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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

LDG ***01*** *00:05:03.4±0.3, 4361N×776E, h3km, Md2.3/2, Ml1.9/3, Error ellipse: s-maj=5.2km s-min=3.0km az=123.0*
STR 01 00:05:04.1±0.1**, 4372N×782E, h2km**±1km**, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBF	**Sospel**	**0.31**	**297**	*e*Pg	Pg	00 05 10.1	0.0
SBF				*e*Sg	Sg	00 05 14.6	+0.4
	22nm,0.2s						
SAOF	**Saorge**	**0.33**	**324**	Pg	Pg	00 05 10.5	+0.1
SAOF				Sg	Sg	00 05 15.1	+0.4
REVF	**Revere**	**0.33**	**274**	Pg	Pg	00 05 10.3	-0.1
REVF				Sg	Sg	00 05 15.3	+0.6
LUCF	**Luceram**	**0.38**	**297**	Pg	Pg	00 05 11.3	-0.2
AUTN	**L'Aution**	**0.40**	**314**	Pg	Pg	00 05 11.6	-0.1
AUTN				Sg	Sg	00 05 17.1	+0.3
TOUF	**Mont Tournerai**	**0.51**	**306**	Pg	Pg	00 05 13.7	-0.1
TOUF				Sg	Sg	00 05 20.6	+0.2
FRF	**La Foret Royal**	**0.87**	**260**	*e*Pg	Pg	00 05 18.9	-1.8
FRF				*e*Sg	Sg	00 05 29.7	-2.2
	6.9nm,0.2s						
LMR	**La Mourre**	**1.03**	**248**	*e*Pg	Pg	00 05 21.1	-2.7
LMR				*e*Sg	Sg	00 05 33.4	-3.8
	2.8nm,0.2s						
MBDF	**Montbardon**	**1.26**	**324**	*e*Pn	Pn	00 05 27.5	-1.2
MBDF				*e*Sg	Sg	00 05 42.9	-1.6
	2.3nm,0.2s						
SMRF	**Simiane la Rot**	**1.64**	**280**	*e*Pn	Pn	00 05 31.0	-3.0
SMRF				*e*Sg	Sg	00 05 54.6	-2.3
	0.9nm,0.2s						

MOS 01 00:15:28.1±2.7**, 5109N×9798E, h10km, mb4.4**/1**, 2C, Error ellipse: s-maj=33.8km s-min=22.1km az=147.5, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.84**	**37**	*e*PN	Pn	00 15 59.0	-0.7
ORL				*e*		00 16 23.0	
ORL				pmax	pmax		
	comp=Z,36nm,0.6s						
ORL				smax			
	comp=E,328nm,0.9s						
MOY	**Mondy**	**1.97**	**72**	⇑*i*PN	Pn	00 16 00.7	-0.9
MOY				*e*		00 16 26.0	
MOY				pmax	pmax		
	comp=Z,71nm,0.4s						
MOY				smax			
	comp=N,540nm,0.3s						
ARS	**Arshan**	**2.90**	**72**	*e*PN	Pn	00 16 17.0	+2.7
ARS				*e*		00 16 54.4	
ARS				pmax	pmax		
	comp=Z,56nm,0.4s						
ARS				smax			
	comp=E,442nm,0.5s						
ZAK	**Zakamensk**	**3.44**	**100**	*e*PN	Pn	00 16 21.3	-0.4
ZAK				*e*S	Sn	00 17 09.5	+6.9
ZAK				pmax	pmax		
	comp=Z,20nm,0.6s						
ZAK				smax			
	comp=N,191nm,1.0s						
IRK	**Irkutsk**	**4.08**	**71**	*e*PN	Pn	00 16 37.3	+6.7
IRK				*e*		00 17 28.8	
IRK				pmax	pmax		
	comp=Z,80nm,0.1s						
IRK				smax			
	comp=N,417nm,0.6s						
LSTR	**Listvyanka**	**4.35**	**77**	⇑*i*PN	Pn	00 16 44.4	+10
LSTR				*e*		00 17 37.3	
LSTR				pmax	pmax		
	comp=Z,11nm,0.9s						
LSTR				smax			
	comp=N,84nm,1.1s						
OGRR	**Ongureny**	**6.42**	**63**	*e*PN	Pn	00 17 22.6	+20
OGRR				*e*		00 18 41.6	
OGRR				pmax	pmax		
	comp=Z,1.0nm,0.1s						
OGRR				smax			
	comp=N,72nm,0.1s						

NNC ***01*** *00:34:54.0±2.4, 4226N×7798E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=21.2km s-min=13.0km az=158.0*
ISCJB ***01*** *00:34:54.4±1.1, 4225N±008×7813E±007, h10km, mb4.2/1, Error ellipse: s-maj=12.3km s-min=6.5km az=143.3*
KNET ***01*** *00:34:54.3±0.6, 4224N×7782E, h0km±3km, ml3.4, Error ellipse: s-maj=7.9km s-min=3.6km az=179.0*
MOS ***01*** *00:35:01.7±0.5, 4267N×7768E, h10km, mb4.5/1, Error ellipse: s-maj=27.2km s-min=22.9km az=105.0*
ISC 01 00:34:56.8±1.1**, 4232N**±008×**7801E**±007**, h10km, n18, σ1s20**/25**, mb4.2**/1**, 11C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDC	**Almaty**	**1.18**	**320**	⇓P	**Pb**	**00 35 16.3**	**-3.0**
	22nm,0.3s						
KNDC				⇑S	**Sb**	**00 35 34.8**	**+0.1**
	65nm,0.2s						
AAA	**Alma-Ata**	**1.23**	**321**	*i* PG	**Pg**	**00 35 17.1**	**-3.4**
AAA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ULHL	**Ulahol**	**1.31**	**268**	P	**Pn**	**00 35 17.1**	**-4.1**
	comp=Z,116nm,0.1s,SNR=399						
ULHL				⇓S	**Sb**	**00 35 34.9**	**-3.5**
	comp=Z,366nm,0.2s						
TKM2	**Tokmak 2**	**1.88**	**290**	⇑P	**Pn**	**00 35 27.8**	**-1.2**
	comp=Z,72nm,0.2s,SNR=73						
TKM2				⇓S	**Sn**	**00 35 53.6**	**+0.9**
	comp=Z,127nm,0.1s						
TKM2	**Tokmak 2**	**1.88**	**290**	⇑P	**Pn**	**00 35 27.7**	**-1.2**
	comp=Z,3.4nm,0.4s						
TKM2				⇑S	**Sn**	**00 35 53.3**	**+0.6**
	comp=Z,14nm,0.5s						
TKM2	**Tokmak 2**	**1.88**	**290**	*i* PN	**Pn**	**00 35 27.7**	**-1.3**
TKM2				pmax	pmax		
	comp=Z,54nm,0.4s						
KZA	**Kyzart**	**2.06**	**264**	⇑P	**Pn**	**00 35 30.4**	**-1.1**
	comp=Z,57nm,0.2s,SNR=39						
KZA				⇑S	**Sn**	**00 35 57.8**	**+0.5**
	comp=Z,196nm,0.4s						
KBK	**Karagaybulak**	**2.29**	**280**	⇑P	**Pn**	**00 35 34.4**	**-0.2**
	comp=Z,47nm,0.2s,SNR=55						
KBK				⇑S	**Sn**	**00 36 06.0**	**+3.2**
	comp=Z,335nm,0.3s						
CHMS	**Chumysh**	**2.50**	**287**	⇓P	**Pn**	**00 35 37.3**	**-0.1**
	comp=Z,25nm,0.2s,SNR=25						
CHMS				⇓S	**Sn**	**00 36 11.3**	**+3.4**
	comp=Z,66nm,0.2s						
UCH	**Uchtor**	**2.59**	**269**	⇓P	**Pn**	**00 35 39.5**	**+0.7**
	comp=Z,9.0nm,0.3s,SNR=9.5						
AAK	**Ala-Archa**	**2.62**	**278**	⇓P	**Pn**	**00 35 39.4**	**+0.3**
	comp=Z,47nm,0.3s,SNR=33						
AAK	**Ala-Archa**	**2.62**	**278**	*c i*PN	**Pn**	**00 35 38.3**	**-0.8**
USP	**Ospenovka**	**2.75**	**291**	⇓P	**Pn**	**00 35 40.8**	**-0.2**
	comp=Z,49nm,0.3s,SNR=65						
MK02	**Makanchi Array**	**5.41**	**33**	⇑Pn	**Pn**	**00 36 18.0**	**+0.4**
	comp=Z,5.0nm,0.8s						
MK02				⇓Lg		00 37 45.4	
	comp=Z,2.9nm,0.4s						
MKAR	**Makanchi Array**	**5.42**	**33**	*i* PN	**Pn**	**00 36 18.7**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KK31	**Karatay Array**	**5.58**	**281**	⇓Pn	**Pb**	**00 36 36.1**	**+1.8**
	comp=Z,6.3nm,0.6s,baz=96,slow=16,SNR=46						
KK31				Lg		00 37 46.9	
	comp=Z,6.3nm,0.5s,baz=96,slow=26,SNR=11						
KURK	**Kurchatov**	**8.41**	**3**	⇑*e*P	**Pn**	**00 36 58.8**	**0.0**
OBN	**Obninsk**	**29.72**	**310**	*e*P	**P**	**00 41 02.6**	**-0.5**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						

INMG ***01*** *01:26:44.0±1.2, 3801N×2.16W, h4km±2km, ML2.4, Error ellipse: s-maj=2.2km s-min=1.3km az=138.0*
MDD 01 01:26:43.8±0.3**, 3804N×218W, h0km**±3km**, mbLg2.3**/29**, 1C, Error ellipse: s-maj=3.1km s-min=2.1km az=147.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHUE	**Huescar**	**0.40**	**236**	Pg	Pg	01 26 50.8	-0.6
	9.6nm,0.1s,SNR=67						
EHUE				Lg		01 26 56.6	
	56nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**0.65**	**337**	Pg	Pg	01 26 55.7	-0.5
	1.8nm,0.2s,SNR=37						
EVIA				Lg		01 27 05.0	
	35nm,0.2s,SNR=14						
EQES	**Quesada**	**0.74**	**252**	Pg	Pg	01 26 57.5	-0.5
	4.2nm,0.1s,SNR=82						
EQES				Lg		01 27 07.4	
	34nm,0.2s,SNR=15						
EMUR	**La Murta**	**0.77**	**105**	Pg	Pg	01 26 57.3	-1.2
	11nm,0.3s,SNR=32						
EMUR				Lg		01 27 08.3	
	171nm,0.6s,SNR=19						
ETOB	**Tobarra**	**0.78**	**39**	Pg	Pg	01 26 58.1	-0.6
	48nm,0.1s,SNR=265						
ETOB				Lg		01 27 09.2	
	56nm,0.2s,SNR=7.9						
CART	**Cartagena**	**1.04**	**115**	⇑Pg	Pg	01 27 03.4	-0.3
CART				Lg		01 27 17.7	
ENIJ	**Nijar**	**1.07**	**181**	Pg	Pg	01 27 03.3	-0.9
	7.3nm,0.3s,SNR=7.7						
ENIJ				Lg		01 27 18.2	
	28nm,0.4s,SNR=7.9						
EBER	**Berja**	**1.27**	**207**	Pg	Pg	01 27 06.9	-1.3
	11nm,0.3s,SNR=33						
EBER				Lg		01 27 24.6	
	114nm,0.6s,SNR=7.9						
EBAN	**Banos Encina**	**1.27**	**276**	Pg	Pg	01 27 07.2	-1.0
	6.6nm,0.1s,SNR=43						
EBAN				Lg		01 27 24.8	
	59nm,0.2s,SNR=25						
EQUE	**Quentar**	**1.30**	**231**	Pn	Pn	01 27 08.1	-1.1
	3.3nm,0.2s,SNR=50						
EQUE				Lg		01 27 25.2	
	24nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.34**	**236**	Pn	Pn	01 27 08.9	-0.8
	3.4nm,0.1s,SNR=23						
ECOG				Lg		01 27 27.1	
	60nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**1.63**	**223**	Pg	Pg	01 27 14.1	-1.0
	0.5nm,0.3s,SNR=7.9						
EGUA				Lg		01 27 36.1	
	1.2nm,0.2s,SNR=7.9						
ERON	**Agron**	**1.65**	**232**	Lg		01 27 37.2	
	2.6nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**1.67**	**66**	Pn	Pn	01 27 13.0	-1.3
	2.5nm,0.1s,SNR=27						
EBEN				Sn	Sn	01 27 34.7	-1.7
	3.2nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.72**	**254**	Pn	Pn	01 27 13.3	-1.7
	1.1nm,0.2s,SNR=7.9						
ELUQ				Pg	Pg	01 27 14.5	-2.3
	5.4nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	01 27 37.0	-0.7
	5.1nm,0.2s,SNR=7.9						
ELUQ				Lg		01 27 39.2	
	13nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.80**	**241**	Pn	Pn	01 27 14.8	-1.3
	0.5nm,0.1s,SNR=7.9						
ELOJ				Pg	Pg	01 27 17.0	-1.3
	3.2nm,0.2s,SNR=7.9						
ELOJ				Sn	Sn	01 27 38.5	-1.2
	1.1nm,0.2s,SNR=7.9						
ELOJ				Lg		01 27 42.4	
	4.3nm,0.2s,SNR=7.9						
ECHE	**Chera**	**1.81**	**31**	Pn	Pn	01 27 15.7	-0.6
	0.5nm,0.2s,SNR=15						
ECHE				Pg	Pg	01 27 17.2	-1.4
	2.7nm,0.2s,SNR=7.9						
ECHE				Lg		01 27 41.2	
	3.3nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.90**	**275**	Pn	Pn	01 27 15.2	-2.1
	2.2nm,0.1s,SNR=26						
EADA				Sn	Sn	01 27 40.4	-1.5
	3.1nm,0.2s,SNR=7.9						
EADA				Lg		01 27 44.4	
	14nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**2.15**	**320**	Pg	Pg	01 27 22.3	-2.6
	0.3nm,0.1s,SNR=7.9						
ESDC				Lg		01 27 50.3	
	0.4nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**2.54**	**235**	Pn	Pn	01 27 25.7	-0.5
	0.4nm,0.3s,SNR=7.9						
EMIJ				Pg	Pg	01 27 29.2	-3.2
	0.4nm,0.1s,SNR=7.9						
EMIJ				Lg		01 28 04.1	
	11nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**2.67**	**29**	Pn	Pn	01 27 26.7	-1.3
	0.2nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	01 27 59.4	-1.7
	2.4nm,0.3s,SNR=7.9						
EMOS				Lg		01 28 09.2	
	2.5nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.93**	**69**	Pn	Pn	01 27 29.7	-1.9
	2.2nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	01 28 04.1	-3.5
	2.8nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**3.02**	**330**	Pg	Pg	01 27 39.9	-1.6
	1.8nm,0.3s,SNR=6.1						
GUD				Lg		01 28 19.4	
	9.2nm,0.3s,SNR=7.9						
ESPR	**Espera**	**3.15**	**249**	Pn	Pn	01 27 34.4	-0.2
	0.4nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	01 28 10.1	-2.8
	3.1nm,0.3s,SNR=7.9						
ESPR				Lg		01 28 25.5	
	3.9nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**3.50**	**33**	Pn	Pn	01 27 38.2	-1.3
	1.3nm,0.2s,SNR=7.1						
ERTA				Sn	Sn	01 28 19.3	-2.3
	1.1nm,0.2s,SNR=7.9						
ERTA				Lg		01 28 35.6	
	0.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.56**	**267**	Pn	Pn	01 27 38.8	-1.5
	0.5nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	01 28 19.7	-3.4
	2.0nm,0.2s,SNR=7.9						
EMIN				Lg		01 28 32.8	
	1.8nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.86**	**282**	Pn	Pn	01 27 42.0	-2.4
	0.4nm,0.2s,SNR=7.9						
EBAD				Pg	Pg	01 27 55.2	-2.6
	0.6nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	01 28 27.6	-2.9
	2.7nm,0.2s,SNR=7.9						
EBAD				Lg		01 28 44.6	
	2.4nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.16**	**36**	Pn	Pn	01 27 47.3	-1.1
	0.3nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**4.23**	**265**	Pn	Pn	01 27 47.2	-2.3
	0.6nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 28 34.8	-4.8
	1.3nm,0.2s,SNR=7.9						
EGRO				Lg		01 28 59.0	
	SNR=7.9						
ETOS	**Mallorca**	**4.26**	**65**	Pn	Pn	01 27 47.6	-2.3
	0.6nm,0.2s,SNR=7.9						
ETOS				Sn	Sn	01 28 35.1	-5.2
	0.7nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**4.33**	**283**	*e*Pn	Pn	01 27 49.4	-1.4
PESTR				*e*Sn	Sn	01 28 39.3	-2.6
PBEJ	**Beja**	**4.49**	**272**	*e*Sg	Sg	01 29 07.6	-0.4
PBEJ							
	3.9nm,0.4s						
PBEJ	**Beja**	**4.49**	**272**	Lg		01 29 07.6	
	1.9nm,0.4s						
PCBR	**Castelo Branco**	**4.50**	**295**	*e*Pn	Pn	01 27 51.8	-1.4
PCBR				*e*Sn	Sn	01 28 43.3	-3.0
PCBR							
	5.6nm,0.5s						
MTE	**Manteigas**	**4.79**	**301**	*e*Sg	Sg	01 29 16.7	-0.8
MTE							
	8.0nm,0.1s						
MTE	**Manteigas**	**4.79**	**301**	Lg		01 29 16.7	
	4.0nm,0.1s						
MOE	**Montemor**	**4.88**	**278**	*e*Sg	Sg	01 29 18.9	-1.6
MOE	**Montemor**	**4.88**	**278**	Lg		01 29 18.9	
	4.4nm,0.5s						
PBRG	**Braganca**	**5.14**	**318**	*e*Sg	Sg	01 29 29.4	+0.5
PBRG							
	3.4nm,0.6s						
PBRG	**Braganca**	**5.14**	**318**	Lg		01 29 29.4	
	1.7nm,0.6s						
EALK	**Alkurruntz**	**5.20**	**5**	Pn	Pn	01 28 02.7	-0.1
	0.4nm,0.3s,SNR=7.9						
EALK				Sn	Sn	01 28 59.7	-3.8
	0.6nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**5.24**	**319**	Sn	Sn	01 28 59.5	-4.9
	0.5nm,0.2s,SNR=7.9						
ECAL				Lg		01 29 30.3	
	1.5nm,0.4s,SNR=7.9						
ELAN	**Lanestosa**	**5.27**	**350**	Pn	Pn	01 28 02.0	-1.8
	0.1nm,0.1s,SNR=7.9						
ELAN				Pg	Pg	01 28 21.4	-3.5
	0.3nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	01 29 00.5	-4.8
	0.2nm,0.2s,SNR=7.9						
ELAN				Lg		01 29 31.2	
	0.5nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**5.36**	**309**	*e*Sg	Sg	01 29 34.6	-1.2
PVRL							
	2.9nm,0.3s						
PVRL	**Vila Real**	**5.36**	**309**	Lg		01 29 34.6	
	1.4nm,0.3s						
EARI	**Arriondas**	**5.74**	**337**	Sn	Sn	01 29 10.8	-5.9
	0.3nm,0.2s,SNR=7.9						
EARI				Lg		01 29 46.0	
	0.3nm,0.3s,SNR=7.9						

CSEM ***01*** *01:42:34.0±0.6, 3756N×2476W, h0km±8km, ML1.7, Error ellipse: s-maj=11.4km s-min=2.0km az=71.0, After PDA*
PDA ***01*** *01:42:34.0±0.6, 3756N×2476W, h0km±8km, MD2.5, ML1.7, Error ellipse: s-maj=11.4km s-min=2.0km az=71.0*
SVSA 01 01:42:34.0±0.6**, 3756N×2476W, h0km**±8km**, MD2.5, ML1.7, Error ellipse: s-maj=11.4km s-min=2.0km az=71.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIRA	**Miradouro**	**0.47**	**299**	*e*S	Sg	01 42 49.3	+0.1
FRA1	**Furnas**	**0.51**	**292**	*e*rx		01 42 50.1	
PCNG	**Congro**	**0.55**	**293**	*e*rx		01 42 52.5	
VIF	**Vila Franca**	**0.57**	**289**	*e*P	Pg	01 42 44.4	-0.6
VIF				*e*S	Sg	01 42 52.4	-0.1
VIF							
	15nm,0.2s						
VIF	**Vila Franca**	**0.57**	**289**	*e*P	Pg	01 42 44.4	-0.6
VIF				*e*S	Sg	01 42 52.4	-0.1
MESC	**Monte Escuro**	**0.60**	**294**	*e*P	Pg	01 42 44.6	-0.8
MESC				*e*S	Sg	01 42 52.5	-0.7
PRCH	**Ribeira Ch**	**0.60**	**287**	*e*P	Pg	01 42 44.7	-0.8
PRCH				*e*S	Sg	01 42 52.5	-0.8
PRCH							
	36nm,0.2s						
PRCH	**Ribeira Ch**	**0.60**	**287**	*e*P	Pg	01 42 44.7	-0.8
PRCH				*e*S	Sg	01 42 52.5	-0.8
PSMN	**Pico do Norte,**	**0.60**	**204**	*e*S	Sg	01 42 52.8	-0.6
LFA	**Lagoa do Fogo**	**0.62**	**291**	*e*rx		01 42 44.1	
PVER	**Pico Vermelho**	**0.65**	**292**	*e*rx		01 42 55.6	
CML	**Cha da Macela**	**0.66**	**289**	*e*P	Pg	01 42 45.7	-1.0
FAC	**Faja de Cima**	**0.74**	**287**	*e*P	Pg	01 42 46.9	-1.3
FAC				*e*S	Sg	01 42 56.5	-1.4
PSAN	**Santo Antonio**	**0.82**	**291**	*e*P	Pg	01 42 48.0	-1.8
PSAN				*e*S	Sg	01 42 58.4	-2.1
PFET	**Feteiras**	**0.86**	**288**	*e*rx		01 42 48.6	
SET2	**Ginetes**	**0.88**	**289**	*e*P	Pg	01 42 48.6	-2.3

NIED ***01*** *02:04:00, 4470N×14790E, h107km, Mw4.2 Best double couple: $M_0$1.95000×10^15 NP1:ϕ_s188.00000°, δ78.00000°, λ15.00000°. NP2:ϕ_s94.00000°, δ75.00000°, λ168.00000°.*
IDC ***01*** *02:04:29.3±0.9, 4532N×14762E, h88km±5km, mb3.6/14, mb1 3.8/15, mb1mx3.7/21, mbtmp4.0/15, Error ellipse: s-maj=23.9km s-min=14.7km az=168.0*
MOS ***01*** *02:04:29.8±1.7, 4513N×14801E, h128km, mb3.9/8, Error ellipse: s-maj=12.6km s-min=10.2km az=85.6*
ISCJB ***01*** *02:04:31.2±0.4, 4514N±006×14783E±006, h124km±4km, mb4.2/32, Error ellipse: s-maj=10.3km s-min=5.5km az=118.1*
JMA ***01*** *02:04:34.4±0.6, 4474N×14791E, h114km, M4.3*
NEIC ***01*** *02:04:37.9±1.5, 4549N×14753E, h159km±12km, mb4.4/14, Error ellipse: s-maj=17.2km s-min=7.2km az=162.0*
ISC 01 02:04:32.2±0.4**, 4518N**±006×**14784E**±006**, h118km**±4km**, n74, σ1s38**/88**, mb4.2**/32**, 5C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.06**	**17**	⇓*i*PN	**Pn**	**02 04 47.1**	**-1.2**
KUR				*i* S	**Sn**	**02 05 00.5**	**+0.1**
KUR				pmax	pmax		
	comp=N,210nm,0.5s						
KUR				pmax	pmax		
	comp=E,230nm,0.5s						
KUR				pmax	pmax		
	comp=Z,610nm,0.5s						
KUR				smax			
	comp=N,2μm,0.6s						
KUR				smax			
	comp=E,2μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.82**	**232**	⇑*i*PN	**Pn**	**02 05 03.5**	**+0.2**
YUK				S	**Sn**	**02 05 25.7**	**-1.4**
YUK				pmax	pmax		
	comp=Z,11μm,1.0s						
YUK				pmax	pmax		
	comp=N,2μm,0.7s						
YUK				pmax	pmax		
	comp=E,5μm,0.6s						
YUK				pmax	pmax		
	comp=N,2μm,0.4s						
YUK				pmax	pmax		
	comp=Z,3μm,0.4s						
YUK				pmax	pmax		
	comp=E,2.0nm,0.5s						
YUK				smax			
	comp=N,1μm,0.4s						
YUK				smax			
	comp=E,2μm,0.5s						
YUK				smax			
	comp=N,3μm,1.5s						
YUK				smax			
	comp=E,2μm,1.0s						
JRA	**Rausu**	**2.31**	**238**	P	**Pn**	**02 05 09.8**	**+0.4**
NEM2	**Nemuro 2**	**2.36**	**220**	P	**Pn**	**02 05 08.8**	**-1.3**
NEM2				*e*S	**Sn**	**02 05 35.2**	**-3.9**
JNK	**Nakash**	**2.75**	**236**	P	**Pn**	**02 05 15.5**	**+0.4**
JTKR	**Abashiri--Toko**	**3.06**	**248**	P	**Pn**	**02 05 19.9**	**+0.7**
JTKR				*e*S	**Sn**	**02 05 56.0**	**+0.5**
JAK	**Akkeshi**	**3.15**	**227**	P	**Pn**	**02 05 19.4**	**-1.0**
JAK				*e*S	**Sn**	**02 05 53.8**	**-3.7**
JAR	**Ashorobuto**	**3.48**	**239**	P	**Pn**	**02 05 25.5**	**+0.7**
JSE	**Soyaes**	**3.73**	**268**	P	**Pn**	**02 05 30.0**	**+1.9**
JKK2	**Kamakawa 2**	**3.87**	**252**	P	**Pn**	**02 05 31.3**	**+1.3**
JKK2				*e*S	**Sn**	**02 06 16.3**	**+1.6**
ASAJ	**Asahikawa**	**3.89**	**256**	P	**Pn**	**02 05 32.1**	**+1.9**
	comp=E,5.7nm,0.3s,baz=82,slow=19,SNR=11						
ASAJ				S	**Sn**	**02 06 16.2**	**+1.1**
	comp=E,5.7nm,0.3s,baz=280,slow=15,SNR=4.1						
ASAJ	**Asahikawa**	**3.89**	**256**	PN	**Pn**	**02 05 32.2**	**+2.0**
ASAJ				S	**Sn**	**02 06 16.3**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**3.96**	**298**	*e*Pn	**Pn**	**02 05 33.5**	**+2.3**
YSS				*e*Sn	**Sn**	**02 06 16.0**	**-0.9**
JCH	**Churui**	**4.13**	**233**	P	**Pn**	**02 05 33.0**	**-0.4**
JCH				*e*S	**Sn**	**02 06 17.3**	**-3.6**
JWK2	**Keihoku**	**4.20**	**274**	P	**Pn**	**02 05 37.6**	**+3.2**
JFR	**Furan**	**4.28**	**244**	P	**Pn**	**02 05 37.0**	**+1.6**
JNBK	**Urakawa-nobuka**	**4.69**	**234**	P	**Pn**	**02 05 39.6**	**-1.3**
JNBK				*e*S	**Sn**	**02 06 29.4**	**-5.0**
JEW	**Eniwo**	**5.17**	**245**	P	**Pn**	**02 05 49.5**	**+2.1**
JSK	**Shakotan**	**5.60**	**254**	P	**Pn**	**02 05 55.7**	**+2.5**
JKB	**Kayabe**	**5.94**	**239**	P	**Pn**	**02 05 55.6**	**-2.2**
JKB				*e*S	**Sn**	**02 06 58.5**	**-6.1**
JOT	**Ohata**	**6.24**	**235**	P	**Pn**	**02 05 59.4**	**-2.5**
JOT				*e*S	**Sn**	**02 07 03.2**	**-8.7**
JANG	**Nango**	**6.69**	**226**	P	**Pn**	**02 06 04.0**	**-3.9**
JANG				*e*S	**Sn**	**02 07 11.6**	**-11**
JOSM	**Okushiri--Mats**	**6.81**	**246**	P	**Pn**	**02 06 09.4**	**-0.2**
SKR	**Severo-Kuril's**	**7.82**	**42**	*e*PN	**Pn**	**02 06 22.0**	**-1.3**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,110nm,0.5s						
PET	**Petropavlovsk**	**10.57**	**38**	⇑*i*PN	**Pn**	**02 06 55.3**	**-5.0**
MJAR	**Matsushiro Arr**	**11.29**	**224**	P	**Pn**	**02 07 06.5**	**-3.4**
	comp=Z,0.8nm,0.3s,baz=28,slow=14,SNR=8.8						

VLA Vladivostok 11.64 265 iPN Pn 02 07 07.5 -7.1
YAK Yakutsk 19.90 334 iP P 02 08 46.4 -8.0
BILL Bilibino 24.85 16⇑eP P 02 09 42.4 -1.2
BILL e 02 10 13.4
BILL eS S 02 13 56.4 -1.4
BILL eSS 02 14 43.4
BILL pmax pmax
comp=Z,12nm,2.7s,mb3.9
ULN Ulaanbaatar 27.97 290 eP P 02 10 11.3 -0.3
ULN pmax pmax
comp=Z,1.0nm,0.8s,mb3.4
ULN Ulaanbaatar 27.97 290 eP P 02 10 11.3 -0.4
comp=Z,1.5nm,0.8s,mb3.6
SONM Songino Array 28.41 290 P P 02 10 14.3 -1.3
comp=Z,0.6nm,0.5s,mb3.4,baz=59,slow=8.7,SNR=5.4
ENH Enshi 33.45 257 eP P 02 10 58.4 -1.4
comp=Z,2.5nm,0.4s,mb4.4
IMA2 Indian Mountai 37.22 35 eP P 02 11 32.6 +0.5
KDAK Kodiak Island 37.92 49 P P 02 11 38.3 +0.2
comp=Z,2.7nm,0.3s,mb4.5,baz=292,slow=9.0,SNR=8.1
COLA College 39.63 37⇑iP P 02 11 51.7 -0.6
MKAR Makanchi Array 44.38 297 P P 02 12 30.1 -0.8
comp=Z,0.4nm,0.4s,mb3.5,baz=74,slow=9.7,SNR=5.5
MKAR PcP PcP 02 14 11.5 -1.2
comp=Z,0.3nm,0.5s,baz=50,slow=2.3,SNR=3.5
MKAR Makanchi Array 44.38 297 P P 02 12 30.1 -0.8
MKAR PcP PcP 02 14 11.5 -1.2
INK Inuvik 44.92 31 P P 02 12 35.5 +0.3
comp=Z,1.1nm,0.4s,mb4.0,baz=302,slow=6.0,SNR=8.5
KURK Kurchatov 45.16 303 eP P 02 12 34.8 -2.2
KURK pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
KURK Kurchatov 45.16 303 eP P 02 12 34.8 -2.2
comp=Z,0.7nm,0.3s,mb3.9
BVAR Borovoye Array 48.99 309 P P 02 13 06.7 -0.1
comp=Z,0.2nm,0.3s,mb3.6,baz=72,slow=9.5,SNR=3.4
BVAR PcP PcP 02 14 28.3 -0.7
comp=Z,1.2nm,0.5s,baz=74,slow=5.3,SNR=5.7
ZRNK Zerenda 49.78 309 eP P 02 13 10.5 -2.3
comp=Z,0.4nm,0.2s,mb4.0
AAK Ala-Archa 51.20 295⇑eP P 02 13 21.8 -1.6
AAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
JIRN Jiri 51.37 272 eP P 02 13 25.4 +0.7
comp=Z,9.4nm,0.2s,mb5.4
GUN Gumba 51.44 273 eP P 02 13 25.8 +0.6
comp=Z,24nm,0.5s,mb5.5
KKN Kakani 51.93 273 eP P 02 13 29.9 +1.0
comp=Z,6.7nm,0.3s,mb5.2
KKN Kakani 51.93 273 eP P 02 13 29.9 +1.0
KKN pmax pmax
comp=Z,7.0nm,0.3s,mb5.2
PKI Pulchoki 51.97 273 eP P 02 13 29.6 +0.4
DMN Daman 52.16 273 eP P 02 13 31.2 +0.6
comp=Z,16nm,0.7s,mb5.2
GKN Gorkha 52.26 274 eP P 02 13 31.7 +0.4
comp=Z,9.9nm,0.3s,mb5.3
KOLN Koldanda 53.13 274 eP P 02 13 38.1 +0.4
comp=Z,2.6nm,0.2s,mb4.9
KEV Kevo 57.55 339 ep P 02 14 04.9 -4.5
comp=Z,1.0nm,0.5s,mb4.1
KEV Kevo 57.55 339 eP P 02 14 04.9 -4.5
KEV pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
JOF Joensuu 61.06 332 ep P 02 14 29.9 -3.6
comp=Z,0.8nm,0.3s,mb4.2
FINES FINESS Array B 63.83 333 P P 02 14 48.8 -3.1
comp=Z,0.6nm,0.5s,mb3.7,baz=46,slow=8.2,SNR=11
FINES FINESS Array B 63.83 333 iP P 02 14 49.7 -2.2
FINES pmax pmax
comp=Z,1.0nm,0.5s
OBN Obninsk 64.46 324 eP P 02 14 57.2 +1.1
OBN pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
HRY Holter Researc 64.81 48 eP P 02 14 59.1 +0.8
FITZ Fitzroy Crossi 66.14 203 P P 02 15 08.5 +1.6
comp=Z,1.5nm,0.9s,mb3.8,baz=0.0,slow=12,SNR=2.8
NVAR Mina Array Bea 66.41 59 P P 02 15 10.2 +1.6
comp=Z,2.0nm,0.8s,mb4.0,baz=278,slow=9.0,SNR=9.4
NVAR sP sP 02 15 41.5 -8.9
comp=Z,0.6nm,0.5s,baz=288,slow=8.5,SNR=2.7
GCMT Greycliff 66.55 48 eP P 02 15 11.2 +1.7
IMW Indian Meadow 67.11 50 eP P 02 15 14.5 +1.4
comp=Z,2.1nm,0.9s,mb4.0
RRI2 Red Ridge 67.26 51 eP P 02 15 15.6 +1.6
comp=Z,6.2nm,0.8s,mb4.5
TPAW Teton Pass 67.37 51 eP P 02 15 16.8 +2.1
comp=Z,8.1nm,1.1s,mb4.5
NB2 NORSAR Subarra 68.45 339 P P 02 15 19.4 -2.1
comp=Z,0.6nm,0.4s,mb3.8,baz=31,slow=6.5
NOA NORSAR Array B 68.45 339 P P 02 15 19.4 -2.0
comp=Z,0.6nm,0.6s,mb3.6,baz=30,slow=6.2,SNR=4.1
PDAR Pinedale Array 68.61 51 P P 02 15 23.5 +1.0
comp=Z,2.0nm,0.8s,mb4.0,baz=312,slow=1.8,SNR=14
PDAR sP sP 02 15 54.5 -10
comp=Z,0.6nm,0.6s,baz=241,slow=1.6,SNR=3.1
ULM Lac du Bonnet 70.07 38 P P 02 15 30.5 -0.9
comp=Z,1.1nm,0.6s,mb3.9,baz=288,slow=6.4,SNR=3.2
AKASG Malin Array Be 70.72 324 P P 02 15 33.0 -2.4
comp=Z,0.6nm,0.3s,mb3.9,baz=39,slow=6.1,SNR=6.2
AKASG Malin Array Be 70.72 324 iP P 02 15 34.5 -0.9
AKASG pmax pmax
comp=Z,1.0nm,0.3s
BRTR Keskin Array B 76.92 314 P P 02 16 11.2 -0.4
comp=Z,0.4nm,0.6s,mb3.3,baz=78,slow=2.9,SNR=4.2
BRTR pP pP 02 16 35.1 -6.2
comp=Z,0.5nm,0.7s,baz=98,slow=3.9,SNR=3.2
GERES GERESS Array B 78.15 331 P P 02 16 18.1 -0.3
comp=Z,0.4nm,0.3s,mb3.6,baz=49,slow=5.5,SNR=11
PLCA Paso Flores 151.74 95 PKPbc PKPbc 02 24 12.2 -0.6
comp=Z,0.6nm,0.5s,baz=274,slow=2.9,SNR=5.2

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*SZGRF **01** 02:16:22.9, 1949S×17471W, h33km, Tonga Islands*
*MOS **01** 02:16:28.5±1.5, 1879S×17488W, h33km, mb5.5/2, Error ellipse: s-maj=21.8km s-min=21.4km az=81.3*
*ISCJB **01** 02:16:29.9±1.9, 1808S±009×17465W±009, h75km±16km, mb4.6/15, Error ellipse: s-maj=18.4km s-min=7.7km az=97.0*
*NEIC **01** 02:16:30.8±1.9, 18.11S×17460W, h66km±16km, mb5.0/8, Error ellipse: s-maj=19.7km s-min=11.0km az=129.0*
*IDC **01** 02:16:37.3±0.8, 18.11S×17445W, h128km±7km, mb4.2/8, mb1 4.4/9, mb1mx4.2/14, mbtmp4.6/9, MS3.7/2, Ms1 3.7/2, ms1mx3.0/21, Error ellipse: s-maj=26.2km s-min=14.5km az=122.0*
ISC 01 02:16:31.9±1.7**, 1812S**±009×**17458W**±008**, h76**km±15km**, h128**km±.9km**:pP-P, n153,** σ0s69/70**, mb4.6**/15**, 39C-22D, Tonga Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
AFI Afiamalu 4.98 33 P Pn 02 17 43.1 -1.0
45nm,0.3s,baz=63,slow=3.0,SNR=16
AFI S Sn 02 18 32.4 -7.9
130nm,0.3s,baz=42,slow=21,SNR=20
AFI LR LR 02 18 53.9
comp=Z,114nm,18.6s,baz=168,slow=28
AFI Afiamalu 4.98 33 ePn Pn 02 17 43.3 -0.8
AFI S Sn 02 18 32.5 -7.9
AFI eSn Sn 02 18 32.8 -7.6
AFI LR LR 02 18 53.9
DZM Mont Dzumac 18.25 254 P Pn 02 20 44.0 +4.0
0.6nm,0.3s,baz=69,slow=17,SNR=13
URZ Urewera 21.34 198 P P 02 21 13.9 +1.2
19nm,0.3s,mb4.9,baz=14,slow=3.5,SNR=28
RPZ Rata Peaks 28.25 202 P P 02 22 19.6 +1.8
5.0nm,0.3s,mb4.5,baz=59,slow=6.7,SNR=8.8
PMG Port Moresby 38.10 278⇑eP P 02 23 44.3 +1.0
WB2 Warramunga Arr 48.16 259⇓iP P 02 25 04.3 -0.2
WRAB Tennant Creek 48.17 259 eP P 02 25 04.3 -0.2
WRAB pmax pmax
comp=Z,21nm,0.5s,mb5.2
WRAB Tennant Creek 48.17 259 eP P 02 25 04.3 -0.2
comp=Z,21nm,0.5s,mb5.2
AS31 Alice Springs 48.24 254 eP P 02 25 05.0 0.0
ASAR Alice Springs 48.24 254 P P 02 25 05.3 +0.3
comp=Z,40nm,0.8s,mb5.3,baz=85,slow=8.6,SNR=287
ASAR S S 02 31 52.9 -6.1
comp=Z,0.8nm,0.7s,baz=90,slow=15,SNR=9.1
ASPA Alice Springs 48.24 254 eP P 02 25 05.1 0.0
KAKA Kakadu 51.22 268⇓iP P 02 25 27.7 0.0
comp=Z,12nm,0.7s,mb5.0
FORT Forrest 53.21 245 eP P 02 25 41.4 -1.0
comp=Z,9.5nm,0.6s,mb5.0
FITZ Fitzroy Crossi 56.59 260 eP P 02 26 06.9 +0.1
comp=Z,6.6nm,0.4s,mb5.0
VNDA Vanda 60.57 186 P P 02 26 34.5 +0.1
comp=Z,2.8nm,0.7s,mb4.4,baz=8.2,slow=6.5,SNR=18
MBWA Marble Bar 61.55 255 eP P 02 26 40.4 -0.6
comp=Z,1.5nm,0.4s,mb4.4
QSPA South Pole Qui 71.94 180 eP P 02 27 46.4 -0.7
comp=Z,22nm,1.0s,mb4.9
QSPA ePcP PcP 02 28 03.6 -1.7
QSPA epP pP 02 28 18.4 +11
PKM Peak Mountain 74.04 44 ⇑P P 02 28 01.2 +1.7
baz=74
MCCM Marconi Confer 74.06 40 ⇑P P 02 28 00.9 +1.2
baz=74
S04C Ingram Canyon, 74.63 41 ⇑P P 02 28 04.0 +1.1
baz=75
GASB Alder Springs 75.11 39 ⇑P P 02 28 06.3 +0.6
baz=75
YSS Yuzh-Sakhalins 75.30 331 iP P 02 28 05.9 -0.9
ISA Isabella 75.38 44 ⇑P P 02 28 07.7 +0.5
baz=76
CMB Columbia Colle 75.54 41 ⇑P P 02 28 08.4 +0.2
baz=76
WDC Whiskeytown Da 75.80 38 ⇓P P 02 28 09.6 -0.1
baz=76
R05C Kirkwood Meado 76.14 41 ⇑P P 02 28 11.4 -0.2
baz=76
MPMC Manual Prospec 76.26 44 ⇑P P 02 28 12.2 0.0
baz=76
GSC Goldstone 76.29 45 ⇓P P 02 28 12.4 -0.1
baz=76
BEKR Beckwourth 76.67 40 ⇑P P 02 28 14.4 -0.1
baz=77
M04C Macdoel 76.97 38 ⇓P P 02 28 16.6 +0.3
baz=77
NVAR Mina Array Bea 77.09 42 P P 02 28 16.7 -0.3
comp=Z,2.6nm,0.8s,mb4.0,baz=220,slow=7.2,SNR=14
NVAR pP pP 02 28 48.7 +12
comp=Z,1.3nm,0.9s,baz=209,slow=8.2,SNR=3.1
NVAR Mina Array Bea 77.09 42 P P 02 28 16.7 -0.3
NVAR pP pP 02 28 48.7 +12
L04A Klamath Falls 77.19 37 ⇑P P 02 28 17.1 -0.4
baz=77
N06A Buffalo Meadow 77.52 39 ⇓P P 02 28 19.2 -0.2
baz=78
Y13A Salome 77.55 48 ⇑P P 02 28 19.3 -0.2
baz=78
L05A Lakeview 77.72 38 ⇑P P 02 28 20.2 -0.3
baz=78
O07A Toulon 77.75 40 ⇓P P 02 28 20.7 +0.1
baz=78
R09A Tonopah 77.78 43 ⇓P P 02 28 20.7 -0.1
baz=78
X13A Yucca 77.95 47 ⇓P P 02 28 21.7 0.0
baz=78
J05A Fort Rock 78.26 37 ⇓P P 02 28 23.6 +0.1
baz=78
R10A Warm Springs 78.30 43 ⇓P P 02 28 24.4 +0.7
baz=78
M07A Soldier Meadow 78.31 39 ⇑P P 02 28 24.1 +0.4
baz=78
U12A Valley of Fire 78.45 45 ⇑P P 02 28 25.0 +0.5
baz=79
K06A Valley Falls 78.53 38 ⇑P P 02 28 24.8 -0.1
baz=79
N08A GE Springer Mi 78.58 40 ⇑P P 02 28 25.1 -0.1
baz=79
J06A Christmas Vall 78.86 37 ⇓P P 02 28 26.3 -0.4
baz=79
X15A Humboldt 79.02 48 ⇓P P 02 28 28.4 +0.7
baz=79
K07A Rock Creek Ran 79.05 38 ⇑P P 02 28 27.7 0.0
baz=79
L08A Fields 79.28 39 ⇑P P 02 28 29.1 +0.1
baz=80
O10A Cortez Mining, 79.31 41 ⇑P P 02 28 29.5 +0.3
baz=80
M09A Marrel Ranch, 79.37 40 ⇑P P 02 28 30.0 +0.5
baz=80
K08A Mann Creek Ran 79.52 38 ⇓P P 02 28 30.3 -0.1
baz=80
L09A Wilkinson Ranc 79.59 39 ⇑P P 02 28 30.9 +0.2
baz=80
I07A Izee 79.74 37 ⇓P P 02 28 31.7 +0.1
baz=80
O11A Cowboy Ranch, 79.75 42 ⇓P P 02 28 31.9 +0.3
baz=80
M10A I.L. Ranch, Tu 79.99 40 ⇓P P 02 28 33.2 +0.3
baz=80
ANMO Albuquerque 83.40 50⇑iP P 02 28 49.1 -1.8
MCMT McKenzie Canyo 84.07 39 eP P 02 28 53.7 -0.6
MAW Mawson 84.87 199 P P 02 28 57.1 -1.2
comp=Z,3.5nm,0.6s,mb4.5,baz=111,slow=5.7,SNR=16
MAW Mawson 84.87 199 eP P 02 28 56.8 -1.5
MAW pmax pmax
comp=Z,11nm,1.1s
MAW Mawson 84.87 199 eP P 02 28 56.8 -1.5
comp=Z,11nm,1.1s,mb4.7
PDAR Pinedale Array 85.03 42 P P 02 28 57.7 -1.4
comp=Z,0.6nm,0.6s,mb3.7,baz=217,slow=3.7,SNR=6.6
PDAR pP pP 02 29 30.2 +11
comp=Z,1.1nm,0.8s,baz=227,slow=1.4,SNR=5.9
PLCA Paso Flores 88.52 132 P P 02 29 15.4 -0.6
comp=Z,0.9nm,0.8s,mb3.9,baz=231,slow=5.9,SNR=5.1
SNAA Sanae 90.26 177⇑eP P 02 29 22.6 -1.6
SNAA Sanae 90.26 177 eP P 02 29 22.1 -2.0
comp=Z,3.1nm,1.0s,mb4.4
ATAH Atahualpa 93.68 99 LR LR 03 02 21.6
comp=Z,279nm,21.1s,baz=229,slow=29
MKAR Makanchi Array 111.91 314 iPKIKP PKiKP 02 34 56.5 -1.7
MKAR pmax pmax
comp=Z,1.0nm,0.5s
KEV Kevo 126.70 351 ep PKPdf 02 35 36.7 +10
comp=Z,8.5nm,1.0s
ARCES ARCESS Array B 127.12 351 PKP PKPdf 02 35 25.3 -2.0
comp=Z,2.9nm,0.8s,baz=37,slow=1.2,SNR=9.4
JOF Joensuu 131.79 344 ep PKPdf 02 35 34.7 -1.5
comp=Z,2.4nm,0.5s
KAF Kangasniemi 133.68 347 ep PKPdf 02 35 35.2 -4.6
comp=Z,2.4nm,0.6s
FINES FINESS Array B 134.33 346 PKP PKPdf 02 35 39.0 -2.0
comp=Z,0.8nm,0.5s,baz=44,slow=2.0,SNR=8.8
OBN Obninsk 136.11 335⇑iPKHKP 02 35 35.0
AKASG Malin Array Be 142.37 335 PKhKP 02 35 49.5
comp=Z,1.2nm,0.6s,baz=39,slow=4.0,SNR=13
KMBO Kilima Mbogo 143.30 242 PKP PKPdf 02 35 55.9 -1.5
comp=Z,2.8nm,0.9s,baz=235,slow=24,SNR=5.4
KMBO Kilima Mbogo 143.30 242 iPKIKP PKPdf 02 36 01.3 +3.9
KMBO pmax pmax
comp=Z,10.0nm,0.7s
KMBO Kilima Mbogo 143.30 242 PKP PKPdf 02 35 55.9 -1.5
MALT Malatya 144.91 312⇑iP PKPdf 02 36 01.4 +1.2
MALT Malatya 144.91 312 ePKPdf PKPdf 02 36 00.5 +0.3
KWP Kalwaria 145.62 340 ePX 02 36 01.5
CLZ Clausthal 146.13 354 ePKPbc PKPbc 02 36 02.9 -0.4
KSP Ksiaz 146.22 348 ePX PKPbc 02 36 03.6 0.0
KSP Ksiaz 146.22 348 ePX PKPbc 02 36 03.6 0.0
KSP Ksiaz 146.22 348 ePKP PKPdf 02 36 03.5 +1.1
CLL Collm 146.35 351 ePKPbc PKPbc 02 36 03.3 -0.7
CLL Collm 146.35 351⇓iPKPbc PKPbc 02 36 03.4 -0.6
comp=Z,12nm,0.9s
CLL ipPKPbc pPKPbc 02 36 37.3 +12
KOLS Kolonicke sedl 146.37 340 ePKP PKPdf 02 36 03.6 +0.9
BURAR Bucovina Array 146.42 336⇑iP PKPbc 02 36 04.9 +0.7
NIE Niedzica 146.55 342 eP PKPbc 02 36 04.9 +0.3
UPC Upice 146.60 348 ePKP PKPbc 02 36 04.5 -0.2
BRG Berggiesshubel 146.63 350 ePKPbc PKPbc 02 36 04.4 -0.4
BRG Berggiesshubel 146.63 350 iPKP PKPbc 02 36 04.5 -0.3
comp=Z,4.4nm,0.9s
BRG e 02 36 06.5
comp=Z,2.9nm,1.0s
BRG Berggiesshubel 146.63 350 iPKHKP PKPbc 02 36 04.5 -0.3
BRG e 02 36 06.4
BRG pmax pmax
comp=Z,4.0nm,0.9s
BRG pmax pmax
comp=Z,3.0nm,1.0s
FBE Freiberg 146.67 351 ePKPbc PKPbc 02 36 04.7 -0.2
DPC Dobruska-Polom 146.68 347 ePKP PKPbc 02 36 04.9 -0.1
BUG Bochum--Univer 146.72 358 ePKPbc PKPbc 02 36 04.8 -0.3
OKC Ostrava-Krasne 146.75 345 ePKP PKPdf 02 36 04.5 +1.2
PVCC Panska Ves 146.85 349 ePKP PKPbc 02 36 05.0 -0.4
MORC Moravsky Berou 146.95 346⇑iP PKPbc 02 36 05.8 +0.1
CFR Carcaliu 147.04 330⇓iP PKPbc 02 36 08.0 +2.0
MOX Moxa 147.18 353 ePKPbc PKPbc 02 36 05.6 -0.8
WERD Werda 147.28 352 ePKPbc PKPbc 02 36 06.0 -0.6
PRU Pruhonice 147.38 349 ePKP PKPbc 02 36 06.7 -0.2
TIRR Tirgusor 147.43 329⇑iP PKPbc 02 36 06.3 -0.7
WERN Wernitzgruen 147.43 352 ePKPbc PKPbc 02 36 06.6 -0.5
BR131 Keskin Array S 147.47 317 ePKPdf PKPdf 02 36 04.1 -0.4
BR131 ePKPbc PKPbc 02 36 06.7 -0.4
BRTR Keskin Array B 147.47 317 PKPbc PKPbc 02 36 07.2 +0.1
comp=Z,2.8nm,0.6s,baz=135,slow=3.2,SNR=21
NKC Novy Kostel 147.47 352 ePKP PKPbc 02 36 06.8 -0.4
HARR Harsova 147.50 329⇓iP PKPbc 02 36 07.4 +0.2
MANZ Manzenberg 147.76 352 ePKPbc PKPbc 02 36 07.4 -0.5
VYHS Vyhne 147.80 343 ePKP PKPbc 02 36 07.6 -0.5
MLR Muntele Rosu 147.81 332⇑iP PKPbc 02 36 08.1 0.0
TREC Trest 147.86 348 ePKP PKPbc 02 36 07.7 -0.5
TNS Taunus Mts 147.88 356 ePKPbc PKPbc 02 36 08.2 -0.1
ANTO Ankara 147.93 318⇑iP PKPbc 02 36 08.8 +0.4
ROTZ Rotzenmuhle 147.96 352 ePKPbc PKPbc 02 36 08.0 -0.5
DRGR 148.05 337⇓iP PKPbc 02 36 08.5 -0.2
GRA1 Grafenberg Arr 148.16 353 ePKPbc PKPbc 02 36 08.7 -0.3
GRF Grafenberg Arr 148.16 353 ePKPbc PKPbc 02 36 08.7 -0.3
KHC Kasperske Hory 148.37 350 ePKP PKPbc 02 36 09.3 -0.3
GEC2 GERESS Array S 148.63 349 ePKPbc PKPbc 02 36 09.7 -0.5
GERES GERESS Array B 148.63 349 PKPbc PKPbc 02 36 09.4 -0.8
comp=Z,2.4nm,0.6s,baz=20,slow=2.7,SNR=24
GERES pPKPbc pPKPbc 02 36 43.5 +12
comp=Z,0.4nm,0.6s,baz=0.0,slow=0.1,SNR=2.4
CONA Conrad Observa 149.07 346⇑iPKPdf PKPdf 02 36 05.4 -1.7
comp=Z,8.3nm,1.1s
BZS Buzias 149.45 337⇑iP PKPbc 02 36 11.6 -0.7
FUR Furstenfeldbru 149.66 352 ePKPbc PKPbc 02 36 12.5 -0.3
CDF Champ du Feu 149.75 358 ePKP1 PKPbc 02 36 11.8 -1.2
comp=Z,18nm,1.0s
BFO Black Forest 149.78 356 ePKPbc PKPbc 02 36 12.2 -0.9
PKSM Moragy 149.93 342⇑iP PKPbc 02 36 13.0 -0.4
HAU Haudompre 150.19 359 ePKP1 PKPbc 02 36 12.7 -1.4
HINF Hinteralfeld 150.36 358 ePKP1 PKPbc 02 36 13.2 -1.3
comp=Z,4.4nm,0.7s
KBA Koelnbreinsper 150.40 349⇑iP PKPbc 02 36 13.7 -0.9
comp=Z,4.8nm,0.6s
MOTA Moosalm 150.49 352⇓iP PKPbc 02 36 14.4 -0.4
comp=Z,7.2nm,1.1s
WTTA Wattenberg 150.49 351⇑iP PKPbc 02 36 14.7 -0.1
comp=Z,8.8nm,0.5s
SQTA Sankt Quirin 150.59 352⇑iP PKPbc 02 36 14.8 -0.3
comp=Z,3.0nm,0.9s
DAVA Damuels 150.69 354⇑iP PKPbc 02 36 15.5 +0.2
comp=Z,13nm,1.0s
LOR Lormes 150.91 2 ePKP1 PKPbc 02 36 14.1 -1.7
comp=Z,50nm,1.5s
SSF Saint Saulge 151.10 3 ePKP1 PKPbc 02 36 14.7 -1.5
comp=Z,14nm,0.9s
VTS Vitosha 151.31 332⇑iP PKPbc 02 36 16.8 +0.1
DIVS Divcibare 151.35 338 eP PKPdf 02 36 09.9 -0.8
AVF Avril sur Loir 151.36 3 ePKP1 PKPbc 02 36 15.5 -1.3
comp=Z,8.0nm,0.9s
SMF Signal de Mont 151.53 2 ePKP1 PKPbc 02 36 15.6 -1.6
BGF Bois d'Agland 151.56 4 ePKP1 PKPbc 02 36 16.4 -0.9
comp=Z,13nm,0.6s
CABF La Chapelle 151.59 359 ePKP1 PKPbc 02 36 16.3 -1.0
comp=Z,29nm,1.0s
TCF Toulx Ste Croi 151.79 5 ePKP1 PKPbc 02 36 16.4 -1.4
comp=Z,12nm,0.8s
SOH Sokhos 152.62 329 eP PKPdf 02 36 08.7 -3.9
LPL La Plagne 152.66 358 ePKP1 PKPbc 02 36 18.9 -0.9
LPG La Plagne 152.68 358 ePKP1 PKPbc 02 36 19.1 -0.7
VIVF Saint-Julien-l 153.34 1 ePKP1 PKPbc 02 36 20.3 -1.0
MBDF Montbardon 153.45 358 ePKP1 PKPbc 02 36 20.9 -0.6
comp=Z,6.7nm,0.7s
LASF Ste Croix 154.09 3 ePKP1 PKPbc 02 36 22.1 -0.8
comp=Z,37nm,1.3s
MTLF Montolieu 154.71 5 ePKP1 PKPbc 02 36 23.5 -0.7
LIC Lamto 164.38 138 ePKIKP PKPdf 02 36 25.2 -1.4
comp=Z,45nm,1.3s

MOS 01 02:35:48.2±2.9**, 5104N**×**9819E, h10**km**, mb4.4**/1**, 1C, Error ellipse: s-maj=32.2km s-min=17.6km az=147.3, Tuva-Buryatia-Mongolia border region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
ORL Orlik 1.81 33 ePN Pn 02 36 20.6 +1.2
ORL e 02 36 44.3
ORL pmax pmax
comp=Z,50nm,0.6s
ORL smax
comp=N,467nm,0.7s
MOY Mondy 1.87 69⇑iPN Pn 02 36 22.0 +1.8
MOY e 02 36 47.0
MOY pmax pmax
comp=Z,107nm,0.6s
MOY smax
comp=N,572nm,0.4s
ARS Arshan 2.79 70 ePN Pn 02 36 36.5 +3.6
ARS e 02 37 16.2
ARS pmax pmax
comp=Z,58nm,0.5s
ARS smax
comp=E,452nm,0.6s
ZAK Zakamensk 3.30 100 ePN Pn 02 36 43.2 +3.3
ZAK e 02 36 47.2
ZAK eS Sn 02 37 30.9 +12
ZAK pmax pmax
comp=Z,32nm,0.8s
ZAK smax
comp=N,175nm,1.0s
TLY Talaya 3.48 77 ePN Pn 02 36 50.0 +7.6
TLY e 02 37 36.0
TLY pmax pmax
comp=Z,9.0nm,0.4s
TLY smax
comp=N,77nm,0.7s
IRK Irkutsk 3.98 70 ePN Pn 02 36 58.7 +10
IRK e 02 37 50.3
IRK pmax pmax
comp=Z,162nm,0.2s
IRK smax
comp=N,462nm,0.3s
LSTR Listvyanka 4.24 76 ePN Pn 02 37 04.5 +12
LSTR e 02 37 58.4
LSTR pmax pmax
comp=Z,12nm,0.7s
LSTR smax
comp=N,90nm,1.1s
OGRR Ongureny 6.33 62 ePN Pn 02 37 43.9 +22
OGRR e 02 39 02.9
OGRR pmax pmax
comp=Z,9.0nm,1.2s
OGRR smax
comp=N,89nm,1.3s

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*IDC **01** 02:36:15.9±1.0, 2822N×10473E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/16, mbtmp3.8/7, MS3.3/1, Ms1 3.3/1, ms1mx2.5/23, Error ellipse: s-maj=41.3km s-min=20.0km az=47.0*
*ISCJB **01** 02:36:16.3±0.8, 2837N±003×10498E±004, h12km±5km, mb4.2/9, Error ellipse: s-maj=6.6km s-min=4.5km az=148.9*
*BJI **01** 02:36:18.9, 2839N×10504E, h15km, mB4.3, mb4.2, ML3.9, Ms3.7, Msz3.6*
ISC 01 02:36:18.2±0.8**, 2832N**±003×**10486E**±005**, h8**km±5km**, n21,** σ1s**23**/35**, mb4.2**/9**, Sichuan**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
GYA Guiyang 2.45 139 P Pn 02 36 59.8 +1.3
GYA PG Pg 02 37 06.4 +1.2
GYA S Sn 02 37 30.5 +1.8
GYA SG Sg 02 37 36.9 -0.1
GYA Smax
comp=N,890nm,0.7s
GYA Smax
comp=E,670nm,0.8s
CD2 Chengdu 2.75 340 P Pn 02 37 03.8 +1.1
CD2 PG Pg 02 37 11.2 +0.2
CD2 S Sn 02 37 38.0 +1.8
CD2 SG Sg 02 37 48.0 +1.3
CD2 Smax
comp=N,780nm,0.8s
CD2 Smax
comp=E,510nm,0.7s
KMI Kunming 3.71 211 PG Pg 02 37 28.5 -0.8
KMI S Sn 02 38 01.5 +1.9
KMI SG Sg 02 38 23.7 +6.4
KMI Smax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,34nm,1.4s						
KMI				Smax			
	comp=E,36nm,1.7s						
XAN	Xi'an	6.68	30	P	Pn	02 37 55.9	-0.7
XAN				PG	Pg	02 38 18.8	-7.3
XAN				S	Sn	02 39 06.8	-6.1
XAN				SG	Sg	02 39 52.2	-0.4
XAN				Smax			
	comp=N,229nm,1.1s						
XAN				Smax			
	comp=E,242nm,1.4s						
LZH	Lanzhou	7.79	354	eP	Pn	02 38 15.4	+3.5
LZH				AP		02 38 18.6	
LZH				XP		02 38 20.8	
LZH				eS	Sn	02 39 42.3	+2.0
LZH				XS		02 39 46.4	
LZH				AMB	AMB		
	comp=Z,13nm,1.0s						
LZH				AMB	AMB		
	comp=Z,66nm,4.0s						
LZH				LR	LR		
	comp=N,432nm,9.3s						
LZH				LR	LR		
	comp=Z,425nm,10.6s						
WHN	Wuhan	8.56	73	P	Pn	02 38 19.5	-3.0
WHN				S	Sn	02 39 52.0	-7.3
WHN				Smax			
	comp=N,64nm,0.6s						
WHN				Smax			
	comp=E,77nm,0.7s						
WHN				LR	LR		
	comp=Z,480nm,5.5s						
GZH	Guangzhou	9.25	122	P	Pn	02 38 30.5	-1.5
GZH				S	Sn	02 40 18.1	+1.9
GZH				Smax			
	comp=N,50nm,1.4s						
GZH				Smax			
	comp=E,55nm,1.3s						
SONM	Songino Array	19.52	3	P	Pn	02 40 47.2	-0.1
	baz=187,slow=10,SNR=2.2						
SONM				LR	LR	02 49 11.4	
	comp=E,82nm,18.8s,baz=120,slow=40						
JOW	Kunigami	20.80	89	P	P	02 41 00.2	+0.2
	comp=E,4.8nm,0.6s,baz=107,slow=28,SNR=3.8						
MKAR	Makanchi Array	25.55	322	P	P	02 41 47.3	-0.1
	comp=E,1.8nm,0.7s,mb3.7,baz=130,slow=12,SNR=10						
QRN	Al-Qurain	49.60	285	eP	P	02 45 10.8	+0.8
MIB	Mutribah	49.85	286	eP	P	02 45 11.6	-0.2
MIB				AMb	AMB	02 45 13.1	
	comp=Z,24nm,0.6s,mb5.4						
RDF	Al-Radifah	49.87	285	eP	P	02 45 11.9	-0.2
RDF				AMb	AMB	02 45 14.1	
	comp=Z,42nm,0.7s						
NAY	Al-Naaiem	50.06	286	eP	P	02 45 12.6	-0.8
NAY				AMb	AMB	02 45 15.3	
	comp=Z,19nm,0.7s,mb5.2						
RST	Umm Al-Ruwaisa	50.21	286	eP	P	02 45 13.4	-1.2
RST				AMb	AMB	02 45 16.0	
	comp=Z,12nm,0.8s,mb5.0						
WB2	Warramunga Arr	55.81	146	eP	P	02 45 54.9	-1.0
BRTR	Keskin Array B	58.72	301	P	P	02 46 15.7	-0.8
	comp=Z,0.3nm,0.6s,mb3.5,baz=104,slow=5.2,SNR=3.7						
ASAR	Alice Springs	58.78	149	P	P	02 46 16.0	-0.9
	comp=Z,0.8nm,0.5s,mb4.0,baz=332,slow=6.9,SNR=18						
ARCES	ARCESS Array B	60.06	336	P	P	02 46 24.3	-1.4
	comp=Z,2.3nm,0.9s,mb4.2,baz=81,slow=7.5,SNR=5.2						
NOA	NORSAR Array B	67.36	328	P	P	02 47 11.6	-2.3
	comp=Z,0.3nm,0.5s,mb3.6,baz=76,slow=5.1,SNR=3.0						
GERES	GERESS Array B	69.97	315	P	P	02 47 29.6	-0.6
	comp=Z,0.5nm,0.8s,mb3.5,baz=72,slow=4.3,SNR=5.3						

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*NEIC **01** 02:53:51.8, 4033N×2548E, h55km, MD3.3(ATH), After ATH.*
*ISK **01** 02:53:51.7, 4029N×2574E, h16km, MD2.8*
*ATH **01** 02:53:51.8, 4033N×2548E, h55km±1km, MD3.3/3*
*CSEM **01** 02:53:51.8, 4033N×2548E, h55km, MD3.3/3, After ATH*
*ISCJB **01** 02:53:51.7±0.5, 4033N±002×2575E±005, h5km±5km, Error ellipse: s-maj=6.2km s-min=3.8km az=138.9*
*SOF **01** 02:53:56.4, 4068N×2586E, h4km, MD2.6*
ISC 01 02:53:52.4±0.5**, 4031N**±002×**2573E**±005**, h13**km±5km**, n17,** σ**0.75**/26**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.18	134	i PG	Pg	02 53 56.2	-0.3
ENEZ	Enez	0.53	37	PG	Pg	02 54 02.3	-0.5
ENEZ				SG	Sg	02 54 11.0	+1.2
BOZC	Bozcaada	0.53	152	i P	Pg	02 54 02.6	-0.2
BOZC				i S	Sg	02 54 09.9	-0.1
LIA	Limnos Island	0.59	226	eP	Pg	02 54 03.9	-0.1
EZN	Ezine	0.67	137	PG	Pg	02 54 04.8	-0.6
EZN				SG	Sg	02 54 14.0	-0.2
RDO	Rodhopi	0.84	350	eP	Pg	02 54 08.0	-0.8
RDO				eS	Sg	02 54 19.9	+0.1
CANB	Canakkale	1.06	106	PG	Pg	02 54 12.6	-0.3
PRK	Paraskevi	1.15	159	eP	Pb	02 54 14.0	0.0
PRK				eS	Sb	02 54 30.2	+1.4
RKY	Sarkoy-Tekirda	1.16	71	ePN	Pn	02 54 13.5	-0.8
AYVA	Ayvalik	1.25	143	i P	Pn	02 54 14.7	-0.8
AYVA				i S	Sb	02 54 32.2	+0.5
MFT	Murefte	1.27	68	ePN	Pn	02 54 15.1	-0.7
KDZ	Kurdzhali	1.36	350	i P	Pn	02 54 16.0	-1.0
KDZ				i Pg	Pg	02 54 17.7	-0.8
MRMT	Marmara Adasi	1.45	78	ePN	Pn	02 54 18.6	+0.3
EDRB	Edirne	1.71	26	ePN	Pn	02 54 21.9	0.0
MMB	Musomiste	1.98	311	eP	Pg	02 54 29.9	-0.5
ELBA	Catalca	2.21	67	i P	Pg	02 54 35.6	+0.8
ELBA				i S	Sg	02 55 04.1	+0.6
KKB	Krupnik	2.53	309	eP	Pb	02 54 38.9	+1.2
KKB				ePg	Pg	02 54 43.0	+2.0

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*IDC **01** 03:04:38.1±0.8, 2832N×10482E, h0km, mb4.1/11, mb1 4.2/12, mb1mx4.1/19, mbtmp4.2/12, ML4.1/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/21, Error ellipse: s-maj=28.2km s-min=17.4km az=62.0*
*ISCJB **01** 03:04:39.3±0.3, 2833N±004×10499E±004, h21km, mb4.2/18, MS3.6/5, Error ellipse: s-maj=5.5km s-min=4.6km az=70.2*
*BJI **01** 03:04:41.3, 2837N×10509E, h21km, mB4.5, mb4.5, ML4.1, Ms4.1, Msz3.9*
*NEIC **01** 03:04:43.1±0.4, 2833N×10474E, h35km, mb4.4/8, Error ellipse: s-maj=9.9km s-min=9.0km az=218.0*
ISC 01 03:04:41.1±0.8**, 2834N**±003×**10489E**±003**, h19**km±5km**, n46,** σ**1.36**/63**, mb4.2**/18**, MS3.6**/5**, 1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	Guiyang	2.45	140	P	Pn	03 05 22.1	+2.0
GYA				S	Sn	03 05 52.9	+3.5
GYA				SG	Sg	03 05 56.7	-3.2
GYA				Smax			
	comp=N,890nm,0.9s						
GYA				Smax			
	comp=E,1μm,0.7s						
CD2	Chengdu	2.75	339	⇓iP	Pn	03 05 25.9	+1.8
CD2				PG	Pg	03 05 33.4	-0.4
CD2				S	Sn	03 05 59.8	+3.0
CD2				SG	Sg	03 06 10.2	+0.8
CD2				Smax			
	comp=N,2μm,0.9s						
CD2				Smax			
	comp=E,2μm,0.7s						
KMI	Kunming	3.74	212	P	Pn	03 05 41.5	+3.7
KMI				PG	Pg	03 05 51.1	-1.7
KMI				S	Sn	03 06 22.8	+1.5
KMI				SG	Sg	03 06 42.8	+1.6
KMI				Smax			
	comp=N,145nm,1.3s						
KMI				Smax			
	comp=E,143nm,1.5s						
KMI				LR	LR		
	comp=N,1μm,5.2s						
KMI				LR	LR		
	comp=E,2μm,4.8s						
KMI				LR	LR		
	comp=Z,894nm,6.6s						
XAN	Xi'an	6.65	30	P	Pn	03 06 18.4	+0.7
XAN				S	Sn	03 07 27.2	-5.7
XAN				SG	Sn	03 08 09.1	+36
XAN				Smax			
	comp=N,415nm,1.2s						
XAN				Smax			
	comp=E,462nm,1.2s						
LZH	Lanzhou	7.77	354	eP	Pn	03 06 37.8	+4.6
LZH				AP		03 06 41.2	
LZH				XP		03 06 43.8	
LZH				eS	Sn	03 08 07.6	+6.9
LZH				XS		03 08 12.4	
LZH				AMB	AMB		
	comp=Z,28nm,1.0s						
LZH				AMB	AMB		
	comp=Z,90nm,4.0s						
LZH				Smax			
	comp=N,140nm,1.2s						
LZH				Smax			
	comp=E,420nm,1.3s						
LZH				LR	LR		
	comp=N,1μm,10.6s						
LZH				LR	LR		
	comp=Z,1μm,13.0s						
WHN	Wuhan	8.53	73	P	Pn	03 06 44.5	+0.9
WHN				S	Sn	03 08 14.8	-4.6
WHN				Smax			
	comp=N,137nm,1.0s						
WHN				Smax			
	comp=E,116nm,1.0s						
WHN				LR	LR		
	comp=Z,1μm,10.1s						
GZH	Guangzhou	9.24	123	P	Pn	03 06 52.9	-0.4
GZH				S	Sn	03 08 36.4	-0.4
GZH				Smax			
	comp=N,161nm,1.3s						
GZH				Smax			
	comp=E,136nm,1.1s						
QIZ	Qiongzhong	10.32	153	P	Pn	03 07 09.2	+1.1
QIZ				eS	Sn	03 09 09.3	+6.1
QIZ				LR	LR		
	comp=N,715nm,10.8s						
QIZ				LR	LR		
	comp=Z,815nm,13.9s						
CHTO	Chiang Mai	10.94	211	ePn	Pn	03 07 20.7	+4.1
	comp=Z,7.1nm,0.9s						
GTA	Gaotai	11.82	340	eP	Pn	03 07 30.3	+1.7
GTA				AP		03 07 36.4	
GTA				XP		03 07 40.2	
GTA				S	Sn	03 09 46.8	+6.9
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s						
GTA				LR	LR		
	comp=N,723nm,12.4s						
GTA				LR	LR		
	comp=E,486nm,14.0s						
GTA				LR	LR		
	comp=Z,1μm,15.6s						
NJ2	Nanjing	12.63	70	eP	Pn	03 07 40.2	+0.5
NJ2				AP		03 07 45.7	
NJ2				XP		03 07 49.8	
NJ2				PP		03 07 50.6	
NJ2				S	Sn	03 10 00.0	+0.2
NJ2				XS		03 10 09.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,20nm,3.5s						
NJ2				LR	LR		
	comp=N,2μm,15.0s						
NJ2				LR	LR		
	comp=E,820nm,7.4s						
NJ2				LR	LR		
	comp=Z,460nm,9.4s						
QZH	Quanzhou	12.71	102	eP	Pn	03 07 41.0	+0.2
QZH				S	Sn	03 09 59.4	-2.4
QZH				LR	LR		
	comp=N,2μm,6.9s						
QZH				LR	LR		
	comp=E,1μm,6.2s						
QZH				LR	LR		
	comp=Z,790nm,12.0s						
BTO	Baotou	12.94	18	eP	Pn	03 07 42.2	-1.8
JIRN	Jiri	16.54	272	eP	Pn	03 08 30.2	-1.8
GUN	Gumba	16.78	273	eP	Pn	03 08 33.4	-1.7
PKI	Pulchoki	17.23	272	eP	Pn	03 08 38.2	-2.5
KKN	Kakani	17.32	273	eP	Pn	03 08 39.5	-2.3
SONM	Songino Array	19.50	3	P	Pn	03 09 08.4	0.0
	comp=Z,0.5nm,0.3s,baz=179,slow=10,SNR=21						
SONM				LR	LR	03 17 23.3	
	comp=Z,189nm,18.8s,baz=332,slow=39						
ULN	Ulaanbaatar	19.57	4	eP	Pn	03 09 09.2	0.0
	comp=Z,7.7nm,1.0s						
SNY	Shenyang	20.31	44	eP	P	03 09 17.6	+1.7
SNY				AMB	AMB		
	comp=Z,8.0nm,2.4s						
SNY				AMB	AMB		
	comp=Z,207nm,6.3s						
SNY				LR	LR		
	comp=N,154nm,14.4s						
SNY				LR	LR		
	comp=Z,131nm,7.8s						
WMQ	Urumqi	20.72	323	eP	P	03 09 22.5	+2.2
WMQ				AP		03 09 31.5	
WMQ				XP	sP	03 09 36.5	+8.3
WMQ				PP		03 09 45.0	
WMQ				S	S	03 13 08.0	-2.9
WMQ				SS		03 13 40.0	
WMQ				AMB	AMB		
	comp=Z,13nm,0.8s						
WMQ				LR	LR		
	comp=N,156nm,9.0s						
WMQ				LR	LR		
	comp=E,178nm,10.0s						
WMQ				LR	LR		
	comp=Z,201nm,10.0s,MS3.8						
JOW	Kunigami	20.77	89	P	P	03 09 21.8	+0.8
	comp=Z,3.2nm,0.3s,baz=269,slow=3.1,SNR=7.7						
JOW				LR	LR	03 17 07.4	
	comp=Z,98nm,20.7s,MS3.2,baz=147,slow=36						
CN2	Changchun	22.58	41	eP	P	03 09 41.1	+0.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KULM	Kulim	23.28	191	eP	P	03 09 48.9	+1.3
MKAR	Makanchi Array	25.55	322	P	P	03 10 09.6	+0.9
	comp=Z,6.8nm,0.8s,mb4.2,baz=129,slow=9.6,SNR=13						
PSI	Prapat	26.03	194	P	P	03 10 14.8	+1.8
	comp=Z,7.6nm,0.7s,mb4.3,baz=320,slow=2.6,SNR=7.7						
PSI				LR	LR	03 21 07.1	
	comp=Z,102nm,18.4s,MS3.4,baz=7.3,slow=38						
KURK	Kurchatov	29.89	326	eP	P	03 10 45.6	-1.9
	comp=Z,6.6nm,1.0s,mb4.3						
WRAB	Tennant Creek	55.80	146	eP	P	03 14 17.0	0.0
	comp=Z,25nm,1.1s,mb5.2						
WB2	Warramunga Arr	55.81	146	eP	P	03 14 16.8	-0.2
BRTR	Keskin Array B	58.73	301	P	P	03 14 36.5	-1.1
	comp=Z,1.0nm,0.8s,mb3.9,baz=117,slow=7.2,SNR=5.4						
ASAR	Alice Springs	58.78	149	P	P	03 14 37.8	-0.2
	comp=Z,1.6nm,0.6s,mb4.2,baz=327,slow=6.0,SNR=11						
AKASG	Malin Array Be	59.79	315	P	P	03 14 44.3	-0.7
	comp=Z,0.6nm,0.4s,mb3.9,baz=71,slow=6.9,SNR=6.9						
ARCES	ARCESS Array B	60.06	336	P	P	03 14 46.6	-0.2
	comp=Z,2.3nm,0.9s,mb4.2,baz=90,slow=7.8,SNR=5.1						
ARCES				LR	LR	03 42 11.0	
	comp=Z,40nm,20.2s,MS3.5,baz=94,slow=38						
FINES	FINESS Array B	60.24	327	P	P	03 14 48.9	+0.7
	comp=Z,0.9nm,0.7s,mb3.9,baz=103,slow=7.9,SNR=3.7						
KWP	Kalwaria	64.11	314	eP	P	03 15 14.2	+0.2
	comp=Z,5.5nm,0.8s,mb4.6						
VYHS	Vyhne	66.86	314	eP	P	03 15 32.0	+0.2
MORC	Moravsky Berou	67.30	315	eP	P	03 15 32.1	-2.5
	comp=Z,3.0nm,0.9s,mb4.3						
NB2	NORSAR Subarra	67.36	328	P	P	03 15 33.2	-1.8
	comp=Z,0.8nm,0.8s,mb3.8,baz=71,slow=6.5						
NOA	NORSAR Array B	67.36	328	P	P	03 15 33.6	-1.3
	comp=Z,1.6nm,0.9s,mb4.0,baz=77,slow=6.1,SNR=4.7						
GERES	GERESS Array B	69.98	315	P	P	03 15 50.7	-0.6
	comp=Z,1.8nm,1.0s,mb4.0,baz=77,slow=5.9,SNR=9.1						
GERES				LR	LR	03 48 26.4	
	comp=Z,75nm,19.2s,MS4.0,baz=110,slow=38						
KMBO	Kilima Mbogo	70.97	258	P	P	03 15 58.4	+1.0
	comp=Z,1.5nm,0.5s,mb4.2,baz=41,slow=11,SNR=5.1						
COLA	College	71.62	25	eP	P	03 16 00.6	-0.6
	comp=Z,4.5nm,0.8s,mb4.5						
INK	Inuvik	74.53	19	P	P	03 16 16.4	-2.1
	comp=Z,1.3nm,0.6s,mb4.0						
DAWY	Dawson	75.17	24	eP	P	03 16 20.9	-1.4
LSZ	Lusaka	85.87	250	eP	P	03 17 20.1	+0.4
	comp=Z,1.5nm,0.6s,mb4.4						
BDFB	Brasilia	151.96	291	PKPbc	PKPbc	03 24 36.2	+1.4
	comp=Z,0.9nm,0.4s,baz=127,slow=5.1,SNR=3.2						

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*IDC **01** 03:05:27.9±2.0, 3717N×7457E, h0km, mb3.9/6, mb1 4.0/9, mb1mx3.8/19, mbtmp4.0/9, ML3.6/3, MS2.9/3, Ms1 2.9/3, ms1mx2.7/22, Error ellipse: s-maj=39.8km s-min=23.8km az=150.0*
*MOS **01** 03:05:32.9±1.4, 3746N×7460E, h38km, mb4.5/1, Error ellipse: s-maj=21.2km s-min=9.1km az=96.0*
*BJI **01** 03:05:32.9, 3739N×7470E, h39km, mB4.8, mb4.7, ML4.3, Ms3.9, Msz3.6*
*ISCJB **01** 03:05:33.1±0.6, 3733N±003×7450E±009, h45km±8km, mb4.1/8, Error ellipse: s-maj=11.8km s-min=3.9km az=154.8*
*NEIC **01** 03:05:36.5±4.1, 3765N×7460E, h39km±26km, mb4.5/4, Error ellipse: s-maj=39.5km s-min=13.6km az=181.0*
*NNC **01** 03:05:36.4±1.2, 3777N×7401E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=11.4km s-min=8.5km az=115.0*
ISC 01 03:05:35.8±0.5**, 3737N**±003×**7455E**±009**, h55**km±8km**, n47,** σ**1.02**/49**, mb4.0**/7**, 2C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.42	27	⇓P	Pn	03 06 13.6	+0.7
KSH				S	Sn	03 06 45.6	+4.4
KSH				Smax			
	comp=N,3μm,0.8s						
KSH				Smax			
	comp=E,3μm,0.8s						
KZA	Kyzart	4.74	6	P	Pn	03 06 45.3	+0.7
	SNR=18						
AML	Almayashu	4.80	352	P	Pn	03 06 45.5	-0.1
	SNR=68						
UCH	Uchtor	4.85	360	P	Pn	03 06 47.0	+0.8
	SNR=5.3						
ULHL	Ulahol	5.04	14	P		03 07 00.4	
	SNR=8.5						
AAK	Ala-Archa	5.26	360	P	Pn	03 06 52.6	+0.8
	SNR=9.7						
EKS2	Erkin-Say	5.32	354	P	Pn	03 06 53.0	+0.3
	SNR=42						
FRU	Bishkek	5.46	0	ePN	Pn	03 06 55.0	+0.5
FRU				pmax	pmax		
	comp=Z,250nm,1.5s						
TKM2	Tokmak 2	5.60	8	P	Pn	03 06 57.3	+0.8
	SNR=21						
TKM2	Tokmak 2	5.60	8	⇓Pn	Pn	03 06 56.9	+0.3
	comp=Z,2.0nm,0.5s						
TKM2				⇓Sn	Sn	03 08 00.3	+0.8
	comp=Z,3.9nm,0.6s						
TKM2				⇑Lg		03 08 24.1	
	comp=Z,16nm,1.0s						
CHMS	Chumysh	5.63	1	P	Pn	03 06 57.3	+0.5
	SNR=16						
USP	Ospenovka	5.89	360	P		03 07 19.7	
	SNR=7.6						
SDNR	Sundarnagar	6.18	160	eP	Pn	03 07 05.4	+0.9
SDNR				ex	x	03 08 11.6	
KK31	Karatay Array	6.51	333	Pn	Pn	03 07 08.1	-0.8
	comp=Z,16nm,0.6s,baz=152,slow=12,SNR=166						
KK31				⇓Sn	Sn	03 08 21.6	-0.2
	comp=Z,30nm,0.6s,baz=164,slow=19,SNR=6.1						
KLP	Kalpa	6.57	151	eP	Pn	03 07 09.6	-0.2
KLP				eS	Sn	03 08 22.8	-0.5
NDI	New Delhi	8.94	165	eP	Pn	03 07 44.0	+1.7
NDI				eS	Sn	03 09 21.6	+0.1
KHET	Khetri	9.33	173	eP	Pn	03 07 46.6	-0.9
KHET				eS	Sn	03 09 31.4	+0.5
KUDL	Kundal	9.34	169	eP	Pn	03 07 48.0	+0.4
KUDL				eS	Sn	03 09 29.9	-1.4
MKAR	Makanchi Array	11.03	29	Pn	Pn	03 08 08.8	-2.0
	comp=Z,0.1nm,0.3s,baz=198,slow=12,SNR=7.3						
MKAR	Makanchi Array	11.03	29	Pn	Pn	03 08 08.8	-2.0
WMQ	Urumqi	11.88	53	eP	Pn	03 08 22.5	+0.1
WMQ				AP		03 08 31.5	
WMQ				XP		03 08 36.5	
WMQ				AMB	AMB		
	comp=Z,13nm,0.8s						
WMQ				LR	LR		
	comp=N,156nm,9.0s						
WMQ				LR	LR		
	comp=E,178nm,10.0s						
WMQ				LR	LR		
	comp=Z,201nm,10.0s						
KURK	Kurchatov	13.66	11	eP	Pn	03 08 43.1	-3.5
KURK				pmax	pmax		
	comp=Z,24nm,1.3s						
KURK	Kurchatov	13.66	11	ePn	Pn	03 08 43.1	-3.5
	comp=Z,24nm,1.3s						
BVA0	Borovoye Array	15.93	351	⇑Pn	Pn	03 09 14.6	-1.6
	comp=Z,2.4nm,1.1s						
BVAR	Borovoye Array	15.93	351	Pn	Pn	03 09 14.3	-1.9
	comp=Z,0.2nm,0.3s,baz=157,slow=12,SNR=12						
BVAR				LR	LR	03 15 08.1	
	comp=Z,22nm,19.7s,baz=134,slow=36						
BRVK	Borovoye	15.97	351	eP	Pn	03 09 14.1	-2.7
BRVK				pmax	pmax		
	comp=Z,16nm,1.0s						
BRVK	Borovoye	15.97	351	ePn	Pn	03 09 14.1	-2.7
	comp=Z,16nm,1.0s						
AKTK	Aktyubinsk	17.63	323	P	Pn	03 09 37.1	-0.3
AKTK				LR	LR	03 16 09.5	
AKTO	Aktyubinsk	17.63	323	P	Pn	03 09 37.1	-0.3
	comp=Z,0.9nm,0.3s,baz=133,slow=8.8,SNR=23						
AKTO				LR	LR	03 16 09.5	
	comp=Z,50nm,21.5s,baz=307,slow=36						
ZAL	Zalesovo	18.02	20	P	Pn	03 09 38.8	-3.5
	comp=Z,0.5nm,0.3s,baz=255,slow=12,SNR=9.8						
WSAR	Wadi Sarin	19.64	229	LR	LR	03 17 45.0	
	comp=Z,61nm,19.3s,baz=96,slow=38						
GTA	Gaotai	19.89	76	eP	Pn	03 10 03.3	-1.3
GTA				AP	pP	03 10 11.0	-3.8
GTA				XP	sP	03 10 15.5	-6.3
SONM	Songino Array	25.50	56	P	P	03 11 00.1	+1.2
	comp=Z,2.0nm,0.6s,mb3.9,baz=263,slow=9.8,SNR=4.2						
BR131	Keskin Array S	31.89	287	eP	P	03 12 01.9	+6.1
	comp=Z,0.6nm,0.5s,mb3.7						
BRTR	Keskin Array B	31.89	287	P	P	03 11 57.0	+1.3
	comp=Z,0.6nm,0.6s,mb3.6,baz=99,slow=6.3,SNR=2.9						
JOF	Joensuu	36.59	328	ep	P	03 12 36.8	+0.4
FINES	FINESS Array B	38.39	325	P	P	03 12 51.9	+0.2
	comp=Z,1.7nm,0.6s,mb3.9,baz=109,slow=11,SNR=11						
ARCES	ARCESS Array B	41.46	336	P	P	03 13 17.1	0.0
	comp=Z,4.3nm,0.7s,mb4.2,baz=113,slow=9.3,SNR=9.2						
ARE0	ARCESS Array S	41.46	336	P	P	03 13 17.9	+0.8
NB2	NORSAR Subarra	45.42	322	P	P	03 13 51.4	+2.4
	comp=Z,0.7nm,0.6s,mb3.7,baz=91,slow=8.6						
NOA	NORSAR Array B	45.42	322	P	P	03 13 48.2	-0.8
	comp=Z,1.0nm,0.7s,mb3.7,baz=91,slow=7.7,SNR=6.0						
NOA	NORSAR Array B	45.42	322	P	P	03 13 48.2	-0.8
SUMG	Summit	61.16	342	eP	P	03 15 46.4	+1.9
	comp=Z,9.6nm,1.2s,mb4.8						
TORD	Torodi Ar. Bea	68.57	270	P	P	03 16 32.1	-0.6
	comp=Z,0.5nm,0.7s,mb3.6,baz=49,slow=5.8,SNR=9.0						
DAWY	Dawson	75.40	15	P	P	03 17 13.4	-0.1
YBH	Yreka Blue Hor	99.71	13	eP	Pdif	03 19 14.8	+1.2
YBH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YBH	Yreka Blue Hor	99.71	13	eP	Pdif	03 19 14.8	+1.2
	comp=Z,5.1nm,0.8s						

CASC 01 03:07:43.2±2.4**, 1258N**×**8854W, h63**km±56km**, MD3.7, ML3.1, 2C-3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.88	17	eP	x	03 08 01.6	
VSM				eS	x	03 08 14.5	
BLLM	Bellamira	0.91	19	⇑eP	x	03 08 01.3	
BLLM				eS	x	03 08 13.6	
CNCH	Conchagua	0.97	45	eP	x	03 08 02.7	
CNCH				eS	x	03 08 18.4	
LCBS	La Ceiba	1.15	338	⇓eP	x	03 08 03.7	
LCBS				eS	x	03 08 18.2	
LFRS	El Faro	1.16	334	eP	x	03 08 03.5	
LFRS				eS	x	03 08 18.1	
LBRS	Las Brisas	1.25	337	⇑iP	x	03 08 05.6	
LBRS				eS	x	03 08 20.3	
BOQS	Boqueron	1.36	328	⇓eP	x	03 08 07.1	
BOQS				eS	x	03 08 24.2	
LEON	Leon	1.61	96	eP	Pn	03 08 08.6	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LEON				eS	Sn	03 08 29.5	+0.1
SBLS	**San Blas**	**1.64**	**320**	eP	x	03 08 10.8	
SBLS				eS	x	03 08 31.8	
SNJE	**San Jose**	**1.65**	**321**	eP	x	03 08 11.0	
SNJE				eS	x	03 08 30.6	
TELN	**Telica**	**1.67**	**89**	eP	Pn	03 08 10.2	0.0
RTR	**El Retiro**	**1.70**	**321**⇓	eP	x	03 08 12.2	
RTR				eS	x	03 08 32.9	
MIRN	**Miramar**	**1.79**	**94**	eP	Pn	03 08 11.4	-0.4
MIRN				eS	Sn	03 08 34.1	+0.6
CNGN	**Cerro Negro**	**1.80**	**92**	eP	Pn	03 08 11.4	-0.5
CNGN				eS	Sn	03 08 34.6	+0.8
RBDL	**Robledal**	**1.89**	**324**	eP	x	03 08 14.7	
MOMJ	**Momotombo**	**1.96**	**95**	eP	Pn	03 08 13.8	-0.4
APYN	**Apoyeque**	**2.17**	**99**	eP	Pn	03 08 16.8	-0.2
APYN				eS	Sn	03 08 43.2	+0.6
MGAN	**Managua**	**2.28**	**101**	eS	Sn	03 08 45.0	-0.4
TICN	**Ticuantepe**	**2.32**	**103**	eP	Pn	03 08 19.1	+0.1
TICN				i		03 08 49.3	
	comp=Z,150nm,0.3s						

*CSEM **01** 03:41:57.8±0.5, 3923N×2930W, h10km, ML1.7, Error ellipse: s-maj=6.7km s-min=3.6km az=64.0, After PDA*
*PDA **01** 03:41:57.8±0.5, 3923N×2930W, h10km, MD3.2, ML1.7, Error ellipse: s-maj=6.7km s-min=3.6km az=64.0*
SVSA 01 03:41:57.8±0.5, 3923N×2930W, h10km, MD3.2, ML1.7, Error ellipse: s-maj=6.7km s-min=3.6km az=64.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOR	**Horta**	**0.88**	**143**	eS	Sg	03 42 21.6	-4.4
ROSA	**Rosais**	**0.97**	**122**	eP	Pg	03 42 12.8	-3.6
ROSA				eS	Sg	03 42 23.9	-5.1
SRBC	**Serra Branca**	**0.99**	**101**	erx		03 42 18.0	
PICO	**Pico**	**1.00**	**137**	eP	Pg	03 42 13.4	-3.6
PICO				eS	Sg	03 42 24.8	-5.1
PCND	**Candelaria**	**1.00**	**139**	eS	Sg	03 42 24.8	-5.3
PCND							
	15nm,0.1s						
PTEI	**Pico do Teixo**	**1.04**	**135**	eP	Pg	03 42 13.6	-4.2
PTEI				eS	Sg	03 42 25.9	-5.4
PTEI							
	7.9nm,0.1s						
PBOI	**Pico dos Bois**	**1.07**	**138**	eS	Sg	03 42 26.5	-5.8
PBOI							
	9.6nm,0.2s						
PMAN	**Manadas**	**1.11**	**122**	eS	Sg	03 42 27.4	-6.3
PMAN							
	8.4nm,0.1s						

*ZUR **01** 03:48:20.5, 4730N×330E, h39km±1km, mb3.4/6*
*BGR **01** 03:48:29.4±1.1, 4679N×494E, h10km, ML3.2, Error ellipse: s-maj=17.8km s-min=13.3km az=121.0*
*STR **01** 03:48:33.2±0.1, 4704N×495E, h5km±1km, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **01** 03:48:35.6±0.1, 4699N×499E, h20km, ML3.5/27, Error ellipse: s-maj=1.1km s-min=0.9km az=141.0*
*NEIC **01** 03:48:35.7, 4701N×494E, h14km, ML3.1(STR), ML3.4(LDG), After LDG.*
LDG 01 03:48:35.7±0.1, 4701N×494E, h14km, Md3.5/3, Ml3.4/24, 7C-4D, Error ellipse: s-maj=1.6km s-min=1.3km az=132.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOR	**Lormes**	**0.78**	**290**	ePg	Pg	03 48 50.4	-0.5
LOR				eSg	Sg	03 49 00.3	-0.9
	1μm,0.2s						
LOR	**Lormes**	**0.78**	**290**	ePg	Pg	03 48 50.4	-0.5
LOR				eSg	Sg	03 49 00.3	-0.9
	610nm,0.2s						
SMF	**Signal de Mont**	**0.84**	**245**	ePg	Pg	03 48 51.8	-0.1
SMF				eSg	Sg	03 49 03.1	+0.2
	729nm,0.2s						
SMF	**Signal de Mont**	**0.84**	**245**	ePn	Pn	03 48 51.1	-1.9
SMF				ePg	Pg	03 48 51.8	-0.1
SMF				eSg	Sg	03 49 03.1	+0.2
SMF	**Signal de Mont**	**0.84**	**245**	ePg	Pg	03 48 51.8	-0.1
SMF				eSg	Sg	03 49 03.1	+0.2
	365nm,0.2s						
CABF	**La Chapelle**	**0.88**	**116**	ePg	Pg	03 48 52.3	-0.5
CABF				eSg	Sg	03 49 04.2	-0.1
	300nm,0.2s						
CABF	**La Chapelle**	**0.88**	**116**	ePg	Pg	03 48 52.3	-0.5
CABF				eSg	Sg	03 49 04.2	-0.1
	150nm,0.2s						
SSF	**Saint Saulge**	**0.98**	**274**	ePg	Pg	03 48 54.0	-0.7
SSF				eSg	Sg	03 49 06.4	-1.1
GIMEL	**Gimel**	**1.03**	**117**⇑	iP	Pb	03 48 54.4	-0.8
	1μm,0.2s						
BRANT	**Les Verrieres**	**1.05**	**93**⇑	iP	Pb	03 48 54.7	-1.0
	490nm,0.5s						
AVF	**Avril sur Loir**	**1.11**	**259**	ePg	Pg	03 48 56.3	-0.8
AVF				eSg	Sg	03 49 10.3	-1.3
	55nm,0.2s						
AVF	**Avril sur Loir**	**1.11**	**259**	ePn	Pn	03 48 54.8	-2.0
AVF				ePg	Pg	03 48 56.3	-0.8
AVF				eSg	Sg	03 49 10.3	-1.3
AVF	**Avril sur Loir**	**1.11**	**259**	ePg	Pg	03 48 56.3	-0.8
AVF				eSg	Sg	03 49 10.3	-1.3
	28nm,0.2s						
SFTF	**Sexfontaines**	**1.20**	**3**	ePg	Pg	03 48 58.3	-0.6
SFTF				eSg	Sg	03 49 14.3	-0.2
	73nm,0.2s						
SFTF	**Sexfontaines**	**1.20**	**3**	ePn	Pn	03 48 56.7	-1.4
SFTF				ePg	Pg	03 48 58.3	-0.6
SFTF				eSg	Sg	03 49 14.3	-0.2
SFTF	**Sexfontaines**	**1.20**	**3**	ePg	Pg	03 48 58.3	-0.6
SFTF				eSg	Sg	03 49 14.3	-0.2
	37nm,0.2s						
LOMF	**Lomont**	**1.33**	**74**	P	Pn	03 48 57.6	-2.3
LOMF				Sg	Sg	03 49 18.1	-0.6
LOMF	**Lomont**	**1.33**	**74**	Pn	Pn	03 48 57.4	-2.5
PLDF	**La Plantade**	**1.38**	**222**	Pn	Pn	03 48 58.8	-1.7
PLDF				Sg	Sg	03 49 19.6	-0.6
HAU	**Haudompre**	**1.38**	**43**	ePg	Pg	03 49 00.7	-1.6
HAU				eSg	Sg	03 49 19.9	-0.4
	288nm,0.3s						
HAU	**Haudompre**	**1.38**	**43**	ePn	Pn	03 48 57.3	-3.3
HAU				ePg	Pg	03 49 00.7	-1.6
HAU				eSg	Sg	03 49 19.9	-0.4
HAU	**Haudompre**	**1.38**	**43**	ePg	Pg	03 49 00.7	-1.6
HAU				eSg	Sg	03 49 19.9	-0.4
	144nm,0.3s						
TORNY	**Torny**	**1.40**	**99**⇑	iP	Pn	03 48 59.5	-1.3
	576nm,0.1s						
THEF	**They Montfort**	**1.41**	**30**	P	Pn	03 48 58.3	-2.7
THEF				S	Sn	03 49 14.5	-4.8
THEF				Sg	Sg	03 49 19.6	-1.6
THEF	**They Montfort**	**1.41**	**30**	Pn	Pn	03 48 58.3	-2.7
THEF				Sg	Sg	03 49 19.2	-2.1
MEZF	**Maizieres J'vi**	**1.50**	**3**	ePg	Pg	03 49 05.2	+0.7
MEZF				eSn	Sn	03 49 18.8	-2.7
MEZF				eSg	Sg	03 49 23.2	-0.8
MEZF	**Maizieres J'vi**	**1.50**	**3**	ePn	Pn	03 49 02.4	+0.2
MEZF				ePg	Pg	03 49 05.2	+0.7
MEZF				eSn	Sn	03 49 18.8	-2.7
MEZF				eSg	Sg	03 49 23.2	-0.8
MEZF	**Maizieres J'vi**	**1.50**	**3**	ePg	Pg	03 49 05.2	+0.7
MEZF				eSn	Sn	03 49 18.8	-2.7
MEZF				eSg	Sg	03 49 23.2	-0.8
BGF	**Bois d'Agland**	**1.51**	**254**	ePg	Pg	03 49 03.1	-1.6
BGF				eSn	Sn	03 49 18.0	-3.7
BGF				eSg	Sg	03 49 22.7	-1.5
BGF	**Bois d'Agland**	**1.51**	**254**	ePn	Pn	03 49 00.4	-1.9
BGF				ePg	Pg	03 49 03.1	-1.6
BGF				eSn	Sn	03 49 18.0	-3.7
BGF				eSg	Sg	03 49 22.7	-1.5
BGF	**Bois d'Agland**	**1.51**	**254**	ePg	Pg	03 49 03.1	-1.6
BGF				eSn	Sn	03 49 18.0	-3.7
BGF				eSg	Sg	03 49 22.7	-1.5
HINF	**Hinteralfeld**	**1.53**	**57**	ePg	Pg	03 49 03.8	-1.4
HINF				eSg	Sg	03 49 23.0	-2.1
	114nm,0.2s						
HINF	**Hinteralfeld**	**1.53**	**57**	ePn	Pn	03 48 59.4	-3.2
HINF				ePg	Pg	03 49 03.8	-1.4
HINF				eSg	Sg	03 49 23.0	-2.1
HINF	**Hinteralfeld**	**1.53**	**57**	ePg	Pg	03 49 03.8	-1.4
HINF				eSg	Sg	03 49 23.0	-2.1
	57nm,0.2s						
AGO	**Saint Agoulin**	**1.57**	**233**	Pn	Pn	03 49 01.1	-2.0
AGO				Sg	Sg	03 49 24.9	-1.4
HYF	**Humbligny**	**1.59**	**280**	ePg	Pg	03 49 05.6	-0.7
HYF				eSg	Sg	03 49 26.9	-0.1
HYF	**Humbligny**	**1.59**	**280**	ePn	Pn	03 49 02.0	-1.4
HYF				ePg	Pg	03 49 05.6	-0.7
HYF				eSg	Sg	03 49 26.9	-0.1
HYF	**Humbligny**	**1.59**	**280**	ePg	Pg	03 49 05.6	-0.7
HYF				eSg	Sg	03 49 26.9	-0.1
BOURR	**Bourrignon**	**1.61**	**75**	iP	Pn	03 49 01.2	-2.5
	232nm,0.3s						
RFYF	**Reffroy**	**1.67**	**12**	ePg	Pg	03 49 07.0	-0.7
RFYF				eSn	Sn	03 49 22.2	-3.4
RFYF				eSg	Sg	03 49 27.9	-1.4
	232nm,0.2s						
RFYF	**Reffroy**	**1.67**	**12**	ePn	Pn	03 49 03.4	-1.0
RFYF				ePg	Pg	03 49 07.0	-0.7
RFYF				eSn	Sn	03 49 22.2	-3.4
RFYF				eSg	Sg	03 49 27.9	-1.4
RFYF	**Reffroy**	**1.67**	**12**	ePg	Pg	03 49 07.0	-0.7
RFYF				eSn	Sn	03 49 22.2	-3.4
RFYF				eSg	Sg	03 49 27.9	-1.4
	116nm,0.2s						
MOF	**Molkenrain**	**1.71**	**60**	P	Pn	03 49 01.9	-3.3
MOF				Sg	Sg	03 49 29.2	-1.6
MOF	**Molkenrain**	**1.71**	**60**	Pn	Pn	03 49 01.8	-3.3
BBS	**Basel-Blauen**	**1.81**	**74**	P	Pn	03 49 03.8	-2.6
BBS				Sg	Sg	03 49 32.2	-1.8
BBS	**Basel-Blauen**	**1.81**	**74**	P	Pn	03 49 03.8	-2.6
BBS				Sg	Sg	03 49 32.2	-1.8
BBS	**Basel-Blauen**	**1.81**	**74**	Pn	Pn	03 49 03.7	-2.7
BBS				Sg	Sg	03 49 32.2	-1.8
PYM	**Petit Puy Mans**	**1.83**	**228**	Pn	Pn	03 49 05.2	-1.6
BALST	**Balsthal**	**1.91**	**79**⇑	iP	Pn	03 49 05.4	-2.4
	299nm,0.4s						
ECH	**Echery**	**1.93**	**50**	P	Pn	03 49 04.0	-4.1
ECH				Sg	Sg	03 49 35.6	-2.1
ECH	**Echery**	**1.93**	**50**	Pn	Pn	03 49 04.3	-3.8
TCF	**Toulx Ste Croi**	**2.01**	**250**	ePg	Pg	03 49 12.6	-1.7
TCF				eSg	Sg	03 49 38.0	-2.4
	38nm,0.2s						
TCF	**Toulx Ste Croi**	**2.01**	**250**	ePn	Pn	03 49 07.4	-1.8
TCF				ePg	Pg	03 49 12.6	-1.7
TCF				eSg	Sg	03 49 38.0	-2.4
TCF	**Toulx Ste Croi**	**2.01**	**250**	ePg	Pg	03 49 12.6	-1.7
TCF				eSg	Sg	03 49 38.0	-2.4
	19nm,0.2s						
CDF	**Champ du Feu**	**2.12**	**47**	ePg	Pg	03 49 15.0	-1.3
CDF				eSn	Sn	03 49 32.5	-4.2
CDF				eSg	Sg	03 49 41.3	-2.4
	63nm,0.3s						
CDF	**Champ du Feu**	**2.12**	**47**	ePn	Pn	03 49 06.8	-3.8
CDF				ePg	Pg	03 49 15.0	-1.3
CDF				eSn	Sn	03 49 32.5	-4.2
CDF				eSg	Sg	03 49 41.3	-2.4
CDF	**Champ du Feu**	**2.12**	**47**	ePg	Pg	03 49 15.0	-1.3
CDF				eSn	Sn	03 49 32.5	-4.2
CDF				eSg	Sg	03 49 41.3	-2.4
	32nm,0.3s						
LBL	**Lubilhac**	**2.13**	**214**	Pn	Pn	03 49 09.1	-1.7
LIBD	**Limburg**	**2.14**	**57**	Sg	Sg	03 49 43.7	-0.7
WLS	**Welschbruch**	**2.15**	**48**	P	Pn	03 49 07.5	-3.6
WLS				Sg	Sg	03 49 42.6	-2.4
VIVF	**Saint-Julien-l**	**2.16**	**185**	ePg	Pg	03 49 15.4	-1.7
VIVF				eSn	Sn	03 49 34.2	-3.5
VIVF				eSg	Sg	03 49 42.6	-2.5
	51nm,0.2s						
VIVF	**Saint-Julien-l**	**2.16**	**185**	ePn	Pn	03 49 10.7	-0.5
VIVF				ePg	Pg	03 49 15.4	-1.7
VIVF				eSn	Sn	03 49 34.2	-3.5
VIVF				eSg	Sg	03 49 42.6	-2.5
VIVF	**Saint-Julien-l**	**2.16**	**185**	ePg	Pg	03 49 15.4	-1.7
VIVF				eSn	Sn	03 49 34.2	-3.5
VIVF				eSg	Sg	03 49 42.6	-2.5
	25nm,0.2s						
ORIF	**Oris-en-Rattie**	**2.19**	**162**	ePg	Pg	03 49 16.9	-0.8
ORIF				eSn	Sn	03 49 35.1	-3.4
ORIF				eSg	Sg	03 49 44.3	-1.7
	37nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.19**	**162**	ePn	Pn	03 49 11.7	+0.1
ORIF				ePg	Pg	03 49 16.9	-0.8
ORIF				eSn	Sn	03 49 35.1	-3.4
ORIF				eSg	Sg	03 49 44.3	-1.7
ORIF	**Oris-en-Rattie**	**2.19**	**162**	ePg	Pg	03 49 16.9	-0.8
ORIF				eSn	Sn	03 49 35.1	-3.4
ORIF				eSg	Sg	03 49 44.3	-1.7
	19nm,0.3s						
KIZ	**Kirchzarten**	**2.23**	**64**	P	Pn	03 49 08.8	-3.5
KIZ				Pg	Pg	03 49 17.4	-1.1
KIZ				S	Sn	03 49 34.3	-5.3
KIZ				Sg	Sg	03 49 45.0	-2.5
KIZ	**Kirchzarten**	**2.23**	**64**	P	Pn	03 49 08.8	-3.5
KIZ				Pg	Pg	03 49 17.4	-1.1
KIZ				S	Sn	03 49 34.3	-5.3
KIZ				Sg	Sg	03 49 45.0	-2.5
FELD	**Feldberg im Sc**	**2.25**	**66**	P	Pn	03 49 09.3	-3.3
FELD				Sg	Sg	03 49 45.8	-2.4
FELD	**Feldberg im Sc**	**2.25**	**66**	P	Pn	03 49 09.3	-3.3
FELD				Sg	Sg	03 49 45.8	-2.4
FELD	**Feldberg im Sc**	**2.25**	**66**	Pn	Pn	03 49 09.1	-3.5
FELD				Sg	Sg	03 49 45.8	-2.4
RRL	**Cesana Torines**	**2.45**	**148**	P	Pn	03 49 16.4	+1.2
RSP	**Reno Superiore**	**2.46**	**138**	P	Pn	03 49 15.7	+0.4
MBDF	**Montbardon**	**2.61**	**150**	ePg	Pg	03 49 24.4	-1.4
MBDF	**Montbardon**	**2.61**	**150**	ePn	Pn	03 49 17.7	+0.2
MBDF				ePg	Pg	03 49 24.4	-1.4
MBDF	**Montbardon**	**2.61**	**150**	ePg	Pg	03 49 24.4	-1.4
BFO	**Black Forest**	**2.65**	**59**	ePn	Pn	03 49 13.8	-4.1
BFO				Pg	Pg	03 49 25.4	-1.0
BFO				S	Sn	03 49 44.1	-5.7
BFO				Sg	Sg	03 49 58.6	-2.2
LANF	**Langenberg**	**2.76**	**43**	P	Pn	03 49 15.6	-3.9
LANF				Sg	Sg	03 50 03.0	-1.3
LANF	**Langenberg**	**2.76**	**43**	Pn	Pn	03 49 15.5	-4.0
WLF	**Walferdange**	**2.78**	**16**	ePn	Pn	03 49 17.5	-2.3
WLF				eSg	Sg	03 50 03.3	-1.8
SISB	**Singen-Schiene**	**2.82**	**75**	P	Pn	03 49 18.4	-2.0
SISB				Pg	Pg	03 49 28.9	-0.8
SISB				S	Sn	03 49 48.1	-6.0
SISB				Sg	Sg	03 50 04.7	-1.6
CAF	**Calviac**	**2.89**	**225**	ePg	Pg	03 49 31.5	+0.4
CAF				eSg	Sg	03 50 06.3	-2.2
	17nm,0.2s						
CAF	**Calviac**	**2.89**	**225**	ePn	Pn	03 49 20.1	-1.2
CAF				ePg	Pg	03 49 31.5	+0.4
CAF				eSg	Sg	03 50 06.3	-2.2
CAF	**Calviac**	**2.89**	**225**	ePg	Pg	03 49 31.5	+0.4
CAF				eSg	Sg	03 50 06.3	-2.2
	8.6nm,0.2s						
RJF	**Les Rejaudoux**	**2.92**	**236**	ePg	Pg	03 49 31.2	-0.6
RJF				eSg	Sg	03 50 07.2	-2.5
	29nm,0.3s						
RJF	**Les Rejaudoux**	**2.92**	**236**	ePn	Pn	03 49 19.8	-2.0
RJF				ePg	Pg	03 49 31.2	-0.6
RJF				eSg	Sg	03 50 07.2	-2.5
RJF	**Les Rejaudoux**	**2.92**	**236**	ePg	Pg	03 49 31.2	-0.6
RJF				eSg	Sg	03 50 07.2	-2.5
	15nm,0.3s						
GUT	**Gutenstein**	**3.02**	**68**	P	Pn	03 49 20.0	-3.1
GUT				S	Sn	03 49 52.8	-6.3
GUT				Sg	Sg	03 50 10.5	-2.3
LASF	**Ste Croix**	**3.03**	**195**	ePg	Pg	03 49 32.8	-0.9
LASF				eSg	Sg	03 50 10.0	-2.9
	24nm,0.5s						
LASF	**Ste Croix**	**3.03**	**195**	ePn	Pn	03 49 21.7	-1.5
LASF				ePg	Pg	03 49 32.8	-0.9
LASF				eSg	Sg	03 50 10.0	-2.9
LASF	**Ste Croix**	**3.03**	**195**	ePg	Pg	03 49 32.8	-0.9
LASF				eSg	Sg	03 50 10.0	-2.9
	12nm,0.5s						
SMRF	**Simiane la Rot**	**3.06**	**171**	ePn	Pn	03 49 21.6	-2.0
LBG	**Lerchenberg**	**3.08**	**56**	P	Pn	03 49 19.8	-4.2
LBG				Pg	Pg	03 49 33.5	-1.3
LBG				S	Sn	03 49 55.5	-5.1
LBG				Sg	Sg	03 50 12.0	-2.8
LBG	**Lerchenberg**	**3.08**	**56**	P	Pn	03 49 19.8	-4.1
LBG				Pg	Pg	03 49 33.5	-1.3
LBG				S	Sn	03 49 55.5	-5.1
LBG				Sg	Sg	03 50 12.0	-2.7
BAIF	**Baives**	**3.10**	**351**	ePg	Pg	03 49 33.5	-1.5
BAIF				eSg	Sg	03 50 13.7	-1.4
	12nm,0.3s						
BAIF	**Baives**	**3.10**	**351**	ePn	Pn	03 49 22.2	-1.9
BAIF				ePg	Pg	03 49 33.5	-1.5
BAIF				eSg	Sg	03 50 13.7	-1.4
BAIF	**Baives**	**3.10**	**351**	ePg	Pg	03 49 33.5	-1.5
BAIF				eSg	Sg	03 50 13.7	-1.4
	5.8nm,0.3s						
GIVF	**Givet**	**3.10**	**359**	ePg	Pg	03 49 33.4	-1.7
GIVF				eSg	Sg	03 50 13.8	-1.5
	23nm,0.3s						
GIVF	**Givet**	**3.10**	**359**	ePn	Pn	03 49 22.3	-1.9
GIVF				ePg	Pg	03 49 33.4	-1.7
GIVF				eSg	Sg	03 50 13.8	-1.5
GIVF	**Givet**	**3.10**	**359**	ePg	Pg	03 49 33.4	-1.7
GIVF				eSg	Sg	03 50 13.8	-1.5
	11nm,0.3s						
TUBL	**Tuebingen-Lenn**	**3.18**	**60**	Sg	Sg	03 50 12.7	-5.2
BUCH	**Bad Urach**	**3.31**	**62**	P	Pn	03 49 23.4	-3.7
BUCH				Pg	Pg	03 49 37.5	-1.7
BUCH				Sg	Sg	03 50 19.5	-2.6
DAVA	**Damuels**	**3.38**	**83**⇓	iPn	Pn	03 49 27.8	-0.3
DAVA			⇓	iSg	Sg	03 50 21.9	-2.4
	4.1nm,0.2s						
MFF	**Saint Martin d**	**3.52**	**265**	ePg	Pg	03 49 41.4	-1.7
MFF				eSn	Sn	03 50 07.1	-4.2
MFF				eSg	Sg	03 50 26.1	-2.5
	11nm,0.2s						
MFF	**Saint Martin d**	**3.52**	**265**	ePn	Pn	03 49 28.8	-1.1
MFF				ePg	Pg	03 49 41.4	-1.7
MFF				eSn	Sn	03 50 07.1	-4.2
MFF				eSg	Sg	03 50 26.1	-2.5
MFF	**Saint Martin d**	**3.52**	**265**	ePg	Pg	03 49 41.4	-1.7
MFF				eSn	Sn	03 50 07.1	-4.2
MFF				eSg	Sg	03 50 26.1	-2.5
	5.5nm,0.2s						
SWS	**Schriesheim-Wi**	**3.53**	**44**	Sg	Sg	03 50 25.8	-3.3
UBR	**Ueberruh**	**3.58**	**77**	P	Pn	03 49 29.8	-0.9
UBR				Pg	Pg	03 49 43.6	-0.7
UBR				Sg	Sg	03 50 30.5	-0.2
LFF	**La Frestale**	**3.58**	**236**	eSg	Sg	03 50 27.9	-2.9
	42nm,0.4s						
LFF	**La Frestale**	**3.58**	**236**	eSg	Sg	03 50 27.9	-2.9
	21nm,0.4s						
SBF	**Sospel**	**3.60**	**150**	ePn	Pn	03 49 31.7	+0.7
FIN	**Finale Ligure**	**3.62**	**139**	P	Pn	03 49 31.9	+0.6
FRF	**La Foret Royal**	**3.65**	**160**	ePn	Pn	03 49 31.2	-0.5
LDF	**La Druitiere**	**3.76**	**297**	ePg	Pg	03 49 46.5	-1.3
LDF				eSg	Sg	03 50 30.0	-6.6
	22nm,0.3s						
LDF	**La Druitiere**	**3.76**	**297**	ePn	Pn	03 49 31.4	-1.9
LDF				ePg	Pg	03 49 46.5	-1.3
LDF				eSg	Sg	03 50 30.0	-6.6
LMR	**La Mourre**	**3.83**	**163**	ePn	Pn	03 49 32.3	-2.0
HDH	**Heidenheim-Cha**	**3.89**	**64**	Sg	Sg	03 50 37.3	-3.2
SIND	**Sindeldorf**	**3.91**	**51**	P	Pn	03 49 31.1	-4.1
SIND				Pg	Pg	03 49 48.1	-2.4
SIND				S	Sn	03 50 15.4	-5.5
SIND				Sg	Sg	03 50 38.6	-2.5
TNS	**Taunus Mts**	**3.97**	**35**	ePn	Pn	03 49 32.1	-4.0
TNS				eSg	Sg	03 50 42.7	-0.6
FLN	**La Foliniere**	**4.05**	**298**	ePg	Pg	03 49 51.5	-1.8
FLN				eSg	Sg	03 50 39.4	-6.3
	33nm,0.3s						
FLN	**La Foliniere**	**4.05**	**298**	ePn	Pn	03 49 35.2	-2.0
FLN				ePg	Pg	03 49 51.5	-1.8
FLN				eSg	Sg	03 50 39.4	-6.3
MTLF	**Montolieu**	**4.14**	**209**	ePg	Pg	03 49 51.9	-3.1
MTLF				eSg	Sg	03 50 45.1	-3.5
	12nm,0.3s						
MTLF	**Montolieu**	**4.14**	**209**	ePn	Pn	03 49 36.0	-2.4
MTLF				ePg	Pg	03 49 51.9	-3.1
MTLF				eSg	Sg	03 50 45.1	-3.5
MTLF	**Montolieu**	**4.14**	**209**	ePg	Pg	03 49 51.9	-3.1
MTLF				eSg	Sg	03 50 45.1	-3.5
	6.0nm,0.3s						
GRR	**Gorron**	**4.15**	**292**	ePn	Pn	03 49 36.3	-2.4
GRR				eSn	Sn	03 50 20.3	-6.7
MOTA	**Moosalm**	**4.22**	**83**⇑	iPn	Pn	03 49 39.0	-0.5
MOTA			⇓	iSg	Sg	03 50 48.3	-2.8
	1.9nm,0.2s						
SQTA	**Sankt Quirin**	**4.29**	**85**⇑	iPn	Pn	03 49 39.8	-0.6
SQTA			⇑	iSg	Sg	03 50 51.9	-1.4
	3.3nm,0.3s						
WTTA	**Wattenberg**	**4.58**	**84**⇓	iPn	Pn	03 49 44.3	-0.2
GRF	**Grafenberg Arr**	**4.98**	**55**	eSg	Sg	03 51 10.8	-4.7
EPF	**Esparros**	**5.14**	**221**	eSg	Sg	03 51 16.5	-4.2
	4.9nm,0.3s						
EPF	**Esparros**	**5.14**	**221**	eSg	Sg	03 51 16.5	-4.2
	2.5nm,0.3s						
SGMF	**Saint Gilles**	**5.22**	**287**	ePn	Pn	03 49 51.1	-2.2
SGMF				eSn	Sn	03 50 47.3	-6.0
	6.2nm,0.3s						
SGMF	**Saint Gilles**	**5.22**	**287**	ePn	Pn	03 49 51.1	-2.2
SGMF				eSn	Sn	03 50 47.3	-6.0
	3.1nm,0.3s						
QUIF	**Quistinic**	**5.57**	**282**	ePn	Pn	03 49 56.2	-2.0
QUIF				eSn	Sn	03 50 54.1	-7.9
	4.3nm,0.2s						
QUIF	**Quistinic**	**5.57**	**282**	ePn	Pn	03 49 56.2	-2.0
QUIF				eSn	Sn	03 50 54.1	-7.9
	2.2nm,0.2s						
ROSF	**Rostrenen**	**5.71**	**287**	ePn	Pn	03 49 57.5	-2.5
ROSF				eSn	Sn	03 50 58.6	-6.7
ROSF				eSg	Sg	03 51 34.7	-4.1
	13nm,0.4s						
ROSF	**Rostrenen**	**5.71**	**287**	ePn	Pn	03 49 57.5	-2.5
ROSF				eSn	Sn	03 50 58.6	-6.7
ROSF				eSg	Sg	03 51 34.7	-4.1
	6.4nm,0.4s						
KHC	**Kasperske Hory**	**6.17**	**67**	ePG	Pg	03 50 32.7	-1.1
KHC				ex	x	03 51 49.2	

*NEIC **01** 04:06:50.2, 17.12N×69.16W, h16km, MD3.7(RSPR), After RSPR.*
RSPR 01 04:06:50.2, 1712N×6916W, h16km±9km, MD3.7/3, MD3.7/3, 19C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**2.14**	**65**	eS	Sn	04 07 48.1	-3.4
CRPR	**Cabo Rojo, PR**	**2.14**	**65**	eS	Sn	04 07 46.7	-4.8
CRPR	**Cabo Rojo, PR**	**2.14**	**65**⇑	eP	Pn	04 07 22.4	-2.8
CRPR				eS	Sn	04 07 46.7	-4.8
MGP	**Maguayo**	**2.16**	**65**⇑	eP	Pn	04 07 22.6	-2.9
MGP	**Maguayo**	**2.16**	**65**⇑	eP	Pn	04 07 22.7	-2.8
MGP	**Maguayo**	**2.16**	**65**⇑	eP	Pn	04 07 22.7	-2.8
LSP	**Las Mesas**	**2.24**	**62**⇑	eP	Pn	04 07 24.3	-2.2
LSP	**Las Mesas**	**2.24**	**62**	eS	Sn	04 07 50.8	-3.1
LSP	**Las Mesas**	**2.24**	**62**⇓	eP	Pn	04 07 24.2	-2.3
LSP	**Las Mesas**	**2.24**	**62**	eS	Sn	04 07 50.1	-3.7
LSP	**Las Mesas**	**2.24**	**62**⇓	eP	Pn	04 07 24.2	-2.3
LSP				eS	Sn	04 07 50.1	-3.7
LRS	**Lares**	**2.50**	**62**⇑	eP	Pn	04 07 27.7	-2.4
LRS				eS	Sn	04 07 57.0	-3.2
LRS	**Lares**	**2.50**	**62**⇑	eP	Pn	04 07 27.7	-2.4
LRS	**Lares**	**2.50**	**62**⇑	eP	Pn	04 07 27.7	-2.4
AOPR	**Arecibo Observ**	**2.60**	**62**⇑	eP	Pn	04 07 28.9	-2.6
AOPR	**Arecibo Observ**	**2.60**	**62**	eS	Sn	04 07 59.1	-3.6
AOPR	**Arecibo Observ**	**2.60**	**62**⇑	eP	Pn	04 07 28.9	-2.6
AOPR	**Arecibo Observ**	**2.60**	**62**⇑	eP	Pn	04 07 28.9	-2.6
CELP	**Cerrillos**	**2.64**	**68**⇑	eP	Pn	04 07 29.9	-2.1
CELP	**Cerrillos**	**2.64**	**68**⇓	eP	Pn	04 07 29.8	-2.3
CELP	**Cerrillos**	**2.64**	**68**⇓	eP	Pn	04 07 29.8	-2.3
HUMP	**Col San Antoni**	**3.31**	**72**⇑	eP	Pn	04 07 39.1	-2.2
HUMP	**Col San Antoni**	**3.31**	**72**	eS	Sn	04 08 17.4	-3.0
HUMP	**Col San Antoni**	**3.31**	**72**⇑	eP	Pn	04 07 41.4	0.0
HUMP	**Col San Antoni**	**3.31**	**72**	eS	Sn	04 08 18.3	-2.1
HUMP	**Col San Antoni**	**3.31**	**72**⇑	eP	Pn	04 07 41.4	0.0
HUMP				eS	Sn	04 08 18.3	-2.1
CBYP	**Canovanas**	**3.35**	**69**	eS	Sn	04 08 12.4	-8.9
CBYP	**Canovanas**	**3.35**	**69**⇑	eP	Pn	04 07 41.3	-0.6
CBYP				eS	Sn	04 08 12.4	-8.9
MTP	**Monte Pirata**	**3.57**	**74**⇑	eP	Pn	04 07 43.0	-1.9
MTP	**Monte Pirata**	**3.57**	**74**	eS	Sn	04 08 24.0	-2.8
MTP	**Monte Pirata**	**3.57**	**74**⇑	eP	Pn	04 07 43.5	-1.5
MTP	**Monte Pirata**	**3.57**	**74**	eS	Sn	04 08 24.8	-2.0
MTP	**Monte Pirata**	**3.57**	**74**⇑	eP	Pn	04 07 43.5	-1.5
MTP				eS	Sn	04 08 24.8	-2.0

CASC 01 04:52:11.3±1.9,753N×8068W,h4km±14km,MD4.1,5C-3D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZU	Azuero	0.48	57	⇓iP	Pg	04 52 20.4	-0.2
AZU				eS	Sg	04 52 28.5	+1.6
ACH	Altos	1.35	34	⇑iP	Pn	04 52 35.7	-1.1
ACH				eS	Sg	04 52 55.5	+0.7
ZANG	Zanguenga, Cho	1.63	30	eP	Pn	04 52 40.1	-0.6
ZANG				eS	Sn	04 53 03.7	+1.6
PINA	Piqa, Costa Ab	1.82	20	⇑eP	Pn	04 52 41.9	-1.4
PINA				eS	Sn	04 53 07.1	+0.3
UPA	Univ. de Panam	1.84	38	⇓eP	Pn	04 52 44.1	+0.5
UPA				eS	Sn	04 53 08.4	+1.2
DVD	David	1.97	297	⇓eP	Pn	04 52 44.5	-0.8
DVD				eS	Sn	04 53 11.4	+1.0
ACLA	Agua Clara, Si	2.06	28	⇑eP	Pn	04 52 46.6	-0.1
ACLA				eS	Sn	04 53 14.0	+1.2
BRU	Baru	2.25	304	⇑eP	Pn	04 52 49.7	+0.5
CTCR	Cotoan	2.46	304	eP	Pn	04 52 51.6	-0.6
CNI	Changuinola	2.61	316	eP	Pn	04 52 54.3	+0.1
CNI				eS	Sn	04 53 27.1	+0.9
BUS	Buena Vista	3.65	304	eP	Pn	04 53 09.5	+1.1
BUS				eS	Sn	04 53 54.9	+3.0
URSC	Urasca	3.82	307	eP	Pn	04 53 12.4	+1.5
LCR2	La Lucha 2	3.95	304	eP	Pn	04 53 14.4	+1.8
PRS1	Puriscal	4.33	304	eP	Pn	04 53 19.6	+1.7
PTP	Ponta Puerca	18.12	53	⇑eP		04 52 49.1	

*ISCJB **01** 04:53:53.7±1.9,12.11N±0.07×14.36E±0.1,h52km±18km, mb4.2/16,MS3.7/3,Error ellipse: s-maj=20.1km s-min=11.6km az=20.6*
*IDC **01** 04:53:53.9±5.7,12.14N×143.50E,h34km±45km,mb3.9/8, mb1 4.0/8,mb1mx3.8/18,mbtmp4.0/8,MS3.6/3,Ms1 3.6/3, ms1mx2.9/34,Error ellipse: s-maj=27.4km s-min=17.3km az=97.0*
*NEIC **01** 04:53:53.5±0.5,12.12N×143.59E,h35km,mb4.3/8,Error ellipse: s-maj=17.6km s-min=11.4km az=97.0*
ISC 01 04:53:56.3±1.6,12.15N±0.07×143.7E±0.1,h62km±16km,n26, σ1s03/22,mb4.2/16,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.84	39	Pn	Pn	04 54 24.7	-0.8
	119nm,0.3s,baz=275,slow=5.4,SNR=28						
GUMO				Sn	Sn	04 54 48.0	+0.2
	210nm,0.3s,baz=70,slow=22,SNR=24						
GUMO				LR	LR	04 55 21.3	
	comp=Z,563nm,18.8s,baz=230,slow=44						
JOW	Kunigami	20.57	317	P	P	04 58 31.8	+1.9
	3.7nm,0.4s,baz=120,slow=12,SNR=3.8						
WRAB	Tennant Creek	33.18	196	eP	P	05 00 26.6	-0.3
	5.8nm,0.7s,mb4.6						
WB2	Warramunga Arr	33.19	196	eP	P	05 00 26.9	-0.1
FITZ	Fitzroy Crossi	34.94	211	eP	P	05 00 42.1	-0.1
	3.2nm,0.7s,mb4.4						
FITZ	Fitzroy Crossi	34.94	211	P	P	05 00 42.1	0.0
	2.0nm,0.8s,mb4.1,baz=34,slow=9.2,SNR=7.0						
ASAR	Alice Springs	36.86	195	P	P	05 00 58.5	0.0
	0.5nm,0.6s,mb3.5,baz=21,slow=12,SNR=8.6						
MBWA	Marble Bar	40.62	216	eP	P	05 01 29.8	-0.2
	1.9nm,0.7s,mb3.8						
DZM	Mont Dzumac	40.68	147	P	P	05 01 31.8	+1.2
	3.4nm,0.6s,mb4.2,baz=2.9,slow=15,SNR=7.6						
SONM	Songino Array	47.26	326	P	P	05 02 24.1	+0.9
	0.4nm,0.5s,mb3.6,baz=142,slow=9.0,SNR=4.6						
MKAR	Makanchi Array	61.73	317	P	P	05 04 08.9	+0.7
	0.6nm,0.5s,mb4.0,baz=90,slow=9.4,SNR=4.4						
KURK	Kurchatov	64.94	320	eP	P	05 04 28.6	-0.8
	2.5nm,0.7s,mb4.3						
BRVK	Borovoye	70.41	322	eP	P	05 05 04.2	+0.4
	2.3nm,0.7s,mb4.2						
ZRNK	Zerenda	71.17	322	eP	P	05 05 08.5	+0.1
	1.4nm,0.5s,mb4.2						
AKTO	Aktyubinsk	77.99	319	LR	LR	05 42 01.8	
	comp=Z,28nm,19.4s,baz=259,slow=37						
YBH	Yreka Blue Hor	84.68	49	LR	LR	05 39 44.0	
	comp=Z,41nm,19.1s,baz=343,slow=32						
KEV	Kevo	87.52	342	ep	P	05 06 35.9	-1.4
	1.0nm,0.5s,mb4.3						
BMO	Blue Mountains	87.82	45	eP	P	05 06 38.0	-0.8
	2.1nm,1.0s,mb4.3						
ARCES	ARCESS Array B	88.09	342	P	P	05 06 40.0	-0.1
	1.7nm,0.6s,mb4.4,baz=66,slow=6.8,SNR=9.6						
ARCES				LR	LR	05 47 25.3	
	comp=Z,20nm,19.9s,baz=103,slow=36						
NVAR	Mina Array Bea	88.72	51	P	P	05 06 46.3	+3.3
	1.3nm,0.7s,mb4.4,baz=269,slow=6.9,SNR=8.0						
JOF	Joensuu	89.11	335	ep	P	05 06 42.8	-2.0
	0.9nm,0.4s,mb4.5						
MCMT	McKenzie Canyo	90.86	44	eP	P	05 06 54.8	+1.7
FINES	FINESS Array B	91.97	335	P	P	05 06 56.8	-1.3
	1.1nm,0.5s,mb4.4,baz=58,slow=4.5,SNR=10						
DBIC	Dimbokro	143.56	299	PKP	PKPdf	05 13 23.3	-0.7
	4.3nm,0.8s,baz=77,slow=3.3,SNR=5.5						
DBIC	Dimbokro	143.56	299	PKP	PKPdf	05 13 23.3	-0.7
LPAZ	La Paz	148.91	101	PKPbc	PKPbc	05 13 40.6	+3.6
	0.6nm,0.5s,baz=355,slow=3.3,SNR=6.3						

ISC 01 05:03:09.0±0.7,3941N±003×4090E±008,h10km,n7, σ1s17/14,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGL	BINGOL	0.49	157	iP	Pg	05 03 17.1	-1.5
BNGL				iS	Sg	05 03 24.6	-0.5
EZM	Erzurum	0.61	35	PG	Pg	05 03 20.2	-0.6
EZM				SG	Sg	05 03 30.7	+1.8
ERZM	Erzurum	0.61	36	iP	Pg	05 03 20.4	-0.5
ERZM				iS	Sg	05 03 27.8	-1.1
BINT	Bingol	0.62	211	iPG	Pg	05 03 19.5	-1.5
BINT				iSG	Sg	05 03 29.1	0.0
KELT	Kelkit	1.47	301	iP	Pn	05 03 35.8	+0.3
KELT				iS	Sn	05 04 01.2	+6.4
BEST	Besiri	1.54	169	iP	Pn	05 03 36.6	+0.1
BEST				iS	Sn	05 03 58.3	+1.8
MARD	Mardin	2.09	183	iP	Pn	05 03 46.3	+2.2
MARD				iS	Sn	05 04 14.8	+4.6

*SOF **01** 05:04:21.5,40.10N×24.67E,h15km,MD2.6*
*ISCJB **01** 05:04:21.9±0.4,40.12N±0.02×24.55E±0.03,h7km±3km, Error ellipse: s-maj=3.8km s-min=3.3km az=22.4*
*NEIC **01** 05:04:22.5,40.15N×24.59E,h28km,MD3.3(ATH), ML3.3(THE),After ATH.*
*ATH **01** 05:04:22.5,40.15N×24.59E,h28km±3km,MD3.3/5*
*CSEM **01** 05:04:23.3±0.1,40.13N×24.57E,h20km,ML3.3,Error ellipse: s-maj=1.7km s-min=1.2km az=21.0*
*THE **01** 05:04:23.5,40.09N×24.52E,h11km,ML2.8*
ISC 01 05:04:22.9±0.4,4011N±002×2455E±002,h13km±3km,n31, σ0s71/54,1D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	Limnos	0.45	113	ePg	Pg	05 04 31.7	-0.1
LOS				eSg	Sg	05 04 38.5	+0.8
OUR	Ouranopolis	0.49	297	ePg	Pg	05 04 33.3	+0.8
OUR				eSg	Sg	05 04 39.5	+0.5
LIA	Limnos Island	0.53	114	⇓iPN	Pg	05 04 33.5	+0.1
LIA				eSN	Sg	05 04 40.8	+0.4
PAIG	Paliouri	0.69	255	ePg	Pg	05 04 36.7	+0.3
PAIG				eSg	Sg	05 04 45.9	+0.4
PAIG	Paliouri	0.69	255	ePg	Pg	05 04 36.7	+0.3
PAIG				eSg	Sg	05 04 45.8	+0.3
PLG	Polygyros	0.88	287	ePN	Pg	05 04 40.3	+0.3
PLG				eSN	Sg	05 04 51.9	+0.4
AOS	Alonnisos	1.07	209	ePg	Pg	05 04 42.8	-0.9
AOS				eSg	Sg	05 04 57.4	-0.2
SOH	Sokhos	1.15	308	ePg	Pg	05 04 44.8	-0.3
SOH				eSg	Sg	05 05 01.4	+1.3
HORT	Hortiatis	1.21	294	ePg	Pg	05 04 45.6	-0.6
HORT				eSg	Sg	05 05 01.8	-0.1
SRS	Serrai	1.24	324	ePg	Pg	05 04 45.8	-1.0
SRS				eSg	Sg	05 05 03.3	+0.4
RDO	Rodhopi	1.28	36	ePN	Pn	05 04 45.7	-0.8
XOR	Xorichti	1.28	235	ePg	Pn	05 04 45.7	-0.9
XOR				eSg	Sg	05 05 03.7	-0.6
THE	Thessaloniki	1.32	294	ePg	Pn	05 04 46.8	-0.2
THE				eSg	Sg	05 05 04.5	-0.8
NVR	Nevrokopi	1.34	337	ePN	Pn	05 04 47.2	-0.1
NVR				eSN	Sn	05 05 03.9	-1.1
ALN	Alexandroupoli	1.38	55	ePg	Pn	05 04 47.2	-0.8
ALN				eSg	Sg	05 05 08.2	+0.6
ALN	Alexandroupoli	1.38	55	ePg	Pn	05 04 47.2	-0.7
ALN				eSg	Sg	05 05 08.1	+0.6
RZN	Rozhen	1.58	5	iP	Pn	05 04 50.9	+0.3
RZN				iPg	Pg	05 04 53.5	+0.3
RZN	Rozhen	1.58	5	iPg	Pg	05 04 53.5	+0.3
PRK	Paraskevi	1.59	123	ePN	Pn	05 04 50.9	+0.2
MMB	Musomiste	1.60	337	ePg	Pn	05 04 50.7	-0.2
MMB				eSg	Sg	05 05 13.1	-1.3
MMB	Musomiste	1.60	337	iP	Pn	05 04 50.6	-0.3
KNT	Kendrikon	1.64	310	ePb	Pb	05 04 51.8	-1.2
KNT				eSb	Sb	05 05 13.3	-0.2
KDZ	Kurdzhali	1.67	23	iP	Pn	05 04 50.9	-1.0
KDZ				iPg	Pg	05 04 53.8	-1.2
GRG	Griva	1.84	298	ePb	Pn	05 04 55.1	+0.9
GRG				eSb	Sn	05 05 17.4	+0.1
VAY	Valandovo	1.93	309	ePb	Pn	05 04 55.6	+0.2
VAY	Valandovo	1.93	309	ePn	Pn	05 04 56.1	+0.7
VAY				ePg	Pg	05 04 59.7	-0.2
VAY				eSn	Sg	05 05 25.7	+0.8
VAY	Valandovo	1.93	309	ePn	Pn	05 04 56.1	+0.7
PLD	Plovdiv	1.99	3	eSn	Sn	05 05 22.8	+1.7
PLD				eSn		05 05 39.2	
AGG	Agios Georgios	2.03	238	ePn	Pn	05 04 57.0	+0.2
AGG				eSn	Sn	05 05 22.9	+0.8
KKB	Krupnik	2.07	328	iP	Pn	05 04 57.8	+0.4
VTS	Vitosha	2.67	338	iP	Pn	05 05 07.0	+1.3

*NIED **01** 05:12:00,30.30N×138.90E,h400km,Mw4.6 Best double couple: $M_0$8.48000×10^{15} NP1:ϕ_s181.00000°,δ87.00000°,λ30.00000°. NP2:ϕ_s89.00000°,δ60.00000°,λ177.00000°.*
*BJI **01** 05:12:30.9,30.25N×138.47E,h443km,mB4.7,mb4.7*
*JMA **01** 05:12:30.2±0.2,30.32N×138.90E,h471km,M4.2*
*ISCJB **01** 05:12:31.1±0.3,30.26N±0.03×138.56E±0.05,h441km±3km, mb4.0/47,Error ellipse: s-maj=6.8km s-min=5.2km az=133.6*
*IDC **01** 05:12:32.0±0.8,30.29N×138.47E,h435km±7km,mb3.5/14, mb1 3.8/18,mb1mx3.7/23,mbtmp4.5/18,Error ellipse: s-maj=15.3km s-min=11.5km az=72.0*
*MOS **01** 05:12:31.1±1.1,30.32N×138.42E,h440km,mb4.1/13,Error ellipse: s-maj=14.5km s-min=6.8km az=106.4*
*NEIC **01** 05:12:32.5±0.6,30.34N×138.49E,h440km±6km,mb4.3/28, Error ellipse: s-maj=6.6km s-min=5.7km az=118.0*
ISC 01 05:12:32.5±0.3,3035N±004×13862E±005,h440km±3km, n110,σ1s12/124,mb4.0/47,6C-4D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.94	20	P	P	05 13 38.0	-0.2
	70nm,0.3s,baz=181,slow=6.6,SNR=30						
JHJ				S	S	05 14 32.4	+0.8
	201nm,0.3s,baz=54,slow=22,SNR=14						
JHJ2	Mitsune	2.94	20	P	P	05 13 39.0	+0.8
JHJ2				eS	S	05 14 31.6	-0.1
TK02	Tokai 2	3.66	349	P	P	05 13 46.2	+2.2
JWZ	Kozaga	4.02	323	P	P	05 13 48.8	+1.7
JWZ				eS	S	05 14 49.3	+1.5
JIE	Ise	4.34	339	P	P	05 13 52.0	+1.9
JIE				eS	S	05 14 54.3	+1.1
CBIJ	Chichi jima	4.51	135	P	P	05 13 49.8	-1.9
	151nm,0.3s,baz=45,slow=2.5,SNR=80						
CBIJ				S	S	05 14 51.5	-4.5
	174nm,0.3s,baz=262,slow=21,SNR=30						
CBIJ	Chichi jima	4.51	135	P	P	05 13 49.7	-1.9
BSO1	Boso 1	4.73	24	P	P	05 13 53.3	-0.4
BSO1				eS	S	05 14 57.9	-2.0
JHHJ	Haha-jima-NKT	4.85	139	P	P	05 13 52.8	-2.1
JHHJ				S	S	05 14 58.5	-3.6
JOD2	Odawara 2	4.92	5	P	P	05 13 55.5	0.0
JOD2				S	S	05 15 02.6	-0.6
JTO	Tosashimizu	5.55	298	P	P	05 14 03.0	+1.2
JTO				S	S	05 15 15.9	+1.2
JRY	Ryogami san	5.66	2	P	P	05 14 02.9	0.0
MJAR	Matsushiro Arr	6.19	357	P	P	05 14 07.7	-0.7
	10.0nm,0.3s,baz=177,slow=10,SNR=61						
MJAR				S	S	05 15 24.3	-2.3
	2.8nm,0.3s,baz=357,slow=22,SNR=5.6						
MAJO	Matsushiro	6.19	357	⇓iP	P	05 14 07.9	-0.4
MAJO				pmax	pmax		
	comp=Z,93nm,0.8s						
MAJO	Matsushiro	6.19	357	⇓iP	P	05 14 07.9	-0.4
	comp=Z,93nm,0.8s						
MAT	Matsushiro	6.19	357	P	P	05 14 07.8	-0.5
MAT				S	S	05 15 24.5	-2.1
MAT	Matsushiro	6.19	357	P	P	05 14 07.8	-0.5
MAT				S	S	05 15 24.2	-2.4
MAT	Matsushiro	6.19	357	eP	P	05 14 08.0	-0.3
MAT				eS	S	05 15 25.0	-1.6
MAT				pmax	pmax		
	comp=Z,46nm,0.7s						
MAT	Matsushiro	6.19	357	eP	P	05 14 08.0	-0.3
	comp=Z,46nm,0.7s						
MAT				eS	S	05 15 25.0	-1.6
JOW	Kunigami	9.74	251	P	P	05 14 48.2	+1.6
	comp=Z,8.1nm,0.3s,baz=89,slow=6.4,SNR=29						
JOW				S	S	05 16 38.9	+1.7
	baz=234,slow=26,SNR=12						
VLA	Vladivostok	13.83	339	eP	P	05 15 30.2	-1.0
VLA				pmax	pmax		
	comp=Z,35nm,0.7s						
MDJ	Mudanjiang	15.93	336	P	P	05 15 53.7	+0.1
MDJ				AMB	AMB		
	comp=Z,22nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,104nm,6.3s						
MDJ	Mudanjiang	15.93	336	eP	P	05 15 52.6	-0.9
	comp=Z,25nm,1.0s						
SNY	Shenyang	16.67	317	⇓P	P	05 16 01.3	-0.2
SNY				AMB	AMB		
	comp=Z,43nm,0.9s						
YSS	Yuzh-Sakhalins	16.89	10	⇑eP	P	05 16 06.1	+2.3
YSS				pmax	pmax		
	comp=Z,13nm,0.8s						
GUMO	Guam	17.65	160	P	P	05 16 11.9	+0.2
	comp=Z,2.6nm,0.3s,baz=194,slow=11,SNR=3.9						
HABR	Khabarovsk	18.30	352	eP	P	05 16 25.1	+6.5
TIA	Tai'an	18.88	294	⇑P	P	05 16 22.4	-1.7
KLR	Kul'dur	19.57	346	eP	P	05 16 27.9	-2.5
BJT	Baijiatuau	20.68	304	eP	P	05 16 39.5	-1.0
BJT				pmax	pmax		
	comp=Z,53nm,1.3s						
BJT	Baijiatuau	20.68	304	eP	P	05 16 39.5	-1.1
	comp=Z,53nm,1.3s						
HIA	Hailar	23.70	328	iP	P	05 17 07.7	-0.1
HIA	Hailar	23.70	328	P	P	05 17 07.4	-0.4
	comp=Z,3.6nm,0.4s,mb4.2						
ENH	Enshi	25.12	277	eP	P	05 17 17.3	-3.1
	comp=Z,4.3nm,0.3s,mb4.4						
XAN	Xi'an	25.35	286	P	P	05 17 22.3	-0.2
XAN				AMB	AMB		
	comp=Z,27nm,0.9s,mb4.7						
GYA	Guiyang	28.32	270	⇓iP	P	05 17 48.1	-0.6
GYA				S	S	05 21 58.7	-4.2
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
GYA				AMB	AMB		
	comp=Z,120nm,3.8s						
ULN	Ulaanbaatar	29.81	315	eP	P	05 18 01.8	0.0
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
ULN	Ulaanbaatar	29.81	315	eP	P	05 18 01.8	0.0
	comp=Z,5.1nm,0.6s,mb4.0						
SONM	Songino Array	30.21	314	P	P	05 18 05.1	-0.1
	comp=Z,2.0nm,0.4s,mb3.8,baz=125,slow=8.5,SNR=24						
MA2	Magadan	30.36	12	eP	P	05 18 07.4	+0.9
MA2				pmax	pmax		
	comp=Z,61nm,1.1s,mb4.8						
MA2	Magadan	30.36	12	eP	P	05 18 07.4	+0.9
	comp=Z,60nm,1.1s,mb4.8						
BOD	Bodaibo	32.30	335	eP	P	05 18 22.7	-0.5
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb3.8						
GTA	Gaotai	32.88	297	eP	P	05 18 27.7	-0.5
GTA				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.0						
ZAK	Zakamensk	33.10	317	eP	P	05 18 30.3	+0.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb3.8						
TLY	Talaya	33.44	320	eP	P	05 18 32.9	-0.1
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
CHTO	Chiang Mai	37.68	262	eP	P	05 19 07.9	-0.6
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.2						
CHTO	Chiang Mai	37.68	262	eP	P	05 19 07.9	-0.6
	comp=Z,11nm,0.9s,mb4.2						
BILL	Bilibino	41.08	15	eP	P	05 19 37.2	+1.2
BILL				e*PP	pP	05 20 56.5	-2.2
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.1						
KAKA	Kakadu	43.22	189	eP	P	05 19 53.3	+0.3
	comp=Z,7.4nm,1.0s,mb4.0						
ZAL	Zalesovo	44.99	318	P	P	05 20 06.2	-0.6
	comp=Z,1.7nm,0.4s,mb3.8,baz=339,slow=7.5,SNR=5.8						
ZAL	Zalesovo	44.99	318	P	P	05 20 06.2	-0.6
JIRN	Jiri	45.60	280	eP	P	05 20 12.4	+0.9
	comp=Z,26nm,0.3s,mb5.0						
GUN	Gumba	45.79	281	eP	P	05 20 13.6	+0.6
	comp=Z,21nm,0.5s,mb4.7						
MKAR	Makanchi Array	46.00	307	P	P	05 20 14.1	-0.5
	comp=Z,1.6nm,0.6s,mb3.5,baz=93,slow=8.7,SNR=18						
MKAR				PcP	PcP	05 21 42.6	+0.1
	comp=Z,0.4nm,0.5s,baz=90,slow=8.5,SNR=3.8						
MKAR				ScP	ScP	05 24 52.6	-0.4
	comp=Z,0.7nm,0.9s,baz=89,slow=7.4,SNR=4.6						
MKAR	Makanchi Array	46.00	307	P	P	05 20 14.1	-0.5
MKAR					pP	05 21 42.7	+3.0
PKI	Pulchoki	46.28	280	eP	P	05 20 16.8	0.0
KKN	Kakani	46.33	281	eP	P	05 20 17.5	+0.3
DMN	Daman	46.53	281	eP	P	05 20 18.9	+0.2
GKN	Gorkha	46.82	281	eP	P	05 20 21.4	+0.5
	comp=Z,7.6nm,0.3s,mb4.5						
KOLN	Koldanda	47.76	281	eP	P	05 20 28.6	+0.6
	comp=Z,32nm,0.9s,mb4.7						
KURK	Kurchatov	48.48	313	⇑eP	P	05 20 32.2	-1.2
WRAB	Tennant Creek	50.16	185	eP	P	05 20 45.3	-0.6
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.2						
WRAB	Tennant Creek	50.16	185	eP	P	05 20 45.3	-0.6
	comp=Z,7.5nm,0.6s,mb4.2						
WB2	Warramunga Arr	50.17	185	eP	P	05 20 45.4	-0.5
BRVK	Borovoye	53.60	316	eP	P	05 21 09.7	-1.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.1						
BRVK	Borovoye	53.60	316	eP	P	05 21 09.7	-1.2
	comp=Z,1.4nm,0.7s,mb3.3						
KDAK	Kodiak Island	53.70	38	P	P	05 21 12.2	+0.6
	comp=Z,3.3nm,0.3s,mb4.1,baz=297,slow=4.5,SNR=22						
AS31	Alice Springs	53.89	185	eP	P	05 21 12.7	-0.2
ASAR	Alice Springs	53.90	185	P	P	05 21 12.7	-0.3
	comp=Z,1.8nm,0.5s,mb3.5,baz=17,slow=12,SNR=30						
ASPA	Alice Springs	53.90	185	eP	P	05 21 12.7	-0.3
MBWA	Marble Bar	54.34	202	eP	P	05 21 15.8	-0.3
	comp=Z,2.5nm,0.6s,mb3.6						
ZRNK	Zerenda	54.38	316	eP	P	05 21 15.4	-1.0
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.3						
ZRNK	Zerenda	54.38	316	eP	P	05 21 15.4	-1.0
	comp=Z,1.5nm,0.5s,mb3.5						
COLA	College	56.00	30	⇑eP	P	05 21 28.4	+0.6
INK	Inuvik	61.40	25	P	P	05 22 04.5	+0.1
	comp=Z,2.3nm,0.7s,mb3.7,baz=281,slow=7.4,SNR=6.4						
KEV	Kevo	68.87	340	ep	P	05 22 50.2	-1.5
	comp=Z,2.9nm,0.7s,mb4.0						
KEV	Kevo	68.87	340	eP	P	05 22 50.2	-1.5
KEV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
ARCES	ARCESS Array B	69.44	340	P	P	05 22 55.1	0.0
	comp=Z,4.0nm,0.6s,mb4.2,baz=64,slow=8.5,SNR=23						
YKA	Yellowknife Ar	70.77	28	P	P	05 23 02.7	-0.3
	comp=Z,2.8nm,0.9s,mb3.8,baz=303,slow=5.5,SNR=4.0						
YKA	Yellowknife Ar	70.77	28	P	P	05 23 02.7	-0.3
JOF	Joensuu	70.77	332	ep	P	05 23 01.0	-2.1
	comp=Z,3.9nm,0.4s,mb4.3						
OBN	Obninsk	72.07	324	eP	P	05 23 09.2	-1.5
OBN				e		05 23 24.2	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
KAF	Kangasniemi	73.18	333	ep	P	05 23 14.8	-2.3
	comp=Z,1.8nm,0.5s,mb3.9,baz=54,slow=5.4						
KAF	Kangasniemi	73.18	333	eP	P	05 23 14.8	-2.3
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
FINES	FINESS Array B	73.64	332	P	P	05 23 19.1	-0.7
	comp=Z,1.9nm,0.5s,mb4.0,baz=74,slow=5.4,SNR=18						
EDM	Edmonton	76.07	36	eP	P	05 23 34.3	+0.8
AKASG	Malin Array Be	78.14	322	P	P	05 23 44.0	-0.9
	comp=Z,0.5nm,0.3s,mb3.6,baz=51,slow=6.0,SNR=11						
NB2	NORSAR Subarra	79.42	337	P	P	05 23 50.7	-1.0
	comp=Z,3.3nm,0.7s,mb4.1,baz=45,slow=5.3						
NOA	NORSAR Array B	79.42	337	P	P	05 23 51.0	-0.6
	comp=Z,3.0nm,0.7s,mb4.1,baz=45,slow=5.2,SNR=15						
HRY	Holter Researc	80.46	41	eP	P	05 23 58.4	+1.2
HLID	Hailey	80.69	45	eP	P	05 23 59.1	+0.7
	comp=Z,0.5nm,0.5s,mb3.5						
DLMT	Dillon	80.78	43	eP	P	05 24 00.3	+1.4
	comp=Z,5.8nm,0.9s,mb4.3						
NVAR	Mina Array Bea	80.94	51	P	P	05 24 01.7	+2.0
	comp=Z,1.2nm,0.8s,mb3.7,baz=276,slow=6.9,SNR=6.9						
BRTR	Keskin Array B	81.50	311	P	P	05 24 02.8	+0.1
	comp=Z,1.8nm,0.8s,mb3.9,baz=101,slow=5.2,SNR=11						
BRTR	Keskin Array B	81.50	311	⇑eP	P	05 24 02.7	+0.1
BRTR	Keskin Array B	81.50	311	P	P	05 24 02.8	+0.2
IMW	Indian Meadow	82.59	43	eP	P	05 24 09.3	+1.1
	comp=Z,3.0nm,0.7s,mb4.1						
FLWY	Flagg Ranch	82.62	43	eP	P	05 24 10.0	+1.7
	comp=Z,4.0nm,0.8s,mb4.2						
TPNV	Topopah Spring	83.10	51	eP	P	05 24 12.0	+1.2
TPNV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
TPNV	Topopah Spring	83.10	51	eP	P	05 24 12.0	+1.2
	comp=Z,1.8nm,0.7s,mb3.9						
HWUT	Hardware Ranch	83.53	45	eP	P	05 24 13.8	+0.9
	comp=Z,13nm,1.0s,mb4.6						
DUG	Dugway	83.55	47	eP	P	05 24 13.2	+0.2
DUG				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.3						
DUG	Dugway	83.55	47	eP	P	05 24 13.2	+0.2
	comp=Z,8.9nm,1.3s,mb4.3						
PDAR	Pinedale Array	84.06	43	P	P	05 24 16.7	+1.1
	comp=Z,1.7nm,0.9s,mb3.8,baz=321,slow=2.1,SNR=13						
DAU	Daniels Canyon	84.41	46	eP	P	05 24 18.9	+1.6
MSU	Marysvale	84.92	48	eP	P	05 24 21.2	+1.4
RWWY	Rawlins	86.10	43	eP	P	05 24 27.1	+1.5
	comp=Z,9.9nm,1.4s,mb4.3						
ANMO	Albuquerque	90.72	48	⇑eP	P	05 24 45.6	-1.5
TORD	Torodi Ar. Bea	120.09	310	PKP	PKPdf	05 30 31.5	-0.6
	comp=Z,0.4nm,0.7s,baz=55,slow=1.4,SNR=4.9						
LPAZ	La Paz	151.82	66	PKPbc	PKPbc	05 31 38.5	+2.2
	comp=Z,1.5nm,1.2s,baz=266,slow=2.6,SNR=5.5						

BJI 01 05:28:30.6,2762N×11988E,h21km,mb4.4,ML4.0,Near coast of southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QZH	Quanzhou	2.91	204	P	Pn	05 29 18.9	+3.3
QZH				PG	Pn	05 29 26.9	+11
QZH				S	Sn	05 29 53.5	+3.6
QZH				SG	Sn	05 30 03.6	+14
QZH				Smax			
	comp=N,520nm,0.4s						
QZH				Smax			
	comp=E,700nm,0.4s						
GZH	Guangzhou	7.44	234	PG	Pn	05 30 39.2	+21
GZH				Smax			
	comp=N,259nm,0.8s						
GZH				Smax			
	comp=E,176nm,0.8s						

*ISCJB **01** 05:33:22.0±5.6,38.3N±0.4×71E±,h10km,Error ellipse: s-maj=134.7km s-min=7.0km az=129.5*
*NEIC **01** 05:33:21.7±12.0,37.85N×69.39E,h75km±71km,mb4.4/7, Error ellipse: s-maj=238.6km s-min=9.0km az=62.0*
ISC 01 05:33:19.6±3.7,380N±02×698E±06,h10km,n14,σ0s97/16, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.13	6	Pn	Pn	05 34 38.4	+1.9
	1.0nm,0.4s,baz=276,slow=43,SNR=17						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KK31				Pg	Pg	05 34 57.3	-0.5
	2.4nm,0.6s,baz=245,slow=58,SNR=4.8						
KK31				Lg		05 36 17.9	
	16nm,1.0s,baz=240,slow=82,SNR=5.6						
KK31	Karatay Array	5.13	6	Pn	Pn	05 34 38.4	+1.9
KK31				Pg	Pg	05 34 57.2	-0.6
KK31				Lg		05 36 17.9	
KK31	Karatay Array	5.13	6	Pn	Pn	05 34 38.3	+1.9
	1.0nm,0.4s,SNR=17						
KK31	Karatay Array	5.13	6	Pg	Pg	05 34 57.3	-0.5
	2.4nm,0.6s,baz=245,SNR=4.8						
KK31				Lg		05 36 17.9	
	16nm,1.0s,baz=240,SNR=5.6						
ZRNK	Zerenda	14.96	358	eP	Pn	05 36 49.2	-1.9
	2.7nm,0.9s						
BRVK	Borovoye	15.06	1	eP	Pn	05 36 53.6	+1.1
	2.4nm,0.6s						
KOLN	Koldanda	15.43	127	eP	Pn	05 36 58.3	+1.0
CHKZ	Chkalovo	15.69	2	eP	Pn	05 37 00.3	-0.4
	1.1nm,0.5s						
GKN	Gorkha	15.93	124	eP	Pn	05 37 04.0	+0.2
	16nm,0.5s						
KKN	Kakani	16.50	124	eP	Pn	05 37 11.3	+0.2
	40nm,0.7s						
DMN	Daman	16.50	124	eP	Pn	05 37 11.1	-0.1
PKI	Pulchoki	16.73	124	eP	Pn	05 37 12.9	-1.1
	36nm,0.7s						
GUN	Gumba	16.82	122	eP	Pn	05 37 15.2	+0.1
	16nm,0.4s						
JIRN	Jiri	17.19	122	eP	Pn	05 37 19.1	-0.7
	17nm,0.5s						

*NEIC **01** 05:55:08.6,2742S×7152W,h40km,MG3.5(GUC),After GUC.*

GUC 01 05:55:08.6±0.6,2742S×7152W,h40km,MD3.6,ML3.5, 2C-5D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CDCH	Caldera	0.71	61	⇓iP	Pn	05 55 22.0	-0.1
CDCH				iS	Sn	05 55 32.6	+0.8
CPCH	Copiapo	1.04	87	⇑iP	Pn	05 55 26.3	-0.4
CPCH				iS	Sn	05 55 40.9	+0.9
CPCH				AML	AML	05 55 42.1	
	comp=E,4µm,0.1s						
CPCH	Copiapo	1.04	87	⇑iP	Pn	05 55 26.3	-0.4
CPCH				iS	Sn	05 55 40.9	+0.9
VACH	Vallenar	1.34	150	⇓iP	Pn	05 55 32.3	+1.5
VACH				iS	Sn	05 55 49.3	+2.0
VACH				AML	AML	05 55 51.3	
	comp=E,1µm,0.1s						
VACH	Vallenar	1.34	150	⇓iP	Pn	05 55 32.3	+1.5
VACH				iS	Sn	05 55 49.3	+2.0
LCO	Las Campanas	1.75	156	eP	Pn	05 55 38.3	+1.9
LCO				iS	Sn	05 56 00.6	+3.1
TLL	Tololo Astrono	2.81	167	⇓iP	Pn	05 55 53.0	+1.9
TLL				iS	Sn	05 56 26.4	+2.7
TLL				AML	AML	05 56 33.4	
	comp=N,110nm,0.5s						
TLL	Tololo Astrono	2.81	167	⇓iP	Pn	05 55 53.0	+1.9
TLL				iS	Sn	05 56 26.4	+2.7

MEX 01 05:56:09.8±0.5,1810N×10439W,h20km±108km,MD4.0, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CJM	Chamela	1.52	336	i P	Pn	05 56 32.7	-3.2
CJM				i S	Sn	05 56 51.2	-4.0
SFJM	Santa Fe	2.69	28	i P	Pn	05 56 50.3	-1.7
SFJM				i S	Sn	05 57 20.5	-3.5
MOIG	Morelia	3.41	62	i P	Pn	05 57 00.3	-1.5
MOIG				i S	Sn	05 57 38.3	-3.4
MEIG	Mezcala	4.54	91	i S	Sn	05 58 06.3	-3.2
PLIG	Platanillo	4.65	86	i S	Sn	05 58 09.5	-2.8
IIZ	Mezontepec	5.00	77	eP	Pn	05 57 24.0	+0.4
IIZ				i S	Sn	05 58 19.7	-1.2
PPM	Popocatepetl	5.55	79	i S	Sn	05 58 32.2	-2.1
UTMO	Huajuapan	6.27	91	i S	Sn	05 58 49.7	-2.6

ISC 01 05:58:12.7±0.6,3941N±003×4079E±006,h10km,n7, σ1^{s}22/14,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.53	148	i P	Pg	05 58 22.2	-0.8
BNGL				i S	Sg	05 58 30.2	+0.1
BINT	Bingol	0.58	204	PG	Pg	05 58 21.6	-2.3
BINT				SG	Sg	05 58 30.9	-0.6
EZM	Erzurum	0.67	41	PG	Pg	05 58 24.3	-1.3
EZM				SG	Sg	05 58 34.2	-0.1
ERZM	Erzurum	0.67	41	i P	Pg	05 58 24.6	-1.0
ERZM				i S	Sg	05 58 35.6	+1.2
KELT	Kelkit	1.40	303	i P	Pn	05 58 37.4	-0.8
KELT				i S	Sn	05 58 58.4	+1.7
BEST	Besiri	1.56	166	i P	Pn	05 58 40.9	+0.4
BEST				i S	Sn	05 59 02.8	+2.1
MARD	Mardin	2.09	180	i P	Pn	05 58 49.1	+1.4
MARD				i S	Sn	05 59 18.3	+4.5

BJI 01 06:07:03.4,2773N×12005E,h12km,mB4.4,mb4.2, ML4.5,Ms4.2,Msz3.8,2C,Near coast of southeastern China

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
QZH	Quanzhou	3.07	206	P	Pn	06 07 51.5	-0.2
QZH				PG	Pg	06 07 59.4	-2.8
QZH				S	Sn	06 08 27.7	-0.6
QZH				SG	Sg	06 08 35.8	-6.2
QZH				Smax			
	comp=N,2µm,0.6s						
QZH				Smax			
	comp=E,2µm,0.7s						
SSE	Sheshan	3.50	16	PG	Pg	06 08 01.2	-9.2
SSE				Smax			
	comp=N,702nm,0.8s						
SSE				Smax			
	comp=E,444nm,0.7s						
NJ2	Nanjing	4.43	347	eP	Pn	06 08 11.4	+1.0
NJ2				PG	Pg	06 08 26.8	-1.5
NJ2				S	Sn	06 09 01.8	-0.1
NJ2				SG	Sg	06 09 21.6	-4.1
NJ2				Smax			
	comp=N,3µm,0.8s						
NJ2				Smax			
	comp=E,2µm,1.0s						
WHN	Wuhan	5.72	301	⇑P	Pn	06 08 29.4	+1.3
WHN				S	Sn	06 09 30.5	-3.2
WHN				Smax			
	comp=N,490nm,1.0s						
WHN				Smax			
	comp=E,332nm,0.8s						
WHN				LR	LR		
	comp=Z,2µm,5.4s						
GYA	Guiyang	11.99	267	⇑iP	Pn	06 09 58.6	+4.5
GYA				AP		06 10 02.8	
GYA				XP		06 10 05.7	
GYA				PP		06 10 09.4	
GYA				S	Sn	06 12 12.5	+4.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
GYA				AMB	AMB		
	comp=Z,90nm,3.5s						
GYA				LR	LR		
	comp=N,250nm,4.2s						
GYA				LR	LR		
	comp=E,400nm,5.7s						
GYA				LR	LR		
	comp=Z,370nm,4.8s						
BJI	Beijing	12.69	346	P	Pn	06 10 08.0	+4.3
BJI				AMB	AMB		
	comp=Z,4.0nm,0.7s						
BJI				LR	LR		
	comp=N,219nm,10.4s						
BJI				LR	LR		
	comp=E,265nm,9.5s						
BJI				LR	LR		
	comp=Z,69nm,20.4s						
SNY	Shenyang	14.36	11	eP	Pn	06 10 26.2	-0.2
SNY				S	Sn	06 13 05.3	-0.3
SNY				XS		06 13 12.0	
SNY				AMB	AMB		
	comp=Z,7.0nm,1.9s						
SNY				AMB	AMB		
	comp=Z,113nm,4.7s						
SNY				LR	LR		
	comp=N,292nm,10.6s						
SNY				LR	LR		
	comp=Z,288nm,11.7s						
LZH	Lanzhou	16.07	305	eP	Pn	06 10 50.0	+0.8
LZH				AP	pP	06 10 54.0	-1.9
LZH				XP	sP	06 10 56.5	-1.0
LZH				PP		06 11 03.0	
LZH				eS	Sn	06 13 47.4	+0.1
LZH				SS		06 14 07.0	
LZH				AMB	AMB		
	comp=Z,13nm,1.0s						
LZH				AMB	AMB		
	comp=Z,80nm,4.9s						
LZH				LR	LR		
	comp=N,473nm,8.9s						
LZH				LR	LR		
	comp=Z,612nm,10.5s						
GTA	Gaotai	20.44	310	eP	P	06 11 46.6	+6.0
GTA				AP	pP	06 11 54.9	+11
GTA				AMB	AMB		
	comp=Z,3.0nm,2.0s						

*BJI **01** 06:08:30.8,543S×15202E,h146km,mB4.8,mb4.8*
*NEIC **01** 06:08:36.6±0.3,474S×15173E,mb4.9/22,Error ellipse: s-maj=8.2km s-min=5.7km az=95.0*
*HRVD **01** 06:08:36.6±0.4,483S×15196E,h172km±4km,MW5.1/49, Centroid moment Tensor Solution. LP body waves: s13,c15;Mantle waves: s49,c70; Half duration: 0 Moment tensor: Scale 10[16]Nm; Mrr0.69±.20; Mθθ-4.11±.22; Mφφ3.42±.23; Mrθ1.62±.16; Mθφ-0.82±.28; Mφr2.11±.16; Best double couple: Mo4.71300×10[16] NP1:φs307.00000°,δ55.00000°,λ173.00000°. NP2: φs41.00000°,δ84.00000°,λ36.00000°. Principal axes: T 4.5680, Plg29.0000°, Azm270.0000°; N 0.2870, Plg54.0000°, Azm49.0000°; P -4.8580, Plg20.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **01** 06:08:37.3±0.7,482S×15169E,h150km±5km,mb4.2/13, mb1 4.3/14,mb1mx4.3/18,mbtmp4.6/14,MS3.8/2, Ms1 3.8/2,ms1mx3.2/16 Error ellipse: s-maj=16.6km s-min=12.2km az=74.0*
*ISCJB **01** 06:08:37.8±1.3,484S±005×15171E±007,h167km±11km, mb4.6/39,Error ellipse: s-maj=11.6km s-min=8.0km az=21.8*
*MOS **01** 06:08:39.7±0.8,477S×15148E,h181km,mb4.5/7,Error ellipse: s-maj=14.8km s-min=10.5km az=72.0*

ISC 01 06:08:40.0±1.1,490S±005×15172E±007,h173km±9km, h151km±4.2km:pP-P,n80,σ0^{s}87/82,mb4.6/38,5C-1D,New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.36	225	P	Pn	06 10 11.6	0.0
	4.3nm,0.3s,baz=46,slow=3.8,SNR=15						
PMG				S	Sn	06 11 22.5	-1.2
	47nm,0.3s,baz=274,slow=19,SNR=16						
PMG	Port Moresby	6.36	225	eP	Pn	06 10 11.8	+0.2
PMG				e		06 11 23.2	
PMG				pmax	pmax		
	comp=Z,182nm,0.9s						
PMG	Port Moresby	6.36	225	ePn	Pn	06 10 11.8	+0.2
	comp=Z,182nm,0.9s						
PMG				eSn	Sn	06 11 23.2	-0.5
CTA	Charters Tower	16.00	199	eP	Pn	06 12 16.6	+1.0
	comp=Z,15nm,0.8s						
CTA	Charters Tower	16.00	199	P	Pn	06 12 15.9	+0.4
	comp=Z,0.5nm,0.3s,baz=27,slow=13,SNR=18						
CTA	Charters Tower	16.00	199	eP	Pn	06 12 16.6	+1.0
CTA				pmax	pmax		
	comp=Z,15nm,0.8s						
CTAO	Charters Tower	16.00	199	eP	Pn	06 12 16.3	+0.7
CTAO				pmax	pmax		
	comp=Z,38nm,1.1s						
CTAO	Charters Tower	16.00	199	eP	Pn	06 12 16.3	+0.8
	comp=Z,38nm,1.1s						
KAKA	Kakadu	20.56	247	⇑iP	P	06 13 04.6	-0.5
	comp=Z,129nm,0.5s						
KAKA				eS	S	06 16 49.1	+3.7
DZM	Mont Dzumac	22.24	141	eP	P	06 13 20.7	-1.9
DZM	Mont Dzumac	22.24	141	P	P	06 13 22.5	-0.2
	comp=Z,18nm,0.5s,mb4.8,baz=336,slow=8.6,SNR=52						
WRAB	Tennant Creek	22.56	227	⇑eP	P	06 13 25.3	-0.3
WRAB				pmax	pmax		
	comp=Z,143nm,0.6s,mb5.6						
WRAB	Tennant Creek	22.56	227	⇑eP	P	06 13 25.3	-0.3
	comp=Z,144nm,0.6s,mb5.6						
WB2	Warramunga Arr	22.57	227	⇑iP	P	06 13 25.7	+0.1
WB2				eS	S	06 17 20.7	+0.8
AS31	Alice Springs	25.36	221	eP	P	06 13 51.9	+0.9
AS31				eS	S	06 18 03.5	-0.9
ASAR	Alice Springs	25.36	221	P	P	06 13 51.3	+0.3
	comp=Z,17nm,0.7s,mb4.7,baz=52,slow=9.1,SNR=60						
ASAR				pP	pP	06 14 23.1	-3.1
	comp=Z,12nm,0.8s,baz=53,slow=8.1,SNR=6.0						
ASAR				sP	sP	06 14 39.4	-6.9
	comp=Z,18nm,0.7s,baz=54,slow=8.5,SNR=6.9						
ASAR				S	S	06 18 04.8	+0.4
	comp=Z,1.2nm,0.7s,baz=55,slow=16,SNR=5.6						
ASPA	Alice Springs	25.36	221	eP	P	06 13 51.9	+0.9
ASPA				eS	S	06 18 03.5	-0.9
ARMA	Armidale	25.38	180	eP	P	06 13 52.1	+0.9
FITZ	Fitzroy Crossi	28.67	241	⇑iP	P	06 14 20.0	-0.5
	comp=Z,45nm,0.6s,mb5.4						
FITZ	Fitzroy Crossi	28.67	241	P	P	06 14 20.1	-0.4
	comp=Z,22nm,0.5s,mb5.2,baz=65,slow=8.0,SNR=164						
MBWA	Marble Bar	34.99	240	eP	P	06 15 15.2	-0.5
	comp=Z,16nm,0.6s,mb4.8						
URZ	Urewera	40.45	149	P	P	06 16 02.0	+0.5
	comp=Z,7.1nm,0.6s,mb4.5,baz=173,slow=7.8,SNR=8.5						
KLBR	Kellerberrin	41.45	226	eP	P	06 16 08.8	-0.9
	comp=Z,48nm,1.5s,mb4.9						
KSM	Kuching	41.85	278	eP	P	06 16 13.6	+0.7
RPZ	Rata Peaks	42.25	159	P	P	06 16 16.5	+0.4
	comp=Z,25nm,0.9s,mb4.8,baz=213,slow=12,SNR=8.0						
RPZ				LR	LR	06 30 49.1	
	comp=Z,102nm,19.3s,baz=185,slow=32						
NWAO	Narrogin (SRO)	42.55	225	P	P	06 16 17.9	-0.7
	comp=Z,5.7nm,0.6s,mb4.4,baz=44,slow=11,SNR=5.3						
MUN	Mundaring	42.77	227	eP	P	06 16 20.3	-0.1
NJ2	Nanjing	48.25	322	eP	P	06 17 04.5	+1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
MDJ	Mudanjiang	53.15	340	P	P	06 17 41.0	+1.1
MDJ				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,80nm,5.7s						
PSI	Prapat	53.30	277	P	P	06 17 40.1	-0.9
	comp=Z,5.1nm,0.7s,mb4.4,baz=103,slow=0.9,SNR=4.5						
XAN	Xi'an	55.96	317	P	P	06 17 59.9	-0.3
XAN				AMB	AMB		
	comp=Z,14nm,1.3s,mb4.6						
KMI	Kunming	56.15	305	P	P	06 18 03.2	+1.6
KMI				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.7						
KMI				LR	LR		
	comp=Z,49nm,32.5s						
HHC	Hu-ho-hao-te	58.51	325	eP	P	06 18 19.2	+1.2
HHC				PCP	PcP	06 19 07.2	+0.6
HHC				PP	PP	06 20 32.3	+2.9
HHC				SCP	ScP	06 22 49.9	-0.5
HHC				PCS	PcS	06 23 00.3	-8.1
HHC				S	S	06 26 08.1	+0.2
HHC				XS	sS	06 27 18.3	+1.2
HHC				SCS	ScS	06 27 47.7	-2.8
HHC				AMB	AMB		
	comp=Z,18nm,0.4s,mb5.2						
HHC				AMB	AMB		
	comp=Z,100nm,4.9s						
HHC				LR	LR		
	comp=N,86nm,16.1s						
HHC				LR	LR		
	comp=E,74nm,18.0s						
HHC				LR	LR		
	comp=Z,102nm,18.0s						
LZH	Lanzhou	60.56	316	eP	P	06 18 32.5	+0.5
LZH				AMB	AMB		
	comp=Z,21nm,1.4s,mb4.8						
GTA	Gaotai	65.00	318	eP	P	06 19 02.1	+0.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
ULN	Ulaanbaatar	65.52	329	eP	P	06 19 04.9	+0.2
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
ULN	Ulaanbaatar	65.52	329	eP	P	06 19 04.9	+0.2
	comp=Z,7.4nm,0.9s,mb4.5						
SONM	Songino Array	65.84	328	P	P	06 19 06.6	-0.2
	comp=Z,3.9nm,0.5s,mb4.5,baz=146,slow=4.8,SNR=31						
SONM				pP	pP	06 19 43.1	-4.5
	comp=Z,1.1nm,0.8s,baz=148,slow=8.7,SNR=1.9						
SONM				sP	sP	06 19 59.6	-6.6
	comp=Z,1.9nm,1.0s,baz=142,slow=6.4,SNR=2.8						
SONM	Songino Array	65.84	328	P	P	06 19 06.6	-0.2
SONM				*PP	pP	06 19 43.1	-4.5
ZAK	Zakamensk	69.02	329	⇓iP	P	06 19 26.3	-0.5
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
TLY	Talaya	69.63	330	eP	P	06 19 30.3	-0.2
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
TLY	Talaya	69.63	330	eP	P	06 19 30.3	-0.2
	comp=Z,2.6nm,0.6s,mb4.1						
JIRN	Jiri	70.92	301	eP	P	06 19 38.9	+0.6
	comp=Z,21nm,0.8s,mb4.9						
GUN	Gumba	71.25	301	eP	P	06 19 40.0	-0.3
	comp=Z,49nm,0.8s,mb5.3						
PKI	Pulchoki	71.56	301	eP	P	06 19 42.3	+0.1
KKN	Kakani	71.73	301	eP	P	06 19 43.5	+0.3
	comp=Z,32nm,0.9s,mb5.1						
KKN	Kakani	71.73	301	eP	P	06 19 43.5	+0.3
KKN				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
DMN	Daman	71.83	301	eP	P	06 19 44.4	+0.6
	comp=Z,53nm,0.9s,mb5.3						
GKN	Gorkha	72.34	301	eP	P	06 19 46.0	-0.8
	comp=Z,59nm,1.0s,mb5.3						
VNDA	Vanda	72.77	178	P	P	06 19 49.7	+0.4
	comp=Z,0.6nm,0.8s,mb3.4,baz=347,slow=6.5,SNR=3.6						
KOLN	Koldanda	73.16	301	eP	P	06 19 51.7	+0.1
	comp=Z,36nm,0.8s,mb5.1						
WMQ	Urumqi	75.09	318	eP	P	06 20 02.5	-0.3
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.5						
MKAR	Makanchi Array	79.70	319	P	P	06 20 28.3	-0.1
	comp=Z,4.6nm,0.8s,mb4.1,baz=106,slow=6.4,SNR=32						
ZAL	Zalesovo	80.65	327	P	P	06 20 32.3	-1.2
	comp=Z,2.1nm,0.5s,mb4.0,baz=344,slow=7.7,SNR=6.9						
MCK	McKinley	81.37	23	eP	P	06 20 35.7	-1.6
MCK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
MCK	McKinley	81.37	23	eP	P	06 20 35.7	-1.6
	comp=Z,3.3nm,1.0s,mb3.9						
NVS	Novosibirsk	81.83	327	eP	P	06 20 37.1	-2.6
ULHL	Ulahol	82.61	314	P	P	06 20 44.4	+0.7
	SNR=5.0						
KURK	Kurchatov	83.19	322	eP	P	06 20 45.3	-1.4
KURK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
KURK	Kurchatov	83.19	322	eP	P	06 20 45.3	-1.4
	comp=Z,14nm,1.1s,mb4.6						
TKM2	Tokmak 2	83.23	314	P	P	06 20 47.4	+0.5
	SNR=8.1						
KZA	Kyzart	83.29	313	P	P	06 20 48.7	+1.4
	SNR=7.0						
FRU	Bishkek	83.91	314	eP	P	06 20 50.0	-0.4
USP	Ospenovka	84.09	314	P	P	06 20 51.5	+0.3
	SNR=14						
AML	Almayashu	84.43	313	P	P	06 20 54.5	+1.4
	SNR=11						
EKS2	Erkin-Say	84.48	314	P	P	06 20 54.0	+0.8
	SNR=15						
QSPA	South Pole Qui	85.06	180	eP	P	06 20 56.5	+0.3
	comp=Z,2.0nm,0.7s,mb4.0						
CHKZ	Chkalovo	88.66	324	eP	P	06 21 11.6	-1.9
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
CHKZ	Chkalovo	88.66	324	eP	P	06 21 11.6	-1.9
	comp=Z,3.3nm,0.6s,mb4.4						
BRVK	Borovoye	88.75	323	eP	P	06 21 12.6	-1.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BRVK	Borovoye	88.75	323	eP	P	06 21 12.6	-1.4
	comp=Z,2.2nm,0.7s,mb4.2						
ZRNK	Zerenda	89.49	323	eP	P	06 21 15.6	-1.8
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
ZRNK	Zerenda	89.49	323	eP	P	06 21 15.6	-1.9
	comp=Z,1.5nm,0.5s,mb4.2						
NVAR	Mina Array Bea	92.99	52	P	P	06 21 34.0	+0.4
	comp=Z,3.8nm,1.1s,mb4.4,baz=245,slow=5.4,SNR=8.5						
NVAR				pP	pP	06 22 10.2	-6.6
	comp=Z,1.5nm,0.8s,baz=262,slow=7.3,SNR=5.0						
PDAR	Pinedale Array	99.71	48	P	Pdif	06 22 03.6	-0.4
	comp=Z,0.5nm,0.8s,baz=259,slow=3.0,SNR=4.4						
PDAR				pP	pP	06 22 39.1	-8.3
	comp=Z,0.6nm,0.8s,baz=259,slow=1.5,SNR=4.3						
PDAR				LR	LR	07 02 58.0	
	comp=Z,36nm,18.5s,baz=78,slow=33						
GERES	GERESS Array B	123.58	328	PKP	PKPdf	06 27 16.7	-0.1
	comp=Z,0.9nm,0.5s,baz=80,slow=1.5,SNR=8.4						
LPAZ	La Paz	135.31	119	PKP	PKPdf	06 27 42.1	+3.1
	comp=Z,0.9nm,0.8s,baz=288,slow=8.7,SNR=5.1						
TOA0	Torodi Ar. Sit	149.31	288	ePKPbc	PKPbc	06 28 08.3	0.0
TORD	Torodi Ar. Bea	149.31	288	PKP	PKPdf	06 28 04.7	+1.0
	comp=Z,13nm,1.0s,baz=18,slow=2.0,SNR=8.9						
TORD				PKPbc	PKPbc	06 28 08.6	+0.3
	comp=Z,13nm,1.0s,baz=47,slow=2.8,SNR=41						
DBIC	Dimbokro	156.63	275	PKPab	PKPab	06 28 44.5	+0.2
	comp=Z,4.3nm,0.8s,baz=43,slow=4.7,SNR=4.7						

*ISCJB **01** 07:49:03.0±4.4,49S±02×1537E±04,h153km±30km, mb4.3/11,Error ellipse: s-maj=59.4km s-min=22.9km az=19.5*
*IDC **01** 07:49:03.7±6.4,490S×15372E,h146km±50km,mb3.8/4, mb1 3.9/6,mb1mx3.8/14,mbtmp4.3/6,Error ellipse: s-maj=54.2km s-min=28.8km az=92.0*
*NEIC **01** 07:49:03.7±2.6,483S×15366E,h147km±20km,mb4.5/9, Error ellipse: s-maj=24.6km s-min=13.0km az=94.0*

ISC 01 07:49:03.7±4.2,48S±01×1536E±03,h142km±29km,n22, σ0^{s}54/20,mb4.3/11,New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.88	234	P	Pn	07 50 55.3	-0.1
	9.5nm,0.3s,baz=56,slow=6.2,SNR=19						
CTA	Charters Tower	16.80	205	P	Pn	07 52 50.7	+0.2
	0.2nm,0.3s,baz=24,slow=14,SNR=4.0						
CTA	Charters Tower	16.80	205	P	Pn	07 52 50.7	+0.2
CTAO	Charters Tower	16.80	205	eP	Pn	07 52 49.8	-0.6
	3.7nm,0.6s						
KAKA	Kakadu	22.35	248	eP	P	07 53 49.5	-0.5
	14nm,0.6s,mb4.6						
WRAB	Tennant Creek	24.05	230	eP	P	07 54 05.9	+0.3
	21nm,0.6s,mb4.8						
WB2	Warramunga Arr	24.05	230	eP	P	07 54 06.3	+0.7
AS31	Alice Springs	26.70	224	eP	P	07 54 29.7	+0.1
ASAR	Alice Springs	26.70	224	P	P	07 54 29.8	+0.2
	3.6nm,0.6s,mb4.2,baz=55,slow=8.8,SNR=39						
ASPA	Alice Springs	26.71	224	eP	P	07 54 29.8	+0.2
FITZ	Fitzroy Crossi	30.38	242	eP	P	07 55 02.2	0.0
	13nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	30.38	242	P	P	07 55 02.3	+0.1
	6.8nm,0.6s,mb4.6,baz=81,slow=7.5,SNR=49						
FORT	Forrest	35.31	220	eP	P	07 55 44.9	-0.1
	40nm,0.6s,mb5.2						
MBWA	Marble Bar	36.68	241	eP	P	07 55 56.5	-0.2
	3.8nm,0.5s,mb4.3						
KLBR	Kellerberrin	42.90	227	eP	P	07 56 47.6	-0.5
	11nm,0.6s,mb4.7						
SONM	Songino Array	66.77	327	P	P	07 59 40.8	+1.1
	0.6nm,0.6s,mb3.6,baz=146,slow=5.7,SNR=4.8						
MKAR	Makanchi Array	80.87	319	P	P	08 01 02.5	+0.6
	1.0nm,0.7s,mb3.5,baz=93,slow=7.1,SNR=8.6						
MKAR				pP	pP	08 01 34.1	-3.1
	0.7nm,0.9s,baz=116,slow=5.5,SNR=2.9						
MKAR	Makanchi Array	80.87	319	P	P	08 01 02.5	+0.6
MKAR				pP	pP	08 01 34.1	-3.1
CHKZ	Chkalovo	89.70	324	eP	P	08 01 44.4	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.7nm,0.4s,mb3.9						
ZRNK	**Zerenda**	**90.56**	**323**	eP	**P**	**08 01 49.2**	**-0.5**
	0.8nm,0.5s,mb4.0						
BDFB	**Brasilia**	**150.47**	**134**	PKPbc	PKPbc	08 08 38.5	+0.1
	1.7nm,0.5s,baz=190,slow=5.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	**151.09**	**289**	PKPbc	PKPbc	08 08 40.4	+0.5
	1.8nm,0.6s,baz=74,slow=1.8,SNR=30						

IDC 01 07:58:28.6±9.4**, 218N×12836E, h176**km±86km**, mb3.7**/6**, mb1 3.8**/6**, mb1mx3.7**/14**, mbtmp4.2**/6**, Error ellipse: s-maj=147.7km s-min=16.7km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.25**	**168**	P	P	08 03 47.5	+0.2
	1.2nm,0.4s,baz=352,slow=7.9,SNR=21						
ASAR				PcP	PcP	08 07 09.8	+0.7
	0.4nm,0.4s,baz=344,slow=2.1,SNR=4.3						
SONM	**Songino Array**	**49.29**	**341**	P	P	08 06 59.9	+0.4
	1.0nm,0.6s,baz=154,slow=7.5,SNR=5.9						
MKAR	**Makanchi Array**	**59.75**	**325**	P	P	08 08 15.1	+0.3
	3.7nm,0.5s,baz=117,slow=8.3,SNR=46						
BVAR	**Borovoye Array**	**69.50**	**327**	P	P	08 09 17.8	-0.2
	1.4nm,0.7s,baz=134,slow=6.4,SNR=7.6						
VNDA	**Vanda**	**81.69**	**173**	P	P	08 10 26.9	-0.4
	0.9nm,0.7s,baz=327,slow=5.3,SNR=3.4						
ARCES	**ARCESS Array B**	**92.46**	**340**	P	P	08 11 18.2	-1.2
	1.9nm,0.9s,baz=60,slow=4.9,SNR=4.3						

CASC 01 08:00:42.9±2.9**, 1334N×9059W, h20**km±24km**, MD3.9, 5C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.84**	**9**⇓	eP	Pb	08 00 57.9	-0.8
IXG				eS	Sb	08 01 11.5	+1.9
SBLS	**San Blas**	**1.06**	**62**	eP	x	08 01 04.5	
SBLS				eS	x	08 01 18.9	
RTR	**El Retiro**	**1.07**	**59**	eP	x	08 01 04.7	
RTR				eS	x	08 01 19.4	
SNJE	**San Jose**	**1.09**	**61**⇑	eP	x	08 01 05.0	
SNJE				eS	x	08 01 21.2	
RBDL	**Robledal**	**1.17**	**49**	eP	x	08 01 06.9	
RBDL				eS	x	08 01 22.3	
BOQS	**Boqueron**	**1.33**	**73**	eP	x	08 01 07.6	
BOQS				eS	x	08 01 25.1	
TP2	**Tecpan 2**	**1.49**	**344**⇑	eP	Pn	08 01 08.7	+0.1
TP2				eS	Sn	08 01 29.9	+2.5
LFU	**La Fuente**	**1.49**	**74**	eP	x	08 01 10.3	
LFU				eS	x	08 01 31.6	
LFRS	**El Faro**	**1.52**	**79**⇑	eP	x	08 01 09.7	
MTO2	**Montecristo 2**	**1.59**	**49**	eP	x	08 01 13.3	
MTO2				eS	x	08 01 34.4	
LCBS	**La Ceiba**	**1.60**	**79**⇑	eP	x	08 01 11.4	
LCBS				eS	x	08 01 33.8	
SNVI	**San Vicente**	**1.73**	**81**	eP	x	08 01 12.8	
SNVI				eS	x	08 01 35.9	
BLLM	**Bellamira**	**2.29**	**87**⇑	eP	x	08 01 18.8	

*GUC **01** 08:06:19.8±1.3, 3136S×6895W, h153km±28km, ML4.8*
*MOS **01** 08:06:19.3±1.0, 3146S×6859W, h105km, mb4.9/22, Error ellipse: s-maj=13.4km s-min=7.2km az=97.1*
*ISCJB **01** 08:06:20.3±0.2, 3145S±0.02×6868W±0.03, h109km, mb4.8/63, Error ellipse: s-maj=3.9km s-min=2.9km az=39.7*
*BJI **01** 08:06:20.9, 3150S×6870W, h108km, mB4.9*
*IDC **01** 08:06:20.5±0.5, 3149S×6860W, h103km±3km, mb4.4/12, mb1 4.5/15, mb1mx4.4/18, mbtmp4.7/15, MS3.5/3, Ms1 3.5/3, ms1mx3.1/22, Error ellipse: s-maj=16.1km s-min=11.1km az=61.0*
*NEIC **01** 08:06:21.0±0.2, 3149S×6867W, mb4.9/55, Error ellipse: s-maj=5.1km s-min=3.7km az=94.0*
NEIC Felt [III] at San Juan.

ISC 01 08:06:21.8±0.2**, 3149S**±002×**6875W**±004**, h111**km**, h111**km±1.1km**: pP-P, n344,** σ0.87/326**, mb4.8**/63**, 59C-81D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.45**	**105**	P	**Pn**	**08 06 36.5**	**-2.0**
CFAA				S	**Sn**	**08 06 48.7**	**-2.2**
	246nm,0.3s,baz=164,slow=21,SNR=236						
CFAA	**Coronel Fontan**	**0.45**	**105**	P	**Pn**	**08 06 36.5**	**-2.0**
CFAA				S	**Sn**	**08 06 48.7**	**-2.2**
MDZ	**Mendoza**	**1.40**	**184**⇓	iP	**Pn**	**08 06 47.1**	**-0.4**
MDZ				i		08 06 48.7	
MDZ				i		08 07 00.7	
MDZ				i S	**Sn**	**08 07 04.9**	**-2.0**
CMCH	**Combarbala**	**1.95**	**279**⇓	iP	**Pn**	**08 06 53.3**	**-1.0**
CMCH				i S	**Sn**	**08 07 18.4**	**-0.6**
CMCH				AML	AML	08 07 20.5	
	comp=E,34μm,0.5s						
CMCH	**Combarbala**	**1.95**	**279**⇓	iP	**Pn**	**08 06 53.3**	**-1.0**
CMCH				i S	**Sn**	**08 07 18.4**	**-0.6**
JACH	**Jahuel**	**1.97**	**232**	eP	**Pn**	**08 06 54.5**	**+0.1**
TLL	**Tololo Astrono**	**2.20**	**306**⇑	iP	**Pn**	**08 06 56.9**	**-0.5**
TLL				i S	**Sn**	**08 07 24.4**	**-0.3**
TLL				AML	AML	08 07 32.0	
	comp=N,5μm,0.6s						
TLL	**Tololo Astrono**	**2.20**	**306**⇑	iP	**Pn**	**08 06 56.9**	**-0.5**
TLL				i S	**Sn**	**08 07 24.4**	**-0.3**
FCH	**Farellones**	**2.25**	**215**⇑	iP	**Pn**	**08 06 58.5**	**+0.5**
FCH				eS	**Sn**	**08 07 28.2**	**+2.3**
OVCH	**Ovalle**	**2.28**	**292**	eP	**Pn**	**08 06 56.5**	**-1.9**
OVCH				i S	**Sn**	**08 07 24.4**	**-2.1**
OVCH				AML	AML	08 07 28.6	
	comp=N,5μm,0.3s						
OVCH	**Ovalle**	**2.28**	**292**	eP	**Pn**	**08 06 56.5**	**-1.9**
OVCH				i S	**Sn**	**08 07 24.4**	**-2.1**
PEL	**Peldehue**	**2.33**	**224**⇓	iP	**Pn**	**08 06 57.8**	**-1.3**
PEL				i S	**Sn**	**08 07 27.8**	**+0.2**
CHNG	**Los Chungos**	**2.38**	**260**⇓	iP	**Pn**	**08 06 57.9**	**-1.8**
CHNG				i S	**Sn**	**08 07 26.9**	**-1.8**
CLCH	**Cerro Calan**	**2.43**	**218**⇑	iP	**Pn**	**08 07 00.1**	**-0.2**
CLCH				i S	**Sn**	**08 07 30.8**	**+0.9**
STL	**Santa Lucia**	**2.52**	**219**	eP	**Pn**	**08 07 00.6**	**-0.9**
STL				i S	**Sn**	**08 07 32.3**	**+0.3**
SJCH	**San Jose de Ma**	**2.54**	**212**	eP	**Pn**	**08 07 01.1**	**-0.8**
SJCH				i S	**Sn**	**08 07 34.7**	**+2.2**
PCH	**Pirque**	**2.60**	**215**	eP	**Pn**	**08 07 02.3**	**-0.3**
RCDM	**Rinconada Maip**	**2.65**	**221**⇓	eP	**Pn**	**08 07 02.7**	**-0.5**
LSCH	**La Serena**	**2.67**	**306**	eP	**Pn**	**08 07 01.2**	**-2.2**
LSCH				i S	**Sn**	**08 07 32.1**	**-3.2**
LSCH				AML	AML	08 07 35.3	
	comp=E,234nm,0.4s						
LSCH	**La Serena**	**2.67**	**306**	eP	**Pn**	**08 07 01.2**	**-2.2**
LSCH				i S	**Sn**	**08 07 32.1**	**-3.2**
TACH	**Talagante**	**2.84**	**220**	eP	**Pn**	**08 07 04.7**	**-1.0**
IHA	**Instituto Hidr**	**2.89**	**237**	eP	**Pn**	**08 07 04.1**	**-2.4**
LCO	**Las Campanas**	**2.99**	**325**	eP	**Pn**	**08 07 06.1**	**-1.6**
LCO				i S	**Sn**	**08 07 40.9**	**-2.1**
VACH	**Vallenar**	**3.38**	**328**⇑	iP	**Pn**	**08 07 11.5**	**-1.5**
VACH				i S	**Sn**	**08 07 49.5**	**-2.9**
VACH				AML	AML	08 07 51.7	
	comp=N,5μm,0.3s						
VACH	**Vallenar**	**3.38**	**328**⇑	iP	**Pn**	**08 07 11.5**	**-1.5**
VACH				i S	**Sn**	**08 07 49.5**	**-2.9**
CPCH	**Copiapo**	**4.34**	**341**⇑	iP	**Pn**	**08 07 23.0**	**-2.8**
CPCH				i S	**Sn**	**08 08 11.3**	**-4.2**
CDCH	**Caldera**	**4.76**	**337**⇓	iP	**Pn**	**08 07 28.9**	**-2.4**
CDCH				i S	**Sn**	**08 08 20.4**	**-5.0**
CCHI	**Chillan**	**5.80**	**208**	eP	**Pn**	**08 07 43.7**	**-1.8**
ANCH	**Antofagasta**	**7.91**	**349**	eP	**Pn**	**08 08 09.0**	**-5.0**
CEN1	**Los Morros**	**8.17**	**351**⇓	iP	**Pn**	**08 08 10.4**	**-7.1**
TRQA	**Tornquist**	**8.60**	**142**⇑	iPn	**Pn**	**08 08 21.0**	**-2.4**
TRQA				eSn	**Sn**	**08 09 53.5**	**-5.0**
PLCA	**Paso Flores**	**9.34**	**188**	P	**Pn**	**08 08 31.4**	**-2.1**
	comp=N,1.5nm,0.3s,baz=2.6,slow=13,SNR=28						
PLCA	**Paso Flores**	**9.34**	**188**	ePn	**Pn**	**08 08 31.5**	**-2.0**
PLCA				eSn	Sn	08 10 38.6	+22
CPUP	**Villa Florida**	**11.24**	**66**	ePn	**Pn**	**08 08 55.0**	**-4.1**
CPUP				eSn	**Sn**	**08 10 58.5**	**-4.3**
LPAZ	**La Paz**	**15.14**	**2**	P	**Pn**	**08 09 48.4**	**-1.4**
	comp=N,0.9nm,0.3s,baz=164,slow=7.3,SNR=99						
LPAZ	**La Paz**	**15.14**	**2**	ePn	**Pn**	**08 09 49.9**	**+0.1**
LPAZ				e		08 10 24.4	
ARE	**Arequipa**	**15.16**	**350**⇑	iP	**Pn**	**08 09 49.6**	**-0.4**
SIV	**San Ignacio**	**16.94**	**26**	P	**Pn**	**08 10 08.9**	**-3.0**
	comp=N,1.2nm,0.3s,baz=194,slow=11,SNR=11						
SAML	**Samuel**	**23.01**	**14**	eP	**P**	**08 11 16.6**	**-0.6**
	comp=N,5.7nm,0.5s,mb4.2						
SAML				e		08 11 37.0	
BDFB	**Brasilia**	**24.63**	**55**	P	**P**	**08 11 30.8**	**-1.0**
	comp=N,5.4nm,0.7s,mb4.1,baz=237,slow=8.4,SNR=8.8						
BDFB				LR	LR	08 21 49.6	
	comp=N,101nm,18.9s,baz=200,slow=38						
ROSC	**El Rosal**	**36.53**	**351**	P	**P**	**08 13 16.8**	**+0.3**
	comp=N,4.5nm,0.8s,mb4.5,baz=122,slow=23,SNR=4.6						
SJG	**San Juan**	**49.37**	**3**	eP	**P**	**08 14 58.1**	**-1.9**
SJG				pmax	pmax		
	comp=Z,22nm,0.8s						
SJG	**San Juan**	**49.37**	**3**	eP	**P**	**08 14 58.1**	**-1.8**
	comp=Z,22nm,0.8s,mb5.1						
SNAA	**Sanae**	**52.89**	**159**	P	**P**	**08 15 25.4**	**-0.9**
	comp=Z,1.6nm,0.6s,mb4.2,baz=289,slow=8.1,SNR=6.4						
SNAA				LR	LR	08 36 13.4	
	comp=Z,42nm,19.3s,baz=37,slow=34						
TEIG	**Tepich**	**54.72**	**337**	eP	**P**	**08 15 39.4**	**-0.2**
	comp=Z,23nm,0.6s,mb5.4						
QSPA	**South Pole Qui**	**58.75**	**180**⇓	iP	**P**	**08 16 08.0**	**0.0**
	comp=Z,20nm,1.2s,mb5.0						
GOGA	**Godfrey**	**66.03**	**347**	eP	**P**	**08 16 55.0**	**-1.5**
GOGA				e*PP	pP	08 17 25.4	+1.5
GOGA				pmax	pmax		
	comp=Z,114nm,1.0s,mb5.7						
GOGA	**Godfrey**	**66.03**	**347**	eP	**P**	**08 16 55.0**	**-1.6**
	comp=Z,114nm,1.0s,mb5.7						
GOGA				epP	pP	08 17 25.4	+1.5
VNDA	**Vanda**	**67.09**	**191**	P	**P**	**08 17 03.4**	**+0.1**
	comp=Z,2.8nm,0.8s,mb4.2,baz=129,slow=5.8,SNR=12						
VNDA	**Vanda**	**67.09**	**191**	eP	**P**	**08 17 03.1**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**67.09**	**191**	eP	**P**	**08 17 03.1**	**-0.2**
	comp=Z,3.2nm,0.8s,mb4.2						
SYO	**Syowa Base**	**67.17**	**158**⇑	eP	**P**	**08 17 02.4**	**-1.4**
NATX	**Nacogdoches**	**67.52**	**336**	eP	**P**	**08 17 06.6**	**+0.6**
	comp=Z,28nm,0.7s,mb5.2						
MYNC	**Murphy**	**67.77**	**346**	eP	**P**	**08 17 06.7**	**-0.8**
MYNC				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
MYNC	**Murphy**	**67.77**	**346**	eP	**P**	**08 17 06.7**	**-0.8**
	comp=Z,16nm,0.8s,mb4.9						
CPCT	**Cooper Cave**	**68.21**	**346**	eP	**P**	**08 17 09.6**	**-0.7**
SWET	**Sewanee**	**68.29**	**345**	eP	**P**	**08 17 10.1**	**-0.7**
SWET				epP	pP	08 17 36.4	-1.9
JCT	**Junction City**	**68.31**	**331**	eP	**P**	**08 17 11.0**	**0.0**
JCT				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.1						
JCT	**Junction City**	**68.31**	**331**	eP	**P**	**08 17 11.0**	**0.0**
	comp=Z,25nm,0.8s,mb5.1						
OXF	**Oxford**	**68.47**	**342**	eP	**P**	**08 17 10.8**	**-1.1**
OXF				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.1						
OXF	**Oxford**	**68.47**	**342**	eP	**P**	**08 17 10.8**	**-1.1**
	comp=Z,18nm,0.6s,mb5.1						
PLAL	**Pickwick Lake**	**68.57**	**343**	eP	**P**	**08 17 10.9**	**-1.7**
	comp=Z,11nm,0.8s,mb4.7						
ELN	**Prospectdale**	**69.27**	**350**	eP	**P**	**08 17 16.5**	**-0.4**
UALR	**University of**	**69.55**	**339**	eP	**P**	**08 17 18.3**	**-0.3**
	comp=Z,22nm,1.1s,mb4.9						
WVT	**Waverly**	**69.60**	**344**	eP	**P**	**08 17 17.6**	**-1.3**
WVT				e*PP	pP	08 17 44.6	-2.0
WVT				e*SP	sP	08 17 57.7	-0.9
WVT				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.3						
WVT	**Waverly**	**69.60**	**344**	eP	**P**	**08 17 17.6**	**-1.3**
	comp=Z,44nm,0.8s,mb5.3						
WVT				epP	pP	08 17 44.6	-2.0
WVT				esP	sP	08 17 57.7	-0.9
MIAR	**Mount Ida**	**69.72**	**338**	eP	**P**	**08 17 19.0**	**-0.6**
MIAR				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.9						
MIAR	**Mount Ida**	**69.72**	**338**	eP	**P**	**08 17 19.0**	**-0.7**
	comp=Z,26nm,1.3s,mb4.9						
UTMT	**University of**	**70.06**	**343**	eP	**P**	**08 17 21.4**	**-0.4**
	comp=Z,98nm,0.6s,mb5.8						
GLAT	**Glass**	**70.10**	**342**	eP	**P**	**08 17 22.1**	**+0.1**
PARMO	**Parma**	**70.59**	**342**	eP	**P**	**08 17 24.4**	**-0.5**
PARMO				epP	pP	08 17 52.2	-0.6
WCI	**Wyandotte Cave**	**71.26**	**345**	eP	**P**	**08 17 27.6**	**-1.4**
WCI				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
WCI	**Wyandotte Cave**	**71.26**	**345**	eP	**P**	**08 17 27.6**	**-1.5**
	comp=Z,18nm,0.8s,mb5.0						
SIUC	**Southern Illin**	**71.45**	**343**	eP	**P**	**08 17 29.0**	**-1.1**
	comp=Z,24nm,0.9s,mb5.0						
MVL	**Millersville**	**71.47**	**354**	eP	**P**	**08 17 30.4**	**+0.2**
DBIC	**Dimbokro**	**71.73**	**70**	P	**P**	**08 17 31.7**	**-0.1**
	comp=Z,15nm,0.8s,mb4.9,baz=214,slow=7.6,SNR=13						
DBIC				LR	LR	08 47 07.4	
	comp=Z,35nm,19.7s,baz=9.2,slow=34						
DBIC	**Dimbokro**	**71.73**	**70**	eP	**P**	**08 17 31.4**	**-0.4**
DBIC				pmax	pmax		
	comp=Z,11nm,0.8s						
DBIC	**Dimbokro**	**71.73**	**70**	eP	**P**	**08 17 31.4**	**-0.5**
	comp=Z,11nm,0.8s,mb4.8						
GDL2	**Guadalupe Moun**	**71.75**	**329**	eP	**P**	**08 17 32.4**	**+0.4**
FVM	**French Village**	**72.01**	**342**	eP	**P**	**08 17 32.8**	**-0.7**
FVM				e*PP	pP	08 17 59.6	-1.8
BLO	**Bloomington**	**72.21**	**346**	eP	**P**	**08 17 32.9**	**-1.8**
BLO				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
BLO	**Bloomington**	**72.21**	**346**	eP	**P**	**08 17 32.9**	**-1.8**
	comp=Z,16nm,0.6s,mb5.0						
SSPA	**Standing Stone**	**72.25**	**353**	eP	**P**	**08 17 34.2**	**-0.8**
	comp=Z,5.6nm,0.9s,mb4.4						
CCM	**Cathedral Cave**	**72.30**	**342**	eP	**P**	**08 17 34.6**	**-0.6**
CCM				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.0						
CCM	**Cathedral Cave**	**72.30**	**342**	eP	**P**	**08 17 34.6**	**-0.6**
	comp=Z,22nm,0.8s,mb5.0						
ACSO	**Alum Creek Sta**	**72.56**	**349**	eP	**P**	**08 17 35.6**	**-1.2**
	comp=Z,16nm,0.8s,mb4.9						
ACSO				epP	pP	08 18 04.7	0.0
AMTX	**Amarillo**	**72.92**	**332**	eP	**P**	**08 17 38.6**	**-0.3**
ERPA	**Erie**	**73.97**	**351**	eP	**P**	**08 17 43.8**	**-1.2**
LPM	**Los Pinos Moun**	**74.54**	**328**	eP	**P**	**08 17 49.3**	**+0.9**
FFD	**Franklin Falls**	**74.64**	**358**	eP	**P**	**08 17 49.3**	**+0.3**
	comp=Z,10nm,0.6s,mb4.7						
MAW	**Mawson**	**74.78**	**163**	P	**P**	**08 17 49.0**	**-0.7**
	comp=Z,14nm,0.8s,mb4.7,baz=209,slow=6.2,SNR=7.2						
LAZ	**Ladron**	**74.85**	**328**	eP	**P**	**08 17 51.0**	**+0.9**
KSU1	**Kansas State U**	**74.86**	**338**	eP	**P**	**08 17 48.9**	**-1.2**
ANMO	**Albuquerque**	**75.00**	**329**	eP	**P**	**08 17 51.9**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,13nm,1.1s						
ANMO	**Albuquerque**	**75.00**	**329**	eP	**P**	**08 17 51.9**	**+0.9**
	comp=Z,13nm,1.1s,mb4.6						
LBNH	**Lisbon**	**75.42**	**358**	eP	**P**	**08 17 53.3**	**-0.1**
LBNH				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
LBNH	**Lisbon**	**75.42**	**358**	eP	**P**	**08 17 53.3**	**-0.1**
	comp=Z,12nm,0.8s,mb4.7						
116A	**Eloy**	**75.55**	**324**	⇑P	**P**	**08 17 54.8**	**+0.7**
	baz=76						
EMMW	**East Machias**	**75.84**	**1**	eP	**P**	**08 17 55.8**	**0.0**
FRNY	**Flat Rock**	**76.08**	**356**	eP	**P**	**08 17 56.5**	**-0.7**
FRNY				epP	pP	08 18 24.9	-0.3
JFWS	**Jewell Farm**	**76.62**	**344**	eP	**P**	**08 17 59.0**	**-1.2**
JFWS				pmax	pmax		
	comp=Z,39nm,1.4s,mb4.9						
JFWS	**Jewell Farm**	**76.62**	**344**	eP	**P**	**08 17 59.0**	**-1.2**
	comp=Z,39nm,1.4s,mb5.0						
TSUM	**Tsumeb**	**77.20**	**105**	eP	**P**	**08 18 04.2**	**+0.7**
	comp=Z,6.9nm,0.8s,mb4.4						
Y14A	**Wickenburg**	**77.30**	**324**	⇑P	**P**	**08 18 04.6**	**+0.5**
	baz=78,SNR=5.7						
X15A	**Humboldt**	**77.34**	**324**	⇓P	**P**	**08 18 05.3**	**+1.0**
	baz=78,SNR=16						
GLA	**Glamis**	**77.55**	**322**	eP	**P**	**08 18 06.5**	**+1.1**
GLA	**Glamis**	**77.55**	**322**	⇓P	**P**	**08 18 06.2**	**+0.7**
	baz=78						
X14A	**Yava**	**77.66**	**324**	⇓P	**P**	**08 18 07.0**	**+0.9**
	baz=78,SNR=7.5						
WUAZ	**Wupatki**	**77.75**	**326**	eP	**P**	**08 18 07.4**	**+0.9**
	comp=Z,16nm,0.9s,mb4.8						
WUAZ				epP	pP	08 18 38.0	+3.3
MVCO	**Mesa Verde**	**77.79**	**329**	eP	**P**	**08 18 07.3**	**+0.6**
W15A	**Williams**	**77.91**	**325**	⇓P	**P**	**08 18 08.7**	**+1.2**
	baz=78						
DVTC	**Desert V Tower**	**77.93**	**321**	⇓P	**P**	**08 18 08.7**	**+1.2**
	baz=78						
Y12C	**Blythe**	**77.93**	**322**	⇓P	**P**	**08 18 08.3**	**+0.8**
	baz=78						
SWSC	**Sam W. Stewart**	**77.98**	**321**	⇓P	**P**	**08 18 08.4**	**+0.6**
	baz=78						
PDMCI	**Parker Dam,Lak**	**78.16**	**323**	⇓P	**P**	**08 18 08.9**	**+0.1**
	baz=78						
X13A	**Yucca**	**78.23**	**323**	P	**P**	**08 18 10.0**	**+0.8**
	baz=79,SNR=11						
BAR	**Barrett**	**78.26**	**320**	eP	**P**	**08 18 10.4**	**+1.1**
MONP	**Monument Peak**	**78.28**	**321**	⇑P	**P**	**08 18 10.5**	**+1.0**
	baz=79						
W14A	**Seligman**	**78.34**	**324**	P	**P**	**08 18 10.9**	**+1.1**
	baz=79,SNR=9.4						
IRM	**Iron Mountain**	**78.58**	**322**	⇓P	**P**	**08 18 11.7**	**+0.6**
	baz=79						
PV01	**Paradox Valley**	**78.59**	**329**	eP	**P**	**08 18 11.9**	**+0.7**
109C	**Camp Elliot, M**	**78.65**	**320**	⇓P	**P**	**08 18 12.0**	**+0.5**
	baz=79						
W13A	**Hualapai Mount**	**78.66**	**324**	⇑P	**P**	**08 18 12.6**	**+1.0**
	baz=79,SNR=6.3						
ISCO	**Idaho Springs**	**78.74**	**332**	eP	**P**	**08 18 12.6**	**+0.6**
ISCO				e*PP	pP	08 18 40.1	-0.2
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
ISCO	**Idaho Springs**	**78.74**	**332**	eP	**P**	**08 18 12.6**	**+0.5**
	comp=Z,6.2nm,0.8s,mb4.5						
ISCO				epP	pP	08 18 40.1	-0.2
BOSA	**Boshof**	**78.75**	**117**	P	**P**	**08 18 11.9**	**-0.1**
	comp=Z,12nm,0.8s,mb4.8,baz=251,slow=4.2,SNR=15						
SMCO	**Snowmass**	**78.77**	**331**	eP	**P**	**08 18 13.5**	**+1.3**
	comp=Z,20nm,0.8s,mb5.0						
SMCO				epP	pP	08 18 42.2	+1.8
PFO	**Pinyon Flat Ob**	**78.85**	**321**	eP	**P**	**08 18 13.8**	**+1.2**
PFO				e*PP	pP	08 18 42.0	+1.2
PFO				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.7						
PFO	**Pinyon Flat Ob**	**78.85**	**321**	eP	**P**	**08 18 13.8**	**+1.2**
	comp=Z,14nm,1.1s,mb4.7						
PFO				epP	pP	08 18 42.0	+1.1
PFO	**Pinyon Flat Ob**	**78.85**	**321**	⇓P	**P**	**08 18 13.7**	**+1.1**
	baz=79,SNR=5.2						
BELC	**Belle Mtn.**	**78.90**	**322**	⇓P	**P**	**08 18 13.7**	**+0.9**
	baz=79						
PV10	**Paradox Valley**	**79.00**	**329**	eP	**P**	**08 18 13.4**	**0.0**
MURC	**Murrieta**	**79.24**	**321**	⇑P	**P**	**08 18 15.6**	**+0.8**
	baz=80						
W12A	**Cal Nev Ari**	**79.32**	**323**	⇓P	**P**	**08 18 15.5**	**+0.4**
	baz=80						
V12A	**Nelson**	**79.64**	**323**	P	**P**	**08 18 17.4**	**+0.6**
	baz=80,SNR=7.7						
HEC	**Hector,Ludlow**	**79.71**	**322**	⇑P	**P**	**08 18 18.4**	**+1.1**
	baz=80						
CIS	**Catalina Islan**	**79.76**	**320**	⇓P	**P**	**08 18 18.1**	**+0.6**
	baz=80						
PHWY	**Pilot Hill**	**79.96**	**333**	eP	**P**	**08 18 19.2**	**+0.6**
TUQ	**Turquoise Mtn.**	**79.97**	**323**	⇑P	**P**	**08 18 19.5**	**+0.9**
	baz=80						
BFSC	**Mount Baldy St**	**79.97**	**321**	⇓P	**P**	**08 18 19.2**	**+0.5**
	baz=80						
V11A	**Goodsprings**	**80.02**	**323**	⇓P	**P**	**08 18 19.5**	**+0.5**
	baz=80						
U12A	**Valley of Fire**	**80.03**	**324**	⇓P	**P**	**08 18 19.6**	**+0.6**
	baz=80,SNR=5.8						
SRU	**San Rafael**	**80.26**	**328**	eP	**P**	**08 18 20.3**	**+0.1**
SRU				e*PP	pP	08 18 49.4	+0.8
SRU				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
SRU	**San Rafael**	**80.26**	**328**	eP	**P**	**08 18 20.3**	**+0.1**
	comp=Z,10nm,0.7s,mb4.8						
SRU				epP	pP	08 18 49.4	+0.8
GSC	**Goldstone**	**80.32**	**322**	⇓P	**P**	**08 18 21.5**	**+0.9**
	baz=81						
CCUT	**Cedar City**	**80.33**	**326**	eP	**P**	**08 18 21.9**	**+1.3**
CCUT				epP	pP	08 18 50.3	+1.3
DECC	**Green Verdugo**	**80.35**	**320**	P	**P**	**08 18 21.6**	**+0.9**
	baz=81						
SHPR	**Sheep Range**	**80.40**	**324**	eP	**P**	**08 18 21.8**	**+0.8**
U11A	**Corn Creek**	**80.45**	**324**	⇑P	**P**	**08 18 22.2**	**+1.0**
	baz=81						
MSU	**Marysvale**	**80.53**	**327**	eP	**P**	**08 18 22.3**	**+0.6**
TMUT	**Trail Mountain**	**80.72**	**328**	eP	**P**	**08 18 23.6**	**+0.9**
TOA0	**Torodi Ar. Sit**	**80.73**	**68**	eP	**P**	**08 18 22.3**	**-0.4**
TOA0				epP	pP	08 18 48.3	-2.8
TORD	**Torodi Ar. Bea**	**80.73**	**68**	P	**P**	**08 18 22.5**	**-0.2**
	comp=Z,22nm,0.7s,mb5.1,baz=284,slow=6.1,SNR=116						
TORD				pP	pP	08 18 48.3	-2.8
	comp=Z,6.5nm,1.0s,baz=248,slow=4.4,SNR=3.6						
LBTB	**Lobatse**	**80.80**	**114**	eP	**P**	**08 18 22.7**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
LBTB	**Lobatse**	**80.80**	**114**	eP	**P**	**08 18 22.7**	**-0.4**
	comp=Z,8.8nm,0.6s,mb4.8						
LRMC	**Laurel Mountai**	**80.92**	**321**	⇑P	**P**	**08 18 24.7**	**+0.9**
	baz=81						
U10A	**Ash Meadows, A**	**80.93**	**323**	⇓P	**P**	**08 18 24.7**	**+0.9**
	baz=81						
RWWY	**Rawlins**	**80.98**	**332**	eP	**P**	**08 18 24.6**	**+0.5**
	comp=Z,21nm,0.6s,mb5.2						
RWWY				epP	pP	08 18 53.5	+1.0
FURC	**Furnace Creek,**	**81.24**	**323**	⇑P	**P**	**08 18 26.2**	**+0.7**
	baz=82						
MPMC	**Manual Prospec**	**81.26**	**322**	⇓P	**P**	**08 18 26.1**	**+0.5**
	baz=82						
ARVC	**Arvin**	**81.28**	**321**	⇑P	**P**	**08 18 26.4**	**+0.8**
	baz=82						
TPNV	**Topopah Spring**	**81.30**	**323**	eP	**P**	**08 18 26.7**	**+0.9**
TPNV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
TPNV	**Topopah Spring**	**81.30**	**323**	eP	**P**	**08 18 26.6**	**+0.9**
	comp=Z,11nm,1.1s,mb4.6						
DAC	**Darwin (Calif)**	**81.48**	**322**	eP	**P**	**08 18 27.6**	**+0.9**
DAC				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
DAC	**Darwin (Calif)**	**81.48**	**322**	eP	**P**	**08 18 27.6**	**+0.9**
	comp=Z,10nm,0.9s,mb4.7						
ISA	**Isabella**	**81.48**	**321**	eP	**P**	**08 18 28.0**	**+1.3**
ISA	**Isabella**	**81.48**	**321**	⇑P	**P**	**08 18 27.5**	**+0.8**
	baz=82						
MPU	**Maple Canyon**	**81.50**	**328**	eP	**P**	**08 18 27.4**	**+0.6**
PKM	**Peak Mountain**	**81.65**	**320**	⇑P	**P**	**08 18 28.7**	**+1.1**
	baz=82,SNR=5.7						
DAU	**Daniels Canyon**	**81.65**	**329**	eP	**P**	**08 18 28.4**	**+0.8**
RSSD	**Black Hills**	**81.85**	**335**	eP	**P**	**08 18 28.6**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.8						
RSSD	**Black Hills**	**81.85**	**335**	eP	**P**	**08 18 28.6**	**-0.1**
	comp=Z,16nm,1.1s,mb4.8						
GRAC	**Grapevine Rang**	**81.91**	**323**	⇑P	**P**	**08 18 29.7**	**+0.7**
	baz=82,SNR=5.0						
VES	**Vestal, Richgr**	**81.94**	**321**	⇑P	**P**	**08 18 29.7**	**+0.6**
	baz=82,SNR=6.5						
TRCR	**Troy Canyon**	**82.05**	**325**	eP	**P**	**08 18 30.5**	**+0.8**
SMMC	**Simmler**	**82.05**	**320**	⇑P	**P**	**08 18 30.9**	**+1.2**
	baz=82						
R10A	**Warm Springs**	**82.36**	**324**	⇓P	**P**	**08 18 32.2**	**+0.9**
	baz=83,SNR=12						
RCTC	**Rector, Farmer**	**82.38**	**321**	⇑P	**P**	**08 18 31.1**	**-0.3**
	baz=83						
S09A	**Goldfield**	**82.39**	**323**	P	**P**	**08 18 32.1**	**+0.6**
	baz=83,SNR=8.4						
HELL	**Mitchell Peak,**	**82.54**	**321**	⇑P	**P**	**08 18 32.4**	**+0.1**
	baz=83,SNR=8.5						
P12A	**McGill**	**82.59**	**326**	⇓P	**P**	**08 18 33.1**	**+0.6**
	baz=83						
TPH	**Tonopah**	**82.66**	**323**	eP	**P**	**08 18 33.9**	**+1.0**
TPH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
TPH	**Tonopah**	**82.66**	**323**	eP	**P**	**08 18 33.9**	**+1.0**
	comp=Z,13nm,1.0s,mb4.7						
R09A	**Tonopah**	**82.70**	**324**	⇓P	**P**	**08 18 33.6**	**+0.4**
	baz=83,SNR=5.7						
HWUT	**Hardware Ranch**	**82.75**	**329**	eP	**P**	**08 18 32.9**	**-0.5**
	comp=Z,5.7nm,0.6s,mb4.6						
PKD	**Parkfield**	**82.82**	**320**	⇓P	**P**	**08 18 34.4**	**+0.7**
	baz=83						
BW06	**Boulder Array**	**82.84**	**331**	eP	**P**	**08 18 33.4**	**-0.4**
PDAR	**Pinedale Array**	**82.84**	**331**	P	**P**	**08 18 33.3**	**-0.5**
	comp=Z,5.0nm,0.7s,mb4.4,baz=133,slow=6.1,SNR=46						
PDAR				pP	pP	08 19 01.1	-1.2
	comp=Z,1.7nm,0.8s,baz=130,slow=6.0,SNR=3.6						
O12A	**Currie**	**83.14**	**326**	⇓P	**P**	**08 18 35.4**	**+0.1**
	baz=84						
MLAC	**Mammoth Lakes**	**83.15**	**322**	⇓P	**P**	**08 18 36.4**	**+0.9**
	baz=84						
KCC	**Kaiser Creek**	**83.18**	**322**	⇑P	**P**	**08 18 35.8**	**+0.3**
	baz=84						
Q09A	**Carvers**	**83.22**	**324**	⇓P	**P**	**08 18 36.2**	**+0.5**
	baz=84						

HVU Hansel Valley 83.43 328 *e*P P 08 18 36.5 -0.3
P10A Eureka 83.46 325 ⇑P P 08 18 37.5 +0.5
baz=84,SNR=5.7
O11A Cowboy Ranch, 83.46 326 ⇓P P 08 18 37.4 +0.3
baz=84,SNR=7.3
NVAR Mina Array Bea 83.48 323 P P 08 18 37.6 +0.5
comp=Z,5.9nm,0.8s,mb4.5,baz=164,slow=5.9,SNR=31
NVAR pP pP 08 19 04.5 -1.1
comp=Z,1.4nm,0.8s,baz=161,slow=5.7,SNR=2.7
Q08A Gabbs 83.61 324 ⇓P P 08 18 38.0 +0.2
baz=84,SNR=9.6
HAST UC Hastings Re 83.70 320 ⇑P P 08 18 38.4 +0.2
baz=84
M13A Montello 83.72 327 ⇑P P 08 18 38.6 +0.3
baz=84,SNR=7.8
N12A Clover Valley, 83.73 327 ⇑P P 08 18 38.2 -0.2
baz=84,SNR=5.8
S05C Merced 83.73 321 ⇑P P 08 18 39.0 +0.6
baz=84
P09A Austin 83.74 324 ⇓P P 08 18 38.5 0.0
baz=84
S06C San Francisco 83.87 322 ⇓P P 08 18 39.4 +0.2
baz=84
SNOW Snow King Moun 83.92 331 *e*P P 08 18 39.1 -0.3
comp=Z,6.0nm,0.7s,mb4.5
O10A Cortez Mining, 84.00 325 ⇓P P 08 18 39.8 +0.1
baz=84
N11A Elko Archery C 84.03 326 ⇓P P 08 18 39.8 -0.2
baz=84
RRI2 Red Ridge 84.06 330 *e*P P 08 18 40.0 -0.1
comp=Z,4.5nm,0.7s,mb4.4
M12A Wells 84.12 327 ⇓P P 08 18 40.2 -0.2
baz=84,SNR=6.2
WAKR Walker 84.12 322 *e*P P 08 18 40.9 +0.5
R06C Coleville 84.14 322 ⇑P P 08 18 41.4 +1.0
baz=84,SNR=6.7
MOOW Moose Ponds 84.14 331 *e*P P 08 18 40.2 -0.3
comp=Z,2.1nm,0.7s,mb4.1
O09A Fish Creek Ran 84.24 325 ⇓P P 08 18 41.5 +0.6
baz=85
CMB Columbia Colle 84.27 322 ⇑P P 08 18 41.2 0.0
baz=85
IMW Indian Meadow 84.35 331 *e*P P 08 18 41.5 0.0
comp=Z,10nm,1.1s,mb4.6
FLWY Flagg Ranch 84.40 331 *e*P P 08 18 42.0 +0.2
comp=Z,19nm,0.9s,mb4.9
M11A Holland Ranch, 84.54 326 ⇑P P 08 18 42.8 +0.3
baz=85,SNR=12
R05C Kirkwood Meado 84.60 322 ⇓P P 08 18 43.6 +0.8
baz=85
P07A Fallon 84.61 323 ⇓P P 08 18 43.5 +0.6
baz=85
WENL Wente Brothers 84.71 320 ⇓P P 08 18 44.7 +1.4
baz=85
R04C Big Horse Ranc 84.73 321 ⇑P P 08 18 44.2 +0.8
baz=85
YFT Old Faithful 84.76 331 *e*P P 08 18 45.2 +1.6
LAO LASA Array 84.85 335 *e*P P 08 18 43.5 -0.5
comp=Z,14nm,0.8s,mb4.9
LAO *e*pP pP 08 19 12.7 0.0
ULM Lac du Bonnet 84.86 343 P P 08 18 42.8 -1.3
comp=Z,3.5nm,0.7s,mb4.4,baz=176,slow=4.4,SNR=4.4
ULM pP pP 08 19 11.1 -1.6
comp=Z,4.0nm,0.7s,baz=163,slow=5.7,SNR=3.4
ULM Lac du Bonnet 84.86 343 *e*P P 08 18 42.3 -1.8
comp=Z,14nm,0.8s,mb5.0
ULM *e*pP pP 08 19 10.8 -1.8
N09A Rock Creek Ran 84.93 325 ⇓P P 08 18 44.5 +0.1
baz=85
M10A I.L. Ranch, Tu 84.96 326 ⇓P P 08 18 44.8 +0.2
baz=85
YMR Madison River 84.99 331 *e*P P 08 18 45.3 +0.6
comp=Z,17nm,0.8s,mb5.0
YMR *e*pP pP 08 19 14.0 +0.7
LAVA Lava Cap Winer 84.99 322 ⇓P P 08 18 44.8 0.0
baz=85
PAHR Pah Rah Range 84.99 323 *e*P P 08 18 45.5 +0.7
comp=Z,9.2nm,0.8s,mb4.8
BDM Black Diamond 85.01 321 ⇓P P 08 18 45.6 +0.8
baz=85
O07A Toulon 85.08 324 ⇓P P 08 18 45.0 -0.1
baz=85
N08A GE Springer Mi 85.17 325 ⇑P P 08 18 46.2 +0.6
baz=86
P06A Stead Airport, 85.23 323 ⇑P P 08 18 46.6 +0.6
baz=86
QLMT Earthquake Lak 85.31 331 *e*P P 08 18 47.2 +0.9
P05C Yuba Gap, Truc 85.32 322 ⇓P P 08 18 46.9 +0.5
baz=86
M09A Marrel Ranch, 85.33 325 ⇑P P 08 18 46.3 -0.1
baz=86
GCMT Greycliff 85.39 333 *e*P P 08 18 46.2 -0.5
GCMT *e*pP pP 08 19 14.6 -0.8
Q04C Lincoln 85.39 321 ⇓P P 08 18 47.2 +0.5
baz=86
FARB Farallon Islan 85.44 320 ⇑P P 08 18 46.9 -0.1
baz=86
O06A Flanigan 85.56 323 ⇓P P 08 18 47.9 +0.3
baz=86
HLID Hailey 85.58 329 *e*P P 08 18 48.0 +0.3
comp=Z,11nm,0.9s,mb4.8
HLID *e*pP pP 08 19 16.8 +0.4
Q03C Winters 85.58 321 ⇑P P 08 18 48.6 +0.9
baz=86
N07B Gerlach 85.59 324 ⇓P P 08 18 47.8 +0.1
baz=86,SNR=8.0
BEKR Beckwourth 85.61 323 P P 08 18 48.3 +0.5
baz=86,SNR=8.1
OHCM Honcut 85.81 322 *e*P P 08 18 48.7 -0.1
L09A Wilkinson Ranc 85.89 326 ⇓P P 08 18 48.9 -0.3
baz=86
SUTB Sutter Butte 85.89 322 ⇑P P 08 18 49.1 -0.2
baz=86
MCMT McKenzie Canyo 85.90 330 *e*P P 08 18 49.8 +0.5
MCMT *e*pP pP 08 19 18.4 +0.4
O05C Quincy 85.97 323 ⇓P P 08 18 49.9 +0.3
baz=86
ORV Oroville 85.98 322 ⇓P P 08 18 49.9 +0.3
baz=86
SCHQ Schefferville 85.98 1 P P 08 18 48.2 -1.4
comp=Z,6.0nm,0.5s,mb4.8,baz=180,slow=4.4,SNR=25
SCHQ pP pP 08 19 15.9 -2.4
comp=Z,4.2nm,0.9s,baz=192,slow=3.7,SNR=3.3
SCHQ Schefferville 85.98 1 *e*P P 08 18 47.9 -1.7
comp=Z,7.5nm,0.5s,mb4.9
N06A Buffalo Meadow 86.00 324 P P 08 18 50.1 +0.4
baz=86,SNR=15
BOZ Bozeman (W) 86.06 331 *e*P P 08 18 49.2 -0.8
BOZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BOZ Bozeman (W) 86.06 331 *e*P P 08 18 49.2 -0.8
comp=Z,3.2nm,0.9s,mb4.2
M07A Soldier Meadow 86.14 324 ⇑P P 08 18 50.6 +0.2
baz=86,SNR=7.2
DLMT Dillon 86.23 331 *e*P P 08 18 50.9 0.0
comp=Z,16nm,1.1s,mb4.8
O04C Chester 86.32 323 ⇓P P 08 18 51.2 -0.2
baz=87
L08A Fields 86.34 325 ⇓P P 08 18 51.1 -0.3
baz=87,SNR=11
LRM Limekiln Ridge 86.54 331 *e*P P 08 18 52.4 +0.1
O03C Acorn Hollow, 86.58 322 ⇑P P 08 18 53.1 +0.5
baz=87
M06C Likely Place G 86.66 324 P P 08 18 53.3 +0.3
baz=87,SNR=7.2
WVOR Wild Horse Val 86.67 325 *e*P P 08 18 52.7 -0.3
WVOR pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
WVOR Wild Horse Val 86.67 325 *e*P P 08 18 52.7 -0.4
comp=Z,7.1nm,1.2s,mb4.5
GASB Alder Springs 86.69 321 ⇑P P 08 18 54.1 +1.0
baz=87
L07A Adell 86.70 325 ⇓P P 08 18 53.7 +0.5
baz=87,SNR=8.8
K08A Mann Creek Ran 86.82 326 ⇓P P 08 18 53.8 +0.1
baz=87,SNR=6.2
HATC Hat Creek Radi 86.88 323 ⇑P P 08 18 53.8 -0.2
baz=87
P01C Double 8 Ranch 86.90 321 ⇓P P 08 18 54.9 +0.8
baz=87
HRY Holter Researc 87.00 332 *e*P P 08 18 54.4 -0.3
HRY *e*pP pP 08 19 23.2 -0.1
M05C Lookout 87.12 323 ⇑P P 08 18 55.0 -0.2
baz=87,SNR=6.5
K07A Rock Creek Ran 87.16 325 ⇓P P 08 18 56.0 +0.6
baz=88,SNR=31
WDC Whiskeytown Da 87.27 322 ⇓P P 08 18 54.8 -1.1
baz=88
EGMT Eagleton 87.27 334 *e*P P 08 18 54.8 -1.1
comp=Z,16nm,1.0s,mb4.9
I09A Lost Marbles R 87.41 327 ⇓P P 08 18 56.5 -0.1
baz=88,SNR=15
L05A Lakeview 87.47 324 P P 08 18 57.5 +0.7
baz=88,SNR=11
J07A Hines 87.70 326 ⇑P P 08 18 58.3 +0.3
baz=88,SNR=13
K06A Valley Falls 87.73 325 ⇓P P 08 18 58.5 +0.4
baz=88,SNR=9.1
CHMT Chamberlain Mo 87.75 331 *e*P P 08 18 57.8 -0.4
CHMT *e*pP pP 08 19 26.5 -0.5
I08A Drewsey 87.75 326 ⇑P P 08 18 58.2 0.0
baz=88,SNR=6.4
M04C Macdoel 87.78 323 ⇑P P 08 18 58.4 +0.1
baz=88,SNR=7.2
H09A Durkee 87.91 327 ⇓P P 08 18 58.7 -0.2
baz=88
J06A Christmas Vall 88.02 325 P P 08 18 59.6 +0.1
baz=88,SNR=19
M02C Callahan 88.02 322 ⇑P P 08 18 59.1 -0.4
baz=88
L04A Klamath Falls 88.09 323 ⇓P P 08 18 59.8 -0.1
baz=88
YBH Yreka Blue Hor 88.19 323 ⇑P P 08 18 59.5 -0.8
baz=88
H08A Prairie City 88.26 327 ⇑P P 08 19 00.5 -0.2
baz=89
I07A Izee 88.33 326 ⇓P P 08 19 01.1 +0.2
baz=89,SNR=12
K04A Chilquin 88.33 324 ⇓P P 08 19 01.0 +0.1
baz=89
I06A Prineville 88.56 326 ⇓P P 08 19 02.6 +0.6
baz=89,SNR=16
J05A Fort Rock 88.58 325 ⇓P P 08 19 02.4 +0.3
baz=89,SNR=10.0
I05A Bend 89.24 325 ⇓P P 08 19 05.6 +0.4
baz=90,SNR=6.6
K02A Glendale 89.34 323 ⇓P P 08 19 05.8 +0.1
baz=90
H05A Madras 89.57 326 ⇑P P 08 19 06.9 +0.1
baz=90
WALA Waterton Lakes 89.72 332 *e*P P 08 19 06.6 -0.9
comp=Z,13nm,1.0s,mb5.0
WALA *e*pP pP 08 19 35.1 -1.2
G05A Wamic 90.05 326 ⇓P P 08 19 09.4 +0.3
baz=90
H04A Detroit Lake 90.07 325 ⇑P P 08 19 08.5 -0.6
baz=90,SNR=5.4
G04A Mulino 90.59 325 ⇓P P 08 19 11.1 -0.4
baz=91
H03A Soap Creek Ran 90.61 324 ⇑P P 08 19 11.7 +0.1
baz=91
G03A Yamhill 91.06 325 ⇓P P 08 19 13.8 +0.1
baz=91
C05A Tolt Reservoir 92.03 327 ⇑P P 08 19 16.8 -1.4
baz=92
B05A Bryant 92.63 328 ⇓P P 08 19 19.7 -1.3
baz=93
BR131 Keskin Array S 118.17 59 *e*PKPdf PKPdf 08 24 55.0 -0.8
BRTR Keskin Array B 118.17 59 PKP PKPdf 08 24 55.0 -0.8
comp=Z,1.0nm,0.7s,baz=202,slow=1.3,SNR=6.8
AKASG Malin Array Be 118.45 46 PKP PKPdf 08 24 53.9 -2.4
comp=Z,1.4nm,0.7s,baz=263,slow=2.9,SNR=6.0
AKASG Malin Array Be 118.45 46 PKP PKPdf 08 24 53.9 -2.4
ASAR Alice Springs 121.03 204 PKP PKPdf 08 25 00.1 -1.2
comp=Z,1.5nm,0.6s,baz=144,slow=2.0,SNR=9.8
ASAR PKKPbc PKKPbc 08 35 02.3 -1.8
comp=Z,0.4nm,0.6s,baz=342,slow=3.4,SNR=6.7
VRSR Storozhevoye 124.72 47 *e*PKIKP 08 24 55.5
VRSR pmax pmax
comp=Z,4.0nm,0.7s
VRSR pmax pmax
comp=N,6.0nm,0.9s
VRSR pmax pmax
comp=E,4.0nm,0.7s
KLMR Klimovskoe 125.75 35 *i* PKIKP PKPdf 08 25 08.5 -1.8
KLMR pmax pmax
comp=Z,10.0nm,1.8s
KIV Kislovodsk 125.80 56 *i* PKHKP 08 24 45.3
FITZ Fitzroy Crossi 128.80 198 PKP PKPdf 08 25 15.7 -0.4
comp=Z,1.8nm,0.6s,baz=172,slow=6.6,SNR=5.7
AKTK Aktyubinsk 136.60 48 PKP PKPdf 08 25 30.0 -0.8
AKTO Aktyubinsk 136.60 48 PKP PKPdf 08 25 30.0 -0.8
comp=Z,0.8nm,0.5s,baz=5.9,slow=3.7,SNR=4.4
TIXI Tiksi 138.67 352 *i* PKIKP PKPdf 08 25 33.3 -1.3
PET Petropavlovsk 139.77 316 *i* PKIKP PKPdf 08 25 35.5 -1.1
ZRNK Zerenda 142.79 42 *e*PKIKP PKPdf 08 25 41.6 -0.5
CHKZ Chkalovo 143.46 41 *e*PKIKP PKPdf 08 25 40.1 -3.1
GUMO Guam 144.40 248 PKP PKPdf 08 25 43.2 -1.7
comp=Z,74nm,0.8s,baz=248,slow=4.8,SNR=4.3
YAK Yakutsk 147.19 344 *e*PKP2 PKPab 08 25 51.5 -2.4
YAK pmax pmax
comp=Z,26nm,0.7s
YAK pmax pmax
comp=Z,14nm,0.8s
YAK Yakutsk 147.19 344 *e*PKPbc PKPbc 08 25 50.8 -1.2
HYB Hyderabad 147.25 108 *i* PKP PKPbc 08 25 52.5 +0.3
EKS2 Erkin-Say 148.32 59 P PKPbc 08 25 55.2 +0.2
SNR=8.5
USP Ospenovka 148.75 57 P PKPbc 08 25 55.9 -0.2
SNR=9.4
AAK Ala-Archa 148.85 59 P PKPbc 08 25 57.0 +0.6
SNR=6.8
FRU Bishkek 148.91 58 *e*PKP2 PKPbc 08 25 56.0 -0.5
CHMS Chumysh 148.98 58 P PKPbc 08 25 56.7 -0.1
SNR=7.8
KURK Kurchatov 149.16 42*d i*PKP2 PKPbc 08 25 56.2 -1.0
PSI Prapat 149.19 155 PKPbc PKPbc 08 25 55.9 -1.4
comp=Z,8.6nm,0.8s,baz=224,slow=4.8,SNR=6.9
NVS Novosibirsk 149.34 32 *e*PKP2 PKPbc 08 25 56.0 -1.6
KZA Kyzart 149.49 60 P PKPbc 08 25 59.2 +1.2
SNR=6.3
TKM2 Tokmak 2 149.61 58 P PKPbc 08 25 58.3 0.0
SNR=13
YSS Yuzh-Sakhalins 151.36 312 *i* PKIKP PKPdf 08 25 59.4 +3.1
YSS Yuzh-Sakhalins 151.36 312 *e*PKPbc PKPbc 08 26 01.2 -1.2
MKAR Makanchi Array 153.03 47 PKP PKPdf 08 25 57.8 -1.0
comp=Z,3.6nm,0.9s,baz=64,slow=2.8,SNR=3.6
MKAR PKPbc PKPbc 08 26 05.1 -1.0
comp=Z,7.1nm,0.8s,baz=305,slow=2.0,SNR=31
MKAR PKPab PKPab 08 26 17.3 -0.7
comp=Z,6.2nm,0.7s,baz=300,slow=4.2,SNR=17
MKAR pPKPbc pPKPbc 08 26 34.3 -1.9
comp=Z,4.0nm,0.9s,baz=298,slow=2.6,SNR=4.3
MKAR PP PP 08 29 51.5 0.0
comp=Z,0.6nm,0.8s,baz=338,slow=9.2,SNR=4.1
BOD Bodaibo 153.60 357 *e*PKIKP PKPdf 08 26 00.4 +0.8
BOD *e* 08 26 17.5
BOD pmax pmax
comp=Z,3.0nm,1.1s
BOD pmax pmax
comp=Z,5.0nm,1.1s
MJAR Matsushiro Arr 157.13 290 PKPab PKPab 08 26 35.4 -0.1
comp=Z,4.3nm,0.8s,baz=109,slow=2.1,SNR=9.4
WMQ Urumqi 157.74 50 *e*PKP PKPdf 08 26 03.5 -1.6
MDJ Mudanjiang 160.55 318 PKP PKPdf 08 26 08.4 0.0
SONM Songino Array 163.25 11 PKPab PKPab 08 27 01.8 -0.4
comp=Z,2.6nm,0.7s,baz=324,slow=4.8,SNR=11
SONM pPKPab pPKPab 08 27 29.1 -2.1
comp=Z,1.4nm,0.7s,baz=321,slow=5.6,SNR=3.8
CN2 Changchun 163.37 322 *e*PKP PKPdf 08 26 11.8 +0.5
KMI Kunming 170.18 128 PKP PKPdf 08 26 11.3 -5.1
KMI APKP 08 26 44.7
KMI XPKP 08 26 57.0
KMI PP PP 08 31 24.0 +1.0
KMI SS SS 08 52 13.4 -0.5
KMI PP PP
comp=Z,94nm,4.7s
KMI LR LR
comp=N,125nm,19.4s
KMI LR LR
comp=E,128nm,21.6s
KMI LR LR
comp=Z,82nm,17.2s
HHC Hu-ho-hao-te 170.65 359 *e*PKP PKPdf 08 26 17.2 +0.6
HHC APKP 08 26 44.3
HHC XPKP 08 26 54.5
HHC PP PP 08 31 27.0 +1.7
HHC SKS SKSdf 08 33 09.5 -0.4
HHC SKKS SKKSac 08 38 04.5 +2.7
HHC SS SS 08 52 20.8 +2.3
HHC PP PP
comp=Z,74nm,7.5s
HHC LR LR
comp=N,95nm,34.2s
HHC LR LR
comp=E,71nm,27.5s
HHC LR LR
comp=Z,97nm,29.4s
LZH Lanzhou 172.31 51 *e*PKP PKPdf 08 26 18.6 +1.1
LZH APKP 08 26 48.0
LZH XPKP 08 27 01.5
LZH PP PP 08 31 36.1 +2.5
LZH SKKS SKKSac 08 38 08.5 -1.3
LZH SS SS 08 52 35.5 +0.7
LZH PP PP
comp=Z,140nm,8.3s
LZH LR LR
comp=E,153nm,18.7s
LZH LR LR
comp=Z,197nm,20.3s
NJ2 Nanjing 173.50 277 *e*PKP PKPdf 08 26 18.6 +0.7

NEIC ***01*** *08:12:24.4±0.4, 958S×10882E, h10km, mb4.6/15, Error ellipse: s-maj=19.7km s-min=6.8km az=49.0*
BJI ***01*** *08:12:24.3, 960S×10880E, h10km, mB4.8, mb4.5, Ms4.4, Msz4.2*
ISCJB ***01*** *08:12:26.0±0.4, 954S±006×10879E±006, h33km, mb4.6/19, MS3.7/5, Error ellipse: s-maj=10.0km s-min=7.1km az=108.5*
IDC ***01*** *08:12:28.4±0.8, 950S×10886E, h32km±5km, mb4.2/7, mb1 4.2/8, mb1mx4.1/16, mbtmp4.4/8, ML4.0/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/23, Error ellipse: s-maj=34.0km s-min=15.7km az=59.0*
ISC 01 08:12:28.4±0.4**, 954S**±006×**10882E**±006**, h35**km**, h35**km±.7km**: pP-P, n38,** σ0.67/34**, mb4.6**/19**, MS3.7**/5**, 1D, South of Jawa**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
YOGI Yogyakarta 2.25 41⇓*e*P Pn 08 13 04.7 +1.6
YOGI *e*S Sn 08 13 29.1 -0.5
MBWA Marble Bar 15.62 139 *e*Pn Pn 08 15 59.6 -6.2
18nm,1.2s
MBWA *e*Sn Sn 08 18 34.1 -24
FITZ Fitzroy Crossi 18.41 119 *e*P Pn 08 16 39.0 -1.8
9.5nm,0.6s
FITZ *e*S Sn 08 19 46.4 -19
FITZ Fitzroy Crossi 18.41 119 P Pn 08 16 40.8 0.0
0.4nm,0.3s,baz=290,slow=8.1,SNR=18
FITZ LR LR 08 23 21.3
comp=Z,127nm,18.9s,baz=292,slow=36
KAKA Kakadu 23.39 100 *e*P P 08 17 33.8 -0.4
6.6nm,0.6s,mb4.2
NWAO Narrogin (SRO) 24.54 163 P P 08 17 45.9 +1.2
18nm,0.9s,mb4.6,baz=11,slow=5.2,SNR=2.9
NWAO LR LR 08 28 15.3
comp=Z,102nm,18.6s,MS3.4,baz=334,slow=38
WRAB Tennant Creek 26.73 116 *e*P P 08 18 04.2 -0.4
10nm,0.6s,mb4.5
WB2 Warramunga Arr 26.73 116 *e*P P 08 18 04.3 -0.3
ASPA Alice Springs 27.77 123 *e*P P 08 18 14.5 +0.6
AS31 Alice Springs 27.78 123 *e*P P 08 18 14.5 +0.5
ASAR Alice Springs 27.78 123 P P 08 18 14.0 0.0
2.2nm,0.6s,mb4.0,baz=303,slow=9.1,SNR=37
ASAR PcP PcP 08 21 30.9 +1.1
1.2nm,0.5s,baz=304,slow=2.1,SNR=14
ASAR LR LR 08 29 35.8
comp=Z,132nm,20.5s,MS3.5,baz=88,slow=37
CTA Charters Tower 37.60 111 P P 08 19 40.9 +1.3
3.6nm,0.6s,mb4.3,baz=268,slow=10,SNR=11
CTAO Charters Tower 37.60 111 *e*P P 08 19 40.6 +1.0
3.8nm,0.5s,mb4.4
JIRN Jiri 42.98 330 *e*P P 08 20 24.5 +0.3
49nm,1.1s,mb5.2
PKI Pulchoki 43.30 329 *e*P P 08 20 26.9 +0.1
GUN Gumba 43.34 330 *e*P P 08 20 27.4 +0.3
DMN Daman 43.49 329 *e*P P 08 20 28.3 0.0
44nm,0.9s,mb5.2
KKN Kakani 43.55 329 *e*P P 08 20 28.5 -0.3
GKN Gorkha 44.05 329 *e*P P 08 20 33.3 +0.5
KOLN Koldanda 44.40 327 *e*P P 08 20 35.6 0.0
52nm,0.8s,mb5.3
BJI Beijing 49.79 7 P P 08 21 16.8 -0.9
BJI AMB AMB
comp=Z,8.0nm,0.9s,mb4.8
BJI LR LR
comp=N,134nm,15.5s,MS4.2
BJI LR LR
comp=E,106nm,15.6s,MS4.2
MJAR Matsushiro Arr 53.52 29 LR LR 08 45 34.3
comp=E,60nm,19.9s,MS3.6,baz=210,slow=37
SONM Songino Array 57.16 358 P P 08 22 11.5 -0.2
comp=E,1.9nm,0.5s,mb4.4,baz=176,slow=8.3,SNR=19
SONM pP pP 08 22 21.7 -0.5
comp=E,3.0nm,0.9s,baz=180,slow=8.5,SNR=7.5
SONM LR LR 08 49 58.9
comp=E,87nm,18.6s,MS3.9,baz=33,slow=39
ULN Ulaanbaatar 57.17 359 *e*P P 08 22 11.2 -0.6
comp=E,7.9nm,1.2s,mb4.6
MKAR Makanchi Array 60.87 339 P P 08 22 37.1 -0.4
comp=E,3.0nm,0.5s,mb4.7,baz=151,slow=7.7,SNR=34
MKAR pP pP 08 22 47.6 -0.5
comp=E,5.6nm,0.5s,baz=144,slow=7.8,SNR=17
KURK Kurchatov 65.49 339 *e*P P 08 23 08.5 +0.5
comp=E,20nm,1.4s,mb5.0
KURK *e* pP 08 23 18.1 -0.6
BVAR Borovoye Array 70.39 337 P P 08 23 39.9 +1.0
comp=E,1.8nm,0.6s,mb4.2,baz=141,slow=8.0,SNR=7.5
BVAR pP pP 08 23 49.1 -0.6
comp=E,2.7nm,0.6s,baz=142,slow=8.5,SNR=7.1
BRVK Borovoye 70.46 336 *e*P P 08 23 39.5 +0.2
comp=E,2.8nm,0.8s,mb4.2
BRVK *e* pP 08 23 49.0 -1.0
CHKZ Chkalovo 70.80 337 *e*P P 08 23 40.5 -0.8
comp=E,5.6nm,0.7s,mb4.6
CHKZ *e* pP 08 23 51.2 -1.0
ZRNK Zerenda 70.89 336 *e*P P 08 23 41.5 -0.4
comp=E,11nm,1.2s,mb4.7
ZRNK *e* pP 08 23 51.8 -0.9
VNDA Vanda 73.16 170 P P 08 23 54.6 -0.9
comp=E,1.2nm,0.6s,mb4.0,baz=301,slow=6.7,SNR=6.4
VNDA Vanda 73.16 170 *e*P P 08 23 54.3 -1.2
comp=E,1.2nm,0.7s,mb3.9
VNDA *e* pP 08 24 05.2 -1.1
QSPA South Pole Qui 80.47 180 *e*P P 08 24 35.9 -0.8
comp=E,2.7nm,0.7s,mb4.3
QSPA *e* pP 08 24 47.3 -0.3
NCB Newcomb 145.59 4 *e*PKPdf PKPdf 08 32 03.2 +0.3
BDFB Brasilia 146.05 223 PKPbc PKPbc 08 32 06.8 +2.2
comp=E,2.9nm,0.5s,baz=134,slow=4.1,SNR=7.6
WVT Waverly 149.51 27 *e*PKPbc PKPbc 08 32 14.3 +0.4
LPAZ La Paz 154.16 187 PKPab PKPab 08 32 40.0 +1.6
comp=E,0.9nm,0.6s,baz=209,slow=3.8,SNR=7.7
LPAZ La Paz 154.16 187 PKPab PKPab 08 32 40.0 +1.6

IDC 01 08:26:41.7±2.3**, 401N**×**9371E, h0**km**, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.5**/21**, mbtmp3.7**/5**, ML4.1**/1**, Error ellipse: s-maj=67.8km s-min=22.4km az=53.0, Off west coast of northern Sumatera**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
PSI Prapat 5.34 103 Pn Pn 08 28 04.6 +1.9
6.5nm,0.3s,baz=287,slow=9.3,SNR=25
PSI Sn Sn 08 29 05.5 +0.7
2.1nm,0.3s,baz=47,slow=0.7,SNR=4.8
FITZ Fitzroy Crossi 38.38 126 P P 08 34 04.2 -0.4
0.5nm,0.6s,baz=308,slow=19,SNR=3.1
MKAR Makanchi Array 43.76 349 P P 08 34 49.2 +0.3
0.4nm,0.5s,baz=169,slow=8.6,SNR=6.2
SONM Songino Array 45.01 12 P P 08 34 58.7 -0.2
1.5nm,0.6s,baz=189,slow=8.8,SNR=12
ASAR Alice Springs 47.85 127 P P 08 35 22.1 +0.8
0.2nm,0.6s,baz=301,slow=8.2,SNR=4.9

MAN 01 08:44:10.5, 1638N×**12246E, h11**km**, mb3.6, ML4.7, 2C-2D, Luzon**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
PALP Palanan 0.68 357⇓*i*P Pg 08 44 23.6 -0.1
PALP Palanan 0.68 357 *e*P Pg 08 44 23.6 -0.1
PALP *e*S Sg 08 44 34.6 +2.0
CAUP Cauayan 0.83 313 *e*P Pg 08 44 25.3 -1.1
CAUP *e*S Sg 08 44 37.3 0.0

BALP	Baler	1.06	233	eP	Pb	08 44 29.7	-1.1
BALP				eS	Sg	08 44 45.6	+1.0
CVP	Callao Caves	1.45	335⇑	iP	Pn	08 44 36.0	-0.6
CVP				iS	Sn	08 44 55.0	-0.6
PCPH	Palayan	1.54	238⇓	eP	Pn	08 44 37.6	-0.3
PCPH				eS	Sn	08 44 57.9	0.0
POLP	Polilio Island	1.72	197	eP	Pn	08 44 40.6	+0.3
POLP				eS	Sn	08 45 02.0	-0.2
BCPH	Baguio City Da	1.80	270⇑	eP	Pn	08 44 41.9	+0.4
BCPH				iS	Sn	08 45 06.0	+1.7
APYP	Conner	1.88	322	eP	Pn	08 44 41.1	-1.4
APYP				eS	Sn	08 45 06.5	+0.4
BOLP	Bolinao	2.44	270	eP	Pn	08 44 52.5	+2.2
PVCP	Virac	3.21	149	eP	Pn	08 45 01.1	+0.2
PVCP				eS	Sn	08 45 40.1	+0.9

*ISCJB **01** 08:56:51.7±1.2, 1736S±005×16776E±007, h33^{km}±10^{km}, mb4.7/27, MS4.2/15, Error ellipse: s-maj=11.2km s-min=8.7km az=134.1*

*IDC **01** 08:56:52.0±4.2, 1725S×16792E, h27^{km}±27^{km}, mb4.4/9, mb1 4.7/11, mb1mx4.6/15, mbtmp4.7/11, ML4.9/2, MS4.1/14, Ms1 4.1/14, ms1mx4.0/19, Error ellipse: s-maj=26.5km s-min=17.0km az=75.0*

*BJI **01** 08:56:51.6, 1725S×16762E, h27^{km}, mB5.2, mb4.8, Ms4.8, Msz4.5*

*LDG **01** 08:56:52.7±0.2, 1713S×16708E, h25^{km}, Mb4.9/2, Ms4.3/6, Error ellipse: s-maj=26.1km s-min=3.4km az=91.0*

*MOS **01** 08:56:53.5±1.9, 1727S×16758E, h33^{km}, mb4.9/11, Error ellipse: s-maj=15.7km s-min=11.1km az=132.4*

*NEIC **01** 08:56:54.1±0.3, 1733S×16780E, mb4.9/14, MS4.7/1, Error ellipse: s-maj=12.9km s-min=10.8km az=82.0*

NEIC Felt at Port-Vila.

*HRVD **01** 08:56:54.1±0.5, 1732S×16771E, h32^{km}±1^{km}, MW5.0/37, Centroid moment Tensor Solution. LP body waves: s29,c32;Mantle waves: s37,c50; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.39±.23; $M_{\theta\theta}$-0.01±.15; $M_{\phi\phi}$-3.39±.16; $M_{r\theta}$-0.42±.29; $M_{\theta\phi}$0.74±.14; $M_{\phi r}$-2.18±.22; Best double couple: $M_0$4.12000×10^{16} NP1:ϕ_s336.00000°, δ31.00000°, λ69.00000°. NP2: ϕ_s180.00000°, δ61.00000°, λ102.00000°. Principal axes: T 4.1230, Plg71.0000°, Azm117.0000°; N -0.0110, Plg11.0000°, Azm354.0000°; P -4.1180, Plg16.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 08:56:53.4±1.2**, 1736S**±005×**16787E**±007**, h34**^{km}±8^{km}**, h37**^{km}±2.9^{km}**:pP-P, n123, σ1^{s}01**/65**, mb4.7**/27**, MS4.2**/15**, 2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKM	Butte a Klehm	0.47	130	iP	Pb	08 57 03.5	-0.1
DZM	Mont Dzumac	4.88	196	eP	Pn	08 58 03.5	-0.8
DZM				eS	Sn	08 58 58.0	-1.6
DZM	Mont Dzumac	4.88	196	Pn	Pn	08 58 04.5	+0.1
	25nm,0.3s,baz=39,slow=12,SNR=201						
DZM				Sn	Sn	08 58 58.6	-0.9
	33nm,0.3s,baz=119,slow=24,SNR=9.3						
DZM				LR	LR	08 59 51.1	
	comp=Z,2μm,21.5s,baz=6.8,slow=36						
HNR	Honiara	11.02	315	Pn	Pn	08 59 28.0	-0.6
	15nm,0.3s,baz=312,slow=1.8,SNR=4.1						
HNR				LR	LR	09 03 04.7	
	comp=Z,589nm,19.5s,baz=178,slow=34						
HNR	Honiara	11.02	315	ePn	Pn	08 59 28.9	+0.3
RAO	Raoul Island	17.60	135	LR	LR	09 05 38.3	
	comp=Z,172nm,19.0s,baz=120,slow=30						
ARMA	Armidale	19.70	226	eP	Pn	09 01 30.0	+8.6
AFI	Afiamalu	19.90	83	LR	LR	09 07 05.8	
	comp=Z,634nm,19.6s,baz=253,slow=31						
CTA	Charters Tower	20.64	259	eP	P	09 01 31.8	+1.7
	18nm,0.9s						
CTA	Charters Tower	20.64	259	P	P	09 01 31.6	+1.6
	21nm,1.0s,baz=80,slow=13,SNR=10						
CTA				LR	LR	09 08 53.3	
	comp=Z,722nm,18.3s,MS4.1,baz=51,slow=35						
CTA	Charters Tower	20.64	259	eP	P	09 01 31.8	+1.7
CTA				pmax	pmax		
	comp=Z,18nm,0.9s						
CTAO	Charters Tower	20.64	259	eP	P	09 01 31.1	+1.0
CTAO				pmax	pmax		
	comp=Z,29nm,0.9s						
CTAO	Charters Tower	20.64	259	eP	P	09 01 31.1	+1.0
	comp=Z,29nm,0.9s						
URZ	Urewera	22.34	161	P	P	09 01 49.4	+1.1
	comp=Z,21nm,0.9s,mb4.5,baz=299,slow=9.0,SNR=9.1						
URZ				LR	LR	09 09 08.7	
	comp=Z,781nm,19.2s,MS4.2,baz=350,slow=33						
SNZO	South Karori	24.59	168	eP	P	09 02 11.5	+1.2
	comp=Z,20nm,0.7s,mb4.7						
RPZ	Rata Peaks	26.41	175	P	P	09 02 27.7	+0.9
	comp=Z,5.5nm,0.7s,mb4.2,baz=340,slow=22,SNR=6.6						
WB2	Warramunga Arr	31.83	260	eP	P	09 03 14.2	-0.7
WRAB	Tennant Creek	31.83	260	eP	P	09 03 14.5	-0.5
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
WRAB	Tennant Creek	31.83	260	eP	P	09 03 14.5	-0.4
	comp=Z,13nm,0.9s,mb4.8						
AS31	Alice Springs	32.37	253	eP	P	09 03 19.1	-0.6
ASAR	Alice Springs	32.37	253	P	P	09 03 19.5	-0.2
	comp=Z,8.6nm,0.7s,mb4.7,baz=79,slow=9.0,SNR=51						
ASAR				PcP	PcP	09 06 05.8	-1.0
	comp=Z,1.9nm,0.7s,baz=94,slow=2.6,SNR=6.2						
ASAR				ScP	ScP	09 09 49.5	+1.6
	comp=Z,2.0nm,1.1s,baz=113,slow=3.8,SNR=5.0						
ASAR				LR	LR	09 16 05.9	
	comp=Z,763nm,18.8s,MS4.4,baz=28,slow=36						
ASAR	Alice Springs	32.37	253	P	P	09 03 19.5	-0.2
ASAR						09 06 05.8	
ASPA	Alice Springs	32.37	253	eP	P	09 03 19.1	-0.6
GUMO	Guam	38.22	322	LR	LR	09 17 52.5	
	comp=Z,308nm,21.2s,MS4.1,baz=127,slow=33						
FITZ	Fitzroy Crossi	40.16	262	eP	P	09 04 27.1	+0.9
	comp=Z,28nm,0.9s,mb5.0						
PPT	Papeete	40.53	97	eS	S	09 10 37.0	+0.8
	comp=Z,139nm,24.5s						
PPT				eLR	LR	09 15 57.5	
	comp=Z,414nm,24.0s						
PPT	Papeete	40.53	97	LR	LR	09 17 01.3	
	comp=Z,328nm,19.0s,MS4.2,baz=143,slow=30						
MBWA	Marble Bar	45.47	257	eP	P	09 05 10.2	+1.0
	comp=Z,19nm,0.8s,mb5.0						
MBWA				epP	pP	09 05 21.4	+2.1
KSM	Kuching	59.70	282	eP	P	09 06 54.7	+0.2
VNDA	Vanda	60.26	182	P	P	09 06 57.9	-0.5
	comp=Z,2.0nm,0.7s,mb4.3,baz=357,slow=9.0,SNR=8.7						
VNDA				LR	LR	09 28 26.2	
	comp=Z,72nm,20.8s,MS3.8,baz=281,slow=31						
VNDA	Vanda	60.26	182	eP	P	09 06 57.7	-0.7
	comp=Z,2.3nm,0.8s,mb4.3						
VNDA				epP	pP	09 07 08.7	0.0
MJAR	Matsushiro Arr	60.49	333	P	P	09 06 59.1	-0.8
	comp=Z,5.9nm,1.0s,mb4.6,baz=162,slow=7.3,SNR=9.0						
MAJO	Matsushiro	60.49	333	eP	P	09 07 02.2	+2.2
MAJO				e*PP	pP	09 07 11.8	+1.5
MAJO				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
MAJO	Matsushiro	60.49	333	eP	P	09 07 02.2	+2.2
	comp=Z,14nm,0.9s,mb5.0						
MAJO				epP	pP	09 07 11.8	+1.5
MAT	Matsushiro	60.49	333	P	P	09 07 02.4	+2.4
MAT				eS	S	09 15 28.0	+15
MAT	Matsushiro	60.49	333	eP	P	09 07 03.0	+3.0
SBA	Scott Base	60.52	180	eP	P	09 07 00.6	+0.4
SBA				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
SBA	Scott Base	60.52	180	eP	P	09 07 00.6	+0.4
	comp=Z,8.0nm,0.7s,mb5.0						
YHNB	Yeheng	61.63	311	eP	P	09 07 07.2	-0.5
YSS	Yuzh-Sakhalins	67.89	342	P	P	09 07 48.0	-0.5
NJ2	Nanjing	67.95	316	eP	P	09 07 50.0	+1.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
MDJ	Mudanjiang	70.86	332	P	P	09 08 07.2	+0.4
MDJ				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,67nm,4.1s						
MDJ	Mudanjiang	70.86	332	eP	P	09 08 05.8	-1.0
	comp=Z,15nm,1.0s,mb4.9						
CN2	Changchun	72.18	329	eP	P	09 08 16.5	+1.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
QSPA	South Pole Qui	72.68	180	eP	P	09 08 17.6	-0.2
	comp=Z,13nm,0.6s,mb5.0						
QSPA				epP	pP	09 08 31.8	+3.5
KLR	Kul'dur	73.63	336	eP	P	09 08 21.0	-2.4
BJI	Beijing	74.66	321	P	P	09 08 28.8	-0.6
BJI				S	S	09 18 05.3	+2.3
BJI				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
BJI				LR	LR		
	comp=Z,99nm,28.3s,MS4.0						
KMI	Kunming	76.17	302	P	P	09 08 39.4	+1.3
KMI				AP	pP	09 08 46.4	-2.3
KMI				S	S	09 18 20.6	+0.9
KMI				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.7						
KMI				LR	LR		
	comp=Z,44nm,25.9s,MS3.6						
CHTO	Chiang Mai	76.69	295	eP	P	09 08 41.6	+0.6
CHTO				e		09 08 48.3	
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
CHTO	Chiang Mai	76.69	295	eP	P	09 08 41.6	+0.6
	comp=Z,10.0nm,1.0s,mb4.7						
CHTO				ePcP	PcP	09 08 48.2	-4.0
HHC	Hu-ho-hao-te	77.95	320	eP	P	09 08 49.1	+1.1
HHC				PCP	PcP	09 08 58.9	+1.2
HHC				AP	pP	09 09 02.3	+3.6
HHC				PP	PP	09 11 47.1	+2.9
HHC				S	S	09 18 38.8	-0.3
HHC				SKS		09 18 54.2	
HHC				SCS	ScS	09 19 01.4	-3.5
HHC				PS		09 19 26.3	
HHC				SS	SS	09 23 44.4	+4.1
HHC				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb5.0						
HHC				AMB	AMB		
	comp=Z,38nm,3.4s						
HHC				LR	LR		
	comp=N,104nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=E,103nm,17.1s,MS4.3						
HHC				LR	LR		
	comp=Z,107nm,18.0s,MS4.2						
MAW	Mawson	79.68	202	LR	LR	09 39 05.5	
	comp=Z,168nm,19.5s,MS4.4,baz=230,slow=32						
CIT	Chita	83.62	330	eP	P	09 09 16.9	-1.4
ULN	Ulaanbaatar	84.58	324	eP	P	09 09 23.0	-0.2
ULN				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.1						
ULN	Ulaanbaatar	84.58	324	eP	P	09 09 23.0	-0.3
	comp=Z,14nm,0.8s,mb5.1						
GTA	Gaotai	84.89	314	eP	P	09 09 25.1	+0.3
GTA				AP	pP	09 09 35.2	-0.3
GTA				XP	sP	09 09 40.3	+0.9
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.6						
SONM	Songino Array	84.94	324	P	P	09 09 23.8	-1.2
	comp=Z,6.2nm,0.7s,mb4.8,baz=142,slow=5.0,SNR=33						
SONM				LR	LR	09 44 08.8	
	comp=Z,83nm,19.6s,MS4.1,baz=5.4,slow=33						
BILL	Bilibino	85.16	359	eP	P	09 09 17.3	-8.9
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
SYO	Syowa Base	86.36	196⇓	eP	P	09 09 31.4	-0.7
SYO	Syowa Base	86.36	196⇓	eP	P	09 09 32.4	+0.3
ZAK	Zakamensk	88.02	325	eP	P	09 09 39.0	-1.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.6						
NVAR	Mina Array Bea	88.55	49	P	P	09 09 41.4	-1.2
	comp=Z,1.2nm,0.9s,mb4.2,baz=224,slow=8.4,SNR=5.9						
NVAR	Mina Array Bea	88.55	49	P	P	09 09 41.4	-1.2
WVOR	Wild Horse Val	89.92	45	eP	P	09 09 48.3	-0.7
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.9						
WVOR	Wild Horse Val	89.92	45	eP	P	09 09 48.3	-0.8
	comp=Z,8.7nm,1.4s,mb4.9						
PDAR	Pinedale Array	96.30	47	LR	LR	09 46 30.6	
	comp=Z,100nm,18.9s,MS4.3,baz=253,slow=31						
MKAR	Makanchi Array	99.49	316	P	P	09 10 31.9	-0.9
	comp=Z,0.8nm,0.6s,mb4.4,baz=94,slow=6.3,SNR=8.8						
MKAR	Makanchi Array	99.49	316	P	P	09 10 31.9	-0.9
YKA	Yellowknife Ar	99.61	27	LR	LR	09 53 48.9	
	comp=Z,62nm,18.9s,MS4.1,baz=270,slow=34						
ARCES	ARCESS Array B	122.93	345	PKP	PKPdf	09 15 44.4	-1.6
	comp=Z,3.0nm,0.6s,baz=90,slow=1.2,SNR=16						
JOF	Joensuu	125.52	337	ep	PKPdf	09 15 48.5	-2.5
	comp=Z,8.1nm,0.9s						
KAF	Kangasniemi	127.84	338	ep	PKPdf	09 15 53.3	-2.1
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	128.36	338	PKP	PKPdf	09 15 56.0	-0.4
	comp=Z,2.3nm,1.0s,baz=56,slow=0.7,SNR=5.7						
NB2	NORSAR Subarra	133.30	345	PKPd	PKPdf	09 16 06.3	+0.5
	comp=Z,0.5nm,0.5s,baz=31,slow=1.9						
NOA	NORSAR Array B	133.30	345	PKP	PKPdf	09 16 05.3	-0.5
	comp=Z,1.7nm,0.8s,baz=30,slow=2.0,SNR=5.2						
BRTR	Keskin Array B	134.63	309	PKP	PKPdf	09 16 08.2	-0.1
	comp=Z,0.3nm,0.4s,baz=132,slow=5.5,SNR=4.1						
GERES	GERESS Array B	142.23	332	PKP	PKPdf	09 16 20.4	-1.8
	comp=Z,0.6nm,0.6s,baz=46,slow=2.8,SNR=4.1						
LANF	Langenberg	144.54	337	PKP	PKPdf	09 16 25.6	-0.7
WLF	Walferdange	144.55	339	ePKIKP	PKPdf	09 16 23.8	-2.5
BFO	Black Forest	144.88	336	ePKIKP	PKPdf	09 16 24.7	-2.2
SPAK	Spaichingen-Ko	144.88	335	PKP	PKPdf	09 16 26.9	0.0
WLS	Welschbruch	145.18	337	PKP	PKPdf	09 16 26.3	-1.1
CDF	Champ du Feu	145.21	337	ePKP1	PKPbc	09 16 26.1	-1.0
	comp=Z,75nm,0.9s						
FELD	Feldberg im Sc	145.38	336	PKP	PKPdf	09 16 27.1	-0.6
ECH	Echery	145.42	337	PKP	PKPdf	09 16 26.9	-0.9
THEF	They Montfort	145.83	338	PKP	PKPdf	09 16 28.0	-0.5
HINF	Hinteralfeld	145.86	337	ePKP1	PKPbc	09 16 28.3	-0.9
HAU	Haudompre	145.89	338	ePKP1	PKPbc	09 16 28.2	-1.0
HAU				eR			
	comp=Z,122nm,20.0s						
HAU	Haudompre	145.89	338	ePKP	PKPdf	09 16 28.2	-0.4
HAU				LR	LR		
	comp=Z,120nm,20.0s,MS4.7						
LOMF	Lomont	146.26	337	PKP	PKPdf	09 16 29.5	+0.3
CABF	La Chapelle	147.16	337	ePKP1	PKPbc	09 16 32.0	-0.9
LDF	La Druitiere	147.34	345	ePKP1	PKPbc	09 16 32.2	-1.3
LOR	Lormes	147.39	340	ePKP1	PKPbc	09 16 32.5	-1.1
LOR				eR			
	comp=Z,122nm,17.8s						
LOR	Lormes	147.39	340	ePKP	PKPdf	09 16 32.5	+1.4
LOR				LR	LR		
	comp=Z,120nm,17.8s,MS4.7						
SSF	Saint Saulge	147.69	340	ePKP1	PKPbc	09 16 33.4	-1.0
	comp=Z,34nm,0.9s						
GRR	Gorron	147.71	346	ePKP1	PKPbc	09 16 33.1	-1.4
LPL	La Plagne	147.81	335	ePKP1	PKPbc	09 16 34.0	-0.7
LPG	La Plagne	147.81	335	ePKP1	PKPbc	09 16 34.0	-0.7
SMF	Signal de Mont	147.94	339	ePKP1	PKPbc	09 16 33.8	-1.3
AVF	Avril sur Loir	147.98	340	ePKP1	PKPbc	09 16 33.9	-1.3
SGMF	Saint Gilles	148.21	348	ePKP1	PKPbc	09 16 34.6	-1.2
ROSF	Rostrenen	148.27	349	ePKP1	PKPbc	09 16 34.6	-1.3
	comp=Z,70nm,1.2s						
BGF	Bois d'Agland	148.35	340	ePKP1	PKPbc	09 16 35.0	-1.2
MBDF	Montbardon	148.43	334	ePKP1	PKPbc	09 16 35.3	-1.1
	comp=Z,12nm,0.9s						
PLDF	La Plantade	148.60	339	PKP	PKPbc	09 16 38.9	+2.1
ORIF	Oris-en-Rattie	148.64	335	ePKP1	PKPbc	09 16 36.0	-0.9
	comp=Z,19nm,0.8s						
ORIF				eR			
	comp=Z,84nm,19.5s						
AGO	Saint Agoulin	148.70	339	PKP	PKPbc	09 16 38.9	+1.8
TCF	Toulx Ste Croi	148.79	341	ePKP1	PKPbc	09 16 36.3	-1.0
	comp=Z,21nm,0.9s						
SBF	Sospel	148.83	332	ePKP1	PKPbc	09 16 36.4	-1.0
PYM	Petit Puy Mans	149.00	339	PKP	PKPbc	09 16 38.2	+0.4
PGF	Pioggiola	149.10	329	ePKP1	PKPbc	09 16 37.2	-0.9
	comp=Z,71nm,1.1s						
VIVF	Saint-Julien-l	149.17	336	ePKP1	PKPbc	09 16 37.2	-1.1
MFF	Saint Martin d	149.19	344	ePKP1	PKPbc	09 16 37.1	-1.2
	comp=Z,28nm,0.8s						
LBL	Lubilhac	149.37	338	PKP	PKPbc	09 16 39.4	+0.6
SMRF	Simiane la Rot	149.54	334	ePKP1	PKPbc	09 16 37.7	-1.5
LASF	Ste Croix	150.14	336	ePKP1	PKPbc	09 16 39.6	-1.0
	comp=Z,42nm,1.0s						
VSL	Villasalto	151.08	324	ePKPbc	PKPbc	09 16 42.1	-0.7
MTLF	Montolieu	151.38	338	ePKP1	PKPbc	09 16 42.4	-1.2
ETSF	Etsaut	152.70	341	ePKP1	PKPbc	09 16 45.5	-1.0
	comp=Z,13nm,0.7s						
SJPF	Ste Jean	152.70	342	ePKP1	PKPbc	09 16 45.6	-1.0
ESDC	Sonseca Array	156.66	344	PKPab	PKPab	09 17 14.5	+0.3
	comp=Z,0.3nm,0.3s,baz=4.6,slow=3.4,SNR=4.3						
TORD	Torodi Ar. Bea	166.01	254	PKP	PKPdf	09 16 54.0	-0.8
	comp=Z,1.2nm,1.0s,baz=75,slow=1.7,SNR=4.2						
TORD				PKPab	PKPab	09 17 55.4	+0.4
	comp=Z,0.9nm,1.0s,baz=100,slow=2.9,SNR=2.7						
LIC	Lamto	166.93	213	ePKIKP	PKPdf	09 16 50.9	-4.6
	comp=Z,36nm,1.3s						

*ISCJB **01** 09:11:35.3±0.6, 4937N±003×678E±004, h0^{km}, Error ellipse: s-maj=4.1km s-min=3.6km az=124.0*

*CSEM **01** 09:11:36.0±0.1, 4946N×691E, h2^{km}, ML2.7/7, Error ellipse: s-maj=2.4km s-min=2.1km az=51.0*

*LDG **01** 09:11:37.0±0.2, 4943N×685E, h1^{km}, Ml2.7/7, Error ellipse: s-maj=3.9km s-min=2.3km az=43.0, Suspected Mining induced.*

*NEIC **01** 09:11:37.0, 4943N×685E, h1^{km}, ML2.7(LDG), After LDG.*

*BGR **01** 09:11:37.2±0.5, 4939N×683E, h1^{km}, ML1.8, Error ellipse: s-maj=10.0km s-min=6.7km az=39.0*

ISC 01 09:11:36.4±0.5**, 4939N**±003×**681E**±004**, h0**^{km}**, n23, σ1^{s}17**/43**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WLF	Walferdange	0.51	303	eSg	Sg	09 11 54.1	+1.3
WLF	Walferdange	0.51	303	ePg	Pg	09 11 48.0	+1.8
WLF	Walferdange	0.51	303	ePg	Pg	09 11 48.0	+1.8
WLF				Sg	Sg	09 11 54.1	+1.3
CDF	Champ du Feu	1.02	162	ePg	Pg	09 11 56.5	+0.5
CDF				eSg	Sg	09 12 11.2	+2.0
	16nm,0.2s						
CDF	Champ du Feu	1.02	162	ePg	Pg	09 11 56.5	+0.5
CDF				eSg	Sg	09 12 11.2	+2.0
	8.1nm,0.2s						
TNS	Taunus Mts	1.35	51	ePg	Pg	09 11 59.4	-2.9
TNS				eSg	Sg	09 12 20.7	+1.0
TNS	Taunus Mts	1.35	51	ePg	Pg	09 11 59.4	-2.9
TNS				eSg	Sg	09 12 20.7	+0.9
HAU	Haudompre	1.42	193	ePg	Pg	09 12 03.8	+0.3
HAU				eSg	Sg	09 12 23.3	+1.4
	12nm,0.2s						
HAU	Haudompre	1.42	193	ePg	Pg	09 12 03.8	+0.3
HAU				eSg	Sg	09 12 23.3	+1.4
	6.1nm,0.2s						
BFO	Black Forest	1.46	136	ePg	Pg	09 12 04.1	-0.2
BFO				eSg	Sg	09 12 23.0	-0.2
BFO	Black Forest	1.46	136	ePg	Pg	09 12 04.1	-0.2
BFO				eSg	Sg	09 12 23.0	-0.2
GIVF	Givet	1.48	300	ePg	Pg	09 12 04.4	-0.3
GIVF				eSg	Sg	09 12 23.9	+0.1
	10nm,0.3s						
GIVF	Givet	1.48	300	ePg	Pg	09 12 04.4	-0.3
GIVF				eSg	Sg	09 12 23.9	+0.1
	5.1nm,0.3s						
HINF	Hinteralfeld	1.57	179	ePg	Pg	09 12 06.7	+0.2
HINF				eSg	Sg	09 12 27.0	+0.1
	36nm,0.3s						
HINF	Hinteralfeld	1.57	179	ePg	Pg	09 12 06.7	+0.2
HINF				eSg	Sg	09 12 27.0	+0.1
	18nm,0.3s						
SFTF	Sexfontaines	1.67	225	eSg	Sg	09 12 31.2	+1.3
	11nm,0.4s						
SFTF	Sexfontaines	1.67	225	eSg	Sg	09 12 31.2	+1.3
	5.5nm,0.4s						
CABF	La Chapelle	2.82	190	ePn	Pn	09 12 22.2	-0.5
LOR	Lormes	2.89	224	ePn	Pn	09 12 22.2	-1.5
LOR				eSn	Sn	09 12 57.4	-1.8
SSF	Saint Saulge	3.21	225	ePn	Pn	09 12 26.4	-1.6
SSF				eSg	Sg	09 13 19.8	+0.3
	4.2nm,0.5s						
SSF	Saint Saulge	3.21	225	ePn	Pn	09 12 26.4	-1.6
SSF				eSg	Sg	09 13 19.8	+0.3
	2.1nm,0.5s						
SMF	Signal de Mont	3.39	217	ePn	Pn	09 12 30.0	-0.5
SMF				eSn	Sn	09 13 08.6	-2.9
SMF				eSg	Sg	09 13 24.9	-0.4
	3.3nm,0.3s						
SMF	Signal de Mont	3.39	217	ePn	Pn	09 12 30.0	-0.5
SMF				eSn	Sn	09 13 08.6	-2.9
SMF				eSg	Sg	09 13 24.9	-0.4
	1.6nm,0.3s						

CASC 01 09:41:11.4±1.8**, 1262N**×**8837W, h31**^{km}±13^{km}**, MD3.6, 4C-2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.81	7⇑	eP	x	09 41 35.0	
VSM				eS	x	09 41 47.0	
BLLM	Bellamira	0.82	9⇓	eP	x	09 41 34.8	
BLLM				eS	x	09 41 46.8	
CNCH	Conchagua	0.83	39⇑	eP	x	09 41 34.4	
CNCH				eS	x	09 41 46.3	
LCBS	La Ceiba	1.19	330	eP	x	09 41 39.7	
LCBS				eS	x	09 41 55.5	
LFRS	El Faro	1.20	326⇓	eP	x	09 41 39.9	
LFRS				eS	x	09 41 56.4	
LBRS	Las Brisas	1.29	329⇑	eP	x	09 41 41.6	
LBRS				eS	x	09 41 57.9	
LFU	La Fuente	1.33	327	eP	x	09 41 42.1	
LFU				eS	x	09 42 00.2	
BOQS	Boqueron	1.42	321	eP	x	09 41 43.3	
BOQS				eS	x	09 42 03.4	
CNGN	Cerro Negro	1.64	94	eP	Pn	09 41 37.9	-0.2
CNGN				eS	Sn	09 41 59.0	+1.0
SBLS	San Blas	1.72	315	eP	x	09 41 48.2	
SBLS				eS	x	09 42 09.5	
SNJE	San Jose	1.73	316⇑	eP	x	09 41 48.0	
SNJE				eS	x	09 42 09.6	

*IDC **01** 09:58:14.0±0.7, 1922S×17339W, h0^{km}, mb4.7/9, mb1 4.9/10, mb1mx4.7/15, mbtmp4.8/10, ML4.1/1, MS4.8/14, Ms1 4.8/14, ms1mx4.5/27, Error ellipse: s-maj=24.2km s-min=18.5km az=123.0*

*BJI **01** 09:58:15.6, 1925S×17384W, h10^{km}, mB5.5, mb5.1, Ms5.1, Msz4.8*

*ISCJB **01** 09:58:17.3±0.2, 1935S±007×17367W±006, h30^{km}, mb5.0/42, MS4.9/39, Error ellipse: s-maj=11.2km s-min=5.4km az=110.3*

*SZGRF **01** 09:58:17.5, 1975S×17221W, h30^{km}, mb5.2, Tonga Islands region*

*NEIC **01** 09:58:19.0±0.3, 1926S×17362W, mb5.0/24, MS5.2/8, Error ellipse: s-maj=16.2km s-min=8.7km az=140.0*

*HRVD **01** 09:58:19.0±0.2, 1948S×17284W, h12^{km}, MW5.2/76, Centroid moment Tensor Solution. LP body waves: s51,c71;Mantle waves: s76,c124; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.87±.13; $M_{\theta\theta}$-0.98±.13; $M_{\phi\phi}$-4.89±.12; $M_{r\theta}$3.05±.37; $M_{\theta\phi}$-3.34±.11; $M_{\phi r}$3.07±.35; Best double couple: $M_0$7.68800×10^{16} NP1:ϕ_s199.00000°, δ29.00000°, λ72.00000°. NP2: ϕ_s39.00000°, δ62.00000°, λ100.00000°. Principal axes: T 7.3050, Plg71.0000°, Azm330.0000°; N 0.7640, Plg9.0000°, Azm215.0000°; P -8.0720, Plg17.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **01** 09:58:24.2±1.5, 1863S×17484W, h33^{km}, mb5.2/16, MS4.9/15 Error ellipse: s-maj=16.2km s-min=14.3km az=44.7*

ISC 01 09:58:19.5±0.2**, 1932S**±006×**17363W**±006**, h32**^{km}**, h32**^{km}±1.5^{km}**:pP-P, n254, σ1^{s}00**/125**, mb5.0**/42**, MS4.9**/39**, 42C-29D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.66	19	Pn	Pn	09 59 34.1	-7.3
	12nm,0.3s,baz=179,slow=17,SNR=13						
AFI				Sn	Sn	10 00 35.8	-9.5
	24nm,0.3s,baz=74,slow=22,SNR=5.8						
AFI				T		10 05 15.4	
	14nm,0.3s,baz=254,slow=23,SNR=4.3						
AFI	Afiamalu	5.66	19	ePn	Pn	09 59 34.2	-7.1
	83nm,0.6s						
RAR	Rarotonga	13.14	101	Pn	Pn	10 01 09.9	-14
	9.1nm,0.3s,baz=292,slow=7.0,SNR=13						
RAR				LR	LR	10 05 33.1	
	comp=Z,5μm,18.5s,baz=276,slow=34						
DZM	Mont Dzumac	18.84	258	eP	Pn	10 02 36.4	-1.0

DZM Mont Dzumac 18.84 258 P **Pn** **10 02 40.1 +2.7**
0.6nm,0.3s,baz=78,slow=15,SNR=28
URZ Urewera 20.52 201 P **P** **10 02 55.5 +0.5**
25nm,0.5s,baz=343,slow=6.1,SNR=15
URZ S **S** **10 06 42.6 -0.4**
8.1nm,0.7s,baz=233,slow=20,SNR=5.0
PPT Papeete 22.88 90 *e*LR LR 10 08 10.6
5µm,28.8s,baz=256
PPT Papeete 22.88 90 LR LR 10 10 01.7
comp=Z,3µm,19.1s,MS4.7,baz=264,slow=31
SNZO South Karori 24.08 202 *e*P **P** **10 03 30.5 -1.5**
18nm,0.6s,mb4.7
HNR Honiara 27.38 287 LR LR 10 13 23.0
comp=Z,938nm,18.2s,MS4.4,baz=177,slow=33
RPZ Rata Peaks 27.52 204 P **P** **10 04 05.3 +2.3**
24nm,0.6s,mb5.0,baz=109,slow=1.5,SNR=25
ARMA Armidale 33.28 244 *e*P **P** **10 04 54.2 +0.2**
RKT Rikitea 36.17 103 *e*LR LR 10 14 32.9
3µm,27.8s
CNB Canberra Magne 36.29 236⇑ *i*P **P** **10 05 19.4 -0.6**
31nm,1.1s,mb5.1
CTA Charters Tower 37.71 262⇑ *i*P **P** **10 05 31.7 -0.4**
20nm,0.8s,mb4.9
CTA Charters Tower 37.71 262⇑ *i*P **P** **10 05 31.7 -0.4**
CTA pmax pmax
comp=Z,20nm,0.8s
CTAO Charters Tower 37.71 262 *e*P **P** **10 05 31.6 -0.5**
CTAO pmax pmax
comp=Z,33nm,0.9s,mb5.1
CTAO Charters Tower 37.71 262 *e*P **P** **10 05 31.6 -0.5**
comp=Z,33nm,0.9s,mb5.1
PMG Port Moresby 39.16 279 P **P** **10 05 45.0 +0.8**
comp=Z,31nm,0.9s,mb5.0,baz=96,slow=4.8,SNR=6.3
PMG Port Moresby 39.16 279 *e*P **P** **10 05 45.1 +0.9**
PMG *e**PP pP 10 05 54.3 +0.8
PMG pmax pmax
comp=Z,31nm,1.0s
PMG Port Moresby 39.16 279 *e*P **P** **10 05 45.1 +0.9**
comp=Z,31nm,1.0s,mb5.0
PMG *e*pP pP 10 05 54.3 +0.8
TOO Toolangi 39.91 234⇓ *i*P **P** **10 05 50.5 0.0**
comp=Z,11nm,0.6s,mb4.8
TOO Toolangi 39.91 234⇓ *i*P **P** **10 05 50.5 0.0**
TOO pmax pmax
comp=Z,11nm,0.6s,mb4.8
AS31 Alice Springs 48.79 255 *e*P **P** **10 07 01.1 -0.4**
ASAR Alice Springs 48.79 255 P **P** **10 07 01.2 -0.3**
comp=Z,46nm,1.0s,mb5.5,baz=87,slow=8.5,SNR=195
ASAR S **S** **10 14 02.7 +0.3**
comp=Z,1.1nm,0.8s,baz=88,slow=15,SNR=8.5
ASAR LR LR 10 27 06.3
comp=Z,1µm,19.1s,MS4.9,baz=102,slow=35
ASAR Alice Springs 48.79 255 P **P** **10 07 01.2 -0.3**
ASAR S **S** **10 14 02.7 +0.3**
ASPA Alice Springs 48.80 255 *e*P **P** **10 07 01.1 -0.4**
WB2 Warramunga Arr 48.83 260⇑ *i*P **P** **10 07 00.5 -1.3**
WRAB Tennant Creek 48.84 260 P **P** **10 07 03.0 +1.2**
comp=Z,62nm,0.6s,mb5.8,SNR=6.5
WRAB Tennant Creek 48.84 260 *e*P **P** **10 07 00.3 -1.5**
WRAB pmax pmax
comp=Z,18nm,0.9s,mb5.1
WRAB Tennant Creek 48.84 260 *e*P **P** **10 07 00.3 -1.5**
comp=Z,18nm,0.9s,mb5.1
KAKA Kakadu 52.09 269⇑ *i*P **P** **10 07 25.6 -0.8**
comp=Z,14nm,0.4s,mb5.2
FORT Forrest 53.53 246 *e*P **P** **10 07 36.7 -0.3**
comp=Z,22nm,1.1s,mb5.0
FITZ Fitzroy Crossi 57.27 261⇑ *i*P **P** **10 08 03.9 0.0**
comp=Z,11nm,1.2s,mb4.8
VNDA Vanda 59.48 186 P **P** **10 08 19.5 +0.1**
comp=Z,1.8nm,0.9s,mb4.1,baz=11,slow=9.6,SNR=6.1
VNDA Vanda 59.48 186 *e*P **P** **10 08 20.9 +1.5**
VNDA pmax pmax
comp=Z,10.0nm,1.4s
VNDA Vanda 59.48 186 *e*P **P** **10 08 20.9 +1.5**
comp=Z,9.6nm,1.4s,mb4.6
MBWA Marble Bar 62.13 256 *e*P **P** **10 08 37.1 -0.2**
comp=Z,19nm,1.0s,mb5.2
KLBR Kellerberrin 62.27 244 *e*P **P** **10 08 38.6 +0.3**
comp=Z,37nm,1.1s,mb5.4
MUN Mundaring 63.53 243 *e*P **P** **10 08 47.3 +0.6**
QSPA South Pole Qui 70.75 180 *e*P **P** **10 09 32.3 -0.2**
comp=Z,11nm,1.1s,mb4.7
MJAR Matsushiro Arr 71.80 321 P **P** **10 09 38.5 -0.3**
comp=Z,12nm,1.0s,mb4.8,baz=157,slow=5.4,SNR=22
MJAR LR LR 10 36 54.6
comp=Z,386nm,20.7s,MS4.7,baz=105,slow=32
MAJO Matsushiro 71.80 321 *e*P **P** **10 09 39.0 +0.2**
MAJO pmax pmax
comp=Z,13nm,0.9s,mb4.9
MAJO Matsushiro 71.80 321 *e*P **P** **10 09 39.0 +0.2**
comp=Z,13nm,0.9s,mb4.8
MAT Matsushiro 71.80 321 P **P** **10 09 38.7 -0.1**
MAT S S 10 19 07.0 +10
MAT Matsushiro 71.80 321 *e*P **P** **10 09 39.0 +0.2**
MAT *e*S S 10 19 08.0 +11
MAT pmax pmax
comp=Z,13nm,1.0s,mb4.8
MAT MLR MLR
comp=Z,710nm,20.0s,MS4.9
MAT Matsushiro 71.80 321 *e*P **P** **10 09 39.0 +0.2**
comp=Z,13nm,1.0s,mb4.8
MAT *e*S S 10 19 08.0 +11
MAT LR LR
comp=Z,710nm,20.0s,MS4.9
JOW Kunigami 72.64 307 LR LR 10 38 38.2
comp=Z,457nm,20.3s,MS4.7,baz=136,slow=33
V04C Ramage Ranch, 74.05 42⇓ *i*P **P** **10 09 52.5 +0.3**
baz=74
ASAJ Asahikawa 74.75 329 LR LR 10 36 26.9
comp=Z,155nm,20.3s,MS4.3,baz=343,slow=31
ISA Isabella 75.61 44⇑ *i*P **P** **10 10 04.4 +3.2**
baz=76
O02C Red Bluff 75.78 38⇑ *i*P **P** **10 10 05.0 +2.8**
baz=76
HELL Mitchell Peak, 75.87 43⇑ *i*P **P** **10 10 05.4 +2.7**
baz=76
PET Petropavlovsk 75.94 343*c i*P **P** **10 10 02.1 -1.0**
PET *e*S S 10 19 47.0 +3.3
PET pmax pmax
comp=Z,200nm,10.0s
PET pmax pmax
comp=Z,200nm,9.8s
PET smax
comp=E,300nm,6.3s
PET smax
comp=E,200nm,9.4s
PET smax
comp=N,300nm,9.6s
PET smax
comp=N,500nm,14.4s
PET MLR MLR
comp=Z,500nm,20.0s,MS4.8
PET MLR MLR
comp=Z,500nm,18.0s
MPMC Manual Prospec 76.49 44⇑ *i*P **P** **10 10 07.0 +0.8**
baz=77
P05C Yuba Gap, Truc 76.51 40⇓ *i*P **P** **10 10 06.8 +0.5**
baz=77
M02C Callahan 76.54 37⇑ *i*P **P** **10 10 07.0 +0.5**
baz=77
YSS Yuzh-Sakhalins 76.77 331*ce*P **P** **10 10 08.1 +0.3**
YSS *e**PP pP 10 10 18.0 +0.3
YSS *e* pP 10 10 19.4 +1.7
YSS *e*S S 10 19 53.0 +0.2
YSS *e*PS 10 20 26.0
YSS smax
comp=N,400nm,9.0s
YSS MLR MLR
comp=N,400nm,19.0s
YSS MLR MLR
comp=Z,500nm,19.0s,MS4.8
YBH Yreka Blue Hor 76.84 37 LR LR 10 38 13.5
comp=Z,846nm,18.3s,MS5.1,baz=239,slow=31
YBH Yreka Blue Hor 76.84 37⇑ *i*P **P** **10 10 09.0 +0.7**
baz=77
HATC Hat Creek Radi 76.97 38⇑ *i*P **P** **10 10 10.3 +1.4**
baz=77
BEKR Beckwourth 77.01 39⇓ *i*P **P** **10 10 10.2 +1.0**
baz=77
KSM Kuching 77.35 276 *e*P **P** **10 10 12.5 +1.5**
NVAR Mina Array Bea 77.38 41 P **P** **10 10 10.1 -1.2**
comp=Z,2.2nm,0.9s,mb4.1,baz=228,slow=10,SNR=12
NVAR Mina Array Bea 77.38 41 P **P** **10 10 10.1 -1.2**
M05C Lookout 77.50 38⇓ *i*P **P** **10 10 12.6 +0.7**
baz=78
O07A Toulon 78.08 40⇑ *i*P **P** **10 10 15.1 -0.1**
baz=78
X13A Yucca 78.11 47⇑ *i*P **P** **10 10 15.6 +0.3**
baz=78
L05A Lakeview 78.12 37⇑ *i*P **P** **10 10 16.2 +0.9**
baz=78
R10A Warm Springs 78.56 43⇑ *i*P **P** **10 10 18.8 +1.0**
baz=79
J05A Fort Rock 78.68 36⇑ *i*P **P** **10 10 18.6 +0.1**
baz=79
X14A Yava 78.69 47⇓ *i*P **P** **10 10 18.4 -0.1**
baz=79
KDAK Kodiak Island 78.78 11 LR LR 10 39 14.9
comp=Z,611nm,20.5s,MS4.9,baz=168,slow=31
W14A Seligman 78.96 47⇓ *i*P **P** **10 10 20.9 +0.9**
baz=79
L07A Adell 78.96 38⇑ *i*P **P** **10 10 19.2 -0.8**
baz=79
H04A Detroit Lake 79.08 35⇑ *i*P **P** **10 10 19.8 -0.8**
baz=79
O09A Fish Creek Ran 79.12 41⇓ *i*P **P** **10 10 20.0 -0.9**
baz=79
X15A Humboldt 79.15 48⇑ *i*P **P** **10 10 21.1 +0.1**
baz=79
K07A Rock Creek Ran 79.43 38⇑ *i*P **P** **10 10 22.7 +0.1**
baz=80
E03A Leban 79.60 33⇓ *i*P **P** **10 10 23.3 -0.2**
baz=80
WVOR Wild Horse Val 79.63 38 *e*P **P** **10 10 23.2 -0.4**
WVOR pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
WVOR Wild Horse Val 79.63 38 *e*P **P** **10 10 23.2 -0.4**
comp=Z,9.1nm,1.3s,mb4.5
L08A Fields 79.65 38⇑ *i*P **P** **10 10 23.8 +0.1**
baz=80
I06A Prineville 79.68 36⇑ *i*P **P** **10 10 24.0 +0.1**
baz=80
M09A Marrel Ranch, 79.71 39⇑ *i*P **P** **10 10 24.1 0.0**
baz=80
J07A Hines 79.82 37⇓ *i*P **P** **10 10 25.2 +0.5**
baz=80
K08A Mann Creek Ran 79.90 38⇑ *i*P **P** **10 10 25.7 +0.6**
baz=80
O11A Cowboy Ranch, 80.04 41⇓ *i*P **P** **10 10 26.6 +0.8**
baz=80
SSE Sheshan 80.15 308 P **P** **10 10 26.9 +0.4**
SSE XP sP 10 10 40.1 0.0
SSE PP PP 10 13 27.3 -1.6
SSE S S 10 20 28.9 -0.2
SSE XS sS 10 20 45.0 -0.6
SSE SS SS 10 25 38.9 -1.0
SSE AMB AMB
comp=Z,31nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,160nm,6.7s
SSE LR LR
comp=N,113nm,21.2s,MS4.5
SSE LR LR
comp=E,190nm,21.1s,MS4.5
SSE LR LR
comp=Z,289nm,20.2s,MS4.6
I07A Izee 80.16 36⇓ *i*P **P** **10 10 26.6 +0.1**
baz=80
I08A Drewsey 80.58 37⇓ *i*P **P** **10 10 29.4 +0.6**
baz=81
MSU Marysvale 81.36 44 *e*P **P** **10 10 33.0 +0.1**
HABR Khabarovsk 81.53 328 *e*P **P** **10 10 33.8 0.0**
HABR *e*S S 10 20 45.7 +2.3
MDJ Mudanjiang 81.99 323 P **P** **10 10 38.5 +2.3**
MDJ AP pP 10 10 45.0 -1.2
MDJ XP sP 10 10 47.6 -2.3
MDJ PP PP 10 13 46.4 +2.3
MDJ S S 10 20 53.3 +5.1
MDJ XS sS 10 21 04.2 -0.5
MDJ AMB AMB
comp=Z,12nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,181nm,3.9s
MDJ LR LR
comp=N,193nm,20.4s,MS4.8
MDJ LR LR
comp=E,415nm,19.1s,MS4.8
MDJ LR LR
comp=Z,654nm,19.1s,MS5.0
NJ2 Nanjing 82.35 308 *e*P **P** **10 10 38.1 -0.1**
NJ2 AP pP 10 10 48.5 +0.3
NJ2 XP sP 10 10 52.4 +0.6
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
NJ2 AMB AMB
comp=Z,30nm,4.3s
NJ2 LR LR
comp=N,740nm,23.2s,MS5.0
NJ2 LR LR
comp=E,400nm,28.0s,MS5.0
NJ2 LR LR
comp=Z,250nm,17.6s
HLID Hailey 82.79 39 *e*P **P** **10 10 39.5 -0.9**
comp=Z,9.5nm,1.6s,mb4.6
TTA Tatalina 83.14 8 *e*P **P** **10 10 40.9 -1.3**
TTA pmax pmax
comp=Z,30nm,1.5s,mb5.1
TTA Tatalina 83.14 8 *e*P **P** **10 10 40.9 -1.3**
comp=Z,30nm,1.5s,mb5.1
PV10 Paradox Valley 83.38 46 *e*P **P** **10 10 42.5 -1.0**
PV10 *e*pP pP 10 10 49.8 -3.7
ANMO Albuquerque 83.48 50 *e*P **P** **10 10 43.7 -0.3**
ANMO pmax pmax
comp=Z,10.0nm,1.4s
ANMO Albuquerque 83.48 50 *e*P **P** **10 10 43.7 -0.3**
comp=Z,9.5nm,1.4s,mb4.6
PV01 Paradox Valley 83.58 46 *e*P **P** **10 10 43.8 -0.7**
DL2 Dalian 83.75 315 P **P** **10 10 48.0 +2.6**
DL2 S S 10 21 10.8 +4.6
DL2 AMB AMB
comp=Z,110nm,3.4s
DL2 LR LR
comp=N,150nm,14.5s,MS4.7
DL2 LR LR
comp=E,210nm,15.8s,MS4.7
DL2 LR LR
comp=Z,240nm,17.3s,MS4.6
CN2 Changchun 83.94 320 *e*P **P** **10 10 46.7 +0.4**
CN2 *e*S S 10 21 12.0 +4.0
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.0
CN2 AMB AMB
comp=Z,440nm,7.0s
CN2 LR LR
comp=N,200nm,20.0s,MS4.8
CN2 LR LR
comp=E,330nm,20.0s,MS4.8
CN2 LR LR
comp=Z,280nm,20.0s,MS4.6
NEW Newport 84.05 34 LR LR 10 44 18.3
comp=Z,2µm,18.4s,MS5.5,baz=190,slow=33
QIZ Qiongzhong 84.17 292 P **P** **10 10 46.6 -0.9**
QIZ XP PcP 10 10 53.7 +2.4
QIZ PP PP 10 14 03.7 +1.8
QIZ S S 10 21 14.0 +3.7
QIZ XS sS 10 21 25.5 -1.4
QIZ SS SS 10 26 44.8 +5.2
QIZ AMB AMB
comp=Z,14nm,1.8s,mb4.8
QIZ AMB AMB
comp=Z,136nm,5.0s
QIZ LR LR
comp=E,111nm,21.9s
QIZ LR LR
comp=Z,187nm,23.0s,MS4.4
MCMT McKenzie Canyo 84.43 39 *e*P **P** **10 10 47.9 -1.0**
REDW Red Top Meadow 84.83 41 *e*P **P** **10 10 49.5 -1.3**
comp=Z,75nm,2.8s,mb5.3
DLMT Dillon 84.88 38 *e*P **P** **10 10 51.1 0.0**
comp=Z,11nm,1.3s,mb4.8
MCK McKinley 84.99 11 *e*P **P** **10 10 50.1 -1.6**
MCK *e**PP pP 10 11 00.4 -1.3
MCK pmax pmax
comp=Z,10µm,1.3s
MCK McKinley 84.99 11 *e*P **P** **10 10 50.1 -1.6**
comp=Z,20µm,1.3s
MCK *e*pP pP 10 11 00.4 -1.3
PDAR Pinedale Array 85.32 42 P **P** **10 10 52.5 -0.8**
comp=Z,1.0nm,0.9s,baz=219,slow=1.9,SNR=7.4
COLA College 86.23 11 *e*P **P** **10 10 55.3 -2.5**
COLA pmax pmax
comp=Z,19nm,1.1s,mb5.2
comp=Z,20nm,1.1s,mb5.2
IMA2 Indian Mountai 86.45 8 *e*P **P** **10 10 57.7 -1.2**
AMTX Amarillo 86.94 52 *e*P **P** **10 11 01.2 -0.1**
comp=Z,15nm,1.3s,mb5.1
PLCA Paso Flores 87.06 132 P **P** **10 10 59.5 -2.4**
comp=Z,3.7nm,1.0s,mb4.6,baz=229,slow=7.3,SNR=5.8
PLCA Paso Flores 87.06 132 *e*P **P** **10 11 00.7 -1.2**
PLCA pmax pmax
comp=Z,7.0nm,1.0s
PLCA Paso Flores 87.06 132 *e*P **P** **10 11 00.7 -1.2**
comp=Z,6.7nm,1.0s,mb4.8
DAWY Dawson 87.25 14 *e*P **P** **10 11 01.0 -1.8**
BJI Beijing 88.00 314 P **P** **10 11 07.9 +1.5**
BJI AP pP 10 11 17.5 +1.0
BJI XP sP 10 11 21.2 +1.1
BJI AMB AMB
comp=Z,15nm,2.5s,mb4.8
BJI AMB AMB
comp=Z,428nm,6.5s
BJI LR LR
comp=N,291nm,18.9s,MS4.8
BJI LR LR
comp=E,270nm,18.9s,MS4.8
BJI LR LR
comp=Z,216nm,19.9s,MS4.6
BILL Bilibino 88.34 353 *e*P **P** **10 11 06.8 -1.2**
BILL *e* 10 14 32.5
BILL *e* 10 21 31.2
BILL pmax pmax
comp=Z,13nm,1.7s,mb4.9
BILL MLR MLR
comp=Z,500nm,20.0s,MS4.9
SYO Syowa Base 88.74 191⇑ *e*PcP PcP 10 11 10.0 -1.4
HHC Hu-ho-hao-te 91.52 313 *e*P **P** **10 11 24.1 +1.3**
HHC AP pP 10 11 34.7 +1.7
HHC XP sP 10 11 38.5 +1.9
HHC PP PP 10 15 04.9 +3.9
HHC SKS 10 21 52.0
HHC S S 10 22 19.6 -0.8
HHC XS sS 10 22 37.1 -0.1
HHC PS PS 10 23 38.1 +5.0
HHC SS SS 10 28 29.6 +2.8
HHC AMB AMB
comp=Z,13nm,0.6s,mb5.4
HHC AMB AMB
comp=Z,143nm,6.9s
HHC LR LR
comp=N,176nm,25.6s,MS4.5
HHC LR LR
comp=E,153nm,22.8s,MS4.5
HHC LR LR
comp=Z,251nm,26.6s,MS4.5
CLNS Chul'man 91.54 331 *e*P **P** **10 11 22.7 -0.2**
CLNS pmax pmax
comp=Z,15nm,1.1s,mb5.2
CLNS pmax pmax
comp=N,8.0nm,1.0s
INK Inuvik 92.10 14 LR LR 10 49 55.9
comp=N,591nm,18.0s,MS5.1,baz=216,slow=34
KMI Kunming 92.51 296 P **P** **10 11 30.0 +2.5**
KMI AP pP 10 11 39.0 +1.4
KMI XP sP 10 11 43.0 +1.8
KMI PP PP 10 15 15.0 +6.2
KMI PPP 10 17 15.8
KMI S S 10 22 30.3 +1.0
KMI XS sS 10 22 43.0 -3.1
KMI SS SS 10 28 45.0 +3.9
KMI SSS 10 32 20.3
KMI AMB AMB
comp=Z,6.0nm,1.0s,mb5.0
KMI AMB AMB
comp=Z,103nm,3.9s
KMI LR LR
comp=N,231nm,12.1s,MS5.0
KMI LR LR
comp=E,291nm,12.1s,MS5.0
KMI LR LR
comp=Z,350nm,18.6s
YAK Yakutsk 92.60 337 *e*P **P** **10 11 26.4 -1.5**
YAK pmax pmax
comp=Z,6.0nm,0.7s,mb5.1
YAK MLR MLR
comp=Z,200nm,19.0s,MS4.6
CD2 Chengdu 93.65 301 P **P** **10 11 30.6 -2.1**
CD2 AP pP 10 11 41.2 -1.6
CD2 XP sP 10 11 45.1 -1.3
CD2 PP PP 10 15 17.7 -0.1
CD2 SKS 10 22 00.7
CD2 S S 10 22 33.1 -6.3
CD2 XS sS 10 22 50.9 -5.3
CD2 PS PS 10 23 55.9 -0.8
CD2 SS SS 10 28 54.1 -3.3
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,40nm,8.9s
CD2 LR LR
comp=E,240nm,16.8s
CD2 LR LR
comp=Z,190nm,19.2s,MS4.6
YKA Yellowknife Ar 93.76 24 LR LR 10 48 42.4
comp=Z,312nm,18.7s,MS4.8,baz=270,slow=32
LZH Lanzhou 95.35 306 *e*P **P** **10 11 41.0 +0.5**
LZH AP pP 10 11 50.5 -0.1
LZH XP sP 10 11 54.2 0.0
LZH PP PP 10 15 33.5 +2.5
LZH SKS 10 22 13.1
LZH *e*S S 10 22 47.0 -7.3
LZH XS sS 10 23 05.0 -6.1
LZH SS SS 10 29 17.2 -4.5
LZH AMB AMB
comp=Z,13nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,83nm,5.2s
LZH LR LR
comp=E,363nm,17.6s
LZH LR LR
comp=Z,563nm,18.8s,MS5.1
SONM Songino Array 97.60 318 P **P** **10 11 52.0 +1.4**
comp=Z,0.1nm,0.3s,baz=90,slow=1.4,SNR=2.6
SONM LR LR 10 53 00.1
comp=Z,234nm,19.4s,MS4.7,baz=105,slow=34
LPAZ La Paz 98.67 111 LR LR 10 49 16.5
comp=Z,424nm,18.3s,MS5.0,baz=310,slow=31
TIXI Tiksi 98.69 344 *e*P **P** **10 11 54.7 -0.9**
TIXI pmax pmax
comp=Z,4.0nm,0.7s,mb5.1
TIXI MLR MLR
comp=Z,300nm,24.0s,MS4.7
WMQ Urumqi 109.27 311 *e*PDIF Pdif 10 12 42.0 -0.6
WMQ PP PP 10 17 18.0 +2.5
WMQ SS SS 10 32 31.0 -3.0
WMQ PP PP
comp=Z,198nm,6.0s
WMQ LR LR
comp=N,187nm,20.0s,MS4.9
WMQ LR LR
comp=E,251nm,20.0s,MS4.9
WMQ LR LR
comp=Z,285nm,20.0s,MS4.8
KURK Kurchatov 115.90 318 *i* PKIKP PKPdf 10 16 58.4 -0.5
ARU Arti 126.51 327 *i* PKIKP PKPdf 10 17 18.6 -0.7
ARU MLR MLR
comp=Z,400nm,19.0s,MS5.1
ARCES ARCESS Array B 128.43 352 PKP PKPdf 10 17 22.0 -1.0
comp=Z,2.8nm,0.9s,baz=11,slow=2.6,SNR=7.3
OBN Obninsk 137.57 335 *i* PKIKP PKPdf 10 17 38.5 -1.6
OBN *e* 10 17 45.3
OBN *e* 10 17 49.1
OBN *e* 10 20 25.8
OBN *e* 10 24 55.0
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.9
HAKT HAKKARI 142.78 307 *i* P PKPdf 10 17 48.5 -1.0
ANN Anapa 143.79 322 *e*PKIKP PKPdf 10 17 53.7 +2.4
AKASG Malin Array Be 143.82 335 PKhKP 10 17 45.9
comp=Z,0.9nm,0.5s,baz=38,slow=4.1,SNR=4.5
AKASG Malin Array Be 143.82 335 PKP 10 17 45.9
KELT Kelkit 144.99 313 *i* P PKPdf 10 17 53.9 +0.5
BSEG Bad Segeberg 145.31 356 *e*PKPbc PKPbc 10 17 53.1 -0.7
ELZG Elazig 145.90 311 *i* P PKPbc 10 17 58.0 +2.4
MALT Malatya 146.37 311⇓ *i*P PKPbc 10 17 58.8 +1.7
MALT Malatya 146.37 311 *e*PKPbc PKPbc 10 17 58.4 +1.3
LVV L'vov 146.45 339 *e*PKP2 PKPab 10 17 56.7 -1.5

ATAB	Bozova	146.82	310	iP	PKPdf	10 17 58.8	+2.3
KIS	Kishinev	146.84	331	ePKHKP	PKPbc	10 17 57.0	-1.4
KIS				e		10 21 25.0	
KIS				MLR	MLR		
	comp=Z,600nm,20.0s,MS5.4						
KIS				MLR	MLR		
	comp=Z,600nm,20.0s						
BOYT	Boyabat	147.21	318	iP	PKPbc	10 17 59.8	+0.3
OJC	Ojcow	147.36	344	ePKPab	PKPab	10 17 58.7	-3.1
CLZ	Clausthal	147.39	355	ePKPbc	PKPbc	10 17 59.5	-0.5
GZT	Gaziantep	147.39	310	iP	PKPbc	10 18 00.9	+0.9
KSP	Ksiaz	147.57	348	ePKP	PKPbc	10 18 00.2	-0.3
KSP				e		10 18 17.6	
CLL	Collm	147.65	352	ePKPbc	PKPbc	10 18 00.1	-0.6
CLL	Collm	147.65	352⇑	iPKP1	PKPbc	10 18 00.0	-0.7
CLL				i		10 18 02.7	
CLL				i		10 18 05.8	
CLL				i *PPKP		10 18 10.5	
CLL				i		10 18 18.1	
CLL				e		10 18 52.0	
CLL	Collm	147.65	352⇑	iPKPbc	PKPbc	10 18 00.0	-0.7
	comp=Z,16nm,1.3s						
CLL				i PKiKP	PKiKP	10 18 02.7	0.0
	comp=Z,16nm,1.1s						
CLL				i x	x	10 18 05.8	
CLL				i pPKPbc	pPKPbc	10 18 10.5	-0.5
	comp=Z,28nm,1.1s						
CLL				i sPKiKP		10 18 18.1	
CLL				ex	x	10 18 52.0	
CLL				Lm		11 30 00.0	
	comp=N,300nm,19.8s						
CLL				Lm		11 30 00.0	
	comp=E,300nm,19.7s						
CLL				Lm		11 30 00.0	
	comp=Z,500nm,19.4s						
CLL	Collm	147.65	352⇑	iPKIKP	PKPbc	10 18 00.0	-0.7
CLL				i		10 18 02.7	
CLL				i		10 18 05.8	
CLL				pmax	pmax		
	comp=Z,16nm,1.3s						
CLL				pmax	pmax		
	comp=Z,16nm,1.1s						
CLL				MLR	MLR		
	comp=Z,500nm,19.4s,MS5.3						
CLL	Collm	147.65	352⇑	iPKP	PKPbc	10 18 00.0	-0.7
CLL				i PKP	PKiKP	10 18 02.7	0.0
CLL				i		10 18 05.8	
CLL				LR	LR		
	comp=Z,500nm,19.4s,MS5.3						
KOLS	Kolonicke sedl	147.79	340	e	pPKPdf	10 18 09.6	+1.0
BURAR	Bucovina Array	147.87	336⇓	iP	PKPbc	10 18 01.6	+0.3
BURAR	Bucovina Array	147.87	336	⇓P	PKPbc	10 18 01.6	+0.4
BRG	Berggiesshubel	147.94	351	ePKPbc	PKPbc	10 18 01.0	-0.5
BRG	Berggiesshubel	147.94	351	ePKP	PKPdf	10 18 00.8	+2.4
	comp=Z,13nm,1.6s						
BRG				e		10 18 07.7	
	comp=Z,9.8nm,1.1s						
BRG	Berggiesshubel	147.94	351	ePKIKP	PKPdf	10 18 00.8	+2.4
BRG				e		10 18 07.7	
BRG				pmax	pmax		
	comp=Z,13nm,1.6s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
UPC	Upice	147.95	348	ePKPbc	PKPbc	10 18 03.2	+1.7
UPC				ex	x	10 18 32.5	
FBE	Freiberg	147.98	352	ePKPbc	PKPbc	10 18 01.3	-0.3
DPC	Dobruska-Polom	148.03	348	ePKPbc	PKPbc	10 18 01.7	0.0
CRVS	Cervenica-Dubn	148.07	341	eP	PKPbc	10 18 01.6	-0.2
BALT	Daday	148.09	320	iP	PKPbc	10 18 02.8	+1.0
PVCC	Panska Ves	148.18	350	ePKPbc	PKPbc	10 18 02.2	+0.1
MORC	Moravsky Berou	148.32	346⇓	iP	PKPbc	10 18 02.7	+0.2
MORC	Moravsky Berou	148.32	346	ePKPbc	PKPbc	10 18 02.5	0.0
UBBA	Unterbreizbach	148.43	356	ePKPbc	PKPbc	10 18 03.1	+0.3
MOX	Moxa	148.46	354	ePKPbc	PKPbc	10 18 02.4	-0.4
MOX	Moxa	148.46	354	ePKP	PKPbc	10 18 04.5	+1.7
MOX							
	comp=Z,200nm,20.0s						
WERD	Werda	148.58	353	ePKPbc	PKPbc	10 18 02.7	-0.4
AVNT	Avonos	148.64	314	iP	PKPbc	10 18 03.7	+0.4
ELDT	Eldivan	148.66	318	iP	PKPbc	10 18 04.5	+1.2
COBT	Iskenderun	148.69	309	iP	PKPbc	10 18 04.1	+0.7
PRU	Pruhonice	148.71	350	ePKPbc	PKPbc	10 18 02.5	-1.0
PRU				ex	x	10 18 22.0	
WERN	Wernitzgruen	148.73	353	ePKPbc	PKPbc	10 18 03.0	-0.5
NKC	Novy Kostel	148.77	352	ePKPbc	PKPbc	10 18 05.5	+1.9
TIRR	Tirgusor	148.91	329⇑	iP	PKPbc	10 18 02.6	-1.4
TIRR	Tirgusor	148.91	329	⇑P	PKPbc	10 18 02.6	-1.3
BR131	Keskin Array S	148.95	317	ePKPbc	PKPbc	10 18 04.5	+0.5
BRTR	Keskin Array B	148.95	317	PKPbc	PKPbc	10 18 04.3	+0.3
	comp=Z,6.7nm,0.8s,baz=144,slow=2.3,SNR=24						
VRAC	Vranov	148.97	347⇓	iP	PKPbc	10 18 04.6	+0.5
VRAC	Vranov	148.97	347	⇓P	PKPbc	10 18 04.6	+0.4
HARR	Harsova	148.97	329⇓	iP	PKPbc	10 18 05.4	+1.3
MANZ	Manzenberg	149.06	353	ePKPbc	PKPbc	10 18 04.1	-0.2
VYHS	Vyhne	149.19	344	eP	PKPbc	10 18 04.7	0.0
TREC	Trest	149.21	348	ePKPbc	PKPbc	10 18 04.5	-0.2
ROTZ	Rotzenmuhle	149.26	353	ePKPbc	PKPbc	10 18 04.5	-0.4
MLR	Muntele Rosu	149.27	333⇑	iP	PKPbc	10 18 05.7	+0.8
MLR	Muntele Rosu	149.27	333	⇑P	PKPbc	10 18 05.7	+0.8
BAIF	Baives	149.28	3	ePKP1	PKPdf	10 18 01.4	+0.8
PSZ	Piszkesteto	149.42	342⇓	epPKP/F	PKPbc	10 18 05.4	+0.1
PSZ	Piszkesteto	149.42	342	ePKPbc	PKPbc	10 18 05.8	+0.5
GRA1	Grafenberg Arr	149.44	354	ePKP	PKPbc	10 18 05.2	-0.1
GRA1				LR	LR		
	comp=Z,400nm,19.0s,MS5.2						
GRF	Grafenberg Arr	149.44	354	ePKP	PKPbc	10 18 05.2	-0.1
SGKT	Sivrigoynuk	149.46	319	iP	PKPbc	10 18 05.7	+0.3
DRGR		149.49	338⇓	iP	PKPbc	10 18 05.6	+0.2
DRGR		149.49	338	⇓P	PKPbc	10 18 05.6	+0.2
KHC	Kasperske Hory	149.69	351	ePKPbc	PKPbc	10 18 05.8	-0.1
KHC				pPKP	pPKPdf	10 18 22.5	+11
KHC				x	x	10 18 48.5	
VOIR		149.70	333⇓	iP	PKPbc	10 18 06.7	+0.8
WLF	Walferdange	149.72	0	ePKPbc	PKPbc	10 18 05.3	-0.7
WET	Wettzell	149.78	351	ePKPbc	PKPbc	10 18 06.3	+0.2
ZST	Bratislava	149.90	346	e	PKPbc	10 18 09.7	+3.3
GEC2	GERESS Array S	149.95	350	ePKPbc	PKPbc	10 18 06.8	+0.2
GERES	GERESS Array B	149.95	350	PKPbc	PKPbc	10 18 06.2	-0.4
	comp=Z,1.4nm,0.7s,baz=54,slow=2.3,SNR=8.5						
HENT	Hendek	150.01	321	iP	PKPbc	10 18 06.5	-0.2
FLN	La Foliniere	150.11	9	ePKP1	PKPbc	10 18 03.8	-3.1
	comp=Z,40nm,1.0s						
FLN				eR			
	comp=Z,385nm,20.2s						
FLN	La Foliniere	150.11	9	ePKP	PKPbc	10 18 03.8	-3.1
FLN				LR	LR		
	comp=Z,390nm,20.3s,MS5.2						
MEST	Erdemli	150.19	311	iP	PKPbc	10 18 05.6	-1.5
LDF	La Druitiere	150.32	9	ePKP1	PKPbc	10 18 04.5	-3.0
	comp=Z,47nm,1.2s						
GRR	Gorron	150.41	10	ePKP1	PKPbc	10 18 04.7	-3.0
	comp=Z,46nm,1.1s						
CONA	Conrad Observa	150.43	347⇑	iPKPdf	PKPdf	10 18 01.3	-1.1
QUIF	Quistinic	150.44	13	ePKP1	PKPbc	10 18 04.9	-2.8
KDHN	Kadinhani	150.60	316	iP	PKPbc	10 18 05.5	-2.6
MOA	Molln	150.82	349⇑	iP	PKPbc	10 18 09.0	+0.4
	comp=Z,7.0nm,1.1s						
BORA	Eskisehir	150.86	320	iP	PKPbc	10 18 08.6	-0.1
CDF	Champ du Feu	150.97	359	ePKP1	PKPbc	10 18 06.2	-2.8
	comp=Z,17nm,0.9s						
BFO	Black Forest	151.01	357	ePKPbc	PKPbc	10 18 08.3	-0.8
ERMK	Ermenek	151.03	312	iP	PKPbc	10 18 09.5	+0.3
PKSM	Moragy	151.33	342⇑	iP	PKPbc	10 18 09.6	-0.2
HAU	Haudompre	151.38	0	ePKP1	PKPbc	10 18 07.1	-2.8
HAU				eR			
	comp=Z,330nm,20.2s						
HAU	Haudompre	151.38	0	ePKP	PKPbc	10 18 07.1	-2.8
HAU				LR	LR		
	comp=Z,330nm,20.3s,MS5.1						
ULDT	Uludag	151.48	322	iP	PKPbc	10 18 10.8	+0.6
CSS	Prodhromos	151.51	309	PKPbc	PKPbc	10 18 10.8	+0.6
MOTA	Moosalm	151.78	353⇑	iP	PKPbc	10 18 11.2	+0.3
	comp=Z,13nm,1.2s						
WTTA	Wattenberg	151.79	352⇓	iP	PKPbc	10 18 10.4	-0.5
	comp=Z,8.1nm,1.1s						
GDZ	Gediz	151.94	320	iP	PKPbc	10 18 09.1	-2.1
DAVA	Damuels	151.95	355⇓	iP	PKPbc	10 18 13.7	+2.5
	comp=Z,13nm,1.1s						
LOR	Lormes	152.04	4	ePKP1	PKPbc	10 18 08.8	-2.6
	comp=Z,15nm,1.0s						
LOR				eR			
	comp=Z,593nm,19.8s						
LOR	Lormes	152.04	4	ePKP	PKPbc	10 18 08.8	-2.6
LOR				LR	LR		
	comp=Z,590nm,19.8s,MS5.4						
SSF	Saint Saulge	152.23	4	ePKP1	PKPbc	10 18 09.2	-2.7
	comp=Z,33nm,1.1s						
MFF	Saint Martin d	152.26	10	ePKP1	PKPbc	10 18 09.3	-2.6
GRUS	Gruza	152.71	337	iPKP	PKPbc	10 18 12.6	-0.4
VTS	Vitosha	152.77	332⇓	iP	PKPab	10 18 23.9	-0.1
CABF	La Chapelle	152.78	0	ePKP1	PKPbc	10 18 10.7	-2.4
DIVS	Divcibare	152.78	338⇓	iPKP	pPKPdf	10 18 17.8	+1.5
TCF	Toulx Ste Croi	152.88	6	ePKP1	PKPbc	10 18 10.8	-2.5
	comp=Z,13nm,0.9s						
AKHS	Akhisar	153.08	321	iP	PKPab	10 18 29.0	+3.7
LPL	La Plagne	153.87	359	ePKP1	PKPbc	10 18 13.3	-2.2
LPG	La Plagne	153.89	359	ePKP1	PKPbc	10 18 13.5	-2.0
ORIF	Oris-en-Rattie	154.47	1	ePKP1	PKPbc	10 18 14.4	-2.4
	comp=Z,3.6nm,0.6s						
ORIF				eR			
	comp=Z,423nm,22.0s						
MBDF	Montbardon	154.66	359	ePKP1	PKPbc	10 18 15.0	-2.2
	comp=Z,4.8nm,0.8s						
SMRF	Simiane la Rot	155.40	1	ePKP1	PKPdf	10 18 16.5	+6.9
FRF	La Foret Royal	155.83	360	ePKP1	PKPdf	10 18 16.2	+6.0
	comp=Z,14nm,0.9s						
LMR	La Mourre	156.05	360	ePKP1	PKPdf	10 18 16.0	+5.5
	comp=Z,23nm,1.0s						
LIC	Lamto	162.90	138	ePKIKP	PKPdf	10 18 18.0	-0.4
	comp=Z,46nm,1.3s						

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*ISCJB **01** 10:03:01.8±0.6, 4449N±002×721E±006, h4^{km}±11^{km}, Error ellipse: s-maj=8.1km s-min=3.0km az=139.6*
*LDG **01** 10:03:02.6±0.2, 4449N×726E, h2^{km}, Md2.3/2, Ml2.3/5, Error ellipse: s-maj=4.9km s-min=1.8km az=80.0*
*STR **01** 10:03:03.4±0.8, 4445N×731E, h5^{km}±1^{km}, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 01 10:03:02.4±0.6, **4449N**±002×**723E**±007, **h10**^{km}±9^{km}, **n15**, σ**0^{s}64**/27, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBDF	Montbardon	0.41	306	ePg	Pg	10 03 10.9	+0.6
MBDF				eSg	Sg	10 03 16.8	+1.1
	25nm,0.2s						
TOUF	Mont Tournerai	0.47	179	Pg	Pg	10 03 11.9	+0.3
TOUF				Sg	Sg	10 03 16.6	-1.3
AUTN	L'Aution	0.51	164	Pg	Pg	10 03 12.1	-0.2
AUTN				Sg	Sg	10 03 19.2	+0.2
SAOF	Saorge	0.55	155	Pg	Pg	10 03 12.9	-0.2
SAOF				Sg	Sg	10 03 19.5	-0.8
MVIF	Mont Vial	0.59	186	Pg	Pg	10 03 14.3	+0.4
MVIF				Sg	Sg	10 03 22.6	+0.9
LUCF	Luceram	0.60	172	Pg	Pg	10 03 13.9	-0.1
LUCF				Sg	Sg	10 03 22.1	+0.2
SBF	Sospel	0.64	167	ePg	Pg	10 03 14.9	+0.1
SBF				eSg	Sg	10 03 24.0	+0.8
	11nm,0.2s						
FRF	La Foret Royal	1.02	205	ePg	Pg	10 03 21.6	-0.3
FRF	La Foret Royal	1.02	205	ePn	Pn	10 03 22.3	-0.4
FRF				eSg	Sg	10 03 35.5	+0.3
	12nm,0.2s						
ORIF	Oris-en-Rattie	1.06	295	ePg	Pg	10 03 22.9	+0.2
ORIF				eSg	Sg	10 03 34.9	-1.5
	6.6nm,0.6s						
LPG	La Plagne	1.07	342	ePg	Pg	10 03 23.2	+0.4
LPG				eSg	Sg	10 03 35.7	-1.0
	6.4nm,0.4s						
LPL	La Plagne	1.09	341	ePg	Pg	10 03 23.5	+0.2
LPL				eSg	Sg	10 03 37.4	0.0
	4.0nm,0.3s						
LMR	La Mourre	1.27	205	ePg	Pg	10 03 26.0	-0.7
LMR	La Mourre	1.27	205	ePn	Pn	10 03 26.8	+0.7
LMR				eSg	Sg	10 03 42.4	-0.7
	13nm,0.2s						
SMRF	Simiane la Rot	1.30	247	ePg	Pg	10 03 27.8	+0.6

IDC 01 10:10:18.0±6.4, **755S**×**1183W**, **h0**^{km}, **mb3.9**/5, **mb1 4.1**/6, **mb1mx3.8**/21, **mbtmp4.0**/6, **ML3.1**/1, **MS3.9**/9, **Ms1 3.8**/9, **ms1mx3.6**/30, **Error ellipse: s-maj=227.3km s-min=93.7km az=138.0, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	Dimbokro	15.74	26	Pn	Pn	10 14 00.9	-0.1
	0.1nm,0.3s,baz=199,slow=12,SNR=2.7						
DBIC				LR	LR	10 18 35.1	
	comp=Z,202nm,21.5s,baz=142,slow=32						
TORD	Torodi Ar. Bea	24.56	33	P	P	10 15 39.6	+0.2
	2.8nm,0.7s,baz=213,slow=9.0,SNR=17						
TORD				LR	LR	10 23 56.8	
	comp=Z,142nm,22.0s,baz=155,slow=33						
TSUM	Tsumeb	30.82	115	LR	LR	10 26 53.2	
	comp=Z,211nm,19.3s,baz=327,slow=32						
BDFB	Brasilia	36.30	254	LR	LR	10 28 30.3	
	comp=Z,208nm,21.2s,baz=190,slow=30						
SUR	Sutherland	39.11	134	LR	LR	10 31 03.8	
	comp=Z,265nm,19.2s,baz=69,slow=32						
BOSA	Boshof	40.76	126	LR	LR	10 33 32.8	
	comp=Z,120nm,19.1s,baz=347,slow=34						
KEST	Kesra	47.44	24	P	P	10 18 55.1	+0.8
	0.8nm,0.9s,baz=229,slow=12,SNR=2.8						
KEST				LR	LR	10 40 19.7	
	comp=Z,60nm,18.7s,baz=239,slow=38						
KMBO	Kilima Mbogo	49.33	85	LR	LR	10 40 23.7	
	comp=Z,92nm,19.1s,baz=260,slow=37						
GERES	GERESS Array B	60.46	19	P	P	10 20 29.7	+0.2
	0.9nm,0.8s,baz=225,slow=6.4,SNR=3.5						
AKASG	Malin Array Be	67.99	27	P	P	10 21 18.9	0.0
	3.0nm,0.8s,baz=227,slow=6.9,SNR=13						
NB2	NORSAR Subarra	70.73	12	P	P	10 21 35.0	-0.8
	comp=Z,1.1nm,0.9s,baz=205,slow=6.2						
NOA	NORSAR Array B	70.73	12	P	P	10 21 35.4	-0.4
	comp=Z,0.8nm,0.8s,baz=206,slow=6.1,SNR=2.5						
BVAR	Borovoye Array	91.31	37	LR	LR	11 08 06.1	
	comp=Z,319nm,18.3s,baz=139,slow=38						

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*IDC **01** 10:19:35.7±0.5, 1922S×17336W, h0^{km}, mb4.9/16, mb1 5.0/17, mb1mx4.9/21, mbtmp4.9/17, ML4.6/1, MS4.7/15, Ms1 4.7/15, ms1mx4.6/21, Error ellipse: s-maj=17.1km s-min=15.9km az=125.0*
*ISCJB **01** 10:19:39.0±0.2, 1924S±005×17349W±004, h31^{km}, mb5.2/66, MS4.9/35, Error ellipse: s-maj=8.7km s-min=3.9km az=115.0*
*BJI **01** 10:19:39.8, 1882S×17339W, h23^{km}, mB5.5, mb5.2, Ms5.1, Msz4.8*
*NEIC **01** 10:19:40.9±0.2, 19.18S×17357W, mb5.2/30, MS5.2/7, Error ellipse: s-maj=10.6km s-min=5.2km az=141.0*
*HRVD **01** 10:19:40.9±0.2, 1933S×17275W, h19^{km}, MW5.2/75, Centroid moment Tensor Solution. LP body waves: s42,c59;Mantle waves: s75,c128; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.71±.03; $M_{\theta\theta}$-0.10±.02; $M_{\phi\phi}$-0.61±.02; $M_{r\theta}$0.11±.04; $M_{\theta\phi}$-0.27±.01; $M_{\phi r}$0.16±.03; Best double couple: $M_0$0.74700×10^{17} NP1:ϕ_s200.00000°, δ38.00000°, λ86.00000°. NP2: ϕ_s26.00000°, δ52.00000°, λ93.00000°. Principal axes: T 0.7380, Plg82.0000°, Azm313.0000°; N 0.0190, Plg3.0000°, Azm204.0000°; P -0.7560, Plg7.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **01** 10:19:40.2, 1966S×173.14W, h32^{km}, mb5.2, Tonga Islands*
*MOS **01** 10:19:42.5±2.9, 1900S×17374W, h33^{km}, mb5.5/19, MS5.0/15, Error ellipse: s-maj=11.3km s-min=8.8km az=70.1*
ISC 01 10:19:41.1±0.2, **1925S**±005×**17347W**±004, **h33**^{km}±.6^{km}:**pP-P**, **n488**, σ**0^{s}86**/292, **mb5.2**/66, **MS4.9**/35, **98C-78D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.55	17	Pn	Pn	10 20 55.2	-6.1
	10nm,0.3s,baz=66,slow=12,SNR=14						
AFI				Sn	Sn	10 21 48.6	-15
	27nm,0.3s,baz=215,slow=23,SNR=5.8						
AFI	Afiamalu	5.55	17	ePn	Pn	10 20 55.6	-5.7
	151nm,0.6s						
AFI				eSn	Sn	10 21 37.7	-26
RAO	Raoul Island	10.75	201	LR	LR	10 24 57.9	
	comp=Z,1µm,18.3s,baz=56,slow=30						
RAR	Rarotonga	13.01	101	Pn	Pn	10 22 31.7	-12
	14nm,0.3s,baz=244,slow=7.1,SNR=13						
RAR				LR	LR	10 26 55.0	
	comp=Z,5µm,18.0s,baz=254,slow=34						
DZM	Mont Dzumac	19.00	258	eP	Pn	10 23 59.4	-1.4
DZM	Mont Dzumac	19.00	258	P	Pn	10 24 01.6	+0.7
	1.7nm,0.3s,baz=78,slow=15,SNR=72						
URZ	Urewera	20.64	201	P	P	10 24 17.9	+0.2
	31nm,0.7s,baz=9.1,slow=1.3,SNR=16						
URZ				S	S	10 28 05.6	-1.1
	27nm,0.8s,baz=271,slow=16,SNR=6.5						
PPT	Papeete	22.73	90	LR	LR	10 31 51.1	
	comp=Z,2µm,18.8s,MS4.7,baz=266,slow=32						
SNZO	South Karori	24.20	202	eP	P	10 24 58.4	+3.9
	64nm,0.9s,mb5.0						
HNR	Honiara	27.50	287	LR	LR	10 35 28.6	
	comp=Z,1µm,18.1s,MS4.5,baz=179,slow=34						
RPZ	Rata Peaks	27.64	205	P	P	10 25 26.0	+0.3
	23nm,1.1s,mb4.7,baz=37,slow=5.1,SNR=3.0						
ARMA	Armidale	33.44	244	eP	P	10 26 16.5	-0.3
RKT	Rikitea	36.03	103	eLR	LR	10 35 51.8	
	3µm,27.2s						
CNB	Canberra Magne	36.46	236⇓	iP	P	10 26 42.7	-0.1
	94nm,1.1s,mb5.6						
CTA	Charters Tower	37.87	262⇑	iP	P	10 26 54.0	-0.8
	59nm,0.8s,mb5.4						
CTA	Charters Tower	37.87	262	P	P	10 26 54.1	-0.8
	95nm,0.9s,mb5.5,baz=96,slow=10,SNR=67						
CTA	Charters Tower	37.87	262	P	P	10 26 54.1	-0.7
CTA				pmax	pmax		
	comp=Z,95nm,0.9s						
CTAO	Charters Tower	37.87	262	eP	P	10 26 54.1	-0.7
PMG	Port Moresby	39.30	279	P	P	10 27 07.0	+0.3
	comp=Z,76nm,0.9s,mb5.4,baz=89,slow=5.4,SNR=17						
PMG				LR	LR	10 41 17.0	
	comp=Z,1µm,20.1s,MS4.7,baz=90,slow=33						
TOO	Toolangi	40.08	234⇑	iP	P	10 27 12.3	-1.0
	comp=Z,28nm,0.8s,mb5.0						
TOO	Toolangi	40.08	234⇑	iP	P	10 27 12.3	-1.0
TOO				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.0						
TAU	Tasmania Unive	40.52	226	P	P	10 27 17.5	+0.5
	comp=Z,215nm,0.9s,mb5.8,SNR=6.4						
AS31	Alice Springs	48.96	255	eP	P	10 28 23.5	-0.7
AS31				eS	S	10 35 25.2	-0.8
ASAR	Alice Springs	48.96	255	P	P	10 28 23.1	-1.0
	comp=Z,97nm,0.9s,mb5.8,baz=86,slow=8.5,SNR=437						
ASAR				S	S	10 35 23.9	-2.2
	comp=Z,1.4nm,0.8s,baz=91,slow=16,SNR=4.7						
ASAR				LR	LR	10 48 27.6	
	comp=Z,1µm,18.3s,MS5.0,baz=101,slow=35						
ASAR	Alice Springs	48.96	255	P	P	10 28 23.2	-1.0
ASAR				S	S	10 35 23.9	-2.2
ASPA	Alice Springs	48.96	255	eP	P	10 28 23.5	-0.7
ASPA				eS	S	10 35 25.2	-0.9
WB2	Warramunga Arr	48.99	260⇑	iP	P	10 28 22.9	-1.6
WB2				eS	S	10 35 24.0	-2.6
WRAB	Tennant Creek	49.00	260	P	P	10 28 23.2	-1.3
	comp=Z,184nm,1.2s,mb6.0,SNR=16						
WRAB	Tennant Creek	49.00	260	eP	P	10 28 23.1	-1.4
KAKA	Kakadu	52.24	269	eP	P	10 28 47.8	-1.1
	comp=Z,50nm,0.7s,mb5.6						
GUMO	Guam	52.42	305	P	P	10 28 50.8	+0.5
	comp=Z,161nm,1.1s,mb5.8,baz=122,slow=1.7,SNR=4.0						
FORT	Forrest	53.70	246	eP	P	10 28 58.6	-1.1
	comp=Z,49nm,0.7s,mb5.5						
FITZ	Fitzroy Crossi	57.43	260	eP	P	10 29 26.1	-0.4
	comp=Z,28nm,1.5s,mb5.1						
SBA	Scott Base	59.43	185	eP	P	10 29 42.9	+2.4
VNDA	Vanda	59.56	186	P	P	10 29 42.5	+1.2
	comp=Z,5.6nm,1.1s,mb4.5,baz=6.1,slow=6.6,SNR=9.4						
VNDA				LR	LR	10 50 38.6	
	comp=Z,443nm,18.2s,MS4.6,baz=11,slow=31						
VNDA	Vanda	59.56	186	eP	P	10 29 42.9	+1.5
VNDA				pmax	pmax		
	comp=Z,26nm,1.4s						
VNDA	Vanda	59.56	186	eP	P	10 29 42.9	+1.5
	comp=Z,26nm,1.4s,mb5.1						
MBWA	Marble Bar	62.29	256	eP	P	10 29 59.4	-0.5
KLBR	Kellerberrin	62.44	244	eP	P	10 30 00.8	-0.1
	comp=Z,132nm,1.1s,mb6.0						
MUN	Mundaring	63.70	243	eP	P	10 30 10.3	+1.0
QSPA	South Pole Qui	70.82	180⇓	iP	P	10 30 54.5	+0.1
	comp=Z,42nm,1.2s,mb5.2						
MJAR	Matsushiro Arr	71.84	321	P	P	10 31 01.3	+0.8
	comp=Z,26nm,0.9s,mb5.1,baz=156,slow=5.7,SNR=45						
MJAR				LR	LR	10 58 57.9	
	comp=Z,368nm,20.3s,MS4.6,baz=120,slow=33						
MAJO	Matsushiro	71.84	321	eP	P	10 31 01.6	+1.1
MAJO				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.3						
MAJO	Matsushiro	71.84	321	eP	P	10 31 01.6	+1.1
	comp=Z,38nm,1.0s,mb5.3						
MAT	Matsushiro	71.84	321	P	P	10 31 01.1	+0.6
MAT				eS	S	10 40 25.0	+6.1
MAT	Matsushiro	71.84	321	eP	P	10 31 01.0	+0.5
MAT				S	S	10 40 25.0	+6.1
MAT				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
MAT	Matsushiro	71.84	321	eP	P	10 31 01.0	+0.5
	comp=Z,34nm,1.0s,mb5.2						
MAT				S	S	10 40 25.0	+6.1
JOW	Kunigami	72.72	307	P	P	10 31 07.7	+1.9
	comp=Z,30nm,0.9s,mb5.2,baz=145,slow=6.5,SNR=11						
MIR	Mirnyy	73.91	205d	iP	P	10 31 14.0	+1.2
MIR				pmax	pmax		
	comp=Z,280nm,2.0s,mb5.8						
MNRC	McLaughlin Nat	74.99	39	⇑P	P	10 31 19.5	+0.4
	baz=75						
MURC	Murrieta	75.08	46	⇓P	P	10 31 20.0	+0.4
	baz=75						
BFSC	Mount Baldy St	75.15	45	⇑P	P	10 31 20.2	+0.2
	baz=75						
VES	Vestal, Richgr	75.17	43	⇑P	P	10 31 20.1	+0.1
	baz=75						
GASB	Alder Springs	75.33	38	⇑P	P	10 31 20.5	-0.5
	baz=76						
ISA	Isabella	75.45	44	eP	P	10 31 23.1	+1.4
ISA				e*PP	pP	10 31 29.2	-2.9
ISA	Isabella	75.45	44	⇓P	P	10 31 21.8	+0.1
	baz=76,SNR=5.1						
T06C	Millerton Lake	75.48	42	⇓P	P	10 31 22.5	+0.6
	baz=76						
R04C	Big Horse Ranc	75.50	40	⇑P	P	10 31 22.8	+0.9
	baz=76						
PFO	Pinyon Flat Ob	75.60	46	⇓P	P	10 31 23.2	+0.6
	baz=76						
SUTB	Sutter Butte	75.61	39	⇑P	P	10 31 23.0	+0.4
	baz=76						
O02C	Red Bluff	75.63	38	⇑P	P	10 31 23.5	+0.8
	baz=76						
CMB	Columbia Colle	75.69	41	eP	P	10 31 24.3	+1.2
CMB				e*PP	pP	10 31 34.1	+0.7
CMB	Columbia Colle	75.69	41	⇑P	P	10 31 23.3	+0.2
	baz=76						
HELL	Mitchell Peak,	75.72	42	⇓P	P	10 31 23.7	+0.5
	baz=76						
N02C	Big Bar	75.76	37	⇑P	P	10 31 24.0	+0.5
	baz=76						
OHCM	Honcut	75.85	39	epP	pP	10 31 34.7	+0.4
LRMC	Laurel Mountai	75.86	44	⇓P	P	10 31 24.8	+0.8
	baz=76						
PET	Petropavlovsk	75.91	343c	iP	P	10 31 23.7	-0.7
PET				eS	S	10 40 56.1	-8.6
PET				pmax	pmax		
	comp=Z,300nm,3.5s						
PET				pmax	pmax		
	comp=Z,200nm,11.0s						
PET				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.8						
PET				MLR	MLR		
	comp=Z,400nm,20.0s						
KCC	Kaiser Creek	75.92	42	⇑P	P	10 31 25.1	+0.7
	baz=76						
LAVA	Lava Cap Winer	75.93	40	⇑P	P	10 31 24.9	+0.4
	baz=76						
S06C	San Francisco	75.93	41	⇓P	P	10 31 24.9	+0.4
	baz=76						
ORV	Oroville	75.98	39	⇓P	P	10 31 24.6	-0.1
	baz=76						
WDC	Whiskeytown Da	76.04	38	eP	P	10 31 25.4	+0.3
WDC				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.0						
WDC	Whiskeytown Da	76.04	38	eP	P	10 31 25.4	+0.3
	comp=Z,32nm,1.6s,mb5.0						
WDC	Whiskeytown Da	76.04	38	⇓P	P	10 31 24.8	-0.3
	baz=76						
BELC	Belle Mtn.	76.13	46	⇑P	P	10 31 25.9	+0.3

baz=76
CWC Cottonwood Cre 76.17 43 ⇓P P 10 31 25.2 -0.6
baz=76
R05C Kirkwood Meado 76.30 40 ⇓P P 10 31 26.4 -0.2
baz=76
MPMC Manual Prospec 76.33 44 ⇑P P 10 31 26.9 +0.2
baz=76,SNR=10
GSC Goldstone 76.34 45 eP P 10 31 28.0 +1.2
GSC Goldstone 76.34 45 ⇑P P 10 31 27.2 +0.4
baz=76
P05C Yuba Gap, Truc 76.36 40 ⇓P P 10 31 27.0 +0.1
baz=77
HEC Hector,Ludlow 76.38 45 ⇓P P 10 31 26.8 -0.2
baz=77
DAC Darwin (Calif) 76.39 43 eP P 10 31 27.7 +0.6
DAC e*PP pP 10 31 36.9 -0.5
DAC pmax pmax
comp=Z,27nm,1.4s,mb5.0
DAC Darwin (Calif) 76.39 43 eP P 10 31 27.7 +0.6
comp=Z,27nm,1.4s,mb5.0
DAC epP pP 10 31 36.9 -0.5
M02C Callahan 76.39 37 ⇑P P 10 31 27.4 +0.3
baz=77
GLA Glamis 76.41 48 ⇓P P 10 31 27.5 +0.4
baz=77
MLAC Mammoth Lakes 76.41 42 ⇑P P 10 31 27.8 +0.6
baz=77
MTUM Tungsten Hills 76.42 42 eP P 10 31 29.0 +1.8
MTUM epP pP 10 31 38.7 +1.2
WAKR Walker 76.57 41 eP P 10 31 29.4 +1.3
R06C Coleville 76.58 41 ⇓P P 10 31 28.2 +0.1
baz=77
O05C Quincy 76.59 39 ⇓P P 10 31 28.7 +0.5
baz=77
YBH Yreka Blue Hor 76.70 37 eP P 10 31 30.7 +1.9
YBH Yreka Blue Hor 76.70 37 ⇑P P 10 31 28.7 -0.2
baz=77
O04C Chester 76.72 38 ⇓P P 10 31 29.2 +0.3
baz=77
YSS Yuzh-Sakhalins 76.78 331 ceP P 10 31 30.0 +0.7
YSS e*PP pP 10 31 39.0 -0.6
YSS eS S 10 41 14.0 -0.3
YSS smax
comp=N,400nm,9.0s
YSS MLR MLR
comp=Z,400nm,18.0s,MS4.8
YSS MLR MLR
comp=N,300nm,17.0s
IRM Iron Mountain 76.80 46 ⇓P P 10 31 28.8 -0.6
baz=77
HATC Hat Creek Radi 76.82 38 ⇓P P 10 31 28.8 -0.7
baz=77
BEKR Beckwourth 76.86 39 ⇑P P 10 31 29.7 0.0
baz=77
WCN Washoe City 76.87 40 ⇑P P 10 31 29.1 -0.7
baz=77
K02A Glendale 76.95 35 ⇓P P 10 31 29.9 -0.4
baz=77
GRAC Grapevine Rang 76.97 43 ⇑P P 10 31 30.4 0.0
baz=77
FURC Furnace Creek, 76.98 44 ⇓P P 10 31 29.9 -0.5
baz=77
TUQ Turquoise Mtn. 77.00 45 ⇓P P 10 31 30.2 -0.3
baz=77
Y12C Blythe 77.00 47 ⇓P P 10 31 30.3 -0.2
baz=77
P06A Stead Airport, 77.02 40 ⇑P P 10 31 30.7 +0.1
baz=77
SHOC Shoshone 77.03 44 ⇑P P 10 31 30.9 +0.2
baz=77
ELFS Eagle Lake Fie 77.12 38 ⇑P P 10 31 30.6 -0.6
baz=77
HUMO Hull Mountain 77.14 36 eP P 10 31 32.0 +0.7
comp=N,41nm,1.9s,mb5.0
HUMO epP pP 10 31 41.0 -0.7
HUMO Hull Mountain 77.14 36 ⇓P P 10 31 32.0 +0.7
baz=77
M04C Macdoel 77.23 37 ⇓P P 10 31 32.1 +0.3
baz=77
NVAR Mina Array Bea 77.23 41 P P 10 31 31.6 -0.3
comp=N,7.0nm,1.0s,mb4.6,baz=228,slow=9.0,SNR=29
U10A Ash Meadows, A 77.30 44 ⇑P P 10 31 32.6 +0.4
baz=78
R08A Mina 77.31 42 ⇓P P 10 31 32.2 -0.1
baz=78
PAHR Pah Rah Range 77.35 40 eP P 10 31 33.9 +1.5
comp=N,35nm,1.5s,mb5.1
PAHR epP pP 10 31 43.4 +0.6
M05C Lookout 77.35 38 ⇓P P 10 31 32.8 +0.3
baz=78
O06A Flanigan 77.37 39 ⇓P P 10 31 32.7 +0.2
baz=78
L04A Klamath Falls 77.45 37 ⇑P P 10 31 33.0 -0.1
baz=78
S09A Goldfield 77.49 42 ⇓P P 10 31 33.1 -0.2
baz=78
KSM Kuching 77.49 276 eP P 10 31 34.9 +1.7
V11A Goodsprings 77.56 45 ⇑P P 10 31 33.7 0.0
baz=78
PDMCI Parker Dam,Lak 77.57 47 ⇓P P 10 31 33.8 0.0
baz=78
W12A Cal Nev Ari 77.64 46 ⇓P P 10 31 34.2 +0.1
baz=78
M06C Likely Place G 77.64 38 ⇑P P 10 31 34.0 -0.1
baz=78
J03A Ideyld Park 77.64 35 ⇑P P 10 31 34.3 +0.2
baz=78
TPNV Topopah Spring 77.66 44 eP P 10 31 35.2 +1.0
TPNV e*PP pP 10 31 45.3 +0.7
Q08A Gabbs 77.72 41 P P 10 31 34.2 -0.4
baz=78,SNR=9.1
N06A Buffalo Meadow 77.73 39 ⇓P P 10 31 33.7 -0.8
baz=78
K04A Chilquin 77.83 36 ⇑P P 10 31 34.7 -0.4
baz=78
V12A Nelson 77.89 45 ⇓P P 10 31 35.3 -0.2
baz=78
R09A Tonopah 77.89 42 ⇓P P 10 31 35.3 -0.2
baz=78,SNR=8.9
Z14A Wintersburg 77.89 48 ⇓P P 10 31 35.1 -0.4
baz=78
O07A Toulon 77.94 40 ⇑P P 10 31 35.3 -0.4
baz=78,SNR=8.3
X13A Yucca 77.95 47 ⇓P P 10 31 35.5 -0.3
baz=78
L05A Lakeview 77.97 37 ⇑P P 10 31 35.6 -0.3
baz=78
SHPR Sheep Range 78.12 44 eP P 10 31 37.0 +0.2
SHPR epP pP 10 31 47.6 +0.5
P08A Dixie Valley 78.14 40 ⇑P P 10 31 36.9 0.0
baz=78
Y14A Wickenburg 78.16 48 ⇓P P 10 31 36.0 -1.0
baz=78
Q09A Carvers 78.17 42 ⇑P P 10 31 37.1 0.0
baz=78
W13A Hualapai Mount 78.19 46 ⇓P P 10 31 36.7 -0.4
baz=78
N07B Gerlach 78.26 39 ⇑P P 10 31 36.8 -0.7
baz=78
H03A Soap Creek Ran 78.34 34 ⇓P P 10 31 37.3 -0.7
baz=79
116A Eloy 78.35 49 ⇓P P 10 31 37.7 -0.3
baz=78
R10A Warm Springs 78.41 42 ⇓P P 10 31 38.2 -0.2
baz=79,SNR=12
U12A Valley of Fire 78.49 45 ⇑P P 10 31 38.5 -0.3
baz=79
M07A Soldier Meadow 78.52 39 ⇓P P 10 31 38.4 -0.5
baz=79
X14A Yava 78.53 47 ⇓P P 10 31 38.7 -0.3
baz=79
J05A Fort Rock 78.54 36 ⇓P P 10 31 38.9 -0.2
baz=79,SNR=6.2
P09A Austin 78.63 41 ⇓P P 10 31 38.8 -0.8
baz=79,SNR=8.3
N08A GE Springer Mi 78.76 40 ⇑P P 10 31 39.7 -0.6
baz=79
K06A Valley Falls 78.78 37 ⇓P P 10 31 40.0 -0.4
baz=79
W14A Seligman 78.80 47 ⇓P P 10 31 40.5 0.0
baz=79
L07A Adell 78.81 38 P P 10 31 40.7 +0.1
baz=79,SNR=7.9
TUC Tucson 78.88 50 eP P 10 31 42.5 +1.5
H04A Detroit Lake 78.94 35 ⇑P P 10 31 41.2 -0.1
baz=79
O09A Fish Creek Ran 78.97 40 ⇓P P 10 31 41.2 -0.2
baz=79,SNR=5.4
X15A Humboldt 79.00 48 ⇑P P 10 31 41.6 0.0
baz=79
P10A Eureka 79.09 41 ⇑P P 10 31 41.7 -0.4
baz=79
I05A Bend 79.09 35 ⇑P P 10 31 41.5 -0.6
baz=79
BMN Battle Mountai 79.10 40 eP P 10 31 44.3 +2.1
BMN e*PP pP 10 31 53.1 +0.5
BMN pmax pmax
comp=Z,24nm,1.3s,mb5.0
BMN Battle Mountai 79.10 40 eP P 10 31 44.3 +2.1
comp=Z,24nm,1.3s,mb5.0
BMN epP pP 10 31 53.0 +0.5
J06A Christmas Vall 79.12 37 ⇑P P 10 31 42.1 -0.2
baz=79
N09A Rock Creek Ran 79.17 40 ⇑P P 10 31 41.8 -0.8
baz=79
K07A Rock Creek Ran 79.29 38 ⇓P P 10 31 42.9 -0.3
baz=80,SNR=7.3
W15A Williams 79.34 47 ⇓P P 10 31 43.7 +0.2
baz=80
H05A Madras 79.43 35 ⇑P P 10 31 43.9 -0.1
baz=80
E03A Lebam 79.46 32 ⇓P P 10 31 43.8 -0.3
baz=80
O10A Cortez Mining, 79.46 41 ⇑P P 10 31 43.5 -0.7
baz=80
WVOR Wild Horse Val 79.48 38 eP P 10 31 43.7 -0.5
WVOR pmax pmax
comp=Z,20nm,1.2s,mb4.9
WVOR Wild Horse Val 79.48 38 eP P 10 31 43.7 -0.5
comp=Z,20nm,1.2s,mb4.9
P11A Circle Ranch, 79.50 42 ⇑P P 10 31 43.5 -0.8
baz=80
L08A Fields 79.50 38 ⇓P P 10 31 43.8 -0.5
baz=80
I06A Prineville 79.53 36 ⇑P P 10 31 44.1 -0.4
baz=80,SNR=6.8
M09A Marrel Ranch, 79.56 39 ⇑P P 10 31 43.9 -0.8
baz=80
F04A Amboy 79.64 33 ⇓P P 10 31 44.1 -1.0
baz=80
J07A Hines 79.68 37 ⇑P P 10 31 44.4 -0.9
baz=80
N10A Dunphy 79.71 40 ⇑P P 10 31 45.1 -0.4
baz=80
D03A Wishkah Elem. 79.75 32 ⇓P P 10 31 45.1 -0.6
baz=80
K08A Mann Creek Ran 79.75 38 P P 10 31 45.7 0.0
baz=80,SNR=9.5
G05A Wamic 79.77 35 ⇑P P 10 31 45.2 -0.6
baz=80
L09A Wilkinson Ranc 79.80 39 ⇑P P 10 31 44.9 -1.0
baz=80
O11A Cowboy Ranch, 79.89 41 ⇓P P 10 31 46.2 -0.2
baz=80,SNR=8.0
CCUT Cedar City 79.90 44 eP P 10 31 47.1 +0.6
C03A Quillayute Air 79.92 31 ⇑P P 10 31 46.3 -0.3
baz=80
ARUT Antelope Range 79.98 44 eP P 10 31 48.3 +1.4
P12A McGill 79.98 42 ⇓P P 10 31 46.4 -0.6
baz=80
I07A Izee 80.02 36 ⇓P P 10 31 46.5 -0.7
baz=80
F05A White Salmon 80.11 34 ⇑P P 10 31 47.2 -0.5
baz=80
M10A I.L. Ranch, Tu 80.17 40 ⇓P P 10 31 47.7 -0.2
baz=80
SSE Sheshan 80.23 308 P P 10 31 48.2 -0.1
SSE AMB AMB
comp=Z,19nm,0.8s,mb5.1
SSE AMB AMB
comp=Z,128nm,7.4s
N11A Elko Archery C 80.24 41 ⇓P P 10 31 47.9 -0.5
baz=80
E05A Randle 80.40 33 ⇓P P 10 31 48.4 -0.8
baz=81
I08A Drewsey 80.43 37 ⇑P P 10 31 48.6 -0.8
baz=81
GNW Green Mountain 80.52 32 eP P 10 31 50.2 +0.4
GNW epP pP 10 32 00.8 +0.5
O12A Currie 80.54 42 ⇓P P 10 31 49.4 -0.6
baz=81
C04A Brinnon 80.55 32 ⇓P P 10 31 50.0 0.0
baz=81
M11A Holland Ranch, 80.57 40 ⇑P P 10 31 50.0 -0.1
baz=81
N12A Clover Valley, 80.69 41 ⇑P P 10 31 50.5 -0.3
baz=81
D05A Enumclaw 80.69 33 ⇓P P 10 31 50.7 -0.1
baz=81
H08A Prairie City 80.75 36 ⇑P P 10 31 50.6 -0.5
baz=81
I09A Lost Marbles R 80.94 37 ⇓P P 10 31 51.4 -0.7
baz=81
M12A Wells 81.10 41 ⇑P P 10 31 52.5 -0.5
baz=81
C05A Tolt Reservoir 81.18 32 ⇓P P 10 31 52.8 -0.6
baz=81
MSU Marysvale 81.21 44 eP P 10 31 54.3 +0.8
N13A Wendover, West 81.21 41 ⇑P P 10 31 52.7 -0.8
baz=81
SVW2 Sparrevohn 81.35 9 eP P 10 31 53.4 -0.9
B05A Bryant 81.36 32 ⇓P P 10 31 53.5 -0.8
baz=82
A04A Legoe Bay, Lum 81.36 31 ⇑P P 10 31 53.5 -0.8
baz=82
H09A Durkee 81.41 37 ⇓P P 10 31 53.9 -0.7
baz=82
F08A Pendleton 81.50 35 ⇑P P 10 31 54.0 -1.0
baz=82
M13A Montello 81.53 41 ⇓P P 10 31 54.4 -0.8
baz=82
HABR Khabarovsk 81.55 328 ⇑iP P 10 31 57.0 +1.7
HABR eS S 10 42 06.3 +1.4
HABR pmax pmax
comp=Z,99nm,1.9s,mb5.4
SLKM Skilak Lake 81.67 11 eP P 10 31 55.3 -0.7
BMO Blue Mountains 81.73 37 eP P 10 31 55.5 -0.8
BMO epP pP 10 32 06.5 -0.1
A05A Maple Falls 81.85 31 ⇑P P 10 31 55.5 -1.4
baz=82
MDJ Mudanjiang 82.02 323 P P 10 31 59.4 +1.6
MDJ AP pP 10 32 09.0 +0.8
MDJ XP sP 10 32 12.7 +0.7
MDJ PP PP 10 35 07.2 +1.4
MDJ S S 10 42 12.1 +2.3
MDJ XS sS 10 42 28.6 +1.6
MDJ AMB AMB
comp=Z,29nm,1.1s,mb5.1
MDJ AMB AMB
comp=Z,236nm,4.4s
MDJ LR LR
comp=N,212nm,18.1s,MS4.9
MDJ LR LR
comp=E,419nm,18.6s,MS4.9
MDJ LR LR
comp=Z,734nm,19.1s,MS5.1
TMUT Trail Mountain 82.27 44 eP P 10 32 01.6 +2.4
TMUT epP pP 10 32 11.2 +1.7
NJ2 Nanjing 82.43 308 eP P 10 32 01.3 +1.3
NJ2 AP pP 10 32 11.7 +1.3
NJ2 XP sP 10 32 15.6 +1.4
NJ2 PP PP 10 35 11.8 +2.6
NJ2 S S 10 42 13.0 -1.0
NJ2 XS sS 10 42 30.0 -1.2
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
NJ2 LR LR
comp=N,1μm,17.8s,MS5.4
NJ2 LR LR
comp=E,310nm,20.7s,MS5.4
NJ2 LR LR
comp=Z,170nm,16.6s,MS4.5
Y22C IRIS PASSCAL I 82.57 50 ⇑P P 10 31 59.4 -1.3
baz=83
SRU San Rafael 82.62 44 eP P 10 32 01.8 +0.9
SRU e*PP pP 10 32 12.1 +0.7
PMR Palmer 82.88 11 eP P 10 32 00.9 -1.4
PMR pmax pmax
comp=Z,34nm,1.4s,mb5.2
PMR MLR MLR
comp=Z,400nm,17.0s,MS4.9
PMR Palmer 82.88 11 eP P 10 32 00.9 -1.4
comp=Z,34nm,1.4s,mb5.2
PMR LR LR
comp=Z,400nm,17.0s,MS4.9
LPM Los Pinos Moun 82.89 50 eP P 10 32 03.9 +1.5
LPM epP pP 10 32 15.4 +2.6
TTA Tatalina 83.05 8 eP P 10 32 03.0 -0.2
TCUT Toone Canyon 83.12 42 eP P 10 32 04.1 +0.5
PV10 Paradox Valley 83.23 46 eP P 10 32 04.4 +0.3
HWUT Hardware Ranch 83.29 42 eP P 10 32 04.8 +0.4
HWUT epP pP 10 32 14.4 -0.4
ANMO Albuquerque 83.32 50 eP P 10 32 04.8 +0.2
PV01 Paradox Valley 83.42 46 eP P 10 32 05.0 -0.1
GDL2 Guadalupe Moun 83.58 53 eP P 10 32 07.1 +1.2
KLR Kul'dur 83.70 327 eP P 10 32 04.8 -1.7
KLR pmax pmax
comp=E,75nm,2.4s
KLR pmax pmax
comp=Z,130nm,2.4s,mb5.6
DL2 Dalian 83.81 315 P P 10 32 09.0 +1.9
DL2 S S 10 42 33.4 +5.4
DL2 AMB AMB
comp=Z,110nm,3.6s
DL2 LR LR
comp=N,130nm,16.8s,MS4.5
DL2 LR LR
comp=E,120nm,17.1s,MS4.5
DL2 LR LR
comp=Z,210nm,17.8s,MS4.6
CN2 Changchun 83.98 320 eP P 10 32 09.2 +1.2
CN2 eXP sP 10 32 23.4 +1.2
CN2 eS S 10 42 35.0 +5.3
CN2 AMB AMB
comp=Z,40nm,1.2s,mb5.4
CN2 AMB AMB
comp=Z,400nm,3.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.8
CN2 LR LR
comp=E,290nm,18.0s,MS4.8
CN2 LR LR
comp=Z,380nm,19.0s,MS4.8
SNY Shenyang 84.06 318 ⇑P P 10 32 05.1 -3.3
SNY S S 10 42 34.2 +3.7
SNY XS sS 10 42 40.1 -7.7
SNY AMB AMB
comp=Z,27nm,1.9s,mb5.0
SNY AMB AMB
comp=Z,426nm,8.6s
SNY LR LR
comp=N,285nm,18.0s
SNY LR LR
comp=Z,230nm,19.2s,MS4.6
MAW Mawson 84.15 199 P P 10 32 08.5 -0.3
comp=Z,9.7nm,0.8s,mb5.0,baz=195,slow=12,SNR=6.3
MAW LR LR 11 08 60.0
comp=Z,665nm,18.4s,MS5.0,baz=100,slow=35
MCMT McKenzie Canyo 84.28 39 eP P 10 32 09.5 0.0
RRI2 Red Ridge 84.38 40 eP P 10 32 15.4 +5.4
SKAG Skagway 84.39 18 eP P 10 32 10.0 0.0
comp=Z,62nm,1.5s,mb5.5
SKAG LR LR
comp=Z,500nm,18.0s,MS4.9
DCID1 Drake Creek 84.60 40 eP P 10 32 12.8 +1.7
REDW Red Top Meadow 84.68 41 eP P 10 32 11.8 +0.3
comp=Z,40nm,1.5s,mb5.3
REDW epP pP 10 32 22.4 +0.5
TPAW Teton Pass 84.69 40 eP P 10 32 11.4 -0.1
comp=Z,32nm,1.4s,mb5.2
DLMT Dillon 84.73 38 eP P 10 32 12.1 +0.3
SNOW Snow King Moun 84.79 41 eP P 10 32 12.0 -0.1
comp=Z,20nm,1.1s,mb5.2
MSO Missoula 84.79 36 eP P 10 32 11.5 -0.6
MSO epP pP 10 32 22.1 -0.4
MCK McKinley 84.89 11 eP P 10 32 12.0 -0.6
MCK pmax pmax
comp=Z,27nm,1.2s,mb5.2
MCK McKinley 84.89 11 eP P 10 32 12.0 -0.6
comp=Z,28nm,1.2s,mb5.3
BSMT Bassoo Peak 84.92 35 eP P 10 32 12.0 -0.7
BSMT epP pP 10 32 22.6 -0.5
MOOW Moose Ponds 84.95 40 eP P 10 32 13.2 +0.3
comp=Z,19nm,1.5s,mb5.0
MOOW epP pP 10 32 23.2 -0.1
SMCO Snowmass 85.03 46 eP P 10 32 14.9 +1.7
comp=Z,16nm,1.3s,mb5.0
LRM Limekiln Ridge 85.07 38 eP P 10 32 13.0 -0.5
LRM epP pP 10 32 24.2 +0.3
QLMT Earthquake Lak 85.12 39 eP P 10 32 15.9 +2.2
FLWY Flagg Ranch 85.16 40 eP P 10 32 14.3 +0.4
BW06 Boulder Array 85.17 42 eP P 10 32 13.1 -0.9
PDAR Pinedale Array 85.17 42 P P 10 32 12.5 -1.4
comp=Z,2.2nm,1.0s,mb4.2,baz=240,slow=2.9,SNR=13
PDAR LR LR 11 06 44.6
comp=Z,529nm,18.4s,MS5.0,baz=249,slow=33
MENT Mentasta 85.19 13 eP P 10 32 13.5 -0.6
WHN Wuhan 85.19 304 P P 10 32 16.2 +2.1
CHMT Chamberlain Mo 85.23 37 eP P 10 32 13.5 -0.8
CHMT epP pP 10 32 22.1 -2.6
YMR Madison River 85.31 39 eP P 10 32 15.8 +1.1
comp=Z,44nm,1.6s,mb5.3
YMR epP pP 10 32 26.4 +1.3
TIA Tai'an 85.64 311 eP P 10 32 17.3 +1.0
HRY Holter Researc 85.92 37 eP P 10 32 19.0 +1.3
HRY epP pP 10 32 27.8 -0.4
WALA Waterton Lakes 86.09 35 eP P 10 32 19.8 +1.2
comp=Z,18nm,1.4s,mb5.1
WALA epP pP 10 32 28.9 -0.2
RWWY Rawlins 86.11 43 eP P 10 32 19.2 +0.5
comp=Z,21nm,1.4s,mb5.2
COLA College 86.13 11 eP P 10 32 17.9 -0.9
COLA e*PP pP 10 32 28.2 -1.0
COLA pmax pmax
comp=Z,30nm,0.9s,mb5.5
COLA College 86.13 11 eP P 10 32 17.9 -0.8
comp=Z,30nm,0.9s,mb5.5
COLA epP pP 10 32 28.2 -1.0
IMA2 Indian Mountai 86.36 8 eP P 10 32 19.3 -0.6
AMTX Amarillo 86.78 51 eP P 10 32 21.9 -0.1
PLCA Paso Flores 86.99 132 P P 10 32 22.8 -0.1
comp=Z,9.4nm,1.0s,mb5.0,baz=260,slow=5.8,SNR=14
PLCA LR LR 11 04 28.4
comp=Z,514nm,18.6s,MS5.0,baz=197,slow=31
PLCA Paso Flores 86.99 132 eP P 10 32 22.8 -0.1
PLCA epP pP 10 32 33.6 +0.2
DAWY Dawson 87.14 14 eP P 10 32 23.2 -0.5
DAWY epP pP 10 32 34.5 +0.4
KULM Kulim 87.84 276 eP P 10 32 29.2 +2.1
KULM epP pP 10 32 38.1 +0.5
BJI Beijing 88.06 314 P P 10 32 29.5 +1.4
BJI AMB AMB
comp=Z,30nm,2.2s,mb5.1
BJI AMB AMB
comp=Z,543nm,4.2s
BJI LR LR
comp=N,197nm,19.6s,MS4.7
BJI LR LR
comp=E,191nm,19.6s,MS4.7
BJI LR LR
comp=Z,171nm,28.6s
BILL Bilibino 88.29 353 eP P 10 32 27.3 -1.9
BILL e*PP pP 10 32 36.8 -2.9
BILL e*SP sP 10 32 41.2 -2.3
BILL e PP 10 35 56.4 -0.3
BILL pmax pmax
comp=Z,21nm,1.5s,mb5.2
BILL MLR MLR
comp=Z,400nm,18.0s,MS4.9
EDM Edmonton 88.78 31 eP P 10 32 31.2 -0.3
EDM e*PP pP 10 32 41.5 -0.5
SYO Syowa Base 88.83 191 ⇑eP P 10 32 30.2 -1.5
SYO Syowa Base 88.83 191 ⇑epP pP 10 32 41.0 -1.2
SNAA Sanae 89.09 177 P P 10 32 32.6 -0.4
comp=Z,3.7nm,1.1s,mb4.6,baz=190,slow=8.9,SNR=4.4
VNA1 Neumayer--Stat 89.75 175 ePKiKP 10 37 45.5
GYA Guiyang 89.78 298 ⇑iP P 10 32 37.6 +1.4
GYA AP pP 10 32 48.2 +1.5
GYA XP sP 10 32 52.1 +1.6
GYA PP PP 10 36 12.5 +3.9
GYA SKS 10 43 03.6
GYA S S 10 43 25.0 -0.8
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.7
GYA AMB AMB
comp=Z,140nm,4.8s
GYA LR LR
comp=N,490nm,18.7s,MS5.2

GYA LR LR
comp=E,670nm,18.8s,MS5.2
GYA LR LR
comp=Z,570nm,19.0s,MS5.0
XAN Xi'an 90.81 306 P **P** **10 32 42.5 +1.5**
XAN AMB AMB
comp=Z,17nm,2.2s,mb5.0
CLNS Chul'man 91.55 331 *e*P **P** **10 32 41.9 -2.5**
CLNS *e**PP pP 10 32 54.2 -0.7
CLNS *e* 10 36 23.9
CLNS *e*S SKSac 10 43 19.0 +4.5
CLNS pmax pmax
comp=Z,37nm,0.9s,mb5.7
CLNS pmax pmax
comp=N,24nm,1.2s
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
CLNS pmax pmax
comp=N,9.0nm,1.1s
CLNS smax
comp=E,15nm,0.9s
CLNS smax
comp=N,4.0nm,0.7s
HHC Hu-ho-hao-te 91.58 313 *e*P **P** **10 32 46.5 +2.0**
HHC AP pP 10 32 57.1 +2.0
HHC XP sP 10 33 01.0 +2.2
HHC PP PP 10 36 27.4 +4.5
HHC SKS 10 43 14.9
HHC S S 10 43 41.5 -0.7
HHC XS sS 10 43 59.0 -0.7
HHC PS PS 10 45 00.2 +4.9
HHC SS SS 10 49 51.0 +2.0
HHC AMB AMB
comp=Z,19nm,1.0s,mb5.4
HHC AMB AMB
comp=Z,261nm,4.3s
HHC LR LR
comp=N,173nm,25.6s,MS4.6
HHC LR LR
comp=E,191nm,24.7s,MS4.6
HHC LR LR
comp=Z,272nm,24.7s,MS4.6
INK Inuvik 92.00 14 P **P** **10 32 45.5 -0.9**
comp=Z,3.7nm,0.9s,mb4.7,baz=186,slow=4.9
INK Inuvik 92.00 14 *e*P **P** **10 32 45.9 -0.6**
INK *ep*P pP 10 32 56.4 -0.6
CFAA Coronel Fontan 92.35 125 P **P** **10 32 48.5 +0.4**
comp=Z,1.3nm,1.1s,mb4.2,baz=226,slow=3.5,SNR=9.7
YAK Yakutsk 92.60 337 *e*P **P** **10 32 48.1 -1.2**
YAK pmax pmax
comp=Z,11nm,1.0s,mb5.2
KMI Kunming 92.62 296 P **P** **10 32 52.5 +3.1**
KMI AP pP 10 33 00.6 +0.7
KMI XP sP 10 33 03.5 -0.1
KMI PP PP 10 36 36.1 +5.0
KMI PPP 10 38 36.2
KMI S S 10 43 49.4 -2.2
KMI XS sS 10 44 07.2 -1.8
KMI AMB AMB
comp=Z,13nm,1.0s,mb5.3
KMI AMB AMB
comp=Z,130nm,3.9s
KMI LR LR
comp=N,186nm,19.5s,MS4.8
KMI LR LR
comp=E,243nm,19.5s,MS4.8
KMI LR LR
comp=Z,301nm,18.2s,MS4.8
YKA Yellowknife Ar 93.63 23 LR LR 11 10 52.4
comp=Z,226nm,19.0s,MS4.7,baz=270,slow=33
CD2 Chengdu 93.74 301 P **P** **10 32 53.5 -1.0**
CD2 AP pP 10 33 04.1 -1.0
CD2 XP sP 10 33 08.0 -0.8
CD2 PP PP 10 36 42.0 +2.1
CD2 SKS 10 43 24.0
CD2 S S 10 43 57.7 -3.8
CD2 XS sS 10 44 15.4 -3.6
CD2 SS SS 10 50 20.8 +0.7
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,30nm,8.4s
CD2 LR LR
comp=E,220nm,20.4s
CD2 LR LR
comp=Z,160nm,16.8s,MS4.5
LZH Lanzhou 95.44 306 *e*P **P** **10 33 04.5 +2.2**
LZH AP pP 10 33 14.4 +1.6
LZH XP sP 10 33 18.0 +1.4
LZH PP PP 10 36 57.5 +4.4
LZH *e*S S 10 44 18.3 +2.1
LZH SS SS 10 50 48.1 +4.0
LZH AMB AMB
comp=Z,25nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,150nm,7.0s
LZH LR LR
comp=E,480nm,17.7s
LZH LR LR
comp=Z,763nm,18.9s,MS5.2
ULM Lac du Bonnet 96.95 39 LR LR 11 12 15.6
comp=Z,752nm,18.2s,MS5.2,baz=63,slow=33
ULN Ulaanbaatar 97.24 318⇑ *e*P **P** **10 33 10.7 +0.2**
SONM Songino Array 97.65 318 P **P** **10 33 13.3 +1.0**
comp=Z,0.6nm,0.9s,mb4.1,baz=153,slow=4.2,SNR=2.7
SONM LR LR 11 13 07.3
comp=Z,226nm,19.6s,MS4.7,baz=109,slow=33
LPAZ La Paz 98.55 111 LR LR 11 09 08.1
comp=Z,419nm,19.1s,MS5.0,baz=310,slow=30
TIXI Tiksi 98.67 344 *e*P **P** **10 33 13.3 -3.6**
TIXI pmax pmax
comp=Z,5.0nm,1.0s,mb5.0
GTA Gaotai 99.51 308 *e*P **P** **10 33 23.9 +3.2**
GTA AP pP 10 33 30.6 -0.6
GTA XP sP 10 33 33.7 -1.3
GTA AMB AMB
comp=Z,3.0nm,0.9s,mb4.7
WMQ Urumqi 109.34 311 *e*PDIF Pdif 10 34 04.0 -0.3
WMQ PP PP 10 38 40.0 +2.6
WMQ SS SS 10 53 53.0 -3.3
WMQ PP PP
comp=Z,215nm,6.0s
WMQ LR LR
comp=N,226nm,20.0s,MS4.9
WMQ LR LR
comp=E,278nm,20.0s,MS4.9
WMQ LR LR
comp=Z,301nm,20.0s,MS4.9
KURK Kurchatov 115.95 318 *e*PKPdf PKPdf 10 38 13.9 -6.5
CHKZ Chkalovo 120.60 322 *e*PKIKP PKPdf 10 38 28.3 -1.0
ZRNK Zerenda 121.67 321 *e*PKIKP PKPdf 10 38 31.0 -0.4
KEV Kevo 127.97 351 *e*pkp PKPdf 10 38 51.2 +7.7
ARCES ARCESS Array B 128.39 352 PKP PKPdf 10 38 43.9 -0.3
comp=Z,3.5nm,0.9s,baz=48,slow=1.8,SNR=5.6
ARCES ARCESS Array B 128.39 352 PKP PKPdf 10 38 43.9 -0.3
JOF Joensuu 133.15 345 *e*pkp PKPdf 10 38 52.3 -1.0
KAF Kangasniemi 135.01 347 *e*pkp 10 38 45.4
FINES FINESS Array B 135.66 347 PKP PKPdf 10 38 57.2 -0.8
comp=Z,5.5nm,1.1s,baz=191,slow=3.9,SNR=6.6
FINES FINESS Array B 135.66 347 PKP PKPdf 10 38 57.2 -0.8
OBN Obninsk 137.57 335 *i* PKIKP PKPdf 10 39 00.9 -0.6
OBN *i* 10 39 12.7
OBN *e* 10 41 45.9
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.8
NOA NORSAR Array B 138.12 357 PKP PKPdf 10 39 02.3 -0.2
comp=Z,0.6nm,0.8s,baz=76,slow=1.7,SNR=3.3
KIV Kislovodsk 141.04 317 *i* PKIKP PKPdf 10 39 12.3 +4.5
KIV pmax pmax
comp=Z,9.0nm,0.8s
HAKT HAKKARI 142.86 307 *i* P PKPdf 10 39 07.9 -3.2
BHD Baghdad 143.50 300 *ex* x 10 39 08.0
KMBO Kilima Mbogo 143.67 240 PKP PKPdf 10 39 12.8 +0.2
comp=Z,2.2nm,0.8s,baz=109,slow=11,SNR=7.3
KMBO Kilima Mbogo 143.67 240 PKP PKPdf 10 39 12.8 +0.2
MSL Mosul 143.73 306 *ex* x 10 39 07.0
AKASG Malin Array Be 143.82 335 PKP PKPdf 10 39 10.2 -2.6
comp=Z,2.2nm,0.7s,baz=39,slow=4.8,SNR=20
AKBB Malin Array Si 143.82 335 *e*PKHKP 10 39 10.1
ANN Anapa 143.83 322 *e*PKHKP 10 39 09.7
BNGL BINGOL 144.23 311 *i* P PKPdf 10 39 14.1 +0.6
BEST Besiri 144.55 309 *i* P PKPdf 10 39 14.6 +0.5
KELT Kelkit 145.05 314 *i* P PKPbc 10 39 16.2 +1.9
MARD Mardin 145.13 308 *i* P PKPbc 10 39 16.0 +1.4
BSEG Bad Segeberg 145.25 356 *e*PKPbc PKPbc 10 39 15.2 +0.2
GRSN GIRESUNGRSN 145.35 315 *i* P PKPbc 10 39 16.1 +0.8
SIM Simferopol' 145.62 324 *i* PKIKP PKPdf 10 39 17.5 +1.6
SIM *e* 10 39 28.0
SIM pmax pmax
comp=Z,33nm,1.0s
ELZG Elazig 145.96 311 *i* P PKPbc 10 39 19.8 +2.6
LVV L'vov 146.44 339*c* *i* PKIKP PKPdf 10 39 18.8 +1.5
MALT Malatya 146.44 311⇓ *i* P PKPbc 10 39 21.4 +2.7
MALT Malatya 146.44 311 *e*PKPbc PKPbc 10 39 20.9 +2.3
URFA Urfa 146.52 310 *e*P PKPbc 10 39 20.3 +1.4
SVSK Karacayir 146.69 315 *e*P PKPbc 10 39 20.6 +1.2
KIS Kishinev 146.85 332 *e*PKIKP PKPdf 10 39 18.0 0.0
KIS MLR MLR
comp=Z,600nm,20.0s,MS5.4
KIS MLR MLR
comp=Z,600nm,20.0s
ATAB Bozova 146.89 310 *i* P PKPbc 10 39 21.6 +1.7
KWP Kalwaria 147.03 341 *e*PKP PKPbc 10 39 21.1 +0.7
KWP *e* 10 39 31.8
BOYT Boyabat 147.26 319 *i* P PKPbc 10 39 22.7 +1.7
CLZ Clausthal 147.33 356 *e*PKPbc PKPbc 10 39 21.6 +0.4
OJC Ojcow 147.34 344 *e*PKPab PKPab 10 39 21.6 -1.5
OJC *ep*PKPab pPKPab 10 39 31.1 -2.6
GZT Gaziantep 147.47 310 *i* P PKPbc 10 39 23.1 +1.5
KSP Ksiaz 147.53 348 *e*PKP PKPbc 10 39 22.7 +0.9
KSP *e* 10 39 33.7
KSP Ksiaz 147.53 348 *e*PKP2 PKPbc 10 39 22.4 +0.6
KSP *e*SS SS 11 01 47.0 -2.1
KSP Ksiaz 147.53 348 *e*PKP PKPbc 10 39 22.4 +0.6
KSP *ep*PKP pPKPdf 10 39 32.4 +2.4
KSP *e*SS SS 11 01 47.0 -2.1
KSP LR LR
comp=Z,700nm,19.5s,MS5.5
CLL Collm 147.60 352 *e*PKPbc PKPbc 10 39 22.1 +0.2
CLL Collm 147.60 352⇑ *i*PKPbc PKPbc 10 39 22.3 +0.4
comp=Z,34nm,1.1s
CLL *i* PKiKP PKiKP 10 39 24.3 +0.3
comp=Z,44nm,1.0s
CLL *i* x x 10 39 27.8
CLL *i* pPKPbc pPKPbc 10 39 33.1 +0.4
comp=Z,120nm,1.5s
CLL *i* sPKiKP 10 39 39.3
CLL *ex* x 10 40 22.0
CLL Collm 147.60 352⇑ *i*PKP2 PKPbc 10 39 22.3 +0.4
CLL *i* 10 39 24.3
CLL pmax pmax
comp=Z,34nm,1.1s
CLL pmax pmax
comp=Z,44nm,1.0s
CLL MLR MLR
comp=Z,500nm,16.4s,MS5.4
CLL Collm 147.60 352⇑ *i*PKP PKPbc 10 39 22.3 +0.4
CLL *i* PKP PKiKP 10 39 24.3 +0.3
CLL *i* 10 39 27.8
CLL LR LR
comp=Z,500nm,16.4s,MS5.4
KOLS Kolonicke sedl 147.78 340 *e*PKP PKPdf 10 39 19.6 +0.1
GAZ Gaziantep 147.80 310 *e*P PKPbc 10 39 24.1 +1.7
BURAR Bucovina Array 147.87 336⇑ *i*P PKPbc 10 39 24.6 +1.9
BURAR Bucovina Array 147.87 336⇑P PKPbc 10 39 24.6 +1.9
BRG Berggiesshubel 147.90 351 *e*PKPbc PKPbc 10 39 23.3 +0.5
BRG Berggiesshubel 147.90 351 *e*PKP PKPbc 10 39 23.4 +0.7
BRG comp=Z,15nm,1.2s *i* 10 39 40.7
BRG comp=Z,33nm,1.2s *i* 10 40 21.0
BRG Berggiesshubel 147.90 351 *e*PKP2 PKPbc 10 39 23.4 +0.6
BRG pmax pmax
comp=Z,15nm,1.2s
BRG pmax pmax
comp=Z,33nm,1.2s
UPC Upice 147.91 349 *e*PKPbc PKPbc 10 39 23.6 +0.8
UPC *ep*PKP pPKPdf 10 39 34.3 +3.7
NIE Niedzica 147.93 343 *e*PKPab PKPab 10 39 24.3 -1.2
FBE Freiberg 147.94 352 *e*PKPbc PKPbc 10 39 23.3 +0.5
BNN Bunyan 147.99 314 *e*P PKPbc 10 39 24.3 +1.3
DPC Dobruska-Polom 148.00 348 *e*PKPbc PKPbc 10 39 20.7 -2.3
DPC *ep*PKP pPKPdf 10 39 36.9 +6.2
CRVS Cervenica-Dubn 148.06 341 *e*PKP PKPbc 10 39 23.9 +0.7
OKC Ostrava-Krasne 148.09 346 *e*PKPbc PKPbc 10 39 23.8 +0.5
OKC AMS AMS 11 54 10.0
comp=Z,300nm,19.0s
CORM Corum 148.12 317 *e*P PKPbc 10 39 24.7 +1.4
BALT Daday 148.13 320 *i* P PKPbc 10 39 25.0 +1.6
PVCC Panska Ves 148.14 350 *e*PKPbc PKPbc 10 39 23.9 +0.5
PVCC AMS AMS 11 54 00.0
comp=Z,400nm,16.4s
MORC Moravsky Berou 148.29 346⇓ *i*P PKPbc 10 39 24.7 +0.9
MORC Moravsky Berou 148.29 346 PKP2 PKPab 10 39 25.4 -1.5
MORC Moravsky Berou 148.29 346 *e*PKPdf PKPdf 10 39 20.4 +0.1
MORC *e*PKPbc PKPbc 10 39 24.3 +0.5
MORC *e*PKPab PKPab 10 39 27.1 +0.2
UBBA Unterbreizbach 148.38 356 *e*PKPbc PKPbc 10 39 24.1 +0.1
MOX Moxa 148.41 354 *e*PKPbc PKPbc 10 39 24.5 +0.4
MOX Moxa 148.41 354 *e*PKP PKPbc 10 39 24.6 +0.5
MOX comp=Z,76nm,2.0s
comp=Z,200nm,18.0s
BEBN Eben Emael 148.51 1 PKPbc PKPbc 10 39 25.0 +0.7
CFR Carcaliu 148.53 330⇑ *i*P PKPbc 10 39 26.3 +1.9
CFR Carcaliu 148.53 330⇑PKP2 PKPab 10 39 25.2 -2.7
CFR Carcaliu 148.53 330⇑PKP2 PKPab 10 39 26.3 -1.6
WERD Werda 148.53 353 *e*PKPbc PKPbc 10 39 24.9 +0.5
HGN Heimansgroeve 148.55 1 *e*PKiKP PKPdf 10 39 21.0 +0.2
CDAG Cicekdag 148.58 316 *i* P PKPbc 10 39 25.4 +0.9
KOZT Kozan 148.65 312 *e*P PKPdf 10 39 21.5 +0.5
PRU Pruhonice 148.67 350 *e*PKPbc PKPbc 10 39 25.4 +0.6
PRU *ep*PKP pPKPdf 10 39 35.6 +3.8
PRU AMS AMS 11 51 20.0
comp=Z,300nm,19.5s
WERN Wernitzgruen 148.68 353 *e*PKPbc PKPbc 10 39 25.6 +0.8
MEM Membach 148.70 1 PKPbc PKPbc 10 39 26.7 +1.9
MEM APKPbc 10 39 36.9
ELDT Eldivan 148.71 318 *i* P PKPbc 10 39 26.5 +1.6
NKC Novy Kostel 148.72 353 *e*PKPbc PKPbc 10 39 25.7 +0.8
SAFT Safranbolu 148.73 320 *e*P PKPbc 10 39 26.1 +1.2
COBT Iskenderun 148.77 310 *i* P PKPbc 10 39 26.7 +1.7
CEYT Ceyhan 148.92 311 *e*P PKPbc 10 39 25.7 +0.3
TIRR Tirgusor 148.93 329⇑ *i*P PKPbc 10 39 26.1 +0.7
VRAC Vranov 148.94 347⇓ *i*P PKPdf 10 39 11.8 -10
HARR Harsova 148.99 330⇑ *i*P PKPbc 10 39 27.3 +1.7
BR131 Keskin Array S 149.00 317 *e*PKPdf PKPdf 10 39 21.7 +0.2
BR131 *e*PKPbc PKPbc 10 39 26.8 +1.2
BRTR Keskin Array B 149.00 317 PKP PKPdf 10 39 21.6 +0.1
comp=Z,7.4nm,1.2s,baz=203,slow=2.5,SNR=6.1
BRTR PKPbc PKPbc 10 39 26.1 +0.5
comp=Z,12nm,0.9s,baz=134,slow=3.6,SNR=58
BRTR Keskin Array B 149.00 317 PKP2 PKPbc 10 39 26.2 +0.6
BRTR pmax pmax
comp=Z,12nm,0.9s
MANZ Manzenberg 149.01 353 *e*PKPbc PKPbc 10 39 26.4 +0.8
TNS Taunus Mts 149.06 358 *e*PKPbc PKPbc 10 39 25.9 +0.2
MBAR Mbarara 149.12 233 *i* PKIKP PKPbc 10 39 26.9 +1.0
KAMT Kaman 149.15 316 *e*P PKPbc 10 39 26.8 +0.8
TREC Trest 149.17 349 *e*PKPbc PKPbc 10 39 26.7 +0.7
TREC *ep*PKP pPKPdf 10 39 37.6 +5.0
TREC AMS AMS 11 50 50.0
comp=Z,400nm,16.8s
VYHS Vyhne 149.17 344 *e*PKP PKPbc 10 39 26.8 +0.8
DOU Dourbes 149.18 2 PKPbc PKPbc 10 39 26.3 +0.2
DOU PKPab PKPab 10 39 29.9 -0.6
DOU E 10 44.0
GIVF Givet 149.19 2 *e*PKP1 PKPbc 10 39 26.1 0.0
BAIF Baives 149.20 3 *e*PKP1 PKPbc 10 39 26.0 -0.1
ROTZ Rotzenmuhle 149.21 353 *e*PKPbc PKPbc 10 39 26.7 +0.6
MLR Muntele Rosu 149.28 333⇓ *i*P PKPbc 10 39 27.5 +1.2
MLR Muntele Rosu 149.28 333 P PKPbc 10 39 27.3 +1.0
KARA Karaisali 149.30 312 *e*P PKPbc 10 39 26.7 +0.3
GRF Grafenberg Arr 149.39 354 *e*PKPbc PKPbc 10 39 27.4 +0.8
PSZ Piszkesteto 149.40 342⇑ *ep*PKP/F PKPbc 10 39 27.1 +0.5
PSZ Piszkesteto 149.40 342⇓ *i*P PKPbc 10 39 27.5 +0.9
PSZ Piszkesteto 149.40 342 *e*PKPdf PKPdf 10 39 21.6 -0.6
PSZ *e*PKPbc PKPbc 10 39 27.1 +0.5
PSZ *e*PKPab PKPab 10 39 31.2 -0.2
ANTO Ankara 149.46 318 *e*P PKPbc 10 39 27.5 +0.7
ANTO Ankara 149.46 318⇑ *i*P PKPbc 10 39 28.8 +2.0
ANTO Ankara 149.46 318 *e*PKPdf PKPdf 10 39 21.8 -0.5
ANTO *e*PKPbc PKPbc 10 39 28.3 +1.5
ANTO *e*PKPab PKPab 10 39 30.9 -0.8
DRGR 149.49 338⇓ *i*P PKPbc 10 39 27.7 +0.9
DRGR 149.49 338 P PKPbc 10 39 27.7 +0.9
SGKT Sivrigoynuk 149.51 320 *i* P PKPbc 10 39 27.6 +0.8
KHC Kasperske Hory 149.65 351 *e*PKPbc PKPbc 10 39 27.5 +0.3
KHC *ep*PKP pPKPdf 10 39 39.5 +6.1
KHC AMS AMS 11 49 50.0
comp=Z,400nm,19.3s
WLF Walferdange 149.65 0 *e*PKPbc PKPbc 10 39 28.3 +1.1
WLF Walferdange 149.65 0 PKPbc PKPbc 10 39 28.4 +1.1
WLF APKPbc 10 39 38.7
WLF E 10 39 45.7
WLF Walferdange 149.65 0 *e*PKPdf PKPdf 10 39 22.1 -0.5
WLF *e*PKPbc PKPbc 10 39 28.2 +1.0
VOIR 149.71 334⇑ *i*P PKPbc 10 39 29.4 +2.0
WET Wettzell 149.74 352 *e*PKPbc PKPbc 10 39 28.0 +0.6
MERS Mersin 149.86 311 *e*P PKPbc 10 39 27.8 0.0
ZST Bratislava 149.87 346 *e*PKP PKPdf 10 39 23.3 +0.4
GEC2 GERESS Array S 149.91 351 *e*PKPbc PKPbc 10 39 28.0 +0.1
GEC2 GERESS Array S 149.91 351 *e*PKPdf PKPdf 10 39 23.4 +0.5
GEC2 *e*PKPbc PKPbc 10 39 28.5 +0.6
GERES GERESS Array B 149.91 351 PKP PKPdf 10 39 21.6 -1.4
comp=Z,0.2nm,0.2s,baz=328,slow=17,SNR=3.0
GERES PKPbc PKPbc 10 39 28.3 +0.4
comp=Z,7.3nm,1.0s,baz=42,slow=2.2,SNR=28
FLN La Foliniere 150.02 9 *e*PKP1 PKPbc 10 39 27.6 -0.5
FLN *e*R
comp=Z,381nm,19.5s
FLN La Foliniere 150.02 9 *e*PKP PKPbc 10 39 27.6 -0.5
FLN *e* LR LR
comp=Z,380nm,19.5s,MS5.2
HENT Hendek 150.05 321 *i* P PKPbc 10 39 29.2 +1.0
LDF La Druitiere 150.23 9 *e*PKP1 PKPbc 10 39 28.6 0.0
MEST Erdemli 150.26 311 *i* P PKPbc 10 39 29.3 +0.6
GRR Gorron 150.32 10 *e*PKP1 PKPbc 10 39 28.8 0.0
LANF Langenberg 150.32 358 PKP PKPbc 10 39 29.8 +1.0
QUIF Quistinic 150.33 13 *e*PKP1 PKPbc 10 39 28.3 -0.6
comp=Z,108nm,1.2s
CONA Conrad Observa 150.40 347⇑ *i*PKPdf PKPdf 10 39 23.5 -0.3
comp=Z,114nm,1.6s
STU Stuttgart 150.47 356 *e*PKPbc PKPbc 10 39 29.6 +0.4
KIZT Kizilcal 150.60 317 *e*P PKPbc 10 39 30.4 +0.9
KDHN Kadinhani 150.65 316 *i* P PKPbc 10 39 29.9 +0.3
IKL Isikli 150.75 311 *e*P PKPbc 10 39 29.9 +0.1
MEZF Maizieres J'vi 150.79 2 *e*PKP1 PKPbc 10 39 30.1 +0.1
comp=Z,68nm,1.1s
KONT Konya--Tatoy 150.80 315 *e*P PKPbc 10 39 29.2 -0.8
ESKT Eskisehir 150.88 319 *e*P PKPbc 10 39 31.0 +0.8
ESKT Eskisehir 150.88 319 *i* P PKPbc 10 39 31.3 +1.1
BZS Buzias 150.89 338⇓ *i*P PKPbc 10 39 31.0 +0.8
WLS Welschbruch 150.90 359 PKP PKPbc 10 39 30.8 +0.6
CDF Champ du Feu 150.90 359 *e*PKP1 PKPbc 10 39 30.3 +0.1
comp=Z,63nm,1.1s
BORA Eskisehir 150.91 320 *i* P PKPbc 10 39 30.9 +0.7
BFO Black Forest 150.95 358 *e*PKPbc PKPbc 10 39 30.3 0.0
BFO Black Forest 150.95 358 *e*PKPbc PKPbc 10 39 30.4 0.0
ADVT Abdulvahap 150.99 322 *e*P PKPbc 10 39 30.5 +0.1
THEF They Montfort 151.09 1 PKP PKPbc 10 39 31.3 +0.6
ECH Echery 151.10 359 PKP PKPbc 10 39 33.2 +2.5
ERMK Ermenek 151.10 312 *i* P PKPbc 10 39 31.7 +1.0
YLV Yalova 151.11 322 *e*P PKPbc 10 39 30.7 0.0
ARSA Arzberg 151.12 347⇑ *i*P PKPbc 10 39 30.8 +0.1
comp=Z,137nm,2.8s
ELBA Catalca 151.26 324 *i* P PKPbc 10 39 31.0 -0.1
GEMT Gemlik 151.30 322 *e*P PKPbc 10 39 31.3 +0.1
HAU Haudompre 151.31 0 *e*PKP1 PKPbc 10 39 31.0 -0.2
comp=Z,54nm,1.1s
HAU *e*R
comp=Z,297nm,19.5s
PKSM Moragy 151.31 342⇑ *i*P PKPbc 10 39 31.5 +0.3
HINF Hinteralfeld 151.50 360 *e*PKP1 PKPbc 10 39 31.6 0.0
EDRB Edirne 151.67 327 *e*P PKPbc 10 39 32.3 +0.3
KBA Koelnbreinsper 151.69 350⇑ *i*P PKPbc 10 39 32.1 +0.1
comp=Z,79nm,2.7s
MOTA Moosalm 151.73 353⇑ *i*P PKPbc 10 39 32.2 0.0
comp=Z,32nm,1.1s
WTTA Wattenberg 151.75 353⇑ *i*P PKPbc 10 39 32.2 0.0
comp=Z,67nm,2.0s
PERS Pernice 151.79 347 *e*PKPdf PKPbc 10 39 31.9 -0.4
PERS *i* PKPbc pPKPbc 10 39 44.1 +1.1
SQTA Sankt Quirin 151.84 353⇑ *i*P PKPbc 10 39 32.6 +0.2
comp=Z,29nm,1.3s
DAVA Damuels 151.90 355⇑ *i*P PKPbc 10 39 32.7 +0.2
comp=Z,44nm,1.5s
LOR Lormes 151.97 4 *e*PKP1 PKPbc 10 39 32.6 -0.1
comp=Z,50nm,1.1s
LOR *e*R
comp=Z,523nm,18.8s
LOMF Lomont 151.97 360 PKP PKPbc 10 39 34.0 +1.3
GDZ Gediz 151.99 320 *i* P PKPbc 10 39 33.0 +0.3
SSF Saint Saulge 152.15 4 *e*PKP1 PKPbc 10 39 33.1 0.0
comp=Z,42nm,1.0s
EIL Elat 152.19 297 *e*PKPdf PKPdf 10 39 28.0 +1.5
EIL *e*PKPbc PKPbc 10 39 34.5 +1.3
AVF Avril sur Loir 152.41 5 *e*PKP1 PKPbc 10 39 33.6 -0.1
comp=Z,25nm,1.1s
SMF Signal de Mont 152.59 4 *e*PKP1 PKPbc 10 39 34.3 +0.2
BGF Bois d'Agland 152.59 6 *e*PKP1 PKPbc 10 39 34.1 0.0
GRUS Gruza 152.70 337⇑ *i*PKP PKPbc 10 39 33.9 -0.4
CABF La Chapelle 152.71 1 *e*PKP1 PKPbc 10 39 34.8 +0.5
comp=Z,41nm,1.0s
DIVS Divcibare 152.78 338⇑ *i*PKP PKPbc 10 39 35.1 +0.6
ENEZ Enez 152.78 326 *e*P PKPab 10 39 43.6 -1.8
TCF Toulx Ste Croi 152.80 7 *e*PKP1 PKPbc 10 39 34.3 -0.2
comp=Z,49nm,1.3s
BOJS Bojanci 152.84 346 *e*PKPdf PKPbc 10 39 35.0 +0.3
BOJS *e*PKPbc PKPab 10 39 46.1 +0.4
DNZL Cakiroluk 153.11 318 *i* P PKPbc 10 39 35.4 +0.1
AKHS Akhisar 153.12 321 *i* P PKPbc 10 39 35.5 +0.3
PLDF La Plantade 153.24 5 PKP PKPbc 10 39 36.4 +0.9
PYM Petit Puy Mans 153.41 6 PKP PKPbc 10 39 35.5 -0.4
LPL La Plagne 153.80 360 *e*PKP1 PKPbc 10 39 37.4 +0.7
LPG La Plagne 153.82 360 *e*PKP1 PKPbc 10 39 37.3 +0.5
ORIF Oris-en-Rattie 154.40 1 *e*PKP1 PKPbc 10 39 38.5 +0.5
comp=Z,14nm,1.0s
ORIF *e*R
comp=Z,378nm,19.8s
ESDC Sonseca Array 157.72 22 PKPab PKPab 10 40 06.2 -0.4
comp=Z,0.2nm,0.3s,baz=284,slow=1.7,SNR=5.8
LIC Lamto 162.85 138 *e*PKIKP PKPdf 10 39 39.0 -0.7
comp=Z,52nm,1.4s
TORD Torodi Ar. Bea 172.36 142 PKP PKPdf 10 39 45.4 -1.1
comp=Z,3.2nm,1.3s,baz=204,slow=3.0,SNR=5.1
TORD PKPab PKPab 10 41 10.3 -0.6
comp=Z,2.7nm,1.1s,baz=229,slow=3.9,SNR=4.3

ISCJB ***01*** *10:30:00.6±1.0, 4271N±006°14601E±008, h68km±7km, mb4.2/7, Error ellipse: s-maj=12.6km s-min=7.1km az=100.8*
IDC ***01*** *10:30:00.9±7.5, 4253N±14608E, h64km±47km, mb4.0/5, mb1 4.0/6, mb1mx3.6/19, mbtmp4.3/6, ML3.8/1, Error ellipse: s-maj=71.3km s-min=31.7km az=172.0*
NEIC ***01*** *10:30:01.2, 4269N±14594E, h70km, mb4.5/1, After JMA.*
JMA ***01*** *10:30:01.2±0.1, 4269N±14594E, h70km±2km, M4.0*
JMA Felt I J1.
MOS ***01*** *10:30:03.7±1.0, 4301N±14594E, h84km, mb4.6/1, Error ellipse: s-maj=30.1km s-min=14.3km az=114.0*

ISC 01 10:30:01.6±1.1, 4271N±006°14599E±008, h62km±7km, n24, σ0=80/36, mb4.3/7, 1C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.68**	**344**	P	**Pn**	**10 30 16.1**	**+0.4**
NEM2				*e*S	**Sn**	**10 30 26.8**	**+0.8**
JAK	**Akkeshi**	**0.99**	**287**	P	**Pn**	**10 30 19.5**	**-0.1**
JAK				*e*S	**Sn**	**10 30 33.0**	**0.0**
JNK	**Nakash**	**1.28**	**314**	P	**Pn**	**10 30 22.9**	**-0.4**
JNK				*e*S	**Sn**	**10 30 38.6**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**1.32**	**356**	⇑ *i*PN	**Pn**	**10 30 23.2**	**-0.8**
YUK				*i* S	**Sn**	**10 30 39.5**	**-1.2**
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=N,180nm,0.4s						
YUK				pmax	pmax		
	comp=E,180nm,0.3s						
YUK				smax			
	comp=N,5μm,1.0s						
YUK				smax			
	comp=E,6μm,0.6s						
YUK				smax			
	comp=N,5μm,0.5s						
YUK				smax			

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,3µm,0.5s						
JRA	**Rausu**	**1.38**	**333**	P	**Pn**	**10 30 24.8**	**+0.1**
JRA				*e*S	**Sn**	**10 30 42.0**	**0.0**
JOB	**Onbets**	**1.60**	**278**	P	**Pn**	**10 30 27.3**	**-0.4**
JOB				*e*S	**Sn**	**10 30 46.7**	**-0.6**
JAR	**Ashorobuto**	**1.73**	**290**	P	**Pn**	**10 30 29.3**	**-0.2**
JAR				*e*S	**Sn**	**10 30 50.3**	**-0.2**
JCH	**Churui**	**1.94**	**268**	P	**Pn**	**10 30 32.1**	**-0.2**
JCH				*e*S	**Sn**	**10 30 55.1**	**-0.5**
JTKR	**Abashiri--Toko**	**1.97**	**310**	P	**Pn**	**10 30 33.2**	**+0.5**
JTKR				*e*S	**Sn**	**10 30 57.1**	**+0.7**
JEM	**Erimo**	**2.21**	**253**	P	**Pn**	**10 30 36.1**	**+0.1**
JEM				*e*S	**Sn**	**10 31 02.2**	**0.0**
JMP	**Maruseppu**	**2.31**	**305**	P	**Pn**	**10 30 37.8**	**+0.4**
JMP				*e*S	**Sn**	**10 31 05.2**	**+0.5**
ASAJ	**Asahikawa**	**2.84**	**301**	P	**Pn**	**10 30 45.9**	**+1.3**
	comp=E,10.0nm,0.3s,baz=136,slow=11,SNR=43						
ASAJ				S	**Sn**	**10 31 21.2**	**+3.6**
	comp=E,13nm,0.3s,baz=74,slow=30,SNR=9.3						
YSS	**Yuzh-Sakhalins**	**4.83**	**333**	*e*Pn	**Pn**	**10 31 12.5**	**+0.8**
SONM	**Songino Array**	**28.11**	**294**	P	**P**	**10 35 47.5**	**0.0**
	comp=E,5.8nm,0.7s,mb4.3,baz=97,slow=7.8,SNR=28						
MKAR	**Makanchi Array**	**44.32**	**298**	P	**P**	**10 38 06.0**	**+0.5**
	comp=E,2.3nm,0.6s,mb4.1,baz=80,slow=8.7,SNR=15						
MKAR	**Makanchi Array**	**44.32**	**298**	P	**P**	**10 38 06.0**	**+0.5**
KURK	**Kurchatov**	**45.41**	**305**	*i* P	**P**	**10 38 15.6**	**+1.5**
INK	**Inuvik**	**47.73**	**30**	P	**P**	**10 38 31.7**	**-0.5**
	comp=E,1.1nm,0.5s,mb4.1,baz=252,slow=3.2,SNR=5.6						
JOF	**Joensuu**	**62.61**	**332**	*e*p	**P**	**10 40 17.7**	**-1.7**
	comp=E,1.4nm,0.4s,mb4.4						
NEW	**Newport**	**63.65**	**48**	*e*P	**P**	**10 40 27.5**	**+1.2**
NEW				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NEW	**Newport**	**63.65**	**48**	*e*P	**P**	**10 40 27.5**	**+1.2**
	comp=Z,7.0nm,1.3s,mb4.5						
FINES	**FINESS Array B**	**65.41**	**333**	P	**P**	**10 40 36.4**	**-1.4**
	comp=Z,1.6nm,0.4s,mb4.4,baz=49,slow=6.3,SNR=13						
NB2	**NORSAR Subarra**	**70.26**	**338**	P	**P**	**10 41 06.9**	**-1.3**
	comp=Z,1.9nm,0.5s,mb4.3,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**70.26**	**338**	P	**P**	**10 41 09.3**	**+1.1**
	comp=Z,1.8nm,0.6s,mb4.2,baz=34,slow=6.2,SNR=9.7						

IGQ 01 10:45:41.4,409S×8044W,h27^{km}±10^{km},Mb4.6,Ms4.4,2C, Error ellipse: s-maj=11.6km s-min=1.5km az=0.7, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HCA		**1.79**	**146**	⇑P	Pn	10 46 11.3	+0.9
HCA				S	Sn	10 46 31.9	-0.4
PT18	**Porculla**	**2.00**	**152**	⇑P	Pn	10 46 15.7	+2.3
PT18				S	Sn	10 46 38.8	+1.3
CHP8	**Chiclayo**	**2.72**	**168**	P	Pn	10 46 25.8	+2.6
IGUA	**Igualata**	**3.15**	**35**	P	Pn	10 46 30.4	+1.2
IGUA				S	Sn	10 47 06.5	+0.7
CUSU	**Cusua**	**3.28**	**37**	P	Pn	10 46 33.4	+2.5
CUSU				S	Sn	10 47 11.0	+2.0
RETU	**Refugio**	**3.29**	**37**	P	Pn	10 46 33.4	+2.2
RETU				S	Sn	10 47 11.5	+2.2
JUIV	**Juive**	**3.30**	**37**	P	Pn	10 46 33.8	+2.5
ULBA	**Ulba**	**3.32**	**38**	P	Pn	10 46 33.2	+1.8
ULBA				S	Sn	10 47 11.0	+1.1
RUN5	**Runtun**	**3.33**	**37**	P	Pn	10 46 33.7	+2.0
RUN5				S	Sn	10 47 11.4	+1.1
PP16	**Cajamarca**	**3.58**	**148**	P	Pn	10 46 38.0	+3.0
PP16				S	Sn	10 47 18.0	+1.6
CAMI	**Rancho Maria**	**3.90**	**30**	P	Pn	10 46 44.9	+5.3
TAMB	**Tambo**	**3.96**	**32**	P	Pn	10 46 43.2	+3.0
TAMB				S	Sn	10 47 36.7	+11
VC1	**Cotopaxi 1**	**3.98**	**31**	P	Pn	10 46 45.4	+4.8
JUA2	**San Juan 2**	**4.26**	**26**	P	Pn	10 46 49.4	+4.9
ANTI	**Antisana**	**4.27**	**32**	P	Pn	10 46 48.3	+3.7
TERV	**Terraza Guagua**	**4.30**	**25**	P	Pn	10 46 49.6	+4.6
GGP	**Refugio Guagua**	**4.30**	**25**	P	Pn	10 46 48.7	+3.6
PINO	**Pino**	**4.31**	**25**	P	Pn	10 46 48.0	+2.8
YANA	**Yana**	**4.37**	**25**	P	Pn	10 46 48.5	+2.6
CAYA	**Cayambe**	**4.80**	**31**	P	Pn	10 46 57.6	+5.7
LAV3	**Lava3-Reventad**	**4.86**	**35**	P	Pn	10 47 03.9	+11
COTA	**Cotacachi**	**4.87**	**26**	P	Pn	10 46 58.5	+5.7
CONE	**Cono NE Rev Vo**	**4.87**	**35**	P	Pn	10 47 04.7	+12
CONE				S	Sn	10 48 02.0	+14

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*IDC **01** 10:47:57.7±1.5,6299N×2831E,h0^{km},mb1 3.0/3, mb1mx2.9/20,mbtmp2.9/3,ML2.5/3,Error ellipse: s-maj=18.8km s-min=7.1km az=109.0*
*ISCJB **01** 10:47:58.5±1.5,6327N±007×272E±03,h0^{km},Error ellipse: s-maj=19.5km s-min=8.2km az=45.8*
*HEL **01** 10:48:01.5,6299N×2771E,h0^{km},ML1.4(FIA0), Explosion*
ISC 01 10:47:59.4±1.6**,6318N**±008×**275E**±03**,h0**^{km}**,n5,**σ**0**^{s}**47**/7**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIA0	**FINESS Array S**	**1.87**	**202**	PN	**Pn**	**10 48 32.4**	**-0.3**
FIA0				LG		10 48 55.5	
FIA0				RG		10 49 04.7	
FIA0				RG		10 49 11.6	
FINES	**FINESS Array B**	**1.87**	**202**	Pn	**Pn**	**10 48 32.0**	**-0.7**
	0.8nm,0.3s,baz=29,slow=17,SNR=31						
FINES				Lg		10 48 57.0	
	1.2nm,0.3s,baz=30,slow=31,SNR=22						
ARCES	**ARCESS Array B**	**6.43**	**354**	Pn	**Pn**	**10 49 35.7**	**+0.3**
	0.1nm,0.3s,baz=167,slow=14,SNR=7.4						
ARCES				Sn	**Sn**	**10 50 49.2**	**-0.4**
	0.1nm,0.3s,baz=174,slow=26,SNR=4.8						
HFS	**Hagfors**	**7.26**	**251**	Pn	**Pn**	**10 49 47.4**	**+0.7**
	0.1nm,0.3s,baz=67,slow=14,SNR=3.6						
HFS				Sn	**Sn**	**10 51 09.3**	**-0.5**
	0.4nm,0.3s,baz=93,slow=28,SNR=4.5						
HFS				Lg		10 51 52.4	
	0.8nm,0.3s,baz=75,slow=29,SNR=6.0						
NOA	**NORSAR Array B**	**7.94**	**262**	Pn	**Pn**	**10 49 56.4**	**+0.3**
	0.1nm,0.3s,baz=72,slow=13,SNR=2.2						

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*ISCJB **01** 10:56:36.8±1.7,3408N±005×243E±0.1,h11^{km}±15^{km}, Error ellipse: s-maj=15.0km s-min=7.4km az=148.6*
*CSEM **01** 10:56:36.6±0.1,3405N×2422E,h8^{km},MD3.6,Error ellipse: s-maj=4.2km s-min=1.9km az=72.0*
*NEIC **01** 10:56:40.6±8.3,3434N×2425E,h20^{km}±17^{km}, MD3.6(ATH),Error ellipse: s-maj=90.8km s-min=11.0km az=201.0*
*ATH **01** 10:56:40.5,3438N×2438E,h24^{km}±5^{km},MD3.6/7*
*HLW **01** 10:56:42.6,3421N×2466E,h33^{km},Mb3.6*
ISC 01 10:56:38.5±1.8**,3419N**±005×**244E**±01**,h8**^{km}±16^{km}**,n22,** σ**0**^{s}**83**/25**,1C-3D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.69**	**342**	*e*PN	**Pg**	**10 56 51.4**	**-0.4**
VAM	**Vamos**	**1.22**	**354**	*e*PN	**Pn**	**10 57 00.4**	**-1.5**
XRY	**Khrisi**	**1.31**	**58**	*e*PN	**Pn**	**10 57 03.3**	**+0.3**
NPS	**Neapolis**	**1.50**	**44**	*e*PN	**Pn**	**10 57 06.3**	**+0.7**
KYTH	**Kithira**	**2.35**	**333**	*e*PB	**Pn**	**10 57 18.5**	**+1.1**
KARP	**Karpathos**	**2.68**	**59**	*e*PN	**Pn**	**10 57 23.0**	**+1.1**
VLI	**Veliai**	**2.78**	**336**	*e*PN	**Pn**	**10 57 22.5**	**-0.8**
SLUM		**2.78**	**165**	P	**Pn**	**10 57 24.5**	**+1.1**
ARG	**Arkhangelos**	**3.70**	**56**	*e*PN	**Pn**	**10 57 36.2**	**+0.3**
HMAT	**Matruh**	**3.86**	**142**	P	**Pn**	**10 57 37.9**	**-0.3**
HMAT				S	**Sn**	**10 58 17.9**	**-5.6**
HMAT	**Matruh**	**3.86**	**142**	P	**Pn**	**10 57 37.8**	**-0.3**
HMAT				S	**Sn**	**10 58 18.0**	**-5.6**
DABA	**Dabaa**	**4.59**	**133**	⇓P	**Pn**	**10 57 47.7**	**-0.5**
SWA1		**5.04**	**166**	P	**Pn**	**10 57 55.6**	**+1.1**
SWA1				S	**Sn**	**10 58 49.2**	**-3.6**
HBRG	**Burj al ‘Arab**	**5.88**	**126**	P	**Pn**	**10 58 04.9**	**-1.0**
AWBH		**7.03**	**145**	P	**Pn**	**10 58 21.8**	**+0.2**
FYM	**Al Fayyum**	**7.24**	**126**	P	**Pn**	**10 58 23.6**	**-0.9**
AYT	**Al ‘Ayyat**	**7.31**	**126**	P	**Pn**	**10 58 25.2**	**-0.3**
HSAF	**As Saff**	**7.63**	**125**	⇓P	**Pn**	**10 58 29.8**	**-0.2**
GLL	**Jalalah**	**7.76**	**124**	⇓P	**Pn**	**10 58 31.2**	**-0.5**
HFRF	**Wahat Farafira**	**7.80**	**153**	⇑P	**Pn**	**10 58 32.5**	**+0.2**
HDK1	**Dakhla**	**9.66**	**152**	P	**Pn**	**10 58 58.5**	**+0.7**
GTR	**Jabal at Tayr**	**10.19**	**146**	P	**Pn**	**10 59 05.4**	**+0.4**

IDC 01 11:18:22.6±2.0**,539S**×**15288E,h0**^{km}**,mb3.6**/2**,mb1 3.7**/2**, mb1mx3.4**/10**,mbtmp3.6**/2**,Error ellipse: s-maj=90.2km s-min=17.5km az=112.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**25.78**	**223**	P	P	11 23 55.5	+0.4
	0.4nm,0.4s,baz=51,slow=9.0,SNR=7.7						
SONM	**Songino Array**	**66.86**	**328**	P	P	11 29 16.8	+0.4
	0.6nm,0.7s,baz=134,slow=5.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**150.56**	**287**	PKPbc	PKPbc	11 38 17.3	+0.9
	0.4nm,0.4s,baz=84,slow=2.7,SNR=11						

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*NIED **01** 11:36:00,4240N×144.10E,h32^{km},Mw3.5 Best double couple: $M_0$1.71000×10^{14} NP1:ϕ_s280.00000°,δ67.00000°, λ-129.00000°. NP2:ϕ_s164.00000°,δ44.00000°, λ-34.00000°.*
JMA 01 11:36:34.5±0.1**,4239N**×**14409E,h63**^{km}±2^{km}**,M3.5,4C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOB	**Onbets**	**0.55**	**340**	⇓P	Pn	11 36 47.3	+0.1
JOB				*e*S	Sn	11 36 56.5	+0.1
JCH	**Churui**	**0.58**	**293**	⇓P	Pn	11 36 47.7	+0.1
JCH				*e*S	Sn	11 36 56.4	-0.7
JAK	**Akkeshi**	**0.75**	**36**	⇑P	Pn	11 36 49.3	-0.2
JAK				*e*S	Sn	11 37 00.2	-0.4
JEM	**Erimo**	**0.79**	**242**	P	Pn	11 36 50.0	0.0
JAR	**Ashorobuto**	**0.94**	**346**	⇓P	Pn	11 36 52.2	+0.4
JAR				*e*S	Sn	11 37 04.8	+0.1
JNBK	**Urakawa-nobuka**	**1.00**	**264**	P	Pn	11 36 52.6	0.0
JNK	**Nakash**	**1.28**	**21**	⇑P	Pn	11 36 56.2	-0.1
JNK				*e*S	Sn	11 37 12.4	-0.2
JBT2	**Biratori 2**	**1.33**	**288**	P	Pn	11 36 56.8	-0.2
JFR	**Furan**	**1.35**	**306**	P	Pn	11 36 57.9	+0.7
JFR				*e*S	Sn	11 37 14.7	+0.5
NEM2	**Nemuro 2**	**1.56**	**51**	P	Pn	11 36 59.5	-0.5
NEM2				*e*S	Sn	11 37 18.2	-1.0
JTKR	**Abashiri--Toko**	**1.59**	**355**	⇑P	Pn	11 37 01.9	+1.5
JTKR				*e*S	Sn	11 37 21.8	+1.9
JMP	**Maruseppu**	**1.70**	**342**	⇑P	Pn	11 37 03.1	+1.1
JMP				*e*S	Sn	11 37 23.7	+1.0
JRA	**Rausu**	**1.72**	**26**	P	Pn	11 37 02.8	+0.6
JRA				*e*S	Sn	11 37 24.0	+0.8
JAB	**Ashibetsu**	**1.77**	**310**	P	Pn	11 37 04.8	+2.0
JKK2	**Kamakawa 2**	**1.78**	**327**	P	Pn	11 37 04.8	+1.8

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*IDC **01** 12:01:41.8±0.7,692S×1281W,h0^{km},mb4.2/17, mb1 4.3/18,mb1mx4.2/27,mbtmp4.3/18,ML3.5/1,MS4.4/21, Ms1 4.4/21,ms1mx4.3/24,Error ellipse: s-maj=21.3km s-min=14.3km az=146.0*
*MOS **01** 12:01:41.7±0.8,699S×1280W,h10^{km},mb5.1/33, MS4.6/12,Error ellipse: s-maj=16.7km s-min=5.2km az=70.5*
*ISCJB **01** 12:01:41.7±0.3,700S±006×1282W±007,h10^{km},mb4.8/60, MS4.5/27,Error ellipse: s-maj=11.7km s-min=6.9km az=75.3*
*HRVD **01** 12:01:43.4±0.2,692S×1279W,h12^{km},MW5.0/81, Centroid moment Tensor Solution. LP body waves: s37,c47;Mantle waves: s81,c130; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.88±.10; $M_{\theta\theta}$-1.61±.10; $M_{\phi\phi}$2.49±.10; $M_{r\theta}$1.10±.28; $M_{\theta\phi}$3.99±.08; $M_{\phi r}$-0.40±.30; Best double couple: $M_0$4.67700×10^{16} NP1:ϕ_s348.00000°,δ76.00000°,λ-169.00000°. NP2: ϕ_s255.00000°,δ79.00000°,λ-15.00000°. Principal axes: T 4.9350, Plg2.0000°, Azm302.0000°; N -0.5160, Plg72.0000°, Azm39.0000°; P -4.4190, Plg18.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 12:01:43.4±0.3,707S×1283W,h10^{km},mb5.0/34,MS4.6/6 Error ellipse: s-maj=11.3km s-min=6.3km az=128.0*
*SZGRF **01** 12:01:47.3,700S×1208W,h33^{km},mb5.1,MS4.6, Ascension Island region*
ISC 01 12:01:44.2±0.3**,700S**±006×**1272W**±006**,h10**^{km}**, (h21**^{km}±1.7^{km}**:pP-P),n180,**σ**0**^{s}**89**/174**,mb4.8**/60**,MS4.5**/27**, 5C-1D,Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASCN	**Ascension**	**1.87**	**240**	*e*Pn	**Pn**	**12 02 11.2**	**-5.0**
ASCN				*e*Sn	**Sn**	**12 02 41.0**	**+1.0**
LIC	**Lamto**	**15.21**	**30**	*e*P	**Pn**	**12 05 17.7**	**-1.3**
	146nm,1.1s						
LIC	**Lamto**	**15.21**	**30**	*e*P	**Pn**	**12 05 17.7**	**-1.3**
	73nm,1.1s						
DBIC	**Dimbokro**	**15.68**	**30**	Pn	**Pn**	**12 05 23.1**	**-2.1**
	0.2nm,0.3s,baz=190,slow=12,SNR=8.0						
DBIC				LR	LR	12 10 08.2	
	comp=Z,1µm,19.4s,baz=183,slow=32						
DBIC				T		12 19 21.2	
	0.2nm,0.3s,baz=162,slow=3.9,SNR=2.8						
DBIC	**Dimbokro**	**15.68**	**30**	Pn	**Pn**	**12 05 23.1**	**-2.1**
DBIC				LR	LR	12 10 08.2	
TOA0	**Torodi Ar. Sit**	**24.61**	**36**	*e*P	**P**	**12 07 03.3**	**-1.3**
TORD	**Torodi Ar. Bea**	**24.61**	**36**	P	**P**	**12 07 03.4**	**-1.2**
	14nm,0.9s,mb4.5,baz=225,slow=11,SNR=45						
TORD				LR	LR	12 15 39.1	
	comp=Z,1µm,18.1s,MS4.5,baz=205,slow=34						
TSUM	**Tsumeb**	**31.84**	**115**	P	**P**	**12 08 09.8**	**+0.6**
	1.7nm,0.8s,mb3.9,baz=252,slow=19,SNR=5.5						
TSUM				LR	LR	12 18 16.1	
	comp=Z,2µm,21.0s,MS4.7,baz=323,slow=31						
BDFB	**Brasilia**	**35.61**	**253**	P	**P**	**12 08 40.9**	**-1.0**
	6.3nm,0.8s,mb4.6,baz=46,slow=8.9,SNR=5.8						
BDFB				LR	LR	12 20 20.5	
	comp=Z,410nm,18.5s,MS4.2,baz=257,slow=32						
LSZ	**Lusaka**	**40.91**	**105**	P	**P**	**12 09 27.6**	**+1.0**
	3.2nm,0.8s,mb4.0,baz=279,slow=11,SNR=5.8						
BOSA	**Boshof**	**41.79**	**126**	P	**P**	**12 09 34.1**	**+0.3**
	2.9nm,0.9s,mb3.9,baz=335,slow=11,SNR=3.2						
BOSA				LR	LR	12 24 18.8	
	comp=Z,872nm,19.2s,MS4.7,baz=292,slow=32						
MBAR	**Mbarara**	**43.80**	**84**	*e*P	**P**	**12 09 51.5**	**+1.4**
CPUP	**Villa Florida**	**46.56**	**240**	LR	LR	12 25 49.9	
	comp=Z,358nm,20.7s,MS4.3,baz=62,slow=31						
ESDC	**Sonseca Array**	**47.14**	**9**	P	**P**	**12 10 15.7**	**-0.9**
	0.3nm,0.4s,mb3.6,baz=197,slow=7.8,SNR=4.6						
ESDC				LR	LR	12 29 45.5	
	comp=Z,317nm,19.6s,MS4.3,baz=205,slow=36						
KEST	**Kesra**	**47.30**	**25**	P	**P**	**12 10 17.5**	**-0.4**
	6.1nm,1.1s,mb4.4,baz=169,slow=4.0,SNR=9.5						
KEST				LR	LR	12 30 19.6	
	comp=Z,426nm,19.2s,MS4.4,baz=187,slow=36						
SIV	**San Ignacio**	**48.12**	**255**	P	**P**	**12 10 24.0**	**-0.2**
	2.4nm,0.8s,mb4.3,baz=106,slow=8.1,SNR=15						
KMBO	**Kilima Mbogo**	**50.16**	**86**	LR	LR	12 29 43.5	
	comp=Z,474nm,18.9s,MS4.5,baz=276,slow=34						
ETSF	**Etsaut**	**50.88**	**12**	*e*P	**P**	**12 10 45.4**	**+0.2**
	92nm,1.8s,mb5.1						
ETSF	**Etsaut**	**50.88**	**12**	*e*P	**P**	**12 10 45.4**	**+0.2**
ETSF				pmax	pmax		
	comp=Z,46nm,1.8s,mb5.1						
ETSF	**Etsaut**	**50.88**	**12**	*e*P	**P**	**12 10 45.4**	**+0.2**
	comp=Z,46nm,1.8s,mb5.1						
SJPF	**Ste Jean**	**50.96**	**11**	*e*P	**P**	**12 10 46.3**	**+0.5**
	comp=Z,22nm,0.9s,mb4.8						
SJPF	**Ste Jean**	**50.96**	**11**	*e*P	**P**	**12 10 46.3**	**+0.5**
SJPF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
SJPF	**Ste Jean**	**50.96**	**11**	*e*P	**P**	**12 10 46.3**	**+0.5**
	comp=Z,11nm,0.9s,mb4.8						
EPF	**Esparros**	**51.19**	**12**	*e*P	**P**	**12 10 47.8**	**+0.2**
MTLF	**Montolieu**	**51.91**	**14**	*e*P	**P**	**12 10 53.4**	**+0.5**
LASF	**Ste Croix**	**53.00**	**15**	*e*P	**P**	**12 11 01.5**	**+0.4**
	comp=Z,12nm,0.9s,mb4.5						
LMR	**La Mourre**	**53.05**	**18**	*e*P	**P**	**12 11 01.6**	**+0.2**
	comp=Z,90nm,1.5s,mb5.2						
LMR	**La Mourre**	**53.05**	**18**	*e*P	**P**	**12 11 01.6**	**+0.2**
LMR				pmax	pmax		
	comp=Z,45nm,1.5s,mb5.2						
LMR	**La Mourre**	**53.05**	**18**	*e*P	**P**	**12 11 01.6**	**+0.2**
	comp=Z,45nm,1.5s,mb5.2						
LFF	**La Frestale**	**53.10**	**12**	*e*P	**P**	**12 11 02.2**	**+0.4**
PGF	**Pioggiola**	**53.14**	**20**	*e*P	**P**	**12 11 02.0**	**-0.1**
	comp=Z,71nm,1.3s,mb5.1						
PGF	**Pioggiola**	**53.14**	**20**	*e*P	**P**	**12 11 02.0**	**-0.1**
PGF				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.1						
PGF	**Pioggiola**	**53.14**	**20**	*e*P	**P**	**12 11 02.0**	**-0.1**
	comp=Z,36nm,1.3s,mb5.1						
FRF	**La Foret Royal**	**53.30**	**17**	*e*P	**P**	**12 11 03.6**	**+0.3**
SMRF	**Simiane la Rot**	**53.37**	**16**	*e*P	**P**	**12 11 04.1**	**+0.3**
CAF	**Calviac**	**53.37**	**13**	*e*P	**P**	**12 11 04.2**	**+0.4**
	comp=Z,40nm,1.2s,mb4.9						
CAF	**Calviac**	**53.37**	**13**	*e*P	**P**	**12 11 04.2**	**+0.4**
CAF				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
CAF	**Calviac**	**53.37**	**13**	*e*P	**P**	**12 11 04.2**	**+0.4**
	comp=Z,20nm,1.2s,mb4.9						
RJF	**Les Rejaudoux**	**53.61**	**12**	*e*P	**P**	**12 11 06.2**	**+0.6**
RJF				*e*R			
	comp=Z,585nm,20.8s						
RJF	**Les Rejaudoux**	**53.61**	**12**	*e*P	**P**	**12 11 06.2**	**+0.6**
RJF				LR	LR		
	comp=Z,590nm,20.8s,MS4.6						
SBF	**Sospel**	**53.81**	**18**	*e*P	**P**	**12 11 07.5**	**+0.5**
VIVF	**Saint-Julien-l**	**53.94**	**15**	*e*P	**P**	**12 11 08.5**	**+0.5**
TRQA	**Tornquist**	**54.15**	**228**	*e*P	**P**	**12 11 08.7**	**-0.8**
	comp=Z,7.9nm,0.9s,mb4.6						
ORIF	**Oris-en-Rattie**	**54.32**	**16**	*e*P	**P**	**12 11 11.3**	**+0.6**
	comp=Z,17nm,0.9s,mb4.7						
ORIF				*e*R			
	comp=Z,1µm,17.0s						
ORIF	**Oris-en-Rattie**	**54.32**	**16**	*e*P	**P**	**12 11 11.3**	**+0.6**
ORIF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ORIF	**Oris-en-Rattie**	**54.32**	**16**	*e*P	**P**	**12 11 11.3**	**+0.6**
	comp=Z,8.5nm,0.9s,mb4.7						
MBDF	**Montbardon**	**54.40**	**17**	*e*P	**P**	**12 11 12.4**	**+1.1**
	comp=Z,27nm,0.9s,mb4.9						
MBDF	**Montbardon**	**54.40**	**17**	*e*P	**P**	**12 11 12.4**	**+1.1**
MBDF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
MBDF	**Montbardon**	**54.40**	**17**	*e*P	**P**	**12 11 12.4**	**+1.1**
	comp=Z,14nm,0.9s,mb4.9						
MFF	**Saint Martin d**	**54.52**	**11**	*e*P	**P**	**12 11 12.9**	**+0.7**
TCF	**Toulx Ste Croi**	**54.70**	**13**	*e*P	**P**	**12 11 13.9**	**+0.4**
	comp=Z,14nm,0.9s,mb4.7						
TCF	**Toulx Ste Croi**	**54.70**	**13**	*e*P	**P**	**12 11 13.9**	**+0.4**
TCF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
TCF	**Toulx Ste Croi**	**54.70**	**13**	*e*P	**P**	**12 11 13.9**	**+0.4**
	comp=Z,7.3nm,0.9s,mb4.7						
LPAZ	**La Paz**	**54.91**	**255**	P	**P**	**12 11 15.0**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.8,baz=117,slow=2.3,SNR=3.4						
LPAZ	**La Paz**	**54.91**	**255**	P	**P**	**12 11 15.0**	**0.0**
LPAZ				*e*P		12 11 15.3	
LPG	**La Plagne**	**55.10**	**17**	*e*P	**P**	**12 11 17.6**	**+1.2**
LPL	**La Plagne**	**55.11**	**17**	*e*P	**P**	**12 11 17.5**	**+1.0**
	comp=Z,18nm,0.8s,mb4.8						
LPL	**La Plagne**	**55.11**	**17**	*e*P	**P**	**12 11 17.5**	**+1.0**
LPL				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LPL	**La Plagne**	**55.11**	**17**	*e*P	**P**	**12 11 17.5**	**+1.0**
	comp=Z,8.9nm,0.8s,mb4.8						
QUIF	**Quistinic**	**55.32**	**8**	*e*P	**P**	**12 11 18.7**	**+0.7**
	comp=Z,222nm,1.7s,mb5.6						
QUIF	**Quistinic**	**55.32**	**8**	*e*P	**P**	**12 11 18.7**	**+0.7**
QUIF				pmax	pmax		
	comp=Z,111nm,1.7s,mb5.6						
QUIF	**Quistinic**	**55.32**	**8**	*e*P	**P**	**12 11 18.7**	**+0.7**
	comp=Z,111nm,1.7s,mb5.6						
SMF	**Signal de Mont**	**55.40**	**14**	*e*P	**P**	**12 11 19.3**	**+0.7**
AVF	**Avril sur Loir**	**55.43**	**13**	*e*P	**P**	**12 11 18.8**	**0.0**
	comp=Z,16nm,1.0s,mb4.7						
AVF	**Avril sur Loir**	**55.43**	**13**	*e*P	**P**	**12 11 18.8**	**0.0**
AVF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
AVF	**Avril sur Loir**	**55.43**	**13**	*e*P	**P**	**12 11 18.8**	**0.0**
	comp=Z,7.8nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**55.72**	**13**	*e*P	**P**	**12 11 21.7**	**+0.9**
	comp=Z,17nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**55.72**	**13**	*e*P	**P**	**12 11 21.7**	**+0.9**
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
SSF	**Saint Saulge**	**55.72**	**13**	*e*P	**P**	**12 11 21.7**	**+0.9**
	comp=Z,8.7nm,1.0s,mb4.7						
ROSF	**Rostrenen**	**55.72**	**8**	*e*P	**P**	**12 11 21.8**	**+0.9**
SGMF	**Saint Gilles**	**55.74**	**8**	*e*P	**P**	**12 11 21.8**	**+0.8**
	comp=Z,136nm,1.7s,mb5.4						
SGMF	**Saint Gilles**	**55.74**	**8**	*e*P	**P**	**12 11 21.8**	**+0.8**
SGMF				pmax	pmax		
	comp=Z,68nm,1.7s,mb5.4						
SGMF	**Saint Gilles**	**55.74**	**8**	*e*P	**P**	**12 11 21.8**	**+0.8**
	comp=Z,68nm,1.7s,mb5.4						
CABF	**La Chapelle**	**55.94**	**16**	*e*P	**P**	**12 11 22.3**	**-0.1**
	comp=Z,35nm,1.0s,mb5.1						
CABF	**La Chapelle**	**55.94**	**16**	*e*P	**P**	**12 11 22.3**	**-0.1**
CABF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
CABF	**La Chapelle**	**55.94**	**16**	*e*P	**P**	**12 11 22.3**	**-0.1**
	comp=Z,18nm,1.0s,mb5.0						
LOR	**Lormes**	**55.99**	**14**	*e*P	**P**	**12 11 23.4**	**+0.6**
	comp=Z,24nm,1.2s,mb4.8						
LOR				*e*R			
	comp=Z,679nm,20.0s						
LOR	**Lormes**	**55.99**	**14**	*e*P	**P**	**12 11 23.4**	**+0.6**
LOR				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
LOR				MLR	MLR		
	comp=Z,680nm,20.0s,MS4.7						
LOR	**Lormes**	**55.99**	**14**	*e*P	**P**	**12 11 23.4**	**+0.6**
	comp=Z,12nm,1.2s,mb4.8						
LOR				LR	LR		
	comp=Z,680nm,20.0s,MS4.7						
GRR	**Gorron**	**56.13**	**9**	*e*P	**P**	**12 11 24.4**	**+0.6**
LDF	**La Druitiere**	**56.45**	**10**	*e*P	**P**	**12 11 26.8**	**+0.7**
FLN	**La Foliniere**	**56.55**	**10**	*e*P	**P**	**12 11 27.4**	**+0.6**
FLN				*e*R			
	comp=Z,571nm,19.0s						
FLN	**La Foliniere**	**56.55**	**10**	*e*P	**P**	**12 11 27.4**	**+0.6**
FLN				LR	LR		
	comp=Z,570nm,19.0s,MS4.7						
CFAA	**Coronel Fontan**	**57.14**	**237**	P	**P**	**12 11 29.4**	**-1.5**
	comp=Z,0.2nm,0.4s,mb3.5,baz=65,slow=7.5,SNR=3.7						
HINF	**Hinteralfeld**	**57.25**	**16**	*e*P	**P**	**12 11 32.8**	**+1.0**
HAU	**Haudompre**	**57.29**	**15**	*e*P	**P**	**12 11 32.5**	**+0.4**
HAU				*e*R			
	comp=Z,391nm,20.2s						
CEY	**Cerknica**	**57.84**	**22**	*e*P	**P**	**12 11 37.3**	**+1.3**
VOY	**Vojsko**	**57.90**	**22**	*e*P	**P**	**12 11 45.1**	**+8.8**
VOY				*e*	pP	12 11 49.4	+10
CDF	**Champ du Feu**	**57.91**	**16**	*e*P	**P**	**12 11 36.6**	**+0.2**
	comp=Z,14nm,0.9s,mb4.7						
BOJS	**Bojanci**	**57.96**	**23**	*e*P	**P**	**12 11 37.2**	**+0.4**
BFO	**Black Forest**	**58.12**	**16**	*e*P	**P**	**12 11 36.6**	**-1.3**
	comp=Z,40nm,1.6s,mb5.2						
BFO	**Black Forest**	**58.12**	**16**	*e*P	**P**	**12 11 36.6**	**-1.3**
BFO				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.2						
BAIF	**Baives**	**58.70**	**13**	*e*P	**P**	**12 11 42.2**	**+0.3**
HGN	**Heimansgroeve**	**59.75**	**14**	*e*P	**P**	**12 11 55.1**	**+5.9**
	comp=Z,27nm,1.3s,mb5.1						
TNS	**Taunus Mts**	**59.88**	**16**	*e*P	**P**	**12 11 50.2**	**+0.1**
	comp=Z,37nm,1.6s,mb5.2						
TNS	**Taunus Mts**	**59.88**	**16**	*e*P	**P**	**12 11 50.2**	**+0.1**
TNS				pmax	pmax		
	comp=Z,37nm,1.6s,mb5.2						
GRA1	**Grafenberg Arr**	**60.19**	**18**	*e*P	**P**	**12 11 52.5**	**+0.3**
	comp=Z,14nm,0.8s,mb5.0						
GRA1				*e*		12 11 57.9	
GRA1				*e*		12 12 07.0	
GRA1				LR	LR		
	comp=Z,400nm,18.1s,MS4.6						
GRF	**Grafenberg Arr**	**60.19**	**18**	*e*P	**P**	**12 11 52.5**	**+0.3**
	comp=Z,14nm,0.8s,mb5.0						
GRF				*e*		12 11 57.9	
GRF				*e*		12 12 07.0	
GRF				*e*L		12 38 19.8	
	comp=Z,443nm,18.1s						
GRF	**Grafenberg Arr**	**60.19**	**18**	*e*P	**P**	**12 11 52.5**	**+0.3**
GRF				*e*		12 11 57.9	
GRF				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
GRF				MLR	MLR		
	comp=Z,400nm,18.1s,MS4.6						
GRF	**Grafenberg Arr**	**60.19**	**18**	*e*P	**P**	**12 11 52.5**	**+0.3**
GRF				*e*		12 11 57.9	
GRF				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
GRF				MLR	MLR		
	comp=Z,400nm,18.1s,MS4.6						
WET	**Wettzell**	**60.23**	**19**	*e*P	**P**	**12 11 52.5**	**0.0**
	comp=Z,53nm,1.8s,mb5.3						
WET	**Wettzell**	**60.23**	**19**	*e*P	**P**	**12 11 52.5**	**0.0**
WET				pmax	pmax		
	comp=Z,53nm,1.8s,mb5.3						

GEC2	**GERESS Array S**	**60.24**	**20**	*e*P	**P**	**12 11 52.3**	**-0.3**
	comp=Z,39nm,1.6s,mb5.2						
GEC2	**GERESS Array S**	**60.24**	**20**	*e*P	**P**	**12 11 52.3**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,39nm,1.6s,mb5.2						
GERES	**GERESS Array B**	**60.24**	**20**	P	**P**	**12 11 52.0**	**-0.5**
	comp=Z,3.0nm,0.8s,mb4.4,baz=191,slow=6.3,SNR=22						
GERES				LR	LR	12 39 19.0	
	comp=Z,418nm,18.0s,MS4.6,baz=221,slow=38						
KHC	**Kasperske Hory**	**60.44**	**20**	*e*P	**P**	**12 11 54.3**	**+0.3**
KHC				*e*pP	pP	12 11 59.8	+2.6
KHC				x	x	12 12 07.5	
KHC				AMS	AMS	12 37 10.0	
	comp=Z,500nm,23.8s						
KHC	**Kasperske Hory**	**60.44**	**20**	*e*P	**P**	**12 11 54.3**	**+0.3**
KHC				*e*		12 11 59.8	
KHC				MLR	MLR		
	comp=Z,500nm,23.8s,MS4.6						
ROTZ	**Rotzenmuhle**	**60.56**	**18**	*e*P	**P**	**12 11 54.2**	**-0.5**
	comp=Z,39nm,1.6s,mb5.3						
MANZ	**Manzenberg**	**60.72**	**18**	*e*P	**P**	**12 11 55.4**	**-0.4**
	comp=Z,35nm,1.4s,mb5.3						
UBBA	**Unterbreizbach**	**60.84**	**16**	*e*P	**P**	**12 11 57.1**	**+0.4**
	comp=Z,32nm,1.6s,mb5.2						
NKC	**Novy Kostel**	**61.04**	**18**	*e*P	**P**	**12 11 58.1**	**+0.1**
NKC				*e*pP	pP	12 12 04.4	+3.1
NKC				AMS	AMS	12 39 00.0	
	comp=Z,600nm,15.9s						
WERN	**Wernitzgruen**	**61.07**	**18**	*e*P	**P**	**12 11 57.7**	**-0.5**
	comp=Z,52nm,1.8s,mb5.4						
WTSB	**Winterswijk**	**61.07**	**14**	*e*P	**P**	**12 12 04.1**	**+5.8**
MOX	**Moxa**	**61.15**	**17**	*e*P	**P**	**12 11 58.1**	**-0.7**
	comp=Z,36nm,1.7s,mb5.2						
MOX	**Moxa**	**61.15**	**17**	*e*P	**P**	**12 11 59.0**	**+0.2**
MOX							
	comp=Z,300nm,19.0s						
WERD	**Werda**	**61.19**	**18**	*e*P	**P**	**12 11 58.3**	**-0.7**
	comp=Z,30nm,1.6s,mb5.2						
TREC	**Trest**	**61.24**	**21**	*e*P	**P**	**12 12 05.2**	**+5.8**
PLCA	**Paso Flores**	**61.29**	**227**	LR	LR	12 32 49.4	
	comp=Z,176nm,20.9s,MS4.2,baz=86,slow=30						
PRU	**Pruhonice**	**61.50**	**20**	*e*pP	pP	12 12 08.1	+3.7
PRU				*e*x	x	12 12 16.2	
PRU				AMS	AMS	12 38 20.0	
	comp=Z,400nm,22.7s						
PSZ	**Piszkesteto**	**61.78**	**24**	*e*P	**P**	**12 12 03.0**	**0.0**
PSZ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
PSZ	**Piszkesteto**	**61.78**	**24**	*e*P	**P**	**12 12 03.0**	**-0.1**
	comp=Z,7.7nm,0.8s,mb4.9						
VYHS	**Vyhne**	**61.82**	**23**	*e*P	**P**	**12 12 02.7**	**-0.6**
VYHS				*e*		12 12 09.9	
VYHS	**Vyhne**	**61.82**	**23**	*e*P	**P**	**12 12 02.7**	**-0.6**
VYHS				*e*		12 12 09.9	
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.6						
VYHS	**Vyhne**	**61.82**	**23**	*e*P	**P**	**12 12 02.7**	**-0.6**
	comp=Z,7.9nm,1.6s,mb4.6						
VYHS				*e*		12 12 09.9	
CLZ	**Clausthal**	**61.86**	**16**	*e*P	**P**	**12 12 03.4**	**-0.2**
	comp=Z,33nm,1.9s,mb5.1						
CLZ	**Clausthal**	**61.86**	**16**	*e*P	**P**	**12 12 03.4**	**-0.2**
CLZ				pmax	pmax		
	comp=Z,33nm,1.9s,mb5.1						
PVCC	**Panska Ves**	**61.97**	**19**	*e*P	**P**	**12 12 03.4**	**-0.9**
PVCC				*e*pP	pP	12 12 11.5	+3.9
PVCC				AMS	AMS	12 36 50.0	
	comp=Z,400nm,25.6s						
BRG	**Berggiesshubel**	**62.07**	**19**	*e*P	**P**	**12 12 03.7**	**-1.3**
	comp=Z,16nm,1.4s,mb5.0						
BRG	**Berggiesshubel**	**62.07**	**19**	*e*P	**P**	**12 12 04.7**	**-0.3**
	comp=Z,2.8nm,1.0s,mb4.3						
BRG				*e*		12 12 19.7	
	comp=Z,9.4nm,1.4s						
BRG				*e*		12 14 36.0	
	comp=Z,9.5nm,1.7s						
BRG				S	**S**	**12 20 31.0**	**+1.2**
BRG							
	comp=N,158nm,16.6s						
BRG							
	comp=E,234nm,18.3s						
BRG							
	comp=Z,326nm,17.6s						
BRG	**Berggiesshubel**	**62.07**	**19**	*e*P	**P**	**12 12 04.7**	**-0.3**
BRG				S	**S**	**12 20 31.0**	**+1.2**
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.7						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.7						
BRG				MLR	MLR		
	comp=N,158nm,16.6s,MS4.5						
BRG				MLR	MLR		
	comp=E,234nm,18.3s,MS4.5						
BRG				MLR	MLR		
	comp=Z,326nm,17.7s,MS4.5						
BRG	**Berggiesshubel**	**62.07**	**19**	*e*P	**P**	**12 12 04.7**	**-0.3**
	comp=Z,2.8nm,1.0s,mb4.3						
BRG				*e*		12 12 19.7	
BRG				*e*		12 14 36.0	
BRG				S	**S**	**12 20 31.0**	**+1.2**
BRG				LR	LR		
	comp=Z,330nm,17.6s,MS4.5						
DRGR		**62.11**	**27**	⇓*i*P	**P**	**12 12 06.7**	**+1.5**
CLL	**Collm**	**62.15**	**18**	*e*P	**P**	**12 12 05.1**	**-0.4**
	comp=Z,15nm,1.3s,mb5.0						
CLL	**Collm**	**62.15**	**18**	P	**P**	**12 12 06.0**	**+0.5**
	comp=Z,logA/T=0.8,mb4.7						
CLL				*i* *PP	pP	12 12 12.4	+3.6
CLL				*e**SP	sP	12 12 20.0	+10
CLL	**Collm**	**62.15**	**18**	*e*P	**P**	**12 12 06.0**	**+0.5**
	comp=Z,9.0nm,1.3s,mb4.7						
CLL				*i* (pP)	pP	12 12 12.4	+3.6
CLL				*e*sP	sP	12 12 20.0	+10
	comp=Z,15nm,1.3s						
CLL				Lm		12 39 00.0	
	comp=Z,400nm,18.6s						
DPC	**Dobruska-Polom**	**62.42**	**21**	*e*P	**P**	**12 12 07.3**	**0.0**
DPC				*e*pP	pP	12 12 13.0	+2.5
DPC				AMS	AMS	12 38 30.0	
	comp=Z,500nm,22.6s						
UPC	**Upice**	**62.44**	**20**	*e*P	**P**	**12 12 07.7**	**+0.2**
UPC				*e*x	x	12 12 18.7	
ROSC	**El Rosal**	**62.60**	**279**	P	**P**	**12 12 08.5**	**0.0**
	comp=Z,3.6nm,0.4s,mb4.9,baz=88,slow=20,SNR=3.4						
ROSC				LR	LR	12 37 39.4	
	comp=Z,596nm,18.4s,MS4.8,baz=43,slow=34						
OKC	**Ostrava-Krasne**	**62.65**	**22**	*e*P	**P**	**12 12 08.2**	**-0.6**
OKC				AMS	AMS	12 41 10.0	
	comp=Z,400nm,18.4s						
MLR	**Muntele Rosu**	**62.67**	**30**	⇑*i*P	**P**	**12 12 08.6**	**-0.4**
BR131	**Keskin Array S**	**63.17**	**39**	*e*P	**P**	**12 12 14.1**	**+1.8**
	comp=Z,3.7nm,0.8s,mb4.6						
BRTR	**Keskin Array B**	**63.17**	**39**	P	**P**	**12 12 13.3**	**+1.0**
	comp=Z,2.7nm,1.0s,mb4.3,baz=201,slow=6.6,SNR=15						
BRTR				LR	LR	12 41 24.1	
	comp=Z,92nm,21.6s,MS3.9,baz=42,slow=38						
BRTR	**Keskin Array B**	**63.17**	**39**	⇑*e*P	**P**	**12 12 14.1**	**+1.8**
CRVS	**Cervenica-Dubn**	**63.20**	**25**	*e*P	**P**	**12 12 13.3**	**+0.8**
CRVS				*e*		12 12 20.8	
CRVS				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.3						
CRVS	**Cervenica-Dubn**	**63.20**	**25**	*e*P	**P**	**12 12 13.3**	**+0.8**
	comp=Z,3.9nm,1.5s,mb4.3						
CRVS				*e*		12 12 20.8	
UZH	**Uzhgorod**	**63.33**	**25**	*e*P	**P**	**12 12 13.0**	**-0.4**
KOLS	**Kolonicke sedl**	**63.56**	**25**	*e*P	**P**	**12 12 16.0**	**+1.1**
KOLS				*e*		12 12 22.0	
KOLS				pmax	pmax		
	comp=Z,40nm,2.7s,mb5.0						
KOLS	**Kolonicke sedl**	**63.56**	**25**	*e*P	**P**	**12 12 16.0**	**+1.1**
	comp=Z,40nm,2.7s,mb5.0						
KOLS				*e*		12 12 22.0	
OJC	**Ojcow**	**63.58**	**23**	*e*P	**P**	**12 12 15.4**	**+0.4**
BSEG	**Bad Segeberg**	**63.73**	**15**	*e*P	**P**	**12 12 16.1**	**0.0**
	comp=Z,33nm,1.4s,mb5.2						
BSEG	**Bad Segeberg**	**63.73**	**15**	*e*P	**P**	**12 12 16.1**	**0.0**
BSEG				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.2						
LVV	**L'vov**	**64.98**	**25**	*e*P	**P**	**12 12 24.1**	**-0.1**
AKASG	**Malin Array Be**	**67.91**	**27**	P	**P**	**12 12 41.4**	**-1.6**
	comp=Z,10.0nm,0.8s,mb4.9,baz=227,slow=7.1,SNR=37						
AKASG				LR	LR	12 43 59.8	
	comp=Z,206nm,20.0s,MS4.4,baz=235,slow=37						
AKASG	**Malin Array Be**	**67.91**	**27**	*i* P	**P**	**12 12 42.7**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKBB	**Malin Array Si**	**67.91**	**27**	*e*P	**P**	**12 12 41.6**	**-1.4**
NB2	**NORSAR Subarra**	**70.38**	**12**	P	**P**	**12 12 58.2**	**-0.1**
	comp=Z,8.4nm,1.2s,mb4.5,baz=205,slow=6.2						
NOA	**NORSAR Array B**	**70.38**	**12**	P	**P**	**12 12 57.5**	**-0.8**
	comp=Z,3.5nm,1.0s,mb4.2,baz=205,slow=6.3,SNR=4.8						
NOA				LR	LR	12 44 36.5	
	comp=Z,130nm,20.0s,MS4.2,baz=210,slow=37						
NOA	**NORSAR Array B**	**70.38**	**12**	P	**P**	**12 12 57.5**	**-0.8**
NOA				LR	LR	12 44 36.5	
GNI	**Garni**	**70.64**	**43**	⇑*e*P	**P**	**12 12 57.4**	**-2.5**
GNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	**Kislovodsk**	**71.14**	**39**	*e*P	**P**	**12 13 02.5**	**-0.4**
KIV				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
GOF	**Gofitskoye**	**71.91**	**38**	*e*P	**P**	**12 13 08.7**	**+1.1**
OBN	**Obninsk**	**74.16**	**27**	⇑*i*P	**P**	**12 13 18.8**	**-2.1**
OBN				*e*		12 13 33.1	
OBN				*e*		12 16 11.9	
OBN				*e*S	S	12 22 47.3	-6.9
OBN				SS	SS	12 27 35.9	-3.4
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
OBN				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.7						
FINES	**FINESS Array B**	**74.60**	**18**	P	**P**	**12 13 21.0**	**-2.5**
	comp=Z,4.9nm,1.1s,mb4.4,baz=207,slow=3.8,SNR=7.0						
FINES				LR	LR	12 48 25.3	
	comp=Z,182nm,18.6s,MS4.4,baz=349,slow=38						
MOS	**Moscow**	**75.02**	**27**	*e*P	**P**	**12 13 31.6**	**+5.7**
MOS				*e*		12 13 39.7	
KAF	**Kangasniemi**	**75.18**	**18**	*e*p	**P**	**12 13 25.2**	**-1.6**
	baz=220,slow=5.6						
SCHQ	**Schefferville**	**76.23**	**331**	LR	LR	12 43 00.1	
	comp=Z,247nm,18.1s,MS4.6,baz=135,slow=33						
JOF	**Joensuu**	**77.35**	**19**	*e*p	**P**	**12 13 38.0**	**-1.1**
MAW	**Mawson**	**78.09**	**158**	LR	LR	12 41 42.0	
	comp=Z,221nm,18.1s,MS4.5,baz=137,slow=31						
ARCES	**ARCESS Array B**	**80.74**	**13**	P	**P**	**12 13 54.9**	**-2.8**
	comp=Z,3.4nm,0.9s,mb4.3,baz=266,slow=8.5,SNR=7.0						
ARCES	**ARCESS Array B**	**80.74**	**13**	P	**P**	**12 13 54.9**	**-2.8**
KEV	**Kevo**	**81.24**	**13**	*e*p	**P**	**12 13 57.3**	**-3.1**
	comp=Z,2.6nm,0.8s,mb4.2						
KEV	**Kevo**	**81.24**	**13**	*e*P	**P**	**12 13 57.3**	**-3.1**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
QSPA	**South Pole Qui**	**83.11**	**180**	*e*P	**P**	**12 14 10.1**	**-0.1**
	comp=Z,38nm,1.1s,mb5.3						
QSPA				*e*P		12 14 10.5	
ARU	**Arti**	**85.62**	**32**	⇑*e*P	**P**	**12 14 20.8**	**-2.1**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.7						
ULM	**Lac du Bonnet**	**90.97**	**320**	LR	LR	12 52 54.7	
	comp=Z,227nm,18.3s,MS4.7,baz=64,slow=34						
CHKZ	**Chkalovo**	**91.65**	**36**	*e*P	**P**	**12 14 52.5**	**+0.9**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.8						
CHKZ	**Chkalovo**	**91.65**	**36**	*e*P	**P**	**12 14 52.5**	**+0.9**
	comp=Z,6.4nm,1.3s,mb4.8						
VNDA	**Vanda**	**95.56**	**179**	LR	LR	12 51 45.5	
	comp=Z,186nm,19.0s,MS4.6,baz=183,slow=31						
PDAR	**Pinedale Array**	**99.72**	**312**	LR	LR	12 53 51.4	
	comp=Z,432nm,21.9s,MS4.9,baz=95,slow=31						
ASAR	**Alice Springs**	**135.38**	**134**	PKhKP		12 20 52.4	
	comp=Z,0.3nm,0.8s,baz=227,slow=3.2,SNR=3.2						

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*ISCJB **01** 12:25:26.6±2.1, 193N±0.1×1454E±02, h190km±20km, mb3.9/11, Error ellipse: s-maj=35.8km s-min=16.5km az=3.4*
*NEIC **01** 12:25:26.4±1.7, 1928N×14548E, h177km±16km, mb4.2/3, Error ellipse: s-maj=22.8km s-min=11.1km az=91.0*
*IDC **01** 12:25:27.7±3.0, 1921N×14542E, h189km±30km, mb3.5/7, mb1 3.7/8, mb1mx3.6/16, mbtmp4.0/8, Error ellipse: s-maj=30.9km s-min=20.3km az=75.0*
ISC 01 12:25:26.7±2.0**, 193N**±01×**1454E**±02**, h178**km±19km**, n15, σ0ˢ67**/16**, mb3.9**/11**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.71**	**185**	P	**Pn**	**12 26 49.3**	**-0.6**
	2.3nm,0.3s,baz=358,slow=20,SNR=2.2						
GUMO				S	**Sn**	**12 27 55.6**	**+0.3**
	2.9nm,0.3s,baz=12,slow=21,SNR=2.4						
WRAB	**Tennant Creek**	**40.48**	**196**	*e*P	**P**	**12 32 48.1**	**+0.1**
	8.0nm,0.7s,mb4.5						
WB2	**Warramunga Arr**	**40.49**	**196**	*e*P	**P**	**12 32 48.1**	**0.0**
FITZ	**Fitzroy Crossi**	**41.95**	**209**	*e*P	**P**	**12 33 00.6**	**+0.6**
	4.0nm,0.6s,mb4.2						
SONM	**Songino Array**	**42.51**	**321**	P	**P**	**12 33 05.2**	**+0.7**
	0.9nm,0.6s,mb3.6,baz=138,slow=9.2,SNR=7.7						
AS31	**Alice Springs**	**44.17**	**195**	*e*P	**P**	**12 33 17.7**	**0.0**
ASAR	**Alice Springs**	**44.17**	**195**	P	**P**	**12 33 17.1**	**-0.6**
	0.7nm,0.4s,mb3.6,baz=11,slow=7.4,SNR=21						
ASPA	**Alice Springs**	**44.17**	**195**	*e*P	**P**	**12 33 17.7**	**0.0**
MKAR	**Makanchi Array**	**57.86**	**314**	P	**P**	**12 35 00.7**	**+1.0**
	0.4nm,0.3s,mb3.7,baz=102,slow=14,SNR=3.5						
KEV	**Kevo**	**81.28**	**342**	*e*p	**P**	**12 37 22.2**	**-0.8**
	2.4nm,0.7s,mb3.9						
ARCES	**ARCESS Array B**	**81.84**	**342**	P	**P**	**12 37 26.1**	**+0.1**
	0.9nm,0.5s,mb3.6,baz=72,slow=8.2,SNR=12						
NVAR	**Mina Array Bea**	**82.97**	**52**	P	**P**	**12 37 33.0**	**+1.3**
	1.4nm,0.7s,mb3.8,baz=263,slow=6.8,SNR=12						
JOF	**Joensuu**	**83.36**	**335**	*e*p	**P**	**12 37 32.8**	**-1.0**
	2.4nm,0.4s,mb4.3						
FINES	**FINESS Array B**	**86.23**	**335**	P	**P**	**12 37 47.0**	**-1.1**
	1.7nm,0.4s,mb4.1,baz=79,slow=5.0,SNR=32						
PDAR	**Pinedale Array**	**87.58**	**45**	P	**P**	**12 37 54.5**	**-0.1**
	0.3nm,0.5s,mb3.4,baz=205,slow=3.1,SNR=3.9						

MOS 01 12:32:53.1±0.9**, 4326N**×**4660E, h11**km**, mb4.2**/1**, 2C-1D, Error ellipse: s-maj=19.4km s-min=15.0km az=118.9, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMR	**Dylym**	**0.19**	**173**	*i* PG	Pg	12 32 57.3	+0.1
DLMR				pmax	pmax		
	comp=Z,2μm,0.2s						
DBC	**Dubki**	**0.29**	**145**	⇓*i*PG	Pg	12 33 00.0	+1.0
DBC				*i* S	Sg	12 33 04.0	+1.0
DBC				pmax	pmax		
	comp=Z,72nm,0.2s						
KRNR	**Karanay**	**0.49**	**152**	*e*PG	Pg	12 33 03.0	+0.4
KRNR				*i* S	Sg	12 33 09.0	-0.1
KRNR				pmax	pmax		
	comp=Z,35nm,0.2s						
UNCR	**Uncukul**	**0.56**	**165**	*i* PG	Pg	12 33 04.7	+0.6
UNCR				*e*S	Sg	12 33 11.7	+0.2
UNCR				pmax	pmax		
	comp=Z,36nm,0.2s						
BTLR	**Botlikh**	**0.66**	**205**	*e*PG	Pg	12 33 06.5	+0.7
BTLR				*e*S	Sg	12 33 15.0	+0.5
BTLR				pmax	pmax		
	comp=Z,29nm,0.2s						
MAK	**Makhachkala**	**0.73**	**114**	*e*PG	Pg	12 33 25.4	+18
MAK				pmax	pmax		
	comp=N,1.0nm,0.5s						
SNJR	**Sundja**	**1.32**	**262**	⇑*i*PG	Pg	12 33 29.0	+10
TRKR	**Terskaya**	**1.44**	**289**	*e*PG	Pg	12 33 32.5	+12
BTKR	**Batakoyurt**	**1.51**	**275**	*e*PG	Pg	12 33 32.3	+10
ARNR	**Ardon**	**1.70**	**268**	*e*PN	Pn	12 33 34.3	+12
ARNR				*e*S	Sn	12 33 54.4	+10
LACR	**Lac**	**1.74**	**256**	⇑*i*PN	Pn	12 33 34.0	+11
LACR				*e*S	Sn	12 33 53.9	+8.4
KORR	**Kora**	**1.86**	**266**	*e*PN	Pn	12 33 36.2	+11
KORR				*e*S	Sn	12 33 57.7	+9.3

MAN 01 12:49:51.0, 2063N×**12032E, h5**km**, mb3.4, ML4.7, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**2.88**	**145**	*e*P	Pn	12 50 38.3	+0.8
SGCP				*e*S	Sn	12 51 13.9	+1.4
APYP	**Conner**	**2.89**	**162**	*e*P	Pn	12 50 38.4	+0.7
APYP				*e*S	Sn	12 51 14.4	+1.6
ABRA	**Dolores**	**2.99**	**173**	*e*P	Pn	12 50 38.5	-0.5
ABRA				*e*S	Sn	12 51 14.0	-1.2
CAUP	**Cauayan**	**3.93**	**159**	*e*P	Pn	12 50 56.2	+4.2
CAUP				*e*S	Sn	12 51 45.1	+6.5
PALP	**Palanan**	**4.07**	**150**	*e*P	Pn	12 51 04.6	+11
PALP				*e*S	Sn	12 51 46.5	+4.7
BALP	**Baler**	**5.01**	**166**	*e*P	Pn	12 51 09.4	+2.6

IDC 01 13:04:46.2±4.6**, 943S**×**10752E, h0**km**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/14**, mbtmp3.7**/3**, Error ellipse: s-maj=207.3km s-min=31.2km az=52.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**28.91**	**123**	P	P	13 10 47.2	+0.4
	0.4nm,0.7s,baz=305,slow=8.6,SNR=4.1						
SONM	**Songino Array**	**57.01**	**359**	P	P	13 14 34.0	+0.4
	0.5nm,0.6s,baz=173,slow=7.3,SNR=4.8						
MKAR	**Makanchi Array**	**60.33**	**340**	P	P	13 14 56.6	-0.1
	0.9nm,0.6s,baz=144,slow=7.5,SNR=12						

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*NIED **01** 13:11:00, 3640N×14100E, h50km, Mw4.1 Best double couple: $M_0$1.85000×10^{15} NP1:ϕ_s211.00000°, δ76.00000°, λ92.00000°. NP2:ϕ_s21.00000°, δ14.00000°, λ80.00000°.*
*MOS **01** 13:11:40.4±0.9, 3642N×14101E, h42km, mb4.6/7, Error ellipse: s-maj=15.3km s-min=9.5km az=130.9*
*NEIC **01** 13:11:42.7, 3637N×14089E, h48km, mb4.5/6, MW4.1(NIED), After JMA.*
NEIC Felt at Inzai-machi. Recorded [3 JMA] in Ibaraki and Tochigi; [2 JMA] in Fukushima; [1 JMA] in Chiba, Gumma, Saitama and Tokyo Prefectures.
*ISCJB **01** 13:11:42.1±0.6, 3641N±003×14094E±005, h50km±4km, mb4.3/20, Error ellipse: s-maj=7.5km s-min=4.7km az=62.6*
*JMA **01** 13:11:42.7±0.1, 3637N×14089E, h48km±1km, M4.3 Broadband fault plane solution: P waves. NP1: ϕ_s182.00000°, δ4.00000°, λ-97.00000°. NP2:ϕ_s9.00000°, δ86.00000°, λ-90.00000°. Principal axes: T Plg41.0000°, Azm99.0000°; N Plg0.0000°, Azm9.0000°; P Plg49.0000°, Azm280.0000°;*
JMA Felt III J1.
*BJI **01** 13:11:42.3, 36.17N×140.99E, h74km, mB4.8, mb4.6*
*IDC **01** 13:11:44.2±0.6, 3641N×14088E, h51km±5km, mb3.9/10, mb1 4.0/13, mb1mx3.8/22, mbtmp4.1/13, MS3.5/2, Ms1 3.5/2, ms1mx2.7/19, Error ellipse: s-maj=9.9km s-min=7.7km az=162.0*
ISC 01 13:11:43.0±0.6**, 3640N**±003×**14093E**±005**, h41**km±5km**, h49**km±1.9km**:pP-P, n58, σ0ˢ91**/72**, mb4.3**/20**, 11C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.36**	**305**	⇑P	**Pn**	**13 11 51.9**	**-0.1**
JHO				S	**Sn**	**13 11 58.1**	**-0.2**
JYT	**Yasato**	**0.62**	**254**	⇑P	**Pn**	**13 11 54.8**	**-0.6**
JYT				S	**Sn**	**13 12 03.1**	**-1.1**
ONAJ	**Iwakimizuishiy**	**0.70**	**351**	⇑P	**Pn**	**13 11 56.3**	**-0.2**
ONAJ				S	**Sn**	**13 12 05.7**	**-0.5**
JFK	**Kawauchi**	**0.96**	**357**	⇑P	**Pn**	**13 11 59.6**	**-0.4**
JFK				S	**Sn**	**13 12 12.0**	**-0.5**
JAG	**Ashikaga**	**1.19**	**271**	⇑P	**Pn**	**13 12 03.0**	**-0.2**
JAG				S	**Sn**	**13 12 16.7**	**-1.4**
JFT	**Otama**	**1.21**	**337**	P	**Pn**	**13 12 04.2**	**+0.8**
JFT				S	**Sn**	**13 12 19.2**	**+0.6**
JKT	**Katashina**	**1.40**	**285**	⇑P	**Pn**	**13 12 06.7**	**+0.7**
JKT				S	**Sn**	**13 12 22.4**	**-0.9**
JFY	**Yanaizu**	**1.40**	**316**	⇑P	**Pn**	**13 12 06.6**	**+0.5**
JFY				S	**Sn**	**13 12 24.1**	**+0.8**
JMM	**Marumori**	**1.46**	**356**	⇑P	**Pn**	**13 12 07.1**	**+0.2**
JMM				S	**Sn**	**13 12 25.0**	**+0.2**
MJAR	**Matsushiro Arr**	**2.20**	**274**	P	**Pn**	**13 12 15.6**	**-1.4**
	37nm,0.3s,baz=90,slow=15,SNR=126						
MJAR				S	**Sn**	**13 12 43.5**	**+0.6**
	84nm,0.3s,baz=77,slow=22,SNR=12						
MAJO	**Matsushiro**	**2.20**	**274**	*e*Pn	**Pn**	**13 12 17.9**	**+0.9**
MAJO				*e*Sn	**Sn**	**13 12 45.2**	**+2.2**
MAT	**Matsushiro**	**2.20**	**274**	P	**Pn**	**13 12 17.7**	**+0.7**
MAT				S	**Sn**	**13 12 44.0**	**+1.0**
MAT	**Matsushiro**	**2.20**	**274**	P	**Pn**	**13 12 17.0**	**0.0**
MAT				*e*S	**Sn**	**13 12 44.0**	**+1.0**
JHJ	**Hachijo jima 2**	**3.41**	**196**	P	**Pn**	**13 12 35.8**	**+2.1**
	32nm,0.3s,baz=66,slow=21,SNR=10.0						
JHJ				S	**Sn**	**13 13 14.0**	**+1.2**
	70nm,0.3s,baz=42,slow=23,SNR=8.4						
ASAJ	**Asahikawa**	**7.81**	**9**	P	**Pn**	**13 13 33.3**	**-0.7**
	1.6nm,0.3s,baz=202,slow=13,SNR=18						
ASAJ				S	**Sn**	**13 15 01.4**	**+0.3**
	0.5nm,0.3s,baz=22,slow=31,SNR=3.7						
ASAJ	**Asahikawa**	**7.81**	**9**	P	**Pn**	**13 13 33.3**	**-0.7**
ASAJ				S	**Sn**	**13 15 01.4**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
CBIJ	**Chichi jima**	**9.34**	**173**	P	**Pn**	**13 13 51.9**	**-3.1**
	comp=N,8.3nm,0.3s,baz=270,slow=23,SNR=7.3						
CBIJ				S	**Sn**	**13 15 29.4**	**-9.3**
	comp=N,2.9nm,0.3s,baz=287,slow=20,SNR=3.9						
VLA	**Vladivostok**	**9.66**	**317**	*e*P	**Pn**	**13 13 58.8**	**-0.6**
VLA				pmax	pmax		
	comp=Z,42nm,0.6s						
MDJ	**Mudanjiang**	**11.90**	**317**	P	**Pn**	**13 14 33.9**	**+3.9**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,70nm,5.1s						
ULN	**Ulaanbaatar**	**27.39**	**305**	*e*P	**P**	**13 17 24.2**	**-0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ULN	**Ulaanbaatar**	**27.39**	**305**	*e*P	**P**	**13 17 24.1**	**-0.3**
	comp=Z,2.5nm,0.6s,mb3.9						
SONM	**Songino Array**	**27.82**	**305**	P	**P**	**13 17 28.1**	**-0.2**
	comp=Z,4.4nm,0.6s,mb4.3,baz=108,slow=9.3,SNR=19						
SONM				LR	LR	13 27 43.0	
	comp=Z,70nm,21.5s,baz=129,slow=34						
BOD	**Bodaibo**	**27.86**	**329**	*e*P	**P**	**13 17 27.6**	**-1.0**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
GTA	**Gaotai**	**32.38**	**288**	*e*P	**P**	**13 18 08.6**	**0.0**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.4						
NVS	**Novosibirsk**	**43.00**	**314**	*e*P	**P**	**13 19 36.9**	**-1.3**
MKAR	**Makanchi Array**	**44.13**	**303**	P	**P**	**13 19 47.6**	**+0.3**
	comp=Z,1.9nm,0.6s,mb4.0,baz=91,slow=9.8,SNR=19						
MKAR	**Makanchi Array**	**44.13**	**303**	⇑*e*P	**P**	**13 19 48.0**	**+0.7**
KURK	**Kurchatov**	**46.02**	**309**	⇑*e*P	**P**	**13 20 01.8**	**-0.5**
KURK	**Kurchatov**	**46.02**	**309**	*e*P	**P**	**13 20 01.6**	**-0.7**
	comp=Z,6.0nm,0.6s,mb4.7						
JIRN	**Jiri**	**46.69**	**276**	*e*P	**P**	**13 20 07.0**	**-0.6**
GUN	**Gumba**	**46.83**	**276**	*e*P	**P**	**13 20 08.9**	**+0.2**
KKN	**Kakani**	**47.37**	**276**	*e*P	**P**	**13 20 12.9**	**0.0**
GKN	**Gorkha**	**47.79**	**277**	*e*P	**P**	**13 20 16.6**	**+0.4**
	comp=Z,28nm,0.9s,mb5.3						
KDAK	**Kodiak Island**	**47.83**	**42**	P	**P**	**13 20 16.1**	**-0.3**
	comp=Z,6.3nm,0.8s,mb4.7,baz=244,slow=4.6,SNR=5.1						
KOLN	**Koldanda**	**48.72**	**277**	*e*P	**P**	**13 20 24.2**	**+0.9**
CHKZ	**Chkalovo**	**50.46**	**313**	*e*P	**P**	**13 20 35.5**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
CHKZ	**Chkalovo**	**50.46**	**313**	*e*P	**P**	**13 20 35.5**	**-1.1**
	comp=Z,2.9nm,0.6s,mb4.5						
ZRNK	**Zerenda**	**51.55**	**313**	*e*P	**P**	**13 20 44.6**	**-0.1**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ZRNK	**Zerenda**	**51.55**	**313**	*e*P	**P**	**13 20 44.6**	**-0.1**
	comp=Z,3.9nm,0.8s,mb4.4						
INK	**Inuvik**	**55.12**	**27**	P	**P**	**13 21 11.2**	**+0.2**
	comp=Z,1.7nm,0.6s,mb4.3,baz=313,slow=6.0,SNR=5.0						
WRAB	**Tennant Creek**	**56.37**	**187**	*e*P	**P**	**13 21 18.5**	**-1.5**
ARU	**Arti**	**56.58**	**319**	⇑*e*P	**P**	**13 21 20.6**	**-0.8**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**60.11**	**187**	P	**P**	**13 21 45.2**	**-0.8**
	comp=Z,1.2nm,0.7s,mb4.0,baz=13,slow=5.1,SNR=22						
ARCES	**ARCESS Array B**	**64.45**	**339**	P	**P**	**13 22 14.6**	**-0.5**
	comp=Z,2.5nm,0.9s,mb4.2,baz=55,slow=10,SNR=6.1						
OBN	**Obninsk**	**68.37**	**323**	*e*P	**P**	**13 22 40.1**	**-0.1**
OBN				*e*		13 23 05.3	
OBN				*e*		13 25 13.4	
OBN				*e*S	S	13 31 39.9	+1.5
OBN				*i*		13 32 39.5	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FINES	**FINESS Array B**	**69.19**	**332**	P	**P**	**13 22 44.6**	**-0.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=52,slow=7.5,SNR=5.8						
FINES	**FINESS Array B**	**69.19**	**332**	*i* P	**P**	**13 22 46.5**	**+1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**74.62**	**337**	P	**P**	**13 23 17.8**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**74.62**	**337**	P	**P**	**13 23 18.0**	**+0.2**
	comp=Z,1.3nm,0.7s,mb4.0,baz=40,slow=5.9,SNR=5.1						
NOA	**NORSAR Array B**	**74.62**	**337**	P	**P**	**13 23 18.0**	**+0.2**
DLMT	**Dillon**	**75.06**	**44**	*e*P	**P**	**13 23 21.6**	**+1.2**
	comp=Z,1.7nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	**75.68**	**53**	P	**P**	**13 23 24.9**	**+1.0**
	comp=Z,1.1nm,0.7s,mb3.9,baz=287,slow=5.9,SNR=8.6						
NVAR				pP	pP	13 23 39.4	+3.1
	comp=Z,1.6nm,0.8s,baz=281,slow=7.2,SNR=10						
NVAR	**Mina Array Bea**	**75.68**	**53**	P	**P**	**13 23 24.9**	**+1.0**
NVAR				pP	pP	13 23 39.4	+3.1
PDAR	**Pinedale Array**	**78.39**	**45**	P	**P**	**13 23 40.2**	**+1.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=298,slow=3.2,SNR=6.9						
PDAR				pP	pP	13 23 53.9	+2.4
	comp=Z,0.9nm,0.7s,baz=294,slow=3.8,SNR=7.2						
GERES	**GERESS Array B**	**83.04**	**328**	LR	LR	14 06 05.4	
	comp=Z,35nm,18.8s,baz=336,slow=39						
FRNY	**Flat Rock**	**93.31**	**24**	*e*P	**P**	**13 24 55.8**	**+2.3**
FRNY				*e*pP	pP	13 25 09.2	+3.2
LPAZ	**La Paz**	**147.34**	**60**	PKPbc	PKPbc	13 31 23.8	+1.7
	comp=Z,1.0nm,0.7s,baz=342,slow=3.2,SNR=7.0						
LPAZ				pPKPbc	pPKPbc	13 31 38.7	+3.7
	comp=Z,1.1nm,0.6s,baz=40,slow=8.2,SNR=4.0						
LPAZ	**La Paz**	**147.34**	**60**	PKPbc	PKPbc	13 31 23.8	+1.7
LPAZ				pPKPbc	pPKPbc	13 31 38.7	+3.7

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*ATH **01** 13:15:26.1, 4177N×2561E, h5km, MD3.5/5*
*CSEM **01** 13:15:27.6±0.1, 4169N×2552E, h2km, MD3.1, Error ellipse: s-maj=2.1km s-min=1.8km az=4.0*
*ISCJB **01** 13:15:27.9±0.4, 4170N±003×2548E±003, h2km, Error ellipse: s-maj=4.5km s-min=3.4km az=7.4*
*NEIC **01** 13:15:28.4, 4170N×2544E, h9km, MD3.1(SOF), MD3.5(ATH), After SOF.*
*SOF **01** 13:15:28.4, 4170N×2544E, h9km, MD3.1*
*SKO **01** 13:15:31.0, 4191N×2540E, h4km*
ISC 01 13:15:28.3±0.6**, 4168N**±003×**2549E**±003**, h0**km±5km**, n37, σ0.84**/43**, 2C-2D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDZ	**Kurdzhali**	**0.07**	**239**	P	**Pg**	**13 15 31.1**	**+1.5**
DIM	**Dimitrovgrad**	**0.37**	**5**	P	**Pg**	**13 15 35.6**	**+0.2**
RDO	**Rodhopi**	**0.54**	**176**	⇑*i*PB	**Pg**	**13 15 39.2**	**+0.5**
RDO				*e*SB	**Sg**	**13 15 46.6**	**+0.9**
RZN	**Rozhen**	**0.58**	**271**	P	**Pg**	**13 15 39.0**	**-0.5**
PLD	**Plovdiv**	**0.72**	**306**	*e*P	**Pg**	**13 15 42.0**	**-0.2**
PLD	**Plovdiv**	**0.72**	**306**	P	**Pg**	**13 15 42.2**	**0.0**
ALN	**Alexandroupoli**	**0.89**	**152**	*e*P	**Pg**	**13 15 46.1**	**+0.7**
EDRB	**Edirne**	**0.95**	**80**	PN	**Pg**	**13 15 46.3**	**-0.2**
EDRB				SN	**Sn**	**13 16 01.8**	**-1.3**
ENEZ	**Enez**	**1.07**	**152**	PN	**Pn**	**13 15 49.5**	**-1.1**
JMB	**Yambol**	**1.13**	**46**	*e*P	**Pg**	**13 15 49.8**	**-0.2**
NVR	**Nevrokopi**	**1.27**	**255**	*e*PG	**Pg**	**13 15 51.3**	**-1.4**
MMB	**Musomiste**	**1.33**	**266**	*e*P	**Pg**	**13 15 52.4**	**-1.4**
MMB	**Musomiste**	**1.33**	**266**	P	**Pg**	**13 15 52.9**	**-0.9**
GADA	**Gvkgeada**	**1.52**	**168**	PN	**Pn**	**13 15 57.0**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.61**	**128**	PN	**Pn**	**13 15 58.2**	**+0.2**
MFT	**Murefte**	**1.62**	**123**	PN	**Pn**	**13 15 58.1**	**0.0**
OUR	**Ouranopolis**	**1.77**	**221**	*e*P	**Pn**	**13 15 59.0**	**-1.2**
LIA	**Limnos Island**	**1.80**	**188**	*e*PB	**Pn**	**13 15 59.7**	**-0.9**
KKB	**Krupnik**	**1.81**	**277**	P	**Pn**	**13 16 01.4**	**+0.7**
SOH	**Sokhos**	**1.83**	**243**	*e*P	**Pn**	**13 16 00.2**	**-0.8**
VTS	**Vitosha**	**1.93**	**299**	*e*P	**Pn**	**13 16 03.5**	**+1.2**
VTS	**Vitosha**	**1.93**	**299**	⇓*i*P	**Pn**	**13 16 03.9**	**+1.6**
EZN	**Ezine**	**1.96**	**161**	*e*PN	**Pn**	**13 16 02.9**	**+0.1**
KNT	**Kendrikon**	**2.02**	**256**	*e*P	**Pn**	**13 16 03.9**	**+0.3**
PLG	**Polygyros**	**2.03**	**230**	*e*PG	**Pn**	**13 16 05.7**	**+2.0**
PLG				*e*SN	**Sg**	**13 16 32.3**	**-1.2**
CANB	**Canakkale**	**2.05**	**144**	*e*PN	**Pn**	**13 16 03.9**	**-0.1**
VAY	**Valandovo**	**2.23**	**262**	*e*P	**Pb**	**13 16 08.3**	**-1.1**
VAY	**Valandovo**	**2.23**	**262**	*e*Pn	**Pb**	**13 16 08.6**	**-0.8**
VAY				*e*Sg	**Sg**	**13 16 41.0**	**+1.1**
VAY	**Valandovo**	**2.23**	**262**	*e*Pn	**Pb**	**13 16 08.5**	**-0.9**
EDC	**Edincik**	**2.24**	**126**	*e*PN	**Pn**	**13 16 06.9**	**+0.3**
GRG	**Griva**	**2.44**	**254**	*e*P	**Pb**	**13 16 13.0**	**0.0**
STIP	**Stip**	**2.48**	**271**	*e*Pn	**Pn**	**13 16 10.7**	**+0.8**
STIP				*e*Sg	**Sg**	**13 16 47.3**	**-0.7**
STIP	**Stip**	**2.48**	**271**	*e*Pn	**Pn**	**13 16 10.6**	**+0.7**
STIP				*e*Sg	**Sg**	**13 16 47.2**	**-0.7**
PRK	**Paraskevi**	**2.51**	**166**	*e*PN	**Pn**	**13 16 10.4**	**+0.1**
YLV	**Yalova**	**3.14**	**110**	*e*P	**Pn**	**13 16 18.9**	**-0.1**
TIRR	**Tirgusor**	**3.50**	**37**	⇓*i*P	**Pg**	**13 16 35.3**	**-0.2**
MLR	**Muntele Rosu**	**3.82**	**5**	⇑*i*P	**Pn**	**13 16 29.7**	**+1.3**

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*NEIC **01** 13:40:38.7, 3791N×184W, h6km, MN2.7(MDD), After MDD.*
NEIC Felt [II] at Coy, Dona Ines, La Paca and Zarcilla de Ramos.
*SFS **01** 13:40:38.0, 3791N×184W, h7km, ML2.7*
*CSEM **01** 13:40:38.6±0.1, 3793N×185W, h5km, ML3.4/13, Error ellipse: s-maj=1.5km s-min=1.0km az=146.0*
*INMG **01** 13:40:38.8±1.2, 3792N×186W, h6km±2km, ML2.9, Error ellipse: s-maj=1.8km s-min=1.6km az=122.0*
MDD 01 13:40:38.9±0.3**, 3791N×183W, h10**km**, mbLg2.8**/30**, 2C-1D, Error ellipse: s-maj=3.2km s-min=2.2km az=157.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.47**	**98**	⇑Pg	Pg	13 40 47.4	-0.7
	SNR=18						
EMUR				Lg		13 40 54.1	
	256nm,0.2s,SNR=5.0						
EMUR	**La Murta**	**0.47**	**98**	⇑Pg	Pg	13 40 47.4	-0.7
EMUR				Lg		13 40 54.9	
EMUR	**La Murta**	**0.47**	**98**	Pg	Pg	13 40 47.4	-0.7
	SNR=18						
EMUR				Lg		13 40 54.9	
	256nm,0.2s,SNR=5.0						
EHUE	**Huescar**	**0.61**	**262**	Pg	Pg	13 40 49.6	-1.2
	4.5nm,0.2s,SNR=43						
EHUE				Lg		13 40 58.7	
	50nm,0.2s,SNR=24						
CART	**Cartagena**	**0.73**	**116**	⇓Pg	Pg	13 40 52.5	-0.5
CART				Lg		13 41 02.7	
CART	**Cartagena**	**0.73**	**116**	*i* P	Pg	13 40 52.5	-0.5
ETOB	**Tobarra**	**0.77**	**17**	Pg	Pg	13 40 52.8	-1.0
	83nm,0.2s,SNR=169						
ETOB				Lg		13 41 03.7	
	205nm,0.1s,SNR=16						
ETOB	**Tobarra**	**0.77**	**17**	Pg	Pg	13 40 52.8	-1.0
	83nm,0.2s,SNR=169						
ETOB				Lg		13 41 03.7	
	205nm,0.1s,SNR=16						
EVIA	**Vianos**	**0.90**	**324**	Pg	Pg	13 40 55.0	-1.3
	10nm,0.1s,SNR=29						
EVIA				Lg		13 41 08.0	
	106nm,0.1s,SNR=15						
ENIJ	**Nijar**	**0.98**	**198**	Pg	Pg	13 40 56.9	-0.9
	5.5nm,0.2s,SNR=7.9						
ENIJ				Lg		13 41 10.1	
	71nm,0.3s,SNR=7.9						
EQES	**Quesada**	**0.99**	**264**	Pg	Pg	13 40 56.9	-1.0
	4.4nm,0.1s,SNR=110						
EQES				Lg		13 41 11.1	
	123nm,0.2s,SNR=29						
EQES	**Quesada**	**0.99**	**264**	Pg	Pg	13 40 56.9	-1.1
	4.4nm,0.1s,SNR=110						
EBER	**Berja**	**1.31**	**220**	Pg	Pg	13 41 02.2	-2.0
	3.4nm,0.3s,SNR=25						
EBER				Lg		13 41 21.7	
	25nm,0.6s,SNR=5.0						
EBER	**Berja**	**1.31**	**220**	Pg	Pg	13 41 02.2	-2.0
	3.4nm,0.3s,SNR=25						
EBER				Lg		13 41 21.7	
	25nm,0.6s,SNR=5.0						
EQUE	**Quentar**	**1.46**	**242**	Pg	Pg	13 41 06.2	-0.7
	23nm,0.2s,SNR=7.9						
EQUE				Lg		13 41 25.0	
	38nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**1.46**	**242**	Pg	Pg	13 41 06.2	-0.8
	23nm,0.2s,SNR=7.9						
EQUE				Lg		13 41 26.4	
	38nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**1.49**	**57**	Pn	Pn	13 41 05.1	-0.6
	0.3nm,0.1s,SNR=35						
EBEN				Pg	Pg	13 41 05.9	-1.6
	7.8nm,0.2s,SNR=7.9						
EBEN				Lg		13 41 26.0	
	41nm,0.3s						
EBEN	**Beniarda**	**1.49**	**57**	Pn	Pn	13 41 05.1	-0.6
	0.3nm,0.1s,SNR=35						
EBEN	**Beniarda**	**1.49**	**57**	Pg	Pg	13 41 05.9	-1.7
	7.8nm,0.2s,SNR=7.9						
EBEN				Lg		13 41 26.0	
	41nm,0.3s						
ECOG	**Cogollos-Vega**	**1.52**	**246**	Pg	Pg	13 41 07.0	-1.1
	7.4nm,0.1s,SNR=7.9						
ECOG				Lg		13 41 28.2	
	74nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.52**	**246**	Pg	Pg	13 41 07.0	-1.1
ECOG				Lg		13 41 28.6	
ECOG	**Cogollos-Vega**	**1.52**	**246**	Pg	Pg	13 41 07.0	-1.1
	7.4nm,0.1s,SNR=7.9						
ECOG				Lg		13 41 28.6	
	74nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	**1.57**	**280**	Pn	Pn	13 41 05.8	-0.9
	15nm,0.2s,SNR=66						
EBAN				Sn	Sn	13 41 26.3	-0.8
	33nm,0.2s,SNR=7.9						
EBAN				Lg		13 41 28.4	
	193nm,0.4s,SNR=15						
EBAN	**Banos Encina**	**1.57**	**280**	Pn	Pn	13 41 05.8	-0.9
EBAN				Sn	Sn	13 41 26.3	-0.8
EBAN				Lg		13 41 28.0	
EBAN	**Banos Encina**	**1.57**	**280**	Pn	Pn	13 41 05.8	-1.0
	15nm,0.2s,SNR=66						
EBAN				Sn	Sn	13 41 26.3	-0.8
	33nm,0.2s,SNR=7.9						
EBAN				Lg		13 41 28.0	
	193nm,0.4s,SNR=15						
EGUA	**Guajares**	**1.75**	**233**	Pn	Pn	13 41 07.8	-1.5
	0.2nm,0.1s,SNR=7.9						
EGUA				Pg	Pg	13 41 10.8	-1.7
	1.8nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.81**	**241**	Pn	Pn	13 41 07.3	-2.8
	0.9nm,0.1s,SNR=7.9						
ERON				Pg	Pg	13 41 11.8	-1.8
	2.7nm,0.2s,SNR=7.9						
ERON				Lg		13 41 36.8	
	47nm,0.6s,SNR=7.9						
ERON	**Agron**	**1.81**	**241**	Pn	Pn	13 41 07.8	-2.2
ERON				Pg	Pg	13 41 11.8	-1.8
ERON				Lg		13 41 37.7	
ERON	**Agron**	**1.81**	**241**	Pn	Pn	13 41 07.8	-2.3
	0.9nm,0.1s,SNR=7.9						
ERON	**Agron**	**1.81**	**241**	Pg	Pg	13 41 11.8	-1.8
	2.7nm,0.2s,SNR=7.9						
ERON				Lg		13 41 37.7	
	47nm,0.6s,SNR=7.9						
ECHE	**Chera**	**1.81**	**22**	Pg	Pg	13 41 11.5	-2.2
	9.3nm,0.3s,SNR=7.9						
ECHE				Lg		13 41 37.5	
	34nm,0.4s,SNR=7.9						
ELUQ	**Luque**	**1.96**	**261**	Pn	Pn	13 41 12.3	+0.1
	10.0nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	13 41 36.7	-0.2
	13nm,0.2s,SNR=7.9						
ELUQ				Lg		13 41 42.1	
	21nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.96**	**261**	Pg	Pg	13 41 12.7	-3.9
ELUQ				Lg		13 41 42.1	
ELUQ	**Luque**	**1.96**	**261**	Pg	Pg	13 41 12.7	-3.9
	10.0nm,0.2s,SNR=7.9						
ELUQ				Lg		13 41 42.1	
	21nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.00**	**248**	Pn	Pn	13 41 12.9	+0.2
	2.0nm,0.1s,SNR=7.9						
ELOJ				Sn	Sn	13 41 36.7	-1.0
	19nm,0.4s,SNR=7.9						
ELOJ				Lg		13 41 42.4	
	7.0nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.00**	**248**	Pn	Pn	13 41 12.9	+0.2
ELOJ				Lg		13 41 41.7	
ELOJ	**Sierra Loja**	**2.00**	**248**	Pn	Pn	13 41 12.9	+0.2
	2.0nm,0.1s,SNR=7.9						
ELOJ				Lg		13 41 41.7	
	19nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**2.19**	**278**	Pn	Pn	13 41 14.2	-1.1
	4.1nm,0.2s,SNR=32						
EADA				Sn	Sn	13 41 40.2	-2.2
	56nm,0.3s						
EADA	**Adamuz**	**2.19**	**278**	Pn	Pn	13 41 14.2	-1.1
	4.1nm,0.2s,SNR=32						
EADA				Sn	Sn	13 41 40.2	-2.2
	56nm,0.3s						
EALB	**Alboran**	**2.19**	**207**	Pg	Pg	13 41 18.8	-2.0
	9.3nm,0.3s,SNR=7.9						
EALB	**Alboran**	**2.19**	**207**	Pg	Pg	13 41 18.8	-2.1
	9.3nm,0.3s,SNR=7.9						
MAL	**Malaga**	**2.37**	**241**	*e*S	Sn	13 41 51.4	+4.4
ESDC	**Sonseca Array**	**2.43**	**317**	Pn	Pn	13 41 17.5	-1.1
	1.5nm,0.1s,SNR=7.9						
ESDC				Pg	Pg	13 41 22.1	-3.4
	11nm,0.2s,SNR=7.9						
ESDC				Lg		13 41 54.2	
	9.8nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**2.43**	**317**	Pn	Pn	13 41 17.5	-1.1
	1.5nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**2.43**	**317**	Pg	Pg	13 41 22.1	-3.4
	11nm,0.2s,SNR=7.9						
ESDC				Lg		13 41 54.2	
	9.8nm,0.2s,SNR=7.9						
ESLA	**Sonseca Array**	**2.43**	**317**	*e*Pn	Pn	13 41 22.7	+4.0
ESLA				*e*Sn	Sn	13 41 53.2	+4.8
EMOS	**Mosqueruela**	**2.67**	**23**	Pn	Pn	13 41 21.1	-0.8
	1.5nm,0.2s,SNR=7.9						
EMOS				Pg	Pg	13 41 26.8	-3.3
	5.0nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	13 41 53.3	-1.0
	2.0nm,0.2s,SNR=7.9						
EMOS				Lg		13 42 03.1	
	5.2nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.67**	**23**	Pn	Pn	13 41 21.1	-0.8
EMOS				Pg	Pg	13 41 29.9	-0.3
EMOS				Lg		13 42 03.1	
EMOS	**Mosqueruela**	**2.67**	**23**	Pn	Pn	13 41 21.1	-0.9
	1.5nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.67**	**23**	Pg	Pg	13 41 29.8	-0.3
	5.0nm,0.3s,SNR=7.9						
EMOS				Lg		13 42 03.1	
	5.2nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**2.71**	**241**	Pg	Pg	13 41 26.6	-4.2
EMIJ				Lg		13 42 08.3	
EMIJ	**Mijas**	**2.71**	**241**	Pg	Pg	13 41 26.6	-4.2
	2.2nm,0.2s,SNR=7.9						
EMIJ				Lg		13 42 08.3	
	12nm,0.4s,SNR=7.9						
EIBI	**Ibiza**	**2.73**	**65**	Pn	Pn	13 41 20.9	-1.8
	0.9nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	13 41 53.5	-2.2
	5.9nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.73**	**65**	Pn	Pn	13 41 20.9	-1.9
	0.9nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	13 41 53.5	-2.3
	5.9nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**3.27**	**327**	Pn	Pn	13 41 30.3	+0.1
	1.5nm,0.2s,SNR=7.9						
GUD				Pg	Pg	13 41 38.7	-3.0
	4.8nm,0.2s,SNR=7.9						
GUD				Lg		13 42 20.5	
	16nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**3.27**	**327**	Pn	Pn	13 41 30.5	+0.3
GUD				Pg	Pg	13 41 38.7	-3.0
GUD				Lg		13 42 20.5	
GUD	**Guadarrama**	**3.27**	**327**	Pn	Pn	13 41 30.5	+0.2
	1.5nm,0.2s,SNR=7.9						
ESPR	**Espera**	**3.37**	**253**	Pg	Pg	13 41 34.5	-9.0
	3.3nm,0.2s,SNR=7.9						
ESPR				Sn	Sn	13 42 07.5	-4.2
	8.1nm,0.3s,SNR=7.9						
ESPR				Lg		13 42 27.2	
	13nm,0.3s,SNR=7.9						
ESPR	**Espera**	**3.37**	**253**	Pg	Pg	13 41 34.5	-9.0
ESPR				Sn	Sn	13 42 07.5	-4.1
ESPR				Lg		13 42 28.4	
ESPR	**Espera**	**3.37**	**253**	Sn	Sn	13 42 07.5	-4.1
	8.1nm,0.3s,SNR=7.9						
ESPR				Lg		13 42 28.4	
	13nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**3.48**	**28**	Pn	Pn	13 41 32.8	-0.3
	1.5nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	13 42 11.9	-2.3
	5.2nm,0.3s,SNR=7.9						
ERTA				Lg		13 42 27.6	
	8.6nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**3.48**	**28**	Pn	Pn	13 41 32.8	-0.3
ERTA				Sn	Sn	13 42 14.3	+0.1
ERTA				Lg		13 42 27.6	
ERTA	**Horta de San J**	**3.48**	**28**	Pn	Pn	13 41 32.8	-0.2
	1.5nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	13 42 14.3	+0.1
	5.2nm,0.3s,SNR=7.9						
ERTA				Lg		13 42 27.6	
	8.6nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.84**	**269**	Pn	Pn	13 41 37.2	-0.8
	2.0nm,0.4s,SNR=31						
EMIN				Sn	Sn	13 42 20.4	-2.7
	5.9nm,0.3s,SNR=5.0						
EMIN				Lg		13 42 41.4	
	22nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.84**	**269**	Pn	Pn	13 41 37.2	-0.8
EMIN				Sn	Sn	13 42 21.4	-1.7
EMIN				Lg		13 42 41.4	
EMIN	**Mina Concepcio**	**3.84**	**269**	Pn	Pn	13 41 37.2	-0.8
	2.0nm,0.4s,SNR=31						
EMIN				Sn	Sn	13 42 21.4	-1.7
	5.9nm,0.3s,SNR=5.0						
EMIN				Lg		13 42 41.4	
	22nm,0.4s,SNR=7.9						
EPLA	**Plasencia**	**3.95**	**304**	Pn	Pn	13 41 37.7	-1.9
	0.8nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	13 42 21.7	-4.2
	1.9nm,0.1s,SNR=7.9						
EPLA				Lg		13 42 40.4	
	10nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**4.07**	**61**	Pn	Pn	13 41 40.5	-0.8
	0.9nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	13 42 26.4	-2.6
	1.6nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**4.07**	**61**	Pn	Pn	13 41 41.3	+0.1
ETOS				Sn	Sn	13 42 27.0	-1.9
ETOS	**Mallorca**	**4.07**	**61**	Pn	Pn	13 41 41.3	+0.1
	0.9nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	13 42 27.0	-2.0
	1.6nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.11**	**32**	Pn	Pn	13 41 41.7	0.0
	0.7nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	13 42 26.3	-3.5
	3.2nm,0.4s,SNR=7.9						
EPOB				Lg		13 42 47.1	
	4.3nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**4.11**	**32**	Pn	Pn	13 41 41.7	0.0
	0.7nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	13 42 26.3	-3.5
	3.2nm,0.4s,SNR=7.9						
EPOB				Lg		13 42 47.1	
	4.3nm,0.4s,SNR=7.9						
EBAD	**Badajoz**	**4.17**	**283**	Pn	Pn	13 41 40.8	-1.7
	2.7nm,0.5s,SNR=5.8						
EBAD				Pg	Pg	13 41 55.4	-3.3
	2.9nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	13 42 27.1	-4.1
	22nm,0.4s,SNR=5.0						
EBAD				Lg		13 42 52.5	
	13nm,0.4s,SNR=7.9						
EBAD	**Badajoz**	**4.17**	**283**	Pn	Pn	13 41 40.8	-1.7
EBAD				Pg	Pg	13 41 56.0	-2.7
EBAD				Sn	Sn	13 42 28.9	-2.3
EBAD				Lg		13 42 52.5	
EBAD	**Badajoz**	**4.17**	**283**	Pn	Pn	13 41 40.8	-1.7
	2.7nm,0.5s,SNR=5.8						
EBAD	**Badajoz**	**4.17**	**283**	Pg	Pg	13 41 56.0	-2.7
	2.9nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	13 42 28.9	-2.3
	22nm,0.4s,SNR=5.0						
EBAD				Lg		13 42 52.5	
	13nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**4.50**	**267**	Pn	Pn	13 41 46.0	-1.1
	2.5nm,0.3s,SNR=9.5						
EGRO				Sn	Sn	13 42 35.9	-3.6
	11nm,0.5s,SNR=5.0						
EGRO				Lg		13 43 02.0	
	7.5nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**4.50**	**267**	Pn	Pn	13 41 46.0	-1.1
EGRO				Sn	Sn	13 42 35.9	-3.6
EGRO				Lg		13 43 00.7	
EGRO	**El Granado**	**4.50**	**267**	Pn	Pn	13 41 46.0	-1.1
	2.5nm,0.3s,SNR=9.5						
EGRO				Sn	Sn	13 42 35.9	-3.6
	11nm,0.5s,SNR=5.0						
EGRO				Lg		13 43 00.7	
	7.5nm,0.4s,SNR=7.9						
PESTR	**Estremoz**	**4.63**	**284**	*e*Pn	Pn	13 41 48.5	-0.4
PESTR				*e*Sn	Sn	13 42 39.9	-2.7
PESTR				*e*Sg	Sg	13 43 03.8	-3.7
PBEJ	**Beja**	**4.77**	**273**	*e*Sn	Sn	13 42 43.4	-2.8
PCBR	**Castelo Branco**	**4.81**	**295**	*e*Sn	Sn	13 42 43.6	-3.6
PCBR				*e*Sg	Sg	13 43 09.6	-3.9
PCBR							
	17nm,0.5s						
PCBR	**Castelo Branco**	**4.81**	**295**	*e*Sn	Sn	13 42 43.6	-3.6
PCBR				*e*Sg	Sg	13 43 09.6	-3.9
	17nm,0.5s						
EBIE	**Bielsa**	**5.01**	**17**	Pn	Pn	13 41 54.6	+0.6
	0.7nm,0.2s,SNR=7.9						
EBIE				Sn	Sn	13 42 48.0	-4.0
	0.3nm,0.2s,SNR=7.9						
EBIE				Lg		13 43 18.1	
	1.4nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**5.01**	**17**	Pn	Pn	13 41 54.6	+0.6
EBIE				Sn	Sn	13 42 49.2	-2.7
EBIE				Lg		13 43 17.1	
EBIE	**Bielsa**	**5.01**	**17**	Pn	Pn	13 41 54.6	+0.5
	SNR=7.9						
EBIE				Sn	Sn	13 42 49.2	-2.8
	0.3nm,0.2s,SNR=7.9						
EBIE				Lg		13 43 17.1	
	1.4nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**5.09**	**301**	*e*Sg	Sg	13 43 19.2	-3.3
MTE							
	15nm,0.3s						
MTE	**Manteigas**	**5.09**	**301**	*e*Sg	Sg	13 43 19.2	-3.3
	15nm,0.3s						
MOE	**Montemor**	**5.17**	**279**	*e*Sn	Sn	13 42 52.6	-3.5
EALK	**Alkurruntz**	**5.31**	**3**	Pn	Pn	13 41 58.2	-0.1
	18nm,0.6s,SNR=7.9						
EALK				Sn	Sn	13 42 54.9	-4.6
	4.5nm,0.4s,SNR=7.9						
EALK				Lg		13 43 29.1	
	74nm,1.6s,SNR=7.9						
EALK	**Alkurruntz**	**5.31**	**3**	Pn	Pn	13 41 58.8	+0.5
EALK				Sn	Sn	13 42 58.1	-1.4
EALK				Lg		13 43 29.1	
EALK	**Alkurruntz**	**5.31**	**3**	Pn	Pn	13 41 58.8	+0.5
	18nm,0.6s,SNR=7.9						
EALK				Sn	Sn	13 42 58.1	-1.4
PBRG	**Braganca**	**5.43**	**317**	*e*Pn	Pn	13 41 59.0	-0.8
PBRG				*e*Sg	Sg	13 43 28.3	-4.9
PBRG							
	9.8nm,0.4s						
PBRG	**Braganca**	**5.43**	**317**	*e*Pn	Pn	13 41 59.0	-0.8
PBRG				*e*Sg	Sg	13 43 28.3	-4.9
	9.8nm,0.4s						
PVIS	**Viseu**	**5.48**	**303**	*e*Sn	Sn	13 42 59.8	-3.8
PVIS				*e*Sg	Sg	13 43 30.4	-4.4
ECAL	**Calabor**	**5.52**	**318**	Pn	Pn	13 41 59.4	-1.8
	0.4nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	13 42 59.3	-5.4
	1.2nm,0.2s,SNR=7.9						
ECAL				Lg		13 43 33.7	
	8.6nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**5.52**	**318**	Pn	Pn	13 41 57.8	-3.3
ECAL				Lg		13 43 33.5	
EARI	**Arriondas**	**5.97**	**336**	Pn	Pn	13 42 06.6	-0.8
	0.9nm,0.2s,SNR=7.9						
EARI				Sn	Sn	13 43 10.9	-4.8
	32nm,1.3s,SNR=7.9						
EARI				Lg		13 43 49.1	
	4.1nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**5.97**	**336**	Pn	Pn	13 42 06.6	-0.8
EARI				Sn	Sn	13 43 10.9	-4.8
EARI				Lg		13 43 48.2	
PCAB	**Cabril**	**6.10**	**310**	*e*Sg	Sg	13 43 52.4	-2.3
ELOB	**Lobios**	**6.21**	**311**	Pn	Pn	13 42 09.8	-0.8
	0.1nm,0.1s,SNR=7.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ELOB				Sn	Sn	13 43 16.9	-4.9
	0.2nm,0.2s,SNR=7.9						
ELOB				Lg		13 43 57.2	
	12nm,0.6s,SNR=7.9						
ELOB	**Lobios**	**6.21**	**311**	Pn	Pn	13 42 09.8	-0.8
ELOB				Sn	Sn	13 43 17.5	-4.2
ELOB				Lg		13 43 55.7	
EPON	**Pontenova**	**6.76**	**325**	Lg		13 44 12.8	
	4.8nm,0.4s,SNR=7.9						

*IDC **01** 15:26:11.3±1.3, 5171N×17633E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/20, mbtmp3.7/5, Error ellipse: s-maj=46.4km s-min=30.4km az=18.0*

*ISCJB **01** 15:26:17.0±1.2, 518N±02×1765E±02, h58km±12km, mb3.7/5, Error ellipse: s-maj=43.9km s-min=8.3km az=41.2*

*NEIC **01** 15:26:17.0±1.4, 5169N×17647E, h43km±14km, ML3.4(AEIC), Error ellipse: s-maj=34.9km s-min=10.3km az=198.0*

ISC 01 15:26:17.3±1.6**, 517N**±03×**1764E**±02**, h46**km±15km**, n9, σ0.74**/11**, mb3.7**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.77**	**307**	P	**Pn**	**15 26 45.9**	**+0.4**
SMY				S	**Sn**	**15 27 07.1**	**+0.3**
AMKA	**Amchitka**	**1.81**	**99**	P	**Pn**	**15 26 44.9**	**-1.2**
AMKA				S	**Sn**	**15 27 08.7**	**+0.8**
ATKA	**Atka Island**	**5.81**	**81**	P	**Pn**	**15 27 40.4**	**-0.5**
SONM	**Songino Array**	**43.82**	**294**	P	**P**	**15 34 19.1**	**+0.5**
	0.5nm,0.5s,mb3.5,baz=63,slow=8.7,SNR=6.5						
NVAR	**Mina Array Bea**	**46.44**	**80**	P	**P**	**15 34 40.4**	**+1.0**
	0.4nm,0.7s,mb3.5,baz=289,slow=8.7,SNR=3.7						
NVAR	**Mina Array Bea**	**46.44**	**80**	P	**P**	**15 34 40.4**	**+1.0**
MKAR	**Makanchi Array**	**57.47**	**306**	P	**P**	**15 36 00.2**	**-1.3**
	0.4nm,0.5s,mb3.7,baz=39,slow=8.2,SNR=5.0						
BVAR	**Borovoye Array**	**58.68**	**317**	P	**P**	**15 36 09.6**	**-0.4**
	1.0nm,0.5s,mb4.1,baz=60,slow=6.0,SNR=6.0						
ASAR	**Alice Springs**	**83.79**	**219**	P	**P**	**15 38 42.0**	**+0.3**
	0.3nm,0.6s,mb3.6,baz=22,slow=5.7,SNR=9.6						

*NIED **01** 15:28:00, 4630N×15320E, h20km, Mw4.1 Best double couple: M₀1.56000×10¹⁵ NP1:φs225.00000°, δ90.00000°, λ156.00000°. NP2:φs315.00000°, δ66.00000°, λ0.00000°.*

*BJI **01** 15:28:09.7, 4653N×15335E, h10km, mB4.4, mb4.5, Ms3.8, Msz3.4*

*NEIC **01** 15:28:10.9±3.6, 46.11N×153.16E, h7km±22km, mb4.5/12, Error ellipse: s-maj=15.9km s-min=8.3km az=134.0*

*ISCJB **01** 15:28:14.3±1.1, 4607N±007×15299E±009, h44km±9km, mb4.3/33, MS3.5/3, Error ellipse: s-maj=14.5km s-min=7.5km az=103.8*

*MOS **01** 15:28:15.1±1.0, 46.14N×15290E, h48km, mb4.6/15, Error ellipse: s-maj=11.1km s-min=7.4km az=112.3*

*IDC **01** 15:28:17.5±4.4, 46.13N×15305E, h55km±40km, mb3.8/13, mb1 4.0/15, mb1mx3.9/22, mbtmp4.1/15, ML3.3/1, Error ellipse: s-maj=27.1km s-min=23.1km az=166.0*

*SZGRF **01** 15:28:20.3, 4635N×15277E, h33km, mb4.6, Kuril Islands, Russia*

ISC 01 15:28:16.5±0.9**, 4610N**±007×**15300E**±009**, h48**km±7km**, h22**km±4.2km**: pP-P, n102,** σ1.21/114**, mb4.3**/33**, MS3.5**/3**, 3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.71**	**258**	ePN	**Pn**	**15 29 09.9**	**-1.2**
KUR				eS	**Sn**	**15 29 52.0**	**-1.5**
SKR	**Severo-Kuril's**	**5.03**	**23**	ePN	**Pn**	**15 29 21.4**	**-8.0**
SKR				pmax	pmax		
	comp=N,80nm,0.9s						
SKR				pmax	pmax		
	comp=E,70nm,0.9s						
SKR				pmax	pmax		
	comp=Z,150nm,0.9s						
SKR				MLR	MLR		
	comp=Z,2μm,12.0s						
YUK	**Yuzh-Kuril'sk**	**5.46**	**250**	PN	**Pn**	**15 29 40.0**	**+4.7**
YUK				S	**Sn**	**15 30 39.2**	**+2.4**
YUK				smax			
	comp=N,150nm,0.5s						
YUK				smax			
	comp=E,220nm,0.5s						
NEM2	**Nemuro 2**	**5.85**	**245**	P	**Pn**	**15 29 39.4**	**-1.2**
NEM2				eS	**Sn**	**15 30 43.4**	**-2.9**
JRA	**Rausu**	**5.99**	**252**	P	**Pn**	**15 29 44.0**	**+1.5**
JNK	**Nakash**	**6.40**	**250**	P	**Pn**	**15 29 49.0**	**+0.8**
JNK				eS	**Sn**	**15 31 01.8**	**+1.9**
JAK	**Akkeshi**	**6.70**	**245**	P	**Pn**	**15 29 51.0**	**-1.2**
JAK				eS	**Sn**	**15 31 03.3**	**-3.8**
JTKR	**Abashiri--Toko**	**6.79**	**255**	P	**Pn**	**15 29 55.2**	**+1.8**
YSS	**Yuzh-Sakhalins**	**7.12**	**281**	ePN	**Pn**	**15 30 02.8**	**+4.8**
YSS				pmax	pmax		
	comp=Z,17nm,0.9s						
YSS	**Yuzh-Sakhalins**	**7.12**	**281**	eP	**Pn**	**15 30 02.8**	**+4.7**
	comp=Z,17nm,0.9s						
JMP	**Maruseppu**	**7.14**	**256**	P	**Pn**	**15 30 00.1**	**+1.8**
JAR	**Ashorobuto**	**7.15**	**250**	P	**Pn**	**15 29 59.1**	**+0.7**
JAR				eS	**Sn**	**15 31 18.5**	**+0.2**
JOB	**Onbets**	**7.29**	**247**	P	**Pn**	**15 30 00.6**	**+0.2**
JKK2	**Kamakawa 2**	**7.61**	**257**	P	**Pn**	**15 30 06.7**	**+2.1**
ASAJ	**Asahikawa**	**7.63**	**259**	P	**Pn**	**15 30 07.5**	**+2.6**
	comp=Z,2.5nm,0.3s,baz=92,slow=13,SNR=12						
ASAJ	**Asahikawa**	**7.63**	**259**	P	**Pn**	**15 30 07.4**	**+2.5**
ASAJ	**Asahikawa**	**7.63**	**259**	PN	**Pn**	**15 30 07.6**	**+2.7**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JCH	**Churui**	**7.74**	**247**	P	**Pn**	**15 30 06.1**	**-0.4**
JCH				eS	**Sn**	**15 31 30.0**	**-2.7**
PET	**Petropavlovsk**	**7.84**	**26**	ePN	**Pn**	**15 30 09.8**	**+1.9**
PET	**Petropavlovsk**	**7.84**	**26**	P	**Pn**	**15 30 02.6**	**-5.2**
	comp=Z,60nm,1.4s						
JEM	**Erimo**	**8.18**	**244**	P	**Pn**	**15 30 13.6**	**+1.1**
JEM				eS	**Sn**	**15 31 42.2**	**-1.4**
JNBK	**Urakawa-nobuka**	**8.30**	**246**	P	**Pn**	**15 30 13.1**	**-1.0**
JBT2	**Biratori 2**	**8.31**	**250**	P	**Pn**	**15 30 14.5**	**+0.3**
JNB	**Noboribetsu**	**9.32**	**251**	P	**Pn**	**15 30 29.0**	**+0.9**
JKB	**Kayabe**	**9.60**	**248**	P	**Pn**	**15 30 31.0**	**-0.9**
JKB				eS	**Sn**	**15 32 14.8**	**-3.6**
JTM	**Tenmabayashi**	**10.17**	**243**	P	**Pn**	**15 30 38.4**	**-1.4**
JTM				eS	**Sn**	**15 32 27.3**	**-5.1**
JRG	**Rokugo**	**11.29**	**238**	eS	**Sn**	**15 32 54.3**	**-5.4**
JIO	**Ouri**	**11.52**	**233**	eS	**Sn**	**15 32 55.8**	**-10**
HABR	**Khabarovsk**	**12.42**	**288**	ePN	**Pn**	**15 31 10.9**	**+0.4**
MA2	**Magadan**	**13.56**	**355**	eP	**Pn**	**15 31 25.4**	**-0.7**
MAJO	**Matsushiro**	**14.63**	**234**	eP	**Pn**	**15 31 38.1**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MAJO	**Matsushiro**	**14.63**	**234**	eP	**Pn**	**15 31 38.1**	**-2.3**
	comp=Z,13nm,0.8s						
MAT	**Matsushiro**	**14.63**	**234**	P	**Pn**	**15 31 48.0**	**+7.5**
MAT				S	**Sn**	**15 34 02.2**	**-19**
MJAR	**Matsushiro Arr**	**14.63**	**234**	P	**Pn**	**15 31 40.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=26,slow=12,SNR=7.5						
KLR	**Kul'dur**	**14.65**	**290**	eP	**Pn**	**15 31 40.2**	**-0.5**
MDJ	**Mudanjiang**	**16.51**	**273**	P	**Pn**	**15 32 06.2**	**+1.6**
MDJ				AMB	AMB		
	comp=Z,21nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,59nm,6.3s						
MDJ	**Mudanjiang**	**16.51**	**273**	eP	**Pn**	**15 32 06.0**	**+1.4**
	comp=Z,20nm,1.1s						
CN2	**Changchun**	**19.60**	**273**	eP	**Pn**	**15 32 42.3**	**0.0**
CN2				eAP	pP	15 32 46.0	-5.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,150nm,15.0s						
CN2				LR	LR		
	comp=E,240nm,15.0s						
CN2				LR	LR		
	comp=Z,230nm,15.0s						
CLNS	**Chul'man**	**20.39**	**312**	eP	**P**	**15 32 49.6**	**+0.4**
CLNS				pmax	pmax		
	comp=Z,18nm,1.0s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.8s						
YAK	**Yakutsk**	**20.83**	**328**	⇓iP	**P**	**15 32 53.3**	**-0.6**
YAK				pmax	pmax		
	comp=Z,19nm,1.0s						
YAK				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.2						
YAK	**Yakutsk**	**20.83**	**328**	eP	**P**	**15 32 53.2**	**-0.7**
BILL	**Bilibino**	**23.04**	**13**	⇓iP	**P**	**15 33 17.0**	**-0.5**
BILL				e*PP		15 33 33.0	
BILL				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.3						
BILL	**Bilibino**	**23.04**	**13**	eP	**P**	**15 33 16.5**	**-1.0**
	comp=Z,10nm,1.0s,mb4.2						
BOD	**Bodaibo**	**26.35**	**311**	eP	**P**	**15 33 46.0**	**-1.9**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.9						
BJI	**Beijing**	**27.40**	**271**	P	**P**	**15 34 01.4**	**+4.1**
BJI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
BJI				LR	LR		
	comp=N,124nm,17.2s,MS3.7						
BJI				LR	LR		
	comp=E,122nm,17.2s,MS3.7						
BJI				LR	LR		
	comp=Z,72nm,17.2s,MS3.3						
SSE	**Sheshan**	**28.80**	**250**	P	**P**	**15 34 14.8**	**+5.0**
SSE				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,33nm,7.2s						
ULN	**Ulaanbaatar**	**31.05**	**290**	i P	**P**	**15 34 30.7**	**+1.0**
SONM	**Songino Array**	**31.48**	**290**	P	**P**	**15 34 33.5**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.7,baz=64,slow=6.8,SNR=3.9						
TLY	**Talaya**	**32.41**	**298**	eP	**P**	**15 34 42.3**	**+0.6**
TLY				e		15 35 45.7	
TLY				eS	**S**	**15 39 47.8**	**-4.9**
TLY				eSSS		15 42 13.5	
TLY				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.2						
TLY				MLR	MLR		
	comp=Z,117nm,15.0s,MS3.7						
ZAK	**Zakamensk**	**32.89**	**296**	eP	**P**	**15 34 45.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
IMA2	**Indian Mountai**	**34.38**	**35**	eP	**P**	**15 34 57.2**	**-1.5**
LZH	**Lanzhou**	**37.84**	**273**	eP	**P**	**15 35 31.8**	**+3.5**
LZH				AP	pP	15 35 37.5	-3.7
LZH				XP	sP	15 35 41.0	-5.9
LZH				AMB	AMB		
	comp=Z,33nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,130nm,4.2s						
GTA	**Gaotai**	**39.00**	**280**	eP	**P**	**15 35 41.0**	**+2.9**
GTA				AP	pP	15 35 49.7	-1.3
GTA				XP	sP	15 35 54.1	-2.6
GTA				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.3						
GYA	**Guiyang**	**41.50**	**258**	P	**P**	**15 36 00.9**	**+2.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
INK	**Inuvik**	**42.24**	**32**	P	**P**	**15 36 04.2**	**-0.6**
	comp=Z,3.7nm,0.9s,mb4.0,baz=264,slow=4.0,SNR=7.6						
INK	**Inuvik**	**42.24**	**32**	P	**P**	**15 36 04.3**	**-0.5**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**42.24**	**32**	eP	**P**	**15 36 04.1**	**-0.8**
	comp=Z,4.9nm,1.0s,mb4.1						
MKAR	**Makanchi Array**	**47.17**	**298**	P	**P**	**15 36 44.2**	**+0.1**
	comp=Z,4.6nm,0.9s,mb4.4,baz=63,slow=8.3,SNR=26						
KURK	**Kurchatov**	**47.66**	**304**	⇓iP	**P**	**15 36 47.4**	**-0.5**
KURK	**Kurchatov**	**47.66**	**304**	eP	**P**	**15 36 47.3**	**-0.6**
	comp=Z,8.9nm,1.0s,mb4.8						
CHKZ	**Chkalovo**	**50.79**	**310**	eP	**P**	**15 37 11.1**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
CHKZ	**Chkalovo**	**50.79**	**310**	eP	**P**	**15 37 11.1**	**-0.7**
	comp=Z,6.0nm,0.6s,mb4.7						
BVAR	**Borovoye Array**	**51.21**	**310**	P	**P**	**15 37 15.2**	**+0.2**
	comp=Z,1.4nm,0.5s,mb4.1,baz=64,slow=7.4,SNR=9.3						
BRVK	**Borovoye**	**51.26**	**310**	eP	**P**	**15 37 15.1**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**51.26**	**310**	eP	**P**	**15 37 15.1**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.3						
ZRNK	**Zerenda**	**51.99**	**310**	eP	**P**	**15 37 20.3**	**-0.5**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
ZRNK	**Zerenda**	**51.99**	**310**	eP	**P**	**15 37 20.3**	**-0.5**
	comp=Z,4.6nm,1.0s,mb4.4						
ARU	**Arti**	**55.44**	**318**	eP	**P**	**15 37 45.2**	**-0.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
ARU	**Arti**	**55.44**	**318**	eP	**P**	**15 37 45.2**	**-0.8**
	comp=Z,3.6nm,0.5s,mb4.7						
ARCES	**ARCESS Array B**	**58.44**	**341**	P	**P**	**15 38 06.6**	**-0.6**
	comp=Z,2.4nm,0.8s,mb4.3,baz=43,slow=9.0,SNR=4.1						
AKTK	**Aktyubinsk**	**59.10**	**312**	P	**P**	**15 38 12.5**	**+0.6**
AKTO	**Aktyubinsk**	**59.10**	**312**	P	**P**	**15 38 12.5**	**+0.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=71,slow=4.4,SNR=4.6						
SUMG	**Summit**	**61.35**	**4**	eP	**P**	**15 38 27.0**	**-0.3**
	comp=Z,12nm,0.8s,mb5.1						
JOF	**Joensuu**	**61.88**	**334**	ep	**P**	**15 38 29.0**	**-1.8**
NVAR	**Mina Array Bea**	**62.80**	**62**	P	**P**	**15 38 37.1**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.8,baz=288,slow=7.6,SNR=4.7						
KAF	**Kangasniemi**	**64.00**	**335**	ep	**P**	**15 38 43.7**	**-1.2**
	comp=Z,4.6nm,0.7s,mb4.6,baz=36,slow=6.2						
KAF	**Kangasniemi**	**64.00**	**335**	eP	**P**	**15 38 43.7**	**-1.2**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
FINES	**FINESS Array B**	**64.60**	**335**	P	**P**	**15 38 48.5**	**-0.3**
	comp=Z,3.8nm,0.6s,mb4.6,baz=38,slow=7.6,SNR=25						
OBN	**Obninsk**	**65.80**	**326**	eP	**P**	**15 38 56.2**	**-0.4**
OBN				e		15 39 28.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
NB2	**NORSAR Subarra**	**68.82**	**341**	P	**P**	**15 39 15.1**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.82**	**341**	P	**P**	**15 39 15.5**	**-0.2**
	comp=Z,1.7nm,0.7s,mb4.1,baz=27,slow=6.2,SNR=10						
KIV	**Kislovodsk**	**71.20**	**314**	i P	**P**	**15 39 32.1**	**+1.8**
KIV				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
ASAR	**Alice Springs**	**71.57**	**198**	P	**P**	**15 39 33.2**	**+0.8**
	comp=Z,0.5nm,0.9s,mb3.5,baz=13,slow=5.9,SNR=4.4						
AKASG	**Malin Array Be**	**72.05**	**326**	P	**P**	**15 39 35.5**	**+0.2**
	comp=Z,6.4nm,0.7s,mb4.6,baz=34,slow=6.3,SNR=20						
AKBB	**Malin Array Si**	**72.05**	**326**	eP	**P**	**15 39 35.7**	**+0.4**
SOC	**Sochi**	**72.93**	**316**	eP	**P**	**15 39 39.7**	**-0.9**
SOC				e*PP	pP	15 40 04.3	+10
SOC				e		15 42 26.2	
SOC				ePPP		15 44 15.2	
SOC				eS	S	15 48 54.7	-8.9
SOC				e		15 49 40.2	
SOC				eSSS		15 56 56.2	
SOC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
OKC	**Ostrava-Krasne**	**76.73**	**332**	eP	**P**	**15 39 54.1**	**-8.5**
UPC	**Upice**	**76.83**	**333**	eP	**P**	**15 40 04.0**	**+0.9**
DPC	**Dobruska-Polom**	**76.87**	**333**	eP	**P**	**15 40 01.2**	**-2.2**
CLL	**Collm**	**77.03**	**336**	eP	**P**	**15 40 05.0**	**+0.8**
VYHS	**Vyhne**	**77.66**	**331**	eP	**P**	**15 40 08.4**	**+0.6**
PRU	**Pruhonice**	**77.74**	**334**	eP	**P**	**15 40 04.3**	**-3.9**
NKC	**Novy Kostel**	**78.14**	**335**	eP	**P**	**15 40 06.2**	**-4.3**
NKC				epP	pP	15 40 13.5	-11
KHC	**Kasperske Hory**	**78.79**	**334**	eP	**P**	**15 40 15.0**	**+1.0**
KHC	**Kasperske Hory**	**78.79**	**334**	eP	**P**	**15 40 15.1**	**+1.1**
BRTR	**Keskin Array B**	**78.81**	**317**	P	**P**	**15 40 14.3**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=90,slow=3.7,SNR=3.8						
GRA1	**Grafenberg Arr**	**78.98**	**336**	eP	**P**	**15 40 17.7**	**+2.6**
	comp=Z,6.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**78.98**	**336**	eP	**P**	**15 40 17.7**	**+2.6**
	comp=Z,6.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**78.98**	**336**	eP	**P**	**15 40 17.7**	**+2.6**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**78.98**	**336**	eP	**P**	**15 40 17.7**	**+2.6**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
GERES	**GERESS Array B**	**79.01**	**334**	P	**P**	**15 40 15.9**	**+0.7**
	comp=Z,0.8nm,0.6s,mb3.8,baz=62,slow=6.2,SNR=6.2						
GERES	**GERESS Array B**	**79.01**	**334**	P	**P**	**15 40 15.9**	**+0.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*ISCJB **01** 15:49:57.4±0.4, 4695N±002×680E±004, h14km±5km, Error ellipse: s-maj=4.7km s-min=3.2km az=4.2*

*ZUR **01** 15:49:58.1, 4692N×688E, h7km±2km, ML1.9/7*

*CSEM **01** 15:49:59.0±0.1, 4694N×681E, h12km, ML2.4/6, Error ellipse: s-maj=2.2km s-min=1.4km az=92.0*

*LDG **01** 15:49:59.0±0.1, 4694N×681E, h2km, Md2.5/2, Ml2.4/8, Error ellipse: s-maj=2.4km s-min=1.3km az=98.0*

ISC 01 15:49:58.3±0.4**, 4694N**±002×**681E**±004**, h16**km±4km**, n34,** σ0.81/49**, 2C-2D, Switzerland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORNY	**Torny**	**0.19**	**149**	i Sg	**Pg**	**15 50 01.5**	**-1.4**
	700nm,0.2s						
TORNY	**Torny**	**0.19**	**149**	⇓iPg	**Sg**	**15 50 04.4**	**-1.6**
	700nm,0.2s						
TORNY	**Torny**	**0.19**	**149**	⇓iPg	**Sg**	**15 50 04.4**	**-1.6**
	700nm,0.2s						
BRANT	**Les Verrieres**	**0.23**	**270**	⇑iPg	**Pg**	**15 50 03.7**	**+0.2**
	126nm,0.4s						
BRANT				eSg	**Sg**	**15 50 08.2**	**+1.1**
	126nm,0.4s						
BOURR	**Bourrignon**	**0.54**	**32**	⇑iPg	**Pg**	**15 50 09.2**	**+0.3**
	98nm,0.6s						
GIMEL	**Gimel**	**0.55**	**223**	eSg	**Pg**	**15 50 09.5**	**+0.3**
CABF	**La Chapelle**	**0.60**	**237**	ePg	**Pg**	**15 50 10.3**	**+0.3**
CABF	**La Chapelle**	**0.60**	**237**	ePn	**Pn**	**15 50 13.0**	**+0.9**
CABF				eSg	**Sg**	**15 50 19.0**	**+1.0**
	7.5nm,0.2s						
CABF	**La Chapelle**	**0.60**	**237**	ePn	**Pn**	**15 50 13.0**	**+0.9**
AIGLE	**Aigle**	**0.61**	**171**	ePg	**Pg**	**15 50 10.7**	**+0.5**
	49nm,1.1s						
SENIN	**Lac Senin**	**0.67**	**150**	ePg	**Pg**	**15 50 12.9**	**+1.6**
	36nm,0.3s						
BALST	**Balsthal**	**0.72**	**56**	ePg	**Pn**	**15 50 18.4**	**+4.6**
	196nm,0.3s						
HINF	**Hinteralfeld**	**0.88**	**2**	ePg	**Pg**	**15 50 15.7**	**+0.4**
HINF				eSg	**Sg**	**15 50 27.6**	**+0.7**
	12nm,0.2s						
HINF	**Hinteralfeld**	**0.88**	**2**	ePg	**Pg**	**15 50 15.7**	**+0.4**
HINF				eSg	**Sg**	**15 50 27.6**	**+0.7**
	5.9nm,0.2s						
HAU	**Haudompre**	**1.11**	**344**	ePg	**Pg**	**15 50 20.0**	**+0.2**
HAU				eSg	**Sg**	**15 50 35.3**	**+1.0**
	9.0nm,0.2s						
HAU	**Haudompre**	**1.11**	**344**	ePg	**Pg**	**15 50 20.0**	**+0.2**
HAU				eSg	**Sg**	**15 50 35.3**	**+1.0**
	4.5nm,0.2s						
SLE	**Schleitheim**	**1.41**	**53**	ePn	**Pn**	**15 50 22.7**	**-0.6**
	94nm,0.5s						
LPL	**La Plagne**	**1.43**	**182**	ePg	**Pg**	**15 50 26.0**	**+0.3**
LPL				eSg	**Sg**	**15 50 46.0**	**+1.8**
LPG	**La Plagne**	**1.44**	**182**	ePg	**Pg**	**15 50 26.2**	**+0.2**
LPG				eSg	**Sg**	**15 50 44.9**	**+0.1**
	2.8nm,0.2s						
LPG	**La Plagne**	**1.44**	**182**	ePg	**Pg**	**15 50 26.2**	**+0.2**
LPG				eSg	**Sg**	**15 50 44.9**	**+0.1**
	1.4nm,0.2s						
CDF	**Champ du Feu**	**1.51**	**12**	ePn	**Pn**	**15 50 24.5**	**-0.1**
CDF	**Champ du Feu**	**1.51**	**12**	ePg	**Pg**	**15 50 27.0**	**-0.2**
CDF				eSg	**Sg**	**15 50 46.9**	**+0.1**
	7.5nm,0.3s						
CDF	**Champ du Feu**	**1.51**	**12**	ePg	**Pg**	**15 50 27.0**	**-0.2**
BFO	**Black Forest**	**1.73**	**36**	ePg	**Pg**	**15 50 30.8**	**-0.7**
BFO				eSg	**Sn**	**15 50 49.0**	**-0.3**
SFTF	**Sexfontaines**	**1.75**	**317**	ePg	**Pg**	**15 50 31.2**	**-0.6**
SFTF				eSg	**Sg**	**15 50 53.9**	**-0.6**
	7.8nm,0.3s						
SFTF	**Sexfontaines**	**1.75**	**317**	ePg	**Pg**	**15 50 31.2**	**-0.6**
SFTF				eSg	**Sg**	**15 50 53.9**	**-0.6**
	3.9nm,0.3s						
LOR	**Lormes**	**2.04**	**280**	ePn	**Pn**	**15 50 32.3**	**+0.3**
LOR	**Lormes**	**2.04**	**280**	ePg	**Pg**	**15 50 37.0**	**-0.5**
LOR				eSg	**Sg**	**15 51 02.7**	**-1.4**
	4.0nm,0.2s						
LOR	**Lormes**	**2.04**	**280**	ePg	**Pg**	**15 50 37.0**	**-0.5**
LOR				eSg	**Sg**	**15 51 02.7**	**-1.4**
	2.0nm,0.2s						
SMF	**Signal de Mont**	**2.06**	**263**	ePg	**Pg**	**15 50 37.4**	**-0.5**
ORIF	**Oris-en-Rattie**	**2.12**	**198**	eSg	**Sg**	**15 51 05.9**	**-0.7**
	4.1nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.12**	**198**	eSg	**Sg**	**15 51 05.9**	**-0.7**
	2.0nm,0.3s						
AVF	**Avril sur Loir**	**2.38**	**268**	ePg	**Pg**	**15 50 43.6**	**-0.3**
VIVF	**Saint-Julien-l**	**2.56**	**216**	eSg	**Sg**	**15 51 19.0**	**-1.7**
	3.1nm,0.2s						

*NAO **01** 15:49:16.4, 4706N×1358E, h33km, mb3.7*

*ISCJB **01** 15:50:10.1±0.3, 5146N±002×1609E±002, h0km, mb3.6/4, Error ellipse: s-maj=2.4km s-min=1.7km az=31.7*

*STR **01** 15:50:11.4±2.9, 5021N×1683E, h10km±1km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*NEIC **01** 15:50:11.4±0.2, 5156N×16.14E, h5km, mb3.8/1, ML3.2(BRA), ML3.5(STR), ML3.7(FUR), ML3.8(SZGRF), Error ellipse: s-maj=3.4km s-min=3.0km az=177.0*

*CSEM **01** 15:50:12.7±0.1, 5150N×16.15E, h1km, ML4.1/21, Ms3.6, Error ellipse: s-maj=1.3km s-min=0.9km az=10.0*

*PRU **01** 15:50:12.7, 5148N×1604E, h0km, M3.8, Felt In Harrachov*

*IDC **01** 15:50:12.3±0.5, 5150N×1600E, h0km, mb3.7/4, mb1 3.8/12, mb1mx3.7/24, mbtmp3.7/12, ML3.7/8, Error ellipse: s-maj=9.5km s-min=5.5km az=106.0*

*IPEC **01** 15:50:12.4±0.3, 5151N×16.12E, h7km±1km, ML3.4/4, Error ellipse: s-maj=2.1km s-min=0.7km az=31.0*

*WAR **01** 15:50:13.1, 5150N×1609E, ML3.3, Mining Induced*

*BGR **01** 15:50:13.5±0.6, 5154N×1597E, h1km, ML3.8, Error ellipse: s-maj=7.8km s-min=5.6km az=127.0*

*LDG **01** 15:50:13.6±0.4, 5153N×16.13E, h1km, Ml4.0/5, Suspected Mining induced.*

*VIE **01** 15:50:14.1±0.4, 5131N×1609E, h0km, mb3.3/8, ML3.3/10, Ms3.6/1, Error ellipse: s-maj=2.7km s-min=1.8km az=0.0 68 km WNW of Breslau Suspected Mining induced.*

ISC 01 15:50:10.9±0.2**, 5154N**±001×**1612E**±002**, h0**km**, n136,** σ1.10/233**, mb3.6**/4**, 10C-15D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**171**	i Pgd	**Pg**	**15 50 25.4**	**+0.9**
KSP				eSg	**Sg**	**15 50 34.4**	**+0.7**
KSP				eL		15 50 39.0	
KSP	**Ksiaz**	**0.71**	**171**	ePg	**Pg**	**15 50 25.4**	**+0.9**
KSP				eSg	**Sg**	**15 50 34.4**	**+0.7**
UPC	**Upice**	**1.04**	**184**	ePG	**Pg**	**15 50 31.3**	**+0.5**
UPC	**Upice**	**1.04**	**184**	ePg	**Pg**	**15 50 31.4**	**+0.6**
VOJS	**Vojsko**	**1.05**	**168**	eSg	Sn	15 50 02.0	+14
DPC	**Dobruska-Polom**	**1.20**	**174**	eSG	**Sg**	**15 50 48.8**	**-0.7**
	444nm,0.7s						
DPC	**Dobruska-Polom**	**1.20**	**174**	ePg	**Pg**	**15 50 34.1**	**+0.2**
DPC				eSg	**Sg**	**15 50 48.5**	**-1.0**
JAVS	**Javornik**	**1.21**	**164**	i Sg	Sn	15 49 55.9	+3.6
PVCC	**Panska Ves**	**1.41**	**225**	ePn	**Pn**	**15 50 38.0**	**+0.1**
PVCC				eSg	**Sg**	**15 50 56.5**	**+0.2**
CEY	**Cerknica**	**1.45**	**156**	i Pg	Pn	15 49 41.2	+1.0
CEY				eSg	Sn	15 49 49.1	-8.9
CEY							
	comp=Z,4.0nm,0.1s						
BRG	**Berggiesshubel**	**1.53**	**245**	ePn	**Pn**	**15 50 39.0**	**-0.4**
BRG				eSg	**Sg**	**15 51 00.5**	**+0.5**
BRG	**Berggiesshubel**	**1.53**	**245**	PN	**Pn**	**15 50 39.0**	**-0.5**
BRG				PG	**Pg**	**15 50 40.8**	**+0.6**
BRG				SG	**Sg**	**15 51 00.3**	**+0.4**
	comp=Z,295nm,0.5s						
BRG	**Berggiesshubel**	**1.53**	**245**	ePn	**Pn**	**15 50 39.2**	**-0.2**
VISS	**Visnje**	**1.53**	**145**	i Pg	Pn	15 49 42.1	+0.7
VISS				eSg	Sn	15 49 51.4	-8.7
KNDS	**Knezji Dol**	**1.63**	**160**	i Pg	Pn	15 49 37.1	-5.6
KNDS				i Sg	Sn	15 49 42.5	-20
KNDS							
	comp=Z,4.0nm,0.1s						
RUE	**Ruedersdorf**	**1.73**	**304**	ePn	**Pn**	**15 50 42.3**	**+0.1**
RUE				eSg	**Sg**	**15 51 08.7**	**+2.3**
RUE	**Ruedersdorf**	**1.73**	**304**	ePn	**Pn**	**15 50 42.3**	**+0.1**
RUE				eSg	**Sg**	**15 51 08.7**	**+2.3**
PRA	**Prague**	**1.82**	**217**	PG	**Pg**	**15 50 43.0**	**-2.9**
PRA				SG	**Sg**	**15 51 09.0**	**-0.5**
FBE	**Freiberg**	**1.85**	**251**	ePn	**Pn**	**15 50 43.8**	**-0.1**
FBE				eSg	**Sg**	**15 51 10.1**	**-0.2**
PRU	**Pruhonice**	**1.85**	**213**	ePN	**Pn**	**15 50 43.7**	**-0.2**
PRU				ePG	**Pg**	**15 50 45.3**	**-1.1**
PRU				ex	x	15 51 02.8	
PRU				eSG	**Sg**	**15 51 09.7**	**-0.7**
	comp=Z,340nm,0.7s						
GKP	**Gorka Klasztor**	**1.86**	**21**	ePg	**Pg**	**15 50 53.8**	**+7.2**
GKP				eSg	**Sg**	**15 51 18.9**	**+8.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BOJS	Bojanci	1.94	143	i Sg	Sn	15 49 50.5	-20
BOJS							
	comp=Z,2.0nm,0.1s						
RAC	Raciborz	1.96	137	ePg	Pg	15 50 49.2	+0.6
RAC				eSg	Sg	15 51 15.4	+1.3
CLL	Collm	1.97	264	ePn	Pn	15 50 45.4	-0.1
CLL				i Pg	Pg	15 50 48.6	0.0
CLL				i Sn	Sn	15 51 07.4	-3.5
CLL				eSg	Sg	15 51 14.9	+0.7
CLL	Collm	1.97	264	i PN	Pn	15 50 45.3	-0.2
CLL				i PG	Pg	15 50 48.6	0.0
CLL				i		15 50 51.5	
CLL				i SN	Sn	15 51 07.4	-3.5
CLL				i SG	Sg	15 51 14.7	+0.6
CLL				eL		15 51 24.0	
CLL	Collm	1.97	264	i Pn	Pn	15 50 45.3	-0.2
CLL				i Pg	Pg	15 50 48.6	0.0
CLL				i x	x	15 50 51.5	
CLL				i Sn	Sn	15 51 07.4	-3.5
CLL				i Sg	Sg	15 51 14.7	+0.6
	comp=Z,235nm,0.7s						
CLL	Collm	1.97	264	i Pn	Pn	15 50 45.3	-0.2
CLL				i Pg	Pg	15 50 48.6	0.0
CLL				i Sn	Sn	15 51 07.4	-3.5
CLL				i Sg	Sg	15 51 14.7	+0.6
MORC	Moravsky Berou	1.98	152	⇓iP	Pn	15 50 46.0	+0.3
MORC	Moravsky Berou	1.98	152	ePn	Pn	15 50 45.8	+0.1
MORC				eSn	Sn	15 51 11.4	+0.1
MORC	Moravsky Berou	1.98	152	ePn	Pn	15 50 45.8	+0.1
MORC				eSn	Sn	15 51 11.4	+0.1
MORC				eSg	Sg	15 51 13.3	-1.4
	comp=Z,254nm,0.5s						
OKC	Ostrava-Krasne	2.14	142	ePN	Pn	15 50 47.4	-0.4
OKC				ePG	Pg	15 50 51.6	-0.3
OKC				eSG	Sg	15 51 18.4	-1.2
	comp=Z,378nm,0.6s						
VRAC	Vranov	2.26	172	Pn	Pn	15 50 50.2	+0.7
	comp=Z,8.9nm,0.3s,baz=344,slow=15,SNR=31						
VRAC				Lg		15 51 22.3	
	comp=Z,24nm,0.3s,baz=248,slow=22,SNR=5.5						
VRAC	Vranov	2.26	172	⇓iP	Pn	15 50 50.1	+0.6
VRAC	Vranov	2.26	172	ePn	Pn	15 50 49.9	+0.4
VRAC				eSg	Sg	15 51 21.2	-2.2
	comp=Z,130nm,0.5s						
TREC	Trest	2.29	190	ePn	Pn	15 50 50.5	+0.6
TREC	Trest	2.29	190	ePg	Pg	15 50 53.5	-1.3
TREC				eSg	Sg	15 51 23.3	-1.1
KRUC	Moravsky	2.49	176	ePn	Pn	15 50 53.5	+0.8
KRUC	Moravsky	2.49	176	ePg	Pg	15 50 57.0	-1.6
KRUC				eSg	Sg	15 51 29.3	-1.6
	comp=Z,180nm,0.7s						
WERD	Werda	2.65	247	ePn	Pn	15 50 55.2	+0.4
WERD				eSg	Sg	15 51 38.4	+2.4
NKC	Novy Kostel	2.67	242	ePn	Pn	15 50 55.6	+0.4
NKC				eSg	Sg	15 51 37.0	+0.3
	comp=Z,238nm,0.3s						
OJC	Ojcow	2.68	118	ePn	Pn	15 50 52.9	-2.4
OJC				ePg	Pg	15 51 02.7	+0.4
OJC				eSg	Sg	15 51 37.1	+0.1
WERN	Wernitzgruen	2.68	244	ePn	Pn	15 50 55.9	+0.6
WERN	Wernitzgruen	2.68	244	Pn	Pn	15 50 55.9	+0.6
JAVC	Velka Javorina	2.86	159	ePn	Pn	15 50 59.2	+1.4
JAVC				eSg	Sg	15 51 42.2	-0.8
	comp=Z,211nm,1.0s						
MROB	Rosenbuehl-Arz	2.90	241	ePn	Pn	15 50 59.1	+0.8
KHC	Kasperske Hory	2.91	215	ePN	Pn	15 50 58.4	-0.1
KHC				ePG	Pg	15 51 04.7	-2.1
KHC				eSN	Sn	15 51 33.3	-0.9
KHC				eSG	Sg	15 51 43.1	-1.4
	comp=Z,112nm,0.6s						
MHAI	Haid-Arzberg	2.93	240	⇓iPn	Pn	15 50 59.4	+0.7
MOX	Moxa	2.98	254	ePn	Pn	15 50 59.6	+0.2
MOX				ePg	Pg	15 51 07.8	-0.2
MOX				eSg	Sg	15 51 47.9	+1.2
MOX	Moxa	2.98	254	Pn	Pn	15 50 59.6	+0.2
MOX				Sg	Sg	15 51 47.9	+1.2
MANZ	Manzenberg	2.99	240	ePn	Pn	15 51 00.1	+0.6
ROTZ	Rotzenmuhle	3.06	236	ePn	Pn	15 51 01.0	+0.5
ROTZ				eSg	Sg	15 51 47.9	-1.4
GEC2	GERESS Array S	3.12	211	ePn	Pn	15 51 01.5	+0.2
GEC2	GERESS Array S	3.12	211	ePn	Pn	15 51 01.5	+0.2
GERES	GERESS Array B	3.12	211	Pn	Pn	15 51 01.4	+0.1
	comp=Z,10nm,0.3s,baz=32,slow=12,SNR=180						
GERES				Pg	Pg	15 51 08.3	-2.3
	comp=Z,19nm,0.3s,baz=30,slow=16,SNR=48						
GERES				Sn	Sn	15 51 37.7	-1.5
	comp=Z,11nm,0.3s,baz=39,slow=28,SNR=7.5						
GERES				Lg		15 51 48.9	
	comp=Z,20nm,0.3s,baz=37,slow=27,SNR=9.0						
GERES	GERESS Array B	3.12	211	Pn	Pn	15 51 01.4	+0.1
SMOL	Smolenice	3.15	164	ePN	Pn	15 51 03.7	+2.0
SMOL				ePG	Pg	15 51 11.4	+0.2
SMOL				eSG	Sg	15 51 53.8	+1.8
WET	Wettzell	3.17	222	ePn	Pn	15 51 02.4	+0.3
WET	Wettzell	3.17	222	ePn	Pn	15 51 02.4	+0.3
ZST	Bratislava	3.41	169	ePG	Pg	15 51 15.0	-1.3
ZST				eSG	Sg	15 51 58.1	-2.4
NIE	Niedzica	3.42	127	ePn	Pn	15 51 06.4	+1.0
NIE				ePg	Pg	15 51 16.3	-0.1
NIE				eSg	Sg	15 52 01.5	+0.8
VYHS	Vyhne	3.52	149	ePN	Pn	15 51 07.0	+0.2
VYHS				ePG	Pg	15 51 17.8	-0.5
VYHS				eSG	Sg	15 52 07.8	+3.9
CLZ	Clausthal	3.59	277	ePn	Pn	15 51 08.9	+1.1
CONA	Conrad Observa	3.62	183	⇓iPn	Pn	15 51 02.6	-5.6
	SNR=17						
GRA1	Grafenberg Arr	3.63	241	ePn	Pn	15 51 09.2	+0.8
GRF	Grafenberg Arr	3.63	241	ePn	Pn	15 51 09.2	+0.8
BSD	Bornholm Skovb	3.65	349	i P	Pn	15 51 08.5	-0.1
BSD				i		15 51 14.7	
BSD				i S	Sn	15 51 50.0	-2.4
BSD				i S	Sn	15 51 52.2	-0.2
MOA	Molln	3.89	199	⇓iPn	Pn	15 51 12.5	+0.6
	SNR=55						
MOA				⇑iSg	Sg	15 52 15.3	-0.5
	comp=Z,150nm,0.6s						
MOA	Molln	3.89	199	⇓iPn	Pn	15 51 12.5	+0.6
MOA				i Sg	Sg	15 52 15.3	-0.5
HROE	Hohe Rhon--Fla	3.90	257	⇓iPn	Pn	15 51 12.6	+0.6
UBBA	Unterbreizbach	3.92	262	ePn	Pn	15 51 12.5	+0.2
BSEG	Bad Segeberg	4.26	306	ePn	Pn	15 51 17.0	-0.1
ARSA	Arzberg	4.31	185	⇑iPn	Pn	15 51 17.8	0.0
	SNR=14						
ARSA				⇓iSg	Sg	15 52 29.2	-0.3
	comp=Z,126nm,0.9s						
ARSA	Arzberg	4.31	185	⇑iPn	Pn	15 51 17.8	0.0
ARSA				i Sg	Sg	15 52 29.2	-0.3
ARSA	Arzberg	4.31	185	Pn	Pn	15 51 17.8	0.0
	comp=Z,14nm,1.0s						
ARSA				Sg	Sg	15 52 29.2	-0.3
	comp=Z,126nm,0.9s						
CRVS	Cervenica-Dubn	4.33	126	ePG	Pg	15 51 34.4	+0.5
CRVS				eSG	Sg	15 52 30.6	+0.6
PSZ	Piszkesteto	4.38	145	ePn	Pn	15 51 19.5	+0.9
PSZ	Piszkesteto	4.38	145	ePn	Pn	15 51 19.5	+0.9
FUR	Furstenfeldbru	4.61	225	ePn	Pn	15 51 22.8	+1.0
KOLS	Kolonicke sedl	4.73	121	ePN	Pn	15 51 24.0	+0.5
KOLS				ePG	Pg	15 51 45.2	+3.6
KOLS				eSG	Sg	15 52 47.5	+4.5
KBA	Koelnbreinsper	4.82	203	i Pn	Pn	15 51 25.8	+1.0
	SNR=19						
KBA				⇑iSg	Sg	15 52 46.6	+0.7
	comp=Z,67nm,0.7s						
KBA	Koelnbreinsper	4.82	203	Pn	Pn	15 51 25.8	+1.0
	comp=Z,19nm,3.0s						
KBA				Sg	Sg	15 52 46.6	+0.7
	comp=Z,67nm,0.7s						
TNS	Taunus Mts	5.04	258	ePn	Pn	15 51 28.1	+0.4
TOD	Tromm	5.05	250	P	Pn	15 51 28.0	+0.1
TOD				S	Sn	15 52 35.2	+8.3
WATA	Walderalm	5.15	217	⇑iPn	Pn	15 51 30.1	+0.9
WATA				⇑iSg	Sg	15 52 58.3	+1.9
	comp=Z,36nm,0.6s						
WATA	Walderalm	5.15	217	Pn	Pn	15 51 30.1	+0.9
WATA				Sg	Sg	15 52 58.3	+2.0
	comp=Z,36nm,0.6s						
WTTA	Wattenberg	5.19	216	⇓iPn	Pn	15 51 30.6	+0.8
WTTA				⇓iSg	Sg	15 52 58.5	+0.9
	comp=Z,36nm,0.6s						
WTTA	Wattenberg	5.19	216	⇓iPn	Pn	15 51 30.6	+0.8
WTTA				i Sg	Sg	15 52 58.5	+0.9
MOTA	Moosalm	5.33	220	⇑iPn	Pn	15 51 32.4	+0.7
	SNR=10						
MOTA				⇓iSg	Sg	15 53 02.9	+0.9
	comp=Z,56nm,0.8s						
MOTA	Moosalm	5.33	220	Pn	Pn	15 51 32.4	+0.7
	comp=Z,10.0nm,1.0s						
MOTA				Sg	Sg	15 53 02.9	+0.9
	comp=Z,56nm,0.8s						
SQTA	Sankt Quirin	5.38	218	⇑iPn	Pn	15 51 33.6	+1.1
	SNR=8.6						
SQTA				⇓iSg	Sg	15 53 05.8	+1.9
	comp=Z,28nm,0.7s						
SQTA	Sankt Quirin	5.38	218	Pn	Pn	15 51 33.6	+1.1
	comp=Z,8.0nm,6.0s						
SQTA				Sg	Sg	15 53 05.8	+1.9
	comp=Z,28nm,0.7s						
VOY	Vojsko	5.71	196	ePn	Pn	15 51 42.3	+5.4
VOY				e		15 52 02.8	
VOY				eSn	Sg	15 53 15.5	+1.2
DAVA	Damuels	5.89	226	⇑iPn	Pn	15 51 39.5	+0.1
DAVA				⇓iSg	Sg	15 53 22.6	+2.4
	comp=Z,32nm,0.6s						
LANF	Langenberg	5.92	248	P	Pn	15 51 39.0	-0.8
BFO	Black Forest	5.97	240	ePn	Pn	15 51 38.9	-1.6
BFO				eSg	Sg	15 53 12.0	-11
DAVOX	Davos	6.28	223	Pn	Pn	15 51 45.5	+0.7
	comp=Z,1.5nm,0.3s,baz=36,slow=13,SNR=8.2						
DAVOX				Lg		15 53 25.3	
	comp=Z,0.7nm,0.3s,baz=333,slow=23,SNR=3.0						
FELD	Feldberg im Sc	6.42	238	P	Pn	15 51 46.1	-0.6
FELD				S	Sn	15 52 58.7	-1.9
DRGR		6.42	135	⇑iP	Pn	15 51 47.3	+0.6
WLS	Welschbruch	6.46	244	P	Pn	15 51 46.1	-1.2
CDF	Champ du Feu	6.51	245	ePn	Pn	15 51 48.8	+0.9
CDF				eSg	Sg	15 53 39.5	-0.5
	comp=Z,36nm,0.7s						
HINF	Hinteralfeld	7.08	242	ePn	Pn	15 51 55.0	-0.7
HINF				eSg	Sg	15 53 55.9	-2.2
	comp=Z,28nm,0.6s						
HINF	Hinteralfeld	7.08	242	ePn	Pn	15 51 55.0	-0.7
HINF				eSg	Sg	15 53 55.9	-2.2
	comp=Z,14nm,0.6s						
BURAR	Bucovina Array	7.10	120	⇓iP	Pn	15 51 56.8	+0.8
HAU	Haudompre	7.25	245	ePg	Pg	15 52 28.6	-1.2
HAU				eSg	Sg	15 54 00.4	-3.4
	comp=Z,27nm,0.6s						
HAU	Haudompre	7.25	245	ePn	Pn	15 51 58.0	-0.1
HAU				ePg	Pg	15 52 28.6	-1.2
HAU				eSg	Sg	15 54 00.4	-3.4
HAU	Haudompre	7.25	245	ePg	Pg	15 52 28.6	-1.2
HAU				eSg	Sg	15 54 00.4	-3.4
	comp=Z,13nm,0.6s						
CABF	La Chapelle	8.23	237	ePg	Pg	15 52 46.2	-2.3
CABF				eSg	Sg	15 54 31.7	-3.4
	comp=Z,62nm,1.0s						
CABF	La Chapelle	8.23	237	ePg	Pg	15 52 46.2	-2.3
CABF				eSg	Sg	15 54 31.7	-3.4
	comp=Z,31nm,1.0s						
AKASG	Malin Array Be	8.29	91	Pn	Pn	15 52 11.0	-1.3
	comp=Z,4.5nm,0.3s,baz=279,slow=12,SNR=21						
AKASG				Sn	Sn	15 53 42.3	-4.4
	comp=Z,2.7nm,0.3s,baz=275,slow=23,SNR=5.8						
AKASG				Lg		15 54 39.3	
	comp=Z,0.8nm,0.3s,baz=68,slow=17,SNR=4.1						
AKASG	Malin Array Be	8.29	91	Pn	Pn	15 52 11.0	-1.3
AKASG				Sn	Sn	15 53 42.3	-4.4
AKASG				Lg		15 54 39.3	
AKASG	Malin Array Be	8.29	91	Pn	Pn	15 52 11.0	-1.4
AKASG				Sn	Sn	15 53 42.3	-4.4
AKBB	Malin Array Si	8.29	91	ePn	Pn	15 52 11.1	-1.3
AKBB				eSn	Sn	15 53 39.8	-6.9
AKBB	Malin Array Si	8.29	91	ePn	Pn	15 52 11.1	-1.3
AKBB				eSn	Sn	15 53 39.8	-6.9
LPL	La Plagne	8.67	230	ePn	Pn	15 52 18.6	+1.1
LPG	La Plagne	8.67	229	ePn	Pn	15 52 17.9	+0.3
HFS	Hagfors	8.72	352	Pn	Pn	15 52 17.7	-0.5
	comp=Z,0.5nm,0.3s,baz=174,slow=15,SNR=16						
HFS				Sn	Sn	15 53 54.3	-3.0
	comp=Z,0.6nm,0.3s,baz=174,slow=28,SNR=4.2						
HFS				Lg		15 54 52.9	
	comp=Z,0.5nm,0.3s,baz=164,slow=33,SNR=2.6						
HFS	Hagfors	8.72	352	Pn	Pn	15 52 17.7	-0.5
HFS				Sn	Sn	15 53 54.3	-3.0
HFS				Lg		15 54 52.9	
HFS	Hagfors	8.72	352	Pn	Pn	15 52 17.7	-0.6
HFS				Sn	Sn	15 53 54.3	-3.0
LOR	Lormes	9.07	247	ePn	Pn	15 52 22.2	-0.8
MBDF	Montbardon	9.25	226	ePn	Pn	15 52 26.1	+0.6
SSF	Saint Saulge	9.38	246	ePn	Pn	15 52 26.8	-0.5
SMF	Signal de Mont	9.43	243	eSg	Sx	15 55 07.4	
	comp=Z,10nm,0.4s						
SMF	Signal de Mont	9.43	243	eSg	Sx	15 55 07.4	
	comp=Z,5.2nm,0.4s						
SBF	Sospel	9.65	221	ePn	Pn	15 52 31.9	+0.8
NB2	NORSAR Subarra	9.90	346	P	Pn	15 52 32.3	-2.2
	comp=Z,0.9nm,0.4s,baz=173,slow=14						
NOA	NORSAR Array B	9.90	346	Pn	Pn	15 52 32.4	-2.1
	comp=Z,0.4nm,0.3s,baz=174,slow=13,SNR=4.5						
NOA				Sn	Sn	15 54 20.6	-5.7
	comp=Z,0.4nm,0.3s,baz=199,slow=20,SNR=2.9						
NOA	NORSAR Array B	9.90	346	Sn	Sn	15 54 20.6	-5.7
FRF	La Foret Royal	10.23	222	ePn	Pn	15 52 39.9	+1.0
LMR	La Mourre	10.47	222	ePn	Pn	15 52 42.1	-0.2
FINES	FINESS Array B	11.33	25	Pn	Pn	15 52 52.6	-1.4
	comp=Z,0.8nm,0.3s,baz=201,slow=12,SNR=31						
FINES				Sn	Sn	15 54 53.3	-8.1
	comp=Z,0.8nm,0.3s,baz=207,slow=21,SNR=6.1						
FINES	FINESS Array B	11.33	25	Sn	Sn	15 54 53.3	-8.1
KAF	Kangasniemi	11.95	24	ep	Pn	15 53 01.0	-1.6
	comp=Z,0.9nm,0.3s,baz=207,slow=13						
EKA	Eskdalemuir Ar	12.10	296	Pn	Pn	15 53 00.5	-4.0
	comp=Z,0.5nm,0.3s,baz=103,slow=14,SNR=8.0						
JOF	Joensuu	14.01	30	ep	Pn	15 53 26.9	-3.7
	comp=Z,1.2nm,0.3s						
ARCES	ARCESS Array B	18.59	10	Pn	Pn	15 54 26.0	-3.7
	comp=Z,0.6nm,0.3s,baz=192,slow=14,SNR=28						
KEV	Kevo	18.98	12	ep	Pn	15 54 26.6	-7.8
	comp=Z,5.7nm,1.0s						
AKTK	Aktyubinsk	26.14	76	P	P	15 55 47.5	+0.8
AKTO	Aktyubinsk	26.14	76	P	P	15 55 47.5	+0.8
	comp=Z,1.5nm,0.6s,mb3.8,baz=270,slow=9.9,SNR=4.6						
TORD	Torodi Ar. Bea	40.03	202	P	P	15 57 48.5	+0.9
	comp=Z,0.7nm,0.6s,mb3.5,baz=15,slow=8.7,SNR=7.8						
SONM	Songino Array	54.89	55	P	P	15 59 45.2	+2.0
	comp=Z,0.4nm,0.8s,mb3.5,baz=292,slow=6.9,SNR=5.0						
PDAR	Pinedale Array	74.92	322	P	P	16 01 55.3	+1.6
	comp=Z,0.4nm,0.6s,mb3.7,baz=73,slow=7.0,SNR=4.1						
ASAR	Alice Springs	125.35	84	PKP	PKPdf	16 09 13.9	+0.2
	comp=Z,0.2nm,0.8s,baz=8.8,slow=1.4,SNR=4.2						

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*NEIC **01** 15:53:14.2,3167S×6990W,h126km,MG4.1(GUC),After GUC.*

GUC 01 15:53:14.2±0.8,3167S×6990W,h126km±7km,MD3.9, ML4.1,18C-6D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	Jahuel	1.17	210	⇑iP	Pn	15 53 39.1	+0.7
JACH				i S	Sn	15 53 57.4	+0.7
CHNG	Los Chungos	1.38	261	⇓iP	Pn	15 53 41.3	+0.7
CHNG				i S	Sn	15 54 01.0	+0.2
CHNG				AML	AML	15 54 07.4	
	comp=N,1μm,0.5s						
ROCH	El Roble	1.60	216	⇑iP	Pn	15 53 43.7	+0.6
ROCH				i S	Sn	15 54 06.5	+1.2
PEL	Peldehue	1.61	204	⇑iP	Pn	15 53 43.7	+0.4
PEL				i S	Sn	15 54 06.0	+0.5
PEL				AML	AML	15 54 07.1	
	comp=E,2μm,0.4s						
PEL	Peldehue	1.61	204	⇑iP	Pn	15 53 43.7	+0.4
PEL				i S	Sn	15 54 06.0	+0.5
FCH	Farellones	1.68	191	⇓iP	Pn	15 53 45.4	+1.2
FCH				i S	Sn	15 54 08.5	+1.5
FCH				AML	AML	15 54 09.6	
	comp=E,1μm,0.2s						
TLL	Tololo Astrono	1.69	332	⇑iP	Pn	15 53 45.6	+1.4
TLL				i S	Sn	15 54 08.8	+1.8
TLL				AML	AML	15 54 10.4	
	comp=N,2μm,1.1s						
TLL	Tololo Astrono	1.69	332	⇑iP	Pn	15 53 45.6	+1.4
TLL				i S	Sn	15 54 08.8	+1.8
CLCH	Cerro Calan	1.80	197	⇓iP	Pn	15 53 46.2	+0.7
CLCH				i S	Sn	15 54 10.3	+0.8
CLCH				AML	AML	15 54 12.6	
	comp=E,1μm,0.4s						
CLCH				AML	AML	15 54 13.0	
	comp=E,2μm,0.3s						
STL	Santa Lucia	1.87	199	⇑iP	Pn	15 53 46.1	-0.2
STL				i S	Sn	15 54 11.0	+0.2
SAN	Santiago	1.89	200	eP	Pn	15 53 47.3	+0.7
SAN				i S	Sn	15 54 12.2	+0.8
SAN				AML	AML	15 54 13.8	
	comp=N,1μm,0.8s						
SAN	Santiago	1.89	200	eP	Pn	15 53 47.3	+0.7
SAN				i S	Sn	15 54 12.2	+0.8
RCDM	Rinconada Maip	1.97	203	⇑iP	Pn	15 53 48.0	+0.5
RCDM				i S	Sn	15 54 13.9	+0.9
RCDM				AML	AML	15 54 14.7	
	comp=E,2μm,0.3s						
RCDM	Rinconada Maip	1.97	203	⇑iP	Pn	15 53 48.0	+0.5
RCDM				i S	Sn	15 54 13.9	+0.9
ANTU	Antumapu	1.99	198	⇑iP	Pn	15 53 48.4	+0.6
ANTU				i S	Sn	15 54 14.3	+0.8
ANTU				AML	AML	15 54 14.8	
	comp=N,1μm,0.3s						
PCH	Pirque	2.01	195	⇑iP	Pn	15 53 48.9	+0.8
PCH				i S	Sn	15 54 15.0	+1.0
LSCH	La Serena	2.10	326	⇑iP	Pn	15 53 50.0	+0.7
LSCH				i S	Sn	15 54 16.6	+0.5
TACH	Talagante	2.16	204	⇑iP	Pn	15 53 50.0	0.0
TACH				i S	Sn	15 54 18.1	+0.8
LCCH	Las Cruces	2.29	218	⇑iP	Pn	15 53 51.8	+0.3
LCCH				i S	Sn	15 54 19.9	-0.2
CHCH	Chadas Angostu	2.34	195	⇓iP	Pn	15 53 52.6	+0.4
CHCH				i S	Sn	15 54 21.9	+0.6
CACH	El Canelo	2.51	193	⇑iP	Pn	15 53 55.1	+0.8
CICH	Cipreses	2.68	189	⇓iP	Pn	15 53 57.5	+1.0
CICH				i S	Sn	15 54 30.5	+1.5
LCO	Las Campanas	2.74	345	⇑iP	Pn	15 53 58.1	+0.8
LCO				i S	Sn	15 54 31.6	+1.1
SFDO	San Fernando	3.08	197	⇓iP	Pn	15 54 01.3	-0.4
SFDO				i S	Sn	15 54 37.9	-0.5
VACH	Vallenar	3.17	346	⇑iP	Pn	15 54 03.6	+0.7
VACH				i S	Sn	15 54 40.5	0.0
VACH				AML	AML	15 54 41.9	
	comp=E,2μm,0.1s						
VACH	Vallenar	3.17	346	⇑iP	Pn	15 54 03.6	+0.7
VACH				i S	Sn	15 54 40.5	0.0

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*GCG **01** 16:11:16.4,1325N×9053W,h23km,MD3.9*
*SSS **01** 16:11:24.8,1320N×9043W,h18km,MD3.2*

CASC 01 16:11:16.7±3.0,1325N×9054W,h20km±15km,MD3.6,3C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.93	5	eP	Pb	16 11 33.7	-0.4
IXG				eS	Sb	16 11 47.1	+1.2
SBLS	San Blas	1.07	56	eP	x	16 11 43.2	
SBLS				eS	x	16 11 58.7	
RTR	El Retiro	1.08	53	eP	x	16 11 44.1	
RTR				eS	x	16 12 01.6	
SNJE	San Jose	1.10	56	eP	x	16 11 43.9	
SNJE				eS	x	16 11 58.5	
RBDL	Robledal	1.19	44	⇑eP	x	16 11 46.0	
RBDL				eS	x	16 12 02.3	
LFRS	El Faro	1.48	75	⇑eP	x	16 11 49.4	
LFRS				eS	x	16 12 08.9	
LCBS	La Ceiba	1.57	75	eP	x	16 11 50.6	
LCBS				eS	x	16 12 10.3	
TP2	Tecpan 2	1.60	343	⇑eP	Pn	16 11 44.4	+0.6
TP2				eS	Sn	16 12 06.2	+2.4
MTO2	Montecristo 2	1.62	45	eP	x	16 11 52.6	
MTO2				eS	x	16 12 13.4	
CNCH	Conchagua	2.63	89	eP	x	16 12 05.5	
CNCH				eS	x	16 12 39.9	

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*ISCJB **01** 16:14:50.6±0.5,2169N±003×14291E±002,h302km±4km, mb4.7/108,Error ellipse: s-maj=4.2km s-min=3.5km az=166.2*
*BJI **01** 16:14:51.1,2177N×14299E,h312km,mB4.6,mb4.7*
*IDC **01** 16:14:51.3±1.4,2172N×14293E,h298km±12km,mb4.4/15, mb1 4.5/19,mb1mx4.5/23,mbtmp5.1/19,Error ellipse: s-maj=15.1km s-min=10.4km az=84.0*
*JMA **01** 16:14:51.3±0.2,2182N×14310E,h314km±2km,M5.0*
*MOS **01** 16:14:51.7±0.9,2197N×14287E,h304km,mb4.8/34,Error ellipse: s-maj=10.5km s-min=6.1km az=110.7*
*NEIC **01** 16:14:52.4±0.8,2167N×14291E,h311km±8km,mb4.7/63, Error ellipse: s-maj=4.5km s-min=4.3km az=135.0*

ISC 01 16:14:52.0±0.5,2173N±003×14294E±002,h301km±4km, h303km±3.8km:pP-P,n444,σ0.86/470,mb4.7/108,84C-95D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	4.93	352	P	Pn	16 16 08.5	-0.2
JHHJ				S	S	16 17 08.6	-1.7
CBIJ	Chichi jima	5.39	353	P	Pn	16 16 13.6	-0.5
	254nm,0.3s,baz=210,slow=3.6,SNR=168						
CBIJ				S	S	16 17 18.4	-1.7
	143nm,0.3s,baz=312,slow=22,SNR=7.7						
CBIJ	Chichi jima	5.39	353	P	Pn	16 16 13.3	-0.7
CBIJ				eS	S	16 17 18.0	-2.1
GUMO	Guam	8.30	167	P	Pn	16 16 49.1	-0.1
	35nm,0.3s,baz=169,slow=4.1,SNR=36						
JHJ2	Mitsune	11.67	347	P	Pn	16 17 29.7	-0.8
JHJ	Hachijo jima 2	11.69	347	P	Pn	16 17 29.7	-1.0
	83nm,0.3s,baz=67,slow=18,SNR=20						
JHJ				S	S	16 19 39.1	-1.8
	23nm,0.3s,baz=91,slow=23,SNR=3.4						
TK01	Tokai 1	12.89	340	P	Pn	16 17 42.5	-2.7
BSO1	Boso 1	12.99	353	P	Pn	16 17 45.8	-0.7
JWZ	Kozaga	13.38	333	P	Pn	16 17 52.7	+1.6
JIE	Ise	13.76	338	P	Pn	16 17 56.1	+0.5
JOD2	Odawara 2	13.90	347	P	Pn	16 17 56.8	-0.5
JOD2				eS	S	16 20 24.6	-5.7
JTO	Tosashimizu	14.28	323	P	P	16 18 04.6	+3.6
JOW	Kunigami	14.30	294	P	P	16 18 03.0	+1.8
	4.0nm,0.3s,baz=133,slow=12,SNR=20						
JRY	Ryogami san	14.67	347	P	P	16 18 05.7	+0.4
JRY				eS	S	16 20 39.8	-6.0
JSU	Suzuyama	14.80	314	P	P	16 18 09.1	+2.3
JWT	Wachi	15.03	336	P	P	16 18 10.4	+1.1
JAD	Aida	15.25	332	P	P	16 18 14.0	+2.3
MJAR	Matsushiro Arr	15.33	345	P	P	16 18 11.5	-1.1
	11nm,0.3s,baz=168,slow=10,SNR=49						
MJAR				S	S	16 20 57.0	-2.0
	2.7nm,0.3s,baz=175,slow=21,SNR=5.6						
MAJO	Matsushiro	15.33	345	eP	P	16 18 11.8	-0.7
MAJO				pmax	pmax		
	comp=Z,75nm,0.5s						
MAJO	Matsushiro	15.33	345	eP	P	16 18 11.8	-0.8
	comp=Z,75nm,0.5s						
MAT	Matsushiro	15.33	345	P	P	16 18 11.6	-0.9
MAT				S	S	16 20 58.0	-1.0
MAT	Matsushiro	15.33	345	P	P	16 18 12.5	0.0
MAT				eS	S	16 20 55.9	-3.1
MAT	Matsushiro	15.33	345	eP	P	16 18 12.0	-0.5
MAT				eS	S	16 20 58.0	-1.0
MAT				pmax	pmax		
	comp=Z,16nm,0.7s						
MAT	Matsushiro	15.33	345	eP	P	16 18 12.0	-0.5
	comp=Z,16nm,0.7s						
MAT				eS	S	16 20 58.0	-1.0
JSJ	Shimokoshiki	15.41	313	P	P	16 18 15.8	+2.4
JKE	Kume jima 2	15.45	290	P	P	16 18 16.3	+2.5
JNU	Nakatsue	15.59	319	P	P	16 18 17.9	+2.5
JHS	Saijyo	15.78	329	P	P	16 18 20.0	+2.5
JHS				S	S	16 21 11.8	+3.6
JMM	Marumori	16.19	354	P	P	16 18 23.2	+1.2
JMM				S	S	16 21 17.5	+1.2
JFU	Fukue jima 2	16.65	314	P	P	16 18 27.9	+1.0
JSD	Sado	16.75	347	P	P	16 18 28.0	0.0
JSD				eS	S	16 21 23.6	-3.8
JMK	Ichinoseki	17.23	355	P	P	16 18 34.7	+1.4
YHNB	Yeheng	20.03	283	eP	P	16 19 02.5	-0.6
SSE	Sheshan	21.57	300	P	P	16 19 17.3	-0.6
SSE				S	S	16 22 54.5	-1.0
SSE				AMB	AMB		
	comp=Z,56nm,1.2s,mb4.8						
SSE				AMB	AMB		
	comp=Z,50nm,3.3s						
SSE				LR	LR		
	comp=N,42nm,15.0s						

SSE LR LR
comp=E,53nm,15.0s
SSE LR LR
comp=Z,43nm,15.2s
NEM2 Nemuro 2 21.71 6 P **P** **16 19 16.6 -2.5**
MATI Mati 21.80 230 *e*P **P** **16 19 20.1 0.0**
BUKP Musuan 22.06 234 *e*P **P** **16 19 21.8 -0.6**
JTKR Abashiri--Toko 22.20 2 P **P** **16 19 24.2 +0.6**
TGY Tagaytay City 22.25 254 P **P** **16 19 24.5 +0.4**
comp=Z,209nm,0.6s,baz=133,slow=7.2,SNR=7.1
ASAJ Asahikawa 22.33 359 P **P** **16 19 25.8 +0.9**
comp=Z,12nm,0.6s,mb4.4,baz=155,slow=8.9,SNR=16
GUIM Jordan 22.41 244 *e*P **P** **16 19 26.1 +0.5**
NJ2 Nanjing 23.76 301 *e*P **P** **16 19 38.3 +0.4**
NJ2 XP sP 16 21 12.9 +4.9
NJ2 PCP PcP 16 23 12.8 +0.5
NJ2 S **S** **16 23 29.0 -1.6**
NJ2 AMB AMB
comp=Z,130nm,1.0s,mb5.2
NJ2 AMB AMB
comp=Z,110nm,10.5s
NJ2 LR LR
comp=N,260nm,16.9s
NJ2 LR LR
comp=E,210nm,18.8s
NJ2 LR LR
comp=Z,210nm,18.8s
IPIL Ipil 24.03 238 *e*P **P** **16 19 39.5 -0.8**
DL2 Dalian 25.03 318 P **P** **16 19 49.5 +0.2**
DL2 AMB AMB
comp=Z,20nm,0.5s,mb4.8
YSS Yuzh-Sakhalins 25.17 360 *e*P **P** **16 19 48.1 -2.4**
YSS pmax pmax
comp=Z,11nm,1.5s,mb4.1
MDJ Mudanjiang 25.35 337 P **P** **16 19 52.3 +0.2**
MDJ AMB AMB
comp=Z,15nm,1.0s,mb4.4
MDJ AMB AMB
comp=Z,81nm,5.0s
MDJ Mudanjiang 25.35 337 *e*P **P** **16 19 52.5 +0.4**
comp=E,6.4nm,0.8s,mb4.1
SNY Shenyang 25.82 325 ⇑P **P** **16 19 55.9 -0.4**
SNY AMB AMB
comp=Z,15nm,0.6s,mb4.6
CN2 Changchun 26.37 331 *e*P **P** **16 20 04.2 +3.0**
TIA Tai'an 26.70 308 ⇑P **P** **16 20 04.3 +0.2**
WHN Wuhan 27.07 295 P **P** **16 20 07.8 +0.4**
HABR Khabarovsk 27.43 349 *e*P **P** **16 20 08.4 -2.2**
HABR *e*S **S** **16 24 28.3 0.0**
HABR pmax pmax
comp=Z,15nm,1.6s,mb4.2
KLR Kul'dur 28.85 345 *e*P **P** **16 20 20.7 -2.5**
BJT Baijiatuau 29.16 315 *e*P **P** **16 20 25.4 -0.5**
BJT pmax pmax
comp=Z,9.0nm,0.6s
BJT Baijiatuau 29.16 315 *e*P **P** **16 20 25.4 -0.5**
comp=Z,9.0nm,0.6s,mb4.4
BJI Beijing 29.17 315 P **P** **16 20 25.4 -0.6**
BJI S **S** **16 24 50.9 -4.6**
BJI AMB AMB
comp=Z,8.0nm,0.6s,mb4.3
BJI AMB AMB
comp=Z,124nm,5.9s
BJI LR LR
comp=N,87nm,10.2s
BJI LR LR
comp=E,42nm,10.3s
BJI LR LR
comp=Z,68nm,26.6s
KKM Kota Kinabalu 30.18 243 P **P** **16 20 35.1 +0.3**
QIZ Qiongzhong 31.11 271 P **P** **16 20 43.0 +0.1**
QIZ AP pP 16 21 45.6 +4.7
QIZ *e*S **S** **16 25 24.0 -1.7**
QIZ AMB AMB
comp=Z,22nm,1.2s,mb4.6
PMG Port Moresby 31.21 172 ⇑*e*P **P** **16 20 48.4 +4.5**
HHC Hu-ho-hao-te 32.65 313 *e*P **P** **16 20 56.4 +0.1**
HHC AP pP 16 21 58.4 +3.8
HHC PP PP 16 22 20.6 +3.4
HHC XP sP 16 22 34.5 +5.2
HHC PCP PcP 16 23 34.7 +0.3
HHC S **S** **16 25 48.1 -1.4**
HHC SCP ScP 16 26 47.0 -2.2
HHC PCS PcS 16 27 19.2 -0.8
HHC XS sS 16 27 38.2 +3.1
HHC SS SS 16 28 15.2 -8.9
HHC SCS ScS 16 30 45.0 -4.6
HHC AMB AMB
comp=Z,18nm,0.6s,mb4.8
HHC AMB AMB
comp=Z,69nm,7.4s
HIA Hailar 33.08 332 *e*P **P** **16 21 00.6 +0.6**
HIA pmax pmax
comp=Z,31nm,1.1s
HIA Hailar 33.08 332 *e*P **P** **16 21 00.6 +0.5**
comp=Z,31nm,1.1s,mb4.8
GYA Guiyang 33.37 285 ⇑*i*P **P** **16 21 03.2 +0.6**
GYA AP pP 16 21 59.9 -1.1
GYA S **S** **16 26 01.2 +0.4**
GYA SCP ScP 16 26 54.6 +2.9
GYA PCS PcS 16 27 23.7 +1.2
GYA SCS ScS 16 30 54.4 +1.0
GYA AMB AMB
comp=Z,20nm,0.6s,mb4.8
GYA AMB AMB
comp=Z,90nm,3.8s
KAKA Kakadu 35.74 198 *e*P **P** **16 21 21.7 -1.0**
comp=Z,2.8nm,0.4s,mb4.2
CD2 Chengdu 36.14 293 P **P** **16 21 25.7 -0.4**
CD2 AP pP 16 22 23.2 -2.0
CD2 PP PP 16 22 58.0 +2.5
CD2 PCP PcP 16 23 45.9 +1.4
CD2 S **S** **16 26 42.8 0.0**
CD2 SS SS 16 29 28.1 -6.9
CD2 SCS ScS 16 31 08.9 +0.6
CD2 AMB AMB
comp=Z,30nm,0.9s,mb4.8
CD2 AMB AMB
comp=Z,120nm,6.4s
LZH Lanzhou 36.83 302 *e*P **P** **16 21 33.0 +1.1**
LZH AP pP 16 22 36.1 +4.8
LZH PP PP 16 23 08.0 +4.9
LZH XP sP 16 23 12.7 +6.9
LZH PCP PcP 16 23 47.7 +1.0
LZH *e*S **S** **16 26 54.2 +0.8**
LZH SS SS 16 29 44.0 -4.9
LZH AMB AMB
comp=Z,56nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,230nm,4.0s
KMI Kunming 36.95 283 P **P** **16 21 33.5 +0.6**
KMI AP pP 16 22 33.0 +0.7
KMI XP sP 16 23 05.7 -1.0
KMI PPP 16 23 41.3
KMI S **S** **16 27 00.4 +5.3**
KMI SS SS 16 29 46.4 -4.7
KMI SSS 16 30 37.5
KMI AMB AMB
comp=Z,16nm,1.0s,mb4.4
KMI AMB AMB
comp=Z,50nm,3.1s
KMI LR LR
comp=N,115nm,8.2s
KMI LR LR
comp=E,83nm,10.1s
KMI LR LR
comp=Z,116nm,7.7s
KSM Kuching 37.60 242 *e*P **P** **16 21 37.9 -0.5**
ULN Ulaanbaatar 38.80 321 P **P** **16 21 49.2 +0.9**
SNR=9.7
ULN Ulaanbaatar 38.80 321 ⇑*e*P **P** **16 21 48.9 +0.6**
ULN Ulaanbaatar 38.80 321 *e*P **P** **16 21 48.7 +0.4**
comp=Z,6.3nm,0.8s,mb4.1
SONM Songino Array 39.17 321 P **P** **16 21 51.9 +0.6**
comp=Z,5.4nm,0.4s,mb4.3,baz=128,slow=6.6,SNR=95
SONM PcP PcP 16 23 54.0 0.0
comp=Z,2.6nm,0.6s,baz=136,slow=4.2,SNR=4.4
GTA Gaotai 40.67 306 ⇑*i*P **P** **16 22 04.3 +0.7**
GTA PP PP 16 23 46.4 +2.0
GTA PCP PcP 16 23 59.5 +0.7
GTA S **S** **16 27 51.2 +0.7**
GTA SS SS 16 30 56.0 -8.4
GTA AMB AMB
comp=Z,22nm,1.0s,mb4.3
GTA AMB AMB
comp=Z,217nm,5.8s
GTA LR LR
comp=N,128nm,18.3s
GTA LR LR
comp=E,43nm,16.0s
GTA LR LR
comp=Z,78nm,12.5s
NST Nakhon Sawan 40.89 269 ⇓P **P** **16 22 07.3 +1.9**
comp=Z,75nm,0.8s,mb5.0
CHG Chiang Mai 41.27 274 ⇑P **P** **16 22 09.3 +0.9**
CHTO Chiang Mai 41.27 274 *e*P **P** **16 22 08.9 +0.5**
CHTO pmax pmax
comp=Z,34nm,1.1s,mb4.5
CHTO Chiang Mai 41.27 274 *e*P **P** **16 22 08.9 +0.5**
comp=Z,34nm,1.1s,mb4.5
YAK Yakutsk 41.30 351 *c*e*P **P** **16 22 08.8 +0.1**
YAK *i* 16 23 59.5
YAK *i*S **S** **16 27 56.5 -3.3**
YAK pmax pmax
comp=Z,10.0nm,0.8s,mb4.1
YAK pmax pmax
comp=N,5.0nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK pmax pmax
comp=Z,16nm,1.0s,mb4.2
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,2.0nm,1.6s
YAK smax
comp=N,17nm,1.1s
YAK smax
comp=Z,6.0nm,1.0s
YAK smax
comp=E,16nm,1.4s
YAK Yakutsk 41.30 351 *e*P **P** **16 22 06.5 -2.1**
comp=E,20nm,0.6s,mb4.5
CTA Charters Tower 41.68 175 *e*P **P** **16 22 09.6 -2.2**
comp=E,5.1nm,0.6s,mb3.9
CTA Charters Tower 41.68 175 *e*P **P** **16 22 09.6 -2.2**
CTA pmax pmax
comp=Z,5.0nm,0.6s
BOD Bodaibo 41.72 337 *e*P **P** **16 22 10.7 -1.4**
BOD *e* 16 23 56.4
BOD pmax pmax
comp=Z,4.0nm,1.3s
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb3.7
ZAK Zakamensk 42.18 323 *e*P **P** **16 22 15.9 +0.1**
ZAK *e* 16 24 03.6
ZAK pmax pmax
comp=Z,10.0nm,1.3s,mb3.9
ZAK pmax pmax
comp=Z,3.0nm,1.5s
WRAB Tennant Creek 42.24 192 *e*P **P** **16 22 15.2 -1.1**
WRAB pmax pmax
comp=Z,15nm,0.5s,mb4.5
WRAB Tennant Creek 42.24 192 *e*P **P** **16 22 15.2 -1.1**
comp=Z,15nm,0.5s,mb4.5
WB2 Warramunga Arr 42.25 192 *e*P **P** **16 22 15.3 -1.0**
WB2 *e*S **S** **16 28 11.1 -2.6**
WB2 Warramunga Arr 42.25 192 *e*P **P** **16 22 15.3 -1.0**
WB2 *e*S **S** **16 28 11.1 -2.6**
IRK Irkutsk 42.55 325 *e*P **P** **16 22 18.6 -0.1**
IRK pmax pmax
comp=Z,25nm,1.1s,mb4.4
TLY Talaya 42.61 324 P **P** **16 22 20.4 +1.3**
SNR=5.4
TLY Talaya 42.61 324 *e*P **P** **16 22 20.0 +0.8**
TLY *e*S **S** **16 28 21.1 +2.3**
TLY *e*SSS 16 31 49.3
TLY pmax pmax
comp=Z,14nm,1.1s,mb4.1
TLY Talaya 42.61 324 *e*P **P** **16 22 19.7 +0.6**
comp=Z,22nm,1.2s,mb4.3
FITZ Fitzroy Crossi 43.05 204 *e*P **P** **16 22 21.8 -0.9**
comp=Z,14nm,0.8s,mb4.2
FITZ *e*PCP PcP 16 24 06.5 -0.2
FITZ *e*S **S** **16 28 22.7 -2.6**
FITZ Fitzroy Crossi 43.05 204 *e*P **P** **16 22 21.8 -0.9**
comp=Z,14nm,0.8s,mb4.2
FITZ *e*PcP PcP 16 24 06.5 -0.2
FITZ *e*S **S** **16 28 22.7 -2.6**
KGM Kluang 43.22 249 P **P** **16 22 26.2 +2.2**
KULM Kulim 44.05 254 ⇑*i*P **P** **16 22 32.2 +1.6**
IPM Ipoh 44.08 253 P **P** **16 22 32.1 +1.3**
AS31 Alice Springs 45.97 192 *e*P **P** **16 22 44.2 -1.4**
AS31 *e*S **S** **16 29 04.5 -2.5**
ASAR Alice Springs 45.97 192 P **P** **16 22 44.2 -1.3**
comp=Z,3.2nm,0.5s,mb3.9,baz=9.5,slow=6.8,SNR=117
ASAR PcP PcP 16 24 15.8 -1.0
comp=Z,2.1nm,0.8s,baz=21,slow=3.1,SNR=7.4
ASPA Alice Springs 45.97 192 *e*P **P** **16 22 44.2 -1.4**
ASPA *e*S **S** **16 29 04.5 -2.5**
MBWA Marble Bar 48.27 210 *e*P **P** **16 23 02.3 -1.0**
comp=Z,10nm,1.0s,mb4.1
BILL Bilibino 48.54 11 ⇓*i*P **P** **16 23 04.6 -0.7**
BILL *e**PP pP 16 24 07.5 -0.5
BILL *e* 16 24 23.8
BILL *e* 16 24 58.8
BILL *e*S **S** **16 29 40.3 -2.8**
BILL pmax pmax
comp=Z,14nm,1.3s,mb4.1
BILL Bilibino 48.54 11 *e*P **P** **16 23 04.9 -0.4**
comp=Z,3.9nm,0.4s,mb4.1
PBA Port Blair 48.93 267 *e*P x 16 22 47.0
PBA *e*S x 16 22 54.4
PBA *ex* x 16 22 55.5
comp=E,125nm,0.3s
PBA *ex* x 16 22 55.6
comp=N,232nm,0.3s
WMQ Urumqi 50.38 309 *e*P **P** **16 23 20.0 +0.9**
WMQ AP pP 16 24 24.0 +1.6
WMQ XP sP 16 24 57.0 +1.2
WMQ PP PP 16 25 20.0 +2.0
WMQ SCS ScS 16 32 36.0 -1.8
WMQ SS SS 16 33 46.0 -0.5
WMQ AMB AMB
comp=Z,21nm,1.0s,mb4.4
WMQ AMB AMB
comp=Z,134nm,5.0s
WMQ LR LR
comp=N,68nm,16.0s
WMQ LR LR
comp=E,64nm,16.0s
WMQ LR LR
comp=Z,58nm,15.0s
TIXI Tiksi 50.60 354 *e*P **P** **16 23 18.6 -2.1**
TIXI pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
TIXI Tiksi 50.60 354 *e*P **P** **16 23 19.4 -1.3**
TIXI pmax pmax
comp=Z,9.0nm,1.0s,mb4.0
JIRN Jiri 51.52 289 *e*P **P** **16 23 29.2 +1.6**
comp=Z,85nm,0.7s,mb5.2
GUN Gumba 51.77 289 *e*P **P** **16 23 30.8 +1.4**
comp=Z,56nm,0.5s,mb5.2
PKI Pulchoki 52.22 289 *e*P **P** **16 23 33.4 +0.7**
comp=Z,37nm,0.7s,mb4.8
PKI Pulchoki 52.22 289 *e*P **P** **16 23 33.4 +0.7**
PKI pmax pmax
comp=Z,37nm,0.7s,mb4.8
KKN Kakani 52.31 289 *e*P **P** **16 23 34.2 +0.9**
comp=Z,27nm,0.6s,mb4.8
KKN Kakani 52.31 289 *e*P **P** **16 23 34.2 +0.9**
KKN pmax pmax
comp=Z,27nm,0.6s,mb4.8
DMN Daman 52.48 289 *e*P **P** **16 23 35.6 +1.0**
GKN Gorkha 52.85 289 *e*P **P** **16 23 38.1 +0.8**
KOLN Koldanda 53.79 289 *e*P **P** **16 23 44.9 +0.8**
comp=Z,18nm,0.3s,mb4.9
FORT Forrest 54.12 196 *e*P **P** **16 23 45.6 -0.9**
comp=Z,20nm,0.7s,mb4.6
MKAR Makanchi Array 54.51 313 P **P** **16 23 49.7 +0.5**
comp=Z,14nm,0.6s,mb4.5,baz=85,slow=9.2,SNR=136
MKAR PcP PcP 16 24 47.5 -1.0
comp=Z,8.2nm,0.6s,baz=78,slow=6.3,SNR=13
MKAR Makanchi Array 54.51 313 P **P** **16 23 49.7 +0.5**
MKAR PcP PcP 16 24 47.5 -1.0
CHGN Chignik 54.89 36 *e*P **P** **16 23 50.3 -1.6**
NVS Novosibirsk 55.14 323 *e*P **P** **16 23 52.8 -0.9**
NVS *e* 16 24 48.5
NVS *e*S **S** **16 31 11.5 -1.2**
NVS pmax pmax
comp=N,4.0nm,0.5s
NVS pmax pmax
comp=E,14nm,0.5s
NVS pmax pmax
comp=Z,17nm,0.5s,mb4.7
NVS smax
comp=N,8.0nm,1.5s
NVS smax
comp=E,3.0nm,1.1s
KURK Kurchatov 57.30 317 P **P** **16 24 09.1 +0.2**
SNR=10
KURK Kurchatov 57.30 317 *e*P **P** **16 24 08.3 -0.6**
KURK *e* 16 24 58.2
KURK pmax pmax
comp=Z,28nm,0.8s,mb4.7
KURK Kurchatov 57.30 317 *e*P **P** **16 24 08.3 -0.6**
comp=Z,28nm,0.8s,mb4.7
KURK *e*PcP PcP 16 24 58.2 -1.1
SVW2 Sparrevohn 57.50 30 *e*P **P** **16 24 09.7 -0.6**
KDAK Kodiak Island 58.31 35 P **P** **16 24 15.3 -0.5**
comp=Z,5.5nm,0.5s,mb4.3,baz=275,slow=5.5,SNR=5.0
TKM2 Tokmak 2 59.15 308 P **P** **16 24 23.1 +1.6**
SNR=13
KZA Kyzart 59.43 307 P **P** **16 24 25.8 +2.3**
SNR=11
IMA2 Indian Mountai 59.60 25 *e*P **P** **16 24 24.4 -0.3**
KBK Karagaybulak 59.63 308 P **P** **16 24 26.3 +1.4**
SNR=8.9
CHMS Chumysh 59.76 308 P **P** **16 24 26.6 +0.9**
SNR=5.5
USP Ospenovka 59.94 308 P **P** **16 24 27.8 +0.8**
SNR=11
HYB Hyderabad 60.44 278 *i*P **P** **16 24 31.0 +0.7**
EKS2 Erkin-Say 60.49 308 P **P** **16 24 31.5 +0.8**
SNR=6.2
AML Almayashu 60.59 307 P **P** **16 24 33.3 +2.0**
SNR=12
CHKZ Chkalovo 62.37 320 *e*P **P** **16 24 42.5 -0.7**
CHKZ pmax pmax
comp=Z,24nm,0.7s,mb4.9
CHKZ Chkalovo 62.37 320 *e*P **P** **16 24 42.5 -0.6**
comp=Z,24nm,0.7s,mb4.9
BRVK Borovoye 62.56 320 P **P** **16 24 45.0 +0.5**
SNR=14
BRVK Borovoye 62.56 320 *e*P **P** **16 24 44.6 +0.1**
BRVK *e* 16 25 19.9
BRVK pmax pmax
comp=Z,36nm,0.8s,mb5.0
BRVK Borovoye 62.56 320 *e*P **P** **16 24 44.6 +0.1**
comp=Z,36nm,0.8s,mb5.0
BRVK *e*PcP PcP 16 25 19.9 -0.6
KK31 Karatay Array 62.86 308 *i*P **P** **16 24 46.8 +0.4**
KK31 pmax pmax
comp=Z,16nm,0.6s,mb4.8
ZRNK Zerenda 63.34 319 *e*P **P** **16 24 49.4 -0.1**
ZRNK pmax pmax
comp=Z,37nm,0.8s,mb5.1
ZRNK Zerenda 63.34 319 *e*P **P** **16 24 49.4 -0.2**
comp=Z,37nm,0.8s,mb5.1
DAWY Dawson 65.30 28 *e*P **P** **16 25 01.8 -0.4**
SKAG Skagway 67.38 33 *e*P **P** **16 25 14.7 -0.6**
comp=Z,7.7nm,0.5s,mb4.7
INK Inuvik 67.64 24 *e*P **P** **16 25 15.5 -1.4**
INK pmax pmax
comp=Z,10.0nm,0.9s
INK Inuvik 67.64 24 *e*P **P** **16 25 15.5 -1.3**
comp=Z,10nm,0.9s,mb4.6
ARU Arti 69.11 324 ⇑*i*P **P** **16 25 25.5 -0.4**
ARU *e* 16 25 46.2
ARU *e* pP 16 26 31.5 -2.2
ARU *e*S S 16 34 04.4 -2.0
ARU *e*SS SS 16 38 33.7 -5.3
ARU pmax pmax
comp=Z,28nm,0.9s,mb5.0
ARU Arti 69.11 324 *e*P **P** **16 25 25.4 -0.6**
comp=Z,41nm,0.8s,mb5.2
AKTO Aktyubinsk 70.39 317 *i*P **P** **16 25 32.8 -0.9**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
YKA Yellowknife Ar 76.54 28 P **P** **16 26 08.1 -1.2**
comp=Z,13nm,0.6s,mb4.8,baz=292,slow=5.9,SNR=30
YKA Yellowknife Ar 76.54 28 *i*P **P** **16 26 08.6 -0.7**
YKA pmax pmax
comp=Z,13nm,0.6s
HDW Hoodsport 76.87 44 P **P** **16 26 12.4 +1.2**
E03A Lebam 76.87 45 ⇓P **P** **16 26 11.5 +0.3**
baz=77
F03A Seaside 77.06 46 ⇑P **P** **16 26 12.4 +0.2**
baz=77
A05A Maple Falls 77.07 42 ⇓P **P** **16 26 11.9 -0.4**
baz=77
BIDO Bidbid 77.10 290 ⇓P **P** **16 26 11.5 -0.9**
CMW Cultus Mountai 77.23 43 P **P** **16 26 14.1 +0.9**
MBW Mount Baker 77.25 42 P **P** **16 26 13.9 +0.6**
APA Apatity 77.26 338 ⇓*i*P **P** **16 26 13.0 -0.3**
APA *i* 16 29 13.5
APA *i*S S 16 35 32.0 -5.6
APA *i* 16 36 18.0
APA pmax pmax
comp=Z,35nm,0.9s,mb5.1
B05A Bryant 77.29 43 ⇓P **P** **16 26 13.6 +0.1**
baz=77
K01A Sixes 77.40 49 ⇓P **P** **16 26 13.6 -0.5**
baz=77
JCW Jim Creek 77.42 43 P **P** **16 26 14.9 +0.7**
G03A Yamhill 77.44 46 ⇓P **P** **16 26 14.6 +0.3**
baz=77
I02A Mapleton 77.47 48 ⇑P **P** **16 26 14.3 -0.2**
baz=77
MPOR Mary's Peak 77.51 47 ⇓P **P** **16 26 15.8 +1.1**
RNO Roman Nose 77.56 48 P **P** **16 26 16.4 +1.4**
KLMR Klimovskoe 77.57 331 *e*P **P** **16 26 12.9 -2.1**
KLMR pmax pmax
comp=Z,20nm,1.5s,mb4.6
H03A Soap Creek Ran 77.63 47 ⇓P **P** **16 26 15.1 -0.3**
baz=78
D05A Enumclaw 77.70 44 ⇑P **P** **16 26 16.3 +0.6**
baz=78
C05A Tolt Reservoir 77.73 43 ⇑P **P** **16 26 16.1 +0.1**
baz=78
HOQ Hoqain 77.79 291 P **P** **16 26 16.9 +0.7**
SNR=6.2
F04A Amboy 77.82 45 ⇓P **P** **16 26 16.5 +0.1**
baz=78
TDL Tradedollar La 77.82 45 P **P** **16 26 17.3 +0.9**
J02A Umpqua 77.85 48 ⇑P **P** **16 26 17.1 +0.5**
baz=78,SNR=5.2
I03A Eugene 77.86 47 ⇑P **P** **16 26 17.2 +0.6**
baz=78
BANOM Banah 77.93 293 ⇓P **P** **16 26 16.8 -0.2**
M01C Crescent City 77.94 50 ⇓P **P** **16 26 17.4 +0.3**
baz=78
G04A Mulino 78.01 46 ⇑P **P** **16 26 17.7 +0.2**
baz=78
E05A Randle 78.05 45 ⇓P **P** **16 26 17.4 -0.3**
baz=78
K02A Glendale 78.10 49 ⇑P **P** **16 26 18.1 +0.2**
baz=78
BSY Bisya 78.15 290 ⇓P **P** **16 26 17.6 -0.7**
L02A Cave Junction 78.21 49 ⇑P **P** **16 26 19.1 +0.5**
baz=78
KEV Kevo 78.26 341 *e*p **P** **16 26 17.1 -1.7**
comp=Z,34nm,0.6s,mb5.2
KEV Kevo 78.26 341 *e*P **P** **16 26 17.1 -1.7**
KEV pmax pmax
comp=Z,34nm,0.6s,mb5.2
J03A Ideyld Park 78.27 48 ⇓P **P** **16 26 19.0 +0.1**
baz=78
BROR Big Rock Looko 78.33 47 P **P** **16 26 19.6 +0.4**
JCC Jacoby Creek 78.33 51 ⇑P **P** **16 26 18.5 -0.7**
baz=78
H04A Detroit Lake 78.38 47 ⇑P **P** **16 26 19.3 -0.1**
baz=78
TDH Tom, Dick, Har 78.44 46 P **P** **16 26 20.3 +0.4**
VLL Laurance Lake 78.46 46 P **P** **16 26 20.8 +0.8**
F05A White Salmon 78.47 45 ⇓P **P** **16 26 20.2 +0.3**
baz=78
HUMO Hull Mountain 78.52 49 *e*P **P** **16 26 20.5 +0.3**
comp=Z,14nm,1.0s,mb4.7
HUMO Hull Mountain 78.52 49 ⇓P **P** **16 26 20.6 +0.3**
baz=78,SNR=6.5
ASHO Ashiyiah 78.53 292 ⇑P **P** **16 26 19.5 -0.8**
KHMM Horse Mountain 78.53 51 *e*P **P** **16 26 21.0 +0.7**
ARQ Araqi 78.56 291 ⇑P **P** **16 26 19.6 -0.8**
BBOR Butler Butte 78.62 48 P **P** **16 26 21.8 +1.0**

ETW Entiat 78.63 43 P **P** 16 26 21.1 +0.3
VFP Flag Point 78.65 46 P **P** 16 26 21.6 +0.6
O01C Eel River Cons 78.70 51 ⇓P **P** 16 26 21.8 +0.6
baz=79
EBG Ellensburg 78.71 44 P **P** 16 26 22.0 +0.7
G05A Wamic 78.78 46 ⇓P **P** 16 26 22.0 +0.4
baz=79
ARCES ARCESS Array B 78.82 341 P **P** 16 26 21.4 -0.4
comp=Z,41nm,0.6s,mb5.3,baz=73,slow=8.6,SNR=215
WIFE Three Sisters- 78.83 47 P **P** 16 26 22.8 +0.9
WTV Waterville 78.84 43 P **P** 16 26 21.8 -0.2
N02C Big Bar 78.85 51 ⇓P **P** 16 26 22.1 +0.1
baz=79,SNR=6.0
YBH Yreka Blue Hor 78.98 49 *e*P **P** 16 26 23.7 +1.0
YBH pmax pmax
comp=Z,11nm,1.0s
YBH Yreka Blue Hor 78.98 49 *e*P **P** 16 26 23.7 +1.0
comp=Z,11nm,1.0s,mb4.5
YBH Yreka Blue Hor 78.98 49 ⇓P **P** 16 26 23.1 +0.4
baz=79,SNR=7.1
M02C Callahan 78.99 50 ⇓P **P** 16 26 23.2 +0.4
baz=79,SNR=6.2
H05A Madras 79.03 46 ⇓P **P** 16 26 23.0 -0.1
baz=79
BUOR Burton Butte 79.12 49 P **P** 16 26 24.2 +0.7
EPH Ephrata 79.18 43 P **P** 16 26 23.9 +0.1
P01C Double 8 Ranch 79.27 52 ⇓P **P** 16 26 24.3 0.0
baz=79
VTHM Trough 79.30 46 P **P** 16 26 24.8 +0.3
MDW Midway 79.33 44 P **P** 16 26 25.2 +0.6
L04A Klamath Falls 79.41 49 ⇑P **P** 16 26 25.3 +0.2
baz=79
O02C Red Bluff 79.43 51 ⇑P **P** 16 26 25.5 +0.3
baz=79,SNR=6.4
SNIWA Snively Ranch 79.45 44 P **P** 16 26 25.7 +0.5
WDC Whiskeytown Da 79.48 51 ⇓P **P** 16 26 25.6 +0.2
baz=79
J05A Fort Rock 79.49 48 ⇓P **P** 16 26 26.0 +0.5
baz=79,SNR=20
VIPM Ingram Point 79.49 46 P **P** 16 26 26.1 +0.6
RSW Rattlesnake Hi 79.52 44 P **P** 16 26 26.2 +0.6
GBL Gable Mountain 79.53 44 P **P** 16 26 26.2 +0.5
M04C Macdoel 79.58 49 ⇑P **P** 16 26 26.3 +0.3
baz=80,SNR=6.8
GASB Alder Springs 79.66 51 ⇓P **P** 16 26 27.0 +0.6
baz=80
OD2 Odessa Site #2 79.73 43 P **P** 16 26 26.5 -0.2
I06A Prineville 79.96 47 ⇑P **P** 16 26 28.2 +0.2
baz=80,SNR=8.4
MNRC McLaughlin Nat 80.12 52 ⇑P **P** 16 26 29.4 +0.6
baz=80,SNR=5.4
NSHM Saint Helena R 80.12 53 *e*P **P** 16 26 28.4 -0.4
HATC Hat Creek Radi 80.17 50 ⇑P **P** 16 26 29.2 +0.1
baz=80
VRHR Novokhopersk 80.18 321 *e*P **P** 16 26 28.8 -0.3
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb4.9
VRHR pmax pmax
comp=N,4.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.5s
JOF Joensuu 80.19 334 *e*p **P** 16 26 27.8 -1.4
comp=E,38nm,0.4s,mb5.5
L05A Lakeview 80.19 49 ⇑P **P** 16 26 29.6 +0.4
baz=80,SNR=6.0
M05C Lookout 80.21 49 ⇑P **P** 16 26 29.1 -0.2
baz=80
J06A Christmas Vall 80.24 47 ⇑P **P** 16 26 29.5 0.0
baz=80,SNR=11
F08A Pendleton 80.26 45 ⇓P **P** 16 26 30.0 +0.4
baz=80,SNR=6.2
CVS Carmenet Viney 80.29 53 ⇓P **P** 16 26 29.7 0.0
baz=80
K06A Valley Falls 80.33 48 ⇓P **P** 16 26 30.2 +0.2
baz=80,SNR=8.9
I07A Izee 80.39 46 ⇓P **P** 16 26 30.4 +0.1
baz=80
NEW Newport 80.41 42 *e*P **P** 16 26 30.2 -0.2
NEW pmax pmax
comp=Z,22nm,1.0s
NEW Newport 80.41 42 *e*P **P** 16 26 30.2 -0.2
comp=Z,22nm,1.0s,mb4.8
SUTB Sutter Butte 80.48 52 ⇑P **P** 16 26 30.5 -0.3
baz=80
MOS Moscow 80.52 326 *e*P **P** 16 26 28.5 -2.5
MOS pmax pmax
comp=Z,48nm,0.7s,mb5.3
ORV Oroville 80.58 51 ⇑P **P** 16 26 30.6 -0.6
baz=80,SNR=6.7
O04C Chester 80.61 50 ⇑P **P** 16 26 31.3 -0.1
baz=80
EDM Edmonton 80.71 36 *e*P **P** 16 26 31.7 -0.2
M06C Likely Place G 80.73 49 ⇑P **P** 16 26 32.1 0.0
baz=81
ELFS Eagle Lake Fie 80.76 50 ⇑P **P** 16 26 32.4 +0.2
baz=81
J07A Hines 80.77 47 ⇑P **P** 16 26 32.3 +0.1
baz=81,SNR=6.5
H08A Prairie City 80.79 46 ⇑P **P** 16 26 32.3 -0.1
baz=81
BDM Black Diamond 80.86 53 ⇑P **P** 16 26 32.2 -0.6
baz=81
BNLO Ben Lomond (Sa 80.92 54 ⇓P **P** 16 26 32.9 -0.2
baz=81
K07A Rock Creek Ran 81.06 48 ⇑P **P** 16 26 34.0 +0.2
baz=81,SNR=14
I08A Drewsey 81.08 46 ⇑P **P** 16 26 33.9 0.0
baz=81,SNR=8.5
DAG Danmarks Havn 81.09 356 ⇑*i*P **P** 16 26 31.7 -2.2
comp=Z,5.3nm,0.6s,mb4.5
DAG Danmarks Havn 81.09 356 ⇑*i*P **P** 16 26 31.7 -2.2
DAG pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
L07A Adell 81.24 48 ⇓P **P** 16 26 35.0 +0.3
baz=81,SNR=8.2
BEKR Beckwourth 81.29 51 ⇑P **P** 16 26 34.7 -0.3
baz=81,SNR=16
P05C Yuba Gap, Truc 81.31 51 ⇑P **P** 16 26 34.9 -0.2
baz=81
OBN Obninsk 81.33 326 *ei*P **P** 16 26 34.9 -0.3
OBN *e**PP pP 16 27 46.5 +1.2
OBN *e**SP sP 16 28 18.1 +1.1
OBN *e*S S 16 36 25.5 +5.3
OBN pmax pmax
comp=Z,55nm,1.4s,mb5.1
OBN Obninsk 81.33 326 *e*P **P** 16 26 34.8 -0.5
comp=Z,14nm,0.7s,mb4.8
N06A Buffalo Meadow 81.35 50 ⇓P **P** 16 26 35.3 0.0
baz=81,SNR=11
H09A Durkee 81.41 45 ⇓P **P** 16 26 35.7 +0.1
baz=81
LAVA Lava Cap Winer 81.41 52 ⇓P **P** 16 26 35.5 -0.1
baz=81,SNR=5.1
S04C Ingram Canyon, 81.42 53 ⇑P **P** 16 26 35.7 0.0
baz=81
R04C Big Horse Ranc 81.44 52 ⇑P **P** 16 26 35.2 -0.6
baz=81
VRSR Storozhevoye 81.54 322 *e*P **P** 16 26 35.9 -0.4
VRSR pmax pmax
comp=Z,50nm,0.8s,mb5.3
VRSR pmax pmax
comp=N,30nm,0.9s
VRSR pmax pmax
comp=E,60nm,1.0s
O06A Flanigan 81.57 50 ⇓P **P** 16 26 36.4 0.0
baz=82,SNR=8.6
K08A Mann Creek Ran 81.57 47 ⇓P **P** 16 26 36.6 +0.2
baz=82,SNR=13
BMO Blue Mountains 81.57 45 *e*P **P** 16 26 36.4 -0.1
comp=E,13nm,0.8s,mb4.7
WVOR Wild Horse Val 81.58 48 *e*P **P** 16 26 36.2 -0.3
WVOR pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
WVOR Wild Horse Val 81.58 48 *e*P **P** 16 26 36.2 -0.3
comp=Z,7.9nm,0.9s,mb4.4
M07A Soldier Meadow 81.59 49 ⇑P **P** 16 26 36.7 +0.2
baz=82,SNR=6.0
GOF Gofitskoye 81.59 315 *e*P **P** 16 26 36.0 -0.5
I09A Lost Marbles R 81.61 46 ⇑P **P** 16 26 36.5 -0.2
baz=82,SNR=5.3
PACP Pacheco Peak 81.63 54 ⇑P **P** 16 26 36.9 +0.2
baz=82
HAST UC Hastings Re 81.65 54 ⇑P **P** 16 26 36.8 -0.1
baz=82
L08A Fields 81.87 48 ⇓P **P** 16 26 38.2 +0.2
baz=82,SNR=21
ZEI Tsey 81.87 313 *e*P **P** 16 26 37.9 -0.1
ZEI pmax pmax
comp=Z,15nm,0.6s,mb4.9
R05C Kirkwood Meado 81.92 52 ⇓P **P** 16 26 38.2 0.0
baz=82
CMB Columbia Colle 81.93 52 *e*P **P** 16 26 38.8 +0.5
CMB pmax pmax
comp=Z,16nm,0.7s,mb4.9
CMB Columbia Colle 81.93 52 *e*P **P** 16 26 38.8 +0.4
comp=Z,16nm,0.7s,mb4.9
CMB Columbia Colle 81.93 52 ⇓P **P** 16 26 38.3 0.0
baz=82,SNR=7.6
WCN Washoe City 81.93 51 ⇑P **P** 16 26 38.5 +0.1
baz=82
N07B Gerlach 81.95 49 ⇑P **P** 16 26 38.5 +0.1
baz=82,SNR=16
V03C Hunter Liggett 82.02 55 ⇑P **P** 16 26 38.7 -0.1
baz=82
BSMT Bassoo Peak 82.02 42 P **P** 16 26 39.5 +0.7
WALA Waterton Lakes 82.07 40 *e*P **P** 16 26 39.3 +0.2
comp=Z,17nm,0.8s,mb4.8
S05C Merced 82.22 53 ⇓P **P** 16 26 39.8 0.0
baz=82
U04C Hernandez Rese 82.23 54 ⇑P **P** 16 26 40.3 +0.4
baz=82
KIV Kislovodsk 82.24 314 P **P** 16 26 40.6 +0.6
SNR=10
KIV Kislovodsk 82.24 314 *e*P **P** 16 26 40.6 +0.7
KIV pmax pmax
comp=E,46nm,1.0s,mb5.2
KIV Kislovodsk 82.24 314 *e*P **P** 16 26 40.5 +0.6
comp=E,46nm,1.0s,mb5.2
O07A Toulon 82.25 50 ⇓P **P** 16 26 40.0 0.0
baz=82,SNR=5.5
S06C San Francisco 82.38 52 ⇓P **P** 16 26 40.5 -0.1
baz=82
L09A Wilkinson Ranc 82.40 48 ⇓P **P** 16 26 41.0 +0.3
baz=82,SNR=8.1
R06C Coleville 82.44 52 ⇑P **P** 16 26 41.3 +0.3
baz=82,SNR=8.0
P07A Fallon 82.47 51 ⇓P **P** 16 26 41.5 +0.4
baz=82
N08A GE Springer Mi 82.54 49 ⇑P **P** 16 26 41.5 0.0
baz=82,SNR=7.8
PKD Parkfield 82.57 54 ⇑P **P** 16 26 41.4 -0.2
baz=82
KAF Kangasniemi 82.60 335 *ep* **P** 16 26 39.1 -2.7
comp=Z,16nm,0.6s,mb5.0,baz=55,slow=4.8
KAF Kangasniemi 82.60 335 *e*P **P** 16 26 39.1 -2.7
KAF pmax pmax
comp=Z,16nm,0.6s,mb5.0
M09A Marrel Ranch, 82.78 48 ⇓P **P** 16 26 42.5 -0.2
baz=83
WHFO Wadi Hawf 82.79 286 ⇓P **P** 16 26 41.2 -1.6
T06C Millerton Lake 82.80 53 P **P** 16 26 42.7 -0.1
baz=83,SNR=5.8
R07C Lee Vining 82.89 52 ⇓P **P** 16 26 43.6 +0.3
baz=83
N09A Rock Creek Ran 82.94 49 ⇑P **P** 16 26 43.8 +0.3
baz=83,SNR=5.5
KCC Kaiser Creek 82.98 53 ⇓P **P** 16 26 43.9 +0.2
baz=83
FIA1 FINESS Array S 83.06 334 *e*P **P** 16 26 42.7 -1.4
FINES FINESS Array B 83.06 334 P **P** 16 26 42.7 -1.4
comp=Z,20nm,0.5s,mb5.2,baz=70,slow=5.1,SNR=306
FINES FINESS Array B 83.06 334 P **P** 16 26 42.7 -1.4
NVAR Mina Array Bea 83.31 51 P **P** 16 26 45.5 +0.1
comp=Z,13nm,0.7s,mb4.8,baz=270,slow=6.5,SNR=38
CHMT Chamberlain Mo 83.35 42 *e*P **P** 16 26 45.2 -0.4
M10A I.L. Ranch, Tu 83.37 48 ⇓P **P** 16 26 46.0 +0.3
baz=83
Q08A Gabbs 83.41 51 ⇑P **P** 16 26 46.1 +0.2
baz=83
ABTO Aybut 83.41 286 ⇑P **P** 16 26 45.0 -0.9
HELL Mitchell Peak, 83.44 53 ⇑P **P** 16 26 45.7 -0.4
baz=83,SNR=5.9
O09A Fish Creek Ran 83.44 49 ⇓P **P** 16 26 46.5 +0.5
baz=83,SNR=18
R08A Mina 83.48 51 ⇓P **P** 16 26 46.3 +0.1
baz=83
PKM Peak Mountain 83.50 55 ⇓P **P** 16 26 46.8 +0.4
baz=83
VES Vestal, Richgr 83.71 54 ⇓P **P** 16 26 46.7 -0.7
baz=84
P09A Austin 83.71 50 ⇓P **P** 16 26 47.6 +0.2
baz=84
SBC Santa Barbara 83.75 56 ⇓P **P** 16 26 47.6 -0.1
baz=84
UMR Umm Al-Rimmam 83.86 299 *e*P **P** 16 26 48.7 +0.5
O10A Cortez Mining, 83.88 49 ⇓P **P** 16 26 48.6 +0.3
baz=84
M11A Holland Ranch, 83.92 48 ⇓P **P** 16 26 48.5 0.0
baz=84
Q09A Carvers 83.96 51 ⇓P **P** 16 26 48.8 +0.1
baz=84
HLID Hailey 83.99 45 *e*P **P** 16 26 48.6 -0.3
comp=Z,9.8nm,0.9s,mb4.6
KBD Kabd 84.02 299 *e*P **P** 16 26 49.1 +0.2
MIB Mutribah 84.08 300 *e*P **P** 16 26 49.2 -0.1
MIB AMb AMb 16 26 51.0
comp=Z,136nm,0.7s
ARVC Arvin 84.17 55 ⇑P **P** 16 26 50.1 +0.4
baz=84
P10A Eureka 84.17 50 ⇑P **P** 16 26 50.1 +0.4
baz=84
N11A Elko Archery C 84.20 48 ⇓P **P** 16 26 50.0 +0.1
baz=84
RDF Al-Radifah 84.23 299 *e*P **P** 16 26 50.0 0.0
RDF AMb AMb 16 26 51.0
comp=Z,55nm,0.6s,mb5.6
CWC Cottonwood Cre 84.23 53 ⇓P **P** 16 26 49.8 -0.3
baz=84
ISA Isabella 84.23 54 ⇑P **P** 16 26 49.0 -1.0
baz=84
HRY Holter Researc 84.32 42 *e*P **P** 16 26 50.7 +0.2
NAY Al-Naaiem 84.36 299 *e*P **P** 16 26 50.5 -0.1
NAY AMb AMb 16 26 51.7
comp=Z,59nm,0.6s,mb5.6
S09A Goldfield 84.36 52 ⇓P **P** 16 26 50.9 +0.2
baz=84,SNR=15
DLMT Dillon 84.42 43 *e*P **P** 16 26 50.5 -0.4
comp=Z,15nm,0.9s,mb4.8
RST Umm Al-Ruwaisa 84.47 299 *e*P **P** 16 26 50.8 -0.4
RST AMb AMb 16 26 52.6
comp=Z,58nm,0.7s,mb5.5
M12A Wells 84.53 48 ⇓P **P** 16 26 52.1 +0.6
baz=84,SNR=16
O11A Cowboy Ranch, 84.53 49 ⇓P **P** 16 26 51.6 +0.1
baz=84,SNR=7.9
GRAC Grapevine Rang 84.54 52 ⇑P **P** 16 26 51.7 +0.2
baz=84,SNR=6.3
LCCM Lewis and Clar 84.67 43 P **P** 16 26 52.5 +0.2
N12A Clover Valley, 84.67 48 ⇑P **P** 16 26 52.5 +0.3
baz=85
P11A Circle Ranch, 84.70 50 ⇑P **P** 16 26 52.6 +0.3
baz=85,SNR=8.2
R10A Warm Springs 84.81 51 ⇓P **P** 16 26 53.1 +0.2
baz=85
MPMC Manual Prospec 84.82 53 ⇓P **P** 16 26 53.2 +0.3
baz=85
LRMC Laurel Mountai 84.89 54 ⇓P **P** 16 26 53.4 +0.1
baz=85
BOZ Bozeman (W) 84.91 43 *e*P **P** 16 26 53.3 -0.1
BOZ pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
BOZ Bozeman (W) 84.91 43 *e*P **P** 16 26 53.3 -0.1
comp=Z,10nm,0.6s,mb4.8
EGMT Eagleton 85.01 40 *e*P **P** 16 26 53.4 -0.5
comp=Z,12nm,0.9s,mb4.7
M13A Montello 85.07 47 ⇑P **P** 16 26 54.4 +0.2
baz=85
O12A Currie 85.12 49 ⇑P **P** 16 26 54.6 +0.2
baz=85
FMP Fort Macarthur 85.12 56 ⇓P **P** 16 26 54.1 -0.4
baz=85
FURC Furnace Creek, 85.12 53 ⇑P **P** 16 26 54.2 -0.3
baz=85
N13A Wendover, West 85.25 48 ⇑P **P** 16 26 55.2 +0.1
baz=85
TRCR Troy Canyon 85.30 51 *e*P **P** 16 26 55.6 +0.2
ANN Anapa 85.33 317 *e*P **P** 16 26 57.9 +2.4
ANN pmax pmax
comp=Z,60nm,1.1s,mb5.3
P12A McGill 85.33 49 ⇑P **P** 16 26 55.6 +0.2
baz=85
TPNV Topopah Spring 85.38 52 *e*P **P** 16 26 55.8 +0.1
TPNV pmax pmax
comp=Z,23nm,0.8s,mb5.1
TPNV Topopah Spring 85.38 52 *e*P **P** 16 26 55.8 +0.1
comp=Z,23nm,0.8s,mb5.1
QLMT Earthquake Lak 85.40 43 *e*P **P** 16 26 56.4 +0.6
BFSC Mount Baldy St 85.40 55 ⇑P **P** 16 26 56.0 +0.2
baz=85
U10A Ash Meadows, A 85.54 53 ⇑P **P** 16 26 57.0 +0.5
baz=85
GSC Goldstone 85.63 54 ⇓P **P** 16 26 56.8 -0.1
baz=86
YMR Madison River 85.77 43 *e*P **P** 16 26 59.1 +1.5
comp=Z,29nm,0.8s,mb5.2
SHOC Shoshone 85.78 53 ⇓P **P** 16 26 57.5 -0.2
baz=86
SUMG Summit 85.94 0 *e*P **P** 16 26 58.6 +0.2
comp=Z,18nm,0.9s,mb4.9
RRI2 Red Ridge 86.12 45 *e*P **P** 16 26 59.8 +0.4
comp=Z,11nm,0.9s,mb4.7
IMW Indian Meadow 86.12 44 *e*P **P** 16 26 59.9 +0.5
comp=Z,12nm,0.9s,mb4.7
HEC Hector,Ludlow 86.17 54 ⇓P **P** 16 26 59.4 -0.2
baz=86
FLWY Flagg Ranch 86.20 44 *e*P **P** 16 26 58.3 -1.4
comp=Z,15nm,1.0s,mb4.8
U11A Corn Creek 86.23 52 ⇑P **P** 16 27 00.2 +0.4
baz=86
TUQ Turquoise Mtn. 86.23 53 ⇓P **P** 16 26 60.0 +0.1
baz=86
TPAW Teton Pass 86.30 44 *e*P **P** 16 27 00.3 +0.1
comp=Z,6.4nm,0.9s,mb4.5
MOOW Moose Ponds 86.32 44 *e*P **P** 16 26 59.7 -0.6
comp=Z,7.0nm,1.1s,mb4.4
109C Camp Elliot, M 86.36 56 ⇓P **P** 16 27 00.3 -0.2
baz=86
DUG Dugway 86.49 48 *e*P **P** 16 27 01.0 -0.1
DUG pmax pmax
comp=Z,15nm,0.9s,mb4.8
DUG Dugway 86.49 48 *e*P **P** 16 27 01.0 -0.2
comp=Z,15nm,0.9s,mb4.8
PFO Pinyon Flat Ob 86.57 55 *e*P **P** 16 27 01.4 -0.1
PFO pmax pmax
comp=Z,16nm,0.9s,mb4.8
PFO Pinyon Flat Ob 86.57 55 *e*P **P** 16 27 01.4 -0.1
comp=Z,16nm,0.9s,mb4.9
PFO Pinyon Flat Ob 86.57 55 ⇓P **P** 16 27 01.5 0.0
baz=86
HWUT Hardware Ranch 86.73 46 *e*P **P** 16 27 02.6 +0.4
comp=Z,19nm,1.1s,mb4.8
BELC Belle Mtn. 86.76 55 ⇓P **P** 16 27 02.1 -0.3
baz=87
U12A Valley of Fire 86.85 52 ⇓P **P** 16 27 02.9 +0.1
baz=87
MONP Monument Peak 86.88 56 ⇓P **P** 16 27 03.0 0.0
baz=87
V12A Nelson 86.91 53 ⇑P **P** 16 27 03.3 +0.2
baz=87
W12A Cal Nev Ari 87.07 53 ⇓P **P** 16 27 03.6 -0.3
baz=87
ARUT Antelope Range 87.08 50 *e*P **P** 16 27 04.5 +0.6
DVTC Desert V Tower 87.22 56 ⇓P **P** 16 27 04.4 -0.2
baz=87
CCUT Cedar City 87.23 51 *e*P **P** 16 27 04.6 -0.1
IRM Iron Mountain 87.33 54 ⇑P **P** 16 27 05.1 0.0
baz=87
SWSC Sam W. Stewart 87.34 56 ⇓P **P** 16 27 04.6 -0.5
baz=87
AKASG Malin Array Be 87.35 324 P **P** 16 27 03.6 -1.6
comp=Z,6.4nm,0.6s,mb4.7,baz=52,slow=4.9,SNR=60
AKBB Malin Array Si 87.35 324 *e*P **P** 16 27 03.5 -1.7
MALT Malatya 87.48 310 *e*P **P** 16 27 05.1 -0.7
MALT pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
MALT Malatya 87.48 310 *e*P **P** 16 27 05.1 -0.7
comp=Z,3.2nm,0.6s,mb4.3
PDAR Pinedale Array 87.54 45 P **P** 16 27 05.5 -0.6
comp=Z,1.2nm,0.5s,mb4.0,baz=189,slow=1.4,SNR=14
MSU Marysvale 87.66 49 *e*P **P** 16 27 06.9 +0.2
W13A Hualapai Mount 87.89 53 ⇓P **P** 16 27 08.0 +0.3
baz=88
Y12C Blythe 87.98 54 ⇓P **P** 16 27 08.2 0.0
baz=88
PDMCI Parker Dam,Lak 88.04 54 ⇓P **P** 16 27 08.5 0.0
baz=88
GLA Glamis 88.04 55 ⇑P **P** 16 27 08.8 +0.3
baz=88
X13A Yucca 88.14 53 ⇑P **P** 16 27 09.1 +0.2
baz=88,SNR=5.4
W14A Seligman 88.44 53 ⇓P **P** 16 27 11.0 +0.6
baz=88
SRU San Rafael 88.55 48 *e*P **P** 16 27 10.4 -0.5
SRU pmax pmax
comp=Z,11nm,0.8s,mb4.7
SRU San Rafael 88.55 48 *e*P **P** 16 27 10.4 -0.5
comp=Z,11nm,0.8s,mb4.7
SUW Suwalki 88.58 329 *e*P **P** 16 27 09.7 -1.3
comp=Z,128nm,0.8s
NB2 NORSAR Subarra 88.84 339 P **P** 16 27 10.0 -2.2
comp=Z,5.1nm,0.7s,mb4.5,baz=52,slow=5.1
NOA NORSAR Array B 88.84 339 P **P** 16 27 10.4 -1.8
comp=Z,3.8nm,0.7s,mb4.4,baz=46,slow=4.5,SNR=16
X14A Yava 88.90 53 ⇓P **P** 16 27 13.1 +0.6
baz=89
Y14A Wickenburg 89.04 54 ⇑P **P** 16 27 13.4 +0.2
baz=89
W15A Williams 89.05 52 ⇓P **P** 16 27 14.0 +0.8
baz=89
Z14A Wintersburg 89.33 54 ⇓P **P** 16 27 14.7 +0.2
baz=89
X15A Humboldt 89.38 53 ⇓P **P** 16 27 15.5 +0.8
baz=89
PV10 Paradox Valley 89.92 48 *e*P **P** 16 27 17.2 -0.1
BR131 Keskin Array S 90.16 313 *e*P **P** 16 27 17.3 -1.1
comp=Z,3.5nm,0.7s,mb4.3
BRTR Keskin Array B 90.16 313 P **P** 16 27 17.4 -0.9
comp=Z,4.1nm,0.7s,mb4.4,baz=95,slow=3.1,SNR=29
PV01 Paradox Valley 90.36 48 *e*P **P** 16 27 19.3 0.0
RSSD Black Hills 90.38 42 *e*P **P** 16 27 18.3 -1.1
RSSD pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
RSSD Black Hills 90.38 42 *e*P **P** 16 27 18.3 -1.1
comp=Z,7.0nm,0.6s,mb4.7
116A Eloy 90.62 55 ⇓P **P** 16 27 22.0 +1.5
baz=90
SMCO Snowmass 90.96 47 *e*P **P** 16 27 22.4 +0.3
comp=Z,12nm,0.9s,mb4.7
ISCO Idaho Springs 91.57 46 *e*P **P** 16 27 25.3 +0.4
ISCO pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ISCO Idaho Springs 91.57 46 *e*P **P** 16 27 25.3 +0.5
comp=Z,8.7nm,1.0s,mb4.6
ANMO Albuquerque 93.38 50 *i* P **P** 16 27 33.0 -0.2
BRG Berggiesshubel 94.93 330 *e*P **P** 16 27 38.5 -1.8
comp=Z,2.4nm,0.8s,mb4.4
BRG Berggiesshubel 94.93 330 *e*P **P** 16 27 38.6 -1.7
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
CLL Collm 95.06 331 ⇓P **P** 16 27 39.8 -1.1
comp=Z,logA/T=0.8,mb4.7
CLL *e**PP pP 16 28 52.0 -0.6
CLL Collm 95.06 331 ⇓*i*P **P** 16 27 39.8 -1.1
comp=Z,7.0nm,1.2s,mb4.7
CLL *e*pP pP 16 28 52.0 -0.6
CLL Collm 95.06 331 ⇓*i*P **P** 16 27 39.8 -1.1
CLL *e**PP pP 16 28 52.0 -0.6
CLL pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
KHC Kasperske Hory 96.31 329 *e*P **P** 16 27 45.0 -1.5
GERES GERESS Array B 96.44 329 P **P** 16 27 46.0 -1.2
comp=Z,1.9nm,0.6s,mb4.4,baz=38,slow=5.2,SNR=16
SNAA Sanae 126.32 193 PKP PKPdf 16 33 17.2 -1.8
comp=Z,1.5nm,0.8s,baz=175,slow=4.8,SNR=8.9
TORD Torodi Ar. Bea 128.54 309 PKP PKPdf 16 33 23.3 +0.1
comp=Z,1.8nm,0.5s,baz=19,slow=1.4,SNR=29
TORD PP PP 16 35 30.9 -1.7
comp=Z,1.2nm,0.9s,baz=31,slow=6.2,SNR=4.3
PLCA Paso Flores 145.95 132 PKPbc PKPbc 16 33 56.4 0.0
comp=Z,27nm,0.7s,baz=233,slow=3.6,SNR=96
PLCA Paso Flores 145.95 132 *e*PKPbc PKPbc 16 33 56.0 -0.4
LPAZ La Paz 150.17 85 PKP PKPdf 16 34 03.5 +1.5
comp=Z,22nm,0.6s,baz=336,slow=3.4,SNR=17
LPAZ PKPbc PKPbc 16 34 09.2 +1.8
comp=Z,22nm,0.6s,baz=304,slow=2.8,SNR=70
LPAZ PKPab PKPab 16 34 16.0 +1.5
comp=Z,12nm,0.5s,baz=343,slow=3.7,SNR=15
LPAZ La Paz 150.17 85 *e*PKPdf PKPdf 16 34 02.9 +0.9
LPAZ *e*PKPbc PKPbc 16 34 08.9 +1.5
LPAZ *e*PKPab PKPab 16 34 16.0 +1.5
SAML Samuel 151.85 67 *e*PKPdf PKPdf 16 34 04.6 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAML				ePKPbc	PKPbc	16 34 11.1	-0.1
SAML				ePKPab	PKPab	16 34 20.2	-1.4
TRQA	Tornquist	153.08	133	ePKPbc	PKPbc	16 34 13.0	-1.0
MKAR	Makanchi Array	147.82	45	PKP	PKPdf	16 36 00.4	+0.1
	4.2nm,0.7s,baz=318,slow=1.6,SNR=35						
MKAR				PKPbc	PKPbc	16 36 02.8	-0.5
	4.3nm,0.7s,baz=318,slow=1.6,SNR=32						
WMQ	Urumqi	152.54	47	ePKP	PKPdf	16 36 10.0	+2.3
ASAJ	Asahikawa	152.84	314	PKPbc	PKPbc	16 36 15.6	+0.2
	6.5nm,0.9s,baz=305,slow=5.0,SNR=3.6						
ASAJ				pPKPbc	pPKPbc	16 36 22.2	-4.7
	6.0nm,0.8s,baz=94,slow=5.8,SNR=3.5						
PBA	Port Blair	153.32	122	eP	x	16 36 30.2	
PBA				eS	x	16 36 39.0	
PBA				ex	x	16 36 39.6	
	comp=E,227nm,0.4s						
PBA				ex	x	16 36 40.8	
	comp=N,170nm,0.3s						
SONM	Songino Array	158.77	17	PKP	PKPdf	16 36 16.5	+0.5
	comp=N,1.0nm,1.0s,baz=18,slow=0.9,SNR=4.6						
HHC	Hu-ho-hao-te	166.58	13	ePKP	PKPdf	16 36 25.9	+2.2
HHC				PKS		16 39 57.4	
HHC				PP	PP	16 41 18.6	+4.9
HHC				SKKS	SKKSac	16 48 00.1	+1.6
HHC				SS	SS	17 01 54.3	+0.7
HHC				LR	LR		
	comp=N,280nm,25.6s						
HHC				LR	LR		
	comp=E,371nm,27.5s						
HHC				LR	LR		
	comp=Z,278nm,27.5s						
KMI	Kunming	168.28	100	PKP	PKPdf	16 36 26.0	+1.1
NJ2	Nanjing	174.85	326	ePKP	PKPdf	16 36 30.0	+1.9

ISCJB ***01*** *16:16:18.6±1.7, 2780S±004×6454W±005, h24km±12km, mb4.6/22, MS3.6/3, Error ellipse: s-maj=8.5km s-min=5.8km az=77.3*
NEIC ***01*** *16:16:19.9±0.2, 2779S×6450W, mb4.8/15, MD5.0(SJA), Error ellipse: s-maj=6.8km s-min=5.4km az=113.0*
NEIC Felt [V] at Termas de Rio Hondo, [IV] at Santiago del Estero and [III] at Catamarca.
IDC ***01*** *16:16:19.7±0.6, 2777S×6445W, h18km±3km, mb4.3/8, mb1 4.3/12, mb1mx4.2/20, mbtmp4.3/12, ML4.2/3, MS3.7/5, Ms1 3.6/5, ms1mx3.4/18, Error ellipse: s-maj=18.7km s-min=12.7km az=128.0*
BJI ***01*** *16:16:19.8, 2780S×6450W, h19km, mB5.0, Ms4.9, Msz4.8*
GUC ***01*** *16:16:22.9±0.4, 2788S×6479W, h20km±15km, mb4.8(NEIC)*
ISC 01 16:16:22.2±0.7**, 2779S**±004×**6451W**±005**, h36**km±7km**, h17**km±2.2km**:pP-P, n68,** σ**0.86**/57**, mb4.6**/22**, MS3.6**/3**, 4C-1D, Santiago del Estero Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	4.99	220	Pn	Pn	16 17 34.4	-0.2
	1.5nm,0.3s,baz=33,slow=12,SNR=168						
CFAA				Sn	Sn	16 18 32.1	+1.1
	7.4nm,0.3s,baz=261,slow=15,SNR=6.7						
CFAA				Lg		16 18 53.5	
	7.6nm,0.3s,baz=132,slow=23,SNR=6.6						
CFAA	Coronel Fontan	4.99	220	Pn	Pn	16 17 34.4	-0.2
CFAA				Sn	Sn	16 18 32.1	+1.1
CFAA				Lg		16 18 53.5	
LCO	Las Campanas	5.58	256	⇑iP	Pn	16 17 42.9	+0.2
LCO				iS	Sn	16 18 44.0	-1.6
LCO	Las Campanas	5.58	256	⇑iP	Pn	16 17 42.9	+0.1
LCO				iS	Sn	16 18 44.0	-1.6
TLL	Tololo Astrono	6.00	245	eP	Pn	16 17 49.0	+0.6
TLL	Tololo Astrono	6.00	245	eP	Pn	16 17 49.3	+0.9
CPUP	Villa Florida	6.57	79	ePn	Pn	16 17 56.8	+0.5
	1.7nm,1.0s						
CMCH	Combarbala	6.58	238	eP	Pn	16 17 56.6	+0.2
CEN1	Los Morros	6.75	309	eP	Pn	16 17 59.8	+1.1
JACH	Jahuel	7.17	226	eP	Pn	16 18 04.7	+0.2
JACH	Jahuel	7.17	226	eP	Pn	16 18 04.9	+0.4
FCH	Farellones	7.43	221	eP	Pn	16 18 09.1	+1.0
FCH				eS	Sn	16 19 29.8	-1.3
PEL	Peldehue	7.54	223	⇑iP	Pn	16 18 09.2	-0.3
PEL	Peldehue	7.54	223	eP	Pn	16 18 09.2	-0.3
TRQA	Tornquist	10.46	169	eP	Pn	16 18 47.8	-1.8
	24nm,0.6s						
LPAZ	La Paz	11.93	343	Pn	Pn	16 19 09.3	-0.4
	0.1nm,0.3s,baz=142,slow=9.7,SNR=9.3						
LPAZ	La Paz	11.93	343	eP	Pn	16 19 11.1	+1.4
	6.6nm,1.0s						
SIV	San Ignacio	12.17	16	Pn	Pn	16 19 12.3	-0.6
	1.3nm,0.3s,baz=202,slow=12,SNR=26						
SIV				Lg		16 22 55.5	
	2.0nm,0.3s,baz=278,slow=23,SNR=2.4						
PLCA	Paso Flores	13.83	200	Lg		16 23 33.0	
	0.5nm,0.3s,baz=310,slow=16,SNR=3.0						
PLCA				LR	LR	16 25 33.6	
	comp=Z,354nm,19.8s,baz=8.3,slow=40						
PLCA	Paso Flores	13.83	200	eP	Pn	16 19 39.7	+4.0
	5.6nm,0.8s						
SAML	Samuel	18.79	4	eP	Pn	16 20 38.5	-0.5
	19nm,1.1s						
BDFB	Brasilia	19.50	55	P	Pn	16 20 47.3	-0.3
	0.6nm,0.3s,baz=240,slow=12,SNR=8.2						
BDFB				S	S	16 24 23.8	-0.7
	0.5nm,0.3s,baz=113,slow=18,SNR=2.9						
BDFB				Lg		16 26 42.1	
	0.3nm,0.3s,baz=146,slow=24,SNR=1.7						
BDFB				LR	LR	16 29 30.9	
	comp=Z,251nm,19.4s,baz=216,slow=41						
HOPE	Hope Point	33.46	150	eP	P	16 22 57.9	+0.1
ROSC	El Rosal	33.81	342	LR	LR	16 37 24.0	
	comp=Z,77nm,21.3s,MS3.4,baz=38,slow=37						
SNAA	Sanae	55.04	160	P	P	16 25 49.3	-0.9
	0.5nm,0.7s,mb3.6,baz=272,slow=11,SNR=4.6						
QSPA	South Pole Qui	62.43	180	⇑iP	P	16 26 42.2	+0.6
	23nm,0.7s,mb5.4						
DBIC	Dimbokro	66.98	69	P	P	16 27 11.6	+0.3
	8.2nm,0.8s,mb4.8,baz=185,slow=11,SNR=7.6						
DBIC				LR	LR	16 52 33.1	
	comp=Z,40nm,18.2s,MS3.7,baz=349,slow=32						
JCT	Junction City	67.03	327	eP	P	16 27 11.2	-0.3
	11nm,0.6s,mb5.0						
WVT	Waverly	67.27	340	eP	P	16 27 11.4	-1.6
	12nm,0.6s,mb5.1						
WVT				e		16 27 17.1	
MIAR	Mount Ida	67.83	334	eP	P	16 27 16.1	-0.5
	6.1nm,1.1s,mb4.5						
MIAR				e		16 27 33.2	
SYO	Syowa Base	69.22	158	⇓eP	P	16 27 24.0	-1.3
CCM	Cathedral Cave	70.13	338	eP	P	16 27 29.6	-1.3
	9.3nm,0.7s,mb4.8						
CCM				e		16 27 35.9	
VNDA	Vanda	71.36	190	P	P	16 27 39.1	+0.7
	3.1nm,0.8s,mb4.3,baz=157,slow=5.1,SNR=12						
NCB	Newcomb	71.96	353	eP	P	16 27 41.4	-0.6
	7.0nm,0.9s,mb4.6						
SUR	Sutherland	72.05	118	eP	P	16 27 44.3	+1.8
ANMO	Albuquerque	73.93	325	eP	P	16 27 54.3	+0.6
	2.5nm,0.9s,mb4.1						
TOA0	Torodi Ar. Sit	75.92	67	eP	P	16 28 05.2	+0.1
TOA0				e		16 28 11.1	
TORD	Torodi Ar. Bea	75.92	67	P	P	16 28 05.2	+0.1
	6.2nm,0.8s,mb4.6,baz=256,slow=5.2,SNR=29						
TORD				pP	pP	16 28 11.3	-4.9
	13nm,0.7s,baz=262,slow=5.6,SNR=32						
TORD				LR	LR	17 01 01.6	
	comp=Z,52nm,19.3s,MS3.9,baz=170,slow=35						
TORD	Torodi Ar. Bea	75.92	67	P	P	16 28 05.2	+0.1
TORD				pP	pP	16 28 11.3	-4.9
TORD				LR	LR	17 01 01.6	
BOSA	Boshof	77.05	116	P	P	16 28 11.9	+0.3
	7.9nm,0.9s,mb4.6,baz=166,slow=8.5,SNR=5.7						
BOSA				pP	pP	16 28 18.1	-4.5
	8.4nm,0.6s,baz=252,slow=5.4,SNR=5.7						
BOSA	Boshof	77.05	116	eP	P	16 28 11.8	+0.3
BOSA				e		16 28 17.6	
MAW	Mawson	77.16	162	P	P	16 28 11.6	-0.5
	2.1nm,0.7s,mb4.2,baz=259,slow=11,SNR=6.3						
MAW				pP	pP	16 28 17.8	-5.4
	4.6nm,0.9s,baz=231,slow=7.6,SNR=7.4						
SMCO	Snowmass	77.51	327	eP	P	16 28 15.5	+1.4
	6.4nm,0.6s,mb4.7						
SRU	San Rafael	79.20	325	eP	P	16 28 23.3	-0.2
	6.3nm,0.8s,mb4.6						
CCUT	Cedar City	79.52	323	eP	P	16 28 26.7	+1.5
CCUT				e		16 28 32.9	
MSU	Marysvale	79.60	324	eP	P	16 28 26.7	+1.0
MSU				e		16 28 32.8	
PDAR	Pinedale Array	81.54	328	P	P	16 28 36.1	+0.1
	1.0nm,0.6s,mb3.9,baz=121,slow=5.7,SNR=6.8						
PDAR				pP	pP	16 28 42.2	-4.9
	1.9nm,0.5s,baz=126,slow=6.4,SNR=9.3						
HWUT	Hardware Ranch	81.61	326	eP	P	16 28 36.0	-0.4
	6.9nm,0.9s,mb4.6						
HWUT				e		16 28 42.8	
ULM	Lac du Bonnet	82.53	340	P	P	16 28 40.3	-0.9
	1.9nm,0.7s,mb4.2,baz=109,slow=8.7,SNR=2.3						
IMW	Indian Meadow	83.05	328	eP	P	16 28 44.0	+0.1
	8.2nm,0.9s,mb4.8						
HLID	Hailey	84.47	326	eP	P	16 28 51.0	-0.2
	9.3nm,1.1s,mb4.8						
DLMT	Dillon	84.93	328	eP	P	16 28 53.9	+0.4
	7.1nm,1.4s,mb4.6						
LSZ	Lusaka	85.35	105	eP	P	16 28 56.7	+1.1
	18nm,1.4s,mb5.0						
ASAR	Alice Springs	125.84	201	PKP	PKPdf	16 35 20.0	-0.1
	2.5nm,0.6s,baz=133,slow=1.7,SNR=64						
ASAR				pPKP	pPKPdf	16 35 26.1	-5.6
	2.4nm,0.5s,baz=135,slow=1.7,SNR=17						
AS31	Alice Springs	125.84	201	ePKPdf	PKPdf	16 35 20.1	0.0
ASPA	Alice Springs	125.84	201	ePKIKP	PKPdf	16 35 20.1	0.0
WB2	Warramunga Arr	129.16	203	ePKPdf	PKPdf	16 35 26.1	-0.4
FITZ	Fitzroy Crossi	133.33	193	ePKPdf	PKPdf	16 35 33.9	-0.4
ZRNK	Zerenda	137.59	41	eP	PKPdf	16 35 42.1	-0.2
ZRNK				e		16 35 48.1	
YAK	Yakutsk	144.48	349	eP	PKPdf	16 35 51.9	-2.8

ISCJB ***01*** *16:18:22.4±0.6, 4449N±002×723E±006, h10km, Error ellipse: s-maj=6.1km s-min=2.7km az=142.8*
STR ***01*** *16:18:22.2±1.1, 4451N×750E, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG ***01*** *16:18:23.7±0.1, 4450N×723E, h2km, Md2.2/2, Ml2.1/6, Error ellipse: s-maj=3.2km s-min=1.4km az=75.0*
ISC 01 16:18:23.0±0.6**, 4450N**±002×**726E**±006**, h10**km**, n13,** σ**0.60**/24**, Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MBDF	Montbardon	0.42	304	ePg	Pg	16 18 31.8	+0.6
MBDF				eSg	Sg	16 18 37.6	+0.9
	23nm,0.2s						
TOUF	Mont Tournerai	0.48	181	Pg	Pg	16 18 32.4	0.0
AUTN	L'Aution	0.52	166	Pg	Pg	16 18 32.9	-0.1
AUTN				Sg	Sg	16 18 40.0	+0.2
SAOF	Saorge	0.55	157	Pg	Pg	16 18 30.9	-2.8
MVIF	Mont Vial	0.60	187	Pg	Pg	16 18 35.0	+0.3
MVIF				Sg	Sg	16 18 43.2	+0.6
LUCF	Luceram	0.61	174	Pg	Pg	16 18 34.7	-0.1
LUCF				Sg	Sg	16 18 43.0	+0.3
SBF	Sospel	0.65	169	ePg	Pg	16 18 36.3	+0.8
SBF				eSg	Sg	16 18 43.8	-0.2
	7.6nm,0.2s						
FRF	La Foret Royal	1.03	205	ePg	Pg	16 18 43.0	+0.1
FRF				eSg	Sg	16 18 56.3	0.0
	9.0nm,0.2s						
LPG	La Plagne	1.06	340	ePg	Pg	16 18 43.0	-0.5
LPG				eSg	Sg	16 18 57.3	0.0
	2.9nm,0.2s						
ORIF	Oris-en-Rattie	1.07	294	ePg	Pg	16 18 43.4	-0.2
ORIF				eSg	Sg	16 18 56.6	-0.9
	2.7nm,0.3s						
LPL	La Plagne	1.09	340	ePg	Pg	16 18 44.2	+0.3
LPL				eSg	Sg	16 18 58.0	0.0
	3.2nm,0.3s						
LMR	La Mourre	1.28	205	ePg	Pg	16 18 46.9	-0.7
LMR				eSg	Sg	16 19 04.4	+0.1
	9.3nm,0.2s						
SMRF	Simiane la Rot	1.32	247	ePg	Pg	16 18 48.7	+0.4
SMRF				eSg	Sg	16 19 04.8	-0.6
	2.8nm,0.3s						

SZGRF ***01*** *17:26:25.6, 151N×9789E, h33km, mb4.8, Northern Sumatera, Indonesia*
BJI ***01*** *17:26:35.2, 402N×9524E, h30km, mB5.1, mb4.8, Ms4.8, Msz4.6*
IDC ***01*** *17:26:40.3±2.6, 499N×9629E, h11km±15km, mb4.4/17, mb1 4.5/18, mb1mx4.5/19, mbtmp4.5/18, ML4.4/1, MS4.1/12, Ms1 4.1/12, ms1mx3.9/17, Error ellipse: s-maj=25.8km s-min=11.7km az=50.0*
ISCJB ***01*** *17:26:41.4±0.2, 472N±003×9606E±003, h31km, mb4.7/83, MS4.5/40, Error ellipse: s-maj=5.3km s-min=3.6km az=73.4*
MOS ***01*** *17:26:42.3±1.6, 490N×9625E, h33km, mb4.8/29, Error ellipse: s-maj=12.6km s-min=6.0km az=121.4*
HRVD ***01*** *17:26:43.0±0.3, 476N×9627E, h21km±1km, MW5.0/67, Centroid moment Tensor Solution. LP body waves: s23,c34;Mantle waves: s67,c103; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.20±.15; Mθθ-3.29±.12; Mφφ3.49±.13; Mrθ-0.45±.20; Mθφ0.31±.09; Mφr-0.41±.24; Best double couple: Mo3.45800×10^16 NP1:φs138.00000°,δ80.00000°,λ-179.00000°. NP2: φs47.00000°,δ89.00000°,λ-10.00000°. Principal axes: T 3.5530, Plg7.0000°, Azm93.0000°; N -0.1950, Plg80.0000°, Azm223.0000°; P -3.3630, Plg8.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***01*** *17:26:43.0±0.2, 484N×96.19E, h30km, mb4.8/32, MS4.4/3 Error ellipse: s-maj=11.2km s-min=5.1km az=220.0*
NEIC Felt [IV] at Calang.
ISC 01 17:26:43.8±0.2**, 474N**±003×**9606E**±003**, h33**km±1.4km**:pP-P, n196,** σ**1.27**/215**, mb4.7**/83**, MS4.5**/40**, 18C-11D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	1.07	315	P	Pn	17 27 01.5	-0.9
	16µm,0.9s						
TSI	Tuntungan	2.78	116	P	Pn	17 27 25.0	-1.0
	2µm,0.9s						
TSI	Tuntungan	2.78	116	⇓eP	Pn	17 27 26.1	+0.1
TSI				eS	Sn	17 28 07.6	+9.2
PSI	Prapat	3.44	124	Pn	Pn	17 27 35.6	+0.5
	35nm,0.3s,baz=311,slow=11,SNR=170						
PSI				Lg		17 28 31.2	
	41nm,0.3s,baz=93,slow=11,SNR=3.5						
PKT	Phuket	3.93	32	P	Pn	17 27 43.0	+1.2
KULM	Kulim	4.60	83	eP	Pn	17 27 48.9	-2.1
IPM	Ipoh	4.95	93	P	Pn	17 27 54.0	-1.8
SNG	Songkhla	5.14	62	P	Pn	17 27 57.0	-1.3
	1µm,1.0s						
PPI	Padang Panjang	6.74	140	P	Pn	17 28 21.9	+1.6
	78nm,0.9s						
KGM	Kluang	7.73	110	P	Pn	17 28 33.0	-1.0
KSI	Kapahiang	10.59	142	P	Pn	17 29 13.3	+0.2
	134nm,0.9s						
NST	Nakhon Sawan	11.58	20	P	Pn	17 29 28.5	+1.9
KKTK	Khon Kaen	13.30	29	P	Pn	17 30 02.0	+12
	340nm,0.6s						
KSM	Kuching	14.59	102	eP	Pn	17 30 06.7	-1.1
CHRT	Chiangrai	15.47	13	⇑P	Pn	17 30 21.0	+1.6
	158nm,0.8s						
VIS	Vishakhapatnam	17.94	317	eP	Pn	17 30 48.3	-2.3
VIS				eS	Sn	17 34 05.1	-4.5
TRD	Trivandrum	19.34	282	⇓ix	x	17 30 29.0	
TRD				ix	x	17 34 35.0	
QIZ	Qiongzhong	19.56	42	P	Pn	17 31 10.5	+0.4
QIZ				AMB	AMB		
	comp=Z,14nm,1.7s						
QIZ				AMB	AMB		
	comp=Z,107nm,3.9s						
QIZ				LR	LR		
	comp=N,2µm,21.1s						
QIZ				LR	LR		
	comp=E,1µm,21.1s						
QIZ				LR	LR		
	comp=Z,677nm,15.3s						
KKM	Kota Kinabalu	20.11	85	P	P	17 31 15.9	+1.2
KKM	Kota Kinabalu	20.11	85	eP	P	17 31 16.0	+1.4
KMI	Kunming	21.26	17	P	P	17 31 31.0	+3.9
KMI				AP		17 31 35.5	
KMI				PP		17 31 56.1	
KMI				PPP		17 32 05.6	
KMI				S	S	17 35 23.4	+1.9
KMI				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb3.9						
KMI				AMB	AMB		
	comp=Z,256nm,3.1s						
KMI				LR	LR		
	comp=N,1µm,13.5s,MS4.7						
KMI				LR	LR		
	comp=E,1µm,10.8s,MS4.7						
KMI				LR	LR		
	comp=Z,2µm,13.5s,MS4.6						
HYB	Hyderabad	21.28	308	⇑iP	P	17 31 29.5	+2.2
	comp=Z,152nm,1.2s,mb5.2						
HYB				eS	S	17 35 28.0	+6.1
HYB				e		17 35 33.5	
HYB	Hyderabad	21.28	308	eP	P	17 31 29.5	+2.2
HYB				eS	S	17 35 28.0	+6.1
HYB				pmax	pmax		
	comp=Z,152nm,1.2s,mb5.2						
HYB	Hyderabad	21.28	308	eP	P	17 31 29.5	+2.2
	comp=Z,152nm,1.2s,mb5.2						
HYB				eS	S	17 35 28.0	+6.1
BOK	Bokaro	21.33	334	eP	P	17 31 27.4	-0.5
TSM	Tawau	21.75	90	P	P	17 31 34.0	+1.6
MNGI	Mangalore	22.50	293	eP	P	17 31 39.3	-1.0
NGP	Nagpur	23.21	316	eP	P	17 31 46.6	-1.3
NGP				AMb	AMB	17 31 48.7	
	comp=Z,80nm,1.4s,mb5.0						
NGP				ex	x	17 36 18.7	
LATR	Latur	23.41	307	eP	P	17 31 50.5	+0.6
GYA	Guiyang	23.86	24	⇑iP	P	17 31 54.7	+0.6
GYA				AP		17 32 04.2	
GYA				XP	sP	17 32 08.0	+0.5
GYA				PP		17 32 28.3	
GYA				S	S	17 36 04.9	-2.9
GYA				SCP	ScP	17 39 13.7	+1.5
GYA				SCS	ScS	17 42 59.4	+0.3
GYA				AMB	AMB		
	comp=Z,70nm,1.3s,mb4.9						
GYA				AMB	AMB		
	comp=Z,230nm,3.6s						
GYA				LR	LR		
	comp=N,650nm,11.4s,MS4.7						
GYA				LR	LR		
	comp=E,2µm,14.6s,MS4.7						
GYA				LR	LR		
	comp=Z,1µm,14.9s,MS4.6						
AKL	Akola	24.38	312	eP	P	17 31 58.2	-0.7
AKL				AML	AML	17 32 04.0	
	comp=Z,106nm,1.0s						
PCI	Palu	24.41	103	P	P	17 31 56.1	-2.9
	comp=Z,84nm,1.6s,mb4.9						
GZH	Guangzhou	24.72	41	P	P	17 32 10.0	+8.0
GZH				S	S	17 36 38.0	+16
GZH				LR	LR		
	comp=N,675nm,11.5s,MS4.6						
GZH				LR	LR		
	comp=E,1µm,12.1s,MS4.6						
GZH				LR	LR		
	comp=Z,1µm,13.1s,MS4.6						
KAD	Karad	24.80	302	eP	P	17 32 03.3	+0.7
KAD				AMb	AMB	17 32 09.2	
	comp=Z,51nm,1.4s,mb4.9						
POO	Poona	25.66	304	eP	P	17 32 09.0	-1.5
BHPL	Bhopal	25.73	317	eP	P	17 32 11.0	-0.1
CD2	Chengdu	27.02	15	P	P	17 32 23.2	+0.5
CD2				AP	pP	17 32 32.6	+0.4
CD2				XP	sP	17 32 36.6	+0.4
CD2				PP		17 33 09.4	
CD2				S	S	17 36 56.6	-1.6
CD2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.0						
CD2				AMB	AMB		
	comp=Z,200nm,4.8s						
CD2				LR	LR		
	comp=E,1µm,14.4s						
CD2				LR	LR		
	comp=Z,1µm,14.4s,MS4.5						
QZH	Quanzhou	29.53	45	eP	P	17 32 48.5	+3.4
QZH				eS	S	17 37 38.0	+0.4
QZH				LR	LR		
	comp=N,2µm,13.4s,MS5.0						
QZH				LR	LR		
	comp=E,1µm,10.2s,MS5.0						
QZH				LR	LR		
	comp=Z,2µm,13.2s,MS4.9						
AJM	Ajmer	29.78	319	eP	P	17 32 46.5	-0.8
AJM				AMb	AMB	17 32 50.7	
	comp=Z,17nm,0.8s,mb4.8						
WHN	Wuhan	30.92	32	⇑P	P	17 33 02.8	+5.4
WHN				eS	S	17 38 11.3	+12
WHN				LR	LR		
	comp=Z,2µm,11.0s,MS4.9						
XAN	Xi'an	31.51	21	P	P	17 33 06.6	+4.0
XAN				AMB	AMB		
	comp=Z,39nm,1.1s,mb5.2						
XAN				AMB	AMB		
	comp=Z,98nm,7.5s						
XAN				LR	LR		
	comp=N,313nm,22.8s,MS4.4						
XAN				LR	LR		
	comp=E,871nm,20.8s,MS4.4						
XAN				LR	LR		
	comp=Z,557nm,15.5s						
SMLA	Simla	31.70	328	eP	P	17 33 03.5	-0.7
SMLA				eS	S	17 38 13.2	+1.6
LZH	Lanzhou	32.01	12	eP	P	17 33 11.2	+4.2
LZH				AP	pP	17 33 20.0	+3.5
LZH				XP	sP	17 33 25.4	+4.9
LZH				PP	PP	17 34 18.0	-1.5
LZH				eS	S	17 38 20.0	+3.6
LZH				XS	sS	17 38 35.1	+2.9
LZH				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,180nm,4.0s						
LZH				LR	LR		
	comp=E,985nm,13.1s						
LZH				LR	LR		
	comp=Z,2µm,14.0s,MS4.9						
NJ2	Nanjing	34.55	35	eP	P	17 33 29.1	-0.1
NJ2				AP	pP	17 33 38.8	0.0
NJ2				XP	sP	17 33 42.7	-0.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,260nm,4.4s						
NJ2				LR	LR		
	comp=N,2µm,20.7s,MS5.0						
NJ2				LR	LR		
	comp=E,2µm,21.0s,MS5.0						
NJ2				LR	LR		
	comp=Z,950nm,14.5s						
GTA	Gaotai	34.68	5	eP	P	17 33 30.1	-0.2
GTA				AP	pP	17 33 39.4	-0.4
GTA				XP	sP	17 33 43.6	-0.2
GTA				PP	PP	17 34 55.7	+6.6
GTA				PPP		17 35 05.8	
GTA				S	S	17 38 57.3	-0.6
GTA				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.3						
GTA				AMB	AMB		
	comp=Z,102nm,6.2s						
GTA				LR	LR		
	comp=N,424nm,14.0s,MS4.4						
GTA				LR	LR		
	comp=E,225nm,12.8s,MS4.4						
GTA				LR	LR		
	comp=Z,619nm,12.8s,MS4.5						
SSE	Sheshan	35.29	39	P	P	17 33 34.6	-0.9
SSE				XP	sP	17 33 47.6	-1.5
SSE				S	S	17 39 07.2	-0.1
SSE				SS	SS	17 41 42.3	+1.0
SSE				AMB	AMB		
	comp=Z,19nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,90nm,3.6s						
SSE				LR	LR		
	comp=N,606nm,15.6s,MS4.5						
SSE				LR	LR		
	comp=E,378nm,15.5s,MS4.5						
SSE				LR	LR		
	comp=Z,453nm,14.5s,MS4.4						
SWI	Sorong	35.60	98	P	P	17 33 40.5	+2.3
	comp=Z,57nm,1.1s,mb5.4						
FITZ	Fitzroy Crossi	36.96	129	eP	P	17 33 48.5	-1.3
	comp=Z,14nm,0.6s,mb5.0						

FITZ Fitzroy Crossi 36.96 129 P **P** **17 33 48.2 -1.6**
comp=Z,8.2nm,0.8s,mb4.6,baz=307,slow=6.3,SNR=30
FITZ ScP ScP 17 39 57.9 +2.9
comp=Z,1.4nm,0.8s,baz=262,slow=3.6,SNR=3.9
JOW Kunigami 37.78 51 P **P** **17 33 59.0 +2.2**
comp=Z,10nm,0.7s,mb4.7,baz=268,slow=8.0,SNR=6.8
BTO Baotou 37.85 17 *eP* **P** **17 34 01.4 +4.1**
HHC Hu-ho-hao-te 38.55 19 *eP* **P** **17 34 03.7 +0.4**
HHC AP pP 17 34 13.6 +0.7
HHC XP sP 17 34 17.3 +0.4
HHC PP PP 17 35 35.7 +3.9
HHC PCP PcP 17 36 16.5 +1.1
HHC S **S** **17 39 57.5 +0.5**
HHC SCP ScP 17 40 00.8 -0.1
HHC PCS PcS 17 40 05.0 +0.3
HHC SCS ScS 17 44 08.8 -2.5
HHC AMB AMB
comp=Z,9.0nm,0.8s,mb4.5
HHC AMB AMB
comp=Z,197nm,6.9s
HHC LR LR
comp=N,1μm,14.9s,MS4.9
HHC LR LR
comp=E,975nm,18.2s,MS4.9
HHC LR LR
comp=Z,1μm,14.7s,MS4.8
BJT Baijiatuau 39.53 25 *eP* **P** **17 34 11.9 +0.5**
BJT pmax pmax
comp=Z,34nm,0.9s
BJT Baijiatuau 39.53 25 *eP* **P** **17 34 11.9 +0.5**
comp=Z,34nm,0.9s,mb5.1
BJI Beijing 39.55 24 P **P** **17 34 15.4 +3.8**
BJI S **S** **17 40 25.8 +14**
BJI AMB AMB
comp=Z,7.0nm,0.7s,mb4.5
BJI AMB AMB
comp=Z,131nm,3.7s
BJI LR LR
comp=N,521nm,16.6s,MS4.7
BJI LR LR
comp=E,712nm,16.6s,MS4.7
BJI LR LR
comp=Z,450nm,20.2s,MS4.3
WMQ Urumqi 39.61 350 P **P** **17 34 11.0 -1.1**
WMQ AP pP 17 34 21.0 -0.8
WMQ XP sP 17 34 25.0 -0.8
WMQ PP PP 17 35 46.0 +2.6
WMQ S **S** **17 40 11.0 -1.9**
WMQ XS sS 17 40 27.0 -1.9
WMQ AMB AMB
comp=Z,15nm,1.0s,mb4.7
WMQ AMB AMB
comp=Z,106nm,4.0s
WMQ LR LR
comp=N,225nm,16.0s,MS4.5
WMQ LR LR
comp=E,437nm,15.0s,MS4.5
WMQ LR LR
comp=Z,246nm,14.0s,MS4.2
KAKA Kakadu 40.09 116 *eP* **P** **17 34 14.3 -1.8**
comp=Z,6.2nm,0.9s,mb4.3
DL2 Dalian 41.16 31 P **P** **17 34 31.4 +6.4**
DL2 S **S** **17 40 45.3 +9.2**
DL2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
DL2 LR LR
comp=N,160nm,16.1s,MS4.3
DL2 LR LR
comp=E,330nm,16.6s,MS4.3
DL2 LR LR
comp=Z,270nm,14.1s,MS4.3
MUN Mundaring 41.24 154 *eP* **P** **17 34 24.8 -0.8**
KLBR Kellerberrin 41.63 152 *eP* **P** **17 34 29.4 +0.6**
comp=Z,26nm,0.9s,mb4.9
NWAO Narrogin (SRO) 42.51 153 P **P** **17 34 36.9 +1.0**
comp=Z,24nm,0.9s,mb4.9,baz=332,slow=12,SNR=4.1
MKAR Makanchi Array 43.55 346 P **P** **17 34 42.8 -1.6**
comp=Z,3.5nm,0.8s,mb4.2,baz=155,slow=6.7,SNR=25
MKAR ScP ScP 17 40 22.9 +2.2
comp=Z,0.5nm,0.8s,baz=146,slow=7.3,SNR=3.8
MKAR Makanchi Array 43.55 346 *i* P **P** **17 34 43.4 -1.0**
MKAR pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 43.84 10 P **P** **17 34 46.0 -0.7**
comp=Z,8.7nm,0.7s,mb4.6,baz=189,slow=8.6,SNR=22
SONM PcP PcP 17 36 32.7 0.0
comp=Z,2.2nm,0.8s,baz=195,slow=5.1,SNR=3.2
SONM LR LR 17 54 01.2
comp=Z,265nm,20.7s,MS4.1,baz=189,slow=38
SONM Songino Array 43.84 10 P **P** **17 34 46.0 -0.7**
SONM 17 36 32.7
ULN Ulaanbaatar 43.99 11 *eP* **P** **17 34 47.9 0.0**
SNY Shenyang 44.34 30 ⇑P **P** **17 34 54.8 +4.1**
SNY AP pP 17 35 06.8 +6.3
SNY S **S** **17 41 24.8 +2.0**
SNY XS sS 17 41 52.6 +14
SNY SS SS 17 44 51.5 +10
SNY AMB AMB
comp=Z,141nm,3.9s
SNY LR LR
comp=N,226nm,13.3s,MS4.7
SNY LR LR
comp=E,621nm,12.9s,MS4.7
SNY LR LR
comp=Z,442nm,14.3s,MS4.5
WRAB Tennant Creek 44.92 124 *eP* **P** **17 34 54.2 -1.1**
WRAB Tennant Creek 44.92 124 *eP* **P** **17 34 53.8 -1.5**
comp=Z,15nm,0.6s,mb5.0
WB2 Warramunga Arr 44.92 124 *eP* **P** **17 34 53.8 -1.5**
JAY Jayapura 45.18 98 P **P** **17 35 03.8 +6.4**
comp=Z,7.1nm,1.1s,mb4.4
ZAK Zakamensk 45.89 6 *eP* **P** **17 35 02.6 -0.4**
ZAK *e* 17 36 54.6
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
ASPA Alice Springs 46.46 129 *eP* **P** **17 35 07.4 -0.1**
AS31 Alice Springs 46.46 129 *eP* **P** **17 35 07.4 -0.1**
ASAR Alice Springs 46.46 129 P **P** **17 35 06.5 -1.0**
comp=Z,13nm,0.8s,mb4.9,baz=300,slow=7.9,SNR=126
ASAR ScP ScP 17 40 35.0 +2.3
comp=Z,1.3nm,0.9s,baz=283,slow=4.2,SNR=4.7
ASAR LR LR 17 53 55.0
comp=Z,334nm,21.7s,MS4.3,baz=210,slow=35
FORT Forrest 46.71 141 *eP* **P** **17 35 10.0 +0.5**
comp=Z,34nm,0.7s,mb5.4
CN2 Changchun 46.73 29 *eP* **P** **17 35 12.0 +2.4**
CN2 *e*AP pP 17 35 22.0 +2.5
CN2 *e*S **S** **17 41 58.5 +1.3**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CN2 LR LR
comp=N,360nm,15.0s,MS4.7
CN2 LR LR
comp=E,440nm,15.0s,MS4.7
CN2 LR LR
comp=Z,310nm,15.0s,MS4.4
TLY Talaya 47.21 6 *eP* **P** **17 35 19.3 +6.0**
TLY *e* 17 37 09.7
TLY *e*SS SS 17 45 26.2 -5.2
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TLY MLR MLR
comp=Z,386nm,16.0s,MS4.5
KURK Kurchatov 48.10 345 *eP* **P** **17 35 18.1 -2.2**
KURK pmax pmax
comp=Z,15nm,1.0s,mb5.0
KURK Kurchatov 48.10 345 *eP* **P** **17 35 18.1 -2.2**
comp=Z,15nm,1.0s,mb5.0
CIT Chita 49.31 14 *eP* **P** **17 35 35.5 +5.9**
CIT *e* pP 17 35 44.2 +4.7
CIT *e* 17 35 51.4
CIT pmax pmax
comp=Z,16nm,1.0s,mb5.0
MDJ Mudanjiang 49.40 31 P **P** **17 35 29.3 -0.9**
MDJ AP pP 17 35 38.0 -2.1
MDJ XP sP 17 35 42.2 -1.8
MDJ PP PP 17 37 23.5 -0.9
MDJ SCP ScP 17 40 43.3 -1.8
MDJ PCS PcS 17 40 48.1 -0.8
MDJ S **S** **17 42 34.6 -0.3**
MDJ SCS ScS 17 45 18.3 -1.2
MDJ AMB AMB
comp=Z,3.0nm,0.8s,mb4.4
MDJ AMB AMB
comp=Z,67nm,4.2s
MDJ LR LR
comp=N,276nm,20.8s,MS4.7
MDJ LR LR
comp=E,656nm,18.9s,MS4.7
MDJ LR LR
comp=Z,357nm,17.0s,MS4.4
NVS Novosibirsk 51.02 350 *eP* **P** **17 35 43.7 +1.2**
NVS *e*S **S** **17 42 56.4 -1.1**
NVS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
NVS pmax pmax
comp=N,5.0nm,1.1s
NVS pmax pmax
comp=E,8.0nm,1.0s
NVS smax
comp=N,23nm,2.4s
NVS smax
comp=E,13nm,2.2s
UMR Umm Al-Rimmam 51.87 304 *eP* **P** **17 35 48.9 +0.1**
UMR AMb AMB 17 35 53.8
comp=Z,29nm,0.8s,mb5.2
NAY Al-Naaiem 52.17 304 *eP* **P** **17 35 51.8 +0.7**
NAY AMb AMB 17 35 57.8
comp=Z,31nm,1.1s,mb5.1
MIB Mutribah 52.26 304 *eP* **P** **17 35 52.1 +0.3**
MIB AMb AMB 17 35 56.9
comp=Z,60nm,1.1s,mb5.4
RST Umm Al-Ruwaisa 52.45 304 *eP* **P** **17 35 53.0 -0.2**
RST AMb AMB 17 36 00.3
comp=Z,49nm,1.0s,mb5.4
ZRNK Zerenda 52.96 340 *eP* **P** **17 35 54.6 -2.3**
ZRNK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
ZRNK Zerenda 52.96 340 *eP* **P** **17 35 54.6 -2.4**
comp=Z,3.3nm,0.6s,mb4.4
CHKZ Chkalovo 53.03 341 *eP* **P** **17 35 55.5 -2.0**
CHKZ pmax pmax
comp=Z,20nm,0.9s,mb5.0
CHKZ Chkalovo 53.03 341 *eP* **P** **17 35 55.5 -2.0**
comp=Z,20nm,0.9s,mb5.0
KLR Kul'dur 53.66 28 *eP* **P** **17 36 03.0 +0.9**
KLR MLR MLR
comp=E,1μm,17.0s
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,1μm,13.0s,MS5.1
BOD Bodaibo 54.78 12 *eP* **P** **17 36 09.1 -1.1**
BOD pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
CTA Charters Tower 55.13 118 *eP* **P** **17 36 11.0 -1.8**
comp=Z,8.1nm,0.9s,mb4.8
CTA Charters Tower 55.13 118 *eP* **P** **17 36 11.0 -1.8**
CTA pmax pmax
comp=Z,8.0nm,0.9s
GNI Garni 57.98 315⇑ *eP* **P** **17 36 32.6 -0.5**
GNI pmax pmax
comp=Z,28nm,1.3s
GNI Garni 57.98 315 *eP* **P** **17 36 32.3 -0.8**
comp=Z,43nm,1.3s,mb5.3
YSS Yuzh-Sakhalins 58.12 36 *eP* **P** **17 36 36.4 +2.3**
YSS pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
KMBO Kilima Mbogo 59.04 266 P **P** **17 36 44.3 +3.8**
comp=Z,6.2nm,0.9s,mb4.6,baz=48,slow=9.6,SNR=14
KMBO LR LR 17 58 31.3
comp=Z,176nm,18.7s,MS4.2,baz=93,slow=32
KMBO Kilima Mbogo 59.04 266 *i* P **P** **17 36 44.9 +4.5**
KMBO pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 59.04 266 *eP* **P** **17 36 42.8 +2.4**
comp=Z,9.1nm,1.0s,mb4.8
ARU Arti 59.50 337⇑ *i*P **P** **17 36 41.6 -2.0**
ARU *e* 17 37 30.3
ARU *e* 17 38 54.4
ARU *e*S **S** **17 44 50.0 -0.9**
ARU *e*SS SS 17 48 49.1 +2.8
ARU pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ARU MLR MLR
comp=Z,600nm,21.0s,MS4.7
ARU MLR MLR
comp=N,400nm,22.0s,MS4.6
ARU MLR MLR
comp=E,300nm,19.0s,MS4.6
ARU Arti 59.50 337 P **P** **17 36 41.8 -1.8**
comp=E,5.1nm,0.8s,mb4.6
ZEI Tsey 59.62 318 *eP* **P** **17 36 44.4 -0.1**
KIV Kislovodsk 60.91 318 *eP* **P** **17 36 52.6 -0.7**
KIV *e*S **S** **17 45 09.8 +0.8**
KIV pmax pmax
comp=Z,20nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,129nm,18.0s,MS4.1
KIV Kislovodsk 60.91 318 *eP* **P** **17 36 52.8 -0.5**
comp=Z,12nm,0.8s,mb5.1
MALT Malatya 61.94 311⇑ *i*P **P** **17 37 04.2 +4.0**
MALT Malatya 61.94 311 *eP* **P** **17 37 00.0 -0.2**
comp=Z,9.4nm,1.1s,mb4.8
YAK Yakutsk 62.38 17 *eP* **P** **17 37 02.2 -0.9**
YAK *i* *PP pP 17 37 09.1 -4.2
YAK *i* 17 37 36.3
YAK pmax pmax
comp=Z,11nm,1.5s,mb4.8
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.4s
YAK MLR MLR
comp=Z,351nm,14.0s,MS4.7
YAK MLR MLR
comp=N,193nm,15.0s,MS4.6
YAK MLR MLR
comp=E,283nm,16.0s,MS4.6
YAK Yakutsk 62.38 17 *eP* **P** **17 37 02.0 -1.2**
comp=E,19nm,0.9s,mb5.2
EIL Elat 62.65 301 *eP* **P** **17 37 05.9 +0.9**
comp=E,295nm,0.8s
SOC Sochi 62.76 317 *eP* **P** **17 37 04.1 -1.6**
SOC pmax pmax
comp=Z,15nm,1.0s,mb5.1
CSS Prodhromos 65.05 306 P **P** **17 37 21.8 +1.0**
comp=Z,27nm,0.9s,mb5.3
MBAR Mbarara 65.47 267⇓ *i*P **P** **17 37 26.0 +2.5**
BRTR Keskin Array B 65.92 312 P **P** **17 37 25.2 -1.1**
comp=Z,8.0nm,1.0s,mb4.7,baz=124,slow=7.0,SNR=19
BRTR LR LR 18 10 19.2
comp=Z,86nm,19.8s,MS4.0,baz=95,slow=40
BR131 Keskin Array S 65.92 312 *eP* **P** **17 37 25.6 -0.8**
comp=Z,5.6nm,0.8s,mb4.7
VRSR Storozhevoye 66.02 325 *eP* **P** **17 37 25.4 -1.6**
VRSR *e* 17 37 52.8
VRSR *e*S S 17 46 09.3 -3.4
VRSR pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
VRSR pmax pmax
comp=N,6.0nm,0.8s
VRSR pmax pmax
comp=E,6.0nm,0.7s
VRSR smax
comp=N,10.0nm,1.3s
VRSR smax
comp=Z,4.0nm,1.9s
VRSR smax
comp=E,8.0nm,1.6s
VRSR MLR MLR
comp=Z,170nm,17.0s,MS4.3
VRSR MLR MLR
comp=N,130nm,18.0s,MS4.3
VRSR MLR MLR
comp=E,120nm,18.0s,MS4.3
ISP Isparta 67.87 309 *eP* **P** **17 37 37.7 -1.1**
OBN Obninsk 69.03 328 *eP* **P** **17 37 44.5 -1.6**
OBN *i* *PP pP 17 37 56.5 +0.2
OBN pmax pmax
comp=Z,13nm,1.5s,mb4.6
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.6
TIXI Tiksi 69.93 11 *eP* **P** **17 37 51.7 +0.1**
TIXI pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
TIRR Tirgusor 70.81 315⇓ *i*P **P** **17 37 59.6 +2.6**
AKASG Malin Array Be 71.78 322 P **P** **17 38 00.8 -2.1**
comp=Z,2.3nm,0.7s,mb4.2,baz=86,slow=5.1,SNR=12
AKASG LR LR 18 14 50.8
comp=Z,173nm,18.7s,MS4.3,baz=100,slow=40
AKASG Malin Array Be 71.78 322 *i* P **P** **17 38 04.0 +1.1**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
MLR Muntele Rosu 72.74 316⇓ *i*P **P** **17 38 09.3 +0.7**
MLR Muntele Rosu 72.74 316⇓ *i*P **P** **17 38 09.3 +0.8**
BURAR Bucovina Array 73.64 318⇑ *i*P **P** **17 38 14.4 +0.5**
BURAR Bucovina Array 73.64 318⇑ P **P** **17 38 14.4 +0.5**
VTS Vitosha 74.20 313⇑ *i*P **P** **17 38 17.1 -0.1**
VTS Vitosha 74.20 313⇑ P **P** **17 38 17.1 0.0**
JOF Joensuu 74.48 335 *ep* **P** **17 38 17.0 -1.8**
comp=Z,1.2nm,0.6s,mb4.0
DRGR 75.18 317⇓ *i*P **P** **17 38 23.2 +0.4**
DRGR 75.18 317⇓ P **P** **17 38 23.2 +0.4**
APA Apatity 75.43 339 *eP* **P** **17 38 25.5 +1.2**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.8
APA MLR MLR
comp=Z,600nm,20.0s,MS4.9
BOSA Boshof 75.58 239 P **P** **17 38 30.6 +5.4**
comp=Z,5.3nm,0.8s,mb4.5,baz=90,slow=6.6,SNR=4.6
BOSA LR LR 18 08 36.9
comp=Z,131nm,18.2s,MS4.3,baz=250,slow=33
KWP Kalwaria 75.64 320 *eP* **P** **17 38 25.4 -0.1**
KOLS Kolonicke sedl 75.81 319 *eP* **P** **17 38 26.8 +0.4**
KOLS *e* 17 38 29.5
KOLS Kolonicke sedl 75.81 319 *eP* **P** **17 38 26.8 +0.4**
KOLS pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KOLS Kolonicke sedl 75.81 319 *eP* **P** **17 38 26.8 +0.4**
comp=Z,4.2nm,0.7s,mb4.5
MAW Mawson 75.89 192 P **P** **17 38 29.1 +2.2**
comp=Z,1.6nm,0.7s,mb4.1,baz=359,slow=8.4,SNR=4.4
MAW LR LR 18 03 08.1
comp=Z,96nm,21.8s,MS4.1,baz=253,slow=29
MAW Mawson 75.89 192 *eP* **P** **17 38 28.0 +1.1**
MAW pmax pmax
comp=Z,9.0nm,1.5s
MAW Mawson 75.89 192 *eP* **P** **17 38 28.0 +1.1**
comp=Z,9.3nm,1.5s,mb4.5
CRVS Cervenica-Dubn 76.33 319 *eP* **P** **17 38 29.4 0.0**
CRVS *e* 17 38 33.6
CRVS *ep*P pP 17 38 39.5 -0.3
CRVS Cervenica-Dubn 76.33 319 *eP* **P** **17 38 29.4 0.0**
CRVS *e* pP 17 38 39.5 -0.3
CRVS pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CRVS Cervenica-Dubn 76.33 319 *eP* **P** **17 38 29.4 0.0**
comp=Z,2.4nm,0.7s,mb4.2
CRVS *e* pP 17 38 39.5 -0.3
FINES FINESS Array B 76.36 332 P **P** **17 38 28.5 -1.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=98,slow=7.9,SNR=8.2
FINES FINESS Array B 76.36 332 *i* P **P** **17 38 31.1 +1.5**
FINES pmax pmax
comp=Z,2.0nm,0.7s
KAF Kangasniemi 76.43 333 *ep* **P** **17 38 30.1 +0.1**
baz=102,slow=5.3
OJC Ojcow 77.59 320 *eP* **P** **17 38 36.2 -0.3**
PKSM Moragy 77.89 316⇑ *i*P **P** **17 38 38.3 +0.1**
PKSM Moragy 77.89 316⇑ P **P** **17 38 38.3 +0.1**
VYHS Vyhne 78.00 318 *eP* **P** **17 38 38.4 -0.4**
VYHS *ep*P pP 17 38 41.5 -7.7
VYHS *e* 17 38 57.9
VYHS Vyhne 78.00 318 *eP* **P** **17 38 38.4 -0.4**
VYHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
VYHS Vyhne 78.00 318 *eP* **P** **17 38 38.4 -0.4**
comp=Z,3.3nm,1.1s,mb4.2
VYHS *e* 17 38 57.9
BILL Bilibino 78.29 21 *eP* **P** **17 38 38.2 -2.2**
BILL *e* pP 17 38 49.0 -1.8
BILL *e*SS SS 17 53 35.3 -0.6
BILL pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
KEV Kevo 78.41 341 *ep* **P** **17 38 40.3 -0.7**
comp=Z,2.3nm,0.7s,mb4.2
KEV Kevo 78.41 341 *eP* **P** **17 38 40.3 -0.7**
KEV pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
OKC Ostrava-Krasne 78.60 320 *eP* **P** **17 38 42.4 +0.3**
ARCES ARCESS Array B 78.84 340 P **P** **17 38 42.0 -1.4**
comp=Z,5.8nm,0.9s,mb4.5,baz=86,slow=6.1,SNR=12
MORC Moravsky Berou 78.98 320⇓ *i*P **P** **17 38 44.3 +0.1**
MORC Moravsky Berou 78.98 320⇓ P **P** **17 38 47.4 +3.2**
MORC Moravsky Berou 78.98 320 *eP* **P** **17 38 43.4 -0.9**
comp=Z,5.8nm,0.9s,mb4.5
ZST Bratislava 79.12 318 *eP* **P** **17 38 46.2 +1.2**
ZST *e* pP 17 38 54.8 -0.6
ZST pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ZST Bratislava 79.12 318 *eP* **P** **17 38 46.2 +1.2**
comp=Z,9.1nm,0.9s,mb4.7
ZST *e* pP 17 38 54.8 -0.6
DPC Dobruska-Polom 79.82 320 *eP* **P** **17 38 51.2 +2.4**
UPC Upice 80.03 320 *eP* **P** **17 38 49.9 0.0**
ARSA Arzberg 80.11 317⇑ *i*P **P** **17 38 50.5 +0.2**
comp=Z,6.8nm,1.1s,mb4.5
BOJS Bojanci 80.19 315 *eP* **P** **17 38 50.3 -0.5**
PERS Pernice 80.35 316 *eP* **P** **17 38 52.0 +0.4**
PRU Pruhonice 80.94 320 AMS AMS 18 20 50.0
comp=Z,100nm,15.9s
PVCC Panska Ves 80.95 320 *eP* **P** **17 38 57.9 +3.1**
PVCC AMS AMS 18 20 30.0
comp=Z,200nm,20.0s
BRG Berggiesshubel 81.37 321 *eP* **P** **17 39 00.1 +3.0**
comp=Z,4.0nm,1.0s,mb4.3
BRG *e* 17 39 07.1
BRG comp=Z,2.1nm,0.7s
BRG comp=N,87nm,20.2s
BRG comp=E,94nm,16.0s
BRG comp=Z,161nm,18.6s
BRG Berggiesshubel 81.37 321 *eP* **P** **17 39 00.1 +3.0**
BRG *e* 17 39 07.1
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
BRG MLR MLR
comp=N,87nm,20.2s,MS4.3
BRG MLR MLR
comp=E,94nm,16.0s,MS4.3
BRG MLR MLR
comp=Z,161nm,18.6s,MS4.4
BRG Berggiesshubel 81.37 321 *eP* **P** **17 39 00.1 +3.0**
comp=Z,4.0nm,1.0s,mb4.3
BRG *e* 17 39 07.1
BRG LR LR
comp=Z,160nm,18.6s,MS4.4
GEC2 GERESS Array S 81.42 319 *eP* **P** **17 38 57.2 -0.2**
GERES GERESS Array B 81.42 319 P **P** **17 38 57.0 -0.3**
comp=Z,4.0nm,0.9s,mb4.4,baz=85,slow=8.3,SNR=12
GERES LR LR 18 19 53.6
comp=Z,64nm,18.9s,MS4.0,baz=91,slow=39
ROBS Robic 81.44 316 *i* P **P** **17 39 00.3 +2.9**
KHC Kasperske Hory 81.52 319 *eP* **P** **17 39 00.2 +2.3**
KHC pP pP 17 39 07.5 -0.8
KHC x x 17 39 15.0
KHC AMS AMS 18 21 20.0
comp=Z,100nm,19.1s
KHC Kasperske Hory 81.52 319 *eP* **P** **17 39 00.2 +2.3**
KHC *e* 17 39 07.5
KHC *e* 17 39 15.0
KHC LR LR
comp=Z,100nm,19.1s,MS4.2
SYO Syowa Base 83.00 198⇓ *eP* **P** **17 39 07.2 +1.6**
GRA1 Grafenberg Arr 83.07 319 *eP* **P** **17 39 06.4 +0.4**
comp=Z,9.0nm,1.0s,mb4.8
GRF Grafenberg Arr 83.07 319 *eP* **P** **17 39 06.4 +0.4**
comp=Z,9.0nm,1.0s,mb4.8
GRF Grafenberg Arr 83.07 319 *eP* **P** **17 39 06.4 +0.4**
GRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
GRF Grafenberg Arr 83.07 319 *eP* **P** **17 39 06.4 +0.4**
GRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
MOTA Moosalm 83.12 317⇑ *i*P **P** **17 39 06.2 -0.1**
comp=Z,5.6nm,0.9s,mb4.6
MOTA Moosalm 83.12 317⇑ *i*P **P** **17 39 06.2 0.0**
MOTA pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
NB2 NORSAR Subarra 83.38 331 P **P** **17 39 05.0 -2.6**
comp=Z,5.9nm,1.2s,mb4.5,baz=93,slow=5.1
NOA NORSAR Array B 83.38 331 P **P** **17 39 06.4 -1.2**

comp=Z,3.9nm,1.1s,mb4.3,baz=92,slow=5.5,SNR=3.4
NOA LR LR 18 20 55.9
comp=Z,206nm,19.7s,MS4.5,baz=60,slow=39
DAVA Damuels 83.95 317⇑*i*P **P 17 39 10.3 -0.2**
comp=Z,9.5nm,0.9s,mb4.9
KEST Kesra 84.60 305 P **P 17 39 14.9 +1.1**
comp=Z,4.4nm,1.0s,mb4.5,baz=280,slow=2.2,SNR=6.7
KEST LR LR 18 20 55.6
comp=Z,39nm,20.1s,MS3.8,baz=265,slow=38
VNDA Vanda 89.50 169 P **P 17 39 37.8 +0.3**
comp=Z,0.7nm,0.6s,mb4.2,baz=286,slow=9.5,SNR=3.7
VNDA LR LR 18 15 46.2
comp=Z,98nm,20.8s,MS4.2,baz=299,slow=33
TORD Torodi Ar. Bea 93.17 283 P **P 17 39 55.8 +1.2**
comp=Z,3.5nm,0.8s,mb4.8,baz=90,slow=5.4,SNR=16
TORD LR LR 18 21 35.1
comp=Z,65nm,19.3s,MS4.1,baz=95,slow=35
ESDC Sonseca Array 94.69 310 P **P 17 40 02.4 +0.9**
comp=Z,0.2nm,0.3s,mb4.0,baz=49,slow=6.7,SNR=4.0
NVAR Mina Array Bea 126.53 33 PKP PKPdf 17 45 44.7 +1.3
comp=Z,0.5nm,0.6s,baz=315,slow=29,SNR=3.4
NVAR Mina Array Bea 126.53 33 PKP PKPdf 17 45 44.7 +1.3
PDAR Pinedale Array 127.32 24 PKP PKPdf 17 45 45.7 +0.8
comp=Z,0.4nm,0.7s,baz=345,slow=3.1,SNR=3.7
CPUP Villa Florida 146.71 227 PKP2 PKPab 17 46 23.5 +0.2

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*ISCJB **01** 18:37:01.3±0.5, 2423S±003×6700W±006, h170^{km}±5^{km}, mb4.2/32, Error ellipse: s-maj=8.2km s-min=4.7km az=173.6*
*IDC **01** 18:37:02.6±1.1, 24.12S×6692W, h166^{km}±9^{km}, mb4.0/11, mb1 4.1/15, mb1mx4.0/20, mbtmp4.5/15, Error ellipse: s-maj=16.0km s-min=11.5km az=65.0*
*NEIC **01** 18:37:02.3±0.5, 24.17S×6698W, h165^{km}±4^{km}, mb4.4/27, Error ellipse: s-maj=7.3km s-min=5.5km az=88.0*
*GUC **01** 18:37:03.4±0.6, 2441S×6738W, h200^{km}, ML5.0*
*BJI **01** 18:37:04.2, 2420S×6700W, h164^{km}, mB4.9*
ISC 01 18:37:02.3±0.5**, 2423S**±003×**6701W**±005**, h165**^{km}±4^{km}**, n80,** σ1^{s}**10**/83**, mb4.2**/32**, 3C-3D, Chile-Argentina border region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LVC Limon Verde 2.37 312 P **Pn 18 37 44.6 +1.9**
500nm,0.3s,baz=134,slow=6.9,SNR=2079
LVC S **Sn 18 38 14.8 +0.9**
243nm,0.3s,baz=12,slow=20,SNR=12
LVC Limon Verde 2.37 312 *e*Pn **Pn 18 37 44.5 +1.9**
LVC *e*Sn **Sn 18 38 13.9 0.0**
CEN1 Los Morros 3.04 285⇓*i*P **Pn 18 37 52.7 +1.9**
CEN1 *i* S **Sn 18 38 29.6 +1.3**
CEN1 AML AML 18 38 31.5
comp=N,2μm,0.5s
ANCH Antofagasta 3.16 279⇑*i*P **Pn 18 37 53.2 +1.0**
ANCH *i* S **Sn 18 38 30.7 -0.3**
ANCH AML AML 18 38 33.0
comp=N,3μm,0.1s
ANCH Antofagasta 3.16 279⇑*i*P **Pn 18 37 53.2 +1.0**
ANCH *i* S **Sn 18 38 30.7 -0.3**
CPCH Copiapo 4.34 223⇓*i*P **Pn 18 38 07.0 -0.3**
CPCH *i* S **Sn 18 38 55.8 -2.3**
CDCH Caldera 4.46 230⇓*i*P **Pn 18 38 08.3 -0.6**
CDCH *i* S **Sn 18 38 57.8 -3.2**
LCO Las Campanas 5.80 214 *e*P **Pn 18 38 26.6 +0.1**
LCO *e*S **Sn 18 39 31.8 -0.7**
TLL Tololo Astrono 6.81 209 *e*P **Pn 18 38 40.0 +0.1**
TLL *e*S **Sn 18 39 55.0 -1.7**
CFAA Coronel Fontan 7.43 188 P **Pn 18 38 49.4 +1.3**
comp=N,0.5nm,0.3s,baz=7.1,slow=12,SNR=20
CFAA S **Sn 18 40 09.8 -1.5**
comp=N,0.9nm,0.3s,baz=126,slow=22,SNR=10
LPAZ La Paz 7.97 352 P **Pn 18 38 55.6 +0.5**
comp=N,3.0nm,0.3s,baz=167,slow=8.4,SNR=39
LPAZ S **Sn 18 40 22.9 -1.2**
comp=N,1.4nm,0.3s,baz=335,slow=20,SNR=6.5
LPAZ La Paz 7.97 352 *e*Pn **Pn 18 38 55.5 +0.4**
LPAZ *e*Sn **Sn 18 40 22.3 -1.9**
CPUP Villa Florida 9.01 105 *e*Pn **Pn 18 39 10.3 +1.3**
SIV San Ignacio 9.91 35 P **Pn 18 39 19.6 -1.2**
comp=N,3.7nm,0.3s,baz=219,slow=13,SNR=86
SIV S **Sn 18 41 00.4 -10**
comp=N,0.2nm,0.3s,baz=237,slow=18,SNR=3.0
TRQA Tornquist 14.44 164 *e*Pn **Pn 18 40 17.5 -1.5**
comp=N,71nm,0.8s
TRQA *e*S **Sn 18 43 01.3 +1.8**
NNA Nana 15.34 321 *e*Pn **Pn 18 40 30.3 +0.2**
comp=N,14nm,0.8s
SAML Samuel 15.62 14 *e*Pn **Pn 18 40 31.8 -1.8**
comp=N,7.5nm,0.9s
PLCA Paso Flores 16.73 189 P **Pn 18 40 48.5 +1.5**
comp=N,0.4nm,0.3s,baz=19,slow=13,SNR=8.8
PLCA Paso Flores 16.73 189 *e*P **Pn 18 40 48.0 +0.9**
comp=N,9.0nm,1.1s
BDFB Brasilia 19.77 68 P **P 18 41 19.5 -0.2**
comp=N,4.1nm,0.3s,baz=248,slow=9.7,SNR=104
ATAH Atahualpa 20.31 326 P **P 18 41 26.2 +0.8**
comp=N,2.5nm,0.3s,baz=160,slow=20,SNR=5.6
TEIG Tepich 48.80 333 *e*P **P 18 45 28.5 -2.1**
comp=N,2.3nm,0.5s,mb4.1
SNAA Sanae 59.14 161 P **P 18 46 46.0 +0.5**
comp=N,1.8nm,0.8s,mb3.9,baz=298,slow=5.1,SNR=8.0
CPCT Cooper Cave 61.62 344 *e*P **P 18 47 01.3 -1.1**
SWET Sewanee 61.78 342 *e*P **P 18 47 01.9 -1.5**
OXF Oxford 62.17 339 P **P 18 47 02.5 -3.5**
PLAL Pickwick Lake 62.18 341 *e*P **P 18 47 03.6 -2.5**
comp=N,4.5nm,1.0s,mb4.2
JCT Junction City 62.83 328 *e*P **P 18 47 09.9 -0.5**
comp=N,11nm,0.7s,mb4.8
WVT Waverly 63.17 341 *e*P **P 18 47 10.0 -2.6**
comp=N,10nm,0.8s,mb4.7
MIAR Mount Ida 63.66 336 *e*P **P 18 47 14.5 -1.4**
comp=N,2.2nm,0.5s,mb4.2
QSPA South Pole Qui 65.98 180 *e*P **P 18 47 32.0 +1.1**
comp=N,3.8nm,0.9s,mb4.2
CCM Cathedral Cave 66.00 339 *e*P **P 18 47 27.5 -3.5**
comp=N,12nm,1.0s,mb4.7
ANMO Albuquerque 69.73 326 *e*P **P 18 47 54.5 +0.1**
comp=N,6.9nm,0.9s,mb4.4
PV01 Paradox Valley 73.28 327 *e*P **P 18 48 16.1 +0.6**
SYO Syowa Base 73.34 159⇑*e*P **P 18 48 16.5 +0.6**
PV10 Paradox Valley 73.70 327 *e*P **P 18 48 18.3 +0.4**
SRU San Rafael 75.00 326 *e*P **P 18 48 25.9 +0.4**
comp=N,9.8nm,0.7s,mb4.5
CCUT Cedar City 75.33 324 *e*P **P 18 48 28.9 +1.5**
MSU Marysvale 75.41 325 *e*P **P 18 48 29.1 +1.3**
MSU *e* 18 48 40.1
ARUT Antelope Range 75.55 324 *e*P **P 18 48 30.1 +1.5**
RSSD Black Hills 76.00 333 *e*P **P 18 48 31.4 +0.1**
comp=N,2.5nm,0.7s,mb4.0
TPNV Topopah Spring 76.51 321 *e*P **P 18 48 35.1 +1.1**
comp=N,11nm,1.1s,mb4.4
TORD Torodi Ar. Bea 76.66 69 P **P 18 48 34.7 -0.2**
comp=N,12nm,1.0s,mb4.5,baz=254,slow=5.4,SNR=29
TORD Torodi Ar. Bea 76.66 69 P **P 18 48 34.7 -0.2**
DUG Dugway 76.99 326 *e*P **P 18 48 37.1 +0.4**
comp=N,3.3nm,0.9s,mb4.0
PDAR Pinedale Array 77.34 329 P **P 18 48 38.5 -0.2**
comp=N,1.0nm,0.5s,mb3.7,baz=137,slow=7.3,SNR=8.1
HWUT Hardware Ranch 77.41 327 *e*P **P 18 48 39.5 +0.4**
comp=N,4.6nm,0.7s,mb4.2
REDW Red Top Meadow 78.40 329 *e*P **P 18 48 44.7 +0.1**
comp=N,4.1nm,0.7s,mb4.2
REDW *e* 18 48 51.9
ULM Lac du Bonnet 78.44 342 P **P 18 48 43.7 -1.0**
comp=N,6.8nm,0.7s,mb4.4,baz=136,slow=6.6,SNR=8.9
ULM Lac du Bonnet 78.44 342 P **P 18 48 43.7 -1.0**
TPAW Teton Pass 78.54 329 *e*P **P 18 48 45.8 +0.4**
comp=N,11nm,1.4s,mb4.3
RRI2 Red Ridge 78.61 329 *e*P **P 18 48 45.8 +0.1**
comp=N,7.4nm,1.0s,mb4.3
MOOW Moose Ponds 78.64 329 *e*P **P 18 48 45.4 -0.5**
comp=N,1.5nm,0.8s,mb3.7
NVAR Mina Array Bea 78.71 321 P **P 18 48 46.9 +0.6**
comp=N,1.7nm,0.7s,mb3.8,baz=166,slow=6.9,SNR=8.9
SCHQ Schefferville 78.73 0 P **P 18 48 45.2 -1.1**
comp=N,1.0nm,0.6s,mb3.7,baz=198,slow=9.6,SNR=3.8
SCHQ Schefferville 78.73 0 P **P 18 48 45.2 -1.1**
IMW Indian Meadow 78.85 329 *e*P **P 18 48 47.1 +0.1**
comp=N,9.5nm,1.0s,mb4.4
FLWY Flagg Ranch 78.88 330 *e*P **P 18 48 47.5 +0.3**
comp=N,21nm,1.4s,mb4.6
GCMT Greycliff 79.73 331 *e*P **P 18 48 51.8 0.0**
PAHR Pah Rah Range 80.19 322 *e*P **P 18 48 55.2 +1.0**
comp=N,3.6nm,0.6s,mb4.2
HLID Hailey 80.27 327 *e*P **P 18 48 55.8 +1.1**
comp=N,15nm,1.1s,mb4.5
BOSA Boshof 80.64 117 P **P 18 48 56.9 +0.3**
comp=N,12nm,0.9s,mb4.5,baz=252,slow=3.7,SNR=23
BOSA Boshof 80.64 117 *e*P **P 18 48 56.8 +0.2**
comp=N,15nm,1.0s,mb4.6
DLMT Dillon 80.73 329 *e*P **P 18 48 57.8 +0.7**
comp=N,16nm,1.4s,mb4.5
MAW Mawson 81.22 163 P **P 18 49 00.1 +0.3**
comp=N,1.4nm,0.5s,mb3.8,baz=227,slow=6.3,SNR=4.3
HRY Holter Researc 81.40 331 *e*P **P 18 49 01.0 +0.3**
ESDC Sonseca Array 86.56 44 P **P 18 49 26.8 0.0**
comp=N,1.3nm,0.8s,mb3.8,baz=233,slow=7.2,SNR=5.6
YKA Yellowknife Ar 94.33 340 P **P 18 50 01.6 -1.4**
comp=N,2.1nm,0.6s,mb4.5,baz=128,slow=4.8,SNR=7.8
YKA Yellowknife Ar 94.33 340 P **P 18 50 01.6 -1.4**
ASAR Alice Springs 128.25 205 PKP PKPdf 18 55 49.6 +0.6
comp=N,1.8nm,0.7s,baz=138,slow=1.8,SNR=26
MKAR Makanchi Array 146.70 40 PKP PKPdf 18 56 22.8 +0.1
comp=N,4.3nm,0.6s,baz=342,slow=1.9,SNR=54
MKAR PKPbc PKPbc 18 56 24.4 -0.2
comp=N,4.4nm,0.6s,baz=342,slow=2.4,SNR=52
MKAR Makanchi Array 146.70 40 PKP PKPdf 18 56 22.8 +0.1
MKAR PKPbc PKPbc 18 56 24.4 -0.2
MJAR Matsushiro Arr 155.10 305 PKPab PKPab 18 57 01.3 +0.3
comp=N,5.1nm,0.9s,baz=63,slow=2.6,SNR=13
MDJ Mudanjiang 155.57 330 PKP PKPdf 18 56 36.2 0.0
SONM Songino Array 155.86 11 PKPab PKPab 18 57 04.2 0.0
comp=N,0.8nm,0.6s,baz=330,slow=4.5,SNR=5.1
CN2 Changchun 157.96 335 *e*PKP PKPdf 18 56 40.2 +1.0
HHC Hu-ho-hao-te 163.38 4 *e*PKP PKPdf 18 56 46.2 +1.1
HHC APKP 18 57 29.0
HHC XPKP 18 57 45.7
HHC PKS 19 00 18.2
HHC PP PP 19 01 25.3 +2.9
HHC SKS SKSdf 19 03 33.6 -0.5
HHC SKKS SKKSac 19 07 55.9 +1.5
HHC SS SS 19 21 34.6 -0.3
HHC LR LR
comp=N,70nm,28.5s
HHC LR LR
comp=E,72nm,24.7s
HHC LR LR
comp=Z,65nm,25.6s
LZH Lanzhou 165.78 32 *e*PKP PKPdf 18 56 47.6 +0.4
LZH APKP 18 57 33.0
LZH XPKP 18 57 49.5
CD2 Chengdu 169.45 49 *e*PKP PKPdf 18 56 47.4 -2.4
NJ2 Nanjing 170.65 328 *e*PKP PKPdf 18 56 52.2 +1.7

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*NEIC **01** 18:51:00.6, 3264S×7171W, h42^{km}, MG2.7(GUC), After GUC.*
GUC 01 18:51:00.6±0.9**, 3264S**×**7171W, h42**^{km}±3^{km}**, MD3.5, ML2.7, 5C-3D, Near coast of central Chile**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
ROCH El Roble 0.67 119⇑*i*P Pn 18 51 14.0 +0.3
CHNG Los Chungos 0.78 13⇓*i*P Pn 18 51 15.7 +0.6
CHNG *i* S Sn 18 51 26.5 +0.9
LCCH Las Cruces 0.84 172⇑*i*P Pn 18 51 15.9 0.0
JACH Jahuel 0.94 93⇑*i*P Pn 18 51 17.9 +0.6
JACH *i* S Sn 18 51 31.6 +1.9
PEL Peldehue 1.00 120⇑*i*P Pn 18 51 19.1 +1.0
PEL *i* S Sn 18 51 32.9 +2.0
PEL AML AML 18 51 34.2
comp=E,1μm,0.3s
PEL Peldehue 1.00 120⇑*i*P Pn 18 51 19.1 +1.0
PEL *i* S Sn 18 51 32.9 +2.0
RCDM Rinconada Maip 1.13 138 *e*P Pn 18 51 21.4 +1.4
RCDM *e*S Sn 18 51 36.3 +2.0
RCDM AML AML 18 51 39.8
comp=N,224nm,0.2s
RCDM Rinconada Maip 1.13 138 *e*P Pn 18 51 21.4 +1.4
RCDM *e*S Sn 18 51 36.3 +2.0
TACH Talagante 1.20 147 *e*P Pn 18 51 21.9 +1.1
TACH *i* S Sn 18 51 38.2 +2.3
CLCH Cerro Calan 1.24 128⇓*i*P Pn 18 51 22.7 +1.3
CLCH *i* S Sn 18 51 39.8 +2.9
CLCH AML AML 18 51 40.2
comp=N,254nm,0.3s
LNV Longovilo 1.33 169 *e*P Pn 18 51 23.7 +1.0
LNV *i* S Sn 18 51 41.2 +2.0
FCH Farellones 1.37 120⇓*i*P Pn 18 51 25.0 +1.7
FCH *i* S Sn 18 51 43.0 +2.7
FCH AML AML 18 51 45.0
comp=N,132nm,0.3s
PCH Pirque 1.40 134 *e*P Pn 18 51 25.1 +1.5
CACH El Canelo 1.74 148 *e*P Pn 18 51 31.5 +3.3

MEX 01 19:15:10.2±0.7**, 1889N**×**10426W, h5**^{km}±15^{km}**, MD4.0, Near coast of Jalisco**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CJM Chamela 0.96 309 *i* P Pg 19 15 26.0 -2.6
CJM *i* S Sg 19 15 39.1 -1.9
SFJM Santa Fe 1.96 36 *i* P Pn 19 15 41.3 -2.7
SFJM *i* S Sn 19 16 04.0 -4.9
MEIG Mezcala 4.51 102 *i* P Pn 19 16 22.8 +3.8
MEIG *i* S Sn 19 17 08.3 -3.5
PLIG Platanillo 4.54 96 *e*P Pn 19 16 18.1 -1.4
PLIG *i* S Sn 19 17 09.3 -3.2

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*ISCJB **01** 19:16:24.8±1.1, 1807N±009×7646W±005, h22^{km}±7^{km}, Error ellipse: s-maj=15.6km s-min=5.7km az=138.8*
*JSN **01** 19:16:25.5±0.6, 1802N×7650W, h0^{km}±3^{km}, MD3.9, MW3.8*
*SSNC **01** 19:16:28.6, 1864N×7731W, h0^{km}, MD3.2, ML3.8*
ISC 01 19:16:25.5±0.9**, 1809N**±008×**7650W**±005**, h16**^{km}±5^{km}**, n13,** σ**0**^{s}**68**/23**, 5C-5D, Jamaica region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CMJ Castle Mountai 0.13 72⇑*i*P **Pg 19 16 29.4 +0.1**
CMJ *i* S **Sg 19 16 32.3 +0.5**
GWJ Greenwich 0.21 265⇑*i*P **Pg 19 16 29.9 -0.6**
HOJ Hope 0.25 249⇑*i*P **Pg 19 16 30.3 -0.8**
STH Stony Hill 0.29 267⇑*i*P **Pg 19 16 31.4 -0.3**
STH *i* S **Sg 19 16 36.4 +0.4**
STH *e*S **Sg 19 16 36.7 +0.7**
BNJ Bonny Gate 0.48 298⇓*i*P **Pg 19 16 35.2 +0.1**
BBJ Bamboo Saint A 0.78 292⇓*e*P **Pb 19 16 40.5 -0.2**
BBJ *e*S **Sb 19 16 51.6 +0.5**
CVJ Coleyville 0.99 278⇓*e*P **Pb 19 16 43.6 -0.6**
MCJ Malvern 1.14 262⇑*e*P **Pn 19 16 46.1 -0.7**
MCJ *e*S **Sb 19 17 01.5 +0.2**
MBJ Montego Bay 1.33 284⇓*e*P **Pn 19 16 49.5 +0.2**
MBJ ⇓*e*S **Sn 19 17 08.0 +1.3**
LMGC Las Mercedes 2.02 346 *e*PG **Pn 19 16 59.0 +0.2**
LMGC *e*SG **Sn 19 17 23.5 -0.2**
comp=N,430nm,0.1s
LMGC *e*
comp=E,319nm,0.1s
HLGC Holguin 2.81 8 *e*P **Pn 19 17 09.3 -0.5**
HLGC *e*S **Sn 19 17 42.1 -1.3**
comp=N,17μm,0.3s
HLGC *e*
comp=E,23μm,0.2s
MOAC Moa 2.94 29 *e*P **Pn 19 17 13.1 +1.6**
MOAC *e*S **Sn 19 17 51.9 +5.4**
comp=N,108nm,0.3s
MOAC *e*
comp=E,173nm,0.4s
MASC Masc 2.98 46 *e*P **Pn 19 17 17.6 +5.5**
MASC *e*S **Sn 19 17 54.2 +6.6**
comp=N,5μm,0.3s
MASC *e*
comp=E,5μm,0.3s

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*NEIC **01** 19:16:37.5±2.1, 5293N×10891E, h10^{km}, mb3.8/4, Error ellipse: s-maj=31.6km s-min=15.8km az=75.0*
*ISCJB **01** 19:16:46.0±0.4, 53.12N±002×10754E±004, h7^{km}±3^{km}, mb3.6/5, MS2.7/1, Error ellipse: s-maj=4.8km s-min=2.3km az=99.2*
*MOS **01** 19:16:46.0±1.1, 53.11N×10749E, h10^{km}, mb4.2/4, Error ellipse: s-maj=10.6km s-min=6.2km az=60.2*
*BYKL **01** 19:16:48.4±0.2, 53.12N×10748E, h19^{km}±21^{km}*
*IDC **01** 19:16:55.1±3.0, 5265N×10648E, h0^{km}, mb3.4/1, mb1 3.4/3, mb1mx3.2/20, mbtmp3.3/3, ML3.1/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/24, Error ellipse: s-maj=55.4km s-min=26.8km az=73.0*
ISC 01 19:16:47.4±0.3**, 5308N**±002×**10754E**±003**, h8**^{km}±3^{km}**, n67,** σ**1**^{s}**22**/130**, mb3.6**/5**, MS2.7**/1**, 8C-5D, Lake Baykal region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KELR Kotokel 0.46 134⇑*i*Pg **Pg 19 16 57.6 +1.2**
KELR *e*Sg **Sg 19 17 04.3 +1.9**
OGRR Ongureny 0.56 3⇑*i*Pg **Pg 19 16 59.0 +0.7**
92nm,0.2s
OGRR ⇑*i*Pg **Pg 19 16 59.0 +0.7**
97nm,0.2s
OGRR ⇑*i*Pg **Pg 19 16 59.0 +0.7**
92nm,0.2s
OGRR Pmax 19 17 04.4
252nm,0.1s
OGRR *e*Sg **Sg 19 17 06.8 +1.1**
OGRR Smax 19 17 07.2
2μm,0.7s
OGRR Ongureny 0.56 3 *e*PG **Pg 19 16 59.1 +0.8**
OGRR *e* 19 17 06.5
OGRR pmax pmax
comp=Z,319nm,0.1s
OGRR smax
comp=E,2μm,0.4s
ZRHB Zarechye 0.58 204⇓*i*Pg **Pg 19 17 00.0 +1.4**
ZRHB Pmax 19 17 00.8
comp=E,2μm,0.5s
ZRHB *i* Sg **Sg 19 17 08.7 +2.5**
ZRHB Smax 19 17 09.1
comp=E,10μm,0.7s
MXMB Maximikha 0.75 76⇑*i*Pg **Pg 19 17 02.7 +0.8**
comp=E,953nm,0.4s
MXMB ⇑*i*Pg **Pg 19 17 02.7 +0.8**
comp=E,187nm,0.4s
MXMB ⇑*i*Pg **Pg 19 17 02.7 +0.8**
comp=E,995nm,0.4s
MXMB Pmax 19 17 03.0
comp=E,1μm,0.4s
MXMB *e*Sg **Sg 19 17 13.5 +1.9**
MXMB Smax 19 17 15.8
comp=E,5μm,0.5s
TRG Tyrgan 0.79 246 *i* Pg **Pg 19 17 02.4 -0.2**
TRG Pmax 19 17 02.8
comp=E,368nm,0.2s
TRG *e*Sg **Sg 19 17 12.4 -0.5**
TRG Smax 19 17 13.8
comp=E,3μm,0.2s
TRG Tyrgan 0.79 246 *e*PG **Pg 19 17 02.4 -0.2**
TRG *e* 19 17 12.4
TRG pmax pmax
comp=Z,282nm,0.1s
TRG smax
comp=E,4μm,0.2s
TRTB Turuntaevo 0.86 176 *i* Pg **Pg 19 17 04.4 +0.5**
TRTB Pmax 19 17 04.8
comp=E,229nm,0.2s
TRTB *e*Sg **Sg 19 17 15.9 +0.9**
TRTB Smax 19 17 19.0
comp=E,3μm,0.2s
FFNB Fofonovo 1.14 205 *e*Pg **Pg 19 17 09.3 0.0**
FFNB Pmax 19 17 10.6
comp=E,1μm,0.1s
FFNB *e*Sg **Sg 19 17 24.5 +0.4**
FFNB Smax 19 17 25.0
comp=E,11μm,0.4s
STDB Stepnoy Dvoret 1.16 218 *e*Pg **Pg 19 17 10.6 +0.9**
STDB Pmax 19 17 11.5
comp=E,992nm,0.4s
STDB *e*Sg **Sg 19 17 26.1 +1.3**
STDB Smax 19 17 29.6
comp=E,8μm,0.4s
KAB Kabansk 1.17 208 *e*Pg **Pg 19 17 09.9 +0.1**
KAB Pmax 19 17 10.4
comp=E,404nm,0.4s
KAB *e*Sg **Sg 19 17 25.7 +0.7**
KAB Smax 19 17 27.2
comp=E,5μm,0.6s
KAB Kabansk 1.17 208 *e*PG **Pg 19 17 09.0 -0.8**
KAB *e* 19 17 24.2
KAB pmax pmax
comp=Z,459nm,0.4s
KAB smax
comp=N,5μm,0.5s
HRMR Khuramsha 1.50 194 *e*Pn **Pn 19 17 14.8 +0.2**
HRMR ⇓*i*Pg **Pg 19 17 15.7 -0.5**
HRMR Pmax 19 17 16.0
comp=N,756nm,0.4s
HRMR *e*Sg **Sg 19 17 36.0 +0.3**
HRMR Smax 19 17 36.7
comp=N,7μm,0.4s
SYVR Suvo 1.58 68 *e*Pn **Pn 19 17 16.0 +0.3**
SYVR *e*Pg **Pg 19 17 17.2 -0.6**
SYVR Pmax 19 17 17.7
comp=N,211nm,0.6s
SYVR *e*Sg **Sg 19 17 38.6 +0.3**
SYVR Smax 19 17 39.3
comp=N,1μm,1.0s
SYVR Suvo 1.58 68 *e*PN **Pn 19 17 17.1 +1.4**
SYVR *e* 19 17 38.3
SYVR pmax pmax
comp=Z,219nm,0.3s
SYVR smax
comp=N,1μm,0.4s
LSTR Listvyanka 2.05 235 *e*Pn **Pn 19 17 22.2 0.0**
LSTR *e*Pg **Pg 19 17 24.3 -2.5**
LSTR Pmax 19 17 34.8
comp=N,204nm,0.5s
LSTR *e*Sn **Sn 19 17 47.8 -0.2**
LSTR *e*Sg **Sg 19 17 51.0 -2.5**
LSTR Smax 19 17 52.4
comp=N,1μm,0.5s
LSTR Listvyanka 2.05 235⇑*i*PN **Pn 19 17 22.3 +0.1**
LSTR *e* 19 17 24.3
LSTR *e*S **Sn 19 17 46.9 -1.1**
LSTR *e* 19 17 50.4
LSTR pmax pmax
comp=Z,164nm,0.8s
LSTR smax
comp=N,2μm,0.9s
IRK Irkutsk 2.16 248 *e*Pn **Pn 19 17 23.6 -0.1**
IRK *e*Pg **Pb 19 17 26.2 -0.6**
IRK Pmax 19 17 38.0
comp=N,288nm,0.3s
IRK *e*Sg **Sb 19 17 53.7 0.0**
IRK Smax 19 17 58.7
comp=N,5μm,0.4s
IRK Irkutsk 2.16 248 *e*PN **Pn 19 17 23.7 0.0**
IRK *e* 19 17 26.6
IRK *e* 19 17 54.2
IRK pmax pmax
comp=Z,310nm,0.4s
IRK smax
comp=N,5μm,0.4s
TLY Talaya 2.77 241 *e*Pn **Pn 19 17 31.7 -0.4**
TLY *e*Pg **Pb 19 17 36.2 -0.9**
TLY Pmax 19 17 38.5
comp=N,57nm,0.3s
TLY *e*Sg **Sb 19 18 11.7 +0.5**
TLY Smax 19 18 15.1
comp=N,488nm,0.4s
TLY Talaya 2.77 241 *e*PN **Pn 19 17 31.7 -0.4**
TLY *e*S **Sn 19 18 05.8 +0.2**
TLY Talaya 2.77 241 *e*Pn **Pn 19 17 31.8 -0.3**
TLY *e*Sn **Sn 19 18 05.7 0.0**
YLYR Ulyunkhan 2.79 49⇓*i*Pn **Pn 19 17 32.8 +0.4**
comp=N,24nm,0.7s
YLYR ⇓*i*Pn **Pn 19 17 32.8 +0.4**
comp=N,11nm,0.7s
YLYR ⇓*i*Pn **Pn 19 17 32.8 +0.4**
comp=N,24nm,0.7s
YLYR *e*Pg **Pg 19 17 39.2 -1.8**
YLYR Pmax 19 17 53.3
comp=N,51nm,0.6s
YLYR *e*Sg **Sg 19 18 15.0 -2.2**
YLYR Smax 19 18 17.3
comp=N,441nm,0.8s
YLYR Ulyunkhan 2.79 49 *e*PN **Pn 19 17 32.9 +0.5**
YLYR *e* 19 17 37.7
YLYR *e* 19 18 14.3
YLYR pmax pmax
comp=Z,36nm,0.2s
YLYR smax

comp=E,509nm,1.4s
NIZ Nizh Angarsk 2.94 23 *e*Pn **Pn 19 17 34.7 +0.3**
NIZ *e*Pg **Pb 19 17 40.3 +0.2**
NIZ Pmax 19 17 43.7
comp=E,63nm,0.7s
NIZ *e*Sg **Sb 19 18 17.8 +1.7**
NIZ Smax 19 18 26.5
comp=E,397nm,1.2s
NIZ Nizh Angarsk 2.94 23 *e*PN **Pn 19 17 35.1 +0.7**
NIZ *e* 19 17 41.8
NIZ *e*S **Sn 19 18 10.8 +0.9**
NIZ *e* 19 18 17.5
NIZ pmax pmax
comp=Z,64nm,0.9s
NIZ smax
comp=N,350nm,0.8s
KMO Kumora 3.53 36 *e*Pn **Pn 19 17 42.7 +0.2**
KMO *e*Pg **Pb 19 17 50.6 +0.5**
KMO Pmax 19 17 54.9
comp=N,60nm,0.4s
KMO *e*Sg **Sb 19 18 37.0 +3.9**
KMO Smax 19 18 46.3
comp=N,328nm,1.0s
KMO Kumora 3.53 36 *e*PN **Pn 19 17 43.0 +0.5**
KMO *e* 19 17 51.0
KMO *e*S **Sn 19 18 24.4 0.0**
KMO *e* 19 18 36.1
KMO pmax pmax
comp=Z,62nm,0.5s
KMO smax
comp=N,461nm,0.8s
ZAK Zakamensk 3.78 226 *e*Pn **Pn 19 17 46.7 +0.7**
ZAK *e*Pg **Pg 19 17 55.6 -4.3**
ZAK Pmax 19 18 04.9
comp=N,22nm,0.6s
ZAK *e*Sn **Sn 19 18 29.8 -0.9**
ZAK *e*Sg **Sg 19 18 45.4 -3.6**
ZAK Smax 19 18 50.0
comp=N,211nm,0.9s
ZAK Zakamensk 3.78 226 *e*PN **Pn 19 17 46.6 +0.6**
ZAK *e* 19 17 55.5
ZAK *e*S **Sg 19 18 44.8 -4.2**
ZAK pmax pmax
comp=Z,22nm,0.3s
ZAK smax
comp=E,260nm,0.7s
CIT Chita 3.82 104 *e*Pn **Pn 19 17 45.9 -0.6**
CIT *e*Pg **Pg 19 17 57.6 -3.1**
CIT Pmax 19 17 58.2
comp=E,184nm,1.2s
CIT *e*Sn **Sn 19 18 32.2 +0.6**
CIT *e*Sg **Sg 19 18 47.8 -2.4**
CIT Smax 19 18 52.3
comp=E,1µm,1.2s
CIT Chita 3.82 104 *e*PN **Pg 19 17 57.6 -3.1**
CIT *e* 19 18 47.6
CIT pmax pmax
comp=Z,191nm,1.2s
CIT smax
comp=E,774nm,1.3s
YOA Uoyan 3.91 37 *e*Pg **Pg 19 18 00.0 -2.3**
YOA Pmax 19 18 24.1
comp=E,170nm,0.8s
YOA *e*Sg **Sg 19 18 52.5 -0.4**
YOA Smax 19 19 12.8
comp=E,632nm,0.7s
YOA Uoyan 3.91 37 *e*PN **Pb 19 17 58.4 +1.9**
MOY Mondy 4.25 253 *e*Pn **Pn 19 17 54.2 +1.7**
MOY *e*Pg **Pg 19 18 02.5 -6.4**
MOY Pmax 19 18 04.2
comp=E,82nm,1.0s
MOY *e* 19 18 44.4
MOY *e*Sg **Sg 19 18 58.3 -5.8**
MOY Smax 19 19 01.5
comp=E,646nm,1.1s
MOY Mondy 4.25 253 *e*PN **Pn 19 17 54.3 +1.8**
MOY *e* 19 18 02.3
MOY *e* 19 18 57.7
MOY pmax pmax
comp=Z,85nm,0.5s
MOY smax
comp=N,651nm,1.1s
UKT Uakit 4.31 54 *e*Pn **Pn 19 17 53.9 +0.7**
UKT *e*Pg **Pg 19 18 05.8 -4.1**
UKT Pmax 19 18 34.8
comp=N,35nm,1.2s
UKT *e*Sg **Sg 19 19 01.1 -4.6**
UKT Smax 19 19 12.5
comp=N,193nm,1.0s
UKT Uakit 4.31 54 *e*PN **Pn 19 17 54.1 +0.9**
UKT *e* 19 18 05.5
UKT *e*S **Sn 19 18 44.0 +0.4**
UKT *e* 19 19 01.2
UKT pmax pmax
comp=Z,25nm,0.4s
UKT smax
comp=N,173nm,0.7s
KPC Khapcheranga 4.54 136 *e*Pn **Pn 19 17 55.7 -0.7**
KPC *e*Pg **Pg 19 18 10.5 -4.0**
KPC Pmax 19 18 13.4
comp=N,133nm,0.6s
KPC *e*Sg **Sg 19 19 10.1 -3.2**
KPC Smax 19 19 14.9
comp=N,416nm,0.7s
KPC Khapcheranga 4.54 136 *e*PN **Pn 19 17 55.5 -0.9**
KPC *e* 19 18 10.8
KPC *e* 19 19 10.0
KPC pmax pmax
comp=Z,134nm,0.9s
KPC smax
comp=N,370nm,1.1s
SVKR Severomuysk 4.64 47 *e*Sg **Sg 19 19 12.1 -4.2**
SVKR Smax 19 19 24.1
comp=N,750nm,0.7s
ORL Orlik 4.72 266 *e*Pn **Pn 19 18 00.5 +1.6**
ORL max 19 18 08.8
comp=N,6.0nm,1.8s
ORL *e*Sn **Sn 19 18 54.1 +0.3**
ORL *e*Sg **Sg 19 19 13.3 -5.7**
ORL Smax 19 19 16.6
comp=N,97nm,1.4s
ORL Orlik 4.72 266 *e*PN **Pn 19 18 01.0 +2.1**
ORL *e*S **Sg 19 19 13.2 -5.8**
ORL smax
comp=N,430nm,1.1s
ULN Ulaanbaatar 5.23 184 *e*Pn **Pn 19 18 06.4 +0.5**
ULN *e*Pg **Pg 19 18 23.6 -4.1**
ULN *e*Sg **Sg 19 19 33.2 -2.3**
ULN Ulaanbaatar 5.23 184 *e*PN **Pn 19 18 06.6 +0.7**
SONM Songino Array 5.30 188 Pn **Pn 19 18 07.7 +0.8**
comp=N,0.6nm,0.3s,baz=0.2,slow=15,SNR=9.3
SONM Pg **Pg 19 18 24.7 -4.3**
comp=N,2.3nm,0.3s,baz=3.7,slow=15,SNR=14
SONM Lg 19 19 33.8
comp=N,11nm,0.3s,baz=197,slow=4.6,SNR=9.9
NLYR Nelyaty 5.83 51 *e*Pn **Pn 19 18 14.1 0.0**
NLYR *e*Pg **Pg 19 18 32.8 -6.3**
NLYR Pmax 19 18 56.2
comp=N,17nm,0.8s
NLYR *e*Sg **Sg 19 19 48.1 -6.4**
NLYR Smax 19 19 53.4
comp=N,200nm,1.5s
NLYR Nelyaty 5.83 51 *e*PN **Pn 19 18 13.8 -0.3**
BOD Bodaibo 6.00 35 *e*Sg **Sg 19 19 51.0 -9.2**
BOD Smax 19 20 03.0
comp=N,86nm,1.8s
TDJR Todzha 6.98 269 *e*Pn **Pn 19 18 32.5 +2.6**
TDJR *e*Pg **Pg 19 18 54.1 -7.0**
TDJR *e*Sg **Sg 19 20 23.9 -7.6**
CRS Chara 7.26 54 *e*PN **Pn 19 18 34.5 +0.7**
CRS *e* 19 18 59.7
CRS *e* 19 20 35.2
CRS pmax pmax
comp=Z,18nm,1.2s
CRS smax
comp=E,146nm,1.1s
TUP Tupik 7.48 75 *e*PN **Pn 19 18 36.5 -0.3**
TUP *e* 19 19 01.1
TUP *e*S **Sn 19 20 00.2 -1.7**
TUP *e* 19 20 38.9
TUP pmax pmax
comp=Z,8.0nm,0.7s
TUP smax
comp=N,357nm,1.2s

YAK Yakutsk 14.81 44 *e*P **Pn 19 20 15.3 -1.8**
YAK pmax pmax
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 17.37 259 Pn **Pn 19 20 48.8 -1.4**
comp=Z,0.1nm,0.3s,baz=61,slow=9.9,SNR=10
MKAR Makanchi Array 17.37 259 *i* P **Pn 19 20 50.5 +0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 17.95 274 P **Pn 19 20 57.3 0.0**
KURK pmax pmax
comp=Z,4.0nm,1.1s
KURK Kurchatov 17.95 274 Pn **Pn 19 20 57.2 -0.1**
comp=Z,3.8nm,1.1s
CHKZ Chkalovo 21.88 286 *e*P **P 19 21 38.0 -2.7**
CHKZ pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
CHKZ Chkalovo 21.88 286 *e*P **P 19 21 38.0 -2.7**
comp=Z,2.5nm,0.6s,mb3.8
BVAR Borovoye Array 22.17 285 P **P 19 21 43.8 0.0**
comp=Z,1.8nm,0.7s,mb3.6,baz=74,slow=11,SNR=9.6
BVAR LR LR 19 30 36.0
comp=Z,33nm,20.9s,MS2.7,baz=319,slow=38
BRVK Borovoye 22.23 285 *e*P **P 19 21 43.8 -0.6**
BRVK pmax pmax
comp=Z,2.0nm,0.6s,mb3.7
BRVK Borovoye 22.23 285 *e*P **P 19 21 43.8 -0.5**
comp=Z,1.8nm,0.6s,mb3.7
ZRNK Zerenda 23.00 285 *e*P **P 19 21 49.7 -2.9**
ZRNK pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
ZRNK Zerenda 23.00 285 *e*P **P 19 21 49.7 -2.9**
comp=Z,2.5nm,0.7s,mb3.8
ARU Arti 27.98 297 *e*P **P 19 22 38.1 -0.4**
FINES FINESS Array B 42.06 315 P **P 19 24 46.7 +7.2**
comp=Z,0.5nm,0.8s,mb3.2,baz=74,slow=10,SNR=2.7
FINES FINESS Array B 42.06 315 P **P 19 24 46.7 +7.2**
FINES pmax pmax
comp=Z,1.0nm,0.8s

IDC 01 19:31:06.0±8.2, 575N×7749W, h45km±61km, mb3.4/3, mb1 3.7/4, mb1mx3.4/21, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=85.1km s-min=36.3km az=99.0, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.27**	**106**	P	Pn	Pn	19 31 58.6	+3.9
	4.6nm,0.3s,baz=78,slow=7.7,SNR=8.0							
SDV	**Santo Domingo**	**7.48**	**65**	P	Pn	Pn	19 32 52.7	+0.1
	2.2nm,0.3s,baz=271,slow=11,SNR=3.6							
LPAZ	**La Paz**	**23.77**	**157**	P	P	P	19 36 16.3	+2.0
	0.6nm,0.5s,baz=0.0,slow=9.1,SNR=2.9							
SIV	**San Ignacio**	**27.03**	**143**	P	P	P	19 36 43.6	-0.4
	1.2nm,0.6s,baz=333,slow=11,SNR=8.5							
TORD	**Torodi Ar. Bea**	**78.21**	**78**	P	P	P	19 43 01.9	+1.1
	0.4nm,0.6s,baz=274,slow=6.1,SNR=7.3							
ASAR	**Alice Springs**	**144.93**	**236**	PKP		PKPdf	19 50 38.2	+0.1
	0.3nm,0.7s,baz=120,slow=3.7,SNR=9.9							

IDC 01 20:12:15.8±3.9, 1402N×14561E, h86km±24km, mb3.5/5, mb1 3.6/5, mb1mx3.4/14, mbtmp3.8/5, Error ellipse: s-maj=72.8km s-min=26.5km az=83.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.83**	**240**	P	Pn	Pn	20 12 35.0	+1.7
	2µm,0.3s,baz=130,slow=2.2,SNR=1168							
GUMO				S		Sn	20 12 47.0	+0.6
	2µm,0.3s,baz=282,slow=22,SNR=92							
ASAR	**Alice Springs**	**39.16**	**197**	P	P	P	20 19 35.5	+0.6
	0.4nm,0.6s,baz=17,slow=11,SNR=6.8							
SONM	**Songino Array**	**46.80**	**324**	P	P	P	20 20 38.1	+1.5
	0.2nm,0.4s,baz=149,slow=14,SNR=2.7							
MKAR	**Makanchi Array**	**61.69**	**316**	P	P	P	20 22 24.5	-0.2
	0.5nm,0.6s,baz=82,slow=8.3,SNR=6.6							
ARCES	**ARCESS Array B**	**86.90**	**342**	P	P	P	20 24 49.8	-1.1
	3.5nm,0.9s,baz=57,slow=6.6,SNR=3.6							
FINES	**FINESS Array B**	**91.08**	**335**	P	P	P	20 25 09.0	-1.6
	0.7nm,0.8s,baz=89,slow=7.6,SNR=6.0							

*ISCJB **01** 20:40:23.7±0.7, 24.13S±0.06×669W±0.1, h175km±12km, mb3.3/2, Error ellipse: s-maj=16.8km s-min=10.0km az=152.6*
*NEIC **01** 20:40:24.6±0.6, 24.15S×66.90W, h173km±7km, mb4.2/3, Error ellipse: s-maj=10.9km s-min=7.5km az=84.0*
*IDC **01** 20:40:24.7±1.4, 24.14S×66.96W, h170km±13km, mb3.3/2, mb1 3.6/6, mb1mx3.4/18, mbtmp4.0/6, Error ellipse: s-maj=21.3km s-min=19.0km az=26.0*
ISC 01 20:40:24.7±0.7, 24.14S±0.07×669W±0.1, h168km±12km, n14, σ0.8 81/18, mb3.3/2, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.39**	**309**	P	Pn	Pn	20 41 06.5	+1.1
	70nm,0.3s,baz=133,slow=5.9,SNR=948							
LVC				S		Sn	20 41 36.9	+0.1
	23nm,0.3s,baz=283,slow=21,SNR=16							
LVC	**Limon Verde**	**2.39**	**309**	P	Pn	Pn	20 41 06.5	+1.1
LVC				*e*Sn		Sn	20 41 35.9	-0.9
LVC				S		Sn	20 41 36.9	+0.1
CFAA	**Coronel Fontan**	**7.53**	**189**	P	Pn	Pn	20 42 11.6	-0.1
	0.1nm,0.3s,baz=37,slow=15,SNR=5.4							
CFAA				S		Sn	20 43 31.1	-4.9
	0.2nm,0.3s,baz=283,slow=21,SNR=8.2							
LPAZ	**La Paz**	**7.90**	**351**	P	Pn	Pn	20 42 17.4	+0.9
	1.4nm,0.3s,baz=166,slow=9.6,SNR=24							
LPAZ				S		Sn	20 43 43.0	-1.9
	0.4nm,0.3s,baz=323,slow=20,SNR=6.8							
LPAZ	**La Paz**	**7.90**	**351**	P	Pn	Pn	20 42 17.4	+0.9
LPAZ				*e*Sn		Sn	20 43 40.9	-4.0
CPUP	**Villa Florida**	**8.94**	**106**	*e*P	Pn	Pn	20 42 30.2	-0.1
	13nm,1.0s							
SIV	**San Ignacio**	**9.78**	**35**	P	Pn	Pn	20 42 41.5	0.0
	0.5nm,0.3s,baz=215,slow=13,SNR=14							
TRQA	**Tornquist**	**14.50**	**164**	*e*P	Pn	Pn	20 43 41.2	-0.8
	12nm,0.7s							
SAML	**Samuel**	**15.52**	**14**	*e*P	Pn	Pn	20 43 53.4	-1.2
	2.8nm,0.9s							
BDFB	**Brasilia**	**19.66**	**68**	P	P	P	20 44 41.5	+1.0
	1.1nm,0.3s,baz=253,slow=11,SNR=13							
TORD	**Torodi Ar. Bea**	**76.54**	**69**	P	P	P	20 51 56.6	+0.4
	0.4nm,0.4s,mb3.4,baz=257,slow=5.4,SNR=13							
PDAR	**Pinedale Array**	**77.31**	**329**	P	P	P	20 52 00.5	-0.1
	0.3nm,0.4s,mb3.2,baz=119,slow=8.4,SNR=3.1							
ASAR	**Alice Springs**	**128.37**	**205**	PKP		PKPdf	20 59 11.2	-0.1
	0.6nm,0.8s,baz=128,slow=2.0,SNR=5.0							
MKAR	**Makanchi Array**	**146.58**	**40**	PKPbc		PKPbc	20 59 46.0	-0.3
	1.4nm,0.6s,baz=280,slow=3.8,SNR=8.9							

*IDC **01** 20:45:39.9±0.7, 132N×97.12E, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.3/19, mbtmp4.3/14, MS4.2/10, Ms1 4.2/10, ms1mx3.9/23, Error ellipse: s-maj=24.9km s-min=16.5km az=49.0*
*SZGRF **01** 20:45:41.0, 190S×96.93E, h33km, mb4.6, Southwest of Sumatera, Indonesia*
*ISCJB **01** 20:45:43.0±0.3, 130N±0.04×97.17E±0.04, h31km, mb4.9/74, MS4.6/37, Error ellipse: s-maj=6.3km s-min=5.0km az=63.3*
*MOS **01** 20:45:43.4±1.0, 139N×97.10E, h33km, mb5.1/26, MS4.6/7, Error ellipse: s-maj=11.7km s-min=6.6km az=93.2*
*BJI **01** 20:45:43.8, 126N×97.28E, h44km, mB5.1, mb5.0, Ms4.9, Msz4.7*
*NEIC **01** 20:45:45.8±1.3, 130N×97.19E, h42km±10km, mb4.9/38, Error ellipse: s-maj=12.3km s-min=6.7km az=47.0*
ISC 01 20:45:45.5±0.3, 133N±0.04×9719E±0.04, h32km, h32km±.9km: pP-P, n184, σ1.9 18/189, mb4.9/74, MS4.6/37, 10C-10D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.27**	**50**	Pn	Pn	Pn	20 46 20.5	-0.1
	24nm,0.3s,baz=276,slow=5.5,SNR=220							
PSI	**Prapat**	**2.27**	**50**	Pn		Pn	20 46 20.5	-0.1
TSI	**Tuntungan**	**2.56**	**32**	*e*P		Pn	20 46 25.4	+0.8
PPI	**Padang Panjang**	**3.66**	**119**	P		Pn	20 46 41.1	+1.2
	215nm,1.1s							
BSI	**Banda Aceh**	**4.55**	**335**	P		Pn	20 46 50.9	-1.2
	115nm,1.1s							
IPM	**Ipoh**	**4.95**	**51**	P		Pn	20 46 59.7	+2.3

KULM Kulim 5.24 41 *e*Pn **Pn 20 47 01.2 -0.2**
KGM Kluang 6.16 84 P **Pn 20 47 16.7 +2.5**
KSI Kapahiang 7.32 133 P **Pn 20 47 41.7 +12**
110nm,0.9s
KSM Kuching 13.12 89 *e*Pn **Pn 20 48 51.4 +2.0**
KSM *e* 20 49 01.7
KSM *e* 20 49 08.3
NST Nakhon Sawan 14.55 11 P **Pn 20 49 09.7 +0.8**
CM31 Chiang Mai Arr 17.11 6 *e*P **Pn 20 49 40.5 -1.6**
18nm,0.8s
CHG Chiang Mai 17.46 6 ⇓P **Pn 20 49 46.9 +0.5**
21nm,1.0s
CHTO Chiang Mai 17.46 6 *e*P **Pn 20 49 44.4 -2.0**
CHTO pmax pmax
comp=Z,25nm,1.0s
CHTO Chiang Mai 17.46 6 *e*Pn **Pn 20 49 44.4 -2.0**
comp=Z,25nm,1.0s
KKM Kota Kinabalu 19.55 76 P **Pn 20 50 12.0 +0.2**
KKM Kota Kinabalu 19.55 76 *e*P **Pn 20 50 11.1 -0.8**
TSM Tawau 20.86 81 P **P 20 50 24.3 -0.3**
TRD Trivandrum 21.37 290 ⇓*i*P **P 20 50 39.0 +8.9**
TRD *i* S 20 55 05.0 +39
QIZ Qiongzhong 21.52 34 P **P 20 50 31.4 -0.3**
QIZ S **S 20 54 27.0 -1.5**
QIZ XS sS 20 54 41.9 -0.4
QIZ AMB AMB
comp=Z,44nm,1.8s,mb4.6
QIZ LR LR
comp=N,761nm,16.2s,MS4.4
QIZ LR LR
comp=E,1µm,14.8s,MS4.4
QIZ LR LR
comp=Z,1µm,15.4s,MS4.4
QIZ Qiongzhong 21.52 34 *e*P **P 20 50 31.9 +0.2**
comp=Z,27nm,0.8s,mb4.7
KMI Kunming 24.25 12 P **P 20 51 00.3 +0.8**
KMI AP 20 51 08.2
KMI XP sP 20 51 13.1 +0.4
KMI PP 20 51 37.4
KMI PPP 20 51 47.5
KMI S **S 20 55 18.9 +2.8**
KMI XS sS 20 55 33.2 +1.8
KMI SS 20 56 11.6
KMI SSS 20 56 28.2
KMI AMB AMB
comp=Z,110nm,1.3s,mb5.1
KMI AMB AMB
comp=Z,452nm,4.6s
KMI LR LR
comp=N,3µm,16.3s,MS5.0
KMI LR LR
comp=E,2µm,13.2s,MS5.0
KMI LR LR
comp=Z,3µm,14.8s,MS5.0
HYB Hyderabad 24.32 312 *i* P **P 20 51 01.5 +1.4**
HYB *e* 20 51 08.0
HYB *e* 20 51 28.5
HYB eS **S 20 55 24.0 +6.9**
GYA Guiyang 26.59 19 ⇑*i*P **P 20 51 20.9 +0.2**
GYA AP pP 20 51 30.2 +0.2
GYA XP sP 20 51 34.3 +0.3
GYA PP 20 52 03.3
GYA S **S 20 55 48.5 -4.8**
GYA SCS ScS 21 02 12.4 +0.1
GYA AMB AMB
comp=Z,40nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,110nm,3.9s
GYA LR LR
comp=N,2µm,15.8s,MS4.8
GYA LR LR
comp=E,1µm,15.5s,MS4.8
GYA LR LR
comp=Z,3µm,15.6s,MS4.9
JIRN Jiri 28.22 339 *e*P **P 20 51 36.8 +1.5**
comp=Z,224nm,1.0s,mb5.7
PKI Pulchoki 28.43 338 *e*P **P 20 51 38.4 +1.2**
comp=Z,94nm,1.1s,mb5.3
PKI Pulchoki 28.43 338 *e*P **P 20 51 38.4 +1.2**
PKI pmax pmax
comp=Z,94nm,1.1s,mb5.3
GUN Gumba 28.56 339 *e*P **P 20 51 39.7 +1.4**
comp=Z,182nm,0.9s,mb5.8
DMN Daman 28.58 337 *e*P **P 20 51 39.2 +0.7**
comp=Z,89nm,1.0s,mb5.5
KKN Kakani 28.68 338 *e*P **P 20 51 40.6 +1.3**
comp=Z,164nm,1.3s,mb5.6
KKN Kakani 28.68 338 *e*P **P 20 51 40.6 +1.3**
KKN pmax pmax
comp=Z,165nm,1.3s,mb5.6
GKN Gorkha 29.12 337 *e*P **P 20 51 44.4 +1.2**
comp=Z,117nm,0.9s,mb5.6
KONA Koldanda 29.34 335 *e*P **P 20 51 46.4 +1.2**
comp=Z,89nm,0.9s,mb5.5
CD2 Chengdu 30.07 11 ⇓*i*P **P 20 51 51.4 -0.3**
CD2 AP pP 20 52 01.0 -0.1
CD2 XP sP 20 52 05.0 0.0
CD2 S **S 20 56 47.3 -0.7**
CD2 XS sS 20 57 03.2 -0.3
CD2 SS SS 20 58 26.5 -30
CD2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,80nm,6.8s
CD2 LR LR
comp=E,1µm,14.4s
CD2 LR LR
comp=Z,1µm,15.6s,MS4.6
QZH Quanzhou 31.28 40 P **P 20 52 00.2 -2.2**
QZH S **S 20 57 06.3 -0.6**
QZH LR LR
comp=N,3µm,13.9s,MS5.2
QZH LR LR
comp=E,2µm,16.8s,MS5.2
QZH LR LR
comp=Z,3µm,15.5s,MS5.0
MBWA Marble Bar 31.39 137 P **P 20 51 57.6 -5.7**
comp=Z,11nm,1.1s,mb4.6
LGTI Lohaghat 32.29 332 *i* P **P 20 52 09.7 -1.5**
WHN Wuhan 33.30 28 ⇓P **P 20 52 20.4 +0.3**
WHN LR LR
comp=Z,3µm,14.6s,MS5.1
FITZ Fitzroy Crossi 34.01 126 *e*P **P 20 52 25.2 -1.0**
comp=Z,6.9nm,0.7s,mb4.7
FITZ Fitzroy Crossi 34.01 126 P **P 20 52 24.9 -1.3**
comp=Z,3.3nm,0.9s,mb4.3,baz=191,slow=6.0,SNR=8.6
XAN Xi'an 34.34 17 P **P 20 52 27.5 -1.6**
XAN S **S 20 57 58.7 +4.2**
XAN AMB AMB
comp=Z,60nm,1.0s,mb5.5
XAN AMB AMB
comp=Z,141nm,11.0s
XAN LR LR
comp=N,247nm,14.5s,MS4.7
XAN LR LR
comp=E,1µm,16.8s,MS4.7
XAN LR LR
comp=Z,2µm,14.7s,MS4.9
LZH Lanzhou 35.13 9 *e*P **P 20 52 35.6 -0.3**
LZH AP pP 20 52 43.0 -2.4
LZH PP PP 20 53 55.3 -0.6
LZH *e*S **S 20 58 07.1 +0.4**
LZH XS sS 20 58 25.0 +2.8
LZH SS SS 21 00 24.5 -15
LZH AMB AMB
comp=Z,69nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,260nm,4.5s
LZH LR LR
comp=E,1µm,16.1s
LZH LR LR
comp=Z,1µm,17.6s,MS4.8
SDNR Sundarnagar 35.58 330 *e*P **P 20 52 40.8 +1.0**
NJ2 Nanjing 36.76 32 *e*P **P 20 52 50.5 +0.6**
NJ2 AP pP 20 53 00.2 +0.8
NJ2 XP sP 20 53 04.2 +0.9
NJ2 PP PP 20 54 16.4 +2.5
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
NJ2 AMB AMB
comp=Z,130nm,4.3s
NJ2 LR LR
comp=N,7µm,17.3s,MS5.5
NJ2 LR LR
comp=E,3µm,22.2s,MS5.5

NJ2 LR LR
comp=Z,930nm,14.9s
SSE Sheshan 37.31 35 P **P** **20 52 53.6 -1.0**
SSE AP pP 20 53 02.7 -1.4
SSE XP sP 20 53 06.5 -1.5
SSE PP PP 20 54 19.2 -0.8
SSE S **S** **20 58 39.4 -0.6**
SSE SCS ScS 21 03 03.9 -2.2
SSE AMB AMB
comp=Z,25nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,96nm,5.8s
SSE LR LR
comp=N,359nm,19.0s,MS4.3
SSE LR LR
comp=E,236nm,19.0s,MS4.3
SSE LR LR
comp=Z,458nm,16.3s,MS4.4
KAKA Kakadu 37.66 113 *e*P **P** **20 52 56.2 -1.3**
comp=Z,18nm,0.9s,mb4.8
GTA Gaotai 37.98 3 P **P** **20 52 59.8 -0.4**
GTA AP pP 20 53 07.7 -2.0
GTA PP PP 20 54 29.0 +1.7
GTA PPP 20 54 49.6
GTA S **S** **20 58 48.2 -1.9**
GTA AMB AMB
comp=Z,23nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,167nm,5.5s
GTA LR LR
comp=N,737nm,14.8s,MS4.7
GTA LR LR
comp=E,520nm,14.4s,MS4.7
GTA LR LR
comp=Z,790nm,14.4s,MS4.7
BTO Baotou 40.79 15 *e*P **P** **20 53 23.0 -0.7**
HHC Hu-ho-hao-te 41.44 17 *e*P **P** **20 53 29.8 +0.8**
HHC AP pP 20 53 39.7 +1.2
HHC XP sP 20 53 43.6 +1.2
HHC PP PP 20 55 09.7 +4.7
HHC PCP PcP 20 55 27.3 +0.8
HHC SCP ScP 20 59 13.0 -1.1
HHC PCS PcS 20 59 17.1 -0.6
HHC S **S** **20 59 43.7 +1.7**
HHC SS SS 21 02 44.1 -2.7
HHC SCS ScS 21 03 29.3 -0.9
HHC AMB AMB
comp=Z,15nm,0.7s,mb4.7
HHC AMB AMB
comp=Z,171nm,4.0s
HHC LR LR
comp=N,1μm,16.1s,MS5.0
HHC LR LR
comp=E,1μm,17.0s,MS5.0
HHC LR LR
comp=Z,1μm,16.2s,MS4.9
WRAB Tennant Creek 42.12 122 *e*P **P** **20 53 34.6 +0.1**
WRAB Tennant Creek 42.12 122 *e*P **P** **20 53 33.9 -0.7**
comp=Z,16nm,0.8s,mb4.7
WB2 Warramunga Arr 42.12 122 *e*P **P** **20 53 33.9 -0.7**
BJT Baijiatuau 42.20 22 *e*P **P** **20 53 35.8 +0.6**
BJT pmax pmax
comp=Z,35nm,0.6s
BJT Baijiatuau 42.20 22 *e*P **P** **20 53 35.8 +0.6**
comp=Z,35nm,0.6s,mb5.2
BJI Beijing 42.22 22 P **P** **20 53 36.3 +0.9**
BJI S **S** **20 59 54.4 +0.8**
BJI AMB AMB
comp=Z,46nm,0.7s,mb5.2
BJI AMB AMB
comp=Z,351nm,3.9s
BJI LR LR
comp=N,258nm,14.2s,MS4.6
BJI LR LR
comp=E,570nm,14.5s,MS4.6
BJI LR LR
comp=Z,301nm,22.8s
WMQ Urumqi 43.15 350 P **P** **20 53 44.0 +1.1**
WMQ AP pP 20 53 54.0 +1.5
WMQ XP sP 20 53 58.0 +1.6
WMQ PP PP 20 55 26.0 +2.6
WMQ S **S** **21 00 08.0 +0.9**
WMQ XS sS 21 00 25.0 +2.1
WMQ SS SS 21 03 15.0 -5.4
WMQ AMB AMB
comp=Z,42nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,151nm,5.0s
WMQ LR LR
comp=N,228nm,14.0s,MS4.5
WMQ LR LR
comp=E,389nm,14.0s,MS4.5
WMQ LR LR
comp=Z,248nm,14.0s,MS4.3
FORT Forrest 43.38 140 *e*P pP 20 53 53.8 -0.6
comp=Z,18nm,0.6s
ASPA Alice Springs 43.48 127 *e*P **P** **20 53 45.5 -0.1**
AS31 Alice Springs 43.48 127 *e*P **P** **20 53 45.5 -0.1**
ASAR Alice Springs 43.48 127 P **P** **20 53 45.2 -0.3**
comp=Z,2.3nm,0.6s,mb4.1,baz=301,slow=7.2,SNR=24
ASAR PcP PcP 20 55 33.2 -0.1
comp=Z,1.0nm,1.0s,baz=299,slow=4.3,SNR=4.1
ASAR ScP ScP 20 59 26.1 +3.9
comp=Z,0.9nm,1.0s,baz=284,slow=5.0,SNR=4.1
ASAR LR LR 21 14 20.5
comp=Z,282nm,19.4s,MS4.2,baz=307,slow=40
ASAR Alice Springs 43.48 127 P **P** **20 53 45.3 -0.3**
ASAR 20 55 33.2
DL2 Dalian 43.57 28 P **P** **20 53 47.0 +0.7**
DL2 *e*S **S** **21 00 15.5 +2.2**
DL2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
DL2 AMB AMB
comp=Z,100nm,4.0s
DL2 LR LR
comp=N,220nm,15.3s,MS4.3
DL2 LR LR
comp=E,200nm,14.6s,MS4.3
DL2 LR LR
comp=Z,270nm,14.7s,MS4.3
JAY Jayapura 43.67 95 P **P** **20 53 48.2 +1.1**
comp=Z,13nm,0.6s,mb4.8
TKM2 Tokmak 2 45.70 338 P **P** **20 54 04.3 +1.1**
SNR=5.8
KBK Karagaybulak 45.72 337 P **P** **20 54 05.5 +2.0**
SNR=8.4
AML Almayashu 45.78 336 P **P** **20 54 05.7 +1.7**
SNR=11
FRU Bishkek 46.00 337 *e*P **P** **20 54 05.0 -0.7**
FRU *e* 20 54 17.0
FRU *e* 20 55 43.0
EKS2 Erkin-Say 46.19 336 P **P** **20 54 08.1 +1.0**
SNR=6.8
USP Ospenovka 46.41 337 P **P** **20 54 10.0 +1.1**
SNR=15
SNY Shenyang 46.79 27 ⇑P **P** **20 54 10.7 -1.2**
SNY AP pP 20 54 20.5 -1.1
SNY XP sP 20 54 24.6 -0.8
SNY S **S** **21 00 58.5 -1.4**
SNY AMB AMB
comp=Z,25nm,1.6s,mb4.9
SNY AMB AMB
comp=Z,87nm,16.2s
SNY LR LR
comp=N,511nm,14.4s,MS4.8
SNY LR LR
comp=E,714nm,15.3s,MS4.8
SNY LR LR
comp=Z,906nm,14.9s,MS4.9
SONM Songino Array 47.01 8 P **P** **20 54 13.2 -0.4**
comp=Z,16nm,0.8s,mb5.0,baz=188,slow=9.2,SNR=138
MKAR Makanchi Array 47.12 346 P **P** **20 54 14.2 -0.2**
comp=Z,11nm,0.8s,mb4.8,baz=154,slow=6.7,SNR=88
MKAR Makanchi Array 47.12 346⇑ *e*P **P** **20 54 14.6 +0.2**
ULN Ulaanbaatar 47.14 9 P **P** **20 54 15.6 +1.0**
SNR=8.9
ULN Ulaanbaatar 47.14 9 *e*P **P** **20 54 15.0 +0.4**
ULN pmax pmax
comp=Z,13nm,0.8s,mb4.9
ULN Ulaanbaatar 47.14 9 *e*P **P** **20 54 15.0 +0.5**
comp=Z,13nm,0.8s,mb4.9
ZAK Zakamensk 49.15 5⇑ *i*P **P** **20 54 30.3 +0.2**
ZAK *e* 20 56 24.0
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
ZAK pmax pmax
comp=Z,3.0nm,1.8s,mb4.0
CN2 Changchun 49.19 27 *e*P **P** **20 54 30.3 -0.2**
CN2 XP sP 20 54 43.4 -0.6
CN2 *e*S **S** **21 01 33.8 -0.1**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,90nm,3.0s
CN2 LR LR
comp=N,600nm,17.0s,MS4.8
CN2 LR LR
comp=E,670nm,17.0s,MS4.8
CN2 LR LR
comp=Z,750nm,17.0s,MS4.8
TLY Talaya 50.47 5 P **P** **20 54 41.0 +0.9**
SNR=5.5
TLY Talaya 50.47 5 *e*P **P** **20 54 40.3 +0.2**
TLY *e* 20 56 39.1
TLY *e*S **S** **21 02 02.4 +11**
TLY pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
TLY MLR MLR
comp=Z,656nm,16.0s,MS4.7
TLY Talaya 50.47 5 *e*P **P** **20 54 40.0 -0.1**
comp=Z,10nm,0.8s,mb4.9
HIA Hailar 51.52 19 *e*P **P** **20 54 47.4 -0.7**
HIA pmax pmax
comp=Z,26nm,1.0s
HIA Hailar 51.52 19 *e*P **P** **20 54 47.4 -0.6**
comp=Z,26nm,1.0s,mb5.1
MAT Matsushiro 51.60 42 P **P** **20 54 48.6 -0.1**
MAT S **S** **21 02 18.0 +11**
MAT Matsushiro 51.60 42 *e*P **P** **20 54 49.0 +0.3**
MAT *e*S **S** **21 02 19.0 +12**
MAJO Matsushiro 51.60 42 *e*P **P** **20 54 48.6 -0.1**
MAJO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MAJO Matsushiro 51.60 42 *e*P **P** **20 54 48.6 0.0**
comp=Z,10.0nm,1.0s,mb4.7
MJAR Matsushiro Arr 51.60 42 P **P** **20 54 48.3 -0.4**
comp=Z,4.4nm,0.8s,mb4.4,baz=224,slow=6.7,SNR=15
KURK Kurchatov 51.67 345 P **P** **20 54 49.8 +0.7**
SNR=11
KURK Kurchatov 51.67 345 *e*P **P** **20 54 49.3 +0.2**
KURK pmax pmax
comp=Z,21nm,0.9s,mb5.1
KURK Kurchatov 51.67 345 *e*P **P** **20 54 49.3 +0.1**
comp=Z,21nm,0.9s,mb5.1
MDJ Mudanjiang 51.76 29 P **P** **20 54 50.4 +0.6**
MDJ AP pP 20 54 59.0 -0.6
MDJ XP sP 20 55 03.2 -0.3
MDJ PP PP 20 56 48.4 +0.7
MDJ SCP ScP 20 59 57.2 +0.1
MDJ PCS PcS 21 00 00.9 +0.1
MDJ S **S** **21 02 14.9 +5.3**
MDJ AMB AMB
comp=Z,19nm,0.8s,mb5.1
MDJ AMB AMB
comp=Z,122nm,5.7s
MDJ LR LR
comp=N,482nm,15.1s,MS4.7
MDJ LR LR
comp=E,279nm,15.7s,MS4.7
MDJ LR LR
comp=Z,732nm,14.5s,MS4.8
MDJ Mudanjiang 51.76 29 *e*P **P** **20 54 50.4 +0.5**
comp=Z,14nm,0.8s,mb5.0
VLA Vladivostok 51.87 32*d i*P **P** **20 54 50.9 +0.3**
VLA pmax pmax
comp=Z,96nm,1.4s,mb5.5
VLA MLR MLR
comp=Z,600nm,14.1s,MS4.8
CIT Chita 52.35 13 *e*P **P** **20 54 54.2 0.0**
CIT *e* pP 20 55 02.3 -1.7
CIT pmax pmax
comp=Z,78nm,1.6s,mb5.4
CTAO Charters Tower 52.57 117 P **P** **20 54 53.2 -2.6**
CTAO pmax pmax
comp=Z,14nm,1.1s,mb4.8
CTAO Charters Tower 52.57 117 P **P** **20 54 53.2 -2.7**
comp=Z,14nm,1.1s,mb4.8
NVS Novosibirsk 54.55 350 *e*P **P** **20 55 08.7 -1.7**
NVS *e*S **S** **21 02 38.4 -9.1**
NVS pmax pmax
comp=N,16nm,1.3s
NVS pmax pmax
comp=E,11nm,1.3s
NVS pmax pmax
comp=Z,28nm,1.3s,mb5.1
NVS smax
comp=N,7.0nm,1.4s
NVS smax
comp=E,19nm,1.6s
KLR Kul'dur 56.14 27 *e*P **P** **20 55 19.2 -2.6**
KLR pmax pmax
comp=E,24nm,1.0s
KLR pmax pmax
comp=Z,56nm,1.0s,mb5.5
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,1μm,13.0s,MS5.2
BRVK Borovoye 56.19 341 P **P** **20 55 22.1 -0.1**
SNR=5.5
BRVK Borovoye 56.19 341 *e*P **P** **20 55 20.5 -1.7**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BRVK Borovoye 56.19 341 *e*P **P** **20 55 20.5 -1.6**
comp=Z,7.0nm,0.8s,mb4.7
ZRNK Zerenda 56.53 340 *e*P **P** **20 55 23.1 -1.5**
ZRNK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
ZRNK Zerenda 56.53 340 *e*P **P** **20 55 23.1 -1.5**
comp=Z,8.8nm,0.9s,mb4.8
CHKZ Chkalovo 56.60 341 *e*P **P** **20 55 24.6 -0.5**
CHKZ pmax pmax
comp=Z,23nm,0.8s,mb5.3
CHKZ Chkalovo 56.60 341 *e*P **P** **20 55 24.6 -0.5**
comp=Z,23nm,0.8s,mb5.2
HABR Khabarovsk 57.15 29 *i* P **P** **20 55 28.7 -0.3**
HABR *e*S **S** **21 03 23.2 +1.1**
HABR pmax pmax
comp=Z,34nm,1.3s,mb5.2
BOD Bodaibo 57.89 11⇑ *i*P **P** **20 55 34.3 +0.1**
BOD pmax pmax
comp=Z,21nm,1.0s,mb5.1
KMBO Kilima Mbogo 59.98 268 LR LR 21 20 23.5
comp=Z,201nm,18.2s,MS4.3,baz=95,slow=35
KMBO Kilima Mbogo 59.98 268⇓ *e*P pP 20 56 01.6 +2.9
YSS Yuzh-Sakhalins 60.25 34 *e*P **P** **20 55 51.3 +0.8**
YSS pmax pmax
comp=Z,42nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 60.25 34 *e*P **P** **20 55 51.2 +0.7**
comp=Z,42nm,1.0s,mb5.4
GNI Garni 61.20 316 *e*P **P** **20 55 57.8 +0.8**
GNI pmax pmax
comp=Z,10.0nm,0.8s
GNI Garni 61.20 316 *e*P **P** **20 55 57.8 +0.8**
comp=Z,10nm,0.8s,mb5.0
ZEI Tsey 62.90 318 *e*P **P** **20 56 06.4 -2.0**
ZEI *e**PP pP 20 56 16.0 -2.4
ZEI *e* 20 58 28.3
ZEI pmax pmax
comp=Z,8.0nm,0.4s,mb5.2
ARU Arti 63.06 337⇓ *i*P **P** **20 56 07.6 -1.9**
ARU *e* 20 58 25.3
ARU *e*PPP 20 59 57.1
ARU *e*S **S** **21 04 37.0 -1.0**
ARU *e*SS SS 21 08 42.7 -1.3
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.9
ARU MLR MLR
comp=Z,200nm,18.0s,MS4.3
ARU MLR MLR
comp=E,20nm,16.0s
ARU MLR MLR
comp=E,200nm,18.0s
ARU Arti 63.06 337 *e*P **P** **20 56 07.0 -2.5**
comp=E,12nm,1.0s,mb5.0
KIV Kislovodsk 64.20 319 *e*P **P** **20 56 16.6 -0.4**
KIV *e*S **S** **21 04 50.7 -1.5**
KIV *e*SS SS 21 08 59.2 -2.6
KIV pmax pmax
comp=Z,13nm,1.1s,mb4.9
KIV Kislovodsk 64.20 319 *e*P **P** **20 56 16.3 -0.7**
comp=Z,17nm,1.0s,mb5.0
GOF Gofitskoye 64.46 320 *e*P **P** **20 56 14.7 -4.0**
MALT Malatya 65.04 312⇑ *i*P **P** **20 56 26.4 +3.9**
MALT Malatya 65.04 312 P **P** **20 56 22.9 +0.4**
MALT *e* 20 56 30.2
MALT pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
MALT Malatya 65.04 312 P **P** **20 56 22.9 +0.4**
comp=Z,7.0nm,1.1s,mb4.6
MALT *e* 20 56 30.2
YAK Yakutsk 65.30 16 *e*P **P** **20 56 23.2 -1.0**
YAK pmax pmax
comp=Z,49nm,1.1s,mb5.5
YAK pmax pmax
comp=N,17nm,1.2s
YAK pmax pmax
comp=E,13nm,1.3s
YAK MLR MLR
comp=Z,405nm,19.0s,MS4.6
YAK MLR MLR
comp=N,249nm,20.0s,MS4.6
YAK MLR MLR
comp=E,258nm,19.0s,MS4.6
YAK Yakutsk 65.30 16 *e*P **P** **20 56 23.1 -1.1**
EIL Elat 65.38 302 *e*P **P** **20 56 26.6 +1.9**
SOKR Solikamsk 65.96 339⇓ *i*P **P** **20 56 27.0 -1.4**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOC Sochi 66.02 318 *e*P **P** **20 56 33.9 +5.1**
SOC *e* 20 57 02.7
SOC *e*PPP 21 00 33.8
SOC *e* 21 06 19.3
SOC pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
SOC MLR MLR
comp=Z,178nm,23.0s,MS4.2
BR131 Keskin Array S 69.02 312 *e*P **P** **20 56 45.6 -2.2**
comp=Z,2.8nm,0.8s,mb4.2
BRTR Keskin Array B 69.02 312 P **P** **20 56 46.9 -0.9**
comp=Z,1.3nm,0.8s,mb3.9,baz=126,slow=7.2,SNR=9.4
BRTR LR LR 21 25 47.7
comp=Z,52nm,20.1s,MS3.8,baz=248,slow=35
VRSR Storozhevoye 69.44 325 *e*P **P** **20 56 49.1 -1.3**
VRSR pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VRSR pmax pmax
comp=N,30nm,4.1s
VRSR pmax pmax
comp=E,7.0nm,0.8s
MA2 Magadan 71.22 26 *e*P **P** **20 57 01.0 -0.3**
MA2 pmax pmax
comp=Z,17nm,0.7s,mb5.1
MA2 Magadan 71.22 26 *e*P **P** **20 57 00.9 -0.3**
comp=Z,17nm,0.7s,mb5.1
PET Petropavlovsk 72.13 34 *e*P **P** **20 57 08.2 +1.5**
PET *e*S S 21 06 34.2 +7.5
PET *e*PS 21 06 57.0
PET *e*PPS 21 07 14.9
PET pmax pmax
comp=Z,100nm,17.7s
PET smax
comp=E,100nm,13.9s
PET MLR MLR
comp=Z,300nm,15.0s,MS4.7
PET MLR MLR
comp=Z,200nm,14.0s
MOS Moscow 72.22 329 *e*P pP 20 57 19.1 +1.7
MOS *e* 20 57 28.3
MOS *e* 20 59 47.7
OBN Obninsk 72.50 328 *e*P **P** **20 57 08.0 -1.0**
OBN *i* pP 20 57 18.5 -0.6
OBN *i* 20 57 25.1
OBN *i* 20 59 46.7
OBN *i*S S 21 06 32.4 +1.4
OBN pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.1
MAW Mawson 72.83 193 P **P** **20 57 11.7 +0.7**
comp=Z,1.5nm,1.0s,mb3.9,baz=182,slow=14,SNR=2.9
MAW LR LR 21 25 37.0
comp=Z,158nm,19.0s,MS4.3,baz=61,slow=33
MAW Mawson 72.83 193 P **P** **20 57 11.6 +0.7**
MAW pmax pmax
comp=Z,9.0nm,1.3s
MAW Mawson 72.83 193 P **P** **20 57 11.6 +0.6**
comp=Z,8.6nm,1.3s,mb4.5
TIXI Tiksi 73.06 10 *e*P **P** **20 57 11.1 -1.2**
BOSA Boshof 74.83 240 LR LR 21 29 08.2
comp=Z,176nm,18.0s,MS4.4,baz=279,slow=35
AKASG Malin Array Be 75.15 322 P **P** **20 57 23.2 -1.3**
comp=Z,0.4nm,0.4s,baz=89,slow=4.7,SNR=11
MLR Muntele Rosu 75.97 317⇑ *i*P **P** **20 57 31.6 +2.4**
BURAR Bucovina Array 76.92 319⇑ *i*P **P** **20 57 36.8 +2.2**
JOF Joensuu 78.03 335 *e*p **P** **20 57 38.1 -2.6**
DRAR 78.43 317⇑ *i*P **P** **20 57 44.7 +1.7**
APA Apatity 79.00 339⇓ *i*P **P** **20 57 50.8 +4.7**
APA *i* 20 57 56.5
APA pmax pmax
comp=Z,11nm,0.8s,mb4.8
KOLS Kolonicke sedl 79.11 320 *e*P **P** **20 57 47.9 +1.2**
FINES FINESS Array B 79.88 332 P **P** **20 57 49.5 -1.4**
comp=Z,2.4nm,0.8s,mb4.2,baz=116,slow=8.9,SNR=7.3
KAF Kangasniemi 79.97 333 *e*p **P** **20 57 49.7 -1.7**
comp=Z,1.2nm,0.5s,mb4.1,baz=100,slow=5.0
KAF Kangasniemi 79.97 333 *e*P **P** **20 57 49.7 -1.7**
KAF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
OJC Ojcow 80.92 321 *e*P **P** **20 58 03.7 +7.2**
BILL Bilibino 81.05 21 *e*P **P** **20 57 56.4 -0.8**
BILL *e* 21 01 00.5
BILL *e*S S 21 08 02.9 -1.4
BILL pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.8
PKSM Moragy 81.12 316⇓ *i*P **P** **20 57 57.7 +0.2**
VYHS Vyhne 81.29 319 *e* **P** **20 58 05.6 +7.2**
VYHS *e* 20 58 18.7
VYHS *e*S S 21 07 45.5 -21
VYHS Vyhne 81.29 319 *e*P **P** **20 58 05.6 +7.2**
VYHS *e* 20 58 18.7
KEV Kevo 81.98 341 *e*p **P** **20 57 59.3 -2.8**
comp=Z,1.3nm,0.6s,mb4.0
KEV Kevo 81.98 341 *e*P **P** **20 57 59.3 -2.8**
KEV pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
ZST Bratislava 82.40 318 *e*S S 21 08 01.4 -17
ARCES ARCESS Array B 82.41 340 P **P** **20 58 02.9 -1.5**
comp=Z,2.9nm,0.8s,mb4.3,baz=116,slow=5.5,SNR=7.3
URZ Urewera 82.90 129 LR LR 21 36 16.8
comp=Z,242nm,20.5s,MS4.6,baz=236,slow=37
BOJS Bojanci 83.40 315 *e*P pP 20 58 17.4 -2.3
PERS Pernice 83.59 317 *i* P **P** **20 58 10.9 +0.5**
PERS *e* 20 58 18.5
GERES GERESS Array B 84.71 319 P **P** **20 58 15.8 -0.3**
comp=Z,1.0nm,0.8s,mb4.0,baz=113,slow=6.1,SNR=7.0
VNDA Vanda 85.95 169 LR LR 21 34 28.7
comp=Z,163nm,18.4s,MS4.5,baz=301,slow=34
VNDA Vanda 85.95 169 P **P** **20 58 25.1 +2.8**
VNDA pmax pmax
comp=Z,5.0nm,1.2s
VNDA Vanda 85.95 169 P **P** **20 58 25.1 +2.8**
comp=Z,4.8nm,1.2s,mb4.6
GRA1 Grafenberg Arr 86.38 320 *e*P **P** **20 58 31.3 +6.8**
comp=Z,4.0nm,1.0s,mb4.6
GRF Grafenberg Arr 86.38 320 *e*P **P** **20 58 31.3 +6.8**
comp=Z,4.0nm,1.0s,mb4.6
GRF Grafenberg Arr 86.38 320 *e*P **P** **20 58 31.3 +6.8**
GRF pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
NB2 NORSAR Subarra 86.89 331 P **P** **20 58 26.1 -0.8**
comp=Z,0.2nm,0.7s,mb3.5,baz=94,slow=5.6
NOA NORSAR Array B 86.89 331 P **P** **20 58 25.6 -1.3**
comp=Z,1.8nm,0.8s,mb4.3,baz=93,slow=4.9,SNR=7.9
NOA LR LR 21 43 12.5
comp=Z,97nm,20.3s,MS4.2,baz=45,slow=40
KEST Kesra 87.48 306 P **P** **20 58 31.1 +1.2**
comp=Z,0.7nm,0.7s,mb4.0,baz=288,slow=3.6,SNR=4.1
TORD Torodi Ar. Bea 95.05 283 LR LR 21 41 19.4
comp=Z,126nm,19.5s,MS4.4,baz=105,slow=35
IMA2 Indian Mountai 96.46 23 *e*P **P** **20 59 11.5 0.0**
IMA2 *e* 20 59 17.9
KDAK Kodiak Island 99.54 31 LR LR 21 53 06.7
comp=Z,125nm,18.1s,MS4.5,baz=52,slow=41

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	128.69	36	PKP	PKPdf	21 04 51.5	+2.1
	comp=Z,0.8nm,0.9s,baz=237,slow=2.0,SNR=5.1						
PDAR	Pinedale Array	129.93	26	PKP	PKPdf	21 04 52.8	+1.1
	comp=Z,0.5nm,0.9s,baz=278,slow=4.3,SNR=4.1						
TMUT	Trail Mountain	131.90	30	eSKPbc	SKPbc	21 08 18.8	-0.1
WVL	Waterville	132.83	347	eSKPbc	SKPbc	21 08 15.8	-6.3
PLAL	Pickwick Lake	143.54	7	ePKPdf	PKPdf	21 05 14.2	-2.6
JCT	Junction City	144.47	26	ePKIKP	PKPdf	21 05 16.8	-1.6
CPUP	Villa Florida	145.09	222	ePKIKP	PKPdf	21 05 20.1	+0.6
CPUP				e		21 05 26.3	
LRAL	Lakeview Retre	145.59	6	ePKPab	PKPab	21 05 20.8	-0.1

*ISCJB **01** 21:29:16.6±3.7, 4.75S±0.1×152.5E±0.1, h112^{km}±33^{km}, mb4.0/10, Error ellipse: s-maj=24.7km s-min=23.5km az=14.9*
*NEIC **01** 21:29:17.0±2.7, 4.75S×152.55E, h105^{km}±23^{km}, mb4.3/6, Error ellipse: s-maj=19.9km s-min=18.6km az=52.0*
*IDC **01** 21:29:18.8±4.6, 4.74S×152.59E, h124^{km}±40^{km}, mb3.7/5, mb1 3.7/6, mb1mx3.6/13, mbtmp4.1/6, MS3.2/3, Ms1 3.2/3, ms1mx2.9/16, Error ellipse: s-maj=30.2km s-min=26.0km az=34.0*
ISC 01 21:29:18.4±3.0**, 4.8S**±0.1×**152.6E**±0.1**, h115**^{km}±26^{km}**, n18,** σ0^s**79**/17**, mb4.0**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.08	229	P	Pn	21 30 59.7	+0.2
	1.4nm,0.3s,baz=38,slow=12,SNR=4.2						
PMG				S	Sn	21 32 19.6	+1.2
	3.1nm,0.3s,baz=73,slow=19,SNR=4.2						
PMG				LR	LR	21 33 39.6	
	comp=Z,81nm,21.2s,baz=216,slow=37						
PMG	Port Moresby	7.08	229	ePn	Pn	21 30 57.0	-2.4
PMG				eSn	Sn	21 32 17.5	-0.9
PMG				S	Sn	21 32 19.6	+1.2
CTA	Charters Tower	16.43	201	LR	LR	21 38 44.5	
	comp=Z,38nm,19.3s,baz=337,slow=34						
KAKA	Kakadu	21.40	247	eP	P	21 33 57.6	+0.8
	17nm,0.6s,mb4.5						
DZM	Mont Dzumac	21.84	143	P	P	21 34 01.9	+0.4
	5.4nm,0.6s,mb4.0,baz=8.0,slow=23,SNR=6.4						
WRAB	Tennant Creek	23.29	228	eP	P	21 34 15.5	-0.4
	13nm,0.7s,mb4.4						
WRAB				e		21 34 22.4	
WB2	Warramunga Arr	23.30	228	eP	P	21 34 15.7	-0.2
ASAR	Alice Springs	26.03	222	P	P	21 34 40.5	-0.2
	0.8nm,0.7s,mb3.3,baz=58,slow=8.7,SNR=10						
FITZ	Fitzroy Crossi	29.48	241	eP	P	21 35 12.1	+0.6
	3.9nm,0.4s,mb4.4						
FITZ	Fitzroy Crossi	29.48	241	P	P	21 35 12.4	+0.9
	2.4nm,0.4s,mb4.2,baz=80,slow=5.7,SNR=21						
MBWA	Marble Bar	35.80	240	P	P	21 36 05.7	-0.8
	2.5nm,0.6s,mb4.3						
PSI	Prapat	54.12	277	LR	LR	22 01 08.3	
	comp=Z,95nm,20.1s,baz=164,slow=35						
PPT	Papeete	57.96	108	eLR	LR	21 38 51.5	
	116nm,23.2s						
ULN	Ulaanbaatar	65.84	328	eP	P	21 39 52.8	+1.3
	0.9nm,0.5s,mb3.9						
SONM	Songino Array	66.17	328	P	P	21 39 53.5	-0.1
	0.5nm,0.5s,mb3.6,baz=145,slow=5.9,SNR=6.8						
MKAR	Makanchi Array	80.14	319	P	P	21 41 15.2	-0.5
	1.2nm,0.6s,mb3.9,baz=96,slow=7.4,SNR=16						
KURK	Kurchatov	83.59	322	P	P	21 41 33.3	-0.6
	1.9nm,0.8s,mb4.0						
TORD	Torodi Ar. Bea	150.08	288	PKPbc	PKPbc	21 48 54.6	-0.9
	1.8nm,0.7s,baz=42,slow=2.1,SNR=26						

*ISCJB **01** 21:32:16.6±0.7, 33.78N±0.08×26.3E±0.1, h62^{km}±52^{km}, Error ellipse: s-maj=18.8km s-min=12.4km az=30.3*
*CSEM **01** 21:32:16.3±0.1, 33.78N×26.23E, h60^{km}, ML3.0, Error ellipse: s-maj=5.9km s-min=2.6km az=65.0*
*NEIC **01** 21:32:17.6, 33.87N×26.13E, h56^{km}, MD3.2(ATH), After ATH.*
*HLW **01** 21:32:17.3, 33.84N×26.27E, h33^{km}, Mb3.0*
*ATH **01** 21:32:17.6, 33.87N×26.13E, h56^{km}, MD3.2/4*
ISC 01 21:32:14.9±2.2**, 33.80N**±0.06×**26.2E**±0.1**, h5**^{km}±20^{km}**, n15,** σ0^s**40**/15**, 10C, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XRY	Khrisi	1.15	338	eP	Pg	21 32 37.0	0.0
NPS	Neapolis	1.54	341	eP	Pn	21 32 42.8	-0.1
KARP	Karpathos	1.91	24	eP	Pn	21 32 48.5	+0.5
GVD	Gavdhos	2.04	301	eP	Pn	21 32 49.6	-0.2
SLUM		2.46	200	⇑P	Pn	21 32 55.5	0.0
SLUM				S	Sx	21 33 23.3	
HMAT	Matruh	2.80	164	⇑P	Pn	21 32 59.7	-0.6
HMAT				S	Sx	21 33 31.5	
SWA1		4.55	186	⇑P	Pn	21 33 24.3	0.0
SWA1				S	Sx	21 34 13.7	
SWA1		4.55	186	P	Pn	21 33 24.3	0.0
SWA1				S	Sx	21 34 13.6	
SWA2		4.59	188	⇑P	Pn	21 33 25.0	+0.1
AWBH		5.93	156	⇑P	Pn	21 33 43.4	0.0
GLL	Jalalah	6.30	131	⇑P	Pn	21 33 48.4	0.0
AMAG	Maghara	6.71	116	⇑P	Pn	21 33 53.2	-0.8
HFRF	Wahat Farafira	6.88	164	⇑P	Pn	21 33 56.2	-0.1
HDK1	Dakhla	8.69	161	⇑P	Pn	21 34 21.9	+0.7
AKRG	Al Kharijah	9.07	155	⇑P	Pn	21 34 27.0	+0.6

*ISCJB **01** 21:40:37.5±0.3, 40.78N±0.02×28.03E±0.02, h8^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.7km az=145.0*
*ISK **01** 21:40:37.5, 40.78N×28.03E, h17^{km}, MD3.1*
*ATH **01** 21:40:37.9, 40.77N×27.77E, h7^{km}, MD3.7/4*
*CSEM **01** 21:40:37.5±0.0, 40.78N×28.05E, h12^{km}, MD3.1, Error ellipse: s-maj=1.1km s-min=1.0km az=169.0*
*NEIC **01** 21:40:37.0, 40.78N×28.01E, h12^{km}, MD3.2(ISK), MD3.7(ATH), After ISK.*
ISC 01 21:40:38.2±0.3**, 40.78N**±0.02×**28.04E**±0.02**, h11**^{km}±3^{km}**, n62,** σ0^s**82**/77**, 2C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRMT	Marmara Adasi	0.38	242	i PG	Pg	21 40 44.9	-0.9
CRLT	Corlu	0.41	327	i PG	Pg	21 40 46.9	+0.5
CRLT				i SG	Sg	21 40 52.4	+0.5
TKR	Tekirdag	0.43	299	PG	Pg	21 40 46.9	+0.2
TKR				SG	Sg	21 40 53.8	+1.3
EDC	Edincik	0.46	197	i PG	Pg	21 40 47.2	0.0
CTT	Catalca	0.47	39	i PG	Pg	21 40 47.7	+0.3
ELBA	Catalca	0.47	39	i P	Pg	21 40 47.7	+0.2
ELBA				i S	Sg	21 40 54.3	+0.6
KCT	Karacabey	0.57	155	PG	Pg	21 40 49.6	+0.2
MFT	Murefte	0.57	271	PG	Pg	21 40 48.3	-1.1
RKY	Sarkoy-Tekirda	0.66	262	PG	Pg	21 40 50.3	-0.7
ARMT	Armutlu	0.67	109	PG	Pg	21 40 51.3	+0.2
BGKT	Bogazkoy	0.69	54	PG	Pg	21 40 51.5	0.0
BGKT				SG	Sg	21 41 00.9	+0.4
ISK	Istanbul-Kandi	0.82	70	PG	Pg	21 40 53.8	-0.4
ISK				SG	Sg	21 41 05.3	+0.4
KLYT	Kilyos	0.89	58	PG	Pg	21 40 55.2	-0.3
GEMT	Gemlik	0.94	111	PG	Pg	21 40 55.8	-0.6
ORLT	Orhaneli	0.99	138	PG	Pg	21 40 57.5	+0.3
BTOK	Tokmak	1.02	180	i P	Pg	21 40 57.6	-0.3
BTOK				i S	Sg	21 41 11.7	+0.5
YLV	Yalova	1.04	102	PG	Pg	21 40 57.0	-1.2
ULDT	Uludag	1.06	127	i P	Pb	21 40 58.1	-0.4
ULDT				i S	Sg	21 41 13.5	+1.2
CANB	Canakkale	1.07	224	PG	Pg	21 40 57.5	-1.3
HRT	Hereke	1.24	88	ePN	Pn	21 41 00.2	-1.3
SILT	Sile	1.27	73	ePN	Pn	21 41 01.7	-0.2
ADVT	Abdulvahap	1.34	105	ePN	Pn	21 41 02.3	-0.6
ENEZ	Enez	1.43	269	ePN	Pn	21 41 03.2	-0.9
EDRB	Edirne	1.44	318	ePN	Pn	21 41 04.1	-0.1
ALN	Alexandroupoli	1.51	275	eP	Pn	21 41 05.5	+0.3
GADA	Gvkgeada	1.73	251	ePN	Pn	21 41 07.6	-0.7
BOZC	Bozcaada	1.78	239	i P	Pn	21 41 09.7	+0.7
BOZC				i S	Sg	21 41 35.9	+0.2
BOZC	Bozcaada	1.78	239	i P	Pn	21 41 09.7	+0.7
BOZC				i S	Sg	21 41 35.8	+0.2
AYVA	Ayvalik	1.80	215	i P	Pn	21 41 09.2	+0.1
AYVA				i S	Sg	21 41 36.7	+0.6
AYVA	Ayvalik	1.80	215	i P	Pn	21 41 09.2	0.0
AYVA				i S	Sg	21 41 36.7	+0.6
GPA	Golpazari	1.80	105	ePN	Pn	21 41 09.3	+0.1
AKHS	Akhisar	1.91	185	i P	Pn	21 41 10.4	-0.3
AKHS				i S	Sg	21 41 39.8	+0.1
AKS	Akhisar	1.91	185	ePN	Pn	21 41 10.4	-0.3
RDO	Rodhopi	1.93	282	ePN	Pn	21 41 10.5	-0.4
JMB	Yambol	2.00	328	eP	Pn	21 41 12.8	+0.8
JMB	Yambol	2.00	328	i P	Pn	21 41 12.0	0.0
PRK	Paraskevi	2.05	222	ePN	Pn	21 41 12.1	-0.5
PRK				eSN	Sn	21 41 38.7	+0.6
KDZ	Kurdzhali	2.16	295	i P	Pn	21 41 16.0	+1.9
HENT	Hendek	2.17	88	i P	Pn	21 41 14.8	+0.4
HENT				i S	Sg	21 41 48.4	+0.3
DIM	Dimitrovgrad	2.27	305	i P	Pn	21 41 14.0	-1.6
ALT	Altintas	2.35	137	ePN	Pn	21 41 16.7	-0.1
LIA	Limnos Island	2.35	249	ePN	Pn	21 41 16.2	-0.6
LOS	Limnos	2.41	250	eP	Pn	21 41 16.8	-0.8
IZM	Izmir	2.46	194	ePN	Pn	21 41 18.2	0.0
ESKT	Eskisehir	2.50	119	ePN	Pn	21 41 19.3	+0.5
BLCB	Balcova	2.52	198	ePN	Pn	21 41 19.2	+0.2
KDZE	Karadeniz Ereo	2.63	77	ePN	Pn	21 41 20.5	-0.1
PLD	Plovdiv	2.83	299	i P	Pn	21 41 19.0	-4.4
CHOS	Chios island	2.84	213	eP	Pn	21 41 26.0	+2.5
SZH	Strazhica	2.93	328	i P	Pn	21 41 25.0	+0.2
NVR	Nevrokopi	3.21	282	ePB	Pn	21 41 28.6	+0.1
SMG	Samos	3.21	197	ePB	Pn	21 41 31.0	+2.4
SRS	Serrai	3.38	277	eP	Pn	21 41 31.3	+0.3
SAFT	Safranbolu	3.55	81	ePN	Pn	21 41 34.0	+0.8
TIRR	Tirgusor	3.68	4	⇑i P	Pb	21 41 40.8	-2.5
KKB	Krupnik	3.88	288	i P	Pn	21 41 42.9	+5.1
VTS	Vitosha	4.04	298	⇑i P	Pb	21 41 46.2	-3.2
CFR	Carcaliu	4.39	1	⇓i P	Pb	21 41 55.6	+0.2
BR131	Keskin Array S	4.42	102	ePn	Pn	21 41 44.9	-0.2
BR131				ePg	Pg	21 42 01.6	-1.2
BR131	Keskin Array S	4.42	102	ePn	Pn	21 41 44.9	-0.2
BR131	Keskin Array S	4.42	102	ePg	Pg	21 42 01.6	-1.2
MLR	Muntele Rosu	4.95	343	⇓i P	Pn	21 41 53.8	+1.4

CASC 01 21:43:38.4±1.5**, 10.06N**×**84.87W, h48**^{km}±5^{km}**, MD3.6, 7C-8D, Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EPA	Esparza	0.27	104	⇓eP	Pn	21 43 46.8	-0.4
EPA				eS	Sn	21 43 54.1	+0.8
JCR	Jicaral	0.32	230	⇑eP	Pn	21 43 47.3	-0.2
JCR				eS	Sn	21 43 54.8	+0.8
CGA2	Cerro Gallo 2	0.40	96	⇑eP	Pn	21 43 48.4	0.0
CGA2				eS	Sn	21 43 56.1	+0.7
CAO	Cobano	0.42	214	⇑eP	Pn	21 43 48.0	-0.6
CAO				eS	Sn	21 43 56.6	+0.7
PRS1	Puriscal	0.55	97	⇓eP	Pn	21 43 50.0	-0.1
POA2	Poas 2	0.62	79	⇓eP	Pn	21 43 51.6	+0.7
POA2				eS	Sn	21 44 02.4	+2.4
VCR	Vista de Mar	0.76	275	⇓eP	Pn	21 43 52.5	-0.3
VCR				eS	Sn	21 44 04.1	+0.8
SJS	Escuela Geolog	0.81	98	eP	Pn	21 43 53.9	+0.4
SJS				eS	Sn	21 44 06.0	+1.6
RIN3	Volcan Rincon	0.89	325	⇑i P	Pn	21 43 54.5	0.0
RIN3				eS	Sn	21 44 07.2	+0.8
LCR2	La Lucha 2	0.90	110	⇓eP	Pn	21 43 54.9	+0.1
LCR2				eS	Sn	21 44 08.8	+2.0
OCM	Ochomogo	0.91	100	⇓eP	Pn	21 43 55.0	+0.2
OCM				⇑eP		21 43 55.0	
OCM				eS	Sn	21 44 07.9	+1.1
OCM				eS	Sn	21 44 08.2	+1.4
IRZ2	Volcan Irazu 2	0.96	95	⇓i P	Pn	21 43 56.1	+0.7
IRZ2				eS	Sn	21 44 10.3	+2.2
VTU	Volcan Turrial	1.09	92	eP	Pn	21 43 59.3	+2.0
URSC	Urasca	1.09	101	⇓eP	Pn	21 43 58.3	+1.0
CRZC	La Cruz	1.15	321	⇑eP	Pn	21 43 58.2	+0.1
CRZC				eS	Sn	21 44 14.8	+2.1
BUS	Buena Vista	1.20	114	⇑eP	Pn	21 43 59.4	+0.6
BUS				eS	Sn	21 44 16.2	+2.3

*IDC **01** 21:56:31.0±1.2, 0.63N×97.25E, h0^{km}, mb4.1/8, mb1 4.2/9, mb1mx3.9/20, mbtmp4.1/9, ML3.5/1, Error ellipse: s-maj=44.0km s-min=19.5km az=55.0*
*BJI **01** 21:56:33.3, 0.55N×97.33E, h36^{km}, mb4.8*
*ISCJB **01** 21:56:34.4±0.8, 0.75N±0.10×97.4E±0.1, h33^{km}, mb4.2/16, Error ellipse: s-maj=16.8km s-min=12.2km az=108.2*
*NEIC **01** 21:56:35.6±0.6, 0.73N×97.34E, h30^{km}, mb4.3/6, Error ellipse: s-maj=12.7km s-min=9.1km az=50.0*
ISC 01 21:56:36.7±0.8**, 0.78N**±0.10×**97.4E**±0.1**, h35**^{km}**, n21,** σ0^s**68**/21**, mb4.2**/16**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.53	37	Pn	Pn	21 57 14.9	-0.4
	8.9nm,0.3s,baz=270,slow=6.6,SNR=28						
KULM	Kulim	5.54	36	ePn	Pn	21 57 56.3	-0.4
KKM	Kota Kinabalu	19.50	74	eP	Pn	22 01 01.6	-0.7
FITZ	Fitzroy Crossi	33.53	125	P	P	22 03 12.6	-0.4
	0.6nm,0.5s,mb3.8,baz=282,slow=9.3,SNR=4.8						
GTA	Gaotai	38.51	3	eP	P	22 03 55.8	+0.2
GTA				AP	pP	22 04 02.9	-2.9
GTA				XP	sP	22 04 06.2	-3.8
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.3						
WRAB	Tennant Creek	41.66	122	eP	P	22 04 22.1	+0.4
	comp=Z,6.8nm,1.0s,mb4.2						
BJT	Baijiatuau	42.64	21	eP	P	22 04 30.5	+0.8
	comp=Z,10nm,1.1s,mb4.5						
BJI	Beijing	42.66	21	P	P	22 04 30.9	+1.0
BJI				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.8						
ASAR	Alice Springs	42.99	127	P	P	22 04 32.9	+0.3
	comp=Z,1.6nm,0.7s,mb3.8,baz=297,slow=8.0,SNR=20						
SONM	Songino Array	47.52	8	P	P	22 05 09.1	+0.6
	comp=Z,0.6nm,0.5s,mb3.9,baz=184,slow=9.8,SNR=5.0						
ULN	Ulaanbaatar	47.65	9	eP	P	22 05 09.7	+0.3
MKAR	Makanchi Array	47.70	346	P	P	22 05 10.3	+0.5
	comp=Z,3.4nm,0.5s,mb4.7,baz=159,slow=8.6,SNR=60						
MKAR	Makanchi Array	47.70	346	P	P	22 05 10.3	+0.5
KURK	Kurchatov	52.25	345	eP	P	22 05 43.4	-1.0
	comp=Z,2.6nm,0.8s,mb4.2						
ZAL	Zalesovo	53.99	351	P	P	22 05 58.1	+0.9
	comp=Z,3.2nm,0.8s,mb4.3,baz=308,slow=5.0,SNR=11						
ZRNK	Zerenda	57.11	340	eP	P	22 06 17.8	-1.8
	comp=Z,2.6nm,1.0s,mb4.2						
CHKZ	Chkalovo	57.19	341	eP	P	22 06 20.0	-0.2
	comp=Z,2.3nm,0.7s,mb4.3						
CHKZ				e		22 06 25.9	
GNI	Garni	61.73	316	P	P	22 06 56.5	+5.0
	comp=Z,6.2nm,1.2s,mb4.6						
FINES	FINESS Array B	80.46	333	P	P	22 08 44.8	-0.1
	comp=Z,1.2nm,0.7s,mb4.0,baz=122,slow=7.2,SNR=7.3						
ARCES	ARCESS Array B	83.00	340	P	P	22 08 57.8	-0.5
	comp=Z,2.6nm,0.9s,mb4.3,baz=93,slow=3.6,SNR=7.1						
NOA	NORSAR Array B	87.47	331	P	P	22 09 20.6	0.0
	comp=Z,0.4nm,0.7s,mb3.8,baz=96,slow=4.5,SNR=3.5						

IDC 01 22:24:31.1±3.9**, 1.39N**×**97.37E, h0**^{km}**, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.5**/18**, mbtmp3.8**/4**, Error ellipse: s-maj=164.8km s-min=27.1km az=60.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.37	127	P	P	22 32 35.6	+0.4
	0.3nm,0.7s,baz=297,slow=8.2,SNR=3.3						
SONM	Songino Array	46.92	8	P	P	22 33 03.4	+0.1
	0.6nm,0.5s,baz=191,slow=9.6,SNR=7.5						
MKAR	Makanchi Array	47.10	346	P	P	22 33 04.6	-0.2
	0.6nm,0.4s,baz=159,slow=7.6,SNR=7.4						
ZAL	Zalesovo	53.39	351	P	P	22 33 52.5	+0.1
	1.6nm,0.4s,baz=329,slow=4.3,SNR=6.7						

*IDC **01** 23:49:49.3±1.2, 9.96S×107.69E, h0^{km}, mb3.9/5, mb1 3.9/6, mb1mx3.8/16, mbtmp3.9/6, MS3.1/1, Ms1 3.1/1, ms1mx2.3/23, Error ellipse: s-maj=56.6km s-min=20.6km az=56.0*
*NEIC **01** 23:49:50.5±0.7, 10.04S×107.69E, h10^{km}, mb4.0/7, Error ellipse: s-maj=34.6km s-min=9.5km az=51.0*
*ISCJB **01** 23:49:51.9±0.6, 10.02S±0.07×107.74E±0.08, h33^{km}, mb3.9/10, Error ellipse: s-maj=11.1km s-min=10.0km az=126.3*
ISC 01 23:49:54.3±0.6**, 10.01S**±0.07×**107.74E**±0.08**, h35**^{km}**, n18,** σ1^s**02**/20**, mb3.9**/10**, 1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOGI	Yogyakarta	3.34	49	⇑i P	Pn	23 50 41.5	-2.5
YOGI				i S	Sn	23 51 23.3	+0.9
PSI	Prapat	15.47	325	LR	LR	00 00 37.6	
	comp=Z,62nm,18.2s,baz=349,slow=42						
MBWA	Marble Bar	15.99	135	ePn	Pn	23 53 33.7	-2.8
	2.8nm,0.6s						
MBWA				eSn	Sn	23 56 16.8	-16
FITZ	Fitzroy Crossi	19.12	117	eP	Pn	23 54 16.3	+1.1
	3.0nm,0.6s						
FITZ	Fitzroy Crossi	19.12	117	P	Pn	23 54 15.9	+0.6
	0.1nm,0.3s,baz=287,slow=12,SNR=6.6						
FITZ				Sn	Sn	23 57 30.7	-18
	0.1nm,0.3s,baz=185,slow=22,SNR=6.2						
NWAO	Narrogin (SRO)	24.43	160	P	P	23 55 10.5	+1.0
	9.2nm,0.9s,mb4.2,baz=2.7,slow=10,SNR=3.0						
NWAO	Narrogin (SRO)	24.43	160	P	P	23 55 10.5	+0.9
WRAB	Tennant Creek	27.49	114	eP	P	23 55 37.4	+0.1
	2.1nm,0.6s,mb3.8						
WB2	Warramunga Arr	27.50	114	eP	P	23 55 37.4	+0.1
ASAR	Alice Springs	28.41	122	P	P	23 55 46.0	+0.5
	0.8nm,0.7s,mb3.5,baz=304,slow=8.7,SNR=8.4						
SONM	Songino Array	57.60	359	P	P	23 59 41.0	+0.3
	0.9nm,0.6s,mb4.0,baz=175,slow=8.5,SNR=7.3						
ULN	Ulaanbaatar	57.62	359	eP	P	23 59 41.5	+0.7
	1.7nm,0.6s,mb4.2						
ULN				e	pP	23 59 52.0	+0.6
MKAR	Makanchi Array	60.95	340	P	P	00 00 03.3	-0.5
	0.4nm,0.4s,mb3.9,baz=148,slow=7.1,SNR=4.6						
KURK	Kurchatov	65.56	340	eP	P	00 00 33.8	-0.6
	0.6nm,0.4s,mb4.0						
BRVK	Borovoye	70.48	337	eP	P	00 01 05.9	+0.6
	0.5nm,0.5s,mb3.7						
CHKZ	Chkalovo	70.83	338	eP	P	00 01 06.4	-1.0
	0.9nm,0.4s,mb4.0						
ZRNK	Zerenda	70.89	336	eP	P	00 01 07.6	-0.1
ZRNK				e	pP	00 01 19.3	+0.7
BRTR	Keskin Array B	84.37	312	P	P	00 02 23.8	+0.9
	0.6nm,0.7s,mb3.9,baz=165,slow=10.0,SNR=5.3						

IDC 01 23:56:27.1±3.5**, 8.61S**×**109.31E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.6**/16**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=177.5km s-min=26.4km az=48.0, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.47	122	P	Pn	00 00 46.1	+1.7
	0.1nm,0.3s,baz=112,slow=11,SNR=4.8						
WRA	Warramunga Arr	26.70	118	P	P	00 02 06.7	-1.3
	0.4nm,0.7s,baz=288,slow=11,SNR=4.6						
ASAR	Alice Springs	27.90	125	P	P	00 02 19.9	+1.2
	0.4nm,0.7s,baz=299,slow=9.5,SNR=4.4						
MKAR	Makanchi Array	60.18	339	P	P	00 06 36.8	+0.2
	0.7nm,0.5s,baz=150,slow=7.5,SNR=5.7						

*NEIC **02** 00:02:39.4, 39.67S×174.06E, h205^{km}, MG3.8(WEL), After WEL.*
WEL 02 00:02:39.6±0.4**, 39.69S**×**174.09E, h204**^{km}±3^{km}**, ML3.7**/9**, 11C-3D, Error ellipse: s-maj=3.0km s-min=1.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NRZ	Ngariki Road	0.37	340	P	Pn	00 03 06.8	+0.1
NRZ	Ngariki Road	0.37	340	PN	Pn	00 03 06.8	+0.1
NEZ	North Egmont	0.42	0	P	Pn	00 03 07.3	+0.5
NEZ	North Egmont	0.42	0	PN	Pn	00 03 07.2	+0.4
RAEZ	Rainy Point	0.46	30	P	Pn	00 03 06.9	-0.1
RAEZ	Rainy Point	0.46	30	PN	Pn	00 03 06.7	-0.2
PKE	Pukeiti	0.50	350	P	Pn	00 03 07.1	0.0
PKE	Pukeiti	0.50	350	PN	Pn	00 03 07.0	-0.1
PKE				SN	Sn	00 03 28.4	0.0
WAZ	Wanganui	0.69	96	P	Pn	00 03 08.8	+0.9
WAZ	Wanganui	0.69	96	PN	Pn	00 03 08.7	+0.8
WAZ				SN	Sn	00 03 29.9	+0.1
VRZ	Vera Road	0.76	43	P	Pn	00 03 07.7	-0.6
VRZ				S	Sn	00 03 28.9	-1.6
VRZ	Vera Road	0.76	43	⇓PN	Pn	00 03 07.7	-0.6
VRZ				SN	Sn	00 03 28.9	-1.6
DUWZ	D'Urville Isla	1.12	187	PN	Pn	00 03 10.7	+0.1
FWVZ	Far West T-bar	1.21	69	P	Pn	00 03 11.3	+0.1
FWVZ	Far West T-bar	1.21	69	PN	Pn	00 03 11.2	0.0
TWVZ	Taurewa	1.21	60	P	Pn	00 03 10.7	-0.5
TWVZ	Taurewa	1.21	60	PN	Pn	00 03 10.7	-0.5
WNVZ	Wahianoa	1.22	73	PN	Pn	00 03 11.5	+0.2
WPVZ	Whakapapa	1.22	67	P	Pn	00 03 11.4	+0.1
WPVZ	Whakapapa	1.22	67	PN	Pn	00 03 11.4	0.0
NGZ	Ngauruhoe	1.27	67	P	Pn	00 03 12.0	+0.3
NGZ	Ngauruhoe	1.27	67	PN	Pn	00 03 12.0	+0.3
WTVZ	West Tongariro	1.29	64	P	Pn	00 03 11.8	-0.1
WTVZ	West Tongariro	1.29	64	PN	Pn	00 03 11.8	-0.1
MOVZ	Moawhango	1.31	78	P	Pn	00 03 11.8	-0.2
MOVZ	Moawhango	1.31	78	PN	Pn	00 03 11.8	-0.2
HIZ	Hauiti	1.31	27	P	Pn	00 03 11.2	-0.8
HIZ	Hauiti	1.31	27	⇓PN	Pn	00 03 11.2	-0.8
OTVZ	Oturere	1.32	67	PN	Pn	00 03 12.3	+0.2
KIW	Kapiti Island	1.33	152	P	Pn	00 03 12.3	+0.2
KIW	Kapiti Island	1.33	152	⇑PN	Pn	00 03 12.3	+0.1
KRVZ	Karewarewa	1.34	64	PN	Pn	00 03 12.2	0.0
TSZ	Takapari Road	1.48	105	P	Pn	00 03 13.9	+0.4
TSZ	Takapari Road	1.48	105	PN	Pn	00 03 13.6	+0.1
MRZ	Mangatainoka R	1.50	131	P	Pn	00 03 13.6	0.0
MRZ	Mangatainoka R	1.50	131	⇑PN	Pn	00 03 13.6	+0.1
MRZ				SN	Sn	00 03 37.8	-2.2
TCW	Tory Channel	1.53	175	P	Pn	00 03 14.2	+0.3
TCW	Tory Channel	1.53	175	PN	Pn	00 03 14.2	+0.4
TCW				SN	Sn	00 03 38.3	-2.2
CAW	Cannon Point	1.60	153	P	Pn	00 03 14.6	+0.1
CAW	Cannon Point	1.60	153	⇑PN	Pn	00 03 14.6	+0.1
MRW	Makara Radio	1.61	163	P	Pn	00 03 14.6	0.0
MRW	Makara Radio	1.61	163	⇑PN	Pn	00 03 14.6	+0.1
NNZ	Nelson	1.62	199	P	Pn	00 03 14.5	-0.2
NNZ	Nelson	1.62	199	⇑PN	Pn	00 03 14.5	-0.2
QRZ	Quartz Range	1.65	226	P	Pn	00 03 14.1	-0.9
QRZ	Quartz Range	1.65	226	⇑PN	Pn	00 03 14.1	-0.9
SNZO	South Karori	1.69	164	P	Pn	00 03 15.2	-0.1
SNZO	South Karori	1.69	164	⇑PN	Pn	00 03 15.2	-0.1
TUWZ	Tuamarina	1.74	184	PN	Pn	00 03 15.8	-0.1
BHW	Baring Head	1.82	161	PN	Pn	00 03 16.2	-0.3
MTW	Mount Morrison	1.82	144	P	Pn	00 03 16.4	-0.2
MTW	Mount Morrison	1.82	144	PN	Pn	00 03 16.4	-0.2
BFZ	Birch Farm	1.92	122	P	Pn	00 03 17.6	0.0
BFZ	Birch Farm	1.92	122	PN	Pn	00 03 17.7	+0.1
BKZ	Black Stump Fm	1.93	75	P	Pn	00 03 17.3	-0.3
BKZ	Black Stump Fm	1.93	75	⇓PN	Pn	00 03 17.2	-0.4
MSWZ	Moikau Station	1.94	153	P	Pn	00 03 17.4	-0.3
MSWZ	Moikau Station	1.94	153	⇑PN	Pn	00 03 17.4	-0.3
PAWZ	Paruwai Farm	1.97	149	PN	Pn	00 03 17.8	-0.3
BSWZ	Blackbirch Sta	2.03	185	P	Pn	00 03 19.0	+0.3
BSWZ	Blackbirch Sta	2.03	185	PN	Pn	00 03 18.9	+0.2
CMWZ	Cape Campbell	2.06	178	P	Pn	00 03 19.3	+0.3
CMWZ	Cape Campbell	2.06	178	PN	Pn	00 03 19.3	+0.3
TRWZ	Traveller	2.10	145	⇑PN	Pn	00 03 19.2	-0.2
PXZ	Pawanui	2.16	100	PN	Pn	00 03 20.2	+0.2
THZ	Tophouse	2.26	203	eP	Pn	00 03 20.6	-0.5
THZ	Tophouse	2.26	203	⇑PN	Pn	00 03 20.6	-0.5
DSZ	Denniston Nort	2.69	220	P	Pn	00 03 25.1	-0.8
DSZ	Denniston Nort	2.69	220	PN	Pn	00 03 25.1	-0.8
URZ	Urewera	2.75	60	eP	Pn	00 03 25.0	-1.5
URZ	Urewera	2.75	60	PN	Pn	00 03 24.9	-1.6
KNZ	Kokohu	2.85	78	P	Pn	00 03 27.2	-0.5
KNZ	Kokohu	2.85	78	⇑PN	Pn	00 03 27.2	-0.5
MWZ	Matawai	3.00	64	P	Pn	00 03 28.0	-1.4
MWZ	Matawai	3.00	64	PN	Pn	00 03 28.0	-1.4
PUZ	Puketiti	3.63	65	P	Pn	00 03 35.3	-1.6
PUZ	Puketiti	3.63	65	PN	Pn	00 03 35.2	-1.7
MQZ	McQueen's Vall	4.16	195	eP	Pn	00 03 41.1	-2.3
MQZ	McQueen's Vall	4.16	195	ePN	Pn	00 03 41.6	-1.9

IGQ 02 00:20:39.0, 0.02N×**78.48W, h9**^{km}±4^{km}**, Mb4.0, Ms3.8, 8C-6D, Error ellipse: s-maj=2.0km s-min=0.8km az=50.6, Colombia-Ecuador border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YANA	Yana	0.17	214	⇑P	Pg	00 20 43.3	+0.7
PINO	Pino	0.22	216	⇑P	Pg	00 20 44.5	+0.9
GGP	Refugio Guagua	0.23	211	⇑P	Pg	00 20 44.5	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TERV	Terraza Guagua	0.23	213	⇑P	Pg	00 20 44.6	+0.9
JUA2	San Juan 2	0.26	208	⇑P	Pg	00 20 44.8	+0.5
COTA	Cotacachi	0.34	24	⇓P	Pg	00 20 46.4	+0.6
ANGU	Angureal	0.47	87	⇑P	Pg	00 20 49.4	+1.1
ANGU				S	Sg	00 20 55.2	+0.7
CAYR	Refugio Cayamb	0.47	91	⇓P	Pg	00 20 49.4	+1.1
CAYA	Cayambe	0.49	84	⇓P	Pg	00 20 49.5	+0.8
ANTI	Antisana	0.56	146	⇓P	Pg	00 20 50.8	+0.8
VC1	Cotopaxi 1	0.66	173	⇑P	Pg	00 20 52.7	+0.9
CAMI	Rancho Maria	0.69	182	P	Pg	00 20 54.7	+2.3
TAMB	Tambo	0.72	171	⇑P	Pg	00 20 53.7	+0.8
CONE	Cono NE Rev Vo	0.84	96	⇓P	Pg	00 20 55.8	+0.5
LAV3	Lava3-Reventad	0.86	98	⇓P	Pg	00 20 55.9	+0.4
PISA	Pisayambo	1.07	175	P	Pg	00 21 00.5	+0.8
ARRY	Arrayan	1.52	179	P	Pn	00 21 07.3	+1.0
ARRY				S	Sn	00 21 26.6	+0.4

*SOF **02** 00:27:57.6, 4038N×2588E, h12km, MD3.0*
*ISCJB **02** 00:27:58.7±0.3, 4040N±002×2585E±002, h8km±3km, Error ellipse: s-maj=2.9km s-min=2.4km az=88.7*
*NEIC **02** 00:27:58.9, 4037N×2588E, h0km, MD3.0(SOF), MD3.3(ATH), ML2.9(THE), After THE.*
*THE **02** 00:27:58.9, 4037N×2588E, h0km, ML3.0*
*ISK **02** 00:27:58.5, 4039N×2582E, h17km, MD3.2*
*ATH **02** 00:27:58.6, 4039N×2584E, h26km±1km, MD3.3/5*
*CSEM **02** 00:27:59.1±0.1, 4040N×2590E, h15km, MD3.2, Error ellipse: s-maj=1.3km s-min=1.2km az=85.0*
ISC 02 00:27:59.5±0.3**, 4039N**±002×**2585E**±002**, h12**km±2km**, n47, σ0.73**/75**, 4C-2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.20	170	iPG	Pg	00 28 03.9	0.0
GADA				iSG	Sg	00 28 07.0	+0.2
ENEZ	Enez	0.41	33	PG	Pg	00 28 07.2	-0.5
ENEZ				SG	Sg	00 28 14.8	+1.5
ALN	Alexandroupoli	0.53	16	ePg	Pg	00 28 09.4	-0.5
ALN				eSg	Sg	00 28 17.7	+0.8
BOZC	Bozcaada	0.57	164	iP	Pg	00 28 10.2	-0.4
BOZC				iS	Sg	00 28 18.0	-0.1
LIA	Limnos Island	0.71	227	⇓iPN	Pg	00 28 13.1	-0.2
LIA				eSN	Sg	00 28 22.5	-0.1
LOS	Limnos	0.75	233	ePg	Pg	00 28 13.9	-0.1
LOS				eSg	Sg	00 28 24.1	+0.4
RDO	Rodhopi	0.79	342	⇑iPN	Pg	00 28 14.1	-0.8
RDO				eSB	Sb	00 28 25.3	-0.7
CANB	Canakkale	1.00	112	PG	Pg	00 28 18.9	+0.1
CANB				SG	Sg	00 28 33.8	+2.0
RKY	Sarkoy-Tekirda	1.05	73	PG	Pg	00 28 19.0	-0.8
RKY				SG	Sg	00 28 34.0	+0.5
MFT	Murefte	1.16	69	PN	Pn	00 28 20.4	-1.2
MFT				SN	Sn	00 28 36.6	-0.8
PRK	Paraskevi	1.19	164	⇓iPN	Pn	00 28 21.2	-0.8
PRK				eSN	Sn	00 28 37.7	-0.4
AYVA	Ayvalik	1.26	149	iP	Pn	00 28 22.6	-0.3
AYVA				iS	Sb	00 28 39.5	+0.1
KDZ	Kurdzhali	1.30	345	iP	Pn	00 28 23.0	-0.6
KDZ				iPg	Pg	00 28 23.9	-0.6
KDZ	Kurdzhali	1.30	345	iPg	Pg	00 28 23.9	-0.6
MRMT	Marmara Adasi	1.35	80	ePN	Pn	00 28 23.3	-0.9
OUR	Ouranopolis	1.43	268	ePg	Pn	00 28 24.5	-0.9
OUR				eSg	Sg	00 28 46.2	+0.6
EDC	Edincik	1.54	91	ePN	Pn	00 28 26.9	+0.1
RZN	Rozhen	1.56	327	iP	Pn	00 28 27.0	-0.1
RZN				iPg	Pg	00 28 28.9	-0.5
EDRB	Edirne	1.60	25	ePN	Pn	00 28 27.0	-0.7
DIM	Dimitrovgrad	1.68	352	iP	Pn	00 28 28.4	-0.3
BTOK	Tokmak	1.79	110	iP	Pn	00 28 30.4	+0.1
BTOK				iS	Sn	00 28 53.2	+0.4
NVR	Nevrokopi	1.79	303	ePN	Pn	00 28 29.8	-0.5
NVR				eSN	Sn	00 28 52.3	-0.6
PLG	Polygyros	1.84	270	ePB	Pn	00 28 30.3	-0.7
SRS	Serrai	1.86	294	ePb	Pn	00 28 31.4	+0.1
SRS				eSb	Sb	00 28 57.5	+0.6
KCT	Karacabey	1.92	93	ePN	Pn	00 28 31.9	-0.1
PLD	Plovdiv	1.92	334	ePb	Pn	00 28 31.9	-0.2
PLD				eSb	Sb	00 28 59.1	+0.7
SOH	Sokhos	1.95	284	ePb	Pn	00 28 32.2	-0.3
SOH				eSb	Sb	00 28 59.7	+0.3
CHOS	Chios island	2.01	175	ePn	Pn	00 28 33.2	-0.1
CHOS				eSn	Sn	00 28 59.3	+1.0
MMB	Musomiste	2.01	307	ePn	Pn	00 28 33.2	0.0
MMB				eSn	Sn	00 29 00.6	+2.3
MMB	Musomiste	2.01	307	iP	Pn	00 28 33.0	-0.3
MMB	Musomiste	2.01	307	ePn	Pn	00 28 33.2	-0.1
MMB				eSn	Sn	00 29 00.6	+2.3
CTT	Catalca	2.10	68	ePN	Pn	00 28 34.4	-0.1
ELBA	Catalca	2.10	68	iP	Pn	00 28 33.6	-0.9
ELBA				iS	Sg	00 29 06.8	-0.2
AKHS	Akhisar	2.14	134	iP	Pn	00 28 34.9	-0.2
AKHS				iS	Sb	00 29 06.4	+1.7
JMB	Yambol	2.15	15	ePn	Pn	00 28 35.4	+0.2
JMB				eSn	Sn	00 29 03.7	+1.9
JMB	Yambol	2.15	15	iP	Pn	00 28 35.0	-0.2
JMB	Yambol	2.15	15	ePn	Pn	00 28 35.4	+0.2
JMB				eSn	Sn	00 29 03.7	+1.9
BLCB	Balcova	2.20	155	ePN	Pn	00 28 35.9	-0.1
IZM	Izmir	2.27	151	ePN	Pn	00 28 36.8	-0.1
KNT	Kendrikon	2.37	290	ePn	Pn	00 28 38.6	+0.3
KNT				eSn	Sn	00 29 09.9	+2.5
KKB	Krupnik	2.56	306	iP	Pn	00 28 40.0	-0.9
KLYT	Kilyos	2.57	69	ePN	Pn	00 28 41.3	+0.3
YLV	Yalova	2.69	85	ePN	Pn	00 28 43.0	+0.3
SMG	Samos	2.78	164	ePN	Pn	00 28 43.8	-0.2
VTS	Vitosha	2.96	319	⇑iP	Sg	00 29 35.2	+0.4
MLR	Muntele Rosu	5.10	1	⇑iP	Pn	00 29 21.6	+5.8
BZS	Buzias	6.08	331	⇑iP	Pn	00 29 29.1	-0.1

*IDC **02** 00:29:25.4±1.8, 678S×13052E, h0km, mb4.1/2, mb1 4.6/4, mb1mx4.1/11, mbtmp4.4/4, ML4.7/2, Error ellipse: s-maj=119.1km s-min=28.8km az=73.0*
*NEIC **02** 00:29:30.6±0.6, 686S×13044E, h35km, mb4.1/4, Error ellipse: s-maj=16.5km s-min=8.5km az=70.0*
*ISCJB **02** 00:29:35.0±1.6, 721S±006×1303E±0.1, h102km±16km, mb4.3/6, Error ellipse: s-maj=17.1km s-min=8.8km az=155.8*
ISC 02 00:29:29.6±3.2**, 700S**±006×**1302E**±01**, h24**km±24km**, n21, σ1.09**/29**, mb4.4**/6**, 1C, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.11	158	⇑iP	Pn	00 31 02.0	+3.7
	37nm,0.2s						
KAKA				eS	Sn	00 32 06.7	-0.6
FITZ	Fitzroy Crossi	11.88	201	eP	Pn	00 32 21.7	+4.4
	9.5nm,0.3s						
FITZ				eS	Sn	00 34 27.7	-1.3
WRAB	Tennant Creek	13.49	163	ePn	Pn	00 32 38.6	-0.7
	33nm,0.6s						
WRAB				eSn	Sn	00 35 01.2	-7.2
WRA	Warramunga Arr	13.49	163	Pn	Pn	00 32 39.0	-0.4
	3.4nm,0.3s,baz=348,slow=14,SNR=73						
WRA				Sn	Sn	00 35 02.2	-6.3
	4.7nm,0.3s,baz=340,slow=22,SNR=7.8						
WB2	Warramunga Arr	13.49	163	eP	Pn	00 32 38.5	-1.0
WB2				eS	Sn	00 35 01.0	-7.6
AS31	Alice Springs	16.96	168	ePn	Pn	00 33 25.7	+0.6
AS31				eSn	Sn	00 36 27.0	-5.8
ASPA	Alice Springs	16.96	168	eP	Pn	00 33 25.7	+0.6
ASPA				eS	Sn	00 36 24.7	-8.1
ASAR	Alice Springs	16.96	168	P	Pn	00 33 26.8	+1.7
	2.7nm,0.3s,baz=357,slow=14,SNR=74						
ASAR				S	Sn	00 36 26.6	-6.3
	0.9nm,0.3s,baz=352,slow=27,SNR=9.6						
MBWA	Marble Bar	17.31	215	ePn	Pn	00 33 34.0	+4.4
	8.0nm,0.4s						
KKM	Kota Kinabalu	19.01	313	P	Pn	00 33 50.2	-0.1
CTAO	Charters Tower	20.33	131	P	P	00 34 04.4	+0.5
HNR	Honiara	29.59	97	P	P	00 35 31.0	-1.5
	149nm,1.1s,mb5.6						
SONM	Songino Array	58.49	341	P	P	00 39 23.0	-0.7
	0.8nm,0.5s,mb4.0,baz=160,slow=8.1,SNR=7.3						
TLY	Talaya	62.72	342	P	P	00 39 54.0	+1.5
	7.5nm,0.8s,mb4.9						
MKAR	Makanchi Array	68.31	327	P	P	00 40 28.4	-0.2
	1.8nm,0.5s,mb4.3,baz=118,slow=7.7,SNR=12						
VNDA	Vanda	72.43	173	P	P	00 40 53.5	-0.3
KURK	Kurchatov	72.59	329	eP	P	00 40 53.6	-1.2
	0.7nm,0.5s,mb3.9						
MAW	Mawson	75.00	201	P	P	00 41 10.4	+1.5
BRVK	Borovoye	78.21	328	eP	P	00 41 25.6	-1.4
	0.5nm,0.4s,mb3.8						
QSPA	South Pole Qui	82.97	180	P	P	00 41 54.3	+1.7
SNAA	Sanae	95.70	193	P	P	00 42 54.2	+1.0

*NIED **02** 00:32:00, 4300N×14460E, h95km, Mw3.8 Best double couple: $M_0$5.02000×10^{14} NP1:φs4.00000°, δ89.00000°, λ89.00000°. NP2:φs240.00000°, δ2.00000°, λ146.00000°.*
*BJI **02** 00:32:08.7, 4330N×14499E, h42km, mB4.9, mb4.5, Ms4.3, Msz3.9*
*NEIC **02** 00:32:10.2±0.7, 4305N×14490E, h35km, mb4.3/6, Error ellipse: s-maj=16.5km s-min=13.1km az=102.0*
NEIC Recorded [2 JMA] in eastern Hokkaido.
*MOS **02** 00:32:17.9±0.8, 4304N×14471E, h121km, mb4.0/11, Error ellipse: s-maj=17.1km s-min=10.8km az=115.6*
*ISCJB **02** 00:32:17.7±0.4, 4302N±004×14468E±005, h114km±2km, mb4.1/24, Error ellipse: s-maj=7.7km s-min=4.6km az=120.2*
*JMA **02** 00:32:19.2±0.1, 4302N×14465E, h106km±1km, M4.0*
JMA Felt II J1.
*SKHL **02** 00:32:19.3±0.5, 4295N×14467E, h106km±10km, mb5.1/1, msh5.3/1*
*IDC **02** 00:32:21.8±3.4, 4323N×14455E, h124km±16km, mb3.6/13, mb1 3.8/13, mb1mx3.6/23, mbtmp4.0/13, Error ellipse: s-maj=55.1km s-min=17.8km az=180.0*
ISC 02 00:32:18.7±0.4**, 4302N**±004×**14467E**±004**, h109**km±2km**, n65, σ0.71**/84**, mb4.1**/24**, 3C-10D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	Akkeshi	0.03	135	⇑P	Pn	00 32 33.9	+0.2
JAK				eS	Sn	00 32 44.9	0.0
JNK	Nakash	0.57	4	⇓P	Pn	00 32 36.0	+0.1
JNK				eS	Sn	00 32 48.3	-0.5
JOB	Onbets	0.62	260	P	Pn	00 32 36.8	+0.5
JOB				eS	Sn	00 32 49.9	+0.3
JAR	Ashorobuto	0.71	293	⇓P	Pn	00 32 37.3	+0.2
JAR				eS	Sn	00 32 50.9	0.0
NEM2	Nemuro 2	0.86	66	⇑P	Pn	00 32 38.5	+0.1
NEM2				eS	Sn	00 32 52.4	-0.8
JRA	Rausu	0.98	20	⇑P	Pn	00 32 40.0	+0.4
JRA				eS	Sn	00 32 55.7	+0.4
JCH	Churui	1.04	248	⇓P	Pn	00 32 40.3	+0.1
JCH				eS	Sn	00 32 55.7	-0.8
JTKR	Abashiri--Toko	1.10	330	⇓P	Pn	00 32 41.5	+0.6
JTKR				eS	Sn	00 32 57.8	+0.2
YUK	Yuzh-Kuril'sk	1.34	40	eP	Pn	00 32 43.9	+0.4
YUK				AMB	AMB	00 32 44.5	
	1µm,0.3s						
YUK				AMB	AMB	00 32 44.7	
	300nm,0.4s						
YUK				iS	Sn	00 33 02.5	+0.2
YUK				A		00 33 03.0	
	6µm,1.0s						
YUK				A		00 33 06.0	
	6µm,0.5s						
YUK				A		00 33 06.0	
	4µm,0.5s						
YUK	Yuzh-Kuril'sk	1.34	40	ePN	Pn	00 32 43.9	+0.4
YUK				iS	Sn	00 33 02.5	+0.2
YUK				pmax	pmax		
	comp=Z,2µm,0.4s						
YUK				smax			
	comp=N,6µm,0.6s						
YUK				smax			
	comp=E,6µm,0.8s						
YUK				smax			
	comp=N,6µm,0.5s						
YUK				smax			
	comp=E,4µm,0.4s						
JMP	Maruseppu	1.37	317	⇓P	Pn	00 32 44.3	+0.4
JMP				eS	Sn	00 33 03.1	0.0
JEM	Erimo	1.50	229	P	Pn	00 32 46.5	+1.1
JEM				eS	Sn	00 33 06.7	+1.0
JFR	Furan	1.53	276	⇓P	Pn	00 32 45.6	-0.1
JFR				eS	Sn	00 33 04.7	-1.6
JNBK	Urakawa-nobuka	1.59	243	⇓P	Pn	00 32 46.0	-0.6
JNBK				eS	Sn	00 33 05.7	-2.0
JKK2	Kamakawa 2	1.64	302	⇓P	Pn	00 32 47.7	+0.6
JKK2				eS	Sn	00 33 09.0	+0.3
JBT2	Biratori 2	1.71	263	⇓P	Pn	00 32 47.7	-0.3
ASAJ	Asahikawa	1.86	307	P	Pn	00 32 51.0	+1.1
	comp=E,105nm,0.3s,baz=159,slow=9.0,SNR=169						
ASAJ				S	Sn	00 33 14.2	+0.5
	comp=E,24nm,0.3s,baz=273,slow=33,SNR=12						
ASAJ	Asahikawa	1.86	307	PN	Pn	00 32 51.0	+1.1
ASAJ				S	Sn	00 33 14.2	+0.5
ASAJ				pmax	pmax		
	comp=Z,105nm,0.3s						
ASAJ				smax			
	comp=N,24nm,0.3s						
KUR	Kuril'sk	3.20	45	eP	Pn	00 33 06.3	-0.9
KUR				iS	Sn	00 33 43.6	-1.1
KUR				A		00 33 45.0	
	comp=N,300nm,0.5s						
KUR				A		00 33 45.0	
	comp=N,290nm,0.5s						
MDJ	Mudanjiang	11.01	284	P	Pn	00 34 46.3	-6.6
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,60nm,7.3s						
SNY	Shenyang	15.62	273	⇓P	Pn	00 35 52.9	+0.2
SNY				AMB	AMB		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	24.64	276	eP	P	00 37 29.6	+0.7
HHC				AP		00 37 38.8	
HHC				XP	sP	00 37 43.0	-22
HHC				PP		00 38 06.8	
HHC				PCP	PcP	00 41 08.1	+4.5
HHC				S	S	00 41 46.8	+4.4
HHC				XS	sS	00 42 01.2	-23
HHC				SS		00 42 41.6	
HHC				SCP	ScP	00 44 43.0	+11
HHC				PCS	PcS	00 44 47.0	+3.3
HHC				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.5						
HHC				AMB	AMB		
	comp=Z,97nm,4.5s						
HHC				LR	LR		
	comp=N,136nm,15.2s						
HHC				LR	LR		
	comp=E,167nm,13.3s						
HHC				LR	LR		
	comp=Z,40nm,9.5s						
ULN	Ulaanbaatar	26.65	294	eP	P	00 37 46.4	-0.7
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ULN	Ulaanbaatar	26.65	294	eP	P	00 37 46.4	-0.7
	comp=Z,2.2nm,0.6s,mb3.9						
NACB	Ninganchiao	26.74	233	eP	P	00 37 47.7	-0.2
SONM	Songino Array	27.09	294	P	P	00 37 51.1	0.0
	comp=Z,6.3nm,0.7s,mb4.2,baz=88,slow=8.7,SNR=31						
BILL	Bilibino	27.58	17	eP	P	00 37 55.7	+0.2
ZAK	Zakamensk	29.02	299	eP	P	00 38 08.2	0.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
KMI	Kunming	38.59	256	P	P	00 39 30.9	0.0
KMI				AMB	AMB		
	comp=Z,8.0nm,0.5s,mb4.8						
ZAL	Zalesovo	40.02	307	P	P	00 39 43.5	+0.7
	comp=Z,1.5nm,0.4s,mb4.1,baz=31,slow=6.4,SNR=4.8						
ZAL	Zalesovo	40.02	307	P	P	00 39 43.5	+0.7
WMQ	Urumqi	40.68	291	eP	P	00 39 49.0	+0.7
WMQ				AP	pP	00 39 59.0	-14
WMQ				PP	PP	00 41 27.0	+2.9
WMQ				S	S	00 45 57.0	+6.8
WMQ				SS	SS	00 48 54.0	-0.8
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,98nm,4.0s						
WMQ				LR	LR		
	comp=N,69nm,12.0s						
WMQ				LR	LR		
	comp=E,85nm,12.0s						
WMQ				LR	LR		
	comp=Z,78nm,12.0s						
MKAR	Makanchi Array	43.32	297	P	P	00 40 09.9	+0.2
	comp=Z,1.2nm,0.4s,mb3.9,baz=79,slow=9.8,SNR=12						
KURK	Kurchatov	44.44	304	eP	P	00 40 18.2	-0.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
KURK	Kurchatov	44.44	304	eP	P	00 40 18.2	-0.4
	comp=Z,4.1nm,0.8s,mb4.2						
INK	Inuvik	47.94	30	P	P	00 40 46.5	+0.4
	comp=Z,1.8nm,0.8s,mb4.0,baz=299,slow=10,SNR=2.6						
INK	Inuvik	47.94	30	P	P	00 40 46.5	+0.4
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	47.94	30	P	P	00 40 44.3	-1.8
CHKZ	Chkalovo	48.22	310	eP	P	00 40 47.8	-0.4
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
CHKZ	Chkalovo	48.22	310	eP	P	00 40 47.8	-0.5
	comp=Z,2.7nm,0.7s,mb4.2						
BVAR	Borovoye Array	48.57	309	P	P	00 40 51.1	+0.2
	comp=Z,1.8nm,0.3s,mb4.5,baz=80,slow=9.4,SNR=26						
BRVK	Borovoye	48.62	309	eP	P	00 40 50.7	-0.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
BRVK	Borovoye	48.62	309	eP	P	00 40 50.7	-0.6
	comp=Z,0.9nm,0.4s,mb4.0						
ZRNK	Zerenda	49.38	309	eP	P	00 40 56.9	-0.2
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
ZRNK	Zerenda	49.38	309	eP	P	00 40 56.9	-0.2
	comp=Z,2.2nm,0.3s,mb4.6						
AKTK	Aktyubinsk	56.63	310	P	P	00 41 51.0	+0.7
AKTO	Aktyubinsk	56.63	310	P	P	00 41 51.0	+0.7
	comp=Z,0.6nm,0.3s,mb4.1,baz=73,slow=7.5,SNR=4.5						
ARCES	ARCESS Array B	59.30	339	P	P	00 42 08.2	-0.7
	comp=Z,4.3nm,1.1s,mb4.4,baz=28,slow=8.8,SNR=3.7						
JOF	Joensuu	61.88	332	ep	P	00 42 25.0	-1.4
	comp=Z,0.9nm,0.4s,mb4.2						
WRAB	Tennant Creek	63.35	191	P	P	00 42 36.3	+0.1
KAF	Kangasniemi	64.14	333	ep	P	00 42 39.9	-1.5
	comp=Z,1.2nm,0.5s,mb4.0,baz=44,slow=6.3						
KAF	Kangasniemi	64.14	333	eP	P	00 42 39.9	-1.5
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
FINES	FINESS Array B	64.69	332	P	P	00 42 44.1	-0.9
	comp=Z,1.9nm,0.5s,mb4.2,baz=42,slow=7.3,SNR=24						
FINES	FINESS Array B	64.69	332	P	P	00 42 44.1	-0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NVAR	Mina Array Bea	69.50	56	P	P	00 43 17.1	+1.8
	comp=Z,0.6nm,0.7s,mb3.5,baz=292,slow=9.0,SNR=5.0						
NB2	NORSAR Subarra	69.62	338	P	P	00 43 15.2	-0.9
	comp=Z,0.5nm,0.5s,mb3.6,baz=40,slow=6.2						
NOA	NORSAR Array B	69.62	338	P	P	00 43 15.6	-0.5
	comp=Z,0.7nm,0.6s,mb3.6,baz=38,slow=6.0,SNR=3.9						
NOA	NORSAR Array B	69.62	338	P	P	00 43 15.6	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	71.08	323	P	P	00 43 24.6	-0.4
	comp=Z,0.6nm,0.4s,mb3.8,baz=42,slow=6.5,SNR=5.3						
AKASG	Malin Array Be	71.08	323	P	P	00 43 24.6	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	71.76	48	P	P	00 43 30.1	+1.0
	comp=Z,0.5nm,0.6s,mb3.5,baz=292,slow=3.1,SNR=5.5						
BRTR	Keskin Array B	76.72	312	P	P	00 43 57.7	-0.1
	comp=Z,0.3nm,0.9s,mb3.0,baz=21,slow=12,SNR=2.3						
BRTR	Keskin Array B	76.72	312	P	P	00 43 57.7	-0.2
CLL	Collm	77.11	331	eP	P	00 44 01.0	+1.0
SIV	San Ignacio	145.24	47	PKPbc	PKPbc	00 51 44.4	+1.1
	comp=Z,0.7nm,0.5s,baz=270,slow=2.0,SNR=6.1						

*THE **02** 00:42:50.8, 4401N×1988E, h7km*
*ISCJB **02** 00:42:50.6±0.2, 4404N±001×2009E±002, h2km, Error ellipse: s-maj=2.4km s-min=1.9km az=172.8*
*BEO **02** 00:42:51.5±0.6, 4404N×2008E, h3km±1km*
*CSEM **02** 00:42:51.0±0.1, 4405N×2004E, h10km, ML3.4, Error ellipse: s-maj=2.1km s-min=1.5km az=110.0*
*NEIC **02** 00:42:52.5, 4405N×1984E, h2km, ML2.8(PDG), ML3.4(THE), After PDG.*
*PDG **02** 00:42:52.5±0.6, 4405N×1984E, h2km±1km*
ISC 02 00:42:51.6±0.2**, 4405N**±001×**2007E**±002**, h2**km**, n57, σ1.12**/95**, 13C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIVS	Divcibare	0.08	313	iPg	Pg	00 42 53.0	-0.1
DIVS				Sg	Sg	00 42 54.7	+0.6
DIVS	Divcibare	0.08	313	ePg	Pg	00 42 52.8	-0.3
DIVS				eSg	Sg	00 42 55.5	+1.4
GRUS	Gruza	0.49	108	iPg	Pg	00 43 00.7	-0.4
GRUS				Sg	Sg	00 43 07.5	+0.1
SJES	Sjenica	0.78	187	Pg	Pg	00 43 05.3	-1.4
SJES				Sg	Sg	00 43 17.2	+0.4
BEO	Belgrade	0.82	20	iPg	Pg	00 43 07.0	-0.4
BEO				Sg	Sg	00 43 18.8	+0.7
SVIS	Svilajnac	0.87	73	⇓iPg	Pg	00 43 08.6	+0.3
SVIS				Sg	Sg	00 43 19.2	-0.3
PLE	Pljevlja	0.87	215	⇓iPg	Pg	00 43 07.3	-1.0
PLE				eSg	Sg	00 43 19.5	0.0
FGSL	Fruska Gora	1.13	351	Pg	Pg	00 43 13.1	-0.1
FGSL				Sg	Sg	00 43 29.5	+1.7
IVA	Berane	1.18	186	⇓iPg	Pg	00 43 14.1	-0.2
IVA				eSg	Sg	00 43 31.9	+2.3
UPM	Unac-Piva	1.19	225	⇑iPg	Pg	00 43 13.0	-1.4
UPM				eSg	Sg	00 43 29.6	-0.4
UPM	Unac-Piva	1.19	225	⇑iPg	Pg	00 43 13.0	-1.5
UPM				eSg	Sg	00 43 29.5	-0.4
PVY	Plav	1.45	183	⇑iPg	Pg	00 43 18.5	-1.0
PVY				eSg	Sg	00 43 42.1	+3.7
NKY	Niksic	1.46	213	⇑iPg	Pg	00 43 18.1	-1.5
NKY				eSg	Sg	00 43 39.5	+0.9
BRY	Bratogost	1.59	225	⇑iPg	Pn	00 43 20.1	-0.8
BRY				eSg	Sg	00 43 43.6	+0.7
TTG	Podgorica	1.72	200	⇓iPn	Pn	00 43 23.3	+0.7
TTG				eSn	Sn	00 43 48.0	+2.7
TREB	Trebinje	1.83	224	P	Pn	00 43 23.8	-0.3
TREB				S	Sn	00 43 48.9	+1.1
DJES	Djerdap	1.86	71	iPn	Pn	00 43 26.2	+1.7
BZS	Buzias	1.92	35	⇑iP	Pn	00 43 24.3	-1.1
BZS				S	Sn	00 43 53.5	+3.4
BUM	Brajici-Budva	1.94	207	⇑iPn	Pn	00 43 27.2	+1.5
BUM				eSn	Sn	00 43 53.6	+2.9
HCY	Herceg Novi	1.97	216	⇓iPn	Pn	00 43 26.5	+0.5
HCY				eSn	Sn	00 43 53.6	+2.3
ULC	Ulcinj	2.17	196	⇓iPn	Pn	00 43 30.5	+1.7
ULC				eSn	Sn	00 43 59.8	+3.5
BLY	Banja Luka	2.18	290	P	Pn	00 43 29.2	+0.2
BLY				S	Sn	00 43 58.3	+1.7
RHK3	Tenkes	2.25	326	eS	Sb	00 44 02.2	+0.9
	1.2nm,0.3s						
PKSM	Moragy	2.39	335	⇑iP	Pn	00 43 33.0	+1.2
PKSM	Moragy	2.39	335	S	Sg	00 44 07.7	-0.7
PKSM	Moragy	2.39	335	⇑ePn	Pn	00 43 32.9	+1.1
PKS6	Bocsa	2.58	352	⇓eP	Pn	00 43 33.8	-0.6
TIR	Tirane	2.70	183	ePn	Pn	00 43 34.4	-1.8
TIR				eSn	Sn	00 44 05.8	-3.6
VTS	Vitosha	2.71	121	ePn	Pn	00 43 35.5	-0.8
VTS				eSn	Sn	00 44 11.0	+1.2
VTS	Vitosha	2.71	121	iP	Pn	00 43 35.0	-1.3
STIP	Stip	2.82	146	ePn	Pn	00 43 35.9	-1.8
STIP				eSn	Sn	00 44 11.9	-0.4
STIP	Stip	2.82	146	ePn	Pn	00 43 35.8	-1.9
PKS7	Kunszentmiklos	3.07	348	eP	Pn	00 43 40.4	-0.8
KKB	Krupnik	3.10	134	iP	Pn	00 43 40.9	-0.8
DRGR		3.32	33	⇑iP	Pn	00 43 45.7	+1.1
DRGR		3.32	33	S	Sg	00 44 38.3	+0.1
FNA	Florina	3.40	163	ePn	Pn	00 43 45.8	0.0
FNA				eSn	Sn	00 44 25.9	-0.8
GRG	Griva	3.54	150	ePn	Pn	00 43 47.2	-0.4
GRG				eSn	Sn	00 44 29.6	-0.5
PKSG		3.55	341	eP	Pn	00 43 46.8	-0.9
KNT	Kendrikon	3.56	143	ePn	Pn	00 43 47.1	-0.8
KNT				eSn	Sn	00 44 30.6	0.0
MMB	Musomiste	3.64	131	ePn	Pn	00 43 48.9	-0.2
MMB				eSn	Sn	00 44 33.7	+1.0
MMB	Musomiste	3.64	131	iP	Pn	00 43 48.7	-0.4
VOIR		3.81	67	⇑iP	Pn	00 43 53.3	+1.9
VOIR		3.81	67	S	Sb	00 44 47.8	+1.5
PSZ	Piszkesteto	3.87	358	⇓ePn	Pn	00 43 52.5	+0.2
PSZ				eSg	Sg	00 45 00.6	+4.5
PSZ	Piszkesteto	3.87	358	ePn	Pn	00 43 51.7	-0.5
PSZ				eSn	Sn	00 44 38.0	-0.4

PSZ	Piszkesteto	3.87	358	ePn	Pn	00 43 51.7	-0.6
PSZ				eSn	Sn	00 44 38.0	-0.4
SRS	Serrai	3.92	137	ePn	Pn	00 43 51.8	-1.0
SRS				eSn	Sn	00 44 40.4	+1.0
SOH	Sokhos	4.04	142	ePn	Pn	00 43 53.7	-0.8
SOH				eSn	Sn	00 44 43.7	+1.4
HORT	Hortiatis	4.11	146	ePn	Pn	00 43 54.9	-0.7
HORT				eSn	Sn	00 44 44.6	+0.3
IGT	Igoumenitsa	4.51	177	ePn	Pn	00 43 59.4	-1.6
IGT				eSn	Sn	00 44 52.9	-1.2
ARSA	Arzberg	4.52	317	⇑iPn	Pn	00 44 00.3	-0.8
ARSA				⇓iSn	Sn	00 44 50.4	-3.9
OUR	Ouranopolis	4.71	141	ePn	Pn	00 44 02.9	-0.9
CONA	Conrad Observa	4.86	324	Pn	Pn	00 43 58.2	-7.7
PAIG	Paliouri	4.92	146	ePn	Pn	00 44 05.7	-0.9
PAIG				eSn	Sn	00 45 04.8	+0.7
MOA	Molln	5.55	315	⇓iPn	Pn	00 44 14.4	-0.9
MOA				⇑iSn	Sn	00 45 17.3	-2.5
KHC	Kasperske Hory	6.77	321	eP	Pn	00 44 31.5	-0.6

CSEM ***02*** *00:46:09.0, 32.49S×178.49W, h33km, mb6.0*

SZGRF ***02*** *00:46:23.3, 29.85S×179.42E, h33km, Kermadec Islands region*

ISCJB ***02*** *00:47:02.0±0.2, 31.59S±0.02×179.44E±0.04, h444km, mb4.9/61, Error ellipse: s-maj=5.1km s-min=2.8km az=36.7*

MOS ***02*** *00:47:02.8±1.0, 31.32S×179.48E, h449km, mb5.1/21, Error ellipse: s-maj=10.7km s-min=9.8km az=138.7*

BJI ***02*** *00:47:03.2, 31.30S×179.60E, h446km, mB5.2, mb5.0*

IDC ***02*** *00:47:03.7±0.6, 31.42S×179.53E, h453km±5km, mb4.6/16, mb1 4.7/20, mb1mx4.7/20, mbtmp5.5/20, Error ellipse: s-maj=9.8km s-min=7.1km az=164.0*

NEIC ***02*** *00:47:03.2±0.2, 31.34S×179.57E, mb4.9/37, Error ellipse: s-maj=7.8km s-min=5.3km az=128.0*

HRVD ***02*** *00:47:03.2±0.2, 31.35S×179.70E, h454km±1km, MW5.7/81, Centroid moment Tensor Solution. LP body waves: s81,c157; Half duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.39±.05; $M_{\theta\theta}$-2.02±.08; $M_{\phi\phi}$3.41±.08; $M_{r\theta}$-2.15±.07; $M_{\theta\phi}$-0.46±.07; $M_{\phi r}$-1.97±.07; Best double couple: $M_0$4.18700×10^{17} NP1:ϕ_s138.00000°, δ43.00000°, λ-160.00000°. NP2:ϕ_s33.00000°, δ77.00000°, λ-49.00000°. Principal axes: T 4.1300, Plg21.0000°, Azm93.0000°; N 0.1130, Plg40.0000°, Azm202.0000°; P -4.2430, Plg43.0000°, Azm343.0000°; nsta1 refers to body waves, cutoff=40s.*

ISC 02 00:47:03.2±0.2**, 31.62S**±0.02×**179.53E**±0.04**, h446km, h446km**±1.8km**:pP-P, n458, σ1s20**/224**, mb5.0**/59**, 18C-23D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.23	44	P	P	00 48 10.8	-0.8
	930nm,0.3s,baz=230,slow=23,SNR=46						
RAO				S	S	00 48 55.0	-12
	1μm,0.3s,baz=93,slow=20,SNR=7.7						
RAO	Raoul Island	3.23	44	eP	P	00 48 10.8	-0.8
KUZ	Kuaotunu	6.01	211	eP	P	00 48 42.4	+5.0
KUZ				S	S	00 50 03.4	+9.1
KUZ	Kuaotunu	6.01	211	ePN	P	00 48 42.4	+5.1
KUZ				SN	S	00 50 03.4	+9.0
MXZ	Matakaoa Point	6.01	189	P	P	00 48 38.8	+1.4
MXZ	Matakaoa Point	6.01	189	PN	P	00 48 38.8	+1.4
WCZ	Waipu Caves	6.10	224	eP	P	00 48 43.6	+5.3
WCZ				S	S	00 50 05.0	+9.0
WCZ	Waipu Caves	6.10	224	ePN	P	00 48 43.6	+5.3
WCZ				SN	S	00 50 05.0	+9.0
OUZ	Omahuta	6.12	232	eP	P	00 48 43.8	+5.3
OUZ	Omahuta	6.12	232	PN	P	00 48 43.8	+5.3
WIZ	White Island	6.20	197	PN	P	00 48 43.1	+3.8
MTAZ	Motutapu	6.42	215	P	P	00 48 47.4	+5.8
MTAZ	Motutapu	6.42	215	PN	P	00 48 47.4	+5.8
PUZ	Puketiti	6.52	189	eP	P	00 48 43.4	+0.7
PUZ				S	S	00 50 05.0	+0.9
PUZ	Puketiti	6.52	189	ePN	P	00 48 43.4	+0.8
PUZ				SN	S	00 50 05.0	+0.9
MKAZ	Moumakai	6.56	212	P	P	00 48 48.5	+5.5
MKAZ	Moumakai	6.56	212	PN	P	00 48 48.5	+5.5
TGRZ	Tauranga	6.66	203	PN	P	00 48 48.7	+4.5
MWZ	Matawai	6.90	193	PN	P	00 48 47.5	+0.8
MWZ				SN	S	00 50 11.1	-0.2
URZ	Urewera	6.92	196	P	P	00 48 47.7	+0.9
	650nm,0.3s,baz=311,slow=1.9,SNR=370						
URZ				S	S	00 50 09.7	-2.0
	180nm,0.3s,baz=48,slow=23,SNR=13						
URZ	Urewera	6.92	196	PN	P	00 48 47.5	+0.6
URZ				SN	S	00 50 10.4	-1.3
TOZ	Tahuroa Road	6.94	207	PN	P	00 48 52.1	+5.0
TAZ	Tarawera	7.05	200	P	P	00 48 50.8	+2.6
PATZ	Paeroa	7.26	201	P	P	00 48 53.1	+2.6
PATZ	Paeroa	7.26	201	PN	P	00 48 52.7	+2.2
KNZ	Kokohu	7.54	191	PN	P	00 48 54.4	+0.9
KNZ				SN	S	00 50 22.7	-1.2
HIZ	Hauiti	7.87	208	ePN	P	00 49 01.3	+4.2
BKZ	Black Stump Fm	7.93	197	PN	P	00 48 57.2	-0.5
OTVZ	Oturere	8.16	202	PN	P	00 49 00.7	+0.5
MOVZ	Moawhango	8.36	201	PN	P	00 49 02.2	-0.1
VRZ	Vera Road	8.44	206	ePN	P	00 49 06.1	+2.9
PXZ	Pawanui	8.67	194	PN	P	00 49 05.2	-0.5
TSZ	Takapari Road	8.90	198	eSN	S	00 50 48.4	-2.7
WAZ	Wanganui	8.92	203	PN	P	00 49 09.4	+1.0
BFZ	Birch Farm	9.42	195	ePN	P	00 49 14.8	+0.9
BFZ				eSN	S	00 50 58.3	-3.2
MRZ	Mangatainoka R	9.57	198	eSN	S	00 51 00.6	-3.9
KIW	Kapiti Island	9.95	201	ePN	P	00 49 18.9	-0.7
KIW				eSN	S	00 51 08.5	-3.5
MRW	Makara Radio	10.35	201	ePN	P	00 49 23.5	-0.5
MRW				eSN	S	00 51 15.6	-4.4
SNZO	South Karori	10.42	200	eP	P	00 49 25.2	+0.5
TCW	Tory Channel	10.46	202	ePN	P	00 49 24.8	-0.5
TCW				eSN	S	00 51 16.9	-5.5
NNZ	Nelson	10.78	206	PN	P	00 49 28.0	-0.7
NNZ				eSN	S	00 51 24.3	-4.4
QRZ	Quartz Range	10.78	210	ePN	P	00 49 28.7	-0.1
QRZ				SN	S	00 51 27.0	-1.8
THZ	Tophouse	11.43	206	PN	P	00 49 35.0	-0.7
LTZ	Lake Taylor	12.55	205	PN	P	00 49 47.8	-0.2
LTZ				SN	S	00 52 00.7	-3.3
MQZ	McQueen's Vall	13.23	202	PN	P	00 49 55.4	+0.1
WVZ	Waitaha Valley	13.39	209	PN	P	00 49 56.8	-0.3
RPZ	Rata Peaks	13.80	207	P	P	00 50 01.7	+0.2
	3.8nm,0.3s,baz=357,slow=1.0,SNR=15						
RPZ				S	S	00 52 26.7	-2.1
	6.1nm,0.3s,baz=142,slow=22,SNR=6.5						
FOZ	Fox Glacier	14.23	210	PN	P	00 50 04.9	-1.2
DZM	Mont Dzumac	15.04	306	eP	P	00 50 17.0	+2.2
DZM				eS	S	00 52 57.4	+4.3
DZM	Mont Dzumac	15.04	306	P	P	00 50 17.0	+2.2
	5.9nm,0.3s,baz=110,slow=10,SNR=62						
DZM				S	S	00 52 57.1	+4.0
	baz=343,slow=20,SNR=10						
DZM				ScP	ScP	00 57 42.0	-0.9
	0.3nm,0.3s,baz=119,slow=10,SNR=3.7						
JCZ	Jackson Bay	15.05	211	PN	P	00 50 13.6	-1.2
ODZ	Otahua Downs	15.09	205	eP	P	00 50 16.4	+1.1
ODZ	Otahua Downs	15.09	205	PN	P	00 50 15.8	+0.5
WKZ	Wanaka	15.54	209	ePN	P	00 50 18.5	-1.5
AFI	Afiamalu	19.35	26	P	P	00 50 57.5	-1.2
	64nm,0.3s,baz=28,slow=2.0,SNR=40						
AFI				S	S	00 54 11.2	+0.3
	6.3nm,0.3s,baz=53,slow=20,SNR=4.7						
RAR	Rarotonga	21.21	66	P	P	00 51 14.2	-1.4
	64nm,0.9s,mb5.1,baz=236,slow=5.7,SNR=6.5						
ARMA	Armidale	23.91	266	eP	P	00 51 43.6	+3.5
CNB	Canberra Magne	25.38	253	eP	P	00 51 56.4	+3.3
	19nm,0.6s,mb4.7						
CNB				eS	S	00 55 54.1	+7.2
CNB				eSCP	ScP	00 58 05.8	-1.7
TAU	Tasmania Unive	27.84	237	eP	P	00 52 18.3	+3.5
TAU				pmax	pmax		
	comp=Z,43nm,1.0s,mb4.8						
TAU	Tasmania Unive	27.84	237	eP	P	00 52 18.3	+3.5
	comp=Z,43nm,1.0s,mb4.8						
TOO	Toolangi	28.54	249	eP	P	00 52 23.8	+2.9
	comp=Z,21nm,0.6s,mb4.7						
TOO				eSCP	ScP	00 58 15.5	-1.6
TOO	Toolangi	28.54	249	eP	P	00 52 23.8	+2.9
TOO				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.7						
HNR	Honiara	28.60	316	P	P	00 52 20.1	-1.4
	comp=Z,164nm,0.5s,mb5.7,baz=106,slow=3.5,SNR=7.5						
HNR	Honiara	28.60	316	eP	P	00 52 20.0	-1.5
HNR				pmax	pmax		
	comp=Z,240nm,0.8s,mb5.7						
HNR	Honiara	28.60	316	P	P	00 52 20.1	-1.4
HNR				pmax	pmax		
	comp=Z,164nm,0.5s,mb5.7						
HNR	Honiara	28.60	316	eP	P	00 52 20.0	-1.5
	comp=Z,240nm,0.8s,mb5.7						
PAE	Paea	31.20	71	eP	P	00 52 43.2	-1.0
	comp=Z,184nm,1.1s,mb5.4						
PAE	Paea	31.20	71	eP	P	00 52 43.2	-1.0
PAE				pmax	pmax		
	comp=Z,184nm,1.1s,mb5.4						
PPT	Papeete	31.26	71	eP	P	00 52 43.9	-0.7
	comp=Z,157nm,1.3s,mb5.3						
PPT	Papeete	31.26	71	P	P	00 52 44.9	+0.3
	comp=Z,55nm,0.6s,mb5.1,baz=198,slow=3.4,SNR=4.2						
CTA	Charters Tower	31.95	283	eP	P	00 52 52.0	+1.5
	comp=Z,138nm,1.0s,mb5.3						
CTA				eS	S	00 57 30.6	+1.6
CTA	Charters Tower	31.95	283	P	P	00 52 52.2	+1.7
	comp=Z,174nm,0.9s,mb5.5,baz=102,slow=11,SNR=106						
CTA				S	S	00 57 30.6	+1.6
	comp=Z,20nm,1.0s,baz=347,slow=19,SNR=24						
CTA				ScP	ScP	00 58 27.8	-0.6
	comp=Z,16nm,1.1s,baz=118,slow=1.9,SNR=3.1						
CTA	Charters Tower	31.95	283	eP	P	00 52 52.0	+1.5
CTA				eS	S	00 57 30.6	+1.6
CTA				pmax	pmax		
	comp=Z,138nm,1.0s						
CTAO	Charters Tower	31.95	283	eP	P	00 52 52.2	+1.7
STKA	Stephens Creek	32.15	259	P	P	00 52 54.6	+2.4
	comp=Z,91nm,0.5s,mb5.5,baz=96,slow=11,SNR=204						
STKA				S	S	00 57 34.4	+2.2
	comp=Z,2.5nm,0.7s,baz=351,slow=19,SNR=4.7						
STKA				ScP	ScP	00 58 27.9	-1.2
	comp=Z,7.5nm,0.8s,baz=67,slow=7.7,SNR=3.4						
PMOR	Pomariorio Ree	34.02	68	eP	P	00 53 07.6	-0.6
	comp=Z,101nm,1.1s,mb5.2						
PMG	Port Moresby	37.28	299	P	P	00 53 35.2	-0.2
	comp=Z,47nm,0.7s,mb5.0,baz=116,slow=5.1,SNR=13						
PMG	Port Moresby	37.28	299	eP	P	00 53 35.3	-0.1
PMG				pmax	pmax		
	comp=Z,75nm,0.9s						
PMG	Port Moresby	37.28	299	eP	P	00 53 35.3	-0.1
	comp=Z,75nm,0.9s,mb5.1						
AS31	Alice Springs	40.95	269	eP	P	00 54 05.9	+0.6
AS31				eScP	ScP	00 59 00.9	-1.0
AS31				eS	S	00 59 42.0	-1.8
AS31				eScS	ScS	01 03 15.0	-3.9
ASAR	Alice Springs	40.95	269	P	P	00 54 05.8	+0.5
	comp=Z,80nm,0.6s,mb5.3,baz=105,slow=7.3,SNR=642						
ASAR				PP	PP	00 55 52.1	+0.3
	comp=Z,9.9nm,0.9s,baz=110,slow=7.6,SNR=4.3						
ASAR				ScP	ScP	00 59 01.1	-0.8
	comp=Z,16nm,0.7s,baz=116,slow=4.1,SNR=16						
ASAR				S	S	00 59 42.0	-1.7
	comp=Z,14nm,1.0s,baz=106,slow=15,SNR=14						
ASAR	Alice Springs	40.95	269	P	P	00 54 05.8	+0.5
ASAR						00 55 52.1	
ASAR				S	S	00 59 42.1	-1.7
ASPA	Alice Springs	40.95	269	eP	P	00 54 05.9	+0.6
ASPA				eSCP	ScP	00 59 00.9	-1.0
ASPA				eS	S	00 59 42.0	-1.8
ASPA				eSCS	ScS	01 03 15.0	-3.9
RKT	Rikitea	41.05	90	eP	P	00 54 06.2	+0.1
	comp=Z,100nm,1.0s,mb5.2						
RKT	Rikitea	41.05	90	eP	P	00 54 06.2	+0.1
RKT				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.2						
WB2	Warramunga Arr	42.04	275	⇓iP	P	00 54 14.1	+0.1
WB2				i SCP	ScP	00 59 06.3	0.0
WB2				eS	S	00 59 56.2	-3.4
WRAB	Tennant Creek	42.05	275	⇓iP	P	00 54 14.5	+0.5
WRAB	Tennant Creek	42.05	275	eP	P	00 54 14.2	+0.2
WRA	Warramunga Arr	42.05	275	P	P	00 54 14.4	+0.3
	comp=Z,114nm,0.4s,mb5.7,baz=113,slow=7.7,SNR=822						
WRA				pP	pP	00 55 39.9	+1.8
	comp=Z,3.9nm,0.5s,baz=111,slow=7.4,SNR=1.1						
WRA				ScP	ScP	00 59 06.4	+0.1
	comp=Z,18nm,1.0s,baz=115,slow=4.0,SNR=10						
WRA				S	S	00 59 57.6	-2.2
	comp=Z,4.7nm,0.4s,baz=109,slow=14,SNR=8.9						
WRA				PKiKP	PKiKP	01 03 01.5	-1.7
	comp=Z,0.3nm,0.3s,baz=83,slow=0.2,SNR=6.4						
WRA	Warramunga Arr	42.05	275	P	P	00 54 14.4	+0.3
WRA				*PP	pP	00 55 39.9	+1.9
WRA				S	S	00 59 57.6	-2.2
WRA	Warramunga Arr	42.05	275	P	P	00 54 14.4	+0.3
WRA				pP	pP	00 55 39.9	+1.8
WRA				ScP	ScP	00 59 06.4	+0.1
WRA				S	S	00 59 57.6	-2.2
FORT	Forrest	43.69	257	eP	P	00 54 26.3	-0.7
	comp=Z,188nm,0.6s,mb5.7						
FORT				eS	S	01 00 22.6	-0.8
SBA	Scott Base	46.68	184	eP	P	00 54 53.3	+3.3
VNDA	Vanda	46.68	185	P	P	00 54 52.5	+2.4
	comp=Z,0.7nm,0.7s,baz=352,slow=9.9,SNR=3.5						
VNDA				pP	pP	00 56 19.5	+3.2
	comp=Z,2.3nm,1.0s,baz=337,slow=5.5,SNR=2.7						
VNDA				ScP	ScP	00 59 25.1	-0.4
	comp=Z,9.0nm,0.8s,baz=344,slow=4.8,SNR=16						
VNDA	Vanda	46.68	185	P	P	00 54 52.5	+2.4
VNDA				*PP	pP	00 56 19.5	+3.2
VNDA	Vanda	46.68	185	P	P	00 54 52.5	+2.4
VNDA				pP	pP	00 56 19.5	+3.2
VNDA				ScP	ScP	00 59 25.1	-0.3
KAKA	Kakadu	47.09	283	eP	P	00 54 52.4	-0.7
	comp=Z,74nm,0.9s,mb5.1						
FITZ	Fitzroy Crossi	50.26	272	eP	P	00 55 17.2	+0.4
	comp=Z,116nm,1.0s,mb5.2						
FITZ				eSCP	ScP	00 59 40.2	-0.5
FITZ				eS	S	01 01 53.2	-1.7
FITZ				eSCS	ScS	01 04 16.8	-3.0
CASY	Casey	53.07	208	eP	P	00 55 37.6	+0.3
MUN	Mundaring	53.09	252	eP	P	00 55 38.0	+0.5
MBWA	Marble Bar	54.00	266	eP	P	00 55 43.7	-0.2
	comp=Z,42nm,0.9s,mb4.8						
GUMO	Guam	55.91	318	P	P	00 55 56.6	-0.7
	comp=Z,133nm,1.0s,mb5.2,baz=191,slow=10,SNR=4.0						
QSPA	South Pole Qui	58.49	180	eP	P	00 56 17.0	+1.8
	comp=Z,18nm,0.9s,mb4.4						
QSPA				epP	pP	00 57 48.8	+2.3
BUKP	Musuan	65.15	297	eP	P	00 56 58.9	+0.1
TSM	Tawau	68.58	289	P	P	00 57 20.7	+0.6
PVCP	Virac	69.54	301	eP	P	00 57 25.5	-0.4
MAW	Mawson	70.41	201	eP	P	00 57 30.9	-0.2
	comp=Z,1.5nm,0.5s						
MAW	Mawson	70.41	201	P	P	00 57 31.6	+0.5
	comp=Z,1.5nm,0.6s,baz=151,slow=9.5,SNR=8.4						
MAW				pP	pP	00 59 06.9	+0.2
	comp=Z,2.1nm,0.8s,baz=91,slow=12,SNR=2.4						
KKM	Kota Kinabalu	70.94	290	P	P	00 57 35.0	+0.7
KKM	Kota Kinabalu	70.94	290	eP	P	00 57 34.2	0.0
KKM				ePcP	PcP	00 57 52.2	+0.6
KKM				e	pP	00 59 06.1	-3.9
BALP	Baler	72.82	301	eP	P	00 57 44.8	-0.5
KSM	Kuching	73.18	282	eP	P	00 57 47.4	+0.1
SYO	Syowa Base	75.44	194	⇑eP	P	00 57 59.4	-0.7
SYO	Syowa Base	75.44	194	⇑esP	sP	01 00 23.5	-0.6
SNAA	Sanae	76.98	179	eP	P	00 58 09.2	+0.5
SNAA				e*PP	pP	00 59 47.0	+0.6
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SNAA	Sanae	76.98	179	eP	P	00 58 09.2	+0.4
	comp=Z,9.3nm,1.0s,mb4.3						
SNAA				epP	pP	00 59 47.0	+0.6
MJAR	Matsushiro Arr	78.07	327	P	P	00 58 12.9	-1.8
	comp=Z,14nm,0.8s,mb4.4,baz=163,slow=5.2,SNR=35						
MAJO	Matsushiro	78.07	327	eP	P	00 58 12.9	-1.7
MAJO				pmax	pmax		
	comp=Z,51nm,1.3s,mb4.8						
MAJO	Matsushiro	78.07	327	eP	P	00 58 12.9	-1.7
	comp=Z,51nm,1.3s,mb4.8						
MAT	Matsushiro	78.07	327	P	P	00 58 12.7	-1.9
MAT				S	S	01 07 24.0	-7.3
MAT	Matsushiro	78.07	327	eP	P	00 58 13.0	-1.6
MAT				eS	S	01 07 25.0	-6.3
MAT				pmax	pmax		
	comp=Z,39nm,1.2s,mb4.7						
MAT	Matsushiro	78.07	327	eP	P	00 58 13.0	-1.6
	comp=Z,39nm,1.2s,mb4.7						
MAT				eS	S	01 07 25.0	-6.3
KGM	Kluang	79.34	279	P	P	00 58 22.7	+1.2
IPM	Ipoh	82.58	280	P	P	00 58 38.9	+0.6
PLCA	Paso Flores	83.21	134	P	P	00 58 42.7	+1.3
	comp=Z,12nm,0.9s,mb4.4,baz=228,slow=5.7,SNR=14						
PLCA				pP	pP	01 00 21.9	+0.9
	comp=Z,4.0nm,1.0s,baz=249,slow=10,SNR=3.5						
PLCA	Paso Flores	83.21	134	eP	P	00 58 43.3	+1.8
PLCA				e*PP	pP	01 00 24.8	+3.9
PLCA				pmax	pmax		
	comp=Z,16nm,0.9s						
PLCA	Paso Flores	83.21	134	eP	P	00 58 43.3	+1.8
	comp=Z,16nm,0.9s,mb4.6						
PLCA				epP	pP	01 00 24.8	+3.9
KULM	Kulim	83.33	280	eP	P	00 58 41.9	-0.2
SSE	Sheshan	83.34	313	P	P	00 58 42.0	-0.1
SSE				AMB	AMB		
	comp=Z,46nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,177nm,6.6s						
QIZ	Qiongzhong	83.62	297	P	P	00 58 44.4	+0.9
QIZ				AP	pP	01 00 24.9	+1.8
QIZ				XP	sP	01 01 09.7	+0.5
QIZ				PPP		01 04 01.9	
QIZ				S	S	01 08 29.4	+1.5
QIZ				XS	sS	01 11 22.7	-2.5
QIZ				SS	SS	01 14 08.0	+1.6
QIZ				AMB	AMB		
	comp=Z,38nm,2.0s,mb4.6						
QIZ				AMB	AMB		
	comp=Z,330nm,5.6s						
SMY	Shemya	84.12	357	eP	P	00 58 44.3	-1.7
SMY				pmax	pmax		
	comp=Z,178nm,1.2s,mb5.5						
SMY	Shemya	84.12	357	eP	P	00 58 44.3	-1.7
	comp=Z,178nm,1.2s,mb5.5						
TSI	Tuntungan	84.14	278	eP	P	00 58 41.6	-4.5
NIKO	Nikolski	84.84	7	eP	P	00 58 47.4	-2.2
YSS	Yuzh-Sakhalins	84.95	336	d iP	P	00 58 49.0	-1.1
YSS				e		01 08 25.0	
YSS				S	S	01 08 38.0	-2.8
YSS				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.3						
YSS	Yuzh-Sakhalins	84.95	336	eP	P	00 58 49.7	-0.4
	comp=Z,47nm,0.4s,mb5.5						
NJ2	Nanjing	85.45	312	eP	P	00 58 53.5	+1.0
NJ2				PP	PP	01 02 20.0	+1.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,20nm,3.5s						
PET	Petropavlovsk	86.23	348	⇓iP	P	00 58 54.8	-1.5
PET				e*SP	sP	01 01 20.6	-2.0
PET				e		01 02 16.7	
PET				eS	S	01 08 29.9	-23
PET				pmax	pmax		
	comp=Z,400nm,4.3s						
PET				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.1						
PET				pmax	pmax		
	comp=Z,200nm,9.1s						
PET				smax			
	comp=N,300nm,4.8s						
PET				smax			
	comp=N,200nm,7.9s						
PET	Petropavlovsk	86.23	348	eP	P	00 58 54.7	-1.6
	comp=N,59nm,1.0s,mb5.2						
FALS	False Pass	87.37	10	P	P	00 59 03.1	+1.4
WHN	Wuhan	87.41	308	P	P	00 59 02.0	+0.2
SDPT	Sand Point	88.30	11	eP	P	00 59 04.1	-1.9
	comp=N,196nm,1.5s,mb5.6						
DL2	Dalian	88.43	319	PR		00 59 05.9	
DL2				S	S	01 09 12.9	-0.9
DL2				XS	sS	01 12 13.2	-0.3
DL2				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
MDJ	Mudanjiang	88.45	327	P	P	00 59 06.4	-0.3
MDJ				AP	pP	01 00 49.3	+1.6
MDJ				XP	sP	01 01 35.9	+2.4
MDJ				PP	PP	01 02 43.1	+0.8
MDJ				XS	sS	01 12 15.8	+2.1
MDJ				AMB	AMB		
	comp=Z,35nm,1.3s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,279nm,5.9s						
MDJ	Mudanjiang	88.45	327	eP	P	00 59 06.5	-0.2
	comp=Z,35nm,1.0s,mb5.0						
ISA	Isabella	88.66	46	eP	P	00 59 08.3	+0.6
ISA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
ISA	Isabella	88.66	46	eP	P	00 59 08.3	+0.6
	comp=Z,11nm,0.9s,mb4.7						
CMB	Columbia Colle	89.09	43	eP	P	00 59 09.5	-0.2
CMB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
CMB	Columbia Colle	89.09	43	eP	P	00 59 09.5	-0.2
	comp=Z,7.4nm,0.8s,mb4.6						
HABR	Khabarovsk	89.10	332	i P	P	00 59 09.9	+0.1
HABR				eS	S	01 09 15.8	-4.2
HABR				pmax	pmax		
	comp=Z,121nm,1.2s,mb5.6						
GLA	Glamis	89.30	50	eP	P	00 59 12.0	+1.3
OHCM	Honcut	89.34	42	eP	P	00 59 10.4	-0.5
SNY	Shenyang	89.40	322	⇑P	P	00 59 10.8	-0.4
SNY				S	S	01 09 19.4	-3.3
SNY				AMB	AMB		
	comp=Z,27nm,1.2s,mb5.0						
SNY				AMB	AMB		
	comp=Z,228nm,6.6s						
GSC	Goldstone	89.46	47	eP	P	00 59 11.8	+0.4
WDC	Whiskeytown Da	89.60	40	eP	P	00 59 12.2	+0.1
WDC				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.7						
WDC	Whiskeytown Da	89.60	40	eP	P	00 59 12.2	+0.1
	comp=Z,18nm,1.3s,mb4.8						
DAC	Darwin (Calif)	89.60	46	epP	pP	01 01 00.0	+6.8
CN2	Changchun	89.85	324	eP	P	00 59 11.7	-1.5
CN2				eAP	pP	01 00 53.5	-0.9
CN2				eS	S	01 09 24.4	-2.4
CN2				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.5						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
WAKR	Walker	89.96	43	eP	P	00 59 14.2	+0.5
TRQA	Tornquist	90.06	136	eP	P	00 59 14.9	+0.7
	comp=Z,9.7nm,0.8s,mb4.7						
YBH	Yreka Blue Hor	90.31	39	P	P	00 59 15.1	-0.2
	comp=Z,3.3nm,0.5s,mb4.5,baz=139,slow=2.8,SNR=8.7						
YBH	Yreka Blue Hor	90.31	39	P	P	00 59 15.1	-0.3
YBH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
YBH	Yreka Blue Hor	90.31	39	eP	P	00 59 15.6	+0.3
	comp=Z,4.0nm,0.6s,mb4.4						
GYA	Guiyang	90.33	301	⇑iP	P	00 59 16.3	+0.8
GYA				AP	pP	01 00 58.2	+1.5
GYA				XP	sP	01 01 42.8	+0.4
GYA				PP	PP	01 02 59.8	+2.7
GYA				SKS		01 09 03.6	
GYA				S	S	01 09 29.8	-1.3
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,120nm,3.8s						
ENH	Enshi	90.56	306	eP	P	00 59 23.0	+6.5
	comp=Z,6.6nm,0.6s,mb4.7						
ENH				ePP	PP	01 02 57.4	-1.4
NVAR	Mina Array Bea	90.58	44	P	P	00 59 16.7	+0.1
	comp=Z,4.7nm,0.7s,mb4.5,baz=228,slow=9.2,SNR=30						
NVAR				pP	pP	01 00 55.5	-2.4
	comp=Z,0.5nm,0.6s,baz=209,slow=8.3,SNR=1.5						
HUMO	Hull Mountain	90.78	39	eP	P	00 59 17.9	+0.4
	comp=Z,14nm,1.1s,mb4.8						
PAHR	Pah Rah Range	90.79	42	eP	P	00 59 17.6	0.0
	comp=Z,3.7nm,0.6s,mb4.5						
TPNV	Topopah Spring	90.86	46	eP	P	00 59 18.1	+0.2
TPNV				e*PP	pP	01 01 00.4	+1.2
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
TPNV	Topopah Spring	90.86	46	eP	P	00 59 18.1	+0.1
	comp=Z,4.9nm,0.6s,mb4.6						
TPNV				epP	pP	01 01 00.4	+1.2
TPH	Tonopah	91.00	45	eP	P	00 59 18.8	+0.3
TPH				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
TPH	Tonopah	91.00	45	eP	P	00 59 18.8	+0.3
	comp=Z,12nm,0.8s,mb4.9						

KLR	**Kul'dur**	**91.04**	**331**	eP	**P**	**00 59 14.7**	**-4.0**
KLR				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.2						
SHPR	**Sheep Range**	**91.26**	**47**	eP	**P**	**00 59 20.2**	**+0.5**
TUC	**Tucson**	**91.53**	**53**	eP	**P**	**00 59 22.3**	**+1.3**
TUC				e*PP	pP	01 01 05.0	+2.7
TUC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
TUC	**Tucson**	**91.53**	**53**	eP	**P**	**00 59 22.3**	**+1.2**
	comp=Z,3.4nm,0.6s,mb4.5						
TUC				epP	pP	01 01 05.0	+2.7
KDAK	**Kodiak Island**	**92.10**	**15**	eP	**P**	**00 59 28.6**	**+5.0**
BJT	**Baijiatuau**	**92.31**	**317**	eP	**P**	**00 59 22.6**	**-2.0**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BJT	**Baijiatuau**	**92.31**	**317**	eP	**P**	**00 59 22.6**	**-2.0**
	comp=Z,7.8nm,0.6s,mb4.8						
BJI	**Beijing**	**92.32**	**317**	P	**P**	**00 59 23.3**	**-1.3**
BJI				XP	sP	01 01 51.5	-0.1
BJI				AMB	AMB		
	comp=Z,15nm,1.6s,mb4.7						
BJI				AMB	AMB		
	comp=Z,189nm,3.5s						
KMI	**Kunming**	**92.49**	**298**	⇓P	**P**	**00 59 26.5**	**+1.1**
KMI				AP	pP	01 01 09.5	+2.7
KMI				XP	sP	01 01 53.8	+1.4
KMI				PP	PP	01 03 16.1	+2.2
KMI				PPP		01 05 21.7	
KMI				SKS		01 09 13.4	
KMI				S	S	01 09 48.9	-1.4
KMI				PS	PS	01 12 06.9	+3.0
KMI				XS	sS	01 12 51.9	0.0
KMI				SS	SS	01 16 14.3	-0.1
KMI				SSS		01 19 58.7	
KMI				AMB	AMB		
	comp=Z,15nm,1.3s,mb4.8						
KMI				AMB	AMB		
	comp=Z,227nm,3.5s						
WVOR	**Wild Horse Val**	**93.02**	**41**	eP	**P**	**00 59 26.5**	**-1.3**
WVOR				e*PP	pP	01 01 08.6	-0.6
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
WVOR	**Wild Horse Val**	**93.02**	**41**	eP	**P**	**00 59 26.4**	**-1.4**
	comp=Z,7.2nm,1.1s,mb4.6						
WVOR				epP	pP	01 01 08.6	-0.6
MSU	**Marysvale**	**94.36**	**47**	eP	**P**	**00 59 34.2**	**+0.2**
LVC	**Limon Verde**	**95.18**	**120**	P	**P**	**00 59 39.8**	**+2.1**
	comp=Z,5.1nm,1.1s,mb4.5,baz=228,slow=3.5,SNR=3.2						
LVC	**Limon Verde**	**95.18**	**120**	eP	**P**	**00 59 40.2**	**+2.5**
	comp=Z,12nm,1.3s,mb4.8						
TMUT	**Trail Mountain**	**95.44**	**47**	eP	**P**	**00 59 36.8**	**-2.1**
HHC	**Hu-ho-hao-te**	**95.57**	**315**	eP	**P**	**00 59 41.3**	**+1.8**
HHC				AP	pP	01 01 23.1	+2.1
HHC				XP	sP	01 02 07.8	+1.2
HHC				PP	PP	01 03 41.5	+3.9
HHC				SKS		01 09 31.3	
HHC				S	S	01 10 16.5	-0.4
HHC				PS	PS	01 12 37.7	+1.0
HHC				XS	sS	01 13 17.2	-2.3
HHC				SS	SS	01 16 59.7	+1.9
HHC				AMB	AMB		
	comp=Z,14nm,0.6s,mb5.3						
HHC				AMB	AMB		
	comp=Z,103nm,4.7s						
TTA	**Tatalina**	**96.24**	**11**	eP	**P**	**00 59 39.2**	**-3.3**
SML	**Sawmill**	**96.67**	**15**	epP	pP	01 01 25.8	-0.2
SML				ePKKPbc	PKKPbc	01 16 26.9	+1.8
LZH	**Lanzhou**	**97.76**	**308**	eP	**P**	**00 59 50.8**	**+1.5**
LZH				AP	pP	01 01 33.0	+2.0
LZH				XP	sP	01 02 17.5	+0.9
LZH				PP	PP	01 03 58.7	+4.4
LZH				SKS		01 09 42.0	
LZH				eS	S	01 10 32.1	-3.4
LZH				XS	sS	01 13 36.2	-2.3
LZH				SS	SS	01 17 30.0	+1.6
LZH				AMB	AMB		
	comp=Z,28nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,179nm,5.5s						
RRI2	**Red Ridge**	**97.78**	**43**	ePKKPbc	PKKPbc	01 16 23.5	+1.4
BW06	**Boulder Array**	**98.48**	**45**	ePP	PP	01 04 02.8	+3.1
PDAR	**Pinedale Array**	**98.49**	**45**	P	Pdif	00 59 51.5	-1.0
	comp=Z,1.2nm,0.7s,baz=208,slow=3.4,SNR=12						
PDAR				PKKP	PKKPbc	01 16 20.1	0.0
	comp=Z,0.4nm,0.6s,baz=69,slow=4.9,SNR=5.3						
BOZ	**Bozeman (W)**	**98.97**	**41**	ePKKPbc	PKKPbc	01 16 23.3	+4.5
HRY	**Holter Researc**	**99.48**	**41**	ePdif	Pdif	00 59 59.3	+2.3
IMA2	**Indian Mountai**	**99.54**	**11**	ePdif	Pdif	00 59 57.0	-0.2
LPAZ	**La Paz**	**99.56**	**116**	P	Pdif	00 59 59.5	+2.3
	comp=Z,1.2nm,0.7s,baz=206,slow=5.5,SNR=5.2						
BILL	**Bilibino**	**99.85**	**355**	eP	Pdif	00 59 52.7	-5.9
BILL				e		01 04 06.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
PHWY	**Pilot Hill**	**100.19**	**48**	ePKKPbc	PKKPbc	01 16 04.9	-11
DAWY	**Dawson**	**100.71**	**17**	ePP	PP	01 04 13.2	-3.3
ULN	**Ulaanbaatar**	**102.28**	**319**	ePP	PP	01 04 24.3	-3.8
SONM	**Songino Array**	**102.63**	**319**	P	Pdif	01 00 09.5	-1.5
	comp=Z,0.4nm,0.4s,baz=134,slow=4.3,SNR=5.1						
SONM				PKiKP	PKiKP	01 04 27.1	-2.1
	comp=Z,3.0nm,1.0s,baz=112,slow=3.4,SNR=6.7						
SONM				PKKP	PKKPbc	01 16 31.4	+23
	comp=Z,0.5nm,0.8s,baz=280,slow=2.5,SNR=4.3						
LAO	**LASA Array**	**102.65**	**43**	ePdif	Pdif	01 00 16.6	+5.6
YKA	**Yellowknife Ar**	**107.47**	**26**	PKiKP	PKiKP	01 04 35.5	-2.6
	comp=Z,0.7nm,0.5s,baz=244,slow=1.6,SNR=15						
YKA	**Yellowknife Ar**	**107.47**	**26**	PKPdf	PKiKP	01 04 35.5	-2.6
BOSA	**Boshof**	**115.29**	**205**	PKP	PKPdf	01 04 53.5	+0.6
	comp=Z,2.8nm,0.9s,baz=217,slow=5.1,SNR=3.2						
BOSA				PKKPab	PKKPab	01 15 34.1	-1.3
	comp=Z,2.1nm,0.6s,baz=338,slow=6.4,SNR=4.3						
BOSA	**Boshof**	**115.29**	**205**	PKIKP	PKPdf	01 04 53.6	+0.6
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BOSA	**Boshof**	**115.29**	**205**	PKP	PKPdf	01 04 53.5	+0.6
BOSA				PKKPab	PKKPab	01 15 34.1	-1.3
MKAR	**Makanchi Array**	**116.93**	**310**	PKP	PKPdf	01 04 54.2	-1.9
	comp=Z,3.5nm,0.6s,baz=112,slow=1.3,SNR=20						
MKAR				PP	PP	01 05 58.9	-14
	comp=Z,1.5nm,0.9s,baz=99,slow=3.9,SNR=3.6						
MKAR				SKP		01 07 46.5	
	comp=Z,2.0nm,0.9s,baz=18,slow=4.2,SNR=4.5						
MKAR				PKKPbc	PKKPbc	01 15 24.1	+1.2
	comp=Z,1.5nm,0.7s,baz=278,slow=3.6,SNR=8.2						
MKAR	**Makanchi Array**	**116.93**	**310**	PKP	PKPdf	01 04 54.2	-1.9
MKAR				PP	PP	01 05 58.9	-14
MKAR				SKP		01 07 46.5	
MKAR				PKKPbc	PKKPbc	01 15 24.1	+1.2
ZAL	**Zalesovo**	**117.54**	**318**	PKP	PKPdf	01 04 55.5	-1.8
	comp=Z,3.9nm,0.3s,baz=306,slow=1.8,SNR=10						
NVS	**Novosibirsk**	**118.66**	**319**	ePKIKP	PKPdf	01 04 56.1	-3.4
NVS				eS	SKSac	01 11 07.6	-4.3
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,13nm,0.8s						
NVS				smax			
	comp=N,22nm,1.5s						
NVS				smax			
	comp=E,38nm,2.2s						
KURK	**Kurchatov**	**120.35**	**314**	P	PKPdf	01 05 01.1	-1.6
	SNR=11						
KURK	**Kurchatov**	**120.35**	**314**	ePKPdf	PKPdf	01 05 00.8	-2.0
KURK				ePP	PP	01 06 32.7	-3.5
NCB	**Newcomb**	**122.23**	**55**	ePKPdf	PKPdf	01 05 04.9	-1.4
CHKZ	**Chkalovo**	**125.72**	**316**	ePKIKP	PKPdf	01 05 11.2	-1.8
BRVK	**Borovoye**	**125.85**	**315**	P	PKPdf	01 05 12.2	-1.0
	SNR=15						
BRVK	**Borovoye**	**125.85**	**315**	ePKPdf	PKPdf	01 05 12.1	-1.2
BRVK				ePP	PP	01 07 02.6	-10
ZRNK	**Zerenda**	**126.61**	**315**	ePKPdf	PKPdf	01 05 12.7	-2.0
ZRNK				epPKPdf	pPKPdf	01 07 04.3	+2.3
ZRNK				ePP	PP	01 07 14.0	-3.7
SCHQ	**Schefferville**	**128.57**	**43**	PKP	PKPdf	01 05 16.5	-2.0
	comp=E,1.7nm,0.4s,baz=297,slow=0.8,SNR=9.4						
SCHQ				SKPbc		01 07 53.5	
	comp=E,32nm,1.1s,baz=270,slow=2.9,SNR=14						
SCHQ	**Schefferville**	**128.57**	**43**	PKP	PKPdf	01 05 16.5	-2.0
SCHQ				SKPbc		01 07 53.5	
KMBO	**Kilima Mbogo**	**131.64**	**235**	PKP	PKPdf	01 05 26.2	+1.9
	comp=E,1.6nm,0.7s,baz=128,slow=2.0,SNR=5.8						
KMBO				SKPbc	SKPbc	01 08 08.0	+0.4
	comp=E,10nm,0.8s,baz=94,slow=3.1,SNR=31						
KMBO	**Kilima Mbogo**	**131.64**	**235**	PKP	PKPdf	01 05 26.2	+1.9
KMBO				SKPbc	SKPbc	01 08 08.0	+0.4
ARU	**Arti**	**132.66**	**320**	i PKIKP	PKPdf	01 05 24.0	-2.2
ARU				e		01 07 50.7	
ARU				eSS	SS	01 25 06.1	+5.0
ARU	**Arti**	**132.66**	**320**	⇑ePKP	PKPdf	01 05 24.3	-1.9
ARU				ePKPdf	PKPdf	01 05 24.8	-1.4
ARU				ePP	PP	01 07 52.2	-4.5
ARU				eSKPbc	SKPbc	01 08 08.8	-2.2
SPB4	**Spitsbergen Ar**	**132.76**	**355**	ePKPdf	PKPdf	01 05 24.6	-1.8
AKTO	**Aktyubinsk**	**133.33**	**311**	SKPbc	SKPbc	01 08 11.8	-1.5
	baz=99,slow=11						
SFJD	**Kangerlussuaq**	**134.00**	**25**	SKPbc	SKPbc	01 08 12.7	-2.8
	baz=308,slow=2.1						
SUMG	**Summit**	**134.43**	**15**	ePKPdf	PKPdf	01 05 29.7	+0.2
SUMG				eSKPbc	SKPbc	01 08 15.4	-1.5
KEV	**Kevo**	**138.81**	**346**	epkp		01 05 26.9	
ARCES	**ARCESS Array B**	**139.30**	**346**	PKhKP		01 05 27.6	
	comp=E,3.0nm,0.4s,baz=44,slow=2.4,SNR=62						
ARCES				PKP	PKPdf	01 05 38.4	-0.1
	comp=E,5.5nm,0.4s,baz=83,slow=2.8,SNR=23						
ARCES				SKP		01 08 26.1	
	comp=E,19nm,1.2s,baz=5.7,slow=1.8,SNR=7.7						
ARCES	**ARCESS Array B**	**139.30**	**346**	PKHKP		01 05 27.6	
ARCES						01 05 38.4	
ARE0	**ARCESS Array S**	**139.30**	**346**	ePKPdf	PKPdf	01 05 37.8	-0.7
ARE0				eSKPbc	SKPbc	01 08 27.8	-3.3
KTK1	**Kautokeino**	**140.18**	**347**	ePdif		01 05 33.2	
KTK1				ePKPd	PKPdf	01 05 40.4	+0.3
TRO	**Tromso**	**140.39**	**349**	ePdif		01 05 30.9	
TRO				ePKPd	PKPdf	01 05 38.7	-1.8
KLMR	**Klimovskoe**	**140.79**	**330**	i PKHKP		01 05 33.3	
KLMR				pmax	pmax		
	comp=Z,50nm,1.9s						
LOF	**Lofoten**	**142.54**	**351**	ePdif	PKPdf	01 05 40.0	-4.3
LOF				AMb	AMB	01 05 42.6	
	comp=Z,48nm,1.4s						
GNI	**Garni**	**142.72**	**296**	P	PKPdf	01 05 41.6	-3.0
	SNR=18						
GNI	**Garni**	**142.72**	**296**	d iPKHKP		01 05 41.2	
GNI	**Garni**	**142.72**	**296**	ePKPdf	PKPdf	01 05 42.1	-2.5
JOF	**Joensuu**	**142.73**	**337**	epkp	PKPdf	01 05 37.9	-6.7
ZEI	**Tsey**	**143.32**	**300**	ePKIKP	PKPdf	01 05 43.8	-1.9
ZEI				e		01 08 58.2	
HAKT	**HAKKARI**	**143.41**	**292**	i P	PKPdf	01 05 43.7	-2.1
VRHR	**Novokhopersk**	**143.52**	**315**	ePKIKP	PKPdf	01 05 42.4	-3.6
VRHR				pmax	pmax		
	comp=Z,30nm,1.0s						
VRHR				pmax	pmax		
	comp=N,8.0nm,0.8s						
VRHR				pmax	pmax		
	comp=E,6.0nm,0.5s						
TVAN	**Van**	**143.70**	**293**	i P	PKPdf	01 05 44.9	-1.5
GOF	**Gofitskoye**	**143.76**	**304**	i PKIKP	PKPdf	01 05 43.9	-2.5
GOF				pmax	pmax		
	comp=Z,230nm,1.3s						
MOS	**Moscow**	**144.09**	**323**	d iPKIKP	PKPdf	01 05 44.9	-2.1
MOS				i		01 09 01.9	
MOS				pmax	pmax		
	comp=Z,500nm,1.6s						
MOS				pmax	pmax		
	comp=Z,291nm,1.3s						
KIV	**Kislovodsk**	**144.12**	**303**	P	PKPdf	01 05 45.9	-1.2
	SNR=27						
KIV	**Kislovodsk**	**144.12**	**303**	⇑iPKIKP	PKPdf	01 05 45.0	-2.1
KIV	**Kislovodsk**	**144.12**	**303**	ePKPdf	PKPdf	01 05 45.5	-1.5
MOR8	**Moi Rana**	**144.26**	**350**	eP	PKPdf	01 05 43.1	-4.2
STOK	**Stokkvaagen**	**144.31**	**351**	eP	PKPdf	01 05 44.3	-3.1
STOK				AMb	AMB	01 05 47.3	
	comp=Z,431nm,1.3s						
BORG	**Borgarnes**	**144.42**	**15**	ePKPdf	PKPdf	01 05 46.0	-1.6
CHVG	**Ch'k'valeri**	**144.66**	**300**	P	PKPdf	01 05 46.5	-1.5
OBN	**Obninsk**	**144.91**	**323**	⇑iPKIKP	PKPdf	01 05 46.4	-2.0
OBN				pmax	pmax		
	comp=Z,210nm,1.0s						
OBN	**Obninsk**	**144.91**	**323**	ePKPdf	PKPdf	01 05 47.1	-1.3
OBN				epPKPdf	pPKPdf	01 07 39.4	+3.4
KAF	**Kangasniemi**	**144.94**	**338**	epkp	PKPdf	01 05 44.8	-3.7
KAF	**Kangasniemi**	**144.94**	**338**	epkp	pPKPdf	01 07 41.0	+5.0
	baz=30,slow=2.3						
VRSR	**Storozhevoye**	**144.95**	**316**	d iPKIKP	PKPdf	01 05 47.0	-1.5
VRSR				pmax	pmax		
	comp=N,50nm,0.8s						
VRSR				pmax	pmax		
	comp=Z,170nm,0.8s						
VRSR				pmax	pmax		
	comp=E,180nm,1.0s						
PUL	**Pulkovo**	**145.17**	**333**	⇑ePKIKP	PKPdf	01 05 48.3	-0.6
ERZM	**Erzurum**	**145.31**	**296**	i P	PKPdf	01 05 49.4	+0.3
BNGL	**BINGOL**	**145.48**	**294**	i P	PKPdf	01 05 50.1	+0.7
FIA1	**FINESS Array S**	**145.51**	**338**	ePKP	PKPdf	01 05 48.2	-1.2
FIA1				epPKPdf	pPKPdf	01 07 39.3	+2.3
FINES	**FINESS Array B**	**145.51**	**338**	PKPbc	PKPbc	01 05 48.1	-2.5
	comp=E,66nm,0.3s,baz=54,slow=5.2,SNR=1797						
MARD	**Mardin**	**145.72**	**291**	i P	PKPdf	01 05 50.8	+1.0
NSS	**Namsos**	**146.16**	**350**	ePKPd	PKPdf	01 05 48.7	-1.8
NSS				AMb	AMB	01 05 51.9	
	comp=Z,184nm,1.2s						
SOC	**Sochi**	**146.30**	**302**	d iPKP2	PKPdf	01 05 51.6	+0.8
SOC				e		01 09 17.9	
SOC				e		01 12 46.0	
SOC				pmax	pmax		
	comp=Z,54nm,0.9s						
SOC				pmax	pmax		
	comp=Z,44nm,1.1s						
MACK	**Trabzon**	**146.50**	**298**	i P	PKPdf	01 05 53.2	+2.0
KELT	**Kelkit**	**146.93**	**296**	i P	PKPdf	01 05 54.8	+3.0
ELZG	**Elazig**	**147.17**	**293**	i P	PKPdf	01 05 55.7	+3.5
VSU	**Vasula**	**147.42**	**333**	i PKP2	PKPdf	01 05 54.1	+1.5
MALT	**Malatya**	**147.60**	**293**	⇓iP	PKPbc	01 05 56.8	+0.5
MALT	**Malatya**	**147.60**	**293**	ePKPdf	PKPdf	01 05 52.7	-0.2
MALT				epPKPdf	pPKPdf	01 07 40.7	+0.1
GRSN	**GIRESUNGRSN**	**147.63**	**298**	i P	PKPdf	01 05 54.8	+1.8
ATAB	**Bozova**	**147.70**	**291**	i P	PKPdf	01 05 56.2	+3.1
ANN	**Anapa**	**147.73**	**305**	i PKHKP		01 05 48.4	
ANN				ePPP		01 12 10.8	
ANN				pmax	pmax		
	comp=Z,110nm,1.0s						
GZT	**Gaziantep**	**148.28**	**291**	i P	PKPdf	01 05 57.9	+3.9
MOL	**Molde**	**148.61**	**353**	ePKPd	PKPdf	01 05 56.8	+2.2
SVST	**Sivas**	**148.71**	**296**	i P	PKPdf	01 05 59.5	+4.7
DOMB	**Dombas**	**148.94**	**351**	ePKPd	PKPdf	01 05 57.5	+2.4
DOMB				ePKPa	PKPab	01 06 03.3	-2.1
COBT	**Iskenderun**	**149.31**	**289**	i P	PKPdf	01 06 00.8	+5.1
MNK	**Minsk**	**149.53**	**327**	ePKHKP	PKPdf	01 05 58.0	+2.0
EIL	**Elat**	**149.54**	**276**	ePKPdf	PKPdf	01 05 55.6	-0.4
EIL				epPKPdf	pPKPdf	01 07 52.9	+9.2
NB2	**NORSAR Subarra**	**149.58**	**349**	PKPa	PKPdf	01 05 58.8	+2.7
	comp=Z,188nm,1.7s,baz=17,slow=2.6						
NB2	**NORSAR Subarra**	**149.58**	**349**	PKPa	PKPdf	01 05 58.8	+2.7
	baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.58**	**349**	PKP	PKPdf	01 05 54.3	-1.9
	comp=Z,15nm,0.5s,baz=16,slow=4.1,SNR=31						
NOA				PKPbc	PKPbc	01 05 59.1	-2.1
	comp=Z,13nm,0.4s,baz=17,slow=4.2,SNR=84						
BHL	**Bhannes**	**149.63**	**284**	eP	PKPbc	01 06 01.2	-0.1
NAO01	**NORSAR Array S**	**149.82**	**349**	ePKPbc	PKPbc	01 05 59.7	-2.1
NAO01				ePKPab	PKPab	01 06 06.7	-2.4
HFS	**Hagfors**	**149.96**	**346**	SKP		01 08 45.0	
	comp=Z,8.4nm,0.7s,baz=107,slow=1.5,SNR=5.1						
SIM	**Simferopol'**	**150.00**	**306**	d iPKHKP	PKPbc	01 06 01.4	-0.8
SIM				e		01 06 09.0	
SIM				pmax	pmax		
	comp=Z,40nm,1.3s						
BOYT	**Boyabat**	**150.11**	**299**	i P	PKPbc	01 06 02.1	-0.4
SUE	**Sulen**	**150.35**	**355**	ePKPd	PKPbc	01 06 01.0	-2.1
SUE				AMb	AMB	01 06 07.9	
	comp=Z,104nm,1.7s						
AVNT	**Avonos**	**150.39**	**294**	i P	PKPbc	01 06 02.5	-0.7
CDAG	**Cicekdag**	**150.71**	**296**	i P	PKPbc	01 06 03.0	-0.9
ASK	**Askoy**	**150.89**	**354**	ePKPd	PKPbc	01 06 02.6	-1.7
AKASG	**Malin Array Be**	**150.91**	**320**	PKP	PKPdf	01 05 56.1	-2.1
	comp=Z,0.3nm,0.3s,baz=61,slow=1.5,SNR=11						
AKASG				PKPbc	PKPbc	01 06 02.0	-2.3
	comp=Z,9.5nm,0.4s,baz=51,slow=2.8,SNR=75						
AKASG				PKPab	PKPab	01 06 11.7	-1.9
	comp=Z,9.4nm,0.4s,baz=54,slow=4.7,SNR=17						
AKBB	**Malin Array Si**	**150.91**	**320**	ePKIKP	PKPbc	01 06 02.1	-2.3
AKBB				e		01 06 12.4	
BER	**Bergen**	**150.97**	**354**	ePKPd	PKPbc	01 06 02.9	-1.6
MEST	**Erdemli**	**151.01**	**289**	i P	PKPbc	01 06 03.9	-0.6
EGD	**Espegrend**	**151.09**	**354**	ePKPd	PKPbc	01 06 03.0	-1.8
KONO	**Kongsberg**	**151.16**	**349**	eP	PKPbc	01 06 03.0	-2.0
KONO				AMb	AMB	01 06 06.2	
	comp=Z,79nm,1.7s						
KONO	**Kongsberg**	**151.16**	**349**	ePKIKP	PKPbc	01 06 03.1	-1.8
KONO				e		01 06 12.8	
BALT	**Daday**	**151.22**	**300**	i P	PKPbc	01 06 04.5	-0.5
BR131	**Keskin Array S**	**151.26**	**296**	ePKPdf	PKPdf	01 05 58.5	-0.2
BRTR	**Keskin Array B**	**151.26**	**296**	PKP	PKPdf	01 05 57.4	-1.3
	comp=Z,3.7nm,1.2s,baz=134,slow=3.6,SNR=12						
BRTR				PKPbc	PKPbc	01 06 04.0	-1.1
	comp=Z,14nm,0.5s,baz=142,slow=3.8,SNR=86						
BRTR				PKPab	PKPab	01 06 14.3	-0.8
	comp=Z,7.1nm,0.6s,baz=141,slow=5.0,SNR=11						
ODD1	**Odda**	**151.31**	**353**	ePKPd	PKPbc	01 06 02.7	-2.5
ODD1				AMb	AMB	01 06 04.2	
	comp=Z,75nm,1.7s						
CSS	**Prodhromos**	**151.62**	**286**	ePKPbc	PKPbc	01 06 05.3	-0.7
BLS5	**Blasjo**	**151.81**	**352**	ePKPd	PKPbc	01 06 05.7	-0.7
ANTO	**Ankara**	**151.90**	**296**	⇓iP	PKPbc	01 06 05.6	-1.0
ANTO	**Ankara**	**151.90**	**296**	ePKPdf	PKPdf	01 05 59.2	-0.4
ANTO				ePKPbc	PKPbc	01 06 06.1	-0.5
ANTO				epPKPdf	pPKPdf	01 07 46.8	-0.7
SUW	**Suwalki**	**151.93**	**330**	ePKPdf	PKPdf	01 05 55.8	-3.9
SUW				ePKP	PKPbc	01 06 05.0	-1.7
SUW				ePKPab	PKPab	01 06 15.7	-2.2
SUW				epPKPdf	PKPab	01 06 15.9	-2.0
KMY	**Karmoy**	**152.14**	**354**	eP	PKPbc	01 06 05.2	-1.9
SGKT	**Sivrigoynuk**	**152.36**	**298**	i P	PKPbc	01 06 06.5	-1.1
CFR	**Carcaliu**	**153.97**	**309**	⇓iP	PKPbc	01 06 10.3	-0.8
WAR	**Warsaw**	**154.09**	**329**	ePKP	PKPab	01 06 25.8	-1.4
BSD	**Bornholm Skovb**	**154.10**	**340**	⇑iP	PKPbc	01 06 09.4	-2.0
	comp=Z,6.0nm,0.4s						
BSD	**Bornholm Skovb**	**154.10**	**340**	i P	PKPab	01 06 25.2	-2.0
	comp=Z,38nm,0.8s						
BSD	**Bornholm Skovb**	**154.10**	**340**	ePKP2	PKPab	01 06 25.2	-2.0
BSD				pmax	pmax		
	comp=Z,38nm,0.8s						
BSD	**Bornholm Skovb**	**154.10**	**340**	⇑iP	PKPbc	01 06 09.4	-2.0
BSD				eP		01 06 25.2	
LVV	**L'vov**	**154.20**	**322**	ePKIKP	PKPdf	01 06 02.6	-0.4
LVV				e		01 06 23.4	
MUD	**Monsted U'grnd**	**154.27**	**348**	i P	PKPab	01 06 26.4	-1.5
	comp=Z,42nm,1.1s						
MUD	**Monsted U'grnd**	**154.27**	**348**	i PKP2	PKPab	01 06 26.4	-1.5
MUD				pmax	pmax		
	comp=Z,42nm,1.1s						
HARR	**Harsova**	**154.28**	**309**	⇓iP	PKPbc	01 06 11.3	-0.4
LIC	**Lamto**	**154.38**	**169**	ePKIKP	PKPdf	01 06 03.3	+0.1
	comp=Z,83nm,1.7s						
BURAR	**Bucovina Array**	**154.73**	**317**	⇑iP	PKPbc	01 06 13.4	+0.7
DBIC	**Dimbokro**	**154.84**	**170**	PKP	PKPdf	01 06 03.6	-0.2
	comp=Z,3.1nm,0.7s,baz=97,slow=4.5,SNR=4.7						
GKP	**Gorka Klasztor**	**154.86**	**335**	ePKP	PKPab	01 06 28.7	-1.7
KWP	**Kalwaria**	**155.00**	**323**	ePKPbc	PKPdf	01 06 12.3	+8.3
KWP				ePKP	PKPab	01 06 30.1	-0.9
KWP				ePKPab	PKPab	01 06 30.3	-0.7
DNZL	**Cakiroluk**	**155.03**	**292**	i P	PKPdf	01 06 13.1	+9.0
MLR	**Muntele Rosu**	**155.26**	**312**	⇑iP	PKPab	01 06 31.9	-0.3
KOLS	**Kolonicke sedl**	**155.65**	**322**	ePKP	PKPdf	01 06 03.9	-1.0
KOLS				e		01 06 13.4	
KOLS				e		01 06 32.7	
VOIR		**155.86**	**312**	⇓iP	PKPdf	01 06 36.3	+31
OJC	**Ojcow**	**156.05**	**327**	ePKIKP	PKPdf	01 06 04.0	-1.5
OJC				e		01 06 34.3	
CRVS	**Cervenica-Dubn**	**156.09**	**323**	ePKP	PKPab	01 06 35.1	-0.7
NIE	**Niedzica**	**156.34**	**325**	ePKPdf	PKPdf	01 06 05.0	-0.8
NIE				ePKPab	PKPab	01 06 35.9	-0.9
BSEG	**Bad Segeberg**	**156.38**	**344**	ePKPab	PKPab	01 06 35.5	-1.5
BSEG				ePP	PP	01 10 11.0	-5.6
DRGR		**156.62**	**317**	⇓iP	PKPab	01 06 37.1	-0.9
RUE	**Ruedersdorf**	**156.70**	**338**	ePKPab	PKPab	01 06 37.1	-1.3
OKC	**Ostrava-Krasne**	**157.08**	**328**	ePKPab	PKPab	01 06 38.3	-1.7
KSP	**Ksiaz**	**157.12**	**332**	ePKP	PKPab	01 06 38.9	-1.3
KSP	**Ksiaz**	**157.12**	**332**	ePKP2	PKPab	01 06 38.7	-1.5
MORC	**Moravsky Berou**	**157.40**	**329**	⇓iP	PKPab	01 06 40.1	-1.3
MORC	**Moravsky Berou**	**157.40**	**329**	ePKPdf	PKPdf	01 06 06.0	-1.1
MORC				ePKPab	PKPab	01 06 41.6	+0.2
DPC	**Dobruska-Polom**	**157.49**	**331**	ePKPab	PKPab	01 06 40.8	-1.0
UPC	**Upice**	**157.50**	**332**	ePKPab	PKPab	01 06 40.5	-1.3
PSZ	**Piszkesteto**	**157.52**	**322**	ePKPdf	PKPdf	01 06 05.5	-1.8
PSZ				ePKPab	PKPab	01 06 40.9	-1.0
VYHS	**Vyhne**	**157.69**	**325**	ePKP	PKPab	01 06 41.8	-0.9
BZS	**Buzias**	**157.89**	**315**	⇓iP	PKPab	01 06 42.7	-0.8
CLL	**Collm**	**157.96**	**337**	ePKPdf	PKPdf	01 06 04.2	-3.6
CLL				⇑iPKPab	PKPab	01 06 42.3	-1.5
	comp=Z,102nm,1.2s						
CLL				esPKPab		01 09 12.2	
CLL				ePP	PP	01 10 20.3	-4.9
CLL				esPP		01 12 47.9	
CLL	**Collm**	**157.96**	**337**	ePKPdf	PKPdf	01 06 06.0	-1.9
CLL				i PKPab	PKPab	01 06 42.2	-1.6
	comp=Z,99nm,1.2s						
CLL				ex	x	01 07 22.0	
CLL				esPKPab		01 09 12.0	
CLL				e(PP)		01 10 17.0	
CLL				e(SPP)		01 23 05.0	
CLL	**Collm**	**157.96**	**337**	ePKIKP	PKPdf	01 06 06.0	-1.9
CLL				i		01 06 42.2	
CLL				pmax	pmax		
	comp=Z,99nm,1.2s						
BRG	**Berggiesshubel**	**157.99**	**335**	ePKPab	PKPab	01 06 42.6	-1.4
BRG	**Berggiesshubel**	**157.99**	**335**	ePKP	PKPdf	01 06 06.5	-1.4
	comp=Z,2.8nm,1.2s						
BRG	**Berggiesshubel**	**157.99**	**335**	i PKP	PKPab	01 06 42.5	-1.5
	comp=Z,46nm,1.4s						
BRG				e		01 07 00.4	
	comp=Z,7.3nm,1.1s						
BRG				i		01 09 09.0	
BRG				i		01 10 18.0	
BRG				e		01 17 04.7	
	comp=Z,2.4nm,0.8s						
BRG	**Berggiesshubel**	**157.99**	**335**	ePKIKP	PKPdf	01 06 06.5	-1.4
BRG				i		01 06 42.5	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,46nm,1.4s						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PVCC	**Panska Ves**	**158.04**	**334**	ePKPab	PKPab	01 06 42.9	-1.3
VRAC	**Vranov**	**158.16**	**329**	⇑iP	PKPab	01 06 43.9	-0.8
FBE	**Freiberg**	**158.16**	**336**	ePKPab	PKPab	01 06 43.7	-1.0
FBE				ePP	PP	01 10 21.6	-4.7
CLZ	**Clausthal**	**158.28**	**342**	ePKPab	PKPab	01 06 44.0	-1.2
CLZ				ePP	PP	01 10 22.8	-4.1
PRU	**Pruhonice**	**158.49**	**333**	ePKPab	PKPab	01 06 44.2	-1.9
TREC	**Trest**	**158.65**	**330**	ePKPab	PKPab	01 06 45.3	-1.5
ZST	**Bratislava**	**158.73**	**326**	ePKP	PKPdf	01 06 08.0	-0.8
ZST				e		01 06 46.5	
WERD	**Werda**	**158.92**	**337**	ePKPab	PKPab	01 06 46.9	-1.1
MOX	**Moxa**	**158.97**	**338**	ePKPab	PKPab	01 06 47.1	-1.2
MOX				ePP	PP	01 10 26.4	-4.3
MOX	**Moxa**	**158.97**	**338**	eP	PKPab	01 06 46.8	-1.5
	comp=Z,72nm,1.6s						
MOX				e		01 09 18.0	
MOX				e		01 10 24.0	
GUNZ	**Gunzen**	**158.98**	**337**	ePKPab	PKPab	01 06 47.4	-0.9
BEO	**Belgrade**	**159.00**	**315**	i PKP	PKPab	01 06 48.4	0.0
WERN	**Wernitzgruen**	**159.03**	**337**	ePKPab	PKPab	01 06 47.7	-0.8
NKC	**Novy Kostel**	**159.05**	**336**	ePKPab	PKPab	01 06 47.4	-1.2
UBBA	**Unterbreizbach**	**159.30**	**341**	ePKPab	PKPab	01 06 48.1	-1.6
UBBA				ePP	PP	01 10 27.6	-4.8
MANZ	**Manzenberg**	**159.38**	**336**	ePKPab	PKPab	01 06 49.2	-0.8
BUG	**Bochum--Univer**	**159.39**	**346**	ePKPab	PKPab	01 06 47.9	-2.2
BUG				ePP	PP	01 10 28.3	-4.6
CONA	**Conrad Observa**	**159.50**	**327**	P	PKPab	01 06 43.1	-7.5
	comp=Z,75nm,1.7s						
ROTZ	**Rotzenmuhle**	**159.53**	**336**	ePKPab	PKPab	01 06 50.1	-0.6
ROTZ				ePP	PP	01 10 29.4	-4.3
KHC	**Kasperske Hory**	**159.55**	**333**	ePKPab	PKPab	01 06 49.4	-1.4
DIVS	**Divcibare**	**159.66**	**314**	⇑iPKP	PKPab	01 06 50.4	-0.9
GEC2	**GERESS Array S**	**159.73**	**332**	ePKPab	PKPab	01 06 50.2	-1.4
GEC2	**GERESS Array S**	**159.73**	**332**	ePKPdf	PKPdf	01 06 07.7	-2.2
GEC2				ePKPab	PKPab	01 06 49.8	-1.8
GERES	**GERESS Array B**	**159.73**	**332**	PKP	PKPdf	01 06 08.0	-2.0
	comp=Z,1.6nm,1.0s,baz=48,slow=2.0,SNR=8.9						
GERES				PKPab	PKPab	01 06 49.9	-1.7
	comp=Z,4.1nm,0.5s,baz=39,slow=6.7,SNR=29						

WET	Wettzell	159.81	334	ePKPab	PKPab	01 06 51.0	-0.9
WET				ePP	PP	01 10 31.3	-3.9
GRF	Grafenberg Arr	159.93	337	ePKPab	PKPab	01 06 51.8	-0.6
GRF				ePP	PP	01 10 32.1	-3.7
ARSA	Arzberg	160.15	326	⇓iP	PKPab	01 06 52.0	-1.4
	comp=Z,48nm,1.8s,SNR=9.0						
TNS	Taunus Mts	160.26	343	ePKPab	PKPab	01 06 52.3	-1.6
MOA	Molln	160.28	329	⇓iP	PKPab	01 06 52.5	-1.4
	comp=Z,49nm,1.6s,SNR=9.5						
BEBN	Eben Emael	160.30	348	PKPab	PKPab	01 06 52.2	-1.8
MEM	Membach	160.42	348	PKPab	PKPab	01 06 52.8	-1.8
BCLA	Clavier	160.73	349	PKPab	PKPab	01 06 53.9	-2.1
SNF	Seneffe	160.80	351	PKPab	PKPab	01 06 54.1	-2.1
GIVF	Givet	161.12	349	ePKP2	PKPab	01 06 55.4	-2.2
DOU	Dourbes	161.16	350	PKPab	PKPab	01 06 55.8	-2.0
FUR	Furstenfeldbru	161.21	335	ePKPab	PKPab	01 06 57.2	-0.9
BAIF	Baives	161.25	351	ePKP2	PKPab	01 06 56.1	-2.1
WLF	Walferdange	161.30	346	ePKPab	PKPab	01 06 57.1	-1.3
WLF	Walferdange	161.30	346	PKPab	PKPab	01 06 56.4	-2.0
WLF	Walferdange	161.30	346	ePKPab	PKPab	01 06 56.4	-2.0
STU	Stuttgart	161.37	340	ePKPab	PKPab	01 06 57.6	-1.1
STU	Stuttgart	161.37	340	ePKPab	PKPab	01 06 57.7	-1.1
TORD	Torodi Ar. Bea	161.51	187	PKP	PKPdf	01 06 12.2	+0.4
	comp=Z,3.8nm,0.9s,baz=15,slow=0.5,SNR=17						
TORD				PKPab	PKPab	01 06 59.8	+0.4
	comp=Z,2.4nm,0.6s,baz=163,slow=4.5,SNR=11						
TORD				SKP		01 08 43.2	
	comp=Z,5.8nm,0.9s,baz=173,slow=4.0,SNR=9.2						
TORD	Torodi Ar. Bea	161.51	187	PKP	PKPdf	01 06 12.2	+0.4
TORD				PKPab	PKPab	01 06 59.8	+0.4
TORD				SKP		01 08 43.2	
LANF	Langenberg	161.56	343	PKP	PKPab	01 06 57.9	-1.7
WATA	Walderalm	161.79	333	⇓iP	PKPab	01 06 59.2	-1.4
	comp=Z,18nm,1.3s						
WTTA	Wattenberg	161.83	333	⇓iP	PKPab	01 06 59.3	-1.5
	comp=Z,52nm,1.8s						
STR	Strasbourg	161.94	342	PKP	PKPab	01 07 00.0	-1.2
MOTA	Moosalm	161.96	334	⇑iP	PKPab	01 06 59.7	-1.6
	comp=Z,27nm,1.1s,SNR=13						
BFO	Black Forest	162.02	341	ePKPab	PKPab	01 07 00.1	-1.5
BFO	Black Forest	162.02	341	ePKPab	PKPab	01 06 59.9	-1.7
SQTA	Sankt Quirin	162.03	333	⇓iP	PKPab	01 07 00.3	-1.4
	comp=Z,24nm,1.2s,SNR=8.7						
WLS	Welschbruch	162.20	343	PKP	PKPab	01 07 00.5	-1.9
CDF	Champ du Feu	162.22	343	ePKP2	PKPab	01 07 00.7	-1.8
ECH	Echery	162.44	343	PKP	PKPab	01 07 01.5	-1.9
DAVA	Damuels	162.46	336	⇑iP	PKPab	01 07 02.1	-1.4
	comp=Z,80nm,1.4s,SNR=15						
MEZF	Maizieres J'vi	162.62	348	ePKP2	PKPab	01 07 02.2	-2.1
	comp=Z,81nm,1.2s						
THEF	They Montfort	162.70	345	PKP	PKPab	01 07 02.7	-1.9
MOF	Molkenrain	162.78	342	PKP	PKPab	01 07 03.2	-1.7
HAU	Haudompre	162.83	344	ePKP2	PKPab	01 07 02.9	-2.3
	comp=Z,21nm,0.7s						
HAU				eR			
	comp=Z,79nm,21.0s						
FLN	La Foliniere	162.88	0	ePKP2	PKPab	01 07 02.0	-3.4
HINF	Hinteralfeld	162.88	343	ePKP2	PKPab	01 07 03.4	-2.0
LDF	La Druitiere	163.04	359	ePKP2	PKPab	01 07 02.8	-3.3
ROSF	Rostrenen	163.17	6	ePKP2	PKPab	01 07 04.8	-1.8
GRR	Gorron	163.25	1	ePKP2	PKPab	01 07 03.9	-3.1
SGMF	Saint Gilles	163.31	5	ePKP2	PKPab	01 07 05.3	-2.0
	comp=Z,177nm,1.6s						
LOMF	Lomont	163.32	342	PKP	PKPab	01 07 05.9	-1.4
QUIF	Quistinic	163.59	6	ePKP2	PKPab	01 07 06.0	-2.5
LOR	Lormes	164.02	349	ePKP2	PKPab	01 07 08.3	-2.1
	comp=Z,63nm,1.4s						
LOR				eR			
	comp=Z,64nm,19.2s						
CABF	La Chapelle	164.20	343	ePKP2	PKPab	01 07 08.9	-2.3
	comp=Z,12nm,0.7s						
SSF	Saint Saulge	164.28	350	ePKP2	PKPab	01 07 09.5	-2.0
	comp=Z,68nm,1.1s						
AVF	Avril sur Loir	164.56	350	ePKP2	PKPab	01 07 10.7	-2.1
	comp=Z,76nm,1.3s						
AQU	L'Aquila	164.60	318	⇑iP	PKPab	01 07 13.1	+0.1
AQU	L'Aquila	164.60	318	ePKPab	PKPab	01 07 12.5	-0.5
SMF	Signal de Mont	164.63	349	ePKP2	PKPab	01 07 11.1	-2.0
	comp=Z,131nm,1.1s						
BGF	Bois d'Agland	164.86	351	ePKP2	PKPab	01 07 12.1	-2.0
	comp=Z,116nm,1.6s						
LPL	La Plagne	165.03	340	ePKP2	PKPab	01 07 13.3	-1.6
	comp=Z,40nm,0.9s						
MFF	Saint Martin d	165.04	359	ePKP2	PKPab	01 07 12.4	-2.5
LPG	La Plagne	165.04	340	ePKP2	PKPab	01 07 13.5	-1.4
TCF	Toulx Ste Croi	165.21	353	ePKP2	PKPab	01 07 13.5	-2.1
AGO	Saint Agoulin	165.32	350	PKP	PKPab	01 07 15.1	-1.0
PLDF	La Plantade	165.32	349	PKP	PKPab	01 07 14.6	-1.6
PYM	Petit Puy Mans	165.63	350	PKP	PKPab	01 07 15.6	-1.9
MBDF	Montbardon	165.74	339	ePKP2	PKPab	01 07 16.2	-1.8
	comp=Z,32nm,1.1s						
ORIF	Oris-en-Rattie	165.82	341	ePKP2	PKPab	01 07 16.6	-1.8
	comp=Z,68nm,0.9s						
LBL	Lubilhac	166.10	349	PKP	PKPab	01 07 18.3	-1.3
VIVF	Saint-Julien-l	166.18	345	ePKP2	PKPab	01 07 18.2	-1.8
	comp=Z,94nm,1.5s						
RJF	Les Rejaudoux	166.25	354	ePKP2	PKPab	01 07 18.0	-2.2
	comp=Z,54nm,1.4s						
RJF				eR			
	comp=Z,105nm,23.0s						
SBF	Sospel	166.28	335	ePKP2	PKPab	01 07 18.1	-2.3
	comp=Z,75nm,0.9s						
CAF	Calviac	166.57	352	ePKP2	PKPab	01 07 20.0	-1.7
LFF	La Frestale	166.67	356	ePKP2	PKPab	01 07 19.6	-2.5
PGF	Pioggiola	166.74	328	ePKP2	PKPab	01 07 20.5	-1.9
SMRF	Simiane la Rot	166.78	341	ePKP2	PKPab	01 07 20.9	-1.7
	comp=Z,127nm,1.4s						
FRF	La Foret Royal	166.82	337	ePKP2	PKPab	01 07 20.8	-2.0
	comp=Z,103nm,1.4s						
LMR	La Mourre	167.06	337	ePKP2	PKPab	01 07 22.0	-1.9
	comp=Z,61nm,1.2s						
LASF	Ste Croix	167.10	346	ePKP2	PKPab	01 07 22.3	-1.7
	comp=Z,91nm,1.7s						
MTLF	Montolieu	168.11	350	ePKP2	PKPab	01 07 26.7	-1.8
	comp=Z,71nm,1.4s						
SJPF	Ste Jean	168.51	3	ePKP2	PKPab	01 07 28.1	-2.2
EPF	Esparros	168.59	357	ePKP2	PKPab	01 07 27.5	-3.1
ETSF	Etsaut	168.74	0	ePKP2	PKPab	01 07 29.4	-1.9
KEST	Kesra	170.85	299	PKPab	PKPab	01 07 40.8	+0.2
	comp=Z,5.8nm,1.2s,baz=269,slow=1.9,SNR=7.4						
ESDC	Sonseca Array	171.48	18	PKP	PKPdf	01 06 19.7	+0.3
	comp=Z,1.3nm,0.8s,baz=345,slow=3.1,SNR=9.0						
ESDC				PKPab	PKPab	01 07 42.1	-1.3
	comp=Z,0.6nm,0.4s,baz=336,slow=3.9,SNR=9.0						
ESDC				PP	PP	01 11 32.5	-2.5
	comp=Z,0.8nm,0.8s,baz=346,slow=4.9,SNR=4.2						

*IDC **02** 00:49:05.0±0.8, 3238S×7177W, h0^{km}, mb4.3/7, mb1 4.3/11, mb1mx4.2/17, mbtmp4.2/11, ML4.1/4, MS3.8/5, Ms1 3.7/5, ms1mx3.3/19, Error ellipse: s-maj=28.5km s-min=19.9km az=89.0*

*ISCJB **02** 00:49:07.8±0.7, 3238S±002×7195W±005, h27^{km}±4^{km}, mb4.2/8, MS3.9/3, Error ellipse: s-maj=7.7km s-min=3.4km az=159.5*

*NEIC **02** 00:49:08.6, 3238S×7180W, h10^{km}, mb4.2/1, ML4.1(GUC), After GUC.*

*GUC **02** 00:49:08.6±0.6, 3238S×7180W, h10^{km}±2^{km}, MD4.2, ML4.1*

ISC 02 00:49:08.1±0.8**, 3238S**±002×**7188W**±005**, h17**^{km}±4^{km}**, n50, σ0^{s}84**/72**, mb4.2**/8**, MS3.9**/3**, 13C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.59	34	⇓iP	Pg	00 49 20.1	+0.4
CHNG				iS	Sg	00 49 28.6	+0.9
IHA	Instituto Hidr	0.68	163	⇑iP	Pg	00 49 21.1	-0.4
IHA				iS	Sg	00 49 30.8	+0.3
ROCH	El Roble	0.94	129	⇑iP	Pb	00 49 25.4	-0.6
ROCH				iS	Sb	00 49 38.4	+0.2
ILCH	Illapel	0.96	40	eP	Pb	00 49 25.6	-0.5
ILCH				iS	Sb	00 49 38.9	+0.4
ILCH				AML	AML	00 49 40.7	
	comp=E,7µm,0.4s						
ILCH	Illapel	0.96	40	eP	Pb	00 49 25.6	-0.5
ILCH				iS	Sb	00 49 38.9	+0.4
LCCH	Las Cruces	1.13	167	⇓iP	Pn	00 49 28.5	-0.5
LCCH				iS	Sb	00 49 43.8	+0.4
JACH	Jahuel	1.13	106	⇑iP	Pn	00 49 27.9	-1.2
JACH				iS	Sb	00 49 42.7	-0.8
PEL	Peldehue	1.27	127	⇑iP	Pn	00 49 30.6	-0.4
PEL				iS	Sb	00 49 46.5	-1.0
PEL				AML	AML	00 49 48.8	
	comp=E,10µm,0.4s						
PEL	Peldehue	1.27	127	⇑iP	Pn	00 49 30.6	-0.4
PEL				iS	Sb	00 49 46.5	-1.0
CMCH	Combarbala	1.42	32	⇑iP	Pn	00 49 33.0	0.0
CMCH				iS	Sn	00 49 51.9	+0.7
RCDM	Rinconada Maip	1.43	141	⇑iP	Pn	00 49 33.2	0.0
RCDM				iS	Sn	00 49 51.5	-0.1
RCDM				AML	AML	00 49 58.7	
	comp=E,3µm,0.4s						
RCDM	Rinconada Maip	1.43	141	⇑iP	Pn	00 49 33.2	0.0
RCDM				iS	Sn	00 49 51.5	-0.1
SAN	Santiago	1.49	137	⇓iP	Pn	00 49 33.8	-0.2
SAN				iS	Sn	00 49 53.1	+0.2
SAN				AML	AML	00 50 04.4	
	comp=E,3µm,0.8s						
SAN	Santiago	1.49	137	⇓iP	Pn	00 49 33.8	-0.2
SAN				iS	Sn	00 49 53.1	+0.2
STL	Santa Lucia	1.49	136	⇑iP	Pn	00 49 33.4	-0.6
STL				iS	Sn	00 49 52.4	-0.5
TACH	Talagante	1.50	148	eP	Pn	00 49 34.3	+0.1
TACH				iS	Sn	00 49 53.5	+0.2
DSCH	Colegio Aleman	1.50	133	⇑iP	Pn	00 49 33.6	-0.6
DSCH				iS	Sn	00 49 52.8	-0.5
CLCH	Cerro Calan	1.52	132	iP	Pn	00 49 34.6	+0.2
CLCH				iS	Sn	00 49 53.9	0.0
CLCH				AML	AML	00 50 02.7	
	comp=E,5µm,0.5s						
ANTU	Antumapu	1.59	139	⇑iP	Pn	00 49 35.7	+0.3
ANTU				iS	Sn	00 49 56.2	+0.8
ANTU				AML	AML	00 50 06.8	
	comp=N,4µm,0.8s						
ANTU	Antumapu	1.59	139	⇑iP	Pn	00 49 35.7	+0.3
ANTU				iS	Sn	00 49 56.2	+0.8
FCH	Farellones	1.64	126	⇓iP	Pn	00 49 36.2	+0.1
FCH				iS	Sn	00 49 57.6	+0.9
PCH	Pirque	1.69	138	iP	Pn	00 49 37.0	+0.2
PCH				iS	Sn	00 49 59.1	+1.0
SJCH	San Jose de Ma	1.80	135	AML	AML	00 50 15.5	
	comp=N,1µm,0.7s						
OVCH	Ovalle	1.86	18	iP	Pn	00 49 39.9	+0.8
OVCH				iS	Sn	00 50 04.1	+2.0
OVCH				AML	AML	00 50 13.5	
	comp=N,8µm,0.7s						
OVCH	Ovalle	1.86	18	iP	Pn	00 49 39.9	+0.8
OVCH				iS	Sn	00 50 04.1	+2.0
CHCH	Chadas Angostu	1.86	147	⇓iP	Pn	00 49 39.9	+0.8
CHCH				iS	Sn	00 50 03.8	+1.6
TLL	Tololo Astrono	2.39	23	AML	AML	00 50 25.8	
	comp=N,7µm,0.9s						
CFAA	Coronel Fontan	3.19	77	Pn	Pn	00 49 59.9	+2.4
	comp=N,2.0nm,0.3s,baz=252,slow=12,SNR=119						
CFAA				Lg		00 50 42.7	
	comp=N,6.8nm,0.3s,baz=12,slow=16,SNR=11						
PLCA	Paso Flores	8.41	173	Pn	Pn	00 51 09.3	+0.3
	comp=N,0.4nm,0.3s,baz=339,slow=12,SNR=9.1						
PLCA				Lg		00 53 30.1	
	baz=266,slow=16,SNR=3.9						
PLCA				LR	LR	00 54 25.9	
	comp=N,277nm,18.1s,baz=357,slow=38						
PLCA	Paso Flores	8.41	173	Pn	Pn	00 51 09.3	+0.2
PLCA				Lg		00 53 30.1	
PLCA				LR	LR	00 54 25.9	
TRQA	Tornquist	9.88	128	ePn	Pn	00 51 30.2	+0.9
	comp=N,31nm,1.3s						
TRQA				eSn	Sn	00 53 34.6	+15
LVC	Limon Verde	10.08	16	Pn	Pn	00 51 29.5	-2.5
	comp=N,0.3nm,0.3s,baz=225,slow=4.3,SNR=4.7						
LVC				Sn	Sn	00 53 36.6	+12
	comp=N,1.6nm,0.3s,baz=157,slow=11,SNR=3.7						
LVC				LR	LR	00 55 17.2	
	comp=N,293nm,19.6s,baz=209,slow=37						
CPUP	Villa Florida	14.04	68	ePn	Pn	00 52 25.3	-0.9
	comp=N,16nm,0.6s						
CPUP				eSn	Sn	00 55 00.2	-1.4
ARE	Arequipa	15.85	1	eP	Pn	00 52 57.0	+6.7
LPAZ	La Paz	16.38	13	Pn	Pn	00 52 58.1	+1.1
	comp=N,0.4nm,0.3s,baz=191,slow=8.7,SNR=22						
SIV	San Ignacio	19.04	34	P	Pn	00 53 28.0	-2.0
	comp=N,0.1nm,0.3s,baz=223,slow=12,SNR=18						
SAML	Samuel	24.67	21	eP	P	00 54 27.5	-0.4
	comp=N,4.3nm,0.8s,mb4.0						
BDFB	Brasilia	27.34	58	P	P	00 54 51.2	-0.9
	comp=N,8.7nm,0.8s,mb4.3,baz=241,slow=7.4,SNR=9.9						
BDFB				LR	LR	01 07 12.5	
	comp=N,242nm,18.4s,MS3.8,baz=199,slow=40						
VNA1	Neumayer--Stat	51.12	157	⇑iP	P	00 58 14.6	+4.8
VNA1				e		00 58 17.2	
VNA1				e		00 58 22.0	
DBIC	Dimbokro	74.54	72	P	P	01 00 45.2	-0.6
	comp=N,5.5nm,0.8s,mb4.5,baz=243,slow=6.8,SNR=3.7						
DBIC				LR	LR	01 31 28.0	
	comp=N,65nm,19.1s,MS3.9,baz=148,slow=34						
DBIC	Dimbokro	74.54	72	P	P	01 00 45.2	-0.6
DBIC				LR	LR	01 31 28.0	
BOSA	Boshof	80.71	118	P	P	01 01 19.9	-0.3
	comp=N,5.7nm,1.1s,mb4.4,baz=304,slow=3.6,SNR=3.3						
PDAR	Pinedale Array	82.38	333	P	P	01 01 29.8	+0.8
	comp=N,0.3nm,0.6s,mb3.4,baz=123,slow=6.7,SNR=2.5						
PDAR				LR	LR	01 36 26.7	
	comp=N,75nm,20.9s,MS4.0,baz=19,slow=34						
NVAR	Mina Array Bea	82.63	325	P	P	01 01 30.5	+0.1
	comp=N,0.6nm,0.6s,mb3.8,baz=170,slow=5.9,SNR=2.8						
TORD	Torodi Ar. Bea	83.54	70	P	P	01 01 34.9	-0.2
	comp=N,3.5nm,0.9s,mb4.5,baz=282,slow=4.7,SNR=14						
ULM	Lac du Bonnet	84.97	345	P	P	01 01 41.1	-1.2
	comp=N,2.4nm,0.8s,mb4.4,baz=166,slow=4.2,SNR=4.8						
WRA	Warramunga Arr	122.24	209	PKP	PKPdf	01 08 01.5	-0.5
	comp=N,1.4nm,0.8s,baz=163,slow=1.5,SNR=18						
BVAR	Borovoye Array	145.99	41	PKPbc	PKPbc	01 08 46.6	-0.2
	comp=N,1.9nm,0.4s,baz=283,slow=2.3,SNR=6.9						
ZAL	Zalesovo	152.78	31	PKPbc	PKPbc	01 09 03.9	-0.1
	comp=N,2.8nm,0.6s,baz=165,slow=5.1,SNR=8.7						
MKAR	Makanchi Array	155.58	46	PKPab	PKPab	01 09 25.6	-1.2
	comp=N,1.2nm,0.7s,baz=326,slow=3.7,SNR=3.7						

*NEIC **02** 01:01:29.2, 3239S×7193W, h20^{km}, ML3.0(GUC), After GUC.*

GUC 02 01:01:29.2±0.6**, 3239S**×**7193W, h20**^{km}±4^{km}**, MD3.4, ML3.0, 6C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.63	36	⇓iP	Pb	01 01 41.5	0.0
CHNG				iS	Sb	01 01 49.6	-0.2
CHNG				AML	AML	01 01 52.4	
	comp=E,166nm,0.4s						
ROCH	El Roble	0.97	127	⇓iP	Pb	01 01 47.0	-0.3
ROCH				iS	Sb	01 01 59.1	-0.7
LCCH	Las Cruces	1.12	164	eP	Pn	01 01 50.1	+0.3
LCCH				iS	Sb	01 02 04.7	+0.5
JACH	Jahuel	1.17	105	⇓iP	Pn	01 01 49.6	-0.8
JACH				iS	Sb	01 02 04.3	-1.2
PEL	Peldehue	1.29	126	⇑iP	Pn	01 01 52.1	0.0
PEL				iS	Sn	01 02 08.5	-0.4
PEL				AML	AML	01 02 08.8	
	comp=E,419nm,0.3s						
PEL	Peldehue	1.29	126	⇑iP	Pn	01 01 52.1	0.0
PEL				iS	Sn	01 02 08.5	-0.4
RCDM	Rinconada Maip	1.45	139	eP	Pn	01 01 54.1	-0.1
RCDM				iS	Sn	01 02 12.7	0.0
CMCH	Combarbala	1.45	33	⇑iP	Pn	01 01 54.3	+0.1
CMCH				iS	Sn	01 02 13.1	+0.4
CMCH				AML	AML	01 02 17.7	
	comp=N,368nm,0.4s						
CMCH	Combarbala	1.45	33	⇑iP	Pn	01 01 54.3	+0.1
CMCH				iS	Sn	01 02 13.1	+0.4
TACH	Talagante	1.51	147	⇓iP	Pn	01 01 56.5	+1.4
TACH				iS	Sn	01 02 14.4	+0.2
CLCH	Cerro Calan	1.54	131	iS	Sn	01 02 16.1	+1.0
FCH	Farellones	1.67	124	⇓iP	Pn	01 01 57.6	+0.3
FCH				iS	Sn	01 02 19.0	+0.8
FCH				AML	AML	01 02 21.2	
	comp=E,59nm,0.3s						
PCH	Pirque	1.71	136	⇓iP	Pn	01 01 59.3	+1.4
PCH				iS	Sn	01 02 20.7	+1.5
CHCH	Chadas Angostu	1.88	145	⇑iP	Pn	01 02 00.7	+0.6
CHCH				iS	Sn	01 02 24.8	+1.5
CACH	El Canelo	2.05	147	iP	Pn	01 02 04.8	+2.2
CACH				iS	Sn	01 02 31.7	+4.1
CICH	Cipreses	2.30	147	⇑iP	Pn	01 02 07.3	+1.3
CICH				iS	Sn	01 02 36.7	+2.9
SFDO	San Fernando	2.35	161	eP	Pn	01 02 10.7	+4.0
TLL	Tololo Astrono	2.42	24	AML	AML	01 02 47.5	
	comp=N,94nm,0.8s						

IDC 02 01:52:03.9±3.4**, 687S**×**14768E, h0**^{km}**, mb3.5**/2**, mb1 3.8**/4**, mb1mx3.5**/14**, mbtmp3.6**/4**, ML3.3**/2**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx3.0**/16**, Error ellipse: s-maj=81.3km s-min=33.0km az=95.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.57	192	Pn	Pn	01 52 47.7	+1.0
	26nm,0.3s,baz=32,slow=4.8,SNR=33						
PMG				Sn	Sn	01 53 18.4	-0.2
	74nm,0.3s,baz=164,slow=23,SNR=14						
WRA	Warramunga Arr	18.34	224	P	Pn	01 56 20.9	+1.3
	0.1nm,0.3s,baz=52,slow=12,SNR=5.6						
ASAR	Alice Springs	21.31	217	P	P	01 56 52.0	-0.1
	1.2nm,0.6s,baz=54,slow=9.3,SNR=18						
FITZ	Fitzroy Crossi	24.21	241	P	P	01 57 22.1	0.0
	0.8nm,0.4s,baz=48,slow=9.7,SNR=12						
AFI	Afiamalu	40.44	103	LR	LR	02 12 20.6	
	comp=Z,243nm,19.3s,baz=146,slow=30						
TORD	Torodi Ar. Bea	145.96	283	PKPbc	PKPbc	02 11 45.7	+0.3
	0.2nm,0.5s,baz=76,slow=3.2,SNR=8.3						

*ISCJB **02** 02:01:21.5±2.3, 351S±04×1114W±04, h10^{km}, mb4.0/14, MS4.0/9, Error ellipse: s-maj=74.1km s-min=15.4km az=80.0*

*IDC **02** 02:01:24.9±1.5, 3451S×11079W, h0^{km}, mb3.9/4, mb1 4.3/4, mb1mx3.9/15, mbtmp3.9/4, MS3.9/9, Ms1 3.9/9, ms1mx3.6/19, Error ellipse: s-maj=62.1km s-min=30.5km az=35.0*

*NEIC **02** 02:01:24.5±1.0, 3484S×111.13W, h10^{km}, mb4.2/10, Error ellipse: s-maj=37.3km s-min=13.2km az=222.0*

ISC 02 02:01:23.0±2.3**, 351S**±04×**1115W**±04**, h10**^{km}**, n28, σ0^{s}69**/17**, mb4.0**/14**, MS4.0**/9**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	32.56	112	P	P	02 07 54.6	+0.3
	5.1nm,1.1s,mb4.4,baz=266,slow=8.8,SNR=5.7						
PLCA				LR	LR	02 17 21.8	
	comp=Z,95nm,19.6s,MS3.5,baz=287,slow=30						
PPT	Papeete	38.06	287	LR	LR	02 20 55.5	
	comp=Z,299nm,18.5s,MS4.1,baz=149,slow=30						
LVC	Limon Verde	39.03	83	eP	P	02 08 49.5	-0.3
	3.9nm,1.0s,mb4.1						
TRQA	Tornquist	39.49	109	eP	P	02 08 53.3	-0.3
	6.1nm,1.1s,mb4.2						
LPAZ	La Paz	42.93	75	P	P	02 09 22.5	+0.5
	1.0nm,0.8s,mb3.6,baz=254,slow=3.1,SNR=3.8						
LPAZ				LR	LR	02 22 49.4	
	comp=Z,158nm,19.4s,MS3.9,baz=303,slow=30						
ROSC	El Rosal	52.91	49	LR	LR	02 29 10.6	
	comp=Z,40nm,19.8s,MS3.5,baz=189,slow=32						
VNDA	Vanda	55.31	195	LR	LR	02 31 23.4	
	comp=Z,58nm,21.8s,MS3.6,baz=110,slow=32						
BDFB	Brasilia	59.59	88	LR	LR	02 34 52.3	
	comp=Z,156nm,18.7s,MS4.2,baz=199,slow=34						
NVAR	Mina Array Bea	73.44	354	P	P	02 12 56.7	+1.2
	0.7nm,0.8s,mb3.6,baz=212,slow=10,SNR=4.7						
NVAR	Mina Array Bea	73.44	354	P	P	02 12 56.7	+1.2
SMCO	Snowmass	74.03	4	eP	P	02 12 59.3	+0.4
	3.0nm,1.1s,mb4.1						
DUG	Dugway	74.94	359	eP	P	02 13 04.8	+0.6
	1.4nm,0.9s,mb3.9						
DAU	Daniels Canyon	75.14	0	eP	P	02 13 05.6	+0.1
WVOR	Wild Horse Val	77.44	355	eP	P	02 13 18.9	+0.5
	1.3nm,0.6s,mb4.0						
BW06	Boulder Array	77.52	1	eP	P	02 13 17.8	-1.1
	2.5nm,1.1s,mb4.1						
PDAR	Pinedale Array	77.52	1	P	P	02 13 18.1	-0.8
	1.1nm,0.9s,mb3.8,baz=170,slow=4.4,SNR=10						
TPAW	Teton Pass	78.22	0	eP	P	02 13 21.3	-1.5
	6.4nm,1.3s,mb4.4						
HLID	Hailey	78.34	358	eP	P	02 13 23.8	+0.3
	13nm,1.6s,mb4.6						
HLID				e		02 14 32.6	
MOOW	Moose Ponds	78.48	1	eP	P	02 13 24.7	+0.4
	1.1nm,0.7s,mb3.9						
RSSD	Black Hills	79.14	5	eP	P	02 13 27.2	-0.7
	1.1nm,0.5s,mb4.0						
MCMT	McKenzie Canyo	79.56	359	eP	P	02 13 30.5	+0.3
STKA	Stephens Creek	84.39	235	LR	LR	02 45 49.9	
	comp=Z,102nm,20.2s,MS4.2,baz=23,slow=31						
ASAR	Alice Springs	94.86	237	LR	LR	02 51 30.4	
	comp=Z,86nm,20.9s,MS4.2,baz=5.9,slow=31						
WRA	Warramunga Arr	97.00	240	LR	LR	02 54 17.2	
	comp=Z,114nm,18.3s,MS4.4,baz=120,slow=32						
AKASG	Malin Array Be	147.71	49	PKPbc	PKPbc	02 21 05.8	-2.0
	0.2nm,0.3s,baz=292,slow=2.3,SNR=4.4						
SONM	Songino Array	149.21	306	PKP	PKPdf	02 21 10.5	+3.0
	0.8nm,0.7s,baz=28,slow=3.5,SNR=5.4						
SONM				PKPbc	PKPbc	02 21 16.4	+4.6
	1.7nm,0.9s,baz=110,slow=2.9,SNR=7.8						
EIL	Elat	151.23	91	ePKPbc	PKPbc	02 21 16.5	-0.1
BRTR	Keskin Array B	152.03	70	PKPbc	PKPbc	02 21 20.1	+1.7
	0.8nm,1.0s,baz=212,slow=4.4,SNR=4.8						

*NDI **02** 02:10:09.8±3.2, 3472N×8084E, h15^{km}, mb4.7, mb4.6(NEIC)*

*ISCJB **02** 02:10:10.6±0.2, 3471N±002×8039E±003, h16^{km}, mb4.6/82, MS3.7/21, Error ellipse: s-maj=3.3km s-min=2.4km az=147.9*

*IDC **02** 02:10:11.0±0.5, 3467N×80.14E, h13^{km}±2^{km}, mb4.2/20, mb1 4.3/23, mb1mx4.3/25, mbtmp4.3/23, ML4.1/3, MS3.7/12, Ms1 3.7/12, ms1mx3.5/30, Error ellipse: s-maj=14.2km s-min=10.8km az=32.0*

*BJI **02** 02:10:11.5, 3471N×8024E, h17^{km}, mB4.8, mb4.6, ML4.3, Ms4.3, Msz4.1*

*NEIC **02** 02:10:12.5±0.3, 3477N×8041E, mb4.6/58, Error ellipse: s-maj=8.8km s-min=4.9km az=51.0*

*MOS **02** 02:10:12.8±1.1, 3479N×8048E, h33^{km}, mb5.0/42, Error ellipse: s-maj=10.8km s-min=4.4km az=124.9*

*SZGRF **02** 02:10:14.0, 3376N×8024E, h33^{km}, mb4.6, Xizang*

*NNC **02** 02:10:18.3±8.0, 35.11N×7973E, h20^{km}±48^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=66.5km s-min=44.4km az=35.0*

ISC 02 02:10:13.0±0.2**, 3471N**±002×**8034E**±003**, h17**^{km}**, h17**^{km}±1.3^{km}**:pP-P, n273, σ1^{s}33**/293**, mb4.6**/82**, MS3.8**/22**, 28C-8D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLP	Kalpa	3.62	210	eP	Pn	02 11 08.6	+0.2
KLP				eS	Sn	02 11 51.9	+1.2
JOSI	Joshimath	4.19	189	ex	x	02 11 04.2	
JOSI				eS	Sn	02 12 02.9	-1.9
DLH	Dalhousie	4.24	241	ex	Pn	02 11 13.0	-3.9
DLH				eS	Sn	02 12 11.0	+5.0
SDNR	Sundarnagar	4.27	222	eP	Pn	02 11 20.0	+2.7
SDNR				ex	Sb	02 12 19.4	+0.4
SMLA	Simla	4.46	218	eP	Pn	02 11 19.3	-0.5
SMLA				eS	Sn	02 12 11.1	-0.3
PONG	Pong	4.59	234	ex	Pb	02 11 35.0	+1.9
BHK	Bhakra	4.65	226	ex	Pb	02 11 34.1	-0.1
LGTI	Lohaghat	5.24	181	eP	Pn	02 11 30.5	-0.1
LGTI				ex	Sn	02 12 33.0	+2.3
KSH	Kashi	5.94	325	P	Pn	02 11 42.4	+2.3
KSH				S	Sn	02 12 49.3	+1.6
CHCP	Chirah Chowk	5.96	262	⇑P	Pn	02 11 36.6	-3.9
NDI	New Delhi	6.57	205	eP	Pn	02 11 47.0	-1.9
NDI				eP		02 11 49.1	
NDI				AMb	AMB	02 11 51.5	
	comp=Z,31nm,1.0s						
NDI				eS	Sn	02 13 00.0	-3.4
AYAN	Aya Nagar	6.79	205	eP	Pn	02 11 51.0	-0.9
AYAN				AMb	AMB	02 11 53.3	
	comp=Z,22nm,0.5s						
AYAN				eS	Sn	02 13 04.3	-4.4
KUDL	Kundal	7.33	208	eP	Pn	02 11 58.3	-0.9
KUDL				AMb	AMB	02 12 00.1	
	comp=Z,18nm,0.8s						
KUDL				eS	Sn	02 13 17.8	-4.2
THW	Thamme Wali	7.41	257	P	Pn	02 11 56.2	-4.2
THW				S	Sn	02 13 16.0	-8.2
GKN	Gorkha	7.62	150	ePn	Pn	02 12 03.2	-0.1
GKN				eSn	Sn	02 13 30.6	+1.3
	comp=Z,132nm,1.1s						

KHET Khetri 7.67 212 *e*P **Pn** **02 12 02.6 -1.3**
KHET AMb AMB 02 12 04.5
comp=Z,5.6nm,0.3s
KHET ⇑*e*S **Sn** **02 13 26.0 -4.4**
KKN Kakani 8.09 147 *e*Pn **Pn** **02 12 10.4 +0.7**
KKN *e*Sn **Sn** **02 13 41.6 +0.9**
comp=Z,57nm,0.8s
DMN Daman 8.17 149 *e*Pn **Pn** **02 12 11.3 +0.5**
DMN *e*Sn **Sn** **02 13 43.1 +0.4**
comp=Z,311nm,1.2s
GUN Gumba 8.27 144 *e*Pn **Pn** **02 12 13.6 +1.5**
GUN *e*Sn **Sn** **02 13 49.5 +4.4**
comp=Z,100nm,1.1s
SBDP Sheikh Budin 8.32 256 P **Pn** **02 12 08.0 -4.9**
PKI Pulchoki 8.33 147 *e*Pn **Pn** **02 12 13.8 +0.8**
JIRN Jiri 8.62 143 *e*Pn **Pn** **02 12 18.8 +1.7**
TKM2 Tokmak 2 9.00 337 ⇑Pn **Pn** **02 12 17.5 -4.6**
comp=Z,6.4nm,1.0s
TKM2 ⇑Lg 02 14 56.1
comp=Z,24nm,1.4s
TKM2 Tokmak 2 9.00 337 *i* P **Pn** **02 12 17.2 -4.9**
TKM2 pmax pmax
comp=Z,40nm,1.0s
FRU Bishkek 9.26 333 *e*P **Pn** **02 12 28.0 +2.2**
FRU pmax pmax
comp=Z,32nm,1.5s
AJM Ajmer 9.56 212 AMb AMB 02 12 33.5
comp=Z,28nm,1.0s
AJM ⇑*e*S **Sn** **02 14 11.3 -5.5**
WMQ Urumqi 10.73 30 *e*P **Pn** **02 12 47.5 +1.6**
WMQ XP 02 12 53.5
WMQ S **Sn** **02 14 48.0 +2.3**
WMQ SS 02 15 01.0
WMQ AMB AMB
comp=Z,12nm,1.0s
WMQ LR LR
comp=N,689nm,8.0s
WMQ LR LR
comp=E,754nm,8.0s
WMQ LR LR
comp=Z,389nm,7.0s
JASL Jaisalmer 11.22 229 *ex* x 02 12 35.5
KK31 Karatay Array 11.35 321 ⇑Pn **Pn** **02 12 52.9 -1.5**
comp=Z,7.9nm,0.7s,baz=141,slow=12,SNR=91
KK31 ⇓Sn **Sn** **02 14 56.3 -4.5**
comp=Z,10nm,0.8s,baz=234,slow=70,SNR=2.7
KK31 Karatay Array 11.35 321 *i* P **Pn** **02 12 52.8 -1.5**
KK31 pmax pmax
comp=Z,6.0nm,0.4s
MK02 Makanchi Array 12.14 6 ⇑P **Pn** **02 13 05.7 +0.5**
comp=Z,12nm,0.6s,baz=185,slow=13
MKAR Makanchi Array 12.16 6 Pn **Pn** **02 13 04.3 -1.2**
comp=Z,1.1nm,0.3s,baz=189,slow=13,SNR=20
MKAR Sn **Sn** **02 15 22.9 +2.2**
comp=Z,0.2nm,0.3s,baz=195,slow=23,SNR=6.3
MKAR Makanchi Array 12.16 6 Pn **Pn** **02 13 04.3 -1.2**
MKAR Sn **Sn** **02 15 22.9 +2.2**
NGP Nagpur 13.55 185 *e*P **Pn** **02 13 22.2 -2.3**
NGP *ex* x 02 15 44.6
AKL Akola 14.26 193 *ex* **Pn** **02 13 28.3 -5.8**
AKL AMb AMB 02 13 35.2
comp=Z,31nm,2.1s
KURK Kurchatov 16.05 356 ⇑P **Pn** **02 13 56.6 -1.3**
comp=Z,16nm,0.9s
KURK Kurchatov 16.05 356 *i* P **Pn** **02 13 56.6 -1.3**
KURK Kurchatov 16.05 356 *e*Pn **Pn** **02 13 57.0 -0.9**
KURK *e*P 02 14 02.9
GTA Gaotai 16.23 68 *e*P **Pn** **02 13 58.9 -1.3**
GTA AP pP 02 14 05.5 -2.4
GTA XP sP 02 14 09.6 -0.4
GTA AMB AMB
comp=Z,3.0nm,0.7s
LZH Lanzhou 19.20 79 *e*P **Pn** **02 14 37.9 +0.9**
LZH AP pP 02 14 44.5 +3.8
LZH XP sP 02 14 50.5 +7.7
LZH PP 02 14 55.1
LZH *e*S **Sn** **02 18 04.1 -7.7**
LZH XS sS 02 18 21.1 +0.6
LZH SS 02 18 33.0
LZH AMB AMB
comp=Z,33nm,1.5s
LZH AMB AMB
comp=Z,190nm,4.8s
LZH LR LR
comp=E,589nm,12.6s
LZH LR LR
comp=Z,662nm,13.1s
VOSK Vostochnaya 19.21 342 ⇑P **Pn** **02 14 34.6 -2.5**
comp=Z,8.7nm,0.7s
ZAL Zalesovo 19.48 8 P **Pn** **02 14 37.6 -2.7**
comp=Z,0.8nm,0.3s,baz=269,slow=11,SNR=10
BVA0 Borovoye Array 19.63 342 ⇑P **Pn** **02 14 39.2 -3.0**
comp=Z,2.8nm,0.9s,baz=225,slow=37,SNR=78
BVAR Borovoye Array 19.63 342 P **Pn** **02 14 39.0 -3.1**
comp=Z,1.5nm,0.3s,baz=156,slow=12,SNR=22
BVAR LR LR 02 22 19.7
comp=Z,164nm,18.4s,baz=303,slow=37
BVAR Borovoye Array 19.63 342 P **Pn** **02 14 39.0 -3.1**
BVAR LR LR 02 22 19.7
BRVK Borovoye 19.69 342 *e*P **Pn** **02 14 39.8 -3.0**
BRVK pmax pmax
comp=Z,7.0nm,0.7s
BRVK Borovoye 19.69 342 *e*P **Pn** **02 14 39.8 -3.1**
comp=Z,7.2nm,0.7s
ZRNK Zerenda 19.94 340 ⇓P **Pn** **02 14 41.5 -4.4**
comp=Z,9.2nm,1.0s
ZRNK Zerenda 19.94 340 *e*P **Pn** **02 14 41.6 -4.2**
ZRNK pmax pmax
comp=Z,10.0nm,0.8s
ZRNK Zerenda 19.94 340 *e*P **Pn** **02 14 41.6 -4.2**
comp=Z,10nm,0.8s
CD2 Chengdu 20.03 94 *e*P **P** **02 14 43.2 -1.9**
CD2 PP 02 15 02.2
CD2 S **S** **02 18 20.7 -8.9**
CD2 AMB AMB
comp=Z,10.0nm,0.6s
CD2 AMB AMB
comp=Z,30nm,4.2s
CD2 LR LR
comp=E,280nm,10.8s
CD2 LR LR
comp=Z,310nm,10.8s,MS3.9
CHKZ Chkalovo 20.17 343 ⇑P **P** **02 14 45.2 -1.4**
comp=Z,12nm,0.7s
CHKZ Chkalovo 20.17 343 *i* P **P** **02 14 46.5 -0.1**
CHKZ pmax pmax
comp=Z,30nm,0.6s
CHKZ Chkalovo 20.17 343 *e*P **P** **02 14 45.0 -1.5**
comp=Z,22nm,0.8s
NVS Novosibirsk 20.23 5 *e*P **P** **02 14 45.1 -2.2**
NVS *e*S **S** **02 18 28.5 -5.1**
NVS pmax pmax
comp=N,16nm,0.8s
NVS pmax pmax
comp=E,6.0nm,0.8s
NVS pmax pmax
comp=Z,16nm,0.8s
NVS smax
comp=N,12nm,1.5s
NVS smax
comp=E,7.0nm,1.5s
AB31 Akbulak array 20.91 320 ⇑P **P** **02 14 54.9 +0.3**
comp=E,6.1nm,0.7s
KMI Kunming 21.60 110 P **P** **02 15 03.0 +1.0**
KMI AP 02 15 08.0
KMI XP sP 02 15 10.2 +1.3
KMI PP 02 15 27.8
KMI PPP 02 15 37.2
KMI S **S** **02 18 56.2 -4.4**
KMI XS sS 02 19 04.3 -3.9
KMI SS 02 19 31.6
KMI SSS 02 19 46.0
KMI AMB AMB
comp=Z,51nm,0.7s,mb5.1
KMI AMB AMB
comp=Z,169nm,4.4s
KMI LR LR
comp=N,401nm,6.7s
KMI LR LR
comp=E,282nm,5.0s
KMI LR LR
comp=Z,246nm,8.2s
WSAR Wadi Sarin 22.12 245 P **P** **02 15 06.1 -1.5**
comp=Z,4.3nm,0.7s,mb4.0,baz=87,slow=14,SNR=4.2
WSAR LR LR 02 25 36.4
comp=Z,104nm,18.7s,MS3.3,baz=35,slow=42
AKTK Aktyubinsk 22.61 321 P **P** **02 15 11.2 -1.7**
AKTK LR LR 02 24 43.9
AKTO Aktyubinsk 22.61 321 P **P** **02 15 11.2 -1.7**
comp=Z,2.5nm,0.5s,mb3.9,baz=105,slow=11,SNR=15
AKTO LR LR 02 24 43.9
comp=Z,257nm,18.6s,MS3.7,baz=295,slow=39
CHG Chiang Mai 22.88 129 ⇓P **P** **02 15 21.9 +6.2**
CHTO Chiang Mai 22.88 129 *e*P **P** **02 15 15.7 0.0**
CHTO *e**PP 02 15 21.6
CHTO pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
CHTO Chiang Mai 22.88 129 *e*P **P** **02 15 15.7 0.0**
comp=Z,10nm,0.8s,mb4.3
CHTO *e*pP 02 15 21.6
ZAK Zakamensk 22.90 40 *e*P **P** **02 15 15.6 -0.3**
ZAK pmax pmax
comp=Z,20nm,1.4s,mb4.3
SONM Songino Array 23.43 48 P **P** **02 15 22.8 +1.3**
comp=Z,3.0nm,0.7s,mb3.9,baz=222,slow=12,SNR=11
SONM pP 02 15 27.3
comp=Z,3.2nm,0.7s,baz=240,slow=10,SNR=13
SONM LR LR 02 25 11.7
comp=Z,219nm,19.8s,MS3.6,baz=65,slow=38
SONM Songino Array 23.43 48 P **P** **02 15 22.8 +1.3**
SONM *PP 02 15 27.3
ULN Ulaanbaatar 23.85 48⇑ *e*P **P** **02 15 27.6 +2.2**
HHC Hu-ho-hao-te 25.34 67 *e*P **P** **02 15 38.9 -0.1**
HHC AP pP 02 15 44.5 +0.5
HHC XP sP 02 15 47.6 +1.5
HHC PP 02 16 17.1
HHC PCP PcP 02 19 13.5 +2.0
HHC S **S** **02 20 00.6 -4.0**
HHC XS sS 02 20 10.1 -2.7
HHC SS 02 21 01.3
HHC SCP ScP 02 22 50.4 +0.4
HHC PCS PcS 02 22 52.3 +0.4
HHC AMB AMB
comp=Z,15nm,0.7s,mb4.6
HHC AMB AMB
comp=Z,179nm,7.4s
HHC LR LR
comp=N,91nm,9.5s
HHC LR LR
comp=E,101nm,10.4s
HHC LR LR
comp=Z,141nm,11.4s,MS3.7
NST Nakhon Sawan 25.98 132 P **P** **02 15 44.0 -0.9**
ARU Arti 26.32 332 *e*P **P** **02 15 48.4 +0.5**
ARU *e* 02 16 25.8
ARU *e*S **S** **02 20 18.1 -2.0**
ARU MLR MLR
comp=Z,100nm,18.0s,MS3.4
ARU MLR MLR
comp=N,60nm,23.0s
ARU MLR MLR
comp=E,70nm,15.0s
ARU Arti 26.32 332 *e*P **P** **02 15 48.2 +0.3**
comp=E,8.8nm,0.8s,mb4.3
GNI Garni 28.66 292 P **P** **02 16 06.8 -2.1**
comp=E,2.0nm,0.3s,mb4.3,baz=145,slow=12,SNR=2.7
GNI LR LR 02 29 11.8
comp=E,125nm,18.6s,MS3.5,baz=163,slow=40
GNI Garni 28.66 292 *e*P **P** **02 16 10.2 +1.3**
GNI pmax pmax
comp=Z,12nm,1.0s
GNI Garni 28.66 292 *e*P **P** **02 16 10.2 +1.3**
comp=Z,12nm,1.0s,mb4.6
KIV Kislovodsk 30.34 299 *i* P **P** **02 16 25.2 +1.5**
QIZ Qiongzhong 30.45 113 P **P** **02 16 25.9 +1.2**
QIZ S **S** **02 21 25.8 +0.7**
QIZ LR LR
comp=Z,438nm,5.0s
NJ2 Nanjing 32.14 84 *e*P **P** **02 16 46.4 +6.8**
NJ2 S **S** **02 21 57.0 +5.6**
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
NJ2 AMB AMB
comp=Z,90nm,6.1s
NJ2 LR LR
comp=N,160nm,20.4s
NJ2 LR LR
comp=E,110nm,10.2s
NJ2 LR LR
comp=Z,500nm,14.0s
MALT Malatya 33.67 289 *e*P **P** **02 16 52.9 -0.1**
MALT pmax pmax
comp=Z,20nm,0.7s,mb5.2
MALT Malatya 33.67 289 *e*P **P** **02 16 52.9 -0.2**
comp=Z,1.7nm,0.7s,mb4.1
ANN Anapa 34.15 300 *e*P **P** **02 17 03.2 +6.1**
ANN *i* *PP pP 02 17 13.1 +11
ANN *e* 02 18 18.5
ANN *e*S **S** **02 22 30.2 +7.6**
ANN pmax pmax
comp=Z,28nm,1.3s,mb5.0
SNY Shenyang 34.39 65 ⇑P **P** **02 17 04.3 +5.0**
SNY AMB AMB
comp=Z,8.0nm,0.5s,mb4.9
BOYT Boyabat 36.07 294 *i* P **P** **02 17 15.4 +1.7**
OBN Obninsk 36.32 318⇑ *e*P **P** **02 17 15.9 0.0**
OBN *e**PP pP 02 17 24.8 +3.8
OBN pmax pmax
comp=Z,12nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,100nm,19.0s,MS3.6
BR131 Keskin Array S 37.20 292 *e*P **P** **02 17 21.4 -1.9**
comp=Z,6.6nm,0.6s,mb4.6
BRTR Keskin Array B 37.20 292 P **P** **02 17 20.9 -2.4**
comp=Z,6.7nm,0.6s,mb4.6,baz=108,slow=8.1,SNR=22
BRTR pP pP 02 17 24.8 -3.6
comp=Z,6.8nm,0.6s,baz=110,slow=9.4,SNR=40
BRTR Keskin Array B 37.20 292 *i* P **P** **02 17 23.5 +0.2**
BRTR pmax pmax
comp=Z,7.0nm,0.6s
ELDT Eldivan 37.27 293 *i* P **P** **02 17 25.9 +1.9**
ANTO Ankara 37.83 292 *e*P **P** **02 17 28.9 +0.2**
ANTO pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
ANTO Ankara 37.83 292 *e*P **P** **02 17 28.9 +0.2**
comp=Z,3.8nm,0.5s,mb4.4
SGKT Sivrigoynuk 38.30 293 *i* P **P** **02 17 34.7 +2.1**
MDJ Mudanjiang 38.66 60 P **P** **02 17 34.9 -0.8**
MDJ S **S** **02 23 32.1 +0.5**
MDJ AMB AMB
comp=Z,6.0nm,1.2s,mb4.2
MDJ AMB AMB
comp=Z,38nm,3.6s
MDJ LR LR
comp=N,38nm,19.2s,MS3.5
MDJ LR LR
comp=E,66nm,17.9s,MS3.5
MDJ LR LR
comp=Z,83nm,20.5s,MS3.5
ESKT Eskisehir 39.36 292 *i* P **P** **02 17 42.5 +1.0**
AKASG Malin Array Be 39.98 310 P **P** **02 17 44.7 -1.9**
comp=Z,3.6nm,0.6s,mb4.3,baz=78,slow=8.1,SNR=17
AKASG PP PP 02 19 17.4 -1.2
comp=Z,2.8nm,0.9s,baz=90,slow=12,SNR=8.9
AKASG Malin Array Be 39.98 310 *i* P **P** **02 17 47.0 +0.3**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 39.98 310 P **P** **02 17 44.7 -1.9**
AKASG PP PP 02 19 17.4 -1.2
AKBB Malin Array Si 39.98 310 *e*P **P** **02 17 48.3 +1.6**
ULDT Uludag 40.57 293 *i* P **P** **02 17 51.5 -0.1**
CFR Carcaliu 40.73 301 ⇓*i*P **P** **02 17 54.4 +1.5**
JOF Joensuu 41.31 328 *e*p **P** **02 17 55.2 -2.4**
comp=Z,0.9nm,0.3s,mb3.9
MLR Muntele Rosu 42.25 302⇑ *i*P **P** **02 18 05.0 -0.4**
KDAG Bornova 42.31 291 *i* P **P** **02 18 07.1 +1.2**
BURAR Bucovina Array 42.60 305⇑ *i*P **P** **02 18 10.0 +1.8**
VOIR 42.88 302⇑ *i*P **P** **02 18 11.3 +0.8**
FINES FINESS Array B 43.26 325 P **P** **02 18 10.7 -2.9**
comp=Z,2.3nm,0.6s,mb4.1,baz=113,slow=9.6,SNR=19
FINES pP pP 02 18 14.7 -4.0
comp=Z,2.5nm,0.6s,baz=111,slow=11,SNR=6.6
FINES LR LR 02 37 47.8
comp=Z,103nm,18.9s,MS3.8,baz=133,slow=38
FINES FINESS Array B 43.26 325 *i* P **P** **02 18 13.6 +0.1**
FINES pmax pmax
comp=Z,2.0nm,0.6s
LVV L'vov 43.30 308 *e*P **P** **02 18 16.4 +2.6**
KAF Kangasniemi 43.30 326 *e*p **P** **02 18 13.6 -0.3**
comp=Z,2.2nm,0.5s,mb4.1
KAF Kangasniemi 43.30 326 *e*P **P** **02 18 13.6 -0.3**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
DRGR 44.37 304⇓*i*P **P** **02 18 24.9 +2.4**
KOLS Kolonicke sedl 44.49 307 *e*P **P** **02 18 23.8 +0.4**
KOLS *e* 02 18 46.3
VTS Vitosha 44.58 298⇑ *i*P **P** **02 18 26.6 +2.5**
CRVS Cervenica-Dubn 45.02 307 *e*P **P** **02 18 30.1 +2.4**
CRVS Cervenica-Dubn 45.02 307 *e*pP **P** **02 18 30.1 +2.4**
BZS Buzias 45.26 302⇓*i*P **P** **02 18 31.9 +2.3**
KEV Kevo 45.37 337 *e*p **P** **02 18 29.1 -1.3**
comp=Z,4.5nm,0.8s,mb4.3
KEV Kevo 45.37 337 *e*P **P** **02 18 29.1 -1.3**
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
NIE Niedzica 45.73 308 *e*P **P** **02 18 32.9 -0.4**
ARCES ARCESS Array B 45.78 336 P **P** **02 18 31.3 -2.4**
comp=Z,3.6nm,0.7s,mb4.4,baz=95,slow=7.7,SNR=14
ARCES pP pP 02 18 35.3 -3.5
comp=Z,4.7nm,0.8s,baz=99,slow=8.4,SNR=5.6
ARCES LR LR 02 38 31.7
comp=Z,74nm,20.4s,MS3.6,baz=109,slow=37
ARCES ARCESS Array B 45.78 336 P **P** **02 18 31.3 -2.4**
ARCES pP pP 02 18 35.3 -3.5
ARCES LR LR 02 38 31.7
ARE0 ARCESS Array S 45.78 336 *e*P **P** **02 18 34.6 +1.0**
MJAR Matsushiro Arr 46.45 70 P **P** **02 18 37.6 -1.4**
comp=Z,0.9nm,0.4s,mb4.0,baz=290,slow=8.7,SNR=5.0
VYHS Vyhne 46.79 307 *e*P **P** **02 18 43.0 +1.4**
VYHS pmax pmax
comp=Z,30nm,1.4s,mb5.0
VYHS Vyhne 46.79 307 *e*P **P** **02 18 43.0 +1.4**
comp=Z,2.6nm,1.4s,mb4.0
VYHS *e* pP 02 18 47.0 +0.2
PKSM Moragy 47.23 304⇑ *i*P **P** **02 18 46.3 +1.2**
MORC Moravsky Berou 47.49 309⇓ *i*P **P** **02 18 49.6 +2.5**
MORC Moravsky Berou 47.49 309 *e*P **P** **02 18 48.1 +1.0**
MORC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MORC Moravsky Berou 47.49 309 *e*P **P** **02 18 48.1 +1.0**
comp=Z,4.3nm,0.9s,mb4.4
ASAJ Asahikawa 47.98 59 LR LR 02 40 22.8
comp=Z,88nm,20.2s,MS3.7,baz=4,3,slow=38
VRAC Vranov 48.16 308⇑ *i*P **P** **02 18 54.6 +2.3**
DPC Dobruska-Polom 48.21 309 *e*P **P** **02 18 52.4 -0.3**
UPC Upice 48.39 310 *e*P **P** **02 18 55.7 +1.7**
JHJ Hachijo jima 2 48.72 74 LR LR 02 41 26.8
comp=Z,108nm,21.2s,MS3.8,baz=91,slow=38
CONA Conrad Observa 48.84 306 P **P** **02 18 53.0 -4.5**
comp=Z,11nm,0.9s,mb4.9
ARSA Arzberg 49.18 305⇑ *i*P **P** **02 19 02.0 +1.9**
comp=Z,5.4nm,0.8s,mb4.6
PRU Pruhonice 49.39 309 *e*P **P** **02 19 02.7 +1.0**
DOBS Dobrina 49.41 304 *i* P **P** **02 19 03.4 +1.5**
PERS Pernice 49.56 305 *e*P **P** **02 19 04.4 +1.4**
BRG Berggiesshubel 49.65 310 *e*P **P** **02 19 04.7 +1.0**
comp=Z,3.1nm,0.9s,mb4.3
BRG
comp=N,239nm,14.0s
BRG
comp=E,67nm,14.0s
BRG
comp=Z,84nm,19.1s
BRG Berggiesshubel 49.65 310 *e*P **P** **02 19 04.7 +1.0**
BRG pmax pmax
comp=Z,30nm,1.0s,mb5.3
BRG MLR MLR
comp=N,239nm,14.0s,MS4.4
BRG MLR MLR
comp=E,67nm,14.0s,MS4.4
BRG MLR MLR
comp=Z,84nm,19.1s
BOJS Bojanci 49.69 303 *e*P **P** **02 19 00.7 -3.3**
MOA Molln 49.91 306⇓ *i*P **P** **02 19 07.0 +1.2**
comp=Z,7.0nm,1.0s,mb4.7
GEC2 GERESS Array S 50.11 308 *e*P **P** **02 19 06.5 -0.7**
GERES GERESS Array B 50.11 308 P **P** **02 19 05.4 -1.8**
comp=Z,4.5nm,1.0s,mb4.5,baz=75,slow=5.7,SNR=15
GERES pP pP 02 19 09.5 -3.0
comp=Z,4.5nm,1.0s,baz=72,slow=6.3,SNR=12
GERES LR LR 02 43 12.0
comp=Z,62nm,18.1s,MS3.7,baz=101,slow=40
KHC Kasperske Hory 50.14 308 *e*P **P** **02 19 09.0 +1.5**
KHC Kasperske Hory 50.14 308⇑ *e*P **P** **02 19 08.2 +0.7**
CLL Collm 50.17 311 *e*P **P** **02 19 08.0 +0.3**
CLL MLR MLR
comp=Z,200nm,12.8s,MS4.3
NB2 NORSAR Subarra 50.36 324 P **P** **02 19 06.0 -3.1**
comp=Z,5.1nm,0.7s,mb4.7,baz=88,slow=7.9
NOA NORSAR Array B 50.36 324 P **P** **02 19 06.0 -3.1**
comp=Z,4.1nm,0.8s,mb4.5,baz=89,slow=7.5,SNR=18
NOA pP pP 02 19 09.8 -4.5
comp=Z,4.1nm,0.8s,baz=89,slow=7.5,SNR=14
NOA LR LR 02 41 56.6
comp=Z,101nm,19.5s,MS3.8,baz=95,slow=38
GRA1 Grafenberg Arr 51.56 309 *e*P **P** **02 19 20.0 +1.9**
comp=Z,9.0nm,1.2s,mb4.6
GRF Grafenberg Arr 51.56 309 *e*P **P** **02 19 20.0 +1.9**
comp=Z,9.0nm,1.2s,mb4.6
GRF Grafenberg Arr 51.56 309 *e*P **P** **02 19 20.0 +1.9**
GRF pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
GRF Grafenberg Arr 51.56 309 *e*P **P** **02 19 20.0 +1.9**
GRF pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
SQTA Sankt Quirin 52.07 306⇑ *i*P **P** **02 19 23.0 +1.1**
comp=Z,3.8nm,0.9s,mb4.3
SQTA Sankt Quirin 52.07 306⇑ *i*P **P** **02 19 23.0 +1.1**
SQTA pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MOTA Moosalm 52.11 306⇑ *i*P **P** **02 19 23.3 +1.1**
comp=Z,4.3nm,0.9s,mb4.4
MOTA Moosalm 52.11 306⇑ *i*P **P** **02 19 23.3 +1.1**
MOTA pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
DAVA Damuels 52.94 306⇑ *i*P **P** **02 19 29.8 +1.4**
comp=Z,1.8nm,0.8s,mb5.0
KMBO Kilima Mbogo 53.81 238 P **P** **02 19 33.5 -1.3**
comp=Z,2.8nm,0.7s,mb4.3,baz=42,slow=9.0,SNR=5.8
KMBO LR LR 02 43 14.1
comp=Z,46nm,18.5s,MS3.6,baz=258,slow=37
KMBO Kilima Mbogo 53.81 238 P **P** **02 19 33.5 -1.3**
KMBO pmax pmax
comp=Z,3.0nm,0.7s
KMBO MLR MLR
comp=Z,46nm,18.5s
KMBO Kilima Mbogo 53.81 238 *e*P **P** **02 19 33.2 -1.6**
comp=Z,7.8nm,1.2s,mb4.5
KMBO *e*pP pP 02 19 37.3 -2.8
CDF Champ du Feu 54.37 308 *e*P **P** **02 19 38.3 -0.6**
comp=Z,5.7nm,0.7s,mb4.3
CDF Champ du Feu 54.37 308 *e*P **P** **02 19 38.3 -0.6**
CDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CDF Champ du Feu 54.37 308 *e*P **P** **02 19 38.3 -0.6**
comp=Z,2.8nm,0.7s,mb4.3
PGF Pioggiola 54.79 301 *e*P **P** **02 19 41.1 -0.8**
HINF Hinteralfeld 54.80 308 *e*P **P** **02 19 41.1 -0.9**
comp=Z,11nm,0.6s,mb4.7
HINF Hinteralfeld 54.80 308 *e*P **P** **02 19 41.1 -0.9**
HINF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
HINF Hinteralfeld 54.80 308 *e*P **P** **02 19 41.1 -0.9**
comp=Z,5.5nm,0.6s,mb4.8
HAU Haudompre 55.07 308 *e*P **P** **02 19 43.4 -0.6**
HAU *e*R
comp=Z,63nm,19.2s
HAU Haudompre 55.07 308 *e*P **P** **02 19 43.4 -0.6**
HAU LR LR
comp=Z,60nm,19.3s,MS3.7
LPG La Plagne 55.49 305 *e*P **P** **02 19 46.8 -0.2**
comp=Z,20nm,0.7s,mb4.9
LPG La Plagne 55.49 305 *e*P **P** **02 19 46.8 -0.2**
LPG pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
LPG La Plagne 55.49 305 *e*P **P** **02 19 46.8 -0.2**
comp=Z,10nm,0.7s,mb5.0
SBF Sospel 55.49 303 *e*P **P** **02 19 46.4 -0.6**
LPL La Plagne 55.49 305 *e*P **P** **02 19 46.9 -0.1**
comp=Z,21nm,0.7s,mb5.0
LPL La Plagne 55.49 305 *e*P **P** **02 19 46.9 -0.1**
LPL pmax pmax
comp=Z,11nm,0.7s,mb5.0
LPL La Plagne 55.49 305 *e*P **P** **02 19 46.9 -0.1**
comp=Z,10nm,0.7s,mb5.0
GIVF Givet 55.51 311 *e*P **P** **02 19 46.3 -0.8**

CABF	La Chapelle	55.62	306	eP	P	02 19 47.3	-0.6
MBDF	Montbardon	55.70	304	eP	P	02 19 47.6	-0.8
	comp=Z,8.3nm,0.8s,mb4.5						
MBDF	Montbardon	55.70	304	eP	P	02 19 47.6	-0.8
MBDF				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
MBDF	Montbardon	55.70	304	eP	P	02 19 47.6	-0.8
	comp=Z,4.2nm,0.8s,mb4.5						
MEZF	Maizieres J'vi	55.78	309	eP	P	02 19 48.2	-0.8
BAIF	Baives	55.90	311	eP	P	02 19 49.3	-0.6
FRF	La Foret Royal	56.13	303	eP	P	02 19 50.7	-0.8
ORIF	Oris-en-Rattie	56.24	305	eP	P	02 19 51.7	-0.7
ORIF				eR			
	comp=Z,146nm,23.0s						
SMRF	Simiane la Rot	56.74	304	eP	P	02 19 55.1	-0.8
KEST	Kesra	56.78	293	pP	pP	02 19 57.5	-4.0
	comp=Z,0.8nm,0.5s,baz=23,slow=1.3,SNR=4.4						
BILL	Bilibino	56.83	27	eP	P	02 19 56.8	+0.3
BILL				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
BILL				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.3						
LOR	Lormes	56.90	308	eP	P	02 19 56.3	-0.7
LOR				eR			
	comp=Z,53nm,21.0s						
LOR	Lormes	56.90	308	eP	P	02 19 56.3	-0.7
LOR				LR	LR		
	comp=Z,50nm,21.0s,MS3.6						
VIVF	Saint-Julien-l	57.08	305	eP	P	02 19 58.0	-0.3
SMF	Signal de Mont	57.09	307	eP	P	02 19 57.3	-1.1
	comp=Z,13nm,0.8s,mb4.7						
SMF	Signal de Mont	57.09	307	eP	P	02 19 57.3	-1.1
SMF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
SMF	Signal de Mont	57.09	307	eP	P	02 19 57.3	-1.1
	comp=Z,6.5nm,0.8s,mb4.7						
SSF	Saint Saulge	57.19	308	eP	P	02 19 58.0	-1.1
	comp=Z,12nm,0.9s,mb4.7						
SSF	Saint Saulge	57.19	308	eP	P	02 19 58.0	-1.1
SSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
SSF	Saint Saulge	57.19	308	eP	P	02 19 58.0	-1.1
	comp=Z,6.3nm,0.9s,mb4.7						
AVF	Avril sur Loir	57.37	307	eP	P	02 19 59.3	-1.1
	comp=Z,7.6nm,0.7s,mb4.5						
AVF	Avril sur Loir	57.37	307	eP	P	02 19 59.3	-1.1
AVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
AVF	Avril sur Loir	57.37	307	eP	P	02 19 59.3	-1.1
	comp=Z,3.8nm,0.7s,mb4.5						
BGF	Bois d'Agland	57.77	307	eP	P	02 20 02.6	-0.6
LASF	Ste Croix	57.88	304	eP	P	02 20 02.8	-1.2
	comp=Z,30nm,1.1s,mb4.9						
TCF	Toulx Ste Croi	58.27	307	eP	P	02 20 06.2	-0.5
	comp=Z,11nm,0.8s,mb4.6						
TCF	Toulx Ste Croi	58.27	307	eP	P	02 20 06.2	-0.5
TCF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TCF	Toulx Ste Croi	58.27	307	eP	P	02 20 06.2	-0.5
	comp=Z,5.6nm,0.8s,mb4.7						
CAF	Calviac	58.81	306	eP	P	02 20 09.9	-0.6
	comp=Z,13nm,1.0s,mb4.6						
CAF	Calviac	58.81	306	eP	P	02 20 09.9	-0.6
CAF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
CAF	Calviac	58.81	306	eP	P	02 20 09.9	-0.6
	comp=Z,6.6nm,1.0s,mb4.6						
LDF	La Druitiere	59.04	310	eP	P	02 20 10.5	-1.5
	comp=Z,19nm,0.9s,mb4.8						
LDF	La Druitiere	59.04	310	eP	P	02 20 10.5	-1.5
LDF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
LDF	La Druitiere	59.04	310	eP	P	02 20 10.5	-1.5
	comp=Z,9.4nm,0.9s,mb4.8						
FLN	La Foliniere	59.21	310	eP	P	02 20 12.7	-0.5
FLN				eR			
	comp=Z,90nm,22.2s						
FLN	La Foliniere	59.21	310	eP	P	02 20 12.7	-0.5
FLN				LR	LR		
	comp=Z,90nm,22.3s,MS3.9						
MTLF	Montolieu	59.25	304	eP	P	02 20 12.4	-1.1
	comp=Z,5.2nm,0.9s,mb4.3						
MTLF	Montolieu	59.25	304	eP	P	02 20 12.4	-1.1
	comp=Z,2.6nm,0.9s,mb4.3						
GRR	Gorron	59.57	310	eP	P	02 20 14.6	-1.1
	comp=Z,7.5nm,0.6s,mb4.6						
GRR	Gorron	59.57	310	eP	P	02 20 14.6	-1.1
GRR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
GRR	Gorron	59.57	310	eP	P	02 20 14.6	-1.1
	comp=Z,3.8nm,0.6s,mb4.6						
LFF	La Frestale	59.70	306	eP	P	02 20 15.5	-1.1
	comp=Z,8.1nm,0.7s,mb4.6						
LFF	La Frestale	59.70	306	eP	P	02 20 15.5	-1.1
LFF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
LFF	La Frestale	59.70	306	eP	P	02 20 15.5	-1.1
	comp=Z,4.1nm,0.7s,mb4.6						
MFF	Saint Martin d	59.71	308	eP	P	02 20 15.6	-1.1
EPF	Esparros	60.64	304	eP	P	02 20 21.9	-1.2
SGMF	Saint Gilles	60.68	310	eP	P	02 20 22.5	-0.8
ROSF	Rostrenen	61.10	311	eP	P	02 20 25.3	-0.9
QUIF	Quistinic	61.18	310	eP	P	02 20 25.8	-0.9
ETSF	Etsaut	61.30	304	eP	P	02 20 27.0	-0.6
	comp=Z,5.5nm,0.7s,mb4.5						
ETSF	Etsaut	61.30	304	eP	P	02 20 27.0	-0.6
	comp=Z,2.8nm,0.6s,mb4.6						
EBEN	Beniarda	62.70	300	P	P	02 20 37.5	+0.5
	comp=Z,26nm,2.1s,mb5.0						
ECHE	Chera	62.88	301	P	P	02 20 39.9	+1.8
ECHE				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
ECHE	Chera	62.88	301	P	P	02 20 39.9	+1.8
	comp=Z,4.7nm,0.7s,mb4.7						
ETOB	Tobarra	63.67	300	P	P	02 20 43.8	+0.4
	comp=Z,18nm,1.0s,mb5.1						
CART	Cartagena	63.72	299	eP	P	02 20 43.8	+0.1
	comp=Z,23nm,0.8s,mb5.3						
EMUR	La Murta	63.79	299	P	P	02 20 45.0	+0.9
	comp=Z,14nm,1.2s,mb4.9						
EARI	Arriondas	64.28	306	P	P	02 20 50.2	+2.8
	comp=Z,55nm,1.5s,mb5.4						
EVIA	Vianos	64.36	300	P	P	02 20 49.7	+1.8
EVIA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
EVIA	Vianos	64.36	300	P	P	02 20 49.7	+1.8
	comp=Z,5.2nm,0.7s,mb4.7						
ENIJ	Nijar	64.85	299	P	P	02 20 51.6	+0.5
ENIJ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
ENIJ	Nijar	64.85	299	P	P	02 20 51.6	+0.5
	comp=Z,12nm,0.9s,mb4.9						
ESDC	Sonseca Array	64.94	302	P	P	02 20 50.8	-0.9
	comp=Z,2.0nm,0.8s,mb4.2,baz=58,slow=6.6,SNR=5.6						
ESDC	Sonseca Array	64.94	302	P	P	02 20 53.0	+1.3
	comp=Z,1.2nm,0.7s,mb4.0						
EQES	Quesada	65.12	300	P	P	02 20 54.5	+1.7
	comp=Z,17nm,0.9s,mb5.1						
EBER	Berja	65.38	299	P	P	02 20 55.8	+1.3
	comp=Z,31nm,1.8s,mb5.0						
EBAN	Banos Encina	65.47	300	P	P	02 20 56.2	+1.1
EBAN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
EBAN	Banos Encina	65.47	300	P	P	02 20 56.2	+1.1
	comp=Z,5.3nm,0.6s,mb4.8						
ECOG	Cogollos-Vega	65.70	300	P	P	02 20 57.5	+0.9
	comp=Z,1.4nm,0.4s,mb4.3						
ERON	Agron	65.98	299	P	P	02 20 58.3	-0.1
	comp=Z,2.7nm,1.0s,mb4.2						
EADA	Adamuz	66.03	301	P	P	02 20 59.2	+0.5
	comp=Z,16nm,1.5s,mb4.8						
ELUQ	Luque	66.08	300	P	P	02 20 59.6	+0.6
ELUQ				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
ELUQ	Luque	66.08	300	P	P	02 20 59.6	+0.6
	comp=Z,18nm,0.8s,mb5.2						
ESPR	Espera	67.52	300	P	P	02 21 08.3	0.0
	comp=Z,16nm,1.2s,mb4.9						
EMIN	Mina Concepcio	67.69	301	P	P	02 21 09.6	+0.3
	comp=Z,4.8nm,1.3s,mb4.4						
LSZ	Lusaka	70.16	234	eP	P	02 21 25.2	+0.6
	comp=Z,2.6nm,0.8s,mb4.2						
IMA2	Indian Mountai	71.33	20	eP	P	02 21 30.1	-1.7
TOA0	Torodi Ar. Sit	73.38	275	eP	P	02 21 44.4	+0.3
TORD	Torodi Ar. Bea	73.38	275	P	P	02 21 40.9	-3.1
	comp=Z,4.6nm,0.6s,mb4.6,baz=45,slow=4.9,SNR=32						
TORD				pP	pP	02 21 45.0	-4.4
	comp=Z,4.6nm,0.6s,baz=46,slow=5.3,SNR=26						
COLA	College	73.86	19	eP	P	02 21 43.9	-2.9
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
COLA	College	73.86	19	eP	P	02 21 43.9	-2.9
	comp=Z,5.8nm,0.8s,mb4.6						
WRA	Warramunga Arr	74.72	128	P	P	02 21 50.9	-1.0
	comp=Z,3.4nm,1.0s,mb4.2,baz=323,slow=5.8,SNR=24						
WRA				pP	pP	02 21 55.9	-1.4
	comp=Z,4.5nm,0.9s,baz=327,slow=5.8,SNR=18						
WRAB	Tennant Creek	74.73	128	eP	P	02 21 50.7	-1.2
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WRAB	Tennant Creek	74.73	128	eP	P	02 21 50.7	-1.2
	comp=Z,6.3nm,0.8s,mb4.6						
DAWY	Dawson	76.67	17	eP	P	02 22 00.6	-2.5
DAWY				epP	pP	02 22 05.5	-3.0
ASAR	Alice Springs	77.15	131	P	P	02 22 04.8	-1.0
	comp=Z,1.6nm,0.5s,mb4.2,baz=321,slow=5.8,SNR=18						
ASAR				pP	pP	02 22 10.0	-1.2
	comp=Z,1.6nm,0.5s,baz=318,slow=5.7,SNR=12						
BOSA	Boshof	81.69	227	P	P	02 22 28.4	-2.1
	comp=Z,1.8nm,0.7s,mb4.1,baz=22,slow=5.4,SNR=3.7						
DBIC	Dimbokro	82.31	273	P	P	02 22 33.5	-0.2
	comp=Z,5.3nm,0.8s,mb4.5,baz=108,slow=4.7,SNR=5.1						
YKA	Yellowknife Ar	82.39	7	P	P	02 22 32.2	-1.9
	comp=Z,1.1nm,0.7s,mb3.9,baz=353,slow=5.2,SNR=6.4						
YKA				pP	pP	02 22 37.9	-1.7
	comp=Z,2.5nm,0.9s,baz=340,slow=5.6,SNR=7.6						
YKA	Yellowknife Ar	82.39	7	P	P	02 22 32.2	-1.9
YKA				pP	pP	02 22 37.9	-1.7
SCHQ	Schefferville	86.46	342	P	P	02 22 54.4	-0.4
	comp=Z,2.6nm,0.8s,mb4.5,baz=226,slow=3.9,SNR=3.8						
LPAZ	La Paz	146.35	295	PKPbc	PKPbc	02 29 51.7	-1.1
	comp=Z,2.3nm,0.9s,baz=15,slow=4.2,SNR=2.9						
LPAZ	La Paz	146.35	295	PKP2	PKPbc	02 29 51.7	-1.2
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LPAZ	La Paz	146.35	295	ePKPbc	PKPbc	02 29 54.5	+1.6
TRQA	Tornquist	149.62	253	ePKPbc	PKPbc	02 30 02.3	+0.7
LVC	Limon Verde	150.57	286	ePKPbc	PKPbc	02 30 06.2	+2.2

WEL 02 02:43:08.9±0.2,3892S×17805E,h43km±3km,ML3.6/6, 1C-2D,Error ellipse: s-maj=2.3km s-min=1.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	Kokohu	0.31	250	⇓PN	Pn	02 43 17.3	-0.2
KNZ				SN	Sn	02 43 23.9	+0.3
MWZ	Matawai	0.71	324	⇓PN	Pn	02 43 22.2	-0.3
MWZ				SN	Sn	02 43 31.6	-0.7
PUZ	Puketiti	0.86	11	PN	Pn	02 43 24.3	-0.2
URZ	Urewera	0.99	311	⇑PN	Pn	02 43 26.0	-0.2
URZ				SN	Sn	02 43 38.6	-0.4
BKZ	Black Stump Fm	1.24	258	PN	Pn	02 43 29.7	0.0
BKZ				SN	Sn	02 43 45.1	-0.2
MXZ	Matakaoa Point	1.36	8	PN	Pn	02 43 31.4	0.0
TAZ	Tarawera	1.39	299	PN	Pn	02 43 32.0	+0.3
PXZ	Pawanui	1.45	219	PN	Pn	02 43 31.6	-0.9
PATZ	Paeroa	1.50	290	PN	Pn	02 43 33.1	-0.3
KATZ	Kakaramea	1.84	267	ePN	Pn	02 43 37.8	-0.1
WNVZ	Wahianoa	1.95	257	PN	Pn	02 43 39.9	+0.4

ISCJB 02 03:27:50.1±1.9,4471N±007×1284W±02,h10km,Error ellipse: s-maj=21.2km s-min=7.1km az=135.1
NEIC 02 03:27:53.8±1.6,4480N×12829W,h10km,mb3.0/1,Error ellipse: s-maj=19.3km s-min=9.3km az=66.0
ISC 02 03:27:48.4±2.6,4466N±009×1288W±03,h10km,n48, σ1§26/52,11C-10D,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02A	Mapleton	3.63	99	⇑P	Pn	03 28 41.8	-2.9
	baz=3.3						
F03A	Seaside	3.92	69	⇓P	Pn	03 28 48.0	-0.5
	baz=3.5,SNR=5.7						
F03A				⇑S	Sn	03 29 40.3	+5.8
	baz=3.5						
COR	Corvallis	3.93	89	ePn	Pn	03 28 47.3	-1.4
H03A	Soap Creek Ran	3.94	88	⇑P	Pn	03 28 47.1	-1.7
	baz=3.5						
G03A	Yamhill	3.98	79	⇓P	Pn	03 28 48.2	-1.1
	baz=3.6						
G03A				⇑S	Sn	03 29 41.4	+5.4
	baz=3.6						
J02A	Umpqua	3.99	107	⇓P	Pn	03 28 45.6	-4.0
	baz=3.7						
I03A	Eugene	4.03	98	⇑P	Pn	03 28 47.3	-2.8
	baz=3.7						
D03A	Wishkah Elem.	4.29	53	⇑P	Pn	03 28 53.5	-0.2
	baz=3.9,SNR=7.4						
WISH	Wishkah	4.29	53	P	Pn	03 28 53.8	+0.2
C03A	Quillayute Air	4.41	40	⇓P	Pn	03 28 54.6	-0.7
	baz=4.1,SNR=8.7						
C03A				⇑S	Sn	03 29 54.0	+7.3
	baz=4.1						
J03A	Ideyld Park	4.41	105	⇑P	Pn	03 28 51.7	-3.6
	baz=4.1,SNR=6.5						
SSOR	Sweet Springs	4.53	85	P	Pn	03 28 56.5	-0.4
L02A	Cave Junction	4.55	122	⇓S	Sn	03 29 47.1	-3.0
	baz=4.3						
BROR	Big Rock Looko	4.57	93	P	Pn	03 28 56.5	-1.0
F04A	Amboy	4.68	72	⇑P	Pn	03 28 58.7	-0.4
	baz=4.3						
HUMO	Hull Mountain	4.72	114	⇑P	Pn	03 28 54.5	-5.1
	baz=4.4						
HUMO				⇓S	Sn	03 29 54.3	0.0
	baz=4.4						
H04A	Detroit Lake	4.72	87	⇓P	Pn	03 28 58.0	-1.6
	baz=4.3,SNR=5.8						
LVP	Lakeview Peak	4.72	70	P	Pn	03 29 00.2	+0.6
OSD	Olympics--Snow	4.75	46	P	Pn	03 28 59.6	-0.3
MTMW	Mount Mitchell	4.85	71	P	Pn	03 29 01.3	0.0
TDL	Tradedollar La	4.93	68	P	Pn	03 29 03.3	+0.8
HDW	Hoodsport	4.99	51	P	Pn	03 29 03.4	+0.2
MEW	McNeil Island	4.99	57	P	Pn	03 29 04.1	+0.8
TDH	Tom, Dick, Har	5.02	80	P	Pn	03 29 03.6	-0.1
VFP	Flag Point	5.25	80	P	Pn	03 29 07.0	+0.1
G05A	Wamic	5.35	81	⇓P	Pn	03 29 07.1	-1.2
	baz=4.9						
D05A	Enumclaw	5.39	60	⇓P	Pn	03 29 09.0	+0.2
	baz=5.0,SNR=17						
PGC	Sidney	5.43	41	ePn	Pn	03 29 08.4	-0.9
	24nm,0.6s						
WPW	White Pass	5.48	66	P	Pn	03 29 10.5	+0.5
C05A	Tolt Reservoir	5.80	56	⇑P	Pn	03 29 14.3	-0.1
	baz=5.4,SNR=7.5						
B05A	Bryant	5.87	50	⇓P	Pn	03 29 15.6	+0.3
	baz=5.5,SNR=8.7						
WVOR	Wild Horse Val	7.72	103	ePn	Pn	03 29 42.0	+1.3
	2.9nm,1.0s						
NEW	Newport	8.83	62	ePn	Pn	03 29 53.8	-2.2
	2.2nm,0.8s						
HLID	Hailey	10.41	91	ePn	Pn	03 30 19.2	+1.5
	3.9nm,1.2s						
CHMT	Chamberlain Mo	11.10	73	ePn	Pn	03 30 27.8	+0.8
MCMT	McKenzie Canyo	11.36	84	ePn	Pn	03 30 31.8	+1.2
BOZ	Bozeman (W)	12.17	79	ePn	Pn	03 30 42.9	+1.1
	7.1nm,1.4s						
IMW	Indian Meadow	12.83	87	ePn	Pn	03 30 52.0	+1.2
	10nm,1.4s						
TPAW	Teton Pass	12.90	89	ePn	Pn	03 30 53.9	+2.2
	27nm,1.8s						
HWUT	Hardware Ranch	12.96	98	ePn	Pn	03 30 53.1	+0.5
	4.7nm,1.1s						
FLWY	Flagg Ranch	12.97	86	ePn	Pn	03 30 54.8	+2.0
	15nm,1.3s						
MOOW	Moose Ponds	13.00	88	ePn	Pn	03 30 54.5	+1.5
MSU	Marysvale	13.87	111	ePn	Pn	03 31 07.1	+2.1
SRU	San Rafael	14.70	106	ePn	Pn	03 31 17.3	+1.1
	4.6nm,0.9s						
PV01	Paradox Valley	16.51	106	ePn	Pn	03 31 40.2	+0.2
MVCO	Mesa Verde	17.03	109	ePn	Pn	03 31 48.9	+2.3
ANMO	Albuquerque	19.67	112	eP	Pn	03 32 18.2	-0.6
	0.8nm,0.8s						
DAWY	Dawson	20.34	347	eP	P	03 32 30.6	+5.9

KRSC 02 03:30:40,5160N×15976E,h10km,ML3.7,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	1.14	318	eP	Pb	03 31 01.1	-0.6
RUS				i S	Sb	03 31 17.1	+0.6
GRL	Gorelyy	1.41	313	eP	Pn	03 31 07.0	+1.3
GRL				i S	Sn	03 31 26.9	+2.5
SPN	Mys Shipunski	1.51	6	eP	Pn	03 31 09.7	+2.6
SPN				i S	Sn	03 31 30.9	+4.1
PET	Petropavlovsk	1.58	335	P	Pn	03 31 08.7	+0.7
PET				i S	Sn	03 31 30.1	+1.6
NLC	Nalytchevo	1.59	351	P	Pn	03 31 09.7	+1.5
NLC				i S	Sn	03 31 31.4	+2.5
SDLR	Sedlovina	1.76	343	eP	Pn	03 31 11.9	+1.3
SDLR				i S	Sn	03 31 35.6	+2.5
MIPR	Malaya Ipel'ka	1.98	291	eP	Pn	03 31 14.6	+1.1
MIPR				i S	Sn	03 31 39.8	+1.4
GNL	Ganaly	2.37	333	eP	Pn	03 31 21.0	+2.0
GNL				i S	Sn	03 31 51.2	+3.1
MKZ	Mys Kozlova	3.19	21	eP	Pn	03 31 30.3	+0.1
MKZ				i S	Sn	03 32 05.5	-2.8
KBTR	Krutoberegovo	4.96	20	P	Pn	03 31 58.1	+3.6

CSEM 02 03:46:23.4,3503N×382W,h0km,MD3.0,After CNRM
CNRM 02 03:46:23.4,3503N×382W,h0km,MD3.0
MDD 02 03:46:23.3±0.9,3504N×383W,h2km±10km,mb2.7/4, Error ellipse: s-maj=8.2km s-min=4.3km az=111.0, PRXIMO,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOU	Touzarine	0.10	139	i P	Pg	03 46 25.0	-0.2
TOU				i S	Sg	03 46 27.0	+0.5
MPAL	Palemas	0.21	334	i P	Pg	03 46 27.0	-0.3
MPAL				i S	Sg	03 46 31.0	+0.9
ZAI	Zaio	0.89	94	eP	Pg	03 46 39.0	-1.5
ZAI				i S	Sg	03 46 52.0	0.0
TZK	Tazeka	0.99	197	i P	Pg	03 46 41.0	-1.3
TZK				i S	Sg	03 46 55.0	-0.1
EALB	Alboran	1.11	36	P	Pg	03 46 44.4	-0.3
	4.9nm,0.3s,SNR=7.9						
EALB				S	Sg	03 46 58.7	-0.4
	8.6nm,0.2s,SNR=7.9						
EMIJ	Mijas	1.71	334	P	Pn	03 46 54.0	-0.2
	0.8nm,0.3s,SNR=7.9						
EMIJ				S	Sn	03 47 09.1	-7.5
	1.4nm,0.2s,SNR=7.9						
MIF	Mishlifen	1.99	216	eP	Pn	03 46 56.0	-2.1
MIF				i S	Sn	03 47 22.0	-1.6
EBER	Berja	2.01	22	P	Pn	03 46 56.1	-2.2
	0.4nm,0.2s,SNR=7.9						
EBER				S	Sn	03 47 21.5	-2.5
	1.0nm,0.3s,SNR=4.9						
CZD	Col de Zad	2.24	207	eP	Pn	03 47 01.0	-0.4
CZD				i S	Sn	03 47 29.0	-0.7
EQES	Quesada	2.83	12	P	Pn	03 47 08.3	-1.3
	0.4nm,0.2s,SNR=7.9						
EQES				S	Sn	03 47 42.6	-1.6
	0.5nm,0.2s,SNR=7.9						

MOS 02 03:54:19.5±0.7,5499N×11166E,h10km,mb4.4/1,Error ellipse: s-maj=26.8km s-min=14.6km az=77.7
BYKL 02 03:54:20.7±0.2,5504N×11165E,h17km±5km,7C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	Ulyunkhan	0.33	240	⇑iPg	Pg	03 54 27.1	-0.5
YLYR				eSg	Sg	03 54 31.9	-0.4
YLYR				Pmax			
	243nm,0.1s						
YLYR				Smax			
	3μm,0.1s						
YLYR	Ulyunkhan	0.33	240	⇑iPG	Pg	03 54 27.1	-0.5
YLYR				e		03 54 31.8	
YLYR				pmax	pmax		
	comp=Z,270nm,0.1s						
YLYR				smax			
	comp=E,4μm,0.1s						
KMO	Kumora	0.89	343	⇑iPg	Pg	03 54 36.8	-1.1
KMO				eSg	Sg	03 54 48.8	-0.8
KMO				Pmax			
	comp=E,69nm,0.4s						
KMO				Smax			
	comp=E,265nm,1.0s						
KMO	Kumora	0.89	343	ePG	Pg	03 54 36.7	-1.2
KMO				e		03 54 48.3	
KMO				pmax	pmax		
	comp=Z,37nm,0.3s						
KMO				smax			
	comp=N,291nm,0.3s						
YOA	Uoyan	1.10	2	ePg	Pg	03 54 41.2	-0.7
YOA				eSg	Sg	03 54 56.7	+0.4
YOA				Pmax			
	comp=N,311nm,0.2s						
YOA				Smax			
	comp=N,863nm,0.4s						
YOA	Uoyan	1.10	2	⇓iPG	Pg	03 54 41.2	-0.7
YOA				i		03 54 56.7	
YOA				pmax	pmax		
	comp=Z,330nm,0.2s						
YOA				smax			
	comp=N,913nm,0.2s						
UKT	Uakit	1.22	68	⇑iPg	Pg	03 54 42.4	-1.8
	comp=N,45nm,0.5s						
UKT				⇑iPg	Pg	03 54 42.4	-1.8
	comp=N,19nm,0.5s						
UKT				⇑iPg	Pg	03 54 42.4	-1.8
	comp=N,46nm,0.5s						
UKT				eSg	Sg	03 54 58.8	-1.3
UKT				eSb	Sb	03 55 02.5	+3.8
UKT				Pmax			
	comp=N,75nm,0.3s						
UKT				max			
	comp=N,705nm,0.3s						
UKT	Uakit	1.22	68	⇑iPG	Pg	03 54 42.3	-1.9
UKT				e		03 54 58.7	
UKT				pmax	pmax		
	comp=Z,61nm,0.2s						
UKT				smax			
	comp=N,417nm,0.2s						
NIZ	Nizh Angarsk	1.41	302	ePg	Pg	03 54 46.0	-1.9
NIZ				eSg	Sg	03 55 05.3	-1.0
NIZ				Pmax			
	comp=N,109nm,0.2s						
NIZ				Smax			
	comp=N,241nm,0.3s						
NIZ	Nizh Angarsk	1.41	302	ePG	Pg	03 54 46.5	-1.4
NIZ				e		03 55 05.3	
NIZ				pmax	pmax		
	comp=Z,114nm,0.2s						
NIZ				smax			
	comp=N,250nm,0.3s						
SVKR	Severomuysk	1.53	44	ePN	Pn	03 54 48.9	+1.7
SVKR				e		03 54 49.4	
SVKR				e		03 55 09.8	
SVKR				pmax	pmax		
	comp=Z,176nm,0.5s						
SVKR				smax			
	comp=N,2μm,0.8s						
SYVR	Suvo	1.69	216	ePn	Pn	03 54 50.3	+0.9
SYVR				ePg	Pg	03 54 51.2	-2.0
SYVR				eSg	Sg	03 55 14.1	-1.0
SYVR				Pmax			
	comp=N,35nm,0.5s						
SYVR				Smax			
	comp=N,159nm,0.3s						
MXMB	Maximikha	2.47	225	ePg	Pg	03 55 04.6	-3.4
MXMB				eSg	Sg	03 55 38.2	-1.8
MXMB				Pmax			
	comp=N,60nm,0.1s						
MXMB				Smax			
	comp=N,244nm,0.6s						
NLYR	Nelyaty	2.71	56	ePn	Pn	03 55 04.6	+1.1
NLYR				ePg	Pg	03 55 09.1	-3.6
NLYR				eSg	Sg	03 55 44.8	-3.1
NLYR				Pmax			
	comp=N,18nm,0.7s						
NLYR				Smax			
	comp=N,175nm,1.1s						
NLYR	Nelyaty	2.71	56	ePN	Pn	03 55 04.4	+0.9
NLYR				e		03 55 08.8	
NLYR				e		03 55 43.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLYR				pmax	pmax		
	comp=Z,19nm,0.2s						
NLYR				smax			
	comp=N,180nm,0.2s						
OGRR	Ongureny	2.76	241	ePn	Pn	03 55 05.3	+1.2
OGRR				ePg	Pg	03 55 09.3	-4.2
OGRR				eSn	Sn	03 55 39.0	+2.0
OGRR				eSg	Sg	03 55 45.8	-3.5
OGRR				Pmax			
	comp=N,19nm,0.2s						
OGRR				Smax			
	comp=N,53nm,0.4s						
BOD	Bodaibo	3.08	24	ePg	Pg	03 55 14.5	-5.2
BOD				eSn	Sn	03 55 46.2	+1.3
BOD				eSg	Sg	03 55 54.3	-5.3
BOD				Pmax			
	comp=N,7.0nm,0.3s						
BOD				Smax			
	comp=N,73nm,0.4s						
KELR	Kotokel	3.11	224	eSg	Sg	03 55 59.1	-1.6
KELR				Smax			
	comp=N,132nm,0.4s						
CIT	Chita	3.23	159	ePg	Pg	03 55 18.4	-4.2
CIT				eSg	Sg	03 56 00.4	-4.1
CIT				Pmax			
	comp=N,9.0nm,0.4s						
CIT				Smax			
	comp=N,60nm,0.7s						
TRTB	Turuntaevo	3.69	222	ePg	Pg	03 55 26.5	-5.0
TRTB				eSg	Sg	03 56 15.5	-3.9
TRTB				Pmax			
	comp=N,7.0nm,0.5s						
TRTB				Smax			
	comp=N,35nm,0.5s						
TRG	Tyrgan	3.88	236	eSg	Sg	03 56 20.0	-5.3
TRG				Smax			
	comp=N,27nm,0.3s						
CRS	Chara	4.16	61	ePg	Pg	03 55 35.8	-4.6
CRS				eSg	Sg	03 56 29.9	-4.4
CRS				Pmax			
	comp=N,13nm,1.0s						
CRS				Smax			
	comp=N,65nm,1.2s						
CRS	Chara	4.16	61	ePN	Pn	03 55 35.9	+13
CRS				e		03 56 29.8	
CRS				pmax	pmax		
	comp=Z,15nm,0.8s						
CRS				smax			
	comp=E,117nm,1.3s						
HRMR	Khuramsha	4.43	221	ePg	Pg	03 55 40.6	-4.9
HRMR				eSg	Sg	03 56 38.9	-3.9
HRMR				Pmax			
	comp=E,11nm,0.6s						
HRMR				Smax			
	comp=E,114nm,0.4s						
TUP	Tupik	4.85	94	ePg	Pg	03 55 46.5	-7.1
TUP				eSg	Sg	03 56 50.4	-6.1
TUP				Pmax			
	comp=E,8.0nm,0.5s						
TUP				Smax			
	comp=E,42nm,0.6s						
LSTR	Listvyanka	5.17	235	eSg	Sg	03 57 00.0	-6.5
LSTR				Smax			
	comp=E,16nm,1.1s						
KPC	Khapcheranga	5.36	175	eSg	Sg	03 57 07.3	-5.6
KPC				Smax			
	comp=E,19nm,0.7s						

*ISCJB **02** 03:59:39.6±1.4, 53N±02×930E±03, h33km, mb4.0/10, Error ellipse: s-maj=52.8km s-min=11.1km az=98.2*
*NEIC **02** 03:59:43.3±3.7, 542N×93.15E, h46km±27km, mb4.2/4, Error ellipse: s-maj=63.9km s-min=10.6km az=56.0*
*IDC **02** 03:59:44.7±6.6, 558N×9344E, h48km±53km, mb3.5/6, mb1 3.7/7, mb1mx3.4/22, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=91.9km s-min=20.3km az=56.0*
ISC 02 03:59:43.0±1.2**, 55N**±02×**933E**±02**, h35km, n21, σ0^{s}77**/13**, mb4.0**/10**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TSI	Tuntungan	5.66	111	eP	Pn	04 01 14.4	+10
PSI	Prapat	6.27	115	P	Pn	04 01 14.8	+1.9
	2.4nm,0.3s,baz=307,slow=10,SNR=9.9						
PSI				S	Sn	04 02 22.2	-1.1
	3.3nm,0.3s,baz=349,slow=19,SNR=4.7						
RAMN	Ramite	22.22	344	eP	sP	04 05 00.9	+11
JIRN	Jiri	23.01	344	eP	pP	04 05 02.6	+8.6
	23nm,0.5s						
PKI	Pulchoki	23.15	342	eP	pP	04 05 04.4	+8.8
	42nm,0.7s						
DMN	Daman	23.28	341	eP	pP	04 05 06.8	+10
	28nm,0.5s						
GUN	Gumba	23.33	343	eP	pP	04 05 04.0	+6.5
	25nm,0.5s						
KKN	Kakani	23.39	342	eP	pP	04 05 07.3	+9.1
	17nm,0.6s						
GKN	Gorkha	23.80	341	eP	pP	04 05 10.0	+7.6
	17nm,0.3s						
KOLN	Koldanda	23.94	339	eP	pP	04 05 14.9	+11
	24nm,0.6s						
MKAR	Makanchi Array	42.18	349	P	P	04 07 32.5	+0.4
	1.6nm,0.6s,mb3.8,baz=161,slow=7.7,SNR=9.0						
SONM	Songino Array	43.62	13	P	P	04 07 44.3	+0.5
	0.4nm,0.7s,mb3.3,baz=177,slow=10,SNR=2.7						
KURK	Kurchatov	46.67	347	eP	P	04 08 08.1	0.0
	2.2nm,0.8s,mb4.1						
WRA	Warramunga Arr	47.67	123	P	P	04 08 16.6	+0.7
	1.7nm,0.7s,mb4.2,baz=300,slow=9.3,SNR=12						
WRA				pP	pP	04 08 29.8	+3.5
	1.5nm,0.6s,baz=302,slow=9.0,SNR=6.4						
WRAB	Tennant Creek	47.67	123	eP	P	04 08 16.0	+0.1
	1.6nm,0.6s,mb4.2						
ASAR	Alice Springs	49.14	128	P	P	04 08 26.1	-1.1
	0.3nm,0.5s,mb3.6,baz=289,slow=8.0,SNR=3.1						
BVAR	Borovoye Array	50.92	342	P	P	04 08 40.3	-0.4
	1.1nm,0.7s,mb3.9,baz=134,slow=8.5,SNR=5.4						
ZRNK	Zerenda	51.29	341	eP	P	04 08 42.8	-0.6
	1.1nm,0.6s,mb4.0						
CHKZ	Chkalovo	51.42	343	eP	P	04 08 44.1	-0.3
	2.6nm,0.6s,mb4.3						
FINES	FINESS Array B	74.36	333	pP	pP	04 11 29.9	+2.0
	0.4nm,0.4s,baz=99,slow=6.0,SNR=2.7						
ARCES	ARCESS Array B	77.16	340	P	P	04 11 33.0	0.0
	1.9nm,0.9s,mb4.0,baz=96,slow=6.5,SNR=5.6						

*IDC **02** 04:36:39.5±1.6, 1005S×10886E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.6/17, mbtmp3.6/6, ML3.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/25, Error ellipse: s-maj=73.1km s-min=20.7km az=45.0*
*NEIC **02** 04:36:40.7±1.3, 1008S×10889E, h10km, mb4.1/3, Error ellipse: s-maj=71.9km s-min=13.0km az=223.0*
*ISCJB **02** 04:36:42.8±1.5, 99S±04×109.1E±04, h33km, mb3.7/8, MS3.2/1, Error ellipse: s-maj=76.8km s-min=13.6km az=85.0*
ISC 02 04:36:44.3±1.6**, 101S**±04×**1089E**±04**, h35km, n11, σ0^{s}78**/10**, mb3.7**/8**, MS3.2**/1**, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.03	118	P	Pn	04 40 50.9	-1.1
	0.1nm,0.3s,baz=347,slow=19,SNR=2.8						
WRA	Warramunga Arr	26.38	115	P	P	04 42 17.6	+0.4
	0.6nm,0.7s,mb3.2,baz=286,slow=11,SNR=6.8						
ASAR	Alice Springs	27.37	123	P	P	04 42 29.5	+3.4
	0.4nm,0.6s,mb3.1,baz=294,slow=9.3,SNR=5.4						
ASAR				LR	LR	04 52 20.9	
	comp=Z,71nm,20.7s,MS3.2,baz=0.1,slow=34						
SONM	Songino Array	57.75	358	P	P	04 46 32.2	+0.5
	0.5nm,0.6s,mb3.7,baz=180,slow=8.4,SNR=3.7						
MKAR	Makanchi Array	61.46	339	P	P	04 46 57.3	+0.1
	1.3nm,0.8s,mb4.1,baz=148,slow=7.1,SNR=6.9						
BRVK	Borovoye	71.04	337	eP	P	04 47 58.2	-0.5
	1.0nm,0.6s,mb3.9						
CHKZ	Chkalovo	71.38	337	eP	P	04 48 00.6	-0.1
	1.1nm,0.5s,mb4.0						
ZRNK	Zerenda	71.47	336	eP	P	04 48 00.9	-0.3
	1.1nm,0.8s,mb3.8						
BRTR	Keskin Array B	85.31	312	P	P	04 49 17.6	0.0
	0.6nm,0.8s,mb3.8,baz=120,slow=5.2,SNR=3.8						
BRTR	Keskin Array B	85.31	312	P	P	04 49 17.6	0.0
WMOK	Wichita Mounta	144.79	42	ePKPdf	PKPdf	04 56 17.9	+0.6

*MDD **02** 04:40:06.1±1.3, 3778N×896W, h0km, mb2.5/3, Error ellipse: s-maj=11.0km s-min=4.2km az=93.0, PRXIMO*
*IGIL **02** 04:40:06.2, 3777N×895W, h2km, ML1.4*
INMG 02 04:40:05.8±0.9**, 3774N**×**897W, h21km**±**8km, ML1.1, Error ellipse: s-maj=11.0km s-min=6.6km az=56.0, Portugal**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTEO	Sao Teotonio	0.28	136	eP	Pb	04 40 11.7	-0.5
PTEO				eS	Sb	04 40 16.4	-0.1
PTEO							
	6.9nm,0.1s						
MORF	Marmelete	0.50	150	eP	Pb	04 40 15.4	-0.5
MORF				eS	Sb	04 40 22.5	-0.4
MORF				eS	Sb	04 40 22.5	-0.4
MORF				AML	AML	04 40 23.7	
	comp=E,21nm,0.1s						
MORF	Marmelete	0.50	150	eP	Pb	04 40 15.4	-0.6
MORF				eS	Sb	04 40 22.5	-0.4
PBEJ	Beja	0.92	72	eP	Pb	04 40 22.1	-0.9
PBEJ				eS	Sb	04 40 34.5	-0.2
PBEJ							
	comp=E,2.2nm,0.2s						
MOE	Montemor	0.92	32	eP	Pb	04 40 22.5	-0.5
MOE				eS	Sb	04 40 34.1	-0.7
EGRO	El Granado	1.20	100	P	Pn	04 40 27.4	+0.2
	comp=E,2.5nm,0.3s,SNR=7.9						
EGRO				S	Sb	04 40 43.7	+0.9
	comp=E,4.4nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	1.82	89	P	Pn	04 40 38.2	+2.4
	comp=E,0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	04 41 01.5	+3.3
	comp=E,1.2nm,0.2s,SNR=7.9						
EBAD	Badajoz	1.84	56	P	Pn	04 40 37.7	+1.6
	comp=E,0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	04 41 01.6	+2.9
	comp=E,2.8nm,0.2s,SNR=7.9						

*CSEM **02** 04:58:29.1±0.1, 3504N×385W, h10km, MD3.2, Error ellipse: s-maj=3.8km s-min=2.3km az=99.0*
*CNRM **02** 04:58:31.5, 3502N×385W, h0km, MD3.2*
MDD 02 04:58:30.6±0.9**, 3505N**×**389W, h2km**±**9km, mb3.0**/9**, Error ellipse: s-maj=7.5km s-min=4.4km az=116.0, PRXIMO, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOU	Touzarine	0.14	130	P	Pg	04 58 32.5	-0.9
TOU				S	Sg	04 58 35.5	+0.3
TOU	Touzarine	0.14	130	i P	Pg	04 58 32.5	-0.9
MPAL	Palemas	0.18	345	i P	Pg	04 58 35.0	+1.0
ZAI	Zaio	0.94	95	eP	Pg	04 58 48.0	-0.6
ZAI				i S	Sg	04 59 01.0	+0.2
TZK	Tazeka	0.99	194	i P	Pg	04 58 49.0	-0.6
TZK				i S	Sg	04 59 03.0	+0.5
EALB	Alboran	1.13	38	P	Pg	04 58 52.2	0.0
	5.1nm,0.2s,SNR=6.7						
EALB				S	Sg	04 59 07.5	+0.7
	28nm,0.2s,SNR=7.5						
EALB	Alboran	1.13	38	P	Pg	04 58 52.2	0.0
	5.1nm,0.2s,SNR=6.7						
EALB				S	Sg	04 59 07.5	+0.7
	28nm,0.2s,SNR=7.5						
EMIJ	Mijas	1.67	335	P	Pn	04 58 59.0	-1.9
	0.6nm,0.2s,SNR=4.7						
EMIJ				S	Sn	04 59 18.6	-4.3
	4.6nm,0.2s,SNR=11						
EGUA	Guajares	1.80	8	P	Pn	04 59 00.7	-1.9
	0.3nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	1.90	318	P	Pn	04 59 03.8	-0.2
	1.0nm,0.5s,SNR=7.9						
MIF	Mishlifen	1.98	215	eP	Pn	04 59 04.0	-1.1
MIF				i S	Sn	04 59 29.0	-1.5
EBER	Berja	2.01	23	P	Pn	04 59 03.4	-2.2
	1.1nm,0.2s,SNR=4.6						
EBER				S	Sn	04 59 28.7	-2.6
	7.5nm,0.4s,SNR=5.0						
EBER	Berja	2.01	23	P	Pn	04 59 03.4	-2.1
	1.1nm,0.2s,SNR=4.6						
EBER				S	Sn	04 59 28.7	-2.5
	7.5nm,0.4s,SNR=5.0						
ELOJ	Sierra Loja	2.10	354	S	Sn	04 59 31.4	-2.1
	6.2nm,0.1s,SNR=7.9						
EQUE	Quentar	2.18	9	P	Pn	04 59 06.6	-1.2
	0.9nm,0.2s,SNR=7.9						
EQUE				S	Sn	04 59 34.2	-1.2
	0.9nm,0.2s,SNR=7.9						
CZD	Col de Zad	2.23	206	i P	Pn	04 59 08.0	-0.6
CZD				i S	Sn	04 59 36.0	-0.7
EQES	Quesada	2.82	13	P	Pn	04 59 16.7	0.0
	0.6nm,0.1s,SNR=7.9						
EQES				S	Sn	04 59 49.8	-1.5
	3.7nm,0.3s,SNR=4.0						
EQES	Quesada	2.82	13	P	Pn	04 59 17.7	+1.0
	0.6nm,0.1s,SNR=7.9						
EQES				S	Sn	04 59 50.5	-0.8
	3.7nm,0.3s,SNR=4.0						
EADA	Adamuz	3.16	350	S	Sn	04 59 57.7	-1.8
	0.7nm,0.1s,SNR=7.9						
EADA	Adamuz	3.16	350	S	Sn	04 59 57.7	-1.8
	0.7nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.52	321	P	Pn	04 59 25.4	-0.9
	0.5nm,0.2s,SNR=7.9						
EMIN				S	Sn	05 00 03.8	-4.7
	0.4nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.52	321	P	Pn	04 59 25.4	-0.9
	0.5nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.46	327	P	Pn	04 59 37.4	-1.9
	1.0nm,0.3s,SNR=7.9						
EBAD				S	Sn	05 00 27.3	-4.5
	3.4nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.46	327	P	Pn	04 59 37.4	-1.9
	1.0nm,0.3s,SNR=7.9						
EBAD				S	Sn	05 00 27.3	-4.5
	3.4nm,0.2s,SNR=7.9						

IDC 02 04:59:07.3±4.0**, 2978S**×**17869W, h0km, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.7**/11**, mbtmp3.7**/3**, Error ellipse: s-maj=177.2km s-min=15.1km az=152.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.85	52	Pn	Pn	04 59 26.7	+0.2
	64nm,0.3s,baz=270,slow=20,SNR=2.1						
RAO				Sn	Sg	04 59 40.2	+5.6
	355nm,0.3s,baz=186,slow=21,SNR=9.7						
STKA	Stephens Creek	34.04	256	P	P	05 05 53.1	+0.1
	2.1nm,0.7s,baz=108,slow=9.6,SNR=3.5						
ASAR	Alice Springs	42.55	267	P	P	05 07 05.0	+0.3
	0.2nm,0.5s,baz=100,slow=7.3,SNR=5.0						
WRA	Warramunga Arr	43.48	272	P	P	05 07 12.4	+0.2
	0.5nm,0.3s,baz=111,slow=8.1,SNR=22						

*ISCJB **02** 05:00:17.1±0.7, 1033N±003×6242W±002, h10km±4km, mb3.9/14, MS3.2/2, Error ellipse: s-maj=4.9km s-min=2.9km az=112.6*
*TRN **02** 05:00:17.0, 1032N×6238W, h3km, MD4.0*
*NEIC **02** 05:00:18.1, 1038N×6236W, h1km, mb4.0/6, MD4.0(TRN), MW4.4(CAR), After CAR.*
*FUNV **02** 05:00:18.7, 1041N×6234W, h5km, MW4.8*
*IDC **02** 05:00:22.6±1.9, 1050N×6267W, h52km±16km, mb3.7/8, mb1 3.9/10, mb1mx3.5/26, mbtmp4.0/10, ML3.5/2, MS3.3/3, Ms1 3.2/3, ms1mx2.8/24, Error ellipse: s-maj=24.4km s-min=10.3km az=128.0*
ISC 02 05:00:17.8±0.5**, 1035N**±002×**6240W**±002**, h5km**±**3km, n82, σ1^{s}16**/124**, mb3.9**/14**, MS3.2**/2**, 7C-8D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.34	31⇑	iP	Pg	05 00 24.2	-0.2
GUIV				eS	Sg	05 00 28.1	-0.8
GUIV	Guiria	0.34	31⇑	eP	Pg	05 00 24.3	-0.1
GUIV				eS	Sg	05 00 28.7	-0.2
GUIV	Guiria	0.34	31	eP	Pg	05 00 24.1	-0.3
GUIV				eS	Sg	05 00 28.4	-0.5
GUNV	Guanoco	0.56	250⇑	iP	Pg	05 00 29.7	+1.0
GUNV				eS	Sg	05 00 39.5	+3.5
GUNV	Guanoco	0.56	250	eP	Pg	05 00 29.6	+1.0
GUNV				eS	Sg	05 00 39.5	+3.5
GUNV	Guanoco	0.56	250	eP	Pg	05 00 29.6	+0.9
GUNV				eS	Sg	05 00 39.4	+3.4
CRUV	Carupano	0.88	291⇓	iP	Pg	05 00 34.4	-0.4
CRUV				eS	Sg	05 00 47.0	+0.9
CRUV	Carupano	0.88	291⇓	eP	Pg	05 00 34.3	-0.4
CRUV				eS	Sg	05 00 47.0	+0.9
CRUV	Carupano	0.88	291	eP	Pg	05 00 34.1	-0.6
CRUV				eS	Sg	05 00 46.4	+0.2
TPP	Pointe-a-Pierr	0.94	92	eP	Pg	05 00 35.5	-0.2
TRN	Trinidad (W)	1.02	73⇑	eP	Pg	05 00 35.4	-2.1
TRN				eS	Sg	05 00 50.3	-0.4
ITEV	Isla Los Testi	1.23	324⇓	iP	Pg	05 00 39.9	-1.5
ITEV				eS	Sg	05 00 57.6	+0.3
ITEV	Isla Los Testi	1.23	324⇓	eP	Pg	05 00 39.7	-1.7
ITEV				eS	Sg	05 00 56.3	-1.0
TBH	Brigand Hill	1.32	84	eP	Pn	05 00 42.3	-0.5
TBH				eS	Sb	05 01 05.0	+4.8
ORIV	Oritupano	1.62	218⇑	iP	Pn	05 00 48.5	+1.6
ORIV				eS	Sn	05 01 11.0	+2.9
ORIV	Oritupano	1.62	218⇑	eP	Pn	05 00 48.6	+1.7
ORIV				eS	Sn	05 01 11.0	+2.9
ORIV	Oritupano	1.62	218	eP	Pn	05 00 48.5	+1.6
ORIV				eS	Sn	05 01 10.6	+2.5
TPR	Prospect	1.80	62	eP	Pn	05 00 49.0	-0.4
TPR				eS	Sn	05 01 14.0	+1.4
BOT	Bacolet	1.84	64	eP	Pn	05 00 49.4	-0.6
GRW	Mount Saint Ca	1.94	22	eP	Pn	05 00 51.2	-0.2
GRW				eS	Sn	05 01 16.4	+0.4
GRHS	Sauteurs	2.00	22	eP	Pn	05 00 52.9	+0.6
GRHS				eS	Sn	05 01 13.4	-4.2
GRIC	Isle de Caille	2.08	23	eP	Pn	05 00 54.9	+1.6
GRIC				eS	Sn	05 01 19.9	+0.3
GRSS	Sisters	2.08	22	eP	Pn	05 00 55.3	+2.0
GRSS				eS	Sn	05 01 21.6	+1.9
PCRV	Puerto La Cruz	2.21	266	P	Pn	05 00 54.5	-0.5
	17nm,0.3s,baz=88,slow=4.4,SNR=78						
PCRV				S	Sn	05 01 23.8	+1.1
	17nm,0.3s,baz=184,slow=14,SNR=4.3						
PCRV	Puerto La Cruz	2.21	266	eP	Pn	05 00 55.4	+0.3
PCRV				eS	Sn	05 01 24.0	+1.3
PCRV	Puerto La Cruz	2.21	266	eP	Pn	05 00 55.2	+0.1
PCRV				eS	Sn	05 01 24.0	+1.3
PCRV	Puerto La Cruz	2.21	266	eP	Pn	05 00 55.3	+0.2
PCRV				eS	Sn	05 01 22.8	+0.1
GRCU	Cariacou	2.30	24	eP	Pn	05 00 57.4	+1.1
GRCU				eS	Sn	05 01 26.1	+1.1
IBAV	Isla La Blanqu	2.59	305	eP	Pn	05 01 00.0	-0.3
IBAV				eS	Sn	05 01 32.1	+0.1
IBAV	Isla La Blanqu	2.59	305	eP	Pn	05 00 59.5	-0.8
IBAV				eS	Sn	05 01 32.1	+0.1
GURV	El Guri	2.66	195	eP	Pn	05 01 01.9	+0.6
GURV	El Guri	2.66	195	eP	Pn	05 01 01.5	+0.2
GURV				eS	Sn	05 01 33.7	-0.2
PRGV	PARIAGUAN	2.72	235	eP	Pn	05 01 02.9	+0.8
PRGV				eS	Sn	05 01 37.2	+1.8
CUPV	Cœpira	3.35	265	eP	Pn	05 01 11.7	+1.0
CUPV				eS	Sn	05 01 50.8	0.0
CUPV	Cœpira	3.35	265	eP	Pn	05 01 12.0	+1.2
CUPV				eS	Sn	05 01 50.2	-0.6
BIRV	Birongo	3.81	272	eP	Pn	05 01 17.8	+0.7
BIRV				eS	Sn	05 02 02.0	-0.1
BIRV	Birongo	3.81	272	eP	Pn	05 01 18.7	+1.6
BIRV				eS	Sn	05 02 02.0	-0.1
BIRV	Birongo	3.81	272	eP	Pn	05 01 17.3	+0.3
BIRV				eS	Sn	05 02 01.3	-0.9
MERV	Las Mercedes	3.99	254⇓	iP	Pn	05 01 20.1	+0.5
MERV				eS	Sn	05 02 06.2	-0.6
MERV	Las Mercedes	3.99	254	eP	Pn	05 01 19.9	+0.3
MERV				eS	Sn	05 02 05.4	-1.3
ORCV	Isla La Orchil	4.00	292	eP	Pn	05 01 19.1	-0.6
ORCV	Isla La Orchil	4.00	292	eP	Pn	05 01 19.2	-0.4
BIM	Bigot	4.34	17	eP	Pn	05 01 24.5	+0.2
BIM				eS	Sn	05 02 12.9	-2.4
FDF	Fort de France	4.52	16⇓	iP	Pn	05 01 26.8	-0.1
BBL	Barber's Block	5.22	10	eP	Pn	05 01 40.4	+3.9
TURV	Turiamo	5.35	272	eP	Pn	05 01 38.8	+0.5
TURV	Turiamo	5.35	272⇑	eP	Pn	05 01 38.9	+0.6
TBG	Guadaloupe-3	5.52	8	eP	Pn	05 01 42.6	+2.1
PHG	Guadaloupe-2	5.68	7	eP	Pn	05 01 43.5	+0.8
SCG	Saint Claude	5.69	7	eP	Pn	05 01 43.5	+0.6
BAUV	El Baul	5.74	256⇓	iP	Pn	05 01 43.1	-0.4
BAUV				eS	Sn	05 02 47.5	-2.2
BAUV	El Baul	5.74	256⇓	eP	Pn	05 01 42.9	-0.7
BAUV				eS	Sn	05 02 47.5	-2.2
BAUV	El Baul	5.74	256	eP	Pn	05 01 43.1	-0.4
BAUV				eS	Sn	05 02 46.6	-3.1
LZG	Guadaloupe-1	5.79	6	eP	Pn	05 01 46.0	+1.7
LZG				eS	Sn	05 02 50.7	-0.3
DEG	La Desirade	6.07	12	eP	Pn	05 01 49.0	+0.9
SEG	Port Louis	6.08	8	eP	Pn	05 01 49.7	+1.5
SANV	Sanarito	7.08	264	eP	Pn	05 02 02.4	+0.4
CURV	Curarigua	7.45	268	eP	Pn	05 02 07.3	+0.3
CURV	Curarigua	7.45	268	eP	Pn	05 02 08.5	+1.4
MONV	Montecano	7.60	283	eP	Pn	05 02 08.5	-0.6
ELOV	Elorza	7.75	245	eP	Pn	05 02 10.9	-0.3
SDV	Santo Domingo	8.25	261	P	Pn	05 02 17.7	-0.3
	4.7nm,0.3s,baz=89,slow=7.1,SNR=6.6						
SDV				S	Sn	05 03 47.5	-4.1
	2.6nm,0.3s,baz=251,slow=18,SNR=4.0						
SDV	Santo Domingo	8.25	261	ePn	Pn	05 02 17.6	-0.5
	23nm,0.8s						
SOCV	Socops	8.59	257	eP	Pn	05 02 22.5	-0.3
SOCV	Socops	8.59	257	eP	Pn	05 02 22.6	-0.2
ROSC	El Rosal	13.02	246	P	Pn	05 03 21.7	-1.7
	1.5nm,0.3s,baz=67,slow=6.4,SNR=3.8						
ROSC				LR	LR	05 08 46.4	
	comp=Z,191nm,21.5s,baz=80,slow=39						
ATAH	Atahualpa	23.47	223	P	P	05 05 27.1	-1.2
	1.8nm,0.3s,mb4.0,baz=60,slow=20,SNR=2.6						
SIV	San Ignacio	26.21	177	P	P	05 05 53.4	0.0
	0.9nm,0.5s,mb3.5,baz=10,slow=9.2,SNR=7.4						
BDFB	Brasilia	29.50	151	LR	LR	05 19 18.1	
	comp=Z,43nm,19.5s,MS3.1,baz=197,slow=38						
WVT	Waverly	34.49	322	eP	P	05 07 05.3	-1.4
	2.7nm,0.8s,mb4.2						
JCT	Junction City	40.10	306	eP	P	05 07 52.8	-1.5
	4.7nm,0.6s,mb4.4						
WMOK	Wichita Mounta	41.09	312	eP	P	05 08 00.0	-2.4
	1.6nm,0.6s,mb3.8						
ANMO	Albuquerque	46.95	309	eP	P	05 08 49.2	-0.2
	1.3nm,0.8s,mb3.9						
ULM	Lac du Bonnet	48.41	332	P	P	05 08 55.5	-5.3
	1.1nm,0.5s,mb4.1,baz=162,slow=9.3,SNR=3.3						
BW06	Boulder Array	52.16	317	eP	P	05 09 27.4	-1.8
	1.4nm,0.8s,mb3.9						
PDAR	Pinedale Array	52.16	317	P	P	05 09 25.9	-3.2
	0.7nm,0.6s,mb3.8,baz=118,slow=10,SNR=9.8						
TPAW	Teton Pass	53.38	317	eP	P	05 09 37.9	-0.3
	1.0nm,0.7s,mb3.9						
EDM	Edmonton	58.98	327	eP	P	05 10 15.3	-3.0
YKA	Yellowknife Ar	64.02	336	P	P	05 10 48.4	-3.9
	0.6nm,0.6s,mb3.8,baz=109,slow=7.3,SNR=6.9						
YKA				LR	LR	05 37 31.1	
	comp=Z,19nm,20.1s,MS3.3,baz=165,slow=35						
NOA	NORSAR Array B	73.08	29	P	P	05 11 48.5	-0.4
	1.3nm,0.9s,mb3.9,baz=263,slow=6.2,SNR=3.5						
ARCES	ARCESS Array B	79.64	21	P	P	05 12 25.3	-0.9
	1.4nm,0.7s,mb4.0,baz=263,slow=7.2,SNR=3.7						
FINES	FINESS Array B	80.26	29	P	P	05 12 28.3	-1.3
	0.7nm,0.5s,mb3.9,baz=281,slow=4.2,SNR=11						

IDC 02 05:12:01.8±3.0**, 919S**×**10912E, h0km, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.5**/17**, mbtmp3.5**/4**, ML2.9**/1**, Error ellipse: s-maj=144.7km s-min=25.7km az=47.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.32	121	P	Pn	05 16 16.7	-0.5
	0.0nm,0.3s,baz=262,slow=19,SNR=3.0						
WRA	Warramunga Arr	26.60	116	P	P	05 17 42.0	+0.3
	0.5nm,0.7s,baz=287,slow=11,SNR=7.6						
ASAR	Alice Springs	27.72	124	P	P	05 17 52.6	+0.9
	0.2nm,0.5s,baz=298,slow=9.4,SNR=4.9						
MKAR	Makanchi Array	60.66	339	P	P	05 22 14.7	0.0
	0.9nm,0.7s,baz=141,slow=7.8,SNR=7.0						

FUNV 02 05:19:13.5, 1012N×**7201W, h1km, MW3.5, Venezuela**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VIRV	Villa del Rosa	0.55	315	eP	Pg	05 19 24.6	+0.6
VIRV				eS	Sg	05 19 32.6	+1.5
VIGV	El Vigia	1.42	153	eP	Pn	05 19 39.9	-0.5
VIGV				eS	Sg	05 19 59.3	+0.2
QARV	Quebrada Arrib	1.47	86	eP	Pn	05 19 40.9	-0.2
QARV				eS	Sg	05 20 01.8	+1.1
DABV	Dabajuro	1.57	59	eP	Pn	05 19 41.4	-1.1
DABV				eS	Sn	05 20 03.3	-0.2
CURV	Curarigua	2.02	93	eP	Pn	05 19 47.3	-1.3
CURV				eS	Sn	05 20 13.8	-0.8
SOCV	Socops	2.15	148	eP	Pn	05 19 49.6	-0.8
SOCV				eS	Sn	05 20 17.1	-0.5
SIQV	Siquisique	2.23	76	eP	Pn	05 19 51.2	-0.4
SIQV				eS	Sn	05 20 19.0	-0.7
CAPV	Capacho	2.25	188	eP	Pn	05 19 51.3	-0.6
CAPV				eS	Sn	05 20 19.6	-0.7
SANV	Sanarito	2.52	104	eP	Pn	05 19 54.8	-0.6
SANV				eS	Sn	05 20 26.2	-0.5
MONV	Montecano	2.71	47	eP	Pn	05 19 57.0	-1.1
MONV				eS	Sn	05 20 29.9	-1.6
TEPV	Terepaima	2.78	93	eP	Pn	05 19 58.6	-0.5
TEPV				eS	Sn	05 20 31.2	-2.1
JACV	Jacura	3.27	73	eP	Pn	05 20 04.3	-1.6
JACV				eS	Sn	05 20 42.6	-2.8
ELOV	Elorza	3.98	141	eP	Pn	05 20 13.8	-1.8
ELOV				eS	Sn	05 20 59.6	-3.2
BAUV	El Baul	4.09	106	eP	Pn	05 20 15.7	-1.3
BAUV				eS	Sn	05 21 02.1	-3.4
TURV	Turiamo	4.12	85	eP	Pn	05 20 15.7	-1.8

*IDC **02** 05:27:42.2±2.8, 1887S×16865E, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.7/12, mbtmp3.6/3, ML3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/17, Error ellipse: s-maj=76.5km s-min=43.7km az=132.0*

*ISCJB **02** 05:27:48.3±2.4, 1899S±0.10×1683E±04, h33^{km}, mb3.5/2, Error ellipse: s-maj=56.4km s-min=6.2km az=26.7*

ISC 02 05:27:48.3±3.3**, 1900S**±009×**1686E**±05**, h35^{km}, n8, σ0^{s}53**/9**, mb3.6**/2**, 1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKM	Butte a Klehm	1.36	347	⇑iP	Pn	05 28 10.3	-0.5
BKM				S	Sn	05 28 27.6	0.0
DZM	Mont Dzumac	3.64	213	eP	Pn	05 28 41.7	-0.3
DZM				eS	Sn	05 29 22.8	-0.9
DZM	Mont Dzumac	3.64	213	Pn	Pn	05 28 41.7	-0.4
	3.5nm,0.3s,baz=39,slow=22,SNR=40						
DZM				Sn	Sn	05 29 23.5	-0.2
	9.2nm,0.3s,baz=155,slow=21,SNR=9.8						
NOUC	Port Laguerre	3.73	214	eP	Pn	05 28 44.0	+0.6
HNR	Honiara	12.65	318	LR	LR	05 34 42.6	
	comp=Z,51nm,18.1s,baz=0.4,slow=33						
WRA	Warramunga Arr	32.24	263	P	P	05 34 13.2	-0.1
	0.3nm,0.8s,mb3.2,baz=90,slow=8.6,SNR=3.2						
ASAR	Alice Springs	32.56	256	P	P	05 34 16.9	+0.9
	1.0nm,0.5s,mb4.0,baz=83,slow=8.6,SNR=14						
ARCES	ARCESS Array B	124.68	345	PKP	PKPdf	05 46 42.8	-1.3
	2.5nm,0.9s,baz=48,slow=1.3,SNR=4.4						

*NEIC **02** 06:04:26.8, 1659N×9489W, h91^{km}, MD3.8(MEX), After MEX.*

MEX 02 06:04:26.9±1.0**, 1662N**×**9491W, h92^{km}**±13^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.47	3	eP	Pn	06 04 40.4	-1.2
CMIG				i S	Sn	06 04 50.8	-1.7
HUIG	Huatulco	1.43	234	i P	Pn	06 04 49.8	-2.0
HUIG				i S	Sn	06 05 09.6	-1.1
OXX	Oaxaca	1.79	285	i P	Pn	06 04 56.3	-0.2
OXX				i S	Sn	06 05 18.2	-0.8
VHO	Vista Hermosa	1.80	285	i P	Pn	06 04 56.0	-0.6
VHO				i S	Sn	06 05 17.6	-1.5
TPIG	Tehuac#an	2.94	308	i P	Pn	06 05 10.6	-1.1
TPIG				i S	Sn	06 05 44.1	-2.1
UTMO	Huajuapan	3.01	294	i P	Pn	06 05 11.8	-0.9
UTMO				i S	Sn	06 05 43.8	-4.1

*CSEM **02** 06:47:51.8, 3680N×592E, h0^{km}, ML3.4, After ALG*

*CRAAG **02** 06:47:51.8, 3680N×592E, Ml3.4*

*ISCJB **02** 06:47:53.9±0.5, 3682N±005×560E±006, h10^{km}, Error ellipse: s-maj=9.3km s-min=4.9km az=77.5*

*MDD **02** 06:47:55.2±0.6, 3676N×568E, h0^{km}, mb3.5/5, Error ellipse: s-maj=7.1km s-min=6.1km az=26.0, PRXIMO*

ISC 02 06:47:54.8±0.5**, 3678N**±005×**567E**±006**, h10^{km}, n15, σ1^{s}19**/17**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.29	143	P	Pg	06 47 59.0	-1.6
SET	Setif	0.61	200	P	Pg	06 48 06.0	-0.7
CKHR	Kef el Ahmar	0.77	189	P	Pg	06 48 11.0	+1.4
CASM	Ain Smara	0.84	127	P	Pg	06 48 09.0	-2.0
CKFL	Kef-Lekhel	0.93	113	P	Pg	06 48 13.5	+0.8
CTEI	Djebel Teioual	0.93	140	P	Pg	06 48 14.5	+1.8
CAEH	'Ain El Ouahch	0.95	89	P	Pg	06 48 14.0	+0.9
CMER	Merouana	1.17	171	P	Pb	06 48 17.0	-0.1
CMAH	Djebel Manchou	1.42	96	P	Pn	06 48 19.0	-1.6
EMHD	Djebel Mahouad	2.26	256	P	Pg	06 48 38.0	-0.1
ETOS	Mallorca	3.74	324	P	Pn	06 48 53.0	+0.5
	1.1nm,0.2s,SNR=19						
ETOS				S	Sn	06 49 32.1	-4.5
	2.2nm,0.2s,SNR=7.9						
EIBI	Ibiza	4.09	305	P	Pn	06 48 58.0	+0.6
	1.1nm,0.3s,SNR=7.9						
EIBI				S	Sn	06 49 43.1	-2.3
	2.8nm,0.2s,SNR=7.9						
EPOB	Poblet	5.80	323	P	Pn	06 49 21.1	+0.3
	0.1nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	6.00	309	P	Pn	06 49 24.9	+1.4
	0.8nm,0.2s,SNR=7.9						
ETOB	Tobarra	6.01	290	P	Pn	06 49 24.0	+0.2
	0.6nm,0.2s,SNR=7.9						

*NEIC **02** 07:01:30.3, 1498N×9465W, h16^{km}, MD4.2(MEX), After MEX.*

MEX 02 07:01:30.5±1.3**, 1500N**×**9466W, h16^{km}**±22^{km}**, MD4.2, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.60	299	i P	Pn	07 01 54.9	-3.2
HUIG				i S	Sn	07 02 12.8	-5.4
CMIG	Matias Romero	2.10	354	i P	Pn	07 02 01.8	-3.0
CMIG				i S	Sn	07 02 25.9	-4.7
SCX	San Cristobal	2.60	48	i P	Pn	07 02 10.3	-1.6
SCX				i S	Sn	07 02 40.5	-2.6
CCIG	Comitan	2.74	62	i P	Pn	07 02 10.0	-3.8
CCIG				i S	Sn	07 02 42.2	-4.4
OXX	Oaxaca	2.87	317	i P	Pn	07 02 15.8	+0.2
VHO	Vista Hermosa	2.87	316	i P	Pn	07 02 14.2	-1.3
VHO				i S	Sn	07 02 46.8	-3.0
TPIG	Tehuac#an	4.28	323	eP	Pn	07 02 34.1	-0.8
TPIG				i S	Sn	07 03 26.3	+1.9

*NEIC **02** 07:21:16.5±2.6, 937S×10766E, h10^{km}, mb4.4/2, Error ellipse: s-maj=121.0km s-min=13.8km az=47.0*

*ISCJB **02** 07:21:17.8±2.9, 93S±06×1078E±07, h33^{km}, mb3.8/6, Error ellipse: s-maj=132.4km s-min=15.6km az=93.6*

*IDC **02** 07:21:17.2±3.0, 897S×108.13E, h0^{km}, mb3.7/4, mb1 3.7/5, mb1mx3.6/18, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=124.7km s-min=21.4km az=51.0*

ISC 02 07:21:20.4±3.0**, 93S**±07×**1078E**±07**, h35^{km}, n7, σ1^{s}17**/7**, mb3.8**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.42	119	P	Pn	07 25 42.9	-2.0
	0.0nm,0.3s,baz=49,slow=18,SNR=3.7						
WRA	Warramunga Arr	27.75	115	P	P	07 27 05.9	+0.2
	0.2nm,0.4s,mb3.1,baz=287,slow=11,SNR=7.1						
ASAR	Alice Springs	28.76	123	P	P	07 27 16.8	+2.1
	0.2nm,0.7s,mb3.0,baz=306,slow=7.9,SNR=2.9						
SONM	Songino Array	56.91	359	P	P	07 31 02.9	+1.1
	1.0nm,0.6s,mb4.0,baz=174,slow=7.2,SNR=6.7						
MKAR	Makanchi Array	60.31	340	P	P	07 31 25.4	-0.2
	1.4nm,0.6s,mb4.2,baz=140,slow=8.1,SNR=8.2						
KURK	Kurchatov	64.92	340	eP	P	07 31 56.0	-0.3
	4.1nm,1.1s,mb4.4						
CHKZ	Chkalovo	70.20	338	eP	P	07 32 28.8	-0.8
	1.5nm,0.6s,mb4.1						

MAN 02 07:22:32.7, 961N×**12556E, h7^{km}, mb1.9, ML3.7, MS2.2, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.19	337	⇓eP	Pg	07 22 37.8	+1.2
SCPH				eS	Sg	07 22 47.4	+8.2
BUTP	Butuan	0.64	175	eP	Pg	07 22 45.0	+0.1
BUKP	Musuan	1.79	196	eP	Pn	07 23 04.1	+0.2

*IDC **02** 07:29:50.0±0.7, 6055S×2666W, h0^{km}, mb4.3/10, mb1 4.4/10, mb1mx4.2/18, mbtmp4.3/10, MS3.6/14, Ms1 3.6/14, ms1mx3.5/25, Error ellipse: s-maj=28.3km s-min=16.3km az=50.0*

*ISCJB **02** 07:29:50.0±0.6, 6046S±009×266W±02, h10^{km}, mb4.4/13, MS3.6/12, Error ellipse: s-maj=18.0km s-min=11.3km az=128.9*

*NEIC **02** 07:29:55.5±0.5, 6049S×2658W, h35^{km}, mb4.5/8, Error ellipse: s-maj=14.2km s-min=10.0km az=66.0*

ISC 02 07:29:51.5±0.6**, 6051S**±009×**265W**±02**, h10^{km}, n37, σ0^{s}96**/27**, mb4.4**/13**, MS3.6**/12**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.59	151	e	Pn	07 32 45.6	-5.1
VNA1				e		07 32 47.4	
VNA1				e		07 32 49.7	
VNA1				e		07 32 53.8	
VNA1				e		07 32 59.8	
SNAA	Sanae	14.60	150	Pn	Pn	07 33 12.1	-5.9
	2.0nm,0.3s,baz=317,slow=12,SNR=27						
SNAA				LR	LR	07 37 34.8	
	comp=Z,106nm,19.8s,baz=28,slow=32						
PMSA	Palmer Station	17.57	240	P	Pn	07 34 00.1	+3.8
	baz=92,slow=11						
PMSA				LR	LR	07 39 44.6	
	comp=Z,96nm,18.4s,baz=43,slow=34						
PMSA	Palmer Station	17.57	240	ePn	Pn	07 33 58.3	+2.0
PMSA				eP		07 34 00.1	
QSPA	South Pole Qui	29.72	180	eP	P	07 35 58.0	+0.2
	27nm,1.1s,mb4.9						
TRQA	Tornquist	31.61	299	eP	P	07 36 14.7	+0.3
PLCA	Paso Flores	33.36	286	LR	LR	07 50 11.1	
	comp=Z,88nm,18.3s,MS3.5,baz=178,slow=37						
MAW	Mawson	36.42	140	P	P	07 36 54.6	-1.6
	4.9nm,0.8s,mb4.5,baz=241,slow=6.8,SNR=12						
MAW	Mawson	36.42	140	eP	P	07 36 54.7	-1.5
	7.5nm,1.0s,mb4.6						
CFAA	Coronel Fontan	39.79	298	P	P	07 37 23.7	-0.9
	1.2nm,0.8s,mb3.7,baz=146,slow=8.0						
CFAA				LR	LR	07 53 11.7	
	comp=Z,6.6nm,19.7s,MS2.5,baz=234,slow=35						
CFAA	Coronel Fontan	39.79	298	P	P	07 37 23.7	-0.9
CFAA				LR	LR	07 53 11.7	
CPUP	Villa Florida	40.11	315	P	P	07 37 26.7	-0.6
	0.9nm,0.3s,mb4.0,baz=136,slow=6.7,SNR=19						
CPUP				LR	LR	07 52 06.9	
	comp=Z,102nm,20.1s,MS3.7,baz=4.0,slow=33						
CPUP	Villa Florida	40.11	315	eP	P	07 37 26.6	-0.7
	9.9nm,0.3s,mb5.0						
SBA	Scott Base	41.64	184	eP	P	07 37 40.1	+0.3
	24nm,1.4s,mb4.6						
VNDA	Vanda	42.12	183	P	P	07 37 44.2	+0.5
	3.8nm,0.7s,mb4.2,baz=194,slow=6.5,SNR=15						
VNDA				LR	LR	07 53 59.0	
	comp=Z,73nm,19.5s,MS3.6,baz=171,slow=34						
VNDA	Vanda	42.12	183	eP	P	07 37 44.2	+0.4
	11nm,1.4s,mb4.3						
BOSA	Boshof	46.92	71	LR	LR	07 53 05.1	
	comp=Z,116nm,18.9s,MS3.9,baz=183,slow=30						
BDFB	Brasilia	47.44	331	LR	LR	07 55 58.4	
	comp=Z,57nm,18.1s,MS3.6,baz=297,slow=33						
LVC	Limon Verde	47.94	303	P	P	07 38 30.3	+0.3
	1.4nm,0.3s,mb4.5,baz=88,slow=5.7,SNR=6.8						
LVC	Limon Verde	47.94	303	eP	P	07 38 30.6	+0.5
	2.2nm,0.6s,mb4.4						
SIV	San Ignacio	50.96	315	P	P	07 38 52.0	-1.2
	2.0nm,0.6s,mb4.2,baz=159,slow=9.0,SNR=14						
LPAZ	La Paz	53.30	307	P	P	07 39 11.0	+0.4
	1.4nm,0.4s,mb4.3,baz=137,slow=5.6,SNR=19						
LPAZ				LR	LR	08 01 34.9	
	comp=Z,21nm,19.8s,MS3.2,baz=269,slow=36						
LPAZ	La Paz	53.30	307	eP	P	07 39 10.9	+0.3
	4.3nm,1.0s,mb4.3						
SAML	Samuel	58.23	316	eP	P	07 39 45.0	-1.0
	2.6nm,0.9s,mb4.3						
LSZ	Lusaka	59.78	66	LR	LR	08 04 14.8	
	comp=Z,75nm,18.0s,MS3.9,baz=326,slow=34						
DBIC	Dimbokro	69.12	23	P	P	07 40 58.2	+0.4
	5.9nm,1.0s,mb4.5,baz=340,slow=21,SNR=4.1						
DBIC				LR	LR	08 04 29.6	
	comp=Z,42nm,19.4s,MS3.7,baz=52,slow=30						
DBIC	Dimbokro	69.12	23	P	P	07 40 58.2	+0.3
DBIC				LR	LR	08 04 29.6	
KMBO	Kilima Mbogo	76.38	67	LR	LR	08 13 51.4	
	comp=Z,59nm,18.4s,MS3.9,baz=99,slow=35						
TOA0	Torodi Ar. Sit	76.81	28	eP	P	07 41 44.8	+1.4
TORD	Torodi Ar. Bea	76.81	28	P	P	07 41 44.7	+1.3
	4.9nm,0.6s,mb4.6,baz=196,slow=5.4,SNR=28						
TORD				LR	LR	08 10 21.2	
	comp=Z,47nm,18.3s,MS3.8,baz=150,slow=32						
TORD	Torodi Ar. Bea	76.81	28	P	P	07 41 44.7	+1.3
TORD				LR	LR	08 10 21.2	
STKA	Stephens Creek	87.43	170	LR	LR	08 20 48.0	
	comp=Z,95nm,19.4s,MS4.2,baz=25,slow=35						
ASAR	Alice Springs	94.62	162	P	P	07 43 11.6	-1.0
	0.9nm,0.7s,mb4.3,baz=193,slow=4.1,SNR=8.0						
PDAR	Pinedale Array	122.94	299	PKP	PKPdf	07 48 47.2	-0.8
	0.2nm,0.4s,baz=178,slow=5.6,SNR=3.6						
YKA	Yellowknife Ar	139.64	314	PKP	PKPdf	07 49 18.4	-1.0
	0.8nm,0.7s,baz=139,slow=1.9,SNR=6.1						
INK	Inuvik	149.37	316	PKPbc	PKPbc	07 49 38.6	-2.0
	3.3nm,0.9s,baz=195,slow=5.7,SNR=4.2						
SONM	Songino Array	150.37	94	PKPbc	PKPbc	07 49 41.7	-1.3
	0.6nm,0.6s,baz=214,slow=4.8,SNR=3.9						
SONM				PKPab	PKPab	07 49 47.6	-1.8
	0.8nm,0.7s,baz=220,slow=5.2,SNR=4.5						

HLW 02 07:36:04.8, 2982N×**3685E, h20^{km}, Mb3.5, 2C, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HBST	Basata	1.94	252	⇑P	Pn	07 36 35.6	-1.0
HBST				S	Sn	07 36 57.8	-2.6
HDHB	Dhahab	2.23	241	P	Pn	07 36 39.2	-1.4
HKAT	Jabal Katrina	2.81	243	⇑P	Pn	07 36 47.5	-1.1
HKAT				S	Sn	07 37 19.5	-2.4
AMAG	Maghara	3.26	285	P	Pn	07 36 53.8	-0.9

IDC 02 07:41:00.5±2.8**, 1644S**×**7259W, h56^{km}**±26^{km}**, mb3.6**/2**, mb1 3.8**/6**, mb1mx3.5**/21**, mbtmp3.8**/6**, ML3.8**/4**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx2.8**/24**, Error ellipse: s-maj=22.2km s-min=20.3km az=108.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.29	89	P	Pn	07 42 04.4	+1.3
	1.1nm,0.3s,baz=275,slow=11,SNR=25						
LPAZ				S	Sn	07 42 53.4	+1.6
	0.8nm,0.3s,baz=292,slow=19,SNR=2.3						
LVC	Limon Verde	7.06	151	P	Pn	07 42 40.3	-0.8
	3.4nm,0.3s,baz=342,slow=9.4,SNR=11						
LVC				S	Sn	07 44 03.0	+3.2
	3.4nm,0.3s,baz=94,slow=19,SNR=10						
ATAH	Atahualpa	10.96	328	P	Pn	07 43 34.4	-0.1
	0.3nm,0.3s,baz=58,slow=11,SNR=3.9						
SIV	San Ignacio	11.07	89	P	Pn	07 43 34.5	-1.5
	0.2nm,0.3s,baz=267,slow=11,SNR=5.5						
CFAA	Coronel Fontan	15.61	166	P	Pn	07 44 39.6	+2.7
	0.0nm,0.3s,baz=346,slow=10,SNR=18						
PLCA	Paso Flores	24.27	176	P	P	07 46 11.8	-0.6
	3.7nm,1.0s,baz=3.2,slow=9.9,SNR=6.0						
PCRV	Puerto La Cruz	27.59	17	LR	LR	07 58 58.0	
	comp=Z,47nm,20.1s,baz=72,slow=39						
TORD	Torodi Ar. Bea	79.07	73	P	P	07 52 59.9	+1.1
	0.6nm,0.6s,baz=270,slow=5.3,SNR=6.3						
AFI	Afiamalu	94.68	254	LR	LR	08 25 16.1	
	comp=Z,76nm,19.8s,baz=222,slow=28						

*IDC **02** 07:51:52.5±1.4, 245N×9575E, h0^{km}, mb4.1/9, mb1 4.2/10, mb1mx4.0/24, mbtmp4.1/10, ML3.7/1, MS3.4/3, Ms1 3.4/3, ms1mx2.8/30, Error ellipse: s-maj=53.1km s-min=16.3km az=51.0*

*BJI **02** 07:51:54.0, 206N×9541E, h57^{km}, mB5.2, mb4.8*

*NEIC **02** 07:51:57.4±0.6, 247N×9586E, h30^{km}, mb4.9/9, Error ellipse: s-maj=14.6km s-min=6.6km az=38.0*

*ISCJB **02** 07:52:00.0±2.7, 26N±0.1×960E±0.1, h69^{km}±21^{km}, mb4.5/21, Error ellipse: s-maj=30.0km s-min=12.1km az=93.8*

ISC 02 07:52:02.0±2.7**, 26N**±01×**960E**±01**, h67^{km}**±21^{km}**, n29, σ0^{s}68**/29**, mb4.5**/21**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	Tuntungan	2.68	70	i P	Pn	07 52 44.1	+1.3
PSI	Prapat	2.90	86	Pn	Pn	07 52 44.9	-0.9
	8.1nm,0.3s,baz=286,slow=7.4,SNR=37						
PSI				Sn	Sn	07 53 19.8	+0.4
	8.5nm,0.3s,baz=261,slow=19,SNR=5.2						
PSI				LR	LR	07 54 17.7	
	comp=Z,425nm,18.2s,baz=266,slow=46						
KULM	Kulim	5.33	60	ePn	Pn	07 53 17.5	-1.4
KULM				eSn	Sn	07 54 29.1	+10
JIRN	Jiri	26.64	340	eP	P	07 57 35.2	+0.9
	56nm,0.9s,mb5.1						
PKI	Pulchoki	26.83	339	eP	P	07 57 36.0	0.0
	10nm,0.6s,mb4.6						
GUN	Gumba	26.98	340	eP	P	07 57 38.2	+0.9
	32nm,0.7s,mb5.0						
DMN	Daman	26.98	338	eP	P	07 57 38.5	+1.2
KKN	Kakani	27.08	339	eP	P	07 57 38.4	+0.2
	41nm,0.9s,mb5.0						
GKN	Gorkha	27.51	338	eP	P	07 57 42.2	+0.1
	41nm,0.9s,mb5.0						
KOLN	Koldanda	27.71	336	eP	P	07 57 44.4	+0.5
	17nm,0.6s,mb4.7						
LZH	Lanzhou	34.10	11	eP	P	07 58 40.2	+0.1
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.8						
FITZ	Fitzroy Crossi	35.69	126	P	P	07 58 53.3	-0.5
	comp=Z,1.5nm,0.8s,mb4.0,baz=270,slow=3.9,SNR=4.8						
GTA	Gaotai	36.80	5	eP	P	07 59 02.8	-0.5
GTA				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.6						
BJT	Baijiatuau	41.48	24	eP	P	07 59 43.0	+0.6
	comp=Z,12nm,0.8s,mb4.8						
BJI	Beijing	41.51	24	P	P	07 59 42.1	-0.5
BJI				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.1						
WRA	Warramunga Arr	43.76	123	P	P	08 00 00.9	+0.1
	comp=Z,1.6nm,0.9s,mb3.8,baz=302,slow=9.1,SNR=6.4						
ASAR	Alice Springs	45.16	127	P	P	08 00 12.9	+0.9
	comp=Z,0.5nm,0.6s,mb3.4,baz=300,slow=7.7,SNR=9.8						
MKAR	Makanchi Array	45.62	347	P	P	08 00 15.3	-0.3
	comp=Z,2.9nm,0.6s,mb4.2,baz=160,slow=8.6,SNR=26						
SONM	Songino Array	45.94	10	P	P	08 00 17.9	-0.2
	comp=Z,3.1nm,0.7s,mb4.2,baz=188,slow=9.3,SNR=19						
SONM				PcP	PcP	08 01 55.5	+1.4
	comp=Z,0.7nm,0.6s,baz=190,slow=3.6,SNR=3.9						
KURK	Kurchatov	50.15	346	eP	P	08 00 50.8	+0.1
	comp=Z,1.9nm,0.6s,mb4.2						
MJAR	Matsushiro Arr	51.47	44	LR	LR	08 25 31.1	
	comp=Z,39nm,19.5s,baz=325,slow=39						
ZAL	Zalesovo	52.00	352	P	P	08 01 04.9	+0.4
	comp=Z,3.3nm,0.5s,mb4.7,baz=324,slow=2.9,SNR=9.9						
BVAR	Borovoye Array	54.56	341	P	P	08 01 22.3	-0.9
	comp=Z,1.4nm,0.7s,mb4.1,baz=138,slow=7.1,SNR=7.4						
CHKZ	Chkalovo	55.04	342	eP	P	08 01 26.3	-0.5
	comp=Z,3.9nm,0.8s,mb4.5						
AKTK	Aktyubinsk	57.46	332	P	P	08 01 43.0	-0.9
AKTO	Aktyubinsk	57.46	332	P	P	08 01 43.0	-0.9
	comp=Z,0.7nm,0.3s,mb4.1,baz=121,slow=10,SNR=5.4						
DZM	Mont Dzumac	72.91	114	LR	LR	08 34 15.8	
	comp=Z,44nm,21.9s,baz=199,slow=35						
FIA1	FINESS Array S	78.23	333	eP	P	08 03 54.2	-0.2
ARCES	ARCESS Array B	80.83	340	P	P	08 04 08.7	+0.2
	comp=Z,6.3nm,1.1s,mb4.4,baz=126,slow=4.7,SNR=3.7						

*NEIC **02** 07:56:10.4, 3648S×17891W, h118^{km}, MG3.7(WEL), After WEL.*

WEL 02 07:56:13.3±0.3**, 3644S**×**17893W, h33^{km}, ML3.6**/4**, Error ellipse: s-maj=5.0km s-min=4.0km az=0.0, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	2.77	233	P	Pn	07 56 54.7	-0.7
PUZ				S	Sn	07 57 26.2	-1.5
PUZ	Puketiti	2.77	233	PN	Pn	07 56 54.9	-0.5
PUZ				SN	Sn	07 57 26.2	-1.5
MWZ	Matawai	3.40	235	eP	Pn	07 57 03.4	-0.6
MWZ				S	Sn	07 57 41.1	-2.0
MWZ	Matawai	3.40	235	PN	Pn	07 57 03.3	-0.6
MWZ				SN	Sn	07 57 41.1	-2.0
URZ	Urewera	3.64	239	eP	Pn	07 57 06.7	-0.6
URZ	Urewera	3.64	239	PN	Pn	07 57 06.7	-0.7
URZ				SN	Sn	07 57 46.4	-2.7
KNZ	Kokohu	3.73	225	P	Pn	07 57 07.7	-0.8
KNZ	Kokohu	3.73	225	PN	Pn	07 57 07.7	-0.8
BKZ	Black Stump Fm	4.53	232	eP	Pn	07 57 18.5	-1.1
BKZ	Black Stump Fm	4.53	232	PN	Pn	07 57 18.5	-1.1

IDC 02 08:00:02.5±3.0**, 5312N**×**3399E, h0^{km}, mb1 3.5**/4**, mb1mx3.2**/21**, mbtmp3.3**/4**, ML3.3**/4**, Error ellipse: s-maj=38.6km s-min=10.9km az=107.0, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	3.81	233	Pn	Pn	08 01 01.2	-1.4
	1.9nm,0.3s,baz=57,slow=16,SNR=5.6						
AKASG				Sn	Sn	08 01 46.2	-1.9
	2.6nm,0.3s,baz=61,slow=20,SNR=4.9						
AKASG				Lg		08 02 03.0	
	2.8nm,0.3s,baz=64,slow=29,SNR=6.8						
FINES	FINESS Array B	9.37	336	Pn	Pn	08 02 13.1	-5.8
	0.2nm,0.3s,baz=154,slow=13,SNR=5.0						
FINES				Sn	Sn	08 03 55.6	-9.4
	0.3nm,0.3s,baz=161,slow=18,SNR=5.0						
FINES				Lg		08 04 57.6	
	baz=147,slow=26,SNR=2.0						
NOA	NORSAR Array B	14.64	312	Pn	Pn	08 03 24.7	-6.1
	0.2nm,0.3s,baz=285,slow=19,SNR=2.7						
ARCES	ARCESS Array B	16.94	350	Pn	Pn	08 03 55.8	-5.1
	0.3nm,0.3s,baz=156,slow=9.3,SNR=9.5						

HEL 02 08:02:34.3, 5938N×**2702E, h0^{km}, ML1.3**(FIA0)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	FINESS Array S	2.12	348	PN	Pn	08 02 18.3	-53
FIA0				PN	Pn	08 03 11.1	+0.1
FIA0				LG		08 03 40.5	

*NEIC **02** 08:21:02.8±0.6, 855S×10877E, h10^{km}, mb4.8/3, Error ellipse: s-maj=25.2km s-min=11.9km az=64.0*

*IDC **02** 08:21:03.6±1.3, 858S×10752E, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.0/17, mbtmp4.2/7, Error ellipse: s-maj=90.3km s-min=21.6km az=85.0*

*ISCJB **02** 08:21:05.9±3.2, 86S±0.1×1089E±02, h58^{km}±32^{km}, mb4.3/10, Error ellipse: s-maj=35.4km s-min=15.0km az=135.6*

ISC 02 08:21:06.9±2.6**, 86S**±01×**1089E**±02**, h46^{km}**±27^{km}**, n22, σ0^{s}95**/19**, mb4.3**/10**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	16.04	329	eP	Pn	08 24 50.1	+0.9
KKM	Kota Kinabalu	16.26	27	eP	Pn	08 24 52.1	+0.1

MBWA	Marble Bar	16.30	141	P	Pn	08 24 51.6	-0.9
JIRN	Jiri	42.20	329	eP	P	08 28 55.5	+0.3
PKI	Pulchoki	42.53	328	eP	P	08 28 57.4	-0.4
GUN	Gumba	42.56	329	eP	P	08 28 58.2	+0.1
DMN	Daman	42.72	328	eP	P	08 28 59.0	-0.3
	30nm,1.0s,mb5.0						
KKN	Kakani	42.77	328	eP	P	08 28 59.4	-0.4
GKN	Gorkha	43.28	328	eP	P	08 29 03.3	-0.6
KOLN	Koldanda	43.65	327	eP	P	08 29 06.0	-0.8
	16nm,0.8s,mb4.8						
SONM	Songino Array	56.21	358	P	P	08 30 45.7	+3.5
	1.1nm,0.5s,mb4.1,baz=180,slow=8.9,SNR=7.7						
MKAR	Makanchi Array	60.01	339	P	P	08 31 09.3	+0.5
	4.2nm,0.6s,mb4.7,baz=143,slow=7.5,SNR=19						
KURK	Kurchatov	64.62	339	eP	P	08 31 39.9	+0.2
	4.5nm,1.1s,mb4.4						
ZAL	Zalesovo	65.53	345	P	P	08 31 46.2	+0.8
	1.2nm,0.3s,mb4.4,baz=207,slow=4.0,SNR=3.2						
ZAL	Zalesovo	65.53	345	P	P	08 31 46.2	+0.7
MAW	Mawson	66.42	198	P	P	08 31 52.5	+1.3
	1.2nm,0.7s,mb4.0,baz=36,slow=5.4,SNR=8.7						
BVAR	Borovoye Array	69.55	336	P	P	08 32 10.5	-0.4
	1.2nm,0.6s,mb4.0,baz=153,slow=9.6,SNR=6.4						
VNDA	Vanda	74.08	170	P	P	08 32 41.6	+3.6
	0.6nm,0.8s,mb3.6,baz=278,slow=7.1,SNR=4.0						
BRTR	Keskin Array B	84.27	311	P	P	08 33 31.4	-2.2
	0.6nm,0.6s,mb3.9,baz=92,slow=7.9,SNR=4.1						
JCT	Junction City	145.46	47	ePKPdf	PKPdf	08 40 42.6	+2.8
WVT	Waverly	148.62	27	ePKPbc	PKPbc	08 40 50.8	+2.0
PLAL	Pickwick Lake	149.46	28	ePKPbc	PKPbc	08 40 52.4	+1.5

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*NEIC **02** 08:35:11.1±1.5, 764S×11020E, h10^{km}, mb4.1/3, Error ellipse: s-maj=74.2km s-min=12.4km az=45.0*
NEIC Felt [III] at Gunung Kidul.
*IDC **02** 08:35:11.8±2.8, 765S×11051E, h0^{km}, mb4.3/3, mb1 4.4/4, mb1mx3.8/16, mbtmp4.2/4, ML3.6/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/23, Error ellipse: s-maj=142.2km s-min=40.8km az=48.0*
*ISCJB **02** 08:35:42.0±4.1, 86S±04×1120E±03, h154^{km}±49^{km}, mb4.0/4, Error ellipse: s-maj=79.4km s-min=17.1km az=74.7*
ISC 02 08:35:43.5±3.5**, 85S**±04×**1120E**±03**, h154**^{km}±42^{km}**, n15, σ0^{s}64**/13**, mb4.0**/4**, 1D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.34	127	eP	Pn	08 39 23.1	-1.0
	5.6nm,0.6s						
FITZ				eS	S	08 42 26.7	+0.8
FITZ	Fitzroy Crossi	16.34	127	P	Pn	08 39 23.5	-0.6
	0.1nm,0.3s,baz=279,slow=11,SNR=5.5						
FITZ				LR	LR	08 45 51.5	
	comp=Z,69nm,19.9s,baz=273,slow=36						
TSI	Tuntungan	17.93	311	⇓eP	Pn	08 39 43.5	+0.5
KAKA	Kakadu	20.50	104	eP	P	08 40 09.0	-0.4
	11nm,0.7s						
WRA	Warramunga Arr	24.42	120	P	P	08 40 48.2	+0.5
	2.3nm,0.7s,mb3.8,baz=294,slow=11,SNR=28						
WRA				LR	LR	08 51 41.6	
	comp=Z,33nm,20.9s,baz=330,slow=38						
WRAB	Tennant Creek	24.43	120	eP	P	08 40 48.1	+0.4
	3.0nm,0.6s,mb4.0						
WB2	Warramunga Arr	24.43	120	eP	P	08 40 47.2	-0.6
WB2				eS	S	08 44 30.5	-26
ASPA	Alice Springs	25.84	128	eP	P	08 41 01.0	+0.6
AS31	Alice Springs	25.84	128	eP	P	08 41 01.0	+0.5
ASAR	Alice Springs	25.84	128	P	P	08 41 00.0	-0.5
	1.2nm,0.6s,mb3.7,baz=304,slow=9.0,SNR=21						
STKA	Stephens Creek	36.02	134	eP	P	08 42 28.5	-1.2
	7.3nm,0.4s,mb4.7						
STKA	Stephens Creek	36.02	134	P	P	08 42 28.7	-1.0
	8.3nm,0.4s,mb4.7,baz=312,slow=8.0,SNR=39						
STKA				LR	LR	08 57 40.8	
	comp=Z,59nm,20.7s,baz=26,slow=36						
YKA	Yellowknife Ar	116.42	22	PKP	PKPdf	08 53 56.6	-12
	0.2nm,0.4s,baz=332,slow=1.4,SNR=6.9						
MIAR	Mount Ida	144.98	38	ePKPbc	PKPdf	08 54 50.8	-11
WVT	Waverly	147.04	30	ePKPab	PKPab	08 54 57.5	-12

CASC 02 08:39:05.1±2.4**, 1253N**×**8702W, h153**^{km}±10^{km}**, MD3.7, ML2.8, 3C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	0.17	133	⇓eP	Pn	08 39 25.2	-0.4
LEON				eS	Sn	08 39 40.0	-1.2
CRIN	San Cristobal	0.17	349	⇓eP	Pn	08 39 25.5	-0.1
CRIN				eS	Sn	08 39 44.6	+3.3
TELN	Telica	0.20	68	eP	Pn	08 39 25.2	-0.4
TELN				eS	Sn	08 39 43.1	+1.8
MIRN	Miramar	0.31	107	⇑eP	Pn	08 39 26.1	+0.1
MIRN				eS	Sn	08 39 41.4	-0.5
CNGN	Cerro Negro	0.31	96	⇓iP	Pn	08 39 25.9	0.0
CNGN				eS	Sn	08 39 42.2	+0.3
MOMJ	Momotombo	0.48	105	⇓eP	Pn	08 39 26.9	+0.3
APYN	Apoyeque	0.72	114	⇓eP	Pn	08 39 28.6	+0.7
XAVN	Gruta Xavier	0.78	119	eP	Pn	08 39 28.9	+0.6
TISN	Laguna Tiscapa	0.83	118	⇑eP	Pn	08 39 29.4	+0.7
MGAN	Managua	0.84	117	⇑eP	Pn	08 39 29.5	+0.7
MGAN				eS	Sn	08 39 47.8	+0.8
	comp=N,104nm,0.5s						
TICN	Ticuantepe	0.91	123	eP	Pn	08 39 30.3	+0.9
TICN				eS	Sn	08 39 49.1	+1.1
CNCH	Conchagua	1.09	313	eP	x	08 39 45.6	
CNCH				eS	x	08 40 07.6	
BLLM	Bellamira	1.50	307	eP	x	08 39 50.7	
BLLM				eS	x	08 40 13.8	
VSM	San Miguel	1.52	306	eP	x	08 39 51.1	
VSM				eS	x	08 40 15.8	
LCBS	La Ceiba	2.21	301	eP	x	08 39 57.7	
LCBS				eS	x	08 40 28.2	
LFRS	El Faro	2.27	299	eP	x	08 39 58.5	
LFRS				eS	x	08 40 28.7	
SNJE	San Jose	2.85	298	eP	x	08 40 07.2	
SNJE				eS	x	08 40 42.7	
SBLS	San Blas	2.85	297	eP	x	08 40 06.4	
SBLS				eS	x	08 40 43.0	
RTR	El Retiro	2.90	298	eP	x	08 40 07.8	
RTR				eS	x	08 40 44.5	

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*IDC **02** 08:54:14.5±0.8, 1009S×10881E, h0^{km}, mb4.1/8, mb1 4.2/9, mb1mx4.1/15, mbtmp4.1/9, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/26, Error ellipse: s-maj=33.7km s-min=17.5km az=53.0*
*NEIC **02** 08:54:16.2±0.4, 10.12S×10882E, h10^{km}, mb4.5/7, Error ellipse: s-maj=18.1km s-min=5.9km az=45.0*
*ISCJB **02** 08:54:17.9±0.6, 10.1S±0.1×1089E±0.1, h33^{km}, mb4.3/16, Error ellipse: s-maj=26.7km s-min=8.3km az=89.7*
ISC 02 08:54:20.2±0.6**, 102S**±01×**1088E**±01**, h35**^{km}**, n31, σ0^{s}72**/26**, mb4.3**/16**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	Marble Bar	15.15	138	ePn	Pn	08 57 44.4	-7.1
	10nm,0.8s						
PSI	Prapat	16.22	322	LR	LR	09 05 24.5	
	comp=Z,69nm,19.4s,baz=139,slow=42						
FITZ	Fitzroy Crossi	18.10	118	eP	Pn	08 58 29.4	+0.6
	3.8nm,0.4s						
FITZ				eS	S	09 01 31.3	-23
FITZ	Fitzroy Crossi	18.10	118	P	Pn	08 58 28.7	-0.1
	0.3nm,0.3s,baz=296,slow=9.3,SNR=22						
FITZ				Sn	Sn	09 01 36.0	-14
	0.4nm,0.3s,baz=152,slow=22,SNR=6.1						
WRA	Warramunga Arr	26.45	115	P	P	08 59 53.7	0.0
	1.4nm,0.7s,mb3.6,baz=286,slow=11,SNR=12						
WRA				Sn	S	09 04 56.3	+31
	0.9nm,0.8s,baz=290,slow=25,SNR=5.5						
WRAB	Tennant Creek	26.45	115	eP	P	08 59 53.9	0.0
	2.5nm,0.6s,mb3.9						
WB2	Warramunga Arr	26.46	115	eP	P	08 59 54.0	+0.2
WB2				eS	S	09 04 48.8	+24
ASAR	Alice Springs	27.43	123	P	P	09 00 03.0	+0.4
	0.5nm,0.6s,mb3.2,baz=296,slow=9.3,SNR=14						
ASAR				PcP	PcP	09 03 21.7	+1.0
	0.5nm,0.6s,baz=295,slow=1.8,SNR=5.0						
ASAR				Sn	S	09 05 20.4	+40
	1.4nm,1.0s,baz=301,slow=24,SNR=5.4						
STKA	Stephens Creek	37.21	130	P	P	09 01 28.4	+0.3
	1.4nm,0.7s,mb3.9,baz=303,slow=21,SNR=3.1						
JIRN	Jiri	43.52	330	eP	P	09 02 21.1	+0.8
	26nm,0.8s,mb5.0						
PKI	Pulchoki	43.83	329	eP	P	09 02 23.3	+0.5
GUN	Gumba	43.88	330	eP	P	09 02 23.7	+0.5
DMN	Daman	44.02	329	eP	P	09 02 24.7	+0.4
	5.3nm,0.2s,mb4.9						
KKN	Kakani	44.08	329	eP	P	09 02 25.4	+0.6
GKN	Gorkha	44.58	329	eP	P	09 02 28.4	-0.4
KOLN	Koldanda	44.93	328	eP	P	09 02 31.5	-0.1
	22nm,0.9s,mb5.0						
MJAR	Matsushiro Arr	54.04	29	P	P	09 03 39.3	-1.8
	0.4nm,0.3s,mb3.8,baz=212,slow=7.3,SNR=5.7						
SONM	Songino Array	57.77	358	P	P	09 04 07.9	+0.1
	2.3nm,0.6s,mb4.4,baz=174,slow=8.7,SNR=8.3						
MKAR	Makanchi Array	61.45	340	P	P	09 04 32.7	-0.4
	3.0nm,0.6s,mb4.6,baz=144,slow=7.8,SNR=26						
MKAR	Makanchi Array	61.45	340	P	P	09 04 32.7	-0.4
MAW	Mawson	64.92	198	P	P	09 04 55.4	-0.7
	1.3nm,0.7s,mb4.1,baz=64,slow=6.4,SNR=4.2						
ZAL	Zalesovo	67.02	345	P	P	09 05 12.6	+3.0
	1.7nm,0.4s,mb4.4,baz=340,slow=3.3,SNR=4.4						
BRVK	Borovoye	71.03	337	eP	P	09 05 33.6	-0.9
	4.1nm,1.1s,mb4.3						
CHKZ	Chkalovo	71.37	337	eP	P	09 05 36.2	-0.3
	6.0nm,0.5s,mb4.8						
ZRNK	Zerenda	71.45	336	eP	P	09 05 36.5	-0.5
	7.3nm,0.8s,mb4.7						
BRTR	Keskin Array B	85.27	312	P	P	09 06 52.8	-0.5
	1.3nm,0.8s,mb4.1,baz=132,slow=6.8,SNR=8.5						
YKA	Yellowknife Ar	119.14	21	PKP	PKPdf	09 13 05.1	-0.3
	0.1nm,0.4s,baz=319,slow=1.0,SNR=4.8						
YKA	Yellowknife Ar	119.14	21	PKP	PKPdf	09 13 05.1	-0.3
WMOK	Wichita Mounta	144.86	42	ePKPdf	PKPdf	09 13 53.9	+0.5
JCT	Junction City	146.54	49	ePKPbc	PKPbc	09 13 58.6	+0.7
MIAR	Mount Ida	148.23	37	ePKPdf	PKPdf	09 13 58.2	-0.9

NNC 02 09:14:20.5±3.4**, 5350N**×**8735E, h0**^{km}**, mb3.9, mpv3.6, 10C-1D, Error ellipse: s-maj=30.4km s-min=21.2km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	6.05	246	⇑Pn	Pn	09 15 50.2	-1.1
	3.1nm,0.8s						
KURK				⇑Lg		09 17 35.6	
	18nm,1.0s						
MK02	Makanchi Array	7.47	208	⇑Pn	Pn	09 16 10.9	+0.2
	4.9nm,0.8s,baz=42,slow=14						
MK02				⇑Sn	Sn	09 17 36.7	+0.6
	6.9nm,1.0s,baz=35,slow=24						
MK02				⇑Lg		09 18 14.9	
	5.1nm,0.7s,baz=34,slow=29						
VOSK	Vostochnaya	9.87	272	⇑Pn	Pn	09 16 44.9	+1.2
	2.0nm,1.1s						
VOSK				⇑Sn	Sn	09 18 30.0	-5.2
	5.9nm,0.8s						
CHKZ	Chkalovo	9.95	278	⇑Pn	Pn	09 16 45.1	+0.3
	3.0nm,1.2s						
CHKZ				⇑Sn	Sn	09 18 33.8	-3.4
	4.0nm,0.9s						
BVA0	Borovoye Array	10.17	274	⇓Sn	Sn	09 18 40.1	-2.4
	0.7nm,1.0s,baz=83,slow=22,SNR=7.3						
ZRNK	Zerenda	11.01	275	⇑Sn	Sn	09 18 59.4	-3.7
	3.3nm,0.8s						

IDC 02 09:59:48.6±18.0**, 2481N**×**9514E, h170**^{km}±170^{km}**, mb3.3**/6**, mb1 3.4**/6**, mb1mx3.1**/22**, mbtmp3.7**/6**, Error ellipse: s-maj=74.0km s-min=18.9km az=52.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	24.23	338	P	P	10 04 49.8	+0.3
	2.4nm,0.5s,baz=148,slow=9.7,SNR=22						
SONM	Songino Array	24.65	18	P	P	10 04 53.3	-0.1
	0.3nm,0.3s,baz=203,slow=9.4,SNR=2.9						
WRA	Warramunga Arr	58.59	136	P	P	10 09 28.0	+0.5
	0.3nm,0.7s,baz=320,slow=7.6,SNR=6.1						
ASAR	Alice Springs	61.11	139	P	P	10 09 44.9	+0.2
	0.5nm,1.0s,baz=314,slow=6.5,SNR=4.2						
HFS	Hagfors	64.60	327	P	P	10 10 07.4	-0.3
	1.6nm,0.5s,baz=117,slow=5.3,SNR=6.7						
NOA	NORSAR Array B	65.71	328	P	P	10 10 14.6	-0.2
	0.7nm,0.5s,baz=192,slow=10,SNR=3.5						

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*IDC **02** 10:30:01.4±3.1, 4440N×10258E, h0^{km}, mb3.8/4, mb1 3.9/6, mb1mx3.7/23, mbtmp3.8/6, ML3.6/2, MS3.4/2, Ms1 3.4/2, ms1mx2.6/31, Error ellipse: s-maj=59.2km s-min=19.9km az=153.0*
*BJI **02** 10:30:01.0, 4455N×10252E, h9^{km}, mb3.4, ML4.0, Ms4.0, Msz3.4*
*ISCJB **02** 10:30:04.0±0.4, 4462N±004×10242E±007, h10^{km}, mb4.2/11, MS3.8/1, Error ellipse: s-maj=7.5km s-min=5.3km az=54.9*
*MOS **02** 10:30:04.0±1.4, 4468N×10228E, h10^{km}, mb4.6/1, Error ellipse: s-maj=16.5km s-min=10.3km az=83.2*
*NEIC **02** 10:30:06.0±0.6, 4470N×10237E, h10^{km}, mb4.4/8, Error ellipse: s-maj=13.2km s-min=7.4km az=125.0*
ISC 02 10:30:05.9±0.4**, 4464N**±004×**10237E**±007**, h10**^{km}**, n30, σ1^{s}16**/34**, mb4.2**/11**, MS3.8**/1**, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	4.25	40	Pn	Pn	10 31 10.6	0.0
	10.0nm,0.3s,baz=216,slow=15,SNR=133						
SONM				Pg	Pb	10 31 21.1	+0.5
	20nm,0.3s,baz=212,slow=19,SNR=34						
SONM				Lg		10 32 17.5	
	37nm,0.3s,baz=222,slow=30,SNR=21						
SONM				LR	LR	10 33 04.3	
	comp=Z,226nm,20.2s,baz=265,slow=42						
ULN	Ulaanbaatar	4.58	44	ePn	Pn	10 31 14.7	-0.5
ULN				eSn	Sb	10 32 25.9	+4.3
GTA	Gaotai	5.56	201	P	Pn	10 31 26.5	-2.1
GTA				SG	Sb	10 32 48.7	-1.0
GTA				Smax			
	comp=N,131nm,1.0s						
GTA				Smax			
	comp=E,137nm,0.9s						
GTA				LR	LR		
	comp=N,473nm,3.8s						
GTA				LR	LR		
	comp=E,530nm,5.0s						
GTA				LR	LR		
	comp=Z,448nm,10.3s						
ZAK	Zakamensk	5.78	6	eP	Pn	10 31 32.4	+0.7
ZAK				pmax	pmax		
	comp=Z,25nm,0.4s						
TLY	Talaya	7.10	6	eP	Pn	10 31 50.6	+0.8
TLY				pmax	pmax		
	comp=Z,14nm,0.5s						
TLY	Talaya	7.10	6	ePn	Pn	10 31 50.6	+0.7
	comp=Z,14nm,0.5s						
TLY				eSn	Sg	10 33 49.0	-4.8
HHC	Hu-ho-hao-te	7.75	116	eP	Pn	10 31 54.4	-4.4
HHC				S	Sn	10 33 26.6	0.0
HHC				LG		10 34 05.7	
HHC				LR	LR		
	comp=N,383nm,4.9s						
HHC				LR	LR		
	comp=E,364nm,4.3s						
HHC				LR	LR		
	comp=Z,306nm,8.5s						
MKAR	Makanchi Array	14.19	286	Pn	Pn	10 33 27.2	+0.3
	comp=Z,0.1nm,0.3s,baz=96,slow=15,SNR=2.7						
BOD	Bodaibo	15.04	25	eP	Pn	10 33 39.2	+0.7
KURK	Kurchatov	17.07	299	eP	Pn	10 34 03.1	-1.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	Kurchatov	17.07	299	eP	Pn	10 34 03.1	-1.5
	comp=Z,3.7nm,0.6s						
GUN	Gumba	21.27	224	eP	P	10 34 53.2	+0.8
JIRN	Jiri	21.33	223	eP	P	10 34 53.0	0.0
KKN	Kakani	21.67	225	eP	P	10 34 58.0	+1.4
	comp=Z,55nm,0.7s,mb5.1						
KKN	Kakani	21.67	225	eP	P	10 34 58.0	+1.4
KKN				pmax	pmax		
	comp=Z,55nm,0.7s,mb5.1						
PKI	Pulchoki	21.79	224	eP	P	10 34 58.0	+0.1
	comp=Z,32nm,0.7s,mb4.9						
PKI	Pulchoki	21.79	224	eP	P	10 34 58.0	+0.1
PKI				pmax	pmax		
	comp=Z,32nm,0.7s,mb4.9						
GKN	Gorkha	21.82	226	eP	P	10 35 00.7	+2.4
	comp=Z,19nm,0.7s,mb4.6						
DMN	Daman	21.91	225	eP	P	10 34 59.6	+0.4
CHKZ	Chkalovo	22.48	305	eP	P	10 35 04.2	-1.1
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
CHKZ	Chkalovo	22.48	305	eP	P	10 35 04.2	-1.1
	comp=Z,3.6nm,0.6s,mb4.0						
BVAR	Borovoye Array	22.51	303	P	P	10 35 05.7	+0.1
	comp=Z,4.2nm,0.7s,mb4.0,baz=100,slow=11,SNR=18						
KOLN	Koldanda	22.55	228	eP	P	10 35 08.2	+2.1
	comp=Z,27nm,1.2s,mb4.6						
BRVK	Borovoye	22.58	303	eP	P	10 35 07.2	+0.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
BRVK	Borovoye	22.58	303	eP	P	10 35 07.2	+0.9
	comp=Z,2.9nm,0.6s,mb3.9						
AKASG	Malin Array Be	47.78	305	P	P	10 38 41.0	-2.2
	comp=Z,0.6nm,0.5s,mb3.9,baz=58,slow=9.0,SNR=5.2						
BR131	Keskin Array S	49.80	290	eP	P	10 38 59.3	+0.5
	comp=Z,2.4nm,0.5s,mb4.5						
NOA	NORSAR Array B	52.80	322	P	P	10 39 20.0	-1.3
	comp=Z,0.5nm,0.6s,mb3.6,baz=62,slow=7.3,SNR=2.9						
YKA	Yellowknife Ar	69.19	17	P	P	10 41 10.4	-2.3
	comp=Z,0.5nm,0.6s,mb3.6,baz=332,slow=5.6,SNR=4.8						
HNR	Honiara	74.71	120	LR	LR	11 14 08.4	
	comp=Z,50nm,19.7s,MS3.8,baz=179,slow=36						

IDC 02 10:35:43.8±2.1**, 159N**×**12667E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.5**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=180.9km s-min=24.5km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.68	161	P	P	10 40 46.7	-0.1
	1.2nm,0.7s,baz=340,slow=11,SNR=15						
ASAR	Alice Springs	26.07	165	P	P	10 41 19.7	+0.7
	0.4nm,0.6s,baz=343,slow=7.9,SNR=9.6						
MKAR	Makanchi Array	59.27	326	P	P	10 45 47.3	+0.1
	0.2nm,0.4s,baz=116,slow=8.3,SNR=3.5						

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*NEIC **02** 10:39:04.6, 3197S×7060W, h106^{km}, MG3.7(GUC), After GUC.*
GUC 02 10:39:04.6±0.9**, 3197S**×**7060W, h106**^{km}±4^{km}**, MD3.7, ML3.7, 20C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILCH	Illapel	0.59	304	⇑iP	Pn	10 39 22.3	+0.7
ILCH				iS	Sn	10 39 34.6	+0.1
ILCH				AML	AML	10 39 35.0	
	comp=E,16μm,0.2s						
ILCH	Illapel	0.59	304	⇑iP	Pn	10 39 22.3	+0.7
ILCH				iS	Sn	10 39 34.6	+0.1
JACH	Jahuel	0.71	180	⇑iP	Pn	10 39 23.5	+0.8
JACH				iS	Sn	10 39 37.4	+1.1
CHNG	Los Chungos	0.77	276	⇑iP	Pn	10 39 23.9	+0.7
CHNG				iS	Sn	10 39 37.8	+0.6
CHNG				AML	AML	10 39 40.5	
	comp=E,2μm,0.6s						
CMCH	Combarbala	0.86	336	⇑iP	Pn	10 39 24.7	+0.6
CMCH				iS	Sn	10 39 39.3	+0.6
CMCH				AML	AML	10 39 41.1	
	comp=E,11μm,0.9s						
CMCH	Combarbala	0.86	336	⇑iP	Pn	10 39 24.7	+0.6
CMCH				iS	Sn	10 39 39.3	+0.6
ROCH	El Roble	1.06	199	⇑iP	Pn	10 39 26.6	+0.5
ROCH				iS	Sn	10 39 42.4	+0.1
IHA	Instituto Hidr	1.37	220	eP	Pn	10 39 29.6	-0.1
FCH	Farellones	1.38	169	⇓iP	Pn	10 39 31.5	+1.8
FCH				iS	Sn	10 39 51.1	+2.3
FCH				AML	AML	10 39 52.9	
	comp=N,2μm,0.3s						
CLCH	Cerro Calan	1.42	178	⇓iP	Pn	10 39 31.0	+0.8
CLCH				iS	Sn	10 39 50.9	+1.2
CLCH				AML	AML	10 39 54.8	
	comp=E,1μm,0.9s						
CLCH				AML	AML	10 39 55.0	
	comp=N,1μm,0.5s						
DSCH	Colegio Aleman	1.43	179	⇑iP	Pn	10 39 30.5	+0.2
DSCH				iS	Sn	10 39 50.5	+0.8
OVCH	Ovalle	1.45	339	⇑iP	Pn	10 39 31.5	+0.9
OVCH				iS	Sn	10 39 50.8	+0.5
OVCH				AML	AML	10 39 52.1	
	comp=N,2μm,0.2s						
OVCH	Ovalle	1.45	339	⇑iP	Pn	10 39 31.5	+0.9
OVCH				iS	Sn	10 39 50.8	+0.5
STL	Santa Lucia	1.46	181	⇑iP	Pn	10 39 31.0	+0.3
STL				iS	Sn	10 39 51.1	+0.6
STL				AML	AML	10 39 55.3	
	comp=E,324nm,0.4s						
SAN	Santiago	1.48	182	iS	Sn	10 39 51.8	+0.9
SAN				AML	AML	10 39 52.8	
	comp=E,720nm,0.4s						
RCDM	Rinconada Maip	1.53	187	⇑iP	Pn	10 39 32.1	+0.6
RCDM				iS	Sn	10 39 52.2	+0.3
RCDM				AML	AML	10 39 56.0	
	comp=E,1μm,0.2s						
RCDM	Rinconada Maip	1.53	187	⇑iP	Pn	10 39 32.1	+0.6
RCDM				iS	Sn	10 39 52.2	+0.3
ANTU	Antumapu	1.60	181	eP	Pn	10 39 32.8	+0.4
ANTU				iS	Sn	10 39 54.4	+0.9
ANTU				AML	AML	10 39 57.9	
	comp=N,746nm,0.2s						
ANTU	Antumapu	1.60	181	eP	Pn	10 39 32.8	+0.4
ANTU				iS	Sn	10 39 54.4	+0.9
PCH	Pirque	1.65	178	eP	Pn	10 39 33.9	+0.9
PCH				iS	Sn	10 39 55.3	+0.7
SJCH	San Jose de Ma	1.68	173	⇑iP	Pn	10 39 34.1	+0.7
SJCH				iS	Sn	10 39 56.2	+1.0
SJCH				AML	AML	10 39 56.6	
	comp=N,618nm,0.3s						
SJCH	San Jose de Ma	1.68	173	⇑iP	Pn	10 39 34.1	+0.7
SJCH				iS	Sn	10 39 56.2	+1.0
TACH	Talagante	1.70	190	⇑iP	Pn	10 39 34.1	+0.4
TACH				iS	Sn	10 39 56.9	+1.1
LCCH	Las Cruces	1.71	208	⇑iP	Pn	10 39 33.9	+0.2
LCCH				iS	Sn	10 39 56.4	+0.5
MDZ	Mendoza	1.74	122	iP	Pn	10 39 37.1	+3.0
MDZ				iS	Sn	10 40 01.2	+4.7
TLL	Tololo Astrono	1.81	354	⇓iP	Pn	10 39 36.0	+1.1
TLL				iS	Sn	10 39 59.5	+1.5
TLL				AML	AML	10 40 04.4	
	comp=N,1μm,0.5s						
TLL	Tololo Astrono	1.81	354	⇓iP	Pn	10 39 36.0	+1.1
TLL				iS	Sn	10 39 59.5	+1.5
CHCH	Chadas Angostu	1.96	181	⇑iP	Pn	10 39 37.4	+0.5
CHCH				iS	Sn	10 40 02.0	+0.4
LNV	Longovilo	2.10	199	eP	Pn	10 39 38.5	-0.2
CACH	El Canelo	2.14	180	⇓iP	Pn	10 39 40.4	+1.1
CACH				iS	Sn	10 40 07.2	+1.5
CICH	Cipreses	2.35	176	eP	Pn	10 39 43.0	+1.1
CICH				iS	Sn	10 40 11.8	+1.3
SFDO	San Fernando	2.66	187	⇑iP	Pn	10 39 46.4	+0.4
SFDO				iS	Sn	10 40 17.8	0.0
LCO	Las Campanas	2.95	358	⇑iP	Pn	10 39 50.5	+0.7
LCO				iS	Sn	10 40 24.6	-0.1
VACH	Vallenar	3.38	358	⇓iP	Pn	10 39 56.1	+0.5

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*SZGRF **02** 10:41:52.6, 1776N×9612E, h33^{km}, mb5.1, Myanmar*
*BJI **02** 10:41:53.5, 1881N×9537E, h10^{km}, mB4.9, mb4.7, Ms4.8, Msz4.5*
*ISCJB **02** 10:41:56.2±0.9, 1925N±004×9556E±002, h4^{km}±5^{km}, mb4.8/120, MS4.1/33, Error ellipse: s-maj=6.1km s-min=3.5km az=17.3*
*IDC **02** 10:41:57.2±0.5, 1923N×9551E, h0^{km}, mb4.6/23, mb1 4.7/23, mb1mx4.6/25, mbtmp4.6/23, MS3.9/13, Ms1 3.9/13, ms1mx3.7/32, Error ellipse: s-maj=18.2km s-min=11.6km az=50.0*
*HRVD **02** 10:41:58.7±0.6, 1908N×9574E, h21^{km}±1^{km}, MW4.7/52, Centroid moment Tensor Solution. LP body waves: s9,c10;Mantle waves: s52,c74; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.66±.13; $M_{\theta\theta}$-0.11±.09; $M_{\phi\phi}$-0.55±.10; $M_{r\theta}$0.12±.16; $M_{\theta\phi}$1.51±.07; $M_{\phi r}$-0.13±.16; Best double couple: $M_0$1.53200×10^{16} NP1:ϕ_s4.00000°, δ87.00000°, λ-178.00000°. NP2:ϕ_s274.00000°, δ88.00000°, λ-3.00000°. Principal axes: T 1.1960,*

Plg1.0000°, Azm319.0000°; N 0.6720, Plg86.0000°, Azm57.0000°; P -1.8680, Plg4.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*NEIC **02** 10:41:58.6±0.1, 19.26N×95.58E, h10km, mb5.0/64 Error ellipse: s-maj=5.5km s-min=3.0km az=220.0*

*MOS **02** 10:41:59.2±0.9, 19.15N×95.48E, h33km, mb5.2/65, Error ellipse: s-maj=10.5km s-min=6.9km az=108.0*

ISC 02 10:41:59.0±0.9, **19.22N**±0.03×**95.55E**±0.02, **h10km**±5km, **h16km**±3.3km**:pP-P, n357**, σ0.**93**/371, **mb4.8**/120, **MS4.1**/33, **28C-13D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	Chiang Mai	3.23	97	⇑P	Pn	10 42 48.4	-1.3
	SNR=36						
CHTO	Chiang Mai	3.23	97	*e*Pn	Pn	10 42 48.3	-1.4
CHTO				*e*Sn	Sn	10 43 29.7	+1.5
CM31	Chiang Mai Arr	3.30	103	*e*Pn	Pn	10 42 50.4	-0.2
CM31				*e*S	Sb	10 43 39.5	+1.8
CHRT	Chiangrai	4.04	80	PG	Pn	10 43 01.0	+0.2
CHRT				SG	Pg	10 43 15.0	-1.3
NST	Nakhon Sawan	5.62	128	PN	Pn	10 43 19.5	-3.0
NST				PG	Pg	10 43 42.4	-4.1
NST				SG	Sg	10 44 56.7	-2.6
SHL	Shillong	7.17	332	*e*P	Pn	10 43 39.7	-4.1
CAL	Calcutta	7.51	297	*e*P	Pn	10 43 47.8	-0.8
NNT	Nongplab	7.72	148	P	Pn	10 43 45.0	-6.4
PBA	Port Blair	8.00	200	*e*P	x	10 45 08.3	
PBA				*e*S	x	10 45 12.1	
PBA				*e*x	x	10 45 15.1	
	comp=N,406nm,0.6s						
PBA				*e*x	x	10 45 15.2	
	comp=E,282nm,0.9s						
KMI	Kunming	8.88	47	P	Pn	10 44 08.2	+1.0
KMI				S	Sn	10 46 00.0	+13
KMI				Smax			
	comp=N,205nm,1.7s						
KMI				Smax			
	comp=E,170nm,1.5s						
KMI				LR	LR		
	comp=N,4μm,5.5s						
KMI				LR	LR		
	comp=E,3μm,5.9s						
BOK	Bokaro	10.08	299	*e*P	Pn	10 44 22.4	-1.3
BOK				AMb	AMB	10 44 30.8	
	comp=Z,80nm,0.6s						
BOK				*e*S	Sn	10 46 04.9	-12
VIS	Vishakhapatnam	11.70	265	*e*S	Sn	10 46 51.5	-4.9
JIRN	Jiri	12.01	316	*e*P	Pn	10 44 51.2	+1.1
	comp=Z,40nm,0.3s						
GUN	Gumba	12.38	316	*e*P	Pn	10 44 57.1	+1.9
	comp=Z,61nm,0.4s						
PKI	Pulchoki	12.48	314	*e*P	Pn	10 44 56.5	0.0
	comp=Z,187nm,0.9s						
PKI	Pulchoki	12.48	314	*e*P	Pn	10 44 56.5	0.0
PKI				pmax	pmax		
	comp=Z,187nm,0.9s						
KKN	Kakani	12.70	314	*e*P	Pn	10 45 00.4	+0.8
	comp=Z,44nm,0.4s						
KKN	Kakani	12.70	314	*e*P	Pn	10 45 00.4	+0.8
KKN				pmax	pmax		
	comp=Z,44nm,0.4s						
DMN	Daman	12.71	313	*e*P	Pn	10 45 00.1	+0.4
	comp=Z,75nm,0.7s						
GKN	Gorkha	13.28	313	*e*P	Pn	10 45 07.2	-0.2
	comp=Z,94nm,0.3s						
QIZ	Qiongzhong	13.51	88	P	Pn	10 45 11.6	+1.0
QIZ				*e*S	Sn	10 47 42.2	+1.5
QIZ				AMB	AMB		
	comp=Z,526nm,4.3s						
QIZ				LR	LR		
	comp=N,6μm,13.7s						
QIZ				LR	LR		
	comp=E,2μm,13.2s						
CD2	Chengdu	13.80	31	P	Pn	10 45 13.6	-1.0
CD2				PP		10 45 24.7	
CD2				S	Sn	10 47 47.8	-0.1
CD2				AMB	AMB		
	comp=Z,20nm,0.6s						
CD2				AMB	AMB		
	comp=Z,60nm,4.2s						
CD2				LR	LR		
	comp=E,2μm,10.7s						
CD2				LR	LR		
	comp=Z,2μm,8.4s						
KOLN	Koldanda	13.87	310	*e*P	Pn	10 45 15.3	-0.2
	comp=Z,114nm,0.6s						
KULM	Kulim	14.71	160	*e*Pn	Pn	10 45 27.4	+0.4
JBP	Jabalpur	15.04	288	⇓*i*x	x	10 45 41.1	
JBP				*e*x	x	10 45 44.5	
	comp=Z,80nm,1.5s						
JBP				*i* S	Sn	10 48 16.9	-1.2
NGP	Nagpur	15.61	280	*e*P	Pn	10 45 41.9	+2.9
NGP				AMb	AMB	10 45 45.6	
	comp=Z,31nm,1.2s						
MDRS	Chennai	15.92	250	*e*x	x	10 49 05.0	
MDRS				*e*x	x	10 50 31.0	
HYB	Hyderabad	16.24	266	*i* P	Pn	10 45 53.5	+6.4
HYB	Hyderabad	16.24	266	*e*P	Pn	10 45 53.5	+6.4
PSI	Prapat	16.65	168	Pn	Pn	10 45 56.2	+3.8
	comp=Z,0.5nm,0.3s,baz=323,slow=11,SNR=14						
PSI				LR	LR	10 53 01.2	
	comp=Z,828nm,18.3s,baz=145,slow=40						
PSI	Prapat	16.65	168	Pn	Pn	10 45 56.2	+3.8
PSI				LR	LR	10 53 01.2	
LGTI	Lohaghat	17.25	309	*i* P	Pn	10 45 58.3	-1.6
BHPL	Bhopal	17.37	286	*e*P	Pn	10 46 02.8	+1.5
BHPL				AMb	AMB	10 46 07.6	
	comp=Z,38nm,1.1s						
BHPL				*e*x	x	10 49 05.0	
AKL	Akola	17.49	278	*e*P	Pn	10 46 04.8	+1.9
AKL				AMb	AMB	10 46 11.0	
	comp=Z,71nm,1.3s						
LZH	Lanzhou	18.32	22	*e*P	Pn	10 46 16.3	+3.2
LZH				AP	pP	10 46 19.5	+3.4
LZH				XP	sP	10 46 21.1	+3.7
LZH				*e*S	Sn	10 49 43.0	+5.4
LZH				XS	sS	10 49 48.0	+0.9
LZH				AMB	AMB		
	comp=Z,203nm,1.4s						
LZH				AMB	AMB		
	comp=Z,670nm,4.0s						
LZH				LR	LR		
	comp=E,3μm,10.4s						
LZH				LR	LR		
	comp=Z,3μm,12.0s						
XAN	Xi'an	18.96	36	P	Pn	10 46 20.5	-0.4
XAN				S	Sn	10 49 59.7	+6.6
XAN				AMB	AMB		
	comp=Z,37nm,1.1s						
XAN				AMB	AMB		
	comp=Z,309nm,7.9s						
XAN				LR	LR		
	comp=N,602nm,8.9s						
XAN				LR	LR		
	comp=E,729nm,8.7s						
XAN				LR	LR		
	comp=Z,999nm,9.4s						
NDI	New Delhi	19.20	303	*e*P	Pn	10 46 23.3	-0.5
NDI				AMb	AMB	10 46 42.9	
	comp=Z,55nm,1.1s						
KAD	Karad	20.38	268	*e*P	P	10 46 39.5	+3.7
KAD				AMb	AMB	10 46 42.4	
	comp=Z,90nm,2.1s						
SMLA	Simla	20.40	309	*e*P	P	10 46 37.6	+1.7
SMLA				AMb	AMB	10 46 38.7	
	comp=Z,205nm,1.0s						
WHN	Wuhan	20.41	53	*e*P	P	10 46 37.5	+1.5
GTA	Gaotai	20.45	9	*e*P	P	10 46 37.6	+1.1
GTA				AP		10 46 41.2	
GTA				XP	sP	10 46 43.2	+2.5
GTA				PP		10 46 59.8	
GTA				PPP		10 47 09.3	
GTA				S	S	10 50 25.8	+0.4
GTA				SS		10 50 55.9	
GTA				AMB	AMB		
	comp=Z,11nm,0.8s						
GTA				AMB	AMB		
	comp=Z,167nm,5.5s						
GTA				LR	LR		
	comp=N,645nm,13.7s,MS4.3						
GTA				LR	LR		
	comp=E,778nm,16.4s,MS4.3						
GTA				LR	LR		
	comp=Z,705nm,16.4s,MS4.1						
AJM	Ajmer	20.56	294	*e*P	P	10 46 37.9	+0.2
AJM				AMb	AMB	10 46 43.8	
	comp=Z,93nm,1.3s						
TRD	Trivandrum	20.94	242	⇓*e*x	x	10 46 30.1	
QZH	Quanzhou	22.08	71	*e*P	P	10 46 54.7	+0.6
KSM	Kuching	22.80	139	*e*P	P	10 47 03.9	+2.2
NJ2	Nanjing	24.52	54	*e*P	P	10 47 17.9	-0.6
NJ2				AP		10 47 22.1	
NJ2				XP	sP	10 47 24.9	+2.0
NJ2				PP		10 47 53.4	
NJ2				S	S	10 51 34.0	-5.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
NJ2				AMB	AMB		
	comp=Z,530nm,8.5s						
NJ2				LR	LR		
	comp=N,1μm,31.0s						
NJ2				LR	LR		
	comp=E,350nm,24.0s						
NJ2				LR	LR		
	comp=Z,190nm,13.0s						
CHCP	Chirah Chowk	24.52	310	⇓P	P	10 47 18.9	+0.4
BTO	Baotou	24.66	27	*e*P	P	10 47 19.4	-0.3
THW	Thamme Wali	25.23	307	P	P	10 47 26.1	+1.1
WMQ	Urumqi	25.40	347	P	P	10 47 27.0	+0.6
WMQ				XP	sP	10 47 34.0	+3.2
WMQ				PP		10 48 06.0	
WMQ				PCP	PcP	10 51 00.0	+1.4
WMQ				S	S	10 51 50.0	-3.0
WMQ				AMB	AMB		
	comp=Z,45nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,203nm,4.0s						
WMQ				LR	LR		
	comp=N,187nm,9.0s						
WMQ				LR	LR		
	comp=E,338nm,11.0s						
WMQ				LR	LR		
	comp=Z,169nm,9.0s						
HHC	Hu-ho-hao-te	25.54	29	*e*P	P	10 47 27.7	-0.1
HHC				AP	pP	10 47 31.9	+1.0
HHC				XP	sP	10 47 34.7	+2.6
HHC				PP		10 48 07.3	
HHC				PCP	PcP	10 50 59.9	+0.9
HHC				S	S	10 51 51.8	-3.5
HHC				SCP	ScP	10 54 39.0	+0.7
HHC				PCS	PcS	10 54 40.0	+0.5
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.6						
HHC				AMB	AMB		
	comp=Z,212nm,3.2s						
HHC				LR	LR		
	comp=N,973nm,11.0s,MS4.7						
HHC				LR	LR		
	comp=E,996nm,10.9s,MS4.7						
HHC				LR	LR		
	comp=Z,852nm,9.4s						
SSE	Sheshan	25.97	58	P	P	10 47 28.2	-3.4
SSE				AP	pP	10 47 36.5	+1.8
SSE				XP	sP	10 47 40.8	+4.8
SSE				S	S	10 51 55.9	-6.2
SSE				XS	sS	10 52 11.0	+3.8
SSE				AMB	AMB		
	comp=Z,43nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,291nm,5.1s						
SSE				LR	LR		
	comp=N,271nm,17.5s,MS3.9						
SSE				LR	LR		
	comp=E,193nm,17.5s,MS3.9						
SSE				LR	LR		
	comp=Z,243nm,18.2s,MS3.8						
KSH	Kashi	26.35	324	*e*P	P	10 47 36.8	+1.7
KSH				*e*AP	pP	10 47 40.8	+2.6
KSH				*e*XP	sP	10 47 43.1	+3.6
KSH				*e*PP		10 48 19.3	
KSH				*e*PPP		10 48 31.5	
KSH				*e*PCP	PcP	10 51 02.6	+1.8
KSH				S	S	10 52 07.4	-0.7
KSH				XS	sS	10 52 14.7	+1.5
KSH				SS		10 53 16.1	
KSH				SCS	ScS	10 58 29.1	-1.6
KSH				AMB	AMB		
	comp=Z,38nm,0.5s,mb5.2						
KSH				LR	LR		
	comp=N,484nm,7.4s						
KSH				LR	LR		
	comp=E,647nm,11.8s						
KSH				LR	LR		
	comp=Z,501nm,14.2s,MS4.2						
BJT	Baijiatuau	27.27	36	*e*P	P	10 47 45.2	+1.8
BJT				pmax	pmax		
	comp=Z,53nm,1.1s						
BJT	Baijiatuau	27.27	36	*e*P	P	10 47 45.2	+1.8
	comp=Z,53nm,1.1s,mb5.0						
BJI	Beijing	27.29	36	P	P	10 47 45.3	+1.7
BJI				S	S	10 52 23.1	+0.2
BJI				AMB	AMB		
	comp=Z,36nm,1.2s,mb4.8						
BJI				AMB	AMB		
	comp=Z,246nm,5.3s						
BJI				LR	LR		
	comp=N,525nm,11.2s,MS4.6						
BJI				LR	LR		
	comp=E,771nm,11.2s,MS4.6						
BJI				LR	LR		
	comp=Z,354nm,13.3s,MS4.1						
ULHL	Ulahol	28.19	329	P	P	10 47 52.5	+0.9
	SNR=5.9						
KZA	Kyzart	28.57	327	P	P	10 47 56.1	+1.2
	SNR=6.2						
TKM2	Tokmak 2	29.01	329	P	P	10 47 59.6	+0.7
	SNR=8.1						
UCH	Uchtor	29.05	327	P	P	10 48 00.6	+1.3
	SNR=16						
AAK	Ala-Archa	29.35	327	P	P	10 48 02.8	+0.9
	comp=Z,151nm,0.9s,mb5.7,SNR=6.4						
AAK	Ala-Archa	29.35	327	P	P	10 48 03.3	+1.3
	SNR=7.4						
AAK	Ala-Archa	29.35	327	P	P	10 48 02.6	+0.7
	SNR=16						
AAK	Ala-Archa	29.35	327*c*	*i*P	P	10 48 02.1	+0.2
AAK				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.0						
AAK	Ala-Archa	29.35	327	*e*P	P	10 48 02.2	+0.3
AML	Almayashu	29.41	326	P	P	10 48 03.2	+0.7
	SNR=10						
FRU	Bishkek	29.44	328	*e*P	P	10 48 03.0	+0.3
FRU				pmax	pmax		
	comp=Z,58nm,2.0s,mb5.0						
MKAR	Makanchi Array	29.57	341	P	P	10 48 03.4	-0.5
	comp=Z,8.7nm,0.6s,mb4.6,baz=152,slow=9.1,SNR=71						
MKAR				ScP	ScP	10 54 53.3	+2.7
	comp=Z,1.2nm,1.0s,baz=142,slow=4.6,SNR=4.4						
EKS2	Erkin-Say	29.74	327	P	P	10 48 06.6	+1.2
	SNR=18						
USP	Ospenovka	29.81	328	P	P	10 48 06.4	+0.4
	SNR=8.1						
SONM	Songino Array	29.87	15	P	P	10 48 06.8	+0.3
	comp=Z,2.9nm,0.5s,mb4.2,baz=201,slow=11,SNR=22						
SONM				ScP	ScP	10 54 54.7	+3.2
	comp=Z,1.2nm,0.9s,baz=181,slow=3.8,SNR=5.0						
SONM				LR	LR	11 02 02.6	
	comp=Z,272nm,20.1s,MS3.9,baz=309,slow=40						
SONM	Songino Array	29.87	15	P	P	10 48 06.9	+0.4
SONM						10 54 54.7	
DL2	Dalian	29.89	43	P	P	10 48 08.3	+1.6
DL2				*e*S	S	10 53 08.1	+4.2
DL2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
DL2				LR	LR		
	comp=N,300nm,16.4s,MS4.2						
DL2				LR	LR		
	comp=E,330nm,13.7s,MS4.2						
DL2				LR	LR		
	comp=Z,440nm,17.5s,MS4.2						
ULN	Ulaanbaatar	30.06	16	*e*P	P	10 48 08.3	+0.1
ULN				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.4						
ULN	Ulaanbaatar	30.06	16	*e*P	P	10 48 08.3	+0.1
	comp=Z,12nm,1.4s,mb4.4						
JOW	Kunigami	30.99	70	P	P	10 48 17.6	+1.3
	comp=Z,14nm,0.5s,mb5.0,baz=277,slow=16,SNR=9.9						
ZAK	Zakamensk	31.69	9	*e*P	P	10 48 22.5	-0.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb3.9						
SNY	Shenyang	32.77	40	⇑P	P	10 48 32.8	+0.8
SNY				PP	PP	10 49 43.8	-2.3
SNY				S	S	10 53 50.1	+1.3
SNY				XS	sS	10 54 07.0	+13
SNY				AMB	AMB		
	comp=Z,25nm,1.2s,mb5.0						
SNY				AMB	AMB		
	comp=Z,208nm,9.2s						
SNY				LR	LR		
	comp=N,619nm,19.4s,MS4.5						
SNY				LR	LR		
	comp=E,475nm,15.9s,MS4.5						
SNY				LR	LR		
	comp=Z,348nm,14.1s,MS4.2						
TLY	Talaya	33.01	9	*e*P	P	10 48 35.2	+1.1
TLY				*e*		10 49 46.3	
TLY				*e*SS	SS	10 56 22.6	+8.0
TLY				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.4						
TLY				MLR	MLR		
	comp=Z,179nm,13.0s,MS4.0						
KURK	Kurchatov	34.18	341	P	P	10 48 43.2	-1.1
	comp=Z,138nm,0.6s,SNR=13						
KURK	Kurchatov	34.18	341	P	P	10 48 44.2	-0.1
	SNR=7.1						
KURK	Kurchatov	34.18	341	*i* P	P	10 48 43.2	-1.1
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
KURK	Kurchatov	34.18	341	*e*P	P	10 48 43.8	-0.6
	comp=Z,15nm,0.7s,mb5.0						
WSAR	Wadi Sarin	34.59	283	LR	LR	11 03 40.7	
	comp=Z,240nm,20.6s,MS3.9,baz=94,slow=38						
CN2	Changchun	35.03	39	*e*P	P	10 48 52.0	+0.3
CN2				*e*AP	pP	10 48 56.4	+1.6
CN2				*e*S	S	10 54 22.6	-1.1
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CN2				AMB	AMB		
	comp=Z,150nm,9.0s						
CN2				LR	LR		
	comp=N,490nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=E,350nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=Z,360nm,17.0s,MS4.2						
ZAL	Zalesovo	35.63	349	P	P	10 48 56.9	+0.1
	comp=Z,6.1nm,0.3s,mb5.0,baz=305,slow=8.0,SNR=22						
ZAL				LR	LR	11 03 40.4	
	comp=Z,46nm,18.2s,MS3.3,baz=124,slow=37						
HOQ	Hoqain	35.80	284	P	P	10 49 01.6	+3.3
	SNR=8.2						
BSY	Bisya	35.92	282	P	P	10 49 02.6	+3.3
	SNR=9.0						
NVS	Novosibirsk	36.78	348	⇑*i*P	P	10 49 05.1	-1.6
NVS				*e*S	S	10 54 54.0	+3.5
NVS				*e*		10 59 21.8	
NVS				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.0						
NVS				pmax	pmax		
	comp=N,33nm,1.5s						
NVS				pmax	pmax		
	comp=E,21nm,1.3s						
NVS				smax			
	comp=N,19nm,1.9s						
NVS				smax			
	comp=E,13nm,1.8s						
KRAR	Krasnoyarsk	36.78	357	*e*P	P	10 49 06.1	-0.6
KRAR				pmax	pmax		
	comp=Z,23nm,0.6s,mb5.2						
ASHO	Ashiyiah	36.94	286	P	P	10 49 11.5	+3.4
	SNR=8.0						
ABKT	Ailbek	37.47	308	P	P	10 49 14.6	+2.0
	comp=Z,139nm,1.1s,mb5.7,SNR=5.5						
MDJ	Mudanjiang	37.97	41	P	P	10 49 16.7	-0.1
MDJ				AP	pP	10 49 19.5	-0.5
MDJ				XP	sP	10 49 21.3	+0.1
MDJ				PP	PP	10 50 43.5	0.0
MDJ				S	S	10 55 08.9	+0.2
MDJ				SCP	ScP	10 55 20.0	-0.1
MDJ				PCS	PcS	10 55 21.1	-0.2
MDJ				SCS	ScS	10 59 30.9	+1.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,44nm,4.5s						
MDJ				LR	LR		
	comp=N,213nm,18.0s						
MDJ				LR	LR		
	comp=E,188nm,24.3s						
MDJ				LR	LR		
	comp=Z,215nm,21.1s,MS3.9						
VLA	Vladivostok	38.72	44	⇑*i*P	P	10 49 22.4	-0.7
VLA				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.9						
BVAR	Borovoye Array	38.97	336	P	P	10 49 24.4	-0.9
	comp=Z,1.2nm,0.3s,mb4.1,baz=138,slow=9.8,SNR=9.8						
BVAR				PcP	PcP	10 51 35.6	0.0
	comp=Z,2.2nm,0.8s,baz=196,slow=2.6,SNR=5.6						
BVAR				ScP	ScP	10 55 27.6	+3.7
	comp=Z,2.1nm,0.9s,baz=138,slow=9.1,SNR=6.8						
BRVK	Borovoye	39.04	336	*e*P	P	10 49 24.9	-0.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
BRVK	Borovoye	39.04	336	*e*P	P	10 49 24.9	-0.9
	comp=Z,2.7nm,0.6s,mb4.2						
CHKZ	Chkalovo	39.39	337	*i* P	P	10 49 26.3	-2.4
CHKZ				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
CHKZ	Chkalovo	39.39	337	*e*P	P	10 49 27.8	-0.9
	comp=Z,13nm,0.7s,mb4.8						
ZRNK	Zerenda	39.46	335	*e*P	P	10 49 28.3	-1.0
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
ZRNK	Zerenda	39.46	335	*e*P	P	10 49 28.3	-1.0
	comp=Z,3.7nm,0.5s,mb4.4						
BOD	Bodaibo	40.87	15	*e*P	P	10 49 40.2	-0.8
BOD				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.0						
MAJO	Matsushiro	41.09	56	*e*P	P	10 49 43.3	+0.5
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
MAJO	Matsushiro	41.09	56	*e*P	P	10 49 43.3	+0.5
	comp=Z,4.1nm,0.8s,mb4.1						
MAT	Matsushiro	41.09	56	P	P	10 49 42.9	+0.1
MAT				S	S	10 56 01.0	+5.5
MAT	Matsushiro	41.09	56	*e*P	P	10 49 43.0	+0.2
MAT				*e*S	S	10 56 02.0	+6.5
MJAR	Matsushiro Arr	41.09	56	P	P	10 49 43.6	+0.8
	comp=Z,3.6nm,0.9s,mb4.0,baz=270,slow=9.6,SNR=15						
MJAR				LR	LR	11 08 44.0	
	comp=Z,211nm,18.1s,MS4.0,baz=285,slow=39						
KLR	Kul'dur	41.67	36	*e*P	P	10 49 44.8	-2.7
KLR				pmax	pmax		
	comp=E,24nm,1.4s						
KLR				pmax	pmax		
	comp=Z,36nm,1.4s,mb4.8						
KLR				MLR	MLR		
	comp=E,500nm,12.0s						
KLR				MLR	MLR		
	comp=Z,2μm,12.0s,MS5.2						
JHJ	Hachijo jima 2	41.74	62	LR	LR	11 09 19.7	
	comp=Z,114nm,21.0s,MS3.7,baz=302,slow=39						
ARU	Arti	46.26	332	⇑*i*P	P	10 50 22.1	-2.3
ARU				*e*		10 52 09.2	
ARU				*e*PPP		10 52 53.9	
ARU				*e*S	S	10 57 06.5	-4.5
ARU				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
ARU				MLR	MLR		
	comp=Z,300nm,18.5s,MS4.3						
ARU				MLR	MLR		
	comp=N,100nm,16.0s,MS4.2						
ARU				MLR	MLR		
	comp=E,200nm,18.0s,MS4.2						
ARU	Arti	46.26	332	*e*P	P	10 50 23.8	-0.6
	comp=E,5.9nm,0.3s,mb5.0						
ASAJ	Asahikawa	46.30	47	P	P	10 50 25.6	+0.9
	comp=E,9.7nm,0.9s,mb4.7,baz=62,slow=22,SNR=4.2						
ASAJ	Asahikawa	46.30	47	P	P	10 50 25.7	+0.9
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MBWA	Marble Bar	46.59	148	*e*P	P	10 50 26.9	-0.1
	comp=Z,16nm,0.9s,mb5.0						

YSS Yuzh-Sakhalins 47.30 43 *e*P P **10 50 32.3 -0.2**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,300nm,14.0s,MS4.4
YSS Yuzh-Sakhalins 47.30 43 *e*P P **10 50 32.4 -0.1**
comp=Z,19nm,0.9s,mb5.0
FITZ Fitzroy Crossi 47.42 140 *e*P P **10 50 32.8 -0.7**
comp=Z,10nm,1.0s,mb4.7
FITZ Fitzroy Crossi 47.42 140 P P **10 50 33.0 -0.5**
comp=Z,6.2nm,1.0s,mb4.5,baz=326,slow=6.1,SNR=9.7
GNI Garni 48.10 307*c i*P P **10 50 40.0 +1.2**
GNI pmax pmax
comp=Z,24nm,1.7s
KIV Kislovodsk 50.33 312 P P **10 50 57.2 +1.3**
SNR=14
KIV Kislovodsk 50.33 312 *e*P P **10 50 56.6 +0.7**
KIV pmax pmax
comp=Z,24nm,0.8s,mb5.3
KIV Kislovodsk 50.33 312 *e*P P **10 50 56.6 +0.8**
comp=Z,24nm,0.8s,mb5.3
SOC Sochi 52.38 311*c i*P P **10 51 11.4 +0.2**
SOC *e* 10 53 12.0
SOC *e*PPP 10 54 13.9
SOC *e*S S **10 58 36.0 -0.9**
SOC *e* 11 01 00.2
SOC *e*SS SS 11 02 01.7 -13
SOC pmax pmax
comp=Z,30nm,1.2s,mb5.1
MALT Malatya 52.73 304 *e*P P **10 51 15.2 +1.4**
MALT pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MALT Malatya 52.73 304 *e*P P **10 51 15.2 +1.4**
comp=Z,5.1nm,0.8s,mb4.5
ANN Anapa 54.19 312 *e*P P **10 51 14.2 -10**
ANN *i* *PP pP 10 51 24.5 -3.3
ANN *e* 10 52 20.7
ANN pmax pmax
comp=Z,17nm,0.8s,mb5.0
ANN MLR MLR
comp=Z,157nm,18.0s,MS4.1
VRSR Storozhevoye 54.29 320 *e*P P **10 51 24.0 -1.3**
VRSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VRSR pmax pmax
comp=N,9.0nm,0.9s
VRSR pmax pmax
comp=E,10.0nm,1.0s
WRA Warramunga Arr 54.41 134 P P **10 51 25.6 -0.6**
comp=E,6.1nm,0.9s,mb4.5,baz=320,slow=7.5,SNR=21
WRAB Tennant Creek 54.41 134 *e*P P **10 51 25.6 -0.5**
WB2 Warramunga Arr 54.42 134 *e*P P **10 51 24.6 -1.6**
EIL Elat 55.61 293 *e*P P **10 51 35.1 +0.3**
comp=E,74nm,0.6s,mb5.9
TIXI Tiksi 55.91 12*c i*P P **10 51 35.1 -1.8**
TIXI pmax pmax
comp=Z,20nm,1.7s,mb4.9
BR131 Keskin Array S 56.54 305 *e*P P **10 51 41.5 +0.1**
comp=Z,1.1nm,0.5s,mb4.1
BRTR Keskin Array B 56.54 305 P P **10 51 41.0 -0.4**
comp=Z,2.4nm,0.9s,mb4.2,baz=114,slow=5.8,SNR=14
BRTR LR LR 11 21 34.9
comp=Z,86nm,19.6s,MS3.9,baz=278,slow=42
ASAR Alice Springs 56.71 137 P P **10 51 42.4 -0.3**
comp=Z,4.1nm,0.8s,mb4.5,baz=318,slow=7.1,SNR=25
ASAR PcP PcP 10 52 40.4 +1.7
comp=Z,1.9nm,0.9s,baz=323,slow=6.3,SNR=4.6
OBN Obninsk 56.80 324*c i*P P **10 51 42.0 -1.3**
OBN pmax pmax
comp=Z,44nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,100nm,20.0s,MS3.9
AKASG Malin Array Be 60.41 318 P P **10 52 07.2 -1.2**
comp=Z,3.7nm,0.5s,mb4.7,baz=78,slow=6.0,SNR=34
AKBB Malin Array Si 60.41 318 *e*P P **10 52 07.0 -1.4**
TIRR Tirgusor 60.57 311⇑*i*P P **10 52 08.7 -0.9**
TIRR Tirgusor 60.57 311 *e*P P **10 52 08.3 -1.3**
HARR Harsova 60.92 311⇑*i*P P **10 52 15.6 +3.6**
JOF Joensuu 61.38 332 *e*p P **10 52 13.6 -1.5**
comp=Z,6.8nm,0.6s,mb5.0
MLR Muntele Rosu 62.34 312⇑*i*P P **10 52 22.4 +0.9**
MLR Muntele Rosu 62.34 312⇑↑P P **10 52 22.4 +0.9**
BURAR Bucovina Array 62.86 314⇑*i*P P **10 52 25.3 +0.3**
BURAR Bucovina Array 62.86 314⇑↑P P **10 52 25.2 +0.2**
SANT Santorini 63.07 302 *e*P P **10 52 26.1 -0.3**
KAF Kangasniemi 63.49 331 *e*p P **10 52 27.7 -1.5**
comp=Z,2.6nm,0.3s,mb4.8,baz=95,slow=6.2
KAF Kangasniemi 63.49 331 *e*P P **10 52 27.7 -1.5**
KAF pmax pmax
comp=Z,3.0nm,0.3s,mb4.9
FINES FINESS Array B 63.50 330 P P **10 52 28.3 -1.0**
comp=Z,2.6nm,0.5s,mb4.6,baz=106,slow=5.8,SNR=24
FINES LR LR 11 22 52.0
comp=Z,140nm,18.6s,MS4.2,baz=142,slow=39
FINES FINESS Array B 63.50 330 P P **10 52 28.3 -1.0**
FINES LR LR 11 22 52.0
LVV L'vov 63.68 317 *i*P P **10 52 30.0 -0.4**
SUW Suwalki 64.34 321 *e*P P **10 52 33.8 -0.9**
VTS Vitosha 64.39 309⇓*i*P P **10 52 35.1 0.0**
VTS Vitosha 64.39 309⇓P P **10 52 35.1 +0.1**
KWP Kalwaria 64.54 317 *e*P P **10 52 36.2 +0.1**
DRGR 64.58 313⇓*i*P P **10 52 36.9 +0.6**
DRGR 64.58 313⇓⇓P P **10 52 36.9 +0.6**
KEV Kevo 64.72 339 *e*p P **10 52 34.9 -2.3**
KOLS Kolonicke sedl 64.83 316 *e*P P **10 52 37.8 -0.2**
BILL Bilibino 65.13 23 *e*P P **10 52 38.6 -1.3**
BILL *e*S S 11 01 19.5 -3.1
BILL pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.4
ARCES ARCESS Array B 65.18 339 P P **10 52 39.6 -0.6**
comp=Z,1.5nm,0.4s,mb4.4,baz=89,slow=7.1,SNR=13
ARCES LR LR 11 21 44.1
comp=Z,59nm,20.4s,MS3.8,baz=92,slow=37
CRVS Cervenica-Dubn 65.37 316 *e*P P **10 52 42.1 +0.7**
BZS Buzias 65.38 312⇓*i*P P **10 52 42.3 +0.8**
BZS Buzias 65.38 312⇓P P **10 52 42.2 +0.7**
NIE Niedzica 66.11 316 *e*P P **10 52 47.2 +1.0**
OJC Ojcow 66.41 317 *e*P P **10 52 48.0 -0.2**
PSZ Piszkesteto 66.45 315 *e*P P **10 52 48.8 +0.4**
PSZ pmax pmax
comp=Z,12nm,1.1s,mb4.8
PSZ Piszkesteto 66.45 315 *e*P P **10 52 48.8 +0.4**
comp=Z,12nm,1.1s,mb4.8
VYHS Vyhne 67.12 315 *e*P P **10 52 52.3 -0.4**
VYHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VYHS Vyhne 67.12 315 *e*P P **10 52 52.3 -0.4**
comp=Z,3.8nm,0.9s,mb4.4
STKA Stephens Creek 67.29 138 *e*P P **10 52 53.7 -0.1**
comp=Z,4.1nm,0.7s,mb4.6
STKA Stephens Creek 67.29 138 P P **10 52 54.0 +0.2**
comp=Z,4.9nm,0.7s,mb4.6,baz=310,slow=10,SNR=9.5
PKSM Moragy 67.41 313⇓*i*P P **10 52 54.5 -0.1**
PKSM Moragy 67.41 313⇓P P **10 52 54.5 0.0**
OKC Ostrava-Krasne 67.49 317 *e*P P **10 52 55.1 0.0**
MORC Moravsky Berou 67.89 317⇑*i*P P **10 52 57.9 +0.4**
MORC Moravsky Berou 67.89 317 *e*P P **10 52 57.3 -0.2**
MORC pmax pmax
comp=Z,13nm,1.3s,mb4.8
MORC Moravsky Berou 67.89 317 *e*P P **10 52 57.3 -0.2**
comp=Z,13nm,1.3s,mb4.8
VRAC Vranov 68.54 316⇓*i*P P **10 53 02.4 +0.8**
VRAC Vranov 68.54 316⇓P P **10 53 02.4 +0.8**
KSP Ksiaz 68.61 318 *e*P P **10 53 02.3 +0.2**
KSP Ksiaz 68.61 318 *e*P P **10 53 02.1 0.0**
DPC Dobruska-Polom 68.63 317 *e*P P **10 53 01.8 -0.4**
UPC Upice 68.81 318 *e*P P **10 53 03.3 -0.1**
TREC Trest 69.26 316 *e*P P **10 53 06.1 0.0**
PVCC Panska Ves 69.73 318 *e*P P **10 53 08.4 -0.6**
PRU Pruhonice 69.80 317 *e*P P **10 53 09.8 +0.3**
PRU AMS AMS 11 27 50.0
comp=Z,100nm,20.6s
BOJS Bojanci 69.84 312 *e*P P **10 53 10.2 +0.5**
BOJS *e* 10 53 18.8
BRG Berggiesshubel 70.09 318 *e*P P **10 53 11.4 +0.2**
comp=Z,14nm,0.9s,mb4.9
BRG Berggiesshubel 70.09 318 *e*P P **10 53 11.5 +0.2**
comp=Z,19nm,1.4s,mb4.8
BRG Berggiesshubel 70.09 318 *e*P P **10 53 11.5 +0.3**
BRG pmax pmax
comp=Z,19nm,1.4s,mb4.8
VISS Visnje 70.09 313 *e*P P **10 53 10.3 -0.9**
MOA Mollin 70.23 315⇑*i*P P **10 53 11.8 -0.3**
comp=Z,24nm,1.4s,mb4.9
CEY Cerknica 70.39 313 *i*P P **10 53 13.2 +0.1**
FBE Freiberg 70.45 318 *e*P P **10 53 13.8 +0.3**
comp=Z,23nm,1.0s,mb5.1
GEC2 GERESS Array S 70.48 316 *e*P P **10 53 13.8 +0.2**
comp=Z,17nm,0.9s,mb5.0
GEC2 GERESS Array S 70.48 316 *e*P P **10 53 13.8 +0.2**
GEC2 pmax pmax
comp=Z,17nm,0.9s,mb5.0
GERES GERESS Array B 70.48 316 P P **10 53 13.2 -0.4**
comp=Z,9.4nm,0.7s,mb4.8,baz=76,slow=5.6,SNR=52
KHC Kasperske Hory 70.52 316 *e*P P **10 53 13.8 -0.1**
KHC Kasperske Hory 70.52 316*c i*P P **10 53 13.9 0.0**
CLL Collm 70.63 319 *e*P P **10 53 14.3 -0.2**
comp=Z,13nm,1.0s,mb4.8
CLL Collm 70.63 319⇑P P **10 53 14.3 -0.2**
comp=Z,logA/T=1.1,mb4.8
CLL *i* *PP pP 10 53 17.1 -0.8
CLL Collm 70.63 319⇑*i*P P **10 53 14.3 -0.2**
comp=Z,13nm,1.0s,mb4.8
CLL *i* pP pP 10 53 17.1 -0.8
CLL Collm 70.63 319⇑*i*P P **10 53 14.3 -0.2**
CLL pmax pmax
comp=Z,13nm,1.0s,mb4.8
NB2 NORSAR Subarra 70.66 329 P P **10 53 13.3 -1.4**
comp=Z,21nm,1.2s,mb4.9,baz=85,slow=6.5
NOA NORSAR Array B 70.66 329 P P **10 53 13.6 -1.1**
comp=Z,4.3nm,0.7s,mb4.5,baz=86,slow=6.1,SNR=13
NOA LR LR 11 26 12.7
comp=Z,64nm,18.9s,MS3.9,baz=90,slow=38
NOA NORSAR Array B 70.66 329 P P **10 53 13.6 -1.1**
NOA LR LR 11 26 12.7
WET Wettzell 70.98 316 *e*P P **10 53 16.9 +0.2**
comp=Z,13nm,1.0s,mb4.8
WET Wettzell 70.98 316 *e*P P **10 53 16.9 +0.2**
WET pmax pmax
comp=Z,13nm,1.0s,mb4.8
TANN Tannenbergstha 71.08 318 *e*P P **10 53 17.4 +0.1**
comp=Z,13nm,1.1s,mb4.8
NKC Novy Kostel 71.11 318 *e*P P **10 53 17.6 +0.1**
WERN Wernitzgruen 71.15 318 *e*P P **10 53 18.0 +0.3**
comp=Z,9.0nm,1.0s,mb4.7
GUNZ Gunzen 71.17 318 *e*P P **10 53 18.1 +0.3**
comp=Z,20nm,1.1s,mb5.0
WERD Werda 71.17 318 *e*P P **10 53 17.8 -0.1**
comp=Z,13nm,1.0s,mb4.8
ROTZ Rotzenmuhle 71.33 317 *e*P P **10 53 19.2 +0.4**
comp=Z,29nm,1.1s,mb5.1
MANZ Manzenberg 71.36 317 *e*P P **10 53 19.8 +0.8**
comp=Z,27nm,1.4s,mb5.0
MOX Moxa 71.58 318 *e*P P **10 53 20.4 +0.1**
comp=Z,12nm,1.0s,mb4.8
MOX Moxa 71.58 318 *e*P P **10 53 20.6 +0.3**
comp=Z,22nm,1.3s,mb4.9
MOX
comp=Z,100nm,23.0s
MOX Moxa 71.58 318 *e*P P **10 53 20.6 +0.3**
MOX pmax pmax
comp=Z,22nm,1.3s,mb4.9
MOX MLR MLR
comp=Z,100nm,23.0s,MS4.0
BSEG Bad Segeberg 71.92 322 *e*P P **10 53 22.8 +0.4**
comp=Z,15nm,0.9s,mb4.9
BSEG Bad Segeberg 71.92 322 *e*P P **10 53 22.8 +0.4**
BSEG pmax pmax
comp=Z,15nm,0.9s,mb4.9
GRA1 Grafenberg Arr 71.97 317 *e*P P **10 53 23.4 +0.7**
comp=Z,21nm,1.3s,mb4.9
GRF Grafenberg Arr 71.97 317 *e*P P **10 53 23.4 +0.7**
comp=Z,21nm,1.3s,mb4.9
GRF Grafenberg Arr 71.97 317 *e*P P **10 53 23.4 +0.7**
GRF pmax pmax
comp=Z,21nm,1.3s,mb4.9
GRF Grafenberg Arr 71.97 317 *e*P P **10 53 23.4 +0.7**
GRF pmax pmax
comp=Z,21nm,1.3s,mb4.9
WTTA Wattenberg 72.07 315⇑*i*P P **10 53 22.7 -0.6**
comp=Z,19nm,1.2s,mb4.9
WTTA Wattenberg 72.07 315⇑*i*P P **10 53 22.7 -0.6**
WTTA pmax pmax
comp=Z,19nm,1.2s,mb4.9
WTTA Wattenberg 72.07 315⇑*i*P P **10 53 22.6 -0.6**
comp=Z,19nm,1.2s,mb4.9
CLZ Clausthal 72.19 320 *e*P P **10 53 24.2 +0.3**
comp=Z,27nm,1.3s,mb5.0
CLZ Clausthal 72.19 320 *e*P P **10 53 24.2 +0.3**
CLZ pmax pmax
comp=Z,27nm,1.3s,mb5.0
MOTA Moosalm 72.42 315⇑*i*P P **10 53 24.5 -0.8**
comp=Z,13nm,1.0s,mb4.8
MOTA Moosalm 72.42 315⇑*i*P P **10 53 24.5 -0.8**
MOTA pmax pmax
comp=Z,13nm,1.0s,mb4.8
UBBA Unterbreizbach 72.57 318 *e*P P **10 53 26.2 -0.1**
comp=Z,12nm,1.4s,mb4.6
DAVA Damuels 73.25 315⇑*i*P P **10 53 29.9 -0.3**
comp=Z,22nm,1.1s,mb5.0
TNS Taunus Mts 73.65 318 *e*P P **10 53 32.9 +0.3**
comp=Z,17nm,1.1s,mb4.9
TNS Taunus Mts 73.65 318 *e*P P **10 53 32.9 +0.3**
TNS pmax pmax
comp=Z,17nm,1.1s,mb4.9
BFO Black Forest 74.08 316 *e*P P **10 53 34.3 -0.8**
comp=Z,8.0nm,1.0s,mb4.6
BFO Black Forest 74.08 316 *e*P P **10 53 34.3 -0.8**
BFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BUG Bochum--Univer 74.16 319 *e*P P **10 53 35.8 +0.2**
comp=Z,18nm,0.6s,mb5.2
LSZ Lusaka 74.62 248 *e*P P **10 53 39.6 +1.3**
LSZ pmax pmax
comp=Z,25nm,0.8s,mb5.2
LSZ Lusaka 74.62 248 *e*P P **10 53 39.6 +1.3**
comp=Z,25nm,0.8s,mb5.2
CDF Champ du Feu 74.75 316 *e*P P **10 53 38.6 -0.5**
comp=Z,26nm,1.1s,mb4.8
CDF Champ du Feu 74.75 316 *e*P P **10 53 38.6 -0.5**
CDF pmax pmax
comp=Z,13nm,1.1s,mb4.8
CDF Champ du Feu 74.75 316 *e*P P **10 53 38.6 -0.5**
comp=Z,13nm,1.1s,mb4.8
PGF Pioggiola 74.78 310 *e*P P **10 53 39.2 0.0**
comp=Z,152nm,1.5s,mb5.4
PGF Pioggiola 74.78 310 *e*P P **10 53 39.2 0.0**
PGF pmax pmax
comp=Z,76nm,1.5s,mb5.4
PGF Pioggiola 74.78 310 *e*P P **10 53 39.2 0.0**
comp=Z,76nm,1.5s,mb5.4
HINF Hinteralfeld 75.16 316 *e*P P **10 53 41.0 -0.4**
WLF Walferdange 75.22 318 *e*P P **10 53 42.7 +1.0**
WLF pmax pmax
comp=Z,22nm,1.1s,mb5.0
WLF Walferdange 75.22 318 *e*P P **10 53 42.7 +0.9**
comp=Z,22nm,1.1s,mb5.0
HAU Haudompre 75.45 316 *e*P P **10 53 42.4 -0.7**
comp=Z,7.5nm,0.5s,mb4.6
HAU *e*R
comp=Z,110nm,18.8s
HAU Haudompre 75.45 316 *e*P P **10 53 42.4 -0.7**
HAU pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
HAU MLR MLR
comp=Z,110nm,18.8s,MS4.2
HAU Haudompre 75.45 316 *e*P P **10 53 42.4 -0.7**
comp=Z,3.8nm,0.5s,mb4.6
HAU LR LR
comp=Z,110nm,18.8s,MS4.2
SBF Sospel 75.62 312 *e*P P **10 53 43.7 -0.3**
LPG La Plagne 75.73 313 *e*P P **10 53 45.0 +0.3**
comp=Z,28nm,0.9s,mb4.9
LPG La Plagne 75.73 313 *e*P P **10 53 45.0 +0.3**
LPG pmax pmax
comp=Z,14nm,0.9s,mb4.9
LPG La Plagne 75.73 313 *e*P P **10 53 45.0 +0.3**
comp=Z,14nm,0.9s,mb4.9
LPL La Plagne 75.74 314 *e*P P **10 53 45.0 +0.3**
comp=Z,31nm,0.9s,mb4.9
LPL La Plagne 75.74 314 *e*P P **10 53 45.0 +0.3**
LPL pmax pmax
comp=Z,16nm,0.9s,mb5.0
LPL La Plagne 75.74 314 *e*P P **10 53 45.0 +0.3**
comp=Z,16nm,0.9s,mb4.9
MBDF Montbardon 75.89 313 *e*P P **10 53 45.6 0.0**
comp=Z,42nm,1.3s,mb4.9
MBDF Montbardon 75.89 313 *e*P P **10 53 45.6 0.0**
MBDF pmax pmax
comp=Z,21nm,1.3s,mb4.9
MBDF Montbardon 75.89 313 *e*P P **10 53 45.6 0.0**
comp=Z,21nm,1.3s,mb4.9
CABF La Chapelle 75.93 315 *e*P P **10 53 45.3 -0.5**
GIVF Givet 75.96 318 *e*P P **10 53 45.6 -0.4**
KEST Kesra 76.05 303 P P **10 53 47.5 +1.0**
comp=Z,5.3nm,0.9s,mb4.5,baz=325,slow=5.4,SNR=9.5
MEZF Maizieres J'vi 76.18 317 *e*P P **10 53 47.2 0.0**
FRF La Foret Royal 76.24 312 *e*P P **10 53 47.5 -0.1**
comp=Z,49nm,0.9s,mb5.1
FRF La Foret Royal 76.24 312 *e*P P **10 53 47.5 -0.1**
FRF pmax pmax
comp=Z,25nm,0.9s,mb5.1
FRF La Foret Royal 76.24 312 *e*P P **10 53 47.5 -0.1**
comp=Z,24nm,0.9s,mb5.1
BAIF Baives 76.35 318 *e*P P **10 53 48.1 -0.1**
comp=Z,36nm,1.1s,mb4.9
BAIF Baives 76.35 318 *e*P P **10 53 48.1 -0.1**
BAIF pmax pmax
comp=Z,18nm,1.1s,mb4.9
BAIF Baives 76.35 318 *e*P P **10 53 48.1 -0.1**
comp=Z,18nm,1.1s,mb4.9
LMR La Mourre 76.39 311 *e*P P **10 53 48.2 -0.2**
ORIF Oris-en-Rattie 76.46 313 *e*P P **10 53 48.7 -0.1**
ORIF *e*R
comp=Z,107nm,21.0s
DAG Danmarks Havn 76.75 348 *i*P P **10 53 47.0 -3.5**
comp=Z,3.7nm,0.8s,mb4.4
DAG Danmarks Havn 76.75 348 *e*P P **10 53 47.0 -3.5**
DAG pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
DAG Danmarks Havn 76.75 348 *e*P P **10 53 47.0 -3.5**
comp=Z,3.7nm,0.8s,mb4.4
SMRF Simiane la Rot 76.90 312 *e*P P **10 53 50.5 -0.8**
comp=Z,19nm,0.9s,mb4.7
SMRF Simiane la Rot 76.90 312 *e*P P **10 53 50.5 -0.8**
comp=Z,19nm,0.9s,mb5.0
LOR Lormes 77.25 316 *e*P P **10 53 52.7 -0.6**
LOR *e*R
comp=Z,71nm,21.0s
LOR Lormes 77.25 316 *e*P P **10 53 52.7 -0.6**
LOR LR LR
comp=Z,70nm,21.0s,MS4.0
VIVF Saint-Julien-l 77.31 313 *e*P P **10 53 53.4 -0.2**
comp=Z,27nm,1.2s,mb4.8
VIVF Saint-Julien-l 77.31 313 *e*P P **10 53 53.4 -0.2**
VIVF pmax pmax
comp=Z,14nm,1.2s,mb4.8
VIVF Saint-Julien-l 77.31 313 *e*P P **10 53 53.4 -0.2**
comp=Z,14nm,1.2s,mb4.8
SMF Signal de Mont 77.42 315 *e*P P **10 53 53.9 -0.4**
comp=Z,22nm,0.7s,mb4.9
SMF Signal de Mont 77.42 315 *e*P P **10 53 53.9 -0.4**
SMF pmax pmax
comp=Z,11nm,0.7s,mb4.9
SMF Signal de Mont 77.42 315 *e*P P **10 53 53.9 -0.4**
comp=Z,11nm,0.7s,mb4.9
SSF Saint Saulge 77.54 316 *e*P P **10 53 54.6 -0.3**
comp=Z,50nm,1.2s,mb5.0
SSF Saint Saulge 77.54 316 *e*P P **10 53 54.6 -0.3**
SSF pmax pmax
comp=Z,25nm,1.2s,mb5.0
SSF Saint Saulge 77.54 316 *e*P P **10 53 54.6 -0.3**
comp=Z,25nm,1.2s,mb5.0
AVF Avril sur Loir 77.71 315 *e*P P **10 53 55.5 -0.4**
comp=Z,20nm,0.9s,mb4.7
AVF Avril sur Loir 77.71 315 *e*P P **10 53 55.5 -0.4**
AVF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
AVF Avril sur Loir 77.71 315 *e*P P **10 53 55.5 -0.4**
comp=Z,9.8nm,0.9s,mb4.7
HYF Humbligny 78.06 316 *e*P P **10 53 58.1 +0.3**
LASF Ste Croix 78.07 313 *e*P P **10 53 57.7 -0.2**
comp=Z,44nm,1.2s,mb5.0
BGF Bois d'Agland 78.11 315 *e*P P **10 53 58.0 -0.1**
TCF Toulx Ste Croi 78.61 315 *e*P P **10 54 01.0 +0.2**
comp=Z,34nm,1.0s,mb4.9
TCF Toulx Ste Croi 78.61 315 *e*P P **10 54 01.0 +0.2**
TCF pmax pmax
comp=Z,17nm,1.0s,mb4.9
TCF Toulx Ste Croi 78.61 315 *e*P P **10 54 01.0 +0.2**
comp=Z,17nm,1.0s,mb4.9
CAF Calviac 79.08 314 *e*P P **10 54 03.2 -0.2**
RJF Les Rejaudoux 79.34 314 *e*P P **10 54 04.4 -0.5**
comp=Z,15nm,0.8s,mb4.7
RJF *e*R
comp=Z,70nm,19.8s
RJF Les Rejaudoux 79.34 314 *e*P P **10 54 04.4 -0.5**
RJF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
RJF MLR MLR
comp=Z,70nm,19.8s,MS4.0
RJF Les Rejaudoux 79.34 314 *e*P P **10 54 04.4 -0.5**
comp=Z,7.4nm,0.8s,mb4.7
RJF LR LR
comp=Z,70nm,19.8s,MS4.0
MTLF Montolieu 79.42 312 *e*P P **10 54 05.3 0.0**
comp=Z,25nm,1.2s,mb4.7
MTLF Montolieu 79.42 312 *e*P P **10 54 05.3 0.0**
MTLF pmax pmax
comp=Z,13nm,1.3s,mb4.7
MTLF Montolieu 79.42 312 *e*P P **10 54 05.3 0.0**
comp=Z,13nm,1.3s,mb4.7
LDF La Druitiere 79.47 318 *e*P P **10 54 05.1 -0.5**
comp=Z,15nm,0.8s,mb4.7
LDF La Druitiere 79.47 318 *e*P P **10 54 05.1 -0.5**
LDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LDF La Druitiere 79.47 318 *e*P P **10 54 05.1 -0.5**
comp=Z,7.6nm,0.8s,mb4.7
FLN La Foliniere 79.65 318 *e*P P **10 54 06.1 -0.5**
FLN *e*R
comp=Z,97nm,21.0s
FLN La Foliniere 79.65 318 *e*P P **10 54 06.1 -0.5**
FLN LR LR
comp=Z,100nm,21.0s,MS4.1
LFF La Frestale 79.97 314 *e*P P **10 54 08.0 -0.3**
MFF Saint Martin d 80.08 316 *e*P P **10 54 08.4 -0.5**
IMA2 Indian Mountai 80.67 23 *e*P P **10 54 11.4 -0.6**
LBTB Lobatse 81.01 240 *e*P P **10 54 15.0 +1.1**
LBTB pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LBTB Lobatse 81.01 240 *e*P P **10 54 15.0 +1.1**
comp=Z,9.7nm,0.7s,mb4.8
SGMF Saint Gilles 81.12 318 *e*P P **10 54 13.4 -1.1**
comp=Z,45nm,1.2s,mb5.0
SGMF Saint Gilles 81.12 318 *e*P P **10 54 13.4 -1.1**
SGMF pmax pmax
comp=Z,23nm,1.2s,mb5.0
SGMF Saint Gilles 81.12 318 *e*P P **10 54 13.4 -1.1**
comp=Z,23nm,1.2s,mb5.0
ETSF Etsaut 81.49 312 *e*P P **10 54 16.7 +0.3**
comp=Z,22nm,1.1s,mb4.7
ETSF Etsaut 81.49 312 *e*P P **10 54 16.7 +0.3**
ETSF pmax pmax
comp=Z,11nm,1.0s,mb4.7
ETSF Etsaut 81.49 312 *e*P P **10 54 16.7 +0.3**
comp=Z,11nm,1.0s,mb4.8
ROSF Rostrenen 81.55 318 *e*P P **10 54 16.3 -0.4**
comp=Z,52nm,1.1s,mb5.1
ROSF Rostrenen 81.55 318 *e*P P **10 54 16.3 -0.4**
ROSF pmax pmax
comp=Z,26nm,1.1s,mb5.1
ROSF Rostrenen 81.55 318 *e*P P **10 54 16.3 -0.4**
comp=Z,26nm,1.1s,mb5.1
QUIF Quistinic 81.62 318 *e*P P **10 54 16.7 -0.4**
comp=Z,54nm,1.3s,mb5.0
QUIF Quistinic 81.62 318 *e*P P **10 54 16.7 -0.4**
QUIF pmax pmax
comp=Z,27nm,1.3s,mb5.0
QUIF Quistinic 81.62 318 *e*P P **10 54 16.7 -0.4**
comp=Z,27nm,1.3s,mb5.0
BOSA Boshof 82.87 237 P P **10 54 24.3 +0.7**
comp=Z,11nm,0.9s,mb4.9,baz=60,slow=3.4,SNR=6.4
BOSA LR LR 11 32 52.9
comp=Z,105nm,18.1s,MS4.2,baz=354,slow=37
BOSA Boshof 82.87 237 *e*P P **10 54 24.2 +0.6**
BOSA pmax pmax
comp=Z,12nm,0.8s,mb5.0
BOSA Boshof 82.87 237 P P **10 54 24.3 +0.7**
BOSA pmax pmax
comp=Z,11nm,0.9s,mb4.9
BOSA MLR MLR
comp=Z,105nm,18.1s,MS4.2
BOSA Boshof 82.87 237 *e*P P **10 54 24.2 +0.6**
comp=Z,12nm,0.8s,mb5.0
COLA College 83.38 23 *e*P P **10 54 24.1 -2.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COLA				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
COLA	College	83.38	23	eP	P	10 54 24.1	-2.2
	comp=Z,6.1nm,1.3s,mb4.5						
SUMG	Summit	83.44	347	eP	P	10 54 25.7	-0.9
	comp=Z,15nm,1.0s,mb5.0						
MCK	McKinley	83.57	24	eP	P	10 54 26.5	-0.8
MCK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
MCK	McKinley	83.57	24	eP	P	10 54 26.5	-0.7
	comp=Z,1.8nm,0.8s,mb4.2						
ESDC	Sonseca Array	84.98	310	P	P	10 54 34.3	-0.1
	comp=Z,0.5nm,0.4s,mb4.0,baz=33,slow=4.8,SNR=6.6						
INK	Inuvik	85.78	16	eP	P	10 54 37.6	-0.8
INK				pmax	pmax		
	comp=Z,18nm,1.3s						
INK	Inuvik	85.78	16	eP	P	10 54 37.6	-0.8
	comp=Z,18nm,1.3s,mb5.2						
DAWY	Dawson	86.83	21	eP	P	10 54 43.1	-0.5
TORD	Torodi Ar. Bea	89.31	284	P	P	10 54 56.0	+0.6
	comp=Z,3.2nm,1.0s,mb4.6,baz=71,slow=3.8,SNR=8.5						
TORD				PP	PP	10 58 26.1	0.0
	comp=Z,1.5nm,0.9s,baz=74,slow=5.1,SNR=4.4						
TORD				LR	LR	11 35 52.8	
	comp=Z,64nm,18.1s,MS4.1,baz=120,slow=36						
MAW	Mawson	89.86	192	P	P	10 54 58.6	+0.7
	comp=Z,2.2nm,1.0s,mb4.5,baz=327,slow=11,SNR=3.7						
YKA	Yellowknife Ar	95.13	14	P	P	10 55 21.2	-1.2
	comp=Z,1.4nm,1.0s,mb4.3,baz=326,slow=5.6,SNR=5.9						
YKA				LR	LR	11 40 47.0	
	comp=Z,71nm,18.4s,MS4.2,baz=180,slow=37						
YKA	Yellowknife Ar	95.13	14	P	P	10 55 21.2	-1.2
YKA				LR	LR	11 40 47.0	
LIC	Lamto	97.89	279	eP	P	10 55 35.1	+0.3
	comp=Z,73nm,1.4s,mb5.7						
LIC	Lamto	97.89	279	eP	P	10 55 35.1	+0.3
	comp=Z,37nm,1.4s,mb5.7						
NVAR	Mina Array Bea	114.44	29	PKP	PKiKP	11 00 39.9	+0.9
	comp=Z,0.6nm,0.9s,baz=4.6,slow=1.8,SNR=4.5						
PV10	Paradox Valley	118.23	22	ePKPdf	PKPdf	11 00 45.5	-0.8
ANMO	Albuquerque	122.21	21	ePKIKP	PKPdf	11 00 54.4	+0.4
JCT	Junction City	128.42	17	ePKIKP	PKPdf	11 01 05.9	0.0
BDFB	Brasilia	145.10	270	PKPbc	PKPbc	11 01 37.6	+1.6
	comp=Z,17nm,0.9s,baz=46,slow=2.4,SNR=15						
BDFB	Brasilia	145.10	270	PKIKP	PKPdf	11 01 37.6	+1.0
BDFB				pmax	pmax		
	comp=Z,17nm,0.9s						
CPUP	Villa Florida	154.05	249	ePKIKP	PKPdf	11 01 51.2	+0.5
CPUP				e		11 01 58.1	
LPAZ	La Paz	164.19	278	PKP	PKPdf	11 02 03.1	+0.6
	comp=Z,2.4nm,1.2s,baz=77,slow=6.4,SNR=4.1						
LPAZ				PKPab	PKPab	11 02 59.2	+3.0
	comp=Z,1.0nm,0.9s,baz=18,slow=5.5,SNR=3.7						

IDC 02 10:48:42.5±3.0**,902S**×**10735E,h0**^{km}**,mb3.8**/4**,mb1 4.0**/4**, mb1mx3.7**/17**,mbtmp3.8**/4**,Error ellipse: s-maj=121.8km s-min=23.7km az=52.0,South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.25	116	P	P	10 54 37.1	-0.2
	1.0nm,0.6s,baz=285,slow=11,SNR=6.7						
ASAR	Alice Springs	29.27	123	P	P	10 54 47.3	+1.0
	1.0nm,0.6s,baz=298,slow=9.1,SNR=7.1						
SONM	Songino Array	56.60	359	P	P	10 58 27.3	+0.2
	1.1nm,0.5s,baz=175,slow=9.0,SNR=11						
MKAR	Makanchi Array	59.89	340	P	P	10 58 50.0	0.0
	0.6nm,0.6s,baz=135,slow=8.7,SNR=6.3						

*IDC **02** 10:51:45.1±1.0,532S×13104E,h0^{km},mb4.1/6,mb1 4.3/7, mb1mx4.2/11,mbtmp4.2/7,ML4.8/1,MS3.6/3,Ms1 3.6/3, ms1mx2.9/22,Error ellipse: s-maj=68.2km s-min=18.9km az=75.0*
*MOS **02** 10:51:46.2±1.2,536S×13153E,h33^{km},mb4.6/14,Error ellipse: s-maj=21.1km s-min=8.6km az=115.9*
*ISCJB **02** 10:51:47.0±1.1,552S±004×13176E±008,h53^{km}±11^{km}, mb4.6/32,Error ellipse: s-maj=12.9km s-min=5.4km az=154.7*
*NEIC **02** 10:51:50.0±0.5,525S×13163E,mb4.5/16,Error ellipse: s-maj=18.6km s-min=9.0km az=56.0*
*BJI **02** 10:51:49.9,520S×13160E,h41^{km},mB5.2,mb4.8*
ISC 02 10:51:48.2±1.0**,549S**±005×**13170E**±007**,h41**^{km}±11^{km}**, h34**^{km}±6.3^{km}**:pP-P,n72,**σ**1^{s}20**/81**,mb4.6**/32**,1D,Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.93	297	P	Pn	10 52 46.5	+0.5
	0.0nm,0.0s						
SWI	Sorong	4.62	355	P	Pn	10 52 52.1	-3.3
	0.0nm,0.0s						
KAKA	Kakadu	7.21	174	eP	Pn	10 53 33.4	+2.3
	53nm,0.3s						
KAKA				eS	Sn	10 54 54.7	+3.0
JAY	Jayapura	9.45	72	P	Pn	10 54 02.2	+0.4
	0.0nm,0.0s						
FITZ	Fitzroy Crossi	13.87	205	eP	Pn	10 55 00.3	-1.8
	21nm,0.4s						
FITZ				eS	Sn	10 57 26.8	-7.8
FITZ	Fitzroy Crossi	13.87	205	Pn	Pn	10 55 00.1	-2.0
	3.6nm,0.3s,baz=32,slow=10,SNR=66						
FITZ				Sn	Sn	10 57 28.8	-5.8
	1.5nm,0.3s,baz=150,slow=9.3,SNR=9.5						
WRAB	Tennant Creek	14.59	170	eP	Pn	10 55 12.1	+0.2
WRAB	Tennant Creek	14.59	170	ePn	Pn	10 55 10.7	-1.2
	19nm,0.4s						
WRAB				eSn	Sn	10 57 45.2	-7.0
WRA	Warramunga Arr	14.59	170	Pn	Pn	10 55 10.4	-1.6
	1.8nm,0.3s,baz=356,slow=13,SNR=70						
WRA				Sn	Sn	10 57 45.1	-7.3
	2.3nm,0.3s,baz=354,slow=23,SNR=8.6						
WB2	Warramunga Arr	14.60	170	eP	Pn	10 55 10.0	-2.0
WB2				eS	Sn	10 57 47.9	-4.5
PMG	Port Moresby	15.81	105	Pn	Pn	10 55 30.5	+2.6
	2.7nm,0.3s,baz=312,slow=10,SNR=9.7						
PMG	Port Moresby	15.81	105	P	Pn	10 55 30.5	+2.6
PMG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PMG	Port Moresby	15.81	105	eP	Pn	10 55 30.4	+2.6
	comp=Z,34nm,0.8s						
AS31	Alice Springs	18.20	174	eP	Pn	10 55 57.7	+0.1
AS31				eS	S	10 59 13.3	-10
ASAR	Alice Springs	18.20	174	P	Pn	10 55 57.5	-0.1
	comp=Z,1.4nm,0.3s,baz=352,slow=9.4,SNR=52						
ASAR				S	S	10 59 14.7	-9.0
	comp=Z,1.2nm,0.3s,baz=354,slow=27,SNR=7.7						
ASAR				LR	LR	11 03 50.8	
	comp=Z,164nm,20.9s,baz=262,slow=39						
ASAR	Alice Springs	18.20	174	P	Pn	10 55 57.5	-0.1
ASAR				S	S	10 59 14.7	-9.0
ASPA	Alice Springs	18.20	174	eP	Pn	10 55 57.7	+0.1
ASPA				eS	S	10 59 13.3	-10
KKM	Kota Kinabalu	19.24	306	eP	Pn	10 56 10.3	0.0
MBWA	Marble Bar	19.43	216	eP	Pn	10 56 13.3	+0.9
	comp=Z,11nm,0.6s						
CTA	Charters Tower	20.27	137	eP	P	10 56 25.1	+4.9
	comp=Z,12nm,0.8s						
CTA	Charters Tower	20.27	137	P	P	10 56 25.0	+4.8
	comp=Z,16nm,0.8s,baz=313,slow=12,SNR=15						
CTA				S	S	11 00 27.6	+22
	comp=Z,4.4nm,0.7s,baz=243,slow=13,SNR=3.6						
CTA				LR	LR	11 05 06.6	
	comp=Z,153nm,20.0s,baz=86,slow=38						
CTA	Charters Tower	20.27	137	eP	P	10 56 25.1	+4.9
CTA				pmax	pmax		
	comp=Z,12nm,0.8s						
CTAO	Charters Tower	20.27	137	eP	P	10 56 24.9	+4.7
CTAO				pmax	pmax		
	comp=Z,12nm,0.7s						
CTAO	Charters Tower	20.27	137	eP	P	10 56 24.9	+4.7
	comp=Z,12nm,0.7s						
KSM	Kuching	22.46	287	eP	P	10 56 45.5	+1.8
FORT	Forrest	25.39	187	eP	P	10 57 14.6	+2.9
	comp=Z,32nm,0.7s,mb5.0						
STKA	Stephens Creek	27.84	162	eP	P	10 57 40.0	+6.3
	comp=Z,3.5nm,0.6s,mb4.2						
STKA	Stephens Creek	27.84	162	P	P	10 57 40.6	+6.8
	comp=Z,2.1nm,0.5s,mb4.0,baz=321,slow=12,SNR=6.2						
STKA				LR	LR	11 10 33.3	
	comp=Z,154nm,20.2s,baz=208,slow=40						
STKA	Stephens Creek	27.84	162	eP	P	10 57 39.7	+6.0
NJ2	Nanjing	39.29	343	eP	P	10 59 11.3	-1.7
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
CHTO	Chiang Mai	40.31	308	eP	P	10 59 25.9	+4.3
CHTO				e*PP	pP	10 59 37.7	+4.8
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
CHTO	Chiang Mai	40.31	308	eP	P	10 59 25.9	+4.3
	comp=Z,11nm,0.9s,mb4.6						
CHTO				epP	pP	10 59 37.7	+4.7
BJI	Beijing	47.51	344	P	P	11 00 17.9	-1.4
BJI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
SNY	Shenyang	47.67	352	⇓P	P	11 00 22.4	+1.9
SNY				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.9						
VLA	Vladivostok	48.38	0	eP	P	11 00 24.2	-1.8
VLA				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
LZH	Lanzhou	48.91	330	eP	P	11 00 37.1	+7.0
LZH				AP	pP	11 00 45.2	+3.5
LZH				XP	sP	11 00 48.6	+2.1
LZH				AMB	AMB		
	comp=Z,22nm,1.4s,mb5.0						
YSS	Yuzh-Sakhalins	53.12	9	eP	P	11 01 01.8	0.0
YSS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
GTA	Gaotai	53.51	329	eP	P	11 01 08.6	+4.0
GTA				AP	pP	11 01 16.0	-0.3
GTA				XP	sP	11 01 19.7	-1.3
GTA				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.4						
JIRN	Jiri	54.91	309	eP	P	11 01 12.8	-2.0
GUN	Gumba	55.27	309	eP	P	11 01 17.8	+0.4
	comp=Z,37nm,0.6s,mb5.6						
PKI	Pulchoki	55.47	309	eP	P	11 01 18.6	-0.2
KKN	Kakani	55.67	309	eP	P	11 01 20.7	+0.4
	comp=Z,21nm,0.8s,mb5.2						
KKN	Kakani	55.67	309	eP	P	11 01 20.7	+0.4
KKN				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
DMN	Daman	55.72	309	eP	P	11 01 20.9	+0.3
GKN	Gorkha	56.27	309	eP	P	11 01 28.0	+3.4
	comp=Z,37nm,0.8s,mb5.5						
KOLN	Koldanda	56.97	308	eP	P	11 01 33.9	+4.4
	comp=Z,33nm,0.8s,mb5.4						
ULN	Ulaanbaatar	57.38	341	eP	P	11 01 32.5	+0.1
ULN				e*PP	pP	11 01 44.3	0.0
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
ULN	Ulaanbaatar	57.38	341	eP	P	11 01 32.5	0.0
	comp=Z,6.1nm,1.1s,mb4.5						
ULN				epP	pP	11 01 44.3	+0.1
SONM	Songino Array	57.58	340	P	P	11 01 34.0	+0.2
	comp=Z,1.2nm,0.8s,mb4.0,baz=167,slow=7.0,SNR=7.1						
ZAK	Zakamensk	60.82	340	eP	P	11 01 56.3	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.1						
TLY	Talaya	61.80	341	eP	P	11 02 03.1	+0.3
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
WMQ	Urumqi	63.08	326	P	P	11 02 12.0	+0.6
WMQ				AMB	AMB		
	comp=Z,15nm,0.8s,mb5.2						
BOD	Bodaibo	64.70	350	eP	P	11 02 21.1	-1.0
BOD				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.2						
MKAR	Makanchi Array	67.92	326	P	P	11 02 42.8	+0.1
	comp=Z,3.9nm,0.6s,mb4.6,baz=116,slow=8.4,SNR=48						
AAK	Ala-Archa	70.50	319	eP	P	11 02 59.0	+0.3
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
ZAL	Zalesovo	71.00	333	P	P	11 03 01.9	+0.1
	comp=Z,1.4nm,0.7s,mb4.0,baz=344,slow=2.8,SNR=5.6						
KURK	Kurchatov	72.13	328	eP	P	11 03 08.2	-0.3
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
KURK	Kurchatov	72.13	328	eP	P	11 03 08.2	-0.4
	comp=Z,8.9nm,1.0s,mb4.7						
NVS	Novosibirsk	72.28	333	eP	P	11 03 11.3	+1.9
VNDA	Vanda	73.74	173	P	P	11 03 21.6	+3.6
	comp=Z,0.5nm,0.6s,mb3.6,baz=287,slow=2.8,SNR=2.9						
MAW	Mawson	76.97	202	P	P	11 03 39.1	+2.6
	comp=Z,0.4nm,0.5s,mb3.6,baz=108,slow=3.2,SNR=3.0						
MAW	Mawson	76.97	202	eP	P	11 03 40.3	+3.7
	comp=Z,3.3nm,0.9s,mb4.3						
TIXI	Tiksi	77.01	359	eP	P	11 03 36.3	-0.5
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
BRVK	Borovoye	77.78	327	eP	P	11 03 41.0	-0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BRVK	Borovoye	77.78	327	eP	P	11 03 41.0	-0.1
	comp=Z,3.3nm,0.8s,mb4.3						
CHKZ	Chkalovo	77.88	328	eP	P	11 03 40.7	-0.9
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CHKZ	Chkalovo	77.88	328	eP	P	11 03 40.7	-0.9
	comp=Z,3.8nm,0.9s,mb4.3						
ZRNK	Zerenda	78.42	327	eP	P	11 03 44.3	-0.4
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ZRNK	Zerenda	78.42	327	eP	P	11 03 44.2	-0.4
	comp=Z,4.8nm,0.9s,mb4.4						
QSPA	South Pole Qui	84.48	180	eP	P	11 04 22.2	+5.5
	comp=Z,2.9nm,0.8s,mb4.5						
ARU	Arti	85.33	328	eP	P	11 04 20.1	-0.9
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
LPAZ	La Paz	150.79	138	PKPbc	PKPbc	11 11 41.6	+5.5
	comp=Z,1.1nm,0.8s,baz=312,slow=4.3,SNR=4.7						

*STR **02** 12:01:58.7±1.2,47.15N×501E,h5^{km}±1^{km},Ml2.7,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **02** 12:02:04.3,4704N×492E,h14^{km},ML2.8(LDG),After LDG.*
*CSEM **02** 12:02:04.0±0.1,4704N×492E,h20^{km},ML2.8/16,Error ellipse: s-maj=1.6km s-min=1.0km az=151.0*
LDG 02 12:02:04.3±0.1**,4704N**×**492E,h14**^{km}**,Md2.8**/3**,Ml2.8**/16**, Error ellipse: s-maj=1.5km s-min=1.1km az=153.0, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LOR	Lormes	0.76	288	ePg	Pg	12 02 19.4	+0.3
LOR				eSg	Sg	12 02 29.2	+0.1
	160nm,0.2s						
LOR	Lormes	0.76	288	ePg	Pg	12 02 19.4	+0.3
LOR				eSg	Sg	12 02 29.2	+0.1
	80nm,0.2s						
SMF	Signal de Mont	0.84	242	ePn	Pn	12 02 20.8	-0.9
SMF				eSg	Sg	12 02 32.1	+0.4
	90nm,0.2s						
SMF	Signal de Mont	0.84	242	ePg	Pg	12 02 20.0	-0.6
SMF				ePn	Pn	12 02 20.8	-0.9
SMF				eSg	Sg	12 02 32.1	+0.4
SMF	Signal de Mont	0.84	242	ePn	Pn	12 02 20.8	-0.9
SMF				eSg	Sg	12 02 32.1	+0.4
	45nm,0.2s						
CABF	La Chapelle	0.91	118	ePg	Pg	12 02 21.8	-0.1
CABF				eSg	Sg	12 02 34.2	+0.4
	40nm,0.2s						
CABF	La Chapelle	0.91	118	ePg	Pg	12 02 21.8	-0.1
CABF				eSg	Sg	12 02 34.2	+0.4
	20nm,0.2s						
SSF	Saint Saulge	0.97	272	ePg	Pg	12 02 22.9	-0.1
SSF				eSg	Sg	12 02 34.0	-1.7
	37nm,0.3s						
SSF	Saint Saulge	0.97	272	ePn	Pn	12 02 21.9	-1.6
SSF				ePg	Pg	12 02 22.9	-0.1
SSF				eSg	Sg	12 02 34.0	-1.7
SSF	Saint Saulge	0.97	272	ePg	Pg	12 02 22.9	-0.1
SSF				eSg	Sg	12 02 34.0	-1.7
	18nm,0.3s						
AVF	Avril sur Loir	1.11	257	ePg	Pg	12 02 25.2	-0.4
AVF				eSg	Sg	12 02 39.2	-0.9
	8.6nm,0.2s						
AVF	Avril sur Loir	1.11	257	ePn	Pn	12 02 23.9	-1.5
AVF				ePg	Pg	12 02 25.2	-0.4
AVF				eSg	Sg	12 02 39.2	-0.9
AVF	Avril sur Loir	1.11	257	ePg	Pg	12 02 25.2	-0.4
AVF				eSg	Sg	12 02 39.2	-0.9
	4.3nm,0.2s						
SFTF	Sexfontaines	1.17	4	ePn	Pn	12 02 24.8	-1.4
SFTF				eSg	Sg	12 02 40.9	-1.1
	27nm,0.3s						
SFTF	Sexfontaines	1.17	4	ePn	Pn	12 02 24.8	-1.4
SFTF				eSg	Sg	12 02 40.9	-1.1
	14nm,0.3s						
HAU	Haudompre	1.36	45	ePg	Pg	12 02 29.9	-0.6
HAU				eSg	Sg	12 02 47.2	-1.1
	35nm,0.3s						
HAU	Haudompre	1.36	45	ePn	Pn	12 02 26.3	-2.6
HAU				ePg	Pg	12 02 29.9	-0.6
HAU				eSg	Sg	12 02 47.2	-1.1
HAU	Haudompre	1.36	45	ePg	Pg	12 02 29.9	-0.6
HAU				eSg	Sg	12 02 47.2	-1.1
	17nm,0.3s						
PLDF	La Plantade	1.40	220	Pg	Pg	12 02 27.6	-3.6
PLDF				Sg	Sg	12 02 48.6	-0.8
BGF	Bois d'Agland	1.51	252	ePg	Pg	12 02 34.3	+1.0
BGF				eSg	Sg	12 02 51.5	-1.4
	24nm,0.3s						
BGF	Bois d'Agland	1.51	252	ePn	Pn	12 02 29.4	-1.5
BGF				ePg	Pg	12 02 34.3	+1.0
BGF				eSg	Sg	12 02 51.5	-1.4
BGF	Bois d'Agland	1.51	252	ePg	Pg	12 02 34.3	+1.0
BGF				eSg	Sg	12 02 51.5	-1.4
	12nm,0.3s						
HINF	Hinteralfeld	1.52	59	ePg	Pg	12 02 33.1	-0.4
HINF				eSg	Sg	12 02 51.5	-1.8
	12nm,0.2s						
HINF	Hinteralfeld	1.52	59	ePn	Pn	12 02 28.3	-2.8
HINF				ePg	Pg	12 02 33.1	-0.4
HINF				eSg	Sg	12 02 51.5	-1.8
HINF	Hinteralfeld	1.52	59	ePg	Pg	12 02 33.1	-0.4
HINF				eSg	Sg	12 02 51.5	-1.8
	5.8nm,0.2s						
HYF	Humbligny	1.57	279	eSg	Sg	12 02 53.9	-1.1
AGO	Saint Agoulin	1.58	232	Pg	Pg	12 02 30.2	-4.5
AGO				Sg	Sg	12 02 54.0	-1.3
PYM	Petit Puy Mans	1.85	226	Pg	Pg	12 02 36.7	-3.1
LPL	La Plagne	1.98	140	ePn	Pn	12 02 36.1	-1.2
LPL				eSg	Sg	12 03 06.8	-1.1
	5.7nm,0.3s						
LPL	La Plagne	1.98	140	ePn	Pn	12 02 36.1	-1.2
LPL				eSg	Sg	12 03 06.8	-1.1
	2.8nm,0.3s						
LPG	La Plagne	2.00	140	ePn	Pn	12 02 36.3	-1.3
LPG				eSg	Sg	12 03 07.7	-0.9
	6.4nm,0.3s						
LPG	La Plagne	2.00	140	ePn	Pn	12 02 36.3	-1.3
LPG				eSg	Sg	12 03 07.7	-0.9
	3.2nm,0.3s						
TCF	Toulx Ste Croi	2.02	249	ePg	Pg	12 02 41.6	-1.4
TCF				eSg	Sg	12 03 06.6	-2.5
	5.7nm,0.2s						
TCF	Toulx Ste Croi	2.02	249	ePg	Pg	12 02 41.6	-1.4
TCF				eSg	Sg	12 03 06.6	-2.5
	2.8nm,0.2s						
CDF	Champ du Feu	2.10	48	ePg	Pg	12 02 43.4	-1.1
CDF				eSg	Sg	12 03 10.7	-1.1
	8.0nm,0.3s						
CDF	Champ du Feu	2.10	48	ePn	Pn	12 02 36.3	-2.7
CDF				ePg	Pg	12 02 43.4	-1.1
CDF				eSg	Sg	12 03 10.7	-1.1
CDF	Champ du Feu	2.10	48	ePg	Pg	12 02 43.4	-1.1
CDF				eSg	Sg	12 03 10.7	-1.1
	4.0nm,0.3s						
LBL	Lubilhac	2.15	213	Pg	Pg	12 02 40.9	-4.7
VIVF	Saint-Julien-l	2.19	185	ePg	Pg	12 02 44.9	-1.5
VIVF				eSg	Sg	12 03 11.5	-3.3
	5.3nm,0.2s						
VIVF	Saint-Julien-l	2.19	185	ePg	Pg	12 02 44.9	-1.5
VIVF				eSg	Sg	12 03 11.5	-3.3
	2.7nm,0.2s						
ORIF	Oris-en-Rattie	2.23	162	ePg	Pg	12 02 45.7	-1.3
ORIF				eSg	Sg	12 03 13.2	-2.7
	6.0nm,0.3s						
ORIF	Oris-en-Rattie	2.23	162	ePg	Pg	12 02 45.7	-1.3
ORIF				eSg	Sg	12 03 13.2	-2.7
	3.0nm,0.3s						
LASF	Ste Croix	3.06	195	ePg	Pg	12 03 01.6	-1.3
LASF				eSg	Sg	12 03 40.0	-2.6
	2.1nm,0.3s						
LASF	Ste Croix	3.06	195	ePg	Pg	12 03 01.6	-1.3
LASF				eSg	Sg	12 03 40.0	-2.6
	1.0nm,0.3s						

*NEIC **02** 12:10:29.5,3781N×4300E,h12^{km},ML3.6(ISK),After ISK.*
*ISK **02** 12:10:31.2,3801N×4274E,h5^{km},MD3.7*
*ISCJB **02** 12:10:32.6±0.7,3804N±003×4275E±004,h4^{km}±7^{km}, Error ellipse: s-maj=6.4km s-min=4.3km az=108.6*
*CSEM **02** 12:10:32.0±0.1,3806N×4274E,h5^{km},MD3.7,Error ellipse: s-maj=1.8km s-min=1.4km az=158.0*
ISC 02 12:10:33.2±0.6**,3801N**±004×**4278E**±004**,h7**^{km}±5^{km}**,n29,** σ**0^{s}98**/39**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TVAN	Van	0.71	44	i P	Pg	12 10 47.1	+0.2
TVAN				i S	Sg	12 10 55.7	-0.5
VANB	Van	0.76	40	PG	Pg	12 10 46.6	-1.1
VANB	Van	0.76	40	Pg	Pg	12 10 46.7	-1.0
VANB				Sg	Sg	12 10 57.7	+0.2
VANB	Van	0.76	40	Pg	Pg	12 10 46.7	-1.0
VANB				Sg	Sg	12 10 57.7	+0.2
HAKT	HAKKARI	0.87	121	i P	Pg	12 10 51.1	+1.3
HAKT				i S	Sg	12 11 05.7	+4.6
CUKT	Cukurca	1.01	139	ePG	Pg	12 10 52.4	-0.2
BEST	Besiri	1.20	265	i P	Pg	12 10 55.0	-1.2
BEST				i S	Sg	12 11 11.4	-0.3
CLDR	Caldiran	1.44	38	PN	Pn	12 10 59.2	-0.5
CLDR				SN	Sg	12 11 21.3	+1.9
CLDR	Caldiran	1.44	38	Pn	Pn	12 10 56.6	-3.1
CLDR				Sg	Sb	12 11 17.6	-1.3
CLDR	Caldiran	1.44	38	ePn	Pn	12 10 59.2	-0.5
CLDR				Sg	Sn	12 11 17.6	-1.2
CLDR				eSn	Sg	12 11 21.3	+1.9
BNGL	BINGOL	1.58	307	i P	Pn	12 11 01.5	-0.1
BNGL				i S	Sn	12 11 23.9	+1.5
MARD	Mardin	1.73	247	i P	Pn	12 11 03.3	-0.4
MARD				i S	Sn	12 11 25.8	-0.2
MSL	Mosul	1.74	172	ex	x	12 11 01.0	
MSL				i x	x	12 11 02.0	
MSL				i x	x	12 11 04.0	
MSL				i x	x	12 11 24.0	
MSL				i x	x	12 11 25.0	
MSL				i x	x	12 11 27.0	
BINT	Bingol	1.99	296	PN	Pn	12 11 07.0	-0.2
DIY	Diyarbakir	2.02	267	ePN	Pn	12 11 06.7	-0.9
DIY	Diyarbakir	2.02	267	Pn	Pn	12 11 06.7	-0.9
ERZM	Erzurum	2.19	330	i P	Pn	12 11 11.5	+1.6
ERZM				i S	Sg	12 11 42.9	-0.5
EZM	Erzurum	2.19	330	PN	Pn	12 11 10.6	+0.7
EZM	Erzurum	2.19	330	Pn	Pn	12 11 11.5	+1.6
GNI	Garni	2.62	35	ePN	Pn	12 11 17.5	+1.5
GNI	Garni	2.62	35	Pn	Pn	12 11 13.8	-2.2
URFA	Urfa	3.19	261	ePN	Pn	12 11 24.4	+0.7
URFA	Urfa	3.19	261	Pn	Pn	12 11 23.5	-0.2
MYA	Malataya	3.44	277	ePN	Pn	12 11 26.7	-0.5
MYA	Malataya	3.44	277	Pn	Pn	12 11 27.2	0.0
MYA	Malataya	3.44	277	Pn	Pn	12 11 27.2	0.0
GAZ	Gaziantep	4.50	261	ePN	Pn	12 11 42.8	+1.1
GAZ	Gaziantep	4.50	261	Pn	Pn	12 11 42.1	+0.4
BHD	Baghdad	4.91	164	ex	x	12 12 02.0	
BHD				ex	x	12 12 12.0	
BHD				ex	x	12 12 23.0	
BHD				ex	x	12 12 56.0	

IDC 02 12:14:44.8±2.7**,1417N**×**5416E,h0**^{km}**,mb3.9**/5**,mb1 4.0**/5**, mb1mx3.6**/22**,mbtmp3.9**/5**,MS3.1**/3**,Ms1 3.1**/3**, ms1mx2.7**/24**,Error ellipse: s-maj=92.5km s-min=30.3km az=72.0,Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	9.97	24	LR	LR	12 20 54.6	
	comp=Z,98nm,18.0s,baz=302,slow=37						
ATD	Arta Tunnel	11.34	258	LR	LR	12 20 29.0	
	comp=Z,134nm,21.3s,baz=285,slow=30						
KMBO	Kilima Mbogo	22.61	229	LR	LR	12 27 32.3	
	comp=Z,48nm,20.9s,baz=87,slow=34						
MKAR	Makanchi Array	40.15	30	P	P	12 22 22.9	+0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.7nm,0.6s,baz=211,slow=6.9,SNR=5.6						
BVAR	Borovoye Array	40.85	15	P	P	12 22 27.7	-0.7
	1.1nm,0.6s,baz=194,slow=12,SNR=8.2						
ARCES	ARCESS Array B	58.20	349	P	P	12 24 40.6	-0.1
	1.2nm,0.7s,baz=97,slow=4.6,SNR=3.6						
WRA	Warramunga Arr	85.80	112	P	P	12 27 27.0	+0.9
	0.8nm,0.7s,baz=297,slow=3.8,SNR=13						
ASAR	Alice Springs	86.49	115	P	P	12 27 29.9	+0.5
	0.5nm,0.7s,baz=292,slow=4.9,SNR=11						

IDC 02 12:31:56.9±5.2**,2989S×17812W,h0km,mb3.7**/2**, mb1 3.9**/2**,mb1mx3.7**/11**,mbtmp3.7**/2**,MS2.8**/1**,Ms1 2.8**/1**, ms1mx2.6**/17**,Error ellipse: s-maj=295.5km s-min=73.7km az=166.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	28.89	310	LR	LR	12 47 45.7	
	comp=Z,20nm,20.8s,baz=178,slow=33						
ASAR	Alice Springs	43.04	266	P	P	12 39 58.3	+0.1
	0.7nm,1.0s,baz=106,slow=7.1,SNR=4.3						
WRA	Warramunga Arr	43.98	272	P	P	12 40 06.1	+0.3
	0.5nm,0.2s,baz=110,slow=8.1,SNR=39						
FINES	FINESS Array B	144.63	340	PKP	PKPdf	12 51 34.2	-1.2
	0.7nm,0.5s,baz=49,slow=4.2,SNR=5.6						

*NEIC **02** 12:38:51.6,2775S×7138W,h43km,MG3.6(GUC),After GUC.*

GUC 02 12:38:51.6±0.9**,2775S×7138W,h43km±5km,MD3.7, ML3.6,6C-2D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDCH	Caldera	0.84	36	⇓iP	Pn	12 39 07.3	+0.4
CDCH				iS	Sn	12 39 19.1	+1.0
CDCH				AML	AML	12 39 19.6	
	comp=E,1µm,0.2s						
CDCH	Caldera	0.84	36	⇓iP	Pn	12 39 07.3	+0.4
CDCH				iS	Sn	12 39 19.1	+1.0
VACH	Vallenar	0.99	146	⇑iP	Pn	12 39 10.0	+1.1
VACH				iS	Sn	12 39 23.2	+1.4
VACH				AML	AML	12 39 24.6	
	comp=E,4µm,0.2s						
VACH	Vallenar	0.99	146	⇑iP	Pn	12 39 10.0	+1.1
VACH				iS	Sn	12 39 23.2	+1.4
CPCH	Copiapo	1.00	67	⇑iP	Pn	12 39 10.9	+1.8
CPCH				iS	Sn	12 39 25.2	+3.3
CPCH				AML	AML	12 39 29.4	
	comp=E,7µm,0.1s						
CPCH	Copiapo	1.00	67	⇑iP	Pn	12 39 10.9	+1.8
CPCH				iS	Sn	12 39 25.2	+3.3
LCO	Las Campanas	1.39	154	eP	Pn	12 39 16.2	+1.7
LCO				iS	Sn	12 39 34.4	+2.7
TLL	Tololo Astrono	2.46	168	⇑iP	Pn	12 39 31.0	+1.9
TLL				iS	Sn	12 40 00.3	+2.4
TLL				AML	AML	12 40 18.9	
	comp=N,368nm,0.8s						
TLL	Tololo Astrono	2.46	168	⇑iP	Pn	12 39 31.0	+1.9
TLL				iS	Sn	12 40 00.3	+2.4
LVC	Limon Verde	5.59	24	ePn	Pn	12 40 13.3	+1.2
	comp=N,5.0nm,0.4s						

*ISCJB **02** 12:39:47.3±0.3,956N±002×7061W±003,h7km,mb3.9/10, MS3.1/1,Error ellipse: s-maj=4.0km s-min=2.7km az=37.4*
*FUNV **02** 12:39:48.9,956N×7062W,h7km,MW4.0*
*NEIC **02** 12:39:49.2,956N×7061W,h8km,mb3.7/2,MW4.0(CAR), After CAR.*
*IDC **02** 12:39:50.1±1.6,946N×7064W,h35km±13km,mb3.8/10, mb1 4.1/13,mb1mx3.9/24,mbtmp4.1/13,ML4.2/3,MS3.0/2, Ms1 3.1/2,ms1mx2.7/26,Error ellipse: s-maj=19.3km s-min=14.7km az=96.0*

ISC 02 12:39:48.8±0.6**,955N**±002×**7063W**±003**,h14km**±4km**,n59,** σ**1.00**/79**,mb3.9**/10**,MS3.1**/1**,15C-10D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QARV	Quebrada Arrib	0.66	9	⇓eP	Pg	12 40 01.2	-0.4
QARV				eS	Sg	12 40 10.6	+0.3
QARV	Quebrada Arrib	0.66	9	⇓iP	Pg	12 40 01.2	-0.4
QARV				eS	Sg	12 40 10.6	+0.3
SDV	Santo Domingo	0.66	180	Pn	Pg	12 40 01.4	-0.2
	1µm,0.3s,baz=42,slow=8.7,SNR=642						
SDV				Lg		12 40 11.0	
	934nm,0.3s,baz=327,slow=19,SNR=47						
SDV	Santo Domingo	0.66	180	ePg	Pg	12 40 01.0	-0.7
SDV				eSg	Sg	12 40 10.6	+0.2
CURV	Curarigua	0.80	55	⇑eP	Pg	12 40 03.8	-0.5
CURV				eS	Sg	12 40 14.6	-0.2
CURV	Curarigua	0.80	55	eP	Pg	12 40 03.8	-0.5
CURV				eS	Sg	12 40 14.6	-0.2
VIGV	El Vigia	1.01	226	⇓eP	Pb	12 40 08.0	-0.1
VIGV				eS	Sb	12 40 22.3	+1.1
VIGV	El Vigia	1.01	226	eP	Pb	12 40 08.2	+0.1
VIGV				eS	Sb	12 40 22.3	+1.1
SOCV	Socops	1.28	190	⇓eP	Pn	12 40 12.7	+0.5
SOCV				eS	Sb	12 40 29.5	+0.5
SOCV	Socops	1.28	190	⇓iP	Pn	12 40 12.7	+0.5
SOCV				eS	Sb	12 40 29.5	+0.5
SIQV	Siquisique	1.36	36	eP	Pn	12 40 13.3	0.0
SIQV				eS	Sn	12 40 32.1	+1.0
SIQV	Siquisique	1.36	36	⇓eP	Pn	12 40 13.7	+0.4
SIQV				eS	Sn	12 40 32.1	+1.0
DABV	Dabajuro	1.36	360	⇓eP	Pn	12 40 13.8	+0.5
DABV				eS	Sn	12 40 32.4	+1.2
DABV	Dabajuro	1.36	360	⇓eP	Pn	12 40 13.8	+0.5
DABV				eS	Sn	12 40 32.4	+1.2
TEPV	Terepaima	1.47	74	⇑eP	Pn	12 40 15.7	+0.8
TEPV				eS	Sn	12 40 34.8	+0.8
TEPV	Terepaima	1.47	74	eP	Pn	12 40 15.7	+0.8
TEPV				eS	Sn	12 40 34.8	+0.8
VIRV	Villa del Rosa	1.99	299	⇓eP	Pn	12 40 20.7	-1.3
VIRV				eS	Sn	12 40 47.7	+1.0
VIRV	Villa del Rosa	1.99	299	⇑iP	Pn	12 40 23.2	+1.3
VIRV				eS	Sn	12 40 47.7	+1.0
JACV	Jacura	2.34	49	eP	Pn	12 40 26.9	+0.2
JACV	Jacura	2.34	49	i P	Pn	12 40 27.4	+0.6
CAPV	Capacho	2.36	225	eP	Pn	12 40 28.0	+0.9
MONV	Montecano	2.47	15	⇓eP	Pn	12 40 28.3	-0.3
MONV				eS	Sn	12 40 57.6	-1.0
BAUV	El Baul	2.62	103	⇑eP	Pn	12 40 30.6	0.0
BAUV				eP		12 40 30.8	
BAUV	El Baul	2.62	103	eP	Pn	12 40 30.8	+0.1
ELOV	Elorza	2.78	156	⇑eP	Pn	12 40 33.6	+0.8
ELOV				eS	Sn	12 41 06.0	-0.1
ELOV	Elorza	2.78	156	⇑eP	Pn	12 40 33.6	+0.8
ELOV				eS	Sn	12 41 06.0	-0.1
IMOV	Isla Los Monje	2.80	355	eP	Pn	12 40 33.0	-0.1
IMOV				eS	Sn	12 41 05.9	-0.9
TURV	Turiamo	2.89	72	⇑eP	Pn	12 40 34.0	-0.4
TURV	Turiamo	2.89	72	⇑iP	Pn	12 40 34.0	-0.4
MERV	Las Mercedes	4.28	94	⇑eP	Pn	12 40 53.7	+0.2
MERV	Las Mercedes	4.28	94	⇑iP	Pn	12 40 53.7	+0.2
BIRV	Birongo	4.39	78	eP	Pn	12 40 55.3	+0.3
BIRV	Birongo	4.39	78	⇑eP	Pn	12 40 55.2	+0.3
CUPV	Cœpira	4.80	84	⇑eP	Pn	12 41 00.9	+0.4
CUPV	Cœpira	4.80	84	⇑iP	Pn	12 41 00.9	+0.4
CAOV	Caicara del Or	4.80	117	⇑eP	Pn	12 40 58.8	-1.7
CAOV	Caicara del Or	4.80	117	⇑iP	Pn	12 40 58.9	-1.7
PCRV	Puerto La Cruz	5.94	83	Pn	Pn	12 41 17.5	+1.3
	7.7nm,0.3s,baz=272,slow=5.1,SNR=17						
PCRV				Sn	Sn	12 42 25.5	+1.5
	11nm,0.3s,baz=276,slow=22,SNR=13						
ROSC	El Rosal	5.94	218	Pn	Pn	12 41 16.3	+0.1
	3.6nm,0.3s,baz=84,slow=22,SNR=2.8						
ROSC				Sn	Sn	12 42 34.5	+10
	9.2nm,0.3s,baz=109,slow=22,SNR=4.6						
ROSC	El Rosal	5.94	218	ePn	Pn	12 41 17.7	+1.5
SJG	San Juan	9.55	27	Pn	Pn	12 42 08.4	+2.5
	5.1nm,0.3s,baz=204,slow=16,SNR=6.3						
SJG				LR	LR	12 45 58.7	
	comp=Z,35nm,19.1s,baz=90,slow=38						
SAML	Samuel	19.82	158	eP	Pn	12 44 18.7	-1.7
	4.4nm,0.9s						
LPAZ	La Paz	25.79	174	P	P	12 45 19.6	+0.4
	0.8nm,0.4s,mb3.6,baz=330,slow=10,SNR=5.9						
LPAZ				LR	LR	12 56 13.0	
	comp=Z,66nm,20.6s,MS3.1,baz=300,slow=38						
LPAZ	La Paz	25.79	174	eP	P	12 45 21.4	+2.2
	0.9nm,0.5s,mb3.6						
SIV	San Ignacio	27.08	159	P	P	12 45 29.1	-1.8
	1.2nm,0.9s,mb3.4,baz=9.3,slow=10,SNR=5.6						
PDAR	Pinedale Array	47.43	321	P	P	12 48 22.1	-0.6
	0.5nm,0.4s,mb3.8,baz=122,slow=11,SNR=9.2						
PLCA	Paso Flores	50.03	180	P	P	12 48 40.5	-2.3
	1.5nm,0.4s,mb4.3,baz=4.4,slow=7.0,SNR=9.0						
PLCA	Paso Flores	50.03	180	P	P	12 48 40.5	-2.3
MCMT	McKenzie Canyo	50.54	322	eP	P	12 48 46.8	+0.2
NVAR	Mina Array Bea	51.42	312	P	P	12 48 53.4	+0.2
	0.5nm,0.5s,mb3.7,baz=127,slow=5.8,SNR=7.2						
YKA	Yellowknife Ar	61.60	338	P	P	12 50 03.3	-2.5
	1.0nm,0.6s,mb4.1,baz=125,slow=6.8,SNR=7.2						
TORD	Torodi Ar. Bea	70.79	79	P	P	12 51 03.3	-1.4
	2.6nm,0.5s,mb4.4,baz=288,slow=6.7,SNR=28						
NB2	NORSAR Subarra	77.75	30	P	P	12 51 44.3	-1.0
	comp=Z,0.9nm,0.7s,mb3.8,baz=266,slow=5.9						
NOA	NORSAR Array B	77.75	30	P	P	12 51 44.6	-0.7
	comp=Z,1.1nm,0.7s,mb3.9,baz=271,slow=5.5,SNR=5.1						
GERES	GERESS Array B	79.16	42	P	P	12 51 52.0	-1.0
	comp=Z,0.3nm,0.2s,mb3.8,baz=235,slow=5.8,SNR=4.4						
FINES	FINESS Array B	84.88	29	P	P	12 52 21.7	-1.4
	comp=Z,0.7nm,0.5s,mb4.0,baz=282,slow=2.7,SNR=3.7						
ASAR	Alice Springs	152.69	236	PKPbc	PKPbc	12 59 43.3	-1.7
	comp=Z,1.5nm,0.5s,baz=113,slow=2.7,SNR=40						
WB2	Warramunga Arr	153.77	244	eP	PKPbc	12 59 45.8	-1.6
WRA	Warramunga Arr	153.78	244	PKPbc	PKPbc	12 59 45.9	-1.5
	comp=Z,0.9nm,0.3s,baz=104,slow=2.8,SNR=71						

*ISCJB **02** 13:06:25.8±0.9,2418N±007×9431E±006,h98km±10km, mb4.2/17,Error ellipse: s-maj=13.8km s-min=6.0km az=62.5*
*NEIC **02** 13:06:27.5±0.3,2428N×9445E,mb4.2/5,Error ellipse: s-maj=12.4km s-min=5.2km az=222.0*
*IDC **02** 13:06:28.4±1.0,2437N×9472E,h95km±8km,mb3.9/13, mb1 3.9/13,mb1mx3.7/26,mbtmp4.2/13,MS3.7/1, Ms1 3.7/1,ms1mx2.6/30,Error ellipse: s-maj=29.7km s-min=11.2km az=67.0*
*BJI **02** 13:06:30.5,2502N×9447E,h61km,mb4.2,ML3.9*

ISC 02 13:06:27.5±0.8**,2427N**±007×**9438E**±006**,h92km**±8km**,n37,** σ**0.98**/41**,mb4.2**/17**,Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHTO	Chiang Mai	6.89	141	ePn	Pn	13 08 05.0	-0.8
	8.5nm,0.6s						
KMI	Kunming	7.65	82	P	Pn	13 08 16.6	+0.4
KMI				AMB	AMB		
	comp=Z,15nm,1.1s						
JIRN	Jiri	8.11	296	ePn	Pn	13 08 24.1	+1.7
JIRN				eSn	Sn	13 09 52.6	+0.3
	comp=Z,126nm,0.4s						
GUN	Gumba	8.46	297	ePn	Pn	13 08 28.6	+1.5
GUN				eSn	Sn	13 10 01.9	+1.0
	comp=Z,190nm,0.6s						
PKI	Pulchoki	8.72	294	ePn	Pn	13 08 31.6	+0.9
PKI				eSn	Sn	13 10 06.0	-1.3
	comp=Z,129nm,0.7s						
KKN	Kakani	8.90	295	ePn	Pn	13 08 33.7	+0.5
KKN				eSn	Sn	13 10 10.0	-1.7
	comp=Z,95nm,0.4s						
DMN	Daman	8.98	294	ePn	Pn	13 08 34.0	-0.3
DMN				eSn	Sn	13 10 12.6	-1.1
	comp=Z,73nm,0.5s						
GKN	Gorkha	9.51	295	ePn	Pn	13 08 41.8	+0.3
GKN				eSn	Sn	13 10 25.1	-1.5
	comp=Z,154nm,0.4s						
KOLN	Koldanda	10.30	292	ePn	Pn	13 08 52.3	+0.1
KOLN				eSn	Sn	13 10 41.5	-4.3
	comp=Z,61nm,0.5s						
GYA	Guiyang	11.32	76	P	Pn	13 09 13.4	+7.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GTA	Gaotai	15.78	16	eP	Pn	13 10 03.3	-1.0
GTA				AP	pP	13 10 12.9	-11
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s						
PSI	Prapat	21.79	168	P	P	13 11 15.1	+3.2
	comp=Z,6.0nm,1.0s,mb3.9,baz=293,slow=11,SNR=7.5						
PSI	Prapat	21.79	168	P	P	13 11 15.1	+3.2
MKAR	Makanchi Array	24.48	340	P	P	13 11 39.1	+1.2
	comp=Z,4.0nm,0.6s,mb4.0,baz=146,slow=10.0,SNR=28						
MKAR				pP		13 11 59.2	
	comp=Z,3.4nm,0.6s,baz=148,slow=12,SNR=5.6						
SONM	Songino Array	25.38	19	P	P	13 11 45.2	-0.9
	comp=Z,1.2nm,0.4s,mb3.6,baz=203,slow=10,SNR=11						
SONM				pP	pP	13 12 07.1	+0.5
	comp=Z,6.3nm,1.3s,baz=195,slow=9.7,SNR=3.4						
KURK	Kurchatov	29.09	339	eP	P	13 12 19.3	+0.1
	comp=Z,1.5nm,0.6s,mb3.8						
BVAR	Borovoye Array	33.96	334	P	P	13 13 03.2	+1.1
	comp=Z,0.7nm,0.5s,mb3.7,baz=153,slow=11,SNR=4.2						
BVAR				ScP	ScP	13 19 16.0	+1.2
	comp=Z,0.7nm,0.7s,baz=169,slow=1.5,SNR=5.5						
CHKZ	Chkalovo	34.36	335	eP	P	13 13 06.6	+1.0
	comp=Z,1.2nm,0.3s,mb4.2						
CHKZ				epP	pP	13 13 26.5	-0.1
AKTO	Aktyubinsk	38.35	322	pP	pP	13 14 01.6	+0.8
	comp=Z,1.3nm,0.7s,baz=106,slow=13,SNR=3.3						
MBWA	Marble Bar	51.45	149	eP	P	13 15 23.1	-0.3
	comp=Z,3.6nm,0.6s,mb4.6						
FINES	FINESS Array B	58.63	328	P	P	13 16 14.8	-0.1
	comp=Z,0.7nm,0.7s,mb3.8,baz=64,slow=4.4,SNR=3.8						
WRA	Warramunga Arr	58.70	135	P	P	13 16 14.9	-0.6
	comp=Z,4.4nm,0.5s,mb4.8,baz=326,slow=7.3,SNR=103						
WRAB	Tennant Creek	58.70	135	eP	P	13 16 14.7	-0.8
	comp=Z,5.3nm,0.7s,mb4.7						
WB2	Warramunga Arr	58.71	135	eP	P	13 16 14.6	-0.9
ARCES	ARCESS Array B	60.11	338	P	P	13 16 25.4	+0.3
	comp=Z,1.6nm,0.7s,mb4.2,baz=103,slow=5.4,SNR=5.4						
NWAO	Narrogin (SRO)	60.91	158	P	P	13 16 30.4	-0.2
	comp=Z,4.3nm,0.6s,mb4.7,baz=0.6,slow=4.0,SNR=6.4						
NWAO	Narrogin (SRO)	60.91	158	P	P	13 16 30.4	-0.2
ASPA	Alice Springs	61.16	138	eP	P	13 16 32.0	-0.3
AS31	Alice Springs	61.16	138	eP	P	13 16 32.0	-0.3
ASAR	Alice Springs	61.16	138	P	P	13 16 32.1	-0.2
	comp=Z,2.8nm,0.6s,mb4.5,baz=320,slow=6.7,SNR=63						
ASAR				pP	pP	13 16 55.7	+0.5
	comp=Z,0.7nm,0.6s,baz=321,slow=6.9,SNR=1.9						
HFS	Hagfors	64.67	327	P	P	13 16 55.9	+0.3
	comp=Z,1.0nm,0.5s,mb4.0,baz=116,slow=3.4,SNR=6.5						
NOA	NORSAR Array B	65.80	328	pP	pP	13 17 24.9	-1.2
	comp=Z,1.1nm,0.6s,baz=86,slow=6.3,SNR=3.9						
CTA	Charters Tower	67.04	127	LR	LR	13 47 26.4	
	comp=Z,58nm,19.8s,baz=35,slow=37						
STKA	Stephens Creek	71.78	139	P	P	13 17 40.9	+0.9
	comp=Z,1.4nm,0.7s,mb3.9,baz=175,slow=2.7,SNR=3.5						
INK	Inuvik	81.26	16	P	P	13 18 32.2	-1.2
	comp=Z,0.8nm,0.5s,mb3.8,baz=305,slow=4.4,SNR=7.4						
INK	Inuvik	81.26	16	eP	P	13 18 32.0	-1.4
	comp=Z,1.3nm,0.8s,mb3.8						
INK				epP	pP	13 18 55.9	-1.6
BOSA	Boshof	84.77	236	P	P	13 18 54.4	+2.9
	comp=Z,3.6nm,0.7s,mb4.4,baz=11,slow=5.2,SNR=7.0						

*SZGRF **02** 13:11:51.0,766N×9270E,h19km,mb5.1,Nicobar Islands, India, region*
*BJI **02** 13:11:54.8,857N×9194E,h18km,mB5.1,mb4.9,Ms4.8, Msz4.5*
*IDC **02** 13:11:55.0±0.5,867N×9194E,h0km,mb4.6/24, mb1 4.6/25,mb1mx4.6/28,mbtmp4.5/25,ML3.9/1,MS4.2/14, Ms1 4.2/14,ms1mx4.0/23,Error ellipse: s-maj=17.8km s-min=11.3km az=50.0*
*ISCJB **02** 13:11:56.1±0.2,864N±003×9193E±003,h19km, mb4.9/107,MS4.4/39,Error ellipse: s-maj=4.7km s-min=3.6km az=26.4*
*NEIC **02** 13:11:57.8±0.2,863N×9193E,mb5.1/51,Error ellipse: s-maj=6.3km s-min=3.9km az=46.0*
*MOS **02** 13:11:58.3±1.0,872N×9197E,h33km,mb5.2/47,Error ellipse: s-maj=9.1km s-min=5.0km az=108.9*

ISC 02 13:11:58.6±0.2**,868N**±003×**9193E**±003**,h20km, h20km**±.9km**:pP-P,n300,**σ**1.04**/288**,mb4.9**/107**,MS4.3**/39**, 26C-17D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	Tuntungan	8.37	128	eP	Pn	13 14 07.9	+9.2
NNT	Nongplab	8.60	62	P	Pn	13 14 04.0	+2.2
SNG	Songkhla	8.73	99	P	Pn	13 14 06.0	+2.3
PSI	Prapat	9.09	130	Pn	Pn	13 14 07.6	-0.9
	1.2nm,0.3s,baz=305,slow=9.7,SNR=7.4						
KULM	Kulim	9.29	111	ePn	Pn	13 14 15.8	+4.5
KULM				eSn	Sn	13 15 30.6	-25
NST	Nakhon Sawan	10.61	48	P	Pn	13 14 29.7	+0.4
	48nm,1.0s						
PALK	Pallekele	11.21	264	ePn	Pn	13 14 38.4	+0.8
PALK				eSn	Sn	13 16 31.1	-11
CHG	Chiang Mai	12.15	33	⇓P	Pn	13 14 52.0	+1.5
	29nm,0.8s						
CHTO	Chiang Mai	12.15	33	P	Pn	13 14 52.5	+2.0
	SNR=7.4						
CHTO	Chiang Mai	12.15	33	eP	Pn	13 14 51.9	+1.4
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
CHTO	Chiang Mai	12.15	33	ePn	Pn	13 14 51.9	+1.4
	comp=Z,17nm,0.9s						
MDRS	Chennai	12.27	292	ex	x	13 15 30.0	
VIS	Vishakhapatnam	12.28	318	eP	Pn	13 14 49.5	-2.6
VIS				eS	Sn	13 16 51.8	-17
CAL	Calcutta	14.20	346	ex	x	13 21 41.2	
TRD	Trivandrum	14.80	270	eP	Pn	13 15 25.8	-0.9
TRD				AMb	AMB	13 15 31.5	
	comp=Z,46nm,1.3s						
HYB	Hyderabad	15.65	305	i P	Pn	13 15 43.0	+5.2
	comp=Z,160nm,1.0s						
HYB				e		13 15 49.5	
HYB				e		13 18 19.5	
HYB				eS	Sn	13 18 31.0	+0.4
HYB	Hyderabad	15.65	305	eP	Pn	13 15 43.0	+5.2
HYB				eS	Sn	13 18 31.0	+0.4
HYB				pmax	pmax		
	comp=Z,160nm,1.0s						
HYB	Hyderabad	15.65	305	eP	Pn	13 15 43.0	+5.2
	comp=Z,160nm,1.0s						
HYB				eS	Sn	13 18 31.0	+0.4
BOK	Bokaro	16.10	340	eP	Pn	13 15 41.4	-2.2
BOK				AMb	AMB	13 15 59.4	
	comp=Z,97nm,1.4s						
BOK				ex	x	13 18 33.8	
MNGI	Mangalore	17.32	286	eP	Pn	13 15 57.5	-1.6
MNGI				eS	Sn	13 19 10.9	-0.4
NGP	Nagpur	17.55	316	eP	Pn	13 16 00.1	-1.7
NGP				AMb	AMB	13 16 05.6	
	comp=Z,156nm,1.3s						
LATR	Latur	17.79	305	eP	Pn	13 16 05.2	+0.4
JBP	Jabalpur	18.40	323	⇓iP	Pn	13 16 12.4	0.0
JBP				ex	x	13 17 11.4	
	comp=Z,114nm,2.0s						
JBP				i x	x	13 19 45.8	
AKL	Akola	18.71	311	eP	Pn	13 16 15.6	-0.6
AKL				AMb	AMB	13 16 20.1	
	comp=Z,72nm,1.3s						
KAD	Karad	19.28	298	eP	Pn	13 16 22.8	-0.3
KAD				AMb	AMB	13 16 44.9	
	comp=Z,85nm,0.7s						
KMI	Kunming	19.32	31	P	Pn	13 16 24.3	+0.8
KMI				AP	pP	13 16 31.9	+3.8
KMI				XP	sP	13 16 35.5	+4.8
KMI				PP		13 16 43.2	
KMI				PPP		13 16 51.3	
KMI				S	Sn	13 19 56.5	-3.2
KMI				XS	sS	13 20 08.5	-0.8
KMI				SS		13 20 23.1	
KMI				SSS		13 20 36.5	
KMI				AMB	AMB		
	comp=Z,38nm,1.4s						
KMI				AMB	AMB		
	comp=Z,758nm,5.0s						
KMI				LR	LR		
	comp=N,2µm,13.1s						
KMI				LR	LR		
	comp=E,1µm,13.1s						
KMI				LR	LR		
	comp=Z,1µm,18.6s						
JIRN	Jiri	19.64	345	eP	Pn	13 16 26.8	-0.5
	comp=Z,262nm,0.9s						
KSM	Kuching	19.65	110	eP	Pn	13 16 25.9	-1.5
PKI	Pulchoki	19.77	343	eP	Pn	13 16 28.6	-0.3
	comp=Z,128nm,0.7s						
PKI	Pulchoki	19.77	343	eP	Pn	13 16 28.6	-0.3
PKI				pmax	pmax		
	comp=Z,128nm,0.7s						
DMN	Daman	19.90	342	eP	Pn	13 16 29.3	-1.1
	comp=Z,159nm,0.9s						
GUN	Gumba	19.96	344	eP	Pn	13 16 30.6	-0.5
	comp=Z,114nm,0.9s						
KKN	Kakani	20.02	343	eP	P	13 16 30.9	+0.9
	comp=Z,109nm,0.8s						
KKN	Kakani	20.02	343	eP	P	13 16 30.9	+0.9
KKN				pmax	pmax		
	comp=Z,109nm,0.8s						
BHPL	Bhopal	20.07	318	eP	P	13 16 29.4	-1.2
BHPL				AMb	AMB	13 16 36.0	
	comp=Z,217nm,1.4s						
POO	Poona	20.09	301	ex	x	13 20 00.0	
GKN	Gorkha	20.41	341	eP	P	13 16 34.7	+0.4
	comp=Z,80nm,0.4s						
KOLN	Koldanda	20.55	339	eP	P	13 16 36.5	+0.7
	comp=Z,116nm,0.9s						
GYA	Guiyang	22.54	37	⇑iP	P	13 16 57.1	0.0
GYA				AP		13 17 06.3	
GYA				XP	sP	13 17 10.4	+4.9
GYA				PP		13 17 25.7	
GYA				S	S	13 20 57.8	-5.8
GYA				SCP	ScP	13 24 23.1	-3.8
GYA				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,510nm,5.7s						
GYA				LR	LR		
	comp=N,1µm,13.2s,MS4.7						
GYA				LR	LR		
	comp=E,1µm,11.4s,MS4.7						
GYA				LR	LR		
	comp=Z,1µm,14.2s,MS4.5						
LGTI	Lohaghat	23.39	334	eP	P	13 17 04.7	-1.4
AJM	Ajmer	24.13	319	eP	P	13 17 12.9	-0.1
AJM				AMb	AMB	13 17 24.1	
	comp=Z,79nm,2.3s,mb4.7						
AJM				eS	S	13 21 31.0	+1.3
NDI	New Delhi	24.24	327	eP	P	13 17 14.0	0.0
NDI				eP		13 17 15.1	
NDI				AMb	AMB	13 17 15.9	
	comp=Z,92nm,1.0s,mb5.2						
CD2	Chengdu	24.72	25	⇓iP	P	13 17 18.5	+0.2
CD2				AP		13 17 27.8	
CD2				XP	sP	13 17 31.8	+4.8
CD2				PP		13 17 56.1	
CD2				S	S	13 21 37.6	-1.6
CD2				XS	sS	13 21 52.9	+3.6
CD2				SS		13 22 37.3	
CD2				AMB	AMB		
	comp=Z,90nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,230nm,8.4s						
CD2				LR	LR		
	comp=E,900nm,14.4s						
CD2				LR	LR		
	comp=Z,690nm,15.6s,MS4.3						
SMLA	Simla	26.23	330	eP	P	13 17 31.7	-0.4
SMLA				AMb	AMB	13 17 42.5	
	comp=Z,140nm,1.7s,mb5.2						
SDNR	Sundarnagar	26.63	331	ex	x	13 21 41.4	
SDNR				ex	x	13 22 56.8	
DLH	Dalhousie	27.97	330	ex	x	13 21 24.0	
DLH				ex	x	13 22 28.0	
LZH	Lanzhou	29.36	20	eP	P	13 18 01.0	+0.9
LZH				AP	pP	13 18 11.0	+4.8
LZH				XP	sP	13 18 14.4	+5.6
LZH				PP	PP	13 18 56.0	-10
LZH				eS	S	13 22 51.2	-1.4
LZH				XS	sS	13 23 06.0	+3.3
LZH				SS	SS	13 24 26.3	-31
LZH				AMB	AMB		
	comp=Z,83nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,233nm,5.2s						
LZH				LR	LR		
	comp=E,1µm,14.8s						
LZH				LR	LR		
	comp=Z,2µm,15.6s,MS4.8						
XAN	Xi'an	29.69	29	P	P	13 18 01.1	-1.9
XAN				AMB	AMB		
	comp=Z,17nm,1.2s,mb4.7						
XAN				LR	LR		
	comp=N,491nm,14.6s,MS4.5						

XAN LR LR
comp=E,564nm,14.2s,MS4.5
XAN LR LR
comp=Z,1μm,12.3s,MS4.7
GTA Gaotai 31.40 12 *e*P **P** **13 18 18.9 +0.8**
GTA AP pP 13 18 25.1 +0.8
GTA XP sP 13 18 28.4 +1.6
GTA PP PP 13 19 23.6 -5.5
GTA PPP 13 19 38.0
GTA PCP PcP 13 21 12.2 +0.8
GTA S **S** **13 23 23.9 -0.6**
GTA XS sS 13 23 39.1 +4.4
GTA SS SS 13 25 12.6 -27
GTA SCS ScS 13 28 47.3 -3.6
GTA AMB AMB
comp=Z,67nm,0.9s,mb5.5
GTA AMB AMB
comp=Z,237nm,4.2s
GTA LR LR
comp=N,440nm,16.0s,MS4.4
GTA LR LR
comp=E,612nm,17.5s,MS4.4
GTA LR LR
comp=Z,557nm,15.2s,MS4.3
NJ2 Nanjing 34.13 43 *e*P **P** **13 18 43.5 +1.5**
NJ2 AP pP 13 18 53.2 +5.0
NJ2 XP sP 13 18 57.1 +6.4
NJ2 PP PP 13 19 59.6 +0.2
NJ2 S **S** **13 24 06.0 -1.0**
NJ2 XS sS 13 24 24.0 +6.8
NJ2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
NJ2 AMB AMB
comp=Z,30nm,6.1s
NJ2 LR LR
comp=N,910nm,22.1s
NJ2 LR LR
comp=E,820nm,14.0s
NJ2 LR LR
comp=Z,300nm,22.2s,MS4.0
WSAR Wadi Sarin 35.02 298 LR LR 13 31 34.3
comp=Z,775nm,19.9s,MS4.5,baz=89,slow=34
WMQ Urumqi 35.20 355⇓ *i*P **P** **13 18 52.0 +0.8**
WMQ AP pP 13 19 02.0 +4.6
WMQ XP sP 13 19 06.0 +6.1
WMQ PP PP 13 20 11.0 -0.1
WMQ S **S** **13 24 23.0 -0.4**
WMQ XS sS 13 24 39.0 +5.3
WMQ SS SS 13 26 40.0 -17
WMQ AMB AMB
comp=Z,43nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,125nm,5.0s
WMQ LR LR
comp=N,289nm,10.0s,MS4.7
WMQ LR LR
comp=E,658nm,13.0s,MS4.7
WMQ LR LR
comp=Z,267nm,10.0s,MS4.3
SSE Sheshan 35.21 47 P **P** **13 18 47.6 -3.7**
SSE AP pP 13 18 56.3 -1.2
SSE XP sP 13 19 00.3 +0.2
SSE S **S** **13 24 20.2 -3.5**
SSE XS sS 13 24 35.3 +1.4
SSE AMB AMB
comp=Z,40nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,298nm,6.6s
SSE LR LR
comp=N,239nm,18.1s,MS4.1
SSE LR LR
comp=E,244nm,18.1s,MS4.1
SSE LR LR
comp=Z,222nm,15.4s,MS4.0
ULHL Ulahol 36.17 340 P **P** **13 19 01.1 +1.5**
SNR=6.7
KZA Kyzart 36.37 339 P **P** **13 19 03.3 +2.1**
SNR=14
HHC Hu-ho-hao-te 36.47 25 *e*P **P** **13 19 01.3 -0.8**
HHC AP pP 13 19 05.7 -2.7
HHC XP sP 13 19 08.3 -2.6
HHC PP PP 13 20 25.8 +0.6
HHC PCP PcP 13 21 24.4 -1.4
HHC S **S** **13 24 43.1 +0.1**
HHC XS sS 13 24 50.4 -2.8
HHC SCP ScP 13 25 09.7 -1.5
HHC PCS PcS 13 25 12.0 -1.6
HHC SS SS 13 27 09.4 -13
HHC SCS ScS 13 29 14.9 -2.7
HHC AMB AMB
comp=Z,11nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,127nm,3.6s
HHC LR LR
comp=N,652nm,10.5s,MS4.9
HHC LR LR
comp=E,988nm,14.5s,MS4.9
HHC LR LR
comp=Z,576nm,18.1s,MS4.4
UCH Uchtor 36.77 338 P **P** **13 19 06.8 +2.2**
SNR=25
AAA Alma-Ata 36.87 342*c i*P **P** **13 19 06.6 +1.1**
AAA *e*S **S** **13 24 53.6 +4.6**
AAA pmax pmax
comp=Z,3μm,3.6s
AAA smax
comp=E,7μm,10.0s
KBK Karagaybulak 36.98 339 P **P** **13 19 08.7 +2.2**
SNR=6.1
AML Almayashu 36.99 337 P **P** **13 19 08.1 +1.6**
SNR=46
TKM2 Tokmak 2 36.99 340 P **P** **13 19 08.2 +1.6**
SNR=14
AAK Ala-Archa 37.12 339 P **P** **13 19 08.9 +1.2**
comp=E,211nm,1.0s,mb5.9,SNR=11
AAK Ala-Archa 37.12 339 P **P** **13 19 09.9 +2.2**
SNR=10
AAK Ala-Archa 37.12 339⇓P **P** **13 19 07.8 +0.1**
SNR=29
AAK Ala-Archa 37.12 339*c i*P **P** **13 19 08.1 +0.4**
AAK pmax pmax
comp=Z,72nm,1.7s,mb5.2
AAK Ala-Archa 37.12 339 *e*P **P** **13 19 08.8 +1.1**
comp=Z,54nm,1.1s,mb5.3
FRU Bishkek 37.26 339 *e*P **P** **13 19 10.0 +1.2**
FRU *i* pP 13 19 15.5 +0.5
FRU pmax pmax
comp=Z,90nm,2.0s,mb5.2
CHMS Chumysh 37.35 339 P **P** **13 19 10.8 +1.1**
SNR=10
EKS2 Erkin-Say 37.41 338 P **P** **13 19 12.4 +2.3**
SNR=18
USP Ospenovka 37.67 339 P **P** **13 19 13.5 +1.1**
SNR=42
BJI Beijing 37.98 31 P **P** **13 19 15.6 +0.6**
BJI AP pP 13 19 24.6 +3.4
BJI PP PP 13 20 41.1 -0.7
BJI S **S** **13 24 59.0 -7.0**
BJI AMB AMB
comp=Z,20nm,1.3s,mb4.7
BJI AMB AMB
comp=Z,228nm,4.6s
BJI LR LR
comp=N,701nm,16.4s,MS4.7
BJI LR LR
comp=E,529nm,16.4s,MS4.7
BJI LR LR
comp=Z,486nm,19.9s,MS4.3
JOW Kunigami 38.84 58 P **P** **13 19 23.6 +1.5**
comp=Z,17nm,0.7s,mb4.9,baz=283,slow=16,SNR=6.8
JOW LR LR 13 38 39.7
comp=Z,541nm,18.1s,MS4.4,baz=148,slow=41
MKAR Makanchi Array 38.86 349 P **P** **13 19 22.1 -0.2**
comp=Z,15nm,0.8s,mb4.8,baz=162,slow=8.4,SNR=80
DL2 Dalian 40.19 37 P **P** **13 19 34.2 +0.8**
DL2 *e*S **S** **13 25 39.0 -0.2**
DL2 AMB AMB
comp=Z,20nm,1.1s,mb4.8
DL2 LR LR
comp=N,300nm,13.5s,MS4.4
DL2 LR LR
comp=E,210nm,13.5s,MS4.4
DL2 LR LR
comp=Z,300nm,14.5s,MS4.3
MBWA Marble Bar 40.32 138 *e*P **P** **13 19 34.3 -0.2**
comp=Z,14nm,0.9s,mb4.7
MBWA *e*pP pP 13 19 41.2 +0.5
SONM Songino Array 40.90 15 P **P** **13 19 39.3 0.0**
comp=Z,21nm,0.8s,mb4.8,baz=196,slow=8.7,SNR=100
ULN Ulaanbaatar 41.10 16*c i*P **P** **13 19 40.5 -0.4**
ULN Ulaanbaatar 41.10 16 *e*P **P** **13 19 40.4 -0.6**
comp=Z,15nm,0.9s,mb4.6
ABKT Ailbek 42.15 319 P **P** **13 19 51.5 +2.0**
comp=Z,278nm,0.8s,mb5.9,SNR=8.4
FITZ Fitzroy Crossi 42.62 129 *e*P **P** **13 19 52.3 -1.0**
comp=Z,7.5nm,0.9s,mb4.4
FITZ Fitzroy Crossi 42.62 129 P **P** **13 19 52.9 -0.4**
comp=Z,3.1nm,0.9s,mb4.0,baz=331,slow=14,SNR=5.2
ZAK Zakamensk 42.62 11⇑ *i*P **P** **13 19 54.0 +0.6**
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
SNY Shenyang 43.22 35⇑P **P** **13 19 57.6 -0.7**
SNY AP pP 13 20 07.5 +2.9
SNY XP sP 13 20 11.2 +4.2
SNY S **S** **13 26 29.4 +5.3**
SNY AMB AMB
comp=Z,14nm,1.0s,mb4.7
SNY AMB AMB
comp=Z,215nm,6.5s
SNY LR LR
comp=N,477nm,19.0s,MS4.7
SNY LR LR
comp=E,592nm,15.7s,MS4.7
SNY LR LR
comp=Z,552nm,16.3s,MS4.5
KURK Kurchatov 43.33 348 P **P** **13 19 58.5 -0.6**
comp=Z,174nm,1.4s,mb5.6,SNR=18
KURK Kurchatov 43.33 348 P **P** **13 19 59.4 +0.3**
SNR=38
KURK Kurchatov 43.33 348⇑ *i*P **P** **13 19 59.0 -0.1**
KURK Kurchatov 43.33 348 *e*P **P** **13 19 58.9 -0.2**
comp=Z,67nm,1.4s,mb5.2
KURK *e*pP pP 13 20 05.2 -0.2
TLY Talaya 43.94 10 *e*P **P** **13 20 04.9 +0.9**
TLY *e*S **S** **13 26 40.5 +6.0**
TLY pmax pmax
comp=Z,18nm,1.2s,mb4.7
TLY MLR MLR
comp=Z,333nm,19.0s,MS4.3
TLY Talaya 43.94 10 *e*P **P** **13 20 04.9 +0.9**
comp=Z,12nm,1.0s,mb4.6
TLY *e*pP pP 13 20 14.0 +3.7
IRK Irkutsk 44.59 11 *e*P **P** **13 20 10.0 +0.8**
IRK *e* 13 20 25.9
IRK *e* 13 21 52.9
IRK pmax pmax
comp=Z,41nm,1.7s,mb5.0
ZAL Zalesovo 45.49 354 P **P** **13 20 16.9 +0.5**
comp=Z,10nm,1.0s,mb4.6,baz=294,slow=9.2,SNR=46
CN2 Changchun 45.55 34 *e*P **P** **13 20 16.9 0.0**
CN2 *e*AP pP 13 20 26.8 +3.6
CN2 *e*XP sP 13 20 30.7 +5.0
CN2 *e*S **S** **13 26 57.6 -0.3**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
CN2 AMB AMB
comp=Z,180nm,5.0s
CN2 LR LR
comp=N,480nm,16.0s,MS4.7
CN2 LR LR
comp=E,510nm,16.0s,MS4.7
CN2 LR LR
comp=Z,510nm,14.0s,MS4.6
NVS Novosibirsk 46.55 353 *e*P **P** **13 20 23.7 -1.1**
NVS pmax pmax
comp=Z,37nm,1.1s,mb5.2
NVS pmax pmax
comp=N,49nm,1.5s
HIA Hailar 46.67 25 *e*P **P** **13 20 25.7 0.0**
HIA pmax pmax
comp=Z,11nm,0.7s
HIA Hailar 46.67 25 *e*P **P** **13 20 25.7 0.0**
comp=Z,11nm,0.7s,mb4.9
CIT Chita 46.69 18 *e*P **P** **13 20 26.2 +0.3**
CIT pmax pmax
comp=Z,70nm,2.1s,mb5.2
BVAR Borovoye Array 47.54 343 P **P** **13 20 32.5 0.0**
comp=Z,8.0nm,0.9s,mb4.8,baz=146,slow=8.2,SNR=31
BRVK Borovoye 47.60 342 P **P** **13 20 33.9 +0.9**
comp=Z,62nm,0.8s,mb5.7,SNR=5.2
BRVK Borovoye 47.60 342 P **P** **13 20 33.4 +0.4**
SNR=6.2
BRVK Borovoye 47.60 342 *e*P **P** **13 20 32.9 -0.1**
BRVK *e**PP pP 13 20 38.7 -0.6
BRVK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BRVK Borovoye 47.60 342 *e*P **P** **13 20 32.9 -0.1**
comp=Z,8.0nm,1.0s,mb4.7
BRVK *e*pP pP 13 20 38.7 -0.6
NWAO Narrogin (SRO) 47.89 151 LR LR 13 40 56.5
comp=Z,384nm,19.6s,MS4.4,baz=321,slow=36
ZRNK Zerenda 47.90 341 *e*P **P** **13 20 34.7 -0.6**
ZRNK *e**PP pP 13 20 40.1 -1.5
ZRNK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ZRNK Zerenda 47.90 341 *e*P **P** **13 20 34.7 -0.6**
comp=Z,9.5nm,0.8s,mb4.9
ZRNK *e*pP pP 13 20 40.1 -1.5
CHKZ Chkalovo 48.05 343 *e*P **P** **13 20 36.1 -0.3**
CHKZ *e**PP pP 13 20 41.3 -1.4
CHKZ pmax pmax
comp=Z,25nm,1.0s,mb5.2
CHKZ Chkalovo 48.05 343 *e*P **P** **13 20 36.1 -0.2**
comp=Z,25nm,1.0s,mb5.2
CHKZ *e*pP pP 13 20 41.3 -1.5
ATD Arta Tunnel 48.36 278 LR LR 13 37 46.3
comp=Z,411nm,21.3s,MS4.4,baz=73,slow=32
MDJ Mudanjiang 48.40 36 P **P** **13 20 40.7 +1.6**
MDJ AP pP 13 20 43.7 -1.8
MDJ XP sP 13 20 45.1 -2.8
MDJ PCP PcP 13 22 06.8 +1.4
MDJ PP PP 13 22 33.5 +1.7
MDJ SCP ScP 13 26 01.5 +2.6
MDJ PCS PcS 13 26 02.8 +1.5
MDJ S **S** **13 27 42.5 +3.9**
MDJ XS sS 13 27 47.4 -1.6
MDJ SCS ScS 13 30 32.7 +1.9
MDJ AMB AMB
comp=Z,6.0nm,1.0s,mb4.6
MDJ AMB AMB
comp=Z,91nm,5.3s
MDJ LR LR
comp=N,144nm,19.6s,MS4.2
MDJ LR LR
comp=E,213nm,16.8s,MS4.2
MDJ LR LR
comp=Z,200nm,15.8s,MS4.2
VLA Vladivostok 48.93 39 *i* P **P** **13 20 41.1 -2.1**
VLA pmax pmax
comp=Z,21nm,1.7s,mb4.9
VLA MLR MLR
comp=Z,500nm,21.0s,MS4.5
AKTK Aktyubinsk 50.21 332 P **P** **13 20 53.3 +0.4**
AKTO Aktyubinsk 50.21 332 P **P** **13 20 53.3 +0.4**
comp=Z,5.0nm,0.8s,mb4.6,baz=127,slow=9.2,SNR=16
MAJO Matsushiro 50.27 49 *e*P **P** **13 20 55.2 +1.8**
MAJO *e* pP 13 21 00.7 +0.9
MAJO pmax pmax
comp=Z,41nm,1.6s,mb5.2
MAJO Matsushiro 50.27 49 *e*P **P** **13 20 55.2 +1.8**
comp=Z,42nm,1.6s,mb5.2
MAJO *e* pP 13 21 00.7 +0.9
MAT Matsushiro 50.27 49 P **P** **13 20 53.7 +0.3**
MAT S **S** **13 28 02.0 -2.7**
MAT Matsushiro 50.27 49 *e*P **P** **13 20 54.0 +0.6**
MJAR Matsushiro Arr 50.27 49 P **P** **13 20 54.1 +0.7**
comp=Z,3.2nm,0.8s,mb4.4,baz=252,slow=8.1,SNR=11
MJAR PcP PcP 13 22 11.7 -0.5
comp=Z,7.3nm,1.0s,baz=248,slow=3.4,SNR=9.7
WRA Warramunga Arr 50.51 125 P **P** **13 20 54.2 -1.0**
comp=Z,3.7nm,0.7s,mb4.4,baz=301,slow=9.0,SNR=36
WRA PcP PcP 13 22 13.5 +0.4
comp=Z,3.2nm,0.9s,baz=294,slow=8.3,SNR=5.5
WRAB Tennant Creek 50.52 125 *e*P **P** **13 20 55.0 -0.3**
WRAB pmax pmax
comp=Z,20nm,0.9s,mb5.0
WRAB Tennant Creek 50.52 125 *e*P **P** **13 20 55.0 -0.3**
comp=Z,20nm,0.9s,mb5.0
WRAB *e*pP pP 13 20 58.6 -3.1
WB2 Warramunga Arr 50.52 125 *e*P **P** **13 20 53.3 -2.0**
CBIJ Chichi jima 50.84 62 LR LR 13 41 40.4
comp=Z,119nm,19.0s,MS3.9,baz=123,slow=35
MAK Makhachkala 51.67 319 *e*P **P** **13 21 01.6 -2.3**
MAK *e* 13 23 00.1
MAK *e*PPP 13 24 03.8
MAK *e*S **S** **13 28 20.5 -3.7**
MAK pmax pmax
comp=Z,50nm,0.4s,mb5.8
MAK pmax pmax
comp=Z,588nm,4.2s
BOD Bodaibo 51.90 15 *e*P **P** **13 21 05.5 -0.2**
BOD pmax pmax
comp=Z,45nm,1.2s,mb5.3
ASPA Alice Springs 52.11 129 *e*P **P** **13 21 06.2 -1.1**
AS31 Alice Springs 52.12 129 *e*P **P** **13 21 06.2 -1.1**
ASAR Alice Springs 52.12 129 P **P** **13 21 06.2 -1.1**
comp=Z,3.4nm,0.8s,mb4.3,baz=306,slow=7.3,SNR=29
ASAR PcP PcP 13 22 19.5 +0.5
comp=Z,4.0nm,0.9s,baz=306,slow=4.3,SNR=8.7
GNI Garni 52.31 315 P **P** **13 21 10.5 +1.7**
comp=Z,4.6nm,0.4s,mb4.8,baz=196,slow=18,SNR=4.5
GNI LR LR 13 44 07.3
comp=Z,89nm,20.3s,MS3.8,baz=304,slow=37
GNI Garni 52.31 315 P **P** **13 21 10.6 +1.8**
SNR=6.4
GNI Garni 52.31 315*c i*P **P** **13 21 09.5 +0.8**
GNI pmax pmax
comp=Z,10.0nm,1.0s
GNI MLR MLR
comp=Z,100nm,17.0s
KLR Kul'dur 52.33 32 *e*P **P** **13 21 05.0 -3.9**
HABR Khabarovsk 53.69 34 *e*P **P** **13 21 17.8 -1.1**
HABR *e*S **S** **13 28 52.8 +1.1**
ZEI Tsey 53.96 317 *e*P **P** **13 21 22.4 +1.5**
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
ARU Arti 54.31 338 P **P** **13 21 23.5 +0.1**
comp=Z,186nm,0.9s,mb6.0,SNR=8.9
ARU Arti 54.31 338⇑ *i*P **P** **13 21 22.7 -0.7**
ARU *e* 13 23 23.7
ARU *e*PPP 13 24 32.7
ARU *e*S **S** **13 29 01.2 +1.1**
ARU *e*SS SS 13 32 43.6 +1.4
ARU pmax pmax
comp=Z,35nm,1.0s,mb5.2
ARU Arti 54.31 338 *e*P **P** **13 21 23.8 +0.4**
comp=Z,36nm,1.0s,mb5.2
ARU *e*pP pP 13 21 29.3 -0.5
CLNS Chul'man 54.46 22 *e*P **P** **13 21 19.4 -5.1**
CLNS *e**PP pP 13 21 29.7 -1.3
CLNS *e* 13 22 25.8
CLNS *e* 13 23 21.8
CLNS *e*S **S** **13 28 50.7 -12**
CLNS *e*SS SS 13 32 35.2 -9.5
CLNS pmax pmax
comp=Z,36nm,1.0s,mb5.3
CLNS pmax pmax
comp=N,19nm,1.1s
CLNS pmax pmax
comp=E,18nm,1.2s
CLNS pmax pmax
comp=Z,11nm,0.8s,mb4.8
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=E,7.0nm,0.9s
CLNS smax
comp=E,101nm,14.0s
CLNS smax
comp=Z,90nm,11.9s
CLNS smax
comp=N,23nm,11.3s
CLNS MLR MLR
comp=N,300nm,13.0s,MS4.7
CLNS MLR MLR
comp=E,300nm,13.0s,MS4.7
CLNS MLR MLR
comp=Z,500nm,13.0s,MS4.8
KIV Kislovodsk 55.26 318 P **P** **13 21 31.1 +0.9**
SNR=9.8
KIV Kislovodsk 55.26 318 *e*P **P** **13 21 30.1 -0.2**
KIV *e*S **S** **13 29 12.6 -0.3**
KIV pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KIV MLR MLR
comp=Z,121nm,18.0s,MS4.0
KIV Kislovodsk 55.26 318 *e*P **P** **13 21 30.6 +0.3**
comp=Z,11nm,0.6s,mb5.0
KMBO Kilima Mbogo 55.35 263 P **P** **13 21 33.2 +2.3**
comp=Z,1.9nm,0.5s,mb4.3,baz=41,slow=13,SNR=7.8
KMBO Kilima Mbogo 55.35 263 *e*P **P** **13 21 32.1 +1.2**
KMBO pmax pmax
comp=Z,3.0nm,0.7s
KMBO Kilima Mbogo 55.35 263 *e*P **P** **13 21 32.1 +1.2**
comp=Z,2.8nm,0.7s,mb4.4
ASF Jabal al Asfar 55.94 303 LR LR 13 48 16.5
comp=Z,212nm,19.3s,MS4.2,baz=315,slow=39
MALT Malatya 56.27 311 *e*P **P** **13 21 38.4 +0.8**
MALT *e**PP pP 13 21 44.0 0.0
MALT pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
MALT Malatya 56.27 311 *e*P **P** **13 21 38.4 +0.8**
comp=Z,7.6nm,1.0s,mb4.7
MALT *e*pP pP 13 21 44.0 -0.1
SOC Sochi 57.09 317 *e*P **P** **13 21 42.0 -1.4**
SOC *e* 13 22 35.4
SOC *e*S **S** **13 29 39.4 +2.1**
SOC *e*SSS 13 35 35.0
SOC pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
SOC MLR MLR
comp=Z,340nm,20.0s,MS4.5
EIL Elat 57.13 300 *e*P **P** **13 21 45.5 +1.9**
comp=Z,63nm,0.5s,mb5.9
EIL *e*pP pP 13 21 50.9 +0.8
MMAI Mount Meron Ar 57.35 304 LR LR 13 48 55.8
comp=Z,158nm,18.6s,MS4.2,baz=40,slow=39
YSS Yuzh-Sakhalins 57.51 39 P **P** **13 21 46.0 -0.4**
YSS *e* pP 13 21 53.0 +0.2
YAK Yakutsk 59.95 19 *e*P **P** **13 22 02.2 -1.1**
YAK *e* 13 22 45.4
YAK *e* 13 24 15.1
YAK *e*PPP 13 25 42.4
YAK *e*S **S** **13 30 13.1 -1.3**
YAK *e* 13 31 43.4
YAK *e*SS SS 13 34 14.1 +3.2
YAK pmax pmax
comp=N,15nm,1.4s
YAK pmax pmax
comp=Z,39nm,1.4s,mb5.2
YAK pmax pmax
comp=E,15nm,1.3s
YAK pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
YAK pmax pmax
comp=N,3.0nm,1.5s
YAK pmax pmax
comp=E,3.0nm,1.4s
YAK smax
comp=N,3.0nm,1.4s
YAK smax
comp=E,4.0nm,1.5s
YAK Yakutsk 59.95 19 *e*P **P** **13 22 02.9 -0.4**
comp=E,61nm,1.0s,mb5.6
BRTR Keskin Array B 60.25 311 P **P** **13 22 04.7 -0.6**
comp=E,3.2nm,0.8s,mb4.4,baz=123,slow=7.1,SNR=23
BRTR LR LR 13 50 54.7
comp=E,138nm,20.6s,MS4.1,baz=105,slow=39
BR131 Keskin Array S 60.25 311 *e*P **P** **13 22 04.3 -1.1**
comp=E,2.5nm,0.7s,mb4.3
VRSR Storozhevoye 60.45 325*d i*P **P** **13 22 06.2 -0.6**
VRSR pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,6.0nm,0.8s
ISP Isparta 62.22 308 *e*P **P** **13 22 18.5 -0.2**
STKA Stephens Creek 62.25 133 *e*P **P** **13 22 19.0 +0.1**
comp=E,6.1nm,1.5s,mb4.5
STKA *i* pP pP 13 22 24.8 -0.6
STKA Stephens Creek 62.25 133 P **P** **13 22 19.5 +0.6**
comp=E,5.4nm,0.9s,mb4.7,baz=320,slow=8.0,SNR=5.0
MOS Moscow 63.26 329 *e*P **P** **13 22 23.8 -1.8**
MOS *i* pP 13 22 29.4 -2.7
MOS *e* 13 23 02.0
MOS pmax pmax

comp=Z,49nm,0.7s,mb5.8
OBN Obninsk 63.53 328 *d* iP P **13 22 26.8 -0.7**
OBN *e* 13 23 04.1
OBN *e* 13 24 49.7
OBN *e*S S **13 30 59.6 -0.3**
OBN pmax pmax
comp=Z,46nm,1.7s,mb5.2
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.3
KLMR Klimovskoe 64.78 335 *e*P P **13 22 34.4 -1.3**
KLMR pmax pmax
comp=Z,30nm,1.6s,mb5.1
SANT Santorini 65.97 306 *e*pP pP 13 22 59.5 +10
AKASG Malin Array Be 66.17 322 P P **13 22 43.2 -1.4**
comp=Z,0.5nm,0.3s,mb4.0,baz=91,slow=4.8,SNR=15
AKASG Malin Array Be 66.17 322 P P **13 22 43.2 -1.4**
TIXI Tiksi 66.89 12 *e*P P **13 22 46.2 -3.0**
TIXI *e* pP 13 22 53.3 -2.4
TIXI *e*S S 13 31 34.0 -6.9
TIXI pmax pmax
comp=Z,50nm,1.2s,mb5.4
MA2 Magadan 67.08 28 *e*P P **13 22 49.0 -1.4**
MA2 pmax pmax
comp=Z,64nm,1.6s,mb5.4
MA2 MLR MLR
comp=Z,300nm,18.0s,MS4.5
TOO Toolangi 67.94 136 *e*P P **13 22 57.4 +1.5**
comp=Z,9.6nm,0.8s,mb4.9
TOO *i* pP pP 13 23 03.2 +0.8
TOO Toolangi 67.94 136 *e*P P **13 22 57.4 +1.5**
TOO *i* *PP pP 13 23 03.2 +0.8
TOO pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
PET Petropavlovsk 69.17 36 *e*P P **13 23 01.4 -2.2**
PET pmax pmax
comp=Z,22nm,2.4s,mb4.7
JOF Joensuu 69.18 335 *e*p P **13 23 02.0 -1.6**
comp=Z,23nm,0.9s,mb5.1
ARMA Armidale 69.19 127 *e*P P **13 23 05.8 +2.1**
ARMA *i* pP pP 13 23 11.5 +1.3
CNB Canberra Magne 69.58 133 *e*P P **13 23 06.3 +0.2**
comp=Z,40nm,1.8s,mb5.0
CNB *i* pP pP 13 23 12.3 -0.4
VSU Vasula 69.78 329 *o* iP P **13 23 06.2 -1.1**
KWP Kalwaria 70.00 320 *e*P P **13 23 08.4 -0.3**
KWP *e* pP 13 23 14.0 -1.3
KOLS Kolonicke sedl 70.16 319 *e*P P **13 23 09.2 -0.4**
APA Apatity 70.33 340 ⇑*i*P P **13 23 10.2 -0.5**
APA *i* 13 23 35.0
APA *i* S S 13 32 22.0 +0.1
APA pmax pmax
comp=Z,22nm,1.2s,mb5.0
APA MLR MLR
comp=Z,500nm,18.0s,MS4.8
SUW Suwalki 70.57 324 *e*P P **13 23 11.3 -0.9**
SUW *e* pP 13 23 16.4 -2.4
CRVS Cervenica-Dubn 70.68 319 *e*P P **13 23 13.5 +0.7**
FIA1 FINESS Array S 70.98 332 *e*P P **13 23 13.6 -1.0**
FIA1 *e*pP pP 13 23 18.1 -3.1
FINES FINESS Array B 70.98 332 P P **13 23 13.9 -0.8**
comp=Z,9.4nm,0.8s,mb4.8,baz=100,slow=8.5,SNR=26
KAF Kangasniemi 71.08 333 *e*p P **13 23 14.1 -1.2**
comp=Z,21nm,0.9s,mb5.1,baz=106,slow=5.8
KAF Kangasniemi 71.08 333 *e*P P **13 23 14.1 -1.2**
KAF pmax pmax
comp=Z,21nm,0.9s,mb5.1
OJC Ojcow 71.95 320 *e*P P **13 23 20.1 -0.4**
VYHS Vyhne 72.35 318 *e*P P **13 23 22.3 -0.6**
VYHS Vyhne 72.35 318 *e*P P **13 23 22.4 -0.5**
VYHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
VYHS Vyhne 72.35 318 *e*P P **13 23 22.4 -0.5**
comp=Z,3.6nm,1.1s,mb4.2
OKC Ostrava-Krasne 72.96 319 *e*P P **13 23 26.2 -0.3**
OKC *e*pP pP 13 23 31.5 -1.6
OKC AMS AMS 13 59 20.0
comp=Z,300nm,25.9s
OKC Ostrava-Krasne 72.96 319 *e*P P **13 23 26.2 -0.3**
OKC *e*pP pP 13 23 31.5 -1.6
MORC Moravsky Berou 73.34 319 *e*P P **13 23 28.8 0.0**
MORC pmax pmax
comp=Z,24nm,1.5s,mb4.9
MORC Moravsky Berou 73.34 319 *e*P P **13 23 28.8 0.0**
comp=Z,24nm,1.5s,mb4.9
KEV Kevo 73.35 341 *e*p P **13 23 25.8 -3.0**
ZST Bratislava 73.46 318 *e*P P **13 23 29.8 +0.3**
ZST Bratislava 73.46 318 *e*P P **13 23 29.9 +0.4**
ZST pmax pmax
comp=Z,14nm,0.9s,mb4.9
ZST Bratislava 73.46 318 *e*P P **13 23 29.9 +0.4**
comp=Z,14nm,0.9s,mb4.9
ARCES ARCESS Array B 73.77 340 P P **13 23 30.4 -0.9**
comp=Z,7.5nm,0.9s,mb4.6,baz=107,slow=6.7,SNR=12
BOSA Boshof 74.17 237 P P **13 23 34.5 +0.9**
comp=Z,7.1nm,0.9s,mb4.6,baz=40,slow=6.3,SNR=6.2
BOSA LR LR 13 51 35.7
comp=Z,150nm,20.1s,MS4.3,baz=50,slow=32
DPC Dobruska-Polom 74.18 320 *e*P P **13 23 34.4 +0.7**
DPC *e*pP pP 13 23 39.0 -1.3
KSP Ksiaz 74.25 320 *e*P P **13 23 34.3 +0.2**
KSP *e* pP 13 23 40.0 -0.7
KSP Ksiaz 74.25 320 *e*P P **13 23 34.2 +0.1**
KSP *e*pP pP 13 23 39.4 -1.3
UPC Upice 74.39 320 *e*P P **13 23 35.2 +0.3**
UPC *e*pP pP 13 23 40.5 -1.1
ARSA Arzberg 74.45 317 ⇑*i*P P **13 23 36.0 +0.8**
comp=Z,16nm,1.3s,mb4.8
BOJS Bojanci 74.52 315 *e*P P **13 23 35.7 0.0**
PERS Pernice 74.69 316 *e*P P **13 23 35.8 -0.9**
VISS Visnje 74.83 315 *e*P P **13 23 37.4 0.0**
PRU Pruhonice 75.29 319 *e*P P **13 23 40.2 +0.1**
PRU *e*pP pP 13 23 45.7 -1.1
PRU AMS AMS 14 10 20.0
comp=Z,200nm,8.5s
PRU Pruhonice 75.29 319 *e*P P **13 23 40.2 +0.1**
PRU *e*pP pP 13 23 45.7 -1.1
PVCC Panska Ves 75.31 320 *e*P P **13 23 40.5 +0.2**
PVCC *e*pP pP 13 23 45.7 -1.2
BRG Berggiesshubel 75.73 320 *e*P P **13 23 43.0 +0.3**
comp=Z,26nm,1.4s,mb5.0
BRG Berggiesshubel 75.73 320 *i* P P **13 23 43.0 +0.3**
comp=Z,10nm,1.1s,mb4.7
BRG *e* pP 13 23 48.6 -0.7
comp=Z,5.8nm,1.0s
BRG *e* 13 24 00.3
comp=Z,8.8nm,1.3s
BRG
comp=N,111nm,17.5s
BRG
comp=E,80nm,23.6s
BRG
comp=Z,83nm,14.9s
BRG Berggiesshubel 75.73 320 *i* P P **13 23 43.0 +0.3**
BRG *e* pP 13 23 48.7 -0.6
BRG *e* 13 24 00.3
BRG pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BRG MLR MLR
comp=N,111nm,17.5s
BRG MLR MLR
comp=E,80nm,23.6s
BRG MLR MLR
comp=Z,83nm,14.9s,MS4.2
BRG Berggiesshubel 75.73 320 *i* P P **13 23 43.0 +0.3**
comp=Z,10nm,1.1s,mb4.7
BRG *e* pP 13 23 48.6 -0.7
BRG *e* 13 24 00.3
BRG LR LR
comp=Z,80nm,14.9s,MS4.2
GEC2 GERESS Array S 75.77 318 *e*P P **13 23 43.1 +0.2**
comp=Z,14nm,1.0s,mb4.8
GEC2 GERESS Array S 75.77 318 *e*P P **13 23 43.1 +0.2**
GEC2 pmax pmax
comp=Z,14nm,1.0s,mb4.8
GERES GERESS Array B 75.77 318 P P **13 23 42.8 -0.1**
comp=Z,6.1nm,0.8s,mb4.6,baz=89,slow=5.5,SNR=35
GERES LR LR 14 00 50.8
comp=Z,141nm,19.5s,MS4.3,baz=279,slow=39
KHC Kasperske Hory 75.86 318 *e*P P **13 23 43.4 0.0**
KHC *e*pP pP 13 23 48.2 -1.9
KHC AMS AMS 14 05 30.0
comp=Z,200nm,13.9s
FBE Freiberg 76.11 320 *e*P P **13 23 44.8 0.0**
comp=Z,28nm,1.0s,mb5.2
BILL Bilibino 76.15 22 *e*P P **13 23 44.8 -0.3**
BILL *e**PP pP 13 23 50.3 -1.4
BILL pmax pmax
comp=Z,20nm,1.2s,mb4.9
BILL Bilibino 76.15 22 *e*P P **13 23 44.8 -0.3**
comp=Z,20nm,1.2s,mb4.9
BILL *e*pP pP 13 23 50.3 -1.4
WET Wettzell 76.32 318 *e*P P **13 23 46.1 +0.1**
comp=Z,29nm,1.8s,mb4.9
WET Wettzell 76.32 318 *e*P P **13 23 46.1 +0.1**
WET pmax pmax
comp=Z,29nm,1.8s,mb4.9
CLL Collm 76.35 321 *e*P P **13 23 45.8 -0.4**
comp=Z,16nm,1.2s,mb4.8
CLL Collm 76.35 321 P P **13 23 45.5 -0.7**
comp=Z,logA/T=1.1,mb4.8
CLL *i* *PP pP 13 23 51.6 -1.2
CLL Collm 76.35 321 *i* P P **13 23 45.5 -0.7**
comp=Z,16nm,1.2s,mb4.8
CLL *i* pP pP 13 23 51.6 -1.2
CLL Collm 76.35 321 *i* P P **13 23 45.5 -0.7**
CLL *i* *PP pP 13 23 51.6 -1.2
CLL pmax pmax
comp=Z,16nm,1.2s,mb4.8
CLL MLR MLR
comp=Z,200nm,15.8s,MS4.5
CLL Collm 76.35 321 *i* P P **13 23 45.5 -0.7**
comp=Z,16nm,1.2s,mb4.8
CLL *i* pP pP 13 23 51.6 -1.2
CLL LR LR
comp=Z,200nm,15.8s,MS4.5
NKC Novy Kostel 76.65 320 *e*P P **13 23 48.2 +0.3**
NKC *e*pP pP 13 23 53.5 -1.0
TANN Tannenbergstha 76.65 320 *e*P P **13 23 48.0 +0.1**
comp=Z,13nm,1.2s,mb4.7
HFS Hagfors 76.66 330 P P **13 23 47.0 -0.9**
comp=Z,6.3nm,0.8s,mb4.6,baz=97,slow=6.1,SNR=7.9
WERN Wernitzgruen 76.70 320 *e*P P **13 23 47.7 -0.5**
comp=Z,11nm,1.1s,mb4.7
GUNZ Gunzen 76.73 320 *e*P P **13 23 48.7 +0.4**
comp=Z,15nm,1.0s,mb4.9
WERD Werda 76.75 320 *e*P P **13 23 48.3 -0.1**
comp=Z,10.0nm,1.0s,mb4.7
ROTZ Rotzenmuhle 76.79 319 *e*P P **13 23 49.1 +0.4**
comp=Z,23nm,1.1s,mb5.0
MANZ Manzenberg 76.86 319 *e*P P **13 23 50.0 +0.9**
comp=Z,26nm,1.1s,mb5.1
MOX Moxa 77.20 320 *e*P P **13 23 51.0 0.0**
comp=Z,20nm,1.4s,mb4.8
MOX Moxa 77.20 320 *e*(P) P **13 23 51.1 +0.1**
comp=Z,28nm,1.8s,mb4.9
MOX *e* pP 13 23 55.9 -1.7
MOX
comp=Z,100nm,18.0s
MOX Moxa 77.20 320 P P **13 23 51.1 +0.1**
MOX *e* pP 13 23 55.9 -1.7
MOX pmax pmax
comp=Z,28nm,1.8s,mb4.9
MOX MLR MLR
comp=Z,100nm,18.0s,MS4.2
GRA1 Grafenberg Arr 77.42 319 *e*P P **13 23 52.9 +0.7**
comp=Z,37nm,1.2s,mb5.2
GRA1 *e*pP pP 13 23 58.4 -0.5
GRF Grafenberg Arr 77.42 319 *e*P P **13 23 52.9 +0.7**
comp=Z,37nm,1.2s,mb5.2
GRF *e*pP pP 13 23 58.4 -0.5
GRF Grafenberg Arr 77.42 319 *e*P P **13 23 52.9 +0.7**
GRF *e**PP pP 13 23 58.4 -0.5
GRF pmax pmax
comp=Z,37nm,1.2s,mb5.2
GRF Grafenberg Arr 77.42 319 *e*P P **13 23 52.9 +0.7**
GRF *e**PP pP 13 23 58.4 -0.5
GRF pmax pmax
comp=Z,37nm,1.2s,mb5.2
MOTA Moosalm 77.46 317 ⇑*i*P P **13 23 51.9 -0.5**
comp=Z,11nm,1.1s,mb4.7
MOTA Moosalm 77.46 317 ⇑*i*P P **13 23 51.9 -0.5**
MOTA pmax pmax
comp=Z,11nm,1.1s,mb4.7
NB2 NORSAR Subarra 77.95 331 P P **13 23 53.9 -1.3**
comp=Z,13nm,1.0s,mb4.8,baz=96,slow=5.6
NOA NORSAR Array B 77.95 331 P P **13 23 54.2 -1.0**
comp=Z,5.0nm,0.9s,mb4.4,baz=98,slow=5.8,SNR=7.6
NOA LR LR 14 06 11.4
comp=Z,178nm,18.6s,MS4.4,baz=140,slow=42
CLZ Clausthal 78.01 321 *e*P P **13 23 55.5 0.0**
comp=Z,22nm,1.0s,mb5.0
CLZ Clausthal 78.01 321 *e*P P **13 23 55.5 0.0**
CLZ pmax pmax
comp=Z,22nm,1.0s,mb5.0
BSEG Bad Segeberg 78.10 323 *e*P P **13 23 56.0 0.0**
comp=Z,41nm,1.4s,mb5.2
BSEG Bad Segeberg 78.10 323 *e*P P **13 23 56.0 0.0**
BSEG pmax pmax
comp=Z,41nm,1.4s,mb5.2
DAVA Damuels 78.29 316 ⇑*i*P P **13 23 57.2 +0.1**
comp=Z,22nm,0.9s,mb5.1
MAW Mawson 78.89 191 P P **13 24 00.0 -0.4**
comp=Z,2.0nm,0.7s,mb4.1,baz=30,slow=8.1,SNR=5.8
MAW Mawson 78.89 191 *e*P P **13 24 01.4 +1.0**
MAW pmax pmax
comp=Z,31nm,1.6s
MAW Mawson 78.89 191 *e*P P **13 24 01.4 +1.0**
comp=Z,31nm,1.6s,mb5.0
KEST Kesra 78.99 305 LR LR 14 02 48.3
comp=Z,113nm,18.4s,MS4.2,baz=272,slow=39
TNS Taunus Mts 79.22 319 *e*P P **13 24 02.3 +0.1**
comp=Z,15nm,1.2s,mb4.8
TNS Taunus Mts 79.22 319 *e*P P **13 24 02.3 +0.1**
TNS pmax pmax
comp=Z,15nm,1.2s,mb4.8
BFO Black Forest 79.32 318 *e*P P **13 24 02.0 -0.7**
comp=Z,20nm,1.4s,mb4.8
BFO Black Forest 79.32 318 *e*P P **13 24 02.0 -0.7**
BFO pmax pmax
comp=Z,20nm,1.4s,mb4.8
LPG La Plagne 80.50 315 *e*P P **13 24 09.5 +0.4**
comp=Z,27nm,0.8s,mb4.9
LPG La Plagne 80.50 315 *e*P P **13 24 09.5 +0.4**
LPG pmax pmax
comp=Z,13nm,0.8s,mb4.9
LPG La Plagne 80.50 315 *e*P P **13 24 09.5 +0.4**
comp=Z,13nm,0.8s,mb4.9
SYO Syowa Base 85.54 197 ⇑*e*P P **13 24 35.7 +0.5**
SYO Syowa Base 85.54 197 ⇓*e*pP pP 13 24 41.0 -0.9
TORD Torodi Ar. Bea 88.28 283 P P **13 24 50.1 +1.6**
comp=Z,3.4nm,1.0s,mb4.5,baz=78,slow=4.5,SNR=10
ESDC Sonseca Array 89.02 310 P P **13 24 52.4 +0.4**
comp=Z,0.4nm,0.3s,mb4.2,baz=70,slow=4.1,SNR=6.8
ESDC LR LR 14 08 39.1
comp=Z,100nm,19.0s,MS4.3,baz=30,slow=38
IMA2 Indian Mountai 91.69 22 *e*P P **13 25 05.0 +0.6**
IMA2 *e*pP pP 13 25 10.0 -1.2
SVW2 Sparrevohn 93.02 27 *e*P P **13 25 11.9 +1.3**
SVW2 *e*pP pP 13 25 16.1 -1.2
MCK McKinley 94.58 23 *e*P P **13 25 17.6 -0.2**
MCK pmax pmax
comp=Z,1.0nm,0.8s,mb4.3
MCK McKinley 94.58 23 *e*P P **13 25 17.6 -0.2**
comp=Z,1.4nm,0.8s,mb4.4
MCK *e*pP pP 13 25 23.2 -1.3
INK Inuvik 96.81 15 *e*P P **13 25 27.7 -0.2**
INK pmax pmax
comp=Z,13nm,1.4s
INK Inuvik 96.81 15 *e*P P **13 25 27.7 -0.2**
comp=Z,13nm,1.4s,mb5.2
INK *e*pP pP 13 25 32.4 -2.3
DAWY Dawson 97.87 20 *e*P P **13 25 33.2 +0.4**
VNA1 Neumayer--Stat 101.52 200 *e*Pdiff Pdif 13 25 52.0 +3.0
VNA1 *e* 13 25 57.8
VNA1 *e* 13 26 01.6
YKA Yellowknife Ar 106.13 12 PP PP 13 30 29.3 -4.0
comp=Z,2.4nm,1.0s,baz=333,slow=7.6,SNR=6.8
I07A Izee 120.26 26 ⇑P PKPdf 13 30 49.0 +0.9
baz=120
J06A Christmas Vall 120.64 27 ⇓P PKPdf 13 30 49.4 +0.5
baz=121
K07A Rock Creek Ran 121.49 27 ⇑P PKPdf 13 30 50.8 +0.3
baz=122
K08A Mann Creek Ran 121.79 26 ⇓P PKPdf 13 30 52.2 +1.1
baz=122
L07A Adell 121.98 27 ⇑P PKPdf 13 30 52.3 +0.9
baz=122
HLID Hailey 122.76 23 *e*PKPdf PKPdf 13 30 53.5 +0.6
N06A Buffalo Meadow 122.76 28 ⇓P PKPdf 13 30 53.8 +0.9
baz=123
M08A Happy Creek Ra 122.87 27 ⇑P PKPdf 13 30 54.7 +1.6
baz=123
N07B Gerlach 123.14 28 ⇑P PKPdf 13 30 55.5 +1.8
baz=123
BEKR Beckwourth 123.20 29 ⇓P PKPdf 13 30 55.2 +1.4
baz=123
O06A Flanigan 123.22 29 ⇓P PKPdf 13 30 55.2 +1.4
baz=123
N08A GE Springer Mi 123.52 27 ⇓P PKPdf 13 30 55.3 +0.9
baz=123
O07A Toulon 123.67 28 ⇓P PKPdf 13 30 56.7 +2.0
baz=124
N09A Rock Creek Ran 123.73 27 ⇑P PKPdf 13 30 56.6 +1.8
baz=124
N12A Clover Valley, 124.80 25 ⇑P PKPdf 13 30 58.9 +2.1
baz=125
S06C San Francisco 124.98 31 ⇓P PKPdf 13 30 58.7 +1.5
baz=125
O11A Cowboy Ranch, 125.14 26 ⇑P PKPdf 13 30 59.3 +1.8
baz=125
S05C Merced 125.15 31 ⇑P PKPdf 13 30 59.2 +1.7
baz=125
PDAR Pinedale Array 125.17 19 PKP PKPdf 13 30 57.6 +0.1
comp=Z,1.3nm,0.8s,baz=29,slow=3.4,SNR=12
PDAR Pinedale Array 125.17 19 PKP PKPdf 13 30 57.6 +0.1
NVAR Mina Array Bea 125.31 29 PKP PKPdf 13 30 59.8 +1.9
comp=Z,1.9nm,0.8s,baz=320,slow=0.9,SNR=14
HWUT Hardware Ranch 125.50 22 *e*PKPdf PKPdf 13 30 58.3 +0.1
S09A Goldfield 126.39 29 ⇓P PKPdf 13 31 01.6 +1.7
baz=126
MPMC Manual Prospec 127.58 30 ⇑P PKPdf 13 31 04.2 +2.1
baz=127
MSU Marysvale 127.95 24 *e*PKIKP PKPdf 13 31 04.4 +1.5
MSU *e* 13 31 10.6
JCT Junction City 139.47 16 *e*PKIKP PKPdf 13 31 25.5 +1.1
JCT *e* 13 34 17.7
PLCA Paso Flores 144.49 203 PKP PKPdf 13 31 33.3 -0.1
comp=Z,2.3nm,0.9s,baz=2.8,slow=7.1,SNR=3.1
CPUP Villa Florida 145.97 235 *e*PKP2 PKPab 13 31 37.6 +0.4

ISCJB ***02*** *13:14:08.3±0.7, 4308N±007×059W±004, h12km±6km, Error ellipse: s-maj=11.1km s-min=4.2km az=16.4*
STR ***02*** *13:14:08.3±0.1, 43.18N×060W, h2km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG ***02*** *13:14:08.9±0.1, 4307N×060W, h6km, Md1.9/2, Error ellipse: s-maj=2.5km s-min=1.1km az=6.0*
MDD ***02*** *13:14:09.4±0.5, 4306N×061W, h6km±6km, mbLg0.9/7, Error ellipse: s-maj=4.7km s-min=2.0km az=13.0, PRXIMO*
ISC 02 13:14:09.1±0.8, 4307N±006×060W±003, h8km±8km, n15, σ0§45/21, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATE	**Arette**	**0.07**	**285**	Pg	**Pg**	**13 14 10.9**	**-0.2**
ATE				Sg	**Sg**	**13 14 12.6**	**0.0**
REYF	**Montagne du Re**	**0.15**	**89**	Pg	**Pg**	**13 14 12.1**	**-0.3**
REYF				Sg	**Sg**	**13 14 14.8**	**+0.1**
REYF	**Montagne du Re**	**0.15**	**89**	Pg	**Pg**	**13 14 12.2**	**-0.2**
REYF				Lg		13 14 14.8	
ETSF	**Etsaut**	**0.17**	**169**	*e*Pg	**Pg**	**13 14 12.6**	**-0.1**
ETSF				*e*Sg	**Sg**	**13 14 15.4**	**+0.3**
	25nm,0.2s						
ETSF	**Etsaut**	**0.17**	**169**	Pg	**Pg**	**13 14 12.6**	**-0.1**
ETSF				Lg		13 14 15.4	
	13nm,0.2s						
LARF	**Larrau**	**0.28**	**264**	Pg	**Pg**	**13 14 14.3**	**-0.4**
LARF				Sg	**Sg**	**13 14 19.0**	**+0.5**
LARF	**Larrau**	**0.28**	**264**	Pg	**Pg**	**13 14 14.4**	**-0.3**
LARF				Lg		13 14 19.1	
SJPF	**Ste Jean**	**0.46**	**276**	*e*Pg	**Pg**	**13 14 17.9**	**-0.1**
SJPF				*e*Sg	**Sg**	**13 14 23.8**	**-0.2**
	6.5nm,0.3s						
SJPF	**Ste Jean**	**0.46**	**276**	Pg	**Pg**	**13 14 17.9**	**-0.1**
SJPF				Lg		13 14 23.8	
	3.2nm,0.3s						
EBIE	**Bielsa**	**0.67**	**125**	Pg	**Pg**	**13 14 21.2**	**-0.8**
	0.2nm,0.1s,SNR=7.9						
EBIE				Lg		13 14 29.9	
	1.3nm,0.1s,SNR=14						
EALK	**Alkurruntz**	**0.68**	**283**	Pg	**Pg**	**13 14 21.9**	**-0.3**
	0.4nm,0.1s,SNR=7.9						
EALK				Lg		13 14 30.2	
	1.5nm,0.2s,SNR=7.9						
ELIZ	**Elizondo**	**0.68**	**278**	Pg	**Pg**	**13 14 22.8**	**+0.5**
	0.2nm,0.3s,SNR=7.9						
ELIZ				Lg		13 14 30.6	
	1.0nm,0.1s,SNR=7.9						
EPF	**Esparros**	**0.69**	**93**	*e*Pn	**Pg**	**13 14 23.7**	**+1.2**
EPF				*e*Sg	**Sg**	**13 14 31.3**	**-0.2**
	1.8nm,0.2s						
EPF	**Esparros**	**0.69**	**93**	Pg	**Pg**	**13 14 23.7**	**+1.2**
EPF				Lg		13 14 31.3	
	0.9nm,0.2s						
IUSE	**Utxeti**	**0.70**	**260**	Pg	**Pg**	**13 14 22.9**	**+0.2**
	0.6nm,0.2s,SNR=7.9						
IUSE				Lg		13 14 31.4	
	1.2nm,0.2s,SNR=7.9						

KRSC ***02*** *13:18:03, 5467N×15999E, h157km, ML4.0*
ISCJB ***02*** *13:18:04.5±0.5, 5468N±003×1600E±01, h155km±4km, mb3.4/3, Error ellipse: s-maj=10.2km s-min=3.6km az=39.4*
MOS ***02*** *13:18:04.1±0.8, 5466N×160.10E, h160km, mb3.6/2, Error ellipse: s-maj=53.1km s-min=12.1km az=76.0*
IDC ***02*** *13:18:05.5±18.0, 5374N×161.13E, h136km±214km, mb3.3/3, mb1 3.7/4, mb1mx3.2/22, mbtmp3.9/4, ML3.9/1, MS4.1/2, Ms1 4.1/2, ms1mx3.0/19, Error ellipse: s-maj=424.9km s-min=26.7km az=139.0*
ISC 02 13:18:05.2±0.5, 5469N±003×1600E±01, h153km±4km, n39, σ0§72/67, mb3.4/3, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUMR	**Tumrok**	**0.61**	**10**	*e*P	**Pn**	**13 18 28.1**	**+0.6**
TUMR				*i* S	**Sn**	**13 18 45.4**	**+0.9**
KII	**Karymskiy**	**0.71**	**205**	P	**Pn**	**13 18 28.4**	**+0.3**
KII				S	**Sn**	**13 18 46.0**	**+0.4**
KII	**Karymskiy**	**0.71**	**205**	*i* P	**Pn**	**13 18 28.4**	**+0.3**
KII				*e*S	**Sn**	**13 18 46.0**	**+0.4**
MKZ	**Mys Kozlova**	**1.04**	**96**	P	**Pn**	**13 18 30.7**	**+0.1**
MKZ				S	**Sn**	**13 18 49.5**	**-0.6**
MKZ	**Mys Kozlova**	**1.04**	**96**	*i* P	**Pn**	**13 18 30.7**	**+0.1**
MKZ				*i* S	**Sn**	**13 18 49.5**	**-0.6**
KMNR	**Kamenistaya**	**1.09**	**9**	*i* P	**Pn**	**13 18 31.4**	**+0.4**
KMNR				*i* S	**Sn**	**13 18 50.9**	**+0.2**
KPT	**Kopyto**	**1.29**	**7**	*i* P	**Pn**	**13 18 32.8**	**-0.1**
KPT				*i* S	**Sn**	**13 18 53.9**	**-0.2**
KOZ	**Kozyrevsk**	**1.38**	**358**	P	**Pn**	**13 18 33.2**	**-0.5**
KOZ				S	**Sn**	**13 18 54.1**	**-1.5**
KOZ	**Kozyrevsk**	**1.38**	**358**	*i* P	**Pn**	**13 18 33.2**	**-0.5**
KOZ				*i* S	**Sn**	**13 18 54.1**	**-1.5**
KOZR	**Kozyr**	**1.39**	**359**	PN	**Pn**	**13 18 54.1**	**-0.6**
KOZR				S	**Sn**	**13 18 54.1**	**-1.6**
ZLN	**Zelenaya**	**1.42**	**20**	*e*P	**Pn**	**13 18 34.9**	**+0.7**
ZLN				*e*S	**Sn**	**13 18 57.3**	**+0.9**
GNL	**Ganaly**	**1.54**	**231**	*i* P	**Pn**	**13 18 35.2**	**-0.2**
GNL				*i* S	**Sn**	**13 18 58.1**	**-0.5**
SDLR	**Sedlovina**	**1.54**	**205**	*i* P	**Pn**	**13 18 36.0**	**+0.5**
SDLR				*i* S	**Sn**	**13 18 59.5**	**+0.8**
NLC	**Nalytchevo**	**1.56**	**194**	P	**Pn**	**13 18 35.5**	**-0.1**
NLC				S	**Sn**	**13 18 59.4**	**+0.5**
NLC	**Nalytchevo**	**1.56**	**194**	*i* P	**Pn**	**13 18 35.5**	**-0.1**
NLC				*i* S	**Sn**	**13 18 59.4**	**+0.5**
KRSR	**Krestovskiy**	**1.57**	**13**	*i* P	**Pn**	**13 18 36.0**	**+0.2**
KRSR				*i* S	**Sn**	**13 18 59.6**	**+0.4**
SPN	**Mys Shipunski**	**1.59**	**178**	P	**Pn**	**13 18 35.3**	**-0.7**
SPN				S	**Sn**	**13 18 58.6**	**-0.9**
SPN	**Mys Shipunski**	**1.59**	**178**	*i* P	**Pn**	**13 18 35.3**	**-0.7**
SPN				*i* S	**Sn**	**13 18 58.6**	**-0.9**
SRDR	**Sredinnyy**	**1.64**	**355**	*i* P	**Pn**	**13 18 35.9**	**-0.6**
SRDR				*i* S	**Sn**	**13 18 59.6**	**-0.9**
KLY	**Klyuchi**	**1.68**	**13**	P	**Pn**	**13 18 37.4**	**+0.5**
KLY				S	**Sn**	**13 19 01.9**	**+0.7**
KLY	**Klyuchi**	**1.68**	**13**	*i* P	**Pn**	**13 18 37.4**	**+0.5**
KLY				*i* S	**Sn**	**13 19 01.9**	**+0.7**
PET	**Petropavlovsk**	**1.83**	**205**	P	**Pn**	**13 18 38.8**	**+0.2**
PET				S	**Sn**	**13 19 04.9**	**+0.6**
PET	**Petropavlovsk**	**1.83**	**205**	⇓*i* PN	**Pn**	**13 18 38.7**	**+0.1**
PET				*i* S	**Sn**	**13 19 04.9**	**+0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PET				pmax	pmax		
	comp=Z,144nm,0.8s						
PET				pmax	pmax		
	comp=N,80nm,0.7s						
PET				smax			
	comp=N,185nm,0.6s						
PET				smax			
	comp=E,143nm,0.5s						
PET	**Petropavlovsk**	**1.83**	**205**	*i* P	**Pn**	**13 18 38.8**	**+0.2**
PET				*i* S	**Sn**	**13 19 04.9**	**+0.6**
SRKR	**Sorokina**	**2.09**	**19**	*e*P	**Pn**	**13 18 42.2**	**+0.6**
SRKR				*i* S	**Sn**	**13 19 10.3**	**+0.8**
KBTR	**Krutoberegovo**	**2.24**	**46**	P	**Pn**	**13 18 43.2**	**-0.1**
KBTR				S	**Sn**	**13 19 12.0**	**-0.6**
KBTR	**Krutoberegovo**	**2.24**	**46**	*i* P	**Pn**	**13 18 43.2**	**-0.1**
KBTR				*i* S	**Sn**	**13 19 12.0**	**-0.6**
GRL	**Gorelyy**	**2.41**	**208**	*e*P	**Pn**	**13 18 45.6**	**+0.2**
GRL				*e*S	**Sn**	**13 19 16.3**	**-0.1**
RUS	**Russkaya**	**2.41**	**201**	P	**Pn**	**13 18 44.8**	**-0.6**
RUS				S	**Sn**	**13 19 15.1**	**-1.3**
RUS	**Russkaya**	**2.41**	**201**	*e*P	**Pn**	**13 18 44.8**	**-0.6**
RUS				*i* S	**Sn**	**13 19 15.1**	**-1.3**
MIPR	**Malaya Ipel'ka**	**3.08**	**220**	P	**Pn**	**13 18 54.4**	**+0.8**
ASAJ	**Asahikawa**	**15.43**	**234**	P	**Pn**	**13 21 36.4**	**+1.7**
	comp=E,0.8nm,0.3s,baz=132,slow=13,SNR=8.2						
ZAL	**Zalesovo**	**41.88**	**301**	LR	LR	13 44 17.3	
	comp=E,370nm,19.4s,baz=290,slow=37						
PDAR	**Pinedale Array**	**56.83**	**62**	P	**P**	**13 27 34.4**	**+0.8**
	comp=E,0.5nm,0.6s,mb3.5,baz=330,slow=5.2,SNR=4.3						
HNR	**Honiara**	**63.87**	**180**	LR	LR	13 49 36.9	
	comp=E,105nm,21.6s,baz=268,slow=30						
WRA	**Warramunga Arr**	**77.49**	**205**	P	**P**	**13 29 42.4**	**-1.3**
	comp=E,0.6nm,0.5s,mb3.5,baz=19,slow=6.0,SNR=15						
WRA	**Warramunga Arr**	**77.49**	**205**	P	**P**	**13 29 42.4**	**-1.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**81.18**	**204**	P	**P**	**13 30 03.0**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.3,baz=9.3,slow=5.4,SNR=6.9						
ASAR	**Alice Springs**	**81.18**	**204**	P	**P**	**13 30 03.0**	**-0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*IDC **02** 13:19:57.5±5.6, 3632N×7096E, h193km±51km, mb3.4/10, mb1 3.5/13, mb1mx3.4/25, mbtmp3.9/13, Error ellipse: s-maj=28.6km s-min=16.6km az=11.0*
*ISCJB **02** 13:19:59.7±0.4, 3663N±003×7103E±007, h217km±6km, mb3.7/11, Error ellipse: s-maj=9.2km s-min=4.8km az=170.5*
*MOS **02** 13:19:59.2±0.9, 3656N×7093E, h215km, mb4.4/1, Error ellipse: s-maj=17.9km s-min=9.6km az=100.8*
*NEIC **02** 13:20:00.1±1.7, 3655N×7100E, h204km±19km, mb4.3/2, Error ellipse: s-maj=19.1km s-min=8.1km az=60.0*
*NNC **02** 13:20:06.3±3.3, 37.14N×7097E, h220km±51km, mb2.9, mpv3.8, Error ellipse: s-maj=38.5km s-min=20.1km az=23.0*
ISC 02 13:20:00.7±0.4**, 3664N**±003×**7104E**±007**, h210**km±5km**, n49, σ0s92**/57**, mb3.7**/11**, 5C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.90**	**166**	P	**Pn**	**13 20 50.4**	**+0.8**
CEP				S	**Sn**	**13 21 28.0**	**+0.1**
CHCP	**Chirah Chowk**	**3.49**	**148**	P	**Pn**	**13 20 57.7**	**+1.2**
CHCP				S	**Sn**	**13 21 36.0**	**-4.4**
THW	**Thamme Wali**	**3.88**	**171**	P	**Pn**	**13 21 01.3**	**0.0**
THW				S	**Sn**	**13 21 45.0**	**-4.0**
SBDP	**Sheikh Budin**	**4.33**	**183**	P	**Pn**	**13 21 05.9**	**-1.0**
SARP	**Sargodha**	**4.89**	**164**	P	**Pn**	**13 21 13.5**	**-0.4**
SARP				S	**Sn**	**13 22 07.0**	**-4.8**
DRP	**Derazinda**	**4.93**	**188**	P	**Pn**	**13 21 14.3**	**-0.1**
AML	**Almayashu**	**5.86**	**20**	P	**Pn**	**13 21 26.7**	**+0.5**
	SNR=140						
UCH	**Uchtor**	**6.19**	**25**	P	**Pn**	**13 21 31.1**	**+0.7**
	SNR=104						
KZA	**Kyzart**	**6.33**	**30**	P	**Pn**	**13 21 32.4**	**+0.1**
	SNR=5.7						
EKS2	**Erkin-Say**	**6.37**	**18**	P	**Pn**	**13 21 33.2**	**+0.4**
	SNR=8.0						
KK31	**Karatay Array**	**6.47**	**357**	⇑P	**Pn**	**13 21 33.6**	**-0.5**
	7.5nm,0.3s,baz=166,slow=12,SNR=126						
KK31				⇑S	**Sn**	**13 22 42.9**	**-5.3**
	10nm,0.4s,baz=241,slow=79,SNR=8.4						
AAK	**Ala-Archa**	**6.55**	**23**	P	**Pn**	**13 21 35.7**	**+0.6**
	SNR=13						
AAK	**Ala-Archa**	**6.55**	**23**	*e*Pn	**Pn**	**13 21 34.6**	**-0.5**
AAK				*e*Sn	**Sn**	**13 22 48.4**	**-1.7**
ULHL	**Ulahol**	**6.89**	**34**	P	**Pn**	**13 21 40.0**	**+0.4**
	SNR=17						
CHMS	**Chumysh**	**6.96**	**23**	P	**Pn**	**13 21 41.0**	**+0.6**
	SNR=7.5						
USP	**Ospenovka**	**7.13**	**21**	P	**Pn**	**13 21 41.9**	**-0.7**
	SNR=9.2						
TKM2	**Tokmak 2**	**7.18**	**28**	P	**Pn**	**13 21 43.7**	**+0.4**
	SNR=17						
TKM2	**Tokmak 2**	**7.18**	**28**	⇓P	**Pn**	**13 21 43.6**	**+0.3**
	1.8nm,0.6s						
TKM2				⇑S	**Sn**	**13 23 02.6**	**-2.4**
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**13.16**	**36**	P	**Pn**	**13 23 00.4**	**+0.7**
	0.3nm,0.3s,baz=216,slow=11,SNR=4.2						
KOLN	**Koldanda**	**13.82**	**126**	*e*P	**Pn**	**13 23 08.3**	**+0.4**
GKN	**Gorkha**	**14.35**	**123**	*e*P	**Pn**	**13 23 14.1**	**-0.3**
GKN				*e*S	**S**	**13 25 44.7**	**-9.1**
DMN	**Daman**	**14.92**	**123**	*e*P	**Pn**	**13 23 21.5**	**+0.1**
	22nm,0.6s						
KKN	**Kakani**	**14.92**	**122**	*e*P	**Pn**	**13 23 21.7**	**+0.3**
AB31	**Akbulak array**	**14.98**	**331**	⇑P	**Pn**	**13 23 21.4**	**-0.7**
	3.0nm,0.5s,baz=169,slow=11,SNR=21						
PKI	**Pulchoki**	**15.15**	**123**	*e*P	**Pn**	**13 23 24.2**	**0.0**
GUN	**Gumba**	**15.26**	**121**	*e*P	**Pn**	**13 23 25.2**	**-0.3**
JIRN	**Jiri**	**15.63**	**121**	*e*P	**Pn**	**13 23 29.9**	**-0.1**
	14nm,0.3s						
ZRNK	**Zerenda**	**16.37**	**356**	*e*P	**P**	**13 23 38.6**	**+0.6**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZRNK	**Zerenda**	**16.37**	**356**	*e*P	**P**	**13 23 38.6**	**+0.7**
	comp=Z,1.8nm,0.5s						
BVAR	**Borovoye Array**	**16.39**	**359**	P	**P**	**13 23 39.4**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=161,slow=10,SNR=6.6						
AKTK	**Aktyubinsk**	**16.68**	**330**	P	**P**	**13 23 42.2**	**+0.9**
AKTO	**Aktyubinsk**	**16.68**	**330**	⇑P	**P**	**13 23 41.9**	**+0.6**
AKTO	**Aktyubinsk**	**16.68**	**330**	P	**P**	**13 23 42.2**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=133,slow=13,SNR=5.4						
ZAL	**Zalesovo**	**19.76**	**25**	P	**P**	**13 24 14.5**	**-0.2**
	comp=Z,5.2nm,0.3s,baz=242,slow=8.7,SNR=6.3						
SONM	**Songino Array**	**28.23**	**56**	P	**P**	**13 25 35.6**	**+1.6**
	comp=Z,0.3nm,0.5s,mb3.2,baz=268,slow=9.5,SNR=2.4						
OBN	**Obninsk**	**29.86**	**319**	*e*P	**P**	**13 25 47.0**	**-1.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
AKASG	**Malin Array Be**	**32.89**	**309**	P	**P**	**13 26 16.3**	**+1.4**
	comp=Z,0.5nm,0.3s,mb3.5,baz=82,slow=7.3,SNR=3.5						
AKASG	**Malin Array Be**	**32.89**	**309**	P	**P**	**13 26 16.3**	**+1.4**
JOF	**Joensuu**	**35.77**	**330**	*e*p	**P**	**13 26 39.2**	**-0.4**
	comp=Z,4.0nm,0.4s,mb4.3						
FINES	**FINESS Array B**	**37.39**	**326**	P	**P**	**13 26 53.3**	**0.0**
	comp=Z,1.3nm,0.4s,mb3.9,baz=118,slow=10.0,SNR=14						
KAF	**Kangasniemi**	**37.53**	**327**	*e*p	**P**	**13 26 57.5**	**+3.0**
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**13 27 23.6**	**+0.2**
	comp=Z,1.6nm,0.5s,mb3.7,baz=112,slow=9.3,SNR=11						
NB2	**NORSAR Subarra**	**44.29**	**323**	P	**P**	**13 27 49.0**	**-0.6**
	comp=Z,1.3nm,0.6s,mb3.4,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**13 27 49.3**	**-0.3**
	comp=Z,1.7nm,0.6s,mb3.6,baz=97,slow=7.7,SNR=5.6						
TORD	**Torodi Ar. Bea**	**65.76**	**269**	P	**P**	**13 30 20.9**	**-2.1**
	comp=Z,0.6nm,0.4s,mb3.6,baz=54,slow=6.2,SNR=9.4						
INK	**Inuvik**	**73.76**	**9**	P	**P**	**13 31 11.7**	**-0.1**
	comp=Z,1.4nm,0.5s,mb3.8,baz=322,slow=3.6,SNR=9.2						
YKA	**Yellowknife Ar**	**81.11**	**3**	P	**P**	**13 31 51.2**	**-1.2**
	comp=Z,0.4nm,0.4s,mb3.4,baz=350,slow=5.2,SNR=4.7						
YKA	**Yellowknife Ar**	**81.11**	**3**	P	**P**	**13 31 51.2**	**-1.2**
WRA	**Warramunga Arr**	**82.03**	**122**	P	**P**	**13 31 55.9**	**-1.5**
	comp=Z,0.3nm,0.4s,mb3.3,baz=324,slow=5.0,SNR=8.8						

IDC 02 13:31:36.2±2.0**, 921S**×**11325E, h0**km**, mb4.1**/6**, mb1 4.2**/7**, mb1mx4.0**/17**, mbtmp4.1**/7**, ML3.5**/1**, Error ellipse: s-maj=81.0km s-min=19.3km az=51.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.93**	**128**	Pn	Pn	13 35 07.2	-1.2
	0.2nm,0.3s,baz=276,slow=16,SNR=9.9						
FITZ				Sn	Sn	13 37 45.7	-8.7
	0.4nm,0.3s,baz=182,slow=19,SNR=8.7						
WRA	**Warramunga Arr**	**23.00**	**120**	P	P	13 36 43.2	+0.7
	0.4nm,0.4s,baz=291,slow=11,SNR=12						
ASAR	**Alice Springs**	**24.42**	**129**	P	P	13 36 56.9	+0.5
	0.9nm,0.5s,baz=304,slow=8.7,SNR=23						
MJAR	**Matsushiro Arr**	**51.20**	**26**	P	P	13 40 41.1	-0.1
	1.6nm,0.8s,baz=201,slow=7.5,SNR=4.7						
SONM	**Songino Array**	**57.12**	**355**	P	P	13 41 24.9	+0.5
	2.0nm,0.7s,baz=176,slow=9.9,SNR=9.5						
MKAR	**Makanchi Array**	**62.22**	**336**	P	P	13 41 59.2	-0.3
	2.3nm,0.4s,baz=145,slow=7.2,SNR=23						
ZAL	**Zalesovo**	**67.36**	**342**	P	P	13 42 33.3	+0.2
	2.1nm,0.4s,baz=263,slow=2.6,SNR=4.2						

*NEIC **02** 13:37:42.8, 1632N×9441W, h79km, MD4.0(MEX), After MEX.*
MEX 02 13:37:41.9±1.2**, 1642N**×**9441W, h96**km±18km**, MD3.9, 1C, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.81**	**326**	*i* P	Pn	13 37 58.9	-1.1
CMIG				*i* S	Sn	13 38 12.2	-1.3
TUIG	**Tuzandepetl**	**1.61**	**360**	*i* P	Pn	13 38 07.3	-1.9
TUIG				*i* S	Sn	13 38 27.6	-2.5
SCX	**San Cristobal**	**1.73**	**79**	*e*P	Pn	13 38 10.7	-0.1
SCX				*i* S	Sn	13 38 32.0	-0.8
HUIG	**Huatulco**	**1.76**	**249**	⇑*i*P	Pn	13 38 09.2	-2.0
HUIG				*i* S	Sn	13 38 32.1	-1.3
HUIG	**Huatulco**	**1.76**	**249**	*i* P	Pn	13 38 09.2	-2.0
HUIG				*i* S	Sn	13 38 31.4	-2.0
CCIG	**Comitan**	**2.19**	**93**	*e*P	Pn	13 38 16.3	-0.4
CCIG				*i* S	Sn	13 38 40.6	-2.7
OXX	**Oaxaca**	**2.31**	**287**	*i* P	Pn	13 38 19.0	+0.6
OXX				*i* S	Sn	13 38 46.0	-0.3
OXX	**Oaxaca**	**2.31**	**287**	*i* P	Pn	13 38 19.5	+1.1
OXX				*i* S	Sn	13 38 47.0	+0.7
VHO	**Vista Hermosa**	**2.32**	**287**	*e*P	Pn	13 38 18.8	+0.4
VHO				*i* S	Sn	13 38 46.2	-0.3
TPIG	**Tehuac#an**	**3.45**	**306**	*i* S	Sn	13 39 12.2	-1.3
UTMO	**Huajuapan**	**3.54**	**294**	*i* P	Pn	13 38 35.1	+0.4
UTMO				*i* S	Sn	13 39 13.2	-2.4

*NEIC **02** 14:03:32.6, 2851S×7135W, h46km, MG3.7(GUC), After GUC.*
GUC 02 14:03:32.6±0.9**, 2851S**×**7135W, h46**km±9km**, ML3.7, 5C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.52**	**98**	⇓*i*P	Pn	14 03 45.6	+1.7
VACH				*i* S	Sn	14 03 54.5	+2.6
VACH				AML	AML	14 03 55.0	
	comp=N,3μm,0.1s						
VACH	**Vallenar**	**0.52**	**98**	⇓*i*P	Pn	14 03 45.6	+1.7
VACH				*i* S	Sn	14 03 54.5	+2.6
LCO	**Las Campanas**	**0.76**	**132**	⇑*i*P	Pn	14 03 48.3	+1.3
LCO				*i* S	Sn	14 03 59.4	+2.1
CPCH	**Copiapo**	**1.44**	**38**	⇑*i*P	Pn	14 03 57.3	+1.1
CPCH				*i* S	Sn	14 04 15.4	+1.3
CPCH				AML	AML	14 04 17.1	
	comp=E,5μm,0.2s						
CPCH	**Copiapo**	**1.44**	**38**	⇑*i*P	Pn	14 03 57.3	+1.1
CPCH				*i* S	Sn	14 04 15.4	+1.3
CDCH	**Caldera**	**1.50**	**18**	⇑*i*P	Pn	14 03 57.2	+0.1
CDCH				*i* S	Sn	14 04 14.8	-0.6
TLL	**Tololo Astrono**	**1.72**	**164**	⇑*i*P	Pn	14 04 01.3	+1.2

*IDC **02** 14:25:01.0±36.0, 1356S×16698E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.9/14, mbtmp4.0/4, ML3.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.8/24, Error ellipse: s-maj=615.1km s-min=50.5km az=57.0*
*ISCJB **02** 14:25:11.6±5.6, 143S±02×1669E±03, h81km±43km, mb3.8/3, Error ellipse: s-maj=55.2km s-min=29.6km az=118.8*
*NEIC **02** 14:25:12.3±5.9, 14.16S×16682E, h65km±45km, Error ellipse: s-maj=55.7km s-min=30.4km az=192.0*
ISC 02 14:25:12.6±5.2**, 142S**±02×**1670E**±03**, h76**km±38km**, n10, σ0s80**/9**, mb3.8**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.86**	**183**	Pn	**Pn**	**14 27 04.4**	**+0.3**
	1.0nm,0.3s,baz=333,slow=16,SNR=15						
DZM				Sn	**Sn**	**14 28 31.1**	**-0.3**
	baz=345,slow=21,SNR=1.3						
HNR	**Honiara**	**8.33**	**304**	LR	LR	14 29 43.0	
	comp=Z,47nm,21.6s,baz=179,slow=35						
STKA	**Stephens Creek**	**29.12**	**228**	P	**P**	**14 31 08.3**	**+2.2**
	1.9nm,0.6s,mb3.9,baz=56,slow=2.0,SNR=5.5						
STKA	**Stephens Creek**	**29.12**	**228**	*e*P	**P**	**14 31 08.2**	**+2.1**
WRA	**Warramunga Arr**	**31.67**	**255**	P	**P**	**14 31 27.6**	**-1.0**
	0.7nm,0.8s,mb3.5,baz=85,slow=9.2,SNR=12						
AS31	**Alice Springs**	**32.59**	**248**	*e*P	**P**	**14 31 36.6**	**-0.1**
ASAR	**Alice Springs**	**32.59**	**248**	P	**P**	**14 31 36.5**	**-0.2**
	1.3nm,0.5s,mb4.0,baz=71,slow=9.7,SNR=49						
ASPA	**Alice Springs**	**32.59**	**248**	*e*P	**P**	**14 31 36.6**	**-0.1**
TGY	**Tagaytay City**	**53.52**	**300**	LR	LR	14 56 51.4	
	comp=Z,32nm,19.2s,baz=157,slow=36						
SBA	**Scott Base**	**63.68**	**180**	*e*P	**P**	**14 35 35.5**	**-0.3**

IDC 02 14:31:35.4±3.2**, 157N**×**10037E, h67**km±44km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.3**/19**, mbtmp3.8**/4**, Error ellipse: s-maj=96.4km s-min=21.7km az=54.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.89**	**310**	P	Pn	14 32 04.7	-0.8
	7.4nm,0.3s,baz=266,slow=6.6,SNR=39						
PSI				S	Sn	14 32 39.8	+11
	3.8nm,0.3s,baz=281,slow=5.0,SNR=6.8						
TSI	**Tuntungan**	**2.63**	**317**	*e*P	Pn	14 32 03.3	-12
WRA	**Warramunga Arr**	**39.58**	**124**	P	P	14 39 01.4	+1.3
	0.6nm,0.5s,baz=302,slow=8.9,SNR=14						
ASAR	**Alice Springs**	**41.14**	**130**	P	P	14 39 11.8	-1.0
	0.4nm,0.7s,baz=295,slow=8.1,SNR=5.3						
SONM	**Songino Array**	**46.38**	**6**	P	P	14 39 54.6	-0.3
	0.9nm,0.6s,baz=197,slow=9.8,SNR=4.3						
ARCES	**ARCESS Array B**	**83.26**	**340**	P	P	14 43 54.7	+0.1
	3.4nm,1.1s,baz=69,slow=2.7,SNR=6.7						

*BJI **02** 14:44:54.4, 1209S×11734E, h15km, mB6.1, mb5.6, Ms5.5, Msz5.3*
*ISCJB **02** 14:45:02.7±0.1, 11.19S±002×11690E±003, h16km, mb5.8/140, MS5.4/192, Error ellipse: s-maj=4.0km s-min=3.2km az=109.3*
*IDC **02** 14:45:02.2±0.3, 11.16S×11689E, h0km, mb5.6/28, mb1 5.6/28, mb1mx5.5/29, mbtmp5.6/28, MS5.4/13, Ms1 5.4/13, ms1mx5.1/25, Error ellipse: s-maj=13.1km s-min=10.1km az=63.0*
*HRVD **02** 14:45:04.6±0.1, 1136S×11692E, h24km, MW5.9/104, Centroid moment Tensor Solution. LP body waves: s104,c206;Mantle waves: s103,c339; Half duration: 2s1 Moment tensor: Scale 10^18Nm; Mrr-0.66±.01; Mθθ0.83±.01; Mφφ-0.16±.01; Mrθ0.15±.01; Mθφ-0.02±.01; Mφr-0.07±.01; Best double couple: M0 0.76700×10^18 NP1:φs83.00000°, δ40.00000°, λ-102.00000°. NP2: φs278.00000°, δ51.00000°, λ-80.00000°. Principal axes: T 0.8450, Plg6.0000°, Azm1.0000°; N -0.1550, Plg8.0000°, Azm92.0000°; P -0.6900, Plg80.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **02** 14:45:04.6±0.1, 11.17S×11685E, h15km, mb5.9/65, ME6.0, MS5.4/150, MW5.8 Error ellipse: s-maj=5.0km s-min=3.1km az=52.0, Moment Tensor Solution. s33 Moment tensor: Scale 10^17Nm; Mrr-6.28; Mθθ7.26; Mφφ-1.00; Mrθ1.60; Mθφ0.51; Mφr-1.78; Best double couple: M0 7.30000×10^17 NP1:φs283.00000°, δ54.00000°, λ-69.00000°. NP2:φs70.00000°, δ41.00000°, λ-116.00000°. Principal axes: T 7.4500, Plg6.0000°, Azm358.0000°; N -0.4300, Plg17.0000°, Azm90.0000°; P -7.0200, Plg72.0000°, Azm248.0000°; Broadband fault plane solution: P waves. NP1:φs45.00000°, δ38.00000°, λ-138.00000°. NP2:φs280.00000°, δ66.00000°, λ-60.00000°. Principal axes: T Plg16.0000°, Azm348.0000°; N Plg0.0000°, Azm0.0000°; P Plg58.0000°, Azm232.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Ampenan. Felt [III] at Denpasar, Gianyar, Kuta and Ubud, Bali. Also felt [III] at Sumbawa Besar, Sumbawa. Felt at Praya, Lombok.
*MOS **02** 14:45:05.2±2.0, 1136S×11679E, h33km, mb6.1/60, MS5.3/59 Error ellipse: s-maj=9.4km s-min=5.3km az=111.4*
*SZGRF **02** 14:45:20.1, 1101S×11298E, h33km, mb5.4, South of Jawa, Indonesia*
ISC 02 14:45:04.9±0.1**, 1118S**±002×**11691E**±003**, h17**km**, h17**km±.9km**:pP-P, n871, σ1s06**/452**, mb5.8**/140**, MS5.4**/191**, 96C-89D, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**2.99**	**326**	P	**Pn**	**14 45 51.9**	**+0.4**
	8μm,0.7s						
NBBI	**Negara**	**3.59**	**321**	P	**Pn**	**14 46 00.1**	**+0.4**
	11μm,0.7s						
WSI	**Waingapu**	**3.66**	**66**	P	**Pn**	**14 46 01.1**	**+0.5**
	8μm,0.8s						
KMMI	**Kalianget**	**5.03**	**324**	P	**Pn**	**14 46 20.5**	**+1.1**
	3μm,1.0s						
KRKI	**Karangkates**	**5.32**	**304**	P	**Pn**	**14 46 21.9**	**-1.6**
	11μm,0.8s						
BJII	**Banjamegara**	**8.07**	**298**	P	**Pn**	**14 47 00.8**	**-0.4**
	1μm,1.0s						
BJII	**Banjamegara**	**8.07**	**298**	⇑*i*P	**Pn**	**14 47 03.2**	**+2.0**
BJII				*i* S	Sn	14 48 07.7	-24
JCJI	**Jatiwangi**	**9.72**	**298**	P	**Pn**	**14 47 22.1**	**-1.8**
	807nm,0.6s						
LEM	**Lembang**	**10.14**	**294**	P	**Pn**	**14 47 28.3**	**-1.4**
	789nm,0.9s						
MBWA	**Marble Bar**	**10.29**	**165**	P	**Pn**	**14 47 26.0**	**-5.7**
	SNR=960						
MBWA				P		14 47 26.3	
	SNR=70						
MBWA	**Marble Bar**	**10.29**	**165**	*e*Pn	**Pn**	**14 47 25.7**	**-6.0**
	992nm,0.4s						
MBWA				*e*Sn	**Sn**	**14 49 06.9**	**-20**
PCI	**Palu**	**10.61**	**16**	P	**Pn**	**14 47 41.6**	**+5.5**
	2μm,1.2s						
FITZ	**Fitzroy Crossi**	**10.90**	**130**	⇑*i*P	**Pn**	**14 47 34.9**	**-5.1**
	951nm,0.7s						
FITZ				*e*S	**Sn**	**14 49 28.0**	**-13**
FITZ	**Fitzroy Crossi**	**10.90**	**130**	Pn	**Pn**	**14 47 35.6**	**-4.3**
	35nm,0.3s,baz=307,slow=9.3,SNR=570						
FITZ				Sn	**Sn**	**14 49 28.7**	**-13**
	115nm,0.3s,baz=195,slow=23,SNR=12						
FITZ				LR	LR	14 52 04.7	
	comp=Z,24μm,18.4s,baz=308,slow=39						
CBJI	**Citeko**	**11.00**	**295**	P	**Pn**	**14 47 36.9**	**-4.6**
	1μm,0.8s						
SBJI	**Serang**	**11.78**	**294**	P	**Pn**	**14 47 51.5**	**-0.6**
	724nm,1.8s						
AAI	**Ambon**	**13.44**	**57**	P	**Pn**	**14 48 19.4**	**+4.7**
	341nm,1.1s						
KLI	**Kotabumi**	**13.48**	**297**	P	**Pn**	**14 48 14.6**	**-0.7**
	466nm,1.1s						
KSM	**Kuching**	**14.18**	**332**	*e*P	**Pn**	**14 48 24.4**	**-0.4**
KAKA	**Kakadu**	**15.27**	**97**	*e*P	**Pn**	**14 48 38.1**	**-1.5**
	152nm,0.7s						
KAKA				*e*S	**Sn**	**14 51 18.6**	**-10**
KSI	**Kapahiang**	**16.04**	**297**	P	**Pn**	**14 48 45.6**	**-3.9**
	2μm,0.7s						
KKM	**Kota Kinabalu**	**17.12**	**358**	*e*P	**Pn**	**14 49 04.9**	**+1.6**
SWI	**Sorong**	**17.55**	**55**	P	**Pn**	**14 49 06.5**	**-2.2**
	2μm,1.3s						
WRA	**Warramunga Arr**	**18.91**	**120**	P	**Pn**	**14 49 21.8**	**-3.4**
	8.0nm,0.3s,baz=287,slow=14,SNR=318						
WRA				Sn	**Sn**	**14 52 40.3**	**-16**
	19nm,0.3s,baz=286,slow=23,SNR=7.5						
WRA				LR	LR	14 57 09.1	
	comp=Z,23μm,20.0s,baz=295,slow=38						
WRAB	**Tennant Creek**	**18.91**	**120**	P	**Pn**	**14 49 24.0**	**-1.3**
	2μm,0.4s						
WRAB	**Tennant Creek**	**18.91**	**120**	⇓*i*P	**Pn**	**14 49 25.2**	**-0.1**
WRAB	**Tennant Creek**	**18.91**	**120**	*e*P	**Pn**	**14 49 22.5**	**-2.8**
	263nm,0.5s						
WB2	**Warramunga Arr**	**18.91**	**120**	⇑*i*P	**Pn**	**14 49 22.3**	**-3.1**
WB2				*e*S	Sn	14 52 34.4	-22
PPI	**Padang Panjang**	**19.56**	**302**	P	**Pn**	**14 49 28.5**	**-4.5**
	612nm,1.3s						
IPIL	**Ipil**	**19.66**	**17**	⇑*e*P	**Pn**	**14 49 34.7**	**+0.3**
IPIL	**Ipil**	**19.66**	**17**	*e*P	**Pn**	**14 49 35.5**	**+1.1**
CTBH	**Cotabato--PC H**	**19.68**	**22**	⇓*i*P	**Pn**	**14 49 35.7**	**+1.1**
BATP	**Bataraza**	**19.86**	**3**	*e*P	**Pn**	**14 49 36.0**	**-0.7**
PAGZ	**Pagadian**	**19.97**	**19**	*e*P	**Pn**	**14 49 39.1**	**+1.1**
DAV	**Davao City (W)**	**20.08**	**26**	*e*P	**P**	**14 49 38.0**	**+0.6**
DAV	**Davao City (W)**	**20.08**	**26**	PFAKE		14 49 50.0	+13
DAV				LR	LR		
	comp=Z,11μm,20.0s,MS5.2						
MATI	**Mati**	**20.27**	**28**	*e*P	**P**	**14 49 39.8**	**+0.3**
KLBR	**Kellerberrin**	**20.33**	**178**	⇑*i*P	**P**	**14 49 38.6**	**-1.6**
	comp=Z,614nm,0.5s						
KLBR				*e*S	S	14 52 59.8	-28
ASPA	**Alice Springs**	**20.40**	**130**	⇑*i*P	**P**	**14 49 40.9**	**0.0**
ASPA				*e*S	**S**	**14 53 15.8**	**-13**
AS31	**Alice Springs**	**20.40**	**130**	⇑*i*P	**P**	**14 49 40.9**	**0.0**
AS31				*e*S	**S**	**14 53 15.8**	**-13**
ASAR	**Alice Springs**	**20.40**	**130**	P	**P**	**14 49 41.0**	**+0.2**
	comp=Z,95nm,0.8s,baz=302,slow=9.9,SNR=821						
ASAR				Sn	**S**	**14 53 12.9**	**-16**
	comp=Z,180nm,1.1s,baz=310,slow=24,SNR=3.7						
ASAR				LR	LR	14 57 05.6	
	comp=Z,11μm,20.2s,MS5.2,baz=308,slow=35						
BUKP	**Musuan**	**20.60**	**24**	*e*P	**P**	**14 49 45.0**	**+2.0**
DCPH	**Dipolog City**	**20.65**	**18**	⇑*e*P	**P**	**14 49 47.2**	**+3.6**
MUN	**Mundaring**	**20.71**	**182**	*e*P	**P**	**14 49 42.7**	**-1.6**
MUN				*e*S	**S**	**14 53 34.5**	**-0.4**
NWAO	**Narrogin (SRO)**	**21.65**	**179**	P	**P**	**14 49 53.3**	**-1.1**
	comp=Z,423nm,0.5s,mb6.1,baz=359,slow=12,SNR=120						
NWAO				Sn	**S**	**14 53 36.2**	**-17**
	comp=Z,169nm,0.5s,baz=90,slow=20,SNR=3.6						
NWAO	**Narrogin (SRO)**	**21.65**	**179**	*e*P	**P**	**14 49 53.2**	**-1.2**
	comp=Z,488nm,0.6s,mb6.1						
NWAO				*e*S	**S**	**14 53 33.1**	**-20**
NWAO				LR	LR		
	comp=Z,19μm,20.0s,MS5.5						
BUTP	**Butuan**	**21.81**	**24**	*e*P	**P**	**14 49 58.9**	**+2.8**
TBP	**Tagbilaran**	**21.85**	**19**	*e*P	**P**	**14 49 56.8**	**+0.2**
FORT	**Forrest**	**22.08**	**154**	⇑*i*P	**P**	**14 49 58.3**	**-0.7**
	comp=Z,849nm,0.7s,mb6.3						
FORT				*i* S	**S**	**14 53 47.8**	**-14**
CUYO	**Cuyo Island**	**22.26**	**11**	*e*P	**P**	**14 50 01.9**	**+0.9**
ENPP	**El Nido**	**22.38**	**7**	*e*P	**P**	**14 50 03.6**	**+1.4**
GUIM	**Jordan**	**22.38**	**15**	*e*P	**P**	**14 50 02.6**	**+0.3**
LLP	**Lapu-Lapu**	**22.48**	**18**	*e*P	**P**	**14 50 03.5**	**+0.2**
SCPH	**Surigao**	**22.50**	**23**	⇓*e*P	**P**	**14 50 03.6**	**+0.1**
MSLP	**Maasin**	**22.60**	**21**	*e*P	**P**	**14 50 04.4**	**-0.1**
PSI	**Prapat**	**22.65**	**307**	P	**P**	**14 50 04.0**	**-1.1**
	comp=Z,168nm,0.9s,mb5.5,baz=156,slow=9.6,SNR=41						
PSI	**Prapat**	**22.65**	**307**	P	**P**	**14 50 04.0**	**-1.1**
KULM	**Kulim**	**23.01**	**315**	*e*P	**P**	**14 50 08.2**	**-0.7**
BUSP	**Coron**	**23.26**	**8**	*e*P	**P**	**14 50 12.1**	**+0.6**
RCP	**Roxas**	**23.32**	**15**	⇑*e*P	**P**	**14 50 12.8**	**+0.6**
TSI	**Tuntungan**	**23.36**	**308**	P	**P**	**14 50 11.9**	**-0.7**
	comp=Z,2μm,1.4s,mb6.4						
TSI	**Tuntungan**	**23.36**	**308**	⇑*e*P	**P**	**14 50 14.5**	**+1.9**
TSI	**Tuntungan**	**23.36**	**308**	*e*P	**P**	**14 50 02.9**	**-10**
OCLP	**Ormoc**	**23.37**	**19**	*e*P	**P**	**14 50 12.3**	**-0.4**
PLP	**Palo**	**23.60**	**20**	*e*P	**P**	**14 50 14.9**	**-0.1**
OTRP	**Odiongan**	**23.93**	**12**	*e*P	**P**	**14 50 18.3**	**+0.3**
SNG	**Songkhla**	**24.40**	**318**	P	**P**	**14 50 13.0**	**-9.2**
	comp=Z,1μm,1.0s,mb6.3						
BOAC	**Boac**	**24.96**	**11**	*e*P	**P**	**14 50 27.8**	**+0.5**
LUBP	**Lubang**	**24.97**	**8**	*e*P	**P**	**14 50 28.3**	**+0.9**
AUQP	**San Andres**	**25.00**	**13**	*e*P	**P**	**14 50 30.7**	**+2.9**
JAY	**Jayapura**	**25.12**	**72**	P	**P**	**14 50 33.2**	**+4.3**
	comp=Z,178nm,0.9s,mb5.6						
TGY	**Tagaytay City**	**25.43**	**9**	*e*P	**P**	**14 50 35.3**	**+3.7**
TGY	**Tagaytay City**	**25.43**	**9**	P	**P**	**14 50 33.4**	**+1.8**
	comp=Z,681nm,0.5s,baz=172,slow=5.0,SNR=15						
PVCP	**Virac**	**25.64**	**16**	⇑*e*P	**P**	**14 50 33.7**	**+0.1**
PVCP	**Virac**	**25.64**	**16**	*e*P	**P**	**14 50 33.4**	**-0.1**
POLP	**Polilio Island**	**26.22**	**11**	*e*P	**P**	**14 50 39.4**	**+0.6**

PKT Phuket 26.70 315 P **P** **14 50 45.0 +1.9**
SCZP Santa Cruz 26.94 6 *e*P **P** **14 50 47.5 +2.2**
BALP Baler 27.14 10 *e*P **P** **14 50 47.7 +0.6**
BSI Banda Aceh 27.15 307 P **P** **14 50 45.7 -1.4**
comp=Z,627nm,1.4s,mb6.0
BOLP Bolinao 27.54 6 *e*P **P** **14 50 52.3 +1.6**
BCPH Baguio City Da 27.62 8⇑*e*P **P** **14 50 57.8 +6.4**
CAUP Cauayan 28.36 10 *e*P **P** **14 50 57.6 -0.4**
PALP Palanan 28.58 11⇑*e*P **P** **14 51 01.6 +1.6**
PALP Palanan 28.58 11 *e*P **P** **14 51 01.6 +1.6**
ABRA Dolores 28.89 8 *e*P **P** **14 51 01.3 -1.4**
CVP Callao Caves 29.10 10 *e*P **P** **14 51 07.0 +2.4**
MNT Nongplab 29.12 324 P **P** **14 51 07.0 +2.2**
APYP Conner 29.17 8 *e*P **P** **14 51 04.0 -1.2**
CTA Charters Tower 29.57 111⇓*i*P **P** **14 51 10.3 +1.5**
comp=Z,47nm,1.1s,mb5.1
CTA *e*S **S** **14 55 53.9 -9.2**
CTA Charters Tower 29.57 111 P **P** **14 51 09.8 +1.0**
comp=Z,27nm,0.7s,mb5.1,baz=278,slow=11,SNR=41
CTAO Charters Tower 29.57 111 P **P** **14 51 10.5 +1.7**
CTAO pmax pmax
comp=Z,130nm,1.2s,mb5.5
CTAO Charters Tower 29.57 111 *e*P **P** **14 51 10.0 +1.2**
comp=Z,128nm,1.2s,mb5.5
CTAO LR LR
comp=Z,10μm,21.0s,MS5.4
PMG Port Moresby 29.81 89*c i*P **P** **14 51 12.3 +1.4**
PMG Port Moresby 29.81 89 *e*P **P** **14 51 14.5 +3.6**
comp=Z,115nm,1.1s,mb5.5
PMG LR LR
comp=Z,11μm,20.0s,MS5.5
STKA Stephens Creek 30.71 136⇓*i*P **P** **14 51 19.4 +0.6**
comp=Z,44nm,0.6s,mb5.5
STKA *i* S **S** **14 56 17.5 -3.4**
STKA Stephens Creek 30.71 136 P **P** **14 51 19.5 +0.6**
comp=Z,51nm,0.7s,mb5.5,baz=304,slow=9.3,SNR=62
STKA LR LR 15 04 30.4
comp=Z,18μm,18.7s,MS5.8,baz=301,slow=38
QIZ Qiongzhong 30.81 347 PFAKE 14 51 30.0 +10
QIZ LR LR
comp=Z,4μm,20.0s,MS5.0
ADE Adelaide 30.89 144 P **P** **14 51 20.6 +0.2**
NST Nakhon Sawan 31.42 328 P **P** **14 51 25.6 +0.5**
comp=Z,171nm,1.0s,mb5.8
GZH Guangzhou 34.23 354 P **P** **14 51 52.8 +3.1**
GZH S **S** **14 57 21.7 +6.0**
GZH LR LR
comp=N,3μm,22.1s,MS5.1
GZH LR LR
comp=E,2μm,18.7s,MS5.1
GZH LR LR
comp=Z,5μm,20.8s,MS5.3
CHG Chiang Mai 34.67 329⇓P **P** **14 51 54.0 +0.5**
comp=Z,98nm,0.7s,mb5.8
CHTO Chiang Mai 34.67 329 P **P** **14 51 54.0 +0.6**
CHTO S **S** **14 57 20.3 -2.1**
CHTO Chiang Mai 34.67 329 P **P** **14 51 53.9 +0.4**
CHTO pmax pmax
comp=Z,76nm,1.0s,mb5.6
CHTO Chiang Mai 34.67 329 *e*P **P** **14 51 53.8 +0.4**
comp=Z,76nm,0.9s,mb5.6
CHTO *e*PcP PcP 14 54 29.4 +2.0
CHTO LR LR
comp=Z,4μm,20.0s,MS5.1
CHRT Chiangrai 35.16 331⇓P **P** **14 51 58.0 +0.3**
comp=Z,395nm,0.7s,mb6.5
NACB Ninganchiao 35.43 7 *e*P **P** **14 51 59.4 -0.6**
YHNB Yeheng 35.89 7 *e*P **P** **14 52 03.6 -0.4**
QZH Quanzhou 35.94 3 P **P** **14 52 04.3 -0.1**
QZH S **S** **14 57 40.0 -1.9**
QZH AMB AMB
comp=Z,2μm,11.4s
QZH LR LR
comp=N,6μm,15.6s,MS5.6
QZH LR LR
comp=E,5μm,15.2s,MS5.6
QZH LR LR
comp=Z,7μm,21.0s
TATO Taipei 36.21 7 PFAKE 14 52 20.0 +13
TATO LR LR
comp=Z,3μm,20.0s,MS5.1
TOO Toolangi 36.72 141 *e*P **P** **14 52 12.7 +1.7**
comp=Z,96nm,1.2s,mb5.5
TOO *e*S **S** **14 57 51.4 -2.4**
TOO Toolangi 36.72 141 *e*P **P** **14 52 12.7 +1.7**
TOO *e*S **S** **14 57 51.4 -2.4**
TOO pmax pmax
comp=Z,97nm,1.2s,mb5.5
GUMO Guam 37.08 49 P **P** **14 52 13.7 -0.4**
comp=Z,62nm,0.5s,mb5.7,baz=141,slow=1.9,SNR=14
GUMO LR LR 15 05 45.6
comp=Z,1μm,20.4s,MS4.8,baz=79,slow=34
ARMA Armidale 37.46 126⇓*i*P **P** **14 52 20.0 +2.6**
ARMA *i* S **S** **14 58 09.3 +4.1**
CNB Canberra Magne 38.00 135 *e*P **P** **14 52 22.5 +0.6**
comp=Z,78nm,1.1s,mb5.3
RIV Riverview 38.56 131 *e*P **P** **14 52 28.8 +2.1**
KMI Kunming 38.63 339⇑P **P** **14 52 29.7 +2.5**
KMI XP sP 14 52 33.8 -0.8
KMI AP pP 14 52 33.0 +0.5
KMI PP PP 14 53 59.0 +3.3
KMI PPP 14 54 22.5
KMI S **S** **14 58 24.3 +1.4**
KMI SSS 15 01 37.5
KMI AMB AMB
comp=Z,166nm,1.0s,mb5.7
KMI AMB AMB
comp=Z,2μm,4.4s
KMI LR LR
comp=N,4μm,19.8s,MS5.4
KMI LR LR
comp=E,4μm,18.4s,MS5.4
KMI LR LR
comp=Z,5μm,20.6s,MS5.3
GYA Guiyang 38.71 345⇑*i*P **P** **14 52 28.7 +0.8**
GYA AP pP 14 52 32.8 -0.4
GYA XP sP 14 52 35.6 +0.3
GYA PP PP 14 53 59.4 +2.8
GYA S **S** **14 58 20.7 -3.4**
GYA SCS ScS 15 02 30.9 -6.6
GYA AMB AMB
comp=Z,180nm,1.0s,mb5.8
GYA AMB AMB
comp=Z,1μm,6.9s
GYA LR LR
comp=N,5μm,20.7s,MS5.4
GYA LR LR
comp=E,3μm,19.4s,MS5.4
GYA LR LR
comp=Z,6μm,21.3s,MS5.3
JOW Kunigami 39.36 16 P **P** **14 52 34.5 +1.2**
comp=Z,104nm,0.7s,mb5.7,baz=210,slow=6.9,SNR=21
PALK Pallekele 40.42 295 P **P** **14 52 43.9 +1.8**
comp=Z,217nm,0.7s,mb6.0,SNR=5.3
PALK Pallekele 40.42 295 *e*P **P** **14 52 42.7 +0.6**
comp=Z,26nm,0.8s,mb5.0
PALK LR LR
comp=Z,7μm,20.0s,MS5.5
TAU Tasmania Unive 41.20 146 PFAKE 14 53 00.0 +11
TAU LR LR
comp=Z,13μm,20.0s,MS5.8
WHN Wuhan 41.55 357 P **P** **14 52 52.0 +0.5**
WHN LR LR
comp=Z,7μm,18.8s,MS5.6
SSE Sheshan 42.23 5 P **P** **14 52 55.9 -1.1**
SSE AP pP 14 53 02.2 -0.1
SSE XP sP 14 53 04.8 +0.4
SSE S **S** **14 59 14.4 -2.2**
SSE SS SS 15 02 23.2 -1.6
SSE AMB AMB
comp=Z,41nm,0.9s,mb5.1
SSE AMB AMB
comp=Z,1μm,7.9s
SSE LR LR
comp=N,850nm,23.5s,MS4.8
SSE LR LR
comp=E,1μm,23.5s,MS4.8
SSE LR LR
comp=Z,2μm,25.0s,MS4.9
HNR Honiara 42.35 92 P **P** **14 52 58.6 +0.6**
comp=Z,153nm,0.9s,mb5.6,baz=260,slow=3.4,SNR=15
HNR Honiara 42.35 92 P **P** **14 52 58.6 +0.6**
HNR pmax pmax
comp=Z,153nm,1.0s,mb5.6
HNR Honiara 42.35 92 *e*P **P** **14 52 59.4 +1.4**
comp=Z,370nm,1.2s,mb5.9
HNR LR LR
comp=Z,3μm,20.0s,MS5.1
NJ2 Nanjing 43.02 2 *e*P **P** **14 53 04.2 +0.8**
NJ2 AP pP 14 53 08.7 -0.1
NJ2 XP sP 14 53 11.2 +0.3
NJ2 PP PP 14 54 46.6 +3.2
NJ2 S **S** **14 59 28.0 -0.3**
NJ2 AMB AMB
comp=Z,40nm,0.5s,mb5.4
NJ2 AMB AMB
comp=Z,1μm,7.0s
NJ2 LR LR
comp=N,8μm,20.1s,MS5.6
NJ2 LR LR
comp=E,2μm,18.2s,MS5.6
NJ2 LR LR
comp=Z,2μm,22.0s,MS4.8
MDRS Chennai 43.63 303 *e*P **P** **14 53 08.0 -0.4**
MDRS AMb AMB 14 53 12.3
comp=Z,260nm,1.9s,mb5.7
MDRS *e*S **S** **14 59 36.5 -0.7**
CAL Calcutta 43.67 320 *e*P **P** **14 53 09.7 +1.0**
CAL *e*x x 14 59 19.2
CD2 Chengdu 43.71 344⇓*i*P **P** **14 53 08.8 -0.2**
CD2 AP pP 14 53 13.3 -1.0
CD2 XP sP 14 53 15.8 -0.6
CD2 PCP PcP 14 54 55.8 0.0
CD2 SCP ScP 14 58 45.6 -1.0
CD2 PCS PcS 14 58 49.0 +0.4
CD2 S **S** **14 59 38.6 +0.3**
CD2 SCS ScS 15 03 05.2 -2.5
CD2 AMB AMB
comp=Z,220nm,0.8s,mb5.9
CD2 AMB AMB
comp=Z,870nm,9.6s
CD2 LR LR
comp=E,3μm,15.6s
CD2 LR LR
comp=Z,2μm,16.8s,MS5.1
VIS Vishakhapatnam 43.87 310 *e*P **P** **14 53 10.6 +0.3**
VIS AMb AMB 14 53 14.7
comp=Z,223nm,1.6s,mb5.6
VIS *e*x x 14 59 32.3
DGAR Diego Garcia 44.00 271 *i* P **P** **14 53 11.9 +0.6**
DGAR MLR MLR
comp=Z,7μm,20.0s,MS5.5
DGAR Diego Garcia 44.00 271 *i* Pr **P** **14 53 11.9 +0.6**
DGAR LR LR
comp=Z,7μm,20.0s,MS5.5
TRD Trivandrum 44.29 295 *e*P **P** **14 53 13.3 -0.4**
TRD AMb AMB 14 53 16.9
comp=Z,231nm,1.0s,mb5.8
SALM Salem 44.64 299 *e*P **P** **14 53 17.0 +0.6**
CBIJ Chichi jima 45.27 32 P **P** **14 53 22.1 +0.7**
comp=Z,144nm,0.6s,mb6.0,baz=261,slow=7.0,SNR=10
XAN Xi'an 45.60 351 P **P** **14 53 22.7 -1.4**
XAN AMB AMB
comp=Z,32nm,1.4s,mb5.1
XAN AMB AMB
comp=Z,10μm,11.3s
XAN LR LR
comp=N,2μm,17.0s,MS5.2
XAN LR LR
comp=E,828nm,16.2s,MS5.2
XAN LR LR
comp=Z,5μm,17.2s,MS5.5
BOK Bokaro 46.13 319 *e*P **P** **14 53 27.8 -0.5**
BOK AMb AMB 14 53 47.8
comp=Z,206nm,1.4s,mb5.9
TIA Tai'an 47.13 0⇑P **P** **14 53 34.8 -1.3**
TIA LR LR
comp=N,2μm,14.0s,MS5.2
TIA LR LR
comp=E,434nm,13.0s,MS5.2
HYB Hyderabad 47.36 306 *i* P **P** **14 53 36.5 -1.4**
comp=E,240nm,1.0s,mb6.1
HYB *e*sP sP 14 53 47.0 +1.7
HYB *e* 14 53 51.0
HYB *e* 14 54 44.0
HYB *e*S **S** **15 00 26.0 -5.0**
HYB *e* 15 01 14.0
HYB *e*ScS ScS 15 03 30.0 -1.2
HYB *e*SS SS 15 03 56.0 -2.6
HYB Hyderabad 47.36 306 *e*P **P** **14 53 36.5 -1.4**
HYB *e*S **S** **15 00 24.0 -7.0**
HYB pmax pmax
comp=Z,240nm,1.0s,mb6.1
HYB Hyderabad 47.36 306 *e*P **P** **14 53 36.5 -1.4**
comp=Z,240nm,1.0s,mb6.1
HYB *e*S **S** **15 00 24.0 -7.0**
BLSP Bilaspur 47.53 314 *e*P **P** **14 53 38.0 -1.2**
MNGI Mangalore 48.15 299 *e*P **P** **14 53 42.0 -2.0**
MNGI AMb AMB 14 53 43.2
comp=Z,125nm,2.5s,mb5.5
NOUC Port Laguerre 48.37 110 *e*P **P** **14 53 47.2 +1.5**
DZM Mont Dzumac 48.50 110 *e*P **P** **14 53 46.3 -0.4**
LZH Lanzhou 48.60 346 *e*P **P** **14 53 48.0 +0.5**
LZH AP pP 14 53 51.1 -1.7
LZH XP sP 14 53 53.0 -1.9
LZH PP PP 14 55 41.3 +0.9
LZH AMB AMB
comp=Z,194nm,1.5s,mb5.9
LZH AMB AMB
comp=Z,810nm,5.9s
LZH LR LR
comp=E,4μm,16.9s
LZH LR LR
comp=Z,5μm,17.7s,MS5.5
JIRN Jiri 48.75 323 *e*P **P** **14 53 49.3 +0.7**
comp=Z,1μm,0.6s
GUN Gumba 49.12 323 *e*P **P** **14 53 51.9 +0.4**
comp=Z,960nm,0.6s
NGP Nagpur 49.15 311 *e*P **P** **14 53 49.9 -1.8**
NGP AMP 14 54 06.7
comp=Z,552nm,2.2s
NGP *e*x x 15 00 50.1
PKI Pulchoki 49.15 322 *e*P **P** **14 53 51.8 +0.1**
comp=Z,315nm,0.7s,mb6.5
PKI Pulchoki 49.15 322 *e*P **P** **14 53 51.8 +0.1**
PKI pmax pmax
comp=Z,315nm,0.7s,mb6.5
INCN Inchon 49.26 10 PFAKE 14 54 00.0 +7.5
INCN LR LR
comp=Z,2μm,20.0s,MS5.0
DMN Daman 49.36 322 *e*P **P** **14 53 53.5 +0.2**
comp=Z,666nm,0.8s,mb6.7
KKN Kakani 49.39 322 *e*P **P** **14 53 53.6 +0.1**
comp=Z,311nm,0.7s,mb6.4
KKN Kakani 49.39 322 *e*P **P** **14 53 53.6 +0.1**
KKN pmax pmax
comp=Z,311nm,0.7s,mb6.5
LATR Latur 49.49 306 *e*P **P** **14 53 53.1 -1.2**
JBP Jabalpur 49.71 314⇓*i*P **P** **14 53 56.2 +0.2**
JBP *e*x x 14 54 15.6
comp=Z,390nm,1.8s
JBP *i* x x 15 01 01.3
GKN Gorkha 49.93 322 *e*P **P** **14 53 57.7 0.0**
comp=Z,443nm,0.6s,mb6.6
DL2 Dalian 50.02 5 P **P** **14 53 56.5 -1.8**
DL2 AP pP 14 54 01.6 -2.1
DL2 S **S** **15 01 06.5 -1.9**
DL2 AMB AMB
comp=Z,30nm,0.9s,mb5.3
DL2 AMB AMB
comp=Z,600nm,6.2s
DL2 LR LR
comp=N,920nm,18.1s,MS4.9
DL2 LR LR
comp=E,590nm,14.9s,MS4.9
DL2 LR LR
comp=Z,1μm,17.8s,MS5.0
KOLN Koldanda 50.40 321 *e*P **P** **14 54 01.2 0.0**
comp=Z,583nm,0.7s,mb6.7
AKL Akola 50.42 309 *e*P **P** **14 54 01.0 -0.3**
AKL AMb AMB 14 54 05.3
comp=Z,261nm,1.9s,mb5.9
KAD Karad 50.82 303 *e*P **P** **14 54 04.3 -0.1**
BJT Baijiatuau 50.94 359 *e*P **P** **14 54 04.5 -0.8**
BJT pmax pmax
comp=Z,80nm,0.6s
BJT MLR MLR
comp=Z,5μm,21.0s
BJT Baijiatuau 50.94 359 *e*P **P** **14 54 04.5 -0.8**
comp=Z,80nm,0.6s,mb5.8
BJT LR LR
comp=Z,5μm,21.0s,MS5.5
BJI Beijing 50.96 359 P **P** **14 54 04.4 -1.0**
BJI PCP PcP 14 55 21.0 -0.6
BJI PP PP 14 56 00.6 -1.3
BJI SCS ScS 15 03 54.3 -1.1
BJI SS SS 15 04 56.7 +0.3
BJI AMB AMB
comp=Z,58nm,1.1s,mb5.4
BJI AMB AMB
comp=Z,2μm,5.9s
BJI LR LR
comp=N,2μm,21.0s,MS5.4
BJI LR LR
comp=E,3μm,21.0s,MS5.4
BJI LR LR
comp=Z,5μm,22.6s,MS5.4
MJAR Matsushiro Arr 51.53 22 P **P** **14 54 07.8 -1.9**
comp=Z,16nm,0.7s,mb5.0,baz=200,slow=7.6,SNR=46
MJAR LR LR 15 15 30.1
comp=Z,2μm,20.6s,MS5.2,baz=230,slow=36
MAJO Matsushiro 51.53 22 P **P** **14 54 07.8 -1.9**
MAJO pmax pmax
comp=Z,33nm,0.7s,mb5.4
MAJO Matsushiro 51.53 22 *e*P **P** **14 54 07.7 -2.0**
comp=Z,33nm,0.6s,mb5.4
MAJO LR LR
comp=Z,2μm,20.0s,MS5.2
MAT Matsushiro 51.53 22 P **P** **14 54 07.4 -2.3**
MAT S **S** **15 01 21.0 -8.4**
MAT Matsushiro 51.53 22 *e*P **P** **14 54 07.0 -2.7**
MAT *e*S **S** **15 01 22.0 -7.4**
MAT pmax pmax
comp=Z,44nm,1.2s,mb5.3
MAT MLR MLR
comp=Z,2μm,22.0s,MS5.2
MAT Matsushiro 51.53 22 *e*P **P** **14 54 07.0 -2.7**
comp=Z,44nm,1.2s,mb5.3
MAT *e*S **S** **15 01 22.0 -7.4**
MAT LR LR
comp=Z,2μm,22.0s,MS5.2
BHPL Bhopal 51.61 312 *e*P **P** **14 54 08.9 -1.4**
BHPL *e*x x 15 01 24.3
POO Poona 51.73 304⇓*i*P **P** **14 54 09.0 -2.2**
comp=Z,330nm,1.0s,mb6.2
POO *e*x x 14 54 57.2
POO AMb AMB 14 55 15.2
comp=Z,361nm,1.5s,mb6.1
BTO Baotou 51.91 353 *e*P **P** **14 54 10.9 -1.7**
HHC Hu-ho-hao-te 52.00 355 *e*P **P** **14 54 17.1 +3.9**
HHC AP pP 14 54 21.6 +3.0
HHC XP sP 14 54 24.2 +3.5
HHC PP PP 14 56 16.1 +4.8
HHC S **S** **15 01 39.9 +4.1**
HHC XS sS 15 01 47.3 +2.6
HHC PS 15 01 51.3
HHC SCS ScS 15 04 02.4 -0.2
HHC SS SS 15 05 15.2 +2.4
HHC AMB AMB
comp=Z,27nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,1μm,5.5s
HHC LR LR
comp=N,2μm,20.4s,MS5.2
HHC LR LR
comp=E,1μm,18.0s,MS5.2
HHC LR LR
comp=Z,3μm,25.5s
GTA Gaotai 52.78 343⇓*i*P **P** **14 54 19.5 +0.5**
GTA AP pP 14 54 24.5 +0.1
GTA XP sP 14 54 26.9 +0.4
GTA PP PP 14 56 18.3 -0.1
GTA PPP 14 57 21.1
GTA SCS ScS 15 04 05.5 -2.6
GTA AMB AMB
comp=Z,39nm,1.0s,mb5.3
GTA AMB AMB
comp=Z,2μm,5.7s
GTA LR LR
comp=N,3μm,20.2s,MS5.4
GTA LR LR
comp=E,2μm,20.2s,MS5.4
GTA LR LR
comp=Z,3μm,19.0s,MS5.4
SNY Shenyang 53.10 6⇓P **P** **14 54 19.8 -1.5**
SNY AP pP 14 54 23.1 -3.7
SNY XP sP 14 54 26.6 -2.2
SNY AMB AMB
comp=Z,58nm,1.2s,mb5.4
SNY AMB AMB
comp=Z,2μm,9.2s
SNY LR LR
comp=N,2μm,17.6s,MS5.2
SNY LR LR
comp=E,704nm,15.5s,MS5.2
SNY LR LR
comp=Z,2μm,17.3s,MS5.2
LGTI Lohaghat 53.67 320 *i* x **P** **14 54 22.0 -3.6**
PTH Pithoragarh 53.76 320 *e*P **P** **14 54 27.1 +0.9**
NDI New Delhi 55.15 317 *e*x x 14 54 16.0
NDI *e*P 14 54 35.5
NDI *e*P 14 54 35.5
NDI AMb AMB 14 54 36.0
comp=Z,400nm,0.7s,mb6.6
NDI *e*x x 15 02 07.0
CASY Casey 55.20 183 *e*P **P** **14 54 36.2 -0.5**
CN2 Changchun 55.26 8⇑P **P** **14 54 35.9 -1.2**
CN2 *e*AP pP 14 54 40.6 -2.0
CN2 XP sP 14 54 42.9 -1.8
CN2 *e*S **S** **15 02 19.5 -0.6**
CN2 AMB AMB
comp=Z,30nm,1.1s,mb5.2
CN2 AMB AMB
comp=Z,1μm,9.0s
CN2 LR LR
comp=N,1μm,19.0s,MS5.2
CN2 LR LR
comp=E,1μm,19.0s,MS5.2
CN2 LR LR
comp=Z,1μm,19.0s,MS5.0
AJM Ajmer 55.56 313 *e*P **P** **14 54 39.1 -0.2**
AJM AMb AMB 14 54 56.1
comp=Z,302nm,1.6s,mb6.1
VLA Vladivostok 55.74 13*c i*P **P** **14 54 39.7 -0.9**
VLA *i* *PP pP 14 54 45.2 -0.8
VLA *e* 14 55 39.5
VLA *e* 14 56 41.7
VLA *i* S **S** **15 02 20.8 -5.7**
VLA pmax pmax
comp=Z,184nm,2.2s,mb5.7
VLA MLR MLR
comp=Z,1μm,20.6s,MS4.9
VLA Vladivostok 55.74 13⇑*i*P **P** **14 54 39.6 -1.0**
RPZ Rata Peaks 56.68 135 P **P** **14 54 47.0 -0.3**
comp=Z,86nm,1.0s,mb5.7,baz=269,slow=4.0,SNR=22
MDJ Mudanjiang 56.71 11 P **P** **14 54 46.9 -0.6**
MDJ AP pP 14 54 50.1 -2.8
MDJ XP sP 14 54 51.4 -3.6
MDJ PP PP 14 56 52.6 -1.0
MDJ S **S** **15 02 35.5 -3.8**
MDJ SCS ScS 15 04 36.3 +0.2
MDJ SS SS 15 06 26.8 -0.3
MDJ AMB AMB
comp=Z,170nm,0.9s,mb6.1
MDJ AMB AMB
comp=Z,1μm,7.2s
MDJ LR LR
comp=N,1μm,20.2s
MDJ LR LR
comp=E,656nm,25.3s
MDJ LR LR
comp=Z,2μm,20.2s,MS5.1
MDJ Mudanjiang 56.71 11 *e*P **P** **14 54 46.9 -0.6**
comp=Z,143nm,0.9s,mb6.0
MDJ LR LR
comp=Z,2μm,22.0s,MS5.1
SMLA Simla 56.77 319 *e*P **P** **14 54 47.1 -0.8**
SMLA AMb AMB 14 54 48.6
comp=Z,626nm,0.6s,mb6.8
SDNR Sundarnagar 57.14 319 *e*P **P** **14 54 50.6 0.0**
SDNR *e*x x 15 02 41.0
BHK Bhakra 57.44 319 *e*x **P** **14 54 57.2 +4.5**
DRV Dumont d'Urvil 57.57 169 P **P** **14 54 51.0 -2.6**
DRV S **S** **15 02 58.0 +7.3**
DRV SS SS 15 06 43.0 +2.3

DRV L 15 09 00.0
DRV R 15 13 00.0
WAKE Wake Island 57.61 59 PFAKE 14 55 10.0 +16
WAKE LR LR
comp=Z,2µm,20.0s,MS5.2
MIR Mirnyy 57.62 191 *d iP* **P 14 54 55.0 +1.1**
MIR *e* 14 55 48.5
MIR *e* 14 57 00.0
MIR *eS* **S 15 02 42.0 -9.3**
MIR *ePS* 15 03 08.0
MIR pmax pmax
comp=Z,2µm,1.9s,mb6.7
MIR pmax pmax
comp=Z,2µm,3.0s
PONG Pong 58.09 319 *eP* **P 14 54 58.0 +0.7**
DLH Dalhousie 58.47 320 *eP* **P 14 54 59.0 -0.9**
DLH *ex* x 14 55 06.0
SNZO South Karori 58.63 132 *eP* **P 14 55 00.9 -0.1**
comp=Z,119nm,0.9s,mb5.9
SNZO LR LR
comp=Z,13µm,20.0s,MS6.0
ULN Ulaanbaatar 59.43 352 *eP* **P 14 55 06.0 -0.5**
ULN pmax pmax
comp=Z,54nm,0.8s,mb5.6
ULN MLR MLR
comp=Z,3µm,19.0s,MS5.4
ULN Ulaanbaatar 59.43 352 *eP* **P 14 55 06.0 -0.6**
comp=Z,54nm,0.8s,mb5.6
ULN LR LR
comp=Z,3µm,19.0s,MS5.4
SONM Songino Array 59.49 352 P **P 14 55 06.4 -0.5**
comp=Z,78nm,0.8s,mb5.8,baz=169,slow=7.4,SNR=297
ASAJ Asahikawa 59.78 21 P **P 14 55 08.3 -0.7**
comp=Z,12nn,0.6s,mb5.1,baz=258,slow=12,SNR=28
ASAJ Asahikawa 59.78 21 P **P 14 55 08.3 -0.7**
ASAJ pmax pmax
comp=Z,12nm,0.6s
URZ Urewera 59.83 128 P **P 14 55 09.0 -0.3**
comp=Z,18nm,0.6s,mb5.3,baz=219,slow=8.9,SNR=6.2
HIA Hailar 60.23 2 *eP* **P 14 55 11.3 -0.8**
HIA pmax pmax
comp=Z,30nm,0.8s
HIA MLR MLR
comp=Z,2µm,20.0s
HIA Hailar 60.23 2 *eP* **P 14 55 11.3 -0.8**
comp=Z,30nn,0.8s,mb5.4
HIA LR LR
comp=Z,2µm,20.0s,MS5.2
WMQ Urumqi 60.85 336⇓ *iP* **P 14 55 16.5 +0.2**
WMQ XP sP 14 55 23.5 -0.3
WMQ PCP PcP 14 56 00.5 +0.6
WMQ PP PP 14 57 32.5 +2.1
WMQ S **S 15 03 31.0 -2.2**
WMQ SCS ScS 15 05 03.0 -3.6
WMQ AMB AMB
comp=Z,188nm,1.0s,mb6.2
WMQ AMB AMB
comp=Z,1µm,6.0s
WMQ LR LR
comp=N,4µm,18.0s,MS5.8
WMQ LR LR
comp=E,5µm,20.0s,MS5.8
WMQ LR LR
comp=Z,3µm,17.0s,MS5.5
FUNA Funafuti 61.34 94 PFAKE 14 55 30.0 +10
FUNA LR LR
comp=Z,11µm,19.0s,MS6.0
HABR Khabarovsk 61.52 14⇓ *iP* **P 14 55 20.7 -0.1**
HABR *eS* **S 15 03 37.6 -4.1**
HABR pmax pmax
comp=Z,258nm,1.8s,mb6.1
HABR MLR MLR
comp=Z,700nm,16.0s,MS4.9
KLR Kul'dur 61.55 11⇑ *iP* **P 14 55 16.9 -4.1**
KLR *i* S **S 15 03 33.0 -9.1**
KLR *e* 15 05 09.5
KLR pmax pmax
comp=E,58nm,2.0s
KLR pmax pmax
comp=Z,240nm,2.0s,mb6.0
KLR pmax pmax
comp=N,1µm,8.0s
KLR pmax pmax
comp=Z,2µm,8.0s
KLR smax
comp=E,720nm,3.0s
KLR MLR MLR
comp=E,700nm,14.0s
KLR MLR MLR
comp=Z,2µm,14.0s,MS5.5
YSS Yuzh-Sakhalins 62.31 20 *eP* **P 14 55 25.0 -1.1**
YSS *i* *SP sP 14 55 37.0 +3.3
YSS 14 56 00.0
YSS *eS* **S 15 03 43.0 -8.7**
YSS *ePPS* 15 04 10.0
YSS *eSS* SS 15 07 54.0 -1.1
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.4
YSS pmax pmax
comp=Z,1µm,6.0s
YSS pmax pmax
comp=Z,80nm,0.9s,mb5.8
YSS MLR MLR
comp=N,900nm,20.0s,MS5.0
YSS MLR MLR
comp=Z,1µm,20.0s,MS5.1
YSS MLR MLR
comp=E,400nm,18.0s,MS5.0
YSS Yuzh-Sakhalins 62.31 20 *eP* **P 14 55 25.3 -0.8**
comp=E,65nm,0.7s,mb5.9
YSS LR LR
comp=Z,1µm,21.0s,MS5.0
ZAK Zakamensk 62.45 350⇓ *iP* **P 14 55 26.5 -0.5**
ZAK *e* 14 56 06.7
ZAK *e* 14 57 46.8
ZAK pmax pmax
comp=Z,31nm,2.0s,mb5.1
ZAK pmax pmax
comp=Z,21nm,1.0s,mb5.2
ZAK pmax pmax
comp=Z,8.0nm,1.2s
CIT Chita 63.00 358 *eP* **P 14 55 30.6 -0.2**
CIT *e* 14 57 50.4
CIT *e* 15 03 54.7
CIT *e* 15 05 16.5
CIT pmax pmax
comp=Z,276nm,2.6s,mb5.9
RAO Raoul Island 63.02 117 PFAKE 14 55 40.0 +9.1
RAO LR LR
comp=Z,5µm,20.0s,MS5.7
KSH Kashi 63.17 325⇓ *iP* **P 14 55 33.2 +1.4**
KSH AP pP 14 55 37.5 +0.1
KSH XP sP 14 55 40.0 +0.6
KSH PCP PcP 14 56 10.4 +1.1
KSH PP PP 14 57 53.4 +2.6
KSH PPP 14 59 24.5
KSH SCP ScP 15 00 10.8 0.0
KSH PCS PcS 15 00 12.4 -0.4
KSH S **S 15 04 01.0 -1.4**
KSH SCS ScS 15 05 21.4 -2.7
KSH AMB AMB
comp=Z,678nm,0.8s,mb6.8
KSH LR LR
comp=N,1µm,9.7s
KSH LR LR
comp=E,2µm,17.1s
KSH LR LR
comp=Z,2µm,21.0s,MS5.2
TLY Talaya 63.64 351 P **P 14 55 35.4 +0.4**
comp=Z,314nm,0.9s,mb6.3,SNR=24
TLY Talaya 63.64 351 *d iP* **P 14 55 34.8 -0.2**
TLY *e* 14 58 02.0
TLY *eS* **S 15 04 04.6 -3.8**
TLY *ePS* 15 04 19.4
TLY *e* 15 05 24.8
TLY pmax pmax
comp=Z,61nm,1.0s,mb5.6
TLY MLR MLR
comp=Z,2µm,20.0s,MS5.4
TLY Talaya 63.64 351 *eP* **P 14 55 34.9 -0.1**
comp=Z,47nm,0.9s,mb5.5
TLY LR LR
comp=Z,2µm,20.0s,MS5.4
MOY Mondy 64.08 349 *eP* **P 14 55 37.3 -0.6**
MOY pmax pmax
comp=Z,254nm,3.0s
IRK Irkutsk 64.09 351 *eP* **P 14 55 37.0 -1.0**
IRK *e* 14 56 16.1
IRK pmax pmax
comp=Z,235nm,2.4s,mb5.8
ULHL Ulahol 64.93 328 P **P 14 55 43.8 +0.3**
SNR=66
AAA Alma-Ata 65.30 329 *d iP* **P 14 55 46.1 +0.2**
AAA *i* S S 15 04 27.7 -1.1
AAA pmax pmax
comp=Z,27µm,3.4s
AAA smax
comp=E,54µm,8.9s
AAA MLR MLR
comp=Z,18µm,16.7s,MS6.3
KZA Kyzart 65.34 327 P **P 14 55 47.2 +1.1**
SNR=133
MKAR Makanchi Array 65.48 335 P **P 14 55 47.0 -0.1**
comp=Z,191nm,0.5s,mb6.4,baz=146,slow=7.1,SNR=752
MKAR Makanchi Array 65.48 335 P **P 14 55 47.0 -0.1**
TKM2 Tokmak 2 65.75 328 P **P 14 55 49.0 +0.3**
SNR=77
TKM2 Tokmak 2 65.75 328 *i* P **P 14 55 48.5 -0.2**
UCH Uchtor 65.84 327 P **P 14 55 50.1 +0.8**
SNR=78
KBK Karagaybulak 65.90 327 P **P 14 55 50.6 +0.8**
SNR=69
AAK Ala-Archa 66.13 327 P **P 14 55 50.9 -0.3**
comp=Z,425nm,0.8s,mb6.5,SNR=42
AAK Ala-Archa 66.13 327 P **P 14 55 52.0 +0.8**
SNR=26
AAK Ala-Archa 66.13 327 *eP* **P 14 55 50.7 -0.5**
AAK pmax pmax
comp=Z,160nm,1.0s,mb6.0
AAK MLR MLR
comp=Z,2µm,21.0s,MS5.3
AAK Ala-Archa 66.13 327 *eP* **P 14 55 50.7 -0.5**
comp=Z,160nm,1.0s,mb6.0
AAK LR LR
comp=Z,2µm,21.0s,MS5.3
FRU Bishkek 66.20 327 *i* P **P 14 55 51.5 -0.2**
FRU *i* 14 56 04.6
FRU *eS* S 15 04 37.0 -2.8
FRU pmax pmax
comp=Z,598nm,2.2s,mb6.2
FRU pmax pmax
comp=Z,1µm,4.0s
FRU smax
comp=N,4µm,8.0s
AML Almayashu 66.22 326 P **P 14 55 52.6 +0.9**
SNR=64
CHMS Chumysh 66.25 327 P **P 14 55 51.5 -0.4**
SNR=14
MAW Mawson 66.50 200⇓ *iP* **P 14 55 53.5 -0.1**
comp=N,86nm,1.1s,mb5.7
MAW *i* S S 15 04 41.5 -2.0
MAW Mawson 66.50 200 P **P 14 55 53.6 +0.1**
comp=N,96nm,1.0s,mb5.8,baz=60,slow=7.5,SNR=168
MAW LR LR 15 22 29.0
comp=N,5µm,18.6s,MS5.8,baz=59,slow=34
MAW PKPPKP 15 24 20.5
comp=N,1.7nm,0.8s,baz=200,slow=5.1,SNR=5.0
EKS2 Erkin-Say 66.53 327 P **P 14 55 54.2 +0.4**
SNR=56
USP Ospenovka 66.56 328 P **P 14 55 53.9 -0.1**
SNR=72
JMDO Jabal Madar 66.57 300 P **P 14 55 54.5 +0.5**
SNR=6.1
SMDO Samad 66.89 301 P **P 14 55 56.4 +0.3**
SNR=11
BIDO Bidbid 67.02 302 P **P 14 55 57.4 +0.5**
SNR=16
OPO Ambohidratompo 67.44 254 P **P 14 55 59.8 +0.3**
comp=N,74nm,0.8s,mb4.8,baz=72,slow=5.4,SNR=14
BSY Bisya 67.49 300 P **P 14 56 00.1 +0.3**
SNR=11
HOQ Hoqain 67.73 301 P **P 14 56 01.5 +0.2**
SNR=17
CLNS Chul'man 68.09 5⇓ *iP* **P 14 56 02.6 -1.0**
CLNS *e* *PP pP 14 56 09.9 +0.7
CLNS *e* 14 56 27.4
CLNS *e* 15 05 45.0
CLNS pmax pmax
comp=Z,49nm,0.7s,mb5.7
CLNS pmax pmax
comp=N,66nm,1.0s
CLNS pmax pmax
comp=E,26nm,0.8s
CLNS pmax pmax
comp=N,22nm,0.8s
CLNS pmax pmax
comp=Z,13nm,0.8s,mb5.0
CLNS pmax pmax
comp=E,19nm,0.9s
CLNS pmax pmax
comp=E,2µm,21.9s
CLNS pmax pmax
comp=Z,300nm,12.7s
CLNS pmax pmax
comp=N,700nm,17.1s
CLNS MLR MLR
comp=Z,1µm,17.0s,MS5.2
CLNS MLR MLR
comp=N,1µm,21.0s,MS5.3
CLNS MLR MLR
comp=E,2µm,24.0s,MS5.3
ARQ Araqi 68.29 301 P **P 14 56 05.4 +0.5**
SNR=9.0
KK31 Karatay Array 68.62 325 *i* P **P 14 56 06.4 -0.6**
KK31 pmax pmax
comp=Z,100nm,1.1s,mb5.7
KK31 Karatay Array 68.62 325 *i* P **P 14 56 06.5 -0.5**
KK31 Karatay Array 68.62 325 *i* P **P 14 56 06.5 -0.5**
WHFO Wadi Hawf 68.70 294 P **P 14 56 07.6 +0.2**
SNR=5.8
BOD Bodaibo 68.79 358⇑ *iP* **P 14 56 06.5 -1.5**
BOD *e* 15 05 04.9
BOD pmax pmax
comp=Z,86nm,1.1s,mb5.6
ABTO Aybut 68.93 294 P **P 14 56 09.3 +0.4**
SNR=19
ASHO Ashiyiah 69.22 302 P **P 14 56 10.8 +0.1**
SNR=16
AFI Afiamalu 69.44 101 PFAKE 14 56 30.0 +18
AFI LR LR
comp=Z,2µm,19.0s,MS5.3
KRAR Krasnoyarsk 69.88 346 *d iP* **P 14 56 13.3 -1.5**
KRAR pmax pmax
comp=Z,349nm,1.7s,mb6.0
KURK Kurchatov 70.06 335 P **P 14 56 15.9 0.0**
comp=Z,1µm,0.6s
KURK Kurchatov 70.06 335 P **P 14 56 15.8 -0.1**
SNR=115
KURK Kurchatov 70.06 335 *d iP* **P 14 56 14.6 -1.3**
KURK pmax pmax
comp=Z,260nm,1.8s,mb5.9
KURK Kurchatov 70.06 335 *eP* **P 14 56 15.6 -0.3**
comp=Z,193nm,0.8s,mb6.1
KURK LR LR
comp=Z,3µm,22.0s,MS5.4
VNDA Vanda 70.18 171 P **P 14 56 16.2 -0.4**
comp=Z,42nm,1.0s,mb5.3,baz=309,slow=6.0,SNR=78
VNDA PKPPKP 15 24 16.8
comp=Z,1.4nm,1.0s,baz=1.9,slow=1.3,SNR=4.5
VNDA LR LR 15 25 52.9
comp=Z,5µm,19.2s,MS5.8,baz=327,slow=35
VNDA Vanda 70.18 171 *eP* **P 14 56 16.0 -0.6**
comp=Z,157nm,1.4s,mb5.8
VNDA LR LR
comp=Z,5µm,19.0s,MS5.8
ZAL Zalesovo 70.36 341 P **P 14 56 17.2 -0.5**
comp=Z,73nm,0.6s,mb5.8,baz=335,slow=3.9,SNR=290
ZAL PKPPKP 15 24 16.9
comp=Z,0.9nm,0.3s,baz=158,slow=12,SNR=6.2
SKR Severo-Kuril's 70.42 25 *eP* **P 14 56 14.0 -4.1**
SKR *e* pP 14 56 19.3 -4.3
SKR *e* 14 56 34.0
SKR *e* 14 59 05.0
SKR *ePPP* 15 00 34.0
SKR *eS* S 15 05 23.0 -7.1
SKR *e* 15 06 17.0
SKR *eSSS* 15 13 03.0
SKR pmax pmax
comp=N,60nm,0.5s
SKR pmax pmax
comp=E,60nm,0.5s
SKR pmax pmax
comp=Z,80nm,0.5s,mb5.9
SKR pmax pmax
comp=Z,3µm,8.0s
SKR smax
comp=N,3µm,10.0s
SKR smax
comp=E,4µm,12.0s
SKR MLR MLR
comp=E,2µm,18.0s
SKR MLR MLR
comp=Z,2µm,18.0s,MS5.5
SBA Scott Base 71.20 170 *eP* **P 14 56 23.3 +0.5**
SBA pmax pmax
comp=Z,341nm,1.9s,mb6.0
SBA MLR MLR
comp=Z,4µm,19.0s,MS5.7
SBA Scott Base 71.20 170 *eP* **P 14 56 23.3 +0.5**
comp=Z,340nm,1.9s,mb6.0
SBA LR LR
comp=Z,4µm,19.0s,MS5.7
NVS Novosibirsk 71.62 340⇓ *iP* **P 14 56 23.0 -2.4**
NVS *i* S S 15 05 33.7 -10
NVS pmax pmax
comp=Z,330nm,1.8s,mb6.0
NVS pmax pmax
comp=N,245nm,1.9s
NVS pmax pmax
comp=E,228nm,1.9s
NVS smax
comp=N,148nm,2.5s
NVS smax
comp=E,270nm,2.4s
PET Petropavlovsk 73.22 25⇓ *iP* **P 14 56 35.3 +0.4**
PET *e* 14 56 50.3
PET *i* S S 15 06 01.6 -0.7
PET *e**SS 15 06 38.2
PET pmax pmax
comp=Z,123nm,1.8s,mb5.5
PET pmax pmax
comp=Z,2µm,6.2s
PET pmax pmax
comp=Z,1µm,7.9s
PET pmax pmax
comp=Z,146nm,1.8s,mb5.6
PET pmax pmax
comp=Z,500nm,10.7s
PET pmax pmax
comp=Z,500nm,14.3s
PET smax
comp=N,1µm,12.2s
PET smax
comp=E,3µm,11.9s
PET smax
comp=N,2µm,12.6s
PET smax
comp=E,2µm,13.2s
PET MLR MLR
comp=Z,800nm,22.0s,MS5.0
PET MLR MLR
comp=Z,600nm,20.0s
PET Petropavlovsk 73.22 25 *eP* **P 14 56 35.2 +0.3**
comp=Z,203nm,1.4s,mb5.9
PET LR LR
comp=Z,750nm,21.0s,MS5.0
ABKT Ailbek 73.49 315 P **P 14 56 37.4 +0.9**
comp=Z,871nm,0.6s,mb6.9,SNR=49
VAN Vannovskaya 73.50 315⇓ *iP* **P 14 56 37.6 +1.0**
VAN *eS* S 15 06 04.0 -1.5
YAK Yakutsk 73.66 6 *d iP* **P 14 56 36.3 -1.2**
YAK pmax pmax
comp=Z,324nm,1.7s,mb6.0
YAK Yakutsk 73.66 6 *eP* **P 14 56 35.9 -1.6**
comp=Z,280nm,1.3s,mb6.0
YAK LR LR
comp=Z,857nm,19.0s,MS5.0
MIDW Midway 74.61 57 PFAKE 14 57 00.0 +17
MIDW LR LR
comp=Z,915nm,19.0s,MS5.1
SYO Syowa Base 75.09 201⇑ *iP* **P 14 56 45.2 -0.6**
SYO Syowa Base 75.09 201⇑ *ipP* **P 14 56 47.4 +1.6**
SYO Syowa Base 75.09 201⇑ *esP* sP 14 56 53.1 -0.3
BVAR Borovoye Array 75.26 333 P **P 14 56 46.3 -0.5**
comp=Z,58nm,0.7s,mb5.6,baz=140,slow=6.9,SNR=205
BRVK Borovoye 75.33 333 P **P 14 56 46.8 -0.4**
comp=Z,600nm,1.0s,mb6.5,SNR=33
BRVK Borovoye 75.33 333 P **P 14 56 47.0 -0.2**
SNR=74
BRVK Borovoye 75.33 333 *eP* **P 14 56 46.6 -0.6**
BRVK pmax pmax
comp=Z,356nm,1.6s,mb6.0
BRVK MLR MLR
comp=Z,1µm,22.0s,MS5.2
BRVK Borovoye 75.33 333 *eP* **P 14 56 46.6 -0.6**
comp=Z,356nm,1.6s,mb6.0
BRVK LR LR
comp=Z,1µm,22.0s,MS5.2
MA2 Magadan 75.59 17 *deP* **P 14 56 48.5 -0.2**
MA2 *e* 14 56 59.1
MA2 *eS* S 15 06 26.0 -2.8
MA2 *ePS* 15 07 00.5
MA2 *eSS* SS 15 11 20.0 +0.1
MA2 pmax pmax
comp=Z,40nm,0.9s,mb5.3
MA2 MLR MLR
comp=Z,300nm,17.0s,MS4.7
MA2 Magadan 75.59 17 *eP* **P 14 56 49.0 +0.4**
comp=Z,336nm,1.6s,mb6.0
MA2 LR LR
comp=Z,942nm,20.0s,MS5.1
CHKZ Chkalovo 75.61 334 *eP* **P 14 56 48.2 -0.6**
CHKZ pmax pmax
comp=Z,543nm,1.5s,mb6.3
CHKZ Chkalovo 75.61 334 *eP* **P 14 56 48.1 -0.6**
comp=Z,543nm,1.5s,mb6.3
ZRNK Zerenda 75.83 332 P **P 14 56 49.7 -0.4**
ZRNK pmax pmax
comp=Z,140nm,0.8s,mb5.9
ZRNK Zerenda 75.83 332 *eP* **P 14 56 49.5 -0.6**
comp=Z,139nm,0.8s,mb5.9
ATD Arta Tunnel 76.95 285 LR LR 15 26 54.1
comp=Z,789nm,20.6s,MS5.0,baz=255,slow=33
KBD Kabd 77.81 303 *eP* **P 14 57 01.0 -0.3**
KBD AMb AMB 14 57 04.5
comp=Z,671nm,1.3s,mb6.4
RDF Al-Radifah 77.84 303 *eP* **P 14 57 01.2 -0.2**
RDF AMb AMB 14 57 02.6
comp=Z,229nm,0.7s,mb6.2
UMR Umm Al-Rimmam 77.92 304 *eP* **P 14 57 01.4 -0.4**
UMR AMb AMB 14 57 04.3
comp=Z,195nm,0.9s,mb6.1
AB31 Akbulak array 78.17 326⇑ *eP* **P 14 57 03.2 0.0**
NAY Al-Naaiem 78.21 303 *eP* **P 14 57 02.9 -0.5**
NAY AMb AMB 14 57 04.5
comp=Z,102nm,0.7s,mb5.9
MIB Mutribah 78.32 304 *eP* **P 14 57 03.9 -0.2**
MIB AMb AMB 14 57 07.1
comp=Z,232nm,1.0s,mb6.1
QSPA South Pole Qui 78.83 180⇓ *iP* **P 14 57 06.5 -0.4**
comp=Z,164nm,1.2s,mb5.8
QSPA LR LR
comp=Z,8µm,20.0s,MS6.0
KMBO Kilima Mbogo 79.63 271 P **P 14 57 13.2 +2.0**
comp=Z,38nm,0.7s,mb5.4,baz=71,slow=6.4,SNR=117
KMBO LR LR 15 26 36.5
comp=Z,2µm,21.9s,MS5.5,baz=353,slow=31
KMBO Kilima Mbogo 79.63 271 P **P 14 57 13.6 +2.4**
SNR=48
KMBO Kilima Mbogo 79.63 271 *eP* **P 14 57 13.3 +2.0**
KMBO *e* 14 57 28.1
KMBO pmax pmax
comp=Z,171nm,1.1s
KMBO MLR MLR
comp=Z,3µm,22.0s
KMBO Kilima Mbogo 79.63 271 *eP* **P 14 57 13.3 +2.0**
comp=Z,171nm,1.1s,mb5.9
KMBO *e* 14 57 28.1
KMBO LR LR
comp=Z,3µm,22.0s,MS5.5
AKTK Aktyubinsk 79.85 326 P **P 14 57 12.4 -0.1**
AKTO Aktyubinsk 79.85 326 P **P 14 57 12.4 -0.1**
comp=Z,83nm,0.7s,mb5.8,baz=119,slow=5.6,SNR=243
DESE Dese 79.90 283 *eP* **P 14 57 16.2 +3.5**
SMY Shemya 80.19 31 P **P 14 57 14.5 +0.3**
SMY pmax pmax
comp=Z,130nm,0.9s,mb5.9
SMY Shemya 80.19 31 *eP* **P 14 57 15.1 +0.9**
comp=Z,303nm,1.7s,mb6.0

SMY LR LR
comp=Z,600nm,23.0s,MS4.9
ARU Arti 82.76 332 P **P** **14 57 27.5 -0.4**
comp=Z,286nm,0.9s,mb6.3,SNR=24
ARU Arti 82.76 332 *eP* **P** **14 57 27.0 -0.9**
ARU *e* 15 00 37.2
ARU *eS* S 15 07 40.4 -4.8
ARU *eSS* SS 15 13 11.3 +3.7
ARU MLR MLR
comp=Z,2µm,22.0s,MS5.4
ARU MLR MLR
comp=N,700nm,23.0s,MS5.3
ARU MLR MLR
comp=E,1µm,21.0s,MS5.3
ARU Arti 82.76 332 *eP* **P** **14 57 26.9 -1.0**
comp=E,343nm,1.7s,mb6.1
ARU LR LR
comp=Z,2µm,22.0s,MS5.4
MAK Makhachkala 82.95 316*d iP* **P** **14 57 30.0 +1.1**
MAK *i* pP 14 57 36.1 +1.6
MAK *e* 15 00 41.8
MAK *i* PPP 15 02 35.4
MAK *i* S S 15 07 44.1 -3.0
MAK *i* SS SS 15 13 06.5 -3.9
MAK pmax pmax
comp=Z,297nm,1.8s,mb6.0
MAK pmax pmax
comp=Z,1µm,2.9s,mb6.5
MAK smax
comp=E,3µm,6.6s
MAK smax
comp=N,1µm,3.8s
MAK Makhachkala 82.95 316 *eP* **P** **14 57 29.2 +0.3**
TIXI Tiksi 83.03 4 *i P* **P** **14 57 27.4 -1.9**
TIXI MLR MLR
comp=Z,1µm,21.0s,MS5.3
TIXI Tiksi 83.03 4 *i* Pr **P** **14 57 27.4 -1.9**
TIXI LR LR
comp=Z,1µm,21.0s,MS5.3
HAKT HAKKARI 83.77 310 *i P* **P** **14 57 33.8 +0.7**
GNI Garni 83.88 313 P **P** **14 57 35.1 +1.5**
comp=Z,10nm,0.5s,mb5.2,baz=48,slow=5.3,SNR=16
GNI Garni 83.88 313 ⇑P **P** **14 57 34.9 +1.3**
SNR=24
GNI Garni 83.88 313 P **P** **14 57 35.1 +1.5**
GNI pmax pmax
comp=Z,10.0nm,0.5s
GNI Garni 83.88 313 *eP* **P** **14 57 34.9 +1.2**
comp=Z,74nm,0.9s,mb5.8
GNI LR LR
comp=Z,1µm,21.0s,MS5.2
DGRG David-gareji 83.88 314 P **P** **14 57 35.6 +1.9**
MTA Mtatsminda 84.37 314 P **P** **14 57 35.6 -0.6**
TBLG Delisi 84.42 314 P **P** **14 57 37.8 +1.4**
NVL N'lazarevskaya 84.43 199*d iP* **P** **14 57 36.5 +0.1**
NVL *i* S S 15 07 58.5 -3.4
NVL *eSSS* 15 16 58.7
NVL pmax pmax
comp=Z,218nm,1.8s,mb6.0
NVL MLR MLR
comp=Z,4µm,16.6s,MS5.8
MAIT Maitri 84.45 199 *eP* **P** **14 57 39.2 +2.6**
DIGO Kars 84.95 313 *i P* **P** **14 57 40.4 +1.3**
ZEI Tsey 85.36 315 *eP* **P** **14 57 42.4 +1.3**
ZEI *e**PP pP 14 57 47.6 +0.8
ZEI pmax pmax
comp=Z,95nm,0.7s,mb6.0
BEST Besiri 85.71 310 *i P* **P** **14 57 43.2 +0.3**
LSZ Lusaka 85.89 255 P **P** **14 57 45.0 +1.2**
LSZ Lusaka 85.89 255 P **P** **14 57 45.3 +1.5**
SNR=26
LSZ Lusaka 85.89 255 *eP* **P** **14 57 44.7 +0.9**
LSZ pmax pmax
comp=Z,60nm,0.8s,mb5.9
LSZ MLR MLR
comp=Z,3µm,22.0s,MS5.7
LSZ Lusaka 85.89 255 *eP* **P** **14 57 44.7 +0.9**
comp=Z,60nm,0.8s,mb5.9
LSZ LR LR
comp=Z,3µm,22.0s,MS5.7
MARD Mardin 85.91 309 *i P* **P** **14 57 44.6 +0.8**
BNGL BINGOL 86.12 311 *i P* **P** **14 57 46.9 +2.0**
MBAR Mbarara 86.13 270⇓*iP* **P** **14 57 45.7 +0.8**
MBAR *e**PP pP 14 57 52.5 +1.9
BOSA Boshof 86.16 242 P **P** **14 57 45.6 +0.5**
comp=Z,33nm,0.7s,mb5.7,baz=99,slow=5.0,SNR=30
BOSA LR LR 15 33 24.4
comp=Z,2µm,18.0s,MS5.6,baz=102,slow=34
BOSA Boshof 86.16 242 *eP* **P** **14 57 45.5 +0.4**
comp=Z,665nm,2.0s,mb6.5
BOSA *e* 14 58 02.2
BOSA LR LR
comp=Z,4µm,19.0s,MS5.8
ERZM Erzurum 86.25 312 *i P* **P** **14 57 47.3 +1.8**
BILL Bilibino 86.45 17 *eP* **P** **14 57 46.0 -0.5**
BILL pmax pmax
comp=Z,28nm,1.0s,mb5.5
BILL Bilibino 86.45 17 *eP* **P** **14 57 45.0 -1.5**
comp=Z,28nm,1.0s,mb5.5
BILL LR LR
comp=Z,686nm,20.0s,MS5.0
LBTB Lobatse 86.52 245 *eP* **P** **14 57 47.8 +0.9**
LBTB pmax pmax
comp=Z,310nm,1.5s,mb6.3
LBTB Lobatse 86.52 245 *eP* **P** **14 57 47.7 +0.8**
comp=Z,307nm,1.5s,mb6.3
LBTB LR LR
comp=Z,5µm,20.0s,MS5.9
KIV Kislovodsk 86.59 316 P **P** **14 57 47.2 0.0**
comp=Z,141nm,1.3s,mb6.0,SNR=23
KIV Kislovodsk 86.59 316 P **P** **14 57 48.2 +1.0**
SNR=28
KIV Kislovodsk 86.59 316 *eP* **P** **14 57 47.8 +0.6**
KIV pmax pmax
comp=Z,64nm,0.9s,mb5.8
KIV MLR MLR
comp=Z,733nm,19.0s,MS5.1
KIV Kislovodsk 86.59 316 *eP* **P** **14 57 47.8 +0.6**
comp=Z,64nm,0.9s,mb5.8
KIV LR LR
comp=Z,733nm,19.0s,MS5.1
GOF Gofitskoye 86.71 317 *eP* **P** **14 57 48.1 +0.3**
GOF *i* 14 58 02.0
GOF *i* S SKSac 15 08 10.8 -3.1
GOF pmax pmax
comp=Z,110nm,0.8s,mb6.1
GOF smax
comp=E,40nm,0.7s
ASF Jabal al Asfar 87.58 303 P **P** **14 57 53.6 +1.6**
comp=E,55nm,0.8s,mb5.9,baz=355,slow=1.9,SNR=84
ELZG Elazig 87.61 310 *i P* **P** **14 57 53.7 +1.5**
ATAB Bozova 87.85 309 *i P* **P** **14 57 54.7 +1.4**
MALT Malatya 87.98 310⇑*iP* **P** **14 57 55.9 +2.0**
MALT Malatya 87.98 310 *eP* **P** **14 57 55.2 +1.2**
comp=E,155nm,1.3s,mb6.1
GZT Gaziantep 88.38 308 *i P* **P** **14 57 56.5 +0.7**
SOC Sochi 88.52 315*d iP* **P** **14 57 56.2 -0.3**
SOC *i* 15 01 22.7
SOC *i* PPP 15 03 17.9
SOC *eS* SKSac 15 08 23.3 -1.5
SOC *e* 15 08 35.8
SOC *eSS* SS 15 14 31.9 -0.3
SOC pmax pmax
comp=Z,61nm,0.7s,mb6.0
SOC Sochi 88.52 315 *i P* **P** **14 57 56.4 -0.1**
EIL Elat 88.59 300 *eP* **P** **14 57 57.9 +1.1**
comp=Z,5µm,1.5s
GRSN GIRESUNGRSN 88.81 312 *i P* **P** **14 57 56.4 -1.4**
MMAI Mount Meron Ar 89.00 304 P **P** **14 58 00.6 +1.8**
comp=Z,20nm,0.8s,mb5.5,baz=90,slow=5.8,SNR=35
BHL Bhannes 89.02 305 *eP* **P** **14 58 00.3 +1.5**
SUR Sutherland 89.17 237 PFAKE 14 58 10.0 +10
SUR LR LR
comp=Z,4µm,20.0s,MS5.9
COBT Iskenderun 89.18 307 *i P* **P** **14 58 00.6 +1.0**
KIP Kipapa 89.51 68 PFAKE 14 58 10.0 +8.8
KIP LR LR
comp=Z,1µm,19.0s,MS5.4
VRHR Novokhopersk 89.56 322 *eP* **P** **14 58 00.7 -0.7**
VRHR *e* 15 08 26.0
VRHR *eS* S 15 08 46.7 -4.8
VRHR pmax pmax
comp=Z,150nm,0.7s,mb6.4
VRHR pmax pmax
comp=N,30nm,1.0s
VRHR pmax pmax
comp=E,30nm,0.5s
VRHR smax
comp=N,460nm,6.8s
VRHR smax
comp=Z,1µm,10.5s
VRHR smax
comp=E,2µm,10.0s
PECR Pechory 89.91 328⇑*iP* **P** **14 58 02.0 -1.0**
PECR *i* 14 58 16.6
PECR *e* 15 01 40.6
PECR *e* 15 08 29.0
PECR *eS* S 15 08 49.0 -5.8
PECR *e* 15 10 03.0
PECR pmax pmax
comp=Z,1µm,1.8s
PECR pmax pmax
comp=Z,600nm,8.0s
PECR smax
comp=N,2µm,8.4s
PECR smax
comp=E,4µm,9.6s
PAE Paea 89.96 108 *eP* **P** **14 58 04.0 +0.8**
comp=E,196nm,1.4s,mb6.3
PAE Paea 89.96 108 *eP* **P** **14 58 04.0 +0.8**
PAE pmax pmax
comp=Z,196nm,1.4s,mb6.2
PPT Papeete 89.98 108 *ePP* PP 15 01 25.5 -11
comp=Z,206nm,27.8s
PPT Papeete 89.98 108 *eS* S 15 08 55.4 0.0
comp=Z,918nm,25.0s
PPT *e*LR LR 15 26 54.1
comp=Z,4µm,25.2s
PPT Papeete 89.98 108 LR LR 15 36 04.9
comp=Z,1µm,20.1s,MS5.3,baz=255,slow=34
TVO Taravao 90.24 108 *eP* **P** **14 58 05.6 +1.1**
comp=Z,82nm,0.8s,mb6.1
TVO Taravao 90.24 108 *eP* **P** **14 58 05.6 +1.1**
TVO pmax pmax
comp=Z,82nm,0.8s,mb6.1
VNA1 Neumayer--Stat 90.39 196 *eP* **P** **14 58 06.3 +1.1**
VNA1 *e* 14 58 07.6
VNA1 *e* pP 14 58 09.7 -1.2
VNA1 *e* pP 14 58 10.8 -0.1
ANN Anapa 90.44 316 *eP* **P** **14 58 04.4 -1.1**
ANN *i* *PP pP 14 58 11.0 -0.2
ANN *e* 15 01 37.2
ANN *e* 15 08 34.0
ANN *eSS* SS 15 14 59.5 -0.5
ANN pmax pmax
comp=Z,53nm,1.0s,mb5.8
ANN Anapa 90.44 316 *eP* **P** **14 58 04.6 -0.9**
AVNT Avonos 90.81 309 *i P* **P** **14 58 07.8 +0.6**
MEST Erdemli 90.85 307 *i P* **P** **14 58 07.0 -0.3**
VRSR Storozhevoye 91.06 322 *eP* **P** **14 58 07.4 -0.9**
VRSR *e**PP pP 14 58 13.8 -0.2
VRSR *eS* SKSac 15 08 35.6 -4.0
VRSR pmax pmax
comp=Z,30nm,0.7s,mb5.7
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,30nm,0.9s
VRSR smax
comp=N,200nm,3.5s
VRSR smax
comp=Z,90nm,4.3s
VRSR smax
comp=E,330nm,4.0s
VRSR MLR MLR
comp=Z,860nm,22.0s,MS5.1
VRSR MLR MLR
comp=N,210nm,20.0s,MS5.0
VRSR MLR MLR
comp=E,590nm,21.0s,MS5.0
CSS Prodhromos 91.13 305 *eP* **P** **14 58 08.6 -0.1**
comp=E,101nm,1.5s,mb5.9
UNV Unalaska Valle 91.16 35 PFAKE 14 58 20.0 +11
UNV LR LR
comp=Z,2µm,22.0s,MS5.6
VOR Voronezh 91.20 323 *eP* **P** **14 58 08.5 -0.5**
VOR pmax pmax
comp=Z,140nm,2.0s,mb6.0
CTKT Corum 91.29 311 *i P* **P** **14 58 09.8 +0.4**
CDAG Cicekdag 91.37 310 *i P* **P** **14 58 09.0 -0.8**
BOYT Boyabat 91.39 312 *i P* **P** **14 58 10.3 +0.4**
POHA Pohakuloa 91.45 70 PFAKE 14 58 20.0 +10
POHA LR LR
comp=Z,1µm,22.0s,MS5.3
ERMK Ermenek 91.83 307 *i P* **P** **14 58 12.3 +0.4**
BR131 Keskin Array S 91.94 310 *eP* **P** **14 58 12.4 0.0**
comp=Z,31nm,0.8s,mb5.7
BR131 LR LR
comp=Z,1µm,20.0s,MS5.3
BRTR Keskin Array B 91.94 310 P **P** **14 58 12.5 +0.1**
comp=Z,36nm,0.8s,mb5.8,baz=131,slow=5.8,SNR=124
BRTR PKKPbc PKKPbc 15 15 29.5 +0.1
comp=Z,0.9nm,0.7s,baz=221,slow=1.1,SNR=5.2
PMOR Pomariorio Ree 92.08 106 *eP* **P** **14 58 14.0 +0.9**
comp=Z,42nm,1.2s,mb5.7
ELDT Eldivan 92.27 311 *i P* **P** **14 58 13.9 -0.1**
ANTO Ankara 92.61 310 P **P** **14 58 16.1 +0.5**
SNR=13
ANTO Ankara 92.61 310 *eP* **P** **14 58 15.8 +0.3**
ANTO pmax pmax
comp=Z,47nm,1.2s,mb5.8
ANTO MLR MLR
comp=Z,789nm,20.0s,MS5.2
ANTO Ankara 92.61 310 *eP* **P** **14 58 15.8 +0.3**
comp=Z,47nm,1.2s,mb5.8
ANTO LR LR
comp=Z,789nm,20.0s,MS5.2
SIM Simferopol' 92.76 315*deP* **P** **14 58 15.8 -0.4**
SIM *eS* SKSac 15 08 50.0 +0.8
SIM pmax pmax
comp=Z,300nm,12.0s
MOS Moscow 93.19 326 *eP* **P** **14 58 11.4 -6.8**
MOS *e* 14 58 29.3
MOS *i* 15 08 49.5
MOS *i* S S 15 09 18.2 -6.2
MOS *i* PS PS 15 10 30.3 -8.5
MOS pmax pmax
comp=Z,400nm,2.5s,mb6.4
MOS pmax pmax
comp=Z,61nm,0.7s,mb6.1
MOS smax
comp=N,1µm,4.0s
SGKT Sivrigoynuk 93.31 311 *i P* **P** **14 58 18.7 0.0**
OBN Obninsk 93.61 325 P **P** **14 58 19.7 -0.5**
comp=N,252nm,0.6s,mb6.8,SNR=5.3
OBN Obninsk 93.61 325*d iP* **P** **14 58 19.3 -0.9**
OBN *e* 15 02 06.5
OBN pmax pmax
comp=Z,73nm,1.7s,mb5.8
OBN Obninsk 93.61 325 *eP* **P** **14 58 19.4 -0.8**
comp=Z,31nm,0.8s,mb5.8
OBN LR LR
comp=Z,2µm,21.0s,MS5.4
KLMR Klimovskoe 93.61 331*d iP* **P** **14 58 18.7 -1.5**
KLMR *e* 15 02 03.0
KLMR *eS* SKSac 15 08 50.8 -3.2
KLMR *ePS* PS 15 10 35.6 -7.9
KLMR pmax pmax
comp=Z,190nm,2.0s,mb6.2
KLMR pmax pmax
comp=Z,130nm,5.3s
ISP Isparta 93.95 308 P **P** **14 58 22.4 +0.7**
ISP *e* 14 58 38.0
ISP pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
ISP Isparta 93.95 308 *eP* **P** **14 58 20.2 -1.5**
comp=Z,10.0nm,0.8s,mb5.3
ESKT Eskisehir 94.01 309 *eP* **P** **14 58 13.4 -8.6**
TNA Tin City 94.05 24 PFAKE 14 58 30.0 +7.8
TNA LR LR
comp=Z,301nm,20.0s,MS4.8
SDPT Sand Point 94.94 35 *eP* **P** **14 58 25.1 -1.1**
comp=Z,91nm,0.8s,mb6.3
SDPT LR LR
comp=Z,900nm,23.0s,MS5.2
GDZ Gediz 94.97 309 *i P* **P** **14 58 25.9 -0.4**
TSUM Tsumeb 95.01 249 *eP* **P** **14 58 27.9 +1.3**
comp=Z,34nm,1.3s,mb5.6
TSUM LR LR
comp=Z,6µm,19.0s,MS6.1
AKHS Akhisar 96.22 308 *i P* **P** **14 58 32.0 -0.1**
CHGN Chignik 96.27 34 *eP* **P** **14 58 31.9 -0.4**
TIRR Tirgusor 96.66 314⇑*iP* **P** **14 58 34.0 -0.1**
TIRR Tirgusor 96.66 314⇑*iP* **P** **14 58 34.0 -0.1**
CFR Carcaliu 96.97 315⇑*iP* **P** **14 58 34.8 -0.7**
AKASG Malin Array Be 97.09 320 P **P** **14 58 34.7 -1.3**
comp=Z,6.9nm,0.6s,mb5.3,baz=82,slow=4.5,SNR=4.5
AKASG PP PP 15 02 24.5 -7.4
comp=Z,5.1nm,0.8s,baz=83,slow=6.2,SNR=7.4
AKASG LR LR 15 54 18.7
comp=Z,725nm,18.9s,MS5.2,baz=95,slow=43
AKASG Malin Array Be 97.09 320 P **P** **14 58 34.7 -1.3**
AKASG PP PP 15 02 24.5 -7.4
AKASG LR LR 15 54 18.7
AKBB Malin Array Si 97.09 320 *eP* **P** **14 58 34.6 -1.4**
LVZ Lovozero 97.37 338 *eP* **P** **14 58 34.8 -2.5**
LVZ pmax pmax
comp=N,4.0nm,0.9s
LVZ pmax pmax
comp=Z,12nm,0.9s,mb5.3
LVZ pmax pmax
comp=E,1.0nm,0.6s
APA Apatity 97.77 337⇓*eP* **P** **14 58 39.0 -0.1**
APA *i* 15 02 41.0
APA *i* 15 09 12.0
APA *i* S S 15 09 56.0 -8.2
APA *i* PS PS 15 11 26.0 -3.1
APA *i* SS SS 15 16 54.0 +9.3
APA pmax pmax
comp=Z,11nm,0.8s,mb5.4
PUL Pulkovo 97.85 329 P **P** **14 58 31.7 -7.8**
PUL 15 02 35.6
PUL MLR MLR
comp=Z,1µm,22.0s,MS5.4
JOF Joensuu 97.86 333 *ep* **P** **14 58 37.7 -1.8**
comp=Z,26nm,0.6s,mb5.9
SVW2 Sparrevohn 98.49 29 *eP* **P** **14 58 42.2 -0.1**
MLR Muntele Rosu 98.54 315 P **P** **14 58 41.6 -0.9**
comp=Z,6.3nm,0.8s,mb5.2,baz=280,slow=2.0,SNR=18
MLR PP PP 15 02 40.2 -2.9
comp=Z,17nm,1.1s,baz=222,slow=3.2,SNR=5.2
MLR Muntele Rosu 98.54 315⇑*iP* **P** **14 58 42.7 +0.2**
MLR Muntele Rosu 98.54 315 P **P** **14 58 41.6 -0.9**
MLR 15 02 40.2
MLR pmax pmax
comp=Z,6.0nm,0.8s
MLR pmax pmax
comp=Z,17nm,1.1s
MLR Muntele Rosu 98.54 315⇑P **P** **14 58 42.7 +0.2**
MLR Muntele Rosu 98.54 315⇑P **P** **14 58 42.7 +0.1**
BURAR Bucovina Array 99.29 317⇑*iP* **P** **14 58 46.4 +0.5**
BURAR Bucovina Array 99.29 317⇑P **P** **14 58 46.4 +0.5**
VSU Vasula 99.52 328*d iP* **P** **14 58 46.2 -0.7**
VSU Vasula 99.52 328 *i* Pr **P** **14 58 46.3 -0.6**
KDAK Kodiak Island 99.63 33 PFAKE 14 59 00.0 +13
KDAK LR LR
comp=Z,203nm,21.0s,MS4.6
IMA2 Indian Mountai 99.89 24 *eP* Pdif 14 58 49.3 +0.7
KAF Kangasniemi 100.07 331 *ep* Pdif 14 58 47.2 -2.2
baz=85,slow=4.1
KAF Kangasniemi 100.07 331 *ep* PP 15 03 02.2 +7.5
comp=Z,2.1nm,0.6s
FIA1 FINESS Array S 100.12 331 *eP* Pdif 14 58 48.3 -1.3
FINES FINESS Array B 100.12 331 P Pdif 14 58 48.8 -0.9
comp=Z,16nm,0.7s,baz=103,slow=6.8,SNR=68
FINES PKiKP PKiKP 15 03 16.9 -0.3
comp=Z,3.4nm,0.8s,baz=88,slow=3.7,SNR=4.0
KEV Kevo 100.37 339 *eP* Pdif 14 58 46.5 -4.2
KEV pmax pmax
comp=Z,11nm,0.7s
KEV MLR MLR
comp=Z,1µm,20.0s,MS5.4
KEV Kevo 100.37 339 *eP* Pdif 14 58 46.5 -4.2
comp=Z,11nm,0.7s
KEV LR LR
comp=Z,1µm,20.0s,MS5.4
TAOE Nuku Hiva Isla 100.82 101 *ePP* PP 15 03 02.4 +2.0
comp=Z,593nm,25.9s
TAOE Nuku Hiva Isla 100.82 101 *ePS* PS 15 11 58.3 -3.6
comp=Z,1µm,27.5s
TAOE Nuku Hiva Isla 100.82 101 *eSS* SS 15 17 32.3 +4.9
comp=Z,1µm,25.9s
TAOE *e*LR LR 15 31 52.7
comp=Z,3µm,20.9s
ARCES ARCESS Array B 100.88 339 P Pdif 14 58 51.8 -1.2
comp=Z,14nm,0.7s,baz=93,slow=6.1,SNR=48
ARCES PKiKP PKiKP 15 03 18.5 0.0
comp=Z,3.5nm,0.8s,baz=152,slow=4.1,SNR=3.4
KWP Kalwaria 101.13 319 *eP* Pdif 14 58 53.8 -0.3
KOLS Kolonicke sedl 101.36 318 *eP* Pdif 14 58 55.0 -0.1
KOLS *ePP* PP 15 03 00.2 -4.3
KOLS *eSP* SP 15 12 08.4 +2.9
KOLS *eSS* SS 15 17 26.5 -8.4
KOLS Kolonicke sedl 101.36 318 *eP* Pdif 14 58 55.0 -0.1
KOLS *e* 15 03 00.2
KOLS *e* 15 12 08.4
BZS Buzias 101.58 314⇑*iP* Pdif 14 58 55.7 -0.4
BZS Buzias 101.58 314⇑P Pdif 14 58 55.7 -0.4
PMR Palmer 101.63 29 PFAKE 14 59 10.0 +14
PMR LR LR
comp=Z,578nm,22.0s,MS5.0
MCK McKinley 101.78 27 P Pdif 14 58 56.4 -0.6
MCK pmax pmax
comp=Z,33nm,1.7s
MCK McKinley 101.78 27 *ePdif* Pdif 14 58 55.1 -1.9
comp=Z,33nm,1.8s
MCK LR LR
comp=Z,334nm,21.0s,MS4.8
RKT Rikitea 101.87 117 *ePS* PS 15 12 13.0 -0.1
comp=Z,663nm,30.0s
RKT Rikitea 101.87 117 *eSS* SS 15 17 43.6 +1.6
comp=Z,657nm,32.0s
RKT *e*LR LR 15 32 22.4
comp=Z,3µm,22.8s
CRVS Cervenica-Dubn 101.90 318 *eP* Pdif 14 58 56.8 -0.7
CRVS *ePP* PP 15 03 10.0 +1.5
CRVS *eSP* SP 15 12 08.2 -3.0
CRVS *e* 15 15 26.2
CRVS *eSS* SS 15 17 27.0 -15
CRVS Cervenica-Dubn 101.90 318 *eP* Pdif 14 58 56.8 -0.7
CRVS *e* 15 03 10.0
CRVS *e* 15 12 08.2
CRVS Cervenica-Dubn 101.90 318 *eP* Pdif 14 58 56.8 -0.7
CRVS *ePP* PP 15 03 10.0 +1.5
CRVS *e* 15 12 08.2
CRVS *e* 15 15 26.3
CRVS *eSS* SS 15 17 27.0 -15
COLA College 102.27 26 PFAKE 14 59 10.0 +11
COLA LR LR
comp=Z,480nm,20.0s,MS5.0
PSZ Piszkesteto 102.89 317⇑*ePP* PP 15 03 14.3 -1.7
SPB4 Spitsbergen Ar 103.03 348 *ePdif* Pdif 14 59 01.4 -1.2
OJC Ojcow 103.04 319 *eP* Pdif 14 59 02.3 -0.3
OJC *e* 15 03 15.8
OJC *e* 15 09 41.6
OJC MLR MLR
comp=Z,4µm,24.1s,MS5.8
TRO Tromso 103.19 339 *ePP* PP 15 03 15.3 -2.9
TRO *i* 15 12 13.2
TRO AMS AMS 15 53 21.4
comp=Z,846nm,18.6s,MS5.3
DIV Divide 103.24 30 PFAKE 14 59 10.0 +6.5
DIV LR LR
comp=Z,1µm,20.0s,MS5.4
VYHS Vyhne 103.62 317 PDIF Pdif 14 59 04.7 -0.4
VYHS *e* 15 02 23.2
VYHS *ePP* PP 15 03 18.9 -2.5
VYHS *eSP* SP 15 12 21.4 -8.0
VYHS *e* 15 15 19.2
VYHS Vyhne 103.62 317 *eP* Pdif 14 59 04.7 -0.4
VYHS *e* 15 03 18.9
VYHS *e* 15 12 21.4
VYHS pmax pmax
comp=Z,6.0nm,1.5s
VYHS Vyhne 103.62 317 *eP* Pdif 14 59 04.7 -0.4
comp=Z,6.3nm,1.5s
VYHS *e* 15 02 23.2
VYHS *ePP* PP 15 03 18.9 -2.5
VYHS *e* 15 12 21.4
VYHS *e* 15 15 19.2
KBS Kingsbay 103.77 349 *e* Pdif 14 59 04.9 -0.9
KBS *ePP* PP 15 03 22.2 -0.3
KBS *i* 15 12 16.6
KBS AMS AMS 15 51 49.7

comp=Z,718nm,19.1s,MS5.2
KBS Kingsbay 103.77 349 PFAKE 14 59 20.0 +14
KBS LR LR

comp=Z,2μm,22.0s,MS5.5
OKC Ostrava-Krasne 104.09 319 *e*PDIF Pdif 14 59 07.0 -0.3
OKC *e*PP PP 15 03 22.3 -2.7
OKC *e*SKS 15 09 47.8
OKC *ex* x 15 12 27.5
OKC AMS AMS 15 48 10.0

comp=Z,900nm,23.1s
OKC Ostrava-Krasne 104.09 319 *e*Pdif Pdif 14 59 07.0 -0.3
OKC *e*PP PP 15 03 22.3 -2.7
OKC *e* 15 09 47.8
OKC *e* 15 12 27.5
PMSA Palmer Station 104.27 180 PFAKE 14 59 20.0 +12
PMSA LR LR

comp=Z,3μm,19.0s,MS5.9
ZST Bratislava 104.77 317 *e*PP PP 15 03 25.8 -4.2
ZST *e*SP SP 15 12 37.3 -4.1
DPC Dobruska-Polom 105.27 319 *e*PDIF Pdif 14 59 13.3 +0.8
DPC *e*PP PP 15 03 29.0 -4.7
DPC *e*SKS SKSac 15 09 50.6 -1.3
DPC *e*SP SP 15 12 42.6 -4.0
DPC AMS AMS 15 48 20.0

comp=Z,1μm,23.9s
KSP Ksiaz 105.28 320 *e*Pdif Pdif 14 59 13.0 +0.5
KSP *e*PKPdf PKiKP 15 03 26.0 -0.6
KSP *e*SKS SKSac 15 09 50.0 -1.9
KSP *e*Sdif Sdif 15 11 04.0 -3.0
KSP *e*SP SP 15 12 40.0 -6.7
KSP *e*SS SS 15 18 08.0 -21
KSP LR LR

comp=Z,2μm,31.8s,MS5.5
PTCN Pitcairn Islan 105.46 120 PFAKE 15 03 40.0 +13
PTCN LR LR

comp=Z,3μm,21.0s,MS5.9
TREC Trest 105.83 318 *e*PP PP 15 03 35.5 -2.3
TREC AMS AMS 15 57 50.0

comp=Z,900nm,21.0s
ARSA Arzberg 105.84 316⇑ *i*P PKiKP 15 03 23.8 -3.8

comp=Z,31nm,2.2s
ARSA Arzberg 105.84 316⇓ *i*PKiKP PKiKP 15 03 27.4 -0.1

comp=Z,31nm,2.2s
BSD Bornholm Skovb 105.95 324 *i* P Pdif 14 59 16.5 +1.0
BSD *i* 15 03 32.0
BSD *i* 15 06 01.6
BSD *e* 15 12 46.7
BSD

comp=Z,540nm,19.0s
BSD Bornholm Skovb 105.95 324 *i* P Pdif 14 59 16.5 +1.0
BSD *i* 15 03 32.0
BSD *i* 15 06 01.6
BSD *e* 15 12 46.7
DAWY Dawson 105.97 26 *e*Pdif Pdif 14 59 16.5 +0.9
BOJS Bojanci 106.04 314 *e*PP PP 15 03 36.3 -3.1
BOJS *e*SKSac SKSac 15 09 57.4 +2.1
BOJS *e* 15 12 54.7
PERS Pernice 106.12 315 *e*PP PP 15 03 35.0 -5.0
HFS Hagfors 106.20 330 Pdiff Pdif 14 59 16.7 +0.1
comp=Z,3.5nm,0.6s,baz=92,slow=5.0,SNR=13
HFS PP PP 15 03 36.8 -3.8

comp=Z,6.9nm,0.8s,baz=77,slow=6.4,SNR=4.5
PRU Pruhonice 106.42 319 *e*PP PP 15 03 40.7 -1.5
PRU *e*SKS SKSac 15 09 55.1 -1.9
PRU *e*SKKP 15 18 28.7
PRU AMS AMS 15 55 30.0

comp=Z,800nm,21.1s
LJU Ljubljana 106.54 315 *e*PP PP 15 03 41.2 -1.9
LJU *e*SKSac SKSac 15 09 58.1 +0.5
LJU *e*SP SP 15 13 00.1 +0.2
CEY Cerknica 106.62 314 *i* PP PP 15 03 40.7 -3.0
BRG Berggiesshubel 106.77 320 *e*Pdiff Pdif 14 59 20.2 +1.1
BRG *e*PP PP 15 03 39.6 -5.1
BRG Berggiesshubel 106.77 320 *e*P Pdif 14 59 20.4 +1.3
comp=Z,8.7nm,1.7s
BRG pP 14 59 36.0
BRG *e*sP 14 59 50.5

comp=Z,1.5nm,0.3s
BRG PP PP 15 03 22.0 -23
BRG SKS SKSac 15 10 04.0 +5.5
BRG S Sdif 15 11 17.0 -2.4
BRG *i* 15 12 57.0
BRG *e*PKKP PKKPbc 15 15 04.4 +17

comp=Z,13nm,1.6s
BRG

comp=N,861nm,25.6s
BRG

comp=E,445nm,27.9s
BRG

comp=Z,495μm,23.4s
BRG Berggiesshubel 106.77 320 *e*P Pdif 14 59 20.4 +1.3
BRG *i* 15 12 57.0
BRG pmax pmax

comp=Z,9.0nm,1.7s
BRG pmax pmax

comp=N,2.0nm,0.3s
BRG pmax pmax

comp=Z,13nm,1.6s
BRG MLR MLR

comp=N,861nm,25.6s,MS5.2
BRG MLR MLR

comp=E,445nm,27.9s,MS5.2
BRG MLR MLR

comp=Z,495μm,23.4s
BRG Berggiesshubel 106.77 320 *e*P Pdif 14 59 20.4 +1.3
comp=Z,8.7nm,1.7s
BRG pP 14 59 36.0
BRG *e*sP 14 59 50.5
BRG PP PP 15 03 22.0 -23
BRG SKS SKSac 15 10 04.0 +5.5
BRG S Sdif 15 11 17.0 -2.4
BRG *i* 15 12 57.0
BRG *e*PKKP PKKPbc 15 15 04.4 +17
BRG LR LR

comp=Z,495μm,23.4s
GEC2 GERESS Array S 107.02 318 *e*Pdiff Pdif 14 59 20.9 +0.6
GEC2 *e*PP PP 15 03 40.9 -5.7
GERES GERESS Array B 107.02 318 Pdiff Pdif 14 59 20.5 +0.2
comp=Z,0.7nm,0.7s,baz=169,slow=1.4,SNR=5.1
GERES PKiKP PKiKP 15 03 29.6 -0.1

comp=Z,2.5nm,0.7s,baz=86,slow=1.9,SNR=7.7
GERES PP PP 15 03 43.6 -3.0

comp=Z,3.6nm,0.8s,baz=98,slow=5.8,SNR=7.6
GERES PKKPbc PKKPbc 15 14 46.4 -0.4

comp=Z,0.8nm,0.7s,baz=273,slow=2.4,SNR=4.2
KHC Kasperske Hory 107.09 318 *e*PKP PKiKP 15 03 22.0 -7.9
KHC *ex* x 15 03 29.0
KHC *e*PP PP 15 03 43.8 -3.3
KHC *e*SKS SKSac 15 09 58.2 -1.7
KHC *e*SP SP 15 13 04.4 -1.0
KHC *e*PKKP PKKPbc 15 14 48.0 +1.4
KHC *ex* x 15 15 03.0
KHC *e*PKKS 15 18 37.9
KHC AMS AMS 15 49 50.0

comp=Z,1μm,23.6s
NB2 NORSAR Subarra107.30 331 P Pdif 14 59 21.4 -0.1
comp=Z,0.8nm,0.6s,baz=76,slow=4.8
NOA NORSAR Array B 107.30 331 Pdiff Pdif 14 59 21.7 +0.1
comp=Z,1.2nm,0.7s,baz=78,slow=4.6,SNR=5.8
NOA PKiKP PKiKP 15 03 30.4 +0.1

comp=Z,1.9nm,0.7s,baz=78,slow=2.0,SNR=5.4
NOA PP PP 15 03 44.5 -4.2

comp=Z,4.9nm,0.8s,baz=87,slow=7.6,SNR=6.0
NOA NORSAR Array B 107.30 331 Pdif Pdif 14 59 21.7 +0.1
NOA PKPdif PKiKP 15 03 30.4 +0.1
NOA PP PP 15 03 44.5 -4.2
COP Copenhagen 107.32 325 *i* P Pdif 14 59 23.6 +2.0
COP *i* 15 10 07.7
COP *i* 15 11 23.5
COP *i* 15 13 03.1
COP

comp=Z,420nm,21.0s
CLL Collm 107.33 320 *e*Pdiff Pdif 14 59 20.7 -1.0
CLL *e*PKiKP PKiKP 15 03 30.3 -0.1
CLL *e*PP PP 15 03 45.6 -3.3
CLL *e*PPP 15 06 04.5
CLL *e*PPPP 15 07 45.3
CLL *e*SKSac SKSac 15 10 00.1 -0.9
CLL *e*Sdiff Sdif 15 11 20.0 -4.2
CLL *e*SP SP 15 13 02.3 -5.7
CLL *e*PKKPbc PKKPbc 15 14 48.0 +2.2
CLL *e*PKKPab PKKPab 15 15 03.0 +2.4
CLL *e*SS SS 15 18 55.1 -1.7
CLL *e*SKKSdf SKKSdf 15 22 17.5 +8.3
CLL *e*SSS 15 23 03.9
CLL *e*L 15 55 22.4

comp=Z,810nm,22.0s
CLL Collm 107.33 320 *e*PDIF Pdif 14 59 20.0 -1.7
CLL *e* 15 03 28.0
CLL *e*PP PP 15 03 45.0 -3.9
CLL *e* 15 04 05.0
CLL *e* 15 04 17.0
CLL *e*PPP 15 06 04.0
CLL *e* 15 07 55.0
CLL *e* 15 10 00.0
CLL *e* 15 11 19.0
CLL *e*SP SP 15 13 06.0 -2.0
CLL *e*PPS 15 14 12.0
CLL *e*PKKP PKKPbc 15 14 48.0 +2.2
CLL *e* 15 17 16.0
CLL *e*SS SS 15 18 48.0 -8.8
CLL *e*SSS 15 23 00.0
CLL Collm 107.33 320 *e*Pdif Pdif 14 59 20.0 -1.7
CLL *e*PKiKP PKiKP 15 03 28.0 -2.4
CLL *e*PP PP 15 03 45.0 -3.9

comp=Z,88nm,2.3s
CLL *ex* x 15 04 05.0
CLL *ex* x 15 04 17.0
CLL *e*PPP 15 06 04.0
CLL *e*PPPP 15 07 55.0
CLL *e*SKSac SKSac 15 10 00.0 -1.0
CLL *e*Sdif Sdif 15 11 19.0 -5.2
CLL *e*SP SP 15 13 06.0 -2.0
CLL *e*PPS 15 14 12.0
CLL *e*PKKPbc PKKPbc 15 14 48.0 +2.2
CLL *ex* x 15 17 16.0
CLL *e*SS SS 15 18 48.0 -8.8
CLL *e*SSS 15 23 00.0
CLL LmV 15 54 00.0

comp=Z,900nm,20.1s
CLL Collm 107.33 320 *e*P Pdif 14 59 20.0 -1.7
CLL *e* 15 03 45.0
CLL *e* 15 10 00.0
CLL pmax pmax

comp=Z,88nm,2.3s
CLL MLR MLR

comp=Z,900nm,20.1s,MS5.3
CLL Collm 107.33 320 *e*Pdif Pdif 14 59 20.0 -1.7
CLL *e*PKP PKiKP 15 03 28.0 -2.4
CLL *e*PP PP 15 03 45.0 -3.9
CLL *e*SKS SKSac 15 10 00.0 -1.0
CLL *e*Sdif Sdif 15 11 19.0 -5.2
CLL *e*PKKP PKKPbc 15 14 48.0 +2.2
CLL LR LR

comp=Z,900nm,20.1s,MS5.3
NAO01 NORSAR Array S 107.49 330 PFAKE 15 03 40.0 +9.3
NAO01 LR LR

comp=Z,894nm,19.0s,MS5.3
INK Inuvik 107.52 22 P Pdif 14 59 23.7 +1.2
INK pmax pmax

comp=Z,19nm,1.4s
INK Inuvik 107.52 22 *e*Pdif Pdif 14 59 21.1 -1.4

comp=Z,19nm,1.5s
INK *e*PKiKP PKiKP 15 03 30.1 -0.6
WET Wettzell 107.55 318 *e*Pdiff Pdif 14 59 24.0 +1.4
WET *e*PP PP 15 03 44.8 -5.7
TANN Tannenbergstha 107.74 319 *e*Pdiff Pdif 14 59 25.2 +1.7
TANN *e*PP PP 15 03 46.8 -5.1
NKC Novy Kostel 107.76 319 *e*SS SS 15 18 54.0 -8.5
NKC AMS AMS 15 49 30.0

comp=Z,1μm,24.5s
ROTZ Rotzenmuhle 107.94 319 *e*Pdiff Pdif 14 59 26.3 +1.9
ROTZ *e*PP PP 15 03 48.4 -5.0
MANZ Manzenberg 107.99 319 *e*Pdiff Pdif 14 59 26.3 +1.7
MANZ *e*PP PP 15 03 48.8 -4.9
MOX Moxa 108.26 320 *e*Pdiff Pdif 14 59 27.7 +1.9
MOX *e*PP PP 15 03 50.5 -5.2
MOX *e*PPP 15 06 17.8
MOX Moxa 108.26 320 *e*PDIFF Pdif 14 59 24.0 -1.8
MOX Moxa 108.26 320 *e*PKP PKiKP 15 03 29.5 -2.6
MOX

comp=Z,500nm,21.0s
KONO Kongsberg 108.31 329 *e* Pdif 14 59 30.0 +4.0
KONO *e*PP PP 15 03 58.0 +2.0
KONO *i* 15 13 06.8
KONO Kongsberg 108.31 329 PFAKE 15 03 40.0 +7.8
KONO LR LR

comp=Z,1μm,21.0s,MS5.5
WTTA Wattenberg 108.48 316⇑ *i*P PKiKP 15 03 33.1 +0.6

comp=Z,68nm,2.0s
GRA1 Grafenberg Arr 108.59 319 *e*Pdif Pdif 14 59 28.7 +1.5
GRA1 *e*PP PP 15 03 52.5 -5.6
GRA1 *e*PPP 15 06 09.2
GRA1 *e*SP SP 15 13 14.9 -5.9
GRA1 LR LR

comp=Z,1μm,20.2s,MS5.4
GRF Grafenberg Arr 108.59 319 *e*Pdiff Pdif 14 59 28.7 +1.5
GRF *e*PP PP 15 03 52.5 -5.6
GRF *e*PPP 15 06 09.2
GRF *e*SP SP 15 13 14.9 -5.9
GRF *e*L 15 57 19.4

comp=Z,1μm,20.2s
GRF Grafenberg Arr 108.59 319 *e*P Pdif 14 59 28.7 +1.5
GRF *e*SP SP 15 13 14.9 -5.9
FUR Furstenfeldbru 108.67 317 *e*Pdiff Pdif 14 59 28.4 +0.8
FUR *e*PP PP 15 03 52.5 -6.1
BSEG Bad Segeberg 108.72 323 *e*Pdiff Pdif 14 59 28.9 +1.1
BSEG *e*PP PP 15 03 55.0 -4.1
BSEG *e*PPP 15 06 22.6
MOL Molde 108.74 333 AMS AMS 15 57 03.3

comp=Z,1μm,17.9s,MS5.6
CLZ Clausthal 108.92 321 *e*Pdiff Pdif 14 59 30.0 +1.3
CLZ *e*PP PP 15 03 55.3 -5.2
SIT Sitka 108.96 33 PFAKE 15 03 40.0 +6.6
SIT LR LR

comp=Z,876nm,21.0s,MS5.3
MUD Monsted U'grnd 109.03 326 *i* P Pdif 14 59 33.2 +4.0
MUD *i* 15 03 59.4
MUD *e* 15 06 16.9
MUD *i* 15 11 35.8
MUD *i* 15 13 23.5
MUD

comp=Z,1μm,21.0s
MUD Monsted U'grnd 109.03 326 *i* P Pdif 14 59 33.2 +4.0
MUD *i* 15 03 59.4
MUD *e* 15 06 16.9
MUD *i* 15 11 35.8
MUD *i* 15 13 23.5
UBBA Unterbreizbach 109.26 320 *e*Pdiff Pdif 14 59 31.2 +1.0
UBBA *e*PP PP 15 03 57.3 -5.7
STU Stuttgart 109.99 318 *e*Pdiff Pdif 14 59 34.8 +1.3
STU *e*PP PP 15 04 00.8 -7.5
BER Bergen 110.27 331 *e* Pdif 14 59 36.4 +1.7
BER *e*PP PP 15 04 06.6 -3.6
BER AMS AMS 16 02 15.3

comp=Z,870nm,19.8s,MS5.3
TNS Taunus Mts 110.32 319 *e*Pdiff Pdif 14 59 36.9 +2.0
TNS *e*PP PP 15 04 03.2 -7.4
IBBN Ibbenburen 110.47 322 *e*Pdiff Pdif 14 59 36.7 +1.1
IBBN *e*PP PP 15 04 05.0 -6.7
IBBN *e*PPP 15 06 39.0
BFO Black Forest 110.61 317 *e*Pdiff Pdif 14 59 38.0 +1.8
BFO *e*PP PP 15 04 04.6 -8.2
PGF Pioggiola 110.65 311 *e*PKIKP PKiKP 15 03 36.6 0.0
BUG Bochum--Univer 110.89 321 *e*Pdiff Pdif 14 59 39.3 +1.8
BUG *e*PP PP 15 04 08.0 -6.8
HOPE Hope Point 111.01 196 PFAKE 15 03 50.0 +13
HOPE LR LR

comp=Z,3μm,19.0s,MS5.9
JMIC Jan Mayen 111.61 343 *e* Pdif 14 59 33.0 -7.7
JMIC *e*PP PP 15 04 17.7 -2.2
JMIC AMS AMS 15 59 24.8

comp=Z,623nm,19.0s,MS5.2
HINF Hinteralfeld 111.66 317 *e*PKIKP PKiKP 15 03 37.8 -0.7
WLF Walferdange 111.86 319 *e*Pdiff Pdif 14 59 43.9 +2.1
HAU Haudompre 111.97 317 *e*PKIKP PKiKP 15 03 39.0 -0.1
HAU *e*R

comp=Z,1μm,19.8s
HAU Haudompre 111.97 317 *e*PKPdf PKiKP 15 03 39.0 -0.1
HAU LR LR

comp=Z,1μm,19.8s,MS5.5
LPG La Plagne 112.01 315 *e*PKIKP PKiKP 15 03 39.6 +0.5
LPL La Plagne 112.02 315 *e*PKIKP PKiKP 15 03 39.5 +0.3
MBDF Montbardon 112.08 314 *e*PKIKP PKiKP 15 03 39.7 +0.4
FRF La Foret Royal 112.29 313 *e*PKIKP PKiKP 15 03 39.8 +0.1
CABF La Chapelle 112.33 316 *e*PKIKP PKiKP 15 03 40.0 +0.2
comp=Z,25nm,0.8s
LMR La Mourre 112.41 312 *e*PKIKP PKiKP 15 03 40.0 +0.1
GIVF Givet 112.64 320 *e*PKIKP PKiKP 15 03 40.4 +0.1
ORIF Oris-en-Rattie 112.69 314 *e*PKIKP PKiKP 15 03 40.5 +0.1
comp=Z,12nm,0.8s
ORIF *e*R

comp=Z,1μm,21.5s
SMRF Simiane la Rot 113.02 313 *e*PKIKP PKiKP 15 03 41.6 +0.5
comp=Z,25nm,0.9s
BAIF Baives 113.04 320 *e*PKIKP PKiKP 15 03 41.2 +0.1
comp=Z,17nm,0.8s
VIVF Saint-Julien-l 113.55 314 *e*PKIKP PKiKP 15 03 42.0 -0.1
comp=Z,18nm,1.0s
LOR Lormes 113.75 317 *e*PKIKP PKiKP 15 03 42.3 -0.2
comp=Z,11nm,0.8s
LOR *e*R

comp=Z,831nm,21.0s
LOR Lormes 113.75 317 *e*PKPdf PKiKP 15 03 42.3 -0.2
LOR LR LR

comp=Z,830nm,21.0s,MS5.3
SMF Signal de Mont 113.86 316 *e*PKIKP PKiKP 15 03 42.4 -0.3
SSF Saint Saulge 114.02 317 *e*PKIKP PKiKP 15 03 43.0 0.0
comp=Z,31nm,0.8s
RES Resolute Bay 114.03 9 *e*PKIKP PKiKP 15 03 42.4 -0.6
RES Resolute Bay 114.03 9 PKIKP PKiKP 15 03 42.8 -0.2
AVF Avril sur Loir 114.17 316 *e*PKIKP PKiKP 15 03 42.9 -0.4
comp=Z,17nm,0.9s
LASF Ste Croix 114.23 313 *e*PKIKP PKiKP 15 03 43.6 +0.2
comp=Z,16nm,1.0s
BGF Bois d'Agland 114.55 316 *e*PKIKP PKiKP 15 03 44.3 +0.3
comp=Z,38nm,0.8s
TCF Toulx Ste Croi 115.03 316 *e*PKIKP PKiKP 15 03 45.1 +0.2
CAF Calviac 115.37 314 *e*PKIKP PKPdf 15 03 46.1 +0.5
MTLF Montolieu 115.52 313 *e*PKIKP PKPdf 15 03 45.7 -0.2
RJF Les Rejaudoux 115.68 315 *e*PKIKP PKPdf 15 03 46.7 +0.5
EKA Eskdalemuir Ar 116.04 327 PKP PKPdf 15 03 46.8 -0.1
comp=Z,1.9nm,0.8s,baz=20,slow=2.7,SNR=6.1
ESK Eskdalemuir 116.07 327 PFAKE 15 04 00.0 +13
ESK LR LR

comp=Z,974nm,21.0s,MS5.4
LDF La Druitiere 116.11 319 *e*PKIKP PKPdf 15 03 46.7 -0.3
comp=Z,12nm,0.7s
LFF La Frestale 116.29 315 *e*PKIKP PKPdf 15 03 47.8 +0.5
FLN La Foliniere 116.30 319 *e*PKIKP PKPdf 15 03 47.2 -0.2
comp=Z,26nm,0.6s
FLN *e*R

comp=Z,1μm,21.8s
FLN La Foliniere 116.30 319 *e*PKPdf PKPdf 15 03 47.2 -0.2
FLN LR LR

comp=Z,1μm,21.8s,MS5.5
MFF Saint Martin d 116.56 317 *e*PKIKP PKPdf 15 03 48.7 +0.8
comp=Z,40nm,0.9s
GRR Gorron 116.63 319 *e*PKIKP PKPdf 15 03 47.8 -0.2
comp=Z,23nm,0.7s
TOA0 Torodi Ar. Sit 116.79 279 *e*PKPdf PKPdf 15 03 48.4 +0.1
TORD Torodi Ar. Bea 116.79 279 PKP PKPdf 15 03 48.9 +0.6
comp=Z,16nm,0.5s,baz=69,slow=1.7,SNR=142
SUMG Summit 116.90 352 *e*PKPdf PKPdf 15 03 49.0 +0.5
YKA Yellowknife Ar 117.01 24 PKP PKPdf 15 03 48.1 -0.6
comp=Z,9.9nm,0.5s,baz=305,slow=1.9,SNR=99
YKA PKKPbc PKKPbc 15 14 13.4 -0.3

comp=Z,2.2nm,0.8s,baz=112,slow=4.2,SNR=7.5
ETSF Etsaut 117.59 313 *e*PKIKP PKPdf 15 03 50.6 +0.7
SGMF Saint Gilles 117.77 319 *e*PKIKP PKPdf 15 03 49.8 -0.4
comp=Z,16nm,0.7s
ROSF Rostrenen 118.20 319 *e*PKIKP PKPdf 15 03 50.7 -0.3
comp=Z,12nm,0.7s
QUIF Quistinic 118.25 319 *e*PKIKP PKPdf 15 03 50.7 -0.4
A05A Maple Falls 118.55 40⇑P PKPdf 15 03 52.9 +1.2
baz=119
B05A Bryant 118.75 41⇑P PKPdf 15 03 53.2 +1.1
baz=119
COR Corvallis 118.89 45 PFAKE 15 04 00.0 +7.7
COR LR LR

comp=Z,718nm,19.0s,MS5.3
I03A Eugene 119.05 46⇓P PKPdf 15 03 53.8 +1.1
baz=119
K02A Glendale 119.16 47⇓P PKPdf 15 03 54.3 +1.5
baz=119
F04A Amboy 119.16 43⇓P PKPdf 15 03 54.0 +1.1
baz=119
C05A Tolt Reservoir 119.17 41⇑P PKPdf 15 03 53.5 +0.6
baz=119
BORG Borgarnes 119.20 341 PFAKE 15 04 00.0 +7.0
BORG LR LR

comp=Z,1μm,21.0s,MS5.5
L02A Cave Junction 119.21 48⇑P PKPdf 15 03 54.5 +1.5
baz=119
J03A Ideyld Park 119.40 46⇓P PKPdf 15 03 54.5 +1.2
baz=119
E05A Randle 119.44 43⇓P PKPdf 15 03 54.0 +0.6
baz=120
HUMO Hull Mountain 119.58 47 *e*PKPdf PKPdf 15 03 54.9 +1.2
HUMO LR LR

comp=Z,794nm,20.0s,MS5.3
HUMO Hull Mountain 119.58 47⇑P PKPdf 15 03 55.1 +1.4
baz=120
ELAN Lanestosa 119.59 314 PKP PKPdf 15 03 54.9 +1.2
H04A Detroit Lake 119.64 45⇓P PKPdf 15 03 54.2 +0.4
baz=120
EVIA Vianos 119.81 308 PKIKP PKPdf 15 03 54.7 +0.6
ENIJ Nijar 119.85 306 PKIKP PKPdf 15 03 54.5 +0.3
M02C Callahan 119.91 49⇑P PKPdf 15 03 56.0 +1.7
baz=120
YBH Yreka Blue Hor 119.95 48 PFAKE 15 04 10.0 +16
YBH LR LR

comp=Z,691nm,19.0s,MS5.3
HOPS Hopland 120.22 51 PFAKE 15 04 10.0 +15
HOPS LR LR

comp=Z,904nm,20.0s,MS5.4
WDC Whiskeytown Da 120.31 49 PFAKE 15 04 10.0 +15
WDC LR LR

comp=Z,761nm,19.0s,MS5.4
EQES Quesada 120.39 307 PKP PKPdf 15 03 55.5 +0.3
EBER Berja 120.40 306 PKP PKPdf 15 03 56.8 +1.6
I05A Bend 120.41 45⇑P PKPdf 15 03 56.9 +1.6
baz=120
M04C Macdoel 120.57 48⇓P PKPdf 15 03 57.0 +1.5
baz=121
J05A Fort Rock 120.65 46⇓P PKPdf 15 03 57.1 +1.4
baz=121
GUD Guadarrama 120.68 311 PKIKP PKPdf 15 03 55.7 -0.1
MNRC McLaughlin Nat 120.72 51⇓P PKPdf 15 03 57.3 +1.5
baz=121
ESDC Sonseca Array 120.73 310 PKP PKPdf 15 03 56.3 +0.4
comp=Z,2.6nm,0.5s,baz=21,slow=2.9,SNR=16
ESDC PKKPbc PKKPbc 15 13 58.7 -1.4

comp=Z,0.2nm,0.3s,baz=63,slow=39,SNR=3.2
ESDC Sonseca Array 120.73 310 PKP PKPdf 15 03 56.7 +0.8
ESLA Sonseca Array 120.73 310 *e*PKPdf PKPdf 15 03 56.5 +0.6
ESLA LR LR

comp=Z,4μm,21.0s,MS6.0
CVS Carmenet Viney 120.81 52⇓P PKPdf 15 03 57.3 +1.3
baz=121
O03C Acorn Hollow, 120.81 50⇓P PKPdf 15 03 57.2 +1.2
baz=121
EBAN Banos Encina 120.89 308 PKIKP PKPdf 15 03 57.4 +1.2
HAWA Hanford 120.96 42 *e*PKPdf PKPdf 15 03 56.2 -0.1
HAWA LR LR

comp=Z,46nm,22.0s
HATC Hat Creek Radi 121.06 49⇓P PKPdf 15 03 58.2 +1.7
baz=121
ERON Agron 121.10 307 PKP PKPdf 15 03 57.1 +0.5
I06A Prineville 121.20 45⇑P PKPdf 15 03 58.6 +1.8
baz=121
L05A Lakeview 121.24 47⇓P PKPdf 15 03 58.7 +1.8
baz=121
BNLO Ben Lomond (Sa 121.25 53⇑P PKPdf 15 03 58.6 +1.8
baz=121
ELOJ Sierra Loja 121.36 307 PKIKP PKPdf 15 03 58.0 +0.9
ELUQ Luque 121.37 307 PKIKP PKPdf 15 03 57.7 +0.6
J06A Christmas Vall 121.42 46⇓P PKPdf 15 03 58.5 +1.3
baz=122
O04C Chester 121.45 49⇓P PKPdf 15 03 58.8 +1.5
baz=122
EADA Adamuz 121.50 308 PKP PKPdf 15 03 58.2 +0.8
F08A Pendleton 121.64 43⇑P PKPdf 15 03 59.2 +1.6
baz=122
ELFS Eagle Lake Fie 121.65 49⇑P PKPdf 15 03 59.4 +1.7
baz=122
I07A Izee 121.65 45⇑P PKPdf 15 03 59.2 +1.6
baz=122
O05C Quincy 121.66 50⇓P PKPdf 15 03 59.2 +1.5
baz=122
M06C Likely Place G 121.70 48⇓P PKPdf 15 03 59.3 +1.5

baz=122
S04C Ingram Canyon, 121.84 53 ⇓P PKPdf 15 03 59.8 +1.8
baz=122
SAO San Andreas Ge 121.88 54 PFAKE 15 04 10.0 +12
SAO LR LR
comp=Z,815nm,19.0s,MS5.4
NEW Newport 121.90 40 ePKIKP PKPdf 15 03 58.8 +0.7
NEW MLR MLR
comp=Z,631nm,21.0s
PACP Pacheco Peak 121.97 53 ⇑P PKPdf 15 03 59.9 +1.7
baz=122
J07A Hines 121.98 46 ⇑P PKPdf 15 03 59.9 +1.6
baz=122
P05C Yuba Gap, Truc 122.03 51 ⇑P PKPdf 15 03 59.9 +1.5
baz=122
EDM Edmonton 122.08 33 ePKIKP PKPdf 15 03 58.8 +0.3
BEKR Beckwourth 122.10 50 ⇓P PKPdf 15 03 59.8 +1.3
baz=122
H08A Prairie City 122.10 44 ⇓P PKPdf 15 03 59.6 +1.1
baz=122
V03C Hunter Liggett 122.18 54 ⇑P PKPdf 15 03 59.9 +1.2
baz=122
K07A Rock Creek Ran 122.21 46 ⇓P PKPdf 15 03 59.7 +0.9
baz=122
EPLA Plasencia 122.24 310 PKIKP PKPdf 15 04 01.7 +2.9
N06A Buffalo Meadow 122.28 49 ⇑P PKPdf 15 04 00.2 +1.3
baz=122
LRV Little Rabbit 122.28 54 ePKPdf PKPdf 15 04 01.6 +2.7
L07A Adell 122.32 47 ⇑P PKPdf 15 04 00.2 +1.2
baz=122
I08A Drewsey 122.35 45 ⇓P PKPdf 15 04 00.1 +1.1
baz=122
DBIC Dimbokro 122.37 271 PKP PKPdf 15 03 59.9 +0.8
comp=Z,27nm,0.5s,baz=94,slow=2.4,SNR=72
DBIC Dimbokro 122.37 271 PKIKP PKPdf 15 03 59.9 +0.9
DBIC pmax pmax
comp=Z,27nm,0.5s
DBIC Dimbokro 122.37 271 ePKPdf PKPdf 15 04 00.0 +1.0
DBIC LR LR
comp=Z,2μm,19.0s,MS5.7
MDT Midelt 122.40 302 PKP PKPdf 15 04 00.4 +1.3
comp=Z,8.6nm,0.6s,baz=76,slow=2.7,SNR=18
O06A Flanigan 122.43 49 ⇑P PKPdf 15 04 00.3 +1.1
baz=122
LIC Lamto 122.47 270 ePKIKP PKPdf 15 03 59.3 +0.1
comp=Z,66nm,0.5s
LIC eR
comp=Z,750nm,19.5s
LIC Lamto 122.47 270 ePKPdf PKPdf 15 03 59.3 +0.1
LIC LR LR
comp=Z,380nm,19.5s,MS5.1
CMB Columbia Colle 122.47 52 PKIKP PKPdf 15 03 59.8 +0.6
CMB MLR MLR
comp=Z,896nm,20.0s,MS5.4
U04C Hernandez Rese 122.48 54 ⇑P PKPdf 15 04 01.6 +2.4
baz=122
EJIF Jimena Fronter 122.52 306 PKIKP PKPdf 15 04 01.2 +1.9
R05C Kirkwood Meado 122.57 51 ⇓P PKPdf 15 04 01.1 +1.7
baz=123
S05C Merced 122.65 53 ⇓P PKPdf 15 04 01.2 +1.6
baz=123
WCN Washoe City 122.68 50 ⇑P PKPdf 15 04 01.6 +2.0
baz=123
WVOR Wild Horse Val 122.72 47 ePKIKP PKPdf 15 04 00.6 +0.9
WVOR MLR MLR
comp=Z,968nm,21.0s,MS5.4
H09A Durkee 122.74 44 ⇑P PKPdf 15 04 00.7 +1.0
baz=123
K08A Mann Creek Ran 122.74 46 ⇑P PKPdf 15 04 00.7 +1.0
baz=123
PKD Parkfield 122.75 54 ⇓P PKPdf 15 04 01.6 +1.8
baz=123
PAHR Pah Rah Range 122.86 50 ePKPdf PKPdf 15 04 01.3 +1.3
N07B Gerlach 122.91 48 ⇑P PKPdf 15 04 01.2 +1.1
baz=123
S06C San Francisco 122.92 52 ⇓P PKPdf 15 04 01.2 +1.1
baz=123
BMO Blue Mountains 122.92 43 PKIKP PKPdf 15 04 00.7 +0.6
BMO Blue Mountains 122.92 43 ePKPdf PKPdf 15 03 59.8 -0.3
BMO LR LR
comp=Z,638nm,21.0s,MS5.2
L08A Fields 122.99 47 ⇑P PKPdf 15 04 01.7 +1.5
baz=123
R06C Coleville 123.08 51 ⇑P PKPdf 15 04 02.3 +1.9
baz=123
O07A Toulon 123.13 49 ⇑P PKPdf 15 04 02.4 +1.8
baz=123
PVRL Vila Real 123.15 312 ePKP PKPdf 15 04 01.9 +1.4
M08A Happy Creek Ra 123.17 48 ⇓P PKPdf 15 04 02.4 +1.8
baz=123
T06C Millerton Lake 123.21 53 ⇑P PKPdf 15 04 02.1 +1.4
baz=123
MTE Manteigas 123.25 311 ePKP PKPdf 15 04 02.1 +1.4
MTE Manteigas 123.25 311 ePP PP 15 05 42.2 +1.3
STS Santiago 123.30 314 PKIKP PKPdf 15 04 03.6 +2.8
PCBR Castelo Branco 123.34 310 ePKP PKPdf 15 04 02.1 +1.2
PVIS Viseu 123.42 312 ePKP PKPdf 15 04 03.0 +1.9
PKM Peak Mountain 123.52 56 ⇓P PKPdf 15 04 03.3 +2.0
baz=124
L09A Wilkinson Ranc 123.52 47 ⇓P PKPdf 15 04 02.9 +1.7
baz=124
N08A GE Springer Mi 123.52 48 ⇑P PKPdf 15 04 02.9 +1.6
baz=124
WALA Waterton Lakes 123.56 38 ePKPdf PKPdf 15 04 02.0 +0.7
EMAZ Mazaricos 123.58 314 PKP PKPdf 15 04 00.7 -0.6
SFJD Kangerlussuaq 123.62 354 ePKPdf PKPdf 15 04 00.8 -0.7
PESTR Estremoz 123.66 309 ePKP PKPdf 15 04 02.4 +0.9
EGRO El Granado 123.88 308 PKP PKPdf 15 04 03.4 +1.5
VES Vestal, Richgr 123.94 54 ⇓P PKPdf 15 04 03.1 +1.1
baz=124
N09A Rock Creek Ran 123.95 48 ⇑P PKPdf 15 04 04.1 +2.0
baz=124
NVAR Mina Array Bea 123.98 51 PKP PKPdf 15 04 04.3 +2.2
comp=Z,5.6nm,0.7s,baz=255,slow=2.7
NVAR PKKPbc PKKPbc 15 13 47.9 +0.3
comp=Z,1.0nm,0.7s,baz=176,slow=4.5,SNR=7.7
MTUM Tungsten Hills 124.03 52 ePKPdf PKPdf 15 04 05.0 +2.8
PBEJ Beja 124.06 308 ePKP PKPdf 15 04 04.0 +1.7
Q08A Gabbs 124.16 50 ⇑P PKPdf 15 04 04.2 +1.8
baz=124
BMN Battle Mountai 124.29 48 PFAKE 15 04 20.0 +17
BMN LR LR
comp=Z,751nm,20.0s,MS5.3
MOE Montemor 124.32 309 ePKP PKPdf 15 04 04.4 +1.6
O09A Fish Creek Ran 124.38 49 ⇑P PKPdf 15 04 04.5 +1.6
baz=124
MSO Missoula 124.43 40 ePKPdf PKPdf 15 04 03.2 +0.2
MSO LR LR
comp=Z,386nm,20.0s,MS5.1
ISA Isabella 124.45 54 ⇓P PKPdf 15 04 04.7 +1.7
baz=124
CWC Cottonwood Cre 124.60 53 ⇑P PKPdf 15 04 05.2 +1.9
baz=125
CHMT Chamberlain Mo 124.83 40 ePKPdf PKPdf 15 04 04.3 +0.5
TPH Tonopah 124.89 51 PFAKE 15 04 20.0 +16
TPH LR LR
comp=Z,633nm,22.0s,MS5.2
CIS Catalina Islan 124.94 57 ⇑P PKPdf 15 04 05.5 +1.5
baz=125
R09A Tonopah 124.97 51 ⇑P PKPdf 15 04 05.8 +1.8
baz=125
FMP Fort Macarthur 124.98 57 ⇓P PKPdf 15 04 06.0 +2.0
baz=125
S09A Goldfield 124.98 52 ⇑P PKPdf 15 04 06.2 +2.2
baz=125
DAC Darwin (Calif) 125.02 53 ePKIKP PKPdf 15 04 06.3 +2.2
DAC MLR MLR
comp=Z,1μm,21.0s,MS5.5
GRAC Grapevine Rang 125.04 53 ⇓P PKPdf 15 04 06.1 +2.0
baz=125
M11A Holland Ranch, 125.04 47 ⇓P PKPdf 15 04 05.8 +1.7
baz=125
LRMC Laurel Mountai 125.12 54 ⇑P PKPdf 15 04 06.6 +2.3
baz=125
MPMC Manual Prospec 125.15 54 ⇑P PKPdf 15 04 06.2 +1.8
baz=125
HLID Hailey 125.31 44 ePKPdf PKPdf 15 04 06.2 +1.6
HLID LR LR
comp=Z,708nm,21.0s,MS5.3
O11A Cowboy Ranch, 125.52 48 ⇑P PKPdf 15 04 06.9 +1.8
baz=126
FURC Furnace Creek, 125.56 53 ⇓P PKPdf 15 04 07.3 +2.2
baz=126
P11A Circle Ranch, 125.61 49 ⇑P PKPdf 15 04 07.5 +2.2
baz=126
M12A Wells 125.67 47 ⇑P PKPdf 15 04 07.4 +2.1
baz=126
N12A Clover Valley, 125.76 47 ⇑P PKPdf 15 04 07.4 +1.9
baz=126
HRY Holter Researc 125.81 40 ePKPdf PKPdf 15 04 05.9 +0.3
GSC Goldstone 125.86 54 P PKPdf 15 04 08.0 +2.3
baz=126
DLMT Dillon 125.86 41 PKPdf PKPdf 15 04 07.2 +1.4
MCMT McKenzie Canyo 125.90 42 ePKPdf PKPdf 15 04 07.1 +1.3
TPNV Topopah Spring 125.92 52 ePKIKP PKPdf 15 04 07.6 +1.8
TPNV MLR MLR
comp=Z,959nm,21.0s,MS5.5
U10A Ash Meadows, A 125.98 53 ⇓P PKPdf 15 04 08.6 +2.6
baz=126
TRCR Troy Canyon 126.07 51 ePKPdf PKPdf 15 04 07.7 +1.6
M13A Montello 126.22 47 ⇑P PKPdf 15 04 08.1 +1.7
baz=126
P12A McGill 126.26 49 ⇑P PKPdf 15 04 08.2 +1.7
baz=126
HEC Hector,Ludlow 126.34 55 ⇓P PKPdf 15 04 09.1 +2.5
baz=126
BOZ Bozeman (W) 126.37 41 PKIKP PKPdf 15 04 08.0 +1.3
BOZ Bozeman (W) 126.37 41 ePKPdf PKPdf 15 04 07.9 +1.2
BOZ LR LR
comp=Z,434nm,20.0s,MS5.1
PFO Pinyon Flat Ob 126.50 56 PFAKE 15 04 20.0 +13
PFO LR LR
comp=Z,1μm,21.0s,MS5.5
PFO Pinyon Flat Ob 126.50 56 ⇑P PKPdf 15 04 09.1 +2.2
baz=126
EGMT Eagleton 126.50 37 ePKPdf PKPdf 15 04 07.5 +0.6
EGMT LR LR
comp=Z,472nm,22.0s,MS5.1
TUQ Turquoise Mtn. 126.53 54 ⇓P PKPdf 15 04 09.5 +2.5
baz=127
MONP Monument Peak 126.67 57 ⇑P PKPdf 15 04 09.8 +2.5
baz=127
BELC Belle Mtn. 126.79 56 ⇓P PKPdf 15 04 10.1 +2.6
baz=127
QLMT Earthquake Lak 126.83 42 ePKPdf PKPdf 15 04 09.6 +2.0
FFC Flin Flon 126.87 27 ePKIKP PKPdf 15 04 07.7 0.0
FFC MLR MLR
comp=Z,663nm,22.0s,MS5.3
DVTC Desert V Tower 126.98 57 ⇑P PKPdf 15 04 10.7 +2.8
baz=127
HVU Hansel Valley 127.06 46 ePKIKP PKPdf 15 04 09.6 +1.6
YMR Madison River 127.20 42 ePKPdf PKPdf 15 04 10.3 +2.0
V12A Nelson 127.31 53 ⇓P PKPdf 15 04 11.2 +2.7
baz=127
YFT Old Faithful 127.37 42 ePKPdf PKPdf 15 04 11.2 +2.6
U12A Valley of Fire 127.38 53 ⇓P PKPdf 15 04 11.2 +2.6
baz=127
IRM Iron Mountain 127.44 55 ⇑P PKPdf 15 04 11.1 +2.3
baz=128
RRI2 Red Ridge 127.49 43 ePKPdf PKPdf 15 04 10.7 +1.9
IMW Indian Meadow 127.53 43 ePKPdf PKPdf 15 04 10.6 +1.6
GCMT Greycliff 127.56 40 ePKPdf PKPdf 15 04 10.4 +1.5
DUG Dugway 127.57 48 ePKIKP PKPdf 15 04 10.4 +1.4
DUG MLR MLR
comp=Z,558nm,19.0s,MS5.3
LKWY Lake 127.61 42 PFAKE 15 04 20.0 +11
LKWY LR LR
comp=Z,1μm,20.0s,MS5.5
FLWY Flagg Ranch 127.61 42 PKPdf PKPdf 15 04 10.0 +0.9
TPAW Teton Pass 127.68 43 ePKPdf PKPdf 15 04 11.0 +1.8
MOOW Moose Ponds 127.72 43 ePKPdf PKPdf 15 04 10.5 +1.3
REDW Red Top Meadow 127.80 43 ePKPdf PKPdf 15 04 11.1 +1.7
SNOW Snow King Moun 127.82 43 ePKPdf PKPdf 15 04 11.6 +2.1
AHID Auburn Hatcher 127.86 44 PFAKE 15 04 20.0 +10
AHID LR LR
comp=Z,601nm,20.0s,MS5.3
PLCA Paso Flores 127.89 173 PKP PKPdf 15 04 10.5 +0.9
comp=Z,11nm,1.1s,baz=331,slow=2.2,SNR=7.7
PLCA Paso Flores 127.89 173 PKP PKPdf 15 04 10.5 +0.9
PLCA LR LR
comp=Z,2μm,20.0s,MS5.7
ASCN Ascension 127.93 251 PFAKE 15 04 20.0 +10
ASCN LR LR
comp=Z,2μm,19.0s,MS5.8
GLA Glamis 127.95 57 ⇑P PKPdf 15 04 12.2 +2.5
baz=128
HWUT Hardware Ranch 127.97 45 ePKPdf PKPdf 15 04 11.0 +1.3
HWUT LR LR
comp=Z,890nm,20.0s,MS5.5
CCUT Cedar City 127.98 51 ePKPdf PKPdf 15 04 12.1 +2.3
Y12C Blythe 128.04 56 ⇓P PKPdf 15 04 12.6 +2.7
baz=128
W13A Hualapai Mount 128.23 54 ⇑P PKPdf 15 04 13.0 +2.7
baz=128
TCUT Toone Canyon 128.26 46 ePKPdf PKPdf 15 04 12.1 +1.7
X13A Yucca 128.40 55 ⇓P PKPdf 15 04 12.7 +2.1
baz=128
MPU Maple Canyon 128.49 47 ePKPdf PKPdf 15 04 12.5 +1.8
MPU LR LR
comp=Z,903nm,22.0s,MS5.4
MVU Marysvale 128.56 49 PFAKE 15 04 20.0 +9.1
MVU LR LR
comp=Z,766nm,19.0s,MS5.4
MSU Marysvale 128.58 49 PKIKP PKPdf 15 04 13.3 +2.4
MSU Marysvale 128.58 49 ePKPdf PKPdf 15 04 13.1 +2.1
DAU Daniels Canyon 128.62 47 ePKIKP PKPdf 15 04 12.2 +1.2
W14A Seligman 128.84 54 ⇓P PKPdf 15 04 14.6 +3.2
baz=129
BW06 Boulder Array 128.91 43 PFAKE 15 04 20.0 +8.5
BW06 LR LR
comp=Z,741nm,19.0s,MS5.4
PDAR Pinedale Array 128.91 43 PKP PKPdf 15 04 12.9 +1.4
comp=Z,2.2nm,0.5s,baz=129,slow=1.6,SNR=30
TMUT Trail Mountain 129.04 48 ePKPdf PKPdf 15 04 13.5 +1.7
X14A Yava 129.19 54 ⇑P PKPdf 15 04 15.0 +2.9
baz=129
Y14A Wickenburg 129.23 55 ⇓P PKPdf 15 04 14.6 +2.5
baz=129
LAO LASA Array 129.25 37 PFAKE 15 04 20.0 +7.8
LAO LR LR
comp=Z,606nm,19.0s,MS5.3
Z14A Wintersburg 129.41 56 ⇓P PKPdf 15 04 15.3 +2.8
baz=130
W15A Williams 129.49 53 ⇓P PKPdf 15 04 15.9 +3.3
baz=130
SRU San Rafael 129.60 48 ePKIKP PKPdf 15 04 14.7 +1.8
X15A Humboldt 129.70 54 ⇑P PKPdf 15 04 16.2 +3.1
baz=130
WUAZ Wupatki 130.10 53 PKPdf PKPdf 15 04 14.4 +0.6
WUAZ LR LR
comp=Z,1μm,21.0s,MS5.6
115A Sonoran Desert 130.16 57 ⇑P PKPdf 15 04 17.6 +3.7
baz=130
116A Eloy 130.62 57 ⇓P PKPdf 15 04 17.8 +3.0
baz=131
RWWY Rawlins 130.94 44 ePKPdf PKPdf 15 04 16.8 +1.4
PV10 Paradox Valley 130.95 48 ePKPdf PKPdf 15 04 18.0 +2.6
TRQA Tornquist 131.02 181 ePKPdf PKPdf 15 04 15.8 +0.2
TRQA LR LR
comp=Z,2μm,20.0s,MS5.8
PV01 Paradox Valley 131.38 49 ePKPdf PKPdf 15 04 18.3 +2.0
TUC Tucson 131.44 57 ePKIKP PKPdf 15 04 18.5 +2.2
TUC MLR MLR
comp=Z,735nm,19.0s,MS5.4
RSSD Black Hills 131.87 39 ePKIKP PKPdf 15 04 17.8 +0.6
RSSD MLR MLR
comp=Z,880nm,20.0s,MS5.5
SMCO Snowmass 132.14 47 ePKPdf PKPdf 15 04 20.2 +2.5
ULM Lac du Bonnet 132.63 28 PKP PKPdf 15 04 17.8 -0.8
comp=Z,8.1nm,0.7s,baz=308,slow=3.8,SNR=12
ULM Lac du Bonnet 132.63 28 ePKPdf PKPdf 15 04 20.1 +1.5
ULM LR LR
comp=Z,891nm,22.0s,MS5.4
ISCO Idaho Springs 132.84 45 ePKIKP PKPdf 15 04 20.8 +1.8
ISCO MLR MLR
comp=Z,996nm,20.0s,MS5.5
LAZ Ladron 133.75 53 ePKPdf PKPdf 15 04 22.7 +2.0
SDCO Great Sand Dun 133.77 48 PFAKE 15 04 30.0 +9.3
SDCO LR LR
comp=Z,1μm,20.0s,MS5.5
ANMO Albuquerque 134.09 52 PKPdf PKPdf 15 04 22.9 +1.5
ANMO PP PP 15 06 52.6 +0.6
ANMO Albuquerque 134.09 52 *d* iPKIKP PKPdf 15 04 23.0 +1.7
ANMO Albuquerque 134.09 52 ePKPdf PKPdf 15 04 24.6 +3.2
ANMO LR LR
comp=Z,814nm,20.0s,MS5.4
LPM Los Pinos Moun 134.18 53 ePKPdf PKPdf 15 04 24.3 +2.8
LPM ePP PP 15 06 52.2 -0.3
EYMN Ely 136.29 28 ePKPdf PKPdf 15 04 25.8 +0.4
EYMN LR LR
comp=Z,974nm,21.0s,MS5.5
SCHQ Schefferville 136.35 3 PKP PKPdf 15 04 26.1 +0.5
comp=Z,10nm,0.5s,baz=28,slow=2.6,SNR=24
SCHQ Schefferville 136.35 3 ePKPdf PKPdf 15 04 25.8 +0.3
SCHQ LR LR
comp=Z,1μm,21.0s,MS5.5
AMTX Amarillo 137.75 50 PFAKE 15 04 40.0 +12
AMTX LR LR
comp=Z,1μm,19.0s,MS5.6
WMOK Wichita Mounta 139.96 48 ePKHKP 15 04 24.6
WMOK MLR MLR
comp=Z,982nm,20.0s,MS5.5
JFWS Jewell Farm 140.54 32 ePKIKP PKPdf 15 04 28.3 -5.0
JFWS MLR MLR
comp=Z,1μm,22.0s,MS5.6
JCT Junction City 140.93 55 ePKHKP 15 04 27.8
JCT MLR MLR
comp=Z,841nm,19.0s,MS5.5
CPUP Villa Florida 142.30 188 ePKIKP PKPdf 15 04 31.8 -4.6
CPUP MLR MLR
comp=Z,398nm,19.0s
CCM Cathedral Cave 143.25 38 ePKIKP PKPdf 15 04 33.9 -4.2
CCM MLR MLR
comp=Z,873nm,20.0s,MS5.5
SLM Saint Louis 143.48 37 ePKIKP PKPdf 15 04 35.9 -2.6
MIAR Mount Ida 143.78 45 ePKIKP PKPdf 15 04 37.4 -1.6
FVM French Village 143.79 38 ePKIKP PKPdf 15 04 36.8 -2.2
AAM Ann Arbor 144.17 26 ePKIKP PKPdf 15 04 38.3 -1.4
AAM MLR MLR
comp=Z,1μm,19.0s,MS5.7
HKT Hockley 144.29 54 PKPdf PKPdf 15 04 40.5 +0.6
HKT Hockley 144.29 54 ePKPdf PKPdf 15 04 40.7 +0.8
HKT LR LR
comp=Z,857nm,20.0s,MS5.5
NATX Nacogdoches 144.40 50 ePKPdf PKPdf 15 04 40.6 +0.5
NATX LR LR
comp=Z,1μm,19.0s,MS5.7
UALR University of 144.50 44 ePKP PKPdf 15 04 40.0 -0.3
MSNY Massena 144.82 15 ePKPdf PKPdf 15 04 39.9 -0.9
PARMO Parma 145.05 39 ePKP PKPdf 15 04 41.2 -0.1
BLO Bloomington 145.19 33 ePKIKP PKPdf 15 04 41.6 +0.1
LONY Lake Ozonia 145.24 14 ePKP PKPdf 15 04 41.4 -0.1
FRNY Flat Rock 145.27 13 ePKP PKPdf 15 04 41.3 -0.3
USIN University of 145.42 35 ePKP PKPdf 15 04 42.5 +0.7
PKME Peaks-Kenny Pk 145.62 8 ePKP PKPdf 15 04 43.0 +0.8
ERPA Erie 145.82 23 ePKPdf PKPdf 15 04 42.9 +0.3
ERPA LR LR
comp=Z,1μm,20.0s,MS5.8
MET Memphis--Engin 145.90 41 ePKP PKPdf 15 04 44.5 +1.9
NCB Newcomb 145.94 14 ePKPdf PKPdf 15 04 43.4 +0.7
NCB LR LR
comp=Z,1μm,19.0s,MS5.6
LVC Limon Verde 145.94 170 ePKPbc PKPbc 15 04 45.6 +2.1
LVC LR LR
comp=Z,2μm,21.0s,MS5.9
WCI Wyandotte Cave 146.00 34 ePKP2 PKPab 15 04 43.7 -0.5
WCI MLR MLR
comp=Z,869nm,20.0s,MS5.5
MIV Mineville/With 146.00 14 ePKPdf PKPdf 15 04 43.6 +0.7
ACSO Alum Creek Sta 146.13 28 ePKPdf PKPdf 15 04 43.5 +0.4
ACSO ePKPbc PKPbc 15 04 44.9 +0.9
ACSO LR LR
comp=Z,562nm,20.0s,MS5.3
ALLY Alegheny Colle 146.16 23 ePKPbc PKPbc 15 04 44.3 +0.1
LBNH Lisbon 146.19 11 ePKP2 PKPab 15 04 44.3 -0.6
LBNH MLR MLR
comp=Z,1μm,19.0s,MS5.8
WVT Waverly 146.57 38 ePKPdf PKPdf 15 04 44.3 +0.5
WVT ePKPbc PKPbc 15 04 46.1 +0.8
WVT LR LR
comp=Z,2μm,20.0s,MS5.8
OXF Oxford 146.61 42 ePKPdf PKPdf 15 04 44.8 +0.9
OXF ePKPbc PKPbc 15 04 46.3 +0.9
ACCN Adirondack Com 146.62 14 ePKPdf PKPdf 15 04 43.8 -0.1
HNH Hanover 146.63 12 ePKPdf PKPdf 15 04 44.8 +0.9
HNH ePKPbc PKPbc 15 04 46.5 +1.0
FFD Franklin Falls 146.98 11 ePKPbc PKPbc 15 04 47.3 +0.8
BINY Binghamton 147.10 18 ePKPbc PKPbc 15 04 47.6 +0.8
BINY LR LR
comp=Z,1μm,20.0s,MS5.7
PLAL Pickwick Lake 147.17 40 ePKPdf PKPdf 15 04 46.1 +1.3
PLAL LR LR
comp=Z,863nm,20.0s,MS5.5
SSPA Standing Stone 147.88 21 ePKPdf PKPdf 15 04 46.9 +0.9
SSPA ePKPbc PKPbc 15 04 49.7 +0.7
SSPA LR LR
comp=Z,998nm,20.0s,MS5.6
HRV Harvard--Oak R 147.93 12 ePKIKP PKPdf 15 04 46.1 0.0
HRV *e* 15 04 50.0
HRV MLR MLR
comp=Z,750nm,19.0s,MS5.5
MCWV Mont Chateau 147.97 25 ePKPbc PKPbc 15 04 50.0 +0.8
MCWV LR LR
comp=Z,1μm,19.0s,MS5.8
QUA2 Belchertown 147.98 13 ePKPbc PKPbc 15 04 50.0 +0.8
WES Weston 148.09 12 ePKP2 PKPab 15 04 50.4 -2.0
WES MLR MLR
comp=Z,1μm,22.0s,MS5.7
RCBR Riachuelo 148.10 239 ePKPbc PKPbc 15 04 51.6 +2.0
RCBR LR LR
comp=Z,2μm,20.0s,MS6.0
SWET Sewanee 148.33 37 ePKPdf PKPdf 15 04 46.9 +0.2
SWET ePKPbc PKPbc 15 04 50.3 +0.1
TZTN Tazewell 148.71 33 PKPdf PKPdf 15 04 48.3 +0.9
PAL Palisades 148.80 16 ePKIKP PKPdf 15 04 47.8 +0.3
PAL *e* 15 04 52.2
BRNJ Basking Ridge 148.92 17 ePKPbc PKPbc 15 04 52.6 +0.9
CPCT Cooper Cave 148.98 35 ePKPdf PKPdf 15 04 48.5 +0.7
CPCT ePKPbc PKPbc 15 04 52.6 +0.8
CPNY Central Park 148.99 16 ePKPbc PKPbc 15 04 53.0 +1.1
LRAL Lakeview Retre 149.10 42 ePKPbc PKPbc 15 04 52.8 +0.7
LRAL LR LR
comp=Z,1μm,20.0s,MS5.7
FWV Forest Hill 149.27 28 ePKPdf PKPdf 15 04 48.5 +0.3
FWV ePKPbc PKPbc 15 04 53.0 +0.4
BAO Brasilia Array 149.45 210 PKPdf PKPbc 15 04 55.0 +2.0
BDFB Brasilia 149.46 210 PKP PKPdf 15 04 50.1 +1.6
comp=Z,58nm,0.6s,baz=198,slow=0.7,SNR=61
BDFB PKPbc PKPbc 15 04 54.6 +1.6
comp=Z,58nm,0.6s,baz=51,slow=0.7,SNR=63
BDFB Brasilia 149.46 210 PKP2 PKPbc 15 04 54.6 +1.6
BDFB pmax pmax
comp=Z,58nm,0.6s
BDFB Brasilia 149.46 210 ePKPdf PKPdf 15 04 49.9 +1.4
BDFB ePKPbc PKPbc 15 04 54.6 +1.6
BDFB LR LR
comp=Z,3μm,20.0s,MS6.1
ELN Prospectdale 149.58 29 ePKPbc PKPbc 15 04 53.6 +0.2
BLA Blacksburg 149.75 28 ePKHKP 15 04 49.5
BLA *e* 15 04 54.3
BLA MLR MLR
comp=Z,84nm,19.0s,MS4.6
CBN Corbin 150.21 23 PKPbc PKPbc 15 04 55.9 +1.0
CBN LR LR
comp=Z,1μm,19.0s,MS5.8
GOGA Godfrey 151.04 37 PKIKP PKPdf 15 04 50.6 -0.5
GOGA *e* 15 04 57.6
GOGA MLR MLR
comp=Z,18μm,20.0s
ARE Arequipa 151.31 163 ePKIKP PKPbc 15 05 00.0 +2.5
LPAZ La Paz 152.26 170 PKP PKPdf 15 04 55.5 +2.7
comp=Z,12nm,1.2s,baz=74,slow=1.0,SNR=27
LPAZ PKPbc PKPbc 15 05 02.2 +2.6
comp=Z,36nm,0.8s,baz=163,slow=1.4,SNR=78
LPAZ La Paz 152.26 170 ePKPdf PKPdf 15 04 55.6 +2.7
LPAZ ePKPbc PKPbc 15 05 02.1 +2.5
LPAZ ePKPab PKPab 15 05 12.0 +2.5
LPAZ LR LR
comp=Z,1μm,20.0s,MS5.8
NNA Nana 153.24 149 ePKPdf PKPdf 15 04 55.4 +1.0
NNA ePKPbc PKPbc 15 05 02.8 +1.0
NNA LR LR
comp=Z,3μm,19.0s,MS6.1
TEIG Tepich 154.17 67 ePKPdf PKPdf 15 04 57.0 +1.3
TEIG ePKPbc PKPbc 15 05 05.1 +1.2
TEIG LR LR
comp=Z,517nm,21.0s,MS5.3
DWPF Disney 155.93 43 PFAKE 15 05 10.0 +12
DWPF LR LR
comp=Z,1μm,21.0s,MS5.8
BBSR BB Station 158.86 4 PFAKE 15 05 10.0 +8.3
BBSR LR LR
comp=Z,913nm,21.0s,MS5.6
SAML Samuel 160.01 180 ePKPdf PKPdf 15 05 04.2 +1.1
SAML ePKPab PKPab 15 05 43.4 +0.7
SAML ePP PP 15 09 19.1 -5.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SAML				LR	LR		
	comp=Z,2µm,20.0s						
ROSC	El Rosal	167.23	119	PKP	PKPdf	15 05 10.7	+1.0
	comp=Z,8.0nm,0.4s,baz=97,slow=21,SNR=10						
ROSC				PKPab	PKPab	15 06 16.8	+2.4
	comp=Z,4.5nm,0.4s,baz=96,slow=22,SNR=4.9						
ROSC	El Rosal	167.23	119	ePKPdf	PKPdf	15 05 11.7	+2.0
ROSC				ePKPab	PKPab	15 06 17.1	+2.7
SDV	Santo Domingo	172.23	106	PKP	PKPdf	15 05 12.8	+0.1
	comp=Z,3.4nm,0.4s,baz=188,slow=1.9,SNR=13						
SDV				PKPab	PKPab	15 06 38.3	+1.7
	comp=Z,3.5nm,0.3s,baz=314,slow=2.2,SNR=3.3						
SDV	Santo Domingo	172.23	106	ePKPdf	PKPdf	15 05 13.5	+0.8
SDV				LR	LR		
	comp=Z,1µm,19.0s						
SJG	San Juan	172.50	23	PKIKP	PKPdf	15 05 13.2	+0.4
SJG				MLR	MLR		
	comp=Z,1µm,21.0s						

*ISCJB **02** 15:13:47.3±0.9, 10.1S±02×1063E±02, h33km, mb3.9/7, Error ellipse: s-maj=39.8km s-min=19.1km az=101.8*

*IDC **02** 15:13:49.6±3.0, 8.70S×107.76E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/18, mbtmp3.7/5, Error ellipse: s-maj=145.1km s-min=22.4km az=48.0*

*NEIC **02** 15:13:49.4±1.5, 9.15S×107.26E, h10km, mb4.4/1, Error ellipse: s-maj=56.2km s-min=15.2km az=49.0*

ISC 02 15:13:49.7±0.9**, 101S**±02×**1063E**±02**, h35km, n7, σ0.58**/7**, mb3.9**/7**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.75	113	P	P	15 19 43.0	-0.9
	0.1nm,0.6s,mb2.8,baz=289,slow=10,SNR=3.5						
ASAR	Alice Springs	29.58	121	P	P	15 19 52.2	+1.0
	0.9nm,1.1s,mb3.4,baz=296,slow=7.1,SNR=3.9						
SONM	Songino Array	57.70	0	P	P	15 23 32.1	-4.7
	0.6nm,0.8s,mb3.7,baz=198,slow=7.6,SNR=3.4						
MKAR	Makanchi Array	60.59	341	P	P	15 23 56.5	-0.3
	1.1nm,0.5s,mb4.3,baz=147,slow=7.7,SNR=17						
MAW	Mawson	64.19	197	eP	P	15 24 20.7	-0.1
	7.4nm,1.2s,mb4.6						
BVAR	Borovoye Array	69.97	338	P	P	15 24 57.8	+0.2
	1.6nm,0.7s,mb4.1,baz=141,slow=9.3,SNR=5.9						
CHKZ	Chkalovo	70.40	338	eP	P	15 25 00.3	+0.1
	1.6nm,0.5s,mb4.2						

*BJI **02** 15:18:15.9, 14.06N×145.70E, h108km, mB5.3, mb4.7*

*ISCJB **02** 15:18:17.7±0.8, 14.20N±0.04×145.37E±0.07, h104km±6km, mb4.6/55, Error ellipse: s-maj=11.3km s-min=6.5km az=151.7*

*IDC **02** 15:18:17.5±0.5, 14.18N×145.56E, h87km±4km, mb4.3/17, mb1 4.4/17, mb1mx4.3/22, mbtmp4.6/17, Error ellipse: s-maj=13.7km s-min=8.6km az=109.0*

*NEIC **02** 15:18:17.5±0.3, 14.25N×145.36E, mb4.8/21, Error ellipse: s-maj=9.8km s-min=5.9km az=85.0*

*MOS **02** 15:18:18.0±1.1, 14.22N×145.28E, h104km, mb4.7/17, Error ellipse: s-maj=17.6km s-min=7.5km az=107.4*

ISC 02 15:18:18.3±0.8**, 1423N**±004×**14545E**±007**, h93km**±6km**, h92km**±1.4km**:pP-P, n125, σ1.17**/103**, mb4.6**/55**, 7C-3D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.85	222	P	Pn	15 18 37.0	+0.4
	2µm,0.3s,baz=87,slow=1.8,SNR=2697						
GUMO				S	Sn	15 18 49.9	-0.3
	4µm,0.3s,baz=264,slow=20,SNR=124						
JOW	Kunigami	20.36	311	P	P	15 22 49.8	+2.5
	17nm,0.5s,baz=130,slow=19,SNR=8.1						
MJAR	Matsushiro Arr	23.14	345	P	P	15 23 14.3	-2.2
	2.5nm,0.6s,mb3.7,baz=166,slow=10,SNR=6.6						
MJAR				pP		15 23 33.6	
	1.7nm,0.7s,baz=160,slow=10,SNR=2.9						
MJAR	Matsushiro Arr	23.14	345	P	P	15 23 14.3	-2.2
MJAR				pP		15 23 33.6	
MAJO	Matsushiro	23.14	345	eP	P	15 23 16.1	-0.4
MAT	Matsushiro	23.14	345	P	P	15 23 16.1	-0.4
MAT	Matsushiro	23.14	345	P	P	15 23 16.0	-0.5
APYP	Conner	23.54	282	eP	P	15 23 20.8	+0.8
PMG	Port Moresby	23.55	176	P	P	15 23 19.0	-1.1
	22nm,0.8s,mb4.5,baz=25,slow=8.0,SNR=7.0						
PMG	Port Moresby	23.55	176	eP	P	15 23 18.4	-1.7
PMG				pmax	pmax		
	comp=Z,25nm,0.8s						
PMG	Port Moresby	23.55	176	eP	P	15 23 18.4	-1.7
	comp=Z,25nm,0.8s,mb4.6						
KAKA	Kakadu	29.71	206	eP	P	15 24 14.7	-0.8
	comp=Z,23nm,0.7s,mb4.9						
NJ2	Nanjing	30.08	311	eP	P	15 24 19.6	+0.8
NJ2				AP	pP	15 24 41.4	+1.6
NJ2				XP	sP	15 24 53.2	+2.6
NJ2				PP	PP	15 25 22.7	-5.6
NJ2				S	S	15 29 12.0	+1.5
NJ2				XS	sS	15 29 49.0	+2.0
NJ2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,530nm,5.8s						
VLA	Vladivostok	31.06	341	eP	P	15 24 27.2	-0.2
VLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
YSS	Yuzh-Sakhalins	32.70	357	eP	P	15 24 39.0	-2.8
MDJ	Mudanjiang	33.16	339	P	P	15 24 46.8	+1.0
MDJ				AP	pP	15 25 09.3	+2.3
MDJ				XP	sP	15 25 21.1	+3.4
MDJ				PP	PP	15 26 04.6	+2.2
MDJ				PCP	PcP	15 27 26.1	-0.6
MDJ				S	S	15 30 00.6	+2.2
MDJ				SCP	ScP	15 31 01.5	-1.0
MDJ				PCS	PcS	15 31 11.3	-0.9
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,256nm,7.7s						
MDJ				LR	LR		
	comp=N,334nm,20.7s						
MDJ				LR	LR		
	comp=E,560nm,19.0s						
MDJ				LR	LR		
	comp=Z,401nm,17.2s						
CTA	Charters Tower	34.11	179	eP	P	15 24 54.7	+0.6
	comp=Z,8.6nm,1.6s,mb4.3						
CTA	Charters Tower	34.11	179	eP	P	15 24 54.7	+0.6
CTA				pmax	pmax		
	comp=Z,9.0nm,1.6s						
CTAO	Charters Tower	34.11	179	eP	P	15 24 54.7	+0.6
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
CTAO	Charters Tower	34.11	179	eP	P	15 24 54.7	+0.7
	comp=Z,3.6nm,0.6s,mb4.4						
WRAB	Tennant Creek	35.66	198	eP	P	15 25 07.4	0.0
WRAB				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.4						
WRAB	Tennant Creek	35.66	198	eP	P	15 25 07.4	0.0
	comp=Z,32nm,0.7s,mb5.4						
WB2	Warramunga Arr	35.67	198	eP	P	15 25 07.4	-0.1
WRA	Warramunga Arr	35.67	198	P	P	15 25 06.8	-0.7
	comp=Z,24nm,0.8s,mb5.2,baz=22,slow=9.2,SNR=77						
WRA				pP	pP	15 25 28.6	-0.3
	comp=Z,3.1nm,0.6s,baz=21,slow=9.3,SNR=2.0						
WRA				PcP	PcP	15 27 34.4	+0.5
	comp=Z,2.1nm,0.8s,baz=10,slow=3.3,SNR=5.6						
WRA				ScP	ScP	15 31 10.6	-0.8
	comp=Z,2.1nm,0.9s,baz=18,slow=4.0,SNR=8.8						
WRA	Warramunga Arr	35.67	198	P	P	15 25 06.8	-0.7
WRA				*PP	pP	15 25 28.6	-0.3
WRA						15 27 34.4	
BJT	Baijiatuau	36.29	321	eP	P	15 25 14.2	+1.4
BJT				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BJT	Baijiatuau	36.29	321	eP	P	15 25 14.2	+1.4
	comp=Z,5.2nm,0.5s,mb4.7						
KSM	Kuching	36.97	253	eP	P	15 25 18.3	-0.2
FITZ	Fitzroy Crossi	37.60	212	⇓iP	P	15 25 24.0	+0.2
	comp=Z,15nm,0.9s,mb4.8						
GYA	Guiyang	38.20	295	P	P	15 25 31.6	+2.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
AS31	Alice Springs	39.32	197	⇑iP	P	15 25 38.5	+0.3
ASAR	Alice Springs	39.32	197	P	P	15 25 38.4	+0.1
	comp=Z,4.9nm,0.7s,mb4.5,baz=23,slow=11,SNR=76						
ASAR				pP	pP	15 25 58.9	-1.0
	comp=Z,2.2nm,0.6s,baz=24,slow=9.4,SNR=3.1						
ASAR				ScP	ScP	15 31 26.1	+0.9
	comp=Z,0.7nm,0.8s,baz=16,slow=4.3,SNR=5.8						
ASPA	Alice Springs	39.32	197	⇑iP	P	15 25 38.5	+0.2
HHC	Hu-ho-hao-te	39.66	318	eP	P	15 25 42.1	+1.0
HHC				AP	pP	15 26 04.8	+2.1
HHC				XP	sP	15 26 16.6	+3.2
HHC				PP	PP	15 27 18.5	+4.7
HHC				SCP	ScP	15 31 25.8	-0.7
HHC				PCS	PcS	15 31 36.3	0.0
HHC				S	S	15 31 37.4	-0.1
HHC				XS	sS	15 32 17.3	+2.5
HHC				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,483nm,4.9s						
HHC				LR	LR		
	comp=N,331nm,14.2s						
HHC				LR	LR		
	comp=E,277nm,12.3s						
HHC				LR	LR		
	comp=Z,368nm,16.1s						
KMI	Kunming	41.49	292	P	P	15 25 56.6	+0.5
KMI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.5						
DZM	Mont Dzumac	41.54	150	P	P	15 25 57.1	+0.6
	comp=Z,12nm,0.8s,mb4.7,baz=337,slow=6.9,SNR=8.6						
CD2	Chengdu	41.65	301	eP	P	15 25 55.5	-1.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
LZH	Lanzhou	43.06	308	eP	P	15 26 11.5	+2.6
LZH				AP	pP	15 26 33.5	+2.7
LZH				XP	sP	15 26 44.4	+3.0
LZH				AMB	AMB		
	comp=Z,42nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,196nm,5.0s						
ARMA	Armidale	44.79	172	eP	P	15 26 23.4	+0.7
STKA	Stephens Creek	45.99	185	eP	P	15 26 31.8	-0.4
	comp=Z,4.8nm,0.9s,mb4.2						
STKA	Stephens Creek	45.99	185	P	P	15 26 31.8	-0.4
	comp=Z,7.5nm,0.9s,mb4.4,baz=6.5,slow=4.8,SNR=7.7						
ULN	Ulaanbaatar	46.18	325	d iP	P	15 26 35.1	+1.4
ULN				i *PP	pP	15 26 56.9	+1.0
ULN	Ulaanbaatar	46.18	325	eP	P	15 26 34.9	+1.2
	comp=Z,4.7nm,0.8s,mb4.3						
ULN				epP	pP	15 26 56.8	+1.0
SONM	Songino Array	46.54	324	P	P	15 26 37.1	+0.6
	comp=Z,4.7nm,0.7s,mb4.3,baz=144,slow=9.0,SNR=18						
SONM				pP	pP	15 26 57.8	-0.9
	comp=Z,1.3nm,0.6s,baz=112,slow=6.4,SNR=2.6						
GTA	Gaotai	47.17	311	eP	P	15 26 42.9	+1.5
GTA				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.4						
FORT	Forrest	47.77	200	eP	P	15 26 45.7	-0.4
	comp=Z,19nm,0.6s,mb5.1						
YAK	Yakutsk	49.05	350	c iP	P	15 26 55.0	-0.9
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
ZAK	Zakamensk	49.62	326	⇓iP	P	15 27 01.0	+0.8
ZAK				e	pP	15 27 23.8	+1.1
ZAK				e		15 28 20.2	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
TLY	Talaya	50.12	327	⇑iP	P	15 27 04.8	+0.8
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
TLY	Talaya	50.12	327	eP	P	15 27 04.3	+0.4
	comp=Z,3.2nm,0.6s,mb4.4						
TOO	Toolangi	51.52	180	eP	P	15 27 15.9	+1.4
	comp=Z,9.0nm,0.7s,mb4.9						
TOO	Toolangi	51.52	180	eP	P	15 27 15.9	+1.4
TOO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
KLBR	Kellerberrin	52.74	210	eP	P	15 27 22.9	-0.7
	comp=Z,31nm,1.3s,mb5.2						
BILL	Bilibino	55.44	9	eP	P	15 27 40.8	-2.4
BILL				e*PP	pP	15 28 06.3	+0.3
BILL				eSS	SS	15 39 03.8	-2.9
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
JIRN	Jiri	56.46	294	eP	P	15 27 49.0	-1.5
GUN	Gumba	56.74	294	eP	P	15 27 51.9	-0.5
WMQ	Urumqi	57.11	313	eP	P	15 27 55.5	+0.5
WMQ				XP	sP	15 28 35.0	+6.7
WMQ				PP	PP	15 30 05.1	+2.4
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,114nm,4.0s						
WMQ				LR	LR		
	comp=N,218nm,18.0s						
WMQ				LR	LR		
	comp=E,235nm,18.0s						
WMQ				LR	LR		
	comp=Z,215nm,18.0s						
PKI	Pulchoki	57.16	294	eP	P	15 27 54.6	-0.8
DMN	Daman	57.42	294	eP	P	15 27 56.4	-0.8
GKN	Gorkha	57.84	294	eP	P	15 27 59.0	-1.2
	comp=Z,25nm,0.9s,mb5.2						
TIXI	Tiksi	58.26	354	eP	P	15 28 01.3	-1.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.9s,mb4.4						
KOLN	Koldanda	58.76	294	eP	P	15 28 06.3	-0.3
	comp=Z,14nm,0.8s,mb5.0						
MKAR	Makanchi Array	61.42	316	P	P	15 28 25.5	+0.8
	comp=Z,3.5nm,0.5s,mb4.6,baz=82,slow=8.7,SNR=45						
MKAR				pP	pP	15 28 47.7	-0.3
	comp=Z,2.5nm,0.6s,baz=86,slow=9.0,SNR=5.5						
MKAR	Makanchi Array	61.42	316	P	P	15 28 25.5	+0.8
MKAR				pP	pP	15 28 47.7	-0.3
ZAL	Zalesovo	61.44	324	P	P	15 28 25.8	+0.9
	comp=Z,2.1nm,0.8s,mb4.2,baz=20,slow=7.6,SNR=9.3						
ZAL				pP	pP	15 28 48.4	+0.3
	comp=Z,1.5nm,0.8s,baz=264,slow=1.3,SNR=2.6						
NVS	Novosibirsk	62.56	325	⇑iP	P	15 28 31.9	-0.5
NVS				i	pP	15 28 54.2	-1.5
NVS				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
NVS				pmax	pmax		
	comp=E,8.0nm,1.3s						
KDAK	Kodiak Island	63.23	32	P	P	15 28 38.0	+1.2
	comp=E,4.4nm,0.5s,mb4.6,baz=308,slow=8.3,SNR=5.5						
KURK	Kurchatov	64.46	320	⇑iP	P	15 28 45.1	+0.2
KURK	Kurchatov	64.46	320	eP	P	15 28 44.5	-0.4
AAK	Ala-Archa	66.52	310	eP	P	15 28 57.4	-0.8
AAK				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.1						
BVAR	Borovoye Array	69.78	322	P	P	15 29 18.9	+0.4
	comp=Z,4.0nm,0.5s,mb4.5,baz=101,slow=7.5,SNR=28						
BRVK	Borovoye	69.84	322	eP	P	15 29 19.3	+0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
BRVK	Borovoye	69.84	322	eP	P	15 29 19.3	+0.4
	comp=Z,2.8nm,0.7s,mb4.2						
DAWY	Dawson	70.82	27	eP	P	15 29 25.1	+0.3
TVO	Taravao	71.82	114	eP	P	15 29 33.1	+2.2
	comp=Z,117nm,0.9s,mb5.7						
TVO	Taravao	71.82	114	eP	P	15 29 33.1	+2.2
TVO				pmax	pmax		
	comp=Z,117nm,0.9s,mb5.7						
PMOR	Pomariorio Ree	72.03	111	eP	P	15 29 33.4	+1.2
	comp=Z,32nm,1.1s,mb5.1						
INK	Inuvik	73.56	23	P	P	15 29 39.6	-1.6
	comp=Z,3.8nm,1.0s,mb4.1,baz=330,slow=5.8,SNR=3.6						
INK	Inuvik	73.56	23	eP	P	15 29 40.5	-0.7
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	Inuvik	73.56	23	eP	P	15 29 40.5	-0.7
	comp=Z,3.2nm,0.9s,mb4.0						
ARU	Arti	76.56	325	eP	P	15 30 00.0	+1.6
OOW	Octopus West	79.86	43	P	pP	15 30 43.9	+3.1
HDW	Hoodsport	80.63	43	P	pP	15 30 47.3	+2.3
RNO	Roman Nose	80.86	47	P	pP	15 30 49.0	+2.8
MPOR	Mary's Peak	80.88	46	P	pP	15 30 49.4	+3.0
CMW	Cultus Mountai	81.10	42	P	pP	15 30 49.7	+2.1
MBW	Mount Baker	81.17	42	P	pP	15 30 49.5	+1.6
JCW	Jim Creek	81.27	43	P	pP	15 30 50.1	+1.7
RPW	Rockport	81.49	42	P	pP	15 30 50.9	+1.2
BROR	Big Rock Looko	81.70	47	P	pP	15 30 52.4	+1.6
BBOR	Butler Butte	81.81	48	P	pP	15 30 53.7	+2.3
IRO	Indian Ridge	81.89	47	P	pP	15 30 53.5	+1.7
WRW	Wenatchee Ridg	82.02	43	P	pP	15 30 54.0	+1.5
YKA	Yellowknife Ar	82.03	28	P	P	15 30 26.9	-1.3
	comp=Z,3.5nm,0.7s,mb4.3,baz=288,slow=5.4,SNR=17						
YKA				pP	pP	15 30 49.1	-3.4
	comp=Z,0.8nm,0.5s,baz=284,slow=5.1,SNR=2.6						
YKA	Yellowknife Ar	82.03	28	i P	P	15 30 27.7	-0.5
YKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WIFE	Three Sisters-	82.19	47	P	pP	15 30 55.6	+2.2
NLW	Nelson Butte	82.33	42	P	pP	15 30 55.4	+1.3
TBM	Table Mountain	82.36	43	P	pP	15 30 56.1	+1.8
ETW	Entiat	82.44	43	P	pP	15 30 56.1	+1.4
VIPM	Ingram Point	82.93	46	P	pP	15 30 59.1	+1.9
SAW	Saint Andrews	83.03	43	P	pP	15 30 58.6	+0.8
MDW	Midway	83.04	44	P	pP	15 30 59.4	+1.6
GBL	Gable Mountain	83.25	44	P	pP	15 31 01.0	+2.1
WVOR	Wild Horse Val	84.82	48	eP	P	15 30 43.8	+1.3
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WVOR	Wild Horse Val	84.82	48	eP	P	15 30 43.8	+1.3
	comp=Z,6.4nm,0.8s,mb4.6						
NVAR	Mina Array Bea	86.08	51	P	P	15 30 49.9	+1.2
	comp=Z,3.3nm,0.7s,mb4.4,baz=274,slow=5.0,SNR=30						
NVAR				pP	pP	15 31 12.7	-0.6
	comp=Z,4.1nm,0.7s,baz=261,slow=8.3,SNR=9.3						
KEV	Kevo	86.09	342	ep	P	15 30 46.1	-2.7
	comp=Z,3.9nm,0.6s,mb4.5						
KEV	Kevo	86.09	342	eP	P	15 30 46.1	-2.7
KEV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ARCES	ARCESS Array B	86.65	342	P	P	15 30 51.2	-0.3
	comp=Z,2.6nm,0.6s,mb4.3,baz=67,slow=8.1,SNR=13						
HLID	Hailey	87.50	46	eP	P	15 30 56.9	+1.3
JOF	Joensuu	87.95	335	ep	P	15 30 55.0	-2.8
	comp=Z,4.1nm,0.6s,mb4.6						
OBN	Obninsk	88.87	327	eP	P	15 31 00.4	-1.7
OBN				e*PP	pP	15 31 24.4	-2.4
OBN				eSS	SS	15 47 39.2	+3.0
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
KIV	Kislovodsk	89.18	315	⇑iP	P	15 31 03.4	-0.2
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KAF	Kangasniemi	90.37	336	ep	P	15 31 06.2	-2.9
	baz=55,slow=4.4						
FINES	FINESS Array B	90.82	335	P	P	15 31 09.1	-2.1
	comp=Z,1.8nm,0.4s,mb4.5,baz=67,slow=5.0,SNR=24						
BW06	Boulder Array	91.12	45	eP	P	15 31 13.1	+0.5
PDAR	Pinedale Array	91.12	45	P	P	15 31 11.9	-0.7
	comp=Z,1.0nm,0.6s,mb4.1,baz=236,slow=2.3,SNR=12						
PDAR				pP	pP	15 31 35.7	-1.6
	comp=Z,1.2nm,0.7s,baz=264,slow=1.5,SNR=5.7						
VNDA	Vanda	92.07	176	P	P	15 31 16.8	-0.1
	comp=Z,2.2nm,0.9s,mb4.4,baz=313,slow=4.9,SNR=7.3						
ANN	Anapa	92.41	317	eP	P	15 31 16.2	-2.3
ANN				e		15 41 40.8	
ANN				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.2						
PLCA	Paso Flores	139.02	137	PKP	PKPdf	15 37 34.8	+0.8
	comp=Z,2.3nm,0.9s,baz=273,slow=11,SNR=3.2						
DBIC	Dimbokro	143.95	303	PKP	PKPdf	15 37 41.6	-1.2
	comp=Z,4.1nm,0.6s,baz=48,slow=9.5,SNR=6.0						
DBIC	Dimbokro	143.95	303	ePKP	PKPdf	15 37 42.0	-0.8
TRQA	Tornquist	146.04	139	ePKPbc	PKPbc	15 37 48.0	+0.6
LPAZ	La Paz	147.56	98	PKPbc	PKPbc	15 37 51.4	-0.3
	comp=Z,5.5nm,0.9s,baz=324,slow=2.9,SNR=22						
LPAZ	La Paz	147.56	98	ePKPdf	PKPdf	15 37 50.9	+1.9

*ISCJB **02** 15:21:45.9±0.5, 68.05N±0.05×59.1W±0.1, h10km, mb4.2/13, MS4.5/1, Error ellipse: s-maj=7.6km s-min=6.1km az=86.4*

*BJI **02** 15:21:45.6, 68.20N×58.80W, h10km, mB4.7, mb4.6, Ms4.5, Msz4.5*

*IDC **02** 15:21:47.8±0.9, 68.11N×58.56W, h0km, mb3.7/7, mb1 4.1/10, mb1mx3.8/26, mbtmp3.9/10, ML3.8/3, Error ellipse: s-maj=25.6km s-min=16.3km az=155.0*

*NEIC **02** 15:21:48.7±0.6, 68.16N×58.83W, h10km, mb4.2/3, ML4.3(OTT), Error ellipse: s-maj=11.0km s-min=9.0km az=189.0*

*OTT **02** 15:21:48.9±0.2, 68.21N×58.59W, h18km, ML4.2/6, Davis Strait. 240km east from Qikiqtarjuaq, Nu Eastern Arctic Background Seismic Zone.*

ISC 02 15:21:47.4±2.2**, 6806N**±005×**589W**±01**, h9km**±15km**, n55, σ1.51**/73**, mb4.2**/13**, MS4.5**/1**, Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	3.35	105	Pn	Pn	15 22 39.8	-0.1
	25nm,0.3s,baz=278,slow=13,SNR=76						
SFJD				Sn	Sn	15 23 15.2	-4.5
	65nm,0.3s,baz=188,slow=15,SNR=16						
SFJD	Kangerlussuaq	3.35	105	i P	Pn	15 22 39.7	-0.2
SFJD				i S	Sn	15 23 17.1	-2.6
SFJD							
	comp=Z,790nm,20.0s						
SFJD	Kangerlussuaq	3.35	105	PN	Pn	15 22 39.7	-0.1
SFJD				SN	Sn	15 23 15.8	-4.0
SFJD				Trac		15 23 22.3	
	comp=Z,171nm,0.2s						
SFJD	Kangerlussuaq	3.35	105	i P	Pn	15 22 39.7	-0.2
SFJD				i S	Sn	15 23 17.1	-2.6
FRB	Frobisher Bay	5.86	227	Pn	Pn	15 23 17.6	+3.3
	comp=Z,12nm,0.3s,baz=27,slow=10.0,SNR=38						
FRB				Sn	Sn	15 24 20.6	-1.1
	comp=Z,26nm,0.3s,baz=248,slow=6.8,SNR=6.3						
FRB	Frobisher Bay	5.86	227	PN	Pn	15 23 17.4	+3.0
FRB				SN	Sn	15 24 21.4	-0.3
FRB				Trac		15 24 43.0	
	comp=Z,56nm,0.2s						
PINU	Pond Inlet	7.90	315	PN	Px	15 23 08.2	
PINU				SN	Sx	15 24 32.6	
PINU				Trac		15 24 40.4	
	comp=Z,19nm,0.2s						
SUMG	Summit	8.22	47	ePn	Pn	15 23 42.7	-4.1
	comp=Z,420nm,0.8s						
GIFN	Gifford Fjord,	8.37	294	PN	Pn	15 23 47.9	-0.9
GIFN				SN	Sn	15 25 15.3	-8.1
GIFN				Trac		15 25 19.1	
	comp=Z,36nm,0.3s						
GIFN	Gifford Fjord,	8.37	294	Pn	Pn	15 23 47.9	-0.9
GIFN				Sn	Sn	15 25 15.3	-8.1
ILON	Igloolik, Nuna	8.43	290	PN	Pn	15 23 49.7	0.0
ILON				SN	Sn	15 25 16.2	-8.7
ILON				Trac		15 25 54.9	
	comp=Z,58nm,0.3s						
ILON	Igloolik, Nuna	8.43	290	Pn	Pn	15 23 49.7	0.0
ILON				Sn	Sn	15 25 16.2	-8.7
SRLN	Sarcpa Lake, N	9.04	284	PN	Pn	15 23 58.4	+0.4
SRLN				SN	Sn	15 25 33.1	-6.9
SRLN				Trac		15 25 36.0	
	comp=Z,41nm,0.2s						
SRLN	Sarcpa Lake, N	9.04	284	Pn	Pn	15 23 58.4	+0.4
SRLN				Sn	Sn	15 25 33.1	-6.9
AP3N	Apex site 3 Nu	9.36	290	PN	Pn	15 24 02.3	0.0
AP3N				SN	Sn	15 25 39.0	-8.7
AP3N				Trac		15 25 46.3	
	comp=Z,25nm,0.1s						
AP3N	Apex site 3 Nu	9.36	290	Pn	Pn	15 24 02.3	-0.1
AP3N				Sn	Sn	15 25 39.0	-8.7
QILN	Qililugaq Expl	10.65	275	PN	Pn	15 24 19.9	-0.1
QILN				SN	Sx	15 26 08.1	
QILN				Trac		15 26 16.0	
	comp=Z,42nm,0.2s						
QILN	Qililugaq Expl	10.65	275	Pn	Pn	15 24 19.9	-0.1
QILN				Sn	Sx	15 26 08.1	
KUQ	Kuujjuuaa	10.86	208	PN	Pn	15 24 24.5	+1.5
KUQ				SN	Sx	15 26 15.0	
KUQ				Trac		15 26 27.7	
	comp=Z,6.5nm,0.1s						
KUQ	Kuujjuuaa	10.86	208	Pn	Pn	15 24 24.5	+1.5
KUQ				Sn	Sx	15 26 15.0	
RES	Resolute Bay	13.06	316	PN	Pn	15 24 52.0	-1.0
RES				SN	Sx	15 27 07.7	
RES				Trac		15 27 39.0	
	comp=Z,7.3nm,0.6s						
RES	Resolute Bay	13.06	316	ePn	Pn	15 24 52.0	-1.0
	comp=Z,8.5nm,0.6s						
SCHQ	Schefferville	13.79	200	Pn	Pn	15 25 02.4	-0.6
	comp=Z,1.4nm,0.3s,baz=357,slow=12,SNR=16						
SCHQ				Sn	Sn	15 27 30.7	-5.5
	comp=Z,0.5nm,0.3s,baz=118,slow=17,SNR=4.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SCHQ	Schefferville	13.79	200	PN	Pn	15 25 04.0	+1.1
SCHQ				SN	Sn	15 27 30.6	-5.5
SCHQ				Trac		15 27 53.0	
	comp=Z,5.4nm,0.3s						
SCHQ	Schefferville	13.79	200	*e*Pn	Pn	15 25 04.0	+1.1
EUNU	Eureka	13.95	341	PN	Pn	15 25 03.9	-1.3
EUNU				SN	Sx	15 27 25.1	
LG4Q	La Grande 4	16.18	214	PN	Pn	15 25 32.4	-2.5
LG4Q				SN	Sx	15 28 19.2	
LG4Q				Trac		15 28 23.8	
	comp=Z,13nm,0.5s						
LG4Q	La Grande 4	16.18	214	Pn	Pn	15 25 32.4	-2.5
LG4Q				Sn	Sx	15 28 19.2	
YOSQ	Ashton Mining	16.52	209	PN	Pn	15 25 36.5	-2.9
YOSQ				SN	Sx	15 28 29.6	
WEMQ	Wemindji, Queb	17.60	221	PN	Pn	15 25 50.4	-2.4
WEMQ				SN	Sx	15 28 54.7	
FCC	Fort Churchill	18.02	256	PN	Pn	15 25 57.5	-0.6
FCC				SN	Sx	15 29 07.1	
FCC	Fort Churchill	18.02	256	*e*Pn	Pn	15 25 59.0	+1.0
SILO	Sutton Inlier	18.27	235	PN	Pn	15 25 59.9	-1.2
SILO				SN	Sx	15 29 09.3	
VIMO	Victor Mine	19.36	230	PN	Pn	15 26 15.1	+0.8
VIMO				SN	Sx	15 29 36.7	
MALO	McAlpine Lake	20.83	220	PN	P	15 26 33.0	+3.8
NANO	Nakina Ontario	22.48	232	PN	P	15 26 50.1	+3.2
YKW3	Yellowknife Ar	23.18	283	PN	P	15 26 52.5	-1.8
YKW3				SN	S	15 31 00.2	-5.7
YKA	Yellowknife Ar	23.22	283	P	P	15 26 56.7	+2.0
	comp=Z,0.5nm,0.5s,mb3.2,baz=50,slow=11,SNR=4.4						
YKA				S	S	15 31 05.1	-1.4
	comp=Z,1.3nm,0.5s,baz=51,slow=23,SNR=5.4						
YKA	Yellowknife Ar	23.22	283	P	P	15 26 56.7	+2.0
YKA				S	S	15 31 05.1	-1.4
FFC	Flin Flon	23.93	258	PN	P	15 27 05.3	+3.7
FFC	Flin Flon	23.93	258	*e*P	P	15 27 00.5	-1.2
	comp=Z,7.2nm,0.7s,mb4.2						
ULM	Lac du Bonnet	25.41	244	P	P	15 27 17.4	+2.2
	comp=Z,3.6nm,0.5s,mb4.1,baz=30,slow=13,SNR=7.5						
ULM	Lac du Bonnet	25.41	244	*e*P	P	15 27 17.8	+2.6
	comp=Z,3.9nm,0.6s,mb4.1						
EYMN	Ely	25.99	236	*e*P	P	15 27 23.5	+3.0
INK	Inuvik	26.20	306	P	P	15 27 23.9	+1.6
	comp=Z,2.1nm,0.8s,mb3.7,baz=46,slow=6.4,SNR=4.7						
INK	Inuvik	26.20	306	*e*P	P	15 27 24.4	+2.0
	comp=Z,2.6nm,0.8s,mb3.8						
ARCES	ARCESS Array B	28.31	48	P	P	15 27 42.6	+1.3
	comp=Z,2.3nm,0.8s,mb3.9,baz=310,slow=9.4,SNR=3.9						
PDAR	Pinedale Array	36.65	253	P	P	15 28 57.0	+2.8
	comp=Z,0.6nm,0.6s,mb3.6,baz=28,slow=6.7,SNR=4.2						
GERES	GERESS Array B	39.65	81	P	P	15 29 18.9	-0.6
	comp=Z,0.6nm,0.6s,mb3.5,baz=332,slow=7.6,SNR=4.8						
SONM	Songino Array	63.91	11	P	P	15 32 21.4	+0.8
	comp=Z,0.2nm,0.3s,mb3.7,baz=24,slow=32,SNR=2.0						
WMQ	Urumqi	65.65	26	*e*P	P	15 32 33.0	+1.1
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.9						
MDJ	Mudanjiang	67.47	353	P	P	15 32 41.5	-2.1
MDJ				AP	pP	15 32 44.7	-1.8
MDJ				PP	PP	15 35 09.0	-3.2
MDJ				S	S	15 41 36.1	-3.7
MDJ				SCS	ScS	15 42 39.0	-3.0
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,389nm,12.2s						
MDJ				LR	LR		
	comp=N,269nm,36.0s						
MDJ				LR	LR		
	comp=E,83nm,29.6s						
MDJ				LR	LR		
	comp=Z,157nm,19.1s						
HHC	Hu-ho-hao-te	71.18	8	*e*P	P	15 33 06.3	-0.2
HHC				AP	pP	15 33 10.9	+1.4
HHC				XP	sP	15 33 13.3	+2.7
HHC				PCP	PcP	15 33 27.1	+0.6
HHC				PP	PP	15 35 45.5	+1.2
HHC				S	S	15 42 19.6	-4.0
HHC				XS	sS	15 42 27.2	-1.3
HHC				PS		15 42 49.0	
HHC				SCS	ScS	15 43 05.8	-5.3
HHC				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,318nm,7.3s						
HHC				LR	LR		
	comp=N,173nm,17.1s,MS4.5						
HHC				LR	LR		
	comp=E,168nm,18.0s,MS4.5						
HHC				LR	LR		
	comp=Z,220nm,16.1s,MS4.5						
NJ2	Nanjing	80.19	2	*e*P	P	15 34 00.5	+2.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
KMI	Kunming	86.11	17	P	P	15 34 28.7	0.0
KMI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.7						

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*SOF **02** 15:47:00.9, 4032N×2570E, h2km, MD3.4*
*NEIC **02** 15:47:02.9, 4033N×2577E, h11km, MD3.4(SOF), MD3.7(ATH), ML3.8(THE), After ATH.*
*MOS **02** 15:47:02.0±1.2, 4025N×2553E, h10km, mb4.5/1, Error ellipse: s-maj=13.0km s-min=5.5km az=98.6*
*ATH **02** 15:47:02.7, 4033N×2569E, h26km±1km, MD3.7/5*
*ISCJB **02** 15:47:02.3±0.3, 4030N±002×2566E±002, h8km±2km, Error ellipse: s-maj=2.6km s-min=2.2km az=42.5*
*CSEM **02** 15:47:03.5±0.1, 4032N×2570E, h20km, MD3.5, Error ellipse: s-maj=1.5km s-min=1.3km az=179.0*
*ISK **02** 15:47:03.3, 4031N×2580E, h14km, MD3.5*
*THE **02** 15:47:04.0, 4026N×2565E, h11km, ML3.7*
ISC 02 15:47:03.0±0.3**, 4029N**±002×**2567E**±002**, h8**km±2km**, n99,** σ**0§98**/132**, 10C-7D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.20	120	*i* PG	Pg	15 47 07.4	+0.3
GADA				*i* SG	Sg	15 47 10.4	+0.5
BOZC	Bozcaada	0.54	147	*i* P	Pg	15 47 13.7	+0.3
BOZC				*i* S	Sg	15 47 21.2	+0.8
LIA	Limnos Island	0.54	224	*e*PN	Pg	15 47 14.6	+1.0
LIA				*e*SN	Sg	15 47 23.1	+2.4
ENEZ	Enez	0.57	39	PG	Pg	15 47 13.4	-0.7
ENEZ				SG	Sg	15 47 21.3	-0.4
LOS	Limnos	0.58	232	*e*Pg	Pg	15 47 15.2	+1.0
LOS				*e*Sg	Sg	15 47 22.0	+0.2
ALN	Alexandroupoli	0.67	25	*e*Pg	Pg	15 47 15.3	-0.6
ALN				*e*Sg	Sg	15 47 27.4	+2.8
EZN	Ezine	0.68	133	PG	Pg	15 47 15.7	-0.5
EZN				SG	Sg	15 47 25.5	+0.4
LPK	Lapseki	0.83	84	PG	Pg	15 47 18.3	-0.8
LPK				SG	Sg	15 47 28.0	-2.0
RDO	Rodhopi	0.86	353	*e*PN	Pg	15 47 19.1	-0.5
RDO				*e*SN	Sg	15 47 30.4	-0.3
CANB	Canakkale	1.10	104	PG	Pg	15 47 23.4	-0.8
PRK	Paraskevi	1.14	156	*e*PN	Pn	15 47 24.7	-0.6
PRK				*e*SN	Sn	15 47 41.4	+0.3
RKY	Sarkoy-Tekirda	1.21	71	PN	Pn	15 47 24.2	-2.1
AYVA	Ayvalik	1.26	141	*i* P	Pn	15 47 26.6	-0.3
AYVA				*i* S	Sb	15 47 44.1	+0.8
AYVA	Ayvalik	1.26	141	*i* P	Pn	15 47 26.5	-0.4
AYVA				*i* S	Sb	15 47 44.1	+0.8
OUR	Ouranopolis	1.29	272	*e*Pg	Pg	15 47 26.6	-1.3
OUR				*e*Sg	Sg	15 47 44.2	-0.5
MFT	Murefte	1.32	68	PN	Pn	15 47 25.9	-1.8
KDZ	Kurdzhali	1.37	352	*i* P	Pn	15 47 27.0	-1.4
MRMT	Marmara Adasi	1.50	77	PN	Pn	15 47 28.4	-1.8
RZN	Rozhen	1.57	333	P	Pn	15 47 31.7	+0.5
PAIG	Paliouri	1.57	257	*e*Pg	Pn	15 47 30.3	-0.9
PAIG				*e*Sg	Sn	15 47 50.4	-1.3
EDC	Edincik	1.68	87	PN	Pn	15 47 32.1	-0.5
PLG	Polygyros	1.70	273	*e*Pn	Pn	15 47 32.5	-0.5
PLG				*e*Sn	Sg	15 48 00.2	+2.4
BNT	Bandirma	1.72	87	PN	Pn	15 47 32.8	-0.4
EDRB	Edirne	1.75	27	PN	Pn	15 47 33.2	-0.5
DIM	Dimitrovgrad	1.76	357	*i* P	Pn	15 47 33.6	-0.2
AOS	Alonnisos	1.78	232	*e*Pb	Pn	15 47 33.4	-0.7
AOS				*e*Sb	Sn	15 47 56.7	-0.1
AOS	Alonnisos	1.78	232	*e*Pb	Pn	15 47 33.3	-0.7
AOS				*e*Sb	Sn	15 47 56.7	-0.1
SOH	Sokhos	1.84	287	*e*Pb	Pn	15 47 34.4	-0.6
SOH				*e*Sb	Sn	15 47 58.1	-0.3
SOH	Sokhos	1.84	287	*e*Pb	Pn	15 47 34.3	-0.6
SOH				*e*Sb	Sn	15 47 58.2	-0.2
CHOS	Chios island	1.93	171	*e*Pb	Pn	15 47 36.0	0.0
CHOS				*e*Sb	Sn	15 47 59.6	-0.8
CHOS	Chios island	1.93	171	*e*Pb	Pn	15 47 36.0	-0.1
PLD	Plovdiv	1.95	338	*e*Pb	Pb	15 47 38.0	-0.8
PLD				*e*Sb	Sb	15 48 02.4	-0.9
PLD	Plovdiv	1.95	338	P	Pb	15 47 39.3	+0.5
MMB	Musomiste	1.96	312	*e*Pb	Pn	15 47 36.0	-0.5
MMB				*e*Sb	Sn	15 48 01.4	+0.1
MMB	Musomiste	1.96	312	P	Pn	15 47 36.2	-0.3
HORT	Hortiatis	1.99	280	*e*Pb	Pb	15 47 36.7	-2.7
HORT				*e*Sb	Sb	15 48 01.6	-2.7
AKS	Akhisar	2.17	130	PN	Pn	15 47 38.6	-0.9
AKHS	Akhisar	2.17	130	*i* P	Pn	15 47 39.4	0.0
AKHS				*i* S	Sb	15 48 11.8	+2.1
BLCB	Balcova	2.18	150	*e*PN	Pn	15 47 39.5	-0.1
KDAG	Bornova	2.26	146	*i* P	Pn	15 47 40.8	+0.2
KDAG				*i* S	Sg	15 48 14.0	-1.5
IZM	Izmir	2.26	146	*e*PN	Pn	15 47 40.7	+0.1
CTT	Catalca	2.26	67	*e*PN	Pn	15 47 40.7	0.0
ELBA	Catalca	2.26	67	*e*P	Pn	15 47 42.4	+1.7
JMB	Yambol	2.28	17	*e*Pn	Pn	15 47 42.0	+1.1
JMB				*e*Sn	Sn	15 48 10.2	+1.0
JMB	Yambol	2.28	17	P	Pn	15 47 44.0	+3.1
JMB	Yambol	2.28	17	*e*Pn	Pn	15 47 42.0	+1.1
JMB				*e*Sn	Sn	15 48 10.1	+1.0
KNT	Kendrikon	2.28	293	*e*Pn	Pn	15 47 41.1	+0.2
KNT				*e*Sn	Sn	15 48 10.4	+1.2
ORLT	Orhaneli	2.48	95	*e*PN	Pn	15 47 44.1	+0.4
KKB	Krupnik	2.51	310	P	Pn	15 47 44.0	-0.1
BGKT	Bogazkoy	2.52	68	*e*PN	Pn	15 47 44.3	+0.1
PTL	Penteli	2.65	213	*e*Pb	Pb	15 47 50.0	-0.6
ULDT	Uludag	2.66	92	*i* P	Pn	15 47 46.8	+0.7
ULDT				*i* S	Sb	15 48 25.3	+1.7
GEMT	Gemlik	2.69	86	*e*PN	Pn	15 47 46.7	+0.1
KLYT	Kilyos	2.73	68	*e*PN	Pn	15 47 47.4	+0.3
SMG	Samos	2.73	160	*e*PN	Pn	15 47 47.0	-0.2
YLV	Yalova	2.84	83	*e*PN	Pn	15 47 48.7	+0.1
AGG	Agios Georgios	2.88	245	*e*Pn	Pn	15 47 49.6	+0.5
AGG				*e*Sn	Sn	15 48 23.8	-0.1
VTS	Vitosha	2.95	322	*e*Sn	Sn	15 48 26.5	+0.7
VTS				*e*Sn	Sn	15 48 27.9	+2.1
VTS	Vitosha	2.95	322	⇓*i*P	Pn	15 47 51.3	+1.1
VTS	Vitosha	2.95	322	*i* P	Pn	15 47 51.0	+0.8
VTS				*e*Sn	Sn	15 48 26.5	+0.8
SZH	Strazhica	2.98	4	P	Pb	15 47 57.4	+1.1
STIP	Stip	2.99	299	*e*Pn	Pb	15 47 58.6	+2.1
ADVT	Abdulvahap	3.11	86	*e*PN	Pn	15 47 52.8	+0.5
SILT	Sile	3.14	73	*e*PN	Pn	15 47 52.6	-0.1
GDZ	Gediz	3.17	111	*i* P	Pb	15 47 58.9	-0.8
APE	Apeiranthos	3.22	182	*e*P	Pn	15 47 52.7	-1.2
MLSB	Milas	3.41	151	*e*PN	Pn	15 47 57.1	+0.6
BODT	Bodrum	3.47	158	*e*PN	Pn	15 47 57.4	+0.1
ALT	Altintas	3.64	108	*e*PN	Pn	15 48 00.0	+0.4
DNZL	Cakiroluk	3.70	134	*i* P	Pn	15 48 00.7	+0.3
ESKT	Eskisehir	4.06	99	*i* P	Pn	15 48 03.4	-1.9
SEYT	Eskypehyr	4.06	99	*i* P	Pn	15 48 03.4	-1.9
IGT	Igoumenitsa	4.18	261	*e*Pn	Pn	15 48 06.5	-0.5
IGT				*e*Sn	Sn	15 48 56.2	+0.3
ISP	Isparta	4.49	121	*e*P	Pn	15 48 13.2	+1.9
TIRR	Tirgusor	4.63	25	⇑*i*P	Pn	15 48 13.1	-0.1
TIRR	Tirgusor	4.63	25	⇑P	Pn	15 48 13.1	-0.1
HARR	Harsova	4.70	20	⇑*i*P	Pn	15 48 13.6	-0.6
HARR	Harsova	4.70	20	⇑P	Pn	15 48 13.6	-0.6
SGKT	Sivrigoynuk	4.88	85	*i* P	Pn	15 48 16.7	+0.1
KIZT	Kizilcal	5.00	104	*e*PN	Pn	15 48 18.9	+0.6
VOIR		5.16	355	⇓*i*P	Pn	15 48 20.5	0.0
VOIR		5.16	355	⇓P	Pn	15 48 20.6	0.0
VOIR		5.16	355	P	Pn	15 48 20.6	+0.1
MLR	Muntele Rosu	5.20	2	⇑*i*P	Pn	15 48 21.9	+0.8
MLR	Muntele Rosu	5.20	2	⇑P	Pn	15 48 21.9	+0.8
BZS	Buzias	6.10	332	⇑*i*P	Pn	15 48 33.4	0.0
BZS	Buzias	6.10	332	⇑P	Pn	15 48 33.4	0.0
BRTR	Keskin Array B	6.14	93	*i* P	Pn	15 48 38.2	+4.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DRGR		6.84	343	⇓*i*P	Pb	15 48 55.5	-6.7
DRGR		6.84	343	⇓P	Pb	15 48 55.5	-6.6
BURAR	Bucovina Array	7.33	358	⇓*i*P	Pn	15 48 52.4	+2.1
BURAR	Bucovina Array	7.33	358	⇓P	Pn	15 48 52.4	+2.1
PKSM	Moragy	7.83	321	⇑*i*P	Pn	15 48 57.6	+0.4
PKSM	Moragy	7.83	321	⇑P	Pn	15 48 57.6	+0.4
KHC	Kasperske Hory	12.32	320	*e*P	Pn	15 49 58.0	-0.7
KIV	Kislovodsk	13.15	68	*e*P	Pn	15 50 14.4	+4.4
KIV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OBN	Obninsk	16.51	22	*e*P	Pn	15 50 56.5	+1.6
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
OBN	Obninsk	16.51	22	*e*P	Pn	15 50 56.5	+1.6
	comp=Z,3.0nm,0.5s						
VSU	Vasula	18.20	2	*e*P	Pn	15 51 15.8	-0.2

IDC 02 15:48:38.4±5.4**, 5264S**×**13936E, h0**km**, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.8**/10**, mbtmp3.8**/2**, Error ellipse: s-maj=295.1km s-min=72.1km az=94.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	29.23	350	P	P	15 54 41.8	0.0
	0.8nm,0.8s,baz=164,slow=10.0,SNR=8.9						
WRA	Warramunga Arr	32.87	351	P	P	15 55 13.7	-0.2
	1.9nm,1.0s,baz=175,slow=7.3,SNR=8.4						
ARCES	ARCESS Array B	145.98	325	PKPbc	PKPbc	16 08 17.8	-2.2
	1.2nm,0.6s,baz=104,slow=3.9,SNR=5.9						

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*CSEM **02** 15:49:13.9±0.1, 4031N×2585E, h15km, MD3.1, Error ellipse: s-maj=4.0km s-min=2.2km az=74.0*
*ISK **02** 15:49:13.1, 4031N×2574E, h16km, MD3.1*
*SOF **02** 15:49:13.5, 4038N×2574E, h2km, MD2.6*
*ISCJB **02** 15:49:14.5±1.0, 4030N±005×258E±0.1, h16km±9km, Error ellipse: s-maj=13.8km s-min=8.1km az=145.2*
ISC 02 15:49:14.7±0.9**, 4030N**±005×**2582E**±010**, h16**km±5km**, n12,** σ**0§61**/15**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.12	151	*i* PG	Pg	15 49 17.8	-0.5
GADA				*i* SG	Sg	15 49 20.9	+0.2
ENEZ	Enez	0.50	30	PG	Pg	15 49 23.9	-0.8
ENEZ				SG	Sg	15 49 32.0	+0.6
EZN	Ezine	0.61	141	PG	Pg	15 49 25.9	-0.8
EZN				SG	Sg	15 49 35.7	+0.9
LPK	Lapseki	0.72	84	PG	Pg	15 49 28.8	+0.1
CANB	Canakkale	0.99	106	PG	Pg	15 49 34.2	+0.3
RKY	Sarkoy-Tekirda	1.10	69	PN	Pn	15 49 35.5	0.0
MFT	Murefte	1.21	66	PN	Pn	15 49 36.5	-0.5
KDZ	Kurdzhali	1.38	347	*i* P	Pn	15 49 38.8	-0.5
BNT	Bandirma	1.61	87	*e*PN	Pn	15 49 42.2	-0.2
RZN	Rozhen	1.62	329	*i* P	Pn	15 49 43.0	+0.4
EDRB	Edirne	1.69	24	*e*PN	Pn	15 49 43.0	-0.6
DIM	Dimitrovgrad	1.76	353	*i* P	Pn	15 49 45.9	+1.4

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*ISCJB **02** 15:54:45.3±0.2, 4453N±002×11425W±002, h10km, Error ellipse: s-maj=3.5km s-min=2.3km az=131.5*
*NEIC **02** 15:54:45.0, 4456N×11423W, h13km, ML3.5(BUT), After BUT.*
NEIC Felt at Challis.
ISC 02 15:54:45.8±0.2**, 4452N**±002×**11416W**±002**, h10**km**, n72,** σ**1§40**/100**, 17C-19D, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCYI	Bear Canyon	0.58	111	⇓*e*P	Pg	15 54 57.9	+0.8
CNCI	Crows Nest Can	0.78	139	*e*P	Pg	15 55 01.4	+0.6
ICI	Italian Canyon	0.90	102	⇓*e*P	Pg	15 55 03.9	+0.8
HLID	Hailey	0.97	191	*e*Pg	Pg	15 55 04.1	-0.4
HLID				*e*Sg	Sg	15 55 17.6	+0.5
MCMT	McKenzie Canyo	0.99	71	*e*Pg	Pg	15 55 04.9	+0.1
EMI	Eightmile Cany	0.99	116	*e*P	Pg	15 55 05.4	+0.5
JGI	Juniper Gulch	1.15	111	⇓*e*P	Pb	15 55 08.3	+0.5
MOMT	Monida	1.27	86	⇓*e*P	Pn	15 55 10.6	+1.1
PZCI	Patelzick Cree	1.33	97	*e*P	Pn	15 55 11.4	+1.0
DLMT	Dillon	1.40	52	*e*Pn	Pn	15 55 11.9	+0.6
DLMT				*e*Sn	Sn	15 55 30.6	+0.8
GBI	Big Grassy But	1.60	109	*e*P	Pn	15 55 15.9	+1.8
BGMT	Barton Gulch	1.67	64	*e*P	Pn	15 55 15.9	+0.9
HBMT	Mount Humbug	1.68	40	⇓*e*P	Pn	15 55 15.7	+0.5
LRM	Limekiln Ridge	1.78	42	*e*Pn	Pn	15 55 16.9	+0.3
CMI	Centennial Mou	1.82	89	*e*P	Pn	15 55 18.7	+1.6
BUT	Butte	1.87	37	*e*P	Pn	15 55 18.1	+0.2
QLMT	Earthquake Lak	1.98	80	*e*Pn	Pn	15 55 20.5	+1.2
QLMT				*e*S	Sn	15 55 46.8	+2.8
BOZ	Bozeman (W)	2.12	57	*e*Pn	Pn	15 55 21.4	+0.1
BOZ				*e*S	Sg	15 55 52.5	-1.4
BMO	Blue Mountains	2.27	280	*e*Pn	Pn	15 55 22.9	-0.4
YMR	Madison River	2.29	85	*e*Pn	Pn	15 55 25.1	+1.5
YMR				*e*S	Sg	15 55 57.7	-1.7
MSO	Missoula	2.31	4	*e*Pn	Pn	15 55 23.6	-0.3
MSO				*e*Pg	Pg	15 55 29.4	-0.8
MSO				Sg	Sg	15 55 50.8	-9.4
DCID1	Drake Creek	2.34	112	*e*Pn	Pn	15 55 24.6	+0.4
RRI2	Red Ridge	2.37	119	*e*P	Pn	15 55 27.1	+2.4
RRI2				*e*S	Sg	15 55 59.2	-2.5
YFT	Old Faithful	2.38	90	*e*Pn	Pn	15 55 26.6	+1.7
IMW	Indian Meadow	2.40	104	*e*Pn	Pn	15 55 26.6	+1.5
IMW				*e*S	Sg	15 56 01.5	-1.4
CHMT	Chamberlain Mo	2.48	15	*e*Pn	Pn	15 55 25.8	-0.4
H09A	Durkee	2.50	275	⇓P	Pn	15 55 27.0	+0.5
	baz=2.4						
H09A				⇑S	Sn	15 55 56.5	-0.6
	baz=2.4						
FLWY	Flagg Ranch	2.52	99	*e*Pn	Pn	15 55 29.4	+2.5
FLWY				*e*S	Sn	15 56 00.8	+3.1
TPAW	Teton Pass	2.54	113	*e*P	Pn	15 55 29.6	+2.6
TPAW				*e*S	Sg	15 56 06.5	-0.8
MOOW	Moose Ponds	2.58	106	*e*Pn	Pn	15 55 30.8	+3.3
MOOW				*e*Pg	Pg	15 55 31.1	-4.1
MOOW				*e*Sg	Sg	15 56 05.4	-3.3
I09A	Lost Marbles R	2.63	259	⇑P	Pn	15 55 29.2	+0.9
	baz=2.6						
REDW	Red Top Meadow	2.66	115	*e*P	Pb	15 55 32.7	-0.7
SNOW	Snow King Moun	2.68	112	*e*Pg	Pb	15 55 33.4	-0.4
HRY	Holter Researc	2.74	36	*e*Pn	Pn	15 55 29.3	-0.4
HRY				*e*Pg	Pg	15 55 36.3	-1.9
AHID	Auburn Hatcher	2.83	127	*e*Pn	Pn	15 55 30.1	-0.9
HVU	Hansel Valley	2.92	159	*e*Pn	Pn	15 55 36.7	+4.4
HVU				*e*Sg	Sn	15 56 16.2	+8.8
M12A	Wells	3.15	190	⇑P	Pn	15 55 36.6	+1.2
	baz=3.2						
M13A	Montello	3.16	180	⇑P	Pn	15 55 38.2	+2.7
	baz=3.2						
I08A	Drewsey	3.23	261	⇑P	Pn	15 55 37.1	+0.6
	baz=3.2						
M11A	Holland Ranch,	3.31	202	⇑P	Pn	15 55 38.2	+0.6
	baz=3.3,SNR=8.1						
BSMT	Bassoo Peak	3.36	353	*e*Pn	Pn	15 55 38.6	+0.3
BSMT				*e*Pg	Pg	15 55 46.3	-3.8
BSMT				*e*Sg	Sg	15 56 28.3	-5.4
GCMT	Greycliff	3.43	67	*e*Pn	Pn	15 55 41.2	+2.0
GCMT				*e*Pg	Pg	15 55 48.9	-2.5
GCMT				*e*Sg	Sg	15 56 31.9	-3.9
SPUT	South Promonto	3.45	158	*e*Pn	Pb	15 55 45.1	-1.8
SPUT				*e*Sg	Sg	15 56 32.1	-4.4
M10A	I.L. Ranch, Tu	3.47	211	⇑P	Pn	15 55 40.0	+0.3
	baz=3.5,SNR=5.9						
HWUT	Hardware Ranch	3.48	146	*e*Pg	Pb	15 55 46.2	-1.3
L09A	Wilkinson Ranc	3.58	227	⇓P	Pb	15 55 49.5	+0.4
	baz=3.6						
K08A	Mann Creek Ran	3.61	242	⇓P	Pn	15 55 42.6	+0.8
	baz=3.6,SNR=61						
N12A	Clover Valley,	3.72	190	⇓P	Pn	15 55 45.2	+1.9
	baz=3.8						
BW06	Boulder Array	3.77	116	*e*Pg	Pb	15 55 51.3	-1.2
L08A	Fields	3.84	234	⇓P	Pb	15 55 51.4	-2.2
	baz=3.8						
I07A	Izee	3.86	265	⇑P	Pn	15 55 46.0	+0.8
	baz=3.8,SNR=17						
I07A				⇑S	Sn	15 56 30.2	-0.4
	baz=3.8						
N11A	Elko Archery C	3.88	198	⇑P	Pb	15 55 53.2	-1.1
	baz=3.9						
M09A	Marrel Ranch,	3.92	219	⇑P	Pb	15 55 53.7	-1.3
	baz=3.9,SNR=7.1						
K07A	Rock Creek Ran	4.12	245	⇓P	Pn	15 55 49.8	+1.0
	baz=4.1,SNR=27						
M08A	Happy Creek Ra	4.36	227	⇓P	Pb	15 56 00.4	-2.0
	baz=4.3						
I06A	Prineville	4.38	265	⇓P	Pn	15 55 53.2	+0.8
	baz=4.3						
N09A	Rock Creek Ran	4.42	215	⇓P	Pb	15 56 01.5	-2.1
	baz=4.4						
DUG	Dugway	4.44	167	Pn	Pn	15 55 51.3	-1.8
DUG				*e*Sg	Sg	15 57 05.1	-3.2
J06A	Christmas Vall	4.51	256	⇑P	Pn	15 55 55.0	+0.8
	baz=4.5,SNR=27						
O11A	Cowboy Ranch,	4.52	195	⇑P	Pb	15 56 02.0	-3.2
	baz=4.6						
L07A	Adell	4.53	238	⇓P	Pn	15 55 55.5	+1.1
	baz=4.5,SNR=7.6						
WALA	Waterton Lakes	4.54	2	*e*Pn	Pn	15 55 54.5	-0.1
WALA				*e*Pg	Pg	15 56 10.5	-2.4
WALA				*e*Sg	Sg	15 57 05.8	-6.0
EGMT	Eagleton	4.65	40	*e*Pn	Pn	15 55 56.3	+0.3
EGMT				*e*Pg	Pg	15 56 11.8	-3.1
EGMT				*e*Sn	Sn	15 56 47.7	-2.4
EGMT				*e*Sg	Sg	15 57 10.0	-5.1
BMN	Battle Mountai	4.67	210	Pg	Pb	15 56 05.4	-2.4
N08A	GE Springer Mi	4.75	219	⇓P	Pb	15 56 07.0	-2.0
	baz=4.7						
M07A	Soldier Meadow	4.83	231	⇑P	Pn	15 55 59.6	+1.1
	baz=4.8						
O09A	Fish Creek Ran	4.89	208	⇑P	Pb	15 56 10.1	-1.4
	baz=4.9						
P12A	McGill	5.07	187	⇓P	Pb	15 56 10.4	-4.3
	baz=5.1						
P11A	Circle Ranch,	5.10	194	⇓P	Pb	15 56 12.1	-3.1
	baz=5.1						
N07B	Gerlach	5.15	225	⇑P	Pb	15 56 13.9	-2.1
	baz=5.1						
J05A	Fort Rock	5.26	259	⇑P	Pn	15 56 05.9	+1.5
	baz=5.2						
L05A	Lakeview	5.46	245	⇓P	Pn	15 56 07.9	+0.7
	baz=5.4						

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*NEIC **02** 15:56:47.7, 3121S×6902W, h161km, MG3.5(GUC), After GUC.*
GUC 02 15:56:47.7±0.6**, 3121S**×**6902W, h161**km±9km**, MD3.7, ML3.5, 11C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.85	304	*e*P	Pn	15 57 23.2	+1.3
TLL				*i* S	Sn	15 57 49.4	+1.3
TLL				AML	AML	15 57 55.3	
	comp=N,235nm,0.6s						
TLL	Tololo Astrono	1.85	304	*e*P	Pn	15 57 23.2	+1.3
TLL				*i* S	Sn	15 57 49.4	+1.3
JACH	Jahuel	1.98	222	⇑*i*P	Pn	15 57 23.9	+0.7
JACH				*i* S	Sn	15 57 51.2	+0.6
CHNG	Los Chungos	2.22	252	⇑*i*P	Pn	15 57 26.4	+0.5
CHNG				*i* S	Sn	15 57 55.6	+0.2
FCH	Farellones	2.37	207	*e*P	Pn	15 57 29.1	+1.4
FCH				*i* S	Sn	15 58 00.2	+1.6
FCH				AML	AML	15 58 04.3	
	comp=N,104nm,0.7s						
PEL	Peldehue	2.38	216	⇑*i*P	Pn	15 57 28.7	+0.7
PEL				*e*S	Sn	15 57 59.5	+0.5
PEL				AML	AML	15 58 01.3	
	comp=E,253nm,0.3s						
PEL	Peldehue	2.38	216	⇑*i*P	Pn	15 57 28.7	+0.7
PEL				*e*S	Sn	15 57 59.5	+0.5
ROCH	El Roble	2.43	223	⇑*i*P	Pn	15 57 29.4	+0.9
ROCH				*i* S	Sn	15 58 01.4	+1.3
PCH	Pirque	2.71	207	⇑*i*P	Pn	15 57 32.8	+0.9
PCH				*i* S	Sn	15 58 07.3	+1.2
RCDM	Rinconada Maip	2.73	213	*e*P	Pn	15 57 32.8	+0.7
RCDM				*i* S	Sn	15 58 06.8	+0.4
RCDM				AML	AML	15 58 07.8	
	comp=E,204nm,0.3s						
RCDM	Rinconada Maip	2.73	213	*e*P	Pn	15 57 32.8	+0.7
RCDM				*i* S	Sn	15 58 06.8	+0.4
TACH	Talagante	2.92	213	⇑*i*P	Pn	15 57 34.9	+0.4
TACH				*i* S	Sn	15 58 11.3	+0.5
CHCH	Chadas Angostu	3.04	206	⇑*i*P	Pn	15 57 36.5	+0.5
CHCH				*i* S	Sn	15 58 14.3	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LCCH	**Las Cruces**	**3.12**	**223**	⇑iP	Pn	15 57 37.3	+0.3
LCCH				i S	Sn	15 58 15.7	+0.5
CACH	**El Canelo**	**3.19**	**204**	⇑iP	Pn	15 57 38.8	+1.0
CACH				i S	Sn	15 58 18.6	+1.9
SFDO	**San Fernando**	**3.78**	**206**	⇑iP	Pn	15 57 46.4	+1.0
SFDO				i S	Sn	15 58 30.8	+0.5

IDC 02 16:11:39.5±3.1**,1079S×11721E,h0km,mb3.5**/3**, mb1 3.7**/4**,mb1mx3.6**/14**,mbtmp3.6**/4**,ML3.9**/1**,Error ellipse: s-maj=159.0km s-min=24.2km az=50.0,South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.93**	**133**	Pn	Pn	16 14 13.7	-3.4
	0.9nm,0.3s,baz=310,slow=9.5,SNR=23						
FITZ				Sn	Sn	16 16 06.5	-14
	0.4nm,0.3s,baz=189,slow=22,SNR=5.5						
WRA	**Warramunga Arr**	**18.84**	**121**	P	Pn	16 16 01.2	-0.2
	0.3nm,0.3s,baz=284,slow=15,SNR=11						
WRA				S	Sn	16 19 17.1	-16
	0.1nm,0.3s,baz=284,slow=25,SNR=5.1						
ASAR	**Alice Springs**	**20.42**	**131**	P	P	16 16 18.7	+0.5
	1.2nm,0.7s,baz=300,slow=9.9,SNR=9.8						
ASAR				S	S	16 19 54.0	-14
	0.5nm,0.7s,baz=301,slow=22,SNR=3.9						
SONM	**Songino Array**	**59.15**	**352**	P	P	16 21 40.7	-1.3
	0.3nm,0.8s,baz=159,slow=4.3,SNR=2.9						
MKAR	**Makanchi Array**	**65.27**	**334**	P	P	16 22 24.1	+1.2
	1.0nm,0.5s,baz=142,slow=6.9,SNR=11						

*IDC **02** 16:46:50.9±3.1, 1863N×14560E, h156km±27km, mb3.6/6, mb1 3.8/7, mb1mx3.5/20, mbtmp4.1/7, Error ellipse: s-maj=41.3km s-min=20.2km az=101.0*
*ISCJB **02** 16:46:51.2±2.5, 186N±0.1×1455E±03, h172km±21km, mb3.9/7, Error ellipse: s-maj=54.3km s-min=21.6km az=18.4*
*NEIC **02** 16:46:52.5±2.0, 1863N×14560E, h174km±17km, mb4.4/2, Error ellipse: s-maj=37.8km s-min=15.8km az=99.0*
ISC 02 16:46:51.7±2.5**,186N**±01×**1455E**±03**,h162**km±20km**,n12, σ0s83**/13**,mb3.9**/7**,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.03**	**187**	P	**Pn**	**16 48 07.1**	**+1.4**
	6.8nm,0.3s,baz=195,slow=8.6,SNR=17						
GUMO				S	**Sn**	**16 49 02.3**	**-1.3**
	4.4nm,0.3s,baz=190,slow=23,SNR=4.3						
WRAB	**Tennant Creek**	**39.84**	**197**	eP	**P**	**16 54 09.2**	**-0.1**
	7.4nm,0.8s,mb4.4						
WB2	**Warramunga Arr**	**39.85**	**197**	eP	**P**	**16 54 09.3**	**-0.1**
WRA	**Warramunga Arr**	**39.85**	**197**	P	**P**	**16 54 09.3**	**-0.1**
	1.8nm,0.4s,mb4.1,baz=13,slow=8.3,SNR=35						
FITZ	**Fitzroy Crossi**	**41.39**	**209**	eP	**P**	**16 54 22.5**	**+0.5**
	2.9nm,0.3s,mb4.4						
FITZ	**Fitzroy Crossi**	**41.39**	**209**	P	**P**	**16 54 22.6**	**+0.6**
	1.7nm,0.3s,mb4.1,baz=34,slow=12,SNR=28						
AS31	**Alice Springs**	**43.52**	**196**	eP	**P**	**16 54 39.4**	**+0.2**
ASAR	**Alice Springs**	**43.52**	**196**	P	**P**	**16 54 39.5**	**+0.3**
	0.8nm,0.6s,mb3.5,baz=22,slow=9.6,SNR=19						
ASPA	**Alice Springs**	**43.52**	**196**	eP	**P**	**16 54 39.4**	**+0.2**
BVAR	**Borovoye Array**	**66.45**	**320**	P	**P**	**16 57 24.2**	**+0.6**
	0.7nm,0.4s,mb3.8,baz=98,slow=7.0,SNR=6.1						
NVAR	**Mina Array Bea**	**83.32**	**52**	P	**P**	**16 59 00.5**	**+0.1**
	1.1nm,0.8s,mb3.7,baz=268,slow=5.8,SNR=7.3						
FINES	**FINESS Array B**	**86.90**	**335**	P	**P**	**16 59 15.9**	**-2.3**
	0.4nm,0.4s,mb3.6,baz=64,slow=6.6,SNR=4.0						

NNC 02 17:00:07.4±14.0**,3671N×7007E,h0km,mb3.3,mpv2.9, 3C,Error ellipse: s-maj=160.5km s-min=116.5km az=41.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.40**	**3**	P	Pn	17 01 44.5	+1.6
	0.4nm,0.2s,baz=175,slow=12,SNR=39						
KK31				⇑S	Sn	17 02 56.8	+0.2
	1.0nm,0.5s,baz=320,slow=32,SNR=4.5						
TKM2	**Tokmak 2**	**7.52**	**33**	⇑P	Pn	17 01 57.7	-0.7
	0.2nm,0.5s						
AB31	**Akbulak array**	**14.55**	**333**	⇑P	Pn	17 03 29.2	-5.3
	0.2nm,0.3s,baz=154,slow=12,SNR=5.6						

*TRN **02** 17:00:52.1, 1872N×6202W, h23km*
*ISCJB **02** 17:00:54.4±2.2, 187N±02×6207W±0.10, h33km, Error ellipse: s-maj=30.5km s-min=8.2km az=42.0*
*RSPR **02** 17:00:56.1, 1964N×6231W, h25km±69km, MD4.1/4, MD4.1/4*
ISC 02 17:00:55.1±2.2**,187N**±02×**6200W**±010**,h35**km**,n10, σ0s74**/13**,5C-1D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEG	**Port Louis**	**2.36**	**168**	eP	**Pn**	**17 01 30.7**	**-0.6**
LZG	**Guadaloupe-1**	**2.58**	**175**	eP	**Pn**	**17 01 35.1**	**+0.7**
STVI	**Saint Thomas**	**2.83**	**263**	⇓eP	**Pn**	**17 01 37.6**	**-0.2**
CULB	**Culebra**	**3.17**	**262**	⇑eP	**Pn**	**17 01 42.5**	**+0.1**
MTP	**Monte Pirata**	**3.43**	**260**	⇑eP	**Pn**	**17 01 45.8**	**-0.3**
MTP				eS	**Sn**	**17 02 25.4**	**-0.1**
CBYP	**Canovanas**	**3.69**	**264**	⇑eP	**Pn**	**17 01 49.1**	**-0.5**
CBYP				eS	**Sn**	**17 02 33.4**	**+1.6**
HUMP	**Col San Antoni**	**3.70**	**262**	eS	**Sn**	**17 02 32.0**	**-0.2**
ICM	**Isla Caja Muer**	**4.38**	**260**	⇑eP	**Pn**	**17 01 59.9**	**+0.9**
AOPR	**Arecibo Observ**	**4.53**	**266**	eS	**Sn**	**17 02 52.9**	**+0.3**
CRPR	**Cabo Rojo, PR**	**4.91**	**262**	⇑eP	**Pn**	**17 02 06.4**	**+0.1**
CRPR				eS	**Sn**	**17 03 00.2**	**-1.7**

*ISCJB **02** 17:17:24.5±1.3, 79S±02×1124E±03, h10km, mb3.7/6, Error ellipse: s-maj=55.2km s-min=10.6km az=120.7*
*IDC **02** 17:17:26.4±2.6, 769S×11280E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/15, mbtmp3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.5/26, Error ellipse: s-maj=143.3km s-min=19.9km az=55.0*
*NEIC **02** 17:17:26.9±1.1, 784S×11260E, h10km, mb3.9/1, Error ellipse: s-maj=46.6km s-min=8.7km az=61.0*
ISC 02 17:17:27.1±1.4**,79S**±02×**1126E**±04**,h10**km**,n12,**σ**0s65**/11**, mb3.7**/6**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**9.53**	**346**	eP	**Pn**	**17 19 43.6**	**-0.7**
MBWA	**Marble Bar**	**14.94**	**153**	P	**Pn**	**17 20 57.3**	**-0.9**
PSI	**Prapat**	**17.23**	**307**	LR	LR	17 27 54.7	
	comp=Z,81nm,19.7s,baz=78,slow=36						
WRA	**Warramunga Arr**	**24.29**	**122**	P	**P**	**17 22 44.2**	**-0.3**
	0.8nm,0.4s,mb3.5,baz=309,slow=9.1,SNR=21						
WRAB	**Tennant Creek**	**24.29**	**122**	eP	**P**	**17 22 44.0**	**-0.5**
	2.4nm,0.7s,mb3.7						
WB2	**Warramunga Arr**	**24.30**	**122**	eP	**P**	**17 22 43.9**	**-0.7**
ASPA	**Alice Springs**	**25.81**	**130**	eP	**P**	**17 22 58.9**	**+0.6**
AS31	**Alice Springs**	**25.82**	**130**	eP	**P**	**17 22 58.9**	**+0.5**
ASAR	**Alice Springs**	**25.82**	**130**	P	**P**	**17 22 58.5**	**+0.2**
	1.5nm,0.7s,mb3.6,baz=306,slow=8.9,SNR=31						
STKA	**Stephens Creek**	**36.08**	**135**	P	**P**	**17 24 30.0**	**+1.1**
	1.2nm,0.4s,mb4.1,baz=329,slow=12,SNR=6.9						
SONM	**Songino Array**	**55.71**	**355**	P	**P**	**17 27 04.4**	**+0.7**
	0.3nm,0.5s,mb3.6,baz=174,slow=6.5,SNR=3.5						
MKAR	**Makanchi Array**	**60.70**	**337**	P	**P**	**17 27 38.6**	**0.0**
	0.4nm,0.4s,mb3.9,baz=142,slow=7.5,SNR=6.8						

*ISCJB **02** 17:35:13.2±0.9, 15.14S±0.05×17432W±0.04, h144km±8km, mb4.7/64, Error ellipse: s-maj=9.1km s-min=5.2km az=118.7*
*SZGRF **02** 17:35:14.9, 1703S×17467W, h182km, Tonga Islands*
*MOS **02** 17:35:17.2±1.1, 15.15S×17428W, h175km, mb4.8/18, Error ellipse: s-maj=11.5km s-min=8.3km az=145.9*
*BJI **02** 17:35:17.4, 1582S×17398W, h216km, mb4.6, mB4.9*
*IDC **02** 17:35:19.4±0.6, 1520S×17433W, h188km±4km, mb4.3/16, mb1 4.4/17, mb1mx4.3/20, mbtmp4.8/17, MS3.9/5, Ms1 3.8/5, ms1mx3.5/20, Error ellipse: s-maj=15.2km s-min=9.4km az=139.0*
*NEIC **02** 17:35:19.2±0.1, 1523S×17427W, mb4.8/42, Error ellipse: s-maj=6.7km s-min=3.6km az=144.0*
*HRVD **02** 17:35:19.2±0.3, 1501S×17389W, h184km±2km, MW5.2/79, Centroid moment Tensor Solution. LP body waves: s36,c47; Mantle waves: s79,c136; Half duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.40±.19; Mθθ1.06±.23; Mφφ1.34±.23; Mrθ0.61±.16; Mθφ4.34±.18; Mφr5.22±.15; Best double couple: M0 7.09300×10^16 NP1:φs83.00000°,δ36.00000°,λ-21.00000°. NP2: φs190.00000°,δ78.00000°,λ-124.00000°. Principal axes: T 7.4920, Plg25.0000°, Azm306.0000°; N -0.7980, Plg33.0000°, Azm198.0000°; P -6.6950, Plg46.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 02 17:35:15.6±1.2**,1517S**±006×**17430W**±005**,h150**km±10km**, h184**km±4.0km**:pP-P,n433,**σ**0s54**/345**,mb4.7**/64**,84C-93D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.74**	**63**	P	**Pn**	**17 35 58.7**	**-0.9**
	826nm,0.3s,baz=147,slow=1.2,SNR=822						
AFI				S	**Sn**	**17 36 30.4**	**-3.3**
	877nm,0.3s,baz=187,slow=22,SNR=10						
AFI				LR	LR	17 36 50.2	
	comp=Z,2μm,18.4s,baz=249,slow=33						
AFI	**Afiamalu**	**2.74**	**63**	P	**Pn**	**17 35 58.8**	**-0.9**
AFI				S	**Sn**	**17 36 30.4**	**-3.3**
RAR	**Rarotonga**	**15.05**	**116**	P	**Pn**	**17 38 42.3**	**+1.8**
	4.2nm,0.3s,baz=247,slow=7.5,SNR=7.1						
RAR				S	**S**	**17 41 24.0**	**-10**
	1.0nm,0.3s,baz=306,slow=12,SNR=3.1						
DZM	**Mont Dzumac**	**19.49**	**246**	eP	**P**	**17 39 37.6**	**+6.7**
DZM	**Mont Dzumac**	**19.49**	**246**	P	**P**	**17 39 39.1**	**+8.3**
	0.6nm,0.3s,baz=96,slow=15,SNR=9.6						
DZM				LR	LR	17 45 41.1	
	comp=Z,282nm,21.8s,baz=271,slow=32						
NOUC	**Port Laguerre**	**19.62**	**247**	eP	**P**	**17 39 40.6**	**+8.2**
PAE	**Paea**	**23.84**	**99**	eP	**P**	**17 40 14.2**	**-0.6**
	43nm,0.8s,mb5.0						
PAE	**Paea**	**23.84**	**99**	eP	**P**	**17 40 14.2**	**-0.6**
PAE				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.0						
PPT	**Papeete**	**23.84**	**99**	eP	**P**	**17 40 14.5**	**-0.3**
	comp=Z,78nm,1.4s,mb5.1						
PPT	**Papeete**	**23.84**	**99**	eP	**P**	**17 40 14.5**	**-0.3**
PPT				pmax	pmax		
	comp=Z,78nm,1.4s						
TVO	**Taravao**	**24.16**	**100**	eP	**P**	**17 40 17.5**	**-0.2**
	comp=Z,64nm,0.7s,mb5.3						
TVO	**Taravao**	**24.16**	**100**	eP	**P**	**17 40 17.5**	**-0.2**
TVO				pmax	pmax		
	comp=Z,64nm,0.7s,mb5.3						
URZ	**Urewera**	**24.23**	**197**	P	**P**	**17 40 18.8**	**+0.5**
	comp=Z,24nm,0.5s,mb5.0,baz=40,slow=3.8,SNR=25						
PMOR	**Pomariorio Ree**	**25.49**	**93**	eP	**P**	**17 40 28.6**	**-1.2**
	comp=Z,246nm,1.1s,mb5.6						
HNR	**Honiara**	**25.79**	**280**	P	**P**	**17 40 35.7**	**+3.2**
	comp=Z,46nm,0.9s,mb5.1,baz=263,slow=9.4,SNR=3.9						
HNR	**Honiara**	**25.79**	**280**	P	**P**	**17 40 33.8**	**+1.4**
HNR				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.1						
HNR	**Honiara**	**25.79**	**280**	P	**P**	**17 40 33.8**	**+1.3**
	comp=Z,45nm,0.9s,mb5.1						
RPZ	**Rata Peaks**	**31.08**	**201**	P	**P**	**17 41 19.5**	**+0.1**
	comp=Z,8.7nm,0.6s,mb4.7,baz=131,slow=12,SNR=11						
CTA	**Charters Tower**	**37.85**	**257**	eP	**P**	**17 42 18.0**	**+0.4**
	comp=Z,6.3nm,0.8s,mb4.3						
CTA	**Charters Tower**	**37.85**	**257**	P	**P**	**17 42 18.3**	**+0.6**
	comp=Z,7.8nm,0.8s,mb4.4,baz=78,slow=9.4,SNR=10						
CTA				pP	pP	17 42 58.1	+7.9
	comp=Z,6.3nm,0.9s,baz=86,slow=15,SNR=3.1						
CTA	**Charters Tower**	**37.85**	**257**	eP	**P**	**17 42 18.0**	**+0.4**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CTAO	**Charters Tower**	**37.85**	**257**	eP	**P**	**17 42 17.7**	**+0.1**
PMG	**Port Moresby**	**38.05**	**274**	P	**P**	**17 42 21.1**	**+1.8**
	comp=Z,17nm,0.8s,mb4.7,baz=68,slow=0.9,SNR=4.4						
PMG	**Port Moresby**	**38.05**	**274**	P	**P**	**17 42 20.7**	**+1.4**
CNB	**Canberra Magne**	**38.21**	**232**	eP	**P**	**17 42 20.5**	**-0.2**
	comp=Z,4.5nm,0.5s,mb4.3						
TOO	**Toolangi**	**41.95**	**230**	eP	**P**	**17 42 52.0**	**+0.6**
	comp=Z,2.4nm,0.5s,mb4.1						
TOO	**Toolangi**	**41.95**	**230**	eP	**P**	**17 42 52.0**	**+0.6**
TOO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**43.40**	**240**	eP	**P**	**17 43 03.3**	**+0.1**
	comp=Z,3.4nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**43.40**	**240**	P	**P**	**17 43 03.1**	**-0.1**
	comp=Z,3.0nm,0.6s,mb4.1,baz=68,slow=7.1,SNR=6.3						
STKA				pP	pP	17 43 44.6	+8.1
	comp=Z,11nm,0.9s,baz=79,slow=11,SNR=4.9						
WB2	**Warramunga Arr**	**49.04**	**257**	eP	**P**	**17 43 46.3**	**-0.9**
WRAB	**Tennant Creek**	**49.04**	**257**	⇑iP	**P**	**17 43 46.6**	**-0.6**
WRAB	**Tennant Creek**	**49.04**	**257**	eP	**P**	**17 43 46.5**	**-0.7**
	comp=Z,21nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**49.05**	**257**	P	**P**	**17 43 46.7**	**-0.6**
	comp=Z,5.3nm,0.3s,mb4.7,baz=97,slow=7.7,SNR=211						
WRA				pP	pP	17 44 27.3	+6.0
	comp=Z,4.6nm,0.9s,baz=93,slow=8.0,SNR=3.1						
AS31	**Alice Springs**	**49.36**	**252**	eP	**P**	**17 43 49.4**	**-0.2**
ASAR	**Alice Springs**	**49.36**	**252**	P	**P**	**17 43 49.5**	**-0.1**
	comp=Z,65nm,0.7s,mb5.3,baz=89,slow=7.7,SNR=729						
ASAR				pP	pP	17 44 31.9	+8.2
	comp=Z,9.2nm,0.7s,baz=88,slow=7.7,SNR=1.0						
ASAR				S	**S**	**17 50 40.2**	**-4.5**
	comp=Z,1.8nm,1.1s,baz=82,slow=14,SNR=8.0						
ASAR				LR	LR	18 01 39.4	
	comp=Z,250nm,21.7s,baz=108,slow=32						
ASAR	**Alice Springs**	**49.36**	**252**	P	**P**	**17 43 49.5**	**-0.1**
ASAR				*PP	pP	17 44 31.9	+8.2
ASAR				S	**S**	**17 50 40.2**	**-4.5**
ASPA	**Alice Springs**	**49.36**	**252**	eP	**P**	**17 43 49.4**	**-0.2**
KAKA	**Kakadu**	**51.65**	**266**	eP	**P**	**17 44 07.1**	**+0.3**
	comp=Z,16nm,0.8s,mb4.7						
FORT	**Forrest**	**54.75**	**243**	eP	**P**	**17 44 28.6**	**-0.8**
	comp=Z,17nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**57.41**	**258**	P	**P**	**17 44 49.1**	**+0.8**
	comp=Z,1.1nm,0.5s,mb4.0,baz=129,slow=9.0,SNR=8.7						
SBA	**Scott Base**	**63.41**	**184**	eP	**P**	**17 45 30.0**	**+0.9**
SBA				*PP	pP	17 46 10.3	+5.5
SBA				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
SBA	**Scott Base**	**63.41**	**184**	eP	**P**	**17 45 30.0**	**+0.9**
	comp=Z,7.7nm,0.7s,mb4.6						
SBA				pP	pP	17 46 10.2	+5.5
VNDA	**Vanda**	**63.52**	**186**	P	**P**	**17 45 30.0**	**+0.2**
	comp=Z,7.5nm,0.9s,mb4.5,baz=7.6,slow=6.2,SNR=30						
VNDA				pP	pP	17 46 11.8	+6.4
	comp=Z,4.1nm,1.0s,baz=16,slow=6.9,SNR=2.5						
VNDA				LR	LR	18 07 06.3	
	comp=Z,70nm,18.5s,baz=101,slow=30						
VNDA	**Vanda**	**63.52**	**186**	eP	**P**	**17 45 30.0**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VNDA	**Vanda**	**63.52**	**186**	eP	**P**	**17 45 30.0**	**+0.2**
	comp=Z,7.4nm,1.0s,mb4.5						
SNCC	**San Nicolas Is**	**71.04**	**46**	⇑P	**P**	**17 46 17.5**	**+0.4**
	baz=71						
SDP	**Sudden Peak, L**	**71.11**	**45**	⇑P	**P**	**17 46 17.9**	**+0.5**
	baz=71						
FARB	**Farallon Islan**	**71.30**	**41**	⇓P	**P**	**17 46 18.7**	**+0.1**
	baz=72						
BSC	**Santa Cruz Isl**	**71.38**	**46**	⇑P	**P**	**17 46 19.2**	**0.0**
	baz=72						
V03C	**Hunter Liggett**	**71.45**	**43**	⇓P	**P**	**17 46 20.0**	**+0.4**
	baz=72						
V04C	**Ramage Ranch,**	**71.47**	**44**	⇓P	**P**	**17 46 19.9**	**+0.3**
	baz=72						
BNLO	**Ben Lomond (Sa**	**71.49**	**42**	⇓P	**P**	**17 46 20.0**	**+0.3**
	baz=72						
JRSC	**Jasper Ridge**	**71.61**	**41**	⇑P	**P**	**17 46 20.7**	**+0.2**
	baz=72						
MCCM	**Marconi Confer**	**71.64**	**40**	⇓P	**P**	**17 46 20.9**	**+0.1**
	baz=72						
PKM	**Peak Mountain**	**71.75**	**45**	⇑P	**P**	**17 46 21.7**	**+0.4**
	baz=72,SNR=5.3						
LRV	**Little Rabbit**	**71.82**	**43**	eP	**P**	**17 46 22.1**	**+0.4**
BLG	**Laguna Peak**	**71.84**	**46**	⇓P	**P**	**17 46 21.8**	**-0.1**
	baz=72						
PKD	**Parkfield**	**71.86**	**44**	⇓P	**P**	**17 46 22.1**	**+0.1**
	baz=72,SNR=7.0						
SMMC	**Simmler**	**71.86**	**44**	⇓P	**P**	**17 46 22.5**	**+0.5**
	baz=72,SNR=6.3						
U04C	**Hernandez Rese**	**71.94**	**43**	⇑P	**P**	**17 46 23.2**	**+0.8**
	baz=72,SNR=18						
PACP	**Pacheco Peak**	**71.99**	**42**	P	**P**	**17 46 23.6**	**+0.8**
	baz=72,SNR=20						
CVS	**Carmenet Viney**	**72.03**	**41**	⇓P	**P**	**17 46 23.1**	**+0.1**
	baz=72						
NSHM	**Saint Helena R**	**72.04**	**40**	eP	**P**	**17 46 23.2**	**+0.1**
WENL	**Wente Brothers**	**72.04**	**41**	⇓P	**P**	**17 46 23.5**	**+0.4**
	baz=72						
P01C	**Double 8 Ranch**	**72.17**	**39**	⇑P	**P**	**17 46 24.2**	**+0.4**
	baz=72						
BDM	**Black Diamond**	**72.17**	**41**	⇑P	**P**	**17 46 24.5**	**+0.6**
	baz=72						
V05C	**Boulder Hill,**	**72.24**	**44**	⇓P	**P**	**17 46 24.7**	**+0.4**
	baz=72						
S04C	**Ingram Canyon,**	**72.25**	**42**	⇑P	**P**	**17 46 24.6**	**+0.3**
	baz=72,SNR=13						
O01C	**Eel River Cons**	**72.29**	**38**	⇓P	**P**	**17 46 25.2**	**+0.6**
	baz=72						
T05C	**Eagle Field, D**	**72.32**	**43**	⇑P	**P**	**17 46 25.3**	**+0.6**
	baz=72						
OSI	**Osito Adit**	**72.35**	**46**	⇑P	**P**	**17 46 24.6**	**-0.3**
	baz=72						
MNRC	**McLaughlin Nat**	**72.36**	**40**	⇓P	**P**	**17 46 25.6**	**+0.6**
	baz=73,SNR=15						
DECC	**Green Verdugo**	**72.42**	**46**	⇑P	**P**	**17 46 24.8**	**-0.6**
	baz=73						
CHGN	**Chignik**	**72.43**	**9**	eP	**P**	**17 46 24.1**	**-1.3**
Q03C	**Winters**	**72.48**	**41**	⇓P	**P**	**17 46 26.3**	**+0.6**
	baz=73						
ARVC	**Arvin**	**72.56**	**45**	⇓P	**P**	**17 46 25.8**	**-0.3**
	baz=73						
109C	**Camp Elliot, M**	**72.56**	**48**	⇑P	**P**	**17 46 25.7**	**-0.5**
	baz=73						
GASB	**Alder Springs**	**72.66**	**39**	⇑P	**P**	**17 46 27.8**	**+1.1**
	baz=73						
VES	**Vestal, Richgr**	**72.78**	**44**	⇓P	**P**	**17 46 26.9**	**-0.6**
	baz=73,SNR=10						
S05C	**Merced**	**72.81**	**42**	⇑P	**P**	**17 46 27.3**	**-0.3**
	baz=73						
YSS	**Yuzh-Sakhalins**	**72.85**	**331**	e	S	17 55 41.0	-0.8
MURC	**Murrieta**	**72.87**	**47**	⇑P	**P**	**17 46 27.7**	**-0.3**
	baz=73						
BFSC	**Mount Baldy St**	**72.89**	**46**	⇓P	**P**	**17 46 27.7**	**-0.4**
	baz=73						
SUTB	**Sutter Butte**	**72.98**	**40**	⇑P	**P**	**17 46 28.1**	**-0.5**
	baz=73						
Q04C	**Lincoln**	**73.00**	**41**	⇑P	**P**	**17 46 28.7**	**-0.1**
	baz=73						
T06C	**Millerton Lake**	**73.02**	**43**	⇓P	**P**	**17 46 28.5**	**-0.4**
	baz=73,SNR=7.2						
MONP	**Monument Peak**	**73.05**	**48**	⇑P	**P**	**17 46 29.0**	**0.0**
	baz=73,SNR=6.8						
ISA	**Isabella**	**73.09**	**45**	P	**P**	**17 46 29.5**	**+0.2**
	baz=73,SNR=17						
CMB	**Columbia Colle**	**73.17**	**42**	P	**P**	**17 46 29.6**	**-0.1**
	baz=73,SNR=16						
DVTC	**Desert V Tower**	**73.17**	**49**	⇓P	**P**	**17 46 29.7**	**0.0**
	baz=73						
M01C	**Crescent City**	**73.19**	**37**	⇑P	**P**	**17 46 30.2**	**+0.3**
	baz=73						
O03C	**Acorn Hollow,**	**73.29**	**39**	⇓P	**P**	**17 46 30.0**	**-0.4**
	baz=74						
WDC	**Whiskeytown Da**	**73.33**	**39**	⇓P	**P**	**17 46 31.0**	**+0.3**
	baz=74,SNR=9.6						
ORV	**Oroville**	**73.35**	**40**	⇓P	**P**	**17 46 30.5**	**-0.3**
	baz=74,SNR=9.2						
PFO	**Pinyon Flat Ob**	**73.40**	**47**	⇓P	**P**	**17 46 30.7**	**-0.4**
	baz=74						
S06C	**San Francisco**	**73.42**	**42**	P	**P**	**17 46 31.2**	**0.0**
	baz=74,SNR=12						
KCC	**Kaiser Creek**	**73.45**	**43**	⇑P	**P**	**17 46 31.3**	**-0.1**
	baz=74,SNR=9.4						
LRMC	**Laurel Mountai**	**73.53**	**45**	P	**P**	**17 46 32.0**	**+0.2**
	baz=74,SNR=15						
SWSC	**Sam W. Stewart**	**73.53**	**48**	⇑P	**P**	**17 46 31.6**	**-0.2**
	baz=74						
M02C	**Callahan**	**73.64**	**38**	⇓P	**P**	**17 46 33.4**	**+0.9**
	baz=74,SNR=5.4						
L02A	**Cave Junction**	**73.68**	**37**	⇓P	**P**	**17 46 32.9**	**+0.1**
	baz=74						
RRX	**Edison Barstow**	**73.69**	**46**	⇑P	**P**	**17 46 32.7**	**-0.1**
	baz=74						
R05C	**Kirkwood Meado**	**73.75**	**41**	⇑P	**P**	**17 46 33.1**	**0.0**
	baz=74,SNR=13						
P05C	**Yuba Gap, Truc**	**73.76**	**41**	⇓P	**P**	**17 46 33.3**	**+0.1**
	baz=74						
CWC	**Cottonwood Cre**	**73.79**	**44**	⇑P	**P**	**17 46 33.3**	**-0.1**
	baz=74						
BELC	**Belle Mtn.**	**73.93**	**47**	P	**P**	**17 46 34.2**	**0.0**
	baz=74,SNR=7.7						
YBH	**Yreka Blue Hor**	**73.94**	**38**	P	**P**	**17 46 35.2**	**+1.0**
	comp=Z,27nm,0.8s,mb5.0,baz=198,slow=3.2,SNR=18						
YBH	**Yreka Blue Hor**	**73.94**	**38**	⇓P	**P**	**17 46 34.9**	**+0.6**
	baz=74						
O05C	**Quincy**	**73.96**	**40**	⇓P	**P**	**17 46 34.6**	**+0.3**
	baz=74						
MPMC	**Manual Prospec**	**73.98**	**45**	⇑P	**P**	**17 46 34.7**	**+0.3**
	baz=74						
TIN	**Tinemaha**	**74.03**	**44**	⇓P	**P**	**17 46 35.1**	**+0.4**
	baz=74						
GSC	**Goldstone**	**74.04**	**46**	P	**P**	**17 46 34.8**	**-0.1**
	baz=74,SNR=12						
R06C	**Coleville**	**74.05**	**42**	⇑P	**P**	**17 46 35.2**	**+0.3**
	baz=74						
R07C	**Lee Vining**	**74.06**	**42**	⇓P	**P**	**17 46 35.3**	**+0.4**
	baz=74						
O04C	**Chester**	**74.06**	**40**	⇑P	**P**	**17 46 35.1**	**+0.1**
	baz=74						
HEC	**Hector,Ludlow**	**74.13**	**46**	P	**P**	**17 46 35.1**	**-0.2**
	baz=74,SNR=9.6						
HATC	**Hat Creek Radi**	**74.13**	**39**	⇓P	**P**	**17 46 35.7**	**+0.3**
	baz=74,SNR=12						
K02A	**Glendale**	**74.13**	**36**	⇓P	**P**	**17 46 35.3**	**0.0**
	baz=74						
LHEM	**Herd Peak**	**74.17**	**38**	P	**P**	**17 46 36.3**	**+0.8**
BEKR	**Beckwourth**	**74.25**	**40**	P	**P**	**17 46 36.1**	**0.0**
	baz=74,SNR=12						
GLA	**Glamis**	**74.29**	**49**	⇑P	**P**	**17 46 36.3**	**+0.1**
	baz=74						
WCN	**Washoe City**	**74.30**	**41**	⇓P	**P**	**17 46 36.7**	**+0.4**
	baz=74						
M04C	**Macdoel**	**74.49**	**38**	P	**P**	**17 46 37.9**	**+0.5**
	baz=75,SNR=12						
DBO	**Dodson Butte**	**74.49**	**36**	P	**P**	**17 46 37.3**	**-0.1**
BUOR	**Burton Butte**	**74.55**	**37**	P	**P**	**17 46 38.4**	**+0.7**
GRAC	**Grapevine Rang**	**74.57**	**44**	⇓P	**P**	**17 46 38.3**	**+0.5**
	baz=75						
IRM	**Iron Mountain**	**74.61**	**48**	P	**P**	**17 46 38.3**	**+0.1**
	baz=75,SNR=11						
FURC	**Furnace Creek,**	**74.63**	**45**	⇑P	**P**	**17 46 37.8**	**-0.4**
	baz=75						
M05C	**Lookout**	**74.65**	**39**	⇑P	**P**	**17 46 38.3**	**0.0**
	baz=75						
BBOR	**Butler Butte**	**74.67**	**37**	P	**P**	**17 46 39.0**	**+0.5**
RNO	**Roman Nose**	**74.71**	**35**	P	**P**	**17 46 39.8**	**+1.1**
I02A	**Mapleton**	**74.72**	**35**	⇓P	**P**	**17 46 38.8**	**0.0**
	baz=75						
SHOC	**Shoshone**	**74.72**	**46**	⇓P	**P**	**17 46 38.1**	**-0.6**
	baz=75						
TUQ	**Turquoise Mtn.**	**74.73**	**46**	⇑P	**P**	**17 46 38.5**	**-0.3**
	baz=75,SNR=12						
O06A	**Flanigan**	**74.75**	**40**	P	**P**	**17 46 39.2**	**+0.3**
	baz=75,SNR=29						
VSP	**Spence Mountai**	**74.76**	**37**	P	**P**	**17 46 39.9**	**+0.9**
J03A	**Ideyld Park**	**74.81**	**36**	⇑P	**P**	**17 46 39.5**	**+0.3**
	baz=75						
R08A	**Mina**	**74.82**	**43**	⇑P	**P**	**17 46 39.3**	**0.0**
	baz=75,SNR=16						
Y12C	**Blythe**	**74.86**	**48**	⇑P	**P**	**17 46 39.4**	**-0.1**
	baz=75						
KDAK	**Kodiak Island**	**74.87**	**12**	P	**P**	**17 46 39.4**	**-0.2**
	comp=Z,2.5nm,0.6s,mb4.0,baz=206,slow=6.9,SNR=3.9						
QSPA	**South Pole Qui**	**74.88**	**180**	eP	**P**	**17 46 39.6**	**-0.1**
	comp=Z,14nm,0.8s,mb4.6						
M06C	**Likely Place G**	**74.96**	**39**	⇓P	**P**	**17 46 40.5**	**+0.3**
	baz=75						
U10A	**Ash Meadows, A**	**74.96**	**45**	⇑P	**P**	**17 46 40.3**	**+0.1**
	baz=75						
P07A	**Fallon**	**74.99**	**41**	⇑P	**P**	**17 46 40.6**	**+0.3**
	baz=75						
I03A	**Eugene**	**75.01**	**36**	⇑P	**P**	**17 46 40.5**	**+0.1**
	baz=75						
S09A	**Goldfield**	**75.06**	**44**	⇑P	**P**	**17 46 40.5**	**-0.2**
	baz=75						
N06A	**Buffalo Meadow**	**75.09**	**40**	P	**P**	**17 46 41.1**	**+0.2**
	baz=75,SNR=23						
MPOR	**Mary's Peak**	**75.19**	**35**	P	**P**	**17 46 42.0**	**+0.5**
Q08A	**Gabbs**	**75.22**	**42**	⇑P	**P**	**17 46 41.6**	**0.0**
	baz=75						
L05A	**Lakeview**	**75.25**	**38**	⇓P	**P**	**17 46 42.4**	**+0.7**
	baz=76						
O07A	**Toulon**	**75.35**	**41**	⇓P	**P**	**17 46 42.5**	**+0.2**
	baz=76						

COR Corvallis 75.38 35 P P
Y13A Salome 75.39 48 ⇓P P 17 46 42.6 0.0
baz=76
W12A Cal Nev Ari 75.39 47 ⇑P P 17 46 42.9 +0.3
baz=76
PDMCI Parker Dam,Lak 75.41 48 ⇑P P 17 46 42.7 0.0
baz=76
R09A Tonopah 75.44 43 ⇓P P 17 46 43.0 +0.1
baz=76
H03A Soap Creek Ran 75.44 35 ⇑P P 17 46 43.2 +0.3
baz=76
HBO Huckleberry Mo 75.47 36 P P 17 46 43.0 0.0
P08A Dixie Valley 75.59 41 ⇑P P 17 46 44.1 +0.4
baz=76
IRO Indian Ridge 75.61 36 P P 17 46 43.6 -0.2
U11A Corn Creek 75.62 45 ⇓P P 17 46 43.8 0.0
baz=76
V12A Nelson 75.63 46 ⇓P P 17 46 44.0 +0.1
baz=76
N07B Gerlach 75.64 40 ⇑P P 17 46 44.3 +0.3
baz=76
BROR Big Rock Looko 75.66 36 P P 17 46 44.4 +0.3
Q09A Carvers 75.69 43 ⇑P P 17 46 44.2 -0.1
baz=76
J05A Fort Rock 75.75 37 ⇑P P 17 46 45.1 +0.4
baz=76
X13A Yucca 75.78 48 ⇓P P 17 46 44.6 -0.2
baz=76
Z14A Wintersburg 75.81 49 ⇓P P 17 46 44.8 -0.2
baz=76
G03A Yamhill 75.85 34 ⇑P P 17 46 45.0 -0.2
baz=76
M07A Soldier Meadow 75.87 40 ⇑P P 17 46 45.7 +0.4
baz=76
O08A Rochester Mine 75.88 41 ⇓P P 17 46 45.5 +0.2
baz=76
WIFE Three Sisters- 75.89 36 P P 17 46 45.5 +0.1
KMOR Kings Mountain 75.94 34 P P 17 46 45.8 0.0
R10A Warm Springs 75.98 43 ⇓P P 17 46 46.2 +0.2
baz=76
W13A Hualapai Mount 75.99 47 P P 17 46 46.2 +0.2
baz=76,SNR=12
115A Sonoran Desert 76.02 50 ⇓P P 17 46 45.7 -0.5
baz=76
Y14A Wickenburg 76.05 49 ⇓P P 17 46 46.3 -0.1
baz=76
NCOR Newberry Crate 76.06 37 P P 17 46 47.5 +1.1
H04A Detroit Lake 76.06 35 ⇓P P 17 46 45.9 -0.5
baz=76
F03A Seaside 76.09 34 ⇓P P 17 46 46.5 -0.1
baz=76
P09A Austin 76.11 42 ⇑P P 17 46 46.7 0.0
baz=76
L07A Adell 76.13 39 ⇓P P 17 46 47.1 +0.4
baz=76
N08A GE Springer Mi 76.16 41 ⇑P P 17 46 47.1 +0.2
baz=76
U12A Valley of Fire 76.20 46 ⇑P P 17 46 47.3 +0.1
baz=76,SNR=9.8
I05A Bend 76.26 36 ⇓P P 17 46 47.7 +0.1
baz=76
PINOR Pine Mountain 76.28 37 P P 17 46 48.1 +0.4
BPO Bald Peter 76.32 36 P P 17 46 48.6 +0.7
116A Eloy 76.35 50 ⇑P P 17 46 48.0 0.0
baz=76
J06A Christmas Vall 76.36 38 ⇑P P 17 46 47.6 -0.5
baz=77
M08A Happy Creek Ra 76.39 40 ⇑P P 17 46 48.3 0.0
baz=77
X14A Yava 76.39 48 ⇓P P 17 46 48.5 +0.3
baz=77
O09A Fish Creek Ran 76.42 41 P P 17 46 48.6 +0.2
baz=77,SNR=20
K07A Rock Creek Ran 76.57 38 ⇓P P 17 46 49.4 +0.1
baz=77
H05A Madras 76.58 36 ⇓P P 17 46 49.1 -0.2
baz=77
N09A Rock Creek Ran 76.59 41 ⇑P P 17 46 49.5 +0.1
baz=77
P10A Eureka 76.59 42 ⇑P P 17 46 49.3 -0.1
baz=77
W14A Seligman 76.61 48 ⇓P P 17 46 50.2 +0.6
baz=77
VLMM Larch Mountain 76.67 35 P P 17 46 50.6 +0.7
F04A Amboy 76.71 34 ⇓P P 17 46 49.6 -0.5
baz=77
D03A Wishkah Elem. 76.74 33 ⇑P P 17 46 50.5 +0.2
baz=77
I06A Prineville 76.74 37 ⇑P P 17 46 50.6 +0.4
baz=77
WVOR Wild Horse Val 76.79 39 P P 17 46 50.5 0.0
LVP Lakeview Peak 76.80 34 P P 17 46 51.0 +0.4
VLL Laurance Lake 76.83 35 P P 17 46 51.1 +0.4
L08A Fields 76.83 39 ⇓P P 17 46 50.6 -0.1
baz=77
VIPM Ingram Point 76.84 36 P P 17 46 50.8 0.0
VFP Flag Point 76.86 35 P P 17 46 50.7 -0.2
X15A Humboldt 76.87 49 ⇑P P 17 46 51.2 +0.2
baz=77
C03A Quillayute Air 76.87 32 ⇑P P 17 46 51.3 +0.4
baz=77
G05A Wamic 76.89 35 ⇓P P 17 46 50.7 -0.4
baz=77
O10A Cortez Mining, 76.93 42 ⇓P P 17 46 51.0 -0.3
baz=77
J07A Hines 76.93 38 ⇑P P 17 46 51.2 -0.1
baz=77
M09A Marrel Ranch, 76.95 40 ⇓P P 17 46 51.7 +0.3
baz=77
E04A Onalaska 76.97 34 ⇑P P 17 46 51.6 +0.1
baz=77
P11A Circle Ranch, 77.02 43 ⇓P P 17 46 51.7 -0.1
baz=77
K08A Mann Creek Ran 77.05 39 ⇓P P 17 46 52.1 +0.1
baz=77
TDL Tradedollar La 77.08 34 P P 17 46 53.0 +0.8
SSE Sheshan 77.12 307 P P 17 46 50.9 -1.5
SSE AMB AMB
comp=Z,20nm,0.7s,mb4.9
SSE AMB AMB
comp=Z,395nm,4.8s
L09A Wilkinson Ranc 77.15 40 ⇑P P 17 46 52.7 +0.2
baz=77
N10A Dunphy 77.16 41 ⇑P P 17 46 52.8 +0.2
baz=77
W15A Williams 77.18 48 ⇑P P 17 46 53.2 +0.5
baz=77
F05A White Salmon 77.21 35 ⇓P P 17 46 52.5 -0.4
baz=77
I07A Izee 77.23 37 ⇓P P 17 46 53.2 +0.2
baz=78
D04A Dobbs Creek Ra 77.25 33 ⇑P P 17 46 53.1 +0.1
baz=78
VTHM Trough 77.28 36 P P 17 46 52.9 -0.4
ASR Mount Adams--S 77.30 35 P P 17 46 53.2 -0.2
O11A Cowboy Ranch, 77.39 42 ⇑P P 17 46 53.9 0.0
baz=78
HDW Hoodsport 77.46 33 P P 17 46 54.8 +0.5
E05A Randle 77.46 34 ⇓P P 17 46 53.7 -0.5
baz=78
SVW2 Sparrevohn 77.46 9 eP P 17 46 53.5 -0.8
B04A Port Angeles 77.48 32 ⇑P P 17 46 54.2 -0.2
baz=78
P12A McGill 77.53 43 ⇓P P 17 46 54.6 -0.1
baz=78
M10A I.L. Ranch, Tu 77.58 41 ⇓P P 17 46 55.1 +0.2
baz=78
CCUT Cedar City 77.58 45 eP P 17 46 54.9 0.0
ARUT Antelope Range 77.65 45 eP P 17 46 55.6 +0.3
WPW White Pass 77.66 34 P P 17 46 55.4 +0.1
I08A Drewsey 77.68 38 ⇓P P 17 46 55.1 -0.3
baz=78
N11A Elko Archery C 77.70 42 ⇓P P 17 46 55.6 0.0
baz=78
D05A Enumclaw 77.73 34 ⇓P P 17 46 56.2 +0.4
baz=78
GSM Grass Mountain 77.84 34 P P 17 46 56.3 -0.1
SLKM Skilak Lake 77.86 12 eP P 17 46 55.9 -0.6
H08A Prairie City 77.97 37 ⇓P P 17 46 56.5 -0.6
baz=78
RMW Rattlesnake Mo 78.00 33 P P 17 46 57.6 +0.4
M11A Holland Ranch, 78.00 41 ⇓P P 17 46 57.4 +0.2
baz=78
N12A Clover Valley, 78.17 42 ⇑P P 17 46 58.0 -0.2
baz=78
C05A Tolt Reservoir 78.20 33 ⇓P P 17 46 57.7 -0.7
baz=78

I09A Lost Marbles R 78.21 38 ⇑P P 17 46 57.8 -0.6
baz=78
MXC Moxie City 78.27 35 P P 17 46 58.7 -0.1
TWW Teanaway 78.30 34 P P 17 46 59.3 +0.5
MDJ Mudanjiang 78.31 323 P P 17 46 59.1 +0.2
MDJ PP PP 17 49 58.1 +0.2
MDJ S S 17 56 43.0 +1.2
MDJ SS SS 18 01 50.0 +2.6
MDJ AMB AMB
comp=Z,4.0nm,1.0s,mb4.0
MDJ AMB AMB
comp=Z,65nm,6.4s
MDJ LR LR
comp=N,49nm,23.6s
MDJ LR LR
comp=E,38nm,23.6s
MDJ LR LR
comp=Z,68nm,30.6s
A04A Legoe Bay, Lum 78.32 32 ⇑P P 17 46 58.8 -0.2
baz=79
EBG Ellensburg 78.32 34 P P 17 46 59.2 +0.2
B05A Bryant 78.34 33 ⇑P P 17 46 58.9 -0.2
baz=79
CMW Cultus Mountai 78.43 32 P P 17 47 00.2 +0.6
M12A Wells 78.55 41 ⇓P P 17 47 00.4 +0.2
baz=79
SNIWA Snively Ranch 78.56 35 P P 17 47 00.6 +0.3
HAWA Hanford 78.58 35 eP P 17 47 00.2 -0.3
comp=Z,3.9nm,1.4s,mb3.8
MDW Midway 78.59 35 P P 17 47 00.7 +0.2
H09A Durkee 78.65 37 ⇑P P 17 47 00.3 -0.5
baz=79
F08A Pendleton 78.66 36 ⇓P P 17 47 00.4 -0.4
baz=79
N13A Wendover, West 78.71 42 ⇑P P 17 47 01.1 0.0
baz=79
GBL Gable Mountain 78.75 35 P P 17 47 01.6 +0.3
A05A Maple Falls 78.81 32 ⇓P P 17 47 00.8 -0.9
baz=79
MSU Marysvale 78.87 45 eP P 17 47 02.7 +0.7
ETW Entiat 78.87 34 P P 17 47 01.9 -0.2
BMO Blue Mountains 78.96 37 eP P 17 47 01.9 -0.6
BMO pmax pmax
comp=Z,12nm,0.2s,mb5.2
BMO Blue Mountains 78.96 37 eP P 17 47 01.9 -0.6
comp=Z,12nm,0.2s,mb5.2
LNOR Lincton Mounta 78.98 36 P P 17 47 02.4 -0.2
M13A Montello 79.00 42 ⇑P P 17 47 02.4 -0.3
baz=79
PMR Palmer 79.07 12 eP P 17 47 02.1 -1.0
EPH Ephrata 79.12 34 P P 17 47 03.1 -0.3
WTV Waterville 79.13 34 P P 17 47 03.1 -0.3
DUG Dugway 79.28 43 eP P 17 47 03.9 -0.3
DUG pmax pmax
comp=Z,25nm,1.1s,mb4.8
DUG Dugway 79.28 43 eP P 17 47 03.9 -0.3
comp=Z,25nm,1.1s,mb4.8
NJ2 Nanjing 79.33 307 eP P 17 47 06.3 +1.8
NJ2 PP PP 17 50 09.8 +3.4
NJ2 S S 17 56 54.0 +1.4
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
NJ2 AMB AMB
comp=Z,40nm,10.2s
NJ2 LR LR
comp=N,280nm,14.0s
NJ2 LR LR
comp=E,180nm,38.0s
NJ2 LR LR
comp=Z,160nm,14.0s
TMUT Trail Mountain 79.91 45 eP P 17 47 08.4 +0.7
MPU Maple Canyon 79.98 44 eP P 17 47 08.3 +0.3
comp=Z,6.7nm,0.7s,mb4.4
HVU Hansel Valley 80.11 42 eP P 17 47 08.4 -0.3
HVU pmax pmax
comp=Z,14nm,0.8s,mb4.6
HVU Hansel Valley 80.11 42 eP P 17 47 08.4 -0.3
comp=Z,14nm,0.8s,mb4.7
PNT Penticton 80.29 33 P P 17 47 09.1 -0.6
SRU San Rafael 80.29 45 eP P 17 47 09.5 -0.2
SRU pmax pmax
comp=Z,22nm,1.1s,mb4.7
SRU San Rafael 80.29 45 eP P 17 47 09.5 -0.1
comp=Z,22nm,1.1s,mb4.7
CN2 Changchun 80.35 320 eP P 17 47 10.0 0.0
CN2 eS S 17 57 01.0 -2.3
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
CN2 AMB AMB
comp=Z,140nm,5.0s
CN2 LR LR
comp=N,120nm,12.0s
CN2 LR LR
comp=E,150nm,12.0s
CN2 LR LR
comp=Z,190nm,11.0s
DAU Daniels Canyon 80.42 44 eP P 17 47 10.3 -0.1
TCUT Toone Canyon 80.67 43 eP P 17 47 11.9 +0.2
HWUT Hardware Ranch 80.81 42 eP P 17 47 11.9 -0.5
PV10 Paradox Valley 80.97 46 eP P 17 47 13.3 0.0
MCK McKinley 81.06 11 eP P 17 47 12.5 -1.3
MCK pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
MCK McKinley 81.06 11 eP P 17 47 12.5 -1.2
comp=Z,6.0nm,0.8s,mb4.3
PV01 Paradox Valley 81.19 47 eP P 17 47 14.4 -0.1
ANMO Albuquerque 81.32 50 d iP P 17 47 15.3 +0.2
ANMO pmax pmax
comp=Z,26nm,1.6s
MENT Mentasta 81.43 14 eP P 17 47 16.7 +1.0
MCMT McKenzie Canyo 81.62 39 eP P 17 47 16.3 -0.5
AHID Auburn Hatcher 81.68 42 eP P 17 47 16.9 -0.1
comp=Z,3.7nm,0.4s,mb4.4
RRI2 Red Ridge 81.82 41 eP P 17 47 17.6 -0.2
DLMT Dillon 82.05 39 eP P 17 47 18.8 -0.2
comp=Z,26nm,1.0s,mb4.8
BSMT Bassoo Peak 82.08 36 P P 17 47 18.4 -0.7
REDW Red Top Meadow 82.13 41 eP P 17 47 19.2 -0.2
comp=Z,55nm,1.4s,mb5.1
TPAW Teton Pass 82.13 41 eP P 17 47 19.3 0.0
comp=Z,42nm,1.1s,mb5.0
SNOW Snow King Moun 82.24 41 eP P 17 47 19.9 -0.1
comp=Z,40nm,1.0s,mb5.0
COLA College 82.30 11 c iP P 17 47 19.6 -0.6
COLA College 82.30 11 eP P 17 47 18.7 -1.5
comp=Z,16nm,0.8s,mb4.7
IMW Indian Meadow 82.33 41 eP P 17 47 20.4 0.0
comp=Z,35nm,0.9s,mb5.0
MOOW Mose Ponds 82.39 41 eP P 17 47 20.4 -0.3
comp=Z,34nm,1.6s,mb4.7
IMA2 Indian Mountai 82.45 8 eP P 17 47 21.0 -0.1
CHMT Chamberlain Mo 82.46 37 eP P 17 47 20.2 -0.9
QLMT Earthquake Lak 82.49 40 eP P 17 47 21.8 +0.6
FLWY Flagg Ranch 82.58 41 eP P 17 47 22.0 +0.3
comp=Z,44nm,1.0s,mb5.2
PDAR Pinedale Array 82.67 42 P P 17 47 21.5 -0.7
comp=Z,21nm,0.8s,mb4.9,baz=215,slow=3.1,SNR=117
YMR Madison River 82.70 40 eP P 17 47 22.9 +0.6
comp=Z,34nm,1.2s,mb5.0
LCCM Lewis and Clar 82.72 39 P P 17 47 22.0 -0.5
SMCO Snowmass 82.78 46 eP P 17 47 22.8 +0.1
comp=Z,30nm,0.9s,mb5.0
BOZ Bozeman (W) 82.78 39 eP P 17 47 22.4 -0.3
BOZ pmax pmax
comp=Z,44nm,1.5s,mb5.0
BOZ Bozeman (W) 82.78 39 eP P 17 47 22.4 -0.4
comp=Z,44nm,1.5s,mb5.0
HRY Holter Researc 83.19 38 eP P 17 47 24.4 -0.5
WALA Waterton Lakes 83.22 35 eP P 17 47 24.3 -0.7
comp=Z,8.0nm,0.7s,mb4.6
DAWY Dawson 83.41 15 eP P 17 47 25.6 -0.4
RWWY Rawlins 83.72 44 eP P 17 47 27.1 -0.5
comp=Z,68nm,1.1s,mb5.3
ISCO Idaho Springs 83.99 46 eP P 17 47 28.8 -0.2
ISCO pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
ISCO Idaho Springs 83.99 46 eP P 17 47 28.8 -0.2
comp=Z,5.9nm,0.8s,mb4.4
GCMT Greycliff 84.05 39 eP P 17 47 29.1 -0.1
BILL Bilibino 84.17 353 eP P 17 47 26.9 -2.9
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
BJI Beijing 84.68 314 P P 17 47 33.2 +0.8
BJI AMB AMB
comp=Z,7.0nm,1.1s,mb4.3

AMTX Amarillo 84.89 52 eP P 17 47 32.5 -0.9
comp=Z,68nm,1.9s,mb5.1
EDM Edmonton 85.74 32 eP P 17 47 36.5 -1.2
RSSD Black Hills 86.88 43 eP P 17 47 41.5 -1.7
RSSD pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
RSSD Black Hills 86.88 43 eP P 17 47 41.5 -1.8
comp=Z,3.1nm,0.6s,mb4.3
MAW Mawson 87.74 199 P P 17 47 47.0 -0.3
comp=Z,1.4nm,0.4s,mb4.1,baz=138,slow=8.5,SNR=8.9
MAW Mawson 87.74 199 eP P 17 47 46.9 -0.4
MAW pmax pmax
comp=Z,5.0nm,0.6s
MAW Mawson 87.74 199 eP P 17 47 46.9 -0.4
comp=Z,4.6nm,0.6s,mb4.5
HHC Hu-ho-hao-te 88.23 313 eP P 17 47 50.6 +0.9
HHC PP PP 17 51 22.6 +3.7
HHC S S 17 58 20.1 -1.5
HHC SS SS 18 04 16.2 +2.2
HHC AMB AMB
comp=Z,16nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,101nm,5.9s
HHC LR LR
comp=N,201nm,16.7s
HHC LR LR
comp=E,112nm,21.2s
INK Inuvik 88.25 14 eP P 17 47 48.7 -1.1
INK pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 88.25 14 eP P 17 47 48.7 -1.1
comp=Z,3.9nm,0.9s,mb4.2
KMI Kunming 90.14 296 P P 17 47 59.1 +0.5
KMI AMB AMB
comp=Z,9.0nm,2.0s,mb4.3
YKA Yellowknife Ar 90.23 24 P P 17 47 58.4 -0.6
comp=Z,4.9nm,0.9s,mb4.4,baz=238,slow=4.4,SNR=23
CD2 Chengdu 90.95 302 eP P 17 48 01.0 -1.4
CD2 PP PP 17 51 41.5 +1.0
CD2 S S 17 58 42.5 -4.2
CD2 SS SS 18 04 53.2 -0.1
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CD2 AMB AMB
comp=Z,40nm,9.2s
CD2 LR LR
comp=E,100nm,18.2s
CD2 LR LR
comp=Z,90nm,16.4s
LZH Lanzhou 92.39 307 eP P 17 48 08.6 -0.4
LZH AMB AMB
comp=Z,12nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,69nm,5.0s
SYO Syowa Base 92.66 192 ⇓eP P 17 48 08.0 -2.3
SONM Songino Array 94.09 318 P P 17 48 16.7 -0.1
comp=Z,0.5nm,0.8s,mb3.7,baz=119,slow=6.4,SNR=4.2
ULM Lac du Bonnet 94.30 39 P P 17 48 16.1 -1.7
comp=Z,3.6nm,0.8s,mb4.5,baz=244,slow=4.7,SNR=5.6
ULM LR LR 18 21 32.3
comp=Z,32nm,21.5s,baz=350,slow=29
PLAL Pickwick Lake 95.52 55 eP P 17 48 21.8 -1.5
comp=Z,3.6nm,0.7s,mb4.8
MKAR Makanchi Array 110.04 315 i PKIKP PKiKP 17 53 28.6 -0.6
BRVK Borovoye 117.22 322 PKIKP PKPdf 17 53 42.4 -0.5
ZRNK Zerenda 118.00 322 ePKIKP PKPdf 17 53 42.6 -1.8
ARU Arti 122.69 328 i PKIKP PKPdf 17 53 50.5 -2.9
ARCES ARCESS Array B 124.25 352 PKP PKPdf 17 53 54.7 -1.7
comp=Z,4.3nm,0.9s,baz=115,slow=1.7,SNR=8.5
OBN Obninsk 133.55 336 ePKIKP PKPdf 17 54 12.6 -1.4
OBN e 18 01 00.6
OBN eSS SS 18 14 09.0 -8.3
OBN pmax pmax
comp=Z,4.0nm,0.8s
CLZ Clausthal 143.22 355 ePKPbc PKPdf 17 54 29.6 -2.1
CLL Collm 143.47 352 ePKPbc PKPdf 17 54 29.5 -2.7
CLL Collm 143.47 352 ⇓i PKIKP PKPdf 17 54 29.5 -2.7
comp=Z,logA/T=0.9
CLL i 17 54 31.6
CLL e*PPKP 17 55 18.0
CLL Collm 143.47 352 ⇓i PKPdf PKPdf 17 54 29.5 -2.7
comp=Z,7.0nm,0.9s
CLL i PKiKP PKiKP 17 54 31.6 -4.0
comp=Z,7.0nm,0.8s
CLL epPKPdf pPKPdf 17 55 18.0 +6.0
CLL Collm 143.47 352 ⇓i PKIKP PKPdf 17 54 29.5 -2.7
CLL e 17 55 18.0
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL pmax pmax
comp=Z,7.0nm,0.8s
KOLS Kolonicke sedl 143.68 341 ePKP PKPdf 17 54 31.0 -1.5
BRG Berggiesshubel 143.77 351 e(P) PKPdf 17 54 32.8 +0.1
comp=Z,0.9nm,0.6s
BRG e 17 54 41.4
comp=Z,1.0nm,0.8s
BRG Berggiesshubel 143.77 351 ePKIKP PKPdf 17 54 32.8 +0.1
BRG pmax pmax
comp=Z,1.0nm,0.6s
BRG pmax pmax
comp=Z,1.0nm,0.8s
UPC Upice 143.77 349 ePKP PKPdf 17 54 31.1 -1.6
NIE Niedzica 143.81 344 ePKP PKPdf 17 54 31.2 -1.6
DPC Dobruska-Polom 143.87 348 ePKP PKPdf 17 54 31.2 -1.7
DPC epPKP pPKPdf 17 55 19.0 +6.3
CRVS Cervenica-Dubn 143.95 342 ePKP PKPdf 17 54 31.2 -1.8
OKC Ostrava-Krasne 143.96 346 ePKP PKPdf 17 54 31.6 -1.4
PVCC Panska Ves 144.00 350 ePKP PKPdf 17 54 31.5 -1.6
MOX Moxa 144.29 354 ePKPbc PKPdf 17 54 32.3 -1.3
WERD Werda 144.41 353 ePKPbc PKPdf 17 54 32.3 -1.5
TANN Tannenbergstha 144.42 353 ePKPbc PKPdf 17 54 32.7 -1.1
GUNZ Gunzen 144.48 353 ePKPbc PKPdf 17 54 32.9 -1.0
PRU Pruhonice 144.53 350 ePKP PKPdf 17 54 33.2 -0.8
PRU epPKP pPKPdf 17 55 22.6 +8.8
WERN Wernitzgruen 144.55 353 ePKPbc PKPdf 17 54 33.4 -0.7
NKC Novy Kostel 144.60 353 ePKP PKPdf 17 54 33.6 -0.5
VRAC Vranov 144.80 348 ⇑i P PKPdf 17 54 34.4 -0.1
VRAC Vranov 144.80 348 ⇑P PKPdf 17 54 34.4 -0.1
KMBO Kilima Mbogo 144.85 245 PKP PKPdf 17 54 35.7 +1.1
comp=Z,2.4nm,0.8s,baz=177,slow=1.4,SNR=4.7
KMBO Kilima Mbogo 144.85 245 ePKP PKPdf 17 54 35.4 +0.9
MANZ Manzenberg 144.88 353 ePKPbc PKPdf 17 54 34.3 -0.3
TNS Taunus Mts 144.96 357 ePKPbc PKPdf 17 54 34.3 -0.5
TIRR Tirgusor 145.02 331 ⇓i P PKPbc 17 54 35.1 +0.5
TIRR Tirgusor 145.02 331 ⇓P PKPbc 17 54 35.1 +0.5
TREC Trest 145.03 349 ePKP PKPdf 17 54 34.4 -0.5
TREC epPKP pPKPdf 17 55 22.8 +8.1
VYHS Vyhne 145.05 345 ePKP PKPdf 17 54 35.1 +0.2
VYHS e 17 55 23.2
HARR Harsova 145.06 332 ⇓i P PKPbc 17 54 35.3 +0.6
ROTZ Rotzenmuhle 145.09 353 ePKPbc PKPbc 17 54 35.2 +0.4
GIVF Givet 145.15 1 ePKP1 PKPbc 17 54 34.1 -0.9
BAIF Baives 145.18 2 ePKP1 PKPbc 17 54 34.5 -0.6
comp=Z,20nm,0.8s
GRA1 Grafenberg Arr 145.27 354 ePKPbc PKPbc 17 54 36.0 +0.6
GRA1 epPKPbc 17 55 22.9
GRF Grafenberg Arr 145.27 354 ePKPbc PKPbc 17 54 36.0 +0.6
GRF epPKPbc 17 55 22.9
MLR Muntele Rosu 145.29 335 ⇑i P PKPdf 17 54 36.3 +1.0
DRGR 145.42 339 ⇑i P PKPdf 17 54 35.3 -0.3
BR131 Keskin Array S 145.43 320 ePKP PKPdf 17 54 36.3 +0.7
BRTR Keskin Array B 145.43 320 PKPbc PKPbc 17 54 36.0 +0.2
comp=Z,12nm,0.8s,baz=102,slow=2.7,SNR=78
BRTR pPKPbc pPKPbc 17 55 21.4 +6.4
comp=Z,6.8nm,0.9s,baz=144,slow=2.7,SNR=4.6
KHC Kasperske Hory 145.52 351 ePKP PKPdf 17 54 35.9 +0.2
KHC epPKP pPKPdf 17 55 25.3 +10
WLF Walferdange 145.59 359 ePKPbc PKPbc 17 54 36.0 -0.4
WLF Walferdange 145.59 359 ePKP PKPbc 17 54 36.0 +0.1
WET Wettzell 145.61 352 ePKPbc PKPbc 17 54 36.1 -0.3
VOIR 145.70 336 ⇑i P PKPdf 17 54 37.2 +1.2
VOIR 145.70 336 ⇑P PKPdf 17 54 37.2 +1.2
ZST Bratislava 145.74 346 ePKP 17 55 26.6
GEC2 GERESS Array S 145.78 351 ePKPbc PKPbc 17 54 36.6 -0.3
GERES GERESS Array B 145.78 351 PKPbc PKPbc 17 54 36.1 -0.8
comp=Z,3.2nm,1.0s,baz=29,slow=3.0,SNR=21
GERES pPKPbc pPKPbc 17 55 25.3 +9.2
comp=Z,2.1nm,0.9s,baz=45,slow=2.9,SNR=3.7
ROSF Rostrenen 146.10 11 ePKP1 PKPbc 17 54 36.7 -1.2
FLN La Foliniere 146.11 7 ePKP1 PKPbc 17 54 36.7 -1.2
comp=Z,14nm,0.7s
CONA Conrad Observa 146.27 348 P PKPdf 17 54 32.5 -4.5
comp=Z,8.5nm,0.8s
SGMF Saint Gilles 146.31 10 ePKP1 PKPbc 17 54 37.2 -1.3

	comp=Z,13nm,0.7s						
LDF	La Druitiere	146.32	7	ePKP1	PKPbc	17 54 38.0	-0.5
GRR	Gorron	146.43	8	ePKP1	PKPbc	17 54 38.6	-0.3
	comp=Z,14nm,0.6s						
QUIF	Quistinic	146.53	11	ePKP1	PKPbc	17 54 37.7	-1.4
MOA	Molln	146.65	349	⇓iP	PKPdf	17 54 39.6	+2.0
	comp=Z,10.0nm,1.1s						
MEZF	Maizieres J'vi	146.75	1	ePKP1	PKPbc	17 54 39.2	-0.6
BZS	Buzias	146.82	339	⇓iP	PKPdf	17 54 39.8	+1.9
BZS	Buzias	146.82	339	⇓P	PKPdf	17 54 39.9	+1.9
CDF	Champ du Feu	146.82	358	ePKP1	PKPbc	17 54 39.4	-0.6
	comp=Z,36nm,1.2s						
BFO	Black Forest	146.86	357	ePKPbc	PKPbc	17 54 40.1	0.0
PKSM	Moragy	147.20	343	⇓iP	PKPdf	17 54 40.8	+2.2
PKSM	Moragy	147.20	343	⇓P	PKPdf	17 54 40.8	+2.3
HAU	Haudompre	147.25	359	ePKP1	PKPbc	17 54 40.6	-0.6
	comp=Z,15nm,0.8s						
HINF	Hinteralfeld	147.43	359	ePKP1	PKPbc	17 54 40.6	-1.1
WTTA	Wattenberg	147.62	352	⇓iP	PKPdf	17 54 42.1	+2.9
	comp=Z,11nm,0.8s						
DAVA	Damuels	147.78	355	⇓iP	PKPbc	17 54 43.6	+1.0
	comp=Z,13nm,0.9s						
LOR	Lormes	147.96	2	ePKP1	PKPbc	17 54 42.5	-0.6
	comp=Z,12nm,0.9s						
SSF	Saint Saulge	148.15	3	ePKP1	PKPbc	17 54 43.2	-0.4
	comp=Z,23nm,1.1s						
AVF	Avril sur Loir	148.41	3	ePKP1	PKPbc	17 54 43.4	-0.8
	comp=Z,11nm,0.9s						
SMF	Signal de Mont	148.58	2	ePKP1	PKPbc	17 54 43.8	-0.9
BGF	Bois d'Agland	148.61	4	ePKP1	PKPbc	17 54 44.3	-0.5
	comp=Z,13nm,0.8s						
CABF	La Chapelle	148.65	359	ePKP1	PKPbc	17 54 45.0	+0.2
	comp=Z,35nm,0.9s						
EIL	Elat	149.46	303	ePKPbc	PKPbc	17 54 47.2	+0.3
LPL	La Plagne	149.73	359	ePKP1	PKPbc	17 54 48.0	+0.5
	comp=Z,23nm,1.0s						
LPG	La Plagne	149.75	359	ePKP1	PKPbc	17 54 48.3	+0.7
	comp=Z,24nm,1.0s						
VIVF	Saint-Julien-l	150.39	1	ePKP1	PKPbc	17 54 49.1	0.0
	comp=Z,22nm,1.1s						
LASF	Ste Croix	151.14	3	ePKP1	PKPbc	17 54 50.8	-0.1
	comp=Z,43nm,1.4s						
SBF	Sospel	151.36	357	ePKP1	PKPbc	17 54 51.3	-0.1
SJPF	Ste Jean	151.52	11	ePKP1	PKPbc	17 54 51.7	0.0
	comp=Z,25nm,1.1s						
ETSF	Etsaut	151.84	10	ePKP1	PKPbc	17 54 52.3	-0.2
	comp=Z,11nm,0.8s						
LMR	La Mourre	151.92	359	ePKP1	PKPbc	17 54 53.2	+0.6
ESDC	Sonseca Array	154.16	17	PKPbc	PKPbc	17 54 57.8	+0.3
	comp=Z,0.2nm,0.3s,baz=339,slow=2.9,SNR=5.8						
ESDC				PKPab	PKPab	17 55 12.0	+0.1
	comp=Z,3.3nm,1.0s,baz=322,slow=2.8,SNR=7.6						
TORD	Torodi Ar. Bea	175.63	117	PKP	PKPdf	17 55 06.0	-1.5
	comp=Z,1.6nm,0.9s,baz=0.2,slow=1.3,SNR=5.1						
TORD				PKPab	PKPab	17 56 44.0	-2.1
	comp=Z,2.4nm,0.8s,baz=257,slow=4.0,SNR=8.3						

IDC 02 17:37:21.2±3.3,901S×10904E,h0km,mb3.4/3,mb1 3.6/3, mb1mx3.4/15,mbtmp3.4/3,Error ellipse: s-maj=166.4km s-min=28.2km az=48.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.48	121	P	Pn	17 41 41.9	+3.2
	0.2nm,0.3s,baz=338,slow=19,SNR=15						
WRA	Warramunga Arr	26.76	117	P	P	17 43 02.3	-0.2
	0.2nm,0.4s,baz=289,slow=11,SNR=6.6						
ASAR	Alice Springs	27.89	124	P	P	17 43 13.8	+1.1
	0.5nm,1.0s,baz=292,slow=8.8,SNR=5.9						
MKAR	Makanchi Array	60.45	339	P	P	17 47 32.7	0.0
	0.3nm,0.4s,baz=152,slow=7.4,SNR=5.4						

CASC 02 17:39:53.1±2.5,1210N×8711W,h81km±11km,MD4.0, 14C-9D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	0.38	34	⇑iP	Pn	17 40 06.0	0.0
LEON				eS	Sn	17 40 17.2	+1.7
COPN	Copaltepe	0.52	81	⇓iP	Pn	17 40 08.0	+0.9
MIRN	Miramar	0.52	49	⇓iP	Pn	17 40 07.3	+0.2
MIRN				eS	Sn	17 40 19.1	+1.6
CNGN	Cerro Negro	0.57	45	eS	Sn	17 40 19.6	+1.3
CNGN				eP		17 40 07.4	
TELN	Telica	0.57	29	⇑eP	Pn	17 40 07.3	-0.3
TELN				eS	Sn	17 40 19.9	+1.5
CRIN	San Cristobal	0.60	6	⇑eP	Pn	17 40 07.8	-0.1
CRIN				eS	Sn	17 40 19.5	+0.7
MOMJ	Momotombo	0.64	61	⇑eP	Pn	17 40 07.8	-0.4
MOMJ				eS	Sn	17 40 19.8	+0.3
APYN	Apoyeque	0.76	80	eS	Sn	17 40 21.8	+0.2
XAVN	Gruta Xavier	0.77	86	eP	Pn	17 40 10.2	+0.6
XAVN				eS	Sn	17 40 23.0	+1.1
TISN	Laguna Tiscapa	0.83	87	⇓eP	Pn	17 40 10.6	+0.4
TISN				eS	Sn	17 40 24.1	+1.1
MGAN	Managua	0.85	87	⇑eP	Pn	17 40 10.2	-0.2
MGAN				eS	Sn	17 40 24.3	+1.0
TICN	Ticuantepe	0.86	94	⇓eP	Pn	17 40 11.6	+1.0
TICN				eS	Sn	17 40 25.5	+1.8
APON	Apoyo	1.04	100	eP	Pn	17 40 12.2	-0.4
CNCH	Conchagua	1.37	329	⇓eP	x	17 40 15.6	
CNCH				eS	x	17 40 34.2	
SSNN	San Juan del S	1.48	123	eP	Pn	17 40 19.2	+1.1
SSNN				eS	Sn	17 40 38.4	+1.4
CONN	Concepcion	1.55	110	eP	Pn	17 40 19.3	+0.2
CONN				eS	Sn	17 40 37.8	-1.0
MADN	Villa Maderas	1.69	114	eP	Pn	17 40 21.2	+0.3
MADN				eS	Sn	17 40 41.8	-0.2
VSM	San Miguel	1.74	320	eP	x	17 40 20.8	
SNVI	San Vicente	2.26	312	eP	x	17 40 27.9	
LCBS	La Ceiba	2.39	311	⇑eP	x	17 40 48.5	
LCBS				eS	x	17 41 17.8	
LFRS	El Faro	2.43	309	⇓eP	x	17 40 49.0	
LFRS				eS	x	17 41 16.3	
VCR	Vista de Mar	2.44	143	⇓iP	Pn	17 40 32.8	+1.9
VCR				eS	Sn	17 41 00.1	+0.3
PICS	Picacho	2.65	308	⇑iP	x	17 40 34.7	
BOQS	Boqueron	2.67	308	⇓eP	x	17 40 34.0	
VACR	Volcan Arenal	2.88	124	eP	Pn	17 40 37.8	+0.9
JCR	Jicaral	2.98	138	⇑eP	Pn	17 40 39.9	+1.8
JCR				eS	Sn	17 41 13.3	+0.5
SBLS	San Blas	3.00	306	eP	x	17 40 38.0	
SNJE	San Jose	3.00	306	⇓eP	x	17 40 57.4	
SNJE				eS	x	17 41 33.3	
CAO	Cobano	3.09	140	⇑eP	Pn	17 40 41.3	+1.6
CAO				eS	Sn	17 41 14.9	-0.7
EPA	Esparza	3.24	130	⇑eP	Pn	17 40 44.2	+2.5
EPA				eS	Sn	17 41 19.8	+0.6
CGA2	Cerro Gallo 2	3.32	128	eP	Pn	17 40 44.0	+1.2
CGA2				eS	Sn	17 41 22.8	+1.6
PRS1	Puriscal	3.46	127	⇑eP	Pn	17 40 46.4	+1.7
PRS1				eS	Sn	17 41 26.9	+2.3
IRZ2	Volcan Irazu 2	3.80	123	eP	Pn	17 40 50.6	+1.3
LCR2	La Lucha 2	3.85	127	⇑eP	Pn	17 40 51.2	+1.3
LCR2				eS	Sn	17 41 34.5	+0.6
URSC	Urasca	3.97	124	eP	Pn	17 40 53.2	+1.5
URSC				eS	Sn	17 41 37.7	+0.7
BUS	Buena Vista	4.15	127	⇑eP	Pn	17 40 56.6	+2.6
BUS				eS	Sn	17 41 42.6	+1.2
CTCR	Cotoan	5.33	126	⇑eP	Pn	17 41 12.4	+2.2

MAN 02 17:56:46.7,1832N×12070E,h21km,mb2.0,ML3.7,MS1.4, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.07	277	⇓iP	Pb	17 56 51.2	+0.6
PIP				eS	Sb	17 56 58.2	+5.1
ABRA	Dolores	0.66	179	eP	Pb	17 56 59.6	+0.1
APYP	Conner	0.69	131	eP	Pb	17 57 00.3	+0.3
APYP				eS	Sb	17 57 12.1	+3.1
POLP	Polilio Island	3.76	161	eP	Pn	17 57 32.3	-11

*IDC **02** 18:13:52.5±0.5,399N×9597E,h0km,mb4.7/19, mb1 4.8/19,mb1mx4.8/20,mbtmp4.7/19,MS3.8/22, Ms1 3.8/22,ms1mx3.7/34,Error ellipse: s-maj=24.4km s-min=12.5km az=57.0*

*BJI **02** 18:13:52.2,342N×9572E,h45km,mB5.1,mb5.1,Ms4.5, Msz4.2*

*ISCJB **02** 18:13:57.5±0.2,397N±003×9600E±003,h42km, mb5.0/128,MS4.0/39,Error ellipse: s-maj=5.2km s-min=3.5km az=62.9*

*MOS **02** 18:13:57.1±0.9,409N×96.12E,h39km,mb5.2/63,Error ellipse: s-maj=9.8km s-min=4.6km az=119.8*

*SZGRF **02** 18:13:57.6,281N×9539E,h49km,mb5.0,Off west coast of northern Sumatera, Indonesia*

*NEIC **02** 18:13:59.4±0.1,397N×9597E,mb5.0/62,MS4.0/3,Error ellipse: s-maj=6.0km s-min=3.2km az=218.0*

NEIC Felt [II] at Banda Aceh.

ISC 02 18:13:59.7±0.2,398N±003×9596E±003,h46km±1.9km:pP-P,n399,σ0.s96/356,mb5.0/128,MS4.0/39, 55C-41D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	Banda Aceh	1.64	336	P	Pn	18 14 24.0	-2.1
	2μm,0.7s						
TSI	Tuntungan	2.65	100	P	Pn	18 14 40.8	+0.9
	922nm,0.9s						
TSI	Tuntungan	2.65	100	⇑iP	Pn	18 14 41.9	+2.0
TSI				eS	Sn	18 15 23.5	+13
TSI	Tuntungan	2.65	100	eP	Pn	18 14 49.9	+10
PSI	Prapat	3.19	111	Pn	Pn	18 14 49.7	+2.4
	62nm,0.3s,baz=318,slow=8.5,SNR=133						
PSI				Sn	Sn	18 15 26.4	+2.4
	81nm,0.3s,baz=283,slow=18,SNR=5.8						
PSI				LR	LR	18 15 45.1	
	comp=Z,906nm,18.5s,baz=282,slow=35						
PSI	Prapat	3.19	111	P	Pn	18 14 49.7	+2.4
PSI						18 15 26.5	
PSI	Prapat	3.19	111	Pn	Pn	18 14 49.7	+2.4
PSI				Sn	Sn	18 15 26.4	+2.4
PSI				LR	LR	18 15 45.1	
KULM	Kulim	4.86	74	eP	Pn	18 15 11.5	+1.3
KULM				eS	Sn	18 16 02.6	-2.6
IPM	Ipoh	5.08	84	P	Pn	18 15 14.5	+1.1
PPI	Padang Panjang	6.25	135	P	Pn	18 15 29.7	+0.3
	79nm,0.9s						
KGM	Kluang	7.61	105	P	Pn	18 15 50.1	+2.2
NNT	Nongplab	9.34	23	P	Pn	18 16 15.0	+3.4
KSI	Kapahiang	10.07	139	P	Pn	18 16 20.9	-0.8
	152nm,0.7s						
NST	Nakhon Sawan	12.32	19	P	Pn	18 16 56.3	+3.8
UBT	Ubonrachathani	14.31	38	⇑P	Pn	18 17 24.5	+4.8
KSM	Kuching	14.55	99	eP	Pn	18 17 23.6	+0.8
CHG	Chiang Mai	15.03	11	P	Pn	18 17 32.2	+3.2
CHTO	Chiang Mai	15.03	11	P	Pn	18 17 32.5	+3.5
	SNR=10.0						
CHTO	Chiang Mai	15.03	11	eP	Pn	18 17 31.5	+2.5
CHTO				pmax	pmax		
	comp=Z,56nm,1.1s						
CHTO	Chiang Mai	15.03	11	eP	Pn	18 17 31.5	+2.5
	comp=Z,56nm,1.1s						
PALK	Pallekele	15.53	283	P	Pn	18 17 35.8	+0.3
KKM	Kota Kinabalu	20.29	83	P	P	18 18 32.5	+1.0
KKM	Kota Kinabalu	20.29	83	eP	P	18 18 32.3	+0.8
KMMI	Kalianget	21.05	121	P	P	18 18 40.2	+0.4
	comp=Z,222nm,1.0s,mb5.5						
HYB	Hyderabad	21.66	309	i P	P	18 18 49.0	+2.6
HYB				e		18 19 05.5	
HYB				e		18 19 16.0	
HYB	Hyderabad	21.66	309	eP	P	18 18 49.0	+2.6
KMI	Kunming	22.01	17	P	P	18 18 53.4	+3.3
KMI				AP		18 19 01.9	
KMI				XP	sP	18 19 05.5	-1.3
KMI				PP		18 19 21.5	
KMI				PPP		18 19 31.3	
KMI				S	S	18 22 53.5	+3.2
KMI				XS	sS	18 23 06.3	-1.8
KMI				SS		18 23 33.3	
KMI				SSS		18 23 49.2	
KMI				AMB	AMB		
	comp=Z,29nm,0.9s,mb4.7						
KMI				AMB	AMB		
	comp=Z,319nm,4.5s						
KMI				LR	LR		
	comp=N,655nm,13.9s,MS4.4						
KMI				LR	LR		
	comp=E,749nm,15.3s,MS4.4						
KMI				LR	LR		
	comp=Z,693nm,17.2s,MS4.1						
BATP	Bataraza	22.23	76	eP	P	18 18 51.4	-0.9
PCI	Palu	24.35	101	P	P	18 19 13.5	+0.2
	comp=Z,155nm,1.4s,mb5.2						
GYA	Guiyang	24.59	24	⇑iP	P	18 19 16.5	+1.0
GYA				AP		18 19 25.8	
GYA				XP	sP	18 19 30.4	-2.5
GYA				PP		18 19 53.6	
GYA				S	S	18 23 33.9	+0.5
GYA				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.1						
GYA				AMB	AMB		
	comp=Z,130nm,4.2s						
GYA				LR	LR		
	comp=N,480nm,16.7s,MS4.2						
GYA				LR	LR		
	comp=E,430nm,17.0s,MS4.2						
GYA				LR	LR		
	comp=Z,480nm,16.4s,MS4.1						
JIRN	Jiri	25.32	339	eP	P	18 19 22.8	+0.7
	comp=Z,48nm,0.7s,mb5.1						
PKI	Pulchoki	25.53	338	eP	P	18 19 23.9	-0.1
	comp=Z,23nm,0.7s,mb4.8						
PKI	Pulchoki	25.53	338	eP	P	18 19 23.9	-0.1
PKI				pmax	pmax		
	comp=Z,23nm,0.7s,mb4.8						
GUN	Gumba	25.66	339	eP	P	18 19 25.7	+0.5
	comp=Z,65nm,0.5s,mb5.4						
DMN	Daman	25.68	337	eP	P	18 19 25.6	+0.3
KKN	Kakani	25.77	338	eP	P	18 19 26.3	+0.1
	comp=Z,46nm,0.9s,mb5.0						
KKN	Kakani	25.77	338	eP	P	18 19 26.3	+0.1
KKN				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.0						
GKN	Gorkha	26.21	337	eP	P	18 19 30.3	+0.1
	comp=Z,31nm,0.4s,mb5.2						
KOLN	Koldanda	26.43	335	eP	P	18 19 32.2	+0.1
	comp=Z,57nm,0.7s,mb5.2						
CD2	Chengdu	27.78	14	⇓iP	P	18 19 44.1	-0.2
CD2				AP	pP	18 19 53.5	-2.8
CD2				XP	sP	18 19 57.5	-4.2
CD2				PP		18 20 34.2	
CD2				S	S	18 24 24.5	+0.7
CD2				SS		18 25 47.2	
CD2				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.3						
CD2				AMB	AMB		
	comp=Z,180nm,5.9s						
CD2				LR	LR		
	comp=E,300nm,18.0s						
CD2				LR	LR		
	comp=Z,370nm,16.8s,MS4.0						
BUKP	Musuan	29.20	81	eP	P	18 19 57.5	+0.6
WHN	Wuhan	31.62	31	⇓P	P	18 20 19.0	+0.8
XAN	Xi'an	32.25	20	P	P	18 20 22.9	-0.9
XAN				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.4						
LZH	Lanzhou	32.77	12	eP	P	18 20 28.1	-0.2
LZH				AP	pP	18 20 37.9	-2.6
LZH				XP	sP	18 20 41.7	-4.2
LZH				PP	PP	18 21 39.1	-3.8
LZH				eS	S	18 25 41.0	-1.0
LZH				SS	SS	18 27 44.0	-20
LZH				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,160nm,5.0s						
LZH				LR	LR		
	comp=E,676nm,14.3s						
LZH				LR	LR		
	comp=Z,988nm,15.4s,MS4.6						
NJ2	Nanjing	35.23	35	eP	P	18 20 50.4	+0.7
NJ2				AP	pP	18 21 00.1	-1.8
NJ2				XP	sP	18 21 04.0	-3.3
NJ2				PP	PP	18 22 10.5	+0.3
NJ2				S	S	18 26 24.0	+3.9
NJ2				XS	sS	18 26 39.0	-1.5
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,60nm,6.3s						
NJ2				LR	LR		
	comp=N,70nm,30.0s						
NJ2				LR	LR		
	comp=E,320nm,18.0s						
NJ2				LR	LR		
	comp=Z,150nm,22.0s						
GTA	Gaotai	35.44	5	eP	P	18 20 51.1	-0.4
GTA				AP	pP	18 20 59.8	-3.9
GTA				XP	sP	18 21 03.4	-5.7
GTA				PP	PP	18 22 13.6	+1.1
GTA				PPP		18 22 32.2	
GTA				PCP	PcP	18 23 21.2	+0.8
GTA				S	S	18 26 25.7	+2.4
GTA				XS	sS	18 26 41.7	-2.0
GTA				PCS	PcS	18 27 03.6	-3.9
GTA				SS	SS	18 28 46.8	-12
GTA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GTA				AMB	AMB		
	comp=Z,122nm,5.3s						
GTA				LR	LR		
	comp=N,228nm,16.0s,MS4.1						
GTA				LR	LR		
	comp=E,134nm,12.6s,MS4.1						
GTA				LR	LR		
	comp=Z,222nm,13.7s,MS4.1						
SWI	Sorong	35.61	97	P	P	18 20 52.0	-0.9
	comp=Z,91nm,0.8s,mb5.8						
SSE	Sheshan	35.95	39	P	P	18 20 53.5	-2.3
SSE				XP	sP	18 21 12.7	-0.7
SSE				S	S	18 26 28.3	-2.7
SSE				XS	sS	18 26 50.7	-0.7
SSE				SS	SS	18 29 06.7	-2.2
SSE				AMB	AMB		
	comp=Z,28nm,0.6s,mb5.4						
SSE				AMB	AMB		
	comp=Z,329nm,5.2s						
SSE				LR	LR		
	comp=N,102nm,25.0s,MS3.7						
SSE				LR	LR		
	comp=E,144nm,25.0s,MS3.7						
SSE				LR	LR		
	comp=Z,198nm,25.0s,MS3.8						
FITZ	Fitzroy Crossi	36.58	128	eP	P	18 20 59.5	-1.7
	comp=Z,18nm,0.6s,mb5.1						
JOW	Kunigami	38.35	50	LR	LR	18 36 36.3	
	comp=Z,186nm,21.7s,MS3.9,baz=239,slow=36						
HHC	Hu-ho-hao-te	39.30	19	eP	P	18 21 25.7	+1.5
HHC				AP	pP	18 21 35.5	-1.0
HHC				XP	sP	18 21 39.6	-2.3
HHC				PP	PP	18 23 01.4	+6.5
HHC				PCP	PcP	18 23 33.1	+0.9
HHC				SCP	ScP	18 27 18.0	+1.1
HHC				PCS	PcS	18 27 22.1	+0.1
HHC				S	S	18 27 26.2	+4.3
HHC				XS	sS	18 27 42.4	-0.1
HHC				SS	SS	18 30 15.0	-1.6
HHC				SCS	ScS	18 31 28.7	-0.1
HHC				AMB	AMB		
	comp=Z,26nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,164nm,4.4s						
HHC				LR	LR		
	comp=N,386nm,13.5s,MS4.5						
HHC				LR	LR		
	comp=E,265nm,15.0s,MS4.5						
HHC				LR	LR		
	comp=Z,328nm,15.2s,MS4.3						
KAKA	Kakadu	39.86	115	⇓iP	P	18 21 27.2	-1.6
	comp=Z,10nm,0.5s,mb4.8						
BJI	Beijing	40.28	24	P	P	18 21 33.4	+1.1
BJI				AMB	AMB		
	comp=Z,85nm,0.7s,mb5.6						
BJI				AMB	AMB		
	comp=Z,197nm,5.3s						
BJI				LR	LR		
	comp=N,187nm,20.0s,MS4.0						
BJI				LR	LR		
	comp=E,121nm,20.0s,MS4.0						
BJI				LR	LR		
	comp=Z,253nm,27.8s						
WMQ	Urumqi	40.34	351	eP	P	18 21 32.5	-0.3
WMQ				AP	pP	18 21 42.5	-2.7
WMQ				XP	sP	18 21 46.5	-4.0
WMQ				PP	PP	18 23 10.0	+3.8
WMQ				S	S	18 27 39.0	+1.5
WMQ				SS	SS	18 30 34.0	-3.4
WMQ				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,124nm,4.0s						
WMQ				LR	LR		
	comp=N,105nm,14.0s,MS4.0						
WMQ				LR	LR		
	comp=E,138nm,16.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,106nm,14.0s,MS3.8						
MUN	Mundaring	40.62	153	eP	P	18 21 35.9	+0.8
KLBR	Kellerberrin	41.02	151	eP	P	18 21 38.8	+0.4
	comp=Z,42nm,1.4s,mb4.9						
DL2	Dalian	41.87	30	P	P	18 21 46.0	+0.6
DL2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.0						
NWAO	Narrogin (SRO)	41.88	153	P	P	18 21 45.4	-0.1
	comp=Z,16nm,1.1s,mb4.6,baz=328,slow=8.4,SNR=3.5						
ULHL	Ulahol	41.97	338	P	P	18 21 46.6	+0.4
	SNR=5.4						
UCH	Uchtor	42.62	336	P	P	18 21 52.6	+1.1
	SNR=11						
KBK	Karagaybulak	42.81	337	P	P	18 21 54.3	+1.3
	SNR=5.9						
AML	Almayashu	42.87	336	P	P	18 21 54.5	+1.0
	SNR=7.2						
AAK	Ala-Archa	42.97	337	eP	P	18 21 55.3	+1.0
AAK				e	pP	18 22 04.9	-1.9
EKS2	Erkin-Say	43.28	336	P	P	18 21 58.0	+1.1
	SNR=9.1						
USP	Ospenovka	43.51	337	P	P	18 21 59.1	+0.5
	SNR=10						
MKAR	Makanchi Array	44.26	347	P	P	18 22 03.3	-1.4
	comp=Z,8.2nm,0.6s,mb4.7,baz=165,slow=7.8,SNR=141						
MKAR	Makanchi Array	44.26	347	⇑eP	P	18 22 03.9	-0.8
WRA	Warramunga Arr	44.58	124	P	P	18 22 06.5	-0.7
	comp=Z,24nm,0.5s,mb5.3,baz=302,slow=9.2,SNR=154						
WRA				LR	LR	18 44 38.4	
	comp=Z,10nm,19.5s,baz=170,slow=41						
WRAB	Tennant Creek	44.58	124	eP	P	18 22 06.8	-0.5
WRAB				pmax	pmax		
	comp=Z,43nm,0.6s,mb5.5						
WRAB	Tennant Creek	44.58	124	eP	P	18 22 06.8	-0.5
	comp=Z,43nm,0.6s,mb5.5						
WB2	Warramunga Arr	44.59	124	⇑iP	P	18 22 06.6	-0.7
SONM	Songino Array	44.60	10	P	P	18 22 06.7	-0.7
	comp=Z,29nm,0.6s,mb5.3,baz=189,slow=9.1,SNR=101						
SONM				PcP	PcP	18 23 49.1	-0.6
	comp=Z,7.3nm,0.6s,baz=195,slow=3.3,SNR=8.1						
SONM				LR	LR	18 42 49.5	
	comp=Z,393nm,19.5s,MS4.3,baz=56,slow=39						
SONM	Songino Array	44.60	10	P	P	18 22 06.7	-0.7
SONM						18 23 49.1	
ULN	Ulaanbaatar	44.75	11	eP	P	18 22 08.1	-0.5
ULN				e		18 23 50.3	
ULN				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
ULN	Ulaanbaatar	44.75	11	eP	P	18 22 08.1	-0.5
	comp=Z,15nm,0.6s,mb5.0						
ULN				ePcP	PcP	18 23 50.3	+0.1
SNY	Shenyang	45.05	29	⇑P	P	18 22 10.6	-0.4
SNY				AP	pP	18 22 23.1	-0.4
SNY				XP	sP	18 22 28.2	-0.7
SNY				PP	PP	18 23 53.8	-3.1
SNY				S	S	18 28 44.5	-2.2
SNY				AMB	AMB		
	comp=Z,23nm,0.7s,mb5.1						
SNY				AMB	AMB		
	comp=Z,128nm,5.2s						
SNY				LR	LR		
	comp=N,300nm,18.8s						
SNY				LR	LR		
	comp=Z,235nm,18.8s,MS4.1						
JAY	Jayapura	45.19	97	P	P	18 22 12.5	+0.4
	comp=Z,18nm,0.9s,mb4.9						
ASPA	Alice Springs	46.07	128	⇓iP	P	18 22 18.8	-0.2
ASAR	Alice Springs	46.07	128	P	P	18 22 18.1	-0.9
	comp=Z,5.5nm,0.4s,mb4.8,baz=297,slow=7.7,SNR=254						
ASAR				PcP	PcP	18 23 54.0	-0.8
	comp=Z,3.1nm,0.7s,baz=307,slow=4.1,SNR=5.7						

ASAR LR LR 18 41 34.0
comp=Z,133nm,20.4s,MS3.9,baz=292,slow=36
ASAR Alice Springs 46.07 128 P **P** **18 22 18.2 -0.8**
ASAR 18 23 54.0
AS31 Alice Springs 46.07 128⇓*iP* **P** **18 22 18.8 -0.2**
FORT Forrest 46.19 141 *eP* **P** **18 22 20.5 +0.5**
comp=Z,29nm,0.5s,mb5.5
ZAK Zakamensk 46.65 6 *eP* **P** **18 22 22.2 -1.4**
ZAK *e* 18 23 55.3
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
ZAK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
CN2 Changchun 47.45 29 *eP* **P** **18 22 29.4 -0.4**
CN2 *eXP* sP 18 22 43.2 -4.5
CN2 *eS* **S** **18 29 22.8 +1.8**
CN2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,250nm,12.0s,MS4.4
CN2 LR LR
comp=E,110nm,12.0s,MS4.4
CN2 LR LR
comp=Z,230nm,12.0s,MS4.4
TLY Talaya 47.97 6 *eP* **P** **18 22 33.9 0.0**
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,320nm,25.0s,MS4.2
TLY Talaya 47.97 6 *eP* **P** **18 22 34.1 +0.2**
ABKT Ailbek 48.30 319 P **P** **18 22 37.5 +1.1**
comp=Z,69nm,0.6s,mb5.9,SNR=5.8
IRK Irkutsk 48.60 7 *eP* **P** **18 22 38.3 -0.4**
IRK pmax pmax
comp=Z,18nm,0.7s,mb5.2
KURK Kurchatov 48.80 345 P **P** **18 22 40.9 +0.6**
comp=Z,79nm,0.4s,SNR=6.8
KURK Kurchatov 48.80 345 P **P** **18 22 40.0 -0.3**
SNR=6.0
KURK Kurchatov 48.80 345 *eP* **P** **18 22 39.6 -0.7**
KURK pmax pmax
comp=Z,11nm,0.8s,mb4.9
KURK Kurchatov 48.80 345 *eP* **P** **18 22 39.6 -0.7**
comp=Z,11nm,0.8s,mb5.0
CBIJ Chichi jima 49.72 58 LR LR 18 42 15.4
comp=Z,83nm,20.4s,MS3.7,baz=135,slow=34
CIT Chita 50.07 14 *eP* **P** **18 22 50.1 +0.1**
CIT *e* pP 18 23 03.6 +1.0
CIT *e* 18 24 09.7
CIT pmax pmax
comp=Z,46nm,2.3s,mb5.1
JHJ Hachijo jima 2 50.10 49 LR LR 18 42 19.4
comp=Z,79nm,21.6s,MS3.7,baz=271,slow=34
MDJ Mudanjiang 50.10 31 P **P** **18 22 51.0 +0.8**
MDJ AP pP 18 23 00.1 -2.7
MDJ XP sP 18 23 03.8 -4.3
MDJ PP PP 18 24 46.7 +1.2
MDJ SCP ScP 18 28 01.5 +0.3
MDJ PCS PcS 18 28 06.4 +0.1
MDJ S **S** **18 30 03.4 +5.1**
MDJ XS sS 18 30 18.0 -1.4
MDJ AMB AMB
comp=Z,12nm,1.1s,mb4.8
MDJ AMB AMB
comp=Z,91nm,5.5s
MDJ LR LR
comp=N,63nm,21.7s,MS4.0
MDJ LR LR
comp=E,143nm,21.7s,MS4.0
MDJ LR LR
comp=Z,142nm,22.5s,MS3.9
VLA Vladivostok 50.33 34⇑*iP* **P** **18 22 51.4 -0.5**
VLA pmax pmax
comp=Z,32nm,1.1s,mb5.3
MAJO Matsushiro 50.54 45 *eP* **P** **18 22 53.6 +0.1**
MAT Matsushiro 50.54 45 P **P** **18 22 53.7 +0.2**
MAT Matsushiro 50.54 45 *eP* **P** **18 22 54.0 +0.5**
MJAR Matsushiro Arr 50.54 45 P **P** **18 22 53.3 -0.2**
comp=Z,3.6nm,0.7s,mb4.4,baz=243,slow=8.5,SNR=11
MJAR PcP PcP 18 24 10.8 -0.1
comp=Z,3.5nm,0.7s,baz=247,slow=3.4,SNR=8.8
MJAR LR LR 18 45 32.8
comp=Z,153nm,20.5s,MS4.0,baz=240,slow=38
MJAR Matsushiro Arr 50.54 45 P **P** **18 22 53.3 -0.2**
MJAR 18 24 10.8
ZAL Zalesovo 50.63 351 P **P** **18 22 53.8 -0.4**
comp=Z,19nm,0.5s,mb5.3,baz=307,slow=6.5,SNR=75
ZAL LR LR 18 49 11.0
comp=Z,52nm,18.0s,MS3.6,baz=304,slow=42
ZAL Zalesovo 50.63 351⇑*eP* **P** **18 22 54.2 0.0**
NVS Novosibirsk 51.75 351⇑*iP* **P** **18 23 00.0 -2.5**
NVS *eS* **S** **18 30 31.3 +10**
NVS pmax pmax
comp=Z,15nm,0.9s,mb4.9
NVS pmax pmax
comp=N,10.0nm,0.7s
NVS pmax pmax
comp=E,7.0nm,0.7s
RDF Al-Radifah 52.14 304 *eP* **P** **18 23 05.6 +0.1**
RDF AMb AMB 18 23 07.9
comp=Z,51nm,0.6s,mb5.7
NAY Al-Naaiem 52.50 304 *eP* **P** **18 23 08.6 +0.4**
NAY AMb AMB 18 23 10.4
comp=Z,37nm,0.7s,mb5.5
MIB Mutribah 52.60 305 *eP* **P** **18 23 09.5 +0.6**
MIB AMb AMB 18 23 11.4
comp=Z,65nm,0.8s,mb5.6
PMG Port Moresby 52.73 105⇑*eP* **P** **18 23 10.2 +0.4**
PMG Port Moresby 52.73 105 *eP* **P** **18 23 09.2 -0.6**
RST Umm Al-Ruwaisa 52.78 304 *eP* **P** **18 23 10.6 +0.3**
RST AMb AMB 18 23 11.7
comp=Z,39nm,0.6s,mb5.5
BRVK Borovoye 53.30 341 P **P** **18 23 13.0 -1.0**
comp=Z,100nm,0.6s,SNR=9.4
BRVK Borovoye 53.30 341 P **P** **18 23 13.5 -0.6**
SNR=14
BRVK Borovoye 53.30 341 *eP* **P** **18 23 12.6 -1.4**
ZRNK Zerenda 53.63 340 *eP* **P** **18 23 15.1 -1.4**
ZRNK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ZRNK Zerenda 53.63 340 *eP* **P** **18 23 15.1 -1.4**
comp=Z,9.3nm,0.8s,mb4.8
CHKZ Chkalovo 53.71 342 *eP* **P** **18 23 16.3 -0.8**
CHKZ pmax pmax
comp=Z,27nm,0.8s,mb5.2
CHKZ Chkalovo 53.71 342 *eP* **P** **18 23 16.3 -0.8**
comp=Z,27nm,0.8s,mb5.2
KLR Kul'dur 54.37 28 *eP* **P** **18 23 19.0 -2.9**
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,100nm,2.0s,mb5.4
CTA Charters Tower 54.87 118⇑*iP* **P** **18 23 25.3 -0.2**
comp=Z,13nm,0.9s,mb5.0
CTA Charters Tower 54.87 118 LR LR 18 46 39.6
comp=Z,151nm,19.6s,MS4.1,baz=277,slow=36
CTA Charters Tower 54.87 118⇑*iP* **P** **18 23 25.3 -0.2**
CTA pmax pmax
comp=Z,13nm,0.9s
CTAO Charters Tower 54.87 118 *eP* **P** **18 23 25.3 -0.2**
CTAO pmax pmax
comp=Z,26nm,1.0s,mb5.2
CTAO Charters Tower 54.87 118 *eP* **P** **18 23 25.3 -0.2**
comp=Z,26nm,1.0s,mb5.2
HABR Khabarovsk 55.48 31 *eP* **P** **18 23 29.4 -0.5**
HABR *eS* **S** **18 31 12.0 +0.4**
BOD Bodaibo 55.54 12 *eP* **P** **18 23 29.1 -1.2**
BOD pmax pmax
comp=Z,14nm,1.6s,mb4.7
STKA Stephens Creek 56.14 133 *eP* **P** **18 23 34.1 -0.5**
comp=Z,9.7nm,0.8s,mb4.9
STKA *e* pP 18 23 48.8 +1.4
STKA Stephens Creek 56.14 133 P **P** **18 23 34.2 -0.3**
comp=Z,11nm,0.8s,mb4.9,baz=310,slow=8.1,SNR=16
STKA LR LR 18 47 14.5
comp=Z,153nm,19.5s,MS4.1,baz=27,slow=36
ASAJ Asahikawa 57.24 39 LR LR 18 48 45.2
comp=Z,135nm,21.0s,MS4.0,baz=73,slow=37
CLNS Chul'man 57.49 18 *eP* **P** **18 23 37.9 -6.3**
CLNS pmax pmax
comp=N,15nm,0.8s
CLNS pmax pmax
comp=Z,30nm,0.8s,mb5.4
CLNS pmax pmax
comp=E,14nm,0.9s
CLNS MLR MLR
comp=N,100nm,15.0s,MS4.4
CLNS MLR MLR
comp=Z,200nm,15.0s,MS4.3
CLNS MLR MLR
comp=E,200nm,14.0s,MS4.4
YSS Yuzh-Sakhalins 58.80 36 *eP* **P** **18 23 53.5 +0.2**
KMBO Kilima Mbogo 58.88 266 LR LR 18 47 09.0
comp=E,139nm,18.8s,MS4.1,baz=97,slow=34
ZEI Tsey 60.11 318 *eP* **P** **18 24 03.5 +1.1**
ZEI *e**PP pP 18 24 14.2 -1.1
ZEI *e* 18 24 45.0
ZEI pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
ARU Arti 60.16 337⇑*iP* **P** **18 24 01.3 -1.4**
ARU *e* 18 24 41.8
ARU *e* 18 26 13.0
ARU *eS* **S** **18 32 11.6 -1.2**
ARU *eSS* SS 18 36 09.8 -0.5
ARU Arti 60.16 337 *eP* **P** **18 24 00.6 -2.1**
comp=Z,31nm,1.3s,mb5.2
KIV Kislovodsk 61.41 319 P **P** **18 24 11.9 +0.7**
SNR=12
KIV Kislovodsk 61.41 319 *eP* **P** **18 24 10.9 -0.3**
KIV pmax pmax
comp=Z,34nm,1.1s,mb5.4
KIV Kislovodsk 61.41 319 *eP* **P** **18 24 10.9 -0.2**
comp=Z,34nm,1.1s,mb5.4
MALT Malatya 62.36 311 *eP* **P** **18 24 18.3 +0.7**
MALT pmax pmax
comp=Z,11nm,1.1s,mb4.9
MALT Malatya 62.36 311 *eP* **P** **18 24 18.3 +0.7**
comp=Z,11nm,1.1s,mb4.9
EIL Elat 62.95 301 *eP* **P** **18 24 22.9 +1.5**
YAK Yakutsk 63.13 17*c iP* **P** **18 24 21.4 -1.3**
YAK pmax pmax
comp=Z,171nm,1.0s
YAK Yakutsk 63.13 17 *eP* **P** **18 24 21.1 -1.6**
SOC Sochi 63.24 317 *eP* **P** **18 24 18.7 -4.7**
SOC *e*PPP 18 28 09.2
SOC *eS* **S** **18 32 46.8 -5.1**
SOC *e* 18 34 10.8
SOC *eSS* SS 18 36 56.2 -2.4
SOC pmax pmax
comp=Z,12nm,0.7s,mb5.1
VRHR Novokhopersk 65.14 326 *eP* **P** **18 24 34.9 -1.0**
VRHR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VRHR pmax pmax
comp=N,5.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.6s
BR131 Keskin Array S 66.34 312 *eP* **P** **18 24 43.3 -0.3**
BRTR Keskin Array B 66.34 312 P **P** **18 24 42.8 -0.9**
comp=E,6.3nm,0.7s,mb4.7,baz=128,slow=7.1,SNR=44
BRTR LR LR 18 56 02.5
comp=E,34nm,19.7s,MS3.6,baz=115,slow=38
BRTR Keskin Array B 66.34 312⇑*eP* **P** **18 24 43.7 +0.1**
VRSR Storozhevoye 66.58 325 *eP* **P** **18 24 44.3 -0.8**
VRSR pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
VRSR pmax pmax
comp=N,10.0nm,0.9s
VRSR pmax pmax
comp=E,9.0nm,0.9s
ANTO Ankara 67.00 312 *eP* **P** **18 24 47.6 -0.3**
ANTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
ANTO Ankara 67.00 312 *eP* **P** **18 24 47.6 -0.2**
comp=Z,5.2nm,0.6s,mb4.7
SIM Simferopol' 67.49 317 *eP* pP 18 25 00.6 -3.4
SIM pmax pmax
comp=Z,13nm,0.9s,mb5.0
SKR Severo-Kuril's 68.35 36 *eP* **P** **18 24 52.3 -4.0**
SKR pmax pmax
comp=E,30nm,0.5s
SKR pmax pmax
comp=Z,110nm,0.5s
MOS Moscow 69.32 329 *eP* **P** **18 24 59.7 -2.7**
MOS *e* pP 18 25 14.6 -1.0
MOS *e* 18 25 23.7
MOS pmax pmax
comp=Z,100nm,1.9s,mb5.4
MOS pmax pmax
comp=Z,39nm,1.1s,mb5.2
MA2 Magadan 69.39 26 *eP* **P** **18 25 01.5 -1.3**
MA2 pmax pmax
comp=Z,68nm,1.5s,mb5.4
OBN Obninsk 69.62 328⇑*eP* **P** **18 25 02.9 -1.3**
OBN *e**PP pP 18 25 17.2 -0.2
OBN pmax pmax
comp=Z,30nm,1.2s,mb5.1
PET Petropavlovsk 70.65 35⇓*iP* **P** **18 25 09.9 -0.6**
PET pmax pmax
comp=Z,49nm,0.6s,mb5.6
PET pmax pmax
comp=N,22nm,0.7s
PET MLR MLR
comp=Z,100nm,17.0s,MS4.1
PET Petropavlovsk 70.65 35 *eP* **P** **18 25 09.4 -1.1**
comp=Z,26nm,0.6s,mb5.3
TIXI Tiksi 70.69 11 *eP* **P** **18 25 08.8 -2.0**
KLMR Klimovskoe 70.72 334 *eP* **P** **18 25 08.7 -2.3**
KLMR pmax pmax
comp=Z,20nm,1.7s,mb4.8
TIRR Tirgusor 71.28 316⇑*iP* **P** **18 25 14.8 +0.5**
TIRR Tirgusor 71.28 316 *eP* **P** **18 25 13.8 -0.5**
CFR Carcaliu 71.63 316⇑*iP* **P** **18 25 16.7 +0.2**
CFR Carcaliu 71.63 316⇑P **P** **18 25 16.7 +0.2**
SANT Santorini 71.97 307 *eP* **P** **18 25 18.4 -0.1**
AKASG Malin Array Be 72.31 322 P **P** **18 25 19.2 -1.4**
comp=Z,2.3nm,0.7s,mb4.2,baz=89,slow=4.8,SNR=20
AKASG Malin Array Be 72.31 322 *i* P **P** **18 25 19.6 -0.9**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 72.31 322 P **P** **18 25 19.2 -1.4**
AKBB Malin Array Si 72.31 322 *eP* **P** **18 25 19.0 -1.5**
MLR Muntele Rosu 73.21 316⇑*iP* **P** **18 25 27.1 +1.2**
MLR Muntele Rosu 73.21 316⇑P **P** **18 25 27.1 +1.3**
DZM Mont Dzumac 73.54 114 LR LR 18 57 51.2
comp=Z,99nm,19.4s,MS4.1,baz=350,slow=36
VOIR 73.82 316⇑*iP* **P** **18 25 29.5 +0.1**
VOIR 73.82 316⇑P **P** **18 25 29.5 +0.1**
BURAR Bucovina Array 74.13 318⇑*iP* **P** **18 25 32.1 +0.8**
BURAR Bucovina Array 74.13 318⇑P **P** **18 25 32.1 +0.8**
VTS Vitosha 74.63 313⇓*iP* **P** **18 25 34.8 +0.6**
VTS Vitosha 74.63 313⇓P **P** **18 25 34.8 +0.6**
JOF Joensuu 75.12 335 *ep* **P** **18 25 35.4 -1.6**
comp=Z,9.9nm,0.8s,mb4.8
MAW Mawson 75.13 192 P **P** **18 25 36.6 -0.4**
comp=Z,2.5nm,0.6s,mb4.3,baz=14,slow=4.7,SNR=8.7
MAW LR LR 18 50 21.1
comp=Z,56nm,21.4s,MS3.8,baz=244,slow=29
DRGR 75.66 317⇓*iP* **P** **18 25 40.8 +0.7**
APA Apatity 76.11 339⇑*iP* **P** **18 25 41.5 -1.1**
APA pmax pmax
comp=Z,11nm,0.7s,mb4.9
KWP Kalwaria 76.15 320 *eP* **P** **18 25 43.1 +0.2**
KWP *e* pP 18 25 59.9 +3.7
BZS Buzias 76.22 316⇓*iP* **P** **18 25 44.0 +0.7**
BZS Buzias 76.22 316⇓P **P** **18 25 44.0 +0.7**
KOLS Kolonicke sedl 76.31 319 *eP* **P** **18 25 44.5 +0.7**
KOLS *e* pP 18 26 01.0 +3.9
SUW Suwalki 76.70 325 *eP* **P** **18 25 44.9 -1.1**
SUW *e* pP 18 25 58.7 -0.6
CRVS Cervenica-Dubn 76.83 319 *eP* **P** **18 25 48.2 +1.5**
CRVS *e* pP 18 26 01.4 +1.3
FINES FINESS Array B 76.97 332 P **P** **18 25 46.9 -0.7**
comp=Z,4.5nm,0.6s,mb4.5,baz=104,slow=8.0,SNR=24
FINES LR LR 19 04 13.6
comp=Z,46nm,21.2s,MS3.8,baz=296,slow=39
KAF Kangasniemi 77.06 333 *ep* **P** **18 25 46.3 -1.7**
comp=Z,9.7nm,0.7s,mb4.8,baz=103,slow=5.3
KAF Kangasniemi 77.06 333 *eP* **P** **18 25 46.3 -1.7**
KAF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
NIE Niedzica 77.66 320 *eP* **P** **18 25 52.4 +1.0**
PSZ Piszkesteto 77.72 318 *eP* **P** **18 25 50.5 -1.2**
PSZ pmax pmax
comp=Z,13nm,0.9s,mb4.9
PSZ Piszkesteto 77.72 318 *eP* **P** **18 25 50.5 -1.2**
comp=Z,13nm,0.9s,mb4.9
OJC Ojcow 78.10 320 *eP* **P** **18 25 54.0 +0.2**
PKSM Moragy 78.36 316⇓*iP* **P** **18 25 55.7 +0.4**
PKSM Moragy 78.36 316⇓P **P** **18 25 55.6 +0.4**
VYHS Vyhne 78.50 319 *eP* **P** **18 25 56.3 +0.3**
VYHS *e* pP 18 26 07.9 -1.5
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VYHS Vyhne 78.50 319 *eP* **P** **18 25 56.3 +0.3**
comp=Z,3.5nm,1.0s,mb4.2
VYHS *e* pP 18 26 07.9 -1.5
BILL Bilibino 79.03 21*c iP* **P** **18 25 57.3 -1.7**
BILL pmax pmax
comp=Z,15nm,1.2s,mb4.8
KEV Kevo 79.08 341 *ep* **P** **18 25 57.9 -1.3**
comp=Z,8.0nm,0.9s,mb4.7
KEV Kevo 79.08 341 *eP* **P** **18 25 57.9 -1.3**
KEV pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
OKC Ostrava-Krasne 79.11 320 *eP* **P** **18 25 59.4 0.0**
OKC *ep*P pP 18 26 11.5 -1.3
MORC Moravsky Berou 79.49 320⇓*iP* **P** **18 26 02.5 +1.0**
MORC Moravsky Berou 79.49 320⇓P **P** **18 26 02.6 +1.1**
MORC Moravsky Berou 79.49 320 *eP* **P** **18 26 01.7 +0.2**
MORC *ep*P pP 18 26 13.0 -1.9
ARCES ARCESS Array B 79.52 340 P **P** **18 26 00.6 -1.0**
comp=Z,5.8nm,0.7s,mb4.6,baz=99,slow=6.1,SNR=27
ARCES LR LR 19 04 35.0
comp=Z,64nm,19.7s,MS4.0,baz=159,slow=38
ARE0 ARCESS Array S 79.52 340 *eP* **P** **18 26 00.8 -0.8**
ZST Bratislava 79.61 318 *eP* **P** **18 26 02.5 +0.4**
ZST *e* pP 18 26 16.6 +1.1
ZST pmax pmax
comp=Z,11nm,0.8s,mb4.8
ZST Bratislava 79.61 318 *eP* **P** **18 26 02.5 +0.4**
comp=Z,10nm,0.8s,mb4.8
ZST *e* pP 18 26 16.6 +1.1
DPC Dobruska-Polom 80.33 320 *eP* **P** **18 26 06.4 +0.4**
DPC *ep*P pP 18 26 19.6 +0.2
UPC Upice 80.54 320 *eP* **P** **18 26 07.9 +0.8**
ARSA Arzberg 80.59 317⇑*iP* **P** **18 26 07.8 +0.4**
comp=Z,8.7nm,1.3s,mb4.5
BOJS Bojanci 80.66 315 *eP* **P** **18 26 08.3 +0.5**
TREC Trest 80.78 319 *eP* **P** **18 26 08.6 +0.2**
PERS Pernice 80.83 316 *eP* **P** **18 26 08.1 -0.6**
PRU Pruhonice 81.44 320 *eP* **P** **18 26 11.7 -0.2**
PRU *ep*P pP 18 26 26.6 +1.2
PVCC Panska Ves 81.46 320 *eP* **P** **18 26 11.8 -0.2**
PVCC *ep*P pP 18 26 25.3 -0.2
AQU L'Aquila 81.83 312⇓*iP* **P** **18 26 15.3 +1.3**
AQU L'Aquila 81.83 312⇓P **P** **18 26 15.3 +1.3**
BRG Berggiesshubel 81.89 321 *eP* **P** **18 26 14.6 +0.3**
comp=Z,10.0nm,0.9s,mb4.8
BRG Berggiesshubel 81.89 321 *eP* **P** **18 26 14.4 +0.1**
comp=Z,5.1nm,1.4s,mb4.3
BRG *i* pP 18 26 31.3 +3.6
comp=Z,5.9nm,0.9s
BRG Berggiesshubel 81.89 321 *eP* **P** **18 26 14.4 +0.1**
BRG *i* pP 18 26 31.3 +3.6
BRG pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
BRG pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
GEC2 GERESS Array S 81.92 319 *eP* **P** **18 26 14.6 +0.2**
comp=Z,16nm,1.1s,mb4.9
GEC2 GERESS Array S 81.92 319 *eP* **P** **18 26 14.6 +0.2**
GEC2 pmax pmax
comp=Z,16nm,1.1s,mb4.9
GERES GERESS Array B 81.92 319 P **P** **18 26 14.5 +0.1**
comp=Z,3.2nm,0.8s,mb4.3,baz=93,slow=5.5,SNR=35
KHC Kasperske Hory 82.02 319 *eP* **P** **18 26 15.3 +0.4**
KHC *ep*P pP 18 26 29.5 +1.1
KHC Kasperske Hory 82.02 319*d iP* **P** **18 26 15.4 +0.5**
RPZ Rata Peaks 82.04 135 LR LR 19 00 43.3
comp=Z,141nm,21.1s,MS4.3,baz=88,slow=34
FBE Freiberg 82.26 321 *eP* **P** **18 26 16.9 +0.7**
comp=Z,12nm,0.8s,mb4.9
WET Wettzell 82.47 319 *eP* **P** **18 26 17.6 +0.2**
comp=Z,8.0nm,0.9s,mb4.7
WET Wettzell 82.47 319 *eP* **P** **18 26 17.6 +0.2**
WET pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CLL Collm 82.50 321 P **P** **18 26 17.0 -0.5**
CLL *e**PP pP 18 26 28.0 -3.0
CLL Collm 82.50 321 *eP* **P** **18 26 17.0 -0.5**
CLL *e*(pP) pP 18 26 28.0 -3.0
CLL Collm 82.50 321 *eP* **P** **18 26 17.0 -0.5**
CLL *ep*P pP 18 26 29.0 -2.0
GUNZ Gunzen 82.88 320 *eP* **P** **18 26 19.4 -0.1**
comp=Z,7.0nm,1.2s,mb4.6
WERD Werda 82.90 320 *eP* **P** **18 26 19.7 +0.1**
comp=Z,4.0nm,0.8s,mb4.5
ROTZ Rotzenmuhle 82.94 319 *eP* **P** **18 26 20.2 +0.4**
comp=Z,8.0nm,0.9s,mb4.8
MANZ Manzenberg 83.01 320 *eP* **P** **18 26 20.2 +0.1**
comp=Z,2.1nm,1.1s,mb4.8
WTTA Wattenberg 83.24 317⇑*iP* **P** **18 26 21.0 -0.3**
comp=Z,8.1nm,0.8s,mb4.8
WTTA Wattenberg 83.24 317⇑*iP* **P** **18 26 21.0 -0.3**
WTTA pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
MOX Moxa 83.35 320 *eP* **P** **18 26 22.1 +0.2**
comp=Z,9.0nm,1.3s,mb4.6
SQTA Sankt Quirin 83.53 317⇑*iP* **P** **18 26 22.6 -0.2**
comp=Z,3.1nm,0.9s,mb4.5
SQTA Sankt Quirin 83.53 317⇑*iP* **P** **18 26 22.6 -0.2**
SQTA pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
GRA1 Grafenberg Arr 83.58 319 *eP* **P** **18 26 23.5 +0.5**
comp=Z,14nm,0.9s,mb5.1
GRA1 *ep*P pP 18 26 37.7 +1.2
GRF Grafenberg Arr 83.58 319 *eP* **P** **18 26 23.5 +0.5**
comp=Z,14nm,0.9s,mb5.1
GRF *ep*P pP 18 26 37.7 +1.2
GRF Grafenberg Arr 83.58 319 *eP* **P** **18 26 23.5 +0.5**
GRF *e**PP pP 18 26 37.7 +1.2
GRF pmax pmax
comp=Z,14nm,0.9s,mb5.1
GRF Grafenberg Arr 83.58 319 *eP* **P** **18 26 23.5 +0.5**
GRF *e**PP pP 18 26 37.7 +1.2
GRF pmax pmax
comp=Z,14nm,0.9s,mb5.1
MOTA Moosalm 83.60 317⇑*iP* **P** **18 26 22.7 -0.5**
comp=Z,4.4nm,0.9s,mb4.6
MOTA Moosalm 83.60 317⇑*iP* **P** **18 26 22.7 -0.5**
MOTA pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
NB2 NORSAR Subarra 83.99 331 P **P** **18 26 24.1 -1.0**
comp=Z,40nm,2.0s,mb5.2,baz=92,slow=5.3
NOA NORSAR Array B 83.99 331 P **P** **18 26 23.7 -1.4**
comp=Z,3.1nm,0.9s,mb4.5,baz=93,slow=5.2,SNR=7.6
NOA LR LR 19 07 07.0
comp=Z,43nm,21.5s,MS3.8,baz=80,slow=38
SPB4 Spitsbergen Ar 84.00 348 *eP* **P** **18 26 24.5 -0.7**
CLZ Clausthal 84.16 322 *eP* **P** **18 26 25.5 +0.5**
comp=Z,20nm,1.3s,mb5.1
CLZ Clausthal 84.16 322 *eP* **P** **18 26 26.4 +0.4**
CLZ pmax pmax
comp=Z,20nm,1.3s,mb5.1
CLZ Clausthal 84.16 322 *eP* **P** **18 26 26.4 +0.4**
comp=Z,20nm,1.3s,mb5.1
BSEG Bad Segeberg 84.23 324 *eP* **P** **18 26 27.0 +0.6**
comp=Z,17nm,1.1s,mb5.1
BSEG Bad Segeberg 84.23 324 *eP* **P** **18 26 27.0 +0.6**
BSEG pmax pmax
comp=Z,17nm,1.1s,mb5.1
KEST Kesra 84.95 305 P **P** **18 26 31.7 +1.7**
comp=Z,7.3nm,0.8s,mb4.9,baz=343,slow=1.0,SNR=25
KEST LR LR 19 06 04.7
comp=Z,22nm,18.2s,MS3.6,baz=336,slow=37
BFO Black Forest 85.47 318 *eP* **P** **18 26 32.5 -0.1**
comp=Z,8.0nm,0.8s,mb4.9
BFO Black Forest 85.47 318 *eP* **P** **18 26 32.5 -0.1**
BFO pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
BUG Bochum-Univer 86.10 321 *eP* **P** **18 26 33.6 -2.1**
CDF Champ du Feu 86.17 318 *eP* **P** **18 26 35.6 -0.5**
comp=Z,5.7nm,0.7s,mb4.6
CDF Champ du Feu 86.17 318 *eP* **P** **18 26 35.6 -0.5**
CDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
CDF Champ du Feu 86.17 318 *eP* **P** **18 26 35.6 -0.5**
comp=Z,2.8nm,0.7s,mb4.6
SBF Sospel 86.20 314 *eP* **P** **18 26 36.3 +0.1**
comp=Z,26nm,0.7s,mb5.3
SBF Sospel 86.20 314 *eP* **P** **18 26 36.3 +0.1**
SBF pmax pmax
comp=Z,13nm,0.7s,mb5.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SBF	Sospel	86.20	314	eP	P	18 26 36.3	+0.1
	comp=Z,13nm,0.7s,mb5.3						
HINF	Hinteralfeld	86.48	318	eP	P	18 26 37.6	0.0
LPG	La Plagne	86.63	315	eP	P	18 26 38.7	+0.4
	comp=Z,16nm,0.7s,mb5.1						
LPG	La Plagne	86.63	315	eP	P	18 26 38.7	+0.4
LPG				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.1						
LPG	La Plagne	86.63	315	eP	P	18 26 38.7	+0.4
	comp=Z,8.2nm,0.7s,mb5.1						
LPL	La Plagne	86.64	315	eP	P	18 26 38.7	+0.3
	comp=Z,40nm,1.0s,mb5.3						
LPL	La Plagne	86.64	315	eP	P	18 26 38.7	+0.3
LPL				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.3						
LPL	La Plagne	86.64	315	eP	P	18 26 38.7	+0.3
	comp=Z,20nm,1.0s,mb5.3						
MBDF	Montbardon	86.65	314	eP	P	18 26 38.5	+0.1
	comp=Z,7.2nm,0.6s,mb4.8						
MBDF	Montbardon	86.65	314	eP	P	18 26 38.5	+0.1
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8						
MBDF	Montbardon	86.65	314	eP	P	18 26 38.5	+0.1
	comp=Z,3.6nm,0.6s,mb4.8						
FRF	La Foret Royal	86.78	313	eP	P	18 26 39.3	+0.2
	comp=Z,12nm,0.6s,mb5.0						
FRF	La Foret Royal	86.78	313	eP	P	18 26 39.3	+0.2
FRF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.0						
FRF	La Foret Royal	86.78	313	eP	P	18 26 39.3	+0.2
	comp=Z,6.2nm,0.6s,mb5.0						
HAU	Haudompre	86.81	318	eP	P	18 26 38.7	-0.5
	comp=Z,32nm,0.9s,mb5.2						
HAU				eR			
	comp=Z,60nm,22.0s						
HAU	Haudompre	86.81	318	eP	P	18 26 38.7	-0.5
HAU				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
HAU				MLR	MLR		
	comp=Z,60nm,22.0s,MS4.0						
HAU	Haudompre	86.81	318	eP	P	18 26 38.7	-0.5
	comp=Z,16nm,0.9s,mb5.2						
HAU				LR	LR		
	comp=Z,60nm,22.0s,MS4.0						
LMR	La Mourre	86.89	313	eP	P	18 26 39.5	-0.1
	comp=Z,21nm,0.9s,mb5.1						
LMR	La Mourre	86.89	313	eP	P	18 26 39.5	-0.1
LMR				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.1						
LMR	La Mourre	86.89	313	eP	P	18 26 39.5	-0.1
	comp=Z,11nm,0.9s,mb5.1						
CABF	La Chapelle	87.05	316	eP	P	18 26 40.6	+0.2
	comp=Z,10nm,0.6s,mb5.0						
CABF	La Chapelle	87.05	316	eP	P	18 26 40.6	+0.2
CABF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.9						
CABF	La Chapelle	87.05	316	eP	P	18 26 40.6	+0.2
	comp=Z,5.3nm,0.6s,mb5.0						
ORIF	Oris-en-Rattie	87.27	315	eP	P	18 26 41.8	+0.3
	comp=Z,6.8nm,0.5s,mb4.8						
ORIF				eR			
	comp=Z,74nm,22.8s						
ORIF	Oris-en-Rattie	87.27	315	eP	P	18 26 41.8	+0.3
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.8						
ORIF	Oris-en-Rattie	87.27	315	eP	P	18 26 41.8	+0.3
	comp=Z,3.4nm,0.5s,mb4.8						
SMRF	Simiane la Rot	87.54	314	eP	P	18 26 43.5	+0.8
MEZF	Maizieres J'vi	87.65	318	eP	P	18 26 43.1	-0.2
GIVF	Givet	87.70	320	eP	P	18 26 43.4	-0.1
BAIF	Baives	88.10	320	eP	P	18 26 45.7	+0.3
	comp=Z,6.3nm,0.6s,mb4.7						
BAIF	Baives	88.10	320	eP	P	18 26 45.7	+0.3
BAIF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7						
BAIF	Baives	88.10	320	eP	P	18 26 45.7	+0.3
	comp=Z,3.2nm,0.6s,mb4.7						
VIVF	Saint-Julien-l	88.13	315	eP	P	18 26 45.7	+0.1
	comp=Z,8.7nm,0.7s,mb4.8						
VIVF	Saint-Julien-l	88.13	315	eP	P	18 26 45.7	+0.1
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
VIVF	Saint-Julien-l	88.13	315	eP	P	18 26 45.7	+0.1
	comp=Z,4.3nm,0.7s,mb4.8						
LOR	Lormes	88.53	317	eP	P	18 26 47.3	-0.1
	comp=Z,15nm,0.7s,mb5.1						
LOR				eR			
	comp=Z,44nm,22.2s						
LOR	Lormes	88.53	317	eP	P	18 26 47.3	-0.1
LOR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.1						
LOR				MLR	MLR		
	comp=Z,40nm,22.3s,MS3.8						
LOR	Lormes	88.53	317	eP	P	18 26 47.3	-0.1
	comp=Z,7.3nm,0.7s,mb5.1						
LOR				LR	LR		
	comp=Z,40nm,22.3s,MS3.8						
SMF	Signal de Mont	88.59	316	eP	P	18 26 47.6	-0.1
	comp=Z,14nm,0.6s,mb5.2						
SMF	Signal de Mont	88.59	316	eP	P	18 26 47.6	-0.1
SMF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.2						
SMF	Signal de Mont	88.59	316	eP	P	18 26 47.6	-0.1
	comp=Z,7.2nm,0.6s,mb5.2						
LASF	Ste Croix	88.77	314	eP	P	18 26 48.7	+0.1
VNDA	Vanda	88.78	169	P	P	18 26 46.3	-2.3
	comp=Z,0.8nm,0.5s,mb4.3,baz=347,slow=4.6,SNR=6.4						
VNDA	Vanda	88.78	169	P	P	18 26 46.3	-2.3
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VNDA	Vanda	88.78	169	eP	P	18 26 46.5	-2.1
VNDA				pmax	pmax		
	comp=Z,15nm,1.8s						
VNDA	Vanda	88.78	169	eP	P	18 26 46.5	-2.1
	comp=Z,15nm,1.8s,mb5.0						
SSF	Saint Saulge	88.79	317	eP	P	18 26 48.5	-0.2
	comp=Z,5.9nm,0.7s,mb4.7						
SSF	Saint Saulge	88.79	317	eP	P	18 26 48.5	-0.2
SSF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
SSF	Saint Saulge	88.79	317	eP	P	18 26 48.5	-0.2
	comp=Z,3.0nm,0.7s,mb4.7						
AVF	Avril sur Loir	88.91	317	eP	P	18 26 49.0	-0.2
	comp=Z,12nm,1.0s,mb4.9						
AVF	Avril sur Loir	88.91	317	eP	P	18 26 49.0	-0.2
AVF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
AVF	Avril sur Loir	88.91	317	eP	P	18 26 49.0	-0.2
	comp=Z,5.8nm,1.0s,mb4.9						
CAF	Calviac	89.97	315	eP	P	18 26 54.9	+0.7
MTLF	Montolieu	90.02	313	eP	P	18 26 55.0	+0.6
RJF	Les Rejaudoux	90.32	315	eP	P	18 26 56.0	+0.2
	comp=Z,21nm,1.1s,mb5.1						
RJF				eR			
	comp=Z,40nm,19.0s						
RJF	Les Rejaudoux	90.32	315	eP	P	18 26 56.0	+0.2
RJF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						
RJF				MLR	MLR		
	comp=Z,40nm,19.0s,MS3.9						
RJF	Les Rejaudoux	90.32	315	eP	P	18 26 56.0	+0.2
	comp=Z,10nm,1.0s,mb5.1						
RJF				LR	LR		
	comp=Z,40nm,19.0s,MS3.9						
LFF	La Frestale	90.91	315	eP	P	18 26 59.5	+0.9
	comp=Z,17nm,0.8s,mb5.1						
LFF	La Frestale	90.91	315	eP	P	18 26 59.5	+0.9
LFF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
LFF	La Frestale	90.91	315	eP	P	18 26 59.5	+0.9
	comp=Z,8.6nm,0.8s,mb5.1						
LDF	La Druitiere	91.06	319	eP	P	18 26 59.5	+0.2
	comp=Z,18nm,0.9s,mb5.1						
LDF	La Druitiere	91.06	319	eP	P	18 26 59.5	+0.2
LDF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.1						
LDF	La Druitiere	91.06	319	eP	P	18 26 59.5	+0.2
	comp=Z,9.1nm,0.9s,mb5.1						
FLN	La Foliniere	91.28	319	eP	P	18 27 00.4	+0.1
	comp=Z,28nm,0.8s,mb5.3						
FLN				eR			
	comp=Z,58nm,20.0s						
FLN	La Foliniere	91.28	319	eP	P	18 27 00.4	+0.1
FLN				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.3						
FLN				MLR	MLR		
	comp=Z,60nm,20.0s,MS4.0						
FLN	La Foliniere	91.28	319	eP	P	18 27 00.4	+0.1
	comp=Z,14nm,0.8s,mb5.3						
FLN				LR	LR		
	comp=Z,60nm,20.0s,MS4.0						
MFF	Saint Martin d	91.33	317	eP	P	18 27 01.8	+1.3
	comp=Z,37nm,1.0s,mb5.4						
MFF	Saint Martin d	91.33	317	eP	P	18 27 01.8	+1.3
MFF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.4						
MFF	Saint Martin d	91.33	317	eP	P	18 27 01.8	+1.3
	comp=Z,18nm,1.0s,mb5.4						
GRR	Gorron	91.58	319	eP	P	18 27 02.1	+0.4
ETSF	Etsaut	92.09	313	eP	P	18 27 05.0	+1.0
	comp=Z,8.6nm,0.8s,mb4.8						
ETSF	Etsaut	92.09	313	eP	P	18 27 05.0	+1.0
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
ETSF	Etsaut	92.09	313	eP	P	18 27 05.0	+1.0
	comp=Z,4.3nm,0.8s,mb4.8						
ALE	Alert	93.06	357	P	P	18 27 08.0	-0.5
	comp=Z,65nm,0.6s,SNR=6.0						
TORD	Torodi Ar. Bea	93.25	283	P	P	18 27 10.9	+1.5
	comp=Z,0.7nm,0.6s,mb4.3,baz=86,slow=6.0,SNR=5.7						
TORD				LR	LR	19 07 06.2	
	comp=Z,79nm,18.6s,MS4.2,baz=260,slow=34						
IMA2	Indian Mountai	94.51	23	eP	P	18 27 14.9	-0.3
ESDC	Sonseca Array	95.09	310	P	P	18 27 18.5	+0.6
	comp=Z,1.0nm,0.5s,mb4.5,baz=59,slow=4.3,SNR=6.4						
VNA1	Neumayer--Stat	98.43	199	eP	P	18 27 31.6	-1.4
VNA1				e	pP	18 27 41.5	-5.1
VNA1				e	pP	18 27 45.1	-1.5
H04A	Detroit Lake	120.76	31	⇓P	PKPdf	18 32 46.5	-0.2
	baz=121						
K02A	Glendale	121.38	33	⇓P	PKPdf	18 32 48.6	+0.7
	baz=121						
J05A	Fort Rock	122.23	31	⇑P	PKPdf	18 32 49.9	+0.3
	baz=122						
I06A	Prineville	122.28	30	⇑P	PKPdf	18 32 50.2	+0.6
	baz=122						
I07A	Izee	122.54	30	⇓P	PKPdf	18 32 50.9	+0.8
	baz=122						
J06A	Christmas Vall	122.81	31	⇓P	PKPdf	18 32 50.9	+0.2
	baz=123						
M04C	Macdoel	122.94	33	⇑P	PKPdf	18 32 50.9	0.0
	baz=123						
I08A	Drewsey	123.12	29	⇓P	PKPdf	18 32 51.9	+0.6
	baz=123						
CHMT	Chamberlain Mo	123.15	24	ePKPdf	PKPdf	18 32 51.9	+0.6
EGMT	Eagleton	123.53	20	ePKPdf	PKPdf	18 32 51.5	-0.5
K07A	Rock Creek Ran	123.67	31	⇑P	PKPdf	18 32 53.0	+0.7
	baz=124						
HATC	Hat Creek Radi	123.81	34	⇓P	PKPdf	18 32 53.6	+1.1
	baz=124						
K08A	Mann Creek Ran	124.03	30	⇑P	PKPdf	18 32 54.3	+1.4
	baz=124						
HOPS	Hopland	124.11	36	⇑P	PKPdf	18 32 53.6	+0.5
	baz=124						
L07A	Adell	124.11	31	⇑P	PKPdf	18 32 54.6	+1.5
	baz=124						
L08A	Fields	124.50	31	⇓P	PKPdf	18 32 54.9	+1.1
	baz=124						
MNRC	McLaughlin Nat	124.55	36	⇓P	PKPdf	18 32 55.2	+1.2
	baz=124						
M07A	Soldier Meadow	124.65	32	⇑P	PKPdf	18 32 55.1	+0.9
	baz=124						
DLMT	Dillon	124.67	24	ePKPdf	PKPdf	18 32 55.0	+0.8
N06A	Buffalo Meadow	124.75	33	⇓P	PKPdf	18 32 55.6	+1.3
	baz=125						
BOZ	Bozeman (W)	124.83	23	ePKIKP	PKPdf	18 32 55.1	+0.6
L09A	Wilkinson Ranc	124.96	30	⇑P	PKPdf	18 32 56.4	+1.6
	baz=125						
M08A	Happy Creek Ra	125.02	31	⇑P	PKPdf	18 32 56.2	+1.4
	baz=125						
ULM	Lac du Bonnet	125.03	9	PKP	PKPdf	18 32 54.0	-0.9
	comp=Z,5.9nm,0.6s,baz=4.1,slow=2.2,SNR=13						
BEKR	Beckwourth	125.08	34	⇓P	PKPdf	18 32 55.2	+0.2
	baz=125						
O06A	Flanigan	125.16	33	⇓P	PKPdf	18 32 56.2	+1.1
	baz=125						
N08A	GE Springer Mi	125.63	32	⇑P	PKPdf	18 32 57.0	+0.9
	baz=126						
O07A	Toulon	125.68	33	⇑P	PKPdf	18 32 57.2	+1.0
	baz=126						
PACP	Pacheco Peak	126.47	37	⇓P	PKPdf	18 32 59.0	+1.4
	baz=126						
O09A	Fish Creek Ran	126.57	31	⇑P	PKPdf	18 32 59.0	+1.1
	baz=126						
S06C	San Francisco	126.73	35	⇓P	PKPdf	18 32 59.1	+0.9
	baz=127						
M12A	Wells	126.77	29	⇓P	PKPdf	18 32 59.7	+1.4
	baz=127						
Q08A	Gabbs	127.12	33	⇓P	PKPdf	18 33 00.0	+1.1
	baz=127						
N12A	Clover Valley,	127.14	29	⇓P	PKPdf	18 33 00.5	+1.5
	baz=127						
M13A	Montello	127.17	28	⇑P	PKPdf	18 33 00.3	+1.3
	baz=127						
NVAR	Mina Array Bea	127.22	34	PKP	PKPdf	18 33 00.0	+0.9
	comp=Z,2.1nm,0.7s,baz=341,slow=0.7,SNR=18						
O11A	Cowboy Ranch,	127.38	30	⇑P	PKPdf	18 33 01.0	+1.6
	baz=127						
EYMN	Ely	127.88	6	ePKPdf	PKPdf	18 33 00.9	+0.5
R09A	Tonopah	128.03	33	⇑P	PKPdf	18 33 02.0	+1.3
	baz=128						
PDAR	Pinedale Array	128.05	24	PKP	PKPdf	18 33 01.4	+0.7
	comp=Z,1.1nm,0.6s,baz=343,slow=1.5,SNR=7.5						
P12A	McGill	128.26	30	⇓P	PKPdf	18 33 02.9	+1.8
	baz=128						
S09A	Goldfield	128.32	34	⇓P	PKPdf	18 33 02.9	+1.8
	baz=128						
PKM	Peak Mountain	128.76	38	⇓P	PKPdf	18 33 03.8	+1.8
	baz=129						
MPMC	Manual Prospec	129.35	35	⇓P	PKPdf	18 33 04.9	+1.8
	baz=129						
LRMC	Laurel Mountai	129.64	36	⇓P	PKPdf	18 33 05.7	+2.0
	baz=130						
GSC	Goldstone	130.28	35	⇓P	PKPdf	18 33 06.6	+1.7
	baz=130						
BELC	Belle Mtn.	131.67	36	⇑P	PKPdf	18 33 10.0	+2.5
	baz=132						
W13A	Hualapai Mount	132.07	33	⇓P	PKPdf	18 33 10.8	+2.5
	baz=132						
MONP	Monument Peak	132.19	37	⇑P	PKPdf	18 33 11.5	+3.0
	baz=132						
W14A	Seligman	132.43	33	⇑P	PKPdf	18 33 11.0	+2.0
	baz=132						
GLA	Glamis	133.03	36	⇑P	PKPdf	18 33 12.1	+2.0
	baz=133						
ANMO	Albuquerque	135.91	27	⇑iPKIKP	PKPdf	18 33 16.7	+1.2
JCT	Junction City	142.57	23	PKIKP	PKPdf	18 33 29.0	+1.4
CPUP	Villa Florida	146.11	226	ePKP2	PKPab	18 33 34.6	-0.8

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*NEIC **02** 18:17:15.7, 15.67N×96.45W, h20km, MD3.8(MEX), After MEX.*

MEX 02 18:17:15.5±0.6**, 15.65N**×**96.46W, h17**km±12km**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.36	71	iP	Pg	18 17 21.9	-1.1
HUIG				iS	Sg	18 17 26.8	-1.2
VHO	Vista Hermosa	1.44	350	iP	Pn	18 17 37.8	-3.0
VHO				iS	Sn	18 17 54.4	-4.8
OXX	Oaxaca	1.45	350	iP	Pn	18 17 38.3	-2.6
OXX				iS	Sn	18 17 55.3	-4.1
CMIG	Matias Romero	2.08	46	iP	Pn	18 17 46.3	-3.4
CMIG				iS	Sn	18 18 11.2	-4.0
UTMO	Huajuapan	2.52	330	iP	Pn	18 17 52.8	-2.8
UTMO				iS	Sn	18 18 21.5	-4.5
MEIG	Mezcala	3.78	307	iS	Sn	18 18 54.0	-3.0
PPM	Popocatepetl	3.98	329	eP	Pn	18 18 17.6	+1.9
PPM				iS	Sn	18 19 02.9	+1.0
PPM	Popocatepetl	3.98	329	iP	Pn	18 18 28.4	+13
PPM				iS	Sn	18 19 15.7	+14

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*NEIC **02** 18:33:39.8±0.8, 24.13N×141.42E, h10km, mb4.3/3, Error ellipse: s-maj=32.2km s-min=18.5km az=85.0*

*ISCJB **02** 18:33:58.1±1.8, 24.0N±0.1×141.2E±0.2, h180km±16km, mb3.8/10, Error ellipse: s-maj=36.3km s-min=20.9km az=179.3*

*IDC **02** 18:34:00.1±2.1, 24.13N×141.37E, h182km±16km, mb3.5/6, mb1 3.6/7, mb1mx3.4/19, mbtmp4.0/7, Error ellipse: s-maj=29.2km s-min=22.0km az=93.0*

ISC 02 18:33:59.4±1.7**, 24.1N**±0.1×**141.3E**±0.2**, h179**km±15km**, n12, σ1.05**/13**, mb3.8**/10**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.14	15	P	Pn	18 34 50.9	+1.3
	14nm,0.3s,baz=300,slow=18,SNR=38						
CBIJ				S	Sn	18 35 27.9	-0.9
	41nm,0.3s,baz=107,slow=24,SNR=18						
KAKA	Kakadu	37.55	194	eP	P	18 40 53.8	-2.4
	2.9nm,0.2s,mb4.6						
WRA	Warramunga Arr	44.25	189	P	P	18 41 51.8	+0.8
	1.0nm,0.6s,mb3.6,baz=6.2,slow=9.3,SNR=5.2						
MKAR	Makanchi Array	51.81	311	P	P	18 42 50.2	+1.3
	1.5nm,0.6s,mb3.8,baz=82,slow=9.3,SNR=14						
CHKZ	Chkalovo	59.60	319	eP	P	18 43 44.4	+0.1
	1.2nm,0.6s,mb3.9						
ZRNK	Zerenda	60.57	319	eP	P	18 43 50.4	-0.6
	0.9nm,0.5s,mb3.9						
YKA	Yellowknife Ar	75.20	28	P	P	18 45 22.1	-0.1
	0.6nm,0.6s,mb3.4,baz=293,slow=5.9,SNR=4.4						
JOF	Joensuu	77.43	334	ep	P	18 45 33.5	-1.2
	0.5nm,0.3s,mb3.6						
FINES	FINESS Array B	80.29	334	P	P	18 45 49.4	-0.9
	0.5nm,0.3s,mb3.6,baz=68,slow=5.0,SNR=16						
FINES	FINESS Array B	80.29	334	P	P	18 45 49.4	-0.9
NVAR	Mina Array Bea	83.06	51	P	P	18 46 05.5	+0.7
	1.0nm,0.7s,mb3.7,baz=279,slow=6.0,SNR=7.8						
BRTR	Keskin Array B	87.44	313	P	P	18 46 27.6	+1.1
	0.5nm,0.5s,mb3.6,baz=48,slow=1.8,SNR=4.5						

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*ISCJB **02** 18:37:11.6±3.0, 6.7S±0.2×147.2E±0.3, h63km±23km, mb4.2/4, Error ellipse: s-maj=45.3km s-min=24.8km az=156.7*

*NEIC **02** 18:37:12.2±3.4, 6.56S×147.19E, h60km±26km, mb4.7/3, Error ellipse: s-maj=33.7km s-min=25.2km az=162.0*

*IDC **02** 18:37:18.0±2.9, 6.98S×147.16E, h95km±29km, mb3.7/3, mb1 3.8/5, mb1mx3.5/14, mbtmp4.0/5, Error ellipse: s-maj=50.9km s-min=20.9km az=109.0*

ISC 02 18:37:16.9±2.9**, 6.9S**±0.2×**147.0E**±0.3**, h76**km±23km**, n14, σ0.45**/15**, mb4.4**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.52	177	P	Pn	18 37 54.9	-0.7
	25nm,0.3s,baz=28,slow=5.4,SNR=133						
PMG				S	Sn	18 38 25.6	+0.2
	44nm,0.3s,baz=212,slow=20,SNR=12						
WRAB	Tennant Creek	17.90	222	eP	Pn	18 41 20.6	+0.1
	4.3nm,0.6s						
WB2	Warramunga Arr	17.90	222	eP	Pn	18 41 20.7	+0.1
WRA	Warramunga Arr	17.91	222	P	Pn	18 41 20.6	-0.1
	0.6nm,0.3s,baz=50,slow=11,SNR=28						
AS31	Alice Springs	20.93	216	eP	P	18 41 53.8	+0.6
ASAR	Alice Springs	20.93	216	P	P	18 41 53.8	+0.6
	1.4nm,0.3s,baz=57,slow=8.9,SNR=55						
ASAR				S	S	18 45 41.3	-0.9
	0.7nm,0.6s,baz=34,slow=21,SNR=8.9						
ASPA	Alice Springs	20.93	216	eP	P	18 41 53.8	+0.5
FITZ	Fitzroy Crossi	23.66	240	eP	P	18 42 21.2	0.0
	14nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	23.66	240	P	P	18 42 21.3	+0.1
	10nm,0.6s,mb4.4,baz=58,slow=13,SNR=79						
STKA	Stephens Creek	25.39	191	P	P	18 42 37.2	+0.2
	1.5nm,0.8s,mb3.5,baz=15,slow=12,SNR=4.9						
STKA	Stephens Creek	25.39	191	P	P	18 42 37.2	+0.2
MBWA	Marble Bar	29.99	239	eP	P	18 43 17.8	-0.3
KLBR	Kellerberrin	36.77	224	eP	P	18 44 16.3	-0.7
	39nm,1.5s,mb5.1						
TORD	Torodi Ar. Bea	145.34	283	PKPbc	PKPbc	18 56 44.8	-1.0
	0.9nm,0.5s,baz=90,slow=3.4,SNR=11						

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*IDC **02** 18:38:40.1±17.0, 19.82S×177.97W, h501km±148km, mb3.5/5, mb1 3.6/6, mb1mx3.4/15, mbtmp4.4/6, Error ellipse: s-maj=159.5km s-min=36.0km az=43.0*

*ISCJB **02** 18:38:44.4±3.5, 20.0S±0.4×178.3W±0.4, h550km, mb4.1/8, Error ellipse: s-maj=70.0km s-min=22.1km az=89.9*

*NEIC **02** 18:38:49.0±7.2, 20.23S×178.40W, h579km±70km, mb4.3/4, Error ellipse: s-maj=66.0km s-min=17.8km az=222.0*

ISC 02 18:38:46.1±3.6**, 20.1S**±0.4×**178.3W**±0.4**, h550**km**, n17, σ0.53**/16**, mb4.1**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	18.51	192	P	P	18 42 28.0	-0.5
	1.0nm,0.3s,baz=40,slow=10.0,SNR=5.1						
CNB	Canberra Magne	32.24	235	eP	P	18 44 30.1	+0.5
	40nm,1.8s,mb4.6						
CTA	Charters Tower	33.29	264	eP	P	18 44 39.5	+1.0
	2.8nm,0.6s,mb4.0						
CTA	Charters Tower	33.29	264	P	P	18 44 39.2	+0.8
	3.9nm,0.5s,mb4.2,baz=92,slow=10.0,SNR=9.3						
CTAO	Charters Tower	33.29	264	eP	P	18 44 39.4	+0.9
STKA	Stephens Creek	37.74	244	P	P	18 45 15.8	+0.5
	2.2nm,0.4s,mb4.1,baz=74,slow=13,SNR=12						
AS31	Alice Springs	44.37	256	eP	P	18 46 08.2	+0.3
ASAR	Alice Springs	44.37	256	P	P	18 46 07.4	-0.5
	4.3nm,0.5s,mb4.2,baz=89,slow=8.3,SNR=42						
ASAR				PcP	PcP	18 47 40.0	+0.3
	0.7nm,0.5s,baz=103,slow=3.7,SNR=6.0						
ASPA	Alice Springs	44.38	256	eP	P	18 46 08.2	+0.3
WB2	Warramunga Arr	44.41	262	eP	P	18 46 08.0	-0.1
WRAB	Tennant Creek	44.41	262	eP	P	18 46 07.8	-0.4
WRA	Warramunga Arr	44.42	262	P	P	18 46 07.6	-0.6
	1.9nm,0.3s,mb4.1,baz=97,slow=7.7,SNR=46						
FORT	Forrest	49.22	246	eP	P	18 46 43.6	-0.8
	8.0nm,0.5s,mb4.5						
FITZ	Fitzroy Crossi	52.84	262	P	P	18 47 11.0	+0.4
	1.6nm,0.5s,mb3.6,baz=89,slow=4.6,SNR=16						
MBWA	Marble Bar	57.70	257	eP	P	18 47 44.0	-0.5
QSPA	South Pole Qui	69.93	180	eP	P	18 49 02.8	+0.5
	2.1nm,0.6s,mb3.8						
ZRNK	Zerenda	119.49	320	eP	PKPdf	18 56 33.0	-0.4

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*IDC **02** 18:41:33.5±1.0, 3.90S×79.92W, h0km, mb3.7/4, mb1 4.0/7, mb1mx3.9/20, mbtmp3.9/7, ML3.4/3, MS3.8/12, Ms1 3.8/12, ms1mx3.4/38, Error ellipse: s-maj=28.4km s-min=21.5km az=81.0*

*IGQ **02** 18:41:34.4, 4.12S×80.11W, h17km±6km, Mb5.0, Ms4.9, Error ellipse: s-maj=5.5km s-min=1.3km az=1.2*

*ISCJB **02** 18:41:37.4±0.6, 4.10S±0.03×80.21W±0.07, h50km±8km, mb3.9/8, MS3.7/9, Error ellipse: s-maj=11.6km s-min=4.2km az=5.3*

*NEIC **02** 18:41:37.7±6.3, 4.01S×79.89W, h31km±45km, mb4.3/4, Error ellipse: s-maj=28.4km s-min=13.6km az=61.0*

ISC 02 18:41:37.8±1.6**, 4.11S**±0.03×**80.24W**±0.06**, h29**km±14km**, n57, σ1.19**/58**, mb3.9**/8**, MS3.7**/9**, 3C-2D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HCA		1.67	151	⇑P	Pn	18 42 03.7	-1.4
PT18	Porculla	1.90	157	⇑P	Pn	18 42 08.0	-0.1
PT18				S	Sn	18 42 30.8	-0.2
SALI	Salinas	2.05	339	P	Pn	18 42 10.8	+0.5
CHP8	Chiclayo	2.66	172	P	Pn	18 42 18.6	-0.1
IGUA	Igualata	3.06	32	P	Pn	18 42 23.0	-1.2
IGUA				S	Sn	18 43 00.8	+1.1
ARRY	Arrayan	3.14	35	⇓P	Pn	18 42 23.6	-1.7
PATA	Patacocha	3.16	35	P	Pn	18 42 24.2	-1.3
PATA				S	Sn	18 43 00.5	-1.7
CUSU	Cusua	3.18	34	P	Pn	18 42 25.2	-0.7
CUSU				S	Sn	18 43 03.8	+1.0
RETU	Refugio	3.19	34	P	Pn	18 42 24.7	-1.3
RETU				S	Sn	18 43 03.8	+0.7
JUIV	Juive	3.21	34	⇓P	Pn	18 42 27.5	+1.3
JUIV				S	Sn	18 43 04.3	+1.0
ULBA	Ulba	3.22	35	P	Pn	18 42 25.4	-1.0
ULBA				S	Sn	18 43 04.0	+0.4
RUN5	Runtun	3.24	34	P	Pn	18 42 26.0	-0.6
ATAH	Atahualpa	3.41	147	Pn	Pn	18 42 31.6	+2.6
	8.1nm,0.3s,baz=331,slow=10,SNR=18						
ATAH				Sn	Sn	18 43 20.8	+12
	74nm,0.3s,baz=150,slow=22,SNR=8.5						
PP16	Cajamarca	3.46	150	P	Pn	18 42 30.4	+0.8
PP16				S	Sn	18 43 11.3	+1.7
QIL1	Quilotoa	3.50	22	P	Pn	18 42 29.1	-1.1
QIL1				S	Sn	18 43 07.4	-3.2
PISA	Pisayambo	3.56	32	P	Pn	18 42 30.3	-0.6
CAMI	Rancho Maria	3.83	27	P	Pn	18 42 36.4	+1.7

TAMB	**Tambo**	**3.88**	**29**	P	**Pn**	**18 42 36.2**	**+0.8**
NAS1	**Nasa**	**3.88**	**27**	P	**Pn**	**18 42 36.7**	**+1.3**
VC1	**Cotopaxi 1**	**3.91**	**28**	P	**Pn**	**18 42 36.8**	**+1.0**
MAG1	**Magdalena**	**4.04**	**7**	P	**Pn**	**18 42 36.3**	**-1.3**
ANTI	**Antisana**	**4.19**	**30**	P	**Pn**	**18 42 38.9**	**-0.8**
JUA2	**San Juan 2**	**4.20**	**23**	P	**Pn**	**18 42 40.0**	**+0.1**
TERV	**Terraza Guagua**	**4.24**	**23**	P	**Pn**	**18 42 41.6**	**+1.2**
GGP	**Refugio Guagua**	**4.24**	**23**	⇑P	**Pn**	**18 42 41.0**	**+0.6**
PINO	**Pino**	**4.25**	**23**	P	**Pn**	**18 42 40.6**	**0.0**
YANA	**Yana**	**4.30**	**23**	P	**Pn**	**18 42 42.1**	**+0.8**
CAYR	**Refugio Cayamb**	**4.67**	**29**	P	**Pn**	**18 42 50.9**	**+4.6**
CAYA	**Cayambe**	**4.72**	**29**	P	**Pn**	**18 42 51.5**	**+4.4**
LAV3	**Lava3-Reventad**	**4.76**	**33**	P	**Pn**	**18 42 54.7**	**+7.1**
LAV3				S	**Sn**	**18 43 54.4**	**+13**
CONE	**Cono NE Rev Vo**	**4.78**	**33**	P	**Pn**	**18 42 54.2**	**+6.4**
CONE				S	**Sn**	**18 43 54.2**	**+12**
COTA	**Cotacachi**	**4.81**	**23**	P	**Pn**	**18 42 49.8**	**+1.6**
ROSC	**El Rosal**	**10.69**	**34**	Pn	**Pn**	**18 44 03.1**	**-5.8**
	4.2nm,0.3s,baz=99,slow=19,SNR=3.5						
ROSC				Lg		18 47 02.8	
	1.1nm,0.3s,baz=88,slow=22,SNR=2.8						
ROSC				LR	LR	18 48 09.7	
	comp=Z,689nm,19.4s,baz=168,slow=38						
SDV	**Santo Domingo**	**16.08**	**37**	LR	LR	18 52 01.5	
	comp=Z,341nm,20.7s,baz=42,slow=40						
LPAZ	**La Paz**	**16.97**	**136**	Pn	**Pn**	**18 45 31.4**	**-1.6**
	0.1nm,0.3s,baz=329,slow=13,SNR=3.7						
LPAZ				LR	LR	18 53 24.4	
	comp=Z,603nm,18.7s,baz=129,slow=42						
LPAZ	**La Paz**	**16.97**	**136**	*e*P	**Pn**	**18 45 31.3**	**-1.7**
	5.6nm,0.9s						
LPAZ				LR	LR	18 53 24.4	
PCRV	**Puerto La Cruz**	**21.05**	**48**	LR	LR	18 54 54.3	
	comp=Z,450nm,18.4s,MS3.9,baz=214,slow=39						
LVC	**Limon Verde**	**21.42**	**150**	P	**P**	**18 46 26.8**	**+3.6**
	8.9nm,0.7s,mb4.2,baz=305,slow=9.0,SNR=9.1						
LVC	**Limon Verde**	**21.42**	**150**	*e*P	**P**	**18 46 23.6**	**+0.3**
	8.9nm,0.8s,mb4.2						
SIV	**San Ignacio**	**22.23**	**123**	P	**P**	**18 46 28.5**	**-3.5**
	1.8nm,0.8s,mb3.6,baz=294,slow=11,SNR=7.7						
SIV				S	**S**	**18 50 55.8**	**+21**
	2.1nm,0.8s,baz=273,slow=15,SNR=2.5						
CMIG	**Matias Romero**	**25.55**	**326**	P	**P**	**18 47 06.0**	**+2.0**
	0.7nm,0.6s,mb3.4,baz=135,slow=6.8,SNR=3.8						
SJG	**San Juan**	**26.09**	**32**	P	**P**	**18 47 07.1**	**-1.8**
	9.5nm,0.3s,mb4.8,baz=311,slow=21,SNR=7.6						
SJG				LR	LR	18 57 52.9	
	comp=Z,226nm,19.4s,MS3.7,baz=90,slow=38						
SJG	**San Juan**	**26.09**	**32**	*e*P	**P**	**18 47 07.5**	**-1.4**
	18nm,0.8s,mb4.7						
BDFB	**Brasilia**	**33.70**	**112**	LR	LR	19 04 12.2	
	comp=Z,94nm,20.1s,MS3.5,baz=89,slow=41						
ANMO	**Albuquerque**	**46.02**	**330**	*e*P	**P**	**18 49 59.7**	**+1.2**
	4.5nm,0.9s,mb4.4						
NVAR	**Mina Array Bea**	**55.06**	**324**	P	**P**	**18 51 06.2**	**-0.6**
	1.0nm,0.8s,mb3.9,baz=129,slow=6.9,SNR=3.8						
YKA	**Yellowknife Ar**	**71.38**	**344**	P	**P**	**18 52 53.6**	**-1.4**
	0.4nm,0.9s,mb3.4,baz=138,slow=6.5,SNR=3.6						
YKA				LR	LR	19 22 32.0	
	comp=Z,58nm,21.4s,MS3.8,baz=330,slow=34						
BORG	**Borgarnes**	**80.99**	**22**	LR	LR	19 25 05.3	
	comp=Z,39nm,20.3s,MS3.8,baz=57,slow=32						
TORD	**Torodi Ar. Bea**	**83.10**	**76**	P	**P**	**18 53 59.3**	**-1.4**
	1.3nm,0.8s,mb4.0,baz=270,slow=5.2,SNR=5.2						
JMIC	**Jan Mayen**	**87.98**	**18**	LR	LR	19 31 20.5	
	comp=Z,23nm,21.2s,MS3.6,baz=269,slow=34						
DAVOX	**Davos**	**93.05**	**43**	LR	LR	19 31 44.5	
	comp=Z,41nm,19.4s,MS3.9,baz=264,slow=32						
NOA	**NORSAR Array B**	**94.28**	**29**	LR	LR	19 30 44.1	
	comp=Z,21nm,20.3s,MS3.6,baz=300,slow=31						
HFS	**Hagfors**	**95.50**	**30**	LR	LR	19 30 53.5	
	comp=Z,42nm,20.7s,MS3.9,baz=137,slow=31						
MKAR	**Makanchi Array**	**134.87**	**17**	PKP	PKPdf	19 00 54.6	+0.8
	0.2nm,0.5s,baz=25,slow=6.7,SNR=3.5						
ASAR	**Alice Springs**	**136.76**	**229**	PKP	PKPdf	19 00 57.2	-0.1
	0.6nm,1.1s,baz=119,slow=2.3,SNR=4.6						
WRA	**Warramunga Arr**	**138.46**	**234**	PKP	PKPdf	19 01 02.5	+2.0
	0.4nm,0.6s,baz=114,slow=2.0,SNR=12						
FITZ	**Fitzroy Crossi**	**146.26**	**228**	PKPbc	PKPbc	19 01 18.4	+3.0
	1.7nm,0.8s,baz=180,slow=2.0,SNR=3.8						

IDC ***02*** *18:43:58.3±2.0, 1.04N×96.92E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/20, mbtmp3.7/5, ML2.9/1, Error ellipse: s-maj=53.4km s-min=23.8km az=62.0*

ISCJB ***02*** *18:44:01.1±1.0, 1.1N±0.1×97.0E±0.1, h33km, mb3.8/7, Error ellipse: s-maj=19.6km s-min=14.5km az=148.2*

NEIC ***02*** *18:44:02.6±0.9, 1.07N×97.00E, h30km, mb4.0/3, Error ellipse: s-maj=18.9km s-min=13.3km az=63.0*

ISC 02 18:44:03.8±1.0**, 1.1N**±0.1×**97.1E**±0.1**, h35**km**, n12,** σ0^s**80**/13**, mb3.8**/7**, 1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.50**	**49**	Pn	**Pn**	**18 44 42.0**	**+0.1**
	2.4nm,0.3s,baz=340,slow=23,SNR=20						
PSI	**Prapat**	**2.50**	**49**	Pn	**Pn**	**18 44 42.0**	**+0.1**
TSI	**Tuntungan**	**2.79**	**33**	⇓*e*P	**Pn**	**18 44 46.6**	**+0.6**
TSI				*i* S	**Sn**	**18 45 32.4**	**+14**
TSI	**Tuntungan**	**2.79**	**33**	*e*P	**Pn**	**18 44 42.8**	**-3.2**
KULM	**Kulim**	**5.47**	**41**	*e*P	**Pn**	**18 45 22.6**	**-0.2**
WRA	**Warramunga Arr**	**42.13**	**122**	P	**P**	**18 51 52.9**	**+0.3**
	0.8nm,0.5s,mb3.6,baz=301,slow=9.1,SNR=13						
WRAB	**Tennant Creek**	**42.13**	**122**	P	**P**	**18 51 51.7**	**-0.9**
	6.8nm,1.1s,mb4.2						
ASAR	**Alice Springs**	**43.48**	**127**	P	**P**	**18 52 04.1**	**+0.6**
	0.7nm,0.9s,mb3.4,baz=298,slow=7.8,SNR=7.3						
SONM	**Songino Array**	**47.22**	**9**	P	**P**	**18 52 33.8**	**+0.6**
	0.5nm,0.3s,mb3.9,baz=190,slow=7.5,SNR=3.7						
MKAR	**Makanchi Array**	**47.27**	**346**	P	**P**	**18 52 33.8**	**+0.3**
	0.8nm,0.5s,mb3.9,baz=160,slow=7.6,SNR=9.2						
ZRNK	**Zerenda**	**56.66**	**340**	P	**P**	**18 53 41.9**	**-1.5**
	0.6nm,0.6s,mb3.8						
CHKZ	**Chkalovo**	**56.74**	**342**	*e*P	**P**	**18 53 44.8**	**+0.8**
	1.1nm,0.6s,mb4.1						

ISCJB ***02*** *19:01:16.4±2.7, 53.30N±0.08×160.85W±0.10, h7km±19km, mb3.7/6, Error ellipse: s-maj=13.7km s-min=9.8km az=20.1*

IDC ***02*** *19:01:16.4±1.9, 53.32N×161.12W, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.7/24, mbtmp3.7/7, ML4.0/2, Error ellipse: s-maj=46.0km s-min=25.8km az=18.0*

NEIC ***02*** *19:01:19.8, 53.20N×160.83W, h18km, mb4.0/2, ML3.5(AEIC), After AEIC.*

ISC 02 19:01:18.7±3.1**, 53.31N**±0.08×**160.9W**±0.1**, h13**km±21km**, n16,** σ**0^{s}81**/19**, mb3.7**/6**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**2.06**	**7**	P	**Pn**	**19 01 53.4**	**+0.4**
SDPT				S	**Sn**	**19 02 18.5**	**-0.1**
FALS	**False Pass**	**2.13**	**318**	P	**Pn**	**19 01 54.4**	**+0.3**
FALS				S	**Sn**	**19 02 20.7**	**+0.3**
AKUT	**Akutan**	**2.99**	**288**	P	**Pn**	**19 02 05.5**	**-0.4**
AKLV	**Akutan Long Va**	**3.10**	**288**	P	**Pn**	**19 02 07.3**	**-0.1**
KDAK	**Kodiak Island**	**6.52**	**43**	Pn	**Pn**	**19 02 53.3**	**-1.0**
	1.4nm,0.3s,baz=213,slow=5.6,SNR=14						
KDAK				Sn	**Sn**	**19 04 03.0**	**-5.5**
	1.9nm,0.3s,baz=39,slow=23,SNR=12						
KDAK	**Kodiak Island**	**6.52**	**43**	P	**Pn**	**19 02 53.3**	**-1.0**
SLKM	**Skilak Lake**	**9.28**	**35**	*e*P	**Pn**	**19 03 33.0**	**+0.8**
IMA2	**Indian Mountai**	**13.29**	**13**	*e*P	**Pn**	**19 04 28.1**	**+0.9**
INK	**Inuvik**	**19.84**	**30**	P	**Pn**	**19 05 49.0**	**-1.8**
	0.7nm,0.3s,baz=232,slow=12,SNR=8.8						
INK	**Inuvik**	**19.84**	**30**	*e*P	**Pn**	**19 05 48.5**	**-2.3**
	2.9nm,0.6s						
YKA	**Yellowknife Ar**	**25.72**	**51**	P	**P**	**19 06 48.6**	**-0.1**
	1.3nm,1.0s,mb3.4,baz=271,slow=9.7,SNR=6.7						
NVAR	**Mina Array Bea**	**32.66**	**100**	P	**P**	**19 07 51.4**	**+0.9**
	0.6nm,0.7s,mb3.7,baz=292,slow=5.8,SNR=5.2						
PDAR	**Pinedale Array**	**35.21**	**86**	P	**P**	**19 08 13.0**	**+0.4**
	0.4nm,0.8s,mb3.4,baz=316,slow=3.8,SNR=3.8						
ZRNK	**Zerenda**	**66.22**	**330**	*e*P	**P**	**19 12 07.4**	**+1.0**
	0.9nm,0.5s,mb4.1						
ZRNK				*e*		19 12 17.0	
MKAR	**Makanchi Array**	**66.70**	**318**	P	**P**	**19 12 08.2**	**-1.2**
	0.4nm,0.4s,mb3.8,baz=39,slow=6.4,SNR=6.1						
AKASG	**Malin Array Be**	**76.01**	**353**	P	**P**	**19 13 05.0**	**-0.6**
	0.8nm,0.4s,mb4.0,baz=8.6,slow=5.8,SNR=6.1						

NEIC ***02*** *19:20:07.9±0.9, 23.75N×141.85E, h10km, mb4.4/1, Error ellipse: s-maj=40.7km s-min=15.3km az=85.0*

ISCJB ***02*** *19:20:21.6±1.5, 23.84N±0.07×141.4E±0.3, h140km±18km, mb3.8/6, Error ellipse: s-maj=42.2km s-min=10.1km az=162.9*

IDC ***02*** *19:20:21.2±2.1, 23.70N×141.78E, h123km±20km, mb3.4/6, mb1 3.6/7, mb1mx3.4/20, mbtmp3.9/7, MS3.9/1, Ms1 3.9/1, ms1mx2.3/15, Error ellipse: s-maj=38.0km s-min=16.2km az=90.0*

JMA ***02*** *19:20:22.0±0.2, 23.89N×140.84E, h78km, M4.9*

ISC 02 19:20:22.3±1.6**, 23.84N**±0.08×**141.2E**±0.2**, h132**km±18km**, n17,** σ**1^{s}08**/21**, mb3.8**/6**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.91**	**17**	P	**Pn**	**19 21 07.9**	**+0.1**
JHHJ				S	**Sn**	**19 21 43.0**	**+0.1**
CBIJ	**Chichi jima**	**3.36**	**15**	P	**Pn**	**19 21 13.9**	**+0.3**
	74nm,0.3s,baz=288,slow=20,SNR=142						
CBIJ				S	**Sn**	**19 21 53.1**	**-0.2**
	65nm,0.3s,baz=295,slow=24,SNR=17						
CBIJ	**Chichi jima**	**3.36**	**15**	P	**Pn**	**19 21 13.9**	**+0.3**
CBIJ				S	**Sn**	**19 21 53.4**	**+0.1**
JHJ2	**Mitsune**	**9.32**	**353**	P	**Pn**	**19 22 35.2**	**+1.7**
JHJ2				*e*S	**Sn**	**19 24 16.0**	**-0.6**
JHJ	**Hachijo jima 2**	**9.34**	**352**	S	**Sn**	**19 24 16.1**	**-0.8**
	3.3nm,0.3s,baz=42,slow=16,SNR=3.9						
BSO1	**Boso 1**	**10.78**	**359**	*e*S	**Sn**	**19 24 47.2**	**-4.7**
BSO3	**Boso 3**	**10.95**	**357**	S	**Sn**	**19 24 52.7**	**-3.1**
BSO4	**Boso 4**	**11.14**	**356**	S	**Sn**	**19 25 00.5**	**-0.1**
JHO	**Hitachi**	**12.74**	**358**	S	**Sn**	**19 25 29.9**	**-9.4**
JMK	**Ichinoseki**	**15.07**	**360**	P	**Pn**	**19 23 50.1**	**+1.8**
WRAB	**Tennant Creek**	**44.02**	**189**	*e*P	**P**	**19 28 15.9**	**-0.8**
	2.6nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**44.03**	**189**	P	**P**	**19 28 15.9**	**-0.9**
	0.9nm,0.4s,mb3.8,baz=7.3,slow=8.0,SNR=43						
ASAR	**Alice Springs**	**47.75**	**189**	P	**P**	**19 28 45.5**	**-0.4**
	0.1nm,0.3s,baz=27,slow=10,SNR=5.3						
ASAR				LR	LR	19 50 14.6	
	comp=Z,142nm,19.9s,baz=112,slow=38						
MKAR	**Makanchi Array**	**51.93**	**312**	P	**P**	**19 29 21.2**	**+3.7**
	0.4nm,0.4s,mb3.4,baz=78,slow=9.1,SNR=9.4						
BVAR	**Borovoye Array**	**59.88**	**319**	P	**P**	**19 30 17.1**	**+3.0**
	0.8nm,0.3s,mb4.0,baz=87,slow=10,SNR=5.0						
YKA	**Yellowknife Ar**	**75.41**	**28**	P	**P**	**19 31 51.1**	**-0.4**
	0.8nm,0.5s,mb3.6,baz=293,slow=5.9,SNR=9.8						
FINES	**FINESS Array B**	**80.48**	**334**	P	**P**	**19 32 20.0**	**+0.4**
	0.9nm,0.5s,mb3.6,baz=116,slow=4.4,SNR=8.5						

NEIC ***02*** *19:24:04.9, 15.88N×96.27W, h41km, MD3.6(MEX), After MEX.*

MEX 02 19:24:06.5±1.1**, 15.97N**×**96.23W, h20**km±62km**, MD3.6, 1D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.23**	**150**	⇓*i*P	Pb	19 24 10.7	-1.4
HUIG				*i* S	Sb	19 24 15.5	-0.4
VHO	**Vista Hermosa**	**1.20**	**336**	*e*P	Pn	19 24 24.5	-3.6
VHO				*i* S	Sb	19 24 39.9	-3.6
OXX	**Oaxaca**	**1.20**	**337**	*i* P	Pn	19 24 25.3	-2.8
OXX				*i* S	Sb	19 24 40.8	-2.8
CMIG	**Matias Romero**	**1.71**	**49**	*e*P	Pn	19 24 31.9	-3.1
CMIG				*i* S	Sn	19 24 52.6	-3.7
UTMO	**Huajuapan**	**2.38**	**321**	*e*P	Pn	19 24 43.5	-0.9
UTMO				*i* S	Sn	19 25 09.1	-4.0

BJI ***02*** *19:24:02.9, 31.19S×177.79W, h5km, mB5.4, mb4.8, Ms4.9, Msz4.6*

NEIC ***02*** *19:24:06.0±0.4, 31.37S×178.01W, h10km, mb4.9/10, Error ellipse: s-maj=13.4km s-min=12.1km az=105.0*

ISCJB ***02*** *19:24:09.4±0.7, 31.77S±0.05×178.4W±0.1, h33km, mb4.7/15, MS3.9/9, Error ellipse: s-maj=14.5km s-min=6.4km az=22.5*

MOS ***02*** *19:24:09.1±1.1, 31.45S×178.19W, h33km, mb5.1/7, Error ellipse: s-maj=19.5km s-min=15.7km az=93.1*

IDC ***02*** *19:24:13.6±2.8, 31.26S×178.17W, h62km±22km, mb4.4/5, mb1 4.6/6, mb1mx4.2/13, mbtmp4.6/6, ML4.8/1, MS3.8/9, Ms1 3.8/9, ms1mx3.6/18, Error ellipse: s-maj=23.7km s-min=17.6km az=154.0*

ISC 02 19:24:12.0±0.7**, 31.94S**±0.05×**178.5W**±0.1**, h35**km**, n87,** σ**1^{s}36**/54**, mb4.7**/15**, MS3.9**/9**, 5C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.72**	**10**	P	**Pn**	**19 24 44.1**	**-9.1**
	353nm,0.3s,baz=74,slow=22,SNR=11						
RAO				S	**Sn**	**19 25 10.0**	**-15**
	483nm,0.3s,baz=87,slow=22,SNR=4.8						
PUZ	**Puketiti**	**6.69**	**203**	*e*PN	**Pn**	**19 25 47.6**	**-0.1**
PUZ				SN	**Sn**	**19 27 08.4**	**+5.8**
URZ	**Urewera**	**7.28**	**209**	P	**Pn**	**19 25 57.4**	**+1.6**
	3.0nm,0.3s,baz=1.4,slow=17,SNR=14						
URZ				S	**Sn**	**19 27 24.3**	**+7.1**
	6.3nm,0.3s,baz=131,slow=21,SNR=9.2						
URZ	**Urewera**	**7.28**	**209**	*e*PN	**Pn**	**19 25 56.2**	**+0.4**
URZ				SN	**Sn**	**19 27 23.9**	**+6.7**
KNZ	**Kokohu**	**7.74**	**203**	*e*PN	**Pn**	**19 26 01.6**	**-0.5**
MRZ	**Mangatainoka R**	**9.95**	**207**	SN	**Sn**	**19 28 23.0**	**+0.2**
TCW	**Tory Channel**	**10.94**	**210**	*e*PN	**Pn**	**19 26 45.5**	**-0.6**
NNZ	**Nelson**	**11.35**	**213**	*e*SN	**Sn**	**19 28 56.3**	**-0.7**
THZ	**Tophouse**	**12.00**	**213**	*e*SN	**Sn**	**19 29 11.8**	**-1.1**
KHZ	**Kahutara**	**12.25**	**209**	*e*SN	**Sn**	**19 29 16.4**	**-2.7**
RPZ	**Rata Peaks**	**14.37**	**212**	P	**Pn**	**19 27 32.1**	**-0.8**
	0.6nm,0.3s,baz=53,slow=5.1,SNR=3.5						
RPZ				S	**Sn**	**19 30 06.6**	**-4.3**
	1.3nm,0.3s,baz=329,slow=19,SNR=6.0						
DZM	**Mont Dzumac**	**16.65**	**302**	P	**Pn**	**19 28 07.1**	**+4.5**
	0.1nm,0.3s,baz=108,slow=12,SNR=4.3						
DZM				LR	LR	19 33 05.3	
	comp=Z,517nm,19.8s,baz=115,slow=32						
RAR	**Rarotonga**	**19.80**	**62**	LR	LR	19 33 41.7	
	comp=Z,255nm,21.4s,baz=206,slow=30						
PPT	**Papeete**	**29.75**	**68**	*e*LQ		19 36 10.9	
	336nm,24.2s						
PPT				*e*LR	LR	19 37 40.3	
	273nm,26.8s						
PPT	**Papeete**	**29.75**	**68**	LR	LR	19 39 30.7	
	comp=Z,98nm,20.8s,MS3.4,baz=252,slow=31						
HNR	**Honiara**	**30.05**	**313**	LR	LR	19 40 38.6	
	comp=Z,168nm,18.8s,MS3.7,baz=180,slow=33						
CTA	**Charters Tower**	**33.70**	**282**	*e*P	**P**	**19 30 51.5**	**+1.8**
	20nm,1.0s,mb5.0						
CTA				*e*		19 31 04.2	
CTA	**Charters Tower**	**33.70**	**282**	P	**P**	**19 30 51.2**	**+1.4**
	26nm,0.9s,mb5.2,baz=107,slow=10,SNR=26						
CTA	**Charters Tower**	**33.70**	**282**	*e*P	**P**	**19 30 51.5**	**+1.8**
CTA				*e*		19 31 04.2	
CTA				pmax	pmax		
	comp=Z,21nm,1.0s						
CTAO	**Charters Tower**	**33.70**	**282**	*e*P	**P**	**19 30 51.3**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
CTAO	**Charters Tower**	**33.70**	**282**	*e*P	**P**	**19 30 51.3**	**+1.6**
	comp=Z,20nm,0.8s,mb5.1						
STKA	**Stephens Creek**	**33.79**	**259**	P	**P**	**19 30 53.8**	**+3.4**
	comp=Z,1.8nm,0.4s,mb4.3,baz=101,slow=13,SNR=9.3						
STKA				LR	LR	19 43 01.2	
	comp=Z,186nm,22.0s,MS3.8,baz=166,slow=33						
STKA	**Stephens Creek**	**33.79**	**259**	*e*P	**P**	**19 30 54.6**	**+4.1**
PMG	**Port Moresby**	**38.95**	**298**	LR	LR	19 43 32.2	
	comp=Z,165nm,20.8s,MS3.8,baz=210,slow=30						
RKT	**Rikitea**	**39.33**	**88**	*e*LR	LR	19 42 08.6	
	comp=Z,321nm,27.5s						
AS31	**Alice Springs**	**42.67**	**269**	*e*P	**P**	**19 32 05.3**	**+0.1**
ASAR	**Alice Springs**	**42.67**	**269**	P	**P**	**19 32 05.3**	**+0.1**
	comp=Z,4.5nm,0.4s,mb4.6,baz=104,slow=7.1,SNR=62						
ASPA	**Alice Springs**	**42.67**	**269**	*e*P	**P**	**19 32 06.0**	**+0.8**
WB2	**Warramunga Arr**	**43.79**	**274**	*e*P	**P**	**19 32 14.5**	**+0.3**
WRAB	**Tennant Creek**	**43.79**	**274**	⇑*i*P	**P**	**19 32 14.7**	**+0.4**
WRAB	**Tennant Creek**	**43.79**	**274**	*e*P	**P**	**19 32 14.6**	**+0.3**
	comp=Z,16nm,0.7s,mb4.8						
WRA	**Warramunga Arr**	**43.80**	**274**	P	**P**	**19 32 14.8**	**+0.5**
	comp=Z,8.4nm,0.4s,mb4.9,baz=112,slow=7.9,SNR=233						
WRA				S	**S**	**19 38 43.0**	**+0.4**
	comp=Z,0.7nm,1.1s,baz=117,slow=12,SNR=2.7						
WRA				LR	LR	19 49 59.2	
	comp=Z,163nm,21.4s,MS3.9,baz=115,slow=35						
WRA	**Warramunga Arr**	**43.80**	**274**	P	**P**	**19 32 14.8**	**+0.5**
WRA				S	**S**	**19 38 43.0**	**+0.4**
SBA	**Scott Base**	**46.48**	**184**	P	**P**	**19 32 37.8**	**+2.2**
SBA				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
SBA	**Scott Base**	**46.48**	**184**	P	**P**	**19 32 37.8**	**+2.2**
	comp=Z,12nm,1.4s,mb4.6						
VNDA	**Vanda**	**46.53**	**186**	*e*P	**P**	**19 32 38.9**	**+2.9**
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VNDA	**Vanda**	**46.53**	**186**	*e*P	**P**	**19 32 38.9**	**+2.9**
	comp=Z,1.6nm,1.0s,mb3.9						
KAKA	**Kakadu**	**48.84**	**282**	*e*P	**P**	**19 32 53.8**	**-0.1**
	comp=Z,4.5nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**51.99**	**271**	*e*P	**P**	**19 33 18.2**	**+0.5**
	comp=Z,7.7nm,1.1s,mb4.5						
FITZ				*e*	pP	19 33 30.3	+2.1
MBWA	**Marble Bar**	**55.69**	**265**	*e*P	**P**	**19 33 46.0**	**+1.2**
QSPA	**South Pole Qui**	**58.17**	**180**	*e*P	**P**	**19 34 04.8**	**+2.4**
	comp=Z,16nm,0.7s,mb5.2						
MAW	**Mawson**	**70.74**	**201**	LR	LR	20 06 10.2	
	comp=Z,72nm,20.1s,MS3.9,baz=246,slow=35						
MAW	**Mawson**	**70.74**	**201**	*e*P	**P**	**19 35 26.4**	**+1.9**
MAW				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MAW	**Mawson**	**70.74**	**201**	*e*P	**P**	**19 35 26.4**	**+1.9**
	comp=Z,7.5nm,1.3s,mb4.5						
SYO	**Syowa Base**	**75.53**	**193**	⇑*e*P	**P**	**19 35 52.6**	**-0.2**
SYO	**Syowa Base**	**75.53**	**193**	⇑*e*PcP	PcP	19 36 03.8	-1.9
SNAA	**Sanae**	**76.63**	**179**	*e*P	**P**	**19 36 01.1**	**+2.0**
SNAA				pmax	pmax		
	comp=Z,17nm,0.6s						
SNAA	**Sanae**	**76.63**	**179**	*e*P	**P**	**19 36 01.1**	**+2.1**
	comp=Z,17nm,0.6s,mb5.2						
NVAR	**Mina Array Bea**	**89.62**	**43**	P	**P**	**19 37 02.9**	**-3.1**
	comp=Z,1.1nm,0.9s,mb4.2,baz=205,slow=7.2,SNR=5.1						
NVAR	**Mina Array Bea**	**89.62**	**43**	P	**P**	**19 37 02.9**	**-3.1**
MDJ	**Mudanjiang**	**89.67**	**326**	P	**P**	**19 37 03.7**	**-2.6**
MDJ				AP	pP	19 37 07.0	-10
MDJ				XP	sP	19 37 08.4	-13
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,53nm,5.5s						
KMI	**Kunming**	**94.17**	**297**	P	**P**	**19 37 26.1**	**-1.0**
KMI				AMB	AMB		
	comp=Z,2.0nm,0.6s,mb4.7						
KMI				LR	LR		
	comp=Z,40nm,16.1s,MS4.0						
ANMO	**Albuquerque**	**94.83**	**52**	*e*P	**P**	**19 37 18.9**	**-11**
CD2	**Chengdu**	**96.58**	**302**	*e*P	**P**	**19 37 35.9**	**-2.2**
CD2				AMB	AMB		
	comp=Z,60nm,6.8s						
HHC	**Hu-ho-hao-te**	**97.03**	**314**	*e*P	**P**	**19 37 38.7**	**-1.4**
HHC				AP	pP	19 37 43.5	-7.8
HHC				XP	sP	19 37 45.7	-10
HHC				PP	PP	19 41 36.7	+0.7
HHC				SKS		19 48 14.2	
HHC				S	S	19 48 57.5	-2.9
HHC				XS	sS	19 49 05.6	-13
HHC				PS	PS	19 50 26.3	+0.4
HHC				SS	SS	19 55 38.1	+1.0
HHC				AMB	AMB		
	comp=Z,124nm,3.5s						
HHC				LR	LR		
	comp=N,191nm,28.5s,MS4.6						
HHC				LR	LR		
	comp=E,233nm,31.3s,MS4.6						
HHC				LR	LR		
	comp=Z,122nm,33.2s,MS4.2						
PDAR	**Pinedale Array**	**97.51**	**44**	LR	LR	20 10 55.7	
	comp=Z,54nm,21.5s,MS4.0,baz=79,slow=29						
WMQ	**Urumqi**	**113.87**	**308**	*e*PKP	PKiKP	19 42 46.0	-1.0
MKAR	**Makanchi Array**	**118.46**	**310**	PKP	PKPdf	19 42 52.0	-3.8
	comp=Z,0.8nm,0.5s,baz=158,slow=0.9,SNR=14						
KURK	**Kurchatov**	**121.83**	**313**	*e*PKIKP	PKPdf	19 42 58.2	-4.1
CHKZ	**Chkalovo**	**127.15**	**316**	*e*PKIKP	PKPdf	19 43 08.9	-3.6
BVAR	**Borovoye Array**	**127.23**	**315**	PKP	PKPdf	19 43 09.5	-3.2
	comp=Z,1.5nm,0.4s,baz=132,slow=2.2,SNR=16						
BRVK	**Borovoye**	**127.29**	**315**	*e*PKIKP	PKPdf	19 43 10.3	-2.5
ZRNK	**Zerenda**	**128.06**	**315**	*e*PKIKP	PKPdf	19 43 10.6	-3.6
ARU	**Arti**	**134.02**	**320**	*i* PKIKP	PKPdf	19 43 20.5	-5.0
ARCES	**ARCESS Array B**	**140.00**	**347**	PKhKP		19 43 26.3	
	comp=Z,2.0nm,0.7s,baz=60,slow=3.1,SNR=12						
JOF	**Joensuu**	**143.70**	**337**	*e*pkp	PKPdf	19 43 35.6	-7.6
KIV	**Kislovodsk**	**145.75**	**302**	*e*PKP2	PKPab	19 43 44.6	-3.0
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KAF	**Kangasniemi**	**145.86**	**339**	*e*pkp	PKPdf	19 43 41.6	-5.3
OBN	**Obninsk**	**146.20**	**324**	⇑*i*PKP2	PKPab	19 43 44.8	-4.5
OBN				pmax	pmax		
	comp=Z,18nm,1.0s						
VRSR	**Storozhevoye**	**146.38**	**316**	*e*PKP2	PKPab	19 43 45.6	-4.4
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRSR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
FIA1	**FINESS Array S**	**146.44**	**339**	*e*PKPdf	PKPdf	19 43 44.7	-3.3
FINES	**FINESS Array B**	**146.45**	**339**	PKPbc	PKPbc	19 43 44.9	-4.4
	comp=E,8.3nm,0.4s,baz=57,slow=4.4,SNR=149						
FINES	**FINESS Array B**	**146.45**	**339**	PKPbc	PKPbc	19 43 44.9	-4.4
VSU	**Vasula**	**148.46**	**335**	*i* PKP2	PKPbc	19 43 51.1	-3.7
MALT	**Malatya**	**149.32**	**292**	*e*PKP2	PKPbc	19 43 55.7	-1.3
ANN	**Anapa**	**149.33**	**305**	*i* PKHKP		19 43 52.8	
ANN				pmax	pmax		
	comp=Z,15nm,1.1s						
ASF	**Jabal al Asfar**	**150.12**	**280**	PKPbc	PKPbc	19 43 57.1	-1.9
	comp=Z,2.0nm,0.5s,baz=98,slow=0.8,SNR=5.6						
NB2	**NORSAR Subarra**	**150.21**	**351**	PKPa	PKPdf	19 43 54.5	+0.4
	comp=Z,4.9nm,1.1s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.21**	**351**	PKPbc	PKPbc	19 43 55.5	-3.6
	comp=Z,4.5nm,0.9s,baz=15,slow=4.1,SNR=9.9						
EIL	**Elat**	**151.29**	**274**	*e*PKPbc	PKPbc	19 44 00.3	-1.5
KONO	**Kongsberg**	**151.77**	**351**	⇑*i*PKIKP	PKPdf	19 43 56.4	-0.1
AKASG	**Malin Array Be**	**152.27**	**321**	PKPbc	PKPbc	19 44 00.1	-3.8
	comp=Z,2.3nm,0.5s,baz=50,slow=2.5,SNR=24						
AKBB	**Malin Array Si**	**152.27**	**321**	*e*PKPbc	PKPbc	19 44 00.8	-3.1
BR131	**Keskin Array S**	**152.96**	**296**	*e*PKPbc	PKPbc	19 44 03.5	-1.9
BRTR	**Keskin Array B**	**152.96**	**296**	PKPbc	PKPbc	19 44 03.4	-2.1
	comp=Z,1.9nm,0.5s,baz=134,slow=3.6,SNR=15						
SUW	**Suwalki**	**153.06**	**331**	*e*PKIKP	PKPbc	19 44 02.4	-3.3
TORD	**Torodi Ar. Bea**	**161.30**	**180**	PKPab	PKPab	19 44 54.1	+1.4
	comp=Z,2.4nm,1.0s,baz=185,slow=2.2,SNR=5.5						

CSEM ***02*** *19:36:02.6±0.5, 36.87N×9.51W, h10km, ML2.3, Error ellipse: s-maj=10.1km s-min=6.1km az=30.0*

MDD ***02*** *19:36:03.8±1.6, 36.78N×9.75W, h22km±41km, mbLg2.5/16, Error ellipse: s-maj=47.3km s-min=9.8km az=43.0, PRXIMO*

NEIC ***02*** *19:36:03.9, 36.99N×9.66W, h0km, MN2.6(MDD), After MDD.*

IGIL ***02*** *19:36:04.9, 36.70N×9.70W, h30km, ML2.4*

INMG 02 19:36:04.6±1.0**, 36.82N**×**9.69W, h12**km±3km**, MD2.7, ML2.3, Error ellipse: s-maj=4.2km s-min=2.5km az=44.0, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORF	**Marmelete**	**0.96**	**59**	*e*P	Pg	19 36 22.1	-1.1
MORF				*e*S	Sg	19 36 34.5	-1.2
MORF				*e*S	Sg	19 36 34.5	-1.2
MORF				AML	AML	19 36 35.6	
	comp=E,75nm,0.1s						
MORF	**Marmelete**	**0.96**	**59**	*e*P	Pg	19 36 22.1	-1.0
MORF				*e*S	Sg	19 36 34.5	-1.2
PTEO	**Sao Teotonio**	**1.06**	**46**	*e*P	Pb	19 36 23.6	-1.2
PTEO				*e*S	Sb	19 36 37.9	-0.7
PTEO							
	comp=E,28nm,0.3s						
PTEO	**Sao Teotonio**	**1.06**	**46**	*e*P	Pb	19 36 23.6	-1.2
PTEO				*e*S	Sb	19 36 37.9	-0.7
	comp=E,28nm,0.3s						
PBEJ	**Beja**	**1.89**	**50**	*e*Pn	Pn	19 36 34.5	-2.1
PBEJ				*e*Sn	Sn	19 36 57.0	-3.3
PBEJ							
	comp=E,8.0nm,0.1s						
PBEJ	**Beja**	**1.89**	**50**	*e*P	Pn	19 36 34.5	-2.1
PBEJ				*e*S	Sn	19 36 57.0	-3.3
	comp=E,8.0nm,0.1s						
EGRO	**El Granado**	**1.90**	**67**	P	Pn	19 36 35.2	-1.6
	comp=E,0.9nm,0.1s,SNR=7.9						
EGRO				S	Sn	19 36 57.9	-2.7
	comp=E,7.5nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.90**	**67**	P	Pn	19 36 35.2	-1.6
	comp=E,0.9nm,0.1s,SNR=7.9						

EGRO				S	Sn	19 36 57.9	-2.7
	comp=E,7.5nm,0.1s,SNR=7.9						
MOE	Montemor	2.01	31	ePn	Pn	19 36 36.9	-1.4
MOE				eSn	Sn	19 37 00.9	-2.4
PLOU	Loures	2.11	11	ePn	Pn	19 36 37.9	-1.8
PLOU				eSn	Sn	19 37 03.0	-2.8
PLOU							
	comp=E,23nm,0.1s						
PLOU	Loures	2.11	11	eP	Pn	19 36 37.9	-1.8
PLOU				eS	Sn	19 37 03.0	-2.8
	comp=E,23nm,0.1s						
PMAFR	Mafra	2.16	8	ePn	Pn	19 36 38.3	-2.1
PMAFR				eSn	Sn	19 37 04.0	-3.0
EMIN	Mina Concepcio	2.58	68	P	Pn	19 36 43.8	-2.4
	comp=E,0.6nm,0.1s,SNR=12						
EMIN				S	Sn	19 37 14.2	-3.3
	comp=E,0.1nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	2.58	68	P	Pn	19 36 43.8	-2.4
	comp=E,0.6nm,0.1s,SNR=12						
EMIN				S	Sn	19 37 14.2	-3.3
	comp=E,0.1nm,0.2s,SNR=7.9						
PESTR	Estremoz	2.63	38	eSn	Sn	19 37 15.4	-3.4
EBAD	Badajoz	2.87	47	P	Pn	19 36 47.8	-2.4
	comp=E,1.0nm,0.1s,SNR=12						
EBAD				S	Sn	19 37 20.4	-4.1
	comp=E,5.7nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.87	47	P	Pn	19 36 47.8	-2.3
	comp=E,1.0nm,0.1s,SNR=12						
EBAD				S	Sn	19 37 20.4	-4.1
	comp=E,5.7nm,0.1s,SNR=7.9						
PTOM	Tomar	2.97	19	eSn	Sn	19 37 23.1	-4.0
PTOM							
	comp=E,10.0nm,0.1s						
PTOM	Tomar	2.97	19	S	Sn	19 37 23.1	-4.0
	comp=E,5.0nm,0.1s						
ESPR	Espera	3.07	88	S	Sn	19 37 25.6	-3.9
	comp=E,5.0nm,0.1s,SNR=7.9						
ESPR	Espera	3.07	88	S	Sn	19 37 25.6	-4.0
	comp=E,5.0nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	3.48	29	ePn	Pn	19 36 57.0	-1.6
PCBR				eSn	Sn	19 37 35.9	-3.8
PCBR							
	comp=E,3.3nm,0.2s						
MTE	Manteigas	3.95	24	ePn	Pn	19 37 03.2	-1.8
MTE				eSn	Sn	19 37 48.4	-2.9
MTE							
	comp=E,5.3nm,0.2s						
PVIS	Viseu	4.14	19	ePn	Pn	19 37 05.9	-1.7
PVIS				eSn	Sn	19 37 51.5	-4.4
PVIS							
	comp=E,5.5nm,0.1s						
EADA	Adamuz	4.28	70	P	Pn	19 37 07.4	-2.1
	comp=E,0.3nm,0.2s,SNR=7.9						
EADA				S	Sn	19 37 54.8	-4.6
	comp=E,0.7nm,0.1s,SNR=7.9						
EADA	Adamuz	4.28	70	P	Pn	19 37 07.4	-2.1
	comp=E,0.3nm,0.2s,SNR=7.9						
EADA				S	Sn	19 37 54.8	-4.6
	comp=E,0.7nm,0.1s,SNR=7.9						
EPLA	Plasencia	4.30	40	P	Pn	19 37 07.7	-2.2
	comp=E,0.2nm,0.1s,SNR=7.9						
EPLA				S	Sn	19 37 56.1	-3.8
	comp=E,3.1nm,0.1s,SNR=7.9						
EPLA	Plasencia	4.30	40	P	Pn	19 37 07.7	-2.2
	comp=E,0.2nm,0.1s,SNR=7.9						
EPLA				S	Sn	19 37 56.1	-3.9
	comp=E,3.1nm,0.1s,SNR=7.9						
ELUQ	Luque	4.39	79	S	Sn	19 37 57.4	-4.7
	comp=E,1.8nm,0.1s,SNR=7.9						
ELUQ	Luque	4.39	79	S	Sn	19 37 58.9	-3.2
	comp=E,1.8nm,0.1s,SNR=7.9						
ELOB	Lobios	5.20	14	P	Pn	19 37 19.8	-2.4
	comp=E,1.4nm,0.2s,SNR=9.2						
ELOB				S	Sn	19 38 16.2	-5.9
	comp=E,3.2nm,0.2s,SNR=7.9						
ELOB	Lobios	5.20	14	P	Pn	19 37 19.8	-2.4
	comp=E,1.4nm,0.2s,SNR=9.2						
ELOB				S	Sn	19 38 16.2	-5.8
	comp=E,3.2nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.33	56	P	Pn	19 37 22.1	-1.9
	comp=E,3.0nm,0.1s,baz=242,slow=13,SNR=8.6						
ESDC				S	Sn	19 38 20.8	-4.5
	comp=E,1.1nm,0.3s,baz=242,slow=23,SNR=14						
ESDC	Sonseca Array	5.33	56	P	Pn	19 37 22.1	-1.9
	comp=E,3.0nm,0.1s,SNR=8.6						
ESDC				S	Sn	19 38 20.8	-4.5
	comp=E,1.1nm,0.3s,SNR=14						
EQES	Quesada	5.36	77	S	Sn	19 38 21.0	-5.1
	comp=E,1.2nm,0.2s,SNR=7.9						
EQES	Quesada	5.36	77	S	Sn	19 38 21.0	-5.1
	comp=E,1.2nm,0.2s,SNR=7.9						
PBRG	Braganca	5.48	24	ePn	Pn	19 37 23.9	-2.1
PBRG				eSn	Sn	19 38 22.9	-6.0
ECAL	Calabor	5.60	23	P	Pn	19 37 25.1	-2.6
	comp=E,0.1nm,0.1s,SNR=7.9						
ECAL				S	Sn	19 38 24.8	-7.2
	comp=E,2.1nm,0.2s,SNR=7.9						
ECAL	Calabor	5.60	23	P	Pn	19 37 25.1	-2.6
	comp=E,0.1nm,0.1s,SNR=7.9						
ECAL				S	Sn	19 38 24.9	-7.1
GUD	Guadarrama	5.77	47	P	Pn	19 37 27.8	-2.2
	comp=E,0.4nm,0.2s,SNR=7.9						
GUD				S	Sn	19 38 30.7	-5.4
	comp=E,0.7nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.15	5	P	Pn	19 37 32.1	-3.1
	comp=E,1.8nm,0.1s,SNR=4.8						
EMAZ				S	Sn	19 38 38.8	-6.6
	comp=E,0.7nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	6.15	5	P	Pn	19 37 32.2	-3.0
EMAZ				S	Sn	19 38 38.8	-6.7
	comp=E,0.7nm,0.2s,SNR=7.9						
ETOB	Tobarra	6.70	72	P	Pn	19 37 41.4	-1.5
	comp=E,0.1nm,0.1s,SNR=7.9						
ETOB				S	Sn	19 38 53.2	-5.9
	comp=E,0.2nm,0.1s,SNR=7.9						
ETOB	Tobarra	6.70	72	P	Pn	19 37 41.3	-1.5
	comp=E,0.1nm,0.1s,SNR=7.9						
ETOB				S	Sn	19 38 53.2	-5.9
	comp=E,0.2nm,0.1s,SNR=7.9						
EPON	Pontenova	6.79	16	P	Pn	19 37 41.4	-2.6
	comp=E,0.4nm,0.1s,SNR=7.9						
EPON				S	Sn	19 38 52.9	-8.2
	comp=E,0.3nm,0.1s,SNR=7.9						
EPON	Pontenova	6.79	16	P	Pn	19 37 41.4	-2.6
	comp=E,0.4nm,0.1s,SNR=7.9						
EPON				S	Sn	19 38 52.9	-8.3
	comp=E,0.3nm,0.1s,SNR=7.9						
EARI	Arriondas	7.33	27	P	Pn	19 37 49.6	-1.8
	comp=E,0.5nm,0.2s,SNR=7.9						
EARI				S	Sn	19 39 07.1	-7.4
	comp=E,0.1nm,0.1s,SNR=7.9						
EARI	Arriondas	7.33	27	P	Pn	19 37 49.6	-1.8
	comp=E,0.5nm,0.2s,SNR=7.9						
EARI				S	Sn	19 39 07.1	-7.4
	comp=E,0.1nm,0.1s,SNR=7.9						

*CSEM **02** 19:43:22.3, 3483N×2263E, h5km, MD3.8/6, After ATH*
*NEIC **02** 19:43:22.3, 3483N×2263E, h5km, MD3.8(ATH), After ATH.*
ATH 02 19:43:22.3, 3483N×2263E, h5km, MD3.8/6, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	1.20	89	ePB	Pb	19 43 45.0	-0.5
VAM	Vamos	1.41	65	ePB	Pb	19 43 49.0	-0.1
KYTH	Kithira	1.48	13	ePB	Pb	19 43 51.0	+0.6
VLI	Veliai	1.90	7	ePN	Pn	19 43 58.0	+2.6
NPS	Neapolis	2.48	79	ePN	Pn	19 44 07.0	+3.6
EVR	Evrytania	4.13	351	ePN	Pn	19 44 29.0	+3.0

*NNC **02** 20:21:39.7±1.3, 4471N×8076E, h8km±7km, mb3.2, mpv2.8, Error ellipse: s-maj=14.1km s-min=8.1km az=140.0*
*ISCJB **02** 20:21:41.4±1.3, 4485N±005×804E±0.1, h10km, Error ellipse: s-maj=15.0km s-min=6.3km az=19.7*
*KNET **02** 20:22:32.1±0.5, 4338N×7592E, h40km±2km, ml1.4, Error ellipse: s-maj=4.2km s-min=2.2km az=32.0*
ISC 02 20:21:44.5±1.9**, 4477N**±005×**803E**±02**, h10km, n15, σ1s16**/18**, 17C-10D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK02	Makanchi Array	2.46	35	⇑Pn	Pn	20 22 18.6	-5.9
	1.9nm,0.4s,baz=215,slow=18						
MK02				⇓Lg		20 22 49.7	
	46nm,0.8s,baz=205,slow=25						
KNDC	Almaty	2.85	238	⇓Lg		20 23 17.1	
	139nm,0.7s						
TKM2	Tokmak 2	3.86	243	⇓P	Pn	20 22 43.5	-0.3
	1.9nm,0.1s,SNR=8.6						
TKM2	Tokmak 2	3.86	243	⇑Pn	Pn	20 22 43.4	-0.5
	0.3nm,0.5s						
TKM2				⇑Pg	Pb	20 22 54.6	+2.0
TKM2				⇑Lg		20 23 51.3	
	2.7nm,0.6s						
CHMS	Chumysh	4.37	248	⇓P	Pn	20 22 50.8	-0.1
	14nm,0.2s,SNR=9.6						
KBK	Karagaybulak	4.41	243	⇓P	Pn	20 22 51.7	+0.4
	16nm,0.2s,SNR=15						
KBK				⇓S	Pg	20 23 06.8	-2.0
	11nm,0.3s						
USP	Ospenovka	4.43	252	⇓P	Pn	20 22 52.0	+0.3
	6.2nm,0.3s,SNR=6.9						
USP				⇓S	Pg	20 23 07.1	-2.3
	4.2nm,0.4s						
UCH	Uchtor	4.90	241	⇑P	Pn	20 22 59.3	+1.1
	2.1nm,0.4s,SNR=6.1						
EKS2	Erkin-Say	5.16	248	⇓P	Pn	20 23 02.2	+0.4
	1.9nm,0.2s,SNR=8.2						
KURK	Kurchatov	6.06	350	⇑Pn	Pn	20 23 12.8	-1.3
	0.8nm,0.5s						
KURK				⇑Sn	Sn	20 24 23.0	-0.5
	5.1nm,1.1s						
KURK				⇑Lg		20 24 59.6	
	7.1nm,0.6s						
KK31	Karatay Array	7.25	260	⇑Pg	Pg	20 23 59.7	-3.5
	0.6nm,0.5s,baz=76,slow=18,SNR=3.2						
KK31				⇑Lg		20 25 38.5	
	2.1nm,0.5s,baz=73,slow=32,SNR=9.7						
VOSK	Vostochnaya	10.05	326	⇑Lg		20 27 13.0	
	3.7nm,0.9s						
BVA0	Borovoye Array	10.52	325	⇑Sn	Sn	20 26 13.7	+0.7
	0.2nm,0.9s						
BVA0				⇑Lg		20 27 20.4	
	0.6nm,0.9s,baz=131,slow=22,SNR=4.5						
CHKZ	Chkalovo	10.92	328	⇑Pn	Pn	20 24 23.7	+2.9
	1.1nm,1.1s						
CHKZ				⇓Sn	Sn	20 26 23.0	0.0
	0.5nm,0.7s						
CHKZ				⇑Lg		20 27 37.8	
	2.5nm,0.7s						
ZRNK	Zerenda	11.05	322	⇑Sn	Sn	20 26 26.3	+0.2
	1.5nm,0.6s						
ZRNK				⇑Lg		20 27 40.5	
	4.5nm,1.1s						

*IDC **02** 20:31:40.6±4.2, 100S×9639E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/19, mbtmp3.7/5, MS2.9/1, Ms1 2.9/1, ms1mx2.0/34, Error ellipse: s-maj=167.9km s-min=23.0km az=57.0*
*ISCJB **02** 20:31:43.7±1.5, 10S±02×964E±03, h33km, mb3.7/5, Error ellipse: s-maj=39.9km s-min=17.7km az=138.8*
ISC 02 20:31:46.2±1.6**, 10S**±02×**964E**±03**, h35km, n8, σ0s73**/8**, mb3.7**/5**, 1D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	4.49	34	LR	LR	20 34 53.4	
	comp=Z,150nm,19.5s,baz=29,slow=43						
TSI	Tuntungan	4.91	26	⇓iP	Pn	20 32 57.2	-0.3
TSI				iS	Sn	20 33 41.1	-12
TSI	Tuntungan	4.91	26	eP	Pn	20 32 57.7	+0.2
WRA	Warramunga Arr	41.61	119	P	P	20 39 30.2	-0.6
	0.5nm,0.8s,mb3.2,baz=288,slow=12,SNR=5.5						
ASAR	Alice Springs	42.77	125	P	P	20 39 40.8	+0.5
	0.2nm,0.5s,mb3.1,baz=310,slow=8.3,SNR=4.9						
MKAR	Makanchi Array	49.14	347	P	P	20 40 29.2	-1.2
	0.8nm,0.4s,mb4.1,baz=160,slow=7.4,SNR=10.0						
SONM	Songino Array	49.36	9	P	P	20 40 32.4	+0.3
	1.6nm,0.7s,mb4.2,baz=186,slow=8.5,SNR=8.7						
ZAL	Zalesovo	55.54	352	P	P	20 41 19.0	+1.1
	1.0nm,0.5s,mb4.1,baz=329,slow=8.3,SNR=5.3						

IDC 02 20:47:36.1±3.8**, 553S**×**15030E, h0km, mb2.7**/2**, mb1 3.1**/2**, mb1mx3.0**/12**, mbtmp2.8**/2**, Error ellipse: s-maj=142.1km s-min=49.1km az=115.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.13	226	P	P	20 52 22.7	+0.4
	0.2nm,0.4s,baz=51,slow=10,SNR=6.3						
ASAR	Alice Springs	23.97	220	P	P	20 52 52.1	0.0
	0.2nm,0.8s,baz=59,slow=7.8,SNR=3.1						
TORD	Torodi Ar. Bea	148.14	286	PKPbc	PKPbc	21 07 24.6	+0.8
	0.6nm,0.7s,baz=70,slow=1.9,SNR=6.7						

*PRU **02** 20:51:50.8, 4371N×1977E, h0km*
*THE **02** 20:51:51.1, 4430N×2003E, h8km, ML4.2*
*PDG **02** 20:51:52.9±0.9, 4405N×20.18E, h10km±1km*
*ISCJB **02** 20:51:53.4±0.1, 44.11N±001×2007E±002, h10km, mb3.7/4, MS3.0/4, Error ellipse: s-maj=2.2km s-min=1.4km az=138.4*
*CSEM **02** 20:51:53.0±0.0, 4408N×2000E, h10km, ML4.2, Error ellipse: s-maj=1.5km s-min=1.0km az=55.0*
*BEO **02** 20:51:53.1±0.5, 44.12N×2009E, h7km*
*IDC **02** 20:51:54.5±0.9, 4402N×2004E, h0km, mb3.7/4, mb1 3.8/13, mb1mx3.7/25, mbtmp3.7/13, ML3.4/9, MS3.0/7, Ms1 3.0/7, ms1mx2.7/35, Error ellipse: s-maj=14.8km s-min=11.6km az=19.0*
*MOS **02** 20:51:54.5±0.8, 4402N×2004E, h23km, mb4.5/2, Error ellipse: s-maj=5.4km s-min=3.1km az=104.0*
*NEIC **02** 20:51:55.5±0.2, 4398N×2004E, h15km, ML3.7(PDG), Error ellipse: s-maj=3.6km s-min=2.5km az=63.0*
NEIC Felt at Belgrade, Cacak, Kosjeric and Kraljevo.
*LDG **02** 20:51:56.1±0.1, 4403N×20.16E, h2km, Ml3.8/2, Error ellipse: s-maj=4.7km s-min=3.6km az=59.0*
ISC 02 20:51:55.0±0.2**, 4410N**±001×**2009E**±002**, h10km, n178, σ1s38**/238**, mb3.7**/4**, MS3.0**/4**, 26C-24D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIVS	Divcibare	0.07	266	iPg	Pg	20 51 55.5	-1.7
DIVS				Sg	Sg	20 51 56.2	-2.6
DIVS	Divcibare	0.07	266	ePg	Pg	20 51 55.0	-2.2
DIVS				eSg	Sg	20 51 58.5	-0.3
GRUS	Gruza	0.50	115	iPg	Pg	20 52 02.9	-1.9
GRUS				Sg	Sg	20 52 10.3	-1.1
BEO	Belgrade	0.77	20	iPg	Pg	20 52 07.5	-2.3
BEO				Sg	Sg	20 52 18.1	-1.7
BEO	Belgrade	0.77	20	Pg	Pg	20 52 07.4	-2.4
BEO				Sg	Sg	20 52 18.1	-1.7
SJES	Sjenica	0.84	187	Pg	Pg	20 52 08.9	-2.3
PLE	Pljevlja	0.92	213	ePg	Pg	20 52 09.8	-2.9
PLE				eSg	Sg	20 52 24.0	-0.8
FGSL	Fruska Gora	1.07	349	Pg	Pg	20 52 13.2	-2.4
FGSL				Sg	Sg	20 52 28.1	-1.5
IVA	Berane	1.24	186	⇓iPg	Pn	20 52 15.4	-3.0
IVA				eSg	Sg	20 52 34.0	-0.9
UPM	Unac-Piva	1.24	224	⇑iPg	Pn	20 52 15.5	-2.9
UPM				eSg	Sg	20 52 35.2	+0.2
PVY	Plav	1.51	183	⇓iPg	Pn	20 52 20.1	-2.0
PVY				eSg	Sg	20 52 42.8	-0.8
NKY	Niksic	1.51	212	⇓iPg	Pn	20 52 20.3	-1.9
NKY				eSg	Sg	20 52 43.9	+0.2
BRY	Bratogost	1.65	224	⇑iPn	Pn	20 52 22.4	-1.5
BRY				eSn	Sg	20 52 49.0	+1.1
TTG	Podgorica	1.78	200	⇑iPn	Pn	20 52 24.4	-1.4
TTG				eSn	Sb	20 52 51.4	+1.4
DJES	Djerdap	1.83	72	iPn	Pn	20 52 26.8	+0.4
DJES				Sg	Sg	20 52 52.8	-0.9
BZS	Buzias	1.86	35	⇑iP	Pn	20 52 26.8	-0.2
BZS	Buzias	1.86	35	P	Pn	20 52 26.5	-0.5
BZS	Buzias	1.86	35	P	Pn	20 52 26.5	-0.5
TREB	Trebinje	1.88	223	P	Pn	20 52 27.0	-0.2
BUM	Brajici-Budva	2.00	206	⇓iPn	Pn	20 52 29.2	+0.4
BUM				eSn	Sb	20 52 57.0	+0.5
HCY	Herceg Novi	2.02	216	ePn	Pn	20 52 28.5	-0.6
HCY				eSn	Sb	20 52 57.6	+0.6
RHK3	Tenkes	2.21	325	eP	Pn	20 52 30.8	-0.9
ULC	Ulcinj	2.23	196	⇑iPn	Pn	20 52 31.6	-0.3
ULC				eSn	Sn	20 53 02.1	+2.6
PKSM	Moragy	2.34	335	⇓iP	Pn	20 52 33.2	-0.4
PKSM	Moragy	2.34	335	P	Pn	20 52 34.3	+0.8
PKSM	Moragy	2.34	335	⇑ePn	Pn	20 52 32.8	-0.8
PKSM	Moragy	2.34	335	P	Pn	20 52 34.3	+0.7
SKO	Skopje	2.35	155	ePn	Pn	20 52 32.8	-0.8
SKO				eSn	Sn	20 53 04.6	+2.0
SKO	Skopje	2.35	155	iPn	Pn	20 52 32.3	-1.4
PKS6	Bocsa	2.52	352	⇑eP	Pn	20 52 35.9	-0.2
VTS	Vitosha	2.73	122	ePn	Pn	20 52 37.5	-1.4
VTS	Vitosha	2.73	122	⇑iP	Pn	20 52 37.7	-1.2
VTS	Vitosha	2.73	122	P	Pn	20 52 37.7	-1.2
TIR	Tirane	2.76	183	ePn	Pn	20 52 37.5	-1.8
PKSN	Nyarlorinc	2.80	357	eP	Pn	20 52 40.0	+0.2
STIP	Stip	2.86	147	ePn	Pn	20 52 38.2	-2.4
STIP				eSn	Sn	20 53 16.7	+1.5
STIP	Stip	2.86	147	iPn	Pn	20 52 38.1	-2.6
PKS7	Kunszentmiklos	3.02	348	⇓eP	Pn	20 52 42.9	+0.1
OHR	Ohrid	3.04	170	ePn	Pn	20 52 42.2	-0.9
OHR				eSn	Sn	20 53 22.0	+2.5
OHR	Ohrid	3.04	170	iPn	Pn	20 52 42.5	-0.6
BIA	Bitola	3.21	163	ePn	Pn	20 52 44.4	-1.2
BIA				eSn	Sn	20 53 25.9	+2.0
BIA	Bitola	3.21	163	iPn	Pn	20 52 45.1	-0.5
DRGR		3.26	34	⇑iP	Pg	20 52 55.1	-2.4
DRGR		3.26	34	P	Pn	20 52 46.0	-0.2
DRGR				⇑P		20 52 55.1	
DRGR		3.26	34	P	Pn	20 52 46.0	-0.2
FNA	Florina	3.45	164	ePn	Pn	20 52 48.1	-0.7
FNA				eSn	Sn	20 53 32.6	+2.9
BUD	Budapest	3.46	348	ePn	Pn	20 52 48.8	-0.1
PKSG		3.50	341	⇓eP	Pn	20 52 49.2	-0.2
GRG	Griva	3.58	151	ePn	Pn	20 52 49.5	-1.1
GRG				eSn	Sn	20 53 34.4	+1.5
KOGS	Kog	3.58	312	iPn	Pn	20 52 49.9	-0.7
KNT	Kendrikon	3.60	144	ePn	Pn	20 52 49.2	-1.6
KNT				eSn	Sn	20 53 34.6	+1.3
KNT	Kendrikon	3.60	144	ePn	Pn	20 52 49.2	-1.6
MMB	Musomiste	3.67	132	ePn	Pn	20 52 50.9	-0.9
MMB				eSn	Sn	20 53 36.1	+1.0
GOLS	Golise	3.69	303	iPn	Pn	20 52 51.6	-0.6
BOJS	Bojanci	3.72	294	ePn	Pg	20 53 04.2	-2.0
MTUR	Matau	3.72	71	⇑iP	Pn	20 52 54.7	+2.2
MTUR	Matau	3.72	71	P	Pn	20 52 55.1	+2.5
MTUR	Matau	3.72	71	P	Pn	20 52 55.1	+2.6
NVLJ	Novalja	3.77	279	iP	Pg	20 53 04.5	-2.7
VOIR		3.78	68	⇓iP	Pn	20 52 55.5	+2.2
VOIR		3.78	68	⇓P	Pn	20 52 55.5	+2.2
PSZ	Piszkesteto	3.82	358	ePn	Pn	20 52 53.7	-0.2
PSZ				eSB	Sg	20 54 03.3	+5.7
PSZ	Piszkesteto	3.82	358	⇓iP	Pn	20 52 53.5	-0.4
PSZ	Piszkesteto	3.82	358	eP	Pn	20 52 53.2	-0.6
LEGS	Legarje	3.85	300	ePn	Pn	20 52 53.9	-0.4
DOBS	Dobrina	3.86	304	ePn	Pn	20 52 53.6	-0.8
PLD	Plovdiv	3.93	119	ePn	Pn	20 52 54.1	-1.2
PLD				eSn	Sn	20 53 42.4	+1.0
GROS	Grobnik	4.00	308	iPn	Pn	20 52 55.6	-0.8
SOH	Sokhos	4.07	142	ePn	Pn	20 52 55.6	-1.7
SOH				eSn	Sn	20 53 47.8	+2.7
HORT	Hortiatis	4.15	146	ePn	Pn	20 52 57.3	-1.2
HORT				eSn	Sn	20 53 49.5	+2.4
PERS	Pernice	4.32	308	iPn	Pn	20 53 00.0	-0.7
PERS				eSn	Sn	20 53 51.0	-0.2
LIT	Litokhoron	4.38	155	ePn	Pn	20 53 00.3	-1.3
LIT				eSn	Sn	20 53 54.8	+2.1
MLR	Muntele Rosu	4.39	70	Pn	Pn	20 53 04.4	+2.7
	3.3nm,0.3s,baz=259,slow=4.8,SNR=26						
MLR				Lg		20 54 19.0	
	5.5nm,0.3s,baz=107,slow=14,SNR=4.1						
MLR	Muntele Rosu	4.39	70	⇓iP	Pn	20 53 04.6	+2.8
MLR	Muntele Rosu	4.39	70	P	Pn	20 53 04.3	+2.6
MLR	Muntele Rosu	4.39	70	P	Pn	20 53 04.3	+2.5
VYHS	Vyhne	4.48	349	ePN	Pn	20 53 03.3	+0.4
VYHS				eSN	Sn	20 53 57.3	+2.3
ARSA	Arzberg	4.49	316	⇑iSn	Sn	20 53 49.4	-5.9
ARSA	Arzberg	4.49	316	⇑iPn	Pn	20 53 02.7	-0.3
	SNR=54						
ARSA				⇓iSn	Sn	20 53 56.0	+0.7
ARSA	Arzberg	4.49	316	⇑iPn	Pn	20 53 02.7	-0.3
ARSA				iSn	Sn	20 53 49.4	-5.9
IGT	Igoumenitsa	4.57	178	ePn	Pn	20 53 03.4	-0.8
IGT				eSn	Sn	20 53 60.0	+2.6
OBKA	Obir	4.59	304	⇓iSn	Sn	20 53 52.9	-4.9
OBKA	Obir	4.59	304	⇑iPn	Pn	20 53 04.8	+0.4
OBKA				⇑iSn	Sn	20 53 55.5	-2.3
OBKA	Obir	4.59	304	⇑iPn	Pn	20 53 04.8	+0.4
OBKA				iSn	Sn	20 53 52.9	-4.9
OBKA	Obir	4.59	304	⇑iPn	Pn	20 53 04.8	+0.4
OBKA				iSn	Sn	20 53 52.9	-4.9
ZST	Bratislava	4.59	334	ePN	Pn	20 53 05.5	+1.1
ZST				eSN	Sn	20 53 55.6	-2.2
OUR	Ouranopolis	4.75	141	ePn	Pn	20 53 05.3	-1.4
OUR				eSn	Sn	20 54 03.0	+1.3
SMOL	Smolenice	4.78	338	ePN	Pn	20 53 07.5	+0.4
SMOL				eSN	Sn	20 54 02.6	+0.1
SMOL	Smolenice	4.78	338	ePn	Pn	20 53 07.6	+0.5
SMOL				eS	Sn	20 54 02.6	+0.1
VOY	Vojsko	4.79	296	ePn	Pn	20 53 09.2	+2.0
VOY				e		20 53 26.7	
VOY				eSn	Sg	20 54 23.7	-5.2
CONA	Conrad Observa	4.83	324	Pn	Pn	20 53 00.4	-7.3
	SNR=17						
CRVS	Cervenica-Dubn	4.89	11	ePN	Pn	20 53 09.8	+1.2
PAIG	Paliouri	4.96	146	ePn	Pn	20 53 07.8	-1.7
PAIG				eSn	Sn	20 54 10.2	+3.3
LIKS	Likavka	4.99	353	ePN	Pn	20 53 13.6	+3.6
BURAR	Bucovina Array	5.02	44	⇓iP	Pn	20 53 11.8	+1.5
BURAR	Bucovina Array	5.02	44	⇓P	Pn	20 53 11.8	+1.5
JMB	Yambol	5.02	107	ePn	Pn	20 53 08.5	-1.8
JMB				eSn	Sn	20 54 08.6	+0.2
KOLS	Kolonicke sedl	5.06	17	ePN	Pn	20 53 13.1	+2.2
XOR	Xorichti	5.27	153	ePn	Pn	20 53 12.4	-1.4
XOR				eSn	Sn	20 54 17.4	+2.8
NIE	Niedzica	5.32	2	ePn	Pn	20 53 17.7	+3.2
AGG	Agios Georgios	5.35	161	ePn	Pn	20 53 14.3	-0.6
AGG				eSn	Sn	20 54 19.0	+2.5
LKD	Levkas	5.41	175	ePn	Pn	20 53 14.3	-1.4
LKD				eSn	Sn	20 54 20.6	+2.6
ALN	Alexandroupoli	5.45	124	ePn	Pn	20 53 15.2	-1.0
MOA	Molln	5.52	315	⇓iSn	Sn	20 54 14.0	-6.8
MOA	Molln	5.52	315	⇑iPn	Pn	20 53 16.4	-0.8
	SNR=18						
MOA				⇑iSn	Sn	20 54 23.0	+2.2
MOA	Molln	5.52	315	⇑iPn	Pn	20 53 16.4	-0.8
MOA				iSn	Sn	20 54 14.0	-6.8
KBA	Koelnbreinsper	5.59	305	⇑iSn	Sn	20 54 17.1	-5.4
KBA	Koelnbreinsper	5.59	305	⇓iPn	Pn	20 53 18.1	-0.1
	SNR=11						
KBA				⇑iSn	Sn	20 54 23.4	+0.9
KBA	Koelnbreinsper	5.59	305	⇓iPn	Pn	20 53 18.1	-0.1
KBA				iSn	Sn	20 54 17.1	-5.4
KBA	Koelnbreinsper	5.59	305	⇓iPn	Pn	20 53 18.0	-0.2
VRAC	Vranov	5.73	336	Pn	Pn	20 53 21.6	+1.4
	1.0nm,0.3s,baz=152,slow=8.5,SNR=7.1						
KWP	Kalwaria	5.81	17	ePn	Pn	20 53 24.7	+3.4
KWP				eSg	Sg	20 55 15.9	+14
OKC	Ostrava-Krasne	5.89	348	ePN	Pn	20 53 23.6	+1.3
MORC	Moravsky Berou	5.94	344	eP	Pn	20 53 24.0	+1.0
MORC				pmax	pmax		
	comp=Z,16nm,1.0s						
MORC	Moravsky Berou	5.94	344	eP	Pn	20 53 24.0	+1.0
	comp=Z,16nm,1.0s						
MORC	Moravsky Berou	5.94	344	eP	Pn	20 53 24.0	+1.0
	comp=Z,16nm,1.0s						
TIRR	Tirgusor	5.99	84	eP	Pn	20 53 23.0	-0.7
TREC	Trest	6.08	330	ePN	Pn	20 53 25.0	+0.1
OJC	Ojcow	6.12	358	ePn	Pn	20 53 27.7	+2.2
OJC				ePP		20 53 35.4	
OJC				eSS		20 54 53.4	
OJC				eSg	Sg	20 55 21.7	+10
GEC2	GERESS Array S	6.47	319	eP	Pn	20 53 32.3	+1.9
GERES	GERESS Array B	6.47	319	Pn	Pn	20 53 32.2	+1.8
	comp=Z,1.5nm,0.3s,baz=132,slow=14,SNR=31						
WTTA	Wattenberg	6.71	301	⇓iPn	Pn	20 53 33.7	+0.1
	SNR=8.6						
WTTA	Wattenberg	6.71	301	⇓iPn	Pn	20 53 33.7	+0.1
KHC	Kasperske Hory	6.74	321	ePN	Pn	20 53 34.7	+0.8
KHC				x	x	20 53 50.5	
KHC				ePG	Pg	20 54 00.0	-4.0
KHC				eSN	Sn	20 54 51.5	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHC	**Kasperske Hory**	**6.74**	**321**	ePn	**Pn**	**20 53 34.7**	**+0.8**
KHC				e		20 53 50.5	
KHC				e		20 54 00.0	
KHC				eSn	**Sn**	**20 54 51.5**	**+0.8**
DPC	**Dobruska-Polom**	**6.75**	**339**	ePN	**Pn**	**20 53 36.5**	**+2.3**
WATA	**Walderalm**	**6.78**	**301**	⇓iPn	**Pn**	**20 53 34.8**	**+0.3**
	SNR=7.7						
SQTA	**Sankt Quirin**	**6.96**	**300**	⇑iSn	**Sn**	**20 54 52.0**	**-4.2**
SQTA	**Sankt Quirin**	**6.96**	**300**	⇓iPn	**Pn**	**20 53 36.9**	**0.0**
	SNR=14						
SQTA				⇑iSn	**Sn**	**20 55 01.2**	**+5.0**
SQTA	**Sankt Quirin**	**6.96**	**300**	⇓iPn	**Pn**	**20 53 36.9**	**0.0**
SQTA				i Sn	**Sn**	**20 54 52.0**	**-4.2**
PRU	**Pruhonice**	**7.00**	**329**	ePN	**Pn**	**20 53 38.0**	**+0.4**
MOTA	**Moosalm**	**7.07**	**300**	⇑iPn	**Pn**	**20 53 38.8**	**+0.2**
	SNR=11						
WET	**Wettzell**	**7.07**	**318**	eP	**Pn**	**20 53 39.7**	**+1.1**
DAVOX	**Davos**	**7.66**	**294**	Pn	**Pn**	**20 53 49.1**	**+2.5**
	comp=Z,1.0nm,0.3s,baz=110,slow=11,SNR=13						
BRG	**Berggiesshubel**	**7.95**	**331**	e(P)	**Pn**	**20 53 53.3**	**+2.8**
	comp=Z,1.0nm,0.5s						
BRG				e		20 54 35.2	
BRG				e		20 55 12.6	
BRG							
	comp=N,163nm,11.4s						
BRG							
	comp=E,158nm,13.8s						
BRG							
	comp=Z,156nm,9.2s						
BRG	**Berggiesshubel**	**7.95**	**331**	eP	**Pn**	**20 53 53.3**	**+2.7**
BRG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRG				MLR	MLR		
	comp=N,163nm,11.4s						
BRG				MLR	MLR		
	comp=E,158nm,13.8s						
BRG				MLR	MLR		
	comp=Z,156nm,9.2s						
BRG	**Berggiesshubel**	**7.95**	**331**	P	**Pn**	**20 53 53.3**	**+2.8**
	comp=Z,1.0nm,0.5s						
BRG				e		20 54 35.2	
BRG				e		20 55 12.6	
CLL	**Collm**	**8.64**	**329**	ePn	**Pn**	**20 54 02.0**	**+1.9**
CLL				ex	x	20 54 08.0	
CLL				ex	x	20 54 16.0	
CLL				ePg	Pn	20 54 37.0	+37
CLL				eSn	**Sn**	**20 55 25.0**	**-13**
CLL				ex	x	20 55 58.0	
CLL				eSg	Sn	20 56 32.0	+54
	comp=Z,21nm,1.5s						
CLL	**Collm**	**8.64**	**329**	ePn	**Pn**	**20 54 02.0**	**+1.9**
CLL				ePg	Pn	20 54 37.0	+37
CLL				eSn	**Sn**	**20 55 25.0**	**-13**
CLL				eSg	Sn	20 56 32.0	+54
MOX	**Moxa**	**8.71**	**322**	e(P)	**Pn**	**20 54 03.5**	**+2.5**
MOX							
	comp=Z,400nm,13.0s						
SBF	**Sospel**	**9.13**	**273**	ePn	**Pn**	**20 54 05.4**	**-1.4**
IDI	**Anoyia**	**9.55**	**156**	Pn	**Pn**	**20 54 11.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=3.4,slow=19,SNR=2.5						
MBDF	**Montbardon**	**9.55**	**278**	ePn	**Pn**	**20 54 11.8**	**-0.8**
LPG	**La Plagne**	**9.59**	**283**	ePn	**Pn**	**20 54 13.4**	**+0.4**
LPL	**La Plagne**	**9.60**	**283**	ePn	**Pn**	**20 54 15.0**	**+1.8**
FRF	**La Foret Royal**	**9.73**	**271**	ePn	**Pn**	**20 54 15.4**	**+0.4**
FRF				eSn	**Sn**	**20 55 59.6**	**-4.8**
	comp=Z,15nm,0.8s						
LMR	**La Mourre**	**9.86**	**270**	ePn	**Pn**	**20 54 16.7**	**-0.1**
HINF	**Hinteralfeld**	**9.94**	**297**	ePn	**Pn**	**20 54 18.5**	**+0.7**
HINF				eSn	**Sn**	**20 56 04.6**	**-4.8**
	comp=Z,3.1nm,0.4s						
CABF	**La Chapelle**	**10.17**	**289**	ePn	**Pn**	**20 54 21.9**	**+0.9**
ORIF	**Oris-en-Rattie**	**10.19**	**280**	ePn	**Pn**	**20 54 20.9**	**-0.3**
HAU	**Haudompre**	**10.31**	**297**	ePn	**Pn**	**20 54 23.9**	**+0.9**
SMRF	**Simiane la Rot**	**10.45**	**274**	ePn	**Pn**	**20 54 25.1**	**+0.2**
BRTR	**Keskin Array B**	**11.00**	**109**	Pn	**Pn**	**20 54 33.2**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=284,slow=15,SNR=4.2						
VSU	**Vasula**	**14.96**	**14**	eP	**Pn**	**20 55 27.3**	**+0.9**
MALT	**Malatya**	**14.96**	**106**	eP	**Pn**	**20 55 22.0**	**-4.4**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MALT	**Malatya**	**14.96**	**106**	eP	**Pn**	**20 55 22.0**	**-4.4**
	comp=Z,1.7nm,0.5s						
OBN	**Obninsk**	**15.30**	**38**	eP	**Pn**	**20 55 29.8**	**-1.2**
OBN				eS	**Sn**	**20 58 16.9**	**-3.7**
OBN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
OBN	**Obninsk**	**15.30**	**38**	eP	**Pn**	**20 55 29.8**	**-1.2**
	comp=Z,4.0nm,1.2s						
KIV	**Kislovodsk**	**16.25**	**83**	eP	**Pn**	**20 55 41.6**	**-1.7**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KIV				MLR	MLR		
	comp=Z,44nm,9.0s						
KIV	**Kislovodsk**	**16.25**	**83**	eP	**Pn**	**20 55 41.6**	**-1.7**
	comp=Z,44nm,9.0s						
MMAI	**Mount Meron Ar**	**16.28**	**128**	Pn	**Pn**	**20 55 41.0**	**-2.7**
	comp=Z,0.8nm,0.3s,baz=319,slow=8.6,SNR=3.9						
MMAI				LR	LR	21 02 14.4	
	comp=Z,48nm,20.6s,baz=280,slow=38						
HFS	**Hagfors**	**16.51**	**349**	Pn	**Pn**	**20 55 46.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=162,slow=15,SNR=3.0						
FINES	**FINESS Array B**	**17.73**	**9**	P	**Pn**	**20 56 02.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=183,slow=13,SNR=4.3						
ASF	**Jabal al Asfar**	**17.76**	**126**	LR	LR	21 03 01.3	
	comp=Z,42nm,21.5s,baz=336,slow=38						
NOA	**NORSAR Array B**	**17.77**	**346**	P	**Pn**	**20 56 03.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=162,slow=10,SNR=3.6						
NOA				LR	LR	21 02 44.4	
	comp=Z,19nm,19.1s,baz=195,slow=36						
GNI	**Garni**	**18.69**	**94**	eP	**Pn**	**20 56 13.9**	**+0.2**
GNI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GNI	**Garni**	**18.69**	**94**	eP	**Pn**	**20 56 13.9**	**+0.2**
	comp=Z,6.0nm,1.2s						
KLMR	**Klimovskoe**	**20.39**	**28**	eP	**P**	**20 56 32.2**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KLMR	**Klimovskoe**	**20.39**	**28**	eP	**P**	**20 56 32.2**	**+0.2**
	comp=Z,10.0nm,1.4s						
MDT	**Midelt**	**22.30**	**248**	LR	LR	21 05 05.0	
	comp=Z,63nm,18.5s,MS3.1,baz=22,slow=36						
AKTO	**Aktyubinsk**	**26.29**	**63**	LR	LR	21 08 28.1	
	comp=Z,34nm,19.2s,MS2.9,baz=161,slow=38						
TORD	**Torodi Ar. Bea**	**34.65**	**213**	P	**P**	**20 58 45.8**	**+1.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=16,slow=8.9,SNR=4.6						
TORD				LR	LR	21 12 49.2	
	comp=Z,48nm,19.5s,MS3.2,baz=300,slow=36						
ZAL	**Zalesovo**	**42.16**	**53**	LR	LR	21 20 17.3	
	comp=Z,19nm,20.2s,MS3.0,baz=69,slow=40						
MKAR	**Makanchi Array**	**42.72**	**64**	P	**P**	**20 59 52.0**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.3,baz=282,slow=6.1,SNR=5.5						
DBIC	**Dimbokro**	**43.21**	**218**	P	**P**	**20 59 56.3**	**+0.2**
	comp=Z,4.6nm,0.9s,mb4.2,baz=29,slow=13,SNR=3.8						
YKA	**Yellowknife Ar**	**67.73**	**339**	P	**P**	**21 02 52.9**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=33,slow=5.5,SNR=4.1						
YKA	**Yellowknife Ar**	**67.73**	**339**	P	**P**	**21 02 52.9**	**+0.3**
YKA	**Yellowknife Ar**	**67.73**	**339**	P	**P**	**21 02 52.9**	**+0.2**

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*ISCJB **02** 20:53:09.4±1.2, 14N±0.1×1015W±02, h10km, mb4.4/14, MS3.8/5, Error ellipse: s-maj=35.0km s-min=11.2km az=117.4*

*IDC **02** 20:53:09.6±1.1, 136N×10148W, h0km, mb4.2/9, mb1 4.4/10, mb1mx4.2/19, mbtmp4.2/10, ML3.4/1, MS3.7/6, Ms1 3.7/6, ms1mx3.3/30, Error ellipse: s-maj=41.7km s-min=18.0km az=54.0*

*NEIC **02** 20:53:11.1±0.6, 135N×10140W, h10km, mb4.7/5, Error ellipse: s-maj=20.5km s-min=9.6km az=62.0*

ISC 02 20:53:11.4±1.2**, 14N**±01×**1015W**±02**, h10**km**, n26,** σ1s**16**/21**, mb4.4**/14**, MS3.8**/5**, Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**16.91**	**22**	Pn	**Pn**	**20 57 09.0**	**+1.0**
	0.1nm,0.3s,baz=218,slow=8.5,SNR=5.6						
CMIG				LR	LR	21 01 14.7	
	comp=Z,23nm,19.0s,baz=30,slow=29						
CMIG	**Matias Romero**	**16.91**	**22**	Pn	**Pn**	**20 57 09.0**	**+0.9**
CMIG				LR	LR	21 01 14.7	
ATAH	**Atahualpa**	**24.52**	**110**	P	**P**	**20 58 33.0**	**+2.1**
	3.5nm,0.4s,mb4.2,baz=59,slow=23,SNR=3.7						
ATAH				LR	LR	21 05 57.3	
	comp=Z,161nm,20.2s,MS3.5,baz=254,slow=31						
ANMO	**Albuquerque**	**33.71**	**353**	LR	LR	21 12 41.7	
	comp=Z,206nm,18.4s,MS3.9,baz=193,slow=35						
MIAR	**Mount Ida**	**33.81**	**12**	eP	**P**	**20 59 53.4**	**-0.2**
	11nm,1.0s,mb4.8						
LPAZ	**La Paz**	**37.34**	**119**	P	**P**	**21 00 25.0**	**+1.1**
	1.5nm,0.9s,mb3.8,baz=295,slow=11,SNR=3.6						
LPAZ	**La Paz**	**37.34**	**119**	eP	**P**	**21 00 24.9**	**+1.0**
	2.5nm,0.3s,mb4.5						
SAML	**Samuel**	**39.54**	**106**	eP	**P**	**21 00 41.2**	**-1.2**
	17nm,1.0s,mb4.7						
LVC	**Limon Verde**	**39.72**	**129**	P	**P**	**21 00 44.2**	**+0.2**
DAU	**Daniels Canyon**	**39.84**	**348**	eP	**P**	**21 00 47.2**	**+2.2**
PDAR	**Pinedale Array**	**41.82**	**351**	P	**P**	**21 01 02.2**	**+0.9**
	3.3nm,1.0s,mb3.9,baz=152,slow=6.7,SNR=16						
SIV	**San Ignacio**	**43.50**	**115**	P	**P**	**21 01 14.2**	**-0.8**
	0.6nm,0.3s,mb3.8,baz=196,slow=20,SNR=3.4						
SSPA	**Standing Stone**	**44.54**	**26**	eP	**P**	**21 01 22.0**	**-1.3**
	12nm,1.3s,mb4.5						
NEW	**Newport**	**48.60**	**346**	P	**P**	**21 01 54.9**	**-0.3**
	1.9nm,0.3s,mb4.6,baz=245,slow=13,SNR=4.2						
NEW	**Newport**	**48.60**	**346**	P	**P**	**21 01 54.9**	**-0.3**
ULM	**Lac du Bonnet**	**48.91**	**5**	P	**P**	**21 01 56.0**	**-1.5**
	4.0nm,0.9s,mb4.5,baz=182,slow=8.7,SNR=4.4						
PLCA	**Paso Flores**	**50.51**	**150**	LR	LR	21 18 37.5	
	comp=Z,117nm,18.1s,MS3.9,baz=290,slow=30						
CPUP	**Villa Florida**	**50.74**	**126**	eP	**P**	**21 02 18.2**	**+6.8**
	10nm,0.8s,mb4.8						
PPT	**Papeete**	**50.95**	**246**	LR	LR	21 18 42.3	
	comp=Z,94nm,19.9s,MS3.8,baz=214,slow=30						
BDFB	**Brasilia**	**55.48**	**110**	P	**P**	**21 02 45.7**	**-0.7**
	1.7nm,0.4s,mb4.4,baz=252,slow=6.4,SNR=3.0						
BDFB				LR	LR	21 24 42.7	
	comp=Z,133nm,19.9s,MS4.0,baz=205,slow=34						
DLBC	**Dease Lake**	**61.15**	**343**	P	**P**	**21 03 22.7**	**-3.4**
	5.1nm,0.7s,mb4.7,baz=342,slow=3.0,SNR=2.8						
DLBC	**Dease Lake**	**61.15**	**343**	P	**P**	**21 03 22.7**	**-3.4**
YKA	**Yellowknife Ar**	**61.74**	**353**	P	**P**	**21 03 29.5**	**-0.5**
	3.6nm,1.0s,mb4.5,baz=162,slow=6.5,SNR=19						
INK	**Inuvik**	**70.28**	**348**	P	**P**	**21 04 25.4**	**+0.5**
	4.6nm,1.0s,mb4.4,baz=159,slow=7.3,SNR=5.6						
ASAR	**Alice Springs**	**122.01**	**243**	PKP	PKPdf	21 12 06.6	+0.5
	0.4nm,0.8s,baz=87,slow=2.0,SNR=2.9						
WRA	**Warramunga Arr**	**122.43**	**247**	PKP	PKPdf	21 12 08.0	+1.1
	0.7nm,1.0s,baz=103,slow=1.2,SNR=5.4						

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*ISCJB **02** 21:15:35.4±0.5, 5064N±003×13004W±005, h10km, mb3.5/3, MS3.5/7, Error ellipse: s-maj=6.4km s-min=2.6km az=95.0*

*IDC **02** 21:15:35.6±1.6, 5049N×13023W, h0km, mb3.6/3, mb1 4.0/9, mb1mx3.8/25, mbtmp3.8/9, ML4.1/5, MS3.5/11, Ms1 3.5/11, ms1mx3.2/32, Error ellipse: s-maj=25.7km s-min=12.5km az=71.0*

*PGC **02** 21:15:35.4, 5045N×13031W, h10km, MLSn3.7/2, Mw4.6/6, Mw4.3, 206km southwest of Pt. Hardy, Bc West of Vancouver Island, British Columbia*

*NEIC **02** 21:15:36.4±0.8, 5060N×130.17W, h10km, mb4.0/2, MW4.6(PGC), Error ellipse: s-maj=15.4km s-min=4.8km az=49.0*

ISC 02 21:15:37.3±0.5**, 5073N**±004×**12995W**±006**, h10**km**, n104,** σ1s**37**/154**, mb3.5**/3**, MS3.5**/7**, 5C-1D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.16**	**94**	⇑Pn	**Pn**	**21 15 59.0**	**-0.5**
HOLB				Sn	**Sn**	**21 16 15.7**	**+0.2**
	comp=Z,756nm,0.3s						
HOLB				Trac		21 16 22.8	
	comp=Z,756nm,0.3s						
HOLB	**Holberg**	**1.16**	**94**	⇑iPn	**Pn**	**21 15 59.0**	**-0.5**
HOLB				Sn	**Sn**	**21 16 15.7**	**+0.2**
BPBC	**Brooks Peninsu**	**1.50**	**111**	Pn	**Pn**	**21 16 02.1**	**-2.3**
BPBC				Sn	**Sn**	**21 16 21.8**	**-2.2**
	comp=Z,243nm,0.2s						
BPBC				Trac		21 16 22.0	
	comp=Z,243nm,0.2s						
BPBC	**Brooks Peninsu**	**1.50**	**111**	Pn	**Pn**	**21 16 02.1**	**-2.3**
BPBC				eSn	**Sn**	**21 16 21.8**	**-2.2**
PHC	**Port Hardy**	**1.60**	**90**	⇑Pn	**Pn**	**21 16 05.7**	**+0.1**
PHC				Sn	**Sn**	**21 16 26.5**	**+0.2**
PHC				Trac		21 16 28.2	
	comp=Z,322nm,0.2s						
PHC	**Port Hardy**	**1.60**	**90**	⇑iPn	**Pn**	**21 16 05.7**	**+0.1**
PHC				eSn	**Sn**	**21 16 26.5**	**+0.2**
MAYB	**Maynard**	**1.80**	**99**	⇑Pn	**Pn**	**21 16 07.7**	**-0.7**
MAYB				Sn	**Sn**	**21 16 31.0**	**-0.3**
	comp=Z,92nm,0.2s						
MAYB				Trac		21 16 35.8	
	comp=Z,92nm,0.2s						
MAYB	**Maynard**	**1.80**	**99**	Pn	**Pn**	**21 16 07.7**	**-0.7**
MAYB				eSn	**Sn**	**21 16 31.0**	**-0.3**
BBB	**Bella Bella**	**1.86**	**37**	Pn	**Pn**	**21 16 10.7**	**+1.5**
	27nm,0.3s,baz=227,slow=12,SNR=632						
BBB				Sn	**Sn**	**21 16 34.5**	**+1.8**
	74nm,0.3s,baz=314,slow=21,SNR=12						
BBB				LR	LR	21 17 04.2	
	comp=Z,392nm,21.2s,baz=222,slow=41						
BBB	**Bella Bella**	**1.86**	**37**	⇓Pn	**Pn**	**21 16 10.6**	**+1.4**
BBB				Sn	**Sn**	**21 16 35.6**	**+2.8**
BBB				Trac		21 16 37.2	
	comp=Z,146nm,0.1s						
EDB	**Eliza Dome**	**2.00**	**114**	Pn	**Pn**	**21 16 09.3**	**-1.9**
EDB				Sn	**Sn**	**21 16 33.4**	**-3.0**
EDB				Trac		21 16 37.4	
	comp=Z,80nm,0.4s						
EDB	**Eliza Dome**	**2.00**	**114**	Pn	**Pn**	**21 16 09.3**	**-1.9**
EDB				eSn	**Sn**	**21 16 33.4**	**-3.0**
BNB	**Barry Inlet**	**2.17**	**329**	Pn	**Pn**	**21 16 11.3**	**-2.1**
BNB				Sn	**Sn**	**21 16 39.1**	**-1.3**
	comp=Z,7μm,0.5s						
BNB				Trac		21 16 41.3	
	comp=Z,7μm,0.5s						
BNB	**Barry Inlet**	**2.17**	**329**	Pn	**Pn**	**21 16 11.3**	**-2.1**
BNB				eSn	**Sn**	**21 16 39.1**	**-1.3**
WOSB	**Woss**	**2.23**	**103**	⇑Pn	**Pn**	**21 16 13.8**	**-0.6**
WOSB				Sn	**Sn**	**21 16 41.8**	**-0.2**
	comp=Z,115nm,0.3s						
WOSB				Trac		21 16 54.8	
	comp=Z,115nm,0.3s						
WOSB	**Woss**	**2.23**	**103**	Pn	**Pn**	**21 16 13.8**	**-0.6**
WOSB				eSn	**Sn**	**21 16 41.8**	**-0.2**
NCRB	**Newcastle Ridg**	**2.50**	**96**	Pn	**Pn**	**21 16 17.9**	**-0.1**
NCRB				Sn	**Sn**	**21 16 46.7**	**-1.9**
	comp=Z,114nm,0.5s						
NCRB				Trac		21 17 09.9	
	comp=Z,114nm,0.5s						
NCRB	**Newcastle Ridg**	**2.50**	**96**	Pn	**Pn**	**21 16 17.9**	**-0.1**
NCRB				eSn	**Sn**	**21 16 46.7**	**-1.9**
ETB	**Estevan Point**	**2.58**	**120**	ePn	**Pn**	**21 16 17.0**	**-2.2**
GDR	**Gold River**	**2.69**	**109**	Pn	**Pn**	**21 16 19.5**	**-1.1**
GDR				Sn	**Sn**	**21 16 48.9**	**-4.3**
	comp=Z,166nm,0.7s						
GDR				Trac		21 17 26.1	
	comp=Z,166nm,0.7s						
GDR	**Gold River**	**2.69**	**109**	ePn	**Pn**	**21 16 19.5**	**-1.1**
GDR				eSn	**Sn**	**21 16 48.9**	**-4.3**
MOBC	**Moresby Island**	**2.75**	**335**	Pn	**Pn**	**21 16 19.7**	**-1.9**
MOBC				Sn	**Sn**	**21 16 52.5**	**-2.4**
	comp=Z,110nm,0.6s						
MOBC				Trac		21 16 56.1	
	comp=Z,110nm,0.6s						
MOBC	**Moresby Island**	**2.75**	**335**	Pn	**Pn**	**21 16 19.7**	**-1.9**
MOBC				eSn	**Sn**	**21 16 52.5**	**-2.4**
BNAB	**Bonilla**	**2.80**	**352**	Pn	**Pn**	**21 16 22.3**	**+0.1**
BNAB				Sn	**Sn**	**21 16 56.3**	**+0.2**
	comp=Z,98nm,0.2s						
BNAB				Trac		21 16 58.4	
	comp=Z,98nm,0.2s						
BNAB	**Bonilla**	**2.80**	**352**	Pn	**Pn**	**21 16 22.3**	**+0.1**
BNAB				eSn	**Sn**	**21 16 56.3**	**+0.2**
VIB	**Van Inlet**	**3.00**	**329**	Pn	**Pn**	**21 16 23.4**	**-1.5**
VIB				Sn	**Sn**	**21 16 55.3**	**-5.5**
	comp=Z,65nm,0.3s						
VIB				Trac		21 17 01.0	
	comp=Z,65nm,0.3s						
VIB	**Van Inlet**	**3.00**	**329**	ePn	**Pn**	**21 16 23.4**	**-1.5**
VIB				eSn	**Sn**	**21 16 55.3**	**-5.5**
CBB	**Campbell River**	**3.01**	**102**	Pn	**Pn**	**21 16 25.1**	**0.0**
CBB				Sn	**Sn**	**21 17 01.6**	**+0.4**
CBB				Trac		21 17 04.4	
	comp=Z,61nm,0.5s						
CBB	**Campbell River**	**3.01**	**102**	Pn	**Pn**	**21 16 25.1**	**0.0**
CBB				eSn	**Sn**	**21 17 01.6**	**+0.4**
BTB	**Buttle Lake**	**3.12**	**112**	⇑Pn	**Pn**	**21 16 25.3**	**-1.2**
BTB				Sn	**Sn**	**21 17 02.6**	**-1.2**
	comp=Z,60nm,0.3s						
BTB				Trac		21 17 08.9	
	comp=Z,60nm,0.3s						
BTB	**Buttle Lake**	**3.12**	**112**	Pn	**Pn**	**21 16 25.3**	**-1.2**
BTB				eSn	**Sn**	**21 17 02.6**	**-1.2**
OZB	**Mount Ozzard**	**3.38**	**120**	Pn	**Pn**	**21 16 28.3**	**-1.9**
OZB				Sn	**Sn**	**21 17 05.4**	**-4.9**
OZB				Trac		21 17 05.8	
	comp=Z,46nm,0.5s						
OZB	**Mount Ozzard**	**3.38**	**120**	ePn	**Pn**	**21 16 28.3**	**-1.9**
OZB				eSn	**Sn**	**21 17 05.4**	**-4.9**
ALB	**Alberni**	**3.61**	**112**	Pn	**Pn**	**21 16 32.4**	**-0.9**
ALB				Trac		21 17 59.8	
	comp=Z,49nm,0.8s						
ALB	**Alberni**	**3.61**	**112**	ePn	**Pn**	**21 16 32.4**	**-0.9**
RUBB	**Prince Rupert**	**3.61**	**357**	Pn	**Pn**	**21 16 34.3**	**+1.0**
RUBB				Sn	**Sn**	**21 17 16.7**	**+0.7**
RUBB				Trac		21 17 21.1	
	comp=Z,160nm,0.2s						
RUBB	**Prince Rupert**	**3.61**	**357**	Pn	**Pn**	**21 16 34.3**	**+1.0**
RUBB				eSn	**Sn**	**21 17 16.7**	**+0.7**
TXB	**Texada**	**3.69**	**104**	Pn	**Pn**	**21 16 34.1**	**-0.3**
TXB				Sn	**Sn**	**21 17 16.0**	**-1.8**
	comp=Z,88nm,0.8s						
TXB				Trac		21 17 53.6	
	comp=Z,88nm,0.8s						
TXB	**Texada**	**3.69**	**104**	ePn	**Pn**	**21 16 34.1**	**-0.3**
TXB				eSn	**Sn**	**21 17 16.0**	**-1.8**
NDB	**Naden**	**3.72**	**332**	Pn	**Pn**	**21 16 33.5**	**-1.3**
NDB				Sn	**Sn**	**21 17 15.7**	**-3.0**
	comp=Z,33nm,0.3s						
NDB				Trac		21 17 31.5	
	comp=Z,33nm,0.3s						
NDB	**Naden**	**3.72**	**332**	ePn	**Pn**	**21 16 33.5**	**-1.3**
NDB				eSn	**Sn**	**21 17 15.7**	**-3.0**
MGB	**Mount Grey**	**3.81**	**115**	Pn	**Pn**	**21 16 35.1**	**-1.0**
MGB				Sn	**Sn**	**21 17 19.3**	**-1.7**
MGB				Trac		21 17 27.9	
	comp=Z,28nm,0.4s						
MGB	**Mount Grey**	**3.81**	**115**	ePn	**Pn**	**21 16 35.1**	**-1.0**
MGB				eSn	**Sn**	**21 17 19.3**	**-1.7**
SHB	**Sechelt**	**4.06**	**104**	Pn	**Pn**	**21 16 39.5**	**0.0**
SHB				Sn	**Sn**	**21 17 24.4**	**-2.8**
SHB				Trac		21 17 40.6	
	comp=Z,34nm,0.3s						
SHB	**Sechelt**	**4.06**	**104**	ePn	**Pn**	**21 16 39.5**	**0.0**
SHB				eSn	**Sn**	**21 17 24.4**	**-2.8**
PFB	**Port Renfrew**	**4.18**	**119**	Pn	**Pn**	**21 16 40.4**	**-0.7**
PFB	**Port Renfrew**	**4.18**	**119**	ePn	**Pn**	**21 16 42.0**	**+0.9**
WPB	**Watts Point**	**4.46**	**101**	Pn	**Pn**	**21 16 45.9**	**+0.9**
WPB				Trac		21 17 41.8	
	comp=Z,18nm,0.6s						
WPB	**Watts Point**	**4.46**	**101**	ePn	**Pn**	**21 16 45.9**	**+0.9**
BIB	**Bowen Island**	**4.48**	**105**	Pn	**Pn**	**21 16 45.7**	**+0.5**
BIB				Sn	**Sn**	**21 17 37.4**	**0.0**
	comp=Z,70nm,1.1s						
BIB				Trac		21 18 24.6	
	comp=Z,70nm,1.1s						
BIB	**Bowen Island**	**4.48**	**105**	ePn	**Pn**	**21 16 45.7**	**+0.5**
BIB				eSn	**Sn**	**21 17 37.4**	**0.0**
LZB	**Mount Lazard**	**4.50**	**116**	Pn	**Pn**	**21 16 46.1**	**+0.5**
LZB				Sn	**Sn**	**21 17 32.0**	**-6.1**
LZB				Trac		21 17 47.8	
	comp=Z,8.1nm,0.7s						
LZB	**Mount Lazard**	**4.50**	**116**	ePn	**Pn**	**21 16 46.1**	**+0.5**
LZB				eSn	**Sn**	**21 17 32.0**	**-6.1**
GOBB	**Galiano Island**	**4.53**	**111**	Pn	**Pn**	**21 16 46.3**	**+0.4**
GOBB				Trac		21 18 28.7	
	comp=Z,48nm,1.0s						
GOBB	**Galiano Island**	**4.53**	**111**	ePn	**Pn**	**21 16 46.3**	**+0.4**
OBC	**Olympics--Boni**	**4.68**	**123**	P	**Pn**	**21 16 48.4**	**+0.3**
PGC	**Sidney**	**4.70**	**114**	eP	**Pn**	**21 16 47.8**	**-0.5**
SNB	**Saturna Island**	**4.81**	**111**	Pn	**Pn**	**21 16 51.2**	**+1.5**
SNB				Sn	**Sn**	**21 17 45.7**	**+0.2**
SNB				Trac		21 17 48.9	
	comp=Z,5.0nm,0.7s						
SNB	**Saturna Island**	**4.81**	**111**	ePn	**Pn**	**21 16 51.2**	**+1.5**
SNB				eSn	**Sn**	**21 17 45.7**	**+0.2**
VGZ	**Gonzales**	**4.89**	**116**	ePn	**Pn**	**21 16 51.6**	**+0.7**
VGZ				eSn	**Sn**	**21 17 45.0**	**-2.6**
HNB	**Haney**	**4.97**	**104**	Pn	**Pn**	**21 16 54.0**	**+2.0**
MCW	**Mount Constitu**	**5.05**	**111**	P	**Pn**	**21 16 54.2**	**+1.1**
FSB	**Fort Saint Jam**	**5.08**	**40**	Pn	**Pn**	**21 16 57.0**	**+3.5**
FSB				Sn	**Sn**	**21 17 57.5**	**+5.2**
	comp=Z,48nm,0.8s						
FSB				Trac		21 18 30.3	
	comp=Z,48nm,0.8s						
FSB	**Fort Saint Jam**	**5.08**	**40**	ePn	**Pn**	**21 16 57.0**	**+3.5**
FSB				eSn	**Sn**	**21 17 57.5**	**+5.2**
CRAG	**Craig**	**5.12**	**339**	eP	**Pn**	**21 16 53.8**	**-0.3**
LLLB	**Lillooet**	**5.13**	**88**	Pn	**Pn**	**21 16 55.8**	**+1.6**
LLLB				Sn	**Sn**	**21 17 51.4**	**-2.1**
LLLB				Trac		21 18 05.7	
	comp=Z,17nm,0.8s						
LLLB	**Lillooet**	**5.13**	**88**	Pn	**Pn**	**21 16 55.8**	**+1.6**
LLLB				eSn	**Sn**	**21 17 51.4**	**-2.1**
VDB	**Vedder Mountai**	**5.35**	**106**	Pn	**Pn**	**21 16 59.0**	**+1.8**
MBW	**Mount Baker**	**5.57**	**107**	P	**Pn**	**21 17 01.7**	**+1.5**
CMW	**Cultus Mountai**	**5.59**	**111**	P	**Pn**	**21 17 02.2**	**+1.7**
JCW	**Jim Creek**	**5.81**	**113**	P	**Pn**	**21 17 04.7**	**+1.2**
RPW	**Rockport**	**5.94**	**109**	P	**Pn**	**21 17 06.6**	**+1.3**
PNT	**Penticton**	**6.80**	**98**	ePn	**Pn**	**21 17 18.9**	**+1.7**
DLBC	**Dease Lake**	**7.73**	**360**	Pn	**Pn**	**21 17 33.4**	**+3.5**
	4.8nm,0.3s,baz=195,slow=16,SNR=24						
DLBC				Sn	**Sn**	**21 19 02.4**	**+5.0**
	0.9nm,0.3s,baz=220,slow=12,SNR=4.7						
DLBC	**Dease Lake**	**7.73**	**360**	Pn	**Pn**	**21 17 33.4**	**+3.5**
DLBC				Sn	**Sn**	**21 19 02.4**	**+5.0**
NEW	**Newport**	**8.70**	**101**	LR	LR	21 21 06.3	
	comp=Z,413nm,20.1s,baz=339,slow=37						
YBH	**Yreka Blue Hor**	**10.29**	**148**	LR	LR	21 21 29.2	
	comp=Z,190nm,20.4s,baz=334,slow=35						
BMO	**Blue Mountains**	**10.33**	**120**	eP	**Pn**	**21 18 06.5**	**+1.0**
WALA	**Waterton Lakes**	**10.48**	**93**	P	**Pn**	**21 18 07.5**	**-0.2**
CHMT	**Chamberlain Mo**	**11.64**	**103**	eP	**Pn**	**21 18 25.3**	**+1.7**
MCMT	**McKenzie Canyo**	**12.91**	**111**	eP	**Pn**	**21 18 42.0**	**+1.1**
EGMT	**Eagleton**	**13.43**	**94**	eP	**Pn**	**21 18 48.8**	**+0.9**
	7.0nm,0.8s						
YKA	**Yellowknife Ar**	**14.45**	**29**	Pn	**Pn**	**21 19 02.9**	**+1.0**
	baz=221,slow=12,SNR=14						
YKA				Sn	**Sn**	**21 21 39.0**	**-3.1**
	baz=223,slow=22,SNR=5.2						
YKA	**Yellowknife Ar**	**14.45**	**29**	Pn	**Pn**	**21 19 02.9**	**+1.0**
YKA				Sn	**Sn**	**21 21 39.0**	**-3.1**
IMW	**Indian Meadow**	**14.57**	**111**	eP	**Pn**	**21 19 06.2**	**+2.8**
	7.5nm,0.9s						
MOOW	**Moose Ponds**	**14.77**	**111**	P	**Pn**	**21 19 08.1**	**+1.9**
	5.4nm,0.8s						
TPAW	**Teton Pass**	**14.80**	**112**	P	**Pn**	**21 19 06.8**	**+0.2**
	8.4nm,0.7s						
TPAW				e		21 19 16.4	
NVAR	**Mina Array Bea**	**14.81**	**142**	Pn	**Pn**	**21 19 07.1**	**+0.4**
	0.1nm,0.3s,baz=290,slow=5.7,SNR=2.5						
HWUT	**Hardware Ranch**	**15.63**	**119**	eP	**Pn**	**21 19 20.9**	**+3.3**
	40nm,2.3s						
PDAR	**Pinedale Array**	**16.05**	**112**	Pn	**Pn**	**21 19 26.4**	**+3.4**
	0.1nm,0.3s,baz=316,slow=12,SNR=24						
FFC	**Flin Flon**	**17.35**	**66**	eP	**Pn**	**21 19 43.2**	**+3.7**
	6.0nm,0.9s						
MSU	**Marysvale**	**17.53**	**127**	eP	**Pn**	**21 19 42.2**	**+0.5**
INK	**Inuvik**	**17.72**	**356**	P	**Pn**	**21 19 47.0**	**+2.8**
	0.1nm,0.3s,baz=174,slow=12,SNR=5.3						
INK				LR	LR	21 26 50.0	
	comp=Z,164nm,19.0s,baz=143,slow=38						
INK	**Inuvik**	**17.72**	**356**	P	**Pn**	**21 19 47.0**	**+2.8**
INK				LR	LR	21 26 50.0	
ULM	**Lac du Bonnet**	**21.58**	**78**	P	**P**	**21 20 28.3**	**+1.2**
	1.7nm,0.6s,mb3.7,baz=295,slow=11,SNR=5.0						
ULM				LR	LR	21 29 25.5	
	comp=Z,80nm,20.8s,MS3.1,baz=350,slow=38						
ULM	**Lac du Bonnet**	**21.58**	**78**	P	**P**	**21 20 28.3**	**+1.2**
ULM				LR	LR	21 29 25.5	
ANMO	**Albuquerque**	**23.20**	**124**	P	**P**	**21 20 45.5**	**+1.1**
	0.7nm,0.5s,mb3.3,baz=346,slow=17,SNR=4.2						
ANMO				LR	LR	21 29 39.9	
	comp=Z,101nm,21.2s,MS3.2,baz=180,slow=36						
ANMO	**Albuquerque**	**23.20**	**124**	P	**P**	**21 20 45.5**	**+1.1**
ANMO				LR	LR	21 29 39.9	
SCHQ	**Schefferville**	**37.25**	**58**	LR	LR	21 38 39.2	
	comp=Z,134nm,18.2s,MS3.8,baz=29,slow=37						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARCES	ARCESS Array B	58.71	10	LR	LR	21 50 47.7	
	comp=Z,44nm,20.1s,MS3.6,baz=354,slow=36						
MJAR	Matsushiro Arr	63.82	296	LR	LR	21 50 55.7	
	comp=Z,69nm,18.2s,MS3.9,baz=45,slow=33						
NOA	NORSAR Array B	64.31	20	LR	LR	21 55 29.7	
	comp=Z,23nm,18.6s,MS3.4,baz=310,slow=37						
FINES	FINESS Array B	66.55	12	LR	LR	21 54 47.3	
	comp=Z,41nm,20.1s,MS3.6,baz=21,slow=35						
MKAR	Makanchi Array	78.96	338	P	P	21 27 41.1	0.0
	0.7nm,0.9s,mb3.6,baz=18,slow=6.5,SNR=3.4						

*IDC **02** 21:17:16.9±1.2, 3927N×7150E, h0^{km}, mb3.6/6, mb1 3.7/9, mb1mx3.5/23, mbtmp3.6/9, ML3.1/3, MS2.8/2, Ms1 2.8/2, ms1mx2.3/36, Error ellipse: s-maj=22.6km s-min=19.1km az=179.0*
*NEIC **02** 21:17:18.8±1.1, 3954N×7156E, h10^{km}, mb3.6/1, Error ellipse: s-maj=16.5km s-min=15.4km az=185.0*
*ISCJB **02** 21:17:19.1±0.9, 3967N±007×7113E±005, h10^{km}, mb3.6/8, Error ellipse: s-maj=10.7km s-min=5.5km az=165.4*
*MOS **02** 21:17:20.2±1.9, 3958N×7133E, h33^{km}, mb4.2/3, Error ellipse: s-maj=17.7km s-min=9.8km az=90.1*
*NNC **02** 21:17:23.0±3.8, 3977N×7158E, h33^{km}±30^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=26.0km s-min=14.8km az=23.0*
ISC 02 21:17:20.7±0.8, **3966N**±007×**7124E**±005, **h10**^{km}, **n39**, σ**1^{s}17**/42, **mb3.6**/8, **14C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.09	36	P	Pn	21 18 10.6	+1.1
	SNR=6.2						
KK31	Karatay Array	3.48	351	⇓Pn	Pn	21 18 17.7	+2.7
	59nm,0.8s,baz=205,slow=38,SNR=184						
KK31				⇑Pg	Pg	21 18 25.7	-1.7
	29nm,0.5s,baz=234,slow=32,SNR=48						
KK31				⇑Lg		21 19 13.7	
	42nm,0.6s,baz=143,slow=30,SNR=8.9						
EKS2	Erkin-Say	3.56	32	P	Pn	21 18 16.1	+0.1
	SNR=16						
UCH	Uchtor	3.57	43	P	Pn	21 18 16.8	+0.8
	SNR=8.2						
AAK	Ala-Archa	3.86	39	P	Pb	21 18 27.6	-1.2
	SNR=12						
AAK	Ala-Archa	3.86	39	eP	Pn	21 18 19.3	-0.8
KZA	Kyzart	3.88	50	P	Pn	21 18 20.8	+0.4
	SNR=30						
FRU	Bishkek	4.07	38	ePN	Pb	21 18 31.5	-0.9
FRU				eS	Sb	21 19 22.0	+0.4
FRU				pmax	pmax		
	comp=Z,36nm,1.5s						
FRU				smax			
	comp=N,432nm,1.5s						
CHMS	Chumysh	4.26	37	P	Pn	21 18 26.6	+1.0
	SNR=20						
USP	Ospenovka	4.36	33	P	Pn	21 18 26.8	-0.1
	SNR=12						
ULHL	Ulahol	4.58	54	P	Pn	21 18 30.8	+0.8
	SNR=19						
TKM2	Tokmak 2	4.62	44	P	Pn	21 18 33.8	+3.2
	SNR=12						
TKM2	Tokmak 2	4.62	44	⇑Pn	Pn	21 18 30.7	+0.1
	comp=N,1.4nm,0.6s						
TKM2				⇑Pg	Pb	21 18 42.3	+0.4
TKM2				⇑Lg		21 19 37.2	
	comp=N,8.4nm,0.8s						
MKAR	Makanchi Array	10.76	45	Pn	Pn	21 19 56.6	+1.9
	comp=N,0.0nm,0.3s,baz=238,slow=11,SNR=4.8						
MKAR				Lg		21 22 53.6	
	comp=N,0.1nm,0.3s,baz=232,slow=29,SNR=3.7						
KURK	Kurchatov	12.21	23	⇑Pn	Pn	21 20 10.2	-4.5
	comp=N,3.3nm,1.8s						
KURK				⇑Lg		21 23 41.3	
	comp=N,6.4nm,0.8s						
KURK	Kurchatov	12.21	23	P	Pn	21 20 12.2	-2.5
AB31	Akbulak array	12.52	324	⇑Pn	Pn	21 20 19.2	+0.3
	comp=N,1.5nm,0.6s,baz=128,slow=14,SNR=20						
AB31				⇑Sn	Sn	21 22 38.9	+0.5
	comp=N,0.9nm,0.4s,baz=136,slow=25,SNR=4.4						
VOSK	Vostochnaya	13.07	359	⇓Lg		21 24 13.7	
	comp=N,6.5nm,1.0s						
BVAR	Borovoye Array	13.38	358	Pn	Pn	21 20 29.7	-1.0
	comp=N,0.1nm,0.3s,baz=250,slow=41,SNR=4.3						
BVAR				Lg		21 24 25.3	
	comp=N,0.3nm,0.3s,baz=176,slow=26,SNR=2.9						
BVAR				LR	LR	21 26 37.1	
	comp=N,26nm,18.2s,baz=318,slow=41						
ZRNK	Zerenda	13.38	354	⇑Pn	Pn	21 20 27.7	-2.9
	comp=N,1.2nm,0.9s						
ZRNK				⇑Lg		21 24 23.2	
	comp=N,13nm,1.6s						
ZRNK	Zerenda	13.38	354	eP	Pn	21 20 28.9	-1.8
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZRNK	Zerenda	13.38	354	eP	Pn	21 20 28.9	-1.7
	comp=Z,1.3nm,0.6s						
CHKZ	Chkalovo	14.03	358	⇑Pn	Pn	21 20 36.5	-3.0
	comp=Z,51nm,0.1s						
CHKZ				⇑Lg		21 24 47.0	
	comp=Z,14nm,2.2s						
AKTK	Aktyubinsk	14.24	324	Pn	Pn	21 20 43.2	+0.9
AKTO	Aktyubinsk	14.24	324	⇑Pn	Pn	21 20 42.6	+0.3
AKTO				⇓Sn	Sn	21 23 20.7	+0.4
AKTO	Aktyubinsk	14.24	324	Pn	Pn	21 20 43.2	+0.9
	comp=Z,0.2nm,0.3s,baz=128,slow=14,SNR=4.5						
ZAL	Zalesovo	16.99	28	LR	LR	21 29 07.0	
	comp=Z,37nm,18.0s,baz=290,slow=41						
ARU	Arti	18.75	338	eP	Pn	21 21 39.9	-0.2
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	Arti	18.75	338	eP	Pn	21 21 39.9	-0.1
	comp=Z,3.4nm,0.8s						
GNI	Garni	20.31	280	eP	P	21 21 55.2	-1.6
GNI				pmax	pmax		
	comp=Z,4.0nm,1.6s						
KIV	Kislovodsk	21.66	291	eP	P	21 22 11.5	+0.2
KIV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
ANN	Anapa	25.44	293	eP	P	21 22 58.6	+10
SONM	Songino Array	26.50	60	P	P	21 22 55.5	-2.6
	comp=Z,0.2nm,0.4s,mb3.0,baz=264,slow=5.8,SNR=2.3						
FINES	FINESS Array B	35.01	324	P	P	21 24 13.5	+0.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=93,slow=10,SNR=5.5						
ARCES	ARCESS Array B	38.32	336	P	P	21 24 42.5	+1.0
	comp=Z,0.9nm,0.7s,mb3.6,baz=116,slow=8.2,SNR=4.2						
NOA	NORSAR Array B	42.01	321	P	P	21 25 13.3	+1.2
	comp=Z,0.8nm,0.7s,mb3.5,baz=91,slow=8.2,SNR=4.0						
TIXI	Tiksi	42.79	23	eP	P	21 25 16.6	-1.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.1						
TORD	Torodi Ar. Bea	66.02	267	P	P	21 28 07.6	+0.2
	comp=Z,0.4nm,0.6s,mb3.6,baz=38,slow=6.1,SNR=9.2						
WRA	Warramunga Arr	83.51	122	P	P	21 29 44.0	-4.7
	comp=Z,0.4nm,0.7s,mb3.7,baz=324,slow=4.8,SNR=5.7						

*ISCJB **02** 21:25:10.7±0.7, 3831N±003×2208E±004, h2^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=4.7km az=164.2*
*ATH **02** 21:25:11.0, 3832N×2206E, h17^{km}±4^{km}, MD3.2/7*
*CSEM **02** 21:25:11.6±0.1, 3835N×2202E, h1^{km}±1^{km}, MD3.2, Error ellipse: s-maj=2.6km s-min=2.1km az=157.0*
*THE **02** 21:25:11.9, 3833N×2209E, h1^{km}, ML2.6*
*NEIC **02** 21:25:11.0, 3832N×2206E, h17^{km}, MD3.2(ATH), After ATH.*
ISC 02 21:25:11.2±0.7, **3831N**±003×**2206E**±004, **h2**^{km}±5^{km}, **n20**, σ**0^{s}85**/30, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.53	242	ePN	Pg	21 25 21.7	+0.3
EVR	Evrytania	0.64	342	ePN	Pg	21 25 23.2	-0.2
AGG	Agios Georgios	0.74	17	ePg	Pg	21 25 24.9	-0.6
AGG				eSg	Sg	21 25 36.7	+1.6
LKR	Lokris	0.81	65	ePN	Pg	21 25 26.5	-0.3
ITM	Ithomi	1.13	185	ePN	Pn	21 25 32.5	-1.6
VLS	Valsamata	1.16	264	ePB	Pg	21 25 32.4	-1.1
VLS				eSN	Sn	21 25 50.8	-0.2
LKD	Levkas	1.17	290	ePg	Pg	21 25 32.9	-0.8
LKD				eSg	Sg	21 25 51.2	+2.3
NEO	Neokhori	1.35	42	ePN	Pn	21 25 36.6	-0.5
MEV	Metsovon	1.61	337	ePg	Pn	21 25 40.5	-0.2
VLI	Veliai	1.74	156	ePN	Pn	21 25 42.7	+0.3
IGT	Igoumenitsa	1.81	313	ePb	Pn	21 25 43.5	0.0
IGT				eSb	Sb	21 26 08.7	+0.3
LIT	Litokhoron	1.82	11	ePb	Pn	21 25 43.3	-0.3
LIT				eSb	Sb	21 26 07.3	-1.2
PAIG	Paliouri	2.05	38	ePn	Pn	21 25 45.6	-1.1
HORT	Hortiatis	2.42	19	ePn	Pn	21 25 51.3	-0.6
HORT				eSn	Sn	21 26 22.6	+0.5
OUR	Ouranopolis	2.51	36	ePn	Pn	21 25 52.5	-0.6
OUR				eSn	Sn	21 26 24.5	+0.2
FNA	Florina	2.52	348	ePn	Pn	21 25 54.1	+0.8
KNT	Kendrikon	2.92	13	ePn	Pn	21 25 58.5	-0.2
KNT				eSn	Sn	21 26 34.8	+0.4
APE	Apeiranthos	3.02	113	ePn	Pn	21 26 01.2	+1.1
APE				eSn	Sn	21 26 37.9	+1.0
CHOS	Chios island	3.15	87	ePn	Pn	21 26 02.3	+0.5
CHOS				eSn	Sn	21 26 39.2	-0.7
LAST	Lasithi	4.18	138	ePn	Pn	21 26 17.5	+1.5

*ISCJB **02** 21:33:47.9±0.3, 5147N±002×1623E±002, h0^{km}, mb3.2/1, Error ellipse: s-maj=2.5km s-min=2.0km az=33.0*
*CSEM **02** 21:33:48.8±0.1, 5154N×1629E, h2^{km}, ML3.7/16, Error ellipse: s-maj=2.0km s-min=1.6km az=163.0*
*MOS **02** 21:33:48.9±0.7, 5159N×1621E, h10^{km}, mb4.5/2, Error ellipse: s-maj=8.0km s-min=4.2km az=81.7*
*BGR **02** 21:33:50.4±0.6, 5148N×1623E, h1^{km}, ML3.4, Error ellipse: s-maj=12.2km s-min=5.6km az=178.0*
*NEIC **02** 21:33:50.4±0.4, 5150N×16.17E, h5^{km}, ML3.4(SZGRF), Error ellipse: s-maj=4.6km s-min=4.0km az=202.0*
*IPEC **02** 21:33:51.8±0.3, 5140N×16.13E, h7^{km}±1^{km}, ML2.8/3, Error ellipse: s-maj=2.1km s-min=0.7km az=29.0*
*PRU **02** 21:33:51.8, 5141N×16.16E, h0^{km}*
*WAR **02** 21:33:51.6, 5145N×16.18E, ML3.1, Mining Induced*
*LDG **02** 21:33:51.5±0.2, 5156N×16.10E, h1^{km}, Ml3.8/9, Error ellipse: s-maj=7.7km s-min=3.7km az=169.0, Suspected Mining induced.*
*IDC **02** 21:33:51.4±0.6, 5145N×1597E, h0^{km}, mb3.5/1, mb1 3.5/9, mb1mx3.4/23, mbtmp3.4/9, ML3.3/8, Error ellipse: s-maj=11.9km s-min=5.7km az=104.0*
*VIE **02** 21:33:53.4±0.7, 5126N×1604E, h0^{km}, mb2.8/6, ML3.0/7, Error ellipse: s-maj=4.5km s-min=3.1km az=11.0 70 km WNW of Breslau Suspected Mining induced.*
ISC 02 21:33:49.6±0.3, **5149N**±002×**1618E**±002, **h0**^{km}, **n122**, σ**1^{s}16**/185, **mb3.2**/1, **16C-9D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	174	i Pgd	Pg	21 34 02.8	+0.6
KSP				e		21 34 09.7	
KSP				eSg	Sg	21 34 11.1	+0.5
KSP				eL		21 34 14.4	
KSP	Ksiaz	0.65	174	⇓iP	Pg	21 34 02.8	+0.6
KSP				e		21 34 11.1	
KSP	Ksiaz	0.65	174	⇓iPg	Pg	21 34 02.8	+0.6
KSP				e		21 34 09.6	
KSP				eSg	Sg	21 34 11.1	+0.5
KSP				e		21 34 14.4	
KSP	Ksiaz	0.65	174	ePg	Pg	21 34 02.8	+0.6
KSP				eSg	Sg	21 34 09.9	-0.7
UPC	Upice	0.99	186	ePG	Pg	21 34 09.0	+0.4
DPC	Dobruska-Polom	1.15	175	ePG	Pg	21 34 11.6	0.0
DPC				eSG	Sg	21 34 25.7	-0.8
	143nm,0.6s						
PVCC	Panska Ves	1.40	227	ePG	Pg	21 34 16.8	+0.3
PVCC				eSG	Sg	21 34 35.8	+1.1
BRG	Berggiesshubel	1.54	247	ePn	Pn	21 34 18.0	-0.3
BRG				eSg	Sg	21 34 39.4	+0.4
BRG	Berggiesshubel	1.54	247	PN	Pn	21 34 17.9	-0.4
BRG				PG	Pg	21 34 19.4	+0.3
BRG				SG	Sg	21 34 40.1	+1.0
	73nm,0.6s						
BRG	Berggiesshubel	1.54	247	P	Pn	21 34 17.9	-0.4
BRG						21 34 40.1	
BRG				smax			
	comp=N,73nm,0.6s						
BRG	Berggiesshubel	1.54	247	ePn	Pn	21 34 17.9	-0.4
BRG	Berggiesshubel	1.54	247	Pg	Pg	21 34 19.5	+0.4
BRG				Sg	Sg	21 34 39.4	+0.3
BRG				S	Sg	21 34 40.1	+1.0
	comp=N,73nm,0.6s						
RUE	Ruedersdorf	1.78	305	eP	Pn	21 34 21.6	0.0
RUE	Ruedersdorf	1.78	305	eP	Pn	21 34 21.6	-0.1
PRA	Prague	1.81	219	PG	Pg	21 34 21.0	-3.2
PRA				SG	Sg	21 34 47.0	-0.6
PRU	Pruhonice	1.83	215	ePN	Pn	21 34 22.1	-0.2
PRU				ePG	Pg	21 34 24.1	-0.6
PRU				eSG	Sg	21 34 47.9	-0.5
	comp=N,145nm,0.5s						
FBE	Freiberg	1.87	253	ePn	Pn	21 34 23.2	+0.4
FBE				eSg	Sg	21 34 50.1	+0.4
GKP	Gorka Klasztor	1.89	20	ePn	Pn	21 34 25.3	+2.1
GKP				ePg	Pg	21 34 32.5	+6.6
GKP				eSn	Sn	21 34 53.5	+5.7
RAC	Raciborz	1.90	137	ePg	Pg	21 34 26.8	+0.7
RAC				eSg	Sg	21 34 52.0	+1.2
MORC	Moravsky Berou	1.92	153	⇑iP	Pn	21 34 23.8	+0.2
MORC	Moravsky Berou	1.92	153	⇑P	Pn	21 34 23.8	+0.2
MORC	Moravsky Berou	1.92	153	ePn	Pn	21 34 23.4	-0.2
MORC				eSg	Sg	21 34 49.6	-1.8
	comp=N,62nm,0.5s						
CLL	Collm	2.00	266	ePn	Pn	21 34 24.5	-0.1
CLL				i Pg	Pg	21 34 28.1	+0.2
CLL				eSg	Sg	21 34 55.8	+2.0
CLL	Collm	2.00	266	ePn	Pn	21 34 25.0	+0.4
CLL				i Pg	Pg	21 34 28.1	+0.2
CLL				i Sg	Sg	21 34 55.2	+1.3
	comp=Z,108nm,0.9s						
CLL	Collm	2.00	266	ePn	Pn	21 34 24.4	-0.2
CLL	Collm	2.00	266	Pg	Pg	21 34 28.1	+0.2
CLL				eSg	Sg	21 34 53.9	0.0
CLL				i S	Sg	21 34 55.2	+1.3
OKC	Ostrava-Krasne	2.08	142	ePG	Pg	21 34 29.1	-0.3
OKC				eSG	Sg	21 34 54.4	-1.9
	comp=Z,119nm,0.7s						
VRAC	Vranov	2.20	173	Pn	Pn	21 34 28.6	+1.2
	comp=Z,6.4nm,0.3s,baz=340,slow=13,SNR=22						
VRAC				Lg		21 34 59.0	
	comp=Z,11nm,0.3s,baz=343,slow=18,SNR=12						
VRAC	Vranov	2.20	173	⇓iP	Pn	21 34 28.4	+1.0
VRAC	Vranov	2.20	173	ePn	Pn	21 34 28.0	+0.6
VRAC				eSg	Sg	21 34 58.0	-2.4
	comp=Z,50nm,0.5s						
TREC	Trest	2.24	192	ePN	Pn	21 34 28.3	+0.3
TREC				ePG	Pg	21 34 31.6	-1.0
KRUC	Moravsky	2.44	177	eSg	Sg	21 35 06.1	-1.8
	comp=Z,46nm,0.6s						
OJC	Ojcow	2.62	118	ePn	Pn	21 34 32.2	-1.0
OJC				ePg	Pg	21 34 40.0	+0.1
OJC				eSg	Sg	21 35 14.2	+0.3
NKC	Novy Kostel	2.68	243	ePN	Pn	21 34 34.4	+0.4
NKC				eSG	Sg	21 35 17.5	+1.8
	comp=Z,80nm,0.4s						
GUNZ	Gunzen	2.69	247	ePn	Pn	21 34 35.4	+1.3
KHC	Kasperske Hory	2.89	216	ePN	Pn	21 34 37.1	+0.2
KHC				ePG	Pg	21 34 43.4	-1.7
KHC				eSN	Sn	21 35 12.9	+0.5
KHC				eSG	Sg	21 35 20.1	-2.5
	comp=Z,68nm,1.0s						
KHC	Kasperske Hory	2.89	216	eP	Pn	21 34 37.1	+0.2
KHC				e		21 35 12.9	
KHC	Kasperske Hory	2.89	216	ePn	Pn	21 34 37.0	+0.1
MROB	Rosenbuehl-Arz	2.91	243	⇑iPn	Pn	21 34 37.9	+0.8
MGBB	Grossbuechelbe	2.94	240	⇓iPn	Pn	21 34 38.3	+0.7
MANZ	Manzenberg	2.99	241	ePn	Pn	21 34 39.5	+1.1
MOX	Moxa	3.00	255	ePn	Pn	21 34 39.4	+1.0
MOX				i Pg	Pg	21 34 47.3	+0.1
MOX				i Sg	Sg	21 35 27.2	+1.1
MOX	Moxa	3.00	255	ePN	Pn	21 34 38.9	+0.5
MOX				i PG	Pg	21 34 47.3	+0.1
MOX				i SG	Sg	21 35 27.2	+1.1
MOX	Moxa	3.00	255	Pg	Pg	21 34 47.3	+0.1
MOX				eSg	Sg	21 35 24.7	-1.4
SMOL	Smolenice	3.09	164	ePG	Pg	21 34 48.4	-0.4
SMOL				eSG	Sg	21 35 30.8	+1.9
GEC2	GERESS Array S	3.09	212	ePn	Pn	21 34 40.8	+1.1
GERES	GERESS Array B	3.09	212	Pn	Pn	21 34 40.7	+1.0
	comp=Z,1.6nm,0.3s,baz=28,slow=13,SNR=62						
GERES				Pg	Pg	21 34 46.8	-2.0
	comp=Z,7.6nm,0.3s,baz=33,slow=17,SNR=66						
GERES				Sn	Sn	21 35 15.3	-2.0
	comp=Z,2.8nm,0.3s,baz=27,slow=30,SNR=5.1						
GERES				Lg		21 35 25.4	
	comp=Z,4.0nm,0.3s,baz=37,slow=27,SNR=6.5						
GERES	GERESS Array B	3.09	212	P	Pn	21 34 40.7	+1.0
GERES						21 35 15.3	
GERES	GERESS Array B	3.09	212	Pg	Pg	21 34 46.8	-2.1
GERES				S	Sn	21 35 15.3	-2.0
WET	Wettzell	3.16	223	eP	Pn	21 34 41.4	+0.8
WET	Wettzell	3.16	223	ePn	Pn	21 34 41.1	+0.5
ZST	Bratislava	3.35	169	eSG	Sg	21 35 36.5	-0.9
NIE	Niedzica	3.36	127	eP	Pg	21 34 53.6	-0.4
NIE				eS	Sg	21 35 37.7	+0.2
VYHS	Vyhne	3.46	149	ePN	Pn	21 34 44.6	-0.1
VYHS				ePG	Pg	21 34 56.7	+0.8
VYHS				eSG	Sg	21 35 41.8	+1.1
VYHS	Vyhne	3.46	149	eP	Pn	21 34 44.6	-0.1
VYHS				pmax	pmax		
	comp=N,9.0nm,0.9s						
CONA	Conrad Observa	3.57	183	i Pn	Pn	21 34 40.1	-6.1
	SNR=8.9						
CLZ	Clausthal	3.63	278	ePn	Pn	21 34 48.3	+1.2
GRA1	Grafenberg Arr	3.64	242	ePn	Pn	21 34 48.2	+1.0
GRF	Grafenberg Arr	3.64	242	ePn	Pn	21 34 48.2	+1.0
BSD	Bornholm Skovb	3.71	349	i P	Pn	21 34 47.9	-0.2
BSD				i S	Sn	21 35 30.9	-1.6
BSD				i LG		21 35 32.6	
BSD	Bornholm Skovb	3.71	349	i P	Pn	21 34 47.9	-0.2
BSD				i S	Sn	21 35 30.9	-1.6
MOA	Molln	3.85	200	⇑iPn	Pn	21 34 50.8	+0.7
	SNR=18						
MOA				⇓iSg	Sg	21 35 52.8	-0.6
	comp=N,56nm,0.7s						
HROE	Hohe Rhon--Fla	3.92	258	⇓iPn	Pn	21 34 51.7	+0.6
ARSA	Arzberg	4.27	186	⇑iPn	Pn	21 34 57.2	+1.4
ARSA				⇑iSg	Sg	21 36 07.6	+0.9
	comp=N,28nm,0.7s						
CRVS	Cervenica-Dubn	4.27	125	ePG	Pg	21 35 12.9	+1.5
CRVS				eSG	Sg	21 36 06.8	0.0
PSZ	Piszkesteto	4.31	145	⇑eP	Pn	21 34 57.4	+1.0
KWP	Kalwaria	4.56	112	ePn	Pn	21 34 59.9	+0.1
KWP				ePg	Pg	21 35 13.9	-3.1
KWP				eSg	Sg	21 36 23.6	+7.5
FUR	Furstenfeldbru	4.60	226	ePn	Pn	21 35 01.5	+1.1
KOLS	Kolonicke sedl	4.68	121	ePN	Pn	21 35 01.8	+0.4
KOLS				e		21 35 21.5	
KOLS				e		21 36 27.6	
KBA	Koelnbreinsper	4.79	204	⇑iPn	Pn	21 35 04.1	+1.1
KBA				⇑iSg	Sg	21 36 22.7	-0.8
	comp=N,30nm,0.7s						
UZH	Uzhgorod	4.87	124	eP	Pg	21 35 22.0	-0.9
WTTA	Wattenberg	5.17	217	⇑iPn	Pn	21 35 08.6	+0.4
WTTA				⇑iSg	Sg	21 36 36.0	+0.3
	comp=N,37nm,0.8s						
SQTA	Sankt Quirin	5.37	219	⇓iPn	Pn	21 35 12.2	+1.3
	SNR=8.0						
SQTA				⇑iSg	Sg	21 36 43.1	+1.1
	comp=N,11nm,0.6s						
PKSM	Moragy	5.53	162	⇓iP	Pn	21 35 14.8	+1.7
PKSM	Moragy	5.53	162	⇓P	Pn	21 35 14.8	+1.6
PKSM	Moragy	5.53	162	⇑eP	Pn	21 35 14.7	+1.6
DAVOX	Davos	6.27	224	Pn	Pn	21 35 21.5	-1.9
	comp=N,0.2nm,0.3s,baz=136,slow=24,SNR=3.1						
DAVOX				Lg		21 37 05.8	
	comp=N,0.4nm,0.3s,baz=206,slow=20,SNR=3.2						
DAVOX	Davos	6.27	224	Pn	Pn	21 35 21.5	-1.8
DAVOX				Lg		21 37 05.8	
DRGR		6.36	135	⇑iP	Pn	21 35 25.3	+0.7
DRGR		6.36	135	⇑P	Pn	21 35 25.3	+0.7
CDF	Champ du Feu	6.52	245	ePn	Pn	21 35 24.7	-2.1
CDF				eSg	Sg	21 37 15.9	-3.1
	comp=N,39nm,0.9s						
CDF	Champ du Feu	6.52	245	ePn	Pn	21 35 24.7	-2.1
CDF				eSg	Sg	21 37 15.9	-3.1
	comp=N,20nm,0.9s						
BURAR	Bucovina Array	7.04	120	⇑iP	Pn	21 35 35.0	+1.1
HINF	Hinteralfeld	7.08	242	ePn	Pn	21 35 33.0	-1.5
HINF				eSg	Sg	21 37 33.5	-3.6
	comp=N,11nm,0.6s						
HINF	Hinteralfeld	7.08	242	ePn	Pn	21 35 33.0	-1.5
HINF				eSg	Sg	21 37 33.5	-3.6
	comp=N,5.3nm,0.6s						
HAU	Haudompre	7.26	245	ePn	Pn	21 35 34.3	-2.7
HAU				eSg	Sg	21 37 38.2	-4.6
	comp=N,3.8nm,0.3s						
HAU	Haudompre	7.26	245	ePn	Pn	21 35 34.3	-2.7
HAU				eSg	Sg	21 37 38.2	-4.6
	comp=N,1.9nm,0.3s						
BAIF	Baives	7.73	264	eSn	Sn	21 37 03.1	-8.4
BAIF				eSg	Sg	21 37 51.0	-6.7
	comp=N,9.8nm,0.5s						
BAIF	Baives	7.73	264	eSn	Sn	21 37 03.1	-8.4
BAIF				eSg	Sg	21 37 51.0	-6.7
	comp=N,4.9nm,0.5s						
CABF	La Chapelle	8.23	238	eSg	Sg	21 38 09.1	-4.8
	comp=N,45nm,1.1s						
CABF	La Chapelle	8.23	238	eSg	Sg	21 38 09.1	-4.8
	comp=N,22nm,1.1s						
AKASG	Malin Array Be	8.25	90	Pn	Pn	21 35 50.5	-0.1
	comp=N,1.0nm,0.3s,baz=282,slow=12,SNR=8.9						
AKASG				Lg		21 38 18.3	
	comp=N,0.3nm,0.3s,baz=269,slow=28,SNR=3.5						
AKASG	Malin Array Be	8.25	90	eP	Pn	21 35 51.7	+1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	8.25	90	eP	Pn	21 35 51.7	+1.2
	comp=Z,1.0nm,0.3s						
LPL	La Plagne	8.66	230	ePn	Pn	21 35 57.4	+1.2
LPG	La Plagne	8.67	230	ePn	Pn	21 35 57.9	+1.7
LPG				eSg	Sg	21 38 25.3	-2.6
	comp=Z,7.6nm,0.7s						
HFS	Hagfors	8.77	352	Pn	Pn	21 35 57.6	-0.1
	comp=Z,0.2nm,0.3s,baz=164,slow=14,SNR=9.9						
HFS				Sn	Sn	21 37 33.7	-3.5
	comp=Z,0.2nm,0.3s,baz=162,slow=24,SNR=3.2						
HFS				Lg		21 38 30.0	
	comp=Z,0.1nm,0.3s,baz=145,slow=24,SNR=2.5						
HFS	Hagfors	8.77	352	P	Pn	21 35 57.6	-0.1
HFS						21 37 33.7	
VSU	Vasula	9.24	37	eP	Pn	21 36 04.3	+0.2
SMF	Signal de Mont	9.44	244	eSg	Sx	21 38 47.4	
	comp=Z,12nm,0.8s						
SMF	Signal de Mont	9.44	244	eSg	Sx	21 38 47.4	
	comp=Z,5.8nm,0.8s						
AVF	Avril sur Loir	9.63	246	eSg	Sx	21 38 53.4	
	comp=Z,34nm,1.3s						
AVF	Avril sur Loir	9.63	246	eSg	Sx	21 38 53.4	
	comp=Z,17nm,1.3s						
NOA	NORSAR Array B	9.96	346	Pn	Pn	21 36 12.6	-1.3
	comp=Z,0.2nm,0.3s,baz=164,slow=12,SNR=3.1						
FRF	La Foret Royal	10.22	223	ePn	Pn	21 36 18.0	+0.5
FINES	FINESS Array B	11.36	25	Pn	Pn	21 36 31.2	-1.9
	comp=Z,0.3nm,0.3s,baz=197,slow=11,SNR=14						
FINES				Sn	Sn	21 38 35.1	-5.7
	comp=Z,0.2nm,0.3s,baz=196,slow=20,SNR=4.0						
FINES	FINESS Array B	11.36	25	eP	Pn	21 36 32.0	-1.1
KAF	Kangasniemi	11.99	23	ep	Pn	21 36 40.4	-1.3
	comp=Z,1.3nm,0.4s						
KAF	Kangasniemi	11.99	23	eP	Pn	21 36 40.4	-1.3
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKA	Eskdalemuir Ar	12.15	296	Pn	Pn	21 36 41.1	-2.9
	comp=Z,0.2nm,0.3s,baz=102,slow=14,SNR=3.6						
OBN	Obninsk	12.71	65	eP	Pn	21 36 51.9	+0.3
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	Obninsk	12.71	65	eP	Pn	21 36 51.9	+0.3
	comp=Z,2.0nm,0.9s						
JOF	Joensuu	14.03	30	ep	Pn	21 37 05.7	-4.0
	comp=Z,1.2nm,0.4s						
JOF	Joensuu	14.03	30	eP	Pn	21 37 05.7	-4.0
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	18.63	10	Pn	Pn	21 38 05.9	-3.1
	comp=Z,0.5nm,0.3s,baz=195,slow=12,SNR=14						
ARCES	ARCESS Array B	18.63	10	P	Pn	21 38 05.9	-3.0
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	Kevo	19.02	12	ep	Pn	21 38 08.7	-4.9
	comp=Z,1.5nm,0.4s						
KEV	Kevo	19.02	12	eP	Pn	21 38 08.7	-4.9
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KIV	Kislovodsk	19.29	103	eP	Pn	21 38 16.8	0.0
KIV				pmax	pmax		
	comp=Z,2.0nm,0.8s						

KIV	**Kislovodsk**	**19.29**	**103**	eP	**Pn**	**21 38 16.8**	**0.0**
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**25.11**	**62**	eP	**P**	**21 39 10.0**	**-6.0**
ARU				eS	**S**	**21 43 33.3**	**-8.3**
TORD	**Torodi Ar. Bea**	**40.00**	**202**	P	**P**	**21 41 25.5**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.2,baz=17,slow=9.3,SNR=3.9						

*ISCJB **02** 21:37:22.0±0.7, 2106S±008×673W±0.1, h198km±8km, mb3.7/4, Error ellipse: s-maj=19.0km s-min=9.0km az=73.5*
*IDC **02** 21:37:22.5±0.8, 2102S×6732W, h186km±9km, mb3.7/4, mb1 3.6/9, mb1mx3.5/19, mbtmp4.0/9, Error ellipse: s-maj=21.3km s-min=12.3km az=124.0*
*NEIC **02** 21:37:22.8±0.7, 2106S×6728W, h192km±7km, mb3.9/1, Error ellipse: s-maj=17.8km s-min=9.1km az=104.0*
ISC 02 21:37:22.8±0.6**, 2104S**±008×**673W**±01**, h191**km±7km**, n17, σ0^{s}88**/18**, mb3.8**/4**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.17**	**224**	P	**Pn**	**21 38 03.2**	**+0.6**
	5.2nm,0.3s,baz=31,slow=7.9,SNR=140						
LVC				S	**Sn**	**21 38 33.1**	**-0.3**
	40nm,0.3s,baz=218,slow=18,SNR=55						
LVC	**Limon Verde**	**2.17**	**224**	P	**Pn**	**21 38 03.2**	**+0.6**
LVC				S	**Sn**	**21 38 33.1**	**-0.3**
LPAZ	**La Paz**	**4.80**	**350**	P	**Pn**	**21 38 35.4**	**+1.0**
	7.9nm,0.3s,baz=156,slow=8.2,SNR=197						
LPAZ	**La Paz**	**4.80**	**350**	eP	**Pn**	**21 38 35.2**	**+0.8**
ARE	**Arequipa**	**6.05**	**318**	eP	**Pn**	**21 38 47.0**	**-3.6**
SIV	**San Ignacio**	**7.74**	**51**	P	**Pn**	**21 39 13.0**	**+0.4**
	1.9nm,0.3s,baz=246,slow=13,SNR=12						
SIV				S	**Sn**	**21 40 39.2**	**-0.7**
	0.6nm,0.3s,baz=143,slow=21,SNR=3.8						
CFAA	**Coronel Fontan**	**10.55**	**184**	P	**Pn**	**21 39 49.0**	**-0.3**
	0.2nm,0.3s,baz=16,slow=12,SNR=26						
PLCA	**Paso Flores**	**19.82**	**187**	P	**P**	**21 41 39.6**	**+0.7**
	0.2nm,0.3s,baz=333,slow=21,SNR=4.1						
PLCA	**Paso Flores**	**19.82**	**187**	eP	**P**	**21 41 37.8**	**-1.1**
	4.3nm,1.1s						
PDAR	**Pinedale Array**	**74.48**	**329**	P	**P**	**21 48 40.9**	**+0.7**
	0.3nm,0.5s,mb3.2,baz=124,slow=7.7,SNR=4.4						
ULM	**Lac du Bonnet**	**75.35**	**341**	P	**P**	**21 48 43.7**	**-1.5**
	1.2nm,0.5s,mb3.8,baz=151,slow=10,SNR=3.3						
ULM	**Lac du Bonnet**	**75.35**	**341**	P	**P**	**21 48 43.7**	**-1.5**
TORD	**Torodi Ar. Bea**	**75.77**	**70**	P	**P**	**21 48 48.5**	**+1.0**
	1.3nm,0.4s,mb3.9,baz=255,slow=5.6,SNR=64						
YKA	**Yellowknife Ar**	**91.27**	**340**	P	**P**	**21 50 06.3**	**-0.1**
	1.2nm,0.5s,mb4.2,baz=134,slow=4.6,SNR=15						
YKA	**Yellowknife Ar**	**91.27**	**340**	P	**P**	**21 50 06.3**	**-0.1**
WRA	**Warramunga Arr**	**134.10**	**209**	PKP	PKPdf	21 56 19.4	+2.0
	0.3nm,0.8s,baz=172,slow=1.6,SNR=6.5						
MKAR	**Makanchi Array**	**144.37**	**37**	PKP	PKPdf	21 56 36.3	+0.2
	1.2nm,0.4s,baz=344,slow=2.8,SNR=28						

*NEIC **02** 22:29:52.5, 1672N×9774W, h25km, MD3.6(MEX), After MEX.*
MEX 02 22:29:52.0±0.9**, 1667N**×**9776W, h20**km±505km**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.06**	**68**	i P	Pb	22 30 08.1	-3.6
VHO				i S	Sb	22 30 21.6	-3.4
OXX	**Oaxaca**	**1.07**	**67**	i P	Pb	22 30 08.5	-3.4
OXX				i S	Sb	22 30 22.5	-2.9
UTMO	**Huajuapan**	**1.16**	**358**	i P	Pn	22 30 09.9	-3.1
UTMO				i S	Sb	22 30 24.4	-3.4
HUIG	**Huatulco**	**1.82**	**119**	i P	Pn	22 30 20.1	-2.0
HUIG				i S	Sn	22 30 40.8	-3.9
HUIG	**Huatulco**	**1.82**	**119**	i P	Pn	22 30 20.1	-2.0
HUIG				i S	Sn	22 30 43.1	-1.5
ACX	**Acapulco**	**2.08**	**276**	eP	Pn	22 30 25.8	+0.1
ACX				i S	Sn	22 30 46.0	-5.0
ACX	**Acapulco**	**2.08**	**276**	i P	Pn	22 30 25.8	+0.1
ACX				i S	Sn	22 30 33.0	-18

*CSEM **02** 22:31:41.0±0.1, 3834N×2780E, h10km, MD3.2, Error ellipse: s-maj=1.4km s-min=1.0km az=88.0*
*ISK **02** 22:31:41.6, 3836N×2776E, h20km, MD3.2*
*ISCJB **02** 22:31:42.6±0.4, 3836N±002×2775E±004, h23km±5km, Error ellipse: s-maj=4.6km s-min=3.6km az=4.3*
*ATH **02** 22:31:42.3, 3838N×2773E, h19km, MD3.2/3*
ISC 02 22:31:42.3±0.5**, 3835N**±002×**2777E**±004**, h17**km±4km**, n26, σ0^{s}66**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAG	**Bornova**	**0.40**	**279**	i P	**Pg**	**22 31 50.1**	**-0.4**
KDAG				i S	**Sg**	**22 31 55.8**	**-0.1**
IZM	**Izmir**	**0.40**	**278**	i PG	**Pg**	**22 31 50.5**	**0.0**
IZM				i SG	**Sg**	**22 31 55.9**	**-0.1**
AKS	**Akhisar**	**0.54**	**4**	PG	**Pg**	**22 31 52.0**	**-1.0**
AKS				SG	**Sg**	**22 31 59.8**	**-0.4**
BLCB	**Balcova**	**0.57**	**274**	PG	**Pg**	**22 31 53.5**	**-0.1**
BLCB				SG	**Sg**	**22 32 02.0**	**+0.7**
AYDN	**Tasoluk**	**0.69**	**172**	i P	**Pg**	**22 31 55.4**	**-0.4**
AYDN				i S	**Sg**	**22 32 07.6**	**+2.7**
SMG	**Samos**	**0.97**	**229**	ePN	**Pn**	**22 32 00.8**	**-0.4**
SMG				eSN	**Sn**	**22 32 14.4**	**-0.2**
MLSB	**Milas**	**1.05**	**180**	PG	**Pg**	**22 32 02.1**	**-0.5**
MLSB				SG	**Sg**	**22 32 16.4**	**+0.1**
DENT	**Denizli**	**1.16**	**120**	ePN	**Pn**	**22 32 03.4**	**-0.4**
DNZL	**Cakiroluk**	**1.21**	**122**	i P	**Pn**	**22 32 03.6**	**-0.8**
DNZL				i S	**Sb**	**22 32 20.9**	**+0.9**
YER	**Yerkesik**	**1.28**	**161**	PN	**Pn**	**22 32 05.2**	**-0.2**
YER				SN	**Sn**	**22 32 21.5**	**-0.7**
BODT	**Bodrum**	**1.33**	**196**	PN	**Pn**	**22 32 06.0**	**-0.2**
BTOK	**Tokmak**	**1.43**	**8**	i P	**Pn**	**22 32 07.2**	**-0.3**
BTOK				i S	**Sn**	**22 32 25.2**	**-0.7**
PRK	**Paraskevi**	**1.47**	**308**	ePN	**Pn**	**22 32 09.5**	**+1.4**
GDZ	**Gediz**	**1.53**	**60**	i P	**Pn**	**22 32 08.3**	**-0.6**
GDZ				i S	**Sn**	**22 32 28.6**	**+0.1**
DAT	**Datca**	**1.62**	**185**	PN	**Pn**	**22 32 09.4**	**-0.7**
CANB	**Canakkale**	**1.76**	**342**	PN	**Pn**	**22 32 11.2**	**-0.8**
KCT	**Karacabey**	**1.97**	**13**	ePN	**Pn**	**22 32 15.1**	**+0.1**
EDC	**Edincik**	**2.00**	**2**	ePN	**Pn**	**22 32 15.9**	**+0.5**
FETY	**Fethiye**	**2.00**	**148**	ePN	**Pn**	**22 32 15.7**	**+0.3**
BNT	**Bandirma**	**2.01**	**3**	ePN	**Pn**	**22 32 16.1**	**+0.6**
ULDT	**Uludag**	**2.09**	**30**	i P	**Pb**	**22 32 19.3**	**-0.5**
ULDT				i S	**Sb**	**22 32 46.3**	**+0.8**
GADA	**Gvkgeada**	**2.34**	**322**	ePN	**Pn**	**22 32 19.9**	**-0.2**
GEMT	**Gemlik**	**2.36**	**27**	ePN	**Pn**	**22 32 21.2**	**+0.9**
LIA	**Limnos Island**	**2.54**	**308**	ePN	**Pn**	**22 32 23.7**	**+0.9**
YLV	**Yalova**	**2.54**	**29**	ePN	**Pn**	**22 32 23.4**	**+0.5**
ADVT	**Abdulvahap**	**2.59**	**36**	ePN	**Pn**	**22 32 23.9**	**+0.5**

WEL 02 22:59:03.9±0.1**, 4283S**×**17138E, h5**km**, ML3.7**/16**, 1C, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WVZ	**Waitaha Valley**	**0.54**	**242**	PG	Pg	22 59 14.2	-0.1
WVZ				SG	Sg	22 59 22.1	+0.8
LTZ	**Lake Taylor**	**0.65**	**86**	P*	Pb	22 59 16.8	-1.1
LTZ				SG	Sg	22 59 25.2	+0.2
RPZ	**Rata Peaks**	**0.92**	**195**	P*	Pb	22 59 21.4	-1.0
RPZ				S*	Sb	22 59 34.6	-0.2
DSZ	**Denniston Nort**	**1.12**	**16**	⇑P*	Pb	22 59 25.0	-0.8
DSZ				S*	Sb	22 59 40.5	-0.3
CRLZ	**Canterbury Las**	**1.17**	**130**	P*	Pb	22 59 25.7	-1.0
MQZ	**McQueen's Vall**	**1.28**	**134**	P*	Pb	22 59 28.1	-0.4
FOZ	**Fox Glacier**	**1.44**	**239**	PN	Pn	22 59 28.4	-2.2
FOZ				S*	Sb	22 59 47.5	-2.4
THZ	**Tophouse**	**1.55**	**47**	PN	Pn	22 59 31.8	-0.4
KHZ	**Kahutara**	**1.64**	**76**	PN	Pn	22 59 33.1	-0.3
LBZ	**Lake Benmore**	**1.79**	**209**	PN	Pn	22 59 34.7	-0.7
QRZ	**Quartz Range**	**2.17**	**24**	PN	Pn	22 59 40.3	-0.4
NNZ	**Nelson**	**2.19**	**43**	PN	Pn	22 59 41.3	+0.4

*ISCJB **02** 23:04:39.9±1.2, 1872N±007×6187W±006, h33km, Error ellipse: s-maj=12.1km s-min=4.7km az=65.8*
*TRN **02** 23:04:39.0, 1872N×6182W, h52km, MD4.0*
*NEIC **02** 23:04:41.0, 1953N×6201W, h24km, MD4.1(RSPR), After RSPR.*
*RSPR **02** 23:04:41.0, 1953N×6201W, h24km±66km, MD4.1/12, MD4.1/12*
ISC 02 23:04:41.2±1.2**, 1870N**±007×**6184W**±006**, h35**km**, n19, σ0^{s}86**/34**, 9C-5D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPB	**Codrington**	**1.05**	**179**	eP	**Pn**	**23 04 59.0**	**-0.4**
CPB				eS	**Sn**	**23 05 12.1**	**-0.7**
BPA	**Boggy Peak**	**1.64**	**181**	eP	**Pn**	**23 05 07.8**	**+0.3**
BPA				eS	**Sn**	**23 05 27.4**	**0.0**
ABV	**Anegada**	**2.36**	**271**	⇑eP	**Pn**	**23 05 17.2**	**-0.3**
ABV				eS	**Sn**	**23 05 45.2**	**0.0**
LZG	**Guadaloupe-1**	**2.54**	**179**	eP	**Pn**	**23 05 20.0**	**+0.1**
TBVI	**Tortola**	**2.64**	**264**	⇓eP	**Pn**	**23 05 19.5**	**-1.8**
TBVI				eS	**Sn**	**23 05 52.5**	**+0.4**
TBG	**Guadaloupe-3**	**2.83**	**176**	eP	**Pn**	**23 05 24.6**	**+0.6**
CDVI	**St. Croix**	**2.94**	**252**	⇑eP	**Pn**	**23 05 26.4**	**+1.0**
CDVI				eS	**Sn**	**23 05 59.6**	**+0.3**
STVI	**Saint Thomas**	**2.98**	**264**	⇓eP	**Pn**	**23 05 25.8**	**-0.2**
STVI				eS	**Sn**	**23 05 59.9**	**-0.7**
CULB	**Culebra**	**3.33**	**264**	⇑eP	**Pn**	**23 05 30.4**	**-0.5**
CULB				eS	**Sn**	**23 06 09.3**	**+0.1**
MTP	**Monte Pirata**	**3.58**	**261**	⇑eP	**Pn**	**23 05 34.3**	**+0.1**
MTP				eS	**Sn**	**23 06 14.3**	**-0.9**
CBYP	**Canovanas**	**3.84**	**264**	⇓eP	**Pn**	**23 05 37.3**	**-0.4**
CBYP				eS	**Sn**	**23 06 21.8**	**+0.2**
HUMP	**Col San Antoni**	**3.85**	**262**	⇑eP	**Pn**	**23 05 37.8**	**0.0**
HUMP				eS	**Sn**	**23 06 23.5**	**+1.7**
CPD	**Cerro la Pandu**	**3.93**	**261**	⇑eP	**Pn**	**23 05 39.6**	**+0.7**
CPD				eS	**Sn**	**23 06 25.1**	**+1.3**
SJG	**San Juan**	**4.13**	**263**	ePn	**Pn**	**23 05 43.2**	**+1.4**
SJG				eSn	**Sn**	**23 06 30.4**	**+1.5**
ICM	**Isla Caja Muer**	**4.52**	**261**	⇑eP	**Pn**	**23 05 47.5**	**+0.4**
AOPR	**Arecibo Observ**	**4.67**	**267**	⇓eP	**Pn**	**23 05 48.7**	**-0.6**
AOPR				eS	**Sn**	**23 06 40.0**	**-2.2**
LSP	**Las Mesas**	**5.01**	**265**	⇑eP	**Pn**	**23 05 53.8**	**-0.1**
LSP				eS	**Sn**	**23 06 50.2**	**-0.2**
MGP	**Maguayo**	**5.03**	**263**	⇑eP	**Pn**	**23 05 54.5**	**+0.3**
CRPR	**Cabo Rojo, PR**	**5.05**	**263**	⇓eP	**Pn**	**23 05 54.3**	**-0.1**
CRPR				eS	**Sn**	**23 06 49.1**	**-2.4**

IDC 02 23:17:05.8±17.0**, 2145S**×**17524W, h233**km±180km**, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.2**/14**, mbtmp3.7**/3**, Error ellipse: s-maj=285.6km s-min=39.6km az=158.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.82**	**257**	P	P	23 25 12.0	-0.3
	0.6nm,0.7s,baz=90,slow=7.9,SNR=7.4						
WRA	**Warramunga Arr**	**47.03**	**262**	P	P	23 25 14.6	+0.7
	0.4nm,0.3s,baz=98,slow=6.9,SNR=4.7						
NVAR	**Mina Array Bea**	**79.97**	**42**	P	P	23 28 49.0	-0.1
	1.3nm,0.6s,baz=216,slow=7.6,SNR=5.6						
AKASG	**Malin Array Be**	**145.07**	**333**	PKPbc	PKPbc	23 36 14.6	-0.7
	0.3nm,0.3s,baz=39,slow=3.9,SNR=6.6						
GERES	**GERESS Array B**	**151.75**	**347**	PKPbc	PKPbc	23 36 33.3	+0.6
	0.1nm,0.2s,baz=5.7,slow=2.7,SNR=4.3						

*NEIC **02** 23:24:29.9, 3205S×7180W, h14km, ML2.8(GUC), After GUC.*
GUC 02 23:24:29.9±0.8**, 3205S**×**7180W, h14**km±4km**, MD3.6, ML2.8, 7C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.30**	**57**	⇓iP	Pg	23 24 36.5	+0.4
CHNG				i S	Sg	23 24 41.4	+1.0
CHNG				AML	AML	23 24 42.0	
	comp=E,1μm,0.5s						
PTCH	**Petorca**	**0.77**	**106**	⇑iP	Pg	23 24 43.8	-1.0
PTCH				i S	Sg	23 24 54.4	-0.5
PTCH				AML	AML	23 24 55.7	
	comp=E,1μm,0.1s						
PTCH	**Petorca**	**0.77**	**106**	⇑iP	Pg	23 24 43.8	-1.0
PTCH				i S	Sg	23 24 54.4	-0.5
CMCH	**Combarbala**	**1.11**	**38**	⇑iP	Pb	23 24 48.0	-2.7
CMCH				i S	Sb	23 25 02.2	-2.8
CMCH				AML	AML	23 25 04.0	
	comp=E,1μm,0.5s						
CMCH	**Combarbala**	**1.11**	**38**	⇑iP	Pb	23 24 48.0	-2.7
CMCH				i S	Sb	23 25 02.2	-2.8
ROCH	**El Roble**	**1.14**	**144**	⇑iP	Pb	23 24 50.2	-1.0
ROCH				i S	Sb	23 25 05.8	0.0
JACH	**Jahuel**	**1.20**	**122**	⇑iP	Pn	23 24 50.9	-1.3
JACH				i S	Sb	23 25 06.9	-0.8
LCCH	**Las Cruces**	**1.44**	**172**	eP	Pn	23 24 54.4	-1.1
RCDM	**Rinconada Maip**	**1.66**	**150**	i P	Pn	23 24 58.2	-0.4
RCDM				i S	Sn	23 25 19.6	-0.1
RCDM				AML	AML	23 25 22.8	
	comp=E,142nm,0.2s						
RCDM	**Rinconada Maip**	**1.66**	**150**	i P	Pn	23 24 58.2	-0.4
RCDM				i S	Sn	23 25 19.6	-0.1
CLCH	**Cerro Calan**	**1.71**	**142**	⇑iP	Pn	23 24 59.2	0.0
CLCH				i S	Sn	23 25 21.4	+0.5
CLCH				AML	AML	23 25 27.0	
	comp=E,150nm,0.6s						
TACH	**Talagante**	**1.76**	**156**	⇓iP	Pn	23 24 59.5	-0.4
TACH				i S	Sn	23 25 22.4	+0.4
FCH	**Farellones**	**1.80**	**136**	⇓iP	Pn	23 25 00.3	-0.2
FCH				i S	Sn	23 25 24.2	+1.2
FCH				AML	AML	23 25 26.0	
	comp=E,109nm,0.2s						
PCH	**Pirque**	**1.90**	**146**	i P	Pn	23 25 01.8	-0.1
PCH				i S	Sn	23 25 27.2	+1.6
TLL	**Tololo Astrono**	**2.06**	**25**	i S	Sn	23 25 32.0	+2.5
TLL				AML	AML	23 25 36.3	
	comp=E,192nm,0.5s						
LCO	**Las Campanas**	**3.17**	**18**	i S	Sn	23 25 59.4	+2.5

IDC 02 23:25:21.2±2.3**, 020S**×**12700E, h0**km**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/15**, mbtmp3.6**/3**, Error ellipse: s-maj=194.6km s-min=27.4km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.90**	**160**	P	P	23 30 03.7	-1.3
	0.5nm,0.3s,baz=338,slow=12,SNR=3.9						
ASAR	**Alice Springs**	**24.27**	**164**	P	P	23 30 41.5	+1.5
	0.7nm,0.3s,baz=346,slow=11,SNR=14						
MKAR	**Makanchi Array**	**60.94**	**326**	P	P	23 35 35.9	0.0
	0.5nm,0.8s,baz=136,slow=5.4,SNR=3.9						

MAN 02 23:28:26.3, 1324N×**12053E, h43**km**, mb3.1, ML4.5, MS1.1, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.57**	**331**	eP	Pn	23 28 39.4	+1.4
LUBP				eS	Sn	23 28 49.1	+2.7
BUSP	**Coron**	**1.27**	**195**	eP	Pn	23 28 48.4	+0.9
BUSP				eS	Sn	23 29 04.4	+1.1
OTRP	**Odiongan**	**1.69**	**121**	eP	Pn	23 28 54.1	+0.7
ENPP	**El Nido**	**2.29**	**208**	eP	Pn	23 29 02.5	+0.9

*ISCJB **02** 23:29:35.1±0.6, 1107N±003×6225W±003, h117km±6km, Error ellipse: s-maj=6.3km s-min=4.2km az=93.6*
*FUNV **02** 23:29:35.9, 11.17N×62.15W, h111km, MW3.4*
*TRN **02** 23:29:37.5, 11.10N×62.05W, h117km, MD3.4*
*NEIC **02** 23:29:37.5, 11.10N×62.05W, h116km, MD3.4(TRN), After TRN.*
ISC 02 23:29:36.1±0.7**, 1107N**±003×**6224W**±003**, h112**km±7km**, n24, σ0^{s}90**/42**, 1C, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.42**	**178**	⇑iP	**Pn**	**23 29 53.3**	**+0.7**
GUIV				eS	**Sn**	**23 30 05.0**	**-0.2**
ITEV	**Isla Los Testi**	**0.92**	**288**	eP	**Pn**	**23 29 55.9**	**-0.7**
ITEV				eS	**Sn**	**23 30 11.4**	**-0.8**
TRN	**Trinidad (W)**	**0.92**	**117**	i P	**Pn**	**23 29 57.3**	**+0.6**
TRN				eS	**Sn**	**23 30 11.5**	**-0.7**
CRUV	**Carupano**	**1.06**	**248**	eP	**Pn**	**23 29 58.6**	**+0.6**
CRUV				eS	**Sn**	**23 30 15.0**	**+0.4**
TPP	**Pointe-a-Pierr**	**1.08**	**134**	eP	**Pn**	**23 29 59.5**	**+1.2**
TPP				eS	**Sn**	**23 30 14.8**	**-0.2**
GUNV	**Guanoco**	**1.14**	**218**	eP	**Pn**	**23 30 00.2**	**+1.3**
GUNV				eS	**Sn**	**23 30 17.7**	**+1.6**
GRW	**Mount Saint Ca**	**1.22**	**28**	eP	**Pn**	**23 30 00.3**	**+0.5**
GRW				eS	**Sn**	**23 30 16.7**	**-1.1**
GRHS	**Sauteurs**	**1.29**	**27**	eP	**Pn**	**23 30 01.3**	**+0.8**
GRHS				eS	**Sn**	**23 30 19.5**	**+0.4**
TBH	**Brigand Hill**	**1.29**	**117**	eP	**Pn**	**23 30 01.3**	**+0.7**
TBH				eS	**Sn**	**23 30 18.2**	**-1.0**
GRSS	**Sisters**	**1.37**	**27**	eP	**Pn**	**23 30 02.1**	**+0.7**
GRSS				eS	**Sn**	**23 30 21.1**	**+0.4**
GRIC	**Isle de Caille**	**1.37**	**28**	eP	**Pn**	**23 30 02.0**	**+0.6**
GRIC				eS	**Sn**	**23 30 20.4**	**-0.3**
TPR	**Prospect**	**1.44**	**85**	eP	**Pn**	**23 30 02.2**	**-0.1**
TPR				eS	**Sn**	**23 30 19.6**	**-2.5**
BOT	**Bacolet**	**1.50**	**86**	i P	**Pn**	**23 30 02.7**	**-0.2**
GRCU	**Cariacou**	**1.59**	**29**	eP	**Pn**	**23 30 04.2**	**+0.2**
GRCU				eS	**Sn**	**23 30 24.8**	**-0.6**
ORIV	**Oritupano**	**2.30**	**210**	eP	**Pn**	**23 30 14.6**	**+1.7**
ORIV				eS	**Sn**	**23 30 41.1**	**-0.1**
PCRV	**Puerto La Cruz**	**2.52**	**250**	eP	**Pn**	**23 30 16.4**	**+0.7**
PCRV				eS	**Sn**	**23 30 45.2**	**-1.1**
PRGV	**PARIAGUAN**	**3.30**	**226**	eP	**Pn**	**23 30 26.6**	**+0.6**
PRGV				eS	**Sn**	**23 31 03.9**	**-0.8**
GURV	**El Guri**	**3.39**	**194**	eP	**Pn**	**23 30 27.6**	**+0.3**
CUPV	**Cœpira**	**3.63**	**254**	eP	**Pn**	**23 30 31.4**	**+0.9**
BIRV	**Birongo**	**4.00**	**262**	eP	**Pn**	**23 30 36.0**	**+0.6**
MERV	**Las Mercedes**	**4.38**	**246**	eP	**Pn**	**23 30 40.0**	**-0.6**
MERV				eS	**Sn**	**23 31 28.8**	**-1.8**
LUEV	**Luepa**	**5.25**	**172**	eP	**Pn**	**23 30 50.9**	**-1.4**
CAOV	**Caicara del Or**	**5.49**	**228**	eP	**Pn**	**23 30 54.6**	**-0.8**
BAUV	**El Baul**	**6.09**	**250**	eP	**Pn**	**23 31 02.1**	**-1.5**
BAUV				eS	**Sn**	**23 32 07.4**	**-4.5**

*ISCJB **02** 23:40:00.2±1.7, 43.11N±0.09×0.46W±0.07, h12km±10km, Error ellipse: s-maj=14.8km s-min=7.5km az=31.9*
*MDD **02** 23:40:01.1±1.1, 4269N×070W, h0km, mbLg0.3/3, Error ellipse: s-maj=9.1km s-min=5.3km az=21.0, PRXIMO SIN SOLUCIN*
*STR **02** 23:40:01.3±0.0, 43.11N×0.48W, h2km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **02** 23:40:01.1±0.1, 43.10N×0.47W, h6km, Md1.9/2, Error ellipse: s-maj=1.4km s-min=0.7km az=16.0*
ISC 02 23:40:00.7±1.7**, 4311N**±009×**045W**±007**, h10**km±10km**, n7, σ0^{s}13**/11**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
REYF	**Montagne du Re**	**0.06**	**130**	Pg	**Pg**	**23 40 03.0**	**+0.2**
REYF				Sg	**Sg**	**23 40 04.3**	**-0.1**
ATE	**Arette**	**0.18**	**263**	Pg	**Pg**	**23 40 04.7**	**+0.1**
ATE				Sg	**Sg**	**23 40 07.1**	**-0.2**
ETSF	**Etsaut**	**0.22**	**200**	ePg	**Pg**	**23 40 05.5**	**+0.2**
ETSF				eSg	**Sg**	**23 40 08.4**	**0.0**
	5.5nm,0.3s						
ETSF	**Etsaut**	**0.22**	**200**	Pg	**Pg**	**23 40 05.5**	**+0.2**
ETSF				Lg		23 40 08.4	
	2.8nm,0.3s						
SJPF	**Ste Jean**	**0.56**	**271**	ePg	**Pg**	**23 40 11.6**	**-0.1**
SJPF				eSg	**Sg**	**23 40 19.2**	**+0.1**
	0.8nm,0.2s						
SJPF	**Ste Jean**	**0.56**	**271**	Pg	**Pg**	**23 40 11.6**	**-0.1**
SJPF				Lg		23 40 19.2	
	0.4nm,0.2s						
EBIE	**Bielsa**	**0.61**	**134**	Pg	**Pg**	**23 40 12.3**	**-0.2**
	0.1nm,0.1s,SNR=7.9						
EBIE				Lg		23 40 21.4	
	0.3nm,0.1s,SNR=7.9						

*BJI **02** 23:44:21.6, 527S×15268E, h32km, mB5.2, mb4.9, Ms4.7, Msz4.6*
*MOS **02** 23:44:22.2±1.1, 539S×15245E, h33km, mb5.3/18, Error ellipse: s-maj=10.8km s-min=7.4km az=83.5*
*ISCJB **02** 23:44:22.3±0.2, 548S±004×15248E±004, h34km, mb4.9/62, MS4.1/24, Error ellipse: s-maj=6.9km s-min=4.9km az=62.8*
*IDC **02** 23:44:23.3±3.4, 547S×15243E, h30km±24km, mb4.6/21, mb1 4.7/23, mb1mx4.7/25, mbtmp4.8/23, ML4.0/2, MS4.1/16, Ms1 4.1/16, ms1mx3.9/25, Error ellipse: s-maj=15.8km s-min=11.0km az=107.0*
*HRVD **02** 23:44:24.2±0.4, 575S×15261E, h16km±1km, MW5.0/54, Centroid moment Tensor Solution. LP body waves: s33,c45;Mantle waves: s54,c82; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.07±.15; $M_{\theta\theta}$-1.97±.10; $M_{\phi\phi}$-0.09±.09; $M_{r\theta}$3.18±.44; $M_{\theta\phi}$-0.44±.07; $M_{\phi r}$0.76±.28; Best double couple: $M_0$3.87000×10^{16} NP1:ϕ_s258.00000°, δ16.00000°, λ91.00000°. NP2: ϕ_s77.00000°, δ74.00000°, λ90.00000°. Principal axes: T 3.8700, Plg61.0000°, Azm346.0000°; N 0.0000, Plg0.0000°, Azm77.0000°; P -3.8690, Plg29.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **02** 23:44:24.2±0.2, 546S×15248E, mb5.1/27 Error ellipse: s-maj=6.2km s-min=4.5km az=109.0*
ISC 02 23:44:24.3±0.2**, 548S**±004×**15253E**±004**, h36**km**, h36**km±1.5km**:pP-P, n161, σ1^{s}04**/143**, mb4.9**/62**, MS4.1**/24**, 13C-4D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.60**	**233**	Pn	**Pn**	**23 45 59.5**	**+0.7**
	9.4nm,0.3s,baz=52,slow=7.5,SNR=23						
PMG				Sn	**Sn**	**23 47 14.3**	**+1.4**
	36nm,0.3s,baz=150,slow=21,SNR=12						
PMG	**Port Moresby**	**6.60**	**233**	ePn	**Pn**	**23 45 59.5**	**+0.6**
PMG				eSn	**Sn**	**23 47 13.3**	**+0.4**
HNR	**Honiara**	**8.34**	**119**	LR	LR	23 49 19.8	
	comp=Z,750nm,20.6s,baz=354,slow=35						
HNR	**Honiara**	**8.34**	**119**	P	**Pn**	**23 46 23.3**	**+0.7**
CTA	**Charters Tower**	**15.75**	**202**	eP	**Pn**	**23 48 04.3**	**+0.8**
	9.7nm,1.3s						
CTA	**Charters Tower**	**15.75**	**202**	Pn	**Pn**	**23 48 04.8**	**+1.4**
	0.7nm,0.3s,baz=38,slow=12,SNR=7.3						
CTA	**Charters Tower**	**15.75**	**202**	eP	**Pn**	**23 48 04.3**	**+0.8**
CTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CTAO	**Charters Tower**	**15.75**	**202**	eP	**Pn**	**23 48 04.2**	**+0.8**
GUMO	**Guam**	**20.41**	**338**	P	**P**	**23 48 59.3**	**+1.0**
	comp=Z,98nm,1.0s,baz=176,slow=8.1,SNR=6.1						
GUMO				LR	LR	23 54 44.4	
	comp=Z,364nm,21.3s,MS3.7,baz=227,slow=30						
KAKA	**Kakadu**	**21.09**	**249**	eP	**P**	**23 49 05.1**	**-0.5**
	comp=Z,140nm,0.6s,mb5.5						
DZM	**Mont Dzumac**	**21.29**	**142**	P	**P**	**23 49 07.2**	**-0.5**
	comp=Z,16nm,0.9s,mb4.3,baz=2.1,slow=14,SNR=16						
DZM				LR	LR	23 55 39.3	
	comp=Z,643nm,20.3s,MS4.0,baz=205,slow=32						
WRAB	**Tennant Creek**	**22.79**	**229**	eP	**P**	**23 49 22.6**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.0						
WRAB	**Tennant Creek**	**22.79**	**229**	eP	**P**	**23 49 22.6**	**-1.1**
	comp=Z,50nm,0.7s,mb5.0						
WB2	**Warramunga Arr**	**22.79**	**229**	eP	**P**	**23 49 22.5**	**-1.2**
WB2	**Warramunga Arr**	**22.79**	**229**	eP	**P**	**23 49 22.6**	**-1.2**
WB2				eS	**S**	**23 53 31.1**	**+0.5**
WRA	**Warramunga Arr**	**22.80**	**229**	P	**P**	**23 49 22.4**	**-1.4**
	comp=Z,8.8nm,0.6s,mb4.4,baz=54,slow=10,SNR=44						
WRA				S	**S**	**23 53 30.7**	**0.0**
	comp=Z,10nm,1.2s,baz=56,slow=18,SNR=9.8						
WRA				LR	LR	23 58 48.9	
	comp=Z,220nm,18.7s,MS3.6,baz=65,slow=38						
WRA	**Warramunga Arr**	**22.80**	**229**	P	**P**	**23 49 22.4**	**-1.4**
WRA				S	**S**	**23 53 30.7**	**0.0**
AS31	**Alice Springs**	**25.47**	**223**	eP	**P**	**23 49 50.0**	**+1.0**
ASAR	**Alice Springs**	**25.47**	**223**	P	**P**	**23 49 48.0**	**-1.1**
	comp=Z,9.9nm,0.6s,mb4.5,baz=56,slow=9.3,SNR=63						
ASPA	**Alice Springs**	**25.48**	**223**	eP	**P**	**23 49 50.1**	**+1.1**
STKA	**Stephens Creek**	**28.19**	**200**	eP	**P**	**23 50 11.4**	**-2.1**
	comp=Z,8.9nm,1.1s,mb4.3						
STKA	**Stephens Creek**	**28.19**	**200**	P	**P**	**23 50 12.6**	**-0.9**
	comp=Z,1.6nm,0.5s,mb4.0,baz=40,slow=15,SNR=6.0						
STKA				LR	LR	00 02 29.9	
	comp=Z,717nm,18.1s,MS4.3,baz=25,slow=39						
FITZ	**Fitzroy Crossi**	**29.11**	**242**	eP	**P**	**23 50 20.6**	**-1.0**
	comp=Z,44nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**29.11**	**242**	P	**P**	**23 50 20.8**	**-0.8**
	comp=Z,32nm,0.8s,mb5.1,baz=89,slow=8.4,SNR=18						
FORT	**Forrest**	**34.10**	**219**	⇑iP	**P**	**23 51 04.4**	**-1.1**
	comp=Z,12nm,0.7s,mb4.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MBWA	Marble Bar	35.41	241	eP	P	23 51 17.8	+1.0
	comp=Z,14nm,0.7s,mb5.0						
TAU	Tasmania Unive	37.56	186	eP	P	23 51 35.3	+0.2
URZ	Urewera	39.54	149	P	P	23 51 52.0	+0.3
	comp=Z,6.4nm,0.7s,mb4.5,baz=80,slow=6.1,SNR=3.5						
JOW	Kunigami	39.79	325	P	P	23 51 53.0	-0.8
	comp=Z,43nm,0.9s,mb5.2,baz=129,slow=10,SNR=9.1						
JOW				LR	LR	00 06 03.8	
	comp=Z,173nm,20.2s,MS3.9,baz=85,slow=33						
JHJ	Hachijo jima 2	40.25	343	LR	LR	00 08 46.4	
	comp=Z,120nm,18.2s,MS3.8,baz=99,slow=36						
RPZ	Rata Peaks	41.43	160	LR	LR	00 07 18.9	
	comp=Z,410nm,19.7s,MS4.3,baz=17,slow=33						
NACB	Ninganchiao	42.16	316	P	P	23 52 13.6	+0.2
YHNB	Yeheng	42.63	316	eP	P	23 52 17.7	+0.5
NWAO	Narrogin (SRO)	42.73	226	LR	LR	00 12 22.0	
	comp=Z,669nm,18.0s,MS4.6,baz=76,slow=39						
NWAO	Narrogin (SRO)	42.73	226	P	P	23 52 18.3	+0.4
MJAR	Matsushiro Arr	43.90	343	P	P	23 52 24.7	-2.7
	comp=Z,2.8nm,0.7s,mb4.1,baz=162,slow=8.8,SNR=7.3						
MJAR				PcP	PcP	23 54 13.2	+0.1
	comp=Z,2.0nm,0.7s,baz=160,slow=4.0,SNR=4.5						
MJAR				LR	LR	00 09 47.4	
	comp=Z,59nm,18.2s,MS3.5,baz=160,slow=35						
MJAR	Matsushiro Arr	43.90	343	P	P	23 52 24.7	-2.7
MJAR						23 54 13.2	
NJ2	Nanjing	49.20	322	eP	P	23 53 10.7	+1.7
NJ2				AP	pP	23 53 20.6	+1.1
NJ2				XP	sP	23 53 24.5	+0.8
NJ2				PP	PP	23 55 04.8	+1.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,20nm,4.3s						
NJ2				LR	LR		
	comp=N,50nm,20.0s,MS3.9						
NJ2				LR	LR		
	comp=E,120nm,18.2s,MS3.9						
NJ2				LR	LR		
	comp=Z,120nm,22.1s,MS3.8						
WHN	Wuhan	51.16	317	eP	P	23 53 24.5	+0.7
KULM	Kulim	52.90	281	P	P	23 53 37.3	+0.6
YSS	Yuzh-Sakhalins	52.92	352c	iP	P	23 53 35.3	-1.6
YSS				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
MDJ	Mudanjiang	53.96	340	P	P	23 53 46.0	+1.5
MDJ				AP	pP	23 53 55.1	-0.1
MDJ				XP	sP	23 53 59.0	-0.4
MDJ				PP	PP	23 55 47.8	+1.8
MDJ				SCP	ScP	23 58 46.1	+1.4
MDJ				PCS	PcS	23 58 49.7	+0.9
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,55nm,5.8s						
MDJ				LR	LR		
	comp=N,27nm,18.2s						
MDJ				LR	LR		
	comp=E,61nm,27.9s						
MDJ				LR	LR		
	comp=Z,78nm,22.5s,MS3.7						
CN2	Changchun	54.81	336	eP	P	23 53 54.4	+3.7
CN2				eXP	sP	23 54 00.4	-5.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
XAN	Xi'an	56.93	317	P	P	23 54 05.4	-0.5
XAN				AMB	AMB		
	comp=Z,26nm,1.1s,mb5.2						
KMI	Kunming	57.15	305	P	P	23 54 09.0	+1.6
KMI				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.8						
KMI				LR	LR		
	comp=Z,100nm,17.5s,MS4.0						
KLR	Kul'dur	57.42	344	eP	P	23 54 05.0	-4.3
KLR				pmax	pmax		
	comp=Z,35nm,1.8s,mb5.1						
PET	Petropavlovsk	58.51	4	eP	P	23 54 17.9	+0.9
PET				eS	S	00 02 18.8	+0.7
PET				eSS	SS	00 06 11.9	+1.1
PET				pmax	pmax		
	comp=Z,100nm,13.2s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
CD2	Chengdu	58.98	311⇓	iP	P	23 54 19.8	-0.4
CD2				AP	pP	23 54 29.9	-1.1
CD2				XP	sP	23 54 33.8	-1.3
CD2				PP	PP	23 56 32.0	+1.3
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
CD2				AMB	AMB		
	comp=Z,70nm,6.2s						
HHC	Hu-ho-hao-te	59.44	325	eP	P	23 54 23.6	+0.2
HHC				AP	pP	23 54 33.7	-0.5
HHC				XP	sP	23 54 37.5	-0.9
HHC				PCP	PcP	23 55 10.4	-0.5
HHC				PP	PP	23 56 39.0	+4.2
HHC				SCP	ScP	23 59 07.9	-1.0
HHC				PCS	PcS	23 59 11.0	-1.9
HHC				AMB	AMB		
	comp=Z,23nm,0.9s,mb5.2						
HHC				AMB	AMB		
	comp=Z,298nm,5.6s						
HHC				LR	LR		
	comp=N,149nm,14.2s,MS4.4						
HHC				LR	LR		
	comp=E,154nm,13.3s,MS4.4						
HHC				LR	LR		
	comp=Z,185nm,17.1s,MS4.3						
BTO	Baotou	60.18	324	eP	P	23 54 28.0	-0.5
SMY	Shemya	60.81	15	eP	P	23 54 32.8	0.0
LZH	Lanzhou	61.53	316	eP	P	23 54 38.5	+0.8
LZH				AP	pP	23 54 47.5	-1.0
LZH				XP	sP	23 54 50.9	-1.7
LZH				PP	PP	23 56 56.5	+3.2
LZH				AMB	AMB		
	comp=Z,46nm,1.2s,mb5.5						
LZH				AMB	AMB		
	comp=Z,160nm,4.0s						
LZH				LR	LR		
	comp=E,740nm,15.0s						
LZH				LR	LR		
	comp=Z,958nm,16.3s,MS5.0						
MA2	Magadan	64.86	359	eP	P	23 54 59.1	-0.7
MA2				e		00 03 58.5	
MA2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
MA2	Magadan	64.86	359	eP	P	23 54 58.9	-0.9
	comp=Z,12nm,0.5s,mb5.2						
GTA	Gaotai	65.97	318	eP	P	23 55 07.5	+0.5
GTA				AP	pP	23 55 17.3	-0.5
GTA				XP	sP	23 55 22.1	+0.1
GTA				PCP	PcP	23 55 38.5	+1.0
GTA				PP	PP	23 57 35.6	+3.3
GTA				PPP		23 59 10.6	
GTA				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
GTA				AMB	AMB		
	comp=Z,122nm,5.7s						
GTA				LR	LR		
	comp=N,139nm,15.2s,MS4.5						
GTA				LR	LR		
	comp=E,133nm,12.6s,MS4.5						
GTA				LR	LR		
	comp=Z,146nm,15.2s,MS4.3						
SONM	Songino Array	66.75	328	P	P	23 55 12.1	+0.2
	comp=Z,5.7nm,0.5s,mb4.8,baz=144,slow=5.6,SNR=47						
SONM				LR	LR	00 26 07.4	
	comp=Z,190nm,18.0s,MS4.3,baz=329,slow=38						
YAK	Yakutsk	69.58	349⇑	eP	P	23 55 28.6	-1.1
YAK				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
ZAK	Zakamensk	69.93	329⇓	iP	P	23 55 31.2	-0.6
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BOD	Bodaibo	70.33	339	eP	P	23 55 31.4	-2.9
BOD				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
TLY	Talaya	70.53	330	eP	P	23 55 35.6	+0.1
TLY				e		00 09 14.5	
TLY				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
TLY				MLR	MLR		
	comp=Z,96nm,18.0s,MS4.1						
TLY	Talaya	70.53	330	eP	P	23 55 35.1	-0.4
	comp=Z,3.5nm,0.9s,mb4.3						
JIRN	Jiri	71.91	301	eP	P	23 55 44.6	+0.8
VNDA	Vanda	72.17	178	P	P	23 55 45.2	-0.2
	comp=Z,1.3nm,1.0s,baz=321,slow=6.5,SNR=2.5						
VNDA				LR	LR	00 23 50.8	
	comp=Z,63nm,21.0s,MS3.9,baz=90,slow=33						
VNDA	Vanda	72.17	178	P	P	23 55 43.9	-1.5
GUN	Gumba	72.24	301	eP	P	23 55 46.5	+0.7
	comp=Z,35nm,0.7s,mb5.4						
PKI	Pulchoki	72.55	301	eP	P	23 55 48.5	+0.8
KKN	Kakani	72.72	301	eP	P	23 55 48.5	-0.2
	comp=Z,17nm,0.7s,mb5.1						
KKN	Kakani	72.72	301	eP	P	23 55 48.5	-0.2
KKN				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
DMN	Daman	72.82	301	eP	P	23 55 49.3	0.0
	comp=Z,30nm,0.8s,mb5.3						
GKN	Gorkha	73.33	301	eP	P	23 55 51.7	-0.6
	comp=Z,34nm,0.9s,mb5.3						
BILL	Bilibino	73.99	5	eP	P	23 55 56.1	0.0
BILL				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.3						
BILL	Bilibino	73.99	5	eP	P	23 55 56.1	-0.1
	comp=Z,33nm,0.8s,mb5.3						
KOLN	Koldanda	74.15	301	eP	P	23 55 56.9	-0.2
	comp=Z,18nm,0.7s,mb5.1						
WMQ	Urumqi	76.06	318	eP	P	23 56 08.5	+0.4
WMQ				AP	pP	23 56 19.0	-0.1
WMQ				XP	sP	23 56 23.0	-0.2
WMQ				PP	PP	23 59 01.0	+2.0
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,186nm,5.0s						
WMQ				LR	LR		
	comp=N,69nm,18.0s,MS4.2						
WMQ				LR	LR		
	comp=E,84nm,18.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,75nm,18.0s,MS4.0						
KDAK	Kodiak Island	76.90	27	eP	P	23 56 12.6	-0.2
SVW2	Sparrevohn	77.55	23	eP	P	23 56 16.8	+0.3
TIXI	Tiksi	78.53	353	eP	P	23 56 19.1	-2.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
SLKM	Skilak Lake	79.39	25	eP	P	23 56 26.1	-0.6
PMR	Palmer	80.41	24	eP	P	23 56 31.4	-0.8
PMR				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
PMR	Palmer	80.41	24	eP	P	23 56 31.4	-0.8
	comp=Z,15nm,0.8s,mb5.0						
MKAR	Makanchi Array	80.66	319	P	P	23 56 33.3	-0.2
	comp=Z,9.6nm,0.8s,mb4.8,baz=104,slow=6.1,SNR=59						
IMA2	Indian Mountai	81.18	19	eP	P	23 56 34.6	-1.7
ZAL	Zalesovo	81.57	326	P	P	23 56 37.9	-0.5
	comp=Z,6.3nm,0.7s,mb4.7,baz=359,slow=5.6,SNR=33						
ZAL				LR	LR	00 32 36.8	
	comp=Z,91nm,18.0s,MS4.2,baz=358,slow=36						
MCK	McKinley	81.59	23	eP	P	23 56 37.1	-1.3
MCK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
MCK	McKinley	81.59	23	eP	P	23 56 37.1	-1.4
	comp=Z,16nm,1.0s,mb4.9						
COLA	College	82.58	22	eP	P	23 56 42.6	-1.0
COLA				e*PP	pP	23 56 54.6	-0.2
COLA				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
COLA	College	82.58	22	eP	P	23 56 42.6	-1.0
	comp=Z,16nm,0.8s,mb5.1						
COLA				epP	pP	23 56 54.6	-0.2
NVS	Novosibirsk	82.75	327⇑	iP	P	23 56 42.1	-2.4
NVS				pmax	pmax		
	comp=N,12nm,1.4s						
NVS				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
NVS				pmax	pmax		
	comp=E,24nm,1.5s						
ULHL	Ulahol	83.59	313	P	P	23 56 50.5	+1.6
	SNR=16						
KURK	Kurchatov	84.14	322	P	P	23 56 51.5	-0.2
	comp=E,158nm,1.4s,mb6.0,SNR=9.1						
KURK	Kurchatov	84.14	322	eP	P	23 56 51.2	-0.5
TKM2	Tokmak 2	84.21	314	P	P	23 56 52.7	+0.7
	SNR=29						
KZA	Kyzart	84.27	313	P	P	23 56 54.2	+1.9
	SNR=59						
QSPA	South Pole Qui	84.49	180	eP	P	23 56 53.1	-0.3
	comp=E,1.9nm,0.6s,mb4.4						
KBK	Karagaybulak	84.61	314	P	P	23 56 55.3	+1.3
	SNR=17						
CHMS	Chumysh	84.83	314	P	P	23 56 56.0	+0.9
	SNR=28						
UCH	Uchtor	84.84	313	P	P	23 56 56.8	+1.6
	SNR=59						
MAW	Mawson	84.84	203	LR	LR	00 29 44.5	
	comp=E,118nm,21.9s,MS4.2,baz=234,slow=32						
MAW	Mawson	84.84	203	eP	P	23 56 55.1	-0.1
MAW				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MAW	Mawson	84.84	203	eP	P	23 56 55.1	-0.1
	comp=Z,0.9nm,0.5s,mb4.2						
FRU	Bishkek	84.89	314	eP	P	23 56 56.0	+0.5
FRU				pmax	pmax		
	comp=Z,90nm,1.5s,mb5.7						
AAK	Ala-Archa	84.94	314	P	P	23 56 56.2	+0.5
	comp=Z,186nm,0.8s,SNR=7.2						
AAK	Ala-Archa	84.94	314	P	P	23 56 57.1	+1.4
	SNR=11						
AAK	Ala-Archa	84.94	314	eP	P	23 56 55.9	+0.2
AAK				e*PP	pP	23 57 06.9	0.0
AAK				pmax	pmax		
	comp=Z,96nm,1.4s,mb5.7						
AAK	Ala-Archa	84.94	314	eP	P	23 56 55.9	+0.2
	comp=Z,96nm,1.4s,mb5.7						
AAK				epP	pP	23 57 06.9	0.0
USP	Ospenovka	85.06	314	P	P	23 56 56.9	+0.5
	SNR=54						
AML	Almayashu	85.41	313	P	P	23 56 59.7	+1.6
	SNR=55						
EKS2	Erkin-Say	85.46	313	P	P	23 56 59.4	+1.1
	SNR=39						
DAWY	Dawson	85.51	24	eP	P	23 56 58.9	+0.3
INK	Inuvik	89.18	21	P	P	23 57 15.3	-1.0
	comp=Z,28nm,1.3s,mb5.5,baz=266,slow=6.1,SNR=9.2						
INK	Inuvik	89.18	21	eP	P	23 57 15.8	-0.5
INK				e*PP	pP	23 57 27.7	+0.2
INK				pmax	pmax		
	comp=Z,14nm,1.0s						
INK	Inuvik	89.18	21	eP	P	23 57 15.8	-0.5
	comp=Z,14nm,1.0s,mb5.3						
INK				epP	pP	23 57 27.7	+0.2
CHKZ	Chkalovo	89.60	324	eP	P	23 57 16.6	-1.6
CHKZ				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.3						
CHKZ	Chkalovo	89.60	324	eP	P	23 57 16.6	-1.6
	comp=Z,11nm,0.7s,mb5.3						
BVAR	Borovoye Array	89.62	323	P	P	23 57 17.0	-1.3
	comp=Z,17nm,0.7s,mb5.5,baz=104,slow=5.5,SNR=112						
F03A	Seaside	89.67	44	⇑P	P	23 57 19.3	+0.8
	baz=90						
BRVK	Borovoye	89.69	323	P	P	23 57 17.5	-1.2
	comp=Z,106nm,0.8s,SNR=10						
BRVK	Borovoye	89.69	323	eP	P	23 57 17.1	-1.6
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.1						
BRVK	Borovoye	89.69	323	eP	P	23 57 17.1	-1.5
	comp=Z,8.4nm,0.8s,mb5.1						
E03A	Lebam	89.75	43	⇑P	P	23 57 20.2	+1.3
	baz=90						
ZRNK	Zerenda	90.44	323	eP	P	23 57 20.4	-1.7
ZRNK				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
ZRNK	Zerenda	90.44	323	eP	P	23 57 20.4	-1.8
	comp=Z,15nm,0.9s,mb5.3						
J05A	Fort Rock	90.97	47	⇑P	P	23 57 26.2	+1.6
	baz=91						
J06A	Christmas Vall	91.76	47	⇓P	P	23 57 28.7	+0.4
	baz=92						
I06A	Prineville	91.79	46	⇑P	P	23 57 28.9	+0.5
	baz=92						
I07A	Izee	92.31	46	⇑P	P	23 57 31.6	+0.8
	baz=92						
NVAR	Mina Array Bea	92.71	52	P	P	23 57 33.6	+0.9
	comp=Z,1.4nm,0.7s,mb4.5,baz=248,slow=9.3,SNR=9.1						
LRMC	Laurel Mountai	92.96	55	⇑P	P	23 57 35.2	+1.4
	baz=93						
MPMC	Manual Prospec	93.17	54	⇓P	P	23 57 35.8	+1.0
	baz=93						
S09A	Goldfield	93.50	53	⇑P	P	23 57 36.8	+0.5
	baz=94						
BMO	Blue Mountains	93.94	45	eP	P	23 57 38.5	+0.2
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.8						
BMO	Blue Mountains	93.94	45	eP	P	23 57 38.5	+0.1
	comp=Z,4.2nm,1.1s,mb4.8						
NEW	Newport	94.28	42	P	P	23 57 39.5	-0.4
	comp=Z,2.2nm,0.3s,mb5.0,baz=54,slow=20,SNR=5.8						
WSAR	Wadi Sarin	95.71	293	P	P	23 57 46.0	-0.4
	comp=Z,3.8nm,0.7s,mb4.9,baz=96,slow=10,SNR=2.8						
YKA	Yellowknife Ar	96.15	28	P	P	23 57 48.2	-0.2
	comp=Z,2.4nm,0.6s,mb4.8,baz=270,slow=4.8,SNR=22						
YKA				LR	LR	00 40 11.3	
	comp=Z,92nm,18.1s,MS4.3,baz=270,slow=35						
YKA	Yellowknife Ar	96.15	28	P	P	23 57 48.2	-0.2
YKA				LR	LR	00 40 11.3	
WALA	Waterton Lakes	96.43	41	eP	P	23 57 50.5	+0.8
	comp=Z,6.5nm,1.0s,mb5.0						
ARU	Arti	96.73	326⇑	iP	P	23 57 48.5	-2.6
ARU				e		00 01 43.4	
ARU				eS	SKSac	00 08 22.5	-2.7
ARU				ePS	PS	00 10 32.4	-2.5
ARU				eSS	SS	00 15 39.4	-5.7
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.1						
ARU	Arti	96.73	326	eP	P	23 57 48.6	-2.4
	comp=Z,7.3nm,0.9s,mb5.1						
AKTK	Aktyubinsk	97.07	320	P	P	23 57 50.5	-2.1
AKTO	Aktyubinsk	97.07	320	P	P	23 57 50.5	-2.1
	comp=Z,2.2nm,0.8s,mb4.6,baz=132,slow=2.8,SNR=5.2						
PDAR	Pinedale Array	99.50	48	P	P	23 58 03.4	-0.1
	comp=Z,0.9nm,0.9s,mb4.3,baz=245,slow=3.1,SNR=4.8						
PDAR				LR	LR	00 37 13.2	
	comp=Z,110nm,18.7s,MS4.4,baz=87,slow=32						
PV01	Paradox Valley	100.35	52	Pdif	Pdif	23 58 08.6	+1.3
FINES	FINESS Array B	111.56	335	Pdiff	Pdif	23 58 55.2	-1.9
	comp=Z,1.2nm,0.7s,baz=64,slow=4.4,SNR=7.7						
FINES	FINESS Array B	111.56	335	Pdif	Pdif	23 58 55.2	-1.9
NOA	NORSAR Array B	117.46	340	PKiKP	PKiKP	00 03 05.2	-0.9
	comp=Z,1.0nm,0.7s,baz=48,slow=1.9,SNR=4.3						
PLCA	Paso Flores	119.40	143	PKP	PKPdf	00 03 10.4	+0.5
	comp=Z,1.0nm,0.6s,baz=166,slow=7.0,SNR=3.6						
IDI	Anoyia	123.50	309	PKP	PKPdf	00 03 20.3	+2.5
	comp=Z,7.4nm,1.0s,baz=9.5,slow=12,SNR=4.5						
KHC	Kasperske Hory	124.38	328	ePKP	PKPdf	00 03 19.5	0.0
KHC	Kasperske Hory	124.38	328⇑	iPKIKP	PKPdf	00 03 19.3	-0.2
GERES	GERESS Array B	124.49	328	PKP	PKPdf	00 03 19.4	-0.3
	comp=Z,1.5nm,0.6s,baz=59,slow=0.8,SNR=14						
GRA1	Grafenberg Arr	125.22	330	ePKP	PKPdf	00 03 21.4	+0.3
GRF	Grafenberg Arr	125.22	330	ePKPdf	PKPdf	00 03 21.4	+0.3
GRF	Grafenberg Arr	125.22	330	ePKIKP	PKPdf	00 03 21.4	+0.3
LVC	Limon Verde	130.79	126	PKPdf	PKPdf	00 03 32.7	+1.0
LPAZ	La Paz	134.33	119	PKP	PKPdf	00 03 41.8	+3.4
	comp=Z,1.5nm,0.9s,baz=341,slow=6.2,SNR=6.9						
LPAZ	La Paz	134.33	119	ePKPdf	PKPdf	00 03 41.1	+2.7
TOA0	Torodi Ar. Sit	150.26	287	ePKP	PKPbc	00 04 10.5	-1.1
TORD	Torodi Ar. Bea	150.26	287	PKPbc	PKPbc	00 04 11.8	+0.2
	comp=Z,4.1nm,0.7s,baz=94,slow=2.1,SNR=36						
BDFB	Brasilia	150.77	136	PKPbc	PKPbc	00 04 14.3	+1.5
	comp=Z,7.4nm,0.9s,baz=135,slow=1.7,SNR=7.8						
DBIC	Dimbokro	157.49	274	PKPab	PKPab	00 04 48.5	0.0
	comp=Z,11nm,1.1s,baz=115,slow=5.9,SNR=4.6						

ATH ***03*** *00:00:23.4, 3850N×2160E, h44km, MD2.8/3*
CSEM ***03*** *00:00:24.7±0.1, 3850N×2139E, h2km, MD2.8, Error ellipse: s-maj=2.0km s-min=1.5km az=137.0*
ISCJB ***03*** *00:00:25.2±0.8, 3858N±005×2145E±005, h12km±10km, Error ellipse: s-maj=8.7km s-min=5.5km az=122.0*
THE ***03*** *00:00:25.6, 3839N×2147E, h31km*
ISC 03 00:00:25.5±0.9**, 3850N**±007×**2153E**±006**, h26**km±13km**, n8,** σ1**§02**/14**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.44	187	eP	Pb	00 00 34.4	-0.3
EVR	Evrytania	0.47	27	eP	Pb	00 00 34.3	-1.0
LKD	Levkas	0.72	287	ePg	Pb	00 00 38.6	-0.8
LKD				eSg	Sb	00 00 49.3	+0.4
VLS	Valsamata	0.81	247	eP	Pb	00 00 39.6	-1.2
VLS				eS	Sb	00 00 53.2	+1.9
AGG	Agios Georgios	0.82	50	ePg	Pb	00 00 41.5	+0.5
AGG				eSg	Sb	00 00 53.8	+2.1
AGG	Agios Georgios	0.82	50	ePg	Pb	00 00 41.5	+0.5
AGG				eSg	Sb	00 00 53.8	+2.2
IGT	Igoumenitsa	1.40	318	ePg	Pn	00 00 49.1	-0.1
IGT				eSg	Sn	00 01 07.2	+0.3
LIT	Litokhoron	1.77	25	ePb	Pb	00 00 56.0	-1.2
LIT				eSb	Sb	00 01 18.7	-0.2

IDC ***03*** *00:03:05.9±4.2, 0.14S×125.16E, h26km±28km, mb4.6/20, mb1 4.6/21, mb1mx4.5/24, mbtmp4.7/21, ML3.5/1, Error ellipse: s-maj=27.4km s-min=12.8km az=74.0*
MOS ***03*** *00:03:05.5±1.1, 005S×12521E, h33km, mb4.9/27, Error ellipse: s-maj=18.3km s-min=7.3km az=115.4*
ISCJB ***03*** *00:03:07.6±1.3, 0.15S±005×12537E±006, h56km±12km, mb4.8/65, MS4.0/3, Error ellipse: s-maj=10.8km s-min=7.1km az=137.2*
NEIC ***03*** *00:03:09.7±1.4, 0.14S×12532E, h61km±12km, mb4.7/24, Error ellipse: s-maj=12.7km s-min=6.3km az=63.0*
BJI ***03*** *00:03:09.7, 0.10S×12530E, h61km, mB5.1, mb4.9, Ms4.9, Msz4.4*
ISC 03 00:03:10.8±1.1**, 019S**±005×**12535E**±006**, h69**km±10km**, h68**km±6.0km**:pP-P, n130,** σ1**§18**/128**, mb4.7**/65**, 5C-1D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	4.49	141	P	Pn	00 04 20.2	+4.0
	194nm,0.7s						
PCI	Palu	5.56	263	P	Pn	00 04 31.0	+0.1
	283nm,0.8s						
KKM	Kota Kinabalu	11.02	304	Pn	Pn	00 05 45.3	-0.2
KAKA	Kakadu	14.29	151	eP	Pn	00 06 26.6	-3.0
	22nm,0.7s						
KSM	Kuching	15.13	276	ePn	Pn	00 06 42.1	+1.7
FITZ	Fitzroy Crossi	17.80	179	eP	Pn	00 07 13.7	-0.1
	8.2nm,0.8s						
FITZ	Fitzroy Crossi	17.80	179	P	Pn	00 07 12.3	-1.5
	0.1nm,0.3s,baz=40,slow=8.0,SNR=7.4						
LEM	Lembang	18.88	249	P	Pn	00 07 27.2	+0.5
	76nm,0.7s						
CBJI	Citeko	19.47	251	P	Pn	00 07 32.2	-1.6
	200nm,0.8s						
WRAB	Tennant Creek	21.51	156	P	P	00 07 57.4	+3.4
WRAB				pmax	pmax		
	comp=Z,16nm,0.5s,mb4.6						
WRAB	Tennant Creek	21.51	156	P	P	00 07 57.4	+3.4
	comp=Z,16nm,0.5s,mb4.6						
WRA	Warramunga Arr	21.52	156	P	P	00 07 53.3	-0.7
	comp=Z,13nm,0.7s,mb4.4,baz=337,slow=12,SNR=23						
WB2	Warramunga Arr	21.52	156	eP	P	00 07 52.1	-2.0
WB2	Warramunga Arr	21.52	156	eP	P	00 07 52.5	-1.5
MBWA	Marble Bar	21.55	194	eP	P	00 07 54.5	+0.1
QIZ	Qiongzhong	24.42	322	P	P	00 08 20.9	-1.9
AS31	Alice Springs	24.77	161	eP	P	00 08 19.8	-6.2
ASPA	Alice Springs	24.77	161	eP	P	00 08 19.8	-6.2
ASAR	Alice Springs	24.77	161	P	P	00 08 26.5	+0.5
	comp=Z,7.2nm,0.9s,mb4.1,baz=344,slow=11,SNR=30						
ASAR				PcP	PcP	00 12 03.1	+2.1
	comp=Z,1.0nm,0.4s,baz=354,slow=2.0,SNR=7.5						
ASAR				ScP	ScP	00 15 38.8	+5.0
	comp=Z,0.8nm,1.1s,baz=344,slow=3.1,SNR=4.1						
ASAR	Alice Springs	24.77	161	P	P	00 08 26.5	+0.5
ASAR						00 12 03.1	
YHNB	Yeheng	25.01	351	eP	P	00 08 26.8	-1.4
KULM	Kulim	25.26	283	P	P	00 08 27.7	-2.7
JOW	Kunigami	27.01	6	P	P	00 08 46.5	+0.2
	comp=Z,54nm,0.8s,mb5.1,baz=196,slow=7.8,SNR=12						
CBIJ	Chichi jima	31.59	30	P	P	00 09 27.1	+0.2
	comp=Z,56nm,0.7s,mb5.4,baz=288,slow=21,SNR=7.1						
CHTO	Chiang Mai	32.08	308	eP	P	00 09 30.3	-0.8
CHTO				e	pP	00 09 44.2	-3.4
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
CHTO	Chiang Mai	32.08	308	eP	P	00 09 30.3	-0.8
	comp=Z,5.0nm,0.8s,mb4.3						
CHTO				e	pP	00 09 44.2	-3.5
NJ2	Nanjing	32.65	350	eP	P	00 09 38.6	+2.5

NJ2 AP pP 00 09 56.3 +3.6
NJ2 PP PP 00 10 48.6 -2.4
NJ2 S **S** **00 14 46.0 -1.2**
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
NJ2 AMB AMB
comp=Z,90nm,4.9s
NJ2 LR LR
comp=N,1μm,14.9s
NJ2 LR LR
comp=E,520nm,30.8s
NJ2 LR LR
comp=Z,520nm,30.8s
KMI Kunming 33.34 321 P **P** **00 09 43.3 +1.2**
KMI AP pP 00 10 01.2 +2.5
KMI XP sP 00 10 10.2 +3.5
KMI AMB AMB
comp=Z,8.0nm,1.4s,mb4.4
KMI LR LR
comp=Z,100nm,14.1s
STKA Stephens Creek 35.06 156 P **P** **00 09 57.8 +0.8**
comp=Z,5.3nm,0.6s,mb4.5,baz=312,slow=7.8,SNR=11
MJAR Matsushiro Arr 38.45 17 P **P** **00 10 26.1 +0.3**
comp=Z,5.6nm,0.6s,mb4.6,baz=192,slow=7.8,SNR=17
MAJO Matsushiro 38.45 17 *eP* **P** **00 10 26.0 +0.2**
MAJO *e* pP 00 10 43.2 +0.6
MAJO pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
MAJO Matsushiro 38.45 17 *eP* **P** **00 10 25.9 +0.2**
comp=Z,7.7nm,0.6s,mb4.7
MAJO *e* pP 00 10 43.2 +0.6
MAT Matsushiro 38.45 17 P **P** **00 10 26.1 +0.3**
MAT Matsushiro 38.45 17 *eP* **P** **00 10 26.0 +0.2**
MAT pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
MAT Matsushiro 38.45 17 *eP* **P** **00 10 26.0 +0.2**
comp=Z,6.8nm,0.7s,mb4.6
LZH Lanzhou 41.26 333 *eP* **P** **00 10 51.1 +2.0**
LZH AMB AMB
comp=Z,21nm,1.3s,mb4.8
SNY Shenyang 41.85 358 ⇓P **P** **00 10 54.3 +0.3**
SNY AMB AMB
comp=Z,6.0nm,0.5s,mb4.6
HHC Hu-ho-hao-te 42.73 345 *eP* **P** **00 11 03.5 +2.4**
HHC AP pP 00 11 21.9 +3.8
HHC PP PP 00 12 44.8 +3.5
HHC PCP PcP 00 12 54.4 +2.8
HHC PCS PcS 00 16 45.6 +1.8
HHC S **S** **00 17 21.0 +1.4**
HHC SS SS 00 20 27.1 -5.4
HHC SCS ScS 00 20 54.7 -0.8
HHC AMB AMB
comp=Z,14nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,119nm,5.5s
HHC LR LR
comp=N,152nm,15.2s
HHC LR LR
comp=E,251nm,11.6s
HHC LR LR
comp=Z,137nm,13.3s
CN2 Changchun 43.80 0 *eP* **P** **00 11 10.2 +0.5**
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
MDJ Mudanjiang 44.77 4 P **P** **00 11 18.3 +0.8**
MDJ AMB AMB
comp=Z,11nm,0.8s,mb4.6
MDJ AMB AMB
comp=Z,84nm,5.1s
GTA Gaotai 45.82 332 P **P** **00 11 27.1 +1.4**
GTA AMB AMB
comp=Z,19nm,0.6s,mb5.0
JIRN Jiri 46.67 310 *eP* **P** **00 11 31.7 -0.7**
GUN Gumba 47.03 310 *eP* **P** **00 11 35.2 0.0**
comp=Z,52nm,0.7s,mb5.4
PKI Pulchoki 47.23 309 *eP* **P** **00 11 36.6 -0.2**
comp=Z,5.6nm,0.3s,mb4.7
PKI Pulchoki 47.23 309 *eP* **P** **00 11 36.6 -0.2**
PKI pmax pmax
comp=Z,6.0nm,0.3s,mb4.8
KKN Kakani 47.43 309 *eP* **P** **00 11 38.4 0.0**
comp=Z,9.3nm,0.4s,mb4.9
KKN Kakani 47.43 309 *eP* **P** **00 11 38.4 0.0**
KKN pmax pmax
comp=Z,9.0nm,0.4s,mb4.8
DMN Daman 47.48 309 *eP* **P** **00 11 39.0 +0.3**
GKN Gorkha 48.03 309 *eP* **P** **00 11 42.8 -0.2**
comp=Z,27nm,0.7s,mb5.2
KOLN Koldanda 48.73 308 *eP* **P** **00 11 48.4 0.0**
comp=Z,46nm,0.6s,mb5.6
HYB Hyderabad 49.26 293 *i* P **P** **00 11 53.5 +1.1**
YSS Yuzh-Sakhalins 49.36 16 *eP* **P** **00 11 48.5 -4.7**
YSS pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
KLR Kul'dur 49.54 6 *eP* **P** **00 11 53.1 -1.4**
ULA Ulaanbaatar 50.44 344 *eP* **P** **00 12 01.8 +0.4**
ULN pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ULN Ulaanbaatar 50.44 344 *eP* **P** **00 12 01.8 +0.4**
comp=Z,3.6nm,0.6s,mb4.5
SONM Songino Array 50.60 344 P **P** **00 12 02.0 -0.6**
comp=Z,5.5nm,0.7s,mb4.7,baz=159,slow=9.0,SNR=15
ZAK Zakamensk 53.79 343 *eP* **P** **00 12 26.3 +0.1**
ZAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TLY Talaya 54.84 344 *eP* **P** **00 12 29.6 -4.2**
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TLY Talaya 54.84 344 *eP* **P** **00 12 29.6 -4.3**
comp=Z,6.2nm,0.8s,mb4.7
WMQ Urumqi 55.19 327 *eP* **P** **00 12 36.0 -0.4**
WMQ AMB AMB
comp=Z,11nm,1.0s,mb4.8
BOD Bodaibo 58.54 353 *eP* **P** **00 13 00.0 -0.1**
BOD pmax pmax
comp=Z,18nm,0.8s,mb5.2
MKAR Makanchi Array 60.02 327 P **P** **00 13 09.1 -1.3**
comp=Z,6.8nm,0.3s,mb5.1,baz=121,slow=8.5,SNR=88
ULHL Ulahol 61.06 320 P **P** **00 13 18.9 +1.5**
SNR=9.4
KZA Kyzart 61.62 320 P **P** **00 13 23.0 +1.8**
SNR=8.3
TKM2 Tokmak 2 61.81 320 P **P** **00 13 23.5 +1.0**
SNR=18
TKM2 Tokmak 2 61.81 320 *i* P **P** **00 13 21.3 -1.1**
TKM2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
YAK Yakutsk 62.15 2 *eP* **P** **00 13 24.9 +0.2**
YAK *e* 00 13 31.3
YAK pmax pmax
comp=Z,13nm,0.8s,mb5.0
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=N,11nm,0.7s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
UCH Uchtor 62.17 319 P **P** **00 13 27.4 +2.6**
SNR=14
AAK Ala-Archa 62.38 320 *eP* **P** **00 13 26.6 +0.4**
AAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
AAK Ala-Archa 62.38 320 *eP* **P** **00 13 26.6 +0.4**
comp=Z,6.3nm,0.6s,mb4.8
AML Almayashu 62.66 319 P **P** **00 13 29.6 +1.5**
SNR=12
USP Ospenovka 62.68 320 P **P** **00 13 28.9 +0.6**
SNR=20
EKS2 Erkin-Say 62.85 320 P **P** **00 13 30.4 +1.0**
SNR=14
ZAL Zalesovo 63.47 335 P **P** **00 13 32.0 -1.5**
comp=Z,3.0nm,0.3s,mb4.7,baz=341,slow=6.5,SNR=11
KURK Kurchatov 64.33 329 *eP* **P** **00 13 37.8 -1.3**
KURK pmax pmax
comp=Z,19nm,0.7s,mb5.0
KURK Kurchatov 64.33 329 *eP* **P** **00 13 37.8 -1.3**
comp=Z,20nm,0.7s,mb5.0
NVS Novosibirsk 64.76 335 *eP* **P** **00 13 37.6 -4.3**
KK31 Karatay Array 65.19 319 *i* P **P** **00 13 44.3 -0.4**
KK31 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
BVAR Borovoye Array 69.87 328 P **P** **00 14 13.1 -1.1**
comp=Z,4.1nm,0.6s,mb4.4,baz=131,slow=8.1,SNR=24
BRVK Borovoye 69.94 328 *eP* **P** **00 14 13.7 -0.9**
BRVK pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
BRVK Borovoye 69.94 328 *eP* **P** **00 14 13.7 -0.9**
comp=Z,9.8nm,1.0s,mb4.6
CHKZ Chkalovo 70.07 329 *eP* **P** **00 14 14.2 -1.2**
CHKZ *e* pP 00 14 28.0 -5.8
CHKZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
CHKZ Chkalovo 70.07 329 *eP* **P** **00 14 14.2 -1.3**
comp=Z,6.0nm,0.8s,mb4.5
CHKZ *e* pP 00 14 28.0 -5.8
ZRNK Zerenda 70.57 328 *i* P **P** **00 14 17.4 -1.1**
ZRNK pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
ZRNK Zerenda 70.57 328 *eP* **P** **00 14 17.1 -1.3**
comp=Z,14nm,0.6s,mb5.0
BILL Bilibino 73.67 15 *eP* **P** **00 14 33.7 -3.3**
BILL pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
AKTK Aktyubinsk 75.88 323 P **P** **00 14 49.1 -0.7**
AKTO Aktyubinsk 75.88 323 P **P** **00 14 49.1 -0.7**
comp=Z,14nm,0.8s,mb4.8,baz=110,slow=7.8,SNR=38
AKTO Aktyubinsk 75.88 323 *i* P **P** **00 14 49.6 -0.2**
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
ARU Arti 77.51 328 ⇑*i* P **P** **00 14 57.6 -1.4**
ARU *e* 00 15 05.7
ARU *e* 00 17 53.5
ARU *e*PPP 00 19 41.9
ARU *e*S S 00 24 48.9 +4.3
ARU *e*SS SS 00 29 52.7 +7.8
ARU pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
ARU Arti 77.51 328 *eP* **P** **00 14 57.9 -1.1**
comp=Z,9.6nm,0.8s,mb4.6
ARU *e* 00 15 07.0
MAW Mawson 79.62 200 P **P** **00 15 11.6 +1.0**
VNDA Vanda 79.74 172 P **P** **00 15 12.4 +1.2**
GNI Garni 82.94 310 P **P** **00 15 29.1 +1.0**
GNI pmax pmax
comp=Z,5.0nm,0.8s
GNI Garni 82.94 310 P **P** **00 15 29.1 +1.0**
comp=Z,5.3nm,0.8s,mb4.4
KIV Kislovodsk 84.84 314 *eP* **P** **00 15 39.9 +2.1**
KIV pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KIV MLR MLR
comp=Z,87nm,18.0s
KIV Kislovodsk 84.84 314 *eP* **P** **00 15 38.6 +0.8**
comp=Z,3.2nm,0.4s,mb4.6
IMA2 Indian Mountai 86.50 24 *eP* **P** **00 15 47.4 +1.3**
MALT Malatya 87.70 308 ⇑*i* P **P** **00 15 53.3 +1.5**
MALT Malatya 87.70 308 *eP* **P** **00 15 52.9 +1.1**
MALT pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
MALT Malatya 87.70 308 *eP* **P** **00 15 52.9 +1.1**
comp=Z,3.3nm,0.9s,mb4.4
VRSR Storozhevoye 87.73 321 *eP* **P** **00 15 51.1 -0.9**
VRSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
VRSR pmax pmax
comp=N,6.0nm,0.8s
VRSR pmax pmax
comp=E,6.0nm,0.7s
PMR Palmer 88.03 28 P **P** **00 15 55.2 +1.8**
KMBO Kilima Mbogo 88.09 269 P **P** **00 15 56.1 +2.4**
comp=E,3.1nm,0.9s,mb4.3,baz=33,slow=7.1,SNR=6.0
KLMR Klimovskoe 88.12 331 *eP* **P** **00 15 52.4 -1.5**
KLMR pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
ANN Anapa 88.65 315c *iP* **P** **00 15 55.4 -0.9**
ANN *i* *PP pP 00 16 05.2 -10
ANN *e*S S 00 26 21.9 -16
ANN pmax pmax
comp=Z,30nm,0.8s,mb5.4
ASF Jabal al Asfar 88.79 302 P **P** **00 15 58.5 +1.5**
comp=Z,5.9nm,0.8s,mb4.7,baz=281,slow=4.7,SNR=14
OBN Obninsk 89.45 325⇑ *eP* **P** **00 15 59.4 -0.7**
OBN *e*S S 00 26 36.9 -8.1
OBN pmax pmax
comp=Z,16nm,0.6s,mb5.2
QSPA South Pole Qui 89.74 180 *eP* **P** **00 16 02.7 +1.2**
comp=Z,1.4nm,0.4s,mb4.4
MMAI Mount Meron Ar 90.06 303 P **P** **00 16 04.3 +1.3**
comp=Z,3.0nm,0.6s,mb4.6,baz=78,slow=7.8,SNR=10.0
EIL Elat 90.44 300 *eP* **P** **00 16 05.3 +0.6**
comp=Z,39nm,0.6s,mb5.7
BR131 Keskin Array S 91.44 310 *eP* **P** **00 16 08.7 -0.7**
comp=Z,0.8nm,0.6s,mb4.0
BRTR Keskin Array B 91.44 310 P **P** **00 16 08.1 -1.2**
comp=Z,1.3nm,0.8s,mb4.1,baz=121,slow=4.8,SNR=8.9
BRTR Keskin Array B 91.44 310 *i* P **P** **00 16 09.0 -0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
JOF Joensuu 92.01 333 *ep* **P** **00 16 09.9 -2.1**
comp=Z,1.0nm,0.4s,mb4.4
JOF Joensuu 92.01 333 *eP* **P** **00 16 09.9 -2.1**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.4
KEV Kevo 93.07 340 *ep* **P** **00 16 25.5 +8.6**
ARCES ARCESS Array B 93.62 340 P **P** **00 16 18.2 -1.2**
comp=Z,1.4nm,0.6s,mb4.5,baz=82,slow=4.0,SNR=12
AKASG Malin Array Be 94.04 321 P **P** **00 16 20.1 -1.2**
comp=Z,1.1nm,0.6s,mb4.4,baz=69,slow=4.2,SNR=7.7
KAF Kangasniemi 94.41 332 *ep* **P** **00 16 21.0 -2.0**
comp=Z,1.5nm,0.4s,mb4.7
KAF Kangasniemi 94.41 332 *eP* **P** **00 16 21.0 -2.0**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.8
FINES FINESS Array B 94.61 332 P **P** **00 16 22.3 -1.6**
comp=Z,0.8nm,0.6s,mb4.3,baz=133,slow=13,SNR=3.7
MLR Muntele Rosu 96.73 316 P **P** **00 16 32.3 -1.3**
comp=Z,2.3nm,0.7s,mb4.7,baz=186,slow=3.9,SNR=5.7
BURAR Bucovina Array 96.98 318 ⇑*i* P **P** **00 16 35.0 +0.3**
IDI Anoyia 98.65 306 P **P** **00 16 41.8 -0.5**
comp=Z,5.6nm,1.0s,mb5.1,baz=41,slow=11,SNR=3.5
ESLA Sonseca Array 119.41 317 *ePKPdf* PKPdf 00 21 52.5 +0.2
TORD Torodi Ar. Bea 122.72 285 PKP PKPdf 00 22 00.4 +1.7
comp=Z,1.2nm,0.6s,baz=91,slow=1.6,SNR=24
SCHQ Schefferville 124.63 9 PKP PKPdf 00 22 03.5 +1.2
comp=Z,1.9nm,0.6s,baz=194,slow=17,SNR=3.9
DBIC Dimbokro 129.91 278 PKP PKPdf 00 22 14.1 +1.7
comp=Z,3.2nm,0.8s,baz=88,slow=20,SNR=4.6

*ISCJB **03** 00:28:20.9±0.5, 1122S×008×3458E×008, h10km, mb3.9/7, Error ellipse: s-maj=13.2km s-min=7.8km az=92.1*
*IDC **03** 00:28:21.4±1.3, 1123S×3461E, h0km, mb3.9/6, mb1 4.1/10, mb1mx3.8/25, mbtmp4.0/10, ML2.1/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/28, Error ellipse: s-maj=35.9km s-min=23.6km az=143.0*
*NEIC **03** 00:28:22.7±0.4, 1123S×3461E, h10km, mb4.0/2, Error ellipse: s-maj=12.2km s-min=8.3km az=121.0*
ISC 03 00:28:23.3±4.1, 1127S±008×3451E±008, h13km±26km, n21, σ1%06/28, mb3.9/7, Malawi

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
LSZ	**Lusaka**	**7.33**	**236**	Pn	**Pn**	**00 30 12.6**	**+2.6**
	2.7nm,0.3s,baz=60,slow=11,SNR=45						
LSZ				Sn	**Sn**	**00 31 32.1**	**-0.9**
	11nm,0.3s,baz=353,slow=13,SNR=7.5						
LSZ				Lg		00 32 14.0	
	19nm,0.3s,baz=331,slow=17,SNR=7.8						
LSZ				LR	LR	00 32 49.8	
	comp=Z,73nm,19.2s,baz=268,slow=36						
LSZ	**Lusaka**	**7.33**	**236**	*e*Pn	**Pn**	**00 30 12.9**	**+2.9**
	26nm,0.4s						
LSZ				*e*Sn	**Sn**	**00 31 32.0**	**-1.0**
KMBO	**Kilima Mbogo**	**10.44**	**15**	Pn	**Pn**	**00 30 50.9**	**-1.7**
	2.2nm,0.3s,baz=178,slow=16,SNR=46						
KMBO				Sn	**Sn**	**00 32 40.8**	**-8.6**
	3.7nm,0.3s,baz=103,slow=23,SNR=8.0						
KMBO				Lg		00 33 39.6	
	2.8nm,0.3s,baz=208,slow=11,SNR=7.4						
KMBO				LR	LR	00 35 16.3	
	comp=Z,53nm,18.5s,baz=126,slow=40						
KMBO	**Kilima Mbogo**	**10.44**	**15**	*e*Pn	**Pn**	**00 30 50.7**	**-1.9**
	1.8nm,0.7s						
KMBO				*e*Sn	**Sn**	**00 32 34.6**	**-15**
OPO	**Ambohidratompo**	**14.24**	**122**	Pn	**Pn**	**00 31 43.5**	**-1.1**
	0.4nm,0.3s,baz=283,slow=11,SNR=6.2						
OPO				Sn	**Sn**	**00 34 11.7**	**-11**
	0.3nm,0.3s,baz=230,slow=16,SNR=2.3						
LBTB	**Lobatse**	**16.07**	**211**	Pn	**Pn**	**00 32 06.8**	**-2.2**
	1.4nm,0.3s,baz=43,slow=10.0,SNR=18						
LBTB				Sn	**Sn**	**00 34 56.1**	**-11**
	0.9nm,0.3s,baz=114,slow=20,SNR=3.4						
LBTB				Lg		00 36 40.9	
	0.8nm,0.3s,baz=315,slow=16,SNR=2.5						
LBTB	**Lobatse**	**16.07**	**211**	*e*Pn	**Pn**	**00 32 08.6**	**-0.3**
	8.4nm,0.6s						
LBTB				*e*Sn	**Sn**	**00 34 55.5**	**-11**
TSUM	**Tsumeb**	**18.12**	**242**	P	**Pn**	**00 32 35.0**	**+0.3**
	0.4nm,0.3s,baz=36,slow=13,SNR=14						
TSUM				Lg		00 37 56.5	
	0.1nm,0.3s,baz=330,slow=20,SNR=2.8						
TSUM				LR	LR	00 40 12.0	
	comp=Z,66nm,21.4s,baz=252,slow=39						
TSUM	**Tsumeb**	**18.12**	**242**	*e*Pn	**Pn**	**00 32 35.5**	**+0.9**
TSUM				*e*Sn	**Sn**	**00 35 55.7**	**-1.0**
SUR	**Sutherland**	**24.51**	**209**	P	**P**	**00 33 44.1**	**+1.8**
TORD	**Torodi Ar. Bea**	**40.60**	**306**	P	**P**	**00 36 03.6**	**+0.9**
	1.7nm,0.9s,mb3.7,baz=127,slow=7.8,SNR=6.8						
TORD				LR	LR	00 53 35.0	
	comp=Z,65nm,20.2s,baz=195,slow=37						
BRTR	**Keskin Array B**	**50.74**	**359**	P	**P**	**00 37 23.5**	**+0.7**
	0.4nm,0.5s,mb3.6,baz=172,slow=7.8,SNR=4.1						
GNI	**Garni**	**52.03**	**10**	*eP*	**P**	**00 37 32.6**	**+0.1**
	1.4nm,0.6s,mb4.1						
CART	**Cartagena**	**58.91**	**327**	P	**P**	**00 38 21.4**	**-0.6**
MKAR	**Makanchi Array**	**71.83**	**32**	P	**P**	**00 39 45.3**	**-0.4**
	1.3nm,0.7s,mb4.0,baz=222,slow=6.4,SNR=12						
FINES	**FINESS Array B**	**72.78**	**356**	P	**P**	**00 39 50.9**	**-0.4**
	1.1nm,0.7s,mb3.9,baz=192,slow=5.5,SNR=4.1						
FINES	**FINESS Array B**	**72.78**	**356**	P	**P**	**00 39 50.9**	**-0.4**
ARCES	**ARCESS Array B**	**80.85**	**357**	P	**P**	**00 40 37.1**	**+0.2**
	2.5nm,0.8s,mb4.2,baz=156,slow=6.1,SNR=8.1						
SONM	**Songino Array**	**86.44**	**40**	P	**P**	**00 41 06.3**	**+0.7**
	0.1nm,0.3s,mb3.5,baz=236,slow=1.9,SNR=3.8						
WRAB	**Tennant Creek**	**95.28**	**111**	P	**P**	**00 41 47.6**	**+0.7**
NVAR	**Mina Array Bea**	**143.66**	**323**	PKP	PKPdf	00 47 57.2	-0.6
	1.5nm,0.7s,baz=52,slow=3.5,SNR=10						

*CSEM **03** 00:28:31.6, 1785S×17761W, h33km, mb5.5*
*BJI **03** 00:29:23.8, 1810S×17890W, h527km, mb4.6, mb4.6*
*NEIC **03** 00:29:26.8±1.0, 1810S×17891W, h527km±11km, mb4.7/20, Error ellipse: s-maj=12.6km s-min=8.5km az=142.0*
*MOS **03** 00:29:28.5±2.0, 1812S×17924W, h533km, mb4.9/9, Error ellipse: s-maj=13.9km s-min=12.3km az=174.2*
*ISCJB **03** 00:29:29.8±1.2, 1818S±007×17906W±006, h579km±14km, mb4.6/31, Error ellipse: s-maj=11.1km s-min=8.5km az=124.7*
*IDC **03** 00:29:29.8±0.7, 1823S×17900W, h565km±7km, mb4.0/13, mb1 4.1/14, mb1mx4.0/19, mbtmp4.9/14, Error ellipse: s-maj=11.8km s-min=10.1km az=154.0*
*SZGRF **03** 00:29:30.2, 1865S×17905W, h586km, Fiji Islands region*
ISC 03 00:29:28.5±0.9, 1817S±007×17892W±006, h550km±11km, n186, σ0%95/86, mb4.6/31, 24C-16D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
AFI	**Afiamalu**	**8.07**	**59**	P	**P**	**00 31 24.1**	**-2.7**
	6.9nm,0.3s,baz=20,slow=7.1,SNR=5.9						
AFI				S	**S**	**00 32 54.2**	**-10**
	4.5nm,0.3s,baz=195,slow=20,SNR=3.5						
AFI	**Afiamalu**	**8.07**	**59**	*eP*	**P**	**00 31 24.5**	**-2.3**
AFI				*e*S	**S**	**00 32 56.8**	**-7.1**
AFI				pmax	pmax		
	comp=Z,49nm,0.7s						
AFI	**Afiamalu**	**8.07**	**59**	*eP*	**P**	**00 31 24.5**	**-2.3**
	comp=Z,49nm,0.7s						
AFI				*e*S	**S**	**00 32 56.8**	**-7.1**
DZM	**Mont Dzumac**	**14.28**	**252**	*eP*	**P**	**00 32 29.9**	**-0.6**
DZM	**Mont Dzumac**	**14.28**	**252**	P	**P**	**00 32 30.0**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=79,slow=18,SNR=23						
DZM				S	**S**	**00 35 05.4**	**+5.0**
	baz=21,slow=19,SNR=5.4						
NOUC	**Port Laguerre**	**14.42**	**252**	*eP*	**P**	**00 32 31.8**	**-0.1**
URZ	**Urewera**	**20.31**	**189**	P	**P**	**00 33 25.8**	**-1.5**
	comp=Z,12nm,0.3s,baz=321,slow=4.9,SNR=20						
HNR	**Honiara**	**22.27**	**290**	P	**P**	**00 33 44.6**	**-0.3**
	comp=Z,51nm,0.4s,mb5.5,baz=234,slow=1.2,SNR=3.7						
HNR	**Honiara**	**22.27**	**290**	*eP*	**P**	**00 33 45.2**	**+0.3**
HNR				pmax	pmax		
	comp=Z,45nm,0.6s,mb5.3						
HNR	**Honiara**	**22.27**	**290**	*eP*	**P**	**00 33 45.1**	**+0.3**
	comp=Z,45nm,0.6s,mb5.3						
SNZO	**South Karori**	**23.70**	**192**	P	**P**	**00 33 57.4**	**-0.2**
RPZ	**Rata Peaks**	**26.83**	**196**	P	**P**	**00 34 24.6**	**-0.7**
	comp=Z,7.2nm,0.4s,mb4.7,baz=221,slow=2.7,SNR=7.9						
ARMA	**Armidale**	**29.39**	**240**	⇑*iP*	**P**	**00 34 49.2**	**+1.7**
CNB	**Canberra Magne**	**32.88**	**232**	⇑*iP*	**P**	**00 35 18.7**	**+1.3**
	comp=Z,49nm,0.8s,mb5.1						
CTA	**Charters Tower**	**32.92**	**261**	*eP*	**P**	**00 35 18.2**	**+0.4**
	comp=Z,37nm,0.9s,mb4.9						
CTA	**Charters Tower**	**32.92**	**261**	P	**P**	**00 35 18.4**	**+0.7**
	comp=Z,42nm,0.8s,mb5.0,baz=90,slow=11,SNR=52						
CTA				S	**S**	**00 39 55.6**	**-1.5**
	comp=Z,3.0nm,0.8s,baz=212,slow=21,SNR=5.6						
CTA	**Charters Tower**	**32.92**	**261**	*eP*	**P**	**00 35 18.2**	**+0.4**
CTA				pmax	pmax		
	comp=Z,37nm,0.9s						
CTAO	**Charters Tower**	**32.92**	**261**	*eP*	**P**	**00 35 18.3**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.0						
CTAO	**Charters Tower**	**32.92**	**261**	*eP*	**P**	**00 35 18.3**	**+0.6**
	comp=Z,50nm,0.9s,mb5.0						
PMG	**Port Moresby**	**34.02**	**280**	P	**P**	**00 35 28.3**	**+1.3**
	comp=Z,105nm,0.9s,mb5.4,baz=82,slow=5.6,SNR=26						
PMG	**Port Moresby**	**34.02**	**280**	*eP*	**P**	**00 35 28.2**	**+1.2**
PMG				pmax	pmax		
	comp=Z,130nm,0.9s						
PMG	**Port Moresby**	**34.02**	**280**	*eP*	**P**	**00 35 28.2**	**+1.1**
	comp=Z,130nm,0.9s,mb5.5						
TOO	**Toolangi**	**36.62**	**231**	⇑*iP*	**P**	**00 35 49.7**	**+1.1**
	comp=Z,69nm,0.9s,mb5.2						
TOO	**Toolangi**	**36.62**	**231**	⇑*iP*	**P**	**00 35 49.7**	**+1.1**
TOO				pmax	pmax		
	comp=Z,69nm,0.9s,mb5.2						
TAU	**Tasmania Unive**	**37.72**	**222**	*eP*	**P**	**00 35 58.5**	**+0.9**
WB2	**Warramunga Arr**	**44.09**	**260**	*eP*	**P**	**00 36 47.5**	**-0.6**
WB2				*e*S	**S**	**00 42 36.9**	**-4.1**
WB2	**Warramunga Arr**	**44.09**	**260**	*eP*	**P**	**00 36 48.2**	**+0.1**
WB2				*e*S	**S**	**00 42 36.9**	**-4.1**
WRAB	**Tennant Creek**	**44.10**	**260**	*eP*	**P**	**00 36 48.3**	**+0.1**
WRAB				*e**PP	pP	00 38 20.7	-6.4
WRAB	**Tennant Creek**	**44.10**	**260**	*eP*	**P**	**00 36 48.1**	**0.0**
	comp=Z,7.6nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**44.11**	**260**	P	**P**	**00 36 48.3**	**0.0**
	comp=Z,7.1nm,0.9s,mb4.2,baz=93,slow=7.5,SNR=34						
WRA				PcP	PcP	00 38 21.3	+0.1
	comp=Z,0.4nm,0.5s,baz=88,slow=3.7,SNR=6.5						
WRA				S	**S**	**00 42 37.3**	**-3.9**
	comp=Z,2.2nm,0.7s,baz=93,slow=14,SNR=6.4						
AS31	**Alice Springs**	**44.25**	**255**	*eP*	**P**	**00 36 49.8**	**+0.5**
AS31				*e*S	**S**	**00 42 40.5**	**-2.7**
ASAR	**Alice Springs**	**44.25**	**255**	P	**P**	**00 36 49.9**	**+0.6**
	comp=Z,13nm,0.6s,mb4.6,baz=84,slow=8.5,SNR=139						
ASAR				PcP	PcP	00 38 21.9	+0.1
	comp=Z,4.5nm,0.8s,baz=104,slow=3.8,SNR=7.5						
ASAR				S	**S**	**00 42 41.5**	**-1.7**
	comp=Z,8.4nm,0.8s,baz=92,slow=16,SNR=40						
ASPA	**Alice Springs**	**44.25**	**255**	*eP*	**P**	**00 36 49.8**	**+0.4**
ASPA				*e*S	**S**	**00 42 40.5**	**-2.7**
KAKA	**Kakadu**	**47.09**	**269**	⇓*iP*	**P**	**00 37 10.8**	**-0.2**
	comp=Z,34nm,0.4s,mb5.2						
GUMO	**Guam**	**47.66**	**309**	P	**P**	**00 37 16.0**	**+0.8**
	comp=Z,110nm,0.7s,mb5.5,baz=172,slow=9.6,SNR=11						
FORT	**Forrest**	**49.45**	**245**	*eP*	**P**	**00 37 28.4**	**-0.1**
	comp=Z,50nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**52.51**	**261**	*eP*	**P**	**00 37 51.2**	**+0.5**
	comp=Z,5.2nm,0.6s,mb4.0						
FITZ	**Fitzroy Crossi**	**52.51**	**261**	S	**S**	**00 44 36.2**	**0.0**
	comp=Z,2.1nm,1.0s,baz=214,slow=21,SNR=3.2						
MBWA	**Marble Bar**	**57.54**	**256**	*eP*	**P**	**00 38 25.9**	**+0.1**
	comp=Z,6.7nm,0.5s,mb4.1						
KLBR	**Kellerberrin**	**58.28**	**244**	*eP*	**P**	**00 38 30.4**	**-0.3**
	comp=Z,32nm,0.8s,mb4.6						
MUN	**Mundaring**	**59.57**	**243**	*eP*	**P**	**00 38 39.6**	**+0.2**
SBA	**Scott Base**	**60.12**	**183**	*eP*	**P**	**00 38 45.2**	**+2.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBA				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.5						
SBA	Scott Base	60.12	183	eP	P	00 38 45.1	+2.1
	comp=Z,25nm,0.9s,mb4.5						
VNDA	Vanda	60.14	185	P	P	00 38 43.5	+0.3
	comp=Z,5.5nm,0.9s,mb3.9,baz=358,slow=7.1,SNR=18						
MJAR	Matsushiro Arr	67.83	324	P	P	00 39 31.4	-0.6
	comp=Z,11nm,0.7s,mb4.5,baz=157,slow=5.7,SNR=26						
MAJO	Matsushiro	67.83	324	eP	P	00 39 31.5	-0.6
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
MAJO	Matsushiro	67.83	324	eP	P	00 39 31.5	-0.6
	comp=Z,7.4nm,0.6s,mb4.4						
MAT	Matsushiro	67.83	324	P	P	00 39 31.3	-0.8
MAT	Matsushiro	67.83	324	eP	P	00 39 31.0	-1.1
QSPA	South Pole Qui	71.88	180	eP	P	00 39 56.6	+0.5
QSPA	South Pole Qui	71.88	180	eP	P	00 39 56.4	+0.2
YSS	Yuzh-Sakhalins	73.44	334	⇑eP	P	00 40 04.9	-0.2
YSS				pmax	pmax		
	comp=Z,38nm,2.2s,mb4.4						
SSE	Sheshan	75.53	310	eP	P	00 40 16.1	-0.8
SSE				AMB	AMB		
	comp=Z,34nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,215nm,5.9s						
NJ2	Nanjing	77.73	310	eP	P	00 40 31.9	+3.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.4						
HABR	Khabarovsk	78.00	331	eP	P	00 40 30.3	0.0
HABR				eS	S	00 49 43.5	+4.1
MDJ	Mudanjiang	78.12	325	P	P	00 40 31.5	+0.5
MDJ				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,51nm,5.8s						
CMB	Columbia Colle	78.36	43	eP	P	00 40 32.4	+0.1
	comp=Z,2.1nm,0.9s						
NVAR	Mina Array Bea	79.95	44	P	P	00 40 41.0	+0.4
	comp=Z,1.1nm,0.8s,baz=210,slow=6.9,SNR=8.0						
NVAR				pP	pP	00 42 41.0	+3.3
	comp=Z,1.1nm,0.8s,baz=217,slow=6.9,SNR=5.2						
NVAR	Mina Array Bea	79.95	44	P	P	00 40 41.0	+0.4
NVAR				pP	pP	00 42 41.0	+3.3
MAW	Mawson	83.45	200	⇑iP	P	00 40 58.3	-0.2
	comp=Z,8.6nm,0.9s,mb4.3						
MAW	Mawson	83.45	200	P	P	00 40 58.4	-0.1
	comp=Z,8.6nm,0.6s,mb4.5,baz=105,slow=7.2,SNR=28						
MAW	Mawson	83.45	200	⇑iP	P	00 40 58.3	-0.2
MAW				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HLID	Hailey	85.15	41	eP	P	00 41 07.4	+0.6
	comp=Z,2.5nm,0.9s,mb3.7						
ANMO	Albuquerque	86.64	52	eP	P	00 41 14.4	+0.5
MCMT	McKenzie Canyo	86.75	41	eP	P	00 41 15.2	+0.7
HHC	Hu-ho-hao-te	87.11	315	eP	P	00 41 12.1	-4.0
HHC				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.7						
HHC				AMB	AMB		
	comp=Z,181nm,6.3s						
REDW	Red Top Meadow	87.31	43	eP	P	00 41 17.6	+0.6
	comp=Z,3.3nm,0.8s,mb4.0						
IMW	Indian Meadow	87.51	42	eP	P	00 41 18.2	+0.2
	comp=Z,3.5nm,0.8s,mb4.1						
KMI	Kunming	87.52	297	P	P	00 41 15.8	-2.3
KMI				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.8						
PDAR	Pinedale Array	87.88	44	P	P	00 41 19.1	-0.6
	comp=Z,2.0nm,0.9s,mb3.8,baz=222,slow=2.0,SNR=12						
SDCO	Great Sand Dun	88.50	49	P	P	00 41 23.5	+0.9
SYO	Syowa Base	88.79	193	⇓eP	P	00 41 22.2	-1.8
SNAA	Sanae	90.34	179	eP	P	00 41 29.9	-1.3
SNAA				pmax	pmax		
	comp=Z,30nm,1.4s						
SNAA	Sanae	90.34	179	eP	P	00 41 29.9	-1.3
	comp=Z,30nm,1.4s,mb4.9						
VNA1	Neumayer--Stat	91.17	177	⇓iP	P	00 41 34.7	-0.3
VNA1				e		00 41 35.9	
MKAR	Makanchi Array	108.97	314	PKiKP	PKiKP	00 46 54.0	-1.7
	comp=Z,0.7nm,0.6s,baz=132,slow=0.7,SNR=5.0						
CHKZ	Chkalovo	116.55	321	PKIKP	PKPdf	00 47 08.2	-2.0
ARU	Arti	122.80	326	⇑iPKIKP	PKPdf	00 47 21.7	-0.5
ARCES	ARCESS Array B	126.49	350	PKP	PKPdf	00 47 27.4	-1.8
	comp=Z,1.1nm,0.4s,baz=87,slow=1.7,SNR=24						
JOF	Joensuu	130.66	342	ep	PKPdf	00 47 33.0	-4.2
	comp=Z,1.4nm,0.4s						
JOF	Joensuu	130.66	342	ePKIKP	PKPdf	00 47 33.0	-4.2
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KAF	Kangasniemi	132.69	344	ep	PKPdf	00 47 35.1	-5.9
FINES	FINESS Array B	133.31	344	PKP	PKPdf	00 47 40.9	-1.2
	comp=Z,1.7nm,0.9s,baz=75,slow=1.2,SNR=6.2						
FINES				SKPbc	SKPbc	00 50 17.1	-2.0
	comp=Z,3.5nm,1.0s,baz=346,slow=3.9,SNR=5.4						
FINES	FINESS Array B	133.31	344	PKP	PKPdf	00 47 40.9	-1.2
FINES				SKPbc	SKPbc	00 50 17.1	-2.0
OBN	Obninsk	134.31	332	⇑iPKIKP	PKPdf	00 47 40.7	-3.3
OBN				i		00 50 21.6	
OBN				e		00 54 00.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NOA	NORSAR Array B	136.58	353	PP	PP	00 50 36.1	-1.7
	comp=Z,1.2nm,0.9s,baz=16,slow=3.0,SNR=3.3						
TSUM	Tsumeb	139.47	204	PKP	PKPdf	00 47 54.1	+0.5
	comp=Z,4.4nm,1.1s,baz=180,slow=4.4,SNR=5.8						
TSUM	Tsumeb	139.47	204	PKP	PKPdf	00 47 54.1	+0.5
KMBO	Kilima Mbogo	139.58	246	PKP	PKPdf	00 47 55.2	+1.5
	comp=Z,1.7nm,0.9s,baz=28,slow=8.5,SNR=5.0						
KMBO	Kilima Mbogo	139.58	246	PKP	PKPdf	00 47 55.2	+1.5
AKASG	Malin Array Be	140.57	332	PKP	PKPdf	00 47 54.6	-0.9
	comp=Z,0.2nm,0.3s,baz=34,slow=2.0,SNR=4.7						
AKASG				SKPbc	SKPbc	00 50 38.9	-1.5
	comp=Z,0.3nm,0.3s,baz=34,slow=3.2,SNR=4.9						
KWP	Kalwaria	144.12	336	ePKP	PKPdf	00 48 01.0	-0.8
BURAR	Bucovina Array	144.62	331	⇓iP	PKPdf	00 48 03.7	+1.0
BURAR	Bucovina Array	144.62	331	⇓P	PKPdf	00 48 03.7	+1.1
BR131	Keskin Array S	144.62	314	ePKPdf	PKPdf	00 48 02.3	-0.3
BRTR	Keskin Array B	144.62	314	PKP	PKPdf	00 48 02.4	-0.3
	comp=Z,3.4nm,0.9s,baz=116,slow=2.9,SNR=19						
BRTR				pPKP	pPKPdf	00 50 14.6	+3.2
	comp=Z,1.7nm,1.0s,baz=48,slow=1.8,SNR=6.6						
BRTR				SKPbc	SKPbc	00 50 49.5	-0.7
	comp=Z,1.9nm,1.0s,baz=90,slow=2.5,SNR=4.8						
OJC	Ojcow	144.69	339	ePKP	PKPdf	00 48 02.6	-0.2
KOLS	Kolonicke sedl	144.85	336	ePKP	PKPdf	00 48 03.4	+0.4
CFR	Carcaliu	144.89	326	⇑iP	PKPdf	00 48 02.0	-1.1
CFR	Carcaliu	144.89	326	⇑P	PKPdf	00 48 02.0	-1.1
NIE	Niedzica	145.19	338	ePKP	PKPdf	00 48 04.6	+1.0
CRVS	Cervenica-Dubn	145.19	336	ePKP	PKPdf	00 48 03.9	+0.3
KSP	Ksiaz	145.22	343	ePKP	PKPdf	00 48 04.7	+1.0
KSP	Ksiaz	145.22	343	ePKP	PKPdf	00 48 04.5	+0.8
OKC	Ostrava-Krasne	145.56	340	ePKP	PKPdf	00 48 05.3	+1.0
UPC	Upice	145.60	343	ePKP	PKPdf	00 48 03.9	-0.4
CLL	Collm	145.61	347	ePKPbc	PKPbc	00 48 05.2	-0.7
CLL	Collm	145.61	347	⇑iPKPbc	PKPbc	00 48 05.3	-0.6
	comp=Z,19nm,0.9s						
CLL	Collm	145.61	347	⇑iPKIKP	PKPdf	00 48 05.3	+0.9
CLL				pmax	pmax		
	comp=Z,19nm,0.9s						
CLL	Collm	145.61	347	⇑iPKP	PKPdf	00 48 05.3	+0.9
CLL				i pPKP	pPKPdf	00 50 16.9	+3.8
CLL				i SKP		00 50 51.6	
CLZ	Clausthal	145.61	350	ePKPbc	PKPbc	00 48 05.6	-0.3
DPC	Dobruska-Polom	145.66	343	ePKP	PKPdf	00 48 05.9	+1.5
BRG	Berggiesshubel	145.80	345	ePKP	PKPdf	00 48 06.0	+1.3
	comp=Z,6.3nm,0.9s						
BRG	Berggiesshubel	145.80	345	ePKIKP	PKPdf	00 48 06.0	+1.3
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MLR	Muntele Rosu	145.80	328	⇑iP	PKPdf	00 48 06.0	+1.3
MLR	Muntele Rosu	145.80	328	⇑P	PKPdf	00 48 06.0	+1.3
MORC	Moravsky Berou	145.81	341	⇑iP	PKPdf	00 48 05.8	+1.1
MORC	Moravsky Berou	145.81	341	⇑P	PKPdf	00 48 05.8	+1.1
MMAI	Mount Meron Ar	145.88	302	PKPbc	PKPbc	00 48 07.0	+0.4
	baz=70,slow=4.7						
FBE	Freiberg	145.90	346	ePKPbc	PKPbc	00 48 06.5	-0.2
PVCC	Panska Ves	145.97	345	ePKP	PKPdf	00 48 06.7	+1.8
DRGR		146.35	333	⇓iP	PKPbc	00 48 07.9	0.0
DRGR		146.35	333	⇓P	PKPbc	00 48 07.9	0.0
PRU	Pruhonice	146.47	344	ePKP	PKPdf	00 48 07.8	+2.0
VYHS	Vyhne	146.49	338	ePKP	PKPdf	00 48 07.8	+2.0
VYHS				e		00 50 18.3	
VRAC	Vranov	146.51	342	⇓iP	PKPbc	00 48 08.3	-0.1
VRAC	Vranov	146.51	342	⇓P	PKPbc	00 48 08.3	0.0
MOX	Moxa	146.53	348	ePKPbc	PKPbc	00 48 07.8	-0.6
TANN	Tannenbergstha	146.57	347	ePKPbc	PKPbc	00 48 08.1	-0.4
WERD	Werda	146.57	347	ePKPbc	PKPbc	00 48 07.9	-0.6
GUNZ	Gunzen	146.65	347	ePKPbc	PKPbc	00 48 08.3	-0.4
WERN	Wernitzgruen	146.71	347	ePKPbc	PKPbc	00 48 08.6	-0.3
NKC	Novy Kostel	146.74	347	ePKP	PKPbc	00 48 08.7	-0.3
TREC	Trest	146.85	343	ePKP	PKPdf	00 48 08.2	+1.8
SMOL	Smolenice	146.95	340	ePKP	PKPbc	00 48 09.5	0.0
MANZ	Manzenberg	147.05	347	ePKPbc	PKPbc	00 48 09.5	-0.3
ROTZ	Rotzenmuhle	147.24	347	ePKPbc	PKPbc	00 48 10.0	-0.3
TNS	Taunus Mts	147.49	351	ePKPbc	PKPbc	00 48 10.4	-0.5
KHC	Kasperske Hory	147.51	345	ePKP	PKPbc	00 48 10.8	-0.2
KHC				ex	x	00 50 23.5	
KHC	Kasperske Hory	147.51	345	⇑iPKIKP	PKPbc	00 48 11.0	0.0
GRA1	Grafenberg Arr	147.51	348	ePKPbc	PKPbc	00 48 10.8	-0.2
GRA1				epPKPbc	pPKPbc	00 50 24.8	+7.1
GRF	Grafenberg Arr	147.51	348	ePKPbc	PKPbc	00 48 10.8	-0.2
GRF				epPKPbc	pPKPbc	00 50 24.8	+7.1
BCLA	Clavier	147.65	355	PKPbc	PKPbc	00 48 11.4	0.0
WET	Wettzell	147.67	345	ePKPbc	PKPbc	00 48 11.0	-0.4
GEC2	GERESS Array S	147.74	344	ePKPbc	PKPbc	00 48 11.0	-0.6
GERES	GERESS Array B	147.74	344	PKPbc	PKPbc	00 48 10.7	-0.9
	comp=Z,3.8nm,0.8s,baz=40,slow=2.3,SNR=3.5						
GERES				pPKPbc	pPKPbc	00 50 20.5	+2.1
	comp=Z,0.4nm,0.7s,baz=306,slow=3.3,SNR=2.4						
BZS	Buzias	147.75	333	⇓iP	PKPbc	00 48 11.3	-0.3
BZS	Buzias	147.75	333	⇓P	PKPbc	00 48 11.3	-0.3
GIVF	Givet	148.01	355	ePKP1	PKPbc	00 48 11.2	-1.1
DOU	Dourbes	148.03	356	PKPbc	PKPbc	00 48 11.9	-0.4
BAIF	Baives	148.09	356	ePKP1	PKPbc	00 48 11.5	-1.0
	comp=Z,15nm,0.7s						
WLF	Walferdange	148.32	354	ePKPbc	PKPbc	00 48 13.1	0.0
WLF	Walferdange	148.32	354	PKPbc	PKPbc	00 48 13.4	+0.3
PKSM	Moragy	148.49	336	⇓iP	PKPbc	00 48 13.0	-0.5
PKSM	Moragy	148.49	336	⇓P	PKPbc	00 48 13.0	-0.5
VTS	Vitosha	149.25	327	⇓iP	PKPbc	00 48 15.2	-0.1
VTS	Vitosha	149.25	327	⇓P	PKPbc	00 48 15.2	-0.2
BFO	Black Forest	149.35	350	ePKPbc	PKPbc	00 48 14.9	-0.7
BFO				epPKPab	pPKPab	00 50 28.9	+3.5
BFO	Black Forest	149.35	350	ePKPbc	PKPbc	00 48 15.3	-0.2
BFO				epPKPab	pPKPab	00 50 28.9	+3.5
CDF	Champ du Feu	149.42	352	ePKP1	PKPbc	00 48 14.7	-1.0
	comp=Z,14nm,0.9s						
KBA	Koelnbreinsper	149.46	343	⇑iP	PKPbc	00 48 14.7	-1.1
	comp=Z,7.1nm,0.8s						
FLN	La Foliniere	149.46	2	ePKP1	PKPbc	00 48 14.4	-1.4
	comp=Z,63nm,1.1s						
MEZF	Maizieres J'vi	149.58	355	ePKP1	PKPbc	00 48 15.2	-0.9
	comp=Z,32nm,1.1s						
LDF	La Druitiere	149.64	2	ePKP1	PKPbc	00 48 14.9	-1.4
WTTA	Wattenberg	149.72	346	⇑iP	PKPbc	00 48 16.1	-0.4
	comp=Z,11nm,0.7s						
WTTA	Wattenberg	149.72	346	⇑iP	PKPbc	00 48 16.1	-0.4
MOTA	Moosalm	149.76	346	⇓iP	PKPbc	00 48 15.8	-0.8
	comp=Z,8.0nm,1.0s						
GRR	Gorron	149.82	3	ePKP1	PKPbc	00 48 15.5	-1.2
	comp=Z,19nm,0.7s						
SGMF	Saint Gilles	149.85	5	ePKP1	PKPbc	00 48 15.1	-1.6
SQTA	Sankt Quirin	149.86	346	⇑iP	PKPbc	00 48 16.2	-0.6
	comp=Z,6.5nm,0.9s						
HAU	Haudompre	149.94	353	ePKP1	PKPbc	00 48 15.8	-1.1
LJU	Ljubljana	150.06	341	ePKPbc	PKPbc	00 48 15.9	-1.3
HINF	Hinteralfeld	150.06	352	ePKP1	PKPbc	00 48 16.0	-1.2
	comp=Z,3.2nm,0.5s						
DAVA	Damuels	150.08	348	⇑iP	PKPbc	00 48 16.8	-0.5
	comp=Z,14nm,1.2s						
BOJS	Bojanci	150.30	340	ePKPdf	PKPdf	00 48 11.1	-0.9
BOJS				ePKPbc	PKPbc	00 48 17.5	-0.3
CEY	Cerknica	150.36	341	ePKPbc	PKPbc	00 48 16.9	-1.0
LOR	Lormes	150.90	356	ePKP1	PKPbc	00 48 18.1	-1.1
	comp=Z,28nm,1.0s						
HYF	Humbligny	150.96	358	ePKP1	PKPbc	00 48 18.6	-0.7
SSF	Saint Saulge	151.12	357	ePKP1	PKPbc	00 48 18.7	-1.0
	comp=Z,14nm,0.9s						
CABF	La Chapelle	151.34	353	ePKP1	PKPbc	00 48 19.8	-0.4
MFF	Saint Martin d	151.63	2	ePKP1	PKPbc	00 48 20.4	-0.4
	comp=Z,36nm,1.2s						
BGF	Bois d'Agland	151.66	357	ePKP1	PKPbc	00 48 19.7	-1.2
TCF	Toulx Ste Croi	151.95	358	ePKP1	PKPbc	00 48 20.3	-1.2
LPL	La Plagne	152.33	351	ePKP1	PKPbc	00 48 21.8	-0.6
ORIF	Oris-en-Rattie	153.03	352	ePKP1	PKPbc	00 48 23.3	-0.6
TORD	Torodi Ar. Bea	174.97	187	PKP	PKPdf	00 48 34.4	-0.9
	comp=Z,1.4nm,0.8s,baz=281,slow=1.2,SNR=5.9						
TORD				PKPab	PKPab	00 50 12.9	-1.6
	comp=Z,1.7nm,0.9s,baz=174,slow=4.4,SNR=5.2						

MAN 03 00:36:25.5, 1142N×12443E, h6^{km}, mb2.7, ML4.2, MS2.3, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	Palo	0.59	115	eP	Pg	00 36 37.0	0.0
PLP				eS	Sg	00 36 45.8	+1.1
LLP	Lapu-Lapu	1.19	203	⇓eP	Pg	00 36 47.3	-0.9
LLP				i S	Sg	00 37 04.4	+0.7
TBP	Tagbilaran	1.81	198	eP	Pn	00 36 57.2	0.0
TBP				eS	Sn	00 37 24.1	+3.7

*NEIC **03** 00:45:53.9±1.6, 1149S×10747E, h10^{km}, mb4.1/4, Error ellipse: s-maj=86.9km s-min=9.9km az=224.0*
*ISCJB **03** 00:45:55.4±2.0, 114S±05×1076E±05, h33^{km}, mb3.9/8, Error ellipse: s-maj=102.7km s-min=12.8km az=87.5*
*IDC **03** 00:46:01.3±4.3, 931S×10938E, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.6/16, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=196.2km s-min=25.5km az=51.0*
ISC 03 00:45:57.4±2.1, 115S±05×1075E±05, h35^{km}, n10, σ0^{s}58/10, mb3.9/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBWA	Marble Bar	15.15	131	ePn	Pn	00 49 28.3	-0.3
	2.0nm,0.3s						
FITZ	Fitzroy Crossi	18.72	113	P	Pn	00 50 12.9	-0.6
	0.1nm,0.3s,baz=309,slow=13,SNR=2.9						
WRAB	Tennant Creek	27.14	111	eP	P	00 51 38.4	+1.1
	1.2nm,0.6s,mb3.6						
ASAR	Alice Springs	27.86	119	P	P	00 51 49.5	+5.9
	0.5nm,0.7s,mb3.2,baz=296,slow=8.8,SNR=6.2						
SONM	Songino Array	59.10	359	P	P	00 55 48.6	-5.6
	0.4nm,0.6s,mb3.6,baz=178,slow=6.6,SNR=4.3						
MKAR	Makanchi Array	62.29	341	P	P	00 56 15.4	-0.5
	0.5nm,0.5s,mb3.9,baz=152,slow=7.7,SNR=6.8						
KURK	Kurchatov	66.90	341	P	P	00 56 45.3	-0.7
	1.6nm,0.8s,mb4.1						
BRVK	Borovoye	71.77	337	eP	P	00 57 16.4	+0.3
	0.6nm,0.4s,mb3.9						
CHKZ	Chkalovo	72.13	338	eP	P	00 57 18.5	+0.2
	4.2nm,0.9s,mb4.4						
ZRNK	Zerenda	72.17	337	eP	P	00 57 19.1	+0.5
	1.9nm,0.5s,mb4.3						

*NEIC **03** 00:49:52.2, 1648N×9973W, h10^{km}, MD3.8(MEX), After MEX.*
MEX 03 00:49:49.5±0.5, 1649N×9936W, h10^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.65	305	i P	Pg	00 50 00.5	-1.7
ACX				i S	Sg	00 50 10.0	-0.7
ACX	Acapulco	0.65	305	i P	Pg	00 50 00.5	-1.7
ACX				i S	Sg	00 50 06.0	-4.7
MEIG	Mezcala	1.45	350	i P	Pn	00 50 11.9	-3.9
MEIG				i S	Sn	00 50 29.1	-5.7
PLIG	Platanillo	1.90	356	eP	Pn	00 50 18.6	-3.3
PLIG				i S	Sn	00 50 40.6	-5.3
PLIG	Platanillo	1.90	356	eP	Pn	00 50 19.7	-2.2
PLIG				i S	Sn	00 50 44.2	-1.7
UTMO	Huajuapan	2.00	48	eP	Pn	00 50 20.9	-2.4
UTMO				i S	Sn	00 50 45.2	-3.1
CIVM	Cilcuayo	2.62	8	i P	Pn	00 50 22.7	-9.2
CIVM				i S	Sn	00 50 53.4	-10
PPM	Popocatepetl	2.66	15	i P	Pn	00 50 24.3	-8.1
PPM				eP		00 50 30.7	
PPM				i S	Sn	00 50 52.9	-12
PPM				i S	Sn	00 51 01.9	-2.7
PPM	Popocatepetl	2.66	15	eP	Pn	00 50 33.7	+1.3
PPM				i S	Sn	00 51 08.1	+3.4
IIZ	Mezontepec	2.69	2	eP	Pn	00 50 29.5	-3.2
IIZ				i S	Sn	00 50 59.9	-5.4
TPIG	Tehuac#an	2.71	44	eP	Pn	00 50 33.2	+0.2
TPIG				i S	Sn	00 51 01.5	-4.3
CMIG	Matias Romero	4.33	81	eP	Pn	00 50 53.5	-1.8
CMIG				i S	Sn	00 51 41.9	-4.0
CMIG	Matias Romero	4.33	81	eP	Pn	00 51 06.3	+11
CMIG				i S	Sn	00 51 44.4	-1.5

*NEIC **03** 01:04:32.0, 1830N×10483W, h15^{km}, mb4.3/25, MD4.5(MEX), After MEX.*
*ISCJB **03** 01:04:34.3±0.7, 1841N±007×10444W±004, h33^{km}, mb4.2/25, MS3.7/4, Error ellipse: s-maj=11.8km s-min=3.3km az=51.7*
*MEX **03** 01:04:34.6±0.6, 1856N×10456W, h15^{km}±14^{km}, MD4.3*
*IDC **03** 01:04:37.7±5.3, 1811N×10442W, h86^{km}±45^{km}, mb3.9/5, mb1 4.0/7, mb1mx3.7/21, mbtmp4.2/7, MS3.6/4, Ms1 3.6/4, ms1mx3.1/22, Error ellipse: s-maj=45.2km s-min=31.4km az=48.0*
ISC 03 01:04:37.0±0.8, 1850N±008×10443W±005, h35^{km}, n81, σ1^{s}21/93, mb4.2/25, MS3.7/4, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	Chamela	1.15	330	eP	Pn	01 04 50.5	-6.1
CJM				i S	Sn	01 05 04.1	-7.1
CJM	Chamela	1.15	330	eP	Pn	01 04 50.5	-6.1
CJM				i S	Sn	01 05 05.4	-5.8
SFJM	Santa Fe	2.37	33	i P	Pn	01 05 11.0	-2.4
SFJM				i S	Sn	01 05 36.5	-4.7
SFJM	Santa Fe	2.37	33	i P	Pn	01 05 13.5	+0.1
MOIG	Morelia	3.28	69	i P	Pn	01 05 25.0	-0.9
MOIG				i S	Sn	01 06 02.6	-1.0
MOIG	Morelia	3.28	69	i P	Pn	01 05 27.0	+1.2
MOIG				i S	Sn	01 06 06.8	+3.2
ACX	Acapulco	4.59	110	i P	Pn	01 05 43.5	-0.5
ACX				i S	Sn	01 06 35.0	-1.1
MEIG	Mezcala	4.60	96	i P	Pn	01 05 43.5	-0.6
MEIG				i S	Sn	01 06 37.1	+0.7
PLIG	Platanillo	4.67	91	i P	Pn	01 05 44.8	-0.3
PLIG				i S	Sn	01 06 37.9	-0.2
PLIG	Platanillo	4.67	91	i P	Pn	01 05 45.8	+0.7
PLIG				i S	Sn	01 06 40.4	+2.3
IIZ	Mezontepec	4.96	81	eP	Pn	01 05 48.6	-0.3
IIZ				i S	Sn	01 06 47.5	+2.5
YAIG	Yautepec	5.09	85	i P	Pn	01 05 50.5	-0.4
YAIG				i S	Sn	01 06 48.8	+0.4
YAIG	Yautepec	5.09	85	i P	Pn	01 05 52.4	+1.6
YAIG				i S	Sn	01 06 52.8	+4.4
PPM	Popocatepetl	5.52	83	eP	Pn	01 05 57.0	+0.2
PPM				i S	Sn	01 06 58.0	-1.0
PPM	Popocatepetl	5.52	83	i P	Pn	01 05 59.1	+2.4
UTMO	Huajuapan	6.33	95	i P	Pn	01 06 08.6	+0.7
UTMO				i S	Sn	01 07 18.2	-0.7
TPIG	Tehuac#an	6.71	90	eP	Pn	01 06 13.4	+0.5
TPIG				i S	Sn	01 07 31.6	+3.5
VHO	Vista Hermosa	7.46	100	i P	Pn	01 06 23.5	+0.1
VHO				i S	Sn	01 07 46.2	-0.6
VHO	Vista Hermosa	7.46	100	i P	Pn	01 06 24.8	+1.4
OXX	Oaxaca	7.47	100	i P	Pn	01 06 25.0	+1.5
LNIG	Linares	7.86	35	i P	Pn	01 06 31.8	+3.0
CMIG	Matias Romero	9.20	97	P	Pn	01 06 47.2	+0.1
	0.4nm,0.3s,baz=25,slow=10,SNR=4.1						
CMIG	Matias Romero	9.20	97	i P	Pn	01 06 47.6	+0.5
CMIG	Matias Romero	9.20	97	P	Pn	01 06 47.2	+0.1
CMIG				i P		01 06 47.6	
CCIG	Comitan	11.94	99	i P	Pn	01 07 25.8	+1.1
CCIG	Comitan	11.94	99	i P	Pn	01 07 17.8	-6.8
JCT	Junction City	12.64	19	Pn	Pn	01 07 37.5	+3.2
	9.1nm,1.0s						
TUC	Tucson	14.89	339	ePn	Pn	01 08 05.4	+0.4
NATX	Nacogdoches	15.88	32	ePn	Pn	01 08 21.4	+3.6
LAZ	Ladron	16.02	352	ePn	Pn	01 08 20.9	+1.3
ANMO	Albuquerque	16.48	354	P	Pn	01 08 28.5	+3.0
	0.2nm,0.3s,baz=164,slow=12,SNR=15						
ANMO	Albuquerque	16.48	354	ePn	Pn	01 08 28.6	+3.1
AMTX	Amarillo	16.50	8	ePn	Pn	01 08 27.6	+1.9
	18nm,0.8s						
WMOK	Wichita Mounta	16.93	16	ePn	Pn	01 08 30.2	-1.0
WUAZ	Wupatki	18.03	341	ePn	Pn	01 08 46.2	+1.4
	19nm,0.9s						
MIAR	Mount Ida	18.68	29	eP	Pn	01 08 51.1	-1.5
	3.7nm,0.6s						
MVCO	Mesa Verde	18.98	350	eP	Pn	01 08 55.7	-0.6
PV01	Paradox Valley	19.89	350	eP	Pn	01 09 06.0	-1.2
PV10	Paradox Valley	20.21	349	eP	P	01 09 08.6	-0.2
SMCO	Snowmass	20.72	354	eP	P	01 09 15.1	+0.7
	12nm,1.1s						
MSU	Marysvale	21.05	343	eP	P	01 09 19.0	+1.1
SRU	San Rafael	21.21	347	eP	P	01 09 18.9	-0.7
	6.0nm,1.0s,mb3.9						
ISCO	Idaho Springs	21.25	357	eP	P	01 09 20.3	+0.2
	5.3nm,0.6s,mb4.0						
LRAL	Lakeview Retre	21.30	44	eP	P	01 09 19.8	-0.8
TMUT	Trail Mountain	21.54	346	eP	P	01 09 24.1	+0.9
KSU1	Kansas State U	21.62	17	eP	P	01 09 23.3	-0.8
PLAL	Pickwick Lake	21.92	38	eP	P	01 09 25.7	-1.5
	5.4nm,0.8s,mb4.0						
MPU	Maple Canyon	22.33	345	eP	P	01 09 33.7	+2.1
	40nm,1.8s,mb4.5						
DAU	Daniels Canyon	22.62	346	P	P	01 09 36.3	+1.7
CCM	Cathedral Cave	22.63	28	eP	P	01 09 33.6	-1.2
	9.7nm,0.8s,mb4.3						
DUG	Dugway	22.80	343	eP	P	01 09 36.8	+0.2
	7.5nm,1.2s,mb4.0						
WVT	Waverly	22.87	37	eP	P	01 09 35.1	-2.2
	6.6nm,0.8s,mb4.1						
FVM	French Village	22.95	29	P	P	01 09 39.1	+1.0
	11nm,0.6s,mb4.5						
NVAR	Mina Array Bea	23.25	331	P	P	01 09 41.6	+0.2
	0.4nm,0.5s,baz=134,slow=8.9,SNR=5.1						
SWET	Sewanee	23.37	41	eP	P	01 09 40.2	-2.4
HWUT	Hardware Ranch	23.83	347	eP	P	01 09 47.4	+0.6
	4.3nm,1.0s,mb3.8						
USIN	University of	24.30	34	eP	P	01 09 50.9	-0.2
	45nm,0.7s,mb5.0						
CPCT	Cooper Cave	24.41	42	eP	P	01 09 51.5	-0.6
PDAR	Pinedale Array	24.58	351	P	P	01 09 52.8	-0.9
	4.8nm,0.6s,mb4.2,baz=173,slow=12,SNR=12						
REDW	Red Top Meadow	25.37	349	eP	P	01 10 00.8	-0.1
	13nm,1.2s,mb4.3						
RRI2	Red Ridge	25.45	348	eP	P	01 10 01.5	0.0
	24nm,1.4s,mb4.5						
SNOW	Snow King Moun	25.45	349	eP	P	01 10 01.6	0.0
	18nm,1.1s,mb4.5						
TPAW	Teton Pass	25.51	349	eP	P	01 10 03.2	+1.0
	18nm,1.1s,mb4.5						
RSSD	Black Hills	25.55	1	eP	P	01 10 01.7	-0.7
	2.2nm,0.6s,mb3.9						
MOOW	Moose Ponds	25.73	349	eP	P	01 10 03.8	-0.3
	14nm,1.5s,mb4.3						
BLO	Bloomington	25.80	33	eP	P	01 10 04.2	-0.5
	11nm,0.7s,mb4.5						
HLID	Hailey	26.37	344	P	P	01 10 09.8	0.0
	2.5nm,1.0s,mb3.7						
FWV	Forest Hill	28.08	43	P	P	01 10 27.8	+2.6
BMO	Blue Mountains	28.39	341	eP	P	01 10 27.7	-0.4
	1.6nm,0.8s,mb3.7						
ULM	Lac du Bonnet	32.41	10	P	P	01 11 01.1	-2.3
	1.6nm,0.5s,mb4.1,baz=200,slow=8.7,SNR=5.8						
ULM				LR	LR	01 24 52.5	
	comp=Z,105nm,20.8s,MS3.5,baz=196,slow=37						
SADO	Sadowa	33.64	33	P	P	01 11 11.6	-2.6
	8.1nm,1.0s,mb4.6,baz=246,slow=5.6,SNR=5.9						
SADO	Sadowa	33.64	33	P	P	01 11 11.6	-2.7
YKA	Yellowknife Ar	44.52	353	P	P	01 12 44.2	-0.9
	1.9nm,0.9s,mb3.9,baz=165,slow=7.5,SNR=16						
YKA	Yellowknife Ar	44.52	353	P	P	01 12 44.2	-0.9
SCHQ	Schefferville	46.19	29	P	P	01 12 57.9	-0.5
	4.3nm,0.7s,mb4.5,baz=226,slow=8.3,SNR=7.2						
SCHQ	Schefferville	46.19	29	eP	P	01 12 58.2	-0.1
	25nm,1.4s,mb5.0						
INK	Inuvik	53.05	347	eP	P	01 13 48.4	-2.2
	9.6nm,1.1s,mb4.6						
ARCES	ARCESS Array B	85.35	16	LR	LR	01 55 59.3	
	comp=Z,61nm,18.6s,MS4.0,baz=338,slow=36						
NOA	NORSAR Array B	85.66	26	LR	LR	01 52 48.6	
	comp=Z,20nm,21.4s,MS3.5,baz=260,slow=34						
GERES	GERESS Array B	93.37	36	LR	LR	02 04 05.5	
	comp=Z,23nm,18.3s,MS3.7,baz=95,slow=38						
WRA	Warramunga Arr	124.74	258	PKP	PKPdf	01 23 27.2	-5.7
	0.4nm,0.8s,baz=97,slow=1.3,SNR=4.5						

ISC 03 01:25:08.0±0.9, 4526N±003×1458E±009, h10^{km}, n5,

σ0^{s}61/8, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDS	**Knezji Dol**	**0.31**	**333**	*i* Sg	**Sg**	**01 25 18.2**	**-0.1**
CEY	**Cerknica**	**0.49**	**348**	*i* Sg	**Sg**	**01 25 24.7**	**+0.5**
BOJS	**Bojanci**	**0.54**	**62**	*i* Pg	**Pg**	**01 25 17.8**	**-0.6**
BOJS				*i* Sg	**Sg**	**01 25 26.0**	**+0.5**
BOJS							
	comp=Z,4.0nm,0.1s						
VISS	**Visnje**	**0.58**	**19**	*i* Pg	**Pg**	**01 25 18.0**	**-1.2**
VISS				*i* Sg	**Sg**	**01 25 27.2**	**+0.4**
VISS							
	comp=Z,1.0nm,0.1s						
NVLJ	**Novalja**	**0.72**	**163**	*i* (Pg)	**Pg**	**01 25 22.6**	**+0.6**
NVLJ				*i* Sg	**Sg**	**01 25 31.2**	**-0.2**

*NEIC **03** 01:40:18.1, 3578S×7173W, h71km, MD3.9(GUC), After GUC.*
NEIC Felt [III] at Talca.
GUC 03 01:40:18.1±0.7**, 3578S×7173W, h71**km±3km**, MD3.9, ML4.0, 5C-9D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.39**	**11**	⇓*i*P	Pn	01 40 30.5	+0.5
TALC				*i* S	Sn	01 40 39.0	+0.2
TALC				AML	AML	01 40 39.5	
	comp=N,70μm,0.1s						
TALC	**Talca**	**0.39**	**11**	⇓*i*P	Pn	01 40 30.5	+0.5
TALC				*i* S	Sn	01 40 39.0	+0.2
CNCO	**Chanco**	**0.66**	**274**	⇓*i*P	Pn	01 40 43.2	+11
CNCO				*i* S	Sn	01 40 54.3	+11
CTCH	**Constitucion**	**0.72**	**308**	⇓*i*P	Pn	01 40 33.7	+0.4
CTCH				*i* S	Sn	01 40 44.8	+0.4
CTCH				AML	AML	01 40 46.9	
	comp=E,15μm,0.7s						
CTCH	**Constitucion**	**0.72**	**308**	⇓*i*P	Pn	01 40 33.7	+0.4
CTCH				*i* S	Sn	01 40 44.8	+0.4
CCHI	**Chillan**	**0.87**	**199**	⇓*i*P	Pn	01 40 35.4	+0.3
CCHI				*i* S	Sn	01 40 47.9	+0.2
CCHI				AML	AML	01 40 52.2	
	comp=E,3μm,0.2s						
CCHI	**Chillan**	**0.87**	**199**	⇓*i*P	Pn	01 40 35.4	+0.3
CCHI				*i* S	Sn	01 40 47.9	+0.2
NICH	**Los Niches**	**0.87**	**28**	⇓*i*P	Pn	01 40 35.5	+0.4
NICH				*i* S	Sn	01 40 48.2	+0.6
SFDO	**San Fernando**	**1.30**	**27**	⇑*i*P	Pn	01 40 40.8	+0.3
CICH	**Cipreses**	**1.81**	**37**	*e*P	Pn	01 40 48.3	+1.1
LNV	**Longovilo**	**1.84**	**8**	⇑*i*P	Pn	01 40 48.0	+0.4
CACH	**El Canelo**	**1.90**	**29**	⇓*i*P	Pn	01 40 48.9	+0.5
CHCH	**Chadas Angostu**	**2.04**	**26**	⇑*i*P	Pn	01 40 50.8	+0.5
CHCH				*i* S	Sn	01 41 16.1	+1.2
TACH	**Talagante**	**2.22**	**17**	*e*P	Pn	01 40 52.6	-0.1
TACH				*i* S	Sn	01 41 19.2	+0.1
LCCH	**Las Cruces**	**2.30**	**3**	*i* P	Pn	01 40 52.7	-1.1
PCH	**Pirque**	**2.37**	**25**	*e*P	Pn	01 40 55.1	+0.3
PCH				*i* S	Sn	01 41 23.4	+0.6
ANTU	**Antumapu**	**2.38**	**23**	*e*P	Pn	01 40 55.2	+0.3
ANTU				*i* S	Sn	01 41 23.9	+0.9
ANTU				AML	AML	01 41 27.4	
	comp=E,838nm,0.6s						
ANTU	**Antumapu**	**2.38**	**23**	*e*P	Pn	01 40 55.2	+0.3
ANTU				*i* S	Sn	01 41 23.9	+0.9
RCDM	**Rinconada Maip**	**2.41**	**19**	*e*P	Pn	01 40 55.3	+0.1
RCDM				*i* S	Sn	01 41 24.0	+0.4
RCDM				AML	AML	01 41 31.2	
	comp=E,494nm,0.1s						
RCDM	**Rinconada Maip**	**2.41**	**19**	*e*P	Pn	01 40 55.3	+0.1
RCDM				*i* S	Sn	01 41 24.0	+0.4
CLCH	**Cerro Calan**	**2.57**	**23**	*e*P	Pn	01 40 57.9	+0.4
CLCH				*i* S	Sn	01 41 28.5	+0.9
CLCH				AML	AML	01 41 51.2	
	comp=N,434nm,0.9s						
FCH	**Farellones**	**2.72**	**26**	*e*P	Pn	01 41 00.6	+1.2
FCH				*i* S	Sn	01 41 33.0	+1.9
FCH				AML	AML	01 41 39.6	
	comp=N,377nm,0.2s						
PEL	**Peldehue**	**2.77**	**18**	⇑*e*P	Pn	01 41 00.7	+0.6
PEL				*i* S	Sn	01 41 32.9	+0.5
PEL				AML	AML	01 41 41.7	
	comp=E,458nm,0.3s						
PEL	**Peldehue**	**2.77**	**18**	⇑*e*P	Pn	01 41 00.7	+0.6
PEL				*i* S	Sn	01 41 32.9	+0.5
JACH	**Jahuel**	**3.23**	**17**	*i* P	Pn	01 41 06.3	-0.1
PLCA	**Paso Flores**	**5.03**	**170**	*e*Pn	Pn	01 41 32.8	+1.7
PLCA				*e*Sn	Sn	01 42 27.5	-0.3

*IDC **03** 01:50:25.1±0.8, 1007S×10892E, h0km, mb4.4/12, mb1 4.5/13, mb1mx4.3/20, mbtmp4.4/13, ML3.9/1, MS3.8/1, Ms1 3.8/1, ms1mx2.7/17, Error ellipse: s-maj=41.1km s-min=14.6km az=45.0*
*BJI **03** 01:50:25.3, 10.10S×108.80E, h10km, mB5.1, mb4.7, Ms4.6, Msz4.3*
*NEIC **03** 01:50:27.3±0.3, 10.10S×108.84E, h10km, mb4.7/12, Error ellipse: s-maj=13.4km s-min=6.1km az=52.0*
*ISCJB **03** 01:50:28.7±2.6, 1020S±0.06×10880E±0.09, h33km±18km, mb4.5/27, MS3.8/4, Error ellipse: s-maj=16.2km s-min=7.8km az=118.4*
ISC 03 01:50:30.9±2.5**, 1020S**±006×**10880E**±008**, h34**km±18km**, h20**km±4.7km**: pP-P, n60,** σ**1**^{s}**07**/58**, mb4.5**/27**, MS3.8**/4**, 1C-1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.99**	**18**	⇑*i*P	**Pn**	**01 51 15.3**	**-0.6**
BJII				*i* S	**Sn**	**01 51 55.9**	**+5.4**
MBWA	**Marble Bar**	**15.14**	**137**	*e*Pn	**Pn**	**01 53 54.3**	**-7.8**
	4.5nm,0.5s						
MBWA				*e*Sn	**Sn**	**01 56 35.1**	**-13**
PSI	**Prapat**	**16.23**	**322**	Pn	**Pn**	**01 54 16.1**	**-0.2**
	0.6nm,0.3s,baz=0.0,slow=20,SNR=3.5						
KULM	**Kulim**	**17.40**	**332**	Pn	**Pn**	**01 54 33.5**	**+2.6**
KKM	**Kota Kinabalu**	**17.75**	**25**	*e*Pn	**Pn**	**01 54 36.3**	**+1.0**
FITZ	**Fitzroy Crossi**	**18.11**	**118**	*e*P	**Pn**	**01 54 39.4**	**-0.3**
	7.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.11**	**118**	P	**Pn**	**01 54 37.2**	**-2.5**
	0.3nm,0.3s,baz=291,slow=8.5,SNR=12						
FITZ				S	**Sn**	**01 57 42.4**	**-18**
	0.1nm,0.3s,baz=189,slow=19,SNR=3.4						
WRA	**Warramunga Arr**	**26.46**	**114**	P	**P**	**01 56 03.6**	**-1.1**
	3.3nm,0.8s,mb3.9,baz=287,slow=11,SNR=14						
WRA				Sn	S	02 01 06.1	+30
	0.8nm,0.6s,baz=279,slow=24,SNR=3.5						
WRAB	**Tennant Creek**	**26.47**	**114**	*e*P	**P**	**01 56 04.3**	**-0.4**
	3.2nm,0.5s,mb4.1						
AS31	**Alice Springs**	**27.43**	**122**	*e*P	**P**	**01 56 15.1**	**+1.6**
ASAR	**Alice Springs**	**27.43**	**122**	P	**P**	**01 56 13.0**	**-0.4**
	1.6nm,0.6s,mb3.7,baz=297,slow=9.2,SNR=17						
ASAR				PcP	PcP	01 59 32.5	+0.9
	1.0nm,0.6s,baz=301,slow=1.8,SNR=7.1						
ASAR				Sn	S	02 01 27.5	+36
	0.7nm,0.8s,baz=294,slow=22,SNR=4.5						
KMI	**Kunming**	**35.60**	**351**	P	**P**	**01 57 28.2**	**+3.0**
KMI				AP	pP	01 57 31.6	-3.5
KMI				XP	sP	01 57 33.0	-6.2
KMI				S	**S**	**02 03 05.2**	**+6.2**
KMI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.5						
KMI				LR	LR		
	comp=Z,78nm,18.0s,MS3.5						
STKA	**Stephens Creek**	**37.20**	**130**	P	**P**	**01 57 38.1**	**-0.8**
	comp=Z,6.4nm,0.8s,mb4.5,baz=295,slow=9.9,SNR=10						
STKA	**Stephens Creek**	**37.20**	**130**	*e*P	**P**	**01 57 39.1**	**+0.2**
STKA				*e*	pP	01 57 49.3	+0.5
NJ2	**Nanjing**	**43.10**	**13**	*e*P	**P**	**01 58 28.5**	**+0.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
JIRN	**Jiri**	**43.55**	**330**	*e*P	**P**	**01 58 31.8**	**+0.5**
PKI	**Pulchoki**	**43.86**	**329**	*e*P	**P**	**01 58 33.6**	**-0.2**
GUN	**Gumba**	**43.91**	**330**	*e*P	**P**	**01 58 34.5**	**+0.3**
DMN	**Daman**	**44.04**	**329**	*e*P	**P**	**01 58 35.3**	**0.0**
KKN	**Kakani**	**44.10**	**329**	*e*P	**P**	**01 58 35.7**	**-0.1**
GKN	**Gorkha**	**44.60**	**329**	*e*P	**P**	**01 58 40.1**	**+0.3**
KOLN	**Koldanda**	**44.95**	**328**	*e*P	**P**	**01 58 42.6**	**+0.1**
	comp=Z,22nm,0.7s,mb5.1						
TAU	**Tasmania Unive**	**46.75**	**141**	P	**P**	**01 58 58.3**	**+1.5**
GTA	**Gaotai**	**50.06**	**351**	*e*P	**P**	**01 59 23.3**	**+1.1**
GTA				AP	pP	01 59 30.3	-2.1
GTA				XP	sP	01 59 33.8	-2.7
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.5						
HHC	**Hu-ho-hao-te**	**50.86**	**3**	*e*P	**P**	**01 59 30.5**	**+2.2**
HHC				AP	pP	01 59 35.0	-3.5
HHC				XP	sP	01 59 37.5	-5.0
HHC				PCP	PcP	02 00 46.6	+2.0
HHC				PP	PP	02 01 27.8	+3.1
HHC				SCP	ScP	02 04 41.0	+2.8
HHC				PCS	PcS	02 04 42.7	+0.6
HHC				S	**S**	**02 06 45.8**	**+3.6**
HHC				XS	sS	02 06 53.4	-5.6
HHC				PS		02 06 55.6	
HHC				SCS	ScS	02 09 17.6	+1.3
HHC				SS	SS	02 10 18.5	+1.5
HHC				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,204nm,5.5s						
HHC				LR	LR		
	comp=N,266nm,17.1s,MS4.5						
HHC				LR	LR		
	comp=E,222nm,14.9s,MS4.5						
HHC				LR	LR		
	comp=Z,169nm,16.1s,MS4.2						
MJAR	**Matsushiro Arr**	**54.11**	**29**	P	**P**	**01 59 49.1**	**-3.2**
	comp=Z,0.7nm,0.3s,mb4.1,baz=195,slow=7.3,SNR=5.7						
CN2	**Changchun**	**55.84**	**15**	*e*P	**P**	**02 00 01.9**	**-3.0**
WMQ	**Urumqi**	**57.09**	**342**	*e*P	**P**	**02 00 14.0**	**+0.2**
WMQ				XP	sP	02 00 21.0	-7.1
WMQ				PP	PP	02 02 22.0	+1.3
WMQ				S	**S**	**02 08 06.0**	**-0.3**
WMQ				SS	SS	02 11 55.0	-0.3
WMQ				AMB	AMB		
	comp=Z,14nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,89nm,5.0s						
WMQ				LR	LR		
	comp=N,41nm,14.0s,MS3.8						
WMQ				LR	LR		
	comp=E,38nm,14.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,34nm,14.0s,MS3.6						
MDJ	**Mudanjiang**	**57.72**	**17**	P	**P**	**02 00 19.5**	**+1.3**
MDJ				XP	sP	02 00 24.0	-8.5
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,54nm,4.6s						
SONM	**Songino Array**	**57.82**	**358**	P	**P**	**02 00 18.8**	**-0.1**
	comp=Z,3.0nm,0.6s,mb4.5,baz=177,slow=8.0,SNR=24						
SONM				LR	LR	02 26 31.9	
	comp=Z,70nm,18.5s,MS3.8,baz=356,slow=38						
ULN	**Ulaanbaatar**	**57.83**	**359**	*e*P	**P**	**02 00 18.2**	**-0.8**
	comp=Z,4.3nm,1.0s,mb4.4						
MKAR	**Makanchi Array**	**61.48**	**340**	P	**P**	**02 00 43.3**	**-0.8**
	comp=Z,5.2nm,0.7s,mb4.8,baz=145,slow=7.7,SNR=45						
MAW	**Mawson**	**64.85**	**198**	P	**P**	**02 01 08.1**	**+1.7**
KURK	**Kurchatov**	**66.10**	**340**	*e*P	**P**	**02 01 13.9**	**-0.6**
	comp=Z,5.0nm,0.8s,mb4.6						
ZAL	**Zalesovo**	**67.06**	**345**	P	**P**	**02 01 19.5**	**-1.1**
	comp=Z,2.9nm,0.4s,mb4.7,baz=308,slow=4.8,SNR=5.3						
ZAL	**Zalesovo**	**67.06**	**345**	P	**P**	**02 01 19.5**	**-1.1**
BVAR	**Borovoye Array**	**70.99**	**337**	P	**P**	**02 01 44.1**	**-0.9**
	comp=Z,8.4nm,0.7s,mb4.8,baz=144,slow=8.3,SNR=49						
BRVK	**Borovoye**	**71.06**	**337**	*e*P	**P**	**02 01 44.7**	**-0.8**
	comp=Z,5.1nm,1.0s,mb4.4						
CHKZ	**Chkalovo**	**71.40**	**337**	*e*P	**P**	**02 01 47.2**	**-0.3**
	comp=Z,14nm,0.6s,mb5.1						
ZRNK	**Zerenda**	**71.48**	**336**	*e*P	**P**	**02 01 47.1**	**-1.0**
	comp=Z,12nm,0.7s,mb4.9						
VNDA	**Vanda**	**72.51**	**169**	P	**P**	**02 01 54.2**	**0.0**
SYO	**Syowa Base**	**73.14**	**201**	⇓*e*P	**P**	**02 01 56.4**	**-1.5**
AKTK	**Aktyubinsk**	**74.77**	**329**	P	**P**	**02 02 06.3**	**-1.1**
AKTO	**Aktyubinsk**	**74.77**	**329**	P	**P**	**02 02 06.3**	**-1.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=136,slow=8.7,SNR=5.0						
ARU	**Arti**	**78.26**	**334**	*e*P	**P**	**02 02 26.1**	**-1.0**
	comp=Z,5.0nm,1.0s,mb4.4						
QSPA	**South Pole Qui**	**79.81**	**180**	P	**P**	**02 02 36.7**	**+1.0**
ASF	**Jabal al Asfar**	**80.44**	**305**	P	**P**	**02 02 38.8**	**-0.2**
	comp=Z,1.2nm,0.7s,mb3.9,baz=315,slow=8.1,SNR=3.5						
EIL	**Elat**	**81.28**	**302**	*e*P	**P**	**02 02 44.0**	**+0.4**
	comp=Z,39nm,0.6s,mb5.5						
MMAI	**Mount Meron Ar**	**81.90**	**306**	P	**P**	**02 02 47.1**	**+0.3**
	comp=Z,2.2nm,0.7s,mb4.2,baz=122,slow=7.9,SNR=5.6						
BR131	**Keskin Array S**	**85.27**	**312**	*e*P	**P**	**02 03 03.9**	**-0.2**
	comp=Z,3.1nm,0.9s,mb4.4						
BRTR	**Keskin Array B**	**85.27**	**312**	P	**P**	**02 03 03.7**	**-0.4**
	comp=Z,2.6nm,0.9s,mb4.4,baz=137,slow=6.6,SNR=17						
SNAA	**Sanae**	**87.01**	**197**	P	**P**	**02 03 13.7**	**+1.0**
YKA	**Yellowknife Ar**	**119.20**	**21**	PKP	PKPdf	02 09 15.4	-0.9
	comp=Z,0.3nm,0.5s,baz=331,slow=1.0,SNR=6.9						
YKA	**Yellowknife Ar**	**119.20**	**21**	PKP	PKPdf	02 09 15.4	-0.9
WMOK	**Wichita Mounta**	**144.93**	**42**	*e*PKPdf	PKPdf	02 10 04.6	+0.3
JCT	**Junction City**	**146.61**	**49**	*e*PKP	PKPdf	02 10 10.4	+3.2
CCM	**Cathedral Cave**	**146.94**	**30**	*e*PKP	PKPdf	02 10 09.8	+2.0
BINY	**Binghamton**	**147.85**	**7**	*e*PKPdf	PKPdf	02 10 10.1	+0.8
MIAR	**Mount Ida**	**148.29**	**37**	*e*PKPbc	PKPbc	02 10 14.5	+1.0
WVT	**Waverly**	**150.10**	**28**	*e*PKPbc	PKPbc	02 10 18.6	+0.6

*NEIC **03** 02:40:47.9, 1583N×9840W, h16km, MD3.9(MEX), After MEX.*
MEX 03 02:40:50.1±0.7**, 1626N×9835W, h8**km±10km**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**1.62**	**292**	*i* P	Pn	02 41 15.8	-3.1
ACX				*i* S	Sn	02 41 35.0	-5.0
UTMO	**Huajuapan**	**1.65**	**18**	*i* P	Pn	02 41 15.8	-3.5
UTMO				*i* S	Sn	02 41 36.6	-4.0
VHO	**Vista Hermosa**	**1.75**	**62**	*e*P	Pn	02 41 16.9	-3.7
VHO				*i* S	Sn	02 41 39.5	-3.5
VHO	**Vista Hermosa**	**1.75**	**62**	*e*P	Pn	02 41 16.9	-3.7
VHO				*i* S	Sn	02 41 42.5	-0.6
OXX	**Oaxaca**	**1.76**	**62**	*i* P	Pn	02 41 18.0	-2.8
OXX				*i* S	Sn	02 41 43.3	-0.1
MEIG	**Mezcala**	**2.06**	**324**	*e*P	Pn	02 41 21.5	-3.4
MEIG				*i* S	Sn	02 41 45.2	-5.5
HUIG	**Huatulco**	**2.21**	**102**	*e*P	Pn	02 41 24.9	-2.1
HUIG				*i* S	Sn	02 41 49.0	-5.4
HUIG	**Huatulco**	**2.21**	**102**	*i* P	Pn	02 41 18.3	-8.6
HUIG				*i* S	Sn	02 41 46.6	-7.8
TPIG	**Tehuac#an**	**2.35**	**23**	*e*P	Pn	02 41 26.3	-2.6
TPIG				*i* S	Sn	02 41 54.2	-3.6
PLIG	**Platanillo**	**2.39**	**333**	*e*P	Pn	02 41 26.6	-3.0
PLIG				*i* S	Sn	02 41 53.9	-5.1
PLIG	**Platanillo**	**2.39**	**333**	*i* P	Pn	02 41 30.4	+0.8
PLIG				*i* S	Sn	02 41 57.2	-1.8
PPM	**Popocatepetl**	**2.81**	**355**	*e*P	Pn	02 41 32.5	-2.7
PPM				*i* S	Sn	02 42 06.0	-3.2
PPM	**Popocatepetl**	**2.81**	**355**	*e*P	Pn	02 41 38.2	+3.0
PPM				*i* S	Sn	02 42 07.5	-1.7
IIZ	**Mezontepec**	**3.04**	**344**	*e*P	Pn	02 41 40.4	+2.0
IIZ				*i* S	Sn	02 42 14.3	-0.6
CMIG	**Matias Romero**	**3.42**	**75**	*e*P	Pn	02 41 39.3	-4.4
CMIG				*i* S	Sn	02 42 20.0	-4.3
CMIG	**Matias Romero**	**3.42**	**75**	*e*P	Pn	02 41 39.3	-4.4
CMIG				*i* S	Sn	02 42 18.1	-6.2

*IDC **03** 02:45:21.9±14.0, 4970N×15673E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/20, mbtmp3.7/4, Error ellipse: s-maj=328.8km s-min=80.9km az=149.0*
*KRSC **03** 02:46:27, 5131N×15444E, h534km, ML4.5*
*ISCJB **03** 02:46:30.0±0.9, 517N±02×1542E±04, h515km±18km, mb3.2/4, Error ellipse: s-maj=50.8km s-min=13.3km az=68.6*
*MOS **03** 02:46:29.3±0.5, 5225N×15285E, h455km, mb3.5/3, Error ellipse: s-maj=33.1km s-min=25.8km az=75.9*
ISC 03 02:46:31.2±0.8**, 519N**±02×**1537E**±05**, h495**km±22km**, n31,** σ**1**^{s}**53**/43**, mb3.3**/4**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.56**	**133**	*e*P	**P**	**02 47 32.9**	**-1.0**
MIPR	**Malaya Ipel'ka**	**1.89**	**79**	*i* P	**P**	**02 47 34.2**	**-1.1**
GRL	**Gorelyy**	**2.73**	**75**	*e*P	**P**	**02 47 40.6**	**+0.6**
RUS	**Russkaya**	**2.98**	**79**	P	**P**	**02 47 41.7**	**+0.1**
RUS				S	**S**	**02 48 36.1**	**-2.8**
RUS	**Russkaya**	**2.98**	**79**	*e*P	**P**	**02 47 41.7**	**+0.1**
RUS				*e*S	**S**	**02 48 36.1**	**-2.8**
GNL	**Ganaly**	**3.09**	**54**	*e*P	**P**	**02 47 43.6**	**+1.2**
PET	**Petropavlovsk**	**3.19**	**68**	*e*S	**S**	**02 48 40.7**	**-0.9**
AVH	**Avacha**	**3.32**	**65**	*e*P	**P**	**02 47 45.8**	**+1.8**
AVH				*e*S	**S**	**02 48 43.5**	**+0.2**
NLC	**Nalytchevo**	**3.63**	**68**	*e*S	**S**	**02 48 45.5**	**-2.1**
SPN	**Mys Shipunski**	**4.01**	**71**	P	**P**	**02 47 49.3**	**0.0**
SPN				S	**S**	**02 48 48.5**	**-4.5**
SPN	**Mys Shipunski**	**4.01**	**71**	*e*P	**P**	**02 47 49.3**	**0.0**
SPN				*e*S	**S**	**02 48 48.5**	**-4.5**
MKZ	**Mys Kozlova**	**5.46**	**58**	P	**P**	**02 48 02.1**	**-0.1**
MKZ				S	**S**	**02 49 12.1**	**-4.4**
MKZ	**Mys Kozlova**	**5.46**	**58**	*e*P	**P**	**02 48 02.1**	**-0.1**
MKZ				*e*S	**S**	**02 49 12.1**	**-4.4**
KPT	**Kopyto**	**5.56**	**41**	*e*P	**P**	**02 48 04.7**	**+1.7**
SRDR	**Sredinnyy**	**5.62**	**36**	*e*P	**P**	**02 48 05.7**	**+2.1**
ZLN	**Zelenaya**	**5.83**	**43**	*e*P	**P**	**02 48 07.6**	**+1.9**
ZLN				*e*S	**S**	**02 49 21.8**	**-1.1**
KRSR	**Krestovskiy**	**5.87**	**40**	*e*P	**P**	**02 48 07.6**	**+1.6**
CIRR	**Tsirk**	**5.87**	**42**	*e*P	**P**	**02 48 08.7**	**+2.6**
BDR	**Baidarnaya**	**6.37**	**40**	*e*P	**P**	**02 48 13.6**	**+2.7**
SRKR	**Sorokina**	**6.42**	**40**	*e*P	**P**	**02 48 13.5**	**+2.2**
SRKR				*e*S	**S**	**02 49 31.9**	**-1.4**
SMKR	**Semkarok**	**6.49**	**41**	*e*P	**P**	**02 48 14.5**	**+2.5**
SMKR				*e*S	**S**	**02 49 32.9**	**-1.7**
KBTR	**Krutoberegovo**	**6.84**	**48**	P	**P**	**02 48 15.9**	**+0.3**
KBTR				S	**S**	**02 49 36.2**	**-4.8**
KBTR	**Krutoberegovo**	**6.84**	**48**	*e*P	**P**	**02 48 15.9**	**+0.3**
KBTR				*e*S	**S**	**02 49 36.2**	**-4.8**
MKAR	**Makanchi Array**	**45.10**	**293**	P	**P**	**02 54 00.4**	**-2.0**
	0.3nm,0.3s,mb3.1,baz=66,slow=11,SNR=4.2						
ARCES	**ARCESS Array B**	**53.10**	**340**	P	**P**	**02 55 00.8**	**-1.0**
	1.5nm,1.0s,mb3.3,baz=31,slow=8.9,SNR=4.5						
ARCES	**ARCESS Array B**	**53.10**	**340**	P	**P**	**02 55 00.8**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
JOF	**Joensuu**	**56.89**	**333**	*e*p	**P**	**02 55 26.5**	**-1.8**
	comp=Z,0.5nm,0.3s,mb3.3						
JOF	**Joensuu**	**56.89**	**333**	*e*P	**P**	**02 55 26.5**	**-1.8**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
FINES	**FINESS Array B**	**59.54**	**334**	P	**P**	**02 55 45.5**	**-0.8**
	comp=Z,0.5nm,0.5s,mb3.2,baz=37,slow=7.4,SNR=9.5						
FINES	**FINESS Array B**	**59.54**	**334**	P	**P**	**02 55 45.5**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**73.97**	**334**	P	**P**	**02 57 15.5**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=26,slow=5.4,SNR=3.8						

*BJI **03** 03:08:10.8, 38.14N×122.28W, h24km, mB4.8, mb4.9, Ms4.8, Msz4.3*
*ISCJB **03** 03:08:11.7±0.4, 3833N±0.01×12255W±0.02, h13km±3km, mb4.6/26, MS4.0/29, Error ellipse: s-maj=2.9km s-min=1.8km az=147.1*
*MOS **03** 03:08:11.6±1.2, 3835N×12251W, h10km, mb4.7/12, Error ellipse: s-maj=6.7km s-min=5.8km az=122.2*
*NEIC **03** 03:08:12.9, 3836N×12259W, h9km, mb4.6/13, MW4.4(BRK), After NCEDC.*
NEIC Items knocked from shelves in the epicentral area. Felt [VI] at Glen Ellen; [V] at Kenwood, Penngrove and Sonoma; [IV] at Yountville; [III] at Concord, Daly City, Oakland, San Francisco, Santa Rosa, Sunnyvale, Vacaville and Vallejo. Felt from Mendocino and Oroville to San Juan Bautista.
*IDC **03** 03:08:13.0±1.0, 3859N×12252W, h0km, mb4.0/10, mb1 4.1/14, mb1mx4.0/26, mbtmp3.9/14, ML3.8/4, MS4.0/30, Ms1 4.0/30, ms1mx3.8/44, Error ellipse: s-maj=15.5km s-min=8.9km az=38.0*
ISC 03 03:08:13.0±0.3**, 3834N**±001×**12259W**±002**, h13**km±2km**, n304,** σ**0**^{s}**88**/328**, mb4.6**/26**, MS4.0**/29**, 75C-84D, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVS	**Carmenet Viney**	**0.10**	**84**	⇑P	**Pg**	**03 08 15.4**	**-0.5**
	baz=0.1,SNR=1000						
CVS				⇑S	**Sg**	**03 08 17.9**	**-0.2**
	baz=0.1						
NSHM	**Saint Helena R**	**0.18**	**356**	*e*Pg	**Pg**	**03 08 16.4**	**-0.7**
MCCM	**Marconi Confer**	**0.30**	**230**	*e*Pg	**Pg**	**03 08 19.4**	**+0.3**
MCCM	**Marconi Confer**	**0.30**	**230**	P	**Pg**	**03 08 19.4**	**+0.3**
	baz=0.3,SNR=1000						
MCCM				⇓S	**Sg**	**03 08 23.8**	**+0.7**
	baz=0.3						
Q03C	**Winters**	**0.54**	**56**	⇓P	**Pg**	**03 08 24.7**	**+1.2**
	baz=0.5						
MNRC	**McLaughlin Nat**	**0.56**	**12**	⇓P	**Pg**	**03 08 23.6**	**-0.2**
	baz=0.5,SNR=1000						
BDM	**Black Diamond**	**0.69**	**123**	⇑P	**Pg**	**03 08 26.6**	**+0.4**
	baz=0.7,SNR=1000						
BDM				⇓S	**Sg**	**03 08 35.6**	**+0.3**
	baz=0.7						
FARB	**Farallon Islan**	**0.71**	**207**	P	**Pg**	**03 08 27.1**	**+0.3**
	baz=0.7,SNR=1000						
FARB				⇑S	**Sg**	**03 08 37.1**	**+0.8**
	baz=0.7						
HOPS	**Hopland**	**0.76**	**330**	*e*Pg	**Pg**	**03 08 27.4**	**-0.2**
HOPS	**Hopland**	**0.76**	**330**	P	**Pg**	**03 08 27.2**	**-0.5**
	baz=0.7,SNR=1000						
HOPS				⇓S	**Sg**	**03 08 38.1**	**+0.5**
	baz=0.7						
SAC	**San Andreas**	**0.76**	**170**	*e*Pg	**Pg**	**03 08 27.8**	**+0.1**
SAC				*e*Sg	**Sg**	**03 08 39.0**	**+1.2**
WENL	**Wente Brothers**	**0.97**	**137**	P	**Pb**	**03 08 31.6**	**0.0**
	baz=1.0,SNR=1000						
JRSC	**Jasper Ridge**	**0.97**	**163**	⇓P	**Pb**	**03 08 30.7**	**-0.9**
	baz=1.0,SNR=1000						
JRSC				⇑S	**Sg**	**03 08 44.8**	**+0.5**
	baz=1.0						
Q04C	**Lincoln**	**1.07**	**62**	P	**Pb**	**03 08 31.4**	**-2.0**
	baz=1.1,SNR=335						
Q04C				⇑S	**Sb**	**03 08 45.7**	**-1.6**
	baz=1.1						
SUTB	**Sutter Butte**	**1.09**	**35**	P	**Pb**	**03 08 31.1**	**-2.6**
	baz=1.1,SNR=357						
BNLO	**Ben Lomond (Sa**	**1.25**	**165**	P	**Pn**	**03 08 34.6**	**-1.5**
	baz=1.3,SNR=1000						
BNLO				⇓S	**Sb**	**03 08 52.5**	**+0.1**
	baz=1.3						
P01C	**Double 8 Ranch**	**1.27**	**333**	⇓P	**Pn**	**03 08 34.4**	**-2.1**
	baz=1.2,SNR=43						
S04C	**Ingram Canyon,**	**1.30**	**129**	P	**Pn**	**03 08 35.6**	**-1.2**
	baz=1.3,SNR=1000						
GASB	**Alder Springs**	**1.32**	**356**	⇑P	**Pn**	**03 08 36.2**	**-0.9**
	baz=1.3,SNR=107						
OHCM	**Honcut**	**1.32**	**40**	*e*Pn	**Pn**	**03 08 34.5**	**-2.7**
ORV	**Oroville**	**1.48**	**35**	P	**Pn**	**03 08 36.9**	**-2.4**
	baz=1.5,SNR=59						
KIPM	**Iron Peak**	**1.63**	**335**	*e*Pn	**Pn**	**03 08 40.7**	**-0.6**
PACP	**Pacheco Peak**	**1.68**	**142**	⇑P	**Pn**	**03 08 41.3**	**-0.8**
	baz=1.7,SNR=293						
O03C	**Acorn Hollow,**	**1.71**	**14**	⇓P	**Pn**	**03 08 39.9**	**-2.6**
	baz=1.7						
CMB	**Columbia Colle**	**1.76**	**99**	*e*P	**Pn**	**03 08 42.5**	**-0.7**
CMB	**Columbia Colle**	**1.76**	**99**	⇓P	**Pn**	**03 08 42.5**	**-0.7**
	baz=1.8,SNR=467						
CMB				⇓S	**Sn**	**03 09 05.0**	**-0.5**
	baz=1.8						
SAO	**San Andreas Ge**	**1.81**	**150**	*e*P	**Pn**	**03 08 42.3**	**-1.6**
P05C	**Yuba Gap, Truc**	**1.82**	**57**	⇑P	**Pn**	**03 08 43.2**	**-0.8**
	baz=1.8,SNR=259						
P05C				⇓S	**Sn**	**03 09 06.5**	**-0.6**
	baz=1.8						
R05C	**Kirkwood Meado**	**2.01**	**79**	P	**Pn**	**03 08 46.6**	**+0.1**
	baz=2.0,SNR=1000						
R05C				⇑S	**Sn**	**03 09 12.0**	**+0.5**
	baz=2.0						
O01C	**Eel River Cons**	**2.04**	**332**	⇓P	**Pn**	**03 08 46.0**	**-1.0**
	baz=2.0						
S05C	**Merced**	**2.04**	**118**	⇓P	**Pn**	**03 08 46.1**	**-1.0**
	baz=2.1,SNR=240						
S05C				⇑S	**Sn**	**03 09 12.1**	**-0.3**
	baz=2.1						
O05C	**Quincy**	**2.08**	**38**	⇓P	**Pn**	**03 08 47.5**	**-0.1**
	baz=2.1,SNR=106						
O05C				⇓S	**Sn**	**03 09 13.9**	**+0.5**
	baz=2.1						
T05C	**Eagle Field, D**	**2.09**	**133**	⇑P	**Pn**	**03 08 47.3**	**-0.5**
	baz=2.1,SNR=112						
T05C				⇓S	**Sn**	**03 09 14.2**	**+0.6**
	baz=2.1						
S06C	**San Francisco**	**2.21**	**101**	⇑P	**Pn**	**03 08 49.6**	**+0.3**
	baz=2.2,SNR=396						
S06C				⇑S	**Sn**	**03 09 16.8**	**+0.3**
	baz=2.2						

WDC **Whiskeytown Da** 2.24 1 *e*P Pn 03 08 47.1 -2.7
WDC **Whiskeytown Da** 2.24 1 ⇓P Pn 03 08 47.5 -2.3
baz=2.2,SNR=58
LRV **Little Rabbit** 2.28 146 *e*Pn Pn 03 08 49.7 -0.6
O04C **Chester** 2.30 30 ⇑P Pn 03 08 50.2 -0.4
baz=2.3,SNR=286
O04C ⇓S Sn 03 09 18.8 0.0
baz=2.3
BEKR **Beckwourth** 2.31 48 ⇑P Pn 03 08 51.2 +0.5
baz=2.3,SNR=1000
BEKR ⇑S Sn 03 09 19.6 +0.5
baz=2.3
WCN **Washoe City** 2.41 66 ⇓P Pn 03 08 52.7 +0.5
baz=2.4,SNR=1000
U04C **Hernandez Rese** 2.44 143 ⇑P Pn 03 08 51.8 -0.7
baz=2.5,SNR=282
WAKR **Walker** 2.48 85 *e*Pn Pn 03 08 54.3 +1.2
P06A **Stead Airport,** 2.49 57 ⇓P Pn 03 08 54.0 +0.8
baz=2.5,SNR=216
V03C **Hunter Liggett** 2.55 155 ⇑P Pn 03 08 53.0 -1.1
baz=2.6,SNR=188
HATC **Hat Creek Radi** 2.63 19 ⇑P Pn 03 08 55.1 0.0
baz=2.6,SNR=88
T06C **Millerton Lake** 2.64 119 ⇑P Pn 03 08 55.1 -0.2
baz=2.7,SNR=28
T06C ⇑S Sn 03 09 27.7 +0.5
baz=2.7
KHMM **Horse Mountain** 2.69 341 *e*Pn Pn 03 08 56.6 +0.7
JCC **Jacoby Creek** 2.72 336 ⇓P Pn 03 08 57.8 +1.5
baz=2.7
KCC **Kaiser Creek** 2.78 110 ⇓P Pn 03 08 57.3 +0.1
baz=2.8,SNR=21
R07C **Lee Vining** 2.80 94 ⇓P Pn 03 08 58.8 +1.3
baz=2.8
U05C **Westside ANR,** 2.80 135 ⇓P Pn 03 08 57.5 0.0
baz=2.8,SNR=11
O06A **Flanigan** 2.82 49 ⇓P Pn 03 08 57.8 +0.1
baz=2.8,SNR=27
PAHR **Pah Rah Range** 2.85 60 *e*Pn Pn 03 08 58.1 0.0
PKD **Parkfield** 2.89 145 ⇓P Pn 03 08 58.0 -0.7
baz=2.9,SNR=120
PKD ⇓S Sn 03 09 33.0 -0.4
baz=2.9
V04C **Ramage Ranch,** 3.02 152 ⇓P Pn 03 08 59.9 -0.7
baz=3.1,SNR=208
M02C **Callahan** 3.06 356 ⇓P Pn 03 09 00.4 -0.6
baz=3.0
P07A **Fallon** 3.13 66 ⇓P Pn 03 09 01.7 -0.2
baz=3.1
N06A **Buffalo Meadow** 3.22 41 ⇑P Pn 03 09 03.1 0.0
baz=3.2,SNR=73
M05C **Lookout** 3.22 20 ⇓P Pn 03 09 03.4 +0.1
baz=3.2
V05C **Boulder Hill,** 3.27 138 ⇓P Pn 03 09 04.1 +0.2
baz=3.3
PTRM **Twissleman Ran** 3.28 144 *e*Pn Pn 03 09 03.5 -0.6
M06C **Likely Place G** 3.30 29 ⇑P Pn 03 09 04.6 +0.3
baz=3.3,SNR=19
MTUM **Tungsten Hills** 3.33 106 *e*Pn Pn 03 09 06.0 +1.2
KRMB **Red Mountain** 3.34 343 *e*Pn Pn 03 09 03.3 -1.6
RCTC **Rector, Farmer** 3.35 126 ⇓P Pn 03 09 04.5 -0.5
baz=3.4
RCTC ⇓S Sn 03 09 44.4 -0.2
baz=3.4
NVAR **Mina Array Bea** 3.37 87 Pn Pn 03 09 05.6 +0.3
5.4nm,0.3s,baz=262,slow=16,SNR=84
NVAR Pg Pg 03 09 11.2 -6.3
45nm,0.3s,baz=256,slow=18,SNR=107
NVAR Lg 03 09 57.2
91nm,0.3s,baz=5.6,slow=32,SNR=12
YBH **Yreka Blue Hor** 3.39 358 Pn Pn 03 09 04.9 -0.7
2.6nm,0.3s,baz=171,slow=6.8,SNR=18
YBH Lg 03 09 49.4
5.0nm,0.3s,baz=106,slow=11,SNR=3.0
YBH LR LR 03 10 32.8
comp=Z,2µm,18.0s,baz=177,slow=44
YBH **Yreka Blue Hor** 3.39 358 *e*Pn Pn 03 09 06.2 +0.5
YBH **Yreka Blue Hor** 3.39 358 ⇑P Pn 03 09 06.0 +0.3
baz=3.4
O07A **Toulon** 3.41 57 P Pn 03 09 06.0 +0.1
baz=3.4,SNR=190
O07A ⇓S Sn 03 09 46.6 +0.4
baz=3.4
M04C **Macdoel** 3.49 9 ⇑P Pn 03 09 07.6 +0.6
baz=3.5
R08A **Mina** 3.52 88 ⇑P Pn 03 09 07.8 +0.4
baz=3.5
SMMC **Simmler** 3.67 145 ⇑P Pn 03 09 08.7 -0.7
baz=3.7,SNR=19
Q08A **Gabbs** 3.69 80 ⇓P Pn 03 09 09.2 -0.4
baz=3.7
TIN **Tinemaha** 3.69 109 ⇓P Pn 03 09 10.7 +1.1
baz=3.7
M01C **Crescent City** 3.70 342 ⇓P Pn 03 09 09.8 -0.1
baz=3.7,SNR=31
M01C ⇓S Sn 03 09 54.0 +0.7
baz=3.7
VES **Vestal, Richgr** 3.75 131 ⇓P Pn 03 09 10.0 -0.5
baz=3.8,SNR=24
VES ⇓S Sn 03 09 55.3 +0.7
baz=3.8
P08A **Dixie Valley** 3.77 67 ⇓P Pn 03 09 11.4 +0.7
baz=3.7
L02A **Cave Junction** 3.89 349 ⇑P Pn 03 09 13.1 +0.6
baz=3.9
M07A **Soldier Meadow** 4.03 40 ⇓P Pn 03 09 14.6 +0.2
baz=4.0,SNR=25
CWC **Cottonwood Cre** 4.06 116 ⇓P Pn 03 09 15.4 +0.7
baz=4.1
KBO **Bosley Butte** 4.07 343 *e*Pn Pn 03 09 14.3 -0.6
PKM **Peak Mountain** 4.09 146 ⇑P Pn 03 09 14.9 -0.3
baz=4.1,SNR=28
PKM ⇑S Sn 03 10 02.9 -0.1
baz=4.1
SDP **Sudden Peak, L** 4.12 155 ⇑P Pn 03 09 14.4 -1.2
baz=4.2
SDP ⇑S Sn 03 10 04.9 +1.3
baz=4.2
N08A **GE Springer Mi** 4.22 53 ⇓P Pn 03 09 16.2 -0.9
baz=4.2,SNR=6.0
TPH **Tonopah** 4.24 92 *e*Pn Pn 03 09 17.0 -0.2
TPH *e*Pg Pg 03 09 27.5 -6.5
TPH *e*Sg Sg 03 10 20.3 -8.6
ISA **Isabella** 4.24 128 *e*P Pn 03 09 17.3 +0.1
ISA **Isabella** 4.24 128 ⇓P Pn 03 09 17.4 +0.1
baz=4.3,SNR=92
Q09A **Carvers** 4.27 82 ⇓P Pn 03 09 16.7 -1.0
baz=4.3,SNR=7.4
Q09A ⇓S Sn 03 10 07.1 -0.2
baz=4.3
S09A **Goldfield** 4.28 97 ⇓P Pn 03 09 17.7 -0.1
baz=4.3
R09A **Tonopah** 4.34 90 ⇑P Pn 03 09 18.9 +0.2
baz=4.3
GRAC **Grapevine Rang** 4.35 106 ⇓P Pn 03 09 19.1 +0.4
baz=4.4
ARVC **Arvin** 4.40 136 ⇑P Pn 03 09 19.0 -0.4
baz=4.4,SNR=23
ARVC ⇑S Sn 03 10 11.2 +0.6
baz=4.4
P09A **Austin** 4.42 72 ⇓P Pn 03 09 18.8 -0.9
baz=4.4,SNR=8.9
K02A **Glendale** 4.48 351 ⇓P Pn 03 09 20.8 +0.2
baz=4.5
DAC **Darwin (Calif)** 4.48 116 *e*P Pn 03 09 24.5 +3.9
M08A **Happy Creek Ra** 4.49 45 ⇓P Pn 03 09 20.5 -0.2
baz=4.5,SNR=19
SBC **Santa Barbara** 4.53 148 ⇓P Pn 03 09 20.9 -0.3
baz=4.6
O09A **Fish Creek Ran** 4.57 65 ⇑P Pn 03 09 21.6 -0.2
baz=4.6
N09A **Rock Creek Ran** 4.65 56 ⇑P Pn 03 09 23.2 +0.3
baz=4.6,SNR=8.5
BMN **Battle Mountai** 4.66 62 *e*P Pn 03 09 22.8 -0.2
MPMC **Manual Prospec** 4.66 118 ⇓P Pn 03 09 23.7 +0.6
baz=4.7,SNR=32
KEBM **Edson Butte** 4.72 344 *e*Pn Pn 03 09 24.0 +0.1
OSI **Osito Adit** 4.85 139 ⇑P Pn 03 09 25.9 +0.3
baz=4.9
LRMC **Laurel Mountai** 4.85 125 ⇓P Pn 03 09 25.9 +0.2
baz=4.9,SNR=28
FURC **Furnace Creek,** 4.93 110 ⇑P Pn 03 09 27.0 +0.3
baz=4.9
P10A **Eureka** 4.94 73 ⇑P Pn 03 09 26.9 -0.1
baz=4.9,SNR=20
R10A **Warm Springs** 4.95 89 ⇓P Pn 03 09 26.9 -0.1
baz=4.9

BSC **Santa Cruz Isl** 4.95 150 ⇑P Pn 03 09 25.9 -1.1
baz=5.0,SNR=6.9
BSC ⇑S Sn 03 10 23.9 -0.2
baz=5.0
L08A **Fields** 5.04 39 ⇓P Pn 03 09 28.4 +0.2
baz=5.0
J03A **Ideyld Park** 5.04 357 ⇑P Pn 03 09 29.4 +1.2
baz=5.0
K07A **Rock Creek Ran** 5.04 29 ⇓P Pn 03 09 29.0 +0.7
baz=5.0
J05A **Fort Rock** 5.05 11 ⇑P Pn 03 09 29.4 +1.0
baz=5.0
WVOR **Wild Horse Val** 5.09 35 *e*P Pn 03 09 29.3 +0.4
WVOR pmax pmax
comp=Z,245nm,1.1s
WVOR **Wild Horse Val** 5.09 35 *e*Pn Pn 03 09 29.3 +0.4
comp=Z,245nm,1.1s
BLG **Laguna Peak** 5.09 145 ⇑P Pn 03 09 28.0 -0.9
baz=5.1
BLG ⇑S Sn 03 10 27.2 -0.4
baz=5.1
O10A **Cortez Mining,** 5.11 66 ⇑P Pn 03 09 29.5 +0.2
baz=5.1
TPNV **Topopah Spring** 5.22 103 *e*Pn Pn 03 09 32.5 +1.8
TPNV *e*Pg Pb 03 09 44.2 +0.2
J06A **Christmas Vall** 5.25 20 ⇓P Pn 03 09 32.1 +1.0
baz=5.2
L09A **Wilkinson Ranc** 5.27 44 ⇑P Pn 03 09 31.7 +0.3
baz=5.2
DECC **Green Verdugo** 5.33 139 ⇑P Pn 03 09 32.4 +0.1
baz=5.4
DECC S Sn 03 10 34.3 +0.7
baz=5.4
K08A **Mann Creek Ran** 5.39 34 ⇑P Pn 03 09 33.0 0.0
baz=5.4
MWC **Mount Wilson** 5.50 137 *e*P Pn 03 09 34.9 +0.4
TRCR **Troy Canyon** 5.51 88 *e*Pn Pn 03 09 34.0 -0.7
TRCR *e*Pg Pb 03 09 53.3 +4.3
TRCR *e*Sg Sb 03 11 01.7 +6.7
GSC **Goldstone** 5.54 121 *e*P Pn 03 09 35.4 +0.3
GSC **Goldstone** 5.54 121 ⇑P Pn 03 09 35.5 +0.3
baz=5.5
SHOC **Shoshone** 5.60 114 ⇑P Pn 03 09 36.2 +0.3
baz=5.6
M10A **I.L. Ranch, Tu** 5.63 54 ⇑P Pn 03 09 36.5 +0.1
baz=5.6
SNCC **San Nicolas Is** 5.65 153 ⇓P Pn 03 09 36.8 +0.1
baz=5.7
SNCC ⇓S Sn 03 10 41.4 -0.1
baz=5.7
RRX **Edison Barstow** 5.67 126 ⇑P Pn 03 09 37.4 +0.5
baz=5.7
O11A **Cowboy Ranch,** 5.67 69 ⇓P Pn 03 09 37.0 +0.1
baz=5.7
BFSC **Mount Baldy St** 5.71 134 ⇓P Pn 03 09 37.4 0.0
baz=5.7
BFSC ⇑S Sn 03 10 42.6 -0.2
baz=5.7
N11A **Elko Archery C** 5.85 63 ⇑P Pn 03 09 40.2 +0.8
baz=5.8
CIS **Catalina Islan** 5.98 144 ⇓P Pn 03 09 39.8 -1.3
baz=6.0
CIS ⇓S Sn 03 10 47.0 -2.5
baz=6.0
U11A **Corn Creek** 6.05 106 ⇑P Pn 03 09 41.6 -0.5
baz=6.0
M11A **Holland Ranch,** 6.07 57 ⇓P Pn 03 09 42.6 +0.1
baz=6.0
TUQ **Turquoise Mtn.** 6.08 116 ⇑P Pn 03 09 42.5 +0.1
baz=6.1
P12A **McGill** 6.10 77 ⇑P Pn 03 09 43.0 +0.2
baz=6.1
P12A ⇑S Sn 03 10 53.2 +0.8
baz=6.1
BBRC **Big Bear Sol-O** 6.12 130 ⇑P Pn 03 09 43.2 +0.1
baz=6.1
HEC **Hector,Ludlow** 6.13 123 ⇓P Pn 03 09 43.3 +0.1
baz=6.1,SNR=10
SHPR **Sheep Range** 6.19 105 *e*Pn Pn 03 09 45.7 +1.7
I07A **Izee** 6.19 21 ⇑P Pn 03 09 45.4 +1.3
baz=6.2
V11A **Goodsprings** 6.24 111 ⇑P Pn 03 09 45.4 +0.6
baz=6.2
SCI **San Clemente I** 6.27 147 ⇑P Pn 03 09 45.2 0.0
baz=6.3
SCI ⇓S Sn 03 10 57.0 +0.2
baz=6.3
N12A **Clover Valley,** 6.35 64 ⇓P Pn 03 09 47.1 +0.8
baz=6.3,SNR=18
H04A **Detroit Lake** 6.35 3 ⇓P Pn 03 09 47.0 +0.8
baz=6.3
MURC **Murrieta** 6.43 136 ⇑P Pn 03 09 46.9 -0.5
baz=6.5
GMRC **Granite Mounta** 6.61 120 ⇓P Pn 03 09 49.5 -0.3
baz=6.6
M12A **Wells** 6.66 60 ⇓P Pn 03 09 50.3 -0.1
baz=6.6
PFO **Pinyon Flat Ob** 6.85 132 *e*P Pn 03 09 52.8 -0.4
PFO **Pinyon Flat Ob** 6.85 132 P Pn 03 09 53.2 0.0
baz=6.9,SNR=10
BELC **Belle Mtn.** 6.86 127 ⇓P Pn 03 09 53.2 -0.1
baz=6.9,SNR=38
HOOD **Mount Hood Mea** 7.02 5 *e*Pn Pn 03 10 00.4 +5.0
109C **Camp Elliot, M** 7.03 139 ⇑P Pn 03 09 55.3 -0.3
baz=7.1
ARUT **Antelope Range** 7.24 92 *e*Pn Pn 03 09 58.1 -0.3
ARUT *e*Pg Pg 03 10 26.6 -5.0
IRM **Iron Mountain** 7.31 122 ⇑P Pn 03 09 59.2 -0.3
baz=7.3
CCUT **Cedar City** 7.33 93 *e*Pn Pn 03 10 00.4 +0.7
CCUT *e*Pg Pb 03 10 25.1 +5.0
CCUT *e*Sg Sb 03 11 58.9 +11
MONP **Monument Peak** 7.40 135 ⇑P Pn 03 10 00.9 +0.3
baz=7.4,SNR=11
BAR **Barrett** 7.42 138 *e*Pn Pn 03 10 02.8 +1.8
BMO **Blue Mountains** 7.62 30 *e*Pn Pn 03 10 05.5 +1.8
SWSC **Sam W. Stewart** 7.71 132 ⇑P Pn 03 10 04.6 -0.4
baz=7.7
DVTC **Desert V Tower** 7.75 135 ⇑P Pn 03 10 05.5 0.0
baz=7.8
DUG **Dugway** 7.81 73 *e*Pn Pn 03 10 08.0 +1.7
DUG *e*Sg Sn 03 12 16.8 +42
BGU **Big Grassy Mou** 7.82 68 *e*Pn Pn 03 10 06.2 -0.2
BGU *e*Pg Pn 03 10 38.8 +32
BGU *e*Sg Sn 03 12 11.0 +36
PDMCI **Parker Dam,Lak** 7.92 118 ⇑P Pn 03 10 07.5 -0.3
baz=7.9
Y12C **Blythe** 7.97 123 ⇑P Pn 03 10 08.0 -0.5
baz=8.0
F08A **Pendleton** 7.98 20 ⇓P Pn 03 10 08.1 -0.5
baz=8.0
X13A **Yucca** 7.98 115 ⇓P Pn 03 10 08.5 -0.2
baz=8.0
HLID **Hailey** 8.09 47 *e*Pn Pn 03 10 08.6 -1.6
HLID *e*Pg Pn 03 10 37.5 +27
MSU **Marysvale** 8.18 86 *e*P Pn 03 10 12.9 +1.6
GLA **Glamis** 8.22 128 *e*P Pn 03 10 11.3 -0.7
GLA **Glamis** 8.22 128 ⇓P Pn 03 10 11.4 -0.6
baz=8.2,SNR=8.1
W14A **Seligman** 8.24 109 ⇓P Pn 03 10 11.7 -0.5
baz=8.2
HVU **Hansel Valley** 8.28 62 *e*P Pn 03 10 21.1 +8.4
NLU **North Lily Min** 8.33 76 *e*Pn Pn 03 10 12.7 -0.7
NLU *e*Sg Sn 03 12 37.4 +50
SPUT **South Promonto** 8.35 66 *e*Pn Pn 03 10 16.8 +3.1
HAWA **Hanford** 8.36 15 *e*Pn Pn 03 10 13.0 -0.9
Y13A **Salome** 8.40 120 ⇓P Pn 03 10 14.7 +0.3
baz=8.4,SNR=6.0
LON **Longmire** 8.43 4 *e*P Pn 03 10 18.7 +3.9
MPU **Maple Canyon** 8.67 75 *e*Pn Pn 03 10 17.2 -0.9
comp=Z,11nm,0.9s
CTU **Camp Tracy** 8.70 71 *e*Pn Pn 03 10 17.7 -0.9
D05A **Enumclaw** 8.86 3 ⇓P Pn 03 10 21.7 +1.0
baz=8.8
Y14A **Wickenburg** 8.91 117 ⇓P Pn 03 10 21.2 -0.2
baz=8.9
TMUT **Trail Mountain** 8.94 80 *e*Pn Pn 03 10 31.6 +10
TCUT **Toone Canyon** 9.05 69 *e*Pn Pn 03 10 23.4 0.0
HWUT **Hardware Ranch** 9.07 65 *e*Pn Pn 03 10 28.8 +5.1
C05A **Tolt Reservoir** 9.38 4 ⇓P Pn 03 10 28.7 +0.9
baz=9.4
WUAZ **Wupatki** 9.41 104 *e*Pn Pn 03 10 28.9 +0.7
WUAZ *e* 03 13 16.6
SRU **San Rafael** 9.46 82 *e*P Pn 03 10 30.5 +1.5
MCMT **McKenzie Canyo** 9.76 45 *e*Pn Pn 03 10 31.9 -1.1
RRI2 **Red Ridge** 9.90 56 *e*Pn Pn 03 10 35.6 +0.7

115A **Sonoran Desert** 10.14 121 ⇑P Pn 03 10 38.7 +0.4
baz=10
TPAW **Teton Pass** 10.20 56 *e*Pn Pn 03 10 39.5 +0.4
REDW **Red Top Meadow** 10.21 57 *e*Pn Pn 03 10 46.1 +6.9
DLMT **Dillon** 10.23 44 *e*Pn Pn 03 10 38.9 -0.6
SNOW **Snow King Moun** 10.32 56 *e*Pn Pn 03 10 46.4 +5.7
comp=Z,23nm,1.1s
PGC **Sidney** 10.33 357 *e*Pn Pn 03 10 39.5 -1.4
A04A **Legoe Bay, Lum** 10.38 360 ⇓P Pn 03 10 42.8 +1.3
baz=10
IMW **Indian Meadow** 10.39 54 *e*Pn Pn 03 10 43.1 +1.4
MOOW **Moose Ponds** 10.45 55 *e*Pn Pn 03 10 47.7 +5.2
comp=Z,8.2nm,1.0s
QLMT **Earthquake Lak** 10.58 49 *e*Pn Pn 03 10 45.8 +1.6
116A **Eloy** 10.58 120 ⇑P Pn 03 10 44.8 +0.5
baz=11
MSO **Missoula** 10.61 34 *e*Pn Pn 03 10 43.0 -1.7
comp=Z,11nm,0.9s
LRM **Limekiln Ridge** 10.61 42 *e*Pn Pn 03 10 50.5 +5.9
FLWY **Flagg Ranch** 10.63 54 *e*Pn Pn 03 10 45.5 +0.4
PV10 **Paradox Valley** 10.64 86 *e*Pn Pn 03 10 45.0 -0.1
NEW **Newport** 10.69 20 Pn Pn 03 10 48.4 +2.6
comp=Z,0.3nm,0.3s,baz=220,slow=11,SNR=5.5
NEW **Newport** 10.69 20 *e*Pn Pn 03 10 43.3 -2.4
BW06 **Boulder Array** 10.86 62 *e*Pn Pn 03 10 54.0 +5.9
PDAR **Pinedale Array** 10.86 62 Pn Pn 03 10 52.0 +3.9
comp=Z,0.1nm,0.3s,baz=249,slow=12,SNR=14
BOZ **Bozeman (W)** 10.94 45 *e*P Pn 03 10 52.7 +3.5
CHMT **Chamberlain Mo** 10.98 36 *e*Pn Pn 03 10 48.8 -1.0
PV01 **Paradox Valley** 11.03 87 *e*Pn Pn 03 10 49.6 -0.9
BSMT **Bassoo Peak** 11.08 28 *e*Pn Pn 03 10 55.1 +4.0
MVCO **Mesa Verde** 11.21 91 *e*Pn Pn 03 10 51.7 -1.2
TUC **Tucson** 11.36 118 *e*P Pn 03 10 55.6 +0.7
SMCO **Snowmass** 12.22 81 *e*Pn Pn 03 11 05.8 -1.0
comp=Z,18nm,1.2s
RWWY **Rawlins** 12.26 69 *e*Pn Pn 03 11 06.6 -0.6
WALA **Waterton Lakes** 12.41 27 *e*Pn Pn 03 11 09.9 +0.5
LAZ **Ladron** 13.05 103 *e*Pn Pn 03 11 22.4 +4.3
ISCO **Idaho Springs** 13.28 78 *e*P Pn 03 11 21.4 +0.3
ANMO **Albuquerque** 13.39 100 Pn Pn 03 11 27.2 +4.6
comp=Z,0.1nm,0.3s,baz=307,slow=10,SNR=3.3
ANMO Lg 03 15 11.4
comp=Z,0.1nm,0.3s,baz=82,slow=14,SNR=2.6
ANMO LR LR 03 16 40.1
comp=Z,452nm,21.6s,baz=292,slow=38
ANMO **Albuquerque** 13.39 100 *e*P Pn 03 11 21.9 -0.7
ANMO pmax pmax
comp=Z,6.0nm,1.3s
ANMO **Albuquerque** 13.39 100 *e*Pn Pn 03 11 21.9 -0.8
comp=Z,6.1nm,1.3s
ANMO Lg 03 15 11.4
ANMO LR LR 03 16 40.1
EGMT **Eagleton** 13.45 40 *e*Pn Pn 03 11 25.3 +1.7
PHWY **Pilot Hill** 13.50 72 *e*Pn Pn 03 11 24.7 +0.5
LAO **LASA Array** 14.65 50 *e*Pn Pn 03 11 39.9 0.0
RSSD **Black Hills** 15.10 62 *e*P Pn 03 11 45.1 -0.9
GDL2 **Guadalupe Moun** 16.09 107 *e*P Pn 03 12 03.9 +5.1
EDM **Edmonton** 16.20 20 *e*Pn Pn 03 11 57.9 -2.4
EDM *e*P 03 12 03.4
AMTX **Amarillo** 17.13 95 *e*Pn Pn 03 12 11.4 -0.7
WMOK **Wichita Mounta** 19.45 93 *e*P Pn 03 12 44.9 +4.4
KSU1 **Kansas State U** 20.27 80 *e*P P 03 12 47.2 -1.0
JCT **Junction City** 20.34 106 *e*P P 03 12 48.8 -0.1
JCT pmax pmax
comp=Z,52nm,1.6s
JCT **Junction City** 20.34 106 *e*P P 03 12 48.8 -0.1
comp=Z,52nm,1.6s
FFC **Flin Flon** 21.54 34 *e*P P 03 13 01.1 -0.9
FFC pmax pmax
comp=Z,13nm,0.8s,mb4.4
FFC **Flin Flon** 21.54 34 *e*P P 03 13 01.1 -0.9
comp=Z,13nm,0.8s,mb4.4
ULM **Lac du Bonnet** 22.40 49 P P 03 13 10.0 -1.1
comp=Z,2.9nm,0.8s,mb3.8,baz=252,slow=12,SNR=5.7
ULM LR LR 03 22 07.9
comp=Z,268nm,18.4s,MS3.7,baz=251,slow=38
ULM **Lac du Bonnet** 22.40 49 *e*P P 03 13 10.6 -0.5
comp=Z,15nm,1.3s,mb4.3
MIAR **Mount Ida** 23.60 90 *e*P P 03 13 23.9 +0.2
MIAR pmax pmax
comp=Z,34nm,1.4s,mb4.6
MIAR **Mount Ida** 23.60 90 *e*P P 03 13 23.9 +0.2
comp=Z,34nm,1.4s,mb4.6
HKT **Hockley** 23.61 103 *e*P P 03 13 23.8 0.0
HKT pmax pmax
comp=Z,58nm,1.8s,mb4.7
HKT **Hockley** 23.61 103 *e*P P 03 13 23.8 0.0
comp=Z,58nm,1.8s,mb4.7
CCM **Cathedral Cave** 24.58 81 *e*P P 03 13 33.0 +0.4
CCM pmax pmax
comp=Z,25nm,1.4s,mb4.5
CCM **Cathedral Cave** 24.58 81 *e*P P 03 13 33.0 +0.4
comp=Z,25nm,1.4s,mb4.5
YKA **Yellowknife Ar** 24.68 9 P P 03 13 33.0 -0.5
comp=Z,0.9nm,0.8s,baz=191,slow=9.1,SNR=9.0
YKA LR LR 03 25 09.6
comp=Z,398nm,18.3s,MS4.0,baz=165,slow=42
YKA **Yellowknife Ar** 24.68 9 P P 03 13 33.0 -0.5
YKA LR LR 03 25 09.6
KDAK **Kodiak Island** 27.57 325 LR LR 03 22 13.9
comp=Z,124nm,20.9s,MS3.9,baz=93,slow=31
DAWY **Dawson** 27.65 344 *e*P P 03 14 02.2 +1.9
CPCT **Cooper Cave** 30.44 84 *e*P P 03 14 25.4 +0.3
INK **Inuvik** 30.63 352 P P 03 14 27.9 +1.1
comp=Z,2.5nm,0.8s,mb4.1,baz=155,slow=16,SNR=6.0
INK **Inuvik** 30.63 352 *e*P P 03 14 23.3 -3.5
INK pmax pmax
comp=Z,13nm,1.4s
INK **Inuvik** 30.63 352 *e*P P 03 14 23.3 -3.5
comp=Z,13nm,1.4s,mb4.6
SVW2 **Sparrevohn** 30.64 329 *e*P P 03 14 31.5 +4.5
CMIG **Matias Romero** 32.19 123 P P 03 14 42.8 +2.3
comp=Z,4.4nm,1.2s,mb4.2,baz=315,slow=6.6,SNR=3.7
CMIG LR LR 03 28 44.6
comp=Z,418nm,19.7s,MS4.1,baz=285,slow=38
IMA2 **Indian Mountai** 33.00 337 *e*P P 03 14 47.5 -0.2
RES **Resolute Bay** 38.69 11 *e*P P 03 15 36.2 -0.3
RES pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
RES **Resolute Bay** 38.69 11 *e*P P 03 15 36.2 -0.2
comp=Z,8.1nm,0.8s,mb4.5
SCHQ **Schefferville** 40.55 47 P P 03 15 52.7 +0.8
comp=Z,4.6nm,1.0s,mb4.0,baz=261,slow=9.9,SNR=6.0
SCHQ LR LR 03 32 36.6
comp=Z,193nm,19.5s,MS4.0,baz=45,slow=36
SCHQ **Schefferville** 40.55 47 P P 03 15 52.7 +0.8
SCHQ LR LR 03 32 36.6
SUMG **Summit** 52.18 22 *e*P P 03 17 22.2 -1.1
comp=Z,14nm,1.0s,mb4.9
SJG **San Juan** 52.82 96 LR LR 03 40 02.8
comp=Z,90nm,19.1s,MS3.8,baz=90,slow=36
SDV **Santo Domingo** 54.99 108 LR LR 03 41 51.7
comp=Z,78nm,19.6s,MS3.8,baz=279,slow=37
PCRV **Puerto La Cruz** 58.72 102 LR LR 03 44 35.5
comp=Z,73nm,18.6s,MS3.8,baz=145,slow=37
PPT **Papeete** 61.10 210 LR LR 03 38 26.1
comp=Z,139nm,18.6s,MS4.1,baz=66,slow=30
AFI **Afiamalu** 69.42 232 LR LR 03 42 14.4
comp=Z,65nm,19.4s,MS3.9,baz=234,slow=29
ARCES **ARCESS Array B** 69.92 11 LR LR 03 52 58.9
comp=Z,119nm,18.4s,MS4.2,baz=308,slow=39
BOD **Bodaibo** 73.14 332 *e*P P 03 19 41.4 -1.8
BOD pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
NOA **NORSAR Array B** 74.06 21 LR LR 03 53 36.9
comp=Z,44nm,18.3s,MS3.8,baz=285,slow=37
LPAZ **La Paz** 74.52 126 P P 03 19 53.3 +2.0
comp=Z,2.3nm,0.8s,mb4.1,baz=307,slow=2.0,SNR=9.9
LPAZ LR LR 03 51 15.7
comp=Z,60nm,21.7s,MS3.9,baz=332,slow=35
LPAZ **La Paz** 74.52 126 *e*P P 03 19 52.5 +1.2
LPAZ pmax pmax
comp=Z,3.0nm,0.9s
LPAZ **La Paz** 74.52 126 *e*P P 03 19 52.5 +1.2
comp=Z,3.2nm,0.9s,mb4.2
MJAR **Matsushiro Arr** 74.64 304 LR LR 03 46 08.2
comp=Z,66nm,20.4s,MS3.9,baz=35,slow=30
MDJ **Mudanjiang** 74.90 315 P P 03 19 54.2 +0.7
MDJ AMB AMB
comp=Z,4.0nm,0.6s,mb4.5
MDJ AMB AMB
comp=Z,61nm,6.1s
HFS **Hagfors** 75.51 21 LR LR 03 55 45.6
comp=Z,104nm,18.3s,MS4.2,baz=159,slow=38
FINES **FINESS Array B** 77.35 15 LR LR 03 55 43.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,91nm,18.3s,MS4.1,baz=341,slow=37						
CN2	Changchun	77.70	317	eP	P	03 20 09.2	-0.2
SONM	Songino Array	83.76	329	P	P	03 20 44.0	+2.2
	comp=Z,1.7nm,0.6s,mb4.3,baz=45,slow=3.1,SNR=13						
NVS	Novosibirsk	84.58	345	eP	P	03 20 45.6	-0.4
RAO	Raoul Island	84.80	226	LR	LR	03 49 47.8	
	comp=Z,140nm,18.9s,MS4.4,baz=45,slow=29						
GERES	GERESS Array B	84.94	27	P	P	03 20 49.7	+1.9
	comp=Z,0.2nm,0.5s,mb3.5,baz=288,slow=11,SNR=2.5						
GERES				LR	LR	03 58 00.9	
	comp=Z,65nm,20.8s,MS4.0,baz=289,slow=35						
ZAL	Zalesovo	85.11	344	P	P	03 20 50.8	+2.1
	comp=Z,1.2nm,0.5s,mb4.2,baz=106,slow=5.6,SNR=3.1						
ZAL				LR	LR	04 04 02.8	
	comp=Z,102nm,21.4s,MS4.2,baz=298,slow=40						
DAVOX	Davos	85.19	31	LR	LR	04 02 35.0	
	comp=Z,50nm,18.5s,MS3.9,baz=273,slow=38						
VRAC	Vranov	85.56	25	LR	LR	03 59 28.5	
	comp=Z,95nm,20.9s,MS4.2,baz=318,slow=36						
HHC	Hu-ho-hao-te	86.96	322	eP	P	03 20 56.5	-1.3
HHC				AP	pP	03 21 01.3	-0.7
HHC				SKS		03 31 19.9	
HHC				S	S	03 31 31.5	-4.6
HHC				SS	SS	03 37 16.0	-2.6
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
HHC				AMB	AMB		
	comp=Z,228nm,5.4s						
HHC				LR	LR		
	comp=N,115nm,20.9s,MS4.7						
HHC				LR	LR		
	comp=E,270nm,20.9s,MS4.7						
HHC				LR	LR		
	comp=Z,131nm,19.9s,MS4.3						
BDFB	Brasilia	87.94	112	LR	LR	04 00 56.5	
	comp=Z,77nm,19.8s,MS4.1,baz=18,slow=36						
BRVK	Borovoye	88.30	352	eP	P	03 21 05.6	+1.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
BRVK	Borovoye	88.30	352	eP	P	03 21 05.6	+1.4
	comp=Z,3.0nm,0.9s,mb4.5						
ZRNK	Zerenda	88.53	353	eP	P	03 21 05.2	-0.1
ZRNK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.8						
ZRNK	Zerenda	88.53	353	eP	P	03 21 05.2	-0.2
	comp=Z,4.7nm,1.0s,mb4.8						
CPUP	Villa Florida	88.69	125	LR	LR	04 05 04.1	
	comp=Z,41nm,20.1s,MS3.8,baz=92,slow=38						
MDT	Midelt	88.71	48	LR	LR	03 55 53.2	
	comp=Z,82nm,19.6s,MS4.2,baz=58,slow=32						
SSE	Sheshan	88.89	310	eP	P	03 21 06.5	-0.5
SSE				AMB	AMB		
	comp=Z,21nm,0.6s,mb5.6						
SSE				AMB	AMB		
	comp=Z,220nm,7.1s						
KURK	Kurchatov	89.39	347	eP	P	03 21 08.6	-0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
KURK	Kurchatov	89.39	347	eP	P	03 21 08.6	-0.8
	comp=Z,1.5nm,0.7s,mb4.4						
NJ2	Nanjing	89.60	312	eP	P	03 21 11.4	+1.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.4						
AKTO	Aktyubinsk	91.61	360	LR	LR	04 04 37.1	
	comp=Z,68nm,21.3s,MS4.1,baz=263,slow=37						
MLR	Muntele Rosu	91.88	22	LR	LR	04 05 05.8	
	comp=Z,79nm,18.0s,MS4.2,baz=131,slow=37						
PLCA	Paso Flores	91.94	143	LR	LR	03 55 08.2	
	comp=Z,81nm,18.3s,MS4.2,baz=76,slow=31						
MKAR	Makanchi Array	92.37	343	P	P	03 21 23.4	+0.2
	comp=Z,0.3nm,0.6s,mb3.8,baz=14,slow=6.4,SNR=2.6						
WMQ	Urumqi	93.75	339	eP	P	03 21 30.0	+0.4
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb5.3						
LZH	Lanzhou	94.41	324	eP	P	03 21 33.4	+0.8
LZH				AP	pP	03 21 37.0	+0.1
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.2						
CD2	Chengdu	98.68	321	eP	P	03 21 50.4	-1.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.4						
BRTR	Keskin Array B	99.32	18	LR	LR	04 10 39.5	
	comp=Z,60nm,19.9s,MS4.1,baz=216,slow=38						

*IDC **03** 03:22:17.4±0.7, 5.80S×78.62W, h0km, mb3.8/6, mb1 4.0/9, mb1mx3.9/19, mbtmp3.8/9, ML3.8/3, Error ellipse: s-maj=37.6km s-min=10.9km az=74.0*
*NEIC **03** 03:22:21.0±7.0, 5.80S×78.62W, h20km±53km, mb4.3/10, Error ellipse: s-maj=30.0km s-min=11.4km az=47.0*
*ISCJB **03** 03:22:22.4±2.0, 5.9S±0.1×78.7W±0.2, h52km±21km, mb4.1/14, Error ellipse: s-maj=35.2km s-min=12.3km az=113.1*
ISC 03 03:22:20.3±2.0**, 5.81S**±0.08×**78.6W**±0.2**, h14**km±12km**, n25,** σ**0.78**/25**, mb4.1**/14**, Northern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	1.20	171	Pg	Pg	03 22 43.3	-0.1
	42nm,0.3s,baz=17,slow=12,SNR=130						
ATAH				Lg		03 23 00.7	
	107nm,0.3s,baz=210,slow=20,SNR=24						
NNA	Nana	6.38	164	Pn	Pn	03 23 54.0	+0.3
	13nm,0.3s,baz=312,slow=11,SNR=19						
NNA				Sn	Sn	03 25 06.0	-0.4
	4.2nm,0.3s,baz=307,slow=20,SNR=2.5						
NNA				Lg		03 25 34.1	
	8.2nm,0.3s,baz=219,slow=23,SNR=5.3						
NNA	Nana	6.38	164	ePn	Pn	03 23 53.6	-0.2
	51nm,0.4s						
LPAZ	La Paz	14.61	136	Pn	Pn	03 25 47.3	+0.8
	0.1nm,0.3s,baz=292,slow=5.4,SNR=2.5						
LPAZ	La Paz	14.61	136	ePn	Pn	03 25 53.9	+7.4
	3.8nm,0.6s						
SAML	Samuel	15.59	102	ePn	Pn	03 25 52.7	-6.8
	8.0nm,0.3s						
SIV	San Ignacio	19.93	122	P	Pn	03 26 52.6	-0.7
	0.1nm,0.3s,baz=298,slow=18,SNR=3.3						
CPUP	Villa Florida	28.78	137	eP	P	03 28 19.2	+1.6
	3.7nm,0.6s,mb4.3						
PLCA	Paso Flores	35.51	169	P	P	03 29 16.1	-0.5
	1.2nm,1.1s,mb3.8,baz=315,slow=13,SNR=2.0						
ANMO	Albuquerque	48.31	329	eP	P	03 31 01.6	+0.5
	3.7nm,0.8s,mb4.5						
WUAZ	Wupatki	51.38	326	eP	P	03 31 25.1	+0.7
	6.2nm,1.0s,mb4.5						
TPNV	Topopah Spring	55.19	323	eP	P	03 31 53.3	+0.8
	2.1nm,0.8s,mb4.2						
DUG	Dugway	55.56	329	eP	P	03 31 55.6	+0.5
	2.7nm,1.0s,mb4.2						
PDAR	Pinedale Array	55.93	333	P	P	03 31 57.4	-0.4
	0.3nm,0.5s,mb3.5,baz=142,slow=7.5,SNR=4.9						
PDAR				PcP	PcP	03 32 55.6	-0.6
	0.5nm,0.5s,baz=130,slow=6.9,SNR=5.9						
HWUT	Hardware Ranch	55.98	330	eP	P	03 31 57.7	-0.4
	3.7nm,0.6s,mb4.6						
NVAR	Mina Array Bea	57.39	323	P	P	03 32 09.2	+1.0
	1.7nm,0.7s,mb4.2,baz=131,slow=7.6,SNR=17						
ULM	Lac du Bonnet	57.80	347	P	P	03 32 09.8	-1.2
	1.5nm,0.4s,mb4.3,baz=163,slow=6.6,SNR=5.9						
ULM				PcP	PcP	03 33 01.7	-1.9
	1.5nm,0.5s,baz=166,slow=6.0,SNR=4.0						
ULM	Lac du Bonnet	57.80	347	eP	P	03 32 09.6	-1.4
	3.4nm,0.8s,mb4.4						
HLID	Hailey	58.84	330	eP	P	03 32 18.2	-0.1
	1.0nm,0.8s,mb3.9						
BOZ	Bozeman (W)	59.11	334	eP	P	03 32 19.7	-0.5
	0.7nm,0.6s,mb3.9						
YKA	Yellowknife Ar	73.46	343	P	P	03 33 50.5	-1.6
	0.3nm,0.4s,mb3.5,baz=140,slow=6.5,SNR=7.4						
YKA	Yellowknife Ar	73.46	343	P	P	03 33 50.5	-1.6
TORD	Torodi Ar. Bea	81.90	76	P	P	03 34 39.7	+0.5
	0.4nm,0.5s,mb3.6,baz=276,slow=5.4,SNR=10						
TORD	Torodi Ar. Bea	81.90	76	P	P	03 34 39.7	+0.5
FITZ	Fitzroy Crossi	146.30	225	eP	PKPdf	03 42 00.4	+1.2
	6.6nm,0.6s						

IDC 03 03:28:18.2±15.0**, 49.10S**×**124.93E, h0**km**, mb3.8**/2**, mb1 4.0**/2**, mb1mx3.7**/10**, mbtmp3.8**/2**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/16**, Error ellipse: s-maj=935.5km s-min=30.2km az=92.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.35	19	P	P	03 33 55.2	-0.7
	1.2nm,0.8s,baz=199,slow=8.7,SNR=11						
VNDA	Vanda	31.80	166	P	P	03 34 43.2	-1.1
	0.9nm,0.7s,baz=310,slow=7.9,SNR=4.8						
VNDA				LR	LR	03 45 52.7	
	comp=Z,62nm,19.2s,baz=328,slow=33						
YKA	Yellowknife Ar	145.31	45	PKPbc	PKPbc	03 47 56.7	-1.0
	1.2nm,0.7s,baz=269,slow=3.5,SNR=17						

*ATH **03** 03:28:32.7, 38.09N×26.54E, h30km±16km, MD3.3/4*
*NEIC **03** 03:28:34.0, 38.11N×26.87E, h5km, MD3.2(ISK), MD3.3(ATH), After ISK.*
*ISK **03** 03:28:34.2, 38.11N×26.83E, h5km, MD3.2*
*ISCJB **03** 03:28:35.4±0.5, 38.10N±0.02×26.73E±0.04, h10km, Error ellipse: s-maj=4.8km s-min=3.2km az=157.2*
*CSEM **03** 03:28:35.2±0.1, 38.10N×26.84E, h5km, MD3.2, Error ellipse: s-maj=2.8km s-min=1.4km az=82.0*
ISC 03 03:28:36.0±0.5**, 38.09N**±0.02×**26.74E**±0.04**, h10**km**, n34,** σ**1.27**/45**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.38	39	i PG	Pg	03 28 41.3	-2.2
BLCB				i SG	Sg	03 28 47.0	-1.5
SMG	Samos	0.39	169	ePB	Pg	03 28 42.6	-1.1
SMG				eSB	Sg	03 28 49.5	+0.6
IZM	Izmir	0.51	53	i PG	Pg	03 28 44.3	-1.7
IZM				i SG	Sg	03 28 52.2	-0.6
KDAG	Bornova	0.52	53	i P	Pg	03 28 44.4	-1.8
KDAG				i S	Sg	03 28 52.5	-0.5
AYDN	Tasoluk	1.00	115	i P	Pg	03 28 54.9	-0.3
AYDN				i S	Sg	03 29 09.0	+0.8
BODT	Bodrum	1.12	156	PN	Pn	03 28 56.7	-1.1
MLSB	Milas	1.14	134	PN	Pn	03 28 56.2	-1.9
AKS	Akhisar	1.15	47	PN	Pn	03 28 55.7	-2.5
AKHS	Akhisar	1.15	47	i P	Pb	03 28 56.7	-1.3
AKHS				i S	Sb	03 29 12.9	-0.1
PRK	Paraskevi	1.21	343	ePN	Pn	03 28 54.8	-4.2
AYVA	Ayvalik	1.22	358	i P	Pn	03 28 56.3	-2.7
AYVA				i S	Sb	03 29 11.0	-3.9
APE	Apeiranthos	1.40	224	ePN	Pn	03 28 56.8	-4.8
DAT	Datca	1.51	154	PN	Pn	03 29 03.2	0.0
YER	Yerkesik	1.55	127	PN	Pn	03 29 03.1	-0.6
EZN	Ezine	1.76	350	PN	Pn	03 29 06.6	0.0
BOZC	Bozcaada	1.83	343	i P	Pn	03 29 02.8	-4.7
BOZC				i S	Sn	03 29 29.4	-1.3
DNZL	Cakiroluk	1.87	102	i P	Pg	03 29 11.4	-0.5
DNZL				i S	Sg	03 29 37.6	+1.5
CANB	Canakkale	1.94	7	PN	Pn	03 29 09.3	+0.3
BTOK	Tokmak	1.95	31	i P	Pn	03 29 11.1	+2.0
BTOK				i S	Sn	03 29 36.2	+2.6
DALT	Dalyan (Mudla)	2.00	131	ePN	Pn	03 29 10.2	+0.3
LIA	Limnos Island	2.17	327	ePN	Pn	03 29 07.8	-4.4
GADA	Gvkgeada	2.20	343	ePN	Pn	03 29 13.7	+1.1
FETY	Fethiye	2.37	127	ePN	Pn	03 29 15.2	+0.3
GDZ	Gediz	2.37	64	i P	Pn	03 29 17.0	+2.1
GDZ				i S	Sb	03 29 50.0	+2.0
EDC	Edincik	2.42	21	ePN	Pn	03 29 16.0	+0.4
BNT	Bandirma	2.44	22	ePN	Pn	03 29 16.5	+0.6
KCT	Karacabey	2.51	30	ePN	Pn	03 29 17.3	+0.5
ORLT	Orhaneli	2.57	40	ePN	Pn	03 29 18.3	+0.6
MRMT	Marmara Adasi	2.59	15	ePN	Pn	03 29 18.7	+0.7
RKY	Sarkoy-Tekirda	2.62	7	ePN	Pn	03 29 19.0	+0.7
ENEZ	Enez	2.68	350	ePN	Pn	03 29 20.4	+1.2
MFT	Murefte	2.73	9	ePN	Pn	03 29 20.8	+1.0
YLV	Yalova	3.21	39	ePN	Pn	03 29 27.4	+1.0
EDRB	Edirne	3.75	0	ePN	Pn	03 29 35.6	+1.7

*IDC **03** 03:33:09.8±0.6, 4.02N×95.99E, h0km, mb4.3/17, mb1 4.3/17, mb1mx4.2/23, mbtmp4.2/17, Error ellipse: s-maj=33.0km s-min=15.4km az=49.0*
*MOS **03** 03:33:13.1±1.2, 3.97N×95.85E, h33km, mb4.6/8, Error ellipse: s-maj=19.5km s-min=8.3km az=121.0*
*ISCJB **03** 03:33:14.8±1.8, 3.87N±0.08×95.88E±0.10, h50km±16km, mb4.4/34, MS3.5/3, Error ellipse: s-maj=18.8km s-min=9.8km az=105.9*
*NEIC **03** 03:33:14.1±0.3, 3.87N×95.82E, h30km, mb4.6/12, Error ellipse: s-maj=11.0km s-min=5.3km az=220.0*
*BJI **03** 03:33:14.1, 3.90N×95.80E, h30km, mB5.0, mb4.8, Ms4.4, Msz3.9*
ISC 03 03:33:16.8±1.8**, 3.88N**±0.08×**95.87E**±0.10**, h50**km±16km**, h38**km±2.7km**:pP-P, n59,** σ**0.97**/56**, mb4.4**/34**, MS3.5**/3**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.23	109	Pn	Pn	03 34 05.3	+0.2
	5.7nm,0.3s,baz=310,slow=9.0,SNR=25						
KULM	Kulim	4.97	73	ePn	Pn	03 34 28.5	-0.4
KULM				epPn		03 34 38.2	
KULM				eSn	Sn	03 35 20.2	-4.8
KKM	Kota Kinabalu	20.39	83	eP	P	03 37 49.1	-0.2
KMI	Kunming	22.14	17	P	P	03 38 10.4	+2.3
KMI				AP		03 38 16.1	
KMI				XP	sP	03 38 19.2	-6.9
KMI				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.3						
KMI				LR	LR		
	comp=Z,57nm,26.3s,MS2.9						
JIRN	Jiri	25.39	340	eP	P	03 38 39.6	+0.2
	comp=Z,9.1nm,0.4s,mb4.7						
PKI	Pulchoki	25.59	338	eP	P	03 38 42.8	+1.6
GUN	Gumba	25.73	339	eP	P	03 38 41.9	-0.5
	comp=Z,28nm,0.6s,mb5.0						
DMN	Daman	25.74	338	eP	P	03 38 43.9	+1.4
KKN	Kakani	25.84	338	eP	P	03 38 43.1	-0.3
GKN	Gorkha	26.27	337	eP	P	03 38 47.2	-0.1
	comp=Z,17nm,0.5s,mb4.8						
KOLN	Koldanda	26.48	335	eP	P	03 38 49.5	+0.2
	comp=Z,16nm,0.6s,mb4.8						
NJ2	Nanjing	35.37	35	eP	P	03 40 08.6	+1.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
GTA	Gaotai	35.55	5	eP	P	03 40 08.1	-1.0
GTA				AP	pP	03 40 19.8	-2.4
GTA				XP	sP	03 40 26.0	-2.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
HHC	Hu-ho-hao-te	39.43	19	eP	P	03 40 43.9	+2.1
HHC				AP	pP	03 40 53.7	-1.4
HHC				XP	sP	03 40 57.6	-3.4
HHC				PP	PP	03 42 20.0	+7.0
HHC				PCP	PcP	03 42 51.2	+2.1
HHC				SCP	ScP	03 46 36.7	+3.3
HHC				PCS	PcS	03 46 39.9	+0.9
HHC				S	S	03 46 44.9	+4.9
HHC				XS	sS	03 47 01.1	-1.2
HHC				SS	SS	03 49 34.9	-0.7
HHC				SCS	ScS	03 50 47.6	+2.0
HHC				AMB	AMB		
	comp=Z,8.0nm,0.5s,mb4.7						
HHC				AMB	AMB		
	comp=Z,92nm,4.2s						
HHC				LR	LR		
	comp=N,127nm,18.0s,MS4.0						
HHC				LR	LR		
	comp=E,130nm,16.1s,MS4.0						
HHC				LR	LR		
	comp=Z,89nm,17.1s,MS3.7						
BJT	Baijiatuau	40.39	24	eP	P	03 40 50.6	+0.8
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJT	Baijiatuau	40.39	24	eP	P	03 40 50.6	+0.8
	comp=Z,8.5nm,0.6s,mb4.7						
BJI	Beijing	40.41	24	eP	P	03 40 50.8	+0.8
WMQ	Urumqi	40.43	351	eP	P	03 40 50.0	-0.1
WMQ				AP	pP	03 41 00.0	-3.5
WMQ				XP	sP	03 41 04.0	-5.4
WMQ				PP	PP	03 42 27.0	+3.1
WMQ				S	S	03 46 56.0	+1.0
WMQ				SS	SS	03 49 50.0	-5.6
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,97nm,4.0s						
WMQ				LR	LR		
	comp=N,68nm,12.0s,MS3.9						
WMQ				LR	LR		
	comp=E,74nm,13.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,66nm,12.0s,MS3.7						
MKAR	Makanchi Array	44.34	347	P	P	03 41 20.9	-1.1
	comp=Z,2.3nm,0.4s,mb4.3,baz=159,slow=8.5,SNR=32						
WRA	Warramunga Arr	44.59	124	P	P	03 41 23.9	-0.1
	comp=Z,3.4nm,0.5s,mb4.4,baz=302,slow=9.2,SNR=20						
WRAB	Tennant Creek	44.60	124	eP	P	03 41 23.7	-0.3
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
WRAB	Tennant Creek	44.60	124	ePKPdf	P	03 41 23.7	-0.3
	comp=Z,7.1nm,0.6s,mb4.7						
WB2	Warramunga Arr	44.60	124	eP	P	03 41 23.8	-0.2
SONM	Songino Array	44.72	10	P	P	03 41 24.0	-0.9
	comp=Z,5.8nm,0.6s,mb4.6,baz=190,slow=9.0,SNR=49						
SONM				PcP	PcP	03 43 06.9	+0.3
	comp=Z,1.4nm,0.6s,baz=194,slow=3.3,SNR=7.0						
ULN	Ulaanbaatar	44.87	11	eP	P	03 41 25.1	-1.0
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
ULN	Ulaanbaatar	44.87	11	ePKPdf	P	03 41 25.1	-1.0
	comp=Z,3.0nm,0.6s,mb4.3						
ASAR	Alice Springs	46.08	128	P	P	03 41 35.8	+0.1
	comp=Z,0.8nm,0.4s,mb4.0,baz=298,slow=7.8,SNR=12						
KURK	Kurchatov	48.88	346	eP	P	03 41 56.3	-1.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KURK	Kurchatov	48.88	346	eP	P	03 41 56.3	-1.1
	comp=Z,2.8nm,0.6s,mb4.5						
ZAL	Zalesovo	50.72	352	P	P	03 42 10.5	-0.9
	comp=Z,7.0nm,0.5s,mb4.9,baz=321,slow=5.2,SNR=14						
BRVK	Borovoye	53.36	341	eP	P	03 42 29.8	-1.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BRVK	Borovoye	53.36	341	eP	P	03 42 29.8	-1.3
	comp=Z,1.6nm,0.7s,mb4.1						
ZRNK	Zerenda	53.70	340	eP	P	03 42 32.4	-1.1
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ZRNK	Zerenda	53.70	340	eP	P	03 42 32.4	-1.1
	comp=Z,1.9nm,0.6s,mb4.2						
CHKZ	Chkalovo	53.78	342	eP	P	03 42 33.4	-0.7
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CHKZ	Chkalovo	53.78	342	eP	P	03 42 33.4	-0.8
	comp=Z,4.6nm,0.8s,mb4.5						
STKA	Stephens Creek	56.13	133	P	P	03 42 51.1	0.0
	comp=Z,1.0nm,0.4s,mb4.2,baz=296,slow=16,SNR=3.5						
BR131	Keskin Array S	66.34	312	eP	P	03 44 00.5	+0.3
	comp=Z,0.5nm,0.3s,mb4.0						
BRTR	Keskin Array B	66.34	312	P	P	03 44 00.6	+0.4
	comp=Z,1.6nm,0.8s,mb4.1,baz=125,slow=6.9,SNR=12						
IDI	Anoyia	72.26	306	P	P	03 44 37.8	+1.0
	comp=Z,1.5nm,0.4s,mb4.2,baz=72,slow=10,SNR=7.8						
AKASG	Malin Array Be	72.34	322	P	P	03 44 36.5	-0.8
	comp=Z,0.2nm,0.3s,mb3.5,baz=86,slow=5.8,SNR=2.9						
AKASG	Malin Array Be	72.34	322	P	P	03 44 36.5	-0.8
JOF	Joensuu	75.17	335	ep	P	03 44 52.7	-1.1
	comp=Z,1.0nm,0.5s,mb4.0						
FINES	FINESS Array B	77.03	332	P	P	03 45 03.1	-1.3
	comp=Z,1.1nm,0.6s,mb4.0,baz=130,slow=5.7,SNR=6.7						
KAF	Kangasniemi	77.11	333	ep	P	03 45 00.3	-4.5
ARCES	ARCESS Array B	79.58	340	P	P	03 45 16.9	-1.6
	comp=Z,0.8nm,0.5s,mb3.9,baz=101,slow=6.9,SNR=22						
ARCES	ARCESS Array B	79.58	340	P	P	03 45 16.9	-1.6
HFS	Hagfors	82.75	330	P	P	03 45 34.8	-0.5
	comp=Z,1.9nm,0.7s,mb4.2,baz=118,slow=4.3,SNR=9.1						
NOA	NORSAR Array B	84.03	331	P	P	03 45 42.0	+0.1
	comp=Z,0.2nm,0.5s,mb3.5,baz=90,slow=5.9,SNR=2.8						
DAVOX	Davos	84.45	316	P	P	03 45 44.9	+0.9
	comp=Z,4.3nm,0.5s,mb4.8,baz=137,slow=5.6,SNR=16						
KEST	Kesra	84.93	305	P	P	03 45 48.2	+1.8
	comp=Z,2.5nm,0.8s,mb4.4,baz=129,slow=2.8,SNR=10.0						
EKA	Eskdalemuir Ar	91.97	326	P	P	03 46 20.5	+0.5
	comp=Z,3.0nm,0.9s,mb4.6,baz=87,slow=5.4,SNR=5.3						
TORD	Torodi Ar. Bea	93.18	283	P	P	03 46 27.2	+1.6
	comp=Z,0.3nm,0.6s,mb3.9,baz=93,slow=5.2,SNR=5.4						
ULM	Lac du Bonnet	125.15	9	PKP	PKPdf	03 52 11.1	-0.5
	comp=Z,1.4nm,0.8s,baz=82,slow=6.5,SNR=4.0						
ULM	Lac du Bonnet	125.15	9	PKP	PKPdf	03 52 11.1	-0.5
NVAR	Mina Array Bea	127.36	34	PKP	PKPdf	03 52 17.1	+1.3
	comp=Z,0.4nm,0.6s,baz=260,slow=3.9,SNR=4.9						
PDAR	Pinedale Array	128.18	24	PKP	PKPdf	03 52 18.0	+0.6
	comp=Z,0.3nm,0.5s,baz=113,slow=2.5,SNR=6.2						
CPUP	Villa Florida	145.98	226	PKPbc	PKPbc	03 52 52.2	+1.3
	comp=Z,0.7nm,0.5s,baz=107,slow=4.8,SNR=5.3						
CPUP	Villa Florida	145.98	226	PKPbc	PKPbc	03 52 52.2	+1.3

CASC 03 03:39:38.8±3.6**, 12.79N**×**88.88W, h40**km±70km**, MD4.1, ML3.6, 10C-6D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNVI	San Vicente	0.82	3⇓	eP	x	03 40 17.5	
SNVI				eS	x	03 40 28.9	
LFRS	El Faro	0.85	348	eP	x	03 40 17.7	
LFRS				eS	x	03 40 34.3	
VSM	San Miguel	0.87	43⇑	eP	x	03 40 18.8	
VSM				eS	x	03 40 32.5	
BLLM	Bellamira	0.91	44⇑	eP	x	03 40 19.0	
BLLM				eS	x	03 40 33.6	
SNET	Serv Nac Est T	0.96	339⇑	iP	x	03 39 55.3	
SNET				eS	x	03 40 08.0	
LBRS	Las Brisas	0.96	351	eP	x	03 40 19.7	
BOQS	Boqueron	1.02	338⇑	eP	x	03 40 20.3	
BOQS				eS	x	03 40 34.2	
CNCH	Conchagua	1.13	64⇓	eP	x	03 40 21.4	
CNCH				eS	x	03 40 39.2	
SBLS	San Blas	1.27	325⇓	eP	x	03 40 23.6	
SBLS				eS	x	03 40 40.1	
SNJE	San Jose	1.29	327	eP	x	03 40 23.9	
SNJE				eS	x	03 40 41.1	
RTR	El Retiro	1.33	326	eP	x	03 40 24.9	
RTR				eS	x	03 40 42.9	
RBDL	Robledal	1.53	329⇓	eP	x	03 40 27.9	
RBDL				eS	x	03 40 47.6	
CRIN	San Cristobal	1.79	93	eP	Pn	03 40 08.1	+0.9
CRIN				eS	Sn	03 40 31.6	+3.0
LEON	Leon	1.98	101⇑	eP	Pn	03 40 09.4	-0.3
LEON				eS	Sn	03 40 31.3	-2.0
TELN	Telica	2.01	95⇓	eP	Pn	03 40 10.5	+0.3
TELN				eS	Sn	03 40 34.4	+0.4
IXG	Ixpaco	2.06	312⇑	eP	Pn	03 40 11.1	+0.2
IXG				eS	Sn	03 40 36.0	+0.6
MIRN	Miramar	2.15	99⇑	eP	Pn	03 40 12.3	+0.2
MIRN				eS	Sn	03 40 36.7	-0.8
CNGN	Cerro Negro	2.15	97⇑	eP	Pn	03 40 11.6	-0.5
CNGN				eS	Sn	03 40 37.3	-0.2
MOMJ	Momotombo	2.32	99⇑	eP	Pn	03 40 14.6	+0.1
MOMJ				eS	Sn	03 40 40.9	-0.7
APYN	Apoyeque	2.53	102	eP	Pn	03 40 17.8	+0.4
APYN				eS	Sn	03 40 47.6	+0.7
XAVN	Gruta Xavier	2.57	104	eP	Pn	03 40 18.3	+0.3
XAVN				eS	Sn	03 40 47.7	-0.3
TISN	Laguna Tiscapa	2.63	104	eP	Pn	03 40 19.1	+0.4
TISN				eS	Sn	03 40 47.5	-1.9
MGAN	Managua	2.65	104	eP	Pn	03 40 19.1	+0.2
MGAN				eS	Sn	03 40 49.7	-0.2
MGAN				i		03 40 51.7	
	comp=N,372nm,0.4s						
TICN	Ticuantepe	2.69	106	eP	Pn	03 40 20.2	+0.6
TICN				eS	Sn	03 40 50.7	-0.2
TP2	Tecpan 2	2.88	314⇓	eP	Pn	03 40 24.8	+2.7
TP2				eS	Sn	03 40 58.9	+3.4
APON	Apoyo	2.88	107	eP	Pn	03 40 22.8	+0.6
APON				eS	Sn	03 40 55.7	+0.1
SSNN	San Juan del S	3.32	116	eP	Pn	03 40 28.5	+0.3
CONN	Concepcion	3.41	111	eP	Pn	03 40 30.0	+0.6
JCR	Jicaral	4.71	128	eP	Pn	03 40 48.6	+1.3
PRS1	Puriscal	5.28	121	eP	Pn	03 40 57.5	+2.4
PRS1				eS	Sn	03 41 56.1	+1.6
OCM	Ochomogo	5.62	120	eP	Pn	03 41 01.6	+1.8
LCR2	La Lucha 2	5.66	122	eP	Pn	03 41 03.5	+3.1
LCR2				eS	Sn	03 42 04.9	+0.9
BUS	Buena Vista	5.96	122⇑	eP	Pn	03 41 07.8	+3.2
CTCR	Cotoan	7.15	122	eP	Pn	03 41 23.3	+2.6

*CSEM **03** 03:44:41.6±0.1, 51.51N×16.27E, h1km, mb4.2/7, ML4.3/9, Error ellipse: s-maj=1.5km s-min=1.2km az=144.0*
*ISCJB **03** 03:44:41.2±0.2, 51.41N±0.01×16.12E±0.02, h0km, mb4.4/33, MS4.1/2, Error ellipse: s-maj=1.7km s-min=1.5km az=179.8*
*MOS **03** 03:44:41.9±0.9, 51.47N×16.10E, h10km, mb4.4/12, Error*

ellipse: s-maj=5.6km s-min=3.7km az=75.0
*BJI **03** 03:44:41.0, 5150N×1610E, h5km, mB5.0, mb4.7, Ms4.6, Msz4.2*
*IDC **03** 03:44:42.9±0.5, 5146N×1607E, h0km, mb4.0/8, mb1 4.0/17, mb1mx3.9/25, mbtmp3.8/17, ML3.6/8, Error ellipse: s-maj=9.5km s-min=5.9km az=106.0*
*STR **03** 03:44:42.6±1.9, 5138N×1626E, h10km±1km, Ml4.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **03** 03:44:43.1±0.2, 5147N×1615E, h5km, mb4.5/17, ML3.8(BRA), ML4.0(FUR), ML4.4(STR), ML4.5(SZGRF), Error ellipse: s-maj=3.2km s-min=3.0km az=156.0*
*PRU **03** 03:44:43.7, 5144N×1611E, h0km*
*IPEC **03** 03:44:43.0±0.3, 5145N×1622E, h7km±1km, ML3.4/3, Error ellipse: s-maj=1.7km s-min=0.7km az=35.0*
*WAR **03** 03:44:43.2, 5147N×1614E, ML3.5, Mining Induced*
*BGR **03** 03:44:44.2±0.5, 5148N×1604E, h1km, ML4.0/16, Error ellipse: s-maj=5.6km s-min=4.4km az=139.0*
*LDG **03** 03:44:44.2±0.2, 5149N×1620E, h1km, Ml4.5/19, Error ellipse: s-maj=6.2km s-min=3.8km az=173.0, Suspected Mining induced.*
*VIE **03** 03:44:44.6±0.8, 5127N×1610E, h0km, mb3.3/6, ML3.4/8, Error ellipse: s-maj=5.1km s-min=3.4km az=8.0 66 km WNW of Breslau Suspected Mining induced.*
*NAO **03** 03:44:50.4, 5149N×1580E, h33km, mb2.7*
ISC 03 03:44:42.5±0.2, **5145N**±001×**1612E**±002, **h0**km, **n238**, σ1§07/340, **mb4.4**/33, **MS4.1**/2, **20C-11D**, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.62	170	ePg	Pg	03 44 54.9	+0.5
KSP				i		03 44 55.3	
KSP				eSg	Sg	03 45 03.1	+0.7
KSP				eL		03 45 07.4	
KSP	Ksiaz	0.62	170	ePg	Pg	03 44 54.9	+0.5
KSP				i		03 44 55.3	
KSP				eSg	Sg	03 45 03.1	+0.7
KSP				e		03 45 07.4	
KSP	Ksiaz	0.62	170	ePg	Pg	03 44 54.9	+0.5
KSP				eSg	Sg	03 45 03.1	+0.7
UPC	Upice	0.95	184	ePG	Pg	03 45 00.8	+0.1
UPC	Upice	0.95	184	ePg	Pg	03 45 01.1	+0.4
DPC	Dobruska-Polom	1.11	173	ePG	Pg	03 45 03.6	-0.2
DPC				eSG	Sg	03 45 17.2	-1.0
	2µm,1.4s						
DPC	Dobruska-Polom	1.11	173	eP	Pg	03 45 03.6	-0.2
DPC				e		03 45 17.2	
DPC				smax			
	comp=N,2µm,1.4s						
DPC	Dobruska-Polom	1.11	173	ePg	Pg	03 45 03.7	-0.1
DPC				eS	Sg	03 45 17.2	-1.0
DPC				eSg	Sg	03 45 17.9	-0.3
PVCC	Panska Ves	1.35	227	ePg	Pg	03 45 08.4	0.0
PVCC				eSg	Sg	03 45 27.6	+1.8
BRG	Berggiesshubel	1.49	248	ePn	Pn	03 45 09.9	-0.6
BRG				eSg	Sg	03 45 32.4	+2.0
BRG	Berggiesshubel	1.49	248	PN	Pn	03 45 09.8	-0.8
BRG				PG	Pg	03 45 11.3	+0.2
BRG				SG	Sg	03 45 31.6	+1.3
	comp=N,325nm,0.5s						
BRG							
	comp=N,967nm,3.5s						
BRG							
	comp=E,963nm,4.4s						
BRG							
	comp=Z,1µm,4.3s						
BRG	Berggiesshubel	1.49	248	P	Pn	03 45 09.8	-0.7
BRG						03 45 31.6	
BRG				smax			
	comp=N,325nm,0.5s						
BRG				MLR	MLR		
	comp=N,967nm,3.5s						
BRG				MLR	MLR		
	comp=E,963nm,4.4s						
BRG				MLR	MLR		
	comp=Z,1µm,4.3s						
BRG	Berggiesshubel	1.49	248	Pg	Pg	03 45 11.3	+0.2
BRG				Sg	Sg	03 45 32.4	+2.0
PRA	Prague	1.75	218	PG	Pg	03 45 14.0	-2.1
PRA				SG	Sg	03 45 39.0	+0.2
PRU	Pruhonice	1.77	215	ePN	Pn	03 45 14.1	-0.4
PRU				ePG	Pg	03 45 16.2	-0.4
PRU				eSG	Sg	03 45 38.1	-1.5
	comp=Z,1µm,1.2s						
PRU	Pruhonice	1.77	215	eP	Pn	03 45 14.1	-0.4
PRU				e		03 45 38.1	
PRU				smax			
	comp=N,1µm,1.2s						
RUE	Ruedersdorf	1.78	306	ePn	Pn	03 45 13.5	-1.0
RUE				eSg	Sg	03 45 40.2	+0.6
RUE	Ruedersdorf	1.78	306	ePn	Pn	03 45 13.0	-1.5
RUE				ePg	Pg	03 45 17.3	+0.7
RUE				eSg	Sg	03 45 41.3	+1.6
RUE	Ruedersdorf	1.78	306	ePn	Pn	03 45 13.0	-1.5
RUE	Ruedersdorf	1.78	306	ePg	Pg	03 45 17.3	+0.7
RUE				Sg	Sg	03 45 40.2	+0.6
FBE	Freiberg	1.82	254	ePn	Pn	03 45 14.7	-0.4
FBE				eSg	Sg	03 45 41.1	+0.1
RAC	Raciborz	1.90	135	ePg	Pg	03 45 19.2	+0.2
RAC				eSg	Sg	03 45 44.7	+1.1
MORC	Moravsky Berou	1.91	151	⇑iP	Pn	03 45 15.7	-0.6
MORC	Moravsky Berou	1.91	151	ePn	Pn	03 45 15.3	-1.0
MORC	Moravsky Berou	1.91	151	ePn	Pn	03 45 15.3	-1.0
MORC				eSg	Sg	03 45 41.0	-2.8
GKP	Gorka Klasztor	1.95	20	ePn	Pn	03 45 17.0	+0.2
GKP				ePP		03 45 24.7	
GKP				eSg	Sg	03 45 46.2	+1.1
CLL	Collm	1.96	267	ePn	Pn	03 45 16.5	-0.5
CLL	Collm	1.96	267	i Pn	Pn	03 45 16.4	-0.6
CLL				i Pg	Pg	03 45 20.6	+0.5
CLL				i x	x	03 45 23.7	
CLL				i Sg	Sg	03 45 46.5	+1.0
	comp=Z,308nm,1.1s						
CLL	Collm	1.96	267	i Pn	Pn	03 45 16.4	-0.6
CLL				i Pg	Pg	03 45 20.6	+0.5
CLL				i Sg	Sg	03 45 46.5	+1.0
CLL	Collm	1.96	267	ePn	Pn	03 45 16.0	-1.0
OKC	Ostrava-Krasne	2.07	141	ePN	Pn	03 45 17.4	-1.1
OKC				ePG	Pg	03 45 21.2	-1.0
OKC				eSG	Sg	03 45 47.9	-1.1
VRAC	Vranov	2.17	172	Pn	Pn	03 45 20.2	+0.3
	comp=Z,11nm,0.3s,baz=341,slow=14,SNR=70						
VRAC				Lg		03 45 52.2	
	comp=Z,47nm,0.3s,baz=61,slow=22,SNR=11						
VRAC	Vranov	2.17	172	⇓iP	Pn	03 45 20.1	+0.2
VRAC	Vranov	2.17	172	⇓P	Pn	03 45 20.1	+0.2
VRAC	Vranov	2.17	172	ePn	Pn	03 45 20.1	+0.2
VRAC				eSg	Sg	03 45 51.1	-1.1
	comp=Z,201nm,0.5s						
TREC	Trest	2.20	191	eSg	Sg	03 45 51.6	-1.5
KRUC	Moravsky	2.40	176	eSg	Sg	03 45 59.3	-0.3
	comp=Z,196nm,0.7s						
TANN	Tannenbergstha	2.54	247	ePn	Pn	03 45 25.2	+0.3
TANN				eSg	Sg	03 46 04.2	+0.1
WERD	Werda	2.61	249	ePn	Pn	03 45 25.9	-0.1
WERD				eSg	Sg	03 46 06.1	-0.4
NKC	Novy Kostel	2.63	244	ePN	Pn	03 45 26.6	+0.4
NKC				ePG	Pg	03 45 32.4	-0.5
NKC				eSG	Sg	03 46 07.9	+0.9
	comp=Z,307nm,0.5s						
GUNZ	Gunzen	2.63	247	ePn	Pn	03 45 26.8	+0.5
GUNZ				eSg	Sg	03 46 05.8	-1.4
OJC	Ojcow	2.64	116	ePn	Pn	03 45 24.0	-2.3
OJC				ePg	Pg	03 45 33.1	0.0
OJC				eSg	Sg	03 46 07.5	+0.2
WERN	Wernitzgruen	2.64	245	ePn	Pn	03 45 26.6	+0.2
WERN				eSg	Sg	03 46 08.0	+0.6
KHC	Kasperske Hory	2.84	216	ePN	Pn	03 45 29.3	+0.2
KHC				ePG	Pg	03 45 35.4	-1.5
KHC				eSN	Sn	03 46 04.0	0.0
KHC				eSG	Sg	03 46 13.4	-0.3
	comp=Z,350nm,1.1s						
KHC	Kasperske Hory	2.84	216	ePg	Pg	03 45 35.4	-1.5
KHC				eS	Sn	03 46 04.0	0.0
	comp=Z,350nm,1.1s						
KHC				eSg	Sg	03 46 12.7	-1.0
MOX	Moxa	2.96	256	ePn	Pn	03 45 30.7	0.0
MOX	Moxa	2.96	256	i PN	Pn	03 45 30.8	+0.1
MOX				i PG	Pg	03 45 39.5	+0.3
MOX				i SG	Sg	03 46 19.3	+1.8
MOX	Moxa	2.96	256	ePn	Pn	03 45 30.5	-0.2
MOX	Moxa	2.96	256	i Pg	Pg	03 45 39.5	+0.3
MOX				eSg	Sg	03 46 17.1	-0.4
ROTZ	Rotzenmuhle	3.01	237	ePn	Pn	03 45 31.6	+0.1
GEC2	GERESS Array S	3.04	212	ePn	Pn	03 45 33.0	+1.2
GEC2	GERESS Array S	3.04	212	ePn	Pn	03 45 33.0	+1.2
GERES	GERESS Array B	3.04	212	Pn	Pn	03 45 31.7	-0.2
	comp=Z,4.2nm,0.3s,baz=29,slow=14,SNR=105						
GERES				Pg	Pg	03 45 39.2	-1.6
	comp=Z,15nm,0.3s,baz=31,slow=16,SNR=76						
GERES				Lg		03 46 18.6	
	comp=Z,26nm,0.3s,baz=32,slow=28,SNR=9.0						
GERES	GERESS Array B	3.04	212	Pg	Pg	03 45 39.2	-1.6
SMOL	Smolenice	3.06	163	ePN	Pn	03 45 33.9	+1.8
SMOL				ePG	Pg	03 45 41.4	+0.2
SMOL				eSG	Sg	03 46 22.7	+1.8
LIKS	Likavka	3.07	140	ePG	Pg	03 45 42.6	+1.1
LIKS				eSG	Sg	03 46 27.1	+5.8
WET	Wettzell	3.11	223	ePn	Pn	03 45 32.8	0.0
WET	Wettzell	3.11	223	ePn	Pn	03 45 32.8	0.0
ZST	Bratislava	3.32	169	ePN	Pn	03 45 37.4	+1.7
ZST				ePG	Pg	03 45 45.3	-0.9
ZST				eSG	Sg	03 46 29.7	+0.5
ZST	Bratislava	3.32	169	eP	Pn	03 45 37.4	+1.7
ZST				pmax	pmax		
	comp=N,204nm,1.2s						
ZST	Bratislava	3.32	169	ePn	Pn	03 45 37.4	+1.7
ZST				ePg	Pg	03 45 45.3	-0.9
ZST				eSg	Sg	03 46 29.7	+0.5
NIE	Niedzica	3.37	126	ePn	Pn	03 45 36.7	+0.4
NIE				ePg	Pg	03 45 46.5	-0.6
NIE				eSg	Sg	03 46 31.0	+0.3
VYHS	Vyhne	3.44	148	ePN	Pn	03 45 37.3	-0.1
VYHS				ePG	Pg	03 45 49.1	+0.6
VYHS	Vyhne	3.44	148	ePn	Pn	03 45 37.3	-0.1
VYHS				ePg	Pg	03 45 49.2	+0.7
CONA	Conrad Observa	3.53	183	⇑iPn	Pn	03 45 32.5	-6.2
	SNR=27						
GRA1	Grafenberg Arr	3.58	242	ePn	Pn	03 45 39.7	+0.3
GRA1				eSg	Sg	03 46 37.7	0.0
GRA1	Grafenberg Arr	3.58	242	Pn	Pn	03 45 39.7	+0.3
GRA1				Sg	Sg	03 46 37.7	0.0
GRF	Grafenberg Arr	3.58	242	ePn	Pn	03 45 39.7	+0.4
GRF				eSg	Sg	03 46 37.7	-0.1
CLZ	Clausthal	3.60	278	ePn	Pn	03 45 40.1	+0.5
CLZ	Clausthal	3.60	278	ePn	Pn	03 45 40.1	+0.5
CLZ	Clausthal	3.60	278	Pn	Pn	03 45 40.1	+0.5
CLZ				eSg	Sg	03 46 38.4	+0.1
BSD	Bornholm Skovb	3.74	349	i P	Pn	03 45 39.4	-2.1
BSD				i S	Sn	03 46 20.4	-5.8
BSD				i LG		03 46 21.9	
BSD	Bornholm Skovb	3.74	349	i P	Pn	03 45 39.4	-2.1
BSD				i S	Sn	03 46 20.4	-5.8
MOA	Molln	3.80	199	⇓iPn	Pn	03 45 42.9	+0.5
	SNR=33						
MOA				⇑iSg	Sg	03 46 45.2	+0.5
	comp=N,239nm,0.8s						
HROE	Hohe Rhon--Fla	3.88	259	⇓iPn	Pn	03 45 43.4	0.0
UBBA	Unterbreizbach	3.91	263	ePn	Pn	03 45 44.2	+0.4
ARSA	Arzberg	4.22	186	⇑iPn	Pn	03 45 49.4	+1.3
	SNR=17						
ARSA				⇑iSg	Sg	03 47 00.1	+1.8
	comp=N,116nm,0.8s						
ARSA	Arzberg	4.22	186	⇑iPn	Pn	03 45 49.4	+1.3
ARSA				i Sg	Sg	03 47 00.1	+1.8
CRVS	Cervenica-Dubn	4.28	125	ePN	Pn	03 45 48.7	-0.2
CRVS				e		03 46 05.6	
CRVS				e		03 47 07.6	
PSZ	Piszkesteto	4.30	144	⇓ePn	Pn	03 45 49.8	+0.6
PSZ	Piszkesteto	4.30	144	ePn	Pn	03 45 49.2	0.0
PSZ				ePg	Pg	03 46 04.9	-0.1
PSZ				eSg	Sg	03 46 59.7	-1.0
PSZ	Piszkesteto	4.30	144	ePn	Pn	03 45 49.2	0.0
PSZ	Piszkesteto	4.30	144	ePg	Pg	03 46 04.9	-0.1
KWP	Kalwaria	4.58	111	ePn	Pn	03 45 52.6	-0.4
KWP				ePP		03 46 06.6	
KWP				ePg	Pg	03 46 11.9	+1.6
KWP				eSg	Sg	03 47 14.3	+4.6
KOLS	Kolonicke sedl	4.69	120	ePN	Pn	03 45 54.0	-0.5
KOLS				e		03 46 15.0	
KBA	Koelnbreinsper	4.74	204	⇓iPn	Pn	03 45 56.1	+0.9
	SNR=12						
KBA				⇑iSg	Sg	03 47 13.5	-1.3
	comp=N,44nm,0.5s						
COP	Copenhagen	4.78	334	i P	Pg	03 46 18.6	+4.5
COP				eS	Sg	03 47 22.2	+6.2
COP				i		03 47 30.7	
PERS	Pernice	4.87	188	ePn	Pn	03 45 58.2	+1.3
PERS				eSn	Sn	03 47 02.8	+8.8
PERS	Pernice	4.87	188	ePn	Pn	03 45 58.2	+1.3
PERS				eSn	Sg	03 47 21.5	+2.6
PERS	Pernice	4.87	188	ePn	Pn	03 45 58.2	+1.2
SUW	Suwalki	5.00	56	ePn	Pn	03 45 57.8	-1.0
SUW				ePg	Pg	03 46 16.7	-1.6
SUW				eSn	Sn	03 46 50.8	-6.5
SUW	Suwalki	5.00	56	ePn	Pn	03 45 56.8	-2.0
SUW				ePg	Pg	03 46 16.7	-1.6
SUW				eSn	Sn	03 46 50.8	-6.5
SUW	Suwalki	5.00	56	ePn	Pn	03 45 56.8	-2.0
GROS	Grobnik	5.01	185	i Pn	Pn	03 45 59.9	+0.9
GROS				eSn	Sb	03 47 12.3	+0.4
GROS							
	comp=Z,143nm,1.2s						
GROS	Grobnik	5.01	185	i Pn	Pn	03 45 59.9	+0.9
GROS				eSn	Sb	03 47 12.3	+0.4
GROS	Grobnik	5.01	185	i Pn	Pn	03 45 59.8	+0.8
TNS	Taunus Mts	5.02	259	ePn	Pn	03 45 59.0	0.0
TNS	Taunus Mts	5.02	259	ePn	Pn	03 45 59.0	0.0
TOD	Tromm	5.02	251	P	Pn	03 45 58.9	-0.2
TOD				S	Sn	03 47 00.2	+2.4
OBKA	Obir	5.05	192	⇑iPn	Pn	03 45 58.7	-0.9
	SNR=6.6						
OBKA				⇑iSg	Sg	03 47 26.1	+1.2
	comp=Z,85nm,0.7s						
STU	Stuttgart	5.20	242	eP	Pn	03 46 00.8	-0.8
STU				pmax	pmax		
	comp=Z,8.0nm,0.4s						
STU	Stuttgart	5.20	242	ePn	Pn	03 46 00.8	-0.8
	comp=Z,8.3nm,0.4s						
STU	Stuttgart	5.20	242	ePn	Pn	03 46 00.8	-0.8
	comp=Z,8.3nm,0.4s						
MOTA	Moosalm	5.25	220	⇑iPn	Pn	03 46 02.2	-0.1
MOTA				⇑iSg	Sg	03 47 33.5	+2.1
	comp=Z,75nm,0.9s						
LVV	L'vov	5.29	105	deP	Pn	03 46 02.5	-0.3
LVV				e		03 47 03.1	
LVV	L'vov	5.29	105	eP	Pn	03 46 02.5	-0.3
LVV				eS	Sn	03 47 03.1	-1.4
SQTA	Sankt Quirin	5.31	219	⇑iPn	Pn	03 46 03.5	+0.4
	SNR=13						
SQTA				⇑iSg	Sg	03 47 34.9	+1.7
	comp=Z,35nm,0.6s						
SQTA	Sankt Quirin	5.31	219	Pn	Pn	03 46 03.5	+0.4
	SNR=13						
SQTA				Sg	Sg	03 47 34.9	+1.7
	comp=Z,35nm,0.6s						
DOBS	Dobrina	5.32	185	i Pn	Pn	03 46 04.9	+1.7
GORS	Gorjuse	5.33	196	ePn	Pn	03 46 03.7	+0.4
PDKS	Podkum	5.45	188	ePn	Pn	03 46 06.3	+1.3
PDKS				eSn	Sb	03 47 25.1	+0.7
PKSM	Moragy	5.50	161	⇑iP	Pn	03 46 07.0	+1.3
PKSM	Moragy	5.50	161	⇑P	Pn	03 46 07.0	+1.3
VOY	Vojsko	5.62	196	ePn	Pn	03 46 16.8	+9.5
VOY				e		03 46 29.4	
VOY				e		03 47 44.7	
SPAK	Spaichingen-Ko	5.81	238	P	Pn	03 46 08.4	-1.6
LANF	Langenberg	5.88	248	P	Pn	03 46 10.7	-0.2
LANF				S	Sn	03 47 25.2	+6.2
BFO	Black Forest	5.92	241	ePn	Pn	03 46 10.7	-0.8
BFO				ePg	Pg	03 46 36.2	+0.2
BFO				eSg	Sg	03 47 52.0	-0.8
BOJS	Bojanci	5.98	186	ePn	Pn	03 46 13.4	+1.1
DAVOX	Davos	6.21	224	Pn	Pn	03 46 15.6	+0.1
	comp=Z,0.6nm,0.3s,baz=98,slow=22,SNR=6.5						
DAVOX				Lg		03 48 00.9	
	comp=Z,1.8nm,0.3s,baz=178,slow=22,SNR=5.0						
DRGR		6.36	135	⇓iP	Pn	03 46 17.4	-0.1
DRGR		6.36	135	⇓P	Pn	03 46 17.4	-0.1
WLS	Welschbruch	6.42	245	P	Pn	03 46 18.2	-0.2
MEM	Membach	6.44	266	P	Pn	03 46 19.3	+0.7
MEM	Membach	6.44	266	P	Pn	03 46 19.2	+0.7
CDF	Champ du Feu	6.47	245	ePn	Pn	03 46 19.6	+0.6
CDF				eSg	Sg	03 48 08.6	-1.7
	comp=Z,331nm,1.2s						
MUD	Monsted U'grnd	6.47	323	i P	Pg	03 46 52.9	+6.3
MUD				eS	Sg	03 48 24.0	+14
WLF	Walferdange	6.60	258	P	Pn	03 46 23.9	+3.1
WLF	Walferdange	6.60	258	eP	Pn	03 46 22.4	+1.6
WLF				pmax	pmax		
	comp=Z,14nm,1.0s						
WLF	Walferdange	6.60	258	ePn	Pn	03 46 22.4	+1.7
	comp=Z,14nm,1.0s						
WLF				ePg	Pg	03 46 50.3	+1.3
WLF	Walferdange	6.60	258	eP	Pn	03 46 22.4	+1.6
	comp=Z,14nm,1.0s						
ECH	Echery	6.64	244	P	Pn	03 46 20.5	-0.8
BCLA	Clavier	6.92	266	P	Pn	03 46 26.3	+1.1
HINF	Hinteralfeld	7.03	242	ePn	Pn	03 46 26.2	-0.5
HINF				eSg	Sg	03 48 26.9	-1.5
	comp=Z,120nm,1.0s						
BURAR	Bucovina Array	7.05	119	⇑iP	Pn	03 46 26.8	-0.2
BURAR	Bucovina Array	7.05	119	⇑P	Pn	03 46 26.8	-0.2
HAU	Haudompre	7.21	245	ePn	Pn	03 46 29.3	+0.1
HAU				eSg	Sg	03 48 33.6	-0.5
	comp=Z,149nm,1.2s						
NE53	Naroch'	7.29	58	eP	Pn	03 46 32.1	+1.9
GIVF	Givet	7.29	264	eSg	Sg	03 48 31.0	-5.7
	comp=Z,252nm,1.3s						
GIVF	Givet	7.29	264	eSg	Sg	03 48 31.0	-5.7
	comp=Z,126nm,1.3s						
DOU	Dourbes	7.43	264	P	Pn	03 46 35.6	+3.4
BAIF	Baives	7.69	264	eSg	Sg	03 48 47.4	-1.9
	comp=Z,173nm,1.3s						
MEZF	Maizieres J'vi	7.72	252	eSg	Sg	03 48 48.5	-2.0
	comp=Z,240nm,1.4s						
SFTF	Sexfontaines	7.87	250	ePn	Pn	03 46 38.5	+0.3
SFTF				eSg	Sg	03 48 53.4	-1.8
	comp=Z,251nm,1.3s						
CABF	La Chapelle	8.18	238	eSg	Sg	03 49 03.4	-1.7
	comp=Z,332nm,1.4s						
AKASG	Malin Array Be	8.29	90	Pn	Pn	03 46 41.0	-2.9
	comp=Z,4.5nm,0.3s,baz=281,slow=12,SNR=22						
AKASG				Sn	Sn	03 48 11.6	-6.7
	comp=Z,2.5nm,0.3s,baz=273,slow=23,SNR=5.0						
AKASG	Malin Array Be	8.29	90	i P	Pn	03 46 41.7	-2.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	Malin Array Be	8.29	90	Pn	Pn	03 46 41.0	-2.9
AKASG				Sn	Sn	03 48 11.6	-6.8
AKASG	Malin Array Be	8.29	90	Pn	Pn	03 46 41.0	-3.0
AKBB	Malin Array Si	8.29	90	ePn	Pn	03 46 41.6	-2.4
LPL	La Plagne	8.61	230	ePn	Pn	03 46 48.8	+0.5
LPL				eSg	Sg	03 49 16.6	-2.3
	comp=Z,104nm,1.5s						
LPG	La Plagne	8.61	230	eSg	Sg	03 49 17.0	-2.0
	comp=Z,23nm,0.5s						
HFS	Hagfors	8.81	352	Pn	Pn	03 46 48.4	-2.8
	comp=Z,0.5nm,0.3s,baz=154,slow=14,SNR=17						
HFS				Sn	Sn	03 48 24.5	-6.6
	comp=Z,0.7nm,0.3s,baz=183,slow=28,SNR=5.8						
LOR	Lormes	9.03	247	eSg	Sg	03 49 29.9	-2.5
	comp=Z,155nm,1.4s						
MBDF	Montbardon	9.18	227	ePn	Pn	03 46 56.5	+0.3
VSU	Vasula	9.30	37	eP	Pn	03 46 57.3	-0.5
SSF	Saint Saulge	9.34	247	eSg	Sx	03 49 39.4	
	comp=Z,59nm,1.2s						
SMF	Signal de Mont	9.38	244	eSg	Sx	03 49 40.1	
	comp=Z,10nm,0.4s						
ORIF	Oris-en-Rattie	9.46	230	ePn	Pn	03 47 00.0	0.0
ORIF				eSg	Sn	03 49 42.8	+56
	comp=Z,13nm,0.6s						
AVF	Avril sur Loir	9.58	246	ePn	Pn	03 47 00.9	-0.8
AVF				eSg	Sn	03 49 46.8	+57
	comp=Z,110nm,1.4s						
SBF	Sospel	9.58	221	ePn	Pn	03 47 01.7	0.0
NB2	NORSAR Subarra	9.99	346	Pn	Pn	03 47 03.5	-3.8
	comp=Z,0.6nm,0.5s,baz=163,slow=14						
NOA	NORSAR Array B	9.99	346	Pn	Pn	03 47 04.2	-3.0
	comp=Z,0.5nm,0.3s,baz=151,slow=12,SNR=5.0						
NOA	NORSAR Array B	9.99	346	Pn	Pn	03 47 04.2	-3.1
BGF	Bois d'Agland	10.00	246	eSg	Sx	03 49 59.8	
	comp=Z,15nm,0.4s						
FRF	La Foret Royal	10.16	223	ePn	Pn	03 47 09.8	+0.2
FINES	FINESS Array B	11.41	25	Pn	Pn	03 47 23.2	-3.5
	comp=Z,0.5nm,0.3s,baz=202,slow=11,SNR=18						
FINES				Sn	Sn	03 49 25.0	-10
	comp=Z,0.4nm,0.3s,baz=207,slow=22,SNR=5.2						
FINES	FINESS Array B	11.41	25	Pn	Pn	03 47 23.2	-3.6
EKA	Eskdalemuir Ar	12.14	296	Pn	Pn	03 47 33.0	-3.7
	comp=Z,0.5nm,0.3s,baz=99,slow=14,SNR=9.2						
OBN	Obninsk	12.76	65	⇑eP	Pn	03 47 41.8	-3.4
OBN				eS	Sn	03 50 02.9	-5.1
OBN				pmax	pmax		
	comp=Z,26nm,1.5s						
MOS	Moscow	13.46	63	eP	Pn	03 47 48.5	-6.2
MOS				MLR	MLR		
	comp=Z,200nm,2.2s						
VRSR	Storozhevoye	14.41	82	eP	Pn	03 48 01.0	-6.8
VRSR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VRSR				pmax	pmax		
	comp=N,6.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,20nm,1.3s						
KLMR	Klimovskoe	15.99	45	eP	Pn	03 48 19.9	-8.9
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRTR	Keskin Array B	16.91	127	Pn	Pn	03 48 40.9	+0.3
	baz=303,slow=12,SNR=4.8						
APA	Apatity	18.27	21	⇓eP	Pn	03 48 52.8	-4.6
APA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ARCES	ARCESS Array B	18.68	10	Pn	Pn	03 48 57.4	-5.1
	comp=Z,0.7nm,0.3s,baz=194,slow=13,SNR=21						
GOF	Gofitskoye	18.96	99	eP	Pn	03 49 06.5	+0.6
KIV	Kislovodsk	19.31	102	eP	Pn	03 49 08.6	-1.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KIV	Kislovodsk	19.31	102	eP	Pn	03 49 08.6	-1.5
	comp=Z,10.0nm,1.2s						
ZEI	Tsey	20.70	104	eP	P	03 49 22.9	-1.4
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ZEI	Tsey	20.70	104	eP	P	03 49 22.9	-1.4
	comp=Z,6.0nm,0.4s						
GNI	Garni	22.78	109	eP	P	03 49 45.0	-1.6
GNI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GNI	Garni	22.78	109	eP	P	03 49 45.0	-1.6
	comp=Z,4.0nm,0.8s,mb4.0						
ARU	Arti	25.16	62	⇓iP	P	03 50 08.4	-1.0
ARU				ePPP		03 50 50.3	
ARU				eS	S	03 54 34.5	-0.9
ARU				eSS		03 55 24.1	
ARU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
ARU	Arti	25.16	62	eP	P	03 50 08.3	-1.2
	comp=Z,5.4nm,0.4s,mb4.6						
ARU	Arti	25.16	62	i P	P	03 50 08.4	-1.0
	comp=Z,11nm,0.9s,mb4.6						
AKTK	Aktyubinsk	26.16	76	P	P	03 50 18.0	-0.5
AKTK	Aktyubinsk	26.16	76	P	P	03 50 18.0	-0.5
AKTO	Aktyubinsk	26.16	76	P	P	03 50 18.0	-0.5
	comp=Z,2.7nm,0.8s,mb4.0,baz=300,slow=10,SNR=7.6						
ZRNK	Zerenda	31.84	66	eP	P	03 51 09.3	+0.2
ZRNK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
ZRNK	Zerenda	31.84	66	eP	P	03 51 09.3	+0.3
	comp=Z,8.7nm,1.3s,mb4.5						
ZRNK	Zerenda	31.84	66	eP	P	03 51 09.3	+0.2
	comp=Z,8.7nm,1.3s,mb4.5						
CHKZ	Chkalovo	32.52	64	eP	P	03 51 14.5	-0.5
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
CHKZ	Chkalovo	32.52	64	eP	P	03 51 14.5	-0.5
	comp=Z,1.0nm,0.7s,mb3.9						
BRVK	Borovoye	32.54	65	eP	P	03 51 15.4	+0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
BRVK	Borovoye	32.54	65	eP	P	03 51 15.4	+0.2
	comp=Z,5.3nm,1.3s,mb4.3						
BRVK	Borovoye	32.54	65	eP	P	03 51 15.4	+0.2
	comp=Z,5.2nm,1.3s,mb4.3						
KURK	Kurchatov	38.21	66	eP	P	03 52 03.3	-0.6
	comp=Z,5.3nm,1.1s,mb4.2						
KURK	Kurchatov	38.21	66	i P	P	03 52 03.4	-0.5
NVS	Novosibirsk	39.01	58	eP	P	03 52 10.3	-0.4
AAK	Ala-Archa	39.78	79	⇑iP	P	03 52 15.9	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
AAK	**Ala-Archa**	**39.78**	**79**	*i* P	**P**	**03 52 15.9**	**-1.2**
	comp=Z,9.0nm,1.3s,mb4.2						
TORD	**Torodi Ar. Bea**	**39.95**	**202**	P	**P**	**03 52 18.0**	**-0.5**
	comp=Z,3.5nm,1.1s,mb3.9,baz=13,slow=8.2,SNR=8.9						
ZAL	**Zalesovo**	**40.22**	**59**	P	**P**	**03 52 21.8**	**+1.0**
	comp=Z,1.3nm,0.4s,mb3.9,baz=186,slow=4.8,SNR=5.7						
MKAR	**Makanchi Array**	**42.23**	**69**	P	**P**	**03 52 37.3**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.4,baz=308,slow=5.9,SNR=7.3						
MKAR	**Makanchi Array**	**42.23**	**69**	⇑*e*P	**P**	**03 52 37.2**	**-0.1**
WMQ	**Urumqi**	**47.05**	**70**	*e*P	**P**	**03 53 18.0**	**+2.2**
WMQ				PCP	PcP	03 54 51.0	+3.1
WMQ				PP	PP	03 55 09.0	+2.7
WMQ				S	**S**	**04 00 10.0**	**+1.4**
WMQ				SCS	ScS	04 03 11.0	-0.6
WMQ				SS	SS	04 03 29.0	-6.4
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,97nm,4.0s						
WMQ				LR	LR		
	comp=N,59nm,13.0s,MS3.9						
WMQ				LR	LR		
	comp=E,61nm,13.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,58nm,13.0s,MS3.7						
ZAK	**Zakamensk**	**51.75**	**55**	*e*P	**P**	**03 53 52.5**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
ZAK	**Zakamensk**	**51.75**	**55**	*e*P	**P**	**03 53 52.5**	**+0.8**
	comp=Z,2.0nm,1.4s,mb3.9						
SONM	**Songino Array**	**54.94**	**55**	P	**P**	**03 54 15.7**	**+0.5**
	comp=Z,1.6nm,0.9s,mb4.0,baz=286,slow=7.7,SNR=12						
ULN	**Ulaanbaatar**	**55.26**	**55**	*e*P	**P**	**03 54 19.3**	**+1.8**
YKA	**Yellowknife Ar**	**59.91**	**336**	P	**P**	**03 54 50.0**	**-0.3**
	comp=Z,1.2nm,0.7s,mb4.0,baz=29,slow=6.8,SNR=14						
YKA	**Yellowknife Ar**	**59.91**	**336**	P	**P**	**03 54 50.0**	**-0.3**
HHC	**Hu-ho-hao-te**	**62.41**	**58**	*e*P	**P**	**03 55 05.4**	**-1.8**
HHC				PCP	PcP	03 55 45.5	-1.2
HHC				PP	PP	03 57 24.5	+0.2
HHC				PCS	PcS	03 59 48.1	-1.9
HHC				S	**S**	**04 03 29.6**	**-5.5**
HHC				SCS	ScS	04 04 55.1	-5.7
HHC				SS	SS	04 07 34.5	-4.0
HHC				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,141nm,6.8s						
HHC				LR	LR		
	comp=N,238nm,20.9s,MS4.5						
HHC				LR	LR		
	comp=E,273nm,23.7s,MS4.5						
HHC				LR	LR		
	comp=Z,157nm,21.8s,MS4.1						
KMI	**Kunming**	**68.73**	**76**	P	**P**	**03 55 48.5**	**+0.4**
KMI				AP		03 55 52.2	
KMI				XP		03 55 54.0	
KMI				PP	PP	03 58 21.7	+2.0
KMI				PPP		03 59 59.9	
KMI				S	S	04 04 49.9	-2.5
KMI				SS	SS	04 09 15.4	-1.5
KMI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.9						
EGMT	**Eagleton**	**70.61**	**325**	*e*P	**P**	**03 55 59.4**	**-0.3**
	comp=Z,23nm,1.7s,mb5.0						
GCMT	**Greycliff**	**72.47**	**323**	*e*P	**P**	**03 56 11.9**	**+1.0**
NJ2	**Nanjing**	**72.85**	**60**	*e*P	**P**	**03 56 13.4**	**+0.2**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
NEW	**Newport**	**72.91**	**329**	*e*P	**P**	**03 56 14.1**	**+0.6**
NEW				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NEW	**Newport**	**72.91**	**329**	*e*P	**P**	**03 56 14.1**	**+0.6**
	comp=Z,2.2nm,0.4s,mb4.6						
BOZ	**Bozeman (W)**	**73.31**	**325**	*e*P	**P**	**03 56 17.1**	**+1.2**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.6						
BOZ	**Bozeman (W)**	**73.31**	**325**	*e*P	**P**	**03 56 17.1**	**+1.2**
	comp=Z,7.2nm,1.3s,mb4.6						
MOOW	**Moose Ponds**	**74.61**	**323**	*e*P	**P**	**03 56 25.0**	**+1.5**
	comp=Z,7.0nm,1.3s,mb4.5						
SSE	**Sheshan**	**74.85**	**59**	*e*P	**P**	**03 56 20.3**	**-4.6**
SSE				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.3						
SSE				AMB	AMB		
	comp=Z,333nm,4.1s						
TPAW	**Teton Pass**	**74.91**	**323**	*e*P	**P**	**03 56 27.4**	**+2.2**
	comp=Z,6.0nm,1.3s,mb4.5						
BW06	**Boulder Array**	**74.99**	**322**	*e*P	**P**	**03 56 25.8**	**+0.1**
	comp=Z,1.8nm,1.2s,mb4.0						
PDAR	**Pinedale Array**	**74.99**	**322**	P	**P**	**03 56 26.1**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.8,baz=45,slow=4.4,SNR=8.1						
BMO	**Blue Mountains**	**75.98**	**328**	*e*P	**P**	**03 56 31.0**	**-0.4**
	comp=Z,12nm,1.3s,mb4.9						
HLID	**Hailey**	**76.11**	**325**	*e*P	**P**	**03 56 33.0**	**+0.9**
	comp=Z,5.1nm,1.3s,mb4.5						
HWUT	**Hardware Ranch**	**76.75**	**322**	*e*P	**P**	**03 56 36.5**	**+0.7**
	comp=Z,5.8nm,1.2s,mb4.6						
BGU	**Big Grassy Mou**	**77.90**	**323**	*e*P	**P**	**03 56 42.7**	**+0.5**
DUG	**Dugway**	**78.45**	**323**	*e*P	**P**	**03 56 45.7**	**+0.5**
DUG				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
DUG	**Dugway**	**78.45**	**323**	*e*P	**P**	**03 56 45.7**	**+0.4**
	comp=Z,5.1nm,1.1s,mb4.6						
PV10	**Paradox Valley**	**78.52**	**319**	*e*P	**P**	**03 56 46.8**	**+1.1**
ANMO	**Albuquerque**	**80.33**	**315**	*e*P	**P**	**03 56 55.9**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	**Albuquerque**	**80.33**	**315**	*e*P	**P**	**03 56 55.9**	**+0.5**
	comp=Z,3.5nm,1.3s,mb4.1						
NVAR	**Mina Array Bea**	**82.02**	**326**	P	**P**	**03 57 05.7**	**+1.1**
	comp=Z,0.3nm,0.6s,mb3.6,baz=46,slow=4.7,SNR=4.5						
TUC	**Tucson**	**84.45**	**317**	*e*P	**P**	**03 57 18.3**	**+1.3**
TUC				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb4.1						
TUC	**Tucson**	**84.45**	**317**	*e*P	**P**	**03 57 18.2**	**+1.2**
	comp=Z,0.7nm,0.8s,mb3.9						

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*LDG **03** 03:49:16.2±0.1, 4564N×294E, h2^{km}, Md2.0/2, Ml2.0/9, Error ellipse: s-maj=1.0km s-min=0.8km az=93.0*

STR 03 03:49:16.4±0.1**, 4563N×296E, h5**^{km}±1^{km}**, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYM	**Petit Puy Mans**	**0.12**	**16**	Pg	Pg	03 49 19.4	+0.5
FRNF	**Fournols**	**0.37**	**229**	Pg	Pg	03 49 24.1	+0.5
FRNF				Sg	Sg	03 49 28.9	+0.5
AGO	**Saint Agoulin**	**0.44**	**16**	Pg	Pg	03 49 24.7	-0.2
AGO				Sg	Sg	03 49 30.9	+0.3
LBL	**Lubilhac**	**0.45**	**153**	Pg	Pg	03 49 25.0	0.0
LBL				Sg	Sg	03 49 30.9	+0.1
COLF	**Collangettes**	**0.53**	**102**	Pg	Pg	03 49 26.7	+0.1
COLF				Sg	Sg	03 49 34.0	+0.6
PLDF	**La Plantade**	**0.57**	**53**	Sg	Sg	03 49 35.4	+0.5
TCF	**Toulx Ste Croi**	**0.84**	**322**	*e*Pg	Pg	03 49 31.6	-0.9
TCF				*e*Sg	Sg	03 49 42.5	-0.9
	9.1nm,0.1s						
BGF	**Bois d'Agland**	**0.93**	**355**	*e*Pg	Pg	03 49 33.7	-0.6
BGF				*e*Sg	Sg	03 49 45.6	-0.8
	22nm,0.3s						
CAF	**Calviac**	**0.95**	**222**	*e*Pg	Pg	03 49 33.8	-0.8
CAF				*e*Sg	Sg	03 49 45.6	-1.2
	4.3nm,0.2s						
RJF	**Les Rejaudoux**	**1.07**	**253**	*e*Pg	Pg	03 49 36.0	-0.9
RJF				*e*Sg	Sg	03 49 49.6	-1.1
	3.0nm,0.2s						
SMF	**Signal de Mont**	**1.19**	**31**	*e*Pg	Pg	03 49 38.4	-0.7
SMF				*e*Sg	Sg	03 49 53.4	-1.1
	1.3nm,0.2s						
AVF	**Avril sur Loir**	**1.19**	**13**	*e*Pg	Pg	03 49 38.1	-1.2
AVF				*e*Sg	Sg	03 49 53.7	-1.0
	2.6nm,0.2s						
VIVF	**Saint-Julien-l**	**1.44**	**122**	*e*Pg	Pg	03 49 43.2	-0.7
VIVF				*e*Sg	Sg	03 50 02.1	-0.5
	2.2nm,0.2s						
SSF	**Saint Saulge**	**1.48**	**15**	*e*Pg	Pg	03 49 43.7	-1.1
SSF				*e*Sg	Sg	03 50 02.2	-1.8
	1.6nm,0.2s						
LASF	**Ste Croix**	**1.68**	**157**	*e*Pg	Pg	03 49 48.0	-0.6
LASF				*e*Sg	Sg	03 50 08.6	-1.8
	2.1nm,0.3s						
LOR	**Lormes**	**1.75**	**20**	*e*Pg	Pg	03 49 48.4	-1.6
LOR				*e*Sg	Sg	03 50 11.0	-1.7
	1.3nm,0.3s						

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*ISCJB **03** 03:52:28.3±0.5, 5159N±003×1607E±005, h0^{km}, Error ellipse: s-maj=4.4km s-min=4.0km az=146.4*
*IDC **03** 03:52:32.1±0.9, 5148N×1600E, h0^{km}, mb1 3.3/5, mb1mx3.1/19, mbtmp3.2/5, ML2.4/5, Error ellipse: s-maj=20.2km s-min=8.6km az=103.0*
*PRU **03** 03:52:33.1, 5141N×1601E, h0^{km}*

ISC 03 03:52:29.9±0.5**, 5154N**±003×**1608E**±005**, h0**^{km}**, n18, σ1^{s}10**/34**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**169**	*e*Pg	**Pg**	**03 52 44.4**	**+0.8**
KSP				e		03 52 45.3	
KSP				*e*Sg	**Sg**	**03 52 52.9**	**+0.1**
UPC	**Upice**	**1.04**	**183**	*e*PG	**Pg**	**03 52 50.3**	**+0.5**
DPC	**Dobruska-Polom**	**1.20**	**173**	*e*PG	**Pg**	**03 52 53.3**	**+0.3**
DPC				*e*SG	**Sg**	**03 53 07.9**	**-0.7**
	10nm,0.4s						
PVCC	**Panska Ves**	**1.39**	**224**	*e*PG	**Pg**	**03 52 57.2**	**+0.6**
BRG	**Berggiesshubel**	**1.50**	**244**	PN	**Pn**	**03 52 58.7**	**+0.6**
BRG				PG	**Pg**	**03 52 59.3**	**+0.6**
BRG				SG	**Sg**	**03 53 19.1**	**+0.8**
	9.1nm,0.4s						
PRU	**Pruhonice**	**1.84**	**213**	*e*PN	**Pn**	**03 53 02.7**	**0.0**
PRU				*e*PG	**Pg**	**03 53 04.4**	**-0.8**
PRU				*e*SG	**Sg**	**03 53 26.6**	**-2.4**
	6.8nm,0.5s						
CLL	**Collm**	**1.94**	**264**	*i* PN	**Pn**	**03 53 04.3**	**+0.1**
CLL				*i* PG	**Pg**	**03 53 07.3**	**+0.1**
CLL				*i* SG	**Sg**	**03 53 33.2**	**+0.8**
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*PG	**Pg**	**03 53 12.8**	**+1.6**
VRAC	**Vranov**	**2.26**	**172**	Pn	**Pn**	**03 53 09.8**	**+1.3**
	0.9nm,0.3s,baz=348,slow=17,SNR=6.4						
VRAC				Lg		03 53 41.4	
	1.3nm,0.3s,baz=86,slow=20,SNR=5.3						
TREC	**Trest**	**2.28**	**190**	*e*PN	**Pn**	**03 53 09.6**	**+0.8**
TREC				*e*PG	**Pg**	**03 53 12.9**	**-0.8**
NKC	**Novy Kostel**	**2.65**	**242**	*e*PN	**Pn**	**03 53 15.1**	**+1.2**
NKC				*e*PG	**Pg**	**03 53 19.7**	**-1.0**
NKC				*e*SG	**Sg**	**03 53 55.1**	**+0.1**
	11nm,0.3s						
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN	**Pn**	**03 53 17.7**	**+0.4**
KHC				*e*PG	**Pg**	**03 53 23.6**	**-1.9**
KHC				*e*SG	**Sg**	**03 54 00.7**	**-2.4**
MOX	**Moxa**	**2.96**	**254**	*e*PG	**Pg**	**03 53 27.0**	**+0.4**
MOX				*e*SG	**Sg**	**03 54 06.0**	**+1.1**
GERES	**GERESS Array B**	**3.10**	**210**	Pn	**Pn**	**03 53 21.4**	**+1.3**
	0.3nm,0.3s,baz=28,slow=13,SNR=8.9						
GERES				Pg	**Pg**	**03 53 27.3**	**-2.1**
	1.3nm,0.3s,baz=32,slow=17,SNR=19						
GERES				Lg		03 54 06.2	
	1.0nm,0.3s,baz=28,slow=26,SNR=6.9						
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P	**Pn**	**03 53 28.4**	**+0.8**
BSD				*i*		03 53 34.4	
BSD				*i* S	**Sn**	**03 54 09.1**	**-2.2**
HFS	**Hagfors**	**8.72**	**352**	Pn	**Pn**	**03 54 37.0**	**-0.2**
	0.1nm,0.3s,baz=165,slow=12,SNR=4.0						
FINES	**FINESS Array B**	**11.34**	**25**	Pn	**Pn**	**03 55 12.3**	**-0.9**
	0.1nm,0.3s,baz=212,slow=9.8,SNR=3.4						
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn	**Pn**	**03 56 45.9**	**-2.9**
	0.1nm,0.3s,baz=187,slow=14,SNR=3.7						

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*BJI **03** 04:03:36.4, 087N×12777E, h128^{km}, mB5.0, mb4.7*
*ISCJB **03** 04:03:44.3±1.4, 175N±005×12745E±009, h138^{km}±13^{km}, mb4.5/35, Error ellipse: s-maj=15.5km s-min=6.1km az=141.7*
*NEIC **03** 04:03:44.8±2.0, 177N×12748E, h128^{km}±19^{km}, mb4.7/19, Error ellipse: s-maj=10.8km s-min=5.1km az=64.0*
*MOS **03** 04:03:45.1±0.6, 184N×12748E, h149^{km}, mb4.3/6, Error ellipse: s-maj=23.0km s-min=9.6km az=113.6*
*IDC **03** 04:03:46.3±2.1, 177N×12747E, h142^{km}±19^{km}, mb4.3/14, mb1 4.3/15, mb1mx4.1/20, mbtmp4.6/15, Error ellipse: s-maj=25.5km s-min=8.7km az=74.0*

ISC 03 04:03:45.4±1.3**, 175N**±005×**12750E**±009**, h132**^{km}±12^{km}**, n61, σ0^{s}90**/65**, mb4.5**/35**, 3C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**9.67**	**343**	*e*P	**Pn**	**04 06 01.1**	**-0.3**
KAKA	**Kakadu**	**15.18**	**161**	*e*P	**Pn**	**04 07 11.5**	**-1.4**
	26nm,0.6s						
KSM	**Kuching**	**17.18**	**269**	*e*P	**Pn**	**04 07 37.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**19.81**	**185**	*e*P	**P**	**04 08 05.7**	**+0.1**
	8.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.81**	**185**	P	**P**	**04 08 05.4**	**-0.2**
	0.9nm,0.3s,baz=20,slow=10,SNR=26						
WRAB	**Tennant Creek**	**22.57**	**163**	⇑*i*P	**P**	**04 08 34.8**	**0.0**
WRAB				pmax	pmax		
	comp=Z,97nm,0.5s,mb5.5						
WRAB	**Tennant Creek**	**22.57**	**163**	⇑*i*P	**P**	**04 08 34.8**	**0.0**
	comp=Z,97nm,0.5s,mb5.5						
WRA	**Warramunga Arr**	**22.58**	**163**	P	**P**	**04 08 34.8**	**-0.1**
	comp=Z,59nm,0.5s,mb5.3,baz=343,slow=10,SNR=199						
WRA				S	**S**	**04 12 31.6**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=338,slow=21,SNR=4.3						
WB2	**Warramunga Arr**	**22.58**	**163**	⇑*i*P	**P**	**04 08 34.9**	**0.0**
MBWA	**Marble Bar**	**24.00**	**198**	*e*P	**P**	**04 08 48.1**	**+0.2**
	comp=Z,4.9nm,0.4s,mb4.4						
JOW	**Kunigami**	**24.95**	**2**	P	**P**	**04 08 56.6**	**+0.2**
	comp=Z,13nm,0.8s,mb4.5,baz=59,slow=26,SNR=5.7						
AS31	**Alice Springs**	**26.02**	**167**	*e*P	**P**	**04 09 06.3**	**+0.2**
ASPA	**Alice Springs**	**26.02**	**167**	*e*P	**P**	**04 09 06.3**	**+0.1**
ASAR	**Alice Springs**	**26.02**	**167**	P	**P**	**04 09 06.3**	**+0.2**
	comp=Z,14nm,0.5s,mb4.9,baz=349,slow=7.4,SNR=199						
ASAR				PcP	PcP	04 12 31.1	+0.3
	comp=Z,1.1nm,0.6s,baz=342,slow=1.8,SNR=5.5						
ASAR				S	**S**	**04 13 28.6**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=347,slow=14,SNR=2.8						
ASAR				ScP	ScP	04 15 57.3	-0.8
	comp=Z,0.4nm,0.6s,baz=345,slow=2.7,SNR=4.9						
ASAR	**Alice Springs**	**26.02**	**167**	P	**P**	**04 09 06.4**	**+0.2**
ASAR						04 12 31.1	
ASAR				S	**S**	**04 13 28.6**	**+1.4**
CTA	**Charters Tower**	**28.45**	**141**	P	**P**	**04 09 28.2**	**+0.4**
	comp=Z,1.8nm,0.4s,mb4.1,baz=304,slow=15,SNR=3.9						
CTAO	**Charters Tower**	**28.45**	**141**	*e*P	**P**	**04 09 29.0**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
CTAO	**Charters Tower**	**28.45**	**141**	*e*P	**P**	**04 09 29.0**	**+1.2**
	comp=Z,2.6nm,0.6s,mb4.1						
PSI	**Prapat**	**28.57**	**273**	P	**P**	**04 09 28.1**	**-0.8**
	comp=Z,3.7nm,0.6s,mb4.3,baz=7.9,slow=2.0,SNR=4.4						
NJ2	**Nanjing**	**31.22**	**346**	*e*P	**P**	**04 09 54.2**	**+1.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
FORT	**Forrest**	**32.35**	**179**	*e*P	**P**	**04 10 01.1**	**-1.1**
	comp=Z,11nm,0.9s,mb4.6						
KMI	**Kunming**	**33.32**	**316**	P	**P**	**04 10 12.2**	**+1.6**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
KLBR	**Kellerberrin**	**34.43**	**195**	*e*P	**P**	**04 10 20.0**	**-0.2**
	comp=Z,26nm,1.2s,mb4.8						
NWAO	**Narrogin (SRO)**	**35.83**	**195**	P	**P**	**04 10 32.6**	**+0.5**
	comp=Z,6.0nm,0.4s,mb4.5,baz=18,slow=8.2,SNR=7.8						
MJAR	**Matsushiro Arr**	**36.01**	**15**	P	**P**	**04 10 32.9**	**-0.8**
	comp=Z,0.8nm,0.3s,mb3.9,baz=180,slow=7.5,SNR=4.2						
STKA	**Stephens Creek**	**36.02**	**159**	*e*P	**P**	**04 10 34.4**	**+0.6**
	comp=Z,17nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**36.02**	**159**	P	**P**	**04 10 34.5**	**+0.7**
	comp=Z,21nm,0.6s,mb4.9,baz=332,slow=8.2,SNR=52						
ARMA	**Armidale**	**39.41**	**146**	*e*P	**P**	**04 11 03.8**	**+1.5**
BJT	**Baijiatuau**	**39.46**	**346**	*e*P	**P**	**04 11 02.3**	**-0.4**
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJT	**Baijiatuau**	**39.46**	**346**	*e*P	**P**	**04 11 02.3**	**-0.4**
	comp=Z,8.6nm,0.6s,mb4.6						
LZH	**Lanzhou**	**40.59**	**330**	*e*P	**P**	**04 11 11.7**	**-0.3**
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,78nm,4.1s						
HHC	**Hu-ho-hao-te**	**41.50**	**342**	*e*P	**P**	**04 11 21.6**	**+2.1**
HHC				PP	PP	04 13 03.0	+5.0
HHC				PCP	PcP	04 13 16.2	+1.6
HHC				SCP	ScP	04 16 50.1	-2.3
HHC				S	**S**	**04 17 25.1**	**-0.1**
HHC				XS	sS	04 18 26.8	+10
HHC				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,154nm,6.0s						
HHC				LR	LR		
	comp=N,157nm,19.9s						
HHC				LR	LR		
	comp=E,120nm,17.1s						
HHC				LR	LR		
	comp=Z,90nm,15.2s						
MDJ	**Mudanjiang**	**42.72**	**2**	P	**P**	**04 11 30.3**	**+0.9**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,52nm,4.8s						
JIRN	**Jiri**	**47.16**	**307**	*e*P	**P**	**04 12 05.1**	**+0.6**
	comp=Z,10nm,0.4s,mb4.8						
GUN	**Gumba**	**47.51**	**307**	*e*P	**P**	**04 12 08.1**	**+0.9**
	comp=Z,17nm,0.4s,mb5.0						
PKI	**Pulchoki**	**47.74**	**306**	*e*P	**P**	**04 12 09.3**	**+0.3**
KKN	**Kakani**	**47.94**	**307**	*e*P	**P**	**04 12 10.7**	**+0.2**
DMN	**Daman**	**48.00**	**306**	*e*P	**P**	**04 12 11.9**	**+0.9**
	comp=Z,8.0nm,0.3s,mb4.8						
GKN	**Gorkha**	**48.55**	**307**	*e*P	**P**	**04 12 15.1**	**-0.1**
ULN	**Ulaanbaatar**	**49.22**	**342**	*e*P	**P**	**04 12 19.7**	**-0.6**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**49.22**	**342**	*e*P	**P**	**04 12 19.7**	**-0.7**
	comp=Z,6.3nm,0.9s,mb4.2						
KOLN	**Koldanda**	**49.28**	**306**	*e*P	**P**	**04 12 21.3**	**+0.5**
	comp=Z,30nm,0.8s,mb5.0						
SONM	**Songino Array**	**49.40**	**341**	P	**P**	**04 12 21.4**	**-0.3**
	comp=Z,2.9nm,0.7s,mb4.0,baz=156,slow=8.9,SNR=18						
WMQ	**Urumqi**	**54.77**	**325**	*e*P	**P**	**04 13 02.0**	**+0.6**
WMQ				PP	PP	04 15 08.0	+2.6
WMQ				S	**S**	**04 20 28.0**	**-3.9**
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,89nm,5.0s						
WMQ				LR	LR		
	comp=N,56nm,14.0s						
WMQ				LR	LR		
	comp=E,85nm,13.0s						
WMQ				LR	LR		
	comp=Z,54nm,12.0s						
BOD	**Bodaibo**	**56.92**	**351**	*e*P	**P**	**04 13 15.1**	**-1.6**
MKAR	**Makanchi Array**	**59.61**	**326**	P	**P**	**04 13 35.4**	**0.0**
	comp=Z,6.6nm,0.4s,mb4.8,baz=120,slow=8.5,SNR=108						
ZAL	**Zalesovo**	**62.69**	**333**	P	**P**	**04 13 58.6**	**+2.5**
	comp=Z,1.8nm,0.4s,mb4.3,baz=332,slow=5.7,SNR=6.1						
KURK	**Kurchatov**	**63.81**	**328**	*e*P	**P**	**04 14 02.6**	**-0.9**
KURK				pmax	pmax		
	comp=Z,16nm,0.4s,mb5.2						
KURK	**Kurchatov**	**63.81**	**328**	*e*P	**P**	**04 14 02.6**	**-0.9**
	comp=Z,16nm,0.4s,mb5.2						
BRVK	**Borovoye**	**69.46**	**327**	*e*P	**P**	**04 14 38.5**	**-0.9**
	comp=Z,2.0nm,0.8s,mb3.9						
CHKZ	**Chkalovo**	**69.56**	**328**	*e*P	**P**	**04 14 38.5**	**-1.5**
	comp=Z,2.4nm,0.8s,mb4.0						
ZRNK	**Zerenda**	**70.11**	**327**	*e*P	**P**	**04 14 42.1**	**-1.3**
ZRNK				*e**PP	pP	04 15 18.8	+3.2
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
ZRNK	**Zerenda**	**70.11**	**327**	*e*P	**P**	**04 14 42.1**	**-1.2**
	comp=Z,3.1nm,0.6s,mb4.2						
ZRNK				*e*pP	pP	04 15 18.8	+3.2
AKTK	**Aktyubinsk**	**75.68**	**322**	P	**P**	**04 15 15.6**	**-0.6**
AKTO	**Aktyubinsk**	**75.68**	**322**	P	**P**	**04 15 15.6**	**-0.6**
	comp=Z,1.9nm,0.7s,mb3.9,baz=105,slow=7.3,SNR=11						
VNDA	**Vanda**	**81.38**	**173**	P	**P**	**04 15 46.9**	**-0.5**
	comp=Z,4.0nm,0.7s,mb4.2,baz=316,slow=7.3,SNR=15						
VNDA	**Vanda**	**81.38**	**173**	*e*P	**P**	**04 15 46.6**	**-0.8**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**81.38**	**173**	*e*P	**P**	**04 15 46.6**	**-0.9**
	comp=Z,2.9nm,0.8s,mb4.0						
MAW	**Mawson**	**82.18**	**200**	P	**P**	**04 15 51.6**	**0.0**
	comp=Z,1.9nm,0.6s,mb3.9,baz=73,slow=5.8,SNR=4.9						
ARCES	**ARCESS Array B**	**92.56**	**340**	P	**P**	**04 16 40.1**	**-1.7**
	comp=Z,2.0nm,0.9s,mb4.2,baz=78,slow=5.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**124.25**	**287**	PKP	PKPdf	04 22 29.1	+0.6
	comp=Z,0.4nm,0.3s,baz=85,slow=1.7,SNR=32						

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*IDC **03** 04:08:26.9±2.4, 1705S×17737W, h370^{km}±22^{km}, mb3.7/11, mb1 3.8/11, mb1mx3.7/17, mbtmp4.4/11, Error ellipse: s-maj=26.8km s-min=14.4km az=153.0*
*BJI **03** 04:08:29.6, 1622S×17735W, h384^{km}, mB4.7, mb4.4*
*ISCJB **03** 04:08:30.2±2.9, 17.1S±0.1×1775W±0.1, h417^{km}±30^{km}, mb4.0/19, Error ellipse: s-maj=21.2km s-min=14.4km az=130.1*
*NEIC **03** 04:08:30.0±2.8, 1702S×17744W, h404^{km}±27^{km}, mb4.0/9, Error ellipse: s-maj=14.8km s-min=13.4km az=172.0*

ISC 03 04:08:31.3±2.4**, 171S**±01×**1774W**±01**, h417**^{km}±26^{km}**, n58, σ0^{s}87**/30**, mb4.0**/19**, 2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**16.00**	**249**	P	**P**	**04 11 54.3**	**+0.5**
	0.2nm,0.3s,baz=64,slow=20,SNR=7.5						
URZ	**Urewera**	**21.66**	**192**	P	**P**	**04 12 48.5**	**-1.1**
	11nm,0.6s,mb4.4,baz=148,slow=3.8,SNR=4.5						
CTA	**Charters Tower**	**34.52**	**259**	P	**P**	**04 14 42.9**	**+0.3**
	1.7nm,0.3s,mb3.9,baz=82,slow=9.7,SNR=5.4						
CTAO	**Charters Tower**	**34.52**	**259**	*e*P	**P**	**04 14 42.1**	**-0.4**
	4.5nm,0.7s,mb3.9						
PMG	**Port Moresby**	**35.26**	**278**	P	**P**	**04 14 49.8**	**+1.0**
	17nm,0.8s,mb4.4,baz=78,slow=7.7,SNR=4.0						
PMG	**Port Moresby**	**35.26**	**278**	*e*P	**P**	**04 14 50.3**	**+1.5**
	20nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**39.86**	**241**	*e*P	**P**	**04 15 26.9**	**+0.2**
	4.2nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**39.86**	**241**	P	**P**	**04 15 27.0**	**+0.3**
	5.7nm,0.6s,mb4.1,baz=83,slow=8.9,SNR=12						
WB2	**Warramunga Arr**	**45.71**	**259**	*e*P	**P**	**04 16 11.8**	**-1.1**
WRAB	**Tennant Creek**	**45.71**	**259**	*e*P	**P**	**04 16 12.3**	**-0.6**
	4.3nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**45.72**	**259**	P	**P**	**04 16 12.2**	**-0.8**
	2.7nm,0.7s,mb3.7,baz=93,slow=7.2,SNR=22						
WRA				ScP	ScP	04 21 00.4	+5.3
	0.9nm,0.7s,baz=89,slow=4.1,SNR=6.3						
AS31	**Alice Springs**	**45.93**	**253**	⇓*i*P	**P**	**04 16 14.4**	**-0.2**
ASAR	**Alice Springs**	**45.93**	**253**	P	**P**	**04 16 14.2**	**-0.4**
	16nm,0.7s,mb4.5,baz=86,slow=8.4,SNR=146						
ASAR				ScP	ScP	04 21 01.7	+5.8
	0.5nm,0.5s,baz=98,slow=4.5,SNR=5.5						
ASAR				S	**S**	**04 22 26.7**	**-0.6**
	0.9nm,0.8s,baz=85,slow=15,SNR=9.3						
ASPA	**Alice Springs**	**45.93**	**253**	⇓*i*P	**P**	**04 16 14.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**54.10**	**260**	*e*P	**P**	**04 17 15.5**	**+0.4**
	2.7nm,0.4s,mb3.8						
FITZ	**Fitzroy Crossi**	**54.10**	**260**	P	**P**	**04 17 15.6**	**+0.5**
	1.4nm,0.4s,mb3.6,baz=79,slow=8.3,SNR=14						
MBWA	**Marble Bar**	**59.20**	**255**	*e*P	**P**	**04 17 51.2**	**+0.8**
	4.0nm,0.6s,mb3.9						
QSPA	**South Pole Qui**	**72.99**	**180**	*e*P	**P**	**04 19 17.7**	**+0.8**
	4.3nm,0.9s,mb4.0						
MDJ	**Mudanjiang**	**78.05**	**324**	P	**P**	**04 19 45.7**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,62nm,4.6s						
NJ2	**Nanjing**	**78.14**	**309**	*e*P	**P**	**04 19 46.8**	**+1.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NVAR	**Mina Array Bea**	**78.16**	**44**	P	**P**	**04 19 46.2**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.6,baz=216,slow=7.6,SNR=8.8						
NVAR	**Mina Array Bea**	**78.16**	**44**	P	**P**	**04 19 46.2**	**+0.3**
MCK	**McKinley**	**83.51**	**12**	*e*P	**P**	**04 20 12.6**	**-1.2**
	comp=Z,2.4nm,0.8s,mb4.0						
COLA	**College**	**84.75**	**12**	*e*P	**P**	**04 20 18.0**	**-1.9**
	comp=Z,1.4nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**86.09**	**43**	P	**P**	**04 20 26.8**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.3,baz=213,slow=3.3,SNR=4.7						
HHC	**Hu-ho-hao-te**	**87.36**	**314**	*e*P	**P**	**04 20 33.8**	**+1.3**
HHC				PP	PP	04 24 06.4	+2.5
HHC				SKS		04 30 26.0	
HHC				S	S	04 30 43.1	+6.1
HHC				AMB	AMB		
	comp=Z,13nm,0.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,169nm,7.2s						
PLCA	**Paso Flores**	**91.23**	**133**	P	**P**	**04 20 51.9**	**+1.4**
	comp=Z,2.1nm,0.9s,mb4.0,baz=232,slow=13,SNR=4.1						
YKA	**Yellowknife Ar**	**93.17**	**24**	P	**P**	**04 20 58.7**	**-0.7**
	comp=Z,0.4nm,0.6s,mb3.5,baz=234,slow=4.5,SNR=5.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	93.17	24	P	P	04 20 58.7	-0.7
ARCES	ARCESS Array B	125.65	350	PKP	PKPdf	04 26 43.3	-0.7
	comp=Z,1.9nm,0.7s,baz=349,slow=1.2,SNR=9.4						
FINES	FINESS Array B	132.63	345	PKP	PKPdf	04 26 57.6	+0.3
	comp=Z,2.9nm,1.0s,baz=94,slow=4.2,SNR=3.5						
KOLS	Kolonicke sedl	144.40	338	ePKP	PKPdf	04 27 18.7	0.0
CRVS	Cervenica-Dubn	144.72	338	ePKP	PKPdf	04 27 19.6	+0.4
CLL	Collm	144.84	349	i PKIKP	PKPdf	04 27 19.4	0.0
	comp=Z,logA/T=1.0						
CLL				i		04 27 23.4	
CLL	Collm	144.84	349	i PKPdf	PKPdf	04 27 19.4	0.0
	comp=Z,7.0nm,0.7s						
CLL				i PKiKP	PKiKP	04 27 23.4	0.0
BR131	Keskin Array S	144.84	316	ePKPdf	PKPdf	04 27 20.1	+0.7
BRTR	Keskin Array B	144.84	316	PKP	PKPdf	04 27 19.9	+0.4
	comp=Z,1.5nm,0.7s,baz=133,slow=4.7,SNR=9.3						
BRG	Berggiesshubel	145.06	347	eP	PKPdf	04 27 20.6	+0.8
	comp=Z,3.3nm,0.7s						
MORC	Moravsky Berou	145.20	343	ePKPbc	PKPbc	04 27 21.0	+0.3
VYHS	Vyhne	145.95	341	ePKP	PKPdf	04 27 23.0	+1.7
GERES	GERESS Array B	147.03	346	PKPbc	PKPbc	04 27 26.6	+0.7
	comp=Z,1.1nm,0.7s,baz=29,slow=3.0,SNR=8.9						
FLN	La Foliniere	148.28	4	ePKP1	PKPbc	04 27 29.0	-0.2
	comp=Z,47nm,1.2s						
CDF	Champ du Feu	148.50	354	ePKP1	PKPbc	04 27 29.9	+0.2
	comp=Z,6.1nm,0.7s						
GRR	Gorron	148.63	4	ePKP1	PKPbc	04 27 29.7	-0.3
LOR	Lormes	149.86	358	ePKP1	PKPbc	04 27 33.3	+0.3
	comp=Z,11nm,0.7s						
SSF	Saint Saulge	150.07	359	ePKP1	PKPbc	04 27 33.9	+0.4
	comp=Z,19nm,1.0s						
AVF	Avril sur Loir	150.35	359	ePKP1	PKPbc	04 27 34.0	-0.2
CABF	La Chapelle	150.39	355	ePKP1	PKPbc	04 27 35.3	+1.0
	comp=Z,19nm,0.8s						
BGF	Bois d'Agland	150.59	360	ePKP1	PKPbc	04 27 35.0	+0.3
	comp=Z,12nm,0.6s						
TCF	Toulx Ste Croi	150.86	1	ePKP1	PKPbc	04 27 35.4	0.0
	comp=Z,8.6nm,0.8s						
LPL	La Plagne	151.42	354	ePKP1	PKPbc	04 27 37.5	+0.9
LPG	La Plagne	151.44	354	ePKP1	PKPbc	04 27 37.3	+0.6
ORIF	Oris-en-Rattie	152.09	355	ePKP1	PKPbc	04 27 38.4	+0.3
MBDF	Montbardon	152.19	354	ePKP1	PKPbc	04 27 39.1	+0.7
	comp=Z,6.8nm,0.7s						
VIVF	Saint-Julien-l	152.24	357	ePKP1	PKPbc	04 27 38.8	+0.3
	comp=Z,5.5nm,0.7s						
SBF	Sospel	152.97	352	ePKP1	PKPbc	04 27 40.8	+0.7
	comp=Z,114nm,1.3s						
FRF	La Foret Royal	153.36	353	ePKP1	PKPbc	04 27 41.5	+0.6
LMR	La Mourre	153.60	354	ePKP1	PKPbc	04 27 42.0	+0.6
	comp=Z,99nm,1.6s						

*IDC **03** 05:25:16.1±1.4, 0.10S×125.02E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.9/17, mbtmp4.0/6, ML3.6/1, Error ellipse: s-maj=113.4km s-min=20.2km az=64.0*

*ISCJB **03** 05:25:18.8±1.0, 0.0S±0.2×125.3E±0.4, h33^{km}, mb3.9/6, Error ellipse: s-maj=69.5km s-min=13.1km az=132.9*

*NEIC **03** 05:25:20.9±0.9, 0.05S×125.28E, h35^{km}, mb3.9/1, Error ellipse: s-maj=59.1km s-min=12.4km az=66.0*

ISC 03 05:25:21.2±1.0**, 0.1S**±0.2×**125.3E**±0.4**, h35^{km}, n10,** σ0^{s}64/10**, mb3.9**/6**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	17.94	179	P	Pn	05 29 27.6	-0.1
	0.2nm,0.3s,baz=9.2,slow=13,SNR=8.4						
WRAB	Tennant Creek	21.67	156	eP	P	05 30 07.4	-1.3
	3.3nm,0.7s,mb3.9						
WRA	Warramunga Arr	21.67	156	P	P	05 30 08.4	-0.3
	1.6nm,0.5s,mb3.7,baz=333,slow=10,SNR=10.0						
AS31	Alice Springs	24.92	161	eP	P	05 30 41.3	+0.4
ASAR	Alice Springs	24.92	161	P	P	05 30 41.5	+0.6
	1.6nm,0.7s,mb3.7,baz=333,slow=7.0,SNR=14						
STKA	Stephens Creek	35.22	155	P	P	05 32 13.0	+0.9
	5.4nm,0.6s,mb4.7,baz=332,slow=8.7,SNR=15						
STKA	Stephens Creek	35.22	155	eP	P	05 32 12.9	+0.8
MKAR	Makanchi Array	59.87	327	P	P	05 35 22.6	-0.7
	0.3nm,0.4s,mb3.7,baz=118,slow=8.2,SNR=3.1						
AKTK	Aktyubinsk	75.72	323	P	P	05 37 03.4	+0.3
AKTO	Aktyubinsk	75.72	323	P	P	05 37 03.4	+0.3
	0.9nm,0.5s,mb4.0,baz=80,slow=8.9,SNR=4.4						

*ISCJB **03** 05:38:32.9±0.6, 29.32S±0.03×71.2W±0.1, h80^{km}±4^{km}, mb3.8/4, Error ellipse: s-maj=15.1km s-min=4.2km az=16.5*

*NEIC **03** 05:38:33.9, 29.36S×70.99W, h73^{km}, MG4.1(GUC), After GUC.*

*GUC **03** 05:38:33.9±0.6, 29.36S×70.99W, h73^{km}±4^{km}, MD4.1, ML4.1*

*IDC **03** 05:38:35.8±5.6, 29.34S×71.12W, h92^{km}±31^{km}, mb3.9/3, mb1 3.8/6, mb1mx3.6/17, mbtmp4.1/6, MS3.5/2, Ms1 3.4/2, ms1mx2.6/19, Error ellipse: s-maj=74.6km s-min=24.2km az=71.0*

ISC 03 05:38:33.9±0.7**, 29.31S**±0.03×**71.3W**±0.1**, h72^{km}**±5^{km}**, n29,** σ**0^{s}77**/47**, mb3.8**/4**, 4C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.56	58	⇓iP	Pn	05 38 47.2	-0.3
LCO				iS	Sn	05 38 57.3	-0.2
LSCH	La Serena	0.60	180	⇓iP	Pn	05 38 48.1	+0.2
LSCH				iS	Sn	05 38 58.7	+0.6
LSCH				AML	AML	05 38 59.1	
	comp=N,392nm,0.3s						
LSCH	La Serena	0.60	180	⇓iP	Pn	05 38 48.1	+0.2
LSCH				iS	Sn	05 38 58.7	+0.6
VACH	Vallenar	0.85	31	⇑iP	Pn	05 38 50.7	0.0
VACH				iS	Sn	05 39 02.9	-0.2
VACH				AML	AML	05 39 04.3	
	comp=N,22μm,0.1s						
VACH	Vallenar	0.85	31	⇑iP	Pn	05 38 50.7	0.0
VACH				iS	Sn	05 39 02.9	-0.2
TLL	Tololo Astrono	0.94	156	eP	Pn	05 38 52.3	+0.6
TLL				iS	Sn	05 39 05.8	+0.9
TLL				AML	AML	05 39 07.7	
	comp=N,26μm,0.6s						
TLL	Tololo Astrono	0.94	156	eP	Pn	05 38 52.3	+0.6
TLL				iS	Sn	05 39 05.8	+0.9
OVCH	Ovalle	1.29	178	⇓iP	Pn	05 38 56.2	-0.1
OVCH				iS	Sn	05 39 12.8	-0.2
OVCH				AML	AML	05 39 16.8	
	comp=N,3μm,0.4s						
OVCH	Ovalle	1.29	178	⇓iP	Pn	05 38 56.2	-0.1
OVCH				iS	Sn	05 39 12.8	-0.2
CMCH	Combarbala	1.87	173	⇑iP	Pn	05 39 03.8	-0.1
CMCH				iS	Sn	05 39 26.1	-0.5
CMCH				AML	AML	05 39 51.0	
	comp=E,3μm,0.6s						
CMCH	Combarbala	1.87	173	⇑iP	Pn	05 39 03.8	-0.1
CMCH				iS	Sn	05 39 26.1	-0.5
CPCH	Copiapo	2.10	22	⇓iP	Pn	05 39 05.8	-1.1
CPCH				iS	Sn	05 39 30.5	-1.6
CPCH				AML	AML	05 39 35.3	
	comp=E,8μm,0.1s						
CPCH	Copiapo	2.10	22	⇓iP	Pn	05 39 05.8	-1.1
CPCH				iS	Sn	05 39 30.5	-1.6
JACH	Jahuel	3.41	171	eP	Pn	05 39 24.6	-0.1
CFAA	Coronel Fontan	3.46	132	P	Pn	05 39 26.6	+1.2
	comp=E,1.4nm,0.3s,baz=304,slow=15,SNR=150						
CFAA				S	Sn	05 40 05.6	+0.4
	comp=E,2.1nm,0.3s,baz=87,slow=18,SNR=10						
PEL	Peldehue	3.85	173	⇓iP	Pn	05 39 31.3	+0.5
PEL				iS	Sn	05 40 14.7	-0.1
PEL				AML	AML	05 40 31.6	
	comp=E,329nm,0.3s						
PEL	Peldehue	3.85	173	⇓iP	Pn	05 39 31.3	+0.5
PEL				iS	Sn	05 40 14.7	-0.1
RCDM	Rinconada Maip	4.18	175	eP	Pn	05 39 35.6	+0.4
RCDM				iS	Sn	05 40 21.7	-1.2
RCDM				AML	AML	05 40 24.5	
	comp=E,140nm,0.2s						
RCDM	Rinconada Maip	4.18	175	eP	Pn	05 39 35.6	+0.4
RCDM				iS	Sn	05 40 21.7	-1.2
ANTU	Antumapu	4.28	173	iS	Sn	05 40 23.8	-1.4
ANTU				AML	AML	05 40 33.6	
	comp=N,127nm,0.3s						
TACH	Talagante	4.34	177	eP	Pn	05 39 37.4	0.0
SFDO	San Fernando	5.29	178	⇓iP	Pn	05 39 50.3	0.0
LPAZ	La Paz	13.28	13	P	Pn	05 41 41.1	+1.9
	comp=N,0.1nm,0.3s,baz=194,slow=9.1,SNR=14						
LPAZ	La Paz	13.28	13	ePn	Pn	05 41 41.3	+2.1
	comp=N,1.9nm,0.7s						
LPAZ				eP		05 41 47.9	
SIV	San Ignacio	16.23	37	P	Pn	05 42 18.5	+1.1
	comp=N,0.4nm,0.3s,baz=218,slow=12,SNR=29						
SAML	Samuel	21.62	22	eP	P	05 43 19.1	+1.1
	comp=N,2.2nm,1.0s,mb3.4						
BDFB	Brasilia	25.35	63	P	P	05 43 53.0	-1.1
	comp=N,1.3nm,0.5s,mb3.6,baz=226,slow=7.7,SNR=5.7						
BDFB				LR	LR	05 55 51.0	
	comp=N,52nm,19.4s,baz=19,slow=41						
DBIC	Dimbokro	73.07	72	P	P	05 49 56.0	-0.3
	comp=N,3.8nm,0.9s,mb4.2,baz=288,slow=3.2,SNR=3.6						
TORD	Torodi Ar. Bea	81.98	70	P	P	05 50 45.7	-0.2
	comp=N,1.4nm,0.6s,mb4.0,baz=264,slow=4.7,SNR=19						
TORD				LR	LR	06 29 46.2	
	comp=N,46nm,18.1s,baz=75,slow=38						

MOS 03 05:40:36.1±0.2**, 4324N**×**4588E, h16^{km}, mb3.8**/1**, Error ellipse: s-maj=28.0km s-min=10.8km az=179.5, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNJR	Sundja	0.80	258	ePG	Pg	05 40 51.7	0.0
SNJR				eS	Sb	05 41 03.2	+1.0
VLKR	Vladikavkaz	0.90	258	ePG	Pg	05 40 53.4	-0.2
VLKR				eS	Sb	05 41 06.2	+1.1
TRKR	Terskaya	0.97	300	ePG	Pg	05 40 54.4	-0.4
TRKR				eS	Sb	05 41 07.9	+0.9
BTKR	Batakoyurt	0.99	278	ePG	Pg	05 40 54.7	-0.5
BTKR				eS	Sb	05 41 08.4	+0.8
KMSR	Komsomolskaya	1.17	277	ePG	Pg	05 40 57.7	-0.9
KMSR				iS	Sb	05 41 13.5	+0.7
ARNR	Ardon	1.17	268	ePG	Pg	05 40 57.8	-0.9
ARNR				eS	Sb	05 41 13.8	+0.9
LACR	Lac	1.23	251	ePG	Pg	05 40 58.9	-1.0
LACR				eS	Sb	05 41 15.6	+0.9
PRTR	Priterechnaya	1.27	294	ePG	Pg	05 40 59.2	-1.4
PRTR				iS	Sb	05 41 16.2	+0.4
KORR	Kora	1.34	264	ePG	Pg	05 41 00.1	-1.7
KORR				eS	Sn	05 41 17.8	+0.3
ZEI	Tsey	1.53	253	ePG	Pg	05 41 02.8	-2.7
ZEI				eS	Sn	05 41 22.5	+0.3

PGC 03 05:49:44.1, 5067N×**13064W, h10^{km}, MLSn2.9**/1**, Mw3.5, 226km southwest of Pt. Hardy, Bc West of Vancouver Island, British Columbia, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.59	90	Pn	Pn	05 50 10.5	-1.9
HOLB				Sn	Sn	05 50 29.3	-3.7
	comp=Z,55nm,0.4s						
HOLB				Trac		05 50 37.5	
	comp=Z,55nm,0.4s						
BPBC	Brooks Peninsu	1.90	105	Pn	Pn	05 50 14.7	-2.0
BPBC				Sn	Sn	05 50 36.0	-4.6
	comp=Z,13nm,0.2s						
BPBC				Trac		05 50 38.3	
	comp=Z,13nm,0.2s						
BNB	Barry Inlet	2.03	340	Pn	Pn	05 50 16.7	-1.7
BNB				Sn	Sn	05 50 40.5	-3.3
	comp=Z,865nm,0.5s						
BNB				Trac		05 50 43.6	
	comp=Z,865nm,0.5s						
PHC	Port Hardy	2.04	88	Pn	Pn	05 50 16.8	-1.7
PHC				Sn	Sn	05 50 40.0	-4.0
PHC				Trac		05 50 49.7	
	comp=Z,34nm,0.6s						
BBB	Bella Bella	2.19	45	Pn	Pn	05 50 18.7	-1.8
BBB				Sn	Sn	05 50 44.1	-3.6
BBB				Trac		05 50 45.7	
	comp=Z,52nm,0.5s						
MAYB	Maynard	2.23	96	Pn	Pn	05 50 19.6	-1.4
MAYB				Trac		05 50 57.9	
	comp=Z,16nm,0.4s						
EDB	Eliza Dome	2.39	108	Pn	Pn	05 50 21.7	-1.7
MOBC	Moresby Island	2.65	343	Pn	Pn	05 50 24.9	-1.9
MOBC				Sn	Sn	05 50 54.8	-4.2
MOBC				Trac		05 51 00.7	
	comp=Z,6.0nm,0.3s						
WOSB	Woss	2.65	100	Pn	Pn	05 50 26.0	-0.9
WOSB				Sn	Sn	05 50 52.3	-6.8
	comp=Z,20nm,0.5s						
WOSB				Trac		05 51 09.9	
	comp=Z,20nm,0.5s						
BNAB	Bonilla	2.82	360	Sn	Sn	05 50 58.3	-5.1
	comp=Z,6.0nm,0.4s						
BNAB				Trac		05 51 00.5	
	comp=Z,6.0nm,0.4s						
VIB	Van Inlet	2.84	336	Pn	Pn	05 50 29.0	-0.5
VIB				Sn	Sn	05 50 58.7	-5.0
VIB				Trac		05 51 08.7	
	comp=Z,7.0nm,0.4s						
NCRB	Newcastle Ridg	2.94	94	Pn	Pn	05 50 29.6	-1.2
NCRB				Sn	Sn	05 50 59.1	-7.0
	comp=Z,5.0nm,0.4s						
NCRB				Trac		05 51 07.4	
	comp=Z,5.0nm,0.4s						
GDR	Gold River	3.09	105	Pn	Pn	05 50 31.1	-1.8
GDR				Sn	Sn	05 51 04.3	-5.6
	comp=Z,8.0nm,0.4s						
GDR				Trac		05 51 22.9	
	comp=Z,8.0nm,0.4s						
CBB	Campbell River	3.44	99	Pn	Pn	05 50 37.5	-0.2
BTB	Buttle Lake	3.51	108	Pn	Pn	05 50 37.5	-1.2
BTB				Sn	Sn	05 51 15.3	-4.9
	comp=Z,9.0nm,0.5s						
BTB				Trac		05 51 18.2	
	comp=Z,9.0nm,0.5s						
NDB	Naden	3.58	338	Pn	Pn	05 50 38.9	-0.8
NDB				Sn	Sn	05 51 20.5	-1.5
	comp=Z,5.0nm,0.5s						
NDB				Trac		05 51 28.6	
	comp=Z,5.0nm,0.5s						
RUBB	Prince Rupert	3.67	4	Pn	Pn	05 50 39.8	-1.1
RUBB				Sn	Sn	05 51 20.2	-4.0
RUBB				Trac		05 51 25.1	
	comp=Z,7.0nm,0.4s						
TXB	Texada	4.10	101	Pn	Pn	05 50 42.9	-4.0
MGB	Mount Grey	4.20	111	Pn	Pn	05 50 49.9	+1.7
MGB				Trac		05 51 18.5	
	comp=Z,4.0nm,0.5s						

*BJI **03** 05:52:55.6, 38.21N×72.85E, h142^{km}, mB4.8, mb4.5*

*MOS **03** 05:53:01.1±0.9, 38.08N×73.62E, h154^{km}, mb4.2/10, Error ellipse: s-maj=12.6km s-min=6.3km az=106.5*

*NEIC **03** 05:53:01.2±0.8, 38.02N×73.60E, h143^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=9.1km s-min=4.1km az=59.0*

*ISCJB **03** 05:53:01.9±0.3, 38.07N±0.02×73.58E±0.04, h165^{km}±4^{km}, mb4.2/28, Error ellipse: s-maj=5.7km s-min=3.5km az=154.7*

*IDC **03** 05:53:02.1±4.7, 37.97N×73.55E, h150^{km}±42^{km}, mb3.7/10, mb1 3.9/14, mb1mx3.7/24, mbtmp4.2/14, Error ellipse: s-maj=27.1km s-min=14.7km az=7.0*

*NNC **03** 05:53:10.0±4.7, 38.69N×73.41E, h204^{km}±34^{km}, mb3.0, mpv3.8, Error ellipse: s-maj=46.3km s-min=21.5km az=8.0*

ISC 03 05:53:02.8±0.3**, 3806N**±0.02×**7360E**±0.05**, h160^{km}**±4^{km}**, n105,** σ**1^{s}00**/128**, mb4.2**/28**, 11C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.36	51	⇓P	Pn	05 53 44.7	+2.0
KSH				S	Sn	05 54 14.7	+1.2
KSH				Smax			
	comp=N,4μm,0.4s						
KSH				Smax			
	comp=E,4μm,0.6s						
AML	Almayashu	4.06	1	P	Pn	05 54 05.0	+0.8
	SNR=169						
KZA	Kyzart	4.21	17	P	Pn	05 54 06.6	+0.7
	SNR=90						
UCH	Uchtor	4.22	9	P	Pn	05 54 07.1	+0.9
	SNR=95						
CHCP	Chirah Chowk	4.41	184	⇑P	Pn	05 54 11.2	+2.6
CHCP				S	Sn	05 54 59.0	-0.8
EKS2	Erkin-Say	4.59	2	P	Pn	05 54 12.0	+1.0
	SNR=82						
AAK	Ala-Archa	4.62	8	P	Pn	05 54 12.4	+1.1
	SNR=12						
AAK	Ala-Archa	4.62	8	ePn	Pn	05 54 11.3	-0.1
AAK				eSn	Sn	05 55 03.8	-1.0
ULHL	Ulahol	4.64	25	P	Pn	05 54 12.2	+0.5
	SNR=32						
KBK	Karagaybulak	4.70	12	P	Pn	05 54 13.4	+1.0
	SNR=6.3						
CHMS	Chumysh	5.01	10	P	Pn	05 54 17.3	+0.9
	SNR=23						
TKM2	Tokmak 2	5.08	17	P	Pn	05 54 18.5	+1.0
	SNR=105						
TKM2	Tokmak 2	5.08	17	⇑P	Pn	05 54 17.4	-0.1
	comp=E,4.5nm,0.5s						
TKM2				⇑S	Sn	05 55 14.0	-1.9
	comp=E,5.5nm,0.8s						
USP	Ospenovka	5.24	7	P	Pn	05 54 19.9	+0.4
	SNR=19						
THW	Thamme Wali	5.47	197	P	Pn	05 54 23.1	+0.5
KK31	Karatay Array	5.55	336	⇑P	Pn	05 54 23.6	-0.1
	comp=E,11nm,0.3s,baz=338,slow=3.0,SNR=285						
KK31				S	Sn	05 55 22.3	-4.6
	comp=E,249nm,0.5s,baz=239,slow=57,SNR=47						
KK31	Karatay Array	5.55	336	i PN	Pn	05 54 23.6	-0.1
KK31				pmax	pmax		
	comp=Z,26nm,0.1s						
DLH	Dalhousie	5.84	160	eP	Pn	05 54 27.0	-0.5
DLH				ex	x	05 55 33.0	
SARP	Sargodha	6.17	187	P	Pn	05 54 32.0	+0.1
PONG	Pong	6.39	162	eP	Pn	05 54 36.0	+1.2
PONG				ex	x	05 55 46.0	
BHK	Bhakra	7.03	160	ex	x	05 54 49.5	
SDNR	Sundarnagar	7.11	156	eP	Pn	05 54 43.4	-0.9
SDNR				eS	Sn	05 55 57.0	-7.1
KLP	Kalpa	7.55	148	eP	Pn	05 54 51.6	+1.4
KLP				eS	Sn	05 56 09.4	-5.4
KLP				AML	AML	05 56 15.5	
	comp=N,560nm,0.5s						
KLP				AML	AML	05 56 17.0	
	comp=E,594nm,0.8s						
NDI	New Delhi	9.83	161	ex	x	05 55 18.0	
NDI				eS	Sn	05 57 02.0	-7.4
KUDL	Kundal	10.19	165	eP	Pn	05 55 23.9	-1.1
KUDL				eS	Sn	05 57 08.2	-10
KUDL				AML	AML	05 57 13.6	
	comp=E,60nm,0.7s						
KUDL				AML	AML	05 57 15.8	
	comp=N,38nm,0.4s						
SONA	Sohna	10.21	162	eP	Pn	05 55 24.5	-0.9
SONA				eS	Sn	05 57 10.2	-8.4
SONA				AML	AML	05 57 15.2	
	comp=E,149nm,0.6s						
SONA				AML	AML	05 57 17.1	
	comp=N,155nm,0.5s						
LGTI	Lohaghat	10.22	145	ex	x	05 55 21.5	
LGTI				eS	Sn	05 57 10.0	-8.7
MKAR	Makanchi Array	10.83	34	P	Pn	05 55 33.9	+0.4
	comp=N,0.3nm,0.3s,baz=212,slow=16,SNR=13						
MK05	Makanchi Array	10.83	34	⇓P	Pn	05 55 33.2	-0.3
	comp=N,3.7nm,0.8s						
WMQ	Urumqi	12.11	57	eP	Pn	05 55 48.0	-2.1
WMQ				XP		05 56 29.0	
WMQ				S	Sn	05 57 59.0	-5.2
WMQ				SCS	ScS	06 08 12.0	-2.1
WMQ				AMB	AMB		
	comp=Z,16nm,0.8s						
WMQ				LR	LR		
	comp=N,31nm,8.0s						
WMQ				LR	LR		
	comp=E,46nm,7.0s						
WMQ				LR	LR		
	comp=Z,29nm,8.0s						
KURK	Kurchatov	13.14	14	⇑P	Pn	05 56 00.8	-2.6
	comp=Z,14nm,0.9s						
KURK	Kurchatov	13.14	14	⇑eP	Pn	05 56 00.8	-2.6
KURK	Kurchatov	13.14	14	ePn	Pn	05 56 00.5	-3.0
	comp=Z,2.3nm,0.7s						
KURK				eP		05 56 07.0	
KOLN	Koldanda	13.26	138	eP	Pn	05 56 04.4	-0.5
	comp=Z,27nm,0.3s						
KOLN				eS	Sn	05 58 22.4	-9.3
GKN	Gorkha	13.64	134	eP	Pn	05 56 08.3	-1.5
	comp=Z,118nm,0.4s						
GKN				eS	Sn	05 58 31.2	-10
KKN	Kakani	14.17	133	eP	Pn	05 56 15.1	-1.3
	comp=Z,80nm,0.6s						
KKN				eS	Sn	05 58 43.1	-11
KKN	Kakani	14.17	133	eP	Pn	05 56 15.1	-1.3
KKN				eS	Sn	05 58 43.1	-11
KKN				pmax	pmax		
	comp=Z,80nm,0.6s						
DMN	Daman	14.21	134	eP	Pn	05 56 15.8	-1.1
PKI	Pulchoki	14.41	133	eP	Pn	05 56 18.6	-0.8
GUN	Gumba	14.44	131	eP	Pn	05 56 18.8	-0.9
VOSK	Vostochnaya	14.77	354	⇑P	Pn	05 56 21.7	-2.2
	comp=Z,6.4nm,0.7s						
JIRN	Jiri	14.80	131	eP	Pn	05 56 23.4	-0.9
	comp=Z,40nm,0.3s						
AB31	Akbulak array	14.90	323	P	Pn	05 56 23.8	-1.7
	comp=Z,3.1nm,0.4s,baz=130,slow=14,SNR=68						
AB31				⇓S	Sn	05 58 55.7	-15
	comp=Z,27nm,0.7s						
BVA0	Borovoye Array	15.13	353	⇑P	Pn	05 56 28.5	+0.3
	comp=Z,2.7nm,1.0s,baz=158,slow=12,SNR=73						
BVAR	Borovoye Array	15.13	353	P	Pn	05 56 28.1	-0.2
	comp=Z,2.1nm,0.3s,baz=162,slow=11,SNR=27						
BVAR				S	S	05 59 09.8	-7.1
	comp=Z,0.3nm,0.3s,baz=155,slow=24,SNR=3.6						
BRVK	Borovoye	15.17	352	eP	Pn	05 56 28.1	-0.7
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRVK	Borovoye	15.17	352	ePn	Pn	05 56 28.1	-0.7
	comp=Z,8.6nm,0.6s						
BRVK				eP		05 56 31.1	
ZRNK	Zerenda	15.23	349	⇑P	Pn	05 56 29.2	-0.3
	comp=Z,9.7nm,0.7s						
ZRNK	Zerenda	15.23	349	eP	Pn	05 56 28.1	-1.4
ZRNK				pmax	pmax		
	comp=Z,17nm,0.8s						
ZRNK	Zerenda	15.23	349	ePn	Pn	05 56 28.1	-1.4
	comp=Z,17nm,0.8s						
CHKZ	Chkalovo	15.75	353	P	Pn	05 56 33.7	-2.2
CHKZ	Chkalovo	15.75	353	eP	Pn	05 56 34.0	-1.9
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHKZ	Chkalovo	15.75	353	ePn	Pn	05 56 34.0	-1.9
	comp=Z,10nm,0.8s						
AKTK	Aktyubinsk	16.61	323	P	Pn	05 56 46.1	-0.3
AKTK				S	S	05 59 42.4	-8.6
AKTO	Aktyubinsk	16.61	323	⇓P	Pn	05 56 45.8	-0.6
	comp=Z,0.1nm,0.6s						
AKTO				⇑S	S	05 59 41.4	-10
	comp=Z,0.4nm,0.8s						
AKTO	Aktyubinsk	16.61	323	P	Pn	05 56 46.1	-0.3
	comp=Z,1.8nm,0.3s,baz=120,slow=12,SNR=36						
AKTO				S	S	05 59 42.4	-8.6
	comp=Z,0.6nm,0.3s,baz=8.8,slow=20,SNR=13						
ZAL	Zalesovo	17.64	22	P	Pn	05 56 58.2	-0.6
	comp=Z,2.2nm,0.3s,baz=266,slow=8.9,SNR=20						
ZAL	Zalesovo	17.64	22	P	Pn	05 56 58.2	-0.6
NVS	Novosibirsk	18.02	18	eP	P	05 56 59.8	-1.7
NVS				eS	S	06 00 14.4	-5.3
NVS				pmax	pmax		
	comp=Z,15nm,1.0s						
NVS				pmax	pmax		
	comp=N,16nm,1.2s						
NVS				smax			
	comp=N,14nm,1.7s						
GTA	Gaotai	20.48	78	eP	P	05 57 29.6	+1.5
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s						
ARU	Arti	20.93	336	⇓iP	P	05 57 33.1	+0.2
ARU				eS	S	06 01 15.6	-1.5
ARU				eSS		06 01 35.8	
ARU				pmax	pmax		
	comp=Z,19nm,1.0s						
ARU	Arti	20.93	336	eP	P	05 57 32.9	0.0
	comp=Z,19nm,1.0s						
GNI	Garni	22.45	284	eP	P	05 57 50.2	+1.7
GNI				pmax	pmax		
	comp=Z,15nm,2.5s						
KIV	Kislovodsk	23.97	294	eP	P	05 58 02.0	-0.4
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.3						
ZAK	Zakamensk	24.40	50	eP	P	05 58 06.6	+0.3
ZAK				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,10.0nm,0.9s,mb4.3						
SONM	Songino Array	25.75	57	P	P	05 58 20.0	+1.5
	comp=Z,1.4nm,0.7s,mb3.7,baz=256,slow=9.9,SNR=12						
ULN	Ulaanbaatar	26.19	57	eP	P	05 58 23.3	+0.8
ANN	Anapa	27.77	296	eP	P	05 58 36.8	+0.2
ANN				e*PP	pP	05 59 07.0	-2.9
ANN				eS	S	06 03 03.0	-4.3
ANN				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
KMI	Kunming	27.85	109	P	P	05 58 38.6	+1.3
KMI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
HHC	Hu-ho-hao-te	29.30	73	eP	P	05 58 51.3	+1.2
HHC				AP	pP	05 59 21.1	-2.5
HHC				XP	sP	05 59 37.7	-4.4
HHC				PP	PP	05 59 52.0	-7.4
HHC				PCP	PcP	06 01 55.8	+3.1
HHC				S	S	06 03 31.6	+0.2
HHC				SCP	ScP	06 05 23.6	+4.3
HHC				PCS	PcS	06 05 37.4	+1.6
HHC				SCS	ScS	06 09 15.7	+1.8
HHC				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.5						
HHC				AMB	AMB		
	comp=Z,112nm,5.5s						
HHC				LR	LR		
	comp=N,150nm,11.6s						
HHC				LR	LR		
	comp=E,252nm,9.8s						
HHC				LR	LR		
	comp=Z,136nm,13.9s						
OBN	Obninsk	30.17	316	deP	P	05 58 56.8	-1.0
OBN				e		06 00 00.5	
OBN				eS	S	06 03 35.4	-10
OBN				eSS	SS	06 06 01.5	+1.2
OBN				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.2						
BR131	Keskin Array S	30.97	286	eP	P	05 59 06.5	+1.7
	comp=Z,0.8nm,0.3s,mb3.9						
BRTR	Keskin Array B	30.97	286	P	P	05 59 05.0	+0.2
	comp=Z,0.9nm,0.5s,mb3.8,baz=99,slow=7.8,SNR=9.1						
BRTR	Keskin Array B	30.97	286	i P	P	05 59 06.9	+2.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	33.63	307	P	P	05 59 28.3	+0.3
	comp=Z,1.6nm,0.4s,mb4.2,baz=83,slow=8.3,SNR=16						
JOF	Joensuu	35.59	328	ep	P	05 59 44.5	-0.4
	comp=Z,5.1nm,0.5s,mb4.4						
JOF	Joensuu	35.59	328	eP	P	05 59 44.5	-0.4
JOF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
NJ2	Nanjing	37.24	85	eP	P	05 59 59.3	+0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
FINES	FINESS Array B	37.38	324	P	P	06 00 00.6	+0.6
	comp=Z,2.4nm,0.4s,mb4.2,baz=118,slow=11,SNR=24						
KAF	Kangasniemi	37.48	325	ep	P	06 00 00.7	-0.1
	comp=Z,0.3nm,0.4s,mb3.3,baz=107,slow=8.5						
SSE	Sheshan	39.45	85	eP	P	06 00 19.0	+1.7
SSE				AMB	AMB		
	comp=Z,38nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,264nm,4.4s						
KEV	Kevo	40.15	337	ep	P	06 00 23.1	0.0
ARCES	ARCESS Array B	40.52	336	P	P	06 00 26.7	+0.6
	comp=Z,3.9nm,0.5s,mb4.3,baz=111,slow=8.7,SNR=41						
ARE0	ARCESS Array S	40.52	336	eP	P	06 00 26.5	+0.4
YAK	Yakutsk	41.49	36	⇑eP	P	06 00 33.8	-0.2
YAK				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.9						
MDJ	Mudanjiang	41.84	63	P	P	06 00 36.2	-0.7
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,66nm,4.1s						
BRG	Berggiesshubel	43.31	307	e(P)	P	06 00 50.0	+1.3
	comp=Z,2.2nm,0.6s,mb4.0						
BRG	Berggiesshubel	43.31	307	eP	P	06 00 50.0	+1.3
BRG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
GERES	GERESS Array B	43.74	304	P	P	06 00 53.1	+1.0
	comp=Z,0.2nm,0.2s,mb3.3,baz=64,slow=2.3,SNR=5.9						
NB2	NORSAR Subarra	44.40	322	P	P	06 00 57.3	-0.1
	comp=Z,2.9nm,0.5s,mb4.2,baz=91,slow=7.9						
NOA	NORSAR Array B	44.40	322	P	P	06 00 57.5	+0.1
	comp=Z,3.3nm,0.5s,mb4.2,baz=92,slow=7.7,SNR=15						
AQU	L'Aquila	45.34	295	eP	P	06 01 04.6	-0.2
AQU				pmax	pmax		
	comp=Z,15nm,0.4s,mb5.0						
AQU	L'Aquila	45.34	295	eP	P	06 01 04.6	-0.3
	comp=Z,15nm,0.4s,mb5.0						
SUMG	Summit	60.25	341	eP	P	06 02 55.0	+0.8
	comp=Z,4.3nm,0.7s,mb4.4						
TOA0	Torodi Ar. Sit	67.81	270	eP	P	06 03 43.4	-0.1
TORD	Torodi Ar. Bea	67.81	270	P	P	06 03 43.7	+0.2
	comp=Z,2.2nm,0.4s,mb4.2,baz=46,slow=5.6,SNR=62						
IMA2	Indian Mountai	69.99	19	eP	P	06 03 56.5	-0.5
INK	Inuvik	72.02	10	eP	P	06 04 09.1	0.0
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	72.02	10	eP	P	06 04 09.1	0.0
	comp=Z,2.1nm,0.6s,mb4.0						
COLA	College	72.39	17	eP	P	06 04 11.1	-0.2
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
COLA	College	72.39	17	eP	P	06 04 11.1	-0.2
	comp=Z,3.6nm,0.8s,mb4.2						
YKA	Yellowknife Ar	79.57	4	P	P	06 04 51.9	-0.1
	comp=Z,1.3nm,0.5s,mb3.8,baz=349,slow=5.5,SNR=18						
WRA	Warramunga Arr	81.10	124	P	P	06 05 00.7	+0.5
	comp=Z,0.5nm,0.5s,mb3.5,baz=327,slow=5.1,SNR=11						
WRAB	Tennant Creek	81.10	124	eP	P	06 05 00.3	+0.2
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
WRAB	Tennant Creek	81.10	124	eP	P	06 05 00.3	+0.1
	comp=Z,3.9nm,0.8s,mb4.1						

PGC 03 06:05:16.3, 7186N×13104W, h35km, MLSn2.6/1, 200km southwest of Sachs Harbour, Nt Beaufort Sea., Beaufort Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
INK	Inuvik	3.67	195	Pn	Pn	06 06 09.5	-1.0
INK				Sn	Sn	06 06 49.2	-3.4
INK				Trac		06 06 52.2	
	comp=Z,5.0nm,0.1s						
DAWY	Dawson	8.43	206	Pn	Pn	06 07 13.6	-2.2
DAWY				Sn	Sn	06 08 42.0	-7.7
DAWY				Trac		06 08 44.0	
	comp=Z,1.0nm,0.1s						
YKW3	Yellowknife Ar	11.24	138	Trac		06 09 54.3	
	comp=Z,1.0nm,0.3s						
YKW3	Yellowknife Ar	11.24	138	Pn	Pn	06 07 52.3	-2.2
YKW3				Sn	Sn	06 09 47.5	-11
YKW3				Trac		06 09 51.0	

*NEIC **03** 06:11:48.4±8.3, 857S×11902E, h30km, mb3.9/1, Error ellipse: s-maj=104.0km s-min=36.3km az=131.0*
*IDC **03** 06:11:49.3±3.5, 853S×11968E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.7/16, mbtmp3.7/4, ML3.7/2, Error ellipse: s-maj=191.8km s-min=25.5km az=61.0*
ISC 03 06:11:54.0±4.2, 88S±02×1194E±03, h41km±39km, n8, σ0.s51/8, mb3.9/1, Flores region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.10	147	eP	Pn	06 14 30.0	-0.1
	3.5nm,0.4s						
FITZ				eS	Sx	06 16 22.1	
FITZ	Fitzroy Crossi	11.10	147	Pn	Pn	06 14 30.2	+0.1
	0.3nm,0.3s,baz=335,slow=8.9,SNR=17						
FITZ				Sn	Sx	06 16 22.1	
	3.5nm,0.3s,baz=181,slow=19,SNR=13						
KAKA	Kakadu	13.42	108	eP	Pn	06 15 02.0	+0.2
	5.4nm,0.3s						
WRA	Warramunga Arr	18.25	129	P	Pn	06 16 03.4	-0.7
	0.3nm,0.3s,baz=303,slow=14,SNR=8.5						
WRA				S	Sx	06 19 11.9	
	0.6nm,0.3s,baz=310,slow=25,SNR=8.3						
WRAB	Tennant Creek	18.25	129	ePn	Pn	06 16 04.5	+0.4
	3.5nm,0.4s						
WB2	Warramunga Arr	18.26	129	eP	Pn	06 16 03.9	-0.3
WB2				eS	Sx	06 19 11.6	
ASAR	Alice Springs	20.32	139	P	P	06 16 27.0	+0.4
	1.0nm,0.3s,baz=313,slow=9.4,SNR=18						
ASAR				S	Sx	06 20 06.0	
	1.2nm,0.6s,baz=316,slow=24,SNR=8.6						
SONM	Songino Array	57.51	350	P	P	06 21 39.1	0.0
	0.7nm,0.5s,mb3.9,baz=171,slow=7.8,SNR=5.5						

MOS 03 06:32:18.6±2.7, 4398N×4011E, h10km, mb4.2/1, 3C-1D, Error ellipse: s-maj=16.4km s-min=11.3km az=179.2, Western Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOC	Sochi	0.49	216	i PG	Pg	06 32 26.7	-1.5
KIV	Kislovodsk	1.86	90	ePN	Pn	06 32 50.8	+0.3
KIV0	Kislovodsk Arr	1.86	90	⇓iPN	Pn	06 32 50.9	+0.3
SHAR	Shatzhatmas	1.86	96	⇑iPN	Pn	06 32 50.3	-0.3
BEYR	Belyy Ugol+	1.95	88	⇑ePN	Pn	06 32 52.5	+0.7
ANN	Anapa	2.09	294	ePN	Pn	06 33 00.0	+6.4
ANN				i S	Sn	06 33 29.5	+10
PYA	Pyatigorsk	2.13	88	ePN	Pn	06 32 55.2	+1.0
GOF	Gofitskoye	2.35	62	ePN	Pn	06 33 00.3	+3.0
GOF				i S	Sn	06 33 32.5	+6.3
GOF				pmax	pmax		
	comp=Z,60nm,0.7s						
GOF				smax			
	comp=N,170nm,0.6s						
GOF				smax			
	comp=E,120nm,0.6s						
KUBR	Kubataba	2.39	93	ePN	Pn	06 32 58.1	+0.3
ZEI	Tsey	3.02	112	ePN	Pn	06 33 13.2	+6.8
ZEI				e		06 33 56.0	
ZEI				pmax	pmax		
	comp=Z,28nm,0.1s						
ZEI				smax			
	comp=N,111nm,0.1s						
OBN	Obninsk	11.38	350	⇑eP	Pn	06 35 01.0	-0.1
OBN				eS	Sn	06 37 10.7	+2.4
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s						

IDC 03 06:40:22.2±3.1, 914S×10858E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.7/3, Error ellipse: s-maj=120.3km s-min=28.3km az=49.0, South of Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.11	116	P	P	06 46 07.1	+0.4
	0.3nm,0.3s,baz=287,slow=11,SNR=14						
SONM	Songino Array	56.76	358	P	P	06 50 08.2	+0.3
	0.5nm,0.5s,baz=174,slow=8.3,SNR=5.9						
MKAR	Makanchi Array	60.42	340	P	P	06 50 33.4	-0.1
	0.8nm,0.6s,baz=134,slow=8.3,SNR=8.1						

*MOS **03** 07:23:50.1±1.7, 3782N×2080E, h10km, mb4.2/8, Error ellipse: s-maj=8.0km s-min=3.9km az=80.1*
*ISCJB **03** 07:23:51.0±0.3, 3789N±002×2077E±003, h10km, mb3.9/14, MS3.1/2, Error ellipse: s-maj=3.3km s-min=2.3km az=102.7*
*ATH **03** 07:23:52.4, 3786N×2095E, h17km±2km, MD4.1/23, ML4.0*
*CSEM **03** 07:23:52.6±0.1, 3782N×2093E, h2km, ML4.0, Error ellipse: s-maj=3.4km s-min=2.0km az=36.0*
*NEIC **03** 07:23:52.4, 3786N×2095E, h17km, ML3.9(THE), ML4.0(ATH), After ATH.*
*THE **03** 07:23:53.8, 3793N×2098E, h3km, ML3.9*
*PDG **03** 07:23:53.9±0.7, 3798N×2091E, h18km±1km*
*HLW **03** 07:23:54.0, 3805N×2167E, h33km, Mb4.1*
*IDC **03** 07:23:57.4±1.4, 3800N×2096E, h54km±18km, mb3.8/12, mb1 3.8/21, mb1mx3.7/34, mbtmp3.9/21, ML3.5/8, MS3.0/3, Ms1 3.1/3, ms1mx2.6/36, Error ellipse: s-maj=15.4km s-min=9.3km az=15.0*
*SKO **03** 07:24:00.1, 3849N×2101E, h0km*
ISC 03 07:23:53.0±0.5, 3786N±002×2083E±003, h14km±3km, n147, σ1.s27/200, mb3.9/14, MS3.1/2, 14C-9D, Ionian Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.37	329	⇑iPB	Pg	07 24 01.3	+0.8
VLS				eSB	Sg	07 24 07.9	+2.3
RLS	Riolos of Patr	0.54	68	ePB	Pg	07 24 01.5	-2.1
LKD	Levkas	0.86	351	ePg	Pg	07 24 08.4	-1.3
LKD				eSg	Sg	07 24 21.0	+0.1
ITM	Ithomi	1.10	128	ePN	Pn	07 24 12.5	-1.5
EVR	Evrytania	1.31	36	ePB	Pn	07 24 15.1	-1.7
EVR				eSN	Sb	07 24 33.5	-0.4
AGG	Agios Georgios	1.65	45	ePg	Pn	07 24 21.2	-0.3
AGG				eSg	Sn	07 24 42.8	+0.2
IGT	Igoumenitsa	1.72	347	ePb	Pn	07 24 23.3	+0.9
IGT				eSb	Sn	07 24 46.8	+2.7
JAN	Janina	1.79	0	ePN	Pn	07 24 25.1	+1.6
LKR	Lokris	1.88	64	ePN	Pn	07 24 25.3	+0.6
MGER	Gerania Oros	1.93	85	ePN	Pn	07 24 26.0	+0.7
MEV	Metsovon	1.95	9	ePb	Sn	07 24 50.4	+0.6
MEV				eSb	Sg	07 25 00.2	+4.5
KEK	Kerkira	2.02	337	ePB	Pn	07 24 28.1	+1.5
NAIG	Nisos Aigina	2.11	92	⇑iPN	Pn	07 24 28.5	+0.7
SRN	Sarande	2.12	342	i Pn	Pn	07 24 29.8	+1.8
SRN				i Sn	Sn	07 25 08.8	+15
ATH	Athens Observa	2.29	86	ePN	Pn	07 24 31.0	+0.8
LSK	Leskovik	2.29	356	i Pn	Pb	07 24 34.7	+0.5
LSK				i Sn	Sn	07 25 12.5	+14
KVR	Kavouri	2.33	90	ePB	Pn	07 24 29.5	-1.3
NEO	Neokhori	2.37	52	ePN	Pn	07 24 32.3	+0.9
PTL	Penteli	2.41	85	ePB	Pn	07 24 32.5	+0.6
KZN	Kozani	2.55	16	ePB	Pn	07 24 35.9	+2.0
LIT	Litokhoron	2.58	29	ePn	Pn	07 24 34.3	-0.1
LIT				eSn	Sn	07 25 06.0	+0.5
AOS	Alonnisos	2.73	60	ePn	Pn	07 24 36.5	+0.2
KBN	Korca	2.76	359	i Pn	Pg	07 24 43.3	-2.6
KBN				i Sn	Sg	07 25 19.0	-2.7
FNA	Florina	2.95	8	ePn	Pn	07 24 40.4	+1.0
FNA				eSn	Sn	07 25 15.9	+1.3
PAIG	Paliouri	3.03	46	ePn	Pn	07 24 40.5	0.0
PAIG				eSn	Sn	07 25 16.8	+0.2
BIA	Bitola	3.18	7	ePn	Pn	07 24 43.4	+0.8
BIA				eSn	Sn	07 25 21.6	+1.4
BIA	Bitola	3.18	7	ePn	Pn	07 24 42.2	-0.4
BIA				eSg	Sn	07 25 21.6	+1.3
PLG	Polygyros	3.23	38	ePN	Pn	07 24 43.6	+0.3
OHR	Ohrid	3.25	360	eSn	Sn	07 25 23.9	+1.9
OHR				eSn	Sn	07 25 25.0	+3.1
OHR	Ohrid	3.25	360	ePn	Pn	07 24 43.9	+0.4
OHR				eSg	Sn	07 25 22.8	+0.8
OHR	Ohrid	3.25	360	ePn	Pn	07 24 43.8	+0.3
OHR				eSg	Sn	07 25 22.7	+0.8
OHR				eSn	Sn	07 25 25.0	+3.1
HORT	Hortiatis	3.25	32	ePn	Pn	07 24 43.6	0.0
HORT				eSn	Sn	07 25 22.5	+0.5
OUR	Ouranopolis	3.48	44	ePn	Pn	07 24 46.8	+0.1
OUR				eSn	Sn	07 25 28.1	+0.5
SOH	Sokhos	3.55	33	ePn	Pn	07 24 48.4	+0.8
SOH				eSn	Sn	07 25 29.5	+0.2
SOH	Sokhos	3.55	33	ePn	Pn	07 24 48.3	+0.7
SOH				eSn	Sn	07 25 29.5	+0.2
VAM	Vamos	3.65	131	ePN	Pn	07 24 51.2	+2.2
KNT	Kendrikon	3.67	25	ePn	Pn	07 24 49.7	+0.5
KNT				eSn	Sn	07 25 33.5	+1.3
VAY	Valandovo	3.71	21	ePn	Pn	07 24 50.0	+0.2
VAY				eSn	Sn	07 25 33.5	+0.2
VAY	Valandovo	3.71	21	ePn	Pn	07 24 49.1	-0.7
QSH	Qafa e Shtames	3.73	349	i Pn	Pn	07 24 50.6	+0.5
QSH				i Sn	Sn	07 25 33.5	-0.2
APE	Apeiranthos	3.82	100	ePn	Pn	07 24 52.3	+0.9
APE	Apeiranthos	3.82	100	⇑iP	Pn	07 24 54.5	+3.1
APE	Apeiranthos	3.82	100	ePb	Pn	07 24 54.8	+3.4
PHP	Peshkopia	3.83	356	i Pn	Pn	07 24 53.2	+1.7
PHP				i Sn	Sn	07 25 36.1	-0.2
LOS	Limnos	3.91	57	ePn	Pn	07 24 52.7	+0.1
LOS				eSn	Sn	07 25 39.0	+0.8
LIA	Limnos Island	3.96	58	ePN	Pn	07 24 53.0	-0.3
STIP	Stip	3.97	15	ePn	Pn	07 24 54.3	+0.9
GVD	Gavdhos	4.00	138	ePN	Pn	07 24 54.6	+0.8
CHOS	Chios island	4.15	81	ePn	Pn	07 24 56.5	+0.6
CHOS	Chios island	4.15	81	ePn	Pn	07 24 56.5	+0.6
IDI	Anoyia	4.15	127	P	Pn	07 24 57.1	+1.1
	1.0nm,0.3s,baz=297,slow=17,SNR=6.7						
IDI				S	Sn	07 25 46.8	+2.6
	11nm,0.3s,baz=178,slow=23,SNR=9.8						
IDI				LR	LR	07 26 49.0	
	comp=Z,284nm,21.2s,baz=268,slow=41						
IDI	Anoyia	4.15	127	P	Pn	07 24 57.1	+1.2
IDI				S	Sn	07 25 46.8	+2.5
NVR	Nevrokopi	4.20	33	ePN	Pn	07 24 56.6	0.0
ULC	Ulcinj	4.28	344	⇑iPn	Pn	07 24 57.5	-0.2
ULC				eSn	Sn	07 25 46.8	-0.5
MMB	Musomiste	4.34	30	ePn	Pn	07 24 59.4	+0.9
MMB				eSn	Sn	07 25 49.5	+0.5
MMB	Musomiste	4.34	30	eP	Pn	07 24 57.0	-1.5
MMB	Musomiste	4.34	30	ePn	Pn	07 24 59.4	+0.9
MMB				eSn	Sn	07 25 49.5	+0.6
KKB	Krupnik	4.36	23	eP	Pb	07 25 06.4	-3.0
SG1	Sgolgore (BA)	4.38	314	ePn	Pn	07 24 59.9	+0.8
BAI	Bari	4.46	318	ePn	Pn	07 25 01.1	+1.0
PRK	Paraskevi	4.48	70	ePN	Pn	07 25 00.8	+0.3
LAST	Lasithi	4.61	124	ePn	Pn	07 25 03.1	+0.9
LAST				eSn	Sn	07 25 56.8	+1.3
BUM	Brajici-Budva	4.68	342	⇓iPn	Pn	07 25 03.0	-0.2
BUM				eSn	Sn	07 25 56.7	-0.5
TTG	Podgorica	4.72	346	⇓iPn	Pn	07 25 03.5	-0.3
TTG				eSn	Sn	07 25 57.7	-0.6
CDT	Castel del Mon	4.77	314	ePn	Pn	07 25 05.6	+1.1
PVY	Plav	4.78	352	⇑iPn	Pn	07 25 04.0	-0.4
PVY				eSn	Sn	07 25 59.6	0.0
RZN	Rozhen	4.86	37	eP	Pn	07 25 06.0	+0.4
RDO	Rodhopi	4.90	46	ePN	Pn	07 25 06.4	+0.2
HCY	Herceg Novi	4.92	339	⇓iPn	Pn	07 25 06.1	-0.4
HCY				eSn	Sn	07 26 02.3	-0.8
IVA	Berane	5.06	352	⇑iPn	Pn	07 25 08.2	-0.2
IVA				eSn	Sn	07 26 06.2	-0.4
VTS	Vitosha	5.07	20	eP	Pn	07 25 09.0	+0.5
VTS	Vitosha	5.07	20	⇑iP	Pn	07 25 15.5	+7.0
VAE	Valguarnera	5.11	268	P	Pn	07 25 13.8	+4.7
	3.4nm,0.3s,baz=59,slow=7.9,SNR=3.5						
VAE				S	Sn	07 26 13.0	+5.3
	5.2nm,0.3s,baz=85,slow=4.6,SNR=5.5						
VAE				LR	LR	07 27 20.5	
	comp=Z,101nm,20.0s,baz=268,slow=39						
VAE	Valguarnera	5.11	268	P	Pn	07 25 13.8	+4.7
VAE				S	Sn	07 26 13.0	+5.3
VAE				LR	LR	07 27 20.5	
VAE	Valguarnera	5.11	268	P	Pn	07 25 13.8	+4.8
VAE				S	Sn	07 26 13.0	+5.2
NKY	Niksic	5.14	345	⇓iPn	Pn	07 25 10.2	+0.7
NKY				eSn	Sn	07 26 08.0	-0.6
KDZ	Kurdzhali	5.18	42	eP	Pn	07 25 08.0	-2.0
TREB	Trebinje	5.21	339	P	Pn	07 25 09.0	-1.4
BRY	Bratogost	5.33	342	⇑iPn	Pn	07 25 11.7	-0.5
BRY				eSn	Sn	07 26 12.8	-0.5
BRY	Bratogost	5.33	342	⇑iPn	Pn	07 25 11.6	-0.5
BRY				eSn	Sn	07 26 12.8	-0.5
MS1	Monte Sant'Ang	5.38	317	ePn	Pn	07 25 13.6	+0.8
UPM	Unac-Piva	5.54	345	⇓iPn	Pn	07 25 15.1	+0.2
UPM				eSn	Sn	07 26 17.1	-1.3
PLE	Pljevlja	5.57	349	⇓iPn	Pn	07 25 15.4	0.0
PLE				eSn	Sn	07 26 17.9	-1.3
KARP	Karpathos	5.58	112	ePN	Pn	07 25 19.2	+3.6
BBLS	Bajina Basta -	6.10	350	ePn	Pn	07 25 22.3	-0.4
BBLS				Sg	Sg	07 26 29.6	-39
DIVS	Divcibare	6.26	354	ePn	Pn	07 25 23.8	-1.2
DIVS				Sg	Sg	07 26 31.8	-42
SLUM		7.30	149	P	Pn	07 25 37.0	-2.2
HMAT	Matruh	8.50	141	⇓P	Pn	07 25 52.2	-3.4
HMAT				S	Sn	07 27 18.1	-13
MLR	Muntele Rosu	8.53	25	P	Pn	07 25 58.7	+2.7
	0.2nm,0.3s,baz=181,slow=7.2,SNR=3.9						
MLR	Muntele Rosu	8.53	25	⇑iP	Pn	07 26 08.0	+12
BOJS	Bojanci	8.70	333	ePn	Pn	07 25 58.0	-0.4
BOJS				eSn	Sn	07 27 30.0	-6.2
CRES	Cresnjev	8.91	335	i Pn	Pn	07 26 00.6	-0.7
CEY	Cerknica	9.21	331	ePn	Pn	07 26 05.2	-0.2
CEY				i Sn	Sn	07 27 44.6	-4.1
PDKS	Podkum	9.27	334	eSn	Sn	07 27 38.7	-12
SWA2		9.42	154	⇓P	Pn	07 26 06.6	-1.6
SWA2				S	Sn	07 27 44.9	-8.9
KEST	Kesra	9.45	261	P	Pn	07 26 11.2	+2.5
	0.1nm,0.3s,baz=159,slow=5.5,SNR=5.9						
SWA1		9.49	153	⇓P	Pn	07 26 07.8	-1.4
SWA1				S	Sn	07 27 45.7	-10
VOY	Vojsko	9.66	330	ePn	Pn	07 26 11.2	-0.3
VOY				eSn	Sn	07 27 55.7	-4.1
PERS	Pernice	9.74	336	ePn	Pn	07 26 11.4	-1.2
ROBS	Robic	9.99	329	ePn	Pn	07 26 16.9	+0.9
ROBS				eSn	Sn	07 28 01.6	-6.2
BRTR	Keskin Array B	10.17	75	P	Pn	07 26 20.9	+2.4
	0.2nm,0.3s,baz=77,slow=29,SNR=4.0						
VYHS	Vyhne	10.73	353	ePN	Pn	07 26 25.6	-0.6
VYHS				eSN	Sn	07 28 22.9	-3.1
VRAC	Vranov	11.85	346	P	Pn	07 26 44.5	+3.0
	1.6nm,0.3s,baz=220,slow=19,SNR=4.2						
VRAC	Vranov	11.85	346	P	Pn	07 26 44.5	+3.0
VRAC				pmax	pmax		
	comp=Z,2.0nm,0.3s						
DAVOX	Davos	12.04	321	P	Pn	07 26 46.9	+2.8
	comp=Z,0.3nm,0.3s,baz=319,slow=20,SNR=2.0						
GERES	GERESS Array B	12.14	337	P	Pn	07 26 45.2	-0.2
	comp=Z,0.3nm,0.3s,baz=159,slow=15,SNR=4.2						
GLL	Jalalah	12.25	129	⇑P	Pn	07 26 42.9	-4.1
HFRF	Wahat Farafira	12.40	147	⇑P	Pn	07 26 46.8	-2.2
KHC	Kasperske Hory	12.43	337	eP	Pn	07 26 49.4	0.0
MMAI	Mount Meron Ar	12.82	108	P	Pn	07 26 57.4	+2.5
	comp=Z,0.6nm,0.3s,baz=302,slow=9.6,SNR=3.3						
ASUT		13.79	136	P	Pn	07 27 04.7	-3.3
AKASG	Malin Array Be	14.16	22	P	Pn	07 27 11.9	-1.2
	comp=Z,0.3nm,0.3s,baz=211,slow=12,SNR=3.3						
CLL	Collm	14.54	340	ex	x	07 27 39.0	
ZEI	Tsey	18.24	67	eP	Pn	07 28 04.2	-1.5
ESDC	Sonseca Array	19.41	283	P	Pn	07 28 19.6	-0.1
	comp=Z,0.6nm,0.3s,baz=71,slow=11,SNR=3.6						
OBN	Obninsk	20.30	27	⇑eP	P	07 28 30.6	+2.3
OBN				e		07 28 48.2	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.3						
VSU	Vasula	20.97	9	eP	P	07 28 37.9	+2.3
MDT	Midelt	21.33	264	P	P	07 28 41.7	+2.2
	comp=Z,3.2nm,1.0s,mb3.6,baz=88,slow=12,SNR=5.1						
HFS	Hagfors	22.75	351	P	P	07 28 53.5	-1.1
	comp=Z,2.3nm,0.4s,mb3.9,baz=150,slow=12,SNR=11						
HFS	Hagfors	22.75	351	P	P	07 28 53.5	-1.2
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
EKA	Eskdalemuir Ar	23.83	325	P	P	07 29 05.7	+0.1
	comp=Z,2.7nm,0.8s,mb3.8,baz=130,slow=8.8,SNR=5.7						
EKA	Eskdalemuir Ar	23.83	325	P	P	07 29 05.7	+0.1
EKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	23.84	6	P	P	07 29 03.6	-2.1
	comp=Z,0.8nm,0.5s,mb3.5,baz=186,slow=11,SNR=4.8						
FINES	FINESS Array B	23.84	6	P	P	07 29 03.6	-2.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	NORSAR Subarra	23.98	348	P	P	07 29 05.3	-1.7
	comp=Z,1.0nm,0.6s,mb3.4,baz=150,slow=11						
NOA	NORSAR Array B	23.98	348	P	P	07 29 05.9	-1.1
	comp=Z,0.9nm,0.5s,mb3.5,baz=158,slow=8.9,SNR=5.2						
NOA				LR	LR	07 40 12.9	
	comp=Z,44nm,18.3s,MS3.0,baz=170,slow=41						
NOA	NORSAR Array B	23.98	348	P	P	07 29 05.9	-1.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA				MLR	MLR		
	comp=Z,44nm,18.3s						
AKTK	Aktyubinsk	29.18	52	P	P	07 29 51.4	-2.4
	comp=Z,1.0nm,0.3s,mb4.0						
AKTO	Aktyubinsk	29.18	52	P	P	07 29 51.4	-2.4
	comp=Z,0.9nm,0.3s,mb4.0,baz=258,slow=7.8,SNR=9.6						
AKTO	Aktyubinsk	29.18	52	P	P	07 29 51.4	-2.4
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
TORD	Torodi Ar. Bea	29.94	220	P	P	07 30 02.1	+1.5
	comp=Z,1.4nm,0.8s,mb3.7,baz=30,slow=8.9,SNR=6.4						
ARCES	ARCESS Array B	31.84	3	P	P	07 30 15.7	-1.6
	comp=Z,1.9nm,0.9s,mb3.9,baz=195,slow=8.8,SNR=5.5						
ARCES	ARCESS Array B	31.84	3	P	P	07 30 15.7	-1.6
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	37.14	50	P	P	07 31 01.1	-2.1
	comp=Z,1.3nm,0.6s,mb4.0,baz=267,slow=6.7,SNR=10						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BVAR	**Borovoye Array**	**37.14**	**50**	P	**P**	**07 31 01.1**	**-2.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**42.27**	**53**	*e*P	**P**	**07 31 43.6**	**-2.3**
NVS	**Novosibirsk**	**44.72**	**47**	*e*P	**P**	**07 32 02.2**	**-3.4**
MKAR	**Makanchi Array**	**45.26**	**58**	P	**P**	**07 32 07.4**	**-2.5**
	comp=Z,2.6nm,0.5s,mb4.3,baz=288,slow=6.2,SNR=13						
MKAR	**Makanchi Array**	**45.26**	**58**	⇑*e*P	**P**	**07 32 07.4**	**-2.5**
ZAL	**Zalesovo**	**45.71**	**48**	P	**P**	**07 32 11.4**	**-2.1**
	comp=Z,5.1nm,0.5s,mb4.7,baz=199,slow=6.1,SNR=8.5						
ZAL	**Zalesovo**	**45.71**	**48**	P	**P**	**07 32 11.4**	**-2.1**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SONM	**Songino Array**	**60.47**	**51**	P	**P**	**07 34 00.3**	**-2.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=288,slow=7.6,SNR=10						
SONM	**Songino Array**	**60.47**	**51**	P	**P**	**07 34 00.3**	**-2.0**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BOD	**Bodaibo**	**60.48**	**38**	*e*P	**P**	**07 33 58.9**	**-3.4**
BOD				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
BOD	**Bodaibo**	**60.48**	**38**	*e*P	**P**	**07 33 58.9**	**-3.4**
	comp=Z,2.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**60.86**	**50**	*e*P	**P**	**07 34 02.6**	**-2.3**
PET	**Petropavlovsk**	**82.37**	**24**	*e*P	**P**	**07 36 13.6**	**-0.8**

MEX 03 07:38:53.1±0.7**, 1537N**×**9537W, h10**km±14km**, MD4.0, 1C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.82**	**299**	*i* P	Pg	07 39 07.2	-1.6
HUIG				*i* S	Sg	07 39 16.8	-2.7
CMIG	**Matias Romero**	**1.77**	**15**	⇑*i* P	Pn	07 39 20.3	-3.6
CMIG				*i* S	Sn	07 39 42.2	-4.3
OXX	**Oaxaca**	**2.14**	**323**	*e*P	Pn	07 39 25.0	-3.9
OXX				*i* S	Sn	07 39 56.0	+0.4
CCIG	**Comitan**	**3.24**	**73**	*i* P	Pn	07 39 41.1	-2.9
CCIG				*i* S	Sn	07 40 19.9	-2.7

CSEM ***03*** *07:56:30.5±0.1, 4253N×827W, h10km, ML3.4/5, Error ellipse: s-maj=4.2km s-min=2.8km az=60.0*
INMG ***03*** *07:56:31.3±1.3, 4255N×837W, h24km±4km, ML2.4, Error ellipse: s-maj=4.1km s-min=2.4km az=82.0*
NEIC ***03*** *07:56:31.1, 4255N×833W, h20km, MN2.7(MDD), After MDD.*
MDD 03 07:56:31.0±0.3**, 4257N**×**828W, h20**km±4km**, mbLg2.7**/13**, 1D, Error ellipse: s-maj=5.2km s-min=3.1km az=76.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STS	**Santiago**	**0.38**	**328**	Pg	Pb	07 56 38.7	-0.3
	207nm,0.1s,SNR=49						
STS				Lg		07 56 44.2	
	331nm,0.1s,SNR=38						
EZAM	**Zamans**	**0.52**	**216**	Pg	Pb	07 56 41.0	-0.4
	70nm,0.1s,SNR=7.9						
EZAM				Lg		07 56 46.1	
	111nm,0.1s,SNR=4.0						
EMAZ	**Mazaricos**	**0.64**	**307**	Pg	Pb	07 56 42.8	-0.7
	28nm,0.1s,SNR=30						
EMAZ				Lg		07 56 50.8	
	221nm,0.1s,SNR=98						
EMAZ	**Mazaricos**	**0.64**	**307**	Pg	Pb	07 56 42.8	-0.7
	28nm,0.1s,SNR=30						
ELOB	**Lobios**	**0.72**	**167**	⇓Pg	Pb	07 56 44.2	-0.6
	50nm,0.1s,SNR=18						
ELOB				Lg		07 56 54.4	
	48nm,0.1s,SNR=5.6						
ELOB	**Lobios**	**0.72**	**167**	Pg	Pb	07 56 44.2	-0.7
	50nm,0.1s,SNR=18						
PCAB	**Cabril**	**0.88**	**167**	*e*P	Pb	07 56 46.4	-1.2
PCAB				*e*S	Sb	07 56 58.5	-0.3
PCAB							
	183nm,0.1s						
PCAB	**Cabril**	**0.88**	**167**	*e*P	Pb	07 56 46.4	-1.2
PCAB				*e*S	Sb	07 56 58.5	-0.3
	183nm,0.1s						
EPON	**Pontenova**	**1.13**	**47**	Pg	Pn	07 56 50.4	-1.2
	0.4nm,0.0s,SNR=11						
EPON				Lg		07 57 05.9	
	112nm,0.2s,SNR=22						
EPON	**Pontenova**	**1.13**	**47**	Pg	Pn	07 56 50.4	-1.2
	0.4nm,0.0s,SNR=11						
ECAL	**Calabor**	**1.31**	**118**	Pn	Pn	07 56 52.9	-1.2
	0.8nm,0.1s,SNR=26						
ECAL				Pg	Pn	07 56 54.6	+0.5
	7.1nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	07 57 09.0	-2.0
	22nm,0.2s,SNR=7.9						
ECAL				Lg		07 57 11.0	
	76nm,0.1s,SNR=17						
ECAL	**Calabor**	**1.31**	**118**	Pn	Pn	07 56 52.9	-1.2
ECAL				Pg	Pn	07 56 55.7	+1.6
ECAL				Sn	Sn	07 57 09.0	-2.0
ECAL				Lg		07 57 12.3	
ECAL	**Calabor**	**1.31**	**118**	Pn	Pn	07 56 52.8	-1.3
	0.8nm,0.1s,SNR=26						
ECAL	**Calabor**	**1.31**	**118**	Pg	Pn	07 56 55.7	+1.6
	7.1nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	07 57 09.0	-1.9
	22nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**1.36**	**162**	*e*Sg	Sn	07 57 13.9	+1.7
PVRL							
	62nm,0.1s						
PVRL	**Vila Real**	**1.36**	**162**	*e*Sg	Sn	07 57 13.9	+1.7
	62nm,0.1s						
PBRG	**Braganca**	**1.38**	**123**	*e*Pg	Pn	07 56 56.8	+1.8
PBRG				*e*Sg	Sn	07 57 14.7	+2.1
PVIS	**Viseu**	**1.87**	**171**	*e*Pn	Pn	07 57 00.7	-1.2
PVIS				*e*Sn	Sn	07 57 22.9	-2.0
PVIS				*e*Sg	Sn	07 57 30.2	+5.3
PVIS							
	30nm,0.1s						
PVIS	**Viseu**	**1.87**	**171**	*e*Pn	Pn	07 57 00.7	-1.2
PVIS				*e*Sn	Sn	07 57 22.9	-2.0
PVIS				*e*Sg	Sn	07 57 30.2	+5.3
	30nm,0.1s						
MTE	**Manteigas**	**2.24**	**165**	*e*Sg	Sn	07 57 41.0	+7.1
MTE							
	19nm,0.4s						
MTE	**Manteigas**	**2.24**	**165**	Lg		07 57 41.0	
	9.5nm,0.4s						
EARI	**Arriondas**	**2.37**	**71**	Pn	Pn	07 57 08.1	-0.7
	0.3nm,0.2s,SNR=7.9						
EARI				Pg	Pn	07 57 12.6	+3.9
	0.4nm,0.1s,SNR=11						
EARI				Sn	Sn	07 57 35.5	-1.8
	2.0nm,0.2s,SNR=7.9						
EARI				Lg		07 57 45.4	
	2.3nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**2.37**	**71**	Pn	Pn	07 57 08.6	-0.1
EARI				Pg	Pn	07 57 15.1	+6.4
EARI				Sn	Sn	07 57 36.1	-1.2
EARI				Lg		07 57 46.9	
EARI	**Arriondas**	**2.37**	**71**	Pn	Pn	07 57 08.6	-0.1
	SNR=7.9						
EARI	**Arriondas**	**2.37**	**71**	Pg	Pn	07 57 15.1	+6.4
	0.4nm,0.1s,SNR=11						
EARI				Sn	Sn	07 57 36.1	-1.1
	0.5nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**2.79**	**167**	*e*Sg	Sn	07 57 57.6	+10
EPLA	**Plasencia**	**3.00**	**146**	Pn	Pn	07 57 16.1	-1.3
	1.9nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	07 57 50.5	-2.2
	1.8nm,0.1s,SNR=7.9						
EPLA				Lg		07 58 03.0	
	1.2nm,0.0s,SNR=7.9						
EPLA	**Plasencia**	**3.00**	**146**	Pn	Pn	07 57 16.1	-1.3
EPLA				Sn	Sn	07 57 51.4	-1.3
EPLA				Lg		07 58 04.7	
EPLA	**Plasencia**	**3.00**	**146**	Pn	Pn	07 57 16.1	-1.3
	1.9nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	07 57 51.4	-1.4
	SNR=7.9						
ELAN	**Lanestosa**	**3.62**	**78**	Pn	Pn	07 57 25.9	-0.1
	1.2nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	07 58 04.9	-3.2
	2.3nm,0.2s,SNR=7.9						
ELAN				Lg		07 58 26.4	
	1.2nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**3.62**	**78**	Pn	Pn	07 57 25.9	0.0
ELAN				Sn	Sn	07 58 07.5	-0.6
ELAN				Lg		07 58 26.4	
ELAN	**Lanestosa**	**3.62**	**78**	Pn	Pn	07 57 25.9	0.0
	1.2nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	07 58 07.5	-0.6
	2.3nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**3.64**	**120**	Pn	Pn	07 57 25.4	-0.8
	1.1nm,0.2s,SNR=7.9						
GUD				Pg	Pn	07 57 32.2	+6.0
	1.2nm,0.5s,SNR=7.9						
GUD				Lg		07 58 25.2	
	3.1nm,0.2s,SNR=4.6						
GUD	**Guadarrama**	**3.64**	**120**	Pn	Pn	07 57 26.5	+0.3
GUD				Lg		07 58 25.2	
GUD	**Guadarrama**	**3.64**	**120**	Pn	Pn	07 57 26.5	+0.3
	1.1nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.93**	**165**	Pn	Pn	07 57 28.9	-1.2
	1.3nm,0.1s,SNR=9.0						
EBAD				Sn	Sn	07 58 11.9	-3.7
	1.3nm,0.1s,SNR=4.0						
EBAD				Lg		07 58 31.1	
	2.9nm,0.2s,SNR=5.0						
EBAD	**Badajoz**	**3.93**	**165**	Pn	Pn	07 57 28.9	-1.2
EBAD				Sn	Sn	07 58 11.9	-3.7
EBAD				Lg		07 58 34.0	
EBAD	**Badajoz**	**3.93**	**165**	Pn	Pn	07 57 28.9	-1.3
	1.3nm,0.1s,SNR=9.0						
EBAD				Sn	Sn	07 58 11.9	-3.7
	1.3nm,0.1s,SNR=4.0						
ESDC	**Sonseca Array**	**4.36**	**130**	Lg		07 58 47.9	
	4.1nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.95**	**165**	Pn	Pn	07 57 43.0	-1.2
	0.4nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.95**	**165**	Pn	Pn	07 57 43.0	-1.2
EMIN				Lg		07 59 03.9	
EMIN	**Mina Concepcio**	**4.95**	**165**	Pn	Pn	07 57 43.0	-1.2

NEIC ***03*** *08:11:11.8, 1685N×10047W, h5km, MD3.5(MEX), After MEX.*
MEX 03 08:11:11.1±0.7**, 1692N**×**10050W, h5**km±6km**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.26**	**59**	*e*P	Pg	08 11 15.6	-0.6
CAIG				*i* S	Sg	08 11 19.9	+0.4
ACX	**Acapulco**	**0.56**	**95**	*i* P	Pg	08 11 21.3	-0.6
ACX				*i* S	Sg	08 11 30.0	+0.8
ACX	**Acapulco**	**0.56**	**95**	*i* P	Pg	08 11 21.3	-0.6
ACX				*i* S	Sg	08 11 30.3	+1.1
MEIG	**Mezcala**	**1.31**	**40**	*i* P	Pn	08 11 33.0	-3.1
MEIG				*i* S	Sg	08 11 48.4	-4.8
PLIG	**Platanillo**	**1.75**	**33**	*i* P	Pn	08 11 39.0	-3.1
PLIG				*i* S	Sn	08 11 59.6	-5.2
PLIG	**Platanillo**	**1.75**	**33**	*i* P	Pn	08 11 41.0	-1.1
PLIG				*i* S	Sn	08 12 03.7	-1.1
UTMO	**Huajuapan**	**2.73**	**70**	*e*P	Pn	08 11 53.3	-2.3
UTMO				*i* S	Sn	08 12 23.7	-5.2
PPM	**Popocatepetl**	**2.79**	**40**	*i* P	Pn	08 11 54.3	-2.0
PPM				*i* S	Sn	08 12 27.4	-2.9
PPM	**Popocatepetl**	**2.79**	**40**	*i* P	Pn	08 11 57.8	+1.5
PPM				*i* S	Sn	08 12 31.7	+1.4

IDC 03 08:25:53.1±54.0**, 1504S**×**17114W, h0**km**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.9**/15**, mbtmp4.2**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/23**, Error ellipse: s-maj=1059.0km s-min=184.0km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**22.36**	**248**	LR	LR	08 37 30.9	
	comp=Z,89nm,20.8s,baz=339,slow=31						
STKA	**Stephens Creek**	**46.11**	**240**	P	P	08 34 19.2	+0.2
	0.6nm,0.3s,baz=84,slow=10,SNR=5.6						
WRA	**Warramunga Arr**	**52.05**	**256**	P	P	08 35 05.0	+0.4
	0.8nm,0.5s,baz=94,slow=6.9,SNR=41						
ASAR	**Alice Springs**	**52.30**	**252**	P	P	08 35 06.9	+0.5
	6.0nm,0.5s,baz=89,slow=7.8,SNR=117						

JMA ***03*** *08:27:26.8±0.2, 3032N×13897E, h468km, M3.7*
ISCJB ***03*** *08:27:27.2±0.3, 3029N±004×13875E±008, h447km±4km, mb3.9/26, Error ellipse: s-maj=10.4km s-min=6.0km az=147.6*
IDC ***03*** *08:27:28.1±0.8, 3030N×13849E, h432km±10km, mb3.3/12, mb1 3.4/16, mb1mx3.4/23, mbtmp4.2/16, Error ellipse: s-maj=23.1km s-min=9.8km az=80.0*
NEIC ***03*** *08:27:29.2±0.8, 3040N×13860E, h447km±8km, mb3.7/9, Error ellipse: s-maj=14.6km s-min=10.6km az=111.0*
ISC 03 08:27:28.3±0.4**, 3035N**±004×**13881E**±008**, h444**km±4km**, n51, σ1^{s}05**/62**, mb3.9**/26**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.89**	**16**	P	**P**	**08 28 35.1**	**+1.1**
	63nm,0.3s,baz=263,slow=24,SNR=49						
JHJ				S	**S**	**08 29 27.6**	**+0.2**
	98nm,0.3s,baz=64,slow=22,SNR=8.6						
JHJ2	**Mitsune**	**2.89**	**17**	P	**P**	**08 28 35.1**	**+1.1**
JHJ2				S	**S**	**08 29 28.0**	**+0.7**
TK02	**Tokai 2**	**3.70**	**346**	P	**P**	**08 28 42.8**	**+2.4**
JWZ	**Kozaga**	**4.12**	**321**	P	**P**	**08 28 44.9**	**+0.8**
CBIJ	**Chichi jima**	**4.39**	**137**	P	**P**	**08 28 45.8**	**-0.8**
	17nm,0.3s,baz=247,slow=19,SNR=19						
CBIJ				S	**S**	**08 29 47.4**	**-2.9**
	62nm,0.3s,baz=280,slow=21,SNR=17						
CBIJ	**Chichi jima**	**4.39**	**137**	P	**P**	**08 28 45.7**	**-0.8**
CBIJ				S	**S**	**08 29 47.2**	**-3.1**
JIM2	**Oshima 3**	**4.39**	**7**	P	**P**	**08 28 47.8**	**+1.3**
JIE	**Ise**	**4.41**	**337**	P	**P**	**08 28 49.1**	**+2.4**
BSO1	**Boso 1**	**4.67**	**23**	P	**P**	**08 28 49.4**	**+0.3**
BSO1				S	**S**	**08 29 53.8**	**-1.2**
JHHJ	**Haha-jima-NKT**	**4.74**	**140**	P	**P**	**08 28 49.2**	**-0.6**
JHHJ				S	**S**	**08 29 54.0**	**-2.3**
JOD2	**Odawara 2**	**4.91**	**3**	P	**P**	**08 28 51.9**	**+0.5**
JOD2				S	**S**	**08 29 58.4**	**-0.8**
JRY	**Ryogami san**	**5.66**	**1**	P	**P**	**08 28 59.4**	**+0.6**
JRY				S	**S**	**08 30 11.0**	**-1.7**
JTO	**Tosashimizu**	**5.70**	**298**	P	**P**	**08 28 59.6**	**+0.3**
MJAR	**Matsushiro Arr**	**6.20**	**356**	P	**P**	**08 29 04.4**	**0.0**
	3.6nm,0.3s,baz=172,slow=11,SNR=25						
MJAR				S	**S**	**08 30 20.7**	**-2.2**
	0.8nm,0.3s,baz=217,slow=42,SNR=3.9						
MAJO	**Matsushiro**	**6.20**	**356**	*e*P	**P**	**08 29 04.4**	**0.0**
	29nm,0.7s						
MAT	**Matsushiro**	**6.20**	**356**	P	**P**	**08 29 04.4**	**0.0**
MAT				S	**S**	**08 30 20.7**	**-2.3**
MAT	**Matsushiro**	**6.20**	**356**	P	**P**	**08 29 04.3**	**-0.1**
MAT				S	**S**	**08 30 21.1**	**-1.9**
MAT	**Matsushiro**	**6.20**	**356**	*e*P	**P**	**08 29 04.0**	**-0.4**
	18nm,0.5s						
MAT				*e*S	**S**	**08 30 21.0**	**-2.0**
JHS	**Saijyo**	**6.67**	**316**	P	**P**	**08 29 10.2**	**+0.9**
JOW	**Kunigami**	**9.90**	**252**	P	**P**	**08 29 45.0**	**+0.9**
	0.9nm,0.3s,baz=117,slow=14,SNR=3.4						
ASAJ	**Asahikawa**	**14.07**	**11**	P	**P**	**08 30 31.8**	**+2.2**
	0.9nm,0.3s,baz=207,slow=2.3,SNR=5.6						
ULN	**Ulaanbaatar**	**29.93**	**315**	*e*P	**P**	**08 32 58.0**	**-0.4**
	0.6nm,0.4s,mb3.3						
SONM	**Songino Array**	**30.33**	**314**	P	**P**	**08 33 00.8**	**-1.0**
	0.6nm,0.4s,mb3.2,baz=124,slow=8.6,SNR=8.5						
JIRN	**Jiri**	**45.76**	**280**	*e*P	**P**	**08 35 08.6**	**+0.3**
	50nm,0.3s,mb5.3						
GUN	**Gumba**	**45.95**	**281**	*e*P	**P**	**08 35 09.7**	**-0.1**
	27nm,0.4s,mb4.9						
MKAR	**Makanchi Array**	**46.14**	**307**	P	**P**	**08 35 10.7**	**-0.5**
	1.1nm,0.6s,mb3.4,baz=90,slow=11,SNR=9.4						
MKAR				PcP	PcP	08 36 39.0	+0.5
	0.5nm,0.5s,baz=81,slow=6.5,SNR=4.7						
PKI	**Pulchoki**	**46.45**	**280**	*e*P	**P**	**08 35 13.3**	**-0.3**
KKN	**Kakani**	**46.50**	**281**	*e*P	**P**	**08 35 13.3**	**-0.6**
	9.7nm,0.3s,mb4.6						
DMN	**Daman**	**46.70**	**281**	*e*P	**P**	**08 35 15.0**	**-0.4**
	8.6nm,0.3s,mb4.5						
GKN	**Gorkha**	**46.98**	**281**	*e*P	**P**	**08 35 17.4**	**-0.2**
	11nm,0.3s,mb4.7						
KOLN	**Koldanda**	**47.93**	**281**	*e*P	**P**	**08 35 24.4**	**-0.4**
	11nm,0.3s,mb4.6						
KURK	**Kurchatov**	**48.60**	**313**	*e*P	**P**	**08 35 28.9**	**-1.0**
	1.5nm,0.4s,mb3.7						
WRA	**Warramunga Arr**	**50.18**	**185**	P	**P**	**08 35 41.8**	**+0.3**
	2.2nm,0.4s,mb3.9,baz=1.6,slow=8.0,SNR=75						
CHKZ	**Chkalovo**	**53.48**	**317**	*e*P	**P**	**08 36 04.7**	**-0.8**
	1.9nm,0.8s,mb3.4						
KDAK	**Kodiak Island**	**53.60**	**38**	P	**P**	**08 36 08.7**	**+2.3**
	3.7nm,0.6s,mb3.8,baz=124,slow=12,SNR=4.6						
ASAR	**Alice Springs**	**53.91**	**186**	P	**P**	**08 36 09.1**	**+0.5**
	1.2nm,0.4s,mb3.5,baz=1.2,slow=6.2,SNR=21						
ZRNK	**Zerenda**	**54.49**	**316**	*e*P	**P**	**08 36 12.1**	**-0.6**
	1.4nm,0.5s,mb3.5						
ZRNK				*e*PcP	PcP	08 37 09.4	-0.1
DAWY	**Dawson**	**59.62**	**30**	*e*P	**P**	**08 36 49.9**	**+1.8**
INK	**Inuvik**	**61.34**	**25**	*e*P	**P**	**08 36 59.7**	**+0.3**
	0.9nm,0.5s,mb3.5						
STKA	**Stephens Creek**	**61.94**	**177**	P	**P**	**08 37 04.2**	**+0.8**
	1.9nm,0.7s,mb3.7,baz=12,slow=10,SNR=6.2						
KEV	**Kevo**	**68.93**	**340**	*e*p	**P**	**08 37 46.4**	**-1.1**
	0.4nm,0.4s,mb3.4						
ARCES	**ARCESS Array B**	**69.50**	**340**	P	**P**	**08 37 51.4**	**+0.5**
	1.3nm,0.5s,mb3.9,baz=62,slow=7.8,SNR=14						
YKA	**Yellowknife Ar**	**70.69**	**28**	P	**P**	**08 37 59.3**	**+1.3**
	0.5nm,0.7s,mb3.1,baz=293,slow=5.5,SNR=4.5						
JOF	**Joensuu**	**70.85**	**332**	*e*p	**P**	**08 37 57.9**	**-1.1**
	2.1nm,0.4s,mb4.0						
KAF	**Kangasniemi**	**73.26**	**333**	*e*p	**P**	**08 38 12.1**	**-0.9**
	1.9nm,0.4s,mb4.0,baz=54,slow=5.3						
FINES	**FINESS Array B**	**73.72**	**333**	P	**P**	**08 38 15.7**	**0.0**
	1.1nm,0.3s,mb3.9,baz=84,slow=5.3,SNR=18						
AKASG	**Malin Array Be**	**78.25**	**322**	P	**P**	**08 38 40.1**	**-0.7**
	0.5nm,0.3s,mb3.6,baz=45,slow=5.0,SNR=4.3						
NB2	**NORSAR Subarra**	**79.49**	**337**	P	**P**	**08 38 47.3**	**-0.2**
	comp=Z,0.8nm,0.5s,mb3.6,baz=45,slow=5.6						
NOA	**NORSAR Array B**	**79.49**	**337**	P	**P**	**08 38 47.6**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.6,baz=46,slow=5.3,SNR=3.6						
BRTR	**Keskin Array B**	**81.63**	**311**	P	**P**	**08 38 58.9**	**+0.2**
	comp=Z,2.0nm,0.8s,mb3.9,baz=90,slow=4.9,SNR=10						
TORD	**Torodi Ar. Bea**	**120.22**	**310**	PKP	PKPdf	08 45 28.3	+0.5
	comp=Z,0.7nm,1.1s,baz=80,slow=1.9,SNR=4.3						

NEIC ***03*** *08:35:32.0±2.8, 1795S×173.19W, h66km±27km, mb4.2/2, Error ellipse: s-maj=23.6km s-min=23.0km az=54.0*
ISCJB ***03*** *08:35:33.1±4.1, 18.1S±02×1740W±06, h33km, mb4.1/7, Error ellipse: s-maj=83.3km s-min=17.8km az=153.8*
IDC ***03*** *08:35:38.4±17.0, 1853S×17503W, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/16, mbtmp4.1/6, Error ellipse: s-maj=331.4km s-min=38.8km az=60.0*
ISC 03 08:35:37.0±4.1**, 182S**±02×**1742W**±06**, h35**km**, n9, σ1^{s}11**/9**, mb4.1**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FUNA	**Funafuti**	**11.57**	**325**	*e*Pn	**Pn**	**08 38 19.5**	**-0.1**
URZ	**Urewera**	**21.40**	**199**	P	**P**	**08 40 19.8**	**-1.9**
	6.5nm,0.4s,mb4.3,baz=294,slow=0.7,SNR=11						
RPZ	**Rata Peaks**	**28.34**	**203**	P	**P**	**08 41 29.2**	**+1.7**
	3.1nm,0.6s,mb4.1,baz=70,slow=14,SNR=7.1						
CTA	**Charters Tower**	**37.38**	**261**	P	**P**	**08 42 45.6**	**-0.7**
	2.2nm,0.7s,mb4.1,baz=102,slow=5.2,SNR=3.5						
CTAO	**Charters Tower**	**37.38**	**261**	*e*P	**P**	**08 42 47.1**	**+0.8**
	1.5nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**42.05**	**242**	P	**P**	**08 43 26.6**	**+1.5**
	1.9nm,1.1s,mb3.6,baz=86,slow=13,SNR=4.1						
WRAB	**Tennant Creek**	**48.53**	**259**	*e*P	**P**	**08 44 15.6**	**-0.9**
	2.7nm,0.6s,mb4.5						
WRAB				*e*	pP	08 44 23.6	-3.4
WRA	**Warramunga Arr**	**48.55**	**259**	P	**P**	**08 44 16.1**	**-0.5**
	0.8nm,0.5s,mb4.0,baz=97,slow=7.5,SNR=27						
ASAR	**Alice Springs**	**48.60**	**254**	P	**P**	**08 44 17.1**	**+0.1**
	1.1nm,0.5s,mb4.1,baz=89,slow=7.7,SNR=20						

ISCJB ***03*** *08:39:17.7±0.3, 4580N±001×12258W±002, h13km±2km, Error ellipse: s-maj=2.6km s-min=1.8km az=2.5*
IDC ***03*** *08:39:17.7±0.9, 4582N×12253W, h0km, mb1 3.6/7, mb1mx3.5/25, mbtmp3.4/7, ML3.4/6, Error ellipse: s-maj=14.0km s-min=8.0km az=110.0*
PNSN ***03*** *08:39:18.6, 4580N×12261W, h15km, MD3.8, Fault plane solution: NP1:φs160.00000°, δ75.00000°, NP2: φs267.00000°, δ42.00000°, Principal axes: T Plg45.0000°, Azm110.0000°; P Plg20.0000°, Azm221.0000°; Fault plane solution: NP1:φs90.00000°, δ50.00000°, NP2: φs340.00000°, δ67.00000°, Principal axes: T Plg46.0000°, Azm297.0000°; P Plg11.0000°, Azm39.0000°;*
NEIC ***03*** *08:39:18.0, 4581N×12261W, h12km, MD3.8(SEA), After SEA.*
NEIC Felt [IV] at Amboy, Ariel, Battle Ground, Camas, Kalama, Kelso, La Center, Ridgefield, Stevenson, Vancouver, Woodland and Yacolt; [III] at Brush Prairie, Longview and Washougal. Felt at Carson, Castle Rock, Centerville, Eatonville, Everett, Glenoma, Randle, Seattle and Sultan. Also felt [IV] at Boring, Fairview and Portland; [III] at Banks, Beaverton, Clackamas, Forest Grove, Gresham, Hillsboro, Hood River, Lake Oswego, North Plains, Oregon City, Rainier, Saint Helens, Sandy, Scappoose, Vernonia, Troutdale, Tualatin, Warren and West Linn; [II] at Beavercreek, Canby, Cornelius, Gladstone and Salem, Oregon. Felt at Aurora, Clatskanie, Corbett, Corvallis, Dundee, Gaston, Lyons, Mosier, Rhododendron, Scotts Mills, Sherwood, Welches and Wilsonville, Oregon.
ISC 03 08:39:17.8±0.2**, 4580N**±001×**12260W**±002**, h9**km±1km**, n130, σ0^{s}83**/169**, 49C-57D, Washington-Oregon border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROSS	**Ross**	**0.15**	**195**	P	**Pg**	**08 39 22.1**	**+1.2**
F04A	**Amboy**	**0.18**	**45**	P	**Pg**	**08 39 22.7**	**+1.1**
	baz=0.2,SNR=706						
F04A				⇓S	**Sg**	**08 39 26.0**	**+1.8**
	baz=0.2						
WPO	**West Portland**	**0.27**	**210**	⇓P	**Pg**	**08 39 24.2**	**+1.1**
LVP	**Lakeview Peak**	**0.30**	**27**	⇓P	**Pg**	**08 39 24.6**	**+0.9**
MTMW	**Mount Mitchell**	**0.35**	**51**	⇓P	**Pg**	**08 39 25.4**	**+0.7**
PGO	**Gresham**	**0.35**	**163**	⇓P	**Pg**	**08 39 25.7**	**+1.0**
RVW	**Rose Valley**	**0.36**	**344**	⇓P	**Pg**	**08 39 25.4**	**+0.6**
ALST	**Alston**	**0.43**	**316**	P	**Pg**	**08 39 26.8**	**+0.7**
FL2	**Flat Top 2**	**0.43**	**24**	⇑P	**Pg**	**08 39 26.8**	**+0.6**
JLK	**June Lake**	**0.47**	**42**	⇓P	**Pg**	**08 39 27.2**	**+0.4**
SHW	**Mount Saint He**	**0.47**	**33**	⇓P	**Pg**	**08 39 27.5**	**+0.7**
HSR	**South Ridge**	**0.47**	**38**	⇓P	**Pg**	**08 39 27.8**	**+0.8**
BULL	**Bull Run Dam**	**0.48**	**138**	⇑P	**Pg**	**08 39 27.2**	**+0.2**
VLMM	**Larch Mountain**	**0.48**	**124**	⇓P	**Pg**	**08 39 27.7**	**+0.7**
CDFW	**Cedar Flats**	**0.50**	**51**	⇑P	**Pg**	**08 39 27.7**	**+0.3**
ESD	**East Dome**	**0.51**	**39**	⇓P	**Pg**	**08 39 28.2**	**+0.6**
STD	**Studebaker Rid**	**0.51**	**31**	⇓P	**Pg**	**08 39 27.9**	**+0.3**
ERK	**Elk Rock**	**0.53**	**20**	⇓P	**Pg**	**08 39 28.2**	**+0.1**
SOSW	**Source of Smit**	**0.55**	**36**	⇑P	**Pg**	**08 39 28.6**	**+0.2**
G04A	**Mulino**	**0.60**	**172**	⇑P	**Pg**	**08 39 29.6**	**+0.1**
	baz=0.6						
G04A				⇓S	**Sg**	**08 39 38.4**	**+1.1**
	baz=0.6						
TDL	**Tradedollar La**	**0.61**	**26**	⇓P	**Pg**	**08 39 29.6**	**0.0**
KMOR	**Kings Mountain**	**0.64**	**255**	⇓P	**Pg**	**08 39 30.0**	**-0.2**
COLT	**Colton High Sc**	**0.64**	**169**	⇓P	**Pg**	**08 39 30.2**	**0.0**
APM	**Augspurger Mou**	**0.65**	**96**	⇑P	**Pg**	**08 39 30.7**	**+0.4**
NLO	**Nicolai Mounta**	**0.66**	**296**	⇑P	**Pg**	**08 39 30.9**	**+0.5**
F03A	**Seaside**	**0.68**	**281**	⇑P	**Pg**	**08 39 30.8**	**-0.1**
	baz=0.7,SNR=204						
F03A				⇓S	**Sg**	**08 39 40.4**	**+0.6**
	baz=0.7						
G03A	**Yamhill**	**0.68**	**225**	⇓P	**Pg**	**08 39 30.5**	**-0.4**
	baz=0.7						
G03A				⇑S	**Sg**	**08 39 40.3**	**+0.5**
	baz=0.7						
GT2	**Goat Mountain**	**0.69**	**160**	⇑P	**Pg**	**08 39 31.0**	**-0.1**
KOSW	**Kosmos**	**0.72**	**23**	⇑P	**Pg**	**08 39 31.5**	**-0.1**
VLL	**Laurance Lake**	**0.73**	**117**	⇑P	**Pg**	**08 39 32.2**	**+0.3**
ASR	**Mount Adams--S**	**0.79**	**63**	⇓P	**Pg**	**08 39 32.6**	**-0.3**
E04A	**Onalaska**	**0.79**	**354**	⇓P	**Pg**	**08 39 33.0**	**-0.1**
	baz=0.8,SNR=165						
E04A				⇑S	**Sg**	**08 39 44.4**	**+1.0**
	baz=0.8						
BMW	**Boistfort Moun**	**0.80**	**327**	⇑P	**Pg**	**08 39 32.6**	**-0.5**
F05A	**White Salmon**	**0.80**	**84**	⇑P	**Pg**	**08 39 33.1**	**-0.2**
	baz=0.8						
F05A				⇑S	**Sg**	**08 39 44.7**	**+1.0**
	baz=0.8						
HOOD	**Mount Hood Mea**	**0.82**	**125**	⇑P	**Pg**	**08 39 33.5**	**-0.2**
LCW	**Lucas Creek**	**0.87**	**356**	⇓P	**Pg**	**08 39 33.9**	**-0.6**
LMW	**Ladd Mountain**	**0.89**	**14**	P	**Pg**	**08 39 34.6**	**-0.3**
VFP	**Flag Point**	**0.94**	**121**	⇑P	**Pg**	**08 39 35.4**	**-0.4**

SSOR	Sweet Springs	0.95	174	⇓P	Pg	08 39 35.4	-0.7
E05A	Randle	0.96	37	⇓P	Pg	08 39 35.3	-0.9
	baz=1.0						
E05A				⇓S	Sg	08 39 48.4	-0.2
	baz=1.0						
E03A	Lebam	1.00	318	⇑P	Pg	08 39 35.9	-1.1
	baz=1.0						
E03A				⇑S	Sg	08 39 49.6	-0.3
	baz=1.0						
HEBO	Mount Hebo	1.00	234	⇓P	Pg	08 39 35.9	-1.1
GLK	Glacier Lake	1.03	42	⇑P	Pg	08 39 36.7	-0.8
VBEM	Beaver Butte	1.03	136	⇑P	Pg	08 39 37.2	-0.4
G05A	Wamic	1.06	121	⇑P	Pg	08 39 38.0	-0.2
	baz=1.1						
G05A				⇑S	Sg	08 39 52.5	+0.5
	baz=1.1						
LON	Longmire	1.09	30	⇓P	Pg	08 39 37.9	-0.9
PCMD	Pierce County	1.11	11	⇓P	Pg	08 39 37.5	-1.5
REMR	Mount Rainier-	1.15	27	⇓P	Pb	08 39 38.7	-1.1
WPW	White Pass	1.16	39	⇑P	Pb	08 39 38.9	-1.0
H04A	Detroit Lake	1.16	165	⇓P	Pb	08 39 38.6	-1.3
	baz=1.2						
H04A				⇑S	Sg	08 39 53.6	-1.4
	baz=1.2						
PCFR	Pierce County	1.19	5	⇑P	Pb	08 39 39.0	-1.5
RVC	Mount Rainier-	1.22	21	⇓P	Pn	08 39 39.9	-1.2
CPW	Capitol Peak	1.23	343	P	Pn	08 39 39.7	-1.4
H03A	Soap Creek Ran	1.23	204	⇑P	Pn	08 39 39.6	-1.5
	baz=1.2						
H03A				⇑S	Sb	08 39 57.0	-0.1
	baz=1.2						
GHW	Garrison Hill	1.26	10	⇓P	Pn	08 39 40.1	-1.5
EGRN	Evergreen Coll	1.30	349	P	Pn	08 39 40.9	-1.2
FMW	Mount Fremont	1.30	29	⇓P	Pn	08 39 41.5	-0.6
VGB	Gordon Butte	1.31	102	⇑P	Pn	08 39 41.6	-0.7
COR	Corvallis	1.31	202	*e*Pg	Pg	08 39 41.1	-1.9
D04A	Dobbs Creek Ra	1.31	354	⇑P	Pn	08 39 41.7	-0.7
	baz=1.3,SNR=106						
D04A				⇓S	Sb	08 39 59.9	+0.3
	baz=1.3						
BPO	Bald Peter	1.32	150	P	Pn	08 39 42.0	-0.4
ON2	Olympics--Nort	1.35	323	P	Pn	08 39 41.8	-1.0
MEW	McNeil Island	1.40	359	⇓P	Pn	08 39 43.1	-0.4
D05A	Enumclaw	1.45	17	⇓P	Pn	08 39 43.7	-0.5
	baz=1.4,SNR=56						
D05A				⇑S	Sn	08 40 03.2	-0.1
	baz=1.4						
MPOR	Mary's Peak	1.46	208	⇓P	Pn	08 39 43.6	-0.7
H02A	Toledo	1.50	222	P	Pn	08 39 44.2	-0.6
	baz=1.5,SNR=97						
H02A				⇓S	Sn	08 40 04.2	-0.3
	baz=1.5						
GSM	Grass Mountain	1.51	21	⇑P	Pn	08 39 44.5	-0.4
H05A	Madras	1.51	139	⇓P	Pn	08 39 44.7	-0.3
	baz=1.5,SNR=76						
H05A				⇑S	Sn	08 40 05.3	+0.5
	baz=1.5						
BROR	Big Rock Looko	1.54	176	P	Pn	08 39 44.5	-0.9
D03A	Wishkah Elem.	1.54	329	⇓P	Pn	08 39 45.0	-0.4
	baz=1.5,SNR=75						
D03A				⇓S	Sn	08 40 06.6	+1.0
	baz=1.5						
NAC	Naches	1.54	52	P	Pn	08 39 46.6	+1.1
VTHM	Trough	1.57	113	P	Pn	08 39 45.7	-0.1
SMW	South Mountain	1.60	342	⇓P	Pn	08 39 46.0	-0.3
FRIS	Frissel Point	1.63	167	⇓P	Pn	08 39 46.9	+0.2
BKCOR	Black Crater	1.64	157	P	Pn	08 39 47.3	+0.6
RMW	Rattlesnake Mo	1.75	18	⇓P	Pn	08 39 48.4	+0.1
GMW	Gold Mountain	1.75	356	P	Pn	08 39 48.1	-0.2
I03A	Eugene	1.89	195	⇑P	Pn	08 39 50.2	-0.1
	baz=1.9,SNR=99						
I03A				⇓S	Sn	08 40 15.1	+0.8
	baz=1.9						
I05A	Bend	1.90	150	⇑P	Pn	08 39 50.2	-0.1
	baz=1.9,SNR=29						
I05A				⇑S	Sn	08 40 15.0	+0.7
	baz=1.9						
C04A	Brinnon	1.93	353	⇑P	Pn	08 39 50.6	-0.2
	baz=1.9						
C04A				⇓S	Sn	08 40 15.6	+0.4
	baz=1.9						
C05A	Tolt Reservoir	1.99	18	⇓P	Pn	08 39 52.3	+0.6
	baz=2.0,SNR=20						
C05A				⇑S	Sn	08 40 17.7	+1.0
	baz=2.0						
I02A	Mapleton	2.00	206	⇓P	Pn	08 39 52.3	+0.5
	baz=2.0,SNR=244						
HAWA	Hanford	2.22	73	*e*Pn	Pn	08 39 55.0	+0.3
HAWA				*e*Sn	Sn	08 40 24.9	+2.6
J03A	Ideyld Park	2.44	186	⇓P	Pn	08 39 58.7	+0.8
	baz=2.5,SNR=71						
J03A				⇑S	Sn	08 40 29.4	+1.4
	baz=2.5						
B05A	Bryant	2.49	8	⇑P	Pn	08 39 59.6	+1.2
	baz=2.5						
B05A				⇓S	Sn	08 40 30.3	+1.4
	baz=2.5						
I06A	Prineville	2.52	137	⇓P	Pn	08 39 58.1	-0.8
	baz=2.5						
F08A	Pendleton	2.68	89	⇑P	Pn	08 40 00.3	-0.8
	baz=2.7,SNR=14						
J05A	Fort Rock	2.70	158	⇓P	Pn	08 40 01.4	0.0
	baz=2.7,SNR=34						
I07A	Izee	2.79	127	⇑P	Pn	08 40 02.7	+0.1
	baz=2.8,SNR=85						
PGC	Sidney	2.91	349	*e*Pn	Pn	08 40 04.1	-0.1
PGC				*e*Sn	Sn	08 40 40.1	+0.9
A04A	Legoe Bay, Lum	2.92	359	⇑P	Pn	08 40 05.5	+1.1
	baz=2.9						
H08A	Prairie City	3.06	113	P	Pn	08 40 06.1	-0.3
	baz=3.1,SNR=115						
J06A	Christmas Vall	3.10	145	⇓P	Pn	08 40 06.6	-0.2
	baz=3.1,SNR=24						
K02A	Glendale	3.10	192	⇓P	Pn	08 40 08.4	+1.4
	baz=3.1						
KEBM	Edson Butte	3.18	204	*e*Pn	Pn	08 40 08.5	+0.5
KEBM				*e*Sg	Sg	08 41 05.4	+5.4
A05A	Maple Falls	3.22	6	⇑P	Pn	08 40 10.0	+1.6
	baz=3.2						
J07A	Hines	3.38	135	⇑P	Pn	08 40 10.4	-0.3
	baz=3.4,SNR=7.8						
I08A	Drewsey	3.44	122	P	Pn	08 40 11.4	-0.1
	baz=3.4,SNR=32						
H09A	Durkee	3.67	106	⇑P	Pn	08 40 14.5	-0.2
	baz=3.7,SNR=35						
L02A	Cave Junction	3.72	192	⇑P	Pn	08 40 16.2	+0.9
	baz=3.7,SNR=18						
KBO	Bosley Butte	3.78	199	*e*Pn	Pn	08 40 15.9	-0.3
KBO				*e*Pg	Pg	08 40 31.0	+0.9
KBO				Sg	Sg	08 41 26.8	+7.7
BMO	Blue Mountains	3.86	102	*e*Pn	Pn	08 40 16.4	-0.9
BMO				*e*Sg	Sb	08 41 16.7	+3.9
I09A	Lost Marbles R	3.91	116	⇓P	Pn	08 40 17.0	-1.1
	baz=3.9						
K07A	Rock Creek Ran	3.94	141	⇓P	Pn	08 40 18.3	-0.1
	baz=3.9						
YBH	Yreka Blue Hor	4.07	181	Pn	Pn	08 40 22.7	+2.5
	0.8nm,0.3s,baz=10,slow=11,SNR=4.2						
YBH				Pg	Pg	08 40 30.3	-5.5
	1.8nm,0.3s,baz=28,slow=11,SNR=7.5						
YBH				Lg		08 41 22.6	
	1.7nm,0.3s,baz=143,slow=21,SNR=4.0						
YBH	Yreka Blue Hor	4.07	181	*e*Pn	Pn	08 40 20.4	+0.2
YBH				Pg	Pg	08 40 30.3	-5.5
YBH				Lg		08 41 22.6	
YBH				*e*Sg	Sg	08 41 28.0	-0.5
K08A	Mann Creek Ran	4.26	135	⇑P	Pn	08 40 23.0	+0.1
	baz=4.3						
WVOR	Wild Horse Val	4.42	138	*e*Pn	Pn	08 40 25.3	+0.3
WVOR				*e*Sg	Sb	08 41 31.9	+3.0
NEW	Newport	4.48	55	Pn	Pn	08 40 27.4	+1.5
	0.3nm,0.3s,baz=245,slow=15,SNR=4.9						
NEW				Pg	Pg	08 40 35.9	-7.8
	1.3nm,0.3s,baz=227,slow=11,SNR=10.0						
NEW				Lg		08 41 36.1	
	2.0nm,0.3s,baz=148,slow=22,SNR=4.9						
NEW	Newport	4.48	55	*e*Pn	Pn	08 40 25.7	-0.2
NEW				*e*Sg	Sg	08 41 38.6	-3.1
L08A	Fields	4.74	138	⇓P	Pn	08 40 29.9	+0.5
	baz=4.7,SNR=10						
KIPM	Iron Peak	6.03	186	*e*Pn	Pn	08 40 45.8	-1.3
MSO	Missoula	6.09	77	*e*Pn	Pn	08 40 48.2	+0.2
	3.2nm,0.6s						
HLID	Hailey	6.25	108	*e*Pn	Pn	08 40 49.8	-0.4
	5.3nm,0.6s						
HLID				*e*Sg	Sg	08 42 33.5	-5.0
PAHR	Pah Rah Range	6.54	158	*e*Pn	Pn	08 40 54.2	+0.1
PAHR				*e*pPn		08 40 58.7	
PAHR				Pg	Pg	08 41 21.9	-1.0
CHMT	Chamberlain Mo	6.57	77	*e*Pn	Pn	08 40 53.8	-0.7
WALA	Waterton Lakes	6.73	58	*e*Pn	Pn	08 40 56.2	-0.6
	3.7nm,0.6s						
WALA				*e*Sg	Sg	08 42 52.4	-1.6
MCMT	McKenzie Canyo	6.95	95	*e*Pn	Pn	08 40 60.0	+0.2
MCMT				*e*Sg	Sg	08 42 59.5	-1.2
DLMT	Dillon	7.04	90	*e*Pn	Pn	08 41 01.0	0.0
	5.6nm,0.7s						
BBB	Bella Bella	7.34	332	Pn	Pn	08 41 07.2	+2.1
	0.3nm,0.3s,baz=263,slow=10,SNR=6.5						
HRY	Holter Researc	7.52	79	*e*Pn	Pn	08 41 07.1	-0.6
BOZ	Bozeman (W)	7.68	87	*e*Pn	Pn	08 41 10.6	+0.8
	2.7nm,0.8s						
NVAR	Mina Array Bea	8.03	155	Pn	Pn	08 41 19.8	+5.2
	0.5nm,0.3s,baz=335,slow=12,SNR=16						
IMW	Indian Meadow	8.51	99	*e*Pn	Pn	08 41 21.6	+0.4
IMW				*e*pPn		08 41 24.4	
EDM	Edmonton	9.55	36	*e*Pn	Pn	08 41 34.7	-0.7
EDM				*e*pPn		08 41 37.7	
EDM				*e*Sn	Sn	08 43 22.1	-0.8
PDAR	Pinedale Array	9.84	103	Pn	Pn	08 41 43.5	+4.1
	0.0nm,0.3s,baz=299,slow=15,SNR=6.7						
SRU	San Rafael	11.14	123	*e*Pn	Pn	08 41 57.5	+0.2
PV01	Paradox Valley	12.94	121	*e*Pn	Pn	08 42 21.9	0.0
PV01				*e*pPn		08 42 25.0	
YKA	Yellowknife Ar	17.34	13	P	Pn	08 43 20.4	+0.4
	baz=198,slow=12,SNR=5.5						
ULM	Lac du Bonnet	18.38	66	P	Pn	08 43 34.2	+1.4
	0.1nm,0.3s,baz=249,slow=9.8,SNR=4.2						

*ISCJB **03** 08:46:57.1±0.7, 1587S±005×715W±0.1, h10km, mb3.7/5, MS3.5/5, Error ellipse: s-maj=15.4km s-min=6.3km az=151.2*
*NEIC **03** 08:46:58.9±2.0, 1597S×7160W, h8km±13km, Error ellipse: s-maj=17.8km s-min=11.2km az=55.0*
*IDC **03** 08:47:02.7±2.6, 1580S×7146W, h50km±24km, mb3.7/3, mb1 3.8/7, mb1mx3.6/19, mbtmp3.8/7, ML3.7/2, MS3.5/8, Ms1 3.5/8, ms1mx3.2/24, Error ellipse: s-maj=31.2km s-min=19.3km az=66.0*
ISC 03 08:46:59.7±0.7**, 1596S**±006×**716W**±01**, h10**km**, n23,** σ0^s**93**/16**, mb3.7**/5**, MS3.5**/5**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	0.51	169	⇑*i*P	Pg	08 47 08.0	-1.6
ARE				*i* S	Sg	08 47 16.9	+0.7
LPAZ	La Paz	3.35	96	P	Pn	08 47 56.4	+4.3
	0.6nm,0.3s,baz=272,slow=13,SNR=27						
NNA	Nana	6.45	307	P	Pn	08 48 35.0	+0.4
	0.9nm,0.3s,baz=144,slow=11,SNR=4.7						
NNA	Nana	6.45	307	*e*P	Pn	08 48 35.7	+1.0
	34nm,0.8s						
NNA	Nana	6.45	307	P	Pn	08 48 35.0	+0.4
LVC	Limon Verde	7.08	159	P	Pn	08 48 44.8	+1.4
	4.3nm,0.3s,baz=323,slow=8.5,SNR=14						
LVC				S	Sn	08 50 08.3	+4.4
	2.8nm,0.3s,baz=167,slow=18,SNR=8.2						
LVC				LR	LR	08 51 28.3	
	comp=Z,428nm,18.9s,baz=313,slow=37						
SIV	San Ignacio	10.12	92	P	Pn	08 49 25.2	+0.1
	0.7nm,0.3s,baz=283,slow=11,SNR=28						
ATAH	Atahualpa	11.12	322	LR	LR	08 54 10.4	
	comp=Z,425nm,21.5s,baz=168,slow=39						
CFAA	Coronel Fontan	15.87	169	P	Pn	08 50 42.9	-0.3
	0.0nm,0.3s,baz=349,slow=11,SNR=8.4						
CFAA				LR	LR	08 56 07.9	
	comp=Z,13nm,22.0s,baz=346,slow=34						
CPUP	Villa Florida	16.82	130	LR	LR	08 58 20.8	
	comp=Z,98nm,21.0s,baz=296,slow=40						
BDFB	Brasilia	22.69	92	LR	LR	09 01 07.0	
	comp=Z,102nm,19.4s,MS3.3,baz=179,slow=37						
PLCA	Paso Flores	24.70	178	P	P	08 52 20.1	-0.7
	2.2nm,0.7s,mb3.8,baz=348,slow=11,SNR=6.3						
PLCA				LR	LR	09 02 34.8	
	comp=Z,62nm,19.9s,MS3.1,baz=353,slow=38						
PCRV	Puerto La Cruz	26.87	15	LR	LR	09 03 58.6	
	comp=Z,226nm,18.6s,MS3.8,baz=205,slow=38						
ULM	Lac du Bonnet	69.31	344	P	P	08 58 06.9	-0.3
	1.4nm,0.9s,mb3.9,baz=172,slow=7.1,SNR=3.7						
NVAR	Mina Array Bea	69.58	322	P	P	08 58 09.1	+0.2
	0.2nm,0.5s,mb3.3,baz=134,slow=7.9,SNR=3.6						
TORD	Torodi Ar. Bea	78.02	73	P	P	08 58 54.4	-4.0
	0.9nm,0.7s,mb3.8,baz=266,slow=5.5,SNR=6.7						
ESDC	Sonseca Array	83.76	46	LR	LR	09 33 01.4	
	comp=Z,32nm,20.4s,MS3.7,baz=270,slow=33						
YKA	Yellowknife Ar	85.15	341	P	P	08 59 31.9	-4.2
	0.5nm,0.6s,mb3.8,baz=135,slow=5.2,SNR=5.9						
YKA				LR	LR	09 39 36.6	
	comp=Z,30nm,18.4s,MS3.7,baz=150,slow=37						
YKA	Yellowknife Ar	85.15	341	P	P	08 59 31.9	-4.2
YKA				LR	LR	09 39 36.6	
WRA	Warramunga Arr	136.15	216	PKP	PKPdf	09 06 20.6	-0.6
	0.8nm,0.9s,baz=157,slow=1.8,SNR=5.3						
TLY	Talaya	144.17	5	*e*PKPdf	PKPdf	09 06 31.2	-4.5
MJAR	Matsushiro Arr	146.54	313	PKPbc	PKPbc	09 06 37.9	-3.4
	0.9nm,0.6s,baz=20,slow=1.7,SNR=5.6						
SONM	Songino Array	148.18	3	PKPbc	PKPbc	09 06 43.9	-2.0
	0.6nm,0.7s,baz=124,slow=1.0,SNR=4.1						

*HLW **03** 08:55:47.1, 3157N×3540E, h20km, Mb3.1*
*GII **03** 08:55:50.3±1.0, 3108N×35.18E, h0km, ML2.6/3*
*ISCJB **03** 08:55:51.0±0.5, 31.11N±003×35.11E±007, h4km±5km, Error ellipse: s-maj=9.9km s-min=3.7km az=34.8*
ISC 03 08:55:51.6±0.5**, 3111N**±003×**3512E**±007**, h6**km±5km**, n21,** σ0^s**92**/29**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MZDA	Masada	0.29	47	Pg	Pg	08 55 57.0	-0.2
MZDA				Sg	Sg	08 56 01.9	+0.8
MASH	Mash'abbe Sade	0.31	248	Pg	Pg	08 55 58.1	+0.5
DRGI	Dragot	0.54	26	Pg	Pg	08 56 01.7	-0.2
ZFRI	Zfri	0.56	175	Pg	Pg	08 56 01.4	-0.9
MKRJ	Makawir	0.63	45	Pg	Pg	08 56 03.8	+0.1
KZIT	Kziot	0.65	252	Pg	Pg	08 56 04.5	+0.4
PRNI	Paran	0.76	187	Pg	Pg	08 56 05.5	-0.7
PRNI				Sg	Sg	08 56 19.0	+2.9
HRFI	Mount Harif	1.07	184	Pg	Pg	08 56 11.1	-1.1
HRFI				Sg	Sg	08 56 27.8	+1.7
HRFI	Mount Harif	1.07	184	Pg	Pg	08 56 11.1	-1.1
HRFI				Sg	Sg	08 56 27.7	+1.6
HMDT	Nahal Hemdat	1.19	17	Pg	Pg	08 56 13.9	-0.6
MBH	Mount Berech	1.32	188	Pn	Pn	08 56 15.6	-1.0
MBH				Sn	Sn	08 56 35.0	+0.4
MMLI	Mount Malkishu	1.35	11	Pn	Pn	08 56 16.4	-0.5
MMLI				Sn	Sn	08 56 36.0	+0.8
AQBJ	Aqaba	1.38	182	Pn	Pn	08 56 16.6	-0.8
EIL	Elat	1.44	186	Pn	Pn	08 56 16.7	-1.5
EIL				Sn	Sn	08 56 37.3	-0.2
OFRI	'Ofer	1.51	356	Pn	Pn	08 56 19.3	+0.2
MMA2	Mount Meron ar	1.91	7	Pn	Pn	08 56 25.8	+1.1
HBST	Basata	1.92	190	P	Pn	08 56 24.5	-0.2
HBST				S	Sn	08 56 51.8	+2.6
SUZ		2.34	238	P	Pn	08 56 29.9	-0.7
HDHB	Dhahab	2.42	190	P	Pn	08 56 31.7	0.0
HDHB	Dhahab	2.42	190	P	Pn	08 56 31.7	+0.1
	2μm,0.5s						
HKAT	Jabal Katrina	2.76	201	P	Pn	08 56 36.0	-0.3

*ISCJB **03** 09:00:57.3±0.5, 4152N±002×2295E±004, h6km±10km, Error ellipse: s-maj=4.4km s-min=4.2km az=141.6*
*SKO **03** 09:00:57.1, 4152N×2296E, h15km, M1.8, ML1.9*
*CSEM **03** 09:00:57.4±0.2, 4156N×2293E, h2km, ML2.5, Error ellipse: s-maj=2.5km s-min=2.0km az=11.0*
*THE **03** 09:00:58.0, 4151N×2295E, h1km, ML2.5*
ISC 03 09:00:57.8±0.6**, 4152N**±003×**2294E**±004**, h13**km±9km**, n16,** σ0^s**51**/32**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.34	235	*e*Pg	Pg	09 01 04.5	-0.1
VAY				*e*Sg	Sg	09 01 09.7	+0.3
VAY	Valandovo	0.34	235	*i* Pg	Pg	09 01 04.4	-0.3
VAY				*e*Lg		09 01 09.4	
	comp=N,130nm,0.2s						
VAY				*e*Sg	Sg	09 01 09.4	+0.1
VAY				*e*Lg		09 01 09.7	
	comp=E,136nm,0.2s						
VAY	Valandovo	0.34	235	*e*Pg	Pg	09 01 04.5	-0.2
VAY				*e*Sg	Sg	09 01 09.6	+0.3
KNT	Kendrikon	0.36	185	*e*Pg	Pg	09 01 04.9	-0.1
KNT				*e*Sg	Sg	09 01 09.5	-0.4
STIP	Stip	0.59	287	*e*Pg	Pg	09 01 09.6	+0.2
STIP				*e*Sg	Sg	09 01 17.8	+0.6
STIP	Stip	0.59	287	*i* Pg	Pg	09 01 09.2	-0.1
STIP				*e*Sg	Sg	09 01 16.6	-0.5
STIP				*e*Lg		09 01 17.9	
	comp=N,28nm,0.3s						
STIP				*e*Lg		09 01 18.0	
	comp=E,30nm,0.2s						
STIP	Stip	0.59	287	*i* Pg	Pg	09 01 09.2	-0.1
STIP				*e*Sg	Sg	09 01 17.8	+0.6
STIP				*e*Lg		09 01 17.9	
	comp=E,28nm,0.3s						
MMB	Musomiste	0.60	83	*e*Pg	Pg	09 01 09.2	-0.2
MMB				*e*Sg	Sg	09 01 17.5	+0.2
SRS	Serrai	0.63	129	*e*Pg	Pg	09 01 09.6	-0.5
SRS				*e*Sg	Sg	09 01 18.5	0.0
GRG	Griva	0.69	216	*e*Pg	Pg	09 01 11.2	-0.1
GRG				*e*Sg	Sg	09 01 20.5	+0.1
SOH	Sokhos	0.76	156	*e*Pg	Pg	09 01 12.1	-0.4
SOH				*e*Sg	Sg	09 01 22.3	-0.3
HORT	Hortiatis	0.93	172	*e*Pg	Pg	09 01 15.6	-0.1
HORT				*e*Sg	Sg	09 01 28.6	+0.7
HORT	Hortiatis	0.93	172	*e*Pg	Pg	09 01 15.6	-0.1
HORT				*e*Sg	Sg	09 01 28.5	+0.7
VTS	Vitosha	1.09	10	*e*Pg	Pg	09 01 18.1	-0.7
VTS				*e*Sg	Sg	09 01 33.9	+0.9
OUR	Ouranopolis	1.42	146	*e*Pg	Pg	09 01 24.7	-0.4
OUR				*e*Sg	Sg	09 01 44.8	+1.2
PAIG	Paliouri	1.69	160	*e*Pb	Pb	09 01 27.9	-0.8
PAIG				*e*Sb	Sb	09 01 50.4	+0.6

*NDI **03** 09:24:28.8±1.8, 3496N×7278E, h10km, ML3.7, mb3.6(NEIC)*
*IDC **03** 09:24:31.2±0.8, 3458N×73.19E, h0km, mb4.0/7, mb1 4.1/10, mb1mx3.8/24, mbtmp3.9/10, ML3.9/3, Error ellipse: s-maj=26.1km s-min=19.8km az=73.0*
*ISCJB **03** 09:24:35.1±0.7, 3473N±004×7321E±006, h38km±9km, mb4.0/7, Error ellipse: s-maj=9.2km s-min=5.5km az=134.5*
*NEIC **03** 09:24:35.6±5.8, 3462N×73.14E, h28km±40km, mb3.6/1, Error ellipse: s-maj=16.8km s-min=12.3km az=196.0*
ISC 03 09:24:36.8±0.6**, 3469N**±003×**7314E**±007**, h36**km±8km**, n30,** σ0^s**95**/36**, mb4.0**/7**, 3C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.03	174	P	Pn	09 24 53.0	-1.8
CEP	Cherat	1.33	230	P	Pn	09 24 59.7	+0.8
CEP				S	Sn	09 25 21.0	+5.6
THW	Thamme Wali	2.22	212	⇑P	Pn	09 25 12.6	+1.5
SARP	Sargodha	2.79	188	P	Pn	09 25 19.5	+0.6
DLH	Dalhousie	3.19	131	*e*P	Pn	09 25 25.0	+0.6
DLH				*e*x	x	09 26 11.0	
PONG	Pong	3.60	138	*e*P	Pn	09 25 29.0	-1.1
PONG				*e*x	x	09 26 28.0	
SDNR	Sundarnagar	4.52	134	*e*P	Pn	09 25 42.0	-0.8
SDNR				*e*x	x	09 26 48.0	
SMLA	Simla	4.91	135	*e*P	Pn	09 25 48.8	+0.7
SMLA				*e*S	Sn	09 26 45.8	+2.1
	479nm,0.3s						
KLP	Kalpa	5.32	125	*e*P	Pn	09 25 54.1	+0.4
KLP				*e*S	Sn	09 26 55.6	+1.8
KLP				AML	AML	09 27 22.2	
	comp=E,256nm,0.6s						
KLP				AML	AML	09 27 25.1	
	comp=N,292nm,0.5s						
KHET	Khetri	6.98	160	*e*S	Sn	09 27 33.4	-1.2
KHET				AML	AML	09 27 52.7	
	comp=N,7.8nm,0.5s						
KHET				AML	AML	09 27 53.8	
	comp=E,12nm,0.4s						
AYAN	Aya Nagar	7.06	150	*e*S	Sn	09 27 36.3	-0.3
SONA	Sohna	7.25	151	*e*P	Pn	09 26 19.2	-1.0
SONA				*e*S	Sn	09 27 39.4	-1.9
SONA				AML	AML	09 27 41.2	
	comp=N,61nm,0.3s						
SONA				AML	AML	09 27 43.7	
	comp=E,53nm,0.4s						
TKM2	Tokmak 2	8.44	12	⇓P	Pn	09 26 40.8	+4.2
	comp=E,0.3nm,0.8s						
TKM2				⇑S	Sn	09 28 09.9	-0.6
	comp=E,0.6nm,0.6s						
KK31	Karatay Array	8.65	347	P	Pn	09 26 41.0	+1.6
	comp=E,2.2nm,0.3s,baz=233,slow=33,SNR=47						
KK31				⇑S	Sn	09 28 15.0	-0.6
	comp=E,1.8nm,0.3s,baz=164,slow=21						
MKAR	Makanchi Array	13.93	27	Pn	Pn	09 27 52.3	+0.7
	comp=E,0.1nm,0.3s,baz=209,slow=14,SNR=3.4						
BVAR	Borovoye Array	18.43	355	P	Pn	09 28 48.7	-0.7
	comp=E,0.7nm,0.3s,baz=155,slow=8.4,SNR=8.9						
ZRNK	Zerenda	18.49	352	*e*P	Pn	09 28 50.0	-0.1
	comp=E,2.0nm,0.5s						
AKTK	Aktyubinsk	19.22	330	P	Pn	09 28 57.8	-1.0
AKTO	Aktyubinsk	19.22	330	P	Pn	09 28 57.8	-1.0
	comp=E,0.7nm,0.3s,baz=133,slow=10,SNR=12						
ZAL	Zalesovo	20.92	20	P	P	09 29 15.9	-0.3
	comp=E,2.1nm,0.3s,baz=248,slow=7.5,SNR=3.6						
JOF	Joensuu	38.30	330	*e*p	P	09 31 54.3	+0.5
	comp=E,2.2nm,0.4s,mb4.2						
ARCES	ARCESS Array B	43.48	338	P	P	09 32 37.2	+0.8
	comp=E,1.1nm,0.5s,mb3.9,baz=112,slow=8.8,SNR=11						
ARCES	ARCESS Array B	43.48	338	P	P	09 32 37.2	+0.8
TOA0	Torodi Ar. Sit	67.45	271	*e*P	P	09 35 29.1	+0.3
TORD	Torodi Ar. Bea	67.45	271	P	P	09 35 29.2	+0.4
	comp=E,1.0nm,0.4s,mb4.2,baz=46,slow=5.9,SNR=29						
AMKA	Amchitka	72.68	39	*e*P	P	09 36 01.2	+0.3
AMKA				*e*pP	pP	09 36 09.7	-2.3
BOSA	Boshof	77.52	222	P	P	09 36 28.9	+0.1
	comp=E,6.1nm,1.2s,mb4.4,baz=69,slow=8.6,SNR=5.3						
WRA	Warramunga Arr	79.55	123	P	P	09 36 39.5	-0.4
	comp=E,0.8nm,0.6s,mb3.9,baz=323,slow=5.1,SNR=26						
ASAR	Alice Springs	81.79	126	P	P	09 36 52.0	+0.2
	comp=E,0.8nm,0.7s,mb3.8,baz=310,slow=5.2,SNR=14						
YKA	Yellowknife Ar	82.96	4	P	P	09 36 57.6	-0.4
	comp=E,0.3nm,0.4s,mb3.6,baz=346,slow=5.7,SNR=5.6						

*SZGRF **03** 09:51:41.1, 3640N×72.10E, h33km, mb4.5, Afghanistan-Tajikistan border region*
*MOS **03** 09:51:45.7±1.3, 3623N×7137E, h92km, mb4.6/17, Error ellipse: s-maj=8.3km s-min=4.8km az=100.2*
*BJI **03** 09:51:48.7, 3609N×7145E, h134km, mB4.9, mb4.6*
*IDC **03** 09:51:48.4±1.0, 36.17N×7126E, h111km±8km, mb3.9/14, mb1 4.1/18, mb1mx4.0/25, mbtmp4.4/18, MS3.5/5, Ms1 3.5/5, ms1mx3.0/33, Error ellipse: s-maj=16.1km s-min=13.5km az=15.0*
*NEIC **03** 09:51:48.9±0.3, 3626N×7151E, mb4.5/19, Error ellipse: s-maj=8.6km s-min=5.3km az=222.0*
*ISCJB **03** 09:51:48.4±0.4, 3627N±002×7154E±004, h123km±5km, mb4.3/38, Error ellipse: s-maj=5.4km s-min=3.2km az=135.5*
*NNC **03** 09:51:58.5±3.9, 3703N×7089E, h173km±31km, mb3.6, mpv4.2, Error ellipse: s-maj=31.3km s-min=27.6km az=35.0*
ISC 03 09:51:49.2±0.4**, 3625N**±002×**7145E**±004**, h116**km±4km**, h112**km±1.9km**:pP-P, n169,** σ1^s**29**/206**, mb4.3**/38**, 16C-19D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.45	171	P	Pn	09 52 30.5	+2.3
CHCP	Chirah Chowk	2.98	150	P	Pn	09 52 38.1	+3.0
CHCP				S	Sn	09 53 15.0	+4.5
SARP	Sargodha	4.43	166	P	Pn	09 52 54.9	+0.4
KSH	Kashi	4.84	46	⇓P	Pn	09 53 04.6	+4.7
KSH				S	Sn	09 53 54.3	-0.6
KSH				Smax			
	comp=N,381nm,0.7s						
KSH				Smax			
	comp=E,442nm,0.7s						
DLH	Dalhousie	5.25	133	*e*P	Pn	09 53 07.0	+1.5
DLH				*e*x	x	09 54 09.0	
PONG	Pong	5.68	138	*e*P	Pn	09 53 15.0	+3.7

PONG eS Sn 09 54 16.0 +0.8
AML Almayashu 6.13 16 P Pn 09 53 18.0 +0.7
SNR=70
BHK Bhakra 6.35 138 ex x 09 53 26.0
BHK ex x 09 54 38.0
UCH Uchtor 6.42 21 P Pn 09 53 22.4 +1.1
SNR=55
KZA Kyzart 6.52 26 P Pn 09 53 23.7 +1.0
SNR=26
SDNR Sundarnagar 6.59 134 eP Pn 09 53 25.0 +1.4
SDNR eS Sn 09 54 34.8 -2.5
EKS2 Erkin-Say 6.65 15 P Pn 09 53 24.9 +0.5
SNR=74
AAK Ala-Archa 6.79 19 P Pn 09 53 27.6 +1.2
SNR=47
AAK Ala-Archa 6.79 19 ⇓P Pn 09 53 26.4 +0.1
SNR=25
AAK Ala-Archa 6.79 19 ePN Pn 09 53 26.3 0.0
AAK pmax pmax
comp=Z,109nm,0.4s
AAK Ala-Archa 6.79 19 ePn Pn 09 53 26.3 0.0
comp=Z,109nm,0.4s
AAK eSn Sn 09 54 42.5 +0.3
KK31 Karatay Array 6.88 354 ⇑P Pn 09 53 26.0 -1.5
comp=Z,38nm,0.4s,baz=160,slow=12,SNR=6.8
KK31 ⇓S Sn 09 54 37.2 -7.2
comp=Z,745nm,0.8s
KK31 Karatay Array 6.88 354 *i* PN Pn 09 53 26.0 -1.5
KK31 pmax pmax
comp=Z,44nm,0.2s
KKAR Karatay Array 6.88 354 PN Pn 09 53 26.0 -1.5
KKAR pmax pmax
comp=Z,9.0nm,0.2s
KBK Karagaybulak 6.95 22 P Pn 09 53 29.8 +1.5
SNR=7.3
SMLA Simla 6.98 135 eP Pn 09 53 30.0 +1.1
SMLA eS Sn 09 54 44.2 -2.6
SMLA AML AML 09 54 49.1
comp=N,588nm,0.6s
SMLA AML AML 09 54 51.7
comp=E,494nm,0.6s
FRU Bishkek 7.01 19 ePN Pn 09 53 29.8 +0.5
FRU pmax pmax
comp=Z,50nm,1.6s
ULHL Ulahol 7.05 30 P Pn 09 53 31.1 +1.4
SNR=8.8
CHMS Chumysh 7.20 20 P Pn 09 53 32.5 +0.6
SNR=55
KLP Kalpa 7.35 128 eP Pn 09 53 34.5 +0.6
KLP eS Sn 09 54 50.5 -5.2
KLP AML AML 09 55 01.3
comp=E,749nm,0.7s
KLP AML AML 09 55 05.2
comp=N,878nm,0.8s
TKM2 Tokmak 2 7.39 24 P Pn 09 53 35.3 +0.9
SNR=49
TKM2 Tokmak 2 7.39 24 ⇑P Pn 09 53 35.3 +0.9
comp=N,2.0nm,0.5s
TKM2 ⇑S Sn 09 54 57.0 +0.4
comp=N,19nm,0.8s
TKM2 Tokmak 2 7.39 24 *i* PN Pn 09 53 35.2 +0.8
TKM2 pmax pmax
comp=Z,28nm,0.4s
USP Ospenovka 7.39 18 P Pn 09 53 34.4 0.0
SNR=23
KHET Khetri 8.95 154 eP Pn 09 53 55.0 -0.5
KHET eS Sn 09 55 28.5 -5.9
KHET AML AML 09 55 31.7
comp=E,134nm,0.4s
KHET AML AML 09 55 33.9
comp=N,148nm,0.6s
NDI New Delhi 8.98 146 eP Pn 09 53 55.5 -0.5
NDI eS Sn 09 55 30.2 -4.9
AYAN Aya Nagar 9.11 147 eP Pn 09 53 56.6 -1.0
AYAN eS Sn 09 55 31.6 -6.7
AYAN AML AML 09 55 33.6
comp=Z,84nm,0.5s
JASL Jaisalmer 9.31 183 ex x 09 53 53.0
JASL eS Sn 09 55 36.3 -6.9
JASL AML AML 09 55 42.3
comp=Z,161nm,0.2s
LGTI Lohaghat 10.03 130 eP Pn 09 54 07.3 -2.8
LGTI ex x 09 55 57.0
AJM Ajmer 10.11 163 *i* P Pn 09 54 09.0 -2.3
AJM eS Sn 09 55 55.2 -7.5
AJM *i* S Sn 09 55 58.0 -4.7
VAN Vannovskaya 10.79 283 P Pn 09 54 14.9 -5.5
MK05 Makanchi Array 13.29 34 ⇑P Pn 09 54 52.9 -0.3
comp=Z,9.5nm,0.6s
MK31 Makanchi Array 13.29 34 P Pn 09 54 52.8 -0.4
MK31 pmax pmax
comp=Z,5.0nm,0.6s
MKAR Makanchi Array 13.29 34 P Pn 09 54 53.0 -0.2
comp=Z,0.5nm,0.3s,baz=218,slow=12,SNR=18
MKAR Makanchi Array 13.29 34 P Pn 09 54 53.0 -0.2
KOLN Koldanda 13.32 126 eP Pn 09 54 52.5 -1.2
KOLN eS Sn 09 54 55.0 -5.4
GKN Gorkha 13.86 123 eP Pn 09 54 59.8 -0.8
comp=Z,90nm,0.5s
GKN eS Sn 09 57 26.8 -6.6
BHPL Bhopal 13.96 157 ex x 09 55 00.4
BHPL ex x 09 57 20.1
DMN Daman 14.43 123 eP Pn 09 55 06.8 -1.1
comp=Z,57nm,0.6s
DMN eS Sn 09 57 40.7 -6.5
KKN Kakani 14.44 122 eP Pn 09 55 07.2 -0.8
KKN eS Sn 09 57 40.9 -6.4
WMQ Urumqi 14.54 54 eP Pn 09 55 07.0 -2.4
WMQ S Sn 09 57 52.0 +2.1
WMQ AMB AMB
comp=Z,12nm,1.0s
WMQ LR LR
comp=N,65nm,4.0s
WMQ LR LR
comp=E,106nm,5.0s
WMQ LR LR
comp=Z,59nm,4.0s
PKI Pulchoki 14.66 122 eP Pn 09 55 10.2 -0.6
comp=Z,42nm,0.4s
PKI eS Sn 09 57 46.6 -6.1
PKI Pulchoki 14.66 122 eP Pn 09 55 10.2 -0.6
PKI eS Sn 09 57 46.6 -6.1
PKI pmax pmax
comp=Z,42nm,0.4s
GUN Gumba 14.78 120 eP Pn 09 55 12.2 -0.1
comp=Z,64nm,0.5s
GUN eS Sn 09 57 48.2 -7.3
JBP Jabalpur 14.99 148 ⇑*i*P Pn 09 55 18.0 +3.1
JBP *i* x x 09 57 50.6
JIRN Jiri 15.15 120 eP Pn 09 55 16.7 -0.2
comp=Z,77nm,0.5s
JIRN eS S 09 57 57.8 -15
KURK Kurchatov 15.36 17 ⇑P Pn 09 55 21.7 +2.1
comp=Z,9.6nm,0.9s
KURK ⇑S S 09 57 60.0 -18
comp=Z,11nm,1.4s
KURK Kurchatov 15.36 17 ⇓P Pn 09 55 22.0 +2.4
SNR=6.7
KURK Kurchatov 15.36 17 eP Pn 09 55 18.8 -0.7
KURK Kurchatov 15.36 17 ePn Pn 09 55 17.9 -1.7
comp=Z,2.2nm,0.6s
KURK *e* 09 55 21.9
KURK eSn Sn 09 58 15.8 +6.4
AB31 Akbulak array 15.48 331 ⇑P Pn 09 55 17.4 -3.7
comp=Z,7.9nm,0.3s,baz=141,slow=12,SNR=414
AB31 ⇓S S 09 57 53.6 -27
comp=Z,49nm,0.6s,baz=154,slow=23,SNR=14
AB31 Akbulak array 15.48 331 eP Pn 09 55 17.4 -3.7
AB31 pmax pmax
comp=Z,3.0nm,0.4s
AKL Akola 16.24 161 eP Pn 09 55 31.9 +1.4
NGP Nagpur 16.44 154 eP Pn 09 55 35.3 +2.3
VOSK Vostochnaya 16.48 359 ⇓P Pn 09 55 30.3 -3.1
comp=Z,20nm,1.1s
VOSK ⇓S S 09 58 22.2 -15
comp=Z,16nm,0.9s
ZRNK Zerenda 16.79 355 ⇓P Pn 09 55 34.8 -2.4
comp=Z,26nm,0.9s
ZRNK ⇑S S 09 58 32.7 -12
comp=Z,17nm,1.1s
ZRNK Zerenda 16.79 355 eP Pn 09 55 34.5 -2.7
ZRNK eS S 09 58 35.5 -9.0
ZRNK pmax pmax
comp=Z,17nm,0.6s
ZRNK Zerenda 16.79 355 ePn Pn 09 55 34.5 -2.7
comp=Z,17nm,0.6s
ZRNK eS S 09 58 35.5 -8.9
BVA0 Borovoye Array 16.79 358 ⇑P Pn 09 55 35.2 -2.0
comp=Z,3.2nm,0.9s,baz=190,slow=20,SNR=121
BVA0 ⇑S S 09 58 31.8 -13
comp=Z,2.3nm,0.8s,baz=170,slow=25,SNR=8.1
BVA0 Borovoye Array 16.79 358 *i* P Pn 09 55 35.2 -2.1
BVA0 pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 16.79 358 P Pn 09 55 35.7 -1.5
comp=Z,2.5nm,0.3s,baz=166,slow=12,SNR=24
BVAR S S 09 58 33.2 -11
comp=Z,1.4nm,0.3s,baz=170,slow=23,SNR=5.9
BVAR LR LR 10 02 19.2
comp=Z,66nm,20.8s,baz=141,slow=37
BVAR Borovoye Array 16.79 358 P Pn 09 55 35.7 -1.6
BVAR S S 09 58 33.2 -11
BRVK Borovoye 16.83 358 ⇑P Pn 09 55 36.3 -1.4
SNR=18
BRVK Borovoye 16.83 358 eP Pn 09 55 37.2 -0.5
BRVK eS S 09 58 36.6 -8.8
BRVK pmax pmax
comp=Z,18nm,0.8s
BRVK Borovoye 16.83 358 ePn Pn 09 55 37.2 -0.5
comp=Z,18nm,0.8s
BRVK *e*S S 09 58 36.6 -8.8
WSAR Wadi Sarin 17.07 224 P Pn 09 55 39.8 -0.8
comp=Z,0.5nm,0.3s,baz=62,slow=11,SNR=6.8
AKTK Aktyubinsk 17.18 330 P Pn 09 55 40.1 -1.9
AKTK S S 09 58 37.0 -16
AKTO Aktyubinsk 17.18 330 ⇓P Pn 09 55 39.4 -2.6
comp=Z,1.3nm,0.7s
AKTO ⇓S S 09 58 34.7 -19
comp=Z,0.5nm,0.7s
AKTO Aktyubinsk 17.18 330 P Pn 09 55 40.1 -1.9
comp=Z,4.6nm,0.3s,baz=136,slow=11,SNR=100
AKTO S S 09 58 37.0 -16
comp=Z,3.2nm,0.3s,baz=0.6,slow=24,SNR=7.4
CHKZ Chkalovo 17.44 358 ⇑P Pn 09 55 43.2 -1.9
comp=Z,7.8nm,0.5s
CHKZ ⇑S S 09 58 47.5 -12
comp=Z,22nm,1.1s
CHKZ Chkalovo 17.44 358 eP Pn 09 55 43.1 -2.0
CHKZ *e* 09 58 45.9
CHKZ pmax pmax
comp=Z,10.0nm,0.5s
CHKZ Chkalovo 17.44 358 ePn Pn 09 55 43.0 -2.0
comp=Z,10nm,0.5s
CHKZ eSn Sn 09 58 45.9 -14
BOK Bokaro 17.59 131 ex x 09 58 54.8
POO Poona 17.78 173 ex x 09 55 49.0
HYB Hyderabad 19.79 160 *i* P P 09 56 14.5 +4.3
HYB eS S 09 59 49.0 +2.2
HYB Hyderabad 19.79 160 eP P 09 56 14.5 +4.3
HYB eS S 09 59 55.0 +8.2
ZAL Zalesovo 19.98 24 P P 09 56 13.0 +0.7
comp=Z,15nm,0.4s,baz=253,slow=6.0,SNR=16
NVS Novosibirsk 20.29 20 eP P 09 56 15.1 -0.6
NVS *e* 09 56 37.5
NVS pmax pmax
comp=Z,20nm,0.9s
NVS pmax pmax
comp=N,14nm,0.8s
NVS pmax pmax
comp=E,6.0nm,0.6s
DGRG David-gareji 20.93 292 P P 09 56 23.4 +0.8
GNI Garni 21.32 289 P P 09 56 27.8 +1.1
comp=E,20nm,0.5s,mb4.7,baz=144,slow=19,SNR=16
GNI Garni 21.32 289 ⇑P P 09 56 28.5 +1.8
SNR=13
GNI Garni 21.32 289 P P 09 56 27.8 +1.1
GNI *eP* 09 56 28.6
GNI *e* 09 56 48.9
MTA Mtatsminda 21.39 293 P P 09 56 28.6 +1.1
TBLG Delisi 21.43 293 eP P 09 56 28.7 +0.8
TBLG Delisi 21.43 293 P P 09 56 28.7 +0.8
ZEI Tsey 22.18 296 eP P 09 56 37.8 +2.0
ZEI *i* 09 57 14.7
ZEI pmax pmax
comp=Z,10.0nm,0.3s,mb4.6
ONI Oni 22.48 295 P P 09 56 40.2 +1.2
GTA Gaotai 22.58 73 eP P 09 56 43.9 +3.8
GTA AMB AMB
comp=Z,6.0nm,1.1s,mb3.8
KIV Kislovodsk 23.23 298 eP P 09 56 46.0 0.0
KIV pmax pmax
comp=Z,18nm,1.0s,mb4.4
SOKR Solikamsk 25.20 342 eP P 09 57 05.4 +1.5
SOKR pmax pmax
comp=Z,30nm,0.7s,mb4.8
ZAK Zakamensk 26.88 48 eP P 09 57 20.6 +1.5
ZAK *e* 09 57 50.3
ZAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
CD2 Chengdu 27.36 92 eP P 09 57 20.0 -3.3
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.4
VRSR Storozhevoye 27.43 313 eP P 09 57 23.8 -0.1
VRSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
VRSR pmax pmax
comp=N,9.0nm,0.7s
VRSR pmax pmax
comp=E,20nm,1.0s
SONM Songino Array 28.18 55 P P 09 57 33.1 +2.5
comp=E,0.9nm,0.6s,mb3.5,baz=254,slow=9.8,SNR=5.8
ULN Ulaanbaatar 28.62 55 eP P 09 57 35.9 +1.4
KMI Kunming 28.98 104 P P 09 57 37.0 -0.8
KMI AMB AMB
comp=Z,6.0nm,0.8s,mb4.3
KMI LR LR
comp=Z,40nm,20.5s
BRTR Keskin Array B 29.86 288 P P 09 57 45.9 +0.3
comp=Z,1.2nm,0.8s,mb3.6,baz=93,slow=7.2,SNR=7.8
BRTR Keskin Array B 29.86 288 *i* P P 09 57 46.5 +1.0
BRTR pmax pmax
comp=Z,10.0nm,0.8s
MOS Moscow 30.08 321 eP P 09 57 58.7 +11
MOS *e* pP 09 58 21.2 +8.3
MOS *e* 09 59 10.9
OBN Obninsk 30.36 319 ⇓eP P 09 57 48.8 -1.2
OBN *e**PP pP 09 58 13.6 -1.8
OBN *e* 09 58 55.4
OBN eS S 10 02 34.2 -7.7
OBN pmax pmax
comp=Z,13nm,1.0s,mb4.5
HHC Hu-ho-hao-te 31.51 69 eP P 09 58 00.5 +0.5
HHC PP PP 09 59 05.0 -8.3
HHC PCP PcP 10 00 52.1 +1.9
HHC PCS PcS 10 04 35.8 +1.1
HHC SS SS 10 04 56.7 -23
HHC AMB AMB
comp=Z,117nm,4.8s
HHC LR LR
comp=N,124nm,12.4s
HHC LR LR
comp=E,163nm,13.3s
HHC LR LR
comp=Z,114nm,15.8s
KLMR Klimovskoe 31.88 331 eP P 09 58 01.7 -1.6
KLMR pmax pmax
comp=Z,20nm,2.1s,mb4.5
AKASG Malin Array Be 33.39 309 P P 09 58 15.3 -1.2
comp=Z,5.4nm,0.6s,mb4.6,baz=81,slow=7.4,SNR=20
AKASG PP PP 09 59 29.8 -4.4
comp=Z,3.7nm,0.8s,baz=91,slow=11,SNR=7.9
AKASG Malin Array Be 33.39 309 P P 09 58 15.3 -1.2
AKASG PP PP 09 59 29.8 -4.4
AKBB Malin Array Si 33.39 309 eP P 09 58 15.7 -0.7
MLR Muntele Rosu 35.22 300 ⇓*i*P P 09 58 35.2 +2.9
MLR Muntele Rosu 35.22 300 ⇓P P 09 58 35.1 +2.9
BOD Bodaibo 35.31 39 eP P 09 58 32.7 -0.4
BOD pmax pmax
comp=Z,3.0nm,1.4s,mb3.9
BURAR Bucovina Array 35.73 303 ⇓*i*P P 09 58 36.7 +0.1
BURAR Bucovina Array 35.73 303 ⇓P P 09 58 36.7 +0.1
JOF Joensuu 36.27 330 ep P 09 58 40.4 -0.8
comp=Z,9.5nm,0.5s,mb5.0
JOF Joensuu 36.27 330 eP P 09 58 40.4 -0.8
JOF pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
APE Apeiranthos 36.57 285 ⇑*i*P P 09 58 51.6 +7.8
LVV L'vov 36.60 307 eP P 09 58 45.1 +1.1
DRGR 37.44 302 ⇓*i*P P 09 58 51.9 +0.8
DRGR 37.44 302 ⇓P P 09 58 51.9 +0.8
FINES FINESS Array B 37.90 326 P P 09 58 53.7 -1.2
comp=Z,6.7nm,0.7s,mb4.6,baz=111,slow=10,SNR=22
FINES pP pP 09 59 19.4 -1.6
comp=Z,4.2nm,0.6s,baz=126,slow=9.7,SNR=4.2
FINES FINESS Array B 37.90 326 *i* P P 09 58 54.5 -0.5
FINES pmax pmax
comp=Z,7.0nm,0.7s
FINES FINESS Array B 37.90 326 P P 09 58 53.7 -1.2
FINES pP pP 09 59 19.4 -1.7
KAF Kangasniemi 38.03 327 ep P 09 58 55.9 -0.2
comp=Z,2.8nm,0.5s,mb4.3,baz=112,slow=8.3
KAF Kangasniemi 38.03 327 eP P 09 58 55.9 -0.2
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
NJ2 Nanjing 39.15 82 eP P 09 59 06.1 +0.7
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
NJ2 AMB AMB
comp=Z,270nm,4.2s
NJ2 LR LR
comp=N,1μm,14.3s
NJ2 LR LR
comp=E,1μm,14.4s
NJ2 LR LR
comp=Z,230nm,13.2s
MORC Moravsky Berou 40.81 307 ⇓*i*P P 09 59 20.5 +1.4
MORC Moravsky Berou 40.81 307 ⇓P P 09 59 20.4 +1.3
KEV Kevo 41.17 338 ep P 09 59 21.2 -0.9
comp=Z,1.9nm,0.5s,mb4.2
KEV Kevo 41.17 338 eP P 09 59 21.2 -0.9
KEV pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
SSE Sheshan 41.34 82 eP P 09 59 24.9 +1.4
SSE AMB AMB
comp=Z,21nm,0.8s,mb5.0
SSE AMB AMB
comp=Z,146nm,4.6s
ARCES ARCESS Array B 41.52 338 P P 09 59 24.8 -0.1
comp=Z,5.9nm,0.7s,mb4.4,baz=112,slow=8.5,SNR=35
ARCES LR LR 10 17 39.9
comp=Z,71nm,18.5s,baz=53,slow=37
ARE0 ARCESS Array S 41.52 338 eP P 09 59 24.7 -0.3
BRG Berggiesshubel 43.07 308 eP P 09 59 38.7 +1.2
comp=Z,3.4nm,1.0s,mb4.0
BRG *e* 10 01 23.5
comp=Z,2.4nm,1.0s
BRG Berggiesshubel 43.07 308 eP P 09 59 38.7 +1.2
BRG *e* 10 01 23.5
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
GERES GERESS Array B 43.37 306 P P 09 59 39.8 -0.2
comp=Z,0.8nm,0.7s,mb3.6,baz=123,slow=6.6,SNR=6.6
GERES PP PP 10 01 20.9 -2.1
comp=Z,0.8nm,0.8s,baz=80,slow=9.6,SNR=5.1
CLL Collm 43.63 309 P P 09 59 42.8 +0.8
comp=Z,logA/T=0.9,mb4.4
CLL Collm 43.63 309 *i* P P 09 59 42.8 +0.8
comp=Z,6.0nm,0.7s,mb4.4
CLL Collm 43.63 309 *i* P P 09 59 42.8 +0.8
CLL pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
YAK Yakutsk 43.96 35 eP P 09 59 42.4 -2.2
YAK pmax pmax
comp=Z,12nm,0.7s,mb4.7
MDJ Mudanjiang 44.21 60 P P 09 59 46.2 -0.4
MDJ PP PP 10 01 29.6 -2.3
MDJ PCS PcS 10 05 23.3 +0.7
MDJ AMB AMB
comp=Z,5.0nm,0.6s,mb4.4
MDJ AMB AMB
comp=Z,61nm,4.6s
MDJ LR LR
comp=N,25nm,21.1s
MDJ LR LR
comp=E,6.0nm,12.8s
MDJ LR LR
comp=Z,22nm,17.3s
NB2 NORSAR Subarra 44.80 323 P P 09 59 50.0 -1.3
comp=Z,8.9nm,0.6s,mb4.7,baz=95,slow=7.9
NOA NORSAR Array B 44.80 323 P P 09 59 50.3 -1.0
comp=Z,8.1nm,0.6s,mb4.7,baz=96,slow=7.8,SNR=32
NOA pP pP 10 00 15.7 -2.4
comp=Z,4.7nm,0.8s,baz=96,slow=8.0,SNR=2.8
NOA LR LR 10 21 47.0
comp=Z,21nm,19.2s,baz=240,slow=40
NOA NORSAR Array B 44.80 323 P P 09 59 50.3 -1.0
NOA *PP pP 10 00 15.7 -2.4
GRA1 Grafenberg Arr 44.90 307 eP P 09 59 54.4 +2.2
comp=Z,5.0nm,0.7s,mb4.3
GRF Grafenberg Arr 44.90 307 eP P 09 59 54.4 +2.2
comp=Z,5.0nm,0.7s,mb4.3
GRF Grafenberg Arr 44.90 307 eP P 09 59 54.4 +2.2
GRF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
GRF Grafenberg Arr 44.90 307 eP P 09 59 54.4 +2.2
GRF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
MJAR Matsushiro Arr 52.71 68 P P 10 00 54.6 +2.8
comp=Z,1.4nm,0.6s,mb4.2,baz=292,slow=11,SNR=5.4
SUMG Summit 61.42 341 eP P 10 01 54.0 +0.9
comp=Z,9.8nm,0.8s,mb4.9
TOA0 Torodi Ar. Sit 66.08 269 eP P 10 02 21.3 -2.4
TORD Torodi Ar. Bea 66.08 269 P P 10 02 21.1 -2.6
comp=Z,3.6nm,0.7s,mb4.3,baz=45,slow=5.0,SNR=17
IMA2 Indian Mountai 72.25 18 eP P 10 03 01.9 +0.1
IMA2 epP pP 10 03 30.7 -0.1
INK Inuvik 74.09 9 eP P 10 03 12.7 +0.1
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 74.09 9 eP P 10 03 12.7 +0.1
comp=Z,6.9nm,0.9s,mb4.4
COLA College 74.62 16 eP P 10 03 16.1 +0.5
COLA pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
COLA College 74.62 16 eP P 10 03 16.1 +0.5
comp=Z,5.4nm,0.8s,mb4.3
DAWY Dawson 77.08 13 eP P 10 03 29.8 +0.2
DAWY *e* 10 03 34.2
BOSA Boshof 77.79 220 P P 10 03 33.7 +0.2
comp=Z,4.5nm,0.9s,mb4.2,baz=111,slow=7.6,SNR=5.7
BOSA Boshof 77.79 220 P P 10 03 33.7 +0.2
YKA Yellowknife Ar 81.48 3 P P 10 03 53.4 -0.1
comp=Z,1.4nm,0.6s,mb4.0,baz=351,slow=5.4,SNR=14
YKA pP pP 10 04 22.1 -1.0
comp=Z,1.5nm,0.8s,baz=350,slow=5.0,SNR=2.8
YKA LR LR 10 47 47.7
comp=Z,23nm,19.3s,baz=270,slow=41
YKA Yellowknife Ar 81.48 3 P P 10 03 53.4 -0.1
YKA *PP pP 10 04 22.2 -0.9
YKA Yellowknife Ar 81.48 3 P P 10 03 53.4 -0.1
YKA pP pP 10 04 22.1 -1.0
YKA LR LR 10 47 47.6
WRA Warramunga Arr 81.55 122 P P 10 03 53.3 -0.6
comp=Z,0.4nm,0.4s,mb3.6,baz=325,slow=4.9,SNR=23
WRA LR LR 10 48 28.6
comp=Z,107nm,20.6s,baz=310,slow=42
WB2 Warramunga Arr 81.56 122 eP P 10 03 54.8 +0.9
ASAR Alice Springs 83.81 125 P P 10 04 05.4 -0.2
comp=Z,0.8nm,0.7s,mb3.6,baz=315,slow=4.9,SNR=8.3
EDM Edmonton 90.80 3 eP P 10 04 39.6 +0.3
PLCA Paso Flores 150.08 250 PKPbc PKPbc 10 11 26.9 +0.7
comp=Z,2.4nm,1.0s,baz=90,slow=5.1,SNR=3.7

MAN 03 09:51:57.1,1183N×12236E,h103km,mb2.4,ML4.0, MS2.9,1C-1D,Panay

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KALP	**Kalibo**	**0.15**	**190**	⇓*e*P	P	n	09 52 12.6	+1.0
RCP	**Roxas**	**0.46**	**125**	⇑eP	P	n	09 52 14.2	+1.3
RCP				eS	S	n	09 52 28.0	+3.3
OTRP	**Odiongan**	**0.63**	**328**	eP	P	n	09 52 16.2	+2.0
OTRP				eS	S	n	09 52 29.2	+2.2
GUIM	**Jordan**	**1.21**	**169**	eP	P	n	09 52 20.3	+0.2
GUIM				eS	S	n	09 52 38.6	+1.1
CUYO	**Cuyo Island**	**1.64**	**234**	eP	P	n	09 52 21.8	-3.5
BUSP	**Coron**	**2.13**	**275**	eP	P	n	09 52 32.3	+0.8

*ISCJB **03** 10:20:41.4±0.5,2754S×1003×6888W×006,h89km±6km, mb4.2/11,Error ellipse: s-maj=9.2km s-min=4.5km az=4.8*
*IDC **03** 10:20:42.4±3.4,2755S×6888W,h83km±28km,mb3.9/7, mb1 4.0/9,mb1mx3.9/18,mbtmp4.2/9,MS2.9/1,Ms1 2.9/1, ms1mx2.1/21,Error ellipse: s-maj=26.9km s-min=20.7km*

az=57.0
*NEIC **03** 10:20:42.7±0.5, 2749S×6885W, h86km±5km, mb4.3/5, Error ellipse: s-maj=8.8km s-min=6.2km az=111.0*
*GUC **03** 10:20:44.8±1.2, 2755S×6938W, h127km±19km, ML4.6*
ISC 03 10:20:42.9±0.5**, 2754S**±003×**6892W**±006**, h86**km±6km**, n43, σ1s03**/48**, mb4.2**/11**, 8C-2D, Chile-Argentina border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CPCH Copiapo 1.29 278⇑ *i*P **Pn 10 21 06.7 +1.0**
CPCH *i* S **Sn 10 21 23.2 +0.3**
CPCH AML AML 10 21 24.9
comp=E,45µm,0.1s
CPCH Copiapo 1.29 278⇑ *i*P **Pn 10 21 06.7 +1.0**
CPCH *i* S **Sn 10 21 23.2 +0.3**
CDCH Caldera 1.76 285⇑ *i*P **Pn 10 21 11.6 -0.2**
CDCH *i* S **Sn 10 21 31.9 -1.9**
LCO Las Campanas 2.15 227⇑ *i*P **Pn 10 21 18.4 +1.5**
LCO *i* S **Sn 10 21 42.8 -0.1**
TLL Tololo Astrono 3.10 212⇑ *i*P **Pn 10 21 30.9 +1.3**
TLL *i* S **Sn 10 22 06.8 +1.1**
TLL AML AML 10 22 15.0
comp=N,953nm,1.1s
TLL Tololo Astrono 3.10 212⇑ *i*P **Pn 10 21 30.9 +1.3**
TLL S **Sn 10 22 06.8 +1.1**
LSCH La Serena 3.12 220⇑ *i*P **Pn 10 21 29.9 -0.1**
LSCH *i* S **Sn 10 22 04.1 -2.2**
CPN1 Cerro Paranal 3.19 335⇓ *i*P **Pn 10 21 32.3 +1.4**
CPN1 *i* S **Sn 10 22 08.3 +0.4**
CPN1 AML AML 10 22 16.1
comp=E,881nm,0.5s
CMCH Combarbala 4.05 206⇓ *i*P **Pn 10 21 42.2 -0.4**
CMCH *i* S **Sn 10 22 27.6 -1.3**
CFAA Coronel Fontan 4.10 172 P **Pn 10 21 45.8 +2.6**
comp=E,1.6nm,0.3s,baz=351,slow=13,SNR=56
CFAA S **Sn 10 22 30.2 +0.3**
comp=E,1.0nm,0.3s,baz=323,slow=14,SNR=3.8
CFAA Coronel Fontan 4.10 172 P **Pn 10 21 45.8 +2.6**
CFAA S **Sn 10 22 30.2 +0.2**
CEN1 Los Morros 4.29 344 *e*P **Pn 10 21 43.8 -2.0**
CEN1 *i* S **Sn 10 22 29.6 -5.0**
CHNG Los Chungos 4.88 207 *e*P **Pn 10 21 53.0 -0.7**
LVC Limon Verde 4.90 0 P **Pn 10 21 55.4 +1.2**
comp=E,28nm,0.3s,baz=181,slow=8.6,SNR=232
LVC S **Sn 10 22 50.3 +0.7**
comp=E,28nm,0.3s,baz=152,slow=19,SNR=8.7
LVC Limon Verde 4.90 0⇑ *e*Pn **Pn 10 21 55.3 +1.2**
FCH Farellones 5.89 191 *e*P **Pn 10 22 08.9 +1.3**
CLCH Cerro Calan 6.00 193 *e*P **Pn 10 22 07.7 -1.4**
CPUP Villa Florida 10.41 86 *e*Pn **Pn 10 23 08.2 -1.1**
comp=E,23nm,0.5s
LPAZ La Paz 11.22 4 P **Pn 10 23 19.6 -0.5**
comp=E,0.6nm,0.3s,baz=194,slow=9.1,SNR=13
LPAZ La Paz 11.22 4 *e*Pn **Pn 10 23 20.0 -0.2**
PLCA Paso Flores 13.23 185 LR LR 10 28 21.2
comp=E,48nm,18.6s,baz=354,slow=35
SIV San Ignacio 13.60 34 P **Pn 10 23 48.2 -3.8**
comp=E,0.9nm,0.3s,baz=238,slow=11,SNR=19
SAML Samuel 19.27 17 *e*P **Pn 10 25 01.0 -1.4**
comp=E,8.6nm,1.0s
BDFB Brasilia 22.72 63 P **P 10 25 36.4 -1.1**
comp=E,10nm,0.9s,mb4.2,baz=242,slow=8.9,SNR=12
SNAA Sanae 56.62 160 P **P 10 30 16.5 -0.4**
comp=E,0.5nm,0.5s,mb3.8,baz=274,slow=7.1,SNR=11
QSPA South Pole Qui 62.68 180 *e*P **P 10 30 58.6 +0.2**
comp=E,4.6nm,0.9s,mb4.4
SWET Sewanee 64.45 345 *e*P **P 10 31 09.0 -1.1**
DBIC Dimbokro 70.57 71 P **P 10 31 48.9 +0.2**
comp=E,7.8nm,1.1s,mb4.5,baz=219,slow=8.6,SNR=5.0
SRU San Rafael 76.84 328 *e*P **P 10 32 26.0 +0.6**
comp=E,8.9nm,1.5s,mb4.3
HWUT Hardware Ranch 79.30 329 *e*P **P 10 32 39.2 +0.3**
comp=E,48nm,1.2s,mb5.2
PDAR Pinedale Array 79.33 331 P **P 10 32 39.2 +0.1**
comp=E,1.3nm,0.9s,mb3.8,baz=118,slow=3.9,SNR=6.0
TORD Torodi Ar. Bea 79.44 69 P **P 10 32 40.0 +0.2**
comp=E,3.2nm,0.7s,mb4.3,baz=272,slow=5.7,SNR=39
NVAR Mina Array Bea 80.25 323 P **P 10 32 44.0 0.0**
comp=E,0.8nm,0.8s,mb3.6,baz=151,slow=6.7,SNR=5.0
BOSA Boshof 80.66 117 P **P 10 32 46.6 +0.3**
comp=E,3.9nm,1.1s,mb4.2,baz=82,slow=11,SNR=3.4
HLID Hailey 82.14 328 *e*P **P 10 32 54.8 +0.7**
comp=E,1.3nm,0.5s,mb4.0
MCMT McKenzie Canyo 82.42 330 *e*P **P 10 32 56.2 +0.7**
ASAR Alice Springs 124.53 206 PKP PKPdf 10 39 31.5 -0.6
comp=E,1.3nm,0.5s,baz=148,slow=1.6,SNR=14
WRA Warramunga Arr 127.70 208 PKP PKPdf 10 39 38.0 -0.2
comp=E,2.4nm,0.6s,baz=157,slow=1.8,SNR=49
FITZ Fitzroy Crossi 132.49 199 PKP PKPdf 10 39 48.1 +0.8
comp=E,0.4nm,0.7s,baz=170,slow=6.1,SNR=5.2
ZAL Zalesovo 147.31 29 PKPbc PKPbc 10 40 16.4 0.0
comp=E,4.0nm,0.4s,baz=148,slow=2.6,SNR=12
ZAL Zalesovo 147.31 29 PKPbc PKPbc 10 40 16.4 0.0
MKAR Makanchi Array 150.32 42 PKPbc PKPbc 10 40 23.6 -0.5
comp=E,5.1nm,0.6s,baz=303,slow=2.2,SNR=32
SONM Songino Array 159.41 9 PKP PKPdf 10 40 31.0 -0.3
comp=E,0.3nm,0.5s,baz=158,slow=1.7,SNR=3.8

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*KRSC **03** 10:22:43, 6068N×16585E, h4km, ML4.0*
*IDC **03** 10:22:45.9±1.1, 6082N×16543E, h0km, mb3.9/8, mb1 4.2/8, mb1mx3.9/23, mbtmp3.9/8, MS3.5/10, Ms1 3.5/10, ms1mx3.2/39, Error ellipse: s-maj=40.4km s-min=17.9km az=164.0*
*ISCJB **03** 10:22:45.6±0.3, 6072N±004×16546E±009, h10km, mb4.1/20, MS3.5/10, Error ellipse: s-maj=6.8km s-min=4.2km az=72.2*
*BJI **03** 10:22:45.5, 5995N×16559E, h12km, mB4.7, mb4.4, Ms4.0, Msz3.6*
*MOS **03** 10:22:45.5±1.0, 6078N×16543E, h10km, mb4.4/6, Error ellipse: s-maj=19.4km s-min=8.8km az=78.6*
*NEIC **03** 10:22:47.3±0.4, 6072N×16540E, h10km, mb4.2/9, Error ellipse: s-maj=12.8km s-min=6.0km az=169.0*
ISC 03 10:22:47.2±0.3**, 6074N**±004×**16551E**±008**, h10**km**, n63, σ1s02**/67**, mb4.1**/20**, MS3.5**/10**, 2C, Eastern Siberia**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SMKR Semkarok 4.67 209 *e*P **Pn 10 23 58.4 +0.6**
SRKR Sorokina 4.68 211 *e*P **Pn 10 23 57.4 -0.5**
BDR Baidarnaya 4.75 210 *e*P **Pn 10 23 59.4 +0.5**
KBTR Krutoberegovo 4.76 198 P **Pn 10 23 58.5 -0.5**
KBTR S **Sn 10 24 53.5 -0.7**
KBTR Krutoberegovo 4.76 198 *e*P **Pn 10 23 58.5 -0.5**
KBTR *i* S **Sn 10 24 53.5 -0.7**
KRSR Krestovskiy 5.22 212 *e*P **Pn 10 24 06.5 +1.1**
ZLN Zelenaya 5.34 210 *e*P **Pn 10 24 06.3 -0.7**
SRDR Sredinnyy 5.37 217 *e*P **Pn 10 24 07.8 +0.3**
KMNR Kamenistaya 5.72 211 *e*P **Pn 10 24 12.4 +0.2**
MKZ Mys Kozlova 6.52 200 P **Pn 10 24 23.1 -0.1**
MKZ S **Sn 10 25 36.1 -1.6**
MKZ Mys Kozlova 6.52 200 *e*P **Pn 10 24 23.1 -0.1**
MKZ *i* S **Sn 10 25 36.1 -1.6**
BILL Bilibino 7.34 2 *e*PN **Pn 10 24 35.1 +0.7**
BILL pmax pmax
comp=Z,13nm,0.5s
BILL Bilibino 7.34 2 *e*Pn **Pn 10 24 35.1 +0.7**
comp=Z,13nm,0.5s
BILL *e*S **Sg 10 26 37.1 -5.6**
MA2 Magadan 7.45 267 *e*PN **Pn 10 24 36.2 +0.2**
MA2 pmax pmax
comp=Z,20nm,0.6s
MA2 MLR MLR
comp=Z,600nm,9.4s
MA2 Magadan 7.45 267 *e*Pn **Pn 10 24 35.5 -0.4**
MA2 *e*Sn **Sn 10 26 01.8 +1.2**
GNL Ganaly 8.16 213 *e*P **Pn 10 24 47.6 +1.8**
SPN Mys Shipunski 8.23 204 P **Pn 10 24 46.5 -0.1**
SPN S **Sn 10 26 16.2 -3.4**
SPN Mys Shipunski 8.23 204 *e*P **Pn 10 24 46.5 -0.1**
SPN *i* S **Sn 10 26 16.2 -3.4**
PET Petropavlovsk 8.59 209 *e*PN **Pn 10 24 54.5 +2.8**
PET *e*S **Sn 10 26 35.6 +7.0**
PET pmax pmax
comp=Z,68nm,0.4s
PET MLR MLR
comp=Z,800nm,17.0s
PET MLR MLR
comp=Z,700nm,17.0s
YAK Yakutsk 17.08 290 *e*P **Pn 10 26 48.4 +2.3**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=E,10.0nm,1.7s
YAK MLR MLR
comp=Z,151nm,12.0s
YAK MLR MLR
comp=N,87nm,10.0s
YAK MLR MLR
comp=E,165nm,15.0s
TTA Tatalina 18.11 66 *e*P **Pn 10 27 01.0 +2.1**
TTA pmax pmax
comp=Z,14nm,1.4s
TTA Tatalina 18.11 66 *e*P **Pn 10 27 01.0 +2.2**
comp=Z,14nm,1.4s
IMA2 Indian Mountai 18.75 56 *e*P **Pn 10 27 07.5 +0.8**
YSS Yuzh-Sakhalins 19.11 234 *e*P **Pn 10 27 11.3 +0.2**
YSS pmax pmax
comp=Z,7.0nm,1.3s
COLA College 21.31 59 *e*P **P 10 27 33.8 -0.3**
COLA College 21.31 59 *e*P **P 10 27 34.8 +0.7**
comp=Z,4.0nm,0.8s,mb3.8
DAWY Dawson 25.06 58 *e*P **P 10 28 11.9 +0.2**
BOD Bodaibo 25.92 287⇑ *i*P **P 10 28 19.0 -0.5**
BOD pmax pmax
comp=Z,5.0nm,1.2s,mb3.9
INK Inuvik 26.21 47 P **P 10 28 23.1 +1.0**
comp=Z,3.7nm,0.8s,mb3.9,baz=284,slow=12,SNR=7.9
INK Inuvik 26.21 47 *e*P **P 10 28 22.1 0.0**
INK pmax pmax
comp=Z,5.0nm,1.0s
INK Inuvik 26.21 47 *e*P **P 10 28 22.1 0.0**
comp=Z,5.2nm,1.0s,mb4.0
VLA Vladivostok 26.78 244 *e*P **P 10 28 29.0 +1.7**
VLA S **S 10 33 04.0 +0.9**
VLA pmax pmax
comp=Z,21nm,1.4s,mb4.5
MJAR Matsushiro Arr 29.78 228 P **P 10 28 54.9 +0.8**
comp=Z,0.8nm,0.7s,mb3.6,baz=9.0,slow=8.7,SNR=4.9
MJAR LR LR 10 42 36.8
comp=Z,116nm,18.6s,MS3.5,baz=0.0,slow=40
ULN Ulaanbaatar 35.22 276 *e*P **P 10 29 41.4 -0.2**
SONM Songino Array 35.56 276 P **P 10 29 44.3 -0.3**
comp=Z,0.4nm,0.3s,mb3.8,baz=57,slow=7.8,SNR=7.8
SONM LR LR 10 44 12.0
comp=Z,99nm,19.0s,MS3.6,baz=256,slow=36
YKA Yellowknife Ar 35.76 51 P **P 10 29 45.2 -1.0**
comp=Z,0.7nm,0.6s,mb3.8,baz=305,slow=8.1,SNR=5.8
YKA Yellowknife Ar 35.76 51 P **P 10 29 45.2 -1.0**
ZAL Zalesovo 41.47 298 LR LR 10 50 08.8
comp=Z,180nm,18.6s,MS4.0,baz=39,slow=40
SSE Sheshan 41.49 245 *e*P **P 10 30 32.3 -2.1**
SSE AMB AMB
comp=Z,28nm,0.6s,mb5.1
SSE AMB AMB
comp=Z,289nm,4.3s
GTA Gaotai 44.98 273 P **P 10 31 02.9 +0.3**
GTA AP pP 10 31 08.7 +3.0
GTA XP sP 10 31 11.9 +4.9
GTA AMB AMB
comp=Z,4.0nm,0.6s,mb4.4
KURK Kurchatov 46.43 299 *e*P **P 10 31 13.6 -0.5**
KURK Kurchatov 46.43 299 *e*P **P 10 31 13.3 -0.7**
comp=Z,4.0nm,0.8s,mb4.4
CHKZ Chkalovo 47.54 307 *e*P **P 10 31 22.4 -0.3**
CHKZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
CHKZ Chkalovo 47.54 307 *e*P **P 10 31 22.4 -0.4**
comp=Z,2.9nm,0.9s,mb4.3
MKAR Makanchi Array 47.73 293 P **P 10 31 22.6 -1.7**
comp=Z,0.5nm,0.6s,mb3.7,baz=37,slow=6.2,SNR=4.6
MKAR Makanchi Array 47.73 293 *i* P **P 10 31 24.2 0.0**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 48.12 306 LR LR 10 54 09.2
comp=Z,72nm,18.3s,MS3.7,baz=27,slow=39
BRVK Borovoye 48.13 306 *e*P **P 10 31 26.5 -0.9**
JMIC Jan Mayen 48.49 357 LR LR 10 50 55.8
comp=Z,23nm,19.5s,MS3.2,baz=239,slow=35
ZRNK Zerenda 48.72 307 *e*P **P 10 31 30.9 -1.0**
ZRNK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
ZRNK Zerenda 48.72 307 *e*P **P 10 31 30.9 -0.9**
comp=Z,1.9nm,0.8s,mb4.2
HLID Hailey 48.72 72 *e*P **P 10 31 31.8 -0.1**
comp=Z,0.7nm,0.6s,mb3.9
NVAR Mina Array Bea 50.85 80 P **P 10 31 47.6 -0.6**
comp=Z,0.5nm,0.6s,mb3.6,baz=305,slow=7.2,SNR=5.7
NVAR LR LR 10 51 24.5
comp=Z,7.1nm,20.2s,MS2.7,baz=300,slow=34
BW06 Boulder Array 51.59 69 *e*P **P 10 31 53.6 0.0**
comp=Z,2.9nm,1.0s,mb4.2
PDAR Pinedale Array 51.59 69 P **P 10 31 53.6 0.0**
comp=Z,1.8nm,0.8s,mb4.0,baz=323,slow=3.6,SNR=16
AKTO Aktyubinsk 54.89 312 LR LR 10 57 27.3
comp=Z,37nm,19.0s,MS3.5,baz=207,slow=38
NOA NORSAR Array B 56.95 345 P **P 10 32 31.6 -1.1**
comp=Z,1.4nm,0.7s,mb4.1,baz=14,slow=7.3,SNR=3.3
NOA LR LR 11 01 01.8
comp=Z,24nm,18.0s,MS3.3,baz=295,slow=40
OBN Obninsk 57.62 328⇑ *e*P **P 10 32 35.3 -2.2**
OBN *e* 10 34 41.3
OBN *e*S **S 10 40 34.3 -1.3**
OBN pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
WMOK Wichita Mounta 63.01 67 *e*P **P 10 33 14.7 +0.4**
WMOK pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
WMOK Wichita Mounta 63.01 67 *e*P **P 10 33 14.7 +0.4**
comp=Z,2.3nm,0.9s,mb4.3
VRAC Vranov 67.47 339 LR LR 11 05 35.9
comp=Z,42nm,18.6s,MS3.7,baz=113,slow=38
HNR Honiara 70.08 186 LR LR 10 59 48.4
comp=Z,74nm,20.7s,MS3.9,baz=359,slow=32
QSPA South Pole Qui 150.51 180 *e*PKPbc PKPbc 10 42 36.6 -2.5

IDC 03 10:23:35.9±1.3**, 5364S**×**14042E, h0**km**, mb4.0**/5**, mb1 4.3**/5**, mb1mx4.1**/12**, mbtmp4.1**/5**, MS3.8**/5**, Ms1 3.8**/5**, ms1mx3.3**/22**, Error ellipse: s-maj=115.5km s-min=19.5km az=86.0, West of Macquarie Island**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 21.77 3 *e*P P 10 28 30.0 +0.9
3.8nm,0.8s
STKA Stephens Creek 21.77 3 P P 10 28 29.9 +0.8
4.4nm,0.7s,baz=170,slow=13,SNR=8.2
RPZ Rata Peaks 22.37 76 LR LR 10 35 28.9
comp=Z,378nm,18.3s,baz=11,slow=32
VNDA Vanda 25.21 169 P P 10 29 02.8 -0.5
4.0nm,0.8s,baz=339,slow=11,SNR=5.0
URZ Urewera 29.39 73 LR LR 10 40 10.5
comp=Z,120nm,18.1s,baz=92,slow=34
ASAR Alice Springs 30.33 348 P P 10 29 49.3 +0.2
1.9nm,0.7s,baz=165,slow=9.5,SNR=17
CTA Charters Tower 33.79 10 LR LR 10 42 42.4
comp=Z,91nm,20.9s,baz=22,slow=34
WRA Warramunga Arr 33.96 350 P P 10 30 20.0 -0.9
3.1nm,0.7s,baz=174,slow=7.7,SNR=13
MAW Mawson 37.70 218 LR LR 10 45 08.0
comp=Z,166nm,19.3s,baz=59,slow=34
SNAA Sanae 52.33 194 P P 10 32 48.8 -0.6
0.4nm,0.5s,baz=167,slow=3.9,SNR=4.7
BOSA Boshof 80.78 234 LR LR 11 04 39.3
comp=Z,84nm,21.7s,baz=0.3,slow=30

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*IDC **03** 10:23:30.4±0.6, 923S×10881E, h0km, mb4.4/11, mb1 4.4/12, mb1mx4.4/19, mbtmp4.3/12, ML3.7/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/22, Error ellipse: s-maj=29.4km s-min=14.5km az=51.0*
*BJI **03** 10:23:30.8, 930S×10870E, h10km, mB5.2, mb4.8, Ms4.7, Msz4.7*
*NEIC **03** 10:23:31.9±0.3, 931S×10875E, h10km, mb4.9/19, Error ellipse: s-maj=13.6km s-min=4.6km az=45.0*
*ISCJB **03** 10:23:32.2±0.4, 936S±009×10874E±0.10, h24km, mb4.7/46, MS4.0/4, Error ellipse: s-maj=17.2km s-min=6.4km az=97.0*
*MOS **03** 10:23:52.0±1.2, 828S×10889E, h152km, mb4.6/15, Error ellipse: s-maj=26.9km s-min=10.1km az=101.0*
ISC 03 10:23:35.8±0.4**, 943S**±009×**10869E**±010**, h38**km**, h38**km±1.4km**: pP-P, n87, σ0s91**/71**, mb4.7**/46**, MS4.0**/4**, 3C, South of Jawa**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MBWA Marble Bar 15.78 139 *e*Pn **Pn 10 27 10.8 -4.3**
4.8nm,0.7s
FITZ Fitzroy Crossi 18.57 119 *e*P **Pn 10 27 50.0 +0.1**
12nm,0.9s
FITZ Fitzroy Crossi 18.57 119 P **Pn 10 27 49.5 -0.4**
0.2nm,0.3s,baz=280,slow=7.0,SNR=18
KAKA Kakadu 23.53 100 *e*P **P 10 28 41.9 -0.7**
14nm,0.8s,mb4.4
NWAO Narrogin (SRO) 24.68 163 LR LR 10 38 29.6
comp=Z,164nm,18.8s,MS3.5,baz=84,slow=36
WRA Warramunga Arr 26.88 116 P **P 10 29 12.9 -0.1**
6.6nm,0.7s,mb4.3,baz=288,slow=11,SNR=28
WRAB Tennant Creek 26.89 116 *e*P **P 10 29 13.3 +0.3**
15nm,0.8s,mb4.6
WRAB *e* pP 10 29 24.5 +0.8
WB2 Warramunga Arr 26.89 116 *e*P **P 10 29 13.4 +0.3**
ASAR Alice Springs 27.94 124 P **P 10 29 22.6 +0.1**
1.6nm,0.9s,mb3.7,baz=302,slow=9.5,SNR=21
ASAR PcP PcP 10 32 38.2 +1.1
2.0nm,0.8s,baz=308,slow=2.0,SNR=15
AS31 Alice Springs 27.94 124 *e*P **P 10 29 22.3 -0.2**
KMI Kunming 34.83 351 P **P 10 30 24.5 +1.5**
KMI AP pP 10 30 27.4 -6.4
KMI XP sP 10 30 28.6 -10
KMI PP PP 10 31 44.0 +1.6
KMI PPP 10 32 02.8
KMI S **S 10 35 58.2 +7.0**
KMI XS sS 10 36 03.1 -6.1
KMI AMB AMB
comp=Z,9.0nm,0.6s,mb4.9
KMI LR LR
comp=N,549nm,4.7s
KMI LR LR
comp=E,939nm,4.9s
KMI LR LR
comp=Z,460nm,4.8s
CTA Charters Tower 37.75 111 P **P 10 30 49.4 +1.5**
comp=Z,3.6nm,0.6s,mb4.2,baz=277,slow=10,SNR=6.3
CTA Charters Tower 37.75 111 P **P 10 30 49.4 +1.5**
CTAO Charters Tower 37.75 111 *e*P **P 10 30 49.6 +1.7**
comp=Z,6.0nm,0.8s,mb4.4
CTAO *e* pP 10 31 01.4 +2.6
STKA Stephens Creek 37.79 131 *e*P **P 10 30 48.9 +0.7**
comp=Z,10nm,0.6s,mb4.7
STKA *e*pP pP 10 31 00.1 +1.0
STKA Stephens Creek 37.79 131 P **P 10 30 48.1 -0.1**
comp=Z,12nm,0.7s,mb4.7,baz=302,slow=8.5,SNR=22
CD2 Chengdu 40.39 353 *e*P **P 10 31 11.4 +1.4**
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
SSE Sheshan 42.04 16 *e*P **P 10 31 19.6 -4.0**
SSE AMB AMB
comp=Z,27nm,0.7s,mb5.0
SSE AMB AMB
comp=Z,175nm,4.2s
NJ2 Nanjing 42.38 13 *e*P **P 10 31 27.4 +1.1**
NJ2 AP pP 10 31 31.9 -5.4
NJ2 XP sP 10 31 34.4 -7.5
NJ2 PP PP 10 33 09.0 +4.1
NJ2 S **S 10 37 49.0 +4.0**
NJ2 XS sS 10 37 56.0 -7.2
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
NJ2 AMB AMB
comp=Z,270nm,3.9s
NJ2 LR LR
comp=N,180nm,25.3s,MS4.0
NJ2 LR LR
comp=E,190nm,24.4s,MS4.0
NJ2 LR LR
comp=Z,2µm,24.2s,MS4.8
JIRN Jiri 42.83 330 *e*P **P 10 31 30.5 +0.5**
comp=Z,56nm,0.9s,mb5.3
PKI Pulchoki 43.15 329 *e*P **P 10 31 33.1 +0.6**
GUN Gumba 43.19 330 *e*P **P 10 31 33.1 +0.2**
comp=Z,47nm,0.9s,mb5.2
DMN Daman 43.33 329 *e*P **P 10 31 34.3 +0.3**
comp=Z,49nm,0.9s,mb5.2
KKN Kakani 43.39 329 *e*P **P 10 31 34.5 0.0**
comp=Z,41nm,0.9s,mb5.1
KKN Kakani 43.39 329 *e*P **P 10 31 34.5 0.0**
KKN pmax pmax
comp=Z,41nm,0.9s,mb5.2
GKN Gorkha 43.89 329 *e*P **P 10 31 38.7 +0.2**
comp=Z,40nm,0.9s,mb5.2
KOLN Koldanda 44.25 327 *e*P **P 10 31 41.5 +0.1**
comp=Z,58nm,0.8s,mb5.4
LZH Lanzhou 45.50 354 *e*P **P 10 31 52.5 +1.1**
LZH AP pP 10 32 02.5 0.0
LZH AMB AMB
comp=Z,24nm,1.3s,mb5.0
GTA Gaotai 49.29 351 *e*P **P 10 32 22.2 +1.4**
GTA AP pP 10 32 32.4 +0.4
GTA AMB AMB
comp=Z,7.0nm,1.1s,mb4.6
BJT Baijiatuau 49.68 8 *e*P **P 10 32 23.3 -0.5**
BJT pmax pmax
comp=Z,21nm,1.0s
BJT Baijiatuau 49.68 8 *e*P **P 10 32 23.3 -0.5**
comp=Z,21nm,1.0s,mb5.1
BJT *e* pP 10 32 34.9 -0.2
BJI Beijing 49.71 8 *e*P **P 10 32 23.5 -0.5**
BJI AMB AMB
comp=Z,18nm,1.0s,mb5.1
HHC Hu-ho-hao-te 50.10 3 *e*P **P 10 32 30.1 +3.1**
HHC AP pP 10 32 34.6 -3.6
HHC XP sP 10 32 37.1 -5.6
HHC PCP PcP 10 33 48.7 +2.5
HHC PP PP 10 34 26.4 +4.1
HHC SCP ScP 10 37 42.7 +3.8
HHC PCS PcS 10 37 44.3 +1.1
HHC S **S 10 39 41.6 +5.9**
HHC XS sS 10 39 49.2 -5.0
HHC PS 10 39 51.5
HHC SCS ScS 10 42 17.6 +2.5
HHC AMB AMB
comp=Z,12nm,0.8s,mb5.0
HHC AMB AMB
comp=Z,157nm,4.4s
HHC LR LR
comp=N,235nm,13.3s,MS4.5
HHC LR LR
comp=E,207nm,12.5s,MS4.5
HHC LR LR
comp=Z,107nm,17.1s,MS3.9
MJAR Matsushiro Arr 53.49 30 P **P 10 32 49.0 -3.3**
comp=Z,3.4nm,0.9s,mb4.3,baz=206,slow=7.4,SNR=7.0
WMQ Urumqi 56.33 342 *e*P **P 10 33 14.0 +1.2**
WMQ XP sP 10 33 21.0 -7.6
WMQ PP PP 10 35 21.0 +2.6
WMQ S **S 10 41 03.0 +2.7**
WMQ SCS ScS 10 42 59.0 +0.1
WMQ SS SS 10 44 50.0 +2.5
WMQ AMB AMB
comp=Z,15nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,135nm,5.0s
WMQ LR LR
comp=N,65nm,15.0s,MS4.0
WMQ LR LR
comp=E,74nm,15.0s,MS4.0
WMQ LR LR
comp=Z,77nm,15.0s,MS3.9
MDJ Mudanjiang 57.02 18 P **P 10 33 19.1 +1.4**
MDJ AMB AMB
comp=Z,3.0nm,0.7s,mb4.4
MDJ AMB AMB
comp=Z,66nm,5.2s
SONM Songino Array 57.05 358 P **P 10 33 17.7 -0.2**
comp=Z,3.0nm,0.5s,mb4.6,baz=177,slow=8.8,SNR=30
ULN Ulaanbaatar 57.06 359 *e*P **P 10 33 18.2 +0.2**
ULN pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
ULN Ulaanbaatar 57.06 359 *e*P **P 10 33 18.2 +0.2**
comp=Z,4.0nm,0.4s,mb4.8
ULN *e* pP 10 33 28.7 -0.7
ZAK Zakamensk 59.75 356 *e*P **P 10 33 36.2 -0.5**
ZAK pmax pmax
comp=Z,20nm,1.2s,mb5.0
TKM2 Tokmak 2 60.22 332 *i* P **P 10 33 39.6 -0.3**
TKM2 pmax pmax
comp=Z,11nm,0.7s,mb5.0
AAK Ala-Archa 60.50 332 *e*P **P 10 33 41.2 -0.7**

AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.4						
MK31	**Makanchi Array**	**60.73**	**340**	P	**P**	**10 33 42.9**	**-0.5**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
MKAR	**Makanchi Array**	**60.73**	**340**	P	**P**	**10 33 43.1**	**-0.3**
	comp=Z,6.9nm,0.6s,mb4.9,baz=144,slow=7.1,SNR=56						
KLR	**Kul'dur**	**61.83**	**17**	eP	**P**	**10 33 46.7**	**-4.2**
YSS	**Yuzh-Sakhalins**	**63.81**	**25**	P	**P**	**10 34 02.5**	**-1.6**
KURK	**Kurchatov**	**65.34**	**339**	eP	**P**	**10 34 13.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
KURK	**Kurchatov**	**65.34**	**339**	eP	**P**	**10 34 13.6**	**-0.4**
	comp=Z,11nm,0.8s,mb4.9						
ZAL	**Zalesovo**	**66.29**	**345**	P	**P**	**10 34 19.7**	**-0.5**
	comp=Z,2.5nm,0.7s,mb4.4,baz=337,slow=2.2						
ZAL	**Zalesovo**	**66.29**	**345**	P	**P**	**10 34 19.7**	**-0.5**
BOD	**Bodaibo**	**67.16**	**3**	eP	**P**	**10 34 23.9**	**-1.8**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
BOD				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.4						
BVA0	**Borovoye Array**	**70.25**	**337**	i P	**P**	**10 34 44.4**	**-0.5**
BRVK	**Borovoye**	**70.31**	**337**	eP	**P**	**10 34 44.8**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**70.31**	**337**	eP	**P**	**10 34 44.8**	**-0.5**
	comp=Z,5.0nm,0.8s,mb4.5						
BRVK				e	pP	10 34 55.5	-1.5
CHKZ	**Chkalovo**	**70.66**	**337**	eP	**P**	**10 34 47.1**	**-0.3**
	comp=Z,13nm,0.7s,mb5.0						
CHKZ				e	pP	10 34 58.3	-0.8
ZRNK	**Zerenda**	**70.74**	**336**	eP	**P**	**10 34 47.4**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
ZRNK	**Zerenda**	**70.74**	**336**	eP	**P**	**10 34 47.4**	**-0.6**
	comp=Z,8.9nm,0.7s,mb4.8						
ZRNK				e	pP	10 34 58.2	-1.4
AB31	**Akbulak array**	**72.34**	**329**	i P	**P**	**10 34 57.1**	**-0.5**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
YAK	**Yakutsk**	**73.10**	**10**	eP	**P**	**10 35 01.1**	**-1.0**
YAK				e	pP	10 35 12.1	-1.7
YAK				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
QSPA	**South Pole Qui**	**80.57**	**180**	eP	**P**	**10 35 44.5**	**+0.3**
	comp=E,4.1nm,0.8s,mb4.4						
TIXI	**Tiksi**	**82.01**	**6**	⇑eP	**P**	**10 35 50.4**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
BR131	**Keskin Array S**	**84.68**	**312**	eP	**P**	**10 36 06.1**	**+0.6**
	comp=Z,2.6nm,0.6s,mb4.5						
BR131				e	pP	10 36 17.3	-0.2
BRTR	**Keskin Array B**	**84.68**	**312**	P	**P**	**10 36 06.2**	**+0.6**
	comp=Z,5.7nm,1.0s,mb4.7,baz=134,slow=7.0,SNR=19						
BRTR	**Keskin Array B**	**84.68**	**312**	i P	**P**	**10 36 06.5**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	**Obninsk**	**87.66**	**327**	ceP	**P**	**10 36 19.5**	**-0.7**
OBN				e		10 39 45.4	
OBN				eS	S	10 46 52.4	-6.9
OBN				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
SNAA	**Sanae**	**87.71**	**197**	P	**P**	**10 36 21.6**	**+1.1**
	comp=Z,0.7nm,0.9s,mb3.9,baz=126,slow=7.8,SNR=5.6						
KLMR	**Klimovskoe**	**88.29**	**333**	eP	**P**	**10 36 22.4**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.2						
AKASG	**Malin Array Be**	**90.63**	**321**	P	**P**	**10 36 33.3**	**-0.9**
	comp=Z,0.2nm,0.2s,mb4.0,baz=84,slow=4.9,SNR=6.3						
YKA	**Yellowknife Ar**	**118.53**	**21**	PKP	PKPdf	10 42 18.2	-1.2
	comp=Z,0.4nm,0.6s,baz=336,slow=1.9,SNR=5.1						
YKA	**Yellowknife Ar**	**118.53**	**21**	PKP	PKPdf	10 42 18.2	-1.2
NVAR	**Mina Array Bea**	**129.00**	**48**	PKP	PKPdf	10 42 41.4	+1.9
	comp=Z,0.4nm,0.7s,baz=244,slow=3.1,SNR=3.7						
ANMO	**Albuquerque**	**139.07**	**46**	⇑iPKIKP	PKPdf	10 43 02.2	+3.9
WMOK	**Wichita Mounta**	**144.42**	**41**	ePKIKP	PKPdf	10 43 07.3	-0.6
NCB	**Newcomb**	**145.50**	**4**	ePKPdf	PKPdf	10 43 10.4	+0.7
BDFB	**Brasilia**	**146.04**	**223**	PKPbc	PKPbc	10 43 13.5	+2.0
	comp=Z,1.1nm,0.4s,baz=117,slow=9.0,SNR=3.2						
JCT	**Junction City**	**146.18**	**48**	ePKIKP	PKPdf	10 43 12.5	+1.6
CCM	**Cathedral Cave**	**146.32**	**29**	ePKP2	PKPab	10 43 12.4	-0.8
BINY	**Binghamton**	**147.10**	**6**	ePKPbc	PKPbc	10 43 15.2	+0.6
MIAR	**Mount Ida**	**147.74**	**36**	ePKP2	PKPab	10 43 17.4	-1.3
SSPA	**Standing Stone**	**148.38**	**10**	ePKPbc	PKPbc	10 43 18.8	+0.7
WVT	**Waverly**	**149.47**	**27**	ePKP2	PKPab	10 43 21.5	-4.2
PLAL	**Pickwick Lake**	**150.30**	**29**	ePKPbc	PKPbc	10 43 23.3	+0.5
ELN	**Prospectdale**	**151.04**	**16**	ePKPbc	PKPbc	10 43 25.0	+0.5
SWET	**Sewanee**	**151.07**	**25**	ePKPbc	PKPbc	10 43 25.0	+0.3
MYNC	**Murphy**	**151.91**	**23**	ePKIKP	PKPbc	10 43 27.8	+1.2
SIV	**San Ignacio**	**152.78**	**202**	PKPbc	PKPbc	10 43 30.9	+2.4
	comp=Z,2.9nm,0.8s,baz=139,slow=2.6,SNR=16						
LPAZ	**La Paz**	**154.25**	**187**	PKPbc	PKPbc	10 43 34.9	+3.1
	comp=Z,1.2nm,1.0s,baz=154,slow=7.1,SNR=4.0						

*ISCJB **03** 10:36:39.4±0.5, 10.40N±0.04×62.46W±0.03, h10km, Error ellipse: s-maj=5.7km s-min=3.6km az=135.0*
*FUNV **03** 10:36:39.9, 10.44N×62.45W, h2km, MW2.6*
*TRN **03** 10:36:40.4, 10.41N×62.36W, h2km, MD3.3*
*NEIC **03** 10:36:40.4, 10.41N×62.36W, h2km, MD3.3(TRN), After TRN.*

ISC 03 10:36:40.0±0.4**, 10.43N**±0.04×**62.45W**±0.03**, h10**km**, n16, σ1.05**/23**, 2C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.31**	**46**	⇑iP	**Pg**	**10 36 45.7**	**-0.5**
GUIV				eS	**Sg**	**10 36 50.8**	**+0.5**
GUNV	**Guanoco**	**0.56**	**241**	eP	**Pg**	**10 36 50.4**	**-0.4**
GUNV				eS	**Sg**	**10 37 00.0**	**+1.9**
CRUV	**Carupano**	**0.81**	**287**	eP	**Pg**	**10 36 55.0**	**-0.7**
CRUV				eS	**Sg**	**10 37 05.1**	**-1.2**
TPP	**Pointe-a-Pierr**	**0.99**	**97**	eP	**Pg**	**10 36 57.5**	**-1.4**
TRN	**Trinidad (W)**	**1.05**	**78**	eP	**Pg**	**10 36 58.5**	**-1.6**
TRN				eS	**Sg**	**10 37 13.4**	**-0.4**
ITEV	**Isla Los Testi**	**1.14**	**324**	⇑iP	**Pb**	**10 37 00.8**	**-0.9**
ITEV				eS	**Sb**	**10 37 16.8**	**+0.2**
TBH	**Brigand Hill**	**1.36**	**88**	eP	**Pn**	**10 37 05.7**	**+0.7**
ORIV	**Oritupano**	**1.65**	**215**	eP	**Pn**	**10 37 08.8**	**-0.2**
ORIV				eS	**Sn**	**10 37 32.2**	**+1.9**
TPR	**Prospect**	**1.80**	**65**	eP	**Pn**	**10 37 11.9**	**+0.8**
GRW	**Mount Saint Ca**	**1.88**	**24**	eP	**Pn**	**10 37 14.3**	**+2.1**
GRW				eS	**Sn**	**10 37 37.9**	**+1.9**
PCRV	**Puerto La Cruz**	**2.17**	**263**	eP	**Pn**	**10 37 15.7**	**-0.5**
CUPV	**Cœpira**	**3.31**	**264**	eP	**Pn**	**10 37 32.1**	**+0.3**
BIRV	**Birongo**	**3.76**	**271**	eP	**Pn**	**10 37 38.3**	**+0.3**
LUEV	**Luepa**	**4.66**	**168**	eP	**Pn**	**10 37 50.5**	**+0.1**
CAOV	**Caicara del Or**	**4.92**	**231**	eP	**Pn**	**10 37 52.7**	**-1.3**
BAUV	**El Baul**	**5.71**	**255**	eP	**Pn**	**10 38 04.2**	**-0.7**

*NEIC **03** 10:44:56.9, 38.00S×176.10E, h164km, MG3.7(WEL), After WEL.*

WEL 03 10:44:56.9±0.4**, 38.00S**×**176.10E, h164**km±4km**, ML3.7**/19**, Error ellipse: s-maj=4.4km s-min=4.3km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.84**	**108**	P	Pn	10 45 21.6	-0.1
URZ	**Urewera**	**0.84**	**108**	PN	Pn	10 45 21.6	-0.1
URZ				SN	Sn	10 45 41.1	+0.3
MWZ	**Matawai**	**1.18**	**107**	P	Pn	10 45 24.7	+0.3
MWZ				S	Sn	10 45 45.8	+0.3
MWZ	**Matawai**	**1.18**	**107**	PN	Pn	10 45 24.7	+0.3
MWZ				SN	Sn	10 45 45.8	+0.3
BKZ	**Black Stump Fm**	**1.20**	**165**	P	Pn	10 45 24.8	+0.1
BKZ				S	Sn	10 45 46.7	+0.7
BKZ	**Black Stump Fm**	**1.20**	**165**	PN	Pn	10 45 24.8	+0.1
BKZ				SN	Sn	10 45 46.7	+0.7
TUVZ	**Tukino**	**1.31**	**195**	P	Pn	10 45 26.2	+0.6
TUVZ	**Tukino**	**1.31**	**195**	PN	Pn	10 45 26.2	+0.6
WNVZ	**Wahianoa**	**1.38**	**196**	P	Pn	10 45 26.7	+0.4
WNVZ	**Wahianoa**	**1.38**	**196**	PN	Pn	10 45 26.7	+0.4
MOVZ	**Moawhango**	**1.43**	**191**	PN	Pn	10 45 26.5	-0.3
MOVZ				SN	Sn	10 45 49.4	-0.4
MTVZ	**Mangateitei**	**1.47**	**199**	PN	Pn	10 45 27.7	+0.5
KNZ	**Kokohu**	**1.60**	**130**	eP	Pn	10 45 28.6	+0.1
KNZ	**Kokohu**	**1.60**	**130**	PN	Pn	10 45 28.6	+0.1
PUZ	**Puketiti**	**1.71**	**93**	P	Pn	10 45 29.6	0.0
PUZ	**Puketiti**	**1.71**	**93**	PN	Pn	10 45 29.6	0.0
PUZ				SN	Sn	10 45 53.8	-1.0
MXZ	**Matakaoa Point**	**1.80**	**77**	PN	Pn	10 45 31.0	+0.3
WAZ	**Wanganui**	**1.96**	**206**	PN	Pn	10 45 31.1	-1.2
TSZ	**Takapari Road**	**2.06**	**183**	P	Pn	10 45 32.6	-0.9
TSZ	**Takapari Road**	**2.06**	**183**	PN	Pn	10 45 32.6	-0.9
BFZ	**Birch Farm**	**2.68**	**178**	eP	Pn	10 45 39.0	-1.8
BFZ	**Birch Farm**	**2.68**	**178**	PN	Pn	10 45 39.0	-1.8
MRZ	**Mangatainoka R**	**2.69**	**188**	P	Pn	10 45 38.8	-2.1
MRZ	**Mangatainoka R**	**2.69**	**188**	PN	Pn	10 45 38.8	-2.1

*CSEM **03** 10:46:10.0±0.1, 37.08N×24.06E, h150km, ML3.3, Error ellipse: s-maj=2.7km s-min=1.1km az=58.0*
*ISCJB **03** 10:46:11.4±0.3, 37.12N±0.02×24.11E±0.03, h138km±3km, mb3.8/4, Error ellipse: s-maj=5.0km s-min=2.7km az=117.2*
*HLW **03** 10:46:13.7, 36.85N×24.64E, h12km, Mb4.2*
*ATH **03** 10:46:13.7, 37.13N×24.09E, h117km±2km, ML3.3*
*NEIC **03** 10:46:13.7, 37.13N×24.09E, h117km, MG3.3(ATH), After ATH.*
*THE **03** 10:46:13.4, 37.12N×24.01E, h113km*
*IDC **03** 10:46:14.2±2.2, 37.04N×24.31E, h138km±23km, mb3.6/4, mb1 3.6/5, mb1mx3.2/20, mbtmp4.0/5, Error ellipse: s-maj=33.5km s-min=15.0km az=144.0*

ISC 03 10:46:12.5±0.3**, 37.12N**±0.02×**24.12E**±0.03**, h133**km±3km**, n66, σ1.17**/97**, mb3.8**/4**, 9C-6D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KVR	**Kavouri**	**0.76**	**338**	eP	**Pn**	**10 46 33.6**	**+0.1**
NAIG	**Nisos Aigina**	**0.81**	**322**	eP	**Pn**	**10 46 33.6**	**-0.4**
ATH	**Athens Observa**	**0.91**	**339**	eP	**Pn**	**10 46 35.1**	**+0.3**
ATH				eS	**Sn**	**10 46 50.2**	**-1.5**
PTL	**Penteli**	**0.95**	**348**	⇑iP	**Pn**	**10 46 35.3**	**+0.2**
PTL				eS	**Sn**	**10 46 50.7**	**-1.6**
VLI	**Veliai**	**1.03**	**247**	⇓iP	**Pn**	**10 46 36.0**	**+0.1**
VLI				eS	**Sn**	**10 46 52.3**	**-1.4**
MGER	**Gerania Oros**	**1.10**	**322**	eP	**Pn**	**10 46 36.6**	**+0.1**
APE	**Apeiranthos**	**1.13**	**92**	ePg	**Pn**	**10 46 37.9**	**+1.0**
APE				eSg	**Sn**	**10 46 55.6**	**+0.3**
APE	**Apeiranthos**	**1.13**	**92**	⇑iP	**Pn**	**10 46 38.1**	**+1.3**
APE				eS	**Sn**	**10 46 55.7**	**+0.3**
APE	**Apeiranthos**	**1.13**	**92**	ePg	**Pn**	**10 46 37.8**	**+1.0**
APE				eSg	**Sn**	**10 46 55.7**	**+0.3**
KYTH	**Kithira**	**1.21**	**226**	⇓iP	**Pn**	**10 46 38.1**	**+0.4**
KYTH				eS	**Sn**	**10 46 56.4**	**-0.4**
VAM	**Vamos**	**1.71**	**178**	eP	**Pn**	**10 46 44.9**	**+1.7**
ITM	**Ithomi**	**1.75**	**272**	⇑iP	**Pn**	**10 46 44.9**	**+1.3**
ITM				eS	**Sn**	**10 47 07.7**	**+0.2**
LKR	**Lokris**	**1.76**	**330**	eP	**Pn**	**10 46 44.1**	**+0.4**
LKR				eS	**Sn**	**10 47 06.8**	**-0.9**
IDI	**Anoyia**	**1.94**	**161**	P	**Pn**	**10 46 47.3**	**+1.5**
	4.0nm,0.3s,baz=340,slow=8.4,SNR=11						
IDI				S	**Sn**	**10 47 11.3**	**0.0**
	40nm,0.3s,baz=0.9,slow=19,SNR=33						
IDI	**Anoyia**	**1.94**	**161**	P	**Pn**	**10 46 47.2**	**+1.4**
IDI				S	**Sn**	**10 47 11.3**	**0.0**
CHOS	**Chios island**	**1.98**	**50**	ePn	**Pn**	**10 46 47.6**	**+1.2**
CHOS				eSn	**Sn**	**10 47 11.3**	**-1.1**
SIVA	**Sivas**	**2.17**	**165**	ePn	**Pn**	**10 46 48.2**	**-0.5**
SIVA				eSn	**Sn**	**10 47 17.3**	**+0.8**
NPS	**Neapolis**	**2.21**	**147**	eP	**Pn**	**10 46 51.2**	**+2.0**
NPS				eS	**Sn**	**10 47 17.4**	**0.0**
LAST	**Lasithi**	**2.25**	**150**	ePn	**Pn**	**10 46 50.7**	**+1.1**
LAST				eSn	**Sn**	**10 47 18.7**	**+0.6**
GVD	**Gavdhos**	**2.28**	**181**	ePn	**Pn**	**10 46 48.9**	**-1.1**
GVD				eSn	**Sn**	**10 47 19.0**	**+0.1**
GVD	**Gavdhos**	**2.28**	**181**	eP	**Pn**	**10 46 51.5**	**+1.5**
RLS	**Riolos of Patr**	**2.31**	**295**	eP	**Pn**	**10 46 52.5**	**+2.2**
XOR	**Xorichti**	**2.35**	**342**	ePn	**Pn**	**10 46 51.6**	**+0.7**
XOR				eSn	**Sn**	**10 47 19.7**	**-0.8**
AGG	**Agios Georgios**	**2.36**	**324**	ePn	**Pn**	**10 46 50.3**	**-0.7**
AGG				eSn	**Sn**	**10 47 19.4**	**-1.3**
EVR	**Evrytania**	**2.56**	**315**	eP	**Pn**	**10 46 54.8**	**+1.3**
EVR				eS	**Sn**	**10 47 25.4**	**+0.4**
XRY	**Khrisi**	**2.58**	**150**	eP	**Pn**	**10 46 56.0**	**+2.2**
ZKR	**Zakros**	**2.63**	**139**	ePn	**Pn**	**10 46 56.2**	**+1.8**
ZKR				eSn	**Sn**	**10 47 27.8**	**+1.2**
PAIG	**Paliouri**	**2.82**	**353**	ePn	**Pn**	**10 46 57.3**	**+0.5**
PAIG				eSn	**Sn**	**10 47 31.0**	**0.0**
LOS	**Limnos**	**2.91**	**15**	ePn	**Pn**	**10 46 58.7**	**+0.8**
LOS				eSn	**Sn**	**10 47 35.2**	**+2.2**
KARP	**Karpathos**	**2.92**	**122**	eP	**Pn**	**10 46 59.9**	**+1.8**
KARP				eS	**Sn**	**10 47 34.5**	**+1.3**
VLS	**Valsamata**	**2.99**	**292**	eP	**Pn**	**10 46 59.1**	**0.0**
LKD	**Levkas**	**3.17**	**301**	ePn	**Pn**	**10 47 01.1**	**-0.2**
LKD				eSn	**Sn**	**10 47 38.0**	**-1.0**
LKD	**Levkas**	**3.17**	**301**	ePn	**Pn**	**10 47 01.1**	**-0.2**
LKD				eSn	**Sn**	**10 47 38.0**	**-1.0**
OUR	**Ouranopolis**	**3.21**	**358**	ePn	**Pn**	**10 47 02.4**	**+0.5**
LIT	**Litokhoron**	**3.23**	**337**	ePn	**Pn**	**10 47 02.4**	**+0.2**
LIT				eSn	**Sn**	**10 47 40.7**	**0.0**
MEV	**Metsovon**	**3.49**	**320**	ePn	**Pn**	**10 47 05.6**	**0.0**
MEV				eSn	**Sn**	**10 47 46.1**	**-0.6**
IGT	**Igoumenitsa**	**3.83**	**310**	ePn	**Pn**	**10 47 09.5**	**-0.5**
IGT				eSn	**Sn**	**10 47 53.6**	**-1.0**
SLUM		**5.69**	**171**	P	**Pn**	**10 47 33.3**	**-1.5**
HMAT	**Matruh**	**6.50**	**157**	P	**Pn**	**10 47 43.4**	**-2.3**
HMAT				S	**Sn**	**10 48 48.7**	**-10**
BRTR	**Keskin Array B**	**7.91**	**68**	P	**Pn**	**10 48 07.0**	**+2.3**
	0.1nm,0.3s,baz=259,slow=13,SNR=5.2						
SWA2		**7.94**	**172**	P	**Pn**	**10 48 04.2**	**-0.9**
SWA2				S	**Sn**	**10 49 25.7**	**-7.6**
SWA1		**7.95**	**170**	P	**Pn**	**10 48 04.6**	**-0.6**
SWA1				S	**Sn**	**10 49 26.1**	**-7.4**
HBRG	**Burj al 'Arab**	**8.08**	**142**	P	**Pn**	**10 48 04.8**	**-2.1**
FYM	**Al Fayyum**	**9.40**	**140**	⇓P	**Pn**	**10 48 23.0**	**-1.6**
AYT	**Al 'Ayyat**	**9.45**	**140**	P	**Pn**	**10 48 23.3**	**-2.0**
KOT	**Kottamia**	**9.63**	**136**	P	**Pn**	**10 48 26.4**	**-1.4**
AWBH		**9.66**	**154**	⇑P	**Pn**	**10 48 27.2**	**-0.9**
HSAF	**As Saff**	**9.72**	**138**	⇑P	**Pn**	**10 48 27.6**	**-1.4**
HHAG	**Hagoal**	**9.77**	**135**	P	**Pn**	**10 48 27.7**	**-1.9**
GLL	**Jalalah**	**9.84**	**138**	P	**Pn**	**10 48 28.9**	**-1.6**
AMAG	**Maghara**	**9.94**	**128**	P	**Pn**	**10 48 29.6**	**-2.3**
MMAI	**Mount Meron Ar**	**10.11**	**111**	P	**Pn**	**10 48 32.5**	**-1.7**
	2.5nm,0.3s,baz=302,slow=12,SNR=4.9						
SUZ		**10.28**	**132**	⇑P	**Pn**	**10 48 34.8**	**-1.6**
HFRF	**Wahat Farafira**	**10.56**	**159**	P	**Pn**	**10 48 40.0**	**-0.1**
ZNM		**10.64**	**134**	⇑P	**Pn**	**10 48 40.3**	**-0.9**
ASUT		**11.56**	**145**	⇓P	**Pn**	**10 48 52.8**	**-0.6**
HBST	**Basata**	**11.88**	**129**	⇑P	**Pn**	**10 48 56.8**	**-0.7**
HKAT	**Jabal Katrina**	**11.93**	**133**	P	**Pn**	**10 48 57.4**	**-0.8**
HDHB	**Dhahab**	**12.16**	**131**	P	**Pn**	**10 49 01.1**	**-0.1**
HDK1	**Dakhla**	**12.39**	**157**	⇑P	**Pn**	**10 49 05.3**	**+1.0**
AKRG	**Al Kharijah**	**12.80**	**153**	⇓P	**Pn**	**10 49 10.6**	**+1.0**
GTR	**Jabal at Tayr**	**12.81**	**153**	⇓P	**Pn**	**10 49 10.6**	**+0.8**
ESDC	**Sonseca Array**	**22.12**	**285**	P	**P**	**10 50 59.2**	**+2.1**
	1.5nm,0.7s,mb3.5,baz=72,slow=9.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**31.18**	**226**	P	**P**	**10 52 21.1**	**+2.3**
	2.1nm,0.6s,mb4.1,baz=35,slow=9.2,SNR=19						
DBIC	**Dimbokro**	**40.19**	**228**	P	**P**	**10 53 37.7**	**+2.0**
	3.6nm,0.8s,mb4.0,baz=24,slow=9.7,SNR=7.2						
MKAR	**Makanchi Array**	**43.42**	**58**	P	**P**	**10 54 02.1**	**+0.1**
	0.5nm,0.3s,mb3.6,baz=268,slow=7.7,SNR=14						

*ISCJB **03** 10:52:54.5±1.0, 72.52N±0.06×4.9E±0.2, h10km, Error ellipse: s-maj=10.3km s-min=8.8km az=157.4*
*NAO **03** 10:52:54.2±3.0, 72.38N×4.15E, ML2.3*
*BER **03** 10:52:55.6±4.2, 72.63N×3.82E, h0km±77km, ML2.2, ML2.3(NAO)*
*CSEM **03** 10:52:55.4±0.1, 72.33N×4.67E, h10km, ML2.2, Error ellipse: s-maj=3.3km s-min=2.1km az=83.0*
*HEL **03** 10:52:56.5±0.5, 72.64N×4.29E, h10km, ML3.3, ML2.2(BER), ML2.3(NAO)*

ISC 03 10:52:56.6±1.0**, 72.54N**±0.06×**4.8E**±0.2**, h10**km**, n27, σ1.07**/34**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**4.50**	**57**	eP	**Pn**	**10 54 05.0**	**+0.2**
BJO	**Bjornoya**	**4.55**	**58**	eP	**Pn**	**10 54 05.0**	**-0.5**
TRO	**Tromso**	**5.44**	**116**	eP	**Pn**	**10 54 17.9**	**+0.2**
TRO				AML	AML	10 55 20.3	
	comp=Z,4.6nm,0.2s						
KIF	**Kilpisjarvi**	**6.36**	**116**	eP	**Pn**	**10 54 31.8**	**+1.5**
KIF				MPN		10 54 32.2	
	comp=Z,5.3nm,0.2s						
KIF				eS	**Sn**	**10 55 43.4**	**+0.5**
KIF	**Kilpisjarvi**	**6.36**	**116**	P	**Pn**	**10 54 31.7**	**+1.4**
	comp=Z,5.3nm,0.2s						
KIF				S	**Sn**	**10 55 43.4**	**+0.5**
SPA0	**Spitsbergen Ar**	**6.37**	**22**	Pn	**Pn**	**10 54 29.9**	**-0.5**
	baz=208,slow=16						
SPA0	**Spitsbergen Ar**	**6.37**	**22**	eP	**Pn**	**10 54 29.9**	**-0.5**
STOK	**Stokkvaagen**	**6.87**	**151**	eP	**Pn**	**10 54 38.0**	**+0.7**
KTK1	**Kautokeino**	**7.03**	**111**	eP	**Pn**	**10 54 42.4**	**+3.0**
KTK1				eS	**Sn**	**10 56 01.3**	**+1.9**
MOR8	**Moi Rana**	**7.24**	**147**	eP	**Pn**	**10 54 42.7**	**+0.3**
MOR8				AML	AML	10 56 05.7	
	comp=Z,3.7nm,0.4s						
ARA0	**ARCESS Array S**	**7.37**	**104**	Pn	**Pn**	**10 54 45.5**	**+1.3**
	baz=306,slow=12						
ARA0				Sn	**Sn**	**10 56 06.8**	**-1.0**
	baz=317,slow=22						
ARA0	**ARCESS Array S**	**7.37**	**104**	eP	**Pn**	**10 54 45.5**	**+1.3**
ARA0				eS	**Sn**	**10 56 06.8**	**-1.0**
KEV	**Kevo**	**7.69**	**100**	eP	**Pn**	**10 54 49.3**	**+0.7**
KEV				MPN		10 54 54.5	
	comp=Z,0.8nm,0.2s						
KEV				eS	**Sn**	**10 56 15.0**	**-0.9**
KEV	**Kevo**	**7.69**	**100**	P	**Pn**	**10 54 49.2**	**+0.6**
	comp=Z,0.8nm,0.2s						
NSS	**Namsos**	**8.46**	**158**	eP	**Pn**	**10 54 58.3**	**-0.9**
SGF	**Sodankyl**	**8.99**	**114**	eP	**Pn**	**10 55 07.7**	**+1.3**
SGF				MPN		10 55 09.5	
	comp=Z,1.7nm,0.2s						
SGF				eS	**Sn**	**10 56 45.4**	**-2.3**
SGF	**Sodankyl**	**8.99**	**114**	P	**Pn**	**10 55 07.7**	**+1.3**
	comp=Z,1.7nm,0.2s						
KU4	**Liikasenvaara**	**10.61**	**113**	eP	**Pn**	**10 55 27.8**	**-0.8**
KU4				MPN		10 55 33.5	
	comp=Z,0.5nm,0.2s						
APA0	**Apatity Array**	**10.73**	**103**	Pn	**Pn**	**10 55 30.0**	**-0.3**
	baz=302,slow=9.3						
APA0	**Apatity Array**	**10.73**	**103**	eP	**Pn**	**10 55 30.0**	**-0.3**
MSF	**Maaselka**	**10.79**	**116**	eP	**Pn**	**10 55 30.5**	**-0.7**
MSF				MPN		10 55 33.8	
	comp=Z,0.8nm,0.2s						
NB2	**NORSAR Subarra**	**11.81**	**165**	eP	**Pn**	**10 55 40.5**	**-4.6**
HFS	**Hagfors**	**12.94**	**160**	Pn	**Pn**	**10 55 59.3**	**-1.1**
	baz=351,slow=16						
HFS	**Hagfors**	**12.94**	**160**	eP	**Pn**	**10 55 59.3**	**-1.1**
JOF	**Joensuu**	**13.77**	**121**	ep	**Pn**	**10 56 10.4**	**-1.5**
	comp=Z,3.8nm,0.6s						
FIA0	**FINESS Array S**	**13.78**	**133**	Pn	**Pn**	**10 56 12.2**	**+0.2**
	baz=330,slow=10						
FIA0	**FINESS Array S**	**13.78**	**133**	eP	**Pn**	**10 56 12.2**	**+0.2**

*NEIC **03** 10:56:52.7, 31.35S×68.72W, h147km, MG3.6(GUC), After GUC.*

GUC 03 10:56:52.7±0.7**, 31.35S**×**68.72W, h147**km±17km**, MD3.8, ML3.6, 2C-8D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.96**	**274**	⇓iP	Pn	10 57 28.0	+0.9
CMCH				i S	Sn	10 57 54.6	+1.0
CMCH				AML	AML	10 57 56.7	
	comp=N,2μm,0.6s						
CMCH	**Combarbala**	**1.96**	**274**	⇓iP	Pn	10 57 28.0	+0.9
CMCH				i S	Sn	10 57 54.6	+1.0
JACH	**Jahuel**	**2.07**	**230**	⇓iP	Pn	10 57 29.4	+0.9
JACH				i S	Sn	10 57 56.8	+0.8
TLL	**Tololo Astrono**	**2.14**	**303**	eP	Pn	10 57 30.6	+1.3
TLL				i S	Sn	10 57 59.0	+1.5
TLL				AML	AML	10 58 02.4	
	comp=N,350nm,0.7s						
TLL	**Tololo Astrono**	**2.14**	**303**	eP	Pn	10 57 30.6	+1.3
TLL				i S	Sn	10 57 59.0	+1.5
FCH	**Farellones**	**2.38**	**213**	⇑iP	Pn	10 57 33.4	+1.2
FCH				i S	Sn	10 58 04.1	+1.5
FCH				AML	AML	10 58 07.8	
	comp=E,70nm,0.3s						
CHNG	**Los Chungos**	**2.43**	**257**	⇓eP	Pn	10 57 33.0	+0.2
CHNG				i S	Sn	10 58 03.8	+0.1
ROCH	**El Roble**	**2.53**	**230**	⇓iP	Pn	10 57 34.3	+0.3
ROCH				i S	Sn	10 58 06.0	+0.1
CLCH	**Cerro Calan**	**2.56**	**216**	eP	Pn	10 57 35.1	+0.8
CLCH				i S	Sn	10 58 07.2	+0.8
CLCH				AML	AML	10 58 14.9	
	comp=E,188nm,0.7s						
PCH	**Pirque**	**2.73**	**213**	⇓iP	Pn	10 57 37.1	+0.7
PCH				i S	Sn	10 58 11.4	+1.1
RCDM	**Rinconada Maip**	**2.77**	**219**	⇓iP	Pn	10 57 37.9	+0.9
RCDM				i S	Sn	10 58 12.1	+0.9
LCO	**Las Campanas**	**2.89**	**323**	⇑iP	Pn	10 57 39.8	+1.3
LCO				i S	Sn	10 58 15.1	+1.2
TACH	**Talagante**	**2.97**	**219**	⇓iP	Pn	10 57 39.7	+0.2

MEX 03 11:00:47.8±0.8**, 16.65N**×**95.06W, h100**km±13km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.47**	**21**	eP	Pn	11 01 02.3	-1.1
CMIG				i S	Sn	11 01 13.2	-1.8
HUIG	**Huatulco**	**1.34**	**229**	i P	Pn	11 01 10.5	-1.6
HUIG				i S	Sn	11 01 29.3	-1.1
OXX	**Oaxaca**	**1.65**	**285**	i P	Pn	11 01 16.0	+0.1
OXX				i S	Sn	11 01 35.5	-1.7
UTMO	**Huajuapan**	**2.87**	**294**	eP	Pn	11 01 30.9	-0.9
UTMO				i S	Sn	11 02 02.6	-3.1

GUC 03 11:14:52.7±0.8**, 24.53S**×**68.21W, h130**km**, MD3.9, ML3.7, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**2.00**	**267**	eP	Pn	11 15 28.4	+1.8
CPN1				i S	Sn	11 15 55.3	+2.8
CPN1				AML	AML	11 15 57.8	
	comp=E,348nm,0.3s						
CEN1	**Los Morros**	**2.14**	**302**	eP	Pn	11 15 29.6	+1.1
CEN1				i S	Sn	11 15 56.9	+1.1
CEN1				AML	AML	11 16 05.7	
	comp=N,441nm,0.7s						
ANCH	**Antofagasta**	**2.18**	**292**	eP	Pn	11 15 29.9	+1.0
ANCH				i S	Sn	11 15 57.8	+1.2
ANCH				AML	AML	11 16 04.2	
	comp=N,897nm,0.3s						
CDCH	**Caldera**	**3.46**	**222**	eP	Pn	11 15 46.4	+1.2
CDCH				i S	Sn	11 16 27.6	+1.7

KRSC 03 11:24:01, 52.41N×**159.64E, h40**km**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.69**	**272**	i P	Pn	11 24 14.7	+0.4
RUS				i S	Sn	11 24 24.3	+0.5
SPN	**Mys Shipunski**	**0.73**	**19**	eP	Pn	11 24 16.0	+1.2
SPN				i S	Sn	11 24 26.7	+2.0
NLC	**Nalytchevo**	**0.78**	**347**	eP	Pn	11 24 16.2	+0.6
NLC				i S	Sn	11 24 26.9	+0.8
PET	**Petropavlovsk**	**0.86**	**316**	eP	Pn	11 24 17.1	+0.5
PET				i S	Sn	11 24 28.6	+0.6
GRL	**Gorelyy**	**0.97**	**279**	eP	Pn	11 24 19.1	+1.0
GRL				i S	Sn	11 24 31.9	+1.3
AVH	**Avacha**	**1.02**	**328**	eP	Pn	11 24 19.9	+1.1
AVH				i S	Sn	11 24 33.3	+1.5
KII	**Karymskiy**	**1.63**	**356**	eP	Pn	11 24 29.7	+2.5
KII				i S	Sn	11 24 50.2	+3.2
GNL	**Ganaly**	**1.65**	**322**	eP	Pn	11 24 29.1	+1.7
GNL				i S	Sn	11 24 49.4	+2.1
MIPR	**Malaya Ipel'ka**	**1.77**	**267**	eP	Pn	11 24 29.9	+0.8
MKZ	**Mys Kozlova**	**2.49**	**29**	eP	Pn	11 24 39.3	+0.3
MKZ				i S	Sn	11 25 07.0	-1.1
ALID	**Alaid**	**2.98**	**240**	eP	Pn	11 24 46.3	+0.6
KBTR	**Krutoberegovo**	**4.24**	**25**	eP	Pn	11 25 04.8	+1.8

ATH ***03*** *11:30:56.4, 3902N×2599E, h40km±19km, MD3.0/3*
CSEM ***03*** *11:30:57.8±0.2, 3888N×2624E, h2km, MD3.0, Error ellipse: s-maj=10.2km s-min=3.8km az=82.0*
ISCJB ***03*** *11:30:58.5±0.8, 3890N±003×26.16E±0.10, h9km±6km, Error ellipse: s-maj=12.9km s-min=4.5km az=173.8*
THE ***03*** *11:30:58.8, 3891N×2604E, h2km*
ISC 03 11:30:58.9±0.8**, 3890N**±003×**262E**±01**, h10**km±6km**, n8,** σ0s**84**/15**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.35	15	eP	Pg	11 31 05.3	-0.6
PRK				eS	Sg	11 31 11.5	+0.9
CHOS	Chios island	0.52	189	ePg	Pg	11 31 07.7	-1.3
CHOS				eSg	Sg	11 31 17.0	+1.2
SMG	Samos	1.31	156	eP	Pn	11 31 21.7	-1.4
SMG				eS	Sb	11 31 40.8	+0.5
LOS	Limnos	1.32	321	ePg	Pn	11 31 23.6	+0.2
LOS				eSg	Sb	11 31 40.5	-0.3
APE	Apeiranthos	1.90	195	ePb	Pn	11 31 31.0	-0.2
APE				eSb	Sn	11 31 56.1	+0.9
APE	Apeiranthos	1.90	195	eP	Pn	11 31 29.3	-1.9
APE	Apeiranthos	1.90	195	ePb	Pn	11 31 31.0	-0.2
APE				eSb	Sn	11 31 56.1	+0.9
ALN	Alexandroupoli	1.99	358	ePb	Pn	11 31 32.8	+0.2
ALN				eSb	Sn	11 31 57.8	+0.2

NEIC ***03*** *11:49:48.9, 2948S×7102W, h43km, MG3.2(GUC), After GUC.*
GUC 03 11:49:48.9±1.1**, 2948S**×**7102W, h43**km±3km**, MD4.2, ML3.2, 3C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	La Serena	0.47	205	⇑iP	Pn	11 49 59.8	+0.4
LSCH				i S	Sn	11 50 07.5	+0.7
LSCH				AML	AML	11 50 08.4	
	comp=E,500nm,0.3s						
LSCH	La Serena	0.47	205	⇑iP	Pn	11 49 59.8	+0.4
LSCH				i S	Sn	11 50 07.5	+0.7
LCO	Las Campanas	0.54	31	⇓iP	Pn	11 50 00.8	+0.6
LCO				i S	Sn	11 50 10.2	+1.9
TLL	Tololo Astrono	0.71	165	eP	Pn	11 50 03.8	+1.2
TLL				i S	Sn	11 50 14.8	+2.3
TLL				AML	AML	11 50 17.2	
	comp=E,5µm,0.3s						
TLL	Tololo Astrono	0.71	165	eP	Pn	11 50 03.8	+1.2
TLL				i S	Sn	11 50 14.8	+2.3
OVCH	Ovalle	1.14	188	⇓iP	Pn	11 50 08.6	+0.2
OVCH				i S	Sn	11 50 22.9	+0.1
OVCH				AML	AML	11 50 25.9	
	comp=N,2µm,0.2s						
OVCH	Ovalle	1.14	188	⇓iP	Pn	11 50 08.6	+0.2
OVCH				S	Sn	11 50 22.9	+0.1
CMCH	Combarbala	1.69	180	⇑iP	Pn	11 50 16.4	+0.4
CMCH				i S	Sn	11 50 36.8	+0.4
CPCH	Copiapo	2.19	16	eP	Pn	11 50 23.6	+0.8
CPCH				i S	Sn	11 50 50.3	+1.7
CDCH	Caldera	2.40	4	⇓iP	Pn	11 50 24.5	-1.2
CDCH				i S	Sn	11 50 53.5	-0.3
CHNG	Los Chungos	2.44	190	⇓iP	Pn	11 50 27.0	+0.9
JACH	Jahuel	3.22	174	i P	Pn	11 50 39.4	+2.5
FCH	Farellones	3.89	171	eP	Pn	11 50 50.0	+3.9
FCH				i S	Sn	11 51 34.9	+4.4
CLCH	Cerro Calan	3.93	174	eP	Pn	11 50 49.0	+2.3
CEN1	Los Morros	6.11	7	i P	Pn	11 51 10.9	-5.7

ISCJB ***03*** *11:56:41.2±0.2, 5534N±002×11040E±003, h1km, mb4.5/38, MS3.5/11, Error ellipse: s-maj=2.8km s-min=1.9km az=91.8*
IDC ***03*** *11:56:42.2±0.7, 5545N×11045E, h0km, mb4.1/18, mb1 4.3/20, mb1mx4.2/27, mbtmp4.1/20, ML3.9/2, MS3.5/11, Ms1 3.5/11, ms1mx3.3/33, Error ellipse: s-maj=16.7km s-min=16.0km az=94.0*
MOS ***03*** *11:56:42.6±0.5, 5541N×11040E, h11km, mb4.7/1, Error ellipse: s-maj=11.2km s-min=6.1km az=67.5*
BJI ***03*** *11:56:42.2, 5569N×11042E, h9km, mB4.7, mb4.4, Ms4.4, Msz4.0*
BYKL ***03*** *11:56:43.2±0.2, 5540N×11040E, h1km±12km*
NEIC ***03*** *11:56:44.6±0.2, 5555N×11032E, h10km, mb4.6/18, Error ellipse: s-maj=6.5km s-min=4.9km az=134.0*
ISC 03 11:56:42.4±0.2**, 5536N**±002×**11040E**±003**, h1**km**, n127,** σ1s**42**/196**, mb4.5**/38**, MS3.5**/11**, 8C-8D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.64	311	⇑iPg	Pg	11 56 54.8	+0.1
NIZ				Pmax		11 56 56.1	
	675nm,0.3s						
NIZ				eSg	Sg	11 57 03.4	+0.4
NIZ				Smax		11 57 18.9	
	8µm,1.2s						
NIZ	Nizh Angarsk	0.64	311	ePG	Pg	11 56 54.8	+0.1
NIZ				e		11 57 03.1	
NIZ				pmax	pmax		
	comp=Z,1µm,0.6s						
NIZ				smax			
	comp=N,7µm,0.6s						
YLYR	Ulyunkhan	0.65	137	⇓iPg	Pg	11 56 55.3	+0.5
	comp=N,823nm,0.8s						
YLYR				⇑iPg	Pg	11 56 55.3	+0.5
	comp=N,667nm,0.8s						
YLYR				⇑iPg	Pg	11 56 55.3	+0.5
	comp=N,745nm,0.8s						
YLYR				Pmax		11 56 57.9	
	comp=N,3µm,0.7s						
YLYR				eSg	Sg	11 57 04.5	+1.2
YLYR				Smax		11 57 16.5	
	comp=N,13µm,1.7s						
YLYR	Ulyunkhan	0.65	137	⇑iPG	Pg	11 56 55.3	+0.5
YLYR				e		11 57 04.3	
YLYR				pmax	pmax		
	comp=Z,1µm,0.3s						
YLYR				smax			
	comp=N,3µm,0.4s						
KMO	Kumora	0.70	40	⇑iPg	Pg	11 56 55.3	-0.5
KMO				Pmax		11 56 57.3	
	comp=N,3µm,0.3s						
KMO				eSg	Sg	11 57 04.0	-0.9
KMO				Smax		11 57 11.7	
	comp=N,25µm,1.5s						
KMO	Kumora	0.70	40	ePG	Pg	11 56 55.2	-0.6
KMO				e		11 57 03.4	
KMO				pmax	pmax		
	comp=Z,3µm,0.4s						
KMO				smax			
	comp=N,24µm,0.8s						
YOA	Uoyan	1.08	43	ePg	Pg	11 57 02.8	-0.3
YOA				Pmax		11 57 03.4	
	comp=N,2µm,0.4s						
YOA				eSg	Sg	11 57 17.1	0.0
YOA				Smax		11 57 20.2	
	comp=N,35µm,0.8s						
YOA	Uoyan	1.08	43	⇓iPG	Pg	11 57 02.8	-0.3
YOA				i		11 57 17.1	
YOA				pmax	pmax		
	comp=Z,4µm,0.5s						
YOA				smax			
	comp=N,8µm,2.3s						
SYVR	Suvo	1.72	188	⇑iPg	Pg	11 57 14.8	-0.5
SYVR				Pmax		11 57 18.1	
	comp=N,2µm,0.9s						
SYVR				eSg	Sg	11 57 38.7	+1.2
SYVR				Smax		11 57 42.7	
	comp=N,9µm,1.8s						
SYVR	Suvo	1.72	188	ePN	Pn	11 57 15.0	+1.6
SYVR				e		11 57 39.2	
SYVR				pmax	pmax		
	comp=Z,2µm,0.8s						
SYVR				smax			
	comp=E,4µm,0.7s						
UKT	Uakit	1.85	85	⇑iPg	Pn	11 57 15.8	+0.6
UKT				Pmax		11 57 19.6	
	comp=E,2µm,0.6s						
UKT				eSg	Sg	11 57 40.5	-1.2
UKT				Smax		11 57 43.2	
	comp=E,8µm,1.1s						
UKT	Uakit	1.85	85	ePN	Pn	11 57 15.8	+0.6
UKT				e		11 57 40.4	
UKT				pmax	pmax		
	comp=Z,2µm,0.6s						
UKT				smax			
	comp=N,8µm,0.9s						
SVKR	Severomuysk	1.94	66	ePg	Pg	11 57 18.1	-1.5
SVKR				Pmax		11 57 21.2	
	comp=N,2µm,0.3s						
SVKR				eSg	Sg	11 57 44.0	-0.8
SVKR				Smax		11 57 47.0	
	comp=N,23µm,0.7s						
SVKR	Severomuysk	1.94	66	ePN	Pn	11 57 18.0	+1.5
SVKR				eS	Sn	11 57 41.5	-0.1
SVKR				e		11 57 43.9	
SVKR				pmax	pmax		
	comp=Z,3µm,0.8s						
SVKR				smax			
	comp=N,3µm,0.7s						
MXMB	Maximikha	2.31	205	ePg	Pg	11 57 25.1	-1.5
MXMB				Pmax		11 57 26.7	
	comp=N,1µm,1.2s						
MXMB				eSg	Sg	11 57 56.2	-0.4
MXMB				Smax		11 57 59.6	
	comp=N,19µm,0.9s						
OGRR	Ongureny	2.37	225	ePn	Pn	11 57 24.5	+2.2
OGRR				ePg	Pg	11 57 26.7	-1.1
OGRR				Pmax		11 57 30.1	
	comp=N,610nm,0.5s						
OGRR				eSg	Sg	11 57 57.5	-1.0
OGRR				Smax		11 58 00.0	
	comp=N,4µm,0.8s						
OGRR	Ongureny	2.37	225	ePN	Pn	11 57 24.3	+2.0
OGRR				e		11 57 26.8	
OGRR				e		11 57 58.4	
OGRR				pmax	pmax		
	comp=Z,610nm,0.9s						
OGRR				smax			
	comp=N,4µm,0.8s						
KELR	Kotokel	2.94	209	ePn	Pn	11 57 32.0	+1.8
KELR				ePg	Pg	11 57 37.1	-1.6
KELR				Pmax		11 57 40.1	
	comp=N,521nm,0.4s						
KELR				eSg	Sg	11 58 16.0	-0.7
KELR				Smax		11 58 19.0	
	comp=N,6µm,0.7s						
BOD	Bodaibo	3.17	37	⇓iPn	Pn	11 57 33.5	+0.1
BOD				ePg	Pb	11 57 38.5	-1.0
BOD				e		11 57 43.0	
BOD				max		11 57 44.0	
	comp=N,404nm,0.7s						
BOD				e		11 58 11.7	
BOD				eSg	Sb	11 58 19.2	+0.5
BOD				Smax		11 58 22.2	
	comp=N,4µm,1.1s						
BOD	Bodaibo	3.17	37	⇓iPN	Pn	11 57 33.3	-0.1
BOD				e		11 57 38.2	
BOD				e		11 58 18.8	
BOD				pmax	pmax		
	comp=Z,407nm,0.4s						
BOD				smax			
	comp=E,4µm,1.0s						
NLYR	Nelyaty	3.19	67	⇓iPn	Pn	11 57 34.5	+0.8
NLYR				ePg	Pg	11 57 40.3	-3.3
NLYR				Pmax		11 57 42.6	
	comp=E,443nm,0.5s						
NLYR				eSg	Sg	11 58 21.9	-3.1
NLYR				Smax		11 58 40.6	
	comp=E,5µm,1.1s						
NLYR	Nelyaty	3.19	67	ePN	Pn	11 57 34.2	+0.5
NLYR				e		11 57 39.7	
NLYR				e		11 58 20.0	
NLYR				pmax	pmax		
	comp=Z,661nm,1.3s						
NLYR				smax			
	comp=E,5µm,1.3s						
ZRHB	Zarechye	3.40	216	ePg	Pg	11 57 44.7	-2.8
ZRHB				Pmax		11 57 47.3	
	comp=E,842nm,0.8s						
ZRHB				eSg	Sg	11 58 30.2	-1.4
ZRHB				Smax		11 58 42.9	
	comp=E,11µm,1.1s						
TRG	Tyrgan	3.53	224	ePn	Pn	11 57 40.1	+1.8
TRG				ePg	Pg	11 57 46.8	-3.2
TRG				Pmax		11 57 57.0	
	comp=E,195nm,1.2s						
TRG				eSg	Sg	11 58 33.3	-2.4
TRG				Smax		11 58 39.3	
	comp=E,2µm,1.5s						
TRG	Tyrgan	3.53	224	ePN	Pn	11 57 40.1	+1.8
TRG				e		11 57 48.0	
TRG				eS	Sn	11 58 21.0	+0.3
TRG				e		11 58 32.8	
TRG				pmax	pmax		
	comp=Z,219nm,0.4s						
TRG				smax			
	comp=N,2µm,1.1s						
TRTB	Turuntaevo	3.54	209	ePn	Pn	11 57 40.4	+2.0
TRTB				ePg	Pg	11 57 47.2	-2.9
TRTB				Pmax		11 57 51.8	
	comp=N,598nm,1.2s						
TRTB				eSn	Sn	11 58 20.1	-0.7
TRTB				eSg	Sg	11 58 34.5	-1.4
TRTB				Smax		11 58 43.2	
	comp=N,2µm,1.2s						
CIT	Chita	3.83	149	ePn	Pn	11 57 43.3	+0.9
CIT				ePg	Pg	11 57 52.3	-3.5
CIT				Pmax		11 57 56.0	
	comp=N,325nm,1.7s						
CIT				eSn	Sn	11 58 25.7	-2.4
CIT				eSg	Sg	11 58 42.3	-3.2
CIT				Smax		11 58 50.9	
	comp=N,1µm,1.7s						
KAB	Kabansk	3.99	215	ePg	Pg	11 57 56.5	-2.3
KAB				Pmax		11 58 11.8	
	comp=N,474nm,0.9s						
KAB				eSg	Sg	11 58 48.6	-1.9
KAB				Smax		11 59 03.2	
	comp=N,6µm,1.7s						
HRMR	Khuramsha	4.26	210	ePn	Pn	11 57 50.2	+1.8
HRMR				ePg	Pg	11 58 00.2	-3.9
HRMR				Pmax		11 58 06.5	
	comp=N,750nm,0.9s						
HRMR				eSg	Sg	11 58 56.1	-3.2
HRMR				Smax		11 58 58.9	
	comp=N,6µm,0.7s						
CRS	Chara	4.67	67	ePn	Pn	11 57 54.9	+0.9
CRS				ePg	Pg	11 58 07.3	-4.5
CRS				Pmax		11 58 10.9	
	comp=N,555nm,1.7s						
CRS				eSg	Sg	11 59 07.5	-4.8
CRS				Smax		11 59 19.6	
	comp=N,3µm,1.1s						
CRS	Chara	4.67	67	ePN	Pn	11 57 55.1	+1.1
CRS				e		11 58 07.1	
CRS				e		11 59 06.8	
CRS				pmax	pmax		
	comp=Z,540nm,1.1s						
CRS				smax			
	comp=E,3µm,1.1s						
IRK	Irkutsk	4.79	232	ePg	Pg	11 58 10.1	-4.0
IRK				Pmax		11 58 13.5	
	comp=E,624nm,0.7s						
IRK				eSn	Sn	11 58 51.5	-0.2
IRK				eSg	Sg	11 59 12.4	-3.7
IRK				Smax		11 59 15.7	
	comp=E,5µm,0.9s						
IRK	Irkutsk	4.79	232	⇑ePN	Pn	11 57 56.9	+1.3
IRK				i		11 58 11.4	
IRK				e		11 59 12.9	
IRK				pmax	pmax		
	comp=Z,630nm,0.7s						
IRK				smax			
	comp=N,5µm,0.8s						
LSTR	Listvyanka	4.81	226	ePN	Pn	11 57 57.7	+1.7
LSTR				e		11 58 09.3	
LSTR				e		11 59 13.6	
LSTR				pmax	pmax		
	comp=Z,89nm,0.7s						
LSTR				smax			
	comp=N,2µm,1.4s						
TLY	Talaya	5.46	230	ePn	Pn	11 58 06.0	+1.2
TLY				ePg	Pg	11 58 21.7	-5.2
TLY				Pmax		11 58 24.3	
	comp=N,147nm,0.5s						
TLY				eSn	Sn	11 59 07.8	-0.4
TLY				eSg	Sg	11 59 31.9	-5.7
TLY				Smax		11 59 36.0	
	comp=N,2µm,1.1s						
TLY	Talaya	5.46	230	⇓iPN	Pn	11 58 06.0	+1.2
TLY				e		11 58 21.8	
TLY	Talaya	5.46	230	ePn	Pn	11 58 06.1	+1.3
	comp=N,147nm,0.6s						
TLY				eSn	Sn	11 59 09.8	+1.6
TLY				eSg	Sg	11 59 33.0	-4.6
KHNR	Khani	5.58	70	ePg	Pn	11 58 08.6	+2.1
KHNR				eSg	Sg	11 59 35.3	-6.4
TUP	Tupik	5.59	96	ePn	Pn	11 58 07.1	+0.4
TUP				ePg	Pg	11 58 23.3	-6.3
TUP				Pmax		11 58 26.6	
	comp=N,115nm,0.7s						
TUP				eSn	Sn	11 59 08.7	-2.9
TUP				eSg	Sg	11 59 36.4	-5.7
TUP				Smax		11 59 43.1	
	comp=N,2µm,0.8s						
TUP	Tupik	5.59	96	ePN	Pn	11 58 07.4	+0.7
TUP				e		11 58 24.3	
TUP				eS	Sn	11 59 09.3	-2.3
TUP				e		11 59 37.4	
TUP				pmax	pmax		
	comp=Z,122nm,0.7s						
TUP				smax			
	comp=N,2µm,0.9s						
KPC	Khapcheranga	5.79	167	ePn	Pn	11 58 10.0	+0.6
KPC				ePg	Pg	11 58 28.5	-4.8
KPC				Pmax		11 58 34.1	
	comp=N,135nm,0.9s						
KPC				eSn	Sn	11 59 15.2	-1.2
KPC				eSg	Sg	11 59 43.6	-4.7
KPC				Smax		11 59 52.9	
	comp=N,908nm,1.3s						
KPC	Khapcheranga	5.79	167	ePN	Pn	11 58 10.0	+0.6
KPC				e		11 58 28.5	
KPC				eS	Sn	11 59 15.5	-0.9
KPC				e		11 59 44.5	
KPC				pmax	pmax		
	comp=Z,135nm,0.9s						
KPC				smax			
	comp=E,908nm,1.5s						
ARS	Arshan	5.86	237	ePn	Pn	11 58 11.5	+1.2
ARS				ePg	Pg	11 58 29.5	-5.1
ARS				Pmax		11 58 35.5	
	comp=E,359nm,0.5s						
ARS				eSn	Sn	11 59 17.4	-0.7
ARS				eSg	Sg	11 59 45.4	-5.1
ARS				Smax		11 59 54.0	
	comp=E,3µm,0.9s						
ARS	Arshan	5.86	237	ePN	Pn	11 58 11.6	+1.3
ARS				e		11 58 29.2	
ARS				e		11 59 44.7	
ARS				pmax	pmax		
	comp=Z,359nm,0.5s						
ARS				smax			
	comp=E,3µm,1.0s						
ZAK	Zakamensk	6.58	224	ePn	Pn	11 58 23.3	+3.0
ZAK				max		11 58 56.4	
	comp=E,28nm,0.8s						
ZAK				eSg	Sg	12 00 08.9	-4.9
ZAK				Smax		12 00 15.1	
	comp=E,547nm,1.2s						
ZAK	Zakamensk	6.58	224	ePN	Pn	11 58 23.1	+2.8
ZAK				e		11 58 42.5	
ZAK				eS	Sg	12 00 08.4	-5.4
ZAK				pmax	pmax		
	comp=Z,28nm,0.8s						
ZAK				smax			
	comp=E,534nm,1.2s						
MOY	Mondy	6.71	240	⇓iPn	Pn	11 58 24.5	+2.4
MOY				max		11 58 55.4	
	comp=E,230nm,1.2s						
MOY				eSn	Sn	11 59 37.8	-1.4
MOY				eSg	Sg	12 00 10.1	-7.9
MOY				Smax		12 00 25.3	
	comp=E,1µm,1.7s						
MOY	Mondy	6.71	240	ePN	Pn	11 58 24.3	+2.2
MOY				e		11 58 44.1	
MOY				eS	Sn	11 59 40.7	+1.5
MOY				pmax	pmax		
	comp=Z,64nm,0.4s						
MOY				smax			
	comp=E,1µm,1.1s						
ORL	Orlik	6.86	250	⇓iPn	Pn	11 58 26.3	+2.3
ORL				max		11 58 28.8	
	comp=E,202nm,1.4s						
ORL				e		11 59 42.3	
ORL				eSg	Sg	12 00 15.5	-7.0
ORL				Smax		12 00 21.8	
	comp=E,2µm,1.3s						
ORL	Orlik	6.86	250	ePN	Pn	11 58 26.3	+2.3
ORL				e		11 58 48.4	
ORL				e		12 00 17.2	
ORL				pmax	pmax		
	comp=Z,83nm,0.8s						
ORL				smax			
	comp=N,1µm,0.8s						
ULN	Ulaanbaatar	7.78	197	ePN	Pn	11 58 40.0	+3.3
ULN				pmax	pmax		
	comp=Z,18nm,0.6s						
ULN	Ulaanbaatar	7.78	197	ePn	Pn	11 58 40.0	+3.3
	comp=Z,18nm,0.6s						
ULN				eS	Sb	12 00 37.0	+5.7
SONM	Songino Array	7.93	200	Pn	Pn	11 58 41.3	+2.5
	comp=Z,1.2nm,0.3s,baz=12,slow=13,SNR=30						
SONM				Sn	Sn	12 00 08.4	-0.8
	comp=Z,1.0nm,0.3s,baz=34,slow=24,SNR=2.8						
SONM				Lg		12 00 55.1	
	comp=Z,13nm,0.3s,baz=10,slow=28,SNR=20						
SONM				LR	LR	12 01 54.7	
	comp=Z,304nm,19.1s,baz=152,slow=39						
SONM	Songino Array	7.93	200	PN	Pn	11 58 41.3	+2.5
SONM						12 00 08.4	
HIA	Hailar	8.36	133	ePN	Pn	11 58 46.7	+2.0
HIA				e		12 00 20.7	
HIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HIA	Hailar	8.36	133	ePn	Pn	11 58 46.7	+2.1
	comp=Z,9.5nm,0.7s						
HIA				eSn	Sn	12 00 20.7	+1.0
KRAR	Krasnoyarsk	9.92	281	eP	Pn	11 59 06.6	+0.6
YAK	Yakutsk	12.02	48	eP	Pn	11 59 33.2	-1.6
YAK				pmax	pmax		
	comp=Z,27nm,0.6s						
YAK	Yakutsk	12.02	48	ePn	Pn	11 59 33.1	-1.6
	comp=Z,27nm,0.6s						
HHC	Hu-ho-hao-te	14.54	176	eP	Pn	12 00 13.7	+4.5
HHC				AP	pP	12 00 17.1	+0.8
HHC				XP	sP	12 00 20.7	+4.3
HHC				PP		12 00 25.7	
HHC				S	Sn	12 02 57.1	+6.1
HHC				PCP	PcP	12 05 26.5	+2.6
HHC				SCS	ScS	12 12 34.8	-1.5
HHC				AMB	AMB		
	comp=Z,7.0nm,0.9s						
HHC				AMB	AMB		
	comp=Z,69nm,4.7s						
HHC				LR	LR		
	comp=N,268nm,9.9s						
HHC				LR	LR		
	comp=E,180nm,8.5s						
HHC				LR	LR		
	comp=Z,130nm,11.9s						
ZAL	Zalesovo	14.86	275	Pn	Pn	12 00 14.5	+0.9
	comp=Z,0.5nm,0.3s,baz=32,slow=12,SNR=39						
ZAL				Sn	Sn	12 03 00.3	+1.4
	comp=Z,0.4nm,0.3s,baz=90,slow=23,SNR=2.6						
ZAL				Lg		12 04 33.3	
	baz=290,slow=17,SNR=3.4						
ZAL				LR	LR	12 06 48.9	
	comp=Z,306nm,19.6s,baz=13,slow=41						
ZAL	Zalesovo	14.86	275	Pn	Pn	12 00 14.5	+0.9
ZAL				Sn	Sn	12 03 00.3	+1.4
ZAL				Lg		12 04 33.3	
ZAL				LR	LR	12 06 48.9	
CN2	Changchun	15.09	134	eP	Pn	12 00 24.7	+8.0
CN2				LG2		12 04 47.0	
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
	comp=N,440nm,10.0s						
CN2				LR	LR		
	comp=E,550nm,10.0s						
CN2				LR	LR		
	comp=Z,320nm,11.0s						
BJT	**Baijiatuau**	**15.82**	**164**	*e*P	**Pn**	**12 00 31.8**	**+5.5**
	comp=Z,12nm,0.9s						
MDJ	**Mudanjiang**	**16.31**	**123**	P	**Pn**	**12 00 35.2**	**+2.6**
MDJ				AP	pP	12 00 40.9	+5.0
MDJ				XP	sP	12 00 42.3	+6.2
MDJ				S	**Sn**	**12 03 38.3**	**+4.3**
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.6s						
MDJ				AMB	AMB		
	comp=Z,57nm,4.8s						
MDJ				LR	LR		
	comp=N,272nm,7.0s						
MDJ				LR	LR		
	comp=E,198nm,8.3s						
MDJ				LR	LR		
	comp=Z,339nm,8.3s						
GTA	**Gaotai**	**17.45**	**208**	*e*P	**Pn**	**12 00 54.3**	**+7.3**
GTA				AP	pP	12 01 00.7	+12
GTA				XP	sP	12 01 04.0	+15
GTA				S	**Sn**	**12 04 15.5**	**+14**
GTA				LG1		12 06 08.1	
GTA				LG2		12 06 35.4	
GTA				AMB	AMB		
	comp=Z,4.0nm,0.6s						
GTA				AMB	AMB		
	comp=Z,143nm,4.2s						
GTA				LR	LR		
	comp=N,399nm,7.2s						
GTA				LR	LR		
	comp=E,368nm,8.4s						
GTA				LR	LR		
	comp=Z,289nm,8.0s						
WMQ	**Urumqi**	**18.61**	**241**	*e*P	**Pn**	**12 01 03.0**	**+1.8**
WMQ				XP	sP	12 01 10.0	+8.5
WMQ				PP		12 01 19.0	
WMQ				S	**Sn**	**12 04 28.0**	**-1.7**
WMQ				SS		12 04 53.0	
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s						
WMQ				LR	LR		
	comp=N,725nm,5.0s						
WMQ				LR	LR		
	comp=E,528nm,5.0s						
WMQ				LR	LR		
	comp=Z,812nm,6.0s						
MKAR	**Makanchi Array**	**19.52**	**256**	Pn	**Pn**	**12 01 11.8**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=61,slow=10,SNR=14						
MKAR				Lg		12 06 57.2	
	comp=Z,0.1nm,0.3s,baz=94,slow=39,SNR=3.6						
MKAR	**Makanchi Array**	**19.52**	**256**	Pn	**Pn**	**12 01 11.8**	**-0.4**
MKAR				Lg		12 06 57.2	
KURK	**Kurchatov**	**19.56**	**270**	*e*P	**Pn**	**12 01 12.0**	**-0.7**
	comp=Z,17nm,0.9s						
LZH	**Lanzhou**	**19.79**	**196**	*e*P	**Pn**	**12 01 20.5**	**+5.0**
LZH				AP	pP	12 01 23.6	+9.3
LZH				XP	sP	12 01 25.0	+11
LZH				PP		12 01 39.5	
LZH				*e*S	**Sn**	**12 04 58.0**	**-0.3**
LZH				AMB	AMB		
	comp=Z,18nm,1.0s						
LZH				AMB	AMB		
	comp=Z,120nm,5.0s						
LZH				LR	LR		
	comp=E,695nm,7.2s						
LZH				LR	LR		
	comp=Z,997nm,8.0s						
CHKZ	**Chkalovo**	**22.94**	**282**	*e*P	**P**	**12 01 48.8**	**+0.9**
	comp=Z,6.3nm,0.6s,mb4.3						
CHKZ				*e*S	**S**	**12 05 56.5**	**-2.5**
BVAR	**Borovoye Array**	**23.30**	**281**	P	**P**	**12 01 51.0**	**-0.7**
	comp=Z,2.2nm,0.6s,mb3.9,baz=65,slow=10,SNR=10						
BVAR				S	**S**	**12 06 02.3**	**-2.6**
	comp=Z,1.5nm,0.9s,baz=52,slow=31,SNR=2.3						
BVAR				LR	LR	12 11 49.6	
	comp=Z,193nm,20.4s,MS3.5,baz=315,slow=39						
BRVK	**Borovoye**	**23.35**	**281**	*e*P	**P**	**12 01 52.0**	**-0.2**
	comp=Z,9.1nm,0.8s,mb4.4						
BRVK				*e*S	**S**	**12 06 05.9**	**+0.2**
ASAJ	**Asahikawa**	**23.43**	**105**	LR	LR	12 11 37.9	
	comp=Z,168nm,19.1s,MS3.5,baz=352,slow=38						
NJ2	**Nanjing**	**24.05**	**162**	*e*P	**P**	**12 02 00.1**	**+1.1**
NJ2				AP		12 02 04.3	
NJ2				XP	sP	12 02 07.1	+7.7
NJ2				PP		12 02 34.3	
NJ2				S	**S**	**12 06 13.0**	**-4.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,210nm,4.1s						
NJ2				LR	LR		
	comp=N,1μm,15.1s,MS4.6						
NJ2				LR	LR		
	comp=E,1μm,14.2s,MS4.6						
NJ2				LR	LR		
	comp=Z,530nm,12.2s,MS4.2						
ZRNK	**Zerenda**	**24.11**	**282**	*e*P	**P**	**12 01 59.5**	**0.0**
	comp=Z,7.9nm,0.6s,mb4.4						
ZRNK				*e*S	**S**	**12 06 19.9**	**+1.9**
CD2	**Chengdu**	**24.89**	**194**	*e*P	**P**	**12 02 07.9**	**+1.3**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
SSE	**Sheshan**	**25.43**	**158**	*e*P	**P**	**12 02 19.3**	**+7.7**
SSE				AMB	AMB		
	comp=Z,35nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,150nm,3.9s						
JHJ	**Hachijo jima 2**	**30.23**	**125**	LR	LR	12 15 17.0	
	comp=Z,66nm,18.3s,MS3.3,baz=286,slow=37						
KMI	**Kunming**	**30.72**	**194**	P	**P**	**12 03 01.6**	**+2.7**
KMI				LR	LR		
	comp=Z,62nm,16.5s,MS3.3						
AKTK	**Aktyubinsk**	**31.35**	**283**	P	**P**	**12 03 04.5**	**+0.1**
AKTK				LR	LR	12 16 38.5	
AKTO	**Aktyubinsk**	**31.35**	**283**	P	**P**	**12 03 04.5**	**+0.1**
	comp=Z,0.9nm,0.7s,mb3.8,baz=58,slow=13,SNR=3.4						
AKTO				LR	LR	12 16 38.5	
	comp=Z,115nm,19.4s,MS3.6,baz=243,slow=38						
GUN	**Gumba**	**32.64**	**223**	*e*P	**P**	**12 03 18.5**	**+2.7**
JIRN	**Jiri**	**32.75**	**222**	*e*P	**P**	**12 03 19.3**	**+2.6**
	comp=Z,12nm,0.5s,mb5.1						
KKN	**Kakani**	**32.98**	**224**	*e*P	**P**	**12 03 21.5**	**+2.7**
	comp=Z,31nm,0.7s,mb5.3						
GKN	**Gorkha**	**33.05**	**225**	*e*P	**P**	**12 03 22.2**	**+2.9**
DMN	**Daman**	**33.22**	**224**	*e*P	**P**	**12 03 23.4**	**+2.6**
	comp=Z,28nm,0.8s,mb5.2						
KOLN	**Koldanda**	**33.68**	**226**	*e*P	**P**	**12 03 28.4**	**+3.6**
	comp=Z,17nm,0.9s,mb5.0						
ARCES	**ARCESS Array B**	**38.16**	**325**	P	**P**	**12 04 01.5**	**-1.7**
	comp=Z,2.1nm,0.5s,mb4.1,baz=64,slow=7.9,SNR=25						
ARCES				PcP	PcP	12 06 19.6	+1.6
	comp=Z,1.5nm,0.8s,baz=69,slow=4.9,SNR=3.9						
ARCES				LR	LR	12 24 21.9	
	comp=Z,42nm,18.2s,MS3.3,baz=285,slow=44						
JOF	**Joensuu**	**38.80**	**314**	*e*p	**P**	**12 04 05.8**	**-2.8**
	comp=Z,1.0nm,0.3s,mb3.9						
KAF	**Kangasniemi**	**41.22**	**315**	*e*p	**P**	**12 04 25.9**	**-2.8**
	comp=Z,2.8nm,0.3s,mb4.5,baz=61,slow=7.9						
FINES	**FINESS Array B**	**41.66**	**314**	P	**P**	**12 04 30.9**	**-1.4**
	comp=Z,4.7nm,0.6s,mb4.4,baz=71,slow=8.5,SNR=25						
FINES				LR	LR	12 23 32.6	
	comp=Z,55nm,19.5s,MS3.4,baz=194,slow=39						
IMA2	**Indian Mountai**	**43.49**	**36**	*e*P	**P**	**12 04 47.2**	**0.0**
COLA	**College**	**46.16**	**35**	*e*P	**P**	**12 05 08.9**	**+0.4**
	comp=Z,19nm,0.6s,mb5.3						
AKASG	**Malin Array Be**	**46.43**	**300**	P	**P**	**12 05 09.8**	**-0.8**
	comp=Z,2.7nm,0.6s,mb4.5,baz=44,slow=8.6,SNR=17						
AKASG	**Malin Array Be**	**46.43**	**300**	P	**P**	**12 05 09.8**	**-0.8**
MCK	**McKinley**	**46.52**	**37**	*e*P	**P**	**12 05 09.6**	**-1.7**
	comp=Z,1.3nm,0.5s,mb4.3						
HFS	**Hagfors**	**47.37**	**317**	P	**P**	**12 05 16.6**	**-1.4**
	comp=Z,5.5nm,0.6s,mb4.9,baz=55,slow=7.8,SNR=13						
NB2	**NORSAR Subarra**	**47.72**	**320**	P	**P**	**12 05 19.7**	**-1.0**
	comp=Z,5.0nm,0.7s,mb4.8,baz=48,slow=7.4						
NOA	**NORSAR Array B**	**47.72**	**320**	P	**P**	**12 05 20.0**	**-0.7**
	comp=Z,4.1nm,0.7s,mb4.7,baz=48,slow=7.3,SNR=14						
NOA				LR	LR	12 27 00.1	
	comp=Z,30nm,18.4s,MS3.3,baz=70,slow=38						
PMR	**Palmer**	**47.83**	**39**	*e*P	**P**	**12 05 20.9**	**-0.7**
	comp=Z,6.3nm,0.8s,mb4.8						
INK	**Inuvik**	**48.03**	**27**	P	**P**	**12 05 21.3**	**-1.8**
	comp=Z,3.1nm,0.9s,mb4.4,baz=332,slow=12,SNR=3.8						
INK	**Inuvik**	**48.03**	**27**	*e*P	**P**	**12 05 22.3**	**-0.8**
	comp=Z,4.2nm,0.9s,mb4.6						
DAWY	**Dawson**	**49.42**	**33**	*e*P	**P**	**12 05 33.1**	**-0.7**
BRTR	**Keskin Array B**	**51.43**	**286**	P	**P**	**12 05 49.1**	**+0.1**
	comp=Z,0.9nm,0.8s,mb3.8,baz=54,slow=6.3,SNR=4.7						
BRTR				LR	LR	12 32 35.0	
	comp=Z,34nm,19.0s,MS3.4,baz=109,slow=42						
GERES	**GERESS Array B**	**55.09**	**307**	P	**P**	**12 06 15.0**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.8,baz=29,slow=6.3,SNR=5.1						
GERES				LR	LR	12 32 04.8	
	comp=Z,71nm,18.6s,MS3.8,baz=289,slow=39						
EKA	**Eskdalemuir Ar**	**57.09**	**321**	P	**P**	**12 06 29.5**	**-0.8**
	comp=Z,5.1nm,0.7s,mb4.7,baz=47,slow=6.6,SNR=13						
YKA	**Yellowknife Ar**	**57.35**	**23**	P	**P**	**12 06 30.1**	**-2.0**
	comp=Z,2.3nm,0.8s,mb4.3,baz=330,slow=7.1,SNR=18						
YKA	**Yellowknife Ar**	**57.35**	**23**	P	**P**	**12 06 30.1**	**-2.0**
SCHQ	**Schefferville**	**70.15**	**358**	P	**P**	**12 07 55.0**	**-1.6**
	comp=Z,3.1nm,0.8s,mb4.5,baz=348,slow=6.4,SNR=4.0						
SCHQ	**Schefferville**	**70.15**	**358**	P	**P**	**12 07 55.0**	**-1.6**
BMO	**Blue Mountains**	**72.32**	**34**	*e*P	**P**	**12 08 10.0**	**+0.3**
	comp=Z,2.8nm,0.8s,mb4.4						
TPAW	**Teton Pass**	**75.47**	**30**	*e*P	**P**	**12 08 28.9**	**+0.8**
	comp=Z,7.9nm,1.1s,mb4.7						
PDAR	**Pinedale Array**	**76.53**	**29**	P	**P**	**12 08 33.3**	**-0.8**
	comp=Z,0.4nm,0.7s,mb3.6,baz=46,slow=4.3,SNR=5.0						
HWUT	**Hardware Ranch**	**77.02**	**31**	*e*P	**P**	**12 08 37.5**	**+0.6**
	comp=Z,5.4nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	**77.72**	**157**	P	**P**	**12 08 40.4**	**-0.5**
	comp=Z,1.0nm,0.8s,mb4.0,baz=350,slow=6.4,SNR=7.3						
NVAR	**Mina Array Bea**	**77.75**	**37**	P	**P**	**12 08 41.5**	**+0.5**
	comp=Z,0.8nm,0.7s,mb3.9,baz=337,slow=4.2,SNR=7.4						
NLU	**North Lily Min**	**78.39**	**32**	*e*P	**P**	**12 08 45.5**	**+0.9**
MSU	**Marysvale**	**79.68**	**33**	*e*P	**P**	**12 08 52.7**	**+1.1**
ASAR	**Alice Springs**	**81.23**	**158**	P	**P**	**12 09 00.1**	**+0.1**
	comp=Z,0.7nm,0.9s,mb3.7,baz=350,slow=4.9,SNR=7.6						
ANMO	**Albuquerque**	**84.68**	**30**	*e*P	**P**	**12 09 19.1**	**+1.3**
	comp=Z,1.3nm,0.8s,mb4.2						
WMOK	**Wichita Mounta**	**86.85**	**24**	*e*P	**P**	**12 09 29.0**	**+0.4**
	comp=Z,9.0nm,1.5s,mb4.8						
TORD	**Torodi Ar. Bea**	**89.59**	**293**	P	**P**	**12 09 41.5**	**-0.2**
	comp=Z,0.9nm,0.7s,mb4.1,baz=29,slow=4.2,SNR=5.0						
QSPA	**South Pole Qui**	**145.12**	**180**	*e*P	PKPbc	12 16 19.3	-1.8
LVC	**Limon Verde**	**147.30**	**359**	*e*PKPbc	PKPbc	12 16 28.4	+0.8
CPUP	**Villa Florida**	**149.65**	**338**	PKPbc	PKPbc	12 16 32.5	-1.2
	comp=Z,0.9nm,0.5s,baz=0.9,slow=5.4,SNR=8.1						

*IDC **03** 12:06:15.4±3.8, 2.29N×127.28E, h90km±32km, mb4.1/11, mb1 4.3/11, mb1mx4.0/19, mbtmp4.5/11, Error ellipse: s-maj=60.2km s-min=10.7km az=72.0*
*ISCJB **03** 12:06:17.7±2.8, 2.25N±0.09×127.2E±0.2, h129km±26km, mb4.3/18, Error ellipse: s-maj=28.3km s-min=8.4km az=123.8*
*NEIC **03** 12:06:18.4±2.0, 2.24N×127.17E, h120km±19km, mb4.4/10, Error ellipse: s-maj=18.9km s-min=5.6km az=63.0*
ISC 03 12:06:17.3±2.3**, 2.28N**±0.08×**127.2E**±0.1**, h108**km±21km**, n32, σ0.76**/33**, mb4.4**/18**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**11.60**	**289**	*e*Pn	**Pn**	**12 09 00.1**	**+0.7**
KAKA	**Kakadu**	**15.77**	**161**	*e*P	**Pn**	**12 09 54.8**	**+1.5**
	33nm,0.6s						
KSM	**Kuching**	**16.92**	**268**	*e*P	**Pn**	**12 10 07.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**20.31**	**184**	*e*P	**P**	**12 10 43.5**	**-1.2**
	7.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.31**	**184**	P	**P**	**12 10 43.7**	**-1.0**
	4.6nm,0.5s,baz=5.3,slow=12,SNR=37						
WRAB	**Tennant Creek**	**23.16**	**163**	*e*P	**P**	**12 11 13.8**	**-0.5**
	34nm,0.5s,mb4.9						
WRA	**Warramunga Arr**	**23.16**	**163**	P	**P**	**12 11 13.6**	**-0.7**
	18nm,0.4s,mb4.8,baz=334,slow=11,SNR=174						
WRA				PcP	PcP	12 15 00.0	+0.7
	0.6nm,0.4s,baz=335,slow=2.3,SNR=5.2						
WRA				S	**S**	**12 15 19.5**	**+1.9**
	0.9nm,0.7s,baz=340,slow=22,SNR=4.3						
WB2	**Warramunga Arr**	**23.17**	**163**	*e*P	**P**	**12 11 13.7**	**-0.7**
WB2				*e*		12 15 00.1	
MBWA	**Marble Bar**	**24.42**	**197**	*e*P	**P**	**12 11 25.9**	**+0.1**
	5.9nm,0.4s,mb4.3						
AS31	**Alice Springs**	**26.60**	**166**	*e*P	**P**	**12 11 44.8**	**-0.6**
AS31				*e*PcP	PcP	12 15 07.4	+0.5
ASAR	**Alice Springs**	**26.60**	**166**	P	**P**	**12 11 45.2**	**-0.2**
	2.1nm,0.3s,mb4.2,baz=342,slow=7.7,SNR=96						
ASAR				PcP	PcP	12 15 07.7	+0.8
	1.7nm,0.4s,baz=347,slow=2.2,SNR=14						
ASPA	**Alice Springs**	**26.60**	**166**	*e*P	**P**	**12 11 44.8**	**-0.7**
ASPA				*e*		12 15 07.6	
FORT	**Forrest**	**32.88**	**179**⇓	*i*P	**P**	**12 12 40.8**	**-0.2**
	15nm,0.5s,mb5.1						
MUN	**Mundaring**	**35.64**	**196**	*e*P	**P**	**12 13 04.6**	**-0.2**
NWAO	**Narrogin (SRO)**	**36.27**	**194**	P	**P**	**12 13 10.6**	**+0.4**
	6.4nm,0.5s,mb4.8,baz=18,slow=8.3,SNR=8.5						
STKA	**Stephens Creek**	**36.61**	**159**	*e*P	**P**	**12 13 13.2**	**+0.1**
	15nm,0.4s,mb5.3						
STKA				*e*		12 15 34.4	
STKA	**Stephens Creek**	**36.61**	**159**	P	**P**	**12 13 13.5**	**+0.4**
	23nm,0.6s,mb5.3,baz=332,slow=7.8,SNR=45						
STKA				PcP	PcP	12 15 34.4	+0.4
	3.4nm,0.5s,baz=329,slow=5.6,SNR=5.5						
STKA	**Stephens Creek**	**36.61**	**159**	*e*P	**P**	**12 13 13.2**	**+0.2**
ARMA	**Armidale**	**39.99**	**146**	*e*P	**P**	**12 13 42.4**	**+1.0**
ULN	**Ulaanbaatar**	**48.64**	**342**	*e*P	**P**	**12 14 49.8**	**-0.5**
	1.5nm,0.6s,mb4.1						
SONM	**Songino Array**	**48.82**	**341**	P	**P**	**12 14 51.7**	**+0.1**
	0.8nm,0.5s,mb4.0,baz=160,slow=8.3,SNR=4.9						
MKAR	**Makanchi Array**	**59.02**	**326**	P	**P**	**12 16 06.0**	**+0.2**
	5.3nm,0.5s,mb4.8,baz=121,slow=8.6,SNR=38						
ZAL	**Zalesovo**	**62.09**	**333**	P	**P**	**12 16 27.4**	**+0.8**
	1.3nm,0.3s,mb4.5,baz=222,slow=4.4,SNR=3.4						
KURK	**Kurchatov**	**63.22**	**328**	*e*P	**P**	**12 16 33.7**	**-0.4**
	2.9nm,0.6s,mb4.4						
KURK				*e*		12 16 48.6	
KURK				*e*	pP	12 17 01.9	+1.3
BVAR	**Borovoye Array**	**68.79**	**327**	P	**P**	**12 17 09.9**	**0.0**
	1.9nm,0.9s,mb3.9,baz=156,slow=8.1,SNR=7.9						
BRVK	**Borovoye**	**68.87**	**327**	*e*P	**P**	**12 17 10.6**	**+0.3**
	1.0nm,0.5s,mb3.9						
BRVK				*e*	pP	12 17 36.9	-0.2
ZRNK	**Zerenda**	**69.52**	**327**	*e*P	**P**	**12 17 13.5**	**-0.8**
	3.2nm,0.8s,mb4.2						
AKTK	**Aktyubinsk**	**75.09**	**322**	P	**P**	**12 17 48.4**	**+0.9**
AKTO	**Aktyubinsk**	**75.09**	**322**	P	**P**	**12 17 48.4**	**+0.9**
	0.7nm,0.3s,mb3.9,baz=84,slow=10,SNR=3.3						
ARCES	**ARCESS Array B**	**91.97**	**340**	P	**P**	**12 19 11.8**	**-2.0**
	1.9nm,1.0s,mb4.3,baz=81,slow=7.5,SNR=3.6						
ARCES	**ARCESS Array B**	**91.97**	**340**	P	**P**	**12 19 11.8**	**-2.0**
QSPA	**South Pole Qui**	**92.20**	**180**	*e*P	**P**	**12 19 15.6**	**+0.7**
	2.1nm,0.8s,mb4.4						
QSPA				*e*		12 19 37.7	

*MOS **03** 12:09:26.6±1.0, 21.33S×32.92E, h10km, mb4.7/12, Error ellipse: s-maj=16.4km s-min=9.0km az=81.2*
*ISCJB **03** 12:09:26.5±0.3, 21.37S±0.04×32.82E±0.05, h10km, mb4.5/32, MS4.3/15, Error ellipse: s-maj=8.1km s-min=4.5km az=82.1*
*IDC **03** 12:09:27.5±0.6, 21.19S×33.35E, h0km, mb4.2/15, mb1 4.3/17, mb1mx4.2/28, mbtmp4.2/17, ML4.4/2, MS4.2/15, Ms1 4.2/15, ms1mx3.9/31, Error ellipse: s-maj=25.7km s-min=16.7km az=64.0*
*PRE **03** 12:09:27.1±1.5, 21.52S×33.09E, h5km, ML5.3*
*BJI **03** 12:09:28.7, 21.30S×33.10E, h10km, mB5.3, mb5.0, Ms4.9, Msz4.3*
*NEIC **03** 12:09:28.8±0.4, 21.34S×33.10E, h10km, mb4.7/10, Error ellipse: s-maj=13.6km s-min=9.4km az=116.0*
*SZGRF **03** 12:09:33.3, 20.87S×33.56E, h33km, mb4.7, Mozambique*
ISC 03 12:09:28.4±0.3**, 21.35S**±0.04×**32.94E**±0.05**, h10**km**,** **(h13**km±1.1km**:pP-P), n99, σ1.17**/102**, mb4.5**/32**, MS4.3**/15**, 4C-2D, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	**Messina**	**2.88**	**249**	*e*P	**Pn**	**12 10 16.7**	**+2.4**
MSNA				*e*S	**Sn**	**12 10 52.4**	**+3.3**
MSNA				AML	AML	12 11 27.5	
	comp=Z,1μm,0.4s						
POGA	**Pongola**	**6.11**	**191**	*e*P	**Pn**	**12 10 56.1**	**-2.6**
POGA				*e*S	**Sn**	**12 12 02.1**	**-6.5**
POGA				AML	AML	12 12 55.3	
	comp=Z,449nm,0.6s						
KSR	**Koster**	**7.12**	**230**	*e*P	**Pn**	**12 11 12.4**	**-0.2**
KSR				*e*S	**Sn**	**12 12 30.6**	**-3.0**
KSR				AML	AML	12 13 32.1	
	comp=Z,236nm,0.7s						
LSZ	**Lusaka**	**7.54**	**322**	Pn	**Pn**	**12 11 18.7**	**+0.4**
	comp=Z,9.1nm,0.3s,baz=147,slow=15,SNR=42						
LSZ				Sn	**Sn**	**12 12 39.8**	**-4.1**
	comp=Z,24nm,0.3s,baz=209,slow=23,SNR=18						
LSZ				Lg		12 13 24.1	
	comp=Z,102nm,0.3s,baz=42,slow=23,SNR=20						
LSZ				LR	LR	12 14 34.7	
	comp=Z,630nm,21.0s,baz=140,slow=40						
LSZ	**Lusaka**	**7.54**	**322**	*e*P	**Pn**	**12 11 18.5**	**+0.1**
LSZ				*e*		12 12 38.7	
LSZ				pmax	pmax		
	comp=Z,100nm,0.7s						
LSZ	**Lusaka**	**7.54**	**322**	*e*Pn	**Pn**	**12 11 18.5**	**+0.2**
	comp=Z,100nm,0.7s						
LSZ				*e*Sn	**Sn**	**12 12 38.7**	**-5.2**
LBTB	**Lobatse**	**7.67**	**240**	*e*P	**Pn**	**12 11 21.0**	**+0.8**
LBTB				*e*S	**Sn**	**12 12 44.3**	**-2.8**
LBTB				AML	AML	12 13 42.5	
	comp=Z,246nm,0.5s						
LBTB	**Lobatse**	**7.67**	**240**	Pn	**Pn**	**12 11 22.4**	**+2.2**
	comp=Z,5.3nm,0.3s,baz=66,slow=13,SNR=97						
LBTB				Sn	**Sn**	**12 12 48.8**	**+1.6**
	comp=Z,14nm,0.3s,baz=155,slow=22,SNR=3.3						
LBTB				Lg		12 13 31.1	
	comp=Z,40nm,0.3s,baz=333,slow=22,SNR=8.8						
LBTB	**Lobatse**	**7.67**	**240**	*e*P	**Pn**	**12 11 22.1**	**+1.9**
LBTB				*e*		12 12 47.8	
LBTB				pmax	pmax		
	comp=Z,25nm,0.2s						
LBTB	**Lobatse**	**7.67**	**240**	*e*Pn	**Pn**	**12 11 22.1**	**+1.9**
	comp=Z,25nm,0.2s						
LBTB				*e*Sn	**Sn**	**12 12 47.8**	**+0.6**
SEK	**Senekal**	**8.45**	**214**	*e*P	**Pn**	**12 11 31.2**	**+0.4**
SEK				*e*S	**Sn**	**12 13 01.0**	**-5.2**
SEK				AML	AML	12 14 25.2	
	comp=Z,241nm,0.8s						
KSD	**Kokstad**	**9.68**	**198**	*e*P	**Pn**	**12 11 47.3**	**-0.4**
KSD				*e*S	**Sn**	**12 13 28.5**	**-8.0**
KSD				AML	AML	12 14 18.1	
	comp=Z,60nm,0.6s						
BOSA	**Boshof**	**10.04**	**222**	*e*P	**Pn**	**12 11 52.8**	**+0.2**
BOSA				*e*S	**Sn**	**12 13 38.7**	**-6.5**
BOSA				AML	AML	12 15 27.8	
	comp=Z,120nm,0.7s						
BOSA	**Boshof**	**10.04**	**222**	Pn	**Pn**	**12 11 53.0**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=50,slow=13,SNR=43						
BOSA				Sn	**Sn**	**12 13 43.6**	**-1.6**
	comp=Z,5.1nm,0.3s,baz=305,slow=17,SNR=3.0						
BOSA				Lg		12 14 50.8	
	comp=Z,14nm,0.3s,baz=312,slow=21,SNR=5.5						
BOSA				LR	LR	12 15 59.8	
	comp=Z,2μm,19.4s,baz=51,slow=38						
BOSA	**Boshof**	**10.04**	**222**	*e*P	**Pn**	**12 11 52.4**	**-0.2**
BOSA				pmax	pmax		
	comp=Z,25nm,0.2s						
BOSA	**Boshof**	**10.04**	**222**	*e*Pn	**Pn**	**12 11 52.4**	**-0.2**
	comp=Z,25nm,0.2s						
BOSA				*e*Sn	**Sn**	**12 13 32.9**	**-12**
UPI	**Upington**	**12.69**	**234**	*e*P	**Pn**	**12 12 29.9**	**+1.0**
UPI				*e*S	**Sn**	**12 14 43.5**	**-6.7**
UPI				AML	AML	12 14 50.9	
	comp=Z,28nm,0.5s						
OPO	**Ambohidratompo**	**13.68**	**81**	Pn	**Pn**	**12 12 35.5**	**-6.9**
	comp=Z,1.4nm,0.3s,baz=266,slow=13,SNR=11						
OPO				Sn	**Sn**	**12 14 59.1**	**-15**
	comp=Z,5.3nm,0.3s,baz=165,slow=20,SNR=7.5						
TSUM	**Tsumeb**	**14.57**	**276**	Pn	**Pn**	**12 12 54.3**	**-0.2**
	comp=Z,2.3nm,0.3s,baz=88,slow=16,SNR=32						
TSUM				Sn	**Sn**	**12 15 32.4**	**-3.6**
	comp=Z,1.5nm,0.3s,baz=156,slow=9.4,SNR=7.4						
TSUM				Lg		12 17 10.0	
	comp=Z,5.7nm,0.3s,baz=2.5,slow=19,SNR=6.2						
TSUM				LR	LR	12 18 38.8	
	comp=Z,2μm,18.7s,baz=235,slow=37						
TSUM	**Tsumeb**	**14.57**	**276**	*e*Pn	**Pn**	**12 12 53.9**	**-0.6**
	comp=Z,50nm,0.9s						
TSUM				*e*Sn	**Sn**	**12 15 32.4**	**-3.6**
SUR	**Sutherland**	**15.40**	**222**	*e*P	**Pn**	**12 13 07.1**	**+1.4**
SUR				*e*S	**Sn**	**12 15 48.7**	**-7.7**
SUR	**Sutherland**	**15.40**	**222**	Pn	**Pn**	**12 13 07.1**	**+1.4**
	comp=Z,4.7nm,0.3s,baz=57,slow=15,SNR=26						
SUR				Sn	**Sn**	**12 15 52.0**	**-4.4**
	comp=Z,4.1nm,0.3s,baz=356,slow=17,SNR=5.2						
SUR				Lg		12 17 33.5	
	comp=Z,3.9nm,0.3s,baz=322,slow=23,SNR=6.4						
SUR				LR	LR	12 19 11.1	
	comp=Z,2μm,18.1s,baz=40,slow=37						
SUR	**Sutherland**	**15.40**	**222**	*e*Pn	**Pn**	**12 13 07.4**	**+1.7**
	comp=Z,62nm,0.8s						
SUR				*e*Sn	**Sn**	**12 15 51.3**	**-5.0**
CVNA	**Calvinia**	**15.51**	**227**	*e*P	**Pn**	**12 13 08.5**	**+1.4**
CVNA				*e*S	**Sn**	**12 15 50.8**	**-8.3**
CVNA				AML	AML	12 16 33.1	
	comp=Z,46nm,0.6s						
KMBO	**Kilima Mbogo**	**20.54**	**12**	*e*P	**P**	**12 14 07.8**	**+0.9**
KMBO				pmax	pmax		
	comp=Z,134nm,1.9s						
KMBO	**Kilima Mbogo**	**20.54**	**12**	*e*P	**P**	**12 14 07.8**	**+0.9**
	comp=Z,134nm,1.9s						
MBAR	**Mbarara**	**20.74**	**354**	*e*P	**P**	**12 14 08.5**	**-0.6**
TORD	**Torodi Ar. Bea**	**46.01**	**315**	P	**P**	**12 17 53.1**	**+1.2**
	comp=Z,3.1nm,0.9s,mb4.2,baz=130,slow=6.6,SNR=8.1						
TORD				PP	PP	12 19 46.2	+6.4
	comp=Z,3.2nm,0.8s,baz=133,slow=8.7,SNR=3.6						
TORD				LR	LR	12 37 23.1	
	comp=Z,201nm,18.1s,MS4.1,baz=135,slow=36						
DBIC	**Dimbokro**	**46.38**	**303**	LR	LR	12 35 59.9	
	comp=Z,296nm,21.0s,MS4.2,baz=117,slow=34						
SYO	**Syowa Base**	**47.83**	**177**⇑	*e*P	**P**	**12 18 06.0**	**-0.1**
MAW	**Mawson**	**49.91**	**166**	*e*P	**P**	**12 18 21.4**	**-0.7**
	comp=Z,3.5nm,0.6s,mb4.6						
MAW	**Mawson**	**49.91**	**166**	P	**P**	**12 18 22.4**	**+0.3**
	comp=Z,4.5nm,0.7s,mb4.6,baz=330,slow=8.5,SNR=12						
MAW	**Mawson**	**49.91**	**166**	*e*P	**P**	**12 18 21.4**	**-0.7**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VNA1	**Neumayer--Stat**	**54.89**	**196**	*e*P	**P**	**12 19 02.3**	**+3.2**
VNA1				*e*	pP	12 19 05.7	+3.4
VNA1				*e*		12 19 11.3	
VNA1				*e*		12 19 15.2	
VNA1				*e*		12 20 03.1	
VNA1				*e*		12 20 23.3	
ISP	**Isparta**	**58.92**	**358**	*e*P	**P**	**12 19 28.0**	**+0.3**
BRTR	**Keskin Array B**	**60.76**	**1**	P	**P**	**12 19 41.6**	**+1.3**
	comp=Z,1.3nm,0.9s,mb4.1,baz=186,slow=8.7,SNR=8.1						
GNI	**Garni**	**62.16**	**10**	LR	LR	12 48 49.2	
	comp=Z,80nm,18.5s,MS3.9,baz=193,slow=38						
PSI	**Prapat**	**68.82**	**78**	LR	LR	12 46 13.3	
	comp=Z,400nm,19.9s,MS4.7,baz=196,slow=32						
AKASG	**Malin Array Be**	**71.81**	**358**	P	**P**	**12 20 49.2**	**-1.9**
	comp=Z,0.5nm,0.4s,mb3.8,baz=181,slow=5.9,SNR=6.8						
AKASG	**Malin Array Be**	**71.81**	**358**	*i* P	**P**	**12 20 50.2**	**-0.9**
AKASG	**Malin Array Be**	**71.81**	**358**	P	**P**	**12 20 49.2**	**-1.9**
GERES	**GERESS Array B**	**71.96**	**347**	P	**P**	**12 20 53.3**	**+1.2**
	comp=Z,0.6nm,0.4s,mb3.8,baz=142,slow=6.8,SNR=7.4						
GRA1	**Grafenberg Arr**	**73.31**	**345**	*e*P	**P**	**12 21 01.9**	**+1.8**
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**73.31**	**345**	*e*P	**P**	**12 21 01.9**	**+1.8**
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**73.31**	**345**	*e*P	**P**	**12 21 01.9**	**+1.8**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**73.31**	**345**	*e*P	**P**	**12 21 01.9**	**+1.8**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
NWAO	**Narrogin (SRO)**	**74.11**	**120**	P	**P**	**12 21 05.5**	**+0.7**
	comp=Z,15nm,1.1s,mb4.8,baz=249,slow=0.2,SNR=3.1						
NWAO	**Narrogin (SRO)**	**74.11**	**120**	P	**P**	**12 21 05.5**	**+0.7**
AAK	**Ala-Archa**	**74.31**	**31**⇑	*e*P	**P**	**12 21 05.0**	**-0.9**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
CLL	**Collm**	**74.44**	**347**	P	**P**	**12 21 06.0**	**-0.7**
	comp=Z,logA/T=0.8,mb4.5						
CLL	**Collm**	**74.44**	**347**	*e*P	**P**	**12 21 06.0**	**-0.7**
	comp=Z,7.0nm,1.0s,mb4.5						
CLL	**Collm**	**74.44**	**347**	*e*P	**P**	**12 21 05.0**	**-1.7**
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
CLL				MLR	MLR		
	comp=Z,100nm,13.8s,MS4.3						
CLL	**Collm**	**74.44**	**347**	*e*P	**P**	**12 21 05.0**	**-1.7**
	comp=Z,7.0nm,1.0s,mb4.5						
CLL				LR	LR		
	comp=Z,100nm,13.8s,MS4.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKTK	**Aktyubinsk**	**74.83**	**16**	P	**P**	**12 21 08.4**	**-0.6**
AKTO	**Aktyubinsk**	**74.83**	**16**	P	**P**	**12 21 08.4**	**-0.6**
	comp=Z,1.1nm,0.5s,mb4.0,baz=221,slow=6.5,SNR=5.5						
BDFB	**Brasilia**	**76.22**	**258**	P	**P**	**12 21 21.7**	**+4.8**
	comp=Z,2.0nm,0.4s,mb4.4,baz=72,slow=8.8,SNR=4.0						
BDFB				LR	LR	12 51 27.4	
	comp=Z,351nm,18.8s,MS4.7,baz=287,slow=33						
OBN	**Obninsk**	**76.22**	**2**	⇓*e*P	**P**	**12 21 15.7**	**-1.2**
OBN				*e*S	S	12 31 08.2	+7.0
OBN				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
VNDA	**Vanda**	**76.94**	**170**	P	**P**	**12 21 21.4**	**+0.4**
	comp=Z,2.5nm,1.0s,mb4.1,baz=278,slow=4.8,SNR=3.8						
VNDA	**Vanda**	**76.94**	**170**	P	**P**	**12 21 21.4**	**+0.4**
ZRNK	**Zerenda**	**80.34**	**21**	*e*P	**P**	**12 21 38.9**	**-0.9**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
ZRNK	**Zerenda**	**80.34**	**21**	*e*P	**P**	**12 21 38.9**	**-0.9**
	comp=Z,3.9nm,1.1s,mb4.2						
ARU	**Arti**	**80.45**	**14**	⇓*i*P	**P**	**12 21 39.8**	**-0.5**
ARU				*e*		12 24 43.8	
ARU				*e*PPP		12 26 34.5	
ARU				*e*S	S	12 31 45.8	-0.8
ARU				*e*SS	SS	12 36 55.1	-3.3
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
BRVK	**Borovoye**	**80.87**	**22**	*e*P	**P**	**12 21 42.0**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
BRVK	**Borovoye**	**80.87**	**22**	*e*P	**P**	**12 21 42.0**	**-0.6**
	comp=Z,5.6nm,1.2s,mb4.4						
BVAR	**Borovoye Array**	**80.88**	**22**	P	**P**	**12 21 41.7**	**-0.9**
	comp=Z,3.7nm,0.9s,mb4.3,baz=220,slow=5.8,SNR=16						
CPUP	**Villa Florida**	**81.04**	**245**	LR	LR	12 53 08.0	
	comp=Z,121nm,19.8s,MS4.2,baz=111,slow=32						
MKAR	**Makanchi Array**	**81.13**	**32**	P	**P**	**12 21 43.1**	**-0.9**
	comp=Z,1.1nm,0.6s,mb4.0,baz=212,slow=4.3,SNR=10						
MKAR	**Makanchi Array**	**81.13**	**32**	⇑*e*P	**P**	**12 21 43.0**	**-1.0**
CHKZ	**Chkalovo**	**81.49**	**22**	*e*P	**P**	**12 21 45.0**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
CHKZ	**Chkalovo**	**81.49**	**22**	*e*P	**P**	**12 21 45.0**	**-0.9**
	comp=Z,9.9nm,1.3s,mb4.6						
WMQ	**Urumqi**	**81.98**	**37**	*e*P	**P**	**12 21 49.0**	**+0.6**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI	**Kunming**	**82.02**	**59**	P	**P**	**12 21 52.5**	**+3.9**
KMI				AP	pP	12 21 55.1	+3.1
KMI				XP	sP	12 21 56.3	+3.1
KMI				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
KMI				LR	LR		
	comp=Z,52nm,19.7s,MS3.9						
KURK	**Kurchatov**	**82.27**	**27**	*e*P	**P**	**12 21 48.5**	**-1.5**
KURK				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
KURK	**Kurchatov**	**82.27**	**27**	*e*P	**P**	**12 21 48.5**	**-1.5**
	comp=Z,20nm,1.3s,mb4.9						
NOA	**NORSAR Array B**	**83.96**	**350**	P	**P**	**12 21 58.3**	**-0.4**
	comp=Z,0.9nm,0.8s,mb4.0,baz=121,slow=3.9,SNR=3.5						
NOA				LR	LR	13 02 46.8	
	comp=Z,30nm,19.4s,MS3.7,baz=340,slow=38						
CD2	**Chengdu**	**85.52**	**55**	*e*P	**P**	**12 22 06.9**	**+0.3**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
PLCA	**Paso Flores**	**85.98**	**228**	LR	LR	12 55 27.1	
	comp=Z,62nm,18.4s,MS4.0,baz=276,slow=32						
FITZ	**Fitzroy Crossi**	**85.98**	**108**	P	**P**	**12 22 08.6**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.3,baz=256,slow=11,SNR=7.3						
GTA	**Gaotai**	**86.86**	**46**	*e*P	**P**	**12 22 13.4**	**+0.2**
GTA				AP	pP	12 22 17.0	+0.4
GTA				XP	sP	12 22 19.2	+1.5
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.8						
LZH	**Lanzhou**	**88.01**	**50**	*e*P	**P**	**12 22 19.1**	**+0.4**
LZH				AP	pP	12 22 22.6	+0.5
LZH				AMB	AMB		
	comp=Z,32nm,1.4s,mb5.4						
LZH				AMB	AMB		
	comp=Z,140nm,5.0s						
ASAR	**Alice Springs**	**91.04**	**116**	P	**P**	**12 22 33.4**	**+0.5**
	comp=Z,1.9nm,0.8s,mb4.5,baz=238,slow=3.7,SNR=21						
ASAR				LR	LR	12 57 07.6	
	comp=Z,93nm,20.4s,MS4.2,baz=176,slow=32						
STKA	**Stephens Creek**	**93.64**	**126**	LR	LR	12 56 49.9	
	comp=Z,142nm,21.1s,MS4.4,baz=208,slow=30						
ZAK	**Zakamensk**	**94.44**	**37**	*e*P	**P**	**12 22 48.9**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s,mb4.2						
SONM	**Songino Array**	**95.09**	**40**	P	**P**	**12 22 50.3**	**-1.3**
	comp=Z,0.2nm,0.4s,mb3.9,baz=219,slow=3.7,SNR=3.1						
SONM				LR	LR	13 05 16.9	
	comp=Z,80nm,18.3s,MS4.2,baz=248,slow=35						
ULN	**Ulaanbaatar**	**95.50**	**41**	⇑*e*P	**P**	**12 22 54.4**	**+0.9**
HHC	**Hu-ho-hao-te**	**95.53**	**48**	*e*P	**P**	**12 22 55.8**	**+2.2**
HHC				AP	pP	12 23 00.5	+3.5
HHC				XP	sP	12 23 02.8	+4.6
HHC				PP	PP	12 26 49.9	+5.4
HHC				SKS		12 33 30.1	
HHC				S	S	12 34 09.3	-1.1
HHC				XS	sS	12 34 17.8	+1.9
HHC				PS	PS	12 35 34.8	+5.7
HHC				SS	SS	12 40 42.2	+3.9
HHC				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.7						
HHC				AMB	AMB		
	comp=Z,97nm,6.2s						
HHC				LR	LR		
	comp=N,154nm,29.4s,MS4.5						
HHC				LR	LR		
	comp=E,177nm,29.4s,MS4.5						
HHC				LR	LR		
	comp=Z,151nm,31.3s,MS4.3						
NJ2	**Nanjing**	**97.75**	**59**	*e*P	**P**	**12 23 04.6**	**+0.9**
NJ2				AP	pP	12 23 09.4	+2.4
NJ2				XP	sP	12 23 11.6	+3.4
NJ2				PP	PP	12 27 05.3	+3.7
NJ2				S	S	12 34 26.0	-3.4
NJ2				XS	sS	12 34 34.0	-1.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.5						
NJ2				LR	LR		
	comp=N,1μm,25.6s,MS5.5						
NJ2				LR	LR		
	comp=E,2μm,24.4s,MS5.5						
YKA	**Yellowknife Ar**	**133.30**	**340**	PKP	PKPdf	12 28 43.8	-0.7
	comp=E,0.4nm,0.6s,baz=41,slow=2.0,SNR=7.7						
PDAR	**Pinedale Array**	**142.14**	**313**	PKP	PKPdf	12 29 00.4	-0.4
	comp=E,0.9nm,1.0s,baz=104,slow=6.3,SNR=5.3						
TMUT	**Trail Mountain**	**144.55**	**308**	*e*PKPdf	PKPdf	12 29 06.5	+1.5
HLID	**Hailey**	**145.00**	**317**	*e*PKPdf	PKPdf	12 29 08.2	+2.3
MSU	**Marysvale**	**145.53**	**308**	*e*PKIKP	PKPdf	12 29 09.5	+2.8
WUAZ	**Wupatki**	**145.79**	**302**	*e*PKPab	PKPab	12 29 11.0	+2.9
TUC	**Tucson**	**145.99**	**296**	*e*PKP2	PKPab	12 29 11.0	+2.2
BMO	**Blue Mountains**	**146.11**	**321**	*e*PKIKP	PKPdf	12 29 10.0	+2.3
HAWA	**Hanford**	**146.45**	**325**	*e*PKPab	PKPab	12 29 11.9	+1.3
NVAR	**Mina Array Bea**	**149.99**	**311**	PKPbc	PKPbc	12 29 21.6	+2.5
	comp=E,2.0nm,0.6s,baz=90,slow=1.8,SNR=16						
MTUM	**Tungsten Hills**	**150.64**	**309**	*e*PKPbc	PKPbc	12 29 24.1	+3.5
HUMO	**Hull Mountain**	**150.74**	**322**	*e*PKPdf	PKPdf	12 29 17.7	+2.4
HUMO				*e*PKPbc	PKPbc	12 29 21.7	+0.9

*IDC **03** 12:24:53.2±8.4, 3641N×71.17E, h159km±75km, mb3.1/3, mb1 3.2/6, mb1mx3.0/23, mbtmp3.6/6, Error ellipse: s-maj=45.7km s-min=33.8km az=21.0*

*ISCJB **03** 12:24:57.9±2.0, 368N±0.1×712E±0.1, h201km±17km, mb3.1/3, Error ellipse: s-maj=23.0km s-min=13.7km az=69.8*

*NNC **03** 12:25:03.6±8.8, 3720N×71.13E, h200km±109km, mb2.4, mpv3.4, Error ellipse: s-maj=88.4km s-min=50.2km az=22.0*

ISC 03 12:24:57.6±2.3**, 367N**±02×**713E**±01**, h189**km±20km**, n17,** σ**1.01**/20**, mb3.2**/3**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.72**	**18**	P	**Pn**	**12 26 21.4**	**+0.4**
	SNR=21						
UCH	**Uchtor**	**6.04**	**23**	P	**Pn**	**12 26 25.5**	**+0.3**
	SNR=23						
KZA	**Kyzart**	**6.17**	**29**	P	**Pn**	**12 26 26.8**	**-0.1**
	SNR=8.8						
AAK	**Ala-Archa**	**6.40**	**22**	P	**Pn**	**12 26 30.7**	**+0.8**
	SNR=6.6						
KK31	**Karatay Array**	**6.41**	**355**	P	**Pn**	**12 26 29.5**	**-0.5**
	4.4nm,0.3s,baz=260,slow=8.5,SNR=24						
KK31				⇓S	**Sn**	**12 27 38.8**	**-4.1**
	18nm,0.7s,baz=179,slow=20,SNR=30						
ULHL	**Ulahol**	**6.72**	**33**	P	**Pn**	**12 26 33.8**	**-0.2**
	SNR=7.0						
USP	**Ospenovka**	**6.99**	**20**	P	**Pn**	**12 26 37.6**	**0.0**
	SNR=7.0						
TKM2	**Tokmak 2**	**7.03**	**27**	P	**Pn**	**12 26 38.6**	**+0.6**
	SNR=9.8						
TKM2	**Tokmak 2**	**7.03**	**27**	⇑P	**Pn**	**12 26 38.6**	**+0.6**
	0.5nm,0.6s						
TKM2				⇑S	**Sn**	**12 27 56.6**	**-1.0**
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**12.98**	**36**	P	**Pn**	**12 27 55.3**	**+0.2**
	0.1nm,0.3s,baz=225,slow=13,SNR=3.8						
AB31	**Akbulak array**	**15.01**	**330**	⇓P	**Pn**	**12 28 21.8**	**+1.6**
	0.4nm,0.5s,baz=150,slow=12,SNR=8.1						
AB31				⇑S	**Sn**	**12 30 58.0**	**-10**
	1.3nm,0.5s,baz=146,slow=24,SNR=6.4						
BVAR	**Borovoye Array**	**16.32**	**358**	P	**Pn**	**12 28 36.9**	**+0.7**
	0.2nm,0.3s,baz=185,slow=15,SNR=6.3						
AKTO	**Aktyubinsk**	**16.71**	**329**	P	**Pn**	**12 28 41.3**	**+0.5**
ZAL	**Zalesovo**	**19.61**	**24**	P	**P**	**12 29 12.2**	**+0.8**
	0.5nm,0.3s,baz=301,slow=4.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**65.95**	**269**	P	**P**	**12 35 21.9**	**-1.5**
	0.4nm,0.5s,mb3.5,baz=58,slow=6.2,SNR=2.9						
YKA	**Yellowknife Ar**	**81.02**	**3**	P	**P**	**12 36 51.3**	**+0.1**
	0.3nm,0.6s,mb3.1,baz=349,slow=5.3,SNR=4.3						
WRA	**Warramunga Arr**	**81.91**	**122**	P	**P**	**12 36 54.7**	**-1.2**
	0.3nm,0.7s,mb3.0,baz=323,slow=4.9,SNR=7.8						

*IDC **03** 12:32:12.7±1.2, 2372N×9361E, h0km, mb4.0/7, mb1 4.2/7, mb1mx3.8/23, mbtmp4.0/7, Error ellipse: s-maj=52.1km s-min=19.0km az=61.0*

*NEIC **03** 12:32:20.0±0.4, 2377N×9361E, mb4.1/3, Error ellipse: s-maj=11.7km s-min=5.5km az=212.0*

*ISCJB **03** 12:32:24.2±1.9, 236N±0.1×930E±0.1, h127km±22km, mb3.9/10, Error ellipse: s-maj=30.1km s-min=12.4km az=79.2*

ISC 03 12:32:24.5±1.7**, 237N**±01×**932E**±01**, h103**km±19km**, n18,** σ**0.97**/25**, mb3.9**/10**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**7.27**	**131**	*e*Pn	**Pn**	**12 33 59.8**	**-8.2**
	4.5nm,0.5s						
JIRN	**Jiri**	**7.41**	**303**	*e*Pn	**Pn**	**12 34 10.2**	**+0.3**
JIRN				*e*Sn	**Sn**	**12 35 32.2**	**-0.2**
	194nm,0.4s						
GUN	**Gumba**	**7.78**	**304**	*e*Pn	**Pn**	**12 34 15.3**	**+0.4**
GUN				*e*Sn	**Sn**	**12 35 41.1**	**-0.1**
	216nm,0.5s						
PKI	**Pulchoki**	**7.98**	**300**	*e*Pn	**Pn**	**12 34 18.2**	**+0.6**
PKI				*e*Sn	**Sn**	**12 35 46.0**	**-0.1**
	104nm,0.5s						
KKN	**Kakani**	**8.18**	**301**	*e*Pn	**Pn**	**12 34 21.1**	**+0.8**
KKN				*e*Sn	**Sn**	**12 35 50.8**	**-0.3**
	93nm,0.6s						
DMN	**Daman**	**8.24**	**300**	*e*Pn	**Pn**	**12 34 21.7**	**+0.6**
DMN				*e*Sn	**Sn**	**12 35 52.4**	**0.0**
	100nm,0.7s						
GKN	**Gorkha**	**8.78**	**301**	*e*Pn	**Pn**	**12 34 28.8**	**+0.3**
GKN				*e*Sn	**Sn**	**12 36 04.9**	**-0.8**
	140nm,0.4s						
KOLN	**Koldanda**	**9.52**	**297**	*e*Pn	**Pn**	**12 34 38.5**	**0.0**
KOLN				*e*Sn	**Sn**	**12 36 21.5**	**-2.1**
	66nm,0.6s						
MKAR	**Makanchi Array**	**24.63**	**342**	P	**P**	**12 37 36.1**	**+0.9**
	2.3nm,0.5s,mb3.9,baz=152,slow=11,SNR=32						
SONM	**Songino Array**	**26.27**	**20**	P	**P**	**12 37 49.0**	**-1.1**
	2.3nm,0.8s,mb3.7,baz=199,slow=9.2,SNR=14						
ULN	**Ulaanbaatar**	**26.51**	**21**	*e*P	**P**	**12 37 49.4**	**-2.9**
	2.2nm,0.6s,mb3.9						
ULN				*e*pP	pP	12 38 03.8	-11
ZAL	**Zalesovo**	**30.83**	**350**	P	**P**	**12 38 29.9**	**-0.7**
	0.9nm,0.6s,mb3.7,baz=105,slow=5.6,SNR=3.8						
BVAR	**Borovoye Array**	**33.98**	**335**	P	**P**	**12 38 59.3**	**+1.2**
	0.9nm,0.6s,mb3.8,baz=134,slow=13,SNR=6.3						
CHKZ	**Chkalovo**	**34.40**	**336**	*e*P	**P**	**12 39 03.1**	**+1.3**
	1.9nm,0.8s,mb4.0						
ZRNK	**Zerenda**	**34.47**	**334**	*e*P	**P**	**12 39 03.1**	**+0.8**
	2.4nm,0.7s,mb4.1						
ZRNK				*e*pP	pP	12 39 17.1	-8.3
WRA	**Warramunga Arr**	**59.11**	**134**	P	**P**	**12 42 13.0**	**-1.0**
	1.1nm,0.5s,mb4.1,baz=322,slow=7.4,SNR=5.3						
ASAR	**Alice Springs**	**61.51**	**137**	P	**P**	**12 42 29.9**	**-0.5**
	1.6nm,0.5s,mb4.3,baz=319,slow=6.4,SNR=9.1						
GERES	**GERESS Array B**	**65.73**	**315**	P	**P**	**12 43 01.6**	**+3.5**
	0.8nm,0.7s,mb3.7,baz=79,slow=6.9,SNR=5.5						

IDC 03 12:36:58.6±8.0**, 772S**×**12879E, h162**km±67km**, mb3.5**/1**, mb1 3.6**/4**, mb1mx3.3**/14**, mbtmp4.0**/4**, Error ellipse: s-maj=63.5km s-min=56.2km az=41.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.77**	**196**	P	Pn	12 39 29.4	+1.0
	0.2nm,0.3s,baz=38,slow=15,SNR=14						
FITZ				S	Sn	12 41 27.7	0.0
	1.0nm,0.3s,baz=63,slow=16,SNR=3.8						
WRA	**Warramunga Arr**	**13.29**	**157**	P	Pn	12 40 00.2	-0.8
	0.7nm,0.3s,baz=331,slow=14,SNR=39						
WRA				S	Sn	12 42 27.6	-0.8
	0.9nm,0.3s,baz=329,slow=22,SNR=6.8						
ASAR	**Alice Springs**	**16.60**	**163**	P	Pn	12 40 43.5	+1.6
	2.0nm,0.3s,baz=338,slow=10,SNR=159						
ASAR				S	S	12 43 48.8	+2.4
	0.3nm,0.3s,baz=328,slow=15,SNR=4.2						
STKA	**Stephens Creek**	**26.84**	**155**	P	P	12 42 23.5	-0.3
	0.6nm,0.3s,baz=321,slow=11,SNR=5.6						

*ISCJB **03** 12:49:47.5±2.0, 387N±0.1×702E±0.1, h10km, Error ellipse: s-maj=19.6km s-min=12.5km az=178.3*

*NNC **03** 12:49:54.0±9.3, 3908N×70.16E, h5km±47km, mb3.7, mpv3.0, Error ellipse: s-maj=59.9km s-min=38.3km az=173.0*

ISC 03 12:49:49.0±2.0**, 386N**±01×**702E**±01**, h10**km**, n9,** σ**0.57**/12**, 3C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.39**	**36**	P	**Pn**	**12 50 55.6**	**0.0**
	SNR=8.9						
KK31	**Karatay Array**	**4.46**	**3**	⇓Pn	**Pn**	**12 50 57.5**	**+0.8**
	3.7nm,0.3s,baz=210,slow=41,SNR=44						
KK31				⇑Sn	**Sn**	**12 51 48.6**	**-0.1**
	9.7nm,0.5s						
KK31				⇓Lg		12 52 00.6	
	47nm,0.8s,baz=236,slow=70,SNR=6.8						
UCH	**Uchtor**	**4.86**	**41**	P	**Pn**	**12 51 02.3**	**+0.1**
	SNR=16						
KZA	**Kyzart**	**5.16**	**47**	P	**Pn**	**12 51 06.5**	**+0.3**
	SNR=18						
USP	**Ospenovka**	**5.65**	**34**	P	**Pn**	**12 51 12.5**	**-0.5**
	SNR=7.8						
TKM2	**Tokmak 2**	**5.92**	**42**	P	**Pn**	**12 51 16.5**	**-0.2**
	SNR=6.4						
TKM2	**Tokmak 2**	**5.92**	**42**	⇑Pn	**Pn**	**12 51 16.5**	**-0.2**
	0.3nm,0.5s						
TKM2				⇓Sn	**Sn**	**12 52 24.6**	**+0.1**
	3.0nm,1.1s						
AB31	**Akbulak array**	**12.92**	**329**	Pn	**Pn**	**12 52 51.5**	**-1.2**
	1.8nm,0.5s,baz=142,slow=13,SNR=34						
AB31				⇓Sn	**Sn**	**12 55 07.8**	**-8.7**
	1.3nm,0.5s,baz=148,slow=23,SNR=4.2						
AKTO	**Aktyubinsk**	**14.62**	**328**	⇑Pn	**Pn**	**12 53 16.8**	**+0.9**

*IDC **03** 12:49:59.4±1.8, 130S×9976E, h0km, mb4.2/7, mb1 4.4/7, mb1mx4.0/19, mbtmp4.2/7, ML2.9/1, Error ellipse: s-maj=91.9km s-min=16.4km az=58.0*

*ISCJB **03** 12:50:03.1±3.5, 13S±02×997E±03, h43km±27km, mb4.3/10, Error ellipse: s-maj=54.0km s-min=12.3km az=105.0*

*NEIC **03** 12:50:05.7±2.4, 132S×9973E, h50km±19km, mb4.3/3, Error ellipse: s-maj=37.0km s-min=8.6km az=52.0*

NEIC Felt [III] at Padang, Sumatra.

ISC 03 12:50:05.2±3.3**, 13S**±02×**997E**±03**, h43**km±25km**, n17,** σ**0.73**/17**, mb4.3**/10**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.15**	**349**	Pn	**Pn**	**12 51 04.7**	**-1.3**
	0.7nm,0.3s,baz=304,slow=11,SNR=2.8						
PSI	**Prapat**	**4.15**	**349**	Pn	**Pn**	**12 51 04.7**	**-1.3**
KULM	**Kulim**	**6.62**	**8**	*e*Pn	**Pn**	**12 51 41.4**	**+1.5**
WRA	**Warramunga Arr**	**38.61**	**121**	P	**P**	**12 57 23.5**	**-0.6**
	1.5nm,0.3s,mb4.2,baz=308,slow=9.1,SNR=43						
WRA				PcP	PcP	12 59 37.0	+1.2
	0.3nm,0.5s,baz=315,slow=2.6,SNR=6.1						
WRAB	**Tennant Creek**	**38.61**	**121**	*e*P	**P**	**12 57 23.7**	**-0.4**
	6.1nm,0.5s,mb4.6						
WB2	**Warramunga Arr**	**38.62**	**121**	*e*P	**P**	**12 57 23.5**	**-0.7**
ASPA	**Alice Springs**	**39.90**	**127**	*e*P	**P**	**12 57 35.0**	**+0.1**
AS31	**Alice Springs**	**39.91**	**127**	*e*P	**P**	**12 57 35.0**	**+0.1**
ASAR	**Alice Springs**	**39.91**	**127**	P	**P**	**12 57 35.1**	**+0.2**
	2.5nm,0.8s,mb4.0,baz=304,slow=8.1,SNR=30						
ASAR				PcP	PcP	12 59 40.8	+0.8
	0.5nm,0.7s,baz=304,slow=2.8,SNR=5.5						
SONM	**Songino Array**	**49.29**	**6**	P	**P**	**12 58 49.6**	**-0.1**
	1.3nm,0.8s,mb4.0,baz=188,slow=8.0,SNR=6.9						
STKA	**Stephens Creek**	**49.84**	**132**	P	**P**	**12 58 55.1**	**+1.2**
	2.0nm,0.7s,mb4.3,baz=306,slow=7.3,SNR=4.9						
MKAR	**Makanchi Array**	**50.28**	**345**	P	**P**	**12 58 57.6**	**+0.3**
	1.2nm,0.3s,mb4.4,baz=154,slow=8.4,SNR=23						
KURK	**Kurchatov**	**54.86**	**344**	*e*P	**P**	**12 59 30.9**	**-0.3**
	1.9nm,0.8s,mb4.2						
ZAL	**Zalesovo**	**56.43**	**349**	P	**P**	**12 59 42.9**	**+0.4**
	5.3nm,0.5s,mb4.8,baz=313,slow=4.9,SNR=15						
CHKZ	**Chkalovo**	**59.89**	**340**	*e*P	**P**	**13 00 05.5**	**-1.1**
	1.5nm,0.8s,mb4.1						
CHKZ				*e*pP	pP	13 00 22.5	+3.5
EIL	**Elat**	**68.89**	**302**	*e*P	**P**	**13 01 06.3**	**+0.8**
	80nm,0.8s						
ARCES	**ARCESS Array B**	**85.72**	**340**	P	**P**	**13 02 39.6**	**0.0**
	0.6nm,0.4s,mb4.2,baz=98,slow=4.6,SNR=11						

*ISCJB **03** 13:06:59.0±1.7, 95N±02×104.1W±02, h10km, mb4.2/16, MS3.8/11, Error ellipse: s-maj=32.3km s-min=19.2km az=132.0*

*IDC **03** 13:07:01.6±1.5, 995N×10437W, h0km, mb4.0/6, mb1 4.3/7, mb1mx4.1/17, mbtmp4.1/7, ML3.4/1, MS3.8/12, Ms1 3.8/12, ms1mx3.7/20, Error ellipse: s-maj=48.2km s-min=31.2km az=106.0*

*NEIC **03** 13:07:02.1±1.0, 967N×104.19W, h10km, mb4.3/11, Error ellipse: s-maj=24.3km s-min=15.9km az=125.0*

ISC 03 13:07:01.8±1.7**, 96N**±02×**1042W**±01**, h10**km**, n36,** σ**1.19**/22**, mb4.2**/16**, MS3.8**/11**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**11.71**	**50**	Pn	**Pn**	**13 09 48.1**	**-0.9**
	0.3nm,0.3s,baz=217,slow=12,SNR=5.9						
CMIG				LR	LR	13 13 09.1	
	comp=Z,681nm,20.0s,baz=229,slow=32						
JCT	**Junction City**	**21.16**	**11**	*e*P	**P**	**13 11 48.5**	**+1.4**
	7.0nm,0.6s,mb4.2						
HKT	**Hockley**	**21.69**	**20**	*e*P	**P**	**13 11 53.7**	**+0.9**
	43nm,1.5s,mb4.7						
TUC	**Tucson**	**23.40**	**346**	*e*P	**P**	**13 12 10.2**	**-0.7**
	5.3nm,1.1s,mb3.9						
LAZ	**Ladron**	**24.82**	**354**	*e*P	**P**	**13 12 25.8**	**+1.7**
AMTX	**Amarillo**	**25.26**	**5**	*e*P	**P**	**13 12 29.1**	**+1.1**
	15nm,0.9s,mb4.5						
ANMO	**Albuquerque**	**25.31**	**356**	P	**P**	**13 12 28.6**	**+0.1**
	0.5nm,0.3s,mb3.5,baz=177,slow=9.4,SNR=3.3						
ANMO	**Albuquerque**	**25.31**	**356**	*e*P	**P**	**13 12 29.3**	**+0.8**
	3.8nm,0.9s,mb3.9						
WMOK	**Wichita Mounta**	**25.50**	**10**	*e*P	**P**	**13 12 31.5**	**+1.3**
	8.5nm,1.6s,mb4.0						
WUAZ	**Wupatki**	**26.61**	**347**	*e*P	**P**	**13 12 40.3**	**+0.1**
	9.8nm,1.1s,mb4.2						
MIAR	**Mount Ida**	**26.66**	**20**	*e*P	**P**	**13 12 41.1**	**+0.4**
	6.3nm,1.2s,mb4.0						
ROSC	**El Rosal**	**29.99**	**97**	LR	LR	13 21 24.0	
	comp=Z,85nm,21.4s,MS3.4,baz=328,slow=28						
TMUT	**Trail Mountain**	**30.22**	**349**	*e*P	**P**	**13 13 09.0**	**-3.5**
NVAR	**Mina Array Bea**	**31.37**	**338**	P	**P**	**13 13 19.2**	**-3.4**
	0.8nm,0.3s,mb4.1,baz=204,slow=17,SNR=28						
PDAR	**Pinedale Array**	**33.36**	**353**	P	**P**	**13 13 39.5**	**-0.6**
	1.3nm,0.8s,mb3.9,baz=179,slow=9.6,SNR=9.7						
HLID	**Hailey**	**34.98**	**347**	*e*P	**P**	**13 13 55.2**	**+1.1**
	3.2nm,1.1s,mb4.2						
DLMT	**Dillon**	**36.35**	**350**	*e*P	**P**	**13 14 04.3**	**-1.6**
	7.6nm,1.2s,mb4.5						
TAOE	**Nuku Hiva Isla**	**40.23**	**244**	*e*LR	LR	13 25 37.2	
	314nm,24.8s						
ULM	**Lac du Bonnet**	**41.09**	**8**	P	**P**	**13 14 45.0**	**-0.7**
	3.2nm,1.0s,mb3.9,baz=213,slow=8.2,SNR=3.4						
ULM				LR	LR	13 31 05.9	
	comp=Z,72nm,21.2s,MS3.5,baz=122,slow=35						
RKT	**Rikitea**	**44.34**	**222**	*e*LR	LR	13 27 33.5	
	261nm,29.8s						
PPT	**Papeete**	**52.34**	**239**	*e*LR	LR	13 31 14.1	
	151nm,25.5s						
PPT	**Papeete**	**52.34**	**239**	LR	LR	13 33 10.6	
	comp=Z,92nm,20.4s,MS3.8,baz=279,slow=30						
YKA	**Yellowknife Ar**	**53.33**	**354**	P	**P**	**13 16 19.8**	**-1.3**
	1.4nm,0.8s,mb4.0,baz=164,slow=7.8,SNR=12						
YKA				LR	LR	13 39 10.8	
	comp=Z,87nm,18.6s,MS3.8,baz=230,slow=36						
SCHQ	**Schefferville**	**53.93**	**26**	P	**P**	**13 16 24.8**	**-0.7**
	5.6nm,1.0s,mb4.4,baz=224,slow=2.0,SNR=5.1						
SCHQ				LR	LR	13 40 07.9	
	comp=Z,68nm,18.5s,MS3.7,baz=247,slow=37						
PLCA	**Paso Flores**	**58.93**	**151**	LR	LR	13 37 29.5	
	comp=Z,149nm,18.3s,MS4.2,baz=119,slow=31						
DAWY	**Dawson**	**59.78**	**343**	*e*P	**P**	**13 17 07.0**	**0.0**
BDFB	**Brasilia**	**61.03**	**114**	LR	LR	13 42 31.7	
	comp=Z,203nm,18.8s,MS4.3,baz=245,slow=35						
INK	**Inuvik**	**61.73**	**348**	*e*P	**P**	**13 17 18.1**	**-2.2**
	3.3nm,0.8s,mb4.5						
NOA	**NORSAR Array B**	**93.50**	**26**	LR	LR	14 03 16.4	
	comp=Z,19nm,20.3s,MS3.5,baz=260,slow=36						
ARCES	**ARCESS Array B**	**93.80**	**16**	LR	LR	14 03 10.9	
	comp=Z,39nm,20.1s,MS3.9,baz=123,slow=36						
HNR	**Honiara**	**97.26**	**262**	*e*P	**P**	**13 20 36.2**	**+1.3**
	66nm,0.4s						
DBIC	**Dimbokro**	**98.03**	**82**	LR	LR	14 00 13.6	
	comp=Z,54nm,18.9s,MS4.1,baz=105,slow=32						
FINES	**FINESS Array B**	**99.25**	**22**	LR	LR	14 05 18.8	
	comp=Z,27nm,18.3s,MS3.8,baz=340,slow=35						
WRA	**Warramunga Arr**	**122.72**	**253**	PKP	PKPdf	13 26 02.0	+4.1
	2.0nm,1.1s,baz=86,slow=2.1,SNR=8.8						
ASAR	**Alice Springs**	**122.96**	**248**	PKP	PKPdf	13 25 59.0	+0.7
	0.4nm,0.9s,baz=112,slow=2.5,SNR=3.1						
MKAR	**Makanchi Array**	**123.55**	**355**	PKP	PKPdf	13 25 59.0	-0.4
	0.3nm,0.9s,baz=173,slow=5.8,SNR=2.3						

IDC 03 13:39:01.9±1.6**, 462N**×**9484E, h0**km**, mb3.8**/7**, mb1 3.9**/7**, mb1mx3.6**/22**, mbtmp3.8**/7**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.6**/38**, Error ellipse: s-maj=99.3km s-min=19.8km az=50.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.46**	**114**	Pn	Pn	13 40 15.7	+4.9
	1.3nm,0.3s,baz=318,slow=12,SNR=6.9						
MKAR	**Makanchi Array**	**43.40**	**347**	P	P	13 47 06.5	+0.3
	0.5nm,0.4s,baz=158,slow=6.9,SNR=5.8						
WRA	**Warramunga Arr**	**45.86**	**123**	P	P	13 47 26.1	+0.3
	1.4nm,0.6s,baz=301,slow=9.5,SNR=17						
ASAR	**Alice Springs**	**47.34**	**128**	P	P	13 47 37.9	+0.5
	0.2nm,0.4s,baz=300,slow=7.9,SNR=9.0						
ASAR				LR	LR	14 08 01.1	
	comp=Z,106nm,18.4s,baz=357,slow=37						
BVAR	**Borovoye Array**	**52.28**	**342**	P	P	13 48 14.6	-0.4
	1.0nm,0.6s,baz=149,slow=12,SNR=5.8						
BRTR	**Keskin Array B**	**65.08**	**312**	P	P	13 49 44.9	+0.6
	0.2nm,0.3s,baz=139,slow=9.5,SNR=3.5						
FINES	**FINESS Array B**	**75.90**	**332**	P	P	13 50 50.1	-0.2
	3.2nm,1.1s,baz=121,slow=7.0,SNR=3.1						
ARCES	**ARCESS Array B**	**78.55**	**340**	P	P	13 51 05.0	-0.1
	0.9nm,0.8s,baz=96,slow=6.2,SNR=3.8						

*IDC **03** 13:46:56.8±1.4, 538S×15307E, h0km, mb4.1/5, mb1 4.2/7, mb1mx3.9/16, mbtmp4.2/7, ML3.9/2, Error ellipse: s-maj=35.8km s-min=28.1km az=139.0*

*ISCJB **03** 13:46:57.7±0.9, 55S±0.1×153.11E±0.09, h16km, mb4.2/9, Error ellipse: s-maj=19.8km s-min=10.9km az=137.8*

NEIC 03 13:46:58.4±6.0, 5.44S×153.18E, h16km±37km, mb4.3/6, Error ellipse: s-maj=21.4km s-min=10.8km az=173.0
ISC 03 13:47:00.8±5.1, **5.5S**±0.2×**153.13E**±0.09, **h28**km±37km, **n18**, σ**0.61**/18, **mb4.2**/9, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.10	236	Pn	Pn	13 48 43.8	+1.0
	6.0nm,0.3s,baz=42,slow=6.1,SNR=22						
PMG				Sn	Sn	13 50 01.9	-0.6
	7.4nm,0.3s,baz=322,slow=23,SNR=9.0						
HNR	Honiara	7.82	121	Pn	Pn	13 48 53.0	+0.4
	3.5nm,0.3s,baz=97,slow=7.8,SNR=4.6						
HNR	Honiara	7.82	121	ePn	Pn	13 48 51.0	-1.7
KAKA	Kakadu	21.65	249	eP	P	13 51 49.2	+0.2
	20nm,0.6s,mb4.7						
WRAB	Tennant Creek	23.25	230	eP	P	13 52 05.7	-0.2
	6.0nm,0.8s,mb4.1						
WB2	Warramunga Arr	23.25	230	eP	P	13 52 05.3	-0.7
WRA	Warramunga Arr	23.26	230	P	P	13 52 05.8	-0.3
	4.4nm,0.8s,mb4.0,baz=54,slow=9.9,SNR=32						
AS31	Alice Springs	25.89	224	eP	P	13 52 30.3	+0.1
ASAR	Alice Springs	25.89	224	P	P	13 52 30.6	+0.4
	1.6nm,0.7s,mb3.7,baz=57,slow=8.7,SNR=6.3						
ASAR				PcP	PcP	13 56 01.1	+2.3
	0.6nm,0.6s,baz=65,slow=2.5,SNR=9.4						
ASPA	Alice Springs	25.89	224	eP	P	13 52 30.3	0.0
STKA	Stephens Creek	28.40	201	eP	P	13 52 52.6	-0.2
	2.1nm,0.8s,mb3.8						
STKA	Stephens Creek	28.40	201	P	P	13 52 53.4	+0.6
	2.4nm,0.7s,mb3.9,baz=35,slow=11,SNR=5.7						
FITZ	Fitzroy Crossi	29.64	243	eP	P	13 53 03.5	-0.3
	1.9nm,0.3s,mb4.3						
FITZ	Fitzroy Crossi	29.64	243	P	P	13 53 03.5	-0.3
	1.0nm,0.3s,mb4.0,baz=69,slow=9.2,SNR=15						
QSPA	South Pole Qui	84.49	180	eP	P	13 59 32.2	+1.1
	1.3nm,0.6s,mb4.2						
CHKZ	Chkalovo	89.94	324	eP	P	13 59 56.8	-0.7
	0.7nm,0.4s,mb4.3						
BVAR	Borovoye Array	89.98	323	P	P	13 59 57.8	+0.2
	1.0nm,0.7s,mb4.3,baz=120,slow=8.5,SNR=4.6						
TORD	Torodi Ar. Bea	150.83	287	PKPbc	PKPbc	14 06 51.1	+0.5
	1.6nm,0.7s,baz=68,slow=2.0,SNR=6.8						

CSEM 03 14:13:02.6±0.5, 38.68N×28.63W, h0km, ML1.3, Error ellipse: s-maj=4.2km s-min=1.7km az=99.0, After PDA
PDA 03 14:13:02.6±0.5, 38.68N×28.63W, h0km, MD2.8, ML1.3, Error ellipse: s-maj=4.2km s-min=1.7km az=99.0
SVSA 03 14:13:02.6±0.5, **38.68N×28.63W, h0km, MD2.8, ML1.3, Error ellipse: s-maj=4.2km s-min=1.7km az=99.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PICO	Pico	0.24	138	eP	Pg	14 13 07.1	0.0
PICO				eS	Sg	14 13 10.7	+0.5
PCND	Candelaria	0.24	148	i P	Pg	14 13 07.3	0.0
PCND				eS	Sg	14 13 10.9	+0.5
PCND							
	22nm,0.1s						
PTEI	Pico do Teixo	0.28	130	eS	Sg	14 13 12.2	+0.6
PTEI							
	12nm,0.3s						
ROSA	Rosais	0.31	82	eP	Pg	14 13 08.5	0.0
ROSA				eS	Sg	14 13 12.5	+0.1
PBOI	Pico dos Bois	0.31	140	eS	Sg	14 13 13.0	+0.4
PBOI							
	20nm,0.2s						
PID	Ribeirinha	0.46	120	erx		14 13 07.8	

IDC 03 14:21:41.0±3.3, **8.99S×107.59E, h0km, mb3.7**/4, **mb1 3.7**/4, **mb1mx3.5**/18, **mbtmp3.7**/4, **Error ellipse: s-maj=159.0km s-min=30.3km az=51.0, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	29.09	123	P	P	14 27 43.5	+0.4
	0.1nm,0.6s,baz=302,slow=8.1,SNR=3.9						
SONM	Songino Array	56.59	359	P	P	14 31 25.6	+0.2
	0.8nm,0.5s,baz=173,slow=8.9,SNR=6.5						
MKAR	Makanchi Array	59.95	340	P	P	14 31 49.0	+0.1
	1.0nm,0.5s,baz=141,slow=7.8,SNR=9.0						
BVAR	Borovoye Array	69.42	337	P	P	14 32 50.7	-0.1
	0.9nm,0.6s,baz=134,slow=9.2,SNR=6.4						

IDC 03 14:28:44.3±2.3, **4.49N×123.00E, h0km, mb3.5**/3, **mb1 3.7**/3, **mb1mx3.5**/18, **mbtmp3.5**/3, **Error ellipse: s-maj=333.0km s-min=26.4km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.71	156	P	P	14 34 25.6	+0.3
	0.5nm,0.3s,baz=334,slow=9.8,SNR=13						
ASAR	Alice Springs	29.93	160	P	P	14 34 54.4	+0.4
	0.2nm,0.4s,baz=339,slow=6.9,SNR=12						
MKAR	Makanchi Array	54.85	327	P	P	14 38 16.4	+0.1
	0.2nm,0.3s,baz=121,slow=7.1,SNR=4.9						

PRU 03 14:30:30.2, 43.56N×20.21E, h0km
MOS 03 14:30:34.7±0.7, 43.92N×19.90E, h11km, mb4.5/1, Error ellipse: s-maj=10.9km s-min=6.8km az=89.9
CSEM 03 14:30:35.7±0.1, 44.06N×20.01E, h5km, ML3.4, Error ellipse: s-maj=1.4km s-min=1.2km az=118.0
ISCJB 03 14:30:35.5±0.3, 44.08N±0.01×20.06E±0.02, h2km±2km, Error ellipse: s-maj=2.7km s-min=2.1km az=32.8
SKO 03 14:30:35.5, 44.07N×20.15E, h2km
PDG 03 14:30:36.4±0.4, 44.02N×20.08E, h11km±1km
NEIC 03 14:30:36.4, 44.02N×20.08E, h11km, ML3.4(PDG), ML3.4(BUC), After PDG.
BEO 03 14:30:36.1±0.3, 44.07N×20.03E, h12km
ISC 03 14:30:36.4±0.4, **44.08N**±0.01×**20.05E**±0.02, **h1**km±2km, **n85**, σ**1.29**/135, **27C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIVS	Divcibare	0.05	295	i Pg	Pg	14 30 38.2	+0.9
DIVS				Sg	Sg	14 30 39.7	+1.8
DIVS	Divcibare	0.05	295	Pg	Pg	14 30 38.2	+0.9
DIVS				Sg	Sg	14 30 39.7	+1.7
GRUS	Gruza	0.51	111	i Pg	Pg	14 30 45.4	-0.9
GRUS				Sg	Sg	14 30 53.7	+0.8
GRUS	Gruza	0.51	111	Pg	Pg	14 30 45.3	-0.9
GRUS				Sg	Sg	14 30 53.7	+0.8
BEO	Belgrade	0.80	21	i Pg	Pg	14 30 51.2	-0.4
BEO				Sg	Sg	14 31 02.7	+0.7
SJES	Sjenica	0.81	186	Pg	Pg	14 30 50.4	-1.5
SJES				Sg	Sg	14 31 03.2	+0.7
SVIS	Svilajnac	0.87	75	⇓iPg	Pg	14 30 53.1	+0.1
SVIS				Sg	Sg	14 31 05.2	+0.9
PLE	Pljevlja	0.89	213	⇑iPg	Pg	14 30 52.3	-1.1
PLE				eSg	Sg	14 31 05.4	+0.5
FGSL	Fruska Gora	1.09	351	Pg	Pg	14 30 56.4	-0.9
FGSL				Sg	Sg	14 31 11.9	+0.4
UPM	Unac-Piva	1.21	224	⇓iPg	Pg	14 30 58.1	-1.3
UPM				i Sg	Sg	14 31 17.0	+2.0
IVA	Berane	1.21	185	⇑iPg	Pg	14 30 57.9	-1.6
IVA				eSg	Sg	14 31 16.3	+1.0
NKY	Niksic	1.48	212	⇓iPg	Pg	14 31 02.9	-1.8
NKY				eSg	Sg	14 31 25.3	+1.4
PVY	Plav	1.48	182	⇓iPg	Pg	14 31 03.1	-1.7
PVY				eSg	Sg	14 31 24.8	+0.8
BRY	Bratogost	1.61	224	⇑iPn	Pn	14 31 05.1	-0.8
BRY				eSn	Sn	14 31 28.6	+1.4
TTG	Podgorica	1.75	200	⇑iPn	Pn	14 31 06.7	-1.1
TTG				eSn	Sn	14 31 31.3	+0.7
TREB	Trebinje	1.84	223	P	Pn	14 31 08.7	-0.4
TREB				S	Sn	14 31 34.0	+1.0
DJES	Djerdap	1.86	72	i Pn	Pn	14 31 10.0	+0.7
DJES				Sg	Sg	14 31 35.5	-0.5
DJES	Djerdap	1.86	72	Pn	Pn	14 31 10.0	+0.7
DJES				Sg	Sg	14 31 35.5	-0.6
BZS	Buzias	1.90	35	⇑iP	Pn	14 31 09.5	-0.4
BZS	Buzias	1.90	35	⇑P	Pn	14 31 09.5	-0.3
BZS				S	Sn	14 31 36.2	+1.8
BZS	Buzias	1.90	35	P	Pn	14 31 09.5	-0.4
BZS				S	Sn	14 31 36.2	+1.8
BUM	Brajici-Budva	1.97	206	⇓iPn	Pn	14 31 10.4	-0.4
BUM				eSn	Sn	14 31 36.8	+0.7
HCY	Herceg Novi	1.99	215	⇓iPn	Pn	14 31 11.0	-0.1
HCY				eSn	Sn	14 31 37.4	+0.8
BLY	Banja Luka	2.16	289	P	Pn	14 31 13.9	+0.4
BLY				S	Sn	14 31 42.8	+1.9
ULC	Ulcinj	2.19	196	⇓iPn	Pn	14 31 13.5	-0.4
ULC				eSn	Sn	14 31 42.0	+0.3
RHK3	Tenkes	2.22	325	⇑eP	Pn	14 31 13.7	-0.5
SKO	Skopje	2.34	154	i Pn	Pn	14 31 14.8	-1.1
SKO				eSn	Sn	14 31 42.8	-2.5
SKO				eSg	Sg	14 31 48.6	-2.9
SKO	Skopje	2.34	154	i Pn	Pn	14 31 14.7	-1.2
SKO				eSn	Sn	14 31 42.7	-2.5
SKO				eSg	Sg	14 31 48.5	-2.9
PKSM	Moragy	2.36	335	⇑iP	Pn	14 31 15.3	-0.9
PKSM	Moragy	2.36	335	⇑P	Pn	14 31 15.3	-0.8
PKSM				S	Sn	14 31 45.9	+0.2
PKSM	Moragy	2.36	335	⇑ePn	Pn	14 31 15.3	-0.9
PKSM				S	Sn	14 31 45.9	+0.2
VTS	Vitosha	2.74	122	⇑iP	Pn	14 31 20.3	-1.1
VTS	Vitosha	2.74	122	i P	Pn	14 31 19.0	-2.4
VTS	Vitosha	2.74	122	P	Pn	14 31 20.3	-1.1
VTS				S	Sn	14 31 55.7	+0.6
PKS9	Tamasi	2.80	334	⇑eP	Pn	14 31 21.8	-0.5
STIP	Stip	2.85	146	i Pn	Pn	14 31 20.6	-2.3
KKB	Krupnik	3.13	134	i P	Pn	14 31 25.0	-1.9
DRGR		3.30	34	⇑iP	Pn	14 31 29.3	+0.2
DRGR		3.30	34	⇑P	Pn	14 31 29.3	+0.2
DRGR				S	Sn	14 32 08.9	0.0
DRGR		3.30	34	P	Pn	14 31 29.3	+0.2
DRGR				S	Sn	14 32 08.9	0.0
BUD	Budapest	3.48	348	ePn	Pn	14 31 30.9	-0.7
BUD				eSg	Sg	14 32 33.2	+5.0
MMB	Musomiste	3.67	131	i P	Pn	14 31 33.7	-0.5
CRES	Cresnjev	3.70	300	i Pn	Pn	14 31 35.2	+0.6
CRES	Cresnjev	3.70	300	i Pn	Pn	14 31 35.2	+0.6
NVLJ	Novalja	3.75	279	i (Pn)	Pn	14 31 36.6	+1.2
NVLJ				i Sn	Sn	14 32 20.0	-0.1
VOIR		3.81	67	⇓iP	Pn	14 31 38.1	+2.0
VOIR		3.81	67	⇓P	Pn	14 31 38.1	+2.0
VOIR				S	Sn	14 32 24.0	+2.4
VOIR		3.81	67	P	Pn	14 31 38.1	+2.0
VOIR				S	Sn	14 32 24.0	+2.4
PSZ	Piszkesteto	3.84	358	⇑ePg	Pn	14 31 36.5	-0.1
PSZ				eSg	Sg	14 32 45.3	+5.5
PSZ	Piszkesteto	3.84	358	ePn	Pn	14 31 34.0	-2.6
LEGS	Legarje	3.84	301	ePn	Pn	14 31 36.4	-0.2
VISS	Visnje	4.08	297	i Pn	Pn	14 31 40.7	+0.8
VISS				e		14 32 46.2	
PDKS	Podkum	4.09	301	i Pn	Pn	14 31 40.6	+0.6
RZN	Rozhen	4.18	123	i P	Pn	14 31 41.0	-0.2
MLR	Muntele Rosu	4.43	69	⇑iP	Pn	14 31 46.4	+1.8
MLR	Muntele Rosu	4.43	69	S	Sb	14 32 46.6	-2.1
MLR	Muntele Rosu	4.43	69	⇑P	Pn	14 31 46.4	+1.8
ARSA	Arzberg	4.49	317	⇑iPn	Pn	14 31 45.2	-0.3
ARSA				⇑iSn	Sn	14 32 35.1	-3.2
VYHS	Vyhne	4.50	350	ePN	Pn	14 31 45.7	+0.1
VYHS				eSN	Sn	14 32 37.2	-1.3
OBKA	Obir	4.58	304	⇑iPn	Pn	14 31 47.0	+0.2
OBKA				⇓iSn	Sn	14 32 38.6	-2.1
ZST	Bratislava	4.60	335	ePN	Pn	14 31 48.2	+1.2
ZST				eSN	Sn	14 32 38.2	-2.9
VOY	Vojsko	4.78	296	ePn	Pn	14 31 52.0	+2.5
VOY				e		14 31 53.8	
VOY				e		14 32 05.3	
VOY				eSn	Sn	14 32 42.2	-3.3
SMOL	Smolenice	4.80	339	ePN	Pn	14 31 49.8	+0.1
SMOL				eSN	Sn	14 32 42.4	-3.5
UZH	Uzhgorod	4.81	18	eP	Pg	14 32 06.3	-2.3
CONA	Conrad Observa	4.83	324	⇑iPn	Pn	14 31 49.6	-0.6
CONA				⇑iSn	Sn	14 32 44.4	-2.4
CRVS	Cervenica-Dubn	4.92	11	ePN	Pn	14 31 52.4	+1.0
PLOR	Plostina	5.01	67	⇓iP	Pn	14 31 54.2	+1.6
BURAR	Bucovina Array	5.05	44	⇑iP	Pn	14 31 55.0	+1.8
BURAR	Bucovina Array	5.05	44	⇑P	Pn	14 31 55.0	+1.8
VRI	Vrincioaia	5.06	67	⇓iP	Pn	14 31 54.9	+1.5
VRI	Vrincioaia	5.06	67	⇓P	Pn	14 31 54.9	+1.5
KOLS	Kolonicke sedl	5.09	17	ePN	Pn	14 31 56.8	+3.0
MOA	Molln	5.52	315	⇑iSn	Sn	14 33 01.2	-2.6
MOA	Molln	5.52	315	⇑iPn	Pn	14 31 59.2	-0.4
MOA				⇓iSn	Sn	14 33 04.9	+1.1
MOA	Molln	5.52	315	Pn	Pn	14 31 59.2	-0.5
MORC	Moravsky Berou	5.96	344	⇓iP	Pn	14 32 11.8	+6.2
MORC	Moravsky Berou	5.96	344	ePn	Pn	14 32 02.3	-3.3
LVV	L'vov	6.36	24	eP	Pn	14 32 02.8	-8.3
KHC	Kasperske Hory	6.74	321	ePN	Pn	14 32 15.7	-0.7
KHC				ex	x	14 32 40.0	
KHC				eSN	Sn	14 33 31.6	-2.2
KHC				eSG	Sg	14 34 18.0	+5.2
KHC	Kasperske Hory	6.74	321	eP	Pn	14 32 17.6	+1.2
DPC	Dobruska-Polom	6.77	339	ePN	Pn	14 32 18.8	+2.0
APE	Apeiranthos	8.15	147	eP	Pn	14 32 42.9	+7.2
OBN	Obninsk	15.34	38	⇑eP	Pn	14 34 16.4	+2.4
OBN				eS	Sn	14 37 04.2	-0.3
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN	Obninsk	15.34	38	eP	Pn	14 34 16.4	+2.4
	comp=Z,3.0nm,0.8s						
OBN				eS	Sn	14 37 04.2	-0.3
MKAR	Makanchi Array	42.75	64	i P	P	14 38 36.0	+0.8
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						

CSEM 03 14:49:58.4, 13.76N×42.79E, h25km, ML4.1, After DHMR
DHMR 03 14:49:58.4±1.5, **13.76N×42.79E, h26**km±22km, **ML4.1, 2C-4D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHBB	Dhamar BB	1.75	62	⇓iP	Pn	14 50 29.2	+2.2
DHBB				i S	Sn	14 50 51.3	+2.9
HAJJ	Hajjah	2.08	22	⇓iP	Pn	14 50 33.2	+1.5
HAJJ				i S	Sn	14 51 01.9	+5.2
HAJJ				AML	AML	14 51 13.2	
	comp=E,1μm,0.6s						
HAJJ	Hajjah	2.08	22	⇓iP	Pn	14 50 33.2	+1.6
HAJJ				i S	Sn	14 51 01.9	+5.2
	comp=E,538nm,0.6s						
ADEN	Aden	2.35	114	⇑iP	Pn	14 50 37.8	+2.6
ADEN				i S	Sn	14 51 08.1	+4.9
ADEN				AML	AML	14 51 25.7	
	comp=E,2μm,0.5s						
ADEN	Aden	2.35	114	⇑iP	Pn	14 50 37.8	+2.5
ADEN				i S	Sn	14 51 08.1	+4.9
	comp=E,857nm,0.5s						
LBOS		2.39	87	⇓iP	Pn	14 50 39.2	+3.3
LBOS				i S	Sn	14 51 11.0	+6.7
BDHA	Al Bayda'	2.71	85	i P	Pn	14 50 43.2	+3.0
BDHA				i S	Sn	14 51 18.5	+6.5
BDHA				AML	AML	14 51 31.9	
	comp=N,2μm,0.5s						
BDHA	Al Bayda'	2.71	85	i P	Pn	14 50 43.2	+3.0
BDHA				i S	Sn	14 51 18.5	+6.4
	comp=N,964nm,0.5s						

IDC 03 15:21:00.0±56.0, **16.26S×174.71W, h0km, mb4.1**/3, **mb1 4.3**/3, **mb1mx3.8**/13, **mbtmp4.1**/3, **2C, Error ellipse: s-maj=1069.0km s-min=170.2km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.51	240	P	P	15 28 57.7	+0.6
	0.8nm,0.3s,baz=95,slow=15,SNR=5.3						
WB2	Warramunga Arr	48.41	258	⇑iP	P	15 29 44.2	+0.3
WRA	Warramunga Arr	48.42	258	P	P	15 29 44.4	+0.4
	0.8nm,0.5s,baz=95,slow=7.2,SNR=37						
ASAR	Alice Springs	48.65	253	P	P	15 29 45.8	+0.1
	2.8nm,0.6s,baz=89,slow=8.5,SNR=98						
ASPA	Alice Springs	48.65	253	⇑iP	P	15 29 45.7	0.0

ISCJB 03 15:29:20.2±0.7, 9.2S±0.1×108.7E±0.2, h10km, mb4.1/13, Error ellipse: s-maj=25.0km s-min=10.0km az=114.9
IDC 03 15:29:22.0±2.1, 9.16S×108.87E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.9/17, mbtmp3.9/7, ML3.3/1, Error ellipse: s-maj=104.4km s-min=17.0km az=52.0
NEIC 03 15:29:22.3±0.7, 9.25S×108.66E, h10km, mb4.4/7, Error ellipse: s-maj=24.2km s-min=9.9km az=59.0
ISC 03 15:29:22.3±0.7, **9.3S**±0.1×**108.6E**±0.2, **h10**km, **n17**, σ**0.99**/17, **mb4.1**/13, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	Kuching	10.81	9	Pn	Pn	15 31 56.1	-1.0
KSM				e		15 32 07.4	
MBWA	Marble Bar	15.95	139	Pn	Pn	15 33 00.8	-5.9
MBWA				eSn	Sn	15 35 39.1	-24
FITZ	Fitzroy Crossi	18.71	120	P	Pn	15 33 41.1	-0.1
	0.1nm,0.3s,baz=5.4,slow=7.2,SNR=4.1						
WRA	Warramunga Arr	27.02	116	P	P	15 35 03.0	-1.5
	0.4nm,0.4s,mb3.3,baz=291,slow=11,SNR=9.9						
WRAB	Tennant Creek	27.02	116	P	P	15 35 05.0	+0.5
	4.2nm,1.0s,mb3.9						
ASAR	Alice Springs	28.09	124	P	P	15 35 15.0	+1.0
	0.4nm,0.6s,mb3.2,baz=300,slow=8.2,SNR=11						
ASAR				PcP	PcP	15 38 30.1	+1.8
	0.2nm,0.5s,baz=308,slow=2.0,SNR=7.5						
QIZ	Qiongzhong	28.15	2	P	P	15 35 12.4	-2.2
	34nm,1.2s,mb4.9						
STKA	Stephens Creek	37.94	131	P	P	15 36 40.6	+0.7
	3.6nm,0.8s,mb4.1,baz=324,slow=6.8,SNR=8.2						
SONM	Songino Array	56.89	358	P	P	15 39 08.7	+1.4
	1.4nm,0.4s,mb4.3,baz=176,slow=9.2,SNR=24						
ULN	Ulaanbaatar	56.90	359	eP	P	15 39 07.8	+0.4
	2.1nm,0.5s,mb4.4						
ULN				e		15 39 19.7	
MKAR	Makanchi Array	60.56	340	P	P	15 39 33.4	+0.6
	1.5nm,0.4s,mb4.4,baz=148,slow=8.0,SNR=36						
MKAR	Makanchi Array	60.56	340	P	P	15 39 33.4	+0.6
KURK	Kurchatov	65.17	340	eP	P	15 40 03.9	+0.3
	2.5nm,0.9s,mb4.2						
KURK				e		15 40 14.4	
MAW	Mawson	65.68	198	P	P	15 40 05.2	-1.6
	4.9nm,1.3s,mb4.4						
ZAL	Zalesovo	66.12	345	P	P	15 40 10.7	+1.0
	0.9nm,0.3s,mb4.2,baz=91,slow=1.7,SNR=3.0						
CHKZ	Chkalovo	70.48	337	eP	P	15 40 36.6	-0.4
	1.9nm,0.7s,mb4.1						
CHKZ				e		15 40 48.1	
ZRNK	Zerenda	70.57	336	eP	P	15 40 37.7	+0.2
	1.8nm,0.5s,mb4.3						
ZRNK				e		15 40 48.2	

NEIC 03 15:48:15.2, 15.85N×61.42W, h32km, MD3.2(FDF), MD3.3(TRN), After TRN.
NEIC Felt [IV] on Guadeloupe.
TRN 03 15:48:13.4, 15.84N×61.58W, h16km, MD3.6, M3.1(FDF), **Md3.2**(FDF), **7C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	Guadaloupe-3	0.07	278	⇓iP	Pg	15 48 17.3	+0.8
TBG	Guadaloupe-3	0.07	278	eP		16 03 51.8	
TBG				eS		16 03 53.1	
HMG	Houelmont	0.18	320	⇑eP	Pg	15 48 19.5	+1.6
HMG				eS	Sg	15 48 22.4	+1.5
PHG	Guadaloupe-2	0.18	340	⇑eP	Pg	15 48 19.7	+1.8
DOG	Dongo Capester	0.19	348	⇑eP	Pg	15 48 19.8	+1.8
SCG	Saint Claude	0.21	332	⇑eP	Pg	15 48 20.0	+1.7
MGG	Marie-Galante	0.26	73	⇑eP	Pg	15 48 21.6	+2.5
BBL	Barber's Block	0.33	162	eP	Pg	15 48 22.7	+2.3
LZG	Guadaloupe-1	0.35	327	⇓eP	Pg	15 48 22.3	+1.6
DWS	Wesley	0.38	137	eP	Pg	15 48 25.0	+3.8
DWS				eS	Sg	15 48 29.5	+3.2
SFG	Saint Francois	0.55	42	eP	Pg	15 48 26.1	+1.9
MDN	Morne-Daniel	0.55	161	eP	Pg	15 48 28.4	+4.0
MDN				eS	Sg	15 48 36.5	+4.7
SEG	Port Louis	0.56	7	⇑eP	Pg	15 48 26.1	+1.6
DBCT	Belle View Cho	0.61	158	eP	Pg	15 48 29.4	+3.9
DBCT				eS	Sg	15 48 38.0	+4.4
DSHT	Scott's Head	0.66	163	eP	Pg	15 48 30.2	+3.9
DSHT				eS	Sg	15 48 39.1	+4.1
DEG	La Desirade	0.68	47	eP	Pg	15 48 27.9	+1.1
FDF	Fort de France	1.18	159	⇑eP	Pn	15 48 35.9	+0.8
FDF				eS	Sb	15 48 51.9	+1.6
BPA	Boggy Peak	1.23	347	eP	Pn	15 48 38.3	+2.5
BPA				eS	Sb	15 48 54.1	+2.4
BIM	Bigot	1.41	160	eP	Pn	15 48 40.0	+1.7
MVM	Montagne Vaucl	1.44	153	eP	Pn	15 48 40.6	+1.8
MVM				eS	Sn	15 48 60.0	+2.7
CPB	Codrington	1.80	352	eP	Pn	15 48 45.9	+2.2
CPB				eS	Sn	15 49 03.2	-3.1

CSEM 03 15:48:50.9±0.1, 42.32N×1.46E, h0km, ML3.2/34, Error ellipse: s-maj=1.2km s-min=1.0km az=20.0
ISCJB 03 15:48:50.1±0.2, 42.42N±0.01×1.44E±0.01, h14km±2km, Error ellipse: s-maj=2.4km s-min=1.8km az=158.4
MDD 03 15:48:51.8±0.2, 42.34N×1.45E, h2km±3km, mbLg2.6/31, Error ellipse: s-maj=2.1km s-min=1.5km az=171.0, PRXIMO
MDD EMS: II - LA SEU URGELL.
NEIC 03 15:48:51.9, 42.46N×1.45E, h5km, ML2.5(MRB), ML3.1(STR), ML3.3(LDG), MN2.6(MDD), After STR.
NEIC Felt [II] at Le Seu d'Urgell, Spain.
STR 03 15:48:51.9±0.3, 42.46N×1.45E, h5km±1km, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0
LDG 03 15:48:51.9±0.1, 42.35N×1.45E, h2km, Ml3.3/26, Error ellipse: s-maj=2.3km s-min=1.3km az=1.0
ISC 03 15:48:50.9±0.2, **42.39N**±0.01×**1.44E**±0.01, **h12**km±1km, **n174**, σ**1.17**/305, **3C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAND	Andorre	0.15	30	Pg	Pg	15 48 55.4	+0.8
PAND				Lg		15 48 58.3	
CSOR	Sort	0.23	267	Pg	Pg	15 48 55.7	-0.1
CSOR				Lg		15 48 59.6	
	558nm,0.2s						
CSOR	Sort	0.23	267	P	Pg	15 48 55.7	-0.1
CSOR				S	Sg	15 48 59.6	+0.4
CLLI	Llivia	0.40	77	Pg	Pg	15 48 59.0	+0.1
CLLI				Lg		15 49 04.9	
	34nm,0.3s						
CLLI	Llivia	0.40	77	P	Pg	15 48 59.0	+0.1
CLLI				S	Sg	15 49 04.9	+0.5
SALF	Salau	0.42	333	Pg	Pg	15 48 59.9	+0.7
SALF				Lg		15 49 06.4	
VALF	Valcebollere	0.42	88	Pg	Pg	15 48 59.2	-0.2
VALF				Sg	Sg	15 49 05.2	+0.1
VALF	Valcebollere	0.42	88	Pg	Pg	15 48 59.3	0.0
VALF				Lg		15 49 05.5	
GRBF	Gourbit	0.46	9	Pg	Pg	15 49 01.1	+1.1
GRBF				Lg		15 49 08.0	
CBRU	Bruguera	0.56	100	Pg	Pg	15 49 01.5	-0.3
CBRU				Lg		15 49 09.3	
	85nm,0.4s						
CBRU	Bruguera	0.56	100	P	Pg	15 49 01.5	-0.3
CBRU				S	Sg	15 49 09.4	+0.2
CARF	Carcanieres	0.59	56	Pg	Pg	15 49 02.8	+0.4
CARF				Sg	Sg	15 49 11.4	+1.2
CARF	Carcanieres	0.59	56	Pg	Pg	15 49 02.9	+0.5
CARF				Lg		15 49 11.4	
MLS	Moulis	0.62	336	Pg	Pg	15 49 03.6	+0.5
MLS				Lg		15 49 13.0	
LPEF	Le Peyrat	0.66	31	Pg	Pg	15 49 04.8	+1.2
LPEF				Lg		15 49 15.1	
MELF	Melles	0.70	314	Pg	Pg	15 49 04.8	+0.3
MELF				Lg		15 49 15.4	
CAVN	Les Avellanes	0.72	226	Pg	Pg	15 49 04.2	-0.7
CAVN				Lg		15 49 14.9	
	92nm,0.3s						
CAVN	Les Avellanes	0.72	226	P	Pg	15 49 04.3	-0.7
CAVN				S	Sg	15 49 15.0	+0.6
CAVN	Les Avellanes	0.72	226	P	Pg	15 49 04.3	-0.6
FILF	Fillols	0.84	78	Pg	Pg	15 49 05.5	-1.7
FILF				Sg	Sg	15 49 15.6	-2.7
FILF	Fillols	0.84	78	Pg	Pg	15 49 05.2	-2.0
FILF				Lg		15 49 15.9	
RESF	Ens	0.92	298	Pg	Pg	15 49 08.5	-0.1
RESF				Sg	Sg	15 49 20.7	+0.1
RESF	Ens	0.92	298	Pg	Pg	15 49 08.7	0.0
RESF				Lg		15 49 20.7	
CFON	Fontmartina	0.97	130	Pg	Pg	15 49 08.8	-0.8
CFON				Lg		15 49 22.7	
	250nm,0.3s						
CFON	Fontmartina	0.97	130	P	Pb	15 49 08.8	-0.8
CFON				S	Sg	15 49 22.7	+0.5
LRDF	Laroque-de-Fa	0.98	55	Pg	Pg	15 49 10.7	+0.9

LRDF	**Laroque-de-Fa**	**0.98**	**55**	Pg	**Pg**	**15 49 10.3**	**+0.5**
LRDF				Lg		15 49 24.9	
EBIE	**Bielsa**	**1.01**	**288**	⇑Pg	**Pg**	**15 49 10.2**	**-0.1**
	10.0nm,0.2s,SNR=18						
EBIE				Lg		15 49 24.6	
	52nm,0.2s,SNR=23						
EBIE	**Bielsa**	**1.01**	**288**	⇑Pg	**Pg**	**15 49 10.2**	**-0.1**
EBIE				Lg		15 49 23.7	
EBIE	**Bielsa**	**1.01**	**288**	Pg	**Pg**	**15 49 10.2**	**-0.1**
	10.0nm,0.2s,SNR=18						
EPF	**Esparros**	**1.04**	**309**	*e*Pg	**Pg**	**15 49 10.8**	**-0.1**
EPF				*e*Sg	**Sg**	**15 49 25.5**	**+1.1**
	94nm,0.2s						
EPF	**Esparros**	**1.04**	**309**	*e*Pg	**Pg**	**15 49 10.8**	**-0.1**
EPF				*e*Sg	**Sg**	**15 49 25.5**	**+1.1**
	47nm,0.2s						
SJAF	**Saint Jean de**	**1.07**	**84**	Pg	**Pg**	**15 49 11.8**	**+0.3**
SJAF				Sg	**Sg**	**15 49 26.6**	**+1.1**
SJAF	**Saint Jean de**	**1.07**	**84**	Pg	**Pg**	**15 49 11.1**	**-0.4**
SJAF				Lg		15 49 26.0	
EPOB	**Poblet**	**1.07**	**195**	Pg	**Pg**	**15 49 10.6**	**-0.9**
	6.2nm,0.1s,SNR=31						
EPOB				Lg		15 49 24.3	
	137nm,0.3s,SNR=20						
EPOB	**Poblet**	**1.07**	**195**	Pg	**Pg**	**15 49 10.6**	**-0.9**
EPOB				Lg		15 49 24.1	
EPOB	**Poblet**	**1.07**	**195**	Pg	**Pg**	**15 49 10.6**	**-1.0**
	6.2nm,0.1s,SNR=31						
MTLF	**Montolieu**	**1.11**	**31**	*e*Pg	**Pg**	**15 49 13.2**	**+0.9**
MTLF				*e*Sg	**Sg**	**15 49 28.0**	**+1.3**
	216nm,0.2s						
MTLF	**Montolieu**	**1.11**	**31**	Pn	**Pn**	**15 49 12.5**	**+0.3**
MTLF				Pg	**Pg**	**15 49 13.2**	**+0.9**
MTLF				Lg		15 49 28.0	
	108nm,0.2s						
MTLF	**Montolieu**	**1.11**	**31**	*e*Pn	**Pn**	**15 49 12.5**	**+0.3**
MTLF				*e*Pg	**Pg**	**15 49 13.2**	**+0.9**
MTLF				*e*Sg	**Sg**	**15 49 28.0**	**+1.3**
MTLF	**Montolieu**	**1.11**	**31**	*e*Pg	**Pg**	**15 49 13.2**	**+0.9**
MTLF				*e*Sg	**Sg**	**15 49 28.0**	**+1.3**
	108nm,0.2s						
CGAR	**Garraf**	**1.12**	**192**	Pg	**Pg**	**15 49 12.6**	**+0.1**
CGAR				Lg		15 49 28.6	
	20nm,0.2s						
CGAR	**Garraf**	**1.12**	**192**	P	**Pg**	**15 49 12.6**	**+0.1**
CGAR				S	**Sb**	**15 49 28.6**	**+2.0**
VIEF	**Viey**	**1.16**	**296**	Pg	**Pg**	**15 49 12.7**	**-0.5**
VIEF				Sg	**Sg**	**15 49 28.6**	**+0.3**
VIEF	**Viey**	**1.16**	**296**	Pg	**Pg**	**15 49 12.8**	**-0.4**
VIEF				Lg		15 49 28.7	
LABF	**Labassere**	**1.21**	**304**	Pg	**Pg**	**15 49 13.8**	**-0.3**
LABF				Sg	**Sg**	**15 49 31.3**	**+1.5**
LABF	**Labassere**	**1.21**	**304**	Pg	**Pg**	**15 49 13.9**	**-0.2**
LABF				Lg		15 49 30.9	
REYF	**Montagne du Re**	**1.52**	**297**	Pg	**Pg**	**15 49 20.3**	**+0.3**
REYF				Sg	**Sg**	**15 49 41.9**	**+2.2**
REYF	**Montagne du Re**	**1.52**	**297**	Pg	**Pg**	**15 49 19.6**	**-0.4**
REYF				Lg		15 49 41.1	
FDAF	**Les Forges d'A**	**1.55**	**287**	Pg	**Pg**	**15 49 20.0**	**-0.6**
FDAF				Lg		15 49 42.0	
ETSF	**Etsaut**	**1.56**	**290**	*e*Pg	**Pg**	**15 49 21.4**	**+0.4**
ETSF				*e*Sg	**Sg**	**15 49 41.6**	**+0.3**
	126nm,0.3s						
ETSF	**Etsaut**	**1.56**	**290**	Pn	**Pn**	**15 49 19.3**	**+0.8**
ETSF				Pg	**Pg**	**15 49 21.4**	**+0.4**
ETSF				Lg		15 49 41.6	
	63nm,0.3s						
ETSF	**Etsaut**	**1.56**	**290**	*e*Pn	**Pn**	**15 49 19.3**	**+0.8**
ETSF				*e*Pg	**Pg**	**15 49 21.4**	**+0.4**
ETSF				*e*Sg	**Sg**	**15 49 41.6**	**+0.3**
ETSF	**Etsaut**	**1.56**	**290**	*e*Pg	**Pg**	**15 49 21.4**	**+0.4**
ETSF				*e*Sg	**Sg**	**15 49 41.6**	**+0.3**
	63nm,0.3s						
ERTA	**Horta de San J**	**1.66**	**211**	Pn	**Pn**	**15 49 20.2**	**+0.5**
	0.8nm,0.1s,SNR=4.0						
ERTA				Pg	**Pg**	**15 49 21.5**	**-1.2**
	26nm,0.4s,SNR=21						
ERTA				Sn	**Sn**	**15 49 41.3**	**+0.4**
	149nm,0.5s,SNR=19						
ERTA				Lg		15 49 43.0	
	40nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**1.66**	**211**	Pn	**Pn**	**15 49 20.2**	**+0.5**
ERTA				Pg	**Pg**	**15 49 21.5**	**-1.2**
ERTA				Lg		15 49 41.3	
ERTA	**Horta de San J**	**1.66**	**211**	Pn	**Pn**	**15 49 20.2**	**+0.5**
	0.8nm,0.1s,SNR=4.0						
ERTA	**Horta de San J**	**1.66**	**211**	Pg	**Pg**	**15 49 21.5**	**-1.2**
	26nm,0.4s,SNR=21						
ATE	**Arette**	**1.73**	**295**	Pg	**Pg**	**15 49 24.7**	**+0.6**
ATE				Sg	**Sg**	**15 49 47.3**	**+0.8**
ATE	**Arette**	**1.73**	**295**	Pg	**Pg**	**15 49 24.7**	**+0.6**
ATE				Lg		15 49 47.0	
LARF	**Larrau**	**1.91**	**291**	Pg	**Pg**	**15 49 26.8**	**-0.7**
LARF				Sg	**Sg**	**15 49 54.0**	**+1.8**
LARF	**Larrau**	**1.91**	**291**	Pg	**Pg**	**15 49 26.6**	**-0.9**
LARF				Lg		15 49 54.0	
ORDF	**Ordiarp**	**1.94**	**296**	Lg		15 49 54.0	
SJPF	**Ste Jean**	**2.10**	**291**	*e*Pg	**Pg**	**15 49 31.5**	**+0.4**
SJPF				*e*Sg	**Sg**	**15 49 57.9**	**-0.4**
	66nm,0.4s						
SJPF	**Ste Jean**	**2.10**	**291**	*e*Pg	**Pg**	**15 49 31.5**	**+0.4**
SJPF				*e*Sg	**Sg**	**15 49 57.9**	**-0.4**
	33nm,0.4s						
IPRE	**Itoiz**	**2.11**	**282**	Pg	**Pg**	**15 49 30.8**	**-0.6**
	6.4nm,0.2s,SNR=5.0						
IPRE				Lg		15 49 59.6	
	15nm,0.3s,SNR=5.5						
IPRE	**Itoiz**	**2.11**	**282**	Pg	**Pg**	**15 49 30.8**	**-0.6**
	6.4nm,0.2s,SNR=5.0						
OSSF	**Osses**	**2.17**	**294**	Lg		15 50 01.2	
EARA	**Aranguren**	**2.27**	**281**	Pg	**Pg**	**15 49 33.0**	**-1.4**
	11nm,0.3s,SNR=7.9						
EARA				Lg		15 50 04.8	
	23nm,0.2s,SNR=6.5						
IUSE	**Utxeti**	**2.28**	**285**	Pg	**Pg**	**15 49 34.1**	**-0.5**
	3.9nm,0.2s,SNR=4.8						
IUSE				Lg		15 50 05.4	
	15nm,0.2s,SNR=7.8						
IUSE	**Utxeti**	**2.28**	**285**	Pg	**Pg**	**15 49 34.1**	**-0.5**
	3.9nm,0.2s,SNR=4.8						
ELIZ	**Elizondo**	**2.32**	**290**	Pg	**Pg**	**15 49 34.8**	**-0.7**
	11nm,0.2s,SNR=9.3						
ELIZ				Lg		15 50 06.5	
	21nm,0.2s,SNR=8.1						
EALK	**Alkurruntz**	**2.33**	**292**	Pn	**Pn**	**15 49 31.4**	**+2.5**
	0.4nm,0.2s,SNR=7.9						
EALK				Pg	**Pg**	**15 49 34.7**	**-0.8**
	15nm,0.3s,SNR=16						
EALK				Lg		15 50 06.3	
	70nm,0.3s,SNR=8.3						
EALK	**Alkurruntz**	**2.33**	**292**	Pg	**Pg**	**15 49 34.3**	**-1.2**
EALK				Lg		15 50 06.0	
EALK	**Alkurruntz**	**2.33**	**292**	Pg	**Pg**	**15 49 34.3**	**-1.2**
	15nm,0.3s,SNR=16						
LASF	**Ste Croix**	**2.44**	**45**	*e*Pg	**Pg**	**15 49 37.1**	**-0.6**
LASF				*e*Sg	**Sg**	**15 50 09.2**	**-0.2**
	45nm,0.3s						
LASF	**Ste Croix**	**2.44**	**45**	Pn	**Pn**	**15 49 31.1**	**+0.6**
LASF				Pg	**Pg**	**15 49 37.1**	**-0.6**
LASF				Lg		15 50 09.2	
	22nm,0.3s						
LASF	**Ste Croix**	**2.44**	**45**	*e*Pn	**Pn**	**15 49 31.1**	**+0.6**
LASF				*e*Pg	**Pg**	**15 49 37.1**	**-0.6**
LASF				*e*Sg	**Sg**	**15 50 09.2**	**-0.2**
LASF	**Ste Croix**	**2.44**	**45**	*e*Pg	**Pg**	**15 49 37.1**	**-0.6**
LASF				*e*Sg	**Sg**	**15 50 09.2**	**-0.2**
	22nm,0.3s						
EMOS	**Mosqueruela**	**2.48**	**216**	Pn	**Pn**	**15 49 32.1**	**+1.0**
	0.3nm,0.2s,SNR=7.9						
EMOS				Pg	**Pg**	**15 49 36.2**	**-2.4**
	2.6nm,0.2s,SNR=5.9						
EMOS				Lg		15 50 09.4	
	28nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**2.48**	**216**	Pn	**Pn**	**15 49 32.1**	**+1.0**
EMOS				Pg	**Pg**	**15 49 36.2**	**-2.4**
EMOS				Lg		15 50 08.5	
EMOS	**Mosqueruela**	**2.48**	**216**	Pn	**Pn**	**15 49 32.1**	**+1.0**
	0.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.48**	**216**	Pg	**Pg**	**15 49 36.2**	**-2.4**
	2.6nm,0.2s,SNR=5.9						
CAF	**Calviac**	**2.58**	**10**	*e*Pg	**Pg**	**15 49 40.5**	**+0.2**
CAF				*e*Sn	**Sn**	**15 50 04.9**	**+1.3**
CAF				*e*Sg	**Sg**	**15 50 14.1**	**+0.4**
	39nm,0.2s						
CAF	**Calviac**	**2.58**	**10**	Pn	**Pn**	**15 49 34.6**	**+2.2**
CAF				Pg	**Pg**	**15 49 40.5**	**+0.2**
CAF				Sn	**Sn**	**15 50 04.9**	**+1.3**
CAF				Lg		15 50 14.1	
	20nm,0.2s						
CAF	**Calviac**	**2.58**	**10**	*e*Pn	**Pn**	**15 49 34.6**	**+2.2**
CAF				*e*Pg	**Pg**	**15 49 40.5**	**+0.2**
CAF				*e*Sn	**Sn**	**15 50 04.9**	**+1.3**
CAF				*e*Sg	**Sg**	**15 50 14.1**	**+0.4**
CAF	**Calviac**	**2.58**	**10**	*e*Pg	**Pg**	**15 49 40.5**	**+0.2**
CAF				*e*Sn	**Sn**	**15 50 04.9**	**+1.3**
CAF				*e*Sg	**Sg**	**15 50 14.1**	**+0.4**
	20nm,0.2s						
LFF	**La Frestale**	**2.60**	**349**	*e*Pg	**Pg**	**15 49 40.8**	**0.0**
LFF				*e*Sg	**Sg**	**15 50 15.6**	**+1.1**
	47nm,0.3s						
LFF	**La Frestale**	**2.60**	**349**	Pn	**Pn**	**15 49 34.9**	**+2.2**
LFF				Pg	**Pg**	**15 49 40.8**	**0.0**
LFF				Lg		15 50 15.6	
	24nm,0.3s						
LFF	**La Frestale**	**2.60**	**349**	*e*Pn	**Pn**	**15 49 34.9**	**+2.2**
LFF				*e*Pg	**Pg**	**15 49 40.8**	**0.0**
LFF				*e*Sg	**Sg**	**15 50 15.6**	**+1.1**
LFF	**La Frestale**	**2.60**	**349**	*e*Pg	**Pg**	**15 49 40.8**	**0.0**
LFF				*e*Sg	**Sg**	**15 50 15.6**	**+1.1**
	24nm,0.3s						
ETOS	**Mallorca**	**2.82**	**158**	Pn	**Pn**	**15 49 35.3**	**-0.4**
	0.4nm,0.1s,SNR=7.9						
ETOS				Sn	**Sn**	**15 50 07.8**	**-1.7**
	1.2nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**2.82**	**158**	Pn	**Pn**	**15 49 34.8**	**-0.9**
ETOS				Sn	**Sn**	**15 50 07.8**	**-1.7**
ETOS	**Mallorca**	**2.82**	**158**	Pn	**Pn**	**15 49 34.8**	**-0.9**
	0.4nm,0.1s,SNR=7.9						
ETOS				Sn	**Sn**	**15 50 07.8**	**-1.7**
	1.2nm,0.2s,SNR=7.9						
RJF	**Les Rejaudoux**	**2.92**	**1**	*e*Pg	**Pg**	**15 49 46.7**	**-0.1**
RJF				*e*Sn	**Sn**	**15 50 12.4**	**+0.4**
RJF				*e*Sg	**Sg**	**15 50 25.1**	**+0.5**
	33nm,0.2s						
RJF	**Les Rejaudoux**	**2.92**	**1**	*e*Pg	**Pg**	**15 49 46.7**	**-0.1**
RJF				*e*Sn	**Sn**	**15 50 12.4**	**+0.4**
RJF				*e*Sg	**Sg**	**15 50 25.1**	**+0.5**
	16nm,0.2s						
FRNF	**Fournols**	**3.10**	**15**	Sg	**Sg**	**15 50 30.5**	**-0.1**
LBL	**Lubilhac**	**3.13**	**24**	Pn	**Pn**	**15 49 41.0**	**+1.0**
ECHE	**Chera**	**3.34**	**214**	Pn	**Pn**	**15 49 44.2**	**+1.3**
	0.7nm,0.3s,SNR=7.9						
ECHE				Sn	**Sn**	**15 50 20.9**	**-1.5**
	1.1nm,0.2s,SNR=7.9						
ECHE				Lg		15 50 36.0	
	9.6nm,0.7s,SNR=7.9						
ECHE	**Chera**	**3.34**	**214**	Pn	**Pn**	**15 49 44.2**	**+1.3**
ECHE				Sn	**Sn**	**15 50 20.9**	**-1.5**
ECHE				Lg		15 50 35.6	
ECHE	**Chera**	**3.34**	**214**	Pn	**Pn**	**15 49 44.2**	**+1.3**
	0.7nm,0.3s,SNR=7.9						
ECHE				Sn	**Sn**	**15 50 20.9**	**-1.5**
	1.1nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.36**	**181**	Sn	**Sn**	**15 50 21.7**	**-1.2**
	3.8nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.36**	**181**	Sn	**Sn**	**15 50 21.7**	**-1.2**
	3.8nm,0.3s,SNR=7.9						
VIVF	**Saint-Julien-l**	**3.40**	**42**	*e*Pg	**Pg**	**15 49 54.8**	**-1.3**
VIVF				*e*Sn	**Sn**	**15 50 23.4**	**-0.6**
VIVF				*e*Sg	**Sg**	**15 50 39.3**	**-0.9**
	15nm,0.3s						
VIVF	**Saint-Julien-l**	**3.40**	**42**	Pn	**Pn**	**15 49 45.3**	**+1.5**
VIVF				Pg	**Pg**	**15 49 54.8**	**-1.3**
VIVF				Sn	**Sn**	**15 50 23.4**	**-0.6**
VIVF				Lg		15 50 39.3	
	7.6nm,0.3s						
VIVF	**Saint-Julien-l**	**3.40**	**42**	*e*Pn	**Pn**	**15 49 45.3**	**+1.5**
VIVF				*e*Pg	**Pg**	**15 49 54.8**	**-1.3**
VIVF				*e*Sn	**Sn**	**15 50 23.4**	**-0.6**
VIVF				*e*Sg	**Sg**	**15 50 39.3**	**-0.9**
VIVF	**Saint-Julien-l**	**3.40**	**42**	*e*Pg	**Pg**	**15 49 54.8**	**-1.3**
VIVF				*e*Sn	**Sn**	**15 50 23.4**	**-0.6**
VIVF				*e*Sg	**Sg**	**15 50 39.3**	**-0.9**
	7.6nm,0.3s						
COLF	**Collangettes**	**3.52**	**27**	Sg	**Sg**	**15 50 43.2**	**-0.9**
ELAN	**Lanestosa**	**3.69**	**285**	Pn	**Pn**	**15 49 48.4**	**+0.8**
	1.2nm,0.2s,SNR=7.9						
ELAN				Pg	**Pg**	**15 49 59.2**	**-2.4**
	2.4nm,0.3s,SNR=7.9						
ELAN				Sn	**Sn**	**15 50 30.9**	**-0.1**
	2.1nm,0.2s,SNR=7.9						
ELAN				Lg		15 50 50.1	
	6.7nm,0.4s,SNR=7.9						
ELAN	**Lanestosa**	**3.69**	**285**	Pn	**Pn**	**15 49 48.1**	**+0.5**
ELAN				Pg	**Pg**	**15 49 59.2**	**-2.4**
ELAN				Sn	**Sn**	**15 50 30.9**	**-0.1**
ELAN				Lg		15 50 47.1	
ELAN	**Lanestosa**	**3.69**	**285**	Pn	**Pn**	**15 49 48.1**	**+0.4**
	1.2nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**3.69**	**285**	Pg	**Pg**	**15 49 59.2**	**-2.4**
	2.4nm,0.3s,SNR=7.9						
ELAN				Sn	**Sn**	**15 50 30.9**	**-0.1**
	2.1nm,0.2s,SNR=7.9						
LMR	**La Mourre**	**3.84**	**74**	*e*Pn	**Pn**	**15 49 51.7**	**+1.9**
LMR				*e*Sn	**Sn**	**15 50 34.7**	**-0.1**
	5.4nm,0.3s						
LMR	**La Mourre**	**3.84**	**74**	*e*Pn	**Pn**	**15 49 51.7**	**+1.9**
LMR				*e*Sn	**Sn**	**15 50 34.7**	**-0.1**
	2.7nm,0.3s						
AGO	**Saint Agoulin**	**3.86**	**18**	Pn	**Pn**	**15 49 48.6**	**-1.4**
TCF	**Toulx Ste Croi**	**3.94**	**8**	*e*Pg	**Pg**	**15 50 05.4**	**-1.0**
TCF				*e*Sn	**Sn**	**15 50 36.5**	**-0.7**
TCF				*e*Sg	**Sg**	**15 50 57.3**	**-0.1**
	13nm,0.3s						
TCF	**Toulx Ste Croi**	**3.94**	**8**	Pn	**Pn**	**15 49 52.5**	**+1.4**
TCF				Pg	**Pg**	**15 50 05.4**	**-1.0**
TCF				Sn	**Sn**	**15 50 36.5**	**-0.7**
TCF				Lg		15 50 57.3	
	6.6nm,0.3s						
TCF	**Toulx Ste Croi**	**3.94**	**8**	*e*Pn	**Pn**	**15 49 52.5**	**+1.4**
TCF				*e*Pg	**Pg**	**15 50 05.4**	**-1.0**
TCF				*e*Sn	**Sn**	**15 50 36.5**	**-0.7**
TCF				*e*Sg	**Sg**	**15 50 57.3**	**-0.1**
TCF	**Toulx Ste Croi**	**3.94**	**8**	*e*Pg	**Pg**	**15 50 05.4**	**-1.0**
TCF				*e*Sn	**Sn**	**15 50 36.5**	**-0.7**
TCF				*e*Sg	**Sg**	**15 50 57.3**	**-0.1**
	6.6nm,0.3s						
FRF	**La Foret Royal**	**3.99**	**71**	*e*Pn	**Pn**	**15 49 53.5**	**+1.6**
FRF				*e*Sn	**Sn**	**15 50 37.9**	**-0.7**
	4.9nm,0.2s						
FRF	**La Foret Royal**	**3.99**	**71**	*e*Pn	**Pn**	**15 49 53.5**	**+1.6**
FRF				*e*Sn	**Sn**	**15 50 37.9**	**-0.7**
	2.5nm,0.2s						
ORIF	**Oris-en-Rattie**	**4.09**	**50**	*e*Pn	**Pn**	**15 49 54.1**	**+0.9**
BGF	**Bois d'Agland**	**4.29**	**13**	*e*Pg	**Pg**	**15 50 12.6**	**-0.5**
BGF				*e*Sg	**Sg**	**15 51 07.7**	**-0.9**
	62nm,0.4s						
BGF	**Bois d'Agland**	**4.29**	**13**	Pn	**Pn**	**15 49 57.2**	**+1.3**
BGF				Pg	**Pg**	**15 50 12.6**	**-0.5**
BGF				Lg		15 51 07.7	
	31nm,0.4s						
BGF	**Bois d'Agland**	**4.29**	**13**	*e*Pn	**Pn**	**15 49 57.2**	**+1.3**
BGF				*e*Pg	**Pg**	**15 50 12.6**	**-0.5**
BGF				*e*Sg	**Sg**	**15 51 07.7**	**-0.9**
BGF	**Bois d'Agland**	**4.29**	**13**	*e*Pg	**Pg**	**15 50 12.6**	**-0.5**
BGF				*e*Sg	**Sg**	**15 51 07.7**	**-0.9**
	31nm,0.4s						
MFF	**Saint Martin d**	**4.36**	**345**	*e*Pg	**Pg**	**15 50 13.2**	**-1.3**
MFF				*e*Sn	**Sn**	**15 50 47.0**	**-0.7**
MFF				*e*Sg	**Sg**	**15 51 10.0**	**-1.0**
	5.7nm,0.3s						
MFF	**Saint Martin d**	**4.36**	**345**	*e*Pg	**Pg**	**15 50 13.2**	**-1.3**
MFF				*e*Sn	**Sn**	**15 50 47.0**	**-0.7**
MFF				*e*Sg	**Sg**	**15 51 10.0**	**-1.0**
	2.8nm,0.3s						
ETOB	**Tobarra**	**4.38**	**212**	Pn	**Pn**	**15 49 57.5**	**+0.3**
	0.6nm,0.3s,SNR=7.9						
ETOB				Sn	**Sn**	**15 50 46.4**	**-1.7**
	0.5nm,0.2s,SNR=7.9						
ETOB				Lg		15 51 08.8	
	1.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**4.38**	**212**	Pn	**Pn**	**15 49 57.5**	**+0.3**
ETOB				Sn	**Sn**	**15 50 46.4**	**-1.7**
ETOB				Lg		15 51 08.1	
ETOB	**Tobarra**	**4.38**	**212**	Pn	**Pn**	**15 49 57.5**	**+0.3**
	0.6nm,0.3s,SNR=7.9						
ETOB				Sn	**Sn**	**15 50 46.4**	**-1.7**
	0.5nm,0.2s,SNR=7.9						
MBDF	**Montbardon**	**4.52**	**57**	*e*Pn	**Pn**	**15 49 59.6**	**+0.5**
MBDF				*e*Sn	**Sn**	**15 50 52.4**	**+0.8**
	7.9nm,0.5s						
MBDF	**Montbardon**	**4.52**	**57**	*e*Pn	**Pn**	**15 49 59.6**	**+0.5**
MBDF				*e*Sn	**Sn**	**15 50 52.4**	**+0.8**
	4.0nm,0.5s						
GUD	**Guadarrama**	**4.55**	**249**	⇑Pn	**Pn**	**15 50 00.6**	**+1.1**
	1.9nm,0.4s,SNR=18						
GUD				Sn	**Sn**	**15 50 51.9**	**-0.4**
	3.9nm,0.4s,SNR=7.9						
GUD				Lg		15 51 12.7	
	2.5nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**4.55**	**249**	Pn	**Pn**	**15 50 00.6**	**+1.1**
	1.9nm,0.4s,SNR=18						
GUD				Sn	**Sn**	**15 50 51.9**	**-0.4**
	3.9nm,0.4s,SNR=7.9						
AVF	**Avril sur Loir**	**4.61**	**17**	*e*Pg	**Pg**	**15 50 17.4**	**-1.8**
AVF				*e*Sg	**Sg**	**15 51 16.9**	**-2.0**
	8.6nm,0.3s						
AVF	**Avril sur Loir**	**4.61**	**17**	Pn	**Pn**	**15 50 01.5**	**+1.2**
AVF				Pg	**Pg**	**15 50 17.4**	**-1.8**
AVF				Lg		15 51 16.9	
	4.3nm,0.3s						
AVF	**Avril sur Loir**	**4.61**	**17**	*e*Pn	**Pn**	**15 50 01.5**	**+1.2**
AVF				*e*Pg	**Pg**	**15 50 17.4**	**-1.8**
AVF				*e*Sg	**Sg**	**15 51 16.9**	**-2.0**
AVF	**Avril sur Loir**	**4.61**	**17**	*e*Pg	**Pg**	**15 50 17.4**	**-1.8**
AVF				*e*Sg	**Sg**	**15 51 16.9**	**-2.0**
	4.3nm,0.3s						
SBF	**Sospel**	**4.63**	**69**	*e*Pn	**Pn**	**15 50 01.0**	**+0.4**
SBF				*e*Sn	**Sn**	**15 50 52.7**	**-1.5**
	22nm,0.5s						
SBF	**Sospel**	**4.63**	**69**	*e*Pn	**Pn**	**15 50 01.0**	**+0.4**
SBF				*e*Sn	**Sn**	**15 50 52.7**	**-1.5**
	11nm,0.5s						
EVIA	**Vianos**	**4.80**	**220**	Lg		15 51 24.2	
	3.3nm,0.4s,SNR=7.9						
SSF	**Saint Saulge**	**4.90**	**17**	*e*Pn	**Pn**	**15 50 05.5**	**+1.2**
SSF				*e*Sg	**Sg**	**15 51 26.8**	**-1.4**
	4.3nm,0.2s						
SSF	**Saint Saulge**	**4.90**	**17**	*e*Pn	**Pn**	**15 50 05.5**	**+1.2**
SSF				*e*Sg	**Sg**	**15 51 26.8**	**-1.4**
	2.2nm,0.2s						
ESDC	**Sonseca Array**	**4.91**	**238**	Lg		15 51 26.1	
	2.4nm,0.5s,baz=52,slow=30,SNR=5.4						
LPG	**La Plagne**	**4.93**	**49**	*e*Pn	**Pn**	**15 50 06.3**	**+1.5**
LPL	**La Plagne**	**4.93**	**49**	*e*Pn	**Pn**	**15 50 06.9**	**+2.1**
EARI	**Arriondas**	**4.98**	**283**	Pn	**Pn**	**15 50 06.6**	**+1.2**
	1.3nm,0.2s,SNR=7.9						
EARI				Sn	**Sn**	**15 51 01.3**	**-1.5**
	2.7nm,0.3s,SNR=7.7						
EARI	**Arriondas**	**4.98**	**283**	Pn	**Pn**	**15 50 08.3**	**+3.0**
EARI				Sn	**Sn**	**15 51 01.3**	**-1.5**
EARI	**Arriondas**	**4.98**	**283**	Pn	**Pn**	**15 50 08.3**	**+2.9**
	1.3nm,0.2s,SNR=7.9						
EARI				Sn	**Sn**	**15 51 01.3**	**-1.5**
	2.7nm,0.3s,SNR=7.7						
LOR	**Lormes**	**5.17**	**19**	*e*Pg	**Pg**	**15 50 28.2**	**-1.8**
LOR				*e*Sg	**Sg**	**15 51 35.1**	**-1.9**
	5.4nm,0.3s						
LOR	**Lormes**	**5.17**	**19**	Pn	**Pn**	**15 50 09.2**	**+1.1**
LOR				Pg	**Pg**	**15 50 28.2**	**-1.8**
LOR				Lg		15 51 35.1	
	2.7nm,0.3s						
LOR	**Lormes**	**5.17**	**19**	*e*Pn	**Pn**	**15 50 09.2**	**+1.1**
LOR				*e*Pg	**Pg**	**15 50 28.2**	**-1.8**
LOR				*e*Sg	**Sg**	**15 51 35.1**	**-1.9**
LOR	**Lormes**	**5.17**	**19**	*e*Pg	**Pg**	**15 50 28.2**	**-1.8**
LOR				*e*Sg	**Sg**	**15 51 35.1**	**-1.9**
	2.7nm,0.3s						
CABF	**La Chapelle**	**5.37**	**37**	*e*Pg	**Pg**	**15 50 31.7**	**-2.1**
CABF				*e*Sg	**Sg**	**15 51 41.4**	**-1.9**
	7.4nm,0.4s						
CABF	**La Chapelle**	**5.37**	**37**	Pn	**Pn**	**15 50 12.5**	**+1.7**
CABF				Pg	**Pg**	**15 50 31.7**	**-2.1**
CABF				Lg		15 51 41.4	
	3.7nm,0.4s						
CABF	**La Chapelle**	**5.37**	**37**	*e*Pn	**Pn**	**15 50 12.5**	**+1.7**
CABF				*e*Pg	**Pg**	**15 50 31.7**	**-2.1**
CABF				*e*Sg	**Sg**	**15 51 41.4**	**-1.9**
CABF	**La Chapelle**	**5.37**	**37**	*e*Pg	**Pg**	**15 50 31.7**	**-2.1**
CABF				*e*Sg	**Sg**	**15 51 41.4**	**-1.9**
	3.7nm,0.4s						
PGF	**Pioggiola**	**5.59**	**86**	*e*Pn	**Pn**	**15 50 14.6**	**+0.8**
PGF				*e*Sn	**Sn**	**15 51 14.2**	**-3.8**
	6.8nm,0.3s						
PGF	**Pioggiola**	**5.59**	**86**	*e*Pn	**Pn**	**15 50 14.6**	**+0.8**
PGF				*e*Sn	**Sn**	**15 51 14.2**	**-3.8**
	3.4nm,0.3s						
EQES	**Quesada**	**5.74**	**219**	Lg		15 51 53.6	
	2.6nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.10**	**269**	Pn	**Pn**	**15 50 22.2**	**+1.5**
	1.0nm,0.2s,SNR=7.9						
ECAL				Sn	**Sn**	**15 51 28.2**	**-2.2**
	0.4nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.10**	**269**	Pn	**Pn**	**15 50 22.2**	**+1.4**
	1.0nm,0.2s,SNR=7.9						
ECAL				Sn	**Sn**	**15 51 28.2**	**-2.2**
	0.4nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**6.13**	**250**	Sn	**Sn**	**15 51 27.5**	**-3.7**
	2.2nm,0.2s,SNR=7.9						
GRR	**Gorron**	**6.21**	**346**	*e*Sn	**Sn**	**15 51 30.7**	**-2.6**
	2.3nm,0.2s						
GRR	**Gorron**	**6.21**	**346**	*e*Sn	**Sn**	**15 51 30.7**	**-2.6**
	1.1nm,0.2s						
LDF	**La Druitiere**	**6.30**	**350**	*e*Sn	**Sn**	**15 51 32.8**	**-2.7**
	1.5nm,0.2s						
LDF	**La Druitiere**	**6.30**	**350**	*e*Sn	**Sn**	**15 51 32.8**	**-2.7**
	0.8nm,0.2s						
EPON	**Pontenova**	**6.38**	**281**	Pn	**Pn**	**15 50 26.7**	**+2.0**
	0.5nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**15 51 35.3**	**-2.2**
	0.3nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**6.38**	**281**	Pn	**Pn**	**15 50 26.7**	**+2.0**
EPON				Sn	**Sn**	**15 51 35.3**	**-2.2**
QUIF	**Quistinic**	**6.42**	**331**	*e*Sn	**Sn**	**15 51 35.4**	**-2.9**
	4.9nm,0.3s						
QUIF	**Quistinic**	**6.42**	**331**	*e*Sn	**Sn**	**15 51 35.4**	**-2.9**
	2.5nm,0.3s						
SGMF	**Saint Gilles**	**6.51**	**336**	*e*Sn	**Sn**	**15 51 37.5**	**-3.0**
	1.4nm,0.2s						
SGMF	**Saint Gilles**	**6.51**	**336**	*e*Sn	**Sn**	**15 51 37.5**	**-3.0**
	0.7nm,0.2s						

*MDD **03** 16:11:46.0±1.9, 3945N×1321W, h50km, mb4.1/12, Error ellipse: s-maj=17.2km s-min=12.4km az=80.0, PRXIMO*
*NEIC **03** 16:11:45.8, 3955N×1290W, h0km, MN3.0(MDD), After MDD.*
*IGIL **03** 16:11:45.5, 3960N×1290W, h10km, ML3.2*
*ISCJB **03** 16:11:47.7±1.0, 3951N±004×1253W±007, h10km, Error ellipse: s-maj=7.9km s-min=5.5km az=155.5*
*INMG **03** 16:11:47.3±0.8, 3941N×1338W, h10km, ML2.7, Error ellipse: s-maj=5.1km s-min=3.5km az=80.0*
ISC 03 16:11:48.4±1.0**, 3950N**±004×**1262W**±007**, h10km, n39, σ1§14**/74**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.65**	**101**	*e*Pn	**Pn**	**16 12 32.2**	**+1.0**
PMAFR				*e*Sn	**Sn**	**16 13 05.8**	**+2.4**
PLOU	**Loures**	**2.77**	**102**	*e*Pn	**Pn**	**16 12 33.7**	**+0.9**
PLOU				*e*Sn	**Sn**	**16 13 08.3**	**+2.0**
PLOU							
	28nm,0.2s						
PTOM	**Tomar**	**3.26**	**87**	*e*Pn	**Pn**	**16 12 40.7**	**+1.1**
PTOM				*e*Sn	**Sn**	**16 13 20.5**	**+2.1**
PTOM							
	21nm,0.1s						
MOE	**Montemor**	**3.47**	**105**	*e*Pn	**Pn**	**16 12 42.6**	**+0.1**
MOE				*e*Sn	**Sn**	**16 13 24.3**	**+0.7**
PTEO	**Sao Teotonio**	**3.63**	**121**	*e*Pn	**Pn**	**16 12 44.0**	**-0.7**
PTEO				*e*Sn	**Sn**	**16 13 24.8**	**-2.7**
PTEO							
	16nm,0.2s						
MORF	**Marmelete**	**3.81**	**124**	*e*P	**Pn**	**16 12 45.7**	**-1.5**
MORF				*e*S	**Sn**	**16 13 29.7**	**-2.4**
MORF				*e*S	**Sn**	**16 13 29.7**	**-2.4**
MORF				AML	AML	16 13 34.2	
	comp=E,49nm,0.0s						
MORF	**Marmelete**	**3.81**	**124**	*e*P	**Pn**	**16 12 45.7**	**-1.5**
MORF				*e*S	**Sn**	**16 13 29.7**	**-2.4**
PESTR	**Estremoz**	**3.96**	**98**	*e*Pn	**Pn**	**16 12 50.1**	**+0.9**
PESTR				*e*Sn	**Sn**	**16 13 36.9**	**+1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCBR	**Castelo Branco**	**3.98**	**84**	ePn	**Pn**	**16 12 50.6**	**+1.0**
PCBR				eSn	**Sn**	**16 13 36.5**	**+0.2**
PCBR							
	comp=E,5.3nm,0.1s						
PBEJ	**Beja**	**4.00**	**110**	eSn	**Sn**	**16 13 36.5**	**-0.2**
PBEJ							
	comp=E,7.0nm,0.2s						
PBEJ	**Beja**	**4.00**	**110**	S	**Sn**	**16 13 36.5**	**-0.2**
	comp=E,3.5nm,0.2s						
MTE	**Manteigas**	**4.00**	**75**	eSn	**Sn**	**16 13 38.5**	**+1.7**
MTE							
	comp=E,5.1nm,0.2s						
MTE	**Manteigas**	**4.00**	**75**	S	**Sn**	**16 13 38.5**	**+1.7**
	comp=E,2.5nm,0.2s						
PCAB	**Cabril**	**4.13**	**56**	ePn	**Pn**	**16 12 52.5**	**+0.9**
PCAB				eSn	**Sn**	**16 13 40.4**	**+0.4**
PCAB							
	comp=E,15nm,0.1s						
ELOB	**Lobios**	**4.20**	**54**	P	**Pn**	**16 12 52.1**	**-0.3**
	comp=E,1.4nm,0.2s,SNR=6.0						
ELOB				S	**Sn**	**16 13 40.9**	**-0.6**
	comp=E,3.2nm,0.1s						
ELOB	**Lobios**	**4.20**	**54**	P	**Pn**	**16 12 52.5**	**+0.1**
ELOB				S	**Sn**	**16 13 41.0**	**-0.5**
EMAZ	**Mazaricos**	**4.41**	**37**	P	**Pn**	**16 12 53.7**	**-1.6**
	comp=E,1.2nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**16 13 41.3**	**-5.4**
	comp=E,6.3nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**4.41**	**37**	P	**Pn**	**16 12 53.3**	**-2.0**
EMAZ				S	**Sn**	**16 13 40.9**	**-5.8**
EBAD	**Badajoz**	**4.43**	**98**	P	**Pn**	**16 12 56.3**	**+0.7**
	comp=E,1.6nm,0.1s,SNR=6.9						
EBAD				S	**Sn**	**16 13 46.5**	**-0.6**
	comp=E,7.7nm,0.2s						
EBAD	**Badajoz**	**4.43**	**98**	P	**Pn**	**16 12 56.3**	**+0.7**
EBAD				S	**Sn**	**16 13 47.7**	**+0.6**
EGRO	**El Granado**	**4.49**	**114**	P	**Pn**	**16 12 56.1**	**-0.3**
	comp=E,3.0nm,0.1s,SNR=12						
EGRO				S	**Sn**	**16 13 47.9**	**-0.7**
	comp=E,6.6nm,0.1s,SNR=6.3						
EGRO	**El Granado**	**4.49**	**114**	P	**Pn**	**16 12 56.0**	**-0.4**
EGRO				S	**Sn**	**16 13 47.9**	**-0.7**
EMIN	**Mina Concepcio**	**4.97**	**109**	P	**Pn**	**16 13 02.9**	**-0.2**
	comp=E,1.2nm,0.1s,SNR=6.0						
EMIN				S	**Sn**	**16 13 59.5**	**-1.1**
	comp=E,1.4nm,0.1s						
EMIN	**Mina Concepcio**	**4.97**	**109**	P	**Pn**	**16 13 03.2**	**+0.1**
EMIN				S	**Sn**	**16 13 59.4**	**-1.3**
PBRG	**Braganca**	**5.03**	**61**	ePn	**Pn**	**16 13 04.9**	**+1.0**
PBRG				eSn	**Sn**	**16 14 02.8**	**+0.7**
PBRG							
	comp=E,3.0nm,0.1s						
EPLA	**Plasencia**	**5.07**	**82**	P	**Pn**	**16 13 04.2**	**-0.3**
	comp=E,0.6nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**16 14 02.1**	**-1.0**
	comp=E,1.8nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**5.07**	**82**	P	**Pn**	**16 13 04.5**	**0.0**
EPLA				S	**Sn**	**16 14 03.1**	**0.0**
ECAL	**Calabor**	**5.09**	**60**	P	**Pn**	**16 13 04.6**	**-0.1**
	comp=E,0.9nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**16 14 02.3**	**-1.3**
	comp=E,2.8nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**5.09**	**60**	P	**Pn**	**16 13 04.6**	**-0.1**
ECAL				S	**Sn**	**16 14 02.0**	**-1.6**
EPON	**Pontenova**	**5.61**	**45**	P	**Pn**	**16 13 11.2**	**-0.8**
	comp=E,0.6nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**16 14 12.6**	**-3.8**
	comp=E,1.6nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**5.61**	**45**	P	**Pn**	**16 13 11.2**	**-0.8**
EPON				S	**Sn**	**16 14 12.7**	**-3.8**
ESPR	**Espera**	**5.94**	**114**	P	**Pn**	**16 13 16.7**	**+0.2**
	comp=E,1.4nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**16 14 22.8**	**-1.8**
	comp=E,7.9nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.94**	**114**	P	**Pn**	**16 13 17.7**	**+1.2**
ESPR				S	**Sn**	**16 14 24.6**	**0.0**
EADA	**Adamuz**	**6.42**	**99**	P	**Pn**	**16 13 23.6**	**+0.5**
	comp=E,0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**16 14 35.0**	**-1.4**
	comp=E,1.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.42**	**99**	P	**Pn**	**16 13 23.6**	**+0.5**
EADA				S	**Sn**	**16 14 35.9**	**-0.4**
GUD	**Guadarrama**	**6.59**	**77**	S	**Sn**	**16 14 39.6**	**-1.1**
	comp=E,0.6nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**6.69**	**86**	P	**Pn**	**16 13 27.5**	**+0.8**
	comp=E,2.8nm,0.2s,SNR=7.9						
ESDC				S	**Sn**	**16 14 41.4**	**-1.6**
	comp=E,0.5nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**6.74**	**53**	P	**Pn**	**16 13 27.0**	**-0.5**
	comp=E,0.2nm,0.1s,SNR=7.9						
EARI				S	**Sn**	**16 14 42.4**	**-1.9**
	comp=E,0.7nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**6.74**	**53**	P	**Pn**	**16 13 27.0**	**-0.5**
EARI				S	**Sn**	**16 14 40.8**	**-3.4**

*IDC **03** 16:15:20.3±1.9, 530N×12569E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/18, mbtmp3.6/5, Error ellipse: s-maj=114.8km s-min=26.5km az=67.0*

*ISCJB **03** 16:15:25.1±0.7, 5.13N±008×1258E±02, h33km, mb3.5/5, Error ellipse: s-maj=35.9km s-min=7.7km az=149.3*

ISC 03 16:15:26.6±0.7**, 517N**±008×**1258E**±02**, h35km, n9, σ0.80**/11**, mb3.5**/5**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.82**	**14**	eP	**Pn**	**16 15 54.9**	**-0.5**
KCP	**Kidapawan**	**1.96**	**339**	⇑eP	**Pn**	**16 15 57.6**	**+0.3**
KCP				i S	**Sn**	**16 16 21.0**	**+0.3**
KCP	**Kidapawan**	**1.96**	**339**	⇑eP	**Pn**	**16 15 57.6**	**+0.3**
KCP				i S	**Sn**	**16 16 20.9**	**+0.3**
BUKP	**Musuan**	**2.79**	**345**	eP	**Pn**	**16 16 09.8**	**+1.0**
FITZ	**Fitzroy Crossi**	**23.13**	**180**	P	**P**	**16 20 29.5**	**-0.1**
	0.8nm,0.6s,mb3.3,baz=2.6,slow=15,SNR=7.9						
WRA	**Warramunga Arr**	**26.33**	**162**	P	**P**	**16 20 59.2**	**0.0**
	0.6nm,0.4s,mb3.5,baz=340,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**29.73**	**165**	P	**P**	**16 21 30.0**	**+0.5**
	0.4nm,0.6s,mb3.4,baz=349,slow=8.5,SNR=22						
STKA	**Stephens Creek**	**39.80**	**159**	P	**P**	**16 22 56.7**	**+0.4**
	0.8nm,0.5s,mb3.8,baz=344,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**55.85**	**325**	P	**P**	**16 24 58.4**	**-2.2**
	0.2nm,0.4s,mb3.5,baz=123,slow=9.1,SNR=3.3						

IDC 03 16:25:35.1±2.9**, 1281N**×**9240E, h0km, mb3.4**/5**, mb1 3.5**/5**, mb1mx3.4**/22**, mbtmp3.4**/5**, 1C, Error ellipse: s-maj=123.6km s-min=23.7km az=68.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.19**	**163**	⇑eP	x	16 25 44.7	
PBA				eS	x	16 26 04.5	
PBA				ex	x	16 26 11.2	
	comp=N,853nm,0.4s						
PBA				ex	x	16 26 11.3	
	comp=E,1μm,0.4s						
MKAR	**Makanchi Array**	**34.93**	**348**	P	P	16 32 28.6	+0.1
	comp=E,0.4nm,0.7s,baz=173,slow=6.8,SNR=3.9						
SONM	**Songino Array**	**36.83**	**16**	P	P	16 32 44.8	0.0
	comp=E,0.2nm,0.4s,baz=202,slow=8.1,SNR=4.0						
FITZ	**Fitzroy Crossi**	**44.93**	**132**	P	P	16 33 51.8	+0.1
	comp=E,0.8nm,0.8s,baz=137,slow=2.7,SNR=3.1						
WRA	**Warramunga Arr**	**52.56**	**128**	P	P	16 34 50.5	+0.1
	comp=E,0.2nm,0.4s,baz=306,slow=8.8,SNR=5.1						
WRA				PcP	PcP	16 36 01.2	+0.5
	comp=E,0.3nm,0.9s,baz=320,slow=3.3,SNR=5.4						
ASAR	**Alice Springs**	**54.42**	**132**	P	P	16 35 04.7	+0.7
	comp=E,0.2nm,0.5s,baz=308,slow=7.0,SNR=9.5						

KRSC 03 16:27:28, 5216N×**15937E, h24km, ML3.5, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.59**	**298**	eP	Pb	16 27 40.9	+1.2
RUS				i S	Sb	16 27 50.1	+2.4
GRL	**Gorelyy**	**0.89**	**297**	eP	Pb	16 27 45.9	+1.2
GRL				i S	Sb	16 27 58.7	+2.6
PET	**Petropavlovsk**	**0.97**	**333**	eP	Pn	16 27 46.7	+0.6
PET				i S	Sb	16 27 59.8	+1.3
NLC	**Nalytchevo**	**1.01**	**359**	eP	Pn	16 27 47.4	+0.7
NLC				i S	Sb	16 28 00.9	+1.2
SPN	**Mys Shipunski**	**1.02**	**23**	eP	Pn	16 27 49.2	+2.4
SPN				i S	Sb	16 28 04.0	+4.0
AVH	**Avacha**	**1.17**	**341**	eP	Pn	16 27 50.6	+1.7
AVH				i S	Sn	16 28 06.2	+2.1
MIPR	**Malaya Ipel'ka**	**1.61**	**275**	eP	Pn	16 27 55.8	+0.9
GNL	**Ganaly**	**1.76**	**331**	eP	Pn	16 27 59.0	+2.0
KII	**Karymskiy**	**1.88**	**1**	P	Pn	16 28 01.9	+3.3
KII				i S	Sn	16 28 25.7	+4.1
MKZ	**Mys Kozlova**	**2.79**	**30**	eP	Pn	16 28 12.5	+1.4
MKZ				i S	Sn	16 28 45.2	+1.3
KBTR	**Krutoberegovo**	**4.53**	**25**	eP	Pn	16 28 37.8	+2.7

*ISCJB **03** 16:38:03.3±1.1, 1752N±009×1454E±02, h364km±11km, mb3.6/16, Error ellipse: s-maj=25.9km s-min=13.9km az=168.3*

*IDC **03** 16:38:04.8±1.9, 1752N×14543E, h363km±21km, mb3.2/9, mb1 3.4/11, mb1mx3.3/21, mbtmp3.9/11, Error ellipse: s-maj=28.2km s-min=12.7km az=86.0*

*NEIC **03** 16:38:04.8±1.0, 1753N×14541E, h367km±11km, mb3.8/7, Error ellipse: s-maj=17.1km s-min=9.5km az=84.0*

ISC 03 16:38:03.8±1.2**, 1755N**±009×**1454E**±02**, h356km**±13km**, n20, σ0.94**/21**, mb3.6**/16**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.98**	**188**	P	**Pn**	**16 39 14.4**	**+1.6**
	9.7nm,0.3s,baz=304,slow=4.6,SNR=12						
GUMO				S	**S**	**16 40 06.1**	**-2.4**
	13nm,0.3s,baz=1.3,slow=23,SNR=11						
MJAR	**Matsushiro Arr**	**19.97**	**343**	P	**P**	**16 42 10.4**	**-0.5**
	0.2nm,0.3s,baz=163,slow=6.3,SNR=4.1						
NACB	**Ninganchiao**	**23.21**	**291**	P	**P**	**16 42 41.0**	**+0.5**
WRAB	**Tennant Creek**	**38.81**	**197**	eP	**P**	**16 44 55.1**	**-0.4**
	5.8nm,0.9s,mb3.8						
WRA	**Warramunga Arr**	**38.82**	**197**	P	**P**	**16 44 56.0**	**+0.3**
	1.2nm,0.6s,mb3.3,baz=16,slow=8.9,SNR=14						
FITZ	**Fitzroy Crossi**	**40.43**	**210**	P	**P**	**16 45 08.9**	**+0.1**
	0.6nm,0.3s,mb3.4,baz=37,slow=13,SNR=7.0						
ASAR	**Alice Springs**	**42.48**	**196**	P	**P**	**16 45 25.4**	**+0.2**
	0.2nm,0.7s,mb2.4,baz=6.7,slow=7.7,SNR=5.6						
ULN	**Ulaanbaatar**	**43.52**	**323**	eP	**P**	**16 45 34.2**	**+0.7**
	2.7nm,0.7s,mb3.5						
SONM	**Songino Array**	**43.88**	**322**	P	**P**	**16 45 37.6**	**+1.2**
	2.3nm,0.6s,mb3.5,baz=136,slow=7.4,SNR=20						
ZAL	**Zalesovo**	**58.78**	**323**	P	**P**	**16 47 25.8**	**0.0**
	0.8nm,0.5s,mb3.4,baz=345,slow=2.8,SNR=3.1						
ZAL	**Zalesovo**	**58.78**	**323**	P	**P**	**16 47 25.8**	**0.0**
MKAR	**Makanchi Array**	**59.08**	**314**	P	**P**	**16 47 28.6**	**+0.8**
	1.6nm,0.6s,mb3.6,baz=83,slow=9.9,SNR=13						
KURK	**Kurchatov**	**61.95**	**319**	eP	**P**	**16 47 46.8**	**-0.2**
	7.1nm,1.0s,mb4.2						
BVAR	**Borovoye Array**	**67.20**	**321**	P	**P**	**16 48 20.4**	**-0.1**
	3.0nm,0.5s,mb4.3,baz=98,slow=7.6,SNR=18						
BRVK	**Borovoye**	**67.26**	**321**	eP	**P**	**16 48 19.1**	**-1.9**
	2.0nm,0.7s,mb4.0						
ZRNK	**Zerenda**	**68.03**	**321**	eP	**P**	**16 48 25.2**	**-0.5**
	0.9nm,0.8s,mb3.5						
INK	**Inuvik**	**70.52**	**23**	P	**P**	**16 48 40.0**	**-0.9**
	1.3nm,0.8s,mb3.7						
ARU	**Arti**	**73.85**	**325**	eP	**P**	**16 48 59.6**	**-0.8**
	1.9nm,0.6s,mb4.0						
YKA	**Yellowknife Ar**	**79.12**	**28**	P	**P**	**16 49 29.2**	**-0.4**
	0.2nm,0.4s,mb3.2,baz=285,slow=5.0,SNR=5.0						
NVAR	**Mina Array Bea**	**84.05**	**52**	P	**P**	**16 49 56.9**	**+1.7**
	0.7nm,0.7s,mb3.6,baz=265,slow=7.1,SNR=7.3						

*ISCJB **03** 16:39:55.5±0.5, 5144N±002×1606E±002, h0km, Error ellipse: s-maj=3.6km s-min=1.9km az=33.8*

*NEIC **03** 16:39:55.2±0.5, 5161N×16.18E, h5km, ML3.3(SZGRF), Error ellipse: s-maj=6.2km s-min=4.1km az=219.0*

*IPEC **03** 16:39:56.5±0.3, 5154N×16.11E, h2km±1km, ML2.7/4, Error ellipse: s-maj=1.8km s-min=0.7km az=24.0*

*WAR **03** 16:39:57.3, 5154N×1606E, ML2.9, Mining Induced*

*LDG **03** 16:39:57.9±0.6, 5156N×16.15E, h1km, Ml3.7/2, Error ellipse: s-maj=14.4km s-min=5.3km az=18.0, Suspected Mining induced.*

*CSEM **03** 16:39:57.7±0.2, 5148N×1607E, h0km, ML3.5/9, Error ellipse: s-maj=2.5km s-min=1.6km az=29.0*

*BGR **03** 16:39:57.0±0.9, 5164N×1595E, h1km, ML3.3/12, Error ellipse: s-maj=21.1km s-min=7.8km az=163.0*

*PRU **03** 16:39:57.8, 5147N×1606E, h0km, Felt In Harrachov*

*VIE **03** 16:40:00.1±0.4, 5125N×1624E, h0km, mb2.3/5, ML3.1/5, Error ellipse: s-maj=3.0km s-min=2.2km az=98.0 56 km WNW of Breslau Suspected Mining induced.*

ISC 03 16:39:56.2±0.4**, 5151N**±002×**1607E**±002**, h0km, n64, σ0.87**/120**, 6C-1D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**168**	ePg	**Pg**	**16 40 10.2**	**+0.9**
KSP				eSg	**Sg**	**16 40 19.4**	**+1.2**
UPC	**Upice**	**1.00**	**182**	ePG	**Pg**	**16 40 16.3**	**+0.8**
DPC	**Dobruska-Polom**	**1.17**	**172**	ePG	**Pg**	**16 40 19.1**	**+0.4**
DPC				eSG	**Sg**	**16 40 34.3**	**+0.4**
	107nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**224**	ePG	**Pg**	**16 40 22.8**	**+0.4**
PVCC	**Panska Ves**	**1.36**	**224**	ePn	**Pn**	**16 40 23.0**	**+0.5**
PVCC				eSg	**Sg**	**16 40 41.5**	**+1.5**
BRG	**Berggiesshubel**	**1.48**	**245**	ePg	**Pg**	**16 40 25.1**	**+0.5**
BRG				eSg	**Sg**	**16 40 44.9**	**+1.1**
BRG	**Berggiesshubel**	**1.48**	**245**	PN	**Pn**	**16 40 23.4**	**-0.7**
BRG				PG	**Pg**	**16 40 24.9**	**+0.3**
BRG				SG	**Sg**	**16 40 44.6**	**+0.8**
	116nm,0.4s						
BRG	**Berggiesshubel**	**1.48**	**245**	ePn	**Pn**	**16 40 24.9**	**+0.8**
BRG	**Berggiesshubel**	**1.48**	**245**	Pg	**Pg**	**16 40 25.1**	**+0.5**
BRG				eSg	**Sg**	**16 40 44.5**	**+0.7**
PRA	**Prague**	**1.78**	**216**	PG	**Pg**	**16 40 30.0**	**-0.2**
PRA				SG	**Sg**	**16 40 54.0**	**+0.7**
FBE	**Freiberg**	**1.81**	**252**	ePn	**Pn**	**16 40 26.8**	**-1.7**
FBE				eSg	**Sg**	**16 40 54.0**	**-0.2**
PRU	**Pruhonice**	**1.81**	**213**	ePN	**Pn**	**16 40 28.5**	**-0.1**
PRU				ePG	**Pg**	**16 40 30.1**	**-0.7**
PRU				eSG	**Sg**	**16 40 54.3**	**+0.1**
	71nm,0.3s						
PRU	**Pruhonice**	**1.81**	**213**	ePg	**Pg**	**16 40 30.1**	**-0.7**
PRU				eSg	**Sg**	**16 40 53.9**	**-0.3**
CLL	**Collm**	**1.93**	**265**	ePn	**Pn**	**16 40 29.2**	**-1.1**
CLL				eSg	**Sg**	**16 40 58.4**	**+0.2**
CLL	**Collm**	**1.93**	**265**	i Pn	**Pn**	**16 40 29.2**	**-1.1**
CLL				ePg	**Pg**	**16 40 33.0**	**-0.2**
CLL				i x	x	16 40 36.4	
CLL				i Sg	**Sg**	**16 40 58.3**	**+0.1**
	comp=Z,73nm,0.7s						
CLL				i x	x	16 41 07.3	
CLL	**Collm**	**1.93**	**265**	i Pn	**Pn**	**16 40 29.2**	**-1.1**
CLL				ePg	**Pg**	**16 40 33.0**	**-0.2**
CLL				i Sg	**Sg**	**16 40 58.3**	**+0.1**
RAC	**Raciborz**	**1.97**	**136**	ePg	**Pg**	**16 40 34.7**	**+0.8**
RAC				eSg	**Sg**	**16 41 00.1**	**+0.7**
MORC	**Moravsky Berou**	**1.97**	**151**	ePn	**Pn**	**16 40 30.4**	**-0.5**
MORC				eSn	**Sn**	**16 40 55.3**	**-1.0**
MORC	**Moravsky Berou**	**1.97**	**151**	ePn	**Pn**	**16 40 30.4**	**-0.5**
MORC				eSn	**Sn**	**16 40 55.3**	**-1.0**
MORC				eSg	**Sg**	**16 40 57.8**	**-1.8**
	comp=Z,55nm,0.4s						
OKC	**Ostrava-Krasne**	**2.13**	**141**	ePG	**Pg**	**16 40 36.6**	**-0.5**
OKC				eSG	**Sg**	**16 41 03.8**	**-1.0**
	comp=Z,99nm,0.7s						
VRAC	**Vranov**	**2.23**	**171**	ePn	**Pn**	**16 40 35.0**	**+0.6**
VRAC				eSg	**Sg**	**16 41 06.7**	**-1.2**
	comp=Z,39nm,0.4s						
TREC	**Trest**	**2.25**	**190**	ePN	**Pn**	**16 40 35.7**	**+1.1**
TREC				ePG	**Pg**	**16 40 38.9**	**-0.4**
TREC	**Trest**	**2.25**	**190**	ePn	**Pn**	**16 40 35.8**	**+1.2**
TREC	**Trest**	**2.25**	**190**	ePg	**Pg**	**16 40 38.9**	**-0.4**
TREC				eSg	**Sg**	**16 41 07.9**	**-0.6**
KRUC	**Moravsky**	**2.46**	**175**	ePn	**Pn**	**16 40 38.4**	**+0.8**
KRUC				eSg	**Sg**	**16 41 14.1**	**-1.2**
	comp=Z,21nm,0.4s						
TANN	**Tannenbergstha**	**2.53**	**246**	ePn	**Pn**	**16 40 38.7**	**+0.2**
TANN				eSg	**Sg**	**16 41 17.6**	**+0.1**
WERD	**Werda**	**2.60**	**247**	ePn	**Pn**	**16 40 39.6**	**0.0**
WERD				eSg	**Sg**	**16 41 19.6**	**-0.3**
NKC	**Novy Kostel**	**2.62**	**242**	ePN	**Pn**	**16 40 40.1**	**+0.3**
NKC				eSG	**Sg**	**16 41 21.4**	**+0.9**
	comp=Z,116nm,0.3s						
NKC	**Novy Kostel**	**2.62**	**242**	ePn	**Pn**	**16 40 40.0**	**+0.2**
NKC				eSg	**Sg**	**16 41 19.8**	**-0.7**
GUNZ	**Gunzen**	**2.63**	**246**	ePn	**Pn**	**16 40 40.7**	**+0.8**
GUNZ				eSg	**Sg**	**16 41 21.5**	**+0.9**
WERN	**Wernitzgruen**	**2.64**	**244**	ePn	**Pn**	**16 40 40.6**	**+0.6**
WERN				eSg	**Sg**	**16 41 20.9**	**0.0**
OJC	**Ojcow**	**2.69**	**117**	ePn	**Pn**	**16 40 38.8**	**-2.0**
OJC				ePg	**Pg**	**16 40 47.7**	**-0.2**
OJC				eSg	**Sg**	**16 41 23.7**	**+0.9**
JAVC	**Velka Javorina**	**2.85**	**158**	ePn	**Pn**	**16 40 44.1**	**+1.2**
JAVC				eSg	**Sg**	**16 41 26.8**	**-0.9**
	comp=Z,27nm,0.7s						
KHC	**Kasperske Hory**	**2.87**	**215**	ePN	**Pn**	**16 40 43.2**	**+0.1**
KHC				ePG	**Pg**	**16 40 49.5**	**-1.6**
KHC				eSN	**Sn**	**16 41 18.9**	**+0.6**
KHC				eSG	**Sg**	**16 41 28.0**	**-0.3**
	comp=Z,27nm,0.4s						
KHC	**Kasperske Hory**	**2.87**	**215**	ePn	**Pn**	**16 40 42.9**	**-0.2**
KHC	**Kasperske Hory**	**2.87**	**215**	ePg	**Pg**	**16 40 49.5**	**-1.6**
KHC				eSn	**Sn**	**16 41 18.9**	**+0.6**
KHC				eSg	**Sg**	**16 41 26.8**	**-1.5**
MOX	**Moxa**	**2.94**	**255**	ePn	**Pn**	**16 40 44.0**	**-0.1**
MOX				eSg	**Sg**	**16 41 30.6**	**0.0**
MOX	**Moxa**	**2.94**	**255**	ePN	**Pn**	**16 40 44.6**	**+0.5**
MOX				ePG	**Pg**	**16 40 53.4**	**+0.9**
MOX				i SG	**Sg**	**16 41 31.5**	**+0.9**
MOX	**Moxa**	**2.94**	**255**	ePg	**Pg**	**16 40 53.4**	**+0.9**
MOX				Sg	**Sg**	**16 41 30.6**	**0.0**
MANZ	**Manzenberg**	**2.94**	**240**	ePn	**Pn**	**16 40 44.3**	**+0.2**
MANZ				eSg	**Sg**	**16 41 31.6**	**+0.9**
GEC2	**GERESS Array S**	**3.07**	**211**	ePn	**Pn**	**16 40 47.0**	**+1.1**
GEC2	**GERESS Array S**	**3.07**	**211**	ePn	**Pn**	**16 40 47.0**	**+1.1**
SMOL	**Smolenice**	**3.13**	**163**	eSG	**Sg**	**16 41 37.5**	**+0.9**
WET	**Wettzell**	**3.13**	**222**	ePn	**Pn**	**16 40 47.3**	**+0.5**
WET	**Wettzell**	**3.13**	**222**	ePn	**Pn**	**16 40 47.3**	**+0.6**
ZST	**Bratislava**	**3.38**	**168**	eSG	**Sg**	**16 41 45.5**	**+0.5**
ZST				e		16 41 49.9	
NIE	**Niedzica**	**3.43**	**126**	eP	**Pg**	**16 41 01.3**	**-0.6**
NIE				eS	**Sg**	**16 41 47.0**	**+0.7**
VYHS	**Vyhne**	**3.51**	**148**	e	**Sg**	**16 41 46.9**	**-2.0**
CLZ	**Clausthal**	**3.56**	**278**	ePn	**Pn**	**16 40 52.9**	**+0.2**
GRA1	**Grafenberg Arr**	**3.58**	**241**	Sg	**Sg**	**16 41 50.2**	**-1.1**
GRF	**Grafenberg Arr**	**3.58**	**241**	eSg	**Sg**	**16 41 50.2**	**-1.1**
CONA	**Conrad Observa**	**3.59**	**182**	⇑iPn	**Pn**	**16 40 53.5**	**+0.4**
CONA				⇑iSg	**Sg**	**16 41 50.3**	**-1.2**
	comp=Z,25nm,0.4s						
BSD	**Bornholm Skovb**	**3.68**	**350**	i P	**Pn**	**16 40 51.3**	**-3.0**
BSD				eS	**Sn**	**16 41 32.0**	**-6.3**
BSD	**Bornholm Skovb**	**3.68**	**350**	eP	**Pn**	**16 40 51.3**	**-3.0**
BSD				eS	**Sn**	**16 41 32.0**	**-6.3**
MOA	**Molln**	**3.85**	**198**	⇑iPn	**Pn**	**16 40 57.5**	**+0.9**
MOA				⇑iSg	**Sg**	**16 42 00.5**	**+0.7**
	comp=Z,28nm,0.6s						
MOA	**Molln**	**3.85**	**198**	⇑iPn	**Pn**	**16 40 57.5**	**+0.9**
MOA				i Sg	**Sg**	**16 42 00.5**	**+0.7**
ARSA	**Arzberg**	**4.28**	**185**	⇓iPn	**Pn**	**16 41 02.8**	**+0.3**
ARSA				⇑iSg	**Sg**	**16 42 13.3**	**-0.3**
	comp=Z,13nm,0.5s						
CRVS	**Cervenica-Dubn**	**4.34**	**125**	ePG	**Pg**	**16 41 19.9**	**+0.5**
CRVS				eSG	**Sg**	**16 42 16.9**	**+1.3**
CDF	**Champ du Feu**	**6.46**	**245**	ePn	**Pn**	**16 41 32.8**	**+0.2**
CDF				eSg	**Sg**	**16 43 22.5**	**-1.3**
	comp=Z,11nm,0.5s						
CDF	**Champ du Feu**	**6.46**	**245**	ePn	**Pn**	**16 41 32.8**	**+0.2**
CDF				eSg	**Sg**	**16 43 22.5**	**-1.3**
	comp=Z,5.6nm,0.5s						
HINF	**Hinteralfeld**	**7.03**	**242**	eSg	**Sg**	**16 43 40.7**	**-1.2**
GIVF	**Givet**	**7.26**	**263**	ePn	**Pn**	**16 41 43.3**	**-0.3**
BAIF	**Baives**	**7.66**	**264**	ePn	**Pn**	**16 41 48.7**	**-0.3**
BAIF				ePg	**Pg**	**16 42 21.8**	**-1.1**
SSF	**Saint Saulge**	**9.34**	**246**	ePn	**Pn**	**16 42 11.2**	**-0.8**

*ISCJB **03** 16:46:41.2±1.0, 4000N±003×7354E±004, h12km±6km, mb4.4/41, MS3.9/11, Error ellipse: s-maj=5.7km s-min=4.2km az=104.9*

*BJI **03** 16:46:43.7, 4051N×7342E, h33km, mB5.0, mb4.6, ML4.3, Ms4.4, Msz4.0*

*MOS **03** 16:46:44.2±1.1, 4004N×7366E, h33km, mb4.7/17, Error ellipse: s-maj=9.3km s-min=6.7km az=95.0*

*NEIC **03** 16:46:45.5±1.1, 40.12N×7384E, h35km±13km, mb4.6/20, Error ellipse: s-maj=10.3km s-min=6.6km az=65.0*

*IDC **03** 16:46:47.1±3.7, 4032N×7376E, h33km±28km, mb4.1/14, mb1 4.3/17, mb1mx4.1/26, mbtmp4.3/17, ML3.6/3, MS3.5/6, Ms1 3.5/6, ms1mx3.2/23, Error ellipse: s-maj=20.1km s-min=11.7km az=4.0*

*NNC **03** 16:46:51.7±5.1, 4079N×7347E, h21km±23km, mb4.2, mpv3.9, Error ellipse: s-maj=33.8km s-min=11.1km az=171.0*

ISC 03 16:46:42.0±1.1**, 4005N**±003×**7354E**±004**, h5km**±7km**, h47km**±4.4km**: pP-P, n120, σ1.24**/133**, mb4.4**/41**, MS3.9**/11**, 12C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.95**	**105**	P	**Pg**	**16 47 19.3**	**0.0**
KSH				S	**Sg**	**16 47 46.5**	**+1.9**
KSH				Smax			
	comp=N,6μm,0.6s						
KSH				Smax			
	comp=E,4μm,0.8s						
AML	**Almayashu**	**2.08**	**3**	P	**Pn**	**16 47 16.2**	**-1.3**
	SNR=735						
UCH	**Uchtor**	**2.29**	**18**	P	**Pn**	**16 47 20.0**	**-0.5**
	SNR=290						
KZA	**Kyzart**	**2.40**	**32**	P	**Pn**	**16 47 22.1**	**+0.2**
	SNR=446						
EKS2	**Erkin-Say**	**2.61**	**4**	P	**Pn**	**16 47 25.4**	**+0.6**
	SNR=183						
AAK	**Ala-Archa**	**2.68**	**15**	P	**Pn**	**16 47 26.7**	**+1.0**
	SNR=318						
AAK	**Ala-Archa**	**2.68**	**15**	ePn	**Pn**	**16 47 25.7**	**0.0**
AAK				eSn	**Sn**	**16 47 55.5**	**-3.0**
KBK	**Karagaybulak**	**2.81**	**22**	P	**Pn**	**16 47 28.6**	**+1.1**
	SNR=392						
FRU	**Bishkek**	**2.89**	**16**	⇓iPN	**Pn**	**16 47 29.4**	**+0.7**
FRU				i S	**Sn**	**16 48 06.2**	**+2.4**
FRU				pmax	pmax		
	comp=Z,1μm,1.8s						
FRU				smax			
	comp=E,3μm,1.8s						
ULHL	**Ulahol**	**2.99**	**42**	P	**Pn**	**16 47 30.9**	**+0.8**
	SNR=46						
CHMS	**Chumysh**	**3.08**	**17**	P	**Pn**	**16 47 32.1**	**+0.9**
	SNR=131						
TKM2	**Tokmak 2**	**3.25**	**28**	P	**Pn**	**16 47 34.7**	**+1.0**
	SNR=244						
TKM2	**Tokmak 2**	**3.25**	**28**	⇓Pn	**Pn**	**16 47 34.7**	**+1.0**
	comp=E,25nm,0.8s						
TKM2				⇓Lg		16 48 17.9	
	comp=E,153nm,0.8s						
USP	**Ospenovka**	**3.29**	**12**	P	**Pn**	**16 47 34.6**	**+0.5**
	SNR=334						
KK31	**Karatay Array**	**3.80**	**324**	⇓Pn	**Pn**	**16 47 42.0**	**+0.8**
	comp=E,8.7nm,0.5s,baz=142,slow=12,SNR=1497						
KK31				⇑Pg	**Pg**	**16 47 49.6**	**-5.2**
	comp=E,50nm,0.4s,baz=133,slow=15,SNR=39						
KK31				⇑Lg		16 48 37.6	
	comp=E,186nm,0.6s,baz=167,slow=36,SNR=4.7						
KK31	**Karatay Array**	**3.80**	**324**	i PN	**Pn**	**16 47 42.0**	**+0.8**
KK31				pmax	pmax		
	comp=Z,98nm,0.4s						
KNDC	**Almaty**	**4.07**	**38**	Pn	**Pn**	**16 47 47.0**	**+2.1**
KNDC				Lg		16 48 41.8	
AAA	**Alma-Ata**	**4.11**	**37**	i PN	**Pn**	**16 47 52.0**	**+6.7**
AAA				i S	**Sn**	**16 48 40.9**	**+7.2**
AAA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AAA				smax			
	comp=N,13nm,0.7s						
MK02	**Makanchi Array**	**9.26**	**41**	⇑Pn	**Pn**	**16 48 55.4**	**-0.7**
	comp=N,8.1nm,0.8s						
MK02				⇓Lg		16 51 27.3	
	comp=N,31nm,1.0s						
MKAR	**Makanchi Array**	**9.27**	**40**	Pn	**Pn**	**16 48 54.9**	**-1.3**
	comp=N,0.1nm,0.3s,baz=226,slow=13,SNR=17						
MKAR				Lg		16 51 32.5	
	comp=N,0.7nm,0.3s,baz=226,slow=25,SNR=4.0						
WMQ	**Urumqi**	**11.19**	**66**	eP	**Pn**	**16 49 26.0**	**+3.4**
WMQ				PP		16 49 36.0	
WMQ				S	**Sn**	**16 51 28.0**	**-0.1**
WMQ				SS		16 51 43.0	
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s						

WMQ LR LR
comp=N,158nm,4.0s
WMQ LR LR
comp=E,87nm,3.0s
WMQ LR LR
comp=Z,68nm,3.0s
KURK Kurchatov 11.24 17 ⇓Pn **Pn 16 49 20.1 -3.2**
comp=Z,7.5nm,1.4s
KURK ⇑Lg 16 52 26.8
comp=Z,109nm,1.4s
KURK Kurchatov 11.24 17⇑*e*P **Pn 16 49 21.0 -2.3**
KURK Kurchatov 11.24 17 *e*Pn **Pn 16 49 18.1 -5.2**
comp=Z,6.5nm,0.9s
KURK *e* 16 50 01.5
NDI New Delhi 11.74 164 *e*S **Sn 16 51 41.5 0.0**
LGTI Lohaghat 11.92 150 *e*P **Pn 16 49 33.0 +0.4**
LGTI *e*S **Sn 16 51 40.5 -5.5**
VOSK Vostochnaya 12.80 353 ⇑Pn **Pn 16 49 40.6 -3.9**
comp=Z,9.0nm,0.9s
VOSK ⇓Lg 16 53 14.7
comp=E,84nm,1.5s
BVA0 Borovoye Array 13.15 352 ⇑Pn **Pn 16 49 44.9 -4.5**
comp=Z,2.1nm,0.9s,baz=178,slow=15,SNR=64
BVA0 ⇑Lg 16 53 24.7
comp=Z,6.6nm,1.1s,baz=218,slow=16,SNR=3.6
BVAR Borovoye Array 13.15 352 Pn **Pn 16 49 45.3 -4.1**
comp=Z,0.4nm,0.3s,baz=173,slow=16,SNR=12
BVAR Lg 16 53 29.6
comp=Z,0.4nm,0.3s,baz=161,slow=27,SNR=3.7
BVAR LR LR 16 55 24.3
comp=E,84nm,19.8s,baz=134,slow=40
BRVK Borovoye 13.20 351 *e*P **Pn 16 49 45.4 -4.6**
BRVK pmax pmax
comp=Z,7.0nm,0.9s
BRVK Borovoye 13.20 351 *e*Pn **Pn 16 49 45.4 -4.7**
comp=Z,7.2nm,0.9s
ZRNK Zerenda 13.27 348 ⇑Pn **Pn 16 49 47.4 -3.6**
comp=Z,3.7nm,0.7s
ZRNK ⇓Lg 16 53 31.6
comp=Z,120nm,1.6s
ZRNK Zerenda 13.27 348 *i* P **Pn 16 49 47.4 -3.6**
ZRNK pmax pmax
comp=Z,7.0nm,0.9s
ZRNK Zerenda 13.27 348 *e*Pn **Pn 16 49 45.9 -5.1**
comp=Z,8.4nm,0.8s
CHKZ Chkalovo 13.77 353 ⇑Pn **Pn 16 49 54.6 -3.3**
comp=Z,5.7nm,1.1s
CHKZ ⇓Lg 16 53 38.7
comp=Z,68nm,1.3s
CHKZ Chkalovo 13.77 353 *e*P **Pn 16 49 49.6 -8.3**
CHKZ pmax pmax
comp=Z,5.0nm,0.8s
CHKZ Chkalovo 13.77 353 *e*Pn **Pn 16 49 49.6 -8.3**
comp=Z,4.8nm,0.8s
KOLN Koldanda 14.81 143 *e*P **Pn 16 50 10.8 -1.2**
comp=Z,71nm,1.2s
AKTK Aktyubinsk 15.05 319 Pn **Pn 16 50 13.4 -1.8**
AKTK LR LR 16 56 29.6
AKTO Aktyubinsk 15.05 319 ⇑Pn **Pn 16 50 13.5 -1.7**
comp=Z,3.1nm,0.8s
AKTO Aktyubinsk 15.05 319 Pn **Pn 16 50 13.4 -1.8**
comp=Z,1.0nm,0.3s,baz=127,slow=13,SNR=21
AKTO LR LR 16 56 29.6
comp=Z,206nm,21.9s,baz=277,slow=39
AKTO Aktyubinsk 15.05 319 *i* P **Pn 16 50 13.5 -1.7**
AKTO pmax pmax
comp=Z,3.0nm,0.8s
GKN Gorkha 15.12 139 *e*P **Pn 16 50 15.3 -0.9**
comp=Z,36nm,0.5s
KKN Kakani 15.62 138 *e*P **Pn 16 50 21.9 -0.8**
DMN Daman 15.68 139 *e*P **Pn 16 50 22.4 -1.1**
comp=Z,50nm,1.1s
GUN Gumba 15.84 136 *e*P **Pn 16 50 25.6 0.0**
comp=Z,37nm,0.5s
ZAL Zalesovo 15.84 25 Pn **Pn 16 50 24.1 -1.5**
comp=Z,0.5nm,0.3s,baz=256,slow=13,SNR=8.2
ZAL Lg 16 54 53.6
comp=Z,0.1nm,0.3s,baz=351,slow=14,SNR=2.1
ZAL LR LR 16 57 34.2
comp=Z,136nm,20.5s,baz=252,slow=42
ZAL Zalesovo 15.84 25 *i* P **Pn 16 50 26.8 +1.2**
ZAL pmax pmax
comp=Z,3.0nm,0.7s
PKI Pulchoki 15.86 138 *e*P **Pn 16 50 24.5 -1.4**
comp=Z,49nm,0.8s
PKI Pulchoki 15.86 138 *e*P **Pn 16 50 24.5 -1.4**
PKI pmax pmax
comp=Z,49nm,0.8s
NVS Novosibirsk 16.16 20 *i* P **Pn 16 50 29.8 +0.1**
NVS *i* S **Sn 16 53 34.8 +5.6**
NVS pmax pmax
comp=Z,39nm,1.2s
NVS pmax pmax
comp=N,52nm,1.4s
NVS pmax pmax
comp=E,14nm,1.2s
NVS smax
comp=N,60nm,2.2s
NVS smax
comp=E,23nm,1.8s
JIRN Jiri 16.20 136 *e*P **Pn 16 50 28.7 -1.6**
comp=E,35nm,0.6s
ARU Arti 19.11 334 ⇓*i*P **Pn 16 51 03.7 -2.7**
ARU *e*S **Sn 16 54 30.6 -10**
ARU pmax pmax
comp=Z,14nm,1.0s
ARU MLR MLR
comp=Z,200nm,19.0s
ARU MLR MLR
comp=N,100nm,16.0s
ARU MLR MLR
comp=E,100nm,17.0s
ARU Arti 19.11 334 *e*Pn **Pn 16 51 03.3 -3.1**
comp=E,17nm,1.0s
GTA Gaotai 20.20 83 *e*P **P 16 51 18.4 +0.9**
GTA AP 16 51 32.2
GTA PP 16 51 42.5
GTA PPP 16 51 51.6
GTA S **S 16 54 58.7 -5.8**
GTA AMB AMB
comp=Z,5.0nm,0.7s
GTA AMB AMB
comp=Z,105nm,6.1s
GTA LR LR
comp=N,207nm,11.0s
GTA LR LR
comp=E,245nm,9.5s
GTA LR LR
comp=Z,215nm,10.3s,MS3.8
KRAR Krasnoyarsk 20.43 32⇑*i*P **P 16 51 21.3 +1.3**
KRAR pmax pmax
comp=Z,67nm,1.5s
WSAR Wadi Sarin 20.98 221 P **P 16 51 31.1 +5.2**
comp=Z,8.8nm,0.7s,baz=44,slow=11,SNR=8.3
GNI Garni 21.99 280 P **P 16 51 41.7 +4.8**
comp=Z,3.9nm,0.4s,mb4.2,baz=79,slow=3.0,SNR=3.1
GNI Garni 21.99 280 *e*P **P 16 51 39.9 +3.0**
GNI pmax pmax
comp=Z,50nm,1.1s
GNI Garni 21.99 280 *e*P **P 16 51 39.9 +3.0**
comp=Z,50nm,1.1s,mb4.9
MOY Mondy 22.23 49 *e*P **P 16 51 39.7 +0.3**
MOY pmax pmax
comp=Z,38nm,1.9s,mb4.5
ZEI Tsey 22.35 287 *e*P **P 16 51 41.4 +0.8**
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
KIV Kislovodsk 23.19 290 *e*P **P 16 51 51.8 +2.2**
KIV *e* 16 52 18.8
KIV *e*S **S 16 55 55.6 -6.0**
KIV pmax pmax
comp=Z,8.0nm,0.6s,mb4.3
KIV MLR MLR
comp=Z,87nm,12.0s,MS3.4
KIV Kislovodsk 23.19 290 P **P 16 51 45.8 -3.8**
comp=Z,25nm,0.8s,mb4.7
ZAK Zakamensk 23.21 54 *e*P **P 16 51 49.1 -0.7**
ZAK pmax pmax
comp=Z,6.0nm,1.3s,mb3.9
TLY Talaya 23.79 51 *e*P **P 16 51 55.7 +0.1**
TLY pmax pmax
comp=Z,6.0nm,1.3s,mb3.9
TLY Talaya 23.79 51 P **P 16 51 50.6 -5.0**
LZH Lanzhou 24.12 90 *e*P **P 16 51 59.2 +0.6**
LZH AP 16 52 12.6
LZH AMB AMB
comp=Z,13nm,1.1s,mb4.3
SONM Songino Array 24.76 61 P **P 16 52 04.4 0.0**
comp=Z,3.2nm,0.8s,mb3.9,baz=264,slow=8.7,SNR=30
ULN Ulaanbaatar 25.20 61 *e*P **P 16 52 08.1 -0.4**
ULN pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
ULN Ulaanbaatar 25.20 61 *e*P **P 16 52 08.1 -0.4**
comp=Z,5.1nm,0.6s,mb4.2
CD2 Chengdu 26.14 101 *e*P **P 16 52 16.9 -0.1**
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
VRSR Storozhevoye 26.25 307 *e*P **P 16 52 18.5 +0.5**
VRSR pmax pmax
comp=Z,9.0nm,1.1s,mb4.2
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,20nm,0.9s
MALT Malatya 27.17 278 P **P 16 52 28.5 +2.2**
MALT pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
MALT Malatya 27.17 278 P **P 16 52 28.4 +2.2**
comp=Z,2.5nm,0.6s,mb3.9
KMI Kunming 28.60 112 P **P 16 52 42.6 +3.6**
KMI AP pP 16 52 52.5 +12
KMI AMB AMB
comp=Z,4.0nm,0.7s,mb4.3
KMI LR LR
comp=Z,42nm,20.5s,MS3.0
OBN Obninsk 28.73 314⇓*e*P **P 16 52 41.2 +1.0**
OBN *e* 16 53 31.4
OBN pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.5
HHC Hu-ho-hao-te 28.80 76 *e*P **P 16 52 41.2 +0.4**
HHC AP pP 16 52 55.8 +13
HHC PP PP 16 53 34.6 -11
HHC PCP PcP 16 55 52.2 +1.6
HHC S **S 16 57 23.3 -7.7**
HHC SS SS 16 58 52.6 -40
HHC AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
HHC AMB AMB
comp=Z,82nm,4.8s
HHC LR LR
comp=N,270nm,13.5s,MS4.6
HHC LR LR
comp=E,942nm,11.8s,MS4.6
HHC LR LR
comp=Z,354nm,15.2s,MS4.1
KLMR Klimovskoe 29.50 326 *e*P **P 16 52 45.9 -1.2**
KLMR pmax pmax
comp=Z,20nm,1.5s,mb4.6
BR131 Keskin Array S 30.44 282 *e*P **P 16 52 55.8 +0.4**
comp=Z,1.7nm,0.7s,mb3.9
BRTR Keskin Array B 30.44 282 P **P 16 52 57.7 +2.3**
comp=Z,2.2nm,0.7s,mb4.0,baz=86,slow=8.4,SNR=9.5
BRTR PcP PcP 16 55 55.9 +1.1
comp=Z,0.4nm,0.4s,baz=319,slow=3.9,SNR=4.3
BOD Bodaibo 31.35 42 *e*P **P 16 53 02.4 -1.0**
BOD pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
AKASG Malin Array Be 32.45 304 P **P 16 53 14.2 +1.1**
comp=Z,2.9nm,0.7s,mb4.2,baz=78,slow=7.7,SNR=19
AKBB Malin Array Si 32.45 304 *e*P **P 16 53 12.8 -0.2**
EIL Elat 33.09 264 P **P 16 53 14.9 -3.8**
comp=Z,56nm,0.8s,mb5.5
JOF Joensuu 33.90 327 *e*p **P 16 53 25.3 -0.4**
comp=Z,5.6nm,0.8s,mb4.5
JOF Joensuu 33.90 327 *e*P **P 16 53 25.3 -0.4**
JOF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
FINES FINESS Array B 35.76 323 P **P 16 53 40.3 -1.5**
comp=Z,4.5nm,0.8s,mb4.5,baz=124,slow=10,SNR=10
FINES FINESS Array B 35.76 323 *i* P **P 16 53 41.4 -0.4**
FINES pmax pmax
comp=Z,5.0nm,0.8s
KAF Kangasniemi 35.83 324 *e*p **P 16 53 41.7 -0.7**
comp=Z,0.8nm,0.4s,mb4.0,baz=104,slow=8.6
KAF Kangasniemi 35.83 324 *e*P **P 16 53 41.7 -0.7**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KWP Kalwaria 36.66 302 P **P 16 53 48.6 -0.9**
KWP pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
KWP Kalwaria 36.66 302 P **P 16 53 48.6 -0.9**
comp=Z,8.0nm,0.8s,mb4.6
NJ2 Nanjing 37.17 88 *e*P **P 16 53 55.5 +1.7**
NJ2 PP PP 16 55 23.4 +5.0
NJ2 S **S 16 59 36.0 -4.8**
NJ2 XS sS 17 00 01.0 +18
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
NJ2 AMB AMB
comp=Z,270nm,4.3s
NJ2 LR LR
comp=N,1μm,15.3s,MS4.9
NJ2 LR LR
comp=E,1μm,14.4s,MS4.9
NJ2 LR LR
comp=Z,530nm,14.2s,MS4.5
CN2 Changchun 38.28 67 *e*P **P 16 54 02.3 -0.9**
ARCES ARCESS Array B 38.69 335 P **P 16 54 05.2 -1.5**
comp=Z,3.0nm,0.6s,mb4.2,baz=111,slow=8.1,SNR=21
ARE0 ARCESS Array S 38.69 335 *e*P **P 16 54 06.0 -0.7**
SSE Sheshan 39.38 88 *e*P **P 16 54 16.3 +3.9**
SSE AP pP 16 54 28.1 +14
SSE PP PP 16 55 48.2 +5.6
SSE S **S 17 00 15.2 +1.0**
SSE AMB AMB
comp=Z,32nm,0.8s,mb5.1
SSE AMB AMB
comp=Z,226nm,4.3s
SSE LR LR
comp=N,44nm,18.9s,MS3.9
SSE LR LR
comp=E,148nm,19.0s,MS3.9
SSE LR LR
comp=Z,137nm,15.1s,MS3.9
YAK Yakutsk 39.93 38 *e*P **P 16 54 15.6 -1.4**
YAK pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK Yakutsk 39.93 38 *e*P **P 16 54 14.6 -2.4**
comp=E,18nm,0.9s,mb4.8
MORC Moravsky Berou 39.98 303 P **P 16 54 19.4 +2.0**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
MORC Moravsky Berou 39.98 303 P **P 16 54 19.4 +1.9**
comp=Z,2.0nm,0.7s,mb4.0
MDJ Mudanjiang 40.99 65 P **P 16 54 23.2 -2.6**
MDJ AP pP 16 54 38.4 +11
MDJ PP PP 16 55 57.6 -2.7
MDJ AMB AMB
comp=Z,5.0nm,1.1s,mb4.1
MDJ AMB AMB
comp=Z,44nm,4.4s
MDJ LR LR
comp=N,217nm,15.4s,MS4.3
MDJ LR LR
comp=E,265nm,16.5s,MS4.3
MDJ LR LR
comp=Z,340nm,16.5s,MS4.3
TIXI Tiksi 41.73 23 *i* P **P 16 54 32.0 +0.1**
GERES GERESS Array B 42.61 302 P **P 16 54 40.2 +1.2**
comp=Z,1.3nm,0.6s,mb3.8,baz=69,slow=8.1,SNR=12
NB2 NORSAR Subarra 42.83 321 P **P 16 54 40.4 -0.4**
comp=Z,7.6nm,0.8s,mb4.5,baz=90,slow=8.6
NOA NORSAR Array B 42.83 321 P **P 16 54 40.8 -0.1**
comp=Z,5.6nm,0.7s,mb4.4,baz=90,slow=8.1,SNR=17
NOA LR LR 17 13 05.4
comp=Z,107nm,18.2s,MS3.8,baz=60,slow=37
MAJO Matsushiro 49.87 72 *e*P **P 16 55 34.4 -1.8**
MAJO pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
MAJO Matsushiro 49.87 72 *e*P **P 16 55 34.4 -1.9**
comp=Z,4.0nm,0.6s,mb4.6
MJAR Matsushiro Arr 49.88 72 P **P 16 55 35.4 -0.8**
comp=Z,3.5nm,0.6s,mb4.5,baz=292,slow=9.0,SNR=12
TOA0 Torodi Ar. Sit 67.80 269 *e*P **P 16 57 42.2 +1.3**
TORD Torodi Ar. Bea 67.80 269 P **P 16 57 42.6 +1.8**
comp=Z,3.4nm,0.7s,mb4.5,baz=45,slow=5.7,SNR=14
IMA2 Indian Mountai 68.13 19 *e*P **P 16 57 41.8 -1.2**
YKA Yellowknife Ar 77.59 4 P **P 16 58 38.6 -0.4**
comp=Z,1.9nm,0.7s,mb4.2,baz=351,slow=5.9,SNR=23
YKA LR LR 17 35 44.6
comp=Z,46nm,18.2s,MS3.8,baz=270,slow=38
SCHQ Schefferville 79.59 338 LR LR 17 38 44.5
comp=Z,36nm,19.1s,MS3.7,baz=138,slow=39
WRA Warramunga Arr 82.24 124 P **P 16 59 04.9 +0.6**
comp=Z,3.1nm,0.7s,mb4.3,baz=326,slow=5.1,SNR=32
WRAB Tennant Creek 82.24 124 *e*P **P 16 59 04.6 +0.3**
comp=Z,5.1nm,0.8s,mb4.5
ASAR Alice Springs 84.71 127 P **P 16 59 17.2 +0.3**
comp=Z,1.9nm,0.7s,mb4.3,baz=316,slow=4.7,SNR=32
CTAO Charters Tower 90.25 116 *e*P **P 16 59 44.9 +1.2**
comp=Z,4.5nm,1.0s,mb4.8
BOZ Bozeman (W) 94.56 4 *e*P **P 17 00 05.6 +2.0**
comp=Z,1.6nm,0.9s,mb4.5

BJI ***03*** *16:55:43.6, 5539N×11059E, h9km, mB4.6, mb4.5, Ms4.4, Msz4.0*
ISCJB ***03*** *16:55:44.4±0.2, 5536N±002×11047E±003, h10km, mb4.1/24, MS3.9/3, Error ellipse: s-maj=3.1km s-min=2.2km az=103.7*
MOS ***03*** *16:55:45.0± 1.1, 5540N×11044E, h13km, mb4.4/10, Error ellipse: s-maj=8.0km s-min=5.5km az=78.3*
IDC ***03*** *16:55:45.4± 0.9, 5547N×11046E, h0km, mb3.8/11, mb1 4.0/13, mb1mx3.9/24, mbtmp3.8/13, ML3.8/2, Error ellipse: s-maj=22.0km s-min=17.5km az=114.0*
BYKL ***03*** *16:55:45.9± 0.2, 5539N×11041E, h7km±18km*
NEIC ***03*** *16:55:46.2± 0.4, 5544N×11051E, h10km, mb4.1/11, Error ellipse: s-maj=8.3km s-min=7.7km az=189.0*
ISC 03 16:55:46.0±0.2, 5539N±002×11047E±003, h10km, n110, σ1§35/161, mb4.1/24, MS3.9/3, 6C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KMO	**Kumora**	**0.65**	**40**	⇑*i*Pg	**Pg**	**Pg**	**16 55 57.7**	**-0.8**
KMO				Pmax			16 55 59.3	
	2μm,0.4s							
KMO				*e*Sg	**Sg**	**Sg**	**16 56 06.9**	**-0.1**
KMO				Smax			16 56 08.8	
	8μm,1.0s							
KMO	**Kumora**	**0.65**	**40**	*e*PG	**Pg**	**Pg**	**16 55 57.7**	**-0.8**
KMO				*e*			16 56 05.7	
KMO				pmax	pmax			
	comp=Z,2μm,0.4s							
KMO				smax				
	comp=E,8μm,1.1s							
NIZ	**Nizh Angarsk**	**0.65**	**307**	⇑*i*Pg	**Pg**	**Pg**	**16 55 57.4**	**-1.1**
NIZ				Pmax			16 55 58.6	
	comp=E,524nm,0.2s							
NIZ				*e*Sg	**Sg**	**Sg**	**16 56 06.3**	**-0.7**
NIZ				Smax			16 56 21.6	
	comp=E,4μm,1.3s							
NIZ	**Nizh Angarsk**	**0.65**	**307**	*e*PG	**Pg**	**Pg**	**16 55 57.5**	**-1.0**
NIZ				*e*			16 56 06.9	
NIZ				pmax	pmax			
	comp=Z,518nm,0.2s							
NIZ				smax				
	comp=E,2μm,1.0s							
YLYR	**Ulyunkhan**	**0.65**	**142**	⇑*i*Pg	**Pg**	**Pg**	**16 55 58.0**	**-0.6**
YLYR				Pmax			16 55 58.8	
	comp=E,372nm,0.2s							
YLYR				*e*Sg	**Sg**	**Sg**	**16 56 07.1**	**-0.1**
YLYR				Smax			16 56 07.8	
	comp=E,6μm,1.7s							
YLYR	**Ulyunkhan**	**0.65**	**142**	⇑*i*PG	**Pg**	**Pg**	**16 55 58.0**	**-0.6**
YLYR				*i*			16 56 06.8	
YLYR				pmax	pmax			
	comp=Z,582nm,0.2s							
YLYR				smax				
	comp=N,2μm,0.3s							
YOA	**Uoyan**	**1.03**	**43**	*e*Pg	**Pg**	**Pg**	**16 56 04.9**	**-0.8**
YOA				Pmax			16 56 06.7	
	comp=N,2μm,0.3s							
YOA				*e*Sg	**Sg**	**Sg**	**16 56 19.5**	**+0.4**
YOA				Smax			16 56 22.7	
	comp=N,19μm,1.0s							
YOA	**Uoyan**	**1.03**	**43**	⇓*i*PG	**Pg**	**Pg**	**16 56 05.1**	**-0.6**
YOA				*i*			16 56 19.5	
YOA				pmax	pmax			
	comp=Z,2μm,0.5s							
YOA				smax				
	comp=N,4μm,2.3s							
SYVR	**Suvo**	**1.76**	**189**	*e*Pn	**Pn**	**Pn**	**16 56 15.4**	**-1.1**
SYVR				*e*Pg	**Pg**	**Pg**	**16 56 17.5**	**-2.2**
SYVR				Pmax			16 56 21.0	
	comp=N,1μm,1.0s							
SYVR				*e*Sg	**Sg**	**Sg**	**16 56 41.4**	**-1.1**
SYVR				Smax			16 56 45.6	
	comp=N,3μm,1.6s							
SYVR				*e*			16 56 52.0	
SYVR	**Suvo**	**1.76**	**189**	*e*PN	**Pn**	**Pn**	**16 56 18.0**	**+1.5**
SYVR				*e*			16 56 41.5	
SYVR				pmax	pmax			
	comp=Z,1μm,0.7s							
SYVR				smax				
	comp=E,2μm,0.7s							
UKT	**Uakit**	**1.80**	**86**	*e*Pn	**Pn**	**Pn**	**16 56 16.0**	**-1.1**
UKT				*e*Pg	**Pn**	**Pn**	**16 56 18.4**	**+1.3**
UKT				Pmax			16 56 22.1	
	comp=E,2μm,0.9s							
UKT				*e*Sg	**Sg**	**Sg**	**16 56 43.5**	**-0.5**
UKT				Smax			16 56 45.9	
	comp=E,3μm,1.1s							
UKT	**Uakit**	**1.80**	**86**	*e*PN	**Pn**	**Pn**	**16 56 18.4**	**+1.3**
UKT				*e*			16 56 43.1	
UKT				pmax	pmax			
	comp=Z,2μm,0.7s							
UKT				smax				
	comp=N,3μm,0.9s							
SVKR	**Severomuysk**	**1.89**	**66**	*e*Pg	**Pg**	**Pg**	**16 56 20.5**	**-1.8**
SVKR				Pmax			16 56 23.9	
	comp=N,1μm,0.5s							
SVKR				*e*Sg	**Sg**	**Sg**	**16 56 46.2**	**-0.6**
SVKR				Smax			16 56 50.8	
	comp=N,9μm,0.9s							
SVKR				*e*SgSg			16 56 54.3	
SVKR	**Severomuysk**	**1.89**	**66**	*e*PN	**Pn**	**Pn**	**16 56 20.7**	**+2.4**
SVKR				*e*			16 56 21.9	
SVKR				*e*			16 56 46.0	
SVKR				pmax	pmax			
	comp=Z,2μm,1.4s							
SVKR				smax				
	comp=N,9μm,0.9s							
MXMB	**Maximikha**	**2.36**	**206**	*e*Pn	**Pn**	**Pn**	**16 56 25.6**	**+0.9**
MXMB				*e*Pg	**Pg**	**Pg**	**16 56 28.2**	**-3.0**
MXMB				Pmax			16 56 30.7	
	comp=N,969nm,0.9s							
MXMB				*e*Sg	**Sg**	**Sg**	**16 56 59.9**	**-1.9**
MXMB				Smax			16 57 10.2	
	comp=N,6μm,0.8s							
OGRR	**Ongureny**	**2.42**	**225**	*e*Pn	**Pn**	**Pn**	**16 56 24.4**	**-1.2**
OGRR				*e*Pg	**Pg**	**Pg**	**16 56 28.9**	**-3.5**
OGRR				Pmax			16 56 29.8	
	comp=N,389nm,0.3s							
OGRR				*e*Sg	**Sg**	**Sg**	**16 57 00.1**	**-3.7**
OGRR				*e*SgSg			16 57 09.2	
OGRR				max			16 57 09.7	
	comp=N,2μm,0.8s							
OGRR	**Ongureny**	**2.42**	**225**	*e*PN	**Pn**	**Pn**	**16 56 24.4**	**-1.2**
OGRR				*e*			16 56 28.4	
OGRR				*e*			16 57 01.2	
OGRR				pmax	pmax			
	comp=Z,391nm,0.4s							
OGRR				smax				
	comp=N,2μm,0.9s							
KELR	**Kotokel**	**2.99**	**209**	*e*Pn	**Pn**	**Pn**	**16 56 34.3**	**+0.9**
KELR				*e*Pg	**Pg**	**Pg**	**16 56 38.9**	**-4.3**
KELR				Pmax			16 56 44.8	
	comp=N,388nm,0.4s							
KELR				*e*Sg	**Sg**	**Sg**	**16 57 18.7**	**-3.3**
KELR				Smax			16 57 29.6	
	comp=N,3μm,0.8s							
BOD	**Bodaibo**	**3.12**	**37**	*e*Pn	**Pn**	**Pn**	**16 56 36.3**	**+1.1**
BOD				*e*Pg	**Pg**	**Pg**	**16 56 41.0**	**-4.8**
BOD				Pmax			16 56 46.6	
	comp=N,187nm,0.7s							
BOD				*e*Sg	**Sg**	**Sg**	**16 57 21.7**	**-4.5**
BOD				Smax			16 57 26.6	
	comp=N,1μm,1.2s							
BOD	**Bodaibo**	**3.12**	**37**	⇑*i*PN	**Pg**	**Pg**	**16 56 42.4**	**-3.4**

BOD e 16 57 21.6
BOD pmax pmax
comp=Z,186nm,0.6s
BOD smax
comp=E,1μm,1.1s
NLYR Nelyaty 3.15 67 ⇓*i*Pn **Pn 16 56 37.1 +1.6**
NLYR *e*Pg **Pg 16 56 42.3 -3.9**
NLYR Pmax 16 56 47.9
comp=E,360nm,0.6s
NLYR *e*Sg **Sg 16 57 24.7 -2.3**
NLYR Smax 16 57 34.7
comp=E,2μm,1.2s
NLYR Nelyaty 3.15 67 *e*PN **Pn 16 56 36.8 +1.3**
NLYR *e* 16 56 43.0
NLYR *e* 16 57 23.4
NLYR pmax pmax
comp=Z,356nm,1.0s
NLYR smax
comp=E,2μm,1.1s
TRG Tyrgan 3.58 224 *e*Pn **Pn 16 56 42.8 +1.3**
TRG *e*Pg **Pg 16 56 48.9 -5.7**
TRG Pmax 16 56 54.3
comp=E,92nm,0.4s
TRG *e*Sg **Sg 16 57 35.6 -5.4**
TRG Smax 16 57 47.9
comp=E,544nm,0.5s
TRG Tyrgan 3.58 224 *e*PN **Pn 16 56 42.6 +1.1**
TRG *e* 16 56 51.1
TRG *e*S **Sn 16 57 24.4 +0.5**
TRG *e* 16 57 36.9
TRG pmax pmax
comp=Z,101nm,0.3s
TRG smax
comp=N,588nm,0.8s
TRTB Turuntaevo 3.59 209 ⇓*i*Pn **Pn 16 56 42.8 +1.2**
TRTB *e*Pg **Pg 16 56 50.6 -4.1**
TRTB Pmax 16 56 54.6
comp=N,363nm,1.3s
TRTB *e*Sg **Sg 16 57 36.8 -4.3**
TRTB Smax 16 57 45.9
comp=N,665nm,1.0s
CIT Chita 3.84 150 *e*Pn **Pn 16 56 45.9 +0.8**
CIT *e*Pg **Pg 16 56 54.8 -4.8**
CIT Pmax 16 56 54.8
comp=N,157nm,1.3s
CIT *e*Sg **Sg 16 57 44.5 -4.9**
CIT Smax 16 58 10.3
comp=N,505nm,1.3s
CIT Chita 3.84 150 *e*PN **Pn 16 56 44.1 -1.0**
CIT *e* 16 56 55.3
CIT *e* 16 57 44.4
CIT pmax pmax
comp=Z,77nm,1.0s
CIT smax
comp=E,258nm,0.9s
KAB Kabansk 4.04 216 Pg **Pg 16 56 57.5 -5.9**
KAB Pmax 16 57 07.4
comp=E,224nm,1.1s
KAB *e*Sg **Sg 16 57 50.7 -5.1**
KAB Smax 16 58 07.0
comp=E,3μm,1.3s
KAB Kabansk 4.04 216 *e*PN **Pg 16 57 01.3 -2.1**
HRMR Khuramsha 4.31 210 *e*Pn **Pn 16 56 53.0 +1.4**
HRMR *e*Pg **Pg 16 57 02.6 -6.0**
HRMR Pmax 16 57 07.2
comp=E,408nm,0.7s
HRMR *e*Sg **Sg 16 57 59.1 -5.4**
HRMR Smax 16 58 08.6
comp=E,2μm,0.8s
CRS Chara 4.62 68 *e*Pn **Pn 16 56 57.7 +1.9**
CRS *e*Pg **Pg 16 57 09.8 -4.6**
CRS Pmax 16 57 13.3
comp=E,370nm,1.5s
CRS *e*Sg **Sg 16 58 10.6 -3.7**
CRS Smax 16 58 19.1
comp=E,1μm,1.2s
CRS Chara 4.62 68 *e*PN **Pb 16 57 09.0 +1.9**
IRK Irkutsk 4.84 232 *e*Pg **Pg 16 57 12.7 -5.9**
IRK Pmax 16 57 16.4
comp=E,254nm,1.0s
IRK *e* 16 57 57.4
IRK *e*Sg **Sg 16 58 15.8 -5.5**
IRK Smax 16 58 19.7
comp=E,2μm,1.2s
IRK Irkutsk 4.84 232 *e*PN **Pn 16 56 59.0 +0.2**
IRK *e* 16 57 15.0
IRK *e* 16 58 14.3
IRK pmax pmax
comp=Z,252nm,0.6s
IRK smax
comp=N,2μm,0.7s
LSTR Listvyanka 4.87 226 *e*PN **Pn 16 56 59.9 +0.7**
LSTR *e* 16 57 13.1
LSTR *e* 16 58 17.0
LSTR pmax pmax
comp=Z,42nm,0.6s
LSTR smax
comp=N,782nm,1.7s
TLY Talaya 5.51 230 *e*Pn **Pn 16 57 07.9 -0.1**
TLY *e*Pg **Pg 16 57 24.5 -7.0**
TLY Pmax 16 57 28.7
comp=N,46nm,0.4s
TLY *e*Sn **Sn 16 58 09.7 -1.7**
TLY *e*Sg **Sg 16 58 34.7 -8.1**
TLY Smax 16 58 46.6
comp=N,516nm,0.7s
TLY Talaya 5.51 230 *e*PN **Pn 16 57 08.1 +0.1**
TLY *e* 16 57 24.6
TLY *e*S **Sn 16 58 11.1 -0.3**
TLY *e* 16 58 35.9
TLY pmax pmax
comp=Z,57nm,0.7s
TLY smax
comp=E,623nm,0.8s
TLY Talaya 5.51 230 *e*Pn **Pn 16 57 07.6 -0.4**
comp=E,54nm,0.6s
TLY *e*Pg **Pg 16 57 24.6 -6.9**
TLY *e*Sn **Sn 16 58 12.3 +0.9**
KHNR Khani 5.53 70 *e*Pn **Pn 16 57 10.0 +1.6**
KHNR *e*Sg **Sg 16 58 38.5 -5.1**
TUP Tupik 5.56 96 *e*Pn **Pn 16 57 10.1 +1.4**
TUP max 16 57 34.2
comp=E,88nm,0.9s
TUP *e*Sn **Sn 16 58 11.4 -1.3**
TUP *e*Sg **Sg 16 58 38.4 -6.1**
TUP Smax 16 58 45.7
comp=E,928nm,1.0s
TUP Tupik 5.56 96 *e*PN **Pn 16 57 10.1 +1.4**
TUP *e* 16 57 26.8
TUP *e*S **Sn 16 58 13.1 +0.4**
TUP *e* 16 58 40.4
TUP pmax pmax
comp=Z,86nm,0.7s
TUP smax
comp=N,932nm,1.0s
KPC Khapcheranga 5.82 168 *e*Pn **Pn 16 57 12.3 +0.1**
KPC *e* 16 57 34.6
KPC max 16 57 46.0
comp=N,42nm,0.6s
KPC *e*Sg **Sg 16 58 45.4 -7.3**
KPC Smax 16 58 55.1
comp=N,519nm,1.2s
KPC Khapcheranga 5.82 168 *e*PN **Pn 16 57 13.7 +1.5**
KPC *e* 16 57 30.8
KPC *e*S **Sn 16 58 19.3 +0.3**
KPC *e* 16 58 46.9
KPC pmax pmax
comp=Z,49nm,0.6s
KPC smax
comp=E,519nm,1.2s
ARS Arshan 5.91 237 *e*Pn **Pn 16 57 13.7 +0.1**
ARS *e*Pg **Pg 16 57 32.5 -6.7**
ARS Pmax 16 57 37.8
comp=E,132nm,0.8s
ARS *e*Sn **Sn 16 58 19.6 -1.7**
ARS *e*Sg **Sg 16 58 48.2 -7.5**
ARS Smax 16 59 01.1
comp=E,2μm,1.4s
ARS Arshan 5.91 237 *e*PN **Pn 16 57 13.8 +0.2**
ARS *e* 16 57 32.4
ARS *e* 16 58 47.9
ARS pmax pmax
comp=Z,130nm,0.5s
ARS smax
comp=E,2μm,1.0s
ZAK Zakamensk 6.64 224 *e*Pn **Pn 16 57 25.1 +1.6**
ZAK *e*Sg **Sg 16 59 11.7 -7.3**
ZAK Smax 16 59 29.2
comp=E,334nm,1.9s
ZAK Zakamensk 6.64 224 *e*PN **Pn 16 57 25.4 +1.9**
ZAK *e* 16 57 45.7
ZAK *e*S **Sb 16 59 09.2 +8.4**
ZAK pmax pmax
comp=Z,17nm,0.9s
ZAK smax
comp=N,335nm,1.8s
MOY Mondy 6.77 240 *e*Pn **Pn 16 57 27.0 +1.7**
MOY max 16 57 30.1
comp=N,151nm,1.6s
MOY *e* 16 58 43.3
MOY *e*Sg **Sg 16 59 14.2 -9.0**
MOY Smax 16 59 30.2
comp=N,788nm,1.5s
MOY Mondy 6.77 240 *e*PN **Pn 16 57 27.0 +1.7**
MOY *e* 16 57 48.7
MOY *e*S **Sn 16 58 43.3 +0.9**
MOY *e* 16 59 18.9
MOY pmax pmax
comp=Z,13nm,0.4s
MOY smax
comp=E,793nm,1.5s
ORL Orlik 6.91 250 *e*Pn **Pn 16 57 28.7 +1.5**
ORL max 16 57 31.7
comp=E,125nm,1.5s
ORL *e* 16 58 45.4
ORL *e*Sg **Sg 16 59 18.4 -9.2**
ORL Smax 16 59 26.7
comp=E,900nm,1.4s
ORL Orlik 6.91 250 *e*PN **Pn 16 57 28.6 +1.4**
ORL *e* 16 57 51.6
ORL *e* 16 59 21.8
ORL pmax pmax
comp=Z,87nm,1.3s
ORL smax
comp=N,935nm,1.7s
ULN Ulaanbaatar 7.83 197 *e*PN **Pn 16 57 39.7 -0.2**
SONM Songino Array 7.98 200 Pn **Pn 16 57 43.9 +2.0**
comp=N,0.9nm,0.3s,baz=5.0,slow=14,SNR=30
SONM Pg Pn 16 58 12.4 +30
comp=N,1.7nm,0.3s,baz=7.4,slow=16,SNR=5.9
SONM Lg 16 59 58.9
comp=N,6.1nm,0.3s,baz=15,slow=30,SNR=14
SONM Songino Array 7.98 200 PN **Pn 16 57 43.9 +1.9**
SONM 16 58 12.4
HIA Hailar 8.36 133 *e*PN **Pn 16 57 46.5 -0.6**
KRAR Krasnoyarsk 9.95 281 *e*P **Pn 16 58 10.4 +1.4**
YAK Yakutsk 11.97 48 *e*P **Pn 16 58 34.3 -2.3**
YAK *e* 17 00 47.4
YAK pmax pmax
comp=Z,11nm,0.6s
YAK pmax pmax
comp=N,1.0nm,0.5s
YAK pmax pmax
comp=E,4.0nm,0.5s
YAK smax
comp=Z,11nm,0.7s
YAK smax
comp=N,30nm,0.9s
YAK smax
comp=E,18nm,0.7s
YAK MLR MLR
comp=Z,117nm,13.0s
YAK Yakutsk 11.97 48 *e*Pn **Pn 16 58 33.8 -2.8**
comp=Z,11nm,0.6s
KLR Kul'dur 14.38 107 *e*P **Pn 16 59 08.2 -1.3**
KLR MLR MLR
comp=E,1μm,7.5s
KLR MLR MLR
comp=Z,2μm,7.5s
HHC Hu-ho-hao-te 14.57 177 *e*P **Pn 16 59 13.8 +1.7**
HHC AP pP 16 59 17.2 -4.3
HHC XP sP 16 59 20.7 -2.1
HHC PP 16 59 25.8
HHC AMB AMB
comp=Z,17nm,0.9s
HHC AMB AMB
comp=Z,157nm,5.1s
HHC LR LR
comp=N,270nm,11.8s
HHC LR LR
comp=E,866nm,8.1s
HHC LR LR
comp=Z,354nm,8.4s
ZAL Zalesovo 14.90 275 Pn **Pn 16 59 17.6 +1.0**
comp=Z,0.2nm,0.3s,baz=35,slow=12,SNR=14
ZAL Lg 17 03 40.7
comp=Z,0.6nm,0.3s,baz=353,slow=20,SNR=2.2
BJT Baijiatuau 15.85 164 P **Pn 16 59 32.7 +3.6**
BJT pmax pmax
comp=Z,10.0nm,1.0s
BJT Baijiatuau 15.85 164 P **Pn 16 59 32.7 +3.7**
comp=Z,10nm,1.0s
MDJ Mudanjiang 16.30 123 P **Pn 16 59 33.9 -0.9**
MDJ AP pP 16 59 39.7 -0.9
MDJ XP sP 16 59 41.1 -0.9
MDJ AMB AMB
comp=Z,3.0nm,0.7s
MDJ AMB AMB
comp=Z,74nm,5.8s
MDJ LR LR
comp=N,208nm,17.5s
MDJ LR LR
comp=E,231nm,15.4s
MDJ LR LR
comp=Z,340nm,14.4s
TIXI Tiksi 18.11 19 *e*P **Pn 16 59 56.7 -0.9**
TIXI pmax pmax
comp=Z,13nm,0.9s
TIXI MLR MLR
comp=Z,206nm,13.0s
WMQ Urumqi 18.66 241 *e*P **Pn 17 00 04.0 -0.3**
WMQ XP sP 17 00 11.0 +2.9
WMQ PP 17 00 20.0
WMQ AMB AMB
comp=Z,14nm,0.8s
WMQ LR LR
comp=N,256nm,5.0s
WMQ LR LR
comp=E,217nm,5.0s
WMQ LR LR
comp=Z,268nm,5.0s
MKAR Makanchi Array 19.56 256 P **Pn 17 00 15.2 0.0**
comp=Z,0.4nm,0.3s,baz=62,slow=12,SNR=14
MKAR Makanchi Array 19.56 256 *i*P **Pn 17 00 17.3 +2.1**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
KURK Kurchatov 19.60 269 *e*P **Pn 17 00 15.8 +0.2**
KURK Kurchatov 19.60 269 *e*P **Pn 17 00 14.0 -1.6**
comp=Z,7.9nm,0.8s
YSS Yuzh-Sakhalins 21.77 99 P **P 17 00 40.0 +2.3**
YSS MLR MLR
comp=Z,800nm,14.0s,MS4.3
YSS MLR MLR
comp=E,900nm,12.0s
YSS Yuzh-Sakhalins 21.77 99 *e*P **P 17 00 39.0 +1.2**
comp=E,6.9nm,1.0s,mb4.0
CHKZ Chkalovo 22.97 282 *e*P **P 17 00 50.6 +0.1**
CHKZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
CHKZ Chkalovo 22.97 282 *e*P **P 17 00 50.6 0.0**
comp=Z,5.7nm,0.8s,mb4.0
BVAR Borovoye Array 23.33 281 P **P 17 00 54.0 -0.4**
comp=Z,2.8nm,0.6s,mb3.9,baz=67,slow=9.4,SNR=10
BRVK Borovoye 23.38 281 *e*P **P 17 00 53.7 -1.2**
BRVK pmax pmax
comp=Z,9.0nm,1.1s,mb4.1
BRVK Borovoye 23.38 281 *e*P **P 17 00 53.7 -1.1**
comp=Z,9.1nm,1.1s,mb4.1
NJ2 Nanjing 24.07 162 *e*P **P 17 01 00.1 -1.3**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.5
ZRNK Zerenda 24.14 282 *e*P **P 17 01 02.2 +0.2**
ZRNK pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
ZRNK Zerenda 24.14 282 *e*P **P 17 01 02.2 +0.2**
comp=Z,7.9nm,0.9s,mb4.1
ARU Arti 28.55 294 P **P 17 01 37.6 -4.2**
ARU pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
ARU Arti 28.55 294 P **P 17 01 37.6 -4.2**
comp=Z,5.1nm,1.2s,mb4.1
KMI Kunming 30.77 194 P **P 17 02 03.1 +1.6**
KMI AP pP 17 02 06.8 +2.3
KMI XP sP 17 02 08.4 +2.6
KMI AMB AMB
comp=Z,3.0nm,0.6s,mb4.3
KMI LR LR
comp=Z,76nm,19.1s,MS3.4
KEV Kevo 37.58 325 *e*p **P 17 02 59.5 -1.0**
comp=Z,2.7nm,0.8s,mb4.0
KEV Kevo 37.58 325 *e*P **P 17 02 59.5 -1.0**
KEV pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
ARCES ARCESS Array B 38.15 325 P **P 17 03 04.8 -0.5**
comp=Z,1.5nm,0.7s,mb3.8,baz=72,slow=9.1,SNR=6.6
JOF Joensuu 38.80 314 *e*p **P 17 03 09.9 -0.9**
comp=Z,0.5nm,0.4s,mb3.6
JOF Joensuu 38.80 314 *e*P **P 17 03 09.9 -0.9**
JOF pmax pmax
comp=Z,10.0nm,0.4s,mb4.9
OBN Obninsk 40.26 301⇑ *e*P **P 17 03 21.4 -1.6**
OBN *e* 17 04 52.4
OBN *e*SS SS 17 13 05.7 +37
OBN pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.2
KAF Kangasniemi 41.23 315 *e*p **P 17 03 29.4 -1.6**
comp=Z,1.3nm,0.4s,mb3.9
KAF Kangasniemi 41.23 315 *e*P **P 17 03 29.4 -1.6**
KAF pmax pmax
comp=Z,10.0nm,0.4s,mb4.8
FINES FINESS Array B 41.66 314 P **P 17 03 34.1 -0.4**
comp=Z,2.6nm,0.6s,mb4.0,baz=54,slow=9.7,SNR=12
KIV Kislovodsk 43.62 284 *e*P **P 17 03 55.7 +5.2**
KIV pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
GNI Garni 44.99 279 P **P 17 04 04.3 +2.9**
GNI pmax pmax
comp=Z,22nm,1.3s
GNI Garni 44.99 279 P **P 17 04 04.3 +2.9**
comp=Z,22nm,1.3s,mb4.8
AKASG Malin Array Be 46.44 300 P **P 17 04 11.2 -1.7**
comp=Z,1.9nm,0.7s,mb4.2,baz=44,slow=8.7,SNR=4.2
NB2 NORSAR Subarra 47.72 320 P **P 17 04 21.0 -1.8**
comp=Z,3.0nm,0.7s,mb4.4,baz=48,slow=7.4
NOA NORSAR Array B 47.72 320 P **P 17 04 23.0 +0.2**
comp=Z,2.6nm,0.7s,mb4.3,baz=48,slow=7.3,SNR=9.2
INK Inuvik 47.98 27 P **P 17 04 24.8 -0.1**
comp=Z,1.5nm,1.0s,mb4.0,baz=342,slow=13,SNR=3.7
INK Inuvik 47.98 27 P **P 17 04 24.8 -0.1**
INK pmax pmax
comp=Z,2.0nm,1.0s
INK Inuvik 47.98 27 P **P 17 04 23.9 -1.0**
comp=Z,4.3nm,1.2s,mb4.3
BRTR Keskin Array B 51.46 286 P **P 17 04 53.7 +2.3**
comp=Z,1.0nm,0.8s,mb3.8,baz=89,slow=8.4,SNR=5.1
KSM Kuching 53.75 180 P **P 17 05 09.0 +0.7**
GERES GERESS Array B 55.10 307 P **P 17 05 20.0 +1.9**
comp=Z,0.2nm,0.6s,mb3.4,baz=45,slow=7.7,SNR=4.6
YKA Yellowknife Ar 57.30 23 P **P 17 05 32.8 -1.1**
comp=Z,1.0nm,0.8s,mb3.9,baz=328,slow=7.0,SNR=10
YKA Yellowknife Ar 57.30 23 P **P 17 05 32.8 -1.1**
NVAR Mina Array Bea 77.70 37 P **P 17 07 44.7 +1.9**
comp=Z,0.4nm,0.5s,mb3.6,baz=319,slow=2.3,SNR=3.7
NVAR Mina Array Bea 77.70 37 P **P 17 07 44.7 +1.9**
ASAR Alice Springs 81.25 158 P **P 17 08 03.3 +1.1**
comp=Z,0.6nm,0.9s,mb3.5,baz=355,slow=4.5,SNR=5.1
QSPA South Pole Qui 145.15 180 *e*P PKPbc 17 15 22.0 -1.2

ISCJB ***03*** *16:57:13.2±0.2, 5538N±002×11037E±003, h10km, mb4.5/49, MS4.0/12, Error ellipse: s-maj=2.9km s-min=2.2km az=93.4*

MOS ***03*** *16:57:13.5±1.1, 5553N×11025E, h7km, mb4.8/21, Error ellipse: s-maj=8.8km s-min=6.2km az=109.0*

LDG ***03*** *16:57:13.7±0.2, 5531N×10955E, h10km, Mb5.1/11, Ms3.5/6, Error ellipse: s-maj=7.4km s-min=2.8km az=101.0*

BJI ***03*** *16:57:13.1, 5561N×11039E, h11km, mB4.5, mb4.3, Ms4.5, Msz4.2*

IDC ***03*** *16:57:14.2±0.8, 5544N×11032E, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.1/24, mbtmp4.0/15, ML4.1/2, MS4.0/5, Ms1 4.0/5, ms1mx3.7/16, Error ellipse: s-maj=16.4km s-min=15.3km az=8.0*

NEIC ***03*** *16:57:15.4±0.3, 5557N×11051E, h10km, mb4.7/32, MS4.0/2, Error ellipse: s-maj=6.6km s-min=4.8km az=68.0*

BYKL ***03*** *16:57:15.0±0.2, 5541N×11039E, h5km*

ISC 03 16:57:14.5±0.2, 5537N±002×11040E±003, h10km, n183, σ1$39/216, mb4.5/49, MS4.0/12, 5C-1D, Lake Baikal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**0.64**	**310**	⇑*i*Pg	**Pg**	**16 57 26.3**	**-0.5**
NIZ				Pmax		16 57 27.4	
	974nm,0.3s						
NIZ				*e*Sg	**Sg**	**16 57 34.5**	**-0.7**
NIZ				Smax		16 57 50.4	
	12μm,1.2s						
NIZ	**Nizh Angarsk**	**0.64**	**310**	*e*PG	**Pg**	**16 57 26.3**	**-0.5**
NIZ				pmax	pmax		
	comp=Z,1μm,0.4s						
YLYR	**Ulyunkhan**	**0.66**	**138**	⇓*i*Pg	**Pg**	**16 57 27.0**	**-0.2**
YLYR				Pmax		16 57 30.8	
	comp=Z,2μm,0.8s						
YLYR				*e*Sg	**Sg**	**16 57 36.4**	**+0.7**
YLYR				Smax		16 57 48.1	
	comp=Z,20μm,2.2s						
YLYR	**Ulyunkhan**	**0.66**	**138**	*e*PG	**Pg**	**16 57 27.0**	**-0.2**
YLYR				*e*		16 57 35.8	
YLYR				pmax	pmax		
	comp=Z,231nm,0.4s						
YLYR				smax			
	comp=N,3μm,0.2s						
KMO	**Kumora**	**0.69**	**41**	⇑*i*Pg	**Pg**	**16 57 26.8**	**-1.0**
KMO				Pmax		16 57 27.0	
	comp=N,6μm,0.4s						
KMO				*e*Sg	**Sg**	**16 57 35.2**	**-1.6**
KMO				Smax		16 57 37.7	
	comp=N,33μm,1.1s						
KMO	**Kumora**	**0.69**	**41**	*e*PG	**Pg**	**16 57 26.8**	**-1.0**
KMO				*e*		16 57 34.7	
KMO				pmax	pmax		
	comp=Z,6μm,0.4s						
KMO				smax			
	comp=N,4μm,1.7s						
YOA	**Uoyan**	**1.07**	**44**	*e*Pg	**Pg**	**16 57 34.1**	**-0.9**
YOA				Pmax		16 57 34.3	
	comp=N,5μm,0.5s						
YOA				*e*Sg	**Sg**	**16 57 48.5**	**-0.5**
YOA				Smax		16 57 51.5	
	comp=N,62μm,1.1s						
YOA				*e*		16 57 56.7	
YOA	**Uoyan**	**1.07**	**44**	⇑*i*PG	**Pg**	**16 57 34.1**	**-0.9**
YOA				*i*		16 57 48.6	
YOA				pmax	pmax		
	comp=Z,5μm,0.5s						
YOA				smax			
	comp=E,11μm,2.6s						
SYVR	**Suvo**	**1.73**	**188**	*e*Pg	**Pg**	**16 57 47.2**	**-0.4**
SYVR				Pmax		16 57 52.4	
	comp=E,1μm,0.6s						
SYVR				*e*Sg	**Sg**	**16 58 10.7**	**+0.7**
SYVR				Smax		16 58 14.8	
	comp=E,9μm,1.5s						
SYVR	**Suvo**	**1.73**	**188**	*e*PN	**Pg**	**16 57 47.2**	**-0.4**
SYVR				*e*		16 58 11.3	
SYVR				pmax	pmax		
	comp=Z,922nm,0.7s						
SYVR				smax			
	comp=N,4μm,1.0s						
UKT	**Uakit**	**1.84**	**85**	*e*Pg	**Pg**	**16 57 47.5**	**-2.3**
UKT				Pmax		16 57 51.1	
	comp=N,4μm,1.3s						
UKT				*e*Sg	**Sg**	**16 58 12.1**	**-1.5**
UKT				Smax		16 58 16.9	
	comp=N,7μm,1.0s						
UKT	**Uakit**	**1.84**	**85**	*e*PN	**Pn**	**16 57 47.6**	**+1.5**
UKT				*e*		16 58 12.3	
UKT				pmax	pmax		
	comp=Z,4μm,0.5s						
UKT				smax			
	comp=N,7μm,0.8s						

SVKR Severomuysk 1.94 66 *e*Pg **Pg** **16 57 50.0 -1.6**
SVKR Pmax 16 57 51.8
comp=N,3μm,0.3s
SVKR *e*Sg **Sg** **16 58 15.9 -0.8**
SVKR Smax 16 58 19.7
comp=N,24μm,0.7s
SVKR Severomuysk 1.94 66 *e*PN **Pn** **16 57 49.8 +2.4**
SVKR *e* 16 58 14.9
SVKR pmax pmax
comp=Z,6μm,1.5s
SVKR smax
comp=N,4μm,0.7s
MXMB Maximikha 2.32 205 *e*Pg **Pg** **16 57 57.8 -1.1**
MXMB Pmax 16 57 58.7
comp=N,1μm,0.8s
MXMB *e*Sg **Sg** **16 58 29.2 +0.2**
MXMB Smax 16 58 31.7
comp=N,16μm,0.9s
OGRR Ongureny 2.38 225 *e*Pg **Pg** **16 57 58.1 -2.0**
OGRR Pmax 16 57 58.9
comp=N,448nm,0.3s
OGRR *e*Sg **Sg** **16 58 30.0 -0.9**
OGRR Smax 16 58 31.3
comp=N,5μm,1.0s
OGRR Ongureny 2.38 225 *e*PN **Pn** **16 57 55.2 +1.7**
OGRR *e* 16 57 58.4
OGRR *e* 16 58 30.4
OGRR pmax pmax
comp=Z,427nm,0.5s
OGRR smax
comp=N,5μm,1.0s
KELR Kotokel 2.95 209 *e*Pg **Pg** **16 58 08.0 -3.0**
KELR Pmax 16 58 12.8
comp=N,435nm,0.4s
KELR *e*Sg **Sg** **16 58 47.8 -1.4**
KELR Smax 16 58 51.0
comp=N,6μm,0.8s
BOD Bodaibo 3.16 38 *e*Pn **Pn** **16 58 05.3 +1.0**
BOD max 16 58 22.4
comp=N,631nm,1.1s
BOD *e*Sg **Sg** **16 58 50.4 -5.7**
BOD Smax 16 58 55.5
comp=N,5μm,1.2s
BOD Bodaibo 3.16 38 *e*PN **Pb** **16 58 11.3 +0.6**
BOD *e* 16 58 50.2
BOD pmax pmax
comp=Z,435nm,0.7s
BOD smax
comp=E,5μm,1.0s
NLYR Nelyaty 3.19 67 *e*Pg **Pg** **16 58 12.2 -3.3**
NLYR Pmax 16 58 14.7
comp=E,574nm,0.6s
NLYR *e*Sg **Sg** **16 58 53.2 -3.6**
NLYR Smax 16 59 04.9
comp=E,6μm,1.1s
NLYR Nelyaty 3.19 67 *e*PN **Pb** **16 58 12.0 +0.9**
NLYR *e* 16 58 50.7
NLYR pmax pmax
comp=Z,1μm,1.1s
NLYR smax
comp=N,6μm,1.2s
TRG Tyrgan 3.54 224 *e*Pg **Pg** **16 58 18.3 -4.0**
TRG Pmax 16 58 26.0
comp=N,117nm,0.5s
TRG *e*Sg **Sg** **16 59 04.8 -3.3**
TRG Smax 16 59 16.8
comp=N,2μm,1.3s
TRG Tyrgan 3.54 224 *e*PN **Pn** **16 58 11.0 +1.5**
TRG *e* 16 58 18.7
TRG *e* 16 59 04.8
TRG pmax pmax
comp=Z,168nm,0.3s
TRG smax
comp=N,1μm,0.9s
TRTB Turuntaevo 3.55 209 Pg **Pg** **16 58 19.2 -3.2**
TRTB Pmax 16 58 23.8
comp=N,590nm,1.3s
TRTB *e*Sg **Sg** **16 59 05.7 -2.7**
TRTB Smax 16 59 15.3
comp=N,2μm,1.6s
CIT Chita 3.84 150 *e*Pg **Pg** **16 58 25.7 -2.3**
CIT Pmax 16 58 27.7
comp=N,587nm,1.2s
CIT *e* 16 59 01.9
CIT *e*Sg **Sg** **16 59 15.8 -1.9**
CIT Smax 16 59 23.1
comp=N,1μm,1.4s
KAB Kabansk 4.00 215 *e*Sg **Sg** **16 59 20.2 -2.7**
KAB Smax 16 59 44.8
comp=N,8μm,1.3s
STDB Stepnoy Dvoret 4.00 218 *e*Sg **Sg** **16 59 20.2 -2.7**
STDB Smax 16 59 22.0
comp=N,8μm,1.4s
HRMR Khuramsha 4.27 210 *e*Pg **Pg** **16 58 32.1 -4.2**
HRMR Pmax 16 58 35.0
comp=N,326nm,0.5s
HRMR *e*Sg **Sg** **16 59 28.1 -3.6**
HRMR Smax 16 59 38.0
comp=N,5μm,0.9s
CRS Chara 4.66 68 *e*Sg **Sg** **16 59 38.6 -5.5**
CRS Smax 16 59 48.1
comp=N,3μm,1.3s
IRK Irkutsk 4.80 232 *e* **Sn** **16 59 24.8 +2.5**
IRK *e*Sg **Sg** **16 59 43.9 -4.5**
IRK Smax 16 59 48.7
comp=N,7μm,1.0s
IRK Irkutsk 4.80 232 *e*PN **Pg** **16 58 42.2 -4.1**
IRK *e*S **Sn** **16 59 22.8 +0.5**
IRK *e* 16 59 44.5
IRK pmax pmax
comp=Z,720nm,1.1s
IRK smax
comp=N,7μm,1.1s
LSTR Listvyanka 4.83 226 *e*PN **Pb** **16 58 41.3 +2.2**
LSTR *e* 16 59 44.5
LSTR pmax pmax
comp=Z,369nm,0.9s
LSTR smax
comp=N,2μm,1.3s
TLY Talaya 5.47 230 *e*Sn **Sn** **16 59 39.3 +0.4**
TLY *e*Sg **Sg** **17 00 03.9 -6.1**
TLY Smax 17 00 08.2
comp=N,2μm,1.0s
TLY Talaya 5.47 230 *e*PN **Pn** **16 58 33.8 -2.1**
TLY *e*Sn **Sn** **16 59 39.3 +0.5**
TLY *e*Sg **Sg** **17 00 00.6 -9.3**
KHNR Khani 5.58 70 *e*Sg **Sg** **17 00 07.4 -6.1**
TUP Tupik 5.59 96 *e* **Sn** **16 59 44.0 +2.0**
TUP *e*Sg **Sg** **17 00 08.0 -6.0**
TUP Smax 17 00 14.9
comp=N,2μm,1.1s
KPC Khapcheranga 5.80 167 *e*Sg **Sg** **17 00 15.7 -4.9**
KPC Smax 17 00 23.2
comp=N,877nm,1.1s
ARS Arshan 5.87 237 *e*Sn **Sn** **16 59 48.6 -0.2**
ARS *e*Sg **Sg** **17 00 17.4 -5.4**
ARS Smax 17 00 22.4
comp=N,4μm,0.9s
ZAK Zakamensk 6.59 224 *e*Sg **Sg** **17 00 40.7 -5.4**
ZAK Smax 17 00 58.4
comp=N,1μm,1.7s
ZAK Zakamensk 6.59 224 *e*PG **Pg** **16 59 15.1 -5.6**
ZAK *e* 17 00 41.2
ZAK pmax pmax
comp=Z,108nm,0.8s
ZAK smax
comp=N,1μm,1.8s
MOY Mondy 6.72 240 *e* **Sn** **17 00 12.5 +2.7**
MOY *e*Sg **Sg** **17 00 43.3 -7.0**
MOY Smax 17 00 56.2
comp=N,2μm,2.1s
MOY Mondy 6.72 240 *e*PG **Pg** **16 59 17.7 -5.5**
MOY *e* 17 00 42.0
MOY pmax pmax
comp=Z,8.0nm,0.7s
MOY smax
comp=N,2μm,2.1s
ORL Orlik 6.86 250 *e* **Sn** **17 00 14.6 +1.3**
ORL *e*Sg **Sg** **17 00 48.2 -6.6**
ORL Smax 17 00 52.1
comp=N,2μm,1.2s
SONM Songino Array 7.94 200 Pn **Pn** **16 59 12.4 +2.4**
comp=N,1.6nm,0.3s,baz=12,slow=14,SNR=4.9
SONM Pg Pn 16 59 41.2 +31
comp=N,2.5nm,0.3s,baz=14,slow=18,SNR=5.6
SONM Lg 17 01 26.6
comp=N,7.5nm,0.3s,baz=13,slow=23,SNR=10
SONM Songino Array 7.94 200 PG Px 16 59 41.2
SONM pmax pmax
comp=Z,3.0nm,0.3s
CLNS Chul'man 8.23 74 *e*Sg Sx 17 01 29.4
HIA Hailar 8.36 133 *e*PN **Pn** **16 59 16.3 +0.6**
HIA pmax pmax
comp=Z,11nm,0.5s
HIA Hailar 8.36 133 *e*Pn **Pn** **16 59 16.3 +0.6**
comp=Z,11nm,0.5s
HIA *e*Pg Pn 17 00 05.6 +50
HIA *e*Sg Sn 17 01 36.0 +46
KRAR Krasnoyarsk 9.92 281 *e*P **Pn** **16 59 36.6 -0.5**
YAK Yakutsk 12.01 48 *e*P **Pn** **17 00 02.2 -3.5**
YAK *e* 17 02 15.1
YAK pmax pmax
comp=Z,11nm,0.7s
YAK pmax pmax
comp=N,5.0nm,0.6s
YAK pmax pmax
comp=E,3.0nm,0.4s
YAK smax
comp=Z,29nm,0.5s
YAK smax
comp=N,63nm,0.7s
YAK smax
comp=E,84nm,1.1s
YAK MLR MLR
comp=Z,686nm,11.0s
YAK Yakutsk 12.01 48 *e*Pn **Pn** **16 59 58.6 -7.1**
HHC Hu-ho-hao-te 14.55 176 *e*P **Pn** **17 00 44.1 +3.8**
HHC AP pP 17 00 47.4 -2.3
HHC XP sP 17 00 51.0 0.0
HHC PP 17 00 55.9
HHC S **Sn** **17 03 26.7 +5.1**
HHC PCP PcP 17 05 57.9 +3.5
HHC SCS ScS 17 13 06.4 +0.6
HHC AMB AMB
comp=Z,21nm,0.9s
HHC AMB AMB
comp=Z,105nm,4.7s
HHC LR LR
comp=N,401nm,6.6s
HHC LR LR
comp=E,398nm,7.4s
HHC LR LR
comp=Z,263nm,11.9s
ZAL Zalesovo 14.87 275 Pn **Pn** **17 00 45.7 +1.0**
comp=Z,0.7nm,0.3s,baz=34,slow=9.3,SNR=15
ZAL Lg 17 05 06.4
comp=Z,0.7nm,0.3s,baz=286,slow=9.6,SNR=2.6
ZAL LR LR 17 07 20.6
comp=Z,611nm,19.0s,baz=17,slow=41
ZAL Zalesovo 14.87 275 Pn **Pn** **17 00 45.7 +1.0**
ZAL Lg 17 05 06.4
ZAL LR LR 17 07 20.6
NVS Novosibirsk 15.52 279 *e*P **Pn** **17 00 52.1 -1.3**
NVS *e*S **Sn** **17 03 48.9 +3.5**
NVS pmax pmax
comp=Z,32nm,1.7s
NVS pmax pmax
comp=N,21nm,2.0s
NVS pmax pmax
comp=E,33nm,1.8s
BJI Beijing 15.81 164 *e*P **Pn** **17 01 03.8 +6.7**
BJI AMB AMB
comp=Z,13nm,1.5s
BJI LR LR
comp=N,249nm,8.5s
BJI LR LR
comp=E,1μm,8.7s
BJI LR LR
comp=Z,232nm,17.1s
BJT Baijiatuau 15.83 164 *e*P **Pn** **17 01 00.8 +3.5**
BJT pmax pmax
comp=Z,18nm,1.2s
BJT Baijiatuau 15.83 164 *e*Pn **Pn** **17 01 00.8 +3.5**
comp=Z,18nm,1.2s
MDJ Mudanjiang 16.31 123 P **Pn** **17 01 06.0 +2.5**
MDJ AP pP 17 01 10.8 +1.5
MDJ XP sP 17 01 13.1 +2.5
MDJ S **Sn** **17 04 09.0 +4.5**
MDJ AMB AMB
comp=Z,3.0nm,0.6s
MDJ AMB AMB
comp=Z,53nm,4.9s
MDJ LR LR
comp=N,204nm,13.8s
MDJ LR LR
comp=E,128nm,16.8s
MDJ LR LR
comp=Z,340nm,15.3s
MDJ Mudanjiang 16.31 123 *e*Pn **Pn** **17 01 10.5 +6.9**
HABR Khabarovsk 16.64 104⇑ *e*P **Pn** **17 01 09.2 +1.5**
HABR *e*S **Sn** **17 04 18.0 +5.5**
HABR pmax pmax
comp=Z,31nm,2.4s
HABR MLR MLR
comp=Z,800nm,13.0s
GTA Gaotai 17.46 208 *e*P **Pn** **17 01 25.7 +7.6**
GTA AMB AMB
comp=Z,3.0nm,1.3s
GTA AMB AMB
comp=Z,120nm,3.4s
GTA LR LR
comp=N,454nm,12.2s
GTA LR LR
comp=E,664nm,9.9s
GTA LR LR
comp=Z,523nm,14.8s
TIXI Tiksi 18.15 19 *e*P **Pn** **17 01 25.2 -1.3**
TIXI *e*S **Sn** **17 04 47.7 -1.3**
TIXI pmax pmax
comp=Z,22nm,0.8s
TIXI MLR MLR
comp=Z,206nm,13.0s
WMQ Urumqi 18.61 241 *e*P **Pn** **17 01 34.0 +1.8**
WMQ XP sP 17 01 41.0 +4.9
WMQ PP 17 01 50.0
WMQ S **Sn** **17 04 58.0 -2.3**
WMQ SS 17 05 22.0
WMQ AMB AMB
comp=Z,15nm,0.8s
WMQ LR LR
comp=N,298nm,5.0s
WMQ LR LR
comp=E,257nm,5.0s
WMQ LR LR
comp=Z,364nm,5.0s
MKAR Makanchi Array 19.52 256 P **Pn** **17 01 44.2 +1.0**
comp=Z,0.9nm,0.3s,baz=36,slow=11,SNR=11
MKAR Makanchi Array 19.52 256 P **Pn** **17 01 44.2 +1.0**
KURK Kurchatov 19.56 269 *e*P **Pn** **17 01 40.3 -3.4**
KURK pmax pmax
comp=Z,29nm,1.0s
KURK Kurchatov 19.56 269 *e*P **Pn** **17 01 40.2 -3.4**
comp=Z,29nm,1.0s
LZH Lanzhou 19.80 196 *e*P **Pn** **17 01 46.5 0.0**
LZH PP 17 02 05.5
LZH *e*S **Sn** **17 05 25.0 -4.0**
LZH AMB AMB
comp=Z,25nm,1.0s
LZH AMB AMB
comp=Z,150nm,5.3s
LZH LR LR
comp=E,1μm,10.2s
LZH LR LR
comp=Z,2μm,11.5s
INCN Inchon 21.00 142 P **P** **17 02 00.6 +2.6**
comp=Z,34nm,1.5s,mb4.5
YSS Yuzh-Sakhalins 21.80 99 *e*P **P** **17 02 10.8 +4.2**
YSS pmax pmax
comp=Z,14nm,1.1s,mb4.3
YSS Yuzh-Sakhalins 21.80 99 *e*P **P** **17 02 10.8 +4.3**
comp=Z,14nm,1.1s,mb4.3
BVAR Borovoye Array 23.30 281 P **P** **17 02 23.4 +0.8**
comp=Z,4.9nm,0.6s,mb4.1,baz=64,slow=8.2,SNR=3.8
BVAR S **S** **17 06 35.2 +0.4**
comp=Z,1.8nm,0.6s,baz=69,slow=14,SNR=2.6
BVAR LR LR 17 12 21.3
comp=Z,399nm,20.0s,MS3.9,baz=321,slow=39
BVAR Borovoye Array 23.30 281 P **P** **17 02 23.4 +0.8**
BVAR S **S** **17 06 35.2 +0.4**
BRVK Borovoye 23.35 281 *e*P **P** **17 02 20.1 -3.0**
BRVK *e*S **S** **17 06 31.5 -4.1**
BRVK pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
BRVK Borovoye 23.35 281 *e*P **P** **17 02 20.1 -3.0**
comp=Z,9.7nm,0.7s,mb4.3
BRVK *e*S **S** **17 06 31.5 -4.1**
ASAJ Asahikawa 23.43 105 LR LR 17 12 09.5
comp=Z,311nm,20.3s,MS3.8,baz=340,slow=38
NJ2 Nanjing 24.06 162 *e*P **P** **17 02 31.0 +1.2**
NJ2 AP 17 02 35.2
NJ2 XP sP 17 02 38.0 +3.9
NJ2 PP 17 03 05.2
NJ2 S **S** **17 06 44.0 -3.0**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.5
NJ2 AMB AMB
comp=Z,270nm,4.3s
NJ2 LR LR
comp=N,1μm,15.3s,MS4.6
NJ2 LR LR
comp=E,1μm,14.4s,MS4.6
NJ2 LR LR
comp=Z,530nm,14.2s,MS4.2
ZRNK Zerenda 24.11 282 *e*P **P** **17 02 32.1 +1.9**
ZRNK pmax pmax
comp=Z,12nm,0.7s,mb4.4
ZRNK Zerenda 24.11 282 *e*P **P** **17 02 32.1 +1.9**
comp=Z,12nm,0.7s,mb4.4
CD2 Chengdu 24.90 194 *e*P **P** **17 02 38.9 +1.5**
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
AAK Ala-Archa 26.45 256 P **P** **17 02 54.4 +2.8**
AAK pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
AAK Ala-Archa 26.45 256 P **P** **17 02 54.4 +2.9**
comp=Z,6.1nm,0.8s,mb4.2
ARU Arti 28.52 294 *e*P **P** **17 03 20.4 +10**
ARU *e* 17 04 14.3
ARU MLR MLR
comp=N,70nm,17.0s,MS3.8
ARU MLR MLR
comp=E,200nm,17.0s,MS3.8
ARU MLR MLR
comp=Z,300nm,17.0s,MS4.0
ARU Arti 28.52 294 *e*P **P** **17 03 14.0 +3.9**
comp=Z,11nm,1.3s,mb4.4
KMI Kunming 30.73 194 P **P** **17 03 32.7 +3.0**
KMI AMB AMB
comp=Z,4.0nm,0.9s,mb4.2
GUN Gumba 32.65 223 *e*P **P** **17 03 50.2 +3.6**
JIRN Jiri 32.76 222 *e*P **P** **17 03 51.3 +3.8**
comp=Z,41nm,1.1s,mb5.3
KKN Kakani 32.99 224 *e*P **P** **17 03 53.1 +3.5**
comp=Z,33nm,0.8s,mb5.3
KKN Kakani 32.99 224 *e*P **P** **17 03 53.1 +3.5**
KKN pmax pmax
comp=Z,33nm,0.8s,mb5.3
GKN Gorkha 33.06 225 *e*P **P** **17 03 53.1 +3.0**
comp=Z,24nm,0.9s,mb5.1
DMN Daman 33.23 224 *e*P **P** **17 03 55.3 +3.7**
KOLN Koldanda 33.69 226 *e*P **P** **17 03 59.2 +3.6**
comp=Z,13nm,0.9s,mb4.9
KLMR Klimovskoe 36.16 308 *e*P **P** **17 04 17.4 +0.5**
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
KEV Kevo 37.58 325 *e*p **P** **17 04 29.2 +0.2**
comp=Z,1.8nm,0.4s,mb4.2
KEV Kevo 37.58 325 *e*P **P** **17 04 29.2 +0.2**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
ARCES ARCESS Array B 38.15 325 P **P** **17 04 33.6 -0.2**
comp=Z,1.2nm,0.5s,mb3.9,baz=73,slow=8.2,SNR=12
JOF Joensuu 38.79 314 *e*p **P** **17 04 38.7 -0.6**
comp=Z,0.7nm,0.3s,mb3.9
OBN Obninsk 40.24 301⇑ *e*P **P** **17 04 47.8 -3.6**
OBN *e* 17 06 20.7
OBN *e*S **S** **17 10 57.5 -1.0**
OBN pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
KAF Kangasniemi 41.22 315 *e*p **P** **17 04 58.7 -0.7**
comp=Z,1.9nm,0.3s,mb4.2,baz=60,slow=7.9
KAF Kangasniemi 41.22 315 *e*P **P** **17 04 58.7 -0.7**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
FINES FINESS Array B 41.66 314 P **P** **17 05 03.1 +0.2**
comp=Z,5.9nm,0.8s,mb4.3,baz=64,slow=7.0,SNR=12
IMA2 Indian Mountai 43.48 36 *e*P **P** **17 05 18.9 +1.1**
KIV Kislovodsk 43.60 284 *e*P **P** **17 05 13.2 -5.6**
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KIV MLR MLR
comp=Z,129nm,17.0s,MS3.9
SOC Sochi 45.48 286 *e*P **P** **17 05 24.6 -9.2**
SOC *e*PPP 17 08 06.1
SOC *e*SS SS 17 15 34.8 -4.4
SOC *e*SSS 17 16 28.4
SOC pmax pmax
comp=Z,20nm,0.7s,mb5.1
SOC MLR MLR
comp=Z,222nm,19.0s,MS4.1
AKASG Malin Array Be 46.43 300 P **P** **17 05 41.3 +0.1**
comp=Z,1.5nm,0.5s,mb4.2,baz=44,slow=8.6,SNR=11
AKASG LR LR 17 27 04.9
comp=Z,170nm,18.7s,MS4.0,baz=50,slow=39
NB2 NORSAR Subarra 47.72 320 P **P** **17 05 50.9 -0.4**
comp=Z,4.6nm,0.8s,mb4.6,baz=46,slow=7.4
NOA NORSAR Array B 47.72 320 P **P** **17 05 51.6 +0.3**
comp=Z,4.2nm,0.8s,mb4.5,baz=47,slow=7.3,SNR=9.5
INK Inuvik 48.02 27 P **P** **17 05 53.5 -0.2**
comp=Z,1.5nm,0.7s,mb4.1,baz=336,slow=9.8,SNR=4.9
INK Inuvik 48.02 27 P **P** **17 05 53.5 -0.2**
DAWY Dawson 49.41 33 *e*P **P** **17 06 03.7 -0.7**
MALT Malatya 49.77 282 *e*P **P** **17 06 09.5 +2.4**
MALT pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MALT Malatya 49.77 282 *e*P **P** **17 06 09.5 +2.4**
comp=Z,4.1nm,0.9s,mb4.5
KWP Kalwaria 50.31 302 *e*P **P** **17 06 13.5 +2.3**
KWP pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KWP Kalwaria 50.31 302 *e*P **P** **17 06 13.4 +2.2**
comp=Z,7.2nm,0.6s,mb4.9
BR131 Keskin Array S 51.43 286 *e*P **P** **17 06 19.6 -0.1**
comp=Z,1.6nm,0.8s,mb4.0
BRTR Keskin Array B 51.43 286 P **P** **17 06 21.5 +1.8**
comp=Z,1.4nm,0.8s,mb3.9,baz=97,slow=5.0,SNR=6.7
MORC Moravsky Berou 52.66 305 P **P** **17 06 28.5 -0.3**
MORC pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MORC Moravsky Berou 52.66 305 P **P** **17 06 28.5 -0.3**
comp=Z,3.3nm,1.0s,mb4.2
PSZ Piszkesteto 52.84 302 *e*P **P** **17 06 29.5 -0.6**
PSZ pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
PSZ Piszkesteto 52.84 302 *e*P **P** **17 06 29.5 -0.6**
comp=Z,7.3nm,0.9s,mb4.6
BRG Berggiesshubel 53.52 308 *e*(P) **P** **17 06 36.3 +1.1**
comp=Z,1.1nm,0.6s,mb4.0
CLL Collm 53.63 309 *i* P **P** **17 06 37.7 +1.7**
CLL *es*P sP 17 06 46.0 +5.6
CLL Collm 53.63 309 *i* P **P** **17 06 37.7 +1.7**
CLL *e* 17 06 46.0
CLL LR LR
comp=Z,200nm,17.2s,MS4.2
GERES GERESS Array B 55.09 307 P **P** **17 06 47.8 +1.2**
comp=Z,0.7nm,0.6s,mb3.9,baz=43,slow=6.0,SNR=6.1
YKA Yellowknife Ar 57.34 23 P **P** **17 07 01.9 -0.7**
comp=Z,1.8nm,0.7s,mb4.2,baz=331,slow=6.9,SNR=12
GIVF Givet 58.04 313 *e*P **P** **17 07 07.2 -0.4**
EIL Elat 58.05 277 P **P** **17 07 10.0 +2.3**
comp=Z,69nm,1.0s,mb5.6
CDF Champ du Feu 58.28 310 *e*P **P** **17 07 08.8 -0.4**
BAIF Baives 58.33 313 *e*P **P** **17 07 08.9 -0.7**
HINF Hinteralfeld 58.91 310 *e*P **P** **17 07 13.4 -0.3**
HAU Haudompre 58.99 311 *e*P **P** **17 07 13.7 -0.5**
HAU *e*R
comp=Z,93nm,19.5s
HAU Haudompre 58.99 311 *e*P **P** **17 07 13.7 -0.5**
HAU LR LR
comp=Z,90nm,19.5s,MS3.9
AQU L'Aquila 60.03 302 *e*P **P** **17 07 24.5 +3.1**
AQU pmax pmax
comp=Z,17nm,0.7s,mb5.2
AQU L'Aquila 60.03 302 *e*P **P** **17 07 24.5 +3.1**
comp=Z,16nm,0.7s,mb5.2
CABF La Chapelle 60.17 310 *e*P **P** **17 07 22.0 -0.4**
LOR Lormes 60.63 311 *e*P **P** **17 07 25.1 -0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,20nm,1.1s,mb4.9						
LOR				eR			
	comp=Z,38nm,22.0s						
LOR	Lormes	60.63	311	eP	P	17 07 25.1	-0.4
LOR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
LOR				MLR	MLR		
	comp=Z,40nm,22.0s,MS3.5						
LOR	Lormes	60.63	311	eP	P	17 07 25.1	-0.4
	comp=Z,10nm,1.1s,mb4.9						
LOR				LR	LR		
	comp=Z,40nm,22.0s,MS3.5						
LPL	La Plagne	60.73	308	eP	P	17 07 25.8	-0.4
LPG	La Plagne	60.74	308	eP	P	17 07 26.1	-0.1
SSF	Saint Saulge	60.94	312	eP	P	17 07 27.1	-0.5
	comp=Z,15nm,1.0s,mb4.8						
SSF	Saint Saulge	60.94	312	eP	P	17 07 27.1	-0.5
SSF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
SSF	Saint Saulge	60.94	312	eP	P	17 07 27.1	-0.5
	comp=Z,7.4nm,1.0s,mb4.8						
SMF	Signal de Mont	61.12	311	eP	P	17 07 28.3	-0.5
AVF	Avril sur Loir	61.22	311	eP	P	17 07 29.1	-0.4
	comp=Z,17nm,1.1s,mb4.8						
AVF	Avril sur Loir	61.22	311	eP	P	17 07 29.1	-0.4
AVF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
AVF	Avril sur Loir	61.22	311	eP	P	17 07 29.1	-0.4
	comp=Z,8.4nm,1.1s,mb4.8						
LDF	La Druitiere	61.25	315	eP	P	17 07 29.3	-0.4
	comp=Z,9.0nm,0.7s,mb4.7						
LDF	La Druitiere	61.25	315	eP	P	17 07 29.3	-0.4
LDF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
LDF	La Druitiere	61.25	315	eP	P	17 07 29.3	-0.4
	comp=Z,4.5nm,0.7s,mb4.7						
FLN	La Foliniere	61.26	315	eP	P	17 07 29.3	-0.5
	comp=Z,42nm,1.0s,mb5.2						
FLN				eR			
	comp=Z,117nm,21.5s						
FLN	La Foliniere	61.26	315	eP	P	17 07 29.3	-0.5
FLN				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.2						
FLN				MLR	MLR		
	comp=Z,120nm,21.5s,MS4.0						
FLN	La Foliniere	61.26	315	eP	P	17 07 29.3	-0.5
	comp=Z,21nm,1.0s,mb5.2						
FLN				LR	LR		
	comp=Z,120nm,21.5s,MS4.0						
MBDF	Montbardon	61.32	308	eP	P	17 07 29.8	-0.4
ORIF	Oris-en-Rattie	61.58	309	eP	P	17 07 31.2	-0.7
ORIF				eR			
	comp=Z,93nm,18.8s						
SBF	Sospel	61.69	307	eP	P	17 07 32.2	-0.5
PGF	Pioggiola	61.98	305	eP	P	17 07 34.0	-0.7
	comp=Z,163nm,1.4s,mb5.7						
PGF	Pioggiola	61.98	305	eP	P	17 07 34.0	-0.7
PGF				pmax	pmax		
	comp=Z,82nm,1.4s,mb5.7						
PGF	Pioggiola	61.98	305	eP	P	17 07 34.0	-0.7
	comp=Z,82nm,1.4s,mb5.7						
TCF	Toulx Ste Croi	62.10	312	eP	P	17 07 34.5	-1.0
	comp=Z,53nm,1.6s,mb5.1						
TCF	Toulx Ste Croi	62.10	312	eP	P	17 07 34.5	-1.0
TCF				pmax	pmax		
	comp=Z,26nm,1.6s,mb5.1						
TCF	Toulx Ste Croi	62.10	312	eP	P	17 07 34.5	-1.0
	comp=Z,26nm,1.6s,mb5.1						
FRF	La Foret Royal	62.29	307	eP	P	17 07 36.0	-0.7
	comp=Z,40nm,1.1s,mb5.2						
FRF	La Foret Royal	62.29	307	eP	P	17 07 36.0	-0.7
FRF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
FRF	La Foret Royal	62.29	307	eP	P	17 07 36.0	-0.7
	comp=Z,20nm,1.1s,mb5.2						
SMRF	Simiane la Rot	62.45	308	eP	P	17 07 37.2	-0.6
SGMF	Saint Gilles	62.49	316	eP	P	17 07 38.2	+0.1
	comp=Z,20nm,0.9s,mb5.0						
SGMF	Saint Gilles	62.49	316	eP	P	17 07 38.2	+0.1
SGMF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
SGMF	Saint Gilles	62.49	316	eP	P	17 07 38.2	+0.1
	comp=Z,10nm,0.9s,mb5.0						
ROSF	Rostrenen	62.71	317	eP	P	17 07 39.2	-0.3
MFF	Saint Martin d	62.84	313	eP	P	17 07 40.2	-0.2
QUIF	Quistinic	63.01	316	eP	P	17 07 41.1	-0.4
CAF	Calviac	63.24	311	eP	P	17 07 42.5	-0.6
	comp=Z,73nm,1.7s,mb5.2						
CAF	Calviac	63.24	311	eP	P	17 07 42.5	-0.6
CAF				pmax	pmax		
	comp=Z,36nm,1.7s,mb5.2						
CAF	Calviac	63.24	311	eP	P	17 07 42.5	-0.6
	comp=Z,36nm,1.7s,mb5.2						
KEST	Kesra	67.16	300	LR	LR	17 40 34.0	
	comp=Z,59nm,19.6s,MS3.8,baz=252,slow=39						
WRA	Warramunga Arr	77.73	157	P	P	17 09 12.7	+1.2
	comp=Z,0.9nm,0.9s,mb3.7,baz=354,slow=6.9,SNR=8.3						
NVAR	Mina Array Bea	77.74	37	P	P	17 09 13.7	+2.1
	comp=Z,0.9nm,0.8s,mb3.8,baz=336,slow=3.7,SNR=6.1						
ASAR	Alice Springs	81.24	158	P	P	17 09 31.8	+1.2
	comp=Z,0.4nm,0.7s,baz=356,slow=4.8,SNR=4.1						
TORD	Torodi Ar. Bea	89.59	293	P	P	17 10 13.6	+1.3
	comp=Z,0.9nm,0.7s,mb4.2,baz=39,slow=4.4,SNR=4.5						
CPUP	Villa Florida	149.64	338	ePKP2	PKPab	17 17 04.4	-5.0

*MOS **03** 17:10:19.2±2.6, 5530N×11040E, h7km, mb4.3/1, Error ellipse: s-maj=88.4km s-min=39.0km az=139.7*

BYKL 03 17:10:19.5±0.2, 5542N×11042E, 3C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.61	306⇑	iPg	Pg	17 10 30.8	-0.4
NIZ				eSg	Sg	17 10 39.1	-0.1
NIZ				Pmax			
	39nm,0.2s						
NIZ				Smax			
	113nm,0.4s						
KMO	Kumora	0.64	43⇓	iPg	Pg	17 10 30.8	-1.0
KMO				eSg	Sg	17 10 39.2	-1.0
KMO				Pmax			
	84nm,0.4s						
KMO				Smax			
	356nm,0.9s						
YLYR	Ulyunkhan	0.69	142⇑	iPg	Pg	17 10 31.6	-1.2
YLYR				eSg	Sg	17 10 41.0	-0.7
YLYR				Pmax			
	64nm,0.4s						
YLYR				Smax			
	325nm,0.3s						
YOA	Uoyan	1.03	45	ePg	Pg	17 10 38.6	-0.6
YOA				eSg	Sg	17 10 52.5	0.0
YOA				Pmax			
	121nm,0.2s						
YOA				Smax			
	789nm,0.8s						
YOA	Uoyan	1.03	45⇑	iPG	Pg	17 10 38.7	-0.5
YOA				e		17 10 53.1	
YOA				pmax	pmax		
	comp=Z,135nm,0.2s						
YOA				smax			
	comp=E,1µm,2.6s						
SYVR	Suvo	1.78	188	ePg	Pg	17 10 51.6	-2.1
SYVR				e		17 10 55.7	
SYVR				eSg	Sg	17 11 16.0	-0.8
SYVR				Pmax			
	comp=E,42nm,0.5s						
SYVR				Smax			
	comp=E,124nm,0.9s						
UKT	Uakit	1.83	87	ePg	Pg	17 10 51.9	-2.6
UKT				eSg	Sg	17 11 16.6	-1.6
UKT				Pmax			
	comp=E,21nm,0.2s						
UKT				Smax			
	comp=E,130nm,0.6s						
SVKR	Severomuysk	1.91	67	ePg	Pg	17 10 54.1	-1.9
SVKR				eSg	Sg	17 11 19.9	-0.9
SVKR				Pmax			
	comp=E,80nm,0.3s						
SVKR				Smax			
	comp=E,543nm,0.5s						
SVKR	Severomuysk	1.91	67	ePN	Pn	17 10 52.6	-0.6
SVKR				e		17 10 55.2	
SVKR				e		17 11 19.7	
SVKR				pmax	pmax		
	comp=Z,73nm,0.4s						
SVKR				smax			
	comp=N,541nm,0.5s						
MXMB	Maximikha	2.37	205	ePg	Pg	17 11 01.9	-3.1
MXMB				eSg	Sg	17 11 34.5	-1.3
MXMB				Pmax			
	comp=N,38nm,0.6s						
MXMB				Smax			
	comp=N,277nm,0.8s						
OGRR	Ongureny	2.42	224	ePn	Pn	17 11 01.0	+0.6
OGRR				ePg	Pg	17 11 03.0	-3.0
OGRR				eSg	Sg	17 11 35.2	-2.2
OGRR				Pmax			
	comp=N,16nm,0.3s						
OGRR				Smax			
	comp=N,91nm,0.5s						
KELR	Kotokel	3.00	208	ePg	Pg	17 11 12.8	-4.2
KELR				eSg	Sg	17 11 52.7	-3.2
KELR				Pmax			
	comp=N,25nm,0.4s						
KELR				Smax			
	comp=N,108nm,0.5s						
BOD	Bodaibo	3.12	38	ePn	Pn	17 11 09.9	0.0
BOD				eSn	Sn	17 11 46.0	-1.8
BOD				eSg	Sg	17 11 55.5	-4.1
BOD				Smax			
	comp=N,45nm,0.9s						
NLYR	Nelyaty	3.16	68	ePn	Pn	17 11 10.5	0.0
NLYR				ePg	Pg	17 11 16.9	-3.1
NLYR				eSg	Sg	17 11 58.1	-2.9
NLYR				Pmax			
	comp=N,17nm,0.5s						
NLYR				Smax			
	comp=N,91nm,1.1s						
ZRHB	Zarechye	3.46	215	ePg	Pg	17 11 21.5	-4.3
ZRHB				eSg	Sg	17 12 07.0	-3.7
ZRHB				Pmax			
	comp=N,58nm,1.0s						
ZRHB				Smax			
	comp=N,228nm,1.3s						
TRG	Tyrgan	3.58	224	ePn	Pn	17 11 17.1	+0.8
TRG				eSg	Sg	17 12 10.2	-4.5
TRG				Smax			
	comp=N,42nm,0.7s						
TRTB	Turuntaevo	3.60	208	ePn	Pn	17 11 16.9	+0.4
TRTB				ePg	Pg	17 11 24.5	-4.0
TRTB				eSg	Sg	17 12 11.3	-3.8
TRTB				Pmax			
	comp=N,11nm,0.5s						
TRTB				Smax			
	comp=N,46nm,1.5s						
CIT	Chita	3.88	150	e	Pg	17 11 30.2	-3.7
CIT				eSg	Sg	17 12 19.1	-5.1
CIT				Smax			
	comp=N,33nm,0.8s						
HRMR	Khuramsha	4.33	210	ePg	Pg	17 11 36.7	-5.7
HRMR				eSg	Sg	17 12 33.3	-5.2
HRMR				Pmax			
	comp=N,24nm,0.8s						
HRMR				Smax			
	comp=N,104nm,0.6s						
CRS	Chara	4.63	68	ePg	Pg	17 11 42.5	-5.8
CRS				eSg	Sg	17 12 42.0	-6.3
CRS				Pmax			
	comp=N,19nm,1.3s						
CRS				Smax			
	comp=N,51nm,1.7s						
CRS	Chara	4.63	68	ePN	Pb	17 11 41.7	+0.1
CRS				e		17 12 42.0	
CRS				pmax	pmax		
	comp=Z,31nm,1.6s						
CRS				smax			
	comp=E,51nm,1.3s						
TUP	Tupik	5.59	96	ePn	Pn	17 11 43.4	-0.5
TUP				ePg	Pg	17 11 58.5	-8.1
TUP				eSg	Sg	17 13 11.5	-7.5
TUP				Pmax			
	comp=E,13nm,0.9s						
TUP				Smax			
	comp=E,47nm,1.0s						
TUP	Tupik	5.59	96	ePN	Pn	17 11 43.4	-0.5
TUP				e		17 11 58.5	
TUP				eS	Sn	17 12 45.2	-3.6
TUP				e		17 13 12.4	
TUP				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TUP				smax			
	comp=N,48nm,1.0s						
KPC	Khapcheranga	5.85	167	Pg	Pg	17 12 05.0	-6.6
KPC				eSn	Sn	17 12 51.2	-4.0
KPC				eSg	Sg	17 13 20.5	-6.9
KPC				Pmax			
	comp=N,7.0nm,1.0s						
KPC				Smax			
	comp=N,24nm,1.1s						
ARS	Arshan	5.91	237	Pg	Pg	17 12 05.3	-7.4
ARS				e		17 12 55.4	
ARS				eSg	Sg	17 13 21.7	-7.5
ARS				Pmax			
	comp=N,20nm,0.5s						
ARS				Smax			
	comp=N,91nm,0.9s						
ZAK	Zakamensk	6.64	223	e	rx	17 12 53.0	
ZAK				eSg	Sg	17 13 44.9	-7.9
ZAK				Smax			
	comp=N,32nm,2.2s						
MOY	Mondy	6.76	240	e	Pn	17 12 02.1	+2.2
MOY				e		17 13 17.1	
MOY				eSg	Sg	17 13 49.4	-7.2
MOY				Smax			
	comp=N,40nm,1.5s						
ORL	Orlik	6.89	250	ePn	Pn	17 12 02.8	+1.1
ORL				e		17 13 20.0	
ORL				eSg	Sg	17 13 52.2	-8.6
ORL				Smax			
	comp=N,42nm,1.1s						

*MOS **03** 17:14:50.9±1.2, 5541N×11038E, h10km, mb4.4/1, Error ellipse: s-maj=25.6km s-min=10.8km az=62.4*

BYKL 03 17:14:51.0±0.2, 5541N×11038E, h2km±13km, 3C, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.60	308	ePg	Pg	17 15 02.6	+0.1
NIZ				eSg	Sg	17 15 10.7	+0.4
NIZ				Pmax			
	45nm,0.2s						
NIZ				Smax			
	269nm,0.4s						
KMO	Kumora	0.67	44⇑	iPg	Pg	17 15 02.9	-0.9
KMO				eSg	Sg	17 15 11.6	-0.8
KMO				Pmax			
	166nm,0.3s						
KMO				Smax			
	448nm,1.0s						
KMO	Kumora	0.67	44	ePG	Pg	17 15 02.8	-1.0
KMO				e		17 15 11.2	
KMO				pmax	pmax		
	comp=Z,162nm,0.3s						
KMO				smax			
	comp=N,414nm,1.0s						
YLYR	Ulyunkhan	0.70	140⇑	iPg	Pg	17 15 03.3	-1.1
YLYR				eSg	Sg	17 15 12.5	-0.9
YLYR				Pmax			
	comp=N,95nm,0.3s						
YLYR				Smax			
	comp=N,298nm,1.0s						
YOA	Uoyan	1.05	46	ePg	Pg	17 15 10.5	-0.6
YOA				eSg	Sg	17 15 24.6	-0.1
YOA				Pmax			
	comp=N,140nm,0.4s						
YOA				Smax			
	comp=N,732nm,1.0s						
YOA	Uoyan	1.05	46	ePG	Pg	17 15 11.1	0.0
YOA				e		17 15 25.5	
YOA				pmax	pmax		
	comp=Z,152nm,0.4s						
YOA				smax			
	comp=E,891nm,1.0s						
SYVR	Suvo	1.77	187	ePg	Pg	17 15 22.9	-2.0
SYVR				eSg	Sg	17 15 46.8	-1.1
SYVR				Pmax			
	comp=E,82nm,0.4s						
SYVR				Smax			
	comp=E,261nm,0.5s						
UKT	Uakit	1.85	86	ePg	Pg	17 15 23.6	-2.9
UKT				eSg	Sg	17 15 48.6	-1.9
UKT				Pmax			
	comp=E,86nm,0.7s						
UKT				Smax			
	comp=E,219nm,0.8s						
UKT	Uakit	1.85	86	ePN	Pn	17 15 23.9	+0.2
UKT				e		17 15 48.5	
UKT				pmax	pmax		
	comp=Z,45nm,0.4s						
UKT				smax			
	comp=N,214nm,0.6s						
SVKR	Severomuysk	1.93	67	ePg	Pg	17 15 25.9	-2.1
SVKR				eSg	Sg	17 15 52.2	-0.9
SVKR				Pmax			
	comp=N,124nm,0.4s						
SVKR				Smax			
	comp=N,615nm,0.5s						
SVKR	Severomuysk	1.93	67	ePN	Pn	17 15 26.3	+1.5
SVKR				e		17 15 27.7	
SVKR				e		17 15 51.5	
SVKR				pmax	pmax		
	comp=Z,122nm,0.4s						
SVKR				smax			
	comp=N,611nm,0.6s						
MXMB	Maximikha	2.35	205	ePn	Pn	17 15 29.5	-1.2
MXMB				ePg	Pg	17 15 33.5	-2.6
MXMB				eSg	Sg	17 16 05.2	-1.5
MXMB				Pmax			
	comp=N,58nm,0.4s						
MXMB				Smax			
	comp=N,445nm,0.8s						
OGRR	Ongureny	2.40	224	ePn	Pn	17 15 32.3	+1.0
OGRR				ePg	Pg	17 15 34.1	-2.9
OGRR				eSg	Sg	17 16 06.4	-1.8
OGRR				Pmax			
	comp=N,39nm,0.3s						
OGRR				Smax			
	comp=N,184nm,0.4s						
OGRR	Ongureny	2.40	224	ePN	Pn	17 15 30.8	-0.5
OGRR				e		17 15 34.5	
OGRR				e		17 16 06.6	
OGRR				pmax	pmax		
	comp=Z,39nm,0.3s						
OGRR				smax			
	comp=N,184nm,0.4s						
KELR	Kotokel	2.98	208	ePn	Pn	17 15 39.6	+0.3
KELR				ePg	Pg	17 15 44.1	-4.0
KELR				eSg	Sg	17 16 23.8	-3.0
KELR				Pmax			
	comp=N,38nm,0.4s						
KELR				Smax			
	comp=N,237nm,0.3s						
BOD	Bodaibo	3.14	38	ePn	Pn	17 15 41.8	+0.4
BOD				eSg	Sg	17 16 26.7	-5.1
BOD				Smax			
	comp=N,54nm,0.9s						
NLYR	Nelyaty	3.18	68	ePn	Pn	17 15 42.6	+0.5
NLYR				ePg	Pg	17 15 48.0	-4.0
NLYR				eSn	Sn	17 16 18.1	-2.5
NLYR				eSg	Sg	17 16 30.4	-2.9
NLYR				Pmax			
	comp=N,28nm,0.7s						
NLYR				Smax			
	comp=N,80nm,1.0s						
ZRHB	Zarechye	3.44	215	eSg	Sg	17 16 38.0	-3.5
ZRHB				Smax			
	comp=N,265nm,0.8s						
TRG	Tyrgan	3.56	223	ePn	Pn	17 15 47.9	+0.6
TRG				ePg	Pg	17 15 55.4	-3.9
TRG				eSg	Sg	17 16 41.3	-4.1
TRG				Pmax			
	comp=N,11nm,0.3s						
TRG				Smax			
	comp=N,50nm,0.3s						
TRTB	Turuntaevo	3.58	208⇑	iPn	Pn	17 15 48.4	+0.9
TRTB				ePg	Pg	17 15 54.9	-4.7
TRTB				eSg	Sg	17 16 42.6	-3.4
TRTB				Pmax			
	comp=N,13nm,0.5s						
TRTB				Smax			
	comp=N,46nm,0.3s						
CIT	Chita	3.88	150	eSg	Sg	17 16 50.8	-4.9
CIT				Smax			
	comp=N,45nm,0.6s						
HRMR	Khuramsha	4.30	210	ePn	Pn	17 15 58.8	+1.3
HRMR				ePg	Pg	17 16 07.8	-5.7
HRMR				eSg	Sg	17 17 04.1	-5.2
HRMR				Pmax			
	comp=N,22nm,0.5s						
HRMR				Smax			
	comp=N,168nm,0.7s						
CRS	Chara	4.66	68	ePg	Pg	17 16 15.4	-4.8
CRS				eSg	Sg	17 17 15.7	-4.9
CRS				Pmax			
	comp=N,19nm,1.1s						
CRS				Smax			
	comp=N,48nm,1.6s						
CRS	Chara	4.66	68	ePN	Pg	17 16 15.2	-5.0
CRS				e		17 17 15.3	
CRS				pmax	pmax		
	comp=Z,19nm,1.0s						
CRS				smax			
	comp=E,48nm,1.6s						
TLY	Talaya	5.48	230	eSg	Sg	17 17 39.9	-7.2
TLY				Smax			
	comp=E,16nm,0.4s						
TLY	Talaya	5.48	230	ePN	Pb	17 16 28.2	+0.7
TLY				e		17 17 39.8	
TLY				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TLY				smax			
	comp=E,47nm,0.8s						
TUP	Tupik	5.61	96	ePn	Pn	17 16 14.9	-0.5
TUP				e		17 16 23.9	
TUP				ePg	Pg	17 16 31.2	-7.3
TUP				eSg	Sg	17 17 43.2	-8.0
TUP				Pmax			
	comp=E,7.0nm,0.6s						
TUP				Smax			
	comp=E,44nm,1.1s						
KPC	Khapcheranga	5.84	167	ePn	Pn	17 16 18.7	+0.1
KPC				ePg	Pg	17 16 35.4	-7.6
KPC				eSn	Sn	17 17 22.4	-3.8
KPC				eSg	Sg	17 17 52.0	-6.7
KPC				Pmax			
	comp=E,3.0nm,0.6s						
KPC				Smax			
	comp=E,45nm,1.0s						
KPC	Khapcheranga	5.84	167	ePN	Pn	17 16 18.5	-0.1
KPC				e		17 16 35.9	
KPC				eS	Sn	17 17 22.8	-3.4
KPC				e		17 17 52.5	
KPC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KPC				smax			
	comp=E,45nm,1.0s						
ARS	Arshan	5.88	237	ePN	Pn	17 16 21.8	+2.7
ARS				e		17 16 39.2	
ARS				e		17 17 53.3	
ARS				pmax	pmax		
	comp=Z,17nm,0.5s						
ARS				smax			
	comp=E,123nm,0.5s						
ZAK	Zakamensk	6.62	223	eSg	Sg	17 18 15.7	-7.8
ZAK				Smax			
	comp=E,16nm,1.7s						
MOY	Mondy	6.73	240	ePN	Pn	17 16 32.1	+1.3
MOY				eS	Sg	17 18 19.9	-7.3
MOY				smax			
	comp=E,45nm,1.6s						
ORL	Orlik	6.87	250	ePN	Pn	17 16 34.1	+1.4
ORL				e		17 16 55.9	
ORL				e		17 18 24.1	
ORL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ORL				smax			
	comp=N,60nm,1.0s						

*NEIC **03** 17:26:52.3, 5994N×13835W, h1km, ML3.5(PMR), ML3.3(AEIC), ML3.5(PGC), After PGC.*

PGC 03 17:26:52.3,5994N×13835W,h1km,ML3.5/4,2D,96km northeast of Yakutat, Ak St. Elias Mountains, British Columbia,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNL	Peninsula	0.60	243	P	Pg	17 27 02.5	-1.3
YKU2	Yakutat	0.80	238	eP	Pg	17 27 07.3	-0.3
HYT	Haines Junctio	0.98	25	⇓P	Pg	17 27 09.8	-1.4
HYT				S	Sg	17 27 23.4	-0.4
HYT				Trac		17 27 27.8	
	comp=Z,447nm,0.2s						
HYT	Haines Junctio	0.98	25	⇓iP	Pg	17 27 09.8	-1.4
HYT				eS	Sg	17 27 23.4	-0.4
PLBC	Pleasant Camp	1.12	115	eP	Pg	17 27 12.3	-1.4
PLBC				eS	Sg	17 27 27.6	-0.6
SKAG	Skagway	1.60	106	ePn	Pn	17 27 20.2	-1.6
SKAG				eSn	Sn	17 27 41.6	-1.5
WHY	Whitehorse	1.87	66	Pn	Pn	17 27 24.8	-0.7
WHY				Sg	Sg	17 27 50.7	-1.7
WHY				Trac		17 27 53.3	
	comp=Z,303nm,0.5s						
WHY	Whitehorse	1.87	66	P	Pn	17 27 25.0	-0.4
WHY				S	Sn	17 27 51.9	+2.2
SIT	Sitka	3.30	150	ePn	Pn	17 27 48.7	+3.6
DAWY	Dawson	4.17	354	P	Pn	17 27 56.5	-0.6
DAWY				Sg	Sg	17 29 01.8	-4.5
DAWY				Trac		17 29 12.3	
	comp=Z,45nm,0.6s						
DAWY	Dawson	4.17	354	ePn	Pn	17 27 56.1	-1.0
DAWY				eSg	Sg	17 29 13.2	+6.9
DLBC	Dease Lake	4.54	106	Pg	Pg	17 28 14.9	-4.3
DLBC				Sg	Sg	17 29 13.2	-4.9
DLBC				Trac		17 29 18.7	
	comp=Z,28nm,0.6s						
DLBC	Dease Lake	4.54	106	ePg	Pg	17 28 14.9	-4.3
DLBC				eSg	Sg	17 29 13.2	-4.9
RUBB	Prince Rupert	7.14	138	Trac		17 30 46.1	
	comp=Z,5.0nm,0.3s						
RUBB	Prince Rupert	7.14	138	Sg	Sg	17 30 36.1	-5.6
INK	Inuvik	8.66	12	Trac		17 31 41.1	
	comp=Z,4.0nm,0.9s						
INK	Inuvik	8.66	12	ePn	Pn	17 28 56.4	-2.3
INK				eSg	Sg	17 31 22.6	-7.6

*NEIC **03** 17:28:08.8±0.2,5783S×2557W,mb5.0/25,Error ellipse: s-maj=9.1km s-min=6.9km az=218.0*

*HRVD **03** 17:28:08.8±0.4,5801S×2529W,h53km±7km,MW4.8/50, Centroid moment Tensor Solution. LP body waves: s19,c20;Mantle waves: s50,c59; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.67±.23; $M_{\theta\theta}$-0.25±.20; $M_{\phi\phi}$0.92±.17; $M_{r\theta}$-0.20±.11; $M_{\theta\phi}$-0.30±.16; $M_{\phi r}$-2.18±.18; Best double couple: $M_0$2.35100×10^{16} NP1:ϕ_s140.00000°,δ13.00000°,λ-134.00000°. NP2: ϕ_s5.00000°,δ80.00000°,λ-81.00000°. Principal axes: T 2.4540, Plg35.0000°, Azm87.0000°; N -0.2050, Plg9.0000°, Azm183.0000°; P -2.2490, Plg54.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **03** 17:28:08.7,5780S×2560W,h68km,mB5.1,Ms5.7,Msz5.2*

*IDC **03** 17:28:08.9±0.6,5785S×2571W,h67km±4km,mb4.6/10, mb1 4.7/11,mb1mx4.5/16,mbtmp4.9/11,MS3.9/11, Ms1 3.9/11,ms1mx3.8/17,Error ellipse: s-maj=16.6km s-min=13.3km az=68.0*

*MOS **03** 17:28:08.0±1.0,5781S×2564W,h69km,mb5.1/10,Error ellipse: s-maj=26.7km s-min=13.0km az=102.4*

*ISCJB **03** 17:28:09.1±1.7,5784S±006×257W±0.1,h85km±15km, mb4.9/26,Error ellipse: s-maj=12.5km s-min=7.9km az=93.2*

ISC 03 17:28:11.1±1.4**,5792S**±006×**257W**±01**,h91**km±14km**, h70**km±.7km**:pP-P,n212,**$\sigma 0^{s}.93$/65**,mb4.9**/26**,42C-48D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.03	297	Pn	Pn	17 29 53.4	+2.2
	3µm,0.9s,SNR=16						
HOPE	Hope Point	7.03	297	⇓ePn	Pn	17 29 52.6	+1.4
	360nm,0.8s						
HOPE				eSn	Sn	17 31 19.8	+10
VNA1	Neumayer--Stat	14.76	157	e	Pn	17 31 33.2	-1.9
VNA1				e		17 31 39.4	
VNA1				e		17 31 43.0	
VNA1				e		17 31 46.4	
VNA1				e		17 31 51.7	
VNA1				e		17 32 00.5	
VNA1				e		17 32 08.4	
VNA1				e		17 32 17.6	
VNA1				e		17 34 05.3	
VNA1				e		17 34 07.0	
VNA1				e		17 34 11.1	
VNA1				e		17 34 15.4	
VNA1				e		17 34 18.7	
VNA1				e		17 34 35.8	
VNA1				e		18 00 34.2	
VNA1				e		18 00 45.4	
SNAA	Sanae	16.71	155	P	Pn	17 31 59.0	-0.4
	2.1nm,0.3s,baz=319,slow=13,SNR=96						
SNAA				S	S	17 34 49.4	-21
	0.2nm,0.3s,baz=0.9,slow=20,SNR=4.9						
SNAA				PcP	PcP	17 36 43.4	+0.1
	0.2nm,0.3s,baz=230,slow=7.9,SNR=4.0						
SNAA				LR	LR	17 37 03.0	
	comp=Z,106nm,21.0s,baz=30,slow=32						
SNAA				ScP	ScP	17 40 11.4	+1.6
	0.1nm,0.3s,baz=321,slow=2.9,SNR=5.9						
PMSA	Palmer Station	19.35	233	P	Pn	17 32 30.6	-0.6
	baz=82,slow=8.9						
PMSA				PcP	PcP	17 36 48.1	+0.4
	baz=274,slow=0.5						
PMSA				LR	LR	17 39 03.1	
	comp=Z,495nm,19.1s,baz=62,slow=34						
PMSA	Palmer Station	19.35	233	eP	Pn	17 32 31.0	-0.2
	105nm,0.9s						
EFI	East Falkland	19.52	275	eP	Pn	17 32 32.2	-1.0
EFI				pmax	pmax		
	comp=Z,182nm,1.1s						
EFI	East Falkland	19.52	275	eP	Pn	17 32 32.2	-1.0
	comp=Z,182nm,1.1s						
MAIT	Maitri	20.24	144	eP	P	17 32 40.5	+1.6
SYO	Syowa Base	29.64	139	⇑eP	P	17 34 06.5	-1.3
QSPA	South Pole Qui	32.33	180	eP	P	17 34 32.6	+1.1
	comp=Z,26nm,1.0s,mb4.9						
PLCA	Paso Flores	33.13	281	P	P	17 34 38.2	-0.2
	comp=Z,15nm,1.0s,mb4.8,baz=140,slow=7.5,SNR=19						
PLCA				PcP	PcP	17 37 20.4	+0.8
	comp=Z,1.7nm,0.7s,baz=98,slow=6.0,SNR=3.5						
PLCA				ScP	ScP	17 40 58.2	+2.6
	comp=Z,1.9nm,0.9s,baz=84,slow=19,SNR=3.5						
PLCA				LR	LR	17 47 52.3	
	comp=Z,152nm,18.1s,baz=173,slow=36						
PLCA	Paso Flores	33.13	281	eP	P	17 34 37.9	-0.6
	comp=Z,24nm,1.1s,mb4.9						
MAW	Mawson	38.18	142	P	P	17 35 21.7	0.0
	comp=Z,11nm,0.8s,mb4.7,baz=229,slow=8.3,SNR=39						
MAW				PcP	PcP	17 37 34.9	+0.4
	comp=Z,3.2nm,0.8s,baz=295,slow=1.5,SNR=3.5						
MAW				LR	LR	17 48 58.2	
	comp=Z,103nm,19.8s,baz=239,slow=33						
MAW	Mawson	38.18	142	P	P	17 35 21.7	0.0
MAW						17 37 34.9	
MAW				pmax	pmax		
	comp=Z,11nm,0.8s						
MAW				MLR	MLR		
	comp=Z,103nm,19.8s						
MAW	Mawson	38.18	142	eP	P	17 35 21.4	-0.2
	comp=Z,14nm,0.8s,mb4.8						
MAW				epP	pP	17 35 38.4	-4.4
MAW				ePcP	PcP	17 37 34.9	+0.4
CPUP	Villa Florida	38.64	311	P	P	17 35 24.2	-1.3
	comp=Z,1.2nm,0.3s,mb4.2,baz=140,slow=11,SNR=15						
CPUP				PcP	PcP	17 37 36.4	+0.5
	comp=Z,3.2nm,0.6s,baz=128,slow=1.9,SNR=6.9						
CPUP				ScP	ScP	17 41 18.6	+2.9
	comp=Z,0.5nm,0.5s,baz=159,slow=8.6,SNR=4.1						
CPUP				LR	LR	17 50 04.7	
	comp=Z,126nm,19.4s,baz=142,slow=34						
CPUP	Villa Florida	38.64	311	P	P	17 35 24.2	-1.3
CPUP						17 37 36.4	
CPUP						17 41 18.6	
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CPUP				MLR	MLR		
	comp=Z,126nm,19.4s						
CPUP	Villa Florida	38.64	311	eP	P	17 35 24.1	-1.4
	comp=Z,57nm,1.1s,mb5.3						
CPUP				ePcP	PcP	17 37 36.0	+0.1
SUR	Sutherland	40.42	71	eP	P	17 35 40.5	+0.2
	comp=Z,26nm,0.9s,mb5.1						
SBA	Scott Base	44.27	184	eP	P	17 36 13.2	+1.7
SBA				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
SBA	Scott Base	44.27	184	eP	P	17 36 13.2	+1.7
	comp=Z,17nm,1.0s,mb4.7						
VNDA	Vanda	44.74	182	P	P	17 36 16.5	+1.2
	comp=Z,16nm,0.6s,mb4.9,baz=186,slow=6.5,SNR=149						
VNDA				ScP	ScP	17 41 43.1	+3.1
	comp=Z,2.0nm,1.1s,baz=234,slow=5.5,SNR=3.0						
VNDA	Vanda	44.74	182	P	P	17 36 16.5	+1.2
VNDA				pmax	pmax		
	comp=Z,17nm,0.6s						
VNDA				pmax	pmax		
	comp=N,2.0nm,1.2s						
VNDA	Vanda	44.74	182	⇓iP	P	17 36 16.0	+0.8
	comp=N,17nm,0.7s,mb4.9						
VNDA				epP	pP	17 36 33.5	-3.4
BDFB	Brasilia	45.38	329	P	P	17 36 21.3	+1.0
	comp=N,23nm,0.7s,mb5.0,baz=150,slow=3.8,SNR=26						
BDFB				LR	LR	17 51 36.2	
	comp=N,121nm,19.5s,baz=197,slow=31						
BOSA	Boshof	45.71	73	P	P	17 36 22.8	-0.1
	comp=N,20nm,0.9s,mb4.8,baz=210,slow=8.9,SNR=22						
BOSA				LR	LR	17 50 36.5	
	comp=N,500nm,19.4s,baz=199,slow=30						
BOSA	Boshof	45.71	73	P	P	17 36 22.8	-0.1
BOSA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
BOSA				MLR	MLR		
	comp=Z,500nm,19.4s						
BOSA	Boshof	45.71	73	eP	P	17 36 22.0	-0.9
	comp=Z,40nm,1.2s,mb5.0						
LVC	Limon Verde	46.92	300	eP	P	17 36 31.8	-0.7
	comp=Z,13nm,1.0s,mb4.6						
LVC				ePcP	PcP	17 38 04.9	+1.2
LBTB	Lobatse	48.84	70	eP	P	17 36 46.7	-0.5
LBTB				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.2						
LBTB	Lobatse	48.84	70	eP	P	17 36 46.7	-0.6
	comp=Z,38nm,1.2s,mb5.2						
TSUM	Tsumeb	49.95	58	eP	P	17 36 55.7	0.0
	comp=Z,6.6nm,0.8s,mb4.6						
LPAZ	La Paz	52.10	305	⇓eP	P	17 37 11.7	-0.1
LPAZ				e		17 38 23.5	
LPAZ				pmax	pmax		
	comp=Z,11nm,0.7s						
LPAZ	La Paz	52.10	305	⇓eP	P	17 37 11.7	0.0
	comp=Z,11nm,0.7s,mb5.0						
LPAZ				ePcP	PcP	17 38 23.5	+1.0
RCBR	Riachuelo	52.56	347	P	P	17 37 11.3	-3.9
	comp=Z,12nm,1.0s,mb4.9						
SAML	Samuel	56.68	314	⇓iP	P	17 37 43.9	-1.1
	comp=Z,14nm,0.5s,mb5.2						
LSZ	Lusaka	58.35	66	eP	P	17 37 56.4	-0.3
LSZ				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
LSZ	Lusaka	58.35	66	eP	P	17 37 56.4	-0.2
	comp=Z,18nm,0.9s,mb5.1						
NNA	Nana	59.84	298	P	P	17 38 05.1	-1.9
	comp=Z,38nm,1.2s,mb5.3						
DBIC	Dimbokro	66.56	23	P	P	17 38 51.7	+0.3
	comp=Z,9.1nm,0.7s,mb4.8,baz=162,slow=8.3,SNR=13						
DBIC				LR	LR	17 58 49.2	
	comp=Z,58nm,19.2s,baz=151,slow=28						
DBIC	Dimbokro	66.56	23	P	P	17 38 51.7	+0.3
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
DBIC				MLR	MLR		
	comp=Z,58nm,19.2s						
DBIC	Dimbokro	66.56	23	eP	P	17 38 51.6	+0.2
	comp=Z,7.4nm,0.6s,mb4.7						
OTAV	Otavalo	71.35	303	eP	P	17 39 21.6	+0.6
	comp=Z,11nm,1.0s,mb4.7						
TOA0	Torodi Ar. Sit	74.31	28	eP	P	17 39 38.8	+0.2
TOA0				ePcP	PcP	17 39 52.0	-0.9
TOA0				epP	pP	17 39 57.5	-4.5
TORD	Torodi Ar. Bea	74.31	28	P	P	17 39 39.2	+0.7
	comp=Z,14nm,0.8s,mb4.7,baz=198,slow=6.4,SNR=111						
TORD				pP	pP	17 39 57.7	-4.3
	comp=Z,16nm,0.8s,baz=196,slow=6.5,SNR=11						
TORD				LR	LR	18 05 13.1	
	comp=Z,147nm,21.1s,baz=290,slow=30						
TORD	Torodi Ar. Bea	74.31	28	P	P	17 39 39.2	+0.7
TORD				pP	pP	17 39 57.7	-4.3
TORD				LR	LR	18 05 13.1	
SDV	Santo Domingo	75.89	314	eP	P	17 39 47.1	-0.5
	comp=Z,16nm,0.8s,mb4.8						
TBG	Guadaloupe-3	79.25	325	eP	P	17 40 06.2	-0.1
PHG	Guadaloupe-2	79.40	325	eP	P	17 40 07.7	+0.5
DEG	La Desirade	79.51	326	eP	P	17 40 08.4	+0.7
LZG	Guadaloupe-1	79.56	325	eP	P	17 40 08.6	+0.6
SEG	Port Louis	79.73	325	eP	P	17 40 08.6	-0.3
SJG	San Juan	82.81	322	P	P	17 40 26.1	+0.9
NWAO	Narrogin (SRO)	84.31	149	P	P	17 40 33.2	+0.3
NWAO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NWAO	Narrogin (SRO)	84.31	149	P	P	17 40 33.2	+0.3
	comp=Z,9.5nm,0.9s,mb4.6						
FORT	Forrest	88.94	158	eP	P	17 40 56.4	+1.0
	comp=Z,18nm,0.7s,mb5.2						
STKA	Stephens Creek	89.92	169	eP	P	17 41 00.7	+0.7
	comp=Z,2.6nm,0.6s,mb4.5						
STKA	Stephens Creek	89.92	169	P	P	17 41 00.7	+0.7
	comp=Z,3.2nm,0.6s,mb4.7,baz=139,slow=3.1,SNR=11						
PPT	Papeete	91.71	232	LR	LR	18 12 58.9	
	comp=Z,218nm,20.9s,baz=144,slow=29						
MBWA	Marble Bar	96.14	148	P	P	17 41 26.2	-2.4
	comp=Z,12nm,1.2s,mb5.2						
ASPA	Alice Springs	96.96	161	eP	P	17 41 32.3	-0.1
ASAR	Alice Springs	96.97	161	P	P	17 41 32.1	-0.2
	comp=Z,4.1nm,0.7s,mb5.0,baz=186,slow=3.9,SNR=84						
ASAR				pP	pP	17 41 50.9	-5.7
	comp=Z,4.8nm,1.0s,baz=195,slow=4.3,SNR=8.6						
ASAR				PP	PP	17 45 31.9	+3.1
	comp=Z,0.5nm,0.7s,baz=175,slow=7.2,SNR=6.3						
ASAR				PKiKP	PKiKP	17 46 07.8	-0.3
	comp=Z,0.2nm,0.5s,baz=180,slow=1.2,SNR=10						
ASAR				PKKPbc	PKKPbc	17 58 11.9	-0.8
	comp=Z,0.5nm,0.8s,baz=6.0,slow=2.4,SNR=5.5						
ASAR	Alice Springs	96.97	161	P	P	17 41 32.1	-0.2
ASAR				pP	pP	17 41 50.9	-5.7
ASAR				PP	PP	17 45 31.9	+3.1
AS31	Alice Springs	96.97	161	eP	P	17 41 32.3	-0.1
KEST	Kesra	97.83	28	LR	LR	18 21 09.3	
	comp=Z,42nm,18.0s,baz=190,slow=32						
WRA	Warramunga Arr	100.68	161	P	Pdif	17 41 48.7	-0.3
	comp=Z,1.0nm,0.6s,baz=194,slow=4.5,SNR=11						
WRA				PKKPbc	PKKPbc	17 58 01.2	-1.1
	comp=Z,0.6nm,0.8s,baz=1.1,slow=3.7,SNR=4.9						
WRAB	Tennant Creek	100.69	161	eP	Pdif	17 41 47.2	-1.8
Y14A	Wickenburg	116.67	292	⇑P	PKPdf	17 46 44.9	+0.3
	baz=117						
X15A	Humboldt	116.72	293	⇓P	PKPdf	17 46 45.0	+0.3
	baz=117						
GLA	Glamis	116.87	290	⇓P	PKPdf	17 46 45.3	+0.4
	baz=117						
X14A	Yava	117.03	292	⇓P	PKPdf	17 46 45.9	+0.6
	baz=117						
SCHQ	Schefferville	117.19	335	PKP	PKPdf	17 46 43.5	-2.1
	comp=Z,1.9nm,0.9s,baz=52,slow=3.5,SNR=3.6						
X13A	Yucca	117.60	292	⇑P	PKPdf	17 46 47.4	+1.0
	baz=118						
IRM	Iron Mountain	117.91	290	⇓P	PKPdf	17 46 47.8	+0.8
	baz=118						
W13A	Hualapai Mount	118.03	292	⇑P	PKPdf	17 46 48.0	+0.8
	baz=118						
BELC	Belle Mtn.	118.21	289	⇓P	PKPdf	17 46 48.5	+0.9
	baz=118						
U12A	Valley of Fire	119.41	292	⇓P	PKPdf	17 46 50.3	+0.5
	baz=120						
SRU	San Rafael	119.58	297	ePKIKP	PKPdf	17 46 49.3	-0.9
GSC	Goldstone	119.65	290	P	PKPdf	17 46 51.0	+0.7
	baz=120						
SHOC	Shoshone	119.85	291	⇑P	PKPdf	17 46 51.5	+0.8
	baz=120						
MSU	Marysvale	119.89	295	ePKIKP	PKPdf	17 46 51.1	+0.3
RWWY	Rawlins	120.07	301	ePKPdf	PKPdf	17 46 50.2	-0.9
LRMC	Laurel Mountai	120.23	289	⇑P	PKPdf	17 46 52.1	+0.7
	baz=120						
U10A	Ash Meadows, A	120.29	291	⇓P	PKPdf	17 46 53.2	+1.7
	baz=120						
RSSD	Black Hills	120.58	305	ePKIKP	PKPdf	17 46 50.9	-1.2
MPMC	Manual Prospec	120.58	290	⇓P	PKPdf	17 46 52.8	+0.7
	baz=121						
FURC	Furnace Creek,	120.59	291	⇑P	PKPdf	17 46 53.0	+0.9
	baz=121						
TPNV	Topopah Spring	120.66	291	ePKIKP	PKPdf	17 46 53.0	+0.7
ISA	Isabella	120.77	289	⇑P	PKPdf	17 46 53.3	+0.8
	baz=121						
PKM	Peak Mountain	120.85	287	⇑P	PKPdf	17 46 53.6	+1.0
	baz=121						
SDP	Sudden Peak, L	120.94	286	⇓P	PKPdf	17 46 54.2	+1.4
	baz=121						
TCUT	Toone Canyon	121.57	298	ePKPdf	PKPdf	17 46 54.2	+0.2
R10A	Warm Springs	121.73	292	⇑P	PKPdf	17 46 55.2	+0.9
	baz=122						
S09A	Goldfield	121.75	291	⇓P	PKPdf	17 46 55.2	+0.9
	baz=122						
PDAR	Pinedale Array	121.99	300	PKP	PKPdf	17 46 53.5	-1.4
	comp=Z,2.4nm,0.5s,baz=138,slow=5.8,SNR=19						
HWUT	Hardware Ranch	122.03	298	ePKPdf	PKPdf	17 46 53.9	-1.0
R09A	Tonopah	122.08	292	⇑P	PKPdf	17 46 55.8	+0.9
	baz=122						
NOA	NORSAR Array B	122.08	20	PKP	PKPdf	17 46 53.9	-1.1
	comp=Z,1.3nm,0.8s,baz=203,slow=1.8,SNR=2.9						
ULM	Lac du Bonnet	122.14	315	PKP	PKPdf	17 46 53.4	-1.7
	comp=Z,5.3nm,0.6s,baz=243,slow=1.6,SNR=7.1						
BGU	Big Grassy Mou	122.19	297	ePKPdf	PKPdf	17 46 55.4	+0.2
T06C	Millerton Lake	122.44	289	⇓P	PKPdf	17 46 57.0	+1.4
	baz=123						
KCC	Kaiser Creek	122.49	289	⇓P	PKPdf	17 46 56.5	+0.7
	baz=123						
N13A	Wendover, West	122.70	296	⇑P	PKPdf	17 46 57.2	+1.0
	baz=123						
O11A	Cowboy Ranch,	122.84	294	⇓P	PKPdf	17 46 57.3	+0.9
	baz=123						
Q08A	Gabbs	122.98	292	⇑P	PKPdf	17 46 57.6	+0.9
	baz=123						
M13A	Montello	123.07	296	⇓P	PKPdf	17 46 57.4	+0.6
	baz=123						
N12A	Clover Valley,	123.10	295	⇓P	PKPdf	17 46 57.8	+0.9
	baz=123						
P09A	Austin	123.12	293	⇓P	PKPdf	17 46 57.5	+0.5
	baz=123						
S06C	San Francisco	123.19	289	⇑P	PKPdf	17 46 57.7	+0.6
	baz=123						
PACP	Pacheco Peak	123.24	288	⇓P	PKPdf	17 46 58.6	+1.4
	baz=124						
M12A	Wells	123.47	296	⇑P	PKPdf	17 46 58.6	+1.0
	baz=124						
R06C	Coleville	123.48	290	⇓P	PKPdf	17 46 59.1	+1.5
	baz=124						
IMW	Indian Meadow	123.51	300	ePKPdf	PKPdf	17 46 58.1	+0.4
CMB	Columbia Colle	123.58	289	⇓P	PKPdf	17 46 59.0	+1.1
	baz=124						
M11A	Holland Ranch,	123.91	295	⇓P	PKPdf	17 46 59.7	+1.2
	baz=124						
R05C	Kirkwood Meado	123.93	290	⇓P	PKPdf	17 47 00.1	+1.5
	baz=124						
LAVA	Lava Cap Winer	124.31	289	⇓P	PKPdf	17 47 00.1	+0.9
	baz=125						
N09A	Rock Creek Ran	124.31	293	⇑P	PKPdf	17 47 00.3	+1.0
	baz=125						
M10A	I.L. Ranch, Tu	124.34	295	⇓P	PKPdf	17 47 00.4	+1.1
	baz=125						
O07A	Toulon	124.45	292	⇑P	PKPdf	17 47 00.9	+1.4
	baz=125						
QLMT	Earthquake Lak	124.45	301	ePKPdf	PKPdf	17 47 00.3	+0.8
N08A	GE Springer Mi	124.55	293	⇓P	PKPdf	17 47 00.6	+0.9
	baz=125						
P05C	Yuba Gap, Truc	124.66	290	⇑P	PKPdf	17 47 01.4	+1.5
	baz=125						
M09A	Marrel Ranch,	124.71	294	⇑P	PKPdf	17 47 01.3	+1.2
	baz=125						
CVS	Carmenet Viney	124.86	288	⇑P	PKPdf	17 47 01.7	+1.3
	baz=125						
HLID	Hailey	124.87	298	ePKPdf	PKPdf	17 47 00.4	0.0
O06A	Flanigan	124.92	291	⇓P	PKPdf	17 47 01.4	+1.0
	baz=125						
BEKR	Beckwourth	124.96	291	⇓P	PKPdf	17 47 01.4	+0.9
	baz=125						
N07B	Gerlach	124.97	292	⇓P	PKPdf	17 47 01.9	+1.3
	baz=125						
M08A	Happy Creek Ra	125.18	293	⇑P	PKPdf	17 47 02.3	+1.4
	baz=125						
MNRC	McLaughlin Nat	125.26	288	⇑P	PKPdf	17 47 02.6	+1.6
	baz=126						
L09A	Wilkinson Ranc	125.26	294	⇑P	PKPdf	17 47 02.4	+1.3
	baz=126						
ORV	Oroville	125.30	290	⇑P	PKPdf	17 47 02.8	+1.6
	baz=126						
O05C	Quincy	125.31	290	⇑P	PKPdf	17 47 02.6	+1.4
	baz=126						
N06A	Buffalo Meadow	125.37	292	⇓P	PKPdf	17 47 02.2	+1.0
	baz=126						
DLMT	Dillon	125.39	300	ePKPdf	PKPdf	17 47 02.0	+0.7
DLMT				eSKP		17 50 21.8	
M07A	Soldier Meadow	125.52	293	⇓P	PKPdf	17 47 02.8	+1.2
	baz=126						
HOPS	Hopland	125.67	288	⇑P	PKPdf	17 47 03.0	+1.2
	baz=126						
FINES	FINESS Array B	125.67	28	PKP	PKPdf	17 47 00.5	-1.3
	comp=Z,3.3nm,0.5s,baz=143,slow=2.7,SNR=52						
FINES				pPKP	pPKPdf	17 47 18.9	-8.2
	comp=Z,1.9nm,0.7s,baz=225,slow=0.8,SNR=2.8						
FINES	FINESS Array B	125.67	28	PKP	PKPdf	17 47 00.5	-1.3
FINES				pPKP	pPKPdf	17 47 18.9	-8.2
O04C	Chester	125.67	290	⇑P	PKPdf	17 47 02.2	+0.4
	baz=126						
ELFS	Eagle Lake Fie	125.71	291	⇓P	PKPdf	17 47 03.2	+1.2
	baz=126						
L08A	Fields	125.72	294	⇑P	PKPdf	17 47 03.2	+1.3
	baz=126						
GASB	Alder Springs	125.98	289	⇑P	PKPdf	17 47 03.5	+1.1
	baz=126						
M06C	Likely Place G	126.03	292	⇓P	PKPdf	17 47 03.5	+0.9
	baz=126						
WVOR	Wild Horse Val	126.05	294	ePKIKP	PKPdf	17 47 03.5	+0.9
HRY	Holter Researc	126.06	302	ePKPdf	PKPdf	17 47 02.9	+0.3
L07A	Adell	126.08	293	⇑P	PKPdf	17 47 03.6	+0.9
	baz=126						
EGMT	Eagleton	126.12	304	ePKPdf	PKPdf	17 47 02.3	-0.4
K08A	Mann Creek Ran	126.20	294	⇓P	PKPdf	17 47 03.5	+0.6
	baz=126						
HATC	Hat Creek Radi	126.23	291	⇓P	PKPdf	17 47 03.8	+0.9
	baz=126						
KAF	Kangasniemi	126.30	27	ep	PKPdf	17 47 01.2	-1.9
	comp=Z,1.1nm,0.3s						
KAF	Kangasniemi	126.30	27	ePKIKP	PKPdf	17 47 01.2	-1.9
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
O02C	Red Bluff	126.42	289	⇓P	PKPdf	17 47 04.0	+0.7
	baz=127						
M05C	Lookout	126.48	291	⇑P	PKPdf	17 47 04.3	+0.9
	baz=127						
K07A	Rock Creek Ran	126.54	294	⇓P	PKPdf	17 47 04.5	+0.9
	baz=127						
WDC	Whiskeytown Da	126.59	290	⇓P	PKPdf	17 47 03.8	+0.2
	baz=127						
I09A	Lost Marbles R	126.77	296	⇓P	PKPdf	17 47 04.3	+0.3
	baz=127						
L05A	Lakeview	126.84	292	⇑P	PKPdf	17 47 05.5	+1.4
	baz=127						
J07A	Hines	127.08	294	⇑P	PKPdf	17 47 05.7	+1.2
	baz=127						
MSO	Missoula	127.11	301	ePKPdf	PKPdf	17 47 04.6	0.0
K06A	Valley Falls	127.11	293	⇑P	PKPdf	17 47 05.4	+0.8
	baz=127						
M04C	Macdoel	127.14	291	⇑P	PKPdf	17 47 05.5	+0.8
	baz=127						
BMO	Blue Mountains	127.21	297	ePKIKP	PKPdf	17 47 04.7	-0.1
H09A	Durkee	127.25	296	⇓P	PKPdf	17 47 05.6	+0.7
	baz=128						
M02C	Callahan	127.36	290	⇓P	PKPdf	17 47 05.8	+0.7
	baz=128						
J06A	Christmas Vall	127.40	294	⇑P	PKPdf	17 47 05.7	+0.5
	baz=128						
L04A	Klamath Falls	127.46	291	⇓P	PKPdf	17 47 05.6	+0.3
	baz=128						
H08A	Prairie City	127.62	296	⇓P	PKPdf	17 47 06.3	+0.8
	baz=128						
I07A	Izee	127.70	295	⇑P	PKPdf	17 47 06.6	+0.9
	baz=128						
I06A	Prineville	127.94	294	⇑P	PKPdf	17 47 07.3	+1.1

baz=128
J05A Fort Rock 127.96 293 ⇑P PKPdf 17 47 07.5 +1.2
baz=128
JOF Joensuu 128.24 29 *e*p PKPdf 17 47 04.9 -1.9
comp=Z,7.1nm,0.5s
JOF Joensuu 128.24 29 *e*PKIKP PKPdf 17 47 04.9 -1.9
JOF pmax pmax
comp=Z,7.0nm,0.5s
FCC Fort Churchill 128.25 322 *e*PKIKP PKPdf 17 47 05.3 -1.5
F08A Pendleton 128.61 297 ⇑P PKPdf 17 47 08.5 +1.1
baz=129
K02A Glendale 128.69 291 ⇑P PKPdf 17 47 09.1 +1.5
baz=129
WALA Waterton Lakes 128.74 303 *e*PKPdf PKPdf 17 47 06.6 -1.1
J03A Ideyld Park 128.88 292 ⇓P PKPdf 17 47 09.5 +1.5
baz=129
D05A Enumclaw 131.15 296 ⇓P PKPdf 17 47 13.5 +1.2
baz=131
KMI Kunming 131.15 110 PKP PKPdf 17 47 11.8 -0.5
EDM Edmonton 131.48 307 *e*PKIKP PKPdf 17 47 11.7 -1.2
B05A Bryant 131.96 297 ⇑P PKPdf 17 47 14.1 +0.2
baz=132
ARCES ARCESS Array B 132.38 22 PKP PKPdf 17 47 12.9 -1.7
comp=Z,3.3nm,0.7s,baz=222,slow=2.3,SNR=19
ARCES PP PP 17 49 37.2 -1.3
comp=Z,1.0nm,0.7s,baz=190,slow=6.0,SNR=3.9
ARCES SKPbc SKPbc 17 50 32.6 -0.6
comp=Z,1.2nm,0.6s,baz=107,slow=1.3,SNR=5.8
ARCES ARCESS Array B 132.38 22 PKIKP PKPdf 17 47 13.0 -1.6
ARCES 17 49 37.2
ARCES ARCESS Array B 132.38 22 PKP PKPdf 17 47 12.9 -1.7
ARCES PP PP 17 49 37.2 -1.3
ARCES SKPbc SKPbc 17 50 32.6 -0.6
CD2 Chengdu 136.39 106 *e*PKP PKPdf 17 47 20.5 -1.6
MKAR Makanchi Array 136.71 72 PKhKP 17 47 13.0
comp=Z,0.4nm,0.7s,baz=272,slow=4.6,SNR=3.9
MKAR PKP PKPdf 17 47 20.1 -2.7
comp=Z,0.5nm,0.5s,baz=249,slow=1.4,SNR=5.7
MKAR pPKP pPKPdf 17 47 41.5 -6.4
comp=Z,1.5nm,0.9s,baz=288,slow=1.2,SNR=4.1
MKAR SKPbc SKPbc 17 50 46.0 -1.1
comp=Z,0.6nm,0.7s,baz=318,slow=1.6,SNR=4.2
MKAR Makanchi Array 136.71 72 PKHKP 17 47 13.0
MKAR 17 47 20.1
MKAR 17 47 41.5
WMQ Urumqi 137.49 79 *e*PKP PKPdf 17 47 24.4 +0.2
YKA Yellowknife Ar 138.08 316 PKhKP 17 47 12.9
comp=Z,0.5nm,0.5s,baz=120,slow=3.0,SNR=7.3
YKA PKP PKPdf 17 47 24.0 -1.2
comp=Z,8.2nm,0.6s,baz=128,slow=2.2,SNR=56
YKA pPKP pPKPdf 17 47 42.4 -8.1
comp=Z,2.4nm,0.6s,baz=129,slow=2.2,SNR=3.1
YKA PP PP 17 50 12.5 -1.9
comp=Z,0.9nm,0.9s,baz=118,slow=6.4,SNR=3.9
YKA SKPbc SKPbc 17 50 50.4 -0.7
comp=Z,2.6nm,0.8s,baz=125,slow=1.7,SNR=13
YKA Yellowknife Ar 138.08 316 PKHKP 17 47 12.9
YKA 17 47 24.1
YKA 17 47 42.4
YKA 17 50 12.5
YKA Yellowknife Ar 138.08 316 PKP 17 47 12.9
YKA PKP PKPdf 17 47 24.1 -1.2
YKA pPKP pPKPdf 17 47 42.4 -8.1
YKA PP PP 17 50 12.5 -1.9
YKA SKPbc SKPbc 17 50 50.4 -0.7
ZAL Zalesovo 142.44 65 PKP PKPdf 17 47 32.4 -0.8
comp=Z,1.0nm,0.4s,baz=299,slow=4.7,SNR=4.3
NJ2 Nanjing 144.69 122 *e*PKP PKPdf 17 47 33.5 -3.6
NJ2 PKP2 PKPdf 17 47 34.6 -2.5
NJ2 APKP 17 47 59.9
NJ2 PP PP
comp=Z,270nm,10.3s
NJ2 LR LR
comp=E,1μm,31.4s
NJ2 LR LR
comp=Z,550nm,30.4s
SKAG Skagway 144.93 303 *e*PKPdf PKPdf 17 47 36.4 -1.1
INK Inuvik 147.74 318 *e*PKHKP PKPdf 17 47 38.6 -3.6
INK *e* 17 47 43.7
INK *e* 17 51 14.8
INK Inuvik 147.74 318 *e*PKPdf PKPdf 17 47 38.5 -3.7
INK *e*PKPbc PKPbc 17 47 43.6 -1.5
INK *e*PKPab PKPab 17 47 46.3 -1.5
INK *e*SKP 17 51 14.8
HHC Hu-ho-hao-te 148.05 104 *e*PKP PKPdf 17 47 39.8 -3.0
HHC APKP 17 48 06.5
HHC PP PP
comp=Z,77nm,6.5s
HHC LR LR
comp=N,179nm,34.1s
HHC LR LR
comp=E,157nm,30.4s
HHC LR LR
comp=Z,101nm,35.1s
DAWY Dawson 148.61 309 *e*PKPbc PKPbc 17 47 46.0 -1.5
BJI Beijing 149.81 110 *e*PKP PKPbc 17 47 50.5 0.0
ZAK Zakamensk 149.85 82 *e*PKP2 PKPbc 17 47 50.0 -0.6
ZAK pmax pmax
comp=Z,7.0nm,1.0s
SONM Songino Array 150.01 89 PKPbc PKPbc 17 47 50.5 -0.5
comp=Z,5.6nm,0.6s,baz=225,slow=3.6,SNR=20
SONM pPKPbc pPKPbc 17 48 08.7 -7.4
comp=Z,5.6nm,0.8s,baz=242,slow=1.0,SNR=5.4
EYAK Cordova Ski Ar 150.12 301 *e*PKPbc PKPbc 17 47 50.6 -0.6
ULN Ulaanbaatar 150.38 89 *e*PKIKP PKPdf 17 47 41.0 -5.5
TLY Talaya 150.76 80 *e*PKIKP PKPbc 17 47 52.5 -0.2
TLY *e* 17 48 13.3
TLY pmax pmax
comp=Z,10.0nm,1.1s
TLY Talaya 150.76 80 *e*PKPbc PKPbc 17 47 51.9 -0.9
IRK Irkutsk 151.39 80 *e*PKIKP PKPdf 17 47 48.0 0.0
IRK pmax pmax
comp=Z,20nm,0.8s
COLA College 152.36 309 *e*PKIKP PKPbc 17 47 54.8 -1.6
IMA2 Indian Mountai 154.96 311 *e*PKPbc PKPbc 17 48 01.1 -0.9
IMA2 *e*PKPab PKPab 17 48 16.2 -1.5
MDJ Mudanjiang 159.77 120 PKP PKPdf 17 48 00.3 +1.1

*MOS **03**:17:33:31.5±1.7,5535N×11041E,h9km,mb4.4/1,Error ellipse: s-maj=35.3km s-min=12.2km az=49.6*
BYKL 03 17:33:31.3±0.2,5539N×11043E,h6km±20km,1C-1D,
Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**0.64**	**308**	*e*Pg	Pg	17 33 42.8	-0.7
NIZ				*e*Sg	Sg	17 33 51.5	-0.3
NIZ				Pmax			
	33nm,0.2s						
NIZ				Smax			
	305nm,0.2s						
KMO	**Kumora**	**0.66**	**41**	*e*Pg	Pg	17 33 43.0	-1.0
KMO				*e*Sg	Sg	17 33 52.0	-0.7
KMO				Pmax			
	125nm,0.4s						
KMO				Smax			
	599nm,0.6s						
KMO	**Kumora**	**0.66**	**41**	*e*PG	Pg	17 33 42.9	-1.1
KMO				*e*		17 33 51.7	
KMO				pmax	pmax		
	comp=Z,118nm,0.4s						
KMO				smax			
	comp=N,534nm,0.9s						
YLYR	**Ulyunkhan**	**0.67**	**140**	⇑*i*Pg	Pg	17 33 43.1	-1.0
YLYR				*e*Sg	Sg	17 33 52.1	-0.6
YLYR				Pmax			
	comp=N,63nm,0.2s						
YLYR				Smax			
	comp=N,253nm,0.3s						
YOA	**Uoyan**	**1.04**	**44**	*e*Pg	Pg	17 33 50.5	-0.8
YOA				*e*Sg	Sg	17 34 04.1	-0.8
YOA				Pmax			
	comp=N,241nm,0.5s						
YOA				Smax			
	comp=N,1μm,0.8s						
YOA	**Uoyan**	**1.04**	**44**	⇓*i*PG	Pg	17 33 50.2	-1.1
YOA				*e*		17 34 04.7	
YOA				pmax	pmax		
	comp=Z,214nm,0.4s						
YOA				smax			
	comp=E,2μm,2.6s						
SYVR	**Suvo**	**1.75**	**188**	*e*Pg	Pg	17 34 03.0	-1.9
SYVR				*e*Sg	Sg	17 34 26.8	-0.9
SYVR				Pmax			
	comp=E,34nm,0.3s						
SYVR				Smax			
	comp=E,244nm,0.3s						
UKT	**Uakit**	**1.82**	**86**	*e*Pg	Pg	17 34 04.0	-2.3
UKT				*e*Sg	Sg	17 34 27.6	-2.3
UKT				Pmax			
	comp=E,49nm,0.4s						
UKT				Smax			
	comp=E,152nm,0.4s						
UKT	**Uakit**	**1.82**	**86**	*e*PN	Pn	17 34 03.9	+0.7
UKT				*e*		17 34 27.9	
UKT				pmax	pmax		
	comp=Z,41nm,0.4s						
UKT				smax			
	comp=E,150nm,0.3s						
SVKR	**Severomuysk**	**1.91**	**66**	*e*Sg	Sg	17 34 31.2	-1.6
SVKR				Smax			
	comp=E,809nm,0.6s						
MXMB	**Maximikha**	**2.35**	**206**	*e*Pg	Pg	17 34 13.2	-3.1
MXMB				*e*		17 34 17.6	
MXMB				*e*Sg	Sg	17 34 44.8	-2.0
MXMB				Pmax			
	comp=E,43nm,0.3s						
MXMB				Smax			
	comp=E,590nm,0.9s						
OGRR	**Ongureny**	**2.41**	**225**	*e*Pn	Pn	17 34 09.6	-1.6
OGRR				*e*		17 34 12.9	
OGRR				*e*Pg	Pg	17 34 14.3	-3.1
OGRR				*e*Sg	Sg	17 34 45.5	-3.1
OGRR				Pmax			
	comp=E,30nm,0.4s						
OGRR				Smax			
	comp=E,129nm,0.3s						
OGRR	**Ongureny**	**2.41**	**225**	*e*PN	Pn	17 34 09.2	-2.0
OGRR				*e*		17 34 14.1	
OGRR				*e*		17 34 46.2	
OGRR				pmax	pmax		
	comp=Z,29nm,0.5s						
OGRR				smax			
	comp=N,169nm,0.9s						
KELR	**Kotokel**	**2.98**	**209**	*e*	Pn	17 34 16.3	-2.7
KELR				*e*Pn	Pn	17 34 18.1	-0.9
KELR				*e*Pg	Pg	17 34 23.9	-4.4
KELR				*e*Sg	Sg	17 35 03.5	-3.4
KELR				Pmax			
	comp=N,29nm,0.3s						
KELR				Smax			
	comp=N,211nm,0.5s						
BOD	**Bodaibo**	**3.13**	**38**	*e*Pn	Pn	17 34 21.6	+0.4
BOD				*e*		17 34 24.1	
BOD				*e*Pg	Pg	17 34 27.3	-4.1
BOD				*e*Sg	Sg	17 35 06.9	-5.1
BOD				Pmax			
	comp=N,13nm,0.3s						
BOD				Smax			
	comp=N,99nm,0.4s						
NLYR	**Nelyaty**	**3.17**	**67**	*e*Pn	Pn	17 34 22.4	+0.8
NLYR				*e*Pg	Pg	17 34 28.5	-3.4
NLYR				*e*Sg	Sg	17 35 09.6	-3.4
NLYR				Pmax			
	comp=N,14nm,0.5s						
NLYR				Smax			
	comp=N,109nm,1.0s						
ZRHB	**Zarechye**	**3.44**	**216**	*e*Pg	Pg	17 34 32.5	-4.7
ZRHB				*e*Sg	Sg	17 35 18.5	-3.2
ZRHB				Pmax			
	comp=N,58nm,0.8s						
ZRHB				Smax			
	comp=N,284nm,1.1s						
TRG	**Tyrgan**	**3.57**	**224**	*e*Pn	Pn	17 34 28.4	+1.2
TRG				*e*Sg	Sg	17 35 21.4	-4.5
TRG				Smax			
	comp=N,41nm,0.4s						
TRTB	**Turuntaevo**	**3.58**	**209**	*e*Pn	Pn	17 34 28.0	+0.7
TRTB				*e*Pg	Pg	17 34 36.2	-3.6
TRTB				*e*		17 35 11.6	
TRTB				*e*Sg	Sg	17 35 21.4	-4.7
TRTB				Pmax			
	comp=N,18nm,0.9s						
TRTB				Smax			
	comp=N,57nm,1.0s						
CIT	**Chita**	**3.85**	**150**	*e*Sg	Sg	17 35 29.9	-5.1
CIT				Smax			
	comp=N,35nm,1.2s						
HRMR	**Khuramsha**	**4.30**	**210**	*e*Pn	Pn	17 34 39.1	+1.8
HRMR				*e*Pg	Pg	17 34 47.9	-5.8
HRMR				*e*Sg	Sg	17 35 44.5	-5.0
HRMR				Pmax			
	comp=N,31nm,0.5s						
HRMR				Smax			
	comp=N,173nm,0.7s						
CRS	**Chara**	**4.64**	**68**	*e*Pn	Pn	17 34 42.6	+0.7
CRS				*e*Pg	Pg	17 34 55.6	-4.6
CRS				*e*		17 35 01.5	
CRS				*e*Sn	Sn	17 35 34.4	-1.6
CRS				*e*Sg	Sg	17 35 54.6	-5.7
CRS				max			
	comp=N,16nm,1.0s						
CRS				Smax			
	comp=N,61nm,1.3s						
CRS	**Chara**	**4.64**	**68**	*e*PN	Pn	17 34 42.6	+0.7
CRS				*e*		17 34 55.8	
CRS				*e*		17 35 54.3	
CRS				pmax	pmax		
	comp=Z,17nm,1.5s						
CRS				smax			
	comp=E,62nm,1.1s						
IRK	**Irkutsk**	**4.82**	**232**	*e*PN	Pg	17 34 56.6	-7.1
IRK				*e*		17 35 58.5	
IRK				pmax	pmax		
	comp=Z,67nm,0.2s						
IRK				smax			
	comp=N,146nm,0.5s						
TLY	**Talaya**	**5.49**	**230**	*e*Pg	Pg	17 35 09.8	-6.7
TLY				*e*Sn	Sn	17 35 55.9	-1.2
TLY				*e*Sg	Sg	17 36 19.8	-7.9
TLY				Pmax			
	comp=N,7.0nm,0.5s						
TLY				Smax			
	comp=N,19nm,0.6s						
TUP	**Tupik**	**5.58**	**96**	*e*Pn	Pn	17 34 54.8	0.0
TUP				*e*		17 35 03.6	
TUP				*e*Pg	Pg	17 35 11.1	-7.1
TUP				*e*Sn	Sn	17 35 56.6	-2.6
TUP				*e*Sg	Sg	17 36 23.5	-7.0
TUP				Pmax			
	comp=N,5.0nm,0.5s						
TUP				Smax			
	comp=N,66nm,0.8s						
TUP	**Tupik**	**5.58**	**96**	*e*PN	Pn	17 34 55.1	+0.3
TUP				*e*		17 35 11.2	
TUP				*e*S	Sn	17 35 56.9	-2.3
TUP				*e*		17 36 23.8	
TUP				pmax	pmax		
	comp=Z,3.0nm,0.2s						
TUP				smax			
	comp=N,66nm,1.1s						
KPC	**Khapcheranga**	**5.82**	**167**	*e*Sn	Sn	17 36 01.7	-3.4
KPC				*e*Sg	Sg	17 36 31.4	-6.7
KPC				Smax			
	comp=N,24nm,1.3s						
ARS	**Arshan**	**5.89**	**237**	*e*Pg	Pg	17 35 18.2	-6.0
ARS				*e*Sn	Sn	17 36 04.6	-2.4
ARS				*e*Sg	Sg	17 36 34.1	-6.4
ARS				Pmax			
	comp=N,25nm,0.6s						
ARS				Smax			
	comp=N,93nm,0.7s						
ARS	**Arshan**	**5.89**	**237**	*e*PN	Pn	17 34 59.5	+0.4
ARS				*e*		17 35 18.3	
ARS				*e*S	Sn	17 36 05.9	-1.1
ARS				*e*		17 36 32.9	
ARS				pmax	pmax		
	comp=Z,25nm,0.6s						
ARS				smax			
	comp=N,92nm,0.7s						
ZAK	**Zakamensk**	**6.62**	**224**	*e*Sg	Sg	17 36 55.8	-8.1
ZAK				Smax			
	comp=N,16nm,0.8s						
MOY	**Mondy**	**6.75**	**240**	*e*PN	Pn	17 35 12.8	+1.9
MOY				*e*		17 35 34.7	
MOY				*e*		17 36 59.6	
MOY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MOY				smax			
	comp=E,35nm,1.5s						
ORL	**Orlik**	**6.89**	**250**	*e*Pn	Pn	17 35 14.0	+1.2
ORL				*e*		17 36 31.4	
ORL				*e*Sg	Sg	17 37 05.3	-7.1
ORL				Smax			
	comp=E,57nm,1.3s						
ORL	**Orlik**	**6.89**	**250**	*e*PN	Pn	17 35 13.8	+1.0
ORL				*e*		17 35 35.6	
ORL				*e*		17 37 04.0	
ORL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ORL				smax			
	comp=N,57nm,1.6s						

*MOS **03**:17:41:57.7±2.0,5540N×11040E,h15km,mb4.3/1,Error ellipse: s-maj=84.9km s-min=34.1km az=63.6*
BYKL 03 17:41:56.8±0.2,5539N×11040E,h1km±10km,3C-2D,
Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**0.62**	**309**	*e*Pg	Pg	17 42 08.2	-0.5
NIZ				*e*Sg	Sg	17 42 16.8	0.0
NIZ				Pmax			
	72nm,0.2s						
NIZ				Smax			
	233nm,0.2s						
KMO	**Kumora**	**0.67**	**42**	⇑*i*Pg	Pg	17 42 08.6	-1.1
KMO				*e*Sg	Sg	17 42 18.2	-0.2
KMO				Pmax			
	123nm,0.4s						
KMO				Smax			
	320nm,1.0s						
YOA	**Uoyan**	**1.06**	**45**	*e*Pg	Pg	17 42 15.8	-1.2
YOA				*e*Sg	Sg	17 42 31.2	+0.5
YOA				Pmax			
	177nm,0.4s						
YOA				Smax			
	459nm,0.3s						
YOA	**Uoyan**	**1.06**	**45**	⇓*i*PG	Pg	17 42 16.2	-0.8
YOA				*e*		17 42 31.6	
YOA				pmax	pmax		
	comp=Z,185nm,0.3s						
YOA				smax			
	comp=E,765nm,1.0s						
SYVR	**Suvo**	**1.75**	**188**	*e*Pg	Pg	17 42 28.3	-2.1
SYVR				*e*Sg	Sg	17 42 52.2	-0.9
SYVR				Pmax			
	comp=E,53nm,0.4s						
SYVR				Smax			
	comp=E,238nm,0.6s						
UKT	**Uakit**	**1.84**	**86**	⇑*i*Pg	Pg	17 42 29.1	-3.0
UKT				*e*Sg	Sg	17 42 54.3	-1.7
UKT				Pmax			
	comp=E,33nm,0.3s						
UKT				Smax			
	comp=E,100nm,0.6s						
SVKR	**Severomuysk**	**1.93**	**67**	*e*Pg	Pg	17 42 31.7	-2.1
SVKR				*e*Sg	Sg	17 42 58.4	-0.4
SVKR				Pmax			
	comp=E,58nm,0.2s						
SVKR				Smax			
	comp=E,375nm,0.5s						
MXMB	**Maximikha**	**2.34**	**205**	⇑*i*Pn	Pn	17 42 37.0	+0.6
MXMB				*e*Pg	Pg	17 42 39.0	-2.7
MXMB				*e*Sg	Sg	17 43 10.8	-1.2
MXMB				Pmax			
	comp=E,52nm,0.4s						
MXMB				Smax			
	comp=E,276nm,0.8s						
OGRR	**Ongureny**	**2.40**	**224**	*e*Pn	Pn	17 42 37.8	+0.7
OGRR				*e*Pg	Pg	17 42 39.5	-3.2
OGRR				*e*Sg	Sg	17 43 11.5	-2.3
OGRR				Pmax			
	comp=E,52nm,0.3s						
OGRR				Smax			
	comp=E,88nm,0.5s						
KELR	**Kotokel**	**2.97**	**208**	*e*Pn	Pn	17 42 45.0	0.0
KELR				*e*Pg	Pg	17 42 49.3	-4.4
KELR				*e*Sg	Sg	17 43 28.9	-3.3
KELR				Pmax			
	comp=E,42nm,0.3s						
KELR				Smax			
	comp=E,160nm,0.4s						
BOD	**Bodaibo**	**3.15**	**38**	*e*Pn	Pn	17 42 47.4	-0.1
BOD				*e*Pg	Pg	17 42 52.6	-4.5
BOD				*e*Sg	Sg	17 43 33.6	-4.3
BOD				max			
	comp=E,13nm,0.3s						
BOD				Smax			
	comp=E,36nm,0.6s						
NLYR	**Nelyaty**	**3.18**	**68**	*e*Pn	Pn	17 42 48.2	+0.3
NLYR				*e*Pg	Pg	17 42 54.7	-3.1
NLYR				*e*Sg	Sg	17 43 35.0	-4.0
NLYR				Pmax			
	comp=E,12nm,0.7s						
NLYR				Smax			
	comp=E,63nm,1.4s						
ZRHB	**Zarechye**	**3.43**	**215**	*e*Pg	Pg	17 42 57.8	-4.7
ZRHB				*e*Sg	Sg	17 43 43.5	-3.4
ZRHB				Pmax			
	comp=E,28nm,0.8s						
ZRHB				Smax			
	comp=E,137nm,0.9s						
TRG	**Tyrgan**	**3.56**	**224**	*e*Pn	Pn	17 42 53.6	+0.5
TRG				*e*Pg	Pg	17 43 00.5	-4.4
TRG				*e*Sg	Sg	17 43 46.9	-4.1
TRG				Pmax			
	comp=E,13nm,0.3s						
TRG				Smax			
	comp=E,41nm,0.3s						
TRTB	**Turuntaevo**	**3.57**	**209**	⇓*i*Pn	Pn	17 42 53.7	+0.5
TRTB				*e*Pg	Pg	17 43 01.0	-4.2
TRTB				*e*Sg	Sg	17 43 48.9	-2.5
TRTB				Pmax			
	comp=E,13nm,0.6s						
TRTB				Smax			
	comp=E,38nm,0.7s						
CIT	**Chita**	**3.86**	**150**	*e*Pg	Pg	17 43 05.0	-5.8
CIT				*e*Sn	Sn	17 43 40.6	-2.7
CIT				*e*Sg	Sg	17 43 55.5	-5.3
CIT				Pmax			
	comp=E,6.0nm,0.4s						
CIT				Smax			
	comp=E,29nm,0.6s						
HRMR	**Khuramsha**	**4.29**	**210**	*e*Pn	Pn	17 43 03.8	+0.6
HRMR				*e*Pg	Pg	17 43 13.0	-6.1
HRMR				*e*		17 43 15.3	
HRMR				*e*Sg	Sg	17 44 09.9	-4.8
HRMR				max			
	comp=E,30nm,0.4s						
HRMR				Smax			
	comp=E,120nm,0.8s						
CRS	**Chara**	**4.65**	**68**	*e*Pg	Pg	17 43 20.2	-5.8
CRS				*e*Sg	Sg	17 44 21.2	-5.1
CRS				Pmax			
	comp=E,9.0nm,1.0s						
CRS				Smax			
	comp=E,28nm,1.4s						
IRK	**Irkutsk**	**4.81**	**232**	*e*PN	Pg	17 43 24.3	-4.7
IRK				*e*		17 44 24.4	
IRK				pmax	pmax		
	comp=Z,61nm,1.0s						
IRK				smax			
	comp=N,135nm,0.5s						
LSTR	**Listvyanka**	**4.84**	**225**	*e*	Pb	17 43 21.3	-1.1
LSTR				*e*Sg	Sg	17 44 26.4	-5.9
LSTR				Smax			
	comp=N,31nm,1.4s						
TUP	**Tupik**	**5.60**	**96**	*e*Pn	Pn	17 43 20.7	-0.5
TUP				*e*Pg	Pg	17 43 36.6	-7.4
TUP				*e*Sn	Sn	17 44 22.2	-3.9
TUP				*e*Sg	Sg	17 44 49.6	-7.0
TUP				Pmax			
	comp=N,5.0nm,0.3s						
TUP				Smax			
	comp=N,37nm,0.8s						
KPC	**Khapcheranga**	**5.82**	**167**	*e*Pn	Pn	17 43 23.5	-0.8
KPC				*e*		17 43 46.7	
KPC				*e*Sn	Sn	17 44 26.8	-4.8
KPC				*e*Sg	Sg	17 44 56.2	-7.6
KPC				Smax			
	comp=N,47nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KPC	Khapcheranga	5.82	167	ePN	Pn	17 43 23.9	-0.3
KPC				e		17 43 41.6	
KPC				eS	Sn	17 44 25.8	-5.8
KPC				e		17 44 57.6	
KPC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KPC				smax			
	comp=E,47nm,1.1s						
ARS	Arshan	5.88	237	ePn	Pn	17 43 25.5	+0.5
ARS				e		17 43 44.1	
ARS				eSn	Sn	17 44 30.6	-2.4
ARS				eSg	Sg	17 44 58.3	-7.3
ARS				Smax			
	comp=E,101nm,0.5s						
ARS	Arshan	5.88	237	ePN	Pn	17 43 23.5	-1.5
ARS				e		17 43 44.4	
ARS				eS	Sn	17 44 31.7	-1.3
ARS				e		17 44 57.8	
ARS				pmax	pmax		
	comp=Z,12nm,0.2s						
ARS				smax			
	comp=E,100nm,0.5s						
MOY	Mondy	6.73	240	e	Sn	17 44 54.3	+0.2
MOY				eSg	Sg	17 45 24.9	-8.2
MOY				Smax			
	comp=E,37nm,1.4s						
ORL	Orlik	6.87	250	ePn	Pn	17 43 40.1	+1.5
ORL				e		17 44 56.0	
ORL				eSg	Sg	17 45 29.5	-7.9
ORL				Smax			
	comp=E,66nm,1.2s						
ORL	Orlik	6.87	250	ePN	Pn	17 43 39.8	+1.2
ORL				e		17 44 01.7	
ORL				e		17 45 29.6	
ORL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ORL				smax			
	comp=N,51nm,1.1s						

*ISCJB **03** 17:42:12.7±1.8, 950S±006×10773E±007, h8km±11km, mb4.6/48, MS3.9/7, Error ellipse: s-maj=13.9km s-min=8.0km az=111.3*
*IDC **03** 17:42:13.2±0.8, 938S×10772E, h0km, mb4.2/9, mb1 4.2/10, mb1mx4.1/18, mbtmp4.1/10, ML3.9/1, MS3.7/2, Ms1 3.7/2, ms1mx2.9/22, Error ellipse: s-maj=31.6km s-min=16.6km az=57.0*
*NEIC **03** 17:42:14.8±0.4, 947S×10768E, h10km, mb4.7/26, Error ellipse: s-maj=13.0km s-min=6.9km az=51.0*
*BJI **03** 17:42:14.8, 950S×10770E, h10km, mB5.0, mb4.7, Ms4.8, Msz4.4*
*MOS **03** 17:42:16.6±1.2, 936S×10786E, h33km, mb4.9/18, Error ellipse: s-maj=15.9km s-min=9.0km az=109.1*
ISC 03 17:42:16.6±2.1**, 952S**±006×**10771E**±007**, h20**km±13km**, h17**km±2.9km**: pP-P, n88, σ1§20**/89**, mb4.6**/48**, MS3.9**/7**, 3C-3D, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	2.94	42⇑	iP	Pn	17 42 42.2	-20
BJII				iS	Sn	17 43 22.3	-14
KSM	Kuching	11.22	13	ePn	Pn	17 44 56.6	+0.8
PSI	Prapat	15.05	324	LR	LR	17 51 40.0	
	comp=Z,269nm,20.9s,baz=31,slow=38						
KULM	Kulim	16.31	334	ePn	Pn	17 46 01.4	-3.0
MBWA	Marble Bar	16.37	136	ePn	Pn	17 46 00.3	-4.9
	12nm,1.1s						
MBWA				eSn	Sn	17 48 46.2	-20
KKM	Kota Kinabalu	17.63	29	ePn	Pn	17 46 20.7	-0.3
FITZ	Fitzroy Crossi	19.37	118	eP	Pn	17 46 43.4	+1.2
	6.6nm,0.9s						
FITZ				eS	Sn	17 50 02.3	-17
FITZ	Fitzroy Crossi	19.37	118	P	Pn	17 46 43.1	+0.9
	0.3nm,0.3s,baz=294,slow=6.4,SNR=10						
FITZ				S	Sn	17 50 02.7	-16
	0.1nm,0.3s,baz=153,slow=14,SNR=4.9						
KAKA	Kakadu	24.47	100	eP	P	17 47 35.3	+1.1
	7.2nm,0.6s,mb4.3						
WRA	Warramunga Arr	27.72	115	P	P	17 48 03.0	-0.5
	3.0nm,1.0s,mb3.9,baz=286,slow=11,SNR=7.7						
WRAB	Tennant Creek	27.72	115	eP	P	17 48 03.6	0.0
WRAB	Tennant Creek	27.72	115	P	P	17 48 00.8	-2.8
	10nm,1.2s,mb4.3						
WB2	Warramunga Arr	27.73	115	eP	P	17 48 04.7	+1.1
ASAR	Alice Springs	28.70	123	P	P	17 48 13.3	+1.0
	1.0nm,0.8s,mb3.6,baz=298,slow=8.9,SNR=9.0						
ASAR				Sn	S	17 53 51.0	+51
	0.6nm,1.0s,baz=304,slow=24,SNR=5.9						
CHTO	Chiang Mai	29.45	343	eP	P	17 48 19.8	+0.8
CHTO				e		17 48 30.0	
CHTO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
CHTO	Chiang Mai	29.45	343	eP	P	17 48 19.8	+0.9
	comp=Z,10nm,1.0s,mb4.5						
CHTO				e		17 48 30.0	
KMI	Kunming	34.77	352	P	P	17 49 08.5	+2.9
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
KMI				LR	LR		
	comp=Z,114nm,20.4s,MS3.6						
GYA	Guiyang	35.77	358⇓	iP	P	17 49 16.6	+2.3
GYA				S	S	17 54 50.5	+0.1
GYA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
GYA				AMB	AMB		
	comp=Z,130nm,6.1s						
GYA				LR	LR		
	comp=N,450nm,17.8s,MS4.5						
GYA				LR	LR		
	comp=E,560nm,19.0s,MS4.5						
GYA				LR	LR		
	comp=Z,610nm,18.2s,MS4.4						
STKA	Stephens Creek	38.46	130	P	P	17 49 38.5	+1.4
	comp=Z,2.2nm,0.7s,mb4.0,baz=280,slow=8.3,SNR=5.3						
STKA	Stephens Creek	38.46	130	eP	P	17 49 36.8	-0.3
CTAO	Charters Tower	38.62	110	eP	P	17 49 39.1	+0.6
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
CTAO	Charters Tower	38.62	110	eP	P	17 49 39.1	+0.6
	comp=Z,8.7nm,1.2s,mb4.4						
CD2	Chengdu	40.37	355	eP	P	17 49 53.4	+0.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
SSE	Sheshan	42.40	17	eP	P	17 50 08.0	-1.7
SSE				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,157nm,5.4s						
JIRN	Jiri	42.43	331	eP	P	17 50 11.5	+1.6
	comp=Z,42nm,1.0s,mb5.0						
NJ2	Nanjing	42.68	14	eP	P	17 50 12.2	+0.2
NJ2				AP	pP	17 50 16.7	-1.4
NJ2				XP	sP	17 50 19.2	-1.4
NJ2				PP	PP	17 51 54.1	+3.0
NJ2				S	S	17 56 35.0	+0.7
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,270nm,4.3s						
NJ2				LR	LR		
	comp=N,720nm,15.5s						
NJ2				LR	LR		
	comp=E,320nm,30.1s						
NJ2				LR	LR		
	comp=Z,320nm,30.1s						
PKI	Pulchoki	42.73	330	eP	P	17 50 13.1	+0.7
GUN	Gumba	42.79	331	eP	P	17 50 13.7	+0.9
	comp=Z,25nm,0.7s,mb5.1						
DMN	Daman	42.91	330	eP	P	17 50 14.9	+1.1
	comp=Z,27nm,0.9s,mb5.0						
KKN	Kakani	42.98	330	eP	P	17 50 14.8	+0.4
	comp=Z,24nm,0.9s,mb4.9						
KKN	Kakani	42.98	330	eP	P	17 50 14.8	+0.4
KKN				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.9						
XAN	Xi’an	43.33	1	P	P	17 50 17.5	+0.3
XAN				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.6						
GKN	Gorkha	43.47	330	eP	P	17 50 19.1	+0.8
	comp=Z,40nm,1.1s,mb5.1						
KOLN	Koldanda	43.81	328	eP	P	17 50 21.8	+0.8
	comp=Z,32nm,0.8s,mb5.1						
LZH	Lanzhou	45.50	356	eP	P	17 50 36.5	+1.9
LZH				AP	pP	17 50 39.5	-1.3
LZH				XP	sP	17 50 40.9	-2.3
LZH				AMB	AMB		
	comp=Z,23nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,156nm,6.2s						
TAU	Tasmania Unive	47.95	141	eP	P	17 50 54.1	+0.4
TAU				pmax	pmax		
	comp=Z,45nm,1.5s,mb5.3						
TAU	Tasmania Unive	47.95	141	eP	P	17 50 54.1	+0.3
	comp=Z,45nm,1.5s,mb5.3						
GTA	Gaotai	49.23	352	eP	P	17 51 05.2	+1.6
GTA				AP	pP	17 51 12.6	+2.8
GTA				XP	sP	17 51 16.7	+4.5
GTA				PP	PP	17 53 01.1	+3.7
GTA				PPP		17 53 53.2	
GTA				S	S	17 58 10.3	+1.9
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.2						
GTA				AMB	AMB		
	comp=Z,88nm,3.4s						
GTA				LR	LR		
	comp=N,72nm,13.7s,MS4.1						
GTA				LR	LR		
	comp=E,109nm,15.2s,MS4.1						
GTA				LR	LR		
	comp=Z,84nm,12.2s,MS4.0						
BJT	Baijiatuau	49.90	8	P	P	17 51 06.0	-2.7
BJT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJT	Baijiatuau	49.90	8	P	P	17 51 06.0	-2.7
	comp=Z,7.5nm,0.9s,mb4.7						
HHC	Hu-ho-hao-te	50.24	4	eP	P	17 51 14.1	+2.8
HHC				AP	pP	17 51 18.6	+1.1
HHC				XP	sP	17 51 21.1	+1.2
HHC				PCP	PcP	17 52 32.7	+2.5
HHC				PP	PP	17 53 10.6	+4.0
HHC				SCP	ScP	17 56 26.3	+1.4
HHC				S	S	17 58 26.5	+4.0
HHC				SCS	ScS	18 01 01.5	+0.1
HHC				SS	SS	18 01 57.1	+1.1
HHC				AMB	AMB		
	comp=Z,12nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,119nm,7.3s						
HHC				LR	LR		
	comp=N,110nm,19.9s,MS4.1						
HHC				LR	LR		
	comp=E,121nm,17.1s,MS4.1						
HHC				LR	LR		
	comp=Z,100nm,19.0s,MS3.8						
MAJO	Matsushiro	54.05	30	P	P	17 51 37.4	-2.2
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
MAJO	Matsushiro	54.05	30	P	P	17 51 37.4	-2.2
	comp=Z,7.4nm,1.1s,mb4.5						
MJAR	Matsushiro Arr	54.05	30	P	P	17 51 37.2	-2.4
	comp=Z,4.4nm,1.0s,mb4.3,baz=204,slow=7.8,SNR=11						
WMQ	Urumqi	56.12	343	P	P	17 51 55.5	+1.0
WMQ				XP	sP	17 52 02.5	-0.8
WMQ				PCP	PcP	17 52 53.5	+1.1
WMQ				PP	PP	17 54 02.5	+2.9
WMQ				S	S	17 59 42.5	0.0
WMQ				SCS	ScS	18 01 40.5	-2.2
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,58nm,12.0s,MS4.0						
WMQ				LR	LR		
	comp=E,42nm,12.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,62nm,12.0s,MS3.9						
SONM	Songino Array	57.11	359	P	P	17 52 01.2	-0.4
	comp=Z,2.9nm,0.8s,mb4.4,baz=172,slow=8.2,SNR=12						
SONM				LR	LR	18 18 15.4	
	comp=Z,62nm,20.4s,MS3.7,baz=180,slow=38						
ULN	Ulaanbaatar	57.13	359	eP	P	17 52 01.7	0.0
ULN	Ulaanbaatar	57.13	359	eP	P	17 52 01.2	-0.5
	comp=Z,3.9nm,0.8s,mb4.5						
MDJ	Mudanjiang	57.40	18	P	P	17 52 04.1	+0.4
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,54nm,4.8s						
HIA	Hailar	59.48	9	eP	P	17 52 17.0	-1.2
ZAK	Zakamensk	59.77	357	eP	pP	17 52 30.2	+3.7
MKAR	Makanchi Array	60.48	340	P	P	17 52 24.9	-0.1
	comp=Z,6.3nm,0.7s,mb4.8,baz=134,slow=6.9,SNR=33						
KLR	Kul’dur	62.19	18	eP	P	17 52 33.4	-3.2
YSS	Yuzh-Sakhalins	64.31	26	eP	P	17 52 51.0	+0.4
YSS				e		17 53 02.8	
YSS	Yuzh-Sakhalins	64.31	26	eP	P	17 52 49.7	-0.9
	comp=Z,13nm,0.9s,mb5.0						
KURK	Kurchatov	65.09	340⇑	eP	P	17 52 56.0	+0.3
KURK	Kurchatov	65.09	340	eP	P	17 52 55.4	-0.4
	comp=Z,11nm,0.9s,mb4.9						
KURK				e		17 53 06.3	
MAW	Mawson	65.18	197	P	P	17 52 56.0	-0.3
	comp=Z,2.2nm,0.8s,mb4.2,baz=27,slow=8.8,SNR=6.4						
MAW	Mawson	65.18	197	eP	P	17 52 56.0	-0.3
MAW				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAW	Mawson	65.18	197	eP	P	17 52 56.0	-0.3
	comp=Z,3.3nm,1.0s,mb4.3						
ZAL	Zalesovo	66.12	345	P	P	17 53 00.7	-1.7
	comp=Z,1.0nm,0.3s,mb4.3,baz=174,slow=2.8,SNR=2.8						
BOD	Bodaibo	67.30	4	eP	P	17 53 08.8	-1.1
BOD				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.4						
BRVK	Borovoye	70.01	337	eP	P	17 53 25.9	-0.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
BRVK	Borovoye	70.01	337	eP	P	17 53 25.9	-1.0
	comp=Z,4.1nm,1.0s,mb4.3						
CHKZ	Chkalovo	70.36	338	eP	P	17 53 28.2	-0.8
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
CHKZ	Chkalovo	70.36	338	eP	P	17 53 28.2	-0.8
	comp=Z,5.2nm,0.7s,mb4.6						
ZRNK	Zerenda	70.43	336	eP	P	17 53 27.6	-1.8
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ZRNK	Zerenda	70.43	336	eP	P	17 53 27.6	-1.8
	comp=Z,5.4nm,0.9s,mb4.5						
YAK	Yakutsk	73.36	11	eP	P	17 53 46.4	-0.6
YAK				e		17 53 57.5	
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
YAK				pmax	pmax		
	comp=N,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
YAK	Yakutsk	73.36	11	eP	P	17 53 45.4	-1.6
	comp=E,15nm,1.0s,mb4.9						
YAK				e		17 53 56.2	
ARU	Arti	77.18	334⇓	iP	P	17 54 08.3	-0.7
ARU				e		17 54 17.6	
ARU				e		17 57 03.6	
ARU				ePPP		17 58 51.7	
ARU				eS	S	18 03 50.7	-6.6
ARU				eSS	SS	18 08 53.1	-1.9
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
ARU	Arti	77.18	334	eP	P	17 54 08.3	-0.7
	comp=Z,4.6nm,1.1s,mb4.3						
ARU				e		17 54 18.4	
LBTB	Lobatse	78.94	246	P	P	17 54 18.1	-0.6
LBTB				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
LBTB	Lobatse	78.94	246	P	P	17 54 18.1	-0.6
	comp=Z,7.0nm,1.0s,mb4.5						
KIV	Kislovodsk	79.21	318	eP	P	17 54 20.4	+0.2
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
KIV				MLR	MLR		
	comp=Z,61nm,19.0s,MS4.0						
KIV	Kislovodsk	79.21	318	P	P	17 54 20.3	+0.1
	comp=Z,7.8nm,0.9s,mb4.6						
BRTR	Keskin Array B	84.02	312	P	P	17 54 45.8	+0.1
	comp=Z,0.7nm,0.8s,mb3.8,baz=145,slow=8.8,SNR=6.2						
VRSR	Storozhevoye	84.29	324	eP	P	17 54 47.1	+0.1
VRSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
VRSR				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
VRSR				pmax	pmax		
	comp=N,6.0nm,0.9s						
OBN	Obninsk	87.21	327⇓	eP	P	17 55 01.9	+0.4
OBN				e		17 58 27.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.9						
OBN	Obninsk	87.21	327	P	P	17 55 00.3	-1.2
BILL	Bilibino	87.63	19	eP	P	17 55 02.1	-1.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.4						
KLMR	Klimovskoe	87.93	333	eP	P	17 55 03.8	-1.1
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.2						
YKA	Yellowknife Ar	118.96	21	PKP	PKPdf	18 01 01.9	-1.8
	comp=Z,0.4nm,0.7s,baz=317,slow=1.9,SNR=4.2						
YKA	Yellowknife Ar	118.96	21⇑	iPKIKP	PKPdf	18 01 03.5	-0.2
WMOK	Wichita Mounta	145.11	40	ePKIKP	PKPdf	18 01 53.0	+0.4
WMOK				e		18 02 04.3	
JCT	Junction City	146.95	47	ePKP2	PKPab	18 01 59.7	+0.6
MIAR	Mount Ida	148.37	35	ePKPbc	PKPbc	18 02 02.6	+1.0
MIAR				ePKPab	PKPab	18 02 06.6	+1.9
CPCT	Cooper Cave	151.88	22	ePKPbc	PKPbc	18 02 11.4	+1.4

CASC 03 17:58:42.3±4.5**, 1297N×9089W, h88**km±143km**, MD3.9, 5C-1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.27	20⇑	eP	Pn	17 59 05.0	-0.1
IXG				eS	Sn	17 59 23.9	+1.7
SBLS	San Blas	1.51	55⇓	eP	x	17 59 13.7	
SBLS				eS	x	17 59 34.7	
SNJE	San Jose	1.54	54	eP	x	17 59 14.7	
SNJE				eS	x	17 59 31.7	
BOQS	Boqueron	1.75	64⇑	eP	x	17 59 19.6	
BOQS				eS	x	17 59 42.1	
TP2	Tecpan 2	1.81	356⇑	eP	Pn	17 59 11.9	0.0
LFRS	El Faro	1.90	70⇑	eP	x	17 59 21.3	
LFRS				eS	x	17 59 46.0	
LCBS	La Ceiba	1.99	70	eP	x	17 59 22.7	
LCBS				eS	x	17 59 46.4	
SNVI	San Vicente	2.10	72⇑	eP	x	17 59 25.6	
SNVI				eS	x	17 59 51.0	

*ISCJB **03** 18:30:19.2±0.6, 5140N±003×16.12E±003, h0km, Error ellipse: s-maj=4.8km s-min=2.7km az=41.4*
*CSEM **03** 18:30:21.8±0.2, 5139N×16.14E, h0km, ML3.1/8, Error ellipse: s-maj=3.2km s-min=1.5km az=23.0*
*VIE **03** 18:30:21.7±0.5, 5134N×16.15E, h0km, mb2.4/4, ML2.7/4, Error ellipse: s-maj=2.8km s-min=2.7km az=169.0 66 km WNW of Breslau Suspected Mining induced.*
*IDC **03** 18:30:21.5±0.8, 5143N×16.11E, h0km, mb1 3.1/6, mb1mx3.0/20, mbtmp3.0/6, ML2.8/6, Error ellipse: s-maj=15.3km s-min=7.2km az=112.0*
*PRU **03** 18:30:21.7, 5140N×16.11E, h0km*
*WAR **03** 18:30:21.3, 5145N×16.13E, ML2.7, Mining Induced*
*IPEC **03** 18:30:21.5±0.3, 5141N×16.18E, h7km±1km, ML2.1/3, Error ellipse: s-maj=2.4km s-min=0.8km az=33.0*
ISC 03 18:30:19.6±0.5**, 5146N**±003×**1616E**±003**, h0**km**, n37, σ1§10**/67**, 3C-1D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.63	173	i Pgd	Pg	18 30 32.5	+0.8
KSP				i		18 30 33.7	
KSP				eSg	Sg	18 30 40.1	+0.3
KSP				eL		18 30 46.0	
KSP	Ksiaz	0.63	173	ePg	Pg	18 30 32.4	+0.7
KSP				eSg	Sg	18 30 40.1	+0.3
UPC	Upice	0.96	186	ePG	Pg	18 30 38.6	+0.5
DPC	Dobruska-Polom	1.12	175	ePG	Pg	18 30 41.4	+0.3
DPC				eSG	Sg	18 30 55.5	-0.1
	33nm,0.4s						
DPC	Dobruska-Polom	1.12	175	ePg	Pg	18 30 41.2	+0.1
DPC				eSg	Sg	18 30 54.9	-0.7
PVCC	Panska Ves	1.38	228	ePG	Pg	18 30 46.3	+0.3
PVCC	Panska Ves	1.38	228	ePn	Pn	18 30 46.5	+0.4
BRG	Berggiesshubel	1.52	248	SG	Sg	18 31 09.1	+0.7
	19nm,0.5s						
BRG	Berggiesshubel	1.52	248	ePn	Pn	18 30 48.6	+0.6
BRG				eSg	Sg	18 31 08.7	+0.3
PRU	Pruhonice	1.80	216	ePN	Pn	18 30 51.4	-0.5
PRU				ePG	Pg	18 30 53.4	-0.8
PRU				eSG	Sg	18 31 16.7	-0.8
	13nm,0.3s						
PRU	Pruhonice	1.80	216	ePn	Pn	18 30 51.5	-0.4
RAC	Raciborz	1.89	136	ePg	Pg	18 30 57.6	+1.7
RAC				eSg	Sg	18 31 23.3	+2.9
MORC	Moravsky Berou	1.90	152	ePn	Pn	18 30 53.4	+0.1
MORC				eSg	Sg	18 31 20.2	-0.6
	11nm,0.3s						
CLL	Collm	1.99	267	i Pg	Pg	18 30 57.2	-0.5
CLL				i x	x	18 30 58.7	
CLL				i x	x	18 31 01.3	
CLL				eSg	Sg	18 31 25.0	+1.5
	comp=Z,12nm,0.5s						
CLL	Collm	1.99	267	ePn	Pn	18 30 56.6	+2.1
OKC	Ostrava-Krasne	2.06	141	ePG	Pg	18 30 58.6	-0.5
OKC				eSG	Sg	18 31 24.8	-1.0
VRAC	Vranov	2.17	173	Pn	Pn	18 30 58.3	+1.2
	comp=Z,2.9nm,0.3s,baz=348,slow=19,SNR=7.4						
VRAC				Lg		18 31 30.6	
	comp=Z,4.4nm,0.3s,baz=92,slow=22,SNR=6.7						
VRAC	Vranov	2.17	173	ePn	Pn	18 30 57.3	+0.2
VRAC				eSg	Sg	18 31 28.2	-1.3
	comp=Z,14nm,0.5s						
TREC	Trest	2.21	192	ePN	Pn	18 30 58.5	+0.9
TREC	Trest	2.21	192	ePn	Pn	18 30 58.4	+0.8
TREC				eSg	Sg	18 31 30.1	-0.7
KRUC	Moravsky	2.41	176	ePn	Pn	18 31 01.7	+1.4
KRUC				eSg	Sg	18 31 35.1	-1.9
	comp=Z,7.5nm,0.4s						
OJC	Ojcow	2.62	117	ePg	Pg	18 31 09.3	-0.5
OJC				eSg	Sg	18 31 44.3	+0.5
NKC	Novy Kostel	2.66	244	ePN	Pn	18 31 03.8	+0.1
NKC				ePG	Pg	18 31 10.3	-0.3
NKC				eSG	Sg	18 31 44.4	-0.7
	comp=Z,24nm,0.3s						
KHC	Kasperske Hory	2.86	216	ePN	Pn	18 31 06.9	+0.4
KHC				ePG	Pg	18 31 13.0	-1.5
KHC				eSN	Sn	18 31 40.0	-1.7
KHC				eSG	Sg	18 31 49.8	-1.9
	comp=Z,8.1nm,0.5s						
KHC	Kasperske Hory	2.86	216	ePn	Pn	18 31 07.1	+0.6
KHC	Kasperske Hory	2.86	216	ePg	Pg	18 31 12.9	-1.6
KHC				eSn	Sn	18 31 40.0	-1.7
KHC				eSg	Sg	18 31 49.8	-1.9
	comp=Z,8.1nm,0.5s						
MOX	Moxa	2.98	256	ePG	Pg	18 31 16.5	-0.4
MOX				i SG	Sg	18 31 55.8	+0.2
MOX	Moxa	2.98	256	ePg	Pg	18 31 16.3	-0.6
MOX				eSg	Sg	18 31 55.0	-0.6
GERES	GERESS Array B	3.06	212	Pn	Pn	18 31 10.6	+1.3
	comp=Z,0.5nm,0.3s,baz=35,slow=13,SNR=12						
GERES				Pg	Pg	18 31 16.1	-2.2
	comp=Z,3.2nm,0.3s,baz=33,slow=17,SNR=50						
GERES				Sn	Sn	18 31 48.6	+2.0
	comp=Z,2.1nm,0.3s,baz=44,slow=27,SNR=5.0						
GERES				Lg		18 31 56.6	
	comp=Z,3.2nm,0.3s,baz=28,slow=26,SNR=7.6						
WET	Wettzell	3.13	223	ePn	Pn	18 31 10.6	+0.3
VYHS	Vyhne	3.44	149	ePG	Pg	18 31 25.8	+0.3
VYHS				eSG	Sg	18 32 13.9	+3.8
CONA	Conrad Observa	3.54	183⇓	iPn	Pn	18 31 16.4	+0.5
CONA			⇑	iSg	Sg	18 32 14.5	+1.0
	comp=Z,14nm,0.5s						
MOA	Molln	3.82	200⇑	iPn	Pn	18 31 20.6	+0.9
MOA			⇑	iSg	Sg	18 32 24.1	+1.7
	comp=Z,5.7nm,0.4s						
AKASG	Malin Array Be	8.26	90	Pn	Pn	18 32 19.0	-1.7
	comp=Z,0.3nm,0.3s,baz=277,slow=12,SNR=2.0						
HFS	Hagfors	8.80	352	Pn	Pn	18 32 27.5	-0.6
	comp=Z,0.1nm,0.3s,baz=156,slow=11,SNR=3.9						
FINES	FINESS Array B	11.39	25	Pn	Pn	18 33 01.7	-1.9
	comp=Z,0.1nm,0.3s,baz=193,slow=11,SNR=4.0						
FINES				Sn	Sn	18 35 05.2	-6.3
	comp=Z,0.1nm,0.3s,baz=213,slow=20,SNR=4.1						
ARCES	ARCESS Array B	18.66	10	Pn	Pn	18 34 35.3	-4.1
	comp=Z,0.2nm,0.3s,baz=195,slow=12,SNR=6.7						

*MOS **03** 18:48:00.6±2.1,5541N×11043E,h5km,mb4.3/1,Error ellipse: s-maj=59.1km s-min=20.1km az=47.0*

BYKL 03 18:48:00.2±0.2,5542N×11039E,h7km±13km,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.60**	**307**	*e*Pg	Pg		18 48 10.8	-0.9
NIZ				*e*Sg	Sg		18 48 18.7	-0.8
NIZ				Pmax				
	60nm,0.2s							
NIZ				Smax				
	334nm,0.4s							
KMO	**Kumora**	**0.66**	**44**	*e*Pg	Pg		18 48 11.5	-1.3
KMO				*e*Sg	Sg		18 48 20.3	-1.1
KMO				Pmax				
	177nm,0.4s							
KMO				Smax				
	762nm,1.2s							
KMO	**Kumora**	**0.66**	**44**	*e*PG	Pg		18 48 11.6	-1.2
KMO				*e*			18 48 19.7	
KMO				pmax	pmax			
	comp=Z,177nm,0.4s							
KMO				smax				
	comp=N,752nm,0.8s							
YLYR	**Ulyunkhan**	**0.70**	**141**	*e*Pg	Pg		18 48 12.2	-1.5
YLYR				*e*Sg	Sg		18 48 21.6	-1.3
YLYR				Pmax				
	comp=N,92nm,0.3s							
YLYR				Smax				
	comp=N,237nm,0.3s							
YOA	**Uoyan**	**1.04**	**46**	*e*Pg	Pg		18 48 18.8	-1.3
YOA				*e*Sg	Sg		18 48 33.6	0.0
YOA				Pmax				
	comp=N,178nm,0.5s							
YOA				Smax				
	comp=N,899nm,0.5s							
YOA	**Uoyan**	**1.04**	**46**	*e*PG	Pg		18 48 18.8	-1.3
YOA				*e*			18 48 33.7	
YOA				pmax	pmax			
	comp=Z,176nm,0.4s							
YOA				smax				
	comp=N,891nm,0.5s							
SYVR	**Suvo**	**1.78**	**188**	*e*Pg	Pg		18 48 32.3	-2.0
SYVR				*e*Sg	Sg		18 48 56.1	-1.3
SYVR				Pmax				
	comp=N,42nm,0.6s							
SYVR				Smax				
	comp=N,322nm,1.1s							
UKT	**Uakit**	**1.84**	**87**	*e*Pg	Pg		18 48 32.8	-2.8
UKT				*e*Sg	Sg		18 48 58.2	-1.3
UKT				Pmax				
	comp=N,110nm,0.5s							
UKT				Smax				
	comp=N,208nm,0.6s							
UKT	**Uakit**	**1.84**	**87**	*e*PN	Pn		18 48 32.6	+0.3
UKT				*e*			18 48 58.4	
UKT				pmax	pmax			
	comp=Z,115nm,0.6s							
UKT				smax				
	comp=N,207nm,0.5s							
SVKR	**Severomuysk**	**1.92**	**67**	*e*Sg	Sg		18 49 01.2	-0.8
SVKR				Smax				
	comp=N,789nm,0.6s							
MXMB	**Maximikha**	**2.37**	**205**	*e*Pg	Pg		18 48 43.5	-2.0
MXMB				*e*Sg	Sg		18 49 14.7	-1.5
MXMB				Pmax				
	comp=N,24nm,0.5s							
MXMB				Smax				
	comp=N,333nm,0.8s							
OGRR	**Ongureny**	**2.41**	**224**	*e*Pg	Pg		18 48 43.5	-2.9
OGRR				*e*Sn	Sn		18 49 08.0	-1.8
OGRR				*e*Sg	Sg		18 49 14.9	-2.8
OGRR				Pmax				
	comp=N,15nm,0.4s							
OGRR				Smax				
	comp=N,85nm,0.4s							
KELR	**Kotokel**	**2.99**	**208**	*e*Sg	Sg		18 49 33.3	-3.0
KELR				Smax				
	comp=N,190nm,0.6s							
BOD	**Bodaibo**	**3.13**	**38**	*e*Pn	Pn		18 48 49.7	-0.2
BOD				*e*Pg	Pg		18 48 55.7	-4.4
BOD				*e*Sg	Sg		18 49 35.6	-5.0
BOD				max				
	comp=N,12nm,0.3s							
BOD				Smax				
	comp=N,81nm,1.0s							
NLYR	**Nelyaty**	**3.17**	**68**	*e*Pn	Pn		18 48 51.3	+0.8
NLYR				*e*Pg	Pg		18 48 57.1	-3.9
NLYR				*e*Sg	Sg		18 49 38.0	-4.2
NLYR				Pmax				
	comp=N,21nm,0.7s							
NLYR				Smax				
	comp=N,134nm,0.8s							
ZRHB	**Zarechye**	**3.45**	**215**	Pg	Pg		18 49 02.8	-3.5
ZRHB				*e*Sg	Sg		18 49 47.4	-3.6
ZRHB				Pmax				
	comp=N,27nm,0.6s							
ZRHB				Smax				
	comp=N,203nm,0.9s							
TRG	**Tyrgan**	**3.57**	**223**	*e*Pn	Pn		18 48 57.4	+1.4
TRG				*e*Sg	Sg		18 49 50.0	-5.0
TRG				Smax				
	comp=N,36nm,0.9s							
TRTB	**Turuntaevo**	**3.59**	**208**	*e*Pn	Pn		18 48 56.5	+0.2
TRTB				*e*Pg	Pg		18 49 04.6	-4.4
TRTB				*e*Sg	Sg		18 49 51.8	-3.7
TRTB				Pmax				
	comp=N,8.0nm,0.5s							
TRTB				Smax				
	comp=N,44nm,0.8s							
CIT	**Chita**	**3.89**	**150**	*e*Sg	Sg		18 49 59.6	-5.5
CIT				Smax				
	comp=N,42nm,1.1s							
HRMR	**Khuramsha**	**4.32**	**210**	*e*Pg	Pg		18 49 18.1	-4.8
HRMR				*e*Sg	Sg		18 50 14.4	-4.4
HRMR				Pmax				
	comp=N,16nm,0.7s							
HRMR				Smax				
	comp=N,118nm,0.7s							
CRS	**Chara**	**4.65**	**68**	*e*Pg	Pg		18 49 24.3	-4.9
CRS				*e*Sg	Sg		18 50 25.2	-4.3
CRS				Pmax				
	comp=N,29nm,1.1s							
CRS				Smax				
	comp=N,84nm,1.4s							
CRS	**Chara**	**4.65**	**68**	*e*PN	Pg		18 49 24.7	-4.5
CRS				*e*			18 50 22.1	
CRS				pmax	pmax			
	comp=Z,29nm,0.9s							
CRS				smax				
	comp=N,84nm,1.4s							
IRK	**Irkutsk**	**4.82**	**231**	*e*PN	Pg		18 49 28.6	-4.0
IRK				*e*			18 50 27.6	
IRK				pmax	pmax			
	comp=Z,27nm,0.7s							
IRK				smax				
	comp=N,115nm,0.5s							
TLY	**Talaya**	**5.50**	**230**	*e*Sg	Sg		18 50 49.7	-6.9
TLY				Smax				
	comp=N,10.0nm,0.4s							
TUP	**Tupik**	**5.61**	**96**	*e*Pn	Pn		18 49 23.9	-0.1
TUP				*e*Pg	Pg		18 49 39.9	-7.7
TUP				*e*Sn	Sn		18 50 24.8	-3.8
TUP				*e*Sg	Sg		18 50 52.7	-7.5
TUP				Pmax				
	comp=N,9.0nm,0.5s							
TUP				Smax				
	comp=N,46nm,1.3s							
KPC	**Khapcheranga**	**5.85**	**167**	*e*Pn	Pn		18 49 27.1	-0.2
KPC				*e*Pg	Pg		18 49 45.7	-6.6
KPC				*e*Sg	Sg		18 51 01.4	-6.7
KPC				Pmax				
	comp=N,5.0nm,0.6s							
KPC				Smax				
	comp=N,36nm,1.0s							
ARS	**Arshan**	**5.89**	**237**	*e*Sn	Sn		18 50 32.0	-3.6
ARS				*e*Sg	Sg		18 51 01.4	-7.9
ARS				Smax				
	comp=N,87nm,0.9s							
ZAK	**Zakamensk**	**6.63**	**223**	*e*Sn	Sn		18 51 01.1	+7.3
ZAK				*e*Sg	Sg		18 51 26.3	-6.7
ZAK				Smax				
	comp=N,21nm,1.6s							
MOY	**Mondy**	**6.74**	**240**	*e*PG	Pg		18 50 04.4	-4.9
MOY				*e*S	Sn		18 50 53.4	-3.2
MOY				*e*			18 51 31.9	
MOY				pmax	pmax			
	comp=Z,2.0nm,0.4s							
MOY				smax				
	comp=E,34nm,1.7s							
ORL	**Orlik**	**6.88**	**250**	*e*Pn	Pn		18 49 42.4	+1.0
ORL				*e*			18 50 59.6	
ORL				*e*Sg	Sg		18 51 32.6	-8.3
ORL				Smax				
	comp=E,45nm,1.2s							
ORL	**Orlik**	**6.88**	**250**	*e*PN	Pn		18 49 43.0	+1.6
ORL				*e*			18 50 04.8	
ORL				*e*S	Sn		18 50 59.4	-0.5
ORL				*e*			18 51 32.5	
ORL				pmax	pmax			
	comp=Z,2.0nm,0.4s							
ORL				smax				
	comp=N,45nm,1.1s							

*MOS **03** 19:27:43.2±0.6,5539N×11041E,h10km,mb4.5/2,Error ellipse: s-maj=19.8km s-min=8.5km az=58.2*

BYKL 03 19:27:44.0±0.2,5539N×11040E,h4km±12km,6C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.62**	**309**	⇑*i*Pg	Pg		19 27 55.3	-0.6
NIZ				*e*Sg	Sg		19 28 04.3	+0.3
NIZ				Pmax				
	117nm,0.2s							
NIZ				Smax				
	432nm,0.2s							
KMO	**Kumora**	**0.67**	**42**	⇑*i*Pg	Pg		19 27 55.7	-1.2
KMO				*e*Sg	Sg		19 28 05.7	0.0
KMO				Pmax				
	276nm,0.5s							
KMO				Smax				
	702nm,1.2s							
KMO	**Kumora**	**0.67**	**42**	*e*PG	Pg		19 27 55.7	-1.2
KMO				*e*			19 28 04.4	
KMO				pmax	pmax			
	comp=Z,159nm,0.3s							
KMO				smax				
	comp=N,695nm,0.7s							
YLYR	**Ulyunkhan**	**0.68**	**139**	⇑*i*Pg	Pg		19 27 55.9	-1.1
YLYR				*e*Sg	Sg		19 28 05.1	-0.6
YLYR				Pmax				
	comp=N,91nm,0.1s							
YLYR				Smax				
	comp=N,413nm,0.4s							
YOA	**Uoyan**	**1.06**	**45**	*e*Pg	Pg		19 28 03.0	-1.2
YOA				*e*Sg	Sg		19 28 19.0	+1.1
YOA				Pmax				
	comp=N,413nm,0.4s							
YOA				Smax				
	comp=N,897nm,0.4s							
YOA	**Uoyan**	**1.06**	**45**	⇑*i*PG	Pg		19 28 02.9	-1.3
SYVR	**Suvo**	**1.75**	**188**	⇓*i*Pg	Pg		19 28 15.3	-2.3
SYVR				*e*Sg	Sg		19 28 39.4	-0.9
SYVR				Pmax				
	comp=N,113nm,0.5s							
SYVR				Smax				
	comp=N,524nm,0.6s							
SYVR	**Suvo**	**1.75**	**188**	*e*PN	Pn		19 28 15.4	+0.3
SYVR				*e*			19 28 39.7	
SYVR				pmax	pmax			
	comp=Z,119nm,0.7s							
SYVR				smax				
	comp=E,414nm,0.4s							
UKT	**Uakit**	**1.84**	**86**	⇑*i*Pg	Pg		19 28 16.3	-3.0
UKT				*e*Sg	Sg		19 28 41.3	-1.9
UKT				Pmax				
	comp=E,92nm,0.4s							
UKT				Smax				
	comp=E,240nm,0.4s							
UKT	**Uakit**	**1.84**	**86**	*e*PN	Pn		19 28 16.3	-0.1
UKT				*e*			19 28 40.9	
UKT				pmax	pmax			
	comp=Z,79nm,0.4s							
UKT				smax				
	comp=N,238nm,0.4s							
SVKR	**Severomuysk**	**1.93**	**67**	*e*Pg	Pg		19 28 19.2	-1.8
SVKR				*e*Sg	Sg		19 28 45.7	-0.3
SVKR				Pmax				
	comp=N,102nm,0.2s							
SVKR				Smax				
	comp=N,806nm,0.5s							
SVKR	**Severomuysk**	**1.93**	**67**	*e*PN	Pn		19 28 18.5	+0.9
SVKR				*e*			19 28 19.2	
SVKR				*e*S	Sn		19 28 41.2	-1.0
SVKR				*e*			19 28 45.6	
SVKR				pmax	pmax			
	comp=Z,101nm,0.4s							
SVKR				smax				
	comp=E,807nm,0.5s							
MXMB	**Maximikha**	**2.34**	**205**	*e*Pn	Pn		19 28 24.1	+0.9
MXMB				*e*Pg	Pg		19 28 26.1	-2.8
MXMB				*e*Sg	Sg		19 28 57.6	-1.6
MXMB				Pmax				
	comp=E,97nm,0.4s							
MXMB				Smax				
	comp=E,698nm,0.7s							
OGRR	**Ongureny**	**2.40**	**224**	*e*Pn	Pn		19 28 24.9	+0.9
OGRR				*e*Pg	Pg		19 28 26.7	-3.2
OGRR				*e*Sg	Sg		19 28 59.2	-1.8
OGRR				Pmax				
	comp=E,95nm,0.2s							
OGRR				Smax				
	comp=E,178nm,0.4s							
OGRR	**Ongureny**	**2.40**	**224**	*e*PN	Pn		19 28 23.2	-0.8
OGRR				*e*			19 28 26.9	
OGRR				*e*			19 28 59.0	
OGRR				pmax	pmax			
	comp=Z,96nm,0.3s							
OGRR				smax				
	comp=E,185nm,0.6s							
KELR	**Kotokel**	**2.97**	**208**	*e*Pn	Pn		19 28 32.5	+0.6
KELR				*e*Pg	Pg		19 28 37.3	-3.6
KELR				*e*Sg	Sg		19 29 16.2	-3.2
KELR				Pmax				
	comp=E,69nm,0.3s							
KELR				Smax				
	comp=E,343nm,0.3s							
BOD	**Bodaibo**	**3.15**	**38**	*e*Pn	Pn		19 28 34.5	+0.2
BOD				*e*Pg	Pg		19 28 40.0	-4.3
BOD				*e*Sg	Sg		19 29 20.2	-4.9
BOD				max				
	comp=E,22nm,0.3s							
BOD				Smax				
	comp=E,78nm,0.5s							
NLYR	**Nelyaty**	**3.18**	**68**	*e*Pn	Pn		19 28 35.4	+0.6
NLYR				*e*Sn	Sn		19 29 11.0	-2.1
NLYR				*e*Sg	Sg		19 29 22.2	-4.0
NLYR				Smax				
	comp=E,157nm,1.4s							
NLYR	**Nelyaty**	**3.18**	**68**	*e*PN	Pn		19 28 35.2	+0.4
NLYR				*e*			19 28 41.7	
NLYR				*e*			19 29 23.6	
NLYR				pmax	pmax			
	comp=Z,39nm,0.8s							
NLYR				smax				
	comp=N,156nm,1.1s							
ZRHB	**Zarechye**	**3.43**	**215**	*e*Pg	Pg		19 28 45.0	-4.7
ZRHB				*e*Sg	Sg		19 29 31.4	-2.7
ZRHB				Pmax				
	comp=N,80nm,0.8s							
ZRHB				Smax				
	comp=N,324nm,0.8s							
TRG	**Tyrgan**	**3.56**	**224**	*e*Pn	Pn		19 28 40.5	+0.6
TRG				*e*Pg	Pg		19 28 48.0	-4.1
TRG				*e*Sg	Sg		19 29 34.1	-4.1
TRG				Pmax				
	comp=N,20nm,0.4s							
TRG				Smax				
	comp=N,73nm,0.4s							
TRTB	**Turuntaevo**	**3.57**	**209**	⇓*i*Pn	Pn		19 28 40.8	+0.7
TRTB				*e*Pg	Pg		19 28 48.2	-4.1
TRTB				*e*Sg	Sg		19 29 35.3	-3.3
TRTB				Pmax				
	comp=N,25nm,0.6s							
TRTB				Smax				
	comp=N,88nm,0.8s							
CIT	**Chita**	**3.86**	**150**	*e*Pg	Pg		19 28 52.8	-5.2
CIT				*e*Sg	Sg		19 29 42.7	-5.3
CIT				Pmax				
	comp=N,8.0nm,0.5s							
CIT				Smax				
	comp=N,77nm,0.9s							
FFNB	**Fofonovo**	**3.98**	**214**	*e*Sg	Sg		19 29 46.5	-5.5
FFNB				Smax				
	comp=N,181nm,0.6s							
HRMR	**Khuramsha**	**4.29**	**210**	*e*Pn	Pn		19 28 50.9	+0.8
HRMR				*e*Pg	Pg		19 29 00.1	-6.2
HRMR				*e*Sg	Sg		19 29 56.6	-5.3
HRMR				Pmax				
	comp=N,64nm,0.6s							
HRMR				Smax				
	comp=N,284nm,0.8s							
CRS	**Chara**	**4.65**	**68**	*e*Pn	Pn		19 28 55.2	+0.2
CRS				*e*Pg	Pg		19 29 07.3	-5.9
CRS				*e*Sg	Sg		19 30 08.3	-5.2
CRS				Pmax				
	comp=N,22nm,1.0s							
CRS				Smax				
	comp=N,59nm,1.4s							
CRS	**Chara**	**4.65**	**68**	*e*PN	Pn		19 28 56.1	+1.1
CRS				*e*			19 29 08.9	
CRS				*e*			19 30 09.8	
CRS				pmax	pmax			
	comp=Z,16nm,0.9s							
CRS				smax				
	comp=N,59nm,1.6s							
IRK	**Irkutsk**	**4.81**	**232**	*e*PN	Pg		19 29 10.3	-5.8
IRK				*e*			19 30 13.3	
IRK				pmax	pmax			
	comp=Z,50nm,0.3s							
IRK				smax				
	comp=N,246nm,0.9s							
TLY	**Talaya**	**5.48**	**230**	*e*Pg	Pg		19 29 21.9	-7.1
TLY				*e*			19 30 09.8	
TLY				*e*Sg	Sg		19 30 32.6	-7.4
TLY				Pmax				
	comp=N,10.0nm,0.5s							
TLY				Smax				
	comp=N,25nm,0.5s							
TLY	**Talaya**	**5.48**	**230**	*e*PN	Pn		19 29 06.9	+0.5
TLY				*e*			19 29 21.5	
TLY				*e*			19 30 32.3	
TLY				pmax	pmax			
	comp=Z,16nm,0.5s							
TLY				smax				
	comp=E,46nm,0.8s							
TUP	**Tupik**	**5.60**	**96**	*e*Pn	Pn		19 29 07.6	-0.4
TUP				*e*Sn	Sn		19 30 09.4	-3.3
TUP				*e*Sg	Sg		19 30 36.8	-6.9
TUP				Smax				
	comp=E,82nm,0.9s							
TUP	**Tupik**	**5.60**	**96**	*e*PN	Pn		19 29 07.6	-0.4
TUP				*e*			19 29 24.3	
TUP				*e*S	Sn		19 30 11.1	-1.6
TUP				*e*			19 30 38.5	
TUP				pmax	pmax			
	comp=Z,6.0nm,0.4s							
TUP				smax				
	comp=N,81nm,0.9s							
KPC	**Khapcheranga**	**5.82**	**167**	*e*Pn	Pn		19 29 10.1	-1.0
KPC				*e*			19 29 30.7	
KPC				*e*Sn	Sn		19 30 14.0	-4.3
KPC				*e*Sg	Sg		19 30 44.2	-6.8
KPC				Smax				
	comp=N,105nm,1.0s							
KPC	**Khapcheranga**	**5.82**	**167**	*e*PN	Pn		19 29 10.6	-0.5
KPC				*e*			19 29 28.9	
KPC				*e*S	Sn		19 30 14.1	-4.2
KPC				*e*			19 30 44.8	
KPC				pmax	pmax			
	comp=Z,7.0nm,0.7s							
KPC				smax				
	comp=E,104nm,1.0s							
ARS	**Arshan**	**5.88**	**237**	*e*Pn	Pn		19 29 11.6	-0.3
ARS				*e*Pg	Pg		19 29 29.9	-6.7
ARS				*e*Sn	Sn		19 30 18.0	-1.7
ARS				*e*Sg	Sg		19 30 45.6	-7.2
ARS				Pmax				
	comp=E,26nm,0.6s							
ARS				Smax				
	comp=E,205nm,0.6s							
ARS	**Arshan**	**5.88**	**237**	*e*PN	Pn		19 29 13.1	+1.2
ARS				*e*			19 29 31.0	
ARS				*e*			19 30 45.5	
ARS				pmax	pmax			
	comp=Z,26nm,0.5s							
ARS				smax				
	comp=E,177nm,0.7s							
ZAK	**Zakamensk**	**6.61**	**224**	*e*Pn	Pn		19 29 22.5	+0.6
ZAK				*e*Pg	Pg		19 29 43.2	-7.4
ZAK				*e*Sg	Sg		19 31 09.4	-6.9
ZAK				Pmax				
	comp=E,3.0nm,0.2s							
ZAK				Smax				
	comp=E,45nm,1.4s							
ZAK	**Zakamensk**	**6.61**	**224**	*e*PN	Pn		19 29 22.5	+0.6
ZAK				*e*			19 29 42.6	
ZAK				*e*S	Sg		19 31 09.1	-7.2
ZAK				pmax	pmax			
	comp=Z,3.0nm,0.3s							
ZAK				smax				
	comp=N,46nm,1.3s							
MOY	**Mondy**	**6.73**	**240**	*e*PN	Pn		19 29 25.2	+1.6
MOY				*e*			19 29 46.1	
ORL	**Orlik**	**6.87**	**250**	⇑*e*Pn	Pn		19 29 26.9	+1.4
ORL				*e*			19 30 42.9	
ORL				*e*Sg	Sg		19 31 16.8	-7.8
ORL				Smax				
	comp=N,153nm,1.3s							
ORL	**Orlik**	**6.87**	**250**	*e*PN	Pn		19 29 26.8	+1.3
ORL				*e*			19 29 48.6	
ORL				*e*			19 31 16.6	
ORL				pmax	pmax			
	comp=Z,6.0nm,0.5s							
ORL				smax				
	comp=N,153nm,2.0s							

*MOS **03** 19:31:31.0±1.1,5542N×11041E,h10km,mb4.5/2,Error ellipse: s-maj=21.8km s-min=11.2km az=52.8*

BYKL 03 19:31:31.5±0.2,5540N×11041E,h2km±10km,3C,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.62**	**308**	⇑*i*Pg	Pg		19 31 43.3	-0.1
NIZ				*e*Sg	Sg		19 31 52.0	+0.6
NIZ				Pmax				
	53nm,0.2s							
NIZ				Smax				
	488nm,0.3s							
NIZ	**Nizh Angarsk**	**0.62**	**308**	*e*PG	Pg		19 31 43.4	0.0
NIZ				*e*			19 31 52.2	
NIZ				pmax	pmax			
	comp=Z,52nm,0.3s							
NIZ				smax				
	comp=N,487nm,0.3s							
KMO	**Kumora**	**0.66**	**42**	*e*Pg	Pg		19 31 43.4	-0.8
KMO				*e*Sg	Sg		19 31 52.9	+0.1
KMO				Pmax				
	comp=N,195nm,0.3s							
KMO				Smax				
	comp=N,975nm,0.9s							
KMO	**Kumora**	**0.66**	**42**	*e*PG	Pg		19 31 43.5	-0.7
KMO				*e*			19 31 52.2	
KMO				pmax	pmax			
	comp=Z,196nm,0.3s							
KMO				smax				
	comp=N,868nm,0.9s							
YLYR	**Ulyunkhan**	**0.68**	**140**	⇑*i*Pg	Pg		19 31 43.4	-1.1
YLYR				*e*Sg	Sg		19 31 52.5	-0.8
YLYR				Pmax				
	comp=N,127nm,0.8s							
YLYR				Smax				
	comp=N,729nm,1.9s							
YOA	**Uoyan**	**1.04**	**45**	*e*Pg	Pg		19 31 50.8	-0.7
YOA				*e*Sg	Sg		19 32 05.4	+0.3
YOA				Pmax				
	comp=N,224nm,0.4s							
YOA				Smax				

comp=N,2μm,1.0s
YOA Uoyan 1.04 45 ⇑*i*PG Pg 19 31 51.1 -0.4
YOA *e* 19 32 05.6
YOA pmax pmax
comp=Z,224nm,0.5s
YOA smax
comp=E,3μm,2.5s
SYVR Suvo 1.76 188 *e*Pg Pg 19 32 03.4 -1.9
SYVR *e*Sg Sg 19 32 26.8 -1.3
SYVR Pmax
comp=E,86nm,1.1s
SYVR Smax
comp=E,435nm,1.3s
UKT Uakit 1.83 86 *e*Pg Pg 19 32 03.9 -2.8
UKT *e*Sg Sg 19 32 28.6 -1.9
UKT Pmax
comp=E,90nm,0.6s
UKT Smax
comp=E,375nm,0.8s
UKT Uakit 1.83 86 *e*PN Pn 19 32 04.3 +0.3
UKT *e* 19 32 28.9
UKT pmax pmax
comp=Z,90nm,0.3s
UKT smax
comp=N,375nm,0.9s
SVKR Severomuysk 1.92 67 *e*PN Pn 19 32 06.4 +1.2
SVKR *e* 19 32 07.0
SVKR *e*S Sn 19 32 27.8 -2.1
SVKR *e* 19 32 32.3
SVKR pmax pmax
comp=Z,108nm,0.9s
SVKR smax
comp=N,1μm,0.7s
MXMB Maximikha 2.35 205 *e*Pg Pg 19 32 13.4 -3.2
MXMB *e*Sg Sg 19 32 46.0 -1.1
MXMB Pmax
comp=N,77nm,0.8s
MXMB Smax
comp=N,775nm,1.0s
OGRR Ongureny 2.41 224 *e*Pn Pn 19 32 12.7 +0.8
OGRR *e*Pg Pg 19 32 14.7 -2.9
OGRR *e*Sg Sg 19 32 46.3 -2.5
OGRR Pmax
comp=N,40nm,0.4s
OGRR Smax
comp=N,179nm,0.9s
OGRR Ongureny 2.41 224 *e*PN Pn 19 32 12.6 +0.7
OGRR *e* 19 32 14.1
OGRR *e* 19 32 46.3
OGRR pmax pmax
comp=Z,44nm,0.9s
OGRR smax
comp=N,178nm,0.9s
KELR Kotokel 2.98 208 *e*Pg Pg 19 32 24.7 -3.9
KELR *e* 19 32 30.5
KELR *e*Sg Sg 19 33 04.5 -2.8
KELR max
comp=N,32nm,0.4s
KELR Smax
comp=N,240nm,0.7s
BOD Bodaibo 3.13 38 *e*Pn Pn 19 32 21.9 0.0
BOD *e*Pg Pg 19 32 27.8 -3.8
BOD *e*Sg Sg 19 33 07.6 -4.6
BOD Pmax
comp=N,21nm,0.3s
BOD Smax
comp=N,177nm,1.0s
BOD Bodaibo 3.13 38 *e*PN Pn 19 32 22.1 +0.2
BOD *e* 19 32 27.5
BOD *e* 19 33 07.1
BOD pmax pmax
comp=Z,21nm,0.4s
BOD smax
comp=E,177nm,0.7s
NLYR Nelyaty 3.17 68 *e*Pn Pn 19 32 22.8 +0.4
NLYR *e*Pg Pg 19 32 28.8 -3.5
NLYR *e*Sn Sn 19 32 59.0 -1.8
NLYR *e*Sg Sg 19 33 09.8 -3.6
NLYR Pmax
comp=E,31nm,0.7s
NLYR Smax
comp=E,222nm,1.1s
NLYR Nelyaty 3.17 68 *e*PN Pn 19 32 22.5 +0.1
NLYR *e* 19 32 28.7
NLYR *e* 19 33 09.3
NLYR pmax pmax
comp=Z,36nm,1.1s
NLYR smax
comp=E,223nm,1.2s
ZRHB Zarechye 3.44 215 *e*Pg Pg 19 32 32.8 -4.6
ZRHB *e*Sg Sg 19 33 18.8 -3.2
ZRHB Pmax
comp=E,52nm,0.7s
ZRHB Smax
comp=E,390nm,1.3s
TRG Tyrgan 3.57 224 *e*Pn Pn 19 32 28.4 +0.6
TRG *e*Pg Pg 19 32 35.7 -4.2
TRG *e*Sg Sg 19 33 21.8 -4.3
TRG Pmax
comp=E,12nm,0.5s
TRG Smax
comp=E,71nm,1.4s
TRTB Turuntaevo 3.58 209 *e*Pn Pn 19 32 28.7 +0.7
TRTB *e*Pg Pg 19 32 35.4 -4.7
TRTB *e*Sg Sg 19 33 22.8 -3.7
TRTB Pmax
comp=E,27nm,0.8s
TRTB Smax
comp=E,73nm,1.1s
CIT Chita 3.87 150 *e*Pg Pg 19 32 40.7 -4.9
CIT *e*Sg Sg 19 33 30.1 -5.6
CIT Pmax
comp=E,9.0nm,0.7s
CIT Smax
comp=E,46nm,0.7s
KAB Kabansk 4.03 215 *e*PN Pg 19 32 46.8 -1.9
HRMR Khuramsha 4.30 210 *e*Pn Pn 19 32 38.0 0.0
HRMR *e*Pg Pg 19 32 48.3 -5.7
HRMR *e*Sg Sg 19 33 44.8 -5.0
HRMR Pmax
comp=E,50nm,0.9s
HRMR Smax
comp=E,244nm,0.9s
CRS Chara 4.64 68 *e*Pg Pg 19 32 55.0 -5.5
CRS *e*Sg Sg 19 33 54.6 -6.1
CRS Pmax
comp=E,34nm,1.1s
CRS Smax
comp=E,149nm,1.2s
CRS Chara 4.64 68 *e*PN Pg 19 32 55.9 -4.6
CRS *e* 19 33 54.9
CRS pmax pmax
comp=Z,34nm,1.0s
CRS smax
comp=E,148nm,1.2s
IRK Irkutsk 4.82 232 *e*PN Pg 19 32 59.7 -4.1
IRK *e* 19 34 00.6
IRK pmax pmax
comp=Z,54nm,0.5s
IRK smax
comp=N,170nm,0.8s
TLY Talaya 5.49 230 *e*Pg Pg 19 33 10.2 -6.5
TLY *e* 19 33 58.1
TLY *e*Sg Sg 19 34 20.2 -7.7
TLY Pmax
comp=N,14nm,0.5s
TLY Smax
comp=N,24nm,0.7s
TUP Tupik 5.59 96 *e*Pn Pn 19 32 55.5 -0.2
TUP *e*Sn Sn 19 33 56.9 -3.6
TUP *e*Sg Sg 19 34 24.8 -6.3
TUP Smax
comp=N,95nm,0.8s
TUP Tupik 5.59 96 *e*PN Pn 19 32 54.2 -1.5
TUP *e* 19 33 11.1
TUP *e*S Sn 19 33 57.1 -3.4
TUP *e* 19 34 25.4
TUP pmax pmax
comp=Z,4.0nm,0.5s
TUP smax
comp=N,96nm,0.8s
KPC Khapcheranga 5.83 167 *e* Pg 19 33 18.8 -4.4
KPC *e*Sn Sn 19 34 03.4 -3.0
KPC *e*Sg Sg 19 34 31.5 -7.3
KPC Smax
comp=N,46nm,1.3s
ARS Arshan 5.89 237 *e*Pn Pn 19 32 59.7 -0.1
ARS *e*Pg Pg 19 33 18.5 -5.8
ARS *e*Sn Sn 19 34 05.6 -2.2
ARS *e*Sg Sg 19 34 33.6 -7.0
ARS Pmax
comp=N,28nm,0.6s
ARS Smax
comp=N,155nm,1.1s
ARS Arshan 5.89 237 *e*PN Pn 19 33 00.0 +0.2
ARS *e* 19 33 18.8
ARS *e*S Sn 19 34 06.7 -1.1
ARS *e* 19 34 32.4
ARS pmax pmax
comp=Z,28nm,0.5s
ARS smax
comp=E,131nm,0.7s
ZAK Zakamensk 6.62 224 *e* rx 19 33 58.6
ZAK *e*Sg Sg 19 34 56.6 -7.5
ZAK Smax
comp=E,31nm,1.1s
MOY Mondy 6.74 240 *e*Pn Pn 19 33 13.1 +1.6
MOY *e* 19 34 28.9
MOY *e*Sg Sg 19 34 59.2 -8.9
MOY Smax
comp=E,63nm,1.4s
MOY Mondy 6.74 240 *e*PN Pn 19 33 13.4 +1.9
MOY *e* 19 33 31.6
MOY *e* 19 34 59.8
MOY pmax pmax
comp=Z,7.0nm,0.7s
MOY smax
comp=E,63nm,1.4s
ORL Orlik 6.88 250 *e*PN Pb 19 33 32.9 +1.2
ORL *e* 19 35 05.5
ORL pmax pmax
comp=Z,5.0nm,1.1s
ORL smax
comp=N,106nm,1.5s

IDC 03 19:55:02.0±2.7, 604S×13105E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.4/12, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=114.0km s-min=29.8km az=78.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.10**	**203**	Pn		Pn	19 58 08.6	-0.8
	0.1nm,0.3s,baz=9.0,slow=19,SNR=4.5							
FITZ				Sn		Sn	20 00 20.3	-16
	0.1nm,0.3s,baz=145,slow=13,SNR=3.9							
WRA	**Warramunga Arr**	**14.19**	**167**	Pn		Pn	19 58 23.6	-0.5
	0.1nm,0.3s,baz=352,slow=13,SNR=10							
WRA				Sn		Sn	20 00 50.6	-12
	0.2nm,0.3s,baz=332,slow=22,SNR=5.8							
ASAR	**Alice Springs**	**17.74**	**171**	P		Pn	19 59 11.8	+1.4
	0.1nm,0.3s,baz=350,slow=11,SNR=6.2							
MKAR	**Makanchi Array**	**68.00**	**326**	P		P	20 06 03.2	+0.2
	0.2nm,0.4s,baz=123,slow=9.0,SNR=4.2							

*IDC **03** 20:16:04.4±1.8, 568S×13074E, h0km, mb4.0/2, mb1 4.1/5, mb1mx3.8/12, mbtmp4.0/5, ML4.0/3, Error ellipse: s-maj=78.2km s-min=25.4km az=71.0*
*NEIC **03** 20:16:05.8±1.5, 564S×13092E, h10km, mb4.2/1, Error ellipse: s-maj=41.3km s-min=17.1km az=72.0*
*ISCJB **03** 20:16:16.8±2.2, 625S±0.10×1303E±0.1, h109km±22km, mb3.7/2, Error ellipse: s-maj=23.7km s-min=15.9km az=166.0*

ISC 03 20:16:20.7±1.7, 639S±009×1304E±01, h151km±13km, n12, σ1§17/19, mb3.7/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**6.60**	**162**	*e*P		**Pn**	**20 17 55.8**	**+0.4**
	19nm,0.5s							
KAKA				*e*S		**Sn**	**20 19 10.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**12.52**	**201**	*e*P		**Pn**	**20 19 16.0**	**+2.4**
	2.0nm,0.3s							
FITZ				*e*S		**Sn**	**20 21 30.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**12.52**	**201**	Pn		**Pn**	**20 19 15.8**	**+2.2**
	0.4nm,0.3s,baz=34,slow=13,SNR=28							
FITZ				Sn		**Sn**	**20 21 31.1**	**-0.9**
	0.8nm,0.3s,baz=183,slow=18,SNR=9.8							
WRAB	**Tennant Creek**	**14.00**	**164**	*e*P		**Pn**	**20 19 31.6**	**-0.9**
WRA	**Warramunga Arr**	**14.01**	**164**	Pn		**Pn**	**20 19 32.0**	**-0.6**
	0.7nm,0.3s,baz=348,slow=13,SNR=32							
WRA				Sn		**Sn**	**20 22 01.1**	**-6.7**
	1.3nm,0.3s,baz=350,slow=24,SNR=10							
WB2	**Warramunga Arr**	**14.01**	**164**	*e*P		**Pn**	**20 19 31.5**	**-1.1**
WB2				*e*S		**Sn**	**20 22 04.2**	**-3.7**
AS31	**Alice Springs**	**17.51**	**169**	*e*P		**Pn**	**20 20 20.4**	**+4.9**
AS31				*e*S		Sx	20 23 29.1	
ASAR	**Alice Springs**	**17.51**	**169**	P		**Pn**	**20 20 19.4**	**+3.9**
	0.5nm,0.3s,baz=347,slow=9.5,SNR=36							
ASAR				S		**S**	**20 23 28.2**	**-0.2**
	0.4nm,0.3s,baz=358,slow=29,SNR=5.8							
ASPA	**Alice Springs**	**17.51**	**169**	*e*P		**Pn**	**20 20 20.4**	**+4.9**
ASPA				*e*S		**S**	**20 23 29.1**	**+0.7**
STKA	**Stephens Creek**	**27.44**	**159**	*e*P		**P**	**20 21 56.2**	**+3.9**
	1.2nm,0.3s,mb4.0							
STKA	**Stephens Creek**	**27.44**	**159**	P		**P**	**20 21 56.1**	**+3.9**
	1.5nm,0.3s,mb4.1,baz=339,slow=8.9,SNR=10.0							
MKAR	**Makanchi Array**	**67.92**	**327**	P		**P**	**20 27 02.7**	**-0.3**
	0.3nm,0.5s,mb3.3,baz=114,slow=8.2,SNR=5.1							

IDC 03 20:45:30.6±1.8, 965S×10804E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/15, mbtmp3.5/5, Error ellipse: s-maj=78.8km s-min=24.4km az=47.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.37**	**115**	P		P	20 51 18.1	+0.7
	0.4nm,0.5s,baz=287,slow=12,SNR=4.4							
ASAR	**Alice Springs**	**28.36**	**123**	P		P	20 51 26.3	0.0
	0.2nm,0.5s,baz=296,slow=9.0,SNR=3.1							
SONM	**Songino Array**	**57.25**	**359**	P		P	20 55 20.1	+0.4
	0.5nm,0.5s,baz=182,slow=9.0,SNR=6.1							
MKAR	**Makanchi Array**	**60.71**	**340**	P		P	20 55 44.6	+0.8
	0.6nm,0.8s,baz=158,slow=8.6,SNR=7.3							
BRTR	**Keskin Array B**	**84.35**	**312**	P		P	20 58 03.8	-0.8
	0.3nm,0.5s,baz=111,slow=6.8,SNR=3.9							

*NEIC **03** 21:06:33.7±9.3, 2950N×7063E, h10km, mb3.8/3, Error ellipse: s-maj=135.0km s-min=45.8km az=158.0*
*IDC **03** 21:07:46.6±1.0, 3586N×6891E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.6/23, mbtmp3.7/10, ML3.4/3, Error ellipse: s-maj=27.0km s-min=20.6km az=54.0*
*ISCJB **03** 21:07:53.9±1.5, 3627N±005×6884E±0.10, h77km±17km, mb3.6/7, Error ellipse: s-maj=14.8km s-min=5.6km az=120.2*
*NNC **03** 21:07:56.8±3.2, 3648N×6861E, h73km±65km, mb3.3, mpv3.5, Error ellipse: s-maj=27.9km s-min=24.8km az=159.0*

ISC 03 21:07:53.9±1.6, 3618N±007×687E±01, h69km±17km, n41, σ1§17/46, mb3.6/7, 8C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DLH	**Dalhousie**	**7.03**	**119**	*e*PG		Px	21 10 10.0	
DLH				*e*SG		**Sn**	**21 10 52.0**	**-0.5**
KK31	**Karatay Array**	**7.06**	**11**	⇓Pn		**Pn**	**21 09 35.1**	**+0.5**
	3.6nm,0.4s,baz=238,slow=50,SNR=74							
KK31				⇑Sn		**Sn**	**21 10 54.4**	**+1.2**
	3.0nm,0.3s							
KK31				⇑Lg			21 11 32.0	
	10.0nm,0.5s							
AML	**Almayashu**	**7.10**	**32**	P		**Pn**	**21 09 36.0**	**+0.8**
	SNR=11							
UCH	**Uchtor**	**7.54**	**35**	P		**Pn**	**21 09 41.8**	**+0.6**
	SNR=35							
KZA	**Kyzart**	**7.79**	**39**	P		**Pn**	**21 09 46.2**	**+1.7**
	SNR=13							
AAK	**Ala-Archa**	**7.86**	**33**	P		**Pn**	**21 09 46.1**	**+0.7**
	SNR=6.8							
AAK	**Ala-Archa**	**7.86**	**33**	*e*P		**Pn**	**21 09 44.9**	**-0.6**
	11nm,0.3s							
KBK	**Karagaybulak**	**8.08**	**35**	P		**Pn**	**21 09 49.5**	**+1.0**
	SNR=8.0							
CHMS	**Chumysh**	**8.26**	**33**	P		**Pn**	**21 09 51.2**	**+0.2**
	SNR=9.8							
ULHL	**Ulahol**	**8.43**	**42**	P		**Pn**	**21 09 54.1**	**+0.9**
	SNR=7.7							
TKM2	**Tokmak 2**	**8.59**	**36**	P		**Pn**	**21 09 55.6**	**+0.1**
	SNR=14							
TKM2	**Tokmak 2**	**8.59**	**36**	⇑Pn		**Pn**	**21 09 55.4**	**0.0**
	0.8nm,0.7s							
TKM2				⇓Sn		**Sn**	**21 11 31.3**	**+0.6**
	2.2nm,0.9s							
AB31	**Akbulak array**	**14.55**	**337**	Pn		**Pn**	**21 11 14.4**	**-1.7**
	2.8nm,0.5s,baz=153,slow=11,SNR=69							
AB31				⇑Sn		**Sn**	**21 13 51.3**	**-4.7**
	1.8nm,0.6s							
MK08	**Makanchi Array**	**14.66**	**40**	⇓Pn		**Pn**	**21 11 14.8**	**-2.8**
	0.8nm,0.5s,baz=226,slow=15							
MKAR	**Makanchi Array**	**14.69**	**40**	Pn		**Pn**	**21 11 16.0**	**-1.9**
	0.0nm,0.3s,baz=225,slow=12,SNR=3.0							
KOLN	**Koldanda**	**15.17**	**119**	*e*P		**Pn**	**21 11 22.6**	**-1.5**
KOLN				*e*S		S	21 14 02.4	-22
GKN	**Gorkha**	**15.77**	**117**	*e*P		**Pn**	**21 11 31.9**	**+0.1**
KURK	**Kurchatov**	**16.20**	**23**	P		**Pn**	**21 11 27.3**	**-10**
AKTK	**Aktyubinsk**	**16.20**	**335**	Pn		**Pn**	**21 11 37.4**	**+0.2**
AKTO	**Aktyubinsk**	**16.20**	**335**	⇓Pn		**Pn**	**21 11 37.9**	**+0.7**
	0.1nm,0.9s							
AKTO				⇑Sn		**Sn**	**21 14 32.6**	**-3.5**
	0.2nm,1.4s							
AKTO	**Aktyubinsk**	**16.20**	**335**	Pn		**Pn**	**21 11 37.4**	**+0.2**
	0.5nm,0.3s,baz=140,slow=13,SNR=7.5							
DMN	**Daman**	**16.34**	**117**	*e*P		**Pn**	**21 11 38.1**	**-0.8**
KKN	**Kakani**	**16.36**	**116**	*e*P		**Pn**	**21 11 38.7**	**-0.5**
PKI	**Pulchoki**	**16.58**	**116**	*e*P		**Pn**	**21 11 42.0**	**+0.1**
VOSK	**Vostochnaya**	**16.62**	**5**	⇓Pn		**Pn**	**21 11 41.0**	**-1.4**
	2.1nm,1.1s							
GUN	**Gumba**	**16.73**	**115**	*e*P		**Pn**	**21 11 45.0**	**+1.2**
	30nm,0.8s							
ZRNK	**Zerenda**	**16.77**	**1**	⇑Pn		**Pn**	**21 11 44.3**	**0.0**
	1.5nm,0.7s							
ZRNK				⇑Sn		**Sn**	**21 14 43.3**	**-6.5**
	1.8nm,0.9s							
ZRNK	**Zerenda**	**16.77**	**1**	*e*P		**Pn**	**21 11 44.0**	**-0.3**
	1.7nm,0.5s							
BVA0	**Borovoye Array**	**16.89**	**4**	Pn		**Pn**	**21 11 45.0**	**-0.8**
	0.1nm,0.2s,baz=168,slow=14,SNR=12							
BVAR	**Borovoye Array**	**16.89**	**4**	Pn		**Pn**	**21 11 44.3**	**-1.4**
	0.3nm,0.3s,baz=178,slow=12,SNR=8.4							
BRVK	**Borovoye**	**16.91**	**3**	*e*P		**Pn**	**21 11 44.9**	**-1.2**
	2.6nm,0.9s							
CHKZ	**Chkalovo**	**17.55**	**4**	⇑Pn		**Pn**	**21 11 52.4**	**-1.4**
	0.4nm,0.3s							
CHKZ	**Chkalovo**	**17.55**	**4**	*e*P		**Pn**	**21 11 53.6**	**-0.2**
	2.3nm,0.8s							
AKASG	**Malin Array Be**	**31.70**	**310**	P		**P**	**21 14 14.8**	**+3.9**
	0.3nm,0.4s,mb3.4,baz=90,slow=7.3,SNR=5.9							
FINES	**FINESS Array B**	**36.72**	**327**	P		**P**	**21 14 58.6**	**+4.2**
	0.4nm,0.5s,mb3.6,baz=120,slow=11,SNR=5.8							
ARCES	**ARCESS Array B**	**40.74**	**338**	P		**P**	**21 15 31.9**	**+3.9**
	0.3nm,0.8s,mb3.9,baz=127,slow=9.3,SNR=6.9							
NB2	**NORSAR Subarra**	**43.52**	**323**	P		**P**	**21 15 54.5**	**+3.9**
	comp=Z,0.5nm,0.4s,mb3.6,baz=99,slow=8.6							
NOA	**NORSAR Array B**	**43.52**	**323**	P		**P**	**21 15 54.1**	**+3.5**
	comp=Z,0.6nm,0.4s,mb3.6,baz=97,slow=7.6,SNR=5.5							
TORD	**Torodi Ar. Bea**	**63.84**	**267**	P		**P**	**21 18 22.1**	**+3.1**
	comp=Z,0.7nm,0.5s,mb3.7,baz=49,slow=5.3,SNR=14							
WRA	**Warramunga Arr**	**83.42**	**120**	P		**P**	**21 20 14.7**	**+0.9**
	comp=Z,0.5nm,0.8s,mb3.4,baz=323,slow=4.3,SNR=5.9							
ASAR	**Alice Springs**	**85.62**	**123**	P		**P**	**21 20 25.6**	**+0.8**
	comp=Z,0.5nm,0.8s,mb3.5,baz=305,slow=5.2,SNR=6.2							

*CSEM **03** 21:09:03.9±0.1, 3979N×2173E, h2km, ML2.4, Error ellipse: s-maj=2.5km s-min=2.3km az=127.0*
*NEIC **03** 21:09:03.8, 3978N×2182E, h4km, MD2.9(ATH), After ATH.*
*ATH **03** 21:09:03.8, 3978N×2182E, h4km, MD2.9/4*
*ISCJB **03** 21:09:03.8±0.6, 3978N±003×2176E±003, h5km±6km, Error ellipse: s-maj=4.4km s-min=4.3km az=6.5*
*SKO **03** 21:09:03.1, 3972N×2169E, h11km*
*THE **03** 21:09:04.4, 3979N×2175E, h9km, ML2.4*

ISC 03 21:09:04.3±0.5, 3978N±003×2175E±003, h14km±5km, n16, σ1§07/28, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MEV	**Metsovon**	**0.40**	**270**	*e*Pg		**Pg**	**21 09 11.6**	**-0.8**
MEV				*e*Sg		**Sg**	**21 09 18.8**	**+0.9**
KZN	**Kozani**	**0.52**	**2**	⇓*i*PG		**Pg**	**21 09 13.7**	**-0.9**
KZN				*e*SG		**Sg**	**21 09 21.9**	**+0.3**
LIT	**Litokhoron**	**0.65**	**61**	*e*Pg		**Pg**	**21 09 16.1**	**-0.9**
LIT				*e*Sg		**Sg**	**21 09 26.8**	**+1.2**
LIT	**Litokhoron**	**0.65**	**61**	*e*Pg		**Pg**	**21 09 16.1**	**-0.9**
LIT				*e*Sg		**Sg**	**21 09 26.8**	**+1.2**
JAN	**Janina**	**0.71**	**260**	*e*PG		**Pg**	**21 09 17.0**	**-1.1**
EVR	**Evrytania**	**0.87**	**177**	*e*PB		**Pb**	**21 09 20.3**	**-0.9**
AGG	**Agios Georgios**	**0.88**	**149**	*e*Pg		**Pg**	**21 09 20.9**	**-0.5**
AGG				*e*Sg		**Sg**	**21 09 35.0**	**+2.0**
FNA	**Florina**	**1.04**	**344**	*e*Pg		**Pb**	**21 09 22.7**	**-1.4**
FNA				*e*Sg		**Sb**	**21 09 39.1**	**+1.5**
IGT	**Igoumenitsa**	**1.12**	**258**	*e*Pg		**Pb**	**21 09 24.2**	**-1.4**
IGT				*e*Sg		**Sb**	**21 09 42.2**	**+2.1**
XOR	**Xorichti**	**1.19**	**110**	*e*Pg		**Pn**	**21 09 26.2**	**-0.4**
XOR				*e*Sg		**Sb**	**21 09 43.0**	**+1.1**
GRG	**Griva**	**1.27**	**23**	*e*Pg		**Pn**	**21 09 27.2**	**-0.5**
GRG				*e*Sg		**Sb**	**21 09 45.6**	**+1.3**
GRG	**Griva**	**1.27**	**23**	*e*Pg		**Pn**	**21 09 27.2**	**-0.5**
GRG				*e*Sg		**Sb**	**21 09 45.6**	**+1.3**
BIA	**Bitola**	**1.28**	**345**	*e*Pg		**Pn**	**21 09 27.3**	**-0.5**
BIA				*e*Sg		**Sb**	**21 09 44.9**	**+0.5**
PAIG	**Paliouri**	**1.49**	**84**	*e*Pg		**Pn**	**21 09 29.8**	**-1.0**
KEK	**Kerkira**	**1.51**	**268**	*e*PB		**Pg**	**21 09 34.5**	**+1.2**
KNT	**Kendrikon**	**1.63**	**32**	*e*Pb		**Pb**	**21 09 33.2**	**-1.0**
KNT				*e*Sb		**Sb**	**21 09 54.4**	**-0.2**

*ISCJB **03** 21:13:11.4±0.4, 3934N±002×2373E±003, h8km±3km, Error ellipse: s-maj=4.1km s-min=3.3km az=149.1*
*NEIC **03** 21:13:11.9, 3933N×2371E, h22km, ML3.1(ATH), After ATH.*
*ATH **03** 21:13:11.9, 3933N×2371E, h22km±3km, MD3.2/7, ML3.1*
*CSEM **03** 21:13:12.3±0.1, 3931N×2371E, h8km, ML2.8, Error ellipse: s-maj=1.5km s-min=1.2km az=55.0*
*THE **03** 21:13:12.4, 3929N×2375E, h13km, ML2.8*

ISC 03 21:13:12.2±0.4, 3932N±002×2373E±003, h12km±3km, n26, σ0§89/45, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AOS	**Alonnisos**	**0.19**	**142**	*e*Pg		**Pg**	**21 13 16.2**	**-0.1**
AOS				*e*Sg		**Sg**	**21 13 19.2**	**-0.1**
XOR	**Xorichti**	**0.42**	**276**	*e*Pg		**Pg**	**21 13 20.4**	**0.0**
PAIG	**Paliouri**	**0.61**	**356**	*e*Pg		**Pg**	**21 13 24.6**	**+0.6**
PAIG				*e*Sg		**Sg**	**21 13 34.5**	**+2.5**
LKR	**Lokris**	**0.88**	**221**	*e*PN		**Pg**	**21 13 29.0**	**-0.1**
LKR				*e*SN		**Sg**	**21 13 41.1**	**+0.5**
OUR	**Ouranopolis**	**1.03**	**11**	*e*Pg		**Pg**	**21 13 31.5**	**-0.5**
OUR				*e*Sg		**Sg**	**21 13 46.7**	**+1.2**
PLG	**Polygyros**	**1.07**	**348**	*e*PN		**Pn**	**21 13 31.9**	**-1.1**
AGG	**Agios Georgios**	**1.13**	**255**	*e*Pg		**Pg**	**21 13 33.0**	**-0.8**
AGG				*e*Sg		**Sg**	**21 13 49.3**	**+0.8**
AGG	**Agios Georgios**	**1.13**	**255**	*e*Pg		**Pg**	**21 13 33.0**	**-0.8**
AGG				*e*Sg		**Sg**	**21 13 49.3**	**+0.8**
LOS	**Limnos**	**1.21**	**59**	*e*Pg		**Pg**	**21 13 34.0**	**-1.5**
LOS				*e*Sg		**Sg**	**21 13 51.2**	**0.0**
LIT	**Litokhoron**	**1.23**	**310**	*e*Pg		**Pg**	**21 13 34.9**	**-1.0**
LIT				*e*Sg		**Sg**	**21 13 51.7**	**-0.1**
LIA	**Limnos Island**	**1.26**	**62**	*e*PN		**Pn**	**21 13 35.3**	**-0.3**
LIA				*e*SN		**Sn**	**21 13 54.4**	**+1.9**
PTL	**Penteli**	**1.27**	**175**	*e*PN		**Pn**	**21 13 35.5**	**-0.3**
ATH	**Athens Observa**	**1.35**	**180**	*e*PN		**Pn**	**21 13 38.3**	**+1.5**
MGER	**Geranía Oros**	**1.38**	**196**	*e*PN		**Pn**	**21 13 38.0**	**+0.8**
KVR	**Kavouri**	**1.49**	**179**	*e*PN		**Pn**	**21 13 39.0**	**+0.3**
SOH	**Sokhos**	**1.53**	**349**	*e*Pg		**Pn**	**21 13 38.9**	**-0.4**
SOH				*e*Sg		**Sg**	**21 14 01.1**	**-0.2**
SOH	**Sokhos**	**1.53**	**349**	*e*Pg		**Pn**	**21 13 38.8**	**-0.4**
SOH				*e*Sg		**Sg**	**21 14 01.1**	**-0.2**
NAIG	**Nisos Aigina**	**1.57**	**187**	*e*PN		**Pg**	**21 13 42.0**	**-0.3**
GRG	**Griva**	**1.92**	**329**	*e*Pb		**Pn**	**21 13 44.9**	**+0.2**
GRG				*e*Sb		**Sb**	**21 14 09.8**	**-1.3**
GRG	**Griva**	**1.92**	**329**	*e*Pb		**Pn**	**21 13 44.8**	**+0.1**
GRG				*e*Sb		**Sb**	**21 14 09.8**	**-1.3**
KNT	**Kendrikon**	**1.94**	**341**	*e*Pb		**Pn**	**21 13 45.0**	**0.0**
KNT				*e*Sb		**Sb**	**21 14 10.0**	**-1.7**
CHOS	**Chios island**	**2.04**	**116**	*e*Pn		**Pn**	**21 13 46.6**	**+0.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS				eSn	Sn	21 14 11.9	+0.2
MMB	Musomiste	2.27	360	ePn	Pn	21 13 48.8	-0.6
MMB				eSn	Sn	21 14 17.4	+0.2
FNA	Florina	2.32	310	ePn	Pn	21 13 50.7	+0.5
FNA				eSn	Sn	21 14 20.0	+1.4
APE	Apeiranthos	2.66	147	ePn	Pn	21 13 54.9	+0.1
APE				eSn	Sn	21 14 25.2	-1.8
APE	Apeiranthos	2.66	147	ePn	Pn	21 13 55.0	+0.2
APE				eSn	Sn	21 14 25.2	-1.8

*LDG **03** 21:53:14.3±0.3, 14.23S×171.37E, h510km, Mb4.4/1, Error ellipse: s-maj=27.2km s-min=16.2km az=166.0*
*ISCJB **03** 21:53:26.6±1.7, 14.3S±0.1×170.8E±0.1, h656km±23km, mb4.2/17, Error ellipse: s-maj=19.6km s-min=16.3km az=171.2*
*NEIC **03** 21:53:26.2±1.3, 14.15S×170.94E, h642km±15km, mb4.5/6, Error ellipse: s-maj=13.4km s-min=11.7km az=202.0*
*BJI **03** 21:53:26.2, 14.10S×170.90E, h641km, mB4.3, mb4.4*
*IDC **03** 21:53:27.8±1.7, 14.26S×170.80E, h656km±21km, mb3.5/12, mb1 3.7/13, mb1mx3.6/17, mbtmp4.5/13, Error ellipse: s-maj=17.9km s-min=11.9km az=160.0*
ISC 03 21:53:27.3±1.6**, 14.2S**±0.1×**170.9E**±0.1**, h646**km±20km**, n77, σ0^{s}85**/31**, mb4.2**/16**, 2C, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.87	208	eP	P	21 55 35.8	-0.3
DZM	Mont Dzumac	8.87	208	P	P	21 55 35.5	-0.7
	5.1nm,0.3s,baz=45,slow=15,SNR=50						
ARMA	Armidale	23.95	225	eP	P	21 57 54.9	+0.8
ARMA				e		21 58 07.0	
CTA	Charters Tower	24.23	253	eP	P	21 57 56.9	+0.4
	5.2nm,0.8s,mb4.0						
CTA	Charters Tower	24.23	253	P	P	21 57 56.8	+0.3
	5.5nm,0.6s,mb4.2,baz=86,slow=9.0,SNR=8.0						
CTAO	Charters Tower	24.23	253	eP	P	21 57 56.6	+0.1
	7.0nm,0.8s,mb4.1						
URZ	Urewera	24.56	168	P	P	21 57 58.6	-0.8
	5.3nm,0.7s,mb4.2,baz=132,slow=19,SNR=5.2						
CNB	Canberra Magne	28.56	219	eP	P	21 58 35.2	+1.0
	16nm,0.9s,mb4.6						
CNB				e		21 58 45.9	
RPZ	Rata Peaks	29.39	180	P	P	21 58 40.6	-0.7
	4.0nm,0.4s,mb4.3,baz=138,slow=18,SNR=8.6						
STKA	Stephens Creek	32.01	232	eP	P	21 59 04.7	+1.1
	18nm,0.4s,mb4.9						
STKA	Stephens Creek	32.01	232	P	P	21 59 04.1	+0.5
	23nm,0.4s,mb5.1,baz=59,slow=8.0,SNR=126						
STKA				PcP	PcP	22 01 33.6	+1.0
	3.0nm,0.7s,baz=42,slow=5.0,SNR=3.6						
TOO	Toolangi	32.39	219	eP	P	21 59 07.8	+1.0
	8.4nm,0.7s,mb4.4						
WB2	Warramunga Arr	35.33	256	eP	P	21 59 30.9	-0.3
WB2	Warramunga Arr	35.33	256	eP	P	21 59 30.4	-0.7
WRAB	Tennant Creek	35.33	256	eP	P	21 59 30.5	-0.7
WRA	Warramunga Arr	35.34	256	P	P	21 59 30.9	-0.4
	3.8nm,0.3s,mb4.4,baz=80,slow=5.9,SNR=155						
WRA				S	S	22 04 19.4	-2.6
	0.7nm,0.7s,baz=86,slow=13,SNR=3.9						
AS31	Alice Springs	36.12	249	eP	P	21 59 37.6	0.0
ASAR	Alice Springs	36.12	249	P	P	21 59 37.6	-0.1
	8.5nm,0.3s,mb4.7,baz=75,slow=9.8,SNR=189						
ASAR				pP		22 01 24.4	
	1.5nm,0.9s,baz=78,slow=9.6,SNR=4.6						
ASAR				PcP	PcP	22 01 45.0	+0.3
	2.0nm,0.7s,baz=88,slow=4.1,SNR=9.7						
ASAR				S	S	22 04 32.5	-1.1
	2.2nm,0.7s,baz=81,slow=17,SNR=16						
ASPA	Alice Springs	36.12	249	eP	P	21 59 37.6	-0.1
FORT	Forrest	42.56	240	eP	P	22 00 29.2	+0.3
	15nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	43.54	259	P	P	22 00 37.0	+0.5
	0.8nm,0.3s,mb3.5,baz=85,slow=22,SNR=13						
MJAR	Matsushiro Arr	59.16	330	P	P	22 02 27.2	-1.0
	1.6nm,0.4s,mb3.5,baz=159,slow=6.3,SNR=9.2						
QSPA	South Pole Qui	75.80	180	eP	P	22 04 09.1	0.0
LZH	Lanzhou	80.61	311	eP	P	22 04 36.4	+1.8
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.4						
SONM	Songino Array	84.21	322	P	P	22 04 52.1	-0.6
	comp=Z,0.6nm,0.5s,mb3.4,baz=137,slow=6.5,SNR=3.9						
NVAR	Mina Array Bea	84.31	48	P	P	22 04 54.0	+0.9
	comp=Z,2.2nm,0.7s,mb3.8,baz=219,slow=6.3,SNR=11						
GTA	Gaotai	84.88	313	eP	P	22 04 56.9	+1.0
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.4						
YKA	Yellowknife Ar	95.52	27	P	P	22 05 43.5	-1.5
	comp=Z,1.3nm,0.4s,mb4.4,baz=255,slow=4.9,SNR=14						
YKA	Yellowknife Ar	95.52	27	P	P	22 05 43.5	-1.5
MKAR	Makanchi Array	99.27	316	P	Pdif	22 06 01.8	+0.1
	comp=Z,0.5nm,0.6s,baz=105,slow=5.1,SNR=7.8						
ARCES	ARCESS Array B	120.62	347	PKP	PKPdf	22 11 06.0	-1.3
	comp=Z,1.9nm,0.4s,baz=80,slow=2.6,SNR=48						
JOF	Joensuu	123.71	339	epkp	PKPdf	22 11 11.5	-1.8
KAF	Kangasniemi	125.95	340	epkp	PKPdf	22 11 15.3	-2.3
FINES	FINESS Array B	126.51	340	PKP	PKPdf	22 11 17.5	-1.1
	comp=Z,0.5nm,0.4s,baz=110,slow=1.4,SNR=18						
FINES	FINESS Array B	126.51	340	PKP	PKPdf	22 11 17.5	-1.1
NB2	NORSAR Subarra	130.99	347	PKPd	PKPdf	22 11 25.4	-1.7
	comp=Z,0.3nm,0.4s,baz=39,slow=1.9						
NOA	NORSAR Array B	130.99	347	PKP	PKPdf	22 11 26.2	-0.9
	comp=Z,0.7nm,0.6s,baz=39,slow=2.2,SNR=4.5						
BRTR	Keskin Array B	134.80	312	PKP	PKPdf	22 11 34.4	+0.1
	comp=Z,0.7nm,0.8s,baz=172,slow=2.5,SNR=4.0						
GERES	GERESS Array B	140.70	336	PKhKP		22 11 39.6	
	comp=Z,0.6nm,0.7s,baz=28,slow=6.0,SNR=4.5						
MOTA	Moosalm	142.93	337	⇑iP	PKPdf	22 11 47.0	-2.1
	comp=Z,4.6nm,1.0s						
CDF	Champ du Feu	143.32	342	ePKP1	PKPdf	22 11 48.2	-1.5
	comp=Z,23nm,0.9s						
DAVA	Damuels	143.43	338	⇑iP	PKPdf	22 11 49.2	-0.7
	comp=Z,14nm,0.7s						
MEZF	Maizieres J'vi	143.88	344	ePKP1	PKPdf	22 11 50.4	-0.3
	comp=Z,19nm,0.6s						
HAU	Haudompre	143.96	342	ePKP1	PKPdf	22 11 50.3	-0.5
	comp=Z,47nm,0.9s						
HINF	Hinteralfeld	143.98	342	ePKP1	PKPdf	22 11 50.2	-0.7
	comp=Z,14nm,0.7s						
FLN	La Foliniere	144.84	350	ePKP1	PKPdf	22 11 52.7	+0.4
LDF	La Druitiere	144.94	350	ePKP1	PKPdf	22 11 52.9	+0.4
	comp=Z,33nm,1.1s						
GRR	Gorron	145.26	350	ePKP1	PKPbc	22 11 54.2	-0.2
	comp=Z,26nm,0.7s						
CABF	La Chapelle	145.29	341	ePKP1	PKPbc	22 11 54.6	+0.1
	comp=Z,22nm,0.8s						
LOR	Lormes	145.32	344	ePKP1	PKPbc	22 11 54.6	0.0
	comp=Z,11nm,0.6s						
SSF	Saint Saulge	145.61	345	ePKP1	PKPbc	22 11 55.5	+0.1
	comp=Z,14nm,0.6s						
SGMF	Saint Gilles	145.64	352	ePKP1	PKPbc	22 11 55.1	-0.4
	comp=Z,17nm,0.7s						
ROSF	Rostrenen	145.65	353	ePKP1	PKPbc	22 11 55.4	-0.1
AVF	Avril sur Loir	145.90	345	ePKP1	PKPbc	22 11 56.3	+0.1
SMF	Signal de Mont	145.91	344	ePKP1	PKPbc	22 11 56.4	+0.2
QUIF	Quistinic	146.05	353	ePKP1	PKPbc	22 11 56.3	-0.3
LPL	La Plagne	146.06	340	ePKP1	PKPbc	22 11 57.2	+0.6
	comp=Z,13nm,0.8s						
LPG	La Plagne	146.06	340	ePKP1	PKPbc	22 11 57.3	+0.6
BGF	Bois d'Agland	146.24	345	ePKP1	PKPbc	22 11 57.1	-0.1
	comp=Z,15nm,0.7s						
TCF	Toulx Ste Croi	146.65	346	ePKP1	PKPbc	22 11 58.2	-0.1
	comp=Z,13nm,0.7s						
MBDF	Montbardon	146.73	339	ePKP1	PKPbc	22 11 58.7	+0.2
MFF	Saint Martin d	146.86	349	ePKP1	PKPbc	22 11 59.0	+0.2
	comp=Z,18nm,0.7s						
ORIF	Oris-en-Rattie	146.87	340	ePKP1	PKPbc	22 11 58.7	-0.1
	comp=Z,11nm,0.6s						
VIVF	Saint-Julien-l	147.30	342	ePKP1	PKPbc	22 12 00.0	0.0
PGF	Pioggiola	147.74	334	ePKP1	PKPbc	22 12 01.6	+0.5
	comp=Z,238nm,1.5s						
FRF	La Foret Royal	147.79	338	ePKP1	PKPbc	22 12 01.3	+0.1
SMRF	Simiane la Rot	147.80	340	ePKP1	PKPbc	22 12 01.7	+0.5
CAF	Calviac	147.96	345	ePKP1	PKPbc	22 12 01.9	+0.3
LMR	La Mourre	148.04	338	ePKP1	PKPbc	22 12 01.6	-0.2
LASF	Ste Croix	148.25	342	ePKP1	PKPbc	22 12 02.8	+0.4
LFF	La Frestale	148.27	347	ePKP1	PKPbc	22 12 02.7	+0.3
	comp=Z,16nm,0.8s						
MTLF	Montolieu	149.40	344	ePKP1	PKPbc	22 12 05.4	+0.3
EPF	Esparros	150.17	346	ePKP1	PKPbc	22 12 07.6	+0.7
	comp=Z,7.2nm,0.8s						
SJPF	Ste Jean	150.43	348	ePKP1	PKPbc	22 12 08.4	+0.9
ETSF	Etsaut	150.50	347	ePKP1	PKPbc	22 12 08.4	+0.7
	comp=Z,12nm,0.8s						
ESDC	Sonseca Array	154.25	351	PKPab	PKPab	22 12 33.0	-0.4
	comp=Z,0.4nm,0.5s,baz=2.6,slow=3.7,SNR=5.0						
TORD	Torodi Ar. Bea	169.44	265	PKP	PKPdf	22 12 22.0	-0.1
	comp=Z,0.6nm,0.8s,baz=344,slow=1.4,SNR=5.0						
TORD				PKPab	PKPab	22 13 41.3	+1.2
	comp=Z,0.6nm,0.5s,baz=96,slow=5.6,SNR=8.7						

*MOS **03** 22:40:05.2±2.2, 55.46N×110.37E, h13km, mb4.5/1, Error ellipse: s-maj=30.1km s-min=14.5km az=58.0*
BYKL 03 22:40:05.7±0.2**, 55.41N**×**110.41E, h8**km±14km**, 1D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.61	307	ePg	Pg	22 40 17.0	-0.6
NIZ				eSg	Sg	22 40 26.2	+0.6
NIZ				Pmax			
	77nm,0.4s						
NIZ				Smax			
	335nm,0.6s						
KMO	Kumora	0.66	43	ePg	Pg	22 40 17.1	-1.2
KMO				eSg	Sg	22 40 25.7	-1.2
KMO				Pmax			
	531nm,0.7s						
KMO				Smax			
	929nm,0.9s						
KMO	Kumora	0.66	43	ePG	Pg	22 40 16.4	-1.9
KMO				e		22 40 25.2	
KMO				pmax	pmax		
	comp=Z,259nm,0.5s						
KMO				smax			
	comp=N,756nm,0.7s						
YLYR	Ulyunkhan	0.69	141	ePg	Pg	22 40 17.3	-1.6
YLYR				eSg	Sg	22 40 26.6	-1.3
YLYR				Pmax			
	comp=N,120nm,0.2s						
YLYR				Smax			
	comp=N,685nm,0.2s						
YOA	Uoyan	1.04	45	eSg	Sg	22 40 38.8	-0.3
YOA				Smax			
	comp=N,2μm,0.7s						
YOA	Uoyan	1.04	45	⇓iPG	Pg	22 40 23.1	-2.5
YOA				e		22 40 37.7	
YOA				pmax	pmax		
	comp=Z,595nm,0.6s						
YOA				smax			
	comp=E,2μm,0.8s						
SYVR	Suvo	1.77	188	ePg	Pg	22 40 37.6	-2.1
SYVR				eSg	Sg	22 41 02.0	-0.7
SYVR				Pmax			
	comp=E,113nm,0.6s						
SYVR				Smax			
	comp=E,529nm,1.0s						
UKT	Uakit	1.83	86	ePg	Pg	22 40 38.1	-2.8
UKT				eSg	Sg	22 41 02.6	-2.1
UKT				Pmax			
	comp=E,142nm,0.4s						
UKT				Smax			
	comp=E,387nm,0.8s						
UKT	Uakit	1.83	86	ePN	Pn	22 40 37.9	+0.4
UKT				e		22 41 02.4	
UKT				pmax	pmax		
	comp=Z,141nm,0.4s						
UKT				smax			
	comp=N,387nm,0.5s						
SVKR	Severomuysk	1.92	67	eSg	Sg	22 41 06.6	-0.7
SVKR				Smax			
	comp=N,1μm,0.6s						
MXMB	Maximikha	2.36	205	ePg	Pg	22 40 48.3	-2.7
MXMB				eSg	Sg	22 41 20.4	-1.2
MXMB				Pmax			
	comp=N,82nm,0.8s						
MXMB				Smax			
	comp=N,976nm,1.0s						
OGRR	Ongureny	2.41	224	ePn	Pn	22 40 46.8	+1.3
OGRR				ePg	Pg	22 40 48.9	-3.1
OGRR				eSg	Sg	22 41 20.7	-2.5
OGRR				Pmax			
	comp=N,60nm,0.3s						
OGRR				Smax			
	comp=N,336nm,0.8s						
OGRR	Ongureny	2.41	224	ePN	Pn	22 40 45.3	-0.2
OGRR				e		22 40 48.9	
OGRR				e		22 41 21.0	
OGRR				pmax	pmax		
	comp=Z,57nm,0.3s						
OGRR				smax			
	comp=N,329nm,1.1s						
KELR	Kotokel	2.99	208	ePg	Pg	22 40 58.4	-4.6
KELR				eSg	Sg	22 41 38.5	-3.2
KELR				Pmax			
	comp=N,58nm,0.4s						
KELR				Smax			
	comp=N,423nm,0.7s						
BOD	Bodaibo	3.13	38	ePn	Pn	22 40 55.4	+0.1
BOD				ePg	Pg	22 41 00.9	-4.7
BOD				eSg	Sg	22 41 41.8	-4.3
BOD				max			
	comp=N,28nm,0.4s						
BOD				Smax			
	comp=N,134nm,1.0s						
NLYR	Nelyaty	3.17	68	ePn	Pn	22 40 56.5	+0.7
NLYR				eSg	Sg	22 41 44.7	-2.7
NLYR				Smax			
	comp=N,216nm,1.1s						
NLYR	Nelyaty	3.17	68	ePN	Pn	22 41 02.5	+6.7
NLYR				e		22 41 44.0	
NLYR				pmax	pmax		
	comp=Z,31nm,0.7s						
NLYR				smax			
	comp=N,215nm,1.0s						
TRG	Tyrgan	3.57	224	eSg	Sg	22 41 56.0	-4.5
TRG				Smax			
	comp=N,92nm,0.8s						
TRTB	Turuntaevo	3.59	208	eSg	Sg	22 41 56.4	-4.5
TRTB				Smax			
	comp=N,121nm,1.5s						
CIT	Chita	3.87	150	eSg	Sg	22 42 04.9	-5.2
CIT				Smax			
	comp=N,61nm,1.3s						
HRMR	Khuramsha	4.31	210	ePg	Pg	22 41 22.3	-6.0
HRMR				eSg	Sg	22 42 19.3	-4.9
HRMR				Pmax			
	comp=N,21nm,0.4s						
HRMR				Smax			
	comp=N,451nm,0.6s						
CRS	Chara	4.64	68	ePn	Pn	22 41 15.8	-0.3
CRS				eSg	Sg	22 42 30.0	-4.7
CRS				Smax			
	comp=N,110nm,1.1s						
TLY	Talaya	5.50	230	eSg	Sg	22 42 56.0	-6.2
TLY				Smax			
	comp=N,25nm,0.3s						
TUP	Tupik	5.59	96	ePn	Pn	22 41 29.4	+0.2
TUP				ePg	Pg	22 41 45.1	-7.7
TUP				eSg	Sg	22 42 57.2	-8.1
TUP				Pmax			
	comp=N,9.0nm,0.4s						
TUP				Smax			
	comp=N,98nm,0.9s						
TUP	Tupik	5.59	96	ePN	Pn	22 41 29.0	-0.2
TUP				e		22 41 45.1	
TUP				eS	Sn	22 42 32.6	-1.0
TUP				e		22 42 59.0	
TUP				pmax	pmax		
	comp=Z,8.0nm,0.3s						
TUP				smax			
	comp=N,88nm,0.8s						
KPC	Khapcheranga	5.84	167	eSg	Sg	22 43 06.8	-6.4
KPC				Smax			
	comp=N,50nm,1.2s						
ARS	Arshan	5.89	237	eSg	Sg	22 43 07.7	-7.2
ARS				Smax			
	comp=N,245nm,1.0s						
ZAK	Zakamensk	6.63	223	eSg	Sg	22 43 31.4	-7.1
ZAK				Smax			
	comp=N,45nm,1.2s						
ZAK	Zakamensk	6.63	223	ePN	Pb	22 41 58.3	-2.9
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.2s						
MOY	Mondy	6.75	240	eSg	Sg	22 43 33.6	-8.7
MOY				Smax			
	comp=Z,89nm,1.4s						

*ISCJB **03** 22:40:19.9±3.3, 20.3S±0.1×177.9W±0.1, h571km±41km, mb4.1/12, Error ellipse: s-maj=22.3km s-min=20.2km az=51.5*
*IDC **03** 22:40:20.9±3.3, 20.37S×177.81W, h568km±35km, mb3.4/5, mb1 3.6/5, mb1mx3.2/12, mbtmp4.3/5, Error ellipse: s-maj=45.7km s-min=17.7km az=147.0*
*NEIC **03** 22:40:21.1±3.5, 20.27S×177.85W, h569km±38km, mb4.3/7, Error ellipse: s-maj=22.2km s-min=12.2km az=64.0*
ISC 03 22:40:20.9±3.4**, 20.3S**±0.1×**177.8W**±0.1**, h568**km±41km**, n28, σ0^{s}47**/19**, mb4.1**/12**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTAO	Charters Tower	33.71	264	eP	P	22 46 16.0	+0.2
	8.2nm,0.4s,mb4.6						
PMG	Port Moresby	35.51	283	P	P	22 46 31.1	+0.4
STKA	Stephens Creek	38.05	244	P	P	22 46 51.8	+0.2
	1.2nm,0.5s,mb3.7,baz=91,slow=12,SNR=7.6						
AS31	Alice Springs	44.76	257	eP	P	22 47 44.6	+0.1
ASAR	Alice Springs	44.76	257	P	P	22 47 44.1	-0.3
	8.6nm,0.8s,mb4.3,baz=96,slow=7.5,SNR=88						
ASAR				PcP	PcP	22 49 15.2	+1.1
	0.9nm,0.7s,baz=105,slow=4.1,SNR=5.1						
ASAR				S	S	22 53 40.5	-0.1
	1.2nm,1.1s,baz=90,slow=14,SNR=5.8						
ASPA	Alice Springs	44.77	257	eP	P	22 47 44.6	+0.1
WB2	Warramunga Arr	44.82	262	eP	P	22 47 44.3	-0.6
WRAB	Tennant Creek	44.82	262	eP	P	22 47 44.5	-0.4
	5.5nm,0.4s,mb4.4						
WRA	Warramunga Arr	44.83	262	P	P	22 47 44.3	-0.7
	3.9nm,0.6s,mb4.1,baz=93,slow=6.3,SNR=19						
KAKA	Kakadu	48.18	271	eP	P	22 48 10.2	0.0
	6.5nm,0.4s,mb4.5						
FITZ	Fitzroy Crossi	53.26	262	eP	P	22 48 47.6	+0.5
	4.0nm,0.4s,mb4.1						
SBA	Scott Base	58.06	184	P	P	22 49 20.7	+0.3
MBWA	Marble Bar	58.09	257	eP	P	22 49 20.5	0.0
	4.9nm,0.4s,mb4.1						
VNDA	Vanda	58.11	185	P	P	22 49 19.8	-0.8
QSPA	South Pole Qui	69.75	180	eP	P	22 50 35.5	+1.0
	0.8nm,0.3s,mb3.7						
MJAR	Matsushiro Arr	70.19	324	P	P	22 50 37.4	+0.3
	4.7nm,0.6s,mb4.2,baz=156,slow=5.1,SNR=16						
MAJO	Matsushiro	70.19	324	eP	P	22 50 37.5	+0.4
	3.8nm,0.4s,mb4.3						
PDAR	Pinedale Array	88.69	43	P	P	22 52 13.7	-0.6
	0.4nm,0.5s,mb3.5,baz=235,slow=3.2,SNR=3.5						
MKAR	Makanchi Array	111.22	313	PKiKP	PKiKP	22 57 50.2	-0.4
	0.3nm,0.6s,baz=101,slow=2.9,SNR=4.1						
MKAR	Makanchi Array	111.22	313	PKPdf	PKiKP	22 57 50.2	-0.4
CHKZ	Chkalovo	118.89	321	ePKPdf	PKPdf	22 58 04.7	-0.6
BRVK	Borovoye	119.14	320	PKPdf	PKPdf	22 58 05.6	-0.2
ZRNK	Zerenda	119.91	320	ePKPdf	PKPdf	22 58 06.7	-0.6
AKASG	Malin Array Be	142.96	331	PKP	PKPdf	22 58 47.5	-2.9
	2.4nm,0.4s,baz=42,slow=4.2,SNR=29						
BRTR	Keskin Array B	146.87	313	PKPbc	PKPbc	22 59 00.6	+0.6
	1.2nm,0.6s,baz=140,slow=5.2,SNR=8.9						
CLL	Collm	147.93	347	⇑iPKPbc	PKPbc	22 59 03.6	+0.9
	comp=Z,6.0nm,0.8s						
BRG	Berggiesshubel	148.14	346	e(P)	PKPbc	22 59 04.2	+1.0
	comp=Z,2.2nm,0.8s						
GERES	GERESS Array B	150.08	345	PKPbc	PKPbc	22 59 08.2	+0.3
	comp=Z,0.8nm,0.6s,baz=56,slow=3.4,SNR=9.5						

IDC 03 22:54:45.1±6.1**, 29.26S**×**178.22W, h0**km**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.6**/9**, mbtmp3.6**/2**, Error ellipse: s-maj=355.9km s-min=82.9km az=165.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.99	266	P	P	23 02 46.0	-0.1
	0.3nm,0.4s,baz=106,slow=7.4,SNR=6.8						
WRA	Warramunga Arr	43.88	271	P	P	23 02 53.8	+0.6
	0.6nm,0.4s,baz=111,slow=7.4,SNR=5.3						
FINES	FINESS Array B	144.01	340	PKP	PKPdf	23 14 21.4	-1.1
	0.4nm,0.3s,baz=60,slow=3.3,SNR=8.6						

*ISCJB **03** 23:03:45.1±0.7, 21.13S±0.05×68.2W±0.2, h138km±11km, mb4.0/3, Error ellipse: s-maj=24.5km s-min=8.8km az=6.7*
*NEIC **03** 23:03:45.1±1.0, 21.06S×68.24W, h114km±12km, Error ellipse: s-maj=18.8km s-min=12.8km az=88.0*
*IDC **03** 23:03:47.4±1.3, 21.34S×67.92W, h128km±16km, mb4.0/3, mb1 3.9/5, mb1mx3.6/16, mbtmp4.4/5, Error ellipse: s-maj=31.4km s-min=19.9km az=137.0*
ISC 03 23:03:46.7±0.6**, 21.14S**±0.05×**68.1W**±0.1**, h120**km±9km**, n15, σ1^{s}12**/18**, mb4.1**/3**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.66	208	P	Pn	23 04 16.1	+0.1
	119nm,0.3s,baz=14,slow=9.2,SNR=767						
LVC				S	Sn	23 04 38.7	+0.4
	58nm,0.3s,baz=107,slow=22,SNR=43						
LPAZ	La Paz	4.83	359	ePn	Pn	23 04 57.0	-0.3
LPAZ				Sn	Sn	23 05 53.3	+1.1
ARE	Arequipa	5.67	325	eP	Pn	23 05 03.0	-5.6
ARE				eS	Sn	23 06 03.0	-9.4
SIV	San Ignacio	8.39	54	P	Pn	23 05 44.5	-0.9
	15nm,0.3s,baz=252,slow=12,SNR=321						
CFAA	Coronel Fontan	10.42	181	P	Pn	23 06 10.4	-2.4
	0.1nm,0.3s,baz=1.1,slow=15,SNR=6.4						
CFAA				S	Sn	23 08 01.8	-5.9
	0.1nm,0.3s,baz=224,slow=14,SNR=4.2						
CPUP	Villa Florida	11.12	120	eP	Pn	23 06 24.1	+2.0
SAML	Samuel	13.01	22	ePn	Pn	23 06 44.8	-2.1
BDFB	Brasilia	19.80	77	P	P	23 08 08.1	+0.4
	0.7nm,0.3s,baz=258,slow=10,SNR=7.3						
DBIC	Dimbokro	67.89	73	P	P	23 14 32.5	+0.2
	6.2nm,1.0s,mb4.4,baz=230,slow=11,SNR=9.9						
TOA0	Torodi Ar. Sit	76.50	70	eP	P	23 15 23.3	-0.1
TORD	Torodi Ar. Bea	76.50	70	P	P	23 15 23.2	-0.3
	2.5nm,0.5s,mb4.2,baz=254,slow=5.5,SNR=79						
TORD	Torodi Ar. Bea	76.50	70	P	P	23 15 23.2	-0.3
YKA	Yellowknife Ar	91.11	340	P	P	23 16 38.8	+1.0
	0.2nm,0.4s,mb3.6,baz=137,slow=4.4,SNR=7.1						
YKA	Yellowknife Ar	91.11	340	P	P	23 16 38.8	+1.0
MKAR	Makanchi Array	144.89	36	PKP	PKPdf	23 23 08.2	-1.3
	0.3nm,0.5s,baz=329,slow=2.2,SNR=4.7						

*ISCJB **03** 23:41:48.9±0.3, 50.09N±0.02×18.97E±0.03, h0km, Error ellipse: s-maj=3.2km s-min=2.2km az=40.7*
*IDC **03** 23:41:50.0±2.1, 50.04N×19.12E, h0km, mb1 3.2/3, mb1mx3.0/18, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=37.7km s-min=9.6km az=135.0*
*IPEC **03** 23:41:49.6±0.1, 50.15N×19.09E, h4km±1km, ML2.7/4, Error ellipse: s-maj=1.1km s-min=0.7km az=173.0*
*PRU **03** 23:41:50.5, 50.17N×19.01E, h0km*
*WAR **03** 23:41:50.5, 50.10N×19.16E, ML2.9, Mining Induced*
*NEIC **03** 23:41:50.1±0.6, 50.13N×19.05E, h5km, ML2.5(BRA), Error ellipse: s-maj=9.7km s-min=5.5km az=188.0*
*CSEM **03** 23:41:51.2±0.2, 50.06N×19.01E, h0km±1km, ML3.4/8, Error ellipse: s-maj=4.3km s-min=2.4km az=30.0*
*VIE **03** 23:41:53.4±0.6, 49.82N×18.92E, h0km, mb2.3/2, ML3.0/3, Error ellipse: s-maj=3.5km s-min=3.3km az=23.0 48 km S of Kattowitz Suspected Mining induced.*
ISC 03 23:41:49.6±0.3**, 50.11N**±0.02×**19.01E**±0.02**, h0**km**, n44, σ1^{s}36**/85**, 3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.52	78	ePg	Pg	23 41 58.4	-1.1
OJC				eSg	Sg	23 42 04.7	-1.5
RAC	Raciborz	0.53	267	ePg	Pg	23 42 03.8	+4.1
RAC				eSg	Sg	23 42 11.1	+4.6
OKC	Ostrava-Krasne	0.62	244	ePG	Pg	23 42 03.1	+1.6
OKC				eSG	Sg	23 42 12.7	+3.2
	90nm,0.5s						
OKC	Ostrava-Krasne	0.62	244	ePg	Pg	23 42 03.1	+1.6
OKC				eSg	Sg	23 42 12.5	+3.0
MORC	Moravsky Berou	1.01	251	eP	Pg	23 42 10.1	+1.2
MORC				eS	Sg	23 42 24.2	+2.3
MORC	Moravsky Berou	1.01	251	ePg	Pg	23 42 09.7	+0.8
MORC				eSg	Sg	23 42 23.1	+1.2
	133nm,0.4s						
LIKS	Likavka	1.06	177	ePN	Pn	23 42 11.1	-0.6
LIKS				eSN	Sn	23 42 24.0	-3.2
LIKS	Likavka	1.06	177	ePn	Pn	23 42 11.1	-0.6

LIKS				eSn	Sn	23 42 24.1	-3.1
NIE	Niedzica	1.09	129	ePg	Pg	23 42 09.4	-1.1
NIE				eSg	Sg	23 42 25.1	+0.4
JAVC	Velka Javorina	1.53	215	ePn	Pn	23 42 18.6	+0.5
JAVC				eSg	Sg	23 42 39.8	+1.1
	57nm,0.6s						
VYHS	Vyhne	1.62	184	ePN	Pn	23 42 18.6	-0.8
VYHS				eSN	Sn	23 42 40.3	-0.7
VYHS	Vyhne	1.62	184	ePn	Pn	23 42 18.9	-0.5
VYHS				eSg	Sg	23 42 40.1	-1.7
DPC	Dobruska-Polom	1.74	279	ePG	Pg	23 42 21.5	-1.5
DPC				eSG	Sg	23 42 45.8	+0.2
	92nm,0.5s						
DPC	Dobruska-Polom	1.74	279	ePn	Pn	23 42 21.4	+0.3
DPC				eSg	Sg	23 42 45.8	+0.2
VRAC	Vranov	1.76	244	Pn	Pn	23 42 22.3	+1.0
	4.1nm,0.3s,baz=65,slow=15,SNR=41						
VRAC				Lg		23 42 46.5	
	7.7nm,0.3s,baz=344,slow=22,SNR=14						
VRAC	Vranov	1.76	244	ePn	Pn	23 42 21.6	+0.3
VRAC				eSg	Sg	23 42 46.3	+0.1
	32nm,0.3s						
KSP	Ksiaz	1.88	294	Pn	Pn	23 42 23.9	+0.9
KSP				ePg	Pg	23 42 25.6	-0.1
KSP				eSg	Sg	23 42 52.1	+2.0
KSP	Ksiaz	1.88	294	ePn	Pn	23 42 24.0	+1.0
KSP				eSg	Sg	23 42 52.5	+2.4
KSP	Ksiaz	1.88	294	ePn	Pn	23 42 23.9	+0.9
KSP				ePg	Pg	23 42 25.6	-0.1
KSP				eSg	Sg	23 42 52.1	+2.0
SMOL	Smolenice	1.91	213	ePN	Pn	23 42 23.9	+0.6
UPC	Upice	1.96	283	ePG	Pg	23 42 25.4	-1.8
UPC				eSG	Sg	23 42 51.3	-1.3
KRUC	Moravsky	2.00	239	ePn	Pn	23 42 25.3	+0.7
KRUC				eSg	Sg	23 42 53.2	-0.6
	40nm,0.4s						
CRVS	Cervenica-Dubn	2.00	126	ePN	Pn	23 42 26.1	+1.4
CRVS				eSN	Sn	23 42 52.9	+2.5
PSZ	Piszkesteto	2.27	165	⇓ePg	Pg	23 42 34.2	+1.1
PSZ				eSg	Sg	23 43 03.7	+1.1
PSZ	Piszkesteto	2.27	165	Pn	Pn	23 42 28.7	+0.4
PSZ				eSn	Sn	23 42 54.2	-2.8
PSZ	Piszkesteto	2.27	165	Pn	Pn	23 42 28.7	+0.4
PSZ				eSn	Sn	23 42 54.2	-2.8
ZST	Bratislava	2.29	214	eSN	Sn	23 42 58.0	+0.5
ZST	Bratislava	2.29	214	eSn	Sn	23 42 58.1	+0.6
TREC	Trest	2.43	252	ePN	Pn	23 42 30.6	+0.1
KOLS	Kolonicke sedl	2.43	118	ePN	Pn	23 42 32.7	+2.2
KWP	Kalwaria	2.44	100	ePn	Pn	23 42 29.1	-1.5
KWP				eP*	Pb	23 42 33.1	-1.2
KWP				ePg	Pg	23 42 37.2	+0.9
KWP				eSn	Sn	23 43 03.5	+2.3
BUD	Budapest	2.63	180	eSB	Sb	23 43 07.9	-2.5
BUD				eSg	Sg	23 43 16.9	+2.8
PRU	Pruhonice	2.88	269	ePN	Pn	23 42 36.9	+0.2
PRU				ePG	Pg	23 42 42.5	-2.3
PRU				eSG	Sg	23 43 21.2	-1.0
	18nm,0.4s						
BRG	Berggiesshubel	3.32	285	PG	Pg	23 42 52.1	-1.2
BRG				SG	Sg	23 43 36.5	+0.1
	8.8nm,0.5s						
GKP	Gorka Klasztor	3.35	341	ePn	Pn	23 42 44.0	+0.9
GKP				ePg	Pg	23 42 58.0	+4.2
KHC	Kasperske Hory	3.67	257	ePN	Pn	23 42 47.8	+0.3
KHC				ePG	Pg	23 42 57.9	-1.9
KHC				eSG	Sg	23 43 47.0	-0.4
	20nm,0.7s						
GERES	GERESS Array B	3.69	252	Pn	Pn	23 42 47.6	-0.2
	0.2nm,0.3s,baz=74,slow=14,SNR=5.5						
GERES				Pg	Pg	23 42 57.5	-2.7
	0.5nm,0.3s,baz=70,slow=16,SNR=9.4						
GERES				Lg		23 43 47.8	
	1.6nm,0.3s,baz=70,slow=28,SNR=4.6						
GERES	GERESS Array B	3.69	252	Pg	Pg	23 42 57.5	-2.7
MOA	Molln	3.86	236	⇓iPn	Pn	23 42 51.7	+1.6
MOA				⇓iSg	Sg	23 43 53.8	+0.2
	comp=Z,6.4nm,0.5s						
CLL	Collm	4.00	290	ePg	Pg	23 43 11.0	+4.7
CLL				eSn	Sn	23 43 50.0	+10
CLL				i Sg	Sg	23 44 00.0	+1.9
	comp=Z,17nm,0.7s						
NKC	Novy Kostel	4.22	274	eSG	Sg	23 44 02.8	-2.4
	comp=Z,13nm,0.5s						
FINES	FINESS Array B	12.02	16	Pn	Pn	23 44 38.0	-4.2
	comp=Z,0.1nm,0.3s,baz=197,slow=11,SNR=7.9						
FINES				Sn	Sn	23 46 46.0	-11
	comp=Z,0.1nm,0.3s,baz=198,slow=25,SNR=3.3						
JOF	Joensuu	14.48	23	ep	Pn	23 45 08.3	-7.4
	comp=Z,0.5nm,0.4s						
ARCES	ARCESS Array B	19.73	7	Pn	Pn	23 46 17.0	-5.1
	comp=Z,0.1nm,0.3s,baz=197,slow=15,SNR=2.6						

*ISCJB **03** 23:59:05.7±0.3, 5296N±009×17187W±007, h131km, mb3.9/25, Error ellipse: s-maj=13.0km s-min=4.9km az=147.0*
*NEIC **03** 23:59:06.8±0.3, 5287N×17189W, mb4.1/7, Error ellipse: s-maj=12.0km s-min=5.3km az=164.0*
*IDC **03** 23:59:07.0±0.7, 5287N×17193W, h133km±5km, mb3.8/18, mb1 4.0/18, mb1mx3.8/28, mbtmp4.2/18, MS2.8/1, Ms1 2.8/1, ms1mx2.4/28, Error ellipse: s-maj=16.7km s-min=11.3km az=168.0*
*BJI **03** 23:59:09.1, 5276N×17274W, h98km, mB4.9, mb4.7*
ISC 03 23:59:07.0±0.3**, 5291N**±009×**17186W**±007**, h133**km**, h133**km±1.9km**:pP-P, n52, σ0^{s}96**/48**, mb3.9**/25**, 2C, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	1.59	245	P	Pn	23 59 36.1	-0.1
ATKA				S	Sn	23 59 58.1	-0.4
NIKO	Nikolski	1.82	87	P	Pn	23 59 36.9	-2.0
NIKO				S	Sn	23 59 59.5	-3.9
OKCD	Okmok Cone D	2.32	75	P	Pn	23 59 44.6	-0.4
OKCD				S	Sn	00 00 12.2	-1.9
AKLV	Akutan Long Va	3.74	68	P	Pn	00 00 03.4	+0.1
AKUT	Akutan	3.84	69	P	Pn	00 00 04.8	+0.2
FALS	False Pass	5.36	65	P	Pn	00 00 25.4	+0.5
AMKA	Amchitka	5.65	258	P	Pn	00 00 28.8	0.0
SDPT	Sand Point	7.12	65	P	Pn	00 00 47.2	-1.4
KDAK	Kodiak Island	11.99	58	P	Pn	00 01 49.7	-3.8
	6.0nm,0.3s,baz=271,slow=6.9,SNR=29						
KDAK	Kodiak Island	11.99	58	P	Pn	00 01 49.7	-3.8
IMA2	Indian Mountai	16.00	27	ePn	Pn	00 02 46.7	+2.2
INK	Inuvik	23.75	35	P	P	00 04 07.3	+0.2
	2.3nm,0.3s,mb4.1,baz=237,slow=8.1,SNR=34						
INK				pP		00 04 35.0	
	4.4nm,0.8s,baz=222,slow=12,SNR=4.2						
INK	Inuvik	23.75	35	P	P	00 04 07.5	+0.4
	5.5nm,0.9s,mb4.1						
INK				pP		00 04 35.0	
INK				ePcP	PcP	00 07 46.7	-0.5
DLBC	Dease Lake	23.92	60	P	P	00 04 08.3	-0.3
	13nm,0.7s,mb4.6,baz=254,slow=0.9,SNR=6.3						
ASAJ	Asahikawa	30.96	272	LR	LR	00 17 26.6	
	comp=Z,19nm,19.9s,baz=349,slow=36						
YKA	Yellowknife Ar	31.04	49	P	P	00 05 11.3	-0.8
	0.5nm,0.6s,mb3.4,baz=275,slow=8.0,SNR=7.4						
YKA				ScP	ScP	00 11 34.8	-0.3
	0.5nm,0.6s,baz=285,slow=3.3,SNR=6.5						
HAWA	Hanford	33.85	80	eP	P	00 05 38.0	+1.4
	0.3nm,0.6s,mb3.2						
NEW	Newport	34.35	75	P	P	00 05 40.5	-0.5
	4.7nm,0.4s,mb4.5,baz=316,slow=7.8,SNR=6.2						
NEW	Newport	34.35	75	P	P	00 05 40.5	-0.5
WALA	Waterton Lakes	35.83	72	eP	P	00 05 54.4	+0.8
	1.4nm,0.4s,mb3.9						
WVOR	Wild Horse Val	36.55	85	eP	P	00 06 01.3	+1.6
	1.7nm,0.6s,mb3.9						
WVOR				ePcP	PcP	00 08 20.7	+0.3
HLID	Hailey	38.43	80	eP	P	00 06 16.6	+1.0
	1.2nm,0.5s,mb3.8						
MDJ	Mudanjiang	38.49	282	P	P	00 06 20.5	+4.4
MDJ				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb3.9						
MDJ				AMB	AMB		
	comp=Z,56nm,4.9s						
NVAR	Mina Array Bea	39.19	90	P	P	00 06 23.5	+1.6
	comp=Z,1.6nm,0.7s,mb3.7,baz=303,slow=7.6,SNR=8.9						
NVAR				pP	pP	00 06 51.8	+0.5
	comp=Z,1.4nm,0.8s,baz=300,slow=7.5,SNR=4.4						
NVAR				PcP	PcP	00 08 29.5	+1.0
	comp=Z,0.7nm,0.7s,baz=319,slow=2.7,SNR=4.0						
NVAR				ScP	ScP	00 12 06.0	+1.4
	comp=Z,0.6nm,0.6s,baz=321,slow=4.1,SNR=5.0						
NVAR	Mina Array Bea	39.19	90	P	P	00 06 23.5	+1.6
NVAR				pP	pP	00 06 51.8	+0.5
NVAR				PcP	PcP	00 08 29.5	+1.0
NVAR				ScP	ScP	00 12 06.0	+1.4
TPNV	Topopah Spring	41.38	90	eP	P	00 06 40.5	+0.5
	comp=Z,2.4nm,0.6s,mb4.0						
TPNV				epP	pP	00 07 08.6	-1.0
CN2	Changchun	41.41	283	eP	P	00 06 46.5	+6.3
PDAR	Pinedale Array	41.79	78	P	P	00 06 44.0	+0.7
	comp=Z,3.1nm,0.5s,mb4.2,baz=307,slow=3.9,SNR=34						
PDAR				pP	pP	00 07 12.3	-0.6
	comp=Z,1.4nm,0.8s,baz=305,slow=5.2,SNR=3.0						
TMUT	Trail Mountain	42.92	83	P	P	00 06 53.8	+1.3
ULM	Lac du Bonnet	45.23	61	P	P	00 07 09.8	-1.1
	comp=Z,1.0nm,0.3s,mb3.9,baz=317,slow=11,SNR=3.9						
SONM	Songino Array	49.71	299	P	P	00 07 46.3	+0.8
	comp=Z,0.5nm,0.6s,mb3.3,baz=61,slow=7.3,SNR=4.6						
SONM				PcP	PcP	00 09 04.5	-0.2
	comp=Z,0.3nm,0.5s,baz=70,slow=12,SNR=3.8						
ARCES	ARCESS Array B	57.21	353	P	P	00 08 39.6	-0.6
	comp=Z,1.9nm,1.0s,mb3.9,baz=8.2,slow=8.2,SNR=4.2						
BVAR	Borovoye Array	62.37	323	P	P	00 09 14.3	-1.1
	comp=Z,0.5nm,0.7s,mb3.5,baz=64,slow=6.8,SNR=4.2						
BVAR				pP	pP	00 09 46.0	-1.3
	comp=Z,0.6nm,0.4s,baz=46,slow=8.5,SNR=2.9						
FINES	FINESS Array B	65.11	351	P	P	00 09 33.2	-0.2
	comp=Z,1.4nm,1.0s,mb3.8,baz=30,slow=8.8,SNR=3.4						
FINES				pP	pP	00 10 05.2	-0.3
	comp=Z,0.7nm,0.7s,baz=19,slow=8.1,SNR=1.8						
NOA	NORSAR Array B	66.38	358	P	P	00 09 41.2	-0.3
	comp=Z,0.2nm,0.5s,mb3.2,baz=4.8,slow=5.3,SNR=2.9						
NOA				pP	pP	00 10 13.8	+0.1
	comp=Z,0.7nm,0.7s,baz=1.2,slow=6.4,SNR=3.8						
KMI	Kunming	67.67	282	P	P	00 09 55.4	+5.7
KMI				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb4.8						
AKTK	Aktyubinsk	68.77	328	P	P	00 09 56.4	-0.2
AKTK				pP	pP	00 10 29.8	+0.8
AKTO	Aktyubinsk	68.77	328	P	P	00 09 56.4	-0.2
	comp=Z,0.5nm,0.4s,mb3.6,baz=1.5,slow=9.1,SNR=3.6						
AKTO				pP	pP	00 10 29.8	+0.8
	comp=Z,3.0nm,0.8s,baz=6.8,slow=3.8,SNR=3.6						
GERES	GERESS Array B	78.51	356	pP	pP	00 11 27.7	+1.1
	comp=Z,0.3nm,0.6s,baz=28,slow=6.0,SNR=2.6						
CTA	Charters Tower	81.25	219	P	P	00 11 07.7	-0.5
	comp=Z,2.1nm,0.5s,mb4.0,baz=38,slow=12,SNR=3.6						
BRTR	Keskin Array B	85.13	341	pP	pP	00 12 02.0	+0.3
	comp=Z,0.8nm,0.7s,baz=32,slow=5.5,SNR=4.7						
WRA	Warramunga Arr	86.17	230	P	P	00 11 31.6	-1.7
	comp=Z,1.7nm,0.5s,mb4.0,baz=37,slow=5.8,SNR=7.2						
PSI	Prapat	87.31	271	P	P	00 11 39.0	+0.2
	comp=Z,2.4nm,0.4s,mb4.4,baz=49,slow=9.3,SNR=4.2						
FITZ	Fitzroy Crossi	88.84	238	eP	P	00 11 46.3	+0.3
	comp=Z,4.1nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	88.84	238	P	P	00 11 45.4	-0.6
	comp=Z,2.5nm,0.7s,mb4.3,baz=52,slow=21,SNR=8.1						
AS31	Alice Springs	89.60	228	⇑iP	P	00 11 49.9	+0.4
ASAR	Alice Springs	89.60	228	P	P	00 11 49.9	+0.3
	comp=Z,6.5nm,0.8s,mb4.6,baz=25,slow=4.7,SNR=54						
ASPA	Alice Springs	89.60	228	⇑iP	P	00 11 49.9	+0.3
TORD	Torodi Ar. Bea	113.98	7	PKP	PKiKP	00 17 29.3	-0.9
	comp=Z,1.1nm,1.2s,baz=345,slow=2.7,SNR=8.1						
TORD	Torodi Ar. Bea	113.98	7	PKP	PKiKP	00 17 29.3	-0.9
MAW	Mawson	150.34	219	PKPbc	PKPbc	00 18 39.5	-3.1
	comp=Z,2.7nm,0.8s,baz=108,slow=2.4,SNR=6.7						
BOSA	Boshof	152.62	326	PKPbc	PKPbc	00 18 47.2	-0.5
	comp=Z,1.4nm,0.5s,baz=320,slow=6.6,SNR=12						

*NEIC **04** 00:51:57.3, 23.16S×68.66W, h110km, MG3.9(GUC), After GUC.*
GUC 04 00:51:57.3±0.5**, 2316S**×**6866W, h110**km**, MD4.2, ML3.9, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.59	337	⇑iP	Pn	00 52 11.9	-2.9
LVC				eSn	Sn	00 52 22.9	-5.0
CEN1	Los Morros	1.43	261	⇓iP	Pn	00 52 26.1	+2.9
CEN1				i S	Sn	00 52 47.6	+4.6
CEN1				AML	AML	00 52 52.9	
	comp=E,2μm,0.6s						
ANCH	Antofagasta	1.69	252	eP	Pn	00 52 26.8	+0.4
ANCH				i S	Sn	00 52 49.2	+0.7
ANCH				AML	AML	00 52 53.7	
	comp=N,2μm,0.1s						
ANCH	Antofagasta	1.69	252	eP	Pn	00 52 26.8	+0.4
ANCH				i S	Sn	00 52 49.2	+0.7
CPN1	Cerro Paranal	2.16	227	eP	Pn	00 52 35.9	+3.6
CPN1				i S	Sn	00 53 04.0	+4.9
CPN1				AML	AML	00 53 11.8	
	comp=N,723nm,0.4s						
CDCH	Caldera	4.36	206	eP	Pn	00 53 03.2	+1.8
CDCH				i S	Sn	00 53 53.5	+2.2
LPAZ	La Paz	6.86	4	ePn	Pn	00 53 31.5	-3.7
	comp=N,25nm,0.9s						
ARE	Arequipa	7.18	338	eP	Pn	00 53 44.0	+4.4
ARE				eS	Sn	00 54 45.0	-15
CPUP	Villa Florida	10.77	109	ePn	Pn	00 54 29.3	+1.0
	comp=N,12nm,0.8s						

*IDC **04** 01:23:28.9±1.7, 2.10N×96.20E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.8/21, mbtmp3.9/7, ML3.4/1, Error ellipse: s-maj=53.5km s-min=20.7km az=51.0*
*ISCJB **04** 01:23:31.7±0.8, 2.1N±0.1×96.2E±0.1, h33km, mb4.0/10, Error ellipse: s-maj=19.1km s-min=11.1km az=92.7*
*NEIC **04** 01:23:33.2±0.5, 2.12N×96.24E, h30km, mb4.0/4, Error ellipse: s-maj=13.5km s-min=7.6km az=47.0*
ISC 04 01:23:34.2±0.8**, 22N**±01×**963E**±01**, h35**km**, n16, σ0^{s}49**/16**, mb4.0**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.74	77	Pn	Pn	01 24 15.6	-0.1
	6.3nm,0.3s,baz=286,slow=8.3,SNR=23						
KULM	Kulim	5.37	55	ePn	Pn	01 24 51.7	-0.1
KULM				e		01 24 58.8	
WRA	Warramunga Arr	43.34	122	P	P	01 31 33.4	+0.5
	0.5nm,0.5s,mb3.5,baz=302,slow=9.1,SNR=3.6						
WRAB	Tennant Creek	43.35	122	eP	P	01 31 32.9	0.0
	0.8nm,0.4s,mb3.8						
WB2	Warramunga Arr	43.35	122	eP	P	01 31 33.6	+0.6
ASAR	Alice Springs	44.72	127	P	P	01 31 43.8	-0.2
	0.5nm,0.8s,mb3.4,baz=300,slow=7.9,SNR=4.1						
MKAR	Makanchi Array	46.09	347	P	P	01 31 55.3	+0.5
	3.0nm,0.6s,mb4.4,baz=167,slow=7.9,SNR=23						
SONM	Songino Array	46.33	9	P	P	01 31 56.0	-0.7
	0.9nm,0.5s,mb4.0,baz=190,slow=8.6,SNR=12						
KURK	Kurchatov	50.62	346	eP	P	01 32 30.0	+0.3
	0.7nm,0.4s,mb3.9						
ZAL	Zalesovo	52.46	351	P	P	01 32 44.2	+0.8
	3.2nm,0.5s,mb4.5,baz=302,slow=5.7,SNR=12						
BRVK	Borovoye	55.10	341	eP	P	01 33 02.0	-0.7
	0.7nm,0.5s,mb4.0						
ZRNK	Zerenda	55.43	340	eP	P	01 33 05.0	-0.2
CHKZ	Chkalovo	55.52	342	eP	P	01 33 05.7	0.0
	2.2nm,0.7s,mb4.3						
TAU	Tasmania Unive	64.15	141	P	P	01 34 04.2	-0.9
ARCES	ARCESS Array B	81.31	340	P	P	01 35 47.0	0.0
	1.6nm,0.9s,mb4.0,baz=114,slow=3.0,SNR=4.9						
ARCES	ARCESS Array B	81.31	340	P	P	01 35 47.0	0.0

IDC 04 02:00:33.6±17.0**, 1676S**×**17931W, h485**km±236km**, mb3.1**/4**, mb1 3.4**/4**, mb1mx3.1**/13**, mbtmp3.9**/4**, Error ellipse: s-maj=343.6km s-min=43.7km az=160.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.00	258	P	P	02 07 57.0	0.0
	0.5nm,0.3s,baz=93,slow=6.8,SNR=5.3						
ASAR	Alice Springs	44.28	253	P	P	02 07 59.6	+0.4
	2.9nm,0.5s,baz=89,slow=8.0,SNR=39						
NVAR	Mina Array Bea	79.20	44	P	P	02 11 48.2	+0.7
	0.4nm,0.6s,baz=222,slow=6.4,SNR=4.1						
PDAR	Pinedale Array	87.12	44	P	P	02 12 27.2	0.0
	0.5nm,0.5s,baz=208,slow=3.6,SNR=5.0						
GERES	GERESS Array B	146.28	344	PKPbc	PKPbc	02 19 18.7	-0.5
	0.3nm,0.6s,baz=82,slow=2.8,SNR=3.5						

NDI 04 02:02:11.2±3.9**, 1409N**×**8111E, h25**km±37km**, ML4.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDRS	Chennai	1.31	220	eP	Pn	02 02 34.4	+0.5
MDRS				eS	Sn	02 02 52.1	+1.4
MDRS				AML	AML	02 02 53.3	
	comp=N,3μm,0.4s						
MDRS				AML	AML	02 02 54.2	
	comp=E,2μm,0.3s						
HYB	Hyderabad	4.12	324	ePn	Pn	02 03 08.5	-4.1
HYB				ePg	Pn	02 03 14.0	+1.4
HYB				eSn	Sn	02 03 39.5	-21
HYB				eSg	Sn	02 03 57.0	-3.1
LATR	Latur	6.13	315	eP	Pn	02 03 40.6	+0.4
LATR				eS	Sn	02 04 45.5	-4.0
MNGI	Mangalore	6.22	260	eP	Pn	02 03 39.9	-1.5
MNGI				i x	x	02 04 22.6	
MNGI				AML	AML	02 04 24.6	
	comp=N,788nm,0.3s						
MNGI				AML	AML	02 04 25.1	
	comp=E,238nm,0.3s						
TRD	Trivandrum	6.88	217	eP	Pn	02 03 40.6	-10
TRD				eS	Sn	02 04 52.1	-16
TRD				AML	AML	02 05 19.1	
	comp=N,136nm,0.2s						
TRD				AML	AML	02 05 19.6	
	comp=E,255nm,0.2s						
NGP	Nagpur	7.29	345	eP	Pn	02 03 55.2	-1.0
NGP				eS	Sn	02 05 09.7	-8.4
NGP				AML	AML	02 05 57.2	
	comp=N,51nm,0.7s						
NGP				AML	AML	02 05 59.8	
	comp=E,86nm,0.5s						
KAD	Karad	7.40	297	eS	Sn	02 05 13.2	-7.5
KAD				AML	AML	02 05 16.2	
	comp=N,176nm,0.4s						
KAD				AML	AML	02 05 16.6	
	comp=E,62nm,0.5s						
AKL	Akola	7.65	330	eP	Pn	02 04 00.6	-0.4
AKL				ex	x	02 05 34.7	
AKL				AML	AML	02 05 47.6	
	comp=E,130nm,0.2s						
AKL				AML	AML	02 05 48.5	
	comp=N,76nm,0.5s						
POO	Poona	8.25	303	eS	Sn	02 05 36.0	-5.7
POO				ex	x	02 06 22.1	
BOM	Bombay	9.28	302	ex	x	02 05 29.8	
BOM				eS	Sn	02 05 58.9	-8.1
BHPL	Bhopal	9.75	340	eS	Sn	02 06 08.8	-10
BHPL				AML	AML	02 07 04.3	
	comp=N,25nm,0.6s						
BHPL				AML	AML	02 07 04.3	
	comp=E,40nm,0.9s						
AJM	Ajmer	13.73	335	ex	x	02 08 56.0	
SONA	Sohna	14.58	346	eS	Sn	02 08 04.7	-12
SONA				AML	AML	02 09 38.5	
	comp=E,31nm,0.2s						
SONA				AML	AML	02 09 40.6	
	comp=N,40nm,0.3s						

*ISCJB **04** 02:21:22.9±0.3, 5070N±002×1239E±003, h12km±3km, Error ellipse: s-maj=3.0km s-min=2.7km az=100.0*
*NEIC **04** 02:21:23.5±0.4, 5071N×1233E, h10km, ML2.5(CLL), ML2.9(FUR), ML3.0(LDG), Error ellipse: s-maj=5.9km s-min=4.0km az=160.0*
*LDG **04** 02:21:24.7±0.2, 5080N×1224E, h5km, Ml3.0/10, Error ellipse: s-maj=5.7km s-min=1.9km az=160.0*
*BGR **04** 02:21:24.3±0.2, 5070N×1234E, h10km, ML2.5/13, Error ellipse: s-maj=2.2km s-min=2.2km az=50.0*
*CSEM **04** 02:21:24.3±0.1, 5072N×1237E, h6km±1km, ML2.9/8, Error ellipse: s-maj=1.4km s-min=0.9km az=145.0*
*PRU **04** 02:21:24.6, 5067N×1239E, h0km, Near Zwickau*
ISC 04 02:21:23.5±0.3**, 5070N**±002×**1232E**±002**, h14**km±2km**, n70, σ1^{s}18**/140**, 8C-1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WERD	Werda	0.25	182	ePg	Pg	02 21 29.0	+0.1
	SNR=166						
TANN	Tannenbergstha	0.30	162	ePg	Pg	02 21 30.5	+0.7
	SNR=37						
TANN				eSg	Sg	02 21 34.2	+0.3
	SNR=4.0						
GUNZ	Gunzen	0.34	179	ePg	Pg	02 21 31.3	+0.9
	SNR=72						
GUNZ				eSg	Sg	02 21 35.6	+0.6
	SNR=4.9						
MOX	Moxa	0.45	263	ePg	Pg	02 21 33.4	+0.9
	SNR=21						
MOX				eSg	Sg	02 21 39.8	+1.3
	SNR=13						
MOX	Moxa	0.45	263	i Pg	Pg	02 21 33.3	+0.9
MOX				i Sg	Sg	02 21 39.9	+1.4
MOX	Moxa	0.45	263	Pg	Pg	02 21 33.4	+1.0
	SNR=21						
MOX				i Sg	Sg	02 21 39.9	+1.4
NKC	Novy Kostel	0.47	170	ePG	Pg	02 21 33.7	+0.8
NKC				eSG	Sg	02 21 39.2	-0.1
	195nm,0.4s						
VIEL	Selb-Vielitz	0.53	195	⇑iPg	Pg	02 21 34.9	+0.9
NEUB	Neuenburg	0.61	326	ePg	Pg	02 21 36.9	+1.4
	SNR=12						
MROB	Rosenbuehl-Arz	0.62	188	⇑iPg	Pg	02 21 36.7	+1.0
MROB				i Sg	Sg	02 21 45.1	+1.1
MHAI	Haid-Arzberg	0.69	188	⇑iPg	Pg	02 21 37.7	+0.9
FBE	Freiberg	0.69	71	ePg	Pg	02 21 37.0	+0.1
FBE				eSg	Sg	02 21 45.7	-0.5
MANZ	Manzenberg	0.73	191	eSg	Sg	02 21 48.6	+1.4
MANZ	Manzenberg	0.73	191	Sg	Sg	02 21 48.6	+1.4
MGBB	Grossbuechelbe	0.73	185	⇑iPg	Pg	02 21 38.6	+0.9
MGBB				i Sg	Sg	02 21 49.1	+1.7
CLL	Collm	0.75	35	ePg	Pg	02 21 38.1	+0.2
	SNR=31						
CLL				i Pn	Pn	02 21 40.1	+0.6
CLL				eSg	Sg	02 21 47.3	-0.5
	SNR=6.9						
CLL				i Sn	Sn	02 21 51.3	+0.7
CLL	Collm	0.75	35	i PG	Pg	02 21 38.1	+0.1
CLL				i PN	Pn	02 21 40.1	+0.6
CLL				i		02 21 48.5	
CLL				i SG	Sg	02 21 49.9	+2.1
CLL				i SN	Sn	02 21 51.3	+0.7
CLL				i		02 21 54.5	
CLL	Collm	0.75	35	i Pg	Pg	02 21 38.1	+0.1
CLL				i Pn	Pn	02 21 40.1	+0.6
CLL				i Sg	Sg	02 21 49.9	+2.1
CLL				i Sn	Sn	02 21 51.3	+0.7
CLL	Collm	0.75	35	Pn	Pn	02 21 40.1	+0.6
CLL				Sg	Sg	02 21 47.3	-0.5
	SNR=6.9						
CLL				Sn	Sn	02 21 51.3	+0.7
ROTZ	Rotzenmuhle	0.94	184	ePg	Pg	02 21 42.5	+0.9
ROTZ				eSg	Sg	02 21 55.2	+1.3
BRG	Berggiesshubel	1.04	80	ePg	Pg	02 21 43.6	0.0
	SNR=14						
BRG				eSg	Sg	02 21 56.7	-0.6
	SNR=8.2						
BRG	Berggiesshubel	1.04	80	PG	Pg	02 21 44.1	+0.5
BRG				i		02 21 46.1	
BRG	Berggiesshubel	1.04	80	SG	Sg	02 21 57.0	-0.3
	37nm,0.4s						
BRG	Berggiesshubel	1.04	80	Pg	Pg	02 21 44.1	+0.5
BRG				i		02 21 46.1	
BRG				Sg	Sg	02 21 57.0	-0.3
GRA1	Grafenberg Arr	1.23	215	ePg	Pg	02 21 48.1	+0.9
GRA1				eSg	Sg	02 22 05.2	+2.0
GRF	Grafenberg Arr	1.23	215	ePg	Pg	02 21 47.9	+0.7
	SNR=82						
GRF				eSg	Sg	02 22 03.9	+0.7
	SNR=6.1						
GRF	Grafenberg Arr	1.23	215	ePg	Pg	02 21 48.1	+0.9
GRF				eSg	Sg	02 22 05.2	+2.0
HROE	Hohe Rhon--Fla	1.39	264	⇑iPn	Pn	02 21 50.7	+2.4
HROE				i Sn	Sn	02 22 09.8	+3.4
PVCC	Panska Ves	1.44	96	ePG	Pg	02 21 50.9	-0.3
UBBA	Unterbreizbach	1.48	276	ePg	Pg	02 21 52.2	+0.4
	SNR=9.9						
UBBA				eSg	Sg	02 22 11.3	+0.3
	SNR=14						
PRU	Pruhonice	1.59	116	ePG	Pg	02 21 53.5	-0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRU				eSG	Sg	02 22 13.4	-1.4
	14nm,0.2s						
WET	**Wettzell**	**1.60**	**167**	ePn	**Pn**	**02 21 53.2**	**+2.0**
	SNR=1.8						
WET				ePg	**Pg**	**02 21 54.2**	**0.0**
WET				eSg	**Sg**	**02 22 15.5**	**+0.5**
WET	**Wettzell**	**1.60**	**167**	ePg	**Pg**	**02 21 54.2**	**0.0**
WET				eSg	**Sg**	**02 22 15.5**	**+0.5**
CLZ	**Clausthal**	**1.67**	**314**	ePg	**Pg**	**02 21 56.7**	**+1.1**
	SNR=13						
CLZ				eSg	**Sg**	**02 22 17.2**	**-0.1**
	SNR=5.2						
KHC	**Kasperske Hory**	**1.77**	**152**	ePN	**Pn**	**02 21 55.1**	**+1.5**
KHC				ePG	**Pg**	**02 21 56.9**	**-0.5**
KHC				eSN	**Sn**	**02 22 14.5**	**-1.3**
KHC				eSG	**Sg**	**02 22 20.0**	**-0.4**
	54nm,0.3s						
GEC2	**GERESS Array S**	**2.06**	**154**	ePn	**Pn**	**02 21 59.7**	**+2.1**
	SNR=1.7						
GEC2				ePg	**Pg**	**02 22 02.5**	**-0.5**
GEC2				eSg	**Sg**	**02 22 28.8**	**-1.0**
	SNR=3.9						
GEC2	**GERESS Array S**	**2.06**	**154**	ePg	**Pg**	**02 22 02.5**	**-0.5**
GEC2				eSg	**Sg**	**02 22 29.4**	**-0.4**
UPC	**Upice**	**2.36**	**93**	eSG	**Sg**	**02 22 37.8**	**-1.6**
TNS	**Taunus Mts**	**2.52**	**261**	eSg	**Sg**	**02 22 43.5**	**-1.0**
	SNR=5.8						
KSP	**Ksiaz**	**2.53**	**85**	ePg	**Pg**	**02 22 11.0**	**-0.9**
KSP				eSg	**Sg**	**02 22 43.2**	**-1.5**
DPC	**Dobruska-Polom**	**2.58**	**96**	eSG	**Sg**	**02 22 44.3**	**-2.0**
	14nm,0.5s						
FUR	**Furstenfeldbru**	**2.63**	**195**	eSg	**Sg**	**02 22 47.1**	**-0.7**
	SNR=3.2						
VRAC	**Vranov**	**3.09**	**115**	ePn	**Pn**	**02 22 13.2**	**+1.5**
MOA	**Molln**	**3.12**	**155**	⇑iPn	**Pn**	**02 22 13.8**	**+1.6**
MOTA	**Moosalm**	**3.45**	**194**	⇓iPn	**Pn**	**02 22 17.1**	**+0.4**
CONA	**Conrad Observa**	**3.62**	**139**	⇑iPn	**Pn**	**02 22 20.9**	**+1.9**
CONA				⇑iPg	**Pg**	**02 22 31.4**	**-1.4**
CONA	**Conrad Observa**	**3.62**	**139**	Sg	**Sg**	**02 23 19.9**	**+0.4**
SMOL	**Smolenice**	**3.98**	**121**	eSG	**Sg**	**02 23 29.6**	**-1.6**
CDF	**Champ du Feu**	**4.00**	**237**	ePg	**Pg**	**02 22 38.4**	**-1.7**
CDF				eSn	**Sn**	**02 23 10.2**	**-0.7**
CDF				eSg	**Sg**	**02 23 30.0**	**-2.0**
	4.3nm,0.3s						
CDF	**Champ du Feu**	**4.00**	**237**	ePn	**Pn**	**02 22 24.5**	**+0.2**
CDF				ePg	**Pg**	**02 22 38.4**	**-1.7**
CDF				eSn	**Sn**	**02 23 10.2**	**-0.7**
CDF				eSg	**Sg**	**02 23 30.0**	**-2.0**
CDF	**Champ du Feu**	**4.00**	**237**	ePg	**Pg**	**02 22 38.4**	**-1.7**
CDF				eSn	**Sn**	**02 23 10.2**	**-0.7**
CDF				eSg	**Sg**	**02 23 30.0**	**-2.0**
	2.2nm,0.3s						
HINF	**Hinteralfeld**	**4.60**	**233**	ePg	**Pg**	**02 22 50.0**	**-1.5**
HINF				eSn	**Sn**	**02 23 24.4**	**-1.2**
HINF				eSg	**Sg**	**02 23 49.1**	**-2.0**
	3.3nm,0.3s						
HINF	**Hinteralfeld**	**4.60**	**233**	ePn	**Pn**	**02 22 32.1**	**-0.4**
HINF				ePg	**Pg**	**02 22 50.0**	**-1.5**
HINF				eSn	**Sn**	**02 23 24.4**	**-1.2**
HINF				eSg	**Sg**	**02 23 49.1**	**-2.0**
HINF	**Hinteralfeld**	**4.60**	**233**	ePg	**Pg**	**02 22 50.0**	**-1.5**
HINF				eSn	**Sn**	**02 23 24.4**	**-1.2**
HINF				eSg	**Sg**	**02 23 49.1**	**-2.0**
	1.6nm,0.3s						
BSD	**Bornholm Skovb**	**4.69**	**19**	iP	**Pn**	**02 22 33.7**	**-0.1**
BSD				iS	**Sn**	**02 23 24.6**	**-3.4**
HAU	**Haudompre**	**4.74**	**238**	ePg	**Pg**	**02 22 53.6**	**-0.7**
HAU				eSg	**Sg**	**02 23 53.3**	**-2.4**
	6.2nm,0.4s						
HAU	**Haudompre**	**4.74**	**238**	ePn	**Pn**	**02 22 35.3**	**+0.8**
HAU				ePg	**Pg**	**02 22 53.6**	**-0.7**
HAU				eSg	**Sg**	**02 23 53.3**	**-2.4**
HAU	**Haudompre**	**4.74**	**238**	ePg	**Pg**	**02 22 53.6**	**-0.7**
HAU				eSg	**Sg**	**02 23 53.3**	**-2.4**
	3.1nm,0.4s						
RFYF	**Reffroy**	**4.91**	**248**	eSg	**Sg**	**02 23 58.7**	**-2.2**
	3.2nm,0.3s						
RFYF	**Reffroy**	**4.91**	**248**	eSg	**Sg**	**02 23 58.7**	**-2.2**
	1.6nm,0.3s						
CABF	**La Chapelle**	**5.81**	**228**	ePg	**Pg**	**02 23 14.6**	**-0.1**
CABF				eSg	**Sg**	**02 24 27.9**	**-2.1**
	0.9nm,0.3s						
CABF	**La Chapelle**	**5.81**	**228**	ePn	**Pn**	**02 22 48.2**	**-0.9**
CABF				ePg	**Pg**	**02 23 14.6**	**-0.1**
CABF				eSg	**Sg**	**02 24 27.9**	**-2.1**
CABF	**La Chapelle**	**5.81**	**228**	ePg	**Pg**	**02 23 14.6**	**-0.1**
CABF				eSg	**Sg**	**02 24 27.9**	**-2.1**
	0.4nm,0.3s						
LPL	**La Plagne**	**6.39**	**218**	ePg	**Pg**	**02 23 24.2**	**-1.6**
LPL				eSg	**Sg**	**02 24 46.5**	**-2.1**
	3.9nm,0.6s						
LPL	**La Plagne**	**6.39**	**218**	ePg	**Pg**	**02 23 24.2**	**-1.6**
LPL				eSg	**Sg**	**02 24 46.5**	**-2.1**
	2.0nm,0.6s						
LOR	**Lormes**	**6.54**	**242**	ePg	**Pg**	**02 23 24.4**	**-4.3**
LOR				eSg	**Sg**	**02 24 49.5**	**-3.9**
	1.2nm,0.3s						
LOR	**Lormes**	**6.54**	**242**	ePn	**Pn**	**02 22 59.5**	**+0.3**
LOR				ePg	**Pg**	**02 23 24.4**	**-4.3**
LOR				eSg	**Sg**	**02 24 49.5**	**-3.9**
LOR	**Lormes**	**6.54**	**242**	ePg	**Pg**	**02 23 24.4**	**-4.3**
LOR				eSg	**Sg**	**02 24 49.5**	**-3.9**
	0.6nm,0.3s						
AVF	**Avril sur Loir**	**7.10**	**240**	ePn	**Pn**	**02 23 06.2**	**-0.7**
	69nm,2.0s						
AVF	**Avril sur Loir**	**7.10**	**240**	ePn	**Pn**	**02 23 06.2**	**-0.7**
	34nm,2.0s						

*ISCJB **04** 02:34:03.8±0.8, 3493N±007×2861E±009, h10km, Error ellipse: s-maj=12.6km s-min=7.0km az=97.1*
*CSEM **04** 02:34:03.6±0.1, 3493N×2869E, h2km, ML3.2, Error ellipse: s-maj=4.2km s-min=2.0km az=53.0*
*HLW **04** 02:34:12.0, 3460N×2864E, h33km, Mb3.2*
*ATH **04** 02:34:16.4, 36.18N×2739E, h10km, MD3.2/3*
ISC 04 02:34:05.0±0.8, **3498N**±007×**2850E**±008, **h10**km, **n14, σ1ˢ06**/17, **5C-2D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.23**	**298**	ePB	**Pb**	**02 34 29.0**	**+0.6**
ARG	**Arkhangelos**	**1.27**	**346**	ePB	**Pb**	**02 34 28.0**	**-1.0**
NPS	**Neapolis**	**2.38**	**278**	ePN	**Pb**	**02 34 48.0**	**0.0**
DABA	**Dabaa**	**3.96**	**183**	⇑P	**Pn**	**02 35 05.2**	**-0.7**
SLUM		**4.44**	**219**	⇓P	**Pn**	**02 35 14.2**	**+1.8**
SLUM				S	**Sn**	**02 35 59.9**	**-4.2**
KOT	**Kottamia**	**5.77**	**150**	⇑P	**Pn**	**02 35 30.7**	**0.0**
HHAG	**Hagoal**	**5.86**	**148**	P	**Pn**	**02 35 32.2**	**+0.3**
HHAG	**Hagoal**	**5.86**	**148**	P	**Pn**	**02 35 32.2**	**+0.3**
AMAG	**Maghara**	**5.87**	**136**	⇓P	**Pn**	**02 35 31.8**	**-0.2**
SWA1		**6.17**	**203**	⇑P	**Pn**	**02 35 36.9**	**+0.7**
SWA1				S	**Sn**	**02 36 39.4**	**-7.4**
SWA2		**6.28**	**205**	P	**Pn**	**02 35 38.5**	**+0.9**
SUZ		**6.30**	**143**	P	**Pn**	**02 35 37.8**	**-0.1**
AWBH		**6.65**	**177**	⇑P	**Pn**	**02 35 42.2**	**-0.5**
AWBH				S	**Sn**	**02 36 48.3**	**-10**
HKAT	**Jabal Katrina**	**7.95**	**143**	⇑P	**Pn**	**02 36 00.8**	**+0.2**

KRSC 04 02:35:29, 5288N×16007E, h47km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.22**	**353**	iP	Pn	02 35 37.4	+0.3
SPN				iS	Sn	02 35 43.1	+0.2
PET	**Petropavlovsk**	**0.87**	**280**	iP	Pn	02 35 44.6	-0.3
PET				iS	Sn	02 35 55.8	-0.7
AVH	**Avacha**	**0.89**	**296**	eP	Pn	02 35 45.4	+0.2
AVH				iS	Sn	02 35 57.4	+0.4
RUS	**Russkaya**	**1.05**	**245**	eP	Pn	02 35 47.1	-0.2
RUS				iS	Sn	02 36 00.5	-0.3
KII	**Karymskiy**	**1.22**	**342**	eP	Pn	02 35 50.1	+0.5
KII				iS	Sn	02 36 05.7	+0.8
GRL	**Gorelyy**	**1.26**	**256**	eP	Pn	02 35 50.9	+0.8
GRL				iS	Sn	02 36 06.6	+0.7
GNL	**Ganaly**	**1.52**	**303**	eP	Pn	02 35 55.1	+1.4
GNL				iS	Sn	02 36 13.9	+1.7
MKZ	**Mys Kozlova**	**1.95**	**30**	eP	Pn	02 35 59.7	+0.1
MKZ				iS	Sn	02 36 22.6	-0.2
MIPR	**Malaya Ipel'ka**	**2.11**	**255**	eP	Pn	02 36 04.3	+2.5
TUMR	**Tumrok**	**2.41**	**1**	P	Pn	02 36 08.4	+2.5
TUMR				iS	Sn	02 36 37.5	+3.4
KMNR	**Kamenistaya**	**2.88**	**2**	P	Pn	02 36 12.8	+0.4
ZLN	**Zelenaya**	**3.17**	**7**	eP	Pn	02 36 16.7	+0.3
ZLN				iS	Sn	02 36 51.7	-1.3
ALID	**Alaid**	**3.45**	**236**	P	Pn	02 36 22.8	+2.6
KBTR	**Krutoberegovo**	**3.70**	**25**	eP	Pn	02 36 26.1	+2.5
KBTR				iS	Sn	02 37 08.4	+2.5
BDR	**Baidarnaya**	**3.75**	**10**	P	Pn	02 36 25.5	+1.1
BDR				iS	Sn	02 37 06.2	-1.1
SMKR	**Semkarok**	**3.80**	**12**	eP	Pn	02 36 26.5	+1.5
SMKR				iS	Sn	02 37 08.5	+0.1
SRKR	**Sorokina**	**3.83**	**9**	eP	Pn	02 36 28.3	+2.8
SRKR				iS	Sn	02 37 12.3	+3.0

*ISCJB **04** 02:42:22.7±0.3, 4407N±002×2007E±003, h5km±3km, Error ellipse: s-maj=4.2km s-min=2.5km az=29.4*
*BEO **04** 02:42:22.6±0.3, 4406N×2009E, h10km*
*CSEM **04** 02:42:23.2±0.1, 4405N×2009E, h0km, MD2.6, Error ellipse: s-maj=1.3km s-min=1.1km az=69.0*
*PDG **04** 02:42:24.0±0.2, 4405N×1992E, h11km*
*NEIC **04** 02:42:24.0, 4405N×1992E, h11km, MD2.6(PDG), After PDG.*
ISC 04 02:42:23.4±0.4, **4408N**±002×**2007E**±003, **h6**km±3km, **n34, σ1ˢ01**/57, **14C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIVS	**Divcibare**	**0.06**	**290**	iPg	**Pg**	**02 42 25.1**	**+0.2**
DIVS				Sg	**Sg**	**02 42 26.4**	**+0.5**
GRUS	**Gruza**	**0.51**	**112**	iPg	**Pg**	**02 42 32.4**	**-0.8**
GRUS				Sg	**Sg**	**02 42 38.7**	**-1.1**
BEO	**Belgrade**	**0.79**	**20**	iPg	**Pg**	**02 42 38.7**	**+0.1**
BEO				Sg	**Sg**	**02 42 50.0**	**+1.0**
SJES	**Sjenica**	**0.81**	**186**	Pg	**Pg**	**02 42 38.4**	**-0.7**
SJES				Sg	**Sg**	**02 42 49.5**	**-0.2**
SVIS	**Svilajnac**	**0.86**	**75**	⇓iPg	**Pg**	**02 42 39.4**	**-0.6**
SVIS				Sg	**Sg**	**02 42 50.8**	**-0.3**
PLE	**Pljevlja**	**0.89**	**213**	⇑iPg	**Pg**	**02 42 39.4**	**-1.2**
PLE				eSg	**Sg**	**02 42 52.1**	**-0.1**
FGSL	**Fruska Gora**	**1.09**	**350**	Pg	**Pg**	**02 42 44.9**	**+0.5**
FGSL				Sg	**Sg**	**02 42 59.6**	**+1.0**
UPM	**Unac-Piva**	**1.21**	**224**	⇑iPg	**Pg**	**02 42 44.9**	**-1.8**
UPM				eSg	**Sg**	**02 43 02.7**	**+0.3**
IVA	**Berane**	**1.21**	**186**	⇓iPg	**Pg**	**02 42 45.6**	**-1.1**
IVA				eSg	**Sg**	**02 43 04.2**	**+1.8**
IVA	**Berane**	**1.21**	**186**	⇓iPg	**Pg**	**02 42 45.6**	**-1.1**
IVA				eSg	**Sg**	**02 43 04.2**	**+1.8**
NKY	**Niksic**	**1.48**	**212**	⇑iPg	**Pn**	**02 42 49.6**	**-1.1**
NKY				eSg	**Sg**	**02 43 12.3**	**+1.2**
PVY	**Plav**	**1.48**	**183**	⇓iPg	**Pg**	**02 42 50.7**	**-1.2**
PVY				eSg	**Sg**	**02 43 12.2**	**+1.1**
BRY	**Bratogost**	**1.62**	**224**	ePg	**Pn**	**02 42 51.8**	**-0.7**
BRY				eSg	**Sg**	**02 43 14.8**	**-0.6**
TTG	**Podgorica**	**1.75**	**200**	⇓iPn	**Pn**	**02 42 54.8**	**+0.5**
TTG				eSn	**Sn**	**02 43 18.6**	**+1.7**
BZS	**Buzias**	**1.89**	**35**	⇑iP	**Pg**	**02 42 59.8**	**+0.1**
BZS	**Buzias**	**1.89**	**35**	⇑P	**Pg**	**02 42 59.8**	**+0.1**
BUM	**Brajici-Budva**	**1.97**	**206**	⇓iPn	**Pn**	**02 42 56.7**	**-0.7**
BUM				eSn	**Sn**	**02 43 23.3**	**+0.9**
HCY	**Herceg Novi**	**1.99**	**216**	⇑iPn	**Pn**	**02 42 57.3**	**-0.3**
HCY				eSn	**Sn**	**02 43 23.7**	**+0.8**
ULC	**Ulcinj**	**2.20**	**196**	⇓iPn	**Pn**	**02 43 00.7**	**+0.2**
ULC				eSn	**Sn**	**02 43 29.1**	**+1.1**
ULC	**Ulcinj**	**2.20**	**196**	⇓iPn	**Pn**	**02 43 00.7**	**+0.2**
ULC				eSn	**Sn**	**02 43 29.0**	**+1.0**
PKSM	**Moragy**	**2.36**	**335**	⇑ePn	**Pn**	**02 43 04.1**	**+1.4**
VTS	**Vitosha**	**2.73**	**122**	⇑iP	**Pn**	**02 43 06.9**	**-0.9**
VTS	**Vitosha**	**2.73**	**122**	⇑P	**Pn**	**02 43 06.9**	**-0.9**
DRGR		**3.29**	**34**	⇑iP	**Pb**	**02 43 23.6**	**+1.4**
BUD	**Budapest**	**3.48**	**348**	eSg	**Sg**	**02 44 20.3**	**+5.0**
VOIR		**3.80**	**67**	⇓iP	**Pn**	**02 43 27.3**	**+4.8**
VOIR		**3.80**	**67**	⇓P	**Pn**	**02 43 27.2**	**+4.7**
PSZ	**Piszkesteto**	**3.84**	**358**	⇓ePn	**Pn**	**02 43 24.4**	**+1.3**
PSZ				eSg	**Sg**	**02 44 31.6**	**+4.8**
PSZ	**Piszkesteto**	**3.84**	**358**	ePn	**Pn**	**02 43 24.4**	**+1.3**
MLR	**Muntele Rosu**	**4.42**	**69**	⇓iP	**Pg**	**02 43 53.5**	**+5.4**
ARSA	**Arzberg**	**4.49**	**316**	⇑iPn	**Pn**	**02 43 32.2**	**+0.1**
ARSA				⇑iSn	**Sn**	**02 44 22.4**	**-2.3**
VYHS	**Vyhne**	**4.50**	**350**	ePN	**Pn**	**02 43 33.7**	**+1.6**
VYHS				eSN	**Sn**	**02 44 24.5**	**-0.2**
OBKA	**Obir**	**4.59**	**304**	⇓iPn	**Pn**	**02 43 33.1**	**-0.3**
OBKA				⇓iSn	**Sn**	**02 44 25.1**	**-1.8**
CONA	**Conrad Observa**	**4.84**	**324**	⇑iPn	**Pn**	**02 43 36.8**	**+0.1**
CONA				⇑iSn	**Sn**	**02 44 31.1**	**-2.0**

*SZGRF **04** 03:13:54.8, 2200S×17650W, h33km, South of Fiji Islands*
*ISCJB **04** 03:15:04.8±1.7, 202S±0.1×1787W±0.1, h623km±24km, mb4.3/17, Error ellipse: s-maj=24.3km s-min=12.7km az=131.7*
*BJI **04** 03:15:06.4, 2040S×17860W, h638km, mB4.7, mb4.5*
*IDC **04** 03:15:07.0±2.5, 2024S×17858W, h640km±31km, mb3.4/6, mb1 3.7/8, mb1mx3.4/14, mbtmp4.5/8, Error ellipse: s-maj=30.9km s-min=15.6km az=158.0*
*NEIC **04** 03:15:08.4±1.9, 2036S×17857W, h659km±22km, mb4.4/10, Error ellipse: s-maj=19.6km s-min=13.4km az=179.0*
ISC 04 03:15:07.2±1.8, **203S**±01×**1786W**±01, **h639**km±22km, **n76, σ0ˢ85**/30, **mb4.2**/17, **3C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.12**	**260**	P	**P**	**03 18 07.1**	**+1.5**
	1.2nm,0.3s,baz=82,slow=19,SNR=12						
URZ	**Urewera**	**18.32**	**191**	P	**P**	**03 18 42.7**	**-1.3**
	2.2nm,0.3s,baz=293,slow=2.1,SNR=9.1						
CTA	**Charters Tower**	**33.00**	**264**	⇓iP	**P**	**03 20 52.6**	**+0.5**
	9.0nm,0.3s,mb4.8						
CTAO	**Charters Tower**	**33.00**	**264**	eP	**P**	**03 20 52.4**	**+0.2**
	14nm,0.5s,mb4.7						
PMG	**Port Moresby**	**34.79**	**283**	eP	**P**	**03 21 03.4**	**-3.5**
	16nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**37.43**	**244**	eP	**P**	**03 21 29.9**	**+1.4**
	4.1nm,1.2s,mb3.8						
STKA	**Stephens Creek**	**37.43**	**244**	P	**P**	**03 21 29.4**	**+0.8**
	3.1nm,0.7s,mb4.0,baz=79,slow=8.2,SNR=5.8						
AS31	**Alice Springs**	**44.07**	**257**	eP	**P**	**03 22 20.6**	**-0.2**
AS31				eS	**S**	**03 28 09.7**	**+0.9**
ASAR	**Alice Springs**	**44.07**	**257**	P	**P**	**03 22 21.1**	**+0.3**
	16nm,0.7s,mb4.5,baz=89,slow=7.7,SNR=166						
ASAR				PcP	PcP	03 23 52.4	+1.1
	1.5nm,0.5s,baz=103,slow=3.5,SNR=5.7						
ASAR				S	**S**	**03 28 08.7**	**-0.1**
	0.9nm,0.8s,baz=92,slow=15,SNR=6.4						
ASPA	**Alice Springs**	**44.08**	**257**	eP	**P**	**03 22 20.6**	**-0.2**
ASPA				eS	**S**	**03 28 09.7**	**+0.9**
WB2	**Warramunga Arr**	**44.12**	**262**	eP	**P**	**03 22 20.4**	**-0.7**
WB2				eS	**S**	**03 28 07.7**	**-1.7**
WRAB	**Tennant Creek**	**44.12**	**262**	eP	**P**	**03 22 21.0**	**-0.1**
	12nm,0.3s,mb4.7						
WRA	**Warramunga Arr**	**44.13**	**262**	P	**P**	**03 22 21.1**	**-0.1**
	8.1nm,0.3s,mb4.5,baz=98,slow=7.3,SNR=104						
KAKA	**Kakadu**	**47.46**	**271**	eP	**P**	**03 22 46.2**	**-0.1**
	7.5nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.55**	**262**	eP	**P**	**03 23 23.9**	**+0.6**
	6.9nm,0.5s,mb4.1						
MBWA	**Marble Bar**	**57.41**	**257**	eP	**P**	**03 23 56.7**	**-0.1**
	7.2nm,0.6s,mb4.0						
MJAR	**Matsushiro Arr**	**69.72**	**324**	P	**P**	**03 25 13.7**	**-1.2**
	2.2nm,0.5s,mb3.9,baz=159,slow=5.7,SNR=8.3						
NJ2	**Nanjing**	**79.34**	**310**	eP	**P**	**03 26 05.5**	**-2.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
MDJ	**Mudanjiang**	**80.03**	**325**	P	**P**	**03 26 11.8**	**-0.3**
NVAR	**Mina Array Bea**	**81.21**	**44**	P	**P**	**03 26 18.7**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.2,baz=226,slow=11,SNR=5.7						
BJT	**Baijiatuau**	**85.36**	**316**	eP	**P**	**03 26 39.0**	**+0.4**
	comp=Z,6.9nm,0.5s,mb4.5						
HLID	**Hailey**	**86.48**	**41**	eP	**P**	**03 26 44.6**	**+0.7**
	comp=Z,1.4nm,0.8s,mb3.6						
SYO	**Syowa Base**	**86.84**	**193**	⇑eP	**P**	**03 26 45.6**	**0.0**
KMI	**Kunming**	**88.79**	**297**	P	**P**	**03 26 55.3**	**+0.6**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
PDAR	**Pinedale Array**	**89.14**	**43**	P	**P**	**03 26 56.5**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.6,baz=205,slow=3.8,SNR=6.8						
LZH	**Lanzhou**	**92.22**	**308**	P	**P**	**03 27 10.5**	**0.0**
LZH				AP	pP	03 29 27.3	+0.2
LZH				XP	sP	03 30 29.2	-1.0
LZH				PP	PP	03 31 03.9	+1.3
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,137nm,5.4s						
TRD	**Trivandrum**	**106.44**	**273**	⇓eP	Pdif	03 28 10.1	-4.0
MKAR	**Makanchi Array**	**110.67**	**314**	PKiKP	PKiKP	03 32 27.4	-1.4
	comp=Z,0.5nm,0.6s,baz=130,slow=1.9,SNR=5.1						
BVAR	**Borovoye Array**	**118.57**	**320**	PKP	PKPdf	03 32 42.8	-1.1
	comp=Z,1.1nm,0.3s,baz=93,slow=3.0,SNR=8.1						
ZRNK	**Zerenda**	**119.41**	**320**	ePKPdf	PKPdf	03 32 44.5	-1.0
ARCES	**ARCESS Array B**	**128.60**	**349**	PKP	PKPdf	03 33 02.0	-1.1
	comp=Z,1.4nm,0.5s,baz=30,slow=0.8,SNR=11						
FINES	**FINESS Array B**	**135.41**	**343**	PKP	PKPdf	03 33 15.2	-0.7
	comp=Z,2.3nm,0.9s,baz=90,slow=3.5,SNR=4.9						
NB2	**NORSAR Subarra**	**138.69**	**353**	PKPa		03 33 10.0	
	comp=Z,0.6nm,0.6s,baz=26,slow=3.8						
HFS	**Hagfors**	**139.23**	**351**	PKhKP		03 33 12.5	
	comp=Z,1.3nm,0.3s,baz=56,slow=2.7,SNR=20						
AKASG	**Malin Array Be**	**142.56**	**331**	PKhKP		03 33 25.1	
	comp=Z,5.1nm,0.5s,baz=42,slow=4.4,SNR=35						
BSD	**Bornholm Skovb**	**143.75**	**347**	iP	PKPdf	03 33 29.3	-1.7
	comp=Z,7.8nm,0.6s						
EKA	**Eskdalemuir Ar**	**144.82**	**5**	PKP	PKPdf	03 33 32.3	-0.5
	comp=Z,1.9nm,0.8s,baz=15,slow=3.6,SNR=6.5						
KWP	**Kalwaria**	**146.16**	**335**	ePKP	PKPdf	03 33 37.5	+2.4
BR131	**Keskin Array S**	**146.31**	**312**	ePKPbc	PKPbc	03 33 37.8	0.0
BRTR	**Keskin Array B**	**146.31**	**312**	PKPbc	PKPbc	03 33 37.9	0.0
	comp=Z,1.7nm,0.5s,baz=131,slow=3.9,SNR=12						
BURAR	**Bucovina Array**	**146.61**	**330**	⇓iP	PKPbc	03 33 40.0	+1.4
BURAR	**Bucovina Array**	**146.61**	**330**	⇓P	PKPbc	03 33 40.0	+1.3
ANTO	**Ankara**	**146.83**	**313**	⇑iP	PKPbc	03 33 39.7	+0.5
ANTO	**Ankara**	**146.83**	**313**	⇑P	PKPbc	03 33 39.7	+0.5
KOLS	**Kolonicke sedl**	**146.88**	**335**	ePKP	PKPbc	03 33 40.8	+1.4
CRVS	**Cervenica-Dubn**	**147.23**	**335**	ePKP	PKPdf	03 33 39.6	+2.7
KSP	**Ksiaz**	**147.32**	**343**	eP	PKPbc	03 33 40.8	+0.3
OKC	**Ostrava-Krasne**	**147.64**	**340**	ePKPbc	PKPbc	03 33 40.5	-0.8
CLL	**Collm**	**147.72**	**346**	ePKPbc	PKPbc	03 33 41.5	0.0
CLL	**Collm**	**147.72**	**346**	⇓iPKPbc	PKPbc	03 33 41.6	+0.1
	comp=Z,8.0nm,0.5s						
DPC	**Dobruska-Polom**	**147.75**	**342**	ePKPbc	PKPbc	03 33 42.1	+0.5
MLR	**Muntele Rosu**	**147.75**	**327**	PKPbc	PKPbc	03 33 40.7	-0.9
	comp=Z,1.7nm,0.3s,baz=351,slow=7.2,SNR=5.4						
MLR	**Muntele Rosu**	**147.75**	**327**	⇓iP	PKPbc	03 33 41.8	+0.2
MLR	**Muntele Rosu**	**147.75**	**327**	⇓P	PKPbc	03 33 41.9	+0.3
BRG	**Berggiesshubel**	**147.91**	**345**	ePKPbc	PKPbc	03 33 42.0	0.0
BRG	**Berggiesshubel**	**147.91**	**345**	iP	PKPdf	03 33 42.1	+4.2
	comp=Z,2.7nm,0.5s						
FBE	**Freiberg**	**148.00**	**346**	ePKPbc	PKPbc	03 33 41.3	-0.9
PVCC	**Panska Ves**	**148.07**	**344**	ePKPbc	PKPbc	03 33 42.5	+0.1
NEUB	**Neuenburg**	**148.07**	**348**	ePKPbc	PKPbc	03 33 42.6	+0.2
EIL	**Elat**	**148.32**	**294**	ePKPbc	PKPbc	03 33 43.3	+0.3
DRGR		**148.36**	**332**	⇓iP	PKPbc	03 33 42.5	-0.6
DRGR		**148.36**	**332**	⇓P	PKPbc	03 33 42.5	-0.6
VYHS	**Vyhne**	**148.55**	**338**	ePKP	PKPbc	03 33 44.0	+0.4
PRU	**Pruhonice**	**148.57**	**344**	ePKPbc	PKPbc	03 33 43.7	+0.1
MOX	**Moxa**	**148.64**	**348**	ePKPbc	PKPbc	03 33 44.1	+0.3
TANN	**Tannenbergstha**	**148.68**	**346**	ePKPbc	PKPbc	03 33 44.1	+0.2
WERD	**Werda**	**148.68**	**347**	ePKPbc	PKPbc	03 33 43.9	0.0
GUNZ	**Gunzen**	**148.75**	**347**	ePKPbc	PKPbc	03 33 43.5	-0.6
TREC	**Trest**	**148.94**	**342**	ePKPbc	PKPbc	03 33 44.0	-0.5
MANZ	**Manzenberg**	**149.16**	**347**	ePKPbc	PKPbc	03 33 44.4	-0.6
ROTZ	**Rotzenmuhle**	**149.34**	**346**	ePKPbc	PKPbc	03 33 44.5	-1.0
KHC	**Kasperske Hory**	**149.61**	**344**	ePKPbc	PKPbc	03 33 46.3	+0.2
KHC				ePKPab	PKPab	03 33 54.0	-0.1
WET	**Wettzell**	**149.77**	**345**	ePKPbc	PKPbc	03 33 47.3	+0.8
GEC2	**GERESS Array S**	**149.84**	**344**	ePKPbc	PKPbc	03 33 46.9	+0.3
GERES	**GERESS Array B**	**149.84**	**344**	PKPbc	PKPbc	03 33 46.5	-0.1
	comp=Z,2.1nm,0.8s,baz=45,slow=2.1,SNR=15						
DAVOX	**Davos**	**152.67**	**347**	PKPbc	PKPbc	03 33 53.1	+0.1
	comp=Z,3.3nm,0.4s,baz=265,slow=3.9,SNR=9.2						

*IDC **04** 03:19:46.8±1.2, 5.19N×94.74E, h0km, mb4.1/10, mb1 4.2/10, mb1mx3.9/23, mbtmp4.1/10, Error ellipse: s-maj=61.5km s-min=18.5km az=53.0*
*NEIC **04** 03:19:51.3±0.9, 5.18N×94.59E, h30km, mb4.3/4, Error ellipse: s-maj=41.2km s-min=9.1km az=49.0*
*ISCJB **04** 03:19:54.3±3.5, 53N±02×948E±03, h73km±29km, mb4.0/14, Error ellipse: s-maj=57.6km s-min=14.6km az=103.0*
ISC 04 03:19:56.2±3.2, **53N**±02×**948E**±03, **h71**km±27km, **n17, σ0ˢ51**/19, **mb4.0**/14, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.82**	**120**	Pn	**Pn**	**03 21 06.0**	**-0.3**
	2.4nm,0.3s,baz=309,slow=14,SNR=6.8						
PSI				Sn	**Sn**	**03 22 01.2**	**+0.4**
	1.1nm,0.3s,baz=313,slow=21,SNR=3.7						
PSI	**Prapat**	**4.82**	**120**	Pn	**Pn**	**03 21 06.0**	**-0.3**
PSI				Sn	**Sn**	**03 22 01.2**	**+0.4**
MKAR	**Makanchi Array**	**42.74**	**347**	P	**P**	**03 27 47.1**	**+0.8**
	1.8nm,0.4s,mb4.1,baz=169,slow=8.2,SNR=20						
SONM	**Songino Array**	**43.56**	**11**	P	**P**	**03 27 52.8**	**-0.1**
	1.1nm,0.7s,mb3.7,baz=188,slow=9.2,SNR=6.4						
SONM				PcP	PcP	03 29 40.3	+0.9
	0.5nm,0.6s,baz=160,slow=4.6,SNR=3.3						
WRA	**Warramunga Arr**	**46.28**	**124**	P	**P**	**03 28 14.3**	**-0.2**
	2.9nm,0.6s,mb4.2,baz=302,slow=9.1,SNR=12						
WRAB	**Tennant Creek**	**46.28**	**124**	eP	**P**	**03 28 14.4**	**-0.1**
	3.4nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**47.80**	**129**	P	**P**	**03 28 26.1**	**-0.3**
	0.5nm,0.5s,mb3.6,baz=307,slow=7.7,SNR=8.8						
ZAL	**Zalesovo**	**49.19**	**352**	P	**P**	**03 28 37.2**	**+0.2**
	3.8nm,0.3s,mb4.8,baz=302,slow=7.3,SNR=8.2						
BVAR	**Borovoye Array**	**51.63**	**341**	P	**P**	**03 28 55.0**	**-0.4**
	1.1nm,0.5s,mb4.1,baz=140,slow=9.4,SNR=8.3						
BRVK	**Borovoye**	**51.69**	**341**	eP	**P**	**03 28 55.5**	**-0.4**
	1.6nm,0.6s,mb4.2						
ZRNK	**Zerenda**	**52.02**	**341**	eP	**P**	**03 28 57.5**	**-0.9**
	1.3nm,0.6s,mb4.1						
CHKZ	**Chkalovo**	**52.12**	**342**	eP	**P**	**03 28 59.2**	**+0.1**
	3.0nm,0.5s,mb4.6						
AKTK	**Aktyubinsk**	**54.51**	**332**	P	**P**	**03 29 16.3**	**-0.4**
AKTO	**Aktyubinsk**	**54.51**	**332**	P	**P**	**03 29 16.3**	**-0.4**
	0.6nm,0.3s,mb4.1,baz=119,slow=6.0,SNR=4.8						
FINES	**FINESS Array B**	**75.28**	**332**	P	**P**	**03 31 32.7**	**+1.2**
	0.6nm,0.8s,mb3.4,baz=43,slow=9.2,SNR=6.1						
ARCES	**ARCESS Array B**	**77.90**	**340**	P	**P**	**03 31 46.4**	**+0.1**
	0.5nm,0.4s,mb3.6,baz=105,slow=6.7,SNR=7.8						
GERES	**GERESS Array B**	**80.17**	**319**	P	**P**	**03 31 59.3**	**+0.7**
	0.9nm,0.7s,mb3.7,baz=104,slow=5.6,SNR=8.1						

*ISCJB **04** 03:41:45.4±0.2, 1036N±002×6241W±002, h10km, mb4.8/89, MS4.1/12, Error ellipse: s-maj=3.2km s-min=2.1km az=110.2*
*MOS **04** 03:41:45.7±1.2, 1042N×6246W, h10km, mb5.1/27, Error ellipse: s-maj=9.3km s-min=6.3km az=133.2*
*IDC **04** 03:41:46.2±0.4, 1038N×6242W, h0km, mb4.5/24, mb1 4.7/28, mb1mx4.6/31, mbtmp4.5/28, ML3.5/2, MS4.0/11, Ms1 4.0/11, ms1mx3.6/31, Error ellipse: s-maj=13.7km s-min=10.4km az=112.0*
*BJI **04** 03:41:46.2, 1040N×6230W, h11km, mB5.1, Ms5.1, Msz4.8*
*TRN **04** 03:41:47.6, 1039N×6230W, h12km, MD4.4, Md4.9(FDF)*
*NEIC **04** 03:41:47.2, 1038N×6229W, h11km, mb4.9/69, MD4.6(TRN), MD4.7(CAR), After TRN.*
*FUNV **04** 03:41:48.2, 1043N×6225W, h6km, MW4.7*
ISC 04 03:41:47.6±0.5, **1038N**±002×**6233W**±002, **h12**km±3km, **n318, σ1ˢ01**/343, **mb4.8**/89, **MS4.1**/12, **50C-54D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.29**	**21**	⇓iP	**Pg**	**03 41 52.7**	**-0.8**
GUIV				eS	**Sg**	**03 41 56.5**	**-1.0**
GUIV	**Guiria**	**0.29**	**21**	⇓eP	**Pg**	**03 41 52.6**	**-0.9**
GUIV				eS	**Sg**	**03 41 56.5**	**-1.0**
GUNV	**Guanoco**	**0.64**	**251**	⇑iP	**Pg**	**03 42 01.0**	**+1.0**
GUNV				eS	**Sg**	**03 42 12.3**	**+3.8**
GUNV	**Guanoco**	**0.64**	**251**	⇑eP	**Pg**	**03 42 00.9**	**+0.8**
GUNV				eS	**Sg**	**03 42 12.8**	**+4.3**
TPP	**Pointe-a-Pierr**	**0.86**	**94**	⇑iP	**Pg**	**03 42 04.2**	**-0.1**
TPP	**Pointe-a-Pierr**	**0.86**	**94**	⇑eP	**Pg**	**03 42 04.2**	**-0.1**
CRUV	**Carupano**	**0.94**	**289**	⇓iP	**Pg**	**03 42 05.1**	**-0.6**
CRUV				eS	**Sg**	**03 42 18.3**	**+0.2**
CRUV	**Carupano**	**0.94**	**289**	eP	**Pg**	**03 42 05.2**	**-0.6**
CRUV				eS	**Sg**	**03 42 18.3**	**+0.2**
TRN	**Trinidad (W)**	**0.95**	**73**	⇑iP	**Pg**	**03 42 03.9**	**-2.0**
TRN				iS	**Sg**	**03 42 15.4**	**-2.8**
TRN	**Trinidad (W)**	**0.95**	**73**	⇑iP	**Pg**	**03 42 03.9**	**-2.0**
TRN				eS	**Sg**	**03 42 15.4**	**-2.8**

TBH **Brigand Hill** 1.25 85⇑ *eP* Pn 03 42 10.6 -0.3
TBH *eS* Sb 03 42 24.9 -2.1
ITEV Isla Los Testi 1.25 321⇓ *iP* Pn 03 42 10.0 -1.0
ITEV *eS* Sb 03 42 27.4 +0.1
ITEV Isla Los Testi 1.25 321⇓ *eP* Pn 03 42 10.1 -0.9
ITEV *eS* Sb 03 42 27.4 +0.1
ITEV Isla Los Testi 1.25 321⇓ *eP* Pn 03 42 10.1 -0.9
ITEV *eS* Sb 03 42 27.4 +0.1
ORIV Oritupano 1.68 220 *eP* Pn 03 42 18.4 +1.7
ORIV *eS* Sn 03 42 42.1 +3.9
TPR Prospect 1.72 62⇑ *iP* Pn 03 42 17.7 +0.3
TPR Prospect 1.72 62⇑ *eP* Pn 03 42 17.7 +0.3
TPR *eS* Sn 03 42 44.0 +4.6
BOT Bacolet 1.77 63 *eP* Pn 03 42 19.1 +1.1
BOT *eS* Sn 03 42 44.3 +3.8
GRW Mount Saint Ca 1.89 20 *eP* Pn 03 42 19.8 +0.1
GRW *eS* Sn 03 42 45.6 +2.1
GRHS Sauteurs 1.96 20 *eP* Pn 03 42 20.4 -0.2
GRHS *eS* Sn 03 42 44.7 -0.4
GRIC Isle de Caille 2.03 21 *eP* Pn 03 42 22.1 +0.5
GRIC *eS* Sn 03 42 45.2 -1.8
GRSS Sisters 2.04 20 *eP* Pn 03 42 22.3 +0.6
GRSS *eS* Sn 03 42 50.2 +3.1
GRCU Cariacou 2.25 22 *eP* Pn 03 42 25.5 +0.8
GRCU *eS* Sn 03 42 53.6 +1.2
PCRV Puerto La Cruz 2.28 265 Pn Pn 03 42 24.5 -0.6
35nm,0.3s,baz=49,slow=5.8,SNR=113
PCRV Puerto La Cruz 2.28 265 *eP* Pn 03 42 25.9 +0.8
PCRV *eS* Sn 03 42 54.4 +1.3
IBAV Isla La Blanqu 2.63 303⇓ *iP* Pn 03 42 30.2 +0.3
IBAV *eS* Sn 03 43 02.4 +0.5
IBAV Isla La Blanqu 2.63 303⇓ *eP* Pn 03 42 30.1 +0.1
IBAV *eS* Sn 03 43 02.4 +0.5
GURV El Guri 2.70 196⇓ *iP* Pn 03 42 31.1 +0.3
GURV *eS* Sn 03 43 03.9 +0.4
GURV El Guri 2.70 196 *eP* Pn 03 42 31.1 +0.2
GURV *eS* Sn 03 43 03.9 +0.4
PRGV PARIAGUAN 2.79 235⇑ *iP* Pn 03 42 34.0 +1.9
PRGV *eS* Sn 03 43 07.8 +2.1
CUPV Cœpira 3.42 265⇓ *eP* Pn 03 42 42.1 +1.4
CUPV *eS* Sn 03 43 22.3 +1.1
CUPV Cœpira 3.42 265⇓ *eP* Pn 03 42 42.1 +1.4
CUPV *eS* Sn 03 43 22.3 +1.1
BIRV Birongo 3.88 272 *eP* Pn 03 42 48.9 +1.9
BIRV *eS* Sn 03 43 32.2 -0.3
ORCV Isla La Orchil 4.05 291⇓ *eP* Pn 03 42 49.5 0.0
ORCV *eS* Sn 03 43 36.1 -0.8
ORCV Isla La Orchil 4.05 291 *eP* Pn 03 42 49.5 0.0
ORCV *eS* Sn 03 43 36.1 -0.8
MERV Las Mercedes 4.07 254⇓ *iP* Pn 03 42 51.3 +1.6
MERV *eS* Sn 03 43 37.5 +0.3
MERV Las Mercedes 4.07 254 *eP* Pn 03 42 51.3 +1.6
MERV *eS* Sn 03 43 37.5 +0.3
BIM Bigot 4.30 16⇑ *eP* Pn 03 42 53.1 +0.4
BIM *eS* Sn 03 43 43.2 +0.4
MVM Montagne Vaucl 4.38 18 *eP* Pn 03 42 54.7 +0.7
FDF Fort de France 4.48 15⇑ *eP* Pn 03 42 55.6 +0.2
LUEV Luepa 4.58 169 *eP* Pn 03 42 55.9 -0.8
LUEV *eS* Sn 03 43 48.5 -1.4
LUEV Luepa 4.58 169 *eP* Pn 03 42 55.9 -0.9
LUEV *eS* Sn 03 43 48.0 -1.9
CAOV Caicara del Or 4.97 233⇑ *iP* Pn 03 43 02.0 -0.1
CAOV *eS* Sn 03 43 58.3 -1.3
TURV Turiamo 5.42 271⇓ *eP* Pn 03 43 09.6 +1.3
TURV *eS* Sn 03 44 07.8 -2.8
TURV Turiamo 5.42 271⇓ *eP* Pn 03 43 09.3 +1.1
TURV *eS* Sn 03 44 07.8 -2.8
TBG Guadaloupe-3 5.49 7 *eP* Pn 03 43 09.1 -0.1
MGG Marie-Galante 5.60 10 *eP* Pn 03 43 12.1 +1.4
HMG Houelmont 5.61 6 *eP* Pn 03 43 11.3 +0.6
SCG Saint Claude 5.66 6 *eP* Pn 03 43 12.8 +1.4
SCG *eS* Sn 03 44 17.9 +1.6
LZG Guadaloupe-1 5.76 5 *eP* Pn 03 43 13.5 +0.6
BAUV El Baul 5.81 256 *eP* Pn 03 43 14.2 +0.6
BAUV *eS* Sn 03 44 18.3 -1.9
SEG Port Louis 6.04 8 *eP* Pn 03 43 18.5 +1.7
JACV Jacura 6.43 277 *eP* Pn 03 43 22.8 +0.7
TEPV Terepaima 6.77 267 *eP* Pn 03 43 27.5 +0.7
SANV Sanarito 7.15 264⇓ *eP* Pn 03 43 32.8 +0.8
SIQV Siquisique 7.36 273 *eP* Pn 03 43 35.4 +0.5
CURV Curarigua 7.52 268 *eP* Pn 03 43 37.6 +0.5
MONV Montecano 7.66 283 *eP* Pn 03 43 39.2 +0.2
ELOV Elorza 7.83 245 *eP* Pn 03 43 41.3 +0.6
QARV Quebrada Arrib 8.07 270 *eP* Pn 03 43 44.3 +0.3
DABV Dabajuro 8.19 275 *eP* Pn 03 43 46.2 0.0
SDV Santo Domingo 8.32 260 Pn Pn 03 43 48.6 +0.5
33nm,0.3s,baz=92,slow=7.7,SNR=24
SDV Sn Sn 03 45 20.1 -1.9
7.2nm,0.3s,baz=358,slow=17,SNR=3.3
SDV Santo Domingo 8.32 260 *ePn* Pn 03 43 48.1 +0.1
279nm,0.9s
SJG San Juan 8.54 335 Pn Pn 03 43 51.4 +0.4
1.9nm,0.3s,baz=139,slow=20,SNR=2.9
SJG Sn Sn 03 45 18.7 -8.5
3.9nm,0.3s,baz=316,slow=13,SNR=2.7
SJG LR LR 03 47 13.5
comp=Z,665nm,21.9s,baz=90,slow=38
SJG San Juan 8.54 335 *eP* Pn 03 43 54.8 +3.8
SJG 03 45 18.7
SJG San Juan 8.54 335 *ePn* Pn 03 43 54.8 +3.8
SJG Sn Sn 03 45 18.7 -8.5
SJG LR LR 03 47 13.5
IMOV Isla Los Monje 8.64 284 *eP* Pn 03 43 52.1 -0.3
SOCV Socops 8.67 257⇑ *iP* Pn 03 43 53.0 +0.2
VIGV El Vigia 9.04 261 *eP* Pn 03 43 57.4 -0.5
VIRV Villa del Rosa 9.91 272 *eP* Pn 03 44 09.4 -0.5
CAPV Capacho 10.17 257⇓ *iP* Pn 03 44 13.3 -0.1
ROSC El Rosal 13.10 246 Pn Pn 03 44 53.8 +0.4
2.7nm,0.3s,baz=88,slow=12,SNR=12
ROSC El Rosal 13.10 246 *ePn* Pn 03 44 55.0 +1.6
ROSC *e* 03 45 09.1
OTAV Otavalo 18.93 239 *eP* Pn 03 46 12.0 +3.0
23nm,0.8s
SAML Samuel 19.21 183 *eP* Pn 03 46 11.5 -0.9
26nm,0.8s
ATAH Atahualpa 23.54 223 P P 03 47 00.9 +3.0
43nm,0.9s,mb4.9,baz=53,slow=4.1,SNR=15
ATAH LR LR 03 57 31.2
comp=Z,399nm,21.6s,MS3.8,baz=202,slow=40
DWPF Disney 25.16 317 *eP* P 03 47 13.5 +0.7
85nm,1.0s,mb5.2
SIV San Ignacio 26.23 177 P P 03 47 23.2 +0.9
9.2nm,0.7s,mb4.5,baz=10,slow=9.4,SNR=60
NNA Nana 26.49 213 LR LR 03 58 49.3
comp=Z,404nm,18.6s,MS4.0,baz=27,slow=39
NNA Nana 26.49 213 *eP* P 03 47 22.9 -1.8
44nm,1.1s,mb4.9
LPAZ La Paz 27.11 192 *eP* P 03 47 32.5 +2.2
3.7nm,0.8s,mb4.0
BDFB Brasilia 29.48 151 P P 03 47 53.1 +1.6
1.7nm,0.6s,mb4.0,baz=278,slow=7.1,SNR=3.2
BDFB LR LR 03 59 43.5
comp=Z,696nm,19.0s,MS4.3,baz=209,slow=36
BLA Blacksburg 31.31 332 *eP* P 03 48 08.4 +0.8
1.7nm,0.8s,mb3.9
ELN Prospectdale 31.48 331 *eP* P 03 48 11.2 +2.1
FWV Forest Hill 31.79 331 *eP* P 03 48 13.5 +1.6
LRAL Lakeview Retre 32.00 319 *eP* P 03 48 14.5 +0.9
38nm,0.9s,mb5.2
CPCT Cooper Cave 32.10 325 *eP* P 03 48 15.7 +1.0
TZTN Tazewell 32.36 327 *eP* P 03 48 17.5 +0.6
SWET Sewanee 32.76 323 *eP* P 03 48 21.2 +0.8
SSPA Standing Stone 33.14 338 *eP* P 03 48 25.4 +1.7
8.8nm,1.0s,mb4.6
LVC Limon Verde 33.41 191 P P 03 48 27.2 +1.1
2.8nm,0.6s,mb4.4,baz=11,slow=7.9,SNR=8.5
LVC Limon Verde 33.41 191 *eP* P 03 48 25.2 -0.8
3.9nm,0.7s,mb4.5
BINY Binghamton 33.89 342 *eP* P 03 48 32.3 +2.1
11nm,1.1s,mb4.7
PLAL Pickwick Lake 33.92 320 *eP* P 03 48 30.8 +0.3
33nm,0.8s,mb5.3
OXF Oxford 34.48 318 *eP* P 03 48 35.3 -0.1
OXF pmax pmax
comp=Z,137nm,1.0s,mb5.8
OXF Oxford 34.48 318 *eP* P 03 48 35.3 -0.1
comp=Z,137nm,1.0s,mb5.8
WVT Waverly 34.52 322 *eP* P 03 48 35.1 -0.6
WVT pmax pmax
comp=Z,33nm,0.8s,mb5.3
WVT Waverly 34.52 322 *eP* P 03 48 35.1 -0.6
comp=Z,33nm,0.8s,mb5.3

ACSO Alum Creek Sta 34.92 332 *eP* P 03 48 40.9 +1.8
comp=Z,24nm,0.9s,mb5.1
WCI Wyandotte Cave 35.08 326 *eP* P 03 48 41.3 +0.7
WCI pmax pmax
comp=Z,32nm,0.9s,mb5.2
WCI Wyandotte Cave 35.08 326 *eP* P 03 48 41.2 +0.7
comp=Z,32nm,0.9s,mb5.2
UTMT University of 35.29 321 *eP* P 03 48 42.6 +0.2
comp=Z,251nm,1.0s
USIN University of 35.67 325 *eP* P 03 48 45.7 +0.2
comp=Z,45nm,0.9s,mb5.4
BLO Bloomington 35.89 327 *eP* P 03 48 48.6 +1.1
BLO pmax pmax
comp=Z,53nm,0.8s,mb5.5
BLO Bloomington 35.89 327 *eP* P 03 48 48.6 +1.1
comp=Z,53nm,0.8s,mb5.5
PARMO Parma 36.04 321 *eP* P 03 48 48.2 -0.6
UALR University of 36.59 316 *eP* P 03 48 53.2 -0.3
comp=Z,24nm,0.9s,mb5.0
NATX Nacogdoches 36.69 310 *eP* P 03 48 55.0 +0.7
comp=Z,55nm,0.9s,mb5.4
HKT Hockley 36.78 307 *eP* P 03 48 55.2 +0.1
HKT pmax pmax
comp=Z,15nm,1.0s,mb4.8
HKT Hockley 36.78 307 *eP* P 03 48 55.2 0.0
comp=Z,15nm,1.0s,mb4.8
CPUP Villa Florida 36.81 173 P P 03 48 54.6 -0.7
comp=Z,1.6nm,0.6s,mb4.0,baz=328,slow=8.3,SNR=7.0
CPUP LR LR
04 04 26.2
comp=Z,176nm,18.8s,MS3.9,baz=339,slow=37
CPUP Villa Florida 36.81 173 *eP* P 03 48 54.3 -1.0
CPUP pmax pmax
comp=Z,10.0nm,0.7s
CPUP Villa Florida 36.81 173 *eP* P 03 48 54.3 -1.0
comp=Z,9.8nm,0.7s,mb4.8
AAM Ann Arbor 36.88 333 *eP* P 03 48 58.1 +2.1
AAM pmax pmax
comp=Z,23nm,0.3s,mb5.5
AAM Ann Arbor 36.88 333 *eP* P 03 48 58.1 +2.1
comp=Z,23nm,0.3s,mb5.5
FVM French Village 37.30 322 *eP* P 03 48 58.1 -1.4
FVM pmax pmax
comp=Z,29nm,0.9s,mb5.1
FVM French Village 37.30 322 *eP* P 03 48 58.1 -1.5
comp=Z,29nm,0.9s,mb5.1
MIAR Mount Ida 37.31 315 *eP* P 03 48 58.7 -0.9
MIAR pmax pmax
comp=Z,15nm,1.1s,mb4.7
MIAR Mount Ida 37.31 315 *eP* P 03 48 58.7 -0.9
comp=Z,15nm,1.1s,mb4.7
CCM Cathedral Cave 37.84 322 *eP* P 03 49 03.5 -0.6
CCM *e* 03 51 19.2
CCM pmax pmax
comp=Z,21nm,0.8s,mb4.9
CCM Cathedral Cave 37.84 322 *eP* P 03 49 03.5 -0.6
comp=Z,22nm,0.8s,mb4.9
CCM *ePcP* PcP 03 51 19.2 -1.3
JCT Junction City 40.15 305 *eP* P 03 49 23.1 -0.3
JCT pmax pmax
comp=Z,29nm,0.8s,mb5.1
JCT Junction City 40.15 305 *eP* P 03 49 23.1 -0.4
comp=Z,29nm,0.8s,mb5.1
JFWS Jewell Farm 40.53 328 *eP* P 03 49 26.3 -0.3
JFWS pmax pmax
comp=Z,70nm,0.8s,mb5.3
JFWS Jewell Farm 40.53 328 *eP* P 03 49 26.3 -0.3
comp=Z,70nm,0.8s,mb5.3
WMOK Wichita Mounta 41.13 312 *eP* P 03 49 30.5 -1.0
WMOK pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
WMOK Wichita Mounta 41.13 312 *eP* P 03 49 30.5 -1.0
comp=Z,9.7nm,0.8s,mb4.5
KSU1 Kansas State U 41.85 319 *eP* P 03 49 35.4 -2.0
CFAA Coronel Fontan 42.12 188 P P 03 49 39.6 -0.1
comp=Z,0.6nm,0.7s,baz=356,slow=8.3,SNR=17
AMTX Amarillo 43.34 311 *eP* P 03 49 48.6 -1.0
comp=Z,16nm,0.9s,mb4.8
SCHQ Schefferville 44.49 356 P P 03 50 00.4 +1.6
comp=Z,16nm,0.6s,mb4.9,baz=176,slow=6.9,SNR=39
SCHQ Schefferville 44.49 356 *eP* P 03 50 00.3 +1.5
comp=Z,24nm,0.7s,mb5.0
EYMN Ely 44.76 332 *eP* P 03 49 59.5 -1.4
comp=Z,9.7nm,0.8s,mb4.7
LPM Los Pinos Moun 46.91 308 *eP* P 03 50 18.2 +0.3
ANMO Albuquerque 46.99 309 LR LR 04 12 10.7
comp=Z,129nm,18.4s,MS3.9,baz=27,slow=39
ANMO Albuquerque 46.99 309 *i P* P 03 50 17.6 -1.0
ANMO Albuquerque 46.99 309 *eP* P 03 50 18.8 +0.2
comp=Z,14nm,1.1s,mb4.8
LENM Lentar 47.12 307 *eP* P 03 50 20.1 +0.6
LAZ Ladron 47.33 308 *eP* P 03 50 21.3 +0.1
ISCO Idaho Springs 48.25 315 *eP* P 03 50 27.6 -0.8
ISCO pmax pmax
comp=Z,13nm,1.0s,mb4.9
ISCO Idaho Springs 48.25 315 *eP* P 03 50 27.6 -0.8
comp=Z,13nm,1.0s,mb4.9
ULM Lac du Bonnet 48.42 332 P P 03 50 27.9 -1.8
comp=Z,14nm,0.6s,mb5.2,baz=130,slow=7.8,SNR=29
ULM PcP PcP 03 51 56.2 +0.3
comp=Z,1.6nm,0.4s,baz=124,slow=5.5,SNR=2.9
ULM LR LR 04 10 51.5
comp=Z,126nm,21.7s,MS3.9,baz=79,slow=36
ULM Lac du Bonnet 48.42 332 *eP* P 03 50 28.1 -1.5
comp=Z,19nm,0.7s,mb5.2
SMCO Snowmass 48.96 314 *eP* P 03 50 32.8 -0.9
comp=Z,6.8nm,0.4s,mb5.0
RSSD Black Hills 49.22 321 *eP* P 03 50 35.0 -0.8
RSSD pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
RSSD Black Hills 49.22 321 *eP* P 03 50 35.0 -0.8
comp=Z,5.3nm,0.8s,mb4.6
MVCO Mesa Verde 49.33 311 *eP* P 03 50 35.7 -1.0
TUC Tucson 49.63 304 *eP* P 03 50 38.2 -0.7
TUC *e* 03 52 00.6
TUC pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
TUC Tucson 49.63 304 *eP* P 03 50 38.2 -0.7
comp=Z,5.6nm,1.0s,mb4.5
TUC *ePcP* PcP 03 52 00.6 +0.3
116A Eloy 50.45 304 ⇑P P 03 50 44.9 -0.3
baz=50
WUAZ Wupatki 50.98 308 *eP* P 03 50 49.8 +0.6
comp=Z,14nm,0.9s,mb4.9
X15A Humboldt 51.38 306 ⇑P P 03 50 52.1 0.0
baz=51,SNR=5.5
PLCA Paso Flores 51.41 188 P P 03 50 52.7 +0.3
comp=Z,2.5nm,0.8s,mb4.2,baz=53,slow=6.7,SNR=6.2
PLCA Paso Flores 51.41 188 *eP* P 03 50 52.8 +0.4
comp=Z,2.6nm,0.6s,mb4.3
W15A Williams 51.59 307 ⇓P P 03 50 53.9 +0.3
baz=52
Y14A Wickenburg 51.85 305 P P 03 50 55.9 +0.2
baz=52,SNR=5.4
X14A Yava 51.89 306 ⇑P P 03 50 56.0 +0.1
baz=52
BW06 Boulder Array 52.19 317 *eP* P 03 50 56.8 -1.4
comp=Z,15nm,1.0s,mb4.9
PDAR Pinedale Array 52.19 317 P P 03 50 57.0 -1.2
comp=Z,7.3nm,0.8s,mb4.7,baz=112,slow=7.2,SNR=27
PDAR PcP PcP 03 52 10.6 +0.8
comp=Z,2.4nm,0.7s,baz=95,slow=3.6,SNR=4.4
PDAR LR LR 04 14 14.4
comp=Z,119nm,19.7s,MS3.9,baz=97,slow=37
W14A Seligman 52.24 307 ⇓P P 03 50 58.4 -0.2
baz=52
X13A Yucca 52.67 306 ⇓P P 03 51 01.7 -0.1
baz=53
W13A Hualapai Mount 52.84 306 ⇓P P 03 51 03.2 +0.2
baz=53,SNR=6.8
PDMCI Parker Dam,Lak 52.85 305 ⇑P P 03 51 02.8 -0.2
baz=53
Y12C Blythe 53.03 305 ⇑P P 03 51 04.9 +0.5
baz=53
GLA Glamis 53.12 304 ⇑P P 03 51 05.5 +0.5
baz=53
HWUT Hardware Ranch 53.12 315 *eP* P 03 51 03.7 -1.4
comp=Z,8.9nm,0.9s,mb4.7
ARUT Antelope Range 53.23 310 *eP* P 03 51 06.0 +0.1
ARUT *epP* pP 03 51 30.5 +21
SNOW Snow King Moun 53.27 317 *eP* P 03 51 05.3 -0.9
comp=Z,14nm,1.0s,mb4.8
REDW Red Top Meadow 53.30 317 *eP* P 03 51 05.3 -1.1
comp=Z,20nm,1.1s,mb5.0
MOOW Moose Ponds 53.38 318 *eP* P 03 51 08.2 +1.2
comp=Z,4.6nm,1.3s,mb4.2
TPAW Teton Pass 53.41 317 *eP* P 03 51 06.4 -0.8
comp=Z,7.4nm,1.0s,mb4.6

FLWY Flagg Ranch 53.48 318 *eP* P 03 51 06.2 -1.5
comp=Z,6.7nm,1.0s,mb4.5
DUG Dugway 53.52 313 *eP* P 03 51 07.3 -0.7
DUG pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
DUG Dugway 53.52 313 *eP* P 03 51 07.3 -0.7
comp=Z,7.4nm,0.9s,mb4.6
IMW Indian Meadow 53.57 318 *eP* P 03 51 09.1 +0.7
comp=Z,5.8nm,1.1s,mb4.4
RRI2 Red Ridge 53.61 317 *eP* P 03 51 08.0 -0.7
comp=Z,15nm,1.4s,mb4.7
IRM Iron Mountain 53.63 305 ⇓P P 03 51 08.9 +0.1
baz=54,SNR=6.7
U12A Valley of Fire 53.70 308 ⇓P P 03 51 09.9 +0.5
baz=54
V12A Nelson 53.77 307 ⇓P P 03 51 09.6 -0.2
baz=54
FCC Fort Churchill 53.94 340 *eP* P 03 51 10.9 -0.2
FCC pmax pmax
comp=Z,14nm,0.8s,mb4.9
FCC Fort Churchill 53.94 340 *eP* P 03 51 10.9 -0.2
comp=Z,14nm,0.8s,mb5.0
FFC Flin Flon 54.19 333 *eP* P 03 51 11.3 -1.6
FFC pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
FFC Flin Flon 54.19 333 *eP* P 03 51 11.3 -1.6
comp=Z,7.6nm,0.7s,mb4.7
V11A Goodsprings 54.25 307 ⇓P P 03 51 14.1 +0.7
baz=54
BELC Belle Mtn. 54.28 304 ⇓P P 03 51 13.0 -0.6
baz=54
MONP Monument Peak 54.40 303 ⇓P P 03 51 14.2 -0.3
baz=54
TUQ Turquoise Mtn. 54.54 306 ⇓P P 03 51 15.4 -0.1
baz=55
PFO Pinyon Flat Ob 54.57 304 ⇓P P 03 51 15.9 +0.2
baz=55
EGMT Eagleton 54.59 323 *eP* P 03 51 14.6 -1.2
comp=Z,13nm,1.0s,mb4.9
BOZ Bozeman (W) 54.72 319 *eP* P 03 51 15.6 -1.2
BOZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BOZ Bozeman (W) 54.72 319 *eP* P 03 51 15.6 -1.2
comp=Z,9.0nm,1.0s,mb4.8
N13A Wendover, West 54.74 313 ⇓P P 03 51 17.5 +0.6
baz=55
P12A McGill 54.83 311 ⇑P P 03 51 17.8 +0.3
baz=55
M13A Montello 54.87 314 ⇑P P 03 51 18.4 +0.5
baz=55
SHOC Shoshone 54.93 307 ⇓P P 03 51 18.5 +0.1
baz=55
109C Camp Elliot, M 54.96 303 ⇑P P 03 51 18.8 +0.2
baz=55
U10A Ash Meadows, A 55.10 307 ⇓P P 03 51 19.7 +0.2
baz=55
TPNV Topopah Spring 55.16 308 *eP* P 03 51 20.2 +0.2
TPNV pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
TPNV Topopah Spring 55.16 308 *eP* P 03 51 20.2 +0.3
comp=Z,4.6nm,0.9s,mb4.5
MURC Murrieta 55.18 304 ⇑P P 03 51 20.1 0.0
baz=55
DLMT Dillon 55.23 319 *eP* P 03 51 18.9 -1.5
comp=Z,10nm,1.1s,mb4.8
N12A Clover Valley, 55.34 313 ⇑P P 03 51 21.7 +0.5
baz=55
M12A Wells 55.42 313 ⇑P P 03 51 21.6 -0.3
baz=56
FURC Furnace Creek, 55.52 307 ⇓P P 03 51 22.0 -0.6
baz=56
R10A Warm Springs 55.55 309 ⇑P P 03 51 21.7 -1.1
baz=56
O11A Cowboy Ranch, 55.57 312 ⇓P P 03 51 22.3 -0.7
baz=56
HLID Hailey 55.78 316 *eP* P 03 51 23.8 -0.6
comp=Z,11nm,1.1s,mb4.8
MPMC Manual Prospec 55.93 307 ⇑P P 03 51 25.3 -0.1
baz=56
LRMC Laurel Mountai 55.96 306 ⇓P P 03 51 25.3 -0.3
baz=56
GRAC Grapevine Rang 56.05 308 ⇓P P 03 51 25.5 -0.8
baz=56
M11A Holland Ranch, 56.06 313 ⇓P P 03 51 26.2 -0.2
baz=56
EDW2 Edwards Air Fo 56.07 305 ⇑P P 03 51 25.5 -1.0
baz=56
S09A Goldfield 56.11 309 ⇓P P 03 51 26.8 +0.1
baz=56,SNR=5.5
R09A Tonopah 56.12 309 ⇑P P 03 51 27.1 +0.3
baz=56,SNR=7.3
CHMT Chamberlain Mo 56.26 320 *eP* P 03 51 26.8 -1.1
CWC Cottonwood Cre 56.48 307 ⇓P P 03 51 28.7 -0.7
baz=56
O09A Fish Creek Ran 56.71 311 ⇑P P 03 51 30.6 -0.5
baz=57
ARVC Arvin 56.80 305 ⇓P P 03 51 31.2 -0.5
baz=57
Q08A Gabbs 56.93 310 ⇑P P 03 51 31.9 -0.7
baz=57,SNR=7.9
SFJD Kangerlussuaq 57.10 5 P P 03 51 35.3 +1.5
comp=Z,6.8nm,0.6s,mb4.8,baz=192,slow=9.9,SNR=3.8
NVAR Mina Array Bea 57.10 309 P P 03 51 34.2 +0.4
comp=Z,2.1nm,0.8s,mb4.2,baz=104,slow=8.0,SNR=14
NVAR PcP PcP 03 52 29.2 +0.6
comp=Z,2.0nm,0.7s,baz=159,slow=4.2,SNR=7.8
NVAR Mina Array Bea 57.10 309 P P 03 51 34.2 +0.4
NVAR PcP PcP 03 52 29.2 +0.6
VES Vestal, Richgr 57.14 306 ⇑P P 03 51 33.8 -0.3
baz=57
N09A Rock Creek Ran 57.14 312 ⇓P P 03 51 34.4 +0.2
baz=57,SNR=6.1
M09A Marrel Ranch, 57.25 313 ⇓P P 03 51 35.1 +0.3
baz=57
HELL Mitchell Peak, 57.27 307 ⇓P P 03 51 34.9 -0.2
baz=57,SNR=10
RCTC Rector, Farmer 57.36 307 ⇓P P 03 51 35.2 -0.4
baz=57
WALA Waterton Lakes 57.53 322 *eP* P 03 51 35.9 -1.0
comp=Z,6.1nm,1.0s,mb4.6
PKM Peak Mountain 57.55 305 ⇑P P 03 51 36.8 -0.2
baz=58
N08A GE Springer Mi 57.57 312 ⇑P P 03 51 36.8 -0.3
baz=58,SNR=6.7
L09A Wilkinson Ranc 57.57 313 ⇑P P 03 51 37.3 +0.2
baz=58
Q07A Schurz 57.61 310 ⇑P P 03 51 37.2 -0.2
baz=58
T06C Millerton Lake 57.87 307 ⇑P P 03 51 39.3 0.0
baz=58
M08A Happy Creek Ra 57.92 313 ⇑P P 03 51 39.9 +0.2
baz=58
L08A Fields 58.10 313 ⇑P P 03 51 40.9 0.0
baz=58
S06C San Francisco 58.17 308 ⇓P P 03 51 41.2 -0.1
baz=58
BMO Blue Mountains 58.17 317 *eP* P 03 51 40.0 -1.4
comp=Z,8.9nm,1.2s,mb4.7
N07B Gerlach 58.18 312 ⇓P P 03 51 41.9 +0.5
baz=58
H09A Durkee 58.35 316 ⇑P P 03 51 42.4 -0.3
baz=58
WVOR Wild Horse Val 58.38 314 *eP* P 03 51 41.5 -1.3
comp=Z,3.6nm,1.1s,mb4.3
S05C Merced 58.43 308 ⇓P P 03 51 43.1 0.0
baz=58
M07A Soldier Meadow 58.48 312 ⇑P P 03 51 43.6 +0.1
baz=58,SNR=5.9
R05C Kirkwood Meado 58.52 309 ⇑P P 03 51 43.0 -0.8
baz=58
O06A Flanigan 58.66 311 ⇓P P 03 51 44.9 +0.1
baz=59
L07A Adell 58.77 313 ⇑P P 03 51 45.1 -0.4
baz=59
N06A Buffalo Meadow 58.81 311 ⇓P P 03 51 45.3 -0.5
baz=59
H08A Prairie City 59.00 316 ⇑P P 03 51 46.6 -0.5
baz=59
EDM Edmonton 59.00 327 *eP* P 03 51 45.8 -1.3
P05C Yuba Gap, Truc 59.05 310 ⇓P P 03 51 47.2 -0.3
baz=59
NEW Newport 59.20 321 LR LR 04 17 18.5
comp=Z,115nm,20.2s,MS4.0,baz=178,slow=36
NEW Newport 59.20 321 *eP* P 03 51 46.8 -1.7
NEW pmax pmax
comp=Z,9.0nm,0.9s
NEW Newport 59.20 321 *eP* P 03 51 46.8 -1.7
comp=Z,9.4nm,0.9s,mb4.8

ESDC	**Sonseca Array**	**59.20**	**50**	P	**P**	**03 51 50.3**	**+1.8**
	comp=Z,3.2nm,1.0s,mb4.3,baz=257,slow=6.9,SNR=6.9						
O05C	**Quincy**	**59.43**	**310**	⇓P	**P**	**03 51 49.8**	**-0.3**
	baz=60						
I07A	**Izee**	**59.44**	**315**	⇑P	**P**	**03 51 50.2**	**-0.1**
	baz=60						
F08A	**Pendleton**	**59.45**	**317**	⇑P	**P**	**03 51 50.1**	**-0.2**
	baz=60						
J06A	**Christmas Vall**	**59.67**	**314**	⇑P	**P**	**03 51 49.3**	**-2.5**
	baz=60						
OHCM	**Honcut**	**59.73**	**310**	eP	**P**	**03 51 49.5**	**-2.6**
L05A	**Lakeview**	**59.85**	**313**	⇑P	**P**	**03 51 51.6**	**-1.4**
	baz=60						
I06A	**Prineville**	**59.90**	**315**	⇓P	**P**	**03 51 53.2**	**-0.1**
	baz=60						
J05A	**Fort Rock**	**60.45**	**314**	⇓P	**P**	**03 51 57.4**	**+0.3**
	baz=60						
M04C	**Macdoel**	**60.52**	**312**	⇓P	**P**	**03 51 56.7**	**-1.0**
	baz=60						
YBH	**Yreka Blue Hor**	**61.15**	**312**	LR	LR	04 19 27.4	
	comp=Z,79nm,19.9s,MS3.9,baz=137,slow=37						
TORD	**Torodi Ar. Bea**	**62.60**	**81**	P	**P**	**03 52 12.3**	**+0.7**
	comp=Z,1.6nm,0.7s,mb4.3,baz=290,slow=6.8,SNR=12						
TORD	**Torodi Ar. Bea**	**62.60**	**81**	P	**P**	**03 52 12.3**	**+0.7**
SUMG	**Summit**	**63.79**	**8**	eP	**P**	**03 52 18.9**	**-0.6**
	comp=Z,38nm,0.8s,mb5.5						
YKA	**Yellowknife Ar**	**64.03**	**336**	P	**P**	**03 52 18.3**	**-2.8**
	comp=Z,7.0nm,0.6s,mb4.8,baz=110,slow=7.3,SNR=72						
YKA				LR	LR	04 18 12.4	
	comp=Z,112nm,21.8s,MS4.0,baz=90,slow=34						
EKA	**Eskdalemuir Ar**	**64.22**	**33**	P	**P**	**03 52 23.3**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.9,baz=295,slow=6.9,SNR=5.6						
KEST	**Kesra**	**69.16**	**56**	P	**P**	**03 52 57.2**	**+3.3**
	comp=Z,1.4nm,1.0s,mb3.8,baz=264,slow=15,SNR=5.5						
SIT	**Sitka**	**72.12**	**327**	eP	**P**	**03 53 13.8**	**+1.9**
SIT				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.3						
SIT	**Sitka**	**72.12**	**327**	eP	**P**	**03 53 13.8**	**+1.9**
	comp=Z,38nm,0.9s,mb5.3						
NAO01	**NORSAR Array S**	**72.83**	**29**	eP	**P**	**03 53 17.3**	**+1.1**
	comp=Z,16nm,0.9s,mb4.9						
KHC	**Kasperske Hory**	**73.01**	**42**	eP	pP	03 53 30.0	+8.9
NB2	**NORSAR Subarra**	**73.03**	**29**	P	**P**	**03 53 18.0**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=262,slow=6.2						
NOA	**NORSAR Array B**	**73.03**	**29**	P	**P**	**03 53 19.0**	**+1.7**
	comp=Z,12nm,0.8s,mb4.8,baz=262,slow=5.9,SNR=33						
NOA	**NORSAR Array B**	**73.03**	**29**	P	**P**	**03 53 19.0**	**+1.7**
GEC2	**GERESS Array S**	**73.07**	**42**	eP	**P**	**03 53 17.9**	**+0.3**
GERES	**GERESS Array B**	**73.07**	**42**	P	**P**	**03 53 18.2**	**+0.6**
	comp=Z,2.3nm,0.8s,mb4.2,baz=268,slow=4.0,SNR=9.1						
INK	**Inuvik**	**73.50**	**338**	eP	**P**	**03 53 17.6**	**-2.5**
INK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
INK	**Inuvik**	**73.50**	**338**	eP	**P**	**03 53 17.6**	**-2.5**
	comp=Z,10.0nm,0.9s,mb4.8						
DAWY	**Dawson**	**75.08**	**334**	eP	**P**	**03 53 27.1**	**-2.2**
COLA	**College**	**78.78**	**334**	eP	**P**	**03 53 48.4**	**-1.8**
COLA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
COLA	**College**	**78.78**	**334**	eP	**P**	**03 53 48.4**	**-1.8**
	comp=Z,12nm,1.1s,mb4.8						
ARCES	**ARCESS Array B**	**79.60**	**21**	P	**P**	**03 53 54.7**	**+0.1**
	comp=Z,11nm,0.8s,mb4.8,baz=270,slow=4.9,SNR=32						
ARCES	**ARCESS Array B**	**79.60**	**21**	P	**P**	**03 53 54.7**	**+0.1**
ARE0	**ARCESS Array S**	**79.60**	**21**	eP	**P**	**03 53 54.9**	**+0.2**
KEV	**Kevo**	**80.11**	**21**	ep	**P**	**03 53 56.3**	**-1.1**
	comp=Z,6.2nm,0.7s,mb4.7						
KEV	**Kevo**	**80.11**	**21**	eP	**P**	**03 53 56.3**	**-1.1**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
FINES	**FINESS Array B**	**80.21**	**29**	P	**P**	**03 53 58.4**	**+0.4**
	comp=Z,7.5nm,0.4s,mb5.0,baz=280,slow=2.9,SNR=39						
KAF	**Kangasniemi**	**80.27**	**28**	ep	**P**	**03 53 57.0**	**-1.3**
	comp=Z,7.2nm,0.4s,mb5.0,baz=273,slow=5.2						
KAF	**Kangasniemi**	**80.27**	**28**	eP	**P**	**03 53 57.0**	**-1.3**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
IMA2	**Indian Mountai**	**81.15**	**336**	eP	**P**	**03 54 03.5**	**+0.5**
MLR	**Muntele Rosu**	**81.49**	**45**	P	**P**	**03 54 07.2**	**+2.4**
	comp=Z,4.9nm,0.9s,mb4.4,baz=316,slow=9.8,SNR=5.6						
IDI	**Anoyia**	**81.84**	**56**	P	**P**	**03 54 09.4**	**+2.8**
	comp=Z,6.0nm,0.8s,mb4.6,baz=294,slow=11,SNR=3.8						
SVW2	**Sparrevohn**	**82.57**	**331**	eP	**P**	**03 54 08.8**	**-1.6**
AKASG	**Malin Array Be**	**83.04**	**40**	P	**P**	**03 54 13.0**	**0.0**
	comp=Z,3.4nm,1.1s,mb4.3,baz=260,slow=4.8,SNR=6.8						
OBN	**Obninsk**	**86.62**	**35**	⇑eP	**P**	**03 54 31.7**	**+0.8**
OBN				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.6						
OBN	**Obninsk**	**86.62**	**35**	eP	**P**	**03 54 31.3**	**+0.4**
	comp=Z,46nm,0.9s,mb5.7						
KLMR	**Klimovskoe**	**86.72**	**29**	eP	**P**	**03 54 31.7**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.3						
BR131	**Keskin Array S**	**87.99**	**50**	eP	**P**	**03 54 37.7**	**+0.1**
	comp=Z,4.9nm,1.0s,mb4.7						
BRTR	**Keskin Array B**	**87.99**	**50**	P	**P**	**03 54 38.0**	**+0.5**
	comp=Z,3.1nm,0.8s,mb4.6,baz=255,slow=3.7,SNR=16						
VRSR	**Storozhevoye**	**89.11**	**38**	eP	**P**	**03 54 44.4**	**+1.5**
VRSR				pmax	pmax		
	comp=N,8.0nm,0.8s						
VRSR				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
VRSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
BOSA	**Boshof**	**92.80**	**118**	P	**P**	**03 55 02.6**	**+2.6**
	comp=E,4.7nm,0.9s,mb4.9,baz=113,slow=8.2,SNR=4.8						
BILL	**Bilibino**	**94.53**	**344**	eP	**P**	**03 55 07.5**	**-0.5**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb5.1						
WMQ	**Urumqi**	**119.57**	**25**	ePKP	PKPdf	04 00 33.0	-4.3
SONM	**Songino Array**	**121.19**	**9**	PKP	PKPdf	04 00 40.1	-0.3
	comp=Z,0.6nm,0.5s,baz=316,slow=1.5,SNR=6.5						
SONM				PP	PP	04 02 14.2	+3.7
	comp=Z,0.1nm,0.3s,baz=203,slow=2.4,SNR=3.7						
CN2	**Changchun**	**125.62**	**353**	ePKP	PKPdf	04 00 52.8	+3.9
HHC	**Hu-ho-hao-te**	**128.72**	**6**	ePKP	PKPdf	04 00 50.1	-4.7
HHC				PP	PP	04 03 01.4	+0.5
HHC				PKS		04 04 25.2	
HHC				PP	PP		
	comp=Z,24nm,5.7s						
HHC				LR	LR		
	comp=N,111nm,37.0s,MS4.5						
HHC				LR	LR		
	comp=E,127nm,33.2s,MS4.5						
HHC				LR	LR		
	comp=Z,110nm,37.0s,MS4.3						
LZH	**Lanzhou**	**131.98**	**15**	ePKP	PKPdf	04 00 56.8	-4.2
LZH				PP	PP		
	comp=Z,83nm,8.5s						
LZH				LR	LR		
	comp=E,167nm,18.3s						
LZH				LR	LR		
	comp=Z,275nm,20.4s,MS5.0						
NJ2	**Nanjing**	**137.80**	**359**	ePKP	PKPdf	04 01 08.3	-3.6
SSE	**Sheshan**	**138.63**	**355**	ePKP	PKPdf	04 01 09.9	-3.5
KMI	**Kunming**	**141.83**	**22**	PKP	PKPdf	04 01 17.9	-1.3
CHTO	**Chiang Mai**	**145.61**	**33**	ePKIKP	PKPdf	04 01 27.7	+1.9
STKA	**Stephens Creek**	**149.22**	**222**	PKPbc	PKPbc	04 01 37.6	+1.5
	comp=Z,3.7nm,0.7s,baz=88,slow=5.3,SNR=6.1						
STKA	**Stephens Creek**	**149.22**	**222**	ePKPbc	PKPbc	04 01 35.3	-0.7
CTAO	**Charters Tower**	**150.82**	**247**	ePKIKP	PKPbc	04 01 41.1	+1.2
ASAR	**Alice Springs**	**159.64**	**227**	PKPab	PKPab	04 02 25.6	+0.8
	comp=Z,1.2nm,0.7s,baz=139,slow=4.3,SNR=8.2						
WRA	**Warramunga Arr**	**161.33**	**237**	PKP	PKPdf	04 01 48.3	+0.2
	comp=Z,1.7nm,1.0s,baz=67,slow=0.9,SNR=6.5						
WRA				PKPab	PKPab	04 02 33.5	+1.4
	comp=Z,2.0nm,0.6s,baz=112,slow=4.3,SNR=10.0						

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*NEIC **04** 04:13:17.0, 6823N×14752W, h15km, mb4.3/5, ML4.1(AEIC), After AEIC.*
*BJI **04** 04:13:17.0, 6820N×14750W, h15km, mB4.8, mb4.8, Ms4.5, Msz4.4*
*ISCJB **04** 04:13:18.0±0.5, 6808N±004×1473W±0.1, h10km, mb4.3/11, MS4.6/1, Error ellipse: s-maj=6.9km s-min=5.7km az=91.7*
*IDC **04** 04:13:20.1±1.5, 6829N×14701W, h0km, mb3.8/3, mb1 4.4/6, mb1mx3.8/21, mbtmp4.0/6, ML4.3/3, Error ellipse: s-maj=42.3km s-min=20.8km az=25.0*
ISC 04 04:13:19.9±0.5**, 6807N**±005×**1474W**±01**, h10**km**, n28, σ1ˢ31**/33**, mb4.3**/11**, MS4.6**/1**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLD	**Coldfoot**	**1.36**	**233**	P	**Pn**	**04 13 42.4**	**-2.5**
COLD				S	**Sb**	**04 14 00.4**	**-2.5**
IMA2	**Indian Mountai**	**3.17**	**234**	ePn	**Pn**	**04 14 10.5**	**+0.6**
IMA2				eSn	**Sb**	**04 14 56.5**	**+1.4**
COLA	**College**	**3.22**	**183**	P	**Pn**	**04 14 09.7**	**-0.8**
COLA				S	**Sn**	**04 14 51.1**	**+2.3**
MCK	**McKinley**	**4.40**	**189**	P	**Pn**	**04 14 26.3**	**-0.5**
KTH	**Kantishna Hill**	**4.76**	**199**	P	**Pn**	**04 14 31.1**	**-0.6**
TRF	**Thorofare Moun**	**4.79**	**196**	P	**Pn**	**04 14 31.4**	**-0.7**
DAWY	**Dawson**	**5.18**	**137**	P	**Pn**	**04 14 36.5**	**-0.9**
INK	**Inuvik**	**5.19**	**81**	Pn	**Pn**	**04 14 36.9**	**-0.6**
	5.1nm,0.3s,baz=281,slow=16,SNR=73						
INK				Sn	**Sn**	**04 15 32.1**	**-5.2**
	2.6nm,0.3s,baz=23,slow=27,SNR=7.6						
INK	**Inuvik**	**5.19**	**81**	ePn	**Pn**	**04 14 36.2**	**-1.3**
INK				Sn	**Sn**	**04 15 32.1**	**-5.2**
PMR	**Palmer**	**6.55**	**187**	P	**Pn**	**04 14 55.5**	**-0.7**
SLKM	**Skilak Lake**	**7.69**	**190**	ePn	**Pn**	**04 15 13.4**	**+1.5**
DLBC	**Dease Lake**	**12.38**	**133**	Pn	**Pn**	**04 16 16.1**	**0.0**
	1.5nm,0.3s,baz=338,slow=11,SNR=6.8						
YKA	**Yellowknife Ar**	**14.67**	**97**	Pn	**Pn**	**04 16 42.3**	**-5.0**
	baz=304,slow=13,SNR=24						
YKA				Sn	**Sn**	**04 19 14.7**	**-15**
	baz=305,slow=23,SNR=3.9						
EDM	**Edmonton**	**21.93**	**116**	eP	**P**	**04 18 12.2**	**-1.2**
BW06	**Boulder Array**	**32.28**	**122**	eP	**P**	**04 19 49.0**	**+0.2**
	2.3nm,0.9s,mb4.0						
PDAR	**Pinedale Array**	**32.28**	**122**	P	**P**	**04 19 50.6**	**+1.8**
	2.0nm,0.9s,mb4.0,baz=348,slow=6.5,SNR=18						
NVAR	**Mina Array Bea**	**33.76**	**137**	P	**P**	**04 20 03.7**	**+2.1**
	1.4nm,0.7s,mb4.0,baz=327,slow=6.6,SNR=9.4						
ARCES	**ARCESS Array B**	**42.57**	**4**	PcP	PcP	04 23 08.2	0.0
	1.1nm,0.9s,baz=352,slow=4.9,SNR=4.5						
MDJ	**Mudanjiang**	**47.05**	**284**	P	**P**	**04 21 48.2**	**-3.3**
CN2	**Changchun**	**49.25**	**287**	eP	**P**	**04 22 06.3**	**-2.2**
SONM	**Songino Array**	**52.10**	**305**	P	**P**	**04 22 31.3**	**+1.2**
	0.4nm,0.6s,mb3.5,baz=17,slow=6.6,SNR=5.3						
CHKZ	**Chkalovo**	**55.33**	**334**	eP	**P**	**04 22 54.7**	**+1.0**
	3.4nm,0.7s,mb4.5						
BRVK	**Borovoye**	**55.98**	**334**	eP	**P**	**04 22 59.5**	**+1.1**
	2.6nm,0.6s,mb4.4						
ZRNK	**Zerenda**	**56.29**	**334**	eP	**P**	**04 23 01.4**	**+0.7**
	2.4nm,0.9s,mb4.2						
KURK	**Kurchatov**	**56.66**	**327**	eP	**P**	**04 23 03.5**	**+0.3**
	1.9nm,0.7s,mb4.2						
NJ2	**Nanjing**	**62.05**	**286**	eP	**P**	**04 23 41.1**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
LZH	**Lanzhou**	**63.53**	**301**	eP	**P**	**04 23 49.3**	**-1.1**
LZH				AP	pP	04 23 52.6	-1.0
LZH				XP	sP	04 23 54.1	-0.7
LZH				ePP	PP	04 26 09.7	-0.3
LZH				AMB	AMB		
	comp=Z,22nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,99nm,4.6s						
LZH				LR	LR		
	comp=E,168nm,15.2s						
LZH				LR	LR		
	comp=Z,347nm,18.3s,MS4.6						
KMI	**Kunming**	**74.00**	**297**	P	**P**	**04 24 51.1**	**-4.5**
KMI				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.8						

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*NEIC **04** 04:40:25.9, 3971S×17701E, h49km, ML3.9(WEL), After WEL.*
NEIC Felt in the Hastings-Napier area.
WEL 04 04:40:25.9±0.1**, 3971S**×**17701E, h47**km±1km**, ML3.8**/19**, 8C-2D, Error ellipse: s-maj=1.8km s-min=0.7km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.34**	**199**	PN	Pn	04 40 35.5	+0.3
PXZ				SN	Sn	04 40 42.3	+0.6
BKZ	**Black Stump Fm**	**0.67**	**324**	⇓P	Pn	04 40 38.7	-0.5
BKZ				S	Sn	04 40 47.5	-1.3
BKZ	**Black Stump Fm**	**0.67**	**324**	⇑PN	Pn	04 40 38.7	-0.5
BKZ				SN	Sn	04 40 47.5	-1.3
KNZ	**Kokohu**	**0.86**	**37**	⇑P	Pn	04 40 41.8	+0.1
KNZ	**Kokohu**	**0.86**	**37**	⇑PN	Pn	04 40 41.8	+0.1
TSZ	**Takapari Road**	**0.88**	**246**	⇑P	Pn	04 40 41.5	-0.4
TSZ				S	Sn	04 40 52.8	-0.8
TSZ	**Takapari Road**	**0.88**	**246**	⇑PN	Pn	04 40 41.5	-0.4
TSZ				SN	Sn	04 40 52.8	-0.8
MOVZ	**Moawhango**	**1.01**	**287**	P	Pn	04 40 43.7	-0.1
MOVZ	**Moawhango**	**1.01**	**287**	PN	Pn	04 40 43.7	0.0
MOVZ				SN	Sn	04 40 56.3	-0.6
HATZ	**Hinemaiaia**	**1.08**	**319**	PN	Pn	04 40 44.7	0.0
HATZ				SN	Sn	04 40 57.7	-0.8
BFZ	**Birch Farm**	**1.13**	**211**	⇑P	Pn	04 40 45.0	-0.4
BFZ	**Birch Farm**	**1.13**	**211**	⇓PN	Pn	04 40 45.0	-0.3
TUVZ	**Tukino**	**1.14**	**292**	P	Pn	04 40 45.6	+0.2
TUVZ	**Tukino**	**1.14**	**292**	PN	Pn	04 40 45.6	+0.1
RITZ	**Rihia Road**	**1.15**	**309**	P	Pn	04 40 45.7	+0.1
RITZ	**Rihia Road**	**1.15**	**309**	PN	Pn	04 40 45.7	+0.1
WNVZ	**Wahianoa**	**1.15**	**289**	P	Pn	04 40 45.7	0.0
WNVZ	**Wahianoa**	**1.15**	**289**	PN	Pn	04 40 45.7	+0.1
OTVZ	**Oturere**	**1.17**	**297**	PN	Pn	04 40 46.1	+0.2
NGZ	**Ngauruhoe**	**1.21**	**296**	P	Pn	04 40 46.6	+0.2
NGZ	**Ngauruhoe**	**1.21**	**296**	PN	Pn	04 40 46.6	+0.1
FWVZ	**Far West T-bar**	**1.21**	**291**	PN	Pn	04 40 46.7	+0.2
KRVZ	**Karewarewa**	**1.22**	**300**	PN	Pn	04 40 46.7	+0.1
MTVZ	**Mangateitei**	**1.23**	**285**	PN	Pn	04 40 47.0	+0.3
WPVZ	**Whakapapa**	**1.24**	**294**	ePN	Pn	04 40 46.9	+0.1
WTVZ	**West Tongariro**	**1.25**	**298**	P	Pn	04 40 46.9	0.0
WTVZ	**West Tongariro**	**1.25**	**298**	PN	Pn	04 40 46.9	-0.1
KATZ	**Kakaramea**	**1.25**	**305**	ePN	Pn	04 40 47.1	+0.1
RATZ	**Rangitukua**	**1.27**	**311**	ePN	Pn	04 40 47.0	-0.3
PKVZ	**Pokaka**	**1.35**	**288**	PN	Pn	04 40 48.2	-0.1
TIWZ	**Tintock**	**1.37**	**218**	PN	Pn	04 40 48.2	-0.4
TIWZ				SN	Sn	04 41 05.3	-0.2
TWVZ	**Taurewa**	**1.37**	**297**	ePN	Pn	04 40 48.3	-0.3
MWZ	**Matawai**	**1.43**	**17**	P	Pn	04 40 49.1	-0.4
MWZ	**Matawai**	**1.43**	**17**	PN	Pn	04 40 49.1	-0.4
MRZ	**Mangatainoka R**	**1.45**	**229**	⇑P	Pn	04 40 48.9	-0.8
MRZ	**Mangatainoka R**	**1.45**	**229**	⇑PN	Pn	04 40 48.9	-0.8
MRZ				SN	Sn	04 41 06.5	-1.0
PATZ	**Paeroa**	**1.45**	**336**	P	Pn	04 40 50.3	+0.6
PATZ	**Paeroa**	**1.45**	**336**	PN	Pn	04 40 49.9	+0.2
URZ	**Urewera**	**1.45**	**3**	PN	Pn	04 40 49.1	-0.6
TAZ	**Tarawera**	**1.52**	**345**	P	Pn	04 40 50.8	+0.1
TAZ	**Tarawera**	**1.52**	**345**	PN	Pn	04 40 50.7	0.0
WAZ	**Wanganui**	**1.56**	**268**	ePN	Pn	04 40 51.9	+0.7
VRZ	**Vera Road**	**1.84**	**288**	ePN	Pn	04 40 54.6	-0.4
MTW	**Mount Morrison**	**1.85**	**218**	ePN	Pn	04 40 53.5	-1.6
PUZ	**Puketiti**	**1.90**	**31**	P	Pn	04 40 54.9	-1.0
PUZ	**Puketiti**	**1.90**	**31**	PN	Pn	04 40 54.9	-1.0
TRWZ	**Traveller**	**1.96**	**210**	ePN	Pn	04 40 54.7	-2.0
KIW	**Kapiti Island**	**1.97**	**234**	P	Pn	04 40 55.9	-1.0
KIW	**Kapiti Island**	**1.97**	**234**	PN	Pn	04 40 55.9	-1.0
CAW	**Cannon Point**	**2.04**	**226**	P	Pn	04 40 56.1	-1.6
CAW	**Cannon Point**	**2.04**	**226**	PN	Pn	04 40 56.0	-1.7
HIZ	**Hauiti**	**2.06**	**305**	ePN	Pn	04 40 57.1	-0.9
PAWZ	**Paruwai Farm**	**2.06**	**215**	ePN	Pn	04 40 56.0	-2.0
MSWZ	**Moikau Station**	**2.17**	**218**	P	Pn	04 40 57.5	-2.0
MSWZ	**Moikau Station**	**2.17**	**218**	ePN	Pn	04 40 57.4	-2.1
MRW	**Makara Radio**	**2.32**	**228**	ePN	Pn	04 40 59.5	-2.2
BHW	**Baring Head**	**2.35**	**223**	SN	Sn	04 41 27.5	-2.2
MXZ	**Matakaoa Point**	**2.37**	**26**	P	Pn	04 41 02.1	-0.2
MXZ	**Matakaoa Point**	**2.37**	**26**	PN	Pn	04 41 02.1	-0.3
SNZO	**South Karori**	**2.37**	**227**	ePn	Pn	04 41 00.8	-1.6
SNZO	**South Karori**	**2.37**	**227**	PN	Pn	04 41 00.3	-2.1
PKE	**Pukeiti**	**2.39**	**281**	ePN	Pn	04 41 03.6	+1.0
TCW	**Tory Channel**	**2.57**	**233**	P	Pn	04 41 03.3	-1.7
TCW	**Tory Channel**	**2.57**	**233**	ePN	Pn	04 41 03.0	-2.0
DUWZ	**D'Urville Isla**	**2.60**	**244**	ePN	Pn	04 41 04.3	-1.2
QRZ	**Quartz Range**	**3.60**	**251**	PN	Pn	04 41 17.0	-2.2
THZ	**Tophouse**	**3.73**	**235**	ePN	Pn	04 41 18.4	-2.6
KHZ	**Kahutara**	**3.77**	**223**	eP	Pn	04 41 20.0	-1.5
KHZ	**Kahutara**	**3.77**	**223**	ePN	Pn	04 41 19.7	-1.8
DSZ	**Denniston Nort**	**4.45**	**241**	eP	Pn	04 41 28.8	-2.0
DSZ	**Denniston Nort**	**4.45**	**241**	ePN	Pn	04 41 28.5	-2.3
MQZ	**McQueen's Vall**	**5.15**	**218**	ePN	Pn	04 41 37.1	-3.5
WVZ	**Waitaha Valley**	**5.79**	**232**	ePN	Pn	04 41 45.9	-3.4
RPZ	**Rata Peaks**	**5.99**	**226**	SN	Sn	04 42 50.9	-8.3
FOZ	**Fox Glacier**	**6.70**	**233**	SN	Sn	04 43 06.3	-10
ODZ	**Otahua Downs**	**7.11**	**219**	eP	Pn	04 42 04.5	-2.9
ODZ	**Otahua Downs**	**7.11**	**219**	ePN	Pn	04 42 02.9	-4.5
JCZ	**Jackson Bay**	**7.54**	**232**	SN	Sn	04 43 28.1	-9.3

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*ISCJB **04** 04:45:20.3±1.4, 4391N±007×128.1W±0.1, h10km, mb3.6/1, Error ellipse: s-maj=14.1km s-min=8.6km az=108.5*
*IDC **04** 04:45:20.4±9.6, 4406N×128.10W, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.4/21, mbtmp3.4/3, ML2.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/24, Error ellipse: s-maj=162.4km s-min=28.9km az=69.0*
*NEIC **04** 04:45:20.9±2.3, 4398N×12830W, h10km, Error ellipse: s-maj=26.6km s-min=11.2km az=72.0*
ISC 04 04:45:20.9±1.5**, 4384N**±009×**1282W**±01**, h10**km**, n31, σ0ˢ75**/34**, mb3.6**/1**, 9C-9D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J02A	**Umpqua**	**3.37**	**97**	⇑P	**Pn**	**04 46 13.3**	**-0.2**
	baz=3.5,SNR=9.1						
I03A	**Eugene**	**3.53**	**86**	⇑P	**Pn**	**04 46 15.1**	**-0.7**
	baz=3.6,SNR=49						
I03A				⇓S	**Sn**	**04 46 55.9**	**-1.7**
	baz=3.6						
K02A	**Glendale**	**3.58**	**106**	⇓P	**Pn**	**04 46 15.4**	**-1.0**
	baz=3.7,SNR=12						
K02A				⇑S	**Sn**	**04 46 58.4**	**-0.3**
	baz=3.7						
G03A	**Yamhill**	**3.79**	**65**	⇓P	**Pn**	**04 46 19.1**	**-0.2**
	baz=3.8,SNR=11						
G03A				⇓S	**Sn**	**04 47 04.0**	**+0.2**
	baz=3.8						
J03A	**Ideyld Park**	**3.81**	**95**	⇑P	**Pn**	**04 46 19.1**	**-0.4**
	baz=3.9,SNR=27						
J03A				⇓S	**Sn**	**04 47 04.6**	**+0.2**
	baz=3.9						
F03A	**Seaside**	**3.88**	**56**	⇑P	**Pn**	**04 46 19.9**	**-0.7**
	baz=3.9						
BBOR	**Butler Butte**	**4.11**	**102**	P	**Pn**	**04 46 24.3**	**+0.6**
HBO	**Huckleberry Mo**	**4.23**	**88**	P	**Pn**	**04 46 27.2**	**+1.8**
E03A	**Lebam**	**4.23**	**49**	⇑P	**Pn**	**04 46 24.2**	**-1.2**
	baz=4.2						
IRO	**Indian Ridge**	**4.27**	**86**	P	**Pn**	**04 46 26.1**	**+0.1**
G04A	**Mulino**	**4.29**	**69**	⇓P	**Pn**	**04 46 25.8**	**-0.3**
	baz=4.3						
H04A	**Detroit Lake**	**4.38**	**77**	⇑P	**Pn**	**04 46 27.0**	**-0.4**
	baz=4.4						
YBH	**Yreka Blue Hor**	**4.53**	**116**	LR	LR	04 48 18.2	
	comp=Z,197nm,20.9s,baz=24,slow=39						
F04A	**Amboy**	**4.59**	**61**	⇑P	**Pn**	**04 46 30.4**	**+0.1**
	baz=4.6,SNR=9.5						
LVP	**Lakeview Peak**	**4.65**	**59**	P	**Pn**	**04 46 31.2**	**0.0**
FL2	**Flat Top 2**	**4.75**	**58**	P	**Pn**	**04 46 33.1**	**+0.6**
MTMW	**Mount Mitchell**	**4.76**	**61**	P	**Pn**	**04 46 33.1**	**+0.5**
TDH	**Tom, Dick, Har**	**4.78**	**70**	P	**Pn**	**04 46 33.6**	**+0.7**
CDFW	**Cedar Flats**	**4.90**	**60**	P	**Pn**	**04 46 35.6**	**+1.0**
TDL	**Tradedollar La**	**4.90**	**57**	P	**Pn**	**04 46 35.0**	**+0.4**
VFP	**Flag Point**	**5.01**	**71**	P	**Pn**	**04 46 36.9**	**+0.9**
G05A	**Wamic**	**5.09**	**72**	⇓P	**Pn**	**04 46 37.7**	**+0.5**
	baz=5.1						
F05A	**White Salmon**	**5.19**	**64**	⇑P	**Pn**	**04 46 38.9**	**+0.4**
	baz=5.2						
ASR	**Mount Adams--S**	**5.20**	**61**	P	**Pn**	**04 46 39.4**	**+0.7**
HDW	**Hoodsport**	**5.22**	**41**	P	**Pn**	**04 46 39.0**	**0.0**
E05A	**Randle**	**5.28**	**57**	⇓P	**Pn**	**04 46 39.9**	**+0.2**
	baz=5.3,SNR=9.2						
D05A	**Enumclaw**	**5.48**	**50**	⇓P	**Pn**	**04 46 42.6**	**0.0**
	baz=5.5						
GSM	**Grass Mountain**	**5.60**	**51**	P	**Pn**	**04 46 44.5**	**+0.3**
NVAR	**Mina Array Bea**	**9.19**	**123**	Pn	**Pn**	**04 47 37.4**	**+3.8**
	0.0nm,0.3s,baz=305,slow=16,SNR=2.3						
YKA	**Yellowknife Ar**	**20.30**	**18**	P	**P**	**04 49 54.9**	**-1.9**
	1.7nm,0.8s,baz=206,slow=11,SNR=15						
ULM	**Lac du Bonnet**	**22.79**	**62**	P	**P**	**04 50 23.1**	**-0.5**
	2.1nm,0.8s,mb3.6,baz=254,slow=11,SNR=4.5						

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*ISCJB **04** 04:47:30.7±0.6, 4121N±002×2403E±005, h12km±9km, Error ellipse: s-maj=6.2km s-min=4.0km az=160.1*
*ATH **04** 04:47:30.7, 4133N×2390E, h27km, MD2.9/3*
*CSEM **04** 04:47:31.4±0.2, 4124N×2404E, h8km, ML1.9, Error ellipse: s-maj=3.5km s-min=2.5km az=77.0*
*THE **04** 04:47:31.9, 4120N×2401E, h1km, ML1.9*
ISC 04 04:47:31.4±0.6**, 4122N**±002×**2404E**±005**, h12**km±9km**, n14, σ0ˢ68**/26**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**0.19**	**314**	ePB	**Pg**	**04 47 35.9**	**+0.3**
NVR				eSB	**Sg**	**04 47 38.6**	**+0.1**
MMB	**Musomiste**	**0.44**	**328**	ePg	**Pg**	**04 47 39.7**	**-0.4**
MMB				eSg	**Sg**	**04 47 46.5**	**+0.5**
MMB	**Musomiste**	**0.44**	**328**	ePg	**Pg**	**04 47 39.7**	**-0.4**
MMB				eSg	**Sg**	**04 47 46.5**	**+0.5**
SOH	**Sokhos**	**0.65**	**233**	ePg	**Pg**	**04 47 44.0**	**-0.2**
SOH				eSg	**Sg**	**04 47 52.8**	**0.0**
KNT	**Kendrikon**	**0.87**	**267**	ePg	**Pg**	**04 47 47.9**	**-0.2**
KNT				eSg	**Sg**	**04 48 00.1**	**+0.6**
OUR	**Ouranopolis**	**0.88**	**183**	ePg	**Pg**	**04 47 49.1**	**+0.6**
OUR				eSg	**Sg**	**04 48 01.0**	**+1.0**
HORT	**Hortiatis**	**0.94**	**229**	ePg	**Pg**	**04 47 48.8**	**-0.9**
HORT				eSg	**Sg**	**04 48 02.0**	**0.0**
PLG	**Polygyros**	**0.96**	**208**	ePN	**Pg**	**04 47 49.8**	**-0.1**
VAY	**Valandovo**	**1.11**	**276**	ePg	**Pg**	**04 47 52.0**	**-0.9**
VAY				eSg	**Sg**	**04 48 08.0**	**+0.6**
RDO	**Rodhopi**	**1.13**	**93**	ePN	**Pn**	**04 47 54.1**	**+1.0**
GRG	**Griva**	**1.27**	**259**	ePg	**Pg**	**04 47 54.3**	**-1.5**
GRG				eSg	**Sg**	**04 48 12.5**	**+0.2**
PAIG	**Paliouri**	**1.32**	**192**	ePg	**Pg**	**04 47 55.8**	**-0.9**
PAIG				eSg	**Sg**	**04 48 15.0**	**+1.1**
LOS	**Limnos**	**1.51**	**148**	ePg	**Pn**	**04 47 57.9**	**-0.3**
LOS				eSg	**Sg**	**04 48 19.3**	**-0.7**
VTS	**Vitosha**	**1.51**	**336**	ePg	**Pg**	**04 47 59.7**	**-0.7**
VTS				eSg	**Sg**	**04 48 20.8**	**+0.8**

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*ISCJB **04** 04:48:25.5±0.7, 4122N±003×2405E±005, h9km±7km, Error ellipse: s-maj=6.5km s-min=3.8km az=135.2*
*ATH **04** 04:48:25.9, 4131N×2395E, h25km, MD3.1/3*
*CSEM **04** 04:48:26.3±0.1, 4126N×2407E, h2km, ML2.4, Error ellipse: s-maj=2.0km s-min=1.5km az=78.0*
*THE **04** 04:48:27.0, 4120N×2401E, h2km, ML2.4*
ISC 04 04:48:26.4±0.6**, 4122N**±003×**2405E**±005**, h13**km±7km**, n15, σ0ˢ58**/27**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**0.19**	**313**	ePB	**Pg**	**04 48 30.9**	**+0.1**
NVR				eSB	**Sg**	**04 48 33.6**	**-0.1**
MMB	**Musomiste**	**0.44**	**327**	ePg	**Pg**	**04 48 34.5**	**-0.6**
MMB				eSg	**Sg**	**04 48 40.8**	**-0.4**
MMB	**Musomiste**	**0.44**	**327**	ePg	**Pg**	**04 48 34.5**	**-0.7**
MMB				eSg	**Sg**	**04 48 40.8**	**-0.3**
SOH	**Sokhos**	**0.66**	**233**	ePg	**Pg**	**04 48 39.0**	**-0.3**
SOH				eSg	**Sg**	**04 48 47.7**	**-0.2**
KNT	**Kendrikon**	**0.87**	**267**	ePg	**Pg**	**04 48 43.0**	**-0.2**
KNT				eSg	**Sg**	**04 48 55.1**	**+0.4**
OUR	**Ouranopolis**	**0.89**	**183**	ePg	**Pg**	**04 48 43.7**	**+0.1**
OUR				eSg	**Sg**	**04 48 56.0**	**+0.9**
HORT	**Hortiatis**	**0.95**	**230**	ePg	**Pg**	**04 48 44.5**	**-0.2**
HORT				eSg	**Sg**	**04 48 57.7**	**+0.5**
HORT	**Hortiatis**	**0.95**	**230**	ePg	**Pg**	**04 48 44.5**	**-0.3**
HORT				eSg	**Sg**	**04 48 57.7**	**+0.5**
PLG	**Polygyros**	**0.96**	**209**	ePN	**Pn**	**04 48 44.9**	**-0.7**
VAY	**Valandovo**	**1.12**	**276**	ePg	**Pg**	**04 48 48.6**	**+0.6**
VAY				eSg	**Sg**	**04 49 02.8**	**+0.2**
RDO	**Rodhopi**	**1.13**	**93**	ePN	**Pn**	**04 48 48.8**	**+0.9**
GRG	**Griva**	**1.27**	**259**	ePg	**Pg**	**04 48 50.7**	**-0.2**
PAIG	**Paliouri**	**1.32**	**192**	ePg	**Pg**	**04 48 50.0**	**-1.8**
PAIG				eSg	**Sg**	**04 49 09.4**	**+0.4**
LOS	**Limnos**	**1.50**	**148**	ePg	**Pn**	**04 48 52.9**	**-0.2**
LOS				eSg	**Sg**	**04 49 14.9**	**0.0**
VTS	**Vitosha**	**1.51**	**336**	ePg	**Pg**	**04 48 55.3**	**-0.2**
VTS				eSg	**Sg**	**04 49 15.8**	**+0.8**

IDC 04 05:01:15.2±2.4**, 647S**×**12936E, h0**km**, mb3.6**/1**, mb1 3.7**/3**, mb1mx3.6**/13**, mbtmp3.5**/3**, ML3.5**/2**, Error ellipse: s-maj=154.2km s-min=32.5km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.23**	**161**	Pn	Pn	05 04 38.7	+0.7
	0.2nm,0.3s,baz=343,slow=13,SNR=5.1						
WRA				Sn	Sn	05 07 03.2	-13
	0.6nm,0.3s,baz=330,slow=21,SNR=6.6						
ASAR	**Alice Springs**	**17.64**	**166**	P	Pn	05 05 22.2	-0.2

	0.3nm,0.3s,baz=339,slow=10,SNR=25						
ASAR				S	Sn	05 08 25.7	-14
	0.2nm,0.3s,baz=321,slow=16,SNR=4.4						
MKAR	**Makanchi Array**	**67.44**	**327**	P	P	05 12 12.8	+0.2
	0.3nm,0.4s,baz=111,slow=6.3,SNR=3.6						

*ISCJB **04** 05:13:37.5±0.8, 59.2S±0.1×25.7W±0.4, h10km, mb3.9/6, Error ellipse: s-maj=31.8km s-min=11.8km az=109.4*
*IDC **04** 05:13:37.9±1.0, 59.21S×25.72W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.8/17, mbtmp4.0/5, ML4.1/1, Error ellipse: s-maj=31.8km s-min=26.5km az=43.0*
*NEIC **04** 05:13:39.2±9.2, 59.18S×25.60W, h11km±57km, mb3.8/3, Error ellipse: s-maj=29.5km s-min=13.8km az=220.0*
ISC 04 05:13:39.2±0.8**, 59.3S**±0.1×**25.7W**±0.4**, h10**km**, n13, σ0s71**/11**, mb3.9**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.52**	**155**	*e*	**Pn**	**05 16 50.7**	**-0.3**
VNA1				*e*		05 16 51.4	
VNA1				*e*		05 16 51.8	
VNA1				*e*		05 16 52.4	
VNA1				*e*		05 16 53.1	
VNA1				*e*		05 16 54.2	
VNA1				*e*		05 16 57.5	
VNA1				*e*		05 17 01.4	
VNA1				*e*		05 17 04.2	
VNA1				*e*		05 17 14.7	
SNAA	**Sanae**	**15.49**	**153**	Pn	**Pn**	**05 17 17.6**	**-0.1**
	0.8nm,0.3s,baz=327,slow=17,SNR=32						
SNAA				Sn	**Sn**	**05 19 59.2**	**-10**
	0.1nm,0.3s,baz=311,slow=20,SNR=2.9						
PLCA	**Paso Flores**	**33.44**	**283**	P	**P**	**05 20 18.1**	**-0.1**
	1.5nm,0.7s,mb4.0,baz=147,slow=7.8,SNR=5.0						
CFAA	**Coronel Fontan**	**39.61**	**295**	P	**P**	**05 21 10.4**	**-0.5**
	0.9nm,0.7s,mb3.6,baz=154,slow=7.6,SNR=20						
VNDA	**Vanda**	**43.39**	**182**	P	**P**	**05 21 42.1**	**+0.3**
	0.8nm,0.7s,mb3.6,baz=182,slow=8.0,SNR=5.2						
VNDA	**Vanda**	**43.39**	**182**	*e*P	**P**	**05 21 42.6**	**+0.8**
	1.1nm,0.8s,mb3.6						
LPAZ	**La Paz**	**52.90**	**306**	*e*P	**P**	**05 22 56.8**	**+1.4**
	0.8nm,0.6s,mb3.8						
SAML	**Samuel**	**57.64**	**315**	*e*P	**P**	**05 23 28.4**	**-1.2**
	1.1nm,0.8s,mb3.9						
TORD	**Torodi Ar. Bea**	**75.51**	**28**	P	**P**	**05 25 23.9**	**+0.2**
	2.1nm,0.6s,mb4.3,baz=199,slow=6.2,SNR=28						
TORD	**Torodi Ar. Bea**	**75.51**	**28**	P	**P**	**05 25 23.9**	**+0.2**
ARCES	**ARCESS Array B**	**133.63**	**22**	PKP	PKPdf	05 32 53.5	-2.5
	0.7nm,0.7s,baz=230,slow=2.2,SNR=4.3						
YKA	**Yellowknife Ar**	**139.06**	**315**	PKP	PKPdf	05 33 03.5	-2.6
	0.8nm,0.6s,baz=128,slow=2.4,SNR=15						
SONM	**Songino Array**	**150.00**	**91**	PKPbc	PKPbc	05 33 28.3	-1.6
	1.7nm,0.8s,baz=204,slow=2.2,SNR=8.1						

*ISCJB **04** 05:28:09.8±0.3, 12.12N±0.04×141.75E±0.05, h25km, mb4.6/40, MS4.0/16, Error ellipse: s-maj=7.7km s-min=6.4km az=13.6*
*IDC **04** 05:28:10.2±0.6, 12.23N×141.90E, h22km±3km, mb4.0/14, mb1 4.1/14, mb1mx4.0/21, mbtmp4.1/14, MS3.9/13, Ms1 3.9/13, ms1mx3.7/22, Error ellipse: s-maj=24.2km s-min=11.4km az=85.0*
*NEIC **04** 05:28:10.7±0.3, 12.17N×141.78E, mb4.6/15, Error ellipse: s-maj=12.2km s-min=7.7km az=90.0*
*BJI **04** 05:28:11.7, 12.59N×141.92E, h8km, mB5.0, mb4.7, Ms4.4, Msz4.1*
*MOS **04** 05:28:11.0±1.1, 12.20N×141.65E, h33km, mb4.8/18, Error ellipse: s-maj=15.3km s-min=8.5km az=100.6*
ISC 04 05:28:12.0±0.3**, 12.16N**±0.04×**141.78E**±0.06**, h26**km**, h26**km±3.2km**:pP-P, n95, σ1s20**/84**, mb4.6**/40**, MS4.0**/16**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.33**	**64**	Pn	**Pn**	**05 29 03.2**	**+0.8**
	236nm,0.3s,baz=195,slow=7.7,SNR=158						
GUMO				Sn	**Sn**	**05 29 42.9**	**+1.8**
	42nm,0.3s,baz=23,slow=21,SNR=5.7						
JOW	**Kunigami**	**19.34**	**321**	P	**Pn**	**05 32 38.5**	**+1.8**
	0.6nm,0.3s,baz=129,slow=14,SNR=2.7						
JOW				LR	LR	05 38 38.2	
	comp=Z,296nm,19.2s,baz=180,slow=32						
JHJ	**Hachijo jima 2**	**20.95**	**355**	LR	LR	05 39 48.2	
	comp=Z,200nm,18.4s,MS3.5,baz=214,slow=33						
PMG	**Port Moresby**	**22.08**	**166**	P	**P**	**05 33 04.0**	**-0.9**
	9.7nm,0.6s,mb4.4,baz=324,slow=8.7,SNR=3.5						
PMG				pP		05 33 11.2	
	27nm,0.7s,baz=350,slow=3.6,SNR=6.4						
PMG				LR	LR	05 40 55.2	
	comp=Z,282nm,21.8s,MS3.6,baz=24,slow=35						
PMG	**Port Moresby**	**22.08**	**166**	*e*P	**P**	**05 33 11.4**	**+6.4**
PMG				pmax	pmax		
	comp=Z,31nm,0.9s						
PMG	**Port Moresby**	**22.08**	**166**	*e*P	**P**	**05 33 11.4**	**+6.4**
	comp=Z,31nm,0.9s,mb4.7						
MJAR	**Matsushiro Arr**	**24.49**	**353**	P	**P**	**05 33 27.4**	**-1.6**
	comp=Z,2.3nm,0.8s,mb3.7,baz=176,slow=8.5,SNR=9.7						
MJAR				LR	LR	05 41 47.9	
	comp=Z,190nm,19.4s,MS3.6,baz=155,slow=34						
MAJO	**Matsushiro**	**24.49**	**353**	*e*P	**P**	**05 33 28.3**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.5						
MAJO	**Matsushiro**	**24.49**	**353**	*e*P	**P**	**05 33 28.3**	**-0.7**
	comp=Z,11nm,0.6s,mb4.5						
MAT	**Matsushiro**	**24.49**	**353**	P	**P**	**05 33 26.7**	**-2.3**
MAT	**Matsushiro**	**24.49**	**353**	P	**P**	**05 33 27.0**	**-2.0**
NJ2	**Nanjing**	**28.92**	**317**	*e*P	**P**	**05 34 11.0**	**+2.1**
NJ2				PP	PP	05 35 07.5	-6.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,100nm,7.1s						
NJ2				LR	LR		
	comp=N,910nm,21.3s						
NJ2				LR	LR		
	comp=E,540nm,12.2s						
NJ2				LR	LR		
	comp=Z,230nm,13.6s						
CTA	**Charters Tower**	**32.34**	**172**	*e*P	**P**	**05 34 42.3**	**+3.2**
	comp=Z,9.5nm,0.8s,mb4.7						
CTA	**Charters Tower**	**32.34**	**172**	P	**P**	**05 34 41.8**	**+2.7**
	comp=Z,4.6nm,0.9s,mb4.3,baz=39,slow=6.5,SNR=3.5						
CTA	**Charters Tower**	**32.34**	**172**	*e*P	**P**	**05 34 42.3**	**+3.2**
CTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTAO	**Charters Tower**	**32.34**	**172**	*e*P	**P**	**05 34 42.2**	**+3.1**
CTAO				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
CTAO	**Charters Tower**	**32.34**	**172**	*e*P	**P**	**05 34 42.2**	**+3.2**
	comp=Z,13nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**32.71**	**193**	*e*P	**P**	**05 34 42.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**32.71**	**193**	*e*P	**P**	**05 34 42.0**	**-0.3**
	comp=Z,4.3nm,0.6s,mb4.6						
WB2	**Warramunga Arr**	**32.72**	**193**	*e*P	**P**	**05 34 41.6**	**-0.8**
WRA	**Warramunga Arr**	**32.73**	**193**	P	**P**	**05 34 41.9**	**-0.5**
	comp=Z,5.6nm,0.7s,mb4.6,baz=11,slow=9.4,SNR=16						
WRA				pPcP		05 37 33.3	
	comp=Z,1.9nm,0.9s,baz=10,slow=2.9,SNR=4.5						
MDJ	**Mudanjiang**	**34.00**	**344**	P	**P**	**05 34 58.2**	**+4.7**
FITZ	**Fitzroy Crossi**	**34.02**	**208**	*e*P	**P**	**05 34 53.7**	**0.0**
	comp=Z,13nm,0.9s,mb4.9						
BJT	**Baijiatuau**	**35.79**	**325**	*e*P	**P**	**05 35 09.9**	**+0.9**
BJT				pmax	pmax		
	comp=Z,12nm,0.6s						
BJT	**Baijiatuau**	**35.79**	**325**	*e*P	**P**	**05 35 09.9**	**+0.9**
	comp=Z,12nm,0.6s,mb5.0						
BJI	**Beijing**	**35.80**	**325**	*e*P	**P**	**05 35 10.1**	**+1.0**
BJI				AMB	AMB		
	comp=Z,12nm,1.5s,mb4.6						
BJI				AMB	AMB		
	comp=Z,105nm,4.0s						
BJI				LR	LR		
	comp=N,228nm,24.8s,MS4.0						
BJI				LR	LR		
	comp=E,200nm,22.5s,MS4.0						
BJI				LR	LR		
	comp=Z,200nm,22.5s,MS3.8						
AS31	**Alice Springs**	**36.42**	**192**	*e*P	**P**	**05 35 14.6**	**+0.2**
ASAR	**Alice Springs**	**36.42**	**192**	P	**P**	**05 35 14.6**	**+0.1**
	comp=Z,2.1nm,0.7s,mb4.2,baz=19,slow=12,SNR=15						
ASAR				pPcP		05 37 44.8	
	comp=Z,3.1nm,0.9s,baz=11,slow=4.3,SNR=9.3						
KLR	**Kul'dur**	**37.89**	**349**	*e*P	**P**	**05 35 24.2**	**-2.6**
KLR				pmax	pmax		
	comp=Z,40nm,1.8s,mb4.8						
HHC	**Hu-ho-hao-te**	**38.98**	**323**	*e*P	**P**	**05 35 37.0**	**+1.0**
HHC				PP	PP	05 37 14.0	+8.5
HHC				PCP	PcP	05 37 45.0	-1.1
HHC				PCS	PcS	05 41 33.6	-2.0
HHC				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.7						
HHC				AMB	AMB		
	comp=Z,132nm,4.5s						
HHC				LR	LR		
	comp=N,168nm,17.1s,MS4.0						
HHC				LR	LR		
	comp=E,131nm,16.1s,MS4.0						
HHC				LR	LR		
	comp=Z,132nm,17.1s,MS3.8						
KMI	**Kunming**	**39.03**	**295**	P	**P**	**05 35 36.3**	**-0.1**
KMI				AP	pP	05 35 47.0	+2.7
KMI				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.4						
CD2	**Chengdu**	**39.73**	**304**	*e*P	**P**	**05 35 46.3**	**+4.0**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
BTO	**Baotou**	**39.77**	**321**	*e*P	**P**	**05 35 42.7**	**+0.1**
LZH	**Lanzhou**	**41.63**	**311**	*e*P	**P**	**05 35 59.2**	**+1.2**
LZH				PP	PP	05 37 40.8	+6.4
LZH				AMB	AMB		
	comp=Z,19nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,102nm,5.3s						
LZH				LR	LR		
	comp=E,176nm,14.5s						
LZH				LR	LR		
	comp=Z,258nm,18.2s,MS4.1						
PSI	**Prapat**	**43.44**	**261**	P	**P**	**05 36 12.3**	**-0.3**
	comp=Z,6.1nm,0.8s,mb4.4,baz=180,slow=8.1,SNR=2.5						
STKA	**Stephens Creek**	**43.78**	**180**	*e*P	**P**	**05 36 21.9**	**+6.5**
	comp=Z,8.9nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**43.78**	**180**	P	**P**	**05 36 14.8**	**-0.6**
	comp=Z,0.8nm,0.4s,mb3.8,baz=337,slow=18,SNR=2.2						
STKA				pP	pP	05 36 22.5	-0.8
	comp=Z,11nm,0.9s,baz=345,slow=7.5,SNR=15						
STKA				LR	LR	05 55 53.3	
	comp=Z,218nm,21.6s,MS4.0,baz=17,slow=38						
STKA	**Stephens Creek**	**43.78**	**180**	*e*P	**P**	**05 36 18.6**	**+3.2**
STKA				pP	pP	05 36 22.5	-0.8
STKA				LR	LR	05 55 53.3	
FORT	**Forrest**	**44.68**	**197**	*e*P	**P**	**05 36 24.2**	**+1.6**
	comp=Z,42nm,0.7s,mb5.4						
CIT	**Chita**	**45.82**	**336**	*e*P	**P**	**05 36 32.4**	**+0.7**
CIT				*e*		05 38 21.3	
CIT				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.2						
ULN	**Ulaanbaatar**	**45.91**	**328**	*e*P	**P**	**05 36 32.0**	**-0.3**
GTA	**Gaotai**	**45.93**	**314**	P	**P**	**05 36 37.1**	**+4.6**
GTA				AP	pP	05 36 47.0	+6.5
GTA				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.9						
SONM	**Songino Array**	**46.23**	**327**	P	**P**	**05 36 33.3**	**-1.6**
	comp=Z,5.4nm,1.1s,mb4.4,baz=126,slow=7.5,SNR=9.0						
SONM				pP	pP	05 36 41.4	-1.5
	comp=Z,9.6nm,1.1s,baz=137,slow=9.0,SNR=17						
SONM				LR	LR	05 55 32.0	
	comp=Z,111nm,18.4s,MS3.8,baz=6.3,slow=36						
SONM	**Songino Array**	**46.23**	**327**	P	**P**	**05 36 33.3**	**-1.6**
SONM				*PP	pP	05 36 41.4	-1.5
ZAK	**Zakamensk**	**49.41**	**328**	*e*P	**P**	**05 37 00.1**	**+0.6**
TOO	**Toolangi**	**49.58**	**176**	*e*P	**P**	**05 37 06.2**	**+5.4**
	comp=Z,11nm,0.8s,mb4.9						
TOO	**Toolangi**	**49.58**	**176**	*e*P	**P**	**05 37 06.2**	**+5.4**
TOO				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
BOD	**Bodaibo**	**50.23**	**341**	*e*P	**P**	**05 37 04.9**	**-0.8**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
YAK	**Yakutsk**	**50.56**	**353**	*e*P	**P**	**05 37 12.5**	**+4.3**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=N,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
NWAO	**Narrogin (SRO)**	**50.59**	**207**	P	**P**	**05 37 07.4**	**-1.0**
	comp=E,11nm,1.0s,mb4.7,baz=0.0,slow=8.1,SNR=2.2						
NWAO				pP	pP	05 37 15.6	-0.9
	comp=E,10nm,0.7s,baz=8.1,slow=4.2,SNR=3.4						
JIRN	**Jiri**	**54.07**	**295**	*e*P	**P**	**05 37 35.4**	**+1.1**
GUN	**Gumba**	**54.37**	**296**	*e*P	**P**	**05 37 40.5**	**+4.0**
DMN	**Daman**	**55.03**	**295**	*e*P	**P**	**05 37 44.3**	**+3.0**
GKN	**Gorkha**	**55.47**	**296**	*e*P	**P**	**05 37 50.8**	**+6.3**
WMQ	**Urumqi**	**55.98**	**315**	*e*P	**P**	**05 37 48.0**	**-0.1**
WMQ				PP	PP	05 39 56.0	+3.0
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,105nm,5.0s						
WMQ				LR	LR		
	comp=N,178nm,15.0s,MS4.4						
WMQ				LR	LR		
	comp=E,165nm,14.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,159nm,14.0s,MS4.3						
KOLN	**Koldanda**	**56.37**	**295**	*e*P	**P**	**05 37 56.5**	**+5.6**
MKAR	**Makanchi Array**	**60.45**	**317**	P	**P**	**05 38 18.9**	**-0.5**
	comp=Z,1.3nm,0.9s,mb4.0,baz=96,slow=8.7,SNR=11						
MKAR	**Makanchi Array**	**60.45**	**317**	P	**P**	**05 38 18.9**	**-0.5**
RPZ	**Rata Peaks**	**61.68**	**156**	P	**P**	**05 38 27.0**	**-0.7**
	comp=Z,11nm,0.9s,mb5.0,baz=83,slow=9.9,SNR=3.8						
KURK	**Kurchatov**	**63.76**	**321**	*e*P	**P**	**05 38 40.7**	**-0.8**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	**63.76**	**321**	*e*P	**P**	**05 38 40.7**	**-0.8**
	comp=Z,2.8nm,0.9s,mb4.3						
CHKZ	**Chkalovo**	**69.15**	**323**	*e*P	**P**	**05 39 17.0**	**+1.0**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
CHKZ	**Chkalovo**	**69.15**	**323**	*e*P	**P**	**05 39 17.0**	**+1.0**
	comp=Z,6.7nm,1.1s,mb4.5						
BRVK	**Borovoye**	**69.26**	**322**	*e*P	**P**	**05 39 15.8**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BRVK	**Borovoye**	**69.26**	**322**	*e*P	**P**	**05 39 15.8**	**-0.9**
	comp=Z,5.4nm,0.9s,mb4.5						
ZRNK	**Zerenda**	**70.02**	**322**	*e*P	**P**	**05 39 20.5**	**-0.9**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ZRNK	**Zerenda**	**70.02**	**322**	*e*P	**P**	**05 39 20.5**	**-0.9**
	comp=Z,2.0nm,0.7s,mb4.2						
PPT	**Papeete**	**73.92**	**112**	*e*S	S	05 49 41.4	+26
	comp=Z,73nm,26.5s						
PPT				*e*LR	LR	06 02 19.2	
	comp=Z,262nm,30.2s						
PPT	**Papeete**	**73.92**	**112**	LR	LR	06 06 13.7	
	comp=Z,90nm,21.5s,MS4.0,baz=299,slow=31						
YKA	**Yellowknife Ar**	**85.50**	**27**	P	**P**	**05 40 45.8**	**-1.7**
	comp=Z,0.1nm,0.4s,baz=289,slow=5.0,SNR=5.6						
YKA				pP	pP	05 40 51.7	-4.3
	comp=Z,0.3nm,0.5s,baz=290,slow=4.9,SNR=5.4						
YKA				LR	LR	06 20 55.0	
	comp=Z,43nm,18.5s,MS3.9,baz=230,slow=37						
YKA	**Yellowknife Ar**	**85.50**	**27**	P	**P**	**05 40 45.9**	**-1.7**
YKA				*PP	pP	05 40 51.7	-4.3
YKA	**Yellowknife Ar**	**85.50**	**27**	P	**P**	**05 40 45.9**	**-1.7**
YKA				pP	pP	05 40 51.7	-4.3
YKA				LR	LR	06 20 55.0	
KEV	**Kevo**	**86.93**	**342**	*e*p	**P**	**05 40 48.5**	**-6.1**
ARCES	**ARCESS Array B**	**87.50**	**342**	P	**P**	**05 40 55.8**	**-1.6**
	comp=Z,1.5nm,0.9s,mb4.2,baz=72,slow=7.9,SNR=4.9						
ARCES				pP	pP	05 41 03.1	-2.8
	comp=Z,0.8nm,0.5s,baz=65,slow=6.9,SNR=2.4						
ARCES				LR	LR	06 24 37.1	
	comp=Z,90nm,19.6s,MS4.2,baz=86,slow=39						
ARCES	**ARCESS Array B**	**87.50**	**342**	P	**P**	**05 40 55.8**	**-1.6**
ARCES				*PP	pP	05 41 03.1	-2.8
RKT	**Rikitea**	**88.61**	**114**	*e*LR	LR	06 09 52.7	
	comp=Z,194nm,32.2s						
WVOR	**Wild Horse Val**	**88.85**	**47**	*e*P	**P**	**05 41 04.0**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
WVOR	**Wild Horse Val**	**88.85**	**47**	*e*P	**P**	**05 41 04.0**	**+0.3**
	comp=Z,1.6nm,0.9s,mb4.3						
NVAR	**Mina Array Bea**	**90.16**	**51**	P	**P**	**05 41 09.2**	**-0.7**
	comp=Z,0.2nm,0.5s,mb3.8,baz=262,slow=6.3,SNR=3.1						
NVAR				pP	pP	05 41 14.8	-3.6
	comp=Z,1.5nm,0.8s,baz=259,slow=8.7,SNR=9.0						
VNDA	**Vanda**	**90.25**	**176**	P	**P**	**05 41 12.1**	**+1.8**
	comp=Z,0.5nm,0.7s,mb4.0,baz=309,slow=5.6,SNR=2.9						
VNDA				LR	LR	06 16 45.0	
	comp=Z,105nm,21.8s,MS4.2,baz=80,slow=32						
VNDA	**Vanda**	**90.25**	**176**	*e*P	**P**	**05 41 08.6**	**-1.7**
VNDA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VNDA	**Vanda**	**90.25**	**176**	*e*P	**P**	**05 41 08.6**	**-1.8**
	comp=Z,1.4nm,1.0s,mb4.2						
KAF	**Kangasniemi**	**90.75**	**335**	*e*p	**P**	**05 41 12.6**	**-0.1**
	comp=Z,0.7nm,0.3s,mb4.5						
KAF	**Kangasniemi**	**90.75**	**335**	*e*P	**P**	**05 41 12.6**	**-0.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.6						
FINES	**FINESS Array B**	**91.16**	**334**	P	**P**	**05 41 13.8**	**-0.8**
	comp=Z,1.1nm,0.7s,mb4.3,baz=77,slow=6.0,SNR=4.7						
FINES	**FINESS Array B**	**91.16**	**334**	P	**P**	**05 41 13.8**	**-0.8**
AKASG	**Malin Array Be**	**94.42**	**324**	LR	LR	06 25 53.7	
	comp=Z,74nm,19.9s,MS4.2,baz=155,slow=37						
BRTR	**Keskin Array B**	**95.83**	**313**	LR	LR	06 27 46.4	
	comp=Z,40nm,21.1s,MS3.9,baz=192,slow=37						
MAW	**Mawson**	**96.96**	**202**	P	**P**	**05 41 43.2**	**+2.0**
	comp=Z,1.7nm,0.9s,mb4.5,baz=27,slow=14,SNR=3.6						
NOA	**NORSAR Array B**	**97.28**	**338**	LR	LR	06 25 36.4	
	comp=Z,38nm,20.9s,MS3.9,baz=100,slow=35						
TORD	**Torodi Ar. Bea**	**133.10**	**301**	PKP	PKPdf	05 47 24.5	-0.7
	comp=Z,0.2nm,0.7s,baz=63,slow=1.3,SNR=2.1						
TORD	**Torodi Ar. Bea**	**133.10**	**301**	PKP	PKPdf	05 47 24.5	-0.7
PLCA	**Paso Flores**	**139.81**	**141**	PKP	PKPdf	05 47 35.9	-1.7
	comp=Z,1.3nm,1.0s,baz=232,slow=3.7,SNR=2.5						
LVC	**Limon Verde**	**148.98**	**114**	*e*PKPbc	PKPbc	05 47 60.0	+2.4
LVC				*e*PKPab	PKPab	05 48 07.2	+5.5
LPAZ	**La Paz**	**150.73**	**102**	*e*PKIKP	PKPbc	05 48 04.1	+2.3
LPAZ				*e*		05 48 12.4	

*BJI **04** 05:56:53.7, 6.07S×152.03E, h46km, mB5.0, mb4.8, Ms4.9, Msz4.6*
*MOS **04** 05:56:54.4±1.3, 6.08S×151.60E, h33km, mb5.0/12, Error ellipse: s-maj=12.5km s-min=9.0km az=80.6*
*NEIC **04** 05:56:56.1±1.2, 6.23S×151.56E, h38km±11km, mb4.8/18, Error ellipse: s-maj=9.6km s-min=7.2km az=136.0*
*ISCJB **04** 05:56:57.5±2.1, 6.17S±0.06×151.40E±0.09, h59km±18km, mb4.7/36, MS3.9/7, Error ellipse: s-maj=14.9km s-min=9.9km az=20.6*
*IDC **04** 05:56:57.2±2.5, 6.21S×151.60E, h46km±23km, mb4.4/11, mb1 4.6/13, mb1mx4.5/16, mbtmp4.7/13, ML4.5/2, MS3.6/7, Ms1 3.6/7, ms1mx3.4/17, Error ellipse: s-maj=18.1km s-min=15.9km az=107.0*
ISC 04 05:56:57.0±1.3**, 6.23S**±0.06×**151.58E**±0.07**, h44**km±13km**, h32**km±1.4km**:pP-P, n80, σ1s09**/75**, mb4.7**/36**, MS3.9**/7**, 2C-6D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.40**	**234**	P	**Pn**	**05 58 15.6**	**+0.6**
	43nm,0.3s,baz=61,slow=9.1,SNR=82						
PMG				S	**Sn**	**05 59 18.7**	**+2.8**
	35nm,0.3s,baz=99,slow=19,SNR=4.8						
PMG	**Port Moresby**	**5.40**	**234**	P	**Pn**	**05 58 15.6**	**+0.6**
PMG				S	**Sn**	**05 59 18.7**	**+2.8**
PMG				pmax	pmax		
	comp=Z,43nm,0.3s						
PMG				smax			
	comp=N,35nm,0.3s						
PMG	**Port Moresby**	**5.40**	**234**	*e*Pn	**Pn**	**05 58 15.1**	**+0.1**
	comp=N,706nm,0.8s						
PMG				*e*Sn	**Sn**	**05 59 12.9**	**-3.0**
HNR	**Honiara**	**8.88**	**112**	P	**Pn**	**05 59 00.9**	**-1.7**
	comp=N,15nm,0.3s,baz=244,slow=4.1,SNR=2.4						
HNR				LR	LR	06 02 12.6	
	comp=N,183nm,19.4s,baz=0.5,slow=36						
HNR	**Honiara**	**8.88**	**112**	*e*Pn	**Pn**	**05 59 00.5**	**-2.1**
	comp=N,125nm,0.9s						
CTA	**Charters Tower**	**14.72**	**200**	P	**Pn**	**06 00 25.8**	**+3.5**
	comp=N,0.2nm,0.3s,baz=28,slow=13,SNR=3.6						
CTA				LR	LR	06 05 00.4	
	comp=N,382nm,20.0s,baz=48,slow=33						
CTAO	**Charters Tower**	**14.72**	**200**	*e*P	**Pn**	**06 00 25.9**	**+3.6**
KAKA	**Kakadu**	**19.94**	**250**	*e*P	**Pn**	**06 01 25.0**	**-2.1**
	comp=N,35nm,0.9s						
KAKA				*e*		06 01 30.4	
KAKA				*e*sP	sP	06 01 38.8	-2.6
KAKA				*e*S	**S**	**06 05 17.3**	**+10**
GUMO	**Guam**	**20.78**	**341**	P	**P**	**06 01 34.7**	**+0.5**
	comp=N,87nm,0.9s,baz=155,slow=12,SNR=6.1						
WRAB	**Tennant Creek**	**21.59**	**229**⇓	*i*P	**P**	**06 01 42.8**	**-0.1**
WRAB	**Tennant Creek**	**21.59**	**229**	*e*P	**P**	**06 01 42.1**	**-0.8**
	comp=N,30nm,0.7s,mb4.8						
WB2	**Warramunga Arr**	**21.59**	**229**	*e*P	**P**	**06 01 42.4**	**-0.6**
WB2				*e*pP		06 01 54.0	
WRA	**Warramunga Arr**	**21.60**	**229**	P	**P**	**06 01 42.6**	**-0.5**
	comp=N,10nm,0.9s,mb4.2,baz=53,slow=9.6,SNR=35						
AS31	**Alice Springs**	**24.29**	**223**	*e*P	**P**	**06 02 10.2**	**+0.1**
AS31				*e*pP		06 02 21.5	
ASAR	**Alice Springs**	**24.29**	**223**	P	**P**	**06 02 10.1**	**0.0**
	comp=N,26nm,0.8s,mb4.7,baz=57,slow=8.7,SNR=142						
ASAR				LR	LR	06 12 44.3	
	comp=N,129nm,18.4s,MS3.4,baz=244,slow=39						
ASPA	**Alice Springs**	**24.29**	**223**	*e*P	**P**	**06 02 10.2**	**+0.1**
ASPA				*e*pP		06 02 21.5	
STKA	**Stephens Creek**	**27.18**	**199**	*e*P	**P**	**06 02 37.3**	**+1.1**
	comp=N,4.3nm,0.7s,mb4.1						
STKA				*e*		06 02 40.6	
STKA	**Stephens Creek**	**27.18**	**199**	P	**P**	**06 02 37.4**	**+1.1**
	comp=N,16nm,0.8s,mb4.6,baz=6.7,slow=9.9,SNR=12						
FITZ	**Fitzroy Crossi**	**27.93**	**243**	*e*P	**P**	**06 02 43.1**	**+0.2**
	comp=N,8.1nm,0.6s,mb4.5						
FITZ				*e*		06 02 49.3	
FITZ				*e*sP	sP	06 03 02.7	+2.6
FITZ	**Fitzroy Crossi**	**27.93**	**243**	P	**P**	**06 02 43.2**	**+0.2**
	comp=N,4.9nm,0.7s,mb4.2,baz=63,slow=8.2,SNR=25						
FORT	**Forrest**	**32.92**	**219**	*e*P	**P**	**06 03 25.1**	**-2.0**
	comp=N,12nm,0.7s,mb4.9						
MBWA	**Marble Bar**	**34.22**	**241**	*e*P	**P**	**06 03 38.7**	**+0.3**
	comp=N,62nm,1.8s,mb5.2						
CBIJ	**Chichi jima**	**34.35**	**345**	LR	LR	06 15 51.4	
	comp=N,88nm,21.6s,MS3.5,baz=202,slow=33						
RPZ	**Rata Peaks**	**41.08**	**158**	P	**P**	**06 04 37.5**	**+1.2**
	comp=N,2.5nm,0.6s,mb4.0,baz=56,slow=3.6,SNR=3.6						
MJAR	**Matsushiro Arr**	**44.35**	**345**	LR	LR	06 22 09.7	
	comp=N,100nm,20.1s,MS3.7,baz=170,slow=34						
SSE	**Sheshan**	**47.13**	**324**	*e*P	**P**	**06 05 24.0**	**-0.8**
SSE				AMB	AMB		
	comp=Z,33nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,151nm,4.2s						
NJ2	**Nanjing**	**49.21**	**323**	*e*P	**P**	**06 05 41.8**	**+1.0**
NJ2				AP	pP	06 05 51.7	-1.5
NJ2				S	**S**	**06 12 42.0**	**-1.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,80nm,4.9s						
NJ2				LR	LR		
	comp=N,270nm,14.2s,MS4.4						
NJ2				LR	LR		
	comp=E,170nm,18.6s,MS4.4						
NJ2				LR	LR		
	comp=Z,120nm,15.9s,MS4.0						
YSS	**Yuzh-Sakhalins**	**53.52**	**352**⇑	*e*P	**P**	**06 06 14.0**	**+0.9**
YSS				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
MDJ	**Mudanjiang**	**54.34**	**341**	P	**P**	**06 06 19.9**	**+0.9**
KMI	**Kunming**	**56.80**	**305**	P	**P**	**06 06 39.3**	**+2.6**
KMI				AP	pP	06 06 49.0	-0.3
KMI				XP	sP	06 06 53.1	-1.3
KMI				AMB	AMB		
	comp=Z,15nm,1.3s,mb4.9						
XAN	**Xi'an**	**56.83**	**318**	P	**P**	**06 06 36.6**	**-0.3**
XAN				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.8						
KLR	**Kul'dur**	**57.88**	**345**	*e*P	**P**	**06 06 40.8**	**-3.5**
CD2	**Chengdu**	**58.76**	**312**	*e*P	**P**	**06 06 50.4**	**0.0**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
CD2				AMB	AMB		
	comp=Z,60nm,6.2s						
LZH	**Lanzhou**	**61.42**	**317**	*e*P	**P**	**06 07 09.1**	**+0.4**
LZH				AP	pP	06 07 18.6	-2.8
LZH				XP	sP	06 07 22.7	-3.8
LZH				AMB	AMB		
	comp=Z,18nm,1.2s,mb5.1						

LZH AMB AMB
comp=Z,77nm,5.4s
LZH LR LR
comp=N,765nm,13.3s
LZH LR LR
comp=Z,983nm,17.5s,MS5.0
HIA Hailar 61.84 337 eP **P 06 07 11.0 -0.5**
comp=Z,4.1nm,0.5s,mb4.8
CIT Chita 66.47 335 eP **P 06 07 42.6 +0.8**
ULN Ulaanbaatar 66.57 329 eP **P 06 07 42.8 +0.3**
ULN pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
ULN Ulaanbaatar 66.57 329 eP **P 06 07 42.8 +0.3**
comp=Z,6.4nm,1.1s,mb4.6
SONM Songino Array 66.89 329 P **P 06 07 44.9 +0.4**
comp=Z,4.4nm,0.7s,mb4.6,baz=147,slow=4.7,SNR=29
SONM LR LR 06 36 35.1
comp=Z,74nm,18.2s,MS3.9,baz=140,slow=36
ZAK Zakamensk 70.08 329⇓iP **P 06 08 04.6 +0.1**
ZAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
YAK Yakutsk 70.13 349d iP **P 06 08 05.9 +1.2**
YAK pmax pmax
comp=Z,14nm,0.6s,mb5.1
BOD Bodaibo 70.69 340 eP **P 06 08 07.1 -1.1**
BOD pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VNDA Vanda 71.46 178 P **P 06 08 12.4 -0.4**
comp=Z,3.5nm,0.9s,mb4.3,baz=318,slow=5.6,SNR=16
VNDA Vanda 71.46 178 eP **P 06 08 15.7 +2.9**
VNDA e*PP pP 06 08 24.5 -1.3
VNDA pmax pmax
comp=Z,5.0nm,1.0s
VNDA Vanda 71.46 178 eP **P 06 08 15.7 +2.8**
comp=Z,4.6nm,1.0s,mb4.4
VNDA epP pP 06 08 24.5 -1.3
BILL Bilibino 74.81 6d iP **P 06 08 33.0 +0.4**
BILL i 06 08 38.8
BILL pmax pmax
comp=Z,35nm,1.0s,mb5.2
BILL Bilibino 74.81 6 eP **P 06 08 32.8 +0.2**
comp=Z,31nm,1.0s,mb5.2
WMQ Urumqi 75.97 318 eP **P 06 08 40.0 +0.7**
WMQ AMB AMB
comp=Z,12nm,1.0s,mb4.8
SVW2 Sparrevohn 78.60 23 eP **P 06 08 55.6 +1.6**
TTA Tatalina 79.53 22 eP **P 06 08 59.2 +0.1**
MKAR Makanchi Array 80.60 319 P **P 06 09 05.0 +0.2**
comp=Z,1.6nm,0.8s,mb4.0,baz=110,slow=7.0,SNR=14
IMA2 Indian Mountai 82.19 20 eP **P 06 09 13.7 +0.5**
COLA College 83.61 22 eP **P 06 09 19.8 -0.8**
COLA pmax pmax
comp=Z,21nm,0.8s,mb5.3
COLA College 83.61 22 eP **P 06 09 19.8 -0.9**
comp=Z,21nm,0.8s,mb5.3
QSPA South Pole Qui 83.75 180 eP **P 06 09 21.0 -0.3**
comp=Z,18nm,1.1s,mb5.1
KURK Kurchatov 84.14 322⇓iP **P 06 09 22.7 -0.6**
KURK Kurchatov 84.14 322 eP **P 06 09 22.6 -0.7**
comp=Z,7.0nm,1.0s,mb4.8
AAK Ala-Archa 84.77 314⇑eP **P 06 09 26.7 +0.2**
AAK pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
AAK Ala-Archa 84.77 314 eP **P 06 09 26.5 0.0**
comp=Z,5.7nm,0.8s,mb4.8
DAWY Dawson 86.58 24 eP **P 06 09 36.2 +0.7**
CHKZ Chkalovo 89.64 324 eP **P 06 09 48.2 -1.9**
CHKZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
CHKZ Chkalovo 89.64 324 eP **P 06 09 48.2 -1.8**
comp=Z,4.0nm,0.8s,mb4.8
BRVK Borovoye 89.72 323 eP **P 06 09 49.1 -1.3**
BRVK pmax pmax
comp=Z,3.0nm,1.1s,mb4.5
BRVK Borovoye 89.72 323 eP **P 06 09 49.1 -1.3**
comp=Z,3.0nm,1.1s,mb4.5
INK Inuvik 90.21 21 eP **P 06 09 51.8 -0.9**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 90.21 21 eP **P 06 09 51.8 -0.9**
comp=Z,9.0nm,1.0s,mb5.0
ZRNK Zerenda 90.46 323 eP **P 06 09 52.4 -1.5**
ZRNK pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
ZRNK Zerenda 90.46 323 eP **P 06 09 52.4 -1.5**
comp=Z,1.8nm,0.8s,mb4.5
NVAR Mina Array Bea 93.91 52 P **P 06 10 11.4 +1.5**
comp=Z,3.0nm,0.8s,mb4.8,baz=251,slow=4.3,SNR=18
ARU Arti 96.81 326⇓iP **P 06 10 20.6 -2.5**
ARU pmax pmax
comp=Z,5.0nm,1.7s,mb4.7
YKA Yellowknife Ar 97.24 28 P **P 06 10 24.9 -0.1**
comp=Z,1.7nm,0.7s,mb4.6,baz=270,slow=4.8,SNR=30
YKA LR LR 06 48 36.7
comp=Z,36nm,21.9s,MS3.8,baz=160,slow=32
YKA Yellowknife Ar 97.24 28 P **P 06 10 24.9 -0.1**
YKA LR LR 06 48 36.7
PDAR Pinedale Array 100.70 48 P Pdif 06 10 40.7 +0.2
comp=Z,0.6nm,0.8s,baz=282,slow=2.7,SNR=6.4
GERES GERESS Array B 124.61 327 PKP PKPdf 06 15 51.7 +0.2
comp=Z,0.6nm,0.4s,baz=51,slow=2.6,SNR=5.8
LPAZ La Paz 134.78 120 ePKIKP PKPdf 06 16 13.7 +2.9
SDV Santo Domingo 138.08 84 ePKPdf PKPdf 06 16 18.1 +1.2
SAML Samuel 142.21 113 ePKPdf PKPdf 06 16 26.5 +2.1
SAML epPKPdf pPKPdf 06 16 37.5 -0.7
TOA0 Torodi Ar. Sit 149.55 285 ePKPbc PKPbc 06 16 41.8 +0.3
TORD Torodi Ar. Bea 149.55 285 PKPbc PKPbc 06 16 42.0 +0.5
comp=Z,9.6nm,0.7s,baz=37,slow=2.8,SNR=42
BDFB Brasilia 150.87 138 PKPbc PKPbc 06 16 44.7 +0.1
comp=Z,5.1nm,0.8s,baz=267,slow=1.3,SNR=8.2

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*ISCJB **04** 07:10:20.1±0.8, 25.76S±0.06×179.57E±0.10, h515km±12km, mb4.1/15, Error ellipse: s-maj=13.5km s-min=8.9km az=175.9*
*IDC **04** 07:10:21.8±1.3, 25.84S×179.58E, h518km±15km, mb3.4/7, mb1 3.7/10, mb1mx3.5/15, mbtmp4.5/10, Error ellipse: s-maj=20.3km s-min=13.7km az=171.0*
*NEIC **04** 07:10:21.0±0.8, 25.77S×179.62E, h516km±10km, mb4.2/7, Error ellipse: s-maj=12.1km s-min=11.6km az=213.0*
ISC 04 07:10:21.1±0.7**, 25.91S**±0.06×**179.90E**±0.09**, h538**km±10km**, n50, σ1.15**/50**, mb4.1**/15**, 1D, South of Fiji Islands**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
RAO Raoul Island 3.86 150 P **P 07 11 42.6 +1.6**
261nm,0.3s,baz=260,slow=23,SNR=17
RAO Raoul Island 3.86 150 P **P 07 11 42.6 +1.6**
KUZ Kuaotunu 11.38 197 PN **P 07 12 55.6 +2.5**
PUZ Puketiti 12.21 186 ePN **P 07 13 02.2 +0.5**
URZ Urewera 12.54 190 P **P 07 13 04.5 -0.7**
18nm,0.3s,baz=20,slow=2.1,SNR=125
URZ S **S 07 15 18.3 -2.0**
2.0nm,0.3s,baz=84,slow=20,SNR=6.6
URZ Urewera 12.54 190 ePN **P 07 13 04.2 -0.9**
URZ SN **S 07 15 20.0 -0.3**
MWZ Matawai 12.55 189 ePN **P 07 13 05.3 0.0**
PATZ Paeroa 12.81 193 PN **P 07 13 10.5 +2.5**
DZM Mont Dzumac 12.87 284 P **P 07 13 08.3 -0.3**
0.5nm,0.3s,baz=90,slow=20,SNR=4.9
DZM S **S 07 15 28.1 +1.5**
0.5nm,0.3s,baz=114,slow=20,SNR=13
BKZ Black Stump Fm 13.53 191 PN **P 07 13 14.6 -0.8**
BKZ SN **S 07 15 42.1 +3.0**
AFI Afiamalu 14.27 35 P **P 07 13 22.3 -0.8**
3.3nm,0.3s,baz=353,slow=16,SNR=5.1
AFI S **S 07 15 43.4 -10**
0.7nm,0.3s,baz=257,slow=19,SNR=2.4
BFZ Birch Farm 15.05 191 ePN **P 07 13 28.9 -2.2**
BFZ SN **S 07 16 07.1 -0.5**
KIW Kapiti Island 15.48 194 ePN **P 07 13 32.9 -2.7**
SNZO South Karori 15.96 194 eP **P 07 13 39.9 -0.6**
37nm,0.6s
TCW Tory Channel 15.96 196 ePN **P 07 13 38.5 -2.1**
BHW Baring Head 16.01 194 ePN **P 07 13 41.8 +0.7**
QRZ Quartz Range 16.09 201 PN **P 07 13 42.2 +0.4**
THZ Tophouse 16.84 198 ePN **P 07 13 48.2 -0.7**
DSZ Denniston Nort 17.16 201 PN **P 07 13 52.3 +0.6**
KHZ Kahutara 17.28 196 PN **P 07 13 52.1 -0.8**
WVZ Waitaha Valley 18.70 201 PN **P 07 14 06.2 +0.3**
RPZ Rata Peaks 19.17 200 P **P 07 14 10.9 +0.7**
1.2nm,0.3s,baz=24,slow=2.3,SNR=12
HNR Honiara 25.03 307 eP **P 07 14 60.0 -2.7**
48nm,0.9s,mb5.1

CTA Charters Tower 31.45 274 P **P 07 15 59.1 +0.6**
8.8nm,0.4s,mb4.6,baz=94,slow=10,SNR=20
CTAO Charters Tower 31.45 274 eP **P 07 15 58.3 -0.2**
8.9nm,0.4s,mb4.7
STKA Stephens Creek 33.93 251 P **P 07 16 19.4 -0.1**
0.6nm,0.3s,mb3.6,baz=310,slow=18,SNR=3.3
AS31 Alice Springs 41.65 263 eP **P 07 17 22.7 +0.2**
ASAR Alice Springs 41.65 263 P **P 07 17 22.8 +0.3**
3.1nm,0.4s,mb4.2,baz=90,slow=7.2,SNR=58
ASAR ScP ScP 07 22 10.8 +5.3
0.8nm,0.9s,baz=91,slow=4.1,SNR=4.7
ASAR S **S 07 23 00.0 -0.2**
0.6nm,0.8s,baz=97,slow=16,SNR=4.5
ASPA Alice Springs 41.66 263⇓iP **P 07 17 22.8 +0.3**
WB2 Warramunga Arr 42.20 268 eP **P 07 17 26.4 -0.4**
WRAB Tennant Creek 42.21 268 eP **P 07 17 26.1 -0.8**
3.1nm,0.4s,mb4.2
WRA Warramunga Arr 42.22 268 P **P 07 17 26.5 -0.4**
2.7nm,0.5s,mb4.0,baz=104,slow=7.8,SNR=20
WRA S **S 07 23 08.6 +0.3**
0.2nm,0.3s,baz=102,slow=15,SNR=11
KAKA Kakadu 46.43 277 eP **P 07 17 58.8 -0.6**
5.5nm,0.3s,mb4.6
FITZ Fitzroy Crossi 50.61 267 eP **P 07 18 31.1 +0.6**
4.6nm,0.5s,mb4.1
MBWA Marble Bar 54.96 261 eP **P 07 19 01.8 +0.3**
15nm,1.4s,mb4.0
QSPA South Pole Qui 64.19 180 eP **P 07 20 06.8 +3.8**
3.1nm,0.5s,mb4.0
MJAR Matsushiro Arr 73.50 326 P **P 07 20 59.3 +0.3**
4.7nm,0.7s,mb4.0,baz=162,slow=5.4,SNR=10
MAJO Matsushiro 73.50 326 eP **P 07 20 59.3 +0.3**
3.9nm,0.4s,mb4.2
SNAA Sanae 82.67 179 P **P 07 21 49.8 +1.5**
0.9nm,0.7s,mb3.4
NVAR Mina Array Bea 86.25 44 P **P 07 22 09.8 +4.0**
1.2nm,0.7s,mb3.6,baz=230,slow=11,SNR=11
NVAR Mina Array Bea 86.25 44 P **P 07 22 09.8 +4.0**
PLCA Paso Flores 86.94 134 P **P 07 22 14.2 +5.2**
1.0nm,0.6s,mb3.6,baz=204,slow=3.0,SNR=4.2
ARCES ARCESS Array B 133.82 348 PKhKP 07 28 29.6
0.6nm,0.9s,baz=90,slow=1.2,SNR=3.6
ARCES SKPbc SKPbc 07 31 19.7 +4.1
2.0nm,0.5s,baz=32,slow=3.5,SNR=20
ARCES ARCESS Array B 133.82 348 PKP 07 28 29.6
ARCES SKPbc SKPbc 07 31 19.7 +4.1
FINES FINESS Array B 140.30 341 PKhKP 07 28 41.8
2.2nm,1.1s,baz=64,slow=6.6,SNR=3.8
FINES SKPbc SKPbc 07 31 38.9 +4.5
1.7nm,0.6s,baz=64,slow=4.4,SNR=7.9
NB2 NORSAR Subarra 144.04 351 PKPa PKPdf 07 28 55.7 +0.3
comp=Z,1.0nm,0.5s,baz=19,slow=3.3
NOA NORSAR Array B 144.04 351 PKP PKPdf 07 28 56.0 +0.5
comp=Z,2.0nm,0.7s,baz=21,slow=2.5,SNR=10
NOA NORSAR Array B 144.04 351 PKP PKPdf 07 28 56.0 +0.5
AKASG Malin Array Be 146.58 326 PKPbc PKPbc 07 29 03.1 +0.8
comp=Z,0.9nm,0.4s,baz=46,slow=4.2,SNR=9.4
BRTR Keskin Array B 148.67 305 PKPbc PKPbc 07 29 14.0 +6.3
comp=Z,1.2nm,0.6s,baz=149,slow=2.6,SNR=5.7

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*SZGRF **04** 07:45:46.5, 51.12N×170.95E, h43km, mb5.2, MS4.6, Near Islands, Aleutian Islands, United States*
*ISCJB **04** 07:45:46.0±0.1, 52.08N±0.03×171.07E±0.02, h10km, mb5.4/200, MS4.9/169, Error ellipse: s-maj=4.0km s-min=1.5km az=9.4*
*BJI **04** 07:45:46.7, 52.38N×170.69E, h7km, mB5.5, mb5.3, Ms5.4, Msz5.1*
*HRVD **04** 07:45:47.7±0.1, 52.12N×171.11E, h12km, MW5.5/100, Centroid moment Tensor Solution. LP body waves: s80,c168;Mantle waves: s100,c214; Half duration: 1.3 Moment tensor: Scale 10^17Nm; Mrr-1.74±.03; Mθθ0.81±.03; Mφφ0.92±.02; Mrθ0.03±.06; Mθφ-1.55±.02; Mφr0.07±.06; Best double couple: M0 2.08200×10^17 NP1:φs312.00000°,δ45.00000°,λ-95.00000°. NP2: φs140.00000°,δ46.00000°,λ-85.00000°. Principal axes: T 2.4200, Plg0.0000°, Azm226.0000°; N -0.6780, Plg4.0000°, Azm316.0000°; P -1.7440, Plg86.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **04** 07:45:47.7±0.1, 52.12N×171.04E, h10km, mb5.4/117, MS4.9/108, ML5.3(AEIC) Error ellipse: s-maj=3.8km s-min=1.9km az=182.0*
*MOS **04** 07:45:50.3±0.9, 52.16N×170.80E, h33km, mb5.4/77, MS4.9/47, Error ellipse: s-maj=11.7km s-min=7.2km az=41.5*
*IDC **04** 07:45:51.5±4.4, 52.12N×171.19E, h37km±35km, mb4.7/24, mb1 4.9/24, mb1mx4.9/24, mbtmp5.0/24, MS4.7/30, Ms1 4.7/30, ms1mx4.5/39, Error ellipse: s-maj=14.7km s-min=9.3km az=151.0*
*KRSC **04** 07:45:52, 52.28N×170.10E, h15km, ML5.8*
ISC 04 07:45:47.7±0.1**, 52.14N**±0.03×**171.08E**±0.02**, h10**km**, (h30**km±4.0km**:pP-P), n982, σ0.78**/990**, mb5.4**/200**, MS4.9**/169**, 113C-150D, Near Islands**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
SMY Shemya 1.94 71 P **Pn 07 46 19.5 -1.3**
SMY S **Sn 07 46 42.5 -2.7**
AMKA Amchitka 5.17 95 P **Pn 07 47 04.8 -0.3**
MKZ Mys Kozlova 6.10 297 P **Pn 07 47 17.4 -0.5**
MKZ S **Sn 07 48 18.8 -8.9**
MKZ Mys Kozlova 6.10 297 eP **Pn 07 47 17.4 -0.5**
MKZ i S **Sn 07 48 18.8 -8.9**
KBTR Krutoberegovo 6.33 313 P **Pn 07 47 20.4 -0.7**
KBTR S **Sn 07 48 24.0 -9.5**
KBTR Krutoberegovo 6.33 313 eP **Pn 07 47 20.4 -0.7**
KBTR i S **Sn 07 48 24.0 -9.5**
SPN Mys Shipunski 6.80 282 P **Pn 07 47 27.5 0.0**
SPN S **Sn 07 48 36.4 -8.6**
SPN Mys Shipunski 6.80 282 eP **Pn 07 47 27.5 0.0**
SPN i S **Sn 07 48 36.4 -8.6**
SMKR Semkarok 7.16 312 eP **Pn 07 47 33.1 +0.6**
ZLN Zelenaya 7.18 307 eP **Pn 07 47 34.4 +1.6**
ZLN i S **Sn 07 48 48.4 -6.0**
TUMR Tumrok 7.21 300 P **Pn 07 47 34.1 +0.9**
TUMR i S **Sn 07 48 47.7 -7.4**
NLC Nalytchevo 7.21 283 P **Pn 07 47 33.2 0.0**
NLC S **Sn 07 48 46.1 -9.0**
NLC Nalytchevo 7.21 283 eP **Pn 07 47 33.2 0.0**
NLC i S **Sn 07 48 46.1 -9.0**
CIRR Tsirk 7.26 307 eP **Pn 07 47 34.9 +1.1**
KII Karymskiy 7.26 290 P **Pn 07 47 34.0 +0.2**
KII S **Sn 07 48 47.5 -8.7**
KII Karymskiy 7.26 290 eP **Pn 07 47 34.0 +0.2**
KII i S **Sn 07 48 47.5 -8.7**
BDR Baidarnaya 7.27 311 eP **Pn 07 47 35.2 +1.2**
SRKR Sorokina 7.34 312 eP **Pn 07 47 36.2 +1.3**
SRKR i S **Sn 07 48 51.4 -6.9**
KMNR Kamenistaya 7.35 304 eP **Pn 07 47 35.8 +0.7**
KMNR i S **Sn 07 48 50.8 -7.7**
KRSR Krestovskiy 7.40 308 eP **Pn 07 47 36.3 +0.6**
KLY Klyuchi 7.40 309 P **Pn 07 47 35.4 -0.4**
KLY S **Sn 07 48 49.8 -10**
KLY Klyuchi 7.40 309 eP **Pn 07 47 35.4 -0.4**
KLY i S **Sn 07 48 49.8 -10**
KPT Kopyto 7.45 305 eP **Pn 07 47 37.5 +1.1**
AVH Avacha 7.58 283 eP **Pn 07 47 39.2 +0.9**
PET Petropavlovsk 7.62 282 P **Pn 07 47 38.7 -0.1**
PET S **Sn 07 48 55.5 -10**
PET Petropavlovsk 7.62 282κ iP **Pn 07 47 38.9 +0.1**
PET eS **Sn 07 48 58.1 -7.1**
PET pmax pmax
comp=Z,800nm,1.2s
PET pmax pmax
comp=Z,710nm,0.4s
PET smax
comp=N,4μm,1.8s
PET smax
comp=N,2μm,0.6s
PET smax
comp=E,1μm,0.5s
PET MLR MLR
comp=Z,7μm,12.0s
PET MLR MLR
comp=Z,8μm,11.0s
PET Petropavlovsk 7.62 282 ePn **Pn 07 47 37.1 -1.7**
PET eSn **Sn 07 49 01.0 -4.2**
PET Petropavlovsk 7.62 282 eP **Pn 07 47 38.7 -0.1**
PET i S **Sn 07 48 55.5 -10**

KOZR Kozyr 7.66 305 P **Pn 07 47 40.8 +1.5**
KOZR S **Sn 07 48 59.2 -6.9**
KOZ Kozyrevsk 7.67 305 P **Pn 07 47 40.8 +1.4**
KOZ S **Sn 07 48 59.2 -7.1**
KOZ Kozyrevsk 7.67 305 eP **Pn 07 47 40.8 +1.4**
KOZ i S **Sn 07 48 59.2 -7.1**
RUS Russkaya 7.71 277 P **Pn 07 47 40.0 -0.1**
RUS S **Sn 07 48 57.8 -10**
RUS Russkaya 7.71 277 eP **Pn 07 47 40.0 -0.1**
RUS i S **Sn 07 48 57.8 -10**
SRDR Sredinnyy 7.86 307 eP **Pn 07 47 44.0 +1.9**
GRL Gorelyy 7.98 278 eP **Pn 07 47 44.7 +1.0**
GRL i S **Sn 07 49 05.9 -8.0**
GNL Ganaly 8.09 286 eP **Pn 07 47 46.1 +0.8**
MIPR Malaya Ipel'ka 8.80 277 eP **Pn 07 47 55.8 +0.9**
MIPR i S **Sn 07 49 27.3 -6.8**
ATKA Atka Island 9.06 84 P **Pn 07 47 57.5 -1.0**
SKR Severo-Kuril's 9.46 267 P **Pn 07 48 01.2 -2.9**
SKR pmax pmax
comp=N,250nm,0.9s
SKR pmax pmax
comp=E,330nm,0.9s
SKR pmax pmax
comp=Z,900nm,0.9s
SKR pmax pmax
comp=N,1μm,4.0s
SKR pmax pmax
comp=E,3μm,4.0s
SKR pmax pmax
comp=Z,2μm,4.0s
SKR MLR MLR
comp=N,23μm,12.0s
SKR MLR MLR
comp=E,12μm,12.0s
SKR MLR MLR
comp=Z,8μm,12.0s
SKR Severo-Kuril's 9.46 267 eP **Pn 07 48 01.2 -2.9**
ALID Alaid 9.77 269 eP **Pn 07 48 08.5 +0.3**
ALID i S **Sn 07 49 49.3 -8.7**
SPIA Saint Paul Isl 11.92 58 ePn **Pn 07 48 38.1 +0.4**
MA2 Magadan 13.58 311d iP **Pn 07 49 02.0 +1.6**
MA2 eS **Sn 07 51 32.7 +1.4**
MA2 pmax pmax
comp=E,70nm,0.8s
MA2 pmax pmax
comp=Z,90nm,0.8s
MA2 MLR MLR
comp=Z,7μm,12.3s
MA2 Magadan 13.58 311 ePn **Pn 07 49 01.9 +1.6**
comp=Z,63nm,0.7s
AKUT Akutan 14.03 73⇑ePn **Pn 07 49 06.0 -0.4**
FALS False Pass 15.39 70 ePn **Pn 07 49 24.8 -0.2**
BILL Bilibino 16.12 353d iP **Pn 07 49 36.4 +2.0**
BILL pmax pmax
comp=Z,163nm,1.2s
BILL MLR MLR
comp=Z,5μm,18.0s
BILL Bilibino 16.12 353 ePn **Pn 07 49 34.1 -0.3**
comp=Z,140nm,1.0s
KUR Kuril'sk 16.77 255 eP **Pn 07 49 40.0 -2.6**
KUR eS **Sn 07 52 51.0 +2.2**
KUR pmax pmax
comp=N,3μm,3.4s
KUR pmax pmax
comp=E,9μm,3.4s
KUR pmax pmax
comp=Z,7μm,3.4s
KUR pmax pmax
comp=N,190nm,1.0s
KUR pmax pmax
comp=E,410nm,1.0s
KUR pmax pmax
comp=Z,1μm,1.0s
KUR smax
comp=N,8μm,5.0s
KUR smax
comp=E,3.0nm,5.0s
SDPT Sand Point 17.08 68 eP **Pn 07 49 46.4 -0.1**
comp=E,384nm,1.4s
CHGN Chignik 18.24 65 eP **Pn 07 50 00.7 -0.2**
YUK Yuzh-Kuril'sk 18.62 254 eP **Pn 07 50 05.0 -0.6**
YUK i S **Sn 07 53 36.0 +2.2**
YUK pmax pmax
comp=Z,4μm,8.0s
YUK pmax pmax
comp=N,3μm,6.0s
YUK pmax pmax
comp=E,4μm,5.0s
YUK smax
comp=N,5μm,5.0s
YUK smax
comp=E,3μm,4.0s
YSS Yuzh-Sakhalins 19.03 265κ iP **Pn 07 50 11.0 +0.5**
YSS eS **Sn 07 53 43.0 -0.6**
YSS pmax pmax
comp=N,40nm,1.0s
YSS pmax pmax
comp=E,80nm,1.0s
YSS pmax pmax
comp=Z,70nm,1.0s
YSS pmax pmax
comp=N,2μm,8.0s
YSS pmax pmax
comp=E,2μm,8.0s
YSS pmax pmax
comp=Z,2μm,8.0s
YSS MLR MLR
comp=N,1μm,14.0s
YSS MLR MLR
comp=Z,2μm,14.0s
YSS MLR MLR
comp=E,2μm,12.0s
YSS Yuzh-Sakhalins 19.03 265 ePn **Pn 07 50 11.4 +0.9**
comp=E,70nm,0.9s
SVW2 Sparrevohn 20.21 51 eP **P 07 50 22.5 -0.2**
TTA Tatalina 20.45 45 eP **P 07 50 25.3 0.0**
ASAJ Asahikawa 20.53 258 P **P 07 50 26.9 +0.8**
comp=E,49nm,0.8s,baz=76,slow=6.8,SNR=19
ASAJ LR LR 07 56 59.4
comp=E,1μm,20.0s,MS4.3,baz=71,slow=32
ASAJ Asahikawa 20.53 258 P **P 07 50 27.0 +0.8**
ASAJ pmax pmax
comp=Z,49nm,0.9s
ASAJ MLR MLR
comp=Z,1μm,20.0s
KDAK Kodiak Island 21.42 60 P **P 07 50 34.0 -1.8**
comp=Z,352nm,0.7s,mb5.8,baz=270,slow=6.2,SNR=140
KDAK S **S 07 54 29.1 -4.3**
comp=Z,59nm,0.9s,baz=0.0,slow=20,SNR=10
KDAK LR LR 07 59 38.2
comp=Z,5μm,18.5s,MS4.9,baz=248,slow=39
KDAK Kodiak Island 21.42 60 eP **P 07 50 34.4 -1.4**
comp=Z,563nm,0.8s,mb6.0
KDAK eS **S 07 54 29.1 -4.4**
KDAK LR LR
comp=Z,1μm,20.0s,MS4.3
IMA2 Indian Mountai 22.43 38 eP **P 07 50 45.5 -1.1**
IMA2 ePcP PcP 07 54 41.1 0.0
SLKM Skilak Lake 22.73 53 eP **P 07 50 48.5 -1.3**
HABR Khabarovsk 23.14 275 i P **P 07 50 54.5 +0.3**
HABR eS **S 07 55 06.1 +0.6**
HABR pmax pmax
comp=Z,218nm,1.7s,mb5.3
HABR MLR MLR
comp=Z,3μm,16.0s,MS4.8
PMR Palmer 23.36 51 eP **P 07 50 55.1 -1.3**
comp=Z,27nm,0.4s,mb5.0
PMR LR LR
comp=Z,3μm,20.0s,MS4.7
YAK Yakutsk 24.15 310d iP **P 07 51 03.2 -0.7**
YAK i *PP 07 51 10.4
YAK e 07 51 36.2
YAK eSS 07 56 23.0
YAK pmax pmax
comp=Z,166nm,0.8s,mb5.5
YAK pmax pmax
comp=N,58nm,2.1s
YAK pmax pmax
comp=E,140nm,1.9s
YAK MLR MLR
comp=Z,2μm,15.0s,MS4.7
YAK MLR MLR
comp=N,1μm,17.0s,MS4.7
YAK MLR MLR
comp=E,2μm,18.0s,MS4.7
YAK Yakutsk 24.15 310 eP **P 07 51 03.3 -0.6**

comp=E,248nm,0.7s,mb5.8
YAK LR LR
comp=Z,3µm,19.0s,MS4.7
COLA College 24.43 43 *e*P **P** **07 51 05.7 -0.8**
comp=Z,600nm,0.9s,mb6.0
COLA LR LR
comp=Z,3µm,21.0s,MS4.7
KLR Kul'dur 24.88 279⇑ *i*P **P** **07 51 08.0 -2.5**
KLR pmax pmax
comp=E,190nm,1.8s
KLR pmax pmax
comp=Z,270nm,1.8s,mb5.5
KLR pmax pmax
comp=N,900nm,9.0s
KLR pmax pmax
comp=E,700nm,9.0s
KLR pmax pmax
comp=Z,2µm,9.0s
KLR MLR MLR
comp=E,1µm,13.0s
KLR MLR MLR
comp=Z,8µm,13.0s,MS5.4
EYAK Cordova Ski Ar 24.94 53 *e*P **P** **07 51 10.9 -0.2**
MENT Mentasta 25.99 48 *e*P **P** **07 51 20.3 -0.3**
CLNS Chul'man 26.82 298 *e*P **P** **07 51 26.6 -1.5**
CLNS *e**PP pP 07 51 31.7 +0.5
CLNS *e*PPP 07 52 05.1
CLNS *e* 07 54 49.7
CLNS *e*S **S** **07 55 57.7 -6.6**
CLNS pmax pmax
comp=Z,44nm,1.1s,mb4.9
CLNS pmax pmax
comp=N,17nm,0.9s
CLNS pmax pmax
comp=E,29nm,1.0s
CLNS smax
comp=E,367nm,9.1s
CLNS smax
comp=Z,153nm,11.3s
CLNS smax
comp=N,300nm,9.9s
CLNS MLR MLR
comp=N,4µm,15.0s,MS5.1
CLNS MLR MLR
comp=Z,3µm,15.0s,MS4.9
CLNS MLR MLR
comp=E,2µm,16.0s,MS5.1
TIXI Tiksi 26.93 332 *e*P **P** **07 51 30.0 +0.9**
TIXI *e*S **S** **07 55 55.0 -11**
TIXI pmax pmax
comp=Z,41nm,0.9s,mb5.0
TIXI MLR MLR
comp=Z,1µm,15.0s,MS4.6
TIXI Tiksi 26.93 332 *e*P **P** **07 51 27.7 -1.5**
TIXI *e*S **S** **07 56 05.1 -1.0**
TIXI LR LR
comp=Z,782nm,20.0s,MS4.3
VLA Vladivostok 27.61 267*c i*P **P** **07 51 35.2 0.0**
VLA *i **PP pP 07 51 44.7 +6.5
VLA *e*S **S** **07 56 15.0 -1.7**
VLA pmax pmax
comp=Z,68nm,1.6s,mb5.0
VLA MLR MLR
comp=Z,2µm,18.0s,MS4.7
VLA Vladivostok 27.61 267⇑ *i*P **P** **07 51 34.4 -0.8**
MJAR Matsushiro Arr 27.90 249 P **P** **07 51 38.2 +0.4**
comp=Z,17nm,1.0s,mb4.6,baz=45,slow=8.0,SNR=29
MJAR LR LR 08 02 41.5
comp=Z,949nm,18.1s,MS4.4,baz=65,slow=36
MAJO Matsushiro 27.90 249 *e*P **P** **07 51 38.6 +0.8**
MAJO *e*S **S** **07 56 22.1 +0.7**
MAJO pmax pmax
comp=Z,56nm,0.9s,mb5.2
MAJO MLR MLR
comp=Z,4µm,19.0s,MS5.0
MAJO Matsushiro 27.90 249 *e*P **P** **07 51 38.6 +0.8**
comp=Z,56nm,0.9s,mb5.2
MAJO *e*S **S** **07 56 22.1 +0.7**
MAJO LR LR
comp=Z,4µm,19.0s,MS5.0
MAT Matsushiro 27.90 249 P **P** **07 51 38.2 +0.4**
MAT S **S** **07 56 20.0 -1.4**
MAT Matsushiro 27.90 249 *e*P **P** **07 51 38.0 +0.2**
MAT *e*S **S** **07 56 20.0 -1.4**
MAT pmax pmax
comp=Z,40nm,1.0s,mb5.0
MAT MLR MLR
comp=Z,3µm,20.0s,MS4.9
MAT Matsushiro 27.90 249 *e*P **P** **07 51 38.0 +0.2**
comp=Z,40nm,1.0s,mb5.0
MAT *e*S **S** **07 56 20.0 -1.4**
MAT LR LR
comp=Z,3µm,20.0s,MS4.9
DAWY Dawson 27.98 45 *e*P **P** **07 51 38.5 0.0**
MDJ Mudanjiang 28.24 271 P **P** **07 51 40.0 -0.9**
MDJ AP pP 07 51 50.4 +6.5
MDJ S **S** **07 56 22.1 -4.6**
MDJ AMB AMB
comp=Z,15nm,1.0s,mb4.6
MDJ AMB AMB
comp=Z,391nm,8.3s
MDJ LR LR
comp=N,3µm,26.6s,MS4.8
MDJ LR LR
comp=E,1µm,29.9s,MS4.8
MDJ LR LR
comp=Z,741nm,20.2s
MDJ Mudanjiang 28.24 271 *e*P **P** **07 51 39.6 -1.2**
comp=Z,18nm,1.0s,mb4.7
MDJ LR LR
comp=Z,2µm,20.0s,MS4.6
JHJ Hachijo jima 2 29.51 242 LR LR 08 02 57.3
comp=Z,664nm,18.8s,MS4.3,baz=109,slow=35
SKAG Skagway 30.25 55 *e*P **P** **07 51 59.1 +0.4**
comp=Z,94nm,1.3s,mb5.4
SKAG *e*PcP PcP 07 54 59.4 +0.1
SKAG *e*S **S** **07 56 53.0 -5.2**
INK Inuvik 30.56 37 P **P** **07 52 01.1 -0.3**
comp=Z,29nm,0.5s,mb5.3,baz=268,slow=7.1,SNR=177
INK PcP PcP 07 54 59.5 -0.6
comp=Z,7.6nm,0.5s,baz=302,slow=4.6,SNR=6.0
INK Inuvik 30.56 37 *e*P **P** **07 52 01.2 -0.2**
comp=Z,74nm,0.9s,mb5.5
INK *e*PcP PcP 07 54 59.4 -0.6
INK *e*S **S** **07 57 03.4 +0.4**
SIT Sitka 30.75 59 *e*P **P** **07 52 04.0 +0.9**
comp=Z,108nm,0.8s,mb5.7
CN2 Changchun 31.21 273 *e*P **P** **07 52 06.3 -0.9**
CN2 *e*S **S** **07 57 10.3 -3.1**
CN2 AMB AMB
comp=Z,20nm,1.3s,mb4.8
CN2 AMB AMB
comp=Z,260nm,3.0s
CN2 LR LR
comp=N,3µm,17.0s,MS5.1
CN2 LR LR
comp=E,2µm,17.0s,MS5.1
CN2 LR LR
comp=Z,2µm,17.0s,MS4.9
HIA Hailar 32.09 286 *e*P **P** **07 52 14.4 -0.5**
HIA *e* 07 53 27.2
HIA *e* 07 55 03.7
HIA *e*S **S** **07 57 27.5 +0.5**
HIA pmax pmax
comp=Z,15nm,0.7s
HIA Hailar 32.09 286 *e*P **P** **07 52 14.4 -0.5**
comp=Z,15nm,0.7s,mb4.9
HIA *e*PP PP 07 53 27.2 -0.1
HIA *e*PcP PcP 07 55 03.7 -0.4
HIA *e*S **S** **07 57 27.5 +0.5**
CRAG Craig 32.37 62 *e*P **P** **07 52 18.7 +1.3**
comp=Z,68nm,1.1s,mb5.4
BOD Bodaibo 32.38 303⇑ *i*P **P** **07 52 16.3 -1.1**
BOD pmax pmax
comp=Z,62nm,0.7s,mb5.5
WAKE Wake Island 32.97 188 PFAKE 07 52 30.0 +7.4
WAKE LR LR
comp=Z,2µm,19.0s,MS4.8
INCN Inchon 34.19 262 P **P** **07 52 34.6 +1.4**
SNR=11
INCN Inchon 34.19 262 *e*P **P** **07 52 33.8 +0.6**
comp=Z,77nm,1.2s,mb5.5
INCN *e* 07 52 44.8
CIT Chita 34.55 293 *e*P **P** **07 52 36.8 +0.5**
CIT *e* 07 52 48.4
CIT *e* 07 53 51.8
CIT *e* 07 55 10.8
CIT pmax pmax
comp=Z,208nm,2.3s,mb5.7
DL2 Dalian 36.37 269 PR **P** **07 52 52.0 0.0**
DL2 S **S** **07 58 30.1 -3.1**
DL2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
DL2 AMB AMB
comp=Z,180nm,6.0s
DL2 LR LR
comp=N,890nm,12.9s,MS4.9
DL2 LR LR
comp=E,880nm,13.3s,MS4.9
DL2 LR LR
comp=Z,720nm,13.7s,MS4.6
KIP Kipapa 38.86 130 *e*P **P** **07 53 14.6 +1.5**
BJI Beijing 39.04 274 *e*P **P** **07 53 15.3 +0.7**
BJI PP PP 07 54 50.9 +6.9
BJI AMB AMB
comp=Z,14nm,1.3s,mb4.5
BJI AMB AMB
comp=Z,471nm,3.2s
BJI LR LR
comp=N,3µm,19.2s,MS5.1
BJI LR LR
comp=E,1µm,20.7s,MS5.1
BJI LR LR
comp=Z,1µm,18.9s,MS4.8
YKW3 Yellowknife Ar 39.19 45 *e*P **P** **07 53 15.7 -0.1**
YKA Yellowknife Ar 39.21 45 P **P** **07 53 15.8 -0.2**
comp=Z,38nm,0.7s,mb5.2,baz=291,slow=7.8,SNR=191
YKA PcP PcP 07 55 23.7 -1.4
comp=Z,4.6nm,0.6s,baz=291,slow=3.6,SNR=5.8
YKA LR LR 08 11 48.2
comp=Z,2µm,20.2s,MS5.0,baz=295,slow=40
YKA Yellowknife Ar 39.21 45 P **P** **07 53 15.8 -0.2**
YKA 07 55 23.8
YKA Yellowknife Ar 39.21 45 P **P** **07 53 15.8 -0.2**
YKA PcP PcP 07 55 23.8 -1.4
YKA LR LR 08 11 48.2
IRK Irkutsk 39.62 298 *e*P **P** **07 53 18.2 -1.2**
IRK *e* 07 55 26.5
IRK pmax pmax
comp=Z,98nm,2.1s,mb5.2
ULN Ulaanbaatar 40.18 290 *e*P **P** **07 53 22.8 -1.3**
ULN MLR MLR
comp=Z,1µm,20.0s,MS4.8
TLY Talaya 40.23 297 P **P** **07 53 25.0 +0.5**
comp=Z,151nm,0.9s,mb5.7,SNR=10
TLY Talaya 40.23 297 P **P** **07 53 25.3 +0.8**
SNR=11
TLY Talaya 40.23 297*d i*P **P** **07 53 24.4 -0.1**
TLY *e* 07 55 00.2
TLY *e*S **S** **07 59 34.9 +3.4**
TLY pmax pmax
comp=Z,40nm,1.1s,mb5.1
TLY MLR MLR
comp=Z,1µm,18.0s,MS4.8
TLY Talaya 40.23 297 *e*P **P** **07 53 23.3 -1.2**
TLY LR LR
comp=Z,2µm,19.0s,MS4.9
OBC Olympics--Boni 40.57 69 P **P** **07 53 28.4 +1.1**
SONM Songino Array 40.58 291 P **P** **07 53 28.3 +0.9**
comp=Z,20nm,0.6s,mb5.0,baz=60,slow=8.0,SNR=191
SONM PcP PcP 07 55 29.4 -0.1
comp=Z,11nm,0.9s,baz=93,slow=1.8,SNR=8.1
SONM LR LR 08 11 24.1
comp=Z,2µm,19.5s,MS4.9,baz=61,slow=38
SONM Songino Array 40.58 291 P **P** **07 53 28.3 +0.9**
SONM 07 55 29.4
PGC Sidney 40.62 68 *e*P **P** **07 53 27.3 -0.4**
comp=Z,63nm,0.8s,mb5.3
OOW Octopus West 40.66 70 P **P** **07 53 29.3 +1.2**
JOW Kunigami 40.74 248 LR LR 08 07 22.7
comp=Z,767nm,21.3s,MS4.5,baz=46,slow=32
B04A Port Angeles 40.89 69 ⇓P **P** **07 53 29.7 -0.3**
baz=41
MCW Mount Constitu 40.95 68 P **P** **07 53 31.2 +0.7**
A04A Legoe Bay, Lum 41.01 67 ⇑P **P** **07 53 31.2 +0.3**
baz=41,SNR=11
ZAK Zakamensk 41.06 296⇑ *i*P **P** **07 53 31.5 +0.2**
ZAK pmax pmax
comp=Z,26nm,1.6s,mb4.6
ZAK pmax pmax
comp=Z,11nm,1.4s,mb4.3
VDB Vedder Mountai 41.19 67 P **P** **07 53 32.3 -0.1**
A05A Maple Falls 41.22 67 ⇓P **P** **07 53 32.1 -0.5**
baz=41,SNR=8.4
D03A Wishkah Elem. 41.23 70 ⇑P **P** **07 53 33.4 +0.6**
baz=41
HDW Hoodsport 41.36 69 P **P** **07 53 34.6 +0.8**
C04A Brinnon 41.37 69 ⇓P **P** **07 53 33.9 -0.1**
baz=41
HHC Hu-ho-hao-te 41.38 279 *e*P **P** **07 53 33.8 -0.2**
HHC AP pP 07 53 38.2 +1.1
HHC XP sP 07 53 40.8 +2.4
HHC PP PP 07 55 12.3 +2.8
HHC PCP PcP 07 55 33.6 +1.5
HHC SCP ScP 07 59 21.3 -0.8
HHC PCS PcS 07 59 23.2 -0.1
HHC S **S** **07 59 46.5 -2.2**
HHC XS sS 07 59 54.1 +0.3
HHC SS SS 08 02 45.2 -7.3
HHC SCS ScS 08 03 35.6 -2.5
HHC AMB AMB
comp=Z,14nm,1.0s,mb4.5
HHC AMB AMB
comp=Z,385nm,7.1s
HHC LR LR
comp=N,3µm,19.0s,MS5.4
HHC LR LR
comp=E,3µm,15.4s,MS5.4
HHC LR LR
comp=Z,1µm,18.8s,MS4.7
MBW Mount Baker 41.43 67 P **P** **07 53 34.8 +0.4**
POHA Pohakuloa 41.47 128 PFAKE 07 53 50.0 +15
POHA LR LR
comp=Z,2µm,19.0s,MS4.9
CMW Cultus Mountai 41.49 68 P **P** **07 53 35.3 +0.4**
GNW Green Mountain 41.54 69 *e*P **P** **07 53 35.9 +0.6**
B05A Bryant 41.59 68 P **P** **07 53 35.8 +0.1**
baz=41,SNR=19
RES Resolute Bay 41.61 24 *e*P **P** **07 53 37.5 +1.6**
E03A Lebam 41.65 71 ⇓P **P** **07 53 36.4 +0.1**
baz=42,SNR=6.3
JCW Jim Creek 41.72 68 P **P** **07 53 37.1 +0.4**
SSE Sheshan 41.81 260 ⇓P **P** **07 53 38.3 +0.8**
SSE PP PP 07 55 12.9 -1.3
SSE PCP PcP 07 55 38.6 +5.1
SSE S **S** **07 59 52.4 -2.7**
SSE SCS ScS 08 03 43.1 +2.3
SSE AMB AMB
comp=Z,56nm,0.8s,mb5.2
SSE AMB AMB
comp=Z,510nm,8.5s
SSE LR LR
comp=N,1µm,24.1s,MS4.7
SSE LR LR
comp=E,731nm,24.1s,MS4.7
SSE LR LR
comp=Z,1µm,23.9s,MS4.8
F03A Seaside 41.99 71 ⇓P **P** **07 53 39.1 +0.1**
baz=42
HTW Haystack Looko 42.02 68 P **P** **07 53 39.2 0.0**
E04A Onalaska 42.12 70 ⇓P **P** **07 53 40.5 +0.5**
baz=42,SNR=5.9
C05A Tolt Reservoir 42.12 68 ⇓P **P** **07 53 39.9 -0.2**
baz=42,SNR=12
RMW Rattlesnake Mo 42.18 69 P **P** **07 53 41.0 +0.4**
D05A Enumclaw 42.22 69 ⇑P **P** **07 53 41.3 +0.4**
baz=42,SNR=12
H02A Toledo 42.43 73 ⇑P **P** **07 53 43.2 +0.6**
baz=42
PNT Penticton 42.44 65 P **P** **07 53 42.5 -0.2**
BTO Baotou 42.47 279 *e*P **P** **07 53 42.6 -0.3**
BTO S **S** **07 59 53.2 -12**
BTO AMB AMB
comp=Z,12nm,1.5s,mb4.3
G03A Yamhill 42.49 72 ⇑P **P** **07 53 43.4 +0.3**
baz=42
RCS Mount Rainier- 42.54 69 P **P** **07 53 44.4 +0.9**
FMW Mount Fremont 42.54 69 P **P** **07 53 43.6 +0.1**
TDL Tradedollar La 42.54 70 P **P** **07 53 44.1 +0.6**
LON Longmire 42.56 69 *e*P **P** **07 53 43.7 +0.1**
NJ2 Nanjing 42.56 263 *e*P **P** **07 53 44.3 +0.6**
NJ2 AP pP 07 53 48.8 +2.0
NJ2 S **S** **08 00 06.0 -0.2**
NJ2 XS sS 08 00 13.0 +1.7
NJ2 AMB AMB
comp=Z,70nm,1.0s,mb5.3
NJ2 AMB AMB
comp=Z,400nm,9.9s
NJ2 LR LR
comp=N,2µm,12.0s,MS5.3
NJ2 LR LR
comp=E,730nm,13.4s,MS5.3
NJ2 LR LR
comp=Z,1µm,17.0s,MS4.8
LVP Lakeview Peak 42.59 71 P **P** **07 53 44.3 +0.4**
F04A Amboy 42.65 71 ⇑P **P** **07 53 44.3 -0.1**
baz=42,SNR=9.9
NLW Nelson Butte 42.69 67 P **P** **07 53 45.1 +0.4**
E05A Randle 42.69 70 ⇓P **P** **07 53 44.1 -0.6**
baz=42,SNR=7.3
MTMW Mount Mitchell 42.72 71 P **P** **07 53 45.5 +0.5**
WPW White Pass 42.74 69 P **P** **07 53 45.1 0.0**
COR Corvallis 42.89 73 *e*P **P** **07 53 47.4 +1.1**
comp=Z,136nm,1.1s,mb5.6
COR LR LR
comp=Z,310nm,20.0s,MS4.2
TWW Teanaway 42.89 68 P **P** **07 53 46.9 +0.6**
I02A Mapleton 42.91 74 ⇑P **P** **07 53 46.6 +0.1**
baz=43
ALE Alert 42.91 9 P **P** **07 53 47.0 +0.5**
comp=Z,226nm,0.5s,mb6.2,SNR=20
LTY Liberty 42.94 68 P **P** **07 53 46.2 -0.5**
ETW Entiat 42.95 68 P **P** **07 53 47.0 +0.2**
ASR Mount Adams--S 43.01 70 P **P** **07 53 47.1 -0.2**
G04A Mulino 43.02 72 ⇑P **P** **07 53 47.3 -0.1**
baz=43
DHW2 Dyer Hill 2 43.06 67 P **P** **07 53 47.6 -0.1**
WTV Waterville 43.11 67 P **P** **07 53 47.9 -0.2**
EBG Ellensburg 43.19 69 P **P** **07 53 49.1 +0.4**
K01A Sixes 43.22 76 ⇓P **P** **07 53 49.2 +0.3**
baz=43
SSOR Sweet Springs 43.23 72 P **P** **07 53 49.7 +0.6**
F05A White Salmon 43.24 70 ⇑P **P** **07 53 49.0 -0.1**
baz=43
I03A Eugene 43.25 74 ⇓P **P** **07 53 49.7 +0.4**
baz=43
VLL Laurance Lake 43.35 71 P **P** **07 53 50.4 +0.4**
J02A Umpqua 43.43 75 ⇓P **P** **07 53 51.1 +0.5**
baz=43
HOOD Mount Hood Mea 43.44 71 *e*P **P** **07 53 51.2 +0.4**
H04A Detroit Lake 43.49 72 ⇑P **P** **07 53 51.0 -0.1**
baz=43,SNR=18
VFP Flag Point 43.55 71 P **P** **07 53 52.2 +0.5**
G05A Wamic 43.68 71 ⇑P **P** **07 53 52.8 +0.1**
baz=44,SNR=10
KRAR Krasnoyarsk 43.75 307⇑ *e*P **P** **07 53 51.4 -1.9**
KRAR pmax pmax
comp=Z,43nm,0.5s,mb5.4
KRAR MLR MLR
comp=Z,2µm,16.0s,MS5.2
J03A Ideyld Park 43.78 74 ⇑P **P** **07 53 53.7 +0.2**
baz=44,SNR=7.0
MDW Midway 43.81 69 P **P** **07 53 53.9 +0.1**
GUMO Guam 43.82 218 LR LR 08 13 51.9
comp=Z,418nm,18.0s,MS4.4,baz=28,slow=38
EDM Edmonton 43.82 57 *e*P **P** **07 53 53.6 -0.2**
K02A Glendale 43.83 75 ⇓P **P** **07 53 54.2 +0.3**
baz=44
OD2 Odessa Site #2 43.98 67 P **P** **07 53 54.7 -0.4**
M01C Crescent City 43.99 77 ⇑P **P** **07 53 55.7 +0.5**
baz=44
HAWA Hanford 44.07 69 *e*P **P** **07 53 55.6 -0.2**
HAWA LR LR
comp=Z,55nm,19.0s
H05A Madras 44.07 72 ⇓P **P** **07 53 55.6 -0.2**
baz=44
L02A Cave Junction 44.12 76 ⇓P **P** **07 53 56.7 +0.5**
baz=44
H2OWA Water 44.13 69 P **P** **07 53 56.2 -0.1**
BBOR Butler Butte 44.24 75 P **P** **07 53 57.6 +0.4**
I05A Bend 44.33 72 ⇓P **P** **07 53 57.8 -0.1**
baz=44
NEW Newport 44.40 65 *e*P **P** **07 53 57.8 -0.6**
comp=Z,58nm,0.9s,mb5.3
NEW LR LR
comp=Z,1µm,19.0s,MS4.9
JCC Jacoby Creek 44.67 78 ⇑P **P** **07 53 59.7 -0.9**
baz=44
KHMM Horse Mountain 44.81 78 *e*P **P** **07 54 02.8 +1.0**
F08A Pendleton 44.84 69 ⇓P **P** **07 54 01.4 -0.5**
baz=45,SNR=7.7
BUOR Burton Butte 44.86 75 P **P** **07 54 03.4 +1.3**
J05A Fort Rock 44.86 73 P **P** **07 54 02.8 +0.7**
baz=45,SNR=13
YBH Yreka Blue Hor 44.91 76 *e*P **P** **07 54 03.4 +0.9**
comp=Z,60nm,0.9s,mb5.4
YBH Yreka Blue Hor 44.91 76 ⇓P **P** **07 54 03.5 +1.0**
baz=45,SNR=11
K04A Chilquin 44.96 74 ⇓P **P** **07 54 03.2 +0.3**
baz=45
VSP Spence Mountai 44.99 75 P **P** **07 54 04.2 +1.0**
M02C Callahan 45.02 76 ⇓P **P** **07 54 04.4 +1.0**
baz=45,SNR=5.5
I06A Prineville 45.08 72 ⇓P **P** **07 54 03.6 -0.3**
baz=45,SNR=8.0
L04A Klamath Falls 45.13 75 ⇑P **P** **07 54 04.6 +0.3**
baz=45
O01C Eel River Cons 45.21 78 ⇓P **P** **07 54 05.4 +0.5**
baz=45
M04C Macdoel 45.40 75 ⇓P **P** **07 54 06.7 +0.3**
baz=45,SNR=7.4
I07A Izee 45.41 71 ⇑P **P** **07 54 06.2 -0.3**
baz=45,SNR=17
J06A Christmas Vall 45.52 73 ⇓P **P** **07 54 07.4 +0.1**
baz=45,SNR=13
H08A Prairie City 45.64 70 ⇑P **P** **07 54 07.7 -0.6**
baz=46,SNR=10
WDC Whiskeytown Da 45.71 77 *e*P **P** **07 54 09.5 +0.6**
comp=Z,62nm,1.1s,mb5.5
WDC Whiskeytown Da 45.71 77 ⇓P **P** **07 54 09.0 +0.1**
baz=46,SNR=9.1
K06A Valley Falls 45.73 73 ⇓P **P** **07 54 09.5 +0.4**
baz=46,SNR=9.8
WALA Waterton Lakes 45.74 63 *e*P **P** **07 54 08.9 -0.2**
O02C Red Bluff 45.81 78 ⇑P **P** **07 54 10.2 +0.5**
baz=46
L05A Lakeview 45.83 74 ⇑P **P** **07 54 10.5 +0.6**
baz=46,SNR=9.1
P01C Double 8 Ranch 45.91 79 ⇓P **P** **07 54 10.3 -0.2**
baz=46
BSMT Bassoo Peak 45.93 64 *e*P **P** **07 54 10.7 +0.1**
J07A Hines 45.94 72 ⇑P **P** **07 54 10.6 -0.1**
baz=46,SNR=12
I08A Drewsey 46.05 71 ⇑P **P** **07 54 11.3 -0.3**
baz=46,SNR=18
M05C Lookout 46.07 75 ⇓P **P** **07 54 11.9 +0.2**
baz=46,SNR=9.0
H09A Durkee 46.13 70 ⇑P **P** **07 54 12.0 -0.3**
baz=46,SNR=24
GASB Alder Springs 46.17 78 ⇓P **P** **07 54 13.1 +0.5**
baz=46,SNR=9.2
HATC Hat Creek Radi 46.21 76 ⇓P **P** **07 54 12.9 0.0**
baz=46,SNR=6.2
BMO Blue Mountains 46.23 69 *e*P **P** **07 54 12.6 -0.4**
HOPS Hopland 46.37 79 *e*P **P** **07 54 12.3 -1.8**
comp=Z,91nm,1.0s,mb5.7
HOPS *e* 07 54 28.5
HOPS LR LR
comp=Z,2µm,19.0s,MS5.0
WHN Wuhan 46.38 265 ⇓P **P** **07 54 14.0 -0.1**
WHN S **S** **08 00 57.0 -4.6**
WHN AMB AMB
comp=Z,70nm,1.0s,mb5.5
WHN LR LR
comp=Z,2µm,14.6s,MS5.1
I09A Lost Marbles R 46.50 70 ⇑P **P** **07 54 14.5 -0.6**
baz=46,SNR=12
M06C Likely Place G 46.56 75 ⇑P **P** **07 54 15.9 +0.3**
baz=46,SNR=6.8
L07A Adell 46.74 74 ⇑P **P** **07 54 17.4 +0.4**
baz=47,SNR=18
O04C Chester 46.74 76 ⇓P **P** **07 54 17.2 +0.2**
baz=47,SNR=14
ELFS Eagle Lake Fie 46.77 76 ⇑P **P** **07 54 17.7 +0.5**
baz=47
K08A Mann Creek Ran 46.81 72 ⇑P **P** **07 54 17.7 +0.1**
baz=47,SNR=10

MNRC	McLaughlin Nat	46.83	79	⇑P	P	07 54 18.2	+0.5
	baz=47						
WVOR	Wild Horse Val	46.90	73	eP	P	07 54 17.9	-0.3
	comp=Z,48nm,1.1s,mb5.3						
WVOR				e		07 54 32.3	
ORV	Oroville	46.97	78	P	P	07 54 18.2	-0.6
	baz=47,SNR=15						
MSO	Missoula	46.99	65	eP	P	07 54 18.2	-0.7
	comp=Z,40nm,1.0s,mb5.3						
MSO				LR	LR		
	comp=Z,635nm,20.0s,MS4.6						
SUTB	Sutter Butte	47.00	78	⇓P	P	07 54 18.2	-0.8
	baz=47,SNR=6.4						
MCCM	Marconi Confer	47.03	80	⇓P	P	07 54 18.9	-0.4
	baz=47						
O05C	Quincy	47.06	77	⇑P	P	07 54 19.5	-0.1
	baz=47						
OHCM	Honcut	47.12	78	eP	P	07 54 19.4	-0.5
CVS	Carmenet Viney	47.15	80	⇑P	P	07 54 19.7	-0.5
	baz=47						
L08A	Fields	47.22	73	⇑P	P	07 54 20.7	0.0
	baz=47,SNR=13						
M07A	Soldier Meadow	47.22	74	⇑P	P	07 54 21.0	+0.3
	baz=47,SNR=27						
N06A	Buffalo Meadow	47.22	75	⇑P	P	07 54 20.7	0.0
	baz=47,SNR=22						
Q03C	Winters	47.24	79	⇓P	P	07 54 20.5	-0.4
	baz=47						
CHMT	Chamberlain Mo	47.32	65	eP	P	07 54 20.6	-0.9
XAN	Xi'an	47.33	273	P	P	07 54 21.6	0.0
XAN				S	S	08 01 09.5	-5.7
XAN				AMB	AMB		
	comp=Z,35nm,1.3s,mb5.1						
XAN				AMB	AMB		
	comp=Z,490nm,8.5s						
XAN				LR	LR		
	comp=N,753nm,17.4s,MS4.9						
XAN				LR	LR		
	comp=E,879nm,17.4s,MS4.9						
XAN				LR	LR		
	comp=Z,1μm,13.3s,MS5.0						
BEKR	Beckwourth	47.46	76	P	P	07 54 22.6	0.0
	baz=47,SNR=14						
Q04C	Lincoln	47.49	78	⇓P	P	07 54 22.6	-0.3
	baz=47						
O06A	Flanigan	47.59	76	⇑P	P	07 54 23.6	-0.1
	baz=48,SNR=12						
M08A	Happy Creek Ra	47.65	74	⇑P	P	07 54 24.3	+0.2
	baz=48,SNR=8.8						
P05C	Yuba Gap, Truc	47.66	77	⇓P	P	07 54 24.1	-0.1
	baz=48						
N07B	Gerlach	47.72	75	⇓P	P	07 54 24.6	0.0
	baz=48,SNR=15						
L09A	Wilkinson Ranc	47.72	72	⇑P	P	07 54 24.6	0.0
	baz=48,SNR=16						
P06A	Stead Airport,	47.85	76	⇓P	P	07 54 25.7	0.0
	baz=48,SNR=5.1						
QZH	Quanzhou	47.86	256	iPR	P	07 54 26.6	+0.9
QZH				S	S	08 01 27.1	+4.4
QZH				AMB	AMB		
	comp=Z,250nm,1.4s,mb6.0						
QZH				AMB	AMB		
	comp=Z,2μm,6.1s						
QZH				LR	LR		
	comp=Z,6μm,40.0s,MS5.3						
LAVA	Lava Cap Winer	47.93	78	⇑P	P	07 54 26.1	-0.2
	baz=48,SNR=10						
WENL	Wente Brothers	48.04	80	⇓P	P	07 54 26.0	-1.1
	baz=48						
BNLO	Ben Lomond (Sa	48.11	81	⇓P	P	07 54 27.1	-0.5
	baz=48						
R04C	Big Horse Ranc	48.13	79	⇑P	P	07 54 27.2	-0.6
	baz=48						
PAHR	Pah Rah Range	48.14	76	eP	P	07 54 28.4	+0.4
O07A	Toulon	48.16	75	⇑P	P	07 54 28.1	+0.1
	baz=48,SNR=14						
WCN	Washoe City	48.18	77	⇓P	P	07 54 28.2	+0.1
	baz=48,SNR=25						
N08A	GE Springer Mi	48.21	74	⇑P	P	07 54 28.3	-0.2
	baz=48,SNR=7.6						
M09A	Marrel Ranch,	48.22	73	⇓P	P	07 54 28.6	+0.1
	baz=48,SNR=12						
HRY	Holter Researc	48.23	64	eP	P	07 54 28.3	-0.3
R05C	Kirkwood Meado	48.37	78	⇓P	P	07 54 29.5	-0.1
	baz=48,SNR=8.3						
S04C	Ingram Canyon,	48.38	80	⇑P	P	07 54 29.6	-0.1
	baz=48						
LRM	Limekiln Ridge	48.42	65	eP	P	07 54 29.2	-0.8
N09A	Rock Creek Ran	48.53	74	P	P	07 54 31.1	+0.2
	baz=48,SNR=11						
P07A	Fallon	48.55	76	⇑P	P	07 54 30.2	-0.8
	baz=48						
EGMT	Eagleton	48.59	62	eP	P	07 54 30.7	-0.7
	comp=Z,47nm,0.7s,mb5.6						
EGMT				LR	LR		
	comp=Z,491nm,20.0s,MS4.5						
KBS	Kingsbay	48.60	355	eP	P	07 54 30.6	-0.8
KBS				eS	S	08 01 34.2	+0.9
KBS				AMS	AMS	08 16 08.1	
	comp=Z,268nm,17.5s,MS4.3						
KBS	Kingsbay	48.60	355	⇑iP	P	07 54 31.6	+0.1
KBS				LR	LR		
	comp=Z,397nm,21.0s,MS4.4						
CMB	Columbia Colle	48.61	78	eP	P	07 54 32.0	+0.5
	comp=Z,63nm,1.2s,mb5.5						
CMB				LR	LR		
	comp=Z,2μm,22.0s,MS5.0						
CMB	Columbia Colle	48.61	78	⇑P	P	07 54 31.4	-0.1
	baz=48,SNR=9.6						
DLMT	Dillon	48.61	66	eP	P	07 54 31.0	-0.5
FFC	Flin Flon	48.66	50	P	P	07 54 31.8	-0.1
	comp=Z,142nm,1.1s,mb5.9,SNR=16						
FFC	Flin Flon	48.66	50	eP	P	07 54 31.3	-0.6
FFC				LR	LR		
	comp=Z,2μm,20.0s,MS5.1						
HLID	Hailey	48.67	69	eP	P	07 54 31.6	-0.4
	comp=Z,39nm,1.0s,mb5.4						
HLID				ePcP	PcP	07 56 01.2	+4.0
M10A	I.L. Ranch, Tu	48.69	72	⇑P	P	07 54 32.3	+0.1
	baz=48,SNR=9.5						
PACP	Pacheco Peak	48.73	80	⇓P	P	07 54 32.4	0.0
	baz=49						
SAO	San Andreas Ge	48.79	80	P	P	07 54 31.0	-1.9
	comp=Z,24nm,1.0s,mb5.2						
SAO				e		07 54 46.8	
SAO				LR	LR		
	comp=Z,1μm,19.0s,MS4.9						
MCMT	McKenzie Canyo	48.79	67	eP	P	07 54 32.2	-0.7
ZAL	Zalesovo	48.80	308	P	P	07 54 32.0	-1.0
	comp=Z,1.9nm,0.4s,mb4.5,baz=106,slow=2.6,SNR=8.1						
ZAL				LR	LR	08 17 47.9	
	comp=Z,2μm,18.6s,MS5.2,baz=53,slow=39						
R06C	Coleville	48.86	77	⇑P	P	07 54 33.8	+0.4
	baz=49,SNR=13						
WAKR	Walker	48.88	77	eP	P	07 54 34.4	+0.9
P08A	Dixie Valley	48.93	75	⇑P	P	07 54 34.3	+0.3
	baz=49						
BMN	Battle Mountai	48.97	74	eP	P	07 54 34.5	+0.2
	comp=Z,57nm,1.1s,mb5.5						
BMN				LR	LR		
	comp=Z,832nm,19.0s,MS4.8						
Q07A	Schurz	48.98	76	⇓P	P	07 54 34.3	0.0
	baz=49						
BOZ	Bozeman (W)	48.98	65	eP	P	07 54 34.1	-0.2
	comp=Z,69nm,1.0s,mb5.6						
BOZ				LR	LR		
	comp=Z,935nm,22.0s,MS4.7						
NVS	Novosibirsk	49.02	310	⇓iP	P	07 54 33.0	-1.7
NVS				eS	S	08 01 33.2	-5.9
NVS				pmax	pmax		
	comp=N,95nm,1.9s						
NVS				pmax	pmax		
	comp=E,140nm,1.9s						
NVS				pmax	pmax		
	comp=Z,172nm,1.9s,mb5.8						
NVS				smax			
	comp=N,43nm,2.1s						
NVS				smax			
	comp=E,48nm,2.2s						
S06C	San Francisco	49.03	78	⇓P	P	07 54 34.6	-0.2
	baz=49,SNR=16						
SPB4	Spitsbergen Ar	49.03	353	eP	P	07 54 33.4	-1.4
LZH	Lanzhou	49.08	279	⇓P	P	07 54 36.5	+1.4
LZH				AP	pP	07 54 38.2	-0.1
LZH				PP	PP	07 56 30.1	+1.4
LZH				PPP		07 57 33.5	
LZH				S	S	08 01 39.7	-0.3
LZH				XS	sS	08 01 45.2	0.0
LZH				SS	SS	08 05 04.7	-6.3
LZH				AMB	AMB		
	comp=Z,135nm,1.4s,mb5.8						
LZH				AMB	AMB		
	comp=Z,464nm,6.7s						
LZH				LR	LR		
	comp=N,3μm,15.2s						
LZH				LR	LR		
	comp=Z,3μm,17.8s,MS5.4						
S05C	Merced	49.09	79	⇑P	P	07 54 34.5	-0.7
	baz=49,SNR=8.1						
O09A	Fish Creek Ran	49.16	74	⇑P	P	07 54 35.8	+0.1
	baz=49,SNR=15						
T05C	Eagle Field, D	49.17	80	⇑P	P	07 54 34.5	-1.3
	baz=49						
M11A	Holland Ranch,	49.19	72	⇓P	P	07 54 36.3	+0.3
	baz=49,SNR=16						
N10A	Dunphy	49.21	73	⇓P	P	07 54 36.2	0.0
	baz=49						
LRV	Little Rabbit	49.27	80	eP	P	07 54 37.2	+0.6
LRV				e		07 54 51.9	
GTA	Gaotai	49.36	285	⇓iP	P	07 54 38.1	+0.9
GTA				PCP	PcP	07 55 59.8	+0.1
GTA				PP	PP	07 56 34.2	+3.0
GTA				PPP		07 57 30.9	
GTA				PCS	PcS	07 59 54.7	-1.6
GTA				S	S	08 01 45.4	+1.5
GTA				SCS	ScS	08 04 25.2	-4.1
GTA				AMB	AMB		
	comp=Z,63nm,0.8s,mb5.7						
GTA				AMB	AMB		
	comp=Z,584nm,5.7s						
GTA				LR	LR		
	comp=N,2μm,15.2s,MS5.4						
GTA				LR	LR		
	comp=E,2μm,15.2s,MS5.4						
GTA				LR	LR		
	comp=Z,1μm,20.5s						
R07C	Lee Vining	49.38	77	⇑P	P	07 54 37.8	+0.4
	baz=49						
V03C	Hunter Liggett	49.40	81	⇓P	P	07 54 37.6	0.0
	baz=49						
U04C	Hernandez Rese	49.45	80	⇓P	P	07 54 38.1	+0.1
	baz=49						
O10A	Cortez Mining,	49.49	74	⇑P	P	07 54 38.6	+0.3
	baz=49,SNR=9.4						
Q08A	Gabbs	49.55	76	⇓P	P	07 54 39.0	+0.3
	baz=49,SNR=25						
P09A	Austin	49.58	75	⇑P	P	07 54 39.1	+0.2
	baz=49,SNR=7.0						
QLMT	Earthquake Lak	49.59	66	eP	P	07 54 39.1	+0.1
NVAR	Mina Array Bea	49.60	77	P	P	07 54 39.2	0.0
	comp=Z,8.1nm,0.8s,mb4.8,baz=306,slow=6.1,SNR=41						
NVAR				PcP	PcP	07 56 01.9	+1.3
	comp=Z,4.9nm,0.8s,baz=197,slow=1.4,SNR=3.6						
NVAR	Mina Array Bea	49.60	77	P	P	07 54 39.2	0.0
NVAR				PcP	PcP	07 56 01.9	+1.3
N11A	Elko Archery C	49.61	73	⇓P	P	07 54 39.5	+0.3
	baz=50						
T06C	Millerton Lake	49.68	79	⇑P	P	07 54 39.3	-0.4
	baz=50						
M12A	Wells	49.71	71	⇓P	P	07 54 40.1	+0.1
	baz=50,SNR=16						
KCC	Kaiser Creek	49.71	78	⇓P	P	07 54 39.9	-0.1
	baz=50,SNR=8.3						
R08A	Mina	49.77	77	⇑P	P	07 54 40.6	+0.1
	baz=50,SNR=7.2						
FCC	Fort Churchill	49.84	43	eP	P	07 54 40.4	-0.5
	comp=Z,78nm,1.0s,mb5.7						
U05C	Westside ANR,	49.87	80	⇓P	P	07 54 41.9	+0.7
	baz=50						
PKD	Parkfield	49.88	81	⇓P	P	07 54 41.2	0.0
	baz=50						
V04C	Ramage Ranch,	49.88	81	⇑P	P	07 54 41.3	+0.1
	baz=50						
P10A	Eureka	49.94	74	⇑P	P	07 54 42.2	+0.5
	baz=50,SNR=9.7						
YMR	Madison River	49.95	66	eP	P	07 54 41.1	-0.7
	comp=Z,181nm,1.4s,mb5.9						
YMR				LR	LR		
	comp=Z,2μm,20.0s,MS5.1						
GCMT	Greycliff	49.98	64	eP	P	07 54 42.2	+0.2
N12A	Clover Valley,	49.99	72	⇑P	P	07 54 42.1	0.0
	baz=50,SNR=12						
Q09A	Carvers	50.02	75	⇑P	P	07 54 42.5	+0.2
	baz=50						
O11A	Cowboy Ranch,	50.09	73	⇓P	P	07 54 43.0	+0.2
	baz=50,SNR=12						
MTUM	Tungsten Hills	50.15	78	eP	P	07 54 43.8	+0.5
YFT	Old Faithful	50.16	66	eP	P	07 54 44.8	+1.4
M13A	Montello	50.18	71	⇑P	P	07 54 43.4	-0.1
	baz=50,SNR=22						
PTRM	Twissleman Ran	50.27	81	P	P	07 54 44.0	-0.2
PTRM				e		07 54 58.6	
HELL	Mitchell Peak,	50.31	79	⇑P	P	07 54 44.0	-0.5
	baz=50,SNR=19						
V05C	Boulder Hill,	50.31	80	⇓P	P	07 54 43.9	-0.7
	baz=50						
LKWY	Lake	50.33	66	eP	P	07 54 44.6	0.0
	comp=Z,35nm,0.9s,mb5.4						
LKWY				e		07 55 00.2	
LKWY				LR	LR		
	comp=Z,3μm,19.0s,MS5.3						
RCTC	Rector, Farmer	50.42	79	⇓P	P	07 54 44.9	-0.4
	baz=50						
IMW	Indian Meadow	50.44	67	eP	P	07 54 48.0	+2.4
	comp=Z,52nm,1.0s,mb5.5						
IMW				e		07 55 02.9	
FLWY	Flagg Ranch	50.46	66	eP	P	07 54 46.5	+0.9
R09A	Tonopah	50.47	76	P	P	07 54 45.8	+0.1
	baz=50,SNR=30						
N13A	Wendover, West	50.48	72	⇓P	P	07 54 46.0	+0.3
	baz=50						
TPH	Tonopah	50.48	76	eP	P	07 54 46.4	+0.6
	comp=Z,52nm,0.9s,mb5.6						
TPH				LR	LR		
	comp=Z,955nm,21.0s,MS4.8						
DCID1	Drake Creek	50.49	67	eP	P	07 54 46.9	+1.0
TIN	Tinemaha	50.55	78	⇑P	P	07 54 46.5	+0.2
	baz=50						
RRI2	Red Ridge	50.57	67	eP	P	07 54 47.1	+0.7
SMMC	Simmler	50.63	81	⇑P	P	07 54 47.0	+0.1
	baz=50						
MOOW	Moose Ponds	50.65	67	eP	P	07 54 47.4	+0.4
TPAW	Teton Pass	50.69	67	eP	P	07 54 48.0	+0.6
	comp=Z,15nm,0.8s,mb5.0						
S09A	Goldfield	50.71	77	P	P	07 54 47.4	-0.1
	baz=51,SNR=13						
HVU	Hansel Valley	50.72	70	eP	P	07 54 48.2	+0.5
SNOW	Snow King Moun	50.82	67	eP	P	07 54 49.3	+1.0
REDW	Red Top Meadow	50.83	67	eP	P	07 54 49.0	+0.6
	comp=Z,72nm,1.5s,mb5.4						
VES	Vestal, Richgr	50.83	80	P	P	07 54 47.7	-0.7
	baz=51,SNR=11						
R10A	Warm Springs	50.89	75	⇓P	P	07 54 48.8	-0.1
	baz=51,SNR=12						
P12A	McGill	50.95	73	⇓P	P	07 54 49.2	-0.2
	baz=51,SNR=12						
PKM	Peak Mountain	51.01	81	⇓P	P	07 54 50.2	+0.4
	baz=51,SNR=5.3						
CWC	Cottonwood Cre	51.04	78	⇓P	P	07 54 50.1	+0.1
	baz=51,SNR=5.9						
AHID	Auburn Hatcher	51.06	68	P	P	07 54 49.9	-0.3
	comp=Z,38nm,0.9s,mb5.3						
AHID				e		07 55 04.7	
AHID				LR	LR		
	comp=Z,882nm,19.0s,MS4.8						
GRAC	Grapevine Rang	51.10	77	⇑P	P	07 54 50.7	+0.3
	baz=51						
BGU	Big Grassy Mou	51.12	71	eP	P	07 54 50.7	+0.1
BGU				e		07 55 04.9	
DAG	Danmarks Havn	51.22	3	iP	P	07 54 51.0	-0.3
	comp=Z,9.7nm,0.8s,mb4.8						
DAG	Danmarks Havn	51.22	3	eP	P	07 54 51.0	-0.3
DAG				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
DAG	Danmarks Havn	51.22	3	eP	P	07 54 51.0	-0.3
	comp=Z,9.7nm,0.8s,mb4.8						
TRCR	Troy Canyon	51.28	75	eP	P	07 54 51.9	+0.1
TRCR				e		07 55 06.3	
LAO	LASA Array	51.31	61	eP	P	07 54 52.3	+0.2
LAO				LR	LR		
	comp=Z,1μm,20.0s,MS4.8						
ISA	Isabella	51.32	79	eP	P	07 54 51.7	-0.4
ISA	Isabella	51.32	79	⇑P	P	07 54 51.3	-0.8
	baz=51,SNR=9.2						
SBC	Santa Barbara	51.38	81	⇑P	P	07 54 52.4	-0.1
	baz=51						
DAC	Darwin (Calif)	51.44	78	eP	P	07 54 53.4	+0.3
DAC				LR	LR		
	comp=Z,1μm,21.0s,MS4.9						
ARVC	Arvin	51.46	80	⇓P	P	07 54 51.8	-1.3
	baz=51						
HWUT	Hardware Ranch	51.53	69	eP	P	07 54 53.8	+0.1
HWUT				LR	LR		
	comp=Z,1μm,21.0s,MS4.8						
MPMC	Manual Prospec	51.65	78	⇓P	P	07 54 54.3	-0.2
	baz=52,SNR=13						
DUG	Dugway	51.72	71	eP	P	07 54 55.4	+0.3
	comp=Z,51nm,0.9s,mb5.5						
DUG				LR	LR		
	comp=Z,703nm,20.0s,MS4.7						
BSC	Santa Cruz Isl	51.73	82	⇑P	P	07 54 55.2	0.0
	baz=52						
FURC	Furnace Creek,	51.76	78	⇓P	P	07 54 55.3	-0.1
	baz=52,SNR=15						
TPNV	Topopah Spring	51.80	77	eP	P	07 54 55.9	+0.1
TPNV				LR	LR		
	comp=Z,2μm,21.0s,MS5.1						
NOQ	North Oquirrh	51.83	70	eP	P	07 54 56.5	+0.6
	comp=Z,36nm,0.8s,mb5.3						
OSI	Osito Adit	51.87	81	⇑P	P	07 54 56.0	-0.2
	baz=52						
LRMC	Laurel Mountai	51.92	79	⇑P	P	07 54 56.2	-0.4
	baz=52						
TCUT	Toone Canyon	51.94	70	eP	P	07 54 57.6	+0.9
BW06	Boulder Array	51.94	67	eP	P	07 54 56.6	-0.2
	comp=Z,42nm,0.9s,mb5.4						
BW06				LR	LR		
	comp=Z,1μm,22.0s,MS4.9						
PDAR	Pinedale Array	51.94	67	P	P	07 54 56.5	-0.2
	comp=Z,15nm,0.8s,mb5.0,baz=306,slow=3.5,SNR=60						
BLG	Laguna Peak	52.00	81	⇑P	P	07 54 56.7	-0.5
	baz=52						
CTU	Camp Tracy	52.01	70	eP	P	07 54 57.5	+0.2
	comp=Z,32nm,0.9s,mb5.2						
U10A	Ash Meadows, A	52.11	77	⇓P	P	07 54 58.1	+0.1
	baz=52,SNR=7.6						
EDW2	Edwards Air Fo	52.13	80	⇓P	P	07 54 57.9	-0.3
	baz=52,SNR=8.7						
NLU	North Lily Min	52.30	71	eP	P	07 54 59.6	+0.1
NLU				e		07 55 14.2	
DECC	Green Verdugo	52.35	81	⇑P	P	07 54 59.4	-0.4
	baz=52						
GZH	Guangzhou	52.41	259	P	P	07 54 56.9	-3.3
GZH				S	S	08 02 22.5	-3.6
GZH				LR	LR		
	comp=N,2μm,19.6s,MS5.1						
GZH				LR	LR		
	comp=E,1μm,20.8s,MS5.1						
GZH				LR	LR		
	comp=Z,1μm,13.1s						
DAU	Daniels Canyon	52.48	70	eP	P	07 55 02.0	+1.2
SHOC	Shoshone	52.48	78	⇓P	P	07 55 00.6	-0.2
	baz=52,SNR=5.7						
MPU	Maple Canyon	52.52	71	PFAKE		07 55 10.0	+8.9
MPU				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
MWC	Mount Wilson	52.54	80	eP	P	07 55 01.6	+0.4
GSC	Goldstone	52.57	79	eP	P	07 55 01.4	0.0
GSC	Goldstone	52.57	79	⇑P	P	07 55 01.3	-0.1
	baz=52,SNR=27						
CD2	Chengdu	52.64	274	⇓iP	P	07 55 02.4	+0.4
CD2				PP	PP	07 57 00.3	-0.7
CD2				PPP		07 58 06.2	
CD2				S	S	08 02 27.9	-1.4
CD2				SS	SS	08 06 05.8	-1.8
CD2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
CD2				AMB	AMB		
	comp=Z,350nm,8.1s						
CD2				LR	LR		
	comp=E,910nm,15.0s						
CD2				LR	LR		
	comp=Z,660nm,15.6s,MS4.8						
U11A	Corn Creek	52.67	77	⇑P	P	07 55 02.3	+0.1
	baz=52						
SHPR	Sheep Range	52.75	76	eP	P	07 55 03.3	+0.5
BFSC	Mount Baldy St	52.77	80	⇓P	P	07 55 02.8	-0.1
	baz=53,SNR=5.9						
CIS	Catalina Islan	52.88	81	⇑P	P	07 55 03.1	-0.6
	baz=53						
ARUT	Antelope Range	52.92	74	P	P	07 55 05.6	+1.6
ARUT	Antelope Range	52.92	74	eP	P	07 55 04.7	+0.7
TUQ	Turquoise Mtn.	53.01	78	⇑P	P	07 55 04.6	-0.1
	baz=53,SNR=5.5						
V11A	Goodsprings	53.04	77	⇓P	P	07 55 05.0	+0.1
	baz=53						
SCI	San Clemente I	53.09	82	⇑P	P	07 55 05.2	-0.1
	baz=53						
CCUT	Cedar City	53.13	74	eP	P	07 55 05.8	+0.2
CCUT				e		07 55 20.4	
U12A	Valley of Fire	53.17	76	⇓P	P	07 55 06.1	+0.2
	baz=53						
HEC	Hector,Ludlow	53.17	79	⇓P	P	07 55 05.7	-0.2
	baz=53,SNR=6.2						
MVU	Marysvale	53.17	73	PFAKE		07 55 20.0	+14
MVU				LR	LR		
	comp=Z,1μm,21.0s,MS4.9						
MSU	Marysvale	53.19	73	eP	P	07 55 06.7	+0.7
BBRC	Big Bear Sol-O	53.20	80	⇑P	P	07 55 06.0	-0.1
	baz=53,SNR=5.4						
TMUT	Trail Mountain	53.24	71	eP	P	07 55 06.5	+0.1
TMUT				e		07 55 21.4	
V12A	Nelson	53.46	77	⇓P	P	07 55 08.0	0.0
	baz=53,SNR=6.2						
MURC	Murrieta	53.48	80	⇓P	P	07 55 08.0	-0.1
	baz=53,SNR=6.1						
WMQ	Urumqi	53.50	297	⇓iP	P	07 55 09.0	+0.7
WMQ				PCP	PcP	07 56 16.0	+0.9
WMQ				PP	PP	07 57 11.0	+2.2
WMQ				S	S	08 02 41.0	-0.1
WMQ				SCS	ScS	08 04 56.0	-2.0
WMQ				SS	SS	08 06 21.0	-0.2
WMQ				AMB	AMB		
	comp=Z,68nm,1.0s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,675nm,5.0s						
WMQ				LR	LR		
	comp=N,2μm,16.0s,MS5.4						
WMQ				LR	LR		
	comp=E,2μm,15.0s,MS5.4						
WMQ				LR	LR		
	comp=Z,1μm,14.0s,MS5.1						
W12A	Cal Nev Ari	53.74	77	⇑P	P	07 55 09.3	-0.7
	baz=54						
SRU	San Rafael	53.76	71	eP	P	07 55 10.9	+0.7
SRU				e		07 55 25.1	
KURK	Kurchatov	53.77	308	P	P	07 55 09.5	-0.7
	comp=Z,364nm,0.7s,mb6.4,SNR=48						
KURK	Kurchatov	53.77	308	P	P	07 55 09.8	-0.4
	SNR=47						
KURK	Kurchatov	53.77	308	eP	P	07 55 09.6	-0.7
	comp=Z,69nm,0.9s,mb5.6						
KURK				e		07 55 25.4	
KURK				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
SUMG	Summit	53.89	11	eP	P	07 55 10.9	-0.3
	comp=Z,69nm,1.0s,mb5.5						
PFO	Pinyon Flat Ob	53.93	80	eP	P	07 55 11.9	+0.5
PFO				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
PFO	Pinyon Flat Ob	53.93	80	⇓P	P	07 55 11.0	-0.4
	baz=54,SNR=6.4						
BELC	Belle Mtn.	53.94	79	⇑P	P	07 55 10.8	-0.7
	baz=54,SNR=11						
RWWY	Rawlins	53.96	66	eP	P	07 55 13.5	+1.8
GYA	Guiyang	54.01	268	⇓iP	P	07 55 12.3	+0.3
GYA				AP	pP	07 55 16.8	+1.6
GYA				XP	sP	07 55 19.7	+3.3
GYA				PCP	PcP	07 56 20.2	+3.1
GYA				PP	PP	07 57 13.5	+0.1
GYA				PPP		07 58 19.6	
GYA				SCP	ScP	08 00 15.8	+0.6
GYA				S	S	08 02 44.9	-3.1
GYA				PS		08 02 52.8	
GYA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
GYA				AMB	AMB		
	comp=Z,530nm,9.6s						
GYA				LR	LR		

comp=N,1µm,14.9s,MS5.1
GYA LR LR
comp=E,860nm,16.4s,MS5.1
GYA LR LR
comp=Z,1µm,14.4s,MS5.1
109C Camp Elliot, M 54.03 81 ⇑P **P 07 55 11.9 -0.3**
baz=54
RSSD Black Hills 54.14 62 *e*P **P 07 55 13.0 +0.1**
RSSD pmax pmax
comp=Z,44nm,1.1s,mb5.3
RSSD Black Hills 54.14 62 *e*P **P 07 55 13.0 +0.1**
comp=Z,44nm,1.1s,mb5.3
IRM Iron Mountain 54.34 78 ⇑P **P 07 55 14.3 -0.1**
baz=54,SNR=13
ULM Lac du Bonnet 54.36 52 P **P 07 55 14.2 -0.3**
comp=Z,11nm,0.5s,mb5.1,baz=308,slow=8.4,SNR=24
ULM LR LR 08 19 57.2
comp=Z,1µm,18.8s,MS5.1,baz=327,slow=38
BAR Barrett 54.44 81 *e*P **P 07 55 15.2 +0.1**
MONP Monument Peak 54.45 81 ⇑P **P 07 55 14.7 -0.5**
baz=54
W13A Hualapai Mount 54.46 77 ⇑P **P 07 55 15.1 -0.2**
baz=54,SNR=5.6
MKAR Makanchi Array 54.47 302 P **P 07 55 14.2 -1.1**
comp=Z,4.0nm,0.5s,mb4.6,baz=56,slow=7.4,SNR=52
SWSC Sam W. Stewart 54.79 80 ⇓P **P 07 55 17.1 -0.6**
baz=55
X13A Yucca 54.84 77 ⇑P **P 07 55 17.6 -0.4**
baz=55,SNR=7.2
PDMCI Parker Dam,Lak 54.86 78 ⇑P **P 07 55 17.7 -0.5**
baz=55,SNR=7.8
W14A Seligman 54.87 76 ⇑P **P 07 55 18.5 +0.2**
baz=55,SNR=14
TGY Tagaytay City 54.98 245 P **P 07 55 19.0 -0.1**
comp=Z,185nm,0.3s,baz=159,slow=14,SNR=3.2
Y12C Blythe 55.00 78 ⇑P **P 07 55 19.1 -0.1**
baz=55,SNR=7.0
PV10 Paradox Valley 55.12 71 *e*P **P 07 55 20.9 +0.9**
PV10 *e* 07 55 35.3
PHWY Pilot Hill 55.21 66 *e*P **P 07 55 21.9 +1.2**
GLA Glamis 55.30 79 *e*P **P 07 55 21.8 +0.4**
GLA Glamis 55.30 79 ⇑P **P 07 55 21.4 +0.1**
baz=55,SNR=6.5
Y13A Salome 55.38 78 ⇑P **P 07 55 21.9 -0.1**
baz=55,SNR=5.3
W15A Williams 55.38 76 ⇑P **P 07 55 22.6 +0.7**
baz=55
X14A Yava 55.49 77 P **P 07 55 23.4 +0.7**
baz=55,SNR=17
CHKZ Chkalovo 55.50 315 P **P 07 55 22.2 -0.6**
CHKZ pmax pmax
comp=Z,71nm,1.0s,mb5.7
CHKZ Chkalovo 55.50 315 *i* P **P 07 55 22.2 -0.6**
PV01 Paradox Valley 55.55 71 *e*P **P 07 55 23.2 0.0**
PV01 *e* 07 55 37.8
KEV Kevo 55.63 346 *e*P **P 07 55 22.4 -1.4**
comp=Z,1.6nm,0.4s,mb4.4
KEV LR LR
comp=Z,791nm,20.0s,MS4.8
WUAZ Wupatki 55.68 75 *e*P **P 07 55 25.3 +1.2**
comp=Z,64nm,1.1s,mb5.6
WUAZ LR LR
comp=Z,2µm,20.0s,MS5.1
SMCO Snowmass 55.77 69 *e*P **P 07 55 25.4 +0.6**
comp=Z,33nm,0.9s,mb5.4
Y14A Wickenburg 55.79 77 ⇑P **P 07 55 24.7 -0.1**
baz=56,SNR=9.6
X15A Humboldt 55.87 76 ⇓P **P 07 55 26.1 +0.6**
baz=56,SNR=7.2
LVZ Lovozero 55.95 342 PFAKE 07 55 40.0 +14
LVZ LR LR
comp=Z,598nm,19.0s,MS4.7
ARCES ARCESS Array B 56.06 346 P **P 07 55 25.9 -0.9**
comp=Z,4.5nm,0.6s,mb4.7,baz=31,slow=7.5,SNR=28
ARCES LR LR 08 20 55.3
comp=Z,1µm,19.5s,MS4.9,baz=14,slow=38
ARE0 ARCESS Array S 56.06 346 *e*P **P 07 55 25.9 -0.9**
BRVK Borovoye 56.07 314 P **P 07 55 26.7 -0.2**
comp=Z,430nm,0.6s,SNR=33
BRVK Borovoye 56.07 314 P **P 07 55 26.9 0.0**
SNR=63
BRVK Borovoye 56.07 314 *e*P **P 07 55 26.5 -0.4**
BRVK LR LR
comp=Z,1µm,20.0s,MS4.9
ISCO Idaho Springs 56.13 67 *e*P **P 07 55 28.5 +1.1**
comp=Z,60nm,1.0s,mb5.6
ISCO LR LR
comp=Z,1µm,19.0s,MS5.0
Z14A Wintersburg 56.22 78 ⇑P **P 07 55 28.0 0.0**
baz=56
APA Apatity 56.47 342 ⇑*i*P **P 07 55 30.0 +0.2**
APA *i* 07 55 40.0
APA *e*PPP 07 58 48.0
APA *i* S **S 08 03 18.0 -2.9**
APA *i* 08 05 20.0
APA *e*SS SS 08 07 10.0 +1.9
APA pmax pmax
comp=Z,500nm,8.0s
ZRNK Zerenda 56.70 315 ⇓*i*P **P 07 55 31.0 -0.4**
ZRNK *e* 07 55 42.3
ZRNK pmax pmax
comp=Z,30nm,0.6s,mb5.5
ZRNK Zerenda 56.70 315 ⇓*i*P **P 07 55 31.0 -0.4**
comp=Z,30nm,0.6s,mb5.5
ZRNK *e* 07 55 42.3
SOKR Solikamsk 56.72 326 ⇓*i*P **P 07 55 30.2 -1.3**
SOKR S **S 08 03 09.3 -15**
SOKR pmax pmax
comp=Z,70nm,2.7s,mb5.2
SOKR MLR MLR
comp=Z,1µm,17.0s,MS5.1
TRO Tromso 56.85 349 *e*P **P 07 55 26.3 -6.1**
TRO *e*S **S 08 03 27.2 +1.3**
TRO AMS AMS 08 25 15.9
comp=Z,434nm,18.4s,MS4.6
KTK1 Kautokeino 56.87 347 *e*P **P 07 55 32.7 +0.1**
KTK1 *e*pP pP 07 55 35.6 -0.1
SFJD Kangerlussuaq 57.10 18 *i* P **P 07 55 33.4 -0.8**
comp=Z,24nm,0.5s,mb5.5
SFJD *i* S **S 08 03 23.9 -5.3**
SFJD
comp=Z,610nm,21.0s
SFJD Kangerlussuaq 57.10 18 *i* P **P 07 55 33.4 -0.8**
SFJD *i* S **S 08 03 23.9 -5.3**
SFJD pmax pmax
comp=Z,24nm,0.5s,mb5.5
SFJD MLR MLR
comp=Z,610nm,21.0s,MS4.7
SFJD Kangerlussuaq 57.10 18 *i* P **P 07 55 33.4 -0.8**
comp=Z,24nm,0.5s,mb5.5
SFJD *i* S **S 08 03 23.9 -5.3**
115A Sonoran Desert 57.11 78 ⇓P **P 07 55 35.1 +0.7**
baz=57,SNR=11
JMIC Jan Mayen 57.18 360 *e*P **P 07 55 35.1 +0.3**
JMIC *e*S **S 08 03 31.6 +1.3**
JMIC *e*SS SS 08 07 20.8 +1.6
JMIC AMS AMS 08 25 30.5
comp=Z,528nm,17.3s,MS4.7
KMI Kunming 57.40 270 P **P 07 55 36.3 -0.1**
KMI PCP PcP 07 56 30.8 +0.6
KMI PP PP 07 57 44.7 +1.0
KMI PPP 07 59 03.1
KMI S **S 08 03 29.3 -3.9**
KMI PS 08 03 41.5
KMI SS SS 08 07 18.7 -3.9
KMI SSS 08 09 30.7
KMI AMB AMB
comp=Z,38nm,1.0s,mb5.4
KMI AMB AMB
comp=Z,423nm,6.6s
KMI LR LR
comp=N,1µm,14.7s,MS5.1
KMI LR LR
comp=E,859nm,18.6s,MS5.1
KMI LR LR
comp=Z,816nm,17.9s,MS4.9
116A Eloy 57.53 77 ⇓P **P 07 55 37.4 +0.2**
baz=57,SNR=5.2
SDCO Great Sand Dun 57.59 69 PFAKE 07 55 50.0 +12
SDCO LR LR
comp=Z,734nm,20.0s,MS4.8
EYMN Ely 58.04 52 *e*P **P 07 55 40.9 +0.1**
TUC Tucson 58.26 77 *e*P **P 07 55 42.8 +0.4**
comp=Z,39nm,1.0s,mb5.4
TUC LR LR
comp=Z,458nm,20.0s,MS4.6

ARU Arti 58.42 323 P **P 07 55 43.9 +0.4**
comp=Z,244nm,0.6s,mb6.4,SNR=12
ARU Arti 58.42 323 *e*P **P 07 55 43.0 -0.5**
ARU *e* 07 56 31.7
ARU *e* 07 57 51.6
ARU *e*PPP 07 59 11.9
ARU *e*S **S 08 03 44.8 -1.7**
ARU *e* 08 05 27.1
ARU *e*SS SS 08 07 33.1 -5.6
ARU MLR MLR
comp=Z,1µm,20.0s,MS5.1
ARU MLR MLR
comp=N,800nm,18.0s,MS5.1
ARU MLR MLR
comp=E,1µm,18.0s,MS5.1
ARU Arti 58.42 323 *e*P **P 07 55 43.0 -0.5**
comp=E,22nm,0.6s,mb5.4
LAZ Ladron 58.96 73 *e*P **P 07 55 48.1 +0.9**
ANMO Albuquerque 58.97 72 *e*P **P 07 55 48.0 +0.7**
comp=E,29nm,1.0s,mb5.3
ANMO LR LR
comp=Z,651nm,21.0s,MS4.7
LENM Lemitar 59.22 73 *e*P **P 07 55 51.2 +2.1**
Y22C IRIS PASSCAL I 59.31 73 ⇑P **P 07 55 50.7 +1.0**
baz=59
LPM Los Pinos Moun 59.32 73 *e*P **P 07 55 51.0 +1.2**
TKM2 Tokmak 2 60.59 303 P **P 07 55 58.4 -0.1**
SNR=17
TKM2 Tokmak 2 60.59 303 *i* P **P 07 55 58.6 +0.1**
MOR8 Moi Rana 60.68 349 *e*P **P 07 55 57.6 -1.5**
ULHL Ulahol 60.73 302 P **P 07 55 59.3 -0.1**
SNR=15
KLMR Klimovskoe 60.89 335 *d i*P **P 07 56 00.7 +0.2**
KLMR *e* 07 58 16.3
KLMR *e*S **S 08 04 19.8 +1.5**
KLMR *e*SS SS 08 08 20.3 +2.9
KLMR pmax pmax
comp=Z,50nm,1.1s,mb5.6
KLMR pmax pmax
comp=Z,240nm,8.4s
USP Ospenovka 60.91 304 P **P 07 56 00.8 +0.2**
SNR=39
CHMS Chumysh 60.97 303 P **P 07 56 01.2 +0.1**
SNR=9.8
KBK Karagaybulak 61.11 303 P **P 07 56 02.4 +0.3**
SNR=9.2
FRU Bishkek 61.16 303 ⇓*i*P **P 07 56 02.0 -0.3**
FRU *e* 07 56 16.0
FRU *e* 08 04 22.0
FRU pmax pmax
comp=Z,190nm,2.0s,mb5.9
FRU MLR MLR
comp=Z,2µm,17.0s,MS5.2
AAK Ala-Archa 61.36 303 P **P 07 56 03.5 -0.2**
comp=Z,197nm,0.7s,mb6.3,SNR=14
AAK Ala-Archa 61.36 303 P **P 07 56 04.0 +0.3**
SNR=10
AAK Ala-Archa 61.36 303 P **P 07 56 03.1 -0.7**
SNR=11
AAK Ala-Archa 61.36 303 P **P 07 56 03.0 -0.7**
AAK pmax pmax
comp=Z,43nm,1.0s,mb5.5
AAK Ala-Archa 61.36 303 *e*Pr **P 07 56 02.7 -1.0**
AAK LR LR
comp=Z,1µm,19.0s,MS5.0
KZA Kyzart 61.37 302 P **P 07 56 04.6 +0.8**
SNR=8.4
KSU1 Kansas State U 61.62 62 *e*P **P 07 56 04.4 -1.1**
UCH Uchtor 61.64 303 P **P 07 56 06.2 +0.6**
SNR=15
EKS2 Erkin-Say 61.71 304 P **P 07 56 06.0 0.0**
SNR=29
AMTX Amarillo 61.79 69 *e*P **P 07 56 07.2 +0.5**
HNR Honiara 62.06 192 LR LR 08 23 06.1
comp=Z,505nm,18.6s,MS4.7,baz=360,slow=36
HNR Honiara 62.06 192 PFAKE 07 56 20.0 +12
HNR LR LR
comp=Z,660nm,19.0s,MS4.8
AML Almayashu 62.13 303 P **P 07 56 09.8 +0.8**
SNR=8.5
GDL2 Guadalupe Moun 62.15 73 *e*P **P 07 56 09.9 +0.8**
JFWS Jewell Farm 62.23 55 *e*P **P 07 56 08.8 -0.8**
JFWS Jewell Farm 62.23 55 PFAKE 07 56 20.0 +10
JFWS LR LR
comp=Z,900nm,21.0s,MS4.9
KAF Kangasniemi 62.72 342 *ep* **P 07 56 11.2 -1.7**
comp=Z,11nm,0.5s,mb5.2,baz=20,slow=6.1
KAF Kangasniemi 62.72 342 *e*P **P 07 56 11.2 -1.7**
KAF pmax pmax
comp=Z,11nm,0.5s,mb5.2
KK31 Karatay Array 63.04 306 *i* P **P 07 56 14.5 -0.5**
KK31 pmax pmax
comp=Z,22nm,0.6s,mb5.5
BORG Borgarnes 63.06 6 PFAKE 07 56 30.0 +15
BORG LR LR
comp=Z,524nm,19.0s,MS4.7
SCHQ Schefferville 63.07 33 P **P 07 56 14.7 -0.6**
comp=Z,34nm,0.8s,mb5.5,baz=331,slow=7.0,SNR=30
SCHQ LR LR 08 24 30.2
comp=Z,979nm,21.3s,MS5.0,baz=328,slow=37
AB31 Akbulak array 63.30 317 *i* P **P 07 56 16.5 -0.2**
FIA1 FINESS Array S 63.38 342 *e*P **P 07 56 16.5 -0.7**
FIA1 *e* 07 56 29.5
FINES FINESS Array B 63.38 342 P **P 07 56 16.6 -0.7**
comp=Z,7.7nm,0.8s,mb4.9,baz=36,slow=7.1,SNR=17
FINES LR LR 08 25 34.5
comp=Z,613nm,19.4s,MS4.8,baz=3.2,slow=38
PECR Pechory 63.43 330 ⇑*e*P **P 07 56 17.6 0.0**
PECR *e* 07 56 49.0
PECR *e*S **S 08 04 50.6 +0.2**
PECR pmax pmax
comp=Z,190nm,1.6s,mb6.0
PECR pmax pmax
comp=Z,70nm,6.0s
PECR MLR MLR
comp=Z,1µm,15.0s,MS5.2
PECR MLR MLR
comp=Z,1µm,15.0s
WMOK Wichita Mounta 63.55 67 *e*P **P 07 56 18.2 -0.2**
comp=Z,25nm,0.8s,mb5.3
WMOK LR LR
comp=Z,807nm,22.0s,MS4.9
CHTO Chiang Mai 64.43 268 P **P 07 56 24.4 +0.2**
SNR=17
CHTO Chiang Mai 64.43 268 P **P 07 56 24.5 +0.3**
CHTO pmax pmax
comp=Z,74nm,1.0s,mb5.7
CHTO Chiang Mai 64.43 268 ⇓*i*P **P 07 56 24.3 +0.1**
comp=Z,74nm,1.0s,mb5.7
CHTO *e* 07 56 35.4
PMG Port Moresby 64.65 206 LR LR 08 21 30.9
comp=Z,196nm,20.1s,MS4.3,baz=233,slow=33
PMG Port Moresby 64.65 206 ⇓*e*P **P 07 56 25.3 -0.3**
PMG Port Moresby 64.65 206 *e*Pr **P 07 56 25.3 -0.3**
PMG LR LR
comp=Z,718nm,21.0s,MS4.8
CM31 Chiang Mai Arr 64.70 268 PFAKE 07 56 40.0 +14
CM31 LR LR
comp=Z,713nm,19.0s,MS4.9
CCM Cathedral Cave 65.27 59 *e*P **P 07 56 28.5 -1.1**
CCM LR LR
comp=Z,226nm,20.0s,MS4.4
DOMB Dombas 65.28 351 *e*P **P 07 56 28.9 -0.7**
DOMB *e*pP pP 07 56 32.7 -0.2
SLM Saint Louis 65.37 58 *e*P **P 07 56 30.1 -0.2**
JIRN Jiri 65.65 284 *e*P **P 07 56 32.8 +0.7**
comp=Z,192nm,1.0s,mb6.1
GUN Gumba 65.65 285 *e*P **P 07 56 32.6 +0.5**
comp=Z,322nm,1.1s,mb6.3
FVM French Village 65.75 59 *e*P **P 07 56 32.0 -0.8**
FVM pmax pmax
comp=Z,16nm,0.6s,mb5.2
FVM French Village 65.75 59 *e*P **P 07 56 31.9 -0.8**
comp=Z,16nm,0.6s,mb5.2
MOS Moscow 65.81 333 *e*P **P 07 56 31.1 -2.0**
MOS *e* 07 56 43.6
MOS *e* 07 57 01.7
MOS *e*S S 08 05 20.1 +0.3
MOS pmax pmax
comp=Z,400nm,2.3s,mb6.0
MOS pmax pmax
comp=Z,136nm,1.8s,mb5.7
MOS MLR MLR
comp=Z,1µm,19.0s,MS5.1
MOS Moscow 65.81 333 *e*P **P 07 56 29.8 -3.3**

AAM Ann Arbor 65.94 52 PFAKE 07 56 50.0 +16
AAM LR LR
comp=Z,2µm,19.0s,MS5.2
VSU Vasula 66.00 340 *d i*P **P 07 56 33.9 -0.5**
VSU Vasula 66.00 340 *i* Pr 07 56 33.9
NB2 NORSAR Subarra 66.03 349 P **P 07 56 33.6 -0.9**
comp=Z,23nm,0.9s,mb5.2,baz=14,slow=6.5
NOA NORSAR Array B 66.03 349 P **P 07 56 33.8 -0.7**
comp=Z,4.0nm,0.6s,mb4.7,baz=13,slow=6.5,SNR=14
NOA LR LR 08 28 46.4
comp=Z,296nm,18.3s,MS4.5,baz=5.0,slow=39
JCT Junction City 66.07 71 *e*P **P 07 56 34.5 -0.3**
JCT LR LR
comp=Z,829nm,21.0s,MS4.9
KKN Kakani 66.09 285 *e*P **P 07 56 35.5 +0.6**
comp=Z,218nm,1.0s,mb6.1
KKN Kakani 66.09 285 *e*P **P 07 56 35.5 +0.6**
KKN pmax pmax
comp=Z,218nm,1.0s,mb6.1
PKI Pulchoki 66.18 285 *e*P **P 07 56 35.9 +0.4**
comp=Z,260nm,1.1s,mb6.2
PKI Pulchoki 66.18 285 *e*P **P 07 56 35.9 +0.4**
PKI pmax pmax
comp=Z,260nm,1.1s,mb6.2
NAO01 NORSAR Array S 66.26 350 *e*P **P 07 56 37.4 +1.4**
comp=Z,7.1nm,0.8s,mb4.8
NAO01 LR LR
comp=Z,366nm,21.0s,MS4.6
GKN Gorkha 66.32 285 *e*P **P 07 56 36.6 +0.2**
comp=Z,241nm,1.1s,mb6.2
DMN Daman 66.33 285 *e*P **P 07 56 37.1 +0.6**
comp=Z,187nm,1.0s,mb6.1
SIUC Southern Illin 66.59 58 *e*P **P 07 56 37.6 -0.6**
comp=Z,25nm,0.7s,mb5.3
MIAR Mount Ida 66.61 64 *e*P **P 07 56 37.3 -1.0**
comp=Z,22nm,0.8s,mb5.2
MIAR LR LR
comp=Z,526nm,21.0s,MS4.7
OBN Obninsk 66.65 333 *d i*P **P 07 56 38.5 0.0**
OBN *i* 07 56 43.7
OBN *i* 07 56 52.1
OBN *i* 07 57 05.4
OBN *i* S S 08 05 31.6 +1.6
OBN pmax pmax
comp=Z,80nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,800nm,16.0s,MS5.0
OBN Obninsk 66.65 333 *i* Pr **P 07 56 38.5 0.0**
OBN LR LR
comp=Z,900nm,19.0s,MS5.0
BLO Bloomington 66.89 56 *e*P **P 07 56 39.4 -0.6**
BLO pmax pmax
comp=Z,53nm,1.0s,mb5.5
BLO Bloomington 66.89 56 *e*P **P 07 56 39.4 -0.6**
comp=Z,53nm,1.0s,mb5.5
PARMO Parma 67.10 60 *e*P **P 07 56 42.0 +0.6**
KOLN Koldanda 67.11 286 *e*P **P 07 56 41.5 +0.1**
comp=Z,169nm,1.2s,mb6.0
UALR University of 67.11 63 *e*P **P 07 56 41.6 +0.1**
USIN University of 67.21 57 *e*P **P 07 56 42.1 0.0**
BER Bergen 67.25 352 *e*P **P 07 56 40.1 -2.2**
BER *e* 08 05 53.7
AFI Afiamalu 67.43 162 LR LR 08 20 02.2
comp=Z,575nm,20.0s,MS4.8,baz=8.0,slow=30
AFI Afiamalu 67.43 162 PFAKE 07 57 00.0 +17
AFI LR LR
comp=Z,698nm,20.0s,MS4.9
KONO Kongsberg 67.57 350 *e*P **P 07 56 43.9 -0.5**
KONO *e*S S 08 05 40.6 -0.4
KONO Kongsberg 67.57 350 *c i*P **P 07 56 42.2 -2.1**
KONO Kongsberg 67.57 350 ⇑*i*P **P 07 56 42.2 -2.1**
KONO LR LR
comp=Z,547nm,19.0s,MS4.8
WCI Wyandotte Cave 67.72 56 *e*P **P 07 56 44.6 -0.7**
WCI LR LR
comp=Z,341nm,20.0s,MS4.6
UTMT University of 67.81 59 *e*P **P 07 56 46.1 +0.2**
comp=Z,153nm,1.2s,mb5.9
ERPA Erie 67.83 49 PFAKE 07 57 00.0 +14
ERPA LR LR
comp=Z,1µm,22.0s,MS5.1
ACSO Alum Creek Sta 67.85 53 P **P 07 56 47.2 +1.0**
comp=Z,29nm,1.3s,mb5.2
ACSO LR LR
comp=Z,800nm,19.0s,MS5.0
MSNY Massena 67.88 44 *e*P **P 07 56 45.3 -1.0**
NATX Nacogdoches 68.07 66 *e*P **P 07 56 48.1 +0.6**
NATX LR LR
comp=Z,839nm,19.0s,MS5.0
ALLY Alegheny Colle 68.12 50 *e*P **P 07 56 49.1 +1.3**
LONY Lake Ozonia 68.30 44 *e*P **P 07 56 47.1 -1.9**
SMLA Simla 68.34 293 *e*P **P 07 56 47.7 -1.5**
SMLA *ex* x 07 57 04.0
WVT Waverly 68.52 59 P **P 07 56 50.1 -0.2**
WVT pmax pmax
comp=Z,29nm,0.9s,mb5.2
WVT Waverly 68.52 59 *e*P **P 07 56 50.0 -0.3**
comp=Z,29nm,0.8s,mb5.2
WVT *e* 07 57 02.1
WVT LR LR
comp=Z,1µm,22.0s,MS5.1
FRNY Flat Rock 68.55 44 *e*P **P 07 56 51.6 +1.1**
VRHR Novokhopersk 68.64 328 *e*P **P 07 56 50.5 -0.6**
VRHR pmax pmax
comp=N,9.0nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VRHR pmax pmax
comp=E,4.0nm,0.6s
HKT Hockley 68.76 68 *e*P **P 07 56 52.2 +0.4**
HKT LR LR
comp=Z,159nm,19.0s,MS4.3
VOR Voronezh 68.85 330 *e*P **P 07 56 51.0 -1.4**
VOR pmax pmax
comp=Z,200nm,2.0s,mb5.7
OXF Oxford 68.90 61 *e*P **P 07 56 52.5 -0.2**
OXF LR LR
comp=Z,949nm,19.0s,MS5.0
NCB Newcomb 68.97 45 *e*P **P 07 56 52.8 -0.3**
NCB LR LR
comp=Z,1µm,20.0s,MS5.0
PLAL Pickwick Lake 69.26 60 *e*P **P 07 56 54.0 -1.0**
comp=Z,25nm,0.6s,mb5.3
PLAL LR LR
comp=Z,858nm,22.0s,MS5.0
VRSR Storozhevoye 69.31 330 *d i*P **P 07 56 55.2 0.0**
VRSR *e*PP pP 07 57 07.2 +8.7
VRSR *e*S S 08 06 01.1 -0.6
VRSR *e*SS SS 08 10 24.5 -3.9
VRSR pmax pmax
comp=N,30nm,1.0s
VRSR pmax pmax
comp=E,30nm,1.0s
VRSR pmax pmax
comp=Z,40nm,1.0s,mb5.3
VRSR smax
comp=N,200nm,4.4s
VRSR smax
comp=Z,100nm,4.5s
VRSR MLR MLR
comp=Z,820nm,18.0s,MS5.0
VRSR MLR MLR
comp=N,670nm,19.0s,MS5.0
VRSR MLR MLR
comp=E,450nm,18.0s,MS5.0
KVTX Kingsville 69.37 72 *e*P **P 07 56 57.1 +1.5**
MNK Minsk 69.41 338 *e*P **P 07 56 53.0 -2.9**
BINY Binghamton 69.60 47 *e*P **P 07 56 56.7 -0.3**
comp=E,67nm,1.2s,mb5.5
BINY LR LR
comp=Z,2µm,22.0s,MS5.2
ACCN Adirondack Com 69.68 45 *e*P **P 07 56 56.5 -1.1**
MCWV Mont Chateau 69.82 51 *e*P **P 07 56 58.1 -0.2**
MCWV LR LR
comp=Z,1µm,21.0s,MS5.2
SSPA Standing Stone 69.97 49 *e*P **P 07 56 58.4 -1.0**
SSPA LR LR
comp=Z,220nm,20.0s,MS4.4
PKME Peaks-Kenny Pk 69.98 41 *e*P **P 07 56 58.8 -0.6**
HNH Hanover 70.02 44 *e*P **P 07 57 01.5 +1.9**
SWET Sewanee 70.21 58 *e*P **P 07 57 00.1 -0.7**
AYAN Aya Nagar 70.35 291 *e*P **P 07 56 59.6 -2.0**
AYAN AMb AMB 07 57 00.9
comp=Z,37nm,1.6s,mb5.1
WVL Waterville 70.41 41 *e*P **P 07 57 02.8 +0.8**

comp=Z,56nm,1.5s,mb5.3
TZTN Tazewell 70.41 56 *e*P **P 07 57 02.3 +0.3**
FFD Franklin Falls 70.47 43 *e*P **P 07 57 01.7 -0.7**
comp=Z,27nm,0.9s,mb5.2
MUD Monsted U'grnd 70.75 349⇑ *i*P **P 07 57 06.1 +2.0**
MUD *i* S S 08 06 21.9 +3.2
MUD
comp=Z,330nm,19.0s
MUD Monsted U'grnd 70.75 349⇑ *i*P **P 07 57 06.1 +2.0**
MUD *i* S S 08 06 21.9 +3.2
CPCT Cooper Cave 70.76 57 *e*P **P 07 57 04.0 -0.1**
SUW Suwalki 70.88 341 *e*P **P 07 57 04.7 -0.2**
SUW L 08 26 58.7
comp=Z,0.7nm,23.6s
SUW Suwalki 70.88 341 *e*P **P 07 57 04.5 -0.3**
FWV Forest Hill 70.97 53 *e*P **P 07 57 05.5 +0.1**
KUDL Kundal 70.97 291 *e*P **P 07 57 04.8 -0.6**
KUDL AMb AMB 07 57 07.6
comp=Z,83nm,1.3s,mb5.5
EMMW East Machias 71.17 40 *e*P **P 07 57 05.9 -0.7**
comp=Z,44nm,1.3s,mb5.2
MVL Millersville 71.19 49 *e*P **P 07 57 07.6 +0.8**
MYNC Murphy 71.25 57 *e*P **P 07 57 06.8 -0.3**
comp=Z,42nm,0.8s,mb5.4
MYNC LR LR
comp=Z,2µm,19.0s,MS5.4
KSM Kuching 71.28 247 *e*P **P 07 57 07.0 -0.3**
ELN Prospectdale 71.28 53 P **P 07 57 07.3 0.0**
BSD Bornholm Skovb 71.30 346 *i*P **P 07 57 05.8 -1.6**
BSD *i* S S 08 06 25.6 +0.5
BSD
comp=Z,370nm,17.0s
BSD Bornholm Skovb 71.30 346 *i*P **P 07 57 05.8 -1.6**
BSD *i* S S 08 06 25.6 +0.5
HRV Harvard--Oak R 71.30 44 PFAKE 07 57 20.0 +13
HRV LR LR
comp=Z,949nm,19.0s,MS5.1
KHET Khetri 71.42 292 *e*P **P 07 57 07.9 -0.3**
KHET *i* x x 07 57 27.8
SDMD Soldier's Deli 71.43 49 *e*P **P 07 57 03.3 -4.9**
BLA Blacksburg 71.46 53 P **P 07 57 09.3 +0.9**
BLA pmax pmax
comp=Z,2.0nm,0.8s
BLA Blacksburg 71.46 53 *e*P **P 07 57 08.6 +0.2**
comp=Z,1.7nm,0.8s
BLA *e* 07 57 23.1
BLA LR LR
comp=Z,111nm,19.0s,MS4.1
PAL Palisades 71.49 46 *e*P **P 07 57 09.6 +1.0**
PAL pmax pmax
comp=Z,50nm,1.0s,mb5.4
PAL Palisades 71.49 46 *e*P **P 07 57 09.6 +1.0**
comp=Z,50nm,1.1s,mb5.4
WES Weston 71.50 44 *e*P **P 07 57 14.0 +5.4**
comp=Z,42nm,1.1s,mb5.3
WES LR LR
comp=Z,1µm,21.0s,MS5.2
CPNY Central Park 71.64 46 *e*P **P 07 57 10.5 +1.0**
CBN Corbin 72.14 50 *e*P **P 07 57 12.6 +0.1**
comp=Z,44nm,0.8s,mb5.4
CBN LR LR
comp=Z,2µm,22.0s,MS5.4
AKASG Malin Array Be 72.57 336 P **P 07 57 14.3 -0.7**
comp=Z,6.2nm,0.6s,mb4.8,baz=25,slow=6.0,SNR=32
AKASG LR LR 08 34 16.2
comp=Z,428nm,18.1s,MS4.8,baz=5.0,slow=40
AKBB Malin Array Si 72.57 336 *e*P **P 07 57 14.0 -1.1**
KAKA Kakadu 72.69 220⇓ *i*P **P 07 57 14.7 -1.0**
comp=Z,54nm,0.9s,mb5.5
GKP Gorka Klasztor 72.70 344 *e*P **P 07 57 16.0 +0.2**
ESK Eskdalemuir 72.81 357 PFAKE 07 57 30.0 +14
ESK LR LR
comp=Z,450nm,19.0s,MS4.8
WAR Warsaw 72.99 341 *e*P **P 07 57 18.8 +1.3**
ABKT Ailbek 73.03 310 P **P 07 57 18.4 +0.6**
comp=Z,254nm,0.7s,mb6.3,SNR=12
BSEG Bad Segeberg 73.08 348 *e*P **P 07 57 17.9 -0.2**
AJM Ajmer 73.30 292 *i*P **P 07 57 19.0 -0.4**
MOIG Morelia 73.35 79⇑ *i*P **P 07 57 20.2 +0.5**
GOF Gofitskoye 73.36 324 *e*P **P 07 57 19.1 -0.6**
GOF pmax pmax
comp=Z,97nm,0.9s,mb5.7
MAK Makhachkala 73.47 320 *e*P **P 07 57 19.4 -1.0**
MAK *e* 07 57 38.4
MAK *i* 08 00 05.4
MAK *i* PPP 08 01 48.2
MAK *i* S S 08 06 49.5 -0.4
MAK *e* 08 07 25.7
MAK pmax pmax
comp=Z,251nm,1.2s,mb6.0
MAK pmax pmax
comp=Z,1µm,2.8s,mb6.3
MAK smax
comp=N,1µm,2.7s
MAK smax
comp=E,640nm,2.5s
MAK MLR MLR
comp=Z,2µm,22.0s,MS5.3
TAOE Nuku Hiva Isla 73.68 129 *e*LR LR 08 19 57.0
comp=Z,2µm,22.1s,baz=344
DZM Mont Dzumac 74.00 184 LR LR 08 28 16.9
comp=Z,682nm,18.2s,MS5.0,baz=26,slow=34
BHPL Bhopal 74.16 287 *i*P **P 07 57 24.9 +0.4**
KIV Kislovodsk 74.44 324 *i*Pr **P 07 57 27.5 +1.4**
SNR=7.5
KIV Kislovodsk 74.44 324 *d i*P **P 07 57 26.9 +0.8**
KIV *i* 07 57 38.7
KIV *i* S S 08 07 04.3 +3.5
KIV pmax pmax
comp=Z,99nm,2.5s,mb5.3
KIV MLR MLR
comp=Z,600nm,18.0s,MS4.9
KIV Kislovodsk 74.44 324 *i*Pr **P 07 57 26.0 -0.1**
KIV LR LR
comp=Z,648nm,20.0s,MS4.9
DSB Dublin 74.97 358 *e*P **P 07 57 28.9 -0.2**
comp=Z,28nm,0.8s,mb5.2
ZEI Tsey 75.02 323 *e*P **P 07 57 30.0 +0.6**
ZEI *e**PP pP 07 57 39.2 +6.5
KWP Kalwaria 75.11 339 *e*Pd **P 07 57 30.9 +1.0**
KWP *e* 07 57 44.5
KWP L 08 30 52.7
comp=Z,0.6nm,23.2s
KWP Kalwaria 75.11 339 *e*Pd **P 07 57 30.9 +1.0**
KWP *e* 07 57 44.5
KWP L 08 30 52.7
comp=Z,0.6nm,23.2s
KWP Kalwaria 75.11 339⇓ *e*P **P 07 57 30.9 +1.0**
KWP *e* 07 57 44.5
CTA Charters Tower 75.11 204⇓ *i*P **P 07 57 28.8 -1.1**
comp=Z,17nm,1.3s,mb4.8
CTA Charters Tower 75.11 204⇓ *i*P **P 07 57 28.8 -1.1**
CTA pmax pmax
comp=Z,17nm,1.3s
CTAO Charters Tower 75.11 204 P **P 07 57 28.9 -1.0**
CTAO pmax pmax
comp=Z,41nm,1.2s,mb5.2
CTAO Charters Tower 75.11 204 *e*P **P 07 57 28.7 -1.2**
comp=Z,41nm,1.3s,mb5.2
CTAO *e* 07 57 39.3
CLZ Clausthal 75.13 348 *e*P **P 07 57 29.9 -0.1**
comp=Z,72nm,2.0s,mb5.3
CLZ Clausthal 75.13 348 *e*P **P 07 57 29.9 -0.1**
CLZ pmax pmax
comp=Z,72nm,2.0s,mb5.3
OJC Ojcow 75.15 341⇓ *i*P **P 07 57 30.6 +0.4**
OJC *e* 07 57 43.0
OJC *e*S S 08 07 09.4 +0.6
OJC MLR MLR
comp=Z,2µm,20.6s,MS5.5
KSP Ksiaz 75.20 344 *e*Pd **P 07 57 30.7 +0.3**
KSP *e* 07 57 44.3
KSP L 08 29 20.7
comp=Z,0.9nm,24.8s
KSP Ksiaz 75.20 344 *e*Pd **P 07 57 30.7 +0.3**
KSP *e* 07 57 44.3
KSP L 08 29 20.7
comp=Z,0.9nm,24.8s
KSP Ksiaz 75.20 344 *e*P **P 07 57 29.7 -0.7**
KSP *e**PP pP 07 57 43.9 +10
KSP *e* 08 00 18.5
KSP *e*S S 08 07 06.0 -3.3
KSP Ksiaz 75.20 344 *e*P **P 07 57 29.7 -0.7**
KSP *e*pP pP 07 57 43.9 +10
KSP *e*PP PP 08 00 18.5 -0.2
KSP *e*S S 08 07 06.0 -3.3
KSP LR LR
comp=Z,1µm,18.6s,MS5.3
CLL Collm 75.28 346 *e*P **P 07 57 30.2 -0.7**
CLL Collm 75.28 346⇓ *i*P **P 07 57 30.5 -0.4**
comp=Z,logA/T=1.6,mb5.3
CLL *i* PCP PcP 07 57 42.4 -1.8
CLL *e* 07 57 56.0
CLL *i* 07 58 06.1
CLL Collm 75.28 346⇓ *i*P **P 07 57 30.5 -0.4**
comp=Z,94nm,2.2s,mb5.3
CLL *i* PcP PcP 07 57 42.4 -1.8
CLL *e*x x 07 57 56.0
CLL *i* x x 07 58 06.1
CLL Collm 75.28 346⇓ *i*P **P 07 57 30.5 -0.4**
CLL *i* 07 57 42.4
CLL pmax pmax
comp=Z,94nm,2.2s,mb5.3
CLL MLR MLR
comp=Z,500nm,16.0s,MS4.9
CLL Collm 75.28 346⇓ *i*P **P 07 57 30.5 -0.4**
comp=Z,94nm,2.2s,mb5.3
CLL *i* 07 57 42.4
CLL *e* 07 57 56.0
CLL LR LR
comp=Z,500nm,16.0s,MS4.9
ONI Oni 75.35 323 P **P 07 57 32.2 +0.9**
WTSB Winterswijk 75.43 350 *e*P **P 07 57 23.9 -7.8**
ANN Anapa 75.51 328 *e*P **P 07 57 32.2 -0.1**
ANN *e**PP pP 07 57 45.3 +10
ANN *e* 08 00 22.8
ANN *e*S S 08 07 12.2 -0.6
ANN pmax pmax
comp=Z,105nm,1.7s,mb5.5
ANN MLR MLR
comp=N,590nm,16.0s,MS5.0
ANN MLR MLR
comp=E,175nm,16.0s,MS5.0
ANN MLR MLR
comp=Z,425nm,16.0s,MS4.8
BRG Berggiesshubel 75.56 345 *e*P **P 07 57 31.9 -0.6**
comp=Z,29nm,1.4s,mb5.0
BRG Berggiesshubel 75.56 345 *e*P **P 07 57 32.3 -0.2**
comp=Z,18nm,1.5s,mb4.8
BRG *e* 07 57 48.6
comp=Z,12nm,1.1s
BRG S S 08 07 14.0 +0.7
BRG SS SS 08 12 03.0 -1.1
BRG Berggiesshubel 75.56 345 *e*P **P 07 57 32.3 -0.2**
BRG *e* 07 57 48.6
BRG S S 08 07 14.0 +0.7
BRG SS SS 08 12 03.0 -1.1
BRG pmax pmax
comp=Z,19nm,1.5s,mb4.8
BRG pmax pmax
comp=Z,12nm,1.1s,mb4.7
BRG Berggiesshubel 75.56 345 *e*P **P 07 57 32.3 -0.2**
comp=Z,18nm,1.5s,mb4.8
BRG *e* 07 57 48.6
BRG S S 08 07 14.0 +0.7
BRG SS SS 08 12 03.0 -1.1
UPC Upice 75.57 344 *e*P **P 07 57 33.0 +0.4**
DGRG David-gareji 75.59 321 P **P 07 57 33.3 +0.6**
TBLG Delisi 75.59 321 P **P 07 57 33.3 +0.6**
FBE Freiberg 75.60 346 *e*P **P 07 57 32.3 -0.5**
comp=Z,48nm,1.5s,mb5.2
FBE *e*pP pP 07 57 44.9 +8.9
MTA Mtatsminda 75.60 321 P **P 07 57 33.6 +0.8**
DPC Dobruska-Polom 75.67 344 *e*P **P 07 57 33.6 +0.5**
DPC AMS AMS 08 37 00.0
comp=Z,500nm,19.6s
PVCC Panska Ves 75.79 345 *e*P **P 07 57 33.5 -0.3**
PVCC *e*PCP PcP 07 57 47.2 +0.8
PVCC *e*S S 08 07 20.6 +4.7
PVCC AMS AMS 08 38 00.0
comp=Z,600nm,12.9s
NIE Niedzica 75.81 341 *e*P **P 07 57 35.6 +1.7**
SOC Sochi 75.82 326 *d i*P **P 07 57 34.4 +0.4**
SOC *e**PP pP 07 57 45.7 +8.4
SOC *e*PPP 08 02 17.3
SOC *e*S S 08 07 11.5 -4.6
SOC pmax pmax
comp=Z,83nm,1.9s,mb5.3
SOC pmax pmax
comp=Z,458nm,2.8s,mb5.9
SOC MLR MLR
comp=Z,765nm,18.0s,MS5.0
SOC Sochi 75.82 326 *i*P **P 07 57 35.3 +1.3**
OKC Ostrava-Krasne 75.83 342 *e*P **P 07 57 34.5 +0.4**
OKC *e*PCP PcP 07 57 46.4 -0.2
OKC *e*S S 08 07 19.2 +2.9
OKC AMS AMS 08 39 40.0
comp=Z,700nm,17.4s
OKC Ostrava-Krasne 75.83 342 *e*P **P 07 57 34.5 +0.4**
OKC *e* 07 57 46.4
OKC *e*S S 08 07 19.2 +2.9
KOLS Kolonicke sedl 75.86 339 *e*P **P 07 57 34.7 +0.5**
KOLS *e* 07 57 49.1
KOLS *e*S S 08 07 14.2 -2.4
MORC Moravsky Berou 76.00 343⇓ *i*P **P 07 57 35.4 +0.3**
MORC Moravsky Berou 76.00 343 P **P 07 57 35.7 +0.6**
CRVS Cervenica-Dubn 76.06 340 *e*P **P 07 57 36.1 +0.7**
CRVS *e*sP sP 07 57 42.1 +2.2
CRVS *e*S S 08 07 17.5 -1.3
CRVS Cervenica-Dubn 76.06 340 *e*P **P 07 57 36.2 +0.8**
CRVS *e* 07 57 42.1
CRVS *e*S S 08 07 17.5 -1.3
KIS Kishinev 76.08 334 *e*P **P 07 57 34.0 -1.5**
KIS *e* 07 57 45.0
KIS *e* 08 00 24.0
KIS *e*S S 08 07 16.0 -3.1
KIS *e*PS 08 07 43.0
KIS *e*SS SS 08 12 08.0 -4.1
KIS MLR MLR
comp=N,700nm,16.0s
KIS MLR MLR
comp=Z,800nm,16.0s,MS5.1
KIS MLR MLR
comp=Z,1µm,18.0s
MOX Moxa 76.13 347 *e*P **P 07 57 35.4 -0.4**
comp=Z,57nm,2.0s,mb5.2
MOX Moxa 76.13 347 *e*P **P 07 57 36.7 +0.9**
comp=Z,63nm,2.1s,mb5.2
MOX
comp=Z,200nm,21.0s
MOX Moxa 76.13 347 *e*P **P 07 57 36.7 +0.9**
MOX pmax pmax
comp=Z,63nm,2.1s,mb5.2
MOX MLR MLR
comp=Z,200nm,21.0s,MS4.4
UBBA Unterbreizbach 76.18 348 *e*P **P 07 57 35.6 -0.4**
comp=Z,60nm,2.2s,mb5.1
WERD Werda 76.22 346 *e*P **P 07 57 36.1 -0.2**
comp=Z,38nm,1.7s,mb5.0
TANN Tannenbergstha 76.23 346 *e*P **P 07 57 36.3 0.0**
comp=Z,32nm,1.7s,mb5.0
GUNZ Gunzen 76.30 346 *e*P **P 07 57 36.7 0.0**
comp=Z,69nm,1.9s,mb5.3
PRU Pruhonice 76.32 345 *e*P **P 07 57 36.6 -0.2**
PRU *e*PCP PcP 07 57 50.8 +2.1
PRU *e*S S 08 07 25.4 +3.7
PRU AMS AMS 08 38 10.0
comp=Z,600nm,15.2s
NKC Novy Kostel 76.41 346 *e*P **P 07 57 37.3 -0.1**
BURAR Bucovina Array 76.42 337⇓ *i*P **P 07 57 38.2 +0.8**
BURAR Bucovina Array 76.42 337⇓ *i*P **P 07 57 38.2 +0.8**
SIM Simferopol' 76.43 330 *de*P **P 07 57 37.8 +0.3**
SIM *e*PPP 08 02 21.0
SIM *e*S S 08 07 25.0 +2.1
SIM *e*PS 08 07 46.0
SIM pmax pmax
comp=Z,100nm,9.0s
VRAC Vranov 76.62 343⇓ *i*P **P 07 57 39.4 +0.8**
VRAC Vranov 76.62 343 P **P 07 57 39.6 +1.0**
MANZ Manzenberg 76.70 346 *e*P **P 07 57 38.9 -0.1**
comp=Z,10.0nm,1.1s,mb4.7
HGN Heimansgroeve 76.71 350 *e*P **P 07 57 33.8 -5.2**
TREC Trest 76.83 344 *e*P **P 07 57 40.0 +0.2**
TREC *e*PCP PcP 07 57 52.2 +1.3
TREC AMS AMS 08 38 40.0
comp=Z,700nm,16.9s
MEM Membach 76.85 350 P **P 07 57 40.0 +0.1**
ROTZ Rotzenmuhle 76.90 346 *e*P **P 07 57 40.3 +0.2**
comp=Z,36nm,1.6s,mb5.0
GNI Garni 76.95 321 P **P 07 57 42.3 +1.9**
comp=Z,7.6nm,0.5s,mb4.9,baz=6.8,slow=4.4,SNR=15
GNI Garni 76.95 321 P **P 07 57 42.5 +2.1**
GNI pmax pmax
comp=Z,63nm,1.1s
GNI Garni 76.95 321 P **P 07 57 42.4 +1.9**
GNI LR LR
comp=Z,863nm,21.0s,MS5.0
VYHS Vyhne 76.99 341 *i*P **P 07 57 40.9 +0.3**
VYHS *e* 07 57 54.0
VYHS *e*PP PP 08 00 33.5 -0.3
VYHS *e*S S 08 07 29.6 +0.6
VYHS Vyhne 76.99 341 *i*P **P 07 57 40.9 +0.3**
VYHS *e* 07 57 54.0
VYHS *e* 08 00 33.6
VYHS *e*S S 08 07 29.6 +0.6
VYHS pmax pmax
comp=Z,24nm,1.5s,mb4.9
VYHS Vyhne 76.99 341 *i*P **P 07 57 40.9 +0.3**
comp=Z,24nm,1.5s,mb4.9
VYHS *e* 07 57 54.0
VYHS *e*PP PP 08 00 33.6 -0.2
VYHS *e*S S 08 07 29.6 +0.6
GRA1 Grafenberg Arr 77.11 347 *e*P **P 07 57 41.6 +0.3**
GRA1 *e*pP pP 07 57 54.3 +10
GRA1 *e*sP sP 07 57 57.7 +12
GRA1 *e*S S 08 07 33.2 +2.9
GRA1 LR LR
comp=Z,300nm,20.8s,MS4.6
GRF Grafenberg Arr 77.11 347 *e*P **P 07 57 41.6 +0.3**
GRF *e*pP pP 07 57 54.3 +10
GRF *e*sP sP 07 57 57.7 +12
GRF *e*S S 08 07 33.2 +2.9
GRF *e*L 08 40 46.7
comp=Z,279nm,20.8s
GRF Grafenberg Arr 77.11 347 *e*P **P 07 57 41.6 +0.3**
GRF *e**PP pP 07 57 54.3 +10
GRF *e**SP sP 07 57 57.7 +12
GRF *e*S S 08 07 33.2 +2.9
DIGO Kars 77.25 322 *i*P **P 07 57 43.3 +1.2**
KHC Kasperske Hory 77.31 345 *e*P **P 07 57 42.7 +0.3**
KHC *e*PCP PcP 07 57 53.4 +0.4
KHC *e*S S 08 07 31.9 -0.5
KHC AMS AMS 08 38 50.0
comp=Z,800nm,16.2s
KHC Kasperske Hory 77.31 345 *d i*P **P 07 57 42.8 +0.4**
PSZ Piszkesteto 77.32 341⇓ *e*P **P 07 57 43.8 +1.3**
PSZ Piszkesteto 77.32 341⇓ *i*P **P 07 57 44.0 +1.5**
PSZ Piszkesteto 77.32 341 *e*P **P 07 57 43.6 +1.0**
PPT Papeete 77.38 142 *e*S S 08 07 26.8 -6.5
comp=Z,425nm,33.5s
PPT *e*SS SS 08 12 25.7 -6.0
comp=Z,112nm,24.2s
PPT *e*LR LR 08 21 31.1
comp=Z,797nm,23.0s,baz=337
PPT Papeete 77.38 142 P **P 07 57 42.6 -0.3**
comp=Z,25nm,0.8s,mb5.2,baz=129,slow=11,SNR=3.7
PPT LR LR 08 31 05.8
comp=Z,653nm,18.2s,MS5.0,baz=325,slow=35
PPT Papeete 77.38 142 P **P 07 57 42.6 -0.3**
PPT LR LR 08 31 05.8
WET Wettzell 77.40 346 *e*P **P 07 57 43.1 +0.1**
comp=Z,49nm,1.7s,mb5.2
WET Wettzell 77.40 346 *e*P **P 07 57 43.1 +0.1**
WET pmax pmax
comp=Z,49nm,1.7s,mb5.2
GIVF Givet 77.47 351 *e*P **P 07 57 42.5 -0.8**
GEC2 GERESS Array S 77.56 345 *e*P **P 07 57 43.8 -0.1**
comp=Z,43nm,1.6s,mb5.1
GEC2 GERESS Array S 77.56 345 *e*P **P 07 57 43.8 -0.1**
GEC2 pmax pmax
comp=Z,43nm,1.6s,mb5.1
GERES GERESS Array B 77.56 345 P **P 07 57 43.8 0.0**
comp=Z,3.2nm,0.6s,mb4.4,baz=26,slow=6.4,SNR=20
GERES LR LR 08 37 54.7
comp=Z,437nm,18.3s,MS4.8,baz=11,slow=40
BAIF Baives 77.57 351 *e*P **P 07 57 43.2 -0.7**
comp=Z,49nm,1.3s,mb5.0
BAIF Baives 77.57 351 *e*P **P 07 57 43.2 -0.7**
BAIF pmax pmax
comp=Z,24nm,1.3s,mb5.0
BAIF Baives 77.57 351 *e*P **P 07 57 43.2 -0.7**
comp=Z,24nm,1.3s,mb5.0
ZST Bratislava 77.60 343 *e*P **P 07 57 44.9 +0.8**
ZST *e* 07 57 57.5
ZST *e*PP PP 08 00 39.3 +0.3
ZST Bratislava 77.60 343 *e*P **P 07 57 44.9 +0.8**
comp=Z,69nm,1.9s,mb5.3
ZST *e* 07 57 57.5
ZST *e*PP PP 08 00 39.3 +0.3
ZST LR LR
comp=Z,900nm,16.2s,MS5.2
VRI Vrincioaia 77.68 335⇓ *i*P **P 07 57 45.2 +0.7**
VRI Vrincioaia 77.68 335 P **P 07 57 45.3 +0.8**
WLF Walferdange 77.77 350 *e*P **P 07 57 45.1 +0.1**
DRGR 77.78 338⇓ *i*P **P 07 57 45.7 +0.6**
DRGR 77.78 338 P **P 07 57 45.9 +0.8**
HYB Hyderabad 77.97 283 *i*P **P 07 57 46.0 -0.1**
HYB Hyderabad 77.97 283 *e*P **P 07 57 46.0 -0.1**
VHO Vísta Hermosa 78.04 78 *e*P **P 07 57 48.3 +1.8**
CONA Conrad Observa 78.09 343 *i*P **P 07 57 47.9 +1.1**
comp=Z,300nm,2.8s,mb5.7,SNR=8.2
DWPF Disney 78.14 59 *e*P **P 07 57 47.9 +0.8**
comp=Z,29nm,0.9s,mb5.2
DWPF LR LR
comp=Z,285nm,22.0s,MS4.5
MLR Muntele Rosu 78.23 336⇑ *i*P **P 07 57 47.3 -0.3**
MLR Muntele Rosu 78.23 336 P **P 07 57 49.0 +1.5**
MOA Molln 78.44 344⇓ *i*P **P 07 57 49.3 +0.6**
comp=Z,434nm,5.7s
VOIR 78.50 336⇓ *i*P **P 07 57 49.8 +0.7**
VOIR 78.50 336⇓ P **P 07 57 49.8 +0.7**
TIRR Tirgusor 78.54 334⇓ *i*P **P 07 57 49.7 +0.4**
TIRR Tirgusor 78.54 334 P **P 07 57 50.0 +0.7**
TIRR Tirgusor 78.54 334⇓ P **P 07 57 49.6 +0.4**
WRAB Tennant Creek 78.59 215 P **P 07 57 48.0 -1.5**
comp=Z,269nm,0.8s,mb6.2,SNR=12
WRAB Tennant Creek 78.59 215 P **P 07 57 48.5 -1.0**
WRAB pmax pmax
comp=Z,77nm,1.0s,mb5.6
WRAB Tennant Creek 78.59 215⇓ *i*P **P 07 57 48.2 -1.3**
comp=Z,77nm,1.0s,mb5.6
WRAB LR LR
comp=Z,736nm,22.0s,MS5.0
WB2 Warramunga Arr 78.59 215⇓ *i*P **P 07 57 48.5 -1.1**
WRA Warramunga Arr 78.60 215 P **P 07 57 48.5 -1.1**
comp=Z,22nm,0.8s,mb5.1,baz=30,slow=6.1,SNR=104
WRA LR LR 08 28 40.4
comp=Z,586nm,21.3s,MS4.9,baz=45,slow=33
GRSN GIRESUNGRSN 78.67 325 *i*P **P 07 57 50.5 +0.5**
ARSA Arzberg 78.80 343⇓ *i*P **P 07 57 51.9 +1.2**
comp=Z,253nm,2.8s,mb5.7
BFO Black Forest 78.83 348 *e*P **P 07 57 50.5 -0.4**
comp=Z,47nm,1.8s,mb5.1
BFO Black Forest 78.83 348 P **P 07 57 51.9 +1.0**
BFO Black Forest 78.83 348 *e*P **P 07 57 50.2 -0.7**
WLS Welschbruch 78.87 349 *e*P **P 07 57 51.0 -0.1**
CDF Champ du Feu 78.88 349 *e*P **P 07 57 50.0 -1.1**
comp=Z,5.7nm,0.5s,mb4.5
CDF Champ du Feu 78.88 349 *e*P **P 07 57 50.0 -1.1**
CDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
CDF Champ du Feu 78.88 349 *e*P **P 07 57 50.0 -1.1**
comp=Z,2.8nm,0.5s,mb4.5
KELT Kelkit 79.00 324 *i*P **P 07 57 53.3 +1.4**
MEZF Maizieres J'vi 79.03 351 *e*P **P 07 57 51.0 -1.0**
ECH Echery 79.09 349 *e*P **P 07 57 52.0 -0.3**
LIBD Limburg 79.10 349 *e*P **P 07 57 52.5 +0.2**
CMIG Matias Romero 79.14 76 *i*P **P 07 57 53.1 +0.6**
BZS Buzias 79.14 339⇓ *i*P **P 07 57 52.9 +0.3**
BZS Buzias 79.14 339 P **P 07 57 53.3 +0.7**
THEF They Montfort 79.21 350 *e*P **P 07 57 52.5 -0.4**
PKSM Moragy 79.21 341⇑ *i*P **P 07 57 52.6 -0.4**
PKSM Moragy 79.21 341 P **P 07 57 52.9 -0.1**
FLN La Foliniere 79.22 354 *e*P **P 07 57 52.1 -0.9**
FLN *e*R
comp=Z,455nm,18.0s
FLN La Foliniere 79.22 354 *e*P **P 07 57 52.1 -0.9**
FLN LR LR
comp=Z,450nm,18.0s,MS4.8
PSN Preselentsi 79.32 334 *i*P **P 07 57 53.8 +0.2**
FELD Feldberg im Sc 79.32 348 *e*P **P 07 57 53.1 -0.5**
KBA Koelnbreinsper 79.34 345⇓ *i*P **P 07 57 55.0 +1.4**

comp=Z,346nm,2.6s,mb5.8,SNR=9.3
KBA Koelnbreinsper 79.34 345 ⇓ iP P 07 57 55.0 +1.3
KBA pmax pmax
comp=Z,346nm,2.6s,mb5.8
BNGL BINGOL 79.36 323 *i* P **P 07 57 55.4 +1.6**
BOYT Boyabat 79.36 328 *i* P **P 07 57 54.8 +1.0**
LDF La Druitiere 79.37 354 *e*P **P 07 57 52.7 -1.1**
HAU Haudompre 79.39 350 *e*P **P 07 57 53.0 -0.9**
HAU *e*R
comp=Z,633nm,22.5s
HAU Haudompre 79.39 350 *e*P **P 07 57 53.0 -0.9**
HAU LR LR
comp=Z,630nm,22.5s,MS4.9
MOTA Moosalm 79.42 346 ⇓ iP P 07 57 54.7 +0.6
comp=Z,56nm,1.7s,mb5.2
MOTA Moosalm 79.42 346 ⇓ iP P 07 57 54.7 +0.6
MOTA pmax pmax
comp=Z,56nm,1.7s,mb5.2
WTTA Wattenberg 79.42 346 ⇓ iP P 07 57 55.5 +1.4
comp=Z,134nm,2.2s,mb5.5
WTTA Wattenberg 79.42 346 ⇓ iP P 07 57 55.6 +1.5
WTTA pmax pmax
comp=Z,135nm,2.2s,mb5.5
MOF Molkenrain 79.45 349 *e*P **P 07 57 53.6 -0.7**
PERS Pernice 79.47 343 *i* P **P 07 57 55.2 +0.8**
HINF Hinteralfeld 79.51 349 *e*P **P 07 57 53.6 -1.0**
SQTA Sankt Quirin 79.53 346 ⇓ iP P 07 57 55.5 +0.8
comp=Z,77nm,1.9s,mb5.3
SQTA Sankt Quirin 79.53 346 ⇓ iP P 07 57 55.6 +0.9
SQTA pmax pmax
comp=Z,77nm,1.9s,mb5.3
HAKT HAKKARI 79.59 320 *i* P **P 07 58 00.6 +5.6**
GRR Gorron 79.62 355 *e*P **P 07 57 54.1 -1.1**
DAVA Damuels 79.65 347 ⇓ iP P 07 57 55.9 +0.5
comp=Z,427nm,5.5s
OBKA Obir 79.69 344 ⇓ iP P 07 57 56.2 +0.7
comp=Z,464nm,3.0s,mb5.9,SNR=5.2
BALT Daday 79.75 329 *i* P **P 07 57 56.9 +1.0**
BBS Basel-Blauen 79.78 349 *e*P **P 07 57 55.7 -0.4**
ROSF Rostrenen 79.79 356 *e*P **P 07 57 55.0 -1.1**
comp=Z,93nm,1.5s,mb5.2
ROSF Rostrenen 79.79 356 *e*P **P 07 57 55.0 -1.1**
ROSF pmax pmax
comp=Z,46nm,1.5s,mb5.2
ROSF Rostrenen 79.79 356 *e*P **P 07 57 55.0 -1.1**
comp=Z,46nm,1.5s,mb5.2
SGMF Saint Gilles 79.84 356 *e*P **P 07 57 55.0 -1.4**
comp=Z,140nm,1.7s,mb5.3
SGMF Saint Gilles 79.84 356 *e*P **P 07 57 55.0 -1.4**
SGMF pmax pmax
comp=Z,70nm,1.7s,mb5.3
SGMF Saint Gilles 79.84 356 *e*P **P 07 57 55.0 -1.4**
comp=Z,70nm,1.7s,mb5.3
LOMF Lomont 79.98 349 *e*P **P 07 57 56.2 -0.9**
PRD Provadia 79.98 334 *i* P **P 07 57 56.8 -0.3**
CTKT Corum 80.12 328 *i* P **P 07 57 58.5 +0.7**
QUIF Quistinic 80.20 356 *e*P **P 07 57 57.0 -1.4**
SZH Strazhica 80.31 335 *i* P **P 07 57 57.1 -1.8**
FITZ Fitzroy Crossi 80.32 223 *e*P **P 07 57 58.5 -0.5**
comp=Z,49nm,1.1s,mb5.3
FITZ Fitzroy Crossi 80.32 223 LR LR 08 29 32.1
comp=Z,156nm,21.1s,MS4.3,baz=46,slow=33
LOR Lormes 80.37 351 *e*P **P 07 57 58.5 -0.8**
LOR *e*R
comp=Z,462nm,22.2s
LOR Lormes 80.37 351 *e*P **P 07 57 58.5 -0.8**
LOR LR LR
comp=Z,460nm,22.3s,MS4.8
PVL Pavlikeni 80.51 335 *i* P **P 07 57 58.5 -1.5**
BOJS Bojanci 80.54 343 *e*P **P 07 58 00.7 +0.6**
BOJS *i* 07 58 14.7
ELZG Elazig 80.56 324 *i* P **P 07 58 02.0 +1.7**
SSF Saint Saulge 80.61 351 *e*P **P 07 57 59.7 -0.8**
KAD Karad 80.67 286 *e*P **P 07 58 00.9 +0.1**
KAD AMb AMB 07 58 02.1
comp=Z,80nm,1.1s,mb5.6
ELDT Eldivan 80.68 329 *i* P **P 07 58 01.9 +0.9**
CABF La Chapelle 80.79 350 *e*P **P 07 58 00.7 -0.8**
AVF Avril sur Loir 80.89 351 *e*P **P 07 58 00.7 -1.3**
MALT Malatya 80.93 324 ⇑ iP P 07 58 02.0 -0.2
MALT Malatya 80.93 324 P **P 07 58 03.3 +1.1**
MALT pmax pmax
comp=Z,81nm,1.4s,mb5.5
MALT Malatya 80.93 324 P **P 07 58 04.0 +1.8**
MALT Malatya 80.93 324 P **P 07 58 04.0 +1.8**
MSL Mosul 80.93 320 *ex* x 07 58 03.0
MSL *ex* x 08 01 07.0
MSL *ex* x 08 08 14.0
MARD Mardin 80.94 322 *i* P **P 07 58 03.2 +0.9**
SMF Signal de Mont 80.99 351 *e*P **P 07 58 01.4 -1.2**
comp=Z,33nm,1.0s,mb4.9
SMF Signal de Mont 80.99 351 *e*P **P 07 58 01.4 -1.2**
SMF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SMF Signal de Mont 80.99 351 *e*P **P 07 58 01.4 -1.2**
comp=Z,16nm,1.0s,mb4.9
SGKT Sivrigoynuk 81.04 330 *i* P **P 07 58 03.6 +0.8**
CDAG Cicekdag 81.16 328 *i* P **P 07 58 04.0 +0.5**
BGF Bois d'Agland 81.17 352 *e*P **P 07 58 02.4 -1.1**
BR131 Keskin Array S 81.31 328 *e*P **P 07 58 04.9 +0.6**
comp=Z,7.1nm,0.7s,mb4.7
BRTR Keskin Array B 81.31 328 P **P 07 58 04.9 +0.6**
comp=Z,9.1nm,0.8s,mb4.8,baz=59,slow=3.1,SNR=48
BRTR LR LR 08 40 17.3
comp=Z,385nm,19.6s,MS4.8,baz=151,slow=40
MFF Saint Martin d 81.35 354 *e*P **P 07 58 03.3 -1.2**
comp=Z,41nm,1.2s,mb5.0
MFF Saint Martin d 81.35 354 *e*P **P 07 58 03.3 -1.2**
MFF pmax pmax
comp=Z,20nm,1.2s,mb4.9
MFF Saint Martin d 81.35 354 *e*P **P 07 58 03.3 -1.2**
comp=Z,20nm,1.2s,mb4.9
PGB Panagyurishte 81.43 336 *i* P **P 07 58 04.9 0.0**
ANTO Ankara 81.45 329 ⇑ iP P 07 58 06.0 +1.0
ANTO Ankara 81.45 329 P **P 07 58 06.1 +1.1**
SNR=13
ANTO Ankara 81.45 329 P **P 07 58 06.6 +1.6**
ANTO pmax pmax
comp=Z,43nm,1.3s,mb5.2
TCF Toulx Ste Croi 81.49 352 *e*P **P 07 58 04.4 -0.8**
DIM Dimitrovgrad 81.55 335 *i* P **P 07 58 06.0 +0.5**
ELBA Catalca 81.59 332 *i* P **P 07 58 05.7 -0.1**
VTS Vitosha 81.63 337 *i* P **P 07 58 06.4 +0.4**
VTS Vitosha 81.63 337 ⇑ iP P 07 58 06.2 +0.2
AGO Saint Agoulin 81.64 352 *e*P **P 07 58 05.3 -0.7**
PLDF La Plantade 81.68 351 *e*P **P 07 58 06.5 +0.3**
PLD Plovdiv 81.71 335 *i* P **P 07 58 06.6 +0.2**
ATAB Bozova 81.72 324 *i* P **P 07 58 08.2 +1.8**
LPL La Plagne 81.80 349 *e*P **P 07 58 06.0 -0.8**
LPG La Plagne 81.81 349 *e*P **P 07 58 05.8 -1.1**
PYM Petit Puy Mans 81.95 352 *e*P **P 07 58 07.4 -0.3**
KDZ Kurdzhali 81.95 335 *i* P **P 07 58 08.9 +1.2**
GZT Gaziantep 82.09 324 *i* P **P 07 58 09.2 +0.8**
BORA Eskisehir 82.17 330 *i* P **P 07 58 09.4 +0.6**
AS31 Alice Springs 82.18 214 *e*P **P 07 58 08.3 -0.6**
ASAR Alice Springs 82.18 214 P **P 07 58 08.3 -0.5**
comp=Z,9.4nm,0.8s,mb4.8,baz=23,slow=4.5,SNR=54
ASAR LR LR 08 29 14.8
comp=Z,551nm,21.8s,MS4.9,baz=13,slow=32
ASPA Alice Springs 82.19 214 *e*P **P 07 58 08.3 -0.6**
KKB Krupnik 82.34 336 *i* P **P 07 58 10.2 +0.5**
ESKT Eskisehir 82.38 330 *i* P **P 07 58 10.1 +0.2**
RDO Rodhopi 82.39 334 *e*P **P 07 58 10.6 +0.6**
LBL Lubilhac 82.44 351 *e*P **P 07 58 10.6 +0.3**
MMB Musomiste 82.44 336 *i* P **P 07 58 10.9 +0.6**
ORIF Oris-en-Rattie 82.48 349 *e*P **P 07 58 09.3 -1.2**
comp=Z,26nm,0.9s,mb4.9
ORIF *e*R
comp=Z,389nm,20.0s
ORIF Oris-en-Rattie 82.48 349 *e*P **P 07 58 09.3 -1.2**
ORIF pmax pmax
comp=Z,13nm,0.9s,mb4.9
ORIF Oris-en-Rattie 82.48 349 *e*P **P 07 58 09.3 -1.2**
comp=Z,13nm,0.9s,mb4.9
RJF Les Rejaudoux 82.52 353 *e*P **P 07 58 09.5 -1.2**
RJF *e*R
comp=Z,643nm,19.8s
RJF Les Rejaudoux 82.52 353 *e*P **P 07 58 09.5 -1.2**
RJF LR LR
comp=Z,640nm,19.8s,MS5.0
MBDF Montbardon 82.57 349 *e*P **P 07 58 09.7 -1.2**
comp=Z,52nm,1.2s,mb5.1
MBDF Montbardon 82.57 349 *e*P **P 07 58 09.7 -1.2**
MBDF pmax pmax
comp=Z,26nm,1.2s,mb5.1
MBDF Montbardon 82.57 349 *e*P **P 07 58 09.7 -1.2**
comp=Z,26nm,1.2s,mb5.1
NVR Nevrokopi 82.64 336 *e*P **P 07 58 12.0 +0.7**
SKO Skopje 82.64 338 *e*P **P 07 58 12.8 +1.5**
VIVF Saint-Julien-l 82.68 350 *e*P **P 07 58 10.0 -1.5**
comp=Z,7.3nm,0.7s,mb4.5
VIVF Saint-Julien-l 82.68 350 *e*P **P 07 58 10.0 -1.5**
VIVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
VIVF Saint-Julien-l 82.68 350 *e*P **P 07 58 10.0 -1.5**
comp=Z,3.7nm,0.7s,mb4.5
BBSR BB Station 82.75 45 PFAKE 07 58 20.0 +8.2
BBSR LR LR
comp=Z,680nm,19.0s,MS5.0
KDHN Kadinhani 82.89 329 *i* P **P 07 58 12.2 -0.3**
LFF La Frestale 82.94 353 *e*P **P 07 58 11.5 -1.4**
VAY Valandovo 82.98 337 *e*P **P 07 58 12.5 -0.6**
BHD Baghdad 83.03 317 *ex* x 07 58 08.0
GDZ Gediz 83.19 331 *i* P **P 07 58 13.7 -0.4**
SAOF Saorge 83.20 348 *e*P **P 07 58 13.3 -0.9**
AUTN L'Aution 83.21 348 *e*P **P 07 58 13.1 -1.1**
TOUF Mont Tournerai 83.21 348 *e*P **P 07 58 15.2 +1.0**
COBT Iskenderun 83.30 325 *i* P **P 07 58 16.2 +1.5**
SBF Sospel 83.34 348 *e*P **P 07 58 13.7 -1.2**
MVIF Mont Vial 83.34 348 *e*P **P 07 58 15.4 +0.5**
SMRF Simiane la Rot 83.45 350 *e*P **P 07 58 14.2 -1.3**
BOZC Bozcaada 83.47 334 *i* P **P 07 58 14.5 -1.1**
LASF Ste Croix 83.53 351 *e*P **P 07 58 14.7 -1.2**
OHR Ohrid 83.61 338 *e*P **P 07 58 15.4 -0.8**
LIA Limnos Island 83.66 334 *e*P **P 07 58 16.7 +0.2**
MGV Manicaragua 83.73 62 *e*P **P 07 58 18.2 +1.3**
AKHS Akhisar 83.87 332 *i* P **P 07 58 16.8 -0.9**
TKTP Tekketepe 83.90 330 *i* P **P 07 58 18.0 +0.2**
ARMA Armidale 83.95 197 *e*P **P 07 58 18.7 +0.7**
PRK Paraskevi 83.97 333 *e*P **P 07 58 18.0 -0.1**
LMR La Mourre 83.97 349 *e*P **P 07 58 16.9 -1.3**
comp=Z,203nm,1.5s,mb5.7
LMR La Mourre 83.97 349 *e*P **P 07 58 16.9 -1.3**
LMR pmax pmax
comp=Z,102nm,1.5s,mb5.7
LMR La Mourre 83.97 349 *e*P **P 07 58 16.9 -1.3**
comp=Z,102nm,1.5s,mb5.7
MEST Erdemli 83.98 326 *i* P **P 07 58 17.9 -0.3**
ISP Isparta 84.02 330 ⇓ iP P 07 58 18.9 +0.5
ISP Isparta 84.02 330 P **P 07 58 18.9 +0.5**
ERMK Ermenek 84.34 327 *i* P **P 07 58 19.6 -0.4**
MTLF Montolieu 84.41 352 *e*P **P 07 58 18.9 -1.5**
comp=Z,80nm,1.4s,mb5.3
MTLF Montolieu 84.41 352 *e*P **P 07 58 18.9 -1.5**
MTLF pmax pmax
comp=Z,40nm,1.4s,mb5.4
MTLF Montolieu 84.41 352 *e*P **P 07 58 18.9 -1.5**
comp=Z,40nm,1.4s,mb5.3
PGF Pioggiola 84.42 347 *e*P **P 07 58 19.1 -1.3**
PALK Pallekele 84.55 275 PFAKE 07 58 30.0 +8.9
PALK LR LR
comp=Z,308nm,21.0s,MS4.7
DNZL Cakiroluk 84.61 331 *i* P **P 07 58 21.6 +0.3**
MIB Mutribah 84.73 313 *e*P **P 07 58 22.0 0.0**
MIB AMb AMB 07 58 23.5
comp=Z,152nm,0.6s,mb6.3
UMR Umm Al-Rimmam 84.77 313 *e*P **P 07 58 21.6 -0.6**
UMR AMb AMB 07 58 22.7
comp=Z,110nm,0.6s,mb6.1
ASHO Ashiyiah 84.84 304 P **P 07 58 22.0 -0.5**
SNR=11
SJPF Ste Jean 84.89 354 *e*P **P 07 58 21.1 -1.7**
ETSF Etsaut 85.07 354 *e*P **P 07 58 22.4 -1.3**
comp=Z,89nm,1.4s,mb5.4
ETSF Etsaut 85.07 354 *e*P **P 07 58 22.4 -1.3**
ETSF pmax pmax
comp=Z,45nm,1.4s,mb5.4
ETSF Etsaut 85.07 354 *e*P **P 07 58 22.4 -1.3**
comp=Z,45nm,1.4s,mb5.4
RST Umm Al-Ruwaisa 85.14 314 *e*P **P 07 58 23.2 -0.9**
RST AMb AMB 07 58 24.9
comp=Z,155nm,1.0s,mb6.1
SMDO Samad 85.14 302 P **P 07 58 24.3 +0.3**
SNR=6.4
NAY Al-Naaiem 85.25 313 *e*P **P 07 58 24.2 -0.4**
NAY AMb AMB 07 58 25.6
comp=Z,50nm,0.9s,mb5.7
RDF Al-Radifah 85.38 313 *e*P **P 07 58 25.2 -0.1**
RDF AMb AMB 07 58 26.6
comp=Z,257nm,1.1s,mb6.3
EVR Evrytania 85.45 336 *e*P **P 07 58 24.5 -1.1**
MBWA Marble Bar 85.60 227 P **P 07 58 25.3 -1.0**
SNR=8.3
MBWA Marble Bar 85.60 227 PFAKE 07 58 40.0 +14
MBWA LR LR
comp=Z,1µm,20.0s,MS5.2
JMDO Jabal Madar 85.68 301 P **P 07 58 26.9 +0.2**
SNR=7.6
ARQ Araqi 85.71 303 P **P 07 58 27.3 +0.4**
SNR=13
CSS Prodhromos 85.73 326 *e*P **P 07 58 26.9 -0.1**
comp=Z,214nm,1.6s,mb6.1
BSY Bisya 85.85 302 P **P 07 58 27.8 +0.2**
SNR=12
APE Apeiranthos 86.21 333 ⇓ iP P 07 58 27.4 -2.0
STKA Stephens Creek 87.56 205 ⇓ iP P 07 58 35.0 -0.9
comp=Z,17nm,0.9s,mb5.3
STKA Stephens Creek 87.56 205 P **P 07 58 35.2 -0.7**
comp=Z,26nm,1.0s,mb5.4,baz=348,slow=7.3,SNR=36
STKA LR LR 08 33 31.2
comp=Z,370nm,20.5s,MS4.8,baz=9.9,slow=33
ESDC Sonseca Array 88.46 356 P **P 07 58 39.2 -1.1**
comp=Z,0.3nm,0.4s,baz=346,slow=5.8,SNR=4.0
ESLA Sonseca Array 88.46 356 PFAKE 07 58 50.0 +10
ESLA LR LR
comp=Z,3µm,19.0s,MS5.8
URZ Urewera 90.18 175 LR LR 08 38 21.7
comp=Z,453nm,18.3s,MS4.9,baz=336,slow=35
KEST Kesra 91.05 345 P **P 07 58 51.5 -0.9**
comp=Z,0.8nm,0.5s,mb4.3,baz=335,slow=2.5,SNR=5.2
KEST LR LR 08 49 16.0
comp=Z,160nm,18.7s,MS4.5,baz=346,slow=42
TOO Toolangi 92.09 200 *e*P **P 07 58 56.9 -0.2**
comp=Z,11nm,1.1s,mb5.1
TOO Toolangi 92.09 200 *e*P **P 07 58 56.9 -0.2**
TOO pmax pmax
comp=Z,11nm,1.1s,mb5.1
SJG San Juan 94.24 53 LR LR 08 43 28.1
comp=Z,434nm,21.9s,MS4.9,baz=270,slow=37
SJG San Juan 94.24 53 PFAKE 07 59 20.0 +13
SJG LR LR
comp=Z,648nm,22.0s,MS5.0
RPZ Rata Peaks 95.47 180 LR LR 08 41 15.2
comp=Z,643nm,18.7s,MS5.1,baz=356,slow=35
SDV Santo Domingo 99.66 62 PFAKE 07 59 40.0 +8.4
SDV LR LR
comp=Z,300nm,19.0s,MS4.8
OTAV Otavalo 102.26 73 PFAKE 08 00 00.0 +17
OTAV LR LR
comp=Z,295nm,21.0s,MS4.8
NNA Nana 112.91 80 PFAKE 08 04 40.0 +15
NNA LR LR
comp=Z,448nm,19.0s,MS5.1
TORD Torodi Ar. Bea 114.34 349 PKP PKiKP 08 04 26.8 -0.9
comp=Z,0.9nm,0.5s,baz=351,slow=2.1,SNR=15
TORD PKKPbc PKKPbc 08 15 07.0 0.0
comp=Z,1.5nm,0.9s,baz=202,slow=3.2,SNR=3.6
TORD Torodi Ar. Bea 114.34 349 PKP PKiKP 08 04 26.8 -0.9
TORD PKKPbc PKKPbc 08 15 07.0 0.0
SAML Samuel 118.52 66 PFAKE 08 04 50.0 +14
SAML LR LR
comp=Z,504nm,21.0s,MS5.1
DRV Dumont d'Urvil 120.80 194 SS SS 08 22 36.0 -3.1
DBIC Dimbokro 121.32 355 PKP PKPdf 08 04 39.9 -1.2
comp=Z,2.5nm,0.5s,baz=318,slow=4.5,SNR=10
LPAZ La Paz 121.50 75 *e*PKiKP PKPdf 08 04 41.7 +0.3
LVC Limon Verde 125.87 81 PFAKE 08 05 00.0 +10
LVC LR LR
comp=Z,346nm,19.0s,MS5.0
CASY Casey 126.69 206 PFAKE 08 05 00.0 +8.6
CASY LR LR
comp=Z,581nm,19.0s,MS5.3
RCBR Riachuelo 128.75 35 PFAKE 08 05 10.0 +15
RCBR LR LR
comp=Z,663nm,22.0s,MS5.3
VNDA Vanda 129.51 183 PKP PKPdf 08 04 54.1 -2.7
comp=Z,4.3nm,1.1s,baz=319,slow=5.6,SNR=9.6
SBA Scott Base 129.75 181 *e*PKiKP PKPdf 08 04 55.5 -1.7
SBA MLR MLR
comp=Z,314nm,20.0s,MS5.0
BDFB Brasilia 132.21 55 PKP PKPdf 08 05 01.2 -0.6
comp=Z,5.6nm,0.9s,baz=344,slow=1.6,SNR=7.0
BDFB Brasilia 132.21 55 PKP PKPdf 08 05 01.2 -0.6
BDFB LR LR
comp=Z,735nm,21.0s,MS5.4
LSZ Lusaka 132.89 307 PFAKE 08 05 10.0 +6.9
LSZ LR LR
comp=Z,508nm,20.0s,MS5.2
CPUP Villa Florida 135.61 74 PKP PKPdf 08 05 07.5 -0.8
comp=Z,1.9nm,0.8s,baz=329,slow=5.2,SNR=7.5
CPUP Villa Florida 135.61 74 *e*PKPdf PKPdf 08 05 07.8 -0.4
PLCA Paso Flores 137.26 100 PKP PKPdf 08 05 11.0 -0.3
comp=Z,10.0nm,0.9s,baz=271,slow=2.8,SNR=12
PLCA Paso Flores 137.26 100 *e*PKPdf PKPdf 08 05 11.2 -0.1
PLCA LR LR
comp=Z,388nm,20.0s,MS5.1
QSPA South Pole Qui 141.88 180 *e*PKPdf 08 05 11.2
QSPA LR LR
comp=Z,413nm,20.0s,MS5.2
MAW Mawson 143.24 217 PKhKP 08 05 16.7
comp=Z,15nm,0.9s,baz=69,slow=5.0,SNR=35
MAW Mawson 143.24 217 *i* PKIKP 08 05 16.7
MAW pmax pmax
comp=Z,15nm,0.9s
MAW Mawson 143.24 217 *e*PKPdf 08 05 16.6
BOSA Boshof 145.43 299 PKPbc PKPbc 08 05 25.7 -0.2
comp=Z,53nm,0.9s,baz=35,slow=2.5,SNR=36
BOSA Boshof 145.43 299 *e*PKPdf PKPdf 08 05 25.7 -0.2
PMSA Palmer Station 149.60 136 *e*PKPbc PKPbc 08 05 35.9 -1.6
PMSA *e*PKPab PKPab 08 05 41.7 -0.8
PMSA LR LR
comp=Z,399nm,19.0s,MS5.2
SYO Syowa Base 151.85 215 ⇑ *i*PKPdf PKPbc 08 05 39.6 -3.1
SYO Syowa Base 151.85 215 ⇓ *e*PKiKP PKiKP 08 05 43.0 -0.1
SNAA Sanae 160.21 186 PKP PKPdf 08 05 43.9 -3.4
comp=Z,0.6nm,0.8s,baz=183,slow=17,SNR=5.9
SNAA PKPab PKPab 08 06 24.6 -3.0
comp=Z,8.5nm,1.1s,baz=185,slow=4.5,SNR=18
SNAA Sanae 160.21 186 PKP2 PKPab 08 06 24.6 -3.0
SNAA pmax pmax
comp=Z,9.0nm,1.1s
SNAA Sanae 160.21 186 *e*PKPdf PKPdf 08 05 44.2 -3.1
SNAA *e*PKPab PKPab 08 06 24.5 -3.1
VNA1 Neumayer--Stat 161.42 181 *e*PKPdf PKPdf 08 05 46.2 -2.5
VNA1 *e* 08 05 47.4
VNA1 *e* 08 06 30.0
VNA1 *e* 08 06 30.9
VNA1 *e* 08 06 32.1
VNA1 *e* 08 06 33.6
VNA1 *e* 08 06 42.1
HOPE Hope Point 163.39 108 PFAKE 08 06 00.0 +9.4
HOPE LR LR
comp=Z,486nm,19.0s

*IDC **04** 07:56:59.0±2.0, 4394N×12868W, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/21, mbtmp3.6/4, ML2.5/1, Error ellipse: s-maj=48.6km s-min=24.3km az=41.0*
*ISCJB **04** 07:56:59.1±1.6, 4382N±008×1285W±01, h14km±14km, mb3.7/2, Error ellipse: s-maj=14.4km s-min=10.8km az=90.7*

ISC 04 07:57:00.1±2.0, 4376N±008×1285W±01, h15km±17km, n19, σ0°44/27, mb3.7/2, 9C-14D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I02A	**Mapleton**	**3.39**	**84**	⇑S			**Sn**	**07 58 32.7**	**+0.2**
	baz=3.6								
J02A	**Umpqua**	**3.61**	**95**	⇓P			**Pn**	**07 57 55.1**	**-0.4**
	baz=3.8,SNR=5.2								
J02A				⇓S			**Sn**	**07 58 37.7**	**-0.1**
	baz=3.8								
I03A	**Eugene**	**3.79**	**85**	⇑P			**Pn**	**07 57 57.4**	**-0.6**
	baz=4.0,SNR=5.8								
I03A				⇑S			**Sn**	**07 58 42.2**	**-0.1**
	baz=4.0								
K02A	**Glendale**	**3.80**	**103**	⇑S			**Sn**	**07 58 42.9**	**+0.4**
	baz=4.0								
G03A	**Yamhill**	**4.05**	**66**	⇓P			**Pn**	**07 58 01.2**	**-0.3**
	baz=4.2								
G03A				⇓S			**Sn**	**07 58 48.3**	**-0.4**
	baz=4.2								
J03A	**Ideyld Park**	**4.05**	**94**	⇑P			**Pn**	**07 58 01.0**	**-0.5**
	baz=4.2,SNR=8.8								
J03A				⇑S			**Sn**	**07 58 48.2**	**-0.5**
	baz=4.2								
F03A	**Seaside**	**4.14**	**57**	⇓P			**Pn**	**07 58 02.0**	**-0.7**
	baz=4.3								
F03A				⇑S			**Sn**	**07 58 50.5**	**-0.3**
	baz=4.3								
E03A	**Lebam**	**4.47**	**50**	⇓S			**Sn**	**07 58 58.4**	**-0.7**
	baz=4.6								
G04A	**Mulino**	**4.55**	**69**	⇓P			**Pn**	**07 58 08.5**	**0.0**
	baz=4.7								
H04A	**Detroit Lake**	**4.64**	**76**	⇓P			**Pn**	**07 58 09.8**	**+0.2**
	baz=4.8								
H04A				⇓S			**Sn**	**07 59 03.7**	**+0.5**
	baz=4.8								
F04A	**Amboy**	**4.85**	**61**	⇑P			**Pn**	**07 58 12.5**	**0.0**
	baz=5.0,SNR=17								
F04A				⇓S			**Sn**	**07 59 08.4**	**0.0**
	baz=5.0								
G05A	**Wamic**	**5.36**	**71**	⇓P			**Pn**	**07 58 20.5**	**+1.0**
	baz=5.5								
F05A	**White Salmon**	**5.45**	**65**	⇓P			**Pn**	**07 58 21.3**	**+0.5**
	baz=5.6,SNR=5.8								
F05A				⇓S			**Sn**	**07 59 24.1**	**+1.0**
	baz=5.6								
E05A	**Randle**	**5.54**	**57**	⇓P			**Pn**	**07 58 22.2**	**+0.3**
	baz=5.7								
D05A	**Enumclaw**	**5.73**	**51**	⇑P			**Pn**	**07 58 24.8**	**+0.2**
	baz=5.9,SNR=6.2								
NVAR	**Mina Array Bea**	**9.36**	**121**	Pn			**Pn**	**07 59 20.0**	**+5.5**
	0.0nm,0.3s,baz=293,slow=15,SNR=4.6								
YKA	**Yellowknife Ar**	**20.45**	**19**	P			**P**	**08 01 37.3**	**+0.3**
	2.4nm,0.8s,baz=206,slow=11,SNR=9.8								
ULM	**Lac du Bonnet**	**23.05**	**62**	P			**P**	**08 02 05.0**	**+0.1**
	3.7nm,0.8s,mb3.9,baz=273,slow=11,SNR=4.8								
SONM	**Songino Array**	**76.79**	**326**	P			**P**	**08 08 51.0**	**-0.1**
	0.2nm,0.3s,mb3.5,baz=40,slow=2.5,SNR=3.4								

IDC 04 08:02:42.3±64.0, 1950S×17989W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/12, mbtmp4.0/3, Error ellipse: s-maj=1151.0km s-min=153.0km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.64**	**243**	P		P	P	08 09 50.2	-0.3
	1.3nm,0.6s,baz=84,slow=9.2,SNR=3.7								
WRA	**Warramunga Arr**	**42.98**	**261**	P		P	P	08 10 43.9	+0.7
	0.8nm,0.3s,baz=96,slow=7.6,SNR=31								
ASAR	**Alice Springs**	**43.02**	**256**	P		P	P	08 10 43.8	+0.2
	1.5nm,0.8s,baz=89,slow=8.0,SNR=16								

*ISCJB **04** 08:12:17.6±1.0, 4121N±004×24.11E±007, h10km±8km, Error ellipse: s-maj=9.1km s-min=5.0km az=131.0*
*ATH **04** 08:12:18.5, 4131N×2395E, h25km, MD2.9/3*
*THE **04** 08:12:18.1, 4120N×24.12E, h1km, ML2.1*
*CSEM **04** 08:12:19.0±0.1, 4121N×2408E, h2km, ML2.1, Error ellipse: s-maj=2.0km s-min=1.7km az=55.0*

ISC 04 08:12:18.2±1.1, 4121N±003×2413E±007, h3km±14km, n10, σ0°85/18, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**0.25**	**305**	*e*PB			**Pg**	**08 12 23.4**	**+0.4**
NVR				*e*SB			**Sg**	**08 12 26.2**	**0.0**
SRS	**Serrai**	**0.42**	**258**	*e*Pg			**Pg**	**08 12 26.1**	**-0.1**
SRS				*e*Sg			**Sg**	**08 12 31.2**	**-0.4**
MMB	**Musomiste**	**0.49**	**322**	*e*Pg			**Pg**	**08 12 27.0**	**-0.5**
MMB				*e*Sg			**Sg**	**08 12 34.1**	**+0.2**
SOH	**Sokhos**	**0.70**	**237**	*e*Pg			**Pg**	**08 12 31.2**	**-0.5**
SOH				*e*Sg			**Sg**	**08 12 40.8**	**0.0**
OUR	**Ouranopolis**	**0.88**	**188**	*e*Pg			**Pg**	**08 12 34.3**	**-0.8**
OUR				*e*Sg			**Sg**	**08 12 47.2**	**+0.8**
KNT	**Kendrikon**	**0.93**	**268**	*e*Pg			**Pg**	**08 12 35.3**	**-0.7**
KNT				*e*Sg			**Sg**	**08 12 49.0**	**+0.8**
PLG	**Polygyros**	**0.98**	**212**	*e*PN			**Pn**	**08 12 37.5**	**-1.4**
RDO	**Rodhopi**	**1.06**	**93**	*e*PN			**Pn**	**08 12 41.4**	**+1.4**
VAY	**Valandovo**	**1.18**	**276**	*e*Pg			**Pg**	**08 12 40.7**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY				eSg	Sg	08 12 57.2	+1.0
PAIG	Paliouri	1.32	195	ePg	Pg	08 12 41.9	-1.7
PAIG				eSg	Sg	08 13 02.3	+1.6

IDC 04 08:13:30.1±30.0**, 1714S**×**17643W, h0**km**, mb4.2**/4**, mb1 4.3**/4**, mb1mx3.9**/14**, mbtmp4.2**/4**, Error ellipse: s-maj=592.0km s-min=138.0km az=85.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.65	241	P	P	08 21 12.6	+0.6
	1.7nm,0.5s,baz=85,slow=7.9,SNR=11						
WB2	Warramunga Arr	46.62	259	eP	P	08 22 00.6	+0.6
WRA	Warramunga Arr	46.63	259	P	P	08 22 00.9	+0.8
	1.5nm,0.4s,baz=96,slow=7.8,SNR=57						
ASAR	Alice Springs	46.82	253	P	P	08 22 01.9	+0.3
	2.3nm,0.4s,baz=93,slow=7.8,SNR=54						
ASPA	Alice Springs	46.82	253	eP	P	08 22 01.9	+0.3
KAKA	Kakadu	49.49	268	eP	P	08 22 23.4	+1.1
	5.7nm,0.6s						
FITZ	Fitzroy Crossi	55.02	260	eP	P	08 23 03.2	-0.2
	3.3nm,0.9s						
FITZ	Fitzroy Crossi	55.02	260	P	P	08 23 03.1	-0.3
	0.6nm,0.3s,baz=92,slow=9.7,SNR=8.4						

*IDC **04** 08:34:33.5±3.8, 1309N×88.14W, h48km±37km, mb3.7/7, mb1 3.9/8, mb1mx3.6/21, mbtmp3.9/8, ML3.6/1, MS3.8/2, Ms1 3.8/2, ms1mx3.2/31, Error ellipse: s-maj=44.5km s-min=18.9km az=57.0*
*NEIC **04** 08:34:33.5±2.3, 1306N×88.16W, h50km±24km, mb4.1/4, Error ellipse: s-maj=34.4km s-min=12.4km az=55.0*
*ISCJB **04** 08:34:34.7±0.7, 1288N±007×8855W±006, h82km±8km, mb3.9/10, Error ellipse: s-maj=14.5km s-min=6.6km az=72.7*
*CASC **04** 08:34:34.6±2.8, 1287N×8860W, h63km±35km, MD4.2, ML3.3, mb4.1(NEIC)*
ISC 04 08:34:36.2±0.6**, 1296N**±008×**8850W**±006**, h74**km±8km**, n51, σ1s07**/50**, mb3.9**/10**, 7C-10D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.51	25⇓	iP	x	08 34 48.6	
CNCH	Conchagua	0.72	64	eS	x	08 35 05.3	
SNVI	San Vicente	0.73	333⇓	eP	x	08 34 50.0	
SNVI				eS	x	08 35 02.7	
LCBS	La Ceiba	0.83	326⇓	iP	x	08 34 58.7	
LCBS				eS	x	08 35 13.6	
CAHU	Cacacuatique	0.85	19	eP	x	08 34 53.6	
SNET	Serv Nac Est T	1.02	315⇑	eP	x	08 34 52.1	
SNET				eS	x	08 35 05.9	
BOQS	Boqueron	1.08	315⇑	iP	x	08 34 54.0	
BOQS				eS	x	08 35 11.3	
SBLS	San Blas	1.40	309⇑	eP	x	08 34 58.1	
SBLS				eS	x	08 35 15.2	
SNJE	San Jose	1.41	310	eP	x	08 35 06.2	
SNJE				eS	x	08 35 24.1	
CRIN	San Cristobal	1.44	100⇓	eP	Pn	08 35 00.5	+0.1
CRIN				eS	Sn	08 35 19.6	+1.0
LEON	Leon	1.66	109⇓	eP	Pn	08 35 01.8	-1.5
TELN	Telica	1.66	102⇓	eP	Pn	08 35 02.8	-0.6
TELN				eS	Sn	08 35 23.4	-0.6
CNGN	Cerro Negro	1.81	104⇓	eP	Pn	08 35 03.5	-1.9
CNGN				eS	Sn	08 35 27.7	+0.1
CNGN				i		08 35 38.2	
	comp=N,2μm,0.5s						
MIRN	Miramar	1.82	106⇓	eP	Pn	08 35 04.5	-0.9
MOMJ	Momotombo	1.99	106⇑	eP	Pn	08 35 06.8	-0.9
MOMJ				eS	Sn	08 35 31.8	+0.1
APYN	Apoyeque	2.22	109⇑	eP	Pn	08 35 10.2	-0.6
APYN				eS	Sn	08 35 38.0	+0.7
XAVN	Gruta Xavier	2.27	111	eS	Sn	08 35 40.0	+1.5
TISN	Laguna Tiscapa	2.32	110⇓	eP	Pn	08 35 11.4	-0.8
MGAN	Managua	2.34	110	eP	Pn	08 35 11.6	-0.9
MGAN				eS	Sn	08 35 40.1	-0.2
MGAN				i		08 35 41.2	
	comp=N,762nm,0.4s						
TICN	Ticuantepe	2.40	112⇑	eP	Pn	08 35 12.4	-0.8
BOA	Boaco	2.75	100⇓	eP	Pn	08 35 17.1	-0.9
BOA				eS	Sn	08 35 53.0	+2.7
BOA				i		08 36 05.3	
	comp=E,42nm,0.5s						
TP2	Tecpan 2	3.05	307⇑	eP	Pn	08 35 22.9	+0.9
SSNN	San Juan del S	3.08	122	eP	Pn	08 35 22.3	-0.1
CONN	Concepcion	3.13	116	eP	Pn	08 35 24.1	+1.0
MADN	Villa Maderas	3.28	118	eP	Pn	08 35 25.1	-0.1
VCR	Vista de Mar	3.98	135	eP	Pn	08 35 33.6	-1.1
JCR	Jicaral	4.54	133	eP	Pn	08 35 41.5	-0.9
JCR				eS	Sn	08 36 32.8	-1.0
CGA2	Cerro Gallo 2	4.92	126	eP	Pn	08 35 47.7	+0.2
CGA2				eS	Sn	08 36 43.6	+0.5
PRS1	Puriscal	5.06	125	eP	Pn	08 35 51.6	+2.2
LCR2	La Lucha 2	5.45	126	eP	Pn	08 35 57.1	+2.4
URSC	Urasca	5.57	123	eP	Pn	08 35 59.3	+2.8
BUS	Buena Vista	5.75	126	eP	Pn	08 35 60.0	+1.1
CMIG	Matias Romero	7.41	304	P	Pn	08 36 22.1	+0.6
	comp=E,0.9nm,0.3s,baz=131,slow=8.7,SNR=8.5						
CMIG				S	Sn	08 37 40.5	-3.6
	comp=E,0.7nm,0.3s,baz=102,slow=20,SNR=2.9						
CMIG				LR	LR	08 39 15.4	
	comp=E,278nm,21.9s,baz=167,slow=37						
CMIG	Matias Romero	7.41	304	P	Pn	08 36 22.1	+0.6
CMIG				S	Sn	08 37 40.5	-3.6
CMIG				LR	LR	08 39 15.3	
JCT	Junction City	20.32	331	eP	P	08 39 06.5	+0.3
	comp=E,3.8nm,0.6s						
WMOK	Wichita Mounta	23.60	338	eP	P	08 39 40.4	+0.2
	comp=E,1.5nm,0.6s,mb3.5						
AMTX	Amarillo	24.88	334	eP	P	08 39 52.2	+0.4
	comp=E,4.1nm,0.6s,mb4.0						
ANMO	Albuquerque	27.27	326	P	P	08 40 14.8	+1.4
	comp=E,0.6nm,0.6s,mb3.3,baz=117,slow=14,SNR=4.5						
PDAR	Pinedale Array	34.84	332	P	P	08 41 20.2	+0.2
	comp=E,1.0nm,0.7s,mb3.8,baz=130,slow=9.7,SNR=9.3						
PDAR				PcP	PcP	08 43 51.9	+0.3
	comp=E,0.4nm,0.6s,baz=156,slow=1.2,SNR=4.1						
NVAR	Mina Array Bea	36.65	319	P	P	08 41 37.4	+2.0
	comp=E,0.7nm,0.7s,mb3.7,baz=128,slow=7.8,SNR=7.2						
NVAR				PcP	PcP	08 43 59.0	+2.0
	comp=E,0.9nm,0.6s,baz=128,slow=3.7,SNR=9.8						
NVAR	Mina Array Bea	36.65	319	P	P	08 41 37.4	+2.0
NVAR				PcP	PcP	08 43 59.0	+2.0
ULM	Lac du Bonnet	37.67	352	P	P	08 41 42.6	-1.5
	comp=E,2.3nm,0.6s,mb4.2,baz=170,slow=10,SNR=7.9						
EGMT	Eagleton	39.19	337	eP	P	08 41 56.9	0.0
	comp=E,5.7nm,0.6s,mb4.6						
SIV	San Ignacio	39.54	136	P	P	08 41 58.5	-1.2
	comp=E,1.5nm,0.5s,mb4.0,baz=261,slow=9.8,SNR=15						
SIV				PcP	PcP	08 44 06.7	+0.8
	comp=E,0.2nm,0.4s,baz=318,slow=3.7,SNR=4.1						
EDM	Edmonton	44.77	339	eP	P	08 42 42.1	-0.1
SCHQ	Schefferville	45.09	18	P	P	08 42 43.9	-1.0
	comp=E,3.9nm,1.2s,mb4.0,baz=269,slow=11,SNR=5.0						
YKA	Yellowknife Ar	52.85	345	P	P	08 43 43.5	-0.6
	comp=E,1.8nm,0.6s,mb4.2,baz=151,slow=7.3,SNR=64						
YKA				PcP	PcP	08 44 51.2	-1.2
	comp=E,0.3nm,0.5s,baz=149,slow=3.8,SNR=4.9						
YKA	Yellowknife Ar	52.85	345	P	P	08 43 43.5	-0.6
YKA				PcP	PcP	08 44 51.2	-1.2
VAE	Valguarnera	92.19	51	LR	LR	09 27 31.8	
	comp=E,103nm,19.9s,baz=304,slow=35						
WRA	Warramunga Arr	138.43	255	PKP	PKPdf	08 53 54.9	+1.9
	comp=E,0.4nm,0.6s,baz=89,slow=2.7,SNR=7.8						
ASAR	Alice Springs	138.50	249	PKP	PKPdf	08 53 54.0	+0.9
	comp=E,0.2nm,0.6s,baz=100,slow=2.2,SNR=4.2						

*ISCJB **04** 09:38:21.2±0.8, 1029S±006×1086E±0.1, h10km, mb3.8/8, Error ellipse: s-maj=14.5km s-min=9.3km az=5.1*
*IDC **04** 09:38:21.6±1.7, 1028S×10861E, h0km, mb3.8/6, mb1 3.8/7, mb1mx3.7/17, mbtmp3.8/7, ML3.6/1, Error ellipse: s-maj=83.9km s-min=18.9km az=47.0*
*NEIC **04** 09:38:23.2±1.0, 1028S×10867E, h10km, mb4.4/2, Error ellipse: s-maj=50.7km s-min=10.2km az=44.0*
ISC 04 09:38:23.8±2.3**, 1026S**±007×**1087E**±01**, h13**km±13km**, n12, σ0s42**/14**, mb3.8**/8**, 1C-1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOGI	Yogyakarta	2.91	34⇓	eP	Pb	09 39 15.5	-0.1
YOGI				eS	Sn	09 39 44.8	+0.1
BJII	Banjamegara	3.09	20⇑	iP	Pg	09 39 23.0	+0.1
BJII				i S	Sn	09 39 33.0	-16
FITZ	Fitzroy Crossi	18.20	117	P	Pn	09 42 36.0	-0.1
	0.2nm,0.3s,baz=77,slow=7.4,SNR=13						
FITZ				S	Sn	09 45 42.2	-17
	0.1nm,0.3s,baz=140,slow=17,SNR=4.8						
WRA	Warramunga Arr	26.55	114	P	P	09 44 01.5	+0.1
	0.9nm,0.7s,mb3.4,baz=286,slow=11,SNR=5.9						
WRAB	Tennant Creek	26.56	114	eP	P	09 44 00.3	-1.1
	11nm,1.2s,mb4.3						
ASAR	Alice Springs	27.51	122	P	P	09 44 10.4	+0.5
	0.5nm,0.6s,mb3.3,baz=297,slow=9.5,SNR=12						
STKA	Stephens Creek	37.26	130	P	P	09 45 36.0	+0.7
	0.9nm,0.7s,mb3.7,baz=325,slow=16,SNR=3.5						
SONM	Songino Array	57.87	358	P	P	09 48 15.5	+0.2
	0.8nm,0.6s,mb3.9,baz=171,slow=8.0,SNR=6.6						
MKAR	Makanchi Array	61.49	340	P	P	09 48 40.3	0.0
	1.0nm,0.7s,mb4.1,baz=147,slow=8.5,SNR=9.1						
ZRNK	Zerenda	71.49	336	eP	P	09 49 43.9	-0.3
	2.1nm,0.8s,mb4.1						
BRTR	Keskin Array B	85.22	312	P	P	09 51 00.1	0.0
	0.7nm,0.7s,mb3.9,baz=126,slow=6.3,SNR=4.5						
WMOK	Wichita Mounta	145.05	42	ePKPbc	PKPbc	09 58 01.9	+1.6

*IDC **04** 09:54:23.9±1.7, 1476S×16722E, h140km±12km, mb4.1/10, mb1 4.1/12, mb1mx4.0/19, mbtmp4.5/12, Error ellipse: s-maj=17.0km s-min=13.2km az=54.0*
*ISCJB **04** 09:54:24.0±1.3, 1486S±007×16721E±008, h157km±11km, mb4.3/16, Error ellipse: s-maj=15.3km s-min=8.6km az=101.1*
*NEIC **04** 09:54:25.3±1.5, 1483S×16721E, h150km±12km, mb4.5/14, Error ellipse: s-maj=11.5km s-min=9.7km az=54.0*
*LDG **04** 09:54:27.6±0.2, 1502S×16603E, h160km, Mb4.0/2, Error ellipse: s-maj=47.2km s-min=5.7km az=82.0*
ISC 04 09:54:25.2±1.2**, 1481S**±007×**16724E**±008**, h153**km±10km**, n58, σ1s01**/36**, mb4.3**/16**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.26	186	eP	Pn	09 56 08.3	-0.3
DZM				eS	Sn	09 57 28.2	-1.6
DZM	Mont Dzumac	7.26	186	P	Pn	09 56 08.6	0.0
	7.3nm,0.3s,baz=340,slow=18,SNR=76						
DZM				S	Sn	09 57 33.2	+3.5
	5.3nm,0.3s,baz=150,slow=20,SNR=5.9						
HNR	Honiara	8.91	306	P	Pn	09 56 29.7	-1.0
	3.2nm,0.3s,baz=84,slow=17,SNR=3.5						
HNR				S	Sn	09 58 09.6	0.0
	4.9nm,0.3s,baz=264,slow=18,SNR=2.5						
HNR	Honiara	8.91	306	ePn	Pn	09 56 30.6	-0.1
	123nm,1.0s						
HNR				S	Sn	09 58 09.6	0.0
HNR				eSn	Sn	09 58 10.2	+0.6
AFI	Afiamalu	20.35	90	eP	P	09 58 50.9	+1.4
	52nm,1.1s						
CTA	Charters Tower	20.69	252	eP	P	09 58 54.9	+1.7
	15nm,0.9s						
CTA	Charters Tower	20.69	252	P	P	09 58 54.5	+1.4
	18nm,0.8s,baz=76,slow=12,SNR=13						
CTAO	Charters Tower	20.69	252	eP	P	09 58 54.4	+1.2
	22nm,0.9s						
ARMA	Armidale	21.15	220	eP	P	09 59 00.8	+2.8
URZ	Urewera	24.93	161	P	P	09 59 33.8	-0.3
	4.2nm,0.5s,mb4.2,baz=291,slow=7.5,SNR=7.3						
SNZO	South Karori	27.18	168	eP	P	09 59 53.7	-0.6
	21nm,1.3s,mb4.6						
STKA	Stephens Creek	28.92	230	eP	P	10 00 11.4	+1.7
	6.1nm,0.9s,mb4.3						
STKA	Stephens Creek	28.92	230	P	P	10 00 11.6	+1.8
	10nm,0.7s,mb4.7,baz=51,slow=8.2,SNR=41						
RPZ	Rata Peaks	28.99	174	P	P	10 00 10.5	+0.1
	4.6nm,0.8s,mb4.3,baz=29,slow=5.5,SNR=4.6						
WRAB	Tennant Creek	31.77	256	eP	P	10 00 33.2	-1.7
	13nm,1.0s,mb4.6						
WRA	Warramunga Arr	31.78	256	P	P	10 00 34.3	-0.6
	3.5nm,0.9s,mb4.1,baz=83,slow=7.8,SNR=22						
AS31	Alice Springs	32.62	249	eP	P	10 00 41.9	-0.4
ASAR	Alice Springs	32.62	249	P	P	10 00 41.8	-0.5
	7.6nm,0.8s,mb4.5,baz=78,slow=9.2,SNR=86						
ASAR				S	S	10 05 47.2	+0.5
	0.5nm,0.8s,baz=83,slow=16,SNR=4.2						
ASAR				ScP	ScP	10 06 57.9	+3.6
	1.9nm,0.9s,baz=86,slow=2.5,SNR=9.9						
ASPA	Alice Springs	32.62	249	eP	P	10 00 41.7	-0.6
FITZ	Fitzroy Crossi	39.97	259	eP	P	10 01 45.0	+0.4
	9.0nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	39.97	259	P	P	10 01 45.0	+0.4
	6.2nm,0.7s,mb4.3,baz=106,slow=9.3,SNR=25						
MBWA	Marble Bar	45.50	255	eP	P	10 02 29.8	+0.7
	5.7nm,0.6s,mb4.4						
VNDA	Vanda	62.78	181	P	P	10 04 34.1	-0.1
	1.2nm,0.5s,mb4.0,baz=1.2,slow=6.5,SNR=7.2						
VNDA	Vanda	62.78	181	eP	P	10 04 33.7	-0.5
	2.6nm,0.9s,mb4.1						
SBA	Scott Base	63.05	180	eP	P	10 04 36.8	+0.8
	7.0nm,0.9s,mb4.5						
CASY	Casey	63.44	202	eP	P	10 04 38.9	+0.4
	8.4nm,1.1s,mb4.5						
QSPA	South Pole Qui	75.21	180	eP	P	10 05 50.3	-0.6
	2.0nm,0.7s,mb3.9						
SONM	Songino Array	82.55	324	P	P	10 06 29.3	-1.6
	1.2nm,0.6s,mb3.8,baz=108,slow=4.8,SNR=3.6						
SNAA	Sanae	93.46	183	eP	P	10 07 21.8	-1.5
	1.0nm,0.7s,mb4.0						
MKAR	Makanchi Array	97.25	316	P	P	10 07 41.4	+0.9
	0.4nm,0.5s,mb4.0,baz=98,slow=5.8,SNR=3.7						
ARCES	ARCESS Array B	120.33	345	PKP	PKPdf	10 12 57.0	-1.1
	1.1nm,0.4s,baz=75,slow=1.5,SNR=25						
FINES	FINESS Array B	125.79	338	PKP	PKPdf	10 13 08.3	-0.3
	0.4nm,0.5s,baz=84,slow=4.3,SNR=4.0						
NOA	NORSAR Array B	130.70	345	PKP	PKPdf	10 13 17.1	-0.8
	0.4nm,0.6s,baz=44,slow=4.5,SNR=2.3						
NOA				SKPbc	SKPbc	10 16 30.8	+3.2
	2.9nm,0.7s,baz=30,slow=3.2,SNR=9.7						
AKASG	Malin Array Be	130.79	326	SKPbc	SKPbc	10 16 30.1	+2.1
	1.0nm,0.5s,baz=47,slow=4.4,SNR=11						
CABF	La Chapelle	144.59	337	ePKP1	PKPdf	10 13 43.5	+0.1
FLN	La Foliniere	144.67	346	ePKP1	PKPdf	10 13 42.5	-1.1
LDF	La Druitiere	144.74	345	ePKP1	PKPdf	10 13 43.4	-0.3
LOR	Lormes	144.81	340	ePKP1	PKPdf	10 13 43.7	-0.1
	11nm,0.8s						
SSF	Saint Saulge	145.10	340	ePKP1	PKPbc	10 13 44.8	+0.7
	18nm,0.7s						
GRR	Gorron	145.11	346	ePKP1	PKPbc	10 13 44.3	+0.1
	18nm,0.6s						
LPL	La Plagne	145.26	336	ePKP1	PKPbc	10 13 45.8	+1.2
	9.2nm,0.7s						
LPG	La Plagne	145.27	336	ePKP1	PKPbc	10 13 45.9	+1.3
	14nm,0.7s						
SMF	Signal de Mont	145.36	340	ePKP1	PKPbc	10 13 45.4	+0.5
AVF	Avril sur Loir	145.39	340	ePKP1	PKPbc	10 13 45.5	+0.5
	4.9nm,0.5s						
SGMF	Saint Gilles	145.61	348	ePKP1	PKPbc	10 13 45.8	+0.1
ROSF	Rostrenen	145.67	349	ePKP1	PKPbc	10 13 45.8	-0.1
BGF	Bois d'Agland	145.76	341	ePKP1	PKPbc	10 13 46.7	+0.5
	9.4nm,0.6s						
MBDF	Montbardon	145.89	335	ePKP1	PKPbc	10 13 47.9	+1.3
ORIF	Oris-en-Rattie	146.09	336	ePKP1	PKPbc	10 13 48.1	+0.9
	23nm,0.9s						
TCF	Toulx Ste Croi	146.20	341	ePKP1	PKPbc	10 13 48.0	+0.5
	3.0nm,0.5s						
SBF	Sospel	146.31	333	ePKP1	PKPbc	10 13 48.9	+1.1
	35nm,0.8s						
MFF	Saint Martin d	146.60	344	ePKP1	PKPbc	10 13 50.0	+1.4
RJF	Les Rejaudoux	147.30	341	ePKP1	PKPbc	10 13 51.3	+0.7
LASF	Ste Croix	147.58	337	ePKP1	PKPbc	10 13 52.2	+0.9
	13nm,0.8s						
LFF	La Frestale	147.87	342	ePKP1	PKPbc	10 13 52.8	+0.7
MTLF	Montolieu	148.81	339	ePKP1	PKPbc	10 13 54.7	+0.2
	9.4nm,0.8s						
EPF	Esparros	149.71	341	ePKP1	PKPbc	10 13 57.4	+0.6
ETSF	Etsaut	150.11	342	ePKP1	PKPbc	10 13 59.0	+1.3

TRN 04 10:23:05.8, 1861N×**6170W, h1**km**, MD3.6, M3.8**(FDF)**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPB	Codrington	0.97	187	eP	Pg	10 23 28.2	+3.7
CPB				eS	Sg	10 23 46.6	+9.5
STMA	St. Maarten, A	1.45	247	e	Pn	10 23 37.9	+4.7
BPA	Boggy Peak	1.57	186	eP	Pn	10 23 37.4	+2.7
BPA				eS	Sn	10 24 00.1	+4.5
SEG	Port Louis	2.21	175	eP	Pn	10 23 47.2	+3.7
DEG	La Desirade	2.37	165	eP	Pn	10 23 48.8	+3.0
DEG				eS	Sn	10 24 19.6	+4.2
LZG	Guadaloupe-1	2.46	182	eP	Pn	10 23 49.9	+2.8
LZG				eS	Sn	10 24 22.5	+4.8

*BJI **04** 10:47:35.0, 486N×9450E, h30km, mB4.9, mb4.9, Ms4.4, Msz4.0*
*ISCJB **04** 10:47:40.6±0.3, 536N±004×9462E±003, h38km, mb4.8/76, MS3.9/25, Error ellipse: s-maj=6.0km s-min=3.9km az=72.5*
*MOS **04** 10:47:40.5±1.0, 554N×9465E, h33km, mb5.0/27, Error ellipse: s-maj=11.5km s-min=5.5km az=113.9*
*NEIC **04** 10:47:41.3±0.2, 539N×9454E, h30km, mb4.9/22, Error ellipse: s-maj=9.0km s-min=4.8km az=46.0*
NEIC Felt [III] at Banda Aceh.
*IDC **04** 10:47:45.6±1.8, 549N×9479E, h65km±14km, mb4.3/20, mb1 4.3/21, mb1mx4.3/26, mbtmp4.5/21, MS3.8/15, Ms1 3.8/15, ms1mx3.5/38, Error ellipse: s-maj=20.1km s-min=8.7km az=48.0*
ISC 04 10:47:43.3±0.3**, 538N**±004×**9459E**±003**, h44**km**, h44**km±3.7km**:pP-P, n200, σ1s01**/186**, mb4.8**/76**, MS3.9**/25**, 15C-12D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.02	121	P	Pn	10 48 59.2	+3.1
	7.6nm,0.3s,baz=305,slow=15,SNR=24						
PSI				S	Sn	10 49 52.5	-0.3
	7.6nm,0.3s,baz=340,slow=17,SNR=3.9						
PSI				LR	LR	10 51 21.2	
	comp=Z,665nm,18.3s,baz=301,slow=43						
PSI	Prapat	5.02	121	P	Pn	10 48 59.2	+3.1
PSI				S	Sn	10 49 52.6	-0.3
KULM	Kulim	6.03	91	ePn	Pn	10 49 10.8	+0.9
KULM				eSn	Sn	10 50 17.2	-0.5
IPM	Ipoh	6.47	98	P	Pn	10 49 17.6	+1.6
KGM	Kluang	9.33	111	P	Pn	10 49 58.1	+3.0
CHTO	Chiang Mai	14.01	17	P	Pn	10 51 07.2	+8.1
	SNR=6.0						
CHTO	Chiang Mai	14.01	17	eP	Pn	10 51 00.7	+1.6
CHTO				e		10 53 34.2	
CHTO				pmax	pmax		
	comp=Z,32nm,0.6s						
CHTO	Chiang Mai	14.01	17	eP	Pn	10 51 00.7	+1.6
	comp=Z,32nm,0.6s						
CHTO				eSn	Sn	10 53 34.1	+1.0
MDRS	Chennai	16.08	299	ex	x	10 51 18.9	
KSM	Kuching	16.16	103	P	Pn	10 51 31.1	+3.8
VIS	Vishakhapatnam	16.48	319	eP	Pn	10 51 31.1	-0.2
VIS				AMb	AMB	10 51 38.5	
	comp=Z,74nm,0.9s						
TRD	Trivandrum	17.78	281	eP	Pn	10 51 48.3	+0.9
TRD				AMb	AMB	10 51 55.0	
	comp=Z,44nm,0.9s						
QIZ	Qiongzhong	20.13	46	P	P	10 52 16.4	+2.9
QIZ				eS	S	10 55 57.0	-0.1
QIZ				LR	LR		
	comp=Z,611nm,20.4s,MS3.9						
BOK	Bokaro	20.14	336	eP	P	10 52 14.1	+0.5
BOK				AMb	AMB	10 52 18.4	
	comp=Z,76nm,0.5s						
SHL	Shillong	20.24	353	ex	x	10 51 56.7	
SHL				AMb	AMB	10 52 12.0	
	comp=Z,487nm,0.7s						
NGP	Nagpur	21.75	318	eP	P	10 52 31.7	+0.7
NGP				AMb	AMB	10 52 36.8	
	comp=Z,21nm,1.0s,mb4.5						
AKL	Akola	22.87	313	eP	P	10 52 43.5	+0.5
AKL				AMb	AMB	10 52 53.0	
	comp=Z,48nm,2.6s,mb4.5						
JIRN	Jiri	23.55	341	eP	P	10 52 49.9	+0.1
	comp=Z,48nm,0.6s,mb5.1						
PKI	Pulchoki	23.73	339	eP	P	10 52 51.6	+0.2
	comp=Z,17nm,0.4s,mb4.8						
DMN	Daman	23.88	339	eP	P	10 52 53.0	+0.3
	comp=Z,38nm,0.7s,mb4.9						
GUN	Gumba	23.89	341	eP	P	10 52 52.8	0.0
	comp=Z,59nm,0.6s,mb5.2						
GYA	Guiyang	23.92	28⇑	iP	P	10 52 53.7	+0.6
GYA				AP		10 53 02.4	
GYA				XP	sP	10 53 07.0	-3.1
GYA				PP		10 53 27.3	
GYA				S	S	10 57 02.6	-3.9
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,130nm,4.2s						
GYA				LR	LR		
	comp=N,950nm,4.9s						
GYA				LR	LR		
	comp=E,1μm,4.8s						
GYA				LR	LR		
	comp=Z,500nm,4.2s						
KKN	Kakani	23.98	339	eP	P	10 52 53.3	-0.4
	comp=Z,38nm,0.9s,mb4.8						
KKN	Kakani	23.98	339	eP	P	10 52 53.3	-0.4
KKN				pmax	pmax		
	comp=Z,38nm,0.9s,mb4.8						
GKN	Gorkha	24.41	338	eP	P	10 52 57.3	-0.2
	comp=Z,22nm,0.3s,mb5.1						
KOLN	Koldanda	24.60	336	eP	P	10 52 59.8	+0.5
	comp=Z,70nm,0.6s,mb5.3						
CD2	Chengdu	26.82	18	eP	P	10 53 18.2	-1.2
CD2				AP	pP	10 53 27.6	-3.5
CD2				XP	sP	10 53 31.6	-4.8
CD2				PP		10 54 04.4	
CD2				S	S	10 57 51.6	-0.9
CD2				XS	sS	10 58 07.3	-4.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=E,130nm,10.6s						
CD2				LR	LR		
	comp=Z,100nm,10.6s,MS3.6						
AJM	Ajmer	28.34	320	eP	P	10 53 34.9	+1.9
AJM				AMb	AMB	10 53 41.4	
	comp=Z,9.8nm,0.7s,mb4.5						
SMLA	Simla	30.39	329	eP	P	10 53 51.5	+0.3
SMLA				AMb	AMB	10 54 08.1	
	comp=Z,15nm,1.8s,mb4.4						
XAN	Xi'an	31.46	23	P	P	10 53 59.3	-1.3
XAN				AMB	AMB		
	comp=Z,42nm,0.7s,mb5.4						
LZH	Lanzhou	31.72	14	eP	P	10 54 02.6	-0.3
LZH				AP	pP	10 54 13.2	-1.5
LZH				XP	sP	10 54 16.1	-3.9
LZH				eS	S	10 59 10.8	+1.3
LZH				XS	sS	10 59 27.1	-2.2
LZH				SS	SS	11 01 04.3	-22
LZH				AMB	AMB		
	comp=Z,24nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,116nm,5.5s						
LZH				LR	LR		
	comp=E,765nm,13.2s						
LZH				LR	LR		
	comp=Z,1μm,17.5s,MS4.7						
GTA	Gaotai	34.20	7	eP	P	10 54 23.9	-0.7
GTA				AP	pP	10 54 34.2	-2.2
GTA				XP	sP	10 54 38.8	-2.9
GTA				PP	PP	10 55 40.3	-2.3
GTA				PPP		10 55 58.5	
GTA				S	S	10 59 49.0	+0.9
GTA				XS	sS	11 00 04.9	-3.0
GTA				SS	SS	11 02 00.9	-16
GTA				AMB	AMB		
	comp=Z,23nm,0.8s,mb5.2						
GTA				AMB	AMB		
	comp=Z,123nm,3.8s						
GTA				LR	LR		
	comp=N,101nm,15.6s,MS3.8						
GTA				LR	LR		
	comp=E,68nm,14.5s,MS3.8						
GTA				LR	LR		
	comp=Z,162nm,17.9s,MS3.8						
NJ2	Nanjing	34.91	38	eP	P	10 54 31.2	+0.5
NJ2				AP	pP	10 54 40.9	-1.7

NJ2 S **S** **11 00 01.0 +2.0**
NJ2 XS sS 11 00 17.0 -1.9
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.2
NJ2 AMB AMB
comp=Z,170nm,10.4s
NJ2 LR LR
comp=N,420nm,19.1s,MS4.5
NJ2 LR LR
comp=E,630nm,15.5s,MS4.5
NJ2 LR LR
comp=Z,270nm,19.4s,MS4.0
SSE Sheshan 35.74 41 *e*P **P** **10 54 38.2 +0.3**
SSE AMB AMB
comp=Z,23nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,100nm,3.5s
SSE LR LR
comp=N,24nm,21.6s,MS3.6
SSE LR LR
comp=E,116nm,21.6s,MS3.6
SSE LR LR
comp=Z,99nm,20.6s,MS3.6
HHC Hu-ho-hao-te 38.45 21 *e*P **P** **10 55 02.0 +1.2**
HHC AP pP 10 55 11.8 -1.0
HHC PP PP 10 56 35.2 +5.8
HHC PCP PcP 10 57 14.7 +1.4
HHC S **S** **11 00 56.4 +3.4**
HHC SCP ScP 11 00 58.3 +0.7
HHC PCS PcS 11 01 01.2 -1.3
HHC XS sS 11 01 12.1 -0.9
HHC SS SS 11 03 39.2 -4.2
HHC SCS ScS 11 05 07.4 -0.4
HHC AMB AMB
comp=Z,13nm,1.1s,mb4.6
HHC AMB AMB
comp=Z,67nm,5.7s
HHC LR LR
comp=N,204nm,19.0s,MS4.1
HHC LR LR
comp=E,129nm,15.2s,MS4.1
HHC LR LR
comp=Z,224nm,19.9s,MS4.0
FITZ Fitzroy Crossi 38.51 128⇑ *i*P **P** **10 55 00.6 -0.7**
comp=Z,11nm,0.6s,mb4.8
FITZ Fitzroy Crossi 38.51 128 P **P** **10 55 00.6 -0.6**
comp=Z,6.2nm,0.6s,mb4.5,baz=308,slow=6.3,SNR=33
FITZ PcP PcP 10 57 14.1 +0.6
comp=Z,1.6nm,0.6s,baz=325,slow=10.0,SNR=5.6
FITZ LR LR 11 11 51.3
comp=Z,85nm,21.7s,MS3.5,baz=120,slow=38
JOW Kunigami 38.54 53 P **P** **10 55 00.3 -1.2**
comp=Z,12nm,0.7s,mb4.7,baz=246,slow=10.0,SNR=4.0
WMQ Urumqi 38.76 352 *e*P **P** **10 55 04.0 +0.6**
WMQ AP pP 10 55 14.0 -1.4
WMQ XP sP 10 55 18.0 -2.6
WMQ PP PP 10 56 38.0 +5.3
WMQ S **S** **11 01 00.0 +2.4**
WMQ XS sS 11 01 16.0 -1.7
WMQ SS SS 11 03 43.0 -6.6
WMQ AMB AMB
comp=Z,12nm,1.0s,mb4.6
WMQ AMB AMB
comp=Z,124nm,4.0s
WMQ LR LR
comp=N,145nm,14.0s,MS4.3
WMQ LR LR
comp=E,326nm,15.0s,MS4.3
WMQ LR LR
comp=Z,102nm,14.0s,MS3.8
BJT Baijiatuau 39.58 26 *e*P **P** **10 55 11.2 +0.9**
BJT pmax pmax
comp=Z,20nm,0.6s
BJT Baijiatuau 39.58 26 *e*P **P** **10 55 11.2 +0.9**
comp=Z,20nm,0.6s,mb5.0
BJI Beijing 39.60 26 *e*P **P** **10 55 11.1 +0.7**
BJI AMB AMB
comp=Z,32nm,0.9s,mb5.0
BJI LR LR
comp=N,85nm,11.3s,MS4.0
BJI LR LR
comp=E,89nm,12.3s,MS4.0
BJI LR LR
comp=Z,162nm,25.1s
ULHL Ulahol 40.17 339 P **P** **10 55 16.0 +0.8**
SNR=5.9
KZA Kyzart 40.39 338 P **P** **10 55 18.2 +1.2**
SNR=9.2
UCH Uchtor 40.80 337 P **P** **10 55 21.6 +1.2**
SNR=50
TKM2 Tokmak 2 40.99 339 P **P** **10 55 22.8 +0.9**
SNR=22
KBK Karagaybulak 41.01 338 P **P** **10 55 23.4 +1.4**
SNR=14
AML Almayashu 41.05 336 P **P** **10 55 23.8 +1.4**
SNR=48
AAK Ala-Archa 41.16 337 P **P** **10 55 24.9 +1.5**
SNR=7.6
AAK Ala-Archa 41.16 337 P **P** **10 55 23.8 +0.5**
SNR=8.8
AAK Ala-Archa 41.16 337 *e*P **P** **10 55 23.8 +0.5**
FRU Bishkek 41.28 338 *e*P **P** **10 55 25.0 +0.7**
CHMS Chumysh 41.37 338 P **P** **10 55 25.6 +0.5**
SNR=7.0
DL2 Dalian 41.39 32 P **P** **10 55 25.9 +0.7**
DL2 AMB AMB
comp=Z,20nm,0.8s,mb4.8
EKS2 Erkin-Say 41.46 337 P **P** **10 55 27.0 +1.2**
SNR=22
KAKA Kakadu 41.68 116 *e*P **P** **10 55 26.8 -0.8**
comp=Z,42nm,1.6s,mb4.8
USP Ospenovka 41.70 338 P **P** **10 55 28.2 +0.5**
SNR=33
MK31 Makanchi Array 42.60 348 P **P** **10 55 34.7 -0.4**
MK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
MKAR Makanchi Array 42.60 348 P **P** **10 55 34.8 -0.3**
comp=Z,11nm,0.6s,mb4.8,baz=165,slow=8.0,SNR=86
KK31 Karatay Array 43.18 334 *i* P **P** **10 55 39.8 0.0**
KK31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.6
KKAR Karatay Array 43.18 334 *e*P **P** **10 55 39.8 0.0**
KKAR pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
SONM Songino Array 43.49 12 P **P** **10 55 41.4 -0.9**
comp=Z,9.8nm,0.7s,mb4.7,baz=190,slow=8.3,SNR=69
SONM PcP PcP 10 57 29.7 0.0
comp=Z,2.5nm,0.5s,baz=195,slow=3.9,SNR=13
SONM ScP ScP 11 01 14.2 -3.3
comp=Z,0.6nm,0.8s,baz=199,slow=4.3,SNR=4.4
SONM LR LR 11 15 31.8
comp=Z,113nm,20.6s,MS3.8,baz=177,slow=38
SONM Songino Array 43.49 12 P **P** **10 55 41.4 -0.9**
SONM 10 57 29.7
ULN Ulaanbaatar 43.65 12 P **P** **10 55 42.7 -0.9**
SNR=6.6
ULN Ulaanbaatar 43.65 12 *e*P **P** **10 55 42.5 -1.1**
SNY Shenyang 44.53 31⇑ P **P** **10 55 50.0 -0.6**
SNY AP pP 10 56 02.6 -0.2
SNY XP sP 10 56 07.6 -0.4
SNY S **S** **11 02 30.1 +7.1**
SNY AMB AMB
comp=Z,21nm,0.6s,mb5.1
SNY AMB AMB
comp=Z,60nm,4.5s
SNY LR LR
comp=E,126nm,13.7s
SNY LR LR
comp=Z,84nm,14.9s,MS3.8
ZAK Zakamensk 45.44 8 *e*P **P** **10 55 55.6 -2.2**
WRA Warramunga Arr 46.48 124 P **P** **10 56 05.9 -0.1**
comp=Z,16nm,0.6s,mb5.1,baz=301,slow=10,SNR=276
WRA ScP ScP 11 01 27.6 -2.3
comp=Z,0.9nm,0.7s,baz=322,slow=3.8,SNR=7.1
WRA Warramunga Arr 46.48 124 *i* P **P** **10 56 05.9 -0.1**
WRA pmax pmax
comp=Z,16nm,0.6s
WRAB Tennant Creek 46.48 124 *e*P **P** **10 56 06.4 +0.3**
WB2 Warramunga Arr 46.49 124⇑ *i*P **P** **10 56 06.2 +0.1**
TLY Talaya 46.76 8⇓ *i*P **P** **10 56 08.2 0.0**
TLY pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
CN2 Changchun 46.91 31 *e*P **P** **10 56 08.5 -0.9**
CN2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
CN2 AMB AMB
comp=Z,80nm,3.0s
KURK Kurchatov 47.12 346 P **P** **10 56 11.6 +0.5**
SNR=14
KURK Kurchatov 47.12 346 *e*P **P** **10 56 11.2 +0.2**
ASPA Alice Springs 48.00 129 *e*P **P** **10 56 18.0 +0.2**
ASAR Alice Springs 48.00 129 P **P** **10 56 18.0 +0.1**
comp=Z,7.6nm,0.6s,mb4.9,baz=301,slow=7.5,SNR=176
ASAR S **S** **11 03 09.5 -3.2**
comp=Z,0.8nm,0.9s,baz=291,slow=14,SNR=6.5
AS31 Alice Springs 48.00 129 *e*P **P** **10 56 18.0 +0.1**
HIA Hailar 48.64 22 *e*P **P** **10 56 21.8 -1.0**
HIA pmax pmax
comp=Z,10.0nm,0.6s
HIA Hailar 48.64 22 *e*P **P** **10 56 21.8 -1.0**
comp=Z,10nm,0.6s,mb5.0
ZAL Zalesovo 49.06 352 P **P** **10 56 26.2 +0.2**
comp=Z,13nm,0.5s,mb5.2,baz=300,slow=6.3,SNR=31
ZAL LR LR 11 18 35.1
comp=Z,44nm,18.2s,MS3.5,baz=204,slow=38
ZAL Zalesovo 49.06 352 *i* P **P** **10 56 26.2 +0.2**
ZAL pmax pmax
comp=Z,13nm,0.5s
MDJ Mudanjiang 49.63 33 P **P** **10 56 30.4 0.0**
MDJ AMB AMB
comp=Z,11nm,0.9s,mb4.9
MDJ AMB AMB
comp=Z,58nm,5.0s
MDJ LR LR
comp=N,31nm,18.9s,MS3.8
MDJ LR LR
comp=E,90nm,20.2s,MS3.8
MDJ LR LR
comp=Z,87nm,20.9s,MS3.7
MDJ Mudanjiang 49.63 33 *e*P **P** **10 56 30.1 -0.3**
VLA Vladivostok 49.96 35 *i* P **P** **10 56 25.5 -7.3**
NVS Novosibirsk 50.16 351⇑ *i*P **P** **10 56 32.6 -1.8**
NVS pmax pmax
comp=Z,17nm,0.8s,mb5.1
NVS pmax pmax
comp=N,12nm,0.8s
KRAR Krasnoyarsk 50.51 359⇑ *i*P **P** **10 56 35.5 -1.5**
KRAR pmax pmax
comp=Z,21nm,0.3s,mb5.5
MAT Matsushiro 50.52 46 P **P** **10 56 36.5 -0.6**
MAT Matsushiro 50.52 46 P **P** **10 56 37.0 -0.1**
MAT S sS 11 04 22.0 +13
MJAR Matsushiro Arr 50.52 46 P **P** **10 56 36.9 -0.2**
comp=Z,2.4nm,0.8s,mb4.2,baz=242,slow=7.9,SNR=7.4
MJAR LR LR 11 18 37.9
comp=Z,124nm,19.5s,MS3.9,baz=250,slow=37
VOSK Vostochnaya 51.03 342 P **P** **10 56 40.6 -0.4**
VOSK pmax pmax
comp=Z,13nm,0.7s,mb5.0
BVA0 Borovoye Array 51.48 342 *i* P **P** **10 56 43.7 -0.6**
BVA0 pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
BVAR Borovoye Array 51.48 342 LR LR 11 24 31.6
comp=Z,60nm,18.4s,MS3.7,baz=319,slow=43
BRVK Borovoye 51.54 341 P **P** **10 56 44.6 -0.1**
SNR=6.3
BRVK Borovoye 51.54 341 *e*P **P** **10 56 44.4 -0.4**
BRVK pmax pmax
comp=Z,11nm,0.6s,mb5.0
BRVK Borovoye 51.54 341 *e*P **P** **10 56 44.4 -0.4**
comp=Z,11nm,0.6s,mb5.0
ZRNK Zerenda 51.86 341 *e*P **P** **10 56 46.8 -0.4**
ZRNK pmax pmax
comp=Z,16nm,0.7s,mb5.1
ZRNK Zerenda 51.86 341 *e*P **P** **10 56 46.8 -0.4**
comp=Z,16nm,0.7s,mb5.0
CHKZ Chkalovo 51.97 342 *e*P **P** **10 56 47.8 -0.1**
CHKZ pmax pmax
comp=Z,44nm,0.6s,mb5.6
CHKZ Chkalovo 51.97 342 *e*P **P** **10 56 47.8 -0.1**
comp=Z,44nm,0.6s,mb5.6
AB31 Akbulak array 52.62 332 *i* P **P** **10 56 52.7 -0.1**
AB31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KLR Kul'dur 53.80 29 *e*P **P** **10 56 56.8 -4.7**
AKTO Aktyubinsk 54.34 332 LR LR 11 23 17.1
comp=Z,41nm,19.9s,MS3.5,baz=321,slow=39
AKTO Aktyubinsk 54.34 332 P **P** **10 57 04.9 -0.5**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
PMG Port Moresby 54.41 106 *i* P **P** **10 57 05.4 -0.5**
BOD Bodaibo 54.46 13 *e*P **P** **10 57 05.2 -1.1**
HABR Khabarovsk 54.99 32 *e*P **P** **10 57 09.4 -0.7**
HABR *e*S **S** **11 04 51.1 +2.1**
CTA Charters Tower 56.72 118 LR LR 11 24 51.2
comp=Z,169nm,19.2s,MS4.2,baz=258,slow=39
CTAO Charters Tower 56.72 118 *e*P **P** **10 57 22.5 0.0**
CTAO pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
CTAO Charters Tower 56.72 118 *e*P **P** **10 57 22.5 0.0**
comp=Z,3.5nm,0.7s,mb4.5
KMBO Kilima Mbogo 57.63 265 LR LR 11 18 13.2
comp=Z,92nm,19.5s,MS3.9,baz=92,slow=32
STKA Stephens Creek 58.08 133 *e*P **P** **10 57 32.4 +0.3**
comp=Z,2.2nm,0.5s,mb4.4
STKA Stephens Creek 58.08 133 P **P** **10 57 32.2 +0.1**
comp=Z,3.6nm,0.6s,mb4.6,baz=300,slow=7.3,SNR=9.0
STKA LR LR 11 23 10.9
comp=Z,121nm,19.2s,MS4.0,baz=28,slow=37
ARU Arti 58.35 337⇓ *i*P **P** **10 57 32.8 -1.1**
ARU *e*S **S** **11 05 34.5 +1.2**
ARU *e*SS SS 11 09 26.2 +0.4
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ARU Arti 58.35 337 *e*P **P** **10 57 33.2 -0.8**
comp=Z,7.3nm,0.6s,mb4.9
YSS Yuzh-Sakhalins 58.48 37*c* *i*P **P** **10 57 34.6 -0.3**
YSS pmax pmax
comp=Z,18nm,1.3s,mb4.9
YSS Yuzh-Sakhalins 58.48 37 *e*P **P** **10 57 34.5 -0.4**
comp=Z,14nm,0.9s,mb5.0
KIV Kislovodsk 59.46 319 *i* P **P** **10 57 41.3 -0.4**
YAK Yakutsk 62.21 18⇑ *i*P **P** **10 57 57.8 -2.5**
YAK pmax pmax
comp=Z,18nm,0.8s,mb5.2
ANN Anapa 63.27 318 *e*P **P** **10 58 09.7 +2.3**
ANN *e*S **S** **11 06 42.3 +6.2**
ANN pmax pmax
comp=Z,87nm,1.6s,mb5.6
TOO Toolangi 63.74 137 *e*P **P** **10 58 12.3 +1.8**
comp=Z,3.8nm,1.3s,mb4.3
TOO Toolangi 63.74 137 *e*P **P** **10 58 12.3 +1.8**
TOO pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
BR131 Keskin Array S 64.40 312 *e*P **P** **10 58 14.3 -0.5**
BRTR Keskin Array B 64.40 312 P **P** **10 58 14.3 -0.5**
comp=Z,4.1nm,0.8s,mb4.5,baz=129,slow=7.0,SNR=22
BRTR Keskin Array B 64.40 312 *i* P **P** **10 58 14.3 -0.5**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
VRSR Storozhevoye 64.66 325 *e*P **P** **10 58 14.6 -1.9**
VRSR pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
VRSR pmax pmax
comp=N,7.0nm,1.2s
VRSR pmax pmax
comp=E,4.0nm,0.8s
ISP Isparta 66.33 309⇓ *i*P **P** **10 58 27.2 -0.1**
OBN Obninsk 67.72 328*c* *i*P **P** **10 58 35.0 -1.1**
OBN *i* pP 10 58 49.4 +0.5
OBN pmax pmax
comp=Z,23nm,1.2s,mb5.1
KLMR Klimovskoe 68.88 335 *e*P **P** **10 58 41.3 -2.1**
KLMR pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
TIXI Tiksi 69.58 11*d* *i*P **P** **10 58 45.6 -2.1**
TIXI pmax pmax
comp=Z,43nm,1.7s,mb5.1
AKASG Malin Array Be 70.38 322 P **P** **10 58 50.9 -1.8**
comp=Z,4.2nm,0.5s,mb4.6,baz=91,slow=5.6,SNR=15
AKASG Malin Array Be 70.38 322 *i* P **P** **10 58 50.9 -1.7**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKBB Malin Array Si 70.38 322 *e*P **P** **10 58 50.8 -1.8**
VRI Vrincioaia 70.81 317⇓ *i*P **P** **10 58 55.6 +0.4**
VRI Vrincioaia 70.81 317 ⇓P **P** **10 58 55.6 +0.4**
PLOR Plostina 70.86 317⇓ *i*P **P** **10 58 55.9 +0.4**
MLR Muntele Rosu 71.26 316⇑ *i*P **P** **10 58 58.3 +0.3**
MLR Muntele Rosu 71.26 316 ⇑P **P** **10 58 58.3 +0.3**
VOIR 71.87 316⇓ *i*P **P** **10 59 00.9 -0.8**
VOIR 71.87 316 ⇓P **P** **10 59 00.8 -0.8**
BURAR Bucovina Array 72.19 318⇑ *i*P **P** **10 59 03.9 +0.3**
BURAR Bucovina Array 72.19 318 ⇑P **P** **10 59 03.9 +0.3**
DRGR 73.71 317⇓ *i*P **P** **10 59 12.7 +0.1**
DRGR 73.71 317 ⇓P **P** **10 59 12.7 +0.1**
KOLS Kolonicke sedl 74.37 319 *e*P **P** **10 59 17.7 +1.3**
KOLS *e* 11 35 47.9
BOSA Boshof 74.66 239 LR LR 11 29 38.0
comp=Z,149nm,18.1s,MS4.3,baz=275,slow=34
CRVS Cervenica-Dubn 74.89 319 *e*P **P** **10 59 19.7 +0.2**
CRVS *e* pP 10 59 35.8 +3.4
FINES FINESS Array B 75.11 332 P **P** **10 59 19.9 -0.8**
comp=Z,2.6nm,0.5s,mb4.4,baz=105,slow=5.8,SNR=33
KAF Kangasniemi 75.20 333 *e*p **P** **10 59 19.3 -1.9**
comp=Z,3.7nm,0.6s,mb4.5,baz=104,slow=5.3
KAF Kangasniemi 75.20 333 *e*P **P** **10 59 19.3 -1.9**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
OJC Ojcow 76.16 320 *e*P **P** **10 59 26.8 +0.1**
MAW Mawson 76.20 192 P **P** **10 59 29.0 +2.0**
comp=Z,0.6nm,0.6s,mb3.7,baz=7.7,slow=8.2,SNR=3.5
PKSM Moragy 76.42 316⇓ *i*P **P** **10 59 27.8 -0.4**
PKSM Moragy 76.42 316 ⇑P **P** **10 59 27.8 -0.3**
VYHS Vyhne 76.55 318 *e*P **P** **10 59 28.9 -0.1**
VYHS *e* pP 10 59 44.9 +2.9
VYHS pmax pmax
comp=Z,8.0nm,1.6s,mb4.4
VYHS Vyhne 76.55 318 *e*P **P** **10 59 28.9 -0.1**
comp=Z,7.8nm,1.6s,mb4.4
VYHS *e* pP 10 59 44.9 +2.9
KEV Kevo 77.32 341 *e*p **P** **10 59 31.4 -1.9**
comp=Z,8.1nm,0.5s,mb4.9
KEV Kevo 77.32 341 *e*P **P** **10 59 31.4 -1.9**
KEV pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
ZST Bratislava 77.67 318 *e*P **P** **10 59 35.5 +0.3**
ZST pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ZST Bratislava 77.67 318 *e*P **P** **10 59 35.5 +0.3**
comp=Z,10nm,0.9s,mb4.8
ARCES ARCESS Array B 77.75 340 P **P** **10 59 35.1 -0.5**
comp=Z,5.8nm,0.5s,mb4.7,baz=96,slow=5.7,SNR=79
ARCES LR LR 11 40 21.7
comp=Z,44nm,20.8s,MS3.8,baz=83,slow=41
GEC2 GERESS Array S 79.97 319 *e*P **P** **10 59 48.0 +0.1**
GERES GERESS Array B 79.97 319 P **P** **10 59 48.3 +0.4**
comp=Z,5.7nm,0.7s,mb4.6,baz=101,slow=5.6,SNR=47
KHC Kasperske Hory 80.07 319⇓ *i*P **P** **10 59 48.6 +0.2**
CLL Collm 80.56 321 *e**SP sP 11 00 07.0 -2.1
CLL Collm 80.56 321 *e*(sP) sP 11 00 07.0 -2.1
NOA NORSAR Array B 82.11 331 P **P** **10 59 58.2 -1.1**
comp=Z,0.8nm,0.7s,mb3.8,baz=100,slow=5.1,SNR=2.9
NOA LR LR 11 38 11.6
comp=Z,26nm,18.4s,MS3.6,baz=110,slow=37
NOA NORSAR Array B 82.11 331 P **P** **10 59 58.2 -1.1**
NOA LR LR 11 38 11.6
SPB4 Spitsbergen Ar 82.36 348 *e*P **P** **10 59 59.5 -1.0**
KEST Kesra 83.03 305 P **P** **11 00 05.5 +1.5**
comp=Z,1.2nm,0.5s,mb4.2,baz=358,slow=5.1,SNR=6.6
RPZ Rata Peaks 83.98 135 P **P** **11 00 08.6 -0.3**
comp=Z,2.4nm,0.6s,mb4.5,baz=330,slow=20,SNR=4.0
LPG La Plagne 84.69 315 *e*P **P** **11 00 12.6 +0.1**
comp=Z,11nm,0.8s,mb4.8
LPG La Plagne 84.69 315 *e*P **P** **11 00 12.6 +0.1**
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
LPG La Plagne 84.69 315 *e*P **P** **11 00 12.6 +0.1**
comp=Z,5.7nm,0.8s,mb4.8
TORD Torodi Ar. Bea 91.60 283 P **P** **11 00 47.2 +1.6**
comp=Z,0.7nm,0.8s,mb4.1,baz=92,slow=4.0,SNR=3.9
ESDC Sonseca Array 93.16 310 LR LR 11 43 18.9
comp=Z,59nm,19.1s,MS4.1,baz=160,slow=36
IMA2 Indian Mountai 93.74 22 *e*P **P** **11 00 55.3 -0.2**
KDAK Kodiak Island 97.37 30 LR LR 11 48 41.5
comp=Z,145nm,18.1s,MS4.5,baz=100,slow=38
INK Inuvik 99.25 16 P **P** **11 01 19.1 -1.3**
comp=Z,0.6nm,0.5s,mb4.4,baz=322,slow=7.4,SNR=8.9
INK Inuvik 99.25 16 *e*P **P** **11 01 18.2 -2.2**
YKA Yellowknife Ar 108.73 14 PKiKP PKiKP 11 06 06.4 -1.1
comp=Z,0.1nm,0.5s,baz=350,slow=2.6,SNR=4.5
SCHQ Schefferville 118.04 348 PKP PKPdf 11 06 24.4 -0.8
comp=Z,1.1nm,0.5s,baz=235,slow=10,SNR=5.6
NEW Newport 119.78 24 PKP PKPdf 11 06 28.1 -0.5
comp=Z,1.1nm,0.5s,baz=288,slow=5.3,SNR=5.3
MSO Missoula 122.20 23 *e*PKPdf PKPdf 11 06 33.0 -0.3
CHMT Chamberlain Mo 122.39 22 *e*PKPdf PKPdf 11 06 33.3 -0.4
EGMT Eagleton 122.68 19 *e*PKPdf PKPdf 11 06 34.3 +0.1
ULM Lac du Bonnet 123.86 8 PKP PKPdf 11 06 35.6 -0.8
comp=Z,3.7nm,0.5s,baz=338,slow=1.9,SNR=18
BOZ Bozeman (W) 124.07 22 *e*PKIKP PKPdf 11 06 36.7 -0.1
GCMT Greycliff 124.65 20 *e*PKPdf PKPdf 11 06 38.2 +0.3
RRI2 Red Ridge 126.13 23 *e*PKPdf PKPdf 11 06 41.9 +1.1
SNOW Snow King Moun 126.25 23 *e*PKPdf PKPdf 11 06 41.9 +0.8
EYMN Ely 126.63 5 *e*PKPdf PKPdf 11 06 41.3 -0.4
NVAR Mina Array Bea 126.79 32 PKP PKPdf 11 06 43.5 +1.5
comp=Z,1.3nm,0.5s,baz=276,slow=4.4,SNR=16
BW06 Boulder Array 127.30 22 *e*PKPdf PKPdf 11 06 43.4 +0.4
PDAR Pinedale Array 127.30 22 PKP PKPdf 11 06 43.3 +0.3
comp=Z,1.4nm,0.5s,baz=107,slow=2.8,SNR=21
RSSD Black Hills 127.94 17 *e*PKIKP PKPdf 11 06 45.0 +0.7
DUG Dugway 128.11 27 *e*PKIKP PKPdf 11 06 46.1 +1.5
ANMO Albuquerque 135.25 25 PKP PKPdf 11 06 59.4 +1.3
comp=Z,0.3nm,0.3s,baz=311,slow=2.3,SNR=8.0
JCT Junction City 141.77 20 *e*PKPpre 11 07 04.0
JCT *e*PKPdf PKPdf 11 07 11.1 +1.1
CPUP Villa Florida 146.04 229 PKPbc PKPbc 11 07 18.7 +0.4
comp=Z,0.7nm,0.4s,baz=149,slow=1.6,SNR=4.1

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*ISCJB **04** 10:57:47.7±1.7,2492S±009×1776W±03,h407km±13km, mb3.5/5, Error ellipse: s-maj=44.2km s-min=13.2km az=161.2*
*IDC **04** 10:57:57.0±2.6,2522S×17875W,h395km±26km,mb3.3/5, mb1 3.5/6,mb1mx3.3/14,mbtmp4.2/6, Error ellipse: s-maj=28.2km s-min=25.0km az=13.0*
*NEIC **04** 10:57:57.2±1.5,2526S×17871W,h403km±17km,mb3.5/1, Error ellipse: s-maj=24.3km s-min=20.7km az=164.0*
ISC 04 10:57:52.8±1.6,2516S±009×1782W±03,h394km±15km, n31,σ0°97/30,mb3.5/5,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.08**	**177**	P		**Pn**		**10 59 09.8**	**+4.6**
	341nm,0.3s,baz=91,slow=5.8,SNR=21								
RAO				S		**S**		**11 00 04.2**	**+0.2**
	baz=252,slow=20,SNR=2.0								
PUZ	**Puketiti**	**13.23**	**192**	*e*PN		**P**		**11 00 45.7**	**-0.4**
MWZ	**Matawai**	**13.63**	**194**	*e*PN		**P**		**11 00 51.2**	**+0.6**
URZ	**Urewera**	**13.66**	**196**	P		**P**		**11 00 51.9**	**+1.1**
	3.4nm,0.3s,baz=11,slow=4.5,SNR=31								
URZ				S		**S**		**11 03 18.4**	**+0.2**
	4.6nm,0.3s,baz=290,slow=24,SNR=14								
URZ	**Urewera**	**13.66**	**196**	*e*PN		**P**		**11 00 51.9**	**+1.0**
PATZ	**Paeroa**	**14.00**	**198**	*e*PN		**P**		**11 00 56.7**	**+2.1**
BKZ	**Black Stump Fm**	**14.68**	**197**	*e*PN		**P**		**11 01 01.9**	**0.0**
PXZ	**Pawanui**	**15.41**	**194**	*e*PN		**P**		**11 01 07.6**	**-2.2**
TSZ	**Takapari Road**	**15.65**	**197**	*e*PN		**P**		**11 01 12.6**	**+0.2**
BFZ	**Birch Farm**	**16.17**	**195**	*e*PN		**P**		**11 01 18.4**	**+0.3**
BFZ				SN		**S**		**11 04 08.9**	**+0.9**
MRZ	**Mangatainoka R**	**16.32**	**197**	*e*PN		**P**		**11 01 19.4**	**-0.2**
CAW	**Cannon Point**	**16.87**	**198**	*e*PN		**P**		**11 01 25.4**	**-0.1**
QRZ	**Quartz Range**	**17.45**	**204**	*e*PN		**P**		**11 01 32.5**	**+0.9**
NNZ	**Nelson**	**17.49**	**202**	PN		**P**		**11 01 30.3**	**-1.9**
NNZ				SN		**S**		**11 04 32.7**	**-0.9**
TUWZ	**Tuamarina**	**17.50**	**200**	*e*PN		**P**		**11 01 31.6**	**-0.7**
THZ	**Tophouse**	**18.14**	**202**	*e*PN		**P**		**11 01 38.0**	**-0.9**
KHZ	**Kahutara**	**18.52**	**200**	*e*PN		**P**		**11 01 41.1**	**-1.9**
WVZ	**Waitaha Valley**	**20.06**	**204**	*e*PN		**P**		**11 01 57.7**	**-0.3**
RPZ	**Rata Peaks**	**20.50**	**203**	P		**P**		**11 02 03.7**	**+1.6**
	9.9nm,0.6s,baz=319,slow=4.0,SNR=16								
FOZ	**Fox Glacier**	**20.88**	**205**	*e*PN		**P**		**11 02 05.0**	**-0.6**
JCZ	**Jackson Bay**	**21.67**	**206**	*e*PN		**P**		**11 02 14.0**	**+1.2**
CTA	**Charters Tower**	**33.16**	**271**	P		**P**		**11 03 54.1**	**0.0**
	3.2nm,0.5s,mb3.9,baz=73,slow=9.3,SNR=6.7								
STKA	**Stephens Creek**	**35.83**	**250**	P		**P**		**11 04 17.6**	**+0.9**
	0.9nm,0.4s,mb3.4,baz=110,slow=13,SNR=3.7								
ASAR	**Alice Springs**	**43.48**	**261**	P		**P**		**11 05 19.4**	**+0.5**
	0.6nm,0.5s,mb3.2,baz=93,slow=7.0,SNR=23								
WRAB	**Tennant Creek**	**43.98**	**267**	*e*P		**P**		**11 05 22.2**	**-0.7**
	1.6nm,0.6s,mb3.5								
WRA	**Warramunga Arr**	**43.99**	**267**	P		**P**		**11 05 22.7**	**-0.3**
	0.7nm,0.3s,mb3.5,baz=101,slow=8.2,SNR=59								
NB2	**NORSAR Subarra**	**143.56**	**352**	PKPa		PKPdf		11 16 43.6	+2.4
	comp=Z,0.6nm,0.6s,baz=14,slow=3.2								
NOA	**NORSAR Array B**	**143.56**	**352**	PKP		PKPdf		11 16 43.2	+2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.0nm,0.8s,baz=15,slow=2.4,SNR=4.2						
NOA	**NORSAR Array B**	**143.56**	**352**	PKP	PKPdf	11 16 43.2	+2.0
HFS	**Hagfors**	**144.09**	**350**	PKP	PKPdf	11 16 45.1	+2.9
	comp=Z,3.2nm,0.4s,baz=67,slow=3.7,SNR=32						
AKASG	**Malin Array Be**	**146.92**	**328**	PKPbc	PKPbc	11 16 52.6	+3.1
	comp=Z,0.7nm,0.3s,baz=46,slow=4.6,SNR=13						

*IDC **04** 10:58:54.7±6.8, 4371N×12914W, h0km, mb3.6/2, mb1 3.6/5, mb1mx3.4/23, mbtmp3.3/5, ML3.2/3, Error ellipse: s-maj=104.2km s-min=30.0km az=64.0*
*ISCJB **04** 10:58:58.5±2.3, 4396N±010×1284W±03, h10km, mb3.8/2, Error ellipse: s-maj=26.9km s-min=13.1km az=154.3*
*NEIC **04** 10:59:00.9±1.9, 4395N×12838W, h10km, mb4.0/3, Error ellipse: s-maj=23.4km s-min=10.7km az=78.0*
ISC 04 10:59:00.8±2.4**, 4396N**±010×**1284W**±03**, h10km, n22, σ0s85**/22**, mb3.8**/2**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SSOR	**Sweet Springs**	**4.36**	**76**	P	**Pn**	**11 00 06.9**	**-0.2**
LVP	**Lakeview Peak**	**4.75**	**62**	P	**Pn**	**11 00 11.9**	**-0.5**
MTMW	**Mount Mitchell**	**4.86**	**63**	P	**Pn**	**11 00 13.9**	**0.0**
TDH	**Tom, Dick, Har**	**4.91**	**72**	P	**Pn**	**11 00 14.7**	**0.0**
ESD	**East Dome**	**4.97**	**61**	P	**Pn**	**11 00 17.0**	**+1.6**
TDL	**Tradedollar La**	**4.99**	**59**	P	**Pn**	**11 00 15.8**	**0.0**
VFP	**Flag Point**	**5.14**	**72**	P	**Pn**	**11 00 17.6**	**-0.2**
HDW	**Hoodsport**	**5.26**	**44**	P	**Pn**	**11 00 20.5**	**+1.1**
ASR	**Mount Adams--S**	**5.31**	**63**	P	**Pn**	**11 00 20.3**	**+0.3**
PGC	**Sidney**	**5.81**	**35**	P	**Pn**	**11 00 25.4**	**-1.6**
HAWA	**Hanford**	**6.73**	**66**	P	**Pn**	**11 00 38.0**	**-1.6**
WVOR	**Wild Horse Val**	**7.31**	**99**	*e*P	**Pn**	**11 00 46.4**	**-1.2**
	2.1nm,1.0s						
NEW	**Newport**	**8.95**	**57**	P	**Pn**	**11 01 11.2**	**+1.2**
	1.2nm,0.7s						
NVAR	**Mina Array Bea**	**9.41**	**123**	Pn	**Pn**	**11 01 16.8**	**+0.4**
	0.0nm,0.3s,baz=290,slow=13,SNR=2.6						
PDAR	**Pinedale Array**	**13.78**	**88**	Pn	**Pn**	**11 02 23.5**	**+7.4**
	0.0nm,0.3s,baz=267,slow=10,SNR=4.1						
ANMO	**Albuquerque**	**19.15**	**111**	P	**Pn**	**11 03 26.0**	**+1.0**
	0.1nm,0.3s,baz=293,slow=7.7,SNR=3.0						
ANMO	**Albuquerque**	**19.15**	**111**	P	**Pn**	**11 03 23.8**	**-1.3**
	3.9nm,1.5s						
ANMO				P		11 03 26.0	
FFC	**Flin Flon**	**20.19**	**48**	*e*P	**P**	**11 03 35.4**	**0.0**
	8.9nm,1.0s						
YKA	**Yellowknife Ar**	**20.24**	**19**	P	**P**	**11 03 35.7**	**-0.3**
	2.2nm,0.8s,baz=207,slow=11,SNR=16						
YKA	**Yellowknife Ar**	**20.24**	**19**	P	**P**	**11 03 35.7**	**-0.3**
ULM	**Lac du Bonnet**	**22.90**	**63**	P	**P**	**11 04 05.0**	**+0.5**
	1.2nm,0.7s,mb3.4,baz=281,slow=9.4,SNR=4.8						
WMOK	**Wichita Mounta**	**24.59**	**102**	*e*P	**P**	**11 04 21.4**	**+0.4**
	8.4nm,1.0s,mb4.2						

IDC 04 11:02:35.3±2.3**, 601S**×**13087E, h0km, mb3.7**/1**, mb1 3.5**/4**, mb1mx3.4**/13**, mbtmp3.4**/4**, ML3.4**/3**, Error ellipse: s-maj=90.9km s-min=29.0km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.06**	**203**	Pn	Pn	11 05 43.1	+1.1
	0.1nm,0.3s,baz=131,slow=20,SNR=13						
FITZ				Sn	Sn	11 08 00.7	-7.4
	0.4nm,0.3s,baz=158,slow=23,SNR=8.8						
WRA	**Warramunga Arr**	**14.26**	**167**	Pn	Pn	11 05 57.9	-0.5
	0.3nm,0.3s,baz=349,slow=14,SNR=14						
WRA				Sn	Sn	11 08 26.6	-11
	0.3nm,0.3s,baz=340,slow=25,SNR=6.4						
ASAR	**Alice Springs**	**17.80**	**171**	P	Pn	11 06 44.7	+0.3
	0.1nm,0.3s,baz=354,slow=14,SNR=6.4						
ASAR				S	Sn	11 09 55.4	-8.0
	0.1nm,0.3s,baz=355,slow=25,SNR=5.7						
MKAR	**Makanchi Array**	**67.88**	**326**	P	P	11 13 35.6	+0.1
	0.3nm,0.3s,baz=127,slow=6.2,SNR=5.4						

MOS 04 11:05:34.9±0.3**, 4385N**×**4453E, h12km, mb4.0**/1**, 4C-10D, Error ellipse: s-maj=11.4km s-min=7.4km az=76.2, Western Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRKR	**Terskaya**	**0.20**	**130**	⇓*i*PG	Pg	11 05 40.5	+1.3
TRKR				*i* S	Sg	11 05 45.6	+3.5
PRTR	**Priterechnaya**	**0.20**	**241**	⇓*i*PG	Pg	11 05 40.1	+0.8
PRTR				*i* S	Sg	11 05 44.8	+2.5
BTKR	**Batakoyurt**	**0.48**	**179**	⇓*i*PG	Pg	11 05 45.6	+1.3
BTKR				*i* S	Sg	11 05 54.4	+3.8
KMSR	**Komsomolskaya**	**0.51**	**200**	⇓*i*PG	Pg	11 05 45.9	+1.1
KMSR				*i* S	Sg	11 05 54.9	+3.3
ARNR	**Ardon**	**0.68**	**195**	⇓*i*PG	Pg	11 05 49.1	+0.9
ARNR				*i* S	Sg	11 06 00.4	+3.3
KUBR	**Kubataba**	**0.81**	**267**	⇑*e*PG	Pg	11 05 50.9	+0.3
VLKR	**Vladikavkaz**	**0.81**	**172**	⇓*i*PG	Pg	11 05 51.3	+0.7
VLKR				*e*S	Sg	11 06 04.3	+3.1
KORR	**Kora**	**0.83**	**204**	⇑*i*PG	Pg	11 05 51.4	+0.4
KORR				*i* S	Sg	11 06 04.4	+2.5
LACR	**Lac**	**1.04**	**189**	⇑*i*PG	Pg	11 05 54.8	-0.1
LACR				*i* S	Sb	11 06 10.4	+2.1
ZEI	**Tsey**	**1.17**	**203**	*e*PG	Pg	11 05 56.4	-1.0
ZEI				*i*		11 06 13.0	
DIGR	**Digorskoe uzhe**	**1.17**	**216**	⇓*i*PG	Pg	11 05 56.6	-0.9
DIGR				*i* S	Sb	11 06 13.4	+1.2
BEYR	**Belyy Ugol+**	**1.25**	**278**	⇓*i*PG	Pg	11 05 57.9	-0.9
BEYR				*e*S	Sb	11 06 13.9	-0.4
KIV0	**Kislovodsk Arr**	**1.33**	**275**	⇓*i*PG	Pg	11 05 59.3	-1.1
KIV0				*e*S	Sb	11 06 16.6	-0.1
KIV	**Kislovodsk**	**1.33**	**275**	⇑*i*PG	Pg	11 05 59.6	-0.9
KIV				*e*S	Sb	11 06 16.6	-0.3
SHAR	**Shatzhatmas**	**1.35**	**266**	⇓*e*PG	Pg	11 05 59.7	-1.1
SHAR				*e*S	Sb	11 06 17.5	+0.2

*ISCJB **04** 11:20:32.6±1.4, 2983N±004×3625E±007, h2km±6km, Error ellipse: s-maj=10.5km s-min=6.6km az=30.6*
*GII **04** 11:20:33.9±1.2, 2991N×3618E, h0km, ML2.0/2*
*HLW **04** 11:20:35.2, 2966N×3625E, h4km, Mb3.0*
ISC 04 11:20:32.6±1.5**, 2983N**±004×**3630E**±008**, h2km**±6km**, n18, σ0s88**/28**, 5C, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.09**	**265**	Pg	**Pg**	**11 20 53.2**	**-0.3**
HRFI	**Mount Harif**	**1.12**	**281**	Pg	**Pg**	**11 20 53.3**	**-0.7**
HRFI				Sg	**Sg**	**11 21 08.9**	**+0.4**
EIL	**Elat**	**1.18**	**263**	Pg	**Pg**	**11 20 56.0**	**+0.7**
EIL				Sg	**Sg**	**11 21 12.2**	**+1.6**
EIL	**Elat**	**1.18**	**263**	Pg	**Pg**	**11 20 55.9**	**+0.6**
EIL				Sg	**Sg**	**11 21 12.2**	**+1.6**
MBH	**Mount Berech**	**1.20**	**269**	Pg	**Pg**	**11 20 55.5**	**-0.2**
ZFRI	**Zfri**	**1.21**	**307**	Pg	**Pg**	**11 20 54.6**	**-1.3**
PRNI	**Paran**	**1.24**	**295**	Pg	**Pg**	**11 20 55.0**	**-1.4**
PRNI				Sg	**Sg**	**11 21 12.4**	**-0.1**
HBST	**Basata**	**1.49**	**246**	⇑P	**Pn**	**11 21 00.7**	**+0.2**
MZDA	**Masada**	**1.69**	**332**	Pn	**Pn**	**11 21 03.1**	**0.0**
MZDA				Sn	**Sn**	**11 21 25.7**	**+0.4**
MKRJ	**Makawir**	**1.81**	**342**	Pn	**Pn**	**11 21 04.4**	**-0.5**
MKRJ				Sn	**Sn**	**11 21 28.5**	**+0.1**
HDHB	**Dhahab**	**1.83**	**234**	⇑P	**Pn**	**11 21 04.8**	**-0.4**
DRGI	**Dragot**	**1.93**	**336**	Pn	**Pn**	**11 21 06.4**	**0.0**
DRGI				Sn	**Sn**	**11 21 31.9**	**+0.6**
AMAZ	**Amatzia**	**2.08**	**325**	Pn	**Pn**	**11 21 09.3**	**+0.8**
AMAZ				Sn	**Sn**	**11 21 34.0**	**-1.0**
AMAZ	**Amatzia**	**2.08**	**325**	Sg	**Pn**	**11 21 08.9**	**+0.4**
HKAT	**Jabal Katrina**	**2.40**	**238**	⇑P	**Pn**	**11 21 13.0**	**+0.1**
HKAT				S	**Sn**	**11 21 40.8**	**-2.1**
AMAG	**Maghara**	**2.80**	**288**	⇑P	**Pn**	**11 21 20.4**	**+2.0**
SUZ		**3.01**	**271**	⇑P	**Pn**	**11 21 22.6**	**+1.2**
SUZ				S	**Sn**	**11 21 57.3**	**-0.8**
ZNM		**3.02**	**262**	P	**Pn**	**11 21 22.3**	**+0.9**

*BJI **04** 11:26:59.1, 4828N×15578E, h59km, mB4.5, mb4.2*
*MOS **04** 11:27:02.2±1.3, 4842N×15506E, h33km, mb4.2/3, Error ellipse: s-maj=13.9km s-min=9.7km az=75.2*
*ISCJB **04** 11:27:02.7±1.1, 4845N±007×1550E±01, h37km±8km, mb4.1/21, MS3.5/4, Error ellipse: s-maj=16.7km s-min=5.5km az=87.3*
*SKHL **04** 11:27:03.8±2.0, 4831N×15535E, h47km±1km, mb5.3/1, msh4.8/1*
*NEIC **04** 11:27:06.7±1.4, 4846N×15492E, h59km±12km, mb4.0/2, Error ellipse: s-maj=17.1km s-min=9.5km az=142.0*
*IDC **04** 11:27:08.5±3.9, 4841N×15486E, h74km±35km, mb3.8/18, mb1 4.0/20, mb1mx3.9/30, mbtmp4.1/20, ML3.8/2, MS3.4/6, Ms1 3.4/6, ms1mx3.1/42, Error ellipse: s-maj=20.6km s-min=16.0km az=132.0*
ISC 04 11:27:04.6±1.0**, 4848N**±007×**1549E**±01**, h40km**±8km**, n53, σ0s99**/54**, mb4.1**/21**, MS3.5**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.34**	**19**	*e*P	**Pn**	**11 27 38.5**	**-2.1**
SKR				AMB	AMB	11 27 42.0	
	600nm,2.0s						
SKR				AMB	AMB	11 27 42.0	
	130nm,0.5s						
SKR				AMB	AMB	11 27 42.0	
	80nm,0.5s						
SKR				AMB	AMB	11 27 42.0	
	220nm,0.5s						
SKR				*e*S	**Sn**	**11 28 06.2**	**-1.9**
SKR				A		11 28 10.0	
	1μm,0.4s						
SKR				A		11 28 10.0	
	310nm,0.4s						
SKR				A		11 28 23.0	
	1μm,2.0s						
SKR				A		11 28 23.0	
	2μm,2.0s						
SKR				A		11 28 23.0	
	1μm,2.0s						
SKR				AMS	AMS	11 28 43.0	
	1μm,16.0s						
SKR	**Severo-Kuril's**	**2.34**	**19**	*e*PN	**Pn**	**11 27 38.5**	**-2.1**
SKR				*e*S	**Sn**	**11 28 06.2**	**-1.9**
SKR				pmax	pmax		
	comp=Z,220nm,0.7s						
SKR				pmax	pmax		
	comp=N,130nm,0.4s						
SKR				pmax	pmax		
	comp=E,80nm,0.4s						
SKR				pmax	pmax		
	comp=Z,600nm,2.0s						
SKR				smax			
	comp=N,1μm,0.2s						
SKR				smax			
	comp=E,2μm,0.2s						
SKR				smax			
	comp=N,1μm,2.0s						
SKR				smax			
	comp=E,2μm,2.0s						
PAU	**Pauzhetka**	**3.23**	**21**	*i* P	**Pn**	**11 27 54.1**	**+1.3**
PAU				*i* S	**Sn**	**11 28 31.3**	**+1.2**
PET	**Petropavlovsk**	**5.13**	**26**	*e*P	**Pn**	**11 28 20.0**	**+1.1**
PET				AMB	AMB	11 28 32.0	
	comp=E,40nm,0.4s						
PET				*e*S	**Sn**	**11 29 16.0**	**-0.9**
PET				A		11 29 24.5	
	comp=E,190nm,0.4s						
PET				A		11 29 26.9	
	comp=E,210nm,0.6s						
PET	**Petropavlovsk**	**5.13**	**26**	*e*P	**Pn**	**11 28 19.5**	**+0.6**
	comp=E,43nm,0.5s						
KUR	**Kuril'sk**	**5.83**	**239**	*e*P	**Pn**	**11 28 28.0**	**-0.5**
KUR				AMB	AMB	11 28 30.5	
	comp=E,380nm,1.0s						
KUR				*e*S	**Sn**	**11 29 34.0**	**0.0**
KUR				A		11 29 48.5	
	comp=E,250nm,1.0s						
KUR				A		11 29 48.5	
	comp=E,360nm,1.0s						
TYV	**Tymovskoe**	**8.31**	**291**	*e*P	**Pn**	**11 29 07.8**	**+5.2**
TYV				AMB	AMB	11 29 09.0	
	comp=E,7.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.35**	**264**	*e*P	**Pn**	**11 29 07.3**	**+4.2**
YSS				*e*S	**Sn**	**11 30 44.3**	**+8.2**
YSS				AMS	AMS	11 32 48.0	
	comp=E,200nm,15.0s						
YSS	**Yuzh-Sakhalins**	**8.35**	**264**	*e*P	**Pn**	**11 29 07.5**	**+4.4**
	comp=E,21nm,1.0s						
OKH	**Okha**	**9.10**	**308**	AMS	AMS	11 34 40.0	
	comp=E,400nm,8.0s						
OKH				AMS	AMS	11 34 40.0	
	comp=E,1μm,24.0s						
OKH				AMS	AMS	11 34 40.0	
	comp=E,500nm,16.0s						
ASAJ	**Asahikawa**	**9.58**	**248**	P	**Pn**	**11 29 23.9**	**+3.9**
	comp=E,1.6nm,0.3s,baz=73,slow=10,SNR=16						
ASAJ				LR	LR	11 32 47.1	
	comp=E,209nm,20.1s,baz=249,slow=36						
EKMR	**Ekimchan**	**14.62**	**297**	*e*P	**Pn**	**11 30 30.5**	**+1.7**
EKMR				AMB	AMB	11 30 38.0	
	comp=E,6.0nm,0.7s						
KLR	**Kul'dur**	**15.27**	**282**	*e*P	**Pn**	**11 30 38.2**	**+0.9**
MJAR	**Matsushiro Arr**	**17.11**	**232**	P	**Pn**	**11 31 00.1**	**-0.6**
	comp=E,0.1nm,0.3s,baz=34,slow=13,SNR=5.9						
MDJ	**Mudanjiang**	**17.82**	**267**	P	**Pn**	**11 31 08.7**	**-0.8**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,41nm,5.2s						
JHJ	**Hachijo jima 2**	**19.10**	**222**	LR	LR	11 38 55.8	
	comp=Z,44nm,18.9s,baz=107,slow=37						
SSE	**Sheshan**	**30.87**	**248**	*e*P	**P**	**11 33 17.8**	**+0.7**
SSE				AMB	AMB		
	comp=Z,29nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,123nm,5.1s						
SONM	**Songino Array**	**31.95**	**287**	P	**P**	**11 33 27.0**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.3,baz=88,slow=8.8,SNR=3.2						
SONM				LR	LR	11 46 37.9	
	comp=Z,104nm,18.4s,MS3.5,baz=269,slow=37						
COLA	**College**	**34.02**	**40**	*e*P	**P**	**11 33 45.4**	**+0.7**
GUMO	**Guam**	**35.77**	**197**	LR	LR	11 49 17.2	
	comp=Z,58nm,18.4s,MS3.4,baz=232,slow=37						
INK	**Inuvik**	**39.54**	**34**	P	**P**	**11 34 32.2**	**+0.7**
	comp=Z,1.6nm,0.7s,mb3.9,baz=289,slow=6.3,SNR=11						
INK	**Inuvik**	**39.54**	**34**	P	**P**	**11 34 32.3**	**+0.7**
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	**Inuvik**	**39.54**	**34**	*e*P	**P**	**11 34 32.2**	**+0.6**
MKAR	**Makanchi Array**	**47.25**	**297**	P	**P**	**11 35 33.0**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.6,baz=64,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**47.25**	**297**	*e*P	**P**	**11 35 38.4**	**+4.6**
MKAR	**Makanchi Array**	**47.25**	**297**	P	**P**	**11 35 33.0**	**-0.8**
KURK	**Kurchatov**	**47.44**	**303**	*e*P	**P**	**11 35 34.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
KURK	**Kurchatov**	**47.44**	**303**	*e*P	**P**	**11 35 34.2**	**-1.0**
	comp=Z,1.0nm,0.6s,mb3.9						
YKA	**Yellowknife Ar**	**48.81**	**38**	P	**P**	**11 35 46.0**	**+0.2**
	comp=Z,1.4nm,0.9s,mb4.0,baz=297,slow=7.7,SNR=10						
YKA	**Yellowknife Ar**	**48.81**	**38**	*e*P	**P**	**11 35 46.0**	**+0.2**
YKA	**Yellowknife Ar**	**48.81**	**38**	P	**P**	**11 35 46.0**	**+0.2**
CHKZ	**Chkalovo**	**50.27**	**310**	*e*P	**P**	**11 35 55.5**	**-1.4**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
CHKZ	**Chkalovo**	**50.27**	**310**	*e*P	**P**	**11 35 55.5**	**-1.4**
	comp=Z,0.8nm,0.5s,mb4.0						
BVAR	**Borovoye Array**	**50.72**	**309**	P	**P**	**11 35 59.4**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.8,baz=56,slow=9.2,SNR=3.9						
ZRNK	**Zerenda**	**51.47**	**310**	P	**P**	**11 36 05.6**	**-0.4**
ARU	**Arti**	**54.57**	**317**	*e*P	pP	11 36 44.5	+4.1
PDAR	**Pinedale Array**	**62.75**	**56**	P	**P**	**11 37 26.5**	**+0.8**
	comp=Z,1.1nm,1.0s,mb4.0,baz=336,slow=3.3,SNR=9.3						
FINES	**FINESS Array B**	**62.99**	**335**	P	**P**	**11 37 25.9**	**-1.4**
	comp=Z,0.9nm,0.7s,mb4.0,baz=31,slow=8.9,SNR=6.3						
FINES	**FINESS Array B**	**62.99**	**335**	P	**P**	**11 37 25.9**	**-1.4**
NOA	**NORSAR Array B**	**66.98**	**342**	LR	LR	12 12 46.8	
	comp=Z,28nm,18.1s,MS3.5,baz=215,slow=41						
HFS	**Hagfors**	**67.26**	**340**	P	**P**	**11 37 54.1**	**-0.9**
	comp=Z,1.4nm,0.5s,mb4.2,baz=354,slow=3.0,SNR=7.0						
WRA	**Warramunga Arr**	**70.55**	**201**	P	**P**	**11 38 14.1**	**-1.3**
	comp=Z,2.0nm,0.9s,mb4.0,baz=20,slow=6.6,SNR=7.9						
SCHQ	**Schefferville**	**71.24**	**24**	P	**P**	**11 38 19.1**	**-0.5**
	comp=Z,0.8nm,0.4s,mb4.0,baz=144,slow=8.4,SNR=5.6						
ASAR	**Alice Springs**	**74.24**	**200**	P	**P**	**11 38 37.4**	**-0.1**
	comp=Z,1.4nm,1.0s,mb3.9,baz=8.2,slow=5.7,SNR=8.0						
EKA	**Eskdalemuir Ar**	**74.94**	**347**	P	**P**	**11 38 41.2**	**-0.3**
	comp=Z,2.8nm,0.6s,mb4.4,baz=20,slow=5.4,SNR=17						
VRAC	**Vranov**	**76.17**	**333**	P	**P**	**11 38 48.0**	**-0.5**
	comp=Z,1.9nm,0.4s,mb4.4,baz=42,slow=13,SNR=3.9						
MLR	**Muntele Rosu**	**76.34**	**326**	P	**P**	**11 38 50.7**	**+1.2**
	comp=Z,2.6nm,0.6s,mb4.4,baz=180,slow=12,SNR=4.0						
GERES	**GERESS Array B**	**77.43**	**335**	P	**P**	**11 38 55.9**	**+0.2**
	comp=Z,1.5nm,0.5s,mb4.2,baz=35,slow=6.0,SNR=13						
GERES				LR	LR	12 16 10.6	
	comp=Z,34nm,19.1s,MS3.7,baz=95,slow=38						
BRTR	**Keskin Array B**	**77.96**	**318**	P	**P**	**11 38 59.4**	**+0.8**
	comp=Z,2.0nm,0.9s,mb4.1,baz=73,slow=4.1,SNR=9.0						
BRTR	**Keskin Array B**	**77.96**	**318**	*e*P	**P**	**11 38 59.4**	**+0.8**
DAVOS	**Davos**	**80.33**	**337**	P	**P**	**11 39 12.7**	**+1.1**
DAVOX	**Davos**	**80.36**	**336**	P	**P**	**11 39 12.7**	**+1.0**
	comp=Z,1.4nm,0.2s,mb4.5,baz=314,slow=17,SNR=4.7						
MMAI	**Mount Meron Ar**	**82.57**	**312**	P	**P**	**11 39 24.3**	**+0.9**
	comp=Z,2.6nm,0.6s,mb4.5,baz=41,slow=6.6,SNR=6.4						

*NEIC **04** 11:31:01.8, 3158S×7153W, h33km, ML2.7(GUC), After GUC.*
GUC 04 11:31:01.8±0.5**, 3158S**×**7153W, h33km**±1km**, MD3.8, ML2.7, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.30**	**175**	*e*P	Pb	11 31 09.5	-0.1
CHNG				*i* S	Sb	11 31 14.8	0.0
JACH	**Jahuel**	**1.35**	**144**	⇓*i*P	Pn	11 31 25.7	+1.3
JACH				*i* S	Sn	11 31 43.7	+2.5
ROCH	**El Roble**	**1.45**	**163**	*i* P	Pn	11 31 26.8	+1.1
ROCH				*i* S	Sn	11 31 46.8	+3.2
TLL	**Tololo Astrono**	**1.54**	**24**	*e*P	Pn	11 31 28.9	+2.0
TLL				*i* S	Sn	11 31 49.1	+3.3
TLL				AML	AML	11 31 51.9	
	comp=N,149nm,0.6s						
TLL	**Tololo Astrono**	**1.54**	**24**	*e*P	Pn	11 31 28.9	+2.0
TLL				*i* S	Sn	11 31 49.1	+3.3
PEL	**Peldehue**	**1.71**	**156**	*e*P	Pn	11 31 30.9	+1.6
PEL				*i* S	Sn	11 31 53.0	+3.0
PEL				AML	AML	11 31 55.0	
	comp=E,165nm,0.4s						
PEL	**Peldehue**	**1.71**	**156**	*e*P	Pn	11 31 30.9	+1.6
PEL				*i* S	Sn	11 31 53.0	+3.0
RCDM	**Rinconada Maip**	**2.00**	**162**	*e*P	Pn	11 31 34.8	+1.6
RCDM				*i* S	Sn	11 31 59.5	+2.5
RCDM				AML	AML	11 32 07.7	
	comp=E,140nm,0.2s						
RCDM	**Rinconada Maip**	**2.00**	**162**	*e*P	Pn	11 31 34.8	+1.6
RCDM				*i* S	Sn	11 31 59.5	+2.5
FCH	**Farellones**	**2.03**	**149**	*e*P	Pn	11 31 36.0	+2.4
FCH				*i* S	Sn	11 32 01.7	+3.8
FCH				AML	AML	11 32 08.2	
	comp=E,49nm,0.3s						
TACH	**Talagante**	**2.12**	**167**	*i* P	Pn	11 31 37.3	+2.4
TACH				*i* S	Sn	11 32 03.4	+3.2

*BER **04** 11:31:47.2±1.9, 8168N×738W, h15km±217km, ML2.5*
*CSEM **04** 11:31:48.2±0.2, 8205N×293W, h30km, mb4.4/1, Error ellipse: s-maj=6.4km s-min=2.6km az=17.0*
*ISCJB **04** 11:31:49.9±1.0, 815N±01×46W±04, h10km, mb3.8/4, MS3.4/4, Error ellipse: s-maj=18.1km s-min=8.7km az=29.0*
*IDC **04** 11:31:51.0±1.5, 8149N×523W, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/22, mbtmp3.5/5, ML4.6/1, MS3.4/4, Ms1 3.4/4, ms1mx2.7/31, Error ellipse: s-maj=38.3km s-min=24.3km az=39.0*
*NEIC **04** 11:31:51.9±1.1, 8148N×451W, h10km, mb4.4/1, Error ellipse: s-maj=20.6km s-min=12.6km az=190.0*
ISC 04 11:31:51.2±1.0**, 815N**±01×**44W**±05**, h10km, n20, σ1s19**/19**, mb3.6**/5**, MS3.4**/4**, 1C, North of Svalbard**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**3.80**	**125**	*e*P	**Pn**	**11 32 49.3**	**-0.5**
KBS				*e*		11 32 50.0	
	baz=324,slow=6.2						
KBS				*e*S	**Sn**	**11 33 35.2**	**+0.7**
KBS				AML	AML	11 33 40.2	
	comp=Z,5.7nm,0.3s						
KBS	**Kingsbay**	**3.80**	**125**	*e*P	**Pn**	**11 32 48.6**	**-1.2**
KBS	**Kingsbay**	**3.80**	**125**	*e*P	**Pn**	**11 32 48.6**	**-1.2**
KBS				*e*S	**Sn**	**11 33 35.2**	**+0.7**
	comp=Z,5.7nm,0.3s,SNR=53						
SPB4	**Spitsbergen Ar**	**4.94**	**122**	*e*P	**Pn**	**11 33 04.3**	**-1.1**
SPB4	**Spitsbergen Ar**	**4.94**	**122**	*e*P	**Pn**	**11 33 04.3**	**-1.1**
DAG	**Danmarks Havn**	**5.46**	**217**	⇑*i*P	**Pn**	**11 33 11.3**	**-1.3**
	comp=Z,5.9nm,0.4s						
DAG				*i*		11 34 12.2	
HOPEN	**Hopen**	**7.41**	**117**	*e*P	**Pn**	**11 33 38.0**	**-1.5**
HOPEN				*e*S	**Sn**	**11 34 60.0**	**-3.6**
HOPEN				AML	AML	11 35 03.2	
	comp=N,22nm,0.6s						
JMIC	**Jan Mayen**	**10.63**	**187**	Pn	**Pn**	**11 34 25.5**	**+1.9**
	comp=N,5.2nm,0.3s,baz=148,slow=2.1,SNR=40						
SUMG	**Summit**	**11.47**	**238**	*e*P	**Pn**	**11 34 28.3**	**-6.7**
	comp=N,5.8nm,0.6s						
ARCES	**ARCESS Array B**	**13.83**	**133**	Pn	**Pn**	**11 35 07.6**	**+0.3**
	comp=N,0.2nm,0.3s,baz=346,slow=11,SNR=10						
NOA	**NORSAR Array B**	**21.02**	**159**	P	**P**	**11 36 35.3**	**+0.3**
	comp=N,0.3nm,0.6s,mb2.8,baz=350,slow=11,SNR=2.2						
FINES	**FINESS Array B**	**21.76**	**139**	P	**P**	**11 36 43.9**	**+1.0**
	comp=N,2.3nm,1.1s,mb3.5,baz=348,slow=13,SNR=3.7						
YKA	**Yellowknife Ar**	**31.56**	**304**	LR	LR	11 50 33.3	
	comp=N,51nm,19.2s,MS3.2,baz=60,slow=36						
SCHQ	**Schefferville**	**32.18**	**254**	*e*P	**P**	**11 38 18.7**	**-0.5**
	comp=N,3.9nm,0.8s,mb4.3						
SCHQ	**Schefferville**	**32.18**	**254**	*e*P	**P**	**11 38 18.7**	**-0.5**
BVAR	**Borovoye Array**	**35.74**	**94**	LR	LR	11 55 57.4	
	comp=N,82nm,20.6s,MS3.5,baz=12,slow=40						
AKTO	**Aktyubinsk**	**36.47**	**107**	LR	LR	11 55 57.8	
	comp=N,67nm,19.0s,MS3.4,baz=19,slow=40						
MKAR	**Makanchi Array**	**43.58**	**84**	P	**P**	**11 39 57.6**	**+2.3**
	comp=N,0.6nm,0.5s,mb3.6,baz=339,slow=7.7,SNR=4.9						
PDAR	**Pinedale Array**	**50.17**	**292**	P	**P**	**11 40 47.0**	**0.0**
	comp=N,1.0nm,1.1s,mb3.8,baz=27,slow=6.1,SNR=4.7						
YBH	**Yreka Blue Hor**	**52.91**	**304**	LR	LR	12 06 52.2	
	comp=N,38nm,20.6s,MS3.4,baz=360,slow=40						

*CSEM **04** 11:34:02.8±0.1, 44.12N×1998E, h2km, MD3.0, Error ellipse: s-maj=4.4km s-min=2.5km az=103.0*
*ISCJB **04** 11:34:03.4±0.3, 44.11N±002×1999E±003, h10km, Error ellipse: s-maj=3.7km s-min=2.0km az=30.6*
*BEO **04** 11:34:03.1±0.3, 44.12N×2001E, h12km*
*PDG **04** 11:34:04.2±0.6, 4406N×1989E, h3km±1km*
*NEIC **04** 11:34:04.2, 4406N×1989E, h3km, MD3.0(PDG), After PDG.*
ISC 04 11:34:04.4±0.3**, 4410N**±002×**2001E**±003**, h10km, n52, σ1s26**/81**, 26C-12D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DIVS	**Divcibare**	**0.02**	**253**	*i* Pg	**Pg**	**11 34 05.1**	**-1.0**
DIVS				Sg	**Sg**	**11 34 06.6**	**-0.8**
BEO	**Belgrade**	**0.79**	**24**	*i* Pg	**Pg**	**11 34 17.5**	**-2.0**
BEO				Sg	**Sg**	**11 34 28.9**	**-0.9**
SJES	**Sjenica**	**0.84**	**184**	Pg	**Pg**	**11 34 18.7**	**-1.8**
SJES				Sg	**Sg**	**11 34 30.5**	**-0.9**
SVIS	**Svilajnac**	**0.89**	**77**	⇓*i*Pg	**Pg**	**11 34 19.7**	**-1.9**
SVIS				Sg	**Sg**	**11 34 32.9**	**-0.2**
PLE	**Pljevlja**	**0.89**	**210**	⇑*i*Pg	**Pg**	**11 34 19.6**	**-2.0**
PLE				*e*Sg	**Sg**	**11 34 31.9**	**-1.4**
FGSL	**Fruska Gora**	**1.06**	**352**	Pg	**Pg**	**11 34 23.0**	**-1.9**
FGSL				Sg	**Sg**	**11 34 37.8**	**-0.9**
UPM	**Unac-Piva**	**1.21**	**222**	⇑*i*Pg	**Pg**	**11 34 24.6**	**-2.9**
UPM				*e*Sg	**Sg**	**11 34 42.6**	**-0.6**
IVA	**Berane**	**1.23**	**184**	⇑*i*Pg	**Pg**	**11 34 25.7**	**-2.4**
IVA				*e*Sg	**Sg**	**11 34 43.9**	**-0.2**
NKY	**Niksic**	**1.49**	**210**	⇑*i*Pg	**Pn**	**11 34 30.2**	**-1.0**
NKY				*e*Sg	**Sg**	**11 34 52.3**	**+0.1**
PVY	**Plav**	**1.51**	**181**	⇑*i*Pg	**Pn**	**11 34 31.0**	**-0.5**
PVY				*e*Sg	**Sg**	**11 34 53.2**	**+0.3**
BRY	**Bratogost**	**1.61**	**222**	⇓*i*Pg	**Pn**	**11 34 32.1**	**-0.8**
BRY				*e*Sg	**Sg**	**11 34 55.7**	**-0.5**
TTG	**Podgorica**	**1.76**	**198**	⇓*i*Pn	**Pn**	**11 34 35.4**	**+0.4**
TTG				*e*Sn	**Sn**	**11 34 60.0**	**+2.6**
TREB	**Trebinje**	**1.84**	**222**	P	**Pn**	**11 34 36.1**	**+0.1**
TREB				S	**Sn**	**11 35 02.3**	**+2.9**
BZS	**Buzias**	**1.90**	**36**	⇑*i*P	**Pb**	**11 34 40.2**	**+1.1**
BZS	**Buzias**	**1.90**	**36**	⇑P	**Pb**	**11 34 40.2**	**+1.1**
BUM	**Brajici-Budva**	**1.98**	**205**	⇑*i*Pn	**Pn**	**11 34 38.8**	**+0.9**
BUM				*e*Sn	**Sn**	**11 35 05.6**	**+2.8**
HCY	**Herceg Novi**	**1.99**	**214**	⇑*i*Pn	**Pn**	**11 34 38.7**	**+0.6**
HCY				*e*Sn	**Sn**	**11 35 05.6**	**+2.6**
BLY	**Banja Luka**	**2.13**	**289**	P	**Pn**	**11 34 40.8**	**+0.8**
BLY				S	**Sb**	**11 35 10.1**	**+0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RHK3	Tenkes	2.18	326	⇑eP	Pn	11 34 40.7	0.0
ULC	Ulcinj	2.21	195	⇑iPn	Pn	11 34 42.0	+0.9
ULC				eSn	Sn	11 35 11.3	+2.8
PKSM	Moragy	2.32	336	⇑iP	Pg	11 34 48.3	-0.6
PKSM	Moragy	2.32	336	⇑P	Pg	11 34 48.3	-0.6
PKSM	Moragy	2.32	336	⇑ePn	Pn	11 34 42.5	-0.1
GZR	Gura Zlata	2.35	56	⇑iP	Pb	11 34 47.6	+0.7
PKS9	Tamasi	2.77	334	⇑eP	Pn	11 34 49.0	+0.2
VTS	Vitosha	2.78	122	⇑iP	Pg	11 34 53.7	-3.9
VTS	Vitosha	2.78	122	⇑P	Pg	11 34 53.6	-4.0
DRGR		3.29	34	⇓iP	Pb	11 35 03.8	+0.9
PKSG		3.48	342	⇑iP	Pn	11 34 58.8	+0.2
PSZ	Piszkesteto	3.82	359	⇓ePn	Pn	11 35 03.1	-0.1
PSZ				eSn	Sn	11 35 46.2	-1.9
PSZ	Piszkesteto	3.82	359	eP	Pn	11 35 02.9	-0.3
VOIR		3.83	68	⇓iP	Pn	11 35 04.8	+1.5
VOIR		3.83	68	⇓P	Pn	11 35 04.8	+1.5
VISS	Visnje	4.05	297	i Pn	Pn	11 35 07.8	+1.5
VISS				i Sn	Sn	11 35 52.9	-1.0
VISS	Visnje	4.05	297	i Pn	Pn	11 35 07.8	+1.4
VISS				i Sn	Sn	11 35 52.8	-1.0
PERS	Pernice	4.28	308	ePn	Pn	11 35 09.7	+0.1
PERS				i Sn	Sn	11 35 58.7	-0.9
PERS	Pernice	4.28	308	ePn	Pn	11 35 09.6	0.0
PERS				i Sn	Sn	11 35 58.7	-0.9
MLR	Muntele Rosu	4.44	70	⇓iP	Pn	11 35 15.2	+3.4
MLR	Muntele Rosu	4.44	70	⇓P	Pn	11 35 15.2	+3.4
ARSA	Arzberg	4.45	317	⇑iSn	Sn	11 35 58.8	-5.0
ARSA	Arzberg	4.45	317	⇑iPn	Pn	11 35 12.4	+0.5
ARSA				⇓iSn	Sn	11 36 05.1	+1.3
ARSA	Arzberg	4.45	317	⇑iPn	Pn	11 35 12.4	+0.5
ARSA				i Sn	Sn	11 35 58.8	-5.0
ARSA	Arzberg	4.45	317	Pn	Pn	11 35 12.4	+0.5
ARSA				Sn	Sn	11 35 58.8	-5.0
VYHS	Vyhne	4.47	350	ePN	Pn	11 35 13.1	+0.9
VYHS				e		11 35 25.7	
ZST	Bratislava	4.57	335	ePN	Pn	11 35 15.0	+1.5
ZST				e		11 36 07.0	
CRVS	Cervenica-Dubn	4.90	11	ePN	Pn	11 35 20.1	+2.0
CRVS				eSG	Sg	11 36 47.6	+5.8
BURAR	Bucovina Array	5.05	44	⇑iP	Pn	11 35 21.1	+0.9
BURAR	Bucovina Array	5.05	44	⇑P	Pn	11 35 21.1	+0.9
KOLS	Kolonicke sedl	5.08	17	eSN	Sn	11 36 17.8	-1.4
KOLS				eSG	Sg	11 36 49.1	+1.7
MOA	Molln	5.49	315	⇓iSn	Sn	11 36 24.4	-4.8
MOA	Molln	5.49	315	⇑iPn	Pn	11 35 27.1	+0.9
MOA				⇓eSn	Sn	11 36 29.6	+0.3
MOA	Molln	5.49	315	⇑iPn	Pn	11 35 27.1	+0.9
MOA				i Sn	Sn	11 36 24.4	-4.8

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*CSEM **04** 11:35:07.7±0.3, 3867N×2862W, h5km, ML1.3, Error ellipse: s-maj=2.5km s-min=1.0km az=101.0, After PDA*
*PDA **04** 11:35:07.7±0.3, 3867N×2862W, h5km, MD2.9, ML1.3, Error ellipse: s-maj=2.5km s-min=1.0km az=101.0*
SVSA 04 11:35:07.7±0.3**, 3867N×2862W, h5km, MD2.9, ML1.3, Error ellipse: s-maj=2.5km s-min=1.0km az=101.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PICO	Pico	0.23	137	eP	Pg	11 35 11.9	-0.2
PICO				eS	Sg	11 35 15.2	+0.1
PCND	Candelaria	0.23	148	eP	Pg	11 35 12.1	-0.2
PCND				eS	Sg	11 35 15.3	0.0
PCND							
	33nm,0.2s						
PTEI	Pico do Teixo	0.27	130	eS	Sg	11 35 16.5	0.0
PTEI							
	9.9nm,0.2s						
ROSA	Rosais	0.30	80	eP	Pg	11 35 13.2	-0.3
ROSA				eS	Sg	11 35 17.2	-0.3

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*IDC **04** 11:37:28.5±1.3, 620S×12905E, h0km, mb4.2/3, mb1 4.4/5, mb1mx4.1/13, mbtmp4.3/5, ML4.4/2, Error ellipse: s-maj=122.3km s-min=22.3km az=68.0*
*NEIC **04** 11:37:29.7±0.5, 616S×12924E, h10km, mb3.9/2, Error ellipse: s-maj=24.9km s-min=6.9km az=74.0*
*ISCJB **04** 11:37:33.8±2.7, 627S±009×1293E±02, h67km±29km, mb3.9/4, Error ellipse: s-maj=36.6km s-min=12.1km az=146.1*
ISC 04 11:37:41.1±2.1**, 650S**±009×**1295E**±02**, h135km**±23km**, n12,** σ1.00/17**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	14.18	161	eP	Pn	11 40 55.5	-0.2
	13nm,0.7s						
WRAB				eS	Sn	11 43 25.7	-6.7
WRA	Warramunga Arr	14.18	161	Pn	Pn	11 40 55.7	-0.1
	1.2nm,0.3s,baz=342,slow=13,SNR=59						
WRA				Sn	Sn	11 43 26.7	-5.9
	2.9nm,0.3s,baz=339,slow=21,SNR=11						
WB2	Warramunga Arr	14.19	161	eP	Pn	11 40 55.4	-0.5
WB2				eS	Sn	11 43 26.8	-5.9
MBWA	Marble Bar	17.34	212	P	Pn	11 41 34.4	-0.4
	5.5nm,0.7s						
MBWA				e		11 41 41.8	
AS31	Alice Springs	17.60	166	eP	Pn	11 41 40.5	+2.7
AS31				eS	S	11 44 43.6	-9.0
ASAR	Alice Springs	17.60	166	P	Pn	11 41 40.8	+2.9
	2.4nm,0.3s,baz=345,slow=12,SNR=178						
ASAR				S	S	11 44 52.0	-0.6
	0.7nm,0.3s,baz=359,slow=26,SNR=10						
STKA	Stephens Creek	27.68	157	P	P	11 43 22.0	+5.7
	1.0nm,0.3s,mb4.0,baz=321,slow=6.5,SNR=2.8						
NACB	Ninganchiao	31.43	346	P	P	11 43 47.9	-1.6
YHNB	Yeheng	31.96	346	eP	P	11 43 53.8	-0.3
SONM	Songino Array	57.80	342	P	P	11 47 18.8	+0.7
	0.5nm,0.4s,mb3.7,baz=160,slow=8.2,SNR=4.9						
MKAR	Makanchi Array	67.51	327	P	P	11 48 23.6	+1.1
	2.8nm,0.5s,mb4.3,baz=120,slow=7.8,SNR=21						
CHKZ	Chkalovo	77.55	329	P	P	11 49 22.0	0.0
	1.2nm,0.8s,mb3.6						

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*NEIC **04** 11:49:14.3±1.3, 1043S×16232E, h15km, mb4.3/1, Error ellipse: s-maj=28.7km s-min=20.6km az=136.0*
*ISCJB **04** 11:49:25.3±5.6, 104S±02×1615E±04, h75km±36km, mb3.8/4, Error ellipse: s-maj=60.5km s-min=34.9km az=26.7*
*IDC **04** 11:49:28.3±6.2, 1024S×16138E, h82km±41km, mb3.6/3, mb1 3.8/3, mb1mx3.5/13, mbtmp3.9/3, Error ellipse: s-maj=57.6km s-min=32.2km az=103.0*
ISC 04 11:49:26.2±5.3**, 103S**±02×**1615E**±03**, h65km**±36km**, n8,** σ0.25/9**, mb3.8**/4**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.76	299	P	Pn	11 49 54.5	0.0
	100nm,0.3s,baz=129,slow=1.0,SNR=38						
HNR				S	Sn	11 50 16.0	0.0
	110nm,0.3s,baz=70,slow=8.6,SNR=6.6						
WB2	Warramunga Arr	27.89	247	eP	P	11 55 10.2	+0.4
WRA	Warramunga Arr	27.90	247	P	P	11 55 10.2	+0.2
	0.9nm,0.4s,mb3.6,baz=73,slow=9.2,SNR=29						
AS31	Alice Springs	29.50	240	eP	P	11 55 24.2	+0.1
ASAR	Alice Springs	29.50	240	P	P	11 55 23.6	-0.5
	0.3nm,0.4s,mb3.3,baz=61,slow=10.0,SNR=10						
ASPA	Alice Springs	29.50	240	eP	P	11 55 24.2	+0.1
FITZ	Fitzroy Crossi	35.59	253	eP	P	11 56 17.0	-0.3
	1.9nm,0.4s,mb4.4						
SONM	Songino Array	75.64	325	P	P	12 01 04.2	0.0
	0.9nm,0.6s,mb3.7,baz=141,slow=5.4,SNR=7.2						

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*IDC **04** 11:53:36.1±7.4, 4026N×14261E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.3/21, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=189.3km s-min=49.8km az=153.0*
*ISCJB **04** 11:53:46.7±1.5, 3899N±004×14250E±010, h20km±9km, mb3.5/2, Error ellipse: s-maj=13.1km s-min=6.2km az=22.9*
*JMA **04** 11:53:48.6±0.1, 3904N×14240E, h32km±2km, M3.4*
ISC 04 11:53:47.8±1.4**, 3904N**±004×**14243E**±008**, h16km**±6km**, n12,** σ0.96/22**, mb3.5**/2**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.60	275	⇓P	Pg	11 54 00.2	+0.7
OFUJ				S	Sg	11 54 08.1	+0.6
MIYJ	Miyakonagasawa	0.72	319	⇓P	Pg	11 54 01.8	-0.1
MIYJ				S	Sg	11 54 11.0	-0.4
JMK	Ichinoseki	0.95	265	⇓P	Pb	11 54 05.4	-0.4
JMK				S	Sb	11 54 17.5	-0.6
JOM	Ohasama	0.99	297	⇓P	Pb	11 54 06.3	-0.2
JOM				S	Sb	11 54 19.0	-0.2
JTH	Tanohata	1.00	334	P	Pb	11 54 06.5	-0.3
JTH				eS	Sb	11 54 20.5	+0.8
JIO	Ouri	1.03	236	⇓P	Pb	11 54 06.0	-1.2
JIO				S	Sb	11 54 18.0	-2.4
JKZ	Kuzumaki	1.27	318	⇓P	Pn	11 54 10.8	-0.1
JKZ				S	Sb	11 54 26.9	-0.6
JANG	Nango	1.51	332	P	Pn	11 54 14.2	0.0
JANG				S	Sn	11 54 34.0	+0.5
MAT	Matsushiro	4.17	235	P	Pn	11 54 52.3	+1.6
MAT				eS	Sn	11 55 40.7	+1.6
MJAR	Matsushiro Arr	4.17	235	Pn	Pn	11 54 52.7	+2.0
	1.2nm,0.3s,baz=41,slow=11,SNR=21						
MJAR				Sn	Sb	11 55 54.8	+4.0
	0.6nm,0.3s,baz=46,slow=26,SNR=3.2						
WRA	Warramunga Arr	59.15	189	P	P	12 03 46.7	-1.0
	0.3nm,0.6s,mb3.5,baz=5.9,slow=7.0,SNR=8.4						
ASAR	Alice Springs	62.88	189	P	P	12 04 12.4	-0.6
	0.3nm,0.9s,mb3.4,baz=1.5,slow=6.9,SNR=3.5						

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*ISCJB **04** 11:58:56.5±0.4, 6287N±004×1505W±0.1, h105km±5km, mb3.9/4, Error ellipse: s-maj=8.8km s-min=6.2km az=177.1*
*NEIC **04** 11:58:58.0, 6286N×15052W, h91km, mb4.2/1, After AEIC.*
*IDC **04** 11:59:00.3±2.5, 6236N×14966W, h155km±45km, mb3.3/3, mb1 3.3/6, mb1mx3.0/21, mbtmp3.7/6, Error ellipse: s-maj=60.0km s-min=18.8km az=130.0*
ISC 04 11:58:57.5±0.4**, 6286N**±004×**1505W**±01**, h101km**±5km**, n25,** σ0.82/29**, mb3.9**/4**, Central Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.60	11	P	Pn	11 59 14.2	+0.1
TRF				S	Sn	11 59 26.5	0.0
KTH	Kantishna Hill	0.72	346	P	Pn	11 59 15.0	0.0
KTH				S	Sn	11 59 27.4	-0.8
MCK	McKinley	1.14	39	P	Pn	11 59 19.3	-0.1
MCK				S	Sn	11 59 35.5	-0.5
GHO	Glory Hole Cre	1.33	145	P	Pn	11 59 22.2	+0.6
PMR	Palmer	1.44	152	P	Pn	11 59 22.8	-0.1
FIB	Fire Island	1.71	174	P	Pn	11 59 28.1	+1.8
KNK	Knik Glacier	1.75	145	P	Pn	11 59 27.0	+0.1
RC01	Rabbit Creek A	1.82	168	P	Pn	11 59 27.6	-0.1
COLA	College	2.35	29	P	Pn	11 59 34.8	+0.3
SLKM	Skilak Lake	2.37	176	P	Pn	11 59 35.0	+0.2
TTA	Tatalina	2.50	274	P	Pn	11 59 36.6	0.0
SEW	Seward	2.82	169	P	Pn	11 59 40.9	+0.1
DIV	Divide	2.84	126	P	Pn	11 59 39.8	-1.3
SVW2	Sparrevohn	2.96	236	P	Pn	11 59 42.7	0.0
MENT	Mentasta	3.12	86	eP	Pn	11 59 45.7	+0.8
EYAK	Cordova Ski Ar	3.25	133	eP	Pn	11 59 46.5	-0.1
IMA2	Indian Mountai	3.50	338	eP	Pn	11 59 50.4	+0.6
DAWY	Dawson	5.15	71	eP	Pn	12 00 12.1	0.0
KDAK	Kodiak Island	5.20	192	P	Pn	12 00 11.7	-1.1
	1.7nm,0.3s,baz=336,slow=10,SNR=31						
KDAK				S	Sn	12 01 07.2	-4.2
	5.5nm,0.3s,baz=122,slow=23,SNR=12						
INK	Inuvik	8.89	45	P	Pn	12 01 05.0	+1.9
	0.4nm,0.3s,baz=232,slow=16,SNR=27						
YKA	Yellowknife Ar	16.37	75	P	Pn	12 02 39.4	-1.8
	baz=282,slow=11,SNR=4.6						
ARCES	ARCESS Array B	47.86	2	P	P	12 07 25.6	+0.5
	1.1nm,0.8s,mb3.7,baz=356,slow=8.5,SNR=7.5						
CHKZ	Chkalovo	59.41	333	eP	P	12 08 47.6	-1.8
	1.4nm,0.7s,mb4.1						
BVAR	Borovoye Array	60.07	333	P	P	12 08 54.7	+0.8
	0.7nm,0.4s,mb4.0,baz=38,slow=9.7,SNR=4.8						
MKAR	Makanchi Array	62.91	322	P	P	12 09 13.2	+0.2
	0.3nm,0.4s,mb3.6,baz=23,slow=6.6,SNR=3.6						

KRSC 04 11:59:49, 5402N×16357E, h32km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	1.21	297	eP	Pn	12 00 11.7	+2.1
MKZ				i S	Sn	12 00 28.3	+3.5
KBTR	Krutoberegovo	2.23	349	eP	Pn	12 00 24.7	+0.9
KBTR				i S	Sn	12 00 50.3	0.0
SPN	Mys Shipunski	2.31	248	eP	Pn	12 00 26.4	+1.6
SPN				i S	Sn	12 00 53.2	+1.1
KII	Karymskiy	2.43	272	eP	Pn	12 00 29.0	+2.5
KII				i S	Sn	12 00 57.7	+2.6
ZLN	Zelenaya	2.56	323	eP	Pn	12 00 30.8	+2.6
KMNR	Kamenistaya	2.59	313	eP	Pn	12 00 31.6	+2.9
KMNR				i S	Sn	12 01 03.3	+4.2
CIRR	Tsirk	2.65	323	eP	Pn	12 00 32.3	+2.8
NLC	Nalytchevo	2.66	253	eP	Pn	12 00 31.3	+1.7
NLC				i S	Sn	12 01 01.9	+1.2
KPT	Kopyto	2.74	317	eP	Pn	12 00 33.4	+2.6
KRSR	Krestovskiy	2.80	323	eP	Pn	12 00 33.8	+2.3
SMKR	Semkarok	2.83	336	eP	Pn	12 00 33.9	+1.9
SMKR				i S	Sn	12 01 07.1	+2.0
KLY	Klyuchi	2.84	325	eP	Pn	12 00 33.0	+0.9
KLY				i S	Sn	12 01 04.9	-0.4
BDR	Baidarnaya	2.89	333	eP	Pn	12 00 34.9	+2.1
KOZ	Kozyrevsk	2.95	315	eP	Pn	12 00 36.9	+3.3
KOZ				i S	Sn	12 01 11.9	+4.0
AVH	Avacha	2.97	257	eP	Pn	12 00 36.9	+3.0
AVH				i S	Sn	12 01 11.9	+3.4
SRKR	Sorokina	2.98	334	eP	Pn	12 00 36.0	+2.1
SRKR				i S	Sn	12 01 10.6	+2.1
PET	Petropavlovsk	3.10	253	eP	Pn	12 00 37.8	+2.1
PET				i S	Sn	12 01 13.8	+2.2
SRDR	Sredinnyy	3.19	318	eP	Pn	12 00 39.5	+2.6
SRDR				i S	Sn	12 01 17.2	+3.4
GNL	Ganaly	3.35	267	eP	Pn	12 00 43.0	+3.9
RUS	Russkaya	3.43	244	eP	Pn	12 00 42.1	+1.9
RUS				i S	Sn	12 01 21.0	+1.3

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*TIR **04** 12:20:41.8, 4188N×19.11E, h18km*
*NEIC **04** 12:20:43.9, 4191N×19.13E, h0km, ML3.2(PDG), After PDG.*
*SKO **04** 12:20:44.9, 4192N×19.16E, h8km*
*CSEM **04** 12:20:44.2±0.1, 4196N×19.13E, h10km, ML3.2, Error ellipse: s-maj=2.8km s-min=1.6km az=36.0*
*THE **04** 12:20:44.5, 4199N×1870E, h11km*
PDG 04 12:20:43.9±0.3**, 4191N×1913E, h0km**±11km**, 20C-5D, Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULC	Ulcinj	0.10	60	⇑iPg	Pg	12 20 45.8	-0.1
ULC				eSg	Sg	12 20 47.2	0.0
ULC	Ulcinj	0.10	60	⇑iPg	Pg	12 20 45.8	-0.1
ULC				eSg	Sg	12 20 47.2	0.0
SDA	Shkodra	0.31	63	i Pg	Pg	12 20 50.0	+0.2
SDA				i Sg	Sg	12 20 54.8	+1.0
BUM	Brajici-Budva	0.42	336	⇑iPg	Pg	12 20 52.1	0.0
BUM				eSg	Sg	12 20 58.8	+1.2
TTG	Podgorica	0.53	11	⇑iPg	Pg	12 20 53.7	-0.3
TTG				eSg	Sg	12 21 01.8	+1.0
QSH	Qafa e Shtames	0.70	124	i Pg	Pg	12 20 56.0	-1.3
QSH				i Sg	Sg	12 21 11.8	+5.4
HCY	Herceg Novi	0.71	319	⇓iPg	Pg	12 20 57.0	-0.6
HCY				eSg	Sg	12 21 08.5	+1.6
TIR	Tirane	0.79	135	eSg	Sg	12 21 17.4	+8.1
NKY	Niksic	0.91	354	⇓iPg	Pg	12 21 00.3	-1.0
NKY				eSg	Sg	12 21 14.4	+1.4
PVY	Plav	0.93	42	⇑iPg	Pg	12 21 01.1	-0.5
PVY				eSg	Sg	12 21 15.4	+1.8
PVY	Plav	0.93	42	⇑iPg	Pg	12 21 01.1	-0.6
PVY				eSg	Sg	12 21 15.4	+1.7
TREB	Trebinje	0.99	325	P	Pg	12 21 01.9	-1.0
TREB				S	Sg	12 21 17.8	+2.0
BRY	Bratogost	1.08	336	⇓iPg	Pg	12 21 03.6	-1.0
BRY				eSg	Sg	12 21 21.0	+2.3
IVA	Berane	1.11	30	⇑iPg	Pg	12 21 04.7	-0.6
IVA				eSg	Sg	12 21 22.1	+2.4
UPM	Unac-Piva	1.30	353	⇑iPg	Pg	12 21 07.3	-1.6
UPM				eSg	Sg	12 21 28.3	+2.6
PLE	Pljevlja	1.43	8	⇑iPg	Pg	12 21 10.5	-0.9
PLE				eSg	Sg	12 21 32.7	+2.8
SJES	Sjenica	1.48	24	Pn	Pn	12 21 13.9	+2.1
OHR	Ohrid	1.49	122	ePg	Pg	12 21 10.5	-1.9
SKO	Skopje	1.72	87	ePn	Pn	12 21 17.4	+2.3
SKO				eSn	Sn	12 21 43.1	+5.3
SKO	Skopje	1.72	87	ePg	Pg	12 21 15.8	-1.2
SKO	Skopje	1.72	87	ePg	Pg	12 21 15.7	-1.3
SKO	Skopje	1.72	87	ePn	Pn	12 21 17.5	+2.4
SKO				eSn	Sn	12 21 43.1	+5.3
BIA	Bitola	1.87	118	ePn	Pn	12 21 18.7	+1.5
BIA				eSn	Sn	12 21 45.5	+3.9
BIA	Bitola	1.87	118	ePn	Pn	12 21 18.3	+1.1
BIA				eSn	Sn	12 21 38.2	-3.3
BIA	Bitola	1.87	118	ePn	Pn	12 21 18.2	+1.0
BIA				eSn	Sn	12 21 45.5	+4.0
FNA	Florina	2.03	123	ePn	Pn	12 21 21.0	+1.6
FNA				eSn	Sn	12 21 48.2	+2.8
DIVS	Divcibare	2.27	16	⇑iPn	Pn	12 21 23.3	+0.6
DIVS				Sg	Sn	12 21 46.1	-5.3
DIVS	Divcibare	2.27	16	ePn	Pn	12 21 20.6	-2.1
STIP	Stip	2.29	94	ePn	Pn	12 21 23.3	+0.3
GRG	Griva	2.64	110	ePn	Pn	12 21 29.4	+1.8
VAY	Valandovo	2.65	102	ePn	Pn	12 21 29.0	+1.2
VAY				eSn	Sn	12 22 03.6	+3.0
VAY	Valandovo	2.65	102	ePn	Pn	12 21 28.1	+0.3
KNT	Kendrikon	2.92	104	ePn	Pn	12 21 33.4	+1.7
KNT				eSn	Sn	12 22 11.7	+4.3
KNT	Kendrikon	2.92	104	ePn	Pn	12 21 33.3	+1.7
VTS	Vitosha	3.10	76	⇑iP	Sn	12 22 15.0	+3.2
LIT	Litokhoron	3.12	124	ePn	Pn	12 21 36.5	+2.2
LIT				eSn	Sn	12 22 15.7	+3.4
HORT	Hortiatis	3.27	112	ePn	Pn	12 21 38.0	+1.6
HORT				eSn	Sn	12 22 20.8	+4.9
FGSL	Fruska Gora	3.28	8	Pn	Pn	12 21 36.6	+0.1
LKD	Levkas	3.41	160	ePn	Pn	12 21 37.9	-0.4
LKD				eSn	Sn	12 22 20.5	+1.2
NVLJ	Novalja	4.09	312	i Pn	Pn	12 21 47.7	+0.1
NVLJ				i Sn	Sn	12 22 34.8	-1.4
NVLJ	Novalja	4.09	312	i Pn	Pn	12 21 47.6	0.0
NVLJ				i Sn	Sn	12 22 34.7	-1.4
BZS	Buzias	4.12	25	⇑iP	Pn	12 21 48.3	+0.3
BZS	Buzias	4.12	25	⇑P	Pn	12 21 48.4	+0.3
PKSM	Moragy	4.31	355	⇑iP	Pn	12 21 51.1	+0.4
PKSM	Moragy	4.31	355	⇑P	Pn	12 21 51.1	+0.4
GZR	Gura Zlata	4.37	36	⇑iP	Pn	12 21 53.0	+1.5
BOJS	Bojanci	4.56	323	i Pn	Pn	12 21 54.9	+0.8
BOJS				eSn	Sn	12 22 48.0	+0.2
VISS	Visnje	4.98	323	ePn	Pn	12 22 01.0	+1.2
VISS				eSn	Sn	12 22 58.0	-0.1
DRGR		5.51	27	⇑iP	Pn	12 22 07.3	+0.1
DRGR		5.51	27	⇑P	Pn	12 22 07.3	+0.1
PERS	Pernice	5.53	330	ePn	Pn	12 22 08.9	+1.5
PERS				i Sn	Sn	12 23 10.6	-1.2
PERS	Pernice	5.53	330	ePn	Pn	12 22 08.9	+1.4
VOIR		5.55	49	⇓iP	Pn	12 22 10.1	+2.3
VOIR		5.55	49	⇓P	Pn	12 22 10.2	+2.4
VOY	Vojsko	5.59	319	ePn	Pn	12 22 08.7	+0.4
VOY				eSn	Sn	12 23 11.7	-1.5
PSZ	Piszkesteto	6.03	5	eP	Pn	12 22 14.5	+0.1
	9.8nm,0.8s						
PSZ	Piszkesteto	6.03	5	eP	Pn	12 22 14.5	+0.2
	9.8nm,0.8s						
MLR	Muntele Rosu	6.10	52	⇑iP	Pn	12 22 14.4	-0.8
MLR	Muntele Rosu	6.10	52	⇑P	Pn	12 22 14.4	-0.8
VYHS	Vyhne	6.58	358	ePN	Pn	12 22 24.6	+2.7
VYHS				eSN	Sn	12 23 37.1	-0.6
VYHS	Vyhne	6.58	358	ePn	Pn	12 22 24.7	+2.8
VYHS				eSn	Sn	12 23 37.1	-0.6
KOLS	Kolonicke sedl	7.36	16	e	Pg	12 23 05.0	+0.1

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*MOS **04** 12:24:24.4±1.1, 543S×12950E, h150km, mb4.7/12, Error ellipse: s-maj=15.3km s-min=7.5km az=103.0*
*BJI **04** 12:24:26.0, 550S×12950E, h168km, mB4.5, mb4.6*
*ISCJB **04** 12:24:27.1±1.2, 550S±004×12959E±008, h179km±12km, mb4.6/37, Error ellipse: s-maj=12.8km s-min=5.5km az=156.4*
*NEIC **04** 12:24:27.7±1.3, 548S×12954E, h169km±13km, mb4.6/16, Error ellipse: s-maj=11.0km s-min=7.0km az=81.0*
*IDC **04** 12:24:32.9±1.9, 557S×12962E, h218km±18km, mb4.1/12, mb1 4.2/14, mb1mx4.1/18, mbtmp4.7/14, Error ellipse: s-maj=16.9km s-min=8.2km az=78.0*
ISC 04 12:24:31.0±1.2**, 557S**±004×**12971E**±008**, h203km**±12km**, n88,** σ1.14/93**, mb4.5**/37**, 11C-12D, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	7.59	159	⇓iP	Pn	12 26 18.1	-0.7
	110nm,0.2s						
KAKA				eS	Sn	12 27 31.4	-13
FITZ	Fitzroy Crossi	13.08	197	eP	Pn	12 27 26.8	-2.4
	16nm,0.4s						
FITZ				i		12 27 33.4	
FITZ				eS	S	12 29 43.8	-11
FITZ	Fitzroy Crossi	13.08	197	P	Pn	12 27 28.7	-0.6
	2.2nm,0.3s,baz=33,slow=11,SNR=92						
FITZ				S	S	12 29 43.7	-11
	1.0nm,0.3s,baz=95,slow=21,SNR=4.7						
WRAB	Tennant Creek	14.97	163	eP	Pn	12 27 51.4	-1.2
WRAB				eS	S	12 30 29.8	-9.0
WRAB				pmax	pmax		
	comp=Z,114nm,0.3s						
WRAB	Tennant Creek	14.97	163	eP	Pn	12 27 51.4	-1.2
	comp=Z,114nm,0.3s						
WRAB				eS	S	12 30 29.8	-9.0
WRA	Warramunga Arr	14.98	163	P	Pn	12 27 51.1	-1.6
	comp=Z,18nm,0.3s,baz=345,slow=12,SNR=124						
WRA				S	S	12 30 30.4	-8.6
	comp=Z,8.7nm,0.3s,baz=344,slow=22,SNR=9.6						
WB2	Warramunga Arr	14.98	163	⇑iP	Pn	12 27 51.3	-1.4
WB2				eS	S	12 30 29.5	-10
PMG	Port Moresby	17.71	103	P	P	12 28 26.9	+3.6
	comp=Z,7.0nm,0.3s,baz=113,slow=1.7,SNR=27						
PMG	Port Moresby	17.71	103c	iP	P	12 28 27.3	+4.0
PMG	Port Moresby	17.71	103	eP	P	12 28 26.1	+2.7
	comp=Z,41nm,0.8s						
MBWA	Marble Bar	18.27	211	eP	P	12 28 29.6	+0.2
	comp=Z,40nm,0.6s						
AS31	Alice Springs	18.44	168	⇓iP	P	12 28 33.2	+2.0
AS31				eS	S	12 31 49.2	-1.8
ASAR	Alice Springs	18.44	168	P	P	12 28 33.1	+1.9
	comp=Z,34nm,0.3s,baz=342,slow=9.7,SNR=2660						
ASAR				S	S	12 31 49.5	-1.4
	comp=Z,2.7nm,0.3s,baz=341,slow=17,SNR=18						
ASAR				ScP	ScP	12 36 08.0	-0.4
	baz=340,slow=2.1,SNR=4.7						
ASAR	Alice Springs	18.44	168	P	P	12 28 33.2	+2.0
ASAR				S	S	12 31 49.6	-1.4
ASPA	Alice Springs	18.44	168	⇓iP	P	12 28 33.2	+2.0
ASPA				eS	S	12 31 49.2	-1.8
CTA	Charters Tower	21.61	133	eP	P	12 29 07.3	+2.3
	comp=Z,3.2nm,0.4s,mb4.2						
CTA	Charters Tower	21.61	133	P	P	12 29 07.3	+2.3
	comp=Z,3.9nm,0.5s,mb4.2,baz=286,slow=11,SNR=12						
CTAO	Charters Tower	21.61	133	eP	P	12 29 07.2	+2.2
GUMO	Guam	24.26	38	P	P	12 29 30.4	+1.0
	comp=Z,23nm,0.4s,mb5.2,baz=180,slow=13,SNR=6.7						
FORT	Forrest	25.12	183	eP	P	12 29 37.3	+0.1
	comp=Z,43nm,0.6s,mb5.3						
KLBR	Kellerberrin	28.21	202	⇓iP	P	12 30 05.2	+0.5
	comp=Z,30nm,0.3s,mb5.4						
STKA	Stephens Creek	28.44	158	⇓iP	P	12 30 08.2	+1.5
	comp=Z,7.0nm,0.4s,mb4.6						
STKA	Stephens Creek	28.44	158	P	P	12 30 08.2	+1.5
	comp=Z,10.0nm,0.6s,mb4.6,baz=330,slow=8.9,SNR=33						
STKA				ScP	ScP	12 36 34.9	-0.4
	comp=Z,3.9nm,0.6s,baz=19,slow=9.3,SNR=3.7						
MUN	Mundaring	29.16	204	⇓iP	P	12 30 13.5	+0.4
NWAO	Narrogin (SRO)	29.60	202	P	P	12 30 17.7	+0.7
	comp=Z,27nm,0.4s,mb5.2,baz=34,slow=7.6,SNR=75						
NWAO	Narrogin (SRO)	29.60	202	eP	P	12 30 17.7	+0.6
ADE	Adelaide	30.41	165	eP	P	12 30 26.9	+2.7
ARMA	Armidale	32.19	143	eP	P	12 30 41.1	+1.3
TOO	Toolangi	34.95	158	eP	P	12 31 06.3	+2.7
	comp=Z,11nm,0.8s,mb4.4						
TOO	Toolangi	34.95	158	eP	P	12 31 06.3	+2.7
TOO				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						

SSE	Sheshan	37.36	348	eP	P	12 31 18.5	-5.4
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,63nm,3.8s						
CHTO	Chiang Mai	38.81	309	eP	P	12 31 36.3	+0.2
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
CHTO	Chiang Mai	38.81	309	eP	P	12 31 36.3	+0.2
	comp=Z,8.3nm,0.9s,mb4.3						
NJ2	Nanjing	38.82	345	eP	P	12 31 30.9	-5.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
MAJO	Matsushiro	42.64	10	eP	P	12 32 06.2	-1.1
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.4						
MAJO	Matsushiro	42.64	10	eP	P	12 32 06.2	-1.2
	comp=Z,15nm,0.9s,mb4.4						
MAT	Matsushiro	42.64	10	P	P	12 32 05.8	-1.5
MAT	Matsushiro	42.64	10	eP	P	12 32 06.0	-1.3
MAT				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.2						
MAT	Matsushiro	42.64	10	eP	P	12 32 06.0	-1.3
	comp=Z,9.2nm,0.9s,mb4.2						
MJAR	Matsushiro Arr	42.64	10	P	P	12 32 06.3	-1.0
	comp=Z,9.0nm,0.7s,mb4.3,baz=186,slow=8.9,SNR=26						
VLA	Vladivostok	48.50	2	⇓eP	P	12 32 52.3	-0.9
VLA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
GTA	Gaotai	52.59	331	eP	P	12 33 26.1	+2.3
GTA				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb3.8						
JIRN	Jiri	53.44	310	eP	P	12 33 30.0	0.0
	comp=Z,16nm,0.4s,mb4.9						
YSS	Yuzh-Sakhalins	53.56	11	eP	P	12 33 30.7	-0.1
YSS				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.3						
YSS	Yuzh-Sakhalins	53.56	11	eP	P	12 33 30.7	-0.1
	comp=Z,4.6nm,0.5s,mb4.3						
GUN	Gumba	53.81	311	eP	P	12 33 32.5	-0.1
	comp=Z,47nm,0.5s,mb5.3						
PKI	Pulchoki	53.99	310	eP	P	12 33 33.6	-0.4
	comp=Z,13nm,0.6s,mb4.7						
PKI	Pulchoki	53.99	310	eP	P	12 33 33.6	-0.4
PKI				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.6						
HABR	Khabarovsk	54.02	4	eP	P	12 33 33.8	-0.4
HABR				eS	S	12 41 03.5	+9.4
KKN	Kakani	54.20	310	eP	P	12 33 34.8	-0.7
	comp=Z,14nm,0.4s,mb4.8						
KLR	Kul'dur	54.60	2	eP	P	12 33 34.2	-4.2
GKN	Gorkha	54.80	310	eP	P	12 33 39.5	-0.3
	comp=Z,36nm,0.4s,mb5.3						
KOLN	Koldanda	55.48	309	eP	P	12 33 44.2	-0.4
ULN	Ulaanbaatar	56.82	342	c iP	P	12 33 53.1	-1.0
SONM	Songino Array	57.00	341	P	P	12 33 55.9	+0.5
	comp=Z,0.8nm,0.6s,mb3.5,baz=165,slow=6.9,SNR=6.7						
CASY	Casey	62.06	189	⇓iP	P	12 34 30.1	+0.1
PET	Petropavlovsk	63.30	19	⇑eP	P	12 34 37.7	-0.4
PET				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.5						
MKAR	Makanchi Array	66.88	327	P	P	12 35 01.6	+0.4
	comp=Z,1.5nm,0.3s,mb4.1,baz=121,slow=8.0,SNR=9.7						
MKAR	Makanchi Array	66.88	327	⇑eP	P	12 35 01.6	+0.5
YAK	Yakutsk	67.40	360	c iP	P	12 35 04.0	-0.4
YAK				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.0						
KRAR	Krasnoyarsk	68.43	339	⇑eP	P	12 35 10.1	-0.7
KRAR				pmax	pmax		
	comp=Z,13nm,0.3s,mb5.0						
AAK	Ala-Archa	69.27	320	⇑eP	P	12 35 16.7	+0.7
ZAL	Zalesovo	70.18	334	P	P	12 35 18.4	-3.2
	comp=Z,1.5nm,0.4s,mb4.0,baz=169,slow=5.4,SNR=3.4						
KURK	Kurchatov	71.16	328	⇑iP	P	12 35 27.8	+0.4
VNDA	Vanda	73.89	173	P	P	12 35 43.7	+0.1
	comp=Z,4.2nm,0.7s,mb4.2,baz=319,slow=6.0,SNR=24						
VNDA	Vanda	73.89	173	eP	P	12 35 43.6	0.0
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VNDA	Vanda	73.89	173	eP	P	12 35 43.6	+0.1
	comp=Z,3.8nm,0.7s,mb4.1						
WSAR	Wadi Sarin	74.99	296	P	P	12 35 50.5	+0.6
	comp=Z,6.4nm,0.8s,mb4.3,baz=88,slow=8.7,SNR=6.0						
WSAR	Wadi Sarin	74.99	296	P	P	12 35 50.5	+0.6
MAW	Mawson	76.17	201	⇓iP	P	12 35 57.0	+0.4
	comp=Z,4.1nm,0.4s,mb4.4						
MAW	Mawson	76.17	201	P	P	12 35 57.1	+0.6
	comp=Z,4.1nm,0.4s,mb4.4,baz=74,slow=5.9,SNR=48						
MAW	Mawson	76.17	201	⇓iP	P	12 35 57.0	+0.4
MAW				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BVAR	Borovoye Array	76.71	328	P	P	12 35 59.5	-0.1
	comp=Z,0.8nm,0.5s,mb3.6,baz=156,slow=7.6,SNR=5.6						
TIXI	Tiksi	77.07	360	⇓eP	P	12 36 00.5	-1.1
TIXI				pmax	pmax		
	comp=Z,43nm,1.7s,mb4.8						
ZRNK	Zerenda	77.41	327	eP	P	12 36 03.3	-0.2
	comp=Z,1.9nm,0.6s,mb3.9						
ZRNK				epP	pP	12 36 48.2	-4.1
AKTK	Aktyubinsk	82.77	322	P	P	12 36 31.6	-0.5
AKTO	Aktyubinsk	82.77	322	P	P	12 36 31.6	-0.5
	comp=Z,1.2nm,0.5s,mb3.9,baz=106,slow=6.0,SNR=5.4						
ARU	Arti	84.35	328	⇑eP	P	12 36 42.0	+1.8
ARU				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
QSPA	South Pole Qui	84.40	180	eP	P	12 36 40.1	-0.4
	comp=Z,4.2nm,0.4s,mb4.5						
SYO	Syowa Base	84.88	201	⇑eP	P	12 36 42.8	-0.1
KIV	Kislovodsk	91.69	314	⇓eP	P	12 37 17.2	+2.1
KIV				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
TORD	Torodi Ar. Bea	128.24	282	PKP	PKPdf	12 43 14.3	+1.3
	comp=Z,0.6nm,0.3s,baz=93,slow=2.1,SNR=12						
PLCA	Paso Flores	130.31	160	PKP	PKPdf	12 43 18.4	+1.5
	comp=Z,3.9nm,1.1s,baz=297,slow=2.3,SNR=2.9						
DBIC	Dimbokro	134.83	274	PKP	PKPdf	12 43 25.5	0.0
	comp=Z,2.6nm,0.5s,baz=202,slow=5.4,SNR=3.7						
LVC	Limon Verde	146.59	148	ePKPbc	PKPbc	12 43 51.0	+2.6
CPUP	Villa Florida	147.56	168	PKPbc	PKPbc	12 43 52.4	+1.3
	comp=Z,3.7nm,0.5s,baz=200,slow=1.9,SNR=13						
CPUP	Villa Florida	147.56	168	ePKPbc	PKPbc	12 43 52.4	+1.3
LPAZ	La Paz	152.01	141	ePKIKP	PKPbc	12 44 04.8	+2.9

*NAO **04** 12:27:43.4±1.8, 6091N×2894E, ML2.4*
*IDC **04** 12:27:44.5±1.7, 6089N×2891E, h0km, mb1 3.3/3, mb1mx3.1/21, mbtmp3.2/3, ML3.3/3, Error ellipse: s-maj=14.9km s-min=10.4km az=156.0*
*BER **04** 12:27:44.0±4.6, 6104N×2901E, h0km, ML2.4(NAO), Suspected explosion*
HEL 04 12:27:43.7±0.3**, 6093N×2901E, h0km, ML1.8, ML2.4**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	FINESS Array S	1.51	291	eP	Pn	12 28 09.9	-2.0
FIA0				eS	Sg	12 28 30.5	-1.7
FIA0	FINESS Array S	1.51	291	Pg	Pg	12 28 09.9	-2.7
	baz=112,slow=18						
FIA0				Lg		12 28 30.7	
	baz=107,slow=37						
FIA0				Rg		12 28 38.2	
	baz=116,slow=37						
FINES	FINESS Array B	1.51	291	Pg	Pg	12 28 09.9	-2.7
	4.5nm,0.3s,baz=114,slow=16,SNR=104						
FINES				Lg		12 28 30.6	
	4.9nm,0.3s,baz=115,slow=32,SNR=20						
FINES				Rg		12 28 37.4	
	37nm,0.8s,baz=107,slow=26,SNR=37						
PVF	Pernaja	1.59	257	eP	Pn	12 28 12.1	-1.0
PVF				eS	Sn	12 28 33.6	-0.8
KAF	Kangasniemi	1.75	314	eP	Pn	12 28 15.0	-0.4
KAF				eS	Sn	12 28 36.8	-1.5
SUF	Sumiainen	2.25	324	eP	Pn	12 28 22.9	+0.7
SUF				MSG		12 28 55.4	
	comp=Z,2.8nm,0.1s						
JOF	Joensuu	2.27	28	eP	Pn	12 28 22.4	-0.1
JOF				eS	Sn	12 28 50.6	-0.5
JOF				MSG		12 28 52.5	
	comp=Z,5.4nm,0.1s						
KEF	Keuruu	2.34	304	eP	Pn	12 28 23.5	+0.1
KEF				MSG		12 28 56.0	
	comp=Z,3.7nm,0.1s						
HFS	Hagfors	7.60	271	eP	Pn	12 29 33.6	-2.0
HFS				eS	Sn	12 30 58.1	-4.3
HFS				eSG		12 31 36.3	
HFS	Hagfors	7.60	271	Pn	Pn	12 29 34.4	-1.3
	comp=Z,0.4nm,0.3s,baz=83,slow=14,SNR=9.6						
HFS				Sn	Sn	12 30 59.6	-2.8
	comp=Z,0.3nm,0.3s,baz=93,slow=26,SNR=5.1						
HFS				Lg		12 31 44.1	
	comp=Z,0.6nm,0.3s,baz=84,slow=30,SNR=5.4						
HFS	Hagfors	7.60	271	Pn	Pn	12 29 33.6	-2.0
	baz=71,slow=12						
HFS				Sn	Sn	12 30 58.1	-4.3
	baz=91,slow=28						
HFS				Lg		12 31 36.3	
	baz=79,slow=37						
NB2	NORSAR Subarra	8.65	278	eP	Pn	12 29 48.2	-1.8
NB2				eSG		12 32 11.0	
NB2	NORSAR Subarra	8.65	278	Pn	Pn	12 29 48.2	-1.8
	baz=88,slow=14						
NB2				Lg		12 32 11.0	
	baz=91,slow=37						
NOA	NORSAR Array B	8.65	278	Pn	Pn	12 29 48.4	-1.7
	comp=Z,0.3nm,0.3s,baz=90,slow=11,SNR=3.1						
ARA0	ARCESS Array S	8.76	352	Pn	Pn	12 29 49.1	-2.5
	baz=162,slow=16						
ARA0				Sn	Sn	12 31 25.7	-5.4
	baz=166,slow=28						
ARA0				Lg		12 32 05.8	
	baz=174,slow=28						
ARA0	ARCESS Array S	8.76	352	eP	Pn	12 29 49.1	-2.5
ARA0				eS	Sn	12 31 25.7	-5.4
ARA0				e		12 32 05.8	
ARCES	ARCESS Array B	8.76	352	Pn	Pn	12 29 50.0	-1.6
	comp=Z,0.5nm,0.3s,baz=172,slow=12,SNR=27						
ARCES				Sn	Sn	12 31 26.9	-4.1
	comp=Z,0.2nm,0.3s,baz=167,slow=24,SNR=3.3						
ARCES				Lg		12 32 14.6	
	comp=Z,0.5nm,0.3s,baz=169,slow=27,SNR=6.1						

*CSEM **04** 12:33:53.8, 3463N×26.19E, h5km, MD3.4/4, After ATH*
ATH 04 12:33:53.8, 3463N×2619E, h5km, MD3.5/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.48	301	ePB	Pg	12 34 02.5	-0.5
KARP	Karpathos	1.21	41	ePB	Pb	12 34 17.0	-0.2
VAM	Vamos	1.81	296	ePN	Pn	12 34 29.0	+3.4
APE	Apeiranthos	2.49	348	ePN	Pn	12 34 39.0	+4.0

CSEM 04 12:34:47.5±0.4**, 4260N×292W, h0km, mb3.5**/1**, Error ellipse: s-maj=4.7km s-min=3.3km az=2.0, After MDD, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELAN	Lanestosa	0.74	329	Pg	Pg	12 35 01.3	-0.4
	7.3nm,0.3s,SNR=6.7						
ELAN				Lg		12 35 11.3	
	16nm,0.2s,SNR=5.4						
EARA	Aranguren	1.00	79	Pg	Pg	12 35 06.3	-0.4
	SNR=7.9						
EARA				Lg		12 35 19.4	
	18nm,0.3s,SNR=7.9						
IUNC	Unciti	1.06	81	Pg	Pg	12 35 06.8	-1.0
	SNR=7.9						
IUNC				Lg		12 35 21.5	
	13nm,0.2s,SNR=7.9						
IUSE	Utxeti	1.07	70	Pg	Pg	12 35 07.1	-0.9
	SNR=7.9						
IUSE				Lg		12 35 21.6	
	3.6nm,0.3s,SNR=7.9						
ELIZ	Elizondo	1.17	60	Pg	Pg	12 35 08.7	-1.2
	12nm,0.3s,SNR=8.1						
ELIZ				Lg		12 35 24.5	
	9.6nm,0.4s,SNR=5.0						
IPRE	Itoiz	1.17	79	Pg	Pg	12 35 09.5	-0.4
	SNR=7.9						
IPRE				Lg		12 35 24.6	
	4.2nm,0.3s,SNR=7.9						
EALK	Alkurruntz	1.21	58	Pg	Pg	12 35 09.9	-0.8
	24nm,0.3s,SNR=30						
EALK				Lg		12 35 26.0	
	85nm,0.3s,SNR=5.0						
EARI	Arriondas	1.82	293	Pg	Pg	12 35 20.1	-2.4
	4.8nm,0.6s,SNR=17						
EARI				Lg		12 35 45.9	
	3.0nm,0.3s,SNR=5.6						
GUD	Guadarrama	2.16	206	Pn	Pn	12 35 23.3	-1.4
	SNR=7.9						
GUD	Guadarrama	2.16	206	Pg	Pg	12 35 26.8	-2.1
	1.6nm,0.3s,SNR=5.4						
GUD				Lg		12 35 56.1	
	4.9nm,0.4s,SNR=6.5						
EBIE	Bielsa	2.26	87	Pn	Pn	12 35 24.7	-1.4
	SNR=7.9						
EBIE	Bielsa	2.26	87	Pg	Pg	12 35 27.7	-3.1
	SNR=7.9						
EBIE				Sn	Sn	12 35 53.9	-0.8
	SNR=7.9						
EBIE				Lg		12 35 57.7	
	3.1nm,0.4s,SNR=6.8						
EMOS	Mosqueruela	2.89	140	Pn	Pn	12 35 35.0	+0.2
	SNR=7.9						
EMOS	Mosqueruela	2.89	140	Pg	Pg	12 35 40.2	-2.7
	SNR=7.9						
EMOS				Lg		12 36 20.4	
	2.0nm,0.4s,SNR=7.9						
ECAL	Calabor	2.91	258	Pn	Pn	12 35 34.2	-0.8
	12nm,1.1s,SNR=5.9						
ECAL	Calabor	2.91	258	Pg	Pg	12 35 41.9	-1.4
	5.2nm,0.4s,SNR=5.0						
ECAL				Lg		12 36 20.3	
	4.5nm,0.3s,SNR=4.7						
ERTA	Horta de San J	2.93	123	Pg	Pg	12 35 41.8	-1.9
	SNR=7.9						
ERTA				Lg		12 36 19.8	
	3.4nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	3.02	195	Pg	Pg	12 35 43.0	-2.5
	0.2nm,0.3s,slow=18,SNR=5.1						
ESDC				Lg		12 36 22.6	
	2.6nm,0.3s,SNR=5.7						
EPON	Pontenova	3.19	285	Lg		12 36 28.2	
	1.7nm,0.3s,SNR=7.9						
EPOB	Poblet	3.23	111	Pn	Pn	12 35 37.0	-2.4
	SNR=7.9						
EPOB	Poblet	3.23	111	Pg	Pg	12 35 46.5	-2.9
	SNR=7.9						
EPOB				Sn	Sn	12 36 14.9	-3.7
	SNR=7.9						
EPOB				Lg		12 36 30.2	
	1.8nm,0.2s,SNR=7.9						
ELOB	Lobios	3.89	261	Lg		12 36 51.6	
	1.5nm,0.3s,SNR=7.9						

MAN 04 13:24:12.3, 1807N×12046E, h10km, mb2.7, ML4.2, MS1.3, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.30	31	⇓iP	Pg	13 24 19.1	+0.8
PIP				eS	Sg	13 24 25.5	+3.1
ABRA	Dolores	0.48	150	eP	Pg	13 24 23.0	+1.3
ABRA				eS	Sg	13 24 30.6	+2.6
APYP	Conner	0.78	105	eP	Pg	13 24 27.1	-0.1
APYP				eS	Sg	13 24 40.1	+2.7
CVP	Callao Caves	1.35	105	⇓eP	Pn	13 24 36.0	-1.2
CVP				eS	Sb	13 24 56.0	+1.0
BCPH	Baguio City Da	1.68	176	⇑iP	Pn	13 24 40.3	-1.4
BCPH				i S	Sn	13 25 02.4	-0.9
CAUP	Cauayan	1.71	130	eP	Pn	13 24 43.1	+0.9
PALP	Palanan	2.12	118	eP	Pn	13 24 48.5	+0.6
BALP	Baler	2.55	155	eP	Pn	13 24 54.2	+0.6

*IDC **04** 13:40:44.9±0.8, 978S×15893E, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.1/13, mbtmp4.0/7, MS3.5/1, Ms1 3.5/1, ms1mx2.9/19, Error ellipse: s-maj=28.6km s-min=9.9km az=157.0*
*ISCJB **04** 13:40:48.2±0.7, 99S±02×1589E±01, h33km, mb3.9/7, Error ellipse: s-maj=26.4km s-min=12.9km az=118.8*
*NEIC **04** 13:40:50.1±0.7, 978S×15898E, h40km, mb4.1/1, Error ellipse: s-maj=27.8km s-min=13.9km az=149.0*
ISC 04 13:40:49.8±0.7**, 98S**±02×**1590E**±01**, h35km, n16, σ0.96**/13**, mb3.9**/7**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.01	67	Pg	Pn	13 41 06.4	-1.1
	119nm,0.3s,baz=250,slow=2.9,SNR=104						
HNR				Lg		13 41 18.8	
	1μm,0.3s,baz=244,slow=4.7,SNR=54						
DZM	Mont Dzumac	14.12	150	LR	LR	13 48 54.0	
	comp=Z,158nm,18.1s,baz=3.5,slow=34						
WRAB	Tennant Creek	25.82	244	eP	P	13 46 16.9	-0.8
WB2	Warramunga Arr	25.82	244	eP	P	13 46 17.7	0.0
WRA	Warramunga Arr	25.84	244	P	P	13 46 17.9	0.0
	1.3nm,0.4s,mb3.8,baz=70,slow=9.6,SNR=33						
STKA	Stephens Creek	27.23	214	eP	P	13 46 31.6	+1.2
	2.1nm,0.4s,mb4.0						
STKA	Stephens Creek	27.23	214	P	P	13 46 30.4	0.0
	2.8nm,0.4s,mb4.1,baz=8.6,slow=7.3,SNR=8.7						
AS31	Alice Springs	27.63	237	eP	P	13 46 31.9	-2.0
ASAR	Alice Springs	27.63	237	P	P	13 46 33.5	-0.5
	0.7nm,0.6s,mb3.5,baz=63,slow=9.9,SNR=14						
VNDA	Vanda	67.69	179	P	P	13 51 44.4	+0.9
	1.6nm,0.8s,mb4.1,baz=333,slow=6.2,SNR=7.3						
SONM	Songino Array	73.86	326	P	P	13 52 22.1	+1.2
	0.5nm,0.5s,mb3.7,baz=139,slow=6.5,SNR=6.0						
MAW	Mawson	83.33	203	P	P	13 53 14.2	+1.2
	2.0nm,0.9s,mb4.1,baz=80,slow=5.3,SNR=4.1						
MKAR	Makanchi Array	88.14	318	P	P	13 53 37.2	+0.3
	0.4nm,0.6s,mb3.8,baz=98,slow=5.0,SNR=5.1						
MKAR	Makanchi Array	88.14	318	P	P	13 53 37.2	+0.3
NOA	NORSAR Array B	123.63	342	PKP	PKPdf	13 59 42.9	-0.6
	0.8nm,0.8s,baz=41,slow=1.7,SNR=4.7						
NOA	NORSAR Array B	123.63	342	PKP	PKPdf	13 59 42.9	-0.7

*IDC **04** 13:41:37.3±0.4, 1001N×7067W, h0km, mb4.7/22, mb1 4.8/26, mb1mx4.8/28, mbtmp4.7/26, ML4.2/3, MS4.4/19, Ms1 4.3/19, ms1mx4.3/25, Error ellipse: s-maj=13.6km s-min=8.0km az=89.0*
*MOS **04** 13:41:37.6±0.9, 1003N×7068W, h10km, mb5.3/82, Error ellipse: s-maj=6.2km s-min=4.8km az=72.8*
*ISCJB **04** 13:41:38.7±0.1, 1004N±002×7067W±001, h16km, mb5.0/155, MS4.4/64, Error ellipse: s-maj=3.2km s-min=2.0km az=33.2*
*BJI **04** 13:41:39.8, 1000N×7060W, h14km, mB5.2, Ms5.4, Msz5.0*
*NEIC **04** 13:41:39.8±0.6, 997N×7065W, h15km±3km, mb5.2/121, MW5.5(CAR), Error ellipse: s-maj=3.0km s-min=2.2km az=205.0*
NEIC Felt [IV] at Maracaibo, [III] at Merida and [II] at Caracas. Felt at Barquisimeto, Chacao and Valera.
*HRVD **04** 13:41:39.8±0.2, 1007N×7057W, h25km±1km, MW5.2/78, Centroid moment Tensor Solution. LP body waves: s52,c77;Mantle waves: s78,c147; Half duration: 1.0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.38±.22; $M_{\theta\theta}$1.47±.18; $M_{\phi\phi}$-1.85±.24; $M_{r\theta}$0.19±.39; $M_{\theta\phi}$-8.63±.17; $M_{\phi r}$-2.52±.50; Best double couple: $M_0$9.14500×10^{16} NP1:ϕ_s85.00000°, δ74.00000°, λ179.00000°. NP2:ϕ_s175.00000°, δ89.00000°, λ16.00000°. Principal axes: T 8.9620, Plg12.0000°, Azm41.0000°; N 0.3660, Plg74.0000°, Azm177.0000°; P -9.3270, Plg11.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*FUNV **04** 13:41:40.8, 1000N×7064W, h9km, MW5.5*
*SZGRF **04** 13:41:41.7, 999N×7095W, h18km, mb5.1, MS4.4, Venezuela*
ISC 04 13:41:40.7±0.1**, 1001N**±002×**7062W**±001**, h17km, h17km**±1.0km**:pP-P, n690, σ0.76**/679**, mb5.0**/155**, MS4.4**/64**, 125C-101D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QARV	Quebrada Arrib	0.22	27	⇑iP	Pg	13 41 45.4	-0.4
QARV				eS	Sg	13 41 50.2	+1.0
QARV	Quebrada Arrib	0.22	27	⇑iP	Pg	13 41 45.4	-0.3
QARV				eS	Sg	13 41 50.2	+1.0
CURV	Curarigua	0.65	90	eP	Pg	13 41 53.1	-0.5
CURV				eS	Sg	13 42 01.8	-0.5
CURV	Curarigua	0.65	90	⇓eP	Pg	13 41 53.1	-0.4
CURV				eS	Sg	13 42 01.8	-0.5
DABV	Dabajuro	0.90	359	⇑eP	Pb	13 41 58.4	+0.5
DABV				eS	Sb	13 42 10.6	+0.9
DABV	Dabajuro	0.90	359	⇑eP	Pb	13 41 58.4	+0.5
DABV				eS	Sb	13 42 11.3	+1.6
SIQV	Siquisique	1.02	52	⇑eP	Pb	13 41 59.8	-0.1
SIQV				eS	Sb	13 42 14.9	+1.8
SIQV	Siquisique	1.02	52	⇑eP	Pb	13 41 59.8	-0.2
SIQV				eS	Sb	13 42 14.9	+1.8
SDV	Santo Domingo	1.12	181	Pg	Pb	13 42 00.2	-1.4
SDV				Lg		13 42 14.5	
SDV	Santo Domingo	1.12	181	eP	Pb	13 41 58.7	-2.9
SANV	Sanarito	1.19	115	⇓iP	Pn	13 42 03.1	+0.6
SANV				eS	Sb	13 42 18.3	+0.5
SANV	Sanarito	1.19	115	⇓iP	Pn	13 42 03.1	+0.6
SANV				eS	Sb	13 42 18.3	+0.5
VIGV	El Vigia	1.38	212	⇑iP	Pn	13 42 05.2	0.0
VIGV				eS	Sn	13 42 23.9	+0.9
VIGV	El Vigia	1.38	212	⇑iP	Pn	13 42 05.2	+0.1
VIGV				eS	Sn	13 42 23.9	+0.9
TEPV	Terepaima	1.41	92	⇑iP	Pn	13 42 07.0	+1.4
TEPV				eS	Sn	13 42 25.2	+1.5
SOCV	Socops	1.73	188	⇑iP	Pn	13 42 10.7	+0.7
SOCV				eS	Sn	13 42 33.5	+1.7
SOCV	Socops	1.73	188	⇑iP	Pn	13 42 10.8	+0.7
SOCV				eS	Sn	13 42 33.5	+1.7
VIRV	Villa del Rosa	1.82	286	⇓iP	Pn	13 42 10.0	-1.2
VIRV				eS	Sn	13 42 35.3	+1.4
VIRV	Villa del Rosa	1.82	286	eP	Pn	13 42 10.2	-1.0
MONV	Montecano	2.03	18	⇑iP	Pn	13 42 13.9	-0.2
MONV	Montecano	2.03	18	⇑iP	Pn	13 42 14.0	-0.1
JACV	Jacura	2.06	59	⇑iP	Pn	13 42 15.4	+0.8
JACV	Jacura	2.06	59	⇑iP	Pn	13 42 15.4	+0.9
IMOV	Isla Los Monje	2.35	353	eP	Pn	13 42 18.1	-0.4
CAPV	Capacho	2.71	218	⇑eP	Pn	13 42 23.0	-0.4
CAPV	Capacho	2.71	218	eP	Pn	13 42 23.9	+0.4
BAUV	El Baul	2.76	112	⇓iP	Pn	13 42 25.3	+1.1
BAUV				eS	Sn	13 42 56.8	-0.2
BAUV	El Baul	2.76	112	eP	Pn	13 42 26.2	+2.0
TURV	Turiamo	2.77	81	⇑iP	Pn	13 42 24.2	-0.1
TURV	Turiamo	2.77	81	⇑iP	Pn	13 42 24.1	-0.2
ELOV	Elorza	3.20	159	⇓iP	Pn	13 42 30.4	+0.2
ELOV	Elorza	3.20	159	⇓iP	Pn	13 42 30.4	+0.3
BIRV	Birongo	4.31	83	⇑eP	Pn	13 42 45.5	0.0
MERV	Las Mercedes	4.33	100	⇑iP	Pn	13 42 46.9	+1.2
MERV	Las Mercedes	4.33	100	⇑eP	Pn	13 42 47.1	+1.4
ORCV	Isla La Orchil	4.70	67	⇑iP	Pn	13 42 49.1	-1.8
ORCV	Isla La Orchil	4.70	67	⇑iP	Pn	13 42 49.4	-1.5
CUPV	Cœpira	4.76	89	⇑iP	Pn	13 42 52.8	+1.1
CUPV	Cœpira	4.76	89	⇑iP	Pn	13 42 52.8	+1.1
CAOV	Caicara del Or	5.02	122	⇓iP	Pn	13 42 53.9	-1.4
PCRV	Puerto La Cruz	5.90	88	Pn	Pn	13 43 08.1	+0.8
	26nm,0.3s,baz=247,slow=4.9,SNR=94						
PCRV				Lg		13 44 49.1	
	113nm,0.3s,baz=262,slow=18,SNR=3.2						
PCRV	Puerto La Cruz	5.90	88	⇑iP	Pn	13 43 08.0	+0.7
PCRV	Puerto La Cruz	5.90	88	⇑iP	Pn	13 43 08.4	+1.1
PRGV	PARIAGUAN	6.03	101	eP	Pn	13 43 09.4	+0.4
IBAV	Isla La Blanqu	6.20	73	⇑iP	Pn	13 43 09.3	-2.1
IBAV	Isla La Blanqu	6.20	73	⇑iP	Pn	13 43 09.5	-2.0
ROSC	El Rosal	6.30	216	Pn	Pn	13 43 13.7	+0.8
	25nm,0.3s,baz=76,slow=6.2,SNR=117						
ROSC				Sn	Sn	13 44 25.1	+0.6
	101nm,0.3s,baz=82,slow=20,SNR=4.2						
ROSC				LR	LR	13 45 50.6	
	comp=Z,6μm,21.3s,baz=9.4,slow=40						
ROSC	El Rosal	6.30	216	eP	Pn	13 43 13.9	+1.0
ORIV	Oritupano	7.18	97	⇑iP	Pn	13 43 24.2	-0.6
ORIV	Oritupano	7.18	97	⇑iP	Pn	13 43 24.2	-0.6
ITEV	Isla Los Testi	7.48	79	eP	Pn	13 43 27.1	-1.9
GUNV	Guanoco	7.56	88	⇑eP	Pn	13 43 30.4	+0.3
GUNV	Guanoco	7.56	88	⇑eP	Pn	13 43 30.7	+0.5
GURV	El Guri	7.78	106	eP	Pn	13 43 33.0	-0.1
GRSS	Sisters	9.13	75	eP	Pn	13 43 51.9	+0.3
SJG	San Juan	9.14	28	Pn	Pn	13 43 49.4	-2.5
	38nm,0.3s,baz=210,slow=10,SNR=58						
SJG				Sn	Sn	13 45 29.7	-4.6
	24nm,0.3s,baz=1.5,slow=17,SNR=6.2						
SJG				LR	LR	13 47 34.7	
	comp=Z,3μm,20.7s,baz=270,slow=39						
SJG	San Juan	9.14	28	eP	Pn	13 43 48.8	-3.0

SJG pmax pmax
comp=Z,181nm,0.6s
SJG San Juan 9.14 28 eP **Pn 13 43 48.8 -3.0**
comp=Z,181nm,0.6s
GRIC Isle de Caille 9.15 75 eP **Pn 13 43 52.1 +0.2**
GRCU Cariacou 9.32 74 eP **Pn 13 43 53.3 -1.0**
FCV Fort Charlotte 9.70 70 eP **Pn 13 43 58.3 -1.2**
SVB Belmont 9.73 70 eP **Pn 13 43 58.5 -1.4**
SSV Crater Summit 9.80 69 eP **Pn 13 43 59.4 -1.5**
CMJ Castle Mountai 9.81 326⇑ eP **Pn 13 44 01.1 +0.1**
GWJ Greenwich 9.96 324⇑ eP **Pn 13 44 02.4 -0.7**
LUEV Luepa 9.97 114⇑ eP **Pn 13 44 01.4 -1.9**
LUEV Luepa 9.97 114 eP **Pn 13 44 01.4 -1.8**
STH Stony Hill 10.01 324⇑ eP **Pn 13 44 03.7 -0.1**
STH eS **Sn 13 45 46.0 -10**
BIM Bigot 10.35 63⇓ eP **Pn 13 44 05.3 -3.1**
FDF Fort de France 10.37 62⇓ eP **Pn 13 44 05.7 -3.0**
BBJ Bamboo Saint A 10.52 323⇑ eP **Pn 13 44 10.2 -0.5**
MASC Masc 10.69 341 eP **Pn 13 44 14.7 +1.8**
MASC eS **Sn 13 46 06.6 -5.6**
MASC e
MOAC Moa 11.38 339 eP **Pn 13 44 25.6 +3.1**
MOAC eS **Sn 13 46 23.9 -5.3**
MOAC e
CPB Codrington 11.42 47 eP **Pn 13 44 19.9 -3.1**
HLGC Holguin 12.01 335 eP **Pn 13 44 38.4 +7.3**
OTAV Otavalo 12.45 219 eP **Pn 13 44 34.2 -2.8**
comp=Z,112nm,1.1s
OTAV e 13 44 39.6
MGV Manicaragua 15.01 324 eP **Pn 13 45 10.6 -1.4**
ATAH Atahualpa 18.59 205 P **Pn 13 45 57.9 +0.6**
comp=Z,1.6nm,0.3s,baz=14,slow=6.6,SNR=14
ATAH LR LR 13 54 05.6
comp=Z,2µm,20.0s,baz=201,slow=40
SAML Samuel 20.24 158 eP **P 13 46 14.2 -0.8**
comp=Z,4.1nm,0.5s
DWPF Disney 20.68 332 eP **P 13 46 18.7 -1.0**
comp=Z,147nm,1.3s
NNA Nana 22.71 196 P **P 13 46 39.6 -1.9**
comp=Z,26nm,0.8s,mb4.7,baz=5.0,slow=7.8,SNR=9.6
NNA LR LR 13 56 36.2
comp=Z,3µm,19.9s,MS4.7,baz=13,slow=40
NNA Nana 22.71 196 eP **P 13 46 38.2 -3.4**
comp=Z,70nm,0.8s,mb5.1
NNA e 13 46 43.6
BBSR BB Station 22.91 13 eP **P 13 46 44.4 +0.7**
comp=Z,82nm,1.4s,mb5.0
CMIG Matias Romero 24.59 289 P **P 13 46 55.8 -4.1**
comp=Z,17nm,0.8s,mb4.6,baz=94,slow=7.8,SNR=15
LPAZ La Paz 26.25 175 eP **P 13 47 14.4 -0.5**
LPAZ pmax pmax
comp=Z,100nm,0.5s
LPAZ La Paz 26.25 175 eP **P 13 47 14.4 -0.5**
comp=Z,0.6nm,0.5s
ARE Arequipa 26.32 182 eP **P 13 47 18.0 +2.5**
SIV San Ignacio 27.51 160 P **P 13 47 25.7 -0.5**
comp=Z,4.7nm,0.7s,mb4.2,baz=11,slow=10,SNR=27
MYNC Murphy 27.83 336 eP **P 13 47 29.7 +0.6**
MYNC pmax pmax
comp=Z,29nm,1.0s,mb4.9
MYNC Murphy 27.83 336 eP **P 13 47 29.7 +0.6**
comp=Z,29nm,1.0s,mb4.9
CPCT Cooper Cave 28.31 336 eP **P 13 47 33.7 +0.3**
BLA Blacksburg 28.49 343 eP **P 13 47 35.6 +0.6**
BLA pmax pmax
comp=Z,20nm,1.0s,mb4.7
BLA MLR MLR
comp=Z,370nm,19.0s,MS4.0
BLA Blacksburg 28.49 343 eP **P 13 47 35.6 +0.7**
comp=Z,2.1nm,1.0s
BLA LR LR
comp=Z,37nm,19.0s
ELN Prospectdale 28.60 343 eP **P 13 47 36.8 +0.8**
SWET Sewanee 28.71 333 eP **P 13 47 37.6 +0.7**
CBN Corbin 28.72 349 PFAKE 13 47 50.0 +13
CBN LR LR
comp=Z,919nm,20.0s,MS4.4
TZTN Tazewell 28.89 338 eP **P 13 47 38.9 +0.4**
FWV Forest Hill 28.94 343 P **P 13 47 39.9 +0.8**
PLAL Pickwick Lake 29.52 330 eP **P 13 47 43.5 -0.7**
comp=Z,35nm,1.1s,mb5.0
WVT Waverly 30.33 332 eP **P 13 47 51.0 -0.3**
WVT pmax pmax
comp=Z,15nm,0.6s,mb4.9
WVT MLR MLR
comp=Z,362nm,19.0s,MS4.0
WVT Waverly 30.33 332 eP **P 13 47 51.0 -0.3**
comp=Z,15nm,0.6s,mb4.9
WVT LR LR
comp=Z,362nm,19.0s,MS4.0
HKT Hockley 30.77 314 eP **P 13 47 55.2 0.0**
HKT pmax pmax
comp=Z,35nm,1.1s,mb5.1
HKT MLR MLR
comp=Z,561nm,22.0s,MS4.2
HKT Hockley 30.77 314 eP **P 13 47 55.2 0.0**
comp=Z,36nm,1.1s,mb5.1
HKT LR LR
comp=Z,561nm,22.0s,MS4.2
NATX Nacogdoches 31.05 318 eP **P 13 47 57.8 +0.1**
comp=Z,170nm,1.2s,mb5.8
SSPA Standing Stone 31.17 349 eP **P 13 47 58.6 -0.1**
comp=Z,62nm,1.8s,mb5.1
WCI Wyandotte Cave 31.42 336 eP **P 13 48 00.6 -0.4**
WCI pmax pmax
comp=Z,19nm,0.8s,mb5.0
WCI Wyandotte Cave 31.42 336 eP **P 13 48 00.6 -0.4**
comp=Z,19nm,0.8s,mb5.0
UALR University of 31.64 325 eP **P 13 48 02.6 -0.3**
comp=Z,9.1nm,0.5s,mb4.9
ACSO Alum Creek Sta 32.03 342 eP **P 13 48 06.2 -0.2**
comp=Z,30nm,1.1s,mb5.0
ACSO LR LR
comp=Z,277nm,20.0s,MS3.9
MIAR Mount Ida 32.20 323 eP **P 13 48 07.5 -0.3**
MIAR pmax pmax
comp=Z,41nm,1.0s,mb5.2
MIAR Mount Ida 32.20 323 eP **P 13 48 07.5 -0.3**
comp=Z,42nm,1.0s,mb5.2
BINY Binghamton 32.40 353 PFAKE 13 48 20.0 +10
BINY LR LR
comp=Z,695nm,20.0s,MS4.3
LVC Limon Verde 32.47 177 eP **P 13 48 08.2 -1.9**
comp=Z,38nm,0.6s,mb5.4
LVC LR LR
comp=Z,2µm,20.0s,MS4.7
ERPA Erie 33.02 347 PFAKE 13 48 30.0 +15
ERPA LR LR
comp=Z,540nm,20.0s,MS4.2
FVM French Village 33.05 331 eP **P 13 48 15.0 -0.3**
FVM pmax pmax
comp=Z,91nm,1.1s,mb5.6
FVM French Village 33.05 331 eP **P 13 48 15.0 -0.2**
comp=Z,91nm,1.1s,mb5.6
ACCN Adirondack Com 33.35 356 eP **P 13 48 16.9 -0.9**
CCM Cathedral Cave 33.51 330 eP **P 13 48 17.5 -1.8**
CCM pmax pmax
comp=Z,45nm,1.0s,mb5.3
CCM MLR MLR
comp=Z,585nm,19.0s,MS4.3
CCM Cathedral Cave 33.51 330 eP **P 13 48 17.5 -1.7**
comp=Z,45nm,1.0s,mb5.3
CCM LR LR
comp=Z,585nm,19.0s,MS4.3
BDFB Brasilia 33.93 138 P **P 13 48 23.4 +0.5**
comp=Z,10nm,0.8s,mb4.8,baz=340,slow=12,SNR=5.2
JCT Junction City 33.94 311 eP **P 13 48 22.4 -0.6**
JCT pmax pmax
comp=Z,43nm,1.0s,mb5.3
JCT Junction City 33.94 311 eP **P 13 48 22.4 -0.6**
comp=Z,43nm,1.0s,mb5.3
LBNH Lisbon 34.12 358 eP **P 13 48 24.6 +0.1**
LBNH pmax pmax
comp=Z,23nm,1.3s,mb5.0
LBNH Lisbon 34.12 358 eP **P 13 48 24.6 +0.1**
comp=Z,23nm,1.3s,mb5.0
AAM Ann Arbor 34.13 343 PFAKE 13 48 40.0 +15
AAM LR LR
comp=Z,575nm,21.0s,MS4.3
FRNY Flat Rock 34.79 356 eP **P 13 48 30.4 +0.1**
PKME Peaks-Kenny Pk 35.14 2 eP **P 13 48 33.8 +0.4**
SADO Sadowa 35.40 350 P **P 13 48 34.7 -0.9**
comp=Z,11nm,0.5s,mb5.0,baz=189,slow=8.3,SNR=8.7
SADO Sadowa 35.40 350 P **P 13 48 34.7 -0.9**
WMOK Wichita Mounta 35.59 318 eP **P 13 48 35.8 -1.5**
WMOK pmax pmax
comp=Z,64nm,1.1s,mb5.5
WMOK Wichita Mounta 35.59 318 eP **P 13 48 35.8 -1.4**
comp=Z,64nm,1.1s,mb5.5
JFWS Jewell Farm 36.99 336 eP **P 13 48 48.3 -0.9**
JFWS pmax pmax
comp=Z,38nm,0.9s,mb5.2
JFWS Jewell Farm 36.99 336 eP **P 13 48 48.3 -0.9**
comp=Z,38nm,0.9s,mb5.2
KSU1 Kansas State U 37.12 326 eP **P 13 48 49.2 -1.0**
AMTX Amarillo 37.62 316 eP **P 13 48 54.1 -0.5**
comp=Z,126nm,1.2s,mb5.5
AMTX LR LR
comp=Z,495nm,21.0s,MS4.3
RCBR Riachuelo 38.00 113 P **P 13 48 59.0 +1.2**
comp=Z,47nm,0.9s,mb5.2
CPUP Villa Florida 38.37 161 P **P 13 49 00.8 0.0**
comp=Z,1.5nm,0.4s,mb4.1,baz=326,slow=8.7,SNR=8.2
CPUP Villa Florida 38.37 161 eP **P 13 49 00.2 -0.6**
CPUP pmax pmax
comp=Z,25nm,0.7s
CPUP MLR MLR
comp=Z,251nm,19.0s
CPUP Villa Florida 38.37 161 eP **P 13 49 00.2 -0.6**
comp=Z,25nm,0.7s,mb5.0
CPUP LR LR
comp=Z,251nm,19.0s,MS4.0
LPM Los Pinos Moun 40.85 312 eP **P 13 49 21.9 +0.4**
ANMO Albuquerque 41.02 313 P **P 13 49 23.6 +0.6**
comp=Z,14nm,1.0s,mb4.5,baz=136,slow=10.0,SNR=38
ANMO Albuquerque 41.02 313 eP **P 13 49 23.5 +0.5**
ANMO pmax pmax
comp=Z,40nm,1.4s
ANMO MLR MLR
comp=Z,396nm,20.0s
ANMO Albuquerque 41.02 313 eP **P 13 49 23.4 +0.5**
comp=Z,40nm,1.4s,mb4.8
ANMO LR LR
comp=Z,396nm,20.0s,MS4.3
LENM Lemitar 41.03 312 eP **P 13 49 23.5 +0.5**
LAZ Ladron 41.26 312 eP **P 13 49 25.6 +0.6**
CAM4 Nova Friburgo 42.33 140 (P) **P 13 49 41.8 +8.1**
ISCO Idaho Springs 42.96 320 eP **P 13 49 39.0 +0.2**
ISCO pmax pmax
comp=Z,53nm,1.8s,mb5.0
ISCO Idaho Springs 42.96 320 eP **P 13 49 39.0 +0.2**
comp=Z,53nm,1.8s,mb5.0
TUC Tucson 43.17 307 eP **P 13 49 40.7 +0.2**
TUC pmax pmax
comp=Z,41nm,1.5s,mb4.9
TUC MLR MLR
comp=Z,391nm,19.0s,MS4.3
TUC Tucson 43.17 307 eP **P 13 49 40.7 +0.2**
comp=Z,41nm,1.5s,mb4.9
TUC LR LR
comp=Z,391nm,19.0s,MS4.3
SMCO Snowmass 43.51 318 eP **P 13 49 43.8 +0.6**
comp=Z,45nm,1.1s,mb5.1
MVCO Mesa Verde 43.55 315 eP **P 13 49 44.0 +0.4**
PHWY Pilot Hill 43.72 321 eP **P 13 49 44.4 -0.6**
116A Eloy 43.99 307 ⇑P **P 13 49 46.9 -0.2**
baz=44,SNR=7.0
PV01 Paradox Valley 44.05 316 eP **P 13 49 48.6 +1.0**
115A Sonoran Desert 44.45 307 ⇑P **P 13 49 50.9 +0.1**
baz=44
PV10 Paradox Valley 44.49 316 eP **P 13 49 51.8 +0.7**
RSSD Black Hills 44.60 326 eP **P 13 49 50.9 -1.1**
RSSD pmax pmax
comp=Z,16nm,1.2s,mb4.7
RSSD MLR MLR
comp=Z,755nm,19.0s,MS4.6
RSSD Black Hills 44.60 326 eP **P 13 49 50.9 -1.1**
comp=Z,16nm,1.2s,mb4.7
RSSD LR LR
comp=Z,755nm,19.0s,MS4.6
SCHQ Schefferville 44.80 3 P **P 13 49 53.2 -0.4**
comp=Z,4.3nm,0.5s,mb4.5,baz=180,slow=6.3,SNR=18
SCHQ LR LR 14 09 15.1
comp=Z,242nm,18.8s,MS4.2,baz=321,slow=37
SCHQ Schefferville 44.80 3 eP **P 13 49 53.5 -0.1**
comp=Z,22nm,0.9s,mb5.0
WUAZ Wupatki 44.88 311 eP **P 13 49 55.0 +0.8**
comp=Z,47nm,1.0s,mb5.3
RWWY Rawlins 45.02 321 eP **P 13 49 55.4 +0.1**
comp=Z,42nm,1.2s,mb5.2
X15A Humboldt 45.12 309 P **P 13 49 56.9 +0.8**
baz=45,SNR=13
ULM Lac du Bonnet 45.22 337 P **P 13 49 55.5 -1.4**
comp=Z,16nm,0.9s,mb4.9,baz=145,slow=8.0,SNR=22
ULM LR LR 14 09 48.7
comp=Z,591nm,20.6s,MS4.5,baz=323,slow=37
ULM Lac du Bonnet 45.22 337 eP **P 13 49 54.8 -2.1**
comp=Z,19nm,0.8s,mb5.0
Z14A Wintersburg 45.25 307 ⇑P **P 13 49 57.4 +0.3**
baz=45,SNR=13
W15A Williams 45.41 310 ⇑P **P 13 49 59.5 +1.1**
baz=45,SNR=8.8
Y14A Wickenburg 45.50 308 ⇓P **P 13 49 59.3 +0.1**
baz=46,SNR=18
X14A Yava 45.61 309 ⇑P **P 13 50 00.6 +0.6**
baz=46,SNR=14
SRU San Rafael 45.86 316 eP **P 13 50 02.2 +0.2**
SRU pmax pmax
comp=Z,35nm,1.0s,mb5.2
SRU San Rafael 45.86 316 eP **P 13 50 02.2 +0.2**
comp=Z,35nm,1.0s,mb5.2
W14A Seligman 46.04 310 ⇓P **P 13 50 04.2 +0.8**
baz=46,SNR=25
Y13A Salome 46.10 308 ⇑P **P 13 50 04.1 +0.2**
baz=46,SNR=5.9
X13A Yucca 46.38 309 ⇓P **P 13 50 06.1 +0.1**
baz=46,SNR=12
TMUT Trail Mountain 46.42 316 eP **P 13 50 06.1 -0.2**
PDMCI Parker Dam,Lak 46.51 308 ⇑P **P 13 50 06.9 -0.2**
baz=46,SNR=5.5
W13A Hualapai Mount 46.60 309 ⇓P **P 13 50 08.6 +0.8**
baz=47,SNR=17
Y12C Blythe 46.62 307 ⇓P **P 13 50 08.1 +0.2**
baz=47
GLA Glamis 46.62 306 ⇓P **P 13 50 08.1 +0.1**
baz=47,SNR=8.8
MSU Marysvale 46.74 314 eP **P 13 50 09.6 +0.7**
DAU Daniels Canyon 46.98 317 eP **P 13 50 11.4 +0.7**
MPU Maple Canyon 47.04 316 eP **P 13 50 12.1 +0.9**
comp=Z,104nm,1.5s,mb5.5
BW06 Boulder Array 47.07 321 PFAKE 13 50 20.0 +8.5
BW06 LR LR
comp=Z,510nm,19.0s,MS4.5
PDAR Pinedale Array 47.07 321 P **P 13 50 11.2 -0.3**
comp=Z,18nm,1.0s,mb5.0,baz=120,slow=8.8,SNR=92
CCUT Cedar City 47.17 313 eP **P 13 50 12.7 +0.5**
IRM Iron Mountain 47.25 308 ⇑P **P 13 50 13.1 +0.2**
baz=47,SNR=18
NLU North Lily Min 47.32 316 eP **P 13 50 14.1 +0.7**
ARUT Antelope Range 47.33 313 eP **P 13 50 14.0 +0.5**
SWSC Sam W. Stewart 47.36 306 ⇓P **P 13 50 13.5 -0.2**
baz=47
TCUT Toone Canyon 47.42 318 eP **P 13 50 14.5 +0.3**
W12A Cal Nev Ari 47.43 309 ⇑P **P 13 50 14.7 +0.5**
baz=48
CTU Camp Tracy 47.44 317 eP **P 13 50 15.2 +0.8**
comp=Z,19nm,0.9s,mb5.0
V12A Nelson 47.57 310 ⇓P **P 13 50 15.6 +0.3**
baz=48,SNR=22
U12A Valley of Fire 47.60 311 ⇓P **P 13 50 16.1 +0.5**
baz=48
HWUT Hardware Ranch 47.76 318 eP **P 13 50 16.5 -0.4**
comp=Z,36nm,1.1s,mb5.3
HWUT LR LR
comp=Z,581nm,22.0s,MS4.5
MONP Monument Peak 47.84 306 ⇑P **P 13 50 17.6 +0.1**
baz=48
BELC Belle Mtn. 47.86 307 ⇑P **P 13 50 17.7 +0.1**
baz=48,SNR=11
DUG Dugway 47.93 316 eP **P 13 50 19.3 +1.2**
DUG pmax pmax
comp=Z,42nm,1.1s,mb5.4
DUG MLR MLR
comp=Z,341nm,19.0s,MS4.3
DUG Dugway 47.93 316 eP **P 13 50 19.3 +1.1**
comp=Z,42nm,1.1s,mb5.4
DUG LR LR
comp=Z,341nm,19.0s,MS4.3
AHID Auburn Hatcher 48.04 320 eP **P 13 50 19.2 +0.2**
comp=Z,8.2nm,0.4s,mb5.1
AHID LR LR
comp=Z,348nm,20.0s,MS4.3
V11A Goodsprings 48.05 310 ⇑P **P 13 50 19.3 +0.3**
baz=48
PFO Pinyon Flat Ob 48.09 306 ⇓P **P 13 50 19.1 -0.3**
baz=48
SNOW Snow King Moun 48.18 321 eP **P 13 50 20.1 -0.1**
comp=Z,84nm,1.2s,mb5.7
REDW Red Top Meadow 48.19 321 eP **P 13 50 19.9 -0.3**
comp=Z,118nm,1.3s,mb5.8
TUQ Turquoise Mtn. 48.28 309 ⇓P **P 13 50 21.2 +0.3**
baz=48,SNR=23
TPAW Teton Pass 48.32 321 eP **P 13 50 20.7 -0.5**
comp=Z,28nm,0.9s,mb5.3
MOOW Moose Ponds 48.33 321 eP **P 13 50 20.9 -0.4**
comp=Z,28nm,1.1s,mb5.2
HEC Hector,Ludlow 48.39 308 ⇑P **P 13 50 22.1 +0.4**
baz=48
BGU Big Grassy Mou 48.41 317 eP **P 13 50 21.5 -0.3**
FLWY Flagg Ranch 48.48 322 eP **P 13 50 22.0 -0.4**
comp=Z,34nm,1.1s,mb5.3
RRI2 Red Ridge 48.48 321 eP **P 13 50 22.5 +0.1**
comp=Z,21nm,0.7s,mb5.3
DCID1 Drake Creek 48.52 321 eP **P 13 50 23.3 +0.6**
IMW Indian Meadow 48.53 321 eP **P 13 50 24.6 +1.8**
comp=Z,26nm,1.0s,mb5.2
LKWY Lake 48.55 322 eP **P 13 50 24.3 +1.3**
LKWY pmax pmax
comp=Z,15nm,0.9s,mb5.0
LKWY Lake 48.55 322 eP **P 13 50 24.3 +1.4**
comp=Z,15nm,0.9s,mb5.0
HVU Hansel Valley 48.64 318 eP **P 13 50 22.6 -1.0**
HVU pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
HVU Hansel Valley 48.64 318 eP **P 13 50 22.6 -1.0**
comp=Z,7.8nm,0.7s,mb4.8
BBRC Big Bear Sol-O 48.67 307 ⇓P **P 13 50 24.4 +0.5**
baz=49
MURC Murrieta 48.68 306 ⇑P **P 13 50 23.9 -0.1**
baz=49
SHOC Shoshone 48.72 309 ⇓P **P 13 50 24.2 0.0**
baz=49,SNR=6.6
YFT Old Faithful 48.76 322 eP **P 13 50 26.1 +1.6**
GCMT Greycliff 48.80 324 eP **P 13 50 24.7 -0.2**
GSC Goldstone 48.91 308 ⇑P **P 13 50 26.0 +0.2**
baz=49,SNR=20
U10A Ash Meadows, A 48.94 310 ⇓P **P 13 50 26.8 +0.9**
baz=49
YMR Madison River 48.95 322 eP **P 13 50 27.2 +1.2**
comp=Z,5.9nm,0.4s,mb5.0
TPNV Topopah Spring 49.06 311 eP **P 13 50 27.5 +0.6**
TPNV pmax pmax
comp=Z,33nm,1.0s,mb5.3
TPNV MLR MLR
comp=Z,681nm,19.0s,MS4.7
TPNV Topopah Spring 49.06 311 eP **P 13 50 27.5 +0.6**
comp=Z,34nm,1.0s,mb5.3
TPNV LR LR
comp=Z,681nm,19.0s,MS4.7
P12A McGill 49.07 314 ⇑P **P 13 50 27.7 +0.8**
baz=49,SNR=30
TRCR Troy Canyon 49.10 313 eP **P 13 50 27.9 +0.7**
N13A Wendover, West 49.17 316 ⇑P **P 13 50 28.1 +0.4**
baz=49,SNR=10
BFSC Mount Baldy St 49.24 307 ⇑P **P 13 50 28.0 -0.2**
baz=49
QLMT Earthquake Lak 49.32 322 eP **P 13 50 30.2 +1.4**
FURC Furnace Creek, 49.35 310 ⇑P **P 13 50 29.5 +0.4**
baz=49,SNR=9.1
M13A Montello 49.37 317 ⇑P **P 13 50 29.3 +0.1**
baz=49,SNR=5.1
SCI San Clemente I 49.58 305 ⇓P **P 13 50 30.5 -0.4**
baz=50
R10A Warm Springs 49.60 312 ⇓P **P 13 50 31.9 +0.9**
baz=50,SNR=22
LRMC Laurel Mountai 49.66 308 ⇓P **P 13 50 31.5 +0.1**
baz=50,SNR=15
MPMC Manual Prospec 49.69 309 P **P 13 50 31.7 +0.1**
baz=50,SNR=9.1
EDW2 Edwards Air Fo 49.70 308 P **P 13 50 31.7 -0.1**
baz=50,SNR=8.5
N12A Clover Valley, 49.74 316 P **P 13 50 32.4 +0.3**
baz=50,SNR=16
DECC Green Verdugo 49.77 307 ⇓P **P 13 50 32.1 -0.2**
baz=50
DAC Darwin (Calif) 49.84 309 eP **P 13 50 33.3 +0.5**
DAC pmax pmax
comp=Z,11nm,1.1s,mb4.8
DAC Darwin (Calif) 49.84 309 eP **P 13 50 33.3 +0.5**
comp=Z,11nm,1.1s,mb4.8
O11A Cowboy Ranch, 49.87 315 P **P 13 50 33.6 +0.6**
baz=50,SNR=17
BOZ Bozeman (W) 49.87 323 eP **P 13 50 32.5 -0.5**
BOZ pmax pmax
comp=Z,26nm,1.2s,mb5.1
BOZ MLR MLR
comp=Z,343nm,20.0s,MS4.3
BOZ Bozeman (W) 49.87 323 eP **P 13 50 32.5 -0.6**
comp=Z,26nm,1.2s,mb5.1
BOZ LR LR
comp=Z,343nm,20.0s,MS4.3
M12A Wells 49.90 317 ⇓P **P 13 50 33.4 +0.1**
baz=50,SNR=15
GRAC Grapevine Rang 49.92 310 ⇓P **P 13 50 33.8 +0.4**
baz=50
S09A Goldfield 50.07 311 P **P 13 50 34.8 +0.3**
baz=50,SNR=29
EGMT Eagleton 50.14 326 eP **P 13 50 34.5 -0.6**
comp=Z,26nm,1.0s,mb5.2
EGMT LR LR
comp=Z,384nm,19.0s,MS4.4
R09A Tonopah 50.14 312 P **P 13 50 35.6 +0.5**
baz=50,SNR=36
MCMT McKenzie Canyo 50.18 321 eP **P 13 50 35.9 +0.5**
OSI Osito Adit 50.19 307 ⇑P **P 13 50 34.9 -0.6**
baz=50
TPH Tonopah 50.19 312 eP **P 13 50 36.3 +0.8**
TPH pmax pmax
comp=Z,27nm,1.3s,mb5.1
TPH Tonopah 50.19 312 eP **P 13 50 36.3 +0.8**
comp=Z,27nm,1.3s,mb5.1
N11A Elko Archery C 50.20 316 ⇓P **P 13 50 35.6 0.0**
baz=50
P10A Eureka 50.23 314 ⇓P **P 13 50 36.2 +0.5**
baz=50,SNR=18
CWC Cottonwood Cre 50.27 309 ⇑P **P 13 50 36.2 +0.2**
baz=50
DLMT Dillon 50.30 322 eP **P 13 50 36.5 +0.2**
comp=Z,67nm,1.4s,mb5.5
BLG Laguna Peak 50.31 306 ⇑P **P 13 50 36.3 -0.2**
baz=50
ISA Isabella 50.32 308 ⇓P **P 13 50 36.3 -0.1**
baz=50,SNR=6.0
ARVC Arvin 50.43 308 ⇑P **P 13 50 37.4 +0.1**
baz=50
Q09A Carvers 50.44 313 ⇓P **P 13 50 38.0 +0.6**
baz=50
SNCC San Nicolas Is 50.44 305 ⇓P **P 13 50 37.1 -0.3**
baz=50
PLCA Paso Flores 50.49 180 P **P 13 50 35.6 -2.1**
comp=Z,16nm,0.9s,mb5.0,baz=354,slow=9.2,SNR=9.8
PLCA LR LR 14 11 22.3
comp=Z,561nm,20.2s,MS4.6,baz=1.4,slow=35
PLCA Paso Flores 50.49 180 eP **P 13 50 35.1 -2.6**
PLCA pmax pmax
comp=Z,26nm,0.8s
PLCA Paso Flores 50.49 180 eP **P 13 50 35.1 -2.6**
comp=Z,26nm,0.8s,mb5.3
M11A Holland Ranch, 50.50 316 P **P 13 50 38.3 +0.4**
baz=50,SNR=25
O10A Cortez Mining, 50.52 315 ⇓P **P 13 50 37.9 0.0**
baz=51
HLID Hailey 50.54 319 eP **P 13 50 38.3 +0.1**
comp=Z,20nm,1.2s,mb4.9
HLID LR LR
comp=Z,278nm,19.0s,MS4.3
HRY Holter Researc 50.56 324 eP **P 13 50 38.0 -0.2**
HRY epP pP 13 50 45.0 +1.4
TIN Tinemaha 50.59 310 ⇑P **P 13 50 38.8 +0.3**
baz=51
P09A Austin 50.68 314 ⇓P **P 13 50 39.8 +0.6**
baz=51,SNR=5.8
BSC Santa Cruz Isl 50.73 306 ⇓P **P 13 50 39.2 -0.4**
baz=51
VES Vestal, Richgr 50.84 308 ⇓P **P 13 50 40.6 +0.2**
baz=51,SNR=11
SBC Santa Barbara 50.93 306 ⇓P **P 13 50 40.7 -0.4**
baz=51
MTUM Tungsten Hills 50.94 310 eP **P 13 50 41.6 +0.5**

R08A Mina 50.94 312 ⇑P P 13 50 41.6 +0.4
baz=51
O09A Fish Creek Ran 50.96 314 ⇑P P 13 50 41.6 +0.3
baz=51,SNR=18
Q08A Gabbs 51.00 312 ⇓P P 13 50 41.7 +0.2
baz=51,SNR=48
FFC Flin Flon 51.05 337 P P 13 50 40.7 -1.3
comp=Z,116nm,1.0s,mb5.8,SNR=11
FFC Flin Flon 51.05 337 *e*P P 13 50 40.3 -1.7
FFC pmax pmax
comp=Z,19nm,0.9s,mb5.0
FFC MLR MLR
comp=Z,696nm,19.0s,MS4.7
FFC Flin Flon 51.05 337 *e*P P 13 50 40.3 -1.7
comp=Z,19nm,0.9s,mb5.0
FFC LR LR
comp=Z,696nm,19.0s,MS4.7
M10A I.L. Ranch, Tu 51.05 316 ⇓P P 13 50 42.2 +0.2
baz=51,SNR=6.6
HELL Mitchell Peak, 51.06 309 ⇑P P 13 50 42.2 +0.2
baz=51,SNR=20
BMN Battle Mountai 51.08 315 *e*P P 13 50 42.4 +0.2
BMN pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BMN MLR MLR
comp=Z,258nm,21.0s,MS4.2
BMN Battle Mountai 51.08 315 *e*P P 13 50 42.4 +0.2
comp=Z,10nm,1.0s,mb4.7
BMN LR LR
comp=Z,258nm,21.0s,MS4.2
NVAR Mina Array Bea 51.12 312 P P 13 50 42.4 0.0
comp=Z,8.9nm,0.8s,mb4.8,baz=116,slow=7.7,SNR=80
NVAR Mina Array Bea 51.12 312 P P 13 50 42.4 0.0
PKM Peak Mountain 51.14 307 ⇑P P 13 50 42.5 -0.1
baz=51,SNR=5.4
SMMC Simmler 51.40 307 ⇓P P 13 50 44.7 +0.1
baz=51
N09A Rock Creek Ran 51.46 315 ⇓P P 13 50 45.0 0.0
baz=52,SNR=14
CHMT Chamberlain Mo 51.50 324 *e*P P 13 50 45.0 -0.4
KCC Kaiser Creek 51.50 310 ⇑P P 13 50 44.9 -0.4
baz=52,SNR=6.0
R07C Lee Vining 51.55 311 ⇑P P 13 50 46.4 +0.7
baz=52
M09A Marrel Ranch, 51.63 316 ⇑P P 13 50 46.6 +0.2
baz=52,SNR=15
T06C Millerton Lake 51.69 310 ⇓P P 13 50 45.9 -0.9
baz=52
MSO Missoula 51.86 323 *e*P P 13 50 48.0 0.0
comp=Z,4.3nm,0.9s,mb4.4
N08A GE Springer Mi 51.86 315 P P 13 50 47.6 -0.4
baz=52,SNR=13
R06C Coleville 51.99 311 ⇓P P 13 50 49.7 +0.7
baz=52,SNR=5.6
PKD Parkfield 52.01 308 ⇓P P 13 50 48.1 -1.0
baz=52
L09A Wilkinson Ranc 52.02 316 ⇑P P 13 50 49.4 +0.2
baz=52,SNR=11
S06C San Francisco 52.08 311 P P 13 50 49.8 +0.1
baz=52,SNR=16
O07A Toulon 52.15 314 P P 13 50 50.4 +0.2
baz=52,SNR=8.8
V04C Ramage Ranch, 52.17 308 ⇓P P 13 50 50.4 0.0
baz=52
S05C Merced 52.27 310 ⇓P P 13 50 50.6 -0.5
baz=52
M08A Happy Creek Ra 52.29 315 ⇓P P 13 50 51.2 0.0
baz=52,SNR=17
U04C Hernandez Rese 52.32 308 ⇑P P 13 50 50.6 -0.9
baz=52
N07B Gerlach 52.45 314 ⇑P P 13 50 51.8 -0.6
baz=52,SNR=15
WCN Washoe City 52.48 312 ⇓P P 13 50 53.1 +0.5
baz=52,SNR=17
R05C Kirkwood Meado 52.51 311 ⇓P P 13 50 53.3 +0.5
baz=52,SNR=11
CMB Columbia Colle 52.53 311 *e*P P 13 50 52.5 -0.5
CMB MLR MLR
comp=Z,445nm,20.0s,MS4.5
CMB Columbia Colle 52.53 311 ⇓P P 13 50 52.5 -0.5
baz=52
L08A Fields 52.55 316 ⇑P P 13 50 53.3 +0.1
baz=53,SNR=40
V03C Hunter Liggett 52.57 308 ⇓P P 13 50 52.9 -0.3
baz=53
P06A Stead Airport, 52.72 313 ⇑P P 13 50 54.3 0.0
baz=53
M07A Soldier Meadow 52.81 315 ⇑P P 13 50 55.1 -0.1
baz=53,SNR=39
WVOR Wild Horse Val 52.85 316 *e*P P 13 50 55.3 -0.1
WVOR pmax pmax
comp=Z,41nm,1.3s,mb5.2
WVOR Wild Horse Val 52.85 316 *e*P P 13 50 55.2 -0.1
comp=Z,41nm,1.3s,mb5.2
K08A Mann Creek Ran 52.87 317 ⇑P P 13 50 55.3 -0.1
baz=53,SNR=14
I09A Lost Marbles R 52.88 318 ⇑P P 13 50 54.3 -1.3
baz=53
PACP Pacheco Peak 52.89 309 ⇓P P 13 50 55.4 -0.3
baz=53
BMO Blue Mountains 52.98 320 *e*P P 13 50 55.1 -1.2
comp=Z,6.6nm,1.0s,mb4.5
BMO LR LR
comp=Z,285nm,19.0s,MS4.3
WALA Waterton Lakes 53.01 326 *e*P P 13 50 55.3 -1.3
comp=Z,17nm,1.2s,mb4.8
R04C Big Horse Ranc 53.01 311 ⇓P P 13 50 56.9 +0.4
baz=53
LAVA Lava Cap Winer 53.02 311 ⇑P P 13 50 56.4 -0.3
baz=53
N06A Buffalo Meadow 53.05 314 ⇓P P 13 50 56.0 -0.8
baz=53,SNR=7.2
S04C Ingram Canyon, 53.07 310 ⇓P P 13 50 56.7 -0.3
baz=53
P05C Yuba Gap, Truc 53.10 312 ⇑P P 13 50 57.7 +0.5
baz=53,SNR=14
BEKR Beckwourth 53.11 313 ⇑P P 13 50 57.0 -0.3
baz=53,SNR=7.7
H09A Durkee 53.13 319 ⇑P P 13 50 56.5 -0.9
baz=53
L07A Adell 53.17 316 ⇑P P 13 50 57.7 0.0
baz=53,SNR=30
I08A Drewsey 53.40 318 ⇓P P 13 50 58.6 -0.8
baz=53,SNR=7.2
WENL Wente Brothers 53.43 310 ⇓P P 13 51 00.0 +0.3
baz=54,SNR=5.2
Q04C Lincoln 53.52 311 ⇑P P 13 51 00.7 +0.4
baz=54
O05C Quincy 53.55 313 P P 13 51 00.9 +0.4
baz=54,SNR=8.3
BNLO Ben Lomond (Sa 53.61 309 ⇑P P 13 51 00.8 -0.1
baz=54
BDM Black Diamond 53.61 310 ⇓P P 13 51 01.1 +0.1
baz=54
ELFS Eagle Lake Fie 53.64 314 ⇓P P 13 51 00.6 -0.6
baz=54,SNR=6.5
M06C Likely Place G 53.66 314 ⇓P P 13 51 00.7 -0.7
baz=54
J07A Hines 53.68 317 ⇑P P 13 51 00.8 -0.7
baz=54
H08A Prairie City 53.72 319 ⇓P P 13 51 01.2 -0.5
baz=54,SNR=5.5
OHCM Honcut 53.76 312 *e*P P 13 51 01.9 -0.1
O04C Chester 53.79 313 ⇓P P 13 51 02.1 -0.2
baz=54
ORV Oroville 53.84 312 ⇓P P 13 51 02.6 -0.1
baz=54,SNR=5.8
SUTB Sutter Butte 53.95 312 ⇓P P 13 51 03.2 -0.2
baz=54
I07A Izee 54.09 318 ⇑P P 13 51 04.4 -0.1
baz=54,SNR=14
K06A Valley Falls 54.09 316 ⇓P P 13 51 04.0 -0.4
baz=54
CVS Carmenet Viney 54.18 310 ⇑P P 13 51 04.1 -1.0
baz=54
M05C Lookout 54.19 314 ⇓P P 13 51 04.3 -0.9
baz=54,SNR=7.0
J06A Christmas Vall 54.19 317 ⇑P P 13 51 04.4 -0.8
baz=54,SNR=8.5
L05A Lakeview 54.21 315 ⇑P P 13 51 04.9 -0.5
baz=54
HATC Hat Creek Radi 54.23 314 ⇑P P 13 51 05.0 -0.5
baz=54
MNRC McLaughlin Nat 54.32 311 ⇑P P 13 51 05.5 -0.7
baz=54
F08A Pendleton 54.33 320 ⇑P P 13 51 05.7 -0.5
baz=54,SNR=10
NEW Newport 54.44 323 *e*P P 13 51 06.0 -1.0
NEW pmax pmax
comp=Z,20nm,1.0s
NEW Newport 54.44 323 *e*P P 13 51 06.0 -1.0
comp=Z,20nm,1.0s,mb5.0
I06A Prineville 54.50 318 ⇓P P 13 51 07.5 0.0
baz=54,SNR=5.5
M04C Macdoel 54.82 314 ⇑P P 13 51 09.6 -0.2
baz=55,SNR=13
J05A Fort Rock 54.94 316 P P 13 51 10.9 +0.2
baz=55,SNR=21
L04A Klamath Falls 54.99 315 ⇓P P 13 51 10.7 -0.4
baz=55,SNR=6.1
EDM Edmonton 55.03 330 *e*P P 13 51 09.2 -2.1
EDM *e**PP pP 13 51 17.5 +0.8
K04A Chilquin 55.04 315 ⇑P P 13 51 11.3 -0.1
baz=55
LHEM Herd Peak 55.04 314 P P 13 51 11.4 0.0
HAWA Hanford 55.06 320 *e*P P 13 51 10.7 -0.8
comp=Z,0.4nm,1.0s
HAWA LR LR
comp=Z,28nm,20.0s
P01C Double 8 Ranch 55.16 311 ⇑P P 13 51 12.9 +0.6
baz=55
BUOR Burton Butte 55.28 315 P P 13 51 13.3 +0.2
I05A Bend 55.29 317 ⇓P P 13 51 13.4 +0.3
baz=55
YBH Yreka Blue Hor 55.42 314 ⇑P P 13 51 12.9 -1.3
baz=55
H05A Madras 55.45 318 ⇓P P 13 51 14.8 +0.6
baz=56
EPH Ephrata 55.51 322 P P 13 51 14.7 -0.1
TBM Table Mountain 56.05 321 P P 13 51 19.2 +0.6
F05A White Salmon 56.07 319 ⇑P P 13 51 19.0 +0.2
baz=56
H04A Detroit Lake 56.09 318 P P 13 51 18.9 0.0
baz=56,SNR=13
TWW Teanaway 56.20 321 P P 13 51 20.3 +0.5
K02A Glendale 56.31 315 ⇑P P 13 51 20.2 -0.3
baz=56
M01C Crescent City 56.46 314 ⇓P P 13 51 21.5 -0.1
baz=56
E05A Randle 56.53 320 ⇓P P 13 51 21.8 -0.3
baz=57,SNR=10
J02A Umpqua 56.57 316 ⇓P P 13 51 21.7 -0.6
baz=57
I03A Eugene 56.57 317 ⇑P P 13 51 21.6 -0.7
baz=57
F04A Amboy 56.71 319 ⇓P P 13 51 23.1 -0.2
baz=57
D05A Enumclaw 56.92 321 ⇓P P 13 51 24.2 -0.7
baz=57,SNR=6.1
C05A Tolt Reservoir 56.94 321 ⇑P P 13 51 23.6 -1.4
baz=57
I02A Mapleton 56.96 316 ⇑P P 13 51 24.8 -0.3
baz=57
G03A Yamhill 57.05 318 ⇑P P 13 51 25.0 -0.7
baz=57
B05A Bryant 57.42 322 ⇓P P 13 51 27.6 -0.8
baz=58
F03A Seaside 57.45 319 ⇓P P 13 51 28.8 +0.3
baz=58
E03A Lebam 57.68 319 ⇑P P 13 51 29.7 -0.5
baz=58
B04A Port Angeles 58.21 321 ⇓P P 13 51 33.7 -0.2
baz=58
OSD Olympics--Snow 58.24 321 P P 13 51 34.5 +0.4
YKA Yellowknife Ar 61.18 338 P P 13 51 52.4 -1.9
comp=Z,7.3nm,0.8s,mb4.9,baz=121,slow=7.2,SNR=52
YKA LR LR 14 19 17.2
comp=Z,401nm,20.8s,MS4.5,baz=175,slow=37
YKA Yellowknife Ar 61.18 338 P P 13 51 52.4 -1.9
YKA LR LR 14 19 17.2
EFI East Falkland 62.39 171 *e*P P 13 52 01.0 -1.5
EFI pmax pmax
comp=Z,100nm,1.5s,mb5.7
EFI MLR MLR
comp=Z,732nm,21.0s,MS4.8
EFI East Falkland 62.39 171 *e*P P 13 52 01.0 -1.5
comp=Z,100nm,1.5s,mb5.7
EFI LR LR
comp=Z,732nm,21.0s,MS4.8
PBEJ Beja 62.48 52 *e*P P 13 52 04.7 +1.6
PESTR Estremoz 62.83 51 *e*P P 13 52 06.2 +0.8
PESTR *e*S S 14 00 36.7 +2.7
PVIS Viseu 62.91 49 *e*P P 13 52 05.9 -0.1
PCAB Cabril 63.00 48 *e*P P 13 52 07.3 +0.7
MTE Manteigas 63.12 50 *e*S S 14 00 44.5 +6.8
MTE *e*LQ 14 09 27.2
MTE *e*LR LR 14 11 22.6
comp=Z,186nm,17.9s
LIC Lamto 64.96 88 *e*P P 13 52 17.6 -1.9
comp=Z,51nm,0.9s,mb5.3
LIC *e*R
comp=Z,88nm,22.2s
LIC Lamto 64.96 88 *e*P P 13 52 17.6 -1.9
comp=Z,25nm,0.9s,mb5.2
LIC LR LR
comp=Z,40nm,22.3s,MS3.6
DBIC Dimbokro 65.07 87 P P 13 52 19.7 -0.5
comp=Z,16nm,0.7s,mb5.1,baz=273,slow=4.1,SNR=7.4
DBIC LR LR 14 16 40.0
comp=Z,116nm,20.3s,MS4.1,baz=247,slow=32
DBIC Dimbokro 65.07 87 *e*P P 13 52 19.9 -0.3
DBIC pmax pmax
comp=Z,36nm,1.0s
DBIC MLR MLR
comp=Z,202nm,19.0s
DBIC Dimbokro 65.07 87 *e*P P 13 52 19.9 -0.3
comp=Z,36nm,1.0s,mb5.4
DBIC LR LR
comp=Z,202nm,19.0s,MS4.3
SUMG Summit 65.42 10 *e*P P 13 52 21.6 -0.9
comp=Z,24nm,0.8s,mb5.3
ESDC Sonseca Array 65.73 51 P P 13 52 25.3 +0.8
comp=Z,2.0nm,0.6s,mb4.3,baz=263,slow=6.8,SNR=12
ESDC LR LR 14 16 56.8
comp=Z,194nm,19.9s,MS4.3,baz=215,slow=32
ESDC Sonseca Array 65.73 51 P P 13 52 25.3 +0.8
ESDC LR LR 14 16 56.8
ESLA Sonseca Array 65.73 51 P P 13 52 23.9 -0.6
ESLA LR LR
comp=Z,2µm,20.0s,MS5.3
DCN Croghan 66.22 36 *e*P P 13 52 27.3 -0.3
DLF Lyons Farm 66.64 36 *e*P P 13 52 28.6 -1.7
QUIF Quistinic 67.55 42 *e*P P 13 52 35.7 -0.4
comp=Z,29nm,0.9s,mb5.0
QUIF Quistinic 67.55 42 *e*P P 13 52 35.7 -0.4
QUIF pmax pmax
comp=Z,15nm,0.9s,mb5.0
QUIF Quistinic 67.55 42 *e*P P 13 52 35.7 -0.4
comp=Z,15nm,0.9s,mb5.0
ROSF Rostrenen 67.56 42 *e*P P 13 52 35.7 -0.4
comp=Z,31nm,0.9s,mb5.0
ROSF Rostrenen 67.56 42 *e*P P 13 52 35.7 -0.4
ROSF pmax pmax
comp=Z,16nm,0.9s,mb5.0
ROSF Rostrenen 67.56 42 *e*P P 13 52 35.7 -0.4
comp=Z,16nm,0.9s,mb5.0
SGMF Saint Gilles 68.01 42 *e*P P 13 52 38.6 -0.4
comp=Z,37nm,1.0s,mb5.1
SGMF Saint Gilles 68.01 42 *e*P P 13 52 38.6 -0.4
SGMF pmax pmax
comp=Z,18nm,1.0s,mb5.1
SGMF Saint Gilles 68.01 42 *e*P P 13 52 38.6 -0.4
comp=Z,18nm,1.0s,mb5.1
SJPF Ste Jean 68.19 48 *e*P P 13 52 40.2 +0.1
comp=Z,48nm,0.8s,mb5.2
SJPF Ste Jean 68.19 48 *e*P P 13 52 40.2 +0.1
SJPF pmax pmax
comp=Z,24nm,0.8s,mb5.3
SJPF Ste Jean 68.19 48 *e*P P 13 52 40.2 +0.1
comp=Z,24nm,0.8s,mb5.3
ETSF Etsaut 68.66 48 *e*P P 13 52 42.9 -0.1
comp=Z,16nm,0.8s,mb4.7
ETSF Etsaut 68.66 48 *e*P P 13 52 42.9 -0.1
ETSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ETSF Etsaut 68.66 48 *e*P P 13 52 42.9 -0.1
comp=Z,8.2nm,0.8s,mb4.7
LCHF La Chataignera 68.99 44 *e*P P 13 52 45.2 +0.1
GRR Gorron 69.15 42 *e*P P 13 52 45.7 -0.4
comp=Z,51nm,1.1s,mb5.1
GRR Gorron 69.15 42 *e*P P 13 52 45.7 -0.4
GRR pmax pmax
comp=Z,26nm,1.1s,mb5.1
GRR Gorron 69.15 42 *e*P P 13 52 45.7 -0.4
comp=Z,26nm,1.1s,mb5.1
EPF Esparros 69.33 48 *e*P P 13 52 47.3 +0.1
comp=Z,35nm,0.7s,mb5.1
EPF Esparros 69.33 48 *e*P P 13 52 47.3 +0.1
EPF pmax pmax
comp=Z,18nm,0.7s,mb5.1
EPF Esparros 69.33 48 *e*P P 13 52 47.3 +0.1
comp=Z,18nm,0.7s,mb5.1
MFF Saint Martin d 69.39 44 *e*P P 13 52 48.3 +0.7
comp=Z,85nm,0.9s,mb5.4
MFF Saint Martin d 69.39 44 *e*P P 13 52 48.3 +0.7
MFF pmax pmax
comp=Z,43nm,0.9s,mb5.4
MFF Saint Martin d 69.39 44 *e*P P 13 52 48.3 +0.7
comp=Z,43nm,0.9s,mb5.4
FLN La Foliniere 69.46 42 *e*P P 13 52 47.7 -0.3
comp=Z,70nm,0.9s,mb5.3
FLN *e*R
comp=Z,385nm,22.5s
FLN La Foliniere 69.46 42 *e*P P 13 52 47.7 -0.3
FLN pmax pmax
comp=Z,35nm,0.9s,mb5.3
FLN MLR MLR
comp=Z,380nm,22.5s,MS4.6
FLN La Foliniere 69.46 42 *e*P P 13 52 47.7 -0.3
comp=Z,35nm,0.9s,mb5.3
FLN LR LR
comp=Z,380nm,22.5s,MS4.6
LDF La Druitiere 69.67 42 *e*P P 13 52 48.9 -0.4
comp=Z,32nm,0.8s,mb5.0
LDF La Druitiere 69.67 42 *e*P P 13 52 48.9 -0.4
LDF pmax pmax
comp=Z,16nm,0.8s,mb5.0
LDF La Druitiere 69.67 42 *e*P P 13 52 48.9 -0.4
comp=Z,16nm,0.8s,mb5.0
LFF La Frestale 69.81 46 *e*P P 13 52 49.8 -0.4
comp=Z,31nm,0.8s,mb5.0
LFF La Frestale 69.81 46 *e*P P 13 52 49.8 -0.4
LFF pmax pmax
comp=Z,15nm,0.8s,mb5.0
LFF La Frestale 69.81 46 *e*P P 13 52 49.8 -0.4
comp=Z,15nm,0.8s,mb5.0
SALF Salau 69.92 48 *e*P P 13 52 52.0 +1.1
RJF Les Rejaudoux 70.39 45 *e*P P 13 52 53.1 -0.6
comp=Z,30nm,0.8s,mb5.0
RJF *e*R
comp=Z,428nm,22.8s
RJF Les Rejaudoux 70.39 45 *e*P P 13 52 53.1 -0.6
RJF pmax pmax
comp=Z,15nm,0.8s,mb5.0
RJF MLR MLR
comp=Z,430nm,22.8s,MS4.6
RJF Les Rejaudoux 70.39 45 *e*P P 13 52 53.1 -0.6
comp=Z,15nm,0.8s,mb5.0
RJF LR LR
comp=Z,430nm,22.8s,MS4.6
TOA0 Torodi Ar. Sit 70.70 80 *e*P P 13 52 55.0 -0.6
TORD Torodi Ar. Bea 70.70 80 P P 13 52 55.4 -0.2
comp=Z,4.1nm,0.7s,mb4.5,baz=287,slow=6.3,SNR=22
TORD LR LR 14 22 46.9
comp=Z,354nm,20.6s,MS4.6,baz=270,slow=35
TORD Torodi Ar. Bea 70.70 80 P P 13 52 55.4 -0.2
TORD LR LR 14 22 46.9
MTLF Montolieu 70.72 48 *e*P P 13 52 55.2 -0.6
comp=Z,56nm,1.1s,mb5.1
MTLF Montolieu 70.72 48 *e*P P 13 52 55.2 -0.6
MTLF pmax pmax
comp=Z,28nm,1.1s,mb5.1
MTLF Montolieu 70.72 48 *e*P P 13 52 55.2 -0.6
comp=Z,28nm,1.1s,mb5.1
CAF Calviac 70.74 46 *e*P P 13 52 55.5 -0.4
comp=Z,59nm,0.9s,mb5.2
CAF Calviac 70.74 46 *e*P P 13 52 55.5 -0.4
CAF pmax pmax
comp=Z,29nm,0.9s,mb5.2
CAF Calviac 70.74 46 *e*P P 13 52 55.5 -0.4
comp=Z,29nm,0.9s,mb5.2
INK Inuvik 70.90 339 *e*P P 13 52 54.8 -2.1
INK pmax pmax
comp=Z,9.0nm,0.8s
INK Inuvik 70.90 339 *e*P P 13 52 54.8 -2.0
comp=Z,9.0nm,0.8s,mb4.8
TCF Toulx Ste Croi 70.97 44 *e*P P 13 52 56.7 -0.6
comp=Z,44nm,0.9s,mb5.1
TCF Toulx Ste Croi 70.97 44 *e*P P 13 52 56.7 -0.6
TCF pmax pmax
comp=Z,22nm,0.9s,mb5.1
TCF Toulx Ste Croi 70.97 44 *e*P P 13 52 56.7 -0.6
comp=Z,22nm,0.9s,mb5.1
MENF Mencas 71.39 40 *e*P P 13 53 04.0 +4.2
BGF Bois d'Agland 71.43 44 *e*P P 13 52 59.4 -0.7
comp=Z,31nm,0.7s,mb5.0
BGF Bois d'Agland 71.43 44 *e*P P 13 52 59.4 -0.7
BGF pmax pmax
comp=Z,16nm,0.7s,mb5.1
BGF Bois d'Agland 71.43 44 *e*P P 13 52 59.4 -0.7
comp=Z,16nm,0.7s,mb5.0
PYM Petit Puy Mans 71.48 45 *e*P P 13 53 00.6 +0.3
AGO Saint Agoulin 71.59 45 *e*P P 13 53 00.0 -1.0
LBL Lubilhac 71.60 46 *e*P P 13 53 02.0 +0.9
AVF Avril sur Loir 71.80 44 *e*P P 13 53 01.5 -0.8
comp=Z,39nm,1.0s,mb5.0
AVF Avril sur Loir 71.80 44 *e*P P 13 53 01.5 -0.8
AVF pmax pmax
comp=Z,20nm,1.0s,mb5.0
AVF Avril sur Loir 71.80 44 *e*P P 13 53 01.5 -0.8
comp=Z,20nm,1.0s,mb5.0
PLDF La Plantade 71.92 45 *e*P P 13 53 03.6 +0.6
SSF Saint Saulge 71.93 44 *e*P P 13 53 02.1 -0.9
comp=Z,37nm,1.1s,mb4.9
SSF Saint Saulge 71.93 44 *e*P P 13 53 02.1 -0.9
SSF pmax pmax
comp=Z,18nm,1.1s,mb4.9
SSF Saint Saulge 71.93 44 *e*P P 13 53 02.1 -0.9
comp=Z,18nm,1.1s,mb4.9
LASF Ste Croix 71.96 47 *e*P P 13 53 03.3 +0.1
comp=Z,68nm,1.3s,mb5.1
DAG Danmarks Havn 72.07 11 ⇓*i*P P 13 53 02.5 -1.4
comp=Z,2.0nm,0.6s,mb4.2
DAG Danmarks Havn 72.07 11 ⇓*i*P P 13 53 02.5 -1.4
DAG pmax pmax
comp=Z,20nm,0.6s,mb5.2
SMF Signal de Mont 72.12 44 *e*P P 13 53 03.5 -0.7
comp=Z,68nm,1.0s,mb5.2
SMF Signal de Mont 72.12 44 *e*P P 13 53 03.5 -0.7
SMF pmax pmax
comp=Z,34nm,1.0s,mb5.2
SMF Signal de Mont 72.12 44 *e*P P 13 53 03.5 -0.7
comp=Z,34nm,1.0s,mb5.2
LOR Lormes 72.18 44 *e*P P 13 53 03.8 -0.8
comp=Z,47nm,0.8s,mb5.1
LOR *e*R
comp=Z,189nm,22.0s
LOR Lormes 72.18 44 *e*P P 13 53 03.8 -0.8
LOR pmax pmax
comp=Z,23nm,0.8s,mb5.2
LOR MLR MLR
comp=Z,190nm,22.0s,MS4.3
LOR Lormes 72.18 44 *e*P P 13 53 03.8 -0.8
comp=Z,23nm,0.8s,mb5.2
LOR LR LR
comp=Z,190nm,22.0s,MS4.3
VIVF Saint-Julien-l 72.59 46 *e*P P 13 53 07.3 +0.3
comp=Z,79nm,1.1s,mb5.2
VIVF Saint-Julien-l 72.59 46 *e*P P 13 53 07.3 +0.3
VIVF pmax pmax
comp=Z,39nm,1.1s,mb5.2
VIVF Saint-Julien-l 72.59 46 *e*P P 13 53 07.3 +0.3
comp=Z,40nm,1.1s,mb5.3
BAIF Baives 72.65 41 *e*P P 13 53 06.6 -0.8
GIVF Givet 73.05 41 *e*P P 13 53 09.2 -0.5
comp=Z,73nm,1.0s,mb5.3
GIVF Givet 73.05 41 *e*P P 13 53 09.2 -0.5
GIVF pmax pmax
comp=Z,37nm,1.0s,mb5.3
GIVF Givet 73.05 41 *e*P P 13 53 09.2 -0.5
comp=Z,37nm,1.0s,mb5.3
MEZF Maizieres J'vi 73.08 42 *e*P P 13 53 09.4 -0.5
comp=Z,93nm,0.8s,mb5.5
MEZF Maizieres J'vi 73.08 42 *e*P P 13 53 09.4 -0.5
comp=Z,93nm,0.8s,mb5.8
SMRF Simiane la Rot 73.19 47 *e*P P 13 53 11.0 +0.4
OG05 Jujurieux 73.20 45 *e*P P 13 53 11.1 +0.5
ORIF Oris-en-Rattie 73.45 46 *e*P P 13 53 12.6 +0.5
comp=Z,49nm,1.1s,mb5.1
ORIF *e*R
comp=Z,183nm,20.8s
ORIF Oris-en-Rattie 73.45 46 *e*P P 13 53 12.6 +0.5

ORIF pmax pmax
comp=Z,25nm,1.1s,mb5.1
ORIF Oris-en-Rattie 73.45 46 *e*P **P 13 53 12.6 +0.5**
comp=Z,25nm,1.1s,mb5.0
CABF La Chapelle 73.67 44 *e*P **P 13 53 13.0 -0.4**
comp=Z,35nm,1.0s,mb4.9
CABF La Chapelle 73.67 44 *e*P **P 13 53 13.0 -0.4**
CABF pmax pmax
comp=Z,17nm,1.0s,mb4.9
CABF La Chapelle 73.67 44 *e*P **P 13 53 13.0 -0.4**
comp=Z,17nm,1.0s,mb4.9
THEF They Montfort 73.68 43 *e*P **P 13 53 13.7 +0.2**
HGN Heimansgroeve 73.81 40⇑ *e*P **P 13 53 13.6 -0.6**
comp=Z,22nm,1.1s,mb5.0
HGN *e*PP PP 13 55 38.9 -20
HGN *e*S S 14 02 42.6 -2.2
HGN *e*SS SS 14 07 22.7 -6.0
LMR La Mourre 73.85 48 *e*P **P 13 53 14.0 -0.4**
comp=Z,202nm,1.5s,mb5.5
LMR La Mourre 73.85 48 *e*P **P 13 53 14.0 -0.4**
LMR pmax pmax
comp=Z,101nm,1.5s,mb5.5
LMR La Mourre 73.85 48 *e*P **P 13 53 14.0 -0.4**
comp=Z,101nm,1.5s,mb5.5
WLF Walferdange 73.88 41 *e*P **P 13 53 15.1 +0.5**
comp=Z,35nm,1.0s,mb5.2
WLF Walferdange 73.88 41 *e*P **P 13 53 15.0 +0.4**
WLF pmax pmax
comp=Z,32nm,0.9s,mb5.2
WLF Walferdange 73.88 41 *e*P **P 13 53 15.0 +0.4**
comp=Z,32nm,0.9s,mb5.2
HAU Haudompre 73.91 43 *e*P **P 13 53 14.1 -0.7**
comp=Z,25nm,0.9s,mb4.8
HAU *e*R
comp=Z,109nm,22.0s
HAU Haudompre 73.91 43 *e*P **P 13 53 14.1 -0.7**
HAU pmax pmax
comp=Z,13nm,0.9s,mb4.9
HAU MLR MLR
comp=Z,110nm,22.0s,MS4.1
HAU Haudompre 73.91 43 *e*P **P 13 53 14.1 -0.7**
comp=Z,13nm,0.9s,mb4.8
HAU LR LR
comp=Z,110nm,22.0s,MS4.1
FRF La Foret Royal 73.95 48 *e*P **P 13 53 14.6 -0.5**
LPL La Plagne 74.07 46 *e*P **P 13 53 16.3 +0.6**
comp=Z,49nm,1.0s,mb5.1
LPL La Plagne 74.07 46 *e*P **P 13 53 16.3 +0.6**
LPL pmax pmax
comp=Z,24nm,1.0s,mb5.1
LPL La Plagne 74.07 46 *e*P **P 13 53 16.3 +0.6**
comp=Z,24nm,1.0s,mb5.1
MBDF Montbardon 74.08 46 *e*P **P 13 53 16.1 +0.3**
comp=Z,27nm,1.0s,mb4.8
MBDF Montbardon 74.08 46 *e*P **P 13 53 16.1 +0.3**
MBDF pmax pmax
comp=Z,13nm,1.0s,mb4.8
MBDF Montbardon 74.08 46 *e*P **P 13 53 16.1 +0.3**
comp=Z,13nm,1.0s,mb4.8
LPG La Plagne 74.08 46 *e*P **P 13 53 16.5 +0.7**
comp=Z,57nm,1.0s,mb5.1
LPG La Plagne 74.08 46 *e*P **P 13 53 16.5 +0.7**
LPG pmax pmax
comp=Z,28nm,1.0s,mb5.2
LPG La Plagne 74.08 46 *e*P **P 13 53 16.5 +0.7**
comp=Z,28nm,1.0s,mb5.2
LOMF Lomont 74.20 44 *e*P **P 13 53 16.9 +0.4**
HINF Hinteralfeld 74.24 43 *e*P **P 13 53 15.8 -0.9**
comp=Z,30nm,1.0s,mb4.9
HINF Hinteralfeld 74.24 43 *e*P **P 13 53 15.8 -0.9**
HINF pmax pmax
comp=Z,15nm,1.0s,mb4.9
HINF Hinteralfeld 74.24 43 *e*P **P 13 53 15.8 -0.9**
comp=Z,15nm,1.0s,mb4.9
TOUF Mont Tournerai 74.40 47 *e*P **P 13 53 19.1 +1.4**
WTSB Winterswijk 74.43 39⇑ *e*P **P 13 53 17.8 0.0**
comp=Z,36nm,1.3s,mb5.2
MOF Molkenrain 74.43 43 *e*P **P 13 53 17.8 0.0**
ECH Echery 74.46 43 *e*P **P 13 53 18.5 +0.5**
LUCF Luceram 74.47 47 *e*P **P 13 53 18.7 +0.6**
SBF Sospel 74.53 47 *e*P **P 13 53 18.0 -0.4**
comp=Z,156nm,1.2s,mb5.5
SBF Sospel 74.53 47 *e*P **P 13 53 18.0 -0.4**
SBF pmax pmax
comp=Z,78nm,1.2s,mb5.5
SBF Sospel 74.53 47 *e*P **P 13 53 18.0 -0.4**
comp=Z,78nm,1.2s,mb5.5
CDF Champ du Feu 74.55 43 *e*P **P 13 53 17.9 -0.6**
comp=Z,35nm,1.0s,mb4.9
CDF Champ du Feu 74.55 43 *e*P **P 13 53 17.9 -0.6**
CDF pmax pmax
comp=Z,18nm,1.0s,mb5.0
CDF Champ du Feu 74.55 43 *e*P **P 13 53 17.9 -0.6**
comp=Z,18nm,1.0s,mb5.0
WLS Welschbruch 74.60 43 *e*P **P 13 53 18.9 +0.1**
SAOF Saorge 74.62 47 *e*P **P 13 53 19.6 +0.7**
BBS Basel-Blauen 74.67 44 *e*P **P 13 53 19.5 +0.3**
BUG Bochum--Univer 74.69 39 *e*P **P 13 53 19.9 +0.6**
comp=Z,23nm,0.9s,mb5.1
LIBD Limburg 74.76 43 *e*P **P 13 53 20.4 +0.7**
LANF Langenberg 74.92 42 *e*P **P 13 53 21.7 +1.0**
FELD Feldberg im Sc 75.02 43 *e*P **P 13 53 21.5 +0.3**
BFO Black Forest 75.25 43 *e*P **P 13 53 23.1 +0.5**
comp=Z,111nm,0.9s,mb4.8
BFO Black Forest 75.25 43 *e*P **P 13 53 23.1 +0.5**
BFO pmax pmax
comp=Z,11nm,0.9s,mb4.8
TNS Taunus Mts 75.38 41 *e*P **P 13 53 23.8 +0.5**
comp=Z,27nm,0.9s,mb5.2
TNS Taunus Mts 75.38 41 *e*P **P 13 53 23.8 +0.5**
TNS pmax pmax
comp=Z,27nm,0.9s,mb5.2
COLA College 75.57 335⇑ *e*P **P 13 53 23.1 -1.3**
PGF Pioggiola 75.67 49 *e*P **P 13 53 25.2 +0.2**
comp=Z,111nm,1.3s,mb5.3
PGF Pioggiola 75.67 49 *e*P **P 13 53 25.2 +0.2**
PGF pmax pmax
comp=Z,56nm,1.3s,mb5.3
PGF Pioggiola 75.67 49 *e*P **P 13 53 25.2 +0.2**
comp=Z,56nm,1.3s,mb5.3
KEST Kesra 76.11 56 P **P 13 53 28.5 +1.0**
comp=Z,4.1nm,0.9s,mb4.3,baz=286,slow=2.2,SNR=8.4
DAVA Damuels 76.28 44⇑ *i*P **P 13 53 29.2 +0.8**
comp=Z,29nm,0.8s,mb5.2,SNR=6.6
CLZ Clausthal 76.64 39 *e*P **P 13 53 31.1 +0.6**
comp=Z,15nm,1.0s,mb4.9
CLZ Clausthal 76.64 39 *e*P **P 13 53 31.1 +0.6**
CLZ pmax pmax
comp=Z,15nm,1.0s,mb4.9
BSEG Bad Segeberg 76.64 37 *e*P **P 13 53 30.7 +0.2**
comp=Z,27nm,1.0s,mb5.1
BSEG Bad Segeberg 76.64 37 *e*P **P 13 53 30.7 +0.2**
BSEG pmax pmax
comp=Z,27nm,1.0s,mb5.1
MOTA Moosalm 77.11 44⇓ *i*P **P 13 53 33.5 +0.3**
comp=Z,14nm,1.0s,mb4.8,SNR=6.1
MOTA Moosalm 77.11 44⇓ *i*P **P 13 53 33.5 +0.3**
MOTA pmax pmax
comp=Z,14nm,1.0s,mb4.8
GRA1 Grafenberg Arr 77.17 41 *e*P **P 13 53 33.8 +0.3**
GRA1 LR LR
comp=Z,200nm,21.5s,MS4.4
GRF Grafenberg Arr 77.17 41 *e*P **P 13 53 33.8 +0.3**
GRF *e*L 14 21 51.9
comp=Z,187nm,21.5s
NAO01 NORSAR Array S 77.18 30 *e*P **P 13 53 33.5 -0.1**
comp=Z,18nm,0.9s,mb5.0
SQTA Sankt Quirin 77.19 44⇓ *i*P **P 13 53 34.3 +0.7**
comp=Z,22nm,0.9s,mb5.1,SNR=8.3
SQTA Sankt Quirin 77.19 44⇓ *i*P **P 13 53 34.3 +0.7**
SQTA pmax pmax
comp=Z,22nm,0.9s,mb5.1
NB2 NORSAR Subarra 77.35 30 P **P 13 53 34.7 +0.2**
comp=Z,1.6nm,0.8s,mb4.0,baz=268,slow=5.9
NOA NORSAR Array B 77.35 30 P **P 13 53 35.0 +0.5**
comp=Z,9.2nm,0.8s,mb4.8,baz=267,slow=5.8,SNR=37
NOA LR LR 14 23 39.8
comp=Z,160nm,21.6s,MS4.3,baz=275,slow=33
MOX Moxa 77.41 40 *e*P **P 13 53 34.9 0.0**
comp=Z,5.0nm,0.8s,mb4.5
WTTA Wattenberg 77.48 44⇑ *i*P **P 13 53 35.7 +0.5**
comp=Z,27nm,1.0s,mb5.1
WTTA Wattenberg 77.48 44⇑ *i*P **P 13 53 35.7 +0.5**
WTTA pmax pmax
comp=Z,27nm,1.0s,mb5.1
MANZ Manzenberg 77.74 41 *e*P **P 13 53 37.5 +0.8**
comp=Z,37nm,1.0s,mb5.3
MANZ *e*pP pP 13 53 42.8 +0.5
ROTZ Rotzenmuhle 77.81 41 *e*P **P 13 53 37.4 +0.4**
comp=Z,10.0nm,1.1s,mb4.7
WERD Werda 77.86 40 *e*P **P 13 53 37.1 -0.2**
comp=Z,15nm,0.9s,mb4.9
WERD *e*pP pP 13 53 43.0 +0.1
GUNZ Gunzen 77.88 41 *e*P **P 13 53 38.2 +0.8**
comp=Z,11nm,1.0s,mb4.7
NKC Novy Kostel 77.95 41 *e*P **P 13 53 37.9 0.0**
NKC *e*pP pP 13 53 43.2 -0.2
TANN Tannenbergstha 77.96 40 *e*P **P 13 53 38.6 +0.7**
comp=Z,20nm,1.1s,mb5.0
IMA2 Indian Mountai 78.10 336 *e*P **P 13 53 37.8 -0.9**
WET Wettzell 78.26 42 *e*P **P 13 53 39.9 +0.3**
comp=Z,11nm,1.1s,mb4.7
WET Wettzell 78.26 42 *e*P **P 13 53 39.9 +0.3**
WET pmax pmax
comp=Z,11nm,1.1s,mb4.7
CLL Collm 78.28 40 *e*P **P 13 53 40.0 +0.3**
comp=Z,18nm,1.1s,mb4.9
CLL *e*pP pP 13 53 44.5 -0.8
CLL Collm 78.28 40 P **P 13 53 38.0 -1.7**
CLL *i* *PP pP 13 53 40.2 -5.1
CLL *i* *SP sP 13 53 45.3 -2.0
CLL *i* 13 53 47.2
CLL *i* PP PP 13 56 31.3 -5.3
CLL Collm 78.28 40 *e*P **P 13 53 38.0 -1.7**
CLL *i* pP pP 13 53 40.2 -5.1
comp=Z,13nm,1.0s
CLL *i* sP sP 13 53 45.3 -2.0
CLL *i* x x 13 53 47.2
CLL *i* PP PP 13 56 31.3 -5.3
CLL L 14 23 00.0
comp=Z,100nm,20.0s
CLL Collm 78.28 40 *e*P **P 13 53 38.0 -1.7**
CLL *i* pP pP 13 53 40.2 -5.1
CLL *i* 13 53 45.3
CLL LR LR
comp=Z,100nm,20.0s,MS4.1
FBE Freiberg 78.51 40 *e*P **P 13 53 41.5 +0.5**
comp=Z,22nm,1.1s,mb5.0
KBA Koelnbreinsper 78.65 44⇑ *i*P **P 13 53 42.0 +0.3**
comp=Z,48nm,1.1s,mb5.3
KBA Koelnbreinsper 78.65 44⇑ *i*P **P 13 53 42.0 +0.3**
KBA pmax pmax
comp=Z,48nm,1.1s,mb5.3
KHC Kasperske Hory 78.72 42 *e*P **P 13 53 42.7 +0.6**
KHC *e*pP pP 13 53 47.8 +0.1
KHC AMS AMS 14 22 30.0
comp=Z,200nm,20.7s
KHC Kasperske Hory 78.72 42 *e*P **P 13 53 42.7 +0.6**
KHC *e*pP pP 13 53 47.8 +0.1
KHC LR LR
comp=Z,200nm,20.7s,MS4.4
GEC2 GERESS Array S 78.81 42 *e*P **P 13 53 42.9 +0.3**
comp=Z,25nm,1.0s,mb5.1
GEC2 GERESS Array S 78.81 42 *e*P **P 13 53 42.9 +0.3**
GEC2 pmax pmax
comp=Z,25nm,1.0s,mb5.1
GERES GERESS Array B 78.81 42 P **P 13 53 43.2 +0.6**
comp=Z,8.0nm,0.8s,mb4.7,baz=264,slow=4.7,SNR=53
GERES LR LR 14 27 21.6
comp=Z,124nm,19.0s,MS4.3,baz=260,slow=35
SVW2 Sparrevohn 78.87 330 *e*P **P 13 53 41.4 -1.5**
BRG Berggiesshubel 78.89 40 *e*P **P 13 53 43.5 +0.5**
comp=Z,13nm,0.9s,mb4.9
BRG *e*pP pP 13 53 48.4 -0.2
BRG Berggiesshubel 78.89 40 *e*P **P 13 53 43.4 +0.4**
comp=Z,8.0nm,0.9s,mb4.6
BRG *e* pP 13 53 48.7 +0.1
comp=Z,8.1nm,0.9s
BRG
comp=N,50nm,16.0s
BRG
comp=E,101nm,20.1s
BRG
comp=Z,159nm,21.1s
BRG Berggiesshubel 78.89 40 *e*P **P 13 53 43.4 +0.4**
BRG *e* pP 13 53 48.7 +0.1
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BRG MLR MLR
comp=N,50nm,16.0s,MS4.2
BRG MLR MLR
comp=E,101nm,20.1s,MS4.2
BRG MLR MLR
comp=Z,159nm,21.1s,MS4.3
BRG Berggiesshubel 78.89 40 *e*P **P 13 53 43.4 +0.4**
comp=Z,8.0nm,0.9s,mb4.7
BRG *e* pP 13 53 48.7 +0.1
BRG LR LR
comp=Z,160nm,21.1s,MS4.3
MOA Molln 79.23 43⇓ *i*P **P 13 53 45.1 +0.2**
comp=Z,18nm,1.0s,mb5.0
PVCC Panska Ves 79.30 40 *e*P **P 13 53 45.8 +0.5**
PVCC *e*pP pP 13 53 50.7 -0.2
PVCC AMS AMS 14 23 40.0
comp=Z,300nm,15.8s
PRU Pruhonice 79.31 41 *e*P **P 13 53 45.8 +0.5**
PRU *e*pP pP 13 53 50.7 -0.2
PRU AMS AMS 14 23 10.0
comp=Z,400nm,31.5s
PRU Pruhonice 79.31 41 *e*P **P 13 53 45.8 +0.5**
PRU *e**PP pP 13 53 50.7 -0.2
VISS Visnje 79.75 45 *e*P **P 13 53 48.3 +0.6**
VISS *e* pP 13 53 52.5 -0.8
TREC Trest 79.96 42 *e*P **P 13 53 49.4 +0.5**
TREC *e*pP pP 13 53 54.8 +0.3
ARSA Arzberg 80.12 44⇓ *i*P **P 13 53 49.8 +0.1**
comp=Z,14nm,0.8s,mb5.0
UPC Upice 80.22 40 *e*P **P 13 53 51.1 +0.8**
UPC *e*pP pP 13 53 55.4 -0.5
CONA Conrad Observa 80.30 43⇑ *i*P **P 13 53 50.9 +0.2**
comp=Z,21nm,1.1s,mb5.0,SNR=6.8
DPC Dobruska-Polom 80.43 40 *e*P **P 13 53 51.9 +0.5**
DPC *e*pP pP 13 53 56.8 -0.2
DPC AMS AMS 14 24 30.0
comp=Z,300nm,15.9s
VRAC Vranov 80.68 41⇓ *i*P **P 13 53 52.7 -0.1**
VRAC Vranov 80.68 41⇓ P **P 13 53 52.6 -0.1**
ZST Bratislava 81.11 43 *e*P **P 13 53 56.0 +1.0**
ZST *e* pP 13 54 00.6 -0.1
ZST pmax pmax
comp=Z,12nm,1.1s,mb4.7
ZST Bratislava 81.11 43 *e*P **P 13 53 56.0 +1.0**
comp=Z,12nm,1.1s,mb4.7
ZST *e* pP 13 54 00.6 -0.1
MORC Moravsky Berou 81.26 41⇑ *i*P **P 13 53 56.4 +0.6**
MORC Moravsky Berou 81.26 41⇑ P **P 13 53 56.4 +0.6**
OKC Ostrava-Krasne 81.64 41 *e*P **P 13 53 58.6 +0.7**
OKC AMS AMS 14 24 40.0
comp=Z,200nm,16.7s
VYHS Vyhne 82.23 42 *e*P **P 13 54 01.6 +0.6**
VYHS *e* pP 13 54 06.2 -0.4
VYHS pmax pmax
comp=Z,30nm,1.0s,mb5.2
VYHS Vyhne 82.23 42 *e*P **P 13 54 01.6 +0.6**
comp=Z,3.3nm,1.0s,mb4.2
VYHS *e* pP 13 54 06.2 -0.4
PKSM Moragy 82.35 44⇑ *i*P **P 13 54 01.9 +0.3**
PKSM Moragy 82.35 44⇑ P **P 13 54 01.9 +0.3**
PPT Papeete 82.63 251 LR LR 14 24 27.0
comp=Z,226nm,21.3s,MS4.5,baz=85,slow=31
OJC Ojcow 82.66 40 *e*P **P 13 54 04.0 +0.8**
ARCES ARCESS Array B 82.83 21 P **P 13 54 03.1 -1.0**
comp=Z,4.8nm,0.9s,mb4.5,baz=299,slow=5.0,SNR=16
ARCES LR LR 14 26 26.5
comp=Z,139nm,22.0s,MS4.3,baz=70,slow=32
ARCES ARCESS Array B 82.83 21 P **P 13 54 03.1 -1.0**
ARCES LR LR 14 26 26.5
KEV Kevo 83.31 20 *e*p **P 13 54 02.6 -4.0**
CRVS Cervenica-Dubn 83.91 42 *e*P **P 13 54 11.1 +1.5**
KOLS Kolonicke sedl 84.43 41 *e*P **P 13 54 13.4 +1.1**
KOLS *e*pP pP 13 54 18.1 +0.2
KAF Kangasniemi 84.46 28 *e*p **P 13 54 10.1 -2.3**
baz=279,slow=4.7
FINES FINESS Array B 84.47 29 P **P 13 54 12.1 -0.4**
comp=Z,5.1nm,0.8s,mb4.7,baz=263,slow=3.1,SNR=24
FINES LR LR 14 24 51.5
comp=Z,98nm,21.6s,MS4.2,baz=164,slow=31
FINES FINESS Array B 84.47 29 P **P 13 54 12.1 -0.5**
FINES LR LR 14 24 51.5
FIA1 FINESS Array S 84.48 29 *e*P **P 13 54 11.6 -0.9**
FIA1 *e*pP pP 13 54 16.9 -1.2

BZS Buzias 84.49 45⇓ *i*P **P 13 54 13.3 +0.7**
BZS Buzias 84.49 45 ⇓P **P 13 54 13.3 +0.7**
DRGR 85.06 44⇓ *i*P **P 13 54 15.9 +0.4**
DRGR 85.06 44 ⇓P **P 13 54 15.9 +0.5**
GZR Gura Zlata 85.33 45⇓ *i*P **P 13 54 17.9 +1.1**
GZR Gura Zlata 85.33 45 ⇓P **P 13 54 17.9 +1.1**
VSU Vasula 85.37 32*c i*P **P 13 54 16.5 -0.5**
LVV L'vov 85.42 40 *e*P **P 13 54 17.9 +0.6**
LVV *e* 13 54 26.9
LVV *i* 14 04 43.3
APA Apatity 86.11 22⇓ *i*P **P 13 54 20.5 -0.2**
APA *i* pP 13 54 25.5 -0.8
APA pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
VTS Vitosha 86.11 48 *i* P **P 13 54 25.4 +4.7**
BURAR Bucovina Array 86.59 42⇑ *i*P **P 13 54 23.3 +0.2**
BURAR Bucovina Array 86.59 42⇑ P **P 13 54 23.3 +0.3**
VOIR 86.90 45⇓ *i*P **P 13 54 25.4 +0.8**
SNX Sinaia 87.23 45⇓ *i*P **P 13 54 27.7 +1.5**
PLD Plovdiv 87.29 48 *i* P **P 13 54 30.6 +4.2**
RZN Rozhen 87.37 48 *i* P **P 13 54 32.9 +6.0**
MLR Muntele Rosu 87.50 44⇓ *i*P **P 13 54 28.2 +0.7**
MLR Muntele Rosu 87.50 44 ⇓P **P 13 54 28.2 +0.7**
DIM Dimitrovgrad 87.90 48 *i* P **P 13 54 34.4 +5.0**
SZH Strazhica 87.95 47 *i* P **P 13 54 37.0 +7.4**
AKASG Malin Array Be 88.50 39 P **P 13 54 31.7 -0.6**
comp=Z,1.2nm,0.5s,mb4.4,baz=275,slow=4.5,SNR=11
AKASG LR LR 14 31 06.2
comp=Z,93nm,22.0s,MS4.2,baz=280,slow=34
AKASG Malin Array Be 88.50 39 P **P 13 54 31.7 -0.6**
AKASG LR LR 14 31 06.2
AKBB Malin Array Si 88.50 39 P **P 13 54 32.6 +0.4**
APE Apeiranthos 88.90 53⇑ *e*P **P 13 54 33.9 -0.2**
VNA1 Neumayer--Stat 90.61 163 *e*P **P 13 54 46.0 +3.9**
VNA1 *e* 13 54 47.0
VNA1 *e* 13 54 48.6
VNA1 *e* pP 13 54 49.8 +2.0
VNA1 *e* 13 54 54.2
VNA1 *e* 13 55 02.1
KLMR Klimovskoe 90.88 27 *e*P **P 13 54 47.1 +3.7**
KLMR pmax pmax
comp=Z,40nm,1.5s,mb5.5
OBN Obninsk 91.48 33*c i*P **P 13 54 45.8 -0.4**
OBN *i* pP 13 54 51.7 -0.1
OBN pmax pmax
comp=Z,15nm,1.0s,mb5.3
BILL Bilibino 92.42 342⇑ *e*P **P 13 54 50.1 -0.4**
BILL pmax pmax
comp=Z,14nm,1.4s,mb5.1
BR131 Keskin Array S 94.43 49 *e*P **P 13 54 60.0 +0.2**
comp=Z,4.2nm,0.9s,mb4.9
BR131 *e*pP pP 13 55 04.8 -0.6
BRTR Keskin Array B 94.43 49 P **P 13 54 59.8 0.0**
comp=Z,1.2nm,1.0s,mb4.3,baz=255,slow=4.9,SNR=5.9
BRTR LR LR 14 35 31.1
comp=Z,58nm,20.8s,MS4.0,baz=288,slow=34
ANN Anapa 95.51 43 *e*P **P 13 55 08.2 +3.5**
ANN pmax pmax
comp=Z,31nm,1.0s,mb5.7
TIXI Tiksi 97.48 354⇑ *e*P **P 13 55 13.9 +0.2**
TIXI pmax pmax
comp=Z,33nm,1.7s,mb5.5
BOSA Boshof 99.84 117 LR LR 14 37 19.6
comp=Z,367nm,18.2s,MS4.9,baz=276,slow=34
ARU Arti 101.66 26 PFAKE 13 55 40.0 +7.7
ARU LR LR
comp=Z,191nm,22.0s,MS4.6
KURK Kurchatov 113.88 21 *i* PKIKP PKiKP 14 00 19.8 +1.2
YSS Yuzh-Sakhalins 115.95 335 *i* PKIKP PKPdf 14 00 26.7 +4.2
AAK Ala-Archa 118.67 29 PFAKE 14 00 40.0 +12
AAK LR LR
comp=Z,176nm,21.0s,MS4.7
HIA Hailar 120.28 352 PFAKE 14 00 40.0 +9.1
HIA LR LR
comp=Z,284nm,20.0s,MS4.9
SONM Songino Array 122.35 2 PKP PKPdf 14 00 33.7 -1.1
comp=Z,0.3nm,0.5s,baz=264,slow=2.6,SNR=3.3
MDJ Mudanjiang 122.63 343 PKP PKPdf 14 00 35.3 -0.1
MDJ PP PP 14 02 11.9 -0.7
MDJ PKS 14 04 12.0
MDJ PS PS 14 12 06.9 -0.9
MDJ SS SS 14 18 54.5 +0.9
MDJ PP PP
comp=Z,58nm,5.3s
MDJ LR LR
comp=N,113nm,24.4s,MS4.8
MDJ LR LR
comp=E,234nm,25.9s,MS4.8
MDJ LR LR
comp=Z,122nm,24.4s,MS4.5
WMQ Urumqi 122.91 19 *e*PKP PKPdf 14 00 36.5 +0.6
CN2 Changchun 124.48 346 *e*PKP PKPdf 14 00 34.7 -4.2
HHC Hu-ho-hao-te 129.35 358 *e*PKP PKPdf 14 00 43.2 -5.0
HHC XPKP 14 00 57.6
HHC PKS 14 04 18.3
HHC PP PP
comp=Z,62nm,6.9s
HHC LR LR
comp=N,269nm,17.8s,MS5.1
HHC LR LR
comp=E,326nm,21.8s,MS5.1
HHC LR LR
comp=Z,273nm,19.8s,MS5.0
GTA Gaotai 130.03 10 *e*PKP PKPdf 14 00 49.0 -0.5
GTA XPKP 14 00 59.5
NJ2 Nanjing 137.20 348 *e*PKP PKPdf 14 01 00.5 -2.5
NJ2 PP PP 14 03 50.0 +2.6
NJ2 PKS 14 04 35.0
NJ2 SKS SKSdf 14 08 06.0 -7.0
NJ2 SKKS SKKSac 14 10 36.0 -5.5
NJ2 PP PP
comp=Z,60nm,5.8s
NJ2 LR LR
comp=N,440nm,29.6s
NJ2 LR LR
comp=E,820nm,22.7s
NJ2 LR LR
comp=Z,200nm,25.3s,MS4.8
SSE Sheshan 137.59 345 *e*PKP PKPdf 14 01 03.7 0.0
SSE LR LR
comp=N,57nm,23.1s,MS4.6
SSE LR LR
comp=E,112nm,23.0s,MS4.6
SSE LR LR
comp=Z,124nm,19.3s,MS4.7
CD2 Chengdu 138.96 7 *e*PKP PKPdf 14 01 03.9 -2.3
CD2 XPKP 14 01 10.8
CD2 PP PP 14 03 59.8 +1.5
CD2 PKS 14 04 38.6
CD2 SKS SKSdf 14 08 09.1 -6.9
CD2 PP PP
comp=Z,80nm,6.9s
CD2 LR LR
comp=E,170nm,19.2s
CD2 LR LR
comp=Z,90nm,15.6s,MS4.6
CTA Charters Tower 143.09 250 *e*PKP PKPdf 14 01 10.8 -2.8
comp=Z,7.5nm,1.2s
STKA Stephens Creek 143.10 229 *e*PKP PKPdf 14 01 16.8 +3.1
comp=Z,4.0nm,0.8s
STKA Stephens Creek 143.10 229 PKP PKPdf 14 01 11.3 -2.4
comp=Z,2.5nm,0.7s,baz=90,slow=4.0,SNR=3.6
STKA Stephens Creek 143.10 229 PKP PKPdf 14 01 11.3 -2.4
STKA *e*PKP PKPdf 14 01 16.8 +3.1
GYA Guiyang 143.65 4 PKP PKPdf 14 01 12.9 -1.7
GYA PKS 14 04 47.3
GYA PP PP
comp=Z,140nm,7.6s
GYA LR LR
comp=Z,170nm,21.0s,MS4.8
KMI Kunming 144.48 10 PKP PKPdf 14 01 13.6 -2.5
KMI LR LR
comp=Z,128nm,23.0s,MS4.6
CHTO Chiang Mai 149.56 20 *e*PKHKP PKPdf 14 01 25.3 +0.7
AS31 Alice Springs 152.94 237 *e*PKP PKPbc 14 01 35.4 -1.6
ASAR Alice Springs 152.94 237 PKP PKPdf 14 01 29.1 -0.6
comp=Z,1.6nm,0.9s,baz=129,slow=1.5,SNR=4.6
ASAR PKPbc PKPbc 14 01 38.9 +1.8
comp=Z,9.6nm,0.7s,baz=117,slow=3.0,SNR=24
ASPA Alice Springs 152.95 237 *e*PKP PKPbc 14 01 35.4 -1.6
WB2 Warramunga Arr 153.97 245 *e*PKP PKPbc 14 01 39.7 +0.5
WRAB Tennant Creek 153.97 245 PKIKP PKPbc 14 01 39.7 +0.5
WRA Warramunga Arr 153.98 245 PKPbc PKPbc 14 01 38.2 -1.0
comp=Z,1.9nm,0.7s,baz=104,slow=3.0,SNR=19

*CRAAG **04** 13:49:10.3, 3650N×108E, Ml3.2*
*ISCJB **04** 13:49:12.0±0.6, 3653N±005×112E±005, h31km±11km, Error ellipse: s-maj=9.4km s-min=6.2km az=119.7*
*CSEM **04** 13:49:11.4±0.2, 3650N×107E, h20km, ML3.2, Error ellipse: s-maj=7.3km s-min=4.9km az=50.0*
*MDD **04** 13:49:13.2±0.6, 3646N×121E, h24km±10km, mb3.7/14, Error ellipse: s-maj=8.4km s-min=7.7km az=1.0, PRXIMO*
ISC 04 13:49:12.6±0.7**, 3651N**±005×**115E**±005**, h27**km±11km**, n31,** σ**1s24**/56**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.38**	**125**	P	**Pb**	**13 49 21.0**	**0.0**
ECHF	**Ech Chlef**	**0.38**	**156**	P	**Pb**	**13 49 20.0**	**-1.1**
ECHA	**Ech Chlef**	**0.40**	**153**	P	**Pb**	**13 49 20.0**	**-1.3**
EANR	**’Ain N’Sour**	**0.56**	**184**	P	**Pb**	**13 49 23.0**	**-0.9**
ETRT	**Tiaret**	**1.12**	**174**	P	**Pn**	**13 49 33.0**	**+0.5**
EMHD	**Djebel Mahouad**	**1.49**	**101**	P	**Pn**	**13 49 35.0**	**-2.6**
EMUR	**La Murta**	**2.33**	**306**	P	**Pn**	**13 49 49.4**	**+0.3**
	5.0nm,0.4s,SNR=7.9						
EMUR				S	**Sn**	**13 50 16.3**	**-0.5**
	6.2nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**2.33**	**306**	P	**Pn**	**13 49 49.4**	**+0.3**
	5.0nm,0.4s,SNR=7.9						
EMUR				S	**Sn**	**13 50 15.9**	**-0.9**
	6.2nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.45**	**334**	P	**Pn**	**13 49 51.5**	**+0.7**
	1.2nm,0.1s,SNR=8.6						
EBEN				S	**Sn**	**13 50 18.7**	**-1.1**
	5.9nm,0.3s						
EBEN	**Beniarda**	**2.45**	**334**	P	**Pn**	**13 49 51.2**	**+0.4**
	1.2nm,0.1s,SNR=8.6						
EBEN				S	**Sn**	**13 50 18.2**	**-1.6**
	5.9nm,0.3s						
EIBI	**Ibiza**	**2.52**	**3**	P	**Pn**	**13 49 53.3**	**+1.6**
	6.4nm,0.2s,SNR=7.5						
EIBI				S	**Sn**	**13 50 20.8**	**-0.8**
	20nm,0.2s,SNR=5.0						
EIBI	**Ibiza**	**2.52**	**3**	P	**Pn**	**13 49 53.3**	**+1.5**
	6.4nm,0.2s,SNR=7.5						
EIBI				S	**Sn**	**13 50 20.8**	**-0.8**
	20nm,0.2s,SNR=5.0						
ETOB	**Tobarra**	**3.02**	**316**	P	**Pn**	**13 50 00.0**	**+1.4**
	1.5nm,0.2s,SNR=9.1						
ETOB				S	**Sn**	**13 50 33.1**	**-0.9**
	4.0nm,0.2s						
ETOB	**Tobarra**	**3.02**	**316**	P	**Pn**	**13 50 00.0**	**+1.3**
	1.5nm,0.2s,SNR=9.1						
ETOB				S	**Sn**	**13 50 32.4**	**-1.6**
	4.0nm,0.2s						
EHUE	**Huescar**	**3.26**	**295**	P	**Pn**	**13 50 03.9**	**+2.0**
	0.7nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**13 50 39.7**	**-0.1**
	1.4nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**3.26**	**295**	P	**Pn**	**13 50 04.2**	**+2.3**
	0.7nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**13 50 39.7**	**-0.1**
	1.4nm,0.1s,SNR=7.9						
EBER	**Berja**	**3.27**	**278**	P	**Pn**	**13 50 02.4**	**+0.3**
	1.3nm,0.1s,SNR=8.7						
EBER				S	**Sn**	**13 50 39.3**	**-0.6**
	6.7nm,0.4s						
EBER	**Berja**	**3.27**	**278**	P	**Pn**	**13 50 02.4**	**+0.4**
	1.3nm,0.1s,SNR=8.7						
EBER				S	**Sn**	**13 50 39.3**	**-0.7**
	6.7nm,0.4s						
ECHE	**Chera**	**3.50**	**332**	P	**Pn**	**13 50 06.5**	**+1.2**
	0.6nm,0.2s,SNR=7.9						
ECHE				S	**Sn**	**13 50 44.5**	**-1.2**
	1.2nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.51**	**21**	P	**Pn**	**13 50 06.2**	**+0.8**
	2.2nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**13 50 45.5**	**-0.5**
	5.3nm,0.5s,SNR=7.9						
ETOS	**Mallorca**	**3.51**	**21**	P	**Pn**	**13 50 06.2**	**+0.8**
	2.2nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**13 50 45.5**	**-0.5**
	5.3nm,0.5s,SNR=7.9						
EVIA	**Vianos**	**3.60**	**307**	P	**Pn**	**13 50 09.0**	**+2.4**
	1.3nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**13 50 47.6**	**-0.5**
	2.4nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.61**	**292**	P	**Pn**	**13 50 08.1**	**+1.4**
	1.4nm,0.1s,SNR=10						
EQES				S	**Sn**	**13 50 47.4**	**-1.0**
	3.4nm,0.2s						
EQES	**Quesada**	**3.61**	**292**	P	**Pn**	**13 50 08.1**	**+1.4**
	1.4nm,0.1s,SNR=10						
EQES				S	**Sn**	**13 50 47.4**	**-1.0**
	3.4nm,0.2s						
EQUE	**Quentar**	**3.74**	**282**	P	**Pn**	**13 50 09.5**	**+0.9**
	1.0nm,0.2s,SNR=7.9						
EQUE				S	**Sn**	**13 50 51.3**	**-0.4**
	1.7nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.06**	**342**	P	**Pn**	**13 50 15.0**	**+2.1**
	0.8nm,0.1s,SNR=7.5						
EMOS				S	**Sn**	**13 50 59.1**	**-0.3**
	2.6nm,0.3s						
EMOS	**Mosqueruela**	**4.06**	**342**	P	**Pn**	**13 50 15.0**	**+2.1**
	0.8nm,0.1s,SNR=7.5						
EMOS				S	**Sn**	**13 50 59.1**	**-0.3**
	2.6nm,0.3s						
EPOB	**Poblet**	**4.84**	**359**	P	**Pn**	**13 50 25.6**	**+2.0**
	0.8nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**13 51 16.0**	**-2.7**
	2.7nm,0.5s,SNR=7.9						
EPOB	**Poblet**	**4.84**	**359**	P	**Pn**	**13 50 25.6**	**+2.0**
	0.8nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**13 51 16.0**	**-2.8**
	2.7nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**4.85**	**292**	P	**Pn**	**13 50 24.1**	**+0.3**
	0.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**13 51 15.8**	**-3.3**
	0.7nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**4.85**	**292**	P	**Pn**	**13 50 24.1**	**+0.3**
	0.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**13 51 15.8**	**-3.3**
	0.7nm,0.2s,SNR=7.9						

WEL 04 14:25:58.0±0.3**, 3916S**×**17490E, h195**km±2km**, ML3.7**/19**, 1C, Error ellipse: s-maj=2.1km s-min=2.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PKVZ	**Pokaka**	**0.37**	**111**	PN	Pn	14 26 24.0	0.0
PKVZ				SN	Sn	14 26 44.2	0.0
MTVZ	**Mangateitei**	**0.49**	**117**	PN	Pn	14 26 24.1	-0.4
MTVZ				SN	Sn	14 26 44.7	-0.2
WPVZ	**Whakapapa**	**0.50**	**95**	*e*PN	Pn	14 26 24.5	0.0
WNVZ	**Wahianoa**	**0.56**	**107**	PN	Pn	14 26 25.0	+0.3
WAZ	**Wanganui**	**0.60**	**174**	PN	Pn	14 26 25.1	+0.3
WAZ				SN	Sn	14 26 45.9	+0.2
NEZ	**North Egmont**	**0.64**	**260**	PN	Pn	14 26 25.0	-0.1
MOVZ	**Moawhango**	**0.70**	**111**	PN	Pn	14 26 25.4	0.0
MOVZ				SN	Sn	14 26 45.4	-1.2
NRZ	**Ngariki Road**	**0.77**	**257**	PN	Pn	14 26 25.5	-0.3
NWEZ	**Newall Road**	**0.81**	**262**	PN	Pn	14 26 25.7	-0.3
TSZ	**Takapari Road**	**1.21**	**138**	PN	Pn	14 26 29.3	+0.5
BKZ	**Black Stump Fm**	**1.23**	**91**	PN	Pn	14 26 28.6	-0.4
BKZ				SN	Sn	14 26 51.1	-1.8
MRZ	**Mangatainoka R**	**1.59**	**161**	PN	Pn	14 26 32.1	+0.1
MRZ				SN	Sn	14 26 57.5	-1.0
KIW	**Kapiti Island**	**1.70**	**180**	PN	Pn	14 26 32.9	-0.1
PXZ	**Pawanui**	**1.75**	**121**	PN	Pn	14 26 33.9	+0.4
PXZ				SN	Sn	14 27 00.5	-0.6
TIWZ	**Tintock**	**1.78**	**155**	PN	Pn	14 26 34.0	+0.1
DUWZ	**D’Urville Isla**	**1.81**	**204**	PN	Pn	14 26 33.4	-0.7
BFZ	**Birch Farm**	**1.84**	**146**	PN	Pn	14 26 34.4	0.0
URZ	**Urewera**	**1.95**	**63**	PN	Pn	14 26 33.6	-2.0
CAW	**Cannon Point**	**1.95**	**176**	PN	Pn	14 26 35.4	-0.2
MTW	**Mount Morrison**	**2.05**	**167**	PN	Pn	14 26 36.1	-0.5
MRW	**Makara Radio**	**2.07**	**184**	PN	Pn	14 26 36.5	-0.3
TCW	**Tory Channel**	**2.11**	**193**	PN	Pn	14 26 36.9	-0.3
WEL	**Wellington**	**2.12**	**183**	PN	Pn	14 26 37.1	-0.3
SNZO	**South Karori**	**2.15**	**184**	PN	Pn	14 26 37.0	-0.7
KNZ	**Kokohu**	**2.16**	**87**	PN	Pn	14 26 37.2	-0.6
MWZ	**Matawai**	**2.21**	**69**	PN	Pn	14 26 36.8	-1.6
BHW	**Baring Head**	**2.25**	**181**	PN	Pn	14 26 38.1	-0.6
MSWZ	**Moikau Station**	**2.27**	**173**	PN	Pn	14 26 38.1	-0.9
TRWZ	**Traveller**	**2.31**	**165**	PN	Pn	14 26 38.8	-0.7
NNZ	**Nelson**	**2.36**	**209**	⇑PN	Pn	14 26 38.8	-1.2
NNZ				SN	Sn	14 27 10.5	-2.3
TUWZ	**Tuamarina**	**2.38**	**198**	PN	Pn	14 26 39.3	-0.9
QRZ	**Quartz Range**	**2.47**	**227**	PN	Pn	14 26 39.1	-2.1
BSWZ	**Blackbirch Sta**	**2.67**	**197**	PN	Pn	14 26 42.9	-0.5
PUZ	**Puketiti**	**2.84**	**69**	PN	Pn	14 26 43.0	-2.4
THZ	**Tophouse**	**3.02**	**210**	PN	Pn	14 26 45.3	-2.2
KHZ	**Kahutara**	**3.42**	**197**	PN	Pn	14 26 51.0	-1.3
DSZ	**Denniston Nort**	**3.50**	**222**	PN	Pn	14 26 50.7	-2.7
LTZ	**Lake Taylor**	**4.13**	**208**	PN	Pn	14 26 59.0	-2.2
MQZ	**McQueen’s Vall**	**4.85**	**200**	*e*PN	Pn	14 27 06.9	-3.4
MQZ				SN	Sn	14 28 00.6	-6.6
WVZ	**Waitaha Valley**	**5.02**	**217**	*e*PN	Pn	14 27 09.6	-2.9
EAZ	**Earnscleugh**	**7.35**	**213**	SN	Sn	14 28 56.1	-10

*ISCJB **04** 14:49:45.3±0.4, 3500N±004×7147E±006, h10km, mb3.7/9, Error ellipse: s-maj=7.7km s-min=4.0km az=120.3*
*NEIC **04** 14:49:46.6±0.7, 3491N×7141E, h10km, mb3.7/3, Error ellipse: s-maj=15.1km s-min=5.7km az=49.0*
*IDC **04** 14:49:53.1±9.2, 3511N×7149E, h51km±81km, mb3.4/7, mb1 3.5/10, mb1mx3.4/23, mbtmp3.7/10, ML3.7/3, Error ellipse: s-maj=45.2km s-min=22.0km az=15.0*
*NNC **04** 14:49:54.6±6.8, 3567N×7112E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=54.7km s-min=50.5km az=63.0*
ISC 04 14:49:47.1±0.4**, 3497N**±003×**7135E**±005**, h10**km**, n36,** σ**1s35**/44**, mb3.7**/9**, 4C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.23**	**158**	P	**Pg**	**14 50 14.5**	**+3.7**
CHCP	**Chirah Chowk**	**2.05**	**129**	P	**Pg**	**14 50 26.9**	**+0.4**
THW	**Thamme Wali**	**2.20**	**171**	P	**Pg**	**14 50 31.1**	**+1.9**
DRP	**Derazinda**	**3.36**	**197**	P	**Pg**	**14 50 51.4**	**-0.1**
DRP				S	**Sg**	**14 51 32.0**	**-3.0**
DLH	**Dalhousie**	**4.54**	**121**	*e*P	**Pn**	**14 50 59.0**	**+3.1**
DLH				*e*S	**Sg**	**14 52 14.0**	**+1.0**
SDNR	**Sundarnagar**	**5.84**	**125**	*e*P	**Pn**	**14 51 17.0**	**+3.3**
SDNR				*e*S	**Sn**	**14 52 24.0**	**+3.3**
AAK	**Ala-Archa**	**8.03**	**17**	*e*Pn	**Pn**	**14 51 45.0**	**+1.2**
	8.3nm,0.3s						
AAK				*e*Sn	**Sn**	**14 53 15.1**	**+0.4**
KK31	**Karatay Array**	**8.15**	**356**	⇑Pn	**Pn**	**14 51 47.0**	**+1.6**
	7.1nm,0.3s,baz=170,slow=12,SNR=296						
KK31				⇑Sn	**Sn**	**14 53 16.7**	**-0.8**
	2.0nm,0.3s,baz=168,slow=24,SNR=4.6						
TKM2	**Tokmak 2**	**8.60**	**21**	⇓Pn	**Pn**	**14 51 53.4**	**+1.8**
	0.2nm,0.5s						
TKM2				⇑Sn	**Sn**	**14 53 25.6**	**-3.0**
	0.2nm,0.6s						
KOLN	**Koldanda**	**12.68**	**121**	*e*P	**Pn**	**14 52 47.1**	**-0.4**
	33nm,0.5s						
GKN	**Gorkha**	**13.29**	**118**	*e*P	**Pn**	**14 52 54.2**	**-1.5**
	24nm,0.5s						
DMN	**Daman**	**13.85**	**118**	*e*P	**Pn**	**14 53 01.6**	**-1.9**
	11nm,0.3s						
KKN	**Kakani**	**13.88**	**117**	*e*P	**Pn**	**14 53 03.1**	**-0.7**
	21nm,0.5s						
PKI	**Pulchoki**	**14.09**	**118**	*e*P	**Pn**	**14 53 06.0**	**-0.8**
	19nm,0.6s						
GUN	**Gumba**	**14.25**	**116**	*e*P	**Pn**	**14 53 07.8**	**-1.1**
	15nm,0.3s						
MKAR	**Makanchi Array**	**14.40**	**32**	P	**Pn**	**14 53 13.0**	**+2.1**
	0.2nm,0.3s,baz=206,slow=13,SNR=4.8						
JIRN	**Jiri**	**14.62**	**116**	*e*P	**Pn**	**14 53 12.4**	**-1.5**
	22nm,0.3s						
AB31	**Akbulak array**	**16.57**	**333**	Pn	**Pn**	**14 53 39.0**	**-0.4**
	2.6nm,0.5s,baz=163,slow=12,SNR=45						
AB31				⇑Sn	**Sn**	**14 56 31.7**	**-12**
	1.4nm,0.6s,baz=159,slow=22,SNR=6.2						
KURK	**Kurchatov**	**16.60**	**16**	*e*Pn	**Pn**	**14 53 39.0**	**-0.8**
	4.1nm,0.7s						
ZRNK	**Zerenda**	**18.05**	**355**	*e*Pn	**Pn**	**14 53 55.6**	**-2.4**
	1.8nm,0.6s						
BVAR	**Borovoye Array**	**18.06**	**358**	P	**Pn**	**14 53 58.3**	**+0.2**
	0.3nm,0.3s,baz=153,slow=9.7,SNR=6.0						
AKTK	**Aktyubinsk**	**18.25**	**332**	P	**Pn**	**14 54 01.4**	**+1.0**
AKTO	**Aktyubinsk**	**18.25**	**332**	⇓Pn	**Pn**	**14 54 01.4**	**+1.0**
AKTO				⇓Sn	**Sn**	**14 57 14.8**	**-9.4**
AKTO	**Aktyubinsk**	**18.25**	**332**	P	**Pn**	**14 54 01.4**	**+1.0**
	0.4nm,0.3s,baz=141,slow=13,SNR=9.4						
ZAL	**Zalesovo**	**21.18**	**22**	P	**P**	**14 54 31.5**	**-1.1**
	9.6nm,0.4s,mb4.5,baz=256,slow=7.9,SNR=24						
ZAL	**Zalesovo**	**21.18**	**22**	P	**P**	**14 54 31.5**	**-1.1**
ARU	**Arti**	**23.17**	**342**	P	**P**	**14 54 50.7**	**-3.0**
	3.5nm,0.8s,mb3.8						
SONM	**Songino Array**	**29.00**	**53**	P	**P**	**14 55 46.4**	**-0.5**
	0.1nm,0.3s,mb3.0,baz=26,slow=23,SNR=3.0						
AKASG	**Malin Array Be**	**34.14**	**311**	P	**P**	**14 56 32.9**	**+0.7**
	0.3nm,0.4s,mb3.6,baz=81,slow=7.0,SNR=4.5						
FINES	**FINESS Array B**	**38.91**	**327**	P	**P**	**14 57 12.9**	**0.0**
	1.9nm,1.0s,mb3.8,baz=121,slow=9.2,SNR=4.9						
ARCES	**ARCESS Array B**	**42.67**	**338**	P	**P**	**14 57 44.3**	**+0.5**
	1.1nm,0.4s,mb3.9,baz=111,slow=8.0,SNR=27						
ARE0	**ARCESS Array S**	**42.67**	**338**	P	**P**	**14 57 43.4**	**-0.4**
NB2	**NORSAR Subarra**	**45.78**	**324**	P	**P**	**14 58 07.4**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**45.78**	**324**	P	**P**	**14 58 08.5**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=101,slow=7.2,SNR=6.5						
TORD	**Torodi Ar. Bea**	**65.98**	**270**	P	**P**	**15 00 35.1**	**+1.5**
	comp=Z,0.4nm,0.5s,mb3.7,baz=50,slow=5.9,SNR=6.5						
ASAR	**Alice Springs**	**83.14**	**125**	P	**P**	**15 02 13.9**	**+0.7**
	comp=Z,0.3nm,0.7s,mb3.4,baz=310,slow=5.3,SNR=6.1						

MAN 04 15:15:03.3, 1307N×**12070E, h3**km**, mb1.7, ML3.5, MS2.1, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.49**	**30**	*e*P	Pg	15 15 13.4	+0.7
LUBP	**Lubang**	**0.79**	**326**	*e*P	Pg	15 15 18.7	+0.2
BUSP	**Coron**	**1.17**	**205**	*e*P	Pg	15 15 26.6	+0.9
BUSP				*e*S	Sg	15 15 43.2	+2.3
BOAC	**Boac**	**1.18**	**71**	*e*P	Pg	15 15 25.5	-0.4
CUYO	**Cuyo Island**	**2.23**	**172**	*e*P	Pn	15 15 41.2	+0.1
ENPP	**El Nido**	**2.24**	**214**	*e*P	Pn	15 15 41.5	+0.3

*ISCJB **04** 15:18:38.9±0.4, 1368N±004×12075E±009, h190km±4km, mb3.6/8, Error ellipse: s-maj=13.6km s-min=6.4km az=179.3*
*IDC **04** 15:18:39.6±1.3, 1357N×12068E, h186km±18km, mb3.3/7, mb1 3.4/7, mb1mx3.1/21, mbtmp3.8/7, Error ellipse: s-maj=144.6km s-min=13.5km az=66.0*
*NEIC **04** 15:18:39.9±0.7, 1368N×12093E, h192km±7km, mb3.7/1, Error ellipse: s-maj=23.9km s-min=9.9km az=73.0*
*MAN **04** 15:18:41.1, 1373N×12069E, h158km, mb3.5, ML4.7, MS2.9*
ISC 04 15:18:39.9±0.4**, 1369N**±004×**12074E**±009**, h185**km±4km**, n27,** σ**0s79**/30**, mb3.6**/8**, 1D, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.28**	**132**	*e*P	**Pn**	**15 19 04.1**	**-0.4**
TGY	**Tagaytay City**	**0.45**	**25**	P	**Pn**	**15 19 05.9**	**+0.9**
	327nm,0.3s,baz=263,slow=1.5,SNR=38						
LUBP	**Lubang**	**0.48**	**275**	*e*P	**Pn**	**15 19 04.1**	**-1.0**
BOAC	**Boac**	**1.09**	**102**	*e*P	**Pn**	**15 19 08.1**	**-0.6**
BOAC				*e*S	**Sn**	**15 19 30.6**	**-0.5**
BUSP	**Coron**	**1.76**	**198**	*e*P	**Pn**	**15 19 15.3**	**+0.6**
BUSP				*e*S	**Sn**	**15 19 40.4**	**-1.4**
BALP	**Baler**	**2.19**	**21**	*e*P	**Pn**	**15 19 20.0**	**+0.7**
SCZP	**Santa Cruz**	**2.23**	**339**	*e*P	**Pn**	**15 19 19.2**	**-0.5**
BCPH	**Baguio City Da**	**2.68**	**357**	⇓*i*P	**Pn**	**15 19 25.1**	**+0.2**
BCPH				*i* S	**Sn**	**15 19 59.2**	**-0.7**
ENPP	**El Nido**	**2.78**	**208**	*e*P	**Pn**	**15 19 27.2**	**+1.1**
BOLP	**Bolinao**	**2.79**	**343**	*e*P	**Pn**	**15 19 26.0**	**-0.2**
CUYO	**Cuyo Island**	**2.83**	**175**	*e*P	**Pn**	**15 19 27.4**	**+0.7**
CAUP	**Cauayan**	**3.40**	**18**	*e*P	**Pn**	**15 19 34.6**	**+1.0**
GUIM	**Jordan**	**3.54**	**149**	*e*P	**Pn**	**15 19 36.9**	**+1.6**
PALP	**Palanan**	**3.73**	**26**	*e*P	**Pn**	**15 19 38.2**	**+0.6**
ABRA	**Dolores**	**3.94**	**360**	*e*P	**Pn**	**15 19 39.7**	**-0.6**
APYP	**Conner**	**4.18**	**7**	*e*P	**Pn**	**15 19 43.7**	**+0.4**
KSM	**Kuching**	**15.93**	**221**	P	**Pn**	**15 22 15.1**	**+1.1**
WRA	**Warramunga Arr**	**36.00**	**158**	P	**P**	**15 25 21.8**	**-1.2**
	0.4nm,0.4s,mb3.4,baz=331,slow=10.0,SNR=17						
AS31	**Alice Springs**	**39.29**	**161**	*e*P	**P**	**15 25 49.8**	**-0.9**
ASAR	**Alice Springs**	**39.29**	**161**	P	**P**	**15 25 50.0**	**-0.6**
	0.5nm,0.3s,mb3.6,baz=336,slow=7.9,SNR=49						
MKAR	**Makanchi Array**	**46.06**	**324**	P	**P**	**15 26 45.9**	**+0.8**
	0.5nm,0.4s,mb3.5,baz=115,slow=10.0,SNR=3.8						
KURK	**Kurchatov**	**50.22**	**326**	*e*P	**P**	**15 27 16.6**	**-0.3**
	2.1nm,0.9s,mb3.8						
BVAR	**Borovoye Array**	**55.80**	**326**	P	**P**	**15 27 57.1**	**-0.6**
	0.4nm,0.5s,mb3.5,baz=82,slow=11,SNR=3.2						
ARCES	**ARCESS Array B**	**79.11**	**339**	P	**P**	**15 30 22.9**	**-0.8**
	1.0nm,0.7s,mb3.6,baz=70,slow=7.8,SNR=6.3						
ARE0	**ARCESS Array S**	**79.11**	**339**	*e*P	**P**	**15 30 29.0**	**+5.3**
ARE0				*e*		15 30 39.9	
FINES	**FINESS Array B**	**80.31**	**331**	P	**P**	**15 30 31.1**	**+0.9**
	1.0nm,0.9s,mb3.4,baz=56,slow=4.8,SNR=4.1						
HFS	**Hagfors**	**86.50**	**331**	P	**P**	**15 31 01.7**	**-0.1**
	1.5nm,0.9s,mb3.8,baz=126,slow=7.5,SNR=4.9						

*IDC **04** 15:24:12.5±1.2, 221N×12555E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/16, mbtmp3.7/5, Error ellipse: s-maj=146.3km s-min=19.4km az=68.0*
*ISCJB **04** 15:24:14.4±0.8, 30N±01×1277E±04, h33km, mb3.9/8, Error ellipse: s-maj=57.6km s-min=12.5km az=146.2*
*NEIC **04** 15:24:16.5±0.7, 276N×12703E, h35km, mb4.2/3, Error ellipse: s-maj=132.0km s-min=10.5km az=70.0*
ISC 04 15:24:16.5±0.8**, 30N**±01×**1277E**±04**, h35**km**, n10,** σ**0s73**/10**, mb3.9**/8**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**23.71**	**164**	*e*P	**P**	**15 29 23.7**	**-1.5**
	4.9nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**23.72**	**164**	P	**P**	**15 29 25.5**	**+0.2**
	2.4nm,0.6s,mb3.8,baz=334,slow=11,SNR=33						
WB2	**Warramunga Arr**	**23.72**	**164**	*e*P	**P**	**15 29 25.3**	**0.0**
MBWA	**Marble Bar**	**25.27**	**198**	P	**P**	**15 29 39.9**	**+0.5**
	12nm,1.2s,mb4.3						
ASAR	**Alice Springs**	**27.19**	**168**	P	**P**	**15 29 56.9**	**+0.1**
	0.7nm,0.6s,mb3.4,baz=345,slow=7.4,SNR=15						
STKA	**Stephens Creek**	**37.12**	**160**	P	**P**	**15 31 24.5**	**+0.9**
	1.6nm,0.6s,mb4.0,baz=327,slow=1.2,SNR=4.8						
STKA	**Stephens Creek**	**37.12**	**160**	P	**P**	**15 31 24.4**	**+0.7**
STKA				P		15 31 24.5	
ULN	**Ulaanbaatar**	**48.11**	**341**	*e*P	**P**	**15 32 53.3**	**+0.6**
	1.3nm,0.7s,mb4.1						
SONM	**Songino Array**	**48.29**	**341**	P	**P**	**15 32 54.6**	**+0.4**
	0.7nm,0.8s,mb3.8,baz=157,slow=9.5,SNR=5.8						
MKAR	**Makanchi Array**	**58.71**	**325**	P	**P**	**15 34 09.5**	**-1.1**
	0.3nm,0.4s,mb3.7,baz=108,slow=8.8,SNR=4.7						

*CSEM **04** 16:04:02.7, 1870S×17693W, h33km, mb5.6*
*BJI **04** 16:04:53.8, 1920S×17669W, h579km, mB4.5, mb4.6*
*MOS **04** 16:04:54.5±0.9, 1917S×17748W, h553km, mb5.0/18, Error ellipse: s-maj=12.8km s-min=8.6km az=156.0*
*ISCJB **04** 16:04:54.4±0.8, 1926S±005×17751W±004, h553km±10km, mb4.5/70, Error ellipse: s-maj=9.3km s-min=4.5km az=120.9*
*NEIC **04** 16:04:55.7±0.6, 1922S×17746W, h559km±7km, mb4.6/48, Error ellipse: s-maj=7.1km s-min=3.8km az=155.0*
*IDC **04** 16:04:56.2±1.0, 1937S×17745W, h566km±10km, mb3.9/18, mb1 4.0/21, mb1mx4.0/22, mbtmp4.8/21, Error ellipse: s-maj=11.4km s-min=8.3km az=140.0*
ISC 04 16:04:56.5±0.8**, 1926S**±005×**17747W**±004**, h564**km±10km**, n331,** σ**0s66**/292**, mb4.5**/70**, 80C-74D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.62**	**47**	P	**P**	**16 06 48.7**	**-2.1**
	111nm,0.3s,baz=71,slow=1.0,SNR=148						
AFI				S	**S**	**16 08 17.8**	**-6.8**
	20nm,0.3s,baz=55,slow=23,SNR=7.1						
AFI	**Afiamalu**	**7.62**	**47**	*e*P	**P**	**16 06 48.8**	**-2.1**
AFI				*e*S	**S**	**16 08 16.5**	**-8.1**
AFI				pmax	pmax		
	comp=Z,419nm,0.6s						
AFI	**Afiamalu**	**7.62**	**47**	*e*P	**P**	**16 06 48.8**	**-2.1**
	comp=Z,419nm,0.6s						
AFI				*e*S	**S**	**16 08 16.5**	**-8.1**
DZM	**Mont Dzumac**	**15.31**	**257**	P	**P**	**16 08 09.6**	**+0.7**
	comp=Z,2.3nm,0.3s,baz=72,slow=18,SNR=22						
RAR	**Rarotonga**	**16.72**	**100**	P	**P**	**16 08 21.6**	**-0.3**
	comp=Z,3.2nm,0.3s,baz=229,slow=7.7,SNR=5.1						
MTAZ	**Motutapu**	**18.70**	**199**	PN	**P**	**16 08 43.1**	**+3.1**
KAAZ	**Kauri Point**	**18.80**	**200**	*e*PN	**P**	**16 08 43.3**	**+2.5**
OTAZ	**Otara**	**18.85**	**199**	PN	**P**	**16 08 43.4**	**+2.1**
WTAZ	**Waiatarua**	**18.94**	**200**	PN	**P**	**16 08 44.5**	**+2.3**
URZ	**Urewera**	**19.51**	**193**	P	**P**	**16 08 46.2**	**-1.1**
	comp=Z,2.9nm,0.3s,baz=54,slow=3.7,SNR=21						
URZ				S	**S**	**16 11 48.9**	**-5.7**
	comp=Z,0.6nm,0.3s,baz=189,slow=21,SNR=7.6						
URZ				ScP	ScP	16 15 22.9	-0.3
	comp=Z,0.3nm,0.3s,baz=168,slow=11,SNR=5.6						
BKZ	**Black Stump Fm**	**20.52**	**193**	*e*PN	**P**	**16 08 54.6**	**-1.8**
QRZ	**Quartz Range**	**23.14**	**200**	PN	**P**	**16 09 20.6**	**+0.7**
THZ	**Tophouse**	**23.88**	**198**	PN	**P**	**16 09 25.6**	**-0.9**
LTZ	**Lake Taylor**	**25.01**	**198**	PN	**P**	**16 09 35.2**	**-1.2**
RPZ	**Rata Peaks**	**26.22**	**199**	P	**P**	**16 09 46.1**	**-1.0**
	comp=Z,3.4nm,0.5s,mb4.2,baz=18,slow=17,SNR=5.5						
PAE	**Paea**	**26.49**	**91**	*e*P	**P**	**16 09 49.2**	**-0.3**
	comp=Z,59nm,1.0s,mb5.2						
PAE	**Paea**	**26.49**	**91**	*e*P	**P**	**16 09 49.2**	**-0.3**
PAE				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.2						
PPT	**Papeete**	**26.51**	**91**	*e*P	**P**	**16 09 49.7**	**0.0**
	comp=Z,28nm,1.0s,mb4.8						
PPT	**Papeete**	**26.51**	**91**	P	**P**	**16 09 48.7**	**-1.0**
	comp=Z,24nm,0.5s,mb5.1,baz=194,slow=15,SNR=4.3						
FOZ	**Fox Glacier**	**26.53**	**201**	PN	**P**	**16 09 48.5**	**-1.3**
TVO	**Taravao**	**26.79**	**91**	*e*P	**P**	**16 09 52.1**	**0.0**
	comp=Z,28nm,0.6s,mb5.0						
TVO	**Taravao**	**26.79**	**91**	*e*P	**P**	**16 09 52.1**	**0.0**
TVO				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.1						
PMOR	**Pomariorio Ree**	**28.56**	**86**	*e*P	**P**	**16 10 07.3**	**-0.3**
	comp=Z,36nm,0.9s,mb5.0						
CTA	**Charters Tower**	**34.13**	**262**	⇓*i*P	**P**	**16 10 55.2**	**+0.2**
	comp=Z,33nm,0.7s,mb5.0						
CTA				*e*SCP	ScP	16 16 10.2	+2.8
CTA	**Charters Tower**	**34.13**	**262**	P	**P**	**16 10 55.6**	**+0.6**
	comp=Z,38nm,0.7s,mb5.0,baz=88,slow=12,SNR=21						
CTA				ScP	ScP	16 16 09.6	+2.3
	comp=Z,9.8nm,1.0s,baz=310,slow=5.5,SNR=4.8						
CTA	**Charters Tower**	**34.13**	**262**	⇓*i*P	**P**	**16 10 55.2**	**+0.2**
CTA				pmax	pmax		
	comp=Z,33nm,0.7s						
CTAO	**Charters Tower**	**34.13**	**262**	*e*P	**P**	**16 10 55.7**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,169nm,1.4s,mb5.4						
CTAO	**Charters Tower**	**34.13**	**262**	*e*P	**P**	**16 10 55.7**	**+0.7**
	comp=Z,170nm,1.4s,mb5.4						
PMG	**Port Moresby**	**35.57**	**281**	*e*P	**P**	**16 11 08.3**	**+1.3**
PMG				pmax	pmax		
	comp=Z,132nm,0.9s						
PMG	**Port Moresby**	**35.57**	**281**	*e*P	**P**	**16 11 08.2**	**+1.2**
	comp=Z,132nm,0.9s,mb5.5						
TOO	**Toolangi**	**37.04**	**233**	*e*P	**P**	**16 11 20.2**	**+1.1**
	comp=Z,38nm,0.7s,mb5.0						
TOO	**Toolangi**	**37.04**	**233**	*e*P	**P**	**16 11 20.2**	**+1.1**
TOO				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.0						
TAOE	**Nuku Hiva Isla**	**37.57**	**79**	*e*P	**P**	**16 11 23.3**	**-0.2**
	comp=Z,221nm,0.8s						
TAU	**Tasmania Unive**	**37.86**	**224**	*e*P	**P**	**16 11 26.7**	**+0.9**
	comp=Z,10nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**38.78**	**243**	⇓*i*P	**P**	**16 11 34.4**	**+1.1**
	comp=Z,42nm,1.1s,mb4.9						
STKA	**Stephens Creek**	**38.78**	**243**	P	**P**	**16 11 34.5**	**+1.2**
	comp=Z,38nm,0.6s,mb5.1,baz=88,slow=8.6,SNR=171						
ADE	**Adelaide**	**41.68**	**239**	*e*P	**P**	**16 11 57.0**	**+0.6**
WB2	**Warramunga Arr**	**45.27**	**261**	*e*P	**P**	**16 12 23.4**	**-0.7**
WRAB	**Tennant Creek**	**45.27**	**261**	⇓*i*P	**P**	**16 12 23.6**	**-0.6**
WRAB				*i* *PP	pP	16 14 14.8	+9.1
WRAB	**Tennant Creek**	**45.27**	**261**	⇓*e*P	**P**	**16 12 23.6**	**-0.5**
	comp=Z,53nm,0.6s,mb5.2						
WRA	**Warramunga Arr**	**45.28**	**261**	P	**P**	**16 12 23.9**	**-0.3**
	comp=Z,33nm,0.5s,mb5.1,baz=98,slow=8.3,SNR=617						
WRA				PcP	PcP	16 13 52.1	+0.2
	comp=Z,4.0nm,0.7s,baz=87,slow=3.5,SNR=4.4						
WRA				ScP	ScP	16 16 53.1	+2.1
	comp=Z,3.1nm,1.0s,baz=88,slow=4.9,SNR=6.0						
WRA				S	**S**	**16 18 21.7**	**-2.1**
	comp=Z,2.8nm,1.0s,baz=98,slow=13,SNR=4.9						
WRA	**Warramunga Arr**	**45.28**	**261**	P	**P**	**16 12 23.9**	**-0.3**
WRA						16 13 52.1	
WRA				S	**S**	**16 18 21.7**	**-2.1**
AS31	**Alice Springs**	**45.30**	**255**	⇓*i*P	**P**	**16 12 24.6**	**+0.2**
AS31				*e*S	**S**	**16 18 22.5**	**-1.6**
AS31				*e*ScS	ScS	16 21 20.1	+1.4

ASAR Alice Springs 45.30 255 P P 16 12 24.6 +0.2
comp=Z,48nm,0.5s,mb5.2,baz=91,slow=7.4,SNR=877
ASAR PcP PcP 16 13 51.9 -0.1
comp=Z,3.8nm,0.5s,baz=118,slow=3.4,SNR=5.2
ASAR ScP ScP 16 16 53.3 +2.2
comp=Z,2.4nm,0.8s,baz=106,slow=5.3,SNR=4.9
ASAR S S **16 18 23.3 -0.8**
comp=Z,3.5nm,0.7s,baz=89,slow=15,SNR=17
ASAR Alice Springs 45.30 255 P P **16 12 24.6 +0.2**
ASAR 16 13 51.9
ASAR S S **16 18 23.3 -0.8**
ASPA Alice Springs 45.30 255⇓*i*P P **16 12 24.6 +0.2**
ASPA *e*S S **16 18 22.5 -1.7**
ASPA *e*SCS ScS 16 21 20.1 +1.4
KAKA Kakadu 48.46 270 *e*P P **16 12 47.9 -0.3**
comp=Z,76nm,0.5s,mb5.5
FORT Forrest 50.25 246⇓*i*P P **16 13 01.0 -0.3**
comp=Z,84nm,0.6s,mb5.3
FITZ Fitzroy Crossi 53.70 261 *e*P P **16 13 25.9 -0.1**
comp=Z,45nm,0.6s,mb5.0
MBWA Marble Bar 58.62 257 *e*P P **16 13 59.9 0.0**
comp=Z,33nm,0.7s,mb4.7
KLBR Kellerberrin 59.04 244 *e*P P **16 14 02.7 0.0**
comp=Z,41nm,0.7s,mb4.8
VNDA Vanda 59.19 185 P P **16 14 02.4 -1.4**
comp=Z,1.6nm,0.6s,mb3.5,baz=331,slow=10,SNR=8.3
VNDA Vanda 59.19 185 *e*P P **16 14 01.0 -2.7**
VNDA pmax pmax
comp=Z,100nm,0.6s
VNDA Vanda 59.19 185 *e*P P **16 14 01.0 -2.7**
comp=Z,1.5nm,0.6s
NWAO Narrogin (SRO) 59.37 243 *e*P P **16 14 05.2 +0.2**
NWAO pmax pmax
comp=Z,25nm,1.1s
NWAO Narrogin (SRO) 59.37 243 *e*P P **16 14 05.2 +0.3**
comp=Z,26nm,1.1s,mb4.4
MUN Mundaring 60.31 244 *e*P P **16 14 10.9 -0.3**
CASY Casey 65.29 205 P P **16 14 43.1 -0.1**
comp=Z,18nm,1.3s,mb4.3
MJAR Matsushiro Arr 59.51 323 P P **16 15 08.3 -0.7**
comp=Z,9.1nm,0.6s,mb4.5,baz=156,slow=5.5,SNR=33
MJAR Matsushiro Arr 69.51 323 P P **16 15 08.3 -0.7**
MAJO Matsushiro 69.51 323 *e*P P **16 15 07.7 -1.3**
MAJO pmax pmax
comp=Z,15nm,0.9s,mb4.5
MAJO Matsushiro 69.51 323 *e*P P **16 15 07.7 -1.3**
comp=Z,15nm,0.9s,mb4.5
MAT Matsushiro 69.51 323 P P **16 15 07.5 -1.5**
MAT *e*S S 16 23 28.2 -4.1
MAT Matsushiro 69.51 323 *e*P P **16 15 08.0 -1.0**
MAT pmax pmax
comp=Z,80nm,0.8s,mb5.3
MAT Matsushiro 69.51 323 *e*P P **16 15 08.0 -1.0**
comp=Z,8.2nm,0.8s,mb4.3
KKM Kota Kinabalu 69.93 284⇑*e*P P **16 15 11.7 +0.2**
QSPA South Pole Qui 70.81 180 *e*P P **16 15 16.6 0.0**
comp=Z,4.3nm,0.7s,mb4.1
ASAJ Asahikawa 72.88 331 P P **16 15 29.1 +0.4**
comp=Z,10nm,0.8s,mb4.3,baz=203,slow=7.4,SNR=16
KSM Kuching 73.74 277 *e*P P **16 15 34.4 +0.8**
YSS Yuzh-Sakhalins 75.01 333*c i*P P **16 15 41.1 +0.4**
YSS pmax pmax
comp=Z,12nm,1.0s,mb4.3
YSS Yuzh-Sakhalins 75.01 333 *e*P P **16 15 41.0 +0.3**
comp=Z,11nm,1.0s,mb4.2
V03C Hunter Liggett 76.48 44⇑P P **16 15 49.2 +0.3**
baz=77
PKM Peak Mountain 76.77 46⇓P P **16 15 51.1 +0.7**
baz=77,SNR=6.7
PKD Parkfield 76.90 44⇓P P **16 15 51.4 +0.3**
baz=77
U04C Hernandez Rese 76.98 44⇓P P **16 15 52.1 +0.6**
baz=77,SNR=5.6
PACP Pacheco Peak 77.03 43⇓P P **16 15 52.3 +0.5**
baz=77
SSE Sheshan 77.28 309 *e*P P **16 15 52.4 -0.8**
SSE AMB AMB
comp=Z,17nm,0.8s,mb4.5
SSE AMB AMB
comp=Z,49nm,4.9s
S04C Ingram Canyon, 77.30 43⇑P P **16 15 53.4 +0.2**
baz=78
ARVC Arvin 77.57 46⇑P P **16 15 54.6 -0.2**
baz=78
VES Vestal, Richgr 77.81 45⇑P P **16 15 55.6 -0.4**
baz=78
S05C Merced 77.85 43⇓P P **16 15 56.0 -0.3**
baz=78
MURC Murrieta 77.85 48⇓P P **16 15 56.1 -0.2**
baz=78
BFSC Mount Baldy St 77.88 47⇓P P **16 15 56.2 -0.2**
baz=78
EDW2 Edwards Air Fo 78.01 46⇓P P **16 15 57.3 +0.2**
baz=78,SNR=13
O02C Red Bluff 78.01 40⇑P P **16 15 57.2 +0.1**
baz=78
MONP Monument Peak 78.02 49⇓P P **16 15 57.6 +0.5**
baz=78,SNR=11
T06C Millerton Lake 78.06 44⇑P P **16 15 57.2 -0.2**
baz=78
ISA Isabella 78.11 46⇑P P **16 15 57.9 +0.2**
baz=78,SNR=10
DVTC Desert V Tower 78.12 49⇓P P **16 15 58.1 +0.3**
baz=78
CMB Columbia Colle 78.22 43 *e*P P **16 15 58.1 -0.1**
CMB pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
CMB Columbia Colle 78.22 43 *e*P P **16 15 58.1 -0.1**
comp=Z,9.7nm,0.9s,mb4.1
CMB Columbia Colle 78.22 43⇓P P **16 15 58.0 -0.2**
baz=78,SNR=6.7
HELL Mitchell Peak, 78.32 44⇓P P **16 15 58.4 -0.4**
baz=78,SNR=6.2
O03C Acorn Hollow, 78.36 40⇓P P **16 15 58.8 -0.2**
baz=78
PFO Pinyon Flat Ob 78.38 48⇑P P **16 15 59.2 +0.2**
baz=78
LAVA Lava Cap Winer 78.42 42⇑P P **16 15 59.1 -0.2**
baz=79
ORV Oroville 78.42 41⇓P P **16 15 58.8 -0.4**
baz=79
S06C San Francisco 78.47 43⇑P P **16 15 59.4 -0.2**
baz=79,SNR=5.7
SWSC Sam W. Stewart 78.49 49⇓P P **16 16 00.3 +0.6**
baz=79
KCC Kaiser Creek 78.49 44⇓P P **16 15 59.7 0.0**
baz=79
LRMC Laurel Mountai 78.54 46⇓P P **16 16 00.1 +0.1**
baz=79
K01A Sixes 78.67 37⇑P P **16 16 01.0 +0.4**
baz=79
M02C Callahan 78.72 39⇓P P **16 16 01.4 +0.5**
baz=79
R05C Kirkwood Meado 78.80 42⇓P P **16 16 01.3 0.0**
baz=79,SNR=6.8
CWC Cottonwood Cre 78.81 45⇑P P **16 16 01.4 0.0**
baz=79
P05C Yuba Gap, Truc 78.82 41⇓P P **16 16 01.4 0.0**
baz=79,SNR=5.8
BELC Belle Mtn. 78.91 48⇓P P **16 16 02.2 +0.3**
baz=79,SNR=9.9
MPMC Manual Prospec 79.00 46⇑P P **16 16 02.5 +0.1**
baz=79,SNR=6.9
MTUM Tungsten Hills 79.00 44 *e*P P **16 16 03.3 +0.9**
YBH Yreka Blue Hor 79.01 39 P P **16 16 02.5 0.0**
comp=Z,5.6nm,0.5s,mb4.1,baz=202,slow=4.5,SNR=6.3
YBH Yreka Blue Hor 79.01 39⇑P P **16 16 02.7 +0.2**
baz=79
O05C Quincy 79.02 41⇓P P **16 16 02.5 0.0**
baz=79
GSC Goldstone 79.05 47⇑P P **16 16 03.0 +0.3**
baz=79
R06C Coleville 79.10 43⇑P P **16 16 03.2 +0.3**
baz=79,SNR=6.8
R07C Lee Vining 79.11 43⇑P P **16 16 03.0 0.0**
baz=79
HEC Hector,Ludlow 79.12 47⇑P P **16 16 02.9 -0.2**
baz=79,SNR=6.1
O04C Chester 79.13 40⇓P P **16 16 03.1 0.0**
baz=79
HATC Hat Creek Radi 79.20 40⇓P P **16 16 03.6 +0.2**
baz=79
GLA Glamis 79.24 49⇑P P **16 16 04.4 +0.7**
baz=79,SNR=5.4
BEKR Beckwourth 79.31 41⇑P P **16 16 04.0 0.0**
baz=80,SNR=7.8
WCN Washoe City 79.36 42⇑P P **16 16 04.4 +0.1**
baz=80
NJ2 Nanjing 79.48 309 *e*P P **16 16 06.5 +1.6**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.4
P06A Stead Airport, 79.48 41⇑P P **16 16 04.9 -0.1**
baz=80
ELFS Eagle Lake Fie 79.53 40⇑P P **16 16 05.3 +0.1**
baz=80
J02A Umpqua 79.53 37⇓P P **16 16 05.1 -0.1**
baz=80
M04C Macdoel 79.56 39⇑P P **16 16 05.3 -0.1**
baz=80
IRM Iron Mountain 79.59 48⇑P P **16 16 06.1 +0.6**
baz=80,SNR=7.7
GRAC Grapevine Rang 79.60 45⇑P P **16 16 05.7 +0.2**
baz=80
HABR Khabarovsk 79.62 330 *e*P P **16 16 05.9 +0.3**
HABR *e*S S 16 25 23.3 +1.5
BUOR Burton Butte 79.62 38 P P **16 16 06.4 +0.7**
FURC Furnace Creek, 79.65 46⇓P P **16 16 05.8 0.0**
baz=80
M05C Lookout 79.72 40⇓P P **16 16 06.2 +0.1**
baz=80
TUQ Turquoise Mtn. 79.73 47⇑P P **16 16 06.0 -0.2**
baz=80
NVAR Mina Array Bea 79.78 43 P P **16 16 06.7 +0.2**
comp=Z,5.6nm,0.8s,mb4.0,baz=212,slow=7.0,SNR=41
MDJ Mudanjiang 79.79 325 *e*P P **16 16 07.1 +0.6**
comp=Z,11nm,1.0s,mb4.1
O06A Flanigan 79.81 41⇑P P **16 16 06.5 -0.1**
baz=80,SNR=6.7
Y12C Blythe 79.82 49⇑P P **16 16 06.9 +0.2**
baz=80
R08A Mina 79.86 43⇑P P **16 16 06.9 0.0**
baz=80
U10A Ash Meadows, A 79.98 46⇑P P **16 16 08.0 +0.4**
baz=80
M06C Likely Place G 80.03 40⇓P P **16 16 07.7 -0.1**
baz=80,SNR=5.4
I03A Eugene 80.08 36⇓P P **16 16 07.9 -0.2**
baz=80
S09A Goldfield 80.09 44⇑P P **16 16 08.2 +0.1**
baz=80
K04A Chilquin 80.13 38⇑P P **16 16 08.5 +0.2**
baz=80
N06A Buffalo Meadow 80.15 41⇑P P **16 16 08.3 -0.1**
baz=80,SNR=8.7
Q08A Gabbs 80.27 43⇑P P **16 16 08.9 -0.2**
baz=80,SNR=6.2
TPH Tonopah 80.29 44 *e*P P **16 16 09.4 +0.2**
TPH pmax pmax
comp=Z,11nm,0.9s,mb4.2
TPH Tonopah 80.29 44 *e*P P **16 16 09.3 +0.2**
comp=Z,11nm,0.9s,mb4.2
L05A Lakeview 80.31 39⇑P P **16 16 09.6 +0.3**
baz=80,SNR=5.4
TPNV Topopah Spring 80.32 45 *e*P P **16 16 09.6 +0.3**
TPNV pmax pmax
comp=Z,5.0nm,0.8s,mb3.9
TPNV Topopah Spring 80.32 45 *e*P P **16 16 09.6 +0.3**
comp=Z,4.9nm,0.8s,mb3.9
PDMCI Parker Dam,Lak 80.38 49⇓P P **16 16 10.0 +0.4**
baz=80
O07A Toulon 80.41 42⇑P P **16 16 09.7 0.0**
baz=81,SNR=15
R09A Tonopah 80.48 44⇑P P **16 16 09.7 -0.4**
baz=81
V12A Nelson 80.62 47⇓P P **16 16 11.3 +0.4**
baz=81
N07B Gerlach 80.70 41⇓P P **16 16 11.2 -0.1**
baz=81
Q09A Carvers 80.74 43⇓P P **16 16 11.7 +0.2**
baz=81
X13A Yucca 80.75 48⇓P P **16 16 12.0 +0.5**
baz=81
Z14A Wintersburg 80.76 50⇑P P **16 16 12.3 +0.8**
baz=81,SNR=6.0
J05A Fort Rock 80.82 38⇑P P **16 16 12.1 +0.2**
baz=81,SNR=14
G03A Yamhill 80.92 35⇓P P **16 16 12.0 -0.5**
baz=81
M07A Soldier Meadow 80.93 40⇓P P **16 16 12.9 +0.4**
baz=81,SNR=9.0
115A Sonoran Desert 80.95 51⇑P P **16 16 13.2 +0.6**
baz=81
W13A Hualapai Mount 80.97 48⇓P P **16 16 13.1 +0.5**
baz=81
Y14A Wickenburg 81.00 49⇓P P **16 16 13.2 +0.3**
baz=81,SNR=6.2
R10A Warm Springs 81.01 44⇑P P **16 16 13.4 +0.6**
baz=81,SNR=20
K06A Valley Falls 81.11 39⇓P P **16 16 13.6 +0.2**
baz=81,SNR=12
H04A Detroit Lake 81.14 36⇓P P **16 16 13.2 -0.3**
baz=81
P09A Austin 81.16 43⇑P P **16 16 13.6 -0.1**
baz=81
L07A Adell 81.20 40 P P **16 16 14.4 +0.6**
baz=81,SNR=11
U12A Valley of Fire 81.21 47⇑P P **16 16 14.6 +0.7**
baz=81
N08A GE Springer Mi 81.22 41⇓P P **16 16 14.0 0.0**
baz=81,SNR=6.3
116A Eloy 81.27 51⇓P P **16 16 14.7 +0.5**
baz=81,SNR=8.7
G04A Mulino 81.30 36⇑P P **16 16 13.9 -0.4**
baz=82
X14A Yava 81.35 49⇑P P **16 16 15.1 +0.5**
baz=82,SNR=11
J06A Christmas Vall 81.44 38⇓P P **16 16 14.6 -0.5**
baz=82,SNR=11
M08A Happy Creek Ra 81.45 41⇑P P **16 16 14.9 -0.2**
baz=82,SNR=7.0
O09A Fish Creek Ran 81.47 42⇓P P **16 16 15.2 0.0**
baz=82,SNR=7.1
E03A Lebam 81.55 34⇑P P **16 16 15.2 -0.4**
baz=82
W14A Seligman 81.59 48⇑P P **16 16 16.7 +0.9**
baz=82,SNR=13
BMN Battle Mountai 81.60 42 *e*P P **16 16 16.1 +0.2**
BMN pmax pmax
comp=Z,16nm,1.4s,mb4.3
BMN Battle Mountai 81.60 42 *e*P P **16 16 16.1 +0.2**
comp=Z,16nm,1.4s,mb4.3
CN2 Changchun 81.62 322 *e*P P **16 16 15.8 -0.2**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.2
P10A Eureka 81.64 43⇓P P **16 16 16.2 +0.1**
baz=82
N09A Rock Creek Ran 81.65 42⇑P P **16 16 16.0 -0.1**
baz=82,SNR=5.6
H05A Madras 81.66 37⇓P P **16 16 15.8 -0.4**
baz=82
F04A Amboy 81.78 35⇓P P **16 16 16.3 -0.5**
baz=82
I06A Prineville 81.81 38⇑P P **16 16 17.3 +0.3**
baz=82
TUC Tucson 81.82 52⇑*i*P P **16 16 17.7 +0.7**
TUC pmax pmax
comp=Z,29nm,1.4s,mb4.5
TUC Tucson 81.82 52⇑*i*P P **16 16 17.7 +0.6**
comp=Z,29nm,1.4s,mb4.5
X15A Humboldt 81.83 49⇓P P **16 16 17.8 +0.7**
baz=82,SNR=7.5
WVOR Wild Horse Val 81.86 40 *e*P P **16 16 16.9 -0.3**
WVOR pmax pmax
comp=Z,23nm,1.2s,mb4.5
WVOR Wild Horse Val 81.86 40 *e*P P **16 16 16.9 -0.4**
comp=Z,23nm,1.2s,mb4.5
L08A Fields 81.90 40 P P **16 16 17.5 +0.1**
baz=82,SNR=16
VIPM Ingram Point 81.92 37 P P **16 16 17.9 +0.4**
VFP Flag Point 81.93 36 P P **16 16 17.8 +0.3**
G05A Wamic 81.97 36⇑P P **16 16 17.5 -0.3**
baz=82
O10A Cortez Mining, 81.98 42⇑P P **16 16 17.9 +0.1**
baz=82
J07A Hines 82.00 39⇑P P **16 16 17.8 -0.2**
baz=82,SNR=5.5
M09A Marrel Ranch, 82.01 41⇑P P **16 16 18.2 +0.2**
baz=82
K08A Mann Creek Ran 82.12 40 P P **16 16 18.8 +0.2**
baz=82,SNR=15
W15A Williams 82.15 49⇑P P **16 16 19.7 +1.0**
baz=82
N10A Dunphy 82.21 42⇓P P **16 16 19.1 +0.1**
baz=82
L09A Wilkinson Ranc 82.22 41⇓P P **16 16 18.9 -0.2**
baz=82,SNR=6.1
PMSA Palmer Station 82.23 157 *e*P P **16 16 19.4 +0.3**
comp=Z,7.9nm,0.7s,mb4.2
I07A Izee 82.31 38⇓P P **16 16 19.5 0.0**
baz=82,SNR=12
O11A Cowboy Ranch, 82.44 43⇑P P **16 16 19.9 -0.3**
baz=83,SNR=14
HDW Hoodsport 82.52 34 P P **16 16 21.1 +0.6**
E05A Randle 82.53 35⇓P P **16 16 20.1 -0.5**
baz=83
B04A Port Angeles 82.55 33⇓P P **16 16 20.4 -0.3**
baz=83
P12A McGill 82.57 44⇑P P **16 16 20.6 -0.2**
baz=83,SNR=9.3
CCUT Cedar City 82.59 46 *e*P P **16 16 21.7 +0.7**
M10A I.L. Ranch, Tu 82.64 41⇑P P **16 16 21.0 -0.2**
baz=83,SNR=9.7
I08A Drewsey 82.75 39⇑P P **16 16 21.7 -0.1**
baz=83
N11A Elko Archery C 82.76 42⇑P P **16 16 21.8 0.0**
baz=83
D05A Enumclaw 82.80 35⇓P P **16 16 21.7 -0.3**
baz=83
MAW Mawson 82.90 200 P P **16 16 21.7 -0.7**
comp=Z,1.1nm,0.6s,mb3.5,baz=117,slow=4.7,SNR=7.7
MAW Mawson 82.90 200 *e*P P **16 16 21.8 -0.6**
MAW pmax pmax
comp=Z,20nm,0.7s
MAW Mawson 82.90 200 *e*P P **16 16 21.8 -0.7**
comp=Z,1.6nm,0.7s,mb3.7
GSM Grass Mountain 82.91 35 P P **16 16 22.8 +0.3**
WUAZ Wupatki 82.95 49 *e*P P **16 16 22.6 -0.1**
comp=Z,26nm,1.2s,mb4.6
H08A Prairie City 83.05 38⇓P P **16 16 22.8 -0.4**
baz=83
M11A Holland Ranch, 83.06 42⇑P P **16 16 23.4 +0.2**
baz=83,SNR=5.3
BBB Bella Bella 83.08 28 P P **16 16 22.6 -0.8**
comp=Z,4.0nm,0.7s,mb4.1,baz=190,slow=11,SNR=8.8
N12A Clover Valley, 83.22 43⇓P P **16 16 24.4 +0.3**
baz=83,SNR=10
C05A Tolt Reservoir 83.27 34⇓P P **16 16 23.7 -0.6**
baz=84
I09A Lost Marbles R 83.28 39⇑P P **16 16 24.1 -0.2**
baz=83
A04A Legoe Bay, Lum 83.38 33⇓P P **16 16 24.0 -0.9**
baz=84
B05A Bryant 83.41 34⇑P P **16 16 24.6 -0.4**
baz=84
M12A Wells 83.60 42⇓P P **16 16 25.9 -0.1**
baz=84,SNR=5.5
H09A Durkee 83.72 38⇓P P **16 16 26.3 -0.2**
baz=84
F08A Pendleton 83.73 37⇑P P **16 16 26.4 -0.2**
baz=84
N13A Wendover, West 83.76 43⇑P P **16 16 26.6 -0.1**
baz=84
A05A Maple Falls 83.87 33⇑P P **16 16 27.3 +0.1**
baz=84
MSU Marysvale 83.89 46 *e*P P **16 16 27.8 +0.4**
BMO Blue Mountains 84.04 38 *e*P P **16 16 27.3 -0.8**
comp=Z,2.5nm,0.8s,mb3.8
M13A Montello 84.05 43⇑P P **16 16 28.2 +0.1**
baz=84,SNR=12
KULM Kulim 84.09 278 *e*P P **16 16 29.2 +0.8**
WTV Waterville 84.20 35 P P **16 16 28.7 -0.2**
TMUT Trail Mountain 84.93 45 *e*P P **16 16 33.1 +0.7**
HLID Hailey 85.06 41 *e*P P **16 16 33.1 -0.1**
comp=Z,2.4nm,0.8s,mb3.8
SRU San Rafael 85.31 46 *e*P P **16 16 34.0 -0.3**
SRU pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
SRU San Rafael 85.31 46 *e*P P **16 16 34.0 -0.3**
comp=Z,4.9nm,0.6s,mb4.2
BJT Baijiatuau 85.36 315 P P **16 16 34.9 +0.4**
PV01 Paradox Valley 86.18 48 *e*P P **16 16 38.1 -0.3**
ANMO Albuquerque 86.24 51 *e*P P **16 16 38.6 -0.1**
ANMO pmax pmax
comp=Z,7.0nm,0.9s
ANMO Albuquerque 86.24 51 *e*P P **16 16 38.6 -0.1**
comp=Z,6.7nm,0.9s,mb4.3
RRI2 Red Ridge 86.88 42 *e*P P **16 16 41.8 +0.1**
comp=Z,22nm,1.3s,mb4.6
COLA College 86.89 12*d i*P P **16 16 39.9 -1.9**
COLA College 86.89 12 *e*P P **16 16 39.4 -2.4**
comp=Z,7.2nm,0.6s,mb4.5
DLMT Dillon 87.12 40 *e*P P **16 16 43.0 +0.1**
comp=Z,24nm,1.3s,mb4.7
REDW Red Top Meadow 87.18 42 *e*P P **16 16 42.8 -0.3**
comp=Z,19nm,1.4s,mb4.5
TPAW Teton Pass 87.18 42 *e*P P **16 16 42.9 -0.3**
comp=Z,14nm,1.5s,mb4.4
IMW Indian Meadow 87.39 42 *e*P P **16 16 47.4 +3.3**
comp=Z,18nm,1.1s,mb4.6
QLMT Earthquake Lak 87.56 41 *e*P P **16 16 45.9 +1.0**
FLWY Flagg Ranch 87.64 42 *e*P P **16 16 45.1 -0.2**
comp=Z,15nm,1.2s,mb4.6
PDAR Pinedale Array 87.72 43 P P **16 16 45.7 0.0**
comp=Z,2.7nm,0.7s,mb4.1,baz=225,slow=1.9,SNR=16
XAN Xi'an 87.78 307 P P **16 16 46.7 +0.7**
XAN AMB AMB
comp=Z,17nm,1.0s,mb4.7
BOZ Bozeman (W) 87.85 40 *e*P P **16 16 46.3 0.0**
BOZ pmax pmax
comp=Z,21nm,1.3s,mb4.7
BOZ Bozeman (W) 87.85 40 *e*P P **16 16 46.3 +0.1**
comp=Z,21nm,1.3s,mb4.7
HIA Hailar 87.98 324⇑*i*P P **16 16 46.9 0.0**
SYO Syowa Base 88.04 193⇑*e*P P **16 16 45.8 -1.4**
HRY Holter Researc 88.27 39 P P **16 16 46.9 -1.4**
WALA Waterton Lakes 88.29 36 P P **16 16 47.4 -0.9**
comp=Z,3.5nm,0.9s,mb4.1
CMIG Matias Romero 88.81 72 P P **16 16 51.3 +0.6**
comp=Z,4.4nm,0.8s,mb4.3,baz=280,slow=4.0,SNR=6.4
GCMT Greycliff 89.11 40 *e*P P **16 16 50.8 -1.4**
KMI Kunming 89.23 297 P P **16 16 54.3 +1.6**
KMI AMB AMB
comp=Z,11nm,1.0s,mb4.6
SNAA Sanae 89.23 178 *e*P P **16 16 52.0 -0.7**
SNAA pmax pmax
comp=Z,20nm,0.8s
SNAA Sanae 89.23 178 *e*P P **16 16 52.0 -0.7**
comp=Z,1.9nm,0.8s,mb4.0
JCT Junction City 89.50 58 *e*P P **16 16 53.0 -1.0**
JCT pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
JCT Junction City 89.50 58 *e*P P **16 16 53.0 -1.0**
comp=Z,4.9nm,0.7s,mb4.5
PLCA Paso Flores 89.76 133 P P **16 16 55.8 +0.6**
comp=Z,1.6nm,0.7s,mb4.0,baz=139,slow=0.7,SNR=5.8
PLCA Paso Flores 89.76 133 *e*P P **16 16 56.7 +1.5**
CD2 Chengdu 90.54 303 *e*P P **16 16 59.0 +0.2**
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
YAK Yakutsk 91.15 338⇑*e*P P **16 16 59.4 -2.2**
YAK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
RSSD Black Hills 91.92 44 *e*P P **16 17 04.5 -0.6**
RSSD pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
RSSD Black Hills 91.92 44 *e*P P **16 17 04.5 -0.7**
comp=Z,10nm,1.1s,mb4.8
LZH Lanzhou 92.41 307 P P **16 17 07.8 +0.4**
LZH AP pP 16 19 09.2 -1.5
LZH PP PP 16 21 01.3 +3.0
LZH AMB AMB
comp=Z,17nm,1.3s,mb4.9
LZH AMB AMB
comp=Z,109nm,5.5s
INK Inuvik 92.95 15 *e*P P **16 17 07.9 -1.9**
INK pmax pmax
comp=Z,4.0nm,1.1s
INK Inuvik 92.95 15 *e*P P **16 17 07.9 -2.0**
comp=Z,4.5nm,1.1s,mb4.4
ULN Ulaanbaatar 94.75 319⇓*i*P P **16 17 18.1 +0.1**
SONM Songino Array 95.15 319 P P **16 17 19.8 0.0**
comp=Z,0.4nm,0.7s,mb3.7,baz=146,slow=3.1,SNR=3.6
YKA Yellowknife Ar 95.18 25 P P **16 17 18.5 -1.5**
comp=Z,0.8nm,0.8s,mb3.9,baz=240,slow=3.4,SNR=5.3
MKAR Makanchi Array 110.70 314 PKIKP PKiKP 16 22 23.4 -2.1
comp=Z,0.4nm,0.5s,baz=38,slow=1.3,SNR=6.4
MKAR Makanchi Array 110.70 314 *i* PKIKP PKiKP 16 22 24.0 -1.5
KURK Kurchatov 113.42 318⇑*i* PKIKP PKiKP 16 22 29.6 -1.1
ARCES ARCESS Array B 127.79 350 PKP PKPdf 16 22 55.9 -2.4
comp=Z,0.8nm,0.4s,baz=6.0,slow=1.7,SNR=17
ARCES SKPbc 16 25 24.0
comp=Z,1.0nm,0.7s,baz=336,slow=2.7,SNR=4.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES	FINESS Array B	134.72	344	PKP	PKPdf	16 23 10.2	-1.1
	comp=Z,0.4nm,0.6s,baz=124,slow=2.7,SNR=3.9						
FINES				SKPbc	SKPbc	16 25 48.1	-0.9
	comp=Z,1.1nm,0.8s,baz=281,slow=1.0,SNR=4.3						
NOA	NORSAR Array B	137.81	354	PKP	PKPdf	16 23 17.8	+0.8
	comp=Z,0.2nm,0.4s,baz=14,slow=3.9,SNR=3.1						
NOA				SKPbc	SKPbc	16 25 58.1	-0.1
	comp=Z,1.1nm,0.8s,baz=13,slow=4.5,SNR=4.8						
HFS	Hagfors	138.39	352	PKhKP		16 23 06.3	
	comp=Z,1.2nm,0.7s,baz=31,slow=3.7,SNR=4.0						
HFS				PKP	PKPdf	16 23 16.8	-1.3
	comp=Z,1.2nm,0.7s,baz=193,slow=20,SNR=3.6						
HFS				SKPbc	SKPbc	16 25 57.3	-2.5
	comp=Z,1.7nm,0.8s,baz=179,slow=7.1,SNR=3.7						
HFS	Hagfors	138.39	352	PKHKP		16 23 06.3	
HFS						16 23 16.8	
KMBO	Kilima Mbogo	140.35	243	PKhKP		16 23 16.6	
	comp=Z,0.8nm,0.6s,baz=23,slow=3.1,SNR=3.4						
ANN	Anapa	141.43	319	*i* PKIKP	PKPdf	16 23 25.7	+2.1
ANN				pmax	pmax		
	comp=Z,20nm,1.0s						
AKASG	Malin Array Be	142.16	332	PKhKP		16 23 19.1	
	comp=Z,2.7nm,0.5s,baz=41,slow=4.2,SNR=23						
AKASG				PKP	PKPdf	16 23 23.2	-1.7
	comp=Z,2.7nm,0.5s,baz=41,slow=4.2,SNR=22						
AKASG	Malin Array Be	142.16	332	*i* PKHKP		16 23 19.2	
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	142.16	332	PKP		16 23 19.1	
AKASG				PKP	PKPdf	16 23 23.2	-1.7
MALT	Malatya	143.55	309	⇑*i*P	PKPdf	16 23 27.3	-0.1
MALT	Malatya	143.55	309	*e*PKPdf	PKPdf	16 23 26.0	-1.3
MALT				*e*SKP		16 26 14.4	
EKA	Eskdalemuir Ar	143.73	5	PKP	PKPdf	16 23 24.7	-3.0
	comp=Z,2.7nm,0.6s,baz=320,slow=3.1,SNR=11						
MBAR	Mbarara	146.00	238	⇓*i*PKP2	PKPab	16 23 34.6	-1.0
BURAR	Bucovina Array	146.22	332	⇑*i*P	PKPbc	16 23 34.8	+0.7
BR131	Keskin Array S	146.36	314	*e*PKPdf	PKPbc	16 23 33.6	-0.9
BRTR	Keskin Array B	146.36	314	PKPbc	PKPbc	16 23 33.6	-0.9
	comp=Z,2.9nm,0.6s,baz=132,slow=4.4,SNR=17						
BRTR				SKPbc	SKPbc	16 26 19.4	0.0
	comp=Z,1.0nm,0.8s,baz=141,slow=4.2,SNR=4.3						
ASF	Jabal al Asfar	146.62	300	PKPbc	PKPbc	16 23 35.8	+0.6
	comp=Z,3.5nm,0.7s,baz=15,slow=2.6,SNR=8.2						
VRI	Vrincioaia	146.79	328	⇓*i*P	PKPbc	16 23 34.8	-0.9
CLL	Collm	146.96	348	*i* PKPbc	PKPbc	16 23 35.2	-0.9
	comp=Z,4.0nm,0.7s						
CLL				*i* PKiKP	PKiKP	16 23 37.4	-0.6
	comp=Z,3.0nm,0.6s						
CLL	Collm	146.96	348	*i* PKP2	PKPbc	16 23 35.2	-0.9
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRG	Berggiesshubel	147.18	347	*e*PKP	PKPbc	16 23 35.8	-0.9
	comp=Z,2.4nm,0.9s						
BRG	Berggiesshubel	147.18	347	*e*PKP2	PKPbc	16 23 35.8	-0.9
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MLR	Muntele Rosu	147.44	329	PKPbc	PKPbc	16 23 36.6	-0.8
	comp=Z,3.2nm,0.8s,baz=133,slow=8.5,SNR=5.0						
MLR	Muntele Rosu	147.44	329	⇓*i*P	PKPbc	16 23 37.1	-0.3
MMAI	Mount Meron Ar	147.61	302	PKPbc	PKPbc	16 23 38.1	+0.3
	comp=Z,7.8nm,0.6s,baz=68,slow=4.9,SNR=16						
VOIR		147.91	329	⇑*i*P	PKPbc	16 23 38.3	-0.3
VOIR		147.91	329	⇑PKP2	PKPbc	16 23 38.4	-0.2
KHC	Kasperske Hory	148.90	346	*e*PKPbc	PKPbc	16 23 40.0	-1.0
KHC				*e*PKPab	PKPab	16 23 46.0	-1.4
GERES	GERESS Array B	149.13	346	PKPbc	PKPbc	16 23 40.6	-1.0
	comp=Z,1.2nm,0.6s,baz=35,slow=3.3,SNR=8.7						
BAIF	Baives	149.24	358	*e*PKP1	PKPbc	16 23 40.8	-1.1
PKSM	Moragy	150.02	337	⇓*i*P	PKPbc	16 23 42.6	-1.1
FLN	La Foliniere	150.47	4	*e*PKP1	PKPbc	16 23 43.1	-1.6
	comp=Z,19nm,0.8s						
LDF	La Druitiere	150.66	4	*e*PKP1	PKPbc	16 23 43.5	-1.7
	comp=Z,6.4nm,0.5s						
CDF	Champ du Feu	150.66	354	*e*PKP1	PKPbc	16 23 43.9	-1.3
MEZF	Maizieres J'vi	150.75	357	*e*PKP1	PKPbc	16 23 44.4	-1.0
SGMF	Saint Gilles	150.78	7	*e*PKP1	PKPbc	16 23 43.7	-1.8
PERS	Pernice	150.80	342	*i* PKPbc	PKPbc	16 23 44.5	-1.0
GRR	Gorron	150.81	5	*e*PKP1	PKPbc	16 23 44.0	-1.5
	comp=Z,7.3nm,0.5s						
HINF	Hinteralfeld	151.29	354	*e*PKP1	PKPbc	16 23 45.0	-1.6
	comp=Z,7.6nm,0.8s						
BOJS	Bojanci	151.78	341	*e*PKPbc	PKPbc	16 23 47.1	-0.6
DAVOX	Davos	151.89	349	PKPbc	PKPbc	16 23 46.9	-1.0
	comp=Z,4.0nm,0.4s,baz=201,slow=3.3,SNR=7.4						
LOR	Lormes	152.04	358	*e*PKP1	PKPbc	16 23 47.1	-1.2
	comp=Z,6.9nm,0.8s						
SSF	Saint Saulge	152.26	359	*e*PKP1	PKPbc	16 23 47.6	-1.2
MFF	Saint Martin d	152.64	4	*e*PKP1	PKPbc	16 23 49.1	-0.5
BGF	Bois d'Agland	152.77	360	*e*PKP1	PKPbc	16 23 47.7	-2.2

IDC 04 16:09:00.4±8.2**,035N**×**9794E,h0**^{km}**,mb4.0**/4**,mb1 4.2**/4**, mb1mx3.6**/20**,mbtmp4.0**/4**,1C,Error ellipse: s-maj=189.9km s-min=115.6km az=138.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	Tuntungan	3.19	11	⇑*e*P	Pn	16 09 56.0	+4.2
SONM	Songino Array	47.86	8	P	P	16 17 40.1	+0.1
	1.2nm,0.5s,baz=186,slow=9.4,SNR=12						
MKAR	Makanchi Array	48.24	346	P	P	16 17 42.7	-0.2
	0.7nm,0.5s,baz=154,slow=9.5,SNR=14						
ZAL	Zalesovo	54.50	350	P	P	16 18 30.1	+0.3
	1.9nm,0.4s,baz=310,slow=8.3,SNR=6.8						
ARCES	ARCESS Array B	83.58	340	P	P	16 21 30.2	-0.3
	1.0nm,0.8s,baz=81,slow=5.6,SNR=5.8						

*ISCJB **04** 16:19:10.6±0.5,5147N±002×1616E±003,h0^{km},Error ellipse: s-maj=3.4km s-min=2.5km az=54.5*
*CSEM **04** 16:19:12.1±0.3,5154N×1618E,h2^{km},ML3.2/8,Error ellipse: s-maj=4.7km s-min=4.1km az=69.0*
*IPEC **04** 16:19:13.1±0.2,5150N×1625E,h0^{km},ML2.4/4,Error ellipse: s-maj=1.5km s-min=1.5km az=43.0*
*IDC **04** 16:19:13.0±0.8,5131N×1660E,h0^{km},mb1 3.1/5, mb1mx3.0/20,mbtmp3.0/5,ML2.7/5,Error ellipse: s-maj=14.6km s-min=7.4km az=114.0*
*WAR **04** 16:19:14.6,5144N×1613E,ML2.7,Mining Induced*
*PRU **04** 16:19:14.7,5141N×1608E,h0^{km}*
*VIE **04** 16:19:15.5±0.8,5132N×1607E,h0^{km},mb2.3/3,ML2.8/3, Error ellipse: s-maj=6.3km s-min=4.8km az=99.0 70 km WNW of Breslau Suspected Mining induced.*
ISC 04 16:19:12.1±0.4**,5150N**±002×**1617E**±003**,h0**^{km}**,n33, σ1^{s}06**/61**,3C-1D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.66	173	*i* Pgd	Pg	16 19 25.7	+1.0
KSP				*e*Sg	Sg	16 19 33.4	+0.1
KSP				*e*L		16 19 38.2	
KSP	Ksiaz	0.66	173	*e*Pg	Pg	16 19 25.7	+1.0
KSP				*e*Sg	Sg	16 19 33.4	+0.1
UPC	Upice	1.00	186	*e*PG	Pg	16 19 31.7	+0.5
DPC	Dobruska-Polom	1.15	175	*e*PG	Pg	16 19 34.5	+0.3
DPC				*e*SG	Sg	16 19 48.9	-0.2
	35nm,0.3s						
DPC	Dobruska-Polom	1.15	175	*e*Pg	Pg	16 19 34.4	+0.2
DPC				*e*Sg	Sg	16 19 49.2	+0.1
PVCC	Panska Ves	1.40	227	*e*Pg	Pg	16 19 39.1	+0.2
PVCC				*e*Sg	Sg	16 19 58.6	+1.5
BRG	Berggiesshubel	1.53	247	PN	Pn	16 19 40.4	-0.3
BRG				PG	Pg	16 19 41.5	0.0
BRG				SG	Sg	16 20 02.5	+1.2
	16nm,0.4s						
PRU	Pruhonice	1.83	215	*e*PG	Pg	16 19 44.9	-2.3
PRU				*e*SG	Sg	16 20 09.4	-1.5
	16nm,0.4s						
MORC	Moravsky Berou	1.93	153	*e*Pn	Pn	16 19 46.6	+0.4
MORC				*e*Sg	Sg	16 20 13.1	-1.1
	22nm,0.3s						
CLL	Collm	1.99	266	*e*Pn	Pn	16 19 47.0	0.0
CLL				*i* Pg	Pg	16 19 50.4	+0.2
CLL				*i* x	x	16 20 05.0	
CLL				*e*Sg	Sg	16 20 17.0	+0.9
	comp=Z,14nm,0.7s						
OKC	Ostrava-Krasne	2.09	142	*e*PG	Pg	16 19 51.5	-0.5
OKC				*e*SG	Sg	16 20 18.0	-1.1
	comp=Z,35nm,0.8s						
VRAC	Vranov	2.21	173	Pg	Pg	16 19 51.6	-2.8
	comp=Z,2.3nm,0.3s,baz=352,slow=16,SNR=11						
VRAC				Lg		16 20 21.3	
	comp=Z,5.0nm,0.3s,baz=281,slow=21,SNR=8.3						
VRAC	Vranov	2.21	173	*e*Pn	Pn	16 19 51.5	+1.5
VRAC				*e*Sg	Sg	16 20 22.1	-1.0
	comp=Z,16nm,0.3s						
TREC	Trest	2.25	191	*e*PG	Pg	16 19 54.3	-0.9
KRUC	Moravsky	2.44	176	*e*Sg	Sg	16 20 30.2	-0.4
	comp=Z,10nm,0.3s						
OJC	Ojcow	2.63	118	*e*Pg	Pg	16 20 02.5	0.0
OJC				*e*Sg	Sg	16 20 37.6	+0.9
OJC	Ojcow	2.63	118	*e*Pn	Pn	16 19 56.6	+0.8
OJC	Ojcow	2.63	118	*e*Pg	Pg	16 20 02.5	0.0
NKC	Novy Kostel	2.68	243	*e*PG	Pg	16 20 02.9	-0.5
NKC				*e*SG	Sg	16 20 38.4	+0.4
	comp=Z,20nm,0.4s						
KHC	Kasperske Hory	2.89	216	*e*PN	Pn	16 20 00.0	+0.6
KHC				*e*PG	Pg	16 20 06.1	-1.4
KHC				*e*SN	Sn	16 20 33.5	-1.4
KHC				*e*SG	Sg	16 20 42.9	-2.1
	comp=Z,11nm,0.4s						
MOX	Moxa	3.00	255	*i* PG	Pg	16 20 09.7	+0.2
MOX				*i* SG	Sg	16 20 49.0	+0.7
GERES	GERESS Array B	3.09	212	Pn	Pn	16 20 03.5	+1.4
	comp=Z,0.5nm,0.3s,baz=35,slow=14,SNR=12						
GERES				Pg	Pg	16 20 09.2	-2.1
	comp=Z,3.2nm,0.3s,baz=32,slow=17,SNR=45						
GERES				Lg		16 20 50.5	
	comp=Z,3.5nm,0.3s,baz=35,slow=28,SNR=10						
SMOL	Smolenice	3.10	164	*e*PG	Pg	16 20 12.3	+0.9
SMOL				*e*SG	Sg	16 20 52.7	+1.1
VYHS	Vyhne	3.46	149	*e*PN	Pn	16 20 08.4	+1.2
VYHS				*e*PG	Pg	16 20 19.9	+1.4
VYHS				*e*SG	Sg	16 21 03.6	+0.2
CONA	Conrad Observa	3.58	183	⇑*i*Pn	Pn	16 20 09.6	+0.8
CONA				⇓*i*Sg	Sg	16 21 06.7	-0.4
	comp=Z,9.7nm,0.3s						
CONA	Conrad Observa	3.58	183	Pn	Pn	16 20 09.6	+0.8
CONA				Sg	Sg	16 21 06.7	-0.4
	comp=Z,9.7nm,0.3s						
BSD	Bornholm Skovb	3.70	349	*i* P	Pn	16 20 11.0	+0.5
BSD				*i*		16 20 17.1	
BSD				*i* S	Sn	16 20 53.8	-1.0
MOA	Molln	3.86	199	⇑*i*Pn	Pn	16 20 13.6	+1.0
MOA				⇑*i*Sg	Sg	16 21 17.1	+1.1
	comp=Z,5.0nm,0.3s						
KOLS	Kolonicke sedl	4.69	121	*e*SG	Sg	16 21 47.6	+5.0
AKASG	Malin Array Be	8.26	90	Pn	Pn	16 21 05.3	-7.8
	comp=Z,0.5nm,0.3s,baz=277,slow=12,SNR=4.0						
HFS	Hagfors	8.77	352	Pn	Pn	16 21 20.2	+0.2
	comp=Z,0.1nm,0.3s,baz=165,slow=13,SNR=4.1						
FINES	FINESS Array B	11.36	25	Pn	Pn	16 21 54.2	-1.4
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=4.8						
FINES				Sn	Sn	16 23 56.3	-6.8
	comp=Z,0.1nm,0.3s,baz=214,slow=19,SNR=4.5						
ARCES	ARCESS Array B	18.63	10	Pn	Pn	16 23 28.4	-2.9
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=7.2						

*ISCJB **04** 16:23:12.3±2.6,397N±02×7139E±009,h10^{km},Error ellipse: s-maj=27.2km s-min=9.2km az=19.8*
*NNC **04** 16:23:15.2±15.0,3989N×7183E,h0^{km},mb3.3,mpv2.8, Error ellipse: s-maj=123.0km s-min=62.2km az=5.0*
ISC 04 16:23:12.8±2.5**,396N**±02×**7145E**±009**,h10**^{km}**,n11, σ1^{s}03**/15**,3C-2D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.04	33	P	Pn	16 24 01.7	+0.7
	SNR=15						
UCH	Uchtor	3.50	40	P	Pn	16 24 07.5	+0.3
	SNR=28						
EKS2	Erkin-Say	3.52	29	P	Pn	16 24 06.6	-0.9
	SNR=6.5						
KK31	Karatay Array	3.57	349	Pn	Pn	16 24 08.5	+0.3
	1.2nm,0.3s,baz=157,slow=12,SNR=82						
KK31				Pg	Pg	16 24 19.4	-1.8
	4.0nm,0.4s,baz=159,slow=15,SNR=18						
KK31				⇓Sn	Sn	16 24 56.2	+5.8
	5.0nm,0.4s,baz=144,slow=27,SNR=4.8						
KZA	Kyzart	3.80	48	P	Pn	16 24 11.2	-0.2
	SNR=6.4						
AAK	Ala-Archa	3.80	36	P	Pn	16 24 14.3	+2.9
	SNR=9.6						
KBK	Karagaybulak	4.03	40	P	Pn	16 24 15.6	+1.0
	SNR=5.7						
CHMS	Chumysh	4.21	35	P	Pn	16 24 17.2	+0.3
	SNR=9.6						
USP	Ospenovka	4.32	31	P	Pn	16 24 17.7	-0.8
	SNR=13						
TKM2	Tokmak 2	4.55	42	⇑Pn	Pn	16 24 20.9	-0.8
	0.3nm,0.6s						
TKM2				⇓Sn	Sn	16 25 14.6	-0.1
	0.5nm,0.5s						
AB31	Akbulak array	12.67	323	⇑Pn	Pn	16 26 11.9	-1.1
	0.5nm,0.5s,baz=129,slow=14,SNR=10						
AB31				⇑Sn	Sn	16 28 35.5	+1.5
	0.6nm,0.6s,baz=135,slow=26,SNR=3.3						

*ISCJB **04** 16:34:53.0±0.5,3564N±002×2746E±003,h18^{km}±6^{km}, mb3.3/3,Error ellipse: s-maj=5.0km s-min=3.9km az=60.6*
*IDC **04** 16:34:52.2±1.3,3572N×2743E,h0^{km},mb3.5/3,mb1 3.5/6, mb1mx3.3/21,mbtmp3.5/6,ML3.3/2,Error ellipse: s-maj=35.3km s-min=18.3km az=156.0*
*CSEM **04** 16:34:52.8±0.1,3562N×2748E,h20^{km},MD3.6,Error ellipse: s-maj=1.6km s-min=1.2km az=69.0*
*ISK **04** 16:34:52.9,3577N×2696E,h33^{km},MD3.4*
*NEIC **04** 16:34:53.2,3575N×2734E,h21^{km},MD3.6(ATH),After ATH.*
*ATH **04** 16:34:53.2,3575N×2734E,h21^{km}±1^{km},MD3.6/9*
*HLW **04** 16:35:00.5,3534N×2762E,h33^{km},Mb3.5*
ISC 04 16:34:53.6±0.6**,3573N**±002×**2740E**±003**,h11**^{km}±4^{km}**,n53, σ1^{s}03**/66**,mb3.3**/3**,11C-4D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.27	228	*e*PB	Pg	16 34 59.5	+0.5
KARP				*e*SB	Sg	16 35 03.5	+0.8
ARG	Arkhangelos	0.76	50	*e*PN	Pg	16 35 08.1	-0.3
NISR	Nisiros	0.91	346	*e*PN	Pg	16 35 10.5	-0.7
DAT	Datca	1.01	8	*i* PG	Pg	16 35 12.4	-0.7
DAT				*i* SG	Sg	16 35 26.2	-0.1
BODT	Bodrum	1.34	357	PN	Pn	16 35 15.3	-3.0
DALT	Dalyan (Mudla)	1.44	43	PN	Pn	16 35 20.7	+1.0
NPS	Neapolis	1.53	253	*e*PN	Pn	16 35 20.2	-0.7
YER	Yerkesik	1.57	27	PN	Pn	16 35 21.5	0.0
YER				SN	Sn	16 35 42.2	+0.3
FETY	Fethiye	1.64	56	PN	Pn	16 35 24.3	+1.9
XRY	Khrisi	1.64	239	*e*PN	Pn	16 35 23.0	+0.6
SANT	Santorini	1.70	293	*e*Pn	Pn	16 35 21.4	-1.8
SANT				*e*Sn	Sn	16 35 40.8	-4.3
SANT	Santorini	1.70	293	*e*Pn	Pn	16 35 21.5	-1.8
SANT				*e*Sn	Sn	16 35 40.8	-4.3
KSL	Kastellorizon	1.82	76	*e*PN	Pn	16 35 26.0	+1.1
AYDN	Tasoluk	1.97	11	*e*P	Pn	16 35 26.9	-0.1
SMG	Samos	2.03	347	*e*PN	Pn	16 35 27.8	0.0
IDI	Anoyia	2.10	259	Pn	Pn	16 35 27.7	-1.0
	14nm,0.3s,baz=75,slow=17,SNR=43						
IDI				Sn	Sb	16 35 57.6	-0.1
	35nm,0.3s,baz=354,slow=13,SNR=7.4						
ELL	Elmali	2.27	63	*e*PN	Pn	16 35 32.8	+1.7
DNZL	Cakiroluk	2.36	33	*i* P	Pn	16 35 33.5	+1.1
DENT	Denizli	2.41	32	*e*PN	Pn	16 35 33.5	+0.5
GVD	Gavdhos	2.85	253	*e*Pn	Pn	16 35 41.2	+2.1
AKS	Akhisar	3.17	6	*e*PN	Pn	16 35 41.9	-1.5
ISP	Isparta	3.27	49	Pn	Pb	16 35 49.1	-2.6
TKTP	Tekketepe	3.29	44	*e*P	Pn	16 35 48.7	+3.6
KYTH	Kithira	3.58	280	*e*PN	Pn	16 35 48.6	-0.6
VLI	Veliai	3.74	287	*e*PN	Pn	16 35 51.0	-0.4
ERMK	Ermenek	4.55	77	*i* P	Pn	16 36 05.5	+3.1
SLUM		4.60	204	⇑P	Pn	16 36 04.1	+0.9
SLUM				S	Sn	16 36 50.2	-6.4
HMAT	Matruh	4.63	183	⇑P	Pn	16 36 03.2	-0.3
HMAT				S	Sn	16 36 49.0	-8.2
KIZT	Kizilcal	4.76	47	*e*PN	Pn	16 36 07.6	+2.3
CSS	Prodhromos	4.91	97	Pn	Pn	16 36 06.8	-0.5
CSS				*e*Sn	Sn	16 37 02.9	-1.2
CSS	Prodhromos	4.91	97	Pn	Pn	16 36 06.8	-0.5
CSS				*e*Sn	Sn	16 37 02.8	-1.3
BR131	Keskin Array S	6.35	49	Pn	Pn	16 36 29.6	+2.4
BR131	Keskin Array S	6.35	49	Pn	Pn	16 36 29.6	+2.4
BRTR	Keskin Array B	6.35	49	Pn	Pn	16 36 28.0	+0.7
	0.3nm,0.3s,baz=227,slow=15,SNR=5.5						
SWA1		6.60	193	⇑P	Pn	16 36 31.3	+0.7
SWA1				S	Sn	16 37 37.3	-8.5
SWA2		6.67	195	⇑P	Pn	16 36 32.3	+0.7
HSAF	As Saff	7.02	149	⇓P	Pn	16 36 35.7	-0.7
AMAG	Maghara	7.03	135	⇓P	Pn	16 36 35.9	-0.5
GLL	Jalalah	7.12	148	⇑P	Pn	16 36 37.4	-0.4
MMAI	Mount Meron Ar	7.15	110	Pn	Pn	16 36 37.3	-0.8
	1.7nm,0.3s,baz=311,slow=12,SNR=6.0						
SUZ		7.44	141	⇑P	Pn	16 36 41.5	-0.6
AWBH		7.49	170	⇑P	Pn	16 36 42.0	-0.9
ZAF		7.75	144	⇑P	Pn	16 36 46.2	-0.3
HFRF	Wahat Farafira	8.59	175	⇑P	Pn	16 36 57.9	0.0
EIL	Elat	8.77	131	*e*Pn	Pn	16 36 59.7	-0.6
EIL				*e*Sn	Sn	16 38 30.1	-9.1
EIL	Elat	8.77	131	*e*Pn	Pn	16 36 59.7	-0.7
EIL				*e*Sn	Sn	16 38 30.1	-9.1
TR2		9.07	142	⇑P	Pn	16 37 04.2	-0.4
HKAT	Jabal Katrina	9.10	140	⇓P	Pn	16 37 04.7	-0.2
TR1		9.50	142	⇑P	Pn	16 37 09.9	-0.5
HHRG	Al Ghardaqah	9.98	146	⇓P	Pn	16 37 16.8	-0.2
FINES	FINESS Array B	25.75	359	P	P	16 40 24.6	+0.3
	0.5nm,0.6s,mb3.2,baz=165,slow=12,SNR=3.4						
TORD	Torodi Ar. Bea	32.27	232	P	P	16 41 23.6	+1.3
	0.5nm,0.6s,mb3.6,baz=33,slow=8.9,SNR=4.5						
MKAR	Makanchi Array	41.93	57	P	P	16 42 43.9	-0.4
	0.2nm,0.5s,mb3.0,baz=275,slow=7.5,SNR=3.0						

*ISCJB **04** 16:55:21.6±0.8,1173N±003×12581E±006,h48^{km}±6^{km}, mb4.5/43,MS3.6/6,Error ellipse: s-maj=10.3km s-min=5.0km az=159.4*
*MOS **04** 16:55:23.4±0.8,1157N×12576E,h70^{km},mb5.0/12,Error ellipse: s-maj=23.0km s-min=7.6km az=122.3*
*BJI **04** 16:55:25.1,1129N×12575E,h105^{km},mB4.7,mb4.6*
*NEIC **04** 16:55:26.7±1.4,1155N×12560E,h82^{km}±12^{km},mb4.7/16, Error ellipse: s-maj=15.4km s-min=5.4km az=63.0*
*IDC **04** 16:55:28.4±4.1,1146N×12532E,h88^{km}±35^{km},mb3.9/16, mb1 3.9/17,mb1mx3.9/24,mbtmp4.2/17,MS3.3/3, Ms1 3.4/3,ms1mx3.1/23,Error ellipse: s-maj=47.6km s-min=11.0km az=69.0*
ISC 04 16:55:24.0±0.8**,1171N**±003×**12574E**±007**,h53**^{km}±6^{km}**, h99**^{km}±.6^{km}**:pP-P,n99,σ1^{s}06**/107**,mb4.5**/43**,MS3.6**/6**, 9C-2D,Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.32	251	*e*P	Pn	16 55 28.9	-4.6
PLP	Palo	0.92	234	*i* P	Pn	16 55 37.6	-3.2
PLP				*e*S	Sn	16 55 47.4	-5.6
OCLP	Ormoc	1.29	240	*e*P	Pn	16 55 43.4	-2.2
MSLP	Maasin	1.79	209	*e*P	Pn	16 55 52.4	0.0
MSLP				*e*S	Sn	16 56 17.0	+3.0
SCPH	Surigao	1.93	187	⇓*e*P	Pn	16 55 53.7	-0.7
SCPH				*e*S	Sn	16 56 11.4	-6.0
MMPH	Masbate	2.17	288	⇑*e*P	Pn	16 55 56.9	-0.8
LLP	Lapu-Lapu	2.22	232	⇑*e*P	Pn	16 55 57.2	-1.2
LLP				*e*S	Sn	16 56 25.5	+0.8
PVCP	Virac	2.44	321	*e*P	Pn	16 55 59.7	-1.7
BUTP	Butuan	2.72	183	*e*P	Pn	16 56 06.5	+1.3
TBP	Tagbilaran	2.72	223	*e*P	Pn	16 56 04.8	-0.5
TBP				*e*S	Sn	16 56 40.2	+3.2
RCP	Roxas	2.94	267	*e*P	Pn	16 56 07.9	-0.3
GUIM	Jordan	3.27	251	*e*P	Pn	16 56 11.8	-1.1
CGP	Cagayan de Oro	3.39	198	*i* S	Sn	16 56 55.5	+2.1
AUQP	San Andres	3.40	299	*e*P	Pn	16 56 15.6	+1.1
OTRP	Odiongan	3.70	281	*e*P	Pn	16 56 17.9	-0.7
BUKP	Musuan	3.86	190	*e*P	Pn	16 56 24.5	+3.6
DCPH	Dipolog City	3.89	217	⇑*e*P	Pn	16 56 21.1	-0.2
BOAC	Boac	4.18	295	*e*P	Pn	16 56 24.2	-1.0
PAGZ	Pagadian	4.48	211	*e*P	Pn	16 56 29.9	+0.6
CUYO	Cuyo Island	4.71	260	*e*P	Pn	16 56 31.9	-0.6
POLP	Polilio Island	4.77	309	*e*P	Pn	16 56 34.3	+1.0
IPIL	Ipil	4.99	219	⇓*i*P	Pn	16 56 37.0	+0.7
IPIL				*i* S	Sn	16 57 36.1	+3.4
IPIL	Ipil	4.99	219	*e*P	Pn	16 56 37.2	+0.9
TGY	Tagaytay City	5.25	297	P	Pn	16 56 42.3	+2.3
	38nm,0.3s,baz=99,slow=4.6,SNR=6.0						
BUSP	Coron	5.43	274	*e*P	Pn	16 56 42.4	0.0
BALP	Baler	5.70	315	*e*P	Pn	16 56 45.0	-1.1
LUBP	Lubang	5.73	291	*e*P	Pn	16 56 46.2	-0.2
CAUP	Cauayan	6.45	324	*e*P	Pn	16 56 55.4	-0.9
APYP	Conner	7.51	325	*e*P	Pn	16 57 11.2	+0.3
GUMO	Guam	18.76	82	LR	LR	17 06 02.9	
	comp=Z,55nm,19.3s,baz=285,slow=33						
NJ2	Nanjing	21.22	344	*e*P	P	17 00 08.3	+3.0
NJ2				AP		17 00 28.5	
NJ2				PP		17 00 36.4	
NJ2				XP	sP	17 00 40.7	+17
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.1						
NJ2				AMB	AMB		
	comp=Z,80nm,4.4s						
NJ2				LR	LR		
	comp=N,210nm,15.2s						
NJ2				LR	LR		
	comp=E,390nm,9.2s						
NJ2				LR	LR		
	comp=Z,130nm,9.8s						
KMI	Kunming	25.52	305	P	P	17 00 48.2	+0.6
KMI				AP	pP	17 01 09.2	+8.3
KMI				XP	sP	17 01 22.8	+16
KMI				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.0						
CD2	Chengdu	27.91	317	*e*P	P	17 01 10.5	+1.5
CD2				AP	pP	17 01 32.4	+10
CD2				XP	sP	17 01 43.8	+15
CD2				PP	PP	17 02 04.6	-8.2
CD2				S	S	17 05 47.0	-2.0
CD2				XS	sS	17 06 24.0	+12
CD2				SS		17 07 17.0	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
FITZ	Fitzroy Crossi	29.62	180	P	P	17 01 23.6	-0.6
	comp=Z,0.9nm,0.5s,mb3.7,baz=325,slow=7.7,SNR=3.7						
PMG	Port Moresby	29.89	134	P	P	17 01 24.7	-1.9
LZH	Lanzhou	31.31	324	*e*P	P	17 01 41.2	+2.1
LZH				AP	pP	17 02 03.5	+11
LZH				XP	sP	17 02 15.6	+17
LZH				*e*PP	PP	17 02 49.7	-0.8
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,103nm,4.8s						
LZH				LR	LR		
	comp=E,319nm,13.4s						
LZH				LR	LR		
	comp=Z,442nm,17.6s,MS4.2						
HHC	Hu-ho-hao-te	31.60	339	*e*P	P	17 01 44.1	+2.4
HHC				AP	pP	17 02 06.2	+11
HHC				XP	sP	17 02 17.9	+17
HHC				PP	PP	17 02 53.2	-0.5
HHC				PCP	PcP	17 04 33.1	+0.1
HHC				S	S	17 06 46.3	-0.5
HHC				XS	sS	17 07 24.6	+15
HHC				SCP	ScP	17 08 06.3	-5.4
HHC				PCS	PcS	17 08 16.3	-1.1
HHC				SS	SS	17 08 43.0	-21
HHC				SCS	ScS	17 12 03.3	-6.4
HHC				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,151nm,4.3s						
HHC				LR	LR		
	comp=N,117nm,18.0s,MS3.8						
HHC				LR	LR		
	comp=E,129nm,16.1s,MS3.8						
HHC				LR	LR		
	comp=Z,115nm,17.1s,MS3.6						
WRAB	Tennant Creek	32.56	165	P	P	17 01 49.9	-0.2
WRAB				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
WRAB	Tennant Creek	32.56	165	P	P	17 01 49.9	-0.3
	comp=Z,16nm,1.3s,mb4.8						
WRA	Warramunga Arr	32.57	165	P	P	17 01 49.0	-1.2
	comp=Z,0.3nm,0.6s,mb3.4,baz=345,slow=9.3,SNR=4.3						
WRA				PcP	PcP	17 04 36.4	+0.8
	comp=Z,0.6nm,0.6s,baz=341,slow=3.1,SNR=6.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MDJ	Mudanjiang	32.96	5	P	P	17 01 54.9	+1.3
MDJ				AP	pP	17 02 17.4	+10
MDJ				XP	sP	17 02 29.7	+16
MDJ				PP	PP	17 03 11.9	+3.1
MDJ				S	S	17 07 07.9	-0.1
MDJ				XS	sS	17 07 47.7	+17
MDJ				SCP	ScP	17 08 10.4	-6.0
MDJ				PCS	PcS	17 08 21.0	-1.1
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,65nm,9.7s						
MDJ				LR	LR		
	comp=N,38nm,15.5s,MS3.3						
MDJ				LR	LR		
	comp=E,26nm,16.5s,MS3.3						
MDJ				LR	LR		
	comp=Z,46nm,19.6s,MS3.2						
ASAJ	Asahikawa	35.41	21	LR	LR	17 16 03.7	
	comp=Z,37nm,18.7s,MS3.2,baz=343,slow=34						
ASAR	Alice Springs	36.05	167	P	P	17 02 19.9	-0.4
	comp=Z,0.2nm,0.3s,mb3.5,baz=351,slow=6.5,SNR=12						
ASAR				PcP	PcP	17 04 46.2	+0.6
	comp=Z,0.7nm,0.6s,baz=341,slow=2.7,SNR=9.1						
ULN	Ulaanbaatar	39.30	340	eP	P	17 02 48.8	+1.0
SONM	Songino Array	39.50	339	P	P	17 02 50.1	+0.7
	comp=Z,1.0nm,0.5s,mb3.8,baz=158,slow=10.0,SNR=14						
JIRN	Jiri	40.27	299	eP	P	17 02 55.0	-0.8
	comp=Z,34nm,0.5s,mb5.3						
GUN	Gumba	40.60	299	eP	P	17 02 58.9	+0.3
	comp=Z,30nm,0.7s,mb5.1						
PKI	Pulchoki	40.92	299	eP	P	17 03 00.6	-0.6
	comp=Z,13nm,0.7s,mb4.7						
PKI	Pulchoki	40.92	299	eP	P	17 03 00.6	-0.6
PKI				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.7						
KKN	Kakani	41.09	299	eP	P	17 03 02.0	-0.5
DMN	Daman	41.19	299	eP	P	17 03 02.0	-1.4
	comp=Z,23nm,1.0s,mb4.7						
GKN	Gorkha	41.69	299	eP	P	17 03 07.0	-0.5
TLY	Talaya	43.72	340	P	P	17 03 24.6	+0.7
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TLY	Talaya	43.72	340	P	P	17 03 24.6	+0.7
	comp=Z,3.6nm,0.8s,mb4.2						
NWAO	Narrogin (SRO)	45.12	190	P	P	17 03 34.5	-0.6
	comp=Z,8.3nm,0.9s,mb4.6,baz=18,slow=13,SNR=3.7						
NWAO	Narrogin (SRO)	45.12	190	P	P	17 03 34.5	-0.6
WMQ	Urumqi	45.78	322	eP	P	17 03 43.0	+2.7
WMQ				PP	PP	17 05 33.0	+4.7
WMQ				S	S	17 10 19.0	-1.1
WMQ				SS	SS	17 13 38.0	-7.1
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,89nm,4.0s						
WMQ				LR	LR		
	comp=N,58nm,15.0s,MS3.8						
WMQ				LR	LR		
	comp=E,57nm,15.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,49nm,15.0s,MS3.6						
STKA	Stephens Creek	45.92	161	P	P	17 03 41.4	0.0
	comp=Z,1.3nm,0.5s,mb4.1,baz=28,slow=7.6,SNR=6.8						
STKA	Stephens Creek	45.92	161	eP	P	17 03 41.2	-0.2
BOD	Bodaibo	46.88	351	eP	P	17 03 48.6	-0.4
BOD				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
YAK	Yakutsk	50.32	2	P	P	17 04 16.2	+0.8
YAK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
YAK	Yakutsk	50.32	2	P	P	17 04 16.2	+0.8
	comp=Z,4.1nm,0.5s,mb4.7						
MK31	Makanchi Array	50.58	322	P	P	17 04 18.1	+0.8
MK31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
MKAR	Makanchi Array	50.58	322	P	P	17 04 18.4	+1.1
	comp=Z,9.5nm,0.8s,mb4.8,baz=108,slow=7.9,SNR=71						
ZAL	Zalesovo	53.13	331	P	P	17 04 37.1	+0.8
	comp=Z,0.8nm,0.3s,mb4.2,baz=340,slow=6.2,SNR=3.2						
NVS	Novosibirsk	54.40	331	eP	P	17 04 39.4	-6.2
KURK	Kurchatov	54.60	325	eP	P	17 04 47.4	+0.4
KURK				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3						
KURK	Kurchatov	54.60	325	eP	P	17 04 47.4	+0.4
	comp=Z,29nm,0.9s,mb5.3						
KKAR	Karatay Array	56.88	314	i P	P	17 05 03.6	+0.2
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BVAR	Borovoye Array	60.20	325	P	P	17 05 27.0	+0.5
	comp=Z,3.3nm,0.6s,mb4.5,baz=116,slow=10,SNR=25						
BRVK	Borovoye	60.27	325	⇑iP	P	17 05 27.1	+0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
BRVK	Borovoye	60.27	325	⇑iP	P	17 05 27.1	+0.1
	comp=Z,5.2nm,0.9s,mb4.6						
CHKZ	Chkalovo	60.32	326	eP	P	17 05 27.1	-0.2
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	60.32	326	eP	P	17 05 27.1	-0.2
	comp=Z,1.8nm,0.6s,mb4.3						
ZRNK	Zerenda	60.95	325	⇑eP	P	17 05 31.7	+0.1
ZRNK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
ZRNK	Zerenda	60.95	325	⇑eP	P	17 05 31.7	+0.1
	comp=Z,7.6nm,0.9s,mb4.8						
AB31	Akbulak array	65.46	319	i P	P	17 06 01.5	+0.1
AKTK	Aktyubinsk	66.90	320	P	P	17 06 10.8	+0.2
AKTO	Aktyubinsk	66.90	320	P	P	17 06 10.8	+0.2
	comp=Z,1.2nm,0.5s,mb4.2,baz=101,slow=7.6,SNR=6.6						
ARU	Arti	67.75	326	⇑iP	P	17 06 15.5	-0.6
ARU				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
ARU	Arti	67.75	326	⇑iP	P	17 06 15.5	-0.5
	comp=Z,3.4nm,0.4s,mb4.7						
KIV	Kislovodsk	77.00	313	P	P	17 07 10.4	-0.7
KIV				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
KIV	Kislovodsk	77.00	313	P	P	17 07 10.4	-0.7
	comp=Z,8.1nm,0.6s,mb4.8						
MALT	Malatya	80.76	307	P	P	17 07 31.7	-0.1
MALT				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
MALT	Malatya	80.76	307	P	P	17 07 31.7	-0.1
	comp=Z,2.2nm,0.8s,mb4.1						
KEV	Kevo	82.11	340	ep	P	17 07 38.1	-0.8
	comp=Z,0.7nm,0.4s,mb3.9						
ARCES	ARCESS Array B	82.68	340	P	P	17 07 42.5	+0.6
	comp=Z,4.2nm,0.7s,mb4.6,baz=77,slow=7.6,SNR=18						
ARE0	ARCESS Array S	82.68	340	eP	P	17 07 41.6	-0.2
KAF	Kangasniemi	84.12	332	ep	P	17 07 47.9	-1.4
	comp=Z,3.8nm,0.6s,mb4.7,baz=73,slow=4.7						
KAF	Kangasniemi	84.12	332	eP	P	17 07 47.9	-1.4
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
BRTR	Keskin Array B	84.23	309	P	P	17 07 49.7	-0.1
	comp=Z,1.0nm,0.7s,mb4.1,baz=91,slow=4.9,SNR=6.3						
FINES	FINESS Array B	84.39	332	P	P	17 07 51.0	+0.3
	comp=Z,2.3nm,0.5s,mb4.6,baz=83,slow=4.7,SNR=36						
AKASG	Malin Array Be	85.13	321	P	P	17 07 54.2	-0.2
	comp=Z,1.8nm,0.6s,mb4.4,baz=66,slow=4.5,SNR=13						
AKASG	Malin Array Be	85.13	321	P	P	17 07 54.2	-0.2
DLBC	Dease Lake	87.43	31	P	P	17 08 09.9	+4.2
	comp=Z,16nm,0.7s,mb5.3,baz=162,slow=0.8,SNR=6.8						
HFS	Hagfors	90.55	332	P	P	17 08 19.0	-1.3
	comp=Z,1.9nm,0.8s,mb4.5,baz=144,slow=2.8,SNR=6.6						
NB2	NORSAR Subarra	91.25	334	P	P	17 08 22.2	-1.4
	comp=Z,0.7nm,0.7s,mb4.1,baz=68,slow=5.1						
NOA	NORSAR Array B	91.25	334	P	P	17 08 22.8	-0.8
	comp=Z,0.9nm,0.7s,mb4.2,baz=64,slow=4.5,SNR=5.9						
NOA				LR	LR	17 50 51.5	
	comp=Z,27nm,20.3s,MS3.7,baz=105,slow=36						
NOA	NORSAR Array B	91.25	334	P	P	17 08 22.8	-0.8
NOA				LR	LR	17 50 51.5	

IDC 04 16:59:25.1±4.3, 1738S×17704W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/14, mbtmp4.0/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/19, Error ellipse: s-maj=180.4km s-min=49.9km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
URZ	Urewera	21.43	193	LR	LR	17 11 53.2	
	comp=Z,92nm,18.8s,baz=299,slow=35						
STKA	Stephens Creek	40.03	241	P	P	17 07 02.3	+0.5
	0.7nm,0.4s,baz=95,slow=11,SNR=3.9						
WRA	Warramunga Arr	46.01	259	P	P	17 07 50.2	-0.1
	0.6nm,0.5s,baz=97,slow=7.1,SNR=19						
ASAR	Alice Springs	46.19	254	P	P	17 07 52.6	+1.0
	5.3nm,0.5s,baz=88,slow=7.9,SNR=178						
ASPA	Alice Springs	46.19	254	eP	P	17 07 52.3	+0.6
FITZ	Fitzroy Crossi	54.40	260	P	P	17 08 53.9	0.0
	1.1nm,0.9s,baz=107,slow=14,SNR=4.2						
GERES	GERESS Array B	147.42	347	PKPbc	PKPbc	17 19 10.4	-0.5
	0.4nm,0.6s,baz=27,slow=1.5,SNR=3.6						

*NIED **04** 17:07:00, 3730N×13720E, h5km, Mw3.6 Best double couple: Mo2.90000×10^14 NP1:φs66.00000°, δ59.00000°, λ132.00000°. NP2:φs186.00000°, δ50.00000°, λ42.00000°.*
*ISCJB **04** 17:07:29.7±0.8, 3733N±003×13719E±005, h13km±6km, mb3.8/8, Error ellipse: s-maj=7.3km s-min=4.9km az=118.2*
*JMA **04** 17:07:30.3, 3732N×13724E, h7km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs50.00000°, δ21.00000°, λ135.00000°. NP2: φs183.00000°, δ75.00000°, λ75.00000°. Principal axes: T Plg57.0000°, Azm73.0000°; N Plg15.0000°, Azm187.0000°; P Plg29.0000°, Azm285.0000°;*
JMA Felt III J1.
*IDC **04** 17:07:34.9±2.5, 3722N×13739E, h52km±29km, mb3.3/7, mb1 3.4/8, mb1mx3.2/22, mbtmp3.5/8, ML3.2/1, MS2.9/1, Ms1 2.9/1, ms1mx1.8/19 Error ellipse: s-maj=51.2km s-min=14.2km az=73.0*
ISC 04 17:07:30.3±0.5, 3732N±003×13724E±004, h14km±4km, n17, σ0.88/23, mb3.8/8, 1C-4D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JSZ	Suzu	0.16	38	⇑P	Pg	17 07 33.7	-0.5
JSZ				S	Sg	17 07 36.3	-0.6
JJH	Hakui	0.54	223	⇓P	Pg	17 07 40.7	-0.2
JJH				S	Sg	17 07 48.6	+0.6
JHG	Hegura jima	0.58	334	⇓P	Pg	17 07 41.4	-0.3
JHG				eS	Sg	17 07 50.2	+0.8
JTT	Ttatey	0.72	174	⇓P	Pg	17 07 44.0	-0.3
JTT				eS	Sg	17 07 53.6	-0.2
JJN	Nakama	0.77	106	⇓P	Pg	17 07 45.2	0.0
JJN				eS	Sg	17 07 56.6	+1.3
MAT	Matsushiro	1.10	135	P	Pb	17 07 50.2	-0.9
MAT				S	Sb	17 08 05.4	+0.1
MJAR	Matsushiro Arr	1.10	135	P	Pb	17 07 51.1	+0.1
	29nm,0.3s,baz=313,slow=17,SNR=130						
MJAR				S	Sb	17 08 06.2	+0.9
	100nm,0.3s,baz=317,slow=27,SNR=36						
JHJ	Hachijo jima 2	4.68	153	LR	LR	17 10 42.7	
	comp=Z,131nm,18.1s,baz=329,slow=41						
ASAJ	Asahikawa	7.91	29	P	Pn	17 09 28.9	+4.1
	0.4nm,0.3s,baz=194,slow=12,SNR=5.1						
GUMO	Guam	24.60	162	P	P	17 12 47.1	-2.8
	17nm,0.3s,mb5.0,baz=186,slow=20,SNR=14						
SONM	Songino Array	24.87	305	P	P	17 12 54.6	+2.2
	0.2nm,0.4s,mb3.0,baz=104,slow=11,SNR=3.2						
WRA	Warramunga Arr	57.02	183	P	P	17 17 15.4	-0.3
	0.3nm,0.6s,mb3.5,baz=360,slow=7.5,SNR=10						
ASAR	Alice Springs	60.74	184	P	P	17 17 41.2	-0.2
	0.2nm,0.8s,mb3.3,baz=6.2,slow=9.4,SNR=3.2						
ARCES	ARCESS Array B	62.53	338	P	P	17 17 53.7	+0.2
	1.7nm,1.0s,mb4.1,baz=79,slow=16,SNR=3.1						
FINES	FINESS Array B	66.97	331	P	P	17 18 21.7	-0.8
	1.2nm,0.7s,mb4.0,baz=101,slow=9.9,SNR=5.4						
AKASG	Malin Array Be	71.99	321	P	P	17 18 54.6	+1.0
	0.2nm,0.3s,mb3.5,baz=51,slow=6.1,SNR=5.0						
NOA	NORSAR Array B	72.59	336	P	P	17 18 55.9	-1.2
	0.7nm,0.7s,mb3.7,baz=41,slow=6.0,SNR=3.8						

MAN 04 17:19:06.8, 1885N×12125E, h7km, mb2.9, ML4.3, MS1.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SGCP	Mt. Cagua	0.97	129	eP	Pg	17 19 25.3	-0.1
APYP	Conner	0.98	180	eP	Pg	17 19 25.7	0.0
APYP				eS	Sg	17 19 41.3	+2.8
CVP	Callao Caves	1.26	154	⇓iP	Pn	17 19 30.0	-0.9
CVP				i S	Sb	17 19 49.0	+1.6
ABRA	Dolores	1.30	203	eP	Pn	17 19 29.6	-1.8
CAUP	Cauayan	1.97	164	eP	Pn	17 19 42.4	+1.8
PALP	Palanan	2.10	148	eP	Pn	17 19 42.3	-0.1
BALP	Baler	3.11	174	eP	Pn	17 19 57.4	+1.2

*ISCJB **04** 17:21:57.7±1.3, 41.16N±009×7281E±010, h10km, Error ellipse: s-maj=14.0km s-min=8.9km az=120.9*
*KNET **04** 17:21:57.6±0.6, 4123N×7305E, h5km±3km, ml2.4, Error ellipse: s-maj=5.0km s-min=3.2km az=106.0*
ISC 04 17:21:59.0±1.3, 4121N±009×7283E±010, h10km, n12, σ1.01/19, 12C-9D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AML	Almayashu	1.12	35	⇓P	Pb	17 22 17.5	-3.0
	21nm,0.1s,SNR=19						
AML				⇑S	Sb	17 22 33.4	-1.8
	62nm,0.2s						
EKS2	Erkin-Say	1.61	26	⇑P	Pn	17 22 26.6	-0.9
	5.8nm,0.1s,SNR=30						
EKS2				⇓S	Sn	17 22 49.1	+0.8
	47nm,0.2s						
UCH	Uchtor	1.62	51	⇑P	Pn	17 22 25.8	-1.8
	18nm,0.3s,SNR=54						
UCH				⇓S	Sn	17 22 47.5	-1.0
	26nm,0.2s						
AAK	Ala-Archa	1.89	41	⇑P	Pn	17 22 31.5	+0.3
	15nm,0.2s,SNR=9.3						
AAK				⇑S	Sn	17 22 56.5	+1.4
	26nm,0.2s						
KZA	Kyzart	2.01	64	⇑P	Pn	17 22 32.4	-0.5
	13nm,0.2s,SNR=33						
KZA				⇑S	Sn	17 22 59.2	+1.1
	23nm,0.3s						
KBK	Karagaybulak	2.14	47	⇓P	Pn	17 22 35.7	+0.9
	6.8nm,0.1s,SNR=10						
KBK				⇓S	Sb	17 23 04.6	+0.2
	76nm,0.6s						
CHMS	Chumysh	2.29	38	⇑P	Pn	17 22 36.7	-0.1
	10.0nm,0.3s,SNR=9.1						
CHMS				⇑S	Sb	17 23 09.3	+0.7
	22nm,0.4s						
USP	Ospenovka	2.40	31	⇑P	Pn	17 22 38.5	+0.3
	7.5nm,0.3s,SNR=14						
KK31	Karatay Array	2.56	318	⇓Pn	Pn	17 22 41.1	+0.6
	1.0nm,0.3s,baz=132,slow=14,SNR=33						
KK31				⇑Lg		17 23 18.9	
	5.1nm,0.4s,baz=138,slow=24,SNR=4.4						
TKM2	Tokmak 2	2.68	49	⇓P	Pn	17 22 42.6	+0.5
	4.4nm,0.2s,SNR=9.6						
TKM2	Tokmak 2	2.68	49	⇓Pn	Pn	17 22 42.0	-0.1
	0.2nm,0.4s						
TKM2				⇑Lg		17 23 18.5	
	2.3nm,0.7s						
ULHL	Ulahol	2.75	67	⇓P	Pn	17 22 43.6	+0.5
	3.3nm,0.4s,SNR=7.1						

MOS 04 17:59:04.4±1.4, 4308N×4525E, h21km, mb3.7/1, 5C, Error ellipse: s-maj=38.4km s-min=16.0km az=0.4, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SNJR	Sundja	0.32	268	⇑iPG	Pb	17 59 12.8	+1.3
SNJR				i S	Sb	17 59 18.8	+2.5
BTKR	Batakoyurt	0.59	300	ePG	Pb	17 59 17.8	+1.7
BTKR				eS	Sb	17 59 27.5	+3.4
LACR	Lac	0.74	250	⇑iPG	Pb	17 59 20.2	+1.5
LACR				i S	Sb	17 59 31.7	+3.3
KMSR	Komsomolskaya	0.76	293	⇑iPG	Pb	17 59 20.6	+1.7
KMSR				i S	Sb	17 59 32.4	+3.6
KORR	Kora	0.87	271	⇑iPG	Pb	17 59 22.4	+1.7
KORR				i S	Sb	17 59 35.5	+3.6
ZEI	Tsey	1.04	253	ePG	Pb	17 59 25.1	+1.4
ZEI				eS	Sb	17 59 40.2	+3.3
DIGR	Digorskoe uzhe	1.24	262	⇑iPG	Pn	17 59 28.7	+2.2
DIGR				i S	Sn	17 59 46.4	+3.9

*ISCJB **04** 17:59:14.6±2.7, 5.1S±02×15476E±007, h66km±24km, mb3.9/7, Error ellipse: s-maj=26.7km s-min=11.4km az=5.9*
*IDC **04** 17:59:16.4±3.4, 5.12S×15476E, h70km±30km, mb3.8/6, mb1 3.8/8, mb1mx3.7/16, mbtmp4.2/8, ML2.8/1, Error ellipse: s-maj=29.5km s-min=17.0km az=174.0*
*NEIC **04** 17:59:16.9±2.2, 524S×15482E, h74km±19km, mb4.2/3, Error ellipse: s-maj=24.7km s-min=14.9km az=183.0*
ISC 04 17:59:17.0±2.2, 51S±02×15477E±007, h75km±19km, n13, σ1.49/16, mb3.9/7, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HNR	Honiara	6.69	130	P	Pn	18 00 51.0	-1.7
	14nm,0.3s,baz=268,slow=8.6,SNR=9.6						
HNR				S	Sn	18 02 09.1	+1.7
	baz=268,slow=21,SNR=2.6						
PMG	Port Moresby	8.68	240	P	Pn	18 01 19.3	-0.4
	0.6nm,0.3s,baz=127,slow=21,SNR=2.6						
PMG				S	Sn	18 02 58.1	+2.3
	1.2nm,0.3s,baz=214,slow=23,SNR=4.6						
PMG	Port Moresby	8.68	240	P	Pn	18 01 19.3	-0.4
PMG				eSn	Sn	18 02 43.8	-12
WRAB	Tennant Creek	24.74	232	eP	P	18 04 30.5	-0.9
	7.2nm,0.9s,mb4.1						
WRA	Warramunga Arr	24.75	232	P	P	18 04 30.5	-1.0
	1.9nm,0.6s,mb3.7,baz=56,slow=9.8,SNR=24						
AS31	Alice Springs	27.29	225	P	P	18 04 50.1	-4.3
ASAR	Alice Springs	27.29	225	P	P	18 04 52.7	-1.7
	1.4nm,0.8s,mb3.5,baz=57,slow=9.2,SNR=14						
STKA	Stephens Creek	29.35	203	P	P	18 05 14.2	+1.5
	0.9nm,0.5s,mb3.7,baz=6.3,slow=9.2,SNR=4.5						
KSM	Kuching	44.90	277	P	P	18 07 26.3	+2.3
MKAR	Makanchi Array	81.85	319	P	P	18 11 30.1	+2.1
	0.5nm,0.6s,mb3.5,baz=103,slow=6.5,SNR=5.3						
MAW	Mawson	86.04	203	P	P	18 11 49.4	+0.1
	1.6nm,0.6s,mb4.2,baz=98,slow=7.2,SNR=8.9						
MAW	Mawson	86.04	203	eP	P	18 11 48.2	-1.1
	1.8nm,0.6s,mb4.2						
BBB	Bella Bella	86.16	37	P	P	18 11 48.8	-1.1
	1.6nm,0.4s,mb4.3,baz=217,slow=5.1,SNR=5.4						

*ISCJB **04** 18:00:41.2±2.9, 294S±02×1797W±05, h532km±31km, mb3.7/3, Error ellipse: s-maj=65.0km s-min=22.3km az=153.0*
*IDC **04** 18:00:43.8±4.1, 2946S×17982E, h502km±40km, mb3.1/3, mb1 3.4/6, mb1mx3.2/13, mbtmp4.2/6, Error ellipse: s-maj=48.2km s-min=30.8km az=60.0*
ISC 04 18:00:44.3±2.9, 296S±02×1799E±05, h522km±28km, n15, σ0.78/16, mb3.7/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PUZ	Puketiti	8.57	189	ePN	P	18 02 47.9	+0.8
MWZ	Matawai	8.94	192	PN	P	18 02 52.3	+1.4
URZ	Urewera	8.95	194	P	P	18 02 51.6	+0.6
	7.9nm,0.3s,baz=360,slow=2.0,SNR=55						
URZ				S	S	18 04 35.5	+0.6
	2.3nm,0.3s,baz=258,slow=23,SNR=13						
URZ	Urewera	8.95	194	PN	P	18 02 50.8	-0.1
BKZ	Black Stump Fm	9.96	195	PN	P	18 02 60.0	-1.4
BFZ	Birch Farm	11.46	194	ePN	P	18 03 16.6	-0.5
THZ	Tophouse	13.40	203	ePN	P	18 03 36.5	-1.0
DZM	Mont Dzumac	14.23	299	P	P	18 03 45.7	-0.4
	0.6nm,0.3s,baz=42,slow=18,SNR=6.0						
WVZ	Waitaha Valley	15.34	206	ePN	P	18 03 57.7	+0.1
RPZ	Rata Peaks	15.77	204	P	P	18 04 01.8	-0.2
	1.5nm,0.3s,baz=24,slow=6.8,SNR=12						
RPZ				S	S	18 06 52.4	+7.5
	0.3nm,0.3s,baz=115,slow=7.9,SNR=4.0						
FOZ	Fox Glacier	16.16	208	ePN	P	18 04 05.0	-1.1
STKA	Stephens Creek	32.89	256	P	P	18 06 35.3	+0.3
	0.8nm,0.3s,mb3.8,baz=68,slow=12,SNR=8.3						
ASAR	Alice Springs	41.33	267	P	P	18 07 45.1	+0.9
	0.8nm,0.5s,mb3.5,baz=107,slow=7.9,SNR=14						
WRA	Warramunga Arr	42.24	272	P	P	18 07 51.5	+0.1
	1.3nm,0.4s,mb3.8,baz=110,slow=8.0,SNR=19						
FINES	FINESS Array B	143.75	339	PKP	PKPdf	18 19 19.8	0.0
	0.5nm,0.3s,baz=69,slow=3.2,SNR=12						

*ISCJB **04** 18:06:53.5±0.6, 4378N±003×10520W±006, h0km, mb4.1/1, Error ellipse: s-maj=6.6km s-min=4.5km az=10.7*
*IDC **04** 18:06:53.8±1.8, 4369N×10538W, h0km, mb3.9/1, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, ML3.2/3, Error ellipse: s-maj=50.1km s-min=8.5km az=150.0*
*NEIC **04** 18:06:55.1±0.4, 4379N×10519W, h0km, ML3.3, Error ellipse: s-maj=6.1km s-min=4.9km az=119.0, Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
ISC 04 18:06:55.0±0.5, 4379N±003×10517W±006, h0km, n40, σ0.98/46, mb4.1/1, Wyoming

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RSSD	Black Hills	0.88	68	eP	Pg	18 07 13.1	+1.1
PHWY	Pilot Hill	2.50	185	ePn	Pn	18 07 36.4	-0.5
PHWY				eSn	Sn	18 08 08.7	+0.6
RWWY	Rawlins	2.58	216	ePn	Pn	18 07 38.6	+0.5
RWWY				eSn	Sn	18 08 08.4	-1.8
LAO	LASA Array	2.99	346	ePn	Pn	18 07 43.9	+0.1
LAO				eSn	Sn	18 08 21.4	+1.1
BW06	Boulder Array	3.36	254	ePn	Pn	18 07 47.9	-1.0
BW06				eSn	Sn	18 08 30.8	+1.4
PDAR	Pinedale Array	3.36	254	Pn	Pn	18 07 48.4	-0.5
	3.0nm,0.3s,baz=66,slow=16,SNR=49						
PDAR				Pg	Pg	18 07 55.4	-4.1
	5.7nm,0.3s,baz=78,slow=14,SNR=35						
PDAR				Lg		18 08 33.0	
	7.6nm,0.3s,baz=77,slow=32,SNR=6.5						
GCMT	Greycliff	3.77	304	ePn	Pn	18 07 54.3	-0.2
LKWY	Lake	3.84	283	P	Pn	18 07 56.2	+0.9
ISCO	Idaho Springs	4.00	185	ePn	Pn	18 07 58.0	+0.5
FLWY	Flagg Ranch	4.00	276	ePn	Pn	18 07 57.6	0.0
FLWY				ePg	Pg	18 08 07.0	-4.7
MOOW	Moose Ponds	4.04	271	ePn	Pn	18 07 59.7	+1.6
SNOW	Snow King Moun	4.07	267	P	Pn	18 08 03.0	+4.5
YFT	Old Faithful	4.13	281	eP	Pb	18 08 10.3	+1.7
REDW	Red Top Meadow	4.15	266	ePn	Pn	18 08 01.2	+1.5
IMW	Indian Meadow	4.17	273	ePn	Pn	18 08 03.5	+3.5
TPAW	Teton Pass	4.21	268	ePn	Pn	18 07 59.8	-0.6
RRI2	Red Ridge	4.49	266	ePn	Pn	18 08 03.7	-0.6
QLMT	Earthquake Lak	4.61	285	ePn	Pb	18 08 15.7	-1.1
SMCO	Snowmass	4.80	197	ePg	Pb	18 08 21.8	+1.7
BOZ	Bozeman (W)	4.96	294	ePn	Pn	18 08 09.6	-1.2
HWUT	Hardware Ranch	5.19	247	eP	Pn	18 08 12.5	-1.5
	9.0nm,0.6s						
EGMT	Eagleton	5.31	325	ePn	Pn	18 08 14.8	-0.7
	18nm,0.6s						
TCUT	Toone Canyon	5.33	242	ePn	Pn	18 08 15.4	-0.4
DLMT	Dillon	5.53	289	ePn	Pn	18 08 19.2	+0.5
	10nm,0.8s						
HRY	Holter Researc	5.54	304	P	Pn	18 08 18.8	+0.1
MCMT	McKenzie Canyo	5.61	283	P	Pn	18 08 24.8	+5.2
DAU	Daniels Canyon	5.64	235	ePn	Pn	18 08 20.8	+0.6
SPUT	South Promonto	5.92	248	ePn	Pn	18 08 23.9	0.0
PV10	Paradox Valley	6.15	210	ePn	Pn	18 08 28.1	+1.1
SRU	San Rafael	6.17	223	ePn	Pn	18 08 25.6	-1.8
	11nm,0.5s						
PV01	Paradox Valley	6.21	206	ePn	Pn	18 08 28.0	+0.1
TMUT	Trail Mountain	6.38	227	ePn	Pn	18 08 29.9	-0.3
NLU	North Lily Min	6.42	236	ePn	Pn	18 08 31.1	+0.2
CHMT	Chamberlain Mo	6.49	302	ePn	Pn	18 08 31.6	-0.2
MSU	Marysvale	7.46	227	ePn	Pn	18 08 44.6	-0.5
CCUT	Cedar City	8.80	228	ePn	Pn	18 09 03.8	+0.2
ULM	Lac du Bonnet	9.05	41	Pn	Pn	18 09 06.0	-1.0
ULM				Lg		18 11 38.6	
ULM	Lac du Bonnet	9.05	41	Pn	Pn	18 09 06.0	-1.0
	0.6nm,0.3s,baz=236,slow=12,SNR=6.5						
ULM				Lg		18 11 38.6	
	0.3nm,0.3s,baz=120,slow=20,SNR=3.5						
NVAR	Mina Array Bea	11.26	246	Pn	Pn	18 09 36.7	-0.4
	0.1nm,0.3s,baz=47,slow=10,SNR=3.6						
ARCES	ARCESS Array B	61.35	18	P	P	18 17 10.8	-1.8
	1.4nm,0.9s,mb4.1,baz=322,slow=7.7,SNR=4.7						

*NEIC **04** 18:10:03.5, 3822S×17586E, h184km, MG3.8(WEL), After*

WEL.

WEL 04 18:10:03.3±0.2,3821S×17586E,h184km±1km,ML3.8/21, 1D,Error ellipse: s-maj=2.1km s-min=1.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	Kakaramea	0.78	190	P	Pn	18 10 30.5	+0.5
KATZ	Kakaramea	0.78	190	PN	Pn	18 10 30.4	+0.4
HIZ	Hauiti	0.85	249	P	Pn	18 10 30.3	-0.1
HIZ	Hauiti	0.85	249	PN	Pn	18 10 30.2	-0.2
TWVZ	Taurewa	0.93	201	P	Pn	18 10 31.1	+0.2
TWVZ	Taurewa	0.93	201	PN	Pn	18 10 31.0	+0.1
WTVZ	West Tongariro	0.93	193	P	Pn	18 10 31.3	+0.3
WTVZ	West Tongariro	0.93	193	PN	Pn	18 10 31.1	+0.1
OTVZ	Oturere	0.97	189	PN	Pn	18 10 31.5	+0.3
OTVZ				SN	Sn	18 10 53.2	+0.4
URZ	Urewera	0.98	93	P	Pn	18 10 31.3	0.0
URZ	Urewera	0.98	93	PN	Pn	18 10 31.1	-0.2
URZ				SN	Sn	18 10 52.8	-0.1
NGZ	Ngauruhoe	0.99	192	P	Pn	18 10 31.7	+0.3
NGZ	Ngauruhoe	0.99	192	PN	Pn	18 10 31.6	+0.2
WPVZ	Whakapapa	1.03	194	P	Pn	18 10 32.0	+0.4
WPVZ	Whakapapa	1.03	194	PN	Pn	18 10 31.9	+0.2
TUVZ	Tukino	1.07	189	P	Pn	18 10 32.3	+0.3
TUVZ	Tukino	1.07	189	PN	Pn	18 10 32.2	+0.2
FWVZ	Far West T-bar	1.07	193	P	Pn	18 10 32.4	+0.4
FWVZ	Far West T-bar	1.07	193	PN	Pn	18 10 32.2	+0.2
BKZ	Black Stump Fm	1.08	153	⇓PN	Pn	18 10 32.2	+0.2
WNVZ	Wahianoa	1.14	190	P	Pn	18 10 32.8	+0.3
WNVZ	Wahianoa	1.14	190	PN	Pn	18 10 32.7	+0.2
WNVZ				SN	Sn	18 10 54.5	-0.6
PKVZ	Pokaka	1.15	200	PN	Pn	18 10 32.6	0.0
MOVZ	Moawhango	1.20	184	PN	Pn	18 10 32.8	-0.2
MTVZ	Mangateitei	1.22	195	PN	Pn	18 10 33.0	-0.1
MWZ	Matawai	1.32	96	P	Pn	18 10 34.3	+0.3
MWZ				S	Sn	18 10 57.6	-0.1
MWZ	Matawai	1.32	96	PN	Pn	18 10 34.3	+0.3
MWZ				SN	Sn	18 10 57.6	-0.1
RAEZ	Rainy Point	1.58	226	P	Pn	18 10 36.4	0.0
RAEZ	Rainy Point	1.58	226	PN	Pn	18 10 36.3	0.0
KNZ	Kokohu	1.63	120	P	Pn	18 10 37.4	+0.5
KNZ	Kokohu	1.63	120	PN	Pn	18 10 37.3	+0.4
WAZ	Wanganui	1.69	204	P	Pn	18 10 37.2	-0.3
WAZ	Wanganui	1.69	204	PN	Pn	18 10 37.0	-0.5
NEZ	North Egmont	1.74	232	P	Pn	18 10 38.4	+0.4
NEZ	North Egmont	1.74	232	PN	Pn	18 10 38.4	+0.4
PKE	Pukeiti	1.77	236	P	Pn	18 10 38.2	-0.1
PKE	Pukeiti	1.77	236	PN	Pn	18 10 38.1	-0.1
TSZ	Takapari Road	1.85	178	P	Pn	18 10 38.6	-0.5
TSZ	Takapari Road	1.85	178	PN	Pn	18 10 38.5	-0.6
NRZ	Ngariki Road	1.88	233	P	Pn	18 10 39.7	+0.3
NRZ	Ngariki Road	1.88	233	PN	Pn	18 10 39.5	+0.1
NWEZ	Newall Road	1.89	235	P	Pn	18 10 39.4	-0.1
PUZ	Puketiti	1.89	87	P	Pn	18 10 39.6	+0.1
PUZ	Puketiti	1.89	87	PN	Pn	18 10 39.4	-0.1
PXZ	Pawanui	1.98	157	PN	Pn	18 10 40.1	-0.4
MXZ	Matakaoa Point	2.04	72	P	Pn	18 10 41.7	+0.6
MXZ				S	Sn	18 11 11.7	+1.4
MXZ	Matakaoa Point	2.04	72	PN	Pn	18 10 41.4	+0.3
MXZ				SN	Sn	18 11 11.5	+1.2
MRZ	Mangatainoka R	2.46	185	eP	Pn	18 10 44.2	-1.6
MRZ	Mangatainoka R	2.46	185	PN	Pn	18 10 44.0	-1.8
BFZ	Birch Farm	2.49	173	eP	Pn	18 10 44.7	-1.4
BFZ	Birch Farm	2.49	173	PN	Pn	18 10 44.7	-1.4
KIW	Kapiti Island	2.75	195	P	Pn	18 10 47.0	-2.2
KIW	Kapiti Island	2.75	195	PN	Pn	18 10 46.9	-2.3
CAW	Cannon Point	2.96	192	P	Pn	18 10 49.4	-2.3
CAW	Cannon Point	2.96	192	PN	Pn	18 10 49.1	-2.6
MTW	Mount Morrison	2.96	185	P	Pn	18 10 49.3	-2.4
MTW	Mount Morrison	2.96	185	PN	Pn	18 10 49.1	-2.6
DUWZ	D'Urville Isla	3.00	209	PN	Pn	18 10 49.4	-2.7
MRW	Makara Radio	3.15	196	P	Pn	18 10 51.4	-2.5
MRW	Makara Radio	3.15	196	PN	Pn	18 10 51.0	-2.9
PAWZ	Paruwai Farm	3.19	186	P	Pn	18 10 51.8	-2.6
PAWZ	Paruwai Farm	3.19	186	PN	Pn	18 10 51.7	-2.7
WEL	Wellington	3.19	195	P	Pn	18 10 52.0	-2.4
WEL	Wellington	3.19	195	PN	Pn	18 10 51.8	-2.7
TRWZ	Traveller	3.19	182	PN	Pn	18 10 51.8	-2.6
SNZO	South Karori	3.22	196	P	Pn	18 10 52.0	-2.9
SNZO	South Karori	3.22	196	PN	Pn	18 10 51.9	-2.9
MSWZ	Moikau Station	3.24	188	P	Pn	18 10 52.4	-2.6
MSWZ	Moikau Station	3.24	188	PN	Pn	18 10 52.2	-2.9
TCW	Tory Channel	3.24	202	P	Pn	18 10 52.5	-2.6
TCW	Tory Channel	3.24	202	PN	Pn	18 10 52.3	-2.8
TUWZ	Tuamarina	3.54	204	PN	Pn	18 10 55.8	-3.0
NNZ	Nelson	3.56	212	eP	Pn	18 10 55.6	-3.5
NNZ	Nelson	3.56	212	PN	Pn	18 10 55.4	-3.6
QRZ	Quartz Range	3.67	224	eP	Pn	18 10 56.8	-3.6
QRZ	Quartz Range	3.67	224	PN	Pn	18 10 56.5	-4.0
BSWZ	Blackbirch Sta	3.82	203	P	Pn	18 10 59.4	-2.9
BSWZ	Blackbirch Sta	3.82	203	ePN	Pn	18 10 58.9	-3.4
THZ	Tophouse	4.22	212	eP	Pn	18 11 04.3	-3.0
THZ	Tophouse	4.22	212	PN	Pn	18 11 03.3	-3.9
KHZ	Kahutara	4.56	202	P	Pn	18 11 08.5	-3.2
KHZ	Kahutara	4.56	202	PN	Pn	18 11 08.2	-3.6
DSZ	Denniston Nort	4.71	220	eP	Pn	18 11 09.5	-4.1
DSZ	Denniston Nort	4.71	220	ePN	Pn	18 11 08.9	-4.7
LTZ	Lake Taylor	5.33	210	eP	Pn	18 11 17.4	-4.2
LTZ	Lake Taylor	5.33	210	ePN	Pn	18 11 17.2	-4.3
ODZ	Otahua Downs	7.87	208	eP	Pn	18 11 50.5	-4.3
ODZ	Otahua Downs	7.87	208	ePN	Pn	18 11 50.3	-4.5

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*MAN **04** 18:20:47.3,15.17N×119.82E,h21km,mb4.5,ML5.1,MS2.9*
MAN F INTENSITY IV - CABANGAN ZAMBALES; INTENSITY III - CLARK AIRBASE PAMPANGA.
*ISCJB **04** 18:20:48.1±0.4,15.13N±0.03×119.86E±0.04,h58km±4km, mb4.5/44,MS3.6/12,Error ellipse: s-maj=7.1km s-min=4.2km az=176.5*
*MOS **04** 18:20:49.9±1.1,15.13N×120.18E,h81km,mb4.5/13,Error ellipse: s-maj=16.7km s-min=7.0km az=118.1*
*BJI **04** 18:20:49.4,15.27N×120.32E,h74km,mB4.5,mb4.4,Ms4.1, Msz3.7*
*NEIC **04** 18:20:51.7±0.8,15.07N×120.14E,h85km±8km,mb4.5/15, Error ellipse: s-maj=13.5km s-min=4.7km az=72.0*
NEIC Felt [IV PIVS] at Cabangan, [III PIVS] at Clark Field and [I PIVS] at Quezon City.
*IDC **04** 18:20:51.4±1.8,15.13N×120.17E,h80km±17km,mb4.0/21, mb1 4.2/21,mb1mx4.2/24,mbtmp4.4/21,MS3.6/10, Ms1 3.6/10,ms1mx3.4/24,Error ellipse: s-maj=19.9km s-min=11.0km az=73.0*

ISC 04 18:20:49.6±0.4,15.14N±0.03×119.94E±0.04,h58km±4km, n133,σ1.21/140,mb4.5/44,MS3.6/12,13C-11D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.63	358	eP	Pn	18 21 00.1	-2.9
SCZP				eS	Sn	18 21 08.5	-4.2
PCPH	Palayan	1.20	69	⇓eP	Pn	18 21 09.0	-1.1
PCPH				eS	Sn	18 21 23.8	-1.7
BOLP	Bolinao	1.23	359	eP	Pn	18 21 08.1	-2.5
BCPH	Baguio City Da	1.38	27	⇑iP	Pn	18 21 11.4	-1.3
BCPH				iS	Sn	18 21 28.9	-1.0
TGY	Tagaytay City	1.42	137	⇑iP	Pn	18 21 15.4	+2.4
TGY				iS	Sn	18 21 37.1	+6.3
TGY	Tagaytay City	1.42	137	P	Pn	18 21 14.0	+0.9
	1μm,0.3s,baz=305,slow=3.1,SNR=71						
LUBP	Lubang	1.43	168	eP	Pn	18 21 11.7	-1.6
BALP	Baler	1.69	69	eP	Pn	18 21 16.7	-0.1
BALP				eS	Sn	18 21 38.0	+0.6
LQP	Lukban	1.86	123	eP	Pn	18 21 20.7	+1.6
PGP	Puerto Galera	1.90	149	eP	Pn	18 21 21.1	+1.4
POLP	Polilio Island	1.98	102	eP	Pn	18 21 21.9	+1.1
BOAC	Boac	2.49	132	eP	Pn	18 21 28.2	+0.5
CAUP	Cauayan	2.55	45	eP	Pn	18 21 29.3	+0.7
ABRA	Dolores	2.60	17	eP	Pn	18 21 30.6	+1.3
GQP	Guinayangan	2.72	116	⇓eP	Pn	18 21 32.1	+1.2
APYP	Conner	2.98	25	eP	Pn	18 21 35.7	+1.2
PALP	Palanan	3.06	51	⇓iP	Pn	18 21 37.6	+2.1
PALP				iS	Sn	18 22 14.9	+4.0
PALP	Palanan	3.06	51	eP	Pn	18 21 36.3	+0.7
CVP	Callao Caves	3.13	35	eP	Pn	18 21 36.0	-0.4
CVP				eS	Sn	18 22 20.0	+7.5
BUSP	Coron	3.13	175	eP	Pn	18 21 37.4	+0.9
AUQP	San Andres	3.21	124	eP	Pn	18 21 40.6	+3.1
OTRP	Odiongan	3.42	143	eP	Pn	18 21 44.0	+3.5
SGCP	Mt. Cagua	3.69	33	eP	Pn	18 21 47.5	+3.4
ENPP	El Nido	3.94	187	eP	Pn	18 21 48.0	+0.5
PVCP	Virac	4.37	110	⇑iP	Pn	18 21 55.2	+1.9
PVCP	Virac	4.37	110	eP	Pn	18 21 54.7	+1.3
CUYO	Cuyo Island	4.39	166	eP	Pn	18 21 54.0	+0.3
PPR	Puerto Princes	5.46	193	⇑iP	Pn	18 22 08.2	-0.1
OCLP	Ormoc	6.10	131	eP	Pn	18 22 25.8	+8.7
BATP	Bataraza	6.64	199	eP	Pn	18 22 23.8	-0.7
PAGZ	Pagadian	7.99	155	eP	Pn	18 22 47.7	+4.6
BUKP	Musuan	8.79	145	eP	Pn	18 22 59.8	+5.9
YHNB	Yeheng	9.58	8	eP	Pn	18 23 07.6	+2.9
QIZ	Qiongzhong	10.40	293	eP	Pn	18 23 13.8	-2.1
JOW	Kunigami	13.99	32	P	Pn	18 24 10.6	+5.8
	1.9nm,0.3s,baz=209,slow=11,SNR=10						
JOW				LR	LR	18 29 14.0	
	comp=Z,118nm,19.7s,baz=287,slow=36						
SSE	Sheshan	15.92	4	eP	Pn	18 24 26.6	-3.3
SSE				AMB	AMB		
	comp=Z,17nm,0.7s						
SSE				AMB	AMB		
	comp=Z,27nm,4.6s						
NJ2	Nanjing	16.86	357	eP	Pn	18 24 39.8	-1.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
CD2	Chengdu	21.59	319	eP	P	18 25 34.4	-0.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.5						
CBIJ	Chichi jima	23.88	57	LR	LR	18 34 01.4	
	comp=Z,74nm,18.2s,MS3.2,baz=108,slow=33						
PSI	Prapat	24.07	241	P	P	18 26 01.4	+2.0
	comp=Z,5.8nm,0.9s,mb4.0,baz=101,slow=12,SNR=4.1						
PSI				LR	LR	18 34 47.4	
	comp=Z,363nm,18.6s,MS3.9,baz=84,slow=34						
GUMO	Guam	24.20	90	LR	LR	18 35 12.1	
	comp=Z,62nm,21.8s,MS3.0,baz=51,slow=36						
JHJ	Hachijo jima 2	25.39	42	LR	LR	18 34 18.0	
	comp=Z,78nm,21.3s,MS3.2,baz=99,slow=32						
HHC	Hu-ho-hao-te	26.63	346	eP	P	18 26 24.4	+1.8
HHC				AP	pP	18 26 39.0	+2.0
HHC				PP		18 27 11.2	
HHC				PCP	PcP	18 29 46.3	+1.0
HHC				S	S	18 30 54.4	+1.0
HHC				XS	sS	18 31 19.4	+1.4
HHC				SCP	ScP	18 33 19.9	-0.4
HHC				PCS	PcS	18 33 26.5	-0.1
HHC				SCS	ScS	18 37 09.3	-1.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
HHC				AMB	AMB		
	comp=Z,61nm,3.8s						
HHC				LR	LR		
	comp=N,156nm,18.0s,MS3.7						
HHC				LR	LR		
	comp=E,100nm,14.2s,MS3.7						
HHC				LR	LR		
	comp=Z,159nm,19.0s,MS3.6						
MJAR	Matsushiro Arr	26.83	34	P	P	18 26 21.9	-2.5
	comp=Z,1.0nm,0.5s,mb3.6,baz=210,slow=6.1,SNR=6.7						
FITZ	Fitzroy Crossi	33.51	170	eP	P	18 27 22.1	-1.3
	comp=Z,3.1nm,0.5s,mb4.5						
SONM	Songino Array	34.48	344	P	P	18 27 32.2	+0.4
	comp=Z,1.8nm,0.6s,mb4.2,baz=162,slow=10.0,SNR=12						
SONM				LR	LR	18 41 24.8	
	comp=Z,87nm,21.1s,MS3.5,baz=345,slow=36						
ASAJ	Asahikawa	34.72	29	P	P	18 27 33.5	-0.4
	comp=Z,9.2nm,0.5s,mb5.0,baz=225,slow=12,SNR=19						
KLR	Kul'dur	35.35	13	eP	P	18 27 35.6	-3.7
MBWA	Marble Bar	36.07	180	eP	P	18 27 44.6	-0.9
PMG	Port Moresby	36.37	130	⇑eP	P	18 27 46.8	-1.2
YSS	Yuzh-Sakhalins	36.98	26	⇑eP	P	18 27 53.5	+0.3
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
YSS	Yuzh-Sakhalins	36.98	26	eP	P	18 27 53.1	-0.2
	comp=Z,11nm,0.8s,mb4.7						
WRAB	Tennant Creek	37.62	157	eP	P	18 27 56.5	-2.2
WRAB				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
WRAB	Tennant Creek	37.62	157	eP	P	18 27 56.5	-2.2
	comp=Z,13nm,0.7s,mb4.8						
WRA	Warramunga Arr	37.63	157	P	P	18 27 56.6	-2.1
	comp=Z,8.1nm,0.7s,mb4.5,baz=340,slow=9.0,SNR=82						
WRA				PcP	PcP	18 30 15.9	+0.6
	comp=Z,1.0nm,0.5s,baz=339,slow=3.2,SNR=6.2						
WB2	Warramunga Arr	37.63	157	eP	P	18 27 56.6	-2.2
WMQ	Urumqi	39.62	323	eP	P	18 28 16.0	+0.6
WMQ				AP	pP	18 28 31.0	+0.7
WMQ				PP	PP	18 29 52.0	+4.8
WMQ				S	S	18 34 15.0	+0.8
WMQ				SS	SS	18 37 07.0	-4.1
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,112nm,4.0s						
WMQ				LR	LR		
	comp=N,102nm,12.0s,MS4.0						
WMQ				LR	LR		
	comp=E,109nm,12.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,102nm,12.0s,MS3.9						
AS31	Alice Springs	40.91	160	eP	P	18 28 24.6	-1.5
ASPA	Alice Springs	40.91	160	eP	P	18 28 24.6	-1.5
ASAR	Alice Springs	40.91	160	P	P	18 28 24.6	-1.5
	comp=Z,3.6nm,0.4s,mb4.4,baz=339,slow=7.1,SNR=98						
ASAR				PcP	PcP	18 30 26.1	+0.4
	comp=Z,0.9nm,0.5s,baz=346,slow=2.7,SNR=4.1						
CTA	Charters Tower	43.53	143	P	P	18 28 46.3	-1.1
	comp=Z,2.7nm,0.3s,mb4.5,baz=340,slow=9.2,SNR=6.3						
CTAO	Charters Tower	43.53	143	eP	P	18 28 46.9	-0.5
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
CTAO	Charters Tower	43.53	143	eP	P	18 28 46.9	-0.6
	comp=Z,4.5nm,0.6s,mb4.4						
MKAR	Makanchi Array	44.44	323	P	P	18 28 54.8	+0.1
	comp=Z,0.4nm,0.3s,mb3.7,baz=107,slow=8.0,SNR=11						
KLBR	Kellerberrin	46.51	183	eP	P	18 29 10.5	-0.5
	comp=Z,12nm,0.5s,mb5.1						
MUN	Mundaring	46.98	184	eP	P	18 29 14.3	-0.5
ZAL	Zalesovo	47.45	332	P	P	18 29 20.4	+2.0
	comp=Z,1.8nm,0.5s,mb4.3,baz=3.0,slow=7.7,SNR=6.1						
ZAL				LR	LR	18 50 57.9	
	comp=Z,84nm,18.1s,MS3.8,baz=122,slow=38						
NWAO	Narrogin (SRO)	47.86	183	eP	P	18 29 21.5	-0.1
KURK	Kurchatov	48.59	326	⇑iP	P	18 29 27.6	+0.4
KURK	Kurchatov	48.59	326	eP	P	18 29 27.6	+0.4
	comp=Z,5.2nm,0.6s,mb4.7						
STKA	Stephens Creek	51.16	156	eP	P	18 29 45.1	-1.5
	comp=Z,1.5nm,0.8s,mb4.0						
STKA	Stephens Creek	51.16	156	P	P	18 29 44.9	-1.8
	comp=Z,1.2nm,0.3s,mb4.2,baz=310,slow=9.4,SNR=7.0						
STKA				LR	LR	18 53 16.9	
	comp=Z,112nm,19.0s,MS3.9,baz=206,slow=38						
BVAR	Borovoye Array	54.17	325	P	P	18 30 09.5	+0.5
	comp=Z,0.8nm,0.4s,mb4.0,baz=124,slow=9.8,SNR=8.0						
BRVK	Borovoye	54.25	325	eP	P	18 30 09.9	+0.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BRVK	Borovoye	54.25	325	eP	P	18 30 09.9	+0.4
	comp=Z,2.1nm,0.8s,mb4.1						
CHKZ	Chkalovo	54.33	326	eP	P	18 30 10.2	+0.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
CHKZ	Chkalovo	54.33	326	eP	P	18 30 10.2	+0.1
	comp=Z,1.8nm,0.6s,mb4.2						
ZRNK	Zerenda	54.91	325	eP	P	18 30 14.3	+0.1
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ZRNK	Zerenda	54.91	325	eP	P	18 30 14.3	+0.1
	comp=Z,2.4nm,0.6s,mb4.4						
BILL	Bilibino	60.58	18	eP	P	18 30 53.9	-0.1
BILL				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.6						
ARU	Arti	61.78	326	⇓iP	P	18 31 01.8	-0.4
ARU				e		18 31 39.6	
ARU				eS	S	18 39 25.2	+4.3
ARU				eSS	SS	18 43 27.8	+4.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
ARU	Arti	61.78	326	eP	P	18 31 01.6	-0.5
	comp=Z,4.9nm,0.7s,mb4.8						
MIB	Mutribah	67.70	296	eP	P	18 31 40.7	0.0
MIB				AMb	AMB	18 31 41.9	
	comp=Z,19nm,0.6s,mb5.3						
NAY	Al-Naaiem	67.84	296	eP	P	18 31 41.7	+0.1
NAY				AMb	AMB	18 31 42.8	
	comp=Z,11nm,0.7s,mb5.0						
RST	Umm Al-Ruwaisa	68.03	296	eP	P	18 31 41.7	-1.0
RST				AMb	AMB	18 31 43.6	
	comp=Z,6.8nm,0.7s,mb4.8						
KIV	Kislovodsk	70.52	312	deP	P	18 31 59.6	+1.4
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
OBN	Obninsk	73.95	324	d iP	P	18 32 18.5	-0.1
OBN				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.2						
KEV	Kevo	76.93	339	ep	P	18 32 34.4	-1.3
	comp=Z,2.9nm,0.5s,mb4.5						
KEV	Kevo	76.93	339	eP	P	18 32 34.4	-1.3
KEV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
ARCES	ARCESS Array B	77.48	339	P	P	18 32 38.6	-0.2
	comp=Z,5.2nm,0.5s,mb4.7,baz=77,slow=6.9,SNR=119						
BRTR	Keskin Array B	77.68	308	P	P	18 32 40.5	+0.6
	comp=Z,0.8nm,0.5s,mb3.9,baz=133,slow=4.6,SNR=5.9						
BRTR				LR	LR	19 13 42.0	
	comp=Z,28nm,19.1s,MS3.6,baz=205,slow=41						
KAF	Kangasniemi	78.44	331	ep	P	18 32 42.5	-1.6
	comp=Z,5.8nm,0.5s,mb4.8,baz=75,slow=5.0						
KAF	Kangasniemi	78.44	331	eP	P	18 32 42.5	-1.6
KAF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
FINES	FINESS Array B	78.67	331	P	P	18 32 44.6	-0.8
	comp=Z,3.6nm,0.5s,mb4.6,baz=61,slow=5.9,SNR=71						
FINES	FINESS Array B	78.67	331	i P	P	18 32 45.0	-0.4
FINES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	Malin Array Be	78.89	320	P	P	18 32 45.6	-1.0
	comp=Z,0.7nm,0.6s,mb3.8,baz=66,slow=4.6,SNR=6.8						
AKASG	Malin Array Be	78.89	320	i P	P	18 32 46.4	-0.2
VRI	Vrincioaia	81.50	315	⇑iP	P	18 33 01.7	+1.1
INK	Inuvik	82.03	21	P	P	18 33 02.1	-1.3
	comp=Z,0.9nm,0.4s,mb4.0,baz=302,slow=4.6,SNR=10						
INK	Inuvik	82.03	21	eP	P	18 33 02.9	-0.5
BURAR	Bucovina Array	82.11	317	⇓iP	P	18 33 04.7	+0.9
MLR	Muntele Rosu	82.11	315	⇓iP	P	18 33 05.2	+1.3
VOIR		82.74	315	⇓iP	P	18 33 03.6	-3.5
KWP	Kalwaria	83.21	319	eP	P	18 33 10.3	+0.7
KMBO	Kilima Mbogo	83.23	267	P	P	18 33 12.4	+2.8
	comp=Z,2.4nm,0.9s,mb4.2,baz=65,slow=3.5,SNR=8.2						
KOLS	Kolonicke sedl	83.67	319	eP	P	18 33 13.7	+1.8
DRGR		83.97	317	⇑iP	P	18 33 14.3	+0.9
CRVS	Cervenica-Dubn	84.20	319	eP	P	18 33 15.8	+1.2
OJC	Ojcow	84.85	321	eP	P	18 33 18.3	+0.4
BZS	Buzias	85.02	316	⇑iP	P	18 33 18.5	-0.2
NB2	NORSAR Subarra	85.65	332	P	P	18 33 21.0	-0.9
	comp=Z,8.3nm,0.7s,mb5.1,baz=68,slow=5.3						
NOA	NORSAR Array B	85.65	332	P	P	18 33 21.1	-0.8
	comp=Z,8.1nm,0.7s,mb5.1,baz=67,slow=4.9,SNR=49						
NOA				LR	LR	19 16 40.6	
	comp=Z,30nm,18.4s,MS3.7,baz=75,slow=39						
VYHS	Vyhne	85.98	319	eP	P	18 33 24.3	+0.8
	comp=Z,2.4nm,1.1s,mb4.3						
OKC	Ostrava-Krasne	85.98	321	eP	P	18 33 24.5	+1.0
MORC	Moravsky Berou	86.38	321	⇓iP	P	18 33 26.0	+0.5
PKSM	Moragy	86.82	317	⇑iP	P	18 33 28.2	+0.5
DPC	Dobruska-Polom	86.92	321	eP	P	18 33 28.8	+0.7
UPC	Upice	87.06	322	eP	P	18 33 29.5	+0.7
VRAC	Vranov	87.11	320	⇑iP	P	18 33 30.0	+0.9
TREC	Trest	87.80	321	eP	P	18 33 31.6	-0.7
PVCC	Panska Ves	87.91	322	eP	P	18 33 32.0	-0.9
PRU	Pruhonice	88.12	321	eP	P	18 33 34.6	+0.7
BRG	Berggiesshubel	88.15	322	eP	P	18 33 34.5	+0.4
	comp=Z,2.7nm,0.8s,mb4.5						
BRG	Berggiesshubel	88.15	322	eP	P	18 33 34.5	+0.5
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
CLL	Collm	88.54	323	i P	P	18 33 35.4	-0.5
KHC	Kasperske Hory	89.02	321	eP	P	18 33 36.2	-1.9
KHC				ex	x	18 34 14.0	
KHC	Kasperske Hory	89.02	321	⇓eP	P	18 33 38.8	+0.7
GERES	GERESS Array B	89.06	321	P	P	18 33 38.3	+0.1
	comp=Z,2.1nm,0.8s,mb4.5,baz=58,slow=5.0,SNR=18						
GRF	Grafenberg Arr	90.22	322	eP	P	18 33 43.3	-0.4
	comp=Z,6.0nm,1.1s,mb4.8						
GRF	Grafenberg Arr	90.22	322	eP	P	18 33 43.3	-0.4
GRF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.8						
YKA	Yellowknife Ar	91.73	22	P	P	18 33 50.3	-0.4
	comp=Z,1.8nm,0.5s,mb4.6,baz=308,slow=4.4,SNR=30						
YKA	Yellowknife Ar	91.73	22	⇑eP	P	18 33 50.2	-0.6
MAW	Mawson	92.21	199	P	P	18 33 53.2	+0.3
	comp=Z,1.7nm,0.9s,mb4.3,baz=110,slow=6.8,SNR=4.9						

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*NEIC **04** 18:28:16.7,18.16N×67.79W,h179km,MD3.6(RSPR), After RSPR.*

RSPR 04 18:28:16.7,18.16N×67.79W,h179km±1km,MD3.6/13, MD3.6/13,10C-3D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	0.67	103	⇑eP	Pn	18 28 41.6	-0.6
CRPR				eS	Sn	18 29 01.4	-0.4
LSP	Las Mesas	0.67	88	eS	Sn	18 29 02.4	+0.6
MGP	Maguayo	0.69	102	⇓eP	Pn	18 28 41.8	-0.5
MGP				eS	Sn	18 29 01.5	-0.5
AGPR	Aguadilla, PR	0.72	64	⇓eP	Pn	18 28 42.7	+0.3
AGPR				eS	Sn	18 29 02.8	+0.5
LRS	Lares	0.91	81	⇑eP	Pn	18 28 43.7	0.0
LRS				eS	Sn	18 29 04.8	+0.3
AOPR	Arecibo Observ	1.01	79	⇑eP	Pn	18 28 44.0	-0.4
AOPR				eS	Sn	18 29 05.2	-0.5
OBIP	Obispado Ponce	1.14	95	⇑eP	Pn	18 28 45.8	+0.4
OBIP				eS	Sn	18 29 08.6	+1.2
ICM	Isla Caja Muer	1.24	102	⇑eP	Pn	18 28 46.5	+0.3
ICM				eS	Sn	18 29 09.1	+0.1
SJG	San Juan	1.56	91	eS	Sn	18 29 15.3	+1.1
CBYP	Canovanas	1.84	86	⇑eP	Pn	18 28 52.3	+0.2
CBYP				eS	Sn	18 29 20.6	+1.2
HUMP	Col San Antoni	1.85	90	⇑eP	Pn	18 28 52.7	+0.6
HUMP				eS	Sn	18 29 20.1	+0.7
MTP	Monte Pirata	2.13	91	⇑eP	Pn	18 28 55.5	+0.4
MTP				eS	Sn	18 29 26.1	+1.3
CULB	Culebra	2.35	86	⇑eP	Pn	18 28 58.0	+0.4
CULB	Culebra	2.35	86	eS	Sn	18 29 30.0	+0.7
STVI	Saint Thomas	2.70	85	⇑eP	Pn	18 29 02.3	+0.7
STVI				eS	Sn	18 29 37.2	+0.6
TBVI	Tortola	3.04	85	⇓eP	Pn	18 29 06.6	+0.9
TBVI				eS	Sn	18 29 44.4	+0.5

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*IDC **04** 19:09:27.4±3.1,4.31N×96.04E,h0km,mb3.7/4,mb1 3.9/5, mb1mx3.6/21,mbtmp3.7/5,ML3.5/1,MS3.8/2,Ms1 3.8/2, ms1mx3.0/26,Error ellipse: s-maj=112.8km s-min=22.0km az=59.0*
*NEIC **04** 19:09:35.3±3.0,4.68N×96.67E,h40km±23km,mb4.3/2, Error ellipse: s-maj=41.6km s-min=12.4km az=62.0*
*ISCJB **04** 19:09:36.2±2.6,4.8N±0.2×96.8E±0.3,h62km±19km,mb3.8/6, Error ellipse: s-maj=46.4km s-min=15.6km az=125.4*

ISC 04 19:09:36.9±2.7,4.8N±0.2×96.8E±0.3,h49km±20km,n12, σ0.94/13,mb3.8/6,MS3.8/2,1D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	Tuntungan	2.20	125	⇓eP	Pn	19 10 11.5	+0.6
TSI				eS	Sn	19 10 44.3	+7.3
PSI	Prapat	2.92	132	Pn	Pn	19 10 20.9	+0.1
	4.6nm,0.3s,baz=328,slow=16,SNR=20						
KULM	Kulim	3.92	82	eP	Pn	19 10 33.7	-0.7
MKAR	Makanchi Array	43.69	346	P	P	19 17 36.1	-0.8
	0.3nm,0.5s,mb3.3,baz=142,slow=6.0,SNR=5.1						
SONM	Songino Array	43.70	9	P	P	19 17 38.9	+1.9
	0.4nm,0.5s,mb3.4,baz=312,slow=20,SNR=5.3						
SONM				LR	LR	19 38 05.5	
	comp=Z,86nm,18.2s,MS3.7,baz=92,slow=39						
WRA	Warramunga Arr	44.36	125	P	P	19 17 41.7	-0.5
	1.6nm,0.5s,mb4.0,baz=302,slow=9.3,SNR=17						
WRAB	Tennant Creek	44.37	125	eP	P	19 17 41.5	-0.8
	7.8nm,0.9s,mb4.4						
WB2	Warramunga Arr	44.37	125	eP	P	19 17 43.2	+0.8
ASAR	Alice Springs	45.95	130	P	P	19 17 54.9	+0.1
	0.8nm,0.7s,mb3.8,baz=303,slow=7.6,SNR=16						
ASAR				LR	LR	19 37 45.9	
	comp=Z,143nm,21.6s,MS3.9,baz=94,slow=37						
AS31	Alice Springs	45.95	130	eP	P	19 17 54.9	+0.1
KURK	Kurchatov	48.25	345	P	P	19 18 14.0	+1.2
	1.6nm,1.0s,mb4.0						
CHKZ	Chkalovo	53.23	341	eP	P	19 18 48.6	-1.6

CSEM ***04*** *19:58:32.8±0.1, 4459N×960E, h19km, ML2.5/5, Error ellipse: s-maj=4.6km s-min=1.6km az=11.0*
GEN ***04*** *19:58:33.5, 4454N×953E, h0km, ML2.0*
ISCJB ***04*** *19:58:33.5±0.3, 4450N±003×948E±002, h12km±2km, Error ellipse: s-maj=4.5km s-min=2.6km az=27.4*
ROM ***04*** *19:58:34.7±0.2, 4449N×947E, h10km, Md2.7/4, Ml1.8/3, Error ellipse: s-maj=4.3km s-min=2.8km az=10.0*
NEIC ***04*** *19:58:35.1, 4441N×952E, h2km, ML2.6(LDG), After LDG.*
LDG ***04*** *19:58:35.1±0.4, 4441N×952E, h2km, Ml2.6/10, Error ellipse: s-maj=8.3km s-min=5.2km az=78.0*
ISC 04 19:58:34.2±0.3**, 4447N**±003×**950E**±002**, h12**km±3km**, n48,** σ**0**^{s}**99**/72**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SC2M	**Scurtabr**	**0.07**	**158**	P	**Pg**	**19 58 36.4**	**-0.2**
SC2M				S	**Sg**	**19 58 38.2**	**-0.2**
CODM		**0.27**	**107**	P	**Pg**	**19 58 39.2**	**-0.5**
CODM				S	**Sg**	**19 58 43.3**	**0.0**
GENL	**Genova Univers**	**0.38**	**261**	P	**Pg**	**19 58 42.7**	**+0.9**
GENL				S	**Sg**	**19 58 48.4**	**+1.5**
GRAM		**0.41**	**87**	P	**Pg**	**19 58 41.5**	**-0.8**
GRAM				S	**Sg**	**19 58 46.9**	**-0.8**
VALM		**0.55**	**102**	P	**Pg**	**19 58 44.6**	**-0.3**
VALM				S	**Sg**	**19 58 51.8**	**-0.4**
VINC	**Vinca**	**0.57**	**125**	P	**Pg**	**19 58 45.3**	**-0.1**
ERBM	**Eremo**	**0.66**	**94**	Pg	**Pg**	**19 58 47.4**	**+0.4**
ERBM				Sg	**Sg**	**19 58 57.7**	**+2.1**
SARO	**Sassorosso**	**0.71**	**113**	P	**Pg**	**19 58 47.3**	**-0.6**
MAIM		**0.91**	**127**	P	**Pg**	**19 58 51.3**	**-0.4**
FIN	**Finale Ligure**	**0.96**	**255**	Pg	**Pg**	**19 58 52.6**	**-0.1**
FIN				Sg	**Sg**	**19 59 05.6**	**+0.4**
PZZT	**Monte Pizzetto**	**1.04**	**109**	Pg	**Pg**	**19 58 54.3**	**+0.1**
	48nm,0.9s						
PII	**Pisa**	**1.05**	**135**	Pg	**Pg**	**19 58 55.1**	**+0.6**
ZCCA	**Zocca**	**1.07**	**96**	Pg	**Pg**	**19 58 56.8**	**+2.1**
RORO		**1.09**	**251**	P	**Pb**	**19 58 54.4**	**-0.6**
ROB	**Roburent**	**1.18**	**262**	P	**Pb**	**19 58 55.7**	**-0.8**
IMI	**Imperia**	**1.28**	**245**	Pg	**Pg**	**19 58 57.2**	**-1.7**
MUGIO	**Muggio**	**1.49**	**348**	Pg	**Pg**	**19 59 01.4**	**-1.4**
STV	**Sta Anna Valdi**	**1.57**	**263**	P	**Pn**	**19 59 01.6**	**-0.4**
ORO	**Oropa**	**1.58**	**318**	Pg	**Pg**	**19 59 03.7**	**-0.8**
ORO				Sg	**Sg**	**19 59 24.1**	**-0.9**
SBF	**Sospel**	**1.60**	**248**	*e*Pn	**Pn**	**19 59 02.0**	**-0.4**
PZZ	**Prazzo**	**1.71**	**272**	P	**Pn**	**19 59 03.7**	**-0.2**
RSP	**Reno Superiore**	**1.73**	**294**	P	**Pn**	**19 59 05.4**	**+1.2**
MABI	**Malga Bissina**	**1.74**	**24**	Pg	**Pn**	**19 59 04.5**	**+0.2**
	3.0nm,0.4s						
PGF	**Pioggiola**	**1.95**	**191**	*e*Pn	**Pn**	**19 59 06.9**	**-0.3**
PGF				*e*Sn	**Sn**	**19 59 30.8**	**-0.9**
	3.0nm,0.3s						
PGF	**Pioggiola**	**1.95**	**191**	*e*Pn	**Pn**	**19 59 06.9**	**-0.3**
PGF				*e*Sn	**Sn**	**19 59 30.8**	**-0.9**
	1.5nm,0.3s						
MBDF	**Montbardon**	**1.96**	**278**	*e*Pn	**Pn**	**19 59 07.9**	**+0.6**
MBDF				*e*Sg	**Sg**	**19 59 37.5**	**+0.2**
	15nm,0.6s						
MBDF	**Montbardon**	**1.96**	**278**	*e*Pn	**Pn**	**19 59 07.9**	**+0.6**
MBDF				*e*Sg	**Sg**	**19 59 37.5**	**+0.2**
	7.7nm,0.6s						
TUE	**Stuetta**	**2.00**	**357**	Pg	**Pb**	**19 59 09.1**	**-1.5**
	16nm,1.3s						
CTI	**Castel Tesino**	**2.19**	**43**	Pn	**Pn**	**19 59 10.7**	**+0.2**
LPG	**La Plagne**	**2.20**	**299**	*e*Pn	**Pn**	**19 59 12.9**	**+2.3**
LPG				*e*Sg	**Sg**	**19 59 45.9**	**+0.9**
	3.5nm,0.3s						
LPG	**La Plagne**	**2.20**	**299**	*e*Pn	**Pn**	**19 59 12.9**	**+2.3**
LPG				*e*Sg	**Sg**	**19 59 45.9**	**+0.9**
	1.8nm,0.3s						
LPL	**La Plagne**	**2.22**	**299**	*e*Pn	**Pn**	**19 59 12.9**	**+2.0**
LPL				*e*Sg	**Sg**	**19 59 44.8**	**-0.9**
	6.1nm,0.5s						
LPL	**La Plagne**	**2.22**	**299**	*e*Pn	**Pn**	**19 59 12.9**	**+2.0**
LPL				*e*Sg	**Sg**	**19 59 44.8**	**-0.9**
	3.0nm,0.5s						
FRF	**La Foret Royal**	**2.25**	**247**	*e*Pn	**Pn**	**19 59 10.7**	**-0.5**
FRF				*e*Sn	**Sn**	**19 59 38.4**	**-0.5**
	3.8nm,0.2s						
FRF	**La Foret Royal**	**2.25**	**247**	*e*Pn	**Pn**	**19 59 10.7**	**-0.5**
FRF				*e*Sn	**Sn**	**19 59 38.4**	**-0.5**
	1.9nm,0.2s						
LMR	**La Mourre**	**2.44**	**243**	*e*Pn	**Pn**	**19 59 13.4**	**-0.5**
LMR				*e*Sn	**Sn**	**19 59 42.2**	**-1.5**
	65nm,1.4s						
LMR	**La Mourre**	**2.44**	**243**	*e*Pn	**Pn**	**19 59 13.4**	**-0.5**
LMR				*e*Sn	**Sn**	**19 59 42.2**	**-1.5**
	33nm,1.4s						
ORIF	**Oris-en-Rattie**	**2.62**	**281**	*e*Pn	**Pn**	**19 59 19.1**	**+2.8**
ORIF				*e*Sn	**Sn**	**19 59 48.5**	**+0.4**
	9.1nm,0.6s						
ORIF	**Oris-en-Rattie**	**2.62**	**281**	*e*Pn	**Pn**	**19 59 19.1**	**+2.8**
ORIF				*e*Sn	**Sn**	**19 59 48.5**	**+0.4**
	4.6nm,0.6s						
SMRF	**Simiane la Rot**	**2.86**	**261**	*e*Pn	**Pn**	**19 59 20.6**	**+0.9**
HAU	**Haudompre**	**4.16**	**329**	*e*Pn	**Pn**	**19 59 38.3**	**+0.8**
CDF	**Champ du Feu**	**4.23**	**340**	*e*Pn	**Pn**	**19 59 39.0**	**+0.5**
CDF				*e*Sn	**Sn**	**20 00 25.4**	**-2.5**
	2.0nm,0.5s						
CDF	**Champ du Feu**	**4.23**	**340**	*e*Pn	**Pn**	**19 59 39.0**	**+0.5**
CDF				*e*Sn	**Sn**	**20 00 25.4**	**-2.5**
	1.0nm,0.5s						
SMF	**Signal de Mont**	**4.53**	**301**	*e*Sn	**Sn**	**20 00 34.8**	**-0.4**
	5.6nm,0.5s						
SMF	**Signal de Mont**	**4.53**	**301**	*e*Sn	**Sn**	**20 00 34.8**	**-0.4**
	2.8nm,0.5s						
LOR	**Lormes**	**4.83**	**307**	*e*Sn	**Sn**	**20 00 42.4**	**-0.2**
	4.0nm,0.4s						
LOR	**Lormes**	**4.83**	**307**	*e*Sn	**Sn**	**20 00 42.4**	**-0.2**
	2.0nm,0.4s						
BGF	**Bois d'Agland**	**5.12**	**296**	*e*Pn	**Pn**	**19 59 52.8**	**+2.1**

WEL 04 20:00:52.6±0.4**, 3865S**×**17567E, h168**km±3km**, ML3.5**/14**, 1C, Error ellipse: s-maj=4.8km s-min=3.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUVZ	**Tukino**	**0.62**	**181**	PN	Pn	20 01 17.0	+0.5
TUVZ				SN	Sn	20 01 35.4	+0.5
WNVZ	**Wahianoa**	**0.68**	**185**	PN	Pn	20 01 17.3	+0.4
MTVZ	**Mangateitei**	**0.75**	**192**	PN	Pn	20 01 17.4	0.0
MOVZ	**Moawhango**	**0.76**	**175**	PN	Pn	20 01 17.5	+0.1
MOVZ				SN	Sn	20 01 35.7	-0.8
BKZ	**Black Stump Fm**	**0.82**	**129**	PN	Pn	20 01 18.3	+0.5
BKZ				SN	Sn	20 01 37.5	+0.3
URZ	**Urewera**	**1.19**	**71**	PN	Pn	20 01 20.4	-0.3
WAZ	**Wanganui**	**1.23**	**206**	PN	Pn	20 01 20.6	-0.4
WAZ				SN	Sn	20 01 42.3	-0.5
TSZ	**Takapari Road**	**1.43**	**171**	⇑PN	Pn	20 01 22.7	-0.1
PXZ	**Pawanui**	**1.66**	**147**	PN	Pn	20 01 25.2	+0.1
MRZ	**Mangatainoka R**	**2.01**	**182**	PN	Pn	20 01 27.8	-1.2
BFZ	**Birch Farm**	**2.08**	**168**	PN	Pn	20 01 28.7	-1.0
PUZ	**Puketiti**	**2.11**	**75**	PN	Pn	20 01 30.3	+0.2
PUZ				SN	Sn	20 01 57.6	-1.4
KIW	**Kapiti Island**	**2.29**	**195**	PN	Pn	20 01 30.1	-2.0
CAW	**Cannon Point**	**2.50**	**191**	PN	Pn	20 01 32.5	-2.1
MTW	**Mount Morrison**	**2.51**	**183**	PN	Pn	20 01 32.5	-2.2
DUWZ	**D'Urville Isla**	**2.54**	**212**	PN	Pn	20 01 32.5	-2.6
MRW	**Makara Radio**	**2.68**	**196**	PN	Pn	20 01 34.4	-2.4
PAWZ	**Paruwai Farm**	**2.74**	**184**	PN	Pn	20 01 35.0	-2.4
SNZO	**South Karori**	**2.76**	**195**	PN	Pn	20 01 35.1	-2.6
TCW	**Tory Channel**	**2.78**	**202**	PN	Pn	20 01 35.2	-2.7
MSWZ	**Moikau Station**	**2.78**	**187**	PN	Pn	20 01 35.4	-2.6
BHW	**Baring Head**	**2.82**	**192**	PN	Pn	20 01 35.8	-2.6
TUWZ	**Tuamarina**	**3.08**	**205**	PN	Pn	20 01 38.5	-3.1
NNZ	**Nelson**	**3.11**	**214**	PN	Pn	20 01 38.5	-3.5
QRZ	**Quartz Range**	**3.26**	**227**	PN	Pn	20 01 39.5	-4.3
THZ	**Tophouse**	**3.76**	**213**	PN	Pn	20 01 46.2	-4.1
KHZ	**Kahutara**	**4.10**	**203**	PN	Pn	20 01 51.5	-3.1
MQZ	**McQueen's Vall**	**5.54**	**203**	PN	Pn	20 02 08.0	-5.4
ODZ	**Otahua Downs**	**7.41**	**209**	*e*PN	Pn	20 02 33.0	-5.1

STR ***04*** *20:02:56.8±0.2, 4281N×000E, h5km±1km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG ***04*** *20:02:57.1±0.1, 4281N×001E, h2km, Ml1.9/4, Error ellipse: s-maj=4.0km s-min=1.3km az=168.0*
MDD 04 20:02:57.4±0.3**, 4283N**×**001E, h10**km±1km**, mbLg1.2**/12**, Error ellipse: s-maj=3.2km s-min=2.1km az=22.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIEF	**Viey**	**0.06**	**12**	Pg	Pg	20 02 59.5	0.0
VIEF				Sg	Sg	20 03 01.0	0.0
VIEF	**Viey**	**0.06**	**12**	Pg	Pg	20 02 59.5	0.0
VIEF				Lg		20 03 01.0	
EBIE	**Bielsa**	**0.17**	**144**	Pg	Pg	20 03 01.2	+0.1
	9.2nm,0.2s,SNR=7.9						
EBIE				Lg		20 03 03.9	
	28nm,0.1s,SNR=7.9						
LABF	**Labassere**	**0.23**	**12**	Pg	Pg	20 03 01.9	-0.2
LABF				Sg	Sg	20 03 05.1	-0.1
LABF	**Labassere**	**0.23**	**12**	Pg	Pg	20 03 02.0	-0.1
LABF				Lg		20 03 05.1	
RESF	**Ens**	**0.24**	**94**	Pg	Pg	20 03 02.2	-0.2
RESF				Sg	Sg	20 03 05.7	-0.1
RESF	**Ens**	**0.24**	**94**	Pg	Pg	20 03 02.3	-0.1
RESF				Lg		20 03 05.8	
EPF	**Esparros**	**0.32**	**50**	*e*Pg	Pg	20 03 03.6	-0.1
EPF				*e*Sg	Sg	20 03 07.8	-0.2
	24nm,0.2s						
EPF	**Esparros**	**0.32**	**50**	Pg	Pg	20 03 03.6	-0.1
EPF				Lg		20 03 07.8	
	12nm,0.2s						
REYF	**Montagne du Re**	**0.38**	**310**	Pg	Pg	20 03 04.4	-0.5
REYF				Sg	Sg	20 03 09.6	-0.4
REYF	**Montagne du Re**	**0.38**	**310**	Pg	Pg	20 03 04.6	-0.3
REYF				Lg		20 03 09.5	
ETSF	**Etsaut**	**0.42**	**280**	*e*Pg	Pg	20 03 05.2	-0.5
ETSF				*e*Sg	Sg	20 03 10.4	-0.9
	8.8nm,0.2s						
ETSF	**Etsaut**	**0.42**	**280**	Pg	Pg	20 03 05.2	-0.5
ETSF				Lg		20 03 10.4	
	4.4nm,0.2s						
MELF	**Melles**	**0.56**	**85**	Pg	Pg	20 03 07.5	-0.7
MELF				Sg	Sg	20 03 14.9	-0.6
MELF	**Melles**	**0.56**	**85**	Pg	Pg	20 03 07.6	-0.6
MELF				Lg		20 03 14.8	
ATE	**Arette**	**0.58**	**297**	Pg	Pg	20 03 08.3	-0.4
ATE				Sg	Sg	20 03 15.8	-0.5
ATE	**Arette**	**0.58**	**297**	Pg	Pg	20 03 08.4	-0.3
ATE				Lg		20 03 15.2	
SALF	**Salau**	**0.87**	**94**	Pg	Pg	20 03 13.6	-0.6
SALF				Sg	Sg	20 03 25.3	-0.3
SALF	**Salau**	**0.87**	**94**	Pg	Pg	20 03 13.6	-0.6
SALF				Lg		20 03 25.0	
SJPF	**Ste Jean**	**0.95**	**288**	*e*Pg	Pg	20 03 15.1	-0.5
SJPF				*e*Sg	Sg	20 03 27.7	-0.3
	2.7nm,0.2s						
SJPF	**Ste Jean**	**0.95**	**288**	Pg	Pg	20 03 15.1	-0.5
SJPF				Lg		20 03 27.7	
	1.4nm,0.2s						
IUSE	**Utxeti**	**1.15**	**277**	Lg		20 03 35.5	
	1.5nm,0.2s,SNR=7.9						
ELIZ	**Elizondo**	**1.18**	**287**	Lg		20 03 35.6	
	1.6nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**1.18**	**290**	Lg		20 03 35.7	
	1.5nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**1.68**	**151**	Pg	Pg	20 03 27.6	-1.9
	0.5nm,0.2s,SNR=7.9						
EPOB				Lg		20 03 50.6	
	1.2nm,0.2s,SNR=7.9						
MTLF	**Montolieu**	**1.70**	**72**	*e*Pg	Pg	20 03 28.9	-1.1
MTLF				*e*Sg	Sg	20 03 50.7	-1.3
	0.8nm,0.2s						
MTLF	**Montolieu**	**1.70**	**72**	Pg	Pg	20 03 28.9	-1.1
MTLF				Lg		20 03 50.7	
	0.4nm,0.2s						
ERTA	**Horta de San J**	**1.88**	**172**	Lg		20 03 56.8	
	0.3nm,0.1s,SNR=7.9						
LFF	**La Frestale**	**2.18**	**14**	*e*Sg	Sg	20 04 06.5	-0.9
	2.8nm,0.3s						
LFF	**La Frestale**	**2.18**	**14**	Lg		20 04 06.5	
	1.4nm,0.3s						
CAF	**Calviac**	**2.57**	**35**	*e*Pg	Pg	20 03 44.9	-1.8
CAF				*e*Sg	Sg	20 04 18.0	-2.0
	0.7nm,0.2s						
CAF	**Calviac**	**2.57**	**35**	Pg	Pg	20 03 44.9	-1.8
CAF				Lg		20 04 18.0	
	0.3nm,0.2s						

IDC 04 20:06:11.6±65.0**, 1646S**×**17759W, h0**km**, mb4.1**/3**, mb1 4.2**/3**, mb1mx3.8**/13**, mbtmp4.1**/3**, Error ellipse: s-maj=1205.0km s-min=160.2km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.02**	**240**	P	P	20 13 48.9	+0.6
	1.4nm,0.7s,baz=88,slow=11,SNR=6.5						
WRA	**Warramunga Arr**	**45.68**	**258**	P	P	20 14 34.3	+0.1
	0.5nm,0.7s,baz=95,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**45.95**	**253**	P	P	20 14 36.5	+0.3
	3.6nm,0.5s,baz=89,slow=7.9,SNR=143						

IDC 04 20:09:55.8±66.0**, 1640S**×**17570W, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/13**, mbtmp4.1**/3**, Error ellipse: s-maj=1242.0km s-min=178.4km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.62**	**240**	P	P	20 17 46.0	+0.5
	1.0nm,0.5s,baz=45,slow=7.2,SNR=4.8						
WRA	**Warramunga Arr**	**47.47**	**258**	P	P	20 18 32.7	+0.4
	0.8nm,0.4s,baz=95,slow=7.2,SNR=9.4						
ASAR	**Alice Springs**	**47.70**	**253**	P	P	20 18 34.3	+0.2
	3.3nm,0.5s,baz=86,slow=8.7,SNR=58						

IDC 04 20:12:25.9±11.0**, 836S**×**13010E, h114**km±124km**, mb3.4**/1**, mb1 3.3**/4**, mb1mx3.1**/13**, mbtmp3.5**/4**, ML3.5**/3**, Error ellipse: s-maj=76.1km s-min=45.6km az=17.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.62**	**204**	P	Pn	20 14 55.3	+0.6
	0.5nm,0.3s,baz=38,slow=14,SNR=27						
FITZ				S	Sn	20 16 52.8	+1.2
	0.3nm,0.3s,baz=47,slow=20,SNR=4.9						
WRA	**Warramunga Arr**	**12.23**	**161**	P	Pn	20 15 15.1	-1.1
	0.3nm,0.3s,baz=328,slow=13,SNR=12						
WRA				S	Sn	20 17 29.7	-1.0
	0.2nm,0.3s,baz=338,slow=22,SNR=4.4						
ASAR	**Alice Springs**	**15.65**	**167**	P	Pn	20 16 01.5	+1.4
	0.2nm,0.3s,baz=340,slow=8.8,SNR=12						
ASAR				S	S	20 18 56.6	-4.0
	0.0nm,0.3s,baz=348,slow=26,SNR=3.1						
MKAR	**Makanchi Array**	**69.41**	**327**	P	P	20 23 21.6	+0.1
	0.4nm,0.4s,baz=111,slow=7.7,SNR=4.6						

CSEM ***04*** *20:16:57.2, 4267N×4660E, h15km, mb4.4, After OBN*
MOS ***04*** *20:16:57.2±2.3, 4267N×4660E, h15km, mb4.4/1, Error ellipse: s-maj=9.4km s-min=6.6km az=24.5*
ISCJB ***04*** *20:16:58.1±0.3, 4267N±002×4652E±002, h10km, Error ellipse: s-maj=3.4km s-min=2.3km az=13.3*
TIF ***04*** *20:16:59.0, 4256N×4638E, h7km±8km*
ISC 04 20:16:58.5±0.3**, 4267N**±002×**4652E**±002**, h10**km**, n35,** σ**1**^{s}**14**/62**, 2C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNCR	**Uncukul**	**0.21**	**77**	⇓*i*PG	**Pg**	**20 17 02.0**	**-0.9**
UNCR				*e*S	**Sg**	**20 17 06.8**	**+1.0**
UNCR				pmax	pmax		
	comp=Z,93nm,0.2s						
UNCR	**Uncukul**	**0.21**	**77**	*i* Pg	**Pg**	**20 17 02.0**	**-0.9**
	comp=Z,93nm,0.2s						
UNCR				*e*Sg	**Sg**	**20 17 06.8**	**+1.0**
BTLR	**Botlikh**	**0.22**	**269**	⇑*i*PG	**Pg**	**20 16 57.4**	**-5.6**
BTLR				pmax	pmax		
	comp=Z,744nm,0.2s						
BTLR	**Botlikh**	**0.22**	**269**	*i* Pg	**Pg**	**20 16 57.4**	**-5.6**
	comp=Z,744nm,0.2s						
KRNR	**Karanay**	**0.33**	**61**	⇓*i*PG	**Pg**	**20 17 04.3**	**-0.7**
KRNR				*i* S	**Sg**	**20 17 10.5**	**+1.0**
KRNR				pmax	pmax		
	comp=Z,105nm,0.1s						
KRNR	**Karanay**	**0.33**	**61**	*i* Pg	**Pg**	**20 17 04.3**	**-0.7**
	comp=Z,105nm,0.1s						
KRNR				*i* Sg	**Sg**	**20 17 10.5**	**+1.0**
ARKR	**Arakani**	**0.36**	**100**	*i* PG	**Pg**	**20 17 04.5**	**-1.1**
ARKR				*i* S	**Sg**	**20 17 11.5**	**+1.1**
ARKR				pmax	pmax		
	comp=Z,86nm,0.2s						
ARKR	**Arakani**	**0.36**	**100**	*i* Pg	**Pg**	**20 17 04.5**	**-1.1**
	comp=Z,86nm,0.2s						
ARKR				*i* Sg	**Sg**	**20 17 11.5**	**+1.1**
DLMR	**Dylym**	**0.41**	**12**	*i* PG	**Pg**	**20 17 04.0**	**-2.6**
DLMR				*i* S	**Sg**	**20 17 11.0**	**-1.0**
DLMR				pmax	pmax		
	comp=Z,276nm,0.3s						
DLMR	**Dylym**	**0.41**	**12**	*i* Pg	**Pg**	**20 17 04.0**	**-2.6**
	comp=Z,276nm,0.3s						
DLMR				*i* Sg	**Sg**	**20 17 11.0**	**-1.0**
DBC	**Dubki**	**0.42**	**33**	⇑*i*PG	**Pg**	**20 17 05.0**	**-1.8**
DBC				*i* S	**Sg**	**20 17 13.0**	**+0.6**
DBC				pmax	pmax		
	comp=Z,96nm,0.2s						
DBC	**Dubki**	**0.42**	**33**	*i* Pg	**Pg**	**20 17 05.0**	**-1.8**
	comp=Z,96nm,0.2s						
DBC				*i* Sg	**Sg**	**20 17 13.0**	**+0.6**
GNBR	**Gunib**	**0.43**	**130**	*e*PG	**Pg**	**20 17 05.0**	**-2.0**
GNBR				*e*S	**Sg**	**20 17 13.0**	**+0.3**
GNBR				pmax	pmax		
	comp=Z,76nm,0.2s						
GNBR	**Gunib**	**0.43**	**130**	*e*Pg	**Pg**	**20 17 05.0**	**-2.0**
	comp=Z,76nm,0.2s						
GNBR				*e*Sg	**Sg**	**20 17 13.0**	**+0.3**
BUJR	**Buynaksk**	**0.46**	**70**	*e*PG	**Pg**	**20 17 10.2**	**+2.6**
BUJR				*i* S	**Sg**	**20 17 18.4**	**+4.7**
BUJR				pmax	pmax		
	comp=Z,83nm,0.1s						
BUJR	**Buynaksk**	**0.46**	**70**	*e*Pg	**Pg**	**20 17 10.2**	**+2.6**
	comp=Z,83nm,0.1s						
BUJR				*i* Sg	**Sg**	**20 17 18.4**	**+4.7**
URKR	**Urkarakh**	**0.97**	**121**	*e*PG	**Pg**	**20 17 17.0**	**-0.1**
URKR				*i* S	**Sg**	**20 17 30.5**	**+0.8**
URKR				pmax	pmax		
	comp=Z,49nm,0.3s						
URKR	**Urkarakh**	**0.97**	**121**	*e*Pg	**Pg**	**20 17 17.0**	**-0.1**
	comp=Z,49nm,0.3s						
URKR				*i* Sg	**Sg**	**20 17 30.5**	**+0.8**
SNJR	**Sundja**	**1.31**	**288**	*i* Pg	**Pn**	**20 17 22.5**	**-0.4**
SNJR				*i* Sg	**Sb**	**20 17 39.6**	**-0.6**
VLKR	**Vladikavkaz**	**1.40**	**286**	*i* Pg	**Pn**	**20 17 23.7**	**-0.4**
VLKR				*e*Sg	**Sn**	**20 17 41.8**	**-0.9**
DGRG	**David-gareji**	**1.48**	**215**	P	**Pn**	**20 17 26.1**	**+0.9**
DGRG				S	**Sn**	**20 17 43.3**	**-1.3**
AKT	**Akhty**	**1.49**	**142**	*e*PG	**Pn**	**20 17 23.0**	**-2.3**
AKT				*e*S	**Sn**	**20 17 44.0**	**-0.9**
AKT				pmax	pmax		
	comp=Z,48nm,0.3s						
AKT	**Akhty**	**1.49**	**142**	*e*Pg	**Pn**	**20 17 23.0**	**-2.3**
	comp=Z,48nm,0.3s						
AKT				*e*Sg	**Sn**	**20 17 44.0**	**-0.9**
MTA	**Mtatsminda**	**1.61**	**233**	P	**Pn**	**20 17 26.7**	**-0.2**
MTA				S	**Sn**	**20 17 47.6**	**-0.1**
BTKR	**Batakoyurt**	**1.61**	**297**	*i* Pn	**Pn**	**20 17 27.9**	**+0.9**
BTKR				*i* Sg	**Sg**	**20 17 49.0**	**-1.3**
TBLG	**Delisi**	**1.62**	**235**	P	**Pn**	**20 17 27.7**	**+0.6**
TBLG				S	**Sn**	**20 17 48.8**	**+0.8**
LACR	**Lac**	**1.64**	**276**	*i* Pn	**Pn**	**20 17 26.9**	**-0.5**
TRKR	**Terskaya**	**1.68**	**310**	*i* Pn	**Pn**	**20 17 29.9**	**+2.0**
TRKR				*i* Sg	**Sg**	**20 17 52.6**	**+0.1**
ARNR	**Ardon**	**1.72**	**288**	*i* Pn	**Pn**	**20 17 29.1**	**+0.6**
KMSR	**Komsomolskaya**	**1.78**	**294**	*i* Pn	**Pn**	**20 17 30.3**	**+1.1**
KORR	**Kora**	**1.85**	**284**	*i* Pn	**Pn**	**20 17 30.6**	**+0.4**
ZEI	**Tsey**	**1.93**	**274**	*i* Pn	**Pn**	**20 17 31.3**	**-0.1**
PRTR	**Priterechnaya**	**1.96**	**304**	*i* Pn	**Pn**	**20 17 33.4**	**+1.6**
DIGR	**Digorskoe uzhe**	**2.17**	**277**	*i* Pn	**Pn**	**20 17 34.6**	**-0.1**
DIGR				*i* Sn	**Sn**	**20 18 00.8**	**-0.9**
ONI	**Oni**	**2.26**	**269**	P	**Pn**	**20 17 37.8**	**+1.9**
ONI				S	**Sn**	**20 18 06.7**	**+2.8**

IDC 04 20:17:18.5±1.9**, 919S**×**12392E, h0**km**, mb3.4**/1**, mb1 3.8**/4**, mb1mx3.5**/14**, mbtmp3.6**/4**, ML3.7**/3**, Error ellipse: s-maj=123.2km s-min=28.1km az=63.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.01**	**169**	*e*P	Pn	20 19 31.1	+1.3
	2.4nm,0.3s						
FITZ				*e*S	Sn	20 21 03.9	-8.1
FITZ	**Fitzroy Crossi**	**9.01**	**169**	Pn	Pn	20 19 30.1	+0.2
	0.6nm,0.3s,baz=358,slow=11,SNR=8.3						
FITZ				Sn	Sn	20 21 03.7	-8.3
	1.5nm,0.3s,baz=131,slow=13,SNR=18						
WRA	**Warramunga Arr**	**14.69**	**138**	Pn	Pn	20 20 46.8	-0.6
	0.3nm,0.3s,baz=313,slow=14,SNR=12						
WRA				Sn	Sn	20 23 20.5	-10
	0.5nm,0.3s,baz=306,slow=23,SNR=8.6						
ASAR	**Alice Springs**	**17.27**	**148**	P	Pn	20 21 21.8	+0.8
	0.2nm,0.3s,baz=320,slow=12,SNR=11						
ASAR				S	Sn	20 24 23.4	-10
	0.2nm,0.3s,baz=312,slow=21,SNR=6.4						
MKAR	**Makanchi Array**	**66.94**	**330**	P	P	20 28 12.8	+0.1
	0.3nm,0.7s,baz=126,slow=7.6,SNR=3.7						

WEL 04 20:27:30.0±0.4**, 3828S**×**17618E, h161**km±3km**, ML3.5**/13**, Error ellipse: s-maj=2.6km s-min=2.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.73**	**89**	PN	Pn	20 27 53.7	-0.2
URZ				SN	Sn	20 28 12.2	+0.1
BKZ	**Black Stump Fm**	**0.92**	**165**	PN	Pn	20 27 55.5	+0.3
OTVZ	**Oturere**	**0.97**	**204**	PN	Pn	20 27 56.0	+0.4
NGZ	**Ngauruhoe**	**1.00**	**207**	PN	Pn	20 27 55.9	0.0
MWZ	**Matawai**	**1.06**	**93**	PN	Pn	20 27 56.5	+0.1
MWZ				SN	Sn	20 28 16.3	-0.2
HIZ	**Hauiti**	**1.07**	**257**	PN	Pn	20 27 56.3	-0.1
HIZ				SN	Sn	20 28 17.0	+0.4
TUVZ	**Tukino**	**1.07**	**203**	PN	Pn	20 27 56.8	+0.3
WNVZ	**Wahianoa**	**1.14**	**203**	PN	Pn	20 27 57.2	+0.2
MOVZ	**Moawhango**	**1.18**	**196**	PN	Pn	20 27 57.0	-0.3
MTVZ	**Mangateitei**	**1.24**	**207**	PN	Pn	20 27 57.8	-0.1
KNZ	**Kokohu**	**1.38**	**123**	PN	Pn	20 27 59.5	+0.2
PUZ	**Puketiti**	**1.65**	**83**	PN	Pn	20 28 01.7	-0.2
TSZ	**Takapari Road**	**1.79**	**185**	PN	Pn	20 28 02.9	-0.5
PXZ	**Pawanui**	**1.83**	**163**	PN	Pn	20 28 03.7	-0.2
BFZ	**Birch Farm**	**2.40**	**179**	PN	Pn	20 28 09.0	-1.5
MRZ	**Mangatainoka R**	**2.42**	**191**	PN	Pn	20 28 09.1	-1.7
KIW	**Kapiti Island**	**2.76**	**200**	PN	Pn	20 28 12.3	-2.6
MTW	**Mount Morrison**	**2.92**	**190**	PN	Pn	20 28 14.0	-2.8
CAW	**Cannon Point**	**2.95**	**197**	PN	Pn	20 28 14.8	-2.4
TRWZ	**Traveller**	**3.14**	**187**	PN	Pn	20 28 16.9	-2.7
PAWZ	**Paruwai Farm**	**3.15**	**190**	PN	Pn	20 28 16.8	-2.9
MRW	**Makara Radio**	**3.16**	**201**	PN	Pn	20 28 17.0	-2.9
MSWZ	**Moikau Station**	**3.21**	**193**	PN	Pn	20 28 17.2	-3.3
TCW	**Tory Channel**	**3.28**	**206**	PN	Pn	20 28 18.1	-3.2
NNZ	**Nelson**	**3.64**	**215**	PN	Pn	20 28 22.3	-3.7
THZ	**Tophouse**	**4.29**	**215**	*e*PN	Pn	20 28 30.2	-4.1

IDC ***04*** *20:32:10.0±1.4, 230N×9533E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/22, mbtmp3.9/9, ML3.3/1, Error ellipse: s-maj=52.8km s-min=18.0km az=53.0*
ISCJB ***04*** *20:32:12.8±0.8, 23N±01×9533E±007, h33km, mb4.0/12, Error ellipse: s-maj=16.0km s-min=9.5km az=19.7*
NEIC ***04*** *20:32:14.9±0.6, 236N×9545E, h30km, mb4.2/4, Error ellipse: s-maj=15.8km s-min=8.5km az=218.0*
ISC 04 20:32:15.5±0.8**, 24N**±01×**9539E**±008**, h35**km**, n15,** σ**0**^{s}**81**/16**, mb4.0**/12**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**3.38**	**70**	⇓*e*P	**Pn**	**20 33 05.3**	**-0.4**
TSI				*e*S	**Sn**	**20 33 47.6**	**+3.1**
PSI	**Prapat**	**3.56**	**83**	Pn	**Pn**	**20 33 06.9**	**-1.4**
	2.7nm,0.3s,baz=316,slow=7.0,SNR=6.9						
KULM	**Kulim**	**6.01**	**61**	*e*P	**Pn**	**20 33 41.1**	**-0.8**
WRA	**Warramunga Arr**	**44.18**	**122**	P	**P**	**20 40 20.7**	**-0.2**
	2.0nm,0.9s,mb3.9,baz=300,slow=9.3,SNR=11						
ASAR	**Alice Springs**	**45.53**	**127**	P	**P**	**20 40 32.5**	**+0.8**
	0.9nm,0.9s,mb3.7,baz=301,slow=8.0,SNR=6.8						
MKAR	**Makanchi Array**	**45.72**	**347**	P	**P**	**20 40 33.5**	**+0.4**
	1.3nm,0.4s,mb4.2,baz=203,slow=14,SNR=14						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	46.30	10	P	P	20 40 37.6	-0.1
	1.1nm,0.6s,mb4.0,baz=189,slow=9.9,SNR=10						
KURK	Kurchatov	50.24	346	eP	P	20 41 08.6	+0.5
	2.3nm,0.8s,mb4.3						
ZAL	Zalesovo	52.16	352	P	P	20 41 23.2	+0.8
	2.2nm,0.6s,mb4.3,baz=306,slow=5.9,SNR=8.4						
BRVK	Borovoye	54.65	342	P	P	20 41 40.5	-0.3
	1.4nm,0.6s,mb4.2						
ZRNK	Zerenda	54.97	341	eP	P	20 41 43.0	-0.1
	2.0nm,0.9s,mb4.2						
CHKZ	Chkalovo	55.08	342	eP	P	20 41 44.2	+0.3
	3.7nm,0.7s,mb4.5						
STKA	Stephens Creek	55.47	132	P	P	20 41 47.1	+0.5
	1.4nm,0.6s,mb4.2,baz=277,slow=20,SNR=4.0						
FINES	FINESS Array B	78.15	333	P	P	20 44 09.8	-1.3
	0.2nm,0.5s,mb3.3,baz=99,slow=12,SNR=4.1						
ARCES	ARCESS Array B	80.85	340	P	P	20 44 25.9	+0.1
	0.8nm,0.6s,mb3.8,baz=104,slow=5.1,SNR=5.1						

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*HLW **04** 20:38:22.4, 3655N×27.19E, h33km, Mb3.7*
*CSEM **04** 20:39:42.8±0.1, 3705N×2796E, h12km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.0km az=179.0*
*ISK **04** 20:39:42.0, 3706N×2796E, h26km, MD2.9*
*ISCJB **04** 20:39:43.4±0.5, 3700N±004×2796E±004, h14km±6km, Error ellipse: s-maj=6.4km s-min=4.6km az=154.6*
*ATH **04** 20:39:44.6, 3698N×2784E, h32km, MD3.1/4*
ISC 04 20:39:43.8±0.5**, 3701N**±003×**2795E**±004**, h17**km±5km**, n15,** σ**0**^{s}**99**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.29	64	i PG	Pg	20 39 49.2	-0.9
DAT	Datca	0.41	227	i PG	Pg	20 39 51.8	-0.4
DAT				i SG	Sg	20 39 59.4	+1.6
BODT	Bodrum	0.52	276	i PG	Pg	20 39 53.1	-1.0
BODT				i SG	Sg	20 40 01.4	+0.4
DALT	Dalyan (Mudla)	0.60	113	PG	Pg	20 39 55.0	-0.6
DALT				SG	Sg	20 40 04.5	+0.9
AYDN	Tasoluk	0.65	355	i P	Pg	20 39 55.9	-0.8
AYDN				i S	Sg	20 40 05.5	+0.1
NISR	Nisiros	0.77	239	ePN	Pg	20 39 58.5	-0.3
ARG	Arkhangelos	0.80	170	ePN	Pn	20 40 00.5	+0.2
FETY	Fethiye	0.98	112	ePG	Pg	20 40 01.0	-1.8
DNZL	Cakiroluk	1.11	52	i P	Pb	20 40 03.9	-0.5
DNZL				i S	Sg	20 40 22.1	+2.4
SMG	Samos	1.13	309	ePN	Pn	20 40 05.0	+0.2
KDAG	Bornova	1.50	339	i P	Pn	20 40 09.4	-0.4
KDAG				i S	Sn	20 40 30.2	+1.3
KDAG	Bornova	1.50	339	i P	Pn	20 40 09.4	-0.4
KDAG				i S	Sn	20 40 30.2	+1.3
KARP	Karpathos	1.59	204	ePN	Pn	20 40 11.7	+0.5
AKS	Akhisar	1.87	357	ePN	Pn	20 40 13.5	-1.5
TKTP	Tekketepe	2.15	61	i P	Pg	20 40 26.0	+1.0
TKTP				i S	Sg	20 41 00.6	+7.7

IDC 04 20:49:57.2±1.5**, 515N**×**12606E, h0**km**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/17**, mbtmp3.5**/4**, Error ellipse: s-maj=152.4km s-min=21.1km az=68.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.23	162	P	P	20 55 34.1	+0.3
	0.5nm,0.3s,baz=340,slow=10,SNR=19						
ASAR	Alice Springs	29.64	165	P	P	20 56 04.8	+0.4
	0.1nm,0.3s,baz=344,slow=7.3,SNR=4.8						
SONM	Songino Array	45.75	342	P	P	20 58 19.4	-0.9
	0.3nm,0.6s,baz=123,slow=5.5,SNR=3.6						
MKAR	Makanchi Array	56.02	325	P	P	20 59 38.4	+0.7
	1.0nm,0.5s,baz=112,slow=8.0,SNR=21						

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*TIR **04** 21:18:23.4, 40.17N×2074E, h13km*
*ATH **04** 21:18:24.0, 4024N×2070E, h13km±2km, MD3.5/6*
*ISCJB **04** 21:18:24.9±0.3, 4021N±002×2070E±002, h10km, Error ellipse: s-maj=2.6km s-min=2.1km az=59.5*
*CSEM **04** 21:18:24.5±0.2, 4026N×2067E, h0km±1km, ML3.0, Error ellipse: s-maj=2.6km s-min=1.8km az=139.0*
*NEIC **04** 21:18:24.0, 4024N×2070E, h13km, MD3.5(ATH), After ATH.*
*THE **04** 21:18:25.8, 4022N×2077E, h0km, ML3.0*
*SKO **04** 21:18:25.8, 4020N×2077E, h4km, M2.3, ML2.7*
ISC 04 21:18:25.4±0.3**, 4021N**±002×**2070E**±002**, h10**km**, n47,** σ**1**^{s}**15**/78**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSK	Leskovik	0.09	233	i Pg	Pg	21 18 27.1	-0.8
LSK				i Sg	Sg	21 18 29.3	-0.4
KBN	Korca	0.42	9	i Pg	Pg	21 18 32.9	-0.8
KBN				i Sg	Sg	21 18 40.8	+1.5
TPE	Tepelena	0.53	280	i Pg	Pg	21 18 34.6	-1.2
TPE				i Sg	Sg	21 18 43.6	+0.8
JAN	Janina	0.56	168	ePB	Pb	21 18 34.8	-2.5
JAN				eSB	Sb	21 18 43.6	-1.8
MEV	Metsovon	0.59	136	ePg	Pg	21 18 35.8	-1.0
MEV				eSg	Sg	21 18 45.2	+0.7
SRN	Sarande	0.63	239	i Pg	Pg	21 18 36.3	-1.3
SRN				i Sg	Sg	21 18 48.7	+2.9
IGT	Igoumenitsa	0.73	203	ePg	Pg	21 18 39.3	-0.2
IGT				eSg	Sg	21 18 51.7	+2.7
FNA	Florina	0.78	42	ePg	Pg	21 18 39.0	-1.4
FNA				eSg	Sg	21 18 51.4	+0.9
KZN	Kozani	0.83	83	ePB	Pg	21 18 40.3	-1.1
KEK	Kerkira	0.85	235	ePB	Pg	21 18 40.6	-1.2
OHR	Ohrid	0.91	5	ePg	Pg	21 18 42.0	-0.9
OHR				eSg	Sg	21 18 55.7	+0.9
OHR	Ohrid	0.91	5	ePg	Pg	21 18 42.1	-0.8
OHR				eSg	Sg	21 18 54.9	+0.2
OHR				eLg		21 18 56.7	
	comp=N,177nm,0.9s						
OHR				eLg		21 18 57.0	
	comp=E,215nm,0.4s						
OHR	Ohrid	0.91	5	ePg	Pg	21 18 42.0	-0.9
OHR				eSg	Sg	21 18 54.8	+0.1
BIA	Bitola	0.94	30	ePg	Pg	21 18 41.7	-1.8
BIA				eSg	Sg	21 18 56.2	+0.4
BIA	Bitola	0.94	30	ePg	Pg	21 18 41.6	-1.9
BIA				eSg	Sg	21 18 54.6	-1.2
BIA				eLg		21 18 56.3	
	comp=N,118nm,0.4s						
BIA				eLg		21 18 56.5	
	comp=E,162nm,0.3s						
BIA	Bitola	0.94	30	ePg	Pg	21 18 41.6	-2.0
BIA				eSg	Sg	21 18 56.2	+0.4
TIR	Tirane	1.30	331	ePg	Pg	21 18 50.5	+0.1
TIR				eSg	Sg	21 19 09.3	+1.9
TIR	Tirane	1.30	331	i Pg	Pg	21 18 50.2	-0.3
LIT	Litokhoron	1.38	94	ePg	Pg	21 18 50.2	-1.7
LIT				eSg	Sg	21 19 09.8	+0.1
LKD	Levkas	1.50	181	ePg	Pg	21 18 53.8	-0.4
LKD				eSg	Sg	21 19 15.4	+1.8
GRG	Griva	1.50	59	ePg	Pg	21 18 52.4	-1.8
GRG				eSg	Sg	21 19 12.7	-0.9
EVR	Evrytania	1.55	146	ePG	Pg	21 18 53.2	-1.9
AGG	Agios Georgios	1.73	133	ePb	Pb	21 18 56.7	-0.6
AGG				eSb	Sb	21 19 19.1	+0.1
THE	Thessaloniki	1.78	75	ePb	Pn	21 18 56.0	-0.3
THE				eSb	Sb	21 19 20.2	-0.4
VAY	Valandovo	1.81	51	ePb	Pn	21 18 56.4	-0.2
VAY				eSb	Sb	21 19 20.9	-0.4
VAY	Valandovo	1.81	51	ePn	Pn	21 18 56.5	-0.1
SKO	Skopje	1.85	17	ePb	Pb	21 18 57.9	-1.4
SKO				eSb	Sb	21 19 22.7	+0.2
SKO	Skopje	1.85	17	ePn	Pb	21 18 59.6	+0.3
STIP	Stip	1.87	37	ePb	Pn	21 18 58.4	+1.0
STIP				eSb	Sb	21 19 22.3	-0.6
STIP	Stip	1.87	37	ePn	Pn	21 18 58.2	+0.8
STIP	Stip	1.87	37	ePn	Pn	21 18 58.1	+0.7
HORT	Hortiatis	1.88	77	ePb	Pn	21 18 57.4	-0.2
HORT				eSb	Sb	21 19 22.8	-0.5
KNT	Kendrikon	1.93	60	ePb	Pn	21 18 58.2	-0.1
KNT				eSb	Sb	21 19 22.9	-1.8
VLS	Valsamata	2.03	182	ePN	Pn	21 19 01.1	+1.5
XOR	Xorichti	2.10	113	ePn	Pn	21 19 01.2	+0.6
XOR				eSn	Sn	21 19 28.4	+1.7
PLG	Polygyros	2.11	85	ePN	Pn	21 19 00.6	-0.1
SOH	Sokhos	2.12	72	ePn	Pn	21 19 01.2	+0.4
SOH				eSn	Sn	21 19 29.2	+2.0
SOH	Sokhos	2.12	72	ePn	Pn	21 19 01.2	+0.3
PAIG	Paliouri	2.31	96	ePn	Pn	21 19 02.9	-0.5
PAIG				eSn	Sn	21 19 33.4	+1.5
LKR	Lokris	2.36	130	ePN	Pn	21 19 05.4	+1.1
SRS	Serrai	2.38	67	ePn	Pn	21 19 04.0	-0.5
SRS				eSn	Sn	21 19 34.8	+1.0
OUR	Ouranopolis	2.52	86	ePn	Pn	21 19 06.9	+0.6
OUR				eSn	Sn	21 19 38.1	+1.0
NVR	Nevrokopi	2.66	64	ePB	Pn	21 19 08.1	-0.2
MMB	Musomiste	2.68	58	ePn	Pn	21 19 08.6	0.0
MMB				eSn	Sn	21 19 42.5	+1.4
VTS	Vitosha	3.04	38	eSn	Sn	21 19 52.1	+2.1
CHOS	Chios island	4.54	112	ePn	Pn	21 19 35.3	+1.2
APE	Apeiranthos	4.91	128	ePn	Pn	21 19 41.2	+1.9

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*NEIC **04** 21:29:01.9, 3866N×2208E, h21km, MD3.5(ATH), After ATH.*
*ATH **04** 21:29:01.9, 3866N×2208E, h21km±1km, MD3.5/14, ML3.3*
*CSEM **04** 21:29:02.0±0.1, 3861N×2209E, h2km, ML3.3, Error ellipse: s-maj=1.8km s-min=1.3km az=56.0*
*ISCJB **04** 21:29:02.9±0.5, 3863N±002×2209E±003, h17km±5km, Error ellipse: s-maj=3.8km s-min=3.3km az=0.9*
*THE **04** 21:29:03.6, 3866N×22.12E, h12km, ML3.2*
*SKO **04** 21:29:24.6, 4022N×22.16E, h0km*
ISC 04 21:29:02.3±0.4**, 3865N**±002×**2210E**±003**, h5**km±3km**, n49,** σ**0**^{s}**78**/73**, 4C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.35	319	⇑iPB	Pg	21 29 09.1	0.0
EVR				eSB	Sg	21 29 14.3	+0.6
AGG	Agios Georgios	0.41	25	ePg	Pg	21 29 10.6	+0.3
AGG				eSg	Sg	21 29 17.6	+2.1
LKR	Lokris	0.70	90	ePN	Pg	21 29 15.6	-0.2
RLS	Riolos of Patr	0.78	220	ePN	Pg	21 29 16.6	-0.6
RLS				eSN	Sg	21 29 28.5	+1.2
XOR	Xorichti	1.11	50	ePg	Pg	21 29 23.9	+0.4
XOR				eSg	Sg	21 29 39.6	+1.7
MGER	Gerania Oros	1.13	126	ePN	Pn	21 29 24.5	-0.2
LKD	Levkas	1.14	273	ePg	Pg	21 29 23.3	-0.9
LKD				eSg	Sg	21 29 40.9	+2.0
VLS	Valsamata	1.28	249	ePN	Pn	21 29 25.4	-1.4
MEV	Metsovon	1.32	329	ePg	Pg	21 29 27.3	-0.3
MEV				eSg	Sg	21 29 45.2	+0.5
JAN	Janina	1.40	316	ePN	Pn	21 29 28.1	-0.3
NAIG	Nisos Aigina	1.41	129	ePN	Pn	21 29 28.5	-0.1
ATH	Athens Observa	1.44	118	ePN	Pn	21 29 29.8	+0.8
ITM	Ithomi	1.48	186	ePN	Pn	21 29 28.9	-0.6
LIT	Litokhoron	1.48	12	ePg	Pg	21 29 29.2	-1.4
LIT				eSg	Sg	21 29 49.4	-0.4
AOS	Alonnisos	1.48	69	ePg	Pg	21 29 29.6	-1.1
AOS				eSg	Sg	21 29 48.3	-1.5
PTL	Penteli	1.51	113	ePN	Pn	21 29 30.0	0.0
KVR	Kavouri	1.55	122	ePN	Pn	21 29 30.5	0.0
IGT	Igoumenitsa	1.64	303	ePb	Pb	21 29 32.4	-0.6
IGT				eSb	Sb	21 29 53.1	-0.8
KZN	Kozani	1.67	351	ePN	Pn	21 29 32.3	+0.1
PAIG	Paliouri	1.77	43	ePb	Pn	21 29 32.9	-0.6
PAIG				eSb	Sb	21 29 56.1	-1.4
LSK	Leskovik	1.90	323	i Pg	Pg	21 29 36.7	-2.0
PLG	Polygyros	2.01	31	ePB	Pn	21 29 36.3	-0.5
VLI	Veliai	2.04	161	ePB	Pn	21 29 36.9	-0.4
KEK	Kerkira	2.08	301	ePN	Pn	21 29 38.2	+0.4
THE	Thessaloniki	2.09	18	ePn	Pn	21 29 37.5	-0.4
THE				eSn	Sn	21 30 04.5	+0.2
THE	Thessaloniki	2.09	18	ePn	Pn	21 29 37.5	-0.4
THE				eSn	Sn	21 30 04.4	+0.2
HORT	Hortiatis	2.09	21	ePn	Pn	21 29 37.1	-0.9
HORT				eSn	Sn	21 30 04.4	+0.1
FNA	Florina	2.20	345	ePn	Pn	21 29 40.0	+0.5
FNA				eSn	Sn	21 30 07.2	+0.1
OUR	Ouranopolis	2.22	40	ePn	Pn	21 29 39.8	0.0
OUR				eSn	Sn	21 30 07.5	-0.1
GRG	Griva	2.31	6	ePn	Pn	21 29 40.9	-0.1
GRG				eSn	Sn	21 30 09.2	-0.6
SOH	Sokhos	2.37	24	ePn	Pn	21 29 41.9	+0.1
SOH				eSn	Sn	21 30 11.6	+0.3
BIA	Bitola	2.44	346	ePg	Pn	21 29 42.5	-0.3
KNT	Kendrikon	2.58	13	ePn	Pn	21 29 44.7	0.0
KNT				eSn	Sn	21 30 16.4	-0.1
LOS	Limnos	2.64	60	ePn	Pn	21 29 45.3	-0.3
VAY	Valandovo	2.69	7	ePn	Pn	21 29 46.2	0.0
VAY				eSn	Sn	21 30 19.1	0.0
VAY	Valandovo	2.69	7	ePg	Pn	21 29 45.1	-1.1
SRS	Serrai	2.71	24	ePn	Pn	21 29 46.4	-0.2
SRS				eSn	Sn	21 30 20.5	+0.7
NVR	Nevrokopi	3.01	26	ePN	Pn	21 29 51.2	+0.5
STIP	Stip	3.04	1	ePn	Pn	21 29 51.7	+0.7
STIP				eSn	Sn	21 30 28.2	+0.5
STIP	Stip	3.04	1	ePn	Pn	21 29 51.6	+0.6
CHOS	Chios island	3.11	94	ePn	Pn	21 29 52.5	+0.5
APE	Apeiranthos	3.14	119	ePn	Pn	21 29 52.8	+0.4
APE	Apeiranthos	3.14	119	ePN	Pn	21 29 53.0	+0.6
APE	Apeiranthos	3.14	119	⇑iP	Pn	21 29 52.7	+0.3
MMB	Musomiste	3.19	22	ePn	Pn	21 29 53.0	0.0
MMB				eSn	Sn	21 30 31.6	+0.2
MMB	Musomiste	3.19	22	ePn	Pn	21 29 53.0	0.0
MMB				eSn	Sn	21 30 31.6	+0.2
VTS	Vitosha	4.02	12	⇑iP	Pn	21 30 05.4	+0.8
LAST	Lasithi	4.41	141	ePn	Pn	21 30 10.9	+1.0
LAST				eSn	Sn	21 31 02.0	+0.5
MLR	Muntele Rosu	7.41	21	⇑iP	Pn	21 30 53.3	+2.3

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*IDC **04** 21:32:12.4±3.6, 1665S×17426W, h93km±48km, mb3.9/4, mb1 4.0/5, mb1mx3.7/15, mbtmp4.3/5, Error ellipse: s-maj=54.4km s-min=31.5km az=108.0*
NEIC 04 21:32:12.9±1.9**, 1664S**×**17420W, h104**km±28km**, Error ellipse: s-maj=38.0km s-min=22.0km az=114.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.58	41	P	Pn	21 33 06.6	+0.2
	57nm,0.3s,baz=186,slow=1.9,SNR=45						
AFI				S	Sn	21 33 44.8	-3.1
	134nm,0.3s,baz=68,slow=23,SNR=18						
URZ	Urewera	22.86	198	P	P	21 37 07.4	+0.1
	7.3nm,0.3s,baz=278,slow=0.9,SNR=18						
STKA	Stephens Creek	42.76	241	P	P	21 40 00.4	+0.5
	1.1nm,0.9s,baz=70,slow=11,SNR=4.3						
WRA	Warramunga Arr	48.82	258	P	P	21 40 48.4	+0.9
	0.3nm,0.3s,baz=92,slow=7.0,SNR=17						
AS31	Alice Springs	49.01	253	eP	P	21 40 49.1	+0.2
ASAR	Alice Springs	49.01	253	P	P	21 40 49.2	+0.3
	8.6nm,0.5s,baz=88,slow=8.4,SNR=184						
BRTR	Keskin Array B	146.61	319	PKPbc	PKPbc	21 51 42.9	+0.6
	0.6nm,0.7s,baz=94,slow=4.3,SNR=4.1						

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*ISCJB **04** 22:07:09.4±0.7, 6888N±0.10×174W±02, h10km, mb3.6/4, MS3.0/5, Error ellipse: s-maj=14.6km s-min=10.2km az=35.5*
*IDC **04** 22:07:10.0±1.3, 6885N×1745W, h0km, mb3.8/4, mb1 3.8/8, mb1mx3.5/26, mbtmp3.7/8, ML2.9/4, MS3.0/7, Ms1 3.0/7, ms1mx2.7/42, Error ellipse: s-maj=33.9km s-min=22.0km az=28.0*
*NEIC **04** 22:07:11.5±0.6, 6885N×1738W, h10km, mb3.5/1, Error ellipse: s-maj=13.0km s-min=9.1km az=196.0*
ISC 04 22:07:11.1±0.7**, 689N**±01×**173W**±02**, h10**km**, n16,** σ**0**^{s}**92**/14**, mb3.6**/4**, MS3.0**/5**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	4.42	203	Pn	Pn	22 08 18.5	+0.4
	1.4nm,0.3s,baz=356,slow=4.1,SNR=5.5						
BORG	Borgarnes	4.42	203	Pn	Pn	22 08 18.5	+0.4
SUMG	Summit	7.91	308	ePn	Pn	22 09 06.2	+0.1
	7.9nm,0.8s						
NOA	NORSAR Array B	14.25	109	LR	LR	22 15 39.1	
	comp=Z,32nm,18.1s,baz=325,slow=36						
ARCES	ARCESS Array B	15.00	67	Pn	Pn	22 10 43.9	+0.9
	0.1nm,0.3s,baz=266,slow=13,SNR=3.0						
EKA	Eskdalemuir Ar	15.02	147	Pn	Pn	22 10 49.4	+6.0
	0.1nm,0.3s,baz=328,slow=9.2,SNR=3.9						
HFS	Hagfors	15.75	108	Pn	Pn	22 10 52.7	-0.3
	0.0nm,0.3s,baz=272,slow=14,SNR=2.7						
HFS				LR	LR	22 16 07.9	
	comp=Z,25nm,21.4s,baz=332,slow=34						
HFS	Hagfors	15.75	108	Pn	Pn	22 10 52.7	-0.3
HFS				LR	LR	22 16 07.9	
KAF	Kangasniemi	18.92	89	ep	Pn	22 11 33.4	+0.9
	1.8nm,0.6s						
FINES	FINESS Array B	19.27	91	P	Pn	22 11 35.5	-1.2
	0.2nm,0.3s,baz=327,slow=10.0,SNR=12						
CLL	Collm	22.77	125	eP	P	22 12 12.0	-1.5
GERES	GERESS Array B	25.17	127	P	P	22 12 35.6	-0.8
	1.2nm,0.9s,mb3.4,baz=327,slow=7.0,SNR=7.9						
GERES				LR	LR	22 21 01.4	
	comp=Z,28nm,20.9s,MS2.8,baz=181,slow=33						
VRAC	Vranov	25.62	122	P	P	22 12 41.2	+0.6
	2.6nm,0.6s,mb3.9,baz=333,slow=9.0,SNR=2.7						
VRAC				LR	LR	22 21 58.0	
	comp=Z,45nm,19.9s,MS3.0,baz=29,slow=35						
DAVOX	Davos	26.00	134	P	P	22 12 45.6	+1.6
	0.7nm,0.3s,mb3.6,baz=357,slow=13,SNR=2.4						
DAVOX				LR	LR	22 23 55.6	
	comp=Z,28nm,19.9s,MS2.8,baz=264,slow=39						
MLR	Muntele Rosu	31.97	114	LR	LR	22 27 02.7	
	comp=Z,48nm,19.0s,MS3.2,baz=289,slow=37						
YKA	Yellowknife Ar	36.50	309	P	P	22 14 15.8	-0.6
	0.3nm,0.6s,mb3.3,baz=38,slow=8.4,SNR=6.5						
YKA				LR	LR	22 28 40.1	
	comp=Z,34nm,18.8s,MS3.2,baz=270,slow=35						

IDC 04 22:16:08.6±2.1**, 1974S**×**17537W, h0**km**, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.7**/14**, mbtmp3.8**/4**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.4**/20**, Error ellipse: s-maj=61.1km s-min=38.5km az=124.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	19.58	198	P	Pn	22 20 37.7	-1.7
	1.0nm,0.3s,baz=354,slow=10,SNR=5.8						
HNR	Honiara	25.96	290	LR	LR	22 29 00.2	
	comp=Z,33nm,20.9s,baz=2.0,slow=30						
STKA	Stephens Creek	40.35	244	P	P	22 23 49.0	+1.1
	0.3nm,0.4s,baz=90,slow=8.1,SNR=2.6						
ASAR	Alice Springs	47.10	256	P	P	22 24 42.6	+0.4
	0.5nm,0.4s,baz=93,slow=8.1,SNR=12						
WRA	Warramunga Arr	47.16	261	P	P	22 24 42.0	-0.8
	0.4nm,0.3s,baz=98,slow=7.1,SNR=13						
BRTR	Keskin Array B	148.11	315	PKPbc	PKPbc	22 35 58.2	+2.0
	0.6nm,0.8s,baz=79,slow=2.6,SNR=4.2						
GERES	GERESS Array B	150.06	348	PKPbc	PKPbc	22 35 59.3	-1.8
	0.1nm,0.4s,baz=356,slow=2.9,SNR=3.5						

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*IDC **04** 22:20:26.2±15.0, 979N×10420W, h0km, mb3.8/5, mb1 4.2/6, mb1mx4.0/17, mbtmp4.0/6, ML4.5/1, MS3.9/16, Ms1 3.8/16, ms1mx3.7/24, Error ellipse: s-maj=266.6km s-min=56.1km az=178.0*
*ISCJB **04** 22:20:28.9±1.3, 10.1N±0.1×104.1W±0.1, h10km, mb4.2/13, MS3.9/15, Error ellipse: s-maj=24.1km s-min=16.6km az=80.2*
*NEIC **04** 22:20:29.9±1.2, 1006N×10421W, h10km, mb4.5/9, Error ellipse: s-maj=21.4km s-min=15.2km az=219.0*
ISC 04 22:20:30.7±1.3**, 101N**±01×**1042W**±01**, h10**km**, n35,** σ**0**^{s}**90**/23**, mb4.2**/13**, MS3.9**/15**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	11.40	52	Pn	Pn	22 23 13.8	+0.2
	3.5nm,0.3s,baz=207,slow=12,SNR=4.3						
CMIG				LR	LR	22 26 35.1	
	comp=Z,818nm,20.4s,baz=234,slow=32						
JCT	Junction City	20.67	11	eP	P	22 25 10.8	+0.1
	21nm,1.1s						
HKT	Hockley	21.22	20	eP	P	22 25 17.5	+0.9
	26nm,1.4s,mb4.4						
MNTX	Cornudas Mount	21.50	357	eP	P	22 25 20.2	+0.6
	21nm,1.3s,mb4.4						
TUC	Tucson	22.91	346	eP	P	22 25 34.9	+0.3
	6.7nm,1.3s,mb3.9						
NATX	Nacogdoches	23.28	21	eP	P	22 25 38.5	0.0
	86nm,1.4s,mb5.0						
LAZ	Ladron	24.32	354	eP	P	22 25 50.3	+1.9
AMTX	Amarillo	24.76	5	eP	P	22 25 52.5	+0.1
	22nm,1.0s,mb4.6						
ANMO	Albuquerque	24.80	356	P	P	22 25 53.6	+0.8
	1.7nm,0.7s,mb3.7,baz=170,slow=12,SNR=4.6						
MIAR	Mount Ida	26.19	20	eP	P	22 26 03.9	-1.5
	11nm,1.2s,mb4.3						
ROSC	El Rosal	30.06	98	LR	LR	22 35 49.7	
	comp=Z,174nm,20.8s,MS3.7,baz=342,slow=31						
NLU	North Lily Min	30.53	348	eP	P	22 26 41.5	-2.6
NVAR	Mina Array Bea	30.90	338	P	P	22 26 47.2	-0.1
	0.3nm,0.5s,mb3.4,baz=163,slow=11,SNR=3.5						
NVAR	Mina Array Bea	30.90	338	P	P	22 26 47.2	-0.1
CPCT	Cooper Cave	30.94	32	eP	P	22 26 46.8	-0.9
PDAR	Pinedale Array	32.86	353	P	P	22 27 05.3	+0.7
	1.4nm,0.9s,mb3.9,baz=150,slow=9.2,SNR=9.0						
PDAR				LR	LR	22 41 21.6	
	comp=Z,89nm,18.5s,MS3.5,baz=181,slow=38						
PDAR	Pinedale Array	32.86	353	P	P	22 27 05.3	+0.7
PDAR				LR	LR	22 41 21.6	
NEW	Newport	39.55	346	LR	LR	22 43 06.6	
	comp=Z,174nm,18.3s,MS3.9,baz=40,slow=34						
ULM	Lac du Bonnet	40.60	8	P	P	22 28 09.3	-1.2
	2.7nm,1.0s,mb3.8,baz=199,slow=1.9,SNR=3.6						
ULM				LR	LR	22 45 13.3	
	comp=Z,237nm,19.1s,MS4.1,baz=195,slow=36						
ULM	Lac du Bonnet	40.60	8	P	P	22 28 09.3	-1.2
ULM				LR	LR	22 45 13.3	
SADO	Sadowa	40.73	28	LR	LR	22 44 30.5	
	comp=Z,111nm,21.8s,MS3.7,baz=236,slow=35						
EDM	Edmonton	43.62	352	eP	P	22 28 35.3	+0.2
LPAZ	La Paz	44.30	126	eP	P	22 28 41.2	+0.6
	3.9nm,1.0s,mb4.1						
BBB	Bella Bella	46.23	340	LR	LR	22 49 07.1	
	comp=Z,81nm,21.4s,MS3.6,baz=44,slow=37						
PPT	Papeete	52.59	239	LR	LR	22 45 35.2	
	comp=Z,102nm,18.8s,MS3.9,baz=60,slow=29						
YKA	Yellowknife Ar	52.83	354	P	P	22 29 45.5	-0.7
	2.1nm,1.1s,mb4.0,baz=165,slow=7.8,SNR=9.6						
YKA				LR	LR	22 52 34.0	
	comp=Z,116nm,18.1s,MS4.0,baz=255,slow=36						
YKA	Yellowknife Ar	52.83	354	P	P	22 29 45.5	-0.7
YKA				LR	LR	22 52 34.0	
SCHQ	Schefferville	53.48	26	LR	LR	22 53 42.7	
	comp=Z,83nm,18.3s,MS3.8,baz=96,slow=37						
CFAA	Coronel Fontan	53.91	142	LR	LR	22 48 02.1	
	comp=Z,27nm,19.8s,MS3.3,baz=227,slow=31						
PLCA	Paso Flores	59.37	151	LR	LR	22 50 26.0	
	comp=Z,193nm,19.6s,MS4.2,baz=325,slow=30						
INK	Inuvik	61.24	348	eP	P	22 30 45.6	-0.2
	5.6nm,1.0s,mb4.7						
BDFB	Brasilia	61.24	114	LR	LR	22 55 36.6	
	comp=Z,323nm,20.0s,MS4.5,baz=243,slow=34						
NOA	NORSAR Array B	93.05	26	LR	LR	23 12 30.1	
	comp=Z,27nm,21.4s,MS3.7,baz=295,slow=34						
ARCES	ARCESS Array B	93.32	16	LR	LR	23 17 12.2	
	comp=Z,59nm,21.5s,MS4.0,baz=82,slow=36						
FINES	FINESS Array B	98.79	22	LR	LR	23 16 43.0	
	comp=Z,50nm,21.5s,MS4.0,baz=185,slow=34						

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*TRN **04** 22:24:56.3, 1886N×6206W, h44km, MD3.9*
*ISCJB **04** 22:24:57.9±1.2, 188N±0.1×62.15W±006, h92km±19km, Error ellipse: s-maj=22.7km s-min=6.1km az=36.3*
*NEIC **04** 22:25:00.3, 19.13N×6226W, h51km, MD4.2(RSPR), After RSPR.*
*RSPR **04** 22:25:00.3, 19.13N×6226W, h51km±24km, MD4.2/11, MD4.2/11*
ISC 04 22:24:58.5±1.1**, 188N**±01×**6209W**±006**, h69**km±35km**, n27,** σ**0**^{s}**97**/45**, 12C-3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPB	Codrington	1.21	168	eP	Pn	22 25 18.8	-0.8
CPB				eS	Sn	22 25 34.0	-1.4
CPB	Codrington	1.21	168	eP	Pn	22 25 18.8	-0.8
CPB				eS	Sn	22 25 31.6	-3.8
STMA	St. Maarten, A	1.25	231	eP	Pn	22 25 20.7	+0.5
STMA				eS	Sn	22 25 36.6	+0.3
STAT	Sint Eustatius	1.58	213	eP	Pn	22 25 24.8	+0.3
STAT				eS	Sn	22 25 44.1	+0.1
SABS	Saba	1.63	223	eP	Pn	22 25 26.7	+1.6
SABS				eS	Sn	22 25 47.9	+2.5
SABT	Saba	1.63	223	eP	Pn	22 25 24.5	-0.7
SABT				eS	Sn	22 25 48.6	+3.3
BPA	Boggy Peak	1.79	173	eP	Pn	22 25 26.7	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BPA				eS	Sn	22 25 49.1	0.0
BPA	Boggy Peak	1.79	173	eP	Pn	22 25 28.5	+1.2
BPA				eS	Sn	22 25 46.4	-2.7
TBVI	Tortola	2.43	260	⇑eP	Pn	22 25 35.1	-0.8
TBVI				eS	Sn	22 26 03.8	-0.8
SEG	Port Louis	2.48	167	eP	Pn	22 25 37.0	+0.4
DEG	La Desirade	2.69	159	eP	Pn	22 25 38.6	-0.8
LZG	Guadaloupe-1	2.69	174	eP	Pn	22 25 39.0	-0.5
CDVI	St. Croix	2.77	248	⇑eP	Pn	22 25 41.0	+0.5
STVI	Saint Thomas	2.77	261	⇑eP	Pn	22 25 40.5	0.0
CULB	Culebra	3.12	261	⇓eP	Pn	22 25 44.9	-0.4
CULB	Culebra	3.12	261	⇑eP	Pn	22 25 44.9	-0.4
CULB				eS	Sn	22 26 18.3	-3.2
MTP	Monte Pirata	3.38	258	⇑eP	Pn	22 25 49.0	+0.3
MTP				eS	Sn	22 26 24.8	-2.9
CBYP	Canovanas	3.62	262	⇑eP	Pn	22 25 52.0	-0.1
CBYP				eS	Sn	22 26 32.8	-0.9
HUMP	Col San Antoni	3.64	260	⇑eP	Pn	22 25 52.5	+0.2
HUMP				eS	Sn	22 26 33.9	-0.2
SJG	San Juan	3.92	260	ePn	Pn	22 25 57.3	+1.0
SJG				eSn	Sn	22 26 42.6	+1.6
ICM	Isla Caja Muer	4.32	258	⇑eP	Pn	22 26 02.5	+0.9
OBIP	Obispado Ponce	4.36	260	⇑eP	Pn	22 26 02.7	+0.4
AOPR	Arecibo Observ	4.45	264	⇑eP	Pn	22 26 03.1	-0.3
AOPR				eS	Sn	22 26 53.5	-0.5
LRS	Lares	4.55	264	⇓eP	Pn	22 26 04.9	+0.1
LRS				eS	Sn	22 26 50.2	-6.2
LSP	Las Mesas	4.79	263	⇑eP	Pn	22 26 08.8	+0.7
LSP				eS	Sn	22 27 01.1	-1.2
MGP	Maguayo	4.82	261	⇓eP	Pn	22 26 09.2	+0.7
CRPR	Cabo Rojo, PR	4.84	261	⇑eP	Pn	22 26 09.3	+0.5
CRPR				eS	Sn	22 27 03.4	-0.2

*NNC **04** 22:30:07.2±10.0, 38.97N×74.04E, h236km±127km, mb1.9, mpv2.9, Error ellipse: s-maj=128.8km s-min=61.0km az=6.0*

*ISCJB **04** 22:30:08.6±1.1, 39.04N±0.06×73.7E±0.2, h10km, Error ellipse: s-maj=21.6km s-min=9.1km az=175.6*

ISC 04 22:30:12.2±1.0**, 39.23N**±0.07×**73.9E**±0.2**, h10km, n11, σ1.09**/14**, 2C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	2.91	356	P	Pn	22 30 59.5	+1.0
	SNR=68						
KZA	Kyzart	3.02	19	P	Pn	22 30 59.8	-0.2
	SNR=8.7						
UCH	Uchtor	3.03	8	P	Pn	22 31 00.9	+0.7
	SNR=18						
EKS2	Erkin-Say	3.43	358	P	Pn	22 31 07.9	+2.1
	SNR=14						
ULHL	Ulahol	3.48	29	P	Pn	22 31 05.0	-1.4
	SNR=5.8						
KBK	Karagaybulak	3.51	12	P	Pn	22 31 07.1	+0.3
	SNR=5.8						
CHMS	Chumysh	3.82	9	P	Pn	22 31 11.1	0.0
	SNR=5.2						
TKM2	Tokmak 2	3.90	18	⇓P	Pn	22 31 11.3	-0.8
	0.4nm,0.6s						
TKM2				⇓S	Sn	22 32 04.4	+6.5
	2.8nm,0.8s						
KK31	Karatay Array	4.66	327	⇑P	Pn	22 31 20.7	-1.9
	1.3nm,0.2s,baz=137,slow=12,SNR=183						
KK31				⇑S	Sn	22 32 20.6	+3.9
	7.5nm,0.3s,baz=138,slow=26,SNR=17						
DLH	Dalhousie	6.87	166	eP	Pg	22 32 24.0	+0.2
AB31	Akbulak array	14.16	320	P	Pn	22 33 23.9	-8.9
	0.7nm,0.6s,baz=128,slow=13,SNR=9.6						
AB31				⇓S	Sn	22 35 59.0	-11
	1.2nm,0.7s,baz=133,slow=23,SNR=4.2						

*IDC **04** 22:30:09.6±1.0, 4.17S×101.46E, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.2/21, mbtmp4.3/14, ML3.9/1, MS3.8/3, Ms1 3.8/3, ms1mx3.2/34, Error ellipse: s-maj=42.9km s-min=14.1km az=50.0*

*MOS **04** 22:30:12.7±0.8, 4.10S×101.55E, h33km, mb4.7/17, Error ellipse: s-maj=18.5km s-min=7.6km az=107.7*

*ISCJB **04** 22:30:13.6±0.5, 4.06S±0.09×101.6E±0.1, h38km, mb4.5/45, MS4.0/2, Error ellipse: s-maj=18.3km s-min=7.5km az=99.1*

*BJI **04** 22:30:13.0, 4.10S×101.60E, h35km, mB4.9, mb4.8, Ms4.5, Msz4.1*

*NEIC **04** 22:30:14.8±0.5, 4.14S×101.56E, h35km, mb4.7/10, Error ellipse: s-maj=21.6km s-min=6.2km az=52.0*

ISC 04 22:30:15.8±0.5**, 4.10S**±0.09×**101.6E**±0.1**, h40km, h40km**±4.5km**:pP-P, n81, σ0.89**/73**, mb4.5**/45**, MS4.0**/2**, 8C-5D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	7.35	339	Pn	Pn	22 31 59.4	-1.1
	1.8nm,0.3s,baz=169,slow=14,SNR=5.6						
PSI				LR	LR	22 35 45.5	
	comp=Z,536nm,20.0s,baz=159,slow=46						
PSI	Prapat	7.35	339	Pn	Pn	22 31 59.4	-1.1
PSI				LR	LR	22 35 45.5	
KULM	Kulim	9.37	354	ePn	Pn	22 32 26.7	-1.5
MBWA	Marble Bar	24.47	135	eP	P	22 35 38.3	+7.3
FITZ	Fitzroy Crossi	27.35	122	P	P	22 35 57.0	0.0
	2.0nm,0.6s,mb3.8,baz=301,slow=10,SNR=7.2						
GYA	Guiyang	30.77	9	⇓iP	P	22 36 28.6	+1.2
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
PKI	Pulchoki	35.14	335	eP	P	22 37 05.8	+0.3
GUN	Gumba	35.23	335	eP	P	22 37 08.1	+1.8
	comp=Z,18nm,0.5s,mb5.3						
DMN	Daman	35.30	334	eP	P	22 37 07.0	+0.1
KKN	Kakani	35.38	335	eP	P	22 37 08.5	+0.9
	comp=Z,17nm,0.7s,mb5.1						
KKN	Kakani	35.38	335	eP	P	22 37 08.5	+0.9
KKN				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
WRA	Warramunga Arr	35.59	119	P	P	22 37 09.2	-0.2
	comp=Z,1.9nm,0.4s,mb4.4,baz=303,slow=8.9,SNR=30						
WRAB	Tennant Creek	35.60	119	eP	P	22 37 09.3	-0.1
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
WRAB	Tennant Creek	35.60	119	eP	P	22 37 09.3	-0.1
	comp=Z,4.9nm,0.6s,mb4.6						
WB2	Warramunga Arr	35.60	119	eP	P	22 37 08.8	-0.7
WB2	Warramunga Arr	35.60	119	eP	P	22 37 09.2	-0.3
GKN	Gorkha	35.85	334	eP	P	22 37 12.6	+1.0
	comp=Z,33nm,1.0s,mb5.2						
KOLN	Koldanda	36.11	332	eP	P	22 37 15.0	+1.1
ASAR	Alice Springs	36.76	125	P	P	22 37 20.1	+0.7
	comp=Z,1.8nm,0.6s,mb4.1,baz=297,slow=7.7,SNR=23						
XAN	Xi'an	38.56	10	P	P	22 37 34.7	+0.1
XAN				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.7						
NJ2	Nanjing	39.52	23	eP	P	22 37 44.1	+1.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
GTA	Gaotai	43.32	358	eP	P	22 38 14.4	+0.6
GTA				AP	pP	22 38 22.8	-2.3
GTA				XP	sP	22 38 26.3	-3.5
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.0						
STKA	Stephens Creek	46.59	131	eP	P	22 38 40.6	+0.8
	comp=Z,7.0nm,1.8s,mb4.3						
STKA	Stephens Creek	46.59	131	P	P	22 38 40.8	+1.0
	comp=Z,2.6nm,1.0s,mb4.1,baz=234,slow=7.6,SNR=4.6						
STKA	Stephens Creek	46.59	131	eP	P	22 38 40.3	+0.5
WMQ	Urumqi	49.31	347	eP	P	22 39 02.0	+1.2
WMQ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
SONM	Songino Array	51.88	4	P	P	22 39 21.5	+1.3
	comp=Z,8.0nm,0.9s,mb4.7,baz=184,slow=8.7,SNR=52						
ULN	Ulaanbaatar	51.96	5	eP	P	22 39 22.0	+1.2
ULN				e*PP	pP	22 39 33.3	+0.9
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
ULN	Ulaanbaatar	51.96	5	eP	P	22 39 21.9	+1.1
	comp=Z,5.3nm,1.0s,mb4.4						
ULN				epP	pP	22 39 33.3	+0.9
UCH	Uchtor	52.25	335	P	P	22 39 23.8	+0.9
	SNR=5.1						
CN2	Changchun	52.30	22	eP	P	22 39 20.1	-3.2
TKM2	Tokmak 2	52.37	336	P	P	22 39 24.9	+1.0
	SNR=12						
AML	Almayashu	52.52	334	P	P	22 39 25.9	+0.9
	SNR=8.3						
AAK	Ala-Archa	52.59	335	⇓eP	P	22 39 24.6	-0.9
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
EKS2	Erkin-Say	52.92	334	P	P	22 39 28.9	+1.0
	SNR=19						
MJAR	Matsushiro Arr	52.94	37	P	P	22 39 27.6	-0.5
	comp=Z,3.0nm,0.6s,mb4.4,baz=214,slow=8.1,SNR=11						
USP	Ospenovka	53.11	335	P	P	22 39 29.3	0.0
	SNR=7.4						
MK31	Makanchi Array	53.46	344	P	P	22 39 31.6	-0.3
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
MKAR	Makanchi Array	53.46	344	P	P	22 39 31.9	0.0
	comp=Z,4.6nm,0.7s,mb4.5,baz=144,slow=8.4,SNR=28						
ZAK	Zakamensk	54.28	1	eP	P	22 39 38.5	+0.6
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
MDJ	Mudanjiang	54.60	24	P	P	22 39 39.7	-0.5
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,52nm,5.1s						
KK31	Karatay Array	54.73	332	iP	P	22 39 40.6	-0.5
KK31				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
KKAR	Karatay Array	54.73	332	iP	P	22 39 40.6	-0.5
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
TLY	Talaya	55.59	2	⇑iP	P	22 39 48.6	+1.3
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
KURK	Kurchatov	58.05	343	⇑iP	P	22 40 04.3	-0.5
KURK	Kurchatov	58.05	343	eP	P	22 40 04.0	-0.8
	comp=Z,6.0nm,0.9s,mb4.6						
KLR	Kul'dur	59.22	23	eP	P	22 40 09.8	-3.1
ZAL	Zalesovo	59.51	349	P	P	22 40 15.3	+0.4
	comp=Z,3.5nm,0.7s,mb4.5,baz=314,slow=6.3,SNR=20						
KRAR	Krasnoyarsk	60.33	354	⇑iP	P	22 40 19.8	-0.7
KRAR				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.3						
NVS	Novosibirsk	60.67	348	eP	P	22 40 19.3	-3.6
YSS	Yuzh-Sakhalins	62.44	31	d iP	P	22 40 35.3	+0.5
YSS				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.1						
BOD	Bodaibo	62.52	7	⇑iP	P	22 40 35.0	-0.3
BOD				e	pP	22 40 46.3	-0.8
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
BOD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
BVAR	Borovoye Array	62.68	339	P	P	22 40 35.5	-0.9
	comp=Z,3.0nm,0.5s,mb4.7,baz=147,slow=8.5,SNR=17						
ZRNK	Zerenda	63.12	339	eP	P	22 40 38.2	-1.1
ZRNK				e*PP	pP	22 40 51.5	+0.4
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
ZRNK	Zerenda	63.12	339	eP	P	22 40 38.2	-1.1
	comp=Z,2.8nm,0.9s,mb4.4						
ZRNK				epP	pP	22 40 51.5	+0.4
CHKZ	Chkalovo	63.14	340	eP	P	22 40 38.6	-0.8
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
CHKZ	Chkalovo	63.14	340	eP	P	22 40 38.6	-0.8
	comp=Z,2.1nm,0.5s,mb4.5						
AB31	Akbulak array	64.22	331	iP	P	22 40 45.6	-1.0
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KMBO	Kilima Mbogo	64.31	271	iP	P	22 40 40.2	-7.0
YAK	Yakutsk	69.37	14	d iP	P	22 41 18.4	-1.0
YAK				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
ARU	Arti	69.75	336	⇑iP	P	22 41 20.8	-0.9
ARU				e		22 41 39.6	
ARU				e		22 43 53.9	
ARU				eS	S	22 50 31.0	+3.2
ARU				eSS	SS	22 55 00.0	+3.4
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
LSZ	Lusaka	72.92	255	LR	LR	23 07 58.9	
	comp=Z,80nm,18.6s,MS4.0,baz=176,slow=31						
PET	Petropavlovsk	74.28	32	⇑iP	P	22 41 47.5	-1.3
PET				pmax	pmax		
	comp=Z,31nm,2.5s,mb4.8						
MA2	Magadan	74.29	24	⇓eP	pP	22 42 01.6	+0.7
BRTR	Keskin Array B	75.89	313	P	P	22 41 57.4	-0.7
	comp=Z,0.8nm,0.6s,mb3.9,baz=135,slow=7.9,SNR=7.1						
TIXI	Tiksi	77.67	9	⇑eP	P	22 42 07.7	-0.4
TIXI				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.7						
OBN	Obninsk	79.39	328	c iP	P	22 42 17.1	-0.5
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
TSUM	Tsumeb	83.00	251	LR	LR	23 14 35.4	
	comp=Z,74nm,21.6s,MS4.0,baz=304,slow=32						
BILL	Bilibino	84.57	20	eP	P	22 42 44.9	+0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
FINES	FINESS Array B	86.69	332	P	P	22 42 55.0	-0.3
	comp=Z,1.2nm,0.6s,mb4.3,baz=113,slow=5.7,SNR=12						
KAF	Kangasniemi	86.75	333	ep	P	22 42 54.9	-0.8
	comp=Z,3.4nm,0.6s,mb4.8,baz=99,slow=4.5						
KAF	Kangasniemi	86.75	333	eP	P	22 42 54.9	-0.8
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7						
KEV	Kevo	88.52	340	ep	P	22 43 04.0	-0.1
	comp=Z,0.7nm,0.6s,mb4.2						
KEV	Kevo	88.52	340	eP	P	22 43 04.0	-0.1
KEV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.3						
ARCES	ARCESS Array B	88.97	340	P	P	22 43 06.2	0.0
	comp=Z,2.3nm,0.8s,mb4.6,baz=78,slow=5.6,SNR=9.6						
GERES	GERESS Array B	91.65	319	P	P	22 43 18.9	+0.2
	comp=Z,0.6nm,0.8s,mb4.0,baz=49,slow=6.1,SNR=4.9						
WMOK	Wichita Mounta	144.13	29	ePKIKP	PKPdf	22 49 45.2	-1.9
WCI	Wyandotte Cave	145.27	11	ePKIKP	PKPdf	22 49 48.8	-0.3
WCI				e		22 50 01.1	
MIAR	Mount Ida	146.59	23	ePKP2	PKPab	22 49 53.6	-0.4
JCT	Junction City	146.89	35	ePKP2	PKPab	22 49 54.2	-1.0
WVT	Waverly	146.96	14	ePKP2	PKPab	22 49 53.4	-2.1

*ISCJB **04** 22:32:35.1±4.2, 57.4S±0.1×26.0W±0.3, h86km±40km, mb4.3/10, Error ellipse: s-maj=24.3km s-min=19.8km az=154.4*

*IDC **04** 22:32:35.5±4.1, 57.44S×25.89W, h71km±32km, mb4.1/7, mb1 4.0/8, mb1mx3.8/17, mbtmp4.3/8, ML3.9/1, Error ellipse: s-maj=40.2km s-min=18.8km az=101.0*

*NEIC **04** 22:32:37.6±2.5, 57.45S×26.00W, h94km±22km, mb4.6/3, Error ellipse: s-maj=12.6km s-min=10.4km az=80.0*

ISC 04 22:32:37.4±4.0**, 57.5S**±0.1×**26.0W**±0.3**, h94km**±38km**, n22, σ0.46**/13**, mb4.3**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.20	157	e	Pn	22 36 06.4	-0.5
VNA1				e		22 36 09.0	
VNA1				e		22 36 15.7	
VNA1				e		22 36 28.1	
VNA1				e		22 36 31.1	
VNA1				e		22 36 35.5	
VNA1				e		22 36 42.8	
VNA1				e		22 36 46.5	
SNAA	Sanae	17.15	155	P	Pn	22 36 31.6	+0.6
	0.4nm,0.3s,baz=322,slow=16,SNR=101						
SNAA				S	S	22 39 26.8	-18
	0.0nm,0.3s,baz=334,slow=14,SNR=3.0						
SNAA				ScP	ScP	22 44 38.8	+2.4
	0.0nm,0.3s,baz=355,slow=3.2,SNR=5.4						
QSPA	South Pole Qui	32.75	180	eP	P	22 39 01.5	+0.2
	9.6nm,0.7s,mb4.7						
MAW	Mawson	38.59	142	P	P	22 39 50.7	-0.5
	1.3nm,0.8s,mb3.8,baz=238,slow=8.7,SNR=6.0						
VNDA	Vanda	45.16	182	P	P	22 40 45.2	+0.5
	2.8nm,0.6s,mb4.2,baz=182,slow=4.0,SNR=14						
BOSA	Boshof	45.71	73	P	P	22 40 49.0	0.0
	7.0nm,0.8s,mb4.5,baz=230,slow=5.9,SNR=17						
LPAZ	La Paz	51.76	305	eP	P	22 41 35.7	+0.4
	2.8nm,0.6s,mb4.5						
SAML	Samuel	56.30	314	eP	P	22 42 07.5	-0.8
	2.7nm,0.5s,mb4.5						
LSZ	Lusaka	58.30	67	P	P	22 42 22.2	-0.2
	3.7nm,0.8s,mb4.5,baz=181,slow=6.8,SNR=8.0						
DBIC	Dimbokro	66.22	23	P	P	22 43 15.3	+0.1
	1.7nm,0.4s,mb4.2,baz=172,slow=14,SNR=7.4						
TORD	Torodi Ar. Bea	74.00	28	P	P	22 44 03.5	+0.6
	7.7nm,0.5s,mb4.7,baz=199,slow=6.7,SNR=178						
ASAR	Alice Springs	97.41	161	P	P	22 46 00.0	-0.4
	0.3nm,0.5s,mb4.0,baz=182,slow=4.2,SNR=5.7						
DUG	Dugway	121.22	297	ePKPdf	PKPdf	22 51 19.0	-0.4
LOHW	Long Hollow	122.81	301	ePKPdf	PKPdf	22 51 21.6	-0.8
FINES	FINESS Array B	125.35	28	PKP	PKPdf	22 51 25.6	-1.7
	1.1nm,0.5s,baz=130,slow=2.2,SNR=22						
KAF	Kangasniemi	125.98	27	ep	PKPdf	22 51 18.8	-10
	0.2nm,0.3s						
ARCES	ARCESS Array B	132.04	22	PKP	PKPdf	22 51 38.2	-1.8
	1.1nm,0.6s,baz=195,slow=1.7,SNR=13						
ARCES	ARCESS Array B	132.04	22	PKP	PKPdf	22 51 38.2	-1.8
BVAR	Borovoye Array	134.98	58	PKP	PKPdf	22 51 45.0	-0.6
	0.6nm,0.6s,baz=198,slow=4.2,SNR=5.1						
YKA	Yellowknife Ar	137.69	316	PKP	PKPdf	22 51 49.2	-1.3
	1.6nm,0.6s,baz=128,slow=2.3,SNR=16						
YKA	Yellowknife Ar	137.69	316	PKP	PKPdf	22 51 49.2	-1.3
SONM	Songino Array	150.12	88	PKPbc	PKPbc	22 52 16.3	-0.9
	3.0nm,0.5s,baz=226,slow=3.1,SNR=20						

IDC 04 22:36:23.2±2.0**, 0.08N**×**127.40E, h0km, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=171.9km s-min=24.5km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.03	162	P	P	22 41 08.9	+0.4
	0.6nm,0.7s,baz=340,slow=11,SNR=18						
ASAR	Alice Springs	24.44	165	P	P	22 41 43.8	+0.3
	1.2nm,0.8s,baz=341,slow=7.1,SNR=8.8						
MKAR	Makanchi Array	60.92	326	P	P	22 46 38.0	+0.2
	0.3nm,0.3s,baz=115,slow=7.3,SNR=11						

*ISCJB **04** 22:40:03.4±0.7, 10.95N±0.04×62.42W±0.04, h98km±7km, Error ellipse: s-maj=7.5km s-min=4.7km az=89.8*

*FUNV **04** 22:40:03.8, 11.01N×62.32W, h94km, MW3.0*

*NEIC **04** 22:40:04.4, 11.02N×62.37W, h12km, MD3.3(TRN), After TRN.*

*TRN **04** 22:40:04.3, 11.04N×62.36W, h12km, MD3.3*

ISC 04 22:40:04.3±0.7**, 10.96N**±0.04×**62.41W**±0.04**, h92**km±8km**, n17, σ0.79**/28**, 2C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.36	149	eP	Pn	22 40 18.1	-0.2
GUIV				eS	Sn	22 40 28.2	-0.5
ITEV	Isla Los Testi	0.81	299	⇑iP	Pn	22 40 21.4	-0.6
ITEV				eS	Sn	22 40 35.0	-0.3
CRUV	Carupano	0.86	251	⇑iP	Pn	22 40 23.0	+0.4
CRUV				eS	Sn	22 40 36.9	+0.6
GUNV	Guanoco	0.95	214	eP	Pn	22 40 24.1	+0.6
GUNV				eS	Sn	22 40 38.9	+0.9
TRN	Trinidad (W)	1.04	107	eP	Pn	22 40 24.9	+0.3
TRN				eS	Sn	22 40 38.4	-1.4
GRW	Mount Saint Ca	1.40	32	eP	Pn	22 40 30.2	+1.3
GRW				eS	Sn	22 40 45.2	-2.2
TBH	Brigand Hill	1.40	110	eP	Pn	22 40 29.4	+0.5
TBH				eS	Sn	22 40 48.6	+1.1
GRHS	Sauteurs	1.46	31	eP	Pn	22 40 30.3	+0.6
GRSS	Sisters	1.54	30	eP	Pn	22 40 30.1	-0.5
GRSS				eS	Sn	22 40 50.7	0.0
GRIC	Isle de Caille	1.54	31	eP	Pn	22 40 30.6	0.0
GRIC				eS	Sn	22 40 51.9	+1.2
GRCU	Cariacou	1.77	32	eP	Pn	22 40 33.3	-0.2
GRCU				eS	Sn	22 40 55.9	+0.1
ORIV	Oritupano	2.12	208	eP	Pn	22 40 38.3	+0.2
ORIV				eS	Sn	22 41 03.5	-0.5
PCRV	Puerto La Cruz	2.32	251	eP	Pn	22 40 40.4	-0.4
GURV	El Guri	3.25	192	eP	Pn	22 40 52.0	-1.2
CUPV	Cœpira	3.44	255	⇓iP	Pn	22 40 56.4	+0.6
BIRV	Birongo	3.82	263	eP	Pn	22 41 01.4	+0.5
BAUV	El Baul	5.90	251	eP	Pn	22 41 27.9	-1.3

*NIED **04** 23:20:00, 40.80N×140.80E, h119km, Mw3.8 Best double couple: $M_0$5.90000×10^14 NP1:ϕ_s108.00000°, δ62.00000°, λ-51.00000°. NP2:ϕ_s228.00000°, δ46.00000°, λ-140.00000°.*

*ISCJB **04** 23:20:52.7±0.4, 40.84N±0.04×140.91E±0.09, h120km±2km, mb3.8/12, Error ellipse: s-maj=11.0km s-min=5.8km az=28.8*

*MOS **04** 23:20:53.5±1.2, 40.80N×140.89E, h133km, mb4.0/6, Error ellipse: s-maj=23.8km s-min=9.7km az=78.0*

*IDC **04** 23:20:54.2±1.9, 40.77N×140.74E, h116km±18km, mb3.5/10, mb1 3.7/13, mb1mx3.5/24, mbtmp3.9/13, Error ellipse: s-maj=22.1km s-min=13.8km az=95.0*

*JMA **04** 23:20:54.0±0.1, 40.81N×140.84E, h112km±1km, M3.5*

JMA Felt I J1.

*NEIC **04** 23:20:54.1, 40.81N×140.84E, h112km, MG3.5(JMA), After JMA.*

ISC 04 23:20:53.7±0.4**, 40.84N**±0.04×**140.90E**±0.08**, h114**km±2km**, n36, σ0.99**/49**, mb3.8**/12**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTM	Tenmabayashi	0.14	112	P	Pn	23 21 09.5	0.0
JTM				S	Sn	23 21 20.9	-0.4
JSI2	Shiura 2	0.42	301	P	Pn	23 21 10.5	-0.1
JSI2				S	Sn	23 21 22.8	-0.4
JOT	Ohata	0.55	12	P	Pn	23 21 12.1	+0.7
JOT				eS	Sn	23 21 25.3	+0.7
JANG	Nango	0.66	135	P	Pn	23 21 11.9	-0.3
JANG				S	Sn	23 21 26.1	0.0
JAH	Hinai	0.68	197	P	Pn	23 21 12.1	-0.2
JAH				S	Sn	23 21 25.6	-0.8
JIW	Iwasaki	0.72	250	P	Pn	23 21 12.5	-0.1
JSR	Shiriuchi	0.78	333	P	Pn	23 21 13.4	+0.3
JSR				S	Sn	23 21 27.5	-0.3
JKB	Kayabe	1.05	6	P	Pn	23 21 16.6	+0.9
JKB				S	Sn	23 21 33.0	+0.6
ASAJ	Asahikawa	3.51	20	P	Pn	23 21 48.2	+1.8
	4.7nm,0.3s,baz=260,slow=16,SNR=17						
ASAJ				S	Sn	23 22 26.3	-1.0
	6.2nm,0.3s,baz=349,slow=13,SNR=3.8						
ASAJ	Asahikawa	3.51	20	P	Pn	23 21 48.3	+1.8
ASAJ				S	Sn	23 22 26.3	-1.0
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
MAJO	Matsushiro	4.78	207	eP	Pn	23 22 04.4	+0.9
MAT	Matsushiro	4.78	207	P	Pn	23 22 04.4	+0.9
MAT				eS	Sn	23 23 01.0	+3.1
MAT	Matsushiro	4.78	207	eP	Pn	23 22 04.0	+0.5
MAT				S	Sn	23 23 08.0	+10
MJAR	Matsushiro Arr	4.78	207	P	Pn	23 22 04.0	+0.4
	comp=N,2.8nm,0.3s,baz=17,slow=14,SNR=22						
MJAR	Matsushiro Arr	4.78	207	P	Pn	23 22 04.0	+0.4
YUK	Yuzh-Kuril'sk	4.87	47	eP	Pn	23 22 04.7	0.0
YUK				iS	Sn	23 22 57.1	-2.9
YUK				pmax	pmax		
	comp=Z,330nm,0.2s						
YUK				smax			
	comp=E,470nm,0.6s						
YUK				smax			
	comp=N,870nm,0.8s						
YUK				smax			
	comp=N,2µm,1.0s						
JHJ	Hachijo jima 2	7.76	187	P	Pn	23 22 41.2	-2.6
	comp=N,7.9nm,0.3s,baz=66,slow=23,SNR=9.4						
JHJ				S	Sn	23 24 03.0	-7.0
	comp=N,9.5nm,0.3s,baz=80,slow=22,SNR=3.0						
BOD	Bodaibo	24.16	324	eP	P	23 25 58.8	-0.3
ZAL	Zalesovo	39.14	309	P	P	23 28 10.5	+0.5
	comp=N,1.3nm,0.3s,mb4.2,baz=348,slow=4.2,SNR=4.6						
MKAR	Makanchi Array	41.85	298	P	P	23 28 32.5	+0.3
	comp=N,0.4nm,0.4s,mb3.5,baz=73,slow=12,SNR=6.1						
KEV	Kevo	59.75	338	ep	P	23 30 44.7	-1.7
	comp=N,0.3nm,0.4s,mb3.7						
KEV	Kevo	59.75	338	eP	P	23 30 44.7	-1.7
KEV				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.2						
YKA	Yellowknife Ar	60.74	31	P	P	23 30 54.2	+1.1
	comp=Z,0.7nm,0.7s,mb3.8,baz=304,slow=6.6,SNR=5.6						
YKA	Yellowknife Ar	60.74	31	P	P	23 30 54.2	+1.0
YKA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WRA	Warramunga Arr	60.78	187	P	P	23 30 52.6	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.3nm,0.3s,mb3.9,baz=7.0,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**64.50**	**187**	P	**P**	**23 31 18.7**	**+0.5**
	comp=Z,0.4nm,0.6s,mb3.5,baz=17,slow=11,SNR=5.9						
KAF	**Kangasniemi**	**64.75**	**332**	*e*p	**P**	**23 31 18.2**	**-1.6**
	comp=Z,1.2nm,0.5s,mb4.0,baz=49,slow=6.1						
KAF	**Kangasniemi**	**64.75**	**332**	*e*P	**P**	**23 31 18.2**	**-1.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
FINES	**FINESS Array B**	**65.27**	**331**	P	**P**	**23 31 22.9**	**-0.2**
	comp=Z,0.7nm,0.3s,mb3.9,baz=30,slow=11,SNR=22						
FINES	**FINESS Array B**	**65.27**	**331**	P	**P**	**23 31 22.9**	**-0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS	**Hagfors**	**70.47**	**335**	P	**P**	**23 31 55.3**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.8,baz=45,slow=6.3,SNR=15						
HFS	**Hagfors**	**70.47**	**335**	P	**P**	**23 31 55.3**	**-0.4**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**70.53**	**337**	P	**P**	**23 31 54.8**	**-1.3**
	comp=Z,0.6nm,0.8s,mb3.5,baz=39,slow=6.1,SNR=4.0						
NOA	**NORSAR Array B**	**70.53**	**337**	P	**P**	**23 31 54.8**	**-1.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**73.05**	**54**	P	**P**	**23 32 13.4**	**+2.2**
	comp=Z,0.5nm,0.6s,mb3.5,baz=286,slow=8.4,SNR=3.6						
PDAR	**Pinedale Array**	**75.30**	**46**	P	**P**	**23 32 25.8**	**+1.6**
	comp=Z,0.5nm,0.4s,mb3.6,baz=344,slow=0.9,SNR=6.2						

IDC 04 23:28:25.7±57.0**, 1457S**×**17174W, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/14**, mbtmp4.1**/3**, Error ellipse: s-maj=1125.0km s-min=195.2km az=78.0, Samoa Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.84**	**240**	P	P	23 36 49.0	-0.5
	1.8nm,0.8s,baz=90,slow=8.1,SNR=4.3						
WRA	**Warramunga Arr**	**51.60**	**256**	P	P	23 37 34.2	+0.5
	0.9nm,0.4s,baz=91,slow=6.9,SNR=5.6						
ASAR	**Alice Springs**	**51.89**	**251**	P	P	23 37 36.9	+0.9
	2.5nm,0.5s,baz=88,slow=8.1,SNR=31						

*IDC **04** 23:43:18.2±1.0, 897S×10798E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.0/18, mbtmp4.1/8, ML3.7/1, Error ellipse: s-maj=52.1km s-min=17.1km az=50.0*
*NEIC **04** 23:43:19.7±0.5, 904S×10795E, h10km, mb4.6/1, Error ellipse: s-maj=29.4km s-min=6.8km az=225.0*
*ISCJB **04** 23:43:28.9±4.4, 87S±02×1084E±03, h98km±36km, mb4.3/11, Error ellipse: s-maj=61.7km s-min=11.1km az=97.9*
ISC 04 23:43:28.8±3.8**, 88S**±02×**1083E**±02**, h78**km±33km**, n19, σ0.s77**/18**, mb4.3**/11**, 1C, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**1.99**	**44**	⇑*i*P	**Pn**	**23 44 01.7**	**+1.2**
BJII				*i* S	**Sn**	**23 44 23.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.21**	**121**	P	**Pn**	**23 47 47.0**	**-1.1**
	0.2nm,0.3s,baz=302,slow=9.5,SNR=5.1						
WRA	**Warramunga Arr**	**27.49**	**117**	P	**P**	**23 49 08.1**	**+0.4**
	1.6nm,0.5s,mb3.9,baz=289,slow=11,SNR=5.0						
WRAB	**Tennant Creek**	**27.50**	**117**	*e*P	**P**	**23 49 08.3**	**+0.6**
	12nm,1.1s,mb4.3						
WB2	**Warramunga Arr**	**27.50**	**117**	*e*P	**P**	**23 49 08.1**	**+0.3**
ASAR	**Alice Springs**	**28.60**	**124**	P	**P**	**23 49 17.9**	**+0.3**
	1.4nm,0.7s,mb3.7,baz=302,slow=7.7,SNR=13						
ASAR				PcP	PcP	23 52 28.3	+1.4
	0.4nm,0.4s,baz=306,slow=2.4,SNR=4.6						
STKA	**Stephens Creek**	**38.49**	**131**	P	**P**	**23 50 42.9**	**-0.4**
	2.3nm,0.7s,mb4.1,baz=313,slow=9.4,SNR=4.9						
STKA	**Stephens Creek**	**38.49**	**131**	*e*P	**P**	**23 50 43.0**	**-0.3**
PKI	**Pulchoki**	**42.40**	**329**	*e*P	**P**	**23 51 16.3**	**+0.7**
GUN	**Gumba**	**42.45**	**330**	*e*P	**P**	**23 51 17.2**	**+1.3**
	21nm,0.6s,mb5.0						
DMN	**Daman**	**42.59**	**329**	*e*P	**P**	**23 51 16.6**	**-0.5**
GKN	**Gorkha**	**43.15**	**329**	*e*P	**P**	**23 51 20.7**	**-0.9**
	11nm,0.6s,mb4.8						
KOLN	**Koldanda**	**43.50**	**327**	*e*P	**P**	**23 51 23.8**	**-0.6**
	23nm,0.6s,mb5.1						
SONM	**Songino Array**	**56.39**	**358**	P	**P**	**23 53 03.0**	**+1.0**
	2.5nm,0.6s,mb4.4,baz=173,slow=7.9,SNR=23						
MKAR	**Makanchi Array**	**59.99**	**340**	P	**P**	**23 53 26.9**	**-0.3**
	4.8nm,0.6s,mb4.7,baz=139,slow=6.6,SNR=32						
ZAL	**Zalesovo**	**65.57**	**345**	P	**P**	**23 54 04.2**	**0.0**
	0.6nm,0.4s,mb3.8,baz=114,slow=8.4,SNR=4.6						
QSPA	**South Pole Qui**	**81.22**	**180**	*e*P	PcP	23 55 45.8	+3.7
BRTR	**Keskin Array B**	**83.98**	**312**	P	**P**	**23 55 49.4**	**-1.1**
	0.5nm,0.7s,mb3.5,baz=123,slow=9.1,SNR=4.3						
BDFB	**Brasilia**	**146.26**	**224**	PKPbc	PKPbc	00 03 00.6	+0.3
	3.0nm,0.5s,baz=162,slow=3.2,SNR=5.3						

IDC 04 23:52:16.1±2.3**, 476N**×**12615E, h0**km**, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.5**/17**, mbtmp3.6**/3**, Error ellipse: s-maj=201.3km s-min=26.3km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.83**	**162**	P	P	23 57 50.4	+1.3
	0.5nm,0.6s,baz=343,slow=10						
ASAR	**Alice Springs**	**29.25**	**165**	P	P	23 58 19.1	-0.6
	0.2nm,0.3s,baz=342,slow=7.1,SNR=8.1						
MKAR	**Makanchi Array**	**56.39**	**325**	P	P	00 01 59.2	+0.1
	0.6nm,0.5s,baz=139,slow=8.0,SNR=6.0						

MOS 05 00:25:26.8±0.4**, 4264N**×**4605E, h27**km**, mb3.8**/1**, 7C-2D, Error ellipse: s-maj=35.7km s-min=9.7km az=32.4, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**1.00**	**296**	⇑*i*PG	Pn	00 25 44.2	-0.9
SNJR				*i* S	Sn	00 25 57.8	-0.5
VLKR	**Vladikavkaz**	**1.08**	**292**	⇑*i*PG	Pn	00 25 45.6	-0.6
VLKR				*i* S	Sn	00 26 00.2	-0.1
LACR	**Lac**	**1.30**	**279**	⇑*i*PG	Pn	00 25 49.2	0.0
LACR				*i* S	Sn	00 26 06.4	+0.7
BTKR	**Batakoyurt**	**1.32**	**304**	⇑*i*PG	Pn	00 25 49.5	0.0
BTKR				*i* S	Sn	00 26 06.9	+0.7
ARNR	**Ardon**	**1.41**	**293**	*e*PG	Pn	00 25 50.9	+0.3
ARNR				*i* S	Sn	00 26 09.4	+1.1
TRKR	**Terskaya**	**1.45**	**319**	⇓*i*PG	Pn	00 25 51.6	+0.4
TRKR				*i* S	Sn	00 26 10.6	+1.4
KMSR	**Komsomolskaya**	**1.48**	**300**	⇓*i*PG	Pn	00 25 52.0	+0.4
KMSR				*i* S	Sn	00 26 11.3	+1.3
KORR	**Kora**	**1.52**	**288**	⇑*i*PG	Pn	00 25 52.7	+0.5
ZEI	**Tsey**	**1.59**	**275**	⇑*i*PG	Pn	00 25 53.9	+0.8
PRTR	**Priterechnaya**	**1.70**	**311**	⇑*i*PN	Pn	00 25 55.4	+0.7
DIGR	**Digorskoe uzhe**	**1.83**	**279**	*e*PN	Pn	00 25 57.2	+0.7

IDC 05 00:41:14.3±2.4**, 353N**×**12571E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/16**, mbtmp3.6**/4**, Error ellipse: s-maj=262.9km s-min=26.8km az=64.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.82**	**160**	P	P	00 46 38.8	+0.7
	0.6nm,0.3s,baz=338,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**28.19**	**164**	P	P	00 47 08.9	+0.4
	0.3nm,0.6s,baz=347,slow=6.7,SNR=5.7						
STKA	**Stephens Creek**	**38.32**	**158**	P	P	00 48 36.2	-0.4
	0.9nm,0.3s,baz=319,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**57.14**	**326**	P	P	00 51 02.8	+0.1
	0.3nm,0.5s,baz=121,slow=6.9,SNR=4.1						

*NEIC **05** 00:43:55.6, 1899N×10379W, h14km, MD4.0(MEX), After MEX.*
MEX 05 00:43:55.6±0.4**, 1899N**×**10379W, h14**km±2km**, MD4.0, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COLM	**Colima**	**0.22**	**27**	*i* P	Pg	00 44 00.0	-0.4
CJM	**Chamela**	**1.29**	**294**	*i* P	Pn	00 44 15.3	-3.8
CJM				*i* S	Sb	00 44 31.2	-4.7
SFJM	**Santa Fe**	**1.65**	**25**	*i* P	Pn	00 44 21.0	-3.1
SFJM				*i* S	Sn	00 44 40.5	-4.7
MOIG	**Morelia**	**2.55**	**74**	*i* P	Pn	00 44 34.4	-2.2
MOIG				*i* S	Sn	00 45 04.0	-3.4
MEIG	**Mezcala**	**4.10**	**104**	*e*P	Pn	00 45 15.3	+18
MEIG				*i* S	Sn	00 45 47.2	+1.7
PLIG	**Platanillo**	**4.11**	**98**	*e*P	Pn	00 44 56.0	-1.9
PLIG				*i* S	Sn	00 45 42.1	-3.7
PLIG	**Platanillo**	**4.11**	**98**	*i* P	Pn	00 45 08.2	+10
PLIG				*i* S	Sn	00 45 58.0	+12

*ISCJB **05** 01:35:19.1±0.5, 1070N±003×6240W±003, h87km±6km, Error ellipse: s-maj=5.6km s-min=3.7km az=105.7*
*FUNV **05** 01:35:19.7, 1071N×6225W, h78km, MW3.4*
*NEIC **05** 01:35:20.2, 1072N×6238W, h84km, MD3.6(TRN), After TRN.*
*TRN **05** 01:35:22.4, 1085N×6233W, h54km, MD3.6*
ISC 05 01:35:20.2±0.5**, 1069N**±003×**6239W**±003**, h79**km±6km**, n28, σ0.s83**/44**, 4C-3D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.17**	**104**	⇑*i*P	**Pn**	**01 35 31.2**	**-0.5**
GUIV				*e*S	**Sn**	**01 35 39.1**	**-1.1**
GUNV	**Guanoco**	**0.76**	**226**	⇑*i*P	**Pn**	**01 35 37.2**	**+0.8**
GUNV				*e*S	**Sn**	**01 35 50.0**	**+1.6**
CRUV	**Carupano**	**0.83**	**269**	⇓*i*P	**Pn**	**01 35 37.5**	**+0.3**
CRUV				*e*S	**Sn**	**01 35 49.9**	**0.0**
TRN	**Trinidad (W)**	**0.97**	**92**	⇑*i*P	**Pn**	**01 35 39.2**	**+0.3**
TRN				*e*S	**Sn**	**01 35 51.3**	**-1.4**
ITEV	**Isla Los Testi**	**0.98**	**312**	⇓*i*P	**Pn**	**01 35 38.2**	**-0.7**
ITEV				*e*S	**Sn**	**01 35 52.4**	**-0.6**
TPP	**Pointe-a-Pierr**	**0.99**	**112**	⇓*i*P	**Pn**	**01 35 40.2**	**+1.1**
TPP				*e*S	**Sn**	**01 35 55.0**	**+1.8**
TBH	**Brigand Hill**	**1.32**	**99**	*e*P	**Pn**	**01 35 43.7**	**+0.6**
TBH				*e*S	**Sn**	**01 36 00.9**	**+0.6**
GRW	**Mount Saint Ca**	**1.63**	**26**	*e*P	**Pn**	**01 35 47.7**	**+0.6**
GRW				*e*S	**Sn**	**01 36 08.2**	**+0.7**
TPR	**Prospect**	**1.66**	**73**	*e*P	**Pn**	**01 35 48.0**	**+0.5**
BOT	**Bacolet**	**1.71**	**74**	*e*P	**Pn**	**01 35 48.5**	**+0.4**
GRIC	**Isle de Caille**	**1.77**	**26**	*e*P	**Pn**	**01 35 48.5**	**-0.5**
GRIC				*e*S	**Sn**	**01 36 10.2**	**-0.7**
GRSS	**Sisters**	**1.77**	**25**	*e*P	**Pn**	**01 35 48.1**	**-0.9**
GRSS				*e*S	**Sn**	**01 36 10.6**	**-0.3**
ORIV	**Oritupano**	**1.90**	**212**	*e*P	**Pn**	**01 35 51.1**	**+0.4**
ORIV				*e*S	**Sn**	**01 36 14.0**	**+0.2**
GRCU	**Cariacou**	**2.00**	**27**	*e*P	**Pn**	**01 35 51.6**	**-0.4**
GRCU				*e*S	**Sn**	**01 36 15.1**	**-1.0**
PCRV	**Puerto La Cruz**	**2.27**	**257**	*e*P	**Pn**	**01 35 55.8**	**+0.2**
PCRV				*e*S	**Sn**	**01 36 22.5**	**-0.2**
IBAV	**Isla La Blanqu**	**2.42**	**298**	⇑*i*P	**Pn**	**01 35 58.3**	**+0.6**
PRGV	**PARIAGUAN**	**2.94**	**229**	*e*P	**Pn**	**01 36 04.5**	**-0.1**
GURV	**El Guri**	**2.99**	**193**	*e*P	**Pn**	**01 36 04.6**	**-0.7**
GURV				*e*S	**Sn**	**01 36 37.4**	**-2.8**
CUPV	**Cœpira**	**3.40**	**260**	*e*P	**Pn**	**01 36 11.7**	**+0.8**
CUPV				*e*S	**Sn**	**01 36 50.4**	**+0.3**
BIRV	**Birongo**	**3.82**	**267**	*e*P	**Pn**	**01 36 17.2**	**+0.6**
ORCV	**Isla La Orchil**	**3.90**	**287**	*e*P	**Pn**	**01 36 18.2**	**+0.6**
MERV	**Las Mercedes**	**4.11**	**250**	*e*P	**Pn**	**01 36 20.2**	**-0.3**
LUEV	**Luepa**	**4.90**	**169**	*e*P	**Pn**	**01 36 29.1**	**-2.3**
CAOV	**Caicara del Or**	**5.12**	**230**	*e*P	**Pn**	**01 36 33.7**	**-0.7**
PHG	**Guadaloupe-2**	**5.34**	**8**	*e*P	**Pn**	**01 36 38.2**	**+0.8**
PHG				*e*S	**Sn**	**01 37 37.6**	**0.0**
LZG	**Guadaloupe-1**	**5.45**	**6**	*e*P	**Pn**	**01 36 39.9**	**+1.0**
BAUV	**El Baul**	**5.83**	**253**	*e*P	**Pn**	**01 36 43.3**	**-0.8**
MONV	**Montecano**	**7.54**	**280**	*e*P	**Pn**	**01 37 07.1**	**-0.3**

*ISCJB **05** 01:38:18.6±0.3, 5151N±002×1611E±002, h0km, Error ellipse: s-maj=2.9km s-min=1.9km az=33.7*
*IPEC **05** 01:38:19.6±0.3, 5159N×1619E, h0km, ML2.8/4, Error ellipse: s-maj=1.9km s-min=1.5km az=42.0*
*VIE **05** 01:38:19.4±2.0, 5161N×1612E, h0km, mb2.8/3, ML3.4/3, Error ellipse: s-maj=24.1km s-min=7.3km az=12.0 84 km NW of Breslau Suspected Mining induced.*
*NEIC **05** 01:38:20.3±0.3, 5159N×1607E, h5km, ML2.9(BRA), ML3.3(SZGRF), Error ellipse: s-maj=4.1km s-min=3.5km az=216.0*
*BGR **05** 01:38:20.6±0.6, 5156N×1606E, h1km, ML3.3/12, Error ellipse: s-maj=13.3km s-min=5.6km az=164.0*
*WAR **05** 01:38:21.6, 5153N×1606E, ML3.0, Mining Induced*
*PRU **05** 01:38:21.5, 5151N×1608E, h0km*
*CSEM **05** 01:38:22.2±0.1, 5149N×1600E, h2km, ML3.7/7, Error ellipse: s-maj=2.9km s-min=1.7km az=13.0*
*IDC **05** 01:38:22.7±1.9, 5150N×1587E, h12km±16km, mb1 3.2/8, mb1mx3.1/22, mbtmp3.2/8, ML3.1/7, Error ellipse: s-maj=11.8km s-min=8.1km az=80.0*
*LDG **05** 01:38:24.2±1.0, 5140N×1601E, h1km, Ml3.6/4, Error ellipse: s-maj=24.2km s-min=9.1km az=26.0, Suspected Mining induced.*
ISC 05 01:38:19.9±0.3**, 5155N**±002×**1607E**±002**, h0**km**, n83, σ0.s97**/145**, 1C-2D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**169**	*i* Pgd	**Pg**	**01 38 34.5**	**+0.8**
KSP				*e*Sg	**Sg**	**01 38 43.8**	**+0.7**
KSP	**Ksiaz**	**0.72**	**169**	⇓*i*Pg	**Pg**	**01 38 34.5**	**+0.8**
KSP				*e*Sg	**Sg**	**01 38 43.0**	**-0.1**
UPC	**Upice**	**1.05**	**182**	*e*PG	**Pg**	**01 38 40.6**	**+0.7**
DPC	**Dobruska-Polom**	**1.21**	**172**	*e*PG	**Pg**	**01 38 43.3**	**+0.2**
DPC				*e*SG	**Sg**	**01 38 59.1**	**+0.2**
	114nm,0.4s						
DPC	**Dobruska-Polom**	**1.21**	**172**	*e*Pg	**Pg**	**01 38 43.3**	**+0.2**
DPC				*e*Sg	**Sg**	**01 38 58.5**	**-0.4**
PVCC	**Panska Ves**	**1.40**	**223**	*e*PG	**Pg**	**01 38 46.7**	**0.0**
PVCC				*e*SG	**Sg**	**01 39 06.1**	**+1.3**
PVCC	**Panska Ves**	**1.40**	**223**	*e*Pg	**Pg**	**01 38 46.6**	**-0.1**
PVCC				*e*Sg	**Sg**	**01 39 05.8**	**+1.0**
BRG	**Berggiesshubel**	**1.50**	**244**	*e*Pg	**Pg**	**01 38 48.0**	**-0.7**
BRG				*e*Sg	**Sg**	**01 39 09.2**	**+1.0**
BRG	**Berggiesshubel**	**1.50**	**244**	PN	**Pn**	**01 38 48.0**	**0.0**
BRG				PG	**Pg**	**01 38 49.1**	**+0.4**
BRG				SG	**Sg**	**01 39 09.1**	**+0.9**
	107nm,0.5s						
BRG	**Berggiesshubel**	**1.50**	**244**	Pg	**Pg**	**01 38 49.1**	**+0.4**
BRG				Sg	**Sg**	**01 39 09.2**	**+1.1**
RUE	**Ruedersdorf**	**1.69**	**304**	*e*Pn	**Pn**	**01 38 50.3**	**-0.4**
RUE				*e*Sn	**Sn**	**01 39 14.6**	**+1.5**
RUE	**Ruedersdorf**	**1.69**	**304**	*e*Pn	**Pn**	**01 38 50.3**	**-0.4**
RUE				*e*Sn	**Sn**	**01 39 14.6**	**+1.5**
PRA	**Prague**	**1.81**	**216**	PG	**Pg**	**01 38 53.0**	**-1.6**
PRA				SG	**Sg**	**01 39 19.0**	**+0.9**
FBE	**Freiberg**	**1.82**	**251**	*e*Pg	**Pg**	**01 38 54.5**	**-0.3**
FBE				*e*Sg	**Sg**	**01 39 18.9**	**+0.5**
FBE	**Freiberg**	**1.82**	**251**	Pg	**Pg**	**01 38 54.5**	**-0.3**
FBE				Sg	**Sg**	**01 39 18.9**	**+0.5**
PRU	**Pruhonice**	**1.84**	**212**	*e*PN	**Pn**	**01 38 52.5**	**-0.2**
PRU				*e*PG	**Pg**	**01 38 54.7**	**-0.5**
PRU				*e*SG	**Sg**	**01 39 20.4**	**+1.3**
	98nm,0.4s						
GKP	**Gorka Klasztor**	**1.86**	**22**	*e*Pg	**Pg**	**01 39 00.3**	**+4.7**
GKP				*e*Sg	**Sg**	**01 39 23.5**	**+3.7**
CLL	**Collm**	**1.94**	**264**	*e*Pn	**Pn**	**01 38 54.2**	**+0.1**
CLL				*e*Sg	**Sg**	**01 39 21.9**	**-0.3**
CLL	**Collm**	**1.94**	**264**	*i* Pn	**Pn**	**01 38 54.1**	**+0.1**
CLL				*i* Pg	**Pg**	**01 38 57.2**	**+0.2**
CLL				*i* x	x	01 39 01.0	
CLL				*i* Sg	**Sg**	**01 39 23.1**	**+1.0**
	comp=Z,72nm,0.7s						
CLL	**Collm**	**1.94**	**264**	*i* Pn	**Pn**	**01 38 54.1**	**+0.1**
CLL				*i* Pg	**Pg**	**01 38 57.2**	**+0.2**
CLL				*i* Sg	**Sg**	**01 39 23.1**	**+1.0**
CLL	**Collm**	**1.94**	**264**	*i* Pg	**Pg**	**01 38 57.2**	**+0.2**
CLL				Sg	**Sg**	**01 39 21.9**	**-0.2**
RAC	**Raciborz**	**1.99**	**137**	*e*Pg	**Pg**	**01 38 58.3**	**+0.2**
RAC				*e*Sg	**Sg**	**01 39 24.1**	**+0.2**
MORC	**Moravsky Berou**	**2.01**	**152**	*e*Pn	**Pn**	**01 38 54.8**	**-0.2**
MORC				*e*Sg	**Sg**	**01 39 22.5**	**-1.9**
	comp=Z,61nm,0.3s						
OKC	**Ostrava-Krasne**	**2.17**	**142**	*e*PN	**Pn**	**01 38 57.2**	**0.0**
OKC				*e*PG	**Pg**	**01 39 01.3**	**-0.1**
OKC				*e*SG	**Sg**	**01 39 28.1**	**-1.3**
	comp=Z,124nm,0.7s						
VRAC	**Vranov**	**2.27**	**171**	Pn	**Pn**	**01 38 59.1**	**+0.5**
	comp=Z,3.2nm,0.3s,baz=332,slow=13,SNR=32						
VRAC				Lg		01 39 32.1	
	comp=Z,9.6nm,0.3s,baz=76,slow=23,SNR=8.5						
VRAC	**Vranov**	**2.27**	**171**	*e*Pn	**Pn**	**01 38 58.7**	**+0.1**
VRAC				*e*Sg	**Sg**	**01 39 31.9**	**-0.9**
	comp=Z,46nm,0.3s						
KRUC	**Moravsky**	**2.50**	**175**	*e*Pn	**Pn**	**01 39 02.3**	**+0.5**
KRUC				*e*Sg	**Sg**	**01 39 39.2**	**-1.1**
	comp=Z,31nm,0.3s						
TANN	**Tannenbergstha**	**2.55**	**245**	*e*Pn	**Pn**	**01 39 02.5**	**+0.1**
TANN				*e*Sg	**Sg**	**01 39 41.2**	**-0.6**
TANN	**Tannenbergstha**	**2.55**	**245**	Pn	**Pn**	**01 39 02.5**	**0.0**
TANN				Sg	**Sg**	**01 39 41.2**	**-0.6**
WERD	**Werda**	**2.62**	**247**	*e*Pn	**Pn**	**01 39 03.2**	**-0.3**
WERD				*e*Sg	**Sg**	**01 39 42.8**	**-1.4**
GUNZ	**Gunzen**	**2.65**	**245**	*e*Pn	**Pn**	**01 39 04.5**	**+0.7**
GUNZ				*e*Sg	**Sg**	**01 39 44.6**	**-0.4**
NKC	**Novy Kostel**	**2.65**	**242**	*e*PN	**Pn**	**01 39 04.6**	**+0.8**
NKC				*e*PG	**Pg**	**01 39 10.8**	**+0.2**
NKC				*e*SG	**Sg**	**01 39 46.4**	**+1.4**
	comp=Z,115nm,0.5s						
OJC	**Ojcow**	**2.71**	**118**	*e*Pn	**Pn**	**01 39 03.1**	**-1.6**
OJC				*e*Pg	**Pg**	**01 39 11.5**	**-0.3**
OJC				*e*Sg	**Sg**	**01 39 47.2**	**+0.2**
JAVC	**Velka Javorina**	**2.88**	**159**	*e*Pn	**Pn**	**01 39 08.3**	**+1.2**
JAVC				*e*Sg	**Sg**	**01 39 52.4**	**-0.2**
	comp=Z,50nm,0.6s						
KHC	**Kasperske Hory**	**2.90**	**214**	*e*PN	**Pn**	**01 39 07.4**	**+0.1**
KHC				*e*PG	**Pg**	**01 39 13.9**	**-1.6**
KHC				*e*SN	**Sn**	**01 39 43.6**	**+0.7**
KHC				*e*SG	**Sg**	**01 39 52.5**	**-0.6**
	comp=Z,36nm,0.4s						
MOX	**Moxa**	**2.95**	**254**	*e*Pn	**Pn**	**01 39 08.0**	**0.0**
MANZ	**Manzenberg**	**2.96**	**240**	*e*Pn	**Pn**	**01 39 09.4**	**+1.3**
MANZ				*e*Sg	**Sg**	**01 39 53.7**	**-1.4**
ROTZ	**Rotzenmuhle**	**3.04**	**236**	*e*Pn	**Pn**	**01 39 09.6**	**+0.4**
GEC2	**GERESS Array S**	**3.11**	**210**	*e*Pn	**Pn**	**01 39 10.9**	**+0.7**
GEC2	**GERESS Array S**	**3.11**	**210**	*e*Pn	**Pn**	**01 39 10.9**	**+0.8**
GERES	**GERESS Array B**	**3.11**	**210**	Pn	**Pn**	**01 39 10.1**	**0.0**
	comp=Z,3.0nm,0.3s,baz=29,slow=12,SNR=89						
GERES				Pg	**Pg**	**01 39 17.4**	**-2.0**
	comp=Z,5.0nm,0.3s,baz=36,slow=16,SNR=38						
GERES				Lg		01 39 59.6	
	comp=Z,8.3nm,0.3s,baz=41,slow=29,SNR=6.3						
GERES	**GERESS Array B**	**3.11**	**210**	Pg	**Pg**	**01 39 17.4**	**-2.1**
WET	**Wettzell**	**3.16**	**222**	*e*Pn	**Pn**	**01 39 11.5**	**+0.7**
WET	**Wettzell**	**3.16**	**222**	*e*Pn	**Pn**	**01 39 11.5**	**+0.6**
SMOL	**Smolenice**	**3.16**	**163**	*e*PG	**Pg**	**01 39 20.6**	**+0.1**
SMOL				*e*SG	**Sg**	**01 40 01.7**	**+0.1**
LIKS	**Likavka**	**3.17**	**141**	*e*SG	**Sg**	**01 40 02.5**	**+0.7**
ZST	**Bratislava**	**3.42**	**168**	*e*SG	**Sg**	**01 40 07.6**	**-2.3**
NIE	**Niedzica**	**3.45**	**127**	*e*P	**Pg**	**01 39 25.8**	**-0.2**
NIE				*e*S	**Sg**	**01 40 11.0**	**+0.3**
VYHS	**Vyhne**	**3.54**	**149**	*e*PN	**Pn**	**01 39 16.8**	**+0.7**
VYHS				*e*		01 39 28.4	
VYHS	**Vyhne**	**3.54**	**149**	*e*Pn	**Pn**	**01 39 16.8**	**+0.7**
VYHS				*e*		01 39 28.4	
VYHS				*e*Sg	**Sg**	**01 40 13.2**	**-0.5**
VYHS	**Vyhne**	**3.54**	**149**	*e*Pn	**Pn**	**01 39 16.8**	**+0.7**
VYHS				*e*Sg	**Sg**	**01 40 13.2**	**-0.5**
GRA1	**Grafenberg Arr**	**3.61**	**241**	*e*Pn	**Pn**	**01 39 16.8**	**-0.2**
GRA1	**Grafenberg Arr**	**3.61**	**241**	Pn	**Pn**	**01 39 16.8**	**-0.2**
GRF	**Grafenberg Arr**	**3.61**	**241**	*e*Pn	**Pn**	**01 39 16.8**	**-0.2**
CONA	**Conrad Observa**	**3.63**	**182**	*i* Pn	**Pn**	**01 39 18.1**	**+0.8**
	SNR=15						
CONA	**Conrad Observa**	**3.63**	**182**		**Sg**	**01 40 15.2**	**-1.3**
CONA	**Conrad Observa**	**3.63**	**182**	Pn	**Pn**	**01 39 18.1**	**+0.8**
	SNR=15						
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* P	**Pn**	**01 39 16.8**	**-0.6**
BSD				*i* S	**Sn**	**01 39 55.5**	**-5.5**
BSD				*i* LG		01 39 58.5	
MOA	**Molln**	**3.89**	**198**	⇓*i*Pn	**Pn**	**01 39 20.5**	**-0.3**
	SNR=6.9						
MOA				⇑*i*Sg	**Sg**	**01 40 23.4**	**-1.3**
	comp=Z,56nm,0.7s						
MOA	**Molln**	**3.89**	**198**	Pn	**Pn**	**01 39 20.5**	**-0.4**
	comp=Z,6.0nm,9.0s						
MOA				Sg	**Sg**	**01 40 23.4**	**-1.4**
	comp=Z,56nm,0.7s						
CRVS	**Cervenica-Dubn**	**4.36**	**125**	*e*PN	**Pn**	**01 39 28.5**	**+1.2**
CRVS				*e*		01 39 43.5	
CRVS	**Cervenica-Dubn**	**4.36**	**125**	*e*Pn	**Pn**	**01 39 28.5**	**+1.2**
CRVS				*e*		01 39 43.5	
CRVS				*e*Sg	**Sg**	**01 40 41.5**	**+1.6**
CRVS	**Cervenica-Dubn**	**4.36**	**125**	*e*Pn	**Pn**	**01 39 28.5**	**+1.2**
CRVS				*e*Sg	**Sg**	**01 40 41.5**	**+1.6**
KWP	**Kalwaria**	**4.64**	**112**	*e*Pg	**Pg**	**01 39 50.6**	**+1.7**
KWP				*e*Sg	**Sg**	**01 40 55.0**	**+5.9**
KOLS	**Kolonicke sedl**	**4.76**	**121**	*e*PN	**Pn**	**01 39 33.0**	**+0.1**
KOLS				*e*SN	**Sn**	**01 40 28.5**	**-0.3**
KOLS				*e*SG	**Sg**	**01 40 53.2**	**+0.2**
PERS	**Pernice**	**4.96**	**188**	*i* Pn	**Pn**	**01 39 37.0**	**+1.4**
PDKS	**Podkum**	**5.54**	**188**	*e*Pn	**Pn**	**01 39 45.4**	**+1.8**
LEGS	**Legarje**	**5.63**	**185**	*i* Pn	**Pn**	**01 39 46.3**	**+1.5**
BOJS	**Bojanci**	**6.08**	**185**	*i* Pn	**Pn**	**01 39 52.1**	**+1.2**
DAVOX	**Davos**	**6.27**	**223**	Pn	**Pn**	**01 39 54.0**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=168,slow=20,SNR=4.1						
DAVOX				Lg		01 41 37.8	
	comp=Z,0.6nm,0.3s,baz=182,slow=20,SNR=4.2						
CDF	**Champ du Feu**	**6.48**	**244**	*e*Pn	**Pn**	**01 39 57.0**	**+0.5**
CDF				*e*Sg	**Sg**	**01 41 47.3**	**-0.8**
	comp=Z,24nm,0.8s						
HINF	**Hinteralfeld**	**7.05**	**242**	*e*Pn	**Pn**	**01 40 04.2**	**-0.1**
HINF				*e*Sg	**Sg**	**01 42 04.0**	**-2.4**
	comp=Z,9.2nm,0.6s						
HAU	**Haudompre**	**7.23**	**244**	*e*Pn	**Pn**	**01 40 06.1**	**-0.6**
HAU				*e*Sg	**Sg**	**01 42 12.6**	**+0.6**
	comp=Z,14nm,0.7s						
MEZF	**Maizieres J'vi**	**7.73**	**251**	*e*Pn	**Pn**	**01 40 16.9**	**+3.3**
AKASG	**Malin Array Be**	**8.32**	**91**	Pn	**Pn**	**01 40 22.2**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=280,slow=12,SNR=6.8						
AKASG				Sn	**Sn**	**01 41 51.1**	**-5.3**
	comp=Z,1.3nm,0.3s,baz=309,slow=18,SNR=5.1						
HFS	**Hagfors**	**8.71**	**352**	Pn	**Pn**	**01 40 26.1**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=175,slow=13,SNR=5.6						
HFS				Sn	**Sn**	**01 42 01.5**	**-4.4**
	comp=Z,0.2nm,0.3s,baz=176,slow=23,SNR=3.4						
LOR	**Lormes**	**9.04**	**246**	*e*Pn	**Pn**	**01 40 31.4**	**-0.2**
SBF	**Sospel**	**9.64**	**220**	*e*Pn	**Pn**	**01 40 40.7**	**+0.8**
NOA	**NORSAR Array B**	**9.88**	**346**	Pn	**Pn**	**01 40 41.4**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=163,slow=12,SNR=2.5						
FINES	**FINESS Array B**	**11.34**	**25**	Pn	**Pn**	**01 41 01.0**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=214,slow=11,SNR=11						
FINES				Sn	**Sn**	**01 43 03.7**	**-6.7**
	comp=Z,0.2nm,0.3s,baz=214,slow=22,SNR=4.7						
KAF	**Kangasniemi**	**11.96**	**24**	*e*p	**Pn**	**01 41 10.4**	**-1.2**
JOF	**Joensuu**	**14.02**	**30**	*e*p	**Pn**	**01 41 36.3**	**-3.4**
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn	**Pn**	**01 42 33.6**	**-5.0**
	comp=Z,0.1nm,0.3s,baz=194,slow=13,SNR=9.3						

*CSEM **05** 02:06:56.1±0.1, 3964N×2748E, h3km, MD3.0, Error ellipse: s-maj=2.3km s-min=1.7km az=152.0*
*ISCJB **05** 02:06:57.6±0.3, 3965N±003×2749E±002, h10km, Error ellipse: s-maj=3.8km s-min=2.7km az=172.4*
*ISK **05** 02:06:57.2, 3965N×2747E, h15km, MD3.0*
*ATH **05** 02:07:01.7, 3959N×2710E, h28km, MD3.2/3*
ISC 05 02:06:57.7±0.4**, 3964N**±003×**2748E**±002**, h7**km±4km**, n31, σ1.s01**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BTOK	**Tokmak**	**0.45**	**73**	*i* P	**Pg**	**02 07 06.0**	**-0.3**
BTOK				*i* S	**Sg**	**02 07 13.2**	**+1.0**
CANB	**Canakkale**	**0.50**	**320**	*i* PG	**Pg**	**02 07 07.1**	**-0.2**
CANB				*i* SG	**Sg**	**02 07 14.6**	**+0.8**
AYVA	**Ayvalik**	**0.69**	**242**	*i* P	**Pg**	**02 07 10.6**	**-0.4**
AYVA				*i* S	**Sg**	**02 07 21.1**	**+1.1**
AYVA	**Ayvalik**	**0.69**	**242**	*i* P	**Pg**	**02 07 10.6**	**-0.5**
AYVA				*i* S	**Sg**	**02 07 21.1**	**+1.0**
BNT	**Bandirma**	**0.80**	**25**	PG	**Pg**	**02 07 12.0**	**-1.0**
AKS	**Akhisar**	**0.80**	**161**	PG	**Pg**	**02 07 13.1**	**0.0**
EZN	**Ezine**	**0.91**	**282**	*i* PG	**Pg**	**02 07 15.5**	**+0.3**
EZN				*i* SG	**Sg**	**02 07 28.0**	**+1.0**
MRMT	**Marmara Adasi**	**0.97**	**5**	PG	**Pg**	**02 07 16.3**	**-0.1**
PRK	**Paraskevi**	**1.01**	**248**	*e*PN	**Pn**	**02 07 16.2**	**-2.2**
RKY	**Sarkoy-Tekirda**	**1.07**	**348**	PG	**Pg**	**02 07 17.7**	**-0.7**
BOZC	**Bozcaada**	**1.12**	**281**	*i* P	**Pg**	**02 07 18.6**	**-0.6**
BOZC				*i* S	**Sg**	**02 07 34.9**	**+1.2**
MFT	**Murefte**	**1.16**	**353**	*e*PN	**Pn**	**02 07 19.1**	**-1.3**
ORLT	**Orhaneli**	**1.17**	**69**	PN	**Pn**	**02 07 19.8**	**-0.7**
KDAG	**Bornova**	**1.24**	**188**	*i* P	**Pb**	**02 07 20.8**	**-0.7**
KDAG				*i* S	**Sg**	**02 07 38.2**	**+0.5**
IZM	**Izmir**	**1.25**	**188**	PN	**Pn**	**02 07 20.5**	**-1.1**
BLCB	**Balcova**	**1.29**	**195**	PN	**Pn**	**02 07 21.5**	**-0.8**
GADA	**Gvkgeada**	**1.33**	**295**	PN	**Pn**	**02 07 21.5**	**-1.3**
ULDT	**Uludag**	**1.37**	**68**	*i* P	**Pn**	**02 07 22.9**	**-0.4**
ULDT				*i* S	**Sb**	**02 07 42.3**	**+0.8**
ENEZ	**Enez**	**1.50**	**318**	PN	**Pn**	**02 07 24.7**	**-0.3**

GEMT	**Gemlik**	**1.54**	**58**	*e*PN	**Pn**	**02 07 24.7**	**-0.9**
GDZ	**Gediz**	**1.65**	**109**	*i* P	**Pn**	**02 07 28.5**	**+1.4**
GDZ				*i* S	**Sn**	**02 07 50.1**	**+1.6**
ELBA	**Catalca**	**1.68**	**25**	*i* P	**Pn**	**02 07 29.0**	**+1.5**
ELBA				*i* S	**Sn**	**02 07 51.7**	**+2.4**
YLV	**Yalova**	**1.73**	**57**	*e*PN	**Pn**	**02 07 27.5**	**-0.7**
LIA	**Limnos Island**	**1.79**	**279**	*e*PN	**Pn**	**02 07 29.0**	**-0.1**
ADVT	**Abdulvahap**	**1.91**	**65**	*e*PN	**Pn**	**02 07 30.3**	**-0.4**
SMG	**Samos**	**1.99**	**195**	*e*PN	**Pn**	**02 07 34.2**	**+2.4**
KLYT	**Kilyos**	**2.01**	**36**	*e*PN	**Pn**	**02 07 31.8**	**-0.3**
RDO	**Rodhopi**	**2.12**	**316**	*e*PN	**Pn**	**02 07 35.2**	**+1.6**
EDRB	**Edirne**	**2.28**	**346**	*e*PN	**Pn**	**02 07 35.0**	**-0.8**
BORA	**Eskisehir**	**2.31**	**83**	*i* P	**Pn**	**02 07 36.6**	**+0.4**
BORA				*i* S	**Sg**	**02 08 12.0**	**+0.1**
ESKT	**Eskisehir**	**2.61**	**91**	*i* P	**Pg**	**02 07 46.0**	**-1.7**
ESKT				*i* S	**Sg**	**02 08 21.9**	**+0.3**

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*ISCJB **05** 02:19:19.8±3.5,2.25N±0.2×143.8E±0.8,h125km±25km, mb3.7/5,Error ellipse: s-maj=116.6km s-min=25.7km az=159.1*

*IDC **05** 02:19:20.4±4.2,22.40N×144.05E,h122km±33km,mb3.3/4, mb1 3.4/5,mb1mx3.2/19,mbtmp3.8/5,Error ellipse: s-maj=95.6km s-min=22.9km az=80.0*

ISC 05 02:19:20.7±3.6**,22.5N**±0.2×**144.1E**±0.8**,h125**km±23km**,n6, σ1s12**/7**,mb3.7**/5**,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.88**	**340**	P	**Pn**	**02 20 33.1**	**+1.1**
	3.8nm,0.3s,baz=307,slow=20,SNR=4.3						
CBIJ				S	**Sn**	**02 21 26.4**	**-1.0**
	24nm,0.3s,baz=274,slow=23,SNR=11						
SONM	**Songino Array**	**39.26**	**319**	P	**P**	**02 26 37.4**	**+0.5**
	0.6nm,0.5s,mb3.7,baz=131,slow=6.5,SNR=8.1						
WRA	**Warramunga Arr**	**43.26**	**193**	P	**P**	**02 27 09.0**	**-0.7**
	0.3nm,0.7s,mb3.1,baz=16,slow=9.3,SNR=3.4						
MKAR	**Makanchi Array**	**54.77**	**312**	P	**P**	**02 28 37.9**	**+0.6**
	0.4nm,0.3s,mb3.9,baz=90,slow=7.7,SNR=9.7						
JOF	**Joensuu**	**79.94**	**335**	*e*p	**P**	**02 31 14.9**	**-0.9**
	1.4nm,0.4s,mb4.1						
FINES	**FINESS Array B**	**82.81**	**335**	P	**P**	**02 31 31.3**	**+0.4**
	0.4nm,0.3s,mb3.7,baz=68,slow=4.9,SNR=19						

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*NEIC **05** 02:23:51.6,31.63S×71.67W,h33km,ML2.8(GUC),After GUC.*

GUC 05 02:23:51.6±0.8**,31.63S**×**71.67W,h33**km±2km**,MD3.7, ML2.8,5C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.29**	**150**	⇓*i*P	Pb	02 23 59.0	-0.1
CHNG				⇑*i*P		02 23 59.0	
CHNG				*i* S	Sb	02 24 04.2	-0.2
CHNG				AML	AML	02 24 04.3	
	comp=N,1μm,0.2s						
JACH	**Jahuel**	**1.39**	**139**	⇑*i*P	Pn	02 24 16.4	+1.7
JACH				*i* S	Sn	02 24 34.4	+2.5
ROCH	**El Roble**	**1.45**	**157**	*e*P	Pn	02 24 17.0	+1.5
ROCH				*i* S	Sn	02 24 36.6	+3.2
TLL	**Tololo Astrono**	**1.64**	**27**	⇑*i*P	Pn	02 24 20.1	+2.0
TLL				*i* S	Sn	02 24 41.6	+3.6
TLL				AML	AML	02 24 45.1	
	comp=E,252nm,0.5s						
TLL	**Tololo Astrono**	**1.64**	**27**	⇑*i*P	Pn	02 24 20.1	+2.0
TLL				*i* S	Sn	02 24 41.6	+3.6
PEL	**Peldehue**	**1.72**	**151**	*e*P	Pn	02 24 20.8	+1.5
PEL				*i* S	Sn	02 24 42.8	+2.7
PEL				AML	AML	02 24 45.6	
	comp=E,240nm,0.3s						
PEL	**Peldehue**	**1.72**	**151**	*e*P	Pn	02 24 20.8	+1.5
PEL				*i* S	Sn	02 24 42.8	+2.7
LCCH	**Las Cruces**	**1.84**	**177**	⇓*i*P	Pn	02 24 21.7	+0.8
RCDM	**Rinconada Maip**	**1.99**	**159**	*e*P	Pn	02 24 24.6	+1.6
RCDM				*i* S	Sn	02 24 49.1	+2.3
CLCH	**Cerro Calan**	**2.00**	**152**	⇑*i*P	Pn	02 24 25.2	+2.0
CLCH				*i* S	Sn	02 24 50.5	+3.4
CLCH				AML	AML	02 24 53.4	
	comp=N,95nm,0.4s						
FCH	**Farellones**	**2.06**	**146**	*e*P	Pn	02 24 25.8	+2.0
FCH				*i* S	Sn	02 24 51.8	+3.4
FCH				AML	AML	02 24 55.0	
	comp=E,90nm,0.2s						
TACH	**Talagante**	**2.11**	**163**	*i* P	Pn	02 24 26.5	+1.9

ISC 05 02:25:33.0±0.7**,51.20N**±0.04×**5.83E**±0.07**,h10**km**,n7, σ0s45**/13**,1C-1D,The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEBN	**Eben Emael**	**0.42**	**194**	⇓P	**Pg**	**02 25 41.6**	**+0.4**
BEBN				S	**Sg**	**02 25 47.4**	**+0.6**
HGN	**Heimansgroeve**	**0.44**	**172**	*e*Pg	**Pg**	**02 25 42.0**	**+0.4**
HGN				*e*Sg	**Sg**	**02 25 47.2**	**-0.3**
MEM	**Membach**	**0.60**	**169**	P	**Pg**	**02 25 45.1**	**+0.5**
MEM				S	**Sg**	**02 25 52.2**	**-0.4**
WTSB	**Winterswijk**	**0.97**	**38**	*e*Pg	**Pg**	**02 25 51.6**	**-0.2**
WTSB				*e*Sg	**Sg**	**02 26 04.5**	**+0.1**
UCC	**Uccle**	**1.01**	**247**	⇑P	**Pg**	**02 25 52.6**	**+0.1**
UCC				S	**Sg**	**02 26 05.9**	**+0.2**
SNF	**Seneffe**	**1.20**	**235**	P	**Pb**	**02 25 56.0**	**+0.2**
DOU	**Dourbes**	**1.36**	**216**	P	**Pn**	**02 25 57.2**	**-0.8**
DOU				S	**Sb**	**02 26 15.1**	**-0.9**
	comp=N,1.9nm,0.2s						

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*ISCJB **05** 02:35:38.2±0.4,50.32N±0.03×18.86E±0.03,h0km,mb2.9/1, Error ellipse: s-maj=4.2km s-min=2.3km az=25.6*

*NEIC **05** 02:35:39.8±0.4,50.31N×18.92E,h5km,ML2.7(BRA),Error ellipse: s-maj=6.3km s-min=4.4km az=15.0*

*PRU **05** 02:35:40.4,50.29N×18.89E,h0km*

*WAR **05** 02:35:40.7,50.24N×18.95E,ML2.7,Mining Induced*

*CSEM **05** 02:35:40.8±0.2,50.28N×18.87E,h0km,ML3.0/4,Error ellipse: s-maj=5.4km s-min=1.8km az=18.0*

*IPEC **05** 02:35:40.3±0.2,50.28N×18.91E,h4km±1km,ML2.2/3,Error ellipse: s-maj=2.5km s-min=0.9km az=171.0*

*IDC **05** 02:35:45.0±2.1,50.14N×18.70E,h17km±15km,mb3.1/1, mb1 3.1/6,mb1mx3.0/20,mbtmp3.1/6,ML2.7/5,Error ellipse: s-maj=17.3km s-min=9.6km az=134.0*

ISC 05 02:35:39.7±0.4**,50.30N**±0.03×**18.89E**±0.03**,h0**km**,n43, σ1s14**/67**,mb2.9**/1**,4C,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.50**	**245**	*e*Pg	**Pg**	**02 35 51.2**	**+2.0**
RAC				*e*Sg	**Sg**	**02 35 58.3**	**+2.7**
OJC	**Ojcow**	**0.59**	**97**	*i* Pgd	**Pg**	**02 35 51.2**	**+0.3**
OJC				*e*Sg	**Sg**	**02 35 59.3**	**+0.8**
OJC	**Ojcow**	**0.59**	**97**	*i* Pg	**Pg**	**02 35 51.2**	**+0.3**
OJC				*e*Sg	**Sg**	**02 35 58.8**	**+0.3**
OKC	**Ostrava-Krasne**	**0.66**	**227**	*e*PG	**Pg**	**02 35 53.3**	**+0.9**
OKC				*e*SG	**Sg**	**02 36 02.6**	**+1.6**
	77nm,1.1s						
OKC	**Ostrava-Krasne**	**0.66**	**227**	*e*Pg	**Pg**	**02 35 53.2**	**+0.8**
OKC				*e*Sg	**Sg**	**02 36 02.6**	**+1.6**
MORC	**Moravsky Berou**	**1.01**	**240**	⇑*i*P	**Pg**	**02 35 59.8**	**+0.7**
MORC	**Moravsky Berou**	**1.01**	**240**	*e*Pg	**Pg**	**02 35 59.4**	**+0.3**
MORC				*e*Sg	**Sg**	**02 36 12.3**	**+0.1**
	33nm,0.3s						
LIKS	**Likavka**	**1.25**	**174**	*e*PG	**Pg**	**02 36 03.7**	**0.0**
LIKS				*e*SG	**Sg**	**02 36 20.5**	**+0.5**
NIE	**Niedzica**	**1.27**	**133**	*e*Pg	**Pg**	**02 36 03.5**	**-0.5**
NIE				*e*Sg	**Sg**	**02 36 21.1**	**+0.6**
JAVC	**Velka Javorina**	**1.64**	**209**	*e*Pg	**Pg**	**02 36 10.1**	**-1.1**
DPC	**Dobruska-Polom**	**1.65**	**273**	*e*PG	**Pg**	**02 36 10.4**	**-0.9**
DPC				*e*SG	**Sg**	**02 36 32.6**	**0.0**
	36nm,0.5s						
KSP	**Ksiaz**	**1.75**	**289**	*e*Pn	**Pn**	**02 36 12.8**	**+1.6**
KSP				*e*Pg	**Pg**	**02 36 14.1**	**+1.0**
KSP				*e*Sg	**Sg**	**02 36 37.4**	**+1.6**
VRAC	**Vranov**	**1.79**	**237**	Pn	**Pn**	**02 36 12.4**	**+0.7**
	2.2nm,0.3s,baz=61,slow=15,SNR=29						
VRAC				Lg		02 36 36.4	
	6.1nm,0.3s,baz=144,slow=21,SNR=21						
VRAC	**Vranov**	**1.79**	**237**	⇑*i*P	**Pn**	**02 36 11.8**	**0.0**
VRAC	**Vranov**	**1.79**	**237**	*e*Pn	**Pn**	**02 36 11.7**	**-0.1**
VRAC				*e*Sg	**Sg**	**02 36 35.9**	**-1.2**
	17nm,0.3s						
VYHS	**Vyhne**	**1.80**	**181**	*e*PN	**Pn**	**02 36 11.2**	**-0.8**
VYHS				*e*SN	**Sn**	**02 36 34.1**	**-1.5**
KRUC	**Moravsky**	**2.04**	**234**	*e*Pn	**Pn**	**02 36 15.0**	**-0.2**
KRUC				*e*Sn	**Sn**	**02 36 42.4**	**+1.0**
	14nm,0.6s						
CRVS	**Cervenica-Dubn**	**2.18**	**129**	*e*PN	**Pn**	**02 36 17.1**	**0.0**
CRVS				*e*		02 36 19.9	
CRVS	**Cervenica-Dubn**	**2.18**	**129**	*e*Pn	**Pn**	**02 36 17.1**	**0.0**
CRVS				*e*		02 36 20.0	
PSZ	**Piszkesteto**	**2.47**	**164**	*e*Pn	**Pn**	**02 36 20.1**	**-1.1**
PSZ				*e*Pg	**Pg**	**02 36 27.0**	**0.0**
PSZ	**Piszkesteto**	**2.47**	**164**	*e*Pn	**Pn**	**02 36 20.1**	**-1.0**
PSZ	**Piszkesteto**	**2.47**	**164**	*e*Pg	**Pg**	**02 36 27.0**	**0.0**
KWP	**Kalwaria**	**2.55**	**104**	*e*Pn	**Pn**	**02 36 22.3**	**0.0**
KWP				*e*Pg	**Pg**	**02 36 29.5**	**+0.9**
KOLS	**Kolonicke sedl**	**2.59**	**121**	*e*PN	**Pn**	**02 36 22.4**	**-0.4**
KOLS				*e*		02 36 29.1	
PVCC	**Panska Ves**	**2.78**	**276**	*e*PG	**Pg**	**02 36 31.8**	**-1.1**
PRU	**Pruhonice**	**2.82**	**265**	*e*PN	**Pn**	**02 36 25.1**	**-0.8**
PRU				*e*PG	**Pg**	**02 36 32.5**	**-1.1**
PRU				*e*SG	**Sg**	**02 37 09.5**	**-0.6**
	9.3nm,0.8s						
BRG	**Berggiesshubel**	**3.21**	**282**	PG	**Pg**	**02 36 40.7**	**-0.4**
BRG				SG	**Sg**	**02 37 22.7**	**0.0**
	3.8nm,0.5s						
BRG	**Berggiesshubel**	**3.21**	**282**	Pg	**Pg**	**02 36 40.7**	**-0.4**
BRG				Sg	**Sg**	**02 37 22.7**	**0.0**
KHC	**Kasperske Hory**	**3.64**	**253**	*e*PN	**Pn**	**02 36 37.3**	**+0.1**
KHC				*e*PG	**Pg**	**02 36 45.7**	**-3.7**
KHC				*e*SG	**Sg**	**02 37 36.2**	**-0.4**
	9.9nm,0.6s						
GERES	**GERESS Array B**	**3.68**	**249**	Pn	**Pn**	**02 36 38.7**	**+1.0**
	0.2nm,0.3s,baz=67,slow=13,SNR=8.2						
GERES				Pg	**Pg**	**02 36 48.2**	**-2.0**
	0.7nm,0.3s,baz=65,slow=17,SNR=21						
GERES				Lg		02 37 34.2	
	2.5nm,0.3s,baz=62,slow=28,SNR=13						
GERES	**GERESS Array B**	**3.68**	**249**	Pg	**Pg**	**02 36 48.2**	**-1.9**
CLL	**Collm**	**3.87**	**287**	*e*SG	**Sg**	**02 37 47.0**	**+3.0**
NKC	**Novy Kostel**	**4.13**	**272**	*e*PG	**Pg**	**02 36 56.1**	**-2.8**
NKC				*e*SG	**Sg**	**02 37 50.5**	**-2.0**
	6.5nm,0.5s						
DRGR		**4.33**	**143**	⇑*i*P	**Pn**	**02 36 46.6**	**-0.1**
MOX	**Moxa**	**4.66**	**277**	*e*(P)	**Sg**	**02 38 11.0**	**+1.6**
BURAR	**Bucovina Array**	**4.96**	**120**	⇑*i*P	**Pn**	**02 36 55.6**	**+0.3**
AKASG	**Malin Array Be**	**6.61**	**83**	Pn	**Pn**	**02 37 20.6**	**+2.6**
	0.6nm,0.3s,baz=294,slow=0.9,SNR=4.7						
HFS	**Hagfors**	**10.29**	**345**	Pn	**Pn**	**02 38 09.5**	**+0.9**
	0.1nm,0.3s,baz=146,slow=14,SNR=3.1						
FINES	**FINESS Array B**	**11.87**	**17**	Pn	**Pn**	**02 38 27.9**	**-2.2**
	0.2nm,0.3s,baz=195,slow=12,SNR=11						
FINES	**FINESS Array B**	**11.87**	**17**	Pn	**Pn**	**02 38 27.9**	**-2.2**
JOF	**Joensuu**	**14.34**	**23**	*e*p	**Pn**	**02 38 58.7**	**-5.2**
ARCES	**ARCESS Array B**	**19.56**	**7**	Pn	**Pn**	**02 40 08.7**	**-1.5**
	0.1nm,0.3s,baz=190,slow=14,SNR=4.0						
TORD	**Torodi Ar. Bea**	**39.62**	**207**	P	**P**	**02 43 12.4**	**-0.5**
	0.3nm,0.9s,mb2.9,baz=9.1,slow=7.7,SNR=4.1						

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*IDC **05** 02:49:32.7±1.8,8.90S×107.44E,h0km,mb3.8/5,mb1 3.8/6, mb1mx3.7/18,mbtmp3.7/6,ML3.2/1,Error ellipse: s-maj=79.2km s-min=19.6km az=47.0*

*NEIC **05** 02:49:33.9±1.1,8.99S×107.32E,h10km,mb4.4/5,Error ellipse: s-maj=52.9km s-min=11.0km az=46.0*

*ISCJB **05** 02:49:35.7±1.3,8.9S±0.3×107.5E±0.3,h33km,mb4.0/10, Error ellipse: s-maj=62.5km s-min=13.3km az=91.9*

ISC 05 02:49:37.8±1.4**,9.0S**±0.3×**107.4E**±0.3**,h35**km**,n12,**σ**0s53**/12**, mb4.0**/10**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.88**	**119**	P	**Pn**	**02 54 07.8**	**0.0**
	0.1nm,0.3s,baz=165,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**28.21**	**116**	P	**P**	**02 55 25.9**	**-1.2**
	0.3nm,0.7s,mb3.0,baz=288,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**28.21**	**116**	P	**P**	**02 55 25.9**	**-1.2**
ASAR	**Alice Springs**	**29.24**	**123**	P	**P**	**02 55 37.4**	**+1.1**
	0.2nm,0.5s,mb3.1,baz=303,slow=8.7,SNR=3.2						
SONM	**Songino Array**	**56.54**	**359**	P	**P**	**02 59 16.9**	**+0.3**
	1.5nm,0.6s,mb4.2,baz=173,slow=7.7,SNR=14						
ULN	**Ulaanbaatar**	**56.57**	**360**	*e*P	**P**	**02 59 17.1**	**+0.3**
	2.4nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**59.85**	**340**	P	**P**	**02 59 40.0**	**+0.3**
	2.5nm,0.5s,mb4.5,baz=142,slow=7.9,SNR=22						
KURK	**Kurchatov**	**64.47**	**340**	*e*P	**P**	**03 00 10.2**	**-0.5**
	3.6nm,0.9s,mb4.4						
BRVK	**Borovoye**	**69.39**	**337**	*e*P	**P**	**03 00 41.9**	**-0.1**
	0.7nm,0.5s,mb3.9						
CHKZ	**Chkalovo**	**69.74**	**338**	*e*P	**P**	**03 00 44.2**	**+0.1**
	3.4nm,0.6s,mb4.5						
ZRNK	**Zerenda**	**69.80**	**336**	*e*P	**P**	**03 00 44.3**	**-0.2**
	2.0nm,0.7s,mb4.2						
BRTR	**Keskin Array B**	**83.44**	**312**	P	**P**	**03 02 01.6**	**+0.1**
	0.6nm,0.8s,mb3.7,baz=147,slow=7.4,SNR=4.4						

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*IDC **05** 03:03:51.8±3.0,15.78N×93.13W,h45km±33km,mb3.8/12, mb1 4.0/13,mb1mx3.8/23,mbtmp4.1/13,ML4.3/1,MS3.3/6, Ms1 3.3/6,ms1mx3.1/23,Error ellipse: s-maj=44.7km s-min=14.4km az=61.0*

*CASC **05** 03:03:52.2±3.6,16.13N×93.61W,h20km±999km,MD4.7, mb4.2(NEIC)*

*NEIC **05** 03:03:54.5±0.5,15.48N×93.48W,mb4.2/21,MD4.6(MEX), Error ellipse: s-maj=9.2km s-min=7.4km az=195.0*

*ISCJB **05** 03:03:54.9±0.5,15.58N±0.05×93.63W±0.03,h88km±4km, mb4.0/27,Error ellipse: s-maj=8.2km s-min=4.3km az=37.3*

*MEX **05** 03:03:56.3±0.6,15.46N×93.64W,h34km±541km,MD4.5*

*BJI **05** 03:03:59.0,15.50N×93.50W,h76km,mB5.0,Ms4.9,Msz4.5*

ISC 05 03:03:56.2±0.5**,15.61N**±0.05×**93.59W**±0.03**,h81**km±4km**, n103,**σ**1s30**/109**,mb4.0**/27**,1C-5D,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**1.45**	**39**	*i* P	**Pn**	**03 04 21.0**	**+0.1**
SCX				*i* S	**Sn**	**03 04 39.0**	**-0.5**
CMIG	**Matias Romero**	**1.93**	**320**	P	**Pn**	**03 04 26.4**	**-0.8**
	103nm,0.3s,baz=144,slow=12,SNR=900						
CMIG				S	**Sn**	**03 04 50.2**	**-0.5**
	400nm,0.3s,baz=126,slow=13,SNR=15						
CMIG	**Matias Romero**	**1.93**	**320**	*i* P	**Pn**	**03 04 26.4**	**-0.8**
CMIG				*i* S	**Sn**	**03 04 50.1**	**-0.7**
CMIG	**Matias Romero**	**1.93**	**320**	P	**Pn**	**03 04 26.4**	**-0.8**
CMIG				*i* S	**Sn**	**03 04 50.1**	**-0.7**
CMIG				S	**Sn**	**03 04 50.2**	**-0.5**
HUIG	**Huatulco**	**2.44**	**274**	⇓*i*P	**Pn**	**03 04 31.6**	**-2.3**
HUIG				*i* S	**Sn**	**03 04 57.9**	**-4.9**
HUIG	**Huatulco**	**2.44**	**274**	*i* P	**Pn**	**03 04 31.4**	**-2.5**
HUIG				*i* S	**Sn**	**03 04 57.5**	**-5.4**
TUIG	**Tuzandepetl**	**2.54**	**342**	*i* P	**Pn**	**03 04 35.5**	**+0.1**
TUIG				*i* S	**Sn**	**03 05 06.0**	**+0.6**
TUIG	**Tuzandepetl**	**2.54**	**342**	*i* P	**Pn**	**03 04 35.5**	**+0.1**
TUIG				*i* S	**Sn**	**03 05 01.6**	**-3.8**
TP2	**Tecpan 2**	**2.61**	**108**	⇓*e*P	**Pn**	**03 04 36.4**	**+0.2**
TP2				*e*S	**Sn**	**03 05 11.4**	**+4.4**
FUG	**Fuego 3**	**2.89**	**113**	⇓*i*P	**Pn**	**03 04 42.5**	**+2.4**
TER	**Terranova**	**3.09**	**114**	*e*P	**Pn**	**03 04 44.0**	**+1.2**
IXG	**Ixpaco**	**3.35**	**115**	*e*P	**Pn**	**03 04 47.3**	**+1.0**
IXG				*e*S	**Sn**	**03 05 29.7**	**+4.8**
OXX	**Oaxaca**	**3.35**	**296**	*e*P	**Pn**	**03 04 47.0**	**+0.7**
VHO	**Vista Hermosa**	**3.35**	**296**	*e*P	**Pn**	**03 04 45.0**	**-1.4**
VHO				*i* S	**Sn**	**03 05 23.1**	**-2.0**
VHO	**Vista Hermosa**	**3.35**	**296**	*i* P	**Pn**	**03 04 47.0**	**+0.7**
VHO				*i* S	**Sn**	**03 05 25.1**	**0.0**
RTR	**El Retiro**	**4.17**	**114**	*e*P	x	03 05 15.1	
RTR				*e*S	x	03 06 08.6	
SBLS	**San Blas**	**4.22**	**114**	*e*P	x	03 05 15.5	
SBLS				*e*S	x	03 06 06.0	
SNJE	**San Jose**	**4.22**	**114**	⇓*e*P	x	03 05 15.8	
SNJE				*e*S	x	03 06 11.1	
TPIG	**Tehuac#an**	**4.57**	**308**	*i* P	**Pn**	**03 05 02.8**	**-0.1**
TPIG				*i* S	**Sn**	**03 05 55.4**	**+0.7**
UTMO	**Huajuapan**	**4.61**	**299**	*e*P	**Pn**	**03 05 03.5**	**+0.1**
UTMO				*i* S	**Sn**	**03 05 55.4**	**-0.1**
LBRS	**Las Brisas**	**4.77**	**112**	*e*P	x	03 05 23.5	
LBRS				*e*S	x	03 06 24.2	
LFRS	**El Faro**	**4.80**	**114**	*e*P	x	03 05 24.3	
LFRS				*e*S	x	03 06 21.3	
LCBS	**La Ceiba**	**4.86**	**113**	*e*P	x	03 05 23.9	
LCBS				*e*S	x	03 06 23.4	
LVIG	**Laguna Verde**	**4.90**	**327**	⇑*i*P	**Pn**	**03 05 05.5**	**-2.0**
LVIG				*i* S	**Sn**	**03 05 57.8**	**-5.0**
LVIG	**Laguna Verde**	**4.90**	**327**	*i* P	**Pn**	**03 05 05.1**	**-2.3**
LVIG				*i* S	**Sn**	**03 05 55.6**	**-7.2**
SNVI	**San Vicente**	**5.00**	**113**	*e*P	x	03 05 27.3	
SNVI				*e*S	x	03 06 27.6	
BLLM	**Bellamira**	**5.61**	**112**	*e*P	x	03 05 37.5	
BLLM				*e*S	x	03 06 44.1	
PPM	**Popocatepetl**	**5.92**	**306**	*e*P	**Pn**	**03 05 21.6**	**+0.3**
PPM				*e*P		03 05 27.5	
PPM				*i* S	**Sn**	**03 06 29.1**	**+1.5**
PPM	**Popocatepetl**	**5.92**	**306**	*i* P	**Pn**	**03 05 25.6**	**+4.4**
PPM				*i* S	**Sn**	**03 06 20.6**	**-6.9**
CNCH	**Conchagua**	**6.04**	**112**	*e*P	x	03 05 42.3	
CNCH				*e*S	x	03 06 54.2	
ACX	**Acapulco**	**6.21**	**282**	*i* P	**Pn**	**03 05 24.0**	**-1.2**
MEIG	**Mezcala**	**6.22**	**293**	*i* P	**Pn**	**03 05 26.2**	**+0.8**
MEIG				*i* S	**Sn**	**03 06 35.2**	**+0.1**
PLIG	**Platanillo**	**6.30**	**297**	*e*P	**Pn**	**03 05 26.3**	**-0.2**
PLIG				*i* S	**Sn**	**03 06 36.4**	**-0.7**
PLIG	**Platanillo**	**6.30**	**297**	*e*P	**Pn**	**03 05 26.3**	**-0.2**
PLIG				*i* S	**Sn**	**03 06 36.0**	**-1.0**
UNM	**Universidad Na**	**6.49**	**306**	*e*P	**Pn**	**03 05 35.0**	**+5.9**
CAIG	**El Cayaco**	**6.57**	**283**	*e*P		03 05 47.8	
CAIG				*i* S	**Sn**	**03 06 42.0**	**-1.7**
CAIG	**El Cayaco**	**6.57**	**283**	*i* P		03 05 48.5	
CAIG				*i* S	**Sn**	**03 06 36.9**	**-6.8**
MOIG	**Morelia**	**8.30**	**300**	*i* P	**Pn**	**03 05 55.9**	**+2.1**
MOIG	**Morelia**	**8.30**	**300**	*i* P	**Pn**	**03 05 56.8**	**+3.0**
LNIG	**Linares**	**10.76**	**330**	⇓*i*P	**Pn**	**03 06 28.3**	**+1.0**
MGV	**Manicaragua**	**14.40**	**61**	*e*PG	**Pn**	**03 07 15.6**	**-0.4**
	baz=228						
MGV				*e*SG	**Sn**	**03 09 43.1**	**-11**
	comp=N,0.5nm,0.4s						
MGV				*e*			
	comp=E,0.4nm,0.4s						
HKT	**Hockley**	**14.42**	**352**	*e*Pn	**Pn**	**03 07 16.5**	**+0.2**
JCT	**Junction City**	**15.86**	**340**	*e*Pn	**Pn**	**03 07 35.2**	**+0.6**
	comp=E,14nm,0.5s						
LRAL	**Lakeview Retre**	**18.35**	**18**	*e*P	**Pn**	**03 08 04.5**	**-0.7**
	comp=E,19nm,1.0s						
MIAR	**Mount Ida**	**18.86**	**0**	*e*P	**Pn**	**03 08 08.9**	**-2.3**
	comp=E,14nm,0.8s						
UALR	**University of**	**19.12**	**3**	*e*P	**Pn**	**03 08 12.1**	**-2.2**
	comp=E,14nm,0.7s						
UALR				*e*pP	pP	03 08 29.8	+1.1
GDL2	**Guadalupe Moun**	**19.21**	**331**	*e*Pn	**Pn**	**03 08 16.3**	**+0.9**
MNTX	**Cornudas Mount**	**19.29**	**328**	*e*P	**Pn**	**03 08 15.2**	**-1.2**
WMOK	**Wichita Mounta**	**19.61**	**347**	*e*P	**Pn**	**03 08 16.7**	**-3.4**
	comp=E,6.5nm,0.6s						
PLAL	**Pickwick Lake**	**19.92**	**13**	*e*P	**Pn**	**03 08 20.0**	**-3.6**
	comp=E,25nm,1.2s						
AMTX	**Amarillo**	**20.52**	**341**	*e*P	**P**	**03 08 28.0**	**+0.1**
SWET	**Sewanee**	**20.70**	**18**	*e*P	**P**	**03 08 29.4**	**-0.3**
SWET				*e*pP		03 08 46.4	
GLAT	**Glass**	**20.93**	**10**	*e*Pn	**P**	**03 08 36.8**	**+4.6**
WVT	**Waverly**	**21.07**	**13**	*e*P	**P**	**03 08 33.2**	**-0.6**
	comp=E,6.8nm,0.5s,mb4.2						
MYNC	**Murphy**	**21.16**	**22**	*e*P	**P**	**03 08 35.5**	**+0.8**
	comp=E,9.9nm,0.6s,mb4.3						
CPCT	**Cooper Cave**	**21.36**	**21**	*e*P	**P**	**03 08 36.8**	**0.0**
CPCT				*e*pP		03 08 53.4	
OTAV	**Otavalo**	**21.37**	**134**	*e*P	pP	03 08 59.8	+6.4
LPM	**Los Pinos Moun**	**22.02**	**330**	*e*P	**P**	**03 08 43.9**	**+0.1**
LAZ	**Ladron**	**22.34**	**329**	*e*P	**P**	**03 08 50.8**	**+3.6**
LAZ				*e*pP		03 09 08.0	
CCM	**Cathedral Cave**	**22.45**	**5**	*e*P	**P**	**03 08 48.2**	**-0.2**
	comp=E,11nm,0.6s,mb4.4						
CCM				*e*pP		03 09 05.2	
ANMO	**Albuquerque**	**22.46**	**331**	P	**P**	**03 08 49.5**	**+1.0**
	comp=E,3.3nm,0.5s,mb3.9,baz=142,slow=12,SNR=15						
ANMO	**Albuquerque**	**22.46**	**331**	*e*P	**P**	**03 08 49.7**	**+1.1**
	comp=E,3.7nm,0.6s,mb3.9						
FVM	**French Village**	**22.46**	**7**	*e*P	**P**	**03 08 47.6**	**-1.0**
	comp=E,5.9nm,0.8s,mb4.0						
TZTN	**Tazewell**	**22.68**	**21**	*e*P	**P**	**03 08 51.3**	**+0.4**
TZTN				*e*pP		03 09 07.8	
TUC	**Tucson**	**22.82**	**320**	*e*P	**P**	**03 08 54.0**	**+1.6**
	comp=E,8.6nm,1.4s,mb3.9						
WCI	**Wyandotte Cave**	**23.43**	**15**	*e*P	**P**	**03 08 56.3**	**-1.7**
	comp=E,5.2nm,0.6s,mb4.0						
WCI				*e*pP		03 09 14.3	
ELN	**Prospectdale**	**24.36**	**25**	P	**P**	**03 09 07.7**	**+1.2**
ELN				*e*pP		03 09 24.9	
BLA	**Blacksburg**	**24.48**	**26**	*e*P	**P**	**03 09 08.6**	**+1.0**
	comp=E,0.8nm,1.1s,mb3.0						
BLA				*e*pP		03 09 25.3	
MVCO	**Mesa Verde**	**25.26**	**331**	*e*P	**P**	**03 09 16.1**	**+1.4**
SMCO	**Snowmass**	**26.25**	**336**	*e*P	**P**	**03 09 25.9**	**+2.2**
	comp=E,1.5nm,0.6s,mb3.6						
SMCO				*e*pP	pP	03 09 43.5	+1.1
SJG	**San Juan**	**26.36**	**81**	LR	LR	03 18 42.3	
	comp=E,45nm,21.5s,baz=90,slow=34						
ECSD	**EROS,Sioux Fal**	**28.15**	**355**	*e*P	**P**	**03 09 38.0**	**-2.7**
PDAR	**Pinedale Array**	**30.33**	**336**	P	**P**	**03 10 00.9**	**+0.9**
	comp=E,0.4nm,0.6s,mb3.2,baz=146,slow=8.2,SNR=4.5						
REDW	**Red Top Meadow**	**31.35**	**335**	*e*P	**P**	**03 10 09.5**	**+0.5**
	comp=E,6.8nm,0.9s,mb4.4						
SNOW	**Snow King Moun**	**31.39**	**336**	*e*P	**P**	**03 10 10.4**	**+1.1**
	comp=E,14nm,0.9s,mb4.7						
LOHW	**Long Hollow**	**31.46**	**336**	*e*P	**P**	**03 10 11.4**	**+1.5**
	comp=E,2.9nm,0.9s,mb4.0						
NVAR	**Mina Array Bea**	**31.46**	**321**	P	**P**	**03 10 12.0**	**+2.1**
	comp=E,2.9nm,0.7s,mb4.1,baz=129,slow=9.3,SNR=24						
NVAR	**Mina Array Bea**	**31.46**	**321**	P	**P**	**03 10 12.0**	**+2.1**
TPAW	**Teton Pass**	**31.49**	**335**	*e*P	**P**	**03 10 11.7**	**+1.5**
	comp=E,3.8nm,0.9s,mb4.1						
RRI2	**Red Ridge**	**31.52**	**335**	*e*P	**P**	**03 10 11.7**	**+1.2**
	comp=E,17nm,1.5s,mb4.5						
HLID	**Hailey**	**33.04**	**332**	*e*P	**P**	**03 10 25.0**	**+1.3**
	comp=E,1.1nm,0.6s,mb3.9						
BOZ	**Bozeman (W)**	**33.56**	**337**	*e*P	**P**	**03 10 29.3**	**+0.9**
	comp=E,0.9nm,0.5s,mb3.9						
DLMT	**Dillon**	**33.70**	**336**	*e*P	**P**	**03 10 32.5**	**+3.0**
LRM	**Limekiln Ridge**	**34.03**	**336**	*e*P	**P**	**03 10 33.6**	**+1.3**
ULM	**Lac du Bonnet**	**34.60**	**357**	P	**P**	**03 10 33.3**	**-4.0**
	comp=E,1.2nm,0.6s,mb3.9,baz=178,slow=12,SNR=3.8						
ULM				LR	LR	03 26 53.2	
	comp=E,44nm,19.1s,baz=268,slow=40						
SCHQ	**Schefferville**	**44.28**	**22**	LR	LR	03 31 50.1	
	comp=E,46nm,21.0s,baz=266,slow=38						
SIV	**San Ignacio**	**44.90**	**133**	P	**P**	**03 12 01.4**	**-1.3**
	comp=E,2.6nm,0.6s,mb4.2,baz=314,slow=7.4,SNR=19						
YKA	**Yellowknife Ar**	**49.12**	**347**	P	**P**	**03 12 33.7**	**-1.8**
	comp=E,1.8nm,0.4s,mb4.3,baz=153,slow=7.2,SNR=66						
YKA				LR	LR	03 33 27.0	
	comp=E,27nm,21.7s,baz=230,slow=36						
YKA	**Yellowknife Ar**	**49.12**	**347**	P	**P**	**03 12 33.7**	**-1.8**
YKA				LR	LR	03 33 27.0	
YKW3	**Yellowknife Ar**	**49.18**	**347**	*e*P	**P**	**03 12 34.2**	**-1.8**
CPUP	**Villa Florida**	**54.59**	**139**	P	**P**	**03 13 13.3**	**-2.9**
	comp=E,0.6nm,0.6s,mb3.8,baz=334,slow=15,SNR=3.1						
BDFB	**Brasilia**	**54.67**	**123**	P	**P**	**03 13 15.6**	**-1.2**
	comp=E,2.8nm,0.5s,mb4.5,baz=286,slow=7.4,SNR=6.7						
BDFB	**Brasilia**	**54.67**	**123**	P	**P**	**03 13 15.6**	**-1.2**
BDFB				*e*P	pP	03 13 32.1	-5.0
PLCA	**Paso Flores**	**59.99**	**160**	P	**P**	**03 13 53.5**	**-0.7**
	comp=E,4.1nm,0.9s,mb4.5,baz=317,slow=9.6,SNR=6.5						
PLCA	**Paso Flores**	**59.99**	**160**	P	**P**	**03 13 53.5**	**-0.8**
EKA	**Eskdalemuir Ar**	**77.56**	**36**	P	**P**	**03 15 40.1**	**-3.2**
	comp=E,0.5nm,0.7s,mb3.4,baz=298,slow=5.6,SNR=4.2						
NOA	**NORSAR Array B**	**83.47**	**28**	LR	LR	03 49 55.2	
	comp=E,18nm,21.5s,baz=285,slow=33						
ARCES	**ARCESS Array B**	**85.09**	**18**	P	**P**	**03 16 21.2**	**-1.9**
	comp=E,1.4nm,0.6s,mb4.1,baz=285,slow=4.6,SNR=7.3						
ARCES				LR	LR	03 55 03.3	
	comp=E,39nm,20.6s,baz=3.9,slow=36						
FINES	**FINESS Array B**	**89.69**	**25**	P	**P**	**03 16 42.8**	**-2.4**
	comp=E,0.4nm,0.5s,mb3.8,baz=336,slow=4.2,SNR=3.8						
HHC	**Hu-ho-hao-te**	**119.17**	**338**	*e*PKP	PKPdf	03 22 38.4	+2.6
HHC				PKS		03 26 13.9	
HHC				PP	PP		
	comp=Z,86nm,7.3s						
HHC				LR	LR		
	comp=N,177nm,30.4s						
HHC				LR	LR		
	comp=E,242nm,29.4s						
HHC				LR	LR		
	comp=Z,152nm,31.3s						
WMQ	**Urumqi**	**120.85**	**359**	*e*PKP	PKPdf	03 22 46.0	+7.0
NJ2	**Nanjing**	**123.32**	**327**	*e*PKP	PKPdf	03 22 51.1	+7.4
WRA	**Warramunga Arr**	**134.28**	**257**	PKP	PKPdf	03 23 04.4	-0.1
	comp=Z,0.6nm,0.7s,baz=82,slow=1.4,SNR=5.2						

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*IDC **05** 03:07:19.6±3.1,55.39N×111.22E,h0km,mb3.6/5,*

mb1 3.6/8,mb1mx3.4/25,mbtmp3.5/8,ML3.3/3,MS3.0/2, Ms1 3.0/2,ms1mx2.6/29,Error ellipse: s-maj=57.1km s-min=23.1km az=106.0

*ISCJB **05** 03:07:21.2±0.3,5533N±003×11046E±004,h10km, mb3.6/5,MS2.8/1,Error ellipse: s-maj=4.3km s-min=2.2km az=102.4*

*MOS **05** 03:07:22.2±1.1,5544N×11040E,h10km,mb4.2/3,Error ellipse: s-maj=11.1km s-min=7.0km az=71.7*

*BYKL **05** 03:07:23.3±0.3,5540N×11042E,h7km±14km*

ISC 05 03:07:23.2±0.3,5538N±002×11046E±003,h10km,n53, σ1§50/89,mb3.6/5,MS2.8/1,2C-3D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.65**	**141**	*i*Pg	**Pg**	**03 07 35.1**	**-0.6**
YLYR				*i* Sg	**Sg**	**03 07 44.4**	**+0.2**
YLYR				*e*		03 07 54.3	
YLYR				Pmax			
	280nm,0.4s						
YLYR				max			
	1μm,2.0s						
YLYR	**Ulyunkhan**	**0.65**	**141**	*e*PG	**Pg**	**03 07 35.3**	**-0.4**
YLYR				*i*		03 07 44.5	
YLYR				pmax	pmax		
	comp=Z,293nm,0.3s						
YLYR				smax			
	comp=N,768nm,0.3s						
NIZ	**Nizh Angarsk**	**0.65**	**308**	*i*Pg	**Pg**	**03 07 34.5**	**-1.3**
NIZ				*e*Sg	**Sg**	**03 07 43.1**	**-1.3**
NIZ				Pmax			
	comp=N,108nm,0.3s						
NIZ				Smax			
	comp=N,482nm,0.5s						
NIZ	**Nizh Angarsk**	**0.65**	**308**	*e*PG	**Pg**	**03 07 34.5**	**-1.3**
NIZ				*e*		03 07 42.8	
NIZ				pmax	pmax		
	comp=Z,106nm,0.4s						
NIZ				smax			
	comp=N,503nm,0.6s						
KMO	**Kumora**	**0.66**	**39**	*i*Pg	**Pg**	**03 07 34.8**	**-1.1**
KMO				*e*Sg	**Sg**	**03 07 43.8**	**-0.8**
KMO				*e*		03 07 49.6	
KMO				Pmax			
	comp=N,372nm,0.4s						
KMO				max			
	comp=N,2μm,1.4s						
KMO	**Kumora**	**0.66**	**39**	*e*PG	**Pg**	**03 07 34.7**	**-1.2**
KMO				*e*		03 07 43.2	
KMO				pmax	pmax		
	comp=Z,385nm,0.3s						
KMO				smax			
	comp=N,2μm,1.1s						
YOA	**Uoyan**	**1.04**	**43**	*e*Pg	**Pg**	**03 07 42.7**	**-0.5**
YOA				*e*Sg	**Sg**	**03 07 56.6**	**-0.1**
YOA				*e*		03 08 18.1	
YOA				Pmax			
	comp=N,502nm,0.4s						
YOA				max			
	comp=N,2μm,2.1s						
YOA	**Uoyan**	**1.04**	**43**	*i*PG	**Pg**	**03 07 42.6**	**-0.6**
YOA				*i*		03 07 56.5	
YOA				pmax	pmax		
	comp=Z,536nm,0.5s						
YOA				smax			
	comp=E,4μm,1.7s						
SYVR	**Suvo**	**1.75**	**189**	*e*PN	**Pn**	**03 07 55.2**	**+1.7**
SYVR				*e*		03 08 19.1	
SYVR				pmax	pmax		
	comp=Z,181nm,0.4s						
SYVR				smax			
	comp=N,430nm,0.9s						
UKT	**Uakit**	**1.81**	**85**	*e*Pg	**Pg**	**03 07 55.7**	**-2.2**
UKT				*e*Sg	**Sg**	**03 08 20.0**	**-1.3**
UKT				*e*		03 08 22.6	
UKT				Pmax			
	comp=N,217nm,0.9s						
UKT				max			
	comp=N,440nm,0.6s						
UKT	**Uakit**	**1.81**	**85**	*e*PN	**Pn**	**03 07 55.8**	**+1.4**
UKT				*e*		03 08 20.0	
UKT				pmax	pmax		
	comp=Z,237nm,0.7s						
UKT				smax			
	comp=N,439nm,0.7s						
SVKR	**Severomuysk**	**1.90**	**66**	*e*Pg	**Pg**	**03 07 58.1**	**-1.5**
SVKR				*e*Sg	**Sg**	**03 08 24.6**	**+0.3**
SVKR				Pmax			
	comp=N,198nm,0.6s						
SVKR				Smax			
	comp=N,2μm,0.6s						
SVKR	**Severomuysk**	**1.90**	**66**	*e*PN	**Pn**	**03 07 57.8**	**+2.2**
SVKR				*e*		03 07 58.4	
SVKR				*e*		03 08 24.1	
SVKR				pmax	pmax		
	comp=Z,206nm,1.0s						
SVKR				smax			
	comp=N,2μm,0.6s						
MXMB	**Maximikha**	**2.35**	**206**	*e*Pg	**Pg**	**03 08 05.7**	**-2.4**
MXMB				*e*Sg	**Sg**	**03 08 38.2**	**-0.4**
MXMB				Pmax			
	comp=N,132nm,0.8s						
MXMB				Smax			
	comp=N,788nm,0.8s						
OGRR	**Ongureny**	**2.41**	**225**	*e*Pg	**Pg**	**03 08 06.4**	**-3.0**
OGRR				*e*Sg	**Sg**	**03 08 38.4**	**-2.2**
OGRR				Pmax			
	comp=N,47nm,0.4s						
OGRR				Smax			
	comp=N,402nm,1.0s						
OGRR	**Ongureny**	**2.41**	**225**	*e*PN	**Pn**	**03 08 03.1**	**+0.5**
OGRR				*e*		03 08 06.9	
OGRR				*e*		03 08 38.6	
OGRR				pmax	pmax		
	comp=Z,48nm,0.4s						
OGRR				smax			
	comp=E,418nm,1.2s						
BOD	**Bodaibo**	**3.13**	**37**	*e*Pn	**Pn**	**03 08 13.3**	**+0.7**
BOD				*e*Pg	**Pg**	**03 08 18.5**	**-4.7**
BOD				*e*Sn	**Sn**	**03 08 51.0**	**+1.0**
BOD				*e*Sg	**Sg**	**03 08 58.9**	**-4.9**
BOD				Pmax			
	comp=E,30nm,0.5s						
BOD				Smax			
	comp=E,232nm,0.5s						
BOD	**Bodaibo**	**3.13**	**37**	*e*PN	**Pn**	**03 08 12.7**	**+0.1**
BOD				*e*		03 08 18.7	
BOD				*e*		03 08 58.4	
BOD				pmax	pmax		
	comp=Z,34nm,0.5s						
BOD				smax			
	comp=N,232nm,0.5s						
NLYR	**Nelyaty**	**3.15**	**67**	*i*Pn	**Pn**	**03 08 14.3**	**+1.4**
NLYR				*e*Pg	**Pg**	**03 08 20.7**	**-2.9**
NLYR				*e*Sn	**Sn**	**03 08 52.4**	**+1.9**
NLYR				*e*Sg	**Sg**	**03 09 01.7**	**-2.8**
NLYR				Pmax			
	comp=N,50nm,0.7s						
NLYR				Smax			
	comp=N,266nm,1.1s						
NLYR	**Nelyaty**	**3.15**	**67**	*e*PN	**Pn**	**03 08 13.9**	**+1.0**
NLYR				*e*		03 08 20.6	
NLYR				*e*		03 09 01.4	
NLYR				pmax	pmax		
	comp=Z,45nm,0.8s						
NLYR				smax			
	comp=E,269nm,1.2s						
ZRHB	**Zarechye**	**3.44**	**216**	*e*Pg	**Pg**	**03 08 25.0**	**-4.1**
ZRHB				*e*Sg	**Sg**	**03 09 12.2**	**-1.4**
ZRHB				Pmax			
	comp=E,122nm,1.0s						
ZRHB				Smax			
	comp=E,676nm,1.4s						
TRG	**Tyrgan**	**3.57**	**224**	*e*Pg	**Pg**	**03 08 27.2**	**-4.4**
TRG				*e*Sg	**Sg**	**03 09 14.9**	**-2.9**
TRG				Pmax			
	comp=E,18nm,0.6s						
TRG				Smax			
	comp=E,125nm,0.5s						
TRG	**Tyrgan**	**3.57**	**224**	*e*PN	**Pn**	**03 08 20.1**	**+1.5**
TRG				*e*		03 08 27.9	
TRG				*e*S	**Sn**	**03 09 01.5**	**+0.7**
TRG				*e*		03 09 14.0	
TRG				pmax	pmax		
	comp=Z,19nm,0.4s						
TRG				smax			
	comp=E,128nm,0.5s						
TRTB	**Turuntaevo**	**3.57**	**209**	*e*Pn	**Pn**	**03 08 20.1**	**+1.5**
TRTB				*e*Pg	**Pg**	**03 08 27.1**	**-4.5**
TRTB				*e*Sg	**Sg**	**03 09 14.7**	**-3.2**
TRTB				Pmax			
	comp=E,41nm,1.1s						
TRTB				Smax			
	comp=E,145nm,1.3s						
CIT	**Chita**	**3.83**	**150**	*e*Pg	**Pg**	**03 08 31.9**	**-4.7**
CIT				*e*Sg	**Sg**	**03 09 21.7**	**-4.6**
CIT				Pmax			
	comp=E,31nm,0.9s						
CIT				Smax			
	comp=E,73nm,1.0s						
HRMR	**Khuramsha**	**4.30**	**211**	*e*Pn	**Pn**	**03 08 30.4**	**+1.8**
HRMR				*e*Pg	**Pg**	**03 08 39.6**	**-6.0**
HRMR				*e*Sn	**Sn**	**03 09 20.4**	**+1.6**
HRMR				*e*Sg	**Sg**	**03 09 35.9**	**-5.4**
HRMR				Pmax			
	comp=E,62nm,0.8s						
HRMR				Smax			
	comp=E,326nm,0.8s						
CRS	**Chara**	**4.63**	**68**	*e*Pn	**Pn**	**03 08 32.9**	**-0.2**
CRS				*e*Pg	**Pg**	**03 08 46.1**	**-5.7**
CRS				*e*Sg	**Sg**	**03 09 47.5**	**-4.2**
CRS				Pmax			
	comp=E,47nm,0.9s						
CRS				Smax			
	comp=E,116nm,1.4s						
CRS	**Chara**	**4.63**	**68**	*e*PN	**Pb**	**03 08 45.3**	**+0.9**
CRS				*e*		03 09 45.6	
CRS				pmax	pmax		
	comp=Z,51nm,1.1s						
CRS				smax			
	comp=E,95nm,1.3s						
IRK	**Irkutsk**	**4.83**	**232**	*e*PN	**Pb**	**03 08 50.1**	**+2.3**
IRK				*e*		03 09 52.0	
IRK				pmax	pmax		
	comp=Z,178nm,0.1s						
IRK				smax			
	comp=N,445nm,0.8s						
LSTR	**Listvyanka**	**4.86**	**226**	*e*Pn	**Pn**	**03 08 37.7**	**+1.4**
LSTR				*e*Pg	**Pg**	**03 08 48.5**	**-7.7**
LSTR				*e*Sn	**Sn**	**03 09 33.0**	**+0.5**
LSTR				*e*Sg	**Sg**	**03 09 53.0**	**-6.1**
LSTR				Pmax			
	comp=N,10.0nm,0.8s						
LSTR				Smax			
	comp=N,83nm,1.0s						
LSTR	**Listvyanka**	**4.86**	**226**	*e*PN	**Pn**	**03 08 38.1**	**+1.8**
LSTR				*e*		03 08 51.0	
LSTR				*e*		03 09 52.8	
LSTR				pmax	pmax		
	comp=Z,11nm,0.8s						
LSTR				smax			
	comp=E,91nm,1.3s						
TLY	**Talaya**	**5.50**	**230**	*e*PN	**Pb**	**03 09 01.8**	**+2.5**
TLY				*e*		03 10 12.2	
TLY				pmax	pmax		
	comp=Z,10.0nm,0.3s						
TLY				smax			
	comp=E,116nm,0.9s						
TUP	**Tupik**	**5.56**	**96**	*e*Pn	**Pn**	**03 08 46.6**	**+0.6**
TUP				*e*Pg	**Pg**	**03 09 03.2**	**-6.5**
TUP				*e*Sn	**Sn**	**03 09 50.3**	**+0.3**
TUP				*e*Sg	**Sg**	**03 10 16.8**	**-5.0**
TUP				Pmax			
	comp=E,11nm,0.9s						
TUP				Smax			
	comp=E,160nm,0.9s						
TUP	**Tupik**	**5.56**	**96**	*e*PN	**Pn**	**03 08 46.8**	**+0.8**
TUP				*e*		03 09 03.5	
TUP				*e*S	**Sn**	**03 09 50.2**	**+0.2**
TUP				*e*		03 10 15.5	
TUP				pmax	pmax		
	comp=Z,12nm,0.5s						
TUP				smax			
	comp=N,164nm,0.9s						
KPC	**Khapcheranga**	**5.81**	**168**	*e*Pn	**Pn**	**03 08 50.3**	**+1.0**
KPC				*e*Sg	**Sg**	**03 10 24.3**	**-5.2**
KPC				max			
	comp=N,6.0nm,0.3s						
KPC				Smax			
	comp=N,76nm,1.0s						
KPC	**Khapcheranga**	**5.81**	**168**	*e*PN	**Pn**	**03 08 50.3**	**+1.0**
KPC				*e*		03 09 08.4	
KPC				*e*		03 10 24.5	
KPC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KPC				smax			
	comp=E,78nm,1.1s						
ZAK	**Zakamensk**	**6.63**	**224**	*e*Sg	**Sg**	**03 10 50.3**	**-5.5**
ZAK				Smax			
	comp=E,50nm,1.0s						
ZAK	**Zakamensk**	**6.63**	**224**	*e*PG	**Pg**	**03 09 24.0**	**-6.0**
ZAK				*e*		03 10 48.9	
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ZAK				smax			
	comp=E,52nm,1.3s						
MOY	**Mondy**	**6.76**	**241**	*e*Pn	**Pn**	**03 09 04.8**	**+2.4**
MOY				*e*Sg	**Sg**	**03 10 52.6**	**-7.4**
MOY				max			
	comp=E,20nm,1.3s						
MOY				Smax			
	comp=E,113nm,1.3s						
MOY	**Mondy**	**6.76**	**241**	*e*PN	**Pn**	**03 09 04.7**	**+2.3**
MOY				*e*		03 09 27.5	
MOY				*e*		03 10 51.6	
MOY				pmax	pmax		
	comp=Z,70nm,0.6s						
MOY				smax			
	comp=E,113nm,1.6s						
ORL	**Orlik**	**6.90**	**250**	*e*Pn	**Pn**	**03 09 05.2**	**+0.9**
ORL				*e*Sn	**Sn**	**03 10 22.8**	**0.0**
ORL				*e*Sg	**Sg**	**03 10 57.6**	**-6.9**
ORL				max			
	comp=E,13nm,1.1s						
ORL				Smax			
	comp=E,143nm,1.2s						
ORL	**Orlik**	**6.90**	**250**	*e*PN	**Pn**	**03 09 06.8**	**+2.5**
ORL				*e*		03 09 28.7	
ORL				*e*		03 10 57.4	
ORL				pmax	pmax		
	comp=Z,14nm,1.0s						
ORL				smax			
	comp=N,144nm,1.4s						
SONM	**Songino Array**	**7.97**	**200**	Pn	**Pn**	**03 09 20.9**	**+1.9**
	comp=N,0.2nm,0.3s,baz=9.1,slow=13,SNR=5.0						
SONM				Lg		03 11 36.1	
	comp=N,0.9nm,0.3s,baz=13,slow=27,SNR=20						
ZAL	**Zalesovo**	**14.89**	**275**	Pn	**Pn**	**03 10 54.5**	**+0.8**
	comp=N,0.3nm,0.3s,baz=17,slow=9.9,SNR=3.2						
ZAL				LR	LR	03 17 27.2	
	comp=N,48nm,19.0s,baz=222,slow=40						
MKAR	**Makanchi Array**	**19.55**	**256**	P	**Pn**	**03 11 52.4**	**+0.2**
	comp=N,0.2nm,0.3s,baz=63,slow=10,SNR=3.8						
BVAR	**Borovoye Array**	**23.33**	**281**	P	**P**	**03 12 32.5**	**+0.9**
	comp=N,0.4nm,0.4s,mb3.2,baz=61,slow=10,SNR=3.3						
BVAR				LR	LR	03 22 30.2	
	comp=N,34nm,19.6s,MS2.8,baz=135,slow=38						
ARCES	**ARCESS Array B**	**38.16**	**325**	P	**P**	**03 14 41.7**	**-0.9**
	comp=N,0.4nm,0.5s,mb3.4,baz=60,slow=9.9,SNR=6.5						
FINES	**FINESS Array B**	**41.67**	**314**	P	**P**	**03 15 11.4**	**-0.3**
	comp=N,0.6nm,0.5s,mb3.5,baz=69,slow=8.9,SNR=13						
FINES	**FINESS Array B**	**41.67**	**314**	P	**P**	**03 15 11.5**	**-0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	**Hagfors**	**47.37**	**318**	P	**P**	**03 15 57.0**	**-0.3**
	comp=Z,0.9nm,0.5s,mb4.0,baz=44,slow=9.0,SNR=9.8						
HFS	**Hagfors**	**47.37**	**318**	P	**P**	**03 15 57.0**	**-0.4**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**47.72**	**320**	P	**P**	**03 16 00.1**	**0.0**
	comp=Z,0.8nm,0.8s,mb3.8,baz=39,slow=8.6,SNR=3.1						
NOA	**NORSAR Array B**	**47.72**	**320**	P	**P**	**03 16 00.1**	**0.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*NEIC **05** 03:07:43.7,3695N×1103W,h0km,MN2.5(MDD),After MDD.*

*CSEM **05** 03:07:46.1±0.4,3721N×1067W,h10km,mb2.5,Error ellipse: s-maj=8.6km s-min=5.0km az=55.0*

MDD 05 03:07:43.6±2.4,3687N×1118W,h17km±81km,mb3.7/14, Error ellipse: s-maj=96.7km s-min=14.2km az=53.0, PRXIMO,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGRO	**El Granado**	**3.03**	**76**	P	**Pn**	**03 08 30.8**	**0.0**
	1.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	03 09 03.2	-3.5
	1.5nm,0.0s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.71**	**75**	P	**Pn**	**03 08 39.2**	**-1.0**
	1.1nm,0.4s,SNR=20						
EMIN				S	Sn	03 09 19.9	-3.5
	0.4nm,0.1s,SNR=8.1						
EMIN	**Mina Concepcio**	**3.71**	**75**	P	**Pn**	**03 08 39.2**	**-0.9**
	1.1nm,0.4s,SNR=20						
EMIN				S	Sn	03 09 19.9	-3.5
	0.4nm,0.1s,SNR=8.1						
EBAD	**Badajoz**	**3.80**	**59**	P	**Pn**	**03 08 40.3**	**-1.1**
	1.5nm,0.1s,SNR=7.9						
EBAD				S	Sn	03 09 21.7	-4.0
	6.9nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.80**	**59**	P	**Pn**	**03 08 40.3**	**-1.1**
	1.5nm,0.1s,SNR=7.9						
EBAD				S	Sn	03 09 21.7	-4.0
	6.9nm,0.2s,SNR=7.9						
ESPR	**Espera**	**4.27**	**88**	P	**Pn**	**03 08 46.8**	**-1.1**
	0.4nm,0.1s,SNR=7.9						
ESPR				S	Sn	03 09 32.5	-4.9
	4.6nm,0.2s,SNR=7.9						
ESPR	**Espera**	**4.27**	**88**	P	**Pn**	**03 08 46.8**	**-1.1**
	0.4nm,0.1s,SNR=7.9						
ESPR				S	Sn	03 09 32.5	-4.9
	4.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**5.41**	**74**	P	**Pn**	**03 09 02.8**	**-0.7**
	0.7nm,0.3s,SNR=12						
EADA				S	Sn	03 10 00.1	-5.3
	1.4nm,0.1s						
EADA	**Adamuz**	**5.41**	**74**	P	**Pn**	**03 09 02.8**	**-0.7**
	0.7nm,0.3s,SNR=12						
EADA				S	Sn	03 10 00.1	-5.3
	1.4nm,0.1s						
ELOB	**Lobios**	**5.54**	**25**	P	**Pn**	**03 09 04.8**	**-0.6**
	12nm,1.0s,SNR=21						
ELOB				S	Sn	03 10 04.6	-4.1
	1.2nm,0.1s						
ELOB	**Lobios**	**5.54**	**25**	P	**Pn**	**03 09 04.8**	**-0.6**
	12nm,1.0s,SNR=21						
ELOB				S	Sn	03 10 04.6	-4.1
	1.2nm,0.1s						
ELUQ	**Luque**	**5.56**	**81**	S	**Sn**	**03 10 05.1**	**-4.1**
	0.4nm,0.1s,SNR=7.9						
EZAM	**Zamans**	**5.61**	**19**	P	**Pn**	**03 09 04.5**	**-1.8**
	1.0nm,0.1s,SNR=7.9						
EZAM				S	Sn	03 10 06.2	-4.1
	0.9nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**6.02**	**75**	P	**Pn**	**03 09 10.6**	**-1.4**
	0.6nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.12**	**33**	P	**Pn**	**03 09 11.8**	**-1.5**
	1.5nm,0.2s,SNR=7.9						
ECAL				S	Sn	03 10 17.4	-5.5
	0.6nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**6.12**	**33**	P	**Pn**	**03 09 11.8**	**-1.5**
	1.5nm,0.2s,SNR=7.9						
ECAL				S	Sn	03 10 17.4	-5.5
	0.6nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**6.20**	**85**	P	**Pn**	**03 09 13.6**	**-0.8**
	0.0nm,0.0s,SNR=7.9						
EQUE				S	Sn	03 10 19.9	-5.1
	0.0nm,0.0s,SNR=7.9						
EQUE	**Quentar**	**6.20**	**85**	P	**Pn**	**03 09 13.6**	**-0.9**
	SNR=7.9						
EQUE				S	Sn	03 10 22.4	-2.6
	SNR=7.9						
ESDC	**Sonseca Array**	**6.33**	**62**	P	**Pn**	**03 09 15.2**	**-1.0**
	0.5nm,0.3s,baz=246,slow=13,SNR=11						
ESDC				S	Sn	03 10 22.3	-5.8
	0.4nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**6.33**	**62**	P	**Pn**	**03 09 15.2**	**-1.0**
	0.5nm,0.3s,SNR=11						
ESDC				S	Sn	03 10 22.3	-5.8
	0.4nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.53**	**79**	P	**Pn**	**03 09 19.0**	**+0.1**
	1.6nm,0.8s,SNR=6.3						
EQES				S	Sn	03 10 28.4	-4.6
	0.9nm,0.3s						
EQES	**Quesada**	**6.53**	**79**	P	**Pn**	**03 09 19.0**	**+0.1**
	1.6nm,0.8s,SNR=6.3						
EQES				S	Sn	03 10 28.4	-4.6
	0.9nm,0.3s						
GUD	**Guadarrama**	**6.66**	**53**	P	**Pn**	**03 09 19.4**	**-1.3**
	0.3nm,0.3s,SNR=7.9						
GUD				S	Sn	03 10 31.2	-4.9
	0.4nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**6.91**	**80**	S	**Sn**	**03 10 36.1**	**-6.2**
	0.1nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.15**	**24**	P	**Pn**	**03 09 26.3**	**-1.1**
	2.4nm,0.3s,SNR=9.4						
EPON				S	Sn	03 10 42.9	-5.3
	0.3nm,0.1s						
EPON	**Pontenova**	**7.15**	**24**	P	**Pn**	**03 09 26.3**	**-1.1**
	2.4nm,0.3s,SNR=9.4						
EPON				S	Sn	03 10 42.9	-5.3

*MDD **05** 03:11:58.4±0.4,3655N×757W,h0km,mb3.9/40,Error ellipse: s-maj=4.3km s-min=2.7km az=42.0,PRXIMO*

*ISCJB **05** 03:12:00.5±0.4,3668N±002×752W±002,h82km±5km, Error ellipse: s-maj=4.3km s-min=2.4km az=74.6*

*SFS **05** 03:12:00.0,3655N×761W,h0km,ML4.0*

*CSEM **05** 03:12:00.9±0.2,3663N×755W,h15km,ML3.7/29,Error ellipse: s-maj=3.6km s-min=1.5km az=40.0*

*NEIC **05** 03:12:00.7,3656N×761W,h20km,MG4.0(MDD),After MDD.*

*LDG **05** 03:12:01.2±0.2,3660N×756W,h10km,Ml3.6/4,Error ellipse: s-maj=4.1km s-min=1.9km az=35.0*

*INMG **05** 03:12:03.0±1.2,3665N×758W,h21km±5km,MD3.2,ML3.0, Error ellipse: s-maj=4.5km s-min=2.4km az=33.0*

*IGIL **05** 03:12:03.9,3670N×780W,h15km,ML3.0*

*CNRM **05** 03:12:04.0,3615N×756W,h6km,MD3.4*

ISC 05 03:12:01.9±0.4,3667N±002×753W±002,h64km±8km,n188, σ1§16/351,1C-7D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERIP	**Rio Piedras**	**0.74**	**17**	P	**Pn**	**03 12 17.0**	**+0.2**
	70nm,0.1s,SNR=7.9						
ERIP				S	**Sn**	**03 12 28.0**	**+0.3**
	231nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**0.87**	**3**	P	**Pn**	**03 12 18.8**	**+0.4**
	36nm,0.1s,SNR=18						
EGRO				S	**Sn**	**03 12 30.8**	**+0.3**
	258nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**0.87**	**3**	Pg	**Pn**	**03 12 18.8**	**+0.4**
EGRO				Sn	**Sn**	**03 12 30.8**	**+0.3**
EGRO	**El Granado**	**0.87**	**3**	Pg	**Pn**	**03 12 18.8**	**+0.5**
	36nm,0.1s,SNR=18						
EGRO				Sn	**Sn**	**03 12 30.8**	**+0.3**
	60nm,0.0s,SNR=7.9						
SCRT	**Cerro San Cris**	**1.09**	**91**	P	**Pn**	**03 12 22.1**	**+0.8**
SCRT				S	**Sn**	**03 12 32.2**	**-3.5**
SCRT	**Cerro San Cris**	**1.09**	**91**	*i* P	**Pn**	**03 12 22.1**	**+0.9**
SCRT				*e*S	**Sn**	**03 12 32.2**	**-3.4**
MORF	**Marmelete**	**1.10**	**306**	*e*P	**Pn**	**03 12 20.3**	**-1.0**
MORF				*e*S	**Sn**	**03 12 31.8**	**-4.0**
MORF				*e*S	**Sn**	**03 12 31.8**	**-4.0**
MORF				AML	AML	03 12 36.6	
	comp=N,279nm,0.1s						
MORF	**Marmelete**	**1.10**	**306**	*e*P	**Pn**	**03 12 20.3**	**-1.0**
MORF				*e*S	**Sn**	**03 12 31.8**	**-4.0**
CNIL	**Conil**	**1.23**	**104**	↓P	**Pn**	**03 12 23.5**	**+0.5**
CNIL				S	**Sn**	**03 12 34.5**	**-4.3**
CNIL	**Conil**	**1.23**	**104**	*i* P	**Pn**	**03 12 23.5**	**+0.5**
CNIL				*e*S	**Sn**	**03 12 34.5**	**-4.3**
GIBL	**Gibalbin**	**1.27**	**82**	P	**Pn**	**03 12 24.5**	**+1.0**
GIBL				S	**Sn**	**03 12 39.7**	**-0.1**
GIBL	**Gibalbin**	**1.27**	**82**	*e*P	**Pn**	**03 12 24.5**	**+1.0**
GIBL				*e*S	**Sn**	**03 12 39.7**	**0.0**
PTEO	**Sao Teotonio**	**1.29**	**313**	*i* P	**Pn**	**03 12 23.7**	**-0.2**
PTEO				*e*S	**Sn**	**03 12 39.5**	**-0.9**
PTEO							
	comp=N,96nm,0.3s						
PTEO	**Sao Teotonio**	**1.29**	**313**	↓*i*P	**Pn**	**03 12 23.7**	**-0.2**
PTEO				*e*S	**Sn**	**03 12 36.9**	**-3.5**

PTEO **Sao Teotonio** 1.29 313 ⇓*i*P Pn 03 12 23.7 -0.2
PTEO *e*S Sn 03 12 39.5 -0.9
comp=N,96nm,0.3s
EMIN **Mina Concepcio** 1.29 32 P Pn 03 12 24.2 +0.3
comp=N,4.3nm,0.1s,SNR=80
EMIN S Sn 03 12 40.4 0.0
comp=N,59nm,0.1s,SNR=7.9
EMIN **Mina Concepcio** 1.29 32 Pn Pn 03 12 24.2 +0.3
comp=N,4.3nm,0.1s,SNR=80
EMIN Sn Sn 03 12 40.3 -0.1
comp=N,40nm,0.3s,SNR=31
ESPR **Espera** 1.36 81 P Pn 03 12 24.7 -0.1
comp=N,72nm,0.1s,SNR=691
ESPR S Sn 03 12 42.0 0.0
comp=N,320nm,0.2s,SNR=7.9
ESPR **Espera** 1.36 81 Pn Pn 03 12 24.7 -0.1
ESPR Sn Sn 03 12 42.0 0.0
ESPR **Espera** 1.36 81 Pn Pn 03 12 24.7 -0.1
comp=N,72nm,0.1s,SNR=691
ESPR Sn Sn 03 12 42.0 0.0
comp=N,87nm,0.1s,SNR=23
PBEJ **Beja** 1.38 349 *i*P Pn 03 12 25.5 +0.4
PBEJ *e*S Sn 03 12 42.7 +0.2
PBEJ
comp=N,103nm,0.1s
PBEJ **Beja** 1.38 349 ⇓*i*P Pn 03 12 25.5 +0.4
PBEJ *e*S Sn 03 12 42.5 0.0
PBEJ **Beja** 1.38 349 ⇓*i*P Pn 03 12 25.5 +0.4
PBEJ *e*S Sn 03 12 42.7 +0.2
comp=N,103nm,0.1s
EJIF **Jimena Fronter** 1.68 97 P Pn 03 12 29.0 0.0
comp=N,1.0nm,0.1s,SNR=27
EJIF S Sn 03 12 48.6 -0.9
comp=N,8.4nm,0.3s,SNR=7.9
EJIF **Jimena Fronter** 1.68 97 Pn Pn 03 12 29.0 0.0
EJIF Sn Sn 03 12 48.6 -0.8
EJIF **Jimena Fronter** 1.68 97 Pn Pn 03 12 29.0 0.0
comp=N,1.0nm,0.1s,SNR=27
EJIF Sn Sn 03 12 48.7 -0.8
LIJA **Lijar** 1.73 81 ⇑P Pn 03 12 30.5 +0.9
LIJA S Sn 03 12 48.6 -2.1
LIJA **Lijar** 1.73 81 *i*P Pn 03 12 30.5 +0.8
LIJA *e*S Sn 03 12 48.6 -2.1
MOE **Montemor** 1.96 341 *e*Pn Pn 03 12 33.7 +0.8
MOE *e*Sn Sn 03 12 56.7 +0.3
EBAD **Badajoz** 2.12 11 P Pn 03 12 35.7 +0.6
comp=N,14nm,0.1s,SNR=163
EBAD S Sn 03 13 00.3 0.0
comp=N,33nm,0.1s,SNR=7.9
EBAD **Badajoz** 2.12 11 Pn Pn 03 12 35.7 +0.6
EBAD Sn Sn 03 13 00.7 +0.3
EBAD **Badajoz** 2.12 11 Pn Pn 03 12 35.7 +0.6
comp=N,14nm,0.1s,SNR=163
EBAD Sn Sn 03 13 00.7 +0.3
comp=N,40nm,0.1s,SNR=5.2
PLML **Palmela** 2.18 330 *e*Pn Pn 03 12 36.9 +1.1
PESTR **Estremoz** 2.20 359 *i*Pn Pn 03 12 36.6 +0.6
PESTR *e*Sn Sn 03 13 01.8 -0.3
EMIJ **Mijas** 2.22 92 P Pn 03 12 35.6 -0.8
comp=N,8.0nm,0.6s,SNR=32
EMIJ S Sn 03 13 02.1 -0.7
comp=N,11nm,0.2s,SNR=7.9
EMIJ **Mijas** 2.22 92 Pn Pn 03 12 35.6 -0.8
EMIJ Sn Sn 03 13 03.4 +0.6
EMIJ **Mijas** 2.22 92 Pn Pn 03 12 35.6 -0.8
comp=N,8.0nm,0.6s,SNR=32
EMIJ Sn Sn 03 13 03.4 +0.6
comp=N,9.3nm,0.1s,SNR=7.9
LIS **Lisbon** 2.41 328 *e*P Pn 03 12 39.3 +0.3
LIS *e*S Sn 03 13 05.0 -2.4
LIS *e*S Sn 03 13 05.0 -2.4
LIS AML AML 03 13 09.9
comp=E,159nm,0.5s
LIS **Lisbon** 2.41 328 *e*P Pn 03 12 39.3 +0.3
LIS *e*S Sn 03 13 05.0 -2.4
INMG **Instituto de M** 2.45 329 *e*Pn Pn 03 12 40.2 +0.7
PLOU **Loures** 2.56 330 *e*Pn Pn 03 12 41.7 +0.7
PLOU *e*Sn Sn 03 13 10.7 -0.2
PLOU
comp=E,42nm,0.2s
PLOU **Loures** 2.56 330 *e*Pn Pn 03 12 41.7 +0.7
PLOU **Loures** 2.56 330 *e*Pn Pn 03 12 41.7 +0.7
PLOU *e*Sn Sn 03 13 10.7 -0.2
comp=E,42nm,0.2s
ALMR **Almeirim** 2.62 342 *e*P Pn 03 12 42.6 +0.9
ALMR *e*S Sn 03 13 11.0 -1.4
ALMR *e*S Sn 03 13 11.1 -1.3
ALMR AML AML 03 13 16.4
comp=E,44nm,0.2s
ALMR **Almeirim** 2.62 342 *e*P Pn 03 12 42.6 +0.8
ALMR *e*S Sn 03 13 11.0 -1.4
PMAFR **Mafra** 2.67 329 *i*Pn Pn 03 12 43.2 +0.7
PMAFR *e*Sn Sn 03 13 13.2 -0.5
ELOJ **Sierra Loja** 2.75 79 P Pn 03 12 44.1 +0.6
comp=E,0.6nm,0.1s,SNR=7.9
ELOJ S Sn 03 13 15.5 -0.2
comp=E,6.3nm,0.2s,SNR=7.9
ELOJ **Sierra Loja** 2.75 79 Pn Pn 03 12 44.1 +0.6
ELOJ Sn Sn 03 13 17.4 +1.7
ELOJ **Sierra Loja** 2.75 79 Pn Pn 03 12 44.1 +0.5
comp=E,0.6nm,0.1s,SNR=7.9
ELOJ Sn Sn 03 13 17.4 +1.7
comp=E,3.1nm,0.1s,SNR=7.9
ELUQ **Luque** 2.76 70 P Pn 03 12 44.1 +0.4
comp=E,1.6nm,0.1s,SNR=7.9
ELUQ S Sn 03 13 14.7 -1.1
comp=E,16nm,0.1s,SNR=7.9
ELUQ **Luque** 2.76 70 Pn Pn 03 12 44.1 +0.4
ELUQ Sn Sn 03 13 17.3 +1.4
ELUQ **Luque** 2.76 70 Pn Pn 03 12 44.1 +0.4
comp=E,1.6nm,0.1s,SNR=7.9
ELUQ Sn Sn 03 13 17.3 +1.5
comp=E,14nm,0.1s,SNR=7.9
EADA **Adamuz** 2.79 57 P Pn 03 12 44.7 +0.6
comp=E,15nm,0.1s,SNR=92
EADA S Sn 03 13 16.7 +0.1
comp=E,25nm,0.2s,SNR=7.9
EADA **Adamuz** 2.79 57 Pn Pn 03 12 44.7 +0.6
EADA Sn Sn 03 13 16.7 +0.1
EADA **Adamuz** 2.79 57 Pn Pn 03 12 44.7 +0.6
comp=E,15nm,0.1s,SNR=92
EADA Sn Sn 03 13 16.7 +0.1
comp=E,40nm,0.1s,SNR=7.9
ERON **Agron** 3.01 82 P Pn 03 12 48.0 +0.9
comp=E,1.6nm,0.1s,SNR=14
ERON S Sn 03 13 22.6 +0.6
comp=E,6.1nm,0.2s,SNR=7.9
ERON **Agron** 3.01 82 Pn Pn 03 12 48.0 +0.9
ERON Sn Sn 03 13 22.6 +0.6
PTOM **Tomar** 3.03 347 *i*Pn Pn 03 12 48.4 +1.1
PTOM *e*Sn Sn 03 13 21.8 -0.6
PTOM
comp=E,42nm,0.3s
PTOM **Tomar** 3.03 347 ⇓*i*Pn Pn 03 12 48.4 +1.1
PTOM *e*Sn Sn 03 13 21.5 -0.9
PTOM **Tomar** 3.03 347 ⇓*i*Pn Pn 03 12 48.4 +1.1
PTOM *e*Sn Sn 03 13 21.5 -0.9
PCBR **Castelo Branco** 3.17 1 *e*Pn Pn 03 12 50.1 +0.8
PCBR *e*Sn Sn 03 13 24.8 -1.1
PCBR
comp=E,38nm,0.2s
PCBR **Castelo Branco** 3.17 1 *e*Pn Pn 03 12 50.1 +0.8
PCBR *e*Sn Sn 03 13 24.8 -1.1
PCBR **Castelo Branco** 3.17 1 *e*Pn Pn 03 12 50.1 +0.8
PCBR *e*Sn Sn 03 13 24.8 -1.1
comp=E,38nm,0.2s
EGUA **Guajares** 3.19 86 P Pn 03 12 49.7 +0.1
comp=E,0.9nm,0.1s,SNR=7.9
EGUA S Sn 03 13 25.5 -1.0
comp=E,2.2nm,0.2s,SNR=7.9
EGUA **Guajares** 3.19 86 Pn Pn 03 12 49.7 +0.1
EGUA Sn Sn 03 13 27.9 +1.5
EGUA **Guajares** 3.19 86 Pn Pn 03 12 49.7 +0.1
SNR=7.9
EGUA Sn Sn 03 13 27.9 +1.5
SNR=7.9
ECOG **Cogollos-Vega** 3.23 78 P Pn 03 12 51.2 +1.0
comp=E,1.1nm,0.1s,SNR=6.8
ECOG S Sn 03 13 26.9 -0.6
comp=E,8.2nm,0.2s,SNR=7.9
ECOG **Cogollos-Vega** 3.23 78 Pn Pn 03 12 51.2 +1.0
ECOG Sn Sn 03 13 27.8 +0.4
ECOG **Cogollos-Vega** 3.23 78 Pn Pn 03 12 51.2 +1.0
comp=E,1.1nm,0.1s,SNR=6.8
ECOG Sn Sn 03 13 27.8 +0.3
comp=E,4.9nm,0.1s,SNR=7.9
EQUE **Quentar** 3.32 79 P Pn 03 12 52.4 +1.0
comp=E,1.4nm,0.1s,SNR=32
EQUE S Sn 03 13 29.7 0.0
comp=E,8.2nm,0.2s,SNR=7.9
EQUE **Quentar** 3.32 79 Pn Pn 03 12 52.4 +1.0
comp=E,1.4nm,0.1s,SNR=32
EQUE Sn Sn 03 13 30.9 +1.3
comp=E,2.9nm,0.1s,SNR=7.9
EBAN **Banos Encina** 3.34 62 P Pn 03 12 51.8 +0.2
comp=E,4.4nm,0.2s,SNR=31
EBAN S Sn 03 13 29.2 -0.8
comp=E,9.1nm,0.1s,SNR=7.9
EBAN **Banos Encina** 3.34 62 Pn Pn 03 12 51.8 +0.2
EBAN Sn Sn 03 13 31.4 +1.4
EBAN **Banos Encina** 3.34 62 Pn Pn 03 12 51.8 +0.2
comp=E,4.4nm,0.2s,SNR=31
EBAN Sn Sn 03 13 31.4 +1.4
comp=E,13nm,0.1s,SNR=7.9
EALB **Alboran** 3.71 100 S Sn 03 13 35.9 -3.1
comp=E,10.0nm,0.2s,SNR=7.9
EALB **Alboran** 3.71 100 Sn Sn 03 13 37.1 -1.9
comp=E,6.2nm,0.1s,SNR=7.9
MTE **Manteigas** 3.73 360 *e*Pn Pn 03 12 57.7 +0.8
MTE *e*Sn Sn 03 13 38.8 -0.7
MTE
comp=E,26nm,0.4s
MTE **Manteigas** 3.73 360 *e*Pn Pn 03 12 57.7 +0.8
MTE *e*Sn Sn 03 13 38.8 -0.7
comp=E,26nm,0.4s
EBER **Berja** 3.73 85 P Pn 03 12 57.6 +0.6
comp=E,1.2nm,0.1s,SNR=20
EBER S Sn 03 13 39.2 -0.5
comp=E,6.7nm,0.2s,SNR=7.9
EBER **Berja** 3.73 85 Pn Pn 03 12 57.6 +0.6
EBER Sn Sn 03 13 39.5 -0.2
EBER **Berja** 3.73 85 Pn Pn 03 12 57.6 +0.6
comp=E,1.2nm,0.1s,SNR=20
EBER Sn Sn 03 13 39.5 -0.2
EQES **Quesada** 3.74 71 P Pn 03 12 57.1 +0.1
comp=E,2.0nm,0.3s,SNR=72
EQES S Sn 03 13 39.2 -0.6
comp=E,9.3nm,0.1s,SNR=7.9
EQES **Quesada** 3.74 71 Pn Pn 03 12 57.1 +0.1
EQES Sn Sn 03 13 40.9 +1.1
EQES **Quesada** 3.74 71 Pn Pn 03 12 57.2 +0.2
EQES Sn Sn 03 13 40.9 +1.1
comp=E,5.9nm,0.1s,SNR=7.9
TZK **Tazeka** 3.76 132 *i*P Pn 03 12 57.0 -0.3
TZK *i*S Sn 03 13 36.0 -4.3
MIF **Mishlifen** 3.76 149 *i*P Pn 03 12 55.0 -2.4
MIF *i*S Sn 03 13 34.0 -6.4
PVIS **Viseu** 4.05 356 *e*Pn Pn 03 13 02.3 +0.9
PVIS *e*Sn Sn 03 13 46.4 -1.1
PVIS
comp=E,22nm,0.1s
PVIS **Viseu** 4.05 356 *e*Pn Pn 03 13 02.3 +0.9
PVIS *e*Sn Sn 03 13 46.4 -1.1
comp=E,22nm,0.1s
EHUE **Huescar** 4.11 72 P Pn 03 13 02.1 0.0
comp=E,2.2nm,0.2s,SNR=49
EHUE S Sn 03 13 47.7 -1.1
comp=E,6.1nm,0.1s,SNR=7.9
EHUE **Huescar** 4.11 72 Pn Pn 03 13 02.1 0.0
EHUE Sn Sn 03 13 48.8 0.0
EHUE **Huescar** 4.11 72 Pn Pn 03 13 02.1 0.0
comp=E,2.2nm,0.2s,SNR=49
EHUE Sn Sn 03 13 48.8 0.0
SNR=7.9
ESDC **Sonseca Array** 4.11 42 P Pn 03 13 03.2 +1.0
SNR=7.9
ESDC S Sn 03 13 45.8 -3.2
SNR=7.9
ESDC **Sonseca Array** 4.11 42 Pn Pn 03 13 03.2 +1.0
SNR=7.9
CZD **Col de Zad** 4.16 150 P Pn 03 13 01.0 -1.9
CZD S Sn 03 13 43.0 -7.3
CZD **Col de Zad** 4.16 150 *i*P Pn 03 13 01.0 -1.9
KIB **El Ksiba** 4.26 163 P Pn 03 13 02.0 -2.3
KIB S Sn 03 13 44.0 -8.7
KIB **El Ksiba** 4.26 163 *i*P Pn 03 13 02.0 -2.3
EVIA **Vianos** 4.45 62 P Pn 03 13 06.7 -0.1
comp=E,4.5nm,0.4s,SNR=15
EVIA S Sn 03 13 56.6 -0.7
comp=E,9.8nm,0.2s,SNR=7.9
EVIA **Vianos** 4.45 62 Pn Pn 03 13 06.7 -0.1
EVIA Sn Sn 03 13 56.6 -0.7
PTO **Porto** 4.54 350 *e*Pn Pn 03 13 09.2 +1.1
PTO *e*Sn Sn 03 13 57.5 -2.0
TZC **Tazercounte** 4.59 169 P Pn 03 13 05.5 -3.2
TZC S Sn 03 13 52.0 -8.7
TZC **Tazercounte** 4.59 169 *i*P Pn 03 13 05.5 -3.2
PVRL **Vila Real** 4.60 358 *e*Pn Pn 03 13 09.6 +0.7
PVRL *e*Sn Sn 03 13 59.7 -1.4
PVRL
comp=E,35nm,0.1s
GUD **Guadarrama** 4.77 33 P Pn 03 13 12.7 +1.6
comp=E,2.9nm,0.2s,SNR=21
GUD S Sn 03 14 05.1 -0.1
comp=E,5.1nm,0.2s,SNR=7.9
GUD **Guadarrama** 4.77 33 Pn Pn 03 13 12.7 +1.6
GUD Sn Sn 03 14 06.3 +1.2
GUD **Guadarrama** 4.77 33 Pn Pn 03 13 12.7 +1.5
comp=E,2.9nm,0.2s,SNR=21
GUD Sn Sn 03 14 06.3 +1.2
SNR=7.9
PCAB **Cabril** 5.05 356 *e*Sn Sn 03 14 10.2 -1.8
PCAB
comp=E,16nm,0.2s
PCAB **Cabril** 5.05 356 S Sn 03 14 10.2 -1.8
comp=E,8.1nm,0.2s
PCAB **Cabril** 5.05 356 *e*Sn Sn 03 14 10.2 -1.8
ETOB **Tobarra** 5.14 66 P Pn 03 13 15.9 -0.4
comp=E,3.4nm,0.3s,SNR=55
ETOB S Sn 03 14 12.2 -2.1
comp=E,9.9nm,0.1s,SNR=7.9
ETOB **Tobarra** 5.14 66 Pn Pn 03 13 15.9 -0.4
ETOB Sn Sn 03 14 13.1 -1.2
ETOB **Tobarra** 5.14 66 Pn Pn 03 13 15.9 -0.4
comp=E,3.4nm,0.3s,SNR=55
ETOB Sn Sn 03 14 13.1 -1.2
comp=E,4.5nm,0.1s,SNR=7.9
EMUR **La Murta** 5.16 75 P Pn 03 13 16.8 +0.4
comp=E,2.3nm,0.3s,SNR=7.0
EMUR S Sn 03 14 12.1 -2.5
comp=E,3.8nm,0.3s,SNR=7.9
EMUR **La Murta** 5.16 75 Pn Pn 03 13 16.8 +0.4
EMUR Sn Sn 03 14 13.4 -1.1
EMUR **La Murta** 5.16 75 Pn Pn 03 13 16.8 +0.4
comp=E,2.3nm,0.3s,SNR=7.0
EMUR Sn Sn 03 14 13.5 -1.1
comp=E,3.4nm,0.2s,SNR=7.9
PBRG **Braganca** 5.17 7 *e*Pn Pn 03 13 17.4 +0.8
PBRG *e*Sn Sn 03 14 12.6 -2.3
PBRG
comp=E,20nm,0.3s
PBRG **Braganca** 5.17 7 *e*Pn Pn 03 13 17.4 +0.8
CIA **Chichaoua** 5.19 192 P Pn 03 13 15.0 -1.9
CIA S Sn 03 14 06.0 -9.5
CIA **Chichaoua** 5.19 192 *i*P Pn 03 13 15.0 -1.9
ELOB **Lobios** 5.21 356 P Pn 03 13 18.1 +0.9
comp=E,0.9nm,0.1s,SNR=21
ELOB S Sn 03 14 14.7 -1.2
comp=E,30nm,0.3s,SNR=7.9
ELOB **Lobios** 5.21 356 Pn Pn 03 13 18.1 +0.9
ELOB Sn Sn 03 14 14.7 -1.2
ELOB **Lobios** 5.21 356 Pn Pn 03 13 18.1 +0.9
comp=E,0.9nm,0.1s,SNR=21
ELOB Sn Sn 03 14 14.7 -1.2
comp=E,0.6nm,0.1s,SNR=7.9
ECAL **Calabor** 5.30 6 P Pn 03 13 19.5 +1.1
comp=E,1.6nm,0.1s,SNR=22
ECAL S Sn 03 14 17.0 -1.2
comp=E,14nm,0.2s,SNR=7.9
ECAL **Calabor** 5.30 6 Pn Pn 03 13 19.5 +1.1
ECAL Sn Sn 03 14 18.2 0.0
ECAL **Calabor** 5.30 6 Pn Pn 03 13 19.5 +1.0
comp=E,1.6nm,0.1s,SNR=22
ECAL Sn Sn 03 14 18.2 0.0
comp=E,3.0nm,0.1s,SNR=7.9
ZFT **Errachidia** 5.32 149 P Pn 03 13 18.0 -0.7
ZFT S Sn 03 14 12.0 -6.6
ZFT **Errachidia** 5.32 149 *e*P Pn 03 13 18.0 -0.7
OUK **Oukaimeden** 5.45 183 P Pn 03 13 17.0 -3.5
OUK S Sn 03 14 12.0 -10
OUK **Oukaimeden** 5.45 183 *i*P Pn 03 13 17.0 -3.5
EZAM **Zamans** 5.55 351 P Pn 03 13 23.0 +1.1
comp=E,3.8nm,0.1s,SNR=7.9
EZAM S Sn 03 14 21.4 -2.8
comp=E,3.5nm,0.2s,SNR=7.9
EZAM **Zamans** 5.55 351 Pn Pn 03 13 23.0 +1.1
EZAM Sn Sn 03 14 23.6 -0.6
EZAM **Zamans** 5.55 351 Pn Pn 03 13 23.0 +1.2
comp=E,3.8nm,0.1s,SNR=7.9
EZAM Sn Sn 03 14 23.6 -0.6
comp=E,4.7nm,0.2s,SNR=7.9
ECHE **Chera** 5.94 59 P Pn 03 13 27.7 +0.5
comp=E,0.6nm,0.2s,SNR=7.9
ECHE S Sn 03 14 32.0 -1.9
comp=E,0.5nm,0.1s,SNR=7.9
ECHE **Chera** 5.94 59 Pn Pn 03 13 27.2 0.0
ECHE Sn Sn 03 14 33.6 -0.3
ECHE **Chera** 5.94 59 Pn Pn 03 13 27.2 0.0
SNR=7.9
ECHE Sn Sn 03 14 33.6 -0.3
SNR=7.9
EBEN **Beniarda** 6.14 68 P Pn 03 13 30.0 0.0
comp=E,15nm,0.9s,SNR=8.2
EBEN S Sn 03 14 36.3 -2.5
comp=E,1.0nm,0.1s,SNR=7.9
EBEN **Beniarda** 6.14 68 Pn Pn 03 13 30.0 0.0
EBEN Sn Sn 03 14 37.6 -1.2
EBEN **Beniarda** 6.14 68 Pn Pn 03 13 30.0 0.0
comp=E,15nm,0.9s,SNR=8.2
EBEN Sn Sn 03 14 37.6 -1.2
comp=E,0.7nm,0.1s,SNR=7.9
STS **Santiago** 6.26 353 P Pn 03 13 32.4 +0.9
comp=E,0.7nm,0.3s,SNR=7.9
STS S Sn 03 14 39.3 -2.4
comp=E,2.3nm,0.2s,SNR=7.9
STS **Santiago** 6.26 353 Pn Pn 03 13 32.4 +0.9
STS Sn Sn 03 14 41.5 -0.2
STS **Santiago** 6.26 353 Pn Pn 03 13 32.4 +0.8
comp=E,0.7nm,0.3s,SNR=7.9
STS Sn Sn 03 14 41.5 -0.2
SNR=7.9
EMAZ **Mazaricos** 6.37 350 P Pn 03 13 34.0 +0.9
comp=E,2.7nm,0.4s,SNR=7.9
EMAZ S Sn 03 14 42.7 -1.7
comp=E,2.6nm,0.1s,SNR=7.9
EMAZ **Mazaricos** 6.37 350 Pn Pn 03 13 34.0 +0.9
EMAZ Sn Sn 03 14 42.7 -1.7
EMAZ **Mazaricos** 6.37 350 Pn Pn 03 13 34.0 +0.9
comp=E,2.7nm,0.4s,SNR=7.9
EMAZ Sn Sn 03 14 42.7 -1.7
comp=E,1.0nm,0.2s,SNR=7.9
EMOS **Mosqueruela** 6.65 54 P Pn 03 13 38.1 +1.1
comp=E,8.5nm,0.5s,SNR=7.9
EMOS S Sn 03 14 48.6 -2.7
comp=E,3.5nm,0.2s,SNR=7.9
EMOS **Mosqueruela** 6.65 54 Pn Pn 03 13 38.1 +1.1
EMOS Sn Sn 03 14 51.1 -0.2
EMOS **Mosqueruela** 6.65 54 Pn Pn 03 13 38.1 +1.2
comp=E,8.5nm,0.5s,SNR=7.9
EMOS Sn Sn 03 14 51.2 -0.1
EPON **Pontenova** 6.66 2 P Pn 03 13 38.0 +1.0
comp=E,0.1nm,0.1s,SNR=7.9
EPON S Sn 03 14 49.4 -2.0
comp=E,1.3nm,0.2s,SNR=7.9
EPON **Pontenova** 6.66 2 Pn Pn 03 13 38.0 +1.0
EPON Sn Sn 03 14 50.7 -0.7
EPON **Pontenova** 6.66 2 Pn Pn 03 13 38.0 +1.0
comp=E,0.1nm,0.1s,SNR=7.9
EPON Sn Sn 03 14 50.7 -0.8
comp=E,0.3nm,0.1s,SNR=7.9
EARI **Arriondas** 6.86 14 P Pn 03 13 41.1 +1.3
comp=E,0.2nm,0.2s,SNR=7.9
EARI S Sn 03 14 54.6 -1.8
comp=E,0.8nm,0.2s,SNR=7.9
EARI **Arriondas** 6.86 14 Pn Pn 03 13 41.1 +1.3
EARI Sn Sn 03 14 54.7 -1.8
EARI **Arriondas** 6.86 14 Pn Pn 03 13 41.1 +1.3
comp=E,0.2nm,0.2s,SNR=7.9
EARI Sn Sn 03 14 54.7 -1.7
SNR=7.9
ELAN **Lanestosa** 7.27 24 P Pn 03 13 46.5 +1.1
comp=E,0.1nm,0.1s,SNR=7.9
ELAN S Sn 03 15 04.0 -2.5
comp=E,2.3nm,0.2s,SNR=7.9
ELAN **Lanestosa** 7.27 24 Pn Pn 03 13 46.5 +1.1
ELAN Sn Sn 03 15 03.9 -2.6
ELAN **Lanestosa** 7.27 24 Pn Pn 03 13 46.5 +1.1
comp=E,0.1nm,0.1s,SNR=7.9
EIBI **Ibiza** 7.41 69 P Pn 03 13 48.2 +1.0
comp=E,6.9nm,0.5s,SNR=7.9
EIBI S Sn 03 15 05.4 -4.4
comp=E,1.8nm,0.2s,SNR=7.9
EIBI **Ibiza** 7.41 69 Pn Pn 03 13 48.2 +1.0
EIBI Sn Sn 03 15 05.4 -4.5
EIBI **Ibiza** 7.41 69 Pn Pn 03 13 48.2 +0.9
comp=E,6.9nm,0.5s,SNR=7.9
ERTA **Horta de San J** 7.49 53 P Pn 03 13 49.9 +1.6
comp=E,0.1nm,0.2s,SNR=7.9
ERTA S Sn 03 15 09.4 -2.3
comp=E,0.4nm,0.1s,SNR=7.9
ERTA **Horta de San J** 7.49 53 Pn Pn 03 13 49.9 +1.6
ERTA Sn Sn 03 15 09.9 -1.9
ERTA **Horta de San J** 7.49 53 Pn Pn 03 13 49.9 +1.6
comp=E,0.1nm,0.2s,SNR=7.9
ERTA Sn Sn 03 15 09.9 -1.8
comp=E,63nm,1.3s,SNR=7.9
EARA **Aranguren** 7.63 35 P Pn 03 13 52.0 +1.7
comp=E,2.7nm,0.2s,SNR=7.9
EARA S Sn 03 15 12.1 -3.1
comp=E,1.9nm,0.2s,SNR=7.9
EARA **Aranguren** 7.63 35 Pn Pn 03 13 52.0 +1.7
comp=E,2.7nm,0.2s,SNR=7.9
EARA Sn Sn 03 15 12.0 -3.2
SNR=7.9
ELIZ **Elizondo** 7.96 34 P Pn 03 13 56.6 +1.8
comp=E,0.6nm,0.2s,SNR=7.9
ELIZ S Sn 03 15 19.7 -3.7
comp=E,1.5nm,0.3s,SNR=7.9
ELIZ **Elizondo** 7.96 34 Pn Pn 03 13 56.6 +1.8
ELIZ Sn Sn 03 15 18.9 -4.4
EALK **Alkurruntz** 8.01 33 P Pn 03 13 57.4 +1.9
comp=E,1.6nm,0.3s,SNR=7.9
EALK S Sn 03 15 21.3 -3.3
comp=E,3.6nm,0.3s,SNR=7.9
EALK **Alkurruntz** 8.01 33 Pn Pn 03 13 57.4 +1.9
EALK Sn Sn 03 15 21.2 -3.4
SJPF **Ste Jean** 8.06 35 *e*Pn Pn 03 13 57.6 +1.4
SJPF *e*Sn Sn 03 15 23.0 -2.7
comp=E,6.8nm,0.2s
SJPF **Ste Jean** 8.06 35 P Pn 03 13 57.6 +1.4
SJPF S Sn 03 15 23.0 -2.7
comp=E,3.4nm,0.2s
EPOB **Poblet** 8.17 52 P Pn 03 13 58.2 +0.4
comp=E,0.2nm,0.1s,SNR=7.9
EPOB **Poblet** 8.17 52 Pn Pn 03 13 58.2 +0.5
SNR=7.9
ETSF **Etsaut** 8.22 39 *e*Pn Pn 03 13 59.3 +1.0
ETSF *e*Sn Sn 03 15 26.8 -2.8
comp=E,3.8nm,0.3s
ETSF **Etsaut** 8.22 39 P Pn 03 13 59.3 +1.0
ETSF S Sn 03 15 26.8 -2.8
comp=E,1.9nm,0.3s
EBIE **Bielsa** 8.43 42 P Pn 03 14 03.1 +1.9
comp=E,1.6nm,0.3s,SNR=7.9
EBIE S Sn 03 15 31.1 -3.8
comp=E,0.5nm,0.1s,SNR=7.9
EBIE **Bielsa** 8.43 42 Pn Pn 03 14 03.1 +1.8
EBIE Sn Sn 03 15 31.1 -3.9
EBIE **Bielsa** 8.43 42 Pn Pn 03 14 03.1 +1.8
comp=E,1.6nm,0.3s,SNR=7.9
EPF **Esparros** 8.77 41 *e*Pn Pn 03 14 06.7 +0.7
EPF *e*Sn Sn 03 15 40.5 -2.8
comp=E,1.8nm,0.2s
EPF **Esparros** 8.77 41 P Pn 03 14 06.7 +0.7
EPF S Sn 03 15 40.5 -2.8
comp=E,0.9nm,0.2s
MTLF **Montolieu** 10.01 45 *e*Pn Pn 03 14 23.1 +0.2
LFF **La Frestale** 10.37 35 *e*Pn Pn 03 14 28.3 +0.6
CAF **Calviac** 10.99 38 *e*Pn Pn 03 14 36.6 +0.4
RJF **Les Rejaudoux** 11.00 36 *e*Pn Pn 03 14 36.6 +0.2
RJF *e*Sn Sn 03 16 32.6 -5.2
comp=E,2.2nm,0.4s
RJF **Les Rejaudoux** 11.00 36 *e*Pn Pn 03 14 36.6 +0.2
RJF *e*Sn Sn 03 16 32.6 -5.2
comp=E,1.1nm,0.4s
MFF **Saint Martin d** 11.35 27 *e*Pn Pn 03 14 42.0 +0.8

QUIF Quistinic 11.69 15 *e*Pn Pn **03 14 46.2 +0.4**
SGMF Saint Gilles 12.14 16 *e*Pn Pn **03 14 51.8 -0.2**
BGF Bois d'Agland 12.56 35 *e*Pn Pn **03 14 57.8 +0.2**

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*STR **05** 03:31:40.5±0.0, 4302N×066W, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **05** 03:31:40.1±0.4, 4289N×078W, h22km, Md2.3/3, Error ellipse: s-maj=19.9km s-min=3.0km az=12.0*
MDD 05 03:31:40.7±0.4, **4309N**×**066W, h12**km±3km, **mbLg0.7**/7, **Error ellipse: s-maj=5.9km s-min=2.3km az=10.0, PRXIMO SIN SOLUCIN, Pyrenees**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATE Arette 0.03 260 Pg Pg 03 31 42.7 -0.2
ATE Sg Sg 03 31 44.3 -0.1
ATE Arette 0.03 260 Pg Pg 03 31 42.7 -0.1
ATE Lg 03 31 44.3
REYF Montagne du Re 0.20 96 Pg Pg 03 31 44.8 -0.3
REYF Sg Sg 03 31 48.1 +0.1
REYF Montagne du Re 0.20 96 Pg Pg 03 31 44.9 -0.2
REYF Lg 03 31 48.3
ETSF Etsaut 0.21 159 *e*Pg Pg 03 31 45.0 -0.2
ETSF *e*Sg Sg 03 31 48.1 -0.1
3.5nm,0.2s
ETSF Etsaut 0.21 159 Pg Pg 03 31 45.0 -0.2
ETSF Lg 03 31 48.1
1.8nm,0.2s
LARF Larrau 0.24 258 Pg Pg 03 31 45.7 -0.1
LARF Sg Sg 03 31 49.4 +0.1
LARF Larrau 0.24 258 Pg Pg 03 31 45.7 -0.1
LARF Lg 03 31 49.4
SJPF Ste Jean 0.41 273 *e*Pg Pg 03 31 48.5 -0.4
SJPF *e*Sg Sg 03 31 54.4 0.0
3.5nm,0.2s
SJPF Ste Jean 0.41 273 Pg Pg 03 31 48.5 -0.4
SJPF Lg 03 31 54.4
1.8nm,0.2s
IPRE Itoiz 0.58 241 Lg 03 32 00.1
0.3nm,0.1s,SNR=7.9
EALK Alkurruntz 0.63 282 Pg Pg 03 31 52.3 -0.7
0.3nm,0.1s,SNR=7.9
EALK Lg 03 32 00.4
0.5nm,0.1s,SNR=5.8
ELIZ Elizondo 0.64 277 Pg Pg 03 31 52.1 -1.1
0.2nm,0.2s,SNR=7.9
ELIZ Lg 03 32 01.1
0.9nm,0.1s,SNR=11
IUSE Utxeti 0.67 258 Lg 03 32 01.9
1.9nm,0.2s,SNR=7.9
EBIE Bielsa 0.72 124 Pg Pg 03 31 53.4 -1.2
0.1nm,0.0s,SNR=7.5
EBIE Lg 03 32 03.2
1.0nm,0.1s,SNR=12
EPF Esparros 0.74 94 *e*Pg Pg 03 31 56.6 +1.6
EPF *e*Sn Sg 03 32 05.2 +0.6
EPF *e*Sg Sg 03 32 07.1 +2.5
0.9nm,0.2s
EPF Esparros 0.74 94 Pn Pn 03 31 56.6 -0.3
EPF Sn Sg 03 32 05.2 +0.6
EPF Lg 03 32 07.1
0.4nm,0.2s

IDC 05 03:47:07.7±12.0, **069N**×**12230E, h85**km±113km, **mb3.3**/3, **mb1 3.5**/4, **mb1mx3.2**/18, **mbtmp3.6**/4, **ML3.8**/1, **MS3.7**/2, **Ms1 3.7**/2, **ms1mx2.9**/14, **Error ellipse: s-maj=138.2km s-min=30.9km az=61.0, Minahassa Peninsula, Sulawesi**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 18.96 170 *e*P Pn 03 51 22.5 -1.2
5.9nm,1.2s
FITZ Fitzroy Crossi 18.96 170 P Pn 03 51 22.4 -1.3
0.2nm,0.3s,baz=276,slow=16,SNR=8.0
WRA Warramunga Arr 23.66 151 P P 03 52 11.7 +0.3
1.0nm,0.4s,baz=333,slow=8.3,SNR=18
WB2 Warramunga Arr 23.67 151 *e*P P 03 52 12.3 +0.9
ASAR Alice Springs 26.71 156 P P 03 52 39.6 +0.7
0.4nm,0.5s,baz=341,slow=13,SNR=8.9
PMG Port Moresby 26.71 113 LR LR 04 03 50.1
comp=Z,118nm,19.5s,baz=43,slow=38
NWAO Narrogin (SRO) 33.78 188 LR LR 04 09 11.8
comp=Z,147nm,20.9s,baz=226,slow=39
MKAR Makanchi Array 57.66 328 P P 03 56 50.3 +1.2
0.3nm,0.3s,baz=115,slow=8.6,SNR=5.5
TORD Torodi Ar. Bea 119.55 285 PKP PKPdf 04 05 46.5 -1.1
0.5nm,1.0s,baz=88,slow=1.4,SNR=4.5

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*NIED **05** 03:51:00, 4680N×15300E, h56km, Mw4.9 Best double couple: M₀2.48000×10^16 NP1:φs77.00000°, δ82.00000°, λ86.00000°. NP2:φs284.00000°, δ8.00000°, λ116.00000°.*
*SKHL **05** 03:51:49.5±1.4, 4660N×15320E, h49km±5km, mb5.0/9, mbv5.9/3, ms3.7/1, msh5.0/3*
*JMA **05** 03:51:50.1±0.7, 4680N×15304E, h30km, M5.1*
*MOS **05** 03:51:51.8±0.9, 4686N×15278E, h62km, mb4.8/38, Error ellipse: s-maj=9.1km s-min=6.3km az=85.6*
*ISCJB **05** 03:51:51.4±0.1, 4678N±004×15275E±003, h57km, mb4.5/89, MS3.8/20, Error ellipse: s-maj=5.5km s-min=2.2km az=134.6*
*NEIC **05** 03:51:53.4±0.3, 4690N×15269E, mb4.7/60, Error ellipse: s-maj=8.0km s-min=4.8km az=171.0*
*BJI **05** 03:51:53.6, 47.18N×15292E, h72km, mB4.5, mb4.6, Ms4.0, Msz3.7*
*IDC **05** 03:51:53.2±0.6, 4686N×15264E, h57km±5km, mb4.0/20, mb1 4.2/20, mb1mx4.1/25, mbtmp4.3/20, MS3.8/13, Ms1 3.8/13, ms1mx3.5/30, Error ellipse: s-maj=15.8km s-min=11.4km az=126.0*
ISC 05 03:51:53.4±0.1, **4684N**±003×**15265E**±003, **h59**km, **h59**km±1.4km**:pP-P, n372,** σ**0.95**/380, **mb4.5**/89, **MS3.8**/20, **67C-63D, Kuril Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 3.70 246⇓*i*P Pn **03 52 47.2 -0.8**
KUR *i*P 03 52 47.2
KUR AMB AMB 03 52 48.0
3μm,1.0s
KUR AMB AMB 03 52 48.0
140nm,0.6s
KUR AMB AMB 03 52 48.0
120nm,0.6s
KUR AMB AMB 03 52 48.0
530nm,0.6s
KUR *e*S Sn **03 53 32.0 +1.7**
KUR A 03 53 49.0
6μm,2.0s
KUR A 03 53 49.0
3μm,2.0s
KUR Kuril'sk 3.70 246*b i*PN Pn **03 52 47.2 -0.8**
KUR *i*S Sn **03 53 32.0 +1.7**
KUR pmax pmax
comp=Z,3μm,1.0s
KUR pmax pmax
comp=N,140nm,0.6s
KUR pmax pmax
comp=E,120nm,0.6s
KUR pmax pmax
comp=Z,530nm,0.6s
KUR smax
comp=N,1μm,0.6s
KUR smax
comp=E,2μm,0.6s
KUR smax
comp=N,6μm,2.0s
KUR smax
comp=E,3μm,2.0s
SKR Severo-Kuril's 4.48 30 *e*P Pn **03 52 53.1 -5.6**
SKR AMB AMB 03 52 58.7
comp=E,1μm,2.0s
SKR AMB AMB 03 52 58.7
comp=E,130nm,0.5s
SKR AMB AMB 03 52 58.7
comp=E,360nm,0.5s
SKR AMB AMB 03 52 58.7
comp=E,510nm,0.5s
SKR pP 03 53 07.5
SKR *e*S Sn **03 53 40.1 -9.3**
SKR A 03 54 07.0
comp=E,2μm,6.0s
SKR A 03 54 07.0
comp=E,2μm,6.0s
SKR A 03 54 07.0
comp=E,2μm,6.0s
SKR A 03 54 07.0
comp=E,600nm,6.0s
SKR A 03 54 07.0
comp=E,960nm,0.7s
SKR A 03 54 07.0
comp=E,220nm,0.7s
SKR AMS AMS 03 56 12.0
comp=E,1μm,12.0s
PAU Pauzhetka 5.38 29 *i*P Pn **03 53 09.6 -1.4**
PAU *i*S Sn **03 54 08.9 -2.6**
YUK Yuzh-Kuril'sk 5.54 242 *e*P Pn **03 53 14.5 +1.3**
YUK AMB AMB 03 53 16.1
comp=E,350nm,0.5s
YUK AMB AMB 03 53 19.1
comp=E,2μm,2.0s
YUK *e*S Sn **03 54 18.1 +2.6**
YUK A 03 54 34.8
comp=E,2μm,0.6s
YUK A 03 54 34.8
comp=E,810nm,0.6s
YUK A 03 54 45.0
comp=E,6μm,1.0s
YUK A 03 54 45.0
comp=E,6μm,1.0s
YUK Yuzh-Kuril'sk 5.54 242 *e*PN Pn **03 53 14.5 +1.3**
YUK *e*S Sn **03 54 18.1 +2.6**
YUK pmax pmax
comp=Z,350nm,0.4s
YUK pmax pmax
comp=E,190nm,0.5s
YUK pmax pmax
comp=Z,2μm,2.0s
YUK smax
comp=N,2μm,0.8s
YUK smax
comp=E,810nm,0.5s
YUK smax
comp=N,6μm,1.0s
YUK smax
comp=E,6μm,1.0s
NEM2 Nemuro 2 6.00 237 P Pn **03 53 18.8 -0.7**
NEM2 *e*S Sn **03 54 24.6 -2.1**
JRA Rausu 6.04 244 P Pn **03 53 22.4 +2.3**
JNK Nakash 6.48 243 P Pn **03 53 27.8 +1.7**
YSS Yuzh-Sakhalins 6.78 275⇓*e*P Pn **03 53 34.2 +4.0**
YSS AMB AMB 03 53 35.8
comp=E,60nm,0.9s
YSS sP 03 53 53.9
YSS AMB AMB 03 53 55.8
comp=E,50nm,0.9s
YSS AMB AMB 03 53 55.8
comp=E,80nm,0.9s
YSS *i*S Sn **03 54 51.9 +5.9**
YSS A 03 54 54.0
comp=E,40nm,0.7s
YSS A 03 54 54.0
comp=E,50nm,0.7s
YSS AMS AMS 03 56 28.0
comp=E,300nm,14.0s
YSS Yuzh-Sakhalins 6.78 275*c i*PN Pn **03 53 34.1 +3.9**
YSS pmax pmax
comp=Z,60nm,1.0s
YSS Yuzh-Sakhalins 6.78 275 *e*Pn Pn **03 53 34.0 +3.8**
comp=Z,45nm,0.6s
JTKR Abashiri--Toko 6.79 248 P Pn **03 53 33.1 +2.8**
JAK Akkeshi 6.83 239 P Pn **03 53 30.4 -0.5**
JAK *e*S Sn **03 54 44.5 -2.7**
JMP Maruseppu 7.12 250 P Pn **03 53 37.7 +2.8**
JAR Ashorobuto 7.21 244 P Pn **03 53 38.3 +2.1**
PET Petropavlovsk 7.30 30 *e*P Pn **03 53 36.2 -1.1**
PET AMB AMB 03 53 38.5
comp=Z,40nm,0.8s
PET AMB AMB 03 53 41.6
comp=Z,200nm,2.0s
PET AMB AMB 03 53 41.8
comp=Z,90nm,0.9s
PET A 03 54 56.2
comp=Z,110nm,0.6s
PET *e*S Sn **03 54 58.5 -0.2**
PET A 03 54 59.6
comp=Z,150nm,0.7s
PET A 03 55 00.1
comp=Z,210nm,0.6s
PET A 03 55 03.5
comp=Z,300nm,6.0s
PET AMS AMS 03 55 03.6
comp=Z,700nm,21.0s
PET AMS AMS 03 56 00.5
comp=Z,600nm,20.0s
PET Petropavlovsk 7.30 30 *e*PN Pn **03 53 36.6 -0.7**
PET pmax pmax
comp=Z,200nm,2.0s
PET pmax pmax
comp=Z,95nm,0.9s
PET MLR MLR
comp=Z,700nm,26.0s
PET MLR MLR
comp=Z,600nm,20.0s
PET Petropavlovsk 7.30 30 *e*Pn Pn **03 53 36.3 -1.0**
comp=Z,64nm,0.7s
JOB Onbets 7.39 241 P Pn **03 53 39.0 +0.4**
JOB *e*S Sn **03 54 59.4 -1.7**
UGL Uglegorsk 7.45 291 *e*P Pn **03 53 44.0 +4.6**
UGL AMB AMB 03 53 47.0
comp=Z,40nm,0.5s
UGL AMS AMS 03 56 30.0
comp=Z,400nm,17.0s
UGL AMS AMS 03 56 30.0
comp=Z,500nm,17.0s
ASAJ Asahikawa 7.57 253 P Pn **03 53 45.1 +4.1**
comp=Z,5.3nm,0.3s,baz=79,slow=15,SNR=48
ASAJ S Sn **03 55 13.0 +7.6**
baz=102,slow=19,SNR=1.1
ASAJ Asahikawa 7.57 253 P Pn **03 53 45.0 +4.0**
ASAJ Asahikawa 7.57 253 PN Pn **03 53 45.2 +4.2**
ASAJ S Sn **03 55 13.0 +7.6**
ASAJ pmax pmax
comp=Z,5.0nm,0.3s
JKK2 Kamakawa 2 7.58 251 P Pn **03 53 44.4 +3.3**
TYV Tymovskoe 7.72 305 *e*P Pn **03 53 47.0 +3.9**
TYV AMB AMB 03 53 57.0
comp=Z,10.0nm,0.8s
TYV AMB AMB 03 53 57.0
comp=Z,30nm,0.8s
JCH Churui 7.84 241 P Pn **03 53 44.4 -0.4**
JCH *e*S Sn **03 55 10.1 -2.0**
JSS Shosan 7.95 256 P Pn **03 53 53.0 +6.7**
JEM Erimo 8.33 238 P Pn **03 53 51.8 +0.4**
JBT2 Biratori 2 8.36 245 P Pn **03 53 52.3 +0.4**
JNBK Urakawa-nobuka 8.41 241 P Pn **03 53 51.9 -0.6**
JEW Eniwo 8.90 247 P Pn **03 54 00.4 +1.1**
JSK Shakotan 9.29 252 P Pn **03 54 09.3 +4.8**
JNB Noboribetsu 9.36 246 P Pn **03 54 05.8 +0.4**
JNB *e*S Sn **03 55 48.3 -0.8**
JKB Kayabe 9.68 243 P Pn **03 54 08.9 -0.9**
JKB *e*S Sn **03 55 52.2 -4.8**
JSH Shimam 9.90 249 P Pn **03 54 14.4 +1.5**
JYM2 Yakumo 2 9.96 246 P Pn **03 54 13.8 +0.1**
JSR Shiriuchi 10.26 243 P Pn **03 54 18.0 +0.2**
JTM Tenmabayashi 10.32 238 P Pn **03 54 16.5 -2.2**
JTM *e*S Sn **03 56 05.4 -7.4**
JANG Nango 10.34 235 P Pn **03 54 15.6 -3.3**
JANG *e*S Sn **03 56 04.9 -8.2**
JTH Tanohata 10.44 233 P Pn **03 54 16.4 -3.9**
JOSM Okushiri--Mats 10.55 248 P Pn **03 54 22.3 +0.6**
OFUJ Ofunato 11.17 230 P Pn **03 54 26.5 -3.7**
TEY Ternei 11.32 267 *e*P Pn **03 54 33.0 +0.7**
GRNR Gornyy 11.40 296 *e*P Pn **03 54 32.6 -0.7**
GRNR AMB AMB 03 54 34.0
comp=Z,42nm,1.0s
JRG Rokugo 11.50 234 P Pn **03 54 32.3 -2.4**
JRG *e*S Sn **03 56 32.8 -8.7**
JIO Ouri 11.80 229 *e*S Sn **03 56 37.6 -11**
HABR Khabarovsk 11.98 284 *e*PN Pn **03 54 42.7 +1.4**
JYA Atsumi 12.57 234 P Pn **03 54 46.9 -2.5**
MA2 Magadan 12.81 356*d i*PN Pn **03 54 53.4 +0.8**
MA2 pmax pmax
comp=Z,100nm,0.6s
MA2 pmax pmax
comp=N,50nm,0.5s
MA2 Magadan 12.81 356 *e*Pn Pn **03 54 53.3 +0.7**
comp=N,72nm,0.5s
JFK Kawauchi 12.87 227 P Pn **03 54 50.6 -2.8**
JFY Yanaizu 13.44 230 P Pn **03 54 58.3 -2.9**
EKMR Ekimchan 14.11 303 *e*P Pn **03 55 11.7 +1.6**
EKMR AMB AMB 03 55 17.5
comp=N,4.0nm,0.5s
KLR Kul'dur 14.18 287 *e*P Pn **03 55 13.2 +2.1**
MJAR Matsushiro Arr 14.88 231 P Pn **03 55 17.6 -2.7**
comp=N,0.5nm,0.3s,baz=23,slow=14,SNR=17
MAJO Matsushiro 14.88 231 *e*P Pn **03 55 26.4 +6.1**
MAJO pmax pmax
comp=Z,17nm,0.6s
MAJO Matsushiro 14.88 231 *e*P Pn **03 55 26.4 +6.1**
comp=Z,17nm,0.6s
MAT Matsushiro 14.88 231 P Pn **03 55 17.7 -2.6**
MAT *e*S Sn **03 58 16.0 +12**
MAT Matsushiro 14.88 231 *e*P Pn **03 55 18.0 -2.3**
SMY Shemya 15.03 59 *e*P Pn **03 55 18.5 -3.7**
SMY pmax pmax
comp=Z,56nm,0.6s
SMY Shemya 15.03 59 *e*P Pn **03 55 18.5 -3.6**
comp=Z,56nm,0.6s
JNG Nsakai 15.04 231 P Pn **03 55 20.2 -2.1**
MDJ Mudanjiang 16.24 271 P Pn **03 55 40.8 +3.2**
MDJ AP pP 03 55 54.1 +1.7
MDJ XP sP 03 56 00.5 +0.6
MDJ S **S** **03 58 42.9 -3.9**
MDJ SCP ScP 04 04 01.3 +3.1
MDJ PCS PcS 04 04 07.0 +2.5
MDJ AMB AMB
comp=Z,18nm,0.8s
MDJ AMB AMB
comp=Z,91nm,10.9s
MDJ LR LR
comp=N,33nm,15.9s
MDJ LR LR
comp=E,151nm,24.9s
MDJ Mudanjiang 16.24 271 *e*P Pn **03 55 40.6 +3.0**
comp=E,16nm,0.8s
YAK Yakutsk 20.07 328⇑*i*P P **03 56 23.0 +1.2**
YAK pmax pmax
comp=Z,20nm,0.7s
CBIJ Chichi jima 21.37 206 LR LR 04 02 37.1
comp=Z,240nm,20.1s,MS3.6,baz=119,slow=30
BILL Bilibino 22.38 13*c i*P P **03 56 46.7 +0.2**
BILL *e**PP 03 57 00.3
BILL pmax pmax
comp=Z,11nm,1.2s,mb4.2
BILL MLR MLR
comp=Z,300nm,15.0s,MS3.8
BOD Bodaibo 25.68 310 *e*P P **03 57 16.9 -0.9**
BOD pmax pmax
comp=Z,3.0nm,1.2s,mb3.7
TIXI Tiksi 27.29 344⇑*e*P P **03 57 31.4 -0.9**
TIXI pmax pmax
comp=Z,15nm,1.0s,mb4.5
HHC Hu-ho-hao-te 29.97 274 *e*P P **03 58 00.0 +3.9**
HHC AP pP 03 58 14.8 +4.1
HHC XP sP 03 58 22.2 +4.6
HHC PP PP 03 58 59.9 -4.6
HHC PCP PcP 04 01 00.1 +2.9
HHC S **S** **04 02 53.3 +3.7**
HHC XS sS 04 03 18.1 +3.6
HHC SS SS 04 04 34.3 -25
HHC SCP ScP 04 04 36.7 +2.4
HHC PCS PcS 04 04 43.3 +2.7
HHC SCS ScS 04 08 30.0 +0.3
HHC AMB AMB
comp=Z,11nm,0.9s,mb4.6
HHC AMB AMB
comp=Z,65nm,4.6s
HHC LR LR
comp=N,179nm,16.1s,MS3.8
HHC LR LR
comp=E,115nm,19.9s,MS3.8
HHC LR LR
comp=Z,163nm,19.0s,MS3.7
ULN Ulaanbaatar 30.57 289⇓*e*P P **03 58 05.1 +3.8**
ULN Ulaanbaatar 30.57 289 *e*P P **03 58 05.8 +4.5**
comp=Z,5.2nm,0.9s,mb4.4
SONM Songino Array 31.00 289 P P **03 58 04.7 -0.5**
comp=Z,0.5nm,0.7s,mb3.5,baz=60,slow=8.7,SNR=3.4
ZAK Zakamensk 32.35 295 *e*P P **03 58 18.0 +1.0**
TTA Tatalina 32.56 42 *e*P P **03 58 18.4 -0.5**
TTA *e**PP pP 03 58 32.9 -0.7
TTA pmax pmax
comp=Z,14nm,0.7s,mb5.0
TTA Tatalina 32.56 42 *e*P P **03 58 18.4 -0.5**
comp=Z,14nm,0.7s,mb5.0
TTA *e*pP pP 03 58 32.9 -0.7
GUMO Guam 33.78 194 LR LR 04 09 29.3
comp=Z,97nm,21.8s,MS3.5,baz=332,slow=31
IMA2 Indian Mountai 33.92 36 *e*P P **03 58 30.0 -0.7**
IMA2 *e*pP pP 03 58 44.5 -1.0
KDAK Kodiak Island 34.29 51 P P **03 58 32.2 -1.8**
comp=Z,8.7nm,0.6s,mb4.9,baz=338,slow=7.9,SNR=7.6
KDAK Kodiak Island 34.29 51 P P **03 58 32.2 -1.8**
XAN Xi'an 35.21 265 P P **03 58 43.2 +1.4**
XAN AMB AMB
comp=Z,4.0nm,0.7s,mb4.5
MCK McKinley 35.79 40 *e*P P **03 58 46.4 -0.4**
MCK *e**PP pP 03 59 00.9 -0.7
MCK pmax pmax
comp=Z,13nm,1.4s,mb4.7
MCK McKinley 35.79 40 *e*P P **03 58 46.4 -0.4**
comp=Z,13nm,1.4s,mb4.7
MCK *e*pP pP 03 59 00.9 -0.7
COLA College 36.27 38 *e*P P **03 58 50.6 -0.3**
COLA pmax pmax
comp=Z,27nm,1.1s,mb5.1
COLA College 36.27 38 *e*P P **03 58 50.6 -0.3**
comp=Z,27nm,1.1s,mb5.1
GTA Gaotai 38.64 279 *e*P P **03 59 12.7 +1.7**
GTA AMB AMB
comp=Z,2.0nm,0.6s,mb4.0
DAWY Dawson 39.97 39 *e*P P **03 59 21.5 -0.5**
CD2 Chengdu 40.57 265 *e*P P **03 59 28.2 +1.2**
CD2 AP pP 03 59 43.5 +1.5
CD2 S **S** **04 05 34.2 +2.1**
CD2 SS SS 04 08 32.8 -1.0
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
CD2 AMB AMB
comp=Z,40nm,5.0s
CD2 LR LR
comp=E,90nm,16.8s
CD2 LR LR
comp=Z,130nm,15.6s,MS3.9
INK Inuvik 41.75 32 P P **03 59 36.8 +0.2**
comp=Z,9.1nm,0.7s,mb4.5,baz=294,slow=7.4,SNR=38
INK pP pP 03 59 50.9 -0.9
comp=Z,16nm,0.8s,baz=299,slow=7.2,SNR=12
INK Inuvik 41.75 32 *e*P P **03 59 36.7 0.0**
INK *e**PP pP 03 59 50.8 -0.9
INK pmax pmax
comp=Z,16nm,0.8s
INK Inuvik 41.75 32 *e*P P **03 59 36.7 +0.1**
comp=Z,16nm,0.8s,mb4.7
INK *e*pP pP 03 59 50.8 -1.0
WMQ Urumqi 44.60 291 *e*P P **04 00 03.0 +3.3**
WMQ AP pP 04 00 18.0 +3.1
WMQ PP PP 04 01 49.0 +4.4
WMQ S **S** **04 06 35.0 +3.7**
WMQ SS SS 04 09 48.0 -4.8
WMQ AMB AMB
comp=Z,14nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,103nm,4.0s
WMQ LR LR
comp=N,87nm,12.0s,MS4.0
WMQ LR LR
comp=E,76nm,12.0s,MS4.0
WMQ LR LR
comp=Z,58nm,12.0s,MS3.7
KMI Kunming 44.95 259 P P **04 00 08.2 +5.8**
KMI AP pP 04 00 20.7 +3.0
KMI AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
KMI LR LR
comp=Z,64nm,35.1s,MS3.3
DLBC Dease Lake 45.76 46 P P **04 00 09.5 +0.6**
comp=Z,11nm,1.0s,mb4.7,baz=266,slow=6.2,SNR=4.2
MKAR Makanchi Array 46.62 297 P P **04 00 15.7 +0.1**
comp=Z,0.8nm,0.6s,mb3.8,baz=72,slow=7.7,SNR=6.4
MKAR Makanchi Array 46.62 297⇑*e*P P **04 00 16.1 +0.5**

KURK **Kurchatov** 47.05 303 ⇓ *e*P P 04 00 22.2 +3.2
CHKZ **Chkalovo** 50.13 310 *e*P P 04 00 41.9 -0.7
CHKZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
CHKZ **Chkalovo** 50.13 310 *e*P P 04 00 41.9 -0.7
comp=Z,3.3nm,0.9s,mb4.4
YKA **Yellowknife Ar** 51.04 37 P P 04 00 49.0 -0.5
comp=Z,2.0nm,0.7s,mb4.2,baz=297,slow=7.0,SNR=22
YKA pP pP 04 01 03.6 -1.4
comp=Z,6.2nm,0.7s,baz=312,slow=7.5,SNR=26
YKA PcP PcP 04 02 03.7 -1.0
comp=Z,1.2nm,0.7s,baz=304,slow=3.7,SNR=6.4
YKA LR LR 04 24 06.9
comp=Z,48nm,20.5s,MS3.5,baz=0.0,slow=38
YKA **Yellowknife Ar** 51.04 37 *i* P P 04 00 49.0 -0.5
YKA **Yellowknife Ar** 51.04 37 P P 04 00 49.0 -0.5
YKA pP pP 04 01 03.6 -1.4
YKA PcP PcP 04 02 03.7 -1.1
YKA LR LR 04 24 07.0
CM31 **Chiang Mai Arr** 52.08 256 *e*P P 04 01 00.7 +3.4
comp=Z,11nm,0.6s,mb5.0
AAK **Ala-Archa** 53.51 296 ⇓ *e*P P 04 01 08.9 +1.1
AAK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
A04A **Legoe Bay, Lum** 54.04 55 ⇑P P 04 01 11.5 -0.1
baz=54
A05A **Maple Falls** 54.23 54 ⇓P P 04 01 12.4 -0.6
baz=54
C04A **Brinnon** 54.43 56 ⇓P P 04 01 14.4 -0.1
baz=54
B05A **Bryant** 54.62 55 P P 04 01 16.1 +0.1
baz=54,SNR=5.4
ARU **Arti** 54.73 317 *e*P P 04 01 15.5 -1.2
ARU *e*S S 04 08 50.0 -2.7
ARU *e*SS SS 04 12 29.4 -6.9
C05A **Tolt Reservoir** 55.17 55 ⇑P P 04 01 18.7 -1.1
baz=55
D05A **Enumclaw** 55.28 56 ⇓P P 04 01 20.8 +0.2
baz=55
F04A **Amboy** 55.73 57 ⇑P P 04 01 23.9 0.0
baz=56
E05A **Randle** 55.76 56 ⇓P P 04 01 23.8 -0.3
baz=56
I02A **Mapleton** 55.99 60 ⇓P P 04 01 25.5 -0.2
baz=56
I03A **Eugene** 56.34 60 ⇓P P 04 01 28.7 +0.4
baz=56
EDM **Edmonton** 56.48 46 *e*P P 04 01 28.8 -0.4
EDM *e**PP pP 04 01 40.5 -4.5
J02A **Umpqua** 56.51 60 ⇑P P 04 01 30.2 +0.7
baz=56
H04A **Detroit Lake** 56.58 58 ⇑P P 04 01 30.2 +0.3
baz=56
G05A **Wamic** 56.76 57 ⇓P P 04 01 31.8 +0.6
baz=56
HAWA **Hanford** 57.12 55 *e*P P 04 01 33.8 +0.1
comp=Z,0.5nm,1.2s
H05A **Madras** 57.16 58 ⇓P P 04 01 34.5 +0.5
baz=57
NEW **Newport** 57.37 53 P P 04 01 35.4 -0.2
comp=Z,5.2nm,1.0s,mb4.5,baz=316,slow=6.8,SNR=6.2
NEW **Newport** 57.37 53 *e*P P 04 01 34.4 -1.2
NEW *e**PP pP 04 01 50.8 -0.5
NEW pmax pmax
comp=Z,8.0nm,1.1s
NEW **Newport** 57.37 53 *e*P P 04 01 34.4 -1.2
comp=Z,8.0nm,1.1s,mb4.7
NEW *e*pP pP 04 01 50.8 -0.5
I05A **Bend** 57.41 58 ⇑P P 04 01 35.8 0.0
baz=57
ARCES **ARCESS Array B** 57.66 341 P P 04 01 36.5 -1.0
comp=Z,0.4nm,0.4s,mb3.8,baz=30,slow=7.6,SNR=6.7
ARCES PcP PcP 04 02 29.9 -0.2
comp=Z,2.5nm,0.9s,baz=35,slow=5.0,SNR=5.7
ARCES LR LR 04 31 06.7
comp=Z,74nm,18.3s,MS3.8,baz=36,slow=41
ARCES **ARCESS Array B** 57.66 341 P P 04 01 36.6 -1.0
ARCES 04 02 29.9
F08A **Pendleton** 57.89 56 ⇑P P 04 01 39.6 +0.4
baz=58
J05A **Fort Rock** 57.95 59 ⇓P P 04 01 40.4 +0.8
baz=58
M02C **Callahan** 58.10 62 ⇓P P 04 01 41.0 +0.4
baz=58
I06A **Prineville** 58.16 58 ⇑P P 04 01 41.8 +0.8
baz=58
M04C **Macdoel** 58.48 61 ⇓P P 04 01 43.9 +0.7
baz=58
I07A **Izee** 58.49 58 ⇓P P 04 01 44.2 +0.9
baz=58
J06A **Christmas Vall** 58.60 59 ⇓P P 04 01 45.0 +0.8
baz=58
WALA **Waterton Lakes** 58.63 50 *e*P P 04 01 44.4 +0.1
comp=Z,18nm,1.1s,mb5.0
WALA *e*pP pP 04 02 00.5 +0.4
H08A **Prairie City** 58.71 57 P P 04 01 45.6 +0.7
baz=58,SNR=6.4
K06A **Valley Falls** 58.81 59 P P 04 01 46.8 +1.2
baz=58,SNR=5.5
L05A **Lakeview** 58.92 60 ⇑P P 04 01 47.5 +1.1
baz=59
J07A **Hines** 59.02 58 ⇑P P 04 01 48.0 +0.9
baz=59
I08A **Drewsey** 59.13 57 ⇓P P 04 01 48.3 +0.4
baz=59,SNR=7.6
M05C **Lookout** 59.15 61 ⇓P P 04 01 47.8 -0.1
baz=59
H09A **Durkee** 59.20 56 ⇓P P 04 01 49.0 +0.8
baz=59,SNR=5.2
I09A **Lost Marbles R** 59.57 57 ⇑P P 04 01 51.2 +0.3
baz=59
L07A **Adell** 59.82 59 ⇓P P 04 01 53.2 +0.7
baz=60
MNRC **McLaughlin Nat** 59.86 64 ⇓P P 04 01 53.4 +0.5
baz=60
K08A **Mann Creek Ran** 59.89 58 ⇑P P 04 01 53.8 +0.8
baz=60,SNR=6.4
MSO **Missoula** 59.96 52 *e*P P 04 01 53.2 -0.3
comp=Z,12nm,1.2s,mb4.8
WVOR **Wild Horse Val** 59.98 59 *e*P P 04 01 54.0 +0.3
WVOR pmax pmax
comp=Z,12nm,1.1s,mb4.8
WVOR **Wild Horse Val** 59.98 59 *e*P P 04 01 54.0 +0.3
comp=Z,12nm,1.1s,mb4.8
ORV **Oroville** 60.03 63 ⇑P P 04 01 53.3 -0.7
baz=60
OHCM **Honcut** 60.17 63 *e*P P 04 01 54.4 -0.6
CHMT **Chamberlain Mo** 60.28 52 *e*P P 04 01 55.4 -0.4
N06A **Buffalo Meadow** 60.30 61 ⇑P P 04 01 56.5 +0.6
baz=60
L08A **Fields** 60.30 59 ⇑P P 04 01 56.5 +0.7
baz=60
M07A **Soldier Meadow** 60.31 60 ⇓P P 04 01 56.6 +0.6
baz=60,SNR=11
BEKR **Beckwourth** 60.53 62 ⇑P P 04 01 57.3 -0.1
baz=60
SUMG **Summit** 60.63 4 *e*P P 04 01 57.8 -0.3
comp=Z,37nm,1.1s,mb5.4
SUMG *e*pP pP 04 02 12.5 -1.5
O06A **Flanigan** 60.67 61 P P 04 01 58.8 +0.4
baz=60,SNR=5.5
M08A **Happy Creek Ra** 60.74 59 ⇑P P 04 01 59.7 +0.9
baz=60
N07B **Gerlach** 60.80 60 ⇓P P 04 01 59.7 +0.4
baz=60
L09A **Wilkinson Ranc** 60.81 59 ⇓P P 04 02 00.0 +0.7
baz=60
FFC **Flin Flon** 60.88 40 *e*P P 04 01 59.5 -0.3
FFC *e**PP pP 04 02 15.4 -0.2
LAVA **Lava Cap Winer** 60.98 63 ⇓P P 04 02 00.4 -0.1
baz=61
JOF **Joensuu** 61.11 333 *e*P P 04 01 59.9 -1.5
comp=Z,2.0nm,0.6s,mb4.4
JOF **Joensuu** 61.11 333 *e*P P 04 01 59.9 -1.5
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
HRY **Holter Researc** 61.17 51 *e*P P 04 02 01.9 +0.1
HRY *e*pP pP 04 02 18.6 +1.0
O07A **Toulon** 61.24 61 ⇓P P 04 02 02.7 +0.5
baz=61,SNR=6.5
M09A **Marrel Ranch,** 61.30 59 ⇑P P 04 02 03.0 +0.3
baz=61
FCC **Fort Churchill** 61.36 33 *e*P P 04 02 01.5 -1.6
FCC *e**PP pP 04 02 17.1 -1.8
FCC pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
FCC **Fort Churchill** 61.36 33 *e*P P 04 02 01.5 -1.6
comp=Z,9.3nm,0.7s,mb5.0
FCC *e*pP pP 04 02 17.1 -1.8
EGMT **Eagleton** 61.44 49 *e*P P 04 02 03.4 -0.2
comp=Z,13nm,1.0s,mb5.0
EGMT *e*pP pP 04 02 18.5 -1.0
DLMT **Dillon** 61.60 53 *e*P P 04 02 05.3 +0.6
comp=Z,5.2nm,1.0s,mb4.6
N09A **Rock Creek Ran** 61.62 60 ⇑P P 04 02 05.0 +0.2
baz=61
CMB **Columbia Colle** 61.65 64 ⇓P P 04 02 05.1 +0.1
baz=61
HLID **Hailey** 61.72 56 *e*P P 04 02 05.8 +0.3
comp=Z,7.6nm,1.3s,mb4.7
PACP **Pacheco Peak** 61.74 65 ⇓P P 04 02 05.8 +0.2
baz=62
M10A **I.L. Ranch, Tu** 61.78 58 ⇓P P 04 02 06.4 +0.6
baz=62
MCMT **McKenzie Canyo** 61.80 54 *e*P P 04 02 06.1 +0.1
R06C **Coleville** 61.92 63 ⇓P P 04 02 06.3 -0.5
baz=62
BOZ **Bozeman (W)** 61.95 52 *e*P P 04 02 07.6 +0.6
BOZ pmax pmax
comp=Z,18nm,1.1s,mb5.1
BOZ **Bozeman (W)** 61.95 52 *e*P P 04 02 07.6 +0.6
comp=Z,18nm,1.1s,mb5.1
S06C **San Francisco** 62.08 63 ⇑P P 04 02 07.7 -0.1
baz=62,SNR=5.0
S05C **Merced** 62.12 64 ⇓P P 04 02 07.6 -0.6
baz=62
O09A **Fish Creek Ran** 62.24 60 ⇑P P 04 02 09.7 +0.7
baz=62,SNR=5.0
M11A **Holland Ranch,** 62.27 58 ⇑P P 04 02 10.2 +1.0
baz=62
N10A **Dunphy** 62.30 59 ⇑P P 04 02 09.9 +0.6
baz=62
V03C **Hunter Liggett** 62.39 66 ⇓P P 04 02 09.9 0.0
baz=62
O10A **Cortez Mining,** 62.58 60 ⇓P P 04 02 11.8 +0.6
baz=62
QLMT **Earthquake Lak** 62.58 53 *e*P P 04 02 11.9 +0.7
Q08A **Gabbs** 62.63 62 ⇓P P 04 02 11.5 0.0
baz=62
NVAR **Mina Array Bea** 62.67 62 P P 04 02 12.5 +0.6
comp=Z,2.7nm,0.7s,mb4.5,baz=287,slow=8.9,SNR=24
N11A **Elko Archery C** 62.69 59 ⇑P P 04 02 12.7 +0.7
baz=62
T06C **Millerton Lake** 62.72 64 ⇑P P 04 02 11.4 -0.8
baz=62
KCC **Kaiser Creek** 62.76 64 ⇑P P 04 02 11.9 -0.5
baz=62
M12A **Wells** 62.79 58 ⇑P P 04 02 13.6 +1.0
baz=62,SNR=5.3
V04C **Ramage Ranch,** 62.87 66 ⇓P P 04 02 12.4 -0.7
baz=63
PKD **Parkfield** 62.87 66 ⇑P P 04 02 12.3 -0.8
baz=63
GCMT **Greycliff** 62.92 51 *e*P P 04 02 13.9 +0.4
P10A **Eureka** 63.02 60 ⇑P P 04 02 15.0 +0.8
baz=63
N12A **Clover Valley,** 63.08 58 ⇑P P 04 02 15.2 +0.7
baz=63,SNR=5.2
O11A **Cowboy Ranch,** 63.17 59 ⇑P P 04 02 15.9 +0.8
baz=63
KAF **Kangasniemi** 63.23 335 *ep* P 04 02 14.1 -1.4
comp=Z,1.8nm,0.5s,mb4.5,baz=37,slow=6.2
KAF **Kangasniemi** 63.23 335 *e*P P 04 02 14.1 -1.4
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
HELL **Mitchell Peak,** 63.35 64 ⇑P P 04 02 16.0 -0.4
baz=63,SNR=7.6
IMW **Indian Meadow** 63.45 53 *e*P P 04 02 17.5 +0.5
comp=Z,7.4nm,1.0s,mb4.8
FLWY **Flagg Ranch** 63.46 53 *e*P P 04 02 18.3 +1.3
comp=Z,15nm,1.4s,mb4.9
R09A **Tonopah** 63.54 62 ⇑P P 04 02 17.7 +0.1
baz=63,SNR=8.5
N13A **Wendover, West** 63.56 58 ⇑P P 04 02 18.2 +0.5
baz=63
RRI2 **Red Ridge** 63.59 54 *e*P P 04 02 18.9 +0.9
comp=Z,15nm,0.8s,mb5.1
MOOW **Moose Ponds** 63.65 53 *e*P P 04 02 19.0 +0.6
comp=Z,5.2nm,1.0s,mb4.5
TPAW **Teton Pass** 63.71 54 *e*P P 04 02 19.5 +0.8
comp=Z,17nm,1.0s,mb5.0
S09A **Goldfield** 63.78 62 ⇑P P 04 02 19.0 -0.1
baz=64,SNR=5.5
LOHW **Long Hollow** 63.82 53 *e*P P 04 02 20.1 +0.7
comp=Z,11nm,1.3s,mb4.7
FINES **FINESS Array B** 63.82 335 P P 04 02 18.8 -0.6
comp=Z,2.8nm,0.4s,mb4.6,baz=39,slow=7.1,SNR=61
SNOW **Snow King Moun** 63.83 54 *e*P P 04 02 18.9 -0.7
comp=Z,14nm,1.1s,mb4.9
REDW **Red Top Meadow** 63.84 54 *e*P P 04 02 20.6 +1.0
comp=Z,17nm,1.2s,mb5.0
VES **Vestal, Richgr** 63.85 65 ⇓P P 04 02 18.7 -0.9
baz=64
R10A **Warm Springs** 63.97 61 ⇑P P 04 02 20.8 +0.4
baz=64
PKM **Peak Mountain** 64.00 66 ⇓P P 04 02 20.9 +0.3
baz=64
P12A **McGill** 64.04 59 ⇑P P 04 02 21.2 +0.3
baz=64
CWC **Cottonwood Cre** 64.08 64 ⇑P P 04 02 21.0 -0.2
baz=64
LAO **LASA Array** 64.14 49 *e*P P 04 02 21.8 +0.3
comp=Z,18nm,1.0s,mb5.0
GRAC **Grapevine Rang** 64.16 63 ⇑P P 04 02 21.6 0.0
baz=64
ISA **Isabella** 64.34 65 ⇑P P 04 02 21.7 -1.1
baz=64
HWUT **Hardware Ranch** 64.59 56 *e*P P 04 02 24.7 +0.2
comp=Z,9.0nm,1.2s,mb4.7
MPMC **Manual Prospec** 64.69 64 ⇓P P 04 02 25.2 0.0
baz=64,SNR=8.3
DUG **Dugway** 64.80 58 *e*P P 04 02 25.9 +0.1
DUG pmax pmax
comp=Z,11nm,1.3s,mb4.7
DUG **Dugway** 64.80 58 *e*P P 04 02 25.9 +0.1
comp=Z,11nm,1.3s,mb4.7
FURC **Furnace Creek,** 64.81 63 ⇑P P 04 02 26.0 +0.1
baz=64
TPNV **Topopah Spring** 64.87 62 *e*P P 04 02 26.3 0.0
TPNV pmax pmax
comp=Z,11nm,1.3s,mb4.7
TPNV **Topopah Spring** 64.87 62 *e*P P 04 02 26.3 0.0
comp=Z,11nm,1.3s,mb4.7
BW06 **Boulder Array** 64.95 54 *e*P P 04 02 26.7 -0.2
comp=Z,6.5nm,0.9s,mb4.7
PDAR **Pinedale Array** 64.95 54 P P 04 02 27.0 +0.2
comp=Z,5.2nm,0.8s,mb4.6,baz=318,slow=2.6,SNR=51
OBN **Obninsk** 65.06 325 ⇑ *e*P P 04 02 28.1 +0.6
OBN *i* *PP pP 04 02 46.8 +3.3
OBN *e* 04 03 00.9
OBN *e*S S 04 11 00.6 -4.7
OBN pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
EDW2 **Edwards Air Fo** 65.15 65 ⇑P P 04 02 28.2 +0.1
baz=65
U10A **Ash Meadows, A** 65.17 63 ⇑P P 04 02 28.4 +0.2
baz=65
DECC **Green Verdugo** 65.35 66 ⇓P P 04 02 29.1 -0.3
baz=65
SHOC **Shoshone** 65.54 63 ⇓P P 04 02 30.7 +0.1
baz=65
GSC **Goldstone** 65.61 64 ⇑P P 04 02 30.6 -0.5
baz=65
BFSC **Mount Baldy St** 65.78 65 ⇓P P 04 02 31.4 -0.8
baz=66
TUQ **Turquoise Mtn.** 66.06 63 ⇓P P 04 02 33.9 -0.1
baz=66
V11A **Goodsprings** 66.10 63 ⇑P P 04 02 34.5 +0.2
baz=66
HEC **Hector,Ludlow** 66.21 64 ⇑P P 04 02 34.8 -0.1
baz=66
U12A **Valley of Fire** 66.25 62 ⇑P P 04 02 35.5 +0.3
baz=66
MURC **Murrieta** 66.48 66 ⇑P P 04 02 35.9 -0.8
baz=66
V12A **Nelson** 66.53 62 ⇑P P 04 02 37.5 +0.5
baz=66
ULM **Lac du Bonnet** 66.66 41 P P 04 02 36.9 -0.9
comp=Z,1.8nm,0.5s,mb4.4,baz=302,slow=6.9,SNR=5.2
ULM LR LR 04 29 19.3
comp=Z,33nm,20.9s,MS3.5,baz=324,slow=34
ULM **Lac du Bonnet** 66.66 41 *e*P P 04 02 36.7 -1.2
comp=Z,3.6nm,0.8s,mb4.5
W12A **Cal Nev Ari** 66.80 63 ⇓P P 04 02 38.5 -0.2
baz=66
SRU **San Rafael** 66.84 57 *e*P P 04 02 39.0 +0.1
SRU pmax pmax
comp=Z,16nm,1.3s,mb4.9
SRU **San Rafael** 66.84 57 *e*P P 04 02 39.0 0.0
comp=Z,16nm,1.3s,mb4.9
PFO **Pinyon Flat Ob** 66.94 65 ⇓P P 04 02 39.0 -0.6
baz=67
BELC **Belle Mtn.** 66.97 64 ⇑P P 04 02 39.2 -0.6
baz=67
RSSD **Black Hills** 67.01 50 *e*P P 04 02 39.7 -0.3
RSSD pmax pmax
comp=Z,13nm,1.0s,mb4.9
RSSD **Black Hills** 67.01 50 *e*P P 04 02 39.7 -0.4
comp=Z,13nm,1.0s,mb4.9
109C **Camp Elliot, M** 67.02 66 ⇓P P 04 02 39.4 -0.7
baz=67
IRM **Iron Mountain** 67.39 64 ⇓P P 04 02 42.4 0.0
baz=67
W13A **Hualapai Mount** 67.53 62 ⇑P P 04 02 43.4 +0.1
baz=67
SWSC **Sam W. Stewart** 67.80 65 ⇑P P 04 02 45.7 +0.6
baz=68
X13A **Yucca** 67.90 63 ⇑P P 04 02 45.7 0.0
baz=68
PDMCI **Parker Dam,Lak** 67.91 63 ⇑P P 04 02 45.6 -0.1
baz=68
W14A **Seligman** 67.94 62 ⇓P P 04 02 46.5 +0.6
baz=68
NB2 **NORSAR Subarra** 68.04 341 P P 04 02 45.8 -0.7
comp=Z,6.0nm,0.7s,mb4.7,baz=28,slow=6.2
NOA **NORSAR Array B** 68.04 341 P P 04 02 46.1 -0.4
comp=Z,4.6nm,0.6s,mb4.7,baz=27,slow=6.3,SNR=28
NOA LR LR 04 35 42.8
comp=Z,38nm,19.9s,MS3.6,baz=25,slow=39
Y12C **Blythe** 68.05 64 ⇓P P 04 02 46.6 0.0
baz=68
PV10 **Paradox Valley** 68.19 57 *e*P P 04 02 47.6 +0.2
NAO01 **NORSAR Array S** 68.29 341 *e*P P 04 02 47.5 -0.6
comp=Z,2.2nm,0.6s,mb4.4
GLA **Glamis** 68.33 65 ⇑P P 04 02 48.3 -0.1
baz=68
W15A **Williams** 68.46 61 ⇑P P 04 02 50.0 +0.8
baz=68
WRA **Warramunga Arr** 68.50 199 P P 04 02 48.9 -0.5
comp=Z,2.0nm,0.8s,mb4.2,baz=20,slow=6.9,SNR=9.4
WRA pP pP 04 03 05.0 -0.5
comp=Z,3.2nm,0.8s,baz=17,slow=6.6,SNR=8.5
WRA LR LR 04 31 46.7
comp=Z,94nm,21.2s,MS4.0,baz=345,slow=35
WRA **Warramunga Arr** 68.50 199 P P 04 02 48.9 -0.5
WRA *PP pP 04 03 05.0 -0.5
X14A **Yava** 68.56 62 ⇓P P 04 02 50.2 +0.5
baz=68
PV01 **Paradox Valley** 68.62 57 *e*P P 04 02 49.9 -0.3
SMCO **Snowmass** 68.81 55 *e*P P 04 02 51.5 +0.1
comp=Z,5.8nm,0.9s,mb4.5
Y14A **Wickenburg** 68.85 63 ⇓P P 04 02 51.5 -0.1
baz=69
X15A **Humboldt** 68.94 62 ⇓P P 04 02 52.8 +0.6
baz=69,SNR=6.0
FITZ **Fitzroy Crossi** 69.07 208 P P 04 02 53.3 +0.3
comp=Z,4.0nm,0.8s,mb4.4,baz=5.5,slow=9.9,SNR=4.3
ISCO **Idaho Springs** 69.14 54 *e*P P 04 02 53.8 +0.4
ISCO pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
ISCO **Idaho Springs** 69.14 54 *e*P P 04 02 53.8 +0.3
comp=Z,10.0nm,1.2s,mb4.6
Z14A **Wintersburg** 69.28 63 ⇓P P 04 02 54.0 -0.3
baz=69
MVCO **Mesa Verde** 69.30 57 *e*P P 04 02 54.5 +0.1
DZM **Mont Dzumac** 69.71 166 LR LR 04 30 49.3
comp=Z,56nm,18.5s,MS3.8,baz=218,slow=34
115A **Sonoran Desert** 70.17 63 ⇑P P 04 03 00.1 +0.4
baz=70
KIV **Kislovodsk** 70.51 314 *e*P P 04 03 03.1 +1.3
KIV *e* 04 05 38.6
KIV *e*S S 04 12 09.6 -0.9
KIV pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
116A **Eloy** 70.58 63 ⇑P P 04 03 02.5 +0.3
baz=70
ECSD **EROS,Sioux Fal** 71.05 46 *e*P P 04 03 03.7 -1.4
AKASG **Malin Array Be** 71.29 326 P P 04 03 06.0 -0.5
comp=Z,4.0nm,0.5s,mb4.6,baz=32,slow=6.1,SNR=14
AKASG **Malin Array Be** 71.29 326 *i* P P 04 03 06.0 -0.6
AKASG pmax pmax
comp=Z,4.0nm,0.5s
LAZ **Ladron** 72.04 59 *e*P P 04 03 11.5 +0.4
ANMO **Albuquerque** 72.05 58 *e*P P 04 03 11.4 +0.3
comp=Z,1.3nm,1.0s,mb3.8
ASAR **Alice Springs** 72.19 198 P P 04 03 12.7 +0.7
comp=Z,2.7nm,0.7s,mb4.3,baz=18,slow=5.7,SNR=32
ASAR pP pP 04 03 28.6 +0.3
comp=Z,2.0nm,0.9s,baz=12,slow=5.5,SNR=4.7
ASAR LR LR 04 30 23.2
comp=Z,151nm,20.6s,MS4.2,baz=78,slow=32
ASAR **Alice Springs** 72.19 198 P P 04 03 12.7 +0.7
ASAR *PP pP 04 03 28.6 +0.4
SCHQ **Schefferville** 73.35 23 P P 04 03 17.9 -0.9
comp=Z,3.1nm,0.9s,mb4.2,baz=310,slow=10,SNR=3.2
SCHQ LR LR 04 35 14.8
comp=Z,44nm,19.2s,MS3.8,baz=359,slow=36
KWP **Kalwaria** 74.58 329 *e*P P 04 03 26.3 +0.3
AMTX **Amarillo** 74.84 55 *e*P P 04 03 27.4 -0.1
comp=Z,9.7nm,0.8s,mb4.8
MNTX **Cornudas Mount** 75.00 60 *e*P P 04 03 28.4 0.0
comp=Z,3.8nm,1.4s,mb4.1
KOLS **Kelowicke sedi** 75.32 329 *e*P P 04 03 30.0 -0.3
BURAR **Bucovina Array** 75.34 326 ⇓ *i*P P 04 03 30.8 +0.4
CRVS **Cervenica-Dubn** 75.64 329 *es*P sP 04 03 55.1 +0.1
MORC **Moravsky Berou** 76.21 332 ⇓ *i*P P 04 03 36.0 +0.7
CLL **Collm** 76.25 335 ⇓P P 04 03 35.2 -0.4
comp=Z,logA/T=0.8,mb4.5
CLL **Collm** 76.25 335 ⇓ *i*P P 04 03 35.2 -0.4
comp=Z,6.0nm,1.0s,mb4.5
CLL **Collm** 76.25 335 ⇓ *i*P P 04 03 35.2 -0.4
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BRG **Berggiesshubel** 76.36 335 *e*P P 04 03 35.7 -0.5
comp=Z,2.0nm,1.0s,mb4.0
WMOK **Wichita Mounta** 76.56 53 *e*P P 04 03 36.5 -0.8
WMOK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
WMOK **Wichita Mounta** 76.56 53 *e*P P 04 03 36.5 -0.9
comp=Z,3.1nm,0.8s,mb4.3
MLR **Muntele Rosu** 76.81 325 ⇑ *i*P P 04 03 39.5 +0.8
MALT **Malatya** 76.86 313 ⇓ *i*P P 04 03 41.4 +2.4
MALT **Malatya** 76.86 313 *e*P P 04 03 41.0 +2.0
MALT pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
MALT **Malatya** 76.86 313 *e*P P 04 03 41.0 +2.0
comp=Z,2.5nm,0.5s,mb4.4
VYHS **Vyhne** 76.89 330 *e*P P 04 03 39.4 +0.2
comp=Z,2.0nm,1.2s,mb3.9
VRAC **Vranov** 76.92 332 ⇑ *i*P P 04 03 39.9 +0.5
VOIR 77.21 325 ⇓ *i*P P 04 03 41.5 +0.5
CCM **Cathedral Cave** 78.00 46 *e*P P 04 03 44.2 -1.2
CCM pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CCM **Cathedral Cave** 78.00 46 *e*P P 04 03 44.2 -1.2
comp=Z,4.6nm,0.9s,mb4.4
KHC **Kasperske Hory** 78.02 334 *e*P P 04 03 45.5 0.0
BRTR **Keskin Array B** 78.11 316 P P 04 03 46.3 +0.3
comp=Z,1.0nm,0.8s,mb3.8,baz=86,slow=2.2,SNR=6.4
GERES **GERESS Array B** 78.23 334 P P 04 03 46.3 -0.4
comp=Z,0.7nm,0.7s,mb3.7,baz=20,slow=4.3,SNR=8.9
GERES LR LR 04 42 52.5
comp=Z,50nm,18.1s,MS3.9,baz=271,slow=39
STKA **Stephens Creek** 78.98 190 LR LR 04 36 38.3
comp=Z,157nm,20.9s,MS4.3,baz=26,slow=34
BAIF **Baives** 79.69 340 *e*P P 04 03 53.1 -1.6
WCI **Wyandotte Cave** 80.26 43 *e*P P 04 03 56.7 -1.0
WCI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WCI **Wyandotte Cave** 80.26 43 *e*P P 04 03 56.7 -1.0
comp=Z,10nm,0.9s,mb4.8
CDF **Champ du Feu** 80.45 337 *e*P P 04 03 57.6 -1.1
comp=Z,5.4nm,0.8s,mb4.2
CDF **Champ du Feu** 80.45 337 *e*P P 04 03 57.6 -1.1
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CDF **Champ du Feu** 80.45 337 *e*P P 04 03 57.6 -1.1
comp=Z,2.7nm,0.8s,mb4.2
MEZF **Maizieres J'vi** 80.94 339 *e*P P 04 04 00.4 -0.9
comp=Z,12nm,0.8s,mb4.6
MEZF **Maizieres J'vi** 80.94 339 *e*P P 04 04 00.4 -0.9
comp=Z,12nm,0.8s,mb4.9

HAU	**Haudompre**	**81.07**	**338**	eP	**P**	**04 04 00.7**	**-1.3**
HAU				eR			
	comp=Z,72nm,20.2s						
HAU	**Haudompre**	**81.07**	**338**	eP	**P**	**04 04 00.7**	**-1.3**
HAU				LR	LR		
	comp=Z,70nm,20.3s,MS4.0						
HINF	**Hinteralfeld**	**81.11**	**337**	eP	**P**	**04 04 00.8**	**-1.5**
WVT	**Waverly**	**81.20**	**45**	eP	**P**	**04 04 02.2**	**-0.5**
WVT				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
WVT	**Waverly**	**81.20**	**45**	eP	**P**	**04 04 02.2**	**-0.6**
	comp=Z,4.6nm,0.7s,mb4.5						
PLAL	**Pickwick Lake**	**81.99**	**46**	eP	**P**	**04 04 05.6**	**-1.3**
	comp=Z,5.7nm,1.0s,mb4.5						
LOR	**Lormes**	**82.38**	**339**	eP	**P**	**04 04 07.7**	**-1.2**
	comp=Z,12nm,1.0s,mb4.5						
LOR				eR			
	comp=Z,48nm,22.2s						
LOR	**Lormes**	**82.38**	**339**	eP	**P**	**04 04 07.7**	**-1.2**
LOR				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
LOR				MLR	MLR		
	comp=Z,50nm,22.3s,MS3.8						
LOR	**Lormes**	**82.38**	**339**	eP	**P**	**04 04 07.7**	**-1.2**
	comp=Z,5.8nm,1.0s,mb4.5						
LOR				LR	LR		
	comp=Z,50nm,22.3s,MS3.8						
SSF	**Saint Saulge**	**82.66**	**339**	eP	**P**	**04 04 09.1**	**-1.3**
	comp=Z,5.1nm,0.8s,mb4.3						
SSF	**Saint Saulge**	**82.66**	**339**	eP	**P**	**04 04 09.1**	**-1.3**
SSF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
SSF	**Saint Saulge**	**82.66**	**339**	eP	**P**	**04 04 09.1**	**-1.3**
	comp=Z,2.5nm,0.8s,mb4.3						
SWET	**Sewanee**	**82.85**	**45**	eP	**P**	**04 04 10.0**	**-1.4**
AVF	**Avril sur Loir**	**82.95**	**339**	eP	**P**	**04 04 10.1**	**-1.8**
	comp=Z,9.9nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	**82.95**	**339**	eP	**P**	**04 04 10.1**	**-1.8**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	**82.95**	**339**	eP	**P**	**04 04 10.1**	**-1.8**
	comp=Z,4.9nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**82.97**	**339**	eP	**P**	**04 04 11.0**	**-1.0**
	comp=Z,42nm,1.4s,mb5.0						
SMF	**Signal de Mont**	**82.97**	**339**	eP	**P**	**04 04 11.0**	**-1.0**
SMF				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
SMF	**Signal de Mont**	**82.97**	**339**	eP	**P**	**04 04 11.0**	**-1.0**
	comp=Z,21nm,1.4s,mb5.0						
LPL	**La Plagne**	**83.26**	**337**	eP	**P**	**04 04 13.4**	**-0.1**
	comp=Z,12nm,1.1s,mb4.5						
LPL	**La Plagne**	**83.26**	**337**	eP	**P**	**04 04 13.4**	**-0.1**
LPL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
LPL	**La Plagne**	**83.26**	**337**	eP	**P**	**04 04 13.4**	**-0.1**
	comp=Z,5.9nm,1.1s,mb4.5						
LPG	**La Plagne**	**83.28**	**337**	eP	**P**	**04 04 13.4**	**-0.2**
TCF	**Toulx Ste Croi**	**83.69**	**340**	eP	**P**	**04 04 14.0**	**-1.7**
	comp=Z,18nm,1.1s,mb4.8						
TCF	**Toulx Ste Croi**	**83.69**	**340**	eP	**P**	**04 04 14.0**	**-1.7**
TCF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
TCF	**Toulx Ste Croi**	**83.69**	**340**	eP	**P**	**04 04 14.0**	**-1.7**
	comp=Z,9.0nm,1.1s,mb4.8						
MBDF	**Montbardon**	**83.98**	**336**	eP	**P**	**04 04 16.2**	**-1.0**
	comp=Z,20nm,1.2s,mb4.8						
MBDF	**Montbardon**	**83.98**	**336**	eP	**P**	**04 04 16.2**	**-1.0**
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.8						
MBDF	**Montbardon**	**83.98**	**336**	eP	**P**	**04 04 16.2**	**-1.0**
	comp=Z,10nm,1.3s,mb4.8						
ORIF	**Oris-en-Rattie**	**84.05**	**337**	eP	**P**	**04 04 16.6**	**-0.9**
	comp=Z,9.1nm,0.8s,mb4.7						
ORIF				eR			
	comp=Z,57nm,22.2s						
ORIF	**Oris-en-Rattie**	**84.05**	**337**	eP	**P**	**04 04 16.6**	**-0.9**
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
ORIF	**Oris-en-Rattie**	**84.05**	**337**	eP	**P**	**04 04 16.6**	**-0.9**
	comp=Z,4.6nm,0.8s,mb4.7						
ESDC	**Sonseca Array**	**91.37**	**342**	LR	LR	04 48 15.4	
	comp=Z,52nm,18.5s,MS4.0,baz=300,slow=37						
VNDA	**Vanda**	**124.22**	**178**	PKP	PKPdf	04 10 41.7	-3.6
	comp=Z,0.4nm,0.4s,baz=12,slow=4.5,SNR=4.1						
VNDA	**Vanda**	**124.22**	**178**	PKP	PKPdf	04 10 41.7	-3.6
BDFB	**Brasilia**	**144.46**	**36**	PKP	PKPdf	04 11 21.4	-1.6
	comp=Z,4.2nm,0.7s,baz=298,slow=2.1,SNR=6.4						
CFAA	**Coronel Fontan**	**145.29**	**79**	PKPbc	PKPbc	04 11 23.5	-0.8
	comp=Z,0.6nm,1.1s,baz=286,slow=2.9,SNR=14						
PLCA	**Paso Flores**	**148.53**	**95**	PKPbc	PKPbc	04 11 32.8	-0.7
	comp=Z,3.1nm,0.8s,baz=257,slow=3.7,SNR=7.6						
PLCA				pPKPbc	pPKPbc	04 11 48.7	-2.0
	comp=Z,2.9nm,0.8s,baz=324,slow=3.1,SNR=3.2						
PLCA	**Paso Flores**	**148.53**	**95**	PKP2	PKPbc	04 11 32.8	-0.7
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PLCA	**Paso Flores**	**148.53**	**95**	ePKP2	PKPbc	04 11 33.1	-0.4
PLCA	**Paso Flores**	**148.53**	**95**	ePKPbc	PKPbc	04 11 33.1	-0.4
CPUP	**Villa Florida**	**148.70**	**60**	PKPbc	PKPbc	04 11 33.7	-0.2
	comp=Z,2.0nm,0.6s,baz=329,slow=3.7,SNR=9.4						
SNAA	**Sanae**	**152.55**	**197**	PKPbc	PKPbc	04 11 41.6	-1.4
	comp=Z,0.4nm,1.0s,baz=325,slow=2.4,SNR=5.4						
SNAA	**Sanae**	**152.55**	**197**	ePKPbc	PKPbc	04 11 42.8	-0.3

*IDC **05** 03:53:37.2±7.3, 532S×14671E, h166km±69km, mb3.7/2, mb1 3.8/4, mb1mx3.4/13, mbtmp4.1/4, Error ellipse: s-maj=80.5km s-min=52.0km az=138.0*

NEIC 05 03:53:34.0±1.6**, 494S×14658E, h150**km**, mb4.1**/1**, Error ellipse: s-maj=27.4km s-min=20.9km az=75.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.47**	**173**	P	Pn	03 54 40.5	+0.1
	1.9nm,0.3s,baz=287,slow=11,SNR=5.2						
PMG				S	Sn	03 55 27.0	-5.1
	6.1nm,0.3s,baz=244,slow=21,SNR=13						
WRAB	**Tennant Creek**	**19.07**	**218**	eP	P	03 57 44.9	+0.1
	3.9nm,0.4s						
WRA	**Warramunga Arr**	**19.09**	**218**	P	P	03 57 45.5	+0.5
	1.4nm,0.3s,baz=39,slow=12,SNR=42						
AS31	**Alice Springs**	**22.27**	**212**	eP	P	03 58 18.9	0.0
ASAR	**Alice Springs**	**22.27**	**212**	P	P	03 58 19.4	+0.5
	1.5nm,0.5s,baz=46,slow=7.5,SNR=25						
ASPA	**Alice Springs**	**22.27**	**212**	eP	P	03 58 18.9	0.0
FITZ	**Fitzroy Crossi**	**24.29**	**236**	eP	P	03 58 37.7	+0.3
	12nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.29**	**236**	P	P	03 58 37.9	+0.5
	6.8nm,0.5s,baz=43,slow=9.5,SNR=33						
TORD	**Torodi Ar. Bea**	**144.41**	**286**	PKP	PKPdf	04 12 53.9	+1.5
	0.4nm,0.7s,baz=85,slow=2.8,SNR=7.9						

CASC 05 04:00:52.6±2.2**, 1270N×8797W, h100**km±24km**, MD3.6, 1C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.59**	**13**	⇓eP	x	04 01 09.8	
CNCH				eS	x	04 01 22.3	
VSM	**San Miguel**	**0.78**	**338**	⇓eP	x	04 01 11.4	
BLLM	**Bellamira**	**0.78**	**341**	⇓eP	x	04 01 11.2	
BLLM				eS	x	04 01 24.2	
CRIN	**San Cristobal**	**0.90**	**90**	eP	Pn	04 01 12.4	+0.5
CRIN				eS	Sn	04 01 28.8	+2.3
LEON	**Leon**	**1.09**	**105**	eP	Pn	04 01 12.9	-1.1
LEON				eS	Sn	04 01 29.2	-1.0
SNVI	**San Vicente**	**1.24**	**317**	eP	x	04 01 15.5	
SNVI				eS	x	04 01 33.8	
MIRN	**Miramar**	**1.26**	**102**	eP	Pn	04 01 15.6	-0.3
MIRN				eS	Sn	04 01 33.6	+0.1
CNGN	**Cerro Negro**	**1.26**	**99**	eP	Pn	04 01 17.0	+1.0
CNGN				eS	Sn	04 01 35.6	+2.0
LCBS	**La Ceiba**	**1.36**	**314**	⇓eP	x	04 01 17.2	
LCBS				eS	x	04 01 37.6	
LFRS	**El Faro**	**1.40**	**311**	⇓eP	x	04 01 17.2	
LBRS	**Las Brisas**	**1.47**	**315**	⇑eP	x	04 01 19.1	
LBRS				eS	x	04 01 37.7	
BOQS	**Boqueron**	**1.64**	**309**	eP	x	04 01 20.9	
BOQS				eS	x	04 01 43.9	
APYN	**Apoyeque**	**1.65**	**106**	eP	Pn	04 01 21.2	+0.5
APYN				eS	Sn	04 01 43.4	+1.3

SBLS	**San Blas**	**1.97**	**305**	eP	x	04 01 25.4	
SBLS				eS	x	04 01 53.0	

*IDC **05** 04:45:04.6±1.0, 679N×12374E, h0km, mb4.0/9, mb1 4.1/9, mb1mx4.0/20, mbtmp4.0/9, MS3.7/1, Ms1 3.7/1, ms1mx2.7/23, Error ellipse: s-maj=103.0km s-min=15.4km az=67.0*
*MOS **05** 04:45:06.8±0.8, 688N×12392E, h33km, mb4.9/7, Error ellipse: s-maj=72.0km s-min=11.8km az=116.2*
*MAN **05** 04:45:07.7, 694N×12381E, h19km, mb4.5, ML5.3, MS2.3*
*ISCJB **05** 04:45:07.8±0.7, 687N±004×12387E±004, h38km±7km, mb4.3/17, Error ellipse: s-maj=8.3km s-min=4.8km az=75.2*
*BJI **05** 04:45:11.3, 690N×12400E, h63km, mB4.7, mb4.5*
*NEIC **05** 04:45:12.3±3.4, 687N×12399E, h63km±35km, mb4.6/8, Error ellipse: s-maj=45.9km s-min=6.1km az=73.0*

ISC 05 04:45:07.8±1.0**, 688N**±004×**12384E**±004**, h21**km±7km**, n56,** σ0.s97/65**, mb4.3**/17**, 6C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.53**	**50**	⇓iP	**Pb**	**04 45 17.7**	**-0.7**
CTBH				i S	**Sb**	**04 45 24.7**	**-0.9**
PAGZ	**Pagadian**	**1.06**	**335**	eP	**Pn**	**04 45 25.9**	**-1.5**
PAGZ				eS	**Sb**	**04 45 40.1**	**-0.8**
KCP	**Kidapawan**	**1.25**	**84**	⇓iP	**Pn**	**04 45 29.7**	**-0.3**
IPIL	**Ipil**	**1.54**	**306**	⇑eP	**Pn**	**04 45 34.0**	**-0.1**
IPIL				eS	**Sn**	**04 45 53.5**	**0.0**
IPIL	**Ipil**	**1.54**	**306**	eP	**Pn**	**04 45 33.8**	**-0.3**
IPIL				eS	**Sn**	**04 45 52.8**	**-0.7**
BUKP	**Musuan**	**1.57**	**51**	eP	**Pn**	**04 45 34.9**	**+0.5**
DMPH	**Davao City--Mi**	**1.67**	**83**	⇑iP	**Pn**	**04 45 36.8**	**+1.0**
DMPH				i S	**Sn**	**04 45 52.7**	**-3.9**
DAV	**Davao City (W)**	**1.74**	**84**	eP	**Pn**	**04 45 39.0**	**+2.2**
DAV	**Davao City (W)**	**1.74**	**84**	ePn	**Pn**	**04 45 38.2**	**+1.5**
DAV				eSn	**Sn**	**04 45 54.6**	**-3.7**
DCPH	**Dipolog City**	**1.76**	**344**	⇑eP	**Pn**	**04 45 36.6**	**-0.3**
DCPH				eS	**Sn**	**04 45 57.8**	**-0.9**
CGP	**Cagayan de Oro**	**1.78**	**28**	i S	**Sn**	**04 45 58.4**	**-0.9**
MATI	**Mati**	**2.40**	**88**	eP	**Pn**	**04 45 46.1**	**+0.2**
SNPH	**Sibulan**	**2.52**	**346**	eP	**Pn**	**04 45 49.0**	**+1.6**
SNPH				i S	**Sn**	**04 46 25.0**	**+7.5**
TBP	**Tagbilaran**	**2.79**	**1**	eP	**Pn**	**04 45 52.2**	**+1.0**
TBP				eS	**Sn**	**04 46 23.2**	**-1.1**
SCPH	**Surigao**	**3.31**	**29**	⇓eP	**Pb**	**04 46 04.8**	**-1.1**
MSLP	**Maasin**	**3.39**	**17**	eP	**Pb**	**04 46 07.2**	**+0.1**
LLP	**Lapu-Lapu**	**3.42**	**2**	eP	**Pb**	**04 46 09.8**	**+2.2**
LLP				eS	**Sn**	**04 46 41.1**	**+1.5**
GUIM	**Jordan**	**3.92**	**342**	eP	**Pn**	**04 46 07.8**	**+1.0**
RCP	**Roxas**	**4.77**	**347**	⇑eP	**Pn**	**04 46 21.0**	**+2.6**
CUYO	**Cuyo Island**	**4.83**	**325**	eP	**Pn**	**04 46 19.7**	**+0.5**
BUSP	**Coron**	**6.23**	**325**	eP	**Pn**	**04 46 38.6**	**+0.2**
BUSP	**Coron**	**6.23**	**325**	eP	**Sn**	**04 47 43.8**	**-5.1**
BATP	**Bataraza**	**6.28**	**288**	eP	**Pn**	**04 46 37.3**	**-1.8**
KAKA	**Kakadu**	**21.26**	**156**	eP	**P**	**04 49 53.2**	**+0.6**
	125nm,1.9s,mb4.9						
FITZ	**Fitzroy Crossi**	**24.89**	**176**	eP	**P**	**04 50 29.2**	**+0.2**
	3.5nm,0.9s,mb3.9						
FITZ	**Fitzroy Crossi**	**24.89**	**176**	P	**P**	**04 50 28.6**	**-0.4**
	4.9nm,1.1s,mb3.9,baz=342,slow=16,SNR=6.7						
WRAB	**Tennant Creek**	**28.58**	**159**	eP	**P**	**04 51 01.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
WRAB	**Tennant Creek**	**28.58**	**159**	eP	**P**	**04 51 01.8**	**-0.5**
	comp=Z,2.6nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	**28.59**	**159**	P	**P**	**04 51 01.7**	**-0.7**
	comp=Z,1.1nm,0.5s,mb3.9,baz=334,slow=10,SNR=7.2						
WB2	**Warramunga Arr**	**28.59**	**159**	eP	**P**	**04 51 01.6**	**-0.8**
ASAR	**Alice Springs**	**31.91**	**162**	P	**P**	**04 51 31.7**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.4,baz=350,slow=7.5,SNR=6.4						
MJAR	**Matsushiro Arr**	**32.31**	**22**	LR	LR	05 03 15.9	
	comp=Z,119nm,18.8s,baz=210,slow=34						
MDJ	**Mudanjiang**	**37.92**	**7**	P	**P**	**04 52 24.3**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,40nm,3.8s						
STKA	**Stephens Creek**	**42.10**	**157**	eP	**P**	**04 52 58.8**	**+0.5**
	comp=Z,3.8nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**42.10**	**157**	P	**P**	**04 52 58.7**	**+0.4**
	comp=Z,9.1nm,1.0s,mb4.4,baz=321,slow=8.3,SNR=14						
STKA	**Stephens Creek**	**42.10**	**157**	eP	**P**	**04 52 58.4**	**+0.1**
SONM	**Songino Array**	**43.43**	**343**	P	**P**	**04 53 10.0**	**+0.9**
	comp=Z,0.4nm,0.5s,mb3.4,baz=157,slow=8.8,SNR=3.9						
BOD	**Bodaibo**	**51.38**	**353**	eP	**P**	**04 54 09.5**	**-1.4**
MKAR	**Makanchi Array**	**53.34**	**325**	P	**P**	**04 54 26.6**	**+1.1**
	comp=Z,0.6nm,0.7s,mb3.6,baz=122,slow=9.1,SNR=5.7						
MKAR	**Makanchi Array**	**53.34**	**325**	i P	**P**	**04 54 25.7**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**53.34**	**325**	P	**P**	**04 54 26.6**	**+1.2**
KRAR	**Krasnoyarsk**	**54.78**	**339**	⇓eP	**P**	**04 54 41.5**	**+5.5**
KURK	**Kurchatov**	**57.55**	**328**	eP	**P**	**04 54 55.6**	**-0.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
KURK	**Kurchatov**	**57.55**	**328**	⇑iP	**P**	**04 54 55.9**	**+0.1**
KURK	**Kurchatov**	**57.55**	**328**	eP	**P**	**04 54 55.6**	**-0.2**
	comp=Z,8.3nm,1.2s,mb4.6						
BVAR	**Borovoye Array**	**63.12**	**327**	P	**P**	**04 55 34.3**	**+0.4**
	comp=Z,2.9nm,0.8s,mb4.4,baz=120,slow=8.8,SNR=17						
BRVK	**Borovoye**	**63.20**	**327**	eP	**P**	**04 55 34.1**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
BRVK	**Borovoye**	**63.20**	**327**	eP	**P**	**04 55 34.1**	**-0.2**
	comp=Z,7.1nm,1.0s,mb4.8						
CHKZ	**Chkalovo**	**63.30**	**328**	eP	**P**	**04 55 34.7**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.7						
CHKZ	**Chkalovo**	**63.30**	**328**	eP	**P**	**04 55 34.7**	**-0.3**
	comp=Z,8.7nm,1.4s,mb4.7						
ZRNK	**Zerenda**	**63.84**	**327**	eP	**P**	**04 55 38.5**	**-0.1**
ZRNK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
ZRNK	**Zerenda**	**63.84**	**327**	eP	**P**	**04 55 38.5**	**-0.1**
	comp=Z,8.8nm,1.0s,mb4.7						
ARU	**Arti**	**70.75**	**328**	⇑iP	**P**	**04 56 21.7**	**-0.7**
ARU				e		04 56 31.2	
ARU				eS	S	05 06 07.4	+32
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ARU	**Arti**	**70.75**	**328**	eP	**P**	**04 56 21.6**	**-0.8**
	comp=Z,5.4nm,1.0s,mb4.4						
BRTR	**Keskin Array B**	**85.81**	**309**	P	**P**	**04 57 46.0**	**+0.4**
	comp=Z,1.9nm,1.0s,mb4.3,baz=121,slow=5.9,SNR=10						
ARCES	**ARCESS Array B**	**86.51**	**340**	P	**P**	**04 57 48.8**	**-0.3**
	comp=Z,1.7nm,0.9s,mb4.3,baz=60,slow=5.8,SNR=5.1						

*ISCJB **05** 05:01:16.1±0.4, 4449N±002×678E±005, h10km±6km, Error ellipse: s-maj=6.1km s-min=3.2km az=128.7*
*STR **05** 05:01:17.4±0.1, 4448N×685E, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **05** 05:01:17.0±0.1, 4450N×679E, h2km, Md2.1/2, Ml2.1/6, Error ellipse: s-maj=3.5km s-min=1.5km az=91.0*

ISC 05 05:01:16.6±0.4**, 4449N**±002×**679E**±005**, h13**km±6km**, n19,** σ0.s55/30**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.23**	**357**	ePg	**Pg**	**05 01 21.7**	**0.0**
MBDF				eSg	**Sg**	**05 01 25.2**	**+0.2**
	48nm,0.3s						
OG22	**Abries**	**0.35**	**19**	Pg	**Pg**	**05 01 24.0**	**+0.3**
OG22				Sg	**Sg**	**05 01 29.3**	**+0.9**
TOUF	**Mont Tournerai**	**0.58**	**145**	Pg	**Pg**	**05 01 27.9**	**-0.2**
TOUF				Sg	**Sg**	**05 01 35.0**	**-0.8**
MVIF	**Mont Vial**	**0.65**	**156**	Pg	**Pg**	**05 01 30.3**	**+0.9**
MVIF				Sg	**Sg**	**05 01 38.3**	**+0.3**
AUTN	**L'Aution**	**0.68**	**137**	Pg	**Pg**	**05 01 29.7**	**-0.2**
AUTN				Sg	**Sg**	**05 01 38.7**	**-0.1**
LUCF	**Luceram**	**0.72**	**146**	Pg	**Pg**	**05 01 30.7**	**0.0**
LUCF				Sg	**Sg**	**05 01 39.9**	**-0.3**
SAOF	**Saorge**	**0.75**	**132**	Pg	**Pg**	**05 01 31.0**	**-0.2**
SAOF				Sg	**Sg**	**05 01 40.5**	**-0.6**
ORIF	**Oris-en-Rattie**	**0.77**	**304**	ePg	**Pg**	**05 01 31.2**	**-0.4**
ORIF				eSg	**Sg**	**05 01 41.2**	**-0.6**
	3.5nm,0.2s						
REVF	**Revere**	**0.86**	**151**	Pg	**Pg**	**05 01 33.6**	**+0.3**
FRF	**La Foret Royal**	**0.94**	**186**	ePg	**Pg**	**05 01 34.3**	**-0.5**
FRF	**La Foret Royal**	**0.94**	**186**	ePn	**Pn**	**05 01 35.6**	**+0.1**
LPG	**La Plagne**	**1.00**	**359**	ePg	**Pg**	**05 01 36.3**	**+0.3**
SMRF	**Simiane la Rot**	**1.01**	**240**	ePg	**Pn**	**05 01 36.9**	**+0.4**
SMRF	**Simiane la Rot**	**1.01**	**240**	ePn	**Pn**	**05 01 36.9**	**+0.4**
SMRF				eSn	**Sn**	**05 01 50.6**	**0.0**
	4.7nm,0.2s						
TAVF	**Tavernes**	**1.02**	**211**	Pg	**Pg**	**05 01 36.7**	**+0.3**
TAVF				Sg	**Sg**	**05 01 51.2**	**+1.5**
LPL	**La Plagne**	**1.02**	**358**	ePg	**Pg**	**05 01 36.1**	**-0.3**
LMR	**La Mourre**	**1.18**	**190**	ePg	**Pg**	**05 01 39.1**	**-0.2**
VIVF	**Saint-Julien-l**	**1.55**	**284**	ePn	**Pn**	**05 01 44.5**	**+0.6**
VIVF	**Saint-Julien-l**	**1.55**	**284**	ePg	**Pg**	**05 01 45.0**	**-1.4**
VIVF				eSn	**Sn**	**05 02 03.6**	**-0.3**
	1.6nm,0.3s						

MOS 05 05:17:47.9±0.7**, 4321N×4593E, h10**km**, mb3.9**/1**, 6C-1D, Error ellipse: s-maj=33.2km s-min=13.0km az=6.7, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKR	**Terskaya**	**1.01**	**301**	⇓iPG	Pg	05 18 08.1	+0.7
TRKR				i S	Sg	05 18 21.6	+1.0
BTKR	**Batakoyurt**	**1.03**	**280**	⇑iPG	Pg	05 18 08.4	+0.8
BTKR				i S	Sg	05 18 22.2	+1.2
ARNR	**Ardon**	**1.21**	**270**	⇑iPG	Pg	05 18 10.6	-0.5
ARNR				i S	Sb	05 18 25.9	-0.6
KMSR	**Komsomolskaya**	**1.21**	**278**	⇑iPG	Pg	05 18 10.3	-0.8
KMSR				i S	Sb	05 18 25.4	-1.1
LACR	**Lac**	**1.26**	**253**	⇑iPG	Pg	05 18 11.9	-0.1
LACR				i S	Sb	05 18 28.1	+0.2
PRTR	**Priterechnaya**	**1.32**	**295**	⇑iPG	Pg	05 18 11.2	-2.0
PRTR				i S	Sb	05 18 27.0	-2.7
KORR	**Kora**	**1.37**	**266**	⇑iPG	Pg	05 18 12.6	-1.6
KORR				i S	Sb	05 18 29.3	-1.8
ZEI	**Tsey**	**1.55**	**254**	ePG	Pg	05 18 15.2	-2.5

*ISCJB **05** 05:27:52.2±0.4, 4049N±002×23.19E±003, h6km±4km, Error ellipse: s-maj=4.5km s-min=3.0km az=152.0*
*CSEM **05** 05:27:52.5±0.1, 4051N×23.18E, h10km, ML2.3, Error ellipse: s-maj=2.4km s-min=1.6km az=50.0*
*THE **05** 05:27:52.7, 4051N×2321E, h9km, ML2.3*
*NEIC **05** 05:27:52.6, 4052N×23.19E, h6km, MD2.5(SOF), MD3.1(ATH), After ATH.*
*ATH **05** 05:27:52.6, 4052N×23.19E, h6km, MD3.1/3*
*SKO **05** 05:27:53.7, 4054N×23.17E, h2km, M1.8, ML2.1*
*SOF **05** 05:27:55.2, 4065N×2342E, h11km, MD2.5*

ISC 05 05:27:52.6±0.4**, 4050N**±002×**2319E**±004**, h10**km±4km**, n22,** σ0.s92/37**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HORT	**Hortiatis**	**0.12**	**327**	ePg	**Pg**	**05 27 55.6**	**+0.2**
HORT				eSg	**Sg**	**05 27 57.5**	**0.0**
THE	**Thessaloniki**	**0.22**	**309**	ePg	**Pg**	**05 27 57.1**	**0.0**
THE				eSg	**Sg**	**05 28 00.5**	**+0.4**
PLG	**Polygyros**	**0.23**	**121**	ePG	**Pg**	**05 27 57.0**	**-0.3**
PLG				eSG	**Sg**	**05 28 00.2**	**-0.3**
SOH	**Sokhos**	**0.35**	**21**	ePg	**Pg**	**05 27 59.4**	**-0.1**
SOH				eSg	**Sg**	**05 28 04.6**	**+0.4**
OUR	**Ouranopolis**	**0.63**	**105**	ePg	**Pg**	**05 28 04.6**	**-0.2**
OUR				eSg	**Sg**	**05 28 13.4**	**+0.4**
LIT	**Litokhoron**	**0.66**	**234**	ePg	**Pg**	**05 28 06.0**	**+0.6**
PAIG	**Paliouri**	**0.68**	**146**	ePg	**Pg**	**05 28 05.0**	**-0.8**
PAIG				eSg	**Sg**	**05 28 16.1**	**+1.5**
SRS	**Serrai**	**0.69**	**26**	ePg	**Pg**	**05 28 05.0**	**-0.9**
SRS				eSg	**Sg**	**05 28 15.3**	**+0.3**
KNT	**Kendrikon**	**0.70**	**342**	ePg	**Pg**	**05 28 05.6**	**-0.5**
KNT				eSg	**Sg**	**05 28 16.6**	**+1.3**
VAY	**Valandovo**	**0.95**	**331**	i Pg	**Pg**	**05 28 09.9**	**-0.9**
VAY				eSg	**Sg**	**05 28 22.3**	**-0.9**
VAY				eLg		05 28 24.3	
	comp=E,25nm,0.3s						
VAY				eLg		05 28 24.6	
	comp=N,51nm,0.4s						
VAY	**Valandovo**	**0.95**	**331**	ePg	**Pg**	**05 28 10.1**	**-0.7**
VAY				eSg	**Sg**	**05 28 24.5**	**+1.4**
NVR	**Nevrokopi**	**0.99**	**31**	ePB	**Pb**	**05 28 11.0**	**-0.9**
NVR				eSB	**Sb**	**05 28 24.5**	**-0.6**
XOR	**Xorichti**	**1.13**	**180**	ePg	**Pg**	**05 28 13.9**	**-0.3**
XOR				eSg	**Sg**	**05 28 30.5**	**+1.6**
MMB	**Musomiste**	**1.17**	**20**	ePg	**Pg**	**05 28 13.4**	**-1.5**
MMB				eSg	**Sg**	**05 28 30.4**	**+0.2**
MMB	**Musomiste**	**1.17**	**20**	i P	**Pb**	**05 28 14.0**	**-0.8**
MMB				eSg	**Sg**	**05 28 30.4**	**+0.3**
KKB	**Krupnik**	**1.37**	**357**	i P	**Pn**	**05 28 17.9**	**+0.1**
AOS	**Alonnisos**	**1.43**	**158**	ePg	**Pg**	**05 28 18.5**	**-1.5**
AGG	**Agios Georgios**	**1.61**	**204**	ePb	**Pb**	**05 28 21.2**	**-1.3**
AGG				eSb	**Sb**	**05 28 42.3**	**-0.5**
RZN	**Rozhen**	**1.66**	**44**	i P	**Pn**	**05 28 22.0**	**+0.2**
RDO	**Rodhopi**	**1.90**	**69**	ePN	**Pn**	**05 28 27.4**	**+2.4**
KDZ	**Kurdzhali**	**2.04**	**55**	P	**Pn**	**05 28 28.0**	**+1.0**
VTS	**Vitosha**	**2.09**	**0**	i P	**Pn**	**05 28 30.8**	**+3.1**

*ISCJB **05** 05:38:12.9±0.4, 4194N±002×2309E±003, h1km±4km, Error ellipse: s-maj=3.6km s-min=2.8km az=1.6*
*SKO **05** 05:38:12.8, 4194N×23.12E, h15km, M2.5, ML2.7*
*CSEM **05** 05:38:12.6±0.1, 4200N×2309E, h5km, MD3.1, Error ellipse: s-maj=1.6km s-min=1.2km az=92.0*
*THE **05** 05:38:13.7, 4194N×23.12E, h2km, ML3.3*
*SOF **05** 05:38:13.2, 4196N×2320E, h14km, MD3.1*
*NEIC **05** 05:38:13.2, 4196N×2320E, h14km, MD3.1(SOF), MD3.5(ATH), After SOF.*
*ATH **05** 05:38:14.6, 4184N×23.12E, h15km±3km, MD3.5/3*

ISC 05 05:38:13.9±0.4**, 4193N**±002×**2311E**±003**, h4**km±3km**, n40,** σ0.s91/65**, 7C-2D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.07**	**195**	i Pg	**Sg**	**05 38 16.8**	**+0.4**
MMB	**Musomiste**	**0.58**	**126**	ePg	**Pg**	**05 38 24.8**	**-0.2**
MMB				eSg	**Sg**	**05 38 33.1**	**+0.6**
MMB	**Musomiste**	**0.58**	**126**	i Pg	**Pg**	**05 38 25.0**	**+0.1**
MMB				eSg	**Sg**	**05 38 33.1**	**+0.7**
VTS	**Vitosha**	**0.66**	**6**	ePg	**Pg**	**05 38 26.3**	**-0.3**
VTS				eSg	**Sg**	**05 38 35.3**	**+0.1**
VTS	**Vitosha**	**0.66**	**6**	⇓iP	**Pg**	**05 38 26.6**	**0.0**
STIP	**Stip**	**0.73**	**251**	ePg	**Pg**	**05 38 28.0**	**+0.2**
STIP				eSg	**Sg**	**05 38 38.7**	**+1.4**
STIP	**Stip**	**0.73**	**251**	ePg	**Pg**	**05 38 27.1**	**-0.8**
STIP				i Sg	**Sg**	**05 38 36.9**	**-0.4**
STIP				eLg		05 38 38.1	
	comp=E,155nm,0.5s						
STIP				eLg		05 38 38.2	
	comp=N,104nm,0.3s						
STIP	**Stip**	**0.73**	**251**	ePg	**Pg**	**05 38 27.0**	**-0.8**
STIP				eSg	**Sg**	**05 38 38.7**	**+1.4**
VAY	**Valandovo**	**0.73**	**214**	ePg	**Pg**	**05 38 27.9**	**0.0**
VAY				eSg	**Sg**	**05 38 38.1**	**+0.7**
VAY	**Valandovo**	**0.73**	**214**	⇑iPg	**Pg**	**05 38 27.7**	**-0.1**
VAY				eSg	**Sg**	**05 38 37.7**	**+0.3**
VAY				eLg		05 38 37.9	
	comp=N,346nm,0.5s						
VAY				eLg		05 38 38.0	
	comp=E,307nm,0.4s						
VAY	**Valandovo**	**0.73**	**214**	⇑iPg	**Pg**	**05 38 27.7**	**-0.2**
VAY				eSg	**Sg**	**05 38 38.1**	**+0.7**
KNT	**Kendrikon**	**0.78**	**192**	ePg	**Pg**	**05 38 28.7**	**-0.2**
KNT				eSg	**Sg**	**05 38 39.7**	**+0.6**
NVR	**Nevrokopi**	**0.81**	**135**	⇑iPN	**Pg**	**05 38 28.7**	**-0.7**
NVR				eSN	**Sg**	**05 38 39.1**	**-0.8**
SRS	**Serrai**	**0.89**	**156**	ePg	**Pg**	**05 38 30.4**	**-0.6**
SRS				eSg	**Sg**	**05 38 43.4**	**+0.9**
PGB	**Panagyurishte**	**1.00**	**51**	i Pg	**Pg**	**05 38 31.5**	**-1.6**
SOH	**Sokhos**	**1.12**	**170**	ePg	**Pg**	**05 38 34.7**	**-0.7**
SOH				eSg	**Sg**	**05 38 51.3**	**+1.3**
PLD	**Plovdiv**	**1.20**	**81**	ePg	**Pg**	**05 38 36.3**	**-0.6**
PLD				eSg	**Sg**	**05 38 53.1**	**+0.6**
PLD	**Plovdiv**	**1.20**	**81**	i Pg	**Pg**	**05 38 36.7**	**-0.2**
PLD				eSg	**Sg**	**05 38 53.1**	**+0.6**
RZN	**Rozhen**	**1.23**	**101**	i Pg	**Pg**	**05 38 36.4**	**-1.0**
THE	**Thessaloniki**	**1.30**	**185**	ePg	**Pg**	**05 38 37.8**	**-1.1**
THE				eSg	**Sg**	**05 38 56.9**	**+1.2**
HORT	**Hortiatis**	**1.33**	**180**	ePg	**Pg**	**05 38 38.8**	**-0.6**
HORT				eSg	**Sg**	**05 38 57.8**	**+1.1**
PLG	**Polygyros**	**1.58**	**171**	ePN	**Pn**	**05 38 42.1**	**-0.4**
BIA	**Bitola**	**1.62**	**236**	ePn	**Pn**	**05 38 42.9**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OUR	Ouranopolis	1.73	157	ePb	Pn	05 38 43.3	-1.3
OUR				eSb	Sb	05 39 08.0	-0.2
KDZ	Kurdzhali	1.75	98	i P	Pn	05 38 44.3	-0.6
DIM	Dimitrovgrad	1.81	85	Pg	Pb	05 38 47.4	-0.2
LIT	Litokhoron	1.89	195	ePb	Pn	05 38 45.6	-1.2
LIT				eSb	Sb	05 39 11.3	-1.4
RDO	Rodhopi	1.99	112	ePN	Pn	05 38 49.0	+0.8
RDO				eSN	Sn	05 39 15.1	+1.7
PAIG	Paliouri	2.05	168	ePn	Pn	05 38 47.7	-1.3
PAIG				eSn	Sn	05 39 15.6	+0.6
PVL	Pavlikeni	2.09	51	P	Pn	05 38 49.9	+0.4
ALN	Alexandroupoli	2.44	114	ePn	Pn	05 38 53.6	-0.8
ALN				eSn	Sn	05 39 26.0	+1.3
SZH	Strazhica	2.48	56	P	Pb	05 38 59.3	+0.4
JMB	Yambol	2.64	77	ePn	Pn	05 38 56.2	-0.9
JMB				eSn	Sn	05 39 30.0	+0.5
DJES	Djerdap	2.73	351	i Pn	Pn	05 39 00.5	+2.0
DJES				Sg	Sb	05 39 37.5	+0.4
DIVS	Divcibare	3.15	315	i Pn	Pn	05 39 03.5	-0.7
DIVS				Sg	Sg	05 39 55.8	+0.8
GZR	Gura Zlata	3.47	356	⇓iP	Pb	05 39 17.4	+1.6
BZS	Buzias	3.84	344	⇑iP	Pn	05 39 12.9	-0.7
MLR	Muntele Rosu	4.11	29	⇑iP	Pn	05 39 20.8	+3.4
PLOR	Plostina	4.68	32	⇑iP	Pn	05 39 30.1	+4.9
PKSM	Moragy	5.35	325	⇑iP	Pn	05 39 33.7	-0.8

IDC 05 06:00:44.8±63.0, 1949S×17910W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.7/12, mbtmp3.9/3, Error ellipse: s-maj=1144.0km s-min=160.9km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.31	243	P	P	06 07 58.8	+0.1
	0.5nm,0.5s,baz=94,slow=15,SNR=2.8						
WRA	Warramunga Arr	43.72	261	P	P	06 08 52.3	+0.6
	0.5nm,0.4s,baz=97,slow=7.5,SNR=16						
ASAR	Alice Springs	43.75	256	P	P	06 08 52.0	+0.1
	2.5nm,0.8s,baz=95,slow=8.0,SNR=21						

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*NEIC **05** 06:08:51.1, 1147N×6134W, h28^{km}, MD3.6(TRN), After TRN.*

TRN 05 06:08:50.4, 1147N×6138W, h26^{km}, MD3.6, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPR	Prospect	0.65	115	eP	Pb	06 09 02.9	-0.3
TPR				eS	Sb	06 09 13.7	+1.8
BOT	Bacolet	0.71	115	eP	Pb	06 09 04.1	-0.1
GRW	Mount Saint Ca	0.74	338	eP	Pb	06 09 05.9	+1.2
GRW				eS	Sb	06 09 18.5	+4.1
GRW	Mount Saint Ca	0.74	338	eP	Pb	06 09 06.7	+2.1
GRW				eS	Sb	06 09 18.5	+4.1
GRHS	Sauteurs	0.79	341	eP	Pb	06 09 06.2	+0.7
GRHS				eS	Sb	06 09 18.9	+3.0
TRN	Trinidad (W)	0.82	182	eP	Pb	06 09 06.5	+0.6
TRN				eS	Sb	06 09 17.8	+1.2
GRCU	Cariacou	1.00	356	⇑eP	Pn	06 09 08.3	-0.5
GRCU				eS	Sb	06 09 21.9	+0.2
TBH	Brigand Hill	1.02	163	eP	Pn	06 09 11.0	+1.9
TPP	Pointe-a-Pierr	1.15	184	eP	Pn	06 09 11.9	+1.1
TPP	Pointe-a-Pierr	1.15	184	eP	Pn	06 09 12.5	+1.7
FCV	Fort Charlotte	1.68	4	eP	Pn	06 09 18.5	+0.4
FCV				eS	Sn	06 09 39.8	+0.9
SVB	Belmont	1.80	4	eP	Pn	06 09 20.3	+0.6
SVB				eS	Sn	06 09 44.5	+2.8
SVV	Soufriere Volc	1.84	5	eP	Pn	06 09 20.9	+0.5
SVV				eS	Sn	06 09 45.9	+3.1
SSV	Crater Summit	1.85	6	eP	Pn	06 09 21.2	+0.7
SSV				eS	Sn	06 09 44.7	+1.6
BIM	Bigot	3.04	6	eP	Pn	06 09 36.9	0.0
BIM				eS	Sn	06 10 13.2	+0.7
MVM	Montagne Vaucl	3.10	9	eP	Pn	06 09 37.2	-0.4
MVM				eS	Sn	06 10 11.5	-2.4
FDF	Fort de France	3.25	4	eP	Pn	06 09 39.4	-0.4
FDF				eS	Sn	06 10 17.5	-0.1
LZG	Guadaloupe-1	4.66	355	eP	Pn	06 09 59.3	+0.2
LZG				eS	Sn	06 10 51.4	-0.9

IDC 05 06:14:29.6±1.0, 165N×12859E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.8/15, mbtmp3.8/6, Error ellipse: s-maj=73.8km s-min=17.9km az=75.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.18	166	P	P	06 19 27.2	-0.1
	1.5nm,0.6s,baz=346,slow=10,SNR=7.7						
ASAR	Alice Springs	25.68	169	P	P	06 20 02.1	+0.9
	0.6nm,0.5s,baz=350,slow=11,SNR=7.9						
STKA	Stephens Creek	35.55	161	P	P	06 21 28.3	-0.1
	2.6nm,0.6s,baz=333,slow=12,SNR=6.0						
MJAR	Matsushiro Arr	35.85	13	P	P	06 21 31.1	+0.1
	1.5nm,0.6s,baz=185,slow=8.1,SNR=4.2						
SONM	Songino Array	49.86	341	P	P	06 23 25.0	+0.4
	0.5nm,0.7s,baz=160,slow=7.3,SNR=4.6						
MKAR	Makanchi Array	60.31	325	P	P	06 24 40.1	0.0
	0.6nm,0.4s,baz=114,slow=7.5,SNR=9.6						

IDC 05 06:18:27.5±7.0, 377N×9586E, h66^{km}±55^{km}, mb3.3/6, mb1 3.4/7, mb1mx3.2/21, mbtmp3.6/7, Error ellipse: s-maj=93.9km s-min=20.1km az=58.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.20	107	P	Pn	06 19 16.3	+0.9
	1.3nm,0.3s,baz=291,slow=13,SNR=4.1						
MKAR	Makanchi Array	44.45	347	P	P	06 26 31.4	-0.5
	0.6nm,0.4s,baz=154,slow=8.6,SNR=11						
WRA	Warramunga Arr	44.54	123	P	P	06 26 33.5	+0.9
	0.3nm,0.7s,baz=299,slow=9.2,SNR=3.2						
SONM	Songino Array	44.83	10	P	P	06 26 35.1	+0.1
	1.0nm,0.7s,baz=186,slow=8.8,SNR=8.4						
ASAR	Alice Springs	46.01	128	P	P	06 26 44.0	-0.3
	0.1nm,0.5s,baz=302,slow=8.7,SNR=4.0						
FINES	FINESS Array B	77.12	332	P	P	06 30 13.9	+0.1
	0.5nm,0.7s,baz=108,slow=6.2,SNR=4.8						
ARCES	ARCESS Array B	79.68	340	P	P	06 30 28.1	+0.2
	0.9nm,0.8s,baz=104,slow=6.7,SNR=5.7						

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*MOS **05** 06:36:26.6±1.5, 5541N×11039E, h15^{km}, mb4.4/1, Error ellipse: s-maj=26.0km s-min=11.4km az=53.5*

BYKL 05 06:36:27.0±0.3, 5543N×11042E, h7^{km}±10^{km}, 2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.61	305	ePg	Pg	06 36 38.6	-0.1
NIZ				eSg	Sg	06 36 47.6	+1.0
NIZ				Pmax			
	35nm,0.2s						
NIZ				Smax			
	155nm,0.5s						
KMO	Kumora	0.64	44	ePg	Pg	06 36 37.9	-1.4
KMO				eSg	Sg	06 36 46.3	-1.3
KMO				e		06 36 53.0	
KMO				Pmax			
	142nm,0.4s						
KMO				max			
	945nm,2.0s						
KMO	Kumora	0.64	44	ePG	Pg	06 36 38.0	-1.3
KMO				e		06 36 45.9	
KMO				pmax	pmax		
	comp=Z,82nm,0.3s						
KMO				smax			
	comp=N,878nm,1.0s						
YLYR	Ulyunkhan	0.70	142	⇓iPg	Pg	06 36 38.8	-1.7
YLYR				eSg	Sg	06 36 48.3	-1.3
YLYR				e		06 36 57.5	
YLYR				Pmax			
	comp=N,181nm,0.6s						
YLYR				max			
	comp=N,646nm,2.0s						
YOA	Uoyan	1.02	46	ePg	Pg	06 36 45.4	-1.2
YOA				eSg	Sg	06 36 59.7	-0.1
YOA				e		06 37 14.7	
YOA				Pmax			
	comp=N,168nm,0.5s						
YOA				max			
	comp=N,1μm,2.5s						
YOA	Uoyan	1.02	46	⇓iPG	Pg	06 36 46.0	-0.6
YOA				i		06 37 00.1	
YOA				pmax	pmax		
	comp=Z,225nm,0.3s						
YOA				smax			
	comp=E,2μm,2.3s						
SYVR	Suvo	1.79	188	ePN	Pn	06 36 59.0	+0.7
SYVR				e		06 37 22.6	
SYVR				pmax	pmax		
	comp=Z,48nm,0.4s						
SYVR				smax			
	comp=N,258nm,0.5s						
UKT	Uakit	1.83	87	ePg	Pg	06 36 59.2	-2.8
UKT				eSg	Sg	06 37 24.0	-1.7
UKT				Pmax			
	comp=N,91nm,1.0s						
UKT				Smax			
	comp=N,203nm,1.1s						
UKT	Uakit	1.83	87	ePN	Pn	06 36 59.4	+0.6
UKT				e		06 37 23.8	
UKT				pmax	pmax		
	comp=Z,75nm,0.4s						
UKT				smax			
	comp=N,208nm,0.3s						
SVKR	Severomuysk	1.90	67	ePg	Pg	06 37 01.1	-2.4
SVKR				eSg	Sg	06 37 27.7	-0.4
SVKR				Pmax			
	comp=N,107nm,0.8s						
SVKR				Smax			
	comp=N,659nm,0.7s						
SVKR	Severomuysk	1.90	67	ePN	Pn	06 36 58.9	-0.9
SVKR				e		06 37 01.3	
SVKR				e		06 37 26.4	
SVKR				pmax	pmax		
	comp=Z,106nm,0.9s						
SVKR				smax			
	comp=N,677nm,0.7s						
MXMB	Maximikha	2.38	205	ePn	Pn	06 37 06.7	+0.3
MXMB				ePg	Pg	06 37 10.1	-2.6
MXMB				eSg	Sg	06 37 42.2	-1.4
MXMB				Pmax			
	comp=N,63nm,0.8s						
MXMB				Smax			
	comp=N,739nm,0.8s						
OGRR	Ongureny	2.43	224	ePn	Pn	06 37 07.8	+0.7
OGRR				ePg	Pg	06 37 10.3	-3.3
OGRR				eSn	Sn	06 37 36.9	-0.2
OGRR				eSg	Sg	06 37 42.3	-2.8
OGRR				Pmax			
	comp=N,26nm,0.3s						
OGRR				Smax			
	comp=N,198nm,0.6s						
OGRR	Ongureny	2.43	224	ePN	Pn	06 37 05.7	-1.4
OGRR				e		06 37 09.9	
OGRR				e		06 37 42.4	
OGRR				pmax	pmax		
	comp=Z,26nm,0.4s						
OGRR				smax			
	comp=N,208nm,1.0s						
KELR	Kotokel	3.01	208	eSg	Sg	06 38 00.8	-2.9
KELR				Smax			
	comp=N,298nm,0.6s						
BOD	Bodaibo	3.11	38	ePn	Pn	06 37 17.2	+0.8
BOD				ePg	Pg	06 37 21.0	-5.5
BOD				eSn	Sn	06 37 51.6	-2.2
BOD				eSg	Sg	06 38 01.7	-5.1
BOD				Pmax			
	comp=N,12nm,0.8s						
BOD				Smax			
	comp=N,101nm,1.0s						
NLYR	Nelyaty	3.15	68	ePn	Pn	06 37 17.7	+0.6
NLYR				ePg	Pg	06 37 23.7	-3.8
NLYR				e		06 37 57.7	
NLYR				eSg	Sg	06 38 04.9	-3.4
NLYR				Pmax			
	comp=N,24nm,0.8s						
NLYR				Smax			
	comp=N,147nm,1.2s						
NLYR	Nelyaty	3.15	68	ePN	Pn	06 37 17.4	+0.3
NLYR				e		06 37 23.5	
NLYR				e		06 38 04.6	
NLYR				pmax	pmax		
	comp=Z,27nm,0.6s						
NLYR				smax			
	comp=E,147nm,1.2s						
TRG	Tyrgan	3.59	224	ePg	Pg	06 37 30.7	-5.1
TRG				eSn	Sn	06 38 05.3	-0.4
TRG				eSg	Sg	06 38 17.5	-4.9
TRG				Pmax			
	comp=E,13nm,0.6s						
TRG				Smax			
	comp=E,41nm,0.4s						
HRMR	Khuramsha	4.33	210	ePg	Pg	06 37 44.0	-6.0
HRMR				eSg	Sg	06 38 40.3	-5.9
HRMR				Pmax			
	comp=E,32nm,0.8s						
HRMR				Smax			
	comp=E,256nm,0.6s						
CRS	Chara	4.63	68	ePg	Pg	06 37 50.7	-5.0
CRS				eSg	Sg	06 38 52.1	-3.5
CRS				Pmax			
	comp=E,26nm,1.0s						
CRS				Smax			
	comp=E,78nm,1.3s						
CRS	Chara	4.63	68	ePN	Pg	06 37 50.4	-5.3
CRS				e		06 38 50.2	
CRS				pmax	pmax		
	comp=Z,36nm,1.2s						
CRS				smax			
	comp=E,85nm,1.2s						
IRK	Irkutsk	4.84	231	ePN	Pb	06 37 52.1	0.0
IRK				e		06 38 55.3	
IRK				pmax	pmax		
	comp=Z,118nm,0.2s						
IRK				smax			
	comp=N,240nm,0.4s						
LSTR	Listvyanka	4.88	225	ePg	Pg	06 37 55.4	-5.0
LSTR				eSg	Sg	06 38 59.6	-4.0
LSTR				Pmax			
	comp=N,7.0nm,0.7s						
LSTR				Smax			
	comp=N,52nm,1.4s						
TLY	Talaya	5.51	230	ePN	Pg	06 38 05.2	-7.4
TLY				e		06 39 16.0	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TLY				smax			
	comp=E,33nm,0.7s						
TUP	Tupik	5.59	96	ePn	Pn	06 37 50.4	-0.1
TUP				ePg	Pg	06 38 06.6	-7.5
TUP				eSn	Sn	06 38 54.0	-1.0
TUP				eSg	Sg	06 39 19.9	-6.6
TUP				Pmax			
	comp=E,6.0nm,0.9s						
TUP				Smax			
	comp=E,72nm,1.0s						
TUP	Tupik	5.59	96	ePN	Pn	06 37 50.2	-0.3
TUP				e		06 38 06.7	
TUP				eS	Sn	06 38 51.7	-3.3
TUP				e		06 39 19.1	
TUP				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TUP				smax			
	comp=N,75nm,1.0s						
ZAK	Zakamensk	6.65	223	eSg	Sg	06 39 53.4	-7.0
ZAK				Smax			
	comp=N,29nm,1.6s						
ORL	Orlik	6.89	250	ePn	Pn	06 38 08.4	-0.1
ORL				e		06 39 26.1	
ORL				eSg	Sg	06 39 58.4	-10
ORL				Smax			
	comp=N,74nm,1.1s						

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*IDC **05** 07:03:06.1±3.2, 3572N×2352E, h84^{km}±22^{km}, mb3.3/6, mb1 3.3/9, mb1mx3.2/24, mbtmp3.6/9, Error ellipse: s-maj=63.3km s-min=26.8km az=36.0*

*ISCJB **05** 07:03:07.0±0.3, 3601N±003×2390E±005, h107^{km}±4^{km}, mb3.5/6, Error ellipse: s-maj=7.8km s-min=3.3km az=127.1*

*HLW **05** 07:03:07.8, 3606N×2426E, h33^{km}, Mb4.2*

*NEIC **05** 07:03:09.1, 3611N×2392E, h39^{km}, MD3.6(ATH), After ATH.*

*ATH **05** 07:03:09.1, 3611N×2392E, h39^{km}±2^{km}, MD3.6/15, ML3.5*

*CSEM **05** 07:03:09.7±0.1, 3610N×2388E, h60^{km}, ML3.5, Error ellipse: s-maj=2.8km s-min=1.6km az=60.0*

*THE **05** 07:03:10.8, 3612N×2385E, h59^{km}*

ISC 05 07:03:08.1±0.3, 3599N±003×2385E±005, h91^{km}±4^{km}, n62, σ1§35/86, mb3.5/6, 14C-8D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAM	Vamos	0.65	154	ePN	Pn	07 03 24.7	+0.6
VAM				eSN	Sn	07 03 34.6	-1.5
KYTH	Kithira	0.72	294	⇓iPN	Pn	07 03 24.6	-0.2
VLI	Veliai	1.04	315	ePN	Pn	07 03 28.1	-0.1
VLI				eSN	Sn	07 03 41.2	-2.1
IDI	Anoyia	1.10	129	P	Pn	07 03 29.5	+0.6
	26nm,0.3s,baz=320,slow=16,SNR=162						
IDI				S	Sn	07 03 43.8	-0.8
GVD	Gavdhos	1.16	170	ePg	Pn	07 03 32.5	+2.8
GVD				eSg	Sn	07 03 49.2	+3.3
GVD	Gavdhos	1.16	170	ePN	Pn	07 03 31.9	+2.2
GVD				eSN	Sn	07 03 49.0	+3.1
GVD	Gavdhos	1.16	170	ePg	Pn	07 03 32.5	+2.8
GVD				eSn	Sn	07 03 49.0	+3.1
GVD				eSg	Sn	07 03 49.2	+3.3
SIVA	Sivas	1.25	141	ePg	Pn	07 03 33.3	+2.7
SIVA				eSg	Sn	07 03 50.7	+3.0
SANT	Santorini	1.36	73	ePg	Pn	07 03 33.1	+1.0
SANT				eSg	Sn	07 03 50.2	+0.1
SANT	Santorini	1.36	73	⇓iPn	Pn	07 03 32.9	+0.9
SANT				eSn	Sn	07 03 49.0	-1.2
SANT	Santorini	1.36	73	ePg	Pn	07 03 33.1	+1.1
SANT				eSn	Sn	07 03 49.0	-1.1
SANT				eSg	Sn	07 03 50.2	+0.1
LAST	Lasithi	1.56	121	ePb	Pn	07 03 36.5	+1.9
LAST				eSb	Sn	07 03 57.9	+3.2
NPS	Neapolis	1.61	116	ePN	Pn	07 03 36.5	+1.3
APE	Apeiranthos	1.73	51	ePb	Pn	07 03 37.2	+0.5
APE				eSb	Sn	07 03 57.8	-0.8
NAIG	Nisos Aigina	1.79	351	ePN	Pn	07 03 37.5	0.0
KVR	Kavouri	1.84	358	ePN	Pn	07 03 36.5	-1.6
KVR				eSN	Sn	07 03 59.8	-1.2
XRY	Khrisi	1.87	126	ePN	Pn	07 03 41.0	+2.4
ITM	Ithomi	1.95	308	ePN	Pn	07 03 40.9	+1.3
ATH	Athens Observa	1.98	357	ePN	Pn	07 03 40.3	+0.3
ATH				eSN	Sn	07 04 02.3	-2.1
MGER	Gerania Oros	2.05	347	ePN	Pn	07 03 41.0	+0.1
PTL	Penteli	2.06	0	ePN	Pn	07 03 41.5	+0.5
ZKR	Zakros	2.12	114	ePn	Pn	07 03 44.1	+2.3
ZKR				eSn	Sn	07 04 11.4	+3.8
KARP	Karpathos	2.73	98	ePN	Pn	07 03 51.5	+1.6
LKR	Lokris	2.74	346	ePN	Pn	07 03 50.6	+0.5
RLS	Riolos of Patr	2.81	318	ePN	Pn	07 03 53.0	+2.0
AGG	Agios Georgios	3.26	339	eSn	Sn	07 04 34.0	-0.9
AGG				eSn	Sn	07 04 47.3	+12
EVR	Evrytania	3.34	332	ePN	Pn	07 03 59.5	+1.3
PAIG	Paliouri	3.94	358	ePn	Pn	07 04 06.9	+0.7
PAIG				eSn	Sn	07 04 50.6	-0.6
SLUM		4.62	165	⇑P	Pn	07 04 15.8	+0.3
SLUM				S	Sn	07 05 05.0	-3.1
SLUM		4.62	165	P	Pn	07 04 15.8	+0.3
SLUM				S	Sn	07 05 04.9	-3.1
SRN	Sarande	4.94	323	i Sg	Sn	07 05 13.5	-2.1
FNA	Florina	5.17	339	eSn	Sn	07 05 22.2	+1.0
FNA				eSn	Sn	07 05 22.8	+1.6
DABA	Dabaa	6.19	142	⇑P	Pn	07 04 35.7	-1.2
SWA2		6.86	168	⇓P	Pn	07 04 46.4	+0.4
SWA2				S	Sn	07 05 58.9	-3.6
SWA1		6.89	166	⇓P	Pn	07 04 46.9	+0.6
SWA1				S	Sn	07 05 59.4	-3.7
HBRG	Burj al ‘Arab	7.37	135	⇓P	Pn	07 04 50.6	-2.2
HNAT	Natroun	8.52	136	⇑P	Pn	07 05 06.9	-1.7
BRTR	Keskin Array B	8.59	61	P	Pn	07 05 14.3	+4.8
	0.2nm,0.3s,baz=250,slow=13,SNR=6.9						
FYM	Al Fayyum	8.72	134	⇑P	Pn	07 05 10.0	-1.2
AWBH		8.76	149	P	Pn	07 05 11.4	-0.4
KOT	Kottamia	9.02	130	⇑P	Pn	07 05 14.0	-1.4
HSAF	As Saff	9.07	132	⇑P	Pn	07 05 15.4	-0.7
GLL	Jalalah	9.20	132	⇓P	Pn	07 05 16.6	-1.1
AMAG	Maghara	9.47	122	P	Pn	07 05 20.1	-1.4
HFRF	Wahat Farafira	9.60	155	⇑P	Pn	07 05 22.9	-0.3
SUZ		9.72	127	⇑P	Pn	07 05 23.8	-1.1
MMAI	Mount Meron Ar	9.98	104	P	Pn	07 05 28.6	+0.1
	1.8nm,0.3s,baz=306,slow=14,SNR=4.1						
GRB	Gharib	10.79	133	⇑P	Pn	07 05 38.4	-1.1
TR2		11.28	129	⇑P	Pn	07 05 44.6	-1.5
HKAT	Jabal Katrina	11.36	128	⇓P	Pn	07 05 45.7	-1.4
HDK1	Dakhla	11.45	154	⇑P	Pn	07 05 48.4	0.0
TR1		11.69	130	⇑P	Pn	07 05 50.9	-0.8
AKRG	Al Kharijah	11.91	150	⇓P	Pn	07 05 55.1	+0.4
GTR	Jabal at Tayr	11.93	149	⇑P	Pn	07 05 55.2	+0.3
HHRG	Al Ghardaqah	12.04	134	⇑P	Pn	07 05 55.2	-1.2
AKASG	Malin Array Be	15.21	13	P	Pn	07 06 41.1	+3.4
	1.4nm,0.3s,baz=207,slow=10,SNR=7.0						
HFS	Hagfors	25.04	348	P	P	07 08 23.6	0.0
	2.7nm,1.0s,mb3.6,baz=159,slow=11,SNR=8.2						
FINES	FINESS Array B	25.52	2	P	P	07 08 29.2	+1.3
	0.9nm,1.0s,mb3.2,baz=159,slow=12,SNR=3.3						
NOA	NORSAR Array B	26.34	346	P	P	07 08 35.3	0.0
	0.3nm,0.7s,mb2.9,baz=148,slow=10,SNR=2.8						
ARCES	ARCESS Array B	33.62	1	P	P	07 09 38.6	-1.1
	0.9nm,0.9s,mb3.6,baz=168,slow=6.2,SNR=3.5						
MKAR	Makanchi Array	44.22	57	P	P	07 11 10.0	+1.9
	1.0nm,0.3s,mb4.0,baz=270,slow=8.5,SNR=4.8						
SONM	Songino Array	59.79	51	P	P	07 13 05.5	+1.9
	0.4nm,0.4s,mb3.8,baz=293,slow=9.2,SNR=5.0						

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*LDG **05** 07:32:59.6±0.1, 2987N×8022E, h10^{km}, Mb4.5/10, Ms3.5/1, Error ellipse: s-maj=9.6km s-min=4.6km az=37.0*

*NEIC **05** 07:33:02.5±0.2, 2989N×8010E, h10^{km}, mb4.5/19, Error ellipse: s-maj=7.2km s-min=3.8km az=38.0*

NEIC Felt at Almora, India.

*DMN **05** 07:33:03.6±0.5, 2987N×8052E, h10^{km}, Ml5.0/7, Error ellipse: s-maj=14.0km s-min=8.5km az=44.0*

*ISCJB **05** 07:33:03.2±0.5, 2985N±002×8019E±002, h29^{km}±4^{km}, mb4.3/52, MS3.8/11, Error ellipse: s-maj=4.0km s-min=2.5km az=41.2*

*NDI **05** 07:33:04.5±3.5, 2985N×8012E, h8^{km}±6^{km}, ML4.5, mb4.5(NEIC)*

*IDC **05** 07:33:04.5±4.5, 2980N×8011E, h26^{km}±29^{km}, mb4.1/18, mb1 4.3/19, mb1mx4.2/24, mbtmp4.3/19, MS3.8/8, Ms1 3.8/8, ms1mx3.3/36, Error ellipse: s-maj=19.1km s-min=14.2km az=42.0*

*MOS **05** 07:33:05.1±0.9, 2985N×8017E, h47^{km}, mb4.6/27, Error ellipse: s-maj=10.4km s-min=5.8km az=119.7*

*BJI **05** 07:33:06.3, 3014N×8043E, h29^{km}, mB4.6, mb4.6, Ms4.2, Msz4.0*

*NNC **05** 07:33:12.2±5.4, 3103N×7940E, h0^{km}, mb4.3, Error ellipse: s-maj=85.9km s-min=22.9km az=38.0*

ISC 05 07:33:03.3±0.6, 2987N±002×8019E±002, h14^{km}±4^{km}, n164, σ1§27/202, mb4.3/52, MS3.8/11, 9C-1D, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	Pithoragarh	0.32	175	eP	Pg	07 33 09.5	-0.3
LGTI	Lohaghat	0.42	173	ex	Pg	07 33 09.7	-2.0
LGTI				ex	Sg	07 33 26.7	+9.4
BAYN	Bayana	0.96	114	Pb	Pb	07 33 20.5	-1.3
BAYN				Sb	Sb	07 33 31.9	-2.4
GNKN	Gaynekanda	1.58	141	Pn	Pn	07 33 33.5	+2.6
GBAN	Gaibana	1.72	133	Pg	Pg	07 33 35.4	-0.9
GBAN				Sg	Sg	07 33 57.1	-1.5
DDI	Dehra Dun	1.90	284	eP	Pn	07 33 37.8	+2.5
DDI				eS	Sn	07 33 59.6	+0.6
HARN	Harre	1.94	138	Pn	Pn	07 33 38.4	+2.7
HARN				Sn	Sn	07 34 05.0	+5.2
KLP	Kalpa	2.36	315	eP	Pn	07 33 44.0	+2.5
KLP				eS	Sn	07 34 12.5	+2.4
KLP				AML	AML	07 34 19.8	
	comp=E,12μm,0.6s						
KLP				AML	AML	07 34 20.5	
	comp=N,11μm,0.6s						
ASOR	Ausora	2.38	243	eP	Pn	07 33 43.4	+1.6
NDI	New Delhi	2.85	246	eP	Pn	07 33 49.8	+1.5
NDI				eS	Sn	07 34 22.4	0.0
NDI				AML	AML	07 34 41.6	

comp=N,2µm,0.5s
NDI AML AML 07 34 45.8
comp=E,5µm,0.6s
SMLA Simla 2.90 297 *e*P **Pn 07 33 50.9 +1.9**
SMLA *e*S **Sn 07 34 25.5 +2.0**
SMLA AML AML 07 34 38.7
comp=N,4µm,0.4s
SMLA AML AML 07 34 39.0
comp=E,6µm,0.4s
KKR Kurukshetra 2.92 273 *e*P **Pn 07 33 51.0 +1.7**
AYAN Aya Nagar 3.01 244 *e*P **Pn 07 33 48.9 -1.6**
AYAN *e*S **Sn 07 34 24.4 -1.9**
BHGR Bahadurgarh 3.07 248 *e*P **Pn 07 33 53.6 +2.3**
SONA Sohna 3.16 240 *e*P **Pn 07 33 54.3 +1.8**
SONA *e*x x 07 34 05.1
SONA *e*S **Sn 07 34 29.5 -0.4**
SONA AML AML 07 34 50.4
comp=N,7µm,0.3s
SONA AML AML 07 34 51.8
comp=E,5µm,0.3s
SDNR Sundarnagar 3.21 301 *e*P **Pn 07 33 56.2 +2.9**
SDNR *e*x x 07 34 47.4
AGRA Agra 3.28 217 *e*P **Pn 07 33 56.2 +1.9**
AGRA *e*S **Sn 07 34 33.0 -0.1**
AGRA AML AML 07 34 36.4
comp=N,2µm,0.4s
AGRA AML AML 07 34 53.6
comp=E,5µm,0.5s
BHK Bhakra 3.60 296 *e*x **Pb 07 34 04.6 -2.1**
BHK *e*x **Sb 07 34 51.2 +1.0**
KOLN Koldanda 3.65 124 *e*Pn **Pn 07 34 01.5 +2.2**
KOLN *e*Sn **Sn 07 34 44.9 +2.8**
comp=E,350nm,0.3s
PONG Pong 4.20 301 *e*P **Pn 07 34 09.0 +2.2**
PONG *e*x **Sb 07 35 08.0 +0.7**
KHET Khetri 4.23 246 *e*P **Pn 07 34 08.4 +1.2**
KHET *e*S **Sn 07 34 56.4 -0.1**
KHET AML AML 07 35 18.4
comp=E,657nm,0.4s
KHET AML AML 07 35 18.6
comp=N,1µm,0.5s
GKN Gorkha 4.32 114 *e*Pn **Pn 07 34 10.5 +2.0**
GKN Gorkha 4.32 114 *e*Sn **Sn 07 34 59.6 +1.0**
comp=N,1µm,0.2s
DLH Dalhousie 4.49 307 *e*P **Pn 07 34 11.0 +0.1**
DLH *e*S **Sn 07 35 02.0 -0.9**
DMN Daman 4.87 116 *e*Pn **Pn 07 34 17.6 +1.6**
DMN *e*Sn **Sn 07 35 12.9 +0.8**
comp=N,282nm,0.3s
KKN Kakani 4.92 114 *e*Pn **Pn 07 34 18.6 +1.8**
KKN *e*Sn **Sn 07 35 14.1 +0.6**
comp=N,310nm,0.2s
PKI Pulchoki 5.12 115 *e*Pn **Pn 07 34 21.1 +1.6**
PKI *e*Sn **Sn 07 35 19.0 +0.6**
comp=N,548nm,0.3s
GUN Gumba 5.36 110 *e*Pn **Pn 07 34 24.4 +1.7**
GUN *e*Sn **Sn 07 35 24.9 +0.7**
comp=N,399nm,0.3s
JIRN Jiri 5.71 111 *e*Sn **Sn 07 35 32.8 0.0**
comp=N,868nm,0.3s
JIRN Jiri 5.71 111 *e*Pn **Pn 07 34 29.6 +2.0**
JIRN *e*Sn **Sn 07 35 32.8 0.0**
AJM Ajmer 5.94 237 *e*P **Pn 07 34 32.1 +1.3**
AJM *e*S **Sn 07 35 35.7 -3.0**
AJM AML AML 07 35 39.9
comp=N,628nm,0.2s
AJM AML AML 07 35 39.9
comp=E,482nm,0.3s
JBP Jabalpur 6.67 182⇓ *e*P **Pn 07 34 42.6 +1.8**
JBP *i* S **Sn 07 35 53.6 -3.0**
SARP Sargodha 6.78 289 P **Pn 07 34 43.4 +1.2**
CHCP Chirah Chowk 7.00 304 P **Pn 07 34 46.8 +1.4**
BHPL Bhopal 7.05 201 *e*P **Pn 07 34 45.8 -0.1**
BHPL *e*S **Sn 07 36 00.9 -4.9**
BHPL AML AML 07 36 04.3
comp=N,526nm,0.2s
BHPL AML AML 07 36 04.4
comp=E,579nm,0.2s
THW Thamme Wali 7.79 294 P **Pn 07 34 56.4 +0.2**
BOK Bokaro 7.90 139 *e*P **Pn 07 34 57.7 0.0**
BOK *e*S **Sn 07 36 23.8 -3.0**
BOK AML AML 07 37 22.0
comp=N,46nm,0.3s
BOK AML AML 07 37 22.1
comp=E,64nm,0.5s
CEP Cherat 8.07 301 P **Pn 07 35 00.5 +0.5**
CEP S **Sn 07 36 30.0 -1.0**
NGP Nagpur 8.74 187 *e*x x 07 35 07.4
NGP *e*S **Sn 07 36 41.6 -5.8**
NGP AML AML 07 37 39.2
comp=E,322nm,0.6s
NGP AML AML 07 37 46.3
comp=N,427nm,0.4s
DRP Derazinda 8.79 285 P **Pn 07 35 09.9 0.0**
AKL Akola 9.56 198 *e*P **Pn 07 35 20.0 -0.4**
AKL *e*S **Sn 07 37 02.8 -4.9**
AKL AML AML 07 38 02.7
comp=N,207nm,0.6s
AKL AML AML 07 38 03.6
comp=E,298nm,0.6s
LATR Latur 11.87 197 *e*x **Pn 07 35 48.1 -3.9**
LATR *e*S **Sn 07 37 55.0 -9.2**
LATR *e*S **Sn 07 37 55.0 -9.2**
VIS Vishakhapatnam 12.43 166 *e*S **Sn 07 38 11.2 -6.6**
HYB Hyderabad 12.48 187 *i* P **Pn 07 35 58.5 -1.9**
comp=E,100nm,1.0s
HYB *e*sP 07 36 08.0
HYB *e*PP 07 36 13.5
HYB *e* 07 38 08.5
HYB *e*S **Sn 07 38 19.0 -0.2**
HYB *e*SS 07 38 31.0
HYB Hyderabad 12.48 187 *e*P **Pn 07 35 58.5 -1.9**
HYB pmax pmax
comp=Z,160nm,1.0s
HYB Hyderabad 12.48 187 *e*P **Pn 07 35 58.5 -1.9**
comp=Z,160nm,1.0s
HYB *e*S **Sn 07 38 08.5 -11**
POO Poona 12.68 209⇑ *i*x **Pn 07 35 58.0 -5.1**
POO *i* S **Sn 07 38 14.0 -10**
POO *e*x x 07 38 40.0
BOM Bombay 12.82 213 *e*x **Pn 07 36 01.2 -3.8**
BOM *i* x x 07 38 02.6
AAK Ala-Archa 13.54 342 *e*P **Pn 07 36 14.0 -0.8**
AAK pmax pmax
comp=Z,14nm,0.9s
AAK Ala-Archa 13.54 342 *e*Pn **Pn 07 36 14.0 -0.9**
comp=Z,14nm,0.9s
KAD Karad 13.65 205 *e*x **Pn 07 36 13.4 -3.0**
KAD *e*S **Sn 07 38 35.5 -12**
KK31 Karatay Array 15.32 332 Pn **Pn 07 36 34.6 -4.4**
comp=Z,4.4nm,0.6s,baz=140,slow=16,SNR=37
KK31 ⇑Sn **Sn 07 39 14.0 -14**
comp=Z,9.0nm,0.7s,baz=169,slow=24,SNR=6.6
MK04 Makanchi Array 16.96 5 ⇑P **Pn 07 36 57.0 -3.0**
comp=Z,14nm,0.9s
MKAR Makanchi Array 16.98 5 Pn **Pn 07 36 57.1 -3.2**
comp=Z,0.6nm,0.3s,baz=181,slow=12,SNR=39
MKAR ScP ScP 07 45 18.1 -2.3
baz=100,slow=1.4,SNR=4.7
GTA Gaotai 18.72 54 *e*P **Pn 07 37 19.6 -2.1**
GTA AP pP 07 37 27.8 +2.4
GTA XP sP 07 37 31.6 +4.3
GTA AMB AMB
comp=Z,4.0nm,1.0s
GTA LR LR
comp=N,407nm,11.0s
GTA LR LR
comp=E,270nm,10.7s
GTA LR LR
comp=Z,375nm,12.2s
CHTO Chiang Mai 20.29 119 P **P 07 37 37.7 -0.8**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 20.29 119 P **P 07 37 37.7 -0.9**
comp=Z,7.3nm,0.8s
CD2 Chengdu 20.36 81 *e*P **P 07 37 39.4 +0.2**
CD2 AMB AMB
comp=Z,10.0nm,0.5s
WSAR Wadi Sarin 20.37 256 P **P 07 37 41.1 +1.8**
comp=Z,3.9nm,0.7s,baz=82,slow=14,SNR=4.4
LZH Lanzhou 20.77 66 *e*P **P 07 37 43.5 -0.2**
LZH AP 07 37 49.3
LZH XP sP 07 37 52.5 +2.8
LZH AMB AMB
comp=Z,31nm,1.3s
KURK Kurchatov 20.86 357 ⇑P **P 07 37 42.6 -2.1**
comp=Z,6.5nm,0.8s
KURK Kurchatov 20.86 357 *e*P **P**
KURK pmax pmax **07 37 43.3 -1.4**
comp=Z,13nm,0.6s
KURK Kurchatov 20.86 357 *e*P **P 07 37 43.2 -1.4**
comp=Z,13nm,0.6s
GYA Guiyang 23.57 92 P **P 07 38 13.8 +0.3**
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.2
GYA AMB AMB
comp=Z,270nm,6.3s
VOSK Vostochnaya 23.82 346 ⇑P **P 07 38 13.7 -2.1**
comp=Z,3.6nm,0.6s,mb4.0
BVA0 Borovoye Array 24.23 345 Pn **P 07 38 18.9 -0.6**
comp=Z,0.7nm,0.7s,mb3.2,baz=132,slow=12,SNR=12
BVAR Borovoye Array 24.23 345 P **P 07 38 18.3 -1.2**
comp=Z,1.9nm,0.6s,mb3.7,baz=148,slow=12,SNR=16
BVAR LR LR 07 48 09.8
comp=Z,42nm,18.4s,MS3.0,baz=155,slow=37
BRVK Borovoye 24.29 345 *e*P **P 07 38 19.3 -0.7**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb3.9
BRVK Borovoye 24.29 345 *e*P **P 07 38 19.3 -0.7**
comp=Z,3.5nm,0.8s,mb3.8
ZAL Zalesovo 24.29 7 P **P 07 38 20.1 +0.1**
comp=Z,6.0nm,0.7s,mb4.1,baz=278,slow=12,SNR=32
ZAL LR LR 07 49 56.2
comp=Z,207nm,19.6s,MS3.6,baz=272,slow=42
ZRNK Zerenda 24.48 344 *e*P **P 07 38 21.4 -0.4**
ZRNK pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
ZRNK Zerenda 24.48 344 *e*P **P 07 38 21.4 -0.5**
comp=Z,9.8nm,0.9s,mb4.2
XAN Xi'an 24.70 73 P **P 07 38 23.5 -0.3**
XAN AMB AMB
comp=Z,25nm,0.9s,mb4.7
AB31 Akbulak array 24.73 327 ⇑Pn **P 07 38 23.4 -0.7**
comp=Z,3.2nm,0.6s,mb4.1,baz=124,slow=9.7,SNR=33
AB31 ⇑Sn **S 07 42 51.8 +6.1**
comp=Z,1.2nm,0.6s
CHKZ Chkalovo 24.80 346 *e*P **P 07 38 23.9 -0.8**
CHKZ pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
CHKZ Chkalovo 24.80 346 *e*P **P 07 38 23.9 -0.8**
comp=Z,8.2nm,0.6s,mb4.4
CHKZ Chkalovo 24.80 346 ⇑Pn **P 07 38 23.8 -0.9**
comp=Z,5.3nm,0.5s,mb4.3
NVS Novosibirsk 25.06 4 *e*P **P 07 38 25.8 -1.2**
NVS *i* S **S 07 42 52.4 +1.6**
NVS pmax pmax
comp=Z,13nm,1.1s,mb4.4
NVS pmax pmax
comp=N,17nm,1.5s
NVS smax
comp=N,26nm,1.8s
AKTK Aktyubinsk 26.45 327 P **P 07 38 39.0 -0.7**
AKTO Aktyubinsk 26.45 327 P **P 07 38 39.0 -0.7**
comp=N,2.8nm,0.5s,mb4.0,baz=124,slow=11,SNR=8.3
ZAK Zakamensk 26.86 34 *e*P **P 07 38 44.0 +0.7**
ZAK *e* 07 39 45.5
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.0
SONM Songino Array 26.98 41 P **P 07 38 46.0 +1.6**
comp=Z,5.4nm,0.6s,mb4.3,baz=239,slow=7.6,SNR=23
SONM PcP PcP 07 42 05.4 -0.5
comp=Z,0.6nm,0.5s,baz=213,slow=3.1,SNR=4.5
SONM LR LR 07 50 22.3
comp=Z,173nm,19.9s,MS3.6,baz=14,slow=38
SONM Songino Array 26.98 41 P **P 07 38 46.0 +1.6**
SONM 07 42 05.4
ULN Ulaanbaatar 27.37 41 *e*P **P 07 38 48.9 +1.0**
ULN pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
ULN Ulaanbaatar 27.37 41 *e*P **P 07 38 48.9 +1.0**
comp=Z,9.8nm,1.1s,mb4.2
ULN *e*pP pP 07 38 53.4 +1.0
TLY Talaya 27.89 32 *e*P **P 07 38 54.0 +1.4**
TLY *e*S **S 07 43 37.8 +2.2**
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
TLY MLR MLR
comp=Z,88nm,14.0s,MS3.5
ARU Arti 30.62 336⇑ *i*P **P 07 39 16.6 -0.2**
ARU *e* 07 40 12.7
ARU *e* 07 42 14.4
ARU *e*S **S 07 44 13.0 -5.5**
ARU pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
ARU Arti 30.62 336 *e*P **P 07 39 16.9 +0.1**
comp=Z,5.1nm,0.8s,mb4.4
KIV Kislovodsk 32.82 306 *e*P **P 07 39 37.4 +1.2**
KIV *e* 07 42 25.0
KIV pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
NJ2 Nanjing 33.11 76 *e*P **P 07 39 43.9 +5.1**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
SSE Sheshan 35.21 77 P **P 07 39 59.5 +2.5**
SSE AMB AMB
comp=Z,23nm,0.8s,mb5.2
SSE AMB AMB
comp=Z,45nm,4.2s
BOD Bodaibo 36.41 30 *e*P **P 07 40 06.5 -0.8**
BOD pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
ANN Anapa 36.68 306 *e*P **P 07 40 10.7 +1.2**
ANN *e**PP pP 07 40 23.1 +9.1
ANN *e*S **S 07 45 48.6 -3.7**
ANN pmax pmax
comp=Z,22nm,1.0s,mb4.9
BRTR Keskin Array B 39.09 297 P **P 07 40 29.7 -0.2**
comp=Z,0.5nm,0.6s,mb3.4,baz=104,slow=10,SNR=4.2
OBN Obninsk 39.93 322 *e*P **P 07 40 36.7 -0.2**
OBN *e* 07 42 07.1
OBN *e* 07 42 44.5
OBN pmax pmax
comp=Z,17nm,1.4s,mb4.6
OBN MLR MLR
comp=Z,100nm,16.0s,MS3.8
KLMR Klimovskoe 41.01 331 *e*P **P 07 40 43.3 -2.6**
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.2
AKASG Malin Array Be 43.09 314 P **P 07 41 02.2 -0.6**
comp=Z,1.3nm,0.6s,mb3.9,baz=79,slow=6.6,SNR=12
AKASG Malin Array Be 43.09 314 P **P 07 41 02.2 -0.6**
AKBB Malin Array Si 43.09 314 *e*P **P 07 41 02.1 -0.7**
HABR Khabarovsk 45.37 50 *e*P **P 07 41 20.2 -0.9**
JOF Joensuu 45.41 331 *e*p **P 07 41 20.4 -1.0**
comp=Z,8.9nm,0.6s,mb4.8
JOF Joensuu 45.41 331 *e*P **P 07 41 20.4 -1.0**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
FINES FINESS Array B 47.22 328 P **P 07 41 35.3 -0.3**
comp=Z,9.0nm,0.6s,mb4.9,baz=111,slow=9.4,SNR=65
FINES LR LR 08 02 38.0
comp=Z,100nm,19.9s,MS3.8,baz=183,slow=38
KAF Kangasniemi 47.31 329 *e*p **P 07 41 35.0 -1.3**
comp=Z,12nm,0.8s,mb4.9,baz=107,slow=7.8
KAF Kangasniemi 47.31 329 *e*P **P 07 41 35.0 -1.3**
KAF pmax pmax
comp=Z,12nm,0.8s,mb4.9
MJAR Matsushiro Arr 48.38 66 P **P 07 41 46.2 +1.6**
comp=Z,0.6nm,0.3s,mb4.2,baz=267,slow=6.3,SNR=4.2
KEV Kevo 49.78 339 *e*p **P 07 41 54.0 -1.4**
comp=Z,7.9nm,0.6s,mb4.9
KEV Kevo 49.78 339 *e*P **P 07 41 54.0 -1.4**
KEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
ARCES ARCESS Array B 50.18 338 P **P 07 41 58.2 -0.2**
comp=Z,19nm,0.8s,mb5.1,baz=114,slow=8.1,SNR=65
ARE0 ARCESS Array S 50.18 338 *e*P **P 07 41 58.5 +0.1**
GERES GERESS Array B 53.07 311 P **P 07 42 18.9 -1.0**
comp=Z,0.3nm,0.4s,mb3.5,baz=76,slow=5.6,SNR=4.1
NB2 NORSAR Subarra 54.23 326 P **P 07 42 27.3 -1.2**
comp=Z,6.4nm,1.0s,mb4.5,baz=92,slow=7.4
NOA NORSAR Array B 54.23 326 P **P 07 42 27.4 -1.1**
comp=Z,2.9nm,0.8s,mb4.2,baz=93,slow=7.3,SNR=12
NOA LR LR 08 06 46.0
comp=Z,93nm,18.2s,MS3.9,baz=70,slow=37
CDF Champ du Feu 57.35 311 *e*P **P 07 42 51.3 +0.4**
comp=Z,1.8nm,0.5s,mb4.1
CDF Champ du Feu 57.35 311 *e*P **P 07 42 51.3 +0.4**
CDF pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
CDF Champ du Feu 57.35 311 *e*P **P 07 42 51.3 +0.4**
comp=Z,0.9nm,0.5s,mb4.1
HINF Hinteralfeld 57.73 310 *e*P **P 07 42 53.8 +0.3**
comp=Z,6.6nm,0.8s,mb4.4
HINF Hinteralfeld 57.73 310 *e*P **P 07 42 53.8 +0.3**
HINF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
HINF Hinteralfeld 57.73 310 *e*P **P 07 42 53.8 +0.3**
comp=Z,3.9nm,0.8s,mb4.4
LPG La Plagne 58.24 308 *e*P **P 07 42 56.6 -0.5**
comp=Z,10nm,0.7s,mb4.7
LPG La Plagne 58.24 308 *e*P **P 07 42 56.6 -0.5**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
LPG La Plagne 58.24 308 *e*P **P 07 42 56.6 -0.5**
comp=Z,5.2nm,0.7s,mb4.7
LPL La Plagne 58.25 308 *e*P **P 07 42 56.6 -0.6**
comp=Z,16nm,0.7s,mb4.8
LPL La Plagne 58.25 308 *e*P **P 07 42 56.6 -0.6**
LPL pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
LPL La Plagne 58.25 308 *e*P **P 07 42 56.6 -0.6**
comp=Z,7.9nm,0.7s,mb4.8
MBDF Montbardon 58.39 307 *e*P **P 07 42 58.4 +0.3**
CABF La Chapelle 58.47 309 *e*P **P 07 42 58.3 -0.4**
ORIF Oris-en-Rattie 58.97 307 *e*P **P 07 43 02.1 -0.1**
VIVF Saint-Julien-l 59.81 307 *e*P **P 07 43 07.5 -0.5**
LOR Lormes 59.83 310 *e*P **P 07 43 08.0 -0.1**
SMF Signal de Mont 59.98 309 *e*P **P 07 43 09.2 +0.1**
SSF Saint Saulge 60.11 310 *e*P **P 07 43 10.0 0.0**
comp=Z,5.9nm,0.8s,mb4.4
SSF Saint Saulge 60.11 310 *e*P **P 07 43 10.0 0.0**
SSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
SSF Saint Saulge 60.11 310 *e*P **P 07 43 10.0 0.0**
comp=Z,3.0nm,0.8s,mb4.4
AVF Avril sur Loir 60.27 310 *e*P **P 07 43 09.9 -1.3**
TCF Toulx Ste Croi 61.16 309 *e*P **P 07 43 16.8 -0.4**
comp=Z,12nm,0.9s,mb4.7
TCF Toulx Ste Croi 61.16 309 *e*P **P 07 43 16.8 -0.4**
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
TCF Toulx Ste Croi 61.16 309 *e*P **P 07 43 16.8 -0.4**
comp=Z,6.1nm,0.9s,mb4.7
BILL Bilibino 61.23 25 *e*P **P 07 43 18.0 +0.3**
BILL pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0
CAF Calviac 61.60 308 *e*P **P 07 43 20.2 0.0**
LDF La Druitiere 62.12 312 *e*P **P 07 43 22.6 -1.1**
comp=Z,15nm,1.0s,mb4.8
LDF La Druitiere 62.12 312 *e*P **P 07 43 22.6 -1.1**
LDF pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
LDF La Druitiere 62.12 312 *e*P **P 07 43 22.6 -1.1**
comp=Z,7.6nm,1.0s,mb4.8
MFF Saint Martin d 62.65 310 *e*P **P 07 43 27.4 +0.1**
SGMF Saint Gilles 63.78 312 *e*P **P 07 43 34.1 -0.6**
ROSF Rostrenen 64.21 313 *e*P **P 07 43 36.8 -0.8**
WRA Warramunga Arr 71.90 127 P **P 07 44 25.6 -0.3**
comp=Z,2.8nm,0.7s,mb4.3,baz=322,slow=6.1,SNR=25
WB2 Warramunga Arr 71.91 127 *e*P **P 07 44 25.6 -0.4**
TORD Torodi Ar. Bea 73.69 276 P **P 07 44 36.5 0.0**
comp=Z,2.1nm,0.7s,mb4.2,baz=57,slow=5.4,SNR=18
TORD LR LR 08 20 47.5
comp=Z,52nm,18.0s,MS3.9,baz=140,slow=39
ASPA Alice Springs 74.12 130 *e*P **P 07 44 38.8 -0.2**
AS31 Alice Springs 74.12 130 *e*P **P 07 44 38.8 -0.2**
comp=Z,4.5nm,0.6s,mb4.6
ASAR Alice Springs 74.12 130 P **P 07 44 38.4 -0.7**
comp=Z,1.1nm,0.6s,mb3.9,baz=316,slow=5.5,SNR=20
IMA2 Indian Mountai 75.91 20 *e*P **P 07 44 48.8 -0.6**
BOSA Boshof 78.30 227 P **P 07 45 02.0 -0.8**
comp=Z,6.6nm,0.8s,mb4.6,baz=37,slow=6.0,SNR=10
BOSA LR LR 08 19 54.4
comp=Z,84nm,18.0s,MS4.1,baz=280,slow=36
COLA College 78.46 19 *e*P **P 07 45 03.1 -0.6**
COLA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
COLA College 78.46 19 *e*P **P 07 45 03.1 -0.6**
comp=Z,3.0nm,0.8s,mb4.3
INK Inuvik 78.97 12 *e*P **P 07 45 05.2 -1.3**
INK pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 78.97 12 *e*P **P 07 45 05.2 -1.3**
comp=Z,1.4nm,0.6s,mb4.1
DBIC Dimbokro 82.43 273 P **P 07 45 25.4 +0.3**
comp=Z,7.7nm,1.0s,mb4.6,baz=25,slow=6.2,SNR=3.7
LIC Lamto 82.80 273 *e*P **P 07 45 32.8 +5.9**
STKA Stephens Creek 84.65 131 P **P 07 45 35.5 -0.9**
comp=Z,1.1nm,0.7s,mb4.1,baz=301,slow=5.9,SNR=3.5
YKA Yellowknife Ar 87.20 7 P **P 07 45 47.3 -1.7**
comp=Z,0.9nm,0.6s,mb4.2,baz=337,slow=5.0,SNR=11
YKA Yellowknife Ar 87.20 7 P **P 07 45 47.3 -1.7**
YKA pmax pmax
comp=Z,1.0nm,0.6s
MAW Mawson 98.04 187 LR LR 08 27 38.3
comp=Z,62nm,19.4s,MS4.1,baz=242,slow=33

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*ISCJB **05** 07:44:54.3±0.5, 4139N±007×8879E±010, h10km, mb3.8/10, Error ellipse: s-maj=13.3km s-min=6.4km az=88.1*
*IDC **05** 07:44:54.4±0.8, 4122N×8873E, h0km, mb3.8/8, mb1 4.0/12, mb1mx3.8/25, mbtmp3.8/12, ML3.6/4, Error ellipse: s-maj=31.1km s-min=15.6km az=48.0*
*BJI **05** 07:44:54.6, 4153N×8899E, h9km, mB4.5, mb4.3, ML4.2, Ms4.0, Msz3.8*
*NEIC **05** 07:44:55.9±0.8, 41.34N×8871E, h10km, mb3.7/4, Error ellipse: s-maj=16.5km s-min=10.9km az=206.0*
ISC 05 07:44:57.6±2.6, 4141N±008×8880E±009, h22km±20km, n28, σ1s14/33, mb3.8/10, 3C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
WMQ	**Urumqi**	**2.54**	**342**	P	**Pn**	**07 45 36.4**	**-1.1**
WMQ				S	**Sn**	**07 46 08.3**	**+0.6**
WMQ				Smax			
	comp=N,2µm,0.7s						
WMQ				Smax			
	comp=E,1µm,0.6s						
MK02	**Makanchi Array**	**7.10**	**321**	⇑Pn	**Pn**	**07 46 41.9**	**+1.7**
	comp=E,7.2nm,0.6s,baz=131,slow=14						
MK02				⇓Lg		07 48 31.2	
	comp=E,45nm,0.8s,baz=132,slow=28						
MKAR	**Makanchi Array**	**7.13**	**321**	Pn	**Pn**	**07 46 39.6**	**-0.9**
	comp=E,0.9nm,0.3s,baz=139,slow=14,SNR=30						
MKAR				Sn	**Sn**	**07 47 59.1**	**-1.7**
	comp=E,2.7nm,0.3s,baz=129,slow=19,SNR=4.0						
MKAR				Lg		07 48 39.0	
	comp=E,2.8nm,0.3s,baz=105,slow=26,SNR=3.6						
MKAR	**Makanchi Array**	**7.13**	**321**	Pn	**Pn**	**07 46 39.6**	**-0.9**
MKAR				Sn	**Sn**	**07 47 59.1**	**-1.7**
MKAR				Lg		07 48 39.0	
GTA	**Gaotai**	**8.64**	**100**	*e*P	**Pn**	**07 47 04.2**	**+2.9**
GTA				AP		07 47 11.5	
GTA				AMB	AMB		
	comp=Z,3.0nm,0.5s						
GTA				LR	LR		
	comp=N,286nm,5.7s						
GTA				LR	LR		
	comp=E,277nm,4.9s						
GTA				LR	LR		
	comp=Z,89nm,6.5s						
KURK	**Kurchatov**	**11.67**	**326**	⇑Pn	**Pn**	**07 47 42.2**	**-0.6**
	comp=Z,2.2nm,0.7s						
KURK				⇑Lg		07 50 55.0	
	comp=Z,18nm,0.9s						
KURK	**Kurchatov**	**11.67**	**326**	*e*Pn	**Pn**	**07 47 42.1**	**-0.7**
	comp=Z,4.3nm,0.8s						
KURK				*e*Sn	**Sn**	**07 49 48.3**	**-4.1**
ZAL	**Zalesovo**	**12.81**	**349**	Pn	**Pn**	**07 47 58.8**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=314,slow=7.4,SNR=6.3						
ZAL				Lg		07 51 41.7	
	comp=Z,0.3nm,0.3s,baz=33,slow=20,SNR=2.2						
LZH	**Lanzhou**	**12.89**	**109**	*e*P	**Pn**	**07 47 57.6**	**-1.8**
LZH				AP		07 48 03.2	
LZH				XP		07 48 07.3	
LZH				*e*S	**Sn**	**07 50 20.0**	**-2.2**
LZH				XS		07 50 29.5	
LZH				*e*SS		07 50 35.3	
LZH				AMB	AMB		
	comp=Z,18nm,1.0s						
LZH				AMB	AMB		

	comp=Z,52nm,4.3s						
LZH				LR	LR		
	comp=N,315nm,7.6s						
LZH				LR	LR		
	comp=Z,797nm,11.5s						
SONM	**Songino Array**	**14.07**	**57**	Pn	**Pn**	**07 48 16.6**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=243,slow=13,SNR=10.0						
SONM				Lg		07 52 19.6	
	comp=Z,0.8nm,0.3s,baz=254,slow=28,SNR=12						
BVAR	**Borovoye Array**	**17.01**	**319**	P	**Pn**	**07 48 53.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=118,slow=11,SNR=8.2						
BRVK	**Borovoye**	**17.08**	**319**	*e*Pn	**Pn**	**07 48 54.4**	**-0.5**
	comp=Z,2.6nm,0.7s						
CHKZ	**Chkalovo**	**17.29**	**321**	*e*Pn	**Pn**	**07 48 57.7**	**+0.1**
	comp=Z,5.0nm,0.6s						
ZRNK	**Zerenda**	**17.66**	**318**	*e*Pn	**Pn**	**07 49 01.2**	**-0.8**
	comp=Z,3.6nm,0.8s						
GYA	**Guiyang**	**20.97**	**130**	P	**P**	**07 49 39.7**	**+0.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s						
AKTK	**Aktyubinsk**	**23.09**	**303**	P	**P**	**07 50 02.1**	**+0.3**
AKTO	**Aktyubinsk**	**23.09**	**303**	P	**P**	**07 50 02.1**	**+0.3**
	comp=Z,2.2nm,0.8s,mb3.6,baz=86,slow=8.5,SNR=5.4						
ARU	**Arti**	**24.64**	**318**	*e*P	**P**	**07 50 16.5**	**0.0**
	comp=Z,7.2nm,0.6s,mb4.4						
BRTR	**Keskin Array B**	**41.33**	**287**	P	**P**	**07 52 42.5**	**+0.8**
	comp=Z,1.2nm,0.8s,mb3.6,baz=98,slow=7.6,SNR=7.8						
FINES	**FINESS Array B**	**41.96**	**320**	P	**P**	**07 52 48.6**	**+1.8**
	comp=Z,1.0nm,0.9s,mb3.4,baz=53,slow=7.1,SNR=2.6						
ARCES	**ARCESS Array B**	**42.63**	**332**	P	**P**	**07 52 54.0**	**+1.8**
	comp=Z,0.9nm,0.5s,mb3.7,baz=69,slow=6.6,SNR=8.0						
NB2	**NORSAR Subarra**	**49.13**	**321**	P	**P**	**07 53 41.4**	**-2.1**
	comp=Z,1.3nm,0.6s,mb4.1,baz=74,slow=7.9						
NOA	**NORSAR Array B**	**49.13**	**321**	P	**P**	**07 53 41.6**	**-1.9**
	comp=Z,0.4nm,0.6s,mb3.7,baz=75,slow=7.0,SNR=3.1						
NOA				pP	pP	07 53 47.8	-2.5
	comp=Z,1.3nm,0.7s,baz=74,slow=7.7,SNR=6.0						
WRA	**Warramunga Arr**	**74.21**	**136**	P	**P**	**07 56 32.2**	**-0.4**
	comp=Z,1.7nm,0.8s,mb4.0,baz=330,slow=5.6,SNR=10.0						
YKA	**Yellowknife Ar**	**74.74**	**11**	P	**P**	**07 56 36.5**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.6,baz=336,slow=5.9,SNR=5.5						
YKA	**Yellowknife Ar**	**74.74**	**11**	P	**P**	**07 56 36.5**	**+0.7**
ASAR	**Alice Springs**	**77.07**	**138**	P	**P**	**07 56 49.1**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=329,slow=5.5,SNR=16						
TORD	**Torodi Ar. Bea**	**79.28**	**278**	P	**P**	**07 57 01.3**	**0.0**
	comp=Z,1.5nm,0.8s,mb4.0,baz=37,slow=5.3,SNR=8.2						
TORD				pP	pP	07 57 07.2	-1.2
	comp=Z,0.8nm,0.6s,baz=42,slow=4.3,SNR=4.1						

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*CSEM **05** 07:58:29.2, 30.19N×7.89W, h30km, MD3.1, After CNRM*
*CNRM **05** 07:58:29.2, 30.19N×7.89W, h30km, MD3.1*
MDD 05 07:58:27.2±2.0**, 30.22N×7.93W, h13**km±12km**, mb3.8**/1**, Error ellipse: s-maj=16.7km s-min=8.2km az=137.0, PRXIMO, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUK	**Oukaimeden**	**0.99**	**3**	*e*P	Pb	07 58 45.0	-1.2
OUK				*i* S	Sb	07 58 58.0	-1.1
CIA	**Chichaoua**	**1.52**	**332**	*i* P	Pn	07 58 54.0	-0.1
CIA				*i* S	Sn	07 59 12.0	-1.8
YBT	**Youssef Ben Ta**	**1.55**	**257**	P	Pn	07 58 51.0	-3.6
YBT				S	Sn	07 59 09.0	-5.6
TZC	**Tazercounte**	**2.28**	**32**	*e*P	Pn	07 59 04.0	-0.6
TZC				*i* S	Sn	07 59 30.0	-2.6
CZD	**Col de Zad**	**3.73**	**41**	*e*P	Pn	07 59 24.0	-0.5
CZD				*i* S	Sn	08 00 05.0	-3.3
EMIN	**Mina Concepcio**	**7.60**	**8**	P	Pn	08 00 15.6	-2.0
	0.4nm,0.1s,SNR=7.9						
EMIN				S	Sn	08 01 37.5	-6.1
	0.4nm,0.1s,SNR=7.9						

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*ISCJB **05** 08:08:58.6±0.3, 38.88N±0.02×42.44E±0.02, h10km, mb3.4/5, Error ellipse: s-maj=3.5km s-min=2.6km az=166.4*
*IDC **05** 08:08:58.4±1.8, 38.93N×42.46E, h0km, mb3.3/4, mb1 3.3/8, mb1mx3.3/23, mbtmp3.3/8, ML3.2/3, Error ellipse: s-maj=33.1km s-min=11.7km az=166.0*
*CSEM **05** 08:08:58.8±0.2, 38.76N×42.43E, h20km±2km, MD3.6, Error ellipse: s-maj=3.2km s-min=2.5km az=158.0*
*ISK **05** 08:08:59.1, 38.75N×42.41E, h25km, MD3.6*
*NEIC **05** 08:08:59.0, 38.75N×42.41E, h25km, mb4.1/2, ML3.6(ISK), After ISK.*
*SZGRF **05** 08:09:04.5, 39.03N×42.13E, h33km, mb4.0, Turkey*
ISC 05 08:08:59.4±0.3**, 38.90N**±0.02×**42.45E**±0.02**, h10**km**, n42,** σ1^{s}**19**/58**, mb3.4**/5**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.80**	**112**	*i* PG	**Pg**	**08 09 14.3**	**-0.4**
TVAN	**Van**	**0.84**	**116**	*i* P	**Pg**	**08 09 14.5**	**-1.0**
TVAN				*i* S	**Sg**	**08 09 27.6**	**+1.2**
VANT	**Van**	**0.86**	**121**	*i* PG	**Pg**	**08 09 14.3**	**-1.7**
BTMT	**Batman**	**1.03**	**227**	PN	**Pn**	**08 09 18.5**	**-1.4**
BTMT				SN	**Sn**	**08 09 33.6**	**-0.8**
CLDR	**Caldiran**	**1.17**	**78**	PN	**Pn**	**08 09 20.7**	**-1.1**
CLDR				SN	**Sn**	**08 09 37.9**	**+0.2**
CLDR	**Caldiran**	**1.17**	**78**	Pn	**Pn**	**08 09 20.7**	**-1.1**
CLDR				Sg	**Sg**	**08 09 37.7**	**+0.7**
ERZM	**Erzurum**	**1.31**	**320**	*i* P	**Pn**	**08 09 22.6**	**-1.1**
ERZM				*i* S	**Sb**	**08 09 42.1**	**+1.2**
EZM	**Erzurum**	**1.31**	**320**	PN	**Pn**	**08 09 22.9**	**-0.8**
HAKT	**HAKKARI**	**1.67**	**143**	*i* P	**Pn**	**08 09 29.9**	**+1.3**
HAKT				*i* S	**Sg**	**08 09 54.8**	**+1.9**
DIGO	**Kars**	**1.67**	**25**	*i* P	**Pn**	**08 09 29.6**	**+0.9**
DIGO				*i* S	**Sg**	**08 09 57.5**	**+4.3**
DIGO	**Kars**	**1.67**	**25**	*i* P	**Pn**	**08 09 29.5**	**+0.8**
KARS	**Kars**	**1.78**	**16**	PN	**Pn**	**08 09 31.8**	**+1.6**
CUKT	**Cukurca**	**1.89**	**151**	PN	**Pn**	**08 09 29.7**	**-1.9**
DIY	**Diyarbakir**	**2.01**	**241**	*e*PN	**Pn**	**08 09 31.6**	**-1.8**
MARD	**Mardin**	**2.06**	**220**	*i* P	**Pn**	**08 09 33.5**	**-0.5**
MARD				*i* S	**Sn**	**08 10 00.5**	**+0.7**
GNI	**Garni**	**2.17**	**54**	Pn	**Pn**	**08 09 36.2**	**+0.7**
	12nm,0.3s,baz=310,slow=4.0,SNR=19						
GNI				Pg	**Pg**	**08 09 39.3**	**-1.6**
	14nm,0.3s,baz=314,slow=4.1,SNR=10						
GNI				Lg		08 10 09.6	
	17nm,0.3s,baz=17,slow=22,SNR=9.2						
GNI	**Garni**	**2.17**	**54**	*e*Pn	**Pn**	**08 09 36.4**	**+0.9**
BCA	**Borcka**	**2.62**	**346**	*e*PN	**Pn**	**08 09 43.6**	**+1.9**
MSL	**Mosul**	**2.66**	**169**	*e*x	x	08 09 45.5	
MSL				*e*x	x	08 10 21.5	
ELZG	**Elazig**	**2.74**	**263**	*i* P	**Pn**	**08 09 43.7**	**+0.3**
ELZG				*i* S	**Sg**	**08 10 27.7**	**+0.3**
KELT	**Kelkit**	**2.77**	**298**	*i* P	**Pn**	**08 09 48.0**	**+4.3**
KELT				*i* S	**Sg**	**08 10 32.4**	**+4.2**
MYA	**Malataya**	**3.20**	**261**	*e*PN	**Pn**	**08 09 49.5**	**-0.2**
MALT	**Malatya**	**3.21**	**261**	*e*Pn	**Pn**	**08 09 50.2**	**+0.5**
MALT				*e*Sn	**Sn**	**08 10 28.2**	**+0.2**
MALT	**Malatya**	**3.21**	**261**	*e*Pn	**Pn**	**08 09 50.2**	**+0.4**
MALT				*e*Sn	**Sn**	**08 10 28.2**	**+0.2**
URFA	**Urfa**	**3.21**	**244**	*e*PN	**Pn**	**08 09 48.7**	**-1.1**
MTA	**Mtatsminda**	**3.32**	**32**	P	**Pb**	**08 09 58.3**	**0.0**
MTA				S	**Sg**	**08 10 41.8**	**-4.1**
TBLG	**Delisi**	**3.33**	**31**	P	**Pb**	**08 09 58.2**	**-0.2**
TBLG				S	**Sg**	**08 10 44.0**	**-2.1**
DGRG	**David-gareji**	**3.39**	**40**	P	**Pn**	**08 09 51.3**	**-1.0**
DGRG				S	**Sg**	**08 10 49.3**	**+1.0**
ONI	**Oni**	**3.75**	**11**	P	**Pn**	**08 10 00.9**	**+3.6**
ONI				S	**Sg**	**08 10 57.0**	**-2.9**
SVSK	**Karacayir**	**4.34**	**285**	*e*PN	**Pn**	**08 10 06.6**	**+1.2**
GAZ	**Gaziantep**	**4.48**	**249**	*e*PN	**Pn**	**08 10 06.5**	**-0.8**
BRTR	**Keskin Array B**	**6.88**	**280**	Pn	**Pn**	**08 10 41.6**	**+1.4**
	0.1nm,0.3s,baz=98,slow=17,SNR=3.0						
ASF	**Jabal al Asfar**	**8.09**	**216**	Pn	**Pn**	**08 11 01.2**	**+4.3**
	0.3nm,0.3s,baz=228,slow=5.1,SNR=3.0						
ASF				Lg		08 13 18.5	
	0.1nm,0.3s,baz=78,slow=21,SNR=4.2						
MMAI	**Mount Meron Ar**	**8.19**	**226**	Pn	**Pn**	**08 11 00.6**	**+2.3**
	0.3nm,0.3s,baz=48,slow=20,SNR=3.2						
AKASG	**Malin Array Be**	**15.05**	**326**	Pn	**Pn**	**08 12 31.4**	**-0.6**
	0.3nm,0.3s,baz=135,slow=12,SNR=6.9						
AKBB	**Malin Array Si**	**15.05**	**326**	*e*Pn	**Pn**	**08 12 32.0**	**0.0**
GERES	**GERESS Array B**	**22.86**	**305**	P	**P**	**08 14 03.2**	**+0.4**
	0.9nm,0.8s,mb3.2,baz=108,slow=8.6,SNR=7.0						
BVAR	**Borovoye Array**	**23.82**	**44**	P	**P**	**08 14 13.6**	**+1.1**
	0.3nm,0.4s,mb3.1,baz=264,slow=5.5,SNR=2.8						
GRA1	**Grafenberg Arr**	**24.65**	**306**	*e*P	**P**	**08 14 19.4**	**-0.6**
	4.0nm,0.8s,mb4.0						
GRF	**Grafenberg Arr**	**24.65**	**306**	*e*P	**P**	**08 14 19.4**	**-0.6**
	comp=Z,4.0nm,0.8s,mb4.0						
FINES	**FINESS Array B**	**24.74**	**341**	P	**P**	**08 14 19.5**	**-1.4**
	comp=Z,0.7nm,0.6s,mb3.4,baz=153,slow=9.4,SNR=3.5						
MKAR	**Makanchi Array**	**30.00**	**62**	P	**P**	**08 15 09.5**	**+1.4**
	comp=Z,0.3nm,0.6s,mb3.2,baz=244,slow=9.5,SNR=3.8						

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*IDC **05** 08:24:55.7±7.1, 35.79N×21.54E, h0km, mb3.5/3, mb1 3.4/5, mb1mx3.3/23, mbtmp3.4/5, ML2.8/2, Error ellipse: s-maj=137.9km s-min=31.6km az=33.0*
*HLW **05** 08:24:57.8, 36.44N×22.33E, h33km, Mb3.1*
*ATH **05** 08:24:59.8, 36.03N×21.93E, h5km, MD3.7/6*
*NEIC **05** 08:24:59.8, 36.03N×21.93E, h5km, MD3.7(ATH), After ATH.*
*ISCJB **05** 08:25:02.6±1.1, 35.85N±0.04×22.2E±0.1, h56km±13km, mb3.5/3, Error ellipse: s-maj=20.4km s-min=6.4km az=157.6*
*CSEM **05** 08:25:04.5±0.7, 35.89N×22.58E, h60km, MD3.7, Error ellipse: s-maj=28.0km s-min=4.1km az=92.0*
ISC 05 08:24:59.1±1.2**, 35.99N**±0.04×**21.90E**±0.10**, h14**km±7km**, n17,** σ1^{s}**10**/20**, mb3.5**/3**, 2C-1D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.97**	**72**	*e*PB	**Pg**	**08 25 17.5**	**-0.3**
VLI	**Veliai**	**1.11**	**49**	*e*PG	**Pg**	**08 25 19.7**	**-0.8**
VLI				*e*SN	**Sn**	**08 25 35.8**	**+0.6**
ITM	**Ithomi**	**1.19**	**1**	*e*PB	**Pb**	**08 25 20.2**	**-1.1**
VAM	**Vamos**	**1.96**	**107**	*e*PN	**Pg**	**08 25 37.6**	**+0.8**
RLS	**Riolos of Patr**	**2.09**	**351**	*e*PG	**Pg**	**08 25 38.9**	**-0.3**
GVD	**Gavdhos**	**2.13**	**122**	*e*PN	**Pb**	**08 25 38.0**	**+0.6**
IDI	**Anoyia**	**2.54**	**105**	Pn	**Pn**	**08 25 43.1**	**+3.3**
	1.8nm,0.3s,baz=296,slow=16,SNR=12						
LKR	**Lokris**	**2.79**	**18**	*e*PN	**Pb**	**08 25 47.7**	**-1.1**
EVR	**Evrytania**	**2.92**	**359**	*e*PN	**Pb**	**08 25 51.2**	**+0.3**
HMAT	**Matruh**	**6.54**	**137**	⇑P	**Pn**	**08 26 33.9**	**-0.8**
SWA2		**7.37**	**155**	P	**Pn**	**08 26 47.3**	**+1.2**
SWA2				S	**Sn**	**08 28 07.5**	**-2.0**
SWA1		**7.44**	**153**	⇓P	**Pn**	**08 26 48.6**	**+1.5**
SWA1				S	**Sn**	**08 28 09.1**	**-2.2**
BRTR	**Keskin Array B**	**10.00**	**65**	Pn	**Pn**	**08 27 27.1**	**+4.8**
	0.1nm,0.3s,baz=253,slow=13,SNR=3.4						
HFRF	**Wahat Farafira**	**10.37**	**146**	⇑P	**Pn**	**08 27 28.0**	**+0.7**
HFS	**Hagfors**	**24.73**	**350**	P	**P**	**08 30 21.2**	**+1.3**
	1.1nm,0.8s,mb3.5,baz=168,slow=14,SNR=3.1						
ARCES	**ARCESS Array B**	**33.66**	**2**	P	**P**	**08 31 39.5**	**+0.2**
	0.6nm,0.8s,mb3.6,baz=190,slow=10.0,SNR=3.8						
MKAR	**Makanchi Array**	**45.54**	**57**	P	**P**	**08 33 17.9**	**-0.4**
	0.3nm,0.5s,mb3.5,baz=280,slow=8.1,SNR=4.8						

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*ISCJB **05** 08:57:33.9±0.5, 48.52N±0.02×17.48E±0.04, h10km, Error ellipse: s-maj=4.0km s-min=3.0km az=71.8*
*CSEM **05** 08:57:34.7±0.2, 48.50N×17.52E, h0km, ML2.5/6, Error ellipse: s-maj=2.6km s-min=2.1km az=144.0*
*PRU **05** 08:57:35.6, 48.51N×17.50E, h0km, Slovakia*
*IPEC **05** 08:57:35.2±0.1, 48.52N×17.54E, h0km, ML1.6/4, Error ellipse: s-maj=0.9km s-min=0.8km az=28.0*
*VIE **05** 08:57:35.4±0.5, 48.47N×17.47E, h9km±4km, mb1.6/2, ML2.2/2, Error ellipse: s-maj=4.1km s-min=1.6km az=85.0 40 km NE of Bratislava*
ISC 05 08:57:34.8±0.5**, 48.51N**±0.02×**17.52E**±0.04**, h10**km**, n17,** σ0^{s}**96**/33**, 1C-1D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMOL	**Smolenice**	**0.06**	**277**	*e*PG	**Pg**	**08 57 35.7**	**-1.1**
SMOL				*e*SG	**Sg**	**08 57 36.4**	**-1.9**
JAVC	**Velka Javorina**	**0.37**	**16**	*e*Pg	**Pg**	**08 57 42.1**	**+0.1**
	baz=194						
JAVC				*e*Sg	**Sg**	**08 57 48.0**	**+1.1**
	28nm,0.2s						
ZST	**Bratislava**	**0.42**	**222**	*e*PG	**Pg**	**08 57 42.6**	**-0.3**
ZST				*e*SG	**Sg**	**08 57 48.6**	**+0.2**
ZST	**Bratislava**	**0.42**	**222**	*e*Pg	**Pg**	**08 57 42.6**	**-0.3**
ZST				*e*Sg	**Sg**	**08 57 48.5**	**+0.1**
VYHS	**Vyhne**	**0.88**	**90**	*e*PG	**Pg**	**08 57 52.1**	**+0.4**
VYHS				*e*SG	**Sg**	**08 58 05.1**	**+2.0**
VYHS	**Vyhne**	**0.88**	**90**	*e*Pg	**Pg**	**08 57 51.9**	**+0.2**
	baz=272						
VYHS				*e*Sg	**Sg**	**08 58 02.2**	**-0.9**
	baz=272						
KRUC	**Moravsky**	**0.93**	**307**	*e*Pg	**Pg**	**08 57 53.2**	**+0.6**
	baz=125						
KRUC				*e*Sg	**Sg**	**08 58 04.4**	**-0.3**
	11nm,0.4s,baz=125						
VRAC	**Vranov**	**1.01**	**323**	*e*Pg	**Pg**	**08 57 54.4**	**+0.3**
	baz=141						
VRAC				*e*Sg	**Sg**	**08 58 06.9**	**-0.3**
	17nm,0.4s,baz=141						
CONA	**Conrad Observa**	**1.25**	**243**	⇓*i*Pg	**Pg**	**08 57 58.0**	**-0.7**
CONA				⇑*i*Sg	**Sg**	**08 58 15.4**	**+0.4**
	6.5nm,0.2s						
CONA	**Conrad Observa**	**1.25**	**243**	Pg	**Pg**	**08 57 58.0**	**-0.8**
CONA				Sg	**Sg**	**08 58 15.4**	**+0.4**
	6.5nm,0.2s						
MORC	**Moravsky Berou**	**1.27**	**1**	*e*Pg	**Pg**	**08 57 58.8**	**-0.4**
	baz=180						
MORC				*e*Sg	**Sg**	**08 58 14.5**	**-1.2**
	6.6nm,0.5s,baz=180						
OKC	**Ostrava-Krasne**	**1.40**	**17**	*e*PG	**Pg**	**08 58 00.7**	**-0.8**
OKC				*e*SG	**Sg**	**08 58 20.1**	**+0.4**
	8.2nm,0.6s						
ARSA	**Arzberg**	**1.84**	**228**	*e*Pn	**Pn**	**08 58 08.4**	**+2.0**
	baz=46						
ARSA				*e*Sg	**Sg**	**08 58 33.6**	**-0.3**
	baz=46						
DPC	**Dobruska-Polom**	**2.00**	**338**	*e*PG	**Pg**	**08 58 13.1**	**-0.1**
DPC				*e*SG	**Sg**	**08 58 40.3**	**+1.1**
	7.1nm,0.5s						
DPC	**Dobruska-Polom**	**2.00**	**338**	*e*Pg	**Pg**	**08 58 13.1**	**-0.1**
DPC				*e*Sg	**Sg**	**08 58 38.0**	**-1.2**
	baz=156						
PRU	**Pruhonice**	**2.45**	**308**	*e*SG	**Sg**	**08 58 54.5**	**+1.1**
	4.7nm,0.4s						
KHC	**Kasperske Hory**	**2.68**	**285**	*e*PG	**Pg**	**08 58 25.0**	**-1.1**
KHC				*e*SG	**Sg**	**08 59 02.9**	**+2.2**
	4.3nm,0.5s						

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*ISCJB **05** 09:00:08.0±0.5, 48.52N±0.02×17.48E±0.04, h5km±6km, Error ellipse: s-maj=4.5km s-min=3.7km az=69.4*
*CSEM **05** 09:00:08.6±0.1, 48.49N×17.53E, h12km, ML2.8/5, Error ellipse: s-maj=2.6km s-min=1.3km az=120.0*
*IPEC **05** 09:00:09.4±0.2, 48.52N×17.54E, h0km, ML2.0/4, Error ellipse: s-maj=2.1km s-min=0.8km az=26.0*
*VIE **05** 09:00:09.3±0.6, 48.46N×17.49E, h12km±3km, mb1.7/3, ML2.6/3, Error ellipse: s-maj=4.2km s-min=2.8km az=80.0 40 km NE of Bratislava*
*PRU **05** 09:00:09.8, 48.51N×17.51E, h0km, Slovakia*
ISC 05 09:00:08.7±0.6**, 48.49N**±0.03×**17.54E**±0.04**, h3**km±7km**, n17,** σ0^{s}**91**/34**, 3C-2D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMOL	**Smolenice**	**0.07**	**288**	*e*PG	**Pg**	**09 00 09.9**	**-0.3**
JAVC	**Velka Javorina**	**0.38**	**14**	*e*Pg	**Pg**	**09 00 16.2**	**+0.2**
JAVC				*e*Sg	**Sg**	**09 00 22.2**	**+1.3**
	121nm,0.5s						
ZST	**Bratislava**	**0.41**	**225**	*e*PG	**Pg**	**09 00 16.8**	**+0.2**
ZST				*e*SG	**Sg**	**09 00 22.7**	**+0.7**
ZST	**Bratislava**	**0.41**	**225**	*e*Pg	**Pg**	**09 00 16.8**	**+0.2**
ZST				*e*Sg	**Sg**	**09 00 22.3**	**+0.3**
VYHS	**Vyhne**	**0.86**	**89**	*e*PG	**Pg**	**09 00 26.1**	**+0.8**
VYHS				*e*SG	**Sg**	**09 00 39.3**	**+2.8**
VYHS	**Vyhne**	**0.86**	**89**	*e*Pg	**Pg**	**09 00 26.0**	**+0.7**
VYHS				*e*Sg	**Sg**	**09 00 36.3**	**-0.2**
KRUC	**Moravsky**	**0.95**	**308**	*e*Pg	**Pg**	**09 00 27.4**	**+0.6**
KRUC				*e*Sg	**Sg**	**09 00 38.7**	**-0.4**
	19nm,0.5s						
VRAC	**Vranov**	**1.03**	**323**	*e*Pg	**Pg**	**09 00 28.6**	**+0.2**
VRAC				*e*Sg	**Sg**	**09 00 41.1**	**-0.6**
	22nm,0.4s						
CONA	**Conrad Observa**	**1.25**	**244**	⇓*i*Pg	**Pg**	**09 00 32.1**	**-0.6**
CONA				⇑*i*Sg	**Sg**	**09 00 49.6**	**+0.7**
	12nm,0.2s						
MORC	**Moravsky Berou**	**1.29**	**0**	*e*Pg	**Pg**	**09 00 33.0**	**-0.4**
MORC				*e*Sg	**Sg**	**09 00 48.8**	**-1.3**
	11nm,0.5s						
OKC	**Ostrava-Krasne**	**1.41**	**16**	*e*PG	**Pg**	**09 00 35.0**	**-0.7**
OKC				*e*SG	**Sg**	**09 00 54.1**	**+0.2**
	22nm,0.8s						
ARSA	**Arzberg**	**1.84**	**228**	⇑*i*Pn	**Pn**	**09 00 40.6**	**-0.5**
ARSA				⇓*i*Pg	**Pg**	**09 00 43.4**	**-0.5**
ARSA				⇑*i*Sn	**Sn**	**09 01 03.8**	**-1.0**
DPC	**Dobruska-Polom**	**2.02**	**337**	*e*PG	**Pg**	**09 00 47.1**	**-0.4**
DPC				*e*SG	**Sg**	**09 01 14.1**	**+0.4**
	9.7nm,0.4s						
DPC	**Dobruska-Polom**	**2.02**	**337**	*e*Pg	**Pg**	**09 00 47.1**	**-0.4**
DPC				*e*Sg	**Sg**	**09 01 12.2**	**-1.5**
PRU	**Pruhonice**	**2.47**	**309**	*e*PG	**Pg**	**09 00 54.7**	**-1.3**
PRU				*e*SG	**Sg**	**09 01 29.4**	**+1.4**
	6.8nm,0.5s						
KHC	**Kasperske Hory**	**2.69**	**285**	*e*PG	**Pg**	**09 00 58.5**	**-1.8**
KHC				*e*SN	**Sn**	**09 01 27.6**	**+1.6**
KHC				*e*SG	**Sg**	**09 01 36.2**	**+1.0**
	6.0nm,0.5s						
NKC	**Novy Kostel**	**3.75**	**300**	*e*SG	**Sg**	**09 02 10.4**	**+1.1**
	6.2nm,0.5s						

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*NIED **05** 09:10:00, 44.20N×146.30E, h107km, Mw4.2 Best double couple: M0 2.10000×10^15 NP1: φs 210.00000°, δ85.00000°, λ107.00000°. NP2: φs 315.00000°, δ18.00000°, λ17.00000°.*
*MOS **05** 09:10:13.7±1.5, 44.24N×146.28E, h132km, mb4.0/5, Error ellipse: s-maj=12.2km s-min=9.4km az=89.2*
*ISCJB **05** 09:10:14.5±0.4, 44.27N±0.04×146.26E±0.05, h125km±3km, mb4.0/23, Error ellipse: s-maj=7.4km s-min=5.4km az=111.1*
*BJI **05** 09:10:15.6, 44.35N×146.14E, h139km, mB4.7, mb4.5*
*NEIC **05** 09:10:16.5±2.0, 44.30N×145.96E, h124km±19km, mb4.5/5, MW4.1(NIED), Error ellipse: s-maj=15.7km s-min=13.0km az=80.0*
*JMA **05** 09:10:16.5±0.2, 44.19N×146.26E, h115km±2km, M4.0*
*IDC **05** 09:10:18.3±1.7, 44.35N×145.95E, h141km±14km, mb3.6/14, mb1 3.7/16, mb1mx3.6/23, mbtmp4.0/16, Error ellipse: s-maj=17.4km s-min=13.0km az=94.0*
ISC 05 09:10:15.4±0.4**, 44.27N**±0.04×**146.27E**±0.05**, h122**km±3km**, n60,** σ1^{s}**24**/79**, mb4.0**/23**, 11C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.38**	**232**	⇑*i*PN	**Pn**	**09 10 33.3**	**+0.4**
JRA	**Rausu**	**0.89**	**249**	⇑P	**Pn**	**09 10 36.8**	**+0.3**
JRA				*e*S	**Sn**	**09 10 52.1**	**-0.4**
NEM2	**Nemuro 2**	**0.98**	**203**	⇑P	**Pn**	**09 10 37.2**	**-0.2**
NEM2				*e*S	**Sn**	**09 10 52.5**	**-1.5**
KUR	**Kuril'sk**	**1.49**	**49*j***	*i*PN	**Pn**	**09 10 41.8**	**-1.0**
KUR				*i* S	**Sn**	**09 11 03.8**	**+0.1**
KUR				pmax	pmax		
	comp=N,250nm,0.5s						
KUR				pmax	pmax		
	comp=E,230nm,0.5s						
KUR				pmax	pmax		
	comp=Z,990nm,0.5s						
KUR				pmax	pmax		
	comp=Z,4µm,1.0s						
KUR				smax			
	comp=N,1µm,0.9s						
KUR				smax			
	comp=E,3µm,0.9s						
KUR				smax			
	comp=N,8µm,2.0s						
KUR				smax			
	comp=E,10µm,2.0s						
JAK	**Akkeshi**	**1.71**	**223**	⇑P	**Pn**	**09 10 45.3**	**-0.1**
JAK				*e*S	**Sn**	**09 11 07.1**	**-1.1**
JTKR	**Abashiri--Toko**	**1.73**	**261**	⇑P	**Pn**	**09 10 45.9**	**+0.3**
JTKR				*e*S	**Sn**	**09 11 08.3**	**-0.3**
JAR	**Ashorobuto**	**2.05**	**243**	⇑P	**Pn**	**09 10 50.6**	**+1.0**
JMP	**Maruseppu**	**2.11**	**264**	⇑P	**Pn**	**09 10 50.8**	**+0.5**
JMP				*e*S	**Sn**	**09 11 17.3**	**+0.3**
JOB	**Onbets**	**2.23**	**233**	P	**Pn**	**09 10 52.7**	**+0.8**
JOB				*e*S	**Sn**	**09 11 20.1**	**+0.3**
JKK2	**Kamakawa 2**	**2.57**	**262**	⇑P	**Pn**	**09 10 57.1**	**+1.0**
JKK2				*e*S	**Sn**	**09 11 28.4**	**+1.0**
ASAJ	**Asahikawa**	**2.65**	**268**	P	**Pn**	**09 10 57.9**	**+0.8**
	comp=E,27nm,0.3s,baz=83,slow=16,SNR=125						
ASAJ				S	**Sn**	**09 11 28.9**	**-0.3**
	comp=E,9.1nm,0.3s,baz=220,slow=22,SNR=13						
ASAJ	**Asahikawa**	**2.65**	**268**	⇑P	**Pn**	**09 10 58.3**	**+1.2**
ASAJ				*e*S	**Sn**	**09 11 30.2**	**+1.0**
ASAJ	**Asahikawa**	**2.65**	**268**	PN	**Pn**	**09 10 57.9**	**+0.8**
ASAJ				S	**Sn**	**09 11 29.0**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,27nm,0.3s						
ASAJ				smax			
	comp=N,9.0nm,0.3s						
JCH	**Churui**	**2.69**	**233**	P	**Pn**	**09 10 58.0**	**+0.4**
JCH				*e*S	**Sn**	**09 11 29.4**	**-0.7**
JSE	**Soyaes**	**2.72**	**286**	⇑P	**Pn**	**09 10 58.8**	**+0.7**
JSE				*e*S	**Sn**	**09 11 31.3**	**+0.3**
YSS	**Yuzh-Sakhalins**	**3.65**	**319**	*e*PN	**Pn**	**09 11 11.0**	**+0.7**
HABR	**Khabarovsk**	**8.82**	**302**	*e*PN	**Pn**	**09 12 22.0**	**+2.0**
HABR				*e*S	**Sn**	**09 14 03.6**	**+6.0**
HABR				pmax	pmax		
	comp=Z,29nm,1.1s						
SKR	**Severo-Kuril's**	**9.25**	**43**	*e*PN	**Pn**	**09 12 23.9**	**-1.9**
SKR				*e*		09 14 06.0	
MAJO	**Matsushiro**	**9.86**	**221**	*e*PN	**Pn**	**09 12 32.2**	**-1.8**
MAJO				pmax	pmax		
	comp=Z,11nm,0.6s						
MAJO	**Matsushiro**	**9.86**	**221**	*e*Pn	**Pn**	**09 12 32.2**	**-1.8**
	comp=Z,10nm,0.6s						
MAT	**Matsushiro**	**9.86**	**221**	P	**Pn**	**09 12 32.6**	**-1.4**
MAT				S	**Sn**	**09 14 27.6**	**+4.9**
MAT	**Matsushiro**	**9.86**	**221**	*e*PN	**Pn**	**09 12 33.0**	**-1.0**
MAT				*e*S	**Sn**	**09 14 28.0**	**+5.3**
MAT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAT	**Matsushiro**	**9.86**	**221**	*e*P	**Pn**	**09 12 33.0**	**-1.0**
	comp=Z,6.7nm,0.6s						
MAT				*e*S	**Sn**	**09 14 28.0**	**+5.3**
MJAR	**Matsushiro Arr**	**9.86**	**221**	P	**Pn**	**09 12 32.7**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=31,slow=14,SNR=26						
MJAR	**Matsushiro Arr**	**9.86**	**221**	P	**Pn**	**09 12 32.7**	**-1.2**
KLR	**Kul'dur**	**11.13**	**302**	*e*PN	**Pn**	**09 12 49.2**	**-1.6**
KLR				pmax	pmax		
	comp=E,28nm,1.4s						
KLR				pmax	pmax		
	comp=Z,28nm,1.4s						
MDJ	**Mudanjiang**	**11.93**	**278**	P	**Pn**	**09 13 02.1**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,14nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,46nm,5.0s						
MDJ	**Mudanjiang**	**11.93**	**278**	*e*Pn	**Pn**	**09 13 01.8**	**+0.3**
	comp=Z,12nm,0.8s						
JHJ	**Hachijo jima 2**	**12.22**	**207**	P	**Pn**	**09 13 06.9**	**+1.5**
	comp=Z,4.5nm,0.3s,baz=68,slow=22,SNR=4.9						
JHJ				S	**Sn**	**09 15 08.4**	**-12**
	comp=Z,3.9nm,0.3s,baz=247,slow=23,SNR=3.0						
JOW	**Kunigami**	**22.65**	**226**	P	**P**	**09 15 07.2**	**+0.7**
	comp=Z,10nm,0.5s,mb4.5,baz=26,slow=9.8,SNR=6.1						
BOD	**Bodaibo**	**24.12**	**316**	*e*P	**P**	**09 15 17.1**	**-2.7**
BOD				*e*		09 15 47.0	
BOD				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.4						
HHC	**Hu-ho-hao-te**	**25.68**	**275**	*e*P	**P**	**09 15 34.2**	**+0.3**
HHC				AMB	AMB		
	comp=Z,13nm,0.6s,mb4.5						
BILL	**Bilibino**	**26.05**	**17**	*e*P	**P**	**09 15 32.4**	**-4.8**
BILL				*e*S	**S**	**09 19 56.4**	**-2.8**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s						
ULN	**Ulaanbaatar**	**27.25**	**292**	*e*P	**P**	**09 15 46.3**	**-1.7**
SONM	**Songino Array**	**27.69**	**292**	P	**P**	**09 15 52.1**	**+0.1**
	comp=Z,1.1nm,0.6s,mb3.6,baz=86,slow=8.8,SNR=7.8						
GYA	**Guiyang**	**36.44**	**254**	P	**P**	**09 17 08.1**	**-0.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
MKAR	**Makanchi Array**	**43.78**	**297**	P	**P**	**09 18 08.3**	**-0.6**
	comp=Z,0.6nm,0.6s,mb3.5,baz=79,slow=8.6,SNR=6.5						
MKAR	**Makanchi Array**	**43.78**	**297**	*i* P	**P**	**09 18 08.3**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**43.78**	**297**	P	**P**	**09 18 08.3**	**-0.6**
YKA	**Yellowknife Ar**	**55.73**	**34**	P	**P**	**09 19 40.1**	**+0.9**
	comp=Z,0.9nm,0.7s,mb3.9,baz=299,slow=7.1,SNR=7.4						
YKA	**Yellowknife Ar**	**55.73**	**34**	P	**P**	**09 19 40.1**	**+0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**58.54**	**339**	P	**P**	**09 19 58.5**	**-0.6**

	comp=Z,1.3nm,0.8s,mb4.0,baz=5.8,slow=19,SNR=3.5						
JOF	**Joensuu**	**61.33**	**332**	*e*p	**P**	**09 20 15.1**	**-3.0**
	comp=Z,0.4nm,0.3s,mb3.9						
FINES	**FINESS Array B**	**64.12**	**333**	P	**P**	**09 20 35.0**	**-1.6**
	comp=Z,0.6nm,0.5s,mb3.7,baz=44,slow=7.4,SNR=13						
WRAB	**Tennant Creek**	**64.81**	**192**	*i* P	**P**	**09 20 38.0**	**-3.1**
WRA	**Warramunga Arr**	**64.82**	**192**	P	**P**	**09 20 41.3**	**+0.2**
	comp=Z,2.1nm,0.8s,mb4.0,baz=9.9,slow=6.8,SNR=17						
VRHR	**Novokhopersk**	**64.83**	**318**	*e*P	**P**	**09 20 44.5**	**+3.3**
VRHR				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.2						
VRHR				pmax	pmax		
	comp=N,30nm,0.8s						
VRHR				pmax	pmax		
	comp=E,20nm,0.5s						
BOZ	**Bozeman (W)**	**67.04**	**48**	*e*P	**P**	**09 20 57.6**	**+2.2**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
BOZ	**Bozeman (W)**	**67.04**	**48**	*e*P	**P**	**09 20 57.6**	**+2.3**
	comp=Z,1.7nm,0.6s,mb4.0						
NVAR	**Mina Array Bea**	**67.84**	**58**	P	**P**	**09 21 03.0**	**+2.6**
	comp=Z,2.1nm,0.8s,mb4.0,baz=282,slow=8.7,SNR=17						
ASAR	**Alice Springs**	**68.54**	**192**	P	**P**	**09 21 06.1**	**+1.3**
	comp=Z,0.9nm,0.7s,mb3.7,baz=12,slow=6.1,SNR=10						
RRI2	**Red Ridge**	**68.71**	**50**	*e*P	**P**	**09 21 09.0**	**+3.2**
	comp=Z,2.8nm,0.8s,mb4.1						
NOA	**NORSAR Array B**	**68.89**	**338**	P	**P**	**09 21 05.3**	**-1.7**
	comp=Z,0.3nm,0.4s,mb3.5,baz=33,slow=6.6,SNR=2.9						
KIV	**Kislovodsk**	**68.95**	**311**	*e*P	**P**	**09 21 04.4**	**-2.9**
KIV				*e**PP	pP	09 21 36.5	-0.8
KIV				*e**SP	sP	09 21 51.9	+1.4
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**70.06**	**49**	P	**P**	**09 21 15.7**	**+1.5**
	comp=Z,1.3nm,0.7s,mb3.9,baz=271,slow=1.9,SNR=13						
AKASG	**Malin Array Be**	**70.79**	**323**	P	**P**	**09 21 17.8**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.9,baz=36,slow=6.5,SNR=7.9						
PV10	**Paradox Valley**	**73.33**	**53**	*e*P	**P**	**09 21 36.6**	**+2.9**
STKA	**Stephens Creek**	**75.90**	**184**	P	**P**	**09 21 49.7**	**+1.2**
	comp=Z,0.8nm,0.8s,mb3.5,baz=346,slow=5.2,SNR=2.9						
BRTR	**Keskin Array B**	**76.73**	**313**	P	**P**	**09 21 53.0**	**-0.3**
	comp=Z,0.7nm,0.7s,mb3.5,baz=52,slow=6.2,SNR=4.1						
BRTR	**Keskin Array B**	**76.73**	**313**	*i* P	**P**	**09 21 53.5**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

IDC 05 09:27:04.8±15.0**,621S**×**12887E,h202**km±165km**,mb2.7**/1**, mb1 3.2**/4**,mb1mx3.0**/13**,mbtmp3.7**/4**,ML3.6**/3**,Error ellipse: s-maj=145.1km s-min=49.1km az=48.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.23**	**195**	P	Pn	09 29 53.0	+0.5
	0.2nm,0.3s,baz=309,slow=20,SNR=7.8						
FITZ				S	S	09 31 59.8	-9.2
	0.1nm,0.3s,baz=276,slow=17,SNR=2.4						
WRA	**Warramunga Arr**	**14.65**	**159**	P	Pn	09 30 22.3	-0.3
	0.3nm,0.3s,baz=333,slow=12,SNR=36						
WRA				S	S	09 33 01.3	-4.1
	0.1nm,0.3s,baz=336,slow=22,SNR=4.3						
ASAR	**Alice Springs**	**18.02**	**165**	P	P	09 31 00.9	+0.3
	0.4nm,0.3s,baz=343,slow=11,SNR=47						
MKAR	**Makanchi Array**	**66.95**	**327**	P	P	09 37 35.7	+0.1
	0.1nm,0.5s,baz=122,slow=5.4,SNR=2.9						

IDC 05 09:45:30.7±6.2**,1495S**×**15918E,h0**km**,mb3.6**/3**, mb1 3.8**/3**,mb1mx3.6**/11**,mbtmp3.6**/3**,Error ellipse: s-maj=97.5km s-min=86.4km az=34.0,South of Solomon Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**23.27**	**221**	P	P	09 50 41.3	+1.4
	0.7nm,0.4s,baz=56,slow=7.3,SNR=3.6						
WRA	**Warramunga Arr**	**24.20**	**255**	P	P	09 50 50.0	+1.1
	0.8nm,0.7s,baz=86,slow=9.3,SNR=8.8						
ASAR	**Alice Springs**	**25.35**	**246**	P	P	09 50 58.4	-1.0
	1.1nm,0.6s,baz=75,slow=9.3,SNR=32						

BJI 05 09:52:49.5,4422N×**8535E,h15**km**,ML3.1,1C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.74**	**102**	⇑*i*P	Pn	09 53 20.1	+1.0
WMQ				S	Sn	09 53 48.2	+7.2
WMQ				Smax			
	comp=N,268nm,0.6s						
WMQ				Smax			
	comp=E,198nm,0.6s						
MK02	**Makanchi Array**	**3.33**	**321**	⇓Pn	Pn	09 53 42.4	+1.4
	comp=E,12nm,1.0s,baz=144,slow=14						
MK02				⇓Lg		09 54 32.9	
	comp=E,8.7nm,0.5s,baz=136,slow=28						

*NEIC **05** 09:53:34.7,3798N×2100E,h18km,MD3.5(ATH),After ATH.*
*ATH **05** 09:53:34.7,3798N×2100E,h18km±1km,MD3.5/4*
*CSEM **05** 09:53:34.2±0.6,3786N×2092E,h2km,MD3.5,Error ellipse: s-maj=14.5km s-min=7.4km az=32.0*
*ISCJB **05** 09:53:35.0±1.2,3793N±008×2097E±007,h18km±10km, Error ellipse: s-maj=14.5km s-min=6.8km az=50.5*
*THE **05** 09:53:35.7,3787N×2063E,h31km,ML2.9*
ISC 05 09:53:33.8±1.4**,3785N**±008×**2095E**±006**,h6**km±8km**,n9, σ1s01**/14**,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.43**	**319**	*e*PB	**Pg**	**09 53 42.5**	**+0.3**
VLS				*e*SB	**Sg**	**09 53 48.7**	**+0.9**
RLS	**Riolos of Patr**	**0.46**	**63**	*e*PB	**Pg**	**09 53 42.4**	**-0.3**
RLS				*e*SB	**Sg**	**09 53 48.5**	**-0.2**
LKD	**Levkas**	**0.89**	**345**	*e*Pg	**Pg**	**09 53 49.8**	**-1.0**
LKD				*e*Sg	**Sg**	**09 54 02.5**	**+0.2**
ITM	**Ithomi**	**1.03**	**130**	*e*PN	**Pn**	**09 53 55.4**	**+0.6**
EVR	**Evrytania**	**1.26**	**32**	*e*PN	**Pn**	**09 53 56.1**	**-1.9**
AGG	**Agios Georgios**	**1.60**	**42**	*e*Pb	**Pb**	**09 54 03.3**	**-0.5**
AGG				*e*Sb	**Sb**	**09 54 25.6**	**+1.4**
IGT	**Igoumenitsa**	**1.75**	**344**	*e*Pb	**Pn**	**09 54 03.5**	**-1.2**
IGT				*e*Sb	**Sn**	**09 54 23.0**	**-4.3**
KEK	**Kerkira**	**2.06**	**335**	*e*PN	**Pn**	**09 54 09.5**	**+0.4**
XOR	**Xorichti**	**2.32**	**49**	*e*Pn	**Pn**	**09 54 14.1**	**+1.5**

*MOS **05** 09:53:54.6±2.5,5288N×10947E,h12km,mb4.4/1,Error ellipse: s-maj=19.1km s-min=12.9km az=68.9*
BYKL 05 09:53:55.3±0.4**,5287N**×**10945E,h18**km±25km**,7C-8D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.58**	**313**	⇑*i*Pg	Pg	09 54 06.2	-0.6
	214nm,0.2s						
MXMB				⇓*i*Pg	Pg	09 54 06.2	-0.6
	128nm,0.2s						
MXMB				⇑*i*Pg	Pg	09 54 06.2	-0.6
	1μm,0.2s						
MXMB				*i* Sg	Sg	09 54 14.2	-0.4
MXMB				Pmax			
	2μm,0.1s						
MXMB				Smax			
	2μm,0.2s						
KELR	**Kotokel**	**0.84**	**263**	⇓*i*Pg	Pg	09 54 10.8	-0.9
KELR				*e*Pb	Pb	09 54 12.8	+1.5
KELR				*i* Sg	Sg	09 54 22.4	-0.4
KELR				*e*Sb	Sb	09 54 26.0	+3.7
KELR				max			
	1μm,0.1s						
KELR				Smax			
	4μm,0.5s						
SYVR	**Suvo**	**0.86**	**22**	⇓*i*Pg	Pg	09 54 11.0	-1.0
	288nm,0.3s						
SYVR				⇓*i*Pg	Pg	09 54 11.0	-1.0
	122nm,0.3s						
SYVR				⇓*i*Pg	Pg	09 54 11.0	-1.0
	284nm,0.3s						
SYVR				*e*Sg	Sg	09 54 22.7	-0.6
SYVR				Pmax			
	229nm,0.1s						
SYVR				Smax			
	1μm,0.3s						
SYVR	**Suvo**	**0.86**	**22**	*e*PG	Pg	09 54 11.1	-0.9
SYVR				*e*		09 54 22.1	
SYVR				pmax	pmax		
	comp=Z,230nm,0.1s						
SYVR				smax			
	comp=E,1μm,0.3s						
TRTB	**Turuntaevo**	**1.28**	**241**	⇑*i*Pg	Pg	09 54 18.4	-1.7
	comp=E,109nm,0.4s						
TRTB				⇑*i*Pg	Pg	09 54 18.4	-1.7
	comp=E,146nm,0.4s						
TRTB				⇓*i*Pg	Pg	09 54 18.4	-1.7
	comp=E,183nm,0.4s						
TRTB				*e*Sg	Sg	09 54 35.9	-0.9
TRTB				Pmax			
	comp=E,99nm,0.2s						
TRTB				Smax			
	comp=E,304nm,0.5s						
OGRR	**Ongureny**	**1.36**	**306**	⇑*i*Pg	Pg	09 54 18.9	-2.6
OGRR				⇑*i*		09 54 19.3	
	comp=E,57nm,0.4s						
OGRR				⇓*i*		09 54 19.3	
	comp=E,42nm,0.4s						
OGRR				⇑*i*		09 54 19.3	
	comp=E,93nm,0.4s						
OGRR				*i* Sg	Sg	09 54 37.0	-2.2
OGRR				max			
	comp=E,127nm,0.1s						
OGRR				Smax			
	comp=E,493nm,0.3s						
OGRR	**Ongureny**	**1.36**	**306**	*e*PG	Pg	09 54 18.9	-2.6
OGRR				*e*		09 54 37.1	
OGRR				pmax	pmax		
	comp=Z,135nm,0.2s						
OGRR				smax			
	comp=N,504nm,0.3s						
ZRHB	**Zarechye**	**1.43**	**258**	*e*Pg	Pg	09 54 20.9	-2.0
ZRHB				*e*Sg	Sg	09 54 40.4	-1.2
ZRHB				Pmax			
	comp=N,222nm,0.5s						
ZRHB				Smax			
	comp=N,1μm,0.6s						
FFNB	**Fofonovo**	**1.84**	**244**	*e*Pg	Pg	09 54 28.0	-2.6
FFNB				*e*Sg	Sg	09 54 53.3	-1.3
FFNB				Pmax			
	comp=N,349nm,0.1s						
FFNB				Smax			
	comp=N,1μm,0.3s						
TRG	**Tyrgan**	**1.89**	**268**	*e*Pn	Pn	09 54 26.3	-0.3
TRG				*e*Pg	Pg	09 54 28.2	-3.3
TRG				*e*Sg	Sg	09 54 54.5	-1.6
TRG				Pmax			
	comp=N,20nm,0.1s						
TRG				Smax			
	comp=N,264nm,0.3s						
TRG	**Tyrgan**	**1.89**	**268**	*e*PN	Pn	09 54 25.8	-0.8
TRG				*e*S	Sn	09 54 51.4	+1.5
TRG				*e*		09 54 53.9	
TRG				pmax	pmax		
	comp=Z,22nm,0.2s						
TRG				smax			
	comp=N,288nm,0.2s						
KAB	**Kabansk**	**1.90**	**245**	*e*Pg	Pg	09 54 29.2	-2.6
KAB				*e*Sg	Sg	09 54 55.6	-0.8
KAB				Pmax			
	comp=N,141nm,0.3s						
KAB				Smax			
	comp=N,2μm,0.7s						
KAB	**Kabansk**	**1.90**	**245**	*e*PN	Pn	09 54 29.2	+2.4
KAB				*e*		09 54 55.5	
KAB				pmax	pmax		
	comp=Z,157nm,0.3s						
KAB				smax			
	comp=E,2μm,0.7s						
HRMR	**Khuramsha**	**1.98**	**232**	⇓*i*Pg	Pg	09 54 30.1	-3.1
HRMR				*e*Sg	Sg	09 54 57.0	-1.9
HRMR				Pmax			
	comp=E,191nm,0.5s						
HRMR				Smax			
	comp=E,934nm,0.3s						
STDB	**Stepnoy Dvoret**	**2.01**	**251**	*e*Pg	Pg	09 54 31.0	-2.9
STDB				*e*Sg	Sg	09 54 57.8	-2.3
STDB				*e*		09 55 00.9	
STDB				Pmax			
	comp=E,64nm,0.2s						
STDB				max			
	comp=E,974nm,0.8s						
YLYR	**Ulyunkhan**	**2.25**	**26**	*e*Pn	Pn	09 54 31.9	+0.3
YLYR				*e*Pg	Pg	09 54 34.9	-3.6
YLYR				*e*Sg	Sg	09 55 05.2	-2.5
YLYR				Pmax			
	comp=E,42nm,0.5s						
YLYR				Smax			
	comp=E,172nm,0.7s						
BTMB	**Babushkin**	**2.51**	**244**	*e*Pn	Pn	09 54 38.5	+3.3
BTMB				*e*Pg	Pg	09 54 40.4	-3.1
BTMB				*e*Sg	Sg	09 55 12.7	-3.4
BTMB				Pmax			
	comp=E,88nm,0.4s						
BTMB				Smax			
	comp=E,303nm,0.7s						
NIZ	**Nizh Angarsk**	**2.91**	**1**	*e*Pg	Pg	09 54 47.0	-4.1
NIZ				*e*Sg	Sg	09 55 25.3	-3.6
NIZ				Pmax			
	comp=E,10.0nm,0.3s						
NIZ				Smax			
	comp=E,54nm,0.2s						
NIZ	**Nizh Angarsk**	**2.91**	**1**	*e*PN	Pn	09 54 42.0	+1.3
NIZ				*e*		09 54 46.2	
NIZ				*e*S	Sn	09 55 16.3	+1.1
NIZ				*e*		09 55 24.9	
LSTR	**Listvyanka**	**3.00**	**252**	*e*Pn	Pn	09 54 42.0	0.0
LSTR				*e*Pg	Pg	09 54 48.3	-4.6
LSTR				*e*Sn	Sn	09 55 18.9	+1.4
LSTR				*e*Sg	Sg	09 55 27.1	-4.7
LSTR				Pmax			
	comp=E,14nm,0.7s						
LSTR				Smax			
	comp=E,68nm,0.8s						
KMO	**Kumora**	**3.19**	**18**	*e*Pn	Pn	09 54 45.7	+1.1
KMO				*e*Pg	Pg	09 54 51.6	-4.9
KMO				*e*Sg	Sg	09 55 33.5	-4.4
KMO				Pmax			
	comp=E,24nm,0.3s						
KMO				Smax			
	comp=E,196nm,1.0s						
KMO	**Kumora**	**3.19**	**18**	*e*PN	Pn	09 54 49.9	+5.3
KMO				*e*S	Sn	09 55 21.4	-0.7
KMO				*e*		09 55 31.6	
KMO				pmax	pmax		
	comp=Z,26nm,0.3s						
KMO				smax			
	comp=N,201nm,1.0s						
IRK	**Irkutsk**	**3.22**	**261**	*e*PN	Pn	09 54 51.9	+6.9
IRK				*e*		09 55 34.1	
IRK				pmax	pmax		
	comp=Z,372nm,0.1s						
IRK				smax			
	comp=N,404nm,0.5s						
UKT	**Uakit**	**3.59**	**41**	*e*Pn	Pn	09 54 50.8	+0.7
UKT				*e*Pg	Pg	09 54 59.7	-4.4
UKT				*e*Sn	Sn	09 55 34.7	+2.7
UKT				*e*Sg	Sg	09 55 47.2	-3.5
UKT				Pmax			
	comp=N,14nm,0.6s						
UKT				Smax			
	comp=N,65nm,0.6s						
UKT	**Uakit**	**3.59**	**41**	*e*PN	Pn	09 54 50.9	+0.8
UKT				*e*		09 54 59.6	
UKT				*e*		09 55 46.6	
ARS	**Arshan**	**4.41**	**260**	*e*Pg	Pg	09 55 13.8	-5.9
ARS				*e*Sg	Sg	09 56 10.7	-6.1
ARS				Pmax			
	comp=N,12nm,0.3s						
ARS				Smax			
	comp=N,164nm,0.8s						
ARS	**Arshan**	**4.41**	**260**	*e*PN	Pg	09 55 13.6	-6.1
ARS				*e*		09 56 10.8	
ARS				pmax	pmax		
	comp=Z,13nm,0.2s						
ARS				smax			
	comp=N,147nm,0.4s						
ZAK	**Zakamensk**	**4.58**	**240**	*e*Pg	Pg	09 55 17.0	-6.0
ZAK				*e*Sg	Sg	09 56 18.1	-4.2
ZAK				Pmax			
	comp=N,6.0nm,0.3s						
ZAK				Smax			
	comp=N,64nm,1.6s						
NLYR	**Nelyaty**	**5.13**	**43**	*e*Sg	Sg	09 56 35.7	-4.3
NLYR				Smax			
	comp=N,71nm,1.0s						
MOY	**Mondy**	**5.33**	**260**	*e*Pn	Pn	09 55 13.7	-0.3
MOY				*e*Pg	Pg	09 55 30.0	-7.4
MOY				*e*Sn	Sn	09 56 16.6	+1.7
MOY				*e*Sg	Sg	09 56 39.2	-7.2
MOY				Pmax			
	comp=N,5.0nm,0.7s						
MOY				Smax			
	comp=N,44nm,1.0s						
BOD	**Bodaibo**	**5.60**	**26**	*e*Sg	Sg	09 56 48.0	-7.0
ORL	**Orlik**	**5.87**	**271**	*e*Pn	Pn	09 55 22.1	+0.7
ORL				*e*Sn	Sn	09 56 28.5	+0.3
ORL				*e*Sg	Sg	09 56 58.3	-5.4
ORL				Smax			
	comp=N,31nm,0.8s						

IGQ 05 10:21:20.7,269S×**7815W,h12**km±7km**,Mb4.2,Ms4.0, 6C-7D,Error ellipse: s-maj=17.6km s-min=5.8km az=159.3,Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATA	**Patacocha**	**1.21**	**346**	⇓P	Pn	10 21 43.0	-0.4
ULBA	**Ulba**	**1.26**	**348**	⇓P	Pn	10 21 43.9	-0.2
RETU	**Refugio**	**1.27**	**346**	P	Pn	10 21 44.0	-0.2
RETU				S	Sb	10 22 01.9	+1.2
CUSU	**Cusua**	**1.28**	**345**	⇓P	Pn	10 21 44.2	-0.2
CUSU				S	Sb	10 22 01.2	0.0
IGUA	**Igualata**	**1.29**	**338**	⇑P	Pn	10 21 45.8	+1.3
IGUA				S	Sb	10 22 02.4	+1.1
JUIV	**Juive**	**1.30**	**346**	⇓P	Pn	10 21 44.3	-0.3
JUIV				S	Sb	10 22 01.5	-0.1
RUN5	**Runtun**	**1.30**	**348**	P	Pn	10 21 44.2	-0.3
RUN5				S	Sb	10 22 01.0	-0.6
TAMB	**Tambo**	**1.99**	**354**	⇓P	Pn	10 21 56.4	+2.2
TAMB				S	Sn	10 22 21.6	+2.5
CAMI	**Rancho Maria**	**2.03**	**350**	P	Pn	10 21 57.9	+3.2
CAMI				S	Sn	10 22 23.0	+3.0
VC1	**Cotopaxi 1**	**2.05**	**353**	⇓P	Pn	10 21 57.5	+2.5
VC1				S	Sn	10 22 22.9	+2.5
ANTI	**Antisana**	**2.23**	**360**	⇑P	Pn	10 21 59.0	+1.6
JUA2	**San Juan 2**	**2.50**	**350**	⇑P	Pn	10 22 06.0	+4.8
JUA2				S	Sn	10 22 40.5	+8.9
GGP	**Refugio Guagua**	**2.54**	**350**	⇑P	Pn	10 22 06.6	+4.9
GGP				S	Sn	10 22 41.5	+9.0
TERV	**Terraza Guagua**	**2.54**	**350**	P	Pn	10 22 06.8	+5.1
TERV				S	Sn	10 22 42.2	+10
PINO	**Pino**	**2.56**	**350**	⇑P	Pn	10 22 07.0	+5.1
YANA	**Yana**	**2.59**	**351**	⇑P	Pn	10 22 07.2	+4.8
YANA				S	Sn	10 22 39.9	+6.1
LAV3	**Lava3-Reventad**	**2.63**	**11**	P	Pn	10 22 04.7	+1.8
LAV3				S	Sn	10 22 39.8	+5.1
CONE	**Cono NE Rev Vo**	**2.65**	**11**	P	Pn	10 22 03.3	0.0
CONE				S	Sn	10 22 40.0	+4.7
CAYA	**Cayambe**	**2.75**	**3**	⇓P	Pn	10 22 07.8	+3.2
CAYA				S	Sn	10 22 42.2	+4.5
COTA	**Cotacachi**	**3.01**	**356**	P	Pn	10 22 15.5	+7.3
COTA				S	Sn	10 22 56.9	+13
MAG1	**Magdalena**	**3.06**	**328**	P	Pn	10 22 07.5	-1.4
MAG1				S	Sn	10 22 41.8	-3.7

*CSEM **05** 10:36:49.2±0.6,3724N×2466W,h5km,ML2.1,Error ellipse: s-maj=5.7km s-min=1.8km az=92.0,After PDA*
*PDA **05** 10:36:49.2±0.6,3724N×2466W,h5km,MD2.8,ML2.1, Error ellipse: s-maj=5.7km s-min=1.8km az=92.0*
SVSA 05 10:36:49.2±0.6**,3724N**×**2466W,h5**km**,MD2.8,ML2.1, Error ellipse: s-maj=5.7km s-min=1.8km az=92.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.40**	**234**	*e*P	Pg	10 36 56.3	-0.7
PSMN				*e*S	Sg	10 37 01.8	-0.4
MIRA	**Miradouro**	**0.74**	**318**	*e*P	Pg	10 37 01.6	-1.7
MIRA				*e*S	Sg	10 37 10.7	-2.2
PFAD	**Fenais da Ajud**	**0.80**	**319**	*e*P	Pg	10 37 02.2	-2.4
PFAD				*e*S	Sg	10 37 11.7	-3.2
VIF	**Vila Franca**	**0.80**	**309**	*e*S	Sg	10 37 12.1	-2.9
VIF							
	30nm,0.2s						
PRCH	**Ribeira Ch**	**0.82**	**307**	*e*S	Sg	10 37 12.6	-2.9
PRCH							
	51nm,0.2s						
MESC	**Monte Escuro**	**0.84**	**312**	*e*S	Sg	10 37 12.9	-3.2
LFA	**Lagoa do Fogo**	**0.85**	**309**	*e*P	Pg	10 37 02.9	-2.5
PDA	**Ponta Delgada**	**0.95**	**303**	*e*S	Sg	10 37 15.8	-3.9

MEX 05 10:52:08.9±0.6**,1686N**×**9685W,h144**km±11km**,MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.24**	**27**	*i* P	Pn	10 52 27.2	-1.3
VHO				*i* S	Sn	10 52 42.0	-1.4
UTMO	**Huajuapan**	**1.33**	**317**	*i* P	Pn	10 52 35.4	-0.9
UTMO				*i* S	Sn	10 52 54.5	-2.6
MEIG	**Mezcala**	**2.85**	**292**	*i* P	Pn	10 52 53.4	-0.7
MEIG				*i* S	Sn	10 53 26.4	-2.6

*ATH **05** 11:08:56.6,3904N×2601E,h11km±6km,MD3.2/3*
*ISCJB **05** 11:08:57.6±0.8,3908N±003×26.17E±005,h7km±5km, Error ellipse: s-maj=7.4km s-min=4.1km az=133.7*
*CSEM **05** 11:08:57.2±0.1,3907N×26.15E,h10km,MD3.2,Error ellipse: s-maj=3.2km s-min=1.5km az=51.0*
*NEIC **05** 11:08:58.0,3902N×26.10E,h28km,MD3.2(ATH), MD3.2(ISK),After ISK.*
*ISK **05** 11:08:58.2,3902N×2603E,h29km,MD3.2*
ISC 05 11:08:58.1±0.8**,3906N**±003×**2617E**±005**,h10**km±4km**,n25, σ0s62**/33**,1C,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.20**	**24**	⇑*i*PG	**Pg**	**11 09 02.5**	**+0.2**
AYVA	**Ayvalik**	**0.48**	**59**	*i* P	**Pg**	**11 09 07.1**	**-0.2**
AYVA				*i* S	**Sg**	**11 09 13.4**	**-0.2**
EZN	**Ezine**	**0.77**	**9**	*i* PG	**Pg**	**11 09 13.6**	**+0.6**
BOZC	**Bozcaada**	**0.78**	**354**	*i* P	**Pg**	**11 09 13.1**	**0.0**
BOZC				*i* S	**Sg**	**11 09 23.9**	**+0.5**
BLCB	**Balcova**	**0.96**	**134**	*i* PG	**Pg**	**11 09 16.7**	**+0.1**
BLCB				*i* SG	**Sg**	**11 09 30.2**	**+1.1**
KDAG	**Bornova**	**1.08**	**127**	*i* P	**Pb**	**11 09 18.8**	**-0.1**
KDAG				*i* S	**Sg**	**11 09 32.3**	**-0.7**
IZM	**Izmir**	**1.08**	**127**	*i* PN	**Pn**	**11 09 18.8**	**-0.5**
LIA	**Limnos Island**	**1.13**	**318**	*e*PB	**Pb**	**11 09 16.8**	**-2.8**
GADA	**Gvkgeada**	**1.15**	**350**	PN	**Pn**	**11 09 19.9**	**-0.2**
CANB	**Canakkale**	**1.18**	**36**	PN	**Pn**	**11 09 20.5**	**-0.1**
AKS	**Akhisar**	**1.30**	**98**	PN	**Pn**	**11 09 22.6**	**+0.4**
AKS				SN	**Sn**	**11 09 40.0**	**+0.4**
LPK	**Lapseki**	**1.39**	**19**	PN	**Pn**	**11 09 23.4**	**0.0**
SMG	**Samos**	**1.45**	**158**	*e*PB	**Pb**	**11 09 25.0**	**-0.1**
SMG				*e*SB	**Sb**	**11 09 44.2**	**+0.5**
BTOK	**Tokmak**	**1.60**	**64**	*i* P	**Pn**	**11 09 26.2**	**-0.3**
BTOK				*i* S	**Sn**	**11 09 46.9**	**-0.3**
ENEZ	**Enez**	**1.67**	**360**	*e*PN	**Pn**	**11 09 27.3**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.80**	**25**	*e*PN	**Pn**	**11 09 29.4**	**+0.3**
EDC	**Edincik**	**1.83**	**45**	*e*PN	**Pn**	**11 09 29.7**	**+0.1**
BNT	**Bandirma**	**1.87**	**46**	*e*PN	**Pn**	**11 09 30.0**	**-0.1**
MFT	**Murefte**	**1.92**	**26**	*e*PN	**Pn**	**11 09 30.5**	**-0.3**
RDO	**Rodhopi**	**2.14**	**347**	*e*PN	**Pn**	**11 09 34.4**	**+0.7**
BODT	**Bodrum**	**2.19**	**155**	*e*PN	**Pn**	**11 09 33.4**	**-1.1**
ORLT	**Orhaneli**	**2.33**	**64**	*e*PN	**Pn**	**11 09 36.6**	**+0.2**
ULDT	**Uludag**	**2.54**	**64**	*i* P	**Pg**	**11 09 46.7**	**0.0**
ULDT				*i* S	**Sg**	**11 10 18.4**	**-1.1**
EDRB	**Edirne**	**2.82**	**9**	*e*PN	**Pn**	**11 09 43.4**	**+0.3**
YLV	**Yalova**	**2.89**	**58**	*e*PN	**Pn**	**11 09 45.5**	**+1.4**

*ISCJB **05** 11:13:12.7±1.0,2648S±003×2745E±004,h3km±7km, mb4.0/3,Error ellipse: s-maj=5.7km s-min=4.9km az=51.9*
*PRE **05** 11:13:13.7±0.8,2643S×2748E,h2km,ML3.9*
*IDC **05** 11:13:15.9±1.6,2642S×2745E,h0km,mb3.9/2,mb1 4.2/7,*

mb1mx3.8/26, mbtmp4.2/7, ML3.9/4, Error ellipse: s-maj=20.3km s-min=14.2km az=96.0
*NEIC **05** 11:13:16.3±0.9, 2636S×2755E, h5^{km}, mb4.3/1, Error ellipse: s-maj=17.1km s-min=9.5km az=101.0*
ISC 05 11:13:14.2±0.8**, 2646S**±003×**2747E**±003**, h1**^{km}±6^{km}**, n21, σ1^{s}29**/40**, mb4.2**/3**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSR	**Koster**	**0.79**	**320**	*e*P	**Pg**	**11 13 28.8**	**-0.4**
KSR				*e*S	**Sg**	**11 13 39.0**	**-0.5**
KSR				AML	AML	11 13 45.9	
	comp=Z,1µm,0.1s						
SLR	**Silverton**	**1.03**	**46**	*e*P	**Pg**	**11 13 32.9**	**-0.9**
SLR				*e*S	**Sg**	**11 13 46.6**	**-0.6**
SLR				AML	AML	11 13 54.5	
	comp=Z,949nm,0.2s						
LBTB	**Lobatse**	**2.21**	**310**	*e*P	**Pn**	**11 13 52.5**	**+0.5**
LBTB				*e*S	**Sn**	**11 14 19.8**	**-0.2**
LBTB				AML	AML	11 14 26.3	
	comp=Z,875nm,0.8s						
LBTB	**Lobatse**	**2.21**	**310**	Pn	**Pn**	**11 13 55.0**	**+3.0**
	comp=Z,79nm,0.3s,baz=140,slow=17,SNR=647						
LBTB				Pg	**Pg**	**11 13 56.5**	**-0.1**
	comp=Z,78nm,0.3s,baz=142,slow=16,SNR=692						
LBTB				Lg		11 14 24.3	
	comp=Z,246nm,0.3s,baz=237,slow=20,SNR=70						
LBTB				Rg		11 14 32.7	
	comp=Z,269nm,0.3s,baz=13,slow=21,SNR=16						
LBTB	**Lobatse**	**2.21**	**310**	Pn	**Pn**	**11 13 55.0**	**+3.0**
LBTB				Pg	**Pg**	**11 13 56.5**	**-0.1**
LBTB				Lg		11 14 24.3	
LBTB				Rg		11 14 32.7	
BOSA	**Boshof**	**2.91**	**222**	*e*P	**Pn**	**11 14 02.0**	**+0.4**
BOSA				*e*S	**Sn**	**11 14 37.1**	**-0.1**
BOSA				AML	AML	11 14 48.0	
	comp=Z,125nm,0.3s						
BOSA	**Boshof**	**2.91**	**222**	Pn	**Pn**	**11 14 04.8**	**+3.2**
	comp=Z,7.9nm,0.3s,baz=45,slow=13,SNR=272						
BOSA				Pg	**Pg**	**11 14 09.6**	**-0.3**
	comp=Z,8.7nm,0.3s,baz=44,slow=17,SNR=21						
BOSA				Sn	**Sn**	**11 14 38.3**	**+1.1**
	comp=Z,10nm,0.3s,baz=2.1,slow=11,SNR=8.2						
BOSA				Lg		11 14 46.5	
	comp=Z,64nm,0.3s,baz=144,slow=21,SNR=20						
BOSA				Rg		11 15 03.6	
	comp=Z,43nm,0.4s,baz=101,slow=21,SNR=2.4						
POGA	**Pongola**	**3.81**	**105**	*e*P	**Pn**	**11 14 15.3**	**+1.3**
POGA				*e*S	**Sn**	**11 14 59.7**	**+0.3**
POGA				AML	AML	11 15 19.9	
	comp=Z,236nm,0.5s						
KSD	**Kokstad**	**4.42**	**158**	*e*P	**Pn**	**11 14 22.0**	**-0.3**
KSD				*e*S	**Sn**	**11 15 13.1**	**-1.3**
KSD				AML	AML	11 15 38.8	
	comp=Z,143nm,0.4s						
HVD	**Hendrik Verwoe**	**4.48**	**202**	*e*P	**Pn**	**11 14 24.0**	**+0.8**
HVD				*e*S	**Sn**	**11 15 15.0**	**-1.0**
HVD				AML	AML	11 15 46.7	
	comp=Z,71nm,0.6s						
MSNA	**Messina**	**4.71**	**30**	*e*P	**Pn**	**11 14 24.9**	**-1.4**
MSNA				*e*S	**Sn**	**11 15 16.6**	**-5.0**
MSNA				AML	AML	11 15 43.0	
	comp=Z,70nm,0.5s						
UPI	**Upington**	**5.84**	**250**	*e*P	**Pn**	**11 14 42.5**	**+0.7**
UPI				*e*S	**Sn**	**11 15 46.8**	**-2.6**
UPI				AML	AML	11 16 24.9	
	comp=Z,63nm,0.4s						
GRM	**Grahamstown**	**6.88**	**187**	*e*P	**Pn**	**11 14 56.8**	**+0.6**
GRM				*e*S	**Sn**	**11 16 12.9**	**-2.2**
GRM				AML	AML	11 16 59.2	
	comp=Z,43nm,0.5s						
SUR	**Sutherland**	**8.28**	**223**	*e*P	**Pn**	**11 15 16.5**	**+1.2**
SUR				*e*S	**Sn**	**11 16 46.0**	**-3.4**
SUR	**Sutherland**	**8.28**	**223**	Pn	**Pn**	**11 15 18.9**	**+3.6**
	comp=Z,1.5nm,0.3s,baz=54,slow=15,SNR=27						
SUR				Sn	**Sn**	**11 16 47.7**	**-1.7**
	comp=Z,1.9nm,0.3s,baz=140,slow=24,SNR=4.2						
SUR				Lg		11 17 35.2	
	comp=Z,8.6nm,0.3s,baz=331,slow=20,SNR=9.4						
CVNA	**Calvinia**	**8.40**	**232**	*e*P	**Pn**	**11 15 17.9**	**+0.9**
CVNA				*e*S	**Sn**	**11 16 48.8**	**-3.7**
CVNA				AML	AML	11 17 40.7	
	comp=Z,84nm,0.5s						
LSZ	**Lusaka**	**11.14**	**4**	Pn	**Pn**	**11 15 54.6**	**0.0**
	comp=Z,2.1nm,0.3s,baz=184,slow=13,SNR=14						
LSZ				Sn	**Sn**	**11 17 56.5**	**-3.3**
	comp=Z,0.8nm,0.3s,baz=237,slow=21,SNR=3.8						
LSZ				Lg		11 18 58.6	
	comp=Z,0.8nm,0.3s,baz=273,slow=21,SNR=3.7						
TSUM	**Tsumeb**	**11.62**	**306**	Pn	**Pn**	**11 16 02.6**	**+1.5**
	comp=Z,1.8nm,0.3s,baz=126,slow=14,SNR=78						
TSUM				Sn	**Sn**	**11 18 06.0**	**-5.5**
	comp=Z,0.4nm,0.3s,baz=13,slow=17,SNR=2.4						
TSUM				Lg		11 19 19.4	
	comp=Z,1.1nm,0.3s,baz=232,slow=21,SNR=6.2						
TORD	**Torodi Ar. Bea**	**46.66**	**324**	P	**P**	**11 21 45.7**	**+1.5**
	comp=Z,1.4nm,0.6s,mb4.3,baz=140,slow=6.1,SNR=12						
SNAA	**Sanae**	**48.30**	**192**	*e*P	**P**	**11 21 59.2**	**+2.2**
	comp=Z,2.3nm,0.8s,mb4.4						
MKAR	**Makanchi Array**	**88.11**	**34**	P	**P**	**11 26 08.1**	**+1.6**
	comp=Z,0.2nm,0.4s,mb3.8,baz=233,slow=7.0,SNR=3.7						

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*NIED **05** 11:54:00, 4550N×15240E, h29^{km}, Mw4.2 Best double couple: $M_0$2.43000×10^{15} NP1:ϕ_s351.00000°, δ52.00000°, λ52.00000°. NP2:ϕ_s222.00000°, δ52.00000°, λ128.00000°.*
*JMA **05** 11:54:54.9±0.8, 4549N×15238E, h30^{km}, M4.6*
*SKHL **05** 11:54:57.3±1.1, 45.10N×15230E, h60^{km}, mb4.5/3, ms4.0/3, msh5.3/1*
*ISCJB **05** 11:55:00.6±2.0, 455N±0.1×1515E±0.1, h29^{km}±13^{km}, mb4.4/25, MS3.6/5, Error ellipse: s-maj=24.9km s-min=7.2km az=103.1*
*BJI **05** 11:55:04.8, 4660N×15090E, h5^{km}, mB4.4, mb4.4*
*NEIC **05** 11:55:04.8±5.4, 4662N×15091E, h6^{km}±31^{km}, mb4.6/14, Error ellipse: s-maj=20.0km s-min=11.2km az=103.0*
*MOS **05** 11:55:09.1±1.0, 4658N×15047E, h41^{km}, mb4.7/10, Error ellipse: s-maj=13.6km s-min=8.5km az=92.0*
*IDC **05** 11:55:14.6±6.2, 4661N×150.10E, h61^{km}±72^{km}, mb3.6/9, mb1 3.8/11, mb1mx3.6/23, mbtmp3.9/11, ML3.5/2, MS3.6/6, Ms1 3.6/6, ms1mx3.1/39, Error ellipse: s-maj=73.6km s-min=33.3km az=7.0*
ISC 05 11:55:01.2±1.8**, 456N**±01×**1516E**±01**, h24**^{km}±12^{km}**, n109, σ1^{s}41**/114**, mb4.4**/25**, MS3.6**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.67**	**264**	*e*P	**Pn**	**11 55 40.5**	**-2.2**
KUR				AMB	AMB	11 55 47.8	
	150nm,0.6s						
KUR				*e*S	**Sn**	**11 56 17.5**	**+3.2**
KUR				A		11 56 26.5	
	950nm,0.6s						
KUR				A		11 56 26.5	
	530nm,0.6s						
KUR				A		11 56 38.0	
	3µm,2.0s						
KUR				A		11 56 38.0	
	2µm,2.0s						
KUR				AMS	AMS	11 57 02.0	
	3µm,14.0s						
KUR	**Kuril'sk**	**2.67**	**264**	PN	**Pn**	**11 55 40.5**	**-2.2**
KUR				*i* S	**Sn**	**11 56 17.5**	**+3.2**
KUR				pmax	pmax		
	comp=Z,150nm,0.6s						
KUR				smax			
	comp=N,950nm,0.6s						
KUR				smax			
	comp=E,530nm,0.6s						
KUR				smax			
	comp=N,3µm,1.5s						
KUR				smax			
	comp=E,2µm,1.5s						
KUR				MLR	MLR		
	comp=Z,3µm,14.0s						
YUK	**Yuzh-Kuril'sk**	**4.38**	**251**	*e*P	**Pn**	**11 56 10.0**	**+3.7**
YUK				A		11 57 20.2	
	comp=Z,2µm,1.0s						
YUK				A		11 57 20.2	
	comp=Z,2µm,1.0s						
YUK				A		11 57 21.4	
	comp=Z,460nm,0.5s						
YUK				A		11 57 21.4	
	comp=Z,840nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.38**	**251**	PN	**Pn**	**11 56 10.0**	**+3.7**
YUK				*e*S	**Sn**	**11 57 07.8**	**+11**
YUK				smax			
	comp=N,2µm,1.0s						
YUK				smax			
	comp=E,2µm,0.8s						
NEM2	**Nemuro 2**	**4.76**	**244**	P	**Pn**	**11 56 09.9**	**-1.5**
NEM2				*e*S	**Sn**	**11 57 04.5**	**-1.3**
JRA	**Rausu**	**4.92**	**253**	P	**Pn**	**11 56 14.8**	**+1.2**
JNK	**Nakash**	**5.32**	**250**	P	**Pn**	**11 56 19.6**	**+0.4**
JAK	**Akkeshi**	**5.61**	**245**	P	**Pn**	**11 56 21.5**	**-1.6**
JTKR	**Abashiri--Toko**	**5.72**	**256**	P	**Pn**	**11 56 26.3**	**+1.6**
SKR	**Severo-Kuril's**	**5.91**	**29**	*e*P	**Pn**	**11 56 25.0**	**-2.3**
SKR				AMB	AMB	11 56 26.1	
	comp=E,30nm,0.5s						
SKR				*e*S	**Sn**	**11 57 30.0**	**-4.3**
SKR				A		11 57 50.6	
	comp=E,400nm,1.0s						
SKR				A		11 57 50.6	
	comp=E,90nm,1.0s						
SKR				A		11 57 50.6	
	comp=E,70nm,1.0s						
SKR				AMS	AMS	11 59 15.0	
	comp=E,800nm,13.0s						
SKR				AMS	AMS	11 59 15.0	
	comp=E,1µm,13.0s						
SKR				AMS	AMS	11 59 15.0	
	comp=E,1µm,13.0s						
JAR	**Ashorobuto**	**6.07**	**251**	P	**Pn**	**11 56 30.6**	**+1.2**
JAR				*e*S	**Sn**	**11 57 42.0**	**+3.8**
JMP	**Maruseppu**	**6.09**	**258**	P	**Pn**	**11 56 32.0**	**+2.3**
JOB	**Onbets**	**6.21**	**247**	P	**Pn**	**11 56 31.0**	**-0.3**
JOB				*e*S	**Sn**	**11 57 41.3**	**-0.1**
YSS	**Yuzh-Sakhalins**	**6.30**	**286**	*e*P	**Pn**	**11 56 37.5**	**+5.0**
YSS				AMS	AMS	11 59 23.0	
	comp=E,400nm,15.0s						
YSS				AMS	AMS	11 59 23.0	
	comp=E,500nm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.30**	**286**	*e*Pn	**Pn**	**11 56 28.5**	**-4.0**
JKK2	**Kamakawa 2**	**6.55**	**258**	P	**Pn**	**11 56 38.5**	**+2.5**
ASAJ	**Asahikawa**	**6.58**	**260**	P	**Pn**	**11 56 38.5**	**+2.0**
	comp=E,1.3nm,0.3s,baz=79,slow=16,SNR=12						
ASAJ				LR	LR	11 59 34.3	
	comp=E,373nm,18.3s,baz=224,slow=44						
ASAJ	**Asahikawa**	**6.58**	**260**	P	**Pn**	**11 56 39.5**	**+3.0**
ASAJ	**Asahikawa**	**6.58**	**260**	PN	**Pn**	**11 56 38.5**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,373nm,18.3s						
JCH	**Churui**	**6.65**	**246**	P	**Pn**	**11 56 36.9**	**-0.5**
JCH				*e*S	**Sn**	**11 57 52.0**	**-0.4**
JFR	**Furan**	**6.91**	**253**	P	**Pn**	**11 56 42.3**	**+1.3**
JEM	**Erimo**	**7.09**	**243**	P	**Pn**	**11 56 42.9**	**-0.5**
JNBK	**Urakawa-nobuka**	**7.21**	**246**	P	**Pn**	**11 56 43.4**	**-1.6**
JBT2	**Biratori 2**	**7.22**	**250**	P	**Pn**	**11 56 44.6**	**-0.7**
JNB	**Noboribetsu**	**8.24**	**251**	P	**Pn**	**11 57 00.0**	**+0.8**
JNB				*e*S	**Sn**	**11 58 29.7**	**-1.8**
JKB	**Kayabe**	**8.51**	**248**	P	**Pn**	**11 57 01.7**	**-1.2**
JANG	**Nango**	**9.06**	**238**	P	**Pn**	**11 57 06.5**	**-3.9**
JANG				*e*S	**Sn**	**11 58 41.7**	**-10**
JTM	**Tenmabayashi**	**9.08**	**242**	P	**Pn**	**11 57 08.1**	**-2.6**
JTM				*e*S	**Sn**	**11 58 44.0**	**-8.2**
JOSM	**Okushiri--Mats**	**9.45**	**253**	P	**Pn**	**11 57 16.0**	**+0.2**
OKH	**Okha**	**9.75**	**328**	AMS	AMS	12 02 06.0	
	comp=Z,500nm,14.0s						
OKH				AMS	AMS	12 02 06.0	
	comp=Z,400nm,14.0s						
JRG	**Rokugo**	**10.20**	**236**	*e*S	**Sn**	**11 59 11.4**	**-8.3**
JIO	**Ouri**	**10.45**	**231**	*e*S	**Sn**	**11 59 14.2**	**-12**
MAJO	**Matsushiro**	**13.55**	**233**	*e*P	**Pn**	**11 58 21.6**	**+10**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAJO	**Matsushiro**	**13.55**	**233**	*e*P	**Pn**	**11 58 21.6**	**+10**
	comp=Z,7.2nm,0.8s						
MAT	**Matsushiro**	**13.55**	**233**	P	**Pn**	**11 58 21.8**	**+10**
MAT	**Matsushiro**	**13.55**	**233**	*e*P	**Pn**	**11 58 22.0**	**+10**
MJAR	**Matsushiro Arr**	**13.55**	**233**	P	**Pn**	**11 58 21.1**	**+9.1**
	comp=Z,0.2nm,0.3s,baz=37,slow=8.5,SNR=14						
KLR	**Kul'dur**	**13.93**	**292**	*e*P	**Pn**	**11 58 20.8**	**+3.7**
KLR				AMS	AMS	12 04 23.0	
	comp=Z,500nm,16.0s						
EKMR	**Ekimchan**	**14.26**	**308**	*e*P	**Pn**	**11 58 23.8**	**+2.2**
EKMR				AMB	AMB	11 58 40.3	
	comp=Z,3.0nm,0.6s						
MDJ	**Mudanjiang**	**15.58**	**274**	P	**Pn**	**11 58 39.9**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,14nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,35nm,5.3s						
MDJ	**Mudanjiang**	**15.58**	**274**	*e*Pn	**Pn**	**11 58 37.5**	**-1.8**
	comp=Z,4.1nm,0.6s						
MDJ				*e*P		11 58 42.9	
CN2	**Changchun**	**18.67**	**274**	*e*P	**Pn**	**11 59 16.6**	**-1.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
YAK	**Yakutsk**	**20.77**	**330**	*e*P	**P**	**11 59 33.7**	**-6.7**
YAK				*e*S	**S**	**12 03 15.8**	**-15**
BILL	**Bilibino**	**23.76**	**14**	*e*P	**P**	**12 00 12.9**	**+1.2**
BILL				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
BOD	**Bodaibo**	**25.96**	**312**	*e*P	**P**	**12 00 29.2**	**-2.6**
SONM	**Songino Array**	**30.76**	**291**	LR	LR	12 14 46.9	
	comp=Z,90nm,19.5s,MS3.4,baz=119,slow=40						
GTA	**Gaotai**	**38.13**	**280**	P	**P**	**12 02 19.9**	**+1.5**
GTA				AP	pP	12 02 32.2	+6.6
GTA				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.7						
ZAL	**Zalesovo**	**42.47**	**306**	LR	LR	12 22 14.9	
	comp=Z,147nm,18.7s,MS3.9,baz=85,slow=40						
MKAR	**Makanchi Array**	**46.56**	**298**	P	**P**	**12 03 26.2**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.8,baz=70,slow=5.9,SNR=7.5						
CHKZ	**Chkalovo**	**50.39**	**310**	*e*P	**P**	**12 03 54.8**	**-1.6**
CHKZ				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
CHKZ	**Chkalovo**	**50.39**	**310**	*e*P	**P**	**12 03 54.8**	**-1.7**
	comp=Z,1.7nm,0.8s,mb4.1						
BVAR	**Borovoye Array**	**50.80**	**310**	P	**P**	**12 03 58.1**	**-1.5**
	comp=Z,0.6nm,0.7s,mb3.7,baz=54,slow=7.7,SNR=4.1						
JIRN	**Jiri**	**54.00**	**274**	*e*P	**P**	**12 04 26.4**	**+3.1**
KKN	**Kakani**	**54.56**	**275**	*e*P	**P**	**12 04 30.5**	**+3.1**
	comp=Z,10.0nm,0.6s,mb5.0						
KKN	**Kakani**	**54.56**	**275**	*e*P	**P**	**12 04 30.5**	**+3.1**
KKN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
PKI	**Pulchoki**	**54.60**	**275**	*e*P	**P**	**12 04 30.3**	**+2.6**
DMN	**Daman**	**54.79**	**275**	*e*P	**P**	**12 04 31.9**	**+2.9**
GKN	**Gorkha**	**54.88**	**276**	*e*P	**P**	**12 04 32.4**	**+2.7**
	comp=Z,20nm,0.8s,mb5.2						
KOLN	**Koldanda**	**55.75**	**276**	*e*P	**P**	**12 04 38.2**	**+2.3**
	comp=Z,28nm,0.6s,mb5.5						
KEV	**Kevo**	**58.09**	**340**	*e*p	**P**	**12 04 51.0**	**-1.5**
	comp=Z,0.6nm,0.3s,mb4.1						
KEV	**Kevo**	**58.09**	**340**	*e*P	**P**	**12 04 51.0**	**-1.5**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ARCES	**ARCESS Array B**	**58.60**	**341**	P	**P**	**12 04 55.8**	**-0.3**
	comp=Z,1.6nm,0.7s,mb4.2,baz=51,slow=7.1,SNR=15						
AKTO	**Aktyubinsk**	**58.72**	**312**	LR	LR	12 32 43.5	
	comp=Z,135nm,18.0s,MS4.1,baz=84,slow=39						
YBH	**Yreka Blue Hor**	**59.21**	**60**	LR	LR	12 24 43.1	
	comp=Z,17nm,21.4s,MS3.1,baz=345,slow=30						
JOF	**Joensuu**	**61.91**	**333**	*e*p	**P**	**12 05 17.3**	**-1.4**
	comp=Z,0.6nm,0.4s,mb4.1						
JOF	**Joensuu**	**61.91**	**333**	*e*P	**P**	**12 05 17.3**	**-1.4**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
NVAR	**Mina Array Bea**	**63.90**	**61**	P	pP	12 05 44.7	+5.2
	comp=Z,0.3nm,0.6s,baz=270,slow=9.0,SNR=3.5						
NVAR	**Mina Array Bea**	**63.90**	**61**	P	pP	12 05 44.7	+5.2
KAF	**Kangasniemi**	**64.05**	**335**	*e*p	**P**	**12 05 30.9**	**-2.1**
	comp=Z,1.2nm,0.4s,mb4.3,baz=38,slow=6.2						
KAF	**Kangasniemi**	**64.05**	**335**	*e*P	**P**	**12 05 30.9**	**-2.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**64.64**	**334**	P	**P**	**12 05 35.7**	**-1.2**
	comp=Z,2.9nm,0.6s,mb4.5,baz=45,slow=7.6,SNR=24						
FINES	**FINESS Array B**	**64.64**	**334**	P	**P**	**12 05 35.7**	**-1.2**
NB2	**NORSAR Subarra**	**68.98**	**341**	P	**P**	**12 06 04.2**	**-0.3**
	comp=Z,4.9nm,0.9s,mb4.4,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.98**	**341**	P	**P**	**12 06 04.7**	**+0.2**
	comp=Z,2.5nm,0.8s,mb4.2,baz=29,slow=6.2,SNR=9.1						
NOA				LR	LR	12 38 07.8	
	comp=Z,25nm,19.3s,MS3.5,baz=330,slow=38						
AKASG	**Malin Array Be**	**71.92**	**326**	P	**P**	**12 06 21.9**	**-0.6**
	comp=Z,2.2nm,0.7s,mb4.2,baz=34,slow=5.7,SNR=5.5						
DPC	**Dobruska-Polom**	**76.88**	**332**	*e*P	**P**	**12 06 53.0**	**+1.7**
CLL	**Collm**	**77.08**	**335**	P	**P**	**12 06 53.2**	**+0.8**
	comp=Z,logA/T=0.8,mb4.5						
CLL	**Collm**	**77.08**	**335**	*i* P	**P**	**12 06 53.2**	**+0.8**
	comp=Z,7.0nm,1.0s,mb4.5						
BRTR	**Keskin Array B**	**78.51**	**316**	P	**P**	**12 07 00.7**	**+0.3**
	comp=Z,1.0nm,0.8s,mb3.8,baz=96,slow=3.8,SNR=6.1						
KHC	**Kasperske Hory**	**78.82**	**333**	*e*P	**P**	**12 07 00.4**	**-1.7**
KHC				*e*x	x	12 07 03.3	
GERES	**GERESS Array B**	**79.03**	**333**	P	**P**	**12 07 03.1**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.6,baz=44,slow=6.3,SNR=3.6						
CDF	**Champ du Feu**	**81.33**	**337**	*e*P	**P**	**12 07 15.6**	**0.0**
	comp=Z,5.6nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**81.33**	**337**	*e*P	**P**	**12 07 15.6**	**0.0**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**81.33**	**337**	*e*P	**P**	**12 07 15.6**	**0.0**
	comp=Z,2.8nm,0.9s,mb4.2						
MEZF	**Maizieres J'vi**	**81.84**	**338**	*e*P	**P**	**12 07 19.4**	**+1.1**
HINF	**Hinteralfeld**	**81.98**	**337**	*e*P	**P**	**12 07 19.5**	**+0.4**
FLN	**La Foliniere**	**82.92**	**342**	*e*P	**P**	**12 07 24.9**	**+0.9**
	comp=Z,11nm,1.0s,mb4.6						
FLN	**La Foliniere**	**82.92**	**342**	*e*P	**P**	**12 07 24.9**	**+0.9**
FLN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
FLN	**La Foliniere**	**82.92**	**342**	*e*P	**P**	**12 07 24.9**	**+0.9**
	comp=Z,5.7nm,1.0s,mb4.6						
LDF	**La Druitiere**	**83.00**	**342**	*e*P	**P**	**12 07 24.6**	**+0.2**
LOR	**Lormes**	**83.29**	**339**	*e*P	**P**	**12 07 24.8**	**-1.1**
	comp=Z,6.1nm,0.8s,mb4.4						
LOR	**Lormes**	**83.29**	**339**	*e*P	**P**	**12 07 24.8**	**-1.1**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
LOR	**Lormes**	**83.29**	**339**	*e*P	**P**	**12 07 24.8**	**-1.1**
	comp=Z,3.0nm,0.8s,mb4.4						
CABF	**La Chapelle**	**83.30**	**337**	*e*P	**P**	**12 07 27.0**	**+1.1**
GRR	**Gorron**	**83.36**	**342**	*e*P	**P**	**12 07 26.3**	**+0.1**
SSF	**Saint Saulge**	**83.57**	**339**	*e*P	**P**	**12 07 27.3**	**0.0**
	comp=Z,7.8nm,0.8s,mb4.6						
SSF	**Saint Saulge**	**83.57**	**339**	*e*P	**P**	**12 07 27.3**	**0.0**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
SSF	**Saint Saulge**	**83.57**	**339**	*e*P	**P**	**12 07 27.3**	**0.0**
	comp=Z,3.9nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**83.86**	**339**	*e*P	**P**	**12 07 29.0**	**+0.2**
	comp=Z,8.9nm,1.0s,mb4.5						
AVF	**Avril sur Loir**	**83.86**	**339**	*e*P	**P**	**12 07 29.0**	**+0.2**
AVF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
AVF	**Avril sur Loir**	**83.86**	**339**	*e*P	**P**	**12 07 29.0**	**+0.2**
	comp=Z,4.4nm,1.0s,mb4.5						
SMF	**Signal de Mont**	**83.87**	**338**	*e*P	**P**	**12 07 29.1**	**+0.3**
	comp=Z,15nm,0.9s,mb4.8						
SMF	**Signal de Mont**	**83.87**	**338**	*e*P	**P**	**12 07 29.1**	**+0.3**
SMF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
SMF	**Signal de Mont**	**83.87**	**338**	*e*P	**P**	**12 07 29.1**	**+0.3**
	comp=Z,7.4nm,0.9s,mb4.8						
LPG	**La Plagne**	**84.13**	**336**	*e*P	**P**	**12 07 31.3**	**+1.1**
BGF	**Bois d'Agland**	**84.20**	**339**	*e*P	**P**	**12 07 30.6**	**0.0**
TCF	**Toulx Ste Croi**	**84.61**	**339**	*e*P	**P**	**12 07 31.3**	**-1.3**
	comp=Z,17nm,1.1s,mb4.8						
TCF	**Toulx Ste Croi**	**84.61**	**339**	*e*P	**P**	**12 07 31.3**	**-1.3**
TCF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
TCF	**Toulx Ste Croi**	**84.61**	**339**	*e*P	**P**	**12 07 31.3**	**-1.3**
	comp=Z,8.4nm,1.1s,mb4.8						

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*ISCJB **05** 11:59:31.1±0.5, 6066N±0.05×14746W±0.06, h54^{km}±8^{km}, mb3.7/3, Error ellipse: s-maj=7.7km s-min=5.1km az=0.8*
*NEIC **05** 11:59:32.3, 6067N×14750W, h19^{km}, ML3.4(AEIC), ML3.7(PMR), After AEIC.*
*IDC **05** 11:59:33.1±3.9, 6097N×14782W, h33^{km}±36^{km}, mb3.5/3, mb1 3.7/6, mb1mx3.4/21, mbtmp3.6/6, ML3.3/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/34, Error ellipse: s-maj=32.4km s-min=15.6km az=132.0*
ISC 05 11:59:31.0±0.9**, 6063N**±004×**14748W**±007**, h27**^{km}±10^{km}**, n26, σ0^{s}95**/32**, mb3.7**/3**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYAK	**Cordova Ski Ar**	**0.86**	**95**	P	**Pb**	**11 59 47.4**	**+0.2**
EYAK				S	**Sb**	**11 59 58.8**	**+0.5**
KNK	**Knik Glacier**	**0.92**	**329**	P	**Pb**	**11 59 47.4**	**-0.9**
DIV	**Divide**	**0.97**	**58**	P	**Pn**	**11 59 47.5**	**-1.4**
DIV				S	**Sb**	**12 00 00.4**	**-1.2**
SEW	**Seward**	**1.11**	**243**	P	**Pn**	**11 59 51.0**	**+0.2**
SEW				S	**Sn**	**12 00 05.8**	**+0.5**
RC01	**Rabbit Creek A**	**1.20**	**294**	P	**Pn**	**11 59 51.8**	**-0.1**
RC01				S	**Sn**	**12 00 07.6**	**+0.2**
PMR	**Palmer**	**1.26**	**321**	P	**Pn**	**11 59 52.5**	**-0.3**
PMR				S	**Sn**	**12 00 09.4**	**+0.6**
MID	**Middleton Isla**	**1.33**	**154**	P	**Pn**	**11 59 56.4**	**+2.6**
GHO	**Glory Hole Cre**	**1.35**	**329**	P	**Pn**	**11 59 54.2**	**+0.2**
SLKM	**Skilak Lake**	**1.36**	**266**	P	**Pn**	**11 59 54.6**	**+0.4**
FIB	**Fire Island**	**1.43**	**293**	P	**Pn**	**11 59 55.8**	**+0.7**
BMRM	**Bremner River**	**1.45**	**75**	P	**Pn**	**11 59 55.9**	**+0.5**
MENT	**Mentasta**	**2.93**	**36**	*e*P	**Pn**	**12 00 16.8**	**+1.1**
TRF	**Thorofare Moun**	**3.13**	**336**	P	**Pn**	**12 00 19.4**	**+0.9**
MCK	**McKinley**	**3.19**	**348**	P	**Pn**	**12 00 20.1**	**+0.8**
KTH	**Kantishna Hill**	**3.35**	**333**	P	**Pn**	**12 00 22.0**	**+0.4**
KDAK	**Kodiak Island**	**3.88**	**225**	Pn	**Pn**	**12 00 29.2**	**+0.4**
	7.3nm,0.3s,baz=38,slow=11,SNR=45						
KDAK				Sn	**Sn**	**12 01 11.2**	**-2.2**
	4.8nm,0.3s,baz=319,slow=23,SNR=9.3						
KDAK	**Kodiak Island**	**3.88**	**225**	*e*P	**Pn**	**12 00 29.0**	**+0.2**
KDAK				P		12 00 29.3	
SVW2	**Sparrevohn**	**3.99**	**280**	P	**Pn**	**12 00 29.1**	**-1.3**
COLA	**College**	**4.27**	**358**	P	**Pn**	**12 00 34.5**	**+0.3**
TTA	**Tatalina**	**4.67**	**303**	*e*P	**Pn**	**12 00 38.4**	**-1.2**
IMA2	**Indian Mountai**	**6.13**	**336**	*e*Pn	**Pn**	**12 01 00.6**	**+0.8**
IMA2				*e*P		12 01 02.0	
INK	**Inuvik**	**9.75**	**32**	Pn	**Pn**	**12 01 49.8**	**+0.3**
	0.2nm,0.3s,baz=213,slow=13,SNR=5.2						
INK				LR	LR	12 06 15.2	
	comp=Z,56nm,21.7s,baz=140,slow=42						
YKA	**Yellowknife Ar**	**15.67**	**69**	Pn	**Pn**	**12 03 08.9**	**-1.0**
	baz=278,slow=12,SNR=5.0						
NVAR	**Mina Array Bea**	**28.76**	**127**	P	**P**	**12 05 31.6**	**+5.2**
	0.7nm,0.8s,mb3.5,baz=285,slow=9.1,SNR=3.7						
FINES	**FINESS Array B**	**58.16**	**4**	P	**P**	**12 09 20.3**	**-2.0**
	0.5nm,0.5s,mb3.8,baz=4.4,slow=9.3,SNR=8.8						
ESDC	**Sonseca Array**	**75.68**	**28**	P	**P**	**12 11 13.5**	**-0.4**
	0.8nm,0.6s,mb3.9,baz=345,slow=6.4,SNR=4.4						

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*NIED **05** 12:20:00, 2690N×12650E, h135^{km}, Mw4.2 Best double couple: $M_0$2.24000×10^{15} NP1:ϕ_s223.00000°, δ73.00000°, λ62.00000°. NP2:ϕ_s104.00000°, δ33.00000°, λ147.00000°.*
*ISCJB **05** 12:20:17.6±0.3, 2680N±0.05×12655E±0.04, h125^{km}±4^{km}, mb3.9/13, Error ellipse: s-maj=9.5km s-min=3.6km az=107.3*
*BJI **05** 12:20:18.9, 2656N×126.14E, h114^{km}, mb4.1*
*JMA **05** 12:20:19.0±0.2, 2686N×12650E, h116^{km}±2^{km}, M3.5*
*IDC **05** 12:20:19.2±1.9, 2684N×12665E, h120^{km}±19^{km}, mb3.6/8, mb1 3.8/8, mb1mx3.5/22, mbtmp4.0/8, Error ellipse: s-maj=31.0km s-min=13.5km az=65.0*
*NEIC **05** 12:20:19.2±1.0, 2682N×12654E, h125^{km}±10^{km}, mb4.0/4, Error ellipse: s-maj=14.8km s-min=11.0km az=60.0*
ISC 05 12:20:18.7±0.3**, 2683N**±005×**12654E**±004**, h118**^{km}±4^{km}**, n38, σ0^{s}98**/56**, mb3.9**/13**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.55**	**156**	P	**Pn**	**12 20 37.4**	**+0.6**
JKE				*e*S	**Sn**	**12 20 50.7**	**+0.3**
JAGN	**Aguni-jima**	**0.68**	**111**	P	**Pn**	**12 20 38.4**	**+0.7**
JAGN				S	**Sn**	**12 20 52.4**	**+0.4**
NAH1	**Naha**	**1.21**	**121**	P	**Pn**	**12 20 43.6**	**+0.9**
NAH1				S	**Sn**	**12 21 01.0**	**+0.1**
JJT2	**Tamagusuku 2**	**1.29**	**122**	P	**Pn**	**12 20 44.9**	**+1.3**
JJT2				*e*S	**Sn**	**12 21 03.6**	**+1.1**
JIH	**Iheya**	**1.29**	**81**	P	**Pn**	**12 20 44.4**	**+0.7**
JIH				S	**Sn**	**12 21 02.3**	**-0.3**
JOW	**Kunigami**	**1.55**	**90**	P	**Pn**	**12 20 47.4**	**+0.8**
	301nm,0.3s,baz=126,slow=27,SNR=203						
JOW				S	**Sn**	**12 21 06.4**	**-1.5**
	868nm,0.3s,baz=131,slow=25,SNR=7.2						
JOW	**Kunigami**	**1.55**	**90**	P	**Pn**	**12 20 47.3**	**+0.7**
JOW				S	**Sn**	**12 21 06.7**	**-1.2**

JMJ	**Miyako jima 2**	**2.30**	**209**	P	**Pn**	**12 20 56.6**	**+0.8**
JMJ				S	**Sn**	**12 21 24.0**	**-0.3**
JOGS	**Gusukube**	**2.30**	**207**	P	**Pn**	**12 20 56.7**	**+0.9**
JOGS				*e*S	**Sn**	**12 21 24.4**	**+0.1**
JTK	**Tokunoshima**	**2.35**	**66**	P	**Pn**	**12 20 56.8**	**+0.3**
JTK				*e*S	**Sn**	**12 21 24.3**	**-1.2**
JTJ	**Tarama**	**2.74**	**218**	P	**Pn**	**12 21 01.8**	**+0.3**
JTJ				S	**Sn**	**12 21 33.2**	**-1.2**
JAM	**Amami Oshima**	**3.15**	**59**	P	**Pn**	**12 21 06.6**	**-0.2**
JAM				*e*S	**Sn**	**12 21 41.2**	**-2.8**
JIJ	**Ishigaki jima**	**3.27**	**222**	P	**Pn**	**12 21 08.1**	**-0.4**
JIJ				S	**Sn**	**12 21 44.6**	**-2.3**
JZK	**Kikaishima**	**3.39**	**63**	P	**Pn**	**12 21 10.2**	**+0.1**
JZK				S	**Sn**	**12 21 48.8**	**-1.0**
JKRS	**Kuro-shima**	**3.44**	**222**	P	**Pn**	**12 21 10.6**	**-0.2**
JKRS				*e*S	**Sn**	**12 21 50.2**	**-0.9**
IRIF	**Iriomote-Funau**	**3.55**	**226**	P	**Pn**	**12 21 11.9**	**-0.3**
IRIF				*e*S	**Sn**	**12 21 52.3**	**-1.2**
HATJ	**Hateruma jima**	**3.70**	**222**	P	**Pn**	**12 21 15.0**	**+0.8**
HATJ				*e*S	**Sn**	**12 21 56.1**	**-1.1**
YOJ	**Yonaguni jima**	**3.96**	**234**	*e*S	**Sn**	**12 22 04.4**	**+1.1**
JNN	**Nakanoshima**	**4.20**	**44**	P	**Pn**	**12 21 21.6**	**+0.7**
JMZ	**Minamidaito 2**	**4.32**	**102**	P	**Pn**	**12 21 20.9**	**-1.6**
JMZ				*e*S	**Sn**	**12 22 05.9**	**-6.1**
YHNB	**Yeheng**	**5.13**	**246**	*e*P	**Pn**	**12 21 34.0**	**+0.7**
GTA	**Gaotai**	**25.55**	**306**	*e*P	**P**	**12 25 36.4**	**0.0**
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.0						
ULN	**Ulaanbaatar**	**25.95**	**329**	P	**P**	**12 25 43.2**	**+3.1**
	comp=Z,2.9nm,0.8s,mb3.8						
SONM	**Songino Array**	**26.24**	**328**	P	**P**	**12 25 44.8**	**+2.2**
	comp=Z,1.8nm,0.7s,mb3.6,baz=139,slow=11,SNR=10						
MKAR	**Makanchi Array**	**40.01**	**312**	P	**P**	**12 27 41.4**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.8,baz=100,slow=9.9,SNR=12						
ZAL	**Zalesovo**	**40.86**	**323**	P	**P**	**12 27 49.0**	**+0.2**
	comp=Z,1.3nm,0.3s,mb4.2,baz=8.4,slow=8.5,SNR=5.2						
KURK	**Kurchatov**	**43.34**	**317**	P	**P**	**12 28 06.4**	**-2.6**
	comp=Z,1.6nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**47.10**	**170**	P	**P**	**12 28 38.8**	**+0.1**
	comp=Z,1.3nm,0.7s,mb3.7,baz=353,slow=8.5,SNR=14						
WB2	**Warramunga Arr**	**47.11**	**170**	*e*P	**P**	**12 28 39.5**	**+0.8**
BVAR	**Borovoye Array**	**48.82**	**318**	P	**P**	**12 28 52.6**	**+0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=77,slow=6.4,SNR=3.7						
ZRNK	**Zerenda**	**49.63**	**318**	*e*P	**P**	**12 28 57.9**	**-0.2**
	comp=Z,3.4nm,1.0s,mb4.2						
AS31	**Alice Springs**	**50.70**	**171**	*e*P	**P**	**12 29 04.8**	**-1.3**
ASAR	**Alice Springs**	**50.70**	**171**	P	**P**	**12 29 06.8**	**+0.6**
	comp=Z,1.4nm,0.5s,mb4.2,baz=358,slow=13,SNR=32						
ASPA	**Alice Springs**	**50.70**	**171**	*e*P	**P**	**12 29 07.1**	**+1.0**
STKA	**Stephens Creek**	**60.12**	**165**	P	**P**	**12 30 14.1**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=318,slow=5.5,SNR=4.8						
STKA	**Stephens Creek**	**60.12**	**165**	P	**P**	**12 30 13.4**	**-0.1**
INK	**Inuvik**	**68.94**	**23**	*e*P	**P**	**12 31 09.5**	**-1.4**
	comp=Z,2.5nm,0.8s,mb4.1						
YKA	**Yellowknife Ar**	**78.62**	**25**	P	**P**	**12 32 07.2**	**-0.2**
	comp=Z,1.2nm,0.6s,mb3.9,baz=306,slow=5.6,SNR=20						

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*ISCJB **05** 12:33:47.1±2.0, 2924S±003×72.12W±005, h13km±14km, mb4.1/8, MS3.3/1, Error ellipse: s-maj=7.8km s-min=5.3km az=22.8*
*IDC **05** 12:33:48.9±1.7, 2928S×7160W, h0km, mb4.3/4, mb1 4.1/7, mb1mx3.9/18, mbtmp4.0/7, ML3.6/3, MS3.4/1, Ms1 3.3/1, ms1mx2.8/24, Error ellipse: s-maj=62.5km s-min=25.9km az=109.0*
*GUC **05** 12:33:48.3±1.0, 2923S×7205W, h39km±5km, ML4.1*
*NEIC **05** 12:33:50.2±2.7, 2926S×7184W, h17km±17km, mb4.3/5, ML3.9(GUC), Error ellipse: s-maj=15.7km s-min=5.2km az=100.0*
ISC 05 12:33:48.9±1.6**, 2925S**±003×**7200W**±007**, h10**km±9km**, n42,** σ**1ˢ13**/50**, mb4.1**/8**, MS3.3**/1**, 2C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.93**	**135**	*e*P	**Pg**	**12 34 06.1**	**-0.6**
LSCH				*i* S	**Sg**	**12 34 19.0**	**+0.2**
LSCH	**La Serena**	**0.93**	**135**	*e*P	**Pg**	**12 34 06.2**	**-0.6**
LSCH				*i* S	**Sg**	**12 34 19.0**	**+0.2**
LCO	**Las Campanas**	**1.16**	**78**	⇓*i*P	**Pb**	**12 34 09.6**	**-1.4**
LCO				*i* S	**Sg**	**12 34 26.7**	**+0.5**
LCO				AML	AML	12 34 28.2	
	comp=N,7μm,0.4s						
LCO	**Las Campanas**	**1.16**	**78**	⇓*i*P	**Pb**	**12 34 09.6**	**-1.4**
LCO				*i* S	**Sg**	**12 34 26.9**	**+0.7**
VACH	**Vallenar**	**1.28**	**59**	*e*P	**Pn**	**12 34 11.3**	**-1.5**
VACH				*i* S	**Sb**	**12 34 28.9**	**-0.5**
VACH				AML	AML	12 34 35.8	
	comp=N,7μm,0.3s						
VACH	**Vallenar**	**1.28**	**59**	*e*P	**Pn**	**12 34 11.3**	**-1.4**
VACH				*i* S	**Sb**	**12 34 29.4**	**0.0**
TLL	**Tololo Astrono**	**1.38**	**132**	⇓*i*P	**Pn**	**12 34 14.0**	**-0.2**
TLL				*i* S	**Sb**	**12 34 32.5**	**0.0**
TLL				AML	AML	12 34 43.4	
	comp=E,14μm,0.5s						
TLL	**Tololo Astrono**	**1.38**	**132**	⇓*i*P	**Pn**	**12 34 14.1**	**-0.1**
TLL				*i* S	**Sb**	**12 34 32.6**	**+0.2**
CDCH	**Caldera**	**2.40**	**26**	⇑*i*P	**Pn**	**12 34 26.1**	**-2.1**
CDCH				AML	AML	12 35 15.1	
	comp=N,534nm,0.5s						
CDCH	**Caldera**	**2.40**	**26**	⇑*i*P	**Pn**	**12 34 26.3**	**-1.9**
CHNG	**Los Chungos**	**2.66**	**171**	*e*P	**Pn**	**12 34 31.4**	**-0.3**
CHNG				*i* S	**Sn**	**12 35 03.3**	**-0.7**
CHNG				AML	AML	12 35 20.1	
	comp=E,660nm,0.7s						
JACH	**Jahuel**	**3.63**	**161**	*e*P	**Pn**	**12 34 43.9**	**-1.2**
CFAA	**Coronel Fontan**	**4.01**	**127**	Pn	**Pn**	**12 34 52.7**	**+2.5**
	comp=E,0.6nm,0.3s,baz=313,slow=11,SNR=27						
CFAA				Lg		12 35 52.1	
	comp=E,5.4nm,0.3s,baz=64,slow=21,SNR=7.3						
CFAA	**Coronel Fontan**	**4.01**	**127**	Pn	**Pn**	**12 34 52.7**	**+2.5**
CFAA				Lg		12 35 52.1	
PEL	**Peldehue**	**4.04**	**164**	*e*P	**Pn**	**12 34 51.5**	**+0.8**
PEL	**Peldehue**	**4.04**	**164**	P	**Pn**	**12 34 51.6**	**+0.9**
LCCH	**Las Cruces**	**4.23**	**175**	⇓*i*P	**Pn**	**12 34 53.4**	**+0.1**
CLCH	**Cerro Calan**	**4.32**	**164**	*e*P	**Pn**	**12 34 55.6**	**+1.1**
FCH	**Farellones**	**4.32**	**161**	*e*P	**Pn**	**12 34 57.4**	**+2.8**
LNV	**Longovilo**	**4.72**	**174**	P	**Pn**	**12 34 59.3**	**-0.8**
CHCH	**Chadas Angostu**	**4.81**	**167**	*e*P	**Pn**	**12 35 01.6**	**+0.3**
CICH	**Cipreses**	**5.23**	**166**	*e*P	**Pn**	**12 35 05.7**	**-1.4**
LVC	**Limon Verde**	**7.17**	**23**	Pn	**Pn**	**12 35 31.9**	**-1.8**
	comp=E,0.3nm,0.3s,baz=189,slow=9.4,SNR=11						
LVC				Lg		12 37 29.4	
	comp=E,6.3nm,0.3s,baz=109,slow=19,SNR=6.6						
LVC	**Limon Verde**	**7.17**	**23**	*e*Pn	**Pn**	**12 35 31.2**	**-2.5**
	comp=E,15nm,0.6s						
LVC				Pn	**Pn**	**12 35 31.9**	**-1.8**
LVC				Lg		12 37 29.4	
PLCA	**Paso Flores**	**11.52**	**174**	Pn	**Pn**	**12 36 33.7**	**+0.4**
	comp=E,0.1nm,0.3s,baz=354,slow=17,SNR=4.5						
PLCA	**Paso Flores**	**11.52**	**174**	Pn	**Pn**	**12 36 33.7**	**+0.4**
CPUP	**Villa Florida**	**13.31**	**81**	Pn	**Pn**	**12 37 00.3**	**+2.6**
	comp=E,0.4nm,0.3s,baz=241,slow=13,SNR=6.6						
CPUP	**Villa Florida**	**13.31**	**81**	*e*Pn	**Pn**	**12 36 59.3**	**+1.5**
LPAZ	**La Paz**	**13.38**	**16**	*e*Pn	**Pn**	**12 37 01.2**	**+2.4**
	comp=E,2.2nm,0.7s						
SIV	**San Ignacio**	**16.59**	**40**	Pn	**Pn**	**12 37 42.5**	**+1.0**
	comp=E,0.2nm,0.3s,baz=228,slow=12,SNR=18						
SAML	**Samuel**	**21.82**	**24**	*e*P	**P**	**12 38 41.7**	**+0.5**
	comp=E,2.4nm,0.8s,mb3.7						
BDFB	**Brasilia**	**25.91**	**64**	P	**P**	**12 39 20.3**	**-0.7**
	comp=E,1.7nm,0.4s,mb3.9,baz=240,slow=11,SNR=6.0						
BDFB				LR	LR	12 51 11.7	
	comp=E,80nm,19.5s,MS3.3,baz=82,slow=41						
OTAV	**Otavalo**	**29.96**	**347**	P	**P**	**12 39 58.7**	**+1.5**
	comp=E,2.6nm,0.7s,mb4.1						
SNAA	**Sanae**	**55.98**	**159**	*e*P	**P**	**12 43 26.8**	**-0.6**
	comp=E,3.6nm,1.0s,mb4.4						
QSPA	**South Pole Qui**	**60.97**	**180**	*e*P	**P**	**12 44 01.4**	**-0.8**
	comp=E,2.2nm,0.8s,mb4.3						
DBIC	**Dimbokro**	**73.67**	**73**	P	**P**	**12 45 22.9**	**+0.3**
	comp=E,3.8nm,0.8s,mb4.4,baz=137,slow=16,SNR=3.8						
DBIC	**Dimbokro**	**73.67**	**73**	P	**P**	**12 45 21.9**	**-0.8**
	comp=E,10nm,1.2s,mb4.6						
MAW	**Mawson**	**77.72**	**164**	P	**P**	**12 45 46.2**	**+0.4**
	comp=E,0.7nm,0.8s,mb3.6,baz=236,slow=3.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**82.58**	**71**	P	**P**	**12 46 12.5**	**+0.5**
	comp=E,2.4nm,0.7s,mb4.3,baz=259,slow=4.9,SNR=10.0						
TORD	**Torodi Ar. Bea**	**82.58**	**71**	P	**P**	**12 46 12.5**	**+0.5**
ZAL	**Zalesovo**	**150.11**	**28**	PKPbc	PKPbc	12 53 41.2	+1.4
	comp=E,2.6nm,0.7s,baz=176,slow=3.3,SNR=10						
MKAR	**Makanchi Array**	**153.40**	**42**	PKPbc	PKPbc	12 53 48.1	+0.8
	comp=E,1.2nm,0.7s,baz=337,slow=1.5,SNR=8.3						

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*ISCJB **05** 12:47:18.3±0.7, 34.15N±004×27.10E±008, h33km, Error ellipse: s-maj=9.3km s-min=6.0km az=146.0*
*NEIC **05** 12:47:18.1, 3426N×2708E, h35km, MD3.5(ATH), After ATH.*
*ATH **05** 12:47:18.1, 3426N×2708E, h35km, MD3.5/4*
*CSEM **05** 12:47:18.6±0.1, 34.16N×27.18E, h40km, ML3.5, Error ellipse: s-maj=4.6km s-min=2.7km az=54.0*
*HLW **05** 12:47:19.3, 3424N×27.17E, h33km, Mb3.5*
ISC 05 12:47:19.8±0.7**, 3419N**±005×**2705E**±008**, h35**km**, n15,** σ**0ˢ70**/18**, 7C-2D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**1.31**	**302**	*e*PN	**Pn**	**12 47 41.6**	**0.0**
KARP	**Karpathos**	**1.36**	**4**	*e*PN	**Pn**	**12 47 41.4**	**-0.9**
NPS	**Neapolis**	**1.60**	**313**	*e*PN	**Pn**	**12 47 45.0**	**-0.6**
GVD	**Gavdhos**	**2.53**	**286**	*e*PN	**Pn**	**12 47 59.0**	**+0.6**
HMAT	**Matruh**	**3.09**	**179**	⇑P	**Pn**	**12 48 06.4**	**+0.4**
HMAT				S	**Sn**	**12 48 40.4**	**-1.3**
SLUM		**3.10**	**210**	⇓P	**Pn**	**12 48 07.0**	**+0.7**
SLUM				S	**Sn**	**12 48 42.0**	**-0.1**
DABA	**Dabaa**	**3.33**	**162**	⇑P	**Pn**	**12 48 09.3**	**-0.1**
HBRG	**Burj al ‘Arab**	**4.31**	**146**	⇑P	**Pn**	**12 48 22.7**	**-0.1**
SWA1		**5.04**	**193**	⇓P	**Pn**	**12 48 33.6**	**+0.7**
SWA1				S	**Sn**	**12 49 28.6**	**-1.3**
AWBH		**6.06**	**164**	P	**Pn**	**12 48 47.6**	**+0.7**
GLL	**Jalalah**	**6.07**	**138**	⇑P	**Pn**	**12 48 46.5**	**-0.4**
GLL	**Jalalah**	**6.07**	**138**	P	**Pn**	**12 48 46.5**	**-0.5**
AMAG	**Maghara**	**6.29**	**122**	⇑P	**Pn**	**12 48 50.1**	**0.0**
HFRF	**Wahat Farafira**	**7.10**	**171**	⇑P	**Pn**	**12 49 01.6**	**+0.4**
HDK1	**Dakhla**	**8.85**	**166**	⇑P	**Pn**	**12 49 26.5**	**+1.3**

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*IDC **05** 13:09:52.3±12.0, 2281S×17940E, h467km±138km, mb3.2/4, mb1 3.4/4, mb1mx3.1/12, mbtmp4.0/4, Error ellipse: s-maj=129.6km s-min=49.3km az=159.0*
*NEIC **05** 13:09:58.9±5.3, 2336S×17938E, h552km±59km, mb4.4/8, Error ellipse: s-maj=31.7km s-min=25.1km az=73.0*
*ISCJB **05** 13:10:01.2±1.1, 233S±02×1793E±02, h600km, mb4.1/11, Error ellipse: s-maj=29.0km s-min=19.8km az=167.0*
ISC 05 13:10:02.5±1.1**, 233S**±02×**1793E**±02**, h600**km**, n23,** σ**0ˢ52**/20**, mb4.1**/11**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**25.66**	**248**	*e*P	**P**	**13 14 47.2**	**+0.8**
CTA	**Charters Tower**	**30.87**	**270**	*e*P	**P**	**13 15 32.1**	**+0.6**
	14nm,0.4s,mb4.9						
CTAO	**Charters Tower**	**30.87**	**270**	⇓*i*P	**P**	**13 15 31.9**	**+0.4**
	19nm,0.5s,mb5.0						
PMG	**Port Moresby**	**33.73**	**289**	*e*P	**P**	**13 15 55.4**	**-0.3**
	18nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**34.37**	**247**	*e*P	**P**	**13 16 01.1**	**+0.1**
	1.3nm,0.7s,mb3.7						
STKA	**Stephens Creek**	**34.37**	**247**	P	**P**	**13 16 01.1**	**+0.1**
	1.5nm,0.6s,mb3.8,baz=106,slow=12,SNR=6.1						
STKA	**Stephens Creek**	**34.37**	**247**	*e*P	**P**	**13 16 00.7**	**-0.3**
AS31	**Alice Springs**	**41.53**	**260**	*e*P	**P**	**13 16 59.0**	**+0.1**
ASAR	**Alice Springs**	**41.53**	**260**	P	**P**	**13 16 59.0**	**+0.1**
	0.9nm,0.3s,mb3.8,baz=93,slow=6.9,SNR=33						
ASPA	**Alice Springs**	**41.53**	**260**	*e*P	**P**	**13 16 59.0**	**+0.1**
WB2	**Warramunga Arr**	**41.83**	**266**	*e*P	**P**	**13 17 00.9**	**-0.3**
WRAB	**Tennant Creek**	**41.83**	**266**	*e*P	**P**	**13 17 00.5**	**-0.8**
	7.0nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**41.84**	**266**	P	**P**	**13 17 01.0**	**-0.3**
	2.0nm,0.3s,mb4.2,baz=90,slow=5.9,SNR=276						
KAKA	**Kakadu**	**45.65**	**275**	*e*P	**P**	**13 17 30.6**	**-0.1**
	6.2nm,0.9s,mb4.1						
FORT	**Forrest**	**45.94**	**249**	*e*P	**P**	**13 17 32.0**	**-0.9**
	11nm,0.7s,mb4.5						
FITZ	**Fitzroy Crossi**	**50.27**	**265**	*e*P	**P**	**13 18 06.2**	**+1.3**
	5.0nm,0.9s,mb3.9						
MBWA	**Marble Bar**	**54.87**	**260**	*e*P	**P**	**13 18 37.3**	**-0.4**
	2.2nm,0.5s,mb3.7						
QSPA	**South Pole Qui**	**66.75**	**180**	*e*P	**P**	**13 19 55.2**	**-0.1**
NVAR	**Mina Array Bea**	**84.77**	**44**	P	**P**	**13 21 34.7**	**+0.1**
	0.4nm,0.7s,mb3.2,baz=232,slow=8.7,SNR=3.4						
NVAR	**Mina Array Bea**	**84.77**	**44**	P	**P**	**13 21 34.7**	**+0.1**
ARCES	**ARCESS Array B**	**131.21**	**348**	PKP	PKPdf	13 28 09.2	+2.0
	0.8nm,0.7s,baz=29,slow=2.8,SNR=5.1						
AKASG	**Malin Array Be**	**144.17**	**327**	PKP	PKPdf	13 28 32.2	+1.3
	0.7nm,0.5s,baz=44,slow=3.9,SNR=4.4						
CLL	**Collm**	**150.14**	**343**	*i* PKPbc	PKPbc	13 28 49.1	+2.6
	comp=Z,5.0nm,0.8s						

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*CSEM **05** 13:19:30.4±0.8, 3845N×2841W, h0km±3km, ML1.3, Error ellipse: s-maj=2.3km s-min=1.6km az=27.0, After PDA*
*PDA **05** 13:19:30.4±0.8, 3845N×2841W, h0km±3km, MD2.8, ML1.3, Error ellipse: s-maj=2.3km s-min=1.6km az=27.0*
SVSA 05 13:19:30.4±0.8**, 3845N**×**2841W, h0**km±3km**, MD2.8, ML1.3, Error ellipse: s-maj=2.3km s-min=1.6km az=27.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBOI	**Pico dos Bois**	**0.03**	**122**	*i* P	Pg	13 19 30.8	-0.2
PBOI				*i* S	Sg	13 19 31.6	+0.3
PBOI							
	223nm,0.2s						
PCND	**Candelaria**	**0.05**	**291**	*i* P	Pg	13 19 31.1	-0.2
PCND				*i* S	Sg	13 19 32.2	+0.3
PCND							
	76nm,0.2s						
PICO	**Pico**	**0.05**	**343**	*i* P	Pg	13 19 31.1	-0.3
PICO				*e*S	Sg	13 19 32.2	+0.2
PICO	**Pico**	**0.05**	**343**	*e*S	Sg	13 19 32.2	+0.2
PTEI	**Pico do Teixo**	**0.06**	**43**	*i* P	Pg	13 19 31.3	-0.2
PTEI				*i* S	Sg	13 19 32.6	+0.3
PTEI							
	102nm,0.1s						
HOR	**Horta**	**0.19**	**293**	*e*S	Sg	13 19 37.0	+0.5
PCED	**Cedros**	**0.29**	**307**	*e*S	Sg	13 19 40.3	+0.6

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*ISCJB **05** 13:23:17.1±0.3, 4408N±001×1993E±003, h9km, Error ellipse: s-maj=3.3km s-min=1.8km az=32.1*
*CSEM **05** 13:23:17.2±0.1, 4409N×1993E, h8km, MD2.8, Error ellipse: s-maj=2.2km s-min=1.3km az=106.0*
*BEO **05** 13:23:17.6±0.3, 4407N×2000E, h9km*
*PDG **05** 13:23:20.4±0.2, 4396N×1981E, h4km*
*NEIC **05** 13:23:20.4, 4396N×1981E, h4km, MD2.8(PDG), After PDG.*
ISC 05 13:23:18.0±0.3**, 4407N**±001×**1994E**±003**, h0**km±3km**, n44,** σ**1ˢ00**/70**, 14C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIVS	**Divcibare**	**0.05**	**57**	*i* Pg	**Pg**	**13 23 19.2**	**+0.3**
DIVS				Sg	**Sg**	**13 23 20.7**	**+1.2**
SJES	**Sjenica**	**0.80**	**180**	Pg	**Pg**	**13 23 32.3**	**-1.1**
SJES				Sg	**Sg**	**13 23 43.4**	**-0.4**
BEO	**Belgrade**	**0.83**	**26**	*i* Pg	**Pg**	**13 23 33.5**	**-0.6**
BEO				Sg	**Sg**	**13 23 44.3**	**-0.5**
PLE	**Pljevlja**	**0.84**	**208**	⇑*i*Pg	**Pg**	**13 23 33.6**	**-0.5**
PLE				*e*Sg	**Sg**	**13 23 44.8**	**-0.2**
SVIS	**Svilajnac**	**0.95**	**76**	⇓*i*Pg	**Pg**	**13 23 34.4**	**-1.9**
SVIS				Sg	**Sg**	**13 23 47.5**	**-1.1**
FGSL	**Fruska Gora**	**1.09**	**355**	Pg	**Pg**	**13 23 37.7**	**-1.2**
FGSL				Sg	**Sg**	**13 23 54.1**	**+1.1**
UPM	**Unac-Piva**	**1.15**	**221**	*e*Pg	**Pg**	**13 23 39.2**	**-0.8**
UPM				*e*Sg	**Sg**	**13 23 54.9**	**+0.1**
IVA	**Berane**	**1.20**	**181**	⇓*i*Pg	**Pg**	**13 23 39.9**	**-1.1**
IVA				*e*Sg	**Sg**	**13 23 57.5**	**+0.9**
IVA	**Berane**	**1.20**	**181**	⇓*i*Pg	**Pg**	**13 23 39.9**	**-1.1**
IVA				*e*Sg	**Sg**	**13 23 57.5**	**+0.9**
NKY	**Niksic**	**1.43**	**209**	⇑*i*Pg	**Pg**	**13 23 44.2**	**-1.3**
NKY				*e*Sg	**Sg**	**13 24 04.5**	**+0.5**
PVY	**Plav**	**1.48**	**179**	⇓*i*Pg	**Pg**	**13 23 45.6**	**-0.7**
PVY				*e*Sg	**Sg**	**13 24 07.7**	**+2.2**
BRY	**Bratogost**	**1.55**	**221**	⇓*i*Pg	**Pn**	**13 23 46.0**	**-0.7**
BRY				*e*Sg	**Sg**	**13 24 08.7**	**+0.9**
BRY	**Bratogost**	**1.55**	**221**	⇓*i*Pg	**Pn**	**13 23 46.0**	**-0.8**
BRY				*e*Sg	**Sg**	**13 24 08.7**	**+0.9**
TTG	**Podgorica**	**1.71**	**197**	⇑*i*Pn	**Pn**	**13 23 49.5**	**+0.5**
TTG				*e*Sn	**Sg**	**13 24 14.0**	**+0.9**
BUM	**Brajici-Budva**	**1.93**	**204**	⇑*i*Pn	**Pn**	**13 23 53.2**	**+1.2**
BUM				*e*Sn	**Sg**	**13 24 19.0**	**-0.9**
HCY	**Herceg Novi**	**1.94**	**213**	⇑*i*Pn	**Pn**	**13 23 52.4**	**+0.3**
HCY				*e*Sn	**Sn**	**13 24 18.9**	**+1.8**
DJES	**Djerdap**	**1.94**	**72**	*i* Pn	**Pn**	**13 23 51.8**	**-0.3**
DJES				Sg	**Sn**	**13 24 17.3**	**+0.1**
BZS	**Buzias**	**1.95**	**37**	⇑*i*P	**Pn**	**13 23 53.5**	**+1.2**
BZS	**Buzias**	**1.95**	**37**	S	**Sg**	**13 24 19.8**	**-0.9**
ULC	**Ulcinj**	**2.17**	**194**	⇑*i*Pn	**Pn**	**13 23 56.7**	**+1.5**
ULC				*e*Sn	**Sb**	**13 24 25.5**	**0.0**
PKSM	**Moragy**	**2.33**	**337**	⇓*i*P	**Pn**	**13 23 58.6**	**+1.1**
PKSM	**Moragy**	**2.33**	**337**	⇓*e*Pn	**Pn**	**13 23 58.4**	**+0.9**
GZR	**Gura Zlata**	**2.42**	**56**	⇑*i*P	**Pn**	**13 23 58.5**	**-0.2**
GZR				S	**Sn**	**13 24 31.3**	**+2.4**
PKS9	**Tamasi**	**2.77**	**336**	⇑*e*P	**Pn**	**13 24 03.2**	**-0.4**
VTS	**Vitosha**	**2.81**	**121**	⇓*i*P	**Pn**	**13 24 01.6**	**-2.5**
DRGR		**3.35**	**35**	⇓*i*P	**Pb**	**13 24 17.9**	**-0.3**
DRGR		**3.35**	**35**	S	**Sg**	**13 25 05.9**	**+0.3**
BUD	**Budapest**	**3.47**	**350**	⇓*e*Pn	**Pn**	**13 24 12.8**	**-0.4**
BUD				*e*SB	**Sg**	**13 25 15.0**	**+5.5**
PKSG		**3.49**	**342**	⇓*e*P	**Pn**	**13 24 12.8**	**-0.7**
CRES	**Cresnjev**	**3.63**	**300**	*e*Sn	**Sg**	**13 25 15.5**	**+0.8**
PENC	**Penc**	**3.75**	**353**	⇑*i*P	**Pn**	**13 24 16.5**	**-0.5**
LEGS	**Legarje**	**3.77**	**301**	*e*Pn	**Pn**	**13 24 17.7**	**+0.3**
PSZ	**Piszkesteto**	**3.85**	**360**	⇓*e*Pn	**Pn**	**13 24 18.5**	**+0.1**
PSZ				*e*SB	**Sg**	**13 25 23.2**	**+1.6**
PSZ	**Piszkesteto**	**3.85**	**360**	*e*Pn	**Pn**	**13 24 17.8**	**-0.6**
PSZ				*e*Sg	**Sg**	**13 25 24.5**	**+2.9**
PSZ	**Piszkesteto**	**3.85**	**360**	*e*Pn	**Pn**	**13 24 17.8**	**-0.6**
VOIR		**3.89**	**68**	⇑*i*P	**Pn**	**13 24 20.2**	**+1.3**
GROS	**Grobnik**	**3.94**	**309**	*i* Pn	**Pn**	**13 24 19.3**	**-0.4**
PERS	**Pernice**	**4.26**	**309**	*i* Pn	**Pn**	**13 24 23.7**	**-0.3**
PERS				*i* Sn	**Sn**	**13 25 13.3**	**-1.0**
ARSA	**Arzberg**	**4.43**	**317**	⇑*i*Pn	**Pn**	**13 24 26.4**	**-0.1**
ARSA				⇑*i*Sn	**Sn**	**13 25 18.4**	**-0.3**
VYHS	**Vyhne**	**4.49**	**351**	*e*PN	**Pn**	**13 24 27.0**	**-0.2**
VYHS				*e*		13 25 16.0	
CONA	**Conrad Observa**	**4.79**	**325**	⇓*i*Pn	**Pn**	**13 24 30.4**	**-1.0**
CONA				⇑*i*Sn	**Sn**	**13 25 26.4**	**-1.1**
CRVS	**Cervenica-Dubn**	**4.94**	**12**	*e*PN	**Pn**	**13 24 32.7**	**-0.8**
CRVS				*e*SG	**Sg**	**13 25 57.1**	**+0.3**
KOLS	**Kolonicke sedl**	**5.12**	**18**	*e*	**Pg**	**13 24 57.8**	**+1.6**
KOLS	**Kolonicke sedl**	**5.12**	**18**	*e*SG	**Sg**	**13 26 05.8**	**+3.2**

IDC 05 13:43:29.1±32.0**, 506N**×**12311E, h0**km**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.6**/20**, mbtmp3.8**/4**, Error ellipse: s-maj=572.2km s-min=133.5km az=138.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.15**	**174**	P	P	13 48 37.3	+0.2
	2.3nm,1.1s,baz=5.0,slow=18,SNR=3.9						
WRA	**Warramunga Arr**	**27.19**	**156**	P	P	13 49 14.7	+0.4
	0.9nm,0.3s,baz=335,slow=9.7,SNR=30						
ASAR	**Alice Springs**	**30.43**	**160**	P	P	13 49 43.5	+0.4
	0.3nm,0.4s,baz=336,slow=7.9,SNR=9.9						
STKA	**Stephens Creek**	**40.74**	**156**	P	P	13 51 11.7	0.0
	1.1nm,0.4s,baz=335,slow=13,SNR=3.2						

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*LDG **05** 13:47:30.9±0.0, 4302N×149W, h10km, Md2.0/2, Error ellipse: s-maj=0.1km s-min=0.1km az=68.0*
*ISCJB **05** 13:47:31.4±0.8, 4308N±005×144W±005, h10km, Error ellipse: s-maj=6.7km s-min=5.7km az=28.5*
*MDD **05** 13:47:31.6±0.6, 43.10N×147W, h14km±5km, mbLg1.1/5, Error ellipse: s-maj=3.1km s-min=1.8km az=106.0, PRXIMO*
*CSEM **05** 13:47:31.8±0.1, 4309N×146W, h10km, ML2.1, Error ellipse: s-maj=1.3km s-min=1.3km az=24.0*
*STR **05** 13:47:31.5±0.1, 43.10N×148W, h2km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 05 13:47:30.8±1.8**, 4311N**±007×**146W**±007**, h18**km±13km**, n16,** σ**0ˢ28**/22**, 3C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELIZ	**Elizondo**	**0.08**	**319**	⇑Pg	**Pg**	**13 47 34.3**	**-0.1**
	2.9nm,0.2s,SNR=18						
ELIZ				Lg		13 47 36.4	
	6.9nm,0.1s,SNR=6.4						
EALK	**Alkurruntz**	**0.12**	**343**	⇑Pg	**Pg**	**13 47 34.9**	**+0.1**
	1.2nm,0.1s,SNR=18						
EALK				Lg		13 47 37.3	
	9.6nm,0.1s,SNR=7.9						
IUSE	**Utxeti**	**0.17**	**202**	⇑Pg	**Pg**	**13 47 35.3**	**-0.1**
	SNR=18						
IUSE				Lg		13 47 38.2	
	13nm,0.1s,SNR=10						
IUSE	**Utxeti**	**0.17**	**202**	Pg	**Pg**	**13 47 35.3**	**-0.1**
	SNR=18						
IUSE				Lg		13 47 38.2	
	13nm,0.1s,SNR=10						
SJPF	**Ste Jean**	**0.17**	**87**	*e*Pg	**Pg**	**13 47 35.4**	**0.0**
SJPF				*e*Sg	**Sg**	**13 47 38.5**	**0.0**
	18nm,0.2s						
SJPF	**Ste Jean**	**0.17**	**87**	*e*Pg	**Pg**	**13 47 35.4**	**0.0**
SJPF				*e*Sg	**Sg**	**13 47 38.5**	**0.0**
	8.8nm,0.2s						
OSSF	**Osses**	**0.21**	**44**	Pg	**Pg**	**13 47 36.0**	**+0.1**
OSSF				Sg	**Sg**	**13 47 39.2**	**-0.2**
OSSF	**Osses**	**0.21**	**44**	Pg	**Pg**	**13 47 36.0**	**+0.1**
OSSF				Lg		13 47 39.2	
IPRE	**Itoiz**	**0.31**	**166**	Pg	**Pg**	**13 47 37.5**	**0.0**
	0.4nm,0.1s,SNR=7.9						
IPRE				Lg		13 47 42.9	
	0.7nm,0.1s,SNR=7.9						
IPRE	**Itoiz**	**0.31**	**166**	Pg	**Pg**	**13 47 37.5**	**-0.1**
	0.4nm,0.1s,SNR=7.9						
LARF	**Larrau**	**0.35**	**101**	Pg	**Pg**	**13 47 38.5**	**+0.2**
LARF				Sg	**Sg**	**13 47 43.7**	**+0.4**
LARF	**Larrau**	**0.35**	**101**	Pg	**Pg**	**13 47 38.5**	**+0.2**
LARF				Lg		13 47 43.7	
ETSF	**Etsaut**	**0.69**	**107**	*e*Pg	**Pg**	**13 47 44.2**	**-0.3**
ETSF				*e*Sg	**Sg**	**13 47 53.3**	**-0.4**
	0.9nm,0.1s						
ETSF	**Etsaut**	**0.69**	**107**	*e*Pg	**Pg**	**13 47 44.2**	**-0.3**
ETSF				*e*Sg	**Sg**	**13 47 53.3**	**-0.4**
	0.4nm,0.1s						
EBIE	**Bielsa**	**1.25**	**109**	Pg	**Pg**	**13 47 54.7**	**-0.3**
	0.4nm,0.1s,SNR=7.9						
EBIE				Lg		13 48 11.8	
	0.4nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**1.25**	**109**	Pg	**Pg**	**13 47 56.0**	**+1.0**
	0.4nm,0.1s,SNR=7.9						

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*KRSC **05** 13:47:39, 5083N×15727E, h119km, ML3.5*
*ISCJB **05** 13:47:40.2±1.2, 508N±0.1×1572E±02, h116km±11km, Error ellipse: s-maj=24.5km s-min=8.5km az=94.8*
ISC 05 13:47:41.2±1.1**, 508N**±01×**1572E**±02**, h105**km±16km**, n20,** σ**0ˢ89**/30**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.05**	**275**	*e*P	**Pn**	**13 48 02.1**	**-0.4**
ALID				*i* S	**Sn**	**13 48 18.3**	**-0.2**
MIPR	**Malaya Ipel’ka**	**1.50**	**350**	*i* P	**Pn**	**13 48 07.5**	**-0.3**
MIPR				*i* S	**Sn**	**13 48 27.8**	**-0.1**
RUS	**Russkaya**	**1.83**	**26**	*e*P	**Pn**	**13 48 12.1**	**+0.3**
RUS				*i* S	**Sn**	**13 48 35.6**	**+0.4**
GRL	**Gorelyy**	**1.84**	**17**	*e*P	**Pn**	**13 48 13.1**	**+1.2**
GRL				*i* S	**Sn**	**13 48 37.4**	**+2.1**
PET	**Petropavlovsk**	**2.41**	**21**	*e*P	**Pn**	**13 48 19.3**	**+0.1**
PET				*i* S	**Sn**	**13 48 48.1**	**-0.2**
AVH	**Avacha**	**2.65**	**20**	*e*P	**Pn**	**13 48 23.3**	**+0.9**
AVH				*i* S	**Sn**	**13 48 55.2**	**+1.1**
NLC	**Nalytchevo**	**2.72**	**28**	*e*P	**Pn**	**13 48 22.6**	**-0.8**
NLC				*i* S	**Sn**	**13 48 53.4**	**-2.4**
SPN	**Mys Shipunski**	**2.89**	**36**	*e*P	**Pn**	**13 48 25.6**	**0.0**
SPN				*i* S	**Sn**	**13 48 58.9**	**-0.9**
GNL	**Ganaly**	**2.94**	**9**	*e*P	**Pn**	**13 48 26.0**	**-0.2**
GNL				*i* S	**Sn**	**13 48 59.6**	**-1.3**
MKZ	**Mys Kozlova**	**4.67**	**34**	*e*P	**Pn**	**13 48 48.2**	**-1.2**
MKZ				*i* S	**Sn**	**13 49 38.1**	**-4.4**
KMNR	**Kamenistaya**	**5.29**	**19**	*e*P	**Pn**	**13 48 59.9**	**+2.0**
KPT	**Kopyto**	**5.49**	**18**	*e*P	**Pn**	**13 49 00.5**	**0.0**
KOZ	**Kozyrevsk**	**5.51**	**16**	*e*P	**Pn**	**13 49 00.0**	**-0.8**
ZLN	**Zelenaya**	**5.66**	**21**	*e*P	**Pn**	**13 49 03.2**	**+0.4**
SRDR	**Sredinnyy**	**5.73**	**14**	*e*P	**Pn**	**13 49 03.7**	**-0.1**
KLY	**Klyuchi**	**5.90**	**19**	*e*P	**Pn**	**13 49 06.0**	**-0.1**
BDR	**Baidarnaya**	**6.25**	**21**	*e*P	**Pn**	**13 49 10.7**	**-0.2**
SRKR	**Sorokina**	**6.32**	**20**	*e*P	**Pn**	**13 49 12.9**	**+1.0**
SMKR	**Semkarok**	**6.33**	**22**	*e*P	**Pn**	**13 49 11.9**	**0.0**
KBTR	**Krutoberegovo**	**6.37**	**30**	*e*P	**Pn**	**13 49 12.7**	**+0.1**

MAN 05 13:56:50.0, 1724N×11994E, h6km, mb3.1, ML4.5, MS1.7, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.84**	**61**	eP	Pg	13 57 06.2	0.0
ABRA				eS	Sg	13 57 18.6	+1.5
BOLP	**Bolinao**	**0.86**	**182**	eP	Pg	13 57 06.5	-0.1
BCPH	**Baguio City Da**	**1.06**	**144**	⇑iP	Pg	13 57 09.7	-0.6
BCPH				i S	Sg	13 57 22.9	-1.1
APYP	**Conner**	**1.39**	**64**	eP	Pn	13 57 14.3	-1.6
SCZP	**Santa Cruz**	**1.46**	**181**	eP	Pn	13 57 15.5	-1.4
CAUP	**Cauayan**	**1.83**	**99**	eP	Pn	13 57 23.8	+1.9
CVP	**Callao Caves**	**1.85**	**75**	eP	Pn	13 57 22.0	-0.4
CVP				eS	Sn	13 57 49.0	+2.9
BALP	**Baler**	**2.17**	**133**	eP	Pn	13 57 26.9	+0.2
SGCP	**Mt. Cagua**	**2.24**	**63**	eP	Pn	13 57 28.5	+0.8
PALP	**Palanan**	**2.38**	**94**	⇓iP	Pn	13 57 30.4	+0.8
PALP	**Palanan**	**2.38**	**94**	eP	Pn	13 57 30.1	+0.5
POLP	**Polilio Island**	**3.16**	**142**	eP	Pn	13 57 38.7	-1.6
LUBP	**Lubang**	**3.50**	**175**	eP	Pn	13 57 47.5	+2.5

*ISCJB **05** 13:59:31.5±0.7, 4309N±004×073E±003, h0km, Error ellipse: s-maj=6.5km s-min=3.6km az=170.5*
*STR **05** 13:59:31.7±0.6, 4307N×074E, h5km±1km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*MDD **05** 13:59:32.9±0.5, 4305N×074E, h0km, mbLg1.2/5, Error ellipse: s-maj=5.0km s-min=2.8km az=5.0, PRXIMO*
*LDG **05** 13:59:33.0±0.3, 4313N×067E, h2km, Md2.2/2, Ml2.1/3, Error ellipse: s-maj=55.2km s-min=4.8km az=163.0*
ISC 05 13:59:31.9±0.9**, 4304N**±006×**072E**±004**, h16**km±11km**, n13,** σ**0.72**/18**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MELF	**Melles**	**0.17**	**169**	Pg	**Pg**	**13 59 35.8**	**-0.3**
MELF				Sg	**Sg**	**13 59 39.3**	**+0.3**
EPF	**Esparros**	**0.28**	**269**	ePg	**Pg**	**13 59 37.8**	**-0.1**
EPF				eSg	**Sg**	**13 59 42.6**	**+0.6**
	41nm,0.3s						
EPF	**Esparros**	**0.28**	**269**	Pg	**Pg**	**13 59 37.8**	**-0.1**
EPF				Lg		13 59 42.6	
	20nm,0.3s						
MLS	**Moulis**	**0.29**	**106**	Pg	**Pg**	**13 59 37.3**	**-0.8**
MLS				Sg	**Sg**	**13 59 42.1**	**-0.2**
SALF	**Salau**	**0.44**	**128**	Pg	**Pg**	**13 59 40.7**	**-0.1**
SALF				Sg	**Sg**	**13 59 46.5**	**-0.3**
EBIE	**Bielsa**	**0.55**	**231**	Pg	**Pg**	**13 59 43.5**	**+0.7**
	0.9nm,0.3s,SNR=7.4						
EBIE				Lg		13 59 51.4	
	1.9nm,0.3s,SNR=8.8						
ETSF	**Etsaut**	**0.95**	**262**	ePg	**Pg**	**13 59 51.1**	**+0.8**
ETSF				eSg	**Sg**	**14 00 01.0**	**-1.7**
	2.5nm,0.2s						
ETSF	**Etsaut**	**0.95**	**262**	Pg	**Pg**	**13 59 51.1**	**+0.8**
ETSF				Lg		14 00 01.0	
	1.2nm,0.2s						
MTLF	**Montolieu**	**1.14**	**74**	ePg	**Pg**	**13 59 54.3**	**+0.4**
MTLF				eSg	**Sg**	**14 00 10.0**	**+1.2**
	9.0nm,0.3s						
MTLF	**Montolieu**	**1.14**	**74**	Pg	**Pg**	**13 59 54.3**	**+0.4**
MTLF				Lg		14 00 10.0	
	4.5nm,0.3s						
EPOB	**Poblet**	**1.70**	**171**	Pg	**Pg**	**14 00 05.0**	**+0.4**
	0.6nm,0.2s,SNR=7.9						
EPOB				Lg		14 00 27.6	
	0.9nm,0.2s,SNR=7.9						
LASF	**Ste Croix**	**2.51**	**64**	eSg	**Sg**	**14 00 51.6**	**-0.9**
	1.8nm,0.3s						
LASF	**Ste Croix**	**2.51**	**64**	Lg		14 00 51.6	
	0.9nm,0.3s						

*CSEM **05** 14:03:38.9, 3311S×6896W, h2km, mb6.1*
*MOS **05** 14:03:41.0±0.9, 3300S×6878W, h10km, mb6.0/46, MS5.2/31, Error ellipse: s-maj=11.1km s-min=6.6km az=94.9*
*ISCJB **05** 14:03:42.6±0.1, 3309S±002×6868W±002, h22km, mb5.7/154, MS5.2/134, Error ellipse: s-maj=3.7km s-min=2.6km az=127.4*
*HRVD **05** 14:03:43.8±0.1, 3320S×6886W, h32km, MW5.6/93, Centroid moment Tensor Solution. LP body waves: s76,c131; Mantle waves: s93,c204; Half duration: 1.5 Moment tensor: Scale 10^{17}Nm; M_{rr}1.74±.04; $M_{\theta\theta}$0.73±.03; $M_{\phi\phi}$-2.47±.04; $M_{r\theta}$0.50±.05; $M_{\theta\phi}$0.90±.03; $M_{\phi r}$1.34±.06; Best double couple: $M_0$2.73300×10^{17} NP1:ϕ_s137.00000°, δ39.00000°, λ44.00000°. NP2:ϕ_s10.00000°, δ64.00000°, λ120.00000°. Principal axes: T 2.4600, Plg59.0000°, Azm323.0000°; N 0.5480, Plg27.0000°, Azm176.0000°; P -3.0050, Plg14.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **05** 14:03:44.1±0.4, 3311S×6872W, h23km±2km, mb5.3/17, mb1 5.3/20, mb1mx5.3/20, mbtmp5.4/20, ML5.6/3, MS5.1/20, Ms1 5.1/20, ms1mx5.0/22 Error ellipse: s-maj=15.7km s-min=10.8km az=87.0*
*NEIC **05** 14:03:44.2±0.1, 3313S×6872W, h25km, mb5.8/149, ME5.5, MS5.2/116, MW5.5, ML5.3(GUC), Error ellipse: s-maj=3.0km s-min=2.7km az=144.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M_{rr}1.12; $M_{\theta\theta}$0.78; $M_{\phi\phi}$-1.90; $M_{r\theta}$0.88; $M_{\theta\phi}$1.09; $M_{\phi r}$1.04; Best double couple: $M_0$2.40000×10^{17} NP1:ϕ_s16.00000°, δ69.00000°, λ136.00000°. NP2:ϕ_s125.00000°, δ49.00000°, λ28.00000°. Principal axes: T 2.3700, Plg45.0000°, Azm332.0000°; N 0.0600, Plg42.0000°, Azm176.0000°; P -2.4300, Plg12.0000°, Azm74.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s305.00000°, δ40.00000°, λ90.00000°. NP2:ϕ_s125.00000°, δ50.00000°, λ90.00000°. Principal axes: T Plg85.0000°, Azm35.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm215.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Minor damage to buildings in the epicentral area. Felt [V] at Mendoza; [IV] at San Juan and San Luis; [III] at Cordoba and La Rioja. Also felt at San Martin. Felt [III] at Los Andes and San Felipe; [II] at Santiago, Valparaiso and Vina del Mar, Chile.
*GUC **05** 14:03:44.0±0.9, 3313S×6885W, h8km±7km, ML5.3*
*BJI **05** 14:03:44.7, 3310S×6870W, h22km, mB5.3, Ms5.4, Msz5.3*
ISC 05 14:03:44.3±0.1**, 3312S**±002×**6873W**±002**, h23**km**, h23**km±.2km**:pP-P, n886,** σ**0.79**/588**, mb5.7**/154**, MS5.2**/134**, 229C-99D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDZ	**Mendoza**	**0.26**	**337**	⇓iP	**Pb**	**14 03 49.0**	**-1.6**
MDZ				S	**Sb**	**14 03 57.0**	**+2.2**
FCH	**Farellones**	**1.32**	**261**	eP	**Pn**	**14 04 05.5**	**-1.8**
FCH				eS	**Sn**	**14 04 22.3**	**-1.9**
FCH				AML	AML	14 04 25.4	
	comp=N,56μm,0.5s						
CLCH	**Cerro Calan**	**1.54**	**259**	eP	**Pn**	**14 04 09.3**	**-1.0**
CLCH				i S	**Sn**	**14 04 29.3**	**-0.2**
CLCH				AML	AML	14 04 32.8	
	comp=N,97μm,0.7s						
CLCH				AML	AML	14 04 33.3	
	comp=N,114μm,0.6s						
DSCH	**Colegio Aleman**	**1.56**	**259**	⇓iP	**Pn**	**14 04 09.4**	**-1.2**
DSCH				i S	**Sn**	**14 04 29.5**	**-0.7**
DSCH				AML	AML	14 04 37.2	
	comp=E,9μm,0.6s						
DSCH	**Colegio Aleman**	**1.56**	**259**	⇓iP	**Pn**	**14 04 09.4**	**-1.2**
DSCH				i S	**Sn**	**14 04 29.5**	**-0.7**
CFAA	**Coronel Fontan**	**1.57**	**16**	Pn	**Pn**	**14 04 12.9**	**+2.2**
	comp=E,161nm,0.3s,baz=191,slow=15,SNR=5482						
CFAA				Lg		14 04 35.2	
	comp=E,3μm,0.3s,baz=117,slow=14,SNR=82						
CFAA				LR	LR	14 04 42.4	
	comp=E,2μm,18.3s,baz=207,slow=38						
PCH	**Pirque**	**1.57**	**251**	⇑iP	**Pn**	**14 04 10.1**	**-0.6**
JACH	**Jahuel**	**1.63**	**285**	⇑iP	**Pn**	**14 04 11.0**	**-0.5**
PEL	**Peldehue**	**1.64**	**269**	⇑iP	**Pn**	**14 04 10.9**	**-0.7**
PEL				i S	**Sn**	**14 04 31.6**	**-0.4**
PEL				AML	AML	14 04 37.6	
	comp=E,108μm,0.8s						
PEL	**Peldehue**	**1.64**	**269**	⇑iP	**Pn**	**14 04 10.9**	**-0.7**
PEL				i S	**Sn**	**14 04 31.6**	**-0.4**
SAN	**Santiago**	**1.65**	**258**	⇓iP	**Pn**	**14 04 11.8**	**-0.1**
ANTU	**Antumapu**	**1.65**	**254**	⇑iP	**Pn**	**14 04 11.4**	**-0.5**
ANTU				i S	**Sn**	**14 04 32.0**	**-0.3**
ANTU				AML	AML	14 04 37.5	
	comp=E,60μm,0.7s						
ANTU	**Antumapu**	**1.65**	**254**	⇑iP	**Pn**	**14 04 11.4**	**-0.5**
ANTU				i S	**Sn**	**14 04 32.0**	**-0.3**
RCDM	**Rinconada Maip**	**1.78**	**258**	eP	**Pn**	**14 04 13.6**	**+0.1**
RCDM				i S	**Sn**	**14 04 35.5**	**+0.1**
RCDM				AML	AML	14 04 41.2	
	comp=N,45μm,0.8s						
RCDM	**Rinconada Maip**	**1.78**	**258**	eP	**Pn**	**14 04 13.6**	**+0.1**
RCDM				i S	**Sn**	**14 04 35.5**	**+0.1**
CHCH	**Chadas Angostu**	**1.80**	**243**	⇑iP	**Pn**	**14 04 13.9**	**+0.1**
CICH	**Cipreses**	**1.85**	**229**	⇑iP	**Pn**	**14 04 15.3**	**+0.8**
CACH	**El Canelo**	**1.85**	**237**	⇓iP	**Pn**	**14 04 15.2**	**+0.7**
TACH	**Talagante**	**1.92**	**253**	i P	**Pn**	**14 04 15.8**	**+0.3**
ROCH	**El Roble**	**1.92**	**274**	⇑iP	**Pn**	**14 04 16.2**	**+0.7**
LCCH	**Las Cruces**	**2.40**	**261**	⇑iP	**Pn**	**14 04 22.3**	**+0.1**
SFDO	**San Fernando**	**2.41**	**231**	⇑iP	**Pn**	**14 04 22.9**	**+0.6**
IHA	**Instituto Hidr**	**2.45**	**272**	eP	**Pn**	**14 04 22.9**	**+0.2**
CHNG	**Los Chungos**	**2.65**	**297**	eP	**Pn**	**14 04 26.6**	**+1.0**
CHNG				eS	**Sn**	**14 04 59.5**	**+2.6**
CHNG				AML	AML	14 05 05.9	
	comp=N,61μm,0.7s						
NICH	**Los Niches**	**2.79**	**227**	⇓iP	**Pn**	**14 04 28.6**	**+1.1**
TALC	**Talca**	**3.31**	**226**	⇓iP	**Pn**	**14 04 35.9**	**+1.4**
TALC				AML	AML	14 05 30.9	
	comp=E,31μm,0.5s						
TLL	**Tololo Astrono**	**3.44**	**328**	⇑iP	**Pn**	**14 04 39.0**	**+2.6**
LSCH	**La Serena**	**3.86**	**326**	⇓iP	**Pn**	**14 04 43.9**	**+1.7**
CCHI	**Chillan**	**4.43**	**217**	⇑iP	**Pn**	**14 04 51.2**	**+1.2**
LCO	**Las Campanas**	**4.43**	**337**	⇑iP	**Pn**	**14 04 51.8**	**+1.7**
VACH	**Vallenar**	**4.86**	**338**	eP	**Pn**	**14 04 57.5**	**+1.6**
VACH				i S	**Sn**	**14 05 54.4**	**+3.0**
PLCA	**Paso Flores**	**7.73**	**190**	Pn	**Pn**	**14 05 37.7**	**+2.3**
	comp=E,2.7nm,0.3s,baz=3.9,slow=14,SNR=70						
PLCA				Lg		14 07 44.8	
	comp=E,26nm,0.3s,baz=333,slow=14,SNR=3.7						
PLCA				LR	LR	14 08 47.7	
	comp=E,28μm,18.2s,baz=9.3,slow=39						
PLCA	**Paso Flores**	**7.73**	**190**	ePn	**Pn**	**14 05 37.6**	**+2.2**
LVC	**Limon Verde**	**10.47**	**359**	Pn	**Pn**	**14 06 12.3**	**-0.6**
	comp=E,9.2nm,0.3s,baz=198,slow=8.3,SNR=72						
LVC				Lg		14 09 11.4	
	comp=E,16nm,0.3s,baz=297,slow=21,SNR=3.3						
LVC				LR	LR	14 10 32.6	
	comp=E,31μm,19.6s,baz=295,slow=39						
LVC	**Limon Verde**	**10.47**	**359**	ePn	**Pn**	**14 06 11.9**	**-1.0**
CPUP	**Villa Florida**	**11.99**	**59**	Pn	**Pn**	**14 06 32.5**	**-1.3**
	comp=E,17nm,0.3s,baz=217,slow=12,SNR=89						
CPUP				Lg		14 10 10.2	
	comp=E,30nm,0.3s,baz=316,slow=10,SNR=3.6						
CPUP				LR	LR	14 11 24.1	
	comp=E,7μm,19.3s,baz=223,slow=38						
CPUP	**Villa Florida**	**11.99**	**59**	eP	**Pn**	**14 06 33.3**	**-0.5**
CPUP	**Villa Florida**	**11.99**	**59**	ePn	**Pn**	**14 06 33.0**	**-0.8**
LPAZ	**La Paz**	**16.77**	**2**	eP	**Pn**	**14 07 39.0**	**+1.4**
LPAZ	**La Paz**	**16.77**	**2**	ePn	**Pn**	**14 07 38.2**	**+0.6**
ARE	**Arequipa**	**16.78**	**351**	⇑iP	**Pn**	**14 07 37.9**	**+0.2**
SIV	**San Ignacio**	**18.41**	**24**	P	**Pn**	**14 07 56.6**	**-1.3**
	comp=E,2.3nm,0.3s,baz=224,slow=13,SNR=89						
EFI	**East Falkland**	**20.10**	**160**	i P	**P**	**14 08 16.6**	**+0.3**
EFI	**East Falkland**	**20.10**	**160**	eP	**P**	**14 08 15.3**	**-1.0**
	comp=E,361nm,0.9s						
EFI				epP		14 08 21.8	
NNA	**Nana**	**22.31**	**339**	P	**P**	**14 08 39.3**	**-0.8**
	comp=E,980nm,1.5s,mb6.0,SNR=21						
NNA	**Nana**	**22.31**	**339**	P	**P**	**14 08 39.5**	**-0.6**
	comp=E,108nm,0.8s,mb5.3,baz=172,slow=13,SNR=31						
NNA				LR	LR	14 16 01.3	
	comp=E,4μm,19.9s,MS4.9,baz=148,slow=33						
NNA	**Nana**	**22.31**	**339**	⇑iP	**P**	**14 08 38.7**	**-1.4**
	comp=E,345nm,1.3s,mb5.6						
SAML	**Samuel**	**24.60**	**13**	⇑iP	**P**	**14 09 02.2**	**-0.4**
	comp=E,309nm,1.0s,mb5.8						
CAM4	**Nova Friburgo**	**25.45**	**72**	⇓iP	**P**	**14 09 11.9**	**+1.5**
CAM4				i		14 09 14.5	
CAM4				i	pP	14 09 18.7	+1.4
CAM4				i		14 09 22.4	
CAM4				i		14 09 25.0	
CAM4				i		14 09 37.3	
CAM4				i		14 09 42.7	
CAM4				i		14 09 59.2	
CAM4				i		14 17 07.3	
CAM4				i		14 17 19.7	
CAM4				i		14 17 41.7	
BDFB	**Brasilia**	**25.59**	**52**	P	**P**	**14 09 11.3**	**-0.2**
	comp=E,47nm,0.8s,mb5.1,baz=228,slow=7.4,SNR=36						
BDFB				S	**S**	**14 13 42.6**	**+4.4**
	comp=E,26nm,0.9s,baz=346,slow=12,SNR=1.7						
BDFB				LR	LR	14 20 18.1	
	comp=E,8μm,20.3s,MS5.3,baz=233,slow=39						
BDFB	**Brasilia**	**25.59**	**52**	P	**P**	**14 09 11.3**	**-0.3**
BDFB				S	**S**	**14 13 42.6**	**+4.5**
BDFB				pmax	pmax		
	comp=Z,47nm,0.8s						
BDFB				smax			
	comp=N,26nm,0.9s						
BDFB				MLR	MLR		
	comp=Z,8μm,20.3s						
BDFB	**Brasilia**	**25.59**	**52**	⇑eP	**P**	**14 09 10.8**	**-0.7**
BDFB				epP	pP	14 09 18.6	+0.1
BDFB				LR	LR		
	comp=Z,16μm,19.0s,MS5.6						
BAO	**Brasilia Array**	**25.61**	**52**	P	**P**	**14 09 12.0**	**+0.2**
ATAH	**Atahualpa**	**27.50**	**339**	P	**P**	**14 09 29.6**	**+0.8**
	comp=Z,42nm,0.8s,mb5.0,baz=171,slow=8.4,SNR=25						
ATAH				LR	LR	14 19 35.3	
	comp=Z,2μm,18.1s,MS4.8,baz=288,slow=35						
HOPE	**Hope Point**	**31.05**	**143**	PFAKE		14 10 10.0	+10
HOPE				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
PMSA	**Palmer Station**	**31.81**	**176**	P	**P**	**14 10 07.1**	**+0.1**
	baz=2.3,slow=13						
PMSA	**Palmer Station**	**31.81**	**176**	⇑eP	**P**	**14 10 06.1**	**-1.0**
	comp=Z,133nm,1.4s,mb5.6						
PMSA				epP	pP	14 10 13.4	-0.6
PMSA				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
OTAV	**Otavalo**	**34.42**	**343**	PFAKE		14 10 40.0	+10
OTAV				LR	LR		
	comp=Z,2μm,21.0s,MS4.9						
RPN	**Rapa Nui**	**35.46**	**269**	LR	LR	14 20 29.6	
	comp=Z,1μm,21.1s,MS4.6,baz=105,slow=28						
ROSC	**El Rosal**	**38.14**	**351**	P	**P**	**14 11 03.3**	**+1.6**
	comp=Z,74nm,0.8s,mb5.5,baz=131,slow=2.8,SNR=33						
ROSC	**El Rosal**	**38.14**	**351**	⇑iP	**P**	**14 11 03.2**	**+1.5**
RCBR	**Riachuelo**	**40.85**	**56**	eP	**P**	**14 11 24.4**	**+0.2**
	comp=Z,132nm,1.3s,mb5.4						
RCBR				epP	pP	14 11 32.1	+0.8
RCBR				LR	LR		
	comp=Z,7μm,21.0s,MS5.5						
SDV	**Santo Domingo**	**41.81**	**357**	LR	LR	14 30 28.7	
	comp=Z,3μm,20.3s,MS5.2,baz=193,slow=38						
SDV	**Santo Domingo**	**41.81**	**357**	PFAKE		14 11 40.0	+7.9
SDV				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
PCRV	**Puerto La Cruz**	**43.23**	**6**	LR	LR	14 32 49.1	
	comp=Z,6μm,19.5s,MS5.5,baz=167,slow=40						
TPP	**Pointe-a-Pierr**	**43.75**	**10**	eP	**P**	**14 11 49.7**	**+1.9**
TBH	**Brigand Hill**	**43.97**	**11**	eP	**P**	**14 11 50.2**	**+0.6**
TBH	**Brigand Hill**	**43.97**	**11**	eP	**P**	**14 11 50.8**	**+1.2**
TPR	**Prospect**	**44.71**	**11**	eP	**P**	**14 11 56.0**	**+0.5**
TPR	**Prospect**	**44.71**	**11**	eP	**P**	**14 11 56.1**	**+0.6**
GRW	**Mount Saint Ca**	**45.53**	**10**	eP	**P**	**14 12 01.8**	**-0.2**
GRW	**Mount Saint Ca**	**45.53**	**10**	eP	**P**	**14 12 01.9**	**-0.1**
SVB	**Belmont**	**46.68**	**10**	eP	**P**	**14 12 11.3**	**+0.3**
SSV	**Crater Summit**	**46.75**	**10**	eP	**P**	**14 12 11.5**	**-0.1**
SSV	**Crater Summit**	**46.75**	**10**	eP	**P**	**14 12 11.6**	**0.0**
BIM	**Bigot**	**47.93**	**10**	eP	**P**	**14 12 19.9**	**-1.0**
MVM	**Montagne Vaucl**	**48.00**	**10**	eP	**P**	**14 12 20.1**	**-1.2**
FDF	**Fort de France**	**48.13**	**10**	eP	**P**	**14 12 21.1**	**-1.3**
VNA1	**Neumayer--Stat**	**49.41**	**158**	e	**P**	**14 12 32.9**	**+0.7**
VNA1				e		14 12 33.5	
VNA1				e	pP	14 12 41.1	+1.7
VNA1				e		14 12 49.5	
VNA1				e		14 12 52.0	
VNA1				e		14 14 00.8	
VNA1				e		14 14 03.2	
VNA1				e		14 14 17.4	
VNA1				e		14 14 20.4	
VNA1				e		14 14 24.0	
VNA1				e		14 14 59.0	
VNA1				e		14 15 40.8	
SJG	**San Juan**	**51.01**	**3**	LR	LR	14 37 04.2	
	comp=Z,2μm,21.4s,MS5.1,baz=270,slow=39						
SJG	**San Juan**	**51.01**	**3**	eP	**P**	**14 12 42.5**	**-1.8**
SJG	**San Juan**	**51.01**	**3**	⇑iP	**P**	**14 12 42.2**	**-2.0**
	comp=Z,394nm,1.0s,mb6.3						
SJG				epP	pP	14 12 49.9	-1.7
SJG				LR	LR		
	comp=Z,2μm,21.0s,MS5.0						
SNAA	**Sanae**	**51.36**	**158**	P	**P**	**14 12 46.0**	**-0.9**
	comp=Z,20nm,0.9s,mb5.0,baz=284,slow=6.9,SNR=80						
SNAA				pP	pP	14 12 54.2	0.0
	comp=Z,149nm,1.2s,baz=280,slow=8.4,SNR=49						
SNAA	**Sanae**	**51.36**	**158**	c iP	**P**	**14 12 46.8**	**-0.1**
SNAA	**Sanae**	**51.36**	**158**	⇑eP	**P**	**14 12 46.0**	**-1.0**
	comp=Z,716nm,1.3s,mb6.4						
SNAA				epP	pP	14 12 54.2	0.0
SNAA				e		14 13 02.2	
GWJ	**Greenwich**	**51.48**	**350**	⇓iP	**P**	**14 12 48.0**	**+0.2**
CMJ	**Castle Mountai**	**51.49**	**351**	⇓iP	**P**	**14 12 48.5**	**+0.6**
STH	**Stony Hill**	**51.49**	**350**	⇓iP	**P**	**14 12 48.0**	**+0.1**
CVJ	**Coleyville**	**51.75**	**349**	⇓iP	**P**	**14 12 50.1**	**+0.3**
BBJ	**Bamboo Saint A**	**51.86**	**350**	⇓iP	**P**	**14 12 50.8**	**+0.2**
HLGC	**Holguin**	**54.16**	**352**	eP	**P**	**14 13 08.3**	**+0.7**
HUIG	**Huatulco**	**55.21**	**327**	i P	**P**	**14 13 15.8**	**+0.6**
MAIT	**Maitri**	**56.00**	**157**	eP	**P**	**14 13 23.2**	**+2.3**
ASCN	**Ascension**	**56.03**	**76**	PFAKE		14 13 30.0	+8.9
ASCN				LR	LR		
	comp=Z,3μm,21.0s,MS5.3						
NVL	**N'lazarevskaya**	**56.03**	**157**	c iP	**P**	**14 13 20.6**	**-0.5**
NVL				i		14 14 19.4	
NVL				i S	**S**	**14 21 07.8**	**-0.4**
NVL				eSS	SS	14 25 02.6	+8.2
NVL				eSSS		14 26 57.5	
NVL				pmax	pmax		
	comp=Z,247nm,1.4s,mb6.0						
VHO	**Vista Hermosa**	**56.63**	**327**	i P	**P**	**14 13 26.7**	**+1.3**
OXX	**Oaxaca**	**56.64**	**327**	i P	**P**	**14 13 27.5**	**+2.0**
QSPA	**South Pole Qui**	**57.11**	**180**	eP	**P**	**14 13 28.8**	**0.0**
	comp=Z,190nm,1.0s,mb6.1						
ACX	**Acapulco**	**57.96**	**324**	eP	**P**	**14 13 35.0**	**+0.2**
RKT	**Rikitea**	**58.43**	**262**	eS	**S**	**14 21 38.6**	**-1.2**
	comp=Z,1μm,33.5s						
RKT				eSS	SS	14 25 32.5	+0.4
	comp=Z,541nm,33.5s						
RKT				eLQ		14 28 23.0	
	comp=Z,1μm,29.5s						
RKT				eLR	LR	14 30 52.3	
	comp=Z,2μm,24.8s,baz=118						
PPM	**Popocatepetl**	**59.24**	**327**	i P	**P**	**14 13 45.7**	**+2.0**
DWPF	**Disney**	**62.08**	**347**	⇑iP	**P**	**14 14 02.4**	**-0.7**
	comp=Z,103nm,0.9s,mb6.0						
DWPF				epP	pP	14 14 09.1	-1.4
DWPF				LR	LR		
	comp=Z,935nm,22.0s,MS4.9						
SFJM	**Santa Fe**	**62.57**	**323**	i P	**P**	**14 14 07.5**	**+1.1**
CJM	**Chamela**	**62.78**	**321**	i P	**P**	**14 14 08.2**	**+0.5**
ZAIG	**Zacatecas**	**64.27**	**325**	i P	**P**	**14 14 18.6**	**+1.0**
SBA	**Scott Base**	**64.48**	**191**	eP	**P**	**14 14 19.8**	**+0.8**
SBA	**Scott Base**	**64.48**	**191**	⇑eP	**P**	**14 14 19.4**	**+0.5**
	comp=Z,37nm,1.0s,mb5.4						
SBA				epP	pP	14 14 26.2	-0.1
SBA				LR	LR		
	comp=Z,681nm,21.0s,MS4.8						
BBSR	**BB Station**	**65.25**	**4**	⇑iP	**P**	**14 14 23.3**	**-0.7**
	comp=Z,60nm,1.0s,mb5.6						
BBSR				epP	pP	14 14 29.9	-1.5
BBSR				LR	LR		
	comp=Z,770nm,21.0s,MS4.9						
VNDA	**Vanda**	**65.48**	**191**	P	**P**	**14 14 25.9**	**+0.5**
	comp=Z,20nm,0.9s,mb5.1,baz=137,slow=5.7,SNR=76						
VNDA				pP	pP	14 14 33.0	+0.1
	comp=Z,22nm,0.9s,baz=132,slow=6.7,SNR=21						
VNDA				LR	LR	14 40 16.9	
	comp=Z,1μm,19.2s,MS5.0,baz=138,slow=34						
VNDA	**Vanda**	**65.48**	**191**	P	**P**	**14 14 26.0**	**+0.5**
VNDA				*PP	pP	14 14 33.0	+0.1
VNDA				pmax	pmax		
	comp=Z,200nm,0.9s						
VNDA				pmax	pmax		
	comp=Z,220nm,0.9s						
VNDA	**Vanda**	**65.48**	**191**	⇑eP	**P**	**14 14 25.6**	**+0.1**
	comp=Z,28nm,0.9s,mb5.3						
VNDA				epP	pP	14 14 32.8	-0.2
VNDA				LR	LR		
	comp=Z,952nm,20.0s,MS5.0						
SYO	**Syowa Base**	**65.65**	**158**	⇓iP	**P**	**14 14 25.2**	**-1.4**
SYO	**Syowa Base**	**65.65**	**158**	⇓ipP	pP	14 14 33.6	-0.4
KVTX	**Kingsville**	**66.39**	**332**	⇑iP	**P**	**14 14 32.4**	**+1.1**
	comp=Z,290nm,1.0s,mb6.3						
HKT	**Hockley**	**67.78**	**335**	⇑iP	**P**	**14 14 39.8**	**-0.3**
HKT				e*PP	pP	14 14 46.5	-1.1
HKT				pmax	pmax		
	comp=Z,129nm,1.6s,mb5.7						
HKT				MLR	MLR		
	comp=Z,627nm,19.0s,MS4.9						
HKT	**Hockley**	**67.78**	**335**	⇑iP	**P**	**14 14 39.8**	**-0.4**
	comp=Z,129nm,1.6s,mb5.7						
HKT				epP	pP	14 14 46.5	-1.1
HKT				LR	LR		
	comp=Z,627nm,19.0s,MS4.9						
CNNC	**Cliffs of the**	**68.55**	**352**	⇑iP	**P**	**14 14 44.3**	**-0.6**
	comp=Z,386nm,0.9s,mb6.3						
CNNC				epP	pP	14 14 51.7	-0.7
NATX	**Nacogdoches**	**69.02**	**336**	⇑iP	**P**	**14 14 48.1**	**+0.2**
	comp=Z,207nm,0.9s,mb6.1						
NATX				epP	pP	14 14 54.5	-0.9
NATX				LR	LR		
	comp=Z,610nm,22.0s,MS4.8						
MYNC	**Murphy**	**69.36**	**347**	eP	**P**	**14 14 49.3**	**-0.7**
TAOE	**Nuku Hiva Isla**	**69.67**	**273**	eS	S	14 23 57.5	-1.6
	comp=Z,2μm,29.0s						
TAOE				eLR	LR	14 35 59.4	
	comp=Z,6μm,22.7s						
JCT	**Junction City**	**69.76**	**332**	eP	**P**	**14 14 52.4**	**-0.1**
JCT	**Junction City**	**69.76**	**332**	⇑iP	**P**	**14 14 51.9**	**-0.5**
	comp=Z,165nm,0.9s,mb6.0						
JCT				epP	pP	14 14 59.0	-0.9
JCT				LR	LR		
	comp=Z,473nm,22.0s,MS4.7						
CPCT	**Cooper Cave**	**69.80**	**346**	⇑iP	**P**	**14 14 51.7**	**-1.0**
CPCT				epP	pP	14 14 58.9	-1.4
SWET	**Sewanee**	**69.87**	**345**	⇑iP	**P**	**14 14 52.4**	**-0.8**
SWET				epP	pP	14 14 59.0	-1.6
PLAL	**Pickwick Lake**	**70.14**	**343**	eP	**P**	**14 14 53.8**	**-1.0**
	comp=Z,129nm,0.8s,mb5.9						
PLAL				LR	LR		
	comp=Z,588nm,22.0s,MS4.8						
TZTN	**Tazewell**	**70.68**	**347**	eP	**P**	**14 14 56.9**	**-1.2**
MET	**Memphis--Engin**	**70.74**	**342**	eP	**P**	**14 14 58.5**	**0.0**
BLA	**Blacksburg**	**70.82**	**350**	⇑iP	**P**	**14 14 58.2**	**-0.8**
BLA				e*PP	pP	14 15 05.3	-1.1
BLA				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.8						
BLA				MLR	MLR		
	comp=Z,500nm,22.0s,MS4.7						
BLA	**Blacksburg**	**70.82**	**350**	⇑iP	**P**	**14 14 58.2**	**-0.7**
	comp=Z,123nm,0.8s,mb5.9						
BLA				epP	pP	14 15 05.3	-1.1
BLA				LR	LR		
	comp=Z,685nm,22.0s,MS4.9						
ELN	**Prospectdale**	**70.88**	**350**	eP	**P**	**14 14 58.9**	**-0.5**
ELN				epP	pP	14 15 06.4	-0.5
UALR	**University of**	**71.08**	**340**	eP	**P**	**14 14 60.0**	**-0.6**
	comp=Z,84nm,1.1s,mb5.6						
WVT	**Waverly**	**71.17**	**344**	⇑iP	**P**	**14 14 59.7**	**-1.4**
WVT				e*PP	pP	14 15 06.8	-1.8
WVT				pmax	pmax		
	comp=Z,472nm,0.8s,mb6.5						
WVT				MLR	MLR		
	comp=Z,543nm,19.0s,MS4.8						
WVT	**Waverly**	**71.17**	**344**	⇑iP	**P**	**14 14 59.7**	**-1.4**
	comp=Z,472nm,0.8s,mb6.5						
WVT				epP	pP	14 15 06.8	-1.8
WVT				LR	LR		
	comp=Z,543nm,19.0s,MS4.8						
FWV	**Forest Hill**	**71.24**	**350**	eP	**P**	**14 15 01.0**	**-0.5**
MIAR	**Mount Ida**	**71.24**	**339**	eP	**P**	**14 15 00.9**	**-0.6**
MIAR				LR	LR		
	comp=Z,404nm,21.0s,MS4.7						
HALT	**Halls**	**71.33**	**342**	⇑iP	**P**	**14 15 01.1**	**-0.9**
HALT				epP	pP	14 15 07.9	-1.7
HBAR	**Harrisburg**	**71.34**	**341**	⇑eP	**P**	**14 15 01.5**	**-0.6**

CBN Corbin 71.42 353 *e*P P **14 15 01.9 -0.6**
comp=Z,244nm,0.9s,mb6.1
CBN LR LR
comp=Z,808nm,21.0s,MS5.0
UTMT University of 71.62 343 *e*P P **14 15 03.0 -0.9**
GLAT Glass 71.66 343 *e*P P **14 15 03.7 -0.3**
LIC Lamto 71.88 70 *e*P P **14 15 05.8 +0.4**
comp=Z,170nm,1.1s,mb5.6
LIC *e*R
comp=Z,350nm,20.0s
LIC Lamto 71.88 70 *e*P P **14 15 05.8 +0.4**
comp=Z,85nm,1.1s,mb5.6
LIC LR LR
comp=Z,180nm,20.0s,MS4.3
PVMO Portageville 71.90 342⇑*i*P P **14 15 05.2 -0.3**
comp=Z,2µm,1.1s
PVMO *e*pP pP 14 15 12.5 -0.5
DBIC Dimbokro 72.28 69 P P **14 15 08.8 +1.0**
comp=Z,30nm,0.7s,mb5.3,baz=214,slow=6.3,SNR=43
DBIC LR LR 14 45 15.2
comp=Z,1µm,18.2s,MS5.2,baz=211,slow=34
DBIC Dimbokro 72.28 69 *e*P P **14 15 08.2 +0.4**
comp=Z,101nm,0.9s,mb5.8
DBIC *e*pP pP 14 15 14.6 -0.7
DBIC LR LR
comp=Z,1µm,19.0s,MS5.2
SDMD Soldier's Deli 72.56 353 *e*P P **14 15 05.5 -4.0**
TVO Taravao 72.74 260 *e*P P **14 15 11.3 +0.8**
comp=Z,297nm,1.1s,mb6.1
TVO Taravao 72.74 260 *e*P P **14 15 11.3 +0.8**
TVO pmax pmax
comp=Z,297nm,1.1s,mb6.1
SUR Sutherland 72.81 118 P P **14 15 12.1 +1.2**
comp=Z,588nm,1.0s,mb6.5,SNR=16
SUR Sutherland 72.81 118 P P **14 15 12.9 +2.0**
WCI Wyandotte Cave 72.85 346 *e*P P **14 15 09.7 -1.4**
WCI pmax pmax
comp=Z,110nm,0.9s,mb5.8
WCI Wyandotte Cave 72.85 346⇑*i*P P **14 15 09.2 -2.0**
comp=Z,115nm,0.9s,mb5.8
WCI *e*pP pP 14 15 15.5 -3.2
WCI LR LR
comp=Z,799nm,22.0s,MS5.0
USIN University of 72.89 344⇑*i*P P **14 15 09.6 -1.8**
comp=Z,302nm,1.0s,mb6.2
USIN *e*pP pP 14 15 16.3 -2.6
SIUC Southern Illin 73.02 343 *e*P P **14 15 11.0 -1.1**
comp=Z,109nm,0.8s,mb5.8
PAE Paea 73.07 260 *e*P P **14 15 13.0 +0.6**
comp=Z,229nm,1.1s,mb6.0
PAE Paea 73.07 260 *e*P P **14 15 13.0 +0.6**
PAE pmax pmax
comp=Z,229nm,1.1s,mb6.0
MVL Millersville 73.10 354⇑*i*P P **14 15 12.3 -0.3**
MVL *e*pP pP 14 15 19.3 -0.8
PPT Papeete 73.11 260 *e*P P **14 15 13.7 +1.0**
comp=Z,214nm,1.4s,mb5.9
PPT Papeete 73.11 260 *e*S S 14 24 38.1 -0.8
comp=Z,2µm,28.5s
PPT *e*LR LR 14 37 35.4
comp=Z,3µm,26.0s,baz=115
PPT Papeete 73.11 260 P P **14 15 12.7 0.0**
comp=Z,99nm,0.9s,mb5.7,baz=94,slow=5.4,SNR=8.2
PPT LR LR 14 40 31.7
comp=Z,982nm,18.0s,MS5.1,baz=112,slow=30
GDL2 Guadalupe Moun 73.15 329 *e*P P **14 15 12.9 0.0**
WMOK Wichita Mounta 73.16 334 *e*P P **14 15 11.8 -1.2**
WMOK Wichita Mounta 73.16 334⇑*i*P P **14 15 11.3 -1.7**
comp=Z,55nm,1.1s,mb5.4
WMOK *e*pP pP 14 15 18.3 -2.2
WMOK LR LR
comp=Z,546nm,22.0s,MS4.8
MNTX Cornudas Mount 73.17 328⇑*i*P P **14 15 11.4 -1.7**
comp=Z,63nm,0.9s,mb5.5
MNTX LR LR
comp=Z,2µm,20.0s,MS5.4
MAW Mawson 73.21 163 P P **14 15 12.2 -1.1**
comp=Z,23nm,0.8s,mb5.2,baz=210,slow=6.8,SNR=64
MAW pP pP 14 15 20.6 -0.2
comp=Z,25nm,0.7s,baz=237,slow=9.1,SNR=10
MAW LR LR 14 48 45.0
comp=Z,2µm,20.2s,MS5.5,baz=226,slow=37
MAW Mawson 73.21 163 P P **14 15 12.2 -1.1**
MAW *PP pP 14 15 20.6 -0.2
MAW pmax pmax
comp=Z,23nm,0.8s
MAW MLR MLR
comp=Z,2µm,20.2s
MAW Mawson 73.21 163⇑*i*P P **14 15 12.1 -1.2**
comp=Z,32nm,0.8s,mb5.3
MAW *e*pP pP 14 15 19.5 -1.3
MAW LR LR
comp=Z,4µm,22.0s,MS5.7
FVM French Village 73.57 342 *e*P P **14 15 14.7 -0.7**
FVM French Village 73.57 342 *e*pP pP 14 15 22.1 -0.9
BRNJ Basking Ridge 73.64 355⇑*i*P P **14 15 16.4 +0.5**
BRNJ *e*pP pP 14 15 22.8 -0.6
CPNY Central Park 73.71 356⇑*i*P P **14 15 15.4 -0.8**
CPNY *e*pP pP 14 15 22.2 -1.5
BLO Bloomington 73.80 346 *e*P P **14 15 15.3 -1.5**
BLO pmax pmax
comp=Z,110nm,0.7s,mb5.9
BLO Bloomington 73.80 346⇑*i*P P **14 15 15.1 -1.7**
comp=Z,107nm,0.7s,mb5.9
BLO *e*pP pP 14 15 21.9 -2.4
CCM Cathedral Cave 73.85 342 *e*P P **14 15 15.1 -2.0**
CCM Cathedral Cave 73.85 342⇑*i*P P **14 15 15.0 -2.0**
comp=Z,275nm,1.0s,mb6.1
CCM *e*pP pP 14 15 21.4 -3.2
CCM LR LR
comp=Z,359nm,20.0s,MS4.7
SSPA Standing Stone 73.88 353⇑*i*P P **14 15 16.6 -0.6**
comp=Z,47nm,0.7s,mb5.5
SSPA *e*pP pP 14 15 23.4 -1.3
SSPA LR LR
comp=Z,600nm,19.0s,MS4.9
PAL Palisades 73.92 356 *e*P P **14 15 17.4 0.0**
PAL Palisades 73.92 356⇑*i*P P **14 15 16.3 -1.2**
SLM Saint Louis 74.14 343 *e*P P **14 15 18.0 -0.7**
SLM pmax pmax
comp=Z,160nm,1.0s,mb5.9
SLM Saint Louis 74.14 343⇑*e*P P **14 15 17.3 -1.4**
comp=Z,157nm,1.0s,mb5.9
SLM *e*pP pP 14 15 24.5 -1.8
ACSO Alum Creek Sta 74.17 349⇑*i*P P **14 15 17.8 -1.1**
comp=Z,379nm,0.8s,mb6.4
ACSO *e*pP pP 14 15 24.6 -1.9
ACSO LR LR
comp=Z,683nm,20.0s,MS4.9
AMTX Amarillo 74.38 332⇑*i*P P **14 15 19.2 -0.9**
comp=Z,142nm,1.0s,mb5.8
AMTX *e*pP pP 14 15 26.0 -1.6
AMTX LR LR
comp=Z,533nm,19.0s,MS4.8
QUA2 Belchertown 75.11 357⇑*i*P P **14 15 23.9 -0.5**
comp=Z,137nm,1.1s,mb5.8
QUA2 *e*pP pP 14 15 30.9 -1.0
ALLY Alegheny Colle 75.14 351⇑*e*P P **14 15 23.4 -1.1**
ALLY *e*pP pP 14 15 30.3 -1.8
WES Weston 75.18 358⇑*e*P P **14 15 24.4 -0.3**
comp=Z,80nm,0.8s,mb5.7
WES *e*pP pP 14 15 30.8 -1.5
WES LR LR
comp=Z,465nm,19.0s,MS4.8
HRV Harvard--Oak R 75.31 358⇑*i*P P **14 15 25.4 -0.1**
HRV *e**PP pP 14 15 32.2 -0.8
HRV pmax pmax
comp=Z,95nm,0.9s,mb5.7
HRV MLR MLR
comp=Z,1µm,21.0s,MS5.1
HRV Harvard--Oak R 75.31 358⇑*i*P P **14 15 25.4 -0.1**
comp=Z,100nm,0.9s,mb5.8
HRV *e*pP pP 14 15 32.2 -0.8
HRV LR LR
comp=Z,1µm,21.0s,MS5.1
ERPA Erie 75.58 351⇑*i*P P **14 15 26.0 -1.1**
comp=Z,272nm,0.9s,mb6.2
ERPA *e*pP pP 14 15 33.2 -1.4
ERPA LR LR
comp=Z,854nm,20.0s,MS5.0
Y22C IRIS PASSCAL I 75.87 328 ⇓P P **14 15 29.4 +0.7**
baz=76
LPM Los Pinos Moun 75.94 328 *e*P P **14 15 29.6 +0.4**
LENM Lemitar 75.97 328 *e*P P **14 15 30.0 +0.7**
LENM *e*pP pP 14 15 39.0 +2.2
TUC Tucson 76.21 324⇑*i*P P **14 15 30.7 0.0**
TUC *e**PP pP 14 15 37.4 -0.8
TUC pmax pmax
comp=Z,200nm,1.0s,mb6.0
TUC MLR MLR
comp=Z,1µm,20.0s,MS5.2
TUC Tucson 76.21 324⇑*i*P P **14 15 30.7 0.0**
comp=Z,45nm,1.0s,mb5.3
TUC *e*pP pP 14 15 37.4 -0.8
TUC LR LR
comp=Z,1µm,20.0s,MS5.2
LAZ Ladron 76.24 328 *e*P P **14 15 31.5 +0.7**
LAZ *e*pP pP 14 15 38.5 +0.1
FFD Franklin Falls 76.27 358 *e*P P **14 15 31.8 +0.8**
comp=Z,223nm,0.9s,mb6.1
ACCN Adirondack Com 76.27 356⇑*i*P P **14 15 30.8 -0.2**
ACCN *e*pP pP 14 15 37.4 -1.2
AAM Ann Arbor 76.30 349 *e*P P **14 15 30.4 -0.8**
AAM pmax pmax
comp=Z,100nm,0.9s,mb5.8
AAM Ann Arbor 76.30 349⇑*e*P P **14 15 29.4 -1.7**
comp=Z,53nm,0.6s,mb5.7
AAM *e*pP pP 14 15 36.5 -2.2
AAM LR LR
comp=Z,607nm,20.0s,MS4.9
KSU1 Kansas State U 76.38 338⇑*i*P P **14 15 30.3 -1.3**
comp=Z,129nm,1.1s,mb5.8
KSU1 *e*pP pP 14 15 37.7 -1.5
ANMO Albuquerque 76.41 329 *i*P P **14 15 32.6 +0.8**
ANMO Albuquerque 76.41 329⇑*i*P P **14 15 32.0 +0.2**
comp=Z,93nm,1.1s,mb5.6
ANMO *e*pP pP 14 15 39.1 -0.2
ANMO LR LR
comp=Z,2µm,20.0s,MS5.3
HNH Hanover 76.53 357⇑*i*P P **14 15 32.7 +0.2**
comp=Z,17nm,0.9s,mb5.0
HNH *e*pP pP 14 15 38.8 -1.2
TSUM Tsumeb 76.77 104⇑*e*P P **14 15 34.3 +0.5**
comp=Z,60nm,1.2s,mb5.4
TSUM *e*pP pP 14 15 41.5 +0.1
TSUM LR LR
comp=Z,2µm,20.0s,MS5.3
116A Eloy 76.87 324 ⇓P P **14 15 34.7 +0.3**
baz=77,SNR=18
NCB Newcomb 76.89 356⇑*i*P P **14 15 34.0 -0.5**
comp=Z,92nm,1.0s,mb5.7
NCB *e*pP pP 14 15 40.6 -1.4
NCB LR LR
comp=Z,794nm,22.0s,MS5.0
LBNH Lisbon 77.05 358 *e*P P **14 15 36.0 +0.6**
LBNH Lisbon 77.05 358⇑*i*P P **14 15 35.5 +0.1**
comp=Z,209nm,0.9s,mb6.1
LBNH *e*pP pP 14 15 42.4 -0.6
LBNH LR LR
comp=Z,1µm,22.0s,MS5.2
115A Sonoran Desert 77.24 323⇑P P **14 15 37.2 +0.7**
baz=78,SNR=35
WVL Waterville 77.32 359 *e*P P **14 15 37.1 +0.1**
comp=Z,99nm,1.0s,mb5.7
EMMW East Machias 77.47 1 *e*P P **14 15 38.3 +0.6**
LONY Lake Ozonia 77.56 356⇑*i*P P **14 15 37.4 -0.8**
comp=Z,137nm,1.0s,mb5.8
LONY *e*pP pP 14 15 44.6 -1.2
FRNY Flat Rock 77.72 356⇑*i*P P **14 15 38.3 -0.8**
FRNY *e*pP pP 14 15 45.5 -1.2
MSNY Massena 77.95 356 *e*P P **14 15 40.4 0.0**
MSNY *e*pP pP 14 15 46.7 -1.3
BOSA Boshof 78.00 116 P P **14 15 41.3 +0.5**
comp=Z,27nm,0.6s,mb5.3,baz=239,slow=5.3,SNR=69
BOSA pP pP 14 15 48.0 -0.3
comp=Z,66nm,0.8s,baz=248,slow=5.9,SNR=19
BOSA LR LR 14 48 53.7
comp=Z,1µm,18.2s,MS5.3,baz=238,slow=35
BOSA Boshof 78.00 116 P P **14 15 41.3 +0.5**
BOSA *PP pP 14 15 48.0 -0.3
BOSA pmax pmax
comp=Z,27nm,0.6s,mb5.3
BOSA pmax pmax
comp=Z,66nm,0.8s,mb5.6
BOSA Boshof 78.00 116⇑*e*P P **14 15 41.0 +0.3**
comp=Z,79nm,0.9s,mb5.6
BOSA *e*pP pP 14 15 47.5 -0.8
BOSA LR LR
comp=Z,1µm,19.0s,MS5.3
PKME Peaks-Kenny Pk 78.02 360⇑*i*P P **14 15 40.9 0.0**
comp=Z,149nm,1.0s,mb5.9
PKME *e*pP pP 14 15 47.6 -0.8
DRV Dumont d'Urvil 78.13 191 P P **14 15 40.0 -1.4**
DRV S S 14 25 35.0 +0.6
Z14A Wintersburg 78.13 323 ⇓P P **14 15 41.7 +0.2**
baz=78,SNR=8.0
JFWS Jewell Farm 78.20 344 *e*P P **14 15 40.5 -1.3**
JFWS Jewell Farm 78.20 344⇑*i*P P **14 15 40.4 -1.5**
comp=Z,210nm,1.0s,mb6.0
JFWS *e*pP pP 14 15 47.1 -2.3
JFWS LR LR
comp=Z,708nm,20.0s,MS5.0
SDCO Great Sand Dun 78.39 331 PFAKE
SDCO LR LR 14 15 50.0 +7.1
comp=Z,1µm,20.0s,MS5.2
Y14A Wickenburg 78.62 324 ⇓P P **14 15 44.4 +0.3**
baz=79,SNR=44
X15A Humboldt 78.68 325 P P **14 15 45.2 +0.7**
baz=79,SNR=101
GLA Glamis 78.84 322 *e*P P **14 15 46.0 +0.6**
GLA Glamis 78.84 322⇑*i*P P **14 15 45.6 +0.3**
GLA *e*pP pP 14 15 52.5 -0.5
GLA Glamis 78.84 322⇑P P **14 15 45.8 +0.4**
baz=79,SNR=23
Y13A Salome 78.94 323⇑P P **14 15 46.3 +0.4**
baz=79,SNR=11
X14A Yava 78.99 324 P P **14 15 46.8 +0.6**
baz=79,SNR=43
WUAZ Wupatki 79.10 326⇑*i*P P **14 15 47.0 +0.2**
comp=Z,94nm,1.0s,mb5.7
WUAZ *e*pP pP 14 15 53.7 -0.7
WUAZ LR LR
comp=Z,1µm,22.0s,MS5.3
MVCO Mesa Verde 79.19 329⇑*i*P P **14 15 47.2 -0.1**
comp=Z,106nm,1.0s,mb5.7
MVCO *e*pP pP 14 15 54.2 -0.7
DVTC Desert V Tower 79.20 321 ⇓P P **14 15 48.0 +0.6**
baz=80,SNR=27
Y12C Blythe 79.24 323⇑P P **14 15 48.1 +0.5**
baz=80,SNR=24
W15A Williams 79.26 325⇑P P **14 15 48.5 +0.8**
baz=80,SNR=22
SWSC Sam W. Stewart 79.26 321⇑P P **14 15 48.1 +0.5**
baz=80,SNR=10
PDMCI Parker Dam,Lak 79.48 323 ⇓P P **14 15 48.9 +0.1**
baz=80,SNR=7.5
BAR Barrett 79.52 320 *e*P P **14 15 49.5 +0.4**
RAR Rarotonga 79.55 252 PFAKE
RAR LR LR 14 16 00.0 +11
comp=Z,1.0nm,20.0s
MONP Monument Peak 79.55 321⇑P P **14 15 50.1 +0.8**
baz=80,SNR=31
X13A Yucca 79.55 324 P P **14 15 49.8 +0.5**
baz=80,SNR=97
MIR Mirnyy 79.66 173*d*/*i*P P **14 15 50.5 +0.7**
MIR pmax pmax
comp=Z,300nm,1.6s,mb6.0
W14A Seligman 79.68 324 P P **14 15 50.7 +0.8**
baz=80,SNR=55
IRM Iron Mountain 79.88 322 P P **14 15 51.5 +0.5**
baz=80,SNR=52
109C Camp Elliot, M 79.92 320 ⇓P P **14 15 51.5 +0.2**
baz=80
W13A Hualapai Mount 79.98 324⇑P P **14 15 52.3 +0.7**
baz=80,SNR=36
PV01 Paradox Valley 80.00 329 *e*P P **14 15 51.8 +0.1**
PFO Pinyon Flat Ob 80.13 321 P P **14 15 53.0 +0.6**
comp=Z,556nm,1.1s,mb6.4,SNR=36
PFO Pinyon Flat Ob 80.13 321⇑*i*P P **14 15 52.8 +0.4**
PFO pmax pmax
comp=Z,110nm,1.0s,mb5.7
PFO MLR MLR
comp=Z,1µm,19.0s,MS5.3
PFO Pinyon Flat Ob 80.13 321⇑*i*P P **14 15 52.8 +0.4**
comp=Z,108nm,1.0s,mb5.7
PFO LR LR
comp=Z,1µm,19.0s,MS5.3
PFO Pinyon Flat Ob 80.13 321 ⇓P P **14 15 53.2 +0.8**
baz=80,SNR=60
LBTB Lobatse 80.14 113⇑*e*P P **14 15 52.7 +0.3**
LBTB *e**PP pP 14 15 59.2 -0.8
LBTB pmax pmax
comp=Z,56nm,0.7s,mb5.6
LBTB MLR MLR
comp=Z,2µm,20.0s,MS5.4
LBTB Lobatse 80.14 113⇑*e*P P **14 15 52.7 +0.2**
comp=Z,56nm,0.7s,mb5.6
LBTB *e*pP pP 14 15 59.2 -0.8
LBTB LR LR
comp=Z,2µm,20.0s,MS5.4
ISCO Idaho Springs 80.19 332 *e*P P **14 15 53.1 +0.4**
ISCO pmax pmax
comp=Z,94nm,1.0s,mb5.7
ISCO Idaho Springs 80.19 332⇑*i*P P **14 15 52.8 +0.1**
comp=Z,87nm,1.1s,mb5.6
ISCO *e*pP pP 14 15 59.9 -0.4
ISCO LR LR
comp=Z,875nm,20.0s,MS5.1
BELC Belle Mtn. 80.19 322⇑P P **14 15 53.3 +0.6**
baz=80,SNR=32
SMCO Snowmass 80.21 331⇑*i*P P **14 15 53.4 +0.6**
comp=Z,188nm,1.1s,mb5.9
SMCO *e*pP pP 14 16 00.4 0.0
PV10 Paradox Valley 80.40 329 *e*P P **14 15 53.8 0.0**
MURC Murrieta 80.51 321 P P **14 15 55.2 +0.8**
baz=81,SNR=32
W12A Cal Nev Ari 80.63 323 ⇓P P **14 15 55.4 +0.3**
baz=81,SNR=18
SCI San Clemente I 80.77 319⇑P P **14 15 56.1 +0.3**
baz=81,SNR=5.9
BBRC Big Bear Sol-O 80.88 321 ⇓P P **14 15 57.4 +1.0**
baz=81
CASY Casey 80.91 180 *e*P P **14 15 55.9 -0.7**
comp=Z,94nm,1.0s,mb5.7
CASY *e*pP pP 14 16 03.0 -1.2
CASY LR LR
comp=Z,2µm,20.0s,MS5.4
V12A Nelson 80.96 324 P P **14 15 57.1 +0.3**
baz=81,SNR=59
HEC Hector,Ludlow 81.01 322 P P **14 15 58.1 +1.0**
baz=81,SNR=21
CIS Catalina Islan 81.01 320 ⇓P P **14 15 57.6 +0.5**
baz=81,SNR=15
FMP Fort Macarthur 81.18 320⇑P P **14 15 58.7 +0.7**
baz=82
BFSC Mount Baldy St 81.25 321 P P **14 15 58.9 +0.5**
baz=82,SNR=49
TUQ Turquoise Mtn. 81.27 323 P P **14 15 59.1 +0.6**
baz=82,SNR=83
TOA0 Torodi Ar. Sit 81.32 68⇑*e*P P **14 15 58.9 +0.2**
TOA0 *e*pP pP 14 16 05.0 -1.3
TORD Torodi Ar. Bea 81.32 68 P P **14 15 59.2 +0.5**
comp=Z,54nm,1.0s,mb5.5,baz=276,slow=5.5,SNR=158
TORD S S 14 26 08.2 +0.1
comp=Z,6.7nm,1.4s,baz=241,slow=9.9,SNR=5.7
TORD PKKPbc PKKPbc 14 34 30.6 -2.7
comp=Z,1.0nm,0.8s,baz=57,slow=2.2,SNR=6.8
TORD LR LR 14 53 14.7
comp=Z,1µm,18.0s,MS5.3,baz=235,slow=36
TORD Torodi Ar. Bea 81.32 68 P P **14 15 59.2 +0.5**
TORD S S 14 26 08.2 +0.1
TORD PKKPbc PKKPbc 14 34 30.6 -2.7
TORD LR LR 14 53 14.7
V11A Goodsprings 81.34 323⇑P P **14 15 59.2 +0.4**
baz=82
U12A Valley of Fire 81.36 324⇑P P **14 15 59.3 +0.3**
baz=82,SNR=26
RRX Edison Barstow 81.39 322⇑P P **14 15 59.8 +0.7**
baz=82
PHWY Pilot Hill 81.42 333⇑*i*P P **14 15 59.2 -0.1**
PHWY *e*pP pP 14 16 06.1 -0.8
MWC Mount Wilson 81.45 321 *e*P P **14 16 00.4 +1.0**
SNCC San Nicolas Is 81.50 319 ⇓P P **14 15 59.9 +0.2**
baz=82
DECC Green Verdugo 81.61 320 ⇓P P **14 16 00.8 +0.5**
baz=82,SNR=11
GSC Goldstone 81.62 322 *e*P P **14 16 00.9 +0.6**
GSC Goldstone 81.62 322⇓*i*P P **14 16 00.8 +0.4**
GSC *e*pP pP 14 16 07.5 -0.4
GSC Goldstone 81.62 322 P P **14 16 00.9 +0.6**
baz=82,SNR=45
SRU San Rafael 81.66 328 *e*P P **14 16 00.5 0.0**
CCUT Cedar City 81.69 326⇑*i*P P **14 16 01.6 +0.9**
CCUT *e*pP pP 14 16 07.9 -0.4
SHPR Sheep Range 81.73 324 *e*P P **14 16 01.4 +0.5**
U11A Corn Creek 81.77 324 ⇓P P **14 16 01.9 +0.8**
baz=82
SHOC Shoshone 81.81 323 ⇓P P **14 16 01.4 0.0**
baz=82,SNR=22
BLG Laguna Peak 81.90 320 ⇓P P **14 16 01.9 +0.1**
baz=82,SNR=5.1
MSU Marysvale 81.91 327 *e*P P **14 16 02.3 +0.4**
EDW2 Edwards Air Fo 81.91 321⇑P P **14 16 02.0 +0.1**
baz=82,SNR=67
MVU Marysvale 81.92 327 PFAKE
MVU LR LR 14 16 10.0 +8.1
comp=Z,2µm,20.0s,MS5.5
OSI Osito Adit 82.10 320⇑P P **14 16 03.2 +0.3**
baz=82
TMUT Trail Mountain 82.11 328⇑*i*P P **14 16 02.8 -0.1**
TMUT *e*pP pP 14 16 10.2 -0.4
BSC Santa Cruz Isl 82.12 319⇑P P **14 16 03.6 +0.6**
baz=82,SNR=11
LRMC Laurel Mountai 82.21 322⇑P P **14 16 03.9 +0.5**
baz=82,SNR=69
U10A Ash Meadows, A 82.25 323 P P **14 16 04.3 +0.7**
baz=82,SNR=33
RWWY Rawlins 82.43 332⇑*i*P P **14 16 04.6 0.0**
comp=Z,226nm,1.0s,mb6.1
RWWY *e*pP pP 14 16 11.3 -0.9
SBC Santa Barbara 82.50 320 ⇓P P **14 16 05.3 +0.3**
baz=83
ARVC Arvin 82.55 321 ⇓P P **14 16 05.6 +0.4**
baz=83
FURC Furnace Creek, 82.55 323⇑P P **14 16 05.6 +0.4**
baz=83,SNR=53
MPMC Manual Prospec 82.56 322 ⇓P P **14 16 05.6 +0.3**
baz=83,SNR=75
TPNV Topopah Spring 82.62 323⇑*e*P P **14 16 06.2 +0.7**
comp=Z,95nm,1.0s,mb5.8
TPNV *e*pP pP 14 16 13.1 -0.1
TPNV LR LR
comp=Z,1µm,19.0s,MS5.2
ISA Isabella 82.77 321 *e*P P **14 16 07.0 +0.7**
ISA pmax pmax
comp=Z,80nm,0.9s,mb5.8
ISA Isabella 82.77 321 *e*P P **14 16 08.3 +2.0**
comp=Z,0.1nm,1.2s
ISA *e*pP pP 14 16 19.0 +5.0
ISA LR LR
comp=Z,175nm,19.0s,MS4.5
ISA Isabella 82.77 321 P P **14 16 07.1 +0.8**
baz=83,SNR=90
DAC Darwin (Calif) 82.78 322 *e*P P **14 16 07.0 +0.6**
DAC pmax pmax
comp=Z,110nm,0.9s,mb5.9
DAC Darwin (Calif) 82.78 322⇑*i*P P **14 16 06.7 +0.3**
comp=Z,122nm,0.9s,mb5.9
DAC *e*pP pP 14 16 13.5 -0.5
DAC LR LR
comp=Z,1µm,19.0s,MS5.3
MPU Maple Canyon 82.89 328⇑*i*P P **14 16 06.8 -0.2**
comp=Z,68nm,1.0s,mb5.6
MPU *e*pP pP 14 16 13.5 -1.1
MPU LR LR
comp=Z,3µm,20.0s,MS5.7
PKM Peak Mountain 82.90 320 P P **14 16 08.0 +0.9**
baz=83,SNR=62
SDP Sudden Peak, L 83.03 319⇑P P **14 16 08.3 +0.6**
baz=83
NLU North Lily Min 83.04 328 *e*P P **14 16 08.2 +0.5**
DAU Daniels Canyon 83.05 329 *e*P P **14 16 08.0 +0.2**
CWC Cottonwood Cre 83.16 322 P P **14 16 08.9 +0.5**
baz=84,SNR=44
VES Vestal, Richgr 83.22 321 P P **14 16 09.1 +0.4**
baz=84,SNR=55
GRAC Grapevine Rang 83.22 323⇑P P **14 16 09.3 +0.6**
baz=84,SNR=66
EYMN Ely 83.25 345⇑*e*P P **14 16 07.2 -1.6**
comp=Z,2µm,1.0s
EYMN *e*pP pP 14 16 13.4 -3.0
EYMN LR LR
comp=Z,10µm,21.0s,MS6.2
SMMC Simmler 83.31 320 ⇓P P **14 16 10.0 +0.8**
baz=84,SNR=18
RSSD Black Hills 83.34 335 *e*P P **14 16 09.2 -0.1**
RSSD pmax pmax
comp=Z,130nm,1.0s,mb5.9

RSSD **Black Hills** 83.34 335⇑*iP* **P** **14 16 08.6 -0.7**
comp=Z,384nm,1.0s,mb6.4
RSSD *epP* pP 14 16 15.5 -1.4
RSSD LR LR
comp=Z,515nm,19.0s,MS4.9
CTU **Camp Tracy** 83.50 329⇑*eP* **P** **14 16 09.6 -0.5**
comp=Z,32nm,0.8s,mb5.4
CTU *epP* pP 14 16 16.2 -1.5
DUG **Dugway** 83.56 328 *eP* **P** **14 16 10.4 -0.1**
DUG pmax pmax
comp=Z,120nm,1.3s,mb5.9
DUG **Dugway** 83.56 328⇑*iP* **P** **14 16 10.0 -0.4**
comp=Z,120nm,1.4s,mb5.8
DUG *epP* pP 14 16 17.1 -0.9
DUG LR LR
comp=Z,2µm,21.0s,MS5.5
NOQ **North Oquirrh** 83.62 328⇑*eP* **P** **14 16 10.0 -0.7**
comp=Z,47nm,1.1s,mb5.5
NOQ *epP* pP 14 16 16.6 -1.8
V05C **Boulder Hill,** 83.68 320 ⇓P **P** **14 16 11.8 +0.8**
baz=84
PTRM **Twissleman Ran** 83.68 320 *eP* **P** **14 16 12.0 +0.9**
R10A **Warm Springs** 83.69 324 P **P** **14 16 12.0 +0.9**
baz=84,SNR=91
TCUT **Toone Canyon** 83.69 329 *epP* pP 14 16 17.8 -1.0
TIN **Tinemaha** 83.70 322 ⇑P **P** **14 16 11.5 +0.3**
baz=84
S09A **Goldfield** 83.71 323 P **P** **14 16 11.4 +0.2**
baz=84,SNR=138
HELL **Mitchell Peak,** 83.83 322 P **P** **14 16 11.8 0.0**
baz=84,SNR=85
P12A **McGill** 83.95 326 ⇓P **P** **14 16 12.6 +0.2**
baz=84,SNR=14
TPH **Tonopah** 83.98 324 *eP* **P** **14 16 13.2 +0.6**
TPH **Tonopah** 83.98 324⇑*iP* **P** **14 16 12.7 +0.1**
comp=Z,142nm,1.1s,mb6.0
TPH *epP* pP 14 16 19.3 -0.9
TPH LR LR
comp=Z,857nm,21.0s,MS5.1
V04C **Ramage Ranch,** 84.03 320 ⇓P **P** **14 16 13.5 +0.6**
baz=84,SNR=14
R09A **Tonopah** 84.03 324 P **P** **14 16 13.0 +0.2**
baz=84,SNR=80
PKD **Parkfield** 84.08 320 P **P** **14 16 13.5 +0.4**
baz=84,SNR=28
MTUM **Tungsten Hills** 84.10 322 *eP* **P** **14 16 13.6 +0.4**
U05C **Westside ANR,** 84.15 321 ⇑P **P** **14 16 13.5 0.0**
baz=84
HWUT **Hardware Ranch** 84.16 329⇑*iP* **P** **14 16 12.8 -0.7**
comp=Z,106nm,1.0s,mb5.9
HWUT LR LR
comp=Z,2µm,19.0s,MS5.4
BW06 **Boulder Array** 84.28 331 *eP* **P** **14 16 13.3 -0.8**
BW06 LR LR
comp=Z,1µm,20.0s,MS5.3
PDAR **Pinedale Array** 84.28 331 P **P** **14 16 13.6 -0.5**
comp=Z,14nm,0.6s,mb5.3,baz=142,slow=5.6,SNR=88
PDAR PKKPbc PKKPbc 14 34 26.2 -0.2
comp=Z,0.8nm,0.7s,baz=349,slow=1.5,SNR=6.9
PDAR LR LR 14 50 42.6
comp=Z,962nm,20.8s,MS5.2,baz=141,slow=33
T06C **Millerton Lake** 84.43 321 ⇑P **P** **14 16 13.7 -1.2**
baz=85,SNR=11
KCC **Kaiser Creek** 84.47 322 P **P** **14 16 14.9 -0.2**
baz=85,SNR=44
V03C **Hunter Liggett** 84.51 320 P **P** **14 16 16.3 +1.0**
baz=85,SNR=20
U04C **Hernandez Rese** 84.52 320 ⇓P **P** **14 16 16.0 +0.7**
baz=85,SNR=31
Q09A **Carvers** 84.55 324 ⇑P **P** **14 16 15.7 +0.3**
baz=85,SNR=22
R08A **Mina** 84.63 323 ⇑P **P** **14 16 15.8 -0.1**
baz=85,SNR=17
N13A **Wendover, West** 84.72 327 ⇑P **P** **14 16 15.7 -0.7**
baz=85,SNR=11
NVAR **Mina Array Bea** 84.79 323 P **P** **14 16 17.0 +0.3**
comp=Z,54nm,0.8s,mb5.7,baz=144,slow=6.3,SNR=360
NVAR PKKPbc PKKPbc 14 34 26.1 +0.9
comp=Z,1.4nm,0.8s,baz=326,slow=1.4,SNR=8.6
P10A **Eureka** 84.81 325 ⇓P **P** **14 16 17.2 +0.4**
baz=85,SNR=41
O11A **Cowboy Ranch,** 84.82 326 P **P** **14 16 17.1 +0.3**
baz=85,SNR=160
HVU **Hansel Valley** 84.83 329 *eP* **P** **14 16 16.8 -0.1**
HVU **Hansel Valley** 84.83 329⇑*iP* **P** **14 16 16.1 -0.8**
comp=Z,110nm,0.8s,mb6.0
HVU *epP* pP 14 16 23.1 -1.5
T05C **Eagle Field, D** 84.86 321 ⇓P **P** **14 16 17.9 +0.8**
baz=85
R07C **Lee Vining** 84.91 322 ⇑P **P** **14 16 18.0 +0.7**
baz=85,SNR=44
AHID **Auburn Hatcher** 84.92 330⇑*iP* **P** **14 16 16.2 -1.1**
comp=Z,109nm,1.3s,mb5.8
AHID *epP* pP 14 16 23.5 -1.5
AHID LR LR
comp=Z,1µm,21.0s,MS5.2
Q08A **Gabbs** 84.94 324 P **P** **14 16 17.4 -0.1**
baz=85,SNR=95
S05C **Merced** 85.02 321 ⇓P **P** **14 16 18.0 +0.2**
baz=85,SNR=6.5
P09A **Austin** 85.08 325 ⇑P **P** **14 16 18.0 -0.2**
baz=85,SNR=14
N12A **Clover Valley,** 85.10 327 ⇑P **P** **14 16 17.7 -0.6**
baz=85,SNR=54
S06C **San Francisco** 85.17 322 P **P** **14 16 18.8 +0.2**
baz=86,SNR=53
SAO **San Andreas Ge** 85.18 320 *eP* **P** **14 16 18.7 +0.1**
SAO **San Andreas Ge** 85.18 320⇑*eP* **P** **14 16 17.4 -1.3**
SAO *epP* pP 14 16 23.4 -2.8
SAO LR LR
comp=Z,832nm,22.0s,MS5.1
PACP **Pacheco Peak** 85.27 320 ⇓P **P** **14 16 19.5 +0.4**
baz=86,SNR=16
REDW **Red Top Meadow** 85.30 331⇑*eP* **P** **14 16 18.6 -0.7**
comp=Z,104nm,1.1s,mb5.9
REDW *epP* pP 14 16 25.6 -1.3
SNOW **Snow King Moun** 85.35 331⇑*iP* **P** **14 16 18.9 -0.6**
comp=Z,81nm,1.0s,mb5.8
O10A **Cortez Mining,** 85.35 325 ⇓P **P** **14 16 19.3 -0.2**
baz=86
N11A **Elko Archery C** 85.40 326 ⇓P **P** **14 16 19.2 -0.5**
baz=86
LOHW **Long Hollow** 85.41 331⇑*iP* **P** **14 16 19.2 -0.6**
comp=Z,66nm,1.0s,mb5.7
WAKR **Walker** 85.42 322 *eP* **P** **14 16 20.7 +0.8**
Q07A **Schurz** 85.44 323 ⇑P **P** **14 16 20.4 +0.5**
baz=86,SNR=7.6
R06C **Coleville** 85.45 322 P **P** **14 16 20.8 +0.8**
baz=86,SNR=62
TPAW **Teton Pass** 85.45 331 *eP* **P** **14 16 19.2 -0.8**
comp=Z,121nm,1.0s,mb6.0
RRI2 **Red Ridge** 85.49 330⇑*iP* **P** **14 16 19.7 -0.5**
RRI2 *epP* pP 14 16 26.5 -1.3
M12A **Wells** 85.49 327 P **P** **14 16 20.0 -0.2**
baz=86,SNR=56
CMB **Columbia Colle** 85.56 322 *eP* **P** **14 16 20.4 -0.2**
CMB **Columbia Colle** 85.56 322⇑*iP* **P** **14 16 20.1 -0.5**
comp=Z,58nm,1.1s,mb5.7
CMB *epP* pP 14 16 27.1 -1.1
CMB LR LR
comp=Z,616nm,20.0s,MS5.0
CMB **Columbia Colle** 85.56 322 ⇑P **P** **14 16 20.3 -0.2**
baz=86,SNR=41
MOOW **Moose Ponds** 85.58 331⇑*iP* **P** **14 16 20.0 -0.7**
comp=Z,25nm,0.9s,mb5.5
MOOW *epP* pP 14 16 26.4 -1.9
O09A **Fish Creek Ran** 85.58 325 ⇑P **P** **14 16 19.9 -0.8**
baz=86,SNR=9.7
DCID1 **Drake Creek** 85.63 331 *epP* pP 14 16 27.4 -1.2
P08A **Dixie Valley** 85.65 324 ⇓P **P** **14 16 20.9 -0.1**
baz=86
S04C **Ingram Canyon,** 85.66 321 ⇓P **P** **14 16 21.2 +0.2**
baz=86,SNR=12
N10A **Dunphy** 85.69 326 ⇑P **P** **14 16 20.7 -0.5**
baz=86
SNZO **South Karori** 85.70 223 PFAKE 14 16 30.0 +8.7
SNZO LR LR
comp=Z,977nm,21.0s,MS5.2
IMW **Indian Meadow** 85.78 331⇑*eP* **P** **14 16 24.3 +2.6**
comp=Z,143nm,1.0s,mb6.2
BMN **Battle Mountai** 85.80 325 *eP* **P** **14 16 21.3 -0.5**
BMN **Battle Mountai** 85.80 325⇑*eP* **P** **14 16 20.5 -1.2**
comp=Z,19nm,1.0s,mb5.3
BMN LR LR
comp=Z,911nm,21.0s,MS5.2
FLWY **Flagg Ranch** 85.84 331⇑*eP* **P** **14 16 21.7 -0.2**
comp=Z,167nm,1.0s,mb6.2
FLWY *epP* pP 14 16 28.6 -1.0
BNLO **Ben Lomond (Sa** 85.84 320 ⇓P **P** **14 16 22.1 +0.2**
baz=86,SNR=7.1
R05C **Kirkwood Meado** 85.90 322 P **P** **14 16 22.8 +0.6**
baz=86,SNR=37
M11A **Holland Ranch,** 85.91 327 P **P** **14 16 22.6 +0.3**
baz=86,SNR=186
P07A **Fallon** 85.94 323 ⇓P **P** **14 16 23.0 +0.6**
baz=86
WENL **Wente Brothers** 85.98 321 ⇓P **P** **14 16 23.2 +0.5**
baz=86,SNR=7.9
R04C **Big Horse Ranc** 86.02 321 ⇑P **P** **14 16 22.7 -0.1**
baz=86
JRSC **Jasper Ridge** 86.07 320 ⇓P **P** **14 16 23.3 +0.2**
baz=86,SNR=7.4
LKWY **Lake** 86.12 332 *eP* **P** **14 16 24.6 +1.3**
LKWY **Lake** 86.12 332⇑*iP* **P** **14 16 23.4 +0.1**
comp=Z,32nm,1.0s,mb5.5
LKWY *epP* pP 14 16 30.2 -0.7
LKWY LR LR
comp=Z,740nm,19.0s,MS5.1
O08A **Rochester Mine** 86.15 324 ⇓P **P** **14 16 23.1 -0.4**
baz=86
WCN **Washoe City** 86.19 323 ⇑P **P** **14 16 24.1 +0.4**
baz=86,SNR=15
YFT **Old Faithful** 86.20 331⇑*iP* **P** **14 16 24.4 +0.7**
N09A **Rock Creek Ran** 86.28 325 ⇓P **P** **14 16 23.2 -0.9**
baz=87,SNR=14
BDM **Black Diamond** 86.28 321 ⇓P **P** **14 16 24.5 +0.3**
baz=87,SNR=9.9
LAVA **Lava Cap Winer** 86.28 322 P **P** **14 16 23.9 -0.2**
baz=87,SNR=36
SAC **San Andreas** 86.30 320 *eP* **P** **14 16 24.6 +0.4**
PAHR **Pah Rah Range** 86.31 323 *eP* **P** **14 16 24.9 +0.7**
comp=Z,108nm,1.0s,mb6.0
M10A **I.L. Ranch, Tu** 86.33 326 ⇓P **P** **14 16 24.2 -0.2**
baz=87,SNR=44
LAO **LASA Array** 86.34 335 *eP* **P** **14 16 23.6 -0.8**
LAO LR LR
comp=Z,661nm,21.0s,MS5.0
O07A **Toulon** 86.40 324 P **P** **14 16 24.8 +0.1**
baz=87,SNR=50
ULM **Lac du Bonnet** 86.42 343 P **P** **14 16 23.5 -1.3**
comp=Z,82nm,0.9s,mb6.0,baz=157,slow=4.3,SNR=90
ULM LR LR 14 59 28.8
comp=Z,303nm,19.1s,MS4.7,baz=156,slow=39
ULM **Lac du Bonnet** 86.42 343⇑*iP* **P** **14 16 23.0 -1.8**
comp=Z,127nm,0.9s,mb6.2
ULM *epP* pP 14 16 29.9 -2.6
ULM LR LR
comp=Z,681nm,19.0s,MS5.1
YMR **Madison River** 86.43 331⇑*iP* **P** **14 16 25.1 +0.2**
comp=Z,218nm,1.0s,mb6.3
YMR *epP* pP 14 16 31.5 -1.0
P06A **Stead Airport,** 86.55 323 ⇓P **P** **14 16 25.6 +0.1**
baz=87,SNR=7.6
P05C **Yuba Gap, Truc** 86.63 322 ⇑P **P** **14 16 25.9 +0.1**
baz=87,SNR=29
Q04C **Lincoln** 86.68 322 ⇓P **P** **14 16 26.1 0.0**
baz=87,SNR=8.8
M09A **Marrel Ranch,** 86.68 326 ⇑P **P** **14 16 25.7 -0.3**
baz=87,SNR=13
WVZ **Waitaha Valley** 86.69 219 *e*PN **P** **14 16 26.0 -0.1**
FARB **Farallon Islan** 86.70 320 ⇓P **P** **14 16 26.4 +0.2**
baz=87,SNR=6.8
QLMT **Earthquake Lak** 86.75 331 *eP* **P** **14 16 26.8 +0.4**
QLMT *epP* pP 14 16 34.2 +0.2
GCMT **Greycliff** 86.85 333 *eP* **P** **14 16 26.0 -0.9**
GCMT *epP* pP 14 16 32.9 -1.6
Q03C **Winters** 86.86 321 ⇑P **P** **14 16 27.7 +0.8**
baz=87
O06A **Flanigan** 86.88 323 ⇓P **P** **14 16 27.0 -0.1**
baz=87,SNR=21
CVS **Carmenet Viney** 86.88 321 ⇑P **P** **14 16 27.2 +0.1**
baz=87,SNR=23
N07B **Gerlach** 86.92 324 ⇓P **P** **14 16 27.1 -0.1**
baz=87,SNR=67
BEKR **Beckwourth** 86.92 323 P **P** **14 16 27.5 +0.2**
baz=87,SNR=51
MCCM **Marconi Confer** 86.96 320⇑*iP* **P** **14 16 27.3 -0.1**
comp=Z,105nm,1.0s,mb6.0
MCCM *epP* pP 14 16 34.2 -0.9
MCCM **Marconi Confer** 86.96 320 ⇓P **P** **14 16 27.6 +0.1**
baz=87,SNR=8.2
HLID **Hailey** 86.98 329⇑*iP* **P** **14 16 27.4 -0.2**
comp=Z,101nm,1.0s,mb6.0
HLID *epP* pP 14 16 34.3 -0.9
HLID LR LR
comp=Z,1µm,20.0s,MS5.3
OHCM **Honcut** 87.10 322 *eP* **P** **14 16 28.1 0.0**
M08A **Happy Creek Ra** 87.14 325 P **P** **14 16 28.4 +0.1**
baz=88,SNR=70
SUTB **Sutter Butte** 87.18 322 ⇓P **P** **14 16 27.9 -0.6**
baz=88,SNR=8.9
L09A **Wilkinson Ranc** 87.25 326 P **P** **14 16 28.6 -0.2**
baz=88,SNR=26
MNRC **McLaughlin Nat** 87.27 321 ⇑P **P** **14 16 29.4 +0.4**
baz=88,SNR=14
ORV **Oroville** 87.27 322 ⇓P **P** **14 16 28.9 0.0**
baz=88,SNR=38
O05C **Quincy** 87.28 323 ⇑P **P** **14 16 29.0 0.0**
baz=88,SNR=14
N06A **Buffalo Meadow** 87.32 324 ⇓P **P** **14 16 29.2 0.0**
baz=88,SNR=70
MCMT **McKenzie Canyo** 87.33 330 *eP* **P** **14 16 29.5 +0.2**
LSZ **Lusaka** 87.43 106 P **P** **14 16 32.7 +3.0**
SNR=14
LSZ **Lusaka** 87.43 106⇑*eP* **P** **14 16 31.3 +1.6**
LSZ *e**PP pP 14 16 38.1 +0.7
LSZ pmax pmax
comp=Z,85nm,1.3s,mb5.8
LSZ MLR MLR
comp=Z,2µm,19.0s,MS5.6
LSZ **Lusaka** 87.43 106⇑*eP* **P** **14 16 31.3 +1.6**
comp=Z,85nm,1.3s,mb5.8
LSZ *epP* pP 14 16 38.1 +0.7
LSZ LR LR
comp=Z,2µm,19.0s,MS5.6
M07A **Soldier Meadow** 87.48 325 ⇓P **P** **14 16 29.8 -0.2**
baz=88,SNR=26
BOZ **Bozeman (W)** 87.50 331 *eP* **P** **14 16 29.3 -0.8**
BOZ **Bozeman (W)** 87.50 331⇑*eP* **P** **14 16 28.9 -1.1**
comp=Z,44nm,1.0s,mb5.7
BOZ *epP* pP 14 16 35.9 -1.8
BOZ LR LR
comp=Z,979nm,19.0s,MS5.2
SCHQ **Schefferville** 87.61 1 P **P** **14 16 29.4 -1.2**
comp=Z,52nm,1.0s,mb5.7,baz=158,slow=3.8,SNR=24
SCHQ LR LR 14 55 46.8
comp=Z,539nm,21.3s,MS4.9,baz=278,slow=36
SCHQ **Schefferville** 87.61 1⇑*iP* **P** **14 16 28.8 -1.8**
comp=Z,142nm,1.3s,mb6.0
SCHQ *epP* pP 14 16 35.8 -2.4
SCHQ LR LR
comp=Z,1µm,22.0s,MS5.2
O04C **Chester** 87.63 323 ⇑P **P** **14 16 30.5 -0.2**
baz=88,SNR=20
DLMT **Dillon** 87.66 331⇑*eP* **P** **14 16 30.1 -0.7**
DLMT *epP* pP 14 16 37.5 -1.0
ELFS **Eagle Lake Fie** 87.67 323 ⇓P **P** **14 16 30.8 0.0**
baz=88,SNR=10
HOPS **Hopland** 87.69 321⇑*eP* **P** **14 16 30.9 -0.1**
comp=Z,68nm,1.3s,mb5.7
HOPS LR LR
comp=Z,1µm,21.0s,MS5.2
HOPS **Hopland** 87.69 321 ⇓P **P** **14 16 31.2 +0.2**
baz=88
L08A **Fields** 87.70 325 P **P** **14 16 31.0 0.0**
baz=88,SNR=94
LRM **Limekiln Ridge** 87.97 331 *eP* **P** **14 16 32.2 -0.1**
GASB **Alder Springs** 87.98 321 P **P** **14 16 33.2 +0.9**
baz=88,SNR=45
M06C **Likely Place G** 87.99 324 ⇑P **P** **14 16 32.4 0.0**
baz=88,SNR=26
WVOR **Wild Horse Val** 88.02 325⇑*iP* **P** **14 16 32.1 -0.5**
WVOR *e**PP pP 14 16 39.0 -1.2
WVOR pmax pmax
comp=Z,77nm,1.1s,mb5.8
WVOR MLR MLR
comp=Z,2µm,22.0s,MS5.4
WVOR **Wild Horse Val** 88.02 325⇑*iP* **P** **14 16 32.1 -0.5**
comp=Z,71nm,1.1s,mb5.8
WVOR *epP* pP 14 16 39.0 -1.2
WVOR LR LR
comp=Z,1µm,22.0s,MS5.3
L07A **Adell** 88.04 325 P **P** **14 16 33.1 +0.5**
baz=88,SNR=48
P01C **Double 8 Ranch** 88.17 321 ⇓P **P** **14 16 33.7 +0.5**
baz=88,SNR=17
K08A **Mann Creek Ran** 88.18 326 P **P** **14 16 33.4 0.0**
baz=88,SNR=56
HATC **Hat Creek Radi** 88.19 323 ⇑P **P** **14 16 33.0 -0.3**
baz=88,SNR=10
O02C **Red Bluff** 88.40 322 ⇓P **P** **14 16 34.1 -0.3**
baz=89,SNR=10
HRY **Holter Researc** 88.45 332 *eP* **P** **14 16 34.5 0.0**
LTIM **Timbered Crate** 88.47 323 P **P** **14 16 34.7 0.0**
WDC **Whiskeytown Da** 88.57 322 *eP* **P** **14 16 34.2 -0.9**
WDC pmax pmax
comp=Z,59nm,1.1s,mb5.8
WDC **Whiskeytown Da** 88.57 322⇑*iP* **P** **14 16 33.4 -1.7**
comp=Z,60nm,1.1s,mb5.8
WDC *epP* pP 14 16 39.8 -3.0
WDC LR LR
comp=Z,424nm,20.0s,MS4.9
WDC **Whiskeytown Da** 88.57 322 ⇑P **P** **14 16 33.7 -1.5**
baz=89,SNR=22
EGMT **Eagleton** 88.75 334⇑*iP* **P** **14 16 34.7 -1.3**
comp=Z,124nm,1.1s,mb6.2
EGMT *epP* pP 14 16 42.0 -1.6
EGMT LR LR
comp=Z,632nm,20.0s,MS5.0
I09A **Lost Marbles R** 88.79 327 ⇓P **P** **14 16 35.9 -0.3**
baz=89,SNR=83
L05A **Lakeview** 88.80 324 ⇓P **P** **14 16 36.4 +0.2**
baz=89,SNR=23
O01C **Eel River Cons** 88.92 321 ⇑P **P** **14 16 37.2 +0.4**
baz=89,SNR=10
J07A **Hines** 89.06 326 ⇓P **P** **14 16 37.4 -0.1**
baz=89,SNR=45
K06A **Valley Falls** 89.08 325 ⇑P **P** **14 16 37.5 0.0**
baz=89,SNR=32
M04C **Macdoel** 89.10 323 ⇑P **P** **14 16 37.1 -0.5**
baz=89,SNR=14
I08A **Drewsey** 89.12 326 ⇑P **P** **14 16 37.8 0.0**
baz=89,SNR=35
MDT **Midelt** 89.13 49 P **P** **14 16 38.2 +0.4**
comp=Z,20nm,0.7s,mb5.5,baz=236,slow=9.0,SNR=20
MDT pP pP 14 16 45.7 +0.2
comp=Z,15nm,1.0s,baz=242,slow=8.0,SNR=5.3
CHMT **Chamberlain Mo** 89.19 331 *eP* **P** **14 16 37.7 -0.3**
H09A **Durkee** 89.29 327 ⇑P **P** **14 16 38.1 -0.5**
baz=90,SNR=7.8
M02C **Callahan** 89.33 322 ⇑P **P** **14 16 38.5 -0.2**
baz=90,SNR=8.0
J06A **Christmas Vall** 89.37 325 P **P** **14 16 38.8 -0.1**
baz=90,SNR=50
HOG **Hogback Mounta** 89.37 324 P **P** **14 16 39.4 +0.5**
KHMM **Horse Mountain** 89.40 322 *eP* **P** **14 16 39.0 0.0**
L04A **Klamath Falls** 89.42 323 ⇓P **P** **14 16 38.9 -0.3**
baz=90,SNR=7.1
YBH **Yreka Blue Hor** 89.50 323⇑*eP* **P** **14 16 37.9 -1.6**
YBH pmax pmax
comp=Z,16nm,0.9s
YBH MLR MLR
comp=Z,685nm,21.0s
YBH **Yreka Blue Hor** 89.50 323⇑*eP* **P** **14 16 37.9 -1.6**
comp=Z,16nm,0.9s,mb5.3
YBH LR LR
comp=Z,685nm,21.0s,MS5.0
YBH **Yreka Blue Hor** 89.50 323 ⇑P **P** **14 16 38.3 -1.3**
baz=90,SNR=6.0
JCC **Jacoby Creek** 89.52 321 ⇑P **P** **14 16 40.0 +0.4**
baz=90
H08A **Prairie City** 89.64 327 P **P** **14 16 39.9 -0.3**
baz=90,SNR=27
K04A **Chilquin** 89.66 324 ⇓P **P** **14 16 40.2 -0.1**
baz=90
I07A **Izee** 89.69 326 P **P** **14 16 40.6 +0.2**
baz=90,SNR=65
PTEO **Sao Teotonio** 89.80 44 *eP* **P** **14 16 41.5 +0.6**
comp=Z,83nm,1.2s,mb5.9
J05A **Fort Rock** 89.92 325 ⇑P **P** **14 16 41.4 0.0**
baz=90,SNR=28
I06A **Prineville** 89.92 326 P **P** **14 16 41.9 +0.5**
baz=90,SNR=44
L02A **Cave Junction** 90.27 323 ⇓P **P** **14 16 43.4 +0.3**
baz=91
EGRO **El Granado** 90.52 44 P **P** **14 16 44.4 +0.1**
comp=Z,58nm,1.3s,mb5.8
BSMT **Bassoo Peak** 90.56 331 *eP* **P** **14 16 44.4 0.0**
I05A **Bend** 90.59 325 ⇓P **P** **14 16 44.7 +0.2**
baz=91,SNR=19
PBEJ **Beja** 90.63 44 *eP* **P** **14 16 45.6 +0.8**
comp=Z,24nm,1.2s,mb5.4
K02A **Glendale** 90.65 323 ⇑P **P** **14 16 44.9 0.0**
baz=91,SNR=7.4
F08A **Pendleton** 90.67 328 ⇓P **P** **14 16 44.5 -0.4**
baz=91
H05A **Madras** 90.93 326 ⇓P **P** **14 16 46.3 +0.1**
baz=91,SNR=7.3
EJIF **Jimena Fronter** 90.99 46 P **P** **14 16 48.4 +1.9**
EJIF pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
EJIF **Jimena Fronter** 90.99 46 P **P** **14 16 48.4 +1.9**
comp=Z,7.8nm,0.8s,mb5.1
ESPR **Espera** 91.03 46 P **P** **14 16 47.7 +1.0**
comp=Z,31nm,1.0s,mb5.6
J02A **Umpqua** 91.13 323 ⇓P **P** **14 16 47.0 -0.1**
baz=91
EMIN **Mina Concepcio** 91.15 44 P **P** **14 16 47.9 +0.7**
comp=Z,32nm,1.0s,mb5.6
WALA **Waterton Lakes** 91.18 332 *eP* **P** **14 16 46.5 -0.8**
comp=Z,85nm,1.0s,mb6.0
PESTR **Estremoz** 91.36 43 *eP* **P** **14 16 48.7 +0.5**
comp=Z,28nm,1.1s,mb5.5
G05A **Wamic** 91.42 326 ⇑P **P** **14 16 48.7 +0.3**
baz=92,SNR=7.2
H04A **Detroit Lake** 91.42 325 ⇑P **P** **14 16 47.6 -0.8**
baz=92,SNR=16
I03A **Eugene** 91.42 324 ⇑P **P** **14 16 48.2 -0.2**
baz=92
HAWA **Hanford** 91.46 328⇑*iP* **P** **14 16 47.8 -0.9**
comp=Z,66nm,1.1s,mb5.9
HAWA *epP* pP 14 16 54.5 -1.8
HAWA LR LR
comp=Z,2µm,19.0s,MS5.5
EMIJ **Mijas** 91.49 46 P **P** **14 16 48.4 -0.3**
comp=Z,24nm,1.2s,mb5.4
WRD **Warden** 91.60 328 P **P** **14 16 49.6 +0.4**
EBAD **Badajoz** 91.61 44 P **P** **14 16 50.0 +0.7**
comp=Z,30nm,1.3s,mb5.5
HOOD **Mount Hood Mea** 91.63 326 *eP* **P** **14 16 49.7 +0.2**
SSOR **Sweet Springs** 91.67 325 P **P** **14 16 49.3 -0.3**
I02A **Mapleton** 91.72 324 ⇑P **P** **14 16 49.7 -0.2**
baz=92
NEW **Newport** 91.85 330 *eP* **P** **14 16 48.9 -1.6**
NEW **Newport** 91.85 330⇑*iP* **P** **14 16 48.0 -2.4**
comp=Z,24nm,1.1s,mb5.5
NEW *epP* pP 14 16 54.9 -3.2
NEW LR LR
comp=Z,1µm,20.0s,MS5.4
OD2 **Odessa Site #2** 91.86 329 P **P** **14 16 50.0 -0.5**
COR **Corvallis** 91.89 324 *eP* **P** **14 16 51.3 +0.7**
comp=Z,92nm,1.2s,mb6.0
COR LR LR
comp=Z,680nm,22.0s,MS5.0
G04A **Mulino** 91.94 325 ⇑P **P** **14 16 50.4 -0.5**
baz=92,SNR=10
F05A **White Salmon** 91.96 326 ⇓P **P** **14 16 50.5 -0.4**
baz=92,SNR=10
FFC **Flin Flon** 92.06 341 P **P** **14 16 50.6 -0.8**
comp=Z,151nm,1.2s,mb6.2,SNR=7.5
PCBR **Castelo Branco** 92.08 42 *eP* **P** **14 16 51.5 0.0**
comp=Z,25nm,1.5s,mb5.3
ELOJ **Sierra Loja** 92.25 46 P **P** **14 16 52.8 +0.5**
ELOJ pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
ELOJ **Sierra Loja** 92.25 46 P **P** **14 16 52.8 +0.5**
comp=Z,5.7nm,0.9s,mb4.9
ERON **Agron** 92.37 47 P **P** **14 16 52.4 -0.4**
comp=Z,1.9nm,0.5s,mb4.7
G03A **Yamhill** 92.41 325 ⇓P **P** **14 16 52.9 -0.1**
baz=93,SNR=6.0
MTMW **Mount Mitchell** 92.42 326 P **P** **14 16 53.1 +0.1**
MTE **Manteigas** 92.42 42 *eP* **P** **14 16 52.8 -0.3**
comp=Z,34nm,1.3s,mb5.5
MTE **Manteigas** 92.42 42 *e*LQ 14 42 26.7
MTE *e*LR LR 14 50 17.8
comp=Z,1µm,18.0s
ELUQ **Luque** 92.44 46 P **P** **14 16 53.9 +0.7**
ELUQ pmax pmax
comp=Z,23nm,1.0s,mb5.5
ELUQ **Luque** 92.44 46 P **P** **14 16 53.9 +0.7**

comp=Z,23nm,1.0s,mb5.5
F04A Amboy 92.45 326 ⇑P **P** **14 16 52.2 -1.0**
baz=93,SNR=5.9
TBM Table Mountain 92.53 328 P **P** **14 16 53.5 -0.1**
E05A Randle 92.60 327 ⇓P **P** **14 16 52.8 -1.1**
baz=93,SNR=12
WTV Waterville 92.64 328 P **P** **14 16 53.4 -0.6**
EADA Adamuz 92.66 45 P **P** **14 16 54.6 +0.5**
comp=Z,18nm,1.2s,mb5.4
ECOG Cogollos-Vega 92.69 46 P **P** **14 16 54.7 +0.4**
ECOG pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
ECOG Cogollos-Vega 92.69 46 P **P** **14 16 54.7 +0.4**
comp=Z,5.4nm,0.8s,mb5.0
LON Longmire 92.77 327 *e*P **P** **14 16 54.0 -0.7**
PVRL Vila Real 92.92 41 *e*P **P** **14 16 55.8 +0.4**
comp=Z,33nm,1.1s,mb5.7
EZAM Zamans 92.98 40 P **P** **14 16 54.2 -1.4**
EZAM pmax pmax
comp=Z,14nm,0.7s,mb5.5
EZAM Zamans 92.98 40 P **P** **14 16 54.2 -1.4**
comp=Z,14nm,0.7s,mb5.5
F03A Seaside 92.99 325 ⇑P **P** **14 16 54.2 -1.5**
baz=93
E04A Onalaska 93.07 326 ⇓P **P** **14 16 55.5 -0.6**
baz=93
AFI Afiamalu 93.10 251 PFAKE 14 17 10.0 +14
AFI LR LR
comp=Z,8µm,19.0s,MS6.2
EBAN Banos Encina 93.13 46 P **P** **14 16 57.0 +0.7**
EBAN pmax pmax
comp=Z,44nm,1.3s,mb5.7
EBAN Banos Encina 93.13 46 P **P** **14 16 57.0 +0.7**
comp=Z,44nm,1.3s,mb5.7
ELOB Lobios 93.13 41 P **P** **14 16 52.7 -3.7**
comp=Z,20nm,1.4s,mb5.3
D05A Enumclaw 93.17 327 ⇑P **P** **14 16 55.3 -1.2**
baz=94,SNR=6.2
ENIJ Nijar 93.32 47 P **P** **14 16 57.9 +0.7**
ENIJ pmax pmax
comp=Z,15nm,1.0s,mb5.4
ENIJ Nijar 93.32 47 P **P** **14 16 57.9 +0.6**
comp=Z,15nm,1.0s,mb5.4
EQES Quesada 93.32 46 P **P** **14 16 57.1 -0.2**
comp=Z,19nm,1.1s,mb5.4
C05A Tolt Reservoir 93.41 327 ⇓P **P** **14 16 55.7 -2.0**
baz=94,SNR=6.6
E03A Lebam 93.44 326 ⇓P **P** **14 16 56.6 -1.2**
baz=94
D04A Dobbs Creek Ra 93.49 326 ⇓P **P** **14 16 57.5 -0.5**
baz=94
STS Santiago 93.56 40 P **P** **14 16 56.6 -1.7**
STS pmax pmax
comp=Z,17nm,1.1s,mb5.4
STS Santiago 93.56 40 P **P** **14 16 56.5 -1.8**
comp=Z,17nm,1.1s,mb5.4
PNT Penticton 93.72 329 P **P** **14 16 57.9 -1.2**
PBRG Braganca 93.81 41 *e*P **P** **14 16 59.8 +0.3**
comp=Z,22nm,1.4s,mb5.4
GNW Green Mountain 93.83 327 *e*P **P** **14 16 59.0 -0.6**
ECAL Calabor 93.91 41 P **P** **14 16 59.4 -0.6**
comp=Z,23nm,1.2s,mb5.5
D03A Wishkah Elem. 93.95 326 ⇓P **P** **14 16 59.8 -0.3**
baz=94
FCC Fort Churchill 93.95 347 *e*P **P** **14 16 59.4 -0.8**
FCC pmax pmax
comp=Z,50nm,0.9s,mb5.9
FCC Fort Churchill 93.95 347 *e*P **P** **14 16 59.4 -0.8**
comp=Z,50nm,0.9s,mb5.9
ESLA Sonseca Array 94.00 44⇑ *e*P **P** **14 17 00.1 -0.2**
comp=Z,5.9nm,1.2s,mb4.9
ESLA *e*pP pP 14 17 07.1 -1.0
ESLA LR LR
comp=Z,4µm,21.0s,MS5.9
ESDC Sonseca Array 94.00 44 P **P** **14 16 59.8 -0.5**
comp=Z,6.7nm,0.9s,mb5.1,baz=243,slow=4.4,SNR=22
ESDC pP pP 14 17 07.3 -0.8
comp=Z,8.5nm,1.0s,baz=239,slow=4.2,SNR=11
ESDC LR LR 15 00 36.6
comp=Z,615nm,18.0s,MS5.1,baz=255,slow=36
ESDC Sonseca Array 94.00 44 P **P** **14 17 01.0 +0.6**
comp=Z,13nm,1.3s,mb5.2
C04A Brinnon 94.01 327 ⇑P **P** **14 16 59.5 -0.9**
baz=94,SNR=10
B05A Bryant 94.02 327 ⇓P **P** **14 16 58.9 -1.6**
baz=94,SNR=7.0
EVIA Vianos 94.20 46 P **P** **14 17 01.7 +0.4**
EVIA pmax pmax
comp=Z,4.0nm,0.6s,mb5.0
EVIA Vianos 94.20 46 P **P** **14 17 01.7 +0.4**
comp=Z,4.4nm,0.6s,mb5.1
EDM Edmonton 94.32 335 *e*P **P** **14 16 59.5 -2.3**
B04A Port Angeles 94.51 327 ⇑P **P** **14 17 01.8 -0.9**
baz=95
GUD Guadarrama 94.52 44 P **P** **14 17 03.7 +1.0**
GUD pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
GUD Guadarrama 94.52 44 P **P** **14 17 03.7 +0.9**
comp=Z,4.5nm,0.9s,mb4.9
A05A Maple Falls 94.55 328 ⇑P **P** **14 17 01.3 -1.6**
baz=95,SNR=7.3
A04A Legoe Bay, Lum 94.63 327 ⇓P **P** **14 17 02.0 -1.2**
baz=95,SNR=7.0
ETOB Tobarra 94.78 46 P **P** **14 17 04.6 +0.7**
comp=Z,19nm,1.1s,mb5.4
ECHE Chera 95.73 46 P **P** **14 17 09.5 +1.2**
ECHE pmax pmax
comp=Z,15nm,1.0s,mb5.4
ECHE Chera 95.73 46 P **P** **14 17 09.5 +1.2**
comp=Z,15nm,1.0s,mb5.4
EMOS Mosqueruela 96.51 46 P **P** **14 17 13.4 +1.6**
comp=Z,32nm,1.3s,mb5.6
ELAN Lanestosa 96.59 42 P **P** **14 17 12.7 +0.5**
comp=Z,22nm,1.0s,mb5.5
ERTA Horta de San J 97.36 46 P **P** **14 17 16.2 +0.6**
comp=Z,31nm,1.0s,mb5.7
SJPF Ste Jean 97.77 43 *e*P **P** **14 17 17.5 0.0**
comp=Z,46nm,1.2s,mb5.6
SJPF Ste Jean 97.77 43 *e*P **P** **14 17 17.5 0.0**
SJPF pmax pmax
comp=Z,23nm,1.2s,mb5.6
SJPF Ste Jean 97.77 43 *e*P **P** **14 17 17.5 0.0**
comp=Z,23nm,1.2s,mb5.6
ETSF Etsaut 98.02 44 *e*P **P** **14 17 18.8 +0.1**
comp=Z,137nm,1.9s,mb5.9
ETSF Etsaut 98.02 44 *e*P **P** **14 17 18.8 +0.1**
ETSF pmax pmax
comp=Z,68nm,1.9s,mb5.8
ETSF Etsaut 98.02 44 *e*P **P** **14 17 18.8 +0.1**
comp=Z,68nm,1.9s,mb5.9
EPF Esparros 98.63 44 *e*P **P** **14 17 19.5 -1.9**
QUIF Quistinic 99.72 38 *e*P Pdif 14 17 25.1 -1.2
comp=Z,37nm,1.2s
QUIF Quistinic 99.72 38 *e*P Pdif 14 17 25.1 -1.2
QUIF pmax pmax
comp=Z,19nm,1.2s,mb5.4
QUIF Quistinic 99.72 38 *e*P Pdif 14 17 25.1 -1.2
comp=Z,18nm,1.2s
MTLF Montolieu 99.91 44 *e*P Pdif 14 17 26.5 -0.6
comp=Z,19nm,1.0s
MTLF Montolieu 99.91 44 *e*P Pdif 14 17 26.5 -0.6
MTLF pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
MTLF Montolieu 99.91 44 *e*P Pdif 14 17 26.5 -0.6
comp=Z,9.7nm,1.0s
ROSF Rostrenen 99.93 38 *e*P Pdif 14 17 26.1 -1.1
comp=Z,51nm,1.2s
ROSF Rostrenen 99.93 38 *e*P Pdif 14 17 26.1 -1.1
ROSF pmax pmax
comp=Z,26nm,1.2s,mb5.5
ROSF Rostrenen 99.93 38 *e*P Pdif 14 17 26.1 -1.1
comp=Z,26nm,1.2s
LFF La Frestale 100.01 42 *e*P Pdif 14 17 27.0 -0.5
KEST Kesra 100.09 54 P Pdif 14 17 27.8 -0.1
comp=Z,2.0nm,1.0s,baz=180,slow=13,SNR=2.9
KEST pP 14 17 36.3
comp=Z,3.4nm,0.9s,baz=296,slow=6.2,SNR=4.3
SGMF Saint Gilles 100.25 38 *e*P Pdif 14 17 27.3 -1.3
comp=Z,19nm,1.1s
SGMF Saint Gilles 100.25 38 *e*P Pdif 14 17 27.3 -1.3
SGMF pmax pmax
comp=Z,10.0nm,1.0s
SGMF Saint Gilles 100.25 38 *e*P Pdif 14 17 27.3 -1.3
comp=Z,9.5nm,1.0s
MFF Saint Martin d 100.52 41 *e*P Pdif 14 17 30.2 +0.4
comp=Z,25nm,1.0s
MFF Saint Martin d 100.52 41 *e*P Pdif 14 17 30.2 +0.4
MFF pmax pmax
comp=Z,13nm,1.0s
MFF Saint Martin d 100.52 41 *e*P Pdif 14 17 30.2 +0.4
comp=Z,12nm,1.0s
RJF Les Rejaudoux 100.67 43 *e*P Pdif 14 17 29.8 -0.7
comp=Z,28nm,1.3s
RJF *e*R
comp=Z,2µm,23.0s
RJF Les Rejaudoux 100.67 43 *e*P Pdif 14 17 29.8 -0.7
RJF pmax pmax
comp=Z,14nm,1.3s
RJF MLR MLR
comp=Z,2µm,23.0s,MS5.4
RJF Les Rejaudoux 100.67 43 *e*P Pdif 14 17 29.8 -0.7
comp=Z,14nm,1.3s
RJF LR LR
comp=Z,2µm,23.0s,MS5.4
CAF Calviac 100.76 43 *e*P Pdif 14 17 30.6 -0.3
comp=Z,31nm,1.3s
CAF Calviac 100.76 43 *e*P Pdif 14 17 30.6 -0.3
CAF pmax pmax
comp=Z,16nm,1.3s
CAF Calviac 100.76 43 *e*P Pdif 14 17 30.6 -0.3
comp=Z,16nm,1.3s
GRR Gorron 101.23 39 *e*P Pdif 14 17 31.7 -1.2
TCF Toulx Ste Croi 101.64 42 *e*P Pdif 14 17 34.0 -0.8
comp=Z,21nm,1.2s
TCF Toulx Ste Croi 101.64 42 *e*P Pdif 14 17 34.0 -0.8
TCF pmax pmax
comp=Z,11nm,1.2s
TCF Toulx Ste Croi 101.64 42 *e*P Pdif 14 17 34.0 -0.8
comp=Z,11nm,1.2s
FLN La Foliniere 101.65 39 *e*P Pdif 14 17 33.9 -0.9
FLN *e*R
comp=Z,1µm,23.0s
FLN La Foliniere 101.65 39 *e*P Pdif 14 17 33.9 -0.9
FLN LR LR
comp=Z,1µm,23.0s,MS5.4
LDF La Druitiere 101.74 39 *e*P Pdif 14 17 34.2 -1.0
YKA Yellowknife Ar 102.15 340 P Pdif 14 17 35.1 -1.9
comp=Z,4.2nm,0.8s,baz=139,slow=4.5,SNR=45
YKA PP PP 14 21 49.2 +0.4
comp=Z,1.8nm,0.8s,baz=138,slow=6.9,SNR=3.8
YKA PKKPbc PKKPbc 14 33 36.3 -3.6
comp=Z,0.4nm,0.6s,baz=323,slow=3.1,SNR=5.8
YKA Yellowknife Ar 102.15 340 P Pdif 14 17 35.1 -1.9
YKA 14 21 49.2
YKA Yellowknife Ar 102.15 340 P Pdif 14 17 35.1 -1.9
YKA PP PP 14 21 49.2 +0.4
YKA PKKPbc PKKPbc 14 33 36.3 -3.6
BGF Bois d'Agland 102.16 42 *e*P Pdif 14 17 36.5 -0.6
YKW3 Yellowknife Ar 102.20 340 *e*Pdif Pdif 14 17 35.9 -1.3
VIVF Saint-Julien-l 102.23 44 *e*P Pdif 14 17 37.4 0.0
comp=Z,40nm,1.4s
VIVF Saint-Julien-l 102.23 44 *e*P Pdif 14 17 37.4 0.0
VIVF pmax pmax
comp=Z,20nm,1.4s
VIVF Saint-Julien-l 102.23 44 *e*P Pdif 14 17 37.4 0.0
comp=Z,20nm,1.4s
AVF Avril sur Loir 102.58 42 *e*P Pdif 14 17 38.3 -0.6
comp=Z,13nm,1.0s
AVF Avril sur Loir 102.58 42 *e*P Pdif 14 17 38.3 -0.6
AVF pmax pmax
comp=Z,6.0nm,1.0s
AVF Avril sur Loir 102.58 42 *e*P Pdif 14 17 38.3 -0.6
comp=Z,6.3nm,1.0s
SMF Signal de Mont 102.77 42 *e*P Pdif 14 17 39.5 -0.3
comp=Z,42nm,1.3s
SMF Signal de Mont 102.77 42 *e*P Pdif 14 17 39.5 -0.3
SMF pmax pmax
comp=Z,21nm,1.3s
SMF Signal de Mont 102.77 42 *e*P Pdif 14 17 39.5 -0.3
comp=Z,21nm,1.3s
SSF Saint Saulge 102.82 42 *e*P Pdif 14 17 39.2 -0.8
comp=Z,20nm,1.1s
SSF Saint Saulge 102.82 42 *e*P Pdif 14 17 39.2 -0.8
SSF pmax pmax
comp=Z,10.0nm,1.1s
SSF Saint Saulge 102.82 42 *e*P Pdif 14 17 39.2 -0.8
comp=Z,10nm,1.1s
LOR Lormes 103.14 42 *e*P Pdif 14 17 40.7 -0.7
comp=Z,33nm,1.5s
LOR *e*R
comp=Z,1µm,18.5s
LOR Lormes 103.14 42 *e*P Pdif 14 17 40.7 -0.7
LOR pmax pmax
comp=Z,16nm,1.5s
LOR MLR MLR
comp=Z,1µm,18.5s,MS5.5
LOR Lormes 103.14 42 *e*P Pdif 14 17 40.7 -0.7
comp=Z,16nm,1.5s
LOR LR LR
comp=Z,1µm,18.5s,MS5.5
MBDF Montbardon 103.40 45 *e*P Pdif 14 17 41.1 -1.5
LPL La Plagne 103.81 44 *e*P Pdif 14 17 43.8 -0.6
comp=Z,21nm,1.2s
LPL La Plagne 103.81 44 *e*P Pdif 14 17 43.8 -0.6
LPL pmax pmax
comp=Z,11nm,1.2s
LPL La Plagne 103.81 44 *e*P Pdif 14 17 43.8 -0.6
comp=Z,11nm,1.2s
CABF La Chapelle 104.03 43 *e*P Pdif 14 17 45.3 -0.1
comp=Z,22nm,1.1s
CABF La Chapelle 104.03 43 *e*P Pdif 14 17 45.3 -0.1
CABF pmax pmax
comp=Z,11nm,1.1s
CABF La Chapelle 104.03 43 *e*P Pdif 14 17 45.3 -0.1
comp=Z,11nm,1.1s
ESK Eskdalemuir 104.33 32 PFAKE 14 18 00.0 +13
ESK LR LR
comp=Z,910nm,20.0s,MS5.3
BORG Borgarnes 104.34 19 PFAKE 14 18 00.0 +13
BORG LR LR
comp=Z,812nm,20.0s,MS5.3
EKA Eskdalemuir Ar 104.36 32 Pdiff Pdif 14 17 45.8 -1.1
comp=Z,5.8nm,0.9s,baz=231,slow=5.2,SNR=12
EKA pPdiff 14 17 53.0
comp=Z,3.5nm,0.9s,baz=234,slow=5.1,SNR=6.1
MEZF Maizieres J'vi 104.49 41 *e*P Pdif 14 17 46.8 -0.7
BAIF Baives 104.90 40 *e*P Pdif 14 17 48.4 -0.9
comp=Z,19nm,1.2s
BAIF Baives 104.90 40 *e*P Pdif 14 17 48.4 -0.9
BAIF pmax pmax
comp=Z,10.0nm,1.2s
BAIF Baives 104.90 40 *e*P Pdif 14 17 48.4 -0.9
comp=Z,9.6nm,1.2s
HINF Hinteralfeld 105.13 43 *e*P Pdif 14 17 49.5 -0.8
GIVF Givet 105.25 40 *e*P Pdif 14 17 50.2 -0.6
CDF Champ du Feu 105.69 42 *e*P Pdif 14 17 52.2 -0.6
comp=Z,9.6nm,1.1s
CDF Champ du Feu 105.69 42 *e*P Pdif 14 17 52.2 -0.6
CDF pmax pmax
comp=Z,5.0nm,1.1s
CDF Champ du Feu 105.69 42 *e*P Pdif 14 17 52.2 -0.6
comp=Z,4.8nm,1.1s
DAVOX Davos 106.33 45 PKiKP PKiKP 14 22 06.8 -0.1
comp=Z,1.7nm,0.5s,baz=300,slow=10,SNR=3.6
DAVOX PKKPbc PKKPbc 14 33 27.2 -0.1
comp=Z,1.8nm,0.5s,baz=38,slow=19,SNR=4.9
WTTA Wattenberg 107.61 45⇑ *i*P PKiKP 14 22 15.2 +5.9
comp=Z,8.5nm,1.3s
GRA1 Grafenberg Arr 108.57 42 *e*P Pdif 14 18 12.0 +6.4
GRA1 *e*PP PP 14 22 42.2 +5.8
GRA1 *e*SP SP 14 31 56.2 -2.2
GRA1 LR LR
comp=Z,900nm,18.7s,MS5.4
GRF Grafenberg Arr 108.57 42 *e*Pdiff Pdif 14 18 12.0 +6.4
GRF *e*PP PP 14 22 42.2 +5.8
GRF *e*SP SP 14 31 56.2 -2.2
GRF *e*L 15 09 40.9
comp=Z,876nm,18.7s
STKA Stephens Creek 109.30 207 PKKPbc PKKPbc 14 33 17.3 -0.7
comp=Z,2.2nm,0.9s,baz=316,slow=2.9,SNR=3.5
MOA Molln 109.45 45⇓ *i*P PKiKP 14 22 12.2 -0.5
comp=Z,5.3nm,0.9s
NKC Novy Kostel 109.53 42 *e*PKP PKiKP 14 22 12.6 -0.3
NKC AMS AMS 15 10 10.0
GEC2 GERESS Array S 109.59 44 *e*PKPdf PKiKP 14 22 11.4 -1.6
GERES GERESS Array B 109.59 44 PKiKP PKiKP 14 22 12.6 -0.3
comp=Z,4.0nm,0.8s,baz=210,slow=1.1,SNR=16
GERES PKKPbc PKKPbc 14 33 16.2 -0.9
comp=Z,1.2nm,0.9s,baz=90,slow=2.7,SNR=7.6
KHC Kasperske Hory 109.65 44 *e*PKP PKiKP 14 22 12.7 -0.4
KHC *e*SP SP 14 32 03.7 -5.7
KHC AMS AMS 15 08 10.0
comp=Z,900nm,20.4s
KHC Kasperske Hory 109.65 44 *e*PKP PKiKP 14 22 12.7 -0.4
KHC *e*SP SP 14 32 03.7 -5.7
KHC LR LR
comp=Z,900nm,20.4s,MS5.3
ARSA Arzberg 109.93 46⇑ *i*P PKiKP 14 22 13.1 -0.6
comp=Z,4.8nm,0.6s
CLL Collm 110.34 41 *e*Pdiff Pdif 14 18 13.9 +0.4
CLL *e*PKiKP PKiKP 14 22 14.1 -0.3
CLL *e*PP PP 14 22 47.8 -1.5
CLL *e*pPP 14 22 55.1
CLL *e*PS PS 14 32 21.2 +2.2
CLL *e*PKKPab PKKPab 14 33 25.6 0.0
CLL *e*SS SS 14 38 22.4 +7.2
CLL *e*SSS 14 42 22.0
CLL *e*L 15 05 10.2
comp=Z,1µm,22.0s
CLL Collm 110.34 41 *e*PDIF Pdif 14 18 08.0 -5.5
CLL *i* 14 22 14.0
CLL *i* 14 22 22.4
CLL *i* PP PP 14 22 48.0 -1.3
CLL *e**PPP 14 22 55.0
CLL *e*PS PS 14 32 13.0 -6.0
CLL *e*PPS 14 33 18.0
CLL *e*PKKP PKKPbc 14 33 25.0 +10
CLL *e* 14 33 52.0
CLL *e*SS SS 14 38 13.0 -2.2
CLL Collm 110.34 41 *e*(Pdif) 14 18 08.0
CLL *i* PKiKP PKiKP 14 22 14.0 -0.4
comp=Z,6.0nm,1.1s
CLL *i* pPKiKP 14 22 22.4
CLL *i* PP PP 14 22 48.0 -1.3
CLL *e*pPP 14 22 55.0
CLL *e*PS PS 14 32 13.0 -6.0
CLL *e*PPS 14 33 18.0
CLL *e*PKKPab PKKPab 14 33 25.0 -0.6
comp=Z,9.0nm,1.4s
CLL *e*x x 14 33 52.0
CLL *e*SS SS 14 38 13.0 -2.2
CLL *e*(SSS) 14 42 12.0
CLL Collm 110.34 41 *e*Pdif Pdif 14 18 08.0 -5.5
CLL *i* PKP PKiKP 14 22 14.0 -0.4
CLL *i* pPKP 14 22 22.4
CLL *i* PP PP 14 22 48.0 -1.3
CLL *e*PKKP PKKPbc 14 33 25.0 +10
CLL LR LR
comp=Z,1µm,21.5s,MS5.4
CONA Conrad Observa 110.44 46⇑ *i*PKiKP PKiKP 14 22 13.4 -1.2
comp=Z,3.5nm,0.6s
PRU Pruhonice 110.61 43 *e*SP SP 14 32 12.4 -6.1
PRU AMS AMS 15 10 40.0
comp=Z,600nm,17.2s
BRG Berggiesshubel 110.67 42 *i* P PKiKP 14 22 15.2 +0.2
comp=Z,3.9nm,0.9s
BRG *i* 14 32 19.0
BRG SS SS 14 38 10.0 -10
BRG
comp=N,250nm,20.8s
BRG
comp=E,364nm,20.0s
BRG
comp=Z,605nm,19.8s
BRG Berggiesshubel 110.67 42 *i* PKiKP PKiKP 14 22 15.2 +0.2
BRG *i* 14 32 19.0
BRG pmax pmax
comp=Z,4.0nm,0.9s
BRG MLR MLR
comp=N,250nm,20.8s,MS5.0
BRG MLR MLR
comp=E,364nm,20.0s,MS5.0
BRG MLR MLR
comp=Z,605nm,19.8s,MS5.2
BRG Berggiesshubel 110.67 42 *i* P PKiKP 14 22 15.2 +0.2
BRG *i* 14 32 19.0
BRG SS SS 14 38 10.0 -10
BRG LR LR
comp=Z,610nm,19.8s,MS5.2
TREC Trest 110.84 44 AMS AMS 15 09 40.0
comp=Z,600nm,20.8s
BER Bergen 110.95 31 *e* SP AMS 14 32 21.2 -0.5
BER AMS AMS 15 14 52.8
comp=Z,608nm,17.1s,MS5.2
PKSM Moragy 111.39 48⇑ *i*P PKiKP 14 22 16.5 +0.1
VRAC Vranov 111.50 45 PKiKP PKiKP 14 22 15.7 -0.9
comp=Z,1.8nm,0.5s,baz=153,slow=4.4,SNR=3.8
DPC Dobruska-Polom 111.79 43 *e*PKP PKiKP 14 22 17.1 0.0
DPC *e*SP SP 14 32 25.7 -3.8
DPC AMS AMS 15 11 30.0
comp=Z,900nm,18.6s
MORC Moravsky Berou 112.25 44⇑ *i*P PKiKP 14 22 18.2 +0.2
KONO Kongsberg 112.48 33 *e*SS SS 14 38 42.6 -1.0
KONO Kongsberg 112.48 33 PFAKE 14 22 30.0 +12
KONO LR LR
comp=Z,746nm,20.0s,MS5.3
VYHS Vyhne 112.48 46 *e*PKP PKiKP 14 22 18.3 -0.1
DIV Divide 112.59 329 PFAKE 14 22 30.0 +11
DIV LR LR
comp=Z,1µm,20.0s,MS5.5
OKC Ostrava-Krasne 112.64 44 *e*PKP PKiKP 14 22 18.2 -0.5
OKC *e*SP SP 14 32 40.6 +3.4
OKC AMS AMS 15 14 00.0
comp=Z,700nm,19.7s
OKC Ostrava-Krasne 112.64 44 *e*PKP PKiKP 14 22 18.2 -0.5
OKC *e*SP SP 14 32 40.6 +3.4
BZS Buzias 113.02 50⇑ *i*P PKiKP 14 22 19.5 0.0
GKP Gorka Klasztor 113.54 41 *e*PKP 14 22 09.1
GKP L 15 07 02.0
comp=Z,1.1nm,22.6s
NAO01 NORSAR Array S 113.59 32 PFAKE 14 22 30.0 +9.4
NAO01 LR LR
comp=Z,760nm,19.0s,MS5.3
NB2 NORSAR Subarra1 113.82 32 PKPd PKiKP 14 22 19.8 -1.2
comp=Z,9.1nm,1.2s,baz=248,slow=1.9
NB2 NORSAR Subarra1 113.82 32 PKPd PKiKP 14 22 19.8 -1.2
baz=248,slow=1.9
NOA NORSAR Array B 113.82 32 PKiKP PKiKP 14 22 20.3 -0.7
comp=Z,2.8nm,0.9s,baz=245,slow=2.0,SNR=7.2
NOA PKKPbc PKKPbc 14 33 08.2 +5.0
comp=Z,3.0nm,0.8s,baz=67,slow=4.6,SNR=9.6
NOA NORSAR Array B 113.82 32 PKPdif PKiKP 14 22 20.3 -0.7
NOA PKKPbc PKKPbc 14 33 08.2 +5.0
DRGR 114.18 49⇓ *i*P PKiKP 14 22 21.7 0.0
CRVS Cervenica-Dubn 114.24 46 *e*PKP PKiKP 14 22 21.2 -0.6
PMR Palmer 114.25 329 PFAKE 14 22 30.0 +8.2
PMR LR LR
comp=Z,464nm,21.0s,MS5.1
KDAK Kodiak Island 114.28 324 PFAKE 14 22 30.0 +8.1
KDAK LR LR
comp=Z,123nm,20.0s,MS4.5
HFS Hagfors 114.55 33 PKP PKiKP 14 22 20.3 -2.1
comp=Z,2.2nm,0.9s,baz=224,slow=4.1,SNR=6.2
HFS PP PP 14 23 18.4 -1.0
comp=Z,3.3nm,1.0s,baz=233,slow=8.9,SNR=2.6
HFS PKKPbc PKKPbc 14 33 01.7 +1.1
comp=Z,4.1nm,0.7s,baz=114,slow=3.6,SNR=11
KOLS Kolonicke sedl 114.74 47 *e*PKP PKiKP 14 22 23.0 +0.2
MCK McKinley 115.06 331 PFAKE 14 22 30.0 +6.6
MCK LR LR
comp=Z,407nm,21.0s,MS5.0
COLA College 115.10 332 PFAKE 14 22 30.0 +6.5
COLA LR LR
comp=Z,651nm,19.0s,MS5.3
KWP Kalwaria 115.27 46 *e*PKP PKiKP 14 22 23.6 -0.2
KWP *e* 14 22 29.7
KWP *e* 14 22 39.1
KWP L 15 14 01.6
comp=Z,0.8nm,19.5s
KWP Kalwaria 115.27 46 *e*PKIKP PKiKP 14 22 23.6 -0.2
KWP *e* 14 22 29.7
KWP MLR MLR
comp=Z,800nm,19.5s,MS5.3
KWP Kalwaria 115.27 46 *e*PKP PKiKP 14 22 23.6 -0.2
KWP *e* 14 22 29.7
KWP *e* 14 22 39.1
MLR Muntele Rosu 115.77 51⇑ *i*P PKPdf 14 22 24.2 -0.5
BURAR Bucovina Array 116.08 49⇑ *i*P PKPdf 14 22 26.0 +0.7
LVV L'vov 116.14 46 *i* PKIKP PKPdf 14 22 24.3 -1.2
LVV *e* 14 23 27.5
LVV *e*PPP 14 26 03.3
LVV *e* 14 29 15.7
LVV *e* 14 33 03.1
SUW Suwalki 117.10 42 *e*PKP PKPdf 14 22 26.3 -1.0
SUW *e* 14 22 33.3
SUW L 15 12 29.0
comp=Z,1.1nm,20.6s

SUW Suwalki 117.10 42 ePKP PKPdf 14 22 26.3 -1.0
SUW e 14 22 33.3
HNR Honiara 117.27 236 PFAKE 14 22 40.0 +12
HNR LR LR
comp=Z,571nm,21.0s,MS5.2
TTA Tatalina 117.74 329 ePKIKP PKPdf 14 22 27.8 -0.7
IMA2 Indian Mountai 117.81 333 eP PKPdf 14 22 27.7 -1.0
ANTO Ankara 118.44 59 PFAKE 14 22 40.0 +10
ANTO LR LR
comp=Z,902nm,20.0s,MS5.4
BR131 Keskin Array S 119.00 59 ePKPdf PKPdf 14 22 30.1 -0.9
BR131 epPKPdf pPKPdf 14 22 37.2 -1.6
BR131 LR LR
comp=Z,610nm,19.0s,MS5.2
BRTR Keskin Array B 119.00 59 PKP PKPdf 14 22 30.5 -0.5
comp=Z,4.6nm,0.8s,baz=188,slow=3.6,SNR=25
BRTR pPKP pPKPdf 14 22 37.6 -1.2
comp=Z,4.3nm,0.9s,baz=205,slow=5.2,SNR=9.5
BRTR PKKPbc PKKPbc 14 32 44.7 -0.2
comp=Z,0.9nm,0.8s,baz=69,slow=6.8,SNR=4.3
BRTR Keskin Array B 119.00 59 PKIKP PKPdf 14 22 30.5 -0.5
BRTR 14 22 37.6
MIDW Midway 119.50 286 PFAKE 14 22 40.0 +8.1
MIDW LR LR
comp=Z,734nm,19.0s,MS5.3
ASAR Alice Springs 119.54 204 PKP PKPdf 14 22 30.9 -1.1
comp=Z,6.1nm,1.0s,baz=140,slow=1.8,SNR=28
ASAR PKKPbc PKKPbc 14 32 43.2 +0.3
comp=Z,4.8nm,0.9s,baz=334,slow=3.1,SNR=35
ASAR SKKPbc 14 36 31.6
comp=Z,1.9nm,0.9s,baz=344,slow=4.5,SNR=4.2
AS31 Alice Springs 119.54 204 eP PKPdf 14 22 30.3 -1.7
ASPA Alice Springs 119.54 204 eP PKPdf 14 22 30.3 -1.7
AKASG Malin Array Be 119.58 46 PKP PKPdf 14 22 30.6 -1.4
comp=Z,11nm,0.6s,baz=263,slow=2.5,SNR=102
AKASG pPKP pPKPdf 14 22 37.4 -2.5
comp=Z,10nm,0.7s,baz=267,slow=2.8,SNR=12
AKASG PKKPbc PKKPbc 14 32 41.7 -1.1
comp=Z,1.3nm,0.6s,baz=55,slow=4.4,SNR=8.0
AKASG Malin Array Be 119.58 46 PKIKP PKPdf 14 22 30.6 -1.5
AKASG 14 22 37.4
AKASG Malin Array Be 119.58 46 PKPdf PKPdf 14 22 30.6 -1.5
AKASG e 14 22 37.4
AKBB Malin Array Si 119.58 46⇑ ePKIKP PKPdf 14 22 30.1 -2.0
AKBB e 14 22 37.1
TRO Tromso 119.83 24 e PKPdf 14 22 30.0 -2.6
TRO ePP PP 14 23 55.4 -0.7
TRO i 14 33 31.8
TRO eSS SS 14 40 21.6 +1.7
TRO AMS AMS 15 10 26.9
comp=Z,314nm,21.2s,MS4.9
UNV Unalaska Valle 120.36 317 PFAKE 14 22 40.0 +6.4
UNV LR LR
comp=Z,1µm,19.0s,MS5.6
KBS Kingsbay 120.48 13 AMS AMS 15 18 15.9
comp=Z,330nm,20.0s,MS5.0
KBS Kingsbay 120.48 13 PFAKE 14 22 40.0 +6.2
KBS LR LR
comp=Z,553nm,20.0s,MS5.2
FINES FINESS Array B 120.72 34 PKP PKPdf 14 22 32.7 -1.6
comp=Z,6.5nm,0.8s,baz=106,slow=0.5,SNR=31
FINES PKKPbc PKKPbc 14 32 37.7 -0.9
comp=Z,2.0nm,0.8s,baz=109,slow=3.6,SNR=10
FINES FINESS Array B 120.72 34 PKP PKPdf 14 22 32.7 -1.6
FINES PKKPbc PKKPbc 14 32 37.7 -0.9
KAF Kangasniemi 120.97 33 epkp PKPdf 14 22 32.3 -2.5
SIM Simferopol' 121.03 54 i PKIKP PKPdf 14 22 34.7 -0.2
SIM e 14 24 03.0
SIM pmax pmax
comp=Z,20nm,1.2s
SIM MLR MLR
comp=Z,700nm,22.4s,MS5.2
MALT Malatya 122.04 62⇓ iP PKPdf 14 22 37.9 +1.1
MALT Malatya 122.04 62⇑ ePKPdf PKPdf 14 22 36.9 +0.1
MALT epPKPdf pPKPdf 14 22 44.2 -0.5
MALT ePP PP 14 24 14.7 +3.5
ARCES ARCESS Array B 122.07 24 PKP PKPdf 14 22 35.4 -1.4
comp=Z,5.1nm,0.5s,baz=254,slow=3.7,SNR=53
ARCES pPKP pPKPdf 14 22 42.5 -2.3
comp=Z,5.6nm,0.7s,baz=247,slow=2.5,SNR=7.4
ARCES PP PP 14 24 09.1 -2.3
comp=Z,8.2nm,1.2s,baz=272,slow=8.0,SNR=4.3
ARCES PKKPbc PKKPbc 14 32 31.4 -2.1
comp=Z,2.0nm,0.6s,baz=90,slow=4.9,SNR=20
ARCES ARCESS Array B 122.07 24 PKIKP PKPdf 14 22 35.4 -1.5
ARCES 14 22 42.5
ARCES 14 24 09.1
ARCES ARCESS Array B 122.07 24 PKP PKPdf 14 22 35.4 -1.4
ARCES pPKP pPKPdf 14 22 42.5 -2.3
ARCES PP PP 14 24 09.1 -2.3
ARCES PKKPbc PKKPbc 14 32 31.4 -2.1
ARE0 ARCESS Array S 122.07 24⇑ ePKPdf PKPdf 14 22 34.9 -2.0
ARE0 epPKPdf pPKPdf 14 22 42.5 -2.3
KEV Kevo 122.62 24 ePKP PKPdf 14 22 35.7 -2.2
KEV LR LR
comp=Z,564nm,21.0s,MS5.2
WB2 Warramunga Arr 122.81 206 eP PKPdf 14 22 37.6 -0.7
WRA Warramunga Arr 122.81 206 PKP PKPdf 14 22 37.6 -0.7
comp=Z,13nm,0.9s,baz=166,slow=1.6,SNR=87
WRA PKKPbc PKKPbc 14 32 29.8 -0.9
comp=Z,5.4nm,0.9s,baz=344,slow=4.3,SNR=30
WRAB Tennant Creek 122.82 206⇓ iPKIKP PKPdf 14 22 37.9 -0.4
WRAB Tennant Creek 122.82 206 ePKPdf PKPdf 14 22 37.3 -1.0
WRAB LR LR
comp=Z,970nm,21.0s,MS5.4
TNA Tin City 123.39 331 PFAKE 14 22 50.0 +11
TNA LR LR
comp=Z,275nm,19.0s,MS4.9
JOF Joensuu 123.40 33 epkp PKPdf 14 22 37.9 -1.5
APA Apatity 124.75 27⇑ iPKIKP PKPdf 14 22 41.4 -0.6
APA i 14 22 47.8
APA pmax pmax
comp=Z,24nm,0.8s
APA MLR MLR
comp=Z,1µm,20.0s,MS5.6
OBN Obninsk 124.92 43c iPKIKP PKPdf 14 22 40.9 -1.4
OBN e 14 24 27.0
OBN pmax pmax
comp=Z,66nm,1.2s
OBN MLR MLR
comp=Z,900nm,24.0s,MS5.3
OBN Obninsk 124.92 43⇑ iPKPdf PKPdf 14 22 40.9 -1.4
OBN e 14 24 27.0
OBN LR LR
comp=Z,900nm,24.0s,MS5.3
LVZ Lovozero 125.23 27 PFAKE 14 22 50.0 +7.1
LVZ LR LR
comp=Z,591nm,22.0s,MS5.2
MBWA Marble Bar 125.42 190 P PKPdf 14 22 43.1 -0.2
SNR=6.1
MBWA Marble Bar 125.42 190 ePKPdf PKPdf 14 22 42.5 -0.8
MBWA epPKPdf pPKPdf 14 22 49.3 -1.9
MOS Moscow 125.60 42 ePKIKP PKPdf 14 22 42.2 -1.4
MOS pmax pmax
comp=Z,56nm,0.8s
PMG Port Moresby 125.63 225 ePKIKP PKPdf 14 22 42.8 -0.9
PMG MLR MLR
comp=Z,552nm,20.0s
VRSR Storozhevoye 125.82 48c iPKIKP PKPdf 14 22 42.7 -1.3
VRSR pmax pmax
comp=N,10.0nm,1.1s
VRSR pmax pmax
comp=Z,40nm,1.1s
VRSR pmax pmax
comp=E,10.0nm,0.8s
KIV Kislovodsk 126.69 57 P PKPdf 14 22 45.2 -0.5
SNR=6.9
KIV Kislovodsk 126.69 57d iPKIKP PKPdf 14 22 44.3 -1.4
KIV e 14 24 38.1
KIV pmax pmax
comp=Z,27nm,0.9s
KIV Kislovodsk 126.69 57 i PKPdfr PKPdf 14 22 44.3 -1.4
KIV e 14 24 38.1
KLMR Klimovskoe 127.08 36c iPKIKP PKPdf 14 22 45.4 -1.0
KLMR pmax pmax
comp=Z,120nm,1.3s
KLMR MLR MLR
comp=Z,640nm,21.0s,MS5.3
FITZ Fitzroy Crossi 127.25 197 eP PKPdf 14 22 46.7 -0.1
comp=Z,19nm,0.9s
FITZ e 14 22 58.6
GNI Garni 127.26 62⇑ iPKIKP PKPdf 14 22 47.2 +0.4
ZEI Tsey 127.28 59 ePKIKP PKPdf 14 22 48.0 +1.2
VRHR Novokhopersk 127.31 48 ePKIKP PKPdf 14 22 46.5 -0.4
VRHR pmax pmax
comp=Z,50nm,0.6s
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.8s
WAKE Wake Island 128.96 269 PFAKE 14 23 00.0 +10
WAKE LR LR
comp=Z,652nm,22.0s,MS5.3
BILL Bilibino 133.23 335c iPKIKP PKPdf 14 22 57.4 -0.7
BILL e 14 25 23.4
BILL pmax pmax
comp=Z,20nm,1.2s
BILL MLR MLR
comp=Z,600nm,21.0s,MS5.3
BILL Bilibino 133.23 335⇑ iPKPdf PKPdf 14 22 57.4 -0.7
BILL e 14 25 23.4
BILL LR LR
comp=Z,600nm,21.0s,MS5.3
SOKR Solikamsk 135.75 36 ePKIKP PKPdf 14 23 02.1 -0.7
SOKR pmax pmax
comp=Z,30nm,1.0s
ARU Arti 137.28 41 i PKIKP PKPdf 14 23 05.1 -0.6
ARU e 14 25 46.5
ARU MLR MLR
comp=Z,900nm,20.0s,MS5.5
ARU MLR MLR
comp=N,30nm,17.0s,MS5.4
ARU MLR MLR
comp=E,600nm,19.0s,MS5.4
ARU Arti 137.28 41 i PKPdf PKPdf 14 23 05.1 -0.6
ARU e 14 25 46.5
ARU LR LR
comp=Z,900nm,20.0s,MS5.5
TIXI Tiksi 140.29 351 PFAKE 14 23 20.0 +8.8
TIXI LR LR
comp=Z,2µm,19.0s,MS5.8
PALK Pallekele 141.74 125 PFAKE 14 23 20.0 +6.2
PALK LR LR
comp=Z,794nm,20.0s,MS5.5
MA2 Magadan 142.91 328 ePKHKP 14 23 10.5
MA2 e 14 26 22.4
MA2 ePPP 14 29 44.9
MA2 eS SS 14 45 06.8 +5.0
MA2 pmax pmax
comp=Z,20nm,0.8s
MA2 MLR MLR
comp=Z,1µm,25.4s,MS5.5
MA2 Magadan 142.91 328 ePKP 14 23 10.5
MA2 e 14 26 22.4
MA2 ePPP 14 29 44.9
MA2 eS SS 14 45 06.8 +5.0
MA2 LR LR
comp=Z,1µm,25.4s,MS5.5
SKR Severo-Kuril's 142.95 312 ePKHKP 14 23 04.0
SKR e 14 23 16.5
SKR e 14 23 24.0
SKR pmax pmax
comp=Z,600nm,3.0s
GUMO Guam 143.77 246 PFAKE 14 23 30.0 +13
GUMO LR LR
comp=Z,1.0nm,20.0s
ZRNK Zerenda 143.98 44 ePKIKP PKPdf 14 23 15.0 -2.8
CHKZ Chkalovo 144.68 42 ePKIKP PKPdf 14 23 16.7 -2.3
CHKZ e 14 23 24.6
BRVK Borovoye 144.68 43 P PKPdf 14 23 18.4 -0.6
SNR=28
BRVK Borovoye 144.68 43 ePKPdf PKPdf 14 23 17.2 -1.8
BRVK LR LR
comp=Z,690nm,22.0s,MS5.4
HYB Hyderabad 146.71 110 i PKP PKPdf 14 23 25.5 +3.1
HYB e 14 23 39.5
HYB e 14 24 32.0
HYB Hyderabad 146.71 110 eP PKPbc 14 23 25.5 +1.4
KGM Kluang 148.17 165 P PKPbc 14 23 28.6 +0.4
KSM Kuching 148.50 178 ePKPdf PKPdf 14 23 26.1 +0.7
KSM ePKPbc PKPbc 14 23 29.2 +0.2
KSM ePKPab PKPab 14 23 33.7 +1.3
YAK Yakutsk 148.76 343 ePKIKP PKPdf 14 23 24.2 -1.6
YAK eS 14 26 55.5
YAK pmax pmax
comp=Z,117nm,0.9s
YAK pmax pmax
comp=N,25nm,1.3s
YAK pmax pmax
comp=E,25nm,1.4s
YAK Yakutsk 148.76 343 ePKPdf PKPdf 14 23 24.2 -1.6
YAK eS 14 26 55.5
AML Almayashu 149.12 62 P PKPbc 14 23 32.1 +1.5
SNR=11
EKS2 Erkin-Say 149.13 61 P PKPdf 14 23 27.9 +1.5
SNR=23
USP Ospenovka 149.59 60 P PKPdf 14 23 28.0 +0.8
SNR=14
AAK Ala-Archa 149.66 61 P PKPbc 14 23 33.6 +1.7
SNR=23
AAK Ala-Archa 149.66 61 P PKPdf 14 23 28.1 +0.8
SNR=120
AAK Ala-Archa 149.66 61⇑ iPKHKP 14 23 26.9
AAK Ala-Archa 149.66 61 PFAKE 14 23 40.0 +13
AAK LR LR
comp=Z,607nm,22.0s,MS5.3
FRU Bishkek 149.73 61⇑ iPKHKP PKPdf 14 23 27.5 +0.1
FRU e 14 27 06.0
FRU pmax pmax
comp=Z,475nm,1.8s
FRU pmax pmax
comp=Z,574nm,1.9s
CHMS Chumysh 149.81 60 P PKPbc 14 23 32.8 +0.5
SNR=37
IPM Ipoh 149.94 159 P PKPbc 14 23 33.3 +0.7
KBK Karagaybulak 149.99 61 P PKPbc 14 23 34.3 +1.6
SNR=16
KZA Kyzart 150.28 62 P PKPbc 14 23 35.5 +2.1
SNR=20
PONG Pong 150.28 82 eS PKPbc 14 23 34.0 +0.6
KURK Kurchatov 150.34 44 P PKPdf 14 23 28.2 -0.2
SNR=121
KURK P 14 23 28.7
SNR=146
KURK Kurchatov 150.34 44 ePKIKP PKPdf 14 23 28.3 -0.1
KURK e 14 23 33.6
KURK MLR MLR
comp=Z,725nm,21.0s,MS5.5
KURK Kurchatov 150.34 44 ePKPdf PKPdf 14 23 28.3 -0.1
KURK e 14 23 33.6
TKM2 Tokmak 2 150.44 60 P PKPdf 14 23 29.5 +1.0
SNR=22
NDI New Delhi 150.53 89 ex PKPdf 14 23 27.0 -1.6
NDI ex PKPbc 14 23 32.5 -1.5
TSM Tawau 150.66 194 P PKPbc 14 23 34.8 +0.5
NVS Novosibirsk 150.70 34 ePKIKP PKPdf 14 23 27.5 -1.4
NVS pmax pmax
comp=Z,359nm,0.9s
NVS pmax pmax
comp=N,27nm,0.7s
NVS pmax pmax
comp=E,73nm,0.9s
ULHL Ulahol 150.99 62 P PKPbc 14 23 36.4 +1.3
SNR=6.2
BUKP Musuan 151.82 210 eP PKPbc 14 23 37.0 0.0
ZAL Zalesovo 151.98 34 PKP PKPdf 14 23 30.6 -0.2
comp=E,7.2nm,1.0s,baz=234,slow=1.2,SNR=17
ZAL PKPbc PKPbc 14 23 37.4 0.0
comp=E,148nm,0.5s,baz=112,slow=2.9,SNR=263
ZAL pPKPbc pPKPbc 14 23 44.4 -0.9
comp=E,111nm,0.8s,baz=163,slow=2.4,SNR=18
ZAL Zalesovo 151.98 34 PKPdf PKPdf 14 23 30.7 -0.2
ZAL e 14 23 37.4
ZAL e 14 23 44.4
PKT Phuket 152.29 151 P PKPbc 14 23 38.0 -0.1
comp=E,806nm,0.8s
YSS Yuzh-Sakhalins 152.43 309 PKPdf PKPdf 14 23 30.0 -1.5
YSS PKPdf PKPbc 14 23 37.3 -1.1
YSS PKiKP PKiKP 14 23 44.1 +5.4
YSS Yuzh-Sakhalins 152.43 309⇑ ePKPdf PKPbc 14 23 37.0 -1.4
YSS e 14 23 43.7
YSS e 14 27 20.0
KKM Kota Kinabalu 152.67 191 P PKPbc 14 23 38.9 -0.1
LGTI Lohaghat 153.29 89 i P PKPbc 14 23 38.3 -2.0
ASAJ Asahikawa 153.33 303 PKP PKPdf 14 23 31.6 -1.2
comp=E,23nm,1.0s,baz=254,slow=4.7,SNR=13
ASAJ PKPbc PKPbc 14 23 38.9 -1.5
comp=E,40nm,1.0s,baz=259,slow=12,SNR=13
ASAJ PKPab PKPab 14 23 52.5 +0.1
comp=E,47nm,0.9s,baz=202,slow=11,SNR=12
ERM Erimo 153.34 299 PFAKE 14 23 40.0 +7.1
ERM LR LR
comp=Z,64nm,20.0s,MS4.4
KRAR Krasnoyarsk 153.79 24⇑ iPKIKP PKPbc 14 23 39.5 -1.9
MSLP Maasin 153.92 212 eP PKPbc 14 23 41.0 -0.7
MKAR Makanchi Array 154.10 50 PKP PKPdf 14 23 32.9 -1.0
comp=Z,11nm,1.0s,baz=300,slow=2.4,SNR=50
MKAR PKPbc PKPbc 14 23 40.0 -2.1
comp=Z,23nm,0.7s,baz=325,slow=1.5,SNR=44
MKAR Makanchi Array 154.10 50 PKPdf PKPdf 14 23 32.9 -1.0
MKAR e 14 23 40.0
CLNS Chul'man 154.50 342 ePKIKP PKPdf 14 23 31.0 -3.5
CLNS pmax pmax
comp=Z,41nm,0.8s
CLNS pmax pmax
comp=N,7.0nm,0.7s
CLNS pmax pmax
comp=E,4.0nm,0.9s
BOD Bodaibo 155.23 357 ePKIKP PKPdf 14 23 33.2 -2.3
BOD e 14 23 59.0
BOD pmax pmax
comp=Z,69nm,1.3s
KOLN Koldanda 155.59 95 eP PKPdf 14 23 36.7 +0.7
HABR Khabarovsk 156.49 318 ePKIKP PKPdf 14 23 35.3 -1.9
GKN Gorkha 156.53 95 eP PKPdf 14 23 37.2 0.0
comp=Z,104nm,1.2s
DMN Daman 156.79 97 eP PKPdf 14 23 38.2 +0.6
comp=Z,65nm,1.1s
KKN Kakani 157.00 96 eP PKPdf 14 23 37.9 +0.1
comp=Z,62nm,1.1s
PKI Pulchoki 157.03 97 eP PKPdf 14 23 37.9 0.0
GUN Gumba 157.54 97 eP PKPdf 14 23 39.4 +0.9
comp=Z,156nm,1.3s
MJAR Matsushiro Arr 157.65 286 PKP PKPdf 14 23 36.6 -2.0
comp=Z,2.0nm,1.0s,baz=50,slow=0.2,SNR=11
MJAR PKPab PKPab 14 24 09.8 -1.1
comp=Z,28nm,0.9s,baz=105,slow=2.4,SNR=28
MJAR PKKP 14 32 02.3
comp=Z,0.6nm,0.5s,baz=229,slow=8.1,SNR=4.3
MJAR Matsushiro Arr 157.65 286 PKIKP PKPdf 14 23 36.6 -2.1
MJAR 14 24 09.8
MJAR Matsushiro Arr 157.65 286 PKP2 PKPab 14 24 09.8 -1.1
MJAR pmax pmax
comp=Z,290nm,0.9s
MJAR pmax pmax
comp=Z,100nm,0.5s
MJAR Matsushiro Arr 157.65 286 PKP PKPdf 14 23 36.6 -2.0
MJAR PKPab PKPab 14 24 09.8 -1.1
MJAR PKKP 14 32 02.3
MAJO Matsushiro 157.65 286 PFAKE 14 23 50.0 +11
MAJO LR LR
comp=Z,473nm,22.0s,MS5.3
MAT Matsushiro 157.65 286 PKP PKPdf 14 23 36.7 -2.0
MAT Matsushiro 157.65 286 ePKP PKPdf 14 23 37.0 -1.7
MAT LR LR
comp=Z,350nm,20.0s,MS5.2
JIRN Jiri 157.72 97 eP PKPdf 14 23 39.0 +0.3
KLR Kul'dur 157.83 323 ePKIKP PKPdf 14 23 33.0 -5.9
KLR e 14 24 07.6
KLR e 14 27 50.0
KLR pmax pmax
comp=Z,64nm,1.8s
WMQ Urumqi 158.75 53 PKP PKPdf 14 23 40.0 0.0
WMQ PKS 14 27 12.0
WMQ PP PP 14 28 00.0 +3.9
WMQ SKS SKSdf 14 30 42.0 -2.1
WMQ SKKS SKKSac 14 34 44.0 +0.3
WMQ SS SS 14 47 58.0 +0.7
WMQ PP PP
comp=Z,124nm,6.0s
WMQ LR LR
comp=N,524nm,18.0s,MS5.6
WMQ LR LR
comp=E,512nm,18.0s,MS5.6
WMQ LR LR
comp=Z,705nm,17.0s,MS5.6
MOY Mondy 160.01 19 ePKIKP PKPdf 14 23 42.0 +0.5
MOY pmax pmax
comp=Z,87nm,2.8s
IRK Irkutsk 160.23 13 ePKIKP PKPdf 14 23 40.6 -1.1
IRK e 14 24 20.9
IRK pmax pmax
comp=Z,50nm,2.1s
TLY Talaya 160.64 14 P PKPdf 14 23 42.5 +0.4
SNR=7.9
TLY Talaya 160.64 14 ePKIKP PKPdf 14 23 39.2 -3.0
TLY MLR MLR
comp=Z,593nm,19.0s
MDJ Mudanjiang 161.74 314 PKP PKPdf 14 23 41.4 -1.9
MDJ PKS 14 27 15.2
MDJ SKS SKSdf 14 30 46.8 0.0
MDJ SS SS 14 48 30.9 +2.1
MDJ PP PP
comp=Z,115nm,5.3s
MDJ LR LR
comp=N,237nm,37.5s
MDJ LR LR
comp=E,344nm,22.5s
MDJ LR LR
comp=Z,368nm,22.5s
MDJ Mudanjiang 161.74 314 ePKPdf PKPdf 14 23 41.0 -2.4
MDJ LR LR
comp=Z,502nm,21.0s
CHG Chiang Mai 161.97 139 ⇑P PKPdf 14 23 43.7 +0.1
comp=Z,18nm,1.3s
CHTO Chiang Mai 161.97 139 P PKPdf 14 23 44.7 +1.2
SNR=5.8
CHTO Chiang Mai 161.97 139 ePKIKP PKPdf 14 23 43.5 -0.1
CHTO e 14 23 50.8
CHTO e 14 24 29.5
CHTO MLR MLR
comp=Z,393nm,21.0s
CHTO Chiang Mai 161.97 139 ePKPdf PKPdf 14 23 43.5 -0.1
CHTO epPKPdf pPKPdf 14 23 50.8 -0.7
CHTO ePKPab PKPab 14 24 29.5 -0.2
CHTO epPKPab pPKPab 14 24 35.8 -1.6
CHTO LR LR
comp=Z,399nm,21.0s
HIA Hailar 162.68 341 PFAKE 14 23 50.0 +5.7
HIA LR LR
comp=Z,643nm,22.0s
NANT Nan 162.88 144 P PKPdf 14 23 45.0 +0.5
CHRT Chiangrai 163.29 139 P PKPdf 14 23 46.0 +1.1
CN2 Changchun 164.63 318 ePKP PKPdf 14 23 43.7 -2.4
CN2 PP PP 14 28 29.1 +1.6
CN2 PP PP
comp=Z,260nm,9.0s
CN2 LR LR
comp=N,430nm,20.0s
CN2 LR LR
comp=E,320nm,20.0s
CN2 LR LR
comp=Z,520nm,21.0s
SONM Songino Array 164.85 13 PKP PKPdf 14 23 45.0 -1.3
comp=Z,3.8nm,0.8s,baz=348,slow=0.4,SNR=24
SONM PKPab PKPab 14 24 41.3 -1.0
comp=Z,10nm,0.8s,baz=330,slow=4.9,SNR=12
SONM PP PP 14 28 31.1 +2.4
comp=Z,6.0nm,1.0s,baz=349,slow=3.3,SNR=6.3
SONM Songino Array 164.85 13 PKP2 PKPab 14 24 41.3 -1.1
SONM 14 28 31.1
SONM pmax pmax
comp=Z,10.0nm,0.9s
SONM pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 164.93 11 PKPdf PKPdf 14 23 45.6 -0.7
ULN PKPab PKPab 14 24 43.0 +0.3
ULN PP PP 14 28 29.9 +0.9
ULN Ulaanbaatar 164.93 11 P PKPdf 14 23 46.0 -0.3
SNR=9.4
ULN Ulaanbaatar 164.93 11c iPKIKP PKPdf 14 23 45.6 -0.7
ULN Ulaanbaatar 164.93 11 ePKPdf PKPdf 14 23 45.0 -1.3
ULN ePKPab PKPab 14 24 42.8 +0.1
ULN epPKPab pPKPab 14 24 50.2 -0.2
ULN LR LR
comp=Z,614nm,19.0s
QIZ Qiongzhong 165.91 174 PKP PKPdf 14 23 45.6 -1.6
QIZ PP PP 14 28 37.0 +2.9
QIZ SS SS 14 49 11.0 -0.8
QIZ LR LR
comp=N,474nm,20.0s
QIZ LR LR
comp=Z,839nm,20.8s
QIZ Qiongzhong 165.91 174 PFAKE 14 24 00.0 +13

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIZ				LR	LR		
	comp=Z,896nm,20.0s						
INCN	Inchon	166.72	293	PFAKE		14 24 00.0	+12
INCN				LR	LR		
	comp=Z,401nm,20.0s						
SNY	Shenyang	166.93	315	⇑PKP	PKPdf	14 23 46.3	-1.6
SNY				PP	PP	14 28 38.5	-0.9
SNY				PP	PP		
	comp=Z,134nm,4.5s						
SNY				LR	LR		
	comp=E,444nm,28.8s						
SNY				LR	LR		
	comp=Z,330nm,27.0s						
TATO	Taipei	167.93	230	PFAKE		14 24 00.0	+11
TATO				LR	LR		
	comp=Z,431nm,20.0s						
GTA	Gaotai	168.83	53	PKP	PKPdf	14 23 49.6	+0.3
GTA				APKP		14 23 56.3	
GTA				XPKP		14 23 59.7	
GTA				PKP2	PKPab	14 25 00.2	+0.3
GTA				PP	PP	14 28 49.6	+0.5
GTA				SKS	SKSdf	14 30 47.1	-4.4
GTA				PPP		14 32 51.5	
GTA				SKKS	SKKSac	14 35 32.7	-2.2
GTA				PP	PP		
	comp=Z,218nm,6.8s						
GTA				LR	LR		
	comp=N,139nm,18.6s						
GTA				LR	LR		
	comp=E,138nm,16.7s						
GTA				LR	LR		
	comp=Z,161nm,15.2s						
KMI	Kunming	169.09	135	PKP	PKPdf	14 23 48.6	-0.8
KMI				APKP		14 23 55.9	
KMI				XPKP		14 23 58.5	
KMI				PKP2	PKPab	14 25 00.4	-0.7
KMI				PKS		14 27 19.8	
KMI				PP	PP	14 28 53.0	+2.6
KMI				SKS	SKSdf	14 30 48.3	-3.3
KMI				SKKS	SKKSac	14 35 36.5	+0.3
KMI				SS	SS	14 49 44.0	+0.2
KMI				SSS		14 56 24.1	
KMI				LR	LR		
	comp=Z,364nm,24.8s						
DL2	Dalian	169.82	307	*i* PKP	PKPdf	14 23 48.8	-1.1
DL2				PKP2	PKPab	14 25 04.3	0.0
DL2				PPP		14 33 08.3	
DL2				PP	PP		
	comp=Z,130nm,8.0s						
DL2				LR	LR		
	comp=N,170nm,17.9s						
DL2				LR	LR		
	comp=E,130nm,17.7s						
DL2				LR	LR		
	comp=Z,260nm,18.0s						
SSE	Sheshan	171.35	259	PKP	PKPdf	14 23 47.8	-2.9
SSE				PP	PP	14 29 02.3	+0.5
SSE				SS	SS	14 50 02.0	-4.2
SSE				LR	LR		
	comp=N,151nm,22.1s						
SSE				LR	LR		
	comp=E,182nm,22.1s						
SSE				LR	LR		
	comp=Z,504nm,22.1s						
BJI	Beijing	172.05	332	PKP	PKPdf	14 23 51.0	0.0
BJI				SKKS	SKKSac	14 35 56.0	+5.4
BJI				SS	SS	14 50 17.6	+4.5
BJI				PP	PP		
	comp=Z,292nm,8.4s						
BJI				LR	LR		
	comp=N,425nm,22.9s						
BJI				LR	LR		
	comp=E,387nm,20.4s						
BJI				LR	LR		
	comp=Z,718nm,21.8s						
BJT	Baijiatuau	172.07	332	PFAKE		14 24 00.0	+9.0
BJT				LR	LR		
	comp=Z,862nm,22.0s						
GYA	Guiyang	172.25	148	⇓*i*PKP	PKPdf	14 23 50.4	-0.7
GYA				PP	PP		
	comp=Z,390nm,6.9s						
GYA				LR	LR		
	comp=N,240nm,20.7s						
GYA				LR	LR		
	comp=E,230nm,21.4s						
GYA				LR	LR		
	comp=Z,250nm,20.8s						
HHC	Hu-ho-hao-te	172.29	358	*e*PKP	PKPdf	14 23 50.9	-0.2
LZH	Lanzhou	173.20	62	⇑PKP	PKPdf	14 23 57.1	+5.6
LZH				APKP		14 23 59.2	
LZH				XPKP		14 24 01.7	
LZH				PKP2	PKPab	14 25 20.5	+1.2
LZH				PKS		14 27 23.2	
LZH				SKKS	SKKSac	14 35 55.6	-0.5
LZH				SS	SS	14 50 25.3	+1.0
LZH				PP	PP		
	comp=Z,382nm,9.5s						
LZH				LR	LR		
	comp=E,742nm,18.5s						
LZH				LR	LR		
	comp=Z,897nm,20.3s						
CD2	Chengdu	173.25	107	*e*PKP	PKPdf	14 23 51.4	-0.1
CD2				APKP		14 23 56.6	
CD2				XPKP		14 24 02.0	
CD2				PP	PP	14 29 14.4	+3.2
CD2				SKS	SKSdf	14 30 49.5	-3.7
CD2				SKKS	SKKSac	14 35 55.5	-0.8
CD2				SS	SS	14 50 23.4	-1.4
CD2				PP	PP		
	comp=Z,170nm,10.8s						
CD2				LR	LR		
	comp=N,240nm,19.2s						
CD2				LR	LR		
	comp=Z,470nm,20.4s						
NJ2	Nanjing	173.51	263	*e*PKP	PKPdf	14 23 51.4	-0.2
NJ2				APKP		14 24 02.2	
NJ2				XPKP		14 24 05.8	
NJ2				PKP2	PKPab	14 25 22.8	+2.1
NJ2				PKS		14 27 22.2	
NJ2				PP	PP	14 29 14.0	+1.6
NJ2				SKKS	SKKSac	14 35 57.0	-0.6
NJ2				PP	PP		
	comp=Z,110nm,5.7s						
NJ2				LR	LR		
	comp=N,610nm,31.0s						
NJ2				LR	LR		
	comp=E,880nm,29.8s						
NJ2				LR	LR		
	comp=Z,330nm,22.8s						
TIA	Tai'an	174.28	304	PKP	PKPdf	14 23 51.3	-0.6
WHN	Wuhan	176.33	226	⇓PKP	PKPdf	14 23 52.8	+0.3
ENH	Enshi	176.78	151	PFAKE		14 24 00.0	+7.4
ENH				LR	LR		
	comp=Z,35nm,22.0s						
XAN	Xi'an	177.84	64	PKP	PKPdf	14 23 52.3	-0.4
XAN				PKP2	PKPab	14 25 40.3	+0.4
XAN				PP	PP	14 29 32.1	-1.0
XAN				LR	LR		
	comp=N,315nm,20.8s						
XAN				LR	LR		
	comp=E,254nm,20.3s						
XAN				LR	LR		
	comp=Z,481nm,23.1s						

*IDC **05** 14:36:29.3±2.0, 3727N×14220E, h0km, mb3.5/2, mb1 3.5/5, mb1mx3.3/23, mbtmp3.5/5, ML3.2/3, MS3.5/2, Ms1 3.5/2, ms1mx2.8/26, Error ellipse: s-maj=37.5km s-min=26.5km az=91.0*
*ISCJB **05** 14:36:31.7±1.6, 3726N±004×14198E±008, h23km±10km, mb3.4/2, MS4.4/1, Error ellipse: s-maj=10.3km s-min=6.6km az=177.4*
*JMA **05** 14:36:34.2±0.2, 3729N×14183E, h41km±4km, M3.3*
ISC 05 14:36:31.4±1.2**, 3735N**±004×**14193E**±006**, h4**km±6km**, n16,** σ1s08/26**, mb3.4**/2**, MS4.4**/1**, 2C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.84	272	⇓P	Pg	14 36 48.8	+1.2
JFK				*e*S	Sg	14 36 58.4	-0.1
ONAJ	Iwakimizuishiy	0.94	255	⇑P	Pg	14 36 49.8	+0.4
ONAJ				S	Sg	14 37 00.5	-1.0
JIO	Ouri	1.20	338	⇑P	Pg	14 36 55.0	+0.6
JIO				S	Sg	14 37 09.4	-0.5
JFT	Otama	1.28	278	⇓P	Pg	14 36 56.0	0.0
JFT				S	Sg	14 37 11.2	-1.3
JHO	Hitachi	1.31	236	⇓P	Pn	14 36 54.7	-1.8
JOU	Okura	1.43	316	P	Pn	14 36 58.7	+0.7
JOU				*e*S	Sb	14 37 16.6	-0.5
JMK	Ichinoseki	1.70	341	P	Pn	14 37 02.8	+1.0
JMK				*e*S	Sn	14 37 23.1	-0.8
JYS	Shirataka	1.72	301	P	Pn	14 37 03.4	+1.4
JYS				S	Sn	14 37 24.0	-0.3
JFY	Yanaizu	1.77	273	P	Pn	14 37 03.6	+0.8
JFY				*e*S	Sn	14 37 24.7	-1.0
MJAR	Matsushiro Arr	3.09	256	Pn	Pn	14 37 21.6	+0.8
	1.0nm,0.3s,baz=336,slow=13,SNR=10.0						
MJAR				Sn	Sn	14 38 00.4	+2.3
	1.8nm,0.3s,baz=77,slow=11,SNR=4.9						
MAT	Matsushiro	3.09	256	P	Pn	14 37 22.2	+1.3
MAT				S	Sn	14 38 03.1	+4.9
JHJ	Hachijo jima 2	4.57	203	Pn	Pn	14 37 40.4	-0.8
	4.9nm,0.3s,baz=136,slow=13,SNR=10						
JHJ				Sn	Sn	14 38 30.5	-4.2
	11nm,0.3s,baz=55,slow=22,SNR=6.7						
ASAJ	Asahikawa	6.78	4	Pn	Pn	14 38 10.3	-1.3
	0.6nm,0.3s,baz=217,slow=13,SNR=7.2						
ASAJ				LR	LR	14 40 38.5	
	comp=Z,60nm,18.6s,baz=168,slow=36						
SONM	Songino Array	27.96	303	P	P	14 42 23.8	+1.0
	0.3nm,0.6s,mb3.1,baz=98,slow=10,SNR=2.8						
CTA	Charters Tower	57.27	175	LR	LR	15 05 58.7	
	comp=Z,304nm,20.9s,MS4.4,baz=204,slow=31						
WRA	Warramunga Arr	57.43	188	P	P	14 46 19.2	-1.9
	0.4nm,0.6s,mb3.6,baz=7.8,slow=7.4,SNR=4.7						

GUC 05 14:36:37.3±0.7**, 3288S**×**6899W, h31**km±12km**, MD3.5, ML2.1, 3C-1D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	1.18	247	⇓*i*P	Pn	14 36 58.6	+0.9
FCH				*i* S	Sn	14 37 14.9	+2.2
FCH				AML	AML	14 37 15.7	
	comp=E,84nm,0.5s						
CHCH	Chadas Angostu	1.75	233	⇑*i*P	Pn	14 37 07.2	+1.8
CHCH				*i* S	Sn	14 37 30.0	+3.4
CACH	El Canelo	1.83	227	⇑*i*P	Pn	14 37 08.5	+2.0
CACH				*i* S	Sn	14 37 32.1	+3.5
CICH	Cipreses	1.87	219	⇑*i*P	Pn	14 37 08.6	+1.4
CICH				*i* S	Sn	14 37 32.3	+2.6

*ISCJB **05** 14:39:15.8±0.6, 2345N±004×8953E±005, h10km, mb3.8/9, Error ellipse: s-maj=7.8km s-min=5.1km az=97.7*
*NEIC **05** 14:39:18.5±0.6, 2366N×8989E, h10km, mb4.2/1, Error ellipse: s-maj=17.4km s-min=7.2km az=223.0*
NEIC Felt at Dhaka. Also felt at Kolkata, India.
*IDC **05** 14:39:19.9±1.0, 2397N×9107E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/22, mbtmp3.8/8, Error ellipse: s-maj=50.5km s-min=18.2km az=55.0*
*DMN **05** 14:39:20.2±0.7, 2364N×89.15E, h10km, Ml4.9/6, Error ellipse: s-maj=35.6km s-min=12.5km az=50.0*
*BJI **05** 14:39:21.3, 23.11N×90.15E, h36km, mB5.0, mb4.0*
ISC 05 14:39:18.6±0.6**, 2351N**±004×**8955E**±005**, h10**km**, n39,** σ1s46/51**, mb3.7**/9**, 1C, Bangladesh**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAL	Calcutta	1.48	230	*e*P	Pn	14 39 45.9	+0.6
CAL				*e*S	Sn	14 40 06.8	+2.1
SHBG	Sahibganj	2.42	315	*e*x	x	14 40 08.5	
SHBG				*e*x	x	14 40 49.5	
SHL	Shillong	2.95	46	*e*P	Pn	14 40 00.5	-5.1
SHL				*e*S	Sn	14 40 29.6	-12
SLGI	Shiliguri	3.34	342	*e*x	x	14 40 25.5	
BOK	Bokaro	3.37	276	*e*P	Pn	14 40 13.0	+1.6
BOK				*e*S	Sn	14 40 50.2	-1.1
BOK				AML	AML	14 41 08.4	
	comp=E,460nm,0.3s						
BOK				AML	AML	14 41 09.4	
	comp=N,1μm,0.2s						
JIRN	Jiri	5.13	324	*e*Pn	Pn	14 40 37.2	+1.7
JIRN				*e*Sn	Sn	14 41 35.4	+0.7
	comp=N,713nm,0.5s						
GUN	Gumba	5.49	324	*e*Pn	Pn	14 40 42.4	+1.9
GUN				*e*Sn	Sn	14 41 42.7	-1.0
	comp=N,1μm,0.8s						
PKI	Pulchoki	5.51	318	*e*Pn	Pn	14 40 42.0	+1.3
PKI				*e*Sn	Sn	14 41 43.0	-1.1
	comp=N,442nm,0.6s						
DMN	Daman	5.72	316	*e*Pn	Pn	14 40 44.8	+1.1
DMN				*e*Sn	Sn	14 41 48.3	-1.1
	comp=N,961nm,0.9s						
KKN	Kakani	5.75	319	*e*Pn	Pn	14 40 45.2	+1.2
KKN				*e*Sn	Sn	14 41 49.3	-0.6
	comp=N,551nm,0.7s						
GKN	Gorkha	6.30	316	*e*Pn	Pn	14 40 52.9	+1.4
GKN				*e*Sn	Sn	14 42 01.4	-2.1
KOLN	Koldanda	6.84	310	*e*Pn	Pn	14 40 59.7	+0.7
KOLN				*e*Sn	Sn	14 42 14.0	-3.0
	comp=N,178nm,0.5s						
VIS	Vishakhapatnam	8.19	226	*e*P	Pn	14 41 15.8	-1.7
VIS				*e*S	Sn	14 42 44.1	-6.0
VIS				AML	AML	14 43 32.8	
	comp=N,43nm,0.9s						
VIS				AML	AML	14 43 37.8	
	comp=E,59nm,0.8s						
JBP	Jabalpur	8.80	270	⇑*i*x	x	14 41 31.1	
JBP				*i* S	Sn	14 43 00.1	-4.9
CHTO	Chiang Mai	9.93	116	*e*Pn	Pn	14 41 39.5	-1.9
CHTO				*e*Sn	Sn	14 43 24.5	-8.4
NGP	Nagpur	10.00	258	*e*P	Pn	14 41 41.5	-0.8
NGP				*e*S	Sn	14 43 27.4	-7.1
NGP				AML	AML	14 44 39.5	
	comp=N,162nm,0.4s						
NGP				AML	AML	14 44 40.6	
	comp=E,122nm,0.8s						
LGTI	Lohaghat	10.22	307	*i* P	Pn	14 41 44.3	-1.0
LGTI				*e*x	x	14 43 49.7	
BHPL	Bhopal	11.14	271	*e*x	x	14 42 04.8	
BHPL				*e*S	Sn	14 43 54.5	-8.1
AKL	Akola	11.95	259	*e*P	Pn	14 42 09.5	+0.5
AKL				*e*x	x	14 44 26.4	
HYB	Hyderabad	11.95	242	*i* P	Pn	14 42 15.0	+6.0
HYB				*e*		14 44 22.0	
HYB				*e*S	Sn	14 44 35.0	+13
HYB	Hyderabad	11.95	242	*e*P	Pn	14 42 15.0	+6.0
HYB				*e*S	Sn	14 44 22.0	-0.4
NDI	New Delhi	12.22	298	*e*P	Pn	14 42 10.1	-2.6
NDI				*e*S	Sn	14 44 20.8	-8.1
KUDL	Kundal	12.63	294	*e*P	Pn	14 42 20.5	+2.2
KUDL				*e*S	Sn	14 44 30.0	-9.1
LATR	Latur	13.15	250	*e*x	x	14 44 21.5	
AJM	Ajmer	13.84	285	*e*P	Pn	14 42 37.0	+2.3
AJM				*e*x	x	14 44 56.1	
POO	Poona	15.47	254	*e*x	x	14 45 03.0	
POO				*i* x	x	14 47 15.0	
KAD	Karad	15.66	250	*e*x	x	14 45 24.7	
GTA	Gaotai	18.09	26	*e*P	Pn	14 43 31.2	+1.2
GTA				AP	pP	14 43 37.9	+4.7
GTA				XP	sP	14 43 41.6	+7.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	23.96	348	P	P	14 44 33.8	+0.7
	comp=Z,1.0nm,0.6s,mb3.5,baz=169,slow=9.7,SNR=9.3						
SONM	Songino Array	27.75	25	P	P	14 45 01.1	-6.3
	comp=Z,0.2nm,0.6s,mb2.9,baz=191,slow=5.9,SNR=2.2						
KURK	Kurchatov	28.46	345	*e*P	P	14 45 21.8	+8.1
	comp=Z,4.1nm,1.0s,mb4.0						
BRTR	Keskin Array B	49.51	303	P	P	14 48 18.1	+8.7
	comp=Z,0.5nm,0.6s,mb3.7,baz=100,slow=10,SNR=3.7						
JOF	Joensuu	54.98	332	*e*p	P	14 48 55.2	+5.2
FINES	FINESS Array B	56.99	329	P	P	14 49 10.6	+6.3
	comp=Z,1.1nm,0.7s,mb4.0,baz=104,slow=6.3,SNR=6.1						
WRA	Warramunga Arr	61.42	131	P	P	14 49 33.8	-1.2
	comp=Z,1.3nm,0.7s,mb4.2,baz=319,slow=7.2,SNR=11						
ASAR	Alice Springs	63.67	134	P	P	14 49 49.1	-1.0
	comp=Z,0.2nm,0.3s,mb3.7,baz=313,slow=6.8,SNR=7.2						
NOA	NORSAR Array B	64.10	328	P	P	14 49 59.1	+6.2
	comp=Z,0.9nm,0.8s,mb3.9,baz=89,slow=6.5,SNR=3.5						
STKA	Stephens Creek	74.22	136	P	P	14 50 54.0	-1.7
	comp=Z,0.7nm,0.6s,mb3.8,baz=338,slow=5.4,SNR=3.3						
STKA	Stephens Creek	74.22	136	P	P	14 50 54.0	-1.7

*ISCJB **05** 14:50:48.8±0.5, 3883N±002×2328E±003, h6km±4km, Error ellipse: s-maj=4.1km s-min=3.4km az=2.4*
*NEIC **05** 14:50:49.6, 3883N×2327E, h3km, ML3.0(ATH), After ATH.*
*ATH **05** 14:50:49.6, 3883N×2327E, h3km, MD2.9/7, ML3.0*
*CSEM **05** 14:50:49.7±0.1, 3883N×2329E, h2km, ML3.0, Error ellipse: s-maj=1.9km s-min=1.2km az=86.0*
*THE **05** 14:50:49.3, 3882N×2326E, h5km, ML2.5*
ISC 05 14:50:49.4±0.4**, 3882N**±002×**2327E**±003**, h9**km±4km**, n21,** σ0s76/35**, 1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	Lokris	0.27	230	⇓*i*PG	Pg	14 50 54.9	+0.1
LKR				*e*SG	Sg	14 50 59.2	+0.8
NEO	Neokhori	0.48	356	*e*PG	Pg	14 50 58.7	-0.1
NEO				*e*SG	Sg	14 51 05.4	+0.3
XOR	Xorichti	0.55	354	*e*Pg	Pg	14 50 59.7	-0.2
XOR				*e*Sg	Sg	14 51 08.5	+1.5
AOS	Alonnisos	0.59	54	*e*Pg	Pg	14 51 00.4	-0.4
AOS				*e*Sg	Sg	14 51 09.3	+0.8
AGG	Agios Georgios	0.76	286	*e*Pg	Pg	14 51 03.3	-0.6
AGG				*e*Sg	Sg	14 51 14.7	+0.9
MGER	Gerania Oros	0.84	180	*e*PG	Pg	14 51 05.5	0.0
PTL	Penteli	0.91	148	*e*PG	Pg	14 51 06.3	-0.5
ATH	Athens Observa	0.92	157	*e*PB	Pb	14 51 07.3	-0.2
KVR	Kavouri	1.07	158	*e*PG	Pg	14 51 10.0	+0.1
NAIG	Nisos Aigina	1.08	171	*e*PB	Pb	14 51 09.5	-0.6
EVR	Evrytania	1.14	275	*e*PB	Pb	14 51 11.7	+0.5
EVR				*e*SB	Sb	14 51 26.8	+0.7
PAIG	Paliouri	1.15	16	*e*Pg	Pg	14 51 10.4	-1.0
PAIG				*e*Sg	Sg	14 51 27.4	+1.0
LIT	Litokhoron	1.41	335	*e*Pg	Pg	14 51 14.2	-2.2
LIT				*e*Sg	Sg	14 51 34.4	-0.3
OUR	Ouranopolis	1.61	20	*e*Pg	Pn	14 51 17.2	-0.7
HORT	Hortiatis	1.78	356	*e*Pb	Pn	14 51 19.4	-0.8
HORT				*e*Sb	Sb	14 51 43.3	-1.2
LOS	Limnos	1.79	51	*e*Pb	Pn	14 51 20.7	+0.3
LOS				*e*Sb	Sb	14 51 44.8	0.0
MEV	Metsovon	1.85	302	*e*Pb	Pn	14 51 21.1	-0.1
MEV				*e*Sb	Sb	14 51 45.7	-0.8
SOH	Sokhos	2.00	2	*e*Pn	Pn	14 51 22.9	-0.3
SOH				*e*Sn	Sn	14 51 48.9	+0.6
GRG	Griva	2.23	343	*e*Pn	Pn	14 51 26.2	-0.3
KNT	Kendrikon	2.35	353	*e*Pn	Pn	14 51 28.2	+0.1
KNT				*e*Sn	Sn	14 51 58.7	+1.6
APE	Apeiranthos	2.50	134	*e*Pn	Pn	14 51 29.8	-0.4
APE				*e*Sn	Sn	14 52 02.2	+1.3

*ISCJB **05** 14:53:24.3±0.7, 3807N±002×2272E±003, h2km±4km, Error ellipse: s-maj=4.2km s-min=3.3km az=97.3*
*NEIC **05** 14:53:25.2, 3809N×2271E, h25km, ML3.3(ATH), After ATH.*
*CSEM **05** 14:53:25.4±0.1, 3805N×2268E, h2km, ML3.3, Error ellipse: s-maj=1.9km s-min=1.7km az=22.0*
*ATH **05** 14:53:25.2, 3809N×2271E, h25km±1km, MD3.6/10, ML3.3*
*THE **05** 14:53:26.4, 38.13N×2282E, h0km, ML3.1*
ISC 05 14:53:24.8±0.6**, 3805N**±002×**2269E**±003**, h2**km±4km**, n30,** σ0s98/53**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGER	Gerania Oros	0.46	98	*e*PB	Pg	14 53 34.0	+0.5
LKR	Lokris	0.65	22	*e*PB	Pg	14 53 36.8	-0.4
NAIG	Nisos Aigina	0.70	114	*e*PN	Pg	14 53 39.0	+0.9
ATH	Athens Observa	0.81	95	*e*PN	Pg	14 53 40.9	+0.5
ATH				*e*SN	Sg	14 53 52.4	+1.4
KVR	Kavouri	0.88	104	*e*PN	Pn	14 53 43.0	-1.2
KVR				*e*SN	Sn	14 53 56.5	-1.0
PTL	Penteli	0.93	90	*e*PN	Pn	14 53 43.5	-1.3
RLS	Riolos of Patr	0.96	271	*e*PB	Pb	14 53 43.5	-0.7
RLS				*e*SN	Sn	14 53 58.1	-1.5
AGG	Agios Georgios	1.01	344	*e*Pg	Pg	14 53 44.1	-0.1
AGG				*e*Sg	Sg	14 53 59.6	+2.3
ITM	Ithomi	1.06	215	*e*PN	Pn	14 53 46.3	-0.3
EVR	Evrytania	1.11	322	*e*PN	Pn	14 53 46.3	-1.0
EVR				*e*SN	Sn	14 54 01.3	-1.8
NEO	Neokhori	1.32	18	*e*PN	Pn	14 53 49.3	-0.9
VLI	Veliai	1.34	171	*e*PN	Pn	14 53 51.2	+0.7
VLI				*e*SN	Sn	14 54 09.1	+0.2
XOR	Xorichti	1.37	16	*e*Pg	Pg	14 53 49.8	-1.4
XOR				*e*Sg	Sg	14 54 09.3	+0.3
AOS	Alonnisos	1.46	39	*e*Pg	Pg	14 53 51.0	-1.7
AOS				*e*Sg	Sg	14 54 11.4	-0.2
VLS	Valsamata	1.66	275	*e*PN	Pn	14 53 55.9	+1.0
LKD	Levkas	1.73	293	*e*Pb	Pb	14 53 58.0	+0.8
LKD				*e*Sb	Sb	14 54 22.6	+3.2
PAIG	Paliouri	2.03	22	*e*Pb	Pn	14 53 58.5	-1.4
PAIG				*e*Sb	Sb	14 54 26.3	-1.7
LIT	Litokhoron	2.06	356	*e*Pn	Pn	14 54 00.2	-0.1
LIT				*e*Sn	Sn	14 54 27.4	+0.9
IGT	Igoumenitsa	2.36	310	*e*Pn	Pb	14 54 07.5	-0.6
IGT				*e*Sn	Sb	14 54 38.1	+0.4
APE	Apeiranthos	2.46	113	*e*Pn	Pn	14 54 06.3	+0.5
APE				*e*Sn	Sn	14 54 37.5	+1.0
APE	Apeiranthos	2.46	113	*e*Pn	Pn	14 54 06.4	+0.5
APE				*e*Sn	Sn	14 54 37.5	+1.0
OUR	Ouranopolis	2.49	23	*e*Pn	Pn	14 54 05.1	-1.2
OUR				*e*Sn	Sn	14 54 36.8	-0.5
HORT	Hortiatis	2.56	7	*e*Pn	Pn	14 54 07.5	+0.1
HORT				*e*Sn	Sn	14 54 39.5	+0.5
HORT	Hortiatis	2.56	7	*e*Pn	Pn	14 54 07.4	+0.1
HORT				*e*Sn	Sn	14 54 39.5	+0.4
CHOS	Chios island	2.67	82	*e*Pn	Pn	14 54 09.1	+0.3
CHOS				*e*Sn	Sn	14 54 42.5	+0.8
SOH	Sokhos	2.82	10	*e*Pn	Pn	14 54 11.2	+0.5
SOH				*e*Sn	Sn	14 54 45.5	+0.2
SOH	Sokhos	2.82	10	*e*Pn	Pn	14 54 11.2	+0.4
SOH				*e*Sn	Sn	14 54 45.5	+0.2
GRG	Griva	2.91	356	*e*Pn	Pn	14 54 12.5	+0.4
GRG				*e*Sn	Sn	14 54 49.1	+1.5
FNA	Florina	2.92	340	*e*Pn	Pn	14 54 12.4	+0.3
FNA				*e*Sn	Sn	14 54 49.1	+1.4
KNT	Kendrikon	3.11	3	*e*Pn	Pn	14 54 14.6	-0.2
KNT				*e*Sn	Sn	14 54 53.6	+1.0

*NEIC **05** 15:02:00.1, 33.12S×6898W, h10km, ML2.5(GUC), After GUC.*
GUC 05 15:02:00.1±0.7**, 3312S**×**6898W, h10**km±4km**, MD3.5, ML2.5, 5C-9D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	1.12	259	⇓*i*P	Pb	15 02 20.8	-0.7
FCH				*i* S	Sg	15 02 36.8	+0.8
FCH				AML	AML	15 02 37.4	
	comp=N,301nm,0.2s						
CLCH	Cerro Calan	1.33	258	⇑*i*P	Pn	15 02 24.7	0.0
CLCH				*i* S	Sb	15 02 43.7	+1.5
CLCH				AML	AML	15 02 48.1	
	comp=E,135nm,0.4s						
PCH	Pirque	1.38	248	⇓*i*P	Pn	15 02 25.6	+0.3
PCH				*i* S	Sb	15 02 44.9	+1.3
JACH	Jahuel	1.42	287	⇑*i*P	Pn	15 02 26.3	+0.3
JACH				*i* S	Sn	15 02 46.0	+1.2
PEL	Peldehue	1.43	269	⇑*i*P	Pn	15 02 26.3	+0.2
PEL				*i* S	Sn	15 02 46.0	+1.0
PEL				AML	AML	15 02 46.4	
	comp=N,134nm,0.3s						
PEL	Peldehue	1.43	269	⇑*i*P	Pn	15 02 26.3	+0.2
PEL				*i* S	Sn	15 02 46.0	+1.0
RCDM	Rinconada Maip	1.57	256	⇓*i*P	Pn	15 02 29.1	+1.1
RCDM				*i* S	Sn	15 02 51.1	+2.6
RCDM				AML	AML	15 02 52.1	
	comp=E,86nm,0.2s						
RCDM	Rinconada Maip	1.57	256	⇓*i*P	Pn	15 02 29.1	+1.1
RCDM				*i* S	Sn	15 02 51.1	+2.6
CHCH	Chadas Angostu	1.61	239	⇑*i*P	Pn	15 02 29.4	+0.8
CHCH				*i* S	Sn	15 02 51.8	+2.3
CACH	El Canelo	1.68	233	⇓*i*P	Pn	15 02 30.6	+1.1
CACH				*i* S	Sn	15 02 53.9	+2.8
CICH	Cipreses	1.69	225	⇓*i*P	Pn	15 02 30.8	+1.0
CICH				*e*S	Sn	15 02 54.5	+2.9
ROCH	El Roble	1.71	274	*e*P	Pn	15 02 31.5	+1.5
ROCH				*i* S	Sn	15 02 55.1	+3.2
TACH	Talagante	1.72	251	⇓*i*P	Pn	15 02 31.6	+1.4

TACH				i S	Sn	15 02 55.0	+2.9
LNV	Longovilo	2.19	247	eP	Pn	15 02 39.0	+2.4
LNV				i S	Sn	15 03 08.7	+4.8
LCCH	Las Cruces	2.19	260	⇓ iP	Pn	15 02 39.5	+2.9
LCCH				i S	Sn	15 03 09.1	+5.2
SFDO	San Fernando	2.25	228	⇓ iP	Pn	15 02 40.9	+3.4

IDC 05 15:07:03.8±9.5**,786S×12752E,h468**^{km}±81^{km}**,mb3.0**/1**, mb1 2.9**/4**,mb1mx2.7**/14**,mbtmp3.8**/4**,Error ellipse: s-maj=112.5km s-min=72.2km az=4.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.83	135	eP	P	15 08 29.7	-17
	13nm,0.4s						
FITZ	Fitzroy Crossi	10.34	190	eP	P	15 09 24.4	-0.1
	5.2nm,1.1s						
FITZ				eS	S	15 11 32.6	+12
FITZ	Fitzroy Crossi	10.34	190	P	P	15 09 24.3	-0.2
	0.1nm,0.3s,baz=0.0,slow=20,SNR=7.8						
FITZ				S	S	15 11 32.2	+12
	0.1nm,0.3s,baz=60,slow=20,SNR=2.5						
WRA	Warramunga Arr	13.71	152	P	P	15 10 00.4	-0.3
	0.4nm,0.3s,baz=330,slow=11,SNR=42						
WRA				S	S	15 12 26.5	-0.3
	0.1nm,0.3s,baz=331,slow=22,SNR=3.2						
WB2	Warramunga Arr	13.71	152	eP	P	15 10 02.0	+1.2
WB2				eS	S	15 12 26.8	-0.1
ASAR	Alice Springs	16.87	159	P	P	15 10 35.6	+1.5
	0.4nm,0.3s,baz=343,slow=8.7,SNR=21						
STKA	Stephens Creek	27.26	153	P	P	15 12 08.8	-0.1
	0.5nm,0.3s,baz=336,slow=10.0,SNR=4.3						

*LDG **05** 15:13:32.6±0.7,4327N×079W,h2^{km},Md2.3/3,Ml1.6/1, Error ellipse: s-maj=19.3km s-min=8.2km az=1.0*
*STR **05** 15:13:35.1±0.3,4294N×105W,h5^{km}±1^{km},Ml2.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
MDD 05 15:13:35.4±0.5**,4294N×102W,h9**^{km}±7^{km}**,mbLg1.1**/7**,1C, Error ellipse: s-maj=3.7km s-min=2.3km az=3.0, PRXIMO,Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LARF	Larrau	0.10	13	Pg	Pg	15 13 37.7	-0.2
LARF				Sg	Sg	15 13 39.7	0.0
LARF	Larrau	0.10	13	Pg	Pg	15 13 37.8	-0.1
LARF				Lg		15 13 39.6	
SJPF	Ste Jean	0.23	319	ePg	Pg	15 13 39.6	-0.5
SJPF				eSg	Sg	15 13 42.8	-0.5
	16nm,0.2s						
SJPF	Ste Jean	0.23	319	Pg	Pg	15 13 39.6	-0.5
SJPF				Lg		15 13 42.8	
	8.2nm,0.2s						
ATE	Arette	0.27	58	Pg	Pg	15 13 41.0	+0.1
ATE				Sg	Sg	15 13 45.3	+0.7
ATE	Arette	0.27	58	Pg	Pg	15 13 41.0	+0.1
ATE				Lg		15 13 45.5	
ORDF	Ordiarp	0.28	12	Pg	Pg	15 13 41.0	0.0
ORDF				Sg	Sg	15 13 45.6	+0.8
ORDF	Ordiarp	0.28	12	Pg	Pg	15 13 41.1	+0.1
ORDF				Lg		15 13 45.4	
IPRE	Itoiz	0.28	242	Pg	Pg	15 13 41.1	+0.1
	1.0nm,0.1s,SNR=7.9						
IPRE				Lg		15 13 45.7	
	3.7nm,0.2s,SNR=7.9						
ETSF	Etsaut	0.34	97	ePg	Pg	15 13 40.9	-1.2
ETSF				eSg	Sg	15 13 45.4	-1.2
	4.4nm,0.2s						
ETSF	Etsaut	0.34	97	Pg	Pg	15 13 40.9	-1.2
ETSF				Lg		15 13 45.4	
	2.2nm,0.2s						
OSSF	Osses	0.36	331	Pg	Pg	15 13 42.3	-0.2
OSSF				Sg	Sg	15 13 47.0	-0.4
OSSF	Osses	0.36	331	Pg	Pg	15 13 42.4	-0.1
OSSF				Lg		15 13 46.9	
IUSE	Utxeti	0.39	271	Pg	Pg	15 13 42.4	-0.6
	0.6nm,0.1s,SNR=7.9						
IUSE				Lg		15 13 48.5	
	6.2nm,0.1s,SNR=6.6						
ELIZ	Elizondo	0.44	301	⇑Pg	Pg	15 13 43.4	-0.5
	4.3nm,0.2s,SNR=18						
ELIZ				Lg		15 13 49.7	
	2.5nm,0.1s,SNR=7.6						
EALK	Alkurruntz	0.46	308	Pg	Pg	15 13 43.9	-0.4
	0.6nm,0.1s,SNR=8.4						
EALK				Lg		15 13 50.0	
	6.8nm,0.1s,SNR=7.6						
EBIE	Bielsa	0.89	106	Pg	Pg	15 13 52.4	-0.1
	0.1nm,0.1s,SNR=6.6						
EBIE				Lg		15 14 05.1	
	1.1nm,0.2s,SNR=7.9						
EPF	Esparros	1.00	84	ePn	Pn	15 13 50.2	-5.3
EPF				eSg	Sg	15 13 58.2	-9.4
	1.2nm,0.2s						

*ISCJB **05** 15:30:39.6±0.4,4934N±002×684E±004,h0^{km},Error ellipse: s-maj=3.8km s-min=3.0km az=127.5*
*CSEM **05** 15:30:41.7±0.1,4936N×692E,h1^{km},ML2.5/5,Error ellipse: s-maj=2.1km s-min=1.8km az=68.0*
*LDG **05** 15:30:41.7±0.3,4936N×693E,h1^{km},Ml2.5/5,Error ellipse: s-maj=7.9km s-min=2.6km az=66.0,Suspected Mining induced.*
*BGR **05** 15:30:41.2±0.3,4937N×683E,h1^{km},ML1.6/3,Error ellipse: s-maj=4.4km s-min=3.3km az=58.0*
ISC 05 15:30:40.6±0.4**,4936N**±002×**683E**±004**,h0**^{km}**,n29,** σ**0^{s}91**/44**,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	Walferdange	0.54	305	ePg	Pg	15 30 51.8	+0.8
	SNR=3.1						
WLF				eSg	Sg	15 30 57.6	-0.4
	SNR=5.0						
LANF	Langenberg	0.74	120	ePg	Pg	15 30 55.0	+0.1
	SNR=5.7						
LANF				eSg	Sg	15 31 06.5	+2.0
	SNR=2.5						
CDF	Champ du Feu	0.99	163	ePg	Pg	15 31 00.7	+1.0
CDF				eSg	Sg	15 31 11.7	-0.8
	11nm,0.2s						
CDF	Champ du Feu	0.99	163	ePg	Pg	15 31 00.7	+1.0
CDF				eSg	Sg	15 31 11.7	-0.8
	5.6nm,0.2s						
WLS	Welschbruch	1.01	160	ePg	Pg	15 31 01.3	+1.3
	SNR=4.0						
WLS				eSg	Sg	15 31 13.0	0.0
	SNR=4.6						
THEF	They Montfort	1.26	207	ePg	Pg	15 31 05.6	+0.8
	SNR=5.4						
TNS	Taunus Mts	1.36	50	ePg	Pg	15 31 06.1	-0.6
	SNR=2.3						
TNS				eSg	Sg	15 31 23.5	-0.8
	SNR=2.4						
HAU	Haudompre	1.39	194	ePg	Pg	15 31 07.6	+0.3
HAU				eSg	Sg	15 31 26.4	+1.0
	10.0nm,0.3s						
HAU	Haudompre	1.39	194	ePg	Pg	15 31 07.6	+0.3
HAU				eSg	Sg	15 31 26.4	+1.0
	5.0nm,0.3s						
BFO	Black Forest	1.43	136	ePg	Pg	15 31 06.8	-1.2
	SNR=5.2						
BFO				eSg	Sg	15 31 25.3	-1.3
	SNR=3.7						
MEZF	Maizieres J'vi	1.45	235	eSn	Sn	15 31 26.8	-1.1
GIVF	Givet	1.50	300	ePn	Pn	15 31 08.8	0.0
GIVF	Givet	1.50	300	ePg	Pg	15 31 10.6	+1.2
GIVF	Givet	1.50	300	ePg	Pg	15 31 10.6	+1.2
MOF	Molkenrain	1.52	172	ePg	Pg	15 31 10.5	+0.7
	SNR=3.7						
HINF	Hinteralfeld	1.54	180	ePg	Pg	15 31 10.8	+0.6
HINF				eSg	Sg	15 31 30.9	+0.7
	23nm,0.3s						
HINF	Hinteralfeld	1.54	180	ePg	Pg	15 31 10.8	+0.6
HINF				eSg	Sg	15 31 30.9	+0.7
	12nm,0.3s						
FELD	Feldberg im Sc	1.68	152	ePg	Pg	15 31 12.8	0.0
	SNR=3.0						
BAIF	Baives	1.84	293	ePn	Pn	15 31 13.8	+0.3
BAIF	Baives	1.84	293	ePg	Pg	15 31 17.0	+1.0
BAIF	Baives	1.84	293	ePg	Pg	15 31 17.0	+1.0
LOMF	Lomont	2.01	180	eSg	Sg	15 31 44.6	-0.6
	SNR=3.0						
CABF	La Chapelle	2.79	191	eSn	Sn	15 31 57.6	-3.4
CABF				eSg	Sg	15 32 10.8	+0.4
	1.6nm,0.3s						
CABF	La Chapelle	2.79	191	eSn	Sn	15 31 57.6	-3.4
CABF				eSg	Sg	15 32 10.8	+0.4
	0.8nm,0.3s						
LOR	Lormes	2.88	225	ePn	Pn	15 31 27.1	-0.7
LOR				eSn	Sn	15 32 02.4	-0.8
SSF	Saint Saulge	3.20	225	ePn	Pn	15 31 31.3	-0.9
AVF	Avril sur Loir	3.47	224	eSn	Sn	15 32 16.1	-1.6
	3.1nm,0.6s						
AVF	Avril sur Loir	3.47	224	eSn	Sn	15 32 16.1	-1.6
	1.5nm,0.6s						
GEC2	GERESS Array S	4.54	94	ePn	Pn	15 31 50.1	-0.5
	SNR=1.1						
GEC2				eSn	Sn	15 32 39.4	-4.7
	SNR=1.5						

*ISCJB **05** 15:40:30.4±0.5,5145N±003×1610E±003,h0^{km},Error ellipse: s-maj=3.9km s-min=2.4km az=40.7*
*IPEC **05** 15:40:30.6±0.4,5155N×1613E,h0^{km}±2^{km},ML2.3/4,Error ellipse: s-maj=4.3km s-min=2.5km az=77.0*
*NEIC **05** 15:40:31.6±0.5,5155N×1614E,h5^{km},ML2.4(BRG), ML2.7(CLL),Error ellipse: s-maj=5.8km s-min=4.2km az=193.0*
*CSEM **05** 15:40:32.7±0.1,5147N×1609E,h0^{km},ML3.3/10,Error ellipse: s-maj=2.5km s-min=1.7km az=2.0*
*IDC **05** 15:40:32.5±0.8,5147N×1605E,h0^{km},mb1 3.2/7, mb1mx3.1/22,mbtmp3.2/7,ML2.8/7,Error ellipse: s-maj=13.8km s-min=8.2km az=109.0*
*WAR **05** 15:40:33.1,5148N×1609E,ML2.6,Mining Induced*
*PRU **05** 15:40:33.2,5144N×1608E,h0^{km}*
*VIE **05** 15:40:34.4±0.3,5132N×1598E,h0^{km},mb2.3/3,ML2.9/3, Error ellipse: s-maj=2.0km s-min=1.6km az=41.0 76 km WNW of Breslau Suspected Mining induced.*
*LDG **05** 15:40:36.1±0.8,5140N×1586E,h1^{km},Ml3.3/1,Error ellipse: s-maj=17.7km s-min=8.0km az=34.0,Suspected Mining induced.*
ISC 05 15:40:31.2±0.4**,5151N**±002×**1611E**±003**,h0**^{km}**,n41,** σ**0^{s}89**/80**,3C-1D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.68	170	i Pgd	Pg	15 40 45.0	+0.8
KSP				eSg	Sg	15 40 53.7	+0.7
KSP	Ksiaz	0.68	170	ePg	Pg	15 40 44.8	+0.6
KSP				eSg	Sg	15 40 52.8	-0.2
UPC	Upice	1.01	184	ePG	Pg	15 40 51.0	+0.5
DPC	Dobruska-Polom	1.17	173	ePG	Pg	15 40 53.8	+0.1
DPC				eSG	Sg	15 41 08.5	-0.3
	46nm,0.4s						
BRG	Berggiesshubel	1.51	246	PN	Pn	15 40 59.0	-0.5
BRG				PG	Pg	15 41 00.4	+0.3
BRG				SG	Sg	15 41 20.6	+0.9
	53nm,0.4s						
PRU	Pruhonice	1.82	214	ePN	Pn	15 41 03.7	-0.1
PRU				ePG	Pg	15 41 05.5	-0.7
PRU				eSG	Sg	15 41 29.1	-0.7
	29nm,0.4s						
RAC	Raciborz	1.95	136	ePg	Pg	15 41 09.1	+0.6
RAC				eSg	Sg	15 41 36.6	+2.8
CLL	Collm	1.96	265	ePn	Pn	15 41 05.0	-0.7
CLL				ePg	Pg	15 41 08.0	-0.8
CLL				i x	x	15 41 12.6	
CLL				i Sg	Sg	15 41 34.5	+0.3
	comp=Z,24nm,0.4s						
CLL				i x	x	15 41 43.7	
CLL	Collm	1.96	265	ePn	Pn	15 41 05.0	-0.7
CLL				ePg	Pg	15 41 08.0	-0.8
CLL				i Sg	Sg	15 41 34.5	+0.3
MORC	Moravsky Berou	1.96	152	ePn	Pn	15 41 05.5	-0.2
MORC				eSg	Sg	15 41 32.8	-1.4
	comp=Z,20nm,0.3s						
OKC	Ostrava-Krasne	2.12	142	ePN	Pn	15 41 07.5	-0.4
OKC				ePG	Pg	15 41 11.5	-0.3
OKC				eSG	Sg	15 41 38.7	-0.6
	comp=Z,26nm,0.5s						
VRAC	Vranov	2.23	172	Pn	Pn	15 41 09.2	-0.2
	comp=Z,1.8nm,0.3s,baz=338,slow=14,SNR=13						
VRAC				Lg		15 41 41.9	
	comp=Z,5.1nm,0.3s,baz=86,slow=22,SNR=9.3						
VRAC	Vranov	2.23	172	Pn	Pn	15 41 09.2	-0.2
VRAC				eSg	Sg	15 41 41.9	-0.9
	comp=Z,13nm,0.2s						
KRUC	Moravsky	2.46	176	ePn	Pn	15 41 12.4	-0.2
KRUC				eSg	Sg	15 41 48.6	-1.7
	comp=Z,9.4nm,0.2s						
NKC	Novy Kostel	2.65	243	ePN	Pn	15 41 16.1	+0.9
NKC				ePG	Pg	15 41 22.3	+0.2
NKC				eSG	Sg	15 41 57.3	+0.9
	comp=Z,44nm,0.4s						
OJC	Ojcow	2.67	118	ePg	Pg	15 41 22.8	+0.4
OJC				eSg	Sg	15 41 58.1	+1.1
JAVC	Velka Javorina	2.84	159	ePn	Pn	15 41 18.9	+1.1
JAVC				eSg	Sg	15 42 02.9	+0.5
	comp=Z,18nm,0.6s						
KHC	Kasperske Hory	2.88	215	ePN	Pn	15 41 18.7	+0.3
KHC				ePG	Pg	15 41 24.9	-1.6
KHC				eSN	Sn	15 41 52.9	-0.9
KHC				eSG	Sg	15 42 02.9	-1.0
	comp=Z,14nm,0.5s						
MOX	Moxa	2.97	255	ePN	Pn	15 41 20.0	+0.5
MOX				i PG	Pg	15 41 27.9	-0.2
MOX				i SG	Sg	15 42 07.1	+0.6
GEC2	GERESS Array S	3.09	211	ePn	Pn	15 41 21.4	+0.2
GEC2				ePb	Pb	15 41 27.8	+0.8
GEC2				eSb	Sb	15 42 07.2	+2.0
GEC2	GERESS Array S	3.09	211	ePn	Pn	15 41 21.4	+0.2
GERES	GERESS Array B	3.09	211	Pn	Pn	15 41 21.6	+0.4
	comp=Z,1.3nm,0.3s,baz=29,slow=12,SNR=41						
GERES				Pg	Pg	15 41 28.3	-2.1
	comp=Z,2.7nm,0.3s,baz=29,slow=20,SNR=28						
GERES				Lg		15 42 07.6	
	comp=Z,4.2nm,0.3s,baz=33,slow=27,SNR=9.0						
GERES	GERESS Array B	3.09	211	Pg	Pg	15 41 28.3	-2.1
ZST	Bratislava	3.38	169	eSG	Sg	15 42 19.5	-0.3
ZST	Bratislava	3.38	169	eSg	Sg	15 42 19.6	-0.2
VYHS	Vyhne	3.49	149	ePN	Pn	15 41 27.8	+1.0
VYHS				ePG	Pg	15 41 37.9	-0.3
VYHS				eSG	Sg	15 42 22.7	-0.8
VYHS	Vyhne	3.49	149	ePn	Pn	15 41 27.9	+1.1
VYHS				ePg	Pg	15 41 37.9	-0.3
VYHS				eSg	Sg	15 42 22.7	-0.8
CONA	Conrad Observa	3.59	183	⇓ iPn	Pn	15 41 28.4	+0.3
CONA				⇑ iSg	Sg	15 42 26.6	0.0
	comp=Z,8.6nm,0.3s						
BSD	Bornholm Skovb	3.68	349	i	Pn	15 41 29.3	-0.1
BSD				i S	Sn	15 42 09.1	-4.3
BSD				i		15 42 52.8	
MOA	Molln	3.86	199	⇑ iPn	Pn	15 41 32.4	+0.6
MOA				⇑ iSg	Sg	15 42 35.1	0.0
	comp=Z,9.9nm,0.5s						
CRVS	Cervenica-Dubn	4.32	125	ePG	Pg	15 41 54.1	+0.2
CRVS				e		15 42 46.6	
KOLS	Kolonicke sedl	4.72	121	ePN	Pn	15 41 44.4	+0.7
KOLS				ePG	Pg	15 42 03.2	+1.5
KOLS				e		15 42 59.5	
KOLS	Kolonicke sedl	4.72	121	ePn	Pn	15 41 44.4	+0.7
KOLS				ePg	Pg	15 42 03.2	+1.5
KOLS				e		15 42 59.6	
DAVOX	Davos	6.25	223	Pn	Pn	15 42 06.4	+1.7
	comp=Z,0.3nm,0.3s,baz=39,slow=13,SNR=3.0						
CDF	Champ du Feu	6.49	245	ePn	Pn	15 42 08.2	+0.2
CDF				eSg	Sg	15 43 52.2	-7.5
	comp=Z,5.1nm,0.5s						
MEZF	Maizieres J'vi	7.74	251	ePn	Pn	15 42 25.2	+0.1
AKASG	Malin Array Be	8.29	90	Pn	Pn	15 42 31.7	-1.0
	comp=Z,0.7nm,0.3s,baz=279,slow=12,SNR=4.2						
HFS	Hagfors	8.75	352	Pn	Pn	15 42 37.7	-1.3
	comp=Z,0.1nm,0.3s,baz=156,slow=15,SNR=4.3						
HFS	Hagfors	8.75	352	Pn	Pn	15 42 37.7	-1.3
FINES	FINESS Array B	11.36	25	Pn	Pn	15 43 12.0	-2.8
	comp=Z,0.1nm,0.3s,baz=203,slow=14,SNR=4.0						
ARCES	ARCESS Array B	18.62	10	Pn	Pn	15 44 46.1	-4.3
	comp=Z,0.1nm,0.3s,baz=198,slow=14,SNR=4.5						

*ISCJB **05** 15:48:41.6±0.9,2419S±007×667W±0.1,h191^{km}±12^{km}, mb3.6/4,Error ellipse: s-maj=20.9km s-min=10.9km az=1.6*
*IDC **05** 15:48:43.1±1.3,2407S×6669W,h186^{km}±13^{km},mb3.4/4, mb1 3.5/7,mb1mx3.4/18,mbtmp3.9/7,Error ellipse: s-maj=20.9km s-min=17.9km az=66.0*
ISC 05 15:48:43.4±1.0**,2410S**±010×**667W**±01**,h193**^{km}±12^{km}**,n10,** σ**0^{s}62**/10**,mb3.5**/4**,Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.50	306	P	Pn	15 49 27.8	+0.9
	52nm,0.3s,baz=128,slow=6.5,SNR=26						
LVC				S	Sn	15 50 00.5	-0.2
	16nm,0.3s,baz=258,slow=22,SNR=12						
CFAA	Coronel Fontan	7.60	190	P	Pn	15 50 30.9	-0.4
	0.1nm,0.3s,baz=355,slow=12,SNR=6.3						
CFAA				S	Sn	15 51 51.7	-5.3
	0.5nm,0.3s,baz=311,slow=23,SNR=23						
SIV	San Ignacio	9.65	34	P	Pn	15 50 57.1	-1.0
	0.2nm,0.3s,baz=209,slow=13,SNR=4.1						
BDFB	Brasilia	19.48	68	P	P	15 52 56.5	+0.9
	0.6nm,0.3s,baz=230,slow=9.1,SNR=7.4						
SNAA	Sanae	59.17	161	P	P	15 58 23.9	0.0
	0.3nm,0.7s,mb3.0,baz=248,slow=11,SNR=4.7						
TORD	Torodi Ar. Bea	76.36	69	P	P	16 00 11.4	+0.3
	0.5nm,0.5s,mb3.4,baz=257,slow=6.2,SNR=12						
ULM	Lac du Bonnet	78.40	341	P	P	16 00 22.1	-0.4
	2.0nm,0.7s,mb3.8,baz=179,slow=9.3,SNR=4.5						
YKA	Yellowknife Ar	94.31	340	P	P	16 01 40.6	-0.1
	0.4nm,0.5s,mb3.7,baz=134,slow=4.4,SNR=11						
WRA	Warramunga Arr	131.66	207	PKP	PKPdf	16 07 34.9	+1.8
	0.7nm,1.1s,baz=160,slow=1.9,SNR=6.5						
MKAR	Makanchi Array	146.43	40	PKPbc	PKPbc	16 08 01.9	+0.3
	1.0nm,0.7s,baz=286,slow=3.8,SNR=9.8						

IDC 05 16:08:31.2±4.7**,012N×10168E,h83**^{km}±71^{km}**,mb3.3**/4**, mb1 3.4**/5**,mb1mx3.1**/20**,mbtmp3.5**/5**,ML3.3**/1**,Error ellipse: s-maj=192.1km s-min=23.4km az=54.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.83	314	P	Pn	16 09 26.9	-0.9
	2.2nm,0.3s,baz=169,slow=5.3,SNR=11						
WRA	Warramunga Arr	37.69	124	P	P	16 15 39.0	+0.4
	0.3nm,0.3s,baz=304,slow=8.9,SNR=6.9						
ASAR	Alice Springs	39.21	129	P	P	16 15 52.2	+1.0
	0.3nm,0.5s,baz=302,slow=8.3,SNR=11						
STKA	Stephens Creek	49.35	134	P	P	16 17 11.5	-0.7
	0.4nm,0.4s,baz=336,slow=10.0,SNR=2.1						
MKAR	Makanchi Array	49.48	343	P	P	16 17 13.3	+0.2
	0.2nm,0.5s,baz=138,slow=7.3,SNR=5.2						

*NEIC **05** 16:16:19.3,2034N×6954W,h10^{km},MD4.1(RSPR),After RSPR.*
RSPR 05 16:16:19.3,2034N×6954W,h10^{km}±18^{km}**,MD4.1**/10**, MD4.1**/10**,14C,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	2.96	129	⇑ eP	Pn	16 17 03.3	-3.0
AGPR				eS	Sn	16 17 38.6	-3.2
LSP	Las Mesas	3.17	132	⇑ eP	Pn	16 17 07.2	-2.0
LSP				eS	Sn	16 17 43.7	-3.3
LRS	Lares	3.26	128	⇑ eP	Pn	16 17 08.4	-2.1
LRS				eS	Sn	16 17 46.6	-2.8
CRPR	Cabo Rojo, PR	3.27	135	⇑ eP	Pn	16 17 08.1	-2.5
CRPR				eS	Sn	16 17 46.0	-3.5
MGP	Maguayo	3.28	135	⇑ eP	Pn	16 17 08.8	-2.0
MGP				eS	Sn	16 17 46.2	-3.6
AOPR	Arecibo Observ	3.30	126	⇑ eP	Pn	16 17 08.8	-2.2
AOPR				eS	Sn	16 17 47.0	-3.3
OBIP	Obispado Ponce	3.60	129	⇑ eP	Pn	16 17 12.6	-2.5
OBIP				eS	Sn	16 17 54.2	-3.4
ICM	Isla Caja Muer	3.75	130	eS	Sn	16 17 58.8	-2.8
SJG	San Juan	3.90	124	⇑ eP	Pn	16 17 16.9	-2.4
SJG				eS	Sn	16 18 02.2	-2.9
CBYP	Canovanas	4.04	120	⇑ eP	Pn	16 17 18.9	-2.4
CBYP				eS	Sn	16 18 05.4	-3.3
CPD	Cerro la Pandu	4.12	123	⇑ eP	Pn	16 17 20.5	-1.9
CPD				eS	Sn	16 18 08.0	-2.6
MTP	Monte Pirata	4.38	120	⇑ eP	Pn	16 17 23.5	-2.4
MTP				eS	Sn	16 18 14.5	-2.5
CULB	Culebra	4.46	116	⇑ eP	Pn	16 17 25.7	-1.3
CULB	Culebra	4.46	116	eS	Sn	16 18 17.5	-1.5
STVI	Saint Thomas	4.76	114	⇑ eP	Pn	16 17 29.2	-1.8
TBVI	Tortola	5.04	112	⇑ eP	Pn	16 17 33.2	-1.8
TBVI				eS	Sn	16 18 30.4	-2.8

IDC 05 16:41:55.5±7.0**,1859S×17422E,h0**^{km}**,mb4.5**/3**, mb1 4.7**/3**,mb1mx4.0**/12**,mbtmp4.5**/3**,Error ellipse: s-maj=135.1km s-min=112.3km az=117.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	32.20	239	eP	P	16 48 26.0	+0.8
	2.9nm,0.6s						
STKA	Stephens Creek	32.20	239	P	P	16 48 26.1	+0.9
	3.4nm,0.5s,baz=92,slow=9.8,SNR=21						
WB2	Warramunga Arr	37.60	261	eP	P	16 49 11.6	-0.1
WRA	Warramunga Arr	37.61	261	P	P	16 49 11.9	0.0
	2.0nm,0.7s,baz=96,slow=6.9,SNR=36						
WRA				ScP	ScP	16 55 19.0	+0.9
	0.5nm,1.1s,baz=109,slow=2.4,SNR=5.6						
ASAR	Alice Springs	37.85	255	P	P	16 49 13.8	-0.1
	13nm,0.6s,baz=88,slow=8.3,SNR=305						
ASPA	Alice Springs	37.85	255	eP	P	16 49 13.7	-0.2

*INMG **05** 17:06:22.2±0.7,4283N×725W,h11^{km}±5^{km},ML1.6,Error ellipse: s-maj=1.8km s-min=1.2km az=96.0*
MDD 05 17:06:22.1±0.6**,4283N×724W,h11**^{km}±1^{km}**,mbLg1.9**/10**, Error ellipse: s-maj=4.9km s-min=3.8km az=115.0, PRXIMO,Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPON	Pontenova	0.50	7	Pg	Pg	17 06 31.3	-0.6
	1.2nm,0.1s,SNR=14						
EPON				Lg		17 06 38.0	
	7.6nm,0.1s,SNR=31						
ECAL	Calabor	0.96	157	Pg	Pg	17 06 39.6	-1.1
	0.6nm,0.1s,SNR=14						
ECAL				Lg		17 06 51.6	
	11nm,0.1s,SNR=9.0						
STS	Santiago	0.97	274	Pg	Pg	17 06 39.3	-1.5
	1.5nm,0.2s,SNR=7.9						
STS				Lg		17 06 52.8	
	8.8nm,0.1s,SNR=6.6						
PBRG	Braganca	1.09	160	eP	Pb	17 06 42.6	-0.4
PBRG				eS	Sb	17 06 56.3	-0.9
PBRG							
	7.0nm,0.1s						
ELOB	Lobios	1.14	213	Pg	Pg	17 06 42.3	-1.7
	0.5nm,0.1s,SNR=16						
ELOB				Lg		17 06 58.1	
	2.9nm,0.1s,SNR=15						
PCAB	Cabril	1.27	208	eP	Pn	17 06 45.5	-0.2
PCAB				eS	Sb	17 07 01.4	-0.8
PCAB							
	9.6nm,0.1s						
EMAZ	Mazaricos	1.28	276	Pg	Pg	17 06 46.0	-0.8
	3.9nm,0.2s,SNR=5.0						
EMAZ				Lg		17 07 02.8	
	8.4nm,0.1s,SNR=6.2						
EARI	Arriondas	1.56	72	Pg	Pg	17 06 50.4	-1.7
	0.7nm,0.2s,SNR=16						
EARI				Lg		17 07 10.9	
	2.0nm,0.1s,SNR=7.5						
PVRL	Vila Real	1.60	193	eSg	Sg	17 07 11.9	-1.6
PVRL							
	11nm,0.1s						
PVRL	Vila Real	1.60	193	Lg		17 07 11.9	
	5.4nm,0.1s						
PVIS	Viseu	2.17	193	eSg	Sg	17 07 28.9	-3.0
ELAN	Lanestosa	2.82	81	Sn	Sn	17 07 38.7	-2.2
	0.5nm,0.3s,SNR=7.9						
ELAN				Lg		17 07 49.8	
	1.3nm,0.2s,SNR=7.9						

*ISCJB **05** 17:07:37.8±0.6,4727N±005×8081E±007,h33km,Error ellipse: s-maj=8.3km s-min=5.3km az=99.6*
*NNC **05** 17:07:38.8±1.9,4707N×8092E,h77km±63km,mb3.2,mpv3.4,Error ellipse: s-maj=28.6km s-min=8.1km az=104.0*
ISC 05 17:07:40.1±0.6,4720N±004×8089E±007,h35km,n15,σ$1^{s}40$/20,11C-8D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK05	Makanchi Array	1.04	112	⇓P	Pn	17 07 57.5	-0.7
	156nm,0.5s						
MK05				⇑S	Sn	17 08 10.9	-0.6
	146nm,0.3s						
KURK	Kurchatov	3.83	338	⇓Pn	Pn	17 08 39.2	+2.7
	9.2nm,0.4s						
KURK				⇑Lg		17 09 45.2	
	95nm,0.7s						
TKM2	Tokmak 2	5.69	223	⇑Pn	Pn	17 09 01.5	-0.6
	0.1nm,0.3s						
TKM2				⇑Sn	Sn	17 10 03.6	-2.5
	0.3nm,0.4s						
TKM2				⇑Lg		17 10 34.2	
	8.1nm,1.0s						
ULHL	Ulahol	5.96	215	P	Pn	17 09 08.1	+2.4
	SNR=22						
USP	Ospenovka	5.99	231	P	Pn	17 09 06.5	+0.3
	SNR=18						
CHMS	Chumysh	6.04	228	P	Pn	17 09 07.4	+0.4
	SNR=5.8						
KBK	Karagaybulak	6.20	225	P	Pn	17 09 10.3	+1.3
	SNR=5.4						
UCH	Uchtor	6.73	225	P	Pn	17 09 19.7	+3.2
	SNR=16						
EKS2	Erkin-Say	6.79	231	P	Pn	17 09 17.6	+0.4
	SNR=8.1						
KK31	Karatay Array	8.40	245	Pn	Pn	17 09 38.3	-1.1
	0.6nm,0.2s,baz=63,slow=11,SNR=47						
KK31				⇓Lg		17 12 02.9	
	7.5nm,0.6s,baz=62,slow=34,SNR=5.9						
VOSK	Vostochnaya	8.45	315	⇑Pn	Pn	17 09 40.8	+0.8
	0.5nm,0.4s						
VOSK				⇑Sn	Sn	17 11 14.5	+0.4
	1.1nm,0.4s						
VOSK				⇓Lg		17 12 07.4	
	18nm,0.8s						
BVA0	Borovoye Array	8.92	315	Pn	Pn	17 09 47.4	+1.0
	0.3nm,0.8s,baz=125,slow=13,SNR=4.7						
BVA0				⇓Lg		17 12 22.3	
	2.5nm,1.1s,baz=114,slow=21,SNR=4.2						
CHKZ	Chkalovo	9.22	318	⇓Pn	Pn	17 09 48.2	-2.3
	1.3nm,0.6s						
CHKZ				⇑Sn	Sn	17 11 33.3	+0.3
	3.3nm,0.7s						
CHKZ				⇓Lg		17 12 36.0	
	16nm,1.1s						
ZRNK	Zerenda	9.56	311	⇑Pn	Pn	17 09 55.2	-0.1
	3.3nm,0.8s						
ZRNK				⇓Sn	Sn	17 11 39.0	-2.5
	2.9nm,0.5s						
ZRNK				⇑Lg		17 12 46.4	
	15nm,1.0s						
AB31	Akbulak array	14.11	286	Pn	Pn	17 10 54.4	-3.1
	0.3nm,0.4s,baz=95,slow=14,SNR=9.0						
AB31				⇑Lg		17 15 09.6	
	6.9nm,1.0s						

*ISCJB **05** 17:22:26.7±2.8,6.1S±02×1278E±02,h416km±35km,mb3.5/2,Error ellipse: s-maj=36.2km s-min=24.4km az=142.8*
*IDC **05** 17:22:28.0±12.0,6.10S×12782E,h406km±161km,mb3.0/1,mb1 3.3/4,mb1mx2.9/15,mbtmp4.0/4,Error ellipse: s-maj=105.7km s-min=56.3km az=41.0*
*NEIC **05** 17:22:29.3±2.4,6.16S×12782E,h434km±37km,mb4.1/4,Error ellipse: s-maj=25.6km s-min=22.9km az=184.0*
ISC 05 17:22:28.6±3.6,61S±02×1278E±02,h423km±53km,n12,σ$0^{s}45$/12,mb3.5/2,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	8.00	146	eP	P	17 24 23.5	-0.1
	5.7nm,0.6s						
FITZ	Fitzroy Crossi	12.11	190	P	P	17 25 09.2	+0.3
	0.3nm,0.3s,baz=3.8,slow=13,SNR=15						
WRAB	Tennant Creek	15.14	156	eP	P	17 25 41.7	-0.2
	3.1nm,0.5s						
WRA	Warramunga Arr	15.15	156	P	P	17 25 41.9	+0.1
	1.1nm,0.3s,baz=334,slow=11,SNR=107						
WB2	Warramunga Arr	15.15	156	eP	P	17 25 42.0	+0.1
MBWA	Marble Bar	16.89	207	eP	P	17 26 00.2	-0.3
	11nm,1.1s						
AS31	Alice Springs	18.42	162	eP	P	17 26 16.3	-0.2
ASAR	Alice Springs	18.42	162	P	P	17 26 16.7	+0.2
	0.8nm,0.3s,baz=344,slow=12,SNR=97						
ASPA	Alice Springs	18.42	162	eP	P	17 26 16.7	+0.2
MKAR	Makanchi Array	66.30	328	P	P	17 32 34.5	+1.0
	0.4nm,0.4s,mb3.4,baz=122,slow=9.5,SNR=6.8						
MKAR	Makanchi Array	66.30	328	P	P	17 32 34.5	+1.0
KURK	Kurchatov	70.63	329	P	P	17 32 59.0	-1.0
	1.6nm,0.8s,mb3.6						

IDC 05 17:23:46.7±4.0,196S×12069E,h0km,mb3.3/3,mb1 3.6/3,mb1mx3.3/16,mbtmp3.4/3,Error ellipse: s-maj=354.9km s-min=27.7km az=66.0,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.31	144	P	P	17 28 45.9	+0.2
	0.8nm,0.8s,baz=318,slow=12,SNR=6.1						
ASAR	Alice Springs	25.09	150	P	P	17 29 13.4	+0.5
	0.3nm,0.5s,baz=332,slow=8.5,SNR=5.5						
SONM	Songino Array	51.13	348	P	P	17 32 51.3	+0.1
	0.5nm,0.9s,baz=152,slow=6.5,SNR=4.0						

IDC 05 17:33:16.1±2.0,431N×12298E,h0km,mb3.4/3,mb1 3.6/3,mb1mx3.3/18,mbtmp3.4/3,MS3.6/1,Ms1 3.6/1,ms1mx2.9/24,Error ellipse: s-maj=230.4km s-min=26.9km az=63.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.56	156	P	P	17 38 55.2	-0.4
	0.1nm,0.4s,baz=333,slow=10,SNR=7.2						
ASAR	Alice Springs	29.77	160	P	P	17 39 25.4	+1.1
	0.1nm,0.3s,baz=339,slow=7.8,SNR=11						
CTA	Charters Tower	33.33	137	LR	LR	17 53 11.8	
	comp=Z,95nm,20.7s,baz=44,slow=36						
MKAR	Makanchi Array	54.99	327	P	P	17 42 49.1	0.0
	0.4nm,0.5s,baz=121,slow=6.5,SNR=4.7						

*NEIC **05** 17:55:24.5,1785N×9885W,h76km,MD3.7(MEX),After MEX.*
MEX 05 17:55:24.6±1.1,1779N×9882W,h66km±17km,MD3.7,1C,Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEIG	Mezcala	0.78	280	*i* P	Pn	17 55 39.0	-1.2
MEIG				*i* S	Sn	17 55 50.0	-1.5
PLIG	Platanillo	0.88	312	*i* P	Pn	17 55 40.4	-1.1
PLIG				*i* S	Sn	17 55 52.8	-1.1
UTMO	Huajuapan	0.96	88	⇑*i*P	Pn	17 55 41.6	-0.8
UTMO				*i* S	Sn	17 55 54.0	-1.7
YAIG	Yautepec	1.09	347	*i* P	Pn	17 55 42.7	-1.3
YAIG				*i* S	Sn	17 55 56.1	-2.4
PPM	Popocatepetl	1.28	8	*i* P	Pn	17 55 44.8	-1.7
PPM				*i* S	Sn	17 56 01.8	-1.1
ACX	Acapulco	1.40	229	*i* P	Pn	17 55 47.0	-1.1
ACX				*i* S	Sn	17 56 02.0	-3.7
TPIG	Tehuac#an	1.52	66	*i* P	Pn	17 55 48.8	-0.8
TPIG				*i* S	Sn	17 56 07.6	-0.9
CAIG	El Cayaco	1.57	242	*i* P	Pn	17 55 49.1	-1.2
CAIG				*i* S	Sn	17 56 09.5	-0.4
VHO	Vista Hermosa	2.11	110	*i* P	Pn	17 56 00.3	+2.6
VHO				*i* S	Sn	17 56 25.0	+2.1
VHO	Vista Hermosa	2.11	110	*i* P	Pn	17 55 59.3	+1.6
VHO				*i* S	Sn	17 56 24.6	+1.7
OXX	Oaxaca	2.12	109	*e*P	Pn	17 55 56.0	-1.7

WEL 05 18:14:13.2±0.5,4507S×16705E,h12km,ML3.6/8,1C-2D, Error ellipse: s-maj=4.9km s-min=1.7km az=90.0,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.74	58	P*	Pb	18 14 26.9	-1.1
MSZ				S*	Sb	18 14 36.2	-1.8
MLZ	Mavora Lakes	0.84	110	⇓P*	Pb	18 14 28.7	-1.0
MLZ				S*	Sb	18 14 38.7	-2.2
WHZ	Wether Hill Ro	1.04	143	⇓P*	Pb	18 14 31.7	-1.4
WHZ				*e*S*	Sb	18 14 45.2	-1.3
WKZ	Wanaka	1.42	81	PN	Pn	18 14 38.9	+0.1
JCZ	Jackson Bay	1.57	51	⇑PN	Pn	18 14 39.9	-1.0
EAZ	Earnscleugh	1.60	97	PN	Pn	18 14 41.4	+0.1
APZ	The Paps	1.88	160	PN	Pn	18 14 44.1	-1.0
TUZ	Tuapeka	2.02	117	*e*PN	Pn	18 14 46.6	-0.4
SYZ	Scrubby Hill	2.07	136	PN	Pn	18 14 46.7	-1.0
LBZ	Lake Benmore	2.33	74	PN	Pn	18 14 51.2	-0.2
FOZ	Fox Glacier	2.42	52	*e*PN	Pn	18 14 51.4	-1.1
ODZ	Otahua Downs	2.55	91	PN	Pn	18 14 53.5	-0.7

NEIC 05 18:29:16.6,5488N×16015W,h5km,ML3.5(AEIC),ML3.9(PMR),After AEIC.,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	Sand Point	0.51	339	P	Pg	18 29 27.4	+1.1
SDPT				S	Sg	18 29 34.9	+2.0
CHGN	Chignik	1.73	34	P	Pn	18 29 44.9	-2.5
FALS	False Pass	1.89	271	P	Pn	18 29 47.6	-1.8
FALS				*e*Sn	Sn	18 30 07.0	-6.6
FALS				*e*Sg	Sg	18 30 11.7	-5.5
AKUT	Akutan	3.36	259	P	Pn	18 30 08.5	-1.2
AKUT				*e*Sn	Sn	18 30 47.9	-2.0
AKLV	Akutan Long Va	3.46	260	P	Pn	18 30 08.8	-2.2
KDAK	Kodiak Island	5.12	52	*e*Pn	Pn	18 30 29.9	-4.0
	28nm,0.5s						
SPIA	Saint Paul Isl	6.11	296	P	Pn	18 30 45.5	-2.0
SVW2	Sparrevohn	6.69	19	*e*Pn	Pn	18 30 52.8	-2.7
SLKM	Skilak Lake	7.75	39	P	Pn	18 31 07.4	-2.6
TTA	Tatalina	8.35	13	*e*Pn	Pn	18 31 15.1	-3.2
	3.7nm,0.4s						

*NEIC **05** 18:49:09.0,33.12S×6896W,h12km,ML3.0(GUC),After GUC.*
GUC 05 18:49:09.0±0.9,3312S×6896W,h12km±5km,MD3.9,ML3.0,7C-10D,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDZ	Mendoza	0.25	21	*e*P	Pg	18 49 16.2	+2.0
MDZ				*i* S	Sg	18 49 19.9	+2.3
FCH	Farellones	1.14	259	⇓*i*P	Pb	18 49 30.1	-0.5
FCH				*i* S	Sb	18 49 46.3	+0.9
FCH				AML	AML	18 49 47.3	
	comp=N,239nm,0.4s						
CLCH	Cerro Calan	1.35	258	⇓*i*P	Pn	18 49 34.0	+0.3
CLCH				*i* S	Sb	18 49 53.5	+1.9
CLCH				AML	AML	18 49 55.7	
	comp=E,210nm,0.4s						
PCH	Pirque	1.40	248	⇑*i*P	Pn	18 49 34.8	+0.4
PCH				*i* S	Sn	18 49 54.4	+1.7
JACH	Jahuel	1.44	287	⇑*i*P	Pn	18 49 35.9	+0.9
JACH				*i* S	Sn	18 49 55.8	+1.9
PEL	Peldehue	1.45	268	⇑*i*P	Pn	18 49 35.7	+0.6
PEL				*i* S	Sn	18 49 55.5	+1.5
PEL				AML	AML	18 49 55.9	
	comp=N,344nm,0.3s						
PEL	Peldehue	1.45	268	⇑*i*P	Pn	18 49 35.7	+0.6
PEL				*i* S	Sn	18 49 55.5	+1.5
RCDM	Rinconada Maip	1.59	256	⇓*i*P	Pn	18 49 38.5	+1.4
RCDM				*i* S	Sn	18 49 59.9	+2.4
RCDM				AML	AML	18 50 01.7	
	comp=N,122nm,0.2s						
RCDM	Rinconada Maip	1.59	256	⇓*i*P	Pn	18 49 38.5	+1.4
RCDM				*i* S	Sn	18 49 59.9	+2.4
CHCH	Chadas Angostu	1.64	240	⇑*i*P	Pn	18 49 38.6	+1.0
CHCH				*i* S	Sn	18 50 01.0	+2.4
CACH	El Canelo	1.70	233	⇑*i*P	Pn	18 49 40.0	+1.5
CACH				*i* S	Sn	18 50 04.0	+3.8
CICH	Cipreses	1.71	225	⇓*i*P	Pn	18 49 39.9	+1.2
CICH				*i* S	Sn	18 50 03.3	+2.8
TACH	Talagante	1.74	252	⇓*i*P	Pn	18 49 40.8	+1.7
TACH				*i* S	Sn	18 50 04.2	+2.9
LNV	Longovilo	2.22	247	⇑*i*P	Pn	18 49 47.9	+2.3
LNV				*i* S	Sn	18 50 18.1	+5.2
LCCH	Las Cruces	2.22	260	⇓*i*P	Pn	18 49 48.7	+3.1
LCCH				*i* S	Sn	18 50 18.6	+5.6
SFDO	San Fernando	2.27	228	⇓*i*P	Pn	18 49 49.2	+2.8
SFDO				*i* S	Sn	18 50 20.8	+6.4
CMCH	Combarbala	2.60	318	⇓*i*P	Pn	18 49 54.2	+3.3
CMCH				*i* S	Sn	18 50 28.6	+6.3
CMCH				AML	AML	18 50 33.6	
	comp=E,973nm,0.6s						
CMCH	Combarbala	2.60	318	⇓*i*P	Pn	18 49 54.2	+3.3
CMCH				*i* S	Sn	18 50 28.6	+6.3

*CSEM **05** 19:01:21.5,1227N×4463E,h2km,ML3.5,After DHMR*
DHMR 05 19:01:21.5±1.2,1227N×4463E,h3km±6km,ML3.5,5C,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	At Turbah	1.08	333	⇑*i*P	Pg	19 01 41.8	-0.4
TRBA				*i* S	Sg	19 01 57.5	+1.2
TRBA				AML	AML	19 02 05.7	
	comp=N,1μm,0.3s						
LBOS		1.71	21	⇑*i*P	Pn	19 01 53.2	+1.0
LBOS				*i* S	Sn	19 02 17.7	+3.2
UDYN	Al ‘Udayn	1.81	339	*i* P	Pn	19 01 54.4	+0.8
UDYN				*i* S	Sn	19 02 19.2	+2.2
UDYN				AML	AML	19 02 29.0	
	comp=N,778nm,0.4s						
UDYN	Al ‘Udayn	1.81	339	*i* P	Pn	19 01 54.4	+0.8
UDYN				*i* S	Sn	19 02 19.2	+2.2
BDHA	Al Bayda’	1.93	28	⇑*i*P	Pn	19 01 55.5	+0.3
BDHA				*i* S	Sn	19 02 23.5	+3.5
BDHA				AML	AML	19 02 33.3	
	comp=Z,240nm,0.5s						
BDHA	Al Bayda’	1.93	28	⇑*i*P	Pn	19 01 55.5	+0.3
BDHA				*i* S	Sn	19 02 23.5	+3.5
DHBB	Dhamar BB	2.30	354	⇑*i*P	Pn	19 02 02.6	+2.2
DHBB				*i* S	Sn	19 02 33.9	+4.7
HAJJ	Hajjah	3.56	344	*i* P	Pn	19 02 20.0	+2.4
HAJJ				*i* S	Sn	19 03 06.6	+6.5
HAJJ				AML	AML	19 03 25.9	
	comp=N,293nm,0.6s						
HAJJ	Hajjah	3.56	344	*i* P	Pn	19 02 20.0	+2.4
HAJJ				*i* S	Sn	19 03 06.6	+6.5

*NEIC **05** 19:05:15.4,2857S×7249W,h80km,MG3.5(GUC),After GUC.*
GUC 05 19:05:15.4±0.8,2857S×7249W,h80km±57km,ML3.5,3C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	Vallenar	1.52	91	⇑*i*P	Pn	19 05 41.6	+0.7
VACH				*i* S	Sn	19 06 01.2	+0.9
VACH				AML	AML	19 06 03.1	
	comp=N,1μm,0.1s						
VACH	Vallenar	1.52	91	⇑*i*P	Pn	19 05 41.6	+0.7
VACH				*i* S	Sn	19 06 01.2	+0.9
LCO	Las Campanas	1.63	106	⇑*i*P	Pn	19 05 43.7	+1.3
LCO				*i* S	Sn	19 06 04.5	+1.8
CDCH	Caldera	2.09	45	*i* P	Pn	19 05 48.9	+0.4
CDCH				*i* S	Sn	19 06 13.9	+0.2
CDCH				AML	AML	19 06 14.6	
	comp=E,149nm,0.2s						
CDCH	Caldera	2.09	45	*i* P	Pn	19 05 48.9	+0.4
CDCH				*i* S	Sn	19 06 13.9	+0.2
TLL	Tololo Astrono	2.17	138	*e*P	Pn	19 05 50.7	+1.2
TLL				*i* S	Sn	19 06 17.0	+1.5
TLL				AML	AML	19 06 19.5	
	comp=N,323nm,0.7s						
TLL	Tololo Astrono	2.17	138	*e*P	Pn	19 05 50.7	+1.2
TLL				*i* S	Sn	19 06 17.0	+1.5
CPCH	Copiapo	2.24	58	*i* P	Pn	19 05 50.7	+0.3
CPCH				*e*S	Sn	19 06 18.3	+1.0
CMCH	Combarbala	2.90	154	AML	AML	19 06 38.0	
	comp=N,324nm,0.8s						

*NEIC **05** 19:29:44.2,33.16S×6897W,h6km,ML3.1(GUC),After GUC.*
GUC 05 19:29:44.2±0.7,3316S×6897W,h6km±9km,MD3.9,ML3.1,6C-6D,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	1.12	261	⇓*i*P	Pg	19 30 05.3	-0.5
FCH				*i* S	Sg	19 30 21.6	+1.3
FCH				AML	AML	19 30 24.6	
	comp=E,717nm,0.2s						
SJCH	San Jose de Ma	1.26	247	*e*P	Pn	19 30 06.9	-1.3
SJCH				*i* S	Sg	19 30 24.8	+0.2
SJCH				AML	AML	19 30 27.9	
	comp=N,368nm,0.4s						
SJCH	San Jose de Ma	1.26	247	*e*P	Pn	19 30 06.9	-1.3
SJCH				*i* S	Sg	19 30 24.8	+0.2
CLCH	Cerro Calan	1.34	260	⇓*i*P	Pn	19 30 09.0	-0.3
CLCH				*i* S	Sb	19 30 27.9	+0.9
CLCH				AML	AML	19 30 32.2	
	comp=E,641nm,0.5s						
CLCH				AML	AML	19 30 32.7	
	comp=N,610nm,0.4s						
PCH	Pirque	1.37	250	⇑*i*P	Pn	19 30 09.9	0.0
PCH				*e*S	Sb	19 30 28.6	+0.6
PEL	Peldehue	1.44	270	⇑*i*P	Pn	19 30 10.8	0.0
PEL				*i* S	Sn	19 30 30.9	+0.8
PEL				AML	AML	19 30 33.0	
	comp=N,570nm,0.5s						
PEL	Peldehue	1.44	270	⇑*i*P	Pn	19 30 10.8	0.0
PEL				*i* S	Sn	19 30 30.9	+0.8
JACH	Jahuel	1.45	289	⇑*i*P	Pn	19 30 10.8	-0.1
JACH				*i* S	Sn	19 30 30.5	+0.3
SAN	Santiago	1.45	258	*e*S	Sn	19 30 30.4	+0.2
SAN				AML	AML	19 30 35.1	
	comp=N,322nm,0.4s						
ANTU	Antumapu	1.45	253	*e*S	Sn	19 30 31.8	+1.4
ANTU				AML	AML	19 30 36.9	
	comp=E,420nm,0.5s						
RCDM	Rinconada Maip	1.58	258	⇑*i*P	Pn	19 30 13.3	+0.6
RCDM				*i* S	Sn	19 30 35.7	+2.4
RCDM				AML	AML	19 30 38.1	
	comp=N,297nm,0.3s						
RCDM	Rinconada Maip	1.58	258	⇑*i*P	Pn	19 30 13.3	+0.6
RCDM				*i* S	Sn	19 30 35.7	+2.4
CHCH	Chadas Angostu	1.61	241	*e*P	Pn	19 30 13.1	0.0
CHCH				*i* S	Sn	19 30 36.2	+2.2
CACH	El Canelo	1.66	235	⇓*i*P	Pn	19 30 14.9	+1.1
CACH				*i* S	Sn	19 30 38.0	+2.5
CICH	Cipreses	1.68	226	*e*P	Pn	19 30 14.8	+0.8
CICH				*i* S	Sn	19 30 38.1	+2.4
TACH	Talagante	1.72	253	*e*P	Pn	19 30 15.6	+1.0
TACH				*i* S	Sn	19 30 39.3	+2.4
ROCH	El Roble	1.73	276	⇓*i*P	Pn	19 30 16.1	+1.4
LNV	Longovilo	2.19	248	*e*P	Pn	19 30 23.5	+2.4
LNV				*i* S	Sn	19 30 52.9	+4.4
LCCH	Las Cruces	2.20	261	⇓*i*P	Pn	19 30 23.7	+2.5
LCCH				*i* S	Sn	19 30 53.4	+4.6
SFDO	San Fernando	2.24	229	*e*P	Pn	19 30 24.4	+2.6
CHNG	Los Chungos	2.49	300	⇓*i*P	Pn	19 30 28.3	+3.1
CHNG				*i* S	Sn	19 31 02.3	+6.4
CHNG				AML	AML	19 31 04.4	
	comp=N,265nm,0.8s						

*ISCJB **05** 19:42:23.2±0.7,30.14N±007×1396E±02,h401km±8km,mb3.2/5,Error ellipse: s-maj=26.6km s-min=8.5km az=150.4*
*IDC **05** 19:42:23.7±1.3,30.11N×13929E,h385km±17km,mb2.9/5,mb1 3.0/7,mb1mx2.8/21,mbtmp3.6/7,Error ellipse: s-maj=63.3km s-min=18.4km az=79.0*
*JMA **05** 19:42:24.4±0.4,3030N×13957E,h413km±4km,M3.2*
ISC 05 19:42:24.6±0.8,3025N±008×1396E±02,h400km±8km,n20,σ$0^{s}98$/29,mb3.2/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.86	3	P	Pn	19 43 27.6	+1.0
JHJ2				*e*S	S	19 44 17.8	+1.1
JHJ	Hachijo jima 2	2.87	3	P	Pn	19 43 27.7	+1.1
	6.3nm,0.3s,baz=96,slow=22,SNR=8.2						
JHJ				S	S	19 44 16.0	-0.8
	11nm,0.3s,baz=259,slow=20,SNR=6.5						
CBIJ	Chichi jima	3.86	144	*e*S	S	19 44 28.9	-3.7
BSO1	Boso 1	4.54	14	P	Pn	19 43 42.7	+0.9
BSO1				*e*S	S	19 44 45.4	+0.9
BSO3	Boso 3	4.60	9	*e*S	S	19 44 45.2	-0.5
BSO4	Boso 4	4.76	7	S	S	19 44 48.6	-0.1
JIE	Ise	4.82	330	P	Pn	19 43 45.5	+0.9
JKN2	Miekihoku	4.89	325	P	Pn	19 43 45.5	+0.1
JOD2	Odawara 2	5.02	355	P	Pn	19 43 47.6	+0.9
JOD2				*e*S	S	19 44 51.7	-1.8
JNY	Yasuok	5.31	344	P	Pn	19 43 50.7	+1.0
JHU	Hanno	5.60	357	P	Pn	19 43 52.8	0.0
JHU				*e*S	S	19 45 01.4	-3.2
JRY	Ryogami san	5.79	354	P	Pn	19 43 55.3	+0.5
JRY				S	S	19 45 08.0	-0.3
MJAR	Matsushiro Arr	6.39	350	P	Pn	19 44 01.4	0.0
	0.9nm,0.3s,baz=169,slow=11,SNR=14						
MJAR				S	S	19 45 20.1	-0.3
	0.3nm,0.3s,baz=171,slow=8.9,SNR=5.6						
MAT	Matsushiro	6.39	350	P	Pn	19 44 01.2	-0.2
MAT				S	S	19 45 17.3	-3.1
MAT	Matsushiro	6.39	350	P	Pn	19 44 01.5	+0.1
MAT				*e*S	S	19 45 18.5	-1.9
MKAR	Makanchi Array	46.76	307	P	P	19 50 14.8	-0.9
	0.2nm,0.5s,mb2.7,baz=95,slow=8.0,SNR=3.7						
WRA	Warramunga Arr	50.16	186	P	P	19 50 40.3	-1.0
	0.3nm,0.5s,mb2.9,baz=1.6,slow=7.8,SNR=6.6						
ARCES	ARCESS Array B	69.83	340	P	P	19 52 53.9	+0.6
	2.2nm,0.9s,mb3.7,baz=79,slow=6.5,SNR=5.0						
FINES	FINESS Array B	74.13	333	P	P	19 53 18.3	-0.2
	0.3nm,0.4s,mb3.2,baz=78,slow=5.6,SNR=4.9						
NOA	NORSAR Array B	79.86	337	P	P	19 53 50.4	+0.4
	0.7nm,0.8s,mb3.4,baz=43,slow=5.3,SNR=2.8						

*IDC **05** 19:44:52.3±0.9,951S×10731E,h0km,mb4.1/8,mb1 4.2/9,mb1mx4.1/16,mbtmp4.1/9,ML3.8/1,Error ellipse: s-maj=30.9km s-min=17.1km az=57.0*
*BJI **05** 19:44:53.9,950S×10740E,h10km,mB4.8,mb4.5*
*NEIC **05** 19:44:54.0±0.4,951S×10738E,h10km,mb4.8/18,Error ellipse: s-maj=13.3km s-min=7.7km az=53.0*
*MOS **05** 19:44:54.0±0.5,973S×10752E,h33km,mb4.7/11,Error ellipse: s-maj=47.4km s-min=15.2km az=113.1*
*ISCJB **05** 19:44:55.4±0.4,960S±008×10736E±009,h33km,mb4.6/30,Error ellipse: s-maj=14.3km s-min=8.2km az=105.8*
ISC 05 19:44:57.8±0.4,961S±008×10735E±009,h35km,n53,σ$1^{s}07$/55,mb4.6/30,3C-2D,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	Marble Bar	16.55	135	*e*Pn	Pn	19 48 41.6	-5.5
	13nm,0.9s						
MBWA				*e*S	S	19 51 29.1	-31
KKM	Kota Kinabalu	17.88	30	*e*Pn	Pn	19 49 00.2	-3.4
FITZ	Fitzroy Crossi	19.65	117	*e*P	Pn	19 49 24.9	-0.1
	10.0nm,0.8s						
FITZ				*e*S	S	19 52 47.0	-16
FITZ	Fitzroy Crossi	19.65	117	P	Pn	19 49 25.1	+0.2
	0.2nm,0.3s,baz=243,slow=9.1,SNR=9.1						
FITZ				Sn	Sn	19 52 50.2	-14
	0.2nm,0.3s,baz=249,slow=22,SNR=5.8						
BUKP	Musuan	24.76	46	*e*P	P	19 50 17.3	+1.3
WRA	Warramunga Arr	28.00	115	P	P	19 50 46.3	+1.0
	1.9nm,1.0s,mb3.7,baz=286,slow=12,SNR=7.5						
WRA	Warramunga Arr	28.00	115	P	P	19 50 46.3	+1.0
WRAB	Tennant Creek	28.01	115	*e*P	P	19 50 45.7	+0.4
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
WRAB	Tennant Creek	28.01	115	*e*P	P	19 50 45.7	+0.4
	comp=Z,6.3nm,0.8s,mb4.3						
ASAR	Alice Springs	28.95	122	P	P	19 50 55.0	+1.3
	comp=Z,0.7nm,0.7s,mb3.5,baz=290,slow=9.6,SNR=5.2						
KMI	Kunming	34.81	353	P	P	19 51 47.3	+2.2
KMI				AP	pP	19 51 58.3	+3.1
KMI				AMB	AMB		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,7.0nm,1.3s,mb4.4						
GYA	Guiyang	35.85	359	⇑iP	P	19 51 55.8	+1.7
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
STKA	Stephens Creek	38.68	130	eP	P	19 52 18.1	+0.1
	comp=Z,4.2nm,0.8s,mb4.2						
STKA	Stephens Creek	38.68	130	P	P	19 52 17.8	-0.3
	comp=Z,3.2nm,0.8s,mb4.1,baz=292,slow=5.5,SNR=9.1						
STKA	Stephens Creek	38.68	130	eP	P	19 52 17.7	-0.3
PKI	Pulchoki	42.63	331	eP	P	19 52 51.6	+0.9
GUN	Gumba	42.70	331	eP	P	19 52 51.9	+0.7
	comp=Z,34nm,0.7s,mb5.2						
DMN	Daman	42.81	330	eP	P	19 52 52.9	+0.8
	comp=Z,30nm,0.9s,mb5.0						
KKN	Kakani	42.88	331	eP	P	19 52 53.0	+0.3
	comp=Z,29nm,0.9s,mb5.0						
KKN	Kakani	42.88	331	eP	P	19 52 53.0	+0.3
KKN				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
GKN	Gorkha	43.37	330	eP	P	19 52 56.2	-0.4
	comp=Z,37nm,1.2s,mb5.0						
KOLN	Koldanda	43.70	329	eP	P	19 52 59.2	-0.1
	comp=Z,19nm,0.6s,mb5.0						
GTA	Gaotai	49.26	352	eP	P	19 53 44.8	+1.9
GTA				AP	pP	19 53 52.2	-1.2
GTA				XP	sP	19 53 55.1	-2.4
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.6						
MAJO	Matsushiro	54.30	31	eP	P	19 54 18.1	-2.4
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
MAJO	Matsushiro	54.30	31	eP	P	19 54 18.1	-2.4
	comp=Z,7.7nm,1.2s,mb4.5						
MJAR	Matsushiro Arr	54.30	31	P	P	19 54 18.3	-2.2
	comp=Z,2.7nm,0.8s,mb4.2,baz=207,slow=7.3,SNR=15						
WMQ	Urumqi	56.09	343	eP	P	19 54 34.5	+1.1
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.1						
CASY	Casey	56.64	178	P	P	19 54 36.6	-0.6
	comp=Z,67nm,1.4s,mb5.5						
SONM	Songino Array	57.19	359	P	P	19 54 41.3	+0.1
	comp=Z,2.2nm,0.7s,mb4.3,baz=177,slow=8.1,SNR=22						
ULN	Ulaanbaatar	57.22	360	eP	P	19 54 41.9	+0.5
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ULN	Ulaanbaatar	57.22	360	eP	P	19 54 41.9	+0.5
	comp=Z,1.6nm,0.5s,mb4.3						
MKAR	Makanchi Array	60.44	340	P	P	19 55 03.9	+0.2
	comp=Z,3.9nm,0.6s,mb4.6,baz=134,slow=6.9,SNR=37						
MKAR	Makanchi Array	60.44	340	i P	P	19 55 03.9	+0.1
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	60.44	340	P	P	19 55 03.9	+0.1
YSS	Yuzh-Sakhalins	64.54	26	P	P	19 55 30.4	-0.8
YSS				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.1						
YSS	Yuzh-Sakhalins	64.54	26	P	P	19 55 30.4	-0.8
	comp=Z,26nm,1.3s,mb5.1						
MAW	Mawson	64.99	197	P	P	19 55 34.0	-0.1
	comp=Z,2.6nm,0.8s,mb4.3,baz=35,slow=9.9,SNR=7.1						
KURK	Kurchatov	65.05	340	⇑Pn	P	19 55 33.0	-1.5
	comp=Z,3.1nm,0.8s,mb4.4						
KURK				⇓Lg		19 55 59.0	
	comp=Z,3.1nm,0.9s						
KURK	Kurchatov	65.05	340	eP	P	19 55 34.1	-0.4
KURK				e		19 55 59.8	
KURK				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
KURK	Kurchatov	65.05	340	eP	P	19 55 34.1	-0.4
	comp=Z,4.8nm,0.4s,mb4.9						
KURK				e		19 55 59.8	
BRVK	Borovoye	69.95	337	eP	P	19 56 04.2	-1.2
	comp=Z,1.9nm,0.8s,mb4.1						
CHKZ	Chkalovo	70.31	338	eP	P	19 56 07.5	-0.1
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
CHKZ	Chkalovo	70.31	338	eP	P	19 56 07.5	-0.1
	comp=Z,3.8nm,0.7s,mb4.4						
ZRNK	Zerenda	70.37	337	eP	P	19 56 07.4	-0.6
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ZRNK	Zerenda	70.37	337	eP	P	19 56 07.4	-0.6
	comp=Z,4.1nm,0.8s,mb4.4						
YAK	Yakutsk	73.51	11	⇑eP	P	19 56 25.9	-0.9
YAK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
ARU	Arti	77.11	335	⇓iP	P	19 56 47.4	-0.1
ARU				e		19 56 54.0	
ARU				e		19 59 43.0	
ARU				ePPP		20 01 28.2	
ARU				eS	S	20 06 37.0	+3.0
ARU				eSS	SS	20 11 32.0	+0.3
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
ARU	Arti	77.11	335	eP	P	19 56 47.2	-0.3
	comp=Z,8.4nm,1.3s,mb4.5						
LSZ	Lusaka	77.15	256	P	P	19 56 47.7	-0.1
LSZ				pmax	pmax		
	comp=Z,14nm,1.9s,mb4.6						
LSZ	Lusaka	77.15	256	P	P	19 56 47.7	-0.1
	comp=Z,14nm,1.9s,mb4.6						
KIV	Kislovodsk	79.04	318	eP	P	19 56 57.7	-0.5
KIV				e		19 59 59.2	
KIV				eS	S	20 06 57.6	+2.8
KIV				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
BRTR	Keskin Array B	83.81	312	P	P	19 57 22.8	-0.7
	comp=Z,1.2nm,1.0s,mb4.0,baz=126,slow=6.3,SNR=6.1						
OBN	Obninsk	87.09	327	eP	P	19 57 38.8	-1.0

MEX 05 19:47:41.0±0.7, 1548N×9577W, h5^{km}±33^{km}, MD3.9, 1C, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.43	312	⇑iP	Pg	19 47 48.8	-0.5
HUIG				i S	Sg	19 47 55.5	+0.6
VHO	Vista Hermosa	1.83	330	i P	Pn	19 48 10.4	-2.6
VHO				i S	Sn	19 48 31.8	-4.8
OXX	Oaxaca	1.83	330	eP	Pn	19 48 10.0	-3.1
OXX				i S	Sn	19 48 34.5	-2.2
UTMO	Huajuapan	3.04	320	eP	Pn	19 48 27.1	-2.6
UTMO				i S	Sn	19 49 03.2	-3.2
TPIG	Tehuac#an	3.29	333	i P	Pn	19 48 44.5	+11
TPIG				i S	Sn	19 49 08.5	-4.2
PPM	Popocatepetl	4.49	323	eP	Pn	19 48 49.0	-0.6
PPM				i S	Sn	19 49 39.8	-2.4

*MOS **05** 19:57:03.7±1.7, 5541N×11038E, h2^{km}, mb4.3/1, Error ellipse: s-maj=41.6km s-min=14.7km az=60.5*

BYKL 05 19:57:03.8±0.3, 5540N×11039E, h10^{km}±13^{km}, 5C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.61	308	⇑iPg	Pg	19 57 14.9	-0.7
NIZ				eSg	Sg	19 57 24.2	+0.5
NIZ				Pmax			
	68nm,0.2s						
NIZ				Smax			
	239nm,0.4s						
KMO	Kumora	0.67	43	⇑iPg	Pg	19 57 15.2	-1.6
KMO				eSg	Sg	19 57 25.1	-0.4
KMO				Pmax			
	201nm,0.4s						
KMO				Smax			
	573nm,1.0s						
KMO	Kumora	0.67	43	ePG	Pg	19 57 15.2	-1.6
KMO				e		19 57 23.5	
KMO				pmax	pmax		
	comp=Z,215nm,0.5s						
KMO				smax			
	comp=N,692nm,0.9s						
YLYR	Ulyunkhan	0.69	140	⇓iPg	Pg	19 57 15.4	-1.7
	comp=N,55nm,0.5s						
YLYR				⇑iPg	Pg	19 57 15.4	-1.7
	comp=N,55nm,0.5s						
YLYR				⇑iPg	Pg	19 57 15.4	-1.7
	comp=N,79nm,0.5s						
YLYR				eSg	Sg	19 57 24.7	-1.4
YLYR				Pmax			
	comp=N,92nm,0.5s						
YLYR				Smax			
	comp=N,472nm,0.9s						
SYVR	Suvo	1.76	188	ePg	Pg	19 57 34.9	-2.7
SYVR				eSg	Sg	19 57 59.3	-1.1
SYVR				e		19 58 02.2	
SYVR				Pmax			
	comp=N,98nm,0.6s						
SYVR				max			
	comp=N,410nm,1.3s						
SYVR	Suvo	1.76	188	ePN	Pn	19 57 35.0	+0.7
SYVR				e		19 57 59.2	
SYVR				pmax	pmax		
	comp=Z,87nm,0.7s						
SYVR				smax			
	comp=E,346nm,0.5s						
UKT	Uakit	1.85	86	⇑iPg	Pg	19 57 35.9	-3.3
UKT				eSg	Sg	19 58 00.9	-2.3
UKT				Pmax			
	comp=E,81nm,0.8s						
UKT				Smax			
	comp=E,228nm,0.7s						
SVKR	Severomuysk	1.93	67	ePg	Pg	19 57 38.6	-2.2
SVKR				eSg	Sg	19 58 05.3	-0.5
SVKR				Pmax			
	comp=E,93nm,0.2s						
SVKR				Smax			
	comp=E,558nm,0.5s						
MXMB	Maximikha	2.35	205	ePn	Pn	19 57 43.6	+1.2
MXMB				ePg	Pg	19 57 46.5	-2.3
MXMB				eSg	Sg	19 58 17.8	-1.5
MXMB				Pmax			
	comp=E,116nm,0.8s						
MXMB				Smax			
	comp=E,531nm,0.7s						
OGRR	Ongureny	2.40	224	ePn	Pn	19 57 44.4	+1.3
OGRR				ePg	Pg	19 57 46.9	-2.9
OGRR				e		19 58 16.5	
OGRR				eSg	Sg	19 58 18.4	-2.5
OGRR				Pmax			
	comp=E,43nm,0.3s						
OGRR				Smax			
	comp=E,158nm,0.7s						
OGRR	Ongureny	2.40	224	ePN	Pn	19 57 44.5	+1.4
OGRR				e		19 57 46.9	
OGRR				e		19 58 18.7	
OGRR				pmax	pmax		
	comp=Z,44nm,0.3s						
OGRR				smax			
	comp=N,159nm,1.0s						
BOD	Bodaibo	3.14	38	ePn	Pn	19 57 53.9	+0.6
BOD				ePg	Pg	19 57 58.8	-5.2
BOD				eSn	Sn	19 58 31.7	+0.8
BOD				eSg	Sg	19 58 39.8	-4.9
BOD				max			
	comp=N,23nm,0.3s						
BOD				Smax			
	comp=N,59nm,0.6s						
NLYR	Nelyaty	3.18	68	ePn	Pn	19 57 54.7	+0.8
NLYR				ePg	Pg	19 58 01.3	-3.5
NLYR				e		19 58 33.8	
NLYR				eSg	Sg	19 58 43.5	-2.5
NLYR				Pmax			
	comp=N,19nm,0.8s						
NLYR				Smax			
	comp=N,128nm,1.5s						
ZRHB	Zarechye	3.43	215	ePg	Pg	19 58 06.3	-3.3
ZRHB				eSg	Sg	19 58 52.4	-1.7
ZRHB				Pmax			
	comp=N,83nm,1.3s						
ZRHB				Smax			
	comp=N,276nm,1.1s						
TRG	Tyrgan	3.56	224	ePn	Pn	19 57 58.7	-0.4
TRG				ePg	Pg	19 58 07.4	-4.6
TRG				eSn	Sn	19 58 42.2	+1.0
TRG				eSg	Sg	19 58 55.2	-2.9
TRG				Pmax			
	comp=N,16nm,0.5s						
TRG				Smax			
	comp=N,55nm,0.7s						
TRTB	Turuntaevo	3.57	208	ePn	Pn	19 57 59.3	0.0
TRTB				ePg	Pg	19 58 07.4	-4.8
TRTB				eSg	Sg	19 58 55.6	-2.9
TRTB				Pmax			
	comp=N,22nm,0.9s						
TRTB				Smax			
	comp=N,63nm,1.3s						
FFNB	Fofonovo	3.99	214	ePg	Pg	19 58 15.7	-4.5
FFNB				eSg	Sg	19 59 08.1	-3.8
FFNB				Smax			
	comp=N,136nm,0.9s						
HRMR	Khuramsha	4.30	210	ePg	Pg	19 58 19.7	-6.5
HRMR				eSg	Sg	19 59 16.6	-5.2
HRMR				Pmax			
	comp=N,46nm,0.6s						
HRMR				Smax			
	comp=N,198nm,0.8s						
CRS	Chara	4.66	68	ePn	Pn	19 58 14.1	0.0
CRS				ePg	Pg	19 58 27.8	-5.2
CRS				eSg	Sg	19 59 29.1	-4.2
CRS				Pmax			
	comp=N,18nm,1.1s						
CRS				Smax			
	comp=N,56nm,1.8s						
CRS	Chara	4.66	68	ePN	Pg	19 58 27.7	-5.3
CRS				e		19 59 29.4	
CRS				pmax	pmax		
	comp=Z,17nm,0.9s						
CRS				smax			
	comp=E,56nm,1.7s						
IRK	Irkutsk	4.81	231	ePN	Pg	19 58 31.4	-4.5
IRK				e		19 59 32.4	
IRK				pmax	pmax		
	comp=Z,36nm,0.8s						
IRK				smax			
	comp=N,259nm,0.9s						
LSTR	Listvyanka	4.84	225	ePn	Pn	19 58 17.5	+0.8
LSTR				ePg	Pg	19 58 30.6	-6.0
LSTR				eSn	Sn	19 59 11.7	-1.1
LSTR				eSg	Sg	19 59 32.6	-6.7
LSTR				Pmax			
	comp=N,5.0nm,0.6s						
LSTR				Smax			
	comp=N,52nm,1.4s						
LSTR	Listvyanka	4.84	225	ePN	Pn	19 58 18.5	+1.8
LSTR				e		19 58 30.6	
LSTR				e		19 59 33.2	
LSTR				pmax	pmax		
	comp=Z,13nm,0.8s						
LSTR				smax			
	comp=N,55nm,1.5s						
TUP	Tupik	5.60	96	ePn	Pn	19 58 27.4	+0.2
TUP				eSn	Sn	19 59 29.0	-2.6
TUP				eSg	Sg	19 59 58.3	-5.4
TUP				max			
	comp=N,5.0nm,0.7s						
TUP				Smax			
	comp=N,58nm,0.8s						
TUP	Tupik	5.60	96	ePN	Pn	19 58 27.5	+0.3
TUP				e		19 58 44.5	
TUP				eS	Sn	19 59 28.6	-3.0
TUP				e		19 59 56.2	
TUP				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TUP				smax			
	comp=N,63nm,0.9s						
ARS	Arshan	5.88	237	ePn	Pn	19 58 31.2	+0.2
ARS				ePg	Pg	19 58 48.7	-7.7
ARS				eSn	Sn	19 59 37.4	-1.0
ARS				eSg	Sg	20 00 05.0	-7.5
ARS				Pmax			
	comp=N,18nm,0.5s						
ARS				Smax			
	comp=N,154nm,1.0s						
ARS	Arshan	5.88	237	ePN	Pg	19 58 50.8	-5.6
ARS				e		20 00 05.2	
ARS				pmax	pmax		
	comp=Z,19nm,0.6s						
ARS				smax			
	comp=E,154nm,0.7s						
MOY	Mondy	6.73	240	ePn	Pn	19 58 44.5	+1.8
MOY				e		20 00 01.1	
MOY				eSg	Sg	20 00 31.7	-8.2
MOY				max			
	comp=E,13nm,1.3s						
MOY				Smax			
	comp=E,72nm,1.5s						
MOY	Mondy	6.73	240	ePN	Pn	19 58 44.8	+2.1
MOY				e		19 59 05.5	
ORL	Orlik	6.87	250	ePn	Pn	19 58 46.3	+1.8
ORL				e		20 00 03.1	
ORL				eSg	Sg	20 00 37.6	-6.6
ORL				Smax			
	comp=E,125nm,1.3s						

*CSEM **05** 20:06:13.2±0.0, 3602N×2647E, h112^{km}, mb3.8/6, Error ellipse: s-maj=1.5km s-min=1.0km az=59.0*
*ISCJB **05** 20:06:14.0±0.2, 3597N±002×2636E±002, h114^{km}±2^{km}, mb3.6/9, Error ellipse: s-maj=3.6km s-min=2.8km az=96.4*
*ATH **05** 20:06:15.7, 3609N×2627E, h84^{km}±2^{km}*
*IDC **05** 20:06:15.6±1.1, 3609N×2624E, h91^{km}±14^{km}, mb3.3/4, mb1 3.3/7, mb1mx3.2/23, mbtmp3.5/7, Error ellipse: s-maj=28.5km s-min=11.8km az=150.0*
*NEIC **05** 20:06:15.7, 3609N×2627E, h84^{km}, mb3.7/15, After ATH.*
*ISK **05** 20:06:16.1, 3610N×2626E, h85^{km}, MD3.5*
*HLW **05** 20:06:16.3, 3586N×2660E, h25^{km}, Mb4.7*
*THE **05** 20:06:17.9, 3606N×2634E, h77^{km}*

ISC 05 20:06:15.2±0.2, 3597N±002×2635E±002, h108^{km}±2^{km}, n116, σ0^{s}99/141, mb3.6/9, 21C-3D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.79	123	eP	Pn	20 06 34.9	+0.8
KARP				eS	Sn	20 06 48.2	-0.1
SANT	Santorini	0.82	299	ePg	Pn	20 06 33.4	-1.0
SANT				eSg	Sn	20 06 45.6	-3.3
SANT	Santorini	0.82	299	eP	Pn	20 06 33.3	-1.1
SANT				eS	Sn	20 06 45.1	-3.8
ZKR	Zakros	0.86	187	ePg	Pn	20 06 35.7	+0.9
ZKR				eSg	Sn	20 06 49.5	-0.1
NISR	Nisiros	0.89	44	eP	Pn	20 06 34.5	-0.6
NPS	Neapolis	0.93	220	⇑iP	Pn	20 06 35.6	+0.1
NPS				eS	Sn	20 06 49.3	-1.4
LAST	Lasithi	1.08	221	ePg	Pn	20 06 37.2	+0.2
LAST				eSg	Sn	20 06 53.1	-0.4
XRY	Khrisi	1.22	206	eP	Pn	20 06 39.6	+1.0
DAT	Datca	1.25	52	i PN	Pn	20 06 39.2	+0.4
DAT				i SN	Sn	20 06 56.1	-0.7
APE	Apeiranthos	1.28	329	ePg	Pn	20 06 38.6	-0.6
APE				eSg	Sn	20 06 54.6	-2.8
APE	Apeiranthos	1.28	329	eP	Pn	20 06 37.5	-1.7
APE	Apeiranthos	1.28	329	ePg	Pn	20 06 38.6	-0.6
APE				eSg	Sn	20 06 54.6	-2.8
BODT	Bodrum	1.33	35	i PN	Pn	20 06 40.0	+0.1
BODT				i SN	Sn	20 06 56.9	-1.7
IDI	Anoyia	1.37	241	P	Pn	20 06 40.4	+0.1
	14nm,0.3s,baz=45,slow=9.9,SNR=192						
IDI				S	Sn	20 06 57.8	-1.6
	132nm,0.3s,baz=315,slow=20,SNR=65						
ARG	Arkhangelos	1.46	80	eP	Pn	20 06 42.4	+1.1
SIVA	Sivas	1.58	233	ePb	Pn	20 06 44.0	+1.3
SIVA				eSb	Sn	20 07 04.5	+0.8
VAM	Vamos	1.84	253	eP	Pn	20 06 46.4	+0.4
YER	Yerkesik	1.94	53	PN	Pn	20 06 48.8	+1.5
YER				SN	Sn	20 07 12.4	+0.6
DALT	Dalyan (Mudla)	2.01	66	PN	Pn	20 06 50.5	+2.4
GVD	Gavdhos	2.17	239	ePn	Pn	20 06 51.6	+1.4
GVD				eSn	Sn	20 07 18.5	+1.6
GVD	Gavdhos	2.17	239	eP	Pn	20 06 53.0	+2.8
GVD				eSn	Sn	20 07 18.5	+1.5
FETY	Fethiye	2.30	73	PN	Pn	20 06 53.4	+1.5
CHOS	Chios island	2.42	354	ePn	Pn	20 06 53.3	-0.1
CHOS				eSn	Sn	20 07 21.5	-1.3
IZM	Izmir	2.53	16	PN	Pn	20 06 55.5	+0.7
KYTH	Kithira	2.70	277	eP	Pn	20 06 57.4	+0.3
VLI	Veliai	2.85	286	eP	Pn	20 06 59.3	+0.2
ELL	Elmali	2.97	74	PN	Pn	20 07 03.0	+2.3
AKS	Akhisar	3.12	21	PN	Pn	20 07 03.2	+0.5
PRK	Paraskevi	3.27	359	eP	Pn	20 07 04.5	-0.1
ITM	Ithomi	3.76	290	eP	Pn	20 07 12.3	+1.1
XOR	Xorichti	4.21	324	ePn	Pn	20 07 17.8	+0.6
AGG	Agios Georgios	4.41	315	ePn	Pn	20 07 21.7	+1.7
AGG				eSn	Sn	20 08 10.1	-0.2
SLUM		4.57	192	⇑P	Pn	20 07 22.6	+0.5
HMAT	Matruh	4.91	172	P	Pn	20 07 26.5	-0.1
HMAT				S	Sn	20 08 17.0	-5.3
LIT	Litokhoron	5.12	325	ePn	Pn	20 07 30.7	+1.1
LIT				eSn	Sn	20 08 26.8	-0.7
DABA	Dabaa	5.21	161	⇑P	Pn	20 07 30.0	-0.7
LKD	Levkas	5.30	303	ePn	Pn	20 07 32.1	+0.1
LKD				eSn	Sn	20 08 31.4	-0.3
MEV	Metsovon	5.56	315	ePn	Pn	20 07 36.9	+1.4
GRG	Griva	5.86	329	ePn	Pn	20 07 40.3	+0.8
IGT	Igoumenitsa	5.95	308	ePn	Pn	20 07 40.2	-0.5
HBRG	Burj al ‘Arab	6.13	151	⇓P	Pn	20 07 42.2	-1.0
HBRG				S	Sn	20 08 45.3	-6.6
SWA1		6.71	185	⇑P	Pn	20 07 51.5	+0.4
SWA1				S	Sn	20 09 01.1	-5.0
SWA2		6.75	187	⇑iP	Pn	20 07 51.9	+0.2
BRTR	Keskin Array B	6.88	55	P	Pn	20 07 55.2	+1.9
	0.2nm,0.3s,baz=235,slow=13,SNR=6.1						
BRTR				S	Sn	20 09 10.9	+0.9
	0.2nm,0.3s,baz=216,slow=25,SNR=4.5						
AANS		7.07	142	⇑P	Pn	20 07 55.1	-0.9
HNAT	Natroun	7.27	149	P	Pn	20 07 58.1	-0.6
SQR		7.31	145	⇓P	Pn	20 07 58.5	-0.7
FYM	Al Fayyum	7.40	146	⇑P	Pn	20 08 00.1	-0.4
AYT	Al ‘Ayyat	7.44	146	⇑P	Pn	20 08 00.7	-0.4
KOT	Kottamia	7.58	141	⇑P	Pn	20 08 02.3	-0.6
HSAF	As Saff	7.70	144	⇑P	Pn	20 08 03.7	-0.9
HHAG	Hagoal	7.70	140	⇓P	Pn	20 08 04.2	-0.4
GLL	Jalalah	7.81	143	⇑P	Pn	20 08 05.4	-0.6
AMAG	Maghara	7.82	131	⇑P	Pn	20 08 04.7	-1.5
AWBH		7.93	163	⇑P	Pn	20 08 07.5	-0.1
MMAI	Mount Meron Ar	8.04	109	P	Pn	20 08 07.7	-1.4
	6.3nm,0.3s,baz=308,slow=12,SNR=38						
MMAI				S	Sn	20 09 35.8	-2.4
	5.6nm,0.3s,baz=314,slow=26,SNR=7.0						
SUZ		8.19	136	P	Pn	20 08 10.3	-0.9
ZNM		8.57	138	⇑P	Pn	20 08 16.0	-0.3
HFRF	Wahat Farafira	8.96	169	⇑P	Pn	20 08 21.7	+0.1
ASF	Jabal al Asfar	9.53	110	P	Pn	20 08 31.0	+1.6
	0.4nm,0.3s,baz=289,slow=12,SNR=2.8						
ASF				S	Sn	20 10 14.1	-0.6
	0.2nm,0.3s,baz=273,slow=18,SNR=2.8						
TR2		9.81	138	⇑P	Pn	20 08 32.8	-0.3
HKAT	Jabal Katrina	9.85	137	⇑P	Pn	20 08 33.8	+0.1
HDHB	Dhahab	10.05	134	P	Pn	20 08 36.4	-0.1
TR1		10.23	139	⇑P	Pn	20 08 38.2	-0.6
TR1		10.23	139	P	Pn	20 08 38.2	-0.7
HHRG	Al Ghardaqah	10.68	143	⇑P	Pn	20 08 44.6	-0.3
HDK1	Dakhla	10.72	165	⇑P	Pn	20 08 46.5	+1.0
AKRG	Al Kharijah	11.03	160	P	Pn	20 08 50.8	+1.2
GTR	Jabal at Tayr	11.04	160	⇑P	Pn	20 08 50.7	+1.0
GERES	GERESS Array B	15.87	328	P	Pn	20 09 53.5	+1.3
	0.2nm,0.3s,baz=144,slow=12,SNR=9.5						
MBDF	Montbardon	17.26	306	eP	Pn	20 10 07.1	-2.3
LPG	La Plagne	17.60	309	eP	Pn	20 10 11.4	-2.1
LPL	La Plagne	17.62	309	eP	Pn	20 10 12.1	-1.6
	1.8nm,0.3s						
LPL	La Plagne	17.62	309	eP	Pn	20 10 12.1	-1.6
	0.9nm,0.3s						
ORIF	Oris-en-Rattie	17.92	306	eP	Pn	20 10 15.3	-2.1
CABF	La Chapelle	18.52	311	eP	P	20 10 21.9	-1.1
	7.7nm,0.6s						
CABF	La Chapelle	18.52	311	eP	P	20 10 21.9	-1.1
	3.8nm,0.6s						
HINF	Hinteralfeld	18.67	315	eP	P	20 10 23.4	-1.2
	3.9nm,0.8s						
HINF	Hinteralfeld	18.67	315	eP	P	20 10 23.4	-1.2
	2.0nm,0.8s						
VIVF	Saint-Julien-l	18.70	305	eP	P	20 10 25.1	+0.1
	5.4nm,0.7s						
VIVF	Saint-Julien-l	18.70	305	eP	P	20 10 25.1	+0.1
	2.7nm,0.7s						
CDF	Champ du Feu	18.76	317	eP	P	20 10 25.1	-0.5
	2.4nm,0.4s						
CDF	Champ du Feu	18.76	317	eP	P	20 10 25.1	-0.5
	1.2nm,0.4s						
SMF	Signal de Mont	19.92	309	eP	P	20 10 38.1	-0.2
	2.5nm,0.4s						
SMF	Signal de Mont	19.92	309	eP	P	20 10 38.1	-0.2
	1.2nm,0.4s						
MEZF	Maizieres J’vi	20.05	315	eP	P	20 10 40.3	+0.6
	6.0nm,0.5s						
MEZF	Maizieres J’vi	20.05	315	eP	P	20 10 40.3	+0.6
	3.0nm,0.5s						

LOR	**Lormes**	**20.18**	**311**	*e*P	**P**	**20 10 40.7**	**-0.3**
	1.9nm,0.4s						
LOR	**Lormes**	**20.18**	**311**	*e*P	**P**	**20 10 40.7**	**-0.3**
	0.9nm,0.4s						
AVF	**Avril sur Loir**	**20.29**	**309**	*e*P	**P**	**20 10 42.2**	**0.0**
	1.4nm,0.4s						
AVF	**Avril sur Loir**	**20.29**	**309**	*e*P	**P**	**20 10 42.2**	**0.0**
	0.7nm,0.4s						
SSF	**Saint Saulge**	**20.30**	**310**	*e*P	**P**	**20 10 42.3**	**-0.1**
	5.3nm,0.4s						
SSF	**Saint Saulge**	**20.30**	**310**	*e*P	**P**	**20 10 42.3**	**-0.1**
	2.7nm,0.4s						
CAF	**Calviac**	**20.47**	**303**	*e*P	**P**	**20 10 43.2**	**-1.0**
	2.1nm,0.5s						
CAF	**Calviac**	**20.47**	**303**	*e*P	**P**	**20 10 43.2**	**-1.0**
	1.0nm,0.5s						
BGF	**Bois d'Agland**	**20.52**	**308**	*e*P	**P**	**20 10 44.9**	**+0.2**
	4.1nm,0.5s						
BGF	**Bois d'Agland**	**20.52**	**308**	*e*P	**P**	**20 10 44.9**	**+0.2**
	2.0nm,0.5s						
RJF	**Les Rejaudoux**	**20.95**	**304**	*e*P	**P**	**20 10 49.4**	**0.0**
	2.7nm,0.5s						
RJF	**Les Rejaudoux**	**20.95**	**304**	*e*P	**P**	**20 10 49.4**	**0.0**
	1.4nm,0.5s						
BAIF	**Baives**	**21.34**	**318**	*e*P	**P**	**20 10 53.7**	**+0.1**
	10nm,0.5s,mb4.1						
BAIF	**Baives**	**21.34**	**318**	*e*P	**P**	**20 10 53.7**	**+0.1**
	5.2nm,0.5s,mb4.1						
ETSF	**Etsaut**	**21.85**	**297**	*e*P	**P**	**20 10 59.5**	**+0.6**
	1.6nm,0.4s,mb3.4						
ETSF	**Etsaut**	**21.85**	**297**	*e*P	**P**	**20 10 59.5**	**+0.6**
	0.8nm,0.4s,mb3.4						
MFF	**Saint Martin d**	**22.46**	**306**	*e*P	**P**	**20 11 05.6**	**+0.2**
	2.7nm,0.5s,mb3.6						
MFF	**Saint Martin d**	**22.46**	**306**	*e*P	**P**	**20 11 05.6**	**+0.2**
	1.4nm,0.5s,mb3.6						
LDF	**La Druitiere**	**23.16**	**311**	*e*P	**P**	**20 11 11.6**	**-0.5**
	1.6nm,0.3s,mb3.6						
LDF	**La Druitiere**	**23.16**	**311**	*e*P	**P**	**20 11 11.6**	**-0.5**
	0.8nm,0.3s,mb3.6						
GRR	**Gorron**	**23.53**	**310**	*e*P	**P**	**20 11 15.2**	**-0.3**
	6.1nm,0.3s,mb4.1						
GRR	**Gorron**	**23.53**	**310**	*e*P	**P**	**20 11 15.2**	**-0.3**
	3.0nm,0.3s,mb4.1						
ESDC	**Sonseca Array**	**24.17**	**288**	P	**P**	**20 11 22.3**	**+1.0**
	0.6nm,0.5s,mb3.2,baz=81,slow=9.9,SNR=8.0						
SGMF	**Saint Gilles**	**24.55**	**309**	*e*P	**P**	**20 11 25.6**	**+0.9**
QUIF	**Quistinic**	**24.83**	**308**	*e*P	**P**	**20 11 27.7**	**+0.4**
ROSF	**Rostrenen**	**25.03**	**309**	*e*P	**P**	**20 11 28.6**	**-0.5**
HFS	**Hagfors**	**25.52**	**345**	P	**P**	**20 11 33.1**	**-0.4**
	2.7nm,1.0s,mb3.6,baz=149,slow=12,SNR=4.0						
EKA	**Eskdalemuir Ar**	**27.95**	**323**	P	**P**	**20 11 55.8**	**+0.5**
	0.8nm,0.7s,mb3.4,baz=114,slow=10,SNR=3.5						
TORD	**Torodi Ar. Bea**	**31.75**	**231**	P	**P**	**20 12 31.6**	**+2.7**
	0.2nm,0.4s,mb3.2,baz=33,slow=8.7,SNR=6.4						

*MOS **05** 20:09:46.9±0.9, 5174N×17683W, h33km, mb5.0/22, Error ellipse: s-maj=11.4km s-min=9.7km az=69.9*

*IDC **05** 20:09:49.1±0.6, 5170N×17681W, h40km±5km, mb4.2/22, mb1 4.3/23, mb1mx4.1/32, mbtmp4.4/23, ML4.8/1, MS3.7/18, Ms1 3.7/18, ms1mx3.5/44, Error ellipse: s-maj=16.5km s-min=10.5km az=151.0*

*BJI **05** 20:09:50.1, 5169N×17686W, h68km, mB4.8, mb4.9, Ms4.3, Msz4.1*

*ISCJB **05** 20:09:51.0±0.8, 5175N±006×17680W±004, h71km±6km, mb4.5/71, Error ellipse: s-maj=9.8km s-min=3.9km az=158.0*

*NEIC **05** 20:09:52.3±0.7, 5169N×17682W, h70km±6km, mb4.7/40, Error ellipse: s-maj=8.7km s-min=3.9km az=175.0*

ISC 05 20:09:52.8±0.7**, 5172N**±006×**17680W**±004**, h73**km±6km**, h47**km±3.5km**:pP-P, n166, σ0.89**/157**, mb4.5**/71**, 4C-2D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**2.46**	**263**	*e*Pn	**Pn**	**20 10 28.8**	**-1.9**
AMKA				*e*Sn	**Sn**	**20 10 59.9**	**+0.1**
NIKO	**Nikolski**	**5.03**	**72**	*e*Pn	**Pn**	**20 11 04.4**	**-1.3**
NIKO				*e*Sn	**Sn**	**20 12 04.6**	**+2.2**
SPIA	**Saint Paul Isl**	**6.67**	**32**	*e*Pn	**Pn**	**20 11 28.1**	**0.0**
SPIA				*e*Sn	**Sn**	**20 12 42.9**	**+0.4**
AKUT	**Akutan**	**7.09**	**66**	*e*P	**Pn**	**20 11 34.8**	**+1.0**
FALS	**False Pass**	**8.61**	**63**	*e*Pn	**Pn**	**20 11 55.2**	**+0.7**
FALS				*e*Sn	**Sn**	**20 13 29.0**	**-1.1**
SDPT	**Sand Point**	**10.37**	**63**	*e*P	**Pn**	**20 12 18.2**	**-0.3**
	19nm,0.3s						
CHGN	**Chignik**	**11.73**	**60**	*e*P	**Pn**	**20 12 37.0**	**-0.2**
SVW2	**Sparrevohn**	**14.96**	**43**	*e*P	**Pn**	**20 13 24.6**	**+4.5**
SVW2				*e*P		20 13 25.0	
KDAK	**Kodiak Island**	**15.19**	**57**	Pn	**Pn**	**20 13 20.2**	**-2.8**
	4.3nm,0.3s,baz=223,slow=4.7,SNR=22						
KDAK				Sn	**Sn**	**20 16 10.8**	**+0.5**
	0.3nm,0.3s,baz=311,slow=20,SNR=3.4						
KDAK	**Kodiak Island**	**15.19**	**57**	Pn	**Pn**	**20 13 20.2**	**-2.8**
KDAK				Sn	**Sn**	**20 16 10.8**	**+0.5**
TTA	**Tatalina**	**15.78**	**37**	*e*P	**Pn**	**20 13 33.0**	**+2.5**
TTA				*e*Pn	**Pn**	**20 13 33.4**	**+2.9**
BILL	**Bilibino**	**18.32**	**340**	*i* P	**Pn**	**20 14 03.4**	**+1.6**
BILL				pmax	pmax		
	comp=Z,22nm,1.0s						
BILL				MLR	MLR		
	comp=Z,200nm,21.0s						
BILL	**Bilibino**	**18.32**	**340**	*e*P	**Pn**	**20 14 03.3**	**+1.5**
	comp=Z,12nm,0.6s						
MCK	**McKinley**	**18.93**	**40**	*e*P	**Pn**	**20 14 07.4**	**-1.7**
MA2	**Magadan**	**19.75**	**306**	*e*P	**Pn**	**20 14 14.2**	**-4.6**
MA2				pmax	pmax		
	comp=Z,14nm,1.1s						
MA2	**Magadan**	**19.75**	**306**	*e*P	**Pn**	**20 14 14.2**	**-4.6**
	comp=Z,14nm,1.1s						
COLA	**College**	**19.87**	**37**	*e*P	**Pn**	**20 14 18.9**	**-1.4**
DAWY	**Dawson**	**23.00**	**43**	*e*P	**P**	**20 14 51.7**	**+0.3**
INK	**Inuvik**	**26.46**	**35**	P	**P**	**20 15 22.1**	**-0.8**
	comp=Z,0.9nm,0.3s,mb3.6,baz=211,slow=10,SNR=6.8						
INK	**Inuvik**	**26.46**	**35**	P	**P**	**20 15 22.2**	**-0.7**
INK				pmax	pmax		
	comp=Z,10.0nm,0.3s						
INK	**Inuvik**	**26.46**	**35**	*e*P	**P**	**20 15 21.4**	**-1.5**
	comp=Z,9.1nm,1.0s,mb4.2						
YSS	**Yuzh-Sakhalins**	**26.53**	**276**	*e*P	**P**	**20 15 24.0**	**+0.4**
YSS				*e*	pP	20 15 39.0	-1.7
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
ASAJ	**Asahikawa**	**27.96**	**270**	P	**P**	**20 15 35.6**	**-0.7**
	comp=Z,17nm,1.1s,mb4.5,baz=5.8,slow=11,SNR=6.5						
ASAJ				LR	LR	20 26 33.6	
	comp=Z,56nm,19.0s,baz=353,slow=36						
BBB	**Bella Bella**	**29.56**	**70**	P	**P**	**20 15 48.5**	**-2.1**
	comp=Z,4.5nm,0.7s,mb4.2,baz=347,slow=14,SNR=4.2						
BBB				LR	LR	20 25 28.8	
	comp=Z,111nm,20.9s,baz=82,slow=32						
YAK	**Yakutsk**	**30.14**	**311**⇓	*e*P	**P**	**20 15 55.7**	**+0.1**
YAK				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.0						
YAK				MLR	MLR		
	comp=Z,100nm,20.0s						
YKA	**Yellowknife Ar**	**34.08**	**47**	P	**P**	**20 16 29.2**	**-1.0**
	comp=Z,1.4nm,0.7s,mb3.9,baz=282,slow=8.3,SNR=10						
YKA				PcP	PcP	20 19 06.3	+0.1
	comp=Z,4.8nm,0.8s,baz=285,slow=3.0,SNR=23						
YKA				LR	LR	20 30 46.3	
	comp=Z,62nm,20.5s,baz=270,slow=37						
YKA	**Yellowknife Ar**	**34.08**	**47**	P	**P**	**20 16 29.2**	**-1.0**
YKA						20 19 06.3	
YKA	**Yellowknife Ar**	**34.08**	**47**	P	**P**	**20 16 29.2**	**-1.0**
YKA				PcP	PcP	20 19 06.3	+0.1
YKA				LR	LR	20 30 46.3	
MAJO	**Matsushiro**	**35.07**	**262**	*e*P	**P**	**20 16 39.0**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
MAJO	**Matsushiro**	**35.07**	**262**	*e*P	**P**	**20 16 39.0**	**+0.2**
	comp=Z,14nm,0.9s,mb4.8						
MAT	**Matsushiro**	**35.07**	**262**	P	**P**	**20 16 39.1**	**+0.4**
MAT	**Matsushiro**	**35.07**	**262**	*e*P	**P**	**20 16 39.0**	**+0.3**
MAT				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
MAT	**Matsushiro**	**35.07**	**262**	*e*P	**P**	**20 16 39.0**	**+0.3**
	comp=Z,9.2nm,0.9s,mb4.6						
MJAR	**Matsushiro Arr**	**35.07**	**262**	P	**P**	**20 16 39.1**	**+0.4**
	comp=Z,5.6nm,0.8s,mb4.5,baz=53,slow=7.7,SNR=43						
MJAR				LR	LR	20 29 09.8	
	comp=Z,116nm,18.9s,baz=195,slow=33						
MDJ	**Mudanjiang**	**35.75**	**280**	P	**P**	**20 16 46.4**	**+1.9**
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,21nm,4.2s						
MDJ				LR	LR		
	comp=N,44nm,26.6s						
MDJ				LR	LR		
	comp=E,78nm,28.4s						
MDJ				LR	LR		
	comp=Z,113nm,28.4s						
MDJ	**Mudanjiang**	**35.75**	**280**	*e*P	**P**	**20 16 44.2**	**-0.3**
	comp=Z,2.9nm,0.5s,mb4.5						
CN2	**Changchun**	**38.71**	**282**	*e*P	**P**	**20 17 11.7**	**+2.1**
CN2				*e*S	**S**	**20 23 07.5**	**+6.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
CN2				AMB	AMB		
	comp=Z,70nm,7.0s						
CN2				LR	LR		
	comp=N,250nm,20.0s						
CN2				LR	LR		
	comp=E,220nm,20.0s						
CN2				LR	LR		
	comp=Z,160nm,22.0s						
PAHR	**Pah Rah Range**	**40.83**	**84**	*e*P	**P**	**20 17 27.7**	**+0.6**
	comp=Z,9.6nm,1.0s,mb4.6						
HLID	**Hailey**	**41.64**	**76**	*e*P	**P**	**20 17 34.0**	**+0.2**
	comp=Z,14nm,1.1s,mb4.6						
BOZ	**Bozeman (W)**	**42.16**	**72**	*e*P	**P**	**20 17 37.0**	**-1.0**
BOZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
BOZ	**Bozeman (W)**	**42.16**	**72**	*e*P	**P**	**20 17 37.0**	**-1.1**
	comp=Z,12nm,0.9s,mb4.6						
NVAR	**Mina Array Bea**	**42.27**	**85**	P	**P**	**20 17 39.6**	**+0.6**
	comp=Z,2.5nm,0.8s,mb4.0,baz=298,slow=7.5,SNR=11						
NVAR				PcP	PcP	20 19 32.8	+1.2
	comp=Z,2.6nm,0.8s,baz=309,slow=2.2,SNR=7.5						
MTUM	**Tungsten Hills**	**42.78**	**86**	*e*P	**P**	**20 17 44.3**	**+1.2**
IMW	**Indian Meadow**	**43.54**	**73**	*e*P	**P**	**20 17 50.7**	**+1.5**
	comp=Z,11nm,1.1s,mb4.5						
FLWY	**Flagg Ranch**	**43.58**	**73**	*e*P	**P**	**20 17 50.1**	**+0.6**
	comp=Z,10nm,1.0s,mb4.5						
RRI2	**Red Ridge**	**43.62**	**74**	*e*P	**P**	**20 17 50.3**	**+0.4**
	comp=Z,12nm,0.9s,mb4.6						
HVU	**Hansel Valley**	**43.65**	**77**	*e*P	**P**	**20 17 50.9**	**+0.8**
HVU				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
HVU	**Hansel Valley**	**43.65**	**77**	*e*P	**P**	**20 17 50.9**	**+0.8**
	comp=Z,7.6nm,0.7s,mb4.5						
MOOW	**Moose Ponds**	**43.74**	**73**	*e*P	**P**	**20 17 51.2**	**+0.4**
	comp=Z,3.3nm,1.1s,mb4.0						
LOHW	**Long Hollow**	**43.90**	**73**	*e*P	**P**	**20 17 52.4**	**+0.3**
	comp=Z,1.3nm,0.6s,mb3.8						
BGU	**Big Grassy Mou**	**44.00**	**78**	*e*P	**P**	**20 17 52.9**	**0.0**
TPNV	**Topopah Spring**	**44.47**	**85**	*e*P	**P**	**20 17 57.3**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
TPNV	**Topopah Spring**	**44.47**	**85**	*e*P	**P**	**20 17 57.3**	**+0.7**
	comp=Z,10nm,0.8s,mb4.6						
DUG	**Dugway**	**44.57**	**79**	*e*P	**P**	**20 17 58.2**	**+0.7**
DUG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
DUG	**Dugway**	**44.57**	**79**	*e*P	**P**	**20 17 58.2**	**+0.7**
	comp=Z,6.4nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**45.01**	**74**	P	**P**	**20 18 01.4**	**+0.4**
	comp=Z,6.6nm,0.8s,mb4.4,baz=310,slow=5.0,SNR=32						
PDAR				pP	pP	20 18 12.4	-6.5
	comp=Z,8.3nm,0.6s,baz=324,slow=3.8,SNR=10						
DAU	**Daniels Canyon**	**45.39**	**77**	*e*P	**P**	**20 18 04.8**	**+0.8**
MSU	**Marysvale**	**45.99**	**80**	*e*P	**P**	**20 18 09.7**	**+1.0**
TMUT	**Trail Mountain**	**46.10**	**79**	*e*P	**P**	**20 18 09.7**	**+0.1**
BJI	**Beijing**	**46.52**	**283**	*e*P	**P**	**20 18 13.9**	**+1.0**
BJI				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.6						
BJI				LR	LR		
	comp=N,108nm,17.7s						
BJI				LR	LR		
	comp=E,122nm,16.3s						
BJI				LR	LR		
	comp=Z,193nm,21.9s						
SRU	**San Rafael**	**46.63**	**78**	*e*P	**P**	**20 18 14.6**	**+0.9**
SRU				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
SRU	**San Rafael**	**46.63**	**78**	*e*P	**P**	**20 18 14.6**	**+0.8**
	comp=Z,9.3nm,0.7s,mb4.6						
RWWY	**Rawlins**	**47.05**	**74**	*e*P	**P**	**20 18 17.2**	**+0.2**
	comp=Z,21nm,1.3s,mb4.7						
ULN	**Ulaanbaatar**	**47.23**	**297**⇑	*e*P	**P**	**20 18 18.1**	**-0.2**
ULN	**Ulaanbaatar**	**47.23**	**297**	*e*P	**P**	**20 18 17.6**	**-0.8**
	comp=Z,3.7nm,0.8s,mb4.2						
RSSD	**Black Hills**	**47.47**	**69**	*e*P	**P**	**20 18 19.4**	**-0.8**
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
RSSD	**Black Hills**	**47.47**	**69**	*e*P	**P**	**20 18 19.4**	**-0.8**
	comp=Z,4.9nm,0.6s,mb4.4						
SONM	**Songino Array**	**47.61**	**297**	P	**P**	**20 18 20.7**	**-0.6**
	comp=Z,2.1nm,0.9s,mb4.0,baz=45,slow=9.1,SNR=17						
SONM				PcP	PcP	20 19 50.3	+0.3
	comp=Z,4.9nm,0.8s,baz=50,slow=2.1,SNR=17						
SONM				LR	LR	20 39 30.5	
	comp=Z,94nm,18.6s,baz=60,slow=37						
SONM	**Songino Array**	**47.61**	**297**	P	**P**	**20 18 20.7**	**-0.6**
SONM						20 19 50.3	
WUAZ	**Wupatki**	**48.40**	**83**	*e*P	**P**	**20 18 27.7**	**+0.3**
	comp=Z,8.3nm,0.8s,mb4.6						
PV01	**Paradox Valley**	**48.44**	**78**	*e*P	**P**	**20 18 27.8**	**+0.1**
ULM	**Lac du Bonnet**	**48.44**	**58**	LR	LR	20 37 15.8	
	comp=Z,39nm,18.9s,baz=324,slow=34						
ISCO	**Idaho Springs**	**49.17**	**75**	*e*P	**P**	**20 18 34.1**	**+0.8**
ISCO				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
ISCO	**Idaho Springs**	**49.17**	**75**	*e*P	**P**	**20 18 34.1**	**+0.8**
	comp=Z,3.4nm,0.9s,mb4.3						
SSE	**Sheshan**	**49.25**	**270**	P	**P**	**20 18 29.7**	**-4.2**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,48nm,5.7s						
NJ2	**Nanjing**	**50.05**	**273**	*e*P	**P**	**20 18 44.8**	**+4.8**
NJ2				PP	PP	20 20 40.8	+5.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
NJ2				LR	LR		
	comp=N,190nm,15.2s						
NJ2				LR	LR		
	comp=E,410nm,21.8s						
NJ2				LR	LR		
	comp=Z,130nm,15.8s						
TUC	**Tucson**	**50.90**	**85**	*e*P	**P**	**20 18 46.5**	**+0.1**
TUC				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
TUC	**Tucson**	**50.90**	**85**	*e*P	**P**	**20 18 46.5**	**+0.1**
	comp=Z,2.8nm,0.8s,mb4.3						
LAZ	**Ladron**	**51.74**	**81**	*e*P	**P**	**20 18 54.0**	**+1.2**
ANMO	**Albuquerque**	**51.80**	**80**	*i* P	**P**	**20 18 53.1**	**0.0**
FRB	**Frobisher Bay**	**52.07**	**32**	P	**P**	**20 18 54.0**	**-1.2**
	comp=Z,5.9nm,0.4s,mb4.9,baz=317,slow=7.4,SNR=6.7						
FRB				pP	pP	20 19 06.1	-7.5
	comp=Z,7.3nm,0.6s,baz=320,slow=5.3,SNR=3.3						
FRB	**Frobisher Bay**	**52.07**	**32**	P	**P**	**20 18 54.0**	**-1.2**
FRB				pP	pP	20 19 06.1	-7.5
WHN	**Wuhan**	**53.88**	**275**	⇓P	**P**	**20 19 08.7**	**+0.3**
MNTX	**Cornudas Mount**	**54.66**	**82**	*e*P	**P**	**20 19 14.3**	**+0.2**
	comp=Z,251nm,1.1s						
ZAL	**Zalesovo**	**54.71**	**314**	LR	LR	20 45 26.1	
	comp=Z,124nm,18.6s,baz=45,slow=39						
XAN	**Xi'an**	**54.82**	**282**	P	**P**	**20 19 15.4**	**+0.1**
XAN				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
KSU1	**Kansas State U**	**54.95**	**69**	*e*P	**P**	**20 19 15.3**	**-0.9**
LZH	**Lanzhou**	**56.48**	**287**	*e*P	**P**	**20 19 27.2**	**0.0**
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,102nm,5.0s						
LZH				LR	LR		
	comp=N,319nm,13.5s						
LZH				LR	LR		
	comp=Z,545nm,15.9s						
GTA	**Gaotai**	**56.59**	**293**	*e*P	**P**	**20 19 28.2**	**+0.2**
GTA				PCP	PcP	20 20 23.6	-0.1
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb4.2						
WMOK	**Wichita Mounta**	**56.60**	**75**	*e*P	**P**	**20 19 28.1**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
WMOK	**Wichita Mounta**	**56.60**	**75**	*e*P	**P**	**20 19 28.1**	**+0.1**
	comp=Z,3.8nm,0.9s,mb4.4						
JMIC	**Jan Mayen**	**57.31**	**5**	LR	LR	20 47 36.1	
	comp=Z,24nm,18.5s,baz=86,slow=40						
ARCES	**ARCESS Array B**	**57.96**	**351**	P	**P**	**20 19 37.8**	**+0.2**
	comp=Z,1.3nm,0.7s,mb4.1,baz=27,slow=8.2,SNR=6.3						
ARCES				LR	LR	20 46 20.9	
	comp=Z,87nm,18.7s,baz=280,slow=38						
FVM	**French Village**	**59.27**	**67**	*e*P	**P**	**20 19 45.6**	**-1.1**
FVM				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
FVM	**French Village**	**59.27**	**67**	*e*P	**P**	**20 19 45.6**	**-1.1**
	comp=Z,25nm,1.1s,mb5.2						
KURK	**Kurchatov**	**59.68**	**315**⇑	*e*P	**P**	**20 19 48.7**	**-0.8**
MIAR	**Mount Ida**	**59.83**	**71**	*e*P	**P**	**20 19 50.1**	**-0.4**
MIAR				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
MIAR	**Mount Ida**	**59.83**	**71**	*e*P	**P**	**20 19 50.0**	**-0.5**
	comp=Z,19nm,0.8s,mb5.2						
CD2	**Chengdu**	**60.12**	**283**	P	**P**	**20 19 53.2**	**+0.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
MKAR	**Makanchi Array**	**60.79**	**309**	P	**P**	**20 19 55.0**	**-2.1**
	comp=Z,0.4nm,0.2s,mb4.0,baz=32,slow=7.1,SNR=7.0						
MKAR	**Makanchi Array**	**60.79**	**309**	*i* P	**P**	**20 19 57.5**	**+0.4**
MKAR	**Makanchi Array**	**60.79**	**309**	P	**P**	**20 19 55.0**	**-2.1**
WCI	**Wyandotte Cave**	**61.43**	**64**	*e*P	**P**	**20 19 58.9**	**-2.5**
WCI				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
WCI	**Wyandotte Cave**	**61.43**	**64**	*e*P	**P**	**20 19 58.9**	**-2.5**
	comp=Z,16nm,0.9s,mb5.1						
BRVK	**Borovoye**	**61.44**	**321**	*e*P	**P**	**20 20 01.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
BRVK	**Borovoye**	**61.44**	**321**	*e*P	**P**	**20 20 01.5**	**0.0**
	comp=Z,2.8nm,0.6s,mb4.5						
GYA	**Guiyang**	**61.53**	**277**⇑	*i*P	**P**	**20 20 02.5**	**+0.4**
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
GYA				AMB	AMB		
	comp=Z,310nm,6.9s						
ZRNK	**Zerenda**	**62.02**	**321**	*e*P	**P**	**20 20 05.2**	**-0.2**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ZRNK	**Zerenda**	**62.02**	**321**	*e*P	**P**	**20 20 05.2**	**-0.3**
	comp=Z,4.7nm,0.8s,mb4.6						
OXF	**Oxford**	**62.29**	**69**	*e*P	**P**	**20 20 06.7**	**-0.5**
OXF				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.5						
OXF	**Oxford**	**62.29**	**69**	*e*P	**P**	**20 20 06.7**	**-0.5**
	comp=Z,54nm,1.0s,mb5.5						
BORG	**Borgarnes**	**62.32**	**12**	LR	LR	20 45 28.7	
	comp=Z,53nm,18.8s,baz=37,slow=34						
PLAL	**Pickwick Lake**	**62.72**	**67**	*e*P	**P**	**20 20 09.2**	**-0.8**
	comp=Z,13nm,0.8s,mb4.9						
PLAL				*e*		20 20 20.8	
ARU	**Arti**	**62.96**	**329**	*e*P	**P**	**20 20 11.8**	**+0.1**
ARU				*e*		20 22 30.1	
ARU				*e*PPP		20 23 58.7	
ARU				*e*S	**S**	**20 28 41.2**	**+5.0**
ARU				*e*SS	SS	20 32 48.6	+6.0
ARU				MLR	MLR		
	comp=Z,90nm,22.0s						
ARU				MLR	MLR		
	comp=N,60nm,21.0s						
ARU				MLR	MLR		
	comp=E,70nm,24.0s						
SWET	**Sewanee**	**63.78**	**66**	*e*P	**P**	**20 20 15.9**	**-1.2**
SWET				*e*		20 20 27.9	
TZTN	**Tazewell**	**64.16**	**63**	*e*P	**P**	**20 20 19.4**	**-0.1**
CPCT	**Cooper Cave**	**64.41**	**65**	*e*P	**P**	**20 20 20.3**	**-0.9**
LRAL	**Lakeview Retre**	**64.74**	**68**	*e*P	**P**	**20 20 22.0**	**-1.4**
	comp=E,6.1nm,1.0s,mb4.4						
FWV	**Forest Hill**	**64.91**	**61**	*e*P	**P**	**20 20 24.5**	**0.0**
KMI	**Kunming**	**64.91**	**279**	P	**P**	**20 20 24.6**	**+0.1**
KMI				AP	pP	20 20 41.0	-2.5
KMI				AMB	AMB		
	comp=Z,31nm,0.9s,mb5.1						
ELN	**Prospectdale**	**65.20**	**61**	*e*P	**P**	**20 20 26.1**	**-0.3**
FINES	**FINESS Array B**	**65.72**	**348**	P	**P**	**20 20 29.9**	**+0.2**
	comp=Z,1.1nm,0.8s,mb3.7,baz=48,slow=2.8,SNR=5.0						
FINES				LR	LR	20 51 22.3	
	comp=Z,53nm,20.9s,baz=183,slow=38						
FINES	**FINESS Array B**	**65.72**	**348**⇑	*e*P	**P**	**20 20 31.7**	**+2.0**
NB2	**NORSAR Subarra**	**67.41**	**356**	P	**P**	**20 20 40.4**	**0.0**
	comp=Z,0.9nm,0.7s,mb3.7,baz=5.9,slow=6.9						
NOA	**NORSAR Array B**	**67.41**	**356**	P	**P**	**20 20 39.9**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.7,baz=5.1,slow=6.3,SNR=4.0						
NOA				LR	LR	20 48 20.2	
	comp=Z,34nm,20.1s,baz=345,slow=34						
AAK	**Ala-Archa**	**67.60**	**311**	*i* P	**P**	**20 20 41.9**	**+0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
AKTK	**Aktyubinsk**	**68.12**	**326**	P	**P**	**20 20 44.8**	**-0.1**
AKTO	**Aktyubinsk**	**68.12**	**326**	P	**P**	**20 20 44.8**	**-0.1**
	comp=Z,5.6nm,0.8s,mb4.5,baz=40,slow=6.2,SNR=20						
HFS	**Hagfors**	**68.18**	**354**	P	**P**	**20 20 44.1**	**-1.2**
	comp=Z,0.9nm,0.5s,mb3.9,baz=56,slow=3.7,SNR=7.4						
HFS				LR	LR	20 49 05.8	
	comp=Z,63nm,21.6s,baz=31,slow=35						
GUN	**Gumba**	**72.88**	**293**	*e*P	**P**	**20 21 15.0**	**+1.1**
	comp=Z,33nm,0.8s,mb5.2						
PPT	**Papeete**	**72.97**	**153**	LR	LR	20 46 05.7	
	comp=Z,53nm,21.6s,baz=344,slow=30						
KKN	**Kakani**	**73.31**	**294**	*e*P	**P**	**20 21 17.3**	**+0.9**
	comp=Z,17nm,0.8s,mb4.9						
KKN	**Kakani**	**73.31**	**294**	*e*P	**P**	**20 21 17.3**	**+0.9**
KKN				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9						
GKN	**Gorkha**	**73.52**	**294**	*e*P	**P**	**20 21 18.2**	**+0.6**
	comp=Z,9.1nm,0.5s,mb4.7						
DMN	**Daman**	**73.55**	**294**	*e*P	**P**	**20 21 18.1**	**+0.3**
	comp=Z,14nm,0.8s,mb4.7						
KOLN	**Koldanda**	**74.28**	**295**	*e*P	**P**	**20 21 21.4**	**-0.7**
AKASG	**Malin Array Be**	**75.59**	**343**	LR	LR	20 57 20.7	
	comp=Z,29nm,20.1s,baz=55,slow=38						
KIV	**Kislovodsk**	**78.77**	**332**	*e*P	**P**	**20 21 47.0**	**-0.4**
KIV				*e*SS	SS	20 36 43.2	-1.8
KIV				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
GERES	**GERESS Array B**	**79.41**	**353**	LR	LR	20 57 59.8	
	comp=Z,53nm,20.8s,baz=297,slow=36						
MLR	**Muntele Rosu**	**81.20**	**344**	P	**P**	**20 22 02.1**	**+1.6**
	comp=Z,2.7nm,0.9s,mb4.1,baz=100,slow=8.8,SNR=4.9						
WRAB	**Tennant Creek**	**83.12**	**226**	*e*P	**P**	**20 22 09.6**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
WRAB	**Tennant Creek**	**83.12**	**226**	*e*P	**P**	**20 22 09.6**	**-1.0**
	comp=Z,18nm,1.1s,mb4.8						
WB2	**Warramunga Arr**	**83.13**	**226**	*e*P	**P**	**20 22 09.6**	**-1.1**
WRA	**Warramunga Arr**	**83.14**	**226**	P	**P**	**20 22 10.0**	**-0.7**
	comp=Z,3.4nm,0.7s,mb4.3,baz=33,slow=5.8,SNR=22						
WRA				pP	pP	20 22 22.0	-8.4
	comp=Z,2.5nm,0.7s,baz=38,slow=6.5,SNR=7.8						
PSI	**Prapat**	**84.27**	**267**	P	**P**	**20 22 17.1**	**+0.7**
	comp=Z,15nm,0.9s,mb4.8,baz=335,slow=12,SNR=8.2						
PSI				LR	LR	20 58 39.3	
	comp=Z,247nm,20.7s,baz=67,slow=35						
BR131	**Keskin Array S**	**85.14**	**337**	*e*P	**P**	**20 22 20.2**	**-0.7**
	comp=Z,2.4nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**85.14**	**337**	P	**P**	**20 22 20.6**	**-0.2**
	comp=Z,3.0nm,0.8s,mb4.3,baz=40,slow=3.0,SNR=20						
BRTR				LR	LR	21 04 42.5	
	comp=Z,24nm,18.4s,baz=188,slow=39						
FITZ	**Fitzroy Crossi**	**85.67**	**234**	*e*P	**P**	**20 22 23.1**	**-0.4**
	comp=Z,17nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**85.67**	**234**	P	**P**	**20 22 23.6**	**+0.1**
	comp=Z,9.8nm,0.8s,mb4.8,baz=153,slow=8.8,SNR=17						
AS31	**Alice Springs**	**86.59**	**224**	*e*P	**P**	**20 22 28.0**	**-0.1**
AS31				*e*		20 22 39.8	
ASAR	**Alice Springs**	**86.60**	**224**	P	**P**	**20 22 28.0**	**0.0**
	comp=Z,5.2nm,0.8s,mb4.5,baz=27,slow=4.7,SNR=42						
ASAR				pP	pP	20 22 40.3	-7.6
	comp=Z,4.1nm,0.8s,baz=28,slow=4.6,SNR=12						
ASPA	**Alice Springs**	**86.60**	**224**	*e*P	**P**	**20 22 28.2**	**+0.2**
STKA	**Stephens Creek**	**90.91**	**214**	*e*P	**P**	**20 22 48.2**	**-0.2**
	comp=Z,3.1nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**90.91**	**214**	P	**P**	**20 22 47.6**	**-0.7**
	comp=Z,4.3nm,0.8s,mb4.6,baz=355,slow=5.6,SNR=13						
STKA				pP	pP	20 23 00.7	-7.8
	comp=Z,2.9nm,0.7s,baz=319,slow=4.1,SNR=4.5						
STKA	**Stephens Creek**	**90.91**	**214**	*e*P	**P**	**20 22 48.0**	**-0.4**
STKA				*e*		20 23 00.9	
TORD	**Torodi Ar. Bea**	**115.39**	**2**	PKP	PKPdf	20 28 25.4	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.5nm,0.4s,baz=354,slow=2.4,SNR=13						
DBIC	Dimbokro	121.43	9	PKP	PKPdf	20 28 36.9	-0.8
	comp=Z,2.2nm,0.6s,baz=33,slow=5.4,SNR=5.4						
PLCA	Paso Flores	129.88	108	PKP	PKPdf	20 28 52.5	-1.4
	comp=Z,2.2nm,0.9s,baz=199,slow=2.6,SNR=4.2						
QSPA	South Pole Qui	141.48	180	eP	PKPdf	20 29 09.2	-6.2
MAW	Mawson	147.52	218	ePKP	PKPdf	20 29 27.2	+1.4
	comp=Z,9.7nm,0.8s						
MAW	Mawson	147.52	218	PKPbc	PKPbc	20 29 27.3	-1.3
	comp=Z,12nm,0.8s,baz=93,slow=2.3,SNR=36						
MAW	Mawson	147.52	218	PKP2	PKPbc	20 29 27.3	-1.2
MAW				pmax	pmax		
	comp=Z,12nm,0.8s						
LBTB	Lobatse	148.33	319	ePKP2	PKPab	20 29 30.9	-3.1
BOSA	Boshof	151.63	316	PKPbc	PKPbc	20 29 38.7	+0.1
	comp=Z,16nm,0.8s,baz=47,slow=1.6,SNR=28						
BOSA	Boshof	151.63	316	ePKPbc	PKPbc	20 29 38.4	-0.3
SNAA	Sanae	159.80	174	PKPab	PKPab	20 30 19.9	-2.6
	comp=Z,0.2nm,0.6s,baz=193,slow=1.7,SNR=6.5						

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*ISCJB **05** 20:15:14.2±0.2, 4620N±001×122.19W±003, h6km±2km, Error ellipse: s-maj=3.2km s-min=2.3km az=1.6*
*NEIC **05** 20:15:14.3, 4620N×122.19W, h1km, MD3.6(SEA), After SEA.*
ISC 05 20:15:14.5±0.2, 4620N±001×12219W±003, h4km±2km, n62, σ0.66/78, 32C-30D, Washington

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YEL	Yellow Rock	0.01	10	⇓P	Pg	20 15 14.8	-0.5
ESD	East Dome	0.03	98	⇓P	Pg	20 15 15.2	-0.3
HSR	South Ridge	0.03	170	⇓P	Pg	20 15 15.2	-0.3
SHW	Mount Saint He	0.03	255	⇓P	Pg	20 15 15.3	-0.2
STD	Studebaker Rid	0.04	328	⇓P	Pg	20 15 15.6	-0.1
SOSW	Source of Smit	0.06	41	⇑P	Pg	20 15 15.8	0.0
JLK	June Lake	0.06	155	⇓P	Pg	20 15 15.8	-0.2
FL2	Flat Top 2	0.11	268	⇑P	Pg	20 15 17.1	+0.3
CDFW	Cedar Flats	0.13	130	⇑P	Pg	20 15 17.4	+0.3
ERK	Elk Rock	0.15	315	⇓P	Pg	20 15 17.6	+0.2
TDL	Tradedollar La	0.15	353	⇓P	Pg	20 15 17.7	+0.2
MTMW	Mount Mitchell	0.18	185	⇓P	Pg	20 15 18.2	+0.2
LVP	Lakeview Peak	0.20	229	⇓P	Pg	20 15 18.6	+0.1
KOSW	Kosmos	0.26	360	⇑P	Pg	20 15 19.8	+0.2
F04A	Amboy	0.31	211	P	Pg	20 15 20.9	+0.3
	baz=0.3,SNR=22						
F04A				⇓S	Sg	20 15 25.8	+1.2
	baz=0.3						
RVW	Rose Valley	0.39	263	⇓P	Pg	20 15 22.1	+0.1
ASR	Mount Adams--S	0.42	97	⇓P	Pg	20 15 22.6	0.0
E05A	Randle	0.47	39	⇓P	Pg	20 15 23.3	-0.2
	baz=0.5,SNR=12						
E05A				⇓S	Sg	20 15 30.1	+0.5
	baz=0.5						
LMW	Ladd Mountain	0.47	352	⇓P	Pg	20 15 24.3	+0.7
GULW	Guler Mountain	0.50	124	P	Pg	20 15 24.3	+0.2
E04A	Onalaska	0.54	317	⇓P	Pg	20 15 25.1	+0.3
	baz=0.5						
E04A				⇓S	Sg	20 15 32.4	+0.5
	baz=0.5						
GLK	Glacier Lake	0.54	48	P	Pg	20 15 24.9	0.0
LCW	Lucas Creek	0.59	323	P	Pg	20 15 25.9	+0.1
LON	Longmire	0.61	25	⇓P	Pg	20 15 26.3	0.0
REMR	Mount Rainier-	0.66	21	P	Pg	20 15 27.4	+0.1
WPW	White Pass	0.67	42	⇑P	Pg	20 15 27.2	-0.2
VLMM	Larch Mountain	0.67	171	P	Pg	20 15 27.4	0.0
RCS	Mount Rainier-	0.74	25	⇓P	Pg	20 15 28.7	-0.1
FMW	Mount Fremont	0.81	26	⇓P	Pg	20 15 30.0	-0.1
VLL	Laurance Lake	0.82	154	P	Pg	20 15 30.3	+0.1
NLO	Nicolai Mounta	0.88	263	P	Pg	20 15 31.4	-0.1
TDH	Tom, Dick, Har	0.95	163	P	Pg	20 15 32.2	-0.6
HOOD	Mount Hood Mea	0.96	157	P	Pg	20 15 32.4	-0.5
GL2	New Goldendale	0.98	104	P	Pg	20 15 33.2	-0.2
F03A	Seaside	0.99	255	⇑P	Pg	20 15 32.8	-0.7
	baz=1.0						
F03A				⇑S	Sg	20 15 47.2	+0.8
	baz=1.0						
D05A	Enumclaw	1.00	8	⇓P	Pg	20 15 33.0	-0.6
	baz=1.0						
D05A				⇑S	Sg	20 15 48.3	+1.7
	baz=1.0						
D04A	Dobbs Creek Ra	1.00	335	⇑P	Pg	20 15 34.4	+0.6
	baz=1.0						
D04A				⇓S	Sg	20 15 46.3	-0.5
	baz=1.0						
E03A	Lebam	1.01	290	⇑P	Pg	20 15 33.0	-0.9
	baz=1.0						
E03A				⇑S	Sg	20 15 47.6	+0.5
	baz=1.0						
G04A	Mulino	1.02	192	⇑P	Pg	20 15 33.5	-0.5
	baz=1.0						
G04A				⇓S	Sg	20 15 47.9	+0.7
	baz=1.0						
VFP	Flag Point	1.02	150	P	Pg	20 15 33.4	-0.7
GSM	Grass Mountain	1.04	15	⇑P	Pg	20 15 33.6	-0.8
KMOR	Kings Mountain	1.07	239	⇑P	Pg	20 15 34.1	-1.0
G05A	Wamic	1.14	147	⇑P	Pg	20 15 36.0	-0.4
	baz=1.1,SNR=14						
G05A				⇓S	Sg	20 15 51.8	+0.7
	baz=1.1						
G03A	Yamhill	1.17	221	⇑P	Pg	20 15 35.9	-1.1
	baz=1.2,SNR=14						
G03A				⇑S	Sg	20 15 51.8	-0.3
	baz=1.2						
D03A	Wishkah Elem.	1.42	311	⇑P	Pn	20 15 40.1	-1.0
	baz=1.4						
D03A				⇑S	Sb	20 15 59.9	-0.1
	baz=1.4						
H04A	Detroit Lake	1.52	180	⇑P	Pn	20 15 41.2	-1.2
	baz=1.5,SNR=22						
H04A				⇑S	Sn	20 16 02.4	-0.2
	baz=1.5						
C05A	Tolt Reservoir	1.53	13	⇑P	Pn	20 15 41.8	-0.8
	baz=1.5						
C05A				⇓S	Sn	20 16 02.4	-0.6
	baz=1.5						
H05A	Madras	1.70	156	⇑P	Pn	20 15 44.7	-0.2
	baz=1.7,SNR=8.2						
H05A				⇑S	Sn	20 16 05.1	-1.9
	baz=1.7						
COR	Corvallis	1.80	206	ePn	Pn	20 15 45.9	-0.3
COR				eSg	Sg	20 16 12.0	-0.2
HAWA	Hanford	1.85	83	ePn	Pn	20 15 47.2	+0.2
HAWA				eSn	Sn	20 16 11.3	+0.5
B04A	Port Angeles	2.06	335	⇑P	Pn	20 15 49.5	-0.4
	baz=2.1						
B05A	Bryant	2.06	2	⇓P	Pn	20 15 49.9	0.0
	baz=2.1						
I05A	Bend	2.14	162	⇑P	Pn	20 15 51.0	0.0
	baz=2.1						
I03A	Eugene	2.36	199	⇑P	Pn	20 15 54.1	+0.1
	baz=2.4						
I02A	Mapleton	2.49	208	⇑P	Pn	20 15 56.9	+1.2
	baz=2.5						
A04A	Legoe Bay, Lum	2.54	352	⇑P	Pn	20 15 57.9	+1.4
	baz=2.5						
A05A	Maple Falls	2.80	1	⇓S	Sn	20 16 33.1	-1.1
	baz=2.8						
I07A	Izee	2.85	137	⇑P	Pn	20 16 02.1	+1.4
	baz=2.8						
J03A	Ideyld Park	2.88	191	⇓P	Pn	20 16 02.6	+1.4
	baz=2.9						
J05A	Fort Rock	3.00	167	⇑P	Pn	20 16 03.7	+1.0
	baz=3.0						
H08A	Prairie City	3.00	123	⇑P	Pn	20 16 03.1	+0.4
	baz=3.0						
J06A	Christmas Vall	3.29	153	⇓P	Pn	20 16 08.2	+1.4
	baz=3.3						

IDC 05 20:32:18.1±1.6, 5088N×17867E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.5/22, mbtmp3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/39, Error ellipse: s-maj=425.0km s-min=31.7km az=134.0, Rat Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	33.43	253	LR	LR	20 53 58.6	
	comp=Z,39nm,18.4s,baz=358,slow=39						
YKA	Yellowknife Ar	36.73	46	P	P	20 39 26.3	-0.6
	1.5nm,1.0s,baz=288,slow=8.5,SNR=5.5						
WRA	Warramunga Arr	80.56	222	P	P	20 44 31.7	-0.6
	0.4nm,0.5s,baz=30,slow=6.0,SNR=4.8						
ASAR	Alice Springs	84.06	220	P	P	20 44 51.0	+0.5
	0.3nm,0.8s,baz=22,slow=5.1,SNR=3.6						

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*ISCJB **05** 20:46:06.2±0.8, 1090N±005×6247W±004, h101km±7km, Error ellipse: s-maj=8.4km s-min=5.5km az=131.8*
*FUNV **05** 20:46:06.6, 1094N×6236W, h97km, MW2.8*
*TRN **05** 20:46:07.7, 1092N×6247W, h88km, MD3.2*
*NEIC **05** 20:46:07.7, 1092N×6247W, h87km, MD3.2(TRN), After TRN.*
ISC 05 20:46:07.2±0.8, 1091N±005×6246W±004, h95km±8km, n15, σ0.78/26, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.35	138	eP	Pn	20 46 21.0	-0.4
GUIV				eS	Sn	20 46 30.6	-1.3
ITEV	Isla Los Testi	0.80	304	eP	Pn	20 46 24.9	-0.2
ITEV				eS	Sn	20 46 38.5	0.0
CRUV	Carupano	0.80	253	eP	Pn	20 46 25.9	+0.9
CRUV				eS	Sn	20 46 39.0	+0.6
GUNV	Guanoco	0.88	213	eP	Pn	20 46 26.4	+0.5
GUNV				eS	Sn	20 46 40.7	+0.8
TRN	Trinidad (W)	1.07	104	eP	Pn	20 46 28.7	+0.8
TRN				eS	Sn	20 46 42.5	-1.1
TBH	Brigand Hill	1.43	107	eP	Pn	20 46 32.7	+0.5
TBH				eS	Sn	20 46 52.1	+0.8
GRW	Mount Saint Ca	1.47	32	eP	Pn	20 46 34.7	+1.9
GRHS	Sauteurs	1.53	31	eP	Pn	20 46 33.5	-0.1
GRSS	Sisters	1.61	31	eP	Pn	20 46 34.9	+0.3
GRSS				eS	Sn	20 46 55.2	-0.1
GRIC	Isle de Caille	1.61	32	eP	Pn	20 46 34.0	-0.6
GRIC				eS	Sn	20 46 55.0	-0.4
TPR	Prospect	1.67	80	eP	Pn	20 46 36.1	+0.8
TPR				eS	Sn	20 46 56.1	-0.6
GRCU	Cariacou	1.84	32	eP	Pn	20 46 37.0	-0.5
BIRV	Birongo	3.77	264	eP	Pn	20 47 02.9	-0.3
CAOV	Caicara del Or	5.22	227	eP	Pn	20 47 21.9	-0.8
CAOV				eS	Sn	20 48 17.3	-4.3
BAUV	El Baul	5.84	251	eP	Pn	20 47 29.9	-1.3
BAUV				eS	Sn	20 48 31.5	-5.1

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*IDC **05** 20:49:21.8±3.0, 258S×14026E, h0km, mb3.9/3, mb1 4.3/4, mb1mx4.0/11, mbtmp4.1/4, ML4.2/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/18, Error ellipse: s-maj=107.6km s-min=22.2km az=94.0*
*NEIC **05** 20:49:26.1±1.6, 260S×14028E, h30km, mb4.3/3, Error ellipse: s-maj=42.1km s-min=13.4km az=90.0*
NEIC Felt [III] at Jayapura.
*ISCJB **05** 20:49:30.5±2.9, 276S±007×1397E±02, h66km±28km, mb3.8/4, Error ellipse: s-maj=30.5km s-min=11.5km az=15.2*
ISC 05 20:49:28.6±4.6, 267S±010×1400E±02, h33km±38km, n15, σ1.10/19, mb3.9/4, MS3.4/2, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	12.45	216	eP	Pn	20 52 23.5	+0.2
	27nm,0.4s						
KAKA				eS	Sn	20 54 38.9	-1.9
WRAB	Tennant Creek	18.01	197	ePn	Pn	20 53 38.0	+1.8
	13nm,0.7s						
WRAB				eSn	Sn	20 56 49.7	-6.4
WB2	Warramunga Arr	18.02	197	eP	Pn	20 53 35.1	-1.2
WB2				eS	Sn	20 56 50.5	-5.8
WRA	Warramunga Arr	18.02	197	P	Pn	20 53 36.3	0.0
	0.8nm,0.3s,baz=20,slow=13,SNR=39						
FITZ	Fitzroy Crossi	20.79	222	eP	P	20 54 10.5	+3.6
	12nm,1.0s						
FITZ				eS	S	20 57 59.7	+2.6
FITZ	Fitzroy Crossi	20.79	222	P	P	20 54 08.0	+1.2
	6.7nm,0.9s,baz=40,slow=17,SNR=8.4						
AS31	Alice Springs	21.68	195	eP	P	20 54 16.4	0.0
AS31				eS	S	20 58 21.7	+7.3
ASAR	Alice Springs	21.68	195	P	P	20 54 16.1	-0.3
	4.0nm,0.7s,mb3.9,baz=30,slow=10,SNR=35						
ASAR				LR	LR	21 03 21.1	
	comp=Z,163nm,20.7s,MS3.4,baz=198,slow=38						
ASPA	Alice Springs	21.68	195	eP	P	20 54 16.4	0.0
ASPA				eS	S	20 58 21.7	+7.2
MBWA	Marble Bar	26.94	225	eP	P	20 55 07.1	+0.3
	12nm,1.3s,mb4.3						
KSM	Kuching	29.93	278	eP	P	20 55 34.4	+0.9
MJAR	Matsushiro Arr	39.05	358	LR	LR	21 10 48.9	
	comp=Z,60nm,18.1s,MS3.5,baz=215,slow=33						
SONM	Songino Array	58.23	334	P	P	20 59 19.5	-0.1
	0.2nm,0.7s,mb3.3,baz=135,slow=5.4,SNR=2.5						
MKAR	Makanchi Array	70.53	322	P	P	21 00 38.2	-1.8
	0.5nm,0.3s,mb4.0,baz=114,slow=6.5,SNR=6.9						
DBIC	Dimbokro	144.72	278	PKPbc	PKPdf	21 09 00.2	-1.6
	4.9nm,1.0s,baz=76,slow=7.2,SNR=3.2						

GUC 05 21:12:12.8±0.6, 3505S×7052W, h20km±8km, MD3.5, ML2.6, 3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CICH	Cipreses	0.73	6	⇓iP	Pb	21 12 26.6	-0.3
CICH				i S	Sb	21 12 37.0	+0.5
CACH	El Canelo	0.94	356	⇓iP	Pb	21 12 30.0	-0.3
CACH				i S	Sb	21 12 43.5	+1.1
LNV	Longovilo	1.32	326	⇓iP	Pn	21 12 36.6	+0.5
LNV				i S	Sn	21 12 54.3	+1.1
RCDM	Rinconada Maip	1.58	351	i S	Sn	21 13 02.4	+2.8
RCDM				AML	AML	21 13 03.5	
	comp=E,137nm,0.1s						

CASC 05 21:28:03.9±2.4, 1420N×9211W, h60km±19km, MD3.9, 2C-4D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	Jato	0.48	76	⇑iP	Pn	21 28 16.6	+1.0
JAT				eS	Sn	21 28 24.6	+0.4
TP2	Tecpan 2	1.21	61	⇓eP	Pn	21 28 25.0	+0.3
TP2				eS	Sn	21 28 42.1	+1.9
FUG	Fuego 3	1.26	79	⇓iP	Pn	21 28 25.8	+0.5
PCG	Pacaya	1.47	82	⇓eP	Pn	21 28 29.5	+1.3
PCG				eS	Sn	21 28 49.0	+2.6
IXG	Ixpaco	1.61	91	⇓eP	Pn	21 28 30.5	+0.5
IXG				eS	Sn	21 28 51.1	+1.4
SBLS	San Blas	2.44	98	eP	x	21 28 51.7	
SBLS				eS	x	21 29 21.4	
SNJE	San Jose	2.46	97	eP	x	21 28 51.9	
SNJE				eS	x	21 29 23.2	
BOQS	Boqueron	2.79	99	eP	x	21 28 56.7	
BOQS				eS	x	21 29 29.4	
LFRS	El Faro	3.02	101	⇑eP	x	21 28 59.7	
LFRS				eS	x	21 29 36.4	
LCBS	La Ceiba	3.09	100	eP	x	21 29 00.5	
LCBS				eS	x	21 29 37.8	
CNCH	Conchagua	4.26	102	eP	x	21 29 24.9	
CNCH				eS	x	21 30 12.0	

IDC 05 21:34:32.7±64.0, 1613S×17585W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/13, mbtmp3.9/3, Error ellipse: s-maj=1209.0km s-min=181.4km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.63	240	P	P	21 42 23.0	+0.4
	0.9nm,0.6s,baz=103,slow=14,SNR=3.1						
WRA	Warramunga Arr	47.38	258	P	P	21 43 08.9	+0.3
	0.6nm,0.5s,baz=93,slow=8.1,SNR=14						
ASAR	Alice Springs	47.65	253	P	P	21 43 10.9	+0.3
	2.9nm,0.5s,baz=88,slow=8.1,SNR=51						

IDC 05 21:51:13.2±8.7, 1414S×16706E, h122km±77km, mb3.4/3, mb1 3.6/4, mb1mx3.3/14, mbtmp3.8/4, Error ellipse: s-maj=65.4km s-min=43.8km az=169.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.91	184	P	Pn	21 53 07.1	+1.7
	0.5nm,0.3s,baz=310,slow=23,SNR=10.0						
DZM				S	Sn	21 54 31.0	-2.1
	0.2nm,0.3s,baz=168,slow=20,SNR=2.1						
STKA	Stephens Creek	29.22	229	P	P	21 57 04.9	+1.6
	0.9nm,0.4s,baz=64,slow=7.0,SNR=10.0						
WRA	Warramunga Arr	31.77	255	P	P	21 57 25.7	-0.1
	0.6nm,0.8s,baz=84,slow=8.0,SNR=3.7						
ASAR	Alice Springs	32.70	248	P	P	21 57 33.5	-0.4
	0.4nm,0.4s,baz=74,slow=9.6,SNR=8.4						
ARCES	ARCESS Array B	119.64	345	PKP	PKPdf	22 09 47.6	-1.0
	0.7nm,0.5s,baz=48,slow=1.8,SNR=6.8						
BAIF	Baives	141.55	342	ePKP1	PKPdf	22 10 31.5	+1.7
CABF	La Chapelle	143.91	338	ePKP1	PKPdf	22 10 35.9	+1.9
	10nm,0.9s						
SSF	Saint Saulge	144.42	341	ePKP1	PKPdf	22 10 35.0	+0.1
	5.3nm,0.8s						
LPL	La Plagne	144.58	336	ePKP1	PKPdf	22 10 36.9	+1.7
	4.6nm,0.8s						
LPG	La Plagne	144.59	336	ePKP1	PKPdf	22 10 36.9	+1.7
SMF	Signal de Mont	144.67	340	ePKP1	PKPdf	22 10 35.6	+0.2
	4.7nm,0.8s						
AVF	Avril sur Loir	144.71	341	ePKP1	PKPdf	22 10 35.6	+0.2
	4.2nm,0.8s						
SGMF	Saint Gilles	144.92	348	ePKP1	PKPdf	22 10 35.6	-0.2
	6.4nm,0.6s						
MBDF	Montbardon	145.21	335	ePKP1	PKPbc	22 10 38.2	+2.0
	5.9nm,0.7s						
ORIF	Oris-en-Rattie	145.41	336	ePKP1	PKPbc	22 10 38.6	+1.8
	5.6nm,0.7s						
TCF	Toulx Ste Croi	145.51	341	ePKP1	PKPbc	22 10 38.4	+1.3
MFF	Saint Martin d	145.91	344	ePKP1	PKPbc	22 10 40.0	+1.7
	6.0nm,0.7s						
FRF	La Foret Royal	146.22	334	ePKP1	PKPbc	22 10 40.4	+1.1
SMRF	Simiane la Rot	146.32	336	ePKP1	PKPbc	22 10 41.2	+1.6
MTLF	Montolieu	148.12	339	ePKP1	PKPbc	22 10 46.2	+1.7
	2.9nm,0.5s						
ETSF	Etsaut	149.42	342	ePKP1	PKPbc	22 10 49.2	+1.4
	5.3nm,0.7s						

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*NEIC **05** 22:21:41.1, 3312S×6893W, h1km, ML3.3(GUC), After GUC.*
GUC 05 22:21:41.1±0.6, 3312S×6893W, h1km±4km, MD3.6, ML3.3, 9C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDZ	Mendoza	0.25	16	⇑iP	Pg	22 21 41.3	-4.6
MDZ				i S	Sg	22 21 46.1	-3.0
FCH	Farellones	1.16	259	⇓iP	Pg	22 22 02.3	-0.9
FCH				i S	Sg	22 22 19.0	+0.7
FCH				AML	AML	22 22 20.1	
	comp=E,980nm,0.6s						
SJCH	San Jose de Ma	1.30	246	i P	Pg	22 22 04.0	-2.0
SJCH				i S	Sg	22 22 22.0	-0.8
SJCH				AML	AML	22 22 23.4	
	comp=N,1μm,0.5s						
SJCH	San Jose de Ma	1.30	246	i P	Pg	22 22 04.0	-2.0
SJCH				i S	Sg	22 22 22.0	-0.8
CLCH	Cerro Calan	1.37	258	⇓iP	Pn	22 22 06.1	-1.3
CLCH				i S	Sg	22 22 25.4	+0.2
CLCH				AML	AML	22 22 30.8	
	comp=E,1μm,0.7s						
CLCH				AML	AML	22 22 31.4	
	comp=E,1μm,0.6s						
PCH	Pirque	1.41	249	i P	Pn	22 22 07.0	-0.9
PCH				i S	Sg	22 22 26.7	+0.2
JACH	Jahuel	1.47	287	⇑iP	Pn	22 22 07.8	-0.8
JACH				i S	Sg	22 22 28.4	+0.2
PEL	Peldehue	1.47	269	⇑eP	Pn	22 22 07.7	-1.0
PEL				eS	Sg	22 22 28.0	-0.4
PEL				AML	AML	22 22 36.1	
	comp=E,549nm,0.6s						
PEL	Peldehue	1.47	269	⇑eP	Pn	22 22 07.7	-1.0
PEL				eS	Sg	22 22 28.0	-0.4
ANTU	Antumapu	1.49	252	eP	Pn	22 22 08.2	-0.8
ANTU				i S	Sb	22 22 28.9	-0.1
ANTU				AML	AML	22 22 30.7	
	comp=E,859nm,0.4s						
ANTU	Antumapu	1.49	252	eP	Pn	22 22 08.2	-0.8
ANTU				i S	Sb	22 22 28.9	-0.1
RCDM	Rinconada Maip	1.61	256	⇑iP	Pn	22 22 10.4	-0.2
RCDM				i S	Sn	22 22 32.6	+0.6
RCDM				AML	AML	22 22 35.3	
	comp=N,360nm,0.3s						
RCDM	Rinconada Maip	1.61	256	⇑iP	Pn	22 22 10.4	-0.2
RCDM				i S	Sn	22 22 32.6	+0.6
CHCH	Chadas Angostu	1.65	240	⇑iP	Pn	22 22 10.8	-0.4
CHCH				i S	Sn	22 22 33.3	+0.4
CACH	El Canelo	1.71	234	⇓iP	Pn	22 22 11.7	-0.2
CACH				i S	Sn	22 22 35.2	+0.8
CICH	Cipreses	1.72	226	⇑iP	Pn	22 22 11.8	-0.3
CICH				i S	Sn	22 22 35.5	+0.8
TACH	Talagante	1.76	252	eP	Pn	22 22 12.4	-0.2
TACH				i S	Sn	22 22 36.2	+0.5
LNV	Longovilo	2.23	247	⇑iP	Pn	22 22 19.9	+0.7
LNV				i S	Sn	22 22 49.5	+2.2
LCCH	Las Cruces	2.24	260	eP	Pn	22 22 19.9	+0.7
LCCH				i S	Sn	22 22 49.7	+2.2
CHNG	Los Chungos	2.50	299	eP	Pn	22 22 24.2	+1.4
CHNG				i S	Sn	22 22 56.1	+2.2
CHNG				AML	AML	22 23 01.1	
	comp=N,305nm,0.5s						
CMCH	Combarbala	2.62	317	⇓iP	Pn	22 22 25.5	+1.0
CMCH				i S	Sn	22 22 60.0	+3.1

MAN 05 22:24:58.8, 1388N×12036E, h19km, mb1.7, ML3.5, MS2.5, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.18	218	eP	Pg	22 25 04.4	+0.8
LUBP				eS	Sg	22 25 08.5	+1.7
TGY	Tagaytay City	0.60	68	⇓eP	Pb	22 25 12.4	+1.6
TGY				eS	Sb	22 25 22.0	+3.1
PGP	Puerto Galera	0.69	123	⇓eP	Pb	22 25 11.8	-0.4
BUSP	Coron	1.87	185	eP	Pn	22 25 30.4	+0.7
OTRP	Odiongan	2.21	133	eP	Pn	22 25 35.2	+0.7
OTRP	Odiongan	2.21	133	eP	Pn	22 25 35.2	+0.7
ENPP	El Nido	2.81	199	eP	Pn	22 25 43.3	+0.6
ENPP	El Nido	2.81	199	eP	Pn	22 25 43.3	+0.6

JMA 05 22:33:28.4±0.3, 3223N×14236E, h0km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.32	293	P	Pn	22 34 08.8	+1.0
JHJ2				S	Sn	22 34 38.5	+1.5
JMY	Miyakejima3	3.01	308	eS	Sn	22 34 54.8	+0.7
JHO	Hitachi	4.61	342	P	Pn	22 34 41.2	+1.8
JHO				eS	Sn	22 35 36.3	+2.7
JAG	Ashikaga	4.83	331	eS	Sn	22 35 41.5	+2.6

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*CSEM **05** 23:09:50.0±0.8, 3674N×2429W, h10km, ML2.6, Error ellipse: s-maj=7.5km s-min=3.0km az=61.0, After PDA*
*PDA **05** 23:09:50.0±0.8, 3674N×2429W, h10km, MD2.9, ML2.6, Error ellipse: s-maj=7.5km s-min=3.0km az=61.0*
SVSA 05 23:09:50.0±0.8, 3674N×2429W, h10km, MD2.9, ML2.6, Error ellipse: s-maj=7.5km s-min=3.0km az=61.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.67	293	eP	Pg	23 10 00.6	-2.4
PSMN				eS	Sg	23 10 09.0	-2.8
MIRA	Miradouro	1.30	323	eP	Pn	23 10 09.3	-5.0
MIRA				eS	Sb	23 10 24.1	-7.3
FRA1	Furnas	1.31	320	eS	Sb	23 10 24.4	-7.2
PCNG	Congro	1.35	319	eP	Pn	23 10 10.6	-4.3
PCNG				eS	Sb	23 10 25.7	-7.0
PCNG							
	16nm,0.1s						
PCNG	Congro	1.35	319	eP	Pn	23 10 10.6	-4.3
PCNG				eS	Sb	23 10 25.7	-7.0
VIF	Vila Franca	1.36	318	eP	Pn	23 10 10.4	-4.6
VIF				eS	Sb	23 10 26.1	-6.8
VIF							
	36nm,0.3s						
VIF	Vila Franca	1.36	318	eP	Pn	23 10 10.4	-4.6
VIF				eS	Sb	23 10 26.1	-6.8
PRCH	Ribeira Ch	1.37	316	eP	Pn	23 10 10.5	-4.6
PRCH				eS	Sb	23 10 25.9	-7.3
PRCH							

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	78nm,0.2s						
PRCH	**Ribeira Ch**	**1.37**	**316**	eP	Pn	23 10 10.5	-4.6
PRCH				eS	Sb	23 10 25.9	-7.3
PFAD	**Fenais da Ajud**	**1.37**	**323**	eP	Pn	23 10 10.3	-4.8
PFAD				eS	Sb	23 10 25.8	-7.4
MESC	**Monte Escuro**	**1.40**	**319**	eP	Pn	23 10 10.8	-4.7
MESC				eS	Sn	23 10 26.6	-7.4
LFA	**Lagoa do Fogo**	**1.40**	**318**	i P	Pn	23 10 11.2	-4.4
LFA				eS	Sn	23 10 27.3	-6.8
PMAT	**Coroa da Mata**	**1.43**	**319**	eP	Pn	23 10 11.6	-4.3
PMAT				eS	Sn	23 10 27.0	-7.7
PMAT							
	26nm,0.2s						
PMAT	**Coroa da Mata**	**1.43**	**319**	eP	Pn	23 10 11.6	-4.3
PMAT				eS	Sn	23 10 27.0	-7.7
CML	**Cha da Macela**	**1.43**	**316**	eP	Pn	23 10 11.4	-4.6
CML				eS	Sn	23 10 27.0	-7.9
PVER	**Pico Vermelho**	**1.44**	**317**	eP	Pn	23 10 11.4	-4.7
PVER				eS	Sn	23 10 27.5	-7.4
PVER							
	26nm,0.3s						
PVER	**Pico Vermelho**	**1.44**	**317**	eP	Pn	23 10 11.4	-4.7
PVER				eS	Sn	23 10 27.5	-7.4
FAC	**Faja de Cima**	**1.50**	**314**	eP	Pn	23 10 12.6	-4.3
FAC				eS	Sn	23 10 28.8	-7.6
PSAN	**Santo Antonio**	**1.59**	**314**	eP	Pn	23 10 14.1	-4.1
PSAN				eS	Sn	23 10 31.7	-7.1
PFET	**Feteiras**	**1.60**	**312**	eP	Pn	23 10 13.7	-4.7
PFET				eS	Sn	23 10 31.8	-7.4
SET2	**Ginetes**	**1.63**	**313**	eP	Pn	23 10 14.3	-4.5
SET2				eS	Sn	23 10 32.5	-7.3
SET4	**Mosteiros**	**1.65**	**314**	eP	Pn	23 10 14.4	-4.6
PID	**Ribeirinha**	**3.48**	**300**	eP	Pn	23 10 39.7	-4.5
PMAN	**Manadas**	**3.56**	**303**	erx		23 10 55.8	
ROSA	**Rosais**	**3.70**	**303**	eP	Pn	23 10 42.8	-4.4
PICO	**Pico**	**3.72**	**299**	eP	Pn	23 10 43.3	-4.2

*ISCJB **05** 23:09:59.8±0.4, 38.12N±002×2390E±003, h2^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=3.1km az=123.3*
*NEIC **05** 23:09:59.8, 3809N×2383E, h19^{km}, ML3.3(ATH), After ATH.*
*ATH **05** 23:09:59.8, 3809N×2383E, h19^{km}±1^{km}, MD3.5/14, ML3.3*
*CSEM **05** 23:10:00.7±0.1, 3805N×2385E, h5^{km}, ML3.3, Error ellipse: s-maj=1.7km s-min=1.3km az=80.0*
*THE **05** 23:10:02.7, 38.17N×2399E, h10^{km}, ML3.1*
ISC 05 23:10:00.5±0.4**, 3810N**±002×**2389E**±003**, h6**^{km}±3^{km}**, n43, σ1^{s}01**/61**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.05**	**200**	ePB	**Sg**	**23 10 03.3**	**+0.4**
ATH	**Athens Observa**	**0.18**	**227**⇑	iPB	**Pg**	**23 10 03.8**	**-0.4**
ATH				eSB	**Sg**	**23 10 05.8**	**-0.9**
KVR	**Kavouri**	**0.28**	**199**	ePB	**Pg**	**23 10 05.5**	**-0.6**
NAIG	**Nisos Aigina**	**0.46**	**223**	ePB	**Pg**	**23 10 08.5**	**-0.9**
MGER	**Gerania Oros**	**0.51**	**258**	ePB	**Pg**	**23 10 09.5**	**-0.8**
LKR	**Lokris**	**0.89**	**309**	ePN	**Pg**	**23 10 17.0**	**-0.6**
LKR				eSN	**Sg**	**23 10 29.3**	**+0.1**
AOS	**Alonnisos**	**1.07**	**360**	ePg	**Pg**	**23 10 21.9**	**+0.7**
AOS				eSg	**Sg**	**23 10 36.2**	**+1.1**
NEO	**Neokhori**	**1.31**	**337**	ePN	**Pn**	**23 10 25.3**	**-0.1**
NEO				eSN	**Sn**	**23 10 41.9**	**-1.4**
XOR	**Xorichti**	**1.38**	**337**	ePg	**Pg**	**23 10 26.2**	**-0.8**
XOR				eSg	**Sg**	**23 10 45.1**	**+0.2**
AGG	**Agios Georgios**	**1.53**	**308**	ePg	**Pg**	**23 10 28.4**	**-1.5**
AGG				eSg	**Sg**	**23 10 51.3**	**+1.6**
VLI	**Veliai**	**1.57**	**209**	ePB	**Pn**	**23 10 27.4**	**-1.6**
APE	**Apeiranthos**	**1.66**	**128**	ePb	**Pn**	**23 10 29.9**	**-0.3**
APE				eSb	**Sb**	**23 10 52.1**	**-0.6**
APE	**Apeiranthos**	**1.66**	**128**	ePn	**Pn**	**23 10 30.3**	**+0.1**
APE				eSb	**Sb**	**23 10 52.1**	**-0.6**
APE				eSn	**Sn**	**23 10 54.0**	**+2.1**
CHOS	**Chios island**	**1.73**	**80**	ePb	**Pb**	**23 10 32.1**	**-0.7**
CHOS				eSb	**Sb**	**23 10 52.8**	**-1.9**
ITM	**Ithomi**	**1.81**	**240**	ePN	**Pn**	**23 10 31.6**	**-0.6**
EVR	**Evrytania**	**1.82**	**297**	ePB	**Pn**	**23 10 31.1**	**-1.4**
PAIG	**Paliouri**	**1.83**	**355**	ePb	**Pn**	**23 10 32.2**	**-0.4**
PAIG				eSb	**Sb**	**23 10 56.4**	**-1.4**
RLS	**Riolos of Patr**	**1.91**	**270**	ePN	**Pn**	**23 10 33.8**	**+0.2**
LOS	**Limnos**	**2.06**	**27**	ePb	**Pb**	**23 10 36.3**	**-2.0**
LIA	**Limnos Island**	**2.06**	**29**	ePB	**Pn**	**23 10 35.6**	**-0.1**
PRK	**Paraskevi**	**2.19**	**58**	ePN	**Pn**	**23 10 38.4**	**+0.9**
OUR	**Ouranopolis**	**2.24**	**2**	ePn	**Pn**	**23 10 38.3**	**+0.1**
OUR				eSn	**Sn**	**23 11 05.0**	**-1.0**
LIT	**Litokhoron**	**2.28**	**332**	ePn	**Pn**	**23 10 38.7**	**0.0**
LIT				eSn	**Sn**	**23 11 07.4**	**+0.4**
PLG	**Polygyros**	**2.30**	**352**	ePB	**Pn**	**23 10 39.1**	**+0.1**
PLG				eSN	**Sn**	**23 11 05.8**	**-1.8**
SMG	**Samos**	**2.37**	**99**	ePN	**Pn**	**23 10 40.6**	**+0.7**
BOZC	**Bozcaada**	**2.43**	**43**	i P	**Pn**	**23 10 40.6**	**-0.1**
AYVA	**Ayvalik**	**2.50**	**60**	i P	**Pg**	**23 10 50.6**	**+2.0**
HORT	**Hortiatis**	**2.57**	**347**	ePn	**Pn**	**23 10 43.3**	**+0.6**
HORT				eSn	**Sn**	**23 11 14.1**	**-0.3**
LKD	**Levkas**	**2.61**	**284**	ePn	**Pn**	**23 10 45.5**	**+2.1**
LKD				eSn	**Sn**	**23 11 18.8**	**+3.5**
THE	**Thessaloniki**	**2.63**	**345**	ePn	**Pn**	**23 10 44.2**	**+0.7**
THE	**Thessaloniki**	**2.63**	**345**	ePn	**Pn**	**23 10 44.2**	**+0.7**
MEV	**Metsovon**	**2.67**	**310**	ePn	**Pn**	**23 10 45.6**	**+1.5**
KDAG	**Bornova**	**2.68**	**82**	eP	**Pg**	**23 10 52.5**	**+0.7**
VAM	**Vamos**	**2.70**	**175**	ePB	**Pn**	**23 10 45.6**	**+1.1**
SOH	**Sokhos**	**2.75**	**352**	ePn	**Pn**	**23 10 45.7**	**+0.5**
SRS	**Serrai**	**3.02**	**356**	ePn	**Pn**	**23 10 49.1**	**+0.1**
SRS				eSn	**Sn**	**23 11 25.0**	**-0.5**
GRG	**Griva**	**3.08**	**339**	ePn	**Pn**	**23 10 50.0**	**+0.3**
IGT	**Igoumenitsa**	**3.12**	**298**	ePn	**Pn**	**23 10 52.1**	**+1.8**
IGT				eSn	**Sn**	**23 11 31.6**	**+3.6**
KNT	**Kendrikon**	**3.15**	**346**	ePn	**Pn**	**23 10 51.5**	**+0.8**
NVR	**Nevrokopi**	**3.25**	**360**	ePN	**Pn**	**23 10 52.3**	**+0.2**
ALN	**Alexandroupoli**	**3.26**	**30**	ePn	**Pn**	**23 10 52.0**	**-0.2**
RDO	**Rodhopi**	**3.30**	**22**	ePN	**Pn**	**23 10 52.5**	**-0.3**
FNA	**Florina**	**3.31**	**325**	ePn	**Pn**	**23 10 54.0**	**+1.1**

*ISCJB **05** 23:22:55.7±0.6, 3796N±003×2185E±004, h7^{km}±5^{km}, Error ellipse: s-maj=6.4km s-min=4.4km az=72.3*
*NEIC **05** 23:22:56.3, 3800N×2182E, h19^{km}, ML3.2(ATH), After ATH.*
*CSEM **05** 23:22:56.5±0.1, 3796N×2187E, h2^{km}, ML3.2, Error ellipse: s-maj=2.8km s-min=1.4km az=19.0*
*ATH **05** 23:22:56.3, 3800N×2182E, h19^{km}±1^{km}, MD3.3/9, ML3.2*
*THE **05** 23:22:57.4, 3782N×2184E, h20^{km}, ML2.9*
ISC 05 23:22:56.1±0.6**, 3794N**±003×**2186E**±004**, h9**^{km}±5^{km}**, n23, σ0^{s}95**/35**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.33**	**291**	ePB	**Pg**	**23 23 02.5**	**-0.2**
RLS				eSB	**Sg**	**23 23 07.5**	**+0.4**
ITM	**Ithomi**	**0.76**	**176**	ePN	**Pg**	**23 23 12.2**	**+1.4**
EVR	**Evrytania**	**0.98**	**358**	ePN	**Pg**	**23 23 13.9**	**-1.0**
VLS	**Valsamata**	**1.03**	**284**	ePN	**Pn**	**23 23 15.2**	**-1.6**
MGER	**Gerania Oros**	**1.11**	**87**	ePN	**Pn**	**23 23 18.0**	**+0.2**
AGG	**Agios Georgios**	**1.14**	**19**	ePg	**Pg**	**23 23 17.4**	**-0.6**
AGG				eSg	**Sg**	**23 23 34.5**	**+1.7**
LKR	**Lokris**	**1.14**	**51**	ePB	**Pb**	**23 23 17.0**	**-1.1**
LKD	**Levkas**	**1.22**	**309**	ePg	**Pg**	**23 23 18.1**	**-1.5**
LKD				eSg	**Sg**	**23 23 35.6**	**+0.2**
NAIG	**Nisos Aigina**	**1.30**	**98**	ePN	**Pn**	**23 23 21.8**	**+1.3**
ATH	**Athens Observa**	**1.47**	**88**	ePN	**Pn**	**23 23 23.7**	**+0.9**
VLI	**Veliai**	**1.49**	**145**	ePN	**Pg**	**23 23 25.5**	**+0.8**
KVR	**Kavouri**	**1.52**	**94**	ePB	**Pb**	**23 23 24.0**	**-0.4**
PTL	**Penteli**	**1.59**	**85**	ePN	**Pn**	**23 23 25.5**	**+1.1**
XOR	**Xorichti**	**1.77**	**36**	ePb	**Pb**	**23 23 26.8**	**-1.9**
XOR				eSb	**Sb**	**23 23 49.8**	**-1.1**
MEV	**Metsovon**	**1.91**	**345**	ePn	**Pn**	**23 23 29.4**	**+0.6**
MEV				eSn	**Sn**	**23 23 53.0**	**0.0**
IGT	**Igoumenitsa**	**1.99**	**324**	ePn	**Pn**	**23 23 29.6**	**-0.4**
IGT				eSn	**Sn**	**23 23 54.6**	**-0.4**
AOS	**Alonnisos**	**2.00**	**52**	ePn	**Pn**	**23 23 30.2**	**+0.1**
AOS				eSn	**Sn**	**23 23 55.2**	**-0.2**
LIT	**Litokhoron**	**2.21**	**13**	ePn	**Pn**	**23 23 33.3**	**+0.3**
LIT				eSn	**Sn**	**23 24 01.3**	**+0.8**
PAIG	**Paliouri**	**2.44**	**35**	ePn	**Pn**	**23 23 35.9**	**-0.3**
PAIG				eSn	**Sn**	**23 24 06.9**	**+0.8**
FNA	**Florina**	**2.86**	**353**	ePn	**Pn**	**23 23 42.6**	**+0.6**
FNA				eSn	**Sn**	**23 24 18.3**	**+1.7**
OUR	**Ouranopolis**	**2.91**	**34**	ePn	**Pn**	**23 23 42.8**	**+0.2**
APE	**Apeiranthos**	**3.05**	**105**	ePn	**Pn**	**23 23 43.6**	**-0.9**
APE				eSn	**Sn**	**23 24 19.1**	**-2.0**
APE	**Apeiranthos**	**3.05**	**105**	ePn	**Pn**	**23 23 43.6**	**-0.9**
APE				eSn	**Sn**	**23 24 19.0**	**-2.1**

MAN 05 23:26:21, 1828N×12092E, h13^{km}, mb2.5, ML4.0, MS2.5, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.52**	**143**	eP	Pg	23 26 32.2	+1.0
APYP				eS	Sg	23 26 42.9	+4.7
ABRA	**Dolores**	**0.66**	**197**	eP	Pg	23 26 33.3	-0.5
CVP	**Callao Caves**	**1.04**	**124**⇑	eP	Pb	23 26 40.0	-0.8
CVP				eS	Sb	23 26 55.0	+0.7
SGCP	**Mt. Cagua**	**1.07**	**92**	eP	Pb	23 26 39.9	-1.5
SGCP				eS	Sb	23 26 56.1	+0.8
CAUP	**Cauayan**	**1.59**	**147**	eP	Pn	23 26 50.9	+2.1
PALP	**Palanan**	**1.88**	**130**	eP	Pn	23 26 42.2	-11
BCPH	**Baguio City Da**	**1.92**	**190**⇓	iP	Pn	23 26 52.3	-1.0
BCPH				i S	Sn	23 27 19.5	+2.1
BOLP	**Bolinao**	**2.12**	**207**	eP	Pn	23 26 56.8	+0.7
BALP	**Baler**	**2.61**	**166**	eP	Pn	23 27 05.9	+3.1

*BJI **05** 23:55:56.7, 1680S×7270W, h53^{km}, mB4.4, Ms4.9, Msz4.6*
*ISCJB **05** 23:55:56.7±0.9, 1685S±006×7284W±006, h61^{km}±7^{km}, mb4.5/41, Error ellipse: s-maj=11.9km s-min=7.8km az=84.8*
*LDG **05** 23:55:57.2±0.4, 16.16S×7238W, h33^{km}, Mb4.8/13, Ms3.5/6, Error ellipse: s-maj=23.3km s-min=8.8km az=44.0*
*NEIC **05** 23:55:57.8±0.3, 1680S×7274W, mb4.5/25, Error ellipse: s-maj=7.9km s-min=4.9km az=50.0*
NEIC Felt [III] at Camana and [II] at Arequipa.
*MOS **05** 23:55:57.6±0.9, 1670S×7283W, h59^{km}, mb4.9/10, Error ellipse: s-maj=13.0km s-min=12.0km az=168.4*
*IDC **05** 23:55:58.0±0.6, 1678S×7263W, h56^{km}±5^{km}, mb4.2/11, mb1 4.2/16, mb1mx4.2/21, mbtmp4.4/16, MS3.4/9, Ms1 3.4/9, ms1mx3.2/21, Error ellipse: s-maj=21.8km s-min=11.6km az=53.0*
ISC 05 23:55:58.1±0.8**, 1685S**±005×**7276W**±006**, h56**^{km}±7^{km}**, h56**^{km}±1.3^{km}**:pP-P, n94, σ0^{s}86**/85**, mb4.5**/41**, MS3.6**/8**, 2C-2D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**1.27**	**73**⇓	iP	**Pn**	**23 56 20.4**	**+0.8**
ARE				i S	**Sn**	**23 56 37.1**	**+1.5**
LPAZ	**La Paz**	**4.47**	**83**⇑	iP	**Pn**	**23 57 07.3**	**+4.1**
NNA	**Nana**	**6.25**	**320**	P	**Pn**	**23 57 27.6**	**-0.1**
	3.9nm,0.3s,baz=130,slow=11,SNR=5.6						
NNA				S	**Sn**	**23 58 32.4**	**-5.2**
	14nm,0.3s,baz=215,slow=18,SNR=7.5						
NNA	**Nana**	**6.25**	**320**	ePn	**Pn**	**23 57 27.2**	**-0.4**
	120nm,1.9s						
NNA				eSn	**Sn**	**23 58 31.0**	**-6.6**
LVC	**Limon Verde**	**6.78**	**148**	P	**Pn**	**23 57 35.9**	**+1.0**
	10nm,0.3s,baz=332,slow=8.8,SNR=114						
LVC				S	**Sn**	**23 58 49.7**	**-1.0**
	34nm,0.3s,baz=78,slow=21,SNR=27						
LVC				LR	LR	00 00 36.4	
	comp=Z,183nm,19.3s,baz=306,slow=41						
LVC	**Limon Verde**	**6.78**	**148**	ePn	**Pn**	**23 57 35.8**	**+0.9**
	29nm,0.4s						
LVC				eSn	**Sn**	**23 58 48.8**	**-1.9**
ATAH	**Atahualpa**	**11.23**	**330**	P	**Pn**	**23 58 38.8**	**+2.9**
	0.4nm,0.3s,baz=348,slow=19,SNR=1.8						
SIV	**San Ignacio**	**11.24**	**87**	P	**Pn**	**23 58 33.1**	**-2.9**
	1.9nm,0.3s,baz=278,slow=10,SNR=30						
SAML	**Samuel**	**12.19**	**51**	ePn	**Pn**	**23 58 46.6**	**-2.3**
	11nm,1.0s						
CFAA	**Coronel Fontan**	**15.25**	**165**	P	**Pn**	**23 59 29.8**	**0.0**
	0.1nm,0.3s,baz=340,slow=12,SNR=13						
CPUP	**Villa Florida**	**17.15**	**126**	P	**Pn**	**23 59 52.6**	**-1.1**
	0.3nm,0.3s,baz=286,slow=10.0,SNR=4.7						
CPUP				LR	LR	00 07 04.8	
	comp=Z,55nm,19.0s,baz=296,slow=39						
ROSC	**El Rosal**	**21.62**	**356**	P	**P**	**00 00 42.8**	**-0.6**
	2.5nm,0.5s,mb3.9,baz=270,slow=20,SNR=3.4						
ROSC				LR	LR	00 10 00.7	
	comp=Z,95nm,19.0s,MS3.2,baz=7.4,slow=39						
BDFB	**Brasilia**	**23.78**	**91**	P	**P**	**00 01 05.0**	**-0.4**
	20nm,0.9s,mb4.6,baz=264,slow=11,SNR=30						
BDFB				LR	LR	00 10 42.7	
	comp=Z,87nm,19.9s,MS3.2,baz=348,slow=37						
BAO	**Brasilia Array**	**23.80**	**91**	P	**P**	**00 01 05.0**	**-0.6**
PLCA	**Paso Flores**	**23.88**	**176**	P	**P**	**00 01 07.9**	**+1.7**
	3.9nm,0.7s,mb4.0,baz=340,slow=8.5,SNR=18						
PLCA				LR	LR	00 09 03.3	
	comp=Z,51nm,20.2s,MS3.0,baz=11,slow=33						
PLCA	**Paso Flores**	**23.88**	**176**	eP	**P**	**00 01 07.4**	**+1.1**
	5.0nm,0.7s,mb4.0						
SDV	**Santo Domingo**	**25.66**	**5**	LR	LR	00 12 21.0	
	comp=Z,75nm,20.0s,MS3.2,baz=173,slow=38						
SDV	**Santo Domingo**	**25.66**	**5**	eP	**P**	**00 01 23.0**	**+0.5**
	9.3nm,1.1s,mb4.2						
PCRV	**Puerto La Cruz**	**28.03**	**17**	LR	LR	00 13 55.1	
	comp=Z,146nm,20.3s,MS3.6,baz=219,slow=39						
HKT	**Hockley**	**51.57**	**334**	eP	**P**	**00 04 58.4**	**0.0**
	1.7nm,0.8s,mb4.0						
WCI	**Wyandotte Cave**	**56.24**	**347**	eP	**P**	**00 05 31.2**	**-1.3**
WCI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WCI	**Wyandotte Cave**	**56.24**	**347**	eP	**P**	**00 05 31.2**	**-1.3**
	comp=Z,5.0nm,0.8s,mb4.6						
MNTX	**Cornudas Mount**	**57.53**	**327**	eP	**P**	**00 05 40.7**	**-0.9**
	comp=Z,1.6nm,0.5s,mb4.3						
ANMO	**Albuquerque**	**60.65**	**328**⇓	iP	**P**	**00 06 03.3**	**+0.1**
TUC	**Tucson**	**60.95**	**323**	eP	**P**	**00 06 05.2**	**-0.1**
	comp=Z,1.8nm,0.9s,mb4.2						
SMCO	**Snowmass**	**64.26**	**331**	eP	**P**	**00 06 27.8**	**+0.4**
	comp=Z,2.9nm,0.8s,mb4.4						
SMCO				epP	pP	00 06 41.3	-1.4
DUG	**Dugway**	**67.90**	**328**	eP	**P**	**00 06 51.2**	**+0.6**
DUG				e*PP	pP	00 07 05.9	-0.3
DUG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
DUG	**Dugway**	**67.90**	**328**	eP	**P**	**00 06 51.2**	**+0.6**
	comp=Z,4.2nm,0.8s,mb4.5						
DUG				epP	pP	00 07 05.9	-0.3
PDAR	**Pinedale Array**	**68.30**	**332**	P	**P**	**00 06 52.3**	**-0.8**
	comp=Z,0.5nm,0.8s,mb3.6,baz=160,slow=4.7,SNR=5.6						
HWUT	**Hardware Ranch**	**68.34**	**330**	eP	**P**	**00 06 53.2**	**-0.2**
	comp=Z,3.0nm,0.7s,mb4.4						
TPAW	**Teton Pass**	**69.50**	**331**	eP	**P**	**00 07 00.0**	**-0.6**
	comp=Z,2.4nm,0.8s,mb4.2						
RRI2	**Red Ridge**	**69.56**	**331**	eP	**P**	**00 07 00.8**	**-0.1**
	comp=Z,6.4nm,0.8s,mb4.6						
RRI2				epP	pP	00 07 16.5	-0.1
NVAR	**Mina Array Bea**	**69.61**	**323**	P	**P**	**00 07 02.4**	**+1.1**
	comp=Z,1.0nm,0.6s,mb3.9,baz=157,slow=7.8,SNR=6.9						
NVAR				pP	pP	00 07 18.2	+1.3
	comp=Z,0.6nm,0.8s,baz=142,slow=5.5,SNR=3.2						
ULM	**Lac du Bonnet**	**69.85**	**344**	P	**P**	**00 07 01.5**	**-1.2**
	comp=Z,5.3nm,0.6s,mb4.7,baz=180,slow=4.5,SNR=7.2						
LIC	**Lamto**	**70.74**	**77**	eP	**P**	**00 07 07.8**	**-0.4**
	comp=Z,11nm,0.5s,mb4.8						
DBIC	**Dimbokro**	**71.06**	**77**	P	**P**	**00 07 09.9**	**-0.2**
	comp=Z,20nm,0.6s,mb5.3,baz=228,slow=6.2,SNR=56						
DBIC				LR	LR	00 38 39.5	
	comp=Z,42nm,18.3s,MS3.7,baz=172,slow=36						
HLID	**Hailey**	**71.20**	**329**	eP	**P**	**00 07 11.5**	**+0.5**
	comp=Z,1.2nm,0.8s,mb3.9						
HLID				epP	pP	00 07 26.9	+0.3
BOZ	**Bozeman (W)**	**71.48**	**332**	eP	**P**	**00 07 12.3**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.8						
SCHQ	**Schefferville**	**71.57**	**4**	P	**P**	**00 07 12.7**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.4,baz=210,slow=5.1,SNR=5.2						
TORD	**Torodi Ar. Bea**	**79.34**	**73**	P	**P**	**00 07 57.7**	**0.0**
	comp=Z,24nm,0.7s,mb5.2,baz=256,slow=5.4,SNR=334						
TORD				pP	pP	00 08 14.1	+0.5
	comp=Z,4.1nm,0.7s,baz=258,slow=4.9,SNR=4.3						
TORD				LR	LR	00 40 05.8	
	comp=Z,69nm,18.7s,MS4.0,baz=120,slow=33						
SYO	**Syowa Base**	**82.10**	**160**⇑	eP	**P**	**00 08 12.9**	**+0.5**
ELOJ	**Sierra Loja**	**83.92**	**48**	P	**P**	**00 08 23.1**	**+1.2**
ELOJ				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.9						
ELOJ	**Sierra Loja**	**83.92**	**48**	P	**P**	**00 08 23.1**	**+1.3**
	comp=Z,6.8nm,0.7s,mb4.9						
EADA	**Adamuz**	**84.07**	**47**	P	**P**	**00 08 23.6**	**+1.0**
	comp=Z,3.1nm,0.7s,mb4.5						
ERON	**Agron**	**84.11**	**49**	P	**P**	**00 08 23.8**	**+1.0**
	comp=Z,2.6nm,0.5s,mb4.6						
ECOG	**Cogollos-Vega**	**84.39**	**49**	P	**P**	**00 08 25.3**	**+1.0**
ECOG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
ECOG	**Cogollos-Vega**	**84.39**	**49**	P	**P**	**00 08 25.2**	**+1.0**
	comp=Z,3.3nm,0.6s,mb4.6						
EBAN	**Banos Encina**	**84.63**	**48**	P	**P**	**00 08 26.3**	**+0.9**
EBAN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
EBAN	**Banos Encina**	**84.63**	**48**	P	**P**	**00 08 26.3**	**+0.8**
	comp=Z,3.7nm,0.6s,mb4.7						
TSUM	**Tsumeb**	**84.90**	**108**	eP	**P**	**00 08 28.6**	**+1.8**
	comp=Z,7.1nm,0.8s,mb4.8						
EQES	**Quesada**	**84.98**	**48**	P	**P**	**00 08 27.8**	**+0.6**
	comp=Z,2.9nm,0.5s,mb4.7						
ESDC	**Sonseca Array**	**85.17**	**46**	P	**P**	**00 08 29.0**	**+0.8**
	comp=Z,3.8nm,0.7s,mb4.7,baz=256,slow=5.2,SNR=31						
EHUE	**Huescar**	**85.33**	**48**	P	**P**	**00 08 29.6**	**+0.7**
EHUE				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6						
EHUE	**Huescar**	**85.33**	**48**	P	**P**	**00 08 29.6**	**+0.7**
	comp=Z,1.8nm,0.4s,mb4.5						
YKA	**Yellowknife Ar**	**85.64**	**342**	P	**P**	**00 08 29.7**	**-0.8**
	comp=Z,3.7nm,0.8s,mb4.7,baz=137,slow=5.1,SNR=23						
YKA				pP	pP	00 08 44.9	-1.6
	comp=Z,2.6nm,0.8s,baz=135,slow=4.7,SNR=7.7						
SJPF	**Ste Jean**	**88.51**	**44**	eP	**P**	**00 08 44.8**	**+0.4**
ETSF	**Etsaut**	**88.87**	**44**	eP	**P**	**00 08 45.8**	**-0.3**
	comp=Z,9.8nm,1.0s,mb4.8						
ETSF	**Etsaut**	**88.87**	**44**	eP	**P**	**00 08 45.8**	**-0.3**
ETSF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.8						
ETSF	**Etsaut**	**88.87**	**44**	eP	**P**	**00 08 45.8**	**-0.3**
	comp=Z,4.9nm,1.0s,mb4.8						
EPF	**Esparros**	**89.52**	**45**	eP	**P**	**00 08 49.5**	**+0.3**
LFF	**La Frestale**	**90.55**	**43**	eP	**P**	**00 08 53.7**	**-0.2**
	comp=Z,11nm,0.7s,mb5.0						
LFF	**La Frestale**	**90.55**	**43**	eP	**P**	**00 08 53.7**	**-0.2**
LFF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb5.0						
LFF	**La Frestale**	**90.55**	**43**	eP	**P**	**00 08 53.7**	**-0.2**
	comp=Z,5.3nm,0.7s,mb5.0						
MFF	**Saint Martin d**	**90.65**	**41**	eP	**P**	**00 08 54.8**	**+0.4**
	comp=Z,4.0nm,0.7s,mb4.6						
MFF	**Saint Martin d**	**90.65**	**41**	eP	**P**	**00 08 54.8**	**+0.4**
MFF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
MFF	**Saint Martin d**	**90.65**	**41**	eP	**P**	**00 08 54.8**	**+0.4**
	comp=Z,2.0nm,0.7s,mb4.6						
GRR	**Gorron**	**90.94**	**39**	eP	**P**	**00 08 54.9**	**-0.8**
	comp=Z,2.5nm,0.5s,mb4.5						
RJF	**Les Rejaudoux**	**91.20**	**43**	eP	**P**	**00 08 56.3**	**-0.6**
	comp=Z,11nm,1.0s,mb4.8						
RJF				eR			
	comp=Z,42nm,17.0s						
RJF	**Les Rejaudoux**	**91.20**	**43**	eP	**P**	**00 08 56.3**	**-0.6**
RJF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
RJF	**Les Rejaudoux**	**91.20**	**43**	eP	**P**	**00 08 56.3**	**-0.6**
	comp=Z,5.6nm,1.0s,mb4.8						
CAF	**Calviac**	**91.41**	**43**	eP	**P**	**00 08 57.8**	**-0.1**
	comp=Z,9.3nm,1.1s,mb4.7						
LDF	**La Druitiere**	**91.47**	**39**	eP	**P**	**00 08 57.4**	**-0.8**
	comp=Z,4.9nm,0.8s,mb4.6						
BGF	**Bois d'Agland**	**92.53**	**42**	eP	**P**	**00 09 02.5**	**-0.6**
	comp=Z,8.0nm,0.7s,mb4.9						
AVF	**Avril sur Loir**	**92.94**	**42**	eP	**P**	**00 09 04.0**	**-1.0**
SMF	**Signal de Mont**	**93.20**	**42**	eP	**P**	**00 09 05.6**	**-0.6**
SMRF	**Simiane la Rot**	**93.41**	**45**	eP	**P**	**00 09 06.7**	**-0.5**
	comp=Z,22nm,1.1s,mb5.2						
ORIF	**Oris-en-Rattie**	**93.94**	**44**	eP	**P**	**00 09 09.6**	**0.0**
ORIF				eR			
	comp=Z,42nm,18.8s						
FRF	**La Foret Royal**	**94.00**	**46**	eP	**P**	**00 09 09.8**	**-0.1**
LPL	**La Plagne**	**94.70**	**44**	eP	**P**	**00 09 13.7**	**+0.6**
LPG	**La Plagne**	**94.71**	**44**	eP	**P**	**00 09 14.0**	**+0.9**
CDF	**Champ du Feu**	**95.99**	**41**	eP	**P**	**00 09 18.3**	**-0.7**
COLA	**College**	**98.94**	**335**	eP	**P**	**00 09 32.5**	**+0.2**
ASAR	**Alice Springs**	**132.04**	**214**	PKP	PKPdf	00 15 05.7	+0.5
	comp=Z,0.2nm,0.6s,baz=135,slow=1.5,SNR=6.0						
ZRNK	**Zerenda**	**133.19**	**31**	ePKIKP	PKPdf	00 15 07.8	+0.4
ZAL	**Zalesovo**	**139.08**	**20**	PKP	PKPdf	00 15 19.1	+0.8
	comp=Z,1.7nm,0.7s,baz=190,slow=3.9,SNR=9.6						
MKAR	**Makanchi Array**	**143.69**	**29**	PKP	PKPdf	00 15 24.1	-2.5
	comp=Z,0.9nm,0.7s,baz=316,slow=5.1,SNR=7.5						
MJAR	**Matsushiro Arr**	**146.31**	**312**	PKPbc	PKPbc	00 15 32.6	+0.3
	comp=Z,4.4nm,1.0s,baz=56,slow=1.3,SNR=18						
MJAR				pPKPbc	pPKPbc	00 15 48.3	-0.6
	comp=Z,1.2nm,0.8s,baz=48,slow=1.0,SNR=4.8						
MAJO	**Matsushiro**	**146.31**	**312**	ePKP2	PKPab	00 15 32.8	-0.4
WMQ	**Urumqi**	**148.42**	**28**	ePKP	PKPdf	00 15 36.0	+1.4
ULN	**Ulaanbaatar**	**149.07**	**0**	ePKP2	PKPab	00 15 40.5	-3.7
SONM	**Songino Array**	**149.09**	**1**	PKPbc	PKPbc	00 15 40.5	+0.6
	comp=Z,2.5nm,0.6s,baz=321,slow=1.1,SNR=20						
SONM				pPKPbc	pPKPbc	00 15 56.4	-0.1
	comp=Z,2.2nm,0.8s,baz=351,slow=1.7,SNR=6.1						
HHC	**Hu-ho-hao-te**	**155.79**	**352**	ePKP	PKPdf	00 15 39.0	-6.6
HHC				SKKS	SKKSac	00 26 29.3	-4.9
HHC				SS	SS	00 39 28.1	-4.3
HHC				PP	PP		
	comp=Z,17nm,7.3s						
HHC				LR	LR		
	comp=N,142nm,25.6s,MS4.8						
HHC				LR	LR		
	comp=E,95nm,26.6s,MS4.8						
HHC				LR	LR		
	comp=Z,89nm,25.6s,MS4.5						
LZH	**Lanzhou**	**160.60**	**8**	ePKP	PKPdf	00 15 50.4	-1.0
LZH				APKP		00 16 06.3	
LZH				XPKP		00 16 12.1	
LZH				PKP2	PKPab	00 16 34.8	+1.6
LZH				LR	LR		
	comp=N,137nm,18.2s						
LZH				LR	LR		
	comp=Z,195nm,20.4s						
NJ2	**Nanjing**	**161.56**	**327**	ePKP	PKPdf	00 15 55.1	+2.7

*LDG **06** 00:16:14.7±0.9, 4288N×092W, h2^{km}, Md1.9/3, Ml1.0/1, Error ellipse: s-maj=33.5km s-min=4.4km az=18.0*
MDD 06 00:16:15.2±0.7**, 4293N×087W, h3**^{km}±8^{km}**, mbLg0.6**/3**, Error ellipse: s-maj=16.3km s-min=2.7km az=21.0, PRXIMO SIN SOLUCIN, Pyrenees**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LARF	**Larrau**	**0.14**	**321**	Pg	Pg	00 16 18.5	+0.6
LARF				Lg		00 16 20.6	
ETSF	**Etsaut**	**0.23**	**98**	ePg	Pg	00 16 19.5	-0.1
ETSF				eSg	Sg	00 16 22.6	+0.1
	2.1nm,0.2s						
ETSF	**Etsaut**	**0.23**	**98**	Pg	Pg	00 16 19.5	-0.1
ETSF				Lg		00 16 22.6	
	1.1nm,0.2s						
SJPF	**Ste Jean**	**0.32**	**305**	ePg	Pg	00 16 21.1	-0.2
SJPF				eSg	Sg	00 16 25.2	-0.3
	2.0nm,0.2s						
SJPF	**Ste Jean**	**0.32**	**305**	Pg	Pg	00 16 21.1	-0.2
SJPF				Lg		00 16 25.2	
	1.0nm,0.2s						
IUSE	**Utxeti**	**0.50**	**272**	Lg		00 16 32.1	
	0.4nm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**0.54**	**296**	Pg	Pg	00 16 25.8	+0.3
	0.2nm,0.2s,SNR=7.9						
ELIZ				Lg		00 16 32.6	
	0.8nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**0.55**	**302**	Pg	Pg	00 16 25.8	0.0
	0.1nm,0.1s,SNR=7.9						
EALK				Lg		00 16 32.7	
	0.6nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**0.78**	**108**	Pg	Pg	00 16 30.7	+0.5
	0.2nm,0.1s,SNR=7.9						
EBIE				Lg		00 16 41.7	
	0.2nm,0.1s,SNR=7.9						
EPF	**Esparros**	**0.89**	**83**	ePg	Pg	00 16 32.7	+0.5
EPF				eSg	Sg	00 16 44.6	+0.8
	0.3nm,0.2s						
EPF	**Esparros**	**0.89**	**83**	Pg	Pg	00 16 32.7	+0.5
EPF				Lg		00 16 44.6	
	0.2nm,0.2s						

*NEIC **06** 00:57:17.7, 3408N×34.12E, h25^{km}, ML3.5(NIC), After NIC.*
NIC 06 00:57:17.7±0.2**, 3408N×3412E, h25**^{km}**, ML3.5, MW3.3, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.93**	**355**	P	Pb	00 57 36.6	+1.5
	7.8nm,0.6s						
PHNC				S	Sb	00 57 51.3	+4.3
CSS	**Prodhromos**	**1.10**	**324**	P	Pn	00 57 35.6	-1.9
	13nm,0.4s						
CSS				S	Sn	00 57 49.9	-2.0
MAMC	**Mammari**	**1.32**	**326**	P	Pn	00 57 39.2	-1.4
ALFC	**Alevga**	**1.66**	**311**	P	Pn	00 57 43.8	-1.4
	13nm,0.3s						
ALFC				S	Sn	00 58 03.9	-1.7
PPCY	**Paphos**	**1.68**	**299**	P	Pn	00 57 43.7	-1.7

*IDC **06** 01:28:29.1±2.1, 21.41S×169.59E, h0km, mb4.0/2, mb1 4.1/3, mb1mx3.8/11, mbtmp4.0/3, ML3.8/1, MS2.8/1, Ms1 2.8/1, ms1mx2.6/19, Error ellipse: s-maj=89.9km s-min=30.6km az=153.0*
*ISCJB **06** 01:28:31.6±1.3, 21.6S±0.1×169.69E±0.09, h33km, mb4.0/3, Error ellipse: s-maj=18.9km s-min=11.6km az=140.7*
*NEIC **06** 01:28:32.5±0.9, 21.48S×169.82E, h35km, mb4.6/2, Error ellipse: s-maj=42.6km s-min=15.8km az=162.0*
ISC 06 01:28:32.5±1.1**, 21.5S**±0.1×**169.77E**±0.10**, h35**km**, n11, σ1**s**17**/9**, mb4.0**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.14**	**260**	*e*P	**Pn**	**01 29 19.0**	**-0.4**
DZM				*e*S	**Sn**	**01 29 54.8**	**-0.8**
DZM	**Mont Dzumac**	**3.14**	**260**	Pn	**Pn**	**01 29 19.0**	**-0.4**
	12nm,0.3s,baz=79,slow=18,SNR=300						
DZM				Sn	**Sn**	**01 29 54.0**	**-1.6**
	11nm,0.3s,baz=168,slow=22,SNR=7.0						
BKM	**Butte a Klehm**	**4.11**	**339**	*i* P	**Pn**	**01 29 33.6**	**+0.8**
AFI	**Afiamalu**	**19.13**	**70**	LR	LR	01 39 09.2	
	comp=Z,29nm,19.6s,baz=143,slow=33						
AFI	**Afiamalu**	**19.13**	**70**	*e*P	**Pn**	**01 32 50.5**	**-3.1**
	71nm,1.1s						
STKA	**Stephens Creek**	**27.12**	**242**	P	**P**	**01 34 13.3**	**+1.2**
	1.0nm,0.3s,mb3.8,baz=90,slow=7.1,SNR=4.3						
ASAR	**Alice Springs**	**33.13**	**259**	P	**P**	**01 35 05.5**	**+0.3**
	1.3nm,0.8s,mb3.9,baz=88,slow=8.8,SNR=11						
QSPA	**South Pole Qui**	**68.52**	**180**	*e*P	**P**	**01 39 32.1**	**+0.7**
	3.1nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**127.41**	**345**	PKP	PKPdf	01 47 34.3	+0.8
	1.0nm,0.8s,baz=20,slow=3.9,SNR=3.9						
CLL	**Collm**	**145.20**	**334**	*e*PKP1	PKPbc	01 48 07.0	+1.0
GERES	**GERESS Array B**	**146.74**	**331**	PKPbc	PKPbc	01 48 11.9	+1.2
	0.5nm,0.7s,baz=60,slow=3.2,SNR=6.9						

JMA 06 01:33:44.4±0.3**, 27.28N**×**126.92E, h123**km±4km**, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.75**	**157**	P	Pn	01 34 04.7	+0.3
JAGN				*e*S	Sn	01 34 19.7	+0.2
JKE	**Kume jima 2**	**0.96**	**187**	P	Pn	01 34 06.3	0.0
JKE				*e*S	Sn	01 34 23.1	+0.3
JIH	**Iheya**	**0.96**	**104**	P	Pn	01 34 06.9	+0.6
JIH				S	Sn	01 34 23.0	+0.1
NAH1	**Naha**	**1.27**	**147**	P	Pn	01 34 09.7	+0.2
NAH1				*e*S	Sn	01 34 28.7	+0.2
JOW	**Kunigami**	**1.29**	**110**	P	Pn	01 34 09.7	+0.1
JOW				*e*S	Sn	01 34 28.0	-0.8
JJT2	**Tamagusuku 2**	**1.36**	**147**	P	Pn	01 34 10.9	+0.5
JTK	**Tokunoshima**	**1.87**	**74**	P	Pn	01 34 16.5	+0.1
JTK				*e*S	Sn	01 34 39.8	-1.1
JAM	**Amami Oshima**	**2.63**	**64**	P	Pn	01 34 26.0	0.0
JAM				*e*S	Sn	01 34 57.1	-0.8
JTJ	**Tarama**	**3.30**	**218**	P	Pn	01 34 34.0	-0.7
JTJ				*e*S	Sn	01 35 10.9	-2.7
JIJ	**Ishigaki jima**	**3.83**	**221**	P	Pn	01 34 40.1	-1.7
JIJ				*e*S	Sn	01 35 21.8	-4.4
JKRS	**Kuro-shima**	**4.01**	**222**	P	Pn	01 34 42.5	-1.6
IRIF	**Iriomote-Funau**	**4.11**	**225**	P	Pn	01 34 43.9	-1.5
JMZ	**Minamidaito 2**	**4.12**	**110**	P	Pn	01 34 43.5	-2.0
JMZ				*e*S	Sn	01 35 26.7	-6.3

*ISCJB **06** 01:52:16.2±0.9, 35.98N±0.04×21.39E±0.10, h33km, Error ellipse: s-maj=11.5km s-min=5.6km az=147.8*
*CSEM **06** 01:52:16.3±0.4, 35.99N×21.38E, h30km, MD3.6, Error ellipse: s-maj=11.8km s-min=4.9km az=84.0*
*ATH **06** 01:52:18.0, 36.12N×21.59E, h32km±8km, MD3.6/6*
*NEIC **06** 01:52:18.0, 36.12N×21.59E, h32km, MD3.6(ATH), After ATH.*
*HLW **06** 01:52:22.1, 36.13N×22.43E, h33km, Mb3.4*
ISC 06 01:52:16.4±2.4**, 36.07N**±0.06×**21.5E**±0.1**, h12**km±19km**, n20, σ0**s**68**/27**, 1C-1D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**1.15**	**17**	*e*PN	**Pn**	**01 52 38.7**	**+0.3**
ITM				*e*SN	**Sn**	**01 52 53.4**	**-0.7**
KYTH	**Kithira**	**1.25**	**80**	*e*PN	**Pn**	**01 52 40.0**	**+0.3**
VLI	**Veliai**	**1.32**	**60**	*e*PN	**Pn**	**01 52 41.2**	**+0.6**
VLI				*e*SN	**Sn**	**01 52 58.1**	**0.0**
RLS	**Riolos of Patr**	**1.98**	**359**	*e*PB	**Pb**	**01 52 51.3**	**-1.1**
VLS	**Valsamata**	**2.23**	**341**	*e*PN	**Pn**	**01 52 54.5**	**+1.4**
VAM	**Vamos**	**2.28**	**106**	*e*PN	**Pn**	**01 52 54.5**	**+0.6**
GVD	**Gavdhos**	**2.43**	**120**	*e*PB	**Pb**	**01 53 00.0**	**-0.1**
SRN	**Sarande**	**3.99**	**343**	*i* Sg	**Sn**	**01 54 03.8**	**-0.1**
SLUM		**5.51**	**145**	P	**Pn**	**01 53 37.9**	**-0.4**
SLUM		**5.51**	**145**	P	**Pn**	**01 53 37.9**	**-0.3**
SLUM				S	**Sn**	**01 54 32.3**	**-9.1**
SLUM		**5.51**	**145**	P	**Pn**	**01 53 37.9**	**-0.3**
SLUM				S	**Sn**	**01 54 32.3**	**-9.2**
SWA1		**7.65**	**151**	P	**Pn**	**01 54 07.9**	**+0.2**
SWA1				S	**Sn**	**01 55 25.6**	**-8.7**
SWA1		**7.65**	**151**	⇑P	**Pn**	**01 54 08.5**	**+0.8**
SWA1				S	**Sn**	**01 55 26.4**	**-7.9**
SWA1		**7.65**	**151**	P	**Pn**	**01 54 08.5**	**+0.8**
SWA1				S	**Sn**	**01 55 26.4**	**-7.9**
AWBH		**9.94**	**139**	P	**Pn**	**01 54 37.9**	**-1.2**
AWBH		**9.94**	**139**	P	**Pn**	**01 54 38.1**	**-1.0**
AWBH		**9.94**	**139**	P	**Pn**	**01 54 38.1**	**-0.9**
HFRF	**Wahat Farafira**	**10.61**	**145**	P	**Pn**	**01 54 47.5**	**-0.7**
HFRF	**Wahat Farafira**	**10.61**	**145**	⇓P	**Pn**	**01 54 47.8**	**-0.4**
HFRF	**Wahat Farafira**	**10.61**	**145**	P	**Pn**	**01 54 47.8**	**-0.4**

*NEIC **06** 01:56:23.3±0.9, 44.24N×129.87W, h10km, mb4.2/12, Error ellipse: s-maj=15.8km s-min=9.3km az=214.0*
*IDC **06** 01:56:32.2±1.7, 43.91N×128.54W, h0km, mb3.9/4, mb1 3.9/8, mb1mx3.7/23, mbtmp3.7/8, ML3.7/5, MS3.5/8, Ms1 3.4/8, ms1mx3.1/26, Error ellipse: s-maj=34.2km s-min=19.3km az=34.0*
*ISCJB **06** 01:56:33.2±0.7, 43.90N±0.05×128.36W±0.06, h10km, mb4.1/7, MS3.4/5, Error ellipse: s-maj=7.1km s-min=5.7km az=78.8*
ISC 06 01:56:34.4±0.7**, 43.85N**±0.05×**128.39W**±0.06**, h10**km**, n74, σ1**s**08**/74**, mb4.1**/7**, MS3.4**/5**, 12C-17D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K01A	**Sixes**	**3.05**	**109**	⇓S	**Sn**	**01 57 57.5**	**-1.6**
	baz=3.1						
H02A	**Toledo**	**3.26**	**74**	⇑P	**Pn**	**01 57 24.6**	**-1.0**
	baz=3.4						
I02A	**Mapleton**	**3.30**	**86**	⇑S	**Sn**	**01 58 05.9**	**+0.5**
	baz=3.4						
J02A	**Umpqua**	**3.53**	**96**	⇓P	**Pn**	**01 57 28.1**	**-1.2**
	baz=3.6,SNR=17						
J02A				⇓S	**Sn**	**01 58 10.7**	**-0.5**
	baz=3.6						
MPOR	**Mary's Peak**	**3.55**	**78**	P	**Pn**	**01 57 28.2**	**-1.2**
I03A	**Eugene**	**3.70**	**86**	⇓P	**Pn**	**01 57 30.6**	**-1.0**
	baz=3.8,SNR=26						
I03A				⇓S	**Sn**	**01 58 15.2**	**0.0**
	baz=3.8						
K02A	**Glendale**	**3.74**	**105**	⇑P	**Pn**	**01 57 30.4**	**-1.7**
	baz=3.8,SNR=25						
K02A				⇓S	**Sn**	**01 58 15.4**	**-0.8**
	baz=3.8						
HSO	**Harness Mounta**	**3.86**	**93**	P	**Pn**	**01 57 33.8**	**0.0**
KMOR	**Kings Mountain**	**3.92**	**61**	P	**Pn**	**01 57 33.4**	**-1.3**
G03A	**Yamhill**	**3.94**	**66**	P	**Pn**	**01 57 34.4**	**-0.5**
	baz=4.1,SNR=61						
G03A				⇑S	**Sn**	**01 58 21.7**	**+0.6**
	baz=4.1						
J03A	**Ideyld Park**	**3.97**	**95**	⇓P	**Pn**	**01 57 34.5**	**-0.8**
	baz=4.1,SNR=44						
J03A				⇑S	**Sn**	**01 58 21.5**	**-0.4**
	baz=4.1						
F03A	**Seaside**	**4.02**	**57**	⇓S	**Sn**	**01 58 23.9**	**+0.8**
	baz=4.2						
BBOR	**Butler Butte**	**4.28**	**101**	P	**Pn**	**01 57 39.5**	**-0.1**
BROR	**Big Rock Looko**	**4.30**	**82**	P	**Pn**	**01 57 39.8**	**-0.1**
E03A	**Lebam**	**4.35**	**50**	⇓P	**Pn**	**01 57 40.4**	**-0.1**
	baz=4.5						
SSOR	**Sweet Springs**	**4.37**	**75**	P	**Pn**	**01 57 41.1**	**+0.3**
IRO	**Indian Ridge**	**4.44**	**86**	P	**Pn**	**01 57 41.7**	**-0.1**
G04A	**Mulino**	**4.44**	**70**	⇑P	**Pn**	**01 57 41.6**	**-0.2**
	baz=4.6,SNR=7.1						
H04A	**Detroit Lake**	**4.54**	**77**	⇑P	**Pn**	**01 57 42.8**	**-0.3**
	baz=4.7						
H04A				⇓S	**Sn**	**01 58 35.8**	**-0.1**
	baz=4.7						
D03A	**Wishkah Elem.**	**4.61**	**43**	⇓P	**Pn**	**01 57 44.2**	**+0.1**
	baz=4.8						
YBH	**Yreka Blue Hor**	**4.69**	**115**	LR	LR	01 59 34.7	
	comp=Z,799nm,19.9s,baz=322,slow=38						
F04A	**Amboy**	**4.73**	**62**	⇓P	**Pn**	**01 57 45.7**	**0.0**
	baz=4.9,SNR=22						
VLMM	**Larch Mountain**	**4.84**	**67**	P	**Pn**	**01 57 47.8**	**+0.6**
MTMW	**Mount Mitchell**	**4.90**	**61**	P	**Pn**	**01 57 48.4**	**+0.3**
H05A	**Madras**	**5.21**	**79**	⇑P	**Pn**	**01 57 51.8**	**-0.5**
	baz=5.3						
J05A	**Fort Rock**	**5.23**	**94**	⇑P	**Pn**	**01 57 52.4**	**-0.2**
	baz=5.3						
G05A	**Wamic**	**5.25**	**72**	⇓P	**Pn**	**01 57 53.4**	**+0.6**
	baz=5.4						
E05A	**Randle**	**5.42**	**58**	⇓P	**Pn**	**01 57 55.0**	**-0.2**
	baz=5.6,SNR=8.4						
WDC	**Whiskeytown Da**	**5.43**	**125**	⇓P	**Pn**	**01 57 54.1**	**-1.3**
	baz=5.4						
D05A	**Enumclaw**	**5.60**	**51**	⇑P	**Pn**	**01 57 57.9**	**+0.1**
	baz=5.8						
L05A	**Lakeview**	**5.83**	**105**	⇑P	**Pn**	**01 57 59.5**	**-1.4**
	baz=5.9						
J06A	**Christmas Vall**	**6.02**	**93**	⇓P	**Pn**	**01 58 02.5**	**-1.0**
	baz=6.1						
K06A	**Valley Falls**	**6.03**	**97**	⇓P	**Pn**	**01 58 03.3**	**-0.3**
	baz=6.1						
B05A	**Bryant**	**6.22**	**43**	⇑P	**Pn**	**01 58 06.5**	**+0.2**
	baz=6.4						
HAWA	**Hanford**	**6.77**	**65**	*e*Pn	**Pn**	**01 58 14.4**	**+0.7**
	0.8nm,0.8s						
WVOR	**Wild Horse Val**	**7.28**	**98**	*e*Pn	**Pn**	**01 58 26.1**	**+5.4**
	5.7nm,1.0s						
PAHR	**Pah Rah Range**	**7.90**	**118**	*e*Pn	**Pn**	**01 58 35.1**	**+5.8**
	26nm,1.4s						
BMO	**Blue Mountains**	**8.01**	**79**	*e*Pn	**Pn**	**01 58 33.9**	**+3.1**
	14nm,1.5s						
CMB	**Columbia Colle**	**8.39**	**131**	*e*Pn	**Pn**	**01 58 39.6**	**+3.6**
	46nm,1.8s						
NEW	**Newport**	**8.99**	**57**	Pn	**Pn**	**01 58 44.4**	**+0.1**
	0.2nm,0.3s,baz=243,slow=13,SNR=2.6						
NEW				LR	LR	02 02 08.9	
	comp=Z,192nm,20.0s,baz=216,slow=37						
NEW	**Newport**	**8.99**	**57**	Pn	**Pn**	**01 58 44.4**	**+0.1**
NEW				LR	LR	02 02 08.9	
NVAR	**Mina Array Bea**	**9.34**	**122**	Pn	**Pn**	**01 58 52.2**	**+3.3**
	0.1nm,0.3s,baz=296,slow=14,SNR=4.7						
HLID	**Hailey**	**10.13**	**87**	*e*Pn	**Pn**	**01 59 04.9**	**+5.0**
	3.9nm,1.0s						
CHMT	**Chamberlain Mo**	**11.08**	**69**	*e*Pn	**Pn**	**01 59 13.5**	**+0.6**
MCMT	**McKenzie Canyo**	**11.18**	**80**	*e*P	**Pn**	**01 59 18.3**	**+4.0**
DUG	**Dugway**	**12.15**	**102**	*e*Pn	**Pn**	**01 59 33.3**	**+5.8**
	5.0nm,1.2s						
HWUT	**Hardware Ranch**	**12.58**	**94**	*e*Pn	**Pn**	**01 59 37.7**	**+4.3**
	8.7nm,1.5s						
TPAW	**Teton Pass**	**12.64**	**86**	*e*Pn	**Pn**	**01 59 36.9**	**+2.7**
	11nm,1.3s						
LOHW	**Long Hollow**	**12.87**	**85**	*e*Pn	**Pn**	**01 59 41.6**	**+4.2**
	7.8nm,1.3s						
TMUT	**Trail Mountain**	**13.64**	**104**	*e*Pn	**Pn**	**01 59 51.5**	**+3.7**
PDAR	**Pinedale Array**	**13.76**	**88**	Pn	**Pn**	**01 59 53.6**	**+4.1**
	0.1nm,0.3s,baz=294,slow=8.8,SNR=2.6						
PDAR				LR	LR	02 05 31.1	
	comp=Z,238nm,18.1s,baz=10,slow=39						
SRU	**San Rafael**	**14.20**	**103**	*e*Pn	pP	02 00 06.9	+1.1
	25nm,1.2s						
DLBC	**Dease Lake**	**14.65**	**357**	Pn	**Pn**	**02 00 01.5**	**-0.1**
	0.8nm,0.3s,baz=297,slow=0.1,SNR=3.0						
WUAZ	**Wupatki**	**15.50**	**117**	*e*Pn	**Pn**	**02 00 17.8**	**+4.8**
	11nm,1.2s						
ISCO	**Idaho Springs**	**17.44**	**96**	*e*P	**Pn**	**02 00 38.8**	**+1.0**
	4.4nm,0.8s						
RSSD	**Black Hills**	**17.52**	**81**	*e*P	**Pn**	**02 00 40.7**	**+2.0**
	16nm,1.4s						
TUC	**Tucson**	**17.98**	**124**	*e*P	**Pn**	**02 00 46.4**	**+1.9**
	0.5nm,0.4s						
LAZ	**Ladron**	**18.95**	**113**	*e*P	**Pn**	**02 00 57.1**	**+0.8**
ANMO	**Albuquerque**	**19.09**	**110**	Pn	**Pn**	**02 01 00.4**	**+2.4**
	0.0nm,0.3s,baz=310,slow=11,SNR=5.2						
ANMO	**Albuquerque**	**19.09**	**110**	*e*P	**Pn**	**02 00 58.7**	**+0.7**
	9.5nm,1.4s						
YKA	**Yellowknife Ar**	**20.34**	**19**	P	**P**	**02 01 10.3**	**-0.4**
	4.1nm,0.8s,baz=207,slow=11,SNR=20						
MNTX	**Cornudas Mount**	**21.78**	**116**	*e*P	**P**	**02 01 26.8**	**+0.5**
	6.8nm,1.4s,mb3.9						
AMTX	**Amarillo**	**22.43**	**104**	*e*P	**P**	**02 01 33.9**	**+0.7**
	14nm,0.9s,mb4.4						
ULM	**Lac du Bonnet**	**22.94**	**62**	P	**P**	**02 01 39.9**	**+1.2**
	3.5nm,0.8s,mb3.9,baz=267,slow=9.0,SNR=4.3						
ULM				LR	LR	02 11 03.1	
	comp=Z,60nm,19.4s,MS3.0,baz=274,slow=38						
ULM	**Lac du Bonnet**	**22.94**	**62**	*e*P	**P**	**02 01 38.4**	**-0.2**
	11nm,1.1s,mb4.2						
ULM				LR	LR	02 11 03.1	
WMOK	**Wichita Mounta**	**24.55**	**102**	*e*P	**P**	**02 01 56.3**	**+2.1**
INK	**Inuvik**	**24.67**	**355**	LR	LR	02 11 34.5	
	comp=Z,44nm,19.8s,MS3.0,baz=234,slow=37						
FCC	**Fort Churchill**	**25.76**	**43**	*e*P	**P**	**02 01 58.5**	**-6.8**
	47nm,1.8s,mb4.7						
WVT	**Waverly**	**31.77**	**90**	*e*P	**P**	**02 02 56.9**	**-1.8**
	4.6nm,1.0s,mb4.3						
SCHQ	**Schefferville**	**40.33**	**52**	LR	LR	02 19 33.0	
	comp=Z,38nm,20.7s,MS3.2,baz=50,slow=34						
SONM	**Songino Array**	**76.76**	**326**	P	**P**	**02 08 25.0**	**-1.0**
	1.8nm,0.9s,mb4.0,baz=35,slow=2.0,SNR=12						
AKASG	**Malin Array Be**	**83.84**	**14**	P	**P**	**02 09 01.5**	**-2.7**
	0.1nm,0.2s,mb3.5,baz=351,slow=3.9,SNR=4.8						
BDFB	**Brasilia**	**93.93**	**108**	LR	LR	02 58 26.7	
	comp=Z,46nm,19.7s,MS3.9,baz=22,slow=40						
PLCA	**Paso Flores**	**98.98**	**139**	LR	LR	02 43 57.9	
	comp=Z,40nm,20.5s,MS3.9,baz=1.5,slow=29						

*CSEM **06** 02:21:29.0±0.6, 39.17N×29.49W, h10km, ML2.2, Error ellipse: s-maj=8.4km s-min=4.6km az=52.0, After PDA*
*PDA **06** 02:21:29.0±0.6, 39.17N×29.49W, h10km, MD3.2, ML2.2, Error ellipse: s-maj=8.4km s-min=4.6km az=52.0*
SVSA 06 02:21:29.0±0.6**, 39.17N**×**29.49W, h10**km**, MD3.2, ML2.2, Error ellipse: s-maj=8.4km s-min=4.6km az=52.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.81**	**131**	*e*S	Sg	02 21 50.4	-4.9
PCED							
	54nm,0.2s						
HOR	**Horta**	**0.92**	**133**	*e*S	Sg	02 21 54.0	-4.8
PCND	**Candelaria**	**1.06**	**131**	*e*P	Pg	02 21 45.1	-4.3
PCND				*e*S	Sg	02 21 57.5	-5.7
PCND							
	42nm,0.2s						
PICO	**Pico**	**1.06**	**128**	*e*P	Pg	02 21 45.4	-4.0
PICO				*e*S	Sg	02 21 57.6	-5.6
ROSA	**Rosais**	**1.07**	**114**	*e*P	Pg	02 21 45.2	-4.3
ROSA				*e*S	Sg	02 21 57.5	-5.9
PTEI	**Pico do Teixo**	**1.11**	**127**	*e*S	Sg	02 21 58.5	-6.2
PTEI							
	25nm,0.1s						
PAMA	**Santo Amaro**	**1.13**	**115**	*e*S	Sb	02 21 58.9	-6.4
PAMA							
	9.6nm,0.1s						
PBOI	**Pico dos Bois**	**1.13**	**130**	*e*S	Sb	02 21 59.2	-6.2
PBOI							
	24nm,0.1s						
PMAN	**Manadas**	**1.21**	**116**	*e*P	Pn	02 21 47.2	-4.8
PMAN				*e*S	Sb	02 22 01.1	-6.6
PMAN							
	14nm,0.1s						
PMAN	**Manadas**	**1.21**	**116**	*e*P	Pn	02 21 47.2	-4.8
PMAN				*e*S	Sb	02 22 01.1	-6.6
PID	**Ribeirinha**	**1.29**	**124**	*e*S	Sb	02 22 03.1	-6.8

*ISCJB **06** 02:46:35.8±0.6, 0.1S±0.2×121.4E±0.4, h250km, mb3.7/8, Error ellipse: s-maj=56.1km s-min=11.0km az=129.4*
*IDC **06** 02:46:37.4±7.7, 0.19N×122.02E, h244km±78km, mb3.3/3, mb1 3.3/3, mb1mx3.1/14, mbtmp3.9/3, Error ellipse: s-maj=124.4km s-min=17.2km az=67.0*
*NEIC **06** 02:46:39.4±4.2, 0.10S×121.50E, h270km±45km, mb3.8/6, Error ellipse: s-maj=46.5km s-min=12.4km az=69.0*
ISC 06 02:46:37.6±0.6**, 0.1S**±0.2×**121.4E**±0.4**, h250**km**, n12, σ0**s**71**/11**, mb3.7**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.36**	**167**	*e*P	**P**	**02 50 34.7**	**+0.8**
	6.9nm,1.0s						
WRAB	**Tennant Creek**	**23.44**	**148**	*e*P	**P**	**02 51 24.4**	**-0.2**
	2.7nm,0.5s,mb4.0						
WB2	**Warramunga Arr**	**23.45**	**148**	*e*P	**P**	**02 51 24.1**	**-0.6**
ASAR	**Alice Springs**	**26.38**	**153**	P	**P**	**02 51 51.5**	**+0.4**
	0.7nm,0.5s,mb3.5,baz=344,slow=14,SNR=14						
ASAR				PcP	PcP	02 55 11.0	+1.4
	0.4nm,0.4s,baz=352,slow=2.3,SNR=6.6						
STKA	**Stephens Creek**	**36.93**	**151**	*e*P	**P**	**02 53 23.0**	**+0.3**
SONM	**Songino Array**	**49.51**	**347**	P	**P**	**02 55 02.1**	**-0.9**
	1.2nm,0.8s,mb3.3,baz=165,slow=9.3,SNR=8.7						
MKAR	**Makanchi Array**	**57.87**	**329**	P	**P**	**02 56 04.7**	**+1.3**
	1.3nm,0.5s,mb3.8,baz=127,slow=8.7,SNR=12						
KURK	**Kurchatov**	**62.27**	**331**	*e*P	**P**	**02 56 33.6**	**+0.5**
	0.9nm,0.5s,mb3.7						
BRVK	**Borovoye**	**67.82**	**330**	*e*P	**P**	**02 57 08.8**	**0.0**
	0.6nm,0.5s,mb3.5						
ZRNK	**Zerenda**	**68.41**	**329**	*e*P	**P**	**02 57 12.0**	**-0.5**
	0.6nm,0.4s,mb3.6						
MAW	**Mawson**	**78.33**	**199**	*e*P	**P**	**02 58 09.0**	**-1.2**
	4.2nm,0.9s,mb4.1						
TORD	**Torodi Ar. Bea**	**118.85**	**285**	PKP	PKPdf	03 04 57.8	+1.7
	0.5nm,0.9s,baz=80,slow=1.2,SNR=6.7						

*NEIC **06** 02:54:34.3, 34.07S×71.99W, h43km, MG2.8(GUC), After GUC.*
GUC 06 02:54:34.3±0.8**, 34.07S**×**71.99W, h43**km±2km**, MD3.7, ML2.8, 7C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.49**	**77**	⇓*i*P	Pn	02 54 45.5	+0.4
LNV				*i* S	Sn	02 54 53.8	+1.1
LCCH	**Las Cruces**	**0.69**	**31**	⇑*i*P	Pn	02 54 47.7	+0.1
LCCH				*i* S	Sn	02 54 58.3	+1.1
TACH	**Talagante**	**0.97**	**65**	⇑*i*P	Pn	02 54 51.7	+0.3
TACH				*i* S	Sn	02 55 05.3	+1.3
SFDO	**San Fernando**	**0.97**	**124**	⇓*i*P	Pn	02 54 52.1	+0.6
SFDO				*i* S	Sn	02 55 05.8	+1.6
CHCH	**Chadas Angostu**	**1.12**	**83**	⇓*i*P	Pn	02 54 54.6	+1.1
CHCH				*i* S	Sn	02 55 10.0	+2.3
RCDM	**Rinconada Maip**	**1.14**	**60**	⇓*i*P	Pn	02 54 54.2	+0.4
RCDM				*i* S	Sn	02 55 09.5	+1.2
RCDM				AML	AML	02 55 11.2	
	comp=E,471nm,0.1s						
RCDM	**Rinconada Maip**	**1.14**	**60**	⇓*i*P	Pn	02 54 54.2	+0.4
RCDM				*i* S	Sn	02 55 09.5	+1.2
CACH	**El Canelo**	**1.16**	**93**	⇑*i*P	Pn	02 54 55.9	+1.9
CACH				*i* S	Sn	02 55 12.3	+3.8
ANTU	**Antumapu**	**1.23**	**67**	*e*P	Pn	02 54 56.1	+1.0
ANTU				*i* S	Sn	02 55 12.6	+2.0
ANTU				AML	AML	02 55 13.1	
	comp=N,348nm,0.2s						
ANTU	**Antumapu**	**1.23**	**67**	*e*P	Pn	02 54 56.1	+1.0
ANTU				*i* S	Sn	02 55 12.6	+2.0
PCH	**Pirque**	**1.31**	**70**	⇓*i*P	Pn	02 54 57.1	+1.0
PCH				*i* S	Sn	02 55 13.8	+1.5
CICH	**Cipreses**	**1.32**	**101**	*i* S	Sn	02 55 14.7	+2.0
ROCH	**El Roble**	**1.36**	**37**	⇑*i*P	Pn	02 54 58.1	+1.3
ROCH				*e*S	Sn	02 55 16.6	+2.9
CLCH	**Cerro Calan**	**1.38**	**61**	⇑*i*P	Pn	02 54 58.2	+1.1
CLCH				*i* S	Sn	02 55 16.4	+2.2
CLCH				AML	AML	02 55 17.3	
	comp=E,135nm,0.3s						
PEL	**Peldehue**	**1.43**	**50**	⇑*i*P	Pn	02 54 59.0	+1.3
PEL				*i* S	Sn	02 55 18.1	+2.8
PEL				AML	AML	02 55 18.9	
	comp=E,244nm,0.5s						
FCH	**Farellones**	**1.60**	**63**	⇑*i*P	Pn	02 55 01.2	+1.2
FCH				*i* S	Sn	02 55 21.9	+2.5
FCH				AML	AML	02 55 22.4	
	comp=E,178nm,0.2s						
JACH	**Jahuel**	**1.81**	**41**	⇓*i*P	Pn	02 55 04.0	+1.0
JACH				*i* S	Sn	02 55 26.5	+1.8

*CRAAG **06** 03:18:21.6, 35.75N×5.61E, Ml3.3*
*MDD **06** 03:18:22.3±1.7, 35.61N×5.45E, h1km±16km, mb3.8/11, mbLg2.3/2, Error ellipse: s-maj=17.5km s-min=7.7km az=45.0, PRXIMO*
*CSEM **06** 03:18:22.4±0.2, 35.77N×5.33E, h15km, ML3.3, Error ellipse: s-maj=5.6km s-min=2.1km az=7.0*
*ISCJB **06** 03:18:23.3±1.2, 35.78N±0.07×5.27E±0.09, h15km±18km, Error ellipse: s-maj=13.5km s-min=10.7km az=104.1*
ISC 06 03:18:24.0±1.1**, 35.77N**±0.07×**5.38E**±0.07**, h12**km±8km**, n29, σ0**s**80**/45**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKHR	**Kef el Ahmar**	**0.27**	**23**	P	**Pg**	**03 18 29.3**	**-0.2**
SET	**Setif**	**0.43**	**2**	P	**Pg**	**03 18 33.5**	**+1.1**
CMER	**Merouana**	**0.45**	**110**	P	**Pg**	**03 18 29.0**	**-3.8**
DFRA	**Djebel Bou Aff**	**0.87**	**27**	P	**Pg**	**03 18 40.0**	**-0.8**
CTEI	**Djebel Teioual**	**0.88**	**71**	P	**Pg**	**03 18 41.0**	**0.0**
CASM	**Ain Smara**	**1.02**	**61**	P	**Pb**	**03 18 43.0**	**-0.6**
CMAH	**Djebel Manchou**	**1.85**	**62**	P	**Pn**	**03 18 57.0**	**+1.4**
ETOS	**Mallorca**	**4.48**	**334**	P	**Pn**	**03 19 31.8**	**+0.1**
	2.9nm,0.3s,SNR=5.0						
ETOS				S	**Sn**	**03 20 23.8**	**+0.2**
	3.0nm,0.4s						
ETOS	**Mallorca**	**4.48**	**334**	P	**Pn**	**03 19 31.8**	**+0.1**
	2.9nm,0.3s,SNR=5.0						
ETOS				S	**Sn**	**03 20 23.8**	**+0.1**
	3.0nm,0.4s						
EIBI	**Ibiza**	**4.57**	**316**	P	**Pn**	**03 19 33.0**	**+0.1**
	2.7nm,0.2s,SNR=8.3						
EIBI				S	**Sn**	**03 20 26.8**	**+0.8**
	5.7nm,0.3s						
EIBI	**Ibiza**	**4.57**	**316**	P	**Pn**	**03 19 33.0**	**+0.1**
	2.7nm,0.2s,SNR=8.3						
EIBI				S	**Sn**	**03 20 26.8**	**+0.8**
	5.7nm,0.3s						
EBEN	**Beniarda**	**5.34**	**305**	P	**Pn**	**03 19 44.3**	**+0.7**
	0.3nm,0.3s,SNR=7.9						
EBEN				S	**Sn**	**03 20 45.1**	**0.0**
	2.3nm,0.6s,SNR=7.9						
EBEN	**Beniarda**	**5.34**	**305**	P	**Pn**	**03 19 44.3**	**+0.7**
	0.3nm,0.3s,SNR=7.9						
EBEN				S	**Sn**	**03 20 43.8**	**-1.3**
	2.3nm,0.6s,SNR=7.9						
EMUR	**La Murta**	**5.70**	**293**	P	**Pn**	**03 19 48.2**	**-0.3**
	2.9nm,0.3s,SNR=6.7						
EMUR				S	**Sn**	**03 20 52.3**	**-1.5**
	2.5nm,0.5s						
EMUR	**La Murta**	**5.70**	**293**	P	**Pn**	**03 19 48.2**	**-0.3**
	2.9nm,0.3s,SNR=6.7						
EMUR				S	**Sn**	**03 20 54.4**	**+0.5**
	2.5nm,0.5s						
ETOB	**Tobarra**	**6.23**	**299**	P	**Pn**	**03 19 56.6**	**+0.9**
	0.7nm,0.2s,SNR=7.4						
ETOB				S	**Sn**	**03 21 05.3**	**-1.5**
	1.1nm,0.5s						
ETOB	**Tobarra**	**6.23**	**299**	P	**Pn**	**03 19 56.6**	**+0.9**
	0.7nm,0.2s,SNR=7.4						
ETOB				S	**Sn**	**03 21 07.8**	**+0.9**
	1.1nm,0.5s						
ECHE	**Chera**	**6.32**	**309**	S	**Sn**	**03 21 09.3**	**+0.3**
	2.8nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**6.51**	**317**	P	**Pn**	**03 19 59.5**	**0.0**
	0.5nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**03 21 13.7**	**0.0**
	0.6nm,0.4s,SNR=7.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EMOS	Mosqueruela	6.51	317	P	Pn	03 19 59.5	0.0
	0.5nm,0.3s,SNR=7.9						
EMOS				S	Sn	03 21 14.4	+0.7
	SNR=7.9						
EPOB	Poblet	6.51	330	P	Pn	03 19 59.8	+0.2
	0.4nm,0.3s,SNR=7.9						
EPOB				S	Sn	03 21 12.2	-1.6
	0.4nm,0.3s,SNR=7.9						
EPOB	Poblet	6.51	330	P	Pn	03 19 59.8	+0.2
	0.4nm,0.3s,SNR=7.9						
ERTA	Horta de San J	6.52	324	P	Pn	03 19 59.3	-0.4
	0.6nm,0.3s,SNR=4.0						
ERTA	Horta de San J	6.52	324	P	Pn	03 19 59.3	-0.4
	0.6nm,0.3s,SNR=4.0						
EBER	Berja	6.77	282	P	Pn	03 20 02.2	-0.9
	1.5nm,0.4s,SNR=5.2						
EBER	Berja	6.77	282	P	Pn	03 20 02.2	-1.0
	1.5nm,0.4s,SNR=5.2						
EBER				S	Sn	03 21 20.7	+0.5
	0.8nm,0.5s,SNR=4.0						
EQES	Quesada	7.08	289	P	Pn	03 20 07.8	+0.4
	2.5nm,0.4s,SNR=13						
EQES				S	Sn	03 21 27.1	-0.7
	14nm,1.0s						
EQES	Quesada	7.08	289	P	Pn	03 20 07.8	+0.4
	2.5nm,0.4s,SNR=13						
EQES				S	Sn	03 21 27.1	-0.7
	14nm,1.0s						
EQUE	Quentar	7.25	284	P	Pn	03 20 10.2	+0.5
	2.0nm,0.5s,SNR=6.7						

*ISCJB **06** 03:49:36.2±0.6, 3875N±003×2482E±003, h15^{km}±7^{km}, Error ellipse: s-maj=4.8km s-min=4.0km az=76.6*
*NEIC **06** 03:49:36.5, 3875N×2486E, h42^{km}, MD3.2(ATH), After ATH.*
*ATH **06** 03:49:36.5, 3875N×2486E, h42^{km}, MD3.2/7, ML3.2*
*CSEM **06** 03:49:37.2±0.2, 3873N×2488E, h52^{km}±4^{km}, ML2.9, Error ellipse: s-maj=2.8km s-min=2.3km az=75.0*
*THE **06** 03:49:38.6, 3877N×2492E, h36^{km}, ML2.9*
ISC 06 03:49:35.3±0.6, **3877N**±003×**2482E**±003, **h4**^{km}±4^{km}, **n28**, σ1^{s}**06**/39, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTL	Penteli	1.03	226	eP	Pg	03 49 56.0	+0.9
CHOS	Chios island	1.04	111	ePg	Pg	03 49 56.0	+0.7
CHOS				eSg	Sg	03 50 08.4	-0.4
LIA	Limnos Island	1.17	14	eP	Pg	03 49 57.5	-0.1
ATH	Athens Observa	1.17	228	eP	Pg	03 49 58.3	+0.5
PRK	Paraskevi	1.23	67	eP	Pg	03 49 58.5	-0.4
KVR	Kavouri	1.25	222	eP	Pg	03 49 59.5	+0.3
LKR	Lokris	1.43	266	eP	Pn	03 50 01.8	-0.1
BOZC	Bozcaada	1.44	41	iP	Pn	03 50 01.0	-1.1
BOZC				iS	Sb	03 50 22.7	+1.4
MGER	Gerania Oros	1.45	238	eP	Pn	03 50 01.0	-1.2
NAIG	Nisos Aigina	1.45	226	eP	Pn	03 50 00.0	-2.2
PAIG	Paliouri	1.46	323	ePg	Pg	03 50 02.5	-0.7
PAIG				eSg	Sg	03 50 21.5	-0.6
AYVA	Ayvalik	1.56	69	iP	Pn	03 50 03.8	0.0
AYVA				iS	Sn	03 50 26.9	+2.6
OUR	Ouranopolis	1.69	338	ePb	Pb	03 50 05.9	-1.0
OUR				eSb	Sb	03 50 26.8	-1.8
APE	Apeiranthos	1.79	161	ePb	Pb	03 50 06.1	-2.5
APE	Apeiranthos	1.79	161	eP	Pn	03 50 06.0	-0.8
PLG	Polygyros	1.92	327	eP	Pn	03 50 08.6	-0.1
KDAG	Bornova	1.96	100	iP	Pg	03 50 13.4	+0.6
KDAG				iS	Sn	03 50 34.3	+0.1
AGG	Agios Georgios	1.96	278	ePn	Pn	03 50 09.8	+0.6
AGG				eSn	Sn	03 50 35.4	+1.2
LIT	Litokhoron	2.24	307	ePn	Pn	03 50 14.2	+1.1
HORT	Hortiatis	2.26	325	ePn	Pn	03 50 14.4	+1.1
HORT				eSn	Sn	03 50 41.0	-0.6
ALN	Alexandroupoli	2.33	24	ePn	Pn	03 50 14.3	0.0
ALN				eSn	Sn	03 50 40.6	-2.8
SOH	Sokhos	2.34	332	ePn	Pn	03 50 15.2	+0.7
EVR	Evrytania	2.35	275	eP	Pn	03 50 15.2	+0.6
SRS	Serrai	2.53	339	ePn	Pn	03 50 17.2	+0.1
AYDN	Tasoluk	2.65	114	iP	Pg	03 50 26.0	-0.2
AYDN				iS	Sb	03 50 56.8	+0.6
KNT	Kendrikon	2.81	329	ePn	Pn	03 50 22.1	+1.2
LKD	Levkas	3.26	270	ePn	Pn	03 50 29.6	+2.6
LAST	Lasithi	3.64	171	ePn	Pn	03 50 32.4	+0.1
LAST				eSn	Sn	03 51 14.6	-1.1

*IDC **06** 04:00:43.5±5.4, 3470N×2569E, h24^{km}±31^{km}, mb3.5/3, mb1 3.5/4, mb1mx3.2/19, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=41.7km s-min=26.4km az=101.0*
*CSEM **06** 04:00:45.0±0.1, 3463N×2553E, h60^{km}, MD3.5, Error ellipse: s-maj=5.1km s-min=2.4km az=69.0*
*ISCJB **06** 04:00:45.6±0.4, 3461N±005×2556E±008, h59^{km}±8^{km}, mb3.4/3, Error ellipse: s-maj=11.9km s-min=5.9km az=117.0*
*NEIC **06** 04:00:47.8, 3478N×2530E, h28^{km}, MD3.5(ATH), After ATH.*
*ATH **06** 04:00:47.8, 3478N×2530E, h28^{km}±7^{km}, MD3.5/6*
*HLW **06** 04:00:51.7, 34.14N×2574E, h13^{km}, Mb3.1*
ISC 06 04:00:47.0±0.4, **3466N**±005×**2550E**±008, **h49**^{km}±9^{km}, **n28**, σ1^{s}**01**/33, **mb3.4**/3, **2C-4D**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.27	37	ePB	Pn	04 00 55.0	-0.8
NPS	Neapolis	0.61	9	ePB	Pn	04 00 59.8	+0.2
NPS	Neapolis	0.61	9	ePn	Pn	04 00 59.6	0.0
NPS				ePb	Pn	04 00 59.8	+0.2
IDI	Anoyia	0.80	322	Pg	Pn	04 01 00.3	-1.8
	16nm,0.3s,baz=148,slow=16,SNR=12						
IDI				Lg		04 01 11.9	
	64nm,0.3s,baz=60,slow=20,SNR=17						
GVD	Gavdhos	1.17	279	ePN	Pn	04 01 08.0	+1.0
VAM	Vamos	1.30	306	ePB	Pn	04 01 08.5	-0.3
VAM				eSB	Sn	04 01 27.9	+2.9
VAM	Vamos	1.30	306	ePn	Pn	04 01 08.4	-0.4
VAM				eSb	Sn	04 01 27.9	+2.9
KARP	Karpathos	1.63	56	ePN	Pn	04 01 18.5	+5.2
KAP	Karpathos	1.64	57	ePN	Pn	04 01 18.5	+5.1
VLI	Veliai	2.93	315	ePN	Pn	04 01 30.5	-0.5
SLUM		3.17	184	⇓P	Pn	04 01 34.0	-0.3
SWA1		5.38	178	⇓P	Pn	04 02 04.3	-0.3
SWA1				S	Sn	04 02 57.7	-7.6
SWA1		5.38	178	P	Pn	04 02 04.3	-0.4
SWA2		5.40	180	⇑P	Pn	04 02 04.3	-0.6
SWA2				S	Sn	04 02 57.6	-8.1
AWBH		6.95	154	⇑P	Pn	04 02 25.5	-0.8
GLL	Jalalah	7.31	132	P	Pn	04 02 31.4	+0.2
AMAG	Maghara	7.63	119	P	Pn	04 02 37.2	+1.6
SUZ		7.85	126	P	Pn	04 02 39.5	+0.9
HFRF	Wahat Farafira	7.86	161	P	Pn	04 02 38.5	-0.3
ASUT		8.91	143	P	Pn	04 02 53.0	-0.1
HDK1	Dakhla	9.69	159	⇓P	Pn	04 03 04.2	+0.4
AKRG	Al Kharijah	10.10	153	⇓P	Pn	04 03 09.3	-0.1
AKASG	Malin Array Be	16.27	8	Pn	Pn	04 04 33.7	+1.7
	0.8nm,0.3s,baz=200,slow=10,SNR=4.6						
AKASG	Malin Array Be	16.27	8	Pn	Pn	04 04 33.7	+1.7
GERES	GERESS Array B	16.66	332	Pn	Pn	04 04 38.1	+1.2
	0.1nm,0.3s,baz=141,slow=8.6,SNR=4.4						
FINES	FINESS Array B	26.81	1	P	P	04 06 21.1	-1.5
	0.8nm,0.9s,mb3.3,baz=153,slow=9.4,SNR=4.9						
TORD	Torodi Ar. Bea	30.38	231	P	P	04 06 55.0	+0.7
	0.3nm,0.7s,mb3.2,baz=33,slow=8.7,SNR=6.3						
ARCES	ARCESS Array B	34.93	0	P	P	04 07 32.2	-1.9
	1.1nm,0.8s,mb3.8,baz=160,slow=7.5,SNR=4.7						

*NEIC **06** 04:03:45.2, 3247S×7185W, h15^{km}, ML3.1(GUC), After GUC.*
GUC 06 04:03:45.2±0.5, **3247S**×**7185W**, **h15**^{km}±3^{km}, **MD3.6**, **ML3.1**, **6C-9D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.66	27	⇓iP	Pg	04 03 57.3	-0.7
CHNG				iS	Sg	04 04 06.3	-0.4
LCCH	Las Cruces	1.03	167	⇓iP	Pb	04 04 03.1	-1.5
LCCH				iS	Sb	04 04 16.9	-1.1
JACH	Jahuel	1.08	102	⇓iP	Pb	04 04 04.3	-1.3
JACH				iS	Sb	04 04 18.7	-0.8
PEL	Peldehue	1.19	125	⇓iP	Pn	04 04 06.2	-1.1
PEL				eS	Sb	04 04 21.9	-0.7
PEL				AML	AML	04 04 26.8	
	comp=E,594nm,0.3s						
PEL	Peldehue	1.19	125	⇓iP	Pn	04 04 06.2	-1.1
PEL				eS	Sb	04 04 21.9	-0.7
RCDM	Rinconada Maip	1.34	139	⇓iP	Pn	04 04 08.4	-1.0
RCDM				iS	Sn	04 04 26.0	-0.9
RCDM				AML	AML	04 04 30.2	
	comp=N,194nm,0.1s						
RCDM	Rinconada Maip	1.34	139	⇓iP	Pn	04 04 08.4	-1.0
RCDM				iS	Sn	04 04 26.0	-0.9
TACH	Talagante	1.40	147	⇑iP	Pn	04 04 09.4	-0.8
TACH				iS	Sn	04 04 27.5	-0.9
CLCH	Cerro Calan	1.44	130	⇑iP	Pn	04 04 10.2	-0.5
CLCH				iS	Sn	04 04 28.8	-0.5
CLCH				AML	AML	04 04 35.0	
	comp=E,4μm,0.4s						
CMCH	Combarbala	1.48	29	⇓iP	Pn	04 04 10.9	-0.4
CMCH				iS	Sn	04 04 29.9	-0.5
CMCH				AML	AML	04 04 33.5	
	comp=E,1μm,0.8s						
CMCH	Combarbala	1.48	29	⇓iP	Pn	04 04 10.9	-0.4
CMCH				iS	Sn	04 04 29.9	-0.5
ANTU	Antumapu	1.50	137	AML	AML	04 04 37.2	
	comp=E,130nm,0.4s						
LNV	Longovilo	1.52	166	⇑iP	Pn	04 04 11.1	-0.8
LNV				iS	Sn	04 04 30.3	-1.1
FCH	Farellones	1.56	123	⇑iP	Pn	04 04 12.5	0.0
FCH				iS	Sn	04 04 33.2	+0.8
FCH				AML	AML	04 04 38.1	
	comp=N,142nm,0.3s						
FCH	Farellones	1.56	123	⇑iP	Pn	04 04 12.5	0.0
FCH				iS	Sn	04 04 33.2	+0.8
PCH	Pirque	1.60	136	⇑iP	Pn	04 04 12.7	-0.2
PCH				iS	Sn	04 04 33.6	+0.2
CACH	El Canelo	1.94	148	iP	Pn	04 04 19.0	+1.3
CACH				iS	Sn	04 04 44.5	+2.6
CICH	Cipreses	2.20	147	iP	Pn	04 04 22.3	+1.1
CICH				iS	Sn	04 04 50.0	+2.0
SFDO	San Fernando	2.25	162	iP	Pn	04 04 22.8	+0.9
SFDO				iS	Sn	04 04 51.5	+2.2
TLL	Tololo Astrono	2.46	22	AML	AML	04 05 06.9	
	comp=N,258nm,0.6s						

*BJI **06** 04:12:29.6, 104N×12644E, h56^{km}, mB4.9, mb4.8, Ms4.3, Msz4.2*
*IDC **06** 04:12:31.3±3.8, 177N×12629E, h12^{km}±23^{km}, mb4.7/23, mb1 4.6/24, mb1mx4.6/25, mbtmp4.7/24, ML4.4/1, MS3.9/11, Ms1 3.9/11, ms1mx3.7/21, Error ellipse: s-maj=17.6km s-min=9.7km az=70.0*
*ISCJB **06** 04:12:34.4±1.0, 169N±003×12633E±005, h48^{km}±9^{km}, mb4.8/85, MS4.0/26, Error ellipse: s-maj=8.9km s-min=5.0km az=140.3*
*MOS **06** 04:12:35.2±1.3, 175N×12626E, h54^{km}, mb5.0/31, Error ellipse: s-maj=11.8km s-min=6.4km az=107.6*
*NEIC **06** 04:12:37.9±1.1, 171N×12638E, h66^{km}±10^{km}, mb4.8/34, Error ellipse: s-maj=8.0km s-min=4.6km az=67.0*
*HRVD **06** 04:12:37.9±0.3, 195N×12647E, h36^{km}, MW5.1/53, Centroid moment Tensor Solution. LP body waves: s45,c55;Mantle waves: s53,c83; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.60±.22; $M_{\theta\theta}$-0.59±.13; $M_{\phi\phi}$-4.00±.17; $M_{r\theta}$-0.06±.16; $M_{\theta\phi}$-1.92±.12; $M_{\phi r}$-1.77±.23; Best double couple: $M_0$5.05500×10^{16} NP1:ϕ_s32.00000°, δ36.00000°, λ103.00000°. NP2: ϕ_s196.00000°, δ55.00000°, λ81.00000°. Principal axes: T 4.9690, Plg78.0000°, Azm73.0000°; N 0.1780, Plg8.0000°, Azm202.0000°; P -5.1410, Plg10.0000°, Azm293.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 06 04:12:37.9±0.8, **169N**±003×**12640E**±005, **h65**^{km}±8^{km}, **h56**^{km}±3.2^{km}**:pP-P**, **n192**, σ1^{s}**12**/180, **mb4.8**/84, **10C-4D**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	5.44	346	⇓eP	Pn	04 13 56.6	+0.2
PCI	Palu	7.05	249	P	Pn	04 14 23.2	+4.8
	235nm,1.4s						
KKM	Kota Kinabalu	11.04	293	P	Pn	04 15 14.4	+1.4
KKM	Kota Kinabalu	11.04	293	ePn	Pn	04 15 14.4	+1.5
JAY	Jayapura	14.90	106	P	Pn	04 16 09.5	+4.7
	34nm,0.8s						
KAKA	Kakadu	15.52	157	eP	Pn	04 16 11.9	-0.8
	53nm,0.6s						
KSM	Kuching	16.09	269	eP	Pn	04 16 22.5	+2.6
FITZ	Fitzroy Crossi	19.68	182	eP	Pn	04 17 00.8	-2.8
	22nm,0.6s						
FITZ	Fitzroy Crossi	19.68	182	P	Pn	04 17 00.8	-2.9
	0.9nm,0.3s,baz=1.9,slow=10,SNR=24						
GUMO	Guam	21.76	56	P	P	04 17 25.4	+1.3
	77nm,0.8s,mb5.1,baz=67,slow=22,SNR=3.7						
WRAB	Tennant Creek	22.86	160	eP	P	04 17 34.4	-1.3
WRAB	Tennant Creek	22.86	160	eP	P	04 17 34.0	-1.7
	139nm,0.9s,mb5.3						
WB2	Warramunga Arr	22.87	160	⇑iP	P	04 17 34.1	-1.7
WB2				eS	S	04 21 40.6	+0.1
KGM	Kluang	23.07	271	P	P	04 17 38.7	+0.8
YHNB	Yeheng	23.35	348	eP	P	04 17 39.0	-1.5
PMG	Port Moresby	23.44	118	P	P	04 17 42.3	+1.0
	15nm,0.7s,mb4.4,baz=330,slow=20,SNR=4.3						
PMG	Port Moresby	23.44	118	eP	P	04 17 42.2	+0.9
PMG				pmax	pmax		
	comp=Z,17nm,0.8s						
PMG	Port Moresby	23.44	118	eP	P	04 17 42.2	+0.9
	comp=Z,17nm,0.8s,mb4.4						
MBWA	Marble Bar	23.63	196	eP	P	04 17 41.8	-1.2
	comp=Z,10nm,0.5s,mb4.4						
QIZ	Qiongzhong	23.66	318	P	P	04 17 44.0	+0.6
QIZ				AP		04 17 55.0	
QIZ				PCP	PcP	04 21 22.5	-3.6
QIZ				S	S	04 21 52.8	-0.5
QIZ				XS	sS	04 22 18.2	-1.6
QIZ				AMB	AMB		
	comp=Z,30nm,1.9s,mb4.3						
QIZ				AMB	AMB		
	comp=Z,252nm,3.0s						
QIZ				LR	LR		
	comp=N,435nm,21.3s						
QIZ				LR	LR		
	comp=Z,797nm,22.8s						
JOW	Kunigami	25.06	4	P	P	04 17 56.6	+0.5
	comp=Z,43nm,0.8s,mb5.0,baz=166,slow=6.4,SNR=10						
IPM	Ipoh	25.48	277	P	P	04 18 00.6	+0.6
AS31	Alice Springs	26.24	164	eP	P	04 18 07.3	+0.5
AS31				eS	S	04 22 46.4	+12
ASAR	Alice Springs	26.24	164	P	P	04 18 06.7	-0.1
	comp=Z,12nm,0.5s,mb4.6,baz=345,slow=7.5,SNR=177						
ASAR				PcP	PcP	04 21 33.0	+1.1
	comp=Z,3.9nm,0.4s,baz=350,slow=2.1,SNR=8.9						
ASAR				S	S	04 22 41.6	+7.2
	comp=Z,1.8nm,0.6s,baz=349,slow=18,SNR=5.2						
ASPA	Alice Springs	26.24	164	eP	P	04 18 07.3	+0.5
ASPA				eS	S	04 22 46.4	+12
PSI	Prapat	27.47	273	P	P	04 18 17.6	-0.3
	comp=Z,12nm,0.8s,mb4.5,baz=86,slow=4.0,SNR=14						
CTA	Charters Tower	29.12	139	P	P	04 18 34.9	+2.4
	comp=Z,7.3nm,0.7s,mb4.4,baz=308,slow=19,SNR=5.3						
CTAO	Charters Tower	29.12	139	eP	P	04 18 32.1	-0.4
CTAO				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.8						
CTAO	Charters Tower	29.12	139	eP	P	04 18 32.1	-0.4
	comp=Z,12nm,0.5s,mb4.8						
SSE	Sheshan	29.66	351	P	P	04 18 39.2	+1.9
SSE				XP	sP	04 18 58.2	-2.4
SSE				PCP	PcP	04 21 41.4	+1.2
SSE				S	S	04 23 33.5	+5.3
SSE				XS	sS	04 23 54.7	-0.4
SSE				AMB	AMB		
	comp=Z,43nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,34μm,3.0s						
SSE				LR	LR		
	comp=N,184nm,26.1s						
SSE				LR	LR		
	comp=E,71nm,26.5s						
SSE				LR	LR		
	comp=Z,238nm,24.9s						
NJ2	Nanjing	31.02	348	eP	P	04 18 52.5	+3.2
NJ2				AP	pP	04 19 07.3	+2.2
NJ2				XP	sP	04 19 14.6	+1.9
NJ2				PP	PP	04 19 57.1	-3.2
NJ2				S	S	04 23 53.0	+3.4
NJ2				XS	sS	04 24 19.0	+2.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,20nm,3.5s						
NJ2				LR	LR		
	comp=N,460nm,21.5s						
NJ2				LR	LR		
	comp=E,550nm,26.6s						
NJ2				LR	LR		
	comp=Z,130nm,23.2s						
GYA	Guiyang	31.08	324	⇓iP	P	04 18 48.9	-0.9
GYA				AP	pP	04 19 01.0	-4.6
GYA				XP	sP	04 19 06.3	-6.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
GYA				AMB	AMB		
	comp=Z,80nm,4.0s						
GYA				LR	LR		
	comp=N,290nm,17.4s						
GYA				LR	LR		
	comp=E,340nm,17.0s						
GYA				LR	LR		
	comp=Z,270nm,17.8s						
CHTO	Chiang Mai	31.83	304	eP	P	04 18 56.0	-0.4
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
CHTO	Chiang Mai	31.83	304	eP	P	04 18 56.0	-0.4
	comp=Z,7.1nm,0.8s,mb4.5						
FORT	Forrest	32.33	177	eP	P	04 19 01.1	+0.3
	comp=Z,37nm,0.6s,mb5.3						
FORT				ePCP	PcP	04 21 48.6	+1.3
KMI	Kunming	32.61	318	P	P	04 19 03.5	+0.2
KMI				AP	pP	04 19 11.7	-7.4
KMI				PP	PP	04 20 15.6	-2.4
KMI				S	S	04 24 21.8	+7.4
KMI				SS	SS	04 26 24.8	-12
KMI				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.5						
KMI				AMB	AMB		
	comp=Z,73nm,3.7s						
KMI				LR	LR		
	comp=N,362nm,22.7s						
KMI				LR	LR		
	comp=E,397nm,26.4s						
KMI				LR	LR		
	comp=Z,709nm,22.7s						
JHJ	Hachijo jima 2	33.69	20	LR	LR	04 32 10.6	
	comp=Z,103nm,19.4s,baz=120,slow=35						
KLBR	Kellerberrin	34.10	193	eP	P	04 19 16.5	+0.3
	comp=Z,15nm,0.5s,mb5.1						
KLBR				ePCP	PcP	04 21 53.4	+1.1
MUN	Mundaring	34.85	195	eP	P	04 19 23.0	+0.3
HNR	Honiara	35.20	109	LR	LR	04 32 40.5	
	comp=Z,219nm,18.3s,baz=179,slow=34						
NWAO	Narrogin (SRO)	35.51	193	P	P	04 19 28.9	+0.6
	comp=Z,10nm,0.7s,mb4.9,baz=25,slow=12,SNR=8.8						
NWAO				LR	LR	04 33 33.6	
	comp=Z,116nm,21.5s,baz=128,slow=36						
XAN	Xi'an	36.09	335	P	P	04 19 31.5	-1.8
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
CD2	Chengdu	36.11	326	P	P	04 19 32.2	-1.3
CD2				AP	pP	04 19 47.1	-2.4
CD2				XP	sP	04 19 53.1	-3.9
CD2				PP	PP	04 20 57.8	+1.2
CD2				S	S	04 25 08.4	+0.2
CD2				XS	sS	04 25 30.5	-5.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				AMB	AMB		
	comp=Z,60nm,5.9s						
CD2				LR	LR		
	comp=N,200nm,10.8s						
CD2				LR	LR		
	comp=Z,190nm,16.8s						
MAJO	Matsushiro	36.36	16	eP	P	04 19 33.7	-1.9
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
MAJO	Matsushiro	36.36	16	eP	P	04 19 33.7	-1.9
	comp=Z,16nm,0.8s,mb5.0						
MAT	Matsushiro	36.36	16	P	P	04 19 34.1	-1.5
MAT				S	S	04 25 16.0	+3.9
MAT	Matsushiro	36.36	16	eP	P	04 19 34.0	-1.6
MAT				eS	S	04 25 17.0	+4.9
MAT				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
MAT	Matsushiro	36.36	16	eP	P	04 19 34.0	-1.6
	comp=Z,10nm,0.8s,mb4.8						
MAT				eS	S	04 25 17.0	+4.9
MJAR	Matsushiro Arr	36.36	16	P	P	04 19 33.6	-2.0
	comp=Z,7.4nm,0.8s,mb4.7,baz=185,slow=9.0,SNR=34						
MJAR				PcP	PcP	04 22 00.3	+1.4
	comp=Z,2.8nm,0.7s,baz=180,slow=2.4,SNR=8.2						
MJAR				LR	LR	04 34 09.0	
	comp=Z,197nm,20.8s,baz=205,slow=36						
MJAR	Matsushiro Arr	36.36	16	P	P	04 19 33.6	-2.0
MJAR						04 22 00.3	
STKA	Stephens Creek	36.37	158	eP	P	04 19 35.3	-0.4
	comp=Z,9.0nm,0.4s,mb5.0						
STKA				ePCP	PcP	04 21 59.9	+1.0
STKA	Stephens Creek	36.37	158	P	P	04 19 35.5	-0.1
	comp=Z,7.0nm,0.3s,mb5.0,baz=337,slow=9.0,SNR=28						
STKA				PcP	PcP	04 22 00.1	+1.2
	comp=Z,3.9nm,0.5s,baz=330,slow=6.3,SNR=3.1						
BJI	Beijing	39.28	348	eP	P	04 19 59.4	-0.9
BJI				S	S	04 25 56.3	-0.1
BJI				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.9						
BJI				LR	LR		
	comp=N,94nm,17.2s						
BJI				LR	LR		
	comp=E,213nm,15.7s						
BJI				LR	LR		
	comp=Z,282nm,28.8s						
ARMA	Armidale	39.98	145	eP	P	04 20 07.0	+1.0
SNY	Shenyang	40.03	357	⇓P	P	04 20 07.0	+0.5
SNY				AP	pP	04 20 19.0	-3.7
SNY				XP	sP	04 20 23.6	-6.6
SNY				PP	PP	04 21 40.2	+0.6
SNY				PCP	PcP	04 22 03.2	-7.1
SNY				S	S	04 26 06.2	-1.4
SNY				AMB	AMB		
	comp=Z,15nm,0.5s,mb5.1						
SNY				AMB	AMB		
	comp=Z,147nm,4.3s						
SNY				LR	LR		
	comp=N,180nm,26.0s						
SNY				LR	LR		
	comp=E,210nm,27.0s						
SNY				LR	LR		
	comp=Z,287nm,23.0s						
LZH	Lanzhou	40.10	331	eP	P	04 20 06.5	-0.5
LZH				AP	pP	04 20 20.1	-3.1
LZH				XP	sP	04 20 25.3	-5.4
LZH				PP	PP	04 21 43.8	+3.5
LZH				eS	S	04 26 10.5	+2.0
LZH				XS	sS	04 26 32.7	-3.3
LZH				SS	SS	04 29 04.6	-3.5
LZH				AMB	AMB		
	comp=Z,25nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,156nm,5.8s						
LZH				LR	LR		
	comp=E,732nm,14.2s						
LZH				LR	LR		
	comp=Z,987nm,17.7s						
HHC	Hu-ho-hao-te	41.23	343	eP	P	04 20 18.5	+2.2
HHC				AP	pP	04 20 33.8	+1.2
HHC				XP	sP	04 20 41.1	+1.0
HHC				PP	PP	04 21 58.2	+5.7
HHC				PCP	PcP	04 22 16.3	+2.1
HHC				SCP	ScP	04 26 00.3	+2.0
HHC				PCS	PcS	04 26 06.4	+1.0
HHC				S	S	04 26 28.8	+3.5
HHC				XS	sS	04 26 55.1	+2.2
HHC				SS	SS	04 29 29.8	-0.7
HHC				SCS	ScS	04 30 14.4	+0.2
HHC				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,117nm,3.4s						
HHC				LR	LR		
	comp=N,276nm,22.5s						

HHC LR LR
comp=E,165nm,24.7s
HHC LR LR
comp=Z,371nm,24.7s
VLA Vladivostok 41.54 6 *e*P **P** **04 20 21.0 +2.1**
VLA *e* pP 04 20 39.0 +3.9
VLA pmax pmax
comp=Z,28nm,1.6s,mb4.7
CN2 Changchun 41.94 359 *e*P **P** **04 20 25.3 +3.2**
CN2 *e*S **S** **04 26 41.5 +5.7**
CN2 LR LR
comp=Z,170nm,22.0s
CNB Canberra Magne 42.63 152 *e*P **P** **04 20 29.2 +1.5**
comp=Z,19nm,1.2s,mb4.7
MDJ Mudanjiang 42.84 3 P **P** **04 20 30.0 +0.6**
MDJ AP pP 04 20 43.2 -2.6
MDJ XP sP 04 20 49.4 -3.8
MDJ PP PP 04 22 10.1 +0.3
MDJ PCP PcP 04 22 20.2 +0.7
MDJ SCP ScP 04 26 06.7 +1.9
MDJ PCS PcS 04 26 12.1 +0.3
MDJ S **S** **04 26 51.4 +2.4**
MDJ XS sS 04 27 14.4 -2.3
MDJ AMB AMB
comp=Z,11nm,0.8s,mb4.6
MDJ AMB AMB
comp=Z,83nm,5.0s
MDJ LR LR
comp=N,127nm,23.0s
MDJ LR LR
comp=E,59nm,22.2s
MDJ LR LR
comp=Z,162nm,21.5s
MDJ Mudanjiang 42.84 3 *e*P **P** **04 20 29.5 0.0**
comp=Z,11nm,0.8s,mb4.6
TOO Toolangi 42.88 158 *e*P **P** **04 20 31.9 +2.1**
comp=Z,2.7nm,0.7s,mb4.1
ASAJ Asahikawa 44.62 17 P **P** **04 20 43.8 0.0**
comp=Z,6.6nm,0.5s,mb4.7,baz=236,slow=9.8,SNR=11
ASAJ LR LR 04 38 57.0
comp=Z,189nm,21.8s,baz=272,slow=36
GTA Gaotai 44.68 330 *e*P **P** **04 20 43.7 -0.5**
GTA AP pP 04 20 58.9 -1.7
GTA XP sP 04 21 06.0 -2.1
GTA PCP PcP 04 22 27.8 +2.0
GTA AMB AMB
comp=Z,4.0nm,0.9s,mb4.2
DZM Mont Dzumac 45.67 123 P **P** **04 20 52.5 +0.5**
comp=Z,4.5nm,0.9s,mb4.2,baz=282,slow=20,SNR=4.2
JIRN Jiri 46.32 308 *e*P **P** **04 20 57.8 +0.6**
comp=Z,20nm,0.4s,mb5.2
GUN Gumba 46.68 308 *e*P **P** **04 21 00.0 0.0**
comp=Z,34nm,0.4s,mb5.4
PKI Pulchoki 46.90 307 *e*P **P** **04 21 02.8 +1.1**
comp=Z,10nm,0.4s,mb4.9
KKN Kakani 47.10 307 *e*P **P** **04 21 03.4 +0.1**
DMN Daman 47.16 307 *e*P **P** **04 21 03.9 +0.2**
comp=Z,25nm,0.9s,mb5.0
HABR Khabarovsk 47.19 8 *e*P **P** **04 21 01.8 -2.2**
HABR *e*S **S** **04 27 52.8 +0.8**
KLR Kul'dur 47.58 5 *e*P **P** **04 21 03.1 -3.9**
GKN Gorkha 47.70 307 *e*P **P** **04 21 07.6 -0.4**
comp=Z,13nm,0.4s,mb5.1
HIA Hailar 47.74 354 *e*P **P** **04 21 09.1 +0.9**
HIA pmax pmax
comp=Z,7.0nm,0.6s
HIA Hailar 47.74 354 *e*P **P** **04 21 09.1 +0.9**
comp=Z,6.6nm,0.6s,mb4.6
KOLN Koldanda 48.43 306 *e*P **P** **04 21 13.4 -0.2**
comp=Z,33nm,0.5s,mb5.5
ULN Ulaanbaatar 48.95 343 P **P** **04 21 17.9 +0.3**
SNR=6.9
ULN Ulaanbaatar 48.95 343 *e*P **P** **04 21 17.5 0.0**
ULN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ULN Ulaanbaatar 48.95 343 *e*P **P** **04 21 17.5 0.0**
comp=Z,8.7nm,0.8s,mb4.7
SONM Songino Array 49.12 342 P **P** **04 21 18.5 -0.3**
comp=Z,4.0nm,0.6s,mb4.5,baz=157,slow=8.7,SNR=30
SONM PcP PcP 04 22 42.7 +1.2
comp=Z,3.6nm,0.8s,baz=172,slow=3.5,SNR=6.1
SONM LR LR 04 45 12.0
comp=Z,257nm,21.6s,baz=276,slow=40
SONM Songino Array 49.12 342 P **P** **04 21 18.5 -0.3**
SONM 04 22 42.7
TLY Talaya 53.35 343 P **P** **04 21 52.0 +1.4**
SNR=5.7
TLY Talaya 53.35 343 *e*P **P** **04 21 51.2 +0.7**
TLY pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
TLY Talaya 53.35 343 *e*P **P** **04 21 51.2 +0.6**
comp=Z,5.7nm,0.6s,mb4.8
WMQ Urumqi 54.21 326 *e*P **P** **04 21 59.0 +2.2**
WMQ AP pP 04 22 15.0 +1.4
WMQ XP sP 04 22 22.0 +1.0
WMQ PP PP 04 24 03.0 +4.0
WMQ S **S** **04 29 31.0 +1.9**
WMQ AMB AMB
comp=Z,17nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,102nm,5.0s
WMQ LR LR
comp=N,254nm,14.0s
WMQ LR LR
comp=E,248nm,14.0s
WMQ LR LR
comp=Z,322nm,14.0s
BOD Bodaibo 56.82 352 *e*P **P** **04 22 15.2 -0.3**
BOD pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
PET Petropavlovsk 57.72 22 *e*P **P** **04 22 25.1 +3.2**
PET *e* 04 30 25.0
PET MLR MLR
comp=Z,100nm,15.0s
MKAR Makanchi Array 59.04 326 P **P** **04 22 30.5 -0.6**
comp=Z,12nm,0.3s,mb5.3,baz=120,slow=7.5,SNR=103
YAK Yakutsk 60.24 2 *e*P **P** **04 22 39.3 0.0**
YAK pmax pmax
comp=Z,13nm,1.0s,mb4.9
YAK Yakutsk 60.24 2 *e*P **P** **04 22 39.0 -0.3**
AAK Ala-Archa 61.65 319⇑ *e*P **P** **04 22 48.5 -0.3**
AAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
KURK Kurchatov 63.28 328 P **P** **04 22 59.5 -0.2**
SNR=7.1
KURK Kurchatov 63.28 328⇑ *e*P **P** **04 22 59.2 -0.5**
KURK Kurchatov 63.28 328 *e*P **P** **04 22 59.0 -0.8**
NVS Novosibirsk 63.53 334 *e*P **P** **04 23 00.1 -1.3**
NVS pmax pmax
comp=N,3.0nm,0.5s
NVS pmax pmax
comp=E,4.0nm,0.5s
NVS pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
KK31 Karatay Array 64.50 318 *i* P **P** **04 23 07.5 -0.2**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
BVAR Borovoye Array 68.84 328 P **P** **04 23 34.5 -0.9**
comp=Z,4.7nm,0.4s,mb4.7,baz=79,slow=4.8,SNR=41
BRVK Borovoye 68.91 328 P **P** **04 23 36.6 +0.8**
SNR=8.1
BRVK Borovoye 68.91 328 *e*P **P** **04 23 35.7 -0.1**
BRVK pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
BRVK Borovoye 68.91 328 *e*P **P** **04 23 35.7 -0.1**
comp=Z,5.5nm,0.6s,mb4.6
WSAR Wadi Sarin 68.94 294 P **P** **04 23 37.9 +1.9**
comp=Z,2.9nm,0.8s,mb4.2,baz=108,slow=3.2,SNR=2.8
CHKZ Chkalovo 69.02 328 *e*P **P** **04 23 35.5 -1.0**
CHKZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
CHKZ Chkalovo 69.02 328 *e*P **P** **04 23 35.5 -1.0**
comp=Z,7.1nm,0.8s,mb4.5
ZRNK Zerenda 69.56 327 *i* P **P** **04 23 38.9 -0.9**
ZRNK pmax pmax
comp=Z,8.0nm,0.4s,mb4.9
ZRNK Zerenda 69.56 327 *e*P **P** **04 23 38.8 -1.0**
comp=Z,16nm,0.4s,mb5.2
AKTK Aktyubinsk 75.05 322 P **P** **04 24 11.8 -0.7**
AKTO Aktyubinsk 75.05 322 P **P** **04 24 11.8 -0.7**
comp=Z,4.5nm,0.4s,mb4.5,baz=91,slow=6.3,SNR=19
AKTO Aktyubinsk 75.05 322 *i* P **P** **04 24 12.2 -0.3**
ARU Arti 76.47 328 *e*P **P** **04 24 20.2 -0.5**
ARU pmax pmax
comp=Z,11nm,0.7s,mb4.7
ARU Arti 76.47 328 *e*P **P** **04 24 20.2 -0.5**
comp=Z,11nm,0.7s,mb4.7
SDPT Sand Point 79.06 34 *e*P **P** **04 24 35.7 +0.7**
comp=Z,28nm,0.5s,mb5.3
KBD Kabd 79.31 299 *e*P **P** **04 24 36.6 +0.1**
UMR Umm Al-Rimmam 79.32 300 *e*P **P** **04 24 33.4 -3.0**
UMR AMb AMB 04 24 44.4
comp=Z,31nm,0.8s,mb5.2
NAY Al-Naaiem 79.71 299 *e*P **P** **04 24 37.8 -0.8**
NAY AMb AMB 04 24 43.2
comp=Z,15nm,0.9s,mb4.8
RST Umm Al-Ruwaisa 79.94 300 *e*P **P** **04 24 37.8 -2.1**
RST AMb AMB 04 24 42.2
comp=Z,19nm,0.7s,mb5.0
VNDA Vanda 81.46 173 P **P** **04 24 48.1 +0.1**
comp=Z,3.3nm,0.5s,mb4.4,baz=320,slow=7.3,SNR=19
VNDA LR LR 04 57 35.5
comp=Z,98nm,20.8s,baz=331,slow=33
VNDA Vanda 81.46 173 *e*P **P** **04 24 47.8 -0.1**
VNDA pmax pmax
comp=Z,9.0nm,0.9s
VNDA Vanda 81.46 173 *e*P **P** **04 24 47.8 -0.1**
comp=Z,9.2nm,0.9s,mb4.6
MAW Mawson 81.74 200 *e*P **P** **04 24 50.0 +0.6**
comp=Z,2.7nm,0.6s,mb4.2
MAW Mawson 81.74 200 P **P** **04 24 50.1 +0.7**
comp=Z,3.7nm,0.7s,mb4.3,baz=81,slow=5.8,SNR=23
MAW LR LR 05 00 31.4
comp=Z,94nm,19.4s,baz=62,slow=35
MAW Mawson 81.74 200 *e*P **P** **04 24 50.0 +0.6**
MAW pmax pmax
comp=Z,3.0nm,0.6s
SVW2 Sparrevohn 82.74 29 *e*P **P** **04 24 56.2 +1.6**
TTA Tatalina 82.86 27 *e*P **P** **04 24 56.1 +0.9**
ZEI Tsey 83.34 313 *e*P **P** **04 24 58.5 +0.7**
KIV Kislovodsk 84.30 314 *de*P **P** **04 25 01.7 -0.9**
KIV *e*S S 04 35 19.4 -3.7
KIV *e*SS SS 04 40 46.6 -7.2
KIV pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
KIV MLR MLR
comp=Z,100nm,18.0s
IMA2 Indian Mountai 84.36 24 *e*P **P** **04 25 03.9 +0.9**
SLKM Skilak Lake 85.27 30 *e*P **P** **04 25 07.2 -0.3**
VRHR Novokhopersk 85.40 321 *e*P **P** **04 25 08.7 +0.5**
VRHR pmax pmax
comp=Z,30nm,1.0s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.8s
PMR Palmer 85.88 29 *e*P **P** **04 25 10.2 -0.4**
PMR pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
PMR Palmer 85.88 29 *e*P **P** **04 25 10.2 -0.4**
comp=Z,8.4nm,0.5s,mb4.9
MCK McKinley 86.12 26 *e*P **P** **04 25 11.6 -0.1**
MCK pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MCK McKinley 86.12 26 *e*P **P** **04 25 11.6 -0.2**
comp=Z,2.4nm,0.7s,mb4.2
COLA College 86.67 25 *e*P **P** **04 25 13.8 -0.6**
VRSR Storozhevoye 86.94 321 *e*P **P** **04 25 16.8 +1.1**
VRSR pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
VRSR pmax pmax
comp=N,5.0nm,1.0s
VRSR pmax pmax
comp=E,10.0nm,0.9s
VOR Voronezh 86.94 322 P **P** **04 25 15.0 -0.7**
VOR pmax pmax
comp=Z,50nm,1.7s,mb5.2
KLMR Klimovskoe 87.01 331 *e*P **P** **04 25 15.1 -1.0**
KLMR pmax pmax
comp=Z,20nm,1.4s,mb4.8
MALT Malatya 87.37 308 *e*P **P** **04 25 18.5 +0.7**
MALT pmax pmax
comp=Z,40nm,1.6s,mb5.1
MALT Malatya 87.37 308 *e*P **P** **04 25 18.5 +0.7**
comp=Z,40nm,1.6s,mb5.1
ANN Anapa 88.08 315 *e*P **P** **04 25 20.9 -0.3**
ANN *i* *PP pP 04 25 31.7 -7.6
ANN *e* 04 35 46.1
ANN pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
OBN Obninsk 88.53 325⇑ *e*P **P** **04 25 23.1 -0.2**
OBN *e*PS 04 37 03.1
OBN pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
OBN MLR MLR
comp=Z,100nm,24.0s
APA Apatity 89.59 337⇑ *e*P **P** **04 25 27.4 -0.9**
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
DAWY Dawson 90.34 26 *e*P **P** **04 25 32.3 +0.5**
SYO Syowa Base 90.42 201⇑ *e*P **P** **04 25 32.5 +0.3**
JOF Joensuu 90.83 333 *ep* **P** **04 25 30.9 -3.2**
comp=Z,3.1nm,0.3s,mb4.9
BRTR Keskin Array B 91.06 310 P **P** **04 25 34.3 -0.8**
comp=Z,1.2nm,0.9s,mb4.0,baz=122,slow=4.5,SNR=6.1
BRTR LR LR 05 10 12.2
comp=Z,56nm,21.6s,baz=87,slow=38
BRTR Keskin Array B 91.06 310⇑ *e*P **P** **04 25 35.9 +0.8**
QSPA South Pole Qui 91.61 180 *e*P **P** **04 25 38.4 +0.7**
comp=Z,2.5nm,0.7s,mb4.5
KEV Kevo 91.68 340 *ep* **P** **04 25 37.4 -0.6**
comp=Z,2.6nm,0.7s,mb4.6
KEV Kevo 91.68 340 *e*P **P** **04 25 37.4 -0.6**
KEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
INK Inuvik 92.17 21 *e*P **P** **04 25 39.9 -0.4**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 92.17 21 *e*P **P** **04 25 39.9 -0.4**
comp=Z,3.1nm,0.8s,mb4.6
ARCES ARCESS Array B 92.23 340 P **P** **04 25 39.4 -1.2**
comp=Z,4.3nm,0.8s,mb4.8,baz=82,slow=6.5,SNR=15
ARCES PKKP PKKPbc 04 42 55.8 +0.6
comp=Z,0.8nm,0.8s,baz=246,slow=3.8,SNR=9.3
ARE0 ARCESS Array S 92.23 340 *e*P **P** **04 25 39.9 -0.7**
KAF Kangasniemi 93.24 332 *ep* **P** **04 25 43.1 -2.1**
comp=Z,2.2nm,0.4s,mb4.8
KAF Kangasniemi 93.24 332 *e*P **P** **04 25 43.1 -2.1**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.8
AKASG Malin Array Be 93.25 321 P **P** **04 25 44.0 -1.3**
comp=Z,2.2nm,0.3s,mb3.9,baz=69,slow=3.7,SNR=4.4
AKASG Malin Array Be 93.25 321 *i* P **P** **04 25 48.0 +2.7**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 93.46 332 P **P** **04 25 44.9 -1.4**
comp=Z,1.1nm,0.4s,mb4.5,baz=74,slow=4.0,SNR=26
FINES LR LR 05 11 21.9
comp=Z,85nm,20.5s,baz=351,slow=38
FINES FINESS Array B 93.46 332 *i* P **P** **04 25 45.5 -0.7**
FINES pmax pmax
comp=Z,1.0nm,0.4s
MLR Muntele Rosu 96.13 316⇑ *i*P **P** **04 25 58.9 +0.5**
BURAR Bucovina Array 96.29 318⇑ *i*P **P** **04 26 02.3 +3.1**
IDI Anoyia 98.41 306 LR LR 05 15 40.3
comp=Z,45nm,18.8s,baz=86,slow=39
HFS Hagfors 99.65 332 P Pdif 04 26 13.7 -0.6
comp=Z,0.7nm,0.3s,baz=108,slow=4.6,SNR=13
NB2 NORSAR Subarra 100.45 333 P Pdif 04 26 16.4 -1.4
comp=Z,0.8nm,0.8s,baz=68,slow=5.1
NOA NORSAR Array B 100.45 333 P Pdif 04 26 16.1 -1.8
comp=Z,1.2nm,0.8s,baz=67,slow=4.7,SNR=4.2
YKA Yellowknife Ar 101.48 24 P Pdif 04 26 21.9 -0.5
comp=Z,1.0nm,0.9s,baz=301,slow=4.2,SNR=5.3
YKA PKiKP PKiKP 04 30 46.7 +0.6
comp=Z,0.3nm,0.4s,baz=295,slow=1.9,SNR=4.9
YKA Yellowknife Ar 101.48 24⇑ *e*P Pdif 04 26 25.2 +2.8
YKA Yellowknife Ar 101.48 24 P Pdif 04 26 21.9 -0.5
PDAR Pinedale Array 113.09 42 PKiKP PKiKP 04 31 08.8 +1.1
comp=Z,0.3nm,0.5s,baz=212,slow=3.2,SNR=4.2
PDAR PKKPab PKKPab 04 42 04.7 +2.9
comp=Z,0.5nm,0.7s,baz=207,slow=3.7,SNR=5.2
RSSD Black Hills 115.99 38 *e*PKIKP PKPdf 04 31 13.6 +0.3
ULM Lac du Bonnet 116.89 29 PKP PKPdf 04 31 14.4 -0.6
comp=Z,1.9nm,0.6s,baz=325,slow=4.3,SNR=4.2
ULM Lac du Bonnet 116.89 29 *e*PKPdf PKPdf 04 31 14.6 -0.4
ANMO Albuquerque 118.62 48 *e*PKiKP PKPdf 04 31 19.3 +0.9
MNTX Cornudas Mount 120.78 51 *e*PKPdf PKPdf 04 31 23.6 +1.1
SCHQ Schefferville 122.62 9 PKP PKPdf 04 31 26.9 +0.8
comp=Z,3.1nm,0.4s,baz=297,slow=2.6,SNR=27
TORD Torodi Ar. Bea 123.21 287 PKP PKPdf 04 31 28.1 +1.0
comp=Z,1.8nm,0.8s,baz=56,slow=1.7,SNR=30
TORD PKKPab PKKPab 04 41 19.8 +2.2
comp=Z,0.7nm,0.7s,baz=242,slow=2.5,SNR=7.7
KSU1 Kansas State U 123.39 39 *e*PKPdf PKPdf 04 31 28.3 +0.8
WMOK Wichita Mounta 124.31 45 *e*PKiKP PKPdf 04 31 30.2 +0.9
JFWS Jewell Farm 124.70 32 *e*PKiKP PKPdf 04 31 29.9 -0.1
MIAR Mount Ida 128.01 42 *e*PKiKP PKPdf 04 31 37.0 +0.7
WCI Wyandotte Cave 130.12 34 *e*PKiKP PKPdf 04 31 41.2 +0.8
DBIC Dimbokro 130.64 280 PKP PKPdf 04 31 43.4 +2.1
comp=Z,4.6nm,1.0s,baz=129,slow=6.6,SNR=3.7
DBIC Dimbokro 130.64 280 PKP PKPdf 04 31 43.4 +2.1
PLAL Pickwick Lake 131.29 38 *e*PKPdf PKPdf 04 31 43.0 +0.5
SSPA Standing Stone 132.40 25 *e*PKPdf PKPdf 04 31 46.0 +1.3
PLCA Paso Flores 138.22 161 PKhKP 04 31 46.0
comp=Z,0.6nm,0.4s,baz=225,slow=7.1,SNR=3.1
PLCA PKP PKPdf 04 31 58.0 +2.5
comp=Z,2.2nm,0.8s,baz=224,slow=2.8,SNR=7.3
PLCA Paso Flores 138.22 161 PKP 04 31 46.0
PLCA *e*PKPdf PKPdf 04 31 57.2 +1.7
MGV Manicaragua 145.03 46 *e*P PKPbc 04 32 11.5 +4.3
CPUP Villa Florida 155.24 172 *e*PKiKP PKPdf 04 32 33.4 +10
LPAZ La Paz 159.63 136 *e*PKiKP PKPdf 04 32 32.1 +3.0
SAML Samuel 168.05 127 *e*PKPdf PKPdf 04 32 38.8 +1.9

BJI **06** *04:24:33.3, 192N×96.11E, h37km, mB5.0, mb4.8, Ms4.3, Msz4.1*
ISCJB **06** *04:24:37.4±1.7, 233N±008×96.12E±0.10, h39km±13km, mb4.5/28, MS4.2/5, Error ellipse: s-maj=19.1km s-min=10.4km az=109.2*
NEIC **06** *04:24:38.5±0.4, 238N×96.17E, h30km, mb4.7/12, Error ellipse: s-maj=12.2km s-min=5.7km az=224.0*
IDC **06** *04:24:40.6±7.2, 245N×9627E, h48km±61km, mb3.8/9, mb1 3.9/10, mb1mx3.6/20, mbtmp4.1/10, ML3.4/1, MS4.0/3, Ms1 4.0/3, ms1mx3.3/21, Error ellipse: s-maj=83.4km s-min=16.3km az=58.0*

ISC 06 04:24:39.9±1.7, 237N±008×962E±01, h41km±13km, n37, o0s84/38, mb4.5/28, MS4.2/5, 2D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC h m s	ISC
TSI	**Tuntungan**	**2.64**	**65**⇓	*e*P		**Pn 04 25 22.1**	**+2.1**
TSI				*e*S		**Sn 04 26 02.0**	**+11**
PSI	**Prapat**	**2.78**	**81**	P		**Pn 04 25 21.5**	**-0.4**
	6.7nm,0.3s,baz=275,slow=6.0,SNR=45						
KULM	**Kulim**	**5.33**	**57**	*e*Pn		**Pn 04 25 55.8**	**-1.1**
KMI	**Kunming**	**23.49**	**15**	P		**P 04 29 46.6**	**+0.6**
KMI				AP		04 29 54.4	
KMI				XP	sP	04 29 58.9	-2.7
KMI				PP		04 30 21.3	
KMI				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.0						
JIRN	**Jiri**	**26.90**	**340**	*e*P		**P 04 30 18.0**	**+1.0**
	comp=Z,30nm,0.7s,mb4.9						
PKI	**Pulchoki**	**27.09**	**339**	*e*P		**P 04 30 19.0**	**+0.3**
	comp=Z,16nm,0.7s,mb4.7						
GUN	**Gumba**	**27.23**	**340**	*e*P		**P 04 30 20.9**	**+0.9**
	comp=Z,30nm,0.7s,mb4.9						
DMN	**Daman**	**27.23**	**338**	*e*P		**P 04 30 21.5**	**+1.5**
KKN	**Kakani**	**27.34**	**339**	*e*P		**P 04 30 21.3**	**+0.4**
	comp=Z,29nm,0.9s,mb4.8						
GKN	**Gorkha**	**27.77**	**338**	*e*P		**P 04 30 25.0**	**+0.2**
	comp=Z,30nm,0.9s,mb4.9						
KOLN	**Koldanda**	**27.97**	**336**	*e*P		**P 04 30 27.4**	**+0.8**
	comp=Z,25nm,1.0s,mb4.8						
XAN	**Xi'an**	**33.68**	**19**	P		**P 04 31 14.7**	**-2.2**
XAN				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**35.45**	**126**	P		**P 04 31 31.6**	**-0.6**
	comp=Z,3.0nm,1.0s,mb4.2,baz=274,slow=16,SNR=5.9						
NJ2	**Nanjing**	**36.43**	**33**	*e*P		**P 04 31 41.2**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
GTA	**Gaotai**	**37.01**	**5**	⇓P		**P 04 31 44.9**	**-0.7**
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.7						
HHC	**Hu-ho-hao-te**	**40.75**	**18**	*e*P		**P 04 32 16.7**	**-0.2**
HHC				AP	pP	04 32 26.5	-1.7
HHC				XP	sP	04 32 30.5	-2.6
HHC				PP	PP	04 33 57.6	+6.4
HHC				PCP	PcP	04 34 13.4	-4.2
HHC				SCP	ScP	04 37 59.8	-4.1
HHC				PCS	PcS	04 38 04.4	-4.0
HHC				S	**S**	**04 38 26.0**	**+1.4**
HHC				XS	sS	04 38 49.0	+5.5
HHC				SCS	ScS	04 42 14.7	-3.9
HHC				AMB	AMB		
	comp=Z,22nm,0.9s,mb4.8						
HHC				LR	LR		
	comp=N,183nm,19.0s,MS4.2						
HHC				LR	LR		
	comp=E,277nm,20.2s,MS4.2						
HHC				LR	LR		
	comp=Z,119nm,22.6s,MS3.7						
BJT	**Baijiatuau**	**41.63**	**23**	*e*P		**P 04 32 24.0**	**-0.1**
	comp=Z,12nm,0.7s,mb4.6						
BJI	**Beijing**	**41.66**	**23**	*e*P		**P 04 32 24.2**	**-0.1**
BJI				AMB	AMB		
	comp=Z,18nm,0.8s,mb4.8						
WMQ	**Urumqi**	**41.95**	**351**	*e*P		**P 04 32 27.0**	**+0.3**
WMQ				AP	pP	04 32 37.0	-1.1
WMQ				XP	sP	04 32 41.0	-2.0
WMQ				PP	PP	04 34 08.0	+3.8
WMQ				S	**S**	**04 38 43.0**	**+0.6**
WMQ				SS	SS	04 41 45.0	-5.2
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,101nm,4.0s						
WMQ				LR	LR		
	comp=N,549nm,12.0s,MS4.8						
WMQ				LR	LR		
	comp=E,648nm,12.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,548nm,12.0s,MS4.7						
WRAB	**Tennant Creek**	**43.53**	**122**	*e*P		**P 04 32 39.7**	**+0.1**
	comp=Z,2.4nm,0.6s,mb4.1						
WB2	**Warramunga Arr**	**43.54**	**122**	*e*P		**P 04 32 40.0**	**+0.4**
ASAR	**Alice Springs**	**44.92**	**127**	P		**P 04 32 51.1**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.7,baz=299,slow=7.7,SNR=15						
MKAR	**Makanchi Array**	**45.87**	**347**	P		**P 04 32 57.9**	**-0.3**
	comp=Z,5.9nm,0.7s,mb4.6,baz=160,slow=8.6,SNR=43						
SONM	**Songino Array**	**46.14**	**10**	P		**P 04 32 59.7**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.3,baz=189,slow=8.8,SNR=24						
ULN	**Ulaanbaatar**	**46.28**	**10**	*e*P		**P 04 33 00.9**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.1						
KURK	**Kurchatov**	**50.40**	**346**	*e*P		**P 04 33 32.2**	**-1.0**
	comp=Z,6.6nm,1.2s,mb4.5						
BVAR	**Borovoye Array**	**54.81**	**341**	P		**P 04 34 04.5**	**-1.2**
	comp=Z,2.2nm,0.7s,mb4.3,baz=138,slow=8.1,SNR=12						
STKA	**Stephens Creek**	**54.90**	**132**	P		**P 04 34 06.4**	**0.0**
	comp=Z,2.7nm,0.9s,mb4.3,baz=294,slow=7.3,SNR=6.0						
STKA	**Stephens Creek**	**54.90**	**132**	*e*P		**P 04 34 07.1**	**+0.7**
ZRNK	**Zerenda**	**55.21**	**340**	*e*P		**P 04 34 07.1**	**-1.5**
	comp=Z,1.7nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	**55.30**	**342**	*e*P		**P 04 34 08.5**	**-0.8**
	comp=Z,3.8nm,0.7s,mb4.5						
FINES	**FINESS Array B**	**78.49**	**333**	P		**P 04 36 36.3**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.9,baz=103,slow=8.6,SNR=4.9						
ARCES	**ARCESS Array B**	**81.09**	**340**	P		**P 04 36 50.7**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.8,baz=101,slow=3.8,SNR=7.0						
ARCES	**ARCESS Array B**	**81.09**	**340**	P		**P 04 36 50.7**	**-0.1**
VRAC	**Vranov**	**81.41**	**319**	LR	LR	05 17 37.3	
	comp=Z,70nm,21.2s,MS4.0,baz=200,slow=39						
GERES	**GERESS Array B**	**83.26**	**319**	P		**P 04 37 02.8**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.7,baz=60,slow=7.9,SNR=4.6						
GERES				LR	LR	05 15 41.6	
	comp=Z,87nm,20.6s,MS4.1,baz=49,slow=37						
DAVOX	**Davos**	**85.74**	**317**	LR	LR	05 17 50.6	
	comp=Z,101nm,20.6s,MS4.2,baz=77,slow=37						

NEIC **06** *04:43:51.7, 36.76S×177.46E, h180km, MG4.2(WEL), After WEL.*

WEL 06 04:43:51.2±0.4, 3669S×17743E, h175km±4km, ML4.2/7, Error ellipse: s-maj=5.3km s-min=4.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC h m s	ISC
MXZ	**Matakaoa Point**	**1.12**	**141**	PN		Pn 04 44 18.7	-0.7
MXZ				SN		Sn 04 44 41.4	+0.3
PUZ	**Puketiti**	**1.53**	**155**	P		Pn 04 44 23.2	+0.1
PUZ				S		Sn 04 44 47.4	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	1.53	155	PN	Pn	04 44 23.2	+0.1
PUZ				SN	Sn	04 44 47.4	-0.2
URZ	Urewera	1.59	189	P	Pn	04 44 24.2	+0.6
URZ	Urewera	1.59	189	PN	Pn	04 44 24.2	+0.5
URZ				SN	Sn	04 44 49.1	+0.5
MWZ	Matawai	1.64	177	P	Pn	04 44 24.5	+0.3
MWZ				S	Sn	04 44 49.3	-0.3
MWZ	Matawai	1.64	177	PN	Pn	04 44 24.5	+0.3
MWZ				SN	Sn	04 44 49.3	-0.3
KNZ	Kokohu	2.33	175	P	Pn	04 44 31.7	0.0
KNZ	Kokohu	2.33	175	PN	Pn	04 44 31.7	0.0
BKZ	Black Stump Fm	2.58	196	PN	Pn	04 44 34.8	+0.3
BKZ				SN	Sn	04 45 07.9	-0.3
FWVZ	Far West T-bar	2.96	209	PN	Pn	04 44 40.4	+1.3
WNVZ	Wahianoa	3.00	208	PN	Pn	04 44 40.9	+1.3
MOVZ	Moawhango	3.02	205	PN	Pn	04 44 40.1	+0.3
MOVZ				SN	Sn	04 45 17.1	-0.5
PXZ	Pawanui	3.37	187	PN	Pn	04 44 43.3	-0.8
PXZ				SN	Sn	04 45 22.7	-2.6
TSZ	Takapari Road	3.56	198	PN	Pn	04 44 45.5	-1.0
WAZ	Wanganui	3.61	211	PN	Pn	04 44 47.8	+0.5
BFZ	Birch Farm	4.09	193	PN	Pn	04 44 52.5	-0.8
MRZ	Mangatainoka R	4.22	199	PN	Pn	04 44 53.3	-1.7
MRZ				SN	Sn	04 45 41.8	-3.0
MSWZ	Moikau Station	5.01	199	PN	Pn	04 45 02.5	-2.7
TUWZ	Tuamarina	5.45	209	PN	Pn	04 45 08.5	-2.5
FOZ	Fox Glacier	9.06	218	PN	Pn	04 45 53.6	-4.9
JCZ	Jackson Bay	9.90	219	PN	Pn	04 46 05.7	-3.7

*ISCJB **06** 05:08:05.6±0.3, 4003N±002×1951E±002, h10km, mb3.7/9, Error ellipse: s-maj=3.2km s-min=1.9km az=67.1*
*IDC **06** 05:08:06.5±1.2, 4027N×1981E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.7/21, mbtmp3.8/10, ML3.7/3, Error ellipse: s-maj=26.5km s-min=14.5km az=65.0*
*PRU **06** 05:08:06.5, 4001N×1902E, h0km, M3.8*
*TIR **06** 05:08:06.7, 40.13N×1972E, h12km, Ml3.5*
*SKO **06** 05:08:08.0, 40.13N×1964E, h5km, M3.2, ML3.4*
*THE **06** 05:08:07.9, 40.12N×1966E, h10km, ML3.6*
*PDG **06** 05:08:07.0±0.2, 4008N×1922E, h10km±1km*
*NEIC **06** 05:08:10.9±0.9, 4008N×1952E, h42km±9km, mb3.8/2, MD3.6(PDG), Error ellipse: s-maj=12.1km s-min=6.1km az=194.0*
*CSEM **06** 05:08:10.5±0.1, 40.17N×1966E, h60km±1km, ML3.6, Error ellipse: s-maj=2.2km s-min=1.6km az=18.0*
*LDG **06** 05:08:11.4±0.2, 40.18N×1959E, h10km, Ml4.0/6, Error ellipse: s-maj=6.6km s-min=4.0km az=45.0*
*HLW **06** 05:08:17.1, 4028N×2309E, h33km, Mb3.7*
ISC 06 05:08:07.7±0.3, **4008N**±002×**1958E**±002, **h10km, n133, σ1^{s}36**/212, **mb3.7**/9, **15C-19D, Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SRN	Sarande	0.38	122	iPg	Pg	05 08 13.7	-1.5
SRN				iSg	Sg	05 08 20.1	-0.1
TPE	Tepelena	0.39	57	iPg	Pg	05 08 12.8	-2.7
TPE				iSg	Sg	05 08 34.6	+14
VLO	Vlora	0.39	350	iPg	Pg	05 08 14.6	-0.9
VLO				iSg	Sg	05 08 24.6	+3.9
LSK	Leskovik	0.78	85	iPg	Pg	05 08 19.9	-3.0
LSK				iSg	Sg	05 08 31.6	-1.5
IGT	Igoumenitsa	0.80	133	ePg	Pg	05 08 21.8	-1.3
IGT				eSg	Sg	05 08 34.1	+0.7
KBN	Korca	1.07	59	iPn	Pn	05 08 25.7	-3.1
KBN				iSn	Sn	05 08 43.7	0.0
TIR	Tirane	1.28	10	ePg	Pg	05 08 32.0	-0.4
TIR				eSg	Sg	05 08 49.2	+0.1
TIR	Tirane	1.28	10	iPg	Pg	05 08 32.0	-0.4
MEV	Metsovon	1.30	103	ePg	Pg	05 08 30.8	-1.9
MEV				eSg	Sg	05 08 50.4	+0.8
MEV	Metsovon	1.30	103	ePg	Pg	05 08 30.8	-1.9
MEV				eSg	Sg	05 08 50.3	+0.7
OHR	Ohrid	1.39	42	ePg	Pg	05 08 31.6	-2.7
OHR				eSg	Sg	05 08 51.6	-0.7
OHR	Ohrid	1.39	42	ePn	Pn	05 08 32.7	-0.4
OHR				eSn	Sn	05 08 50.7	-0.8
OHR				eLg		05 08 53.0	
	comp=E,3μm,1.7s						
OHR				eLg		05 08 55.1	
	comp=N,2μm,1.1s						
OHR	Ohrid	1.39	42	ePn	Pn	05 08 32.6	-0.5
OHR				eSn	Sn	05 08 50.6	-0.9
OHR				eSg	Sg	05 08 51.6	-0.7
OHR				eLg		05 08 53.0	
	comp=N,3μm,1.7s						
QSH	Qafa e Shtames	1.46	10	ipn?	Pn	05 08 32.8	-1.3
QSH				iSn	Sn	05 08 55.5	+2.2
FNA	Florina	1.54	62	ePg	Pn	05 08 34.3	-0.9
FNA				eSg	Sg	05 08 55.5	-1.8
LKD	Levkas	1.60	149	ePg	Pg	05 08 37.0	-1.5
LKD				eSg	Sg	05 08 59.5	+0.2
BIA	Bitola	1.62	54	ePg	Pn	05 08 35.3	-1.1
BIA				eSg	Sg	05 08 57.3	-2.7
BIA	Bitola	1.62	54	ePn	Pn	05 08 35.6	-0.8
BIA				eSn	Sn	05 08 57.4	+0.1
BIA				eLg		05 08 59.9	
	comp=N,217nm,0.6s						
BIA				eLg		05 09 00.3	
	comp=E,388nm,0.6s						
BIA	Bitola	1.62	54	ePg	Pn	05 08 35.3	-1.1
BIA				eSg	Sg	05 08 57.3	-2.7
BIA				eLg		05 08 59.9	
	comp=E,217nm,0.6s						
PE1	Pezze di Greco	1.80	294	ePn	Pn	05 08 40.3	+1.5
ULC	Ulcinj	1.90	352	⇑iPn	Pn	05 08 40.0	-0.2
ULC				eSn	Sn	05 09 06.9	+2.7
LIT	Litokhoron	2.23	89	ePn	Pn	05 08 45.3	+0.5
LIT				eSn	Sn	05 09 14.2	+1.9
BUM	Brajici-Budva	2.28	347	⇑iPn	Pn	05 08 45.2	-0.2
BUM				eSn	Sn	05 09 14.3	+0.8
BAI	Bari	2.30	297	ePn	Pn	05 08 46.7	+1.0
GRG	Griva	2.32	67	ePn	Pn	05 08 46.5	+0.6
GRG				eSn	Sn	05 09 14.1	-0.4
SG1	Sgolgore (BA)	2.34	290	ePn	Pn	05 08 47.9	+1.6
SKO	Skopje	2.35	36	ePn	Pn	05 08 47.5	+1.0
SKO				eSn	Sn	05 09 16.1	+0.7
SKO	Skopje	2.35	36	ePn	Pn	05 08 47.1	+0.7
SKO				eSn	Sn	05 09 15.0	-0.4
SKO				eLg		05 09 18.9	
	comp=E,460nm,0.7s						
SKO				eLg		05 09 19.5	
	comp=N,337nm,0.6s						
SKO	Skopje	2.35	36	ePn	Pn	05 08 47.1	+0.7
SKO				eSn	Sn	05 09 14.9	-0.5
TTG	Podgorica	2.36	354	⇓iPn	Pn	05 08 46.6	0.0
TTG				eSn	Sn	05 09 17.5	+2.0
AGG	Agios Georgios	2.37	116	ePn	Pn	05 08 47.9	+1.2
AGG				eSn	Sn	05 09 17.9	+2.0
HCY	Herceg Novi	2.50	341	⇓iPn	Pn	05 08 48.2	-0.3
HCY				eSn	Sn	05 09 20.0	+0.9
PVY	Plav	2.53	7	⇑iPn	Pn	05 08 49.9	+1.0
PVY				eSn	Sn	05 09 23.3	+3.6
STIP	Stip	2.55	50	ePn	Pn	05 08 48.8	-0.4
STIP				eSn	Sn	05 09 21.8	+1.6
STIP	Stip	2.55	50	ePn	Pn	05 08 49.1	0.0
STIP				eSn	Sn	05 09 18.8	-1.4
STIP				eLg		05 09 22.9	
	comp=E,84nm,1.0s						
STIP				eLg		05 09 23.3	
	comp=N,62nm,0.9s						
STIP	Stip	2.55	50	ePn	Pn	05 08 49.0	-0.1
STIP				eSn	Sn	05 09 18.7	-1.5
VAY	Valandovo	2.59	60	ePn	Pn	05 08 50.1	+0.5
VAY				eSn	Sn	05 09 22.3	+1.1
VAY	Valandovo	2.59	60	ePn	Pn	05 08 50.4	+0.7
VAY				eSn	Sn	05 09 21.0	-0.1
VAY				eLg		05 09 27.5	
	comp=N,587nm,1.6s						
VAY				eLg		05 09 28.5	
	comp=E,534nm,1.4s						
VAY	Valandovo	2.59	60	ePn	Pn	05 08 50.2	+0.6
VAY				eSn	Sn	05 09 21.0	-0.1
THE	Thessaloniki	2.64	77	ePn	Pn	05 08 50.2	-0.2
THE				eSn	Sn	05 09 22.8	+0.3
HORT	Hortiatis	2.74	78	ePn	Pn	05 08 51.1	-0.6
HORT				eSn	Sn	05 09 26.8	+1.9
KNT	Kendrikon	2.75	66	ePn	Pn	05 08 51.9	+0.1
KNT				eSn	Sn	05 09 26.4	+1.3
NKY	Niksic	2.77	351	⇑iPn	Pn	05 08 52.6	+0.5
NKY				eSn	Sn	05 09 26.9	+1.4
IVA	Berane	2.80	5	⇑iPn	Pn	05 08 53.9	+1.3
IVA				eSn	Sn	05 09 29.4	+3.1
CUC	Castrocucco	2.89	269	Pn	Pn	05 08 58.7	+4.9
BRY	Bratogost	2.92	345	⇓iPn	Pn	05 08 53.7	-0.6
BRY				eSn	Sn	05 09 30.0	+0.5
SOH	Sokhos	2.97	74	ePn	Pn	05 08 54.5	-0.4
SOH				eSn	Sn	05 09 32.1	+1.5
PAIG	Paliouri	3.15	91	ePn	Pn	05 08 56.7	-0.7
PAIG				eSn	Sn	05 09 36.3	+1.2
UPM	Unac-Piva	3.16	351	⇑iPn	Pn	05 08 58.3	+0.8
UPM				eSn	Sn	05 09 36.3	+1.0
FGMS	Monte Sant'Ang	3.19	302	Pn	Pn	05 08 59.6	+1.6
KKB	Krupnik	3.19	55	eP	Pn	05 09 00.0	+2.0
SJES	Sjenica	3.20	5	Pn	Pn	05 08 58.2	+0.2
PLE	Pljevlja	3.25	358	⇑iPn	Pn	05 08 59.0	+0.2
PLE				eSn	Sn	05 09 39.1	+1.6
CEL	Celeste	3.40	239	Pn	Pn	05 09 02.8	+2.1
MMB	Musomiste	3.49	63	ePn	Pn	05 09 02.1	+0.1
MMB				eSn	Sn	05 09 45.6	+2.3
MMB	Musomiste	3.49	63	eP	Pn	05 09 02.0	0.0
VTS	Vitosha	3.71	46	ePn	Pn	05 09 05.3	+0.3
VTS				eSn	Sn	05 09 49.5	+0.7
VTS	Vitosha	3.71	46	⇑iP	Pn	05 09 06.4	+1.4
VTS	Vitosha	3.71	46	iP	Pn	05 09 07.0	+2.0
BBLS	Bajina Basta -	3.79	358	iPn	Pn	05 09 06.8	+0.7
DIVS	Divcibare	4.03	4	iPn	Pn	05 09 09.7	+0.3
DIVS				Sg	Sn	05 09 53.6	-3.1
DIVS	Divcibare	4.03	4	ePn	Pn	05 09 09.1	-0.4
DIVS				eSn	Sn	05 10 00.4	+3.8
DIVS	Divcibare	4.03	4	ePn	Pn	05 09 09.1	-0.3
DIVS				Sg	Sn	05 09 53.6	-3.0
RZN	Rozhen	4.21	66	eP	Pn	05 09 13.0	+1.0
PLD	Plovdiv	4.37	61	eP	Pn	05 09 18.0	+3.9
AQU	L'Aquila	5.18	298	ePn	Pn	05 09 24.1	-1.2
	comp=E,38nm,1.2s						
AQU	L'Aquila	5.18	298	ePn	Pn	05 09 24.1	-1.2
	comp=E,38nm,1.2s						
NVLJ	Novalja	5.68	324	iPn	Pn	05 09 32.5	+0.3
NVLJ				iSn	Sn	05 10 34.5	-2.9
NVLJ	Novalja	5.68	324	iPn	Pn	05 09 32.4	+0.3
NVLJ				iSn	Sn	05 10 34.5	-2.9
BZS	Buzias	5.73	14	⇓iP	Pn	05 09 30.4	-2.5
BZS	Buzias	5.73	14	⇓P	Pn	05 09 30.4	-2.5
CING	Cingoli	5.80	307	Pn	Pn	05 09 34.9	+1.1
MURB	Monte Urbino	6.17	303	Pn	Pn	05 09 42.4	+3.6
PKSM	Moragy	6.17	354	⇑iP	Pn	05 09 37.6	-1.2
BOJS	Bojanci	6.29	331	iPn	Pn	05 09 41.1	+0.7
BOJS				eSn	Sn	05 10 50.5	-1.8
IDI	Anoyia	6.37	137	Pn	Pn	05 09 41.5	-0.1
	comp=E,0.6nm,0.3s,baz=315,slow=16,SNR=4.8						
IDI				Sn	Sn	05 10 47.0	-7.5
	comp=E,1.0nm,0.3s,baz=292,slow=19,SNR=3.9						
GOLS	Golise	6.60	335	ePn	Pn	05 09 44.8	0.0
GOLS				eSn	Sn	05 10 58.7	-1.3
CRE	Caprese Michel	6.71	304	Pn	Pn	05 09 49.4	+3.2
MLR	Muntele Rosu	7.15	39	Pn	Pn	05 09 55.4	+3.1
	comp=E,0.3nm,0.3s,baz=275,slow=16,SNR=7.2						
MLR	Muntele Rosu	7.15	39	⇓iP	Pn	05 09 55.3	+3.0
MLR	Muntele Rosu	7.15	39	⇓P	Pn	05 09 55.3	+2.9
VOY	Vojsko	7.26	327	ePn	Pn	05 09 53.8	-0.1
VOY				eSn	Sn	05 11 13.9	-2.4
PERS	Pernice	7.32	335	iPn	Pn	05 09 54.3	-0.3
PERS				eSn	Sn	05 11 14.3	-3.4
OBKA	Obir	7.40	332	⇓iPn	Pn	05 09 55.9	+0.2
OBKA				⇓iSn	Sn	05 11 15.6	-4.1
PSZ	Piszkesteto	7.84	2	ePn	Pn	05 10 09.3	+7.5
CTI	Castel Tesino	8.32	318	Pn	Pn	05 10 08.1	-0.3
VYHS	Vyhne	8.43	357	ePN	Pn	05 10 11.4	+1.5
VYHS				eSN	Sn	05 11 40.2	-4.9
MOA	Molln	8.66	336	⇓iSn	Sn	05 11 46.7	-4.0
MOA	Molln	8.66	336	⇓iPn	Pn	05 10 13.3	+0.2
	SNR=6.4						
MOA				⇓iSn	Sn	05 11 46.7	-4.0
MOA	Molln	8.66	336	Pn	Pn	05 10 13.3	+0.3
	comp=E,6.0nm,4.0s						
KOLS	Kolonicke sedl	9.06	11	ePN	Pn	05 10 21.5	+3.0
KOLS				eSN	Sn	05 11 55.2	-5.3
WTTA	Wattenberg	9.20	324	⇑iPn	Pn	05 10 21.0	+0.5
	SNR=6.0						
WTTA				⇓iSn	Sn	05 12 00.1	-3.9
WATA	Walderalm	9.28	324	⇑iSn	Sn	05 12 03.2	-2.8
WATA	Walderalm	9.28	324	⇓iPn	Pn	05 10 22.5	+1.0
	SNR=7.7						
WATA				⇑iSn	Sn	05 12 03.2	-2.8
WATA	Walderalm	9.28	324	Pn	Pn	05 10 22.5	+0.9
	comp=E,7.0nm,7.0s						
SQTA	Sankt Quirin	9.36	322	⇓iSn	Sn	05 12 06.7	-1.3
SQTA	Sankt Quirin	9.36	322	⇑iPn	Pn	05 10 24.0	+1.2
	SNR=8.6						
SQTA				⇓iSn	Sn	05 12 06.7	-1.3
SQTA	Sankt Quirin	9.36	322	Pn	Pn	05 10 24.0	+1.3
	comp=E,8.0nm,6.0s						
MOTA	Moosalm	9.50	323	⇓iSn	Sn	05 12 09.4	-2.1
MOTA	Moosalm	9.50	323	⇓iPn	Pn	05 10 25.7	+1.1
	SNR=17						
MOTA				⇓iSn	Sn	05 12 09.4	-2.1
MOTA	Moosalm	9.50	323	Pn	Pn	05 10 25.7	+1.1
	comp=E,16nm,7.0s						
SLUM		9.71	150	⇑P	Pn	05 10 24.7	-2.8
GEC2	GERESS Array S	9.71	336	ePn	Pn	05 10 27.6	+0.1
GEC2				eSn	Sn	05 12 12.6	-4.1
GEC2	GERESS Array S	9.71	336	ePn	Pn	05 10 27.6	+0.1
GERES	GERESS Array B	9.71	336	Pn	Pn	05 10 26.8	-0.8
	comp=E,0.5nm,0.3s,baz=161,slow=14,SNR=19						
GERES				Sn	Sn	05 12 13.2	-3.5
	comp=E,0.5nm,0.3s,baz=149,slow=23,SNR=7.6						
DAVOX	Davos	9.72	317	Pn	Pn	05 10 29.7	+2.0
	comp=E,0.5nm,0.3s,baz=186,slow=10,SNR=9.5						
DAVOX				Sn	Sn	05 12 14.2	-2.7
	comp=E,0.2nm,0.3s,baz=285,slow=20,SNR=2.5						
DAVOX	Davos	9.72	317	Pn	Pn	05 10 29.7	+2.0
DAVOX				Sn	Sn	05 12 14.2	-2.7
KHC	Kasperske Hory	10.01	337	ePN	Pn	05 10 31.2	-0.3
KHC				eSN	Sn	05 12 18.5	-5.3
LPG	La Plagne	10.87	304	ePn	Pn	05 10 45.9	+2.6
LPG				eSn	Sn	05 12 37.7	-7.3
	comp=E,9.0nm,0.5s						
LPL	La Plagne	10.89	304	ePn	Pn	05 10 45.0	+1.4
LPL				eSn	Sn	05 12 35.9	-10
	comp=E,6.7nm,0.5s						
CABF	La Chapelle	11.79	308	eSn	Sn	05 13 03.4	-4.1
	comp=E,11nm,0.8s						
SWA2		11.84	154	⇑P	Pn	05 10 55.9	-0.7
SWA2				S	Sn	05 12 52.3	-16
SWA1		11.91	153	P	Pn	05 10 56.1	-1.4
SWA1				S	Sn	05 12 52.4	-18
HINF	Hinteralfeld	11.99	314	ePn	Pn	05 10 58.4	-0.2
HINF				eSn	Sn	05 13 06.0	-6.4
	comp=E,2.5nm,0.3s						
CDF	Champ du Feu	12.12	317	ePn	Pn	05 11 00.7	+0.2
CDF				eSn	Sn	05 13 09.7	-6.0
HAU	Haudompre	12.37	314	ePn	Pn	05 11 01.1	-2.8
HAU				eSn	Sn	05 13 13.2	-8.7
	comp=E,6.6nm,0.4s						
SMF	Signal de Mont	13.19	305	eSn	Sn	05 13 33.4	-8.4
	comp=E,3.2nm,0.4s						
LOR	Lormes	13.45	307	ePn	Pn	05 11 18.9	+0.4
LOR				eSn	Sn	05 13 38.6	-9.4
HFRF	Wahat Farafira	14.79	148	P	Pn	05 11 32.3	-4.7
HFS	Hagfors	20.41	352	P	P	05 12 44.1	-0.8
	comp=E,2.6nm,0.5s,baz=170,slow=9.8,SNR=20						
EKA	Eskdalemuir Ar	21.46	323	P	P	05 12 57.1	+0.8
	comp=E,1.2nm,0.6s,mb3.4,baz=121,slow=9.4,SNR=9.6						
NAO01	NORSAR Array S	21.48	348	eP	P	05 12 55.4	-1.0
	comp=E,3.0nm,0.7s,mb3.7						
NAO01	NORSAR Array S	21.48	348	eP	P	05 12 55.4	-1.0
NB2	NORSAR Subarra	21.61	349	P	P	05 12 56.4	-1.5
	comp=Z,2.0nm,0.6s,mb3.7,baz=162,slow=10						
NOA	NORSAR Array B	21.61	349	P	P	05 12 57.0	-0.8
	comp=Z,2.5nm,0.6s,mb3.8,baz=161,slow=9.8,SNR=7.7						
FINES	FINESS Array B	21.76	8	P	P	05 12 57.4	-2.0
	comp=Z,1.1nm,0.6s,mb3.5,baz=175,slow=10,SNR=13						
KAF	Kangasniemi	22.44	8	ep	P	05 13 00.4	-6.3
JOF	Joensuu	23.93	13	ep	P	05 13 22.1	+0.2
	comp=Z,3.5nm,0.6s,mb4.0						
ARCES	ARCESS Array B	29.68	4	P	P	05 14 11.5	-2.2
	comp=Z,2.6nm,0.9s,mb4.0,baz=184,slow=12,SNR=5.3						
ARCES	ARCESS Array B	29.68	4	P	P	05 14 11.5	-2.2
TORD	Torodi Ar. Bea	31.10	215	P	P	05 14 28.4	+2.2
	comp=Z,0.4nm,0.9s,mb3.3,baz=30,slow=12,SNR=3.2						
CHKZ	Chkalovo	36.63	51	eP	P	05 15 12.4	-1.8
	comp=Z,1.1nm,0.8s,mb3.7						
MKAR	Makanchi Array	44.95	60	P	P	05 16 21.0	-1.9
	comp=Z,1.1nm,0.6s,mb3.9,baz=293,slow=7.5,SNR=9.8						

*IDC **06** 05:15:22.9±1.7, 1934N×9860E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/16, mbtmp3.7/5, Error ellipse: s-maj=52.2km s-min=29.3km az=58.0*
*ISCJB **06** 05:15:24.7±0.8, 1941N±005×99.13E±007, h10km, mb3.5/5, Error ellipse: s-maj=8.9km s-min=6.5km az=1.7*
*NEIC **06** 05:15:25.1±0.8, 1943N×9865E, h10km, Error ellipse: s-maj=32.0km s-min=8.8km az=74.0*
ISC 06 05:15:26.0±0.8, **1943N**±004×**9896E**±008, **h10km, n12, σ1^{s}25**/19, **mb3.5**/5, **Thailand**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHG	Chiang Mai	0.62	181	PG	Pg	05 15 38.0	+0.1
CHG				SG	Sg	05 15 43.5	-2.5
CHTO	Chiang Mai	0.62	181	ePg	Pg	05 15 38.0	+0.1
CHTO				eSg	Sg	05 15 46.4	+0.4
CM31	Chiang Mai Arr	0.97	181	ePg	Pg	05 15 45.2	+0.5
CM31				eSn	Sn	05 16 01.7	+2.2
NANT	Nan	1.76	111	PG	Pn	05 15 53.0	-3.6
NST	Nakhon Sawan	3.90	163	PN	Pn	05 16 25.8	-0.2
NST				PG	Pg	05 16 35.0	-5.8
NST				SG	Sg	05 17 30.2	-1.2
KKTK	Khon Kaen	4.80	129	PN	Pn	05 16 40.0	+1.7
KKTK				PG	Pg	05 16 57.0	-0.9
KKTK				SG	Sg	05 18 00.0	0.0
SONM	Songino Array	28.97	10	P	P	05 21 26.4	+0.8
	0.5nm,0.8s,mb3.3,baz=188,slow=8.7,SNR=3.2						
MKAR	Makanchi Array	30.52	337	P	P	05 21 38.2	-1.1
	0.5nm,0.7s,mb3.5,baz=152,slow=9.8,SNR=3.2						
MKAR	Makanchi Array	30.52	337	P	P	05 21 38.2	-1.1
MJAR	Matsushiro Arr	38.32	55	P	P	05 22 47.8	+1.0
	0.6nm,0.7s,mb3.4,baz=255,slow=9.4,SNR=4.3						
ASAR	Alice Springs	54.74	140	P	P	05 24 55.9	+0.3
	0.3nm,0.4s,mb3.7,baz=326,slow=7.4,SNR=4.3						
NOA	NORSAR Array B	72.12	329	P	P	05 26 47.6	-3.0
	0.9nm,0.9s,mb3.7,baz=85,slow=5.8,SNR=3.4						

MAN 06 05:17:01.5, 736N×12398E, h32km, mb3.3, ML4.5, MS2.8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.29	117	⇑iP	Pb	05 17 07.8	-1.2
CTBH				iS	Sb	05 17 17.1	+2.9
PAGZ	Pagadian	0.77	310	eP	Pn	05 17 17.7	+1.6
PAGZ				eS	Sn	05 17 27.4	+0.8
KCP	Kidapawan	1.15	107	⇓eP	Pn	05 17 22.3	+0.9
KCP				iS	Sn	05 17 44.6	+8.6
BUKP	Musuan	1.19	64	eP	Pn	05 17 26.8	+4.9
IPIL	Ipil	1.46	287	⇓eP	Pn	05 17 25.5	-0.2
IPIL				eS	Sn	05 17 44.9	+1.2
IPIL	Ipil	1.46	287	eP	Pn	05 17 25.6	-0.1
IPIL				eS	Sn	05 17 44.7	+1.0
SNPH	Sibulan	2.11	340	eP	Pn	05 17 34.5	0.0
TBP	Tagbilaran	2.32	357	eP	Pn	05 17 52.9	+15
OTRP	Odiongan	5.34	339	eP	Pn	05 18 31.5	+13

*IDC **06** 05:32:56.2±0.6, 300S×8032W, h0km, mb4.4/17, mb1 4.6/19, mb1mx4.5/25, mbtmp4.5/19, ML3.3/3, MS3.8/13, Ms1 3.8/13, ms1mx3.6/20, Error ellipse: s-maj=21.4km s-min=11.5km az=67.0*
*BJI **06** 05:32:58.7, 351S×7978W, h53km, mB4.8, Ms4.7, Msz4.6*
*ISCJB **06** 05:32:59.4±0.2, 3.18S±002×8053W±002, h33km, mb4.6/60, MS3.9/15, Error ellipse: s-maj=3.5km s-min=3.3km az=85.1*
*IGQ **06** 05:32:59.8, 308S×8044W, h27km±12km, Mb4.8, Ms4.7, Error ellipse: s-maj=5.0km s-min=1.3km az=6.4*
*NEIC **06** 05:33:02.9±1.0, 299S×8020W, h51km±10km, mb4.7/50, MD4.7(IGQ), Error ellipse: s-maj=9.8km s-min=4.4km az=66.0*
ISC 06 05:33:01.9±0.2, **317S**±002×**8045W**±002, **h35km, (h47km**±4.0km**:pP-P), n276, σ0^{s}94**/266, **mb4.6**/60, **MS3.9**/15, **74C-60D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALI	Salinas	1.11	331	P	Pn	05 33 19.5	-1.5
IGUA	Igualata	2.46	47	P	Pn	05 33 38.9	-0.6
IGUA				S	Sn	05 34 09.6	+1.3
ARRY	Arrayan	2.59	50	P	Pn	05 33 40.5	-0.7
HCA		2.61	157	⇓P	Pn	05 33 42.7	+1.2
PATA	Patacocha	2.61	51	P	Pn	05 33 42.1	+0.6
CUSU	Cusua	2.61	49	P	Pn	05 33 42.2	+0.7
RETU	Refugio	2.63	50	P	Pn	05 33 42.3	+0.5
JUIV	Juive	2.63	49	⇓P	Pn	05 33 42.0	+0.1
ULBA	Ulba	2.66	50	P	Pn	05 33 42.8	+0.6
RUN5	Runtun	2.67	49	⇓P	Pn	05 33 42.5	+0.2
PT18	Porculla	2.84	160	⇑P	Pn	05 33 46.5	+1.8
PT18				S	Sn	05 34 15.9	-1.9
PISA	Pisayambo	2.94	45	⇑P	Pn	05 33 47.1	+1.1
CAMI	Rancho Maria	3.15	38	⇓P	Pn	05 33 50.2	+1.3
TAMB	Tambo	3.22	40	⇑P	Pn	05 33 50.9	+1.0
VC1	Cotopaxi 1	3.24	39	⇑P	Pn	05 33 51.4	+1.2
JUA2	San Juan 2	3.46	32	⇑P	Pn	05 33 53.5	+0.3
TERV	Terraza Guagua	3.50	32	⇑P	Pn	05 33 54.2	+0.5
GGP	Refugio Guagua	3.50	32	⇑P	Pn	05 33 53.9	+0.1
PINO	Pino	3.51	32	⇑P	Pn	05 33 54.3	+0.4
ANTI	Antisana	3.54	40	⇑P	Pn	05 33 55.0	+0.7
YANA	Yana	3.56	32	⇑P	Pn	05 33 54.9	+0.2
CHP8	Chiclayo	3.62	171	P	Pn	05 33 56.2	+0.8
OTAV	Otavalo	3.93	31	ePn	Pn	05 33 59.0	-0.6
OTAV				eSg	Sn	05 34 45.8	+1.3
CAYR	Refugio Cayamb	4.00	38	⇓P	Pn	05 34 02.2	+1.6
CAYA	Cayambe	4.05	37	⇑P	Pn	05 34 02.2	+0.9
COTA	Cotacachi	4.07	31	⇑P	Pn	05 34 02.3	+0.7
CHAR	Charly	4.13	42	P	Pn	05 34 03.5	+1.0
LAV3	Lava3-Reventad	4.15	43	P	Pn	05 34 03.3	+0.6
CONE	Cono NE Rev Vo	4.16	42	P	Pn	05 34 03.3	+0.4
ATAH	Atahualpa	4.32	152	Pn	Pn	05 34 09.5	+4.4
	4.9nm,0.3s,baz=336,slow=6.7,SNR=23						
ATAH				Lg		05 35 05.8	
	50nm,0.3s,baz=322,slow=21,SNR=7.8						
PP16	Cajamarca	4.38	154	⇓P	Pn	05 34 09.0	+3.1
PP16				S	Sn	05 34 55.0	-0.7
NNA	Nana	9.46	158	Pn	Pn	05 35 15.6	0.0
	3.4nm,0.3s,baz=328,slow=11,SNR=13						
NNA				Sn	Sn	05 37 00.4	-0.4
	2.6nm,0.3s,baz=229,slow=20,SNR=3.2						
NNA	Nana	9.46	158	ePn	Pn	05 35 15.5	-0.1
ROSC	El Rosal	10.04	38	Pn	Pn	05 35 20.3	-3.3
	0.4nm,0.3s,baz=265,slow=22,SNR=5.3						
ROSC	El Rosal	10.04	38	ePn	Pn	05 35 19.9	-3.7
SDV	Santo Domingo	15.46	39	Pn	Pn	05 36 35.1	-2.1
	0.6nm,0.3s,baz=254,slow=19,SNR=3.0						
SDV	Santo Domingo	15.46	39	ePn	Pn	05 36 34.5	-2.7
	40nm,1.3s						
ARE	Arequipa	15.88	147	eP	Pn	05 36 49.0	+6.4
LPAZ	La Paz	17.80	138	eP	Pn	05 37 07.8	+1.1
	0.3nm,0.7s						
SAML	Samuel	18.10	109	eP	Pn	05 37 08.2	-2.2
PCRV	Puerto La Cruz	20.59	50	P	P	05 37 36.4	-1.3
	14nm,0.5s,baz=262,slow=5.8,SNR=11						
LVC	Limon Verde	22.34	151	P	P	05 37 58.5	+2.0
	11nm,0.7s,mb4.4,baz=315,slow=7.8,SNR=23						
LVC				LR	LR	05 47 30.9	
	comp=Z,171nm,22.0s,MS3.4,baz=308,slow=39						
LVC	Limon Verde	22.34	151	eP	P	05 37 58.5	+2.0
	21nm,0.9s,mb4.6						
SIV	San Ignacio	22.93	125	P	P	05 38 01.9	-0.9
	5.5nm,0.6s,mb4.2,baz=304,slow=8.8,SNR=32						
CMIG	Matias Romero	24.66	325	P	P	05 38 19.8	+0.5
	15nm,1.0s,mb4.5,baz=127,slow=4.4,SNR=14						
CMIG	Matias Romero	24.66	325	P	P	05 38 19.8	+0.5
SJG	San Juan	25.41	33	P	P	05 38 24.9	-1.2
	40nm,0.9s,mb4.9,baz=260,slow=3.0,SNR=6.1						
CFAA	Coronel Fontan	30.54	159	P	P	05 39 13.0	+1.1
	0.4nm,0.8s,mb3.3,baz=334,slow=8.4,SNR=12						
CFAA				PcP	PcP	05 42 09.7	-0.5
	0.1nm,0.4s,baz=298,slow=3.3,SNR=3.9						
CPUP	Villa Florida	31.97	138	P	P	05 39 24.1	-0.4
	3.4nm,0.7s,mb4.3,baz=302,slow=7.8,SNR=14						
CPUP				LR	LR	05 55 20.6	
	comp=Z,311nm,20.8s,MS4.0,baz=299,slow=42						
CPUP	Villa Florida	31.97	138	eP	P	05 39 23.6	-0.9
	11nm,0.6s,mb4.9						

BDFB **Brasilia** 34.25 113 P P 05 39 43.8 -0.6
3.4nm,0.7s,mb4.4,baz=306,slow=11,SNR=4.7
BDFB LR LR 05 55 22.8
comp=Z,266nm,20.9s,MS4.0,baz=95,slow=39
HKT **Hockley** 36.07 337 *e*P P 05 39 59.6 -0.4
6.3nm,1.4s,mb4.3
NATX **Nacogdoches** 37.27 340 *e*P P 05 40 10.1 -0.1
23nm,0.8s,mb5.0
JCT **Junction City** 38.22 332 *e*P P 05 40 18.3 0.0
13nm,0.8s,mb4.7
OXF **Oxford** 38.41 348 *e*P P 05 40 17.5 -2.4
20nm,1.0s,mb4.8
PLCA **Paso Flores** 38.45 168 P P 05 40 21.1 +0.9
4.0nm,1.0s,mb4.1,baz=353,slow=12,SNR=9.4
PLCA PcP PcP 05 42 33.3 +0.4
3.0nm,0.7s,baz=344,slow=1.1,SNR=7.7
PLCA LR LR 05 53 55.9
comp=Z,147nm,19.7s,MS3.8,baz=2.7,slow=33
PLCA **Paso Flores** 38.45 168 *e*P P 05 40 21.0 +0.8
5.5nm,1.0s,mb4.2
SWET **Sewanee** 38.52 353 *e*P P 05 40 18.2 -2.6
CPCT **Cooper Cave** 38.60 355 *e*P P 05 40 20.0 -1.5
PLAL **Pickwick Lake** 38.62 350 *e*P P 05 40 18.2 -3.4
UALR **University of** 39.36 344 *e*P P 05 40 26.9 -0.9
15nm,0.8s,mb4.8
MIAR **Mount Ida** 39.49 343 *e*P P 05 40 27.9 -1.0
TZTN **Tazewell** 39.61 356 *e*P P 05 40 27.1 -2.8
WVT **Waverly** 39.70 351 *e*P P 05 40 27.5 -3.1
3.3nm,0.8s,mb4.1
WMOK **Wichita Mounta** 41.45 337 *e*P P 05 40 44.3 -0.8
SIUC **Southern Illin** 41.48 349 *e*P P 05 40 43.4 -2.0
16nm,0.8s,mb4.7
WCI **Wyandotte Cave** 41.54 353 *e*P P 05 40 42.3 -3.5
12nm,0.9s,mb4.5
FVM **French Village** 41.97 348 *e*P P 05 40 46.5 -2.9
MNTX **Cornudas Mount** 42.00 328 *e*P P 05 40 49.4 -0.3
7.7nm,1.1s,mb4.2
CCM **Cathedral Cave** 42.22 347 *e*P P 05 40 48.8 -2.6
4.4nm,0.6s,mb4.3
BLO **Bloomington** 42.50 353 *e*P P 05 40 50.5 -3.2
12nm,0.9s,mb4.5
AMTX **Amarillo** 42.78 334 *e*P P 05 40 55.4 -0.6
11nm,0.8s,mb4.6
MVL **Millersville** 43.12 5 *e*P P 05 40 57.5 -1.2
ACSO **Alum Creek Sta** 43.25 357 *e*P P 05 40 56.6 -3.1
4.4nm,0.6s,mb4.4
KSU1 **Kansas State U** 44.62 342⇑ *i*P P 05 41 09.8 -1.0
KSU1 *e*pP pP 05 41 27.6 +6.5
ANMO **Albuquerque** 45.10 329 *e*P P 05 41 14.9 +0.3
12nm,0.9s,mb4.7
BINY **Binghamton** 45.33 5 *e*P P 05 41 13.9 -2.5
7.9nm,0.7s,mb4.7
TUC **Tucson** 45.53 323 *e*P P 05 41 18.0 +0.1
1.9nm,1.0s,mb4.0
116A **Eloy** 46.26 323 ⇑P P 05 41 24.4 +0.7
baz=46
115A **Sonoran Desert** 46.67 322 ⇓P P 05 41 27.8 +0.9
baz=47
Z14A **Wintersburg** 47.56 322 ⇑P P 05 41 34.5 +0.6
baz=48
MVCO **Mesa Verde** 47.89 330 *e*P P 05 41 35.2 -1.2
X15A **Humboldt** 47.92 324 ⇑P P 05 41 37.4 +0.7
baz=48
Y14A **Wickenburg** 47.99 323 ⇑P P 05 41 37.7 +0.4
baz=48
WUAZ **Wupatki** 48.16 326 *e*P P 05 41 39.1 +0.5
12nm,1.0s,mb4.9
X14A **Yava** 48.29 324 ⇓P P 05 41 40.4 +0.8
baz=48
W15A **Williams** 48.43 325 ⇓P P 05 41 41.5 +0.9
baz=49
ISCO **Idaho Springs** 48.60 334 *e*P P 05 41 41.6 -0.4
6.3nm,1.0s,mb4.6
Y12C **Blythe** 48.79 322 ⇑P P 05 41 43.9 +0.5
baz=49
W14A **Seligman** 48.92 324 ⇑P P 05 41 45.3 +0.9
baz=49
PDMCI **Parker Dam,Lak** 48.93 322 ⇑P P 05 41 45.3 +0.9
baz=49
X13A **Yucca** 48.94 323 ⇑P P 05 41 45.1 +0.5
baz=49
W13A **Hualapai Mount** 49.32 323 ⇑P P 05 41 48.5 +1.1
baz=50
IRM **Iron Mountain** 49.45 322 ⇑P P 05 41 49.0 +0.6
baz=50,SNR=5.2
PHWY **Pilot Hill** 49.78 335 *e*P P 05 41 50.8 -0.1
W12A **Cal Nev Ari** 50.05 323 ⇑P P 05 41 53.3 +0.3
baz=50
V12A **Nelson** 50.32 323 ⇑P P 05 41 55.6 +0.6
baz=50
U12A **Valley of Fire** 50.62 324 ⇓P P 05 41 57.9 +0.6
baz=51
HEC **Hector,Ludlow** 50.63 321 ⇓P P 05 41 58.5 +1.1
baz=51
BBRC **Big Bear Sol-O** 50.63 320 ⇓P P 05 41 58.2 +0.8
baz=51
CCUT **Cedar City** 50.73 326 *e*P P 05 41 59.0 +0.8
V11A **Goodsprings** 50.74 323 ⇑P P 05 41 58.6 +0.4
baz=51
TUQ **Turquoise Mtn.** 50.77 322 ⇑P P 05 41 59.2 +0.7
baz=51
MSU **Marysvale** 50.78 328 *e*P P 05 41 59.5 +0.9
TMUT **Trail Mountain** 50.86 329 *e*P P 05 41 55.8 -3.4
ARUT **Antelope Range** 50.95 326 *e*P P 05 42 00.9 +1.2
SHPR **Sheep Range** 51.04 324 *e*P P 05 42 01.5 +1.1
RRX **Edison Barstow** 51.08 321 ⇓P P 05 42 01.0 +0.2
baz=51
GSC **Goldstone** 51.23 322 *e*P P 05 42 03.1 +1.2
GSC **Goldstone** 51.23 322 ⇑P P 05 42 02.7 +0.8
baz=51
SHOC **Shoshone** 51.30 322 ⇓P P 05 42 03.1 +0.6
baz=51
RSSD **Black Hills** 51.61 338 *e*P P 05 42 04.5 -0.3
8.2nm,1.0s,mb4.6
U10A **Ash Meadows, A** 51.67 323 ⇓P P 05 42 05.9 +0.7
baz=52
EDW2 **Edwards Air Fo** 51.71 320 ⇑P P 05 42 05.7 +0.3
baz=52
DAU **Daniels Canyon** 51.73 330 *e*P P 05 42 06.6 +1.0
LRMC **Laurel Mountai** 51.90 321 ⇑P P 05 42 07.3 +0.5
baz=52
TPNV **Topopah Spring** 51.98 324 *e*P P 05 42 08.5 +1.0
5.3nm,1.0s,mb4.4
FURC **Furnace Creek,** 52.03 323 ⇓P P 05 42 08.6 +0.8
baz=52
MPMC **Manual Prospec** 52.15 322 ⇓P P 05 42 09.1 +0.3
baz=52
TCUT **Toone Canyon** 52.34 331 *e*P P 05 42 10.9 +0.7
DUG **Dugway** 52.35 329 *e*P P 05 42 10.9 +0.6
5.0nm,0.9s,mb4.4
ISA **Isabella** 52.51 321 ⇓P P 05 42 12.2 +0.8
baz=53
Q12A **Willow Creek R** 52.60 326 ⇓P P 05 42 12.7 +0.6
baz=53,SNR=5.3
GRAC **Grapevine Rang** 52.68 323 ⇑P P 05 42 13.6 +0.8
baz=53
BW06 **Boulder Array** 52.75 333 *e*P P 05 42 12.2 -1.1
13nm,1.3s,mb4.7
PDAR **Pinedale Array** 52.75 333 P P 05 42 12.4 -0.8
5.9nm,0.8s,mb4.6,baz=123,slow=8.2,SNR=56
PDAR LR LR 06 05 46.3
comp=Z,70nm,20.5s,MS3.7,baz=321,slow=37
PDAR **Pinedale Array** 52.75 333 P P 05 42 12.4 -0.8
PDAR LR LR 06 05 46.3
CWC **Cottonwood Cre** 52.76 322 ⇓P P 05 42 14.0 +0.8
baz=53
HWUT **Hardware Ranch** 52.79 331⇑ *e*P P 05 42 13.1 -0.4
18nm,0.8s,mb5.0
PKM **Peak Mountain** 52.90 319 ⇑P P 05 42 14.6 +0.3
baz=53
R10A **Warm Springs** 52.91 325 ⇑P P 05 42 15.7 +1.3
baz=53
P12A **McGill** 52.95 327 ⇓P P 05 42 15.3 +0.6
baz=53
S09A **Goldfield** 53.08 324 ⇑P P 05 42 15.9 +0.3
baz=53,SNR=5.9
SMMC **Simmler** 53.27 319 ⇑P P 05 42 17.5 +0.5
baz=53
R09A **Tonopah** 53.33 324 ⇑P P 05 42 17.9 +0.4
baz=54,SNR=5.2
AHID **Auburn Hatcher** 53.45 332 *e*P P 05 42 17.6 -0.8
3.9nm,0.8s,mb4.4
HELL **Mitchell Peak,** 53.49 321 ⇑P P 05 42 19.2 +0.5
baz=54
N13A **Wendover, West** 53.56 328 ⇓P P 05 42 19.4 +0.2
baz=54
Q09A **Carvers** 53.79 325 ⇑P P 05 42 21.5 +0.6
baz=54
REDW **Red Top Meadow** 53.80 333 *e*P P 05 42 20.3 -0.7
25nm,1.3s,mb5.0
O11A **Cowboy Ranch,** 53.82 327 ⇓P P 05 42 21.6 +0.5
baz=54
SNOW **Snow King Moun** 53.84 333 *e*P P 05 42 21.3 +0.1
LOHW **Long Hollow** 53.89 333 *e*P P 05 42 20.7 -0.9
9.3nm,1.2s,mb4.6
P10A **Eureka** 53.91 326 ⇓P P 05 42 22.6 +0.8
baz=54
TPAW **Teton Pass** 53.95 333 *e*P P 05 42 21.3 -0.7
15nm,1.2s,mb4.8
N12A **Clover Valley,** 54.00 328 ⇑P P 05 42 22.5 +0.1
baz=54
PKD **Parkfield** 54.00 320 ⇑P P 05 42 22.9 +0.5
baz=54
RRI2 **Red Ridge** 54.01 332 *e*P P 05 42 22.4 0.0
MOOW **Moose Ponds** 54.06 333 *e*P P 05 42 21.4 -1.5
6.4nm,1.2s,mb4.4
KCC **Kaiser Creek** 54.08 322 ⇓P P 05 42 23.4 +0.4
baz=54
T06C **Millerton Lake** 54.12 321 ⇑P P 05 42 24.1 +0.7
baz=54
NVAR **Mina Array Bea** 54.18 324 P P 05 42 24.5 +0.8
4.5nm,0.7s,mb4.5,baz=132,slow=7.6,SNR=44
NVAR **Mina Array Bea** 54.18 324 P P 05 42 24.5 +0.8
Q08A **Gabbs** 54.24 324 ⇑P P 05 42 24.7 +0.5
baz=54,SNR=5.1
P09A **Austin** 54.25 325 ⇑P P 05 42 24.7 +0.4
baz=54
IMW **Indian Meadow** 54.26 333 *e*P P 05 42 26.7 +2.4
6.9nm,1.0s,mb4.5
FLWY **Flagg Ranch** 54.30 333 *e*P P 05 42 24.1 -0.5
46nm,1.6s,mb5.2
M12A **Wells** 54.34 328 ⇓P P 05 42 24.4 -0.5
baz=54
N11A **Ellis Archery C** 54.35 327 ⇑P P 05 42 25.1 +0.2
baz=54
O10A **Cortez Mining,** 54.40 326 P P 05 42 26.1 +0.8
baz=54,SNR=7.3
U04C **Hernandez Rese** 54.41 320 ⇓P P 05 42 25.5 +0.2
baz=55
V03C **Hunter Liggett** 54.49 319 ⇓P P 05 42 26.5 +0.5
baz=55
LRV **Little Rabbit** 54.60 320 *e*P P 05 42 26.9 +0.2
O09A **Fish Creek Ran** 54.70 326 ⇓P P 05 42 27.9 +0.5
baz=55,SNR=8.1
S05C **Merced** 54.72 321 ⇓P P 05 42 27.8 +0.1
baz=55
S06C **San Francisco** 54.76 322 ⇓P P 05 42 28.3 +0.3
baz=55,SNR=7.7
M11A **Holland Ranch,** 54.81 328 ⇓P P 05 42 28.3 0.0
baz=55
ULM **Lac du Bonnet** 54.84 348 P P 05 42 26.3 -2.2
11nm,0.6s,mb5.1,baz=155,slow=6.8,SNR=24
ULM LR LR 06 04 23.8
comp=Z,61nm,21.9s,MS3.6,baz=227,slow=34
ULM **Lac du Bonnet** 54.84 348 *e*P P 05 42 26.1 -2.4
32nm,1.3s,mb5.2
ULM *e*pP pP 05 42 37.3 -1.7
P08A **Dixie Valley** 54.88 325 ⇓P P 05 42 29.3 +0.5
baz=55
R06C **Coleville** 54.92 323 ⇑P P 05 42 30.1 +0.9
baz=55,SNR=5.4
PACP **Pacheco Peak** 55.12 320 ⇑P P 05 42 30.7 +0.2
baz=55
CMB **Columbia Colle** 55.19 322 ⇓P P 05 42 31.1 +0.1
baz=55
GCMT **Greycliff** 55.21 335 *e*P P 05 42 30.5 -0.7
N09A **Rock Creek Ran** 55.35 326 ⇑P P 05 42 32.0 -0.2
baz=56
R05C **Kirkwood Meado** 55.42 323 P P 05 42 33.8 +1.1
baz=56,SNR=6.2
WCN **Washoe City** 55.61 323 ⇓P P 05 42 34.5 +0.5
baz=56
N08A **GE Springer Mi** 55.64 326 ⇑P P 05 42 33.7 -0.6
baz=56
HLID **Hailey** 55.64 331 *e*P P 05 42 33.9 -0.4
7.9nm,0.9s,mb4.7
O07A **Toulon** 55.65 325 ⇓P P 05 42 34.3 -0.1
baz=56
R04C **Big Horse Ranc** 55.66 322 ⇑P P 05 42 35.1 +0.7
baz=56
MCMT **McKenzie Canyo** 55.85 333 *e*P P 05 42 35.5 -0.3
LAVA **Lava Cap Winer** 55.85 322 ⇓P P 05 42 35.9 +0.1
baz=56
P06A **Stead Airport,** 55.93 324 ⇓P P 05 42 37.0 +0.6
baz=56
BOZ **Bozeman (W)** 55.93 334 *e*P P 05 42 35.3 -1.1
14nm,1.4s,mb4.8
BOZ *e*pP pP 05 42 47.9 +0.9
N07B **Gerlach** 56.11 325 ⇓P P 05 42 37.5 -0.2
baz=56,SNR=6.1
P05C **Yuba Gap, Truc** 56.12 323 ⇓P P 05 42 38.5 +0.8
baz=56
DLMT **Dillon** 56.14 333 *e*P P 05 42 37.2 -0.6
8.0nm,1.2s,mb4.6
O06A **Flanigan** 56.20 324 ⇓P P 05 42 38.8 +0.5
baz=56
L09A **Wilkinson Ranc** 56.23 327 ⇑P P 05 42 38.6 +0.1
baz=56
M08A **Happy Creek Ra** 56.23 326 ⇑P P 05 42 38.4 -0.1
baz=56
Q04C **Lincoln** 56.30 322 ⇓P P 05 42 39.5 +0.6
baz=56
BEKR **Beckwourth** 56.33 324 ⇓P P 05 42 39.8 +0.7
baz=56,SNR=5.4
N06A **Buffalo Meadow** 56.59 325 ⇑P P 05 42 41.3 +0.2
baz=57,SNR=18
M07A **Soldier Meadow** 56.63 326 ⇓P P 05 42 41.2 -0.2
baz=57
CVS **Carmenet Viney** 56.67 321 ⇓P P 05 42 41.7 +0.1
baz=57
L08A **Fields** 56.71 327 P P 05 42 42.0 +0.1
baz=57,SNR=8.7
O05C **Quincy** 56.72 323 ⇑P P 05 42 42.5 +0.5
baz=57,SNR=5.8
SUTB **Sutter Butte** 56.79 322 ⇓P P 05 42 42.4 0.0
baz=57
ORV **Oroville** 56.81 323 ⇓P P 05 42 43.0 +0.4
baz=57,SNR=7.5
HRY **Holter Researc** 56.85 335 *e*P P 05 42 41.8 -1.2
HRY *e*pP pP 05 42 53.7 +0.2
MNRC **McLaughlin Nat** 56.98 321 ⇓P P 05 42 44.3 +0.4
baz=57
WVOR **Wild Horse Val** 57.03 327 *e*P P 05 42 44.1 -0.1
14nm,1.0s,mb4.9
O04C **Chester** 57.05 324 ⇓P P 05 42 44.8 +0.6
baz=57,SNR=5.0
EGMT **Eagleton** 57.05 337 *e*P P 05 42 42.5 -1.8
6.4nm,1.2s,mb4.5
L07A **Adell** 57.14 326 ⇑P P 05 42 44.9 -0.1
baz=57
K08A **Mann Creek Ran** 57.16 327 ⇑P P 05 42 45.0 -0.1
baz=57,SNR=16
M06C **Likely Place G** 57.25 325 ⇓P P 05 42 46.0 +0.2
baz=57
HATC **Hat Creek Radi** 57.58 324 ⇓P P 05 42 48.2 +0.1
baz=58
GASB **Alder Springs** 57.62 322 ⇑P P 05 42 49.3 +1.0
baz=58
I09A **Lost Marbles R** 57.62 329 P P 05 42 48.0 -0.4
baz=58,SNR=5.4
M05C **Lookout** 57.74 325 ⇑P P 05 42 49.3 +0.1
baz=58,SNR=5.7
P01C **Double 8 Ranch** 57.89 322 ⇓P P 05 42 50.8 +0.6
baz=58
O02C **Red Bluff** 57.98 323 ⇑P P 05 42 50.6 -0.3
baz=58
L05A **Lakeview** 58.00 325 ⇑P P 05 42 51.4 +0.4
baz=58,SNR=6.4
I08A **Drewsey** 58.01 328 ⇑P P 05 42 50.6 -0.5
baz=58,SNR=6.3
BMO **Blue Mountains** 58.01 330 *e*P P 05 42 49.7 -1.4
1.3nm,0.8s,mb4.0
J07A **Hines** 58.03 327 ⇑P P 05 42 50.8 -0.5
baz=58
H09A **Durkee** 58.06 329 ⇓P P 05 42 50.7 -0.7
baz=58
WDC **Whiskeytown Da** 58.08 323 ⇓P P 05 42 49.6 -1.9
baz=58
J06A **Christmas Vall** 58.41 327 ⇑P P 05 42 53.8 0.0
baz=58
M04C **Macdoel** 58.41 325 ⇑P P 05 42 53.9 0.0
baz=58,SNR=7.3
H08A **Prairie City** 58.48 329 P P 05 42 54.5 +0.1
baz=59,SNR=8.4
I07A **Izee** 58.62 328 P P 05 42 55.4 +0.1
baz=59,SNR=6.8
L04A **Klamath Falls** 58.69 325 ⇑P P 05 42 55.6 -0.3
baz=59
M02C **Callahan** 58.76 324 ⇓P P 05 42 55.3 -1.0
baz=59
YBH **Yreka Blue Hor** 58.89 324 ⇑P P 05 42 56.7 -0.5
baz=59,SNR=5.5
SCHQ **Schefferville** 58.89 9 P P 05 42 54.0 -3.2
3.9nm,0.8s,mb4.5,baz=144,slow=8.6,SNR=4.1
SCHQ LR LR 06 06 19.2
comp=Z,88nm,19.2s,MS3.9,baz=122,slow=34
SCHQ **Schefferville** 58.89 9 P P 05 42 54.0 -3.2
SCHQ LR LR 06 06 19.2
I06A **Prineville** 58.90 327 ⇑P P 05 42 57.5 +0.2
baz=59,SNR=12
J05A **Fort Rock** 59.03 326 ⇓P P 05 42 58.2 0.0
baz=59,SNR=7.8
JCC **Jacoby Creek** 59.12 322 ⇑P P 05 42 59.1 +0.3
baz=59
F08A **Pendleton** 59.41 330 ⇓P P 05 43 00.4 -0.4
baz=60
WALA **Waterton Lakes** 59.56 335 *e*P P 05 43 01.1 -0.7
5.5nm,0.8s,mb4.6
I05A **Bend** 59.62 327 ⇑P P 05 43 02.2 0.0
baz=60
L02A **Cave Junction** 59.67 324 ⇑P P 05 43 02.5 -0.1
baz=60
M01C **Crescent City** 59.79 323 ⇓P P 05 43 03.8 +0.3
baz=60
H05A **Madras** 59.91 327 ⇑P P 05 43 04.4 +0.2
baz=60
K02A **Glendale** 59.98 325 ⇓P P 05 43 04.5 -0.3
baz=60
NEW **Newport** 60.38 333 *e*P P 05 43 06.6 -0.8
6.8nm,1.4s,mb4.5
J02A **Umpqua** 60.40 325 ⇑P P 05 43 07.7 +0.1
baz=60
D05A **Enumclaw** 61.99 329 ⇑P P 05 43 18.2 -0.2
baz=62
C05A **Tolt Reservoir** 62.17 330 ⇓P P 05 43 18.9 -0.7
baz=62
EDM **Edmonton** 62.59 338 *e*P P 05 43 20.4 -2.0
FCC **Fort Churchill** 62.69 352 *e*P P 05 43 20.8 -2.3
4.7nm,0.7s,mb4.7
A05A **Maple Falls** 63.24 331 ⇑P P 05 43 26.2 -0.6
baz=63
YKA **Yellowknife Ar** 70.42 344 P P 05 44 10.4 -2.0
1.3nm,0.6s,mb4.0,baz=139,slow=5.5,SNR=12
YKA LR LR 06 18 02.6
comp=Z,29nm,18.9s,MS3.5,baz=200,slow=38
YKA **Yellowknife Ar** 70.42 344 P P 05 44 10.4 -2.0
YKA LR LR 06 18 02.6
DBIC **Dimbokro** 76.09 82 P P 05 44 45.4 -0.4
5.5nm,0.9s,mb4.5,baz=258,slow=6.2,SNR=8.2
DBIC **Dimbokro** 76.09 82 P P 05 44 45.4 -0.4
DAWY **Dawson** 79.79 337 *e*P P 05 45 04.8 -1.7
INK **Inuvik** 80.09 342 *e*P P 05 45 05.5 -2.5
7.0nm,1.0s,mb4.5
SUMG **Summit** 80.14 12 *e*P P 05 45 05.8 -2.5
10nm,1.2s,mb4.6
VNA1 **Neumayer--Stat** 81.17 161 *e*P P 05 45 13.8 0.0
VNA1 *e* 05 45 27.6
TORD **Torodi Ar. Bea** 83.08 76 P P 05 45 22.9 -0.9
0.8nm,0.4s,mb4.1,baz=276,slow=6.1,SNR=30
TORD LR LR 06 18 23.5
comp=Z,68nm,18.7s,MS4.0,baz=260,slow=33
SNAA **Sanae** 83.12 162 *e*P P 05 45 22.8 -1.2
SNAA *e* 05 45 25.8
SNAA *e* 05 45 27.0
SNAA *e* 05 45 29.8
SNAA *e* 05 45 37.1
SNAA *e* 05 45 46.2
SNAA **Sanae** 83.12 162 *e*P P 05 45 22.6 -1.5
7.9nm,0.8s,mb4.8
SNAA *e*pP pP 05 45 36.7 +1.6
QSPA **South Pole Qui** 86.91 180 *e*P P 05 45 42.4 -0.6
7.5nm,0.8s,mb5.0
VNDA **Vanda** 92.72 191 P P 05 46 10.4 +0.1
1.1nm,0.7s,mb4.4,baz=103,slow=4.2,SNR=4.4
VNDA LR LR 06 19 08.9
comp=Z,61nm,19.6s,MS4.0,baz=141,slow=30
VNDA **Vanda** 92.72 191 *e*P P 05 46 10.4 +0.2
1.7nm,0.7s,mb4.6
NOA **NORSAR Array B** 93.56 29 LR LR 06 23 01.1
comp=Z,27nm,20.9s,MS3.7,baz=195,slow=32
GERES **GERESS Array B** 95.10 41 LR LR 06 23 27.6
comp=Z,40nm,19.4s,MS3.9,baz=295,slow=32
TSUM **Tsumeb** 96.54 110 *e*P P 05 46 27.8 -0.1
4.5nm,1.0s,mb4.8
ARCES **ARCESS Array B** 98.51 20 LR LR 06 28 16.3
comp=Z,36nm,18.1s,MS3.9,baz=250,slow=34
MDJ **Mudanjiang** 130.97 332 PKP PKPdf 05 52 07.6 -2.1
SONM **Songino Array** 135.11 353 PKP PKPdf 05 52 17.1 -0.4
0.2nm,0.5s,baz=327,slow=2.4,SNR=2.3
SNY **Shenyang** 135.89 334 *e*PKP PKPdf 05 52 15.4 -3.5
ASAR **Alice Springs** 137.21 230 PKhKP 05 52 13.8
0.4nm,0.8s,baz=145,slow=2.7,SNR=5.2
ASAR PKP PKPdf 05 52 21.1 -0.2
2.2nm,1.0s,baz=111,slow=1.7,SNR=8.3
ASAR **Alice Springs** 137.21 230 PKP PKPdf 05 52 21.1 -0.2
WMQ **Urumqi** 138.18 13 *e*PKP PKPdf 05 52 19.0 -4.1
HHC **Hu-ho-hao-te** 140.95 345 *e*PKP PKPdf 05 52 24.3 -3.9
HHC PP PP 05 55 27.7 -1.4
HHC PKS 05 55 58.7
HHC SKKS SKKSac 06 02 13.6 -6.4
HHC SS SS 06 13 47.9 -5.9
HHC PP PP
comp=Z,32nm,7.6s
HHC LR LR
comp=Z,146nm,27.5s,MS4.6
SSE **Sheshan** 145.53 326 PKP PKPdf 05 52 33.2 -3.0
NJ2 **Nanjing** 146.02 330 *e*PKP PKPdf 05 52 33.3 -3.8
NJ2 PKP2 PKPab 05 52 37.0 -1.5
NJ2 APKP 05 52 50.2
NJ2 PP PP 05 56 00.0 +0.5
NJ2 PKS 05 56 07.0
NJ2 SKS SKSdf 05 59 30.0 -13
NJ2 SKKS SKKSac 06 02 39.0 -10
NJ2 PP PP
comp=Z,20nm,10.0s
NJ2 LR LR
comp=E,80nm,20.2s
NJ2 LR LR
comp=Z,30nm,30.3s
FITZ **Fitzroy Crossi** 146.72 230 *e*P PKPdf 05 52 40.4 +2.2
comp=Z,13nm,0.9s
MBWA **Marble Bar** 148.77 218 *e*PKPbc PKPbc 05 52 45.1 -0.4
KMI **Kunming** 157.96 352 PKP PKPdf 05 52 52.7 -2.1
KMI APKP 05 53 06.5
KMI XPKP 05 53 14.3
KMI PP PP 05 57 08.7 +1.1
KMI PP PP
comp=Z,100nm,9.7s
KMI LR LR
comp=Z,30nm,28.8s,MS4.0

MAN 06 05:34:38.5, 700N×12380E, h6km, mb2.2, ML3.9, MS0.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	0.50	63	⇓ *i*P	Pg	05 34 48.5	+0.3
CTBH				*i* S	Sg	05 34 55.8	+1.2
PAGZ	**Pagadian**	0.94	334	*e*P	Pg	05 34 56.4	-0.2
PAGZ				*e*S	Sg	05 35 06.7	-2.1
IPIL	**Ipil**	1.45	303	*e*P	Pn	05 35 04.7	-0.5
BUKP	**Musuan**	1.53	55	*e*P	Pn	05 35 05.9	-0.5

*NEIC **06** 06:04:03.4, 3309S×6893W, h7km, ML3.3(GUC), After GUC.*

GUC 06 06:04:03.4±0.4, 3309S×6893W, h7km±3km, MD3.5, ML3.3, 9C-7D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDZ	**Mendoza**	0.22	18	⇓ *i*P	Pg	06 04 09.0	+1.2
MDZ				*i* S	Sg	06 04 14.0	+3.2
SJCH	**San Jose de Ma**	1.31	245	*i* P	Pn	06 04 25.7	-2.4
SJCH				*i* S	Sb	06 04 43.5	-1.7
SJCH				AML	AML	06 04 44.4	
	comp=N,314nm,0.2s						
SJCH	**San Jose de Ma**	1.31	245	*i* P	Pn	06 04 25.7	-2.4
SJCH				*i* S	Sb	06 04 43.5	-1.7
PCH	**Pirque**	1.43	248	⇑ *i*P	Pn	06 04 28.7	-1.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCH				i S	Sb	06 04 48.1	-0.5
JACH	Jahuel	1.46	286	⇑iP	Pn	06 04 29.3	-0.7
JACH				i S	Sn	06 04 49.0	-0.3
ANTU	Antumapu	1.50	251	⇑iP	Pn	06 04 29.9	-0.8
ANTU				i S	Sn	06 04 50.3	-0.2
ANTU				AML	AML	06 04 53.7	
	comp=E,319nm,0.5s						
ANTU	Antumapu	1.50	251	⇑iP	Pn	06 04 29.9	-0.8
ANTU				i S	Sn	06 04 50.3	-0.2
RCDM	Rinconada Maip	1.62	255	⇓iP	Pn	06 04 32.1	-0.2
RCDM				i S	Sn	06 04 53.9	+0.6
RCDM				AML	AML	06 04 55.7	
	comp=E,143nm,0.4s						
RCDM	Rinconada Maip	1.62	255	⇓iP	Pn	06 04 32.1	-0.2
RCDM				i S	Sn	06 04 53.9	+0.6
CHCH	Chadas Angostu	1.66	239	⇑iP	Pn	06 04 32.5	-0.4
CHCH				i S	Sn	06 04 54.8	+0.3
CACH	El Canelo	1.73	233	⇓iP	Pn	06 04 33.8	0.0
CACH				i S	Sn	06 04 57.2	+1.2
CICH	Cipreses	1.74	225	⇑iP	Pn	06 04 34.0	0.0
CICH				i S	Sn	06 04 57.1	+0.7
ROCH	El Roble	1.75	273	⇑iP	Pn	06 04 34.5	+0.4
TACH	Talagante	1.77	251	⇓iP	Pn	06 04 34.3	-0.1
TACH				i S	Sn	06 04 57.7	+0.6
LNV	Longovilo	2.24	247	⇑iP	Pn	06 04 41.7	+0.9
LNV				i S	Sn	06 05 10.9	+2.1
CHNG	Los Chungos	2.48	298	AML	AML	06 05 21.9	
	comp=E,215nm,0.7s						
CMCH	Combarbala	2.60	317	⇑iP	Pn	06 04 47.0	+1.2
CMCH				AML	AML	06 05 25.8	
	comp=E,1µm,0.7s						
TLL	Tololo Astrono	3.33	331	⇓iP	Pn	06 04 57.5	+1.8
TLL				i S	Sn	06 05 38.4	+2.9
TLL				AML	AML	06 05 53.4	
	comp=N,267nm,0.4s						
TLL	Tololo Astrono	3.33	331	⇓iP	Pn	06 04 57.5	+1.8
TLL				i S	Sn	06 05 38.4	+2.9

CASC 06 06:40:04.6±2.7**, 711N×8285W, h35**^{km}±999^{km}**, MD4.2, 6C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVD	David	1.38	17	eP	Pn	06 40 28.7	+1.4
DVD				eS	Sn	06 40 44.8	+0.4
BRU	Baru	1.71	10	eS	Sn	06 40 56.5	+3.9
CTCR	Cotoan	1.78	3	⇑iP	Pn	06 40 29.6	-3.3
CTCR				eS	Sn	06 40 51.6	-2.7
CNI	Changuinola	2.32	8	⇑eP	Pn	06 40 44.7	+4.4
CNI				eS	Sn	06 41 11.7	+4.2
BUS	Buena Vista	2.59	340	eP	Pn	06 40 44.2	+0.2
BUS				⇑iP		06 40 44.4	
AZU	Azuero	2.65	75	eP	Pn	06 40 45.4	+0.7
AZU				eS	Sn	06 41 14.7	-1.0
LCR2	La Lucha 2	2.85	337	eP	Pn	06 40 48.4	+0.8
LCR2				⇑iP		06 40 48.9	
URSC	Urasca	2.86	341	eP	Pn	06 40 48.1	+0.4
URSC				⇑iP		06 40 48.8	
PRS1	Puriscal	3.20	333	eP	Pn	06 40 52.2	-0.2
PRS1				⇑iP		06 40 52.7	
ACH	Altos	3.29	62	eP	Pn	06 40 56.0	+2.4
ACH				eS	Sn	06 41 33.6	+2.3

*NEIC **06** 06:50:34.5, 3389S×72.11W, h19^{km}, ML3.5(GUC), After GUC.*

GUC 06 06:50:34.5±0.6**, 3389S×7211W, h19**^{km}±10^{km}**, ML3.5, 14C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNV	Longovilo	0.58	96	eP	Pg	06 50 46.0	-0.1
LNV				i S	Sg	06 50 53.6	-0.4
LCCH	Las Cruces	0.61	47	⇑iP	Pb	06 50 45.9	-0.7
LCCH				i S	Sb	06 50 54.4	-0.5
IHA	Instituto Hidr	0.95	24	⇑iP	Pb	06 50 51.3	-1.0
IHA				i S	Sb	06 51 04.0	-0.6
TACH	Talagante	1.00	77	⇑iP	Pb	06 50 52.0	-1.3
RCDM	Rinconada Maip	1.16	70	eP	Pn	06 50 54.3	-1.4
RCDM				i S	Sb	06 51 09.8	-0.7
RCDM				AML	AML	06 51 10.8	
	comp=E,985nm,0.4s						
RCDM	Rinconada Maip	1.16	70	eP	Pn	06 50 54.3	-1.4
RCDM				i S	Sb	06 51 09.8	-0.7
SFDO	San Fernando	1.16	129	⇑iP	Pn	06 50 54.6	-1.2
CHCH	Chadas Angostu	1.21	92	⇑iP	Pn	06 50 55.8	-0.7
CHCH				i S	Sb	06 51 11.8	-0.4
ANTU	Antumapu	1.27	76	⇑iP	Pn	06 50 56.6	-0.7
ANTU				i S	Sn	06 51 13.3	-0.5
ANTU				AML	AML	06 51 23.8	
	comp=N,980nm,0.5s						
ANTU	Antumapu	1.27	76	⇑iP	Pn	06 50 56.6	-0.7
ANTU				i S	Sn	06 51 13.3	-0.5
CACH	El Canelo	1.27	101	⇓iP	Pn	06 50 57.3	0.0
CACH				i S	Sn	06 51 14.8	+0.9
SAN	Santiago	1.28	70	eP	Pn	06 50 57.0	-0.4
SAN				i S	Sn	06 51 13.5	-0.6
SAN				AML	AML	06 51 23.6	
	comp=E,965nm,0.8s						
SAN	Santiago	1.28	70	eP	Pn	06 50 57.0	-0.4
SAN				i S	Sn	06 51 13.5	-0.6
NICH	Los Niches	1.32	147	eP	Pn	06 50 57.2	-0.8
NICH				i S	Sn	06 51 15.0	-0.1
PCH	Pirque	1.36	79	⇑iP	Pn	06 50 57.8	-0.6
PCH				i S	Sn	06 51 15.7	-0.2
DSCH	Colegio Aleman	1.38	69	⇓iP	Pn	06 50 57.9	-0.8
DSCH				i S	Sn	06 51 16.4	-0.1
CLCH	Cerro Calan	1.40	70	⇑iP	Pn	06 50 58.9	-0.1
CLCH				i S	Sn	06 51 17.1	0.0
CLCH				AML	AML	06 51 32.4	
	comp=N,825nm,0.7s						
PEL	Peldehue	1.41	58	⇑iP	Pn	06 50 58.8	-0.3
PEL				i S	Sn	06 51 17.5	+0.4
PEL				AML	AML	06 51 20.5	
	comp=N,2µm,0.6s						
PEL	Peldehue	1.41	58	⇑iP	Pn	06 50 58.8	-0.3
PEL				i S	Sn	06 51 17.5	+0.4
CICH	Cipreses	1.46	107	eP	Pn	06 50 59.8	-0.1
TALC	Talca	1.55	166	⇑iP	Pn	06 51 01.1	0.0
TALC				i S	Sn	06 51 20.9	+0.1
TALC				AML	AML	06 51 24.1	
	comp=E,2µm,0.4s						
TALC	Talca	1.55	166	⇑iP	Pn	06 51 01.1	0.0
TALC				i S	Sn	06 51 20.9	+0.1
FCH	Farellones	1.62	70	⇑iP	Pn	06 51 02.0	0.0
FCH				i S	Sn	06 51 23.3	+0.9
FCH				AML	AML	06 51 24.9	
	comp=E,747nm,0.4s						
CCHI	Chillan	2.70	179	eP	Pn	06 51 17.9	+0.9
CCHI				AML	AML	06 52 03.3	
	comp=E,392nm,0.6s						
MDZ	Mendoza	2.91	71	eP	Pn	06 51 16.2	-3.6

NNC 06 07:22:37.4±6.2**, 3903N×7001E, h10**^{km}±13^{km}**, mb3.3, mpv2.8, 5C-2D, Error ellipse: s-maj=42.8km s-min=25.7km az=178.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	4.09	5	⇑Pn	Pn	07 23 42.0	+2.1
	2.0nm,0.6s,baz=178,slow=13,SNR=16						
KK31				⇑Sn	Sn	07 24 33.9	+6.0
	2.0nm,0.4s,baz=174,slow=17,SNR=4.3						
KK31				⇓Lg		07 24 47.5	
	3.4nm,0.5s,baz=165,slow=29,SNR=6.4						
TKM2	Tokmak 2	5.75	46	⇑Pn	Pn	07 24 02.2	-0.5
	0.2nm,0.4s						
TKM2				⇓Sn	Sn	07 25 11.1	+2.4
	0.4nm,0.7s						
AB31	Akbulak array	12.51	328	⇑Pn	Pn	07 25 36.1	+0.7
	0.5nm,0.5s,baz=152,slow=11,SNR=17						
AB31				⇑Sn	Sn	07 27 54.6	-0.2
	0.3nm,0.4s,baz=163,slow=22,SNR=3.1						

*ISCJB **06** 07:36:32.8±1.1, 190S±02×1777W±0.1, h558^{km}±16^{km}, mb4.0/15, Error ellipse: s-maj=32.6km s-min=12.4km az=119.8*

*IDC **06** 07:36:34.0±1.7, 1895S×17768W, h554^{km}±20^{km}, mb3.4/5, mb1 3.7/6, mb1mx3.4/13, mbtmp4.4/6, Error ellipse: s-maj=47.8km s-min=13.8km az=147.0*

*NEIC **06** 07:36:33.8±0.8, 1906S×17761W, h557^{km}±10^{km}, mb4.4/11, Error ellipse: s-maj=18.7km s-min=7.3km az=150.0*

ISC 06 07:36:33.5±1.1**, 191S**±02×**1776W**±01**, h552**^{km}±15^{km}**, n23, σ0ˢ61**/24**, mb4.0**/15**, 4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.55	48	P	P	07 38 27.7	+0.9
	11nm,0.3s,baz=287,slow=19,SNR=12						
AFI				S	S	07 39 58.5	-1.2
	2.7nm,0.3s,baz=66,slow=20,SNR=3.9						
CTA	Charters Tower	34.06	262	eP	P	07 42 32.5	+0.3
	6.7nm,0.9s,mb4.2						
CTAO	Charters Tower	34.06	262	eP	P	07 42 32.5	+0.3
	7.5nm,0.7s,mb4.3						
TOO	Toolangi	37.08	232	eP	P	07 42 57.8	+0.6
	5.7nm,0.8s,mb4.2						
STKA	Stephens Creek	38.79	243	⇓iP	P	07 43 11.9	+0.8
	3.6nm,0.9s,mb3.9						
STKA	Stephens Creek	38.79	243	P	P	07 43 11.7	+0.5
	3.8nm,0.5s,mb4.2,baz=87,slow=9.7,SNR=20						
STKA	Stephens Creek	38.79	243	eP	P	07 43 11.5	+0.4
WB2	Warramunga Arr	45.20	261	⇓iP	P	07 44 01.4	-0.1
WRAB	Tennant Creek	45.20	261	eP	P	07 44 01.1	-0.4
	6.7nm,0.4s,mb4.5						
AS31	Alice Springs	45.25	255	⇓iP	P	07 44 02.1	+0.2
ASAR	Alice Springs	45.26	255	P	P	07 44 02.1	+0.2
	9.1nm,0.8s,mb4.4,baz=89,slow=7.8,SNR=111						
ASAR				PcP	PcP	07 45 29.2	-0.8
	1.0nm,0.6s,baz=102,slow=4.1,SNR=5.5						
ASAR				S	S	07 50 00.3	-1.7
	0.5nm,0.7s,baz=92,slow=15,SNR=5.5						
ASPA	Alice Springs	45.26	255	⇓iP	P	07 44 02.1	+0.2
KAKA	Kakadu	48.36	270	eP	P	07 44 25.6	+0.3
	9.8nm,0.4s,mb4.7						
FORT	Forrest	50.24	245	eP	P	07 44 38.5	-0.7
	11nm,0.5s,mb4.5						
FITZ	Fitzroy Crossi	53.63	261	eP	P	07 45 04.0	+0.5
	7.4nm,0.5s,mb4.3						
MBWA	Marble Bar	58.57	256	eP	P	07 45 37.1	-0.5
	5.0nm,0.3s,mb4.2						
KLBR	Kellerberrin	59.04	244	eP	P	07 45 40.2	-0.5
	51nm,1.6s,mb4.5						
MJAR	Matsushiro Arr	69.29	323	P	P	07 46 45.7	0.0
	0.8nm,0.4s,mb3.6,baz=157,slow=5.9,SNR=7.4						
QSPA	South Pole Qui	71.01	180	eP	P	07 46 55.4	-0.5
	1.3nm,0.6s,mb3.6						
CMB	Columbia Colle	78.13	43	eP	P	07 47 35.8	0.0
	1.0nm,0.6s,mb3.3						
NVAR	Mina Array Bea	79.70	43	P	P	07 47 45.4	+1.2
	0.8nm,0.6s,mb3.2,baz=226,slow=11,SNR=8.9						
PDAR	Pinedale Array	87.64	43	P	P	07 48 23.1	-0.3
	0.4nm,0.6s,mb3.3,baz=227,slow=3.7,SNR=5.4						
DAVOX	Davos	151.67	349	PKPbc	PKPbc	07 55 26.2	+0.5
	41nm,0.9s,baz=22,slow=5.4,SNR=3.2						

*ORF **06** 07:49:09.5, 3667N×1938E, h10^{km}, mb4.8*

*BGS **06** 07:49:27.6±1.7, 3843N×2076E, h10^{km}, mb4.8*

*BJI **06** 07:49:43.6, 4029N×1992E, h6^{km}, mB5.0, mb4.9, Ms5.0, Msz4.6*

*ROM **06** 07:49:43.4±0.3, 3999N×2004E, h10^{km}, Ml5.0/47, Error ellipse: s-maj=4.2km s-min=2.1km az=73.0*

*ATH **06** 07:49:43.2, 4021N×1949E, h14^{km}±2^{km}, ML5.1*

*IDC **06** 07:49:44.7±0.6, 40.18N×1975E, h0^{km}, mb4.7/18, mb1 4.7/30, mb1mx4.7/32, mbtmp4.6/30, ML4.1/12, MS4.1/27, Ms1 4.1/27, ms1mx3.9/35, Error ellipse: s-maj=10.7km s-min=9.6km az=110.0*

*PDG **06** 07:49:45.1±0.3, 40.15N×1973E, h10^{km}±1^{km}*

*MOS **06** 07:49:45.2±1.2, 4023N×1971E, h10^{km}, mb5.2/53, MS4.4/18, Error ellipse: s-maj=2.9km s-min=2.1km az=110.2*

*CSEM **06** 07:49:45.2, 4037N×1977E, h2^{km}, mb4.9*

*ISCJB **06** 07:49:45.3±0.3, 4021N±001×19685E±0010, h6^{km}±2^{km}, mb4.9/123, MS4.4/46, Error ellipse: s-maj=1.9km s-min=1.2km az=27.1*

*SKO **06** 07:49:45.8, 4006N×1957E, h11^{km}, M4.4, ML4.8*

*THE **06** 07:49:46.0, 40.14N×1967E, h0^{km}, ML4.8*

*NEIC **06** 07:49:46.8±0.6, 40.16N×1974E, h9^{km}±4^{km}, mb4.9/107, ML5.0(PDG), ML5.1(ATH), Error ellipse: s-maj=2.7km s-min=1.9km az=202.0*

NEIC Felt at Ioannina and on Corfu, Greece.

*HRVD **06** 07:49:46.8±0.4, 4005N×1953E, h16^{km}±2^{km}, MW4.8/58, Centroid moment Tensor Solution. LP body waves: s13,c14;Mantle waves: s58,c77; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.13±.17; $M_{\theta\theta}$0.74±.10; $M_{\phi\phi}$-1.87±.12; $M_{r\theta}$0.81±.40; $M_{\theta\phi}$0.72±.07; $M_{\phi r}$-0.57±.27; Best double couple: $M_0$2.00000×10^{16} NP1:ϕ_s20.00000°, δ44.00000°, λ146.00000°. NP2:ϕ_s136.00000°, δ67.00000°, λ51.00000°. Principal axes: T 1.7700, Plg52.0000°, Azm0.0000°; N 0.4610, Plg35.0000°, Azm153.0000°; P -2.2290, Plg13.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*TIR **06** 07:49:46.1, 40.17N×1983E, h16^{km}, Ml4.5*

*LDG **06** 07:49:47.5±0.1, 4008N×1983E, h10^{km}, Ml4.7/13, Error ellipse: s-maj=4.4km s-min=3.8km az=16.0*

ISC 06 07:49:47.3±0.3**, 4017N**±001×**19698E**±0010**, h11**^{km}±2^{km}**, h15**^{km}±1.5^{km}**:pP-P, n1081, σ1ˢ17**/1217**, mb4.9**/124**, MS4.4**/46**, 97C-110D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.27	63	i Pg	Pg	07 49 50.9	-1.9
TPE				i Sg	Sg	07 49 55.3	-1.2
VLO	Vlora	0.33	332	i Pg	Pg	07 49 55.2	+1.2
VLO				i Sg	Sg	07 49 59.0	+0.5
SRN	Sarande	0.37	141	i Pg	Pg	07 49 52.6	-2.1
SRN				i Sg	Sg	07 49 56.9	-2.8
KEK	Kerkira	0.47	170	ePB	Pg	07 49 54.6	-1.9
KEK				eSB	Sg	07 50 02.6	0.0
LSK	Leskovik	0.69	92	i Pg	Pg	07 49 58.7	-2.0
LSK				i Sg	Sg	07 50 09.9	+0.1
IGT	Igoumenitsa	0.81	142	ePg	Pg	07 50 00.3	-2.5
IGT				eSg	Sg	07 50 12.6	-0.8
SCTE	Santa Cesarea	0.95	264	Pg	Pg	07 50 05.7	+0.1
SCTE				Sg	Sg	07 50 22.2	+4.2
	26µm,0.4s						
JAN	Janina	1.03	120	ePN	Pn	07 50 04.7	-3.0
JAN				eSB	Sb	07 50 21.1	+0.5
TIR	Tirane	1.18	6	Pn	Pn	07 50 08.7	-1.1
TIR				Sn	Sn	07 50 26.7	+0.8
	55µm,1.2s						
TIR	Tirane	1.18	6	ePg	Pg	07 50 08.9	-1.1
TIR				eSg	Sg	07 50 26.3	+1.0
TIR	Tirane	1.18	6	i Pg	Pg	07 50 08.9	-1.1
LCI	Lecce	1.22	278	⇓iPg	Pg	07 50 10.9	0.0
MEV	Metsovon	1.24	108	ePg	Pn	07 50 09.2	-1.5
MEV	Metsovon	1.24	108	ePg	Pn	07 50 09.1	-1.5
OHR	Ohrid	1.26	41	ePn	Pn	07 50 10.1	-0.8
OHR				eSn	Sn	07 50 28.4	+0.6
	comp=E,25µm,1.0s						
OHR				eLg		07 50 31.5	
OHR				eLg		07 50 32.2	
OHR	Ohrid	1.26	41	ePg	Pn	07 50 08.3	-2.6
OHR	Ohrid	1.26	41	ePn	Pn	07 50 10.0	-0.9
OHR				eSn	Sn	07 50 28.3	+0.5
	comp=E,25µm,1.0s						
OHR				eLg		07 50 31.4	
QSH	Qafa e Shtames	1.36	7	i Pn	Pn	07 50 13.8	+1.6
FNA	Florina	1.42	64	ePg	Pn	07 50 11.8	-1.2
BIA	Bitola	1.50	55	ePg	Pn	07 50 13.2	-1.0
BIA				eSg	Sg	07 50 35.5	0.0
BIA	Bitola	1.50	55	ePn	Pn	07 50 13.7	-0.5
BIA				eSn	Sn	07 50 32.5	-1.3
	comp=E,6µm,0.7s						
BIA				eLg		07 50 37.1	
BIA				eLg		07 50 38.7	
BIA	Bitola	1.50	55	ePg	Pn	07 50 13.2	-1.0
BIA				eSn	Sn	07 50 32.4	-1.4
	comp=E,6µm,0.7s						
BIA				eSg	Sg	07 50 35.5	-0.1
BIA				eLg		07 50 37.0	
KZN	Kozani	1.59	85	ePG	Pn	07 50 15.9	+0.4
KZN				eSN	Sn	07 50 39.0	+2.9
LKD	Levkas	1.64	153	ePb	Pn	07 50 15.2	-0.9
LKD				eSb	Sb	07 50 38.2	0.0
LKD	Levkas	1.64	153	ePb	Pn	07 50 15.2	-0.9
LKD				eSb	Sb	07 50 38.2	-0.1
ULC	Ulcinj	1.82	349	⇑iPn	Pn	07 50 18.7	+0.1
ULC				eSn	Sn	07 50 46.4	+4.7
EVR	Evrytania	2.06	127	ePG	Pn	07 50 23.1	+1.2
EVR				eSN	Sn	07 50 50.3	+2.7
NOCI	Noci	2.10	288	ePn	Pn	07 50 22.4	-0.1
	comp=E,12µm,0.4s						
VLS	Valsamata	2.11	161	ePN	Pn	07 50 21.4	-1.2
LIT	Litokhoron	2.14	91	ePn	Pn	07 50 23.5	+0.4
LIT				eSn	Sn	07 50 51.8	+2.2
GRG	Griva	2.20	68	ePn	Pn	07 50 24.3	+0.4
GRG				eSn	Sn	07 50 52.1	+0.9
BUM	Brajici-Budva	2.21	344	⇑iPn	Pn	07 50 24.1	+0.1
BUM				eSn	Sn	07 50 55.5	+4.2
BUM	Brajici-Budva	2.21	344	⇑iPn	Pn	07 50 24.0	0.0
BUM				eSn	Sn	07 50 55.5	+4.2
SKO	Skopje	2.23	36	ePn	Pn	07 50 25.9	+1.7
SKO				eSn	Sn	07 50 56.0	+4.2
SKO	Skopje	2.23	36	i Pn	Pn	07 50 26.0	+1.8
SKO				eSn	Sn	07 50 54.6	+2.8
	comp=E,13µm,1.1s						
SKO				eLg		07 50 58.2	
SKO				eLg		07 50 58.2	
SKO	Skopje	2.23	36	i Pn	Pn	07 50 26.0	+1.8
SKO				eSn	Sn	07 50 54.6	+2.8
	comp=E,13µm,1.1s						
SKO				eLg		07 50 58.2	
TTG	Podgorica	2.28	352	⇑iPn	Pn	07 50 25.2	+0.3
TTG				eSn	Sn	07 50 57.3	+4.3
AGG	Agios Georgios	2.34	119	ePn	Pn	07 50 26.5	+0.8
STIP	Stip	2.42	50	ePn	Pn	07 50 27.4	+0.5
STIP				eSn	Sn	07 50 58.7	+2.2
STIP	Stip	2.42	50	i Pn	Pn	07 50 27.6	+0.7
STIP				eSn	Sn	07 51 02.0	+5.5
	comp=E,1µm,0.9s						
STIP				eLg		07 51 06.1	
STIP				eLg		07 51 08.1	
STIP	Stip	2.42	50	ePn	Pn	07 50 27.4	+0.5
STIP				eSn	Sn	07 50 58.7	+2.2
STIP				eLg		07 51 06.0	
PVY	Plav	2.43	5	⇑iPn	Pn	07 50 27.4	+0.5
PVY				eSn	Sn	07 51 01.1	+4.4
HCY	Herceg Novi	2.44	339	⇑iPn	Pn	07 50 26.9	-0.4
HCY				eSn	Sn	07 51 01.3	+4.2
VAY	Valandovo	2.46	61	ePn	Pn	07 50 27.4	-0.1
VAY				eSn	Sn	07 51 00.1	+2.5
VAY	Valandovo	2.46	61	i Pn	Pn	07 50 27.4	-0.1
VAY				eSn	Sn	07 51 00.8	+3.2
	comp=N,8µm,1.1s						
VAY				eLg		07 51 05.9	
VAY				eLg		07 51 08.7	
VAY	Valandovo	2.46	61	i Pn	Pn	07 50 27.3	-0.2
VAY				eSn	Sn	07 51 00.1	+2.5
VAY				eLg		07 51 08.6	
AMUR	Altamura	2.47	288	⇓ePn	Pn	07 50 27.7	+0.2
	comp=N,5µm,0.7s						
TIP	Timpagrande	2.48	247	ePn	Pn	07 50 28.1	+0.4
TIP	Timpagrande	2.48	247	ePn	Pn	07 50 28.1	+0.5
ORI	Oriolo Calabro	2.49	269	⇓ePn	Pn	07 50 27.8	-0.1
	comp=N,10µm,0.9s						
RLS	Riolos of Patr	2.52	146	ePN	Pn	07 50 28.1	-0.2
THE	Thessaloniki	2.54	79	ePn	Pn	07 50 28.1	-0.4
THE				eSn	Sn	07 51 01.4	+2.1
SERS	Sersale	2.59	245	⇓ePn	Pn	07 50 28.6	-0.6
	comp=N,3µm,0.9s						
KNT	Kendrikon	2.63	67	ePn	Pn	07 50 29.9	+0.2
HORT	Hortiatis	2.63	80	ePn	Pn	07 50 29.6	-0.2
HORT				eSn	Sn	07 51 03.7	+1.9
NKY	Niksic	2.69	349	⇓iPn	Pn	07 50 31.0	+0.4
NKY				eSn	Sn	07 51 07.2	+4.1
NKY	Niksic	2.69	349	⇓iPn	Pn	07 50 31.0	+0.4
NKY				eSn	Sn	07 51 07.2	+4.1
IVA	Berane	2.70	3	⇓iPn	Pn	07 50 32.1	+1.4
IVA				eSn	Sn	07 51 07.8	+4.4
TREB	Trebinje	2.74	339	P	Pn	07 50 31.0	-0.2
TREB				S	Sn	07 51 06.4	+2.1
SCHR	S. Chirico Rap	2.77	272	⇓ePn	Pn	07 50 32.1	+0.4
	comp=N,2µm,0.7s						
XOR	Xorichti	2.81	106	ePn	Pn	07 50 32.3	0.0
NEO	Neokhori	2.85	107	ePN	Pn	07 50 32.8	0.0
BRY	Bratogost	2.86	343	⇑iPn	Pn	07 50 32.7	-0.2
BRY				eSn	Sn	07 51 11.0	+3.6
SOH	Sokhos	2.86	76	ePn	Pn	07 50 32.9	0.0
GRI	Girifalco	2.87	243	Pn	Pn	07 50 32.6	-0.5
	comp=N,2µm,0.8s						
PLG	Polygyros	2.87	85	ePB	Pn	07 50 33.9	+0.8
LKR	Lokris	2.98	120	ePN	Pn	07 50 34.5	0.0
CUC	Castrocucco	2.98	268	⇓ePn	Pn	07 50 35.3	+0.7
	comp=N,4µm,0.9s						
PLAC	Placanica	3.06	237	⇓ePn	Pn	07 50 35.0	-0.6
	comp=N,1µm,0.9s						
PAIG	Paliouri	3.07	93	ePn	Pn	07 50 35.1	-0.7
PAIG				eSn	Sn	07 51 14.2	+1.8
KKB	Krupnik	3.07	55	i P	Pn	07 50 36.7	+0.9
UPM	Unac-Piva	3.08	349	⇓iPn	Pn	07 50 37.0	+1.0
UPM				eSn	Sn	07 51 16.4	+3.5
SLCN	Sala Consilina	3.12	275	⇓ePn	Pn	07 50 37.1	+0.7
	comp=N,6µm,1.0s						
PLE	Pljevlja	3.16	356	⇑iPn	Pn	07 50 37.8	+0.7
PLE				eSn	Sn	07 51 18.9	+4.0
VULT	Monte Vulture	3.21	285	⇓ePn	Pn	07 50 38.2	+0.5
	comp=N,8µm,0.8s						
FGMS	Monte Sant'Ang	3.22	300	⇓ePn	Pn	07 50 38.2	+0.3
MSAG	Monte S. Angel	3.25	299	Pn	Pn	07 50 38.6	+0.3
	comp=N,4µm,0.6s						
MRLC	Muro Lucano	3.26	282	⇓ePn	Pn	07 50 38.8	+0.3
	comp=N,4µm,1.2s						
FG4	Candela	3.32	288	Pn	Pn	07 50 40.3	+1.0
CMPR	Campora	3.37	274	⇓ePn	Pn	07 50 40.8	+0.9
	comp=N,4µm,1.5s						
MMB	Musomiste	3.37	64	ePn	Pn	07 50 40.1	+0.2
MMB	Musomiste	3.37	64	i P	Pn	07 50 40.5	+0.6
CDRU	Civita di Ruta	3.37	277	⇓ePn	Pn	07 50 40.5	+0.5
	comp=N,3µm,1.4s						
NVR	Nevrokopi	3.37	68	ePN	Pn	07 50 40.3	+0.3
SGO	Sicignano	3.38	278	⇓ePn	Pn	07 50 40.4	+0.4
AOS	Alonnisos	3.38	106	ePn	Pn	07 50 40.0	-0.1
AOS				eSn	Sn	07 51 21.5	+1.3
SGRT	San Giovanni R	3.38	299	Pn	Pn	07 50 40.5	+0.4
	comp=N,3µm,0.8s						
SGTA	Sant Agata di	3.43	288	Pn	Pn	07 50 41.5	+0.7
	comp=N,12µm,1.6s						
RGNG	Rignano Grg	3.46	297	Pn	Pn	07 50 41.2	+0.1
ITM	Ithomi	3.46	149	ePN	Pn	07 50 41.1	-0.1
CAFE	Carife	3.50	286	⇓ePn	Pn	07 50 42.3	+0.6
	comp=N,15µm,1.9s						
SNAL	S. Angelo Dei	3.50	284	⇓ePn	Pn	07 50 42.2	+0.5
	comp=N,12µm,1.4s						
MCRV	Calabrutti - M	3.51	281	Pn	Pn	07 50 41.9	+0.1
	comp=N,2µm,0.9s						
CEL	Celeste	3.52	238	⇓ePn	Pn	07 50 41.2	-0.8
	comp=N,3µm,0.8s						
SOI	Samo	3.52	235	⇓ePn	Pn	07 50 40.9	-1.2
	comp=N,2µm,0.8s						
MGER	Gerania Oros	3.53	127	ePN	Pn	07 50 41.0	-1.1
FG5	Orsara di Pugl	3.54	290	Pn	Pn	07 50 43.3	+1.0
VTS	Vitosha	3.58	46	ePn	Pn	07 50 43.6	+0.8
VTS				eSn	Sn	07 51 27.5	+2.4
VTS	Vitosha	3.58	46	i P	Pn	07 50 43.9	+1.1
VTS	Vitosha	3.58	46	⇑iP	Pn	07 50 44.2	+1.4
SCLL	Scilla	3.64	240	Pn	Pn	07 50 42.6	-1.0
	comp=N,516nm,0.8s						
BBLS	Bajina Basta -	3.70	357	i Pn	Pn	07 50 45.3	+0.9
MSRU	Castanea	3.77	241	⇓ePn	Pn	07 50 43.9	-1.5
	comp=N,3µm,0.9s						
MSI	Messina ING	3.77	240	Pn	Pn	07 50 44.7	-0.8
GRUS	Gruza	3.79	11	i Pn	Pn	07 50 45.6	-0.1
MTTG	Motta San Giov	3.79	236	Pn	Pn	07 50 44.5	-1.3
	comp=N,1µm,0.6s						
FG2	Serracapriola	3.80	297	Pn	Pn	07 50 46.5	+0.6
NAIG	Nisos Aigina	3.81	128	ePN	Pn	07 50 45.0	-1.0
ATH	Athens Observa	3.82	124	ePN	Pn	07 50 45.7	-0.5
PSB1	Pescosannita	3.86	287	Pn	Pn	07 50 47.8	+1.1
	comp=N,5µm,1.5s						
PTL	Penteli	3.87	122	ePN	Pn	07 50 46.1	-0.8
CIGN	Sant'Elia a Pi	3.92	294	Pn	Pn	07 50 48.6	+1.1
	comp=N,5µm,1.2s						
DIVS	Divcibare	3.93	3	⇓iPn	Pn	07 50 47.5	-0.1
DIVS				Sg	Sg	07 51 58.9	+5.4
DIVS	Divcibare	3.93	3	ePn	Pn	07 50 47.7	+0.1
KVR	Kavouri	3.94	125	ePN	Pn	07 50 46.5	-1.3
SACR	S. Croce Del S	3.98	289	⇓ePn	Pn	07 50 49.9	+1.6
	comp=N,3µm,1.1s						

LLI **Lipari** 4.07 246 Pn Pn 07 50 50.2 +0.7
comp=N,6µm,0.7s
VPL **Vulcano Piano** 4.07 245⇓ePn Pn 07 50 48.2 -1.4
comp=N,2µm,0.7s
RZN **Rozhen** 4.09 67 *i* P Pn 07 50 50.8 +0.9
BSSO **Busso** 4.11 291 Pn Pn 07 50 51.5 +1.4
comp=N,4µm,1.4s
PGB **Panagyurishte** 4.12 53 *i* P Pn 07 50 51.0 +0.8
MMME **Mongiuffi-Meli** 4.12 239⇓ePn Pn 07 50 49.1 -1.1
comp=N,2µm,1.1s
LOS **Limnos** 4.14 92 ePn Pn 07 50 50.2 -0.3
LOS eSn Sn 07 51 41.1 +2.2
FRES **Fresagrandinar** 4.21 297 Pn Pn 07 50 52.7 +1.3
comp=N,3µm,0.7s
TRIV **Trivento** 4.21 294 Pn Pn 07 50 52.8 +1.3
comp=N,9µm,1.7s
LIA **Limnos Island** 4.22 92 ePN Pn 07 50 51.3 -0.3
PLD **Plovdiv** 4.24 61 ePn Pn 07 50 53.5 +1.6
PLD eSn Sn 07 51 44.6 +3.1
PLD **Plovdiv** 4.24 61 *i* P Pn 07 50 53.4 +1.5
SVIS **Svilajnac** 4.27 15⇑iPn Pn 07 50 52.2 -0.1
VLI **Veliai** 4.29 143 ePN Pn 07 50 52.1 -0.4
VAGA **Valle Agricola** 4.33 288⇓ePn Pn 07 50 54.4 +1.3
comp=N,2µm,0.9s
MOCO **Biccari - m.te** 4.37 288 Pn Pn 07 50 44.9 -8.8
comp=N,7µm,1.4s
MIDA **Miranda** 4.38 291⇓ePn Pn 07 50 55.2 +1.4
comp=N,4µm,1.6s
RNI2 **Rionero Sannit** 4.47 292⇓ePn Pn 07 50 57.1 +2.1
comp=N,5µm,1.7s
RFI **Roccamonfina** 4.48 286 Pn Pn 07 50 55.8 +0.6
comp=N,203nm,1.2s
MNO **Monte Soro** 4.49 242 Pn Pn 07 50 55.7 +0.4
comp=N,2µm,1.0s
CERA **Filignano** 4.53 290⇓ePn Pn 07 50 57.8 +1.9
comp=N,8µm,1.9s
RDO **Rodhopi** 4.55 76 ePN Pn 07 50 55.8 -0.3
AGST **Augusta-Monte** 4.55 232 Pn Pn 07 50 52.5 -3.6
comp=N,288nm,0.5s
KDZ **Kurdzhali** 4.58 69 *i* P Pn 07 50 56.0 -0.5
KYTH **Kithira** 4.69 145 ePN Pn 07 50 58.5 +0.4
SSY **Sortino** 4.71 232 Pn Pn 07 50 54.7 -3.7
comp=N,2µm,0.7s
SDI **San Donato** 4.72 291 Pn Pn 07 50 59.8 +1.4
comp=N,319nm,0.6s
INTR **Introdacqua** 4.75 295⇓ePn Pn 07 50 59.4 +0.5
comp=N,2µm,1.1s
GADA **Gvkgeada** 4.75 88 P Pn 07 50 58.6 -0.2
DIM **Dimitrovgrad** 4.79 65 *i* P Pn 07 51 00.0 +0.5
HAVL **Avola** 4.81 230⇓ePn Pn 07 50 56.0 -3.7
comp=N,1µm,0.6s
ALN **Alexandroupoli** 4.89 79 ePn Pn 07 51 00.6 -0.2
BOZC **Bozcaada** 4.89 92 *i* P Pn 07 51 01.4 +0.6
VVLD **Villa Vallelon** 4.90 292 Pn Pn 07 51 02.3 +1.4
comp=N,5µm,1.9s
GIB **Gibilmanna** 4.92 246 Pn Pn 07 51 00.8 -0.5
comp=N,853nm,1.0s
DJES **Djerdap** 4.92 24 *i* Pn Pn 07 51 00.9 -0.4
VAE **Valguarnera** 4.93 239 Pn Pn 07 51 00.9 -0.4
comp=N,1.1nm,0.3s,baz=244,slow=4.0,SNR=9.4
BLY **Banja Luka** 4.94 339 P Pn 07 51 01.8 +0.3
BLY S Sn 07 51 59.0 +0.4
ENEZ **Enez** 4.96 81 P Pn 07 51 02.1 +0.3
HMDC **Modica** 5.01 232 Pn Pn 07 50 59.2 -3.3
comp=N,3µm,0.6s
FAGN **Fagnano** 5.06 296⇓ePn Pn 07 51 04.5 +1.3
comp=N,1µm,0.6s
GIUL **Giuliano Di Ro** 5.08 288⇓ePn Pn 07 51 04.2 +0.8
comp=N,628nm,1.2s
RAFF **Raffo Rosso** 5.11 236 Pn Pn 07 51 01.6 -2.2
comp=N,3µm,1.5s
PRK **Paraskevi** 5.15 98 ePN Pn 07 51 05.0 +0.6
TERO **Teramo** 5.20 300 Pn Pn 07 51 06.0 +1.0
comp=N,531nm,0.7s
PVL **Pavlikeni** 5.20 52 *i* P Pn 07 51 05.0 -0.1
AQU **L'Aquila** 5.22 297⇓iP Pn 07 51 06.8 +1.4
AQU **L'Aquila** 5.22 297 ePn Pn 07 51 06.4 +1.1
AQU Pn Pn 07 51 07.0 +1.6
AQU **L'Aquila** 5.22 297 Pn Pn 07 51 07.0 +1.6
CHOS **Chios island** 5.25 108 ePn Pn 07 51 06.6 +0.9
OFFI **Offida** 5.29 303 Pn Pn 07 51 08.0 +1.7
comp=N,2µm,0.6s
CERT **Cerreto** 5.38 291 Pn Pn 07 51 08.7 +1.2
comp=N,823nm,1.3s
FIAM **Fiamignano** 5.38 295⇓ePn Pn 07 51 09.8 +2.2
comp=N,1µm,1.3s
AYVA **Ayvalik** 5.46 97 *i* P Pn 07 51 10.2 +1.6
CORL **Corleone** 5.47 247 Pn Pn 07 51 08.2 -0.6
comp=N,635nm,1.1s
RDP **Rocca di Papa** 5.52 289 Pn Pn 07 51 10.5 +1.1
comp=N,661nm,0.8s
APE **Apeiranthos** 5.52 122 ePn Pn 07 51 08.8 -0.7
APE **Apeiranthos** 5.52 122 ePN Pn 07 51 09.0 -0.5
APE **Apeiranthos** 5.52 122⇑iP Pn 07 51 08.9 -0.6
APE **Apeiranthos** 5.52 122*c* iP Pn 07 51 08.6 -0.9
MTCE **Montecelio** 5.57 292⇓ePn Pn 07 51 11.3 +1.1
comp=N,538nm,1.3s
EDRB **Edirne** 5.59 70 eP Pn 07 51 10.3 -0.1
BZS **Buzias** 5.62 14⇓iP Pn 07 51 10.2 -0.7
BZS **Buzias** 5.62 14 P Pn 07 51 11.2 +0.3
BZS **Buzias** 5.62 14 ⇓P Pn 07 51 10.2 -0.7
CANB **Canakkale** 5.65 89 P Pn 07 51 11.3 +0.1
NVLJ **Novalja** 5.66 322⇑*i*iPn Pn 07 51 11.4 0.0
NVLJ *i* Sn Sn 07 52 14.5 -1.9
AOI **Ancona** 5.67 309⇑ePn Pn 07 51 11.2 -0.3
comp=N,433nm,0.9s
JMB **Yambol** 5.67 64 ePn Pn 07 51 11.5 -0.1
MNS **Montasola** 5.73 295⇑ePn Pn 07 51 13.8 +1.4
comp=N,678nm,1.5s
RKY **Sarkoy-Tekirda** 5.73 82 eP Pn 07 51 13.6 +1.2
MFT **Murefte** 5.81 82 P Pn 07 51 13.6 0.0
CING **Cingoli** 5.82 305⇑ePn Pn 07 51 13.8 +0.2
comp=N,292nm,0.7s
SANT **Santorini** 5.91 128 ePn Pn 07 51 14.5 -0.3
SANT **Santorini** 5.91 128 ePn Pn 07 51 14.5 -0.4
SNTG **Esanatoglia** 5.92 304⇑ePn Pn 07 51 15.3 +0.3
comp=N,185nm,0.5s
VAM **Vamos** 5.95 142 ePN Pn 07 51 14.0 -1.3
BLCB **Balcova** 5.97 105 eP Pn 07 51 17.9 +2.3
ASS **Assisi** 6.02 301⇓ePn Pn 07 51 17.9 +1.6
comp=N,5.0nm,0.4s
ARV **Arcevia** 6.04 306⇑ePn Pn 07 51 16.7 +0.1
comp=N,211nm,0.6s
MRMT **Marmara Adasi** 6.05 83 eP Pn 07 51 18.2 +1.5
PKSM **Moragy** 6.08 353⇓iP Pn 07 51 16.9 -0.3
PKSM **Moragy** 6.08 353 ⇓P Pn 07 51 16.9 -0.4
SMG **Samos** 6.08 112 ePN Pn 07 51 17.6 +0.4
TOLF **Tolfa** 6.11 290⇓ePn Pn 07 51 18.5 +0.9
comp=N,220nm,1.0s
IZM **Izmir** 6.13 104 eP Pn 07 51 19.8 +2.0
MURB **Monte Urbino** 6.19 302⇓ePn Pn 07 51 20.2 +1.5
comp=N,806nm,0.6s
BOJS **Bojanci** 6.25 330 ePn Pn 07 51 19.5 0.0
BOJS eSn Sn 07 52 30.4 -0.5
BOJS
comp=Z,498nm,1.2s
BUC1 **Bucharest** 6.28 46 P Pn 07 51 21.8 +1.9
GVD **Gavdhos** 6.37 145 ePN Pn 07 51 19.5 -1.6
IDI **Anoyia** 6.38 138 Pn Pn 07 51 19.0 -2.3
comp=Z,11nm,0.3s,baz=323,slow=8.7,SNR=39
IDI Sn Sn 07 52 28.3 -5.8
comp=Z,48nm,0.3s,baz=104,slow=23,SNR=10
IDI LR LR 07 53 17.2
comp=Z,221nm,20.6s,baz=326,slow=33
IDI **Anoyia** 6.38 138 Pn Pn 07 51 19.0 -2.3
IDI Sn Sn 07 52 28.3 -5.8
AKS **Akhisar** 6.41 99 eP Pn 07 51 23.9 +2.2
MTUR **Matau** 6.41 36⇑iP Pn 07 51 24.1 +2.4
MTUR **Matau** 6.41 36 ⇑P Pn 07 51 24.1 +2.4
LATE **Laterza** 6.42 295⇓ePn Pn 07 51 22.9 +1.1
comp=Z,46nm,1.1s
CRES **Cresnjev** 6.45 333 *i* Pn Pn 07 51 21.8 -0.4
CRES eSn Sn 07 52 35.6 -0.2
BADI **Badiali** 6.49 303⇓ePn Pn 07 51 24.4 +1.6
comp=Z,112µm,22.0s
PRD **Provadia** 6.51 60 *i* P Pn 07 51 23.0 -0.1
VOIR 6.57 35⇑iP Pn 07 51 26.1 +2.2
VOIR 6.57 35 ⇑P Pn 07 51 26.1 +2.3
RSM **Repubblica di** 6.57 307 Pn Pn 07 51 24.5 +0.6
comp=Z,676nm,1.2s
ELBA **Catalca** 6.71 79 *i* P Pn 07 51 27.3 +1.5
SNX **Sinaia** 6.72 38⇑iP Pn 07 51 28.3 +2.4
SNX **Sinaia** 6.72 38 ⇑P Pn 07 51 28.3 +2.4
BODT **Bodrum** 6.72 115 eP Pn 07 51 26.6 +0.6

ARCI **Arcidosso** 6.73 296 Pn Pn 07 51 27.8 +1.7
comp=Z,207nm,1.2s
NPS **Neapolis** 6.78 134 ePN Pn 07 51 26.2 -0.6
PDKS **Podkum** 6.81 331 ePn Pn 07 51 26.9 -0.4
MAON **Monte Argentar** 6.83 292 Pn Pn 07 51 27.4 -0.1
comp=Z,291nm,1.3s
AYDN **Tasoluk** 6.85 109 *i* P Pn 07 51 28.9 +1.1
DRGR 6.97 17⇓iP Pn 07 51 29.6 +0.2
DRGR 6.97 17 P Pn 07 51 30.5 +1.1
DRGR 6.97 17 ⇓P Pn 07 51 29.6 +0.3
LJU **Ljubljana** 6.98 329 ePn Pn 07 51 29.1 -0.4
LJU eSn Sn 07 52 50.0 +1.1
MLR **Muntele Rosu** 7.02 39 Pn Pn 07 51 30.7 +0.6
comp=Z,2.1nm,0.3s,baz=199,slow=7.1,SNR=40
MLR **Muntele Rosu** 7.02 39⇑iP Pn 07 51 32.0 +1.9
MLR **Muntele Rosu** 7.02 39 P Pn 07 51 32.3 +2.2
MLR **Muntele Rosu** 7.02 39 ⇑P Pn 07 51 32.0 +1.9
TRI **Trieste** 7.04 324⇑iPn Pn 07 51 29.5 -0.8
DAT **Datca** 7.08 117 eP Pn 07 51 35.4 +4.5
CSNT **Castellina Chi** 7.09 300⇑ePn Pn 07 51 31.8 +0.7
comp=Z,141nm,0.8s
GRFL **Gerfalco** 7.17 297 Pn Pn 07 51 33.3 +1.1
comp=Z,73nm,0.9s
ISK **Istanbul-Kandi** 7.18 80 eP Pn 07 51 32.7 +0.4
KLYT **Kilyos** 7.18 78 eP Pn 07 51 36.7 +4.4
VOY **Vojsko** 7.23 326 ePn Pn 07 51 32.4 -0.6
VOY eSn Sn 07 52 52.9 -2.2
GEMT **Gemlik** 7.26 85 eP Pn 07 51 34.2 +0.8
PERS **Pernice** 7.27 334 ePn Pn 07 51 32.7 -0.8
SEI **Scarperia** 7.31 305 Pn Pn 07 51 35.9 +1.8
comp=Z,691nm,0.8s
BUD **Budapest** 7.33 356 ePn Pn 07 51 40.7 +6.4
OBKA **Obir** 7.36 331 *i* Pn Pn 07 51 34.1 -0.7
SNR=48
OBKA ⇑*i*Sn Sn 07 52 56.9 -1.4
YER **Yerkesik** 7.37 112 eP Pn 07 51 40.8 +5.9
YLV **Yalova** 7.40 84 eP Pn 07 51 37.7 +2.4
CVD **Cernavoda** 7.44 53 P Pn 07 51 38.1 +2.3
CADS **Cadrg** 7.45 326 *i* Pn Pn 07 51 35.3 -0.7
KARP **Karpathos** 7.49 126 ePN Pn 07 51 35.7 -0.9
FNVD **Fontana Vidola** 7.51 305 Pn Pn 07 51 38.9 +2.0
comp=Z,285nm,1.2s
ROBS **Robic** 7.56 325 *i* Pn Pn 07 51 36.5 -1.0
ROBS eSn Sn 07 53 00.4 -2.9
ROBS **Robic** 7.56 325 *i* Pn Pn 07 51 36.5 -1.1
HARR **Harsova** 7.58 51⇓iP Pn 07 51 38.6 +0.8
HRT **Hereke** 7.63 82 eP Pn 07 51 39.9 +1.5
GDZ **Gediz** 7.63 95 *i* Pn Pn 07 51 39.9 +1.4
PZZT **Monte Pizzetto** 7.66 304 Pn Pn 07 51 39.5 +0.6
comp=Z,217nm,1.2s
DENT **Denizli** 7.66 105 eP Pn 07 51 41.1 +2.2
ADVT **Abdulvahap** 7.68 85 eP Pn 07 51 39.8 +0.7
ARSA **Arzberg** 7.69 338⇑iPn Pn 07 51 38.5 -0.8
SNR=25
ARSA ⇑*i*Sn Sn 07 53 05.8 -0.6
DNZL **Cakiroluk** 7.70 106 *i* P Pn 07 51 41.5 +2.1
PII **Pisa** 7.70 300 Pn Pn 07 51 40.8 +1.4
comp=Z,68nm,0.6s
PSZ **Piszkesteto** 7.75 1 ePn Pn 07 51 39.4 -0.6
PSZ **Piszkesteto** 7.75 1⇓iP Pn 07 51 39.9 -0.1
PSZ **Piszkesteto** 7.75 1 ePn Pn 07 51 39.6 -0.5
TIRR **Tirgusor** 7.75 54⇑iP Pn 07 51 40.2 +0.1
TIRR **Tirgusor** 7.75 54 ePn Pn 07 51 39.3 -0.8
TIRR **Tirgusor** 7.75 54 P Pn 07 51 41.6 +1.5
DALT **Dalyan (Mudla)** 7.79 113 eP Pn 07 51 45.7 +5.0
VSL **Villasalto** 7.97 268 ePn Pn 07 51 44.2 +1.1
VSL **Villasalto** 7.97 268 ePn Pn 07 51 44.2 +1.1
CFR **Carcaliu** 7.98 48⇑iP Pn 07 51 44.0 +0.8
CFR **Carcaliu** 7.98 48 ⇑P Pn 07 51 44.0 +0.8
VLC **Villacollemand** 7.98 303 ePn Pn 07 51 44.0 +0.8
VLC eSn Sn 07 53 12.3 -1.2
VLC **Villacollemand** 7.98 303 ePn Pn 07 51 44.0 +0.7
VLC eSn Sn 07 53 12.3 -1.2
FETY **Fethiye** 8.17 113 eP Pn 07 51 49.1 +3.3
CONA **Conrad Observa** 8.23 342 *i* Pn Pn 07 51 45.5 -1.2
SNR=8.4
ZST **Bratislava** 8.23 348 ePN Pn 07 51 46.8 +0.1
ZST *e* 07 51 55.4
ZST *e* 07 53 17.5
KBA **Koelnbreinsper** 8.30 328⇓iPn Pn 07 51 46.8 -0.8
KBA ⇓*i*Sn Sn 07 53 20.0 -1.3
VYHS **Vyhne** 8.34 356 ePN Pn 07 51 47.7 -0.5
VYHS *e* 07 53 19.7
VYHS *e* 07 54 07.0
VYHS **Vyhne** 8.34 356 eP Pn 07 51 47.7 -0.5
VYHS eS Sn 07 53 19.7 -2.7
BURAR **Bucovina Array** 8.44 26⇓iP Pn 07 51 52.0 +2.5
BURAR **Bucovina Array** 8.44 26 ⇓P Pn 07 51 52.0 +2.5
ESKT **Eskisehir** 8.61 91 eP Pn 07 51 53.7 +1.9
MOA **Molln** 8.61 335⇓iPn Pn 07 51 51.8 -0.1
SNR=38
MOA ⇓*i*Sn Sn 07 53 28.8 -0.3
ELL **Elmali** 8.71 110 eP Pn 07 51 57.1 +3.8
ISP **Isparta** 8.73 102 eP Pn 07 51 57.2 +3.6
ISP **Isparta** 8.73 102 ePn Pn 07 51 53.0 -0.6
MDU **Mudurnu** 8.80 84 eP Pn 07 51 55.6 +1.1
CRVS **Cervenica-Dubn** 8.82 8 ePN Pn 07 51 55.1 +0.3
CRVS *e* 07 52 02.3
CRVS *e* 07 54 19.2
BOB **Bobbio (Coli)** 8.86 305 Pn Pn 07 51 56.0 +0.7
KOLS **Kolonicke sedl** 8.95 11 eP Pn 07 51 57.4 +0.8
KOLS eSg Sn 07 54 35.1 +58
WTTA **Wattenberg** 9.18 323⇑iPn Pn 07 51 59.3 -0.4
SNR=42
WTTA ⇓*i*Sn Sn 07 53 41.9 -1.0
ANTB **Antalya** 9.19 107 eP Pn 07 52 01.8 +2.0
NIE **Niedzica** 9.26 2 *i* Pc Pn 07 52 02.9 +2.1
NIE ePP 07 52 11.3
NIE eSn Sn 07 53 45.0 +0.1
WATA **Walderalm** 9.26 323⇑iPn Pn 07 52 00.5 -0.2
SNR=70
WATA ⇓*i*Sn Sn 07 53 43.2 -1.8
KEST **Kesra** 9.30 245 Pn Pn 07 52 01.4 +0.1
comp=Z,0.2nm,0.3s,baz=0.0,slow=3.2,SNR=15
SQTA **Sankt Quirin** 9.35 322⇑iPn Pn 07 52 02.2 +0.2
SNR=52
SQTA ⇑*i*Sn Sn 07 53 45.4 -1.7
VRAC **Vranov** 9.40 347 Pn Pn 07 52 02.5 -0.2
comp=Z,0.5nm,0.3s,baz=175,slow=12,SNR=13
VRAC **Vranov** 9.40 347⇑iP Pn 07 52 00.7 -2.0
VRAC **Vranov** 9.40 347 ⇑P Pn 07 52 00.7 -2.0
VRAC **Vranov** 9.40 347 P Pn 07 52 04.3 +1.6
MOTA **Moosalm** 9.48 322⇓iPn Pn 07 52 03.9 0.0
SNR=156
MOTA ⇑*i*Sn Sn 07 53 48.6 -1.9
MOTA **Moosalm** 9.48 322⇓iPn Pn 07 52 03.9 0.0
MOTA *i* Sn Sn 07 53 48.6 -1.9
KIS **Kishinev** 9.50 41 eP Pn 07 52 02.0 -2.1
KIS eS Sn 07 53 54.0 +3.1
KIS MLR MLR
comp=Z,4µm,8.0s
KIS MLR MLR
comp=N,3µm,6.0s
KIS MLR MLR
comp=E,3µm,8.0s
KIS MLR MLR
comp=Z,4µm,12.0s
KIS **Kishinev** 9.50 41 eP Pn 07 52 02.0 -2.1
KIS eS Sn 07 53 54.0 +3.1
comp=Z,4µm,12.0s
KIZT **Kizilcal** 9.50 94 eP Pn 07 52 05.9 +1.8
TREC **Trest** 9.60 343 AMS AMS 07 56 20.0
comp=Z,2µm,8.4s
GEC2 **GERESS Array S** 9.67 336 ePn Pn 07 52 05.1 -1.3
GERES **GERESS Array B** 9.67 336 Pn Pn 07 52 05.0 -1.4
comp=Z,3.5nm,0.3s,baz=156,slow=12,SNR=107
GERES Sn Sn 07 53 52.6 -2.4
comp=Z,2.7nm,0.3s,baz=152,slow=24,SNR=5.1
KWP **Kalwaria** 9.70 12 eP Pn 07 52 09.4 +2.6
KWP L 07 56 22.0
comp=Z,3.8nm,14.2s
KWP **Kalwaria** 9.70 12 ePn Pn 07 52 06.0 -0.7
comp=Z,83nm,1.1s
KWP **Kalwaria** 9.70 12 ePn Pn 07 52 06.0 -0.8
comp=Z,83nm,1.1s
KWP **Kalwaria** 9.70 12 eP Pn 07 52 09.4 +2.6
comp=Z,4µm,14.2s
DAVOX **Davos** 9.72 316 Pn Pn 07 52 07.0 -0.1
comp=Z,4.0nm,0.3s,baz=143,slow=11,SNR=26
DAVOX Sn Sn 07 53 56.4 +0.1
comp=Z,3.2nm,0.3s,baz=42,slow=21,SNR=3.9
DAVOX LR LR 07 56 32.1
comp=Z,1µm,21.1s,baz=124,slow=42

DAVOX **Davos** 9.72 316 Pn Pn 07 52 07.0 -0.1
DAVOX Sn Sn 07 53 56.4 +0.1
DAVOX LR LR 07 56 32.1
DAVOX **Davos** 9.72 316 Pn Pn 07 52 07.0 -0.1
DAVOX Sn Sn 07 53 56.4 +0.2
MORC **Moravsky Berou** 9.72 352⇑*i*P Pn 07 52 06.6 -0.6
MORC **Moravsky Berou** 9.72 352 ⇑P Pn 07 52 06.6 -0.6
MORC **Moravsky Berou** 9.72 352 P Pn 07 52 08.2 +1.0
OKC **Ostrava-Krasne** 9.73 354 eP Pn 07 52 08.1 +0.9
OKC AMS AMS 07 57 20.0
comp=Z,4µm,10.2s
OKC **Ostrava-Krasne** 9.73 354 ePn Pn 07 52 08.1 +0.9
KDHN **Kadinhani** 9.76 96 *i* P Pn 07 52 11.8 +4.2
SAOF **Saorge** 9.80 297 eP Pn 07 52 10.0 +1.8
DAVOS **Davos** 9.80 316 P Pn 07 52 07.0 -1.2
DAVOS 07 53 56.4
SBF **Sospel** 9.84 296 ePn Pn 07 52 08.8 0.0
REVF **Revere** 9.85 295 eP Pn 07 52 10.5 +1.6
AUTN **L'Aution** 9.89 297 eP Pn 07 52 10.0 +0.6
SAFT **Safranbolu** 9.92 80 eP Pn 07 52 10.7 +0.8
KHC **Kasperske Hory** 9.96 336 eP Pn 07 52 09.1 -1.3
KHC *ex* x 07 52 28.5
KHC eS Sn 07 54 00.5 -1.6
comp=Z,113nm,1.9s
KHC AMS AMS 07 56 50.0
comp=Z,3µm,10.7s
KHC **Kasperske Hory** 9.96 336 ePn Pn 07 52 09.1 -1.3
KHC *e* 07 52 28.5
KHC eSn Sn 07 54 00.5 -1.6
KHC **Kasperske Hory** 9.96 336 ePn Pn 07 52 09.1 -1.3
KHC eS Sn 07 54 00.5 -1.6
RAC **Raciborz** 9.97 354 eP Pn 07 52 11.5 +1.0
RAC ePP 07 52 20.3
TOUF **Mont Tournerai** 10.02 297 eP Pn 07 52 13.3 +2.1
DAVA **Damuels** 10.05 318⇓iPn Pn 07 52 12.4 +0.8
SNR=16
MVIF **Mont Vial** 10.05 296 eP Pn 07 52 12.3 +0.7
OJC **Ojcow** 10.05 0⇑iP Pn 07 52 12.4 +0.8
OJC ePP 07 52 20.8
ANTO **Ankara** 10.05 88 eP Pn 07 52 13.2 +1.6
KONT **Konya--Tatoy** 10.10 99 eP Pn 07 52 15.5 +3.2
LVV **L'vov** 10.12 16 eP Pn 07 52 15.1 +2.5
LVV eS Sn 07 54 12.0 +5.9
LVV MLR MLR
comp=Z,1µm,9.0s
LVV **L'vov** 10.12 16 eP Pn 07 52 15.1 +2.5
comp=Z,1µm,9.0s
LVV eS Sn 07 54 12.0 +5.9
WET **Wettzell** 10.20 334 ePn Pn 07 52 11.9 -1.7
FRF **La Foret Royal** 10.31 293 ePn Pn 07 52 15.2 +0.1
LMR **La Mourre** 10.35 292 ePn Pn 07 52 15.3 -0.4
DPC **Dobruska-Polom** 10.45 348 eP Pn 07 52 18.5 +1.4
DPC AMS AMS 07 57 10.0
comp=Z,3µm,9.1s
PRU **Pruhonice** 10.47 341 eP Pn 07 52 17.1 -0.2
PRU AMS AMS 07 57 40.0
comp=Z,2µm,9.4s
PRA **Prague** 10.57 341 P Pn 07 52 19.0 +0.3
MBDF **Montbardon** 10.58 300 ePn Pn 07 52 18.8 -0.1
MBDF eSn Sn 07 54 12.7 -4.6
comp=Z,28nm,0.6s
MBDF **Montbardon** 10.58 300 ePn Pn 07 52 18.8 -0.1
MBDF eSn Sn 07 54 12.7 -4.6
comp=Z,14nm,0.6s
UPC **Upice** 10.65 347 eP Pn 07 52 20.2 +0.3
BR131 **Keskin Array S** 10.72 88 ePn Pn 07 52 20.3 -0.4
BR131 **Keskin Array S** 10.72 88 ePn Pn 07 52 20.3 -0.5
BRTR **Keskin Array B** 10.72 88 Pn Pn 07 52 21.5 +0.7
comp=Z,0.4nm,0.3s,baz=269,slow=12,SNR=28
BRTR **Keskin Array B** 10.72 88 *i* P Pn 07 52 22.5 +1.7
BRTR pmax pmax
comp=Z,7.0nm,0.9s
BRTR **Keskin Array B** 10.72 88 *i* P Pn 07 52 22.5 +1.7
comp=Z,7.0nm,0.9s
TAVF **Tavernes** 10.73 293 eP Pn 07 52 23.2 +2.2
LPG **La Plagne** 10.89 303 ePn Pn 07 52 23.3 +0.2
LPG eSn Sn 07 54 20.0 -5.0
comp=Z,82nm,0.7s
LPG **La Plagne** 10.89 303 ePn Pn 07 52 23.3 +0.2
LPG eSn Sn 07 54 20.0 -5.0
comp=Z,41nm,0.7s
LPL **La Plagne** 10.91 304 ePn Pn 07 52 22.7 -0.7
LPL eSn Sn 07 54 16.9 -8.6
comp=Z,64nm,0.6s
LPL **La Plagne** 10.91 304 ePn Pn 07 52 22.7 -0.7
LPL eSn Sn 07 54 16.9 -8.6
comp=Z,32nm,0.6s
BERF **Bertagne** 10.93 291 eP Pn 07 52 27.1 +3.5
OQ25 **Le Caire** 10.93 297 eP Pn 07 52 21.6 -2.1
KSP **Ksiaz** 10.93 349 eP Pn 07 52 22.9 -0.8
KSP L 07 57 34.4
comp=Z,2.2nm,15.2s
KSP **Ksiaz** 10.93 349 eP Pn 07 52 22.9 -0.8
KSP ePP 07 52 34.0
KSP eS Sn 07 54 38.0 +12
BZK **Bozkurt** 10.95 76 eP Pn 07 52 24.7 +0.7
VILF **Villemus** 11.03 294 eP Pn 07 52 26.0 +0.9
RSL **Roselend** 11.05 304 eP Pn 07 52 25.5 +0.2
GELF **Grande-Etoile** 11.13 291 eP Pn 07 52 28.2 +1.8
SPAK **Spaichingen-Ko** 11.14 319 eP Pn 07 52 25.2 -1.4
SMRF **Simiane la Rot** 11.16 295 ePn Pn 07 52 26.8 -0.1
TREF **Trevaresse** 11.21 293 eP Pn 07 52 29.5 +2.0
ORIF **Oris-en-Rattie** 11.24 299 ePn Pn 07 52 27.6 -0.3
ORIF eSn Sn 07 54 27.1 -6.5
comp=Z,33nm,0.7s
ORIF **Oris-en-Rattie** 11.24 299 ePn Pn 07 52 27.6 -0.3
ORIF eSn Sn 07 54 27.1 -6.5
comp=Z,16nm,0.7s
GRF **Grafenberg Arr** 11.25 331 eL 07 57 52.4
comp=Z,1µm,20.9s
NKC **Novy Kostel** 11.28 336 eP Pn 07 52 27.6 -0.8
NKC AMS AMS 07 57 50.0
comp=Z,4µm,12.9s
NKC **Novy Kostel** 11.28 336 ePn Pn 07 52 27.6 -0.8
CDAG **Cicekdag** 11.29 88 *i* P Pn 07 52 31.2 +2.6
FELD **Feldberg im Sc** 11.40 316 eP Pn 07 52 27.3 -2.8
PRAF **Pradon** 11.40 293 eP Pn 07 52 32.3 +2.1
BBS **Basel-Blauen** 11.42 314 eP Pn 07 52 29.6 -0.8
CORM **Corum** 11.43 85 eP Pn 07 52 29.6 -0.9
GUNZ **Gunzen** 11.43 336 ePn Pn 07 52 29.6 -0.9
BRG **Berggiesshubel** 11.43 341 ePn Pn 07 52 29.4 -1.2
BRG **Berggiesshubel** 11.43 341 *i* P Pn 07 52 29.6 -1.0
comp=Z,18nm,1.7s
BRG S Sn 07 54 30.0 -8.3
BRG
comp=N,1µm,9.9s
BRG
comp=E,1µm,11.5s
BRG
comp=Z,1µm,11.8s
WERD **Werda** 11.51 336 ePn Pn 07 52 31.1 -0.5
BFO **Black Forest** 11.52 319 ePn Pn 07 52 29.6 -2.2
SIM **Simferopol'** 11.65 61 eP Pn 07 52 33.2 -0.4
SIM eS Sn 07 54 44.0 +0.4
SIM pmax pmax
comp=Z,30nm,0.9s
SIM MLR MLR
comp=Z,930nm,16.3s
SIM **Simferopol'** 11.65 61 eP Pn 07 52 33.2 -0.4
comp=Z,30nm,0.9s
SIM eS Sn 07 54 44.0 +0.4
comp=Z,930nm,16.3s
IKL **Isikli** 11.68 105 eP Pn 07 52 35.0 +1.0
LOMF **Lomont** 11.74 312 eP Pn 07 52 32.9 -1.9
LIBD **Limburg** 11.78 317 eP Pn 07 52 37.2 +1.9
CABF **La Chapelle** 11.80 308 ePn Pn 07 52 34.9 -0.7
CABF eSn Sn 07 54 41.5 -5.8
comp=Z,126nm,1.0s
CABF **La Chapelle** 11.80 308 ePn Pn 07 52 34.9 -0.7
CABF eSn Sn 07 54 41.5 -5.8
comp=Z,63nm,1.0s
MOF **Molkenrain** 11.85 314 eP Pn 07 52 34.9 -1.4
MOX **Moxa** 11.90 334 ePn Pn 07 52 34.8 -2.2
MOX **Moxa** 11.90 334 eP Pn 07 52 35.0 -2.0
comp=Z,27nm,0.9s
MOX *e* 07 55 24.0
MOX *e* 07 56 08.0
MOX
comp=Z,3µm,16.0s
MOX **Moxa** 11.90 334 eP Pn 07 52 35.0 -2.0
comp=Z,27nm,0.9s
MOX *e* 07 56 08.0
HINF **Hinteralfeld** 11.99 314 ePn Pn 07 52 36.5 -1.6

HINF eSn Sn 07 54 44.1 -7.8
comp=Z,18nm,0.3s
HINF Hinteralfeld 11.99 314 ePn Pn 07 52 36.5 -1.6
HINF eSn Sn 07 54 44.1 -7.8
comp=Z,8.8nm,0.3s
CSS Prodhromos 12.00 111 ePn Pn 07 52 37.3 -1.0
comp=Z,34nm,0.8s
CSS eSn Sn 07 54 50.0 -2.2
CSS Prodhromos 12.00 111 ePn Pn 07 52 37.3 -1.0
comp=Z,34nm,0.8s
CSS eSn Sn 07 54 50.0 -2.2
VIVF Saint-Julien-l 12.03 298 ePn Pn 07 52 38.7 -0.1
ECH Echery 12.06 316 eP Pn 07 52 37.7 -1.4
CLL Collm 12.07 340 i PN Pn 07 52 40.3 +1.0
CLL i 07 52 54.0
CLL eSN Sn 07 54 29.0 -25
CLL e 07 55 24.0
CLL eSG Sn 07 56 00.0 +66
CLL L 07 56 44.0
CLL Collm 12.07 340 i Pn Pn 07 52 40.3 +1.0
CLL i x x 07 52 54.0
comp=Z,27nm,1.2s
CLL eSn Sn 07 54 29.0 -25
CLL eSb Sn 07 55 24.0 +30
CLL eSg Sn 07 56 00.0 +66
CLL Collm 12.07 340 i Pn Pn 07 52 40.3 +1.0
CLL i 07 52 54.0
CLL eSn Sn 07 54 29.0 -25
CLL eSg Sn 07 56 00.0 +66
MERS Mersin 12.07 101 eP Pn 07 52 40.1 +0.8
WLS Welschbruch 12.07 317 eP Pn 07 52 37.7 -1.6
WAR Warsaw 12.11 4 eP Pn 07 52 42.1 +2.3
WAR e 07 52 55.5
WAR L 07 58 23.7
comp=Z,2.4nm,15.8s
WAR Warsaw 12.11 4 eP Pn 07 52 42.1 +2.3
WAR e 07 52 55.5
CDF Champ du Feu 12.11 317 ePn Pn 07 52 39.0 -0.9
CDF eSn Sn 07 54 47.3 -7.7
LANF Langenberg 12.21 320 eP Pn 07 52 40.8 -0.4
KARA Karaisali 12.34 99 eP Pn 07 52 43.7 +0.6
HAU Haudompre 12.37 314 ePn Pn 07 52 41.9 -1.5
HAU eSn Sn 07 54 53.6 -7.7
comp=Z,40nm,0.4s
HAU Haudompre 12.37 314 ePn Pn 07 52 41.9 -1.5
HAU eSn Sn 07 54 53.6 -7.7
comp=Z,20nm,0.4s
LASF Ste Croix 12.39 294 ePn Pn 07 52 43.2 -0.5
AKASG Malin Array Be 12.46 29 Pn Pn 07 52 43.8 -0.8
comp=Z,0.3nm,0.3s,baz=214,slow=13,SNR=17
AKASG Malin Array Be 12.46 29 i P Pn 07 52 44.5 -0.1
AKASG pmax pmax
comp=Z,6.0nm,0.9s
AKASG Malin Array Be 12.46 29 i P Pn 07 52 44.5 -0.1
comp=Z,6.0nm,0.9s
AKBB Malin Array Si 12.46 29 eP Pn 07 52 43.8 -0.8
THEF They Montfort 12.70 314 eP Pn 07 52 45.5 -2.4
TNS Taunus Mts 12.79 326 ePn Pn 07 52 48.1 -1.0
KOZT Kozan 12.86 97 eP Pn 07 52 51.1 +1.0
CEYT Ceyhan 12.95 99 eP Pn 07 52 52.3 +1.0
ETOS Mallorca 12.96 274 P Pn 07 52 54.9 +3.5
comp=Z,267nm,2.2s
ETOS Mallorca 12.96 274 P Pn 07 52 54.9 +3.4
comp=Z,267nm,2.2s
RUE Ruedersdorf 12.96 344 ePn Pn 07 52 50.8 -0.7
comp=Z,20nm,0.4s
RUE Ruedersdorf 12.96 344 ePn Pn 07 52 50.8 -0.7
comp=Z,20nm,0.4s
PLDF La Plantade 13.10 302 eP Pn 07 52 52.2 -1.1
LBL Lubilhac 13.11 298 eP Pn 07 52 57.0 +3.5
GKP Gorka Klasztor 13.21 354 eP Pn 07 52 57.3 +2.5
GKP L 07 58 59.2
comp=Z,1.0nm,17.1s
SMF Signal de Mont 13.21 305 ePn Pn 07 52 52.9 -1.9
SMF eSn Sn 07 55 11.7 -10
comp=Z,55nm,0.8s
SMF Signal de Mont 13.21 305 ePn Pn 07 52 52.9 -1.9
SMF eSn Sn 07 55 11.7 -10
comp=Z,28nm,0.8s
SVSK Karacayir 13.26 86 eP Pn 07 52 57.1 +1.5
MEZF Maizieres J'vi 13.37 313 ePn Pn 07 52 55.8 -1.2
PYM Petit Puy Mans 13.43 300 eP Pn 07 53 03.0 +5.2
MTLF Montolieu 13.43 289 ePn Pn 07 52 57.1 -0.8
LOR Lormes 13.46 307 ePn Pn 07 52 57.0 -1.3
LOR eSn Sn 07 55 19.0 -8.9
comp=Z,32nm,0.6s
LOR Lormes 13.46 307 ePn Pn 07 52 57.0 -1.3
LOR eSn Sn 07 55 19.0 -8.9
comp=Z,16nm,0.6s
WLF Walferdange 13.48 319 P Pn 07 52 59.4 +0.9
WLF Walferdange 13.48 319 ePn Pn 07 52 58.9 +0.4
WLF Walferdange 13.48 319 ePn Pn 07 52 58.9 +0.4
AVF Avril sur Loir 13.57 305 ePn Pn 07 52 57.3 -2.5
AVF eSn Sn 07 55 21.9 -8.8
comp=Z,5.2nm,0.3s
AVF Avril sur Loir 13.57 305 ePn Pn 07 52 57.3 -2.5
AVF eSn Sn 07 55 21.9 -8.8
comp=Z,2.6nm,0.3s
SSF Saint Saulge 13.59 306 ePn Pn 07 52 54.8 -5.2
SSF eSn Sn 07 55 22.2 -8.8
comp=Z,10nm,0.4s
SSF Saint Saulge 13.59 306 ePn Pn 07 52 54.8 -5.2
SSF eSn Sn 07 55 22.2 -8.8
comp=Z,5.2nm,0.4s
BGF Bois d'Agland 13.81 303 ePn Pn 07 53 01.8 -1.2
BGF eSn Sn 07 55 28.3 -8.1
comp=Z,18nm,0.5s
BGF Bois d'Agland 13.81 303 ePn Pn 07 53 01.8 -1.2
BGF eSn Sn 07 55 28.3 -8.1
comp=Z,9.1nm,0.5s
CAF Calviac 13.84 296 ePn Pn 07 53 04.4 +1.0
ANN Anapa 13.88 65 eP Pn 07 53 04.1 +0.2
ANN eS Sn 07 55 41.6 +3.6
ANN pmax pmax
comp=Z,42nm,1.1s
ANN Anapa 13.88 65 eP Pn 07 53 04.1 +0.2
comp=Z,42nm,1.1s
ANN eS Sn 07 55 41.6 +3.6
SUW Suwalki 14.04 8 eP Pn 07 53 06.0 -0.3
SUW ePP 07 53 17.0
SUW L 07 59 16.7
comp=Z,3.0nm,14.0s
SUW Suwalki 14.04 8 eP Pn 07 53 06.0 -0.3
SUW ePP 07 53 17.0
TCF Toulx Ste Croi 14.13 301 ePn Pn 07 53 06.6 -0.8
TCF eSn Sn 07 55 35.3 -8.8
comp=Z,3.8nm,0.3s
TCF Toulx Ste Croi 14.13 301 ePn Pn 07 53 06.6 -0.8
TCF eSn Sn 07 55 35.3 -8.8
comp=Z,1.9nm,0.3s
EPOB Poblet 14.16 281 P Pn 07 53 12.8 +4.9
comp=Z,202nm,1.8s
EPOB Poblet 14.16 281 P Pn 07 53 12.8 +4.9
comp=Z,202nm,1.8s
MEM Membach 14.17 322 P Pn 07 53 00.9 -7.0
BHL Bhannes 14.19 111 eP Pn 07 53 09.8 +1.6
HYF Humbligny 14.21 306 ePn Pn 07 53 08.3 -0.2
HYF eSn Sn 07 55 37.0 -9.2
RJF Les Rejaudoux 14.30 297 ePn Pn 07 53 09.7 -0.1
HGN Heimansgroeve 14.31 322 eP Pn 07 53 09.3 -0.6
BCLA Clavier 14.38 320 P Pn 07 53 13.4 +2.5
GIVF Givet 14.42 318 ePn Pn 07 53 10.5 -0.9
MMAI Mount Meron Ar 14.49 115 Pn Pn 07 53 08.7 -3.6
comp=Z,5.6nm,0.3s,baz=324,slow=13,SNR=9.2
MMAI Sn Sn 07 55 41.7 -11
comp=Z,2.7nm,0.3s,baz=311,slow=13,SNR=4.2
MMAI LR LR 07 59 49.0
comp=Z,676nm,18.1s,baz=315,slow=42
DOU Dourbes 14.54 318 P Pn 07 53 14.1 +1.1
FKH Fakeheh 14.56 109 eP Pn 07 53 11.7 -1.6
MALT Malatya 14.63 91 i/P Pn 07 53 19.7 +5.4
MALT Malatya 14.63 91 eP Pn 07 53 19.6 +5.3
MALT pmax pmax
comp=Z,18nm,0.5s
MALT Malatya 14.63 91 eP Pn 07 53 19.6 +5.2
comp=Z,18nm,0.5s
MALT Malatya 14.63 91 eP Pn 07 53 19.6 +5.3
comp=Z,18nm,0.5s
BAIF Baives 14.71 317 ePn Pn 07 53 14.8 -0.6
ERTA Horta de San J 14.74 279 P Pn 07 53 20.6 +4.8
comp=Z,98nm,1.4s
ERTA Horta de San J 14.74 279 P Pn 07 53 20.5 +4.7
comp=Z,98nm,1.4s
LFF La Frestale 14.75 295 ePn Pn 07 53 15.2 -0.7

EPF Esparros 14.76 287 ePn Pn 07 53 16.7 +0.7
WTSB Winterswijk 14.78 327 eP Pn 07 53 18.1 +1.8
EBIE Bielsa 14.88 286 P Pn 07 53 22.3 +4.6
comp=Z,89nm,1.5s
EBIE Bielsa 14.88 286 P Pn 07 53 22.3 +4.6
comp=Z,89nm,1.5s
SNF Seneffe 14.95 319 P Pn 07 53 23.0 +4.5
LABF Labassere 14.96 287 eP Pn 07 53 23.2 +4.5
VIEF Viey 14.98 287 eP Pn 07 53 22.4 +3.4
URFA Urfa 15.16 94 eP Pn 07 53 21.8 +0.5
BSD Bornholm Skovb 15.29 350 i P Pn 07 53 17.5 -5.6
comp=Z,99nm,1.5s
BSD eS Sn 07 56 18.9 +6.5
BSD
comp=Z,310nm,16.0s
BSD Bornholm Skovb 15.29 350 eP Pn 07 53 17.5 -5.6
BSD eS Sn 07 56 18.9 +6.5
BSD pmax pmax
comp=Z,99nm,1.5s
BSD Bornholm Skovb 15.29 350 eP Pn 07 53 17.5 -5.6
comp=Z,99nm,1.5s
BSD eS Sn 07 56 18.9 +6.5
MNK Minsk 15.34 18 eP Pn 07 53 19.0 -4.8
EMOS Mosqueruela 15.40 277 P Pn 07 53 29.3 +4.7
comp=Z,146nm,1.6s
EMOS Mosqueruela 15.40 277 P Pn 07 53 29.3 +4.7
comp=Z,146nm,1.6s
ETSF Etsaut 15.41 287 ePn Pn 07 53 24.8 +0.1
EBEN Beniarda 15.46 271 P Pn 07 53 30.6 +5.2
comp=Z,207nm,1.5s
EBEN Beniarda 15.46 271 P Pn 07 53 30.6 +5.2
comp=Z,207nm,1.5s
MFF Saint Martin d 15.77 301 ePn Pn 07 53 29.8 +0.4
ECHE Chera 15.88 275 P Pn 07 53 36.0 +5.2
ECHE pmax pmax
comp=Z,26nm,0.9s
ECHE Chera 15.88 275 P Pn 07 53 36.0 +5.3
comp=Z,26nm,0.9s
ECHE Chera 15.88 275 P Pn 07 53 36.0 +5.2
comp=Z,26nm,0.9s
SJPF Ste Jean 15.91 287 ePn Pn 07 53 31.1 -0.1
ASF Jabal al Asfar 16.00 115 Pn Pn 07 53 31.4 -1.0
comp=Z,0.5nm,0.3s,baz=179,slow=7.6,SNR=3.4
ASF LR LR 08 00 46.3
comp=Z,405nm,20.1s,baz=166,slow=41
EALK Alkurruntz 16.12 288 P Pn 07 53 37.2 +3.3
comp=Z,110nm,2.3s
EALK Alkurruntz 16.12 288 P Pn 07 53 37.2 +3.2
comp=Z,110nm,2.3s
ELIZ Elizondo 16.14 288 P Pn 07 53 36.7 +2.6
ELIZ pmax pmax
comp=Z,14nm,1.0s
ELIZ Elizondo 16.14 288 P Pn 07 53 36.7 +2.6
comp=Z,14nm,1.0s
COP Copenhagen 16.25 345 i P Pn 07 53 35.0 -0.6
COP i S Sn 07 56 52.4 +17
COP
comp=Z,230nm,16.0s
COP Copenhagen 16.25 345 eP Pn 07 53 35.0 -0.6
COP i S Sn 07 56 52.4 +17
EIL Elat 16.30 125 ePn Pn 07 53 31.6 -4.5
EIL Elat 16.30 125 ePn Pn 07 53 31.6 -4.5
EMUR La Murta 16.44 269 P Pn 07 53 38.2 +0.2
comp=Z,182nm,1.8s
LDF La Druitiere 16.45 307 ePn Pn 07 53 38.2 +0.1
ETOB Tobarra 16.49 272 P Pn 07 53 44.3 +5.7
comp=Z,202nm,2.3s
ETOB Tobarra 16.49 272 P Pn 07 53 44.3 +5.7
comp=Z,202nm,2.3s
FLN La Foliniere 16.73 308 ePn Pn 07 53 41.6 -0.1
GRR Gorron 16.82 306 ePn Pn 07 53 42.1 -0.7
EVIA Vianos 17.22 272 P Pn 07 53 50.1 +2.2
EVIA pmax pmax
comp=Z,65nm,1.1s
EVIA Vianos 17.22 272 P Pn 07 53 50.1 +2.2
comp=Z,65nm,1.1s
EVIA Vianos 17.22 272 P Pn 07 53 50.1 +2.2
comp=Z,65nm,1.1s
KIV Kislovodsk 17.47 70 P Pn 07 53 51.6 +0.6
SNR=14
KIV Kislovodsk 17.47 70 eP Pn 07 53 49.8 -1.1
KIV Kislovodsk 17.47 70 ePn Pn 07 53 49.8 -1.2
VRSR Storozhevoye 17.47 44 d iP Pn 07 53 49.6 -1.4
VRSR pmax pmax
comp=Z,20nm,0.8s
VRSR pmax pmax
comp=N,40nm,0.9s
VRSR pmax pmax
comp=E,60nm,0.9s
VRSR MLR MLR
comp=Z,710nm,15.0s
VRSR MLR MLR
comp=N,330nm,16.0s
VRSR MLR MLR
comp=E,660nm,16.0s
VRSR Storozhevoye 17.47 44 i P Pn 07 53 49.6 -1.4
comp=E,710nm,15.0s
EHUE Huescar 17.48 269 P Pn 07 53 53.5 +2.4
EHUE pmax pmax
comp=Z,25nm,0.8s
EHUE Huescar 17.48 269 P Pn 07 53 53.5 +2.4
comp=Z,25nm,0.8s
EHUE Huescar 17.48 269 P Pn 07 53 53.5 +2.4
comp=Z,25nm,0.8s
ELAN Lanestosa 17.53 288 P Pn 07 53 53.0 +1.3
comp=Z,55nm,1.4s
ELAN Lanestosa 17.53 288 P Pn 07 53 53.0 +1.3
comp=Z,55nm,1.4s
MUD Monsted U'grnd 17.70 341 i P Pn 07 53 54.7 +0.9
comp=Z,34nm,1.1s
MUD i S Sn 07 57 20.7 +10
MUD
comp=Z,480nm,16.0s
MUD Monsted U'grnd 17.70 341 i P Pn 07 53 54.7 +0.9
comp=Z,34nm,1.1s
MUD i S Sn 07 57 20.7 +10
VOR Voronezh 17.75 43 P Pn 07 53 52.0 -2.5
VOR pmax pmax
comp=N,100nm,2.0s
VOR pmax pmax
comp=E,150nm,2.0s
VOR pmax pmax
comp=Z,180nm,2.0s
GOF Gofitskoye 17.84 66 ñ iP Pn 07 53 55.0 -0.5
GOF i S Sn 07 57 16.0 +1.8
GOF pmax pmax
comp=Z,84nm,0.8s
GOF smax
comp=E,1μm,1.0s
GOF Gofitskoye 17.84 66 i P Pn 07 53 55.0 -0.5
comp=E,84nm,0.8s
GOF i S Sn 07 57 16.0 +1.8
SGMF Saint Gilles 17.84 304 ePn Pn 07 53 56.2 +0.7
EQES Quesada 17.85 270 P Pn 07 53 58.5 +2.8
comp=E,142nm,1.6s
EQES Quesada 17.85 270 P Pn 07 53 58.5 +2.8
comp=E,142nm,1.6s
EBER Berja 17.96 267 P Pn 07 54 00.1 +3.1
comp=E,98nm,1.4s
EBER Berja 17.96 267 P Pn 07 54 00.1 +3.0
comp=E,98nm,1.4s
ONI Oni 17.98 75 P Pn 07 53 57.1 -0.2
ONI S Sn 07 57 25.5 +7.8
QUIF Quistinic 18.12 303 ePn Pn 07 53 58.4 -0.6
ESDC Sonseca Array 18.15 276 P Pn 07 53 59.6 +0.2
comp=E,0.4nm,0.3s,baz=74,slow=11,SNR=62
ESDC LR LR 08 01 07.8
comp=E,519nm,19.8s,baz=80,slow=38
ESDC Sonseca Array 18.15 276 P Pn 07 53 59.4 0.0
comp=E,13nm,0.8s
ESDC Sonseca Array 18.15 276 P Pn 07 53 59.4 +0.1
comp=E,13nm,0.8s
ESLA Sonseca Array 18.15 276 ePn Pn 07 53 59.7 +0.3
ESLA Sonseca Array 18.15 276 ePn Pn 07 53 59.7 +0.4
GUD Guadarrama 18.16 279 P Pn 07 54 01.6 +2.1
GUD pmax pmax
comp=Z,25nm,0.8s
GUD Guadarrama 18.16 279 P Pn 07 54 01.6 +2.1
comp=Z,25nm,0.8s
GUD Guadarrama 18.16 279 P Pn 07 54 01.6 +2.1
comp=Z,25nm,0.8s
ZEI Tsey 18.31 74 eP Pn 07 53 58.4 -2.9
EBAN Banos Encina 18.31 271 P Pn 07 54 01.9 +0.6
EBAN pmax pmax
comp=Z,85nm,1.4s
EBAN Banos Encina 18.31 271 P Pn 07 54 01.9 +0.6
comp=Z,85nm,1.4s
ROSF Rostrenen 18.32 304 ePn Pn 07 53 59.4 -2.0
ECOG Cogollos-Vega 18.37 268 P Pn 07 54 02.0 -0.1
ECOG pmax pmax
comp=Z,20nm,1.2s
ECOG Cogollos-Vega 18.37 268 P Pn 07 54 02.0 0.0
comp=Z,20nm,1.2s
ECOG Cogollos-Vega 18.37 268 P Pn 07 54 02.0 -0.1
comp=Z,20nm,1.2s
EGUA Guajares 18.50 267 P Pn 07 54 03.6 0.0
EGUA pmax pmax
comp=Z,5.0nm,1.0s
EGUA Guajares 18.50 267 P Pn 07 54 03.6 0.0
comp=Z,4.9nm,1.0s
EGUA Guajares 18.50 267 P Pn 07 54 03.6 0.0
comp=Z,4.9nm,1.0s
ERON Agron 18.63 268 P Pn 07 54 05.9 +0.7
comp=Z,13nm,0.8s
ERON Agron 18.63 268 P Pn 07 54 05.9 +0.7
comp=Z,13nm,0.8s
CLDR Caldiran 18.67 85 eP Pn 07 54 08.2 +2.5
OBN Obninsk 18.70 31 ceP Pn 07 54 02.2 -3.9
OBN eS Sn 07 57 25.3 -10
OBN pmax pmax
comp=Z,84nm,1.0s
OBN MLR MLR
comp=Z,1μm,19.0s
OBN Obninsk 18.70 31 eP Pn 07 54 02.9 -3.2
OBN Obninsk 18.70 31 eP Pn 07 54 02.9 -3.2
OBN eS Sn 07 57 25.3 -10
comp=Z,1μm,19.0s
VRHR Novokhopersk 18.75 47 eP Pn 07 54 05.2 -1.5
VRHR pmax pmax
comp=Z,140nm,1.1s
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,50nm,0.6s
VRHR MLR MLR
comp=Z,830nm,9.0s
VRHR MLR MLR
comp=N,70nm,15.0s
VRHR MLR MLR
comp=E,900nm,10.0s
VRHR Novokhopersk 18.75 47 eP Pn 07 54 05.2 -1.5
comp=E,70nm,15.0s
MSL Mosul 18.77 94 ex x 07 54 08.0
MSL ex x 07 57 35.0
EARI Arriondas 18.83 288 P Pn 07 54 05.8 -1.8
comp=E,132nm,2.0s
EARI Arriondas 18.83 288 P Pn 07 54 05.8 -1.8
comp=E,132nm,2.0s
ELUQ Luque 18.83 270 P Pn 07 54 08.1 +0.4
ELUQ pmax pmax
comp=Z,36nm,0.7s
ELUQ Luque 18.83 270 P Pn 07 54 08.1 +0.4
comp=Z,36nm,0.7s
ELUQ Luque 18.83 270 P Pn 07 54 08.1 +0.4
comp=Z,36nm,0.7s
VSU Vasula 18.85 11 c iP Pn 07 54 04.6 -3.3
VSU Vasula 18.85 11 i P Pn 07 54 04.6 -3.3
ELOJ Sierra Loja 18.86 268 P Pn 07 54 09.0 +1.0
ELOJ pmax pmax
comp=Z,18nm,1.0s
ELOJ Sierra Loja 18.86 268 P Pn 07 54 09.0 +1.1
comp=Z,18nm,1.0s
ELOJ Sierra Loja 18.86 268 P Pn 07 54 09.0 +1.0
comp=Z,18nm,1.0s
EADA Adamuz 18.92 272 P Pn 07 54 09.9 +1.2
comp=Z,122nm,1.3s
EADA Adamuz 18.92 272 P Pn 07 54 09.9 +1.2
comp=Z,122nm,1.3s
MTA Mtatsminda 19.01 77 P Pn 07 54 08.9 -0.9
MTA S Sn 07 57 46.7 +4.1
GNI Garni 19.13 82 eP Pn 07 54 10.1 -1.2
GNI Garni 19.13 82 P Pn 07 54 09.6 -1.7
comp=Z,0.6nm,0.3s,baz=307,slow=1.2,SNR=16
GNI LR LR 08 01 58.0
comp=Z,245nm,20.5s,baz=81,slow=38
GNI Garni 19.13 82 P Pn 07 54 11.0 -0.3
SNR=30
GNI Garni 19.13 82 c iP Pn 07 54 10.3 -1.0
GNI pmax pmax
comp=Z,112nm,1.7s
GNI MLR MLR
comp=Z,500nm,18.0s
GNI Garni 19.13 82 eP Pn 07 54 09.8 -1.4
comp=Z,75nm,1.0s
GNI ePn Pn 07 54 11.0 -0.2
GNI Garni 19.13 82 eP Pn 07 54 09.8 -1.5
comp=Z,75nm,1.0s
HGH Gray Hill 19.32 314 eP Pn 07 54 11.7 -1.9
HGH AMb AMB 07 54 18.1
comp=Z,43nm,1.4s
HGH Gray Hill 19.32 314 eP Pn 07 54 11.7 -1.9
HGH AMb AMB 07 54 18.1
comp=Z,43nm,1.4s
DYA Yadsworthy 19.45 310 eP Pn 07 54 13.7 -1.4
DYA Yadsworthy 19.45 310 eP Pn 07 54 13.7 -1.4
DGRG David-gareji 19.46 78 P Pn 07 54 14.4 -0.8
DGRG S Sn 07 58 04.8 +11
KBI1 Birley Grange 19.47 319 eP Pn 07 54 14.6 -0.8
KBI1 Birley Grange 19.47 319 eP Pn 07 54 14.6 -0.8
KWE Weaver Farm 19.50 318 eP Pn 07 54 14.8 -0.9
KWE Weaver Farm 19.50 318 eP Pn 07 54 14.8 -0.9
EMIJ Mijas 19.50 267 P Pn 07 54 14.8 -1.0
comp=Z,57nm,0.9s
EMIJ Mijas 19.50 267 P Pn 07 54 14.8 -1.0
comp=Z,57nm,0.9s
MOS Moscow 19.57 31 eP Pn 07 54 11.3 -5.2
MOS eS Sn 07 57 52.3 -3.9
MOS pmax pmax
comp=Z,121nm,1.2s
MOS MLR MLR
comp=Z,1μm,11.0s
MOS Moscow 19.57 31 eP Pn 07 54 11.3 -5.2
comp=Z,121nm,1.2s
MOS eS Sn 07 57 52.3 -3.9
comp=Z,1μm,11.0s
MCH1 Michaelchurch 19.59 315 eP Pn 07 54 15.7 -1.2
MCH1 Michaelchurch 19.59 315 eP Pn 07 54 15.7 -1.2
HEX Exmoor 19.63 312 eP Pn 07 54 16.1 -1.2
HEX Exmoor 19.63 312 eP Pn 07 54 16.1 -1.2
HTR Trewern Hill 19.78 315 eP Pn 07 54 17.5 -1.6
HTR AMb AMB 07 54 24.7
comp=Z,72nm,1.4s
HTR Trewern Hill 19.78 315 eP Pn 07 54 17.5 -1.6
HTR AMb AMB 07 54 24.7
comp=Z,72nm,1.4s
HLM1 Long Mynd 19.78 316 eP Pn 07 54 18.0 -1.1
HLM1 AMb AMB 07 54 27.5
comp=Z,70nm,1.6s
HLM1 Long Mynd 19.78 316 eP Pn 07 54 18.0 -1.1
HLM1 AMb AMB 07 54 27.5
comp=Z,70nm,1.6s
LHO Holmfirth 19.80 320 eP Pn 07 54 17.8 -1.4
LHO Holmfirth 19.80 320 eP Pn 07 54 17.8 -1.4
ECAL Calabor 19.99 284 P Pn 07 54 21.3 -0.2
comp=Z,263nm,2.5s
ECAL Calabor 19.99 284 P Pn 07 54 21.3 -0.2
comp=Z,263nm,2.5s
PBRG Braganca 20.00 283 eP P 07 54 21.4 +1.4
comp=Z,42nm,1.4s
EJIF Jimena Fronter 20.07 267 P P 07 54 21.9 +1.2
EJIF pmax pmax
comp=Z,43nm,0.9s
EJIF Jimena Fronter 20.07 267 P P 07 54 21.9 +1.2
comp=Z,43nm,0.9s
EJIF Jimena Fronter 20.07 267 P P 07 54 21.9 +1.2
comp=Z,43nm,0.9s
CRQ2 Rosemanowes 2 20.09 308 eP P 07 54 19.5 -1.4
CRQ2 AMb AMB 07 54 29.2
comp=Z,77nm,1.5s
CRQ2 Rosemanowes 2 20.09 308 eP P 07 54 19.5 -1.4
CRQ2 AMb AMB 07 54 29.2
comp=Z,77nm,1.5s
CCA1 Carnmenellis 20.14 308 eP P 07 54 20.4 -1.0
CCA1 Carnmenellis 20.14 308 eP P 07 54 20.4 -1.0
SBD1 Bryn Du 20.18 317 eP P 07 54 21.9 +0.1
SBD1 Bryn Du 20.18 317 eP P 07 54 21.9 +0.1
ESPR Espera 20.24 269 P P 07 54 21.2 -1.4
comp=Z,44nm,0.8s
ESPR Espera 20.24 269 P P 07 54 21.2 -1.4
comp=Z,44nm,0.8s

EPON **Pontenova** 20.25 288 P P 07 54 22.7 +0.1
comp=Z,187nm,1.9s
EPON **Pontenova** 20.25 288 P P 07 54 22.7 +0.1
comp=Z,187nm,1.9s
HFS **Hagfors** 20.33 351 P P 07 54 22.8 -0.8
comp=Z,20nm,0.6s,baz=163,slow=11,SNR=102
HFS LR LR 08 02 40.2
comp=Z,280nm,18.3s,MS3.7,baz=172,slow=38
KONO **Kongsberg** 20.51 345 *e* S 07 58 14.9 +0.1
KONO **Kongsberg** 20.51 345 *eP* P 07 54 24.6 -0.8
KONO pmax pmax
comp=Z,11nm,0.7s
KONO **Kongsberg** 20.51 345 *eP* P 07 54 24.6 -0.9
comp=Z,11nm,0.7s
KONO **Kongsberg** 20.51 345 *eP* P 07 54 24.6 -0.8
comp=Z,11nm,0.7s
EMIN **Mina Concepcio** 20.62 272 P P 07 54 26.6 -0.1
comp=Z,933nm,2.1s
EMIN **Mina Concepcio** 20.62 272 P P 07 54 26.6 -0.1
comp=Z,933nm,2.1s
EBAD **Badajoz** 20.65 275 P P 07 54 28.0 +1.0
comp=Z,89nm,1.4s
EBAD **Badajoz** 20.65 275 P P 07 54 28.0 +1.0
comp=Z,89nm,1.4s
WPM1 **Penmaenmawr** 20.69 317 *eP* P 07 54 27.7 +0.3
WPM1 **Penmaenmawr** 20.69 317 *eP* P 07 54 27.7 +0.3
MTE **Manteigas** 20.76 279 *eP* P 07 54 29.0 +0.8
comp=Z,96nm,1.4s
MTE *eS* S 07 58 20.2 +0.4
MTE *e*LR LR 08 02 43.8
MTE Manteigas 20.76 279 *eP* P 07 54 29.1 +1.0
MTE *e*Pn P 07 54 31.4 +3.3
MTE Manteigas 20.76 279 *eP* P 07 54 29.1 +0.9
MTE *eS* S 07 58 20.2 +0.4
PVRL **Vila Real** 20.78 282 *eP* P 07 54 28.1 -0.3
PCBR **Castelo Branco** 20.80 278 *eP* P 07 54 27.6 -1.0
comp=Z,87nm,1.8s
MDT **Midelt** 20.84 257 P P 07 54 28.4 -0.6
comp=Z,15nm,0.9s,baz=72,slow=11,SNR=30
MDT LR LR 08 02 16.7
comp=Z,395nm,21.7s,MS3.8,baz=44,slow=36
BHD **Baghdad** 20.91 101 *ex* x 07 54 24.0
BHD *ex* x 07 58 04.0
BHD *ex* x 07 58 33.0
BHD *ex* x 08 01 10.0
BHD *ex* x 08 04 24.0
MAK **Makhachkala** 20.95 73 *eP* P 07 54 27.8 -2.5
MAK *i* PPP 07 54 58.4
MAK *i* S S 07 58 24.0 +0.3
MAK *i* SS 07 58 41.5
MAK pmax pmax
comp=Z,150nm,0.8s
MAK MLR MLR
comp=Z,928nm,16.0s,MS4.3
MAK Makhachkala 20.95 73 *eP* P 07 54 27.8 -2.5
comp=Z,150nm,0.8s
MAK *i* S S 07 58 24.0 +0.3
comp=Z,928nm,16.0s
MAK Makhachkala 20.95 73 *i* PcP PcP 07 58 41.5 +3.8
WLF1 **Llynfaes** 20.96 317 *eP* P 07 54 30.9 +0.6
WLF1 AMb AMB 07 54 38.0
comp=Z,63nm,1.4s
WLF1 Llynfaes 20.96 317 *eP* P 07 54 30.9 +0.6
WLF1 AMb AMB 07 54 38.0
comp=Z,63nm,1.4s
PVIS **Viseu** 20.98 280 *eP* P 07 54 30.6 +0.1
comp=Z,70nm,1.4s
BLS5 **Blasjo** 21.00 341 *eP* P 07 54 30.9 0.0
BLS5 AMb AMB 07 54 33.7
comp=Z,79nm,1.4s,mb4.8
BLS5 Blasjo 21.00 341 *eP* P 07 54 30.9 0.0
comp=Z,79nm,1.4s,mb4.8
BLS5 Blasjo 21.00 341 *eP* P 07 54 30.9 +0.1
comp=Z,79nm,1.4s,mb4.8,SNR=34
YRC **Rhoscolyn** 21.04 317 *eP* P 07 54 30.8 -0.4
YRC **Rhoscolyn** 21.04 317 *eP* P 07 54 30.8 -0.4
PESTR **Estremoz** 21.07 275 *eP* P 07 54 31.5 0.0
comp=Z,47nm,1.4s,mb4.6
PESTR *eS* S 07 58 26.0 +0.1
WCB1 Church Bay 21.09 317 *eP* P 07 54 32.1 +0.4
WCB1 AMb AMB 07 54 39.1
comp=Z,81nm,1.6s,mb4.8
WCB1 Church Bay 21.09 317 *eP* P 07 54 32.1 +0.4
WCB1 AMb AMB 07 54 39.1
comp=Z,81nm,1.6s,mb4.8
BBO1 **Bothel** 21.14 321 *eP* P 07 54 32.1 -0.3
BBO1 **Bothel** 21.14 321 *eP* P 07 54 32.1 -0.3
EGRO **El Granado** 21.30 272 P P 07 54 34.0 -0.1
comp=Z,218nm,1.5s,mb5.3
EGRO El Granado 21.30 272 P P 07 54 34.0 0.0
comp=Z,218nm,1.5s,mb5.3
BHH **Howats Hill** 21.33 322 *eP* P 07 54 34.6 +0.2
BHH **Howats Hill** 21.33 322 *eP* P 07 54 34.6 +0.2
ECK **Cauldkaine Hil** 21.34 322 *eP* P 07 54 34.5 0.0
ECK **Cauldkaine Hil** 21.34 322 *eP* P 07 54 34.5 0.0
NAO01 **NORSAR Array S** 21.40 348 *eP* P 07 54 34.4 -0.7
comp=Z,43nm,0.9s,mb4.8
NAO01 NORSAR Array S 21.40 348 *eP* P 07 54 34.4 -0.7
comp=Z,43nm,0.9s,mb4.8
EKA **Eskdalemuir Ar** 21.44 323 P P 07 54 35.2 -0.4
comp=Z,16nm,0.8s,mb4.4,baz=120,slow=9.4,SNR=51
ESK **Eskdalemuir** 21.46 323 *eP* P 07 54 35.2 -0.5
ESK **Eskdalemuir** 21.46 323 *eP* P 07 54 35.2 -0.5
ESK **Eskdalemuir** 21.46 323 *eP* P 07 54 35.8 +0.1
ESK pmax pmax
comp=Z,83nm,1.1s,mb5.0
ESK Eskdalemuir 21.46 323 *eP* P 07 54 35.8 +0.1
comp=Z,83nm,1.1s,mb5.0
ESK Eskdalemuir 21.46 323 *eP* P 07 54 35.8 +0.1
comp=Z,83nm,1.1s,mb5.0
PBEJ **Beja** 21.47 273 *eP* P 07 54 35.8 0.0
comp=Z,59nm,1.6s,mb4.7
PBEJ *eS* S 07 58 37.5 +3.7
NB2 **NORSAR Subarra** 21.54 349 P P 07 54 35.1 -1.5
comp=Z,71nm,1.1s,mb5.0,baz=162,slow=11
NOA **NORSAR Array B** 21.54 349 P P 07 54 35.1 -1.5
comp=Z,32nm,0.8s,mb4.8,baz=155,slow=9.6,SNR=59
NOA LR LR 08 03 16.9
comp=Z,127nm,18.3s,MS3.4,baz=170,slow=38
PTOM **Tomar** 21.54 278 *eP* P 07 54 37.3 +0.7
comp=Z,100nm,1.2s,mb5.1
PTOM *eS* S 07 58 38.1 +2.9
ESY **Stoneypath** 21.55 324 *eP* P 07 54 37.4 +0.7
ESY **Stoneypath** 21.55 324 *eP* P 07 54 37.4 +0.7
BWH **Wardlaw** 21.59 322 *eP* P 07 54 38.2 +1.1
BWH **Wardlaw** 21.59 322 *eP* P 07 54 38.2 +1.1
EBL **Broad Law** 21.65 324 *eP* P 07 54 38.6 +0.8
EBL **Broad Law** 21.65 324 *eP* P 07 54 38.6 +0.8
FINES **FINESS Array B** 21.66 8 P P 07 54 35.7 -2.2
comp=Z,25nm,0.9s,mb4.6,baz=179,slow=11,SNR=71
FINES LR LR 08 04 05.9
comp=Z,574nm,19.9s,MS4.0,baz=189,slow=40
FINES FINESS Array B 21.66 8 P P 07 54 35.7 -2.2
FINES LR LR 08 04 05.9
FIA1 **FINESS Array S** 21.66 8 *eP* P 07 54 35.6 -2.2
FIA1 **FINESS Array S** 21.66 8 *eP* P 07 54 35.6 -2.2
MOE **Montemor** 21.72 275 *eP* P 07 54 38.8 +0.3
EDI **Edinburgh** 21.80 324 *eP* P 07 54 39.6 +0.1
EDI **Edinburgh** 21.80 324 *eP* P 07 54 39.6 +0.1
EAU **Auchinoon** 21.88 323 *eP* P 07 54 39.8 -0.4
EAU **Auchinoon** 21.88 323 *eP* P 07 54 39.8 -0.4
DSB **Dublin** 22.00 315 *eP* P 07 54 41.9 +0.4
comp=Z,38nm,1.3s,mb4.7
DSB **Dublin** 22.00 315 *eP* P 07 54 41.9 +0.4
comp=Z,38nm,1.3s,mb4.7
DLF **Lyons Farm** 22.10 315 *eP* P 07 54 41.2 -1.4
BER **Bergen** 22.12 341 *e* S 07 58 40.6 -6.0
BER AMS AMS 08 05 47.7
comp=Z,608nm,15.3s,MS4.1
PTEO **Sao Teotonio** 22.25 272 *eP* P 07 54 43.6 -0.6
KAF **Kangasniemi** 22.33 8 *ep* P 07 54 41.7 -3.4
comp=Z,19nm,0.6s,mb4.7,baz=191,slow=10
KAF Kangasniemi 22.33 8 *eP* P 07 54 41.7 -3.4
KAF pmax pmax
comp=Z,19nm,0.6s,mb4.7
EAB **Aberfoyle** 22.48 323 *eP* P 07 54 45.0 -1.7
EAB **Aberfoyle** 22.48 323 *eP* P 07 54 45.0 -1.7
DCN **Croghan** 22.53 315 *eP* P 07 54 41.6 -5.6
MME1 **Meikle Cairn** 22.57 327 *eP* P 07 54 47.1 -0.5
MME1 **Meikle Cairn** 22.57 327 *eP* P 07 54 47.1 -0.5
PECR **Pechory** 22.72 37 ⇓ *iP* P 07 54 47.0 -2.2
PECR *i* 07 54 47.0
PECR *e* 07 55 10.0
PECR pmax pmax
comp=Z,2μm,1.4s
PECR pmax pmax
comp=Z,500nm,2.4s,mb5.5
PECR MLR MLR
comp=Z,2μm,13.0s,MS4.7
PECR MLR MLR
comp=N,700nm,14.0s
PECR MLR MLR
comp=Z,2μm,13.0s
PECR Pechory 22.72 37 *i* P P 07 54 47.0 -2.2
comp=Z,2μm,1.4s
DOMB Dombas 22.83 347 *eP* P 07 54 50.8 +0.4
DOMB AMb AMB 07 54 57.7
comp=Z,154nm,1.5s,mb5.2
DOMB Dombas 22.83 347 *eP* P 07 54 50.8 +0.4
comp=Z,154nm,1.5s,mb5.2
DOMB Dombas 22.83 347 *eP* P 07 54 50.8 +0.4
comp=Z,154nm,1.5s,mb5.2,SNR=33
JOF Joensuu 23.82 13 *ep* P 07 54 57.1 -3.3
comp=Z,6.6nm,0.5s,mb4.3
KLMR Klimovskoe 24.05 24 *c iP* P 07 55 00.0 -2.5
KLMR *eS* S 07 59 16.6 -3.1
KLMR pmax pmax
comp=Z,190nm,1.3s,mb5.4
KLMR pmax pmax
comp=Z,70nm,4.7s
KLMR MLR MLR
comp=Z,1μm,14.0s,MS4.5
KLMR Klimovskoe 24.05 24 *i* P P 07 55 00.0 -2.5
comp=Z,1μm,14.0s
KLMR *eS* S 07 59 16.6 -3.1
MIB Mutribah 24.81 106 *eP* P 07 55 06.8 -2.6
MIB AMb AMB 07 55 12.7
comp=Z,94nm,0.9s,mb5.3
NSS Namsos 24.81 352 *eP* P 07 55 07.1 -2.4
NSS AMb AMB 07 55 09.4
comp=Z,102nm,1.0s,mb5.3
NSS AMS AMS 08 07 28.9
comp=Z,480nm,17.8s,MS4.0
NSS Namsos 24.81 352 *eP* P 07 55 07.1 -2.4
comp=Z,102nm,1.0s,mb5.3
NSS LR LR
comp=Z,480nm,17.8s,MS4.0
NSS Namsos 24.81 352 *eP* P 07 55 07.1 -2.3
comp=Z,102nm,1.0s,mb5.3,SNR=28
NAY Al-Naaiem 25.03 107 *eP* P 07 55 08.2 -3.2
NAY AMb AMB 07 55 10.7
comp=Z,14nm,0.9s,mb4.5
UMR Umm Al-Rimmam 25.22 106 *eP* P 07 55 09.8 -3.3
UMR AMb AMB 07 55 14.6
comp=Z,89nm,0.9s,mb5.3
QRN Al-Qurain 25.80 107 *eP* P 07 55 15.0 -3.5
QRN AMb AMB 07 55 21.2
comp=Z,84nm,0.9s,mb5.3
MOR8 Moi Rana 26.22 355 *eP* P 07 55 21.4 -0.8
APA Apatity 28.47 11 ⇓ *iP* P 07 55 40.8 -1.6
APA *i* S S 08 00 23.0 -6.8
APA pmax pmax
comp=Z,43nm,1.4s,mb4.9
APA MLR MLR
comp=Z,2μm,12.0s,MS4.8
APA Apatity 28.47 11 *i* P P 07 55 40.8 -1.6
comp=Z,2μm,12.0s
AKTK Aktyubinsk 28.55 56 P P 07 55 41.0 -2.1
AKTK LR LR 08 09 05.0
AKTK Aktyubinsk 28.55 56 P P 07 55 41.0 -2.1
AKTO Aktyubinsk 28.55 56 P P 07 55 41.0 -2.1
comp=Z,3.8nm,0.4s,mb4.5,baz=258,slow=9.1,SNR=31
AKTO LR LR 08 09 04.9
comp=Z,401nm,18.8s,MS4.0,baz=92,slow=41
KTK1 Kautokeino 28.96 3 *eP* P 07 55 45.8 -1.0
KTK1 AMb AMB 07 55 48.0
comp=Z,39nm,1.5s,mb4.9
KTK1 Kautokeino 28.96 3 *eP* P 07 55 45.8 -1.0
comp=Z,39nm,1.5s,mb4.9
KTK1 Kautokeino 28.96 3 *eP* P 07 55 45.8 -1.0
comp=Z,39nm,1.5s,mb4.9,SNR=28
TRO Tromso 29.53 359 *eP* P 07 55 48.5 -3.3
TRO AMb AMB 07 55 50.9
comp=Z,34nm,1.6s,mb4.8
TRO AMS AMS 08 09 34.7
comp=Z,562nm,17.6s,MS4.2
TRO Tromso 29.53 359 *eP* P 07 55 48.5 -3.3
comp=Z,34nm,1.6s,mb4.8
TRO LR LR
comp=Z,560nm,17.6s,MS4.2
TRO Tromso 29.53 359 *eP* P 07 55 48.5 -3.3
comp=Z,34nm,1.6s,mb4.8,SNR=27
ARCES ARCESS Array B 29.59 4 P P 07 55 50.1 -2.2
comp=Z,12nm,0.8s,mb4.7,baz=186,slow=8.5,SNR=36
ARCES LR LR 08 09 02.4
comp=Z,737nm,19.5s,MS4.3,baz=186,slow=39
ARE0 ARCESS Array S 29.59 4 *eP* P 07 55 50.2 -2.2
ARE0 *e*PcP PcP 07 58 56.0 -1.1
ARE0 ARCESS Array S 29.59 4 *eP* P 07 55 50.2 -2.1
ARE0 ARCESS Array S 29.59 4 *e*PcP PcP 07 58 56.0 -1.0
KEV Kevo 29.90 5 *ep* P 07 55 52.4 -2.7
comp=Z,8.4nm,0.6s,mb4.7
KEV Kevo 29.90 5 *eP* P 07 55 52.4 -2.7
KEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
ARU Arti 30.04 44 ⇑ *iP* P 07 55 53.6 -2.7
ARU *e* 07 56 49.7
ARU *e* 07 58 55.7
ARU *eS* S 08 00 53.0 -1.3
ARU *e*SS SS 08 02 24.0 -38
ARU pmax pmax
comp=Z,20nm,1.5s,mb4.6
ARU MLR MLR
comp=Z,500nm,15.0s,MS4.3
ARU Arti 30.04 44 *eP* P 07 55 54.6 -1.7
comp=Z,9.7nm,0.8s,mb4.6
ARU Arti 30.04 44 *eP* P 07 55 54.6 -1.7
comp=Z,9.7nm,0.8s,mb4.6
ARU Arti 30.04 44 *e*PcP PcP 07 58 55.7 -2.5
SOKR Solikamsk 30.21 38 ⇓ *iP* P 07 55 54.2 -3.6
SOKR pmax pmax
comp=Z,40nm,1.3s,mb5.0
SOKR MLR MLR
comp=Z,1μm,23.0s,MS4.5
SOKR Solikamsk 30.21 38 *i* P P 07 55 54.2 -3.6
comp=Z,1μm,23.0s
TOA0 Torodi Ar. Sit 31.23 215 *eP* P 07 56 06.2 -0.7
TOA0 Torodi Ar. Sit 31.23 215 *eP* P 07 56 06.2 -0.6
TORD Torodi Ar. Bea 31.23 215 P P 07 56 06.1 -0.7
comp=Z,14nm,0.9s,mb4.8,baz=24,slow=9.6,SNR=35
TORD ScP ScP 08 02 43.6 -0.7
comp=Z,1.7nm,1.0s,baz=35,slow=3.5,SNR=5.5
TORD LR LR 08 11 34.1
comp=Z,438nm,18.7s,MS4.2,baz=15,slow=42
BORG Borgarnes 34.06 330 LR LR 08 10 39.9
comp=Z,188nm,19.9s,MS3.8,baz=174,slow=37
JMIC Jan Mayen 34.07 344 LR LR 08 11 31.1
comp=Z,84nm,18.9s,MS3.5,baz=262,slow=38
JMIC Jan Mayen 34.07 344 AMS AMS 08 14 50.1
comp=Z,120nm,15.8s,MS3.7
ZRNK Zerenda 35.52 52 *eP* P 07 56 42.9 -1.4
ZRNK pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
ZRNK Zerenda 35.52 52 *eP* P 07 56 42.9 -1.4
comp=Z,4.5nm,0.4s,mb4.8
ZRNK Zerenda 35.52 52 *eP* P 07 56 42.9 -1.4
comp=Z,4.5nm,0.4s,mb4.8
BRVK Borovoye 36.30 52 P P 07 56 49.9 -1.0
SNR=20
BRVK Borovoye 36.30 52 *eP* P 07 56 49.7 -1.2
BRVK *e* 07 58 10.6
BRVK pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BRVK Borovoye 36.30 52 *eP* P 07 56 49.7 -1.2
comp=Z,10nm,0.8s,mb4.8
BRVK *e*PP PP 07 58 10.6 -2.8
BRVK Borovoye 36.30 52 *eP* P 07 56 49.7 -1.2
comp=Z,10nm,0.8s,mb4.8
BRVK Borovoye 36.30 52 *e*PP PP 07 58 10.6 -2.8
CHKZ Chkalovo 36.50 51 *eP* P 07 56 51.1 -1.5
CHKZ pmax pmax
comp=Z,16nm,0.7s,mb5.1
CHKZ Chkalovo 36.50 51 *eP* P 07 56 51.1 -1.5
comp=Z,16nm,0.7s,mb5.0
CHKZ Chkalovo 36.50 51 *eP* P 07 56 51.1 -1.5
comp=Z,16nm,0.7s,mb5.0
KK31 Karatay Array 37.62 68 *i* P P 07 57 00.2 -1.9
KK31 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
KK31 Karatay Array 37.62 68 *i* P P 07 57 00.2 -1.9
comp=Z,10.0nm,0.6s,mb4.7
KBS Kingsbay 38.99 358 AMS AMS 08 16 18.1
comp=Z,167nm,17.2s,MS3.9
KBS Kingsbay 38.99 358 *eP* P 07 57 13.3 -0.4
KBS pmax pmax
comp=Z,28nm,1.0s,mb5.0
KBS Kingsbay 38.99 358 *eP* P 07 57 13.3 -0.4
comp=Z,28nm,1.0s,mb5.0
KBS Kingsbay 38.99 358 *eP* P 07 57 13.3 -0.4
comp=Z,28nm,1.0s,mb5.0
DBIC Dimbokro 39.97 220 P P 07 57 21.2 -0.6
comp=Z,6.4nm,0.6s,mb4.5,baz=22,slow=8.0,SNR=9.0
DBIC LR LR 08 16 40.0
comp=Z,261nm,18.2s,MS4.1,baz=13,slow=40
DBIC Dimbokro 39.97 220 *eP* P 07 57 21.3 -0.5
DBIC pmax pmax
comp=Z,10.0nm,0.7s
DBIC Dimbokro 39.97 220 *eP* P 07 57 21.3 -0.5
comp=Z,10nm,0.7s,mb4.7
DAG Danmarks Havn 40.21 347 ⇑ *iP* P 07 57 23.5 -0.4
comp=Z,2.1nm,0.7s,mb4.0
DAG Danmarks Havn 40.21 347 ⇑ *iP* P 07 57 23.5 -0.4
DAG pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
AAK Ala-Archa 40.57 68 P P 07 57 25.1 -1.7
SNR=17
AAK Ala-Archa 40.57 68 *eP* P 07 57 24.9 -1.9
AAK Ala-Archa 40.57 68 P P 07 57 25.1 -1.7
SNR=17
FRU Bishkek 40.60 68 ⇑ *iP* P 07 57 25.2 -1.9
FRU pmax pmax
comp=Z,102nm,1.8s,mb5.2
FRU Bishkek 40.60 68 *i* P P 07 57 25.2 -1.9
comp=Z,102nm,1.8s,mb5.2
TKM2 Tokmak 2 41.27 67 *i* P P 07 57 28.5 -4.1
TKM2 pmax pmax
comp=Z,12nm,1.3s,mb4.4
TKM2 Tokmak 2 41.27 67 *i* P P 07 57 28.5 -4.1
comp=Z,12nm,1.3s,mb4.4
KURK Kurchatov 41.63 55 P P 07 57 33.8 -1.8
SNR=8.7
KURK Kurchatov 41.63 55 *eP* P 07 57 33.3 -2.3
KURK pmax pmax
comp=Z,21nm,1.3s,mb4.6
KURK Kurchatov 41.63 55 *eP* P 07 57 33.2 -2.3
comp=Z,21nm,1.3s,mb4.6
MBAR Mbarara 41.81 163 *i* P P 07 57 37.4 +0.3
NVS Novosibirsk 43.81 48 *eP* P 07 57 51.1 -2.1
NVS pmax pmax
comp=N,14nm,1.7s
NVS pmax pmax
comp=E,23nm,1.7s
NVS pmax pmax
comp=Z,54nm,1.7s,mb5.0
MKAR Makanchi Array 44.83 60 P P 07 57 59.6 -1.8
comp=Z,22nm,0.6s,mb5.2,baz=292,slow=6.4,SNR=144
NDI New Delhi 48.06 85 *eP* P 07 58 22.0 -4.8
WMQ Urumqi 49.37 62 ⇑ *iP* P 07 58 36.0 -0.9
WMQ XP sP 07 58 43.0 +1.5
WMQ PP PP 08 00 30.0 -0.9
WMQ S S 08 05 40.0 -3.5
WMQ SS SS 08 09 07.0 -8.1
WMQ AMB AMB
comp=Z,18nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,102nm,4.0s
WMQ LR LR
comp=N,298nm,14.0s,MS4.6
WMQ LR LR
comp=E,297nm,14.0s,MS4.6
WMQ LR LR
comp=Z,248nm,14.0s,MS4.4
KOLN Koldanda 53.38 83 *eP* P 07 59 04.0 -2.9
comp=Z,22nm,0.6s,mb5.3
GKN Gorkha 54.05 82 *eP* P 07 59 08.8 -3.0
comp=Z,53nm,1.0s,mb5.4
DMN Daman 54.61 82 *eP* P 07 59 13.2 -2.7
comp=Z,47nm,0.9s,mb5.5
KKN Kakani 54.65 82 *eP* P 07 59 13.3 -2.9
comp=Z,25nm,0.7s,mb5.4
KKN Kakani 54.65 82 *eP* P 07 59 13.3 -2.9
KKN pmax pmax
comp=Z,25nm,0.7s,mb5.3
PKI Pulchoki 54.86 82 *eP* P 07 59 14.8 -2.9
comp=Z,22nm,0.8s,mb5.3
PKI Pulchoki 54.86 82 *eP* P 07 59 14.8 -2.9
PKI pmax pmax
comp=Z,22nm,0.8s,mb5.2
MOY Mondy 54.90 49 *eP* P 07 59 17.5 -0.5
GUN Gumba 55.04 81 *eP* P 07 59 16.7 -2.3
comp=Z,78nm,1.1s,mb5.5
JIRN Jiri 55.40 81 *eP* P 07 59 19.3 -2.3
comp=Z,22nm,0.6s,mb5.4
TLY Talaya 56.42 48 P P 07 59 28.9 0.0
SNR=14
TLY Talaya 56.42 48 *eP* P 07 59 27.1 -1.8
TLY *eS* S 08 07 14.0 -5.6
TLY pmax pmax
comp=Z,23nm,1.2s,mb5.1
TLY MLR MLR
comp=Z,624nm,14.0s,MS4.9
TLY Talaya 56.42 48 *eP* P 07 59 28.2 -0.7
comp=Z,10.0nm,0.8s,mb4.9
TLY Talaya 56.42 48 *eP* P 07 59 28.2 -0.7
comp=Z,9.9nm,0.8s,mb4.9
IRK Irkutsk 56.55 47 *eP* P 07 59 28.4 -1.4
IRK pmax pmax
comp=Z,42nm,2.2s,mb5.1
IRK Irkutsk 56.55 47 *eP* P 07 59 28.4 -1.4
comp=Z,42nm,2.2s,mb5.1
SCHQ Schefferville 56.57 316 P P 07 59 29.4 -0.6
comp=Z,4.4nm,0.5s,mb4.8,baz=84,slow=5.6,SNR=16
SCHQ LR LR 08 23 53.8
comp=Z,126nm,18.2s,MS4.0,baz=108,slow=36
SCHQ Schefferville 56.57 316 *eP* P 07 59 29.2 -0.8
comp=Z,16nm,1.0s,mb5.0
SCHQ Schefferville 56.57 316 *eP* P 07 59 29.2 -0.8
comp=Z,16nm,1.0s,mb5.0
BOD Bodaibo 59.20 38 *eP* P 07 59 46.3 -2.2
BOD pmax pmax
comp=Z,16nm,1.5s,mb4.8
BOD Bodaibo 59.20 38 *eP* P 07 59 46.3 -2.2
comp=Z,16nm,1.5s,mb4.8
GTA Gaotai 59.46 62 P P 07 59 49.1 -1.1
GTA AP pP 07 59 52.6 -1.0
GTA XP sP 07 59 55.0 +0.1
GTA PCP PcP 08 00 37.6 -0.2
GTA PP PP 08 02 03.4 +1.9
GTA S S 08 07 58.0 -1.4
GTA XS sS 08 08 04.4 -0.6
GTA SCS ScS 08 09 39.2 -1.3
GTA SS SS 08 11 50.8 -3.6
GTA AMB AMB
comp=Z,8.0nm,1.2s,mb4.6
GTA AMB AMB
comp=Z,118nm,3.8s
GTA LR LR
comp=N,206nm,16.8s,MS4.6
GTA LR LR
comp=E,286nm,17.2s,MS4.6
GTA LR LR
comp=Z,305nm,22.9s
SONM Songino Array 59.70 51 P P 07 59 50.7 -1.2
comp=Z,10nm,0.8s,mb4.9,baz=290,slow=7.9,SNR=55
SONM LR LR 08 26 39.5
comp=Z,223nm,19.4s,MS4.3,baz=178,slow=37
ULN Ulaanbaatar 60.08 51 P P 07 59 54.3 -0.2
SNR=6.4
ULN Ulaanbaatar 60.08 51 *c iP* P 07 59 53.2 -1.3
ULN *e**PP pP 07 59 57.3 -0.6
YAK Yakutsk 63.69 30 *eP* P 08 00 17.1 -1.7
YAK pmax pmax
comp=Z,11nm,1.5s,mb4.7
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.5s
YAK Yakutsk 63.69 30 *eP* P 08 00 17.1 -1.7
comp=E,6.0nm,1.4s,mb4.4
LZH Lanzhou 63.89 64 *eP* P 08 00 18.5 -1.6
LZH AP pP 08 00 21.7 -1.9
LZH XP sP 08 00 23.2 -1.6
LZH *e*S S 08 08 51.2 -4.4
LZH XS sS 08 08 57.1 -4.1
LZH SS SS 08 12 58.9 -4.9
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.1

LZH AMB AMB
comp=Z,95nm,7.7s
LZH LR LR
comp=E,623nm,15.9s
LZH LR LR
comp=Z,758nm,18.3s,MS4.9
ACCN Adirondack Com 65.98 307 *eP* **P 08 00 33.8 0.0**
ACCN Adirondack Com 65.98 307 *eP* **P 08 00 33.8 0.0**
HHC Hu-ho-hao-te 66.44 56 *eP* **P 08 00 35.4 -1.3**
HHC AP pP 08 00 40.1 0.0
HHC XP sP 08 00 42.4 +1.0
HHC PCP PcP 08 01 05.6 -0.7
HHC PP PP 08 03 01.9 -1.0
HHC SCP 08 05 06.9
HHC PCS 08 05 08.8
HHC S S 08 09 21.6 -5.3
HHC XS sS 08 09 29.5 -3.1
HHC SCS ScS 08 10 27.5 -6.0
HHC SS SS 08 13 39.6 -3.9
HHC AMB AMB
comp=Z,20nm,0.8s,mb5.2
HHC AMB AMB
comp=Z,75nm,3.4s
HHC LR LR
comp=N,309nm,17.2s,MS4.7
HHC LR LR
comp=E,236nm,19.9s,MS4.7
HHC LR LR
comp=Z,250nm,24.7s,MS4.3
HIA Hailar 66.55 45 *eP* **P 08 00 36.8 -0.6**
HIA pmax pmax
comp=Z,16nm,0.9s
HIA Hailar 66.55 45 *eP* **P 08 00 36.8 -0.6**
comp=Z,16nm,0.9s,mb5.0
HIA Hailar 66.55 45 *eP* **P 08 00 36.8 -0.6**
comp=Z,16nm,0.9s,mb5.0
CD2 Chengdu 66.64 69 P **P 08 00 36.2 -1.7**
CD2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.8
XAN Xi'an 68.49 63 P **P 08 00 47.9 -1.8**
XAN AP pP 08 00 54.2 +1.1
XAN AMB AMB
comp=Z,11nm,1.4s,mb4.7
KMI Kunming 69.18 74 P **P 08 00 55.9 +2.0**
KMI AP pP 08 00 59.6 +2.2
KMI XP sP 08 01 01.5 +2.8
KMI PP PP 08 03 29.6 +2.9
KMI S S 08 09 56.1 -3.6
KMI XS sS 08 10 03.7 -1.7
KMI SS SS 08 14 25.7 -0.2
KMI AMB AMB
comp=Z,8.0nm,0.7s,mb4.8
KMI AMB AMB
comp=Z,135nm,3.9s
KMI LR LR
comp=N,139nm,15.5s,MS4.4
KMI LR LR
comp=E,121nm,17.5s,MS4.4
KMI LR LR
comp=Z,119nm,20.0s,MS4.1
BILL Bilibino 69.22 13*c i* P **P 08 00 53.0 -1.2**
BILL *e* 08 03 22.6
BILL *eS* S 08 10 02.4 +2.2
BILL pmax pmax
comp=Z,24nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,200nm,20.0s,MS4.3
BILL Bilibino 69.22 13 *i* P **P 08 00 53.0 -1.2**
comp=Z,24nm,1.2s,mb5.0
BILL *eS* S 08 10 02.4 +2.2
INK Inuvik 69.99 350 *eP* **P 08 00 57.6 -1.4**
INK pmax pmax
comp=Z,7.0nm,1.1s
INK Inuvik 69.99 350 *eP* **P 08 00 57.6 -1.4**
comp=Z,6.9nm,1.1s,mb4.5
INK Inuvik 69.99 350 *eP* **P 08 00 57.6 -1.4**
comp=Z,6.9nm,1.1s,mb4.5
SSPA Standing Stone 70.13 307 *eP* **P 08 01 00.2 +0.4**
comp=Z,9.8nm,1.2s,mb4.6
SSPA Standing Stone 70.13 307 *eP* **P 08 01 00.2 +0.4**
comp=Z,9.8nm,1.2s,mb4.6
GYA Guiyang 71.27 71 P **P 08 01 04.4 -2.4**
GYA AP pP 08 01 09.7 -0.5
GYA XP sP 08 01 11.5 0.0
GYA PP PP 08 03 43.4 -1.4
GYA S S 08 10 17.6 -6.6
GYA SKS 08 11 01.7
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,90nm,4.8s
GYA LR LR
comp=N,240nm,18.9s,MS4.7
GYA LR LR
comp=E,270nm,18.7s,MS4.7
GYA LR LR
comp=Z,250nm,18.6s,MS4.5
YKA Yellowknife Ar 71.30 339 P **P 08 01 06.2 -0.7**
comp=Z,5.0nm,0.9s,mb4.5,baz=37,slow=5.7,SNR=21
YKA LR LR 08 33 55.1
comp=Z,88nm,19.0s,MS4.0,baz=300,slow=37
YKA Yellowknife Ar 71.30 339 P **P 08 01 06.2 -0.7**
YKA LR LR 08 33 55.1
KLR Kul'dur 72.74 40 *eP* **P 08 01 11.8 -3.8**
KLR pmax pmax
comp=Z,28nm,1.6s,mb4.9
KLR MLR MLR
comp=E,700nm,13.0s
KLR MLR MLR
comp=Z,1µm,13.0s,MS5.4
KLR Kul'dur 72.74 40 *eP* **P 08 01 11.8 -3.8**
comp=Z,28nm,1.6s,mb4.9
CN2 Changchun 72.99 47 *eP* **P 08 01 16.2 -0.8**
CN2 *eXP* sP 08 01 23.7 +1.9
CN2 *eS* S 08 10 39.2 -4.7
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,14.0s,MS5.1
CN2 LR LR
comp=E,500nm,14.0s,MS5.1
CN2 LR LR
comp=Z,500nm,14.0s,MS5.0
SNY Shenyang 73.17 49 ⇑P **P 08 01 16.1 -2.0**
SNY AP pP 08 01 22.7 +1.1
SNY XP sP 08 01 26.0 +3.1
SNY S S 08 10 50.7 +4.7
SNY AMB AMB
comp=Z,10.0nm,1.5s,mb4.5
SNY AMB AMB
comp=Z,94nm,4.5s
SNY LR LR
comp=N,306nm,13.5s,MS5.0
SNY LR LR
comp=E,408nm,14.7s,MS5.0
SNY LR LR
comp=Z,437nm,15.7s,MS4.8
ULM Lac du Bonnet 73.72 323 P **P 08 01 21.0 -0.4**
comp=Z,14nm,0.9s,mb4.9,baz=30,slow=5.1,SNR=14
ULM LR LR 08 37 13.0
comp=Z,114nm,18.1s,MS4.2,baz=22,slow=39
ULM Lac du Bonnet 73.72 323 *eP* **P 08 01 21.1 -0.2**
comp=Z,17nm,0.8s,mb5.0
ULM Lac du Bonnet 73.72 323 *eP* **P 08 01 21.1 -0.3**
comp=Z,17nm,0.8s,mb5.0
FWV Forest Hill 73.79 306 *eP* **P 08 01 22.4 +0.6**
FWV Forest Hill 73.79 306 *eP* **P 08 01 22.4 +0.6**
IMA2 Indian Mountai 73.97 357 *eP* **P 08 01 22.7 -0.1**
MDJ Mudanjiang 74.72 44 P **P 08 01 26.5 -0.7**
MDJ PCP PcP 08 01 40.6 -0.7
MDJ PP PP 08 04 11.8 -2.4
MDJ S S 08 11 02.4 -1.0
MDJ SCS ScS 08 11 37.9 -1.0
MDJ SS SS 08 15 49.4 -1.4
MDJ AMB AMB
comp=Z,6.0nm,0.8s,mb4.6
MDJ AMB AMB
comp=Z,34nm,4.2s
MDJ LR LR
comp=N,240nm,20.9s,MS4.7
MDJ LR LR
comp=E,268nm,19.2s,MS4.7
MDJ LR LR
comp=Z,190nm,15.7s,MS4.5
DAWY Dawson 74.79 351 *eP* **P 08 01 27.3 -0.3**
DAWY Dawson 74.79 351 *eP* **P 08 01 27.3 -0.3**
COLA College 74.84 355*c i* P **P 08 01 27.6 -0.3**
COLA College 74.84 355 *eP* **P 08 01 27.3 -0.6**
comp=Z,8.8nm,0.9s,mb4.7
COLA College 74.84 355 *i* P **P 08 01 27.6 -0.3**
JFWS Jewell Farm 75.88 315 *eP* **P 08 01 34.0 +0.1**
JFWS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
JFWS Jewell Farm 75.88 315 *eP* **P 08 01 34.0 +0.2**
comp=Z,7.7nm,0.9s,mb4.6
JFWS Jewell Farm 75.88 315 *eP* **P 08 01 34.0 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
MCK McKinley 76.04 355 *eP* **P 08 01 34.2 -0.6**
MCK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MCK McKinley 76.04 355 *eP* **P 08 01 34.2 -0.6**
comp=Z,9.3nm,1.0s,mb4.7
BLO Bloomington 76.24 310 *eP* **P 08 01 36.5 +0.6**
BLO pmax pmax
comp=Z,24nm,0.9s,mb5.1
BLO Bloomington 76.24 310 *eP* **P 08 01 36.5 +0.6**
comp=Z,24nm,0.9s,mb5.1
BLO Bloomington 76.24 310 *eP* **P 08 01 36.5 +0.6**
comp=Z,24nm,0.9s,mb5.1
NJ2 Nanjing 76.36 60 *eP* **P 08 01 35.4 -1.2**
NJ2 XP sP 08 01 42.4 +1.0
NJ2 PP PP 08 04 29.0 +0.9
NJ2 S S 08 11 19.0 -2.6
NJ2 XS sS 08 11 26.0 -1.3
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
NJ2 AMB AMB
comp=Z,20nm,3.8s
NJ2 LR LR
comp=N,640nm,18.0s
NJ2 LR LR
comp=Z,710nm,20.0s,MS5.0
WCI Wyandotte Cave 76.72 309 *eP* **P 08 01 38.8 +0.2**
WCI pmax pmax
comp=Z,13nm,0.9s,mb4.9
WCI Wyandotte Cave 76.72 309 *eP* **P 08 01 38.8 +0.2**
comp=Z,13nm,0.9s,mb4.9
VLA Vladivostok 76.96 44 *eP* **P 08 01 37.0 -3.0**
VLA pmax pmax
comp=Z,33nm,2.0s,mb4.9
VLA MLR MLR
comp=Z,400nm,14.6s,MS4.9
VLA Vladivostok 76.96 44 *eP* **P 08 01 37.0 -3.0**
comp=Z,400nm,14.6s
TTA Tatalina 77.19 358 *eP* **P 08 01 42.0 +0.7**
PMR Palmer 78.18 355 *eP* **P 08 01 46.6 -0.2**
PMR pmax pmax
comp=Z,18nm,1.0s,mb5.0
PMR Palmer 78.18 355 *eP* **P 08 01 46.6 -0.2**
comp=Z,18nm,1.0s,mb5.0
SSE Sheshan 78.50 59 P **P 08 01 46.6 -2.0**
SSE AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
SSE AMB AMB
comp=Z,39nm,4.5s
EDM Edmonton 78.53 333 *eP* **P 08 01 48.6 -0.1**
SIUC Southern Illin 78.79 310 *eP* **P 08 01 50.4 +0.2**
comp=Z,20nm,1.1s,mb5.0
SIUC Southern Illin 78.79 310 *eP* **P 08 01 50.4 +0.2**
comp=Z,20nm,1.1s,mb5.0
SVW2 Sparrevohn 79.01 358 *eP* **P 08 01 51.6 +0.2**
WVT Waverly 79.03 308 *eP* **P 08 01 50.6 -0.9**
WVT pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
WVT Waverly 79.03 308 *eP* **P 08 01 50.6 -0.9**
comp=Z,7.0nm,0.9s,mb4.6
WVT Waverly 79.03 308 *eP* **P 08 01 50.6 -0.9**
comp=Z,7.0nm,0.9s,mb4.6
FVM French Village 79.31 311 *eP* **P 08 01 53.3 +0.3**
FVM pmax pmax
comp=Z,12nm,0.9s,mb4.8
FVM French Village 79.31 311 *eP* **P 08 01 53.3 +0.3**
comp=Z,12nm,0.9s,mb4.8
FVM French Village 79.31 311 *eP* **P 08 01 53.3 +0.3**
comp=Z,12nm,0.9s,mb4.8
YSS Yuzh-Sakhalins 79.53 36⇑ *eP* **P 08 01 53.3 -0.9**
YSS *e**PP pP 08 01 56.0 -1.7
YSS *i* *SP sP 08 01 57.3 -1.7
YSS *eS* S 08 11 54.0 -1.7
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=N,300nm,16.0s,MS5.0
YSS MLR MLR
comp=E,400nm,16.0s,MS5.0
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.8
YSS Yuzh-Sakhalins 79.53 36 *eP* **P 08 01 53.8 -0.4**
comp=Z,36nm,0.9s,mb5.3
YSS Yuzh-Sakhalins 79.53 36 *eP* **P 08 01 53.3 -0.9**
comp=Z,30nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 79.53 36 *i* PcP PcP 08 01 57.3 -4.8
YSS *eS* S 08 11 54.0 -1.7
KULM Kulim 79.70 92 *eP* **P 08 01 54.5 -0.6**
KULM Kulim 79.70 92 *eP* **P 08 01 54.5 -0.6**
CCM Cathedral Cave 79.73 311 *eP* **P 08 01 55.4 +0.1**
CCM pmax pmax
comp=Z,11nm,0.8s,mb4.8
CCM Cathedral Cave 79.73 311 *eP* **P 08 01 55.4 0.0**
comp=Z,11nm,0.8s,mb4.8
CCM Cathedral Cave 79.73 311 *eP* **P 08 01 55.4 +0.1**
comp=Z,11nm,0.8s,mb4.8
PLAL Pickwick Lake 79.94 307 *eP* **P 08 01 56.0 -0.5**
comp=Z,16nm,1.0s,mb4.9
PLAL Pickwick Lake 79.94 307 *eP* **P 08 01 56.0 -0.4**
comp=Z,16nm,1.0s,mb4.9
PSI Prapat 79.97 95 LR LR 08 37 37.4
comp=Z,179nm,18.4s,MS4.5,baz=174,slow=36
LAO LASA Array 80.99 326 *eP* **P 08 02 02.7 +0.6**
comp=Z,20nm,0.8s,mb5.1
LAO LASA Array 80.99 326 *eP* **P 08 02 02.7 +0.6**
comp=Z,20nm,0.8s,mb5.1
OXF Oxford 81.07 308 *eP* **P 08 02 02.1 -0.4**
OXF pmax pmax
comp=Z,18nm,1.0s,mb5.0
OXF Oxford 81.07 308 *eP* **P 08 02 02.1 -0.4**
comp=Z,18nm,1.0s,mb5.0
OXF Oxford 81.07 308 *eP* **P 08 02 02.1 -0.4**
comp=Z,18nm,1.0s,mb5.0
EGMT Eagleton 81.41 328 *eP* **P 08 02 04.9 +0.6**
comp=Z,30nm,0.8s,mb5.3
EGMT Eagleton 81.41 328 *eP* **P 08 02 04.9 +0.6**
comp=Z,30nm,0.8s,mb5.3
ASAJ Asahikawa 81.61 38 LR LR 08 38 13.8
comp=Z,105nm,18.8s,MS4.2,baz=337,slow=36
KSU1 Kansas State U 81.99 315 *eP* **P 08 02 07.7 +0.3**
KSU1 Kansas State U 81.99 315 *eP* **P 08 02 07.7 +0.3**
RSSD Black Hills 81.99 323 *eP* **P 08 02 07.9 +0.5**
RSSD pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
RSSD Black Hills 81.99 323 *eP* **P 08 02 07.9 +0.5**
comp=Z,6.3nm,0.9s,mb4.5
RSSD Black Hills 81.99 323 *eP* **P 08 02 07.9 +0.5**
comp=Z,6.3nm,0.9s,mb4.5
WALA Waterton Lakes 82.17 331 *eP* **P 08 02 08.3 0.0**
comp=Z,12nm,0.9s,mb4.8
WALA Waterton Lakes 82.17 331 *eP* **P 08 02 08.3 0.0**
comp=Z,12nm,0.9s,mb4.8
UALR University of 82.64 310 *eP* **P 08 02 11.2 +0.4**
comp=Z,9.7nm,0.9s,mb4.8
UALR University of 82.64 310 *eP* **P 08 02 11.2 +0.4**
comp=Z,9.6nm,0.9s,mb4.8
GCMT Greycliff 83.16 327 *eP* **P 08 02 14.0 +0.5**
GCMT Greycliff 83.16 327 *eP* **P 08 02 14.0 +0.5**
HRY Holter Researc 83.30 329 *eP* **P 08 02 14.4 +0.2**
HRY Holter Researc 83.30 329 *eP* **P 08 02 14.4 +0.2**
MIAR Mount Ida 83.52 310 *eP* **P 08 02 16.0 +0.7**
MIAR pmax pmax
comp=Z,16nm,0.9s,mb5.2
MIAR Mount Ida 83.52 310 *eP* **P 08 02 16.0 +0.7**
comp=Z,16nm,0.9s,mb5.2
MIAR Mount Ida 83.52 310 *eP* **P 08 02 16.0 +0.7**
comp=Z,16nm,0.9s,mb5.2
BAO Brasilia Array 83.79 244 P **P 08 02 18.5 +1.8**
BDFB Brasilia 83.81 244 P **P 08 02 17.7 +0.8**
comp=Z,12nm,0.9s,mb5.0,baz=42,slow=5.7,SNR=9.4
BDFB LR LR 08 41 01.6
comp=Z,132nm,18.1s,MS4.4,baz=272,slow=37
NEW Newport 83.99 333 *eP* **P 08 02 17.8 +0.1**
NEW pmax pmax
comp=Z,8.0nm,1.0s
NEW Newport 83.99 333 *eP* **P 08 02 17.8 0.0**
comp=Z,8.3nm,1.0s,mb4.8
NEW Newport 83.99 333 *eP* **P 08 02 17.8 +0.1**
comp=Z,8.0nm,1.0s,mb4.8
MSO Missoula 84.03 330 *eP* **P 08 02 17.8 -0.1**
comp=Z,5.4nm,1.2s,mb4.5
MSO Missoula 84.03 330 *eP* **P 08 02 17.8 -0.1**
comp=Z,5.4nm,1.2s,mb4.5
BOZ Bozeman (W) 84.09 328 *eP* **P 08 02 18.7 +0.5**
BOZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
BOZ Bozeman (W) 84.09 328 *eP* **P 08 02 18.7 +0.4**
comp=Z,7.5nm,0.9s,mb4.8
BOZ Bozeman (W) 84.09 328 *eP* **P 08 02 18.7 +0.5**
comp=Z,7.5nm,0.9s,mb4.8
LKWY Lake 84.46 327 *eP* **P 08 02 20.5 +0.4**
LKWY pmax pmax
comp=Z,18nm,0.9s,mb5.2
LKWY Lake 84.46 327 *eP* **P 08 02 20.5 +0.4**
comp=Z,18nm,0.9s,mb5.2
LKWY Lake 84.46 327 *eP* **P 08 02 20.5 +0.4**
comp=Z,18nm,0.9s,mb5.2
SDV Santo Domingo 84.59 277 *eP* **P 08 02 22.1 +1.3**
comp=Z,20nm,1.3s,mb5.1
SDV Santo Domingo 84.59 277 *eP* **P 08 02 22.1 +1.3**
comp=Z,20nm,1.3s,mb5.1
YMR Madison River 84.61 327 *eP* **P 08 02 21.2 +0.3**
comp=Z,14nm,1.0s,mb5.1
YMR Madison River 84.61 327 *eP* **P 08 02 21.2 +0.3**
comp=Z,14nm,1.0s,mb5.1
QLMT Earthquake Lak 84.67 327 *eP* **P 08 02 22.5 +1.3**
QLMT Earthquake Lak 84.67 327 *eP* **P 08 02 22.5 +1.3**
DLMT Dillon 84.71 328 *eP* **P 08 02 22.2 +0.8**
comp=Z,15nm,1.0s,mb5.1
DLMT Dillon 84.71 328 *eP* **P 08 02 22.2 +0.8**
comp=Z,15nm,1.0s,mb5.1
YFT Old Faithful 84.73 327 *eP* **P 08 02 21.7 +0.2**
YFT *e*PcP PcP 08 02 25.0 0.0
YFT Old Faithful 84.73 327 *e*PcP PcP 08 02 25.0 0.0
PHWY Pilot Hill 84.83 322 *eP* **P 08 02 22.7 +0.7**
PHWY Pilot Hill 84.83 322 *eP* **P 08 02 22.7 +0.7**
FLWY Flagg Ranch 84.97 327 *eP* **P 08 02 23.2 +0.5**
comp=Z,16nm,1.0s,mb5.1
FLWY Flagg Ranch 84.97 327 *eP* **P 08 02 23.2 +0.5**
comp=Z,16nm,1.0s,mb5.1
A05A Maple Falls 85.01 336 ⇓P **P 08 02 22.2 -0.7**
baz=85
MAJO Matsushiro 85.04 45 *eP* **P 08 02 22.1 -1.0**
MAJO pmax pmax
comp=Z,13nm,1.0s,mb5.0
MAJO Matsushiro 85.04 45 *eP* **P 08 02 22.1 -1.0**
comp=Z,13nm,1.0s,mb5.0
MAJO Matsushiro 85.04 45 *eP* **P 08 02 22.1 -1.0**
comp=Z,13nm,1.0s,mb5.0
MAT Matsushiro 85.04 45 P **P 08 02 21.6 -1.5**
MAT S S 08 12 50.0 -2.3
MAT Matsushiro 85.04 45 *eP* **P 08 02 22.0 -1.1**
MAT *eS* S 08 12 50.0 -2.3
MAT pmax pmax
comp=Z,16nm,1.2s,mb5.0
MAT Matsushiro 85.04 45 *eP* **P 08 02 22.0 -1.1**
comp=Z,16nm,1.2s,mb5.0
MAT *eS* S 08 12 50.0 -2.3
MJAR Matsushiro Arr 85.05 45 P **P 08 02 21.8 -1.3**
comp=Z,8.9nm,1.0s,mb4.8,baz=314,slow=5.7,SNR=20
MJAR LR LR 08 46 58.2
comp=Z,162nm,18.5s,MS4.4,baz=270,slow=40
IMW Indian Meadow 85.23 327 *eP* **P 08 02 28.9 +4.9**
comp=Z,10nm,0.9s,mb5.0
MCMT McKenzie Canyo 85.25 328 *eP* **P 08 02 24.5 +0.4**
MCMT McKenzie Canyo 85.25 328 *eP* **P 08 02 24.5 +0.4**
MOOW Moose Ponds 85.27 326 *eP* **P 08 02 25.0 +0.8**
comp=Z,4.2nm,0.9s,mb4.6
MOOW Moose Ponds 85.27 326 *eP* **P 08 02 25.0 +0.8**
comp=Z,4.2nm,0.9s,mb4.6
OD2 Odessa Site #2 85.29 333 P **P 08 02 24.6 +0.3**
OD2 Odessa Site #2 85.29 333 P **P 08 02 24.6 +0.3**
WTV Waterville 85.45 334 P **P 08 02 25.4 +0.3**
WTV Waterville 85.45 334 P **P 08 02 25.4 +0.3**
PDAR Pinedale Array 85.55 325 P **P 08 02 25.4 -0.1**
comp=Z,1.3nm,0.6s,mb4.4,baz=70,slow=6.6,SNR=13
PDAR LR LR 08 43 57.6
comp=Z,163nm,20.8s,MS4.4,baz=38,slow=38
TPAW Teton Pass 85.56 326 *eP* **P 08 02 25.8 +0.2**
comp=Z,6.7nm,1.0s,mb4.8
REDW Red Top Meadow 85.62 326 *eP* **P 08 02 26.6 +0.6**
comp=Z,3.9nm,1.0s,mb4.6
B05A Bryant 85.66 336 ⇑P **P 08 02 24.1 -2.1**
baz=85
C05A Tolt Reservoir 86.03 335 ⇓P **P 08 02 27.7 -0.2**
baz=86
TBM Table Mountain 86.13 334 P **P 08 02 28.3 -0.2**
RMW Rattlesnake Mo 86.27 335 P **P 08 02 29.3 +0.1**
EBG Ellensburg 86.34 334 P **P 08 02 30.0 +0.5**
WMOK Wichita Mounta 86.36 314 *eP* **P 08 02 30.5 +0.9**
WMOK pmax pmax
comp=Z,18nm,1.0s,mb5.3
WMOK Wichita Mounta 86.36 314 *eP* **P 08 02 30.5 +0.9**
comp=Z,18nm,1.0s,mb5.3
WMOK Wichita Mounta 86.36 314 *eP* **P 08 02 30.5 +0.9**
comp=Z,18nm,1.0s,mb5.3
C04A Brinnon 86.42 336 ⇑P **P 08 02 31.0 +1.1**
baz=86
HAWA Hanford 86.44 333 *eP* **P 08 02 30.3 +0.3**
comp=Z,1.6nm,1.0s,mb4.2
D05A Enumclaw 86.57 335 ⇑P **P 08 02 30.4 -0.2**
baz=86
F08A Pendleton 86.69 332 ⇑P **P 08 02 32.0 +0.8**
baz=86
BMO Blue Mountains 86.96 331 *eP* **P 08 02 32.2 -0.3**
comp=Z,11nm,1.2s,mb5.0
E05A Randle 87.05 334 ⇓P **P 08 02 32.3 -0.7**
baz=87
H09A Durkee 87.25 331 ⇓P **P 08 02 31.6 -2.4**
baz=87
HWUT Hardware Ranch 87.36 326 *eP* **P 08 02 34.5 0.0**
comp=Z,9.8nm,0.8s,mb5.1
H08A Prairie City 87.75 332 ⇓P **P 08 02 34.9 -1.5**
baz=87
I09A Lost Marbles R 87.87 331 ⇓P **P 08 02 36.4 -0.6**
baz=88
I07A Izee 88.43 332 ⇑P **P 08 02 40.4 +0.8**
baz=88
JHJ Hachijo jima 2 88.45 47 LR LR 08 46 47.3
comp=Z,140nm,18.2s,MS4.4,baz=275,slow=39
G04A Mulino 88.48 334 ⇓P **P 08 02 38.7 -1.1**
baz=88
H05A Madras 88.55 333 ⇓P **P 08 02 40.4 +0.3**
baz=88
BGU Big Grassy Mou 88.55 326 *eP* **P 08 02 39.7 -0.5**
I06A Prineville 88.80 332 ⇓P **P 08 02 42.6 +1.2**
baz=88
H04A Detroit Lake 88.84 334 ⇑P **P 08 02 42.3 +0.7**
baz=88
SRU San Rafael 88.93 324 *eP* **P 08 02 41.7 -0.2**
SRU pmax pmax
comp=Z,11nm,0.8s,mb5.2
SRU San Rafael 88.93 324 *eP* **P 08 02 41.7 -0.2**
comp=Z,11nm,0.8s,mb5.2
SRU San Rafael 88.93 324 *eP* **P 08 02 41.7 -0.2**
comp=Z,11nm,0.8s,mb5.2
M12A Wells 88.93 328 P **P 08 02 43.4 +1.5**
baz=89,SNR=8.2
NLU North Lily Min 88.93 325 *eP* **P 08 02 42.3 +0.3**
J07A Hines 88.97 331 ⇑P **P 08 02 43.9 +1.7**
baz=89
I05A Bend 88.98 333 ⇓P **P 08 02 42.5 +0.3**
baz=89
DUG Dugway 89.06 326 *eP* **P 08 02 42.7 +0.2**
DUG pmax pmax
comp=Z,11nm,0.9s,mb5.2
DUG Dugway 89.06 326 *eP* **P 08 02 42.7 +0.2**
comp=Z,11nm,0.9s,mb5.2
DUG Dugway 89.06 326 *eP* **P 08 02 42.7 +0.2**
comp=Z,11nm,0.9s,mb5.2
TMUT Trail Mountain 89.08 324 *eP* **P 08 02 42.9 +0.2**
N13A Wendover, West 89.10 327 ⇑P **P 08 02 42.8 0.0**
baz=89
K08A Mann Creek Ran 89.22 331 ⇑P **P 08 02 43.7 +0.4**
baz=89
M11A Holland Ranch, 89.27 328 ⇓P **P 08 02 44.4 +0.9**
baz=89
BROR Big Rock Looko 89.30 334 P **P 08 02 44.1 +0.4**
J06A Christmas Vall 89.38 332 P **P 08 02 45.6 +1.5**
baz=89,SNR=6.5

N12A	Clover Valley,	89.45	327	P	P	08 02 45.5	+1.1
	baz=89,SNR=7.7						
M10A	I.L. Ranch, Tu	89.50	329	⇓P	P	08 02 46.4	+1.8
	baz=89						
MVCO	Mesa Verde	89.50	321	*e*P	P	08 02 45.4	+0.7
L09A	Wilkinson Ranc	89.52	330	⇑P	P	08 02 46.0	+1.3
	baz=89,SNR=5.5						
K07A	Rock Creek Ran	89.54	331	⇓P	P	08 02 45.6	+0.8
	baz=89						
L08A	Fields	89.63	330	P	P	08 02 46.5	+1.3
	baz=89,SNR=9.6						
J05A	Fort Rock	89.74	333	⇓P	P	08 02 46.5	+0.8
	baz=89,SNR=5.9						
K06A	Valley Falls	89.81	332	⇓P	P	08 02 47.3	+1.3
	baz=90						
JCT	Junction City	90.08	311	*e*P	P	08 02 47.8	+0.5
JCT				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
JCT	Junction City	90.08	311	*e*P	P	08 02 47.8	+0.4
	comp=Z,11nm,1.0s,mb5.1						
JCT	Junction City	90.08	311	*e*P	P	08 02 47.8	+0.5
	comp=Z,11nm,1.0s,mb5.1						
L07A	Adell	90.15	331	P	P	08 02 49.5	+1.8
	baz=90,SNR=5.4						
MSU	Marysvale	90.16	324	*e*P	P	08 02 48.4	+0.7
M08A	Happy Creek Ra	90.28	330	⇓P	P	08 02 48.2	-0.1
	baz=90,SNR=5.3						
O11A	Cowboy Ranch,	90.31	327	⇓P	P	08 02 48.4	0.0
	baz=90						
N09A	Rock Creek Ran	90.46	329	⇑P	P	08 02 50.0	+0.9
	baz=90						
P12A	McGill	90.55	327	⇓P	P	08 02 50.0	+0.5
	baz=90						
M07A	Soldier Meadow	90.63	330	⇓P	P	08 02 51.2	+1.3
	baz=90						
L05A	Lakeview	90.68	332	⇑P	P	08 02 50.5	+0.3
	baz=90,SNR=6.4						
N08A	GE Springer Mi	90.76	329	⇓P	P	08 02 50.4	-0.1
	baz=90						
Q12A	Willow Creek R	90.88	326	⇓P	P	08 02 52.5	+1.4
	baz=91,SNR=6.0						
O09A	Fish Creek Ran	90.90	328	⇓P	P	08 02 52.0	+0.9
	baz=91						
K02A	Glendale	90.98	334	⇓P	P	08 02 51.8	+0.3
	baz=91						
LAZ	Ladron	91.06	319	*e*P	P	08 02 52.4	+0.5
M06C	Likely Place G	91.28	331	⇓P	P	08 02 50.1	-2.8
	baz=91						
M05C	Lookout	91.39	332	⇑P	P	08 02 51.0	-2.4
	baz=91						
N06A	Buffalo Meadow	91.44	330	⇓P	P	08 02 54.5	+0.8
	baz=91						
O07A	Toulon	91.58	330	⇑P	P	08 02 56.5	+2.2
	baz=91						
O06A	Flanigan	91.94	330	⇓P	P	08 02 56.4	+0.4
	baz=92						
HATC	Hat Creek Radi	91.98	332	⇑P	P	08 02 55.6	-0.6
	baz=92						
R10A	Warm Springs	92.14	327	⇑P	P	08 02 57.8	+0.9
	baz=92						
WUAZ	Wupatki	92.24	322	*e*P	P	08 02 58.0	+0.7
	comp=Z,4.9nm,0.9s,mb4.8						
MNTX	Cornudas Mount	92.26	316	*e*P	P	08 02 57.4	0.0
	comp=Z,5.5nm,1.0s,mb4.8						
O04C	Chester	92.28	331	⇓P	P	08 02 58.8	+1.3
	baz=92						
Q08A	Gabbs	92.32	328	⇑P	P	08 02 59.1	+1.3
	baz=92						
BEKR	Beckwourth	92.40	330	⇑P	P	08 02 58.9	+0.8
	baz=92						
R09A	Tonopah	92.50	327	⇓P	P	08 02 59.4	+0.9
	baz=92						
O05C	Quincy	92.53	331	⇑P	P	08 02 58.1	-0.6
	baz=92						
WCN	Washoe City	92.66	330	⇑P	P	08 02 59.2	-0.1
	baz=92						
R08A	Mina	92.83	328	⇑P	P	08 02 59.6	-0.5
	baz=92						
NVAR	Mina Array Bea	92.84	328	P	P	08 03 00.7	+0.6
	comp=Z,1.2nm,0.9s,mb4.3,baz=53,slow=3.9,SNR=8.0						
W15A	Williams	92.93	322	⇓P	P	08 03 01.1	+0.6
	baz=93						
P05C	Yuba Gap, Truc	92.99	330	⇑P	P	08 03 00.3	-0.5
	baz=93						
S09A	Goldfield	93.00	327	⇓P	P	08 02 59.0	-1.8
	baz=93						
O02C	Red Bluff	93.03	332	⇑P	P	08 03 00.4	-0.6
	baz=93						
ORV	Oroville	93.10	331	⇑P	P	08 03 00.3	-1.0
	baz=93						
R06C	Coleville	93.22	329	⇑P	P	08 03 01.8	-0.1
	baz=93						
W14A	Seligman	93.29	323	⇑P	P	08 03 02.3	+0.1
	baz=93						
OHCM	Honcut	93.29	331	*e*P	P	08 03 02.5	+0.4
R05C	Kirkwood Meado	93.30	330	⇓P	P	08 03 02.6	+0.4
	baz=93						
X15A	Humboldt	93.49	322	⇑P	P	08 03 03.7	+0.6
	baz=93						
V12A	Nelson	93.66	324	⇑P	P	08 03 03.5	-0.4
	baz=93						
GRAC	Grapevine Rang	93.67	327	⇑P	P	08 03 05.3	+1.4
	baz=93						
Q04C	Lincoln	93.68	331	⇓P	P	08 03 03.9	-0.1
	baz=93						
W13A	Hualapai Mount	93.75	323	⇓P	P	08 03 04.4	+0.1
	baz=94						
X14A	Yava	93.81	322	⇓P	P	08 03 05.2	+0.6
	baz=94						
V11A	Goodsprings	93.82	325	⇑P	P	08 03 04.2	-0.4
	baz=94						
FURC	Furnace Creek,	93.91	326	⇑P	P	08 03 04.6	-0.4
	baz=94						
S06C	San Francisco	93.93	329	⇓P	P	08 03 04.2	-1.0
	baz=94						
X13A	Yucca	94.14	323	⇓P	P	08 03 07.1	+1.0
	baz=94						
Y14A	Wickenburg	94.30	322	⇓P	P	08 03 07.0	+0.1
	baz=94						
MPMC	Manual Prospec	94.53	326	⇑P	P	08 03 07.9	0.0
	baz=94						
PDMCI	Parker Dam,Lak	94.53	323	⇓P	P	08 03 08.4	+0.5
	baz=94						
S05C	Merced	94.58	329	⇓P	P	08 03 07.6	-0.5
	baz=94						
T06C	Millerton Lake	94.63	328	⇓P	P	08 03 06.5	-1.9
	baz=94						
HELL	Mitchell Peak,	94.63	328	⇓P	P	08 03 08.8	+0.4
	baz=94						
Z14A	Wintersburg	94.75	322	⇓P	P	08 03 09.0	+0.1
	baz=94						
Y13A	Salome	94.79	323	⇑P	P	08 03 09.6	+0.5
	baz=94						
S04C	Ingram Canyon,	94.83	330	⇓P	P	08 03 10.1	+0.8
	baz=94						
115A	Sonoran Desert	94.94	321	⇑P	P	08 03 09.9	+0.1
	baz=95						
IRM	Iron Mountain	95.10	324	⇑P	P	08 03 10.1	-0.4
	baz=95						
PACP	Pacheco Peak	95.25	330	⇑P	P	08 03 10.6	-0.6
	baz=95						
ISA	Isabella	95.28	327	⇑P	P	08 03 11.3	0.0
	baz=95						
SAO	San Andreas Ge	95.52	330	*e*P	P	08 03 12.5	+0.1
SAO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
SAO	San Andreas Ge	95.52	330	*e*P	P	08 03 12.5	0.0
	comp=Z,4.2nm,0.9s,mb4.9						
SAO	San Andreas Ge	95.52	330	*e*P	P	08 03 12.5	+0.1
	comp=Z,4.0nm,0.9s,mb4.8						
U04C	Hernandez Rese	95.61	329	⇑P	P	08 03 11.4	-1.5
	baz=95						
LRV	Little Rabbit	95.65	329	*e*P	P	08 03 12.7	-0.4
CPUP	Villa Florida	97.42	242	LR	LR	08 45 07.3	
	comp=Z,208nm,22.0s,MS4.6,baz=40,slow=34						
ASAR	Alice Springs	122.99	94	PKP	PKPdf	08 08 40.7	-3.1
	comp=Z,1.6nm,0.7s,baz=325,slow=1.1,SNR=4.2						
QSPA	South Pole Qui	130.03	180	*e*P	PKPdf	08 08 55.8	-1.4

*HLW **06** 07:50:47.2, 3132N×3541E, h16km, Mb3.1*
*ISCJB **06** 07:50:49.7±0.5, 3106N±003×3517E±007, h6km±6km, Error ellipse: s-maj=10.1km s-min=4.9km az=30.1*
*GII **06** 07:50:49.3±0.4, 3107N×3521E, h0km±2km, ML2.4/7*
ISC 06 07:50:50.2±0.5, **3107N**±003×**3517E**±007, **h9**km±6km, **n21**, σ**0ˢ69**/23, **3D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MZDA	Masada	0.29	36	T		07 52 19.0	
MZDA	Masada	0.29	36	Pg	Pg	07 50 55.7	-0.3
MZDA				Sg	Sg	07 51 01.0	+1.1
MASH	Mash'abbe Sade	0.34	257	Pg	Pg	07 50 56.8	0.0
AMAZ	Amatzia	0.51	335	Pg	Pg	07 51 01.3	+1.3
ZFRI	Zfri	0.52	179	Pg	Pg	07 51 00.2	-0.1
DRGI	Dragot	0.55	20	Pg	Pg	07 51 00.5	-0.5
MKRJ	Makawir	0.63	40	Pg	Pg	07 51 02.6	+0.3
PRNI	Paran	0.73	191	Pg	Pg	07 51 04.3	-0.1
HRFI	Mount Harif	1.04	186	Pg	Pg	07 51 10.4	+0.2
HMDT	Nahal Hemdat	1.22	15	Pg	Pg	07 51 12.7	-0.8
MBH	Mount Berech	1.29	190	Pg	Pg	07 51 14.4	-0.6
AQBJ	Aqaba	1.34	184	Pn	Pn	07 51 14.9	-0.3
MMLI	Mount Malkishu	1.38	9	Pn	Pn	07 51 16.3	+0.6
EIL	Elat	1.41	188	Pn	Pn	07 51 16.2	+0.1
OFRI	'Ofer	1.55	354	Pn	Pn	07 51 17.9	-0.1
AMAG	Maghara	1.74	256	⇓P	Pn	07 51 19.9	-0.7
AMAG				S	Sn	07 51 43.7	+0.8
HBST	Basata	1.89	192	P	Pn	07 51 22.1	-0.5
HBST				S	Sn	07 51 47.8	+1.2
HKAT	Jabal Katrina	2.74	202	⇓P	Pn	07 51 34.8	+0.4
TR2		2.96	205	⇓P	Pn	07 51 37.4	0.0
TR1		3.23	199	P	Pn	07 51 40.9	-0.2
HDMB	Hadim	6.28	340	*e*P	Pn	07 52 21.3	-1.8

*CSEM **06** 07:56:37.6±0.6, 4024N×1945E, h2km, ML3.4, Error ellipse: s-maj=11.3km s-min=6.2km az=90.0*
*THE **06** 07:56:39.8, 4016N×1968E, h0km, ML3.4*
*NEIC **06** 07:56:40.9, 4015N×1940E, h11km, MD3.3(PDG), After PDG.*
*SKO **06** 07:56:40.9, 4017N×1983E, h4km*
*ISCJB **06** 07:56:40.7±0.4, 4014N±002×1973E±003, h10km, Error ellipse: s-maj=3.8km s-min=2.3km az=90.0*
*PDG **06** 07:56:40.9±0.2, 4015N×1940E, h11km±1km*
*TIR **06** 07:56:41.7, 4029N×1996E, h16km*
ISC 06 07:56:41.3±0.4, **4012N**±002×**1971E**±003, **h10**km, **n43**, σ**1ˢ24**/77, **6C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.29	53	*i* Pg	Pg	07 56 44.9	-2.3
TPE				*i* Sg	Sg	07 56 49.8	-1.3
VLO	Vlora	0.39	335	*i* Pg	Pg	07 56 50.4	+1.5
VLO				*i* Sg	Sg	07 56 58.6	+4.6
LSK	Leskovik	0.69	87	*i* Pg	Pg	07 56 51.0	-3.6
LSK				*i* Sg	Sg	07 57 02.5	-1.0
IGT	Igoumenitsa	0.76	140	*e*Pg	Pg	07 56 53.9	-2.0
IGT				*e*Sg	Sg	07 57 07.2	+1.4
IGT	Igoumenitsa	0.76	140	*e*Pg	Pg	07 56 53.9	-2.1
IGT				*e*Sg	Sg	07 57 07.2	+1.3
MEV	Metsovon	1.22	105	*e*Pg	Pg	07 57 02.7	-2.0
MEV				*e*Sg	Sg	07 57 21.4	+0.9
TIR	Tirane	1.23	6	*e*Pg	Pg	07 57 02.9	-2.1
TIR				*e*Sg	Sg	07 57 19.7	-1.3
TIR	Tirane	1.23	6	*i* Pg	Pg	07 57 02.9	-2.1
OHR	Ohrid	1.29	40	*e*Pg	Pg	07 57 03.7	-2.5
OHR				*e*Sg	Sg	07 57 22.5	-0.4
OHR	Ohrid	1.29	40	*e*Pn	Pn	07 57 04.6	-0.8
OHR	Ohrid	1.29	40	*e*Pn	Pn	07 57 04.6	-0.8
OHR				*e*Sg	Sg	07 57 22.5	-0.5
FNA	Florina	1.44	62	*e*Pg	Pg	07 57 06.2	-2.7
FNA				*e*Sg	Sg	07 57 26.8	-0.7
BIA	Bitola	1.53	53	*e*Pg	Pn	07 57 07.0	-1.6
BIA				*e*Sg	Sg	07 57 29.4	-1.0
BIA	Bitola	1.53	53	*e*Pn	Pn	07 57 06.9	-1.7
LKD	Levkas	1.59	152	*e*Pb	Pb	07 57 09.4	-1.3
LKD				*e*Sb	Sb	07 57 32.1	+1.3
PE1	Pezze di Greco	1.87	292	*e*Pn	Pn	07 57 11.6	-1.8
ULC	Ulcinj	1.88	350	⇑*i*Pn	Pn	07 57 13.0	-0.4
ULC				*e*Sn	Sn	07 57 38.7	+1.6
LIT	Litokhoron	2.13	90	*e*Pn	Pn	07 57 16.9	-0.1
LIT				*e*Sn	Sn	07 57 45.5	+2.0
GRG	Griva	2.22	67	*e*Pn	Pn	07 57 17.9	-0.2
GRG				*e*Sn	Sn	07 57 47.0	+1.4
BUM	Brajici-Budva	2.26	345	⇑*i*Pn	Pn	07 57 18.2	-0.6
BUM				*e*Sn	Sn	07 57 47.5	+0.8
AGG	Agios Georgios	2.31	118	*e*Pn	Pn	07 57 19.7	+0.4
AGG				*e*Sn	Sn	07 57 49.5	+1.8
TTG	Podgorica	2.33	352	⇓*i*Pn	Pn	07 57 20.4	+0.6
TTG				*e*Sn	Sn	07 57 49.4	+0.9
BAI	Bari	2.37	296	*e*Pn	Pn	07 57 19.2	-1.0
STIP	Stip	2.45	49	*e*Pn	Pn	07 57 21.0	-0.4
STIP				*e*Sn	Sn	07 57 51.8	+0.5
STIP	Stip	2.45	49	*e*Pn	Pn	07 57 20.6	-0.8
PVY	Plav	2.48	5	⇓*i*Pn	Pn	07 57 22.3	+0.5
PVY				*e*Sn	Sn	07 57 54.4	+2.3
HCY	Herceg Novi	2.50	339	⇑*i*Pn	Pn	07 57 21.1	-0.9
HCY				*e*Sn	Sn	07 57 52.1	-0.4
HCY	Herceg Novi	2.50	339	⇑*i*Pn	Pn	07 57 21.0	-1.0
HCY				*e*Sn	Sn	07 57 52.1	-0.4
HORT	Hortiatis	2.64	78	*e*Pn	Pn	07 57 23.1	-0.8
HORT				*e*Sn	Sn	07 57 57.4	+1.5
HORT	Hortiatis	2.64	78	*e*Pn	Pn	07 57 23.0	-0.9
HORT				*e*Sn	Sn	07 57 57.4	+1.5
KNT	Kendrikon	2.64	66	*e*Pn	Pn	07 57 23.7	-0.3
KNT				*e*Sn	Sn	07 57 57.8	+1.7
NKY	Niksic	2.74	349	⇑*i*Pn	Pn	07 57 25.4	0.0
NKY				*e*Sn	Sn	07 57 59.8	+1.2
IVA	Berane	2.75	3	⇑*i*Pn	Pn	07 57 26.1	+0.6
IVA				*e*Sn	Sn	07 58 01.1	+2.2
CDT	Castel del Mon	2.79	291	*e*Pn	Pn	07 57 27.7	+1.8
XOR	Xorichti	2.79	105	*e*Pn	Pn	07 57 25.1	-0.9
XOR				*e*Sn	Sn	07 58 01.3	+1.6
SOH	Sokhos	2.87	75	*e*Pn	Pn	07 57 26.9	-0.2
SOH				*e*Sn	Sn	07 58 03.2	+1.6
SOH	Sokhos	2.87	75	*e*Pn	Pn	07 57 26.9	-0.2
SOH				*e*Sn	Sn	07 58 03.2	+1.5
BRY	Bratogost	2.91	343	⇓*i*Pn	Pn	07 57 27.1	-0.6
BRY				*e*Sn	Sn	07 58 02.8	+0.1
PAIG	Paliouri	3.06	92	*e*Pn	Pn	07 57 28.6	-1.1
PAIG				*e*Sn	Sn	07 58 08.1	+1.8
UPM	Unac-Piva	3.14	349	⇓*i*Pn	Pn	07 57 30.8	0.0
UPM				*e*Sn	Sn	07 58 08.5	+0.2
PLE	Pljevlja	3.22	356	⇓*i*Pn	Pn	07 57 32.5	+0.7
PLE				*e*Sn	Sn	07 58 11.2	+0.9
AOS	Alonnisos	3.36	105	*e*Pn	Pn	07 57 33.7	-0.1
VTS	Vitosha	3.61	46	*e*Pn	Pn	07 57 36.5	-0.8

*CSEM **06** 07:58:46.6±0.1, 3695N×2680E, h20km, MD3.0, Error ellipse: s-maj=3.9km s-min=1.7km az=5.0*
*THE **06** 07:58:46.2, 3694N×2665E, h0km*
*ISCJB **06** 07:58:47.0±0.6, 3691N±004×2674E±004, h23km±8km, Error ellipse: s-maj=7.3km s-min=5.0km az=160.0*
*ISK **06** 07:58:47.1, 3695N×2681E, h21km, MD3.0*
ISC 06 07:58:46.0±0.5, **3695N**±004×**2670E**±003, **h13**km±6km, **n12**, σ**0ˢ83**/19, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.50	77	*i* PG	Pg	07 58 55.6	-0.3
BODT				*i* SG	Sg	07 59 02.9	+0.3
DAT	Datca	0.74	107	PG	Pg	07 59 00.6	+0.3
DAT				SG	Sg	07 59 10.7	+0.7
APE	Apeiranthos	0.94	278	*e*Pg	Pg	07 59 04.9	+0.7
APE				*e*Sg	Sg	07 59 17.4	+0.9
SANT	Santorini	1.15	240	*e*Pg	Pg	07 59 06.8	-1.4
SANT				*e*Sg	Sg	07 59 23.7	+0.5
YER	Yerkesik	1.28	81	PN	Pn	07 59 09.1	-0.5
BLCB	Balcova	1.46	11	*e*PN	Pn	07 59 13.4	+1.3
IZM	Izmir	1.51	17	*e*PN	Pn	07 59 14.2	+1.3
CHOS	Chios island	1.52	341	*e*Pg	Pg	07 59 13.6	-1.7
CHOS				*e*Sg	Sg	07 59 34.6	-0.5
DALT	Dalyan (Mudla)	1.56	96	*e*PN	Pn	07 59 12.7	-0.8
ZKR	Zakros	1.87	192	*e*Pb	Pn	07 59 17.2	-0.6
ZKR				*e*Sb	Sb	07 59 43.5	+0.2
ZKR	Zakros	1.87	192	*e*Pb	Pn	07 59 17.2	-0.6
ZKR				*e*Sb	Sb	07 59 43.5	+0.1
FETY	Fethiye	1.94	99	*e*PN	Pn	07 59 18.4	-0.3

*IDC **06** 08:01:57.2±1.4, 668S×130.16E, h0km, mb4.2/4, mb1 4.4/5, mb1mx4.1/10, mbtmp4.3/5, Error ellipse: s-maj=194.1km s-min=21.8km az=68.0*
*ISCJB **06** 08:02:00.4±0.6, 659S±009×1304E±02, h33km, mb4.2/10, Error ellipse: s-maj=32.9km s-min=7.2km az=139.4*
*NEIC **06** 08:02:03.1±0.5, 656S×13039E, mb4.3/9, Error ellipse: s-maj=17.6km s-min=8.1km az=72.0*
ISC 06 08:02:06.1±2.4, **67S**±01×**1303E**±02, **h68**km±23km, **n22**, σ**1ˢ30**/28, **mb4.1**/10, **1C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.33	160	⇓*i*P	Pn	08 03 39.4	+2.6
	285nm,0.3s						
KAKA				*e*S	Sn	08 04 46.1	-1.6
FITZ	Fitzroy Crossi	12.18	201	*e*P	Pn	08 04 57.6	+1.0
	23nm,0.3s						
FITZ				*e*S	Sn	08 07 02.5	-8.1
WRAB	Tennant Creek	13.73	164	*e*Pn	Pn	08 05 15.2	-2.3
WRAB				*e*Sn	Sn	08 07 38.1	-10
WB2	Warramunga Arr	13.74	164	⇑*i*P	Pn	08 05 15.2	-2.4
WB2				*e*S	Sn	08 07 41.5	-7.0
AS31	Alice Springs	17.21	169	*e*P	Pn	08 06 02.2	+0.3
AS31				*e*S	S	08 09 03.9	-14
ASAR	Alice Springs	17.21	169	P	Pn	08 06 01.9	0.0
	5.1nm,0.3s,baz=343,slow=9.2,SNR=155						
ASPA	Alice Springs	17.21	169	*e*P	Pn	08 06 01.7	-0.2
ASPA				*e*S	S	08 09 04.6	-14
MBWA	Marble Bar	17.61	214	*e*P	Pn	08 06 09.7	+3.0
	8.2nm,0.5s						
CTA	Charters Tower	20.44	132	*e*P	P	08 06 39.4	+1.6
	7.7nm,1.6s						
CTAO	Charters Tower	20.44	132	*e*P	P	08 06 38.8	+1.0
	14nm,1.1s						
FORT	Forrest	24.03	185	*e*P	P	08 07 16.7	+2.1
	15nm,0.5s,mb4.6						
STKA	Stephens Creek	27.18	159	*e*P	P	08 07 43.2	+0.1
	2.5nm,0.3s,mb4.2						
STKA	Stephens Creek	27.18	159	P	P	08 07 42.8	-0.4
	3.3nm,0.3s,mb4.3,baz=335,slow=9.5,SNR=19						
STKA	Stephens Creek	27.18	159	*e*P	P	08 07 43.7	+0.6
STKA				*e*pP	pP	08 07 54.5	-4.8
CNB	Canberra Magne	33.45	151	*e*P	P	08 08 39.3	+0.8
	43nm,1.6s,mb5.0						
ULN	Ulaanbaatar	58.07	342	*e*P	P	08 11 52.1	-0.1
	1.5nm,0.5s,mb4.3						
SONM	Songino Array	58.25	341	P	P	08 11 53.8	+0.3
	0.4nm,0.5s,mb3.7,baz=161,slow=7.3,SNR=5.5						
MKAR	Makanchi Array	68.13	327	P	P	08 12 58.9	+0.1
	2.0nm,0.4s,mb4.3,baz=121,slow=8.0,SNR=22						
BVAR	Borovoye Array	77.96	328	P	P	08 13 56.0	-0.8
	0.7nm,0.6s,mb3.5,baz=131,slow=6.7,SNR=6.1						
BRVK	Borovoye	78.03	328	*e*P	P	08 13 56.8	-0.5
	0.7nm,0.6s,mb3.6						
CHKZ	Chkalovo	78.15	328	*e*P	P	08 13 56.8	-1.1
	0.6nm,0.6s,mb3.5						
QSPA	South Pole Qui	83.26	180	*e*P	P	08 14 26.5	+1.3
	13nm,1.7s,mb4.5						
QSPA				*e*pP	pP	08 14 37.9	-5.8

*NEIC **06** 08:11:31.6, 4023N×1962E, h5km, MD3.3(ATH), After ATH.*
*ATH **06** 08:11:31.6, 4023N×1962E, h5km, MD3.3/5*
*ISCJB **06** 08:11:32.5±0.6, 4012N±002×1963E±004, h2km, Error ellipse: s-maj=4.3km s-min=3.3km az=162.3*
*CSEM **06** 08:11:33.7±0.1, 4014N×1977E, h2km, MD3.3, Error ellipse: s-maj=3.0km s-min=2.0km az=95.0*
*TIR **06** 08:11:33.5, 4014N×1983E, h5km*
*THE **06** 08:11:33.2, 4011N×1960E, h0km, ML3.5*
ISC 06 08:11:33.3±0.6, **4011N**±002×**1963E**±004, **h2**km, **n27**, σ**1ˢ18**/45, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.35	58	*i* Pg	Pg	08 11 38.5	-1.5
TPE				*i* Sg	Sg	08 11 42.8	-1.7
SRN	Sarande	0.37	128	*i* Pg	Pg	08 11 39.3	-1.0
SRN				*i* Sg	Sg	08 11 44.9	-0.2
KEK	Kerkira	0.42	161	*e*PG	Pg	08 11 41.6	+0.3
LSK	Leskovik	0.75	87	*i* Pg	Pg	08 11 45.4	-2.2
LSK				*i* Sg	Sg	08 11 57.2	-0.1
IGT	Igoumenitsa	0.79	136	*e*Pg	Pg	08 11 47.6	-0.8
IGT				*e*Sg	Sg	08 12 00.6	+1.8
JAN	Janina	1.05	115	*e*PN	Pg	08 11 52.4	-0.9
JAN				*e*SB	Sb	08 12 08.1	-0.1
TIR	Tirane	1.25	8	*e*Pg	Pg	08 11 57.1	-0.2
TIR				*e*Sg	Sg	08 12 15.2	+1.8
TIR	Tirane	1.25	8	*i* Pg	Pg	08 11 57.1	-0.2
MEV	Metsovon	1.27	104	*e*Pg	Pg	08 11 57.0	-0.7
MEV				*e*Sg	Sg	08 12 16.4	+2.2
OHR	Ohrid	1.34	41	*e*Pg	Pg	08 11 57.3	-1.7
OHR				*e*Sg	Sg	08 12 18.4	+2.0
OHR	Ohrid	1.34	41	*e*Pn	Pn	08 11 57.5	-1.6
OHR				*e*Sn	Sn	08 12 14.0	-3.4
OHR	Ohrid	1.34	41	*e*Pg	Pg	08 11 57.3	-1.7
OHR				*e*Sn	Sn	08 12 13.9	-3.5
OHR				*e*Sg	Sg	08 12 18.5	+2.1
FNA	Florina	1.50	63	*e*Pg	Pn	08 11 59.9	-1.2
FNA				*e*Sg	Sg	08 12 22.3	+0.9
BIA	Bitola	1.58	54	*e*Pg	Pn	08 12 01.5	-0.8
BIA				*e*Sg	Sg	08 12 24.4	+0.3
BIA	Bitola	1.58	54	*e*Pn	Pn	08 12 00.7	-1.7
BIA	Bitola	1.58	54	*e*Pn	Pn	08 12 00.6	-1.7
BIA	Bitola	1.58	54	*e*Pg	Pn	08 12 01.5	-0.8
BIA				*e*Sg	Sg	08 12 24.4	+0.3
LKD	Levkas	1.61	150	*e*Pg	Pg	08 12 02.5	-1.6
LKD				*e*Sg	Sg	08 12 24.3	-0.7
KZN	Kozani	1.66	82	*e*PB	Pn	08 12 03.0	-0.3
PE1	Pezze di Greco	1.82	293	*e*Pn	Pg	08 12 08.9	+0.8
EVR	Evrytania	2.07	124	*e*PN	Pn	08 12 09.8	+0.8
VLS	Valsamata	2.07	158	*e*PG	Pg	08 12 14.1	+1.1
LIT	Litokhoron	2.20	89	*e*Pn	Pn	08 12 11.5	+0.7
LIT				*e*Sn	Sn	08 12 39.3	+0.7
AGG	Agios Georgios	2.36	117	*e*Pn	Pn	08 12 13.7	+0.8
AGG				*e*Sn	Sn	08 12 43.9	+1.4
SG1	Sgolgore (BA)	2.36	289	*e*Pn	Pn	08 12 14.0	+0.9
HORT	Hortiatis	2.70	78	*e*Pn	Pn	08 12 17.9	+0.2
HORT				*e*Sn	Sn	08 12 52.3	+1.4
KNT	Kendrikon	2.70	66	*e*Pn	Pn	08 12 18.4	+0.7

*ISCJB **06** 08:15:37.2±1.0, 4009N±003×1940E±007, h0km, Error ellipse: s-maj=8.1km s-min=4.2km az=164.4*
*THE **06** 08:15:38.9, 4009N×1946E, h0km, ML3.1*
*TIR **06** 08:15:39.7, 4017N×1982E, h4km*
*CSEM **06** 08:15:39.9±0.2, 4014N×1962E, h0km±1km, ML3.1, Error ellipse: s-maj=5.8km s-min=2.6km az=83.0*
*ATH **06** 08:15:40.4, 4008N×1965E, h13km, MD3.3/4*
ISC 06 08:15:37.3±1.2, **4009N**±003×**1936E**±008, **h1**km±6km, **n21**, σ**1ˢ11**/33, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	Kerkira	0.51	138	*e*PB	Pg	08 15 48.2	+1.2
SRN	Sarande	0.53	113	*i* Pg	Pg	08 15 46.2	-1.3
SRN				*i* Sg	Sg	08 15 52.2	-2.2
IGT	Igoumenitsa	0.93	127	*e*Pg	Pg	08 15 54.1	-1.1
IGT				*e*Sg	Sg	08 16 09.0	+1.8
JAN	Janina	1.23	110	*e*PB	Pb	08 15 59.6	-1.6
TIR	Tirane	1.31	17	*e*Pg	Pg	08 16 03.0	+0.6
TIR				*e*Sg	Sg	08 16 22.7	+3.3
TIR	Tirane	1.31	17	*i* Pg	Pg	08 16 03.0	+0.6
MEV	Metsovon	1.47	101	*e*Pg	Pn	08 16 04.3	-0.6
MEV				*e*Sg	Sg	08 16 24.6	+0.1
OHR	Ohrid	1.49	47	*e*Pg	Pg	08 16 06.0	+0.1
OHR				*e*Sg	Sg	08 16 26.4	+1.2
OHR	Ohrid	1.49	47	*e*Pn	Pn	08 16 04.5	-0.8
OHR	Ohrid	1.49	47	*e*Pn	Pn	08 16 04.4	-0.8
OHR	Ohrid	1.49	47	*e*Pg	Pg	08 16 06.1	+0.2
OHR				*e*Sg	Sg	08 16 26.4	+1.1
FNA	Florina	1.69	65	*e*Pb	Pn	08 16 06.7	-1.2
FNA				*e*Sb	Sb	08 16 30.7	-0.1
LKD	Levkas	1.71	144	*e*Pb	Pb	08 16 09.2	-0.2
LKD				*e*Sb	Sb	08 16 32.1	+0.7
LKD	Levkas	1.71	144	*e*Pb	Pb	08 16 09.2	-0.2
LKD				*e*Sb	Sb	08 16 32.1	+0.7
BIA	Bitola	1.76	58	*e*Pb	Pn	08 16 08.2	-0.6
BIA				*e*Sb	Sb	08 16 32.7	-0.2
BIA	Bitola	1.76	58	*e*Pn	Pn	08 16 07.4	-1.5
BIA	Bitola	1.76	58	*e*Pn	Pn	08 16 07.3	-1.6
KZN	Kozani	1.86	83	*e*PB	Pb	08 16 11.2	-0.8
EVR	Evrytania	2.23	121	*e*PN	Pn	08 16 16.7	+1.4
LIT	Litokhoron	2.40	89	*e*Pn	Pn	08 16 17.8	+0.1
LIT				*e*Sn	Sn	08 16 47.7	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AGG	**Agios Georgios**	**2.53**	**114**	*e*Pn	**Pn**	**08 16 20.5**	**+1.0**
AGG				*e*Sn	**Sn**	**08 16 52.7**	**+1.7**

*ISCJB **06** 08:19:22.3±0.7, 3828N±003×2649E±005, h4^{km}, Error ellipse: s-maj=5.5km s-min=4.4km az=136.9*
*CSEM **06** 08:19:22.7±0.1, 3830N×2660E, h8^{km}, MD2.8, Error ellipse: s-maj=2.6km s-min=2.1km az=79.0*
*ISK **06** 08:19:22.6, 3836N×2657E, h4^{km}, MD2.8*
*ATH **06** 08:19:22.5, 3820N×2640E, h22^{km}, MD3.1/3*
ISC 06 08:19:22.2±1.2**, 3828N**±003×**2647E**±007**, h1**^{km}±10^{km}**, n12, σ1^{s}09**/20**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.47**	**77**	*i* PG	**Pg**	**08 19 30.3**	**-0.8**
BLCB				*i* SG	**Sg**	**08 19 36.1**	**-1.0**
IZM	**Izmir**	**0.64**	**79**	*i* PG	**Pg**	**08 19 33.5**	**-0.9**
IZM				*i* SG	**Sg**	**08 19 42.4**	**-0.2**
SMG	**Samos**	**0.64**	**153**	*e*PN	**Pg**	**08 19 34.3**	**-0.1**
SMG				*e*SN	**Sg**	**08 19 43.2**	**+0.5**
KDAG	**Bornova**	**0.64**	**79**	*i* P	**Pg**	**08 19 33.8**	**-0.7**
KDAG				*i* S	**Sg**	**08 19 44.0**	**+1.2**
PRK	**Paraskevi**	**0.98**	**351**	*e*PN	**Pn**	**08 19 42.7**	**-0.3**
PRK				*e*SN	**Sn**	**08 19 57.4**	**-0.1**
AYVA	**Ayvalik**	**1.04**	**10**	*i* P	**Pg**	**08 19 42.9**	**+0.7**
AYVA				*i* S	**Sg**	**08 19 58.4**	**+2.7**
AKS	**Akhisar**	**1.21**	**60**	PN	**Pn**	**08 19 45.0**	**-1.3**
AYDN	**Tasoluk**	**1.28**	**118**	*i* P	**Pg**	**08 19 45.0**	**-1.6**
AYDN				*i* S	**Sg**	**08 20 04.4**	**+1.3**
BODT	**Bodrum**	**1.39**	**151**	PN	**Pn**	**08 19 50.2**	**+1.6**
APE	**Apeiranthos**	**1.42**	**212**	*e*PN	**Pn**	**08 19 47.7**	**-1.4**
DAT	**Datca**	**1.78**	**150**	*e*PN	**Pn**	**08 19 55.6**	**+1.5**
DNZL	**Cakiroluk**	**2.12**	**105**	*i* P	**Pb**	**08 20 01.4**	**0.0**
DNZL				*i* S	**Sg**	**08 20 34.4**	**+4.1**

*TRN **06** 09:23:25.7, 1862N×6140W, h35^{km}, MD4.5*
*SZGRF **06** 09:23:27.6, 1767N×6193W, h47^{km}, mb4.5, Leeward Islands*
*NEIC **06** 09:23:27.3, 1852N×6143W, h35^{km}, mb4.3/7, MD4.1(TRN), MD4.3(RSPR), MD4.4(FDF), After TRN.*
*RSPR **06** 09:23:29.7, 1874N×6156W, h57^{km}±13^{km}, MD4.3/9, MD4.3/9*
*ISCJB **06** 09:23:29.4±0.8, 1843N±005×6160W±004, h44^{km}±8^{km}, mb4.0/20, MS3.9/8, Error ellipse: s-maj=8.8km s-min=3.5km az=64.7*
*IDC **06** 09:23:30.5±5.0, 1837N×6153W, h33^{km}±40^{km}, mb3.7/11, mb1 4.0/15, mb1mx3.8/25, mbtmp3.9/15, ML3.9/4, MS3.8/11, Ms1 3.8/11, ms1mx3.6/27, Error ellipse: s-maj=21.2km s-min=14.7km az=60.0*
ISC 06 09:23:29.0±1.1**, 1846N**±003×**6155W**±003**, h22**^{km}±9^{km}**, n68, σ0^{s}89**/86**, mb4.0**/20**, MS3.9**/8**, 15C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPB	**Codrington**	**0.86**	**198**	*e*P	**Pb**	**09 23 45.1**	**-0.1**
BPA	**Boggy Peak**	**1.44**	**192**	*e*P	**Pn**	**09 23 53.0**	**-0.7**
STMA	**St. Maarten, A**	**1.54**	**255**	*e*P	**Pn**	**09 23 55.1**	**0.0**
STMA				*e*S	**Sn**	**09 24 15.3**	**+0.8**
STAT	**Sint Eustatius**	**1.67**	**235**	*e*P	**Pn**	**09 23 58.4**	**+1.5**
STAT				*e*S	**Sn**	**09 24 20.5**	**+3.0**
STAT	**Sint Eustatius**	**1.67**	**235**	*e*P	**Pn**	**09 23 58.9**	**+2.0**
STAT				*e*S	**Sn**	**09 24 20.5**	**+3.0**
SABS	**Saba**	**1.82**	**243**	*e*P	**Pn**	**09 24 00.4**	**+1.5**
SABS				*e*		09 24 14.5	
SABS				*e*S	**Sn**	**09 24 22.6**	**+1.4**
SABT	**Saba**	**1.82**	**243**	*e*P	**Pn**	**09 24 00.4**	**+1.5**
SABT				*e*S	**Sn**	**09 24 22.6**	**+1.4**
SABT				*e*S	**Sn**	**09 24 24.2**	**+3.0**
SEG	**Port Louis**	**2.05**	**179**	*e*P	**Pn**	**09 24 02.0**	**0.0**
DEG	**La Desirade**	**2.19**	**168**	*e*P	**Pn**	**09 24 02.5**	**-1.4**
DEG				*e*S	**Sn**	**09 24 29.5**	**-0.8**
LZG	**Guadaloupe-1**	**2.32**	**185**	*e*P	**Pn**	**09 24 05.5**	**-0.2**
DOG	**Dongo Capester**	**2.42**	**182**	*e*P	**Pn**	**09 24 08.1**	**+0.9**
SCG	**Saint Claude**	**2.42**	**183**	*e*P	**Pn**	**09 24 08.0**	**+0.8**
SCG				*e*S	**Sn**	**09 24 37.8**	**+1.6**
PHG	**Guadaloupe-2**	**2.43**	**182**	*e*P	**Pn**	**09 24 06.9**	**-0.5**
MGG	**Marie-Galante**	**2.54**	**175**	*e*P	**Pn**	**09 24 08.8**	**0.0**
TBG	**Guadaloupe-3**	**2.60**	**182**	*e*P	**Pn**	**09 24 10.4**	**+0.8**
TBVI	**Tortola**	**2.91**	**269**	⇑*e*P	**Pn**	**09 24 13.1**	**-0.8**
TBVI				*e*S	**Sn**	**09 24 47.2**	**-1.0**
CDVI	**St. Croix**	**3.14**	**258**	⇑*e*P	**Pn**	**09 24 17.5**	**+0.4**
CDVI				*e*S	**Sn**	**09 24 54.0**	**+0.1**
STVI	**Saint Thomas**	**3.25**	**269**	⇑*e*P	**Pn**	**09 24 17.7**	**-0.8**
STVI				*e*S	**Sn**	**09 24 55.5**	**-0.9**
CULB	**Culebra**	**3.60**	**268**	⇑*e*P	**Pn**	**09 24 22.1**	**-1.3**
CULB				*e*S	**Sn**	**09 25 03.6**	**-1.5**
FDF	**Fort de France**	**3.73**	**174**	⇓*e*P	**Pn**	**09 24 24.0**	**-1.1**
FDF				*e*S	**Sn**	**09 25 07.0**	**-1.2**
MTP	**Monte Pirata**	**3.83**	**265**	⇑*e*P	**Pn**	**09 24 26.1**	**-0.4**
MTP				*e*S	**Sn**	**09 25 10.7**	**-0.2**
MVM	**Montagne Vaucl**	**3.93**	**171**	*e*P	**Pn**	**09 24 26.7**	**-1.3**
MVM				*e*S	**Sn**	**09 25 13.4**	**0.0**
BIM	**Bigot**	**3.95**	**173**	*e*P	**Pn**	**09 24 27.9**	**-0.2**
CBYP	**Canovanas**	**4.10**	**268**	⇑*e*P	**Pn**	**09 24 30.1**	**-0.1**
CBYP				*e*S	**Sn**	**09 25 17.0**	**-0.5**
CPD	**Cerro la Pandu**	**4.17**	**265**	⇑*e*P	**Pn**	**09 24 31.5**	**+0.3**
CPD				*e*S	**Sn**	**09 25 19.5**	**+0.2**
SJG	**San Juan**	**4.39**	**266**	⇑*e*P	**Pn**	**09 24 34.4**	**+0.2**
SJG	**San Juan**	**4.39**	**266**	*e*S	**Sn**	**09 25 24.2**	**-0.4**
SJG	**San Juan**	**4.39**	**266**	Pn	**Pn**	**09 24 34.9**	**+0.7**
	10nm,0.3s,baz=75,slow=7.4,SNR=16						
SJG				Sn	**Sn**	**09 25 23.7**	**-0.9**
	13nm,0.3s,baz=321,slow=17,SNR=5.2						
SJG				LR	LR	09 25 36.6	
	comp=Z,373nm,18.2s,baz=90,slow=29						
SJG	**San Juan**	**4.39**	**266**	⇑*e*P	**Pn**	**09 24 34.4**	**+0.2**
SJG				*e*S	**Sn**	**09 25 24.2**	**-0.4**
OBIP	**Obispado Ponce**	**4.83**	**266**	⇑*e*P	**Pn**	**09 24 40.6**	**+0.4**
OBIP				*e*S	**Sn**	**09 25 35.0**	**-0.5**
AOPR	**Arecibo Observ**	**4.94**	**269**	⇑*e*P	**Pn**	**09 24 41.8**	**0.0**
AOPR				*e*S	**Sn**	**09 25 38.2**	**-0.1**
LRS	**Lares**	**5.04**	**269**	⇑*e*P	**Pn**	**09 24 43.0**	**-0.1**
LRS				*e*S	**Sn**	**09 25 39.8**	**-0.8**
LSP	**Las Mesas**	**5.27**	**268**	⇑*e*P	**Pn**	**09 24 46.4**	**0.0**
LSP				*e*S	**Sn**	**09 25 46.1**	**-0.2**
AGPR	**Aguadilla, PR**	**5.28**	**271**	⇑*e*P	**Pn**	**09 24 46.1**	**-0.4**
CRPR	**Cabo Rojo, PR**	**5.31**	**266**	⇑*e*P	**Pn**	**09 24 46.9**	**+0.1**
CRPR				*e*S	**Sn**	**09 25 47.4**	**+0.2**
PCRV	**Puerto La Cruz**	**8.76**	**200**	Pn	**Pn**	**09 25 34.6**	**+0.3**
	0.6nm,0.3s,baz=163,slow=8.8,SNR=6.0						
PCRV				LR	LR	09 29 04.1	
	comp=Z,568nm,19.8s,baz=12,slow=38						
SDV	**Santo Domingo**	**12.98**	**224**	Pn	**Pn**	**09 26 32.2**	**+0.3**
	0.2nm,0.3s,baz=73,slow=10,SNR=5.6						
SDV				LR	LR	09 31 57.4	
	comp=Z,244nm,18.3s,baz=44,slow=39						
ROSC	**El Rosal**	**18.41**	**224**	P	**Pn**	**09 27 43.8**	**+1.2**
	1.5nm,0.3s,baz=260,slow=15,SNR=4.5						
OTAV	**Otavalo**	**24.57**	**224**	*e*P	**P**	**09 28 45.1**	**-2.1**
	8.6nm,1.3s,mb4.1						
BLA	**Blacksburg**	**24.96**	**322**	*e*P	**P**	**09 28 51.7**	**+1.0**
	0.9nm,0.8s,mb3.4						
ATAH	**Atahualpa**	**30.27**	**215**	LR	LR	09 43 39.3	
	comp=Z,201nm,18.4s,MS3.8,baz=152,slow=40						
CCM	**Cathedral Cave**	**32.43**	**313**	*e*P	**P**	**09 29 55.6**	**-1.6**
	3.0nm,0.8s,mb4.2						
SIV	**San Ignacio**	**34.24**	**179**	P	**P**	**09 30 13.0**	**0.0**
	2.6nm,0.6s,mb4.3,baz=15,slow=9.4,SNR=21						
SCHQ	**Schefferville**	**36.53**	**355**	LR	LR	09 45 07.1	
	comp=Z,88nm,19.0s,MS3.6,baz=172,slow=35						
JCT	**Junction City**	**36.65**	**296**	*e*P	**P**	**09 30 33.9**	**+0.1**
	6.0nm,1.2s,mb4.3						
AMTX	**Amarillo**	**39.12**	**303**	*e*P	**P**	**09 30 55.1**	**+0.5**
	5.2nm,0.9s,mb4.3						
ANMO	**Albuquerque**	**42.98**	**302**	P	**P**	**09 31 27.2**	**+0.8**
	1.3nm,0.9s,mb3.6,baz=112,slow=6.1,SNR=5.5						
CPUP	**Villa Florida**	**44.71**	**175**	P	**P**	**09 31 39.3**	**-1.0**
	0.6nm,0.5s,mb3.7,baz=342,slow=8.6,SNR=4.4						
CPUP				LR	LR	09 52 41.5	
	comp=Z,77nm,18.2s,MS3.7,baz=174,slow=39						
PDAR	**Pinedale Array**	**47.12**	**312**	P	**P**	**09 32 00.1**	**+0.9**
	1.0nm,0.7s,mb3.8,baz=107,slow=8.7,SNR=9.4						
HWUT	**Hardware Ranch**	**48.27**	**310**	*e*P	**P**	**09 32 07.2**	**-1.1**
	7.2nm,1.3s,mb4.5						
MDT	**Midelt**	**52.71**	**62**	LR	LR	09 52 52.6	
	comp=Z,110nm,18.4s,MS3.9,baz=281,slow=33						
NVAR	**Mina Array Bea**	**52.88**	**305**	P	**P**	**09 32 44.7**	**+1.7**
	0.9nm,0.8s,mb3.8,baz=104,slow=6.2,SNR=8.5						
ESDC	**Sonseca Array**	**53.64**	**54**	P	**P**	**09 32 48.5**	**-0.1**
	0.1nm,0.3s,mb3.2,baz=270,slow=5.1,SNR=4.1						
NEW	**Newport**	**53.65**	**317**	*e*P	**P**	**09 32 48.6**	**-0.1**
	2.7nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**57.07**	**334**	P	**P**	**09 33 13.0**	**-0.3**
	0.9nm,0.7s,mb3.9,baz=98,slow=7.3,SNR=11						
YKA	**Yellowknife Ar**	**57.07**	**334**	P	**P**	**09 33 13.0**	**-0.3**
PLCA	**Paso Flores**	**59.48**	**188**	P	**P**	**09 33 28.9**	**-1.3**
	3.4nm,0.8s,mb4.4,baz=329,slow=11,SNR=6.2						
PLCA	**Paso Flores**	**59.48**	**188**	P	**P**	**09 33 28.9**	**-1.3**
TORD	**Torodi Ar. Bea**	**60.83**	**85**	LR	LR	09 58 30.0	
	comp=Z,184nm,18.2s,MS4.3,baz=245,slow=34						
GRF	**Grafenberg Arr**	**65.04**	**43**	*e*P	**P**	**09 34 07.9**	**+0.5**
	comp=Z,4.0nm,1.4s,mb4.3						
GRF				*e*pP	pP	09 34 21.0	+6.4
NB2	**NORSAR Subarra**	**65.68**	**31**	P	**P**	**09 34 11.8**	**+0.2**
	comp=Z,2.3nm,0.9s,mb4.2,baz=262,slow=6.2						
NOA	**NORSAR Array B**	**65.68**	**31**	P	**P**	**09 34 12.1**	**+0.5**
	comp=Z,1.9nm,1.0s,mb4.1,baz=263,slow=6.7,SNR=2.5						
NOA				LR	LR	10 00 22.3	
	comp=Z,95nm,18.1s,MS4.0,baz=265,slow=34						
GERES	**GERESS Array B**	**66.67**	**44**	P	**P**	**09 34 19.3**	**+1.3**
	comp=Z,0.4nm,0.8s,mb3.5,baz=201,slow=5.2,SNR=2.4						
KEV	**Kevo**	**72.34**	**21**	*e*p	PcP	09 35 07.8	-3.0
FINES	**FINESS Array B**	**72.85**	**30**	P	**P**	**09 34 56.6**	**+0.7**
	comp=Z,1.7nm,1.0s,mb3.9,baz=153,slow=0.9,SNR=3.4						
FINES				LR	LR	10 04 55.4	
	comp=Z,88nm,19.1s,MS4.0,baz=324,slow=34						
KAF	**Kangasniemi**	**72.87**	**29**	*e*p	**P**	**09 35 02.6**	**+6.5**
	comp=Z,4.9nm,0.8s,mb4.5						
JOF	**Joensuu**	**75.04**	**28**	*e*p	**P**	**09 35 19.0**	**+10**
AKASG	**Malin Array Be**	**76.42**	**41**	LR	LR	10 07 10.5	
	comp=Z,113nm,18.1s,MS4.2,baz=270,slow=34						

*ISCJB **06** 09:27:48.2±1.3, 612S±0.1×1553E±08, h10^{km}, mb4.3/7, MS4.5/14, Error ellipse: s-maj=55.3km s-min=10.3km az=152.9*
*IDC **06** 09:27:51.5±1.1, 6123S×15387E, h0^{km}, mb4.1/4, mb1 4.2/4, mb1mx4.1/8, mbtmp4.1/4, MS4.6/16, Ms1 4.6/16, ms1mx4.5/21, Error ellipse: s-maj=56.6km s-min=21.3km az=89.0*
*NEIC **06** 09:27:52.9±0.7, 6122S×15382E, h10^{km}, mb4.5/6, Error ellipse: s-maj=33.1km s-min=10.6km az=81.0*
*HRVD **06** 09:27:52.9±0.3, 6124S×15405E, h13^{km}±1^{km}, MW5.2/73, Centroid moment Tensor Solution. LP body waves: s41,c55;Mantle waves: s73,c109; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.63±.19; $M_{\theta\theta}$4.52±.17; $M_{\phi\phi}$-3.89±.17; $M_{r\theta}$-1.14±.41; $M_{\theta\phi}$-4.83±.17; $M_{\phi r}$1.35±.43; Best double couple: $M_0$6.62400×10^{16} NP1:ϕ_s249.00000°, δ76.00000°, λ177.00000°. NP2: ϕ_s340.00000°, δ87.00000°, λ14.00000°. Principal axes: T 7.0530, Plg12.0000°, Azm205.0000°; N -0.8610, Plg76.0000°, Azm350.0000°; P -6.1960, Plg8.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 06 09:27:49.4±1.2**, 613S**±01×**1553E**±08**, h10**^{km}**, n38, σ1^{s}14**/17**, mb4.3**/7**, MS4.5**/14**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**16.48**	**175**	Pn	**Pn**	**09 31 38.8**	**-1.9**
	0.7nm,0.3s,baz=341,slow=12,SNR=39						
VNDA				LR	LR	09 37 28.6	
	comp=Z,3μm,18.9s,baz=350,slow=35						
SBA	**Scott Base**	**17.08**	**172**	*e*P	**Pn**	**09 31 47.8**	**-0.5**
	46nm,1.3s						
RPZ	**Rata Peaks**	**19.91**	**35**	LR	LR	09 38 38.9	
	comp=Z,2μm,20.8s,baz=190,slow=32						
URZ	**Urewera**	**26.73**	**41**	LR	LR	09 42 30.1	
	comp=Z,750nm,20.4s,MS4.2,baz=188,slow=32						
QSPA	**South Pole Qui**	**28.84**	**180**	*e*P	**P**	**09 33 50.6**	**+2.8**
	14nm,1.4s,mb4.5						
STKA	**Stephens Creek**	**30.73**	**337**	*e*P	**P**	**09 34 05.4**	**+0.8**
	3.3nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**30.73**	**337**	P	**P**	**09 34 05.8**	**+1.2**
	2.2nm,0.7s,mb4.1,baz=156,slow=6.7,SNR=6.0						
STKA				LR	LR	09 45 24.0	
	comp=Z,999nm,18.1s,MS4.5,baz=161,slow=35						
STKA	**Stephens Creek**	**30.73**	**337**	*e*P	**P**	**09 34 05.1**	**+0.4**
RAO	**Raoul Island**	**36.61**	**41**	LR	LR	09 48 47.9	
	comp=Z,1μm,18.5s,MS4.6,baz=175,slow=34						
MAW	**Mawson**	**36.81**	**220**	*e*P	**P**	**09 34 57.7**	**+0.3**
	2.5nm,0.8s,mb4.1						
MAW	**Mawson**	**36.81**	**220**	P	**P**	**09 34 57.7**	**+0.3**
	3.0nm,0.9s,mb4.1,baz=117,slow=8.6,SNR=9.1						
MAW				LR	LR	09 50 02.8	
	comp=Z,2μm,18.3s,MS4.8,baz=111,slow=37						
MAW	**Mawson**	**36.81**	**220**	*e*P	**P**	**09 34 57.6**	**+0.1**
	5.8nm,1.0s,mb4.4						
NWAO	**Narrogin (SRO)**	**37.48**	**302**	LR	LR	09 46 14.7	
	comp=Z,1μm,21.2s,MS4.7,baz=143,slow=30						
DZM	**Mont Dzumac**	**39.91**	**16**	LR	LR	09 48 33.2	
	comp=Z,928nm,18.8s,MS4.7,baz=30,slow=31						
ASAR	**Alice Springs**	**40.36**	**329**	P	**P**	**09 35 27.6**	**+0.3**
	2.9nm,0.9s,mb4.0,baz=164,slow=8.5,SNR=18						
ASAR				PcP	PcP	09 37 31.6	+1.1
	1.2nm,0.8s,baz=146,slow=2.9,SNR=5.6						
ASAR				LR	LR	09 49 53.5	
	comp=Z,520nm,19.4s,MS4.4,baz=166,slow=33						
ASAR	**Alice Springs**	**40.36**	**329**	P	**P**	**09 35 27.6**	**+0.3**
ASAR				PcP	PcP	09 37 31.6	+1.1
AS31	**Alice Springs**	**40.36**	**329**	*e*P	**P**	**09 35 27.4**	**+0.1**
CTA	**Charters Tower**	**41.62**	**347**	LR	LR	09 50 36.4	
	comp=Z,707nm,20.2s,MS4.5,baz=180,slow=33						
WRAB	**Tennant Creek**	**43.83**	**331**	*e*P	**P**	**09 35 54.8**	**-0.9**
	6.7nm,0.9s,mb4.4						
SNAA	**Sanae**	**46.49**	**189**	P	**P**	**09 36 18.2**	**+1.4**
	1.9nm,1.1s,mb3.9,baz=176,slow=8.6,SNR=9.7						
SNAA	**Sanae**	**46.49**	**189**	*e*	**P**	**09 36 17.7**	**+0.9**
SNAA				*e*		09 36 24.0	
SNAA				*e*		09 36 28.8	
SNAA				*e*		09 36 34.4	
SNAA	**Sanae**	**46.49**	**189**	*e*P	**P**	**09 36 17.9**	**+1.1**
	4.8nm,0.9s,mb4.4						
MBWA	**Marble Bar**	**47.07**	**312**	*e*P	**P**	**09 36 20.1**	**-1.2**
	8.6nm,1.0s,mb4.6						
RAR	**Rarotonga**	**50.63**	**58**	LR	LR	09 56 36.6	
	comp=Z,171nm,18.2s,MS4.1,baz=257,slow=34						
HNR	**Honiara**	**51.84**	**6**	LR	LR	09 56 01.9	
	comp=Z,867nm,18.1s,MS4.8,baz=178,slow=33						
PMG	**Port Moresby**	**52.10**	**350**	LR	LR	09 58 07.5	
	comp=Z,769nm,18.4s,MS4.8,baz=168,slow=35						
PPT	**Papeete**	**58.24**	**67**	LR	LR	10 00 00.1	
	comp=Z,245nm,18.0s,MS4.4,baz=187,slow=33						
RPN	**Rapa Nui**	**69.09**	**108**	LR	LR	10 02 02.4	
	comp=Z,289nm,19.7s,MS4.5,baz=306,slow=29						
MJAR	**Matsushiro Arr**	**98.45**	**346**	LR	LR	10 28 51.0	
	comp=Z,86nm,18.4s,MS4.3,baz=210,slow=37						
NVAR	**Mina Array Bea**	**121.19**	**66**	PKP	PKPdf	09 46 47.2	+4.7
	0.6nm,0.8s,baz=177,slow=3.7,SNR=5.6						
NVAR	**Mina Array Bea**	**121.19**	**66**	PKP	PKPdf	09 46 47.2	+4.7
BVAR	**Borovoye Array**	**132.21**	**306**	PKP	PKPdf	09 47 05.4	+1.9
	0.7nm,0.8s,baz=144,slow=5.3,SNR=3.7						
KEST	**Kesra**	**146.61**	**236**	PKPbc	PKPbc	09 47 31.6	+0.4
	1.7nm,1.0s,baz=65,slow=14,SNR=2.4						
MDT	**Midelt**	**148.71**	**214**	PKPbc	PKPbc	09 47 39.2	+2.3
	1.5nm,0.9s,baz=141,slow=4.6,SNR=3.9						
AKASG	**Malin Array Be**	**148.95**	**275**	PKPbc	PKPbc	09 47 37.2	-0.3
	0.9nm,0.6s,baz=103,slow=2.2,SNR=5.7						
AKASG	**Malin Array Be**	**148.95**	**275**	PKPbc	PKPbc	09 47 37.2	-0.3
ESDC	**Sonseca Array**	**154.90**	**220**	PKPbc	PKPbc	09 47 52.5	+1.4
	0.1nm,0.3s,baz=316,slow=3.5,SNR=4.6						
ESDC				PKPab	PKPab	09 48 06.6	+0.2
	0.1nm,0.3s,baz=158,slow=2.3,SNR=4.9						
FINES	**FINESS Array B**	**156.16**	**293**	PKP	PKPdf	09 47 45.6	+1.5
	0.5nm,0.7s,baz=128,slow=18,SNR=2.9						
FINES				PKPab	PKPab	09 48 09.6	-2.1
	1.1nm,0.8s,baz=170,slow=4.2,SNR=3.6						

IDC 06 09:32:44.1±1.2**, 6125S**×**15407E, h0**^{km}**, mb4.1**/5**, mb1 4.2**/5**, mb1mx4.1**/9**, mbtmp4.1**/5**, Error ellipse: s-maj=50.5km s-min=21.4km az=96.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**16.55**	**174**	Pn	Pn	09 36 32.3	-5.2
	0.3nm,0.3s,baz=351,slow=11,SNR=8.2						
STKA	**Stephens Creek**	**30.50**	**339**	P	P	09 39 00.2	+1.4
	4.4nm,1.0s,baz=173,slow=10.0,SNR=4.5						
MAW	**Mawson**	**36.42**	**220**	P	P	09 39 50.4	0.0
	2.3nm,0.9s,baz=124,slow=9.2,SNR=6.0						
ASAR	**Alice Springs**	**40.04**	**331**	P	P	09 40 19.9	-1.0
	2.1nm,0.9s,baz=164,slow=8.0,SNR=9.4						
DZM	**Mont Dzumac**	**40.08**	**18**	P	P	09 40 20.5	-0.8
	12nm,1.1s,baz=135,slow=9.3,SNR=3.2						
SNAA	**Sanae**	**46.40**	**190**	P	P	09 41 11.2	-1.1
	0.9nm,0.8s,baz=162,slow=6.6,SNR=9.6						
PDAR	**Pinedale Array**	**129.18**	**71**	PKP	PKPdf	09 51 54.0	-0.2
	0.5nm,0.7s,baz=107,slow=3.0,SNR=4.5						
AKASG	**Malin Array Be**	**148.34**	**276**	PKPbc	PKPbc	09 52 29.1	-3.3
	0.2nm,0.3s,baz=110,slow=1.5,SNR=5.6						

*IDC **06** 09:34:34.7±16.0, 3608N×7124E, h115^{km}±104^{km}, mb3.3/5, mb1 3.4/8, mb1mx3.2/20, mbtmp3.7/8, ML3.6/3, Error ellipse: s-maj=149.0km s-min=40.4km az=178.0*
*MOS **06** 09:34:35.8±1.1, 3629N×7107E, h125^{km}, mb4.0/3, Error ellipse: s-maj=18.9km s-min=9.4km az=99.5*
*ISCJB **06** 09:34:38.7±0.5, 3641N±003×7128E±007, h153^{km}±9^{km}, mb3.5/6, Error ellipse: s-maj=9.5km s-min=5.4km az=152.0*
*NEIC **06** 09:34:38.5±1.8, 3638N×7124E, h135^{km}±19^{km}, mb4.7/8, Error ellipse: s-maj=21.3km s-min=5.0km az=60.0*
*NNC **06** 09:34:45.2±3.2, 3689N×7083E, h132^{km}±52^{km}, mb2.9, mpv3.8, Error ellipse: s-maj=36.6km s-min=21.3km az=40.0*
ISC 06 09:34:39.7±0.5**, 3641N**±003×**7132E**±007**, h149**^{km}±8^{km}**, n48, σ1^{s}04**/54**, mb3.5**/6**, 4C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.63**	**169**	⇓P	**Pn**	**09 35 22.9**	**+0.6**
CHCP	**Chirah Chowk**	**3.18**	**149**	P	**Pn**	**09 35 30.5**	**+1.3**
THW	**Thamme Wali**	**3.63**	**174**	P	**Pn**	**09 35 35.2**	**+0.2**
SBDP	**Sheikh Budin**	**4.12**	**186**	P	**Pn**	**09 35 41.1**	**-0.4**
SARP	**Sargodha**	**4.62**	**166**	P	**Pn**	**09 35 47.4**	**-0.6**
DRP	**Derazinda**	**4.75**	**192**	P	**Pn**	**09 35 49.3**	**-0.4**
DLH	**Dalhousie**	**5.45**	**134**	*e*P	**Pn**	**09 35 57.0**	**-1.9**
DLH				*e*S	**Sn**	**09 36 58.0**	**-2.8**
AML	**Almayashu**	**6.00**	**17**	P	**Pn**	**09 36 07.2**	**+0.9**
	SNR=42						
EKS2	**Erkin-Say**	**6.53**	**16**	P	**Pn**	**09 36 14.3**	**+1.0**
	SNR=13						
AAK	**Ala-Archa**	**6.68**	**21**	P	**Pn**	**09 36 18.3**	**+2.9**
	SNR=7.4						
AAK	**Ala-Archa**	**6.68**	**21**	*e*PN	**Pn**	**09 36 15.1**	**-0.3**
AAK				pmax	pmax		
	comp=Z,13nm,0.5s						
AAK	**Ala-Archa**	**6.68**	**21**	*e*Pn	**Pn**	**09 36 15.1**	**-0.3**
	comp=Z,13nm,0.5s						
KK31	**Karatay Array**	**6.71**	**355**	⇓P	**Pn**	**09 36 14.5**	**-1.3**
	comp=Z,7.1nm,0.3s,baz=176,slow=13,SNR=315						
KK31				⇑S	**Sn**	**09 37 25.6**	**-5.5**
	comp=Z,19nm,0.7s,baz=189,slow=20,SNR=15						
KBK	**Karagaybulak**	**6.84**	**23**	P	**Pn**	**09 36 20.2**	**+2.7**
	SNR=7.0						
TKM2	**Tokmak 2**	**7.29**	**26**	P	**Pn**	**09 36 26.3**	**+2.8**
	SNR=40						
TKM2	**Tokmak 2**	**7.29**	**26**	⇑P	**Pn**	**09 36 25.8**	**+2.2**
	comp=Z,1.6nm,0.5s						
TKM2				⇓S	**Sn**	**09 37 43.6**	**-1.4**
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**13.22**	**35**	P	**Pn**	**09 37 41.7**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=216,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**13.22**	**35**	P	**Pn**	**09 37 41.7**	**+0.1**
KOLN	**Koldanda**	**13.51**	**126**	*e*P	**Pn**	**09 37 44.7**	**-0.6**
	comp=Z,9.5nm,0.4s						
GKN	**Gorkha**	**14.04**	**123**	*e*P	**Pn**	**09 37 52.1**	**0.0**
	comp=Z,26nm,0.3s						
DMN	**Daman**	**14.61**	**123**	*e*P	**Pn**	**09 38 00.0**	**+0.8**
	comp=Z,32nm,0.6s						
KKN	**Kakani**	**14.62**	**122**	*e*P	**Pn**	**09 37 58.7**	**-0.5**
	comp=Z,19nm,0.5s						
KKN	**Kakani**	**14.62**	**122**	*e*P	**Pn**	**09 37 58.7**	**-0.5**
KKN				pmax	pmax		
	comp=Z,19nm,0.5s						
PKI	**Pulchoki**	**14.84**	**122**	*e*P	**Pn**	**09 38 02.0**	**-0.1**
	comp=Z,18nm,0.5s						
PKI	**Pulchoki**	**14.84**	**122**	*e*P	**Pn**	**09 38 02.0**	**-0.1**
PKI				pmax	pmax		
	comp=Z,18nm,0.5s						
GUN	**Gumba**	**14.95**	**120**	*e*P	**Pn**	**09 38 04.7**	**+1.2**
	comp=Z,16nm,0.4s						
KURK	**Kurchatov**	**15.23**	**18**	*e*P	**Pn**	**09 38 06.4**	**-0.5**
AB31	**Akbulak array**	**15.28**	**331**	⇓P	**Pn**	**09 38 06.8**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=144,slow=14,SNR=51						
AB31				⇑S	**S**	**09 40 43.0**	**-20**
	comp=Z,0.7nm,0.5s,baz=152,slow=23,SNR=3.6						
JIRN	**Jiri**	**15.32**	**121**	*e*P	**Pn**	**09 38 08.7**	**+0.7**
	comp=Z,39nm,0.5s						
ZRNK	**Zerenda**	**16.62**	**355**	*e*P	**Pn**	**09 38 23.2**	**-0.7**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZRNK	**Zerenda**	**16.62**	**355**	*e*P	**Pn**	**09 38 23.2**	**-0.6**
	comp=Z,1.6nm,0.6s						
BVAR	**Borovoye Array**	**16.62**	**358**	P	**Pn**	**09 38 24.4**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=158,slow=9.7,SNR=14						
AKTK	**Aktyubinsk**	**16.98**	**330**	P	**Pn**	**09 38 28.2**	**-0.1**
AKTO	**Aktyubinsk**	**16.98**	**330**	⇓P	**Pn**	**09 38 27.5**	**-0.7**
	comp=Z,0.1nm,0.9s						
AKTO				⇓S	**S**	**09 41 30.1**	**-6.9**
AKTO	**Aktyubinsk**	**16.98**	**330**	P	**Pn**	**09 38 28.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=150,slow=10,SNR=13						
CHKZ	**Chkalovo**	**17.27**	**359**	*e*P	**Pn**	**09 38 30.4**	**-1.3**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CHKZ	**Chkalovo**	**17.27**	**359**	*e*P	**Pn**	**09 38 30.4**	**-1.4**
	comp=Z,1.6nm,0.5s						
GNI	**Garni**	**21.16**	**288**	*e*P	**P**	**09 39 14.9**	**+1.9**
GNI				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KIV	**Kislovodsk**	**23.05**	**298**	⇑*e*P	**P**	**09 39 28.1**	**-3.8**
KIV				*e*S	**S**	**09 43 11.6**	**-20**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
AKASG	**Malin Array Be**	**33.20**	**309**	P	**P**	**09 41 01.6**	**-0.5**
	comp=Z,0.2nm,0.3s,mb3.3,baz=80,slow=8.1,SNR=4.4						
AKASG	**Malin Array Be**	**33.20**	**309**	P	**P**	**09 41 03.0**	**+0.8**
FINES	**FINESS Array B**	**37.70**	**326**	P	**P**	**09 41 40.2**	**-0.4**
	comp=Z,0.7nm,0.9s,mb3.3,baz=128,slow=12,SNR=4.9						
FINES	**FINESS Array B**	**37.70**	**326**	P	**P**	**09 41 41.4**	**+0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**37.70**	**326**	P	**P**	**09 41 40.2**	**-0.4**
ARCES	**ARCESS Array B**	**41.32**	**338**	P	**P**	**09 42 10.9**	**+0.3**
	comp=Z,2.1nm,0.8s,mb3.8,baz=99,slow=7.9,SNR=7.5						
NB2	**NORSAR Subarra**	**44.60**	**323**	P	**P**	**09 42 36.2**	**-0.8**
	comp=Z,0.6nm,0.5s,mb3.5,baz=100,slow=7.9						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**09 42 36.5**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.5,baz=96,slow=7.7,SNR=4.5						
YKA	**Yellowknife Ar**	**81.32**	**3**	P	**P**	**09 46 39.6**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.2,baz=351,slow=5.4,SNR=9.3						

*ISCJB **06** 09:40:05.9±1.3, 176S±04×1788W±03, h542^{km}±27^{km}, mb3.7/5, Error ellipse: s-maj=73.0km s-min=17.5km az=119.9*
*IDC **06** 09:40:06.2±2.0, 1765S×17880W, h529^{km}±26^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.3/15, mbtmp4.3/7, Error ellipse: s-maj=55.1km s-min=16.2km az=149.0*
ISC 06 09:40:06.7±1.2**, 177S**±04×**1788W**±03**, h537**^{km}±23^{km}**, n21, σ0^{s}68**/7**, mb3.7**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.69**	**62**	P	**P**	**09 42 00.6**	**-0.2**
	4.5nm,0.3s,baz=233,slow=19,SNR=6.1						
DZM	**Mont Dzumac**	**14.59**	**250**	P	**P**	**09 43 12.7**	**+0.7**
	0.6nm,0.3s,baz=93,slow=16,SNR=10						
CTA	**Charters Tower**	**33.16**	**260**	P	**P**	**09 45 57.9**	**-0.8**
	4.0nm,0.9s,mb4.0,baz=121,slow=5.9,SNR=2.8						
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**09 46 42.1**	**-0.4**
	1.3nm,0.4s,mb3.8,baz=194,slow=2.3,SNR=11						
ASAR	**Alice Springs**	**44.53**	**254**	P	**P**	**09 47 31.0**	**+0.4**
	9.4nm,0.6s,mb4.5,baz=88,slow=8.2,SNR=148						
MJAR	**Matsushiro Arr**	**67.50**	**324**	P	**P**	**09 50 09.3**	**-0.1**
	1.1nm,0.6s,mb3.5,baz=154,slow=5.6,SNR=4.4						
NVAR	**Mina Array Bea**	**79.48**	**44**	P	**P**	**09 51 17.9**	**+0.4**
	0.4nm,0.7s,mb2.9,baz=226,slow=6.4,SNR=4.2						
BRTR	**Keskin Array B**	**144.36**	**315**	PKP	PKPdf	09 58 41.9	+0.2
	0.8nm,0.7s,baz=111,slow=2.8,SNR=4.9						
GERES	**GERESS Array B**	**147.28**	**345**	PKPbc	PKPbc	09 58 49.7	-0.2
	0.9nm,0.5s,baz=29,slow=3.8,SNR=12						
GIVF	**Givet**	**147.50**	**356**	*e*PKP1	PKPbc	09 58 50.0	-0.5
BAIF	**Baives**	**147.59**	**356**	*e*PKP1	PKPbc	09 58 50.4	-0.3

	2.9nm,0.6s						
CDF	**Champ du Feu**	**148.93**	**352**	*e*PKP1	PKPbc	09 58 53.6	-0.4
	2.1nm,0.5s						
FLN	**La Foliniere**	**148.94**	**2**	*e*PKP1	PKPbc	09 58 53.5	-0.6
LDF	**La Druitiere**	**149.12**	**2**	*e*PKP1	PKPbc	09 58 53.5	-1.0
ROSF	**Rostrenen**	**149.18**	**6**	*e*PKP1	PKPbc	09 58 53.5	-1.1
GRR	**Gorron**	**149.30**	**3**	*e*PKP1	PKPbc	09 58 54.2	-0.7
	1.9nm,0.3s						
SGMF	**Saint Gilles**	**149.32**	**5**	*e*PKP1	PKPbc	09 58 54.1	-0.9
QUIF	**Quistinic**	**149.60**	**6**	*e*PKP1	PKPbc	09 58 54.9	-0.8
LOR	**Lormes**	**150.39**	**356**	*e*PKP1	PKPbc	09 58 57.0	-0.5
	3.4nm,0.4s						
SSF	**Saint Saulge**	**150.61**	**357**	*e*PKP1	PKPbc	09 58 57.6	-0.4
	2.2nm,0.4s						
MFF	**Saint Martin d**	**151.11**	**2**	*e*PKP1	PKPbc	09 58 58.9	-0.3
	2.6nm,0.6s						

*NEIC **06** 10:15:13.1, 3435S×7057W, h113km, MG3.5(GUC), After GUC.*

GUC 06 10:15:13.1±0.7**, 3435S×7057W, h113km**±3km**, MD3.4, ML3.5, 19C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CICH	**Cipreses**	**0.12**	**78**	⇑*i*P	Pn	10 15 29.0	+0.3
CICH				*i* S	Sn	10 15 41.6	+1.2
CACH	**El Canelo**	**0.23**	**353**	⇓*i*P	Pn	10 15 29.4	+0.4
CACH				*i* S	Sn	10 15 42.2	+1.3
CHCH	**Chadas Angostu**	**0.42**	**350**	⇑*i*P	Pn	10 15 30.0	+0.2
CHCH				*i* S	Sn	10 15 42.7	+0.4
SFDO	**San Fernando**	**0.46**	**234**	⇓*i*P	Pn	10 15 30.4	+0.4
PCH	**Pirque**	**0.73**	**4**	⇑*i*P	Pn	10 15 32.6	+0.7
PCH				*i* S	Sn	10 15 46.9	+0.7
SJCH	**San Jose de Ma**	**0.73**	**14**	⇑*i*P	Pn	10 15 31.9	0.0
SJCH				*i* S	Sn	10 15 46.9	+0.7
SJCH				AML	AML	10 15 48.5	
	comp=E,741nm,0.3s						
SJCH	**San Jose de Ma**	**0.73**	**14**	⇑*i*P	Pn	10 15 31.9	0.0
SJCH				*i* S	Sn	10 15 46.9	+0.7
TACH	**Talagante**	**0.76**	**336**	⇑*i*P	Pn	10 15 32.7	+0.4
TACH				*i* S	Sn	10 15 46.8	+0.2
ANTU	**Antumapu**	**0.78**	**356**	⇓*i*P	Pn	10 15 33.0	+0.6
ANTU				*i* S	Sn	10 15 47.9	+0.9
ANTU				AML	AML	10 15 48.4	
	comp=N,3µm,0.6s						
ANTU	**Antumapu**	**0.78**	**356**	⇓*i*P	Pn	10 15 33.0	+0.6
ANTU				*i* S	Sn	10 15 47.9	+0.9
LNV	**Longovilo**	**0.80**	**299**	⇑*i*P	Pn	10 15 32.9	+0.3
LNV				*i* S	Sn	10 15 47.2	-0.1
NICH	**Los Niches**	**0.85**	**220**	⇑*i*P	Pn	10 15 33.4	+0.3
NICH				*i* S	Sn	10 15 49.0	+0.9
RCDM	**Rinconada Maip**	**0.88**	**347**	⇑*i*P	Pn	10 15 33.8	+0.5
RCDM				*i* S	Sn	10 15 49.1	+0.5
RCDM				AML	AML	10 15 50.6	
	comp=E,4µm,0.1s						
RCDM	**Rinconada Maip**	**0.88**	**347**	⇑*i*P	Pn	10 15 33.8	+0.5
RCDM				*i* S	Sn	10 15 49.1	+0.5
SAN	**Santiago**	**0.90**	**355**	⇑*i*P	Pn	10 15 33.9	+0.4
SAN				*i* S	Sn	10 15 49.6	+0.7
SAN				AML	AML	10 15 50.4	
	comp=N,2µm,0.3s						
SAN	**Santiago**	**0.90**	**355**	⇑*i*P	Pn	10 15 33.9	+0.4
SAN				*i* S	Sn	10 15 49.6	+0.7
STL	**Santa Lucia**	**0.91**	**356**	*e*P	Pn	10 15 33.4	-0.2
STL				*e*S	Sn	10 15 49.1	-0.1
STL				AML	AML	10 15 49.8	
	comp=E,910nm,0.3s						
DSCH	**Colegio Aleman**	**0.95**	**360**	⇑*i*P	Pn	10 15 34.0	0.0
DSCH				*i* S	Sn	10 15 50.2	+0.4
CLCH	**Cerro Calan**	**0.95**	**2**	*e*P	Pn	10 15 34.7	+0.6
CLCH				*i* S	Sn	10 15 50.9	+1.1
CLCH				AML	AML	10 15 53.1	
	comp=E,1µm,0.4s						
CLCH				AML	AML	10 15 53.7	
	comp=E,1µm,0.4s						
FCH	**Farellones**	**1.04**	**13**	⇓*i*P	Pn	10 15 35.8	+0.8
FCH				*i* S	Sn	10 15 53.1	+1.6
FCH				AML	AML	10 15 54.2	
	comp=E,701nm,0.2s						
LCCH	**Las Cruces**	**1.20**	**316**	⇑*i*P	Pn	10 15 36.9	+0.2
LCCH				*i* S	Sn	10 15 54.6	0.0
PEL	**Peldehue**	**1.20**	**355**	⇑*i*P	Pn	10 15 37.3	+0.6
PEL				*i* S	Sn	10 15 55.5	+0.9
PEL				AML	AML	10 15 57.4	
	comp=N,868nm,0.2s						
PEL	**Peldehue**	**1.20**	**355**	⇑*i*P	Pn	10 15 37.3	+0.6
PEL				*i* S	Sn	10 15 55.5	+0.9
TALC	**Talca**	**1.37**	**220**	⇑*i*P	Pn	10 15 38.9	+0.3
TALC				*i* S	Sn	10 15 58.0	+0.2
TALC				AML	AML	10 15 58.9	
	comp=E,2µm,0.1s						
TALC	**Talca**	**1.37**	**220**	⇑*i*P	Pn	10 15 38.9	+0.3
TALC				*i* S	Sn	10 15 58.0	+0.2
JACH	**Jahuel**	**1.66**	**359**	⇑*i*P	Pn	10 15 42.8	+0.8
JACH				*i* S	Sn	10 16 05.0	+1.0
CCHI	**Chillan**	**2.56**	**208**	*i* P	Pn	10 15 53.5	+0.1
CCHI				*i* S	Sn	10 16 24.8	+0.3
CCHI				AML	AML	10 16 28.7	
	comp=E,317nm,0.6s						
CCHI	**Chillan**	**2.56**	**208**	*i* P	Pn	10 15 53.5	+0.1
CCHI				*i* S	Sn	10 16 24.8	+0.3

*IDC **06** 10:20:43.4±1.1, 521N×9470E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.0/20, mbtmp4.2/10, Error ellipse: s-maj=49.6km s-min=19.4km az=48.0*
*NEIC **06** 10:20:47.9±0.6, 509N×9451E, h30km, mb4.5/8, Error ellipse: s-maj=20.4km s-min=6.4km az=42.0*
*ISCJB **06** 10:20:52.5±2.7, 53N±02×949E±02, h86km±22km, mb4.2/18, Error ellipse: s-maj=42.9km s-min=11.1km az=104.4*

ISC 06 10:20:53.9±2.5**, 53N**±02×**948E**±02**, h78**km±21km**, n30,** σ**0.s72**/30**, mb4.2**/18**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.82**	**121**	Pn	**Pn**	**10 22 03.1**	**-0.9**
	5.1nm,0.3s,baz=331,slow=14,SNR=17						
PSI				Sn	**Sn**	**10 23 01.2**	**+2.8**
	2.8nm,0.3s,baz=222,slow=10,SNR=4.8						
KULM	**Kulim**	**5.85**	**90**	*e*Pn	**Pn**	**10 22 16.5**	**-1.4**
KULM				*e*Sn	**Sn**	**10 23 16.4**	**-7.1**
CHTO	**Chiang Mai**	**14.03**	**16**	*e*Pn	**Pn**	**10 24 14.9**	**+5.9**
	4.6nm,0.7s						
JIRN	**Jiri**	**23.69**	**341**	*e*P	**P**	**10 25 59.3**	**+0.9**
	4.5nm,0.3s,mb4.3						
PKI	**Pulchoki**	**23.88**	**339**	*e*P	**P**	**10 26 00.9**	**+0.8**
DMN	**Daman**	**24.02**	**339**	*e*P	**P**	**10 26 02.2**	**+0.8**
KKN	**Kakani**	**24.12**	**339**	*e*P	**P**	**10 26 02.9**	**+0.6**
GKN	**Gorkha**	**24.55**	**338**	*e*P	**P**	**10 26 06.2**	**0.0**
	7.3nm,0.3s,mb4.6						
KOLN	**Koldanda**	**24.75**	**336**	*e*P	**P**	**10 26 08.3**	**+0.3**
	11nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**42.72**	**347**	P	**P**	**10 28 43.0**	**-0.2**
	1.5nm,0.4s,mb4.1,baz=170,slow=7.2,SNR=20						
SONM	**Songino Array**	**43.53**	**11**	P	**P**	**10 28 49.5**	**-0.2**
	1.9nm,0.7s,mb4.0,baz=192,slow=8.1,SNR=18						
SONM				PcP	PcP	10 30 37.0	+0.8
	0.7nm,0.4s,baz=194,slow=3.3,SNR=9.0						
KURK	**Kurchatov**	**47.25**	**346**	*e*P	**P**	**10 29 19.5**	**+0.5**
	3.8nm,0.6s,mb4.3						
ASPA	**Alice Springs**	**47.80**	**129**	*e*P	**P**	**10 29 23.1**	**-0.2**
AS31	**Alice Springs**	**47.80**	**129**	*e*P	**P**	**10 29 23.1**	**-0.3**
ASAR	**Alice Springs**	**47.80**	**129**	P	**P**	**10 29 23.2**	**-0.2**
	1.7nm,0.4s,mb4.2,baz=299,slow=8.0,SNR=74						
BVAR	**Borovoye Array**	**51.62**	**341**	P	**P**	**10 29 52.1**	**-0.2**
	2.2nm,0.6s,mb4.4,baz=148,slow=8.7,SNR=17						
BRVK	**Borovoye**	**51.68**	**341**	*e*P	**P**	**10 29 52.5**	**-0.3**
	3.9nm,1.0s,mb4.4						
ZRNK	**Zerenda**	**52.00**	**340**	*e*P	**P**	**10 29 54.9**	**-0.2**
	3.3nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**52.10**	**342**	*e*P	**P**	**10 29 56.1**	**+0.1**
	12nm,0.8s,mb5.0						
PMG	**Port Moresby**	**54.20**	**106**	P	**P**	**10 30 11.5**	**+0.1**
	15nm,1.0s,mb5.0,baz=295,slow=11,SNR=3.0						
AKTK	**Aktyubinsk**	**54.50**	**332**	P	**P**	**10 30 12.9**	**-0.6**
AKTO	**Aktyubinsk**	**54.50**	**332**	P	**P**	**10 30 12.9**	**-0.6**
	2.3nm,0.5s,mb4.5,baz=100,slow=9.1,SNR=10.0						
BRTR	**Keskin Array B**	**64.59**	**312**	P	**P**	**10 31 22.6**	**-0.3**
	0.7nm,0.6s,mb3.7,baz=129,slow=6.9,SNR=4.6						
JOF	**Joensuu**	**73.43**	**335**	*e*p	**P**	**10 32 16.6**	**-1.0**
FINES	**FINESS Array B**	**75.27**	**332**	P	**P**	**10 32 28.2**	**-0.1**
	0.6nm,0.5s,mb3.6,baz=106,slow=5.2,SNR=11						
KAF	**Kangasniemi**	**75.36**	**333**	*e*p	**P**	**10 32 32.9**	**+4.1**
	0.9nm,0.4s,mb3.9						
ARCES	**ARCESS Array B**	**77.89**	**340**	P	**P**	**10 32 43.0**	**0.0**
	1.3nm,0.7s,mb3.8,baz=91,slow=4.9,SNR=16						
GERES	**GERESS Array B**	**80.16**	**319**	P	**P**	**10 32 56.3**	**+0.8**
	1.3nm,0.7s,mb3.9,baz=112,slow=5.8,SNR=12						
NVAR	**Mina Array Bea**	**126.76**	**32**	PKP	PKPdf	10 39 50.1	+1.7
	0.2nm,0.5s,baz=272,slow=3.5,SNR=3.8						
PDAR	**Pinedale Array**	**127.31**	**22**	PKP	PKPdf	10 39 49.7	+0.3
	0.3nm,0.5s,baz=90,slow=3.8,SNR=6.1						

*ISCJB **06** 11:28:39.3±0.4, 40.11N±002×1970E±003, h1km, Error ellipse: s-maj=3.3km s-min=2.8km az=154.3*
*CSEM **06** 11:28:39.1±0.2, 40.17N×1964E, h1km±1km, MD3.4, Error ellipse: s-maj=3.0km s-min=2.1km az=129.0*
*ATH **06** 11:28:39.0, 40.13N×1954E, h19km±4km, MD3.4/5*
*TIR **06** 11:28:40.8, 40.12N×1997E, h5km*
*THE **06** 11:28:41.5, 40.12N×1980E, h0km, ML3.1*
*NEIC **06** 11:28:41.1±7.7, 40.07N×1974E, h3km±23km, MD3.4(ATH), Error ellipse: s-maj=91.2km s-min=22.8km az=121.0*
*SKO **06** 11:28:43.4, 40.17N×1992E, h0km, M2.2, ML2.6*
*ROM **06** 11:28:45.3±0.7, 4036N×1932E, h10km, Md3.0/2, Error ellipse: s-maj=15.6km s-min=4.1km az=136.0*

ISC 06 11:28:40.0±0.5**, 4012N**±002×**1969E**±003**, h1**km±3km**, n38,** σ**1.s06**/65**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.30**	**55**	*i* Pg	**Pg**	**11 28 44.3**	**-1.5**
TPE				*i* Sg	**Sg**	**11 28 49.4**	**-0.4**
SRN	**Sarande**	**0.34**	**135**	*i* Pg	**Pg**	**11 28 45.6**	**-0.9**
SRN				*i* Sg	**Sg**	**11 28 51.2**	**+0.3**
KEK	**Kerkira**	**0.42**	**168**	*e*PB	**Pg**	**11 28 47.9**	**0.0**
KEK				*e*SB	**Sg**	**11 28 55.3**	**+2.0**
IGT	**Igoumenitsa**	**0.77**	**139**	*e*Pg	**Pg**	**11 28 53.8**	**-0.9**
IGT				*e*Sg	**Sg**	**11 29 06.2**	**+1.5**
SCTE	**Santa Cesarea**	**0.94**	**267**	Pn	**Pn**	**11 28 59.1**	**-1.2**
JAN	**Janina**	**1.01**	**117**	*e*PN	**Pn**	**11 29 00.3**	**-1.0**
JAN				*e*SN	**Sn**	**11 29 14.9**	**-1.2**
MEV	**Metsovon**	**1.23**	**105**	*e*Pg	**Pg**	**11 29 03.4**	**-0.2**
MEV				*e*Sg	**Sg**	**11 29 19.7**	**+0.1**
TIR	**Tirane**	**1.23**	**6**	*e*Pg	**Pg**	**11 29 05.5**	**+1.8**
TIR				*e*Sg	**Sg**	**11 29 21.9**	**+2.3**
TIR	**Tirane**	**1.23**	**6**	*i* Pg	**Pg**	**11 29 05.5**	**+1.9**
TIR	**Tirane**	**1.23**	**6**	Pn	**Pn**	**11 29 05.2**	**+0.8**
TIR	**Tirane**	**1.23**	**6**	*e*Pg	**Pg**	**11 29 05.5**	**+1.9**
TIR				*e*Sg	**Sg**	**11 29 21.9**	**+2.3**
OHR	**Ohrid**	**1.30**	**40**	*e*Pg	**Pg**	**11 29 04.1**	**-0.8**
OHR				*e*Sg	**Sg**	**11 29 24.0**	**+2.2**
OHR	**Ohrid**	**1.30**	**40**	*e*Pg	**Pg**	**11 29 03.9**	**-1.0**
OHR				*e*Sg	**Sg**	**11 29 20.2**	**-1.7**
OHR				*e*Lg		11 29 24.8	
	comp=E,150nm,0.7s						
OHR				*e*Lg		11 29 25.5	
	comp=N,126nm,0.8s						
OHR	**Ohrid**	**1.30**	**40**	*e*Pg	**Pg**	**11 29 03.9**	**-1.1**
OHR				*e*Sg	**Sg**	**11 29 24.0**	**+2.1**
QSH	**Qafa e Shtames**	**1.41**	**7**	*i* pn?	**Pn**	**11 29 06.8**	**0.0**
QSH				*i* Sn	**Sn**	**11 29 29.5**	**+3.5**
FNA	**Florina**	**1.45**	**62**	*e*Pg	**Pg**	**11 29 06.5**	**-1.3**
FNA				*e*Sg	**Sg**	**11 29 27.6**	**+1.1**
FNA	**Florina**	**1.45**	**62**	*e*Pg	**Pg**	**11 29 06.5**	**-1.3**
FNA				*e*Sg	**Sg**	**11 29 27.6**	**+1.0**
BIA	**Bitola**	**1.54**	**54**	*e*Pg	**Pg**	**11 29 07.5**	**-2.0**
BIA				*e*Sg	**Sg**	**11 29 28.7**	**-0.7**
BIA	**Bitola**	**1.54**	**54**	*e*Pg	**Pg**	**11 29 07.5**	**-2.0**
BIA				*e*Sg	**Sg**	**11 29 26.7**	**-2.7**
BIA				*e*Lg		11 29 30.0	
	comp=E,60nm,0.6s						
BIA				*e*Lg		11 29 31.4	
	comp=N,61nm,0.9s						
BIA	**Bitola**	**1.54**	**54**	*e*Pg	**Pg**	**11 29 07.4**	**-2.1**
BIA				*e*Sg	**Sg**	**11 29 26.7**	**-2.7**
LKD	**Levkas**	**1.60**	**152**	*e*Pg	**Pg**	**11 29 09.7**	**-0.9**
LKD				*e*Sg	**Sg**	**11 29 31.9**	**+0.6**
KZN	**Kozani**	**1.61**	**83**	*e*PN	**Pn**	**11 29 10.1**	**+0.6**
PE1	**Pezze di Greco**	**1.86**	**292**	*e*Pn	**Pn**	**11 29 10.9**	**-2.0**
EVR	**Evrytania**	**2.04**	**126**	*e*PN	**Pn**	**11 29 16.4**	**+1.0**
VLS	**Valsamata**	**2.06**	**160**	*e*PN	**Pn**	**11 29 15.6**	**-0.2**
NOCI	**Noci**	**2.11**	**289**	Pn	**Pn**	**11 29 16.5**	**+0.1**
LIT	**Litokhoron**	**2.15**	**90**	*e*Pn	**Pn**	**11 29 17.1**	**+0.2**
LIT				*e*Sn	**Sn**	**11 29 43.7**	**-0.6**
GRG	**Griva**	**2.23**	**67**	*e*Pn	**Pn**	**11 29 18.4**	**+0.3**
GRG				*e*Sn	**Sn**	**11 29 46.2**	**-0.1**
AGG	**Agios Georgios**	**2.32**	**117**	*e*Pn	**Pn**	**11 29 20.5**	**+1.2**
AGG				*e*Sn	**Sn**	**11 29 49.3**	**+0.9**
SG1	**Sgolgore (BA)**	**2.40**	**288**	*e*Pn	**Pn**	**11 29 20.1**	**-0.4**
STIP	**Stip**	**2.46**	**50**	*e*Pn	**Pn**	**11 29 21.6**	**+0.3**
STIP				*e*Sn	**Sn**	**11 29 52.8**	**+0.7**
AMUR	**Altamura**	**2.48**	**289**	Pn	**Pn**	**11 29 21.1**	**-0.4**
VAY	**Valandovo**	**2.50**	**60**	*e*Pn	**Pn**	**11 29 23.1**	**+1.4**
VAY				*e*Sn	**Sn**	**11 29 51.5**	**-1.4**
VAY				*e*Lg		11 29 59.6	
	comp=E,32nm,0.8s						
VAY				*e*Lg		11 29 59.7	
	comp=N,48nm,0.8s						
VAY	**Valandovo**	**2.50**	**60**	*e*Pn	**Pn**	**11 29 23.1**	**+1.3**
VAY				*e*Sn	**Sn**	**11 29 51.5**	**-1.4**
HORT	**Hortiatis**	**2.65**	**79**	*e*Pn	**Pn**	**11 29 23.4**	**-0.4**
HORT				*e*Sn	**Sn**	**11 29 56.3**	**-0.4**
KNT	**Kendrikon**	**2.66**	**66**	*e*Pn	**Pn**	**11 29 25.1**	**+1.1**
KNT				*e*Sn	**Sn**	**11 29 57.0**	**+0.2**
PAIG	**Paliouri**	**3.07**	**92**	*e*Pn	**Pn**	**11 29 28.6**	**-1.1**
PAIG				*e*Sn	**Sn**	**11 30 07.4**	**+0.3**
RGNG	**Rignano Grg**	**3.47**	**298**	Pn	**Pn**	**11 29 35.9**	**+0.7**

*THE **06** 11:40:42.3, 4008N×1932E, h0km, ML3.6*
*ROM **06** 11:40:44.8±0.5, 3997N×1989E, h10km, Md3.3/2, Ml3.7/31, Error ellipse: s-maj=7.2km s-min=3.2km az=62.0*
*ISCJB **06** 11:40:44.4±0.4, 40.11N±002×1966E±002, h0km±3km, mb3.6/6, Error ellipse: s-maj=2.6km s-min=2.1km az=17.3*
*NEIC **06** 11:40:44.4, 40.10N×1957E, h19km, MD3.6(PDG), MD3.9(ATH), ML3.7(LDG), After ATH.*
*ATH **06** 11:40:44.4, 40.10N×1957E, h19km±2km, MD3.9/10*
*PRU **06** 11:40:45.1, 4040N×20.18E, h0km*
*IDC **06** 11:40:45.2±1.3, 4025N×1973E, h0km, mb3.6/6, mb1 3.7/11, mb1mx3.6/23, mbtmp3.6/11, ML3.6/5, MS2.8/2, Ms1 2.8/2, ms1mx2.2/28, Error ellipse: s-maj=20.0km s-min=17.5km az=107.0*
*TIR **06** 11:40:45.6, 40.15N×1984E, h11km, Ml3.4*
*LDG **06** 11:40:46.4±0.2, 40.11N×1966E, h10km, Ml3.7/6, Error ellipse: s-maj=6.3km s-min=3.4km az=28.0*
*SKO **06** 11:40:46.9, 3998N×1991E, h0km*
*PDG **06** 11:40:46.4±0.5, 40.14N×1968E, h11km±2km*
*CSEM **06** 11:40:47.2±0.0, 4007N×1970E, h10km, ML3.8/7, Error ellipse: s-maj=1.5km s-min=1.0km az=1.0*

ISC 06 11:40:45.6±0.4**, 4011N**±002×**1969E**±002**, h1**km±3km**, n160,** σ**1.s28**/234**, mb3.6**/6**, 13C-18D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.31**	**52**	*i* Pg	**Pg**	**11 40 50.4**	**-1.1**
TPE				*i* Sg	**Sg**	**11 40 54.8**	**-0.6**
SRN	**Sarande**	**0.33**	**134**	*i* Pg	**Pg**	**11 40 51.8**	**-0.1**
SRN				*i* Sg	**Sg**	**11 40 57.8**	**+1.7**
VLO	**Vlora**	**0.39**	**337**	*i* Pg	**Pg**	**11 40 54.3**	**+1.2**
VLO				*i* Sg	**Sg**	**11 41 03.4**	**+5.3**
LSK	**Leskovik**	**0.70**	**86**	*i* Pg	**Pg**	**11 40 57.1**	**-1.8**
LSK				*i* Sg	**Sg**	**11 41 08.5**	**+0.5**
IGT	**Igoumenitsa**	**0.76**	**139**	*e*Pg	**Pg**	**11 40 59.6**	**-0.5**
IGT				*e*Sg	**Sg**	**11 41 14.6**	**+4.7**
SCTE	**Santa Cesarea**	**0.94**	**268**	Pg	**Pg**	**11 41 05.7**	**+2.1**
SCTE				Sg	**Sg**	**11 41 20.8**	**+5.0**
	5µm,0.5s						
KBN	**Korca**	**0.98**	**58**	*i* Pn	**Pn**	**11 41 03.7**	**-2.8**
KBN				*i* Sn	**Sn**	**11 41 24.2**	**+3.2**
JAN	**Janina**	**1.00**	**116**	*e*PN	**Pn**	**11 41 04.4**	**-2.3**
JAN				*e*SN	**Sn**	**11 41 20.1**	**-1.3**
MEV	**Metsovon**	**1.22**	**105**	*e*Pg	**Pg**	**11 41 09.7**	**+0.6**
MEV				*e*Sg	**Sg**	**11 41 30.9**	**+6.0**
TIR	**Tirane**	**1.25**	**6**	*e*Pg	**Pg**	**11 41 08.2**	**-1.2**
TIR				*e*Sg	**Sg**	**11 41 26.7**	**+1.1**
TIR	**Tirane**	**1.25**	**6**	*i* Pg	**Pg**	**11 41 08.2**	**-1.2**
TIR	**Tirane**	**1.25**	**6**	Pn	**Pn**	**11 41 10.7**	**+0.6**
TIR				*e*Sg	**Sg**	**11 41 26.7**	**+1.1**
TIR				Sn	**Sn**	**11 41 29.5**	**+2.0**
	2µm,0.8s						
OHR	**Ohrid**	**1.31**	**40**	*e*Pg	**Pg**	**11 41 09.4**	**-1.2**
OHR				*e*Sg	**Sg**	**11 41 32.1**	**+4.5**
OHR	**Ohrid**	**1.31**	**40**	*e*Pg	**Pg**	**11 41 10.7**	**+0.1**
OHR				*e*Sg	**Sg**	**11 41 29.5**	**+1.9**
OHR	**Ohrid**	**1.31**	**40**	*e*Pg	**Pg**	**11 41 10.7**	**0.0**
OHR				*e*Sg	**Sg**	**11 41 32.2**	**+4.6**
QSH	**Qafa e Shtames**	**1.42**	**6**	*i* Pn	**Pn**	**11 41 13.1**	**+0.6**
QSH				*i* Sn	**Sn**	**11 41 31.2**	**-0.6**
FNA	**Florina**	**1.45**	**62**	*e*Pb	**Pb**	**11 41 12.2**	**-1.2**
FNA				*e*Sb	**Sb**	**11 41 36.9**	**+4.6**
BIA	**Bitola**	**1.54**	**53**	*e*Pb	**Pb**	**11 41 13.2**	**-1.7**
BIA				*e*Sb	**Sb**	**11 41 37.9**	**+3.1**
BIA	**Bitola**	**1.54**	**53**	*e*Pg	**Pg**	**11 41 13.9**	**-1.2**
BIA	**Bitola**	**1.54**	**53**	*e*Pg	**Pg**	**11 41 13.8**	**-1.3**
LKD	**Levkas**	**1.58**	**152**	*e*Pb	**Pb**	**11 41 14.4**	**-1.2**
LKD				*e*Sb	**Sb**	**11 41 35.9**	**-0.2**
KZN	**Kozani**	**1.60**	**82**	*e*PN	**Pn**	**11 41 14.9**	**-0.1**
KZN				*e*SN	**Sn**	**11 41 38.0**	**+1.7**
ULC	**Ulcinj**	**1.88**	**350**	⇓*i*Pn	**Pn**	**11 41 19.2**	**+0.4**
ULC				*e*Sn	**Sn**	**11 41 45.7**	**+2.5**
EVR	**Evrytania**	**2.02**	**125**	*e*PN	**Pn**	**11 41 22.2**	**+1.4**
VLS	**Valsamata**	**2.05**	**160**	*e*PB	**Pn**	**11 41 20.5**	**-0.7**
NOCI	**Noci**	**2.12**	**290**	Pn	**Pn**	**11 41 21.8**	**-0.3**
	873nm,0.3s						
LIT	**Litokhoron**	**2.15**	**89**	*e*Pn	**Pn**	**11 41 22.6**	**+0.1**
LIT				*e*Sn	**Sg**	**11 41 54.6**	**+0.1**
GRG	**Griva**	**2.23**	**67**	*e*Pn	**Pn**	**11 41 23.7**	**+0.1**
GRG				*e*Sn	**Sb**	**11 41 55.9**	**+1.1**
BUM	**Brajici-Budva**	**2.27**	**345**	⇑*i*Pn	**Pn**	**11 41 23.8**	**-0.4**
BUM				*e*Sn	**Sn**	**11 41 54.9**	**+2.1**
SKO	**Skopje**	**2.28**	**35**	*e*Pn	**Pn**	**11 41 26.0**	**+1.7**
AGG	**Agios Georgios**	**2.31**	**117**	*e*Pn	**Pn**	**11 41 24.4**	**-0.3**
AGG				*e*Sn	**Sb**	**11 41 57.6**	**+0.6**
TTG	**Podgorica**	**2.34**	**352**	⇓*i*Pn	**Pn**	**11 41 24.6**	**-0.6**
TTG				*e*Sn	**Sn**	**11 41 55.9**	**+1.3**
TTG	**Podgorica**	**2.34**	**352**	⇓*i*Pn	**Pn**	**11 41 24.6**	**-0.6**
TTG				*e*Sn	**Sn**	**11 41 55.8**	**+1.3**
STIP	**Stip**	**2.47**	**49**	*e*Pn	**Pn**	**11 41 26.6**	**-0.2**
STIP				*e*Sn	**Sb**	**11 42 01.7**	**+0.2**
STIP	**Stip**	**2.47**	**49**	*e*Pn	**Pn**	**11 41 28.4**	**+1.5**
STIP	**Stip**	**2.47**	**49**	*e*Pn	**Pn**	**11 41 28.3**	**+1.4**
STIP				*e*Sn	**Sb**	**11 42 01.7**	**+0.2**
RLS	**Riolos of Patr**	**2.47**	**145**	*e*PB	**Pn**	**11 41 27.1**	**+0.2**
AMUR	**Altamura**	**2.49**	**290**	Pn	**Pn**	**11 41 26.9**	**-0.3**
	243nm,0.3s						
ORI	**Oriolo Calabro**	**2.49**	**270**	Pn	**Pn**	**11 41 29.3**	**+2.1**
PVY	**Plav**	**2.49**	**5**	⇓*i*Pn	**Pn**	**11 41 27.6**	**+0.4**
PVY				*e*Sn	**Sn**	**11 42 00.1**	**+1.8**
VAY	**Valandovo**	**2.50**	**60**	*e*Pn	**Pn**	**11 41 27.3**	**-0.1**
VAY				*e*Sn	**Sb**	**11 42 03.0**	**+0.5**
VAY	**Valandovo**	**2.50**	**60**	*e*Pn	**Pn**	**11 41 27.7**	**+0.4**
VAY				*e*Sg	**Sg**	**11 42 03.2**	**-2.7**
VAY	**Valandovo**	**2.50**	**60**	*e*Pn	**Pn**	**11 41 27.6**	**+0.3**
VAY				*e*Sn	**Sb**	**11 42 03.0**	**+0.5**
HCY	**Herceg Novi**	**2.50**	**339**	⇑*i*Pn	**Pn**	**11 41 26.4**	**-1.0**
HCY				*e*Sn	**Sn**	**11 41 59.6**	**+1.0**
SERS	**Sersale**	**2.56**	**246**	Pn	**Pn**	**11 41 28.1**	**0.0**
	55nm,0.4s						
HORT	**Hortiatis**	**2.65**	**78**	*e*Pn	**Pn**	**11 41 29.3**	**0.0**
HORT				*e*Sn	**Sb**	**11 42 06.8**	**0.0**
KNT	**Kendrikon**	**2.66**	**66**	*e*Pn	**Pn**	**11 41 29.8**	**+0.3**
NKY	**Niksic**	**2.75**	**349**	*e*Pn	**Pn**	**11 41 30.4**	**-0.4**
NKY				*e*Sn	**Sn**	**11 42 05.8**	**+1.1**
IVA	**Berane**	**2.77**	**3**	⇑*i*Pn	**Pn**	**11 41 31.3**	**+0.3**
IVA				*e*Sn	**Sn**	**11 42 06.7**	**+1.7**
NEO	**Neokhori**	**2.84**	**105**	*e*PN	**Pn**	**11 41 32.2**	**+0.2**
GRI	**Girifalco**	**2.84**	**244**	Pn	**Pn**	**11 41 32.9**	**+0.9**
	84nm,0.5s						
SOH	**Sokhos**	**2.88**	**75**	*e*Pn	**Pn**	**11 41 32.9**	**+0.3**
SOH				*e*Sn	**Sb**	**11 42 12.9**	**-0.6**
PLG	**Polygyros**	**2.88**	**84**	*e*PN	**Pn**	**11 41 33.4**	**+0.8**
PLG				*e*SN	**Sn**	**11 42 07.5**	**-0.4**
BRY	**Bratogost**	**2.92**	**343**	⇑*i*Pn	**Pn**	**11 41 32.8**	**-0.3**
BRY				*e*Sn	**Sn**	**11 42 10.5**	**+1.7**
LKR	**Lokris**	**2.95**	**119**	*e*PN	**Pn**	**11 41 33.9**	**+0.4**
CUC	**Castrocucco**	**2.98**	**269**	Pn	**Pn**	**11 41 36.5**	**+2.6**
	163nm,0.6s						
PLAC	**Placanica**	**3.02**	**238**	Pn	**Pn**	**11 41 34.4**	**-0.1**
PLAC				Sn	**Sn**	**11 42 10.4**	**-0.9**
	63nm,0.5s						
PAIG	**Paliouri**	**3.07**	**92**	*e*Pn	**Pn**	**11 41 34.7**	**-0.4**
KKB	**Krupnik**	**3.11**	**55**	*e*P	**Pn**	**11 41 36.5**	**+0.8**
SLCN	**Sala Consilina**	**3.12**	**276**	Pn	**Pn**	**11 41 36.5**	**+0.6**
	232nm,0.6s						
UPM	**Unac-Piva**	**3.15**	**350**	⇓*i*Pn	**Pn**	**11 41 37.5**	**+1.3**
UPM				*e*Sn	**Sn**	**11 42 15.8**	**+1.4**
VULT	**Monte Vulture**	**3.22**	**287**	Pn	**Pn**	**11 41 39.0**	**+1.8**
PLE	**Pljevlja**	**3.23**	**356**	⇓*i*Pn	**Pn**	**11 41 38.1**	**+0.8**
PLE				*e*Sn	**Sn**	**11 42 17.9**	**+1.5**
MRLC	**Muro Lucano**	**3.27**	**283**	Pn	**Pn**	**11 41 39.3**	**+1.3**
	144nm,0.6s						
MSAG	**Monte S. Angel**	**3.28**	**300**	Pn	**Pn**	**11 41 38.0**	**-0.1**
	278nm,0.3s						
CMPR	**Campora**	**3.37**	**275**	Pn	**Pn**	**11 41 40.5**	**+1.2**
	67nm,0.5s						
CDRU	**Civita di Ruta**	**3.38**	**278**	Pn	**Pn**	**11 41 39.9**	**+0.5**
	64nm,0.5s						
SGO	**Sicignano**	**3.38**	**279**	Pn	**Pn**	**11 41 39.9**	**+0.4**
	20nm,0.2s						
MMB	**Musomiste**	**3.40**	**63**	*e*Pn	**Pn**	**11 41 40.0**	**+0.3**
MMB				*e*Sn	**Sn**	**11 42 25.0**	**+4.4**
MMB	**Musomiste**	**3.40**	**63**	*e*P	**Pn**	**11 41 40.1**	**+0.4**
NVR	**Nevrokopi**	**3.40**	**67**	*e*PN	**Pn**	**11 41 40.9**	**+1.2**
SGRT	**San Giovanni R**	**3.41**	**300**	Pn	**Pn**	**11 41 39.8**	**-0.1**
	133nm,0.3s						
SGTA	**Sant Agata di**	**3.45**	**289**	Pn	**Pn**	**11 41 42.0**	**+1.6**
	174nm,0.5s						
CEL	**Celeste**	**3.48**	**239**	Pn	**Pn**	**11 41 40.7**	**-0.1**
CEL				Sn	**Sn**	**11 42 21.8**	**-0.9**
	141nm,0.6s						
SOI	**Samo**	**3.48**	**235**	Pn	**Pn**	**11 41 40.9**	**0.0**
SOI				Sn	**Sn**	**11 42 21.8**	**-1.0**
	116nm,0.6s						
SNAL	**S. Angelo Dei**	**3.51**	**285**	Pn	**Pn**	**11 41 42.6**	**+1.3**
	205nm,0.8s						
CAFE	**Carife**	**3.52**	**287**	Pn	**Pn**	**11 41 42.0**	**+0.7**
	503nm,1.5s						
MCRV	**Calabrutti - M**	**3.52**	**282**	Pn	**Pn**	**11 41 41.8**	**+0.5**
	101nm,0.5s						
VTS	**Vitosha**	**3.63**	**46**	*e*Pn	**Pn**	**11 41 42.7**	**-0.1**
VTS	**Vitosha**	**3.63**	**46**	⇓*i*P	**Pn**	**11 41 43.5**	**+0.7**
VTS	**Vitosha**	**3.63**	**46**	*e*P	**Pn**	**11 41 44.6**	**+1.8**
BBLS	**Bajina Basta -**	**3.76**	**357**	*i* Pn	**Pn**	**11 41 45.6**	**+0.9**
GRUS	**Gruza**	**3.85**	**11**	*i* Pn	**Pn**	**11 41 45.6**	**-0.4**
DIVS	**Divcibare**	**3.99**	**3**	⇑*i*Pn	**Pn**	**11 41 46.3**	**-1.5**
DIVS				Sg	**Sg**	**11 42 48.1**	**-5.8**
SACR	**S. Croce Del S**	**4.00**	**290**	Pn	**Pn**	**11 41 49.9**	**+1.9**
	63nm,0.7s						
MMME	**Mongiuffi-Meli**	**4.08**	**239**	Pn	**Pn**	**11 41 49.3**	**+0.2**
	51nm,0.6s						
BSSO	**Busso**	**4.13**	**292**	Pn	**Pn**	**11 41 50.9**	**+1.2**
	68nm,0.7s						
TRIV	**Trivento**	**4.23**	**295**	Pn	**Pn**	**11 41 52.6**	**+1.4**
	89nm,0.9s						
VLI	**Veliai**	**4.24**	**142**	*e*PN	**Pn**	**11 41 51.5**	**+0.3**
VAGA	**Valle Agricola**	**4.35**	**289**	Pn	**Pn**	**11 41 53.4**	**+0.7**
	82nm,0.7s						
MOCO	**Biccari - m.te**	**4.39**	**288**	Pn	**Pn**	**11 41 44.5**	**-8.8**
	163nm,0.9s						
MIDA	**Miranda**	**4.40**	**292**	Pn	**Pn**	**11 41 54.9**	**+1.4**
	52nm,0.5s						
AGST	**Augusta-Monte**	**4.51**	**232**	Pn	**Pn**	**11 41 52.7**	**-2.2**
CERA	**Filignano**	**4.55**	**291**	Pn	**Pn**	**11 41 57.3**	**+1.7**
	53nm,0.6s						
KYTH	**Kithira**	**4.64**	**144**	*e*PN	**Pn**	**11 41 57.5**	**+0.7**
INTR	**Introdacqua**	**4.77**	**295**	Pn	**Pn**	**11 41 58.6**	**0.0**
	86nm,0.8s						
FAGN	**Fagnano**	**5.09**	**297**	Pn	**Pn**	**11 42 02.2**	**-0.7**
	95nm,0.5s						
GIUL	**Giuliano Di Ro**	**5.09**	**289**	Pn	**Pn**	**11 42 03.7**	**+0.7**
	43nm,1.4s						
TERO	**Teramo**	**5.22**	**301**	Pn	**Pn**	**11 42 05.5**	**+0.7**
	29nm,0.4s						
AQU	**L'Aquila**	**5.25**	**297**	*e*Pn	**Pn**	**11 42 06.5**	**+1.4**
	18nm,0.6s						
AQU				*e*Sn	**Sn**	**11 43 01.8**	**-4.4**
AQU	**L'Aquila**	**5.25**	**297**	*e*Pn	**Pn**	**11 42 06.5**	**+1.4**
	18nm,0.6s						
AQU				*e*Sn	**Sn**	**11 43 01.8**	**-4.4**
OFFI	**Offida**	**5.32**	**304**	Pn	**Pn**	**11 42 07.4**	**+1.3**
CERT	**Cerreto**	**5.40**	**292**	Pn	**Pn**	**11 42 08.2**	**+1.0**

	12nm,0.4s						
FIAM	**Fiamignano**	**5.41**	**296**	Pn	**Pn**	**11 42 09.1**	**+1.8**
	23nm,0.7s						
APE	**Apeiranthos**	**5.49**	**122**	ePn	**Pn**	**11 42 09.2**	**+0.7**
BZS	**Buzias**	**5.68**	**14**	⇓iP	**Pn**	**11 42 10.7**	**-0.4**
BZS	**Buzias**	**5.68**	**14**	⇓P	**Pn**	**11 42 10.7**	**-0.4**
BZS				S	**Sn**	**11 43 11.9**	**-5.0**
BZS	**Buzias**	**5.68**	**14**	⇓P	**Pn**	**11 42 10.7**	**-0.4**
BZS				S	**Sn**	**11 43 11.9**	**-5.1**
NVLJ	**Novalja**	**5.71**	**323**	i Pn	**Pn**	**11 42 10.7**	**-0.7**
NVLJ				i Sn	**Sn**	**11 43 14.4**	**-3.2**
CING	**Cingoli**	**5.85**	**306**	Pn	**Pn**	**11 42 12.9**	**-0.5**
	22nm,0.9s						
PKSM	**Moragy**	**6.15**	**353**	⇑iP	**Pn**	**11 42 16.2**	**-1.3**
PKSM	**Moragy**	**6.15**	**353**	⇑P	**Pn**	**11 42 16.2**	**-1.3**
PKSM				S	**Sn**	**11 43 23.3**	**-5.2**
PKSM	**Moragy**	**6.15**	**353**	⇑P	**Pn**	**11 42 16.2**	**-1.3**
PKSM				S	**Sn**	**11 43 23.3**	**-5.1**
BOJS	**Bojanci**	**6.30**	**330**	i Pn	**Pn**	**11 42 19.1**	**-0.5**
BOJS				eSn	**Sn**	**11 43 29.3**	**-3.0**
IDI	**Anoyia**	**6.33**	**138**	Pn	**Pn**	**11 42 19.1**	**-0.9**
	1.2nm,0.3s,baz=108,slow=22,SNR=6.8						
IDI				Sn	**Sn**	**11 43 25.4**	**-7.5**
	3.7nm,0.3s,baz=322,slow=18,SNR=8.1						
BADI	**Badiali**	**6.52**	**304**	Pn	**Pn**	**11 42 23.6**	**+1.0**
	4.0nm,1.1s						
MLR	**Muntele Rosu**	**7.07**	**38**	Pn	**Pn**	**11 42 30.3**	**+0.1**
	0.1nm,0.3s,baz=142,slow=23,SNR=2.1						
MLR				LR	LR	11 45 17.8	
	comp=Z,61nm,18.2s,baz=93,slow=39						
MLR	**Muntele Rosu**	**7.07**	**38**	⇓iP	**Pn**	**11 42 37.0**	**+6.8**
VOY	**Vojsko**	**7.28**	**326**	ePn	**Pn**	**11 42 31.8**	**-1.3**
VOY				eSn	**Sn**	**11 43 51.9**	**-4.5**
VOJS	**Vojsko**	**7.29**	**326**	ePn	**Pn**	**11 42 32.0**	**-1.1**
VOJS				eSn	**Sn**	**11 43 51.7**	**-4.8**
PERS	**Pernice**	**7.33**	**334**	ePn	**Pn**	**11 42 32.8**	**-0.9**
PERS				eSn	**Sn**	**11 43 50.6**	**-6.8**
OBKA	**Obir**	**7.42**	**331**	⇓iPn	**Pn**	**11 42 33.9**	**-1.0**
OBKA				⇑iSn	**Sn**	**11 43 52.9**	**-6.7**
PSZ	**Piszkesteto**	**7.81**	**1**	ePn	**Pn**	**11 42 47.2**	**+6.9**
VYHS	**Vyhne**	**8.41**	**356**	ePN	**Pn**	**11 42 44.2**	**-4.3**
MOA	**Molln**	**8.67**	**335**	⇑iPn	**Pn**	**11 42 50.5**	**-1.5**
MOA				⇓iSn	**Sn**	**11 44 23.4**	**-7.0**
CRVS	**Cervenica-Dubn**	**8.88**	**8**	ePN	**Pn**	**11 42 51.6**	**-3.4**
WTTA	**Wattenberg**	**9.23**	**323**	⇓iPn	**Pn**	**11 42 59.0**	**-0.8**
WTTA				⇓iSn	**Sn**	**11 44 39.4**	**-4.8**
WATA	**Walderalm**	**9.31**	**324**	⇓iPn	**Pn**	**11 43 00.2**	**-0.6**
WATA				⇓iSn	**Sn**	**11 44 41.8**	**-4.4**
SQTA	**Sankt Quirin**	**9.39**	**322**	⇓iPn	**Pn**	**11 43 01.9**	**-0.1**
SQTA				⇑iSn	**Sn**	**11 44 45.0**	**-3.3**
MOTA	**Moosalm**	**9.53**	**322**	⇑iPn	**Pn**	**11 43 03.7**	**-0.2**
MOTA				⇑iSn	**Sn**	**11 44 47.2**	**-4.5**
GERES	**GERESS Array B**	**9.72**	**336**	Pn	**Pn**	**11 43 06.0**	**-0.5**
	0.4nm,0.3s,baz=158,slow=14,SNR=13						
DAVOX	**Davos**	**9.76**	**316**	Pn	**Pn**	**11 43 07.5**	**+0.4**
	0.5nm,0.3s,baz=166,slow=9.7,SNR=4.5						
DAVOX	**Davos**	**9.76**	**316**	Pn	**Pn**	**11 43 07.5**	**+0.4**
KHC	**Kasperske Hory**	**10.02**	**336**	ePN	**Pn**	**11 43 10.2**	**-0.3**
KHC				eSN	**Sn**	**11 44 57.2**	**-6.3**
FRF	**La Foret Royal**	**10.33**	**294**	ePn	**Pn**	**11 43 15.9**	**+1.1**
MBDF	**Montbardon**	**10.61**	**300**	ePn	**Pn**	**11 43 16.6**	**-2.1**
LPG	**La Plagne**	**10.92**	**304**	eSn	**Sn**	**11 45 15.0**	**-11**
	2.7nm,0.3s						
LPG	**La Plagne**	**10.92**	**304**	eSn	**Sn**	**11 45 15.0**	**-11**
	1.4nm,0.3s						
LPL	**La Plagne**	**10.94**	**304**	ePn	**Pn**	**11 43 19.7**	**-3.6**
LPL				eSn	**Sn**	**11 45 17.2**	**-9.1**
	2.0nm,0.2s						
LPL	**La Plagne**	**10.94**	**304**	ePn	**Pn**	**11 43 19.7**	**-3.6**
LPL				eSn	**Sn**	**11 45 17.2**	**-9.1**
	1.0nm,0.2s						
CABF	**La Chapelle**	**11.84**	**308**	ePn	**Pn**	**11 43 33.1**	**-2.4**
CABF				eSn	**Sn**	**11 45 38.2**	**-10**
	1.5nm,0.4s						
CABF	**La Chapelle**	**11.84**	**308**	ePn	**Pn**	**11 43 33.1**	**-2.4**
CABF				eSn	**Sn**	**11 45 38.2**	**-10**
	0.8nm,0.4s						
HINF	**Hinteralfeld**	**12.03**	**314**	ePn	**Pn**	**11 43 35.7**	**-2.4**
HINF				eSn	**Sn**	**11 45 42.7**	**-10**
	2.4nm,0.4s						
HINF	**Hinteralfeld**	**12.03**	**314**	ePn	**Pn**	**11 43 35.7**	**-2.4**
HINF				eSn	**Sn**	**11 45 42.7**	**-10**
	1.2nm,0.4s						
CDF	**Champ du Feu**	**12.16**	**317**	ePn	**Pn**	**11 43 37.1**	**-2.8**
SMF	**Signal de Mont**	**13.24**	**305**	eSn	**Sn**	**11 46 11.1**	**-11**
	0.9nm,0.2s						
SMF	**Signal de Mont**	**13.24**	**305**	eSn	**Sn**	**11 46 11.1**	**-11**
	0.4nm,0.2s						
LOR	**Lormes**	**13.50**	**307**	ePn	**Pn**	**11 43 57.2**	**-0.9**
LOR				eSn	**Sn**	**11 46 18.8**	**-10**
	2.1nm,0.4s						
LOR	**Lormes**	**13.50**	**307**	ePn	**Pn**	**11 43 57.2**	**-0.9**
LOR				eSn	**Sn**	**11 46 18.8**	**-10**
	1.0nm,0.4s						
CAF	**Calviac**	**13.86**	**296**	ePn	**Pn**	**11 44 00.6**	**-2.5**
ESDC	**Sonseca Array**	**18.15**	**276**	P	**Pn**	**11 44 57.1**	**-1.8**
	0.2nm,0.3s,baz=70,slow=12,SNR=5.0						
ESDC				LR	LR	11 52 10.1	
	comp=Z,35nm,21.5s,baz=280,slow=38						
HFS	**Hagfors**	**20.40**	**351**	P	**P**	**11 45 22.4**	**-1.4**
	2.1nm,0.4s,baz=164,slow=12,SNR=30						
EKA	**Eskdalemuir Ar**	**21.49**	**323**	P	**P**	**11 45 33.1**	**-2.6**
	1.4nm,0.6s,mb3.5,baz=122,slow=8.9,SNR=9.5						
NOA	**NORSAR Array B**	**21.60**	**349**	P	**P**	**11 45 35.3**	**-1.6**
	1.7nm,0.5s,mb3.7,baz=162,slow=11,SNR=7.7						
FINES	**FINESS Array B**	**21.72**	**8**	P	**P**	**11 45 35.5**	**-2.6**
	1.9nm,0.9s,mb3.5,baz=172,slow=12,SNR=12						
FINES	**FINESS Array B**	**21.72**	**8**	P	**P**	**11 45 35.5**	**-2.6**
KAF	**Kangasniemi**	**22.40**	**8**	ep	**P**	**11 45 43.8**	**-1.6**
JOF	**Joensuu**	**23.88**	**13**	ep	**P**	**11 46 08.0**	**+7.4**
	2.8nm,0.7s,mb3.9						
ARCES	**ARCESS Array B**	**29.65**	**4**	P	**P**	**11 46 49.5**	**-3.1**
	1.0nm,0.7s,mb3.8,baz=192,slow=9.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**31.18**	**216**	P	**P**	**11 47 08.3**	**+2.3**
	0.2nm,0.6s,mb3.2,baz=42,slow=7.8,SNR=3.2						

*BJI **06** 12:04:32.1, 21.10S×17355W, h10km, mB5.2, mb4.9, Ms4.6, Msz4.3*
*IDC **06** 12:04:33.6±0.8, 2090S×17379W, h0km, mb4.4/8, mb1 4.5/10, mb1mx4.3/16, mbtmp4.4/10, ML3.2/2, MS3.5/9, Ms1 3.5/9, ms1mx3.3/19, Error ellipse: s-maj=31.6km s-min=18.2km az=133.0*
*ISCJB **06** 12:04:34.9±0.6, 2103S±009×17358W±009, h33km, mb4.6/21, MS3.7/9, Error ellipse: s-maj=14.1km s-min=9.6km az=95.6*
*NEIC **06** 12:04:35.4±0.5, 2077S×17391W, h10km, mb4.7/11, Error ellipse: s-maj=16.4km s-min=9.1km az=137.0*
ISC 06 12:04:37.8±0.5**, 2099S**±007×**17363W**±008**, h35**km**, (h9**km±4.0km**:pP-P), n68,** σ**1§22**/36**, mb4.6**/21**, MS3.7**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.26**	**14**	Pn	**Pn**	**12 06 18.5**	**-2.9**
	1.8nm,0.3s,baz=197,slow=16,SNR=7.2						
AFI				Sn	**Sn**	**12 07 34.6**	**-7.9**
	18nm,0.3s,baz=188,slow=21,SNR=6.0						
AFI	**Afiamalu**	**7.26**	**14**	ePn	**Pn**	**12 06 18.5**	**-2.9**
AFI				Sn	**Sn**	**12 07 32.4**	**-10**
RAO	**Raoul Island**	**9.10**	**204**	Sn	**Sn**	**12 08 27.2**	**-0.5**
	77nm,0.3s,baz=93,slow=22,SNR=3.8						
RAR	**Rarotonga**	**12.94**	**93**	Pn	**Pn**	**12 07 37.2**	**-1.9**
	1.1nm,0.3s,baz=277,slow=7.1,SNR=6.7						
RAR				Sn	**Sn**	**12 09 50.7**	**-11**
	4.6nm,0.3s,baz=99,slow=19,SNR=5.3						
RAR				LR	LR	12 11 31.8	
	comp=Z,146nm,21.9s,baz=244,slow=32						
DZM	**Mont Dzumac**	**18.57**	**263**	P	**Pn**	**12 08 52.3**	**+0.2**
	0.9nm,0.3s,baz=76,slow=19,SNR=14						
DZM				LR	LR	12 13 33.6	
	comp=Z,82nm,18.5s,baz=127,slow=29						
PPT	**Papeete**	**22.95**	**86**	eLR	LR	12 15 02.6	
	377nm,26.8s,baz=255						
PPT	**Papeete**	**22.95**	**86**	LR	LR	12 16 59.6	
	comp=Z,98nm,20.5s,MS3.2,baz=234,slow=32						
RPZ	**Rata Peaks**	**26.01**	**206**	P	**P**	**12 10 07.7**	**+0.3**
	5.7nm,0.7s,mb4.2,baz=119,slow=19,SNR=2.1						
HNR	**Honiara**	**27.92**	**290**	LR	LR	12 19 32.7	
	comp=Z,110nm,21.5s,MS3.4,baz=180,slow=32						
TAOE	**Nuku Hiva Isla**	**34.44**	**75**	eLR	LR	12 20 14.5	
	579nm,29.3s						
CTA	**Charters Tower**	**37.51**	**264**	eP	**P**	**12 11 47.5**	**-0.8**
	5.5nm,0.6s,mb4.5						
CTAO	**Charters Tower**	**37.51**	**264**	eP	**P**	**12 11 47.6**	**-0.7**
	5.9nm,0.6s,mb4.5						
PMG	**Port Moresby**	**39.45**	**281**	P	**P**	**12 12 04.0**	**-0.5**
	16nm,0.8s,mb4.8,baz=72,slow=5.8,SNR=4.6						
PMG				LR	LR	12 23 24.3	
	comp=Z,74nm,20.1s,MS3.5,baz=58,slow=29						
PMG	**Port Moresby**	**39.45**	**281**	eP	**P**	**12 12 04.3**	**-0.2**
	16nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**41.28**	**245**	eP	**P**	**12 12 19.7**	**0.0**
	5.8nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**41.28**	**245**	P	**P**	**12 12 19.5**	**-0.2**
	7.0nm,0.7s,mb4.4,baz=86,slow=9.3,SNR=16						
STKA				LR	LR	12 27 13.1	
	comp=Z,142nm,19.3s,MS3.9,baz=26,slow=33						
AS31	**Alice Springs**	**48.39**	**257**	eP	**P**	**12 13 15.8**	**-0.5**
ASAR	**Alice Springs**	**48.39**	**257**	P	**P**	**12 13 15.8**	**-0.5**
	11nm,0.8s,mb5.0,baz=99,slow=7.8,SNR=124						
ASAR				PcP	PcP	12 14 44.0	+1.6
	1.2nm,0.9s,baz=106,slow=3.3,SNR=4.2						
ASAR				LR	LR	12 29 59.9	
	comp=Z,89nm,21.0s,MS3.7,baz=5.7,slow=32						
ASPA	**Alice Springs**	**48.39**	**257**	eP	**P**	**12 13 15.8**	**-0.5**
WB2	**Warramunga Arr**	**48.57**	**262**	eP	**P**	**12 13 16.4**	**-1.3**
WRAB	**Tennant Creek**	**48.57**	**262**	eP	**P**	**12 13 16.2**	**-1.5**
	13nm,0.9s,mb5.0						
KAKA	**Kakadu**	**52.07**	**270**	eP	**P**	**12 13 43.0**	**-1.2**
	15nm,0.9s,mb4.9						
FORT	**Forrest**	**52.86**	**247**	eP	**P**	**12 13 49.4**	**-0.6**
	19nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**57.01**	**262**	eP	**P**	**12 14 19.9**	**-0.1**
	7.5nm,1.1s,mb4.6						
SBA	**Scott Base**	**57.69**	**185**	eP	**P**	**12 14 29.9**	**+5.0**
	2.3nm,1.1s,mb4.1						
KLBR	**Kellerberrin**	**61.55**	**245**	eP	**P**	**12 14 52.5**	**+1.1**
	31nm,1.0s,mb5.4						
MUN	**Mundaring**	**62.80**	**244**	eP	**P**	**12 15 01.3**	**+1.6**
QSPA	**South Pole Qui**	**69.09**	**180**	eP	**P**	**12 15 44.1**	**+3.9**
	7.3nm,1.2s,mb4.5						
MJAR	**Matsushiro Arr**	**73.09**	**321**	P	**P**	**12 16 04.9**	**+0.5**
	2.7nm,0.7s,mb4.3,baz=159,slow=5.7,SNR=16						
NVAR	**Mina Array Bea**	**78.63**	**41**	P	**P**	**12 16 36.9**	**+0.8**
	0.5nm,0.7s,mb3.6,baz=220,slow=5.7,SNR=6.1						
MAW	**Mawson**	**82.46**	**199**	P	**P**	**12 16 58.4**	**+1.8**
	0.9nm,0.8s,mb3.8,baz=115,slow=7.6,SNR=6.7						
MDJ	**Mudanjiang**	**83.32**	**323**	P	**P**	**12 17 02.7**	**+1.7**
MDJ				AP	pP	12 17 05.9	-6.2
MDJ				XP	sP	12 17 07.1	-9.0
MDJ				PP	PP	12 20 13.1	+0.2
MDJ				S	S	12 27 21.4	+2.1
MDJ				XS	sS	12 27 28.2	-9.3
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,36nm,4.8s						
MDJ				LR	LR		
	comp=N,24nm,13.1s						
MDJ				LR	LR		
	comp=E,12nm,20.9s						
MDJ				LR	LR		
	comp=Z,32nm,15.7s,MS3.8						
NJ2	**Nanjing**	**83.37**	**308**	eP	**P**	**12 17 02.1**	**+0.8**
NJ2				AP	pP	12 17 06.5	-5.9
NJ2				XP	sP	12 17 07.9	-8.5
NJ2				S	S	12 27 18.0	-1.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,1µm,8.3s						
NJ2				LR	LR		
	comp=N,160nm,36.0s						
NJ2				LR	LR		
	comp=E,140nm,22.0s						
NJ2				LR	LR		
	comp=Z,90nm,14.0s						
PDAR	**Pinedale Array**	**86.56**	**42**	P	**P**	**12 17 19.9**	**+2.5**
	comp=Z,0.3nm,0.5s,mb3.8,baz=270,slow=0.9,SNR=2.7						
PDAR				LR	LR	12 49 42.4	
	comp=Z,23nm,18.2s,MS3.6,baz=85,slow=31						
HHC	**Hu-ho-hao-te**	**92.65**	**313**	eP	**P**	**12 17 47.5**	**+1.5**
HHC				AP	pP	12 17 52.3	-4.8
HHC				XP	sP	12 17 54.5	-6.6
HHC				PP	PP	12 21 30.4	+2.6
HHC				SKS		12 28 16.8	
HHC				S	S	12 28 47.0	-1.1
HHC				SS	SS	12 35 00.3	-0.4
HHC				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb5.1						
HHC				AMB	AMB		
	comp=Z,71nm,3.4s						
HHC				LR	LR		
	comp=N,131nm,19.9s,MS4.5						
HHC				LR	LR		
	comp=E,92nm,21.8s,MS4.5						
HHC				LR	LR		
	comp=Z,75nm,19.9s,MS4.1						
KMI	**Kunming**	**93.23**	**296**	P	**P**	**12 17 51.7**	**+3.0**
KMI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb5.1						
CD2	**Chengdu**	**94.52**	**301**	eP	**P**	**12 17 53.7**	**-0.9**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,30nm,6.8s						
ULM	**Lac du Bonnet**	**98.38**	**39**	LR	LR	12 56 39.5	
	comp=Z,28nm,19.6s,MS3.8,baz=330,slow=32						
ARCES	**ARCESS Array B**	**130.08**	**351**	PKP	PKPdf	12 23 44.5	+0.6
	comp=Z,1.1nm,0.7s,baz=324,slow=3.1,SNR=4.5						
FINES	**FINESS Array B**	**137.31**	**346**	PKP	PKPdf	12 23 58.1	+0.6
	comp=Z,0.6nm,0.7s,baz=12,slow=2.7,SNR=6.0						
AKASG	**Malin Array Be**	**145.33**	**334**	PKPbc	PKPbc	12 24 12.2	+0.5
	comp=Z,8.3nm,0.6s,baz=40,slow=4.1,SNR=59						
AKBB	**Malin Array Si**	**145.33**	**334**	ePKP	PKPdf	12 24 12.4	+0.6
MALT	**Malatya**	**147.44**	**309**	ePKPbc	PKPbc	12 24 20.8	+2.8
CLL	**Collm**	**149.30**	**352**	i PKPbc	PKPbc	12 24 24.4	+1.6
	comp=Z,5.0nm,0.9s						
CLL				ePKPab	PKPab	12 24 28.0	+0.5
CLL				i sPKPab		12 24 36.0	
CLL				i x	x	12 24 48.4	
KOLS	**Kolonicke sedl**	**149.35**	**339**	ePKP	PKPbc	12 24 26.0	+3.1
KOLS	**Kolonicke sedl**	**149.35**	**339**	ePKP	PKPbc	12 24 26.1	+3.2
BRG	**Berggiesshubel**	**149.59**	**351**	eP	PKPbc	12 24 25.5	+1.9
	comp=Z,2.2nm,0.8s						
CRVS	**Cervenica-Dubn**	**149.65**	**340**	ePKP	PKPbc	12 24 27.0	+3.3
CRVS	**Cervenica-Dubn**	**149.65**	**340**	ePKP	PKPbc	12 24 27.1	+3.4
BR131	**Keskin Array S**	**150.14**	**315**	ePKPbc	PKPbc	12 24 26.5	+1.6
BRTR	**Keskin Array B**	**150.14**	**315**	PKPbc	PKPbc	12 24 26.4	+1.5
	comp=Z,2.6nm,0.8s,baz=134,slow=3.6,SNR=17						
VYHS	**Vyhne**	**150.79**	**343**	ePKP	PKPbc	12 24 28.5	+2.1
VYHS	**Vyhne**	**150.79**	**343**	ePKP	PKPbc	12 24 28.6	+2.2
GIVF	**Givet**	**150.92**	**2**	ePKIKP	PKPbc	12 24 28.6	+1.9
BAIF	**Baives**	**150.94**	**3**	ePKIKP	PKPbc	12 24 28.8	+2.0
	comp=Z,15nm,1.1s						
KHC	**Kasperske Hory**	**151.34**	**350**	eP	PKPbc	12 24 29.5	+1.8
KHC				x	x	12 24 40.0	
KHC	**Kasperske Hory**	**151.34**	**350**	eP	PKPbc	12 24 29.5	+1.8
KHC				e		12 24 40.0	
GERES	**GERESS Array B**	**151.59**	**350**	PKPbc	PKPbc	12 24 29.6	+1.3
	comp=Z,0.9nm,0.6s,baz=39,slow=2.6,SNR=9.6						
FLN	**La Foliniere**	**151.75**	**10**	ePKIKP	PKPbc	12 24 30.1	+1.5
SGMF	**Saint Gilles**	**151.86**	**13**	ePKIKP	PKPbc	12 24 30.9	+2.0
LDF	**La Druitiere**	**151.97**	**9**	ePKIKP	PKPbc	12 24 30.7	+1.6
GRR	**Gorron**	**152.05**	**10**	ePKIKP	PKPbc	12 24 31.0	+1.7
CDF	**Champ du Feu**	**152.63**	**359**	ePKIKP	PKPbc	12 24 32.6	+2.0
	comp=Z,5.2nm,0.8s						
HINF	**Hinteralfeld**	**153.23**	**359**	ePKIKP	PKPbc	12 24 33.5	+1.5
SSF	**Saint Saulge**	**153.89**	**4**	ePKIKP	PKPbc	12 24 35.4	+2.0
	comp=Z,14nm,1.2s						
SMF	**Signal de Mont**	**154.32**	**4**	ePKIKP	PKPbc	12 24 35.3	+1.0
CABF	**La Chapelle**	**154.44**	**0**	ePKIKP	PKPbc	12 24 35.5	+0.9
ORIF	**Oris-en-Rattie**	**156.13**	**1**	ePKIKP	PKPdf	12 24 37.5	+9.0

*NEIC **06** 12:13:16.6, 3285S×7148W, h52km, MG2.7(GUC), After GUC.*
GUC 06 12:13:16.6±0.9**, 3285S**×**7148W, h52**km±5km**, MD3.5, ML2.7, 13C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.22**	**219**	⇓iP	Pn	12 13 25.5	+0.2
IHA				i S	Sn	12 13 31.9	+0.4
ROCH	**El Roble**	**0.41**	**107**	⇓iP	Pn	12 13 27.8	+0.9
ROCH				i S	Sn	12 13 36.2	+1.8
LCCH	**Las Cruces**	**0.62**	**187**	⇑iP	Pn	12 13 29.5	0.0
LCCH				i S	Sn	12 13 39.2	+0.4
PEL	**Peldehue**	**0.72**	**114**	⇓iP	Pn	12 13 31.5	+0.8
PEL				i S	Sn	12 13 42.4	+1.4
PEL				AML	AML	12 13 46.0	
	comp=N,828nm,0.3s						
PEL	**Peldehue**	**0.72**	**114**	⇓iP	Pn	12 13 31.5	+0.8
PEL				i S	Sn	12 13 42.4	+1.4
JACH	**Jahuel**	**0.76**	**77**	⇑iP	Pn	12 13 32.0	+0.7
JACH				i S	Sn	12 13 43.4	+1.5
SAN	**Santiago**	**0.91**	**131**	i P	Pn	12 13 34.2	+1.1
SAN				i S	Sn	12 13 46.6	+1.3
SAN				AML	AML	12 13 47.2	
	comp=N,358nm,0.2s						
SAN	**Santiago**	**0.91**	**131**	i P	Pn	12 13 34.2	+1.1
SAN				i S	Sn	12 13 46.6	+1.3
TACH	**Talagante**	**0.92**	**151**	⇑iP	Pn	12 13 33.8	+0.6
TACH				i S	Sn	12 13 46.1	+0.7
DSCH	**Colegio Aleman**	**0.93**	**126**	⇑iP	Pn	12 13 33.7	+0.2
DSCH				i S	Sn	12 13 46.7	+0.8
CLCH	**Cerro Calan**	**0.95**	**125**	⇑iP	Pn	12 13 34.6	+0.8
CLCH				i S	Sn	12 13 47.9	+1.5
CLCH				AML	AML	12 13 50.2	
	comp=E,239nm,0.3s						
CLCH				AML	AML	12 13 52.3	
	comp=E,354nm,0.7s						
CHNG	**Los Chungos**	**0.97**	**359**	⇓iP	Pn	12 13 34.5	+0.5
CHNG				i S	Sn	12 13 47.3	+0.6
CHNG				AML	AML	12 13 48.0	
	comp=N,136nm,0.2s						
ANTU	**Antumapu**	**1.00**	**136**	⇑iP	Pn	12 13 35.3	+0.9
ANTU				i S	Sn	12 13 48.9	+1.4
ANTU				AML	AML	12 13 49.4	
	comp=N,552nm,0.6s						
ANTU	**Antumapu**	**1.00**	**136**	⇑iP	Pn	12 13 35.3	+0.9
ANTU				i S	Sn	12 13 48.9	+1.4
FCH	**Farellones**	**1.10**	**116**	⇑iP	Pn	12 13 36.6	+0.9
FCH				i S	Sn	12 13 51.6	+1.8
FCH				AML	AML	12 13 52.5	
	comp=N,302nm,0.1s						
PCH	**Pirque**	**1.11**	**134**	⇓iP	Pn	12 13 36.6	+0.7
PCH				i S	Sn	12 13 51.3	+1.1
SJCH	**San Jose de Ma**	**1.22**	**130**	⇑iP	Pn	12 13 37.7	+0.3
SJCH				i S	Sn	12 13 53.6	+0.7
SJCH				AML	AML	12 13 54.3	
	comp=E,170nm,0.3s						
SJCH	**San Jose de Ma**	**1.22**	**130**	⇑iP	Pn	12 13 37.7	+0.3
SJCH				i S	Sn	12 13 53.6	+0.7
CHCH	**Chadas Angostu**	**1.28**	**148**	⇑iP	Pn	12 13 38.7	+0.6
CHCH				i S	Sn	12 13 55.4	+1.3
CACH	**El Canelo**	**1.46**	**150**	⇑iP	Pn	12 13 41.9	+1.4
CACH				i S	Sn	12 14 00.5	+2.0
CICH	**Cipreses**	**1.71**	**149**	⇑iP	Pn	12 13 44.9	+0.9
CICH				i S	Sn	12 14 06.3	+1.7
CMCH	**Combarbala**	**1.72**	**14**	eP	Pn	12 13 44.3	+0.2
CMCH				i S	Sn	12 14 06.3	+1.3
CMCH				AML	AML	12 14 08.9	
	comp=E,375nm,0.9s						
CMCH	**Combarbala**	**1.72**	**14**	eP	Pn	12 13 44.3	+0.2
CMCH				i S	Sn	12 14 06.3	+1.3
SFDO	**San Fernando**	**1.80**	**168**	eP	Pn	12 13 45.8	+0.6

*ISCJB **06** 12:18:11.2±1.3, 3903S±004×738W±0.1, h33km, Error ellipse: s-maj=15.6km s-min=5.9km az=178.7*
*GUC **06** 12:18:12.3±0.8, 3938S×7265W, h70km, ML4.3*
*NEIC **06** 12:18:12.2±3.2, 39.13S×7387W, h35km, ML4.3(GUC), Error ellipse: s-maj=50.7km s-min=12.5km az=84.0*
ISC 06 12:18:13.2±1.3**, 3908S**±004×**737W**±01**, h35**km**, n10,** σ**1§07**/19**, 3C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLCH	**Valdivia**	**0.79**	**157**	⇑iP	**Pn**	**12 18 26.7**	**-1.2**
VLCH				i S	**Sn**	**12 18 37.1**	**-1.3**
VLCH				AML	AML	12 18 42.3	
	comp=N,19µm,0.5s						
VLCH	**Valdivia**	**0.79**	**157**	⇑iP	**Pn**	**12 18 26.7**	**-1.2**
VLCH				i S	**Sn**	**12 18 37.1**	**-1.3**
TMU	**Temuco**	**0.89**	**68**	⇑iP	**Pn**	**12 18 29.8**	**+0.7**
TMU				i S	**Sn**	**12 18 40.8**	**+0.1**
CCHI	**Chillan**	**2.77**	**27**	eP	**Pn**	**12 18 56.4**	**+1.4**
CCHI				i S	**Sn**	**12 19 28.2**	**+1.1**
CCHI				AML	AML	12 19 49.9	
	comp=N,2µm,0.7s						
CCHI				AML	AML	12 19 52.6	
	comp=N,925nm,0.6s						
CCHI	**Chillan**	**2.77**	**27**	P	**Pn**	**12 18 56.4**	**+1.4**
CCHI				i S	**Sn**	**12 19 28.2**	**+1.1**
PLCA	**Paso Flores**	**2.90**	**126**	eP	**Pn**	**12 18 58.4**	**+1.6**
PLCA				eS	**Sn**	**12 19 40.5**	**+10**
TALC	**Talca**	**4.01**	**24**	eP	**Pn**	**12 19 12.4**	**+0.4**
TALC				i S	**Sn**	**12 19 56.7**	**-1.0**
NICH	**Los Niches**	**4.50**	**26**	eP	**Pn**	**12 19 19.5**	**+0.6**
CLCH	**Cerro Calan**	**6.20**	**25**	eP	**Pn**	**12 19 42.4**	**+0.2**
CLCH				i S	**Sn**	**12 20 50.3**	**-1.5**
FCH	**Farellones**	**6.34**	**26**	eP	**Pn**	**12 19 44.2**	**0.0**
FCH				i S	**Sn**	**12 20 54.0**	**-1.4**

*ISCJB **06** 12:21:14.8±2.0, 206S±03×1786W±02, h522km±24km, mb3.5/7, Error ellipse: s-maj=50.1km s-min=15.9km az=124.7*
*NEIC **06** 12:21:16.0±1.1, 2064S×17859W, h528km±12km, mb3.6/2, Error ellipse: s-maj=28.7km s-min=9.6km az=152.0*
*IDC **06** 12:21:15.8±2.5, 2070S×17857W, h523km±28km, mb3.2/5, mb1 3.5/6, mb1mx3.2/12, mbtmp4.2/6, Error ellipse: s-maj=51.1km s-min=17.2km az=151.0*
ISC 06 12:21:16.3±1.9**, 206S**±03×**1786W**±02**, h528**km±22km**, n14,** σ**0§39**/11**, mb3.5**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.31**	**45**	P	**P**	**12 23 26.7**	**0.0**
	6.9nm,0.3s,baz=44,slow=3.3,SNR=10						
AFI	**Afiamalu**	**9.31**	**45**	eP	**P**	**12 23 26.8**	**0.0**
STKA	**Stephens Creek**	**37.24**	**244**	P	**P**	**12 27 42.6**	**-0.3**
	0.7nm,0.4s,mb3.6,baz=107,slow=9.3,SNR=5.0						
AS31	**Alice Springs**	**43.95**	**257**	eP	**P**	**12 28 36.7**	**+0.4**
ASAR	**Alice Springs**	**43.95**	**257**	P	**P**	**12 28 36.5**	**+0.1**
	0.6nm,0.4s,mb3.5,baz=90,slow=8.3,SNR=44						
ASAR				PcP	PcP	12 30 10.4	-0.2
	0.6nm,0.6s,baz=100,slow=3.9,SNR=12						
WRAB	**Tennant Creek**	**44.02**	**262**	P	**P**	**12 28 36.8**	**-0.1**
NVAR	**Mina Array Bea**	**81.48**	**44**	P	**P**	**12 32 38.8**	**+0.4**
	0.4nm,0.6s,mb3.0,baz=212,slow=6.0,SNR=4.5						
TPNV	**Topopah Spring**	**82.02**	**46**	P	**P**	**12 32 40.6**	**-0.4**
	1.0nm,0.8s,mb3.3						
COLA	**College**	**88.43**	**13**	eP	**P**	**12 33 11.5**	**-0.6**
	1.0nm,0.7s,mb3.6						
PDAR	**Pinedale Array**	**89.42**	**43**	P	**P**	**12 33 17.4**	**+0.7**
	0.6nm,0.7s,mb3.6,baz=255,slow=2.9,SNR=5.2						
PLCA	**Paso Flores**	**89.60**	**134**	P	**P**	**12 33 17.4**	**-0.1**
	4.0nm,1.0s,mb4.2,baz=210,slow=4.0,SNR=3.3						
ARCES	**ARCESS Array B**	**128.93**	**349**	PKP	PKPdf	12 39 22.2	-1.7
	2.1nm,0.8s,baz=355,slow=1.9,SNR=3.8						
BRTR	**Keskin Array B**	**146.50**	**312**	PKPbc	PKPbc	12 39 58.4	+0.1
	0.8nm,0.6s,baz=139,slow=3.7,SNR=5.7						
GERES	**GERESS Array B**	**150.15**	**344**	PKPbc	PKPbc	12 40 07.4	-0.1
	0.8nm,0.7s,baz=23,slow=5.3,SNR=4.8						

*ISK **06** 12:42:43.8, 3853N×2655E, h28km, MD2.9*
*CSEM **06** 12:42:44.6±0.1, 3864N×2666E, h24km, MD2.9, Error ellipse: s-maj=3.3km s-min=1.6km az=49.0*
*ATH **06** 12:42:44.0, 3858N×2627E, h15km, MD3.1/3*
*ISCJB **06** 12:42:45.1±1.1, 3862N±005×2657E±009, h28km±13km, Error ellipse: s-maj=14.2km s-min=4.9km az=117.7*
ISC 06 12:42:44.1±1.1**, 3860N**±005×**2652E**±008**, h10**km±7km**, n12,** σ**0§61**/20**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.46**	**118**	PG	**Pg**	**12 42 53.7**	**+0.6**
BLCB				SG	**Sg**	**12 43 00.0**	**+0.7**
IZM	**Izmir**	**0.62**	**109**	PG	**Pg**	**12 42 56.1**	**0.0**
KDAG	**Bornova**	**0.62**	**109**	i P	**Pg**	**12 42 55.7**	**-0.4**
KDAG				i S	**Sg**	**12 43 04.0**	**-0.2**
PRK	**Paraskevi**	**0.67**	**343**	ePN	**Pg**	**12 42 57.0**	**-0.1**
PRK				eSN	**Sg**	**12 43 06.2**	**+0.3**
AYVA	**Ayvalik**	**0.72**	**11**	i P	**Pg**	**12 42 58.0**	**0.0**
AYVA				i S	**Sg**	**12 43 08.0**	**+0.7**

SMG	**Samos**	**0.93**	**164**	*e*PN	**Pn**	**12 43 02.6**	**-0.6**
AKS	**Akhisar**	**1.05**	**74**	PG	**Pg**	**12 43 03.6**	**-0.6**
AKS				SG	**Sg**	**12 43 17.1**	**-0.8**
EZN	**Ezine**	**1.23**	**353**	PN	**Pn**	**12 43 06.4**	**-1.0**
BOZC	**Bozcaada**	**1.29**	**344**	*i* P	**Pn**	**12 43 07.4**	**-0.8**
BOZC				*i* S	**Sb**	**12 43 26.0**	**+0.9**
AYDN	**Tasoluk**	**1.43**	**131**	*i* P	**Pn**	**12 43 09.8**	**-0.2**
AYDN				*i* S	**Sn**	**12 43 30.1**	**+1.3**
AYDN	**Tasoluk**	**1.43**	**131**	*i* P	**Pn**	**12 43 09.8**	**-0.3**
AYDN				*i* S	**Sn**	**12 43 30.1**	**+1.2**
LIA	**Limnos Island**	**1.66**	**322**	*e*PN	**Pn**	**12 43 13.4**	**+0.1**

IDC ***06*** *13:40:48.6±5.0, 723S×12868E, h109km±50km, mb4.0/6, mb1 4.2/8, mb1mx4.0/13, mbtmp4.5/8, MS3.3/1, Ms1 3.3/1, ms1mx2.5/23, Error ellipse: s-maj=48.8km s-min=22.2km az=74.0*

ISCJB ***06*** *13:40:50.1±1.6, 729S±007×1286E±01, h138km±17km, mb4.1/10, Error ellipse: s-maj=21.9km s-min=7.9km az=131.8*

NEIC ***06*** *13:40:52.3±1.9, 724S×12848E, h140km±20km, mb4.4/9, Error ellipse: s-maj=21.7km s-min=11.4km az=60.0*

ISC 06 13:40:55.8±1.2**, 762S**±006×**1284E**±01**, h183**km±11km**, n26,** σ**1.s11**/32**, mb4.1**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.41**	**142**	*e*P	**Pn**	**13 42 28.6**	**+0.4**
	36nm,0.5s						
KAKA				*e*S	**Sn**	**13 43 36.9**	**-4.1**
FITZ	**Fitzroy Crossi**	**10.77**	**194**	*e*P	**Pn**	**13 43 24.6**	**-0.6**
	23nm,0.4s						
FITZ				*e*S	**Sn**	**13 45 18.8**	**-6.1**
FITZ	**Fitzroy Crossi**	**10.77**	**194**	P	**Pn**	**13 43 24.9**	**-0.4**
	2.7nm,0.3s,baz=27,slow=10,SNR=84						
FITZ				S	**Sn**	**13 45 22.5**	**-2.4**
	2.0nm,0.3s,baz=25,slow=22,SNR=7.9						
WRAB	**Tennant Creek**	**13.52**	**156**	*e*Pn	**Pn**	**13 43 59.8**	**-0.4**
	45nm,0.6s						
WRAB				*e*		13 44 06.3	
WB2	**Warramunga Arr**	**13.52**	**156**	*e*P	**Pn**	**13 43 59.3**	**-1.1**
WB2				*i*		13 44 06.9	
WB2				*e*S	**Sn**	**13 46 22.9**	**-8.0**
MBWA	**Marble Bar**	**15.87**	**211**	*e*P	**Pn**	**13 44 31.4**	**+2.1**
	12nm,1.1s						
MBWA				*e*S	**S**	**13 47 19.4**	**-6.1**
AS31	**Alice Springs**	**16.79**	**162**	*e*P	**Pn**	**13 44 43.4**	**+3.0**
AS31				*e*S	**S**	**13 47 44.9**	**-0.5**
ASAR	**Alice Springs**	**16.79**	**162**	P	**Pn**	**13 44 42.3**	**+1.9**
	3.2nm,0.3s,baz=337,slow=9.2,SNR=391						
ASAR				S	**S**	**13 47 45.5**	**0.0**
	0.6nm,0.3s,baz=346,slow=25,SNR=8.7						
ASPA	**Alice Springs**	**16.79**	**162**	*e*P	**Pn**	**13 44 43.4**	**+3.0**
ASPA				*e*S	**S**	**13 47 44.9**	**-0.5**
KKM	**Kota Kinabalu**	**18.25**	**318**	*e*P	**P**	**13 44 50.0**	**-5.4**
KSM	**Kuching**	**20.22**	**296**	*e*P	**P**	**13 45 16.6**	**0.0**
GUMO	**Guam**	**26.65**	**38**	LR	LR	13 55 04.7	
	comp=Z,70nm,19.3s,baz=73,slow=33						
STKA	**Stephens Creek**	**27.07**	**155**	*e*P	**P**	**13 46 24.4**	**+3.1**
	1.9nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**27.07**	**155**	P	**P**	**13 46 23.3**	**+2.0**
	2.3nm,0.6s,mb4.0,baz=304,slow=7.0,SNR=7.6						
CHTO	**Chiang Mai**	**39.19**	**312**	*e*P	**P**	**13 48 06.0**	**0.0**
	4.0nm,0.9s,mb4.0						
MJAR	**Matsushiro Arr**	**44.88**	**11**	P	**P**	**13 48 47.9**	**-4.0**
	1.0nm,0.6s,mb3.6,baz=194,slow=8.7,SNR=6.6						
MJAR	**Matsushiro Arr**	**44.88**	**11**	P	**P**	**13 48 47.9**	**-4.0**
ULN	**Ulaanbaatar**	**58.39**	**343**	*e*P	**P**	**13 50 31.9**	**-0.1**
	5.7nm,1.0s,mb4.4						
SONM	**Songino Array**	**58.55**	**343**	P	**P**	**13 50 33.0**	**-0.1**
	2.7nm,0.7s,mb4.2,baz=164,slow=7.4,SNR=21						
MKAR	**Makanchi Array**	**67.91**	**328**	P	**P**	**13 51 34.2**	**-0.4**
	2.9nm,0.5s,mb4.2,baz=121,slow=9.0,SNR=24						
ZAL	**Zalesovo**	**71.46**	**335**	P	**P**	**13 51 55.3**	**-1.0**
	2.4nm,0.4s,mb4.3,baz=3.4,slow=5.4,SNR=7.9						
KURK	**Kurchatov**	**72.25**	**329**	*e*P	**P**	**13 52 00.6**	**-0.4**
	11nm,1.2s,mb4.5						
ZRNK	**Zerenda**	**78.45**	**328**	*e*P	**P**	**13 52 35.9**	**-0.4**
	5.4nm,1.1s,mb4.1						
AKTK	**Aktyubinsk**	**83.62**	**323**	P	**P**	**13 53 04.0**	**+0.4**
AKTO	**Aktyubinsk**	**83.62**	**323**	P	**P**	**13 53 04.0**	**+0.4**
	1.8nm,0.7s,mb3.9,baz=127,slow=7.6,SNR=7.1						
TORD	**Torodi Ar. Bea**	**127.41**	**281**	PKP	PKPdf	13 59 41.1	+2.4
	0.3nm,0.8s,baz=29,slow=2.2,SNR=4.9						

ISCJB ***06*** *13:47:53.9±0.6, 5024N±006×1873E±004, h0km, Error ellipse: s-maj=8.2km s-min=3.2km az=33.6*

WAR ***06*** *13:47:55.5, 5027N×1887E, ML2.5, Mining Induced*

PRU ***06*** *13:47:56.4, 5026N×1878E, h0km*

ISC 06 13:47:55.0±0.7**, 5028N**±006×**1878E**±004**, h0**km**, n11,** σ**1.s22**/19**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.60**	**223**	*e*PG	**Pg**	**13 48 07.5**	**+1.0**
OKC				*e*SG	**Sg**	**13 48 17.6**	**+3.2**
	26nm,0.5s						
OJC	**Ojcow**	**0.66**	**95**	*e*Pg	**Pg**	**13 48 07.1**	**-0.5**
OJC				*e*Sg	**Sg**	**13 48 15.7**	**-0.5**
NIE	**Niedzica**	**1.32**	**130**	*e*Pgc	**Pg**	**13 48 19.4**	**-0.9**
NIE				*e*Sg	**Sg**	**13 48 37.5**	**+0.1**
DPC	**Dobruska-Polom**	**1.57**	**273**	*e*PG	**Pg**	**13 48 23.9**	**-1.3**
DPC				*e*SG	**Sg**	**13 48 45.7**	**+0.1**
	31nm,0.5s						
KSP	**Ksiaz**	**1.68**	**290**	*e*Pg	**Pg**	**13 48 27.6**	**+0.4**
KSP				*e*Sg	**Sg**	**13 48 50.3**	**+1.3**
VYHS	**Vyhne**	**1.79**	**179**	*e*PN	**Pn**	**13 48 26.4**	**-0.7**
VYHS				*e*SN	**Sn**	**13 48 49.2**	**-1.4**
CRVS	**Cervenica-Dubn**	**2.23**	**127**	*e*PN	**Pn**	**13 48 36.3**	**+3.2**
CRVS				*e*SN	**Sn**	**13 49 03.9**	**+2.5**
KOLS	**Kolonicke sedl**	**2.65**	**119**	*e*	**Pn**	**13 48 44.0**	**+5.1**
KOLS				*e*		13 49 09.4	
KOLS				*e*		14 23 34.1	
PRU	**Pruhonice**	**2.74**	**265**	*e*SG	**Sg**	**13 49 21.4**	**-1.7**
	8.2nm,0.6s						
KHC	**Kasperske Hory**	**3.57**	**253**	*e*PG	**Pg**	**13 49 03.0**	**-0.3**
KHC				*e*SG	**Sg**	**13 49 49.6**	**0.0**
	6.6nm,0.4s						
CLL	**Collm**	**3.80**	**288**	*i* SG	**Sg**	**13 50 01.6**	**+4.4**

MAN 06 14:05:07.5, 693N×12379E, h9km, mb3.9, ML4.9, MS1.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.53**	**58**	⇑*i*P	Pg	14 05 18.0	+0.2
CTBH				*i* S	Sg	14 05 25.4	+0.6
PAGZ	**Pagadian**	**1.00**	**336**	*e*P	Pg	14 05 26.5	-0.1
PAGZ				*e*S	Sg	14 05 41.9	+2.3
IPIL	**Ipil**	**1.48**	**305**	*e*P	Pn	14 05 33.8	-0.4
IPIL				*e*S	Sn	14 05 51.1	-2.6
BUKP	**Musuan**	**1.57**	**53**	*e*P	Pn	14 05 35.3	-0.2

ISCJB ***06*** *14:26:17.2±0.5, 3741N±002×7471E±002, h5km±3km, mb5.3/230, MS5.2/194, Error ellipse: s-maj=2.9km s-min=2.2km az=74.2*

IDC ***06*** *14:26:17.7±0.4, 3739N×7473E, h0km, mb5.0/29, mb1 5.1/34, mb1mx5.1/34, mbtmp5.0/34, ML4.6/5, MS4.9/30, Ms1 4.9/30, ms1mx4.9/35, Error ellipse: s-maj=13.2km s-min=10.1km az=7.0*

MOS ***06*** *14:26:17.8±1.1, 3750N×7473E, h10km, mb5.5/99, MS5.2/57, Error ellipse: s-maj=6.8km s-min=3.3km az=131.9*

NEIC ***06*** *14:26:19.3±0.1, 3737N×7473E, mb5.3/156, MS5.3/129, MW5.6, Error ellipse: s-maj=4.6km s-min=2.7km az=207.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17}Nm; M_{rr}0.40; $M_{\theta\theta}$-3.62; $M_{\phi\phi}$3.22; $M_{r\theta}$-0.38; $M_{\theta\phi}$0.09; $M_{\phi r}$-0.22; Best double couple: $M_0$3.40000×10^{17} NP1: ϕ_s46.00000°, δ89.00000°, λ-7.00000°. NP2: ϕ_s136.00000°, δ83.00000°, λ-179.00000°. Principal axes: T 3.2400, Plg5.0000°, Azm91.0000°; N 0.4200, Plg83.0000°, Azm221.0000°; P -3.6600, Plg5.0000°, Azm1.0000°;*

HRVD ***06*** *14:26:19.3±0.1, 3757N×7467E, h24km, MW5.6/98, Centroid moment Tensor Solution. LP body waves: s74,c121; Mantle waves: s98,c229; Half duration: 1.s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.11±.04; $M_{\theta\theta}$-2.35±.04; $M_{\phi\phi}$3.45±.04; $M_{r\theta}$-0.19±.06; $M_{\theta\phi}$-1.00±.03; $M_{\phi r}$-0.14±.06; Best double couple: $M_0$3.08300×10^{17} NP1: ϕ_s126.00000°, δ83.00000°, λ-175.00000°. NP2: ϕ_s35.00000°, δ85.00000°, λ-7.00000°. Principal axes: T 3.6190, Plg1.0000°, Azm81.0000°; N -1.0820, Plg82.0000°, Azm179.0000°; P -2.5470, Plg8.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

BJI ***06*** *14:26:20.3, 3742N×7481E, h10km, mB5.2, mb5.1, ML5.6, Ms5.6, Msz5.3*

CSEM ***06*** *14:26:21.0, 3753N×7475E, h30km, mb5.6*

NNC ***06*** *14:26:21.6±2.5, 3763N×7406E, h0km, mb5.6, mpv5.6, Error ellipse: s-maj=21.4km s-min=17.9km az=155.0*

CRAAG ***06*** *14:26:21.0, 3753N×7475E, Mb5.6*

BGS ***06*** *14:26:21.2±2.0, 3741N×7473E, h11km, mb5.3*

SZGRF ***06*** *14:26:21.1, 3849N×7605E, h33km, mb5.3, MS5.2, Southern Xinjiang, China*

ISC 06 14:26:19.9±0.6**, 3744N**±001×**7472E**±002**, h11**km±3km**, h12**km±.7km**:pP-P, n920,** σ**1.s23**/920**, mb5.3**/230**, MS5.2**/194**, 64C-50D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.30**	**25**	⇓*i*PG	**Pg**	**14 27 01.9**	**-2.0**
KSH				S	**Sn**	**14 27 30.3**	**+4.3**
KSH				Smax			
	comp=N,29µm,0.6s						
KSH				Smax			
	comp=E,35µm,0.8s						
SRNI	**Srinagar**	**3.33**	**178**	*e*x	x	14 27 20.0	
SRNI				*e*x	x	14 28 10.0	
CHCP	**Chirah Chowk**	**3.95**	**198**	⇓P	**Pn**	**14 27 24.4**	**+3.9**
CEP	**Cherat**	**4.27**	**213**	P	**Pn**	**14 27 27.4**	**+2.5**
KZA	**Kyzart**	**4.65**	**5**	P	**Pn**	**14 27 33.6**	**+3.5**
	SNR=557						
AML	**Almayashu**	**4.76**	**351**	P	**Pn**	**14 27 34.9**	**+3.4**
	SNR=165						
UCH	**Uchtor**	**4.79**	**358**	P	**Pn**	**14 27 35.3**	**+3.4**
	SNR=219						
ULHL	**Ulahol**	**4.94**	**13**	P	**Pn**	**14 27 38.3**	**+4.2**
	SNR=28						
DLH	**Dalhousie**	**4.99**	**168**	*e*P	**Pn**	**14 27 36.0**	**+1.3**
AAK	**Ala-Archa**	**5.19**	**358**	Pn	**Pn**	**14 27 40.3**	**+2.8**
	comp=E,6µm,1.1s						
AAK	**Ala-Archa**	**5.19**	**358**	P	**Pn**	**14 27 41.0**	**+3.5**
	SNR=113						
AAK	**Ala-Archa**	**5.19**	**358**	P	**Pn**	**14 27 40.1**	**+2.5**
	SNR=1148						
AAK	**Ala-Archa**	**5.19**	**358**	*e*PN	**Pn**	**14 27 40.2**	**+2.7**
AAK				*e*S	**Sg**	**14 29 07.4**	**+0.8**
AAK				pmax	pmax		
	comp=Z,2µm,0.8s						
AAK	**Ala-Archa**	**5.19**	**358**	*e*P	**Pn**	**14 27 40.2**	**+2.7**
	comp=Z,2µm,0.8s						
AAK				*e*S	**Sg**	**14 29 07.4**	**+0.7**
KBK	**Karagaybulak**	**5.22**	**2**	P	**Pn**	**14 27 41.8**	**+3.9**
	SNR=208						
THW	**Thamme Wali**	**5.24**	**209**	P	**Pn**	**14 27 40.2**	**+2.1**
EKS2	**Erkin-Say**	**5.27**	**352**	P	**Pn**	**14 27 41.7**	**+3.1**
	SNR=288						
FRU	**Bishkek**	**5.39**	**359**	⇓*i*PN	**Pn**	**14 27 43.5**	**+3.2**
FRU				*i*		14 29 23.0	
FRU				pmax	pmax		
	comp=Z,1µm,1.8s						
FRU				pmax	pmax		
	comp=Z,4µm,4.4s						
FRU				MLR	MLR		
	comp=Z,49µm,11.0s						
TKM2	**Tokmak 2**	**5.52**	**7**	P	**Pn**	**14 27 45.5**	**+3.5**
	SNR=867						
TKM2	**Tokmak 2**	**5.52**	**7**	⇓Pn	**Pn**	**14 27 46.0**	**+4.0**
	comp=Z,370nm,1.0s						
TKM2				⇑Sn	**Sn**	**14 28 50.6**	**+5.1**
	comp=Z,135nm,0.6s						
TKM2				⇓Lg		14 29 14.4	
	comp=Z,876nm,1.4s						
TKM2	**Tokmak 2**	**5.52**	**7**	*i* PN	**Pn**	**14 27 44.6**	**+2.6**
TKM2				pmax	pmax		
	comp=Z,2µm,1.0s						
CHMS	**Chumysh**	**5.56**	**0**	P	**Pn**	**14 27 46.1**	**+3.6**
	SNR=281						
PONG	**Pong**	**5.56**	**169**	*e*P	**Pn**	**14 27 45.0**	**+2.4**
SARP	**Sargodha**	**5.75**	**198**	P	**Pn**	**14 27 46.5**	**+1.3**
SARP				S	**Sn**	**14 28 51.0**	**-0.3**
USP	**Ospenovka**	**5.83**	**358**	P	**Pn**	**14 27 49.5**	**+3.3**
	SNR=18						
KNDC	**Almaty**	**6.02**	**16**	⇓Pn	**Pn**	**14 27 53.7**	**+4.8**
	comp=Z,2µm,1.4s						
KNDC				⇑Pg	**Pg**	**14 28 10.1**	**-5.1**
KNDC				⇑Lg		14 29 26.2	
	comp=Z,15µm,1.9s						
SBDP	**Sheikh Budin**	**6.05**	**213**	P	**Pn**	**14 27 50.7**	**+1.4**
AAA	**Alma-Ata**	**6.07**	**16**	*e*P*	**Pb**	**14 28 10.0**	**+4.3**
AAA				pmax	pmax		
	comp=Z,13nm,1.1s						
BHK	**Bhakra**	**6.17**	**166**	*e*x	x	14 27 58.4	
BHK				*e*x	x	14 28 22.0	
SDNR	**Sundarnagar**	**6.21**	**162**	*e*P	**Pn**	**14 27 53.8**	**+2.4**
KK31	**Karatay Array**	**6.51**	**332**	Pn	**Pn**	**14 27 57.1**	**+1.5**
	comp=Z,351nm,0.6s,baz=148,slow=13,SNR=5339						
KK31				⇑Sn	**Sn**	**14 29 10.2**	**+0.3**
	comp=Z,619nm,0.6s,baz=163,slow=27,SNR=9.2						
KK31				⇓Lg		14 29 42.5	
	baz=153,slow=25						
KK31	**Karatay Array**	**6.51**	**332**	*i* PN	**Pn**	**14 27 57.1**	**+1.5**
KK31				pmax	pmax		
	comp=Z,179nm,0.3s						
KLP	**Kalpa**	**6.57**	**153**	*e*P	**Pn**	**14 27 58.4**	**+2.0**
KLP				*e*S	**Sn**	**14 29 06.9**	**-4.4**
SMLA	**Simla**	**6.61**	**161**	*e*P	**Pn**	**14 27 59.1**	**+2.1**
SMLA				*e*S	**Sn**	**14 29 08.5**	**-3.8**
DRP	**Derazinda**	**6.79**	**215**	⇑P	**Pn**	**14 28 01.4**	**+1.9**
DDI	**Dehra Dun**	**7.62**	**158**	*e*P	**Pn**	**14 28 12.0**	**+1.2**
DDI				*e*S	**Sn**	**14 29 30.5**	**-6.6**
KKR	**Kurukshetra**	**7.66**	**166**	*e*P	**Pn**	**14 28 11.2**	**-0.1**
JOSI	**Joshimath**	**7.95**	**148**	*e*P	**Pn**	**14 28 02.5**	**-13**
JOSI				*e*S	**Sn**	**14 29 28.0**	**-17**
BHGR	**Bahadurgarh**	**8.92**	**167**	*e*P	**Pn**	**14 28 28.9**	**+0.2**
NDI	**New Delhi**	**8.97**	**166**	*e*P	**Pn**	**14 28 30.0**	**+0.6**
NDI				*e*x	x	14 30 09.2	
ASOR	**Ausora**	**9.03**	**163**	*e*P	**Pn**	**14 28 31.8**	**+1.7**
PTH	**Pithoragarh**	**9.10**	**148**	*e*P	**Pn**	**14 28 37.1**	**+5.9**
PTH				*e*S	**Sn**	**14 30 10.8**	**-2.8**
BISR	**Bishrakh**	**9.13**	**165**	*e*P	**Pn**	**14 28 31.4**	**-0.2**
AYAN	**Aya Nagar**	**9.15**	**167**	*e*P	**Pn**	**14 28 30.4**	**-1.5**
LGTI	**Lohaghat**	**9.20**	**148**	*e*P	**Pn**	**14 28 30.0**	**-2.6**
LGTI				*e*x	x	14 30 14.7	
SONA	**Sohna**	**9.37**	**167**	*e*P	**Pn**	**14 28 35.4**	**+0.5**
SONA				*e*S	**Sn**	**14 30 11.8**	**-8.5**
KHET	**Khetri**	**9.38**	**174**	*e*P	**Pn**	**14 28 34.9**	**-0.1**
KUDL	**Kundal**	**9.38**	**170**	*e*P	**Pn**	**14 28 35.8**	**+0.8**
KUDL				*e*S	**Sn**	**14 30 12.3**	**-8.3**
AGRA	**Agra**	**10.53**	**164**	*e*P	**Pn**	**14 28 50.4**	**-0.4**
MK02	**Makanchi Array**	**10.89**	**29**	⇓Pn	**Pn**	**14 28 58.0**	**+2.3**
	comp=Z,282nm,1.2s,baz=212,slow=14						
MK02				⇑Lg		14 31 57.9	
	comp=Z,215nm,0.9s,baz=206,slow=28						
MKAR	**Makanchi Array**	**10.90**	**29**	Pn	**Pn**	**14 28 58.2**	**+2.3**
	comp=Z,1.6nm,0.3s,baz=205,slow=11,SNR=148						
MKAR	**Makanchi Array**	**10.90**	**29**	Pn	**Pn**	**14 28 58.2**	**+2.3**
AJM	**Ajmer**	**10.92**	**180**	*i* P	**Pn**	**14 28 55.0**	**-1.1**
AJM				*i* x	x	14 30 58.0	
WMQ	**Urumqi**	**11.73**	**53**	P	**Pn**	**14 29 08.0**	**+0.8**
WMQ				XP		14 29 14.5	
WMQ				PP		14 29 18.0	
WMQ				S	**Sn**	**14 31 19.0**	**+0.8**
WMQ				SS		14 31 34.0	
WMQ				AMB	AMB		
	comp=Z,42nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,158nm,3.0s						
WMQ				LR	LR		
	comp=N,31µm,5.0s						
WMQ				LR	LR		
	comp=E,16µm,5.0s						
WMQ				LR	LR		
	comp=Z,11µm,4.0s						
KOLN	**Koldanda**	**12.20**	**140**	*e*P	**Pn**	**14 29 10.9**	**-2.6**
	comp=Z,570nm,0.6s						
KOLN				*e*S	**Sn**	**14 31 24.1**	**-5.4**
	comp=Z,662nm,0.7s						
GKN	**Gorkha**	**12.57**	**136**	*e*P	**Pn**	**14 29 16.4**	**-2.2**
	comp=Z,624nm,0.6s						
KKN	**Kakani**	**13.09**	**134**	*e*P	**Pn**	**14 29 22.9**	**-2.9**
	comp=Z,361nm,0.6s						
KKN				*e*S	**Sn**	**14 31 47.5**	**-3.9**
KKN	**Kakani**	**13.09**	**134**	*e*P	**Pn**	**14 29 22.9**	**-2.9**
KKN				*e*S	**Sn**	**14 31 47.5**	**-3.9**
KKN				pmax	pmax		
	comp=Z,361nm,0.6s						
DMN	**Daman**	**13.13**	**135**	*e*P	**Pn**	**14 29 23.8**	**-2.5**
	comp=Z,2µm,1.3s						
DMN				*e*S	**Sn**	**14 31 48.1**	**-4.3**
ABKT	**Ailbek**	**13.17**	**277**	Pn	**Pn**	**14 29 24.1**	**-2.7**
	comp=Z,1µm,0.7s,SNR=9.3						
VAN	**Vannovskaya**	**13.17**	**277**	P	**Pn**	**14 29 23.7**	**-3.2**
PKI	**Pulchoki**	**13.33**	**134**	*e*P	**Pn**	**14 29 26.3**	**-2.8**
GUN	**Gumba**	**13.35**	**132**	*e*P	**Pn**	**14 29 27.5**	**-1.8**
	comp=Z,363nm,0.7s						
ALBI	**Allahabad**	**13.51**	**151**	*e*x	x	14 30 15.0	
ALBI	**Allahabad**	**13.51**	**151**	*e*P	**Pn**	**14 29 27.5**	**-4.0**
KURK	**Kurchatov**	**13.56**	**11**	Pn	**Pn**	**14 29 31.3**	**-0.9**
	comp=Z,2µm,1.0s,SNR=48						
KURK	**Kurchatov**	**13.56**	**11**	⇓Pn	**Pn**	**14 29 31.5**	**-0.8**
	comp=Z,210nm,1.0s						
KURK				⇑Lg		14 33 24.0	
	comp=Z,2µm,2.7s						
KURK	**Kurchatov**	**13.56**	**11**	P	**Pn**	**14 29 31.6**	**-0.7**
	SNR=181						
KURK	**Kurchatov**	**13.56**	**11**	*e*P	**Pn**	**14 29 31.4**	**-0.8**
KURK				pmax	pmax		
	comp=Z,397nm,1.0s						
KURK	**Kurchatov**	**13.56**	**11**	*e*P	**Pn**	**14 29 31.4**	**-0.9**
	comp=Z,397nm,1.0s						
JIRN	**Jiri**	**13.72**	**132**	*e*P	**Pn**	**14 29 32.1**	**-2.3**
	comp=Z,606nm,0.5s						
BHPL	**Bhopal**	**14.34**	**170**	*e*x	x	14 29 40.1	
BHPL				AMb	AMB	14 29 42.9	
	comp=Z,155nm,1.1s						
BHPL				*e*x	x	14 32 19.8	
VOSK	**Vostochnaya**	**15.51**	**351**	⇓Pn	**Pn**	**14 29 56.1**	**-2.5**
	comp=Z,206nm,1.6s						
VOSK				⇑Lg		14 34 21.4	
	comp=Z,574nm,1.6s						
SLGI	**Shiliguri**	**15.77**	**129**	*e*P	**Pn**	**14 29 59.4**	**-2.5**
BVA0	**Borovoye Array**	**15.88**	**350**	⇓Pn	**Pn**	**14 30 01.1**	**-2.2**
	comp=Z,29nm,0.8s,baz=165,slow=13,SNR=1134						
BVA0				⇑Lg		14 34 33.8	
	comp=Z,69nm,1.6s,baz=163,slow=25,SNR=3.5						
BVAR	**Borovoye Array**	**15.88**	**350**	Pn	**Pn**	**14 30 01.1**	**-2.3**
	comp=Z,1.8nm,0.3s,baz=159,slow=13,SNR=54						
BVAR				LR	LR	14 36 17.1	
	comp=Z,8µm,20.0s,baz=139,slow=38						
BRVK	**Borovoye**	**15.93**	**350**	Pn	**Pn**	**14 30 01.9**	**-2.0**
	comp=Z,698nm,0.9s,SNR=35						
BRVK	**Borovoye**	**15.93**	**350**	P	**Pn**	**14 30 01.9**	**-2.0**
	SNR=174						
BRVK				P		14 30 02.1	
	SNR=65						
BRVK	**Borovoye**	**15.93**	**350**	*e*P	**Pn**	**14 30 01.5**	**-2.4**
BRVK				pmax	pmax		
	comp=Z,214nm,0.8s						
BRVK	**Borovoye**	**15.93**	**350**	*e*P	**Pn**	**14 30 01.4**	**-2.5**
	comp=Z,214nm,0.8s						
AB31	**Akbulak array**	**15.94**	**323**	⇑Pn	**Pn**	**14 30 01.3**	**-2.8**
	comp=Z,104nm,0.6s,baz=148,slow=9.0,SNR=4.0						
AB31				⇑Sn	**Sn**	**14 32 47.4**	**-13**
	comp=Z,117nm,0.7s,baz=142,slow=19,SNR=12						
ZRNK	**Zerenda**	**16.02**	**347**	⇓Pn	**Pn**	**14 30 02.8**	**-2.4**
	comp=Z,124nm,0.8s						
ZRNK				⇑Sn	**Sn**	**14 33 07.1**	**+4.3**
	comp=Z,164nm,1.7s						
ZRNK				⇑Lg		14 34 45.8	
	comp=Z,589nm,1.7s						
ZRNK	**Zerenda**	**16.02**	**347**	*e*P	**Pn**	**14 30 02.8**	**-2.4**
ZRNK				pmax	pmax		
	comp=Z,162nm,0.7s						
ZRNK	**Zerenda**	**16.02**	**347**	*e*P	**Pn**	**14 30 02.8**	**-2.4**
	comp=Z,162nm,0.7s						
CHKZ	**Chkalovo**	**16.49**	**351**	⇓Pn	**Pn**	**14 30 08.8**	**-2.3**
	comp=Z,172nm,1.6s						
CHKZ				⇓Sn	**Sn**	**14 33 14.6**	**+0.4**
	comp=Z,135nm,1.6s						
CHKZ				⇑Lg		14 35 02.0	
	comp=Z,678nm,2.2s						
CHKZ	**Chkalovo**	**16.49**	**351**	*e*P	**Pn**	**14 30 08.8**	**-2.4**
CHKZ	**Chkalovo**	**16.49**	**351**	*e*P	**Pn**	**14 30 08.7**	**-2.5**
	comp=Z,22nm,0.6s						
BOK	**Bokaro**	**16.63**	**142**	*e*P	**Pn**	**14 30 12.7**	**-0.2**
BOK				AMb	AMB	14 30 20.5	
	comp=Z,515nm,2.0s						
BOK				*e*x	x	14 33 05.3	
NGP	**Nagpur**	**16.66**	**166**	*e*P	**Pn**	**14 30 08.2**	**-5.1**
NGP				*e*x	x	14 30 09.8	
	comp=Z,225nm,1.2s						
NGP				*e*S	**Sn**	**14 33 10.5**	**-7.7**
AKL	**Akola**	**16.79**	**173**	*e*x	x	14 30 11.8	
AKTK	**Aktyubinsk**	**17.66**	**323**	P	**Pn**	**14 30 23.9**	**-1.9**
AKTK				S	**Sn**	**14 33 35.5**	**-6.9**
AKTK				LR	LR	14 36 58.4	
AKTO	**Aktyubinsk**	**17.66**	**323**	⇓Pn	**Pn**	**14 30 23.4**	**-2.4**
	comp=Z,11nm,1.1s						
AKTO				⇓Sn	**Sn**	**14 33 33.2**	**-9.2**
	comp=Z,30nm,1.6s						
AKTO	**Aktyubinsk**	**17.66**	**323**	P	**Pn**	**14 30 23.9**	**-1.9**
	comp=Z,2.9nm,0.3s,baz=130,slow=13,SNR=67						
AKTO				S	**Sn**	**14 33 35.5**	**-6.9**
	comp=Z,2.5nm,0.3s,baz=16,slow=19,SNR=5.0						
AKTO				LR	LR	14 36 58.4	
	comp=Z,4µm,21.0s,baz=138,slow=36						
AKTO	**Aktyubinsk**	**17.66**	**323**	P	**Pn**	**14 30 23.9**	**-1.9**
AKTO				S	**Sn**	**14 33 35.5**	**-6.9**
ZAL	**Zalesovo**	**17.91**	**20**	P	**Pn**	**14 30 28.1**	**-0.8**
	comp=Z,5.7nm,0.3s,baz=267,slow=11,SNR=138						
ZAL				LR	LR	14 38 29.9	
	comp=Z,6µm,19.3s,baz=258,slow=41						
ZAL	**Zalesovo**	**17.91**	**20**	*i* P	**Pn**	**14 30 28.6**	**-0.3**
ZAL				pmax	pmax		
	comp=Z,105nm,1.1s						
NVS	**Novosibirsk**	**18.36**	**16**	⇑*i*P	**Pn**	**14 30 33.5**	**-0.9**
NVS				*e*S	**Sn**	**14 34 01.7**	**+2.3**
NVS				pmax	pmax		
	comp=Z,840nm,1.1s						
NVS				pmax	pmax		
	comp=N,440nm,1.2s						
NVS				pmax	pmax		
	comp=E,174nm,0.9s						
NVS				smax			
	comp=N,687nm,2.0s						
NVS				smax			
	comp=E,371nm,2.5s						
POO	**Poona**	**18.85**	**183**	⇑*i*x	**Pn**	**14 30 39.0**	**-1.4**
	comp=E,110nm,1.0s						
POO				*i* x	x	14 30 54.5	
POO				*i* x	x	14 34 05.0	
POO				*i* SS		14 34 29.5	
POO				*i* PCP	PcP	14 35 07.0	+0.6
CAL	**Calcutta**	**18.92**	**138**	*e*P	**Pn**	**14 30 42.1**	**+0.8**
CAL				*e*x	x	14 34 10.0	
LATR	**Latur**	**19.02**	**175**	*e*P	**Pn**	**14 30 42.2**	**-0.2**
BANOM	**Banah**	**19.39**	**239**	P	**Pn**	**14 30 45.7**	**-1.3**
	SNR=11						
GTA	**Gaotai**	**19.74**	**77**	⇑P	**Pn**	**14 30 52.1**	**+1.0**
GTA				AP	pP	14 30 55.5	+2.8
GTA				XP	sP	14 30 58.2	+4.1
GTA				PP		14 31 14.9	
GTA				AMB	AMB		
	comp=Z,78nm,0.8s						
GTA				AMB	AMB		
	comp=Z,3µm,4.9s						
GTA				LR	LR		
	comp=N,10µm,13.7s						
GTA				LR	LR		
	comp=E,8µm,11.4s						
GTA				LR	LR		
	comp=Z,6µm,12.2s						
WSAR	**Wadi Sarin**	**19.79**	**229**	P	**Pn**	**14 30 51.0**	**-0.6**
	comp=Z,4.0nm,0.3s,baz=40,slow=11,SNR=38						
WSAR				LR	LR	14 40 07.5	
	comp=Z,7µm,19.8s,baz=51,slow=42						
BIDO	**Bidbid**	**19.88**	**230**	⇓P	**Pn**	**14 30 52.6**	**-0.2**
	SNR=7.3						
KAD	**Karad**	**20.06**	**182**	*e*P	**P**	**14 30 53.6**	**+0.5**
KAD				AMb	AMB	14 30 57.0	
	comp=Z,160nm,1.4s						
KAD				*e*S	**S**	**14 34 39.3**	**+1.0**
WBK	**Wadi Bani Khal**	**20.07**	**227**	⇑P	**P**	**14 30 52.1**	**-1.1**
	SNR=25						

HYB **Hyderabad** 20.23 169 *i* P P 14 30 55.5 +0.6
comp=Z,190nm,1.0s
HYB *e* 14 30 58.0
HYB *e* 14 34 34.0
HYB *e*S **S** **14 34 42.0 +0.3**
HYB LR LR 14 38 56.0
comp=Z,15nm,14.0s
HYB Hyderabad 20.23 169 *e*P **P** **14 30 55.5 +0.6**
HYB *e*S **S** **14 34 34.0 -7.7**
HYB pmax pmax
comp=Z,190nm,1.0s
HYB Hyderabad 20.23 169 *e*P **P** **14 30 55.5 +0.6**
comp=Z,190nm,1.0s
HYB *e*S **S** **14 34 34.0 -7.7**
SMDO Samad 20.27 230 ⇑P **P** **14 30 57.9 +2.5**
SNR=19
HOQ Hoqain 20.34 232 P P **14 30 58.6 +2.5**
SNR=13
ASHO Ashiyiah 20.38 237 P P **14 30 57.8 +1.2**
SNR=69
JMDO Jabal Madar 20.76 228 P P **14 31 02.3 +1.6**
SNR=76
ARQ Araqi 21.02 233 P P **14 31 05.5 +1.9**
SNR=18
VIS Vishakhapatnam 21.05 157 *e*P **P** **14 31 05.3 +1.5**
VIS AMb AMB 14 31 09.8
comp=Z,333nm,1.2s,mb5.5
VIS *ex* x 14 34 54.3
MAK Makhachkala 21.46 293 *c i*P **P** **14 31 11.6 +3.3**
MAK *i* 14 31 30.5
MAK *i* S **S** **14 35 03.2 -3.0**
MAK *i* SSS 14 35 39.6
MAK pmax pmax
comp=Z,454nm,1.1s,mb5.7
MAK MLR MLR
comp=Z,14μm,13.0s,MS5.6
ARU Arti 21.87 335 P P **14 31 12.3 -0.4**
comp=Z,1μm,0.8s,SNR=33
ARU Arti 21.87 335 *e*P **P** **14 31 11.7 -1.0**
ARU *e*PPP 14 31 39.3
ARU *e*S **S** **14 35 15.2 +1.0**
ARU *e*SS 14 35 38.9
ARU *e*SSS 14 35 54.0
ARU MLR MLR
comp=Z,8μm,17.0s,MS5.2
ARU MLR MLR
comp=N,4μm,15.0s,MS5.1
ARU MLR MLR
comp=E,4μm,15.0s,MS5.1
KRAR Krasnoyarsk 22.24 28 *e*P **P** **14 31 15.9 -0.7**
KRAR MLR MLR
comp=Z,6μm,16.0s,MS5.1
DGRG David-gareji 22.96 289 P P **14 31 25.1 +0.8**
DGRG S **S** **14 35 31.6 -2.9**
DGRG David-gareji 22.96 289 P P **14 31 30.7 +6.4**
DGRG S **S** **14 35 48.8 +14**
LZH Lanzhou 23.33 84 ⇑P **P** **14 31 29.5 +1.3**
LZH AP 14 31 38.7
LZH XP sP 14 31 42.8 +10
LZH PP 14 32 01.5
LZH S **S** **14 35 35.2 -5.3**
LZH XS sS 14 35 51.5 +5.6
LZH SS 14 36 23.4
LZH AMB AMB
comp=Z,239nm,1.2s,mb5.5
LZH AMB AMB
comp=Z,1μm,7.1s
LZH LR LR
comp=E,6μm,10.2s
LZH LR LR
comp=Z,9μm,13.7s,MS5.4
MOY Mondy 23.35 44 *e*P **P** **14 31 30.1 +1.8**
MOY pmax pmax
comp=Z,201nm,3.2s
MTA Mtatsminda 23.40 290 P P **14 31 29.0 +0.1**
MTA S **S** **14 35 41.5 -0.2**
GNI Garni 23.48 286 *e*P **P** **14 31 31.4 +1.8**
GNI Garni 23.48 286 P **P** **14 31 31.3 +1.6**
comp=Z,64nm,0.6s,mb5.2,baz=344,slow=1.6,SNR=11
GNI Garni 23.48 286 P **P** **14 31 32.1 +2.4**
SNR=106
GNI Garni 23.48 286 *c i*P **P** **14 31 29.4 -0.3**
GNI MLR MLR
comp=Z,2μm,13.0s
GNI Garni 23.48 286 *e*P **P** **14 31 30.9 +1.3**
comp=Z,383nm,1.0s,mb5.8
GNI LR LR
comp=Z,2μm,19.0s,MS4.7
UMR Umm Al-Rimmam 23.80 259 *e*P **P** **14 31 31.0 -1.7**
UMR AMb AMB 14 31 38.6
comp=Z,185nm,1.1s,mb5.4
MIB Mutribah 23.98 260 *e*P **P** **14 31 33.1 -1.3**
MIB AMb AMB 14 31 39.1
comp=Z,200nm,0.9s,mb5.5
KBD Kabd 23.99 258 *e*P **P** **14 31 32.7 -1.7**
KBD AMb AMB 14 31 40.4
comp=Z,742nm,1.1s,mb6.0
ZEI Tsey 24.09 292 *e*P **P** **14 31 39.2 +3.8**
ZEI *e**PP 14 31 42.1
ZEI *e* 14 32 05.9
ZAK Zakamensk 24.13 48 ⇑*i*P **P** **14 31 36.8 +1.0**
ZAK pmax pmax
comp=Z,75nm,1.5s,mb4.9
CLDR Caldiran 24.19 284 *e*P **P** **14 31 40.8 +4.5**
RDF Al-Radifah 24.21 257 *e*P **P** **14 31 35.5 -1.0**
RDF AMb AMB 14 31 42.6
comp=Z,264nm,1.2s,mb5.5
NAY Al-Naaiem 24.30 258 *e*P **P** **14 31 36.6 -0.7**
NAY AMb AMB 14 31 44.9
comp=Z,291nm,1.5s,mb5.5
MNGI Mangalore 24.39 180 *i* P **P** **14 31 38.1 -0.1**
MNGI *e*S **S** **14 36 06.9 +9.2**
MNGI Mangalore 24.39 180 *e*P **P** **14 31 39.0 +0.9**
MNGI *ex* x 14 36 06.9
ONI Oni 24.42 292 P **P** **14 31 40.4 +2.0**
ONI S **S** **14 36 00.8 +2.7**
DIGO Kars 24.50 287 *i* P **P** **14 31 41.2 +2.0**
HAKT HAKKARI 24.56 280 *i* P **P** **14 31 44.0 +4.4**
VANB Van 24.66 282 *e*P **P** **14 31 45.5 +5.0**
CUKT Cukurca 24.69 279 *e*P **P** **14 31 44.4 +3.5**
MDRS Chennai 24.76 167 *e*P **P** **14 31 41.6 +0.1**
MDRS AMb AMB 14 31 48.3
comp=Z,111nm,1.6s,mb5.1
CD2 Chengdu 24.83 97 P P **14 31 43.7 +1.6**
CD2 AP 14 31 46.5
CD2 XP sP 14 31 48.2 +1.5
CD2 PP 14 32 19.5
CD2 PCP PcP 14 35 21.1 +2.9
CD2 S **S** **14 36 01.6 -3.1**
CD2 XS sS 14 36 09.4 -0.7
CD2 SS 14 36 59.4
CD2 AMB AMB
comp=Z,50nm,1.0s,mb5.0
CD2 AMB AMB
comp=Z,410nm,4.5s
CD2 LR LR
comp=N,5μm,14.4s
CD2 LR LR
comp=Z,4μm,13.8s,MS5.1
TLY Talaya 24.84 46 P P **14 31 44.3 +2.0**
comp=Z,121nm,1.2s,mb5.3,SNR=11
TLY Talaya 24.84 46 P P **14 31 44.5 +2.3**
SNR=20
TLY Talaya 24.84 46 *c i*P P **14 31 47.7 +5.4**
TLY *e* 14 32 14.3
TLY *e*S **S** **14 36 07.6 +2.6**
TLY *e*SS 14 36 50.8
TLY pmax pmax
comp=Z,45nm,1.9s,mb4.7
TLY MLR MLR
comp=Z,5μm,14.0s,MS5.1
TLY Talaya 24.84 46 *e*P **P** **14 31 43.4 +1.1**
comp=Z,29nm,1.0s,mb4.8
TLY LR LR
comp=Z,7μm,20.0s,MS5.2
GOF Gofitskoye 24.90 298 ⇓*i*P **P** **14 31 44.0 +1.3**
GOF pmax pmax
comp=Z,390nm,0.9s,mb5.9
SOKR Solikamsk 24.97 338 ⇓*i*P **P** **14 31 43.3 -0.1**
SOKR S **S** **14 36 12.2 +5.2**
SOKR pmax pmax
comp=Z,150nm,1.0s,mb5.5
SOKR MLR MLR
comp=Z,5μm,15.0s,MS5.2

BHD Baghdad 25.04 270 *ex* x 14 31 39.0
BHD *ex* x 14 32 14.5
BHD *ex* x 14 32 31.0
BHD *ex* x 14 36 00.0
BHD *ex* x 14 37 49.0
BHD *ex* x 14 40 07.0
KIV Kislovodsk 25.04 295 P **P** **14 31 44.0 -0.1**
comp=Z,588nm,0.9s,mb6.1,SNR=13
KIV Kislovodsk 25.04 295 P **P** **14 31 44.6 +0.6**
SNR=50
KIV Kislovodsk 25.04 295 *c i*P **P** **14 31 44.1 0.0**
KIV *e* 14 32 21.6
KIV *e*S **S** **14 36 09.7 +1.6**
KIV pmax pmax
comp=Z,26nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,5μm,19.0s,MS5.0
KIV Kislovodsk 25.04 295 *e*P **P** **14 31 44.3 +0.2**
comp=Z,197nm,0.8s,mb5.7
KIV LR LR
comp=Z,5μm,20.0s,MS5.1
MSL Mosul 25.28 277 *ex* x 14 31 47.0
MSL *ex* x 14 31 52.0
MSL *ex* x 14 32 29.0
MSL *ex* x 14 35 03.0
MSL *ex* x 14 36 10.0
MSL *ex* x 14 37 12.0
SONM Songino Array 25.35 56 P **P** **14 31 47.7 +0.9**
comp=Z,25nm,0.6s,mb4.9,baz=254,slow=9.7,SNR=86
SONM LR LR 14 42 33.8
comp=Z,7μm,19.4s,MS5.2,baz=358,slow=38
IRK Irkutsk 25.43 45 *e*P **P** **14 31 49.0 +1.4**
IRK pmax pmax
comp=Z,123nm,1.2s,mb5.3
BCA Borcka 25.78 289 *e*P **P** **14 31 52.6 +1.8**
ULN Ulaanbaatar 25.79 56 P **P** **14 31 52.5 +1.6**
SNR=47
ULN Ulaanbaatar 25.79 56 *c i*P **P** **14 31 51.6 +0.8**
ULN Ulaanbaatar 25.79 56 PFAKE 14 32 00.0 +9.2
ULN LR LR
comp=Z,7μm,19.0s,MS5.2
WHFO Wadi Hawf 26.77 229 ⇓P **P** **14 31 59.8 +0.2**
SNR=12
KMI Kunming 26.80 109 P **P** **14 32 01.6 +1.6**
KMI AP pP 14 32 05.1 +1.8
KMI XP sP 14 32 06.5 +1.9
KMI PP 14 32 46.1
KMI S **S** **14 36 34.4 -1.6**
KMI SS 14 37 43.9
KMI AMB AMB
comp=Z,38nm,1.0s,mb4.9
KMI AMB AMB
comp=Z,108nm,3.1s
KMI LR LR
comp=N,5μm,20.2s
KMI LR LR
comp=E,5μm,12.9s
KMI LR LR
comp=Z,4μm,24.7s,MS4.9
MARD Mardin 26.89 280 *i* P **P** **14 32 04.7 +3.8**
VRHR Novokhopersk 27.09 311 *e*P **P** **14 32 02.7 +0.1**
VRHR *e*S **S** **14 36 44.5 +3.9**
VRHR pmax pmax
comp=Z,60nm,0.7s,mb5.2
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR smax
comp=N,340nm,1.7s
VRHR smax
comp=Z,200nm,3.1s
VRHR smax
comp=E,80nm,1.3s
VRHR MLR MLR
comp=Z,3μm,10.0s,MS5.2
VRHR MLR MLR
comp=N,2μm,18.0s
VRHR MLR MLR
comp=E,4μm,12.0s
EZC Erzincan 27.28 286 *e*P **P** **14 32 10.4 +6.1**
ABTO Aybut 27.49 229 P **P** **14 32 07.7 +1.6**
SNR=10
BTO Baotou 27.49 72 *e*P **P** **14 32 07.6 +1.4**
BTO S **S** **14 36 41.0 -5.9**
BTO LR LR
comp=N,3μm,15.6s,MS5.1
BTO LR LR
comp=E,3μm,17.9s,MS5.1
PECR Pechory 27.84 323 *e*P **P** **14 32 08.4 -1.0**
PECR *e*S **S** **14 36 53.2 +0.8**
PECR pmax pmax
comp=Z,110nm,1.2s,mb5.4
PECR smax
comp=E,2μm,5.0s
PECR MLR MLR
comp=Z,8μm,14.0s,MS5.4
PECR MLR MLR
comp=E,3μm,12.0s
XAN Xi'an 27.88 87 P **P** **14 32 11.0 +1.4**
XAN AP pP 14 32 22.2 +9.3
XAN S **S** **14 36 53.0 +0.1**
XAN AMB AMB
comp=Z,12nm,1.1s,mb4.4
XAN LR LR
comp=N,5μm,13.5s,MS5.4
XAN LR LR
comp=E,4μm,13.2s,MS5.4
XAN LR LR
comp=Z,6μm,14.2s,MS5.3
CHG Chiang Mai 28.16 125 ⇓P **P** **14 32 12.5 +0.3**
comp=Z,33nm,1.4s,mb4.8
CHTO Chiang Mai 28.16 125 P **P** **14 32 12.9 +0.8**
SNR=28
CHTO Chiang Mai 28.16 125 *e*P **P** **14 32 12.4 +0.2**
CHTO pmax pmax
comp=Z,66nm,1.0s,mb5.2
CHTO MLR MLR
comp=Z,6μm,20.0s,MS5.2
CHTO Chiang Mai 28.16 125 *e*P **P** **14 32 12.4 +0.2**
comp=Z,66nm,1.0s,mb5.2
CHTO LR LR
comp=Z,6μm,20.0s,MS5.2
URFA Urfa 28.40 281 *e*P **P** **14 32 19.8 +5.5**
CM31 Chiang Mai Arr 28.41 125 PFAKE 14 32 30.0 +16
CM31 LR LR
comp=Z,4μm,20.0s,MS5.1
MALT Malatya 28.55 283 ⇓*i*P **P** **14 32 17.9 +2.2**
MALT Malatya 28.55 283 *e*P **P** **14 32 17.4 +1.7**
MALT pmax pmax
comp=Z,41nm,0.9s,mb5.2
MALT Malatya 28.55 283 *e*P **P** **14 32 17.4 +1.7**
comp=Z,41nm,0.9s,mb5.2
VRSR Storozhevoye 28.60 310 *e*P **P** **14 32 15.6 -0.5**
VRSR *e*S **S** **14 37 07.6 +3.3**
VRSR pmax pmax
comp=N,6.0nm,0.9s
VRSR pmax pmax
comp=E,20nm,0.9s
VRSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VRSR smax
comp=N,470nm,3.5s
VRSR smax
comp=Z,110nm,4.9s
VRSR smax
comp=E,110nm,3.1s
VRSR MLR MLR
comp=E,4μm,16.0s,MS5.2
VRSR MLR MLR
comp=Z,4μm,16.0s,MS5.1
VRSR MLR MLR
comp=N,770nm,14.0s,MS5.2
HHC Hu-ho-hao-te 28.64 72 *e*P **P** **14 32 22.2 +5.7**
HHC AP pP 14 32 26.5 +6.8
HHC XP sP 14 32 29.3 +8.2
HHC PP PP 14 33 14.9 -6.2
HHC PCP PcP 14 35 34.4 +7.2
HHC S **S** **14 37 08.3 +3.3**
HHC XS sS 14 37 15.3 +4.9
HHC SS SS 14 38 32.8 -33
HHC SCP ScP 14 39 13.6 +5.2
HHC PCS PcS 14 39 15.5 +5.8
HHC SCS ScS 14 43 05.4 +3.7
HHC AMB AMB
comp=Z,19nm,0.9s,mb4.8
HHC LR LR
comp=N,6μm,15.3s,MS5.4
HHC LR LR
comp=E,3μm,15.1s,MS5.4
HHC LR LR
comp=Z,7μm,16.9s,MS5.3
VOR Voronezh 28.73 311 *e*P **P** **14 32 16.3 -0.9**
VOR pmax pmax
comp=Z,170nm,1.6s,mb5.5
ANN Anapa 28.85 297 *e*P **P** **14 32 18.0 -0.3**
ANN *i* *PP pP 14 32 21.1 -0.5
ANN *e* 14 33 10.0
ANN *e*S **S** **14 37 10.5 +2.3**
ANN *e*SS SS 14 38 35.1 -35
ANN pmax pmax
comp=Z,20nm,1.0s,mb4.8
ANN MLR MLR
comp=Z,4μm,16.0s,MS5.1
GYA Guiyang 29.10 103 ⇓*i*P **P** **14 32 21.7 +1.2**
GYA PP PP 14 33 15.5 -11
GYA S **S** **14 37 13.3 +1.1**
GYA AMB AMB
comp=Z,40nm,0.9s,mb5.2
GYA AMB AMB
comp=Z,120nm,4.5s
GYA LR LR
comp=N,6μm,12.6s,MS5.5
GYA LR LR
comp=E,4μm,13.4s,MS5.5
GYA LR LR
comp=Z,4μm,11.7s,MS5.2
NANT Nan 29.34 122 ⇓P **P** **14 32 21.0 -1.6**
comp=Z,444nm,1.0s,mb6.2
SVSK Karacayir 29.41 287 *e*P **P** **14 32 31.7 +8.3**
ENH Enshi 29.62 94 PFAKE 14 32 40.0 +15
ENH LR LR
comp=Z,15nm,22.0s
PALK Pallekele 30.51 168 PFAKE 14 32 40.0 +6.9
PALK LR LR
comp=Z,5μm,21.0s,MS5.2
KOZT Kozan 30.73 282 *e*P **P** **14 32 41.1 +6.1**
MOS Moscow 30.88 318 *e*P **P** **14 32 34.6 -1.7**
MOS *e*S **S** **14 37 36.8 -3.3**
MOS *e*SS SS 14 39 20.8 -31
MOS pmax pmax
comp=Z,174nm,1.0s,mb5.8
MOS smax
comp=N,1μm,3.2s
MOS smax
comp=E,300nm,2.2s
MOS MLR MLR
comp=Z,5μm,12.0s,MS5.4
CORM Corum 31.18 288 *e*P **P** **14 32 38.8 -0.2**
SIM Simferopol' 31.21 297 *d i*P **P** **14 32 40.2 +1.0**
SIM *e* 14 33 40.0
SIM *e*S **S** **14 37 42.0 -3.2**
SIM pmax pmax
comp=Z,92nm,1.0s,mb5.6
SIM MLR MLR
comp=Z,4μm,17.9s,MS5.1
NST Nakhon Sawan 31.23 127 P **P** **14 32 40.5 +1.1**
comp=Z,58nm,0.9s,mb5.4
OBN Obninsk 31.24 317 *de*P **P** **14 32 38.4 -1.0**
OBN *i* S **S** **14 37 49.7 +4.0**
OBN pmax pmax
comp=Z,106nm,0.8s,mb5.7
OBN MLR MLR
comp=Z,3μm,17.0s,MS5.0
OBN Obninsk 31.24 317 *e*P **P** **14 32 38.4 -1.0**
comp=Z,95nm,0.7s,mb5.7
OBN LR LR
comp=Z,4μm,19.0s,MS5.1
ASF Jabal al Asfar 31.36 272 P **P** **14 32 42.7 +2.2**
comp=Z,4.7nm,0.5s,mb4.6,baz=358,slow=3.9,SNR=4.7
ASF LR LR 14 47 50.7
comp=Z,3μm,19.7s,MS5.0,baz=294,slow=41
KARA Karaisali 31.38 282 *e*P **P** **14 32 45.9 +5.2**
BZK Bozkurt 31.44 291 *e*P **P** **14 32 41.1 -0.1**
CDAG Cicekdag 31.46 287 *i* P **P** **14 32 37.7 -3.7**
BHL Bhannes 31.78 276 *e*P **P** **14 32 51.9 +7.6**
MERS Mersin 31.88 281 *e*P **P** **14 32 50.6 +5.5**
BALT Daday 31.95 290 *i* P **P** **14 32 45.7 0.0**
BR131 Keskin Array S 32.00 287 *e*P **P** **14 32 46.1 0.0**
comp=Z,58nm,0.9s,mb5.4
BR131 LR LR
comp=Z,1μm,19.0s,MS4.6
BRTR Keskin Array B 32.00 287 P **P** **14 32 46.5 +0.3**
comp=Z,7.5nm,0.5s,mb4.8,baz=96,slow=6.7,SNR=71
KAMT Kaman 32.00 286 *e*P **P** **14 32 45.9 -0.3**
BJT Baijiatuau 32.23 72 PFAKE 14 33 00.0 +12
BJT LR LR
comp=Z,11μm,19.0s,MS5.6
MMAI Mount Meron Ar 32.26 274 P **P** **14 32 48.9 +0.4**
comp=Z,7.9nm,0.8s,mb4.5,baz=62,slow=10,SNR=4.3
KKTK Khon Kaen 32.50 123 ⇑P **P** **14 32 51.1 +0.6**
comp=Z,1μm,0.8s
ANTO Ankara 32.62 287 *e*P **P** **14 32 52.9 +1.3**
ANTO Ankara 32.62 287 ⇑*i*P **P** **14 32 52.6 +1.0**
ANTO Ankara 32.62 287 P **P** **14 32 53.3 +1.6**
SNR=33
ANTO Ankara 32.62 287 *e*P **P** **14 32 51.5 -0.1**
ANTO pmax pmax
comp=Z,152nm,1.3s,mb5.8
ANTO MLR MLR
comp=Z,2μm,19.0s,MS4.8
ANTO Ankara 32.62 287 *e*P **P** **14 32 51.5 -0.1**
comp=Z,152nm,1.3s,mb5.8
ANTO LR LR
comp=Z,2μm,19.0s,MS4.8
IKL Isikli 32.69 281 *e*P **P** **14 32 52.9 +0.8**
BOD Bodaibo 32.75 39 *e*P **P** **14 32 52.2 -0.5**
BOD pmax pmax
comp=Z,160nm,1.4s,mb5.8
SGKT Sivrigoynuk 33.07 289 *i* P **P** **14 32 57.0 +1.5**
KONT Konya--Tatoy 33.32 284 *e*P **P** **14 32 58.9 +1.2**
WHN Wuhan 33.38 90 ⇓P **P** **14 32 59.5 +1.2**
WHN S **S** **14 38 22.0 +2.8**
WHN LR LR
comp=Z,3μm,12.9s,MS5.1
KDHN Kadinhani 33.38 285 *i* P **P** **14 33 03.0 +4.7**
KIZT Kizilcal 33.49 286 *e*P **P** **14 32 57.7 -1.6**
TIA Tai'an 33.76 79 *e*P **P** **14 33 03.3 +1.8**
ESKT Eskisehir 34.16 287 *i* P **P** **14 33 05.3 +0.3**
HIA Hailar 34.32 55 PFAKE 14 33 20.0 +14
HIA LR LR
comp=Z,8μm,20.0s,MS5.4
AKASG Malin Array Be 34.72 307 P **P** **14 33 08.6 -1.3**
comp=Z,8.5nm,0.5s,mb4.9,baz=78,slow=7.5,SNR=27
AKASG LR LR 14 49 46.2
comp=Z,2μm,18.2s,MS4.8,baz=120,slow=40
UBT Ubonrachathani 34.76 121 ⇓P **P** **14 33 11.5 +1.3**
ISP Isparta 34.77 285 *e*P **P** **14 33 09.5 -0.8**
ISP Isparta 34.77 285 *e*P **P** **14 33 12.8 +2.5**
ISP Isparta 34.77 285 *c i*P **P** **14 33 08.5 -1.8**
TKTP Tekketepe 34.87 285 *i* P **P** **14 33 11.3 +0.2**
KIS Kishinev 34.87 301 *e*P **P** **14 33 09.0 -2.2**
KIS *e* 14 33 16.0
KIS *e* 14 34 25.0
KIS *e*S **S** **14 38 39.0 -3.2**
KIS MLR MLR
comp=E,4μm,14.0s,MS5.2
KIS MLR MLR
comp=Z,6μm,14.0s,MS5.5
KIS MLR MLR
comp=N,2μm,17.0s,MS5.2
GDZ Gediz 35.28 287 *i* P **P** **14 33 15.1 +0.4**
TIRR Tirgusor 35.29 296 *e*P **P** **14 33 15.2 +0.4**
QIZ Qiongzhong 35.70 111 P **P** **14 33 19.7 +1.4**
QIZ PP PP 14 34 42.0 +2.7
QIZ S **S** **14 38 56.0 +1.2**
QIZ XS sS 14 39 01.0 +0.7
QIZ SCP ScP 14 39 31.3 -1.1
QIZ AMB AMB
comp=Z,33nm,0.9s,mb5.3
QIZ AMB AMB
comp=Z,107nm,4.1s
QIZ LR LR
comp=N,2μm,15.7s,MS5.2
QIZ LR LR
comp=E,3μm,16.6s,MS5.2
QIZ LR LR
comp=Z,3μm,18.4s,MS5.1
QIZ Qiongzhong 35.70 111 *e*P **P** **14 33 17.4 -0.9**
comp=Z,32nm,1.0s,mb5.2

QIZ LR LR
comp=Z,4µm,20.0s,MS5.1
MNK Minsk 36.01 314 *eP* **P 14 33 19.0 -1.9**
MNK *eS* **S 14 39 00.0 +0.4**
MNK MLR MLR
comp=Z,14µm,16.0s,MS5.8
GZH Guangzhou 36.03 102 P **P 14 33 21.1 -0.1**
GZH S **S 14 38 59.3 -0.7**
GZH LR LR
comp=N,6µm,14.3s,MS5.6
GZH LR LR
comp=E,4µm,14.6s,MS5.6
GZH LR LR
comp=Z,5µm,16.8s,MS5.3
NJ2 Nanjing 36.41 85 *eP* **P 14 33 26.2 +1.8**
NJ2 AP pP 14 33 30.6 +2.9
NJ2 XP sP 14 33 33.2 +4.2
NJ2 PP PP 14 34 49.8 +2.6
NJ2 S **S 14 39 09.0 +3.3**
NJ2 XS sS 14 39 16.0 +4.8
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
NJ2 AMB AMB
comp=Z,40nm,4.5s
NJ2 LR LR
comp=N,9µm,16.0s
NJ2 LR LR
comp=E,6µm,22.0s
NJ2 LR LR
comp=Z,2µm,14.0s,MS5.1
DL2 Dalian 36.59 73 P **P 14 33 29.0 +3.1**
DL2 PP PP 14 34 49.0 -0.2
DL2 S **S 14 39 12.5 +4.0**
DL2 AMB AMB
comp=Z,30nm,0.9s,mb5.1
DL2 LR LR
comp=N,2µm,16.5s,MS5.1
DL2 LR LR
comp=E,2µm,17.2s,MS5.1
DL2 LR LR
comp=Z,3µm,16.8s,MS5.1
JOF Joensuu 36.60 328 *ep* **P 14 33 25.7 -0.3**
IDID Didziasalis 36.75 315 *eP* **P 14 33 28.3 +1.0**
IDID AMb AMB 14 33 31.4
comp=Z,2µm,0.9s
JMB Yambol 36.85 293 *eP* **P 14 33 27.7 -0.5**
MLR Muntele Rosu 36.95 298 P **P 14 33 29.0 0.0**
comp=Z,32nm,0.7s,mb5.2,baz=94,slow=1.5,SNR=41
MLR LR LR 14 50 13.1
comp=Z,6µm,19.8s,MS5.4,baz=258,slow=39
MLR Muntele Rosu 36.95 298 ⇓*iP* **P 14 33 29.5 +0.5**
MLR Muntele Rosu 36.95 298 P **P 14 33 29.0 0.0**
MLR pmax pmax
comp=Z,33nm,0.7s
MLR MLR MLR
comp=Z,6µm,19.8s
IIGN Ignalina 37.05 315 *eP* **P 14 33 30.9 +1.0**
IIGN AMb AMB 14 33 34.3
comp=Z,2µm,0.6s
IZAR Zarasai 37.10 315 *eP* **P 14 33 31.2 +0.9**
IZAR AMb AMB 14 33 34.6
comp=Z,2µm,0.5s
BURAR Bucovina Array 37.30 302 ⇓*iP* **P 14 33 35.2 +3.2**
BURAR Bucovina Array 37.30 302 ⇓P **P 14 33 35.2 +3.2**
VSU Vasula 37.35 320*c iP* **P 14 33 31.9 -0.5**
SNY Shenyang 37.48 68 ⇑P **P 14 33 33.4 -0.1**
SNY AP pP 14 33 37.2 +0.4
SNY XP sP 14 33 40.4 +2.3
SNY PP PP 14 35 03.2 +4.2
SNY S **S 14 39 14.8 -7.2**
SNY AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
SNY AMB AMB
comp=Z,250nm,4.5s
SNY LR LR
comp=N,2µm,14.5s,MS5.5
SNY LR LR
comp=E,6µm,16.3s,MS5.5
SNY LR LR
comp=Z,7µm,16.5s,MS5.5
ALN Alexandroupoli 37.52 291 *eP* **P 14 33 27.7 -6.1**
MTUR Matau 37.59 298 P **P 14 33 36.3 +1.9**
DIM Dimitrovgrad 37.69 293 *eP* **P 14 33 45.0 +10**
LVZ Lovozero 37.74 337 P **P 14 33 35.8 +0.1**
comp=Z,1µm,0.8s,SNR=21
LVZ Lovozero 37.74 337 PFAKE 14 33 50.0 +14
LVZ LR LR
comp=Z,8µm,22.0s,MS5.5
APA Apatity 37.97 336 ⇓*iP* **P 14 33 37.0 -0.6**
APA *i* 14 35 13.6
APA *eS* **S 14 39 26.0 -3.4**
APA *eSS* SS 14 42 30.0 +14
APA pmax pmax
comp=Z,39nm,1.0s,mb5.1
APA MLR MLR
comp=Z,16µm,15.0s,MS6.0
LVV L'vov 38.02 306 *eP* **P 14 33 38.1 0.0**
LVV *eS* **S 14 39 31.3 +1.0**
LVV MLR MLR
comp=E,2µm,18.0s,MS5.2
LVV MLR MLR
comp=Z,2µm,18.0s,MS4.9
LVV MLR MLR
comp=N,2µm,16.0s,MS5.2
CHOS Chios island 38.05 287 *eP* **P 14 33 27.7 -11**
SNG Songkhla 38.22 136 P **P 14 33 40.0 +0.3**
comp=N,278nm,0.9s,mb6.0
RZN Rozhen 38.35 292 *eP* **P 14 33 41.0 +0.1**
FIA1 FINESS Array S 38.41 325 *eP* **P 14 33 40.6 -0.8**
FINES FINESS Array B 38.41 325 P **P 14 33 40.5 -0.9**
comp=N,20nm,0.5s,mb5.1,baz=114,slow=9.6,SNR=73
FINES LR LR 14 49 05.3
comp=N,2µm,21.6s,MS5.0,baz=102,slow=36
ATD Arta Tunnel 38.49 236 P **P 14 33 42.6 +0.5**
comp=N,59nm,1.0s,mb5.3,baz=22,slow=4.5,SNR=18
ATD LR LR 14 51 46.4
comp=N,1µm,18.4s,MS4.8,baz=46,slow=40
KAF Kangasniemi 38.50 326 *ep* **P 14 33 41.3 -0.8**
CN2 Changchun 38.52 64 *eP* **P 14 33 42.7 +0.4**
CN2 *eXP* sP 14 33 49.7 +2.7
CN2 *ePP* PP 14 35 13.7 +3.3
CN2 *eS* **S 14 39 37.0 -0.9**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,9µm,15.0s,MS5.7
CN2 LR LR
comp=E,3µm,15.0s,MS5.7
CN2 LR LR
comp=Z,6µm,15.0s,MS5.5
PGB Panagyurishte 38.60 294 *eP* **P 14 33 43.9 +1.0**
SSE Sheshan 38.61 85 P **P 14 33 43.7 +0.7**
SSE PCP PcP 14 35 57.8 +2.5
SSE S **S 14 39 38.6 -0.6**
SSE AMB AMB
comp=Z,35nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,62nm,5.0s
SSE LR LR
comp=N,3µm,15.7s,MS5.3
SSE LR LR
comp=E,3µm,15.7s,MS5.3
SSE LR LR
comp=Z,2µm,14.9s,MS5.1
SUW Suwalki 38.66 312 *eP* **P 14 33 44.9 +1.4**
SUW *epP* pP 14 33 46.5 -0.3
SUW *eS* **S 14 39 36.7 -3.3**
SUW *esS* sS 14 39 44.2 -1.3
SUW L 14 49 06.2
comp=Z,4.2nm,24.2s
SUW Suwalki 38.66 312 *eP* **P 14 33 44.9 +1.4**
SUW *epP* pP 14 33 46.5 -0.3
SUW *eS* **S 14 39 36.7 -3.3**
SUW *eSS* sS 14 39 44.2 -1.3
APE Apeiranthos 38.80 285⇑*iP* **P 14 33 48.1 +3.5**
APE Apeiranthos 38.80 285*d iP* **P 14 33 44.4 -0.2**
APE Apeiranthos 38.80 285 ⇑P **P 14 33 48.1 +3.5**
KWP Kalwaria 38.88 305 *eP* **P 14 33 46.1 +0.8**
KWP *epP* pP 14 33 49.4 +0.7
KWP L 14 51 00.2
comp=Z,4.4nm,21.2s
KWP Kalwaria 38.88 305 *eP* **P 14 33 46.1 +0.8**
KWP *epP* pP 14 33 49.4 +0.7

DRGR 39.07 301⇑*iP* **P 14 33 48.0 +1.1**
DRGR 39.07 301 P **P 14 33 47.7 +0.8**
DRGR 39.07 301 ⇑P **P 14 33 48.0 +1.2**
MMB Musomiste 39.10 292 *eP* **P 14 33 47.9 +0.8**
KOLS Kolonicke sedl 39.20 304 *eP* **P 14 33 48.1 +0.1**
KOLS *ePP* PP 14 35 23.5 +5.7
KOLS *e* 14 35 39.9
KOLS Kolonicke sedl 39.20 304 *eP* **P 14 33 48.1 +0.1**
KOLS *ePP* PP 14 35 23.5 +5.7
KOLS *e* 14 35 39.9
KOLS LR LR
comp=Z,3µm,17.3s,MS5.1
UZH Uzhgorod 39.20 304 *eP* **P 14 33 47.0 -1.0**
UZH *e* 14 35 16.0
UZH *ePPP* 14 35 46.0
UZH *eS* **S 14 39 46.0 -2.1**
UZH *eSS* SS 14 42 39.0 -2.1
UZH MLR MLR
comp=Z,4µm,16.0s,MS5.3
QZH Quanzhou 39.21 96 *eP* **P 14 33 48.6 +0.5**
QZH S **S 14 39 51.1 +2.8**
QZH SS SS 14 42 38.0 -3.2
QZH LR LR
comp=N,8µm,15.1s,MS5.7
QZH LR LR
comp=E,5µm,16.4s,MS5.7
QZH LR LR
comp=Z,4µm,21.5s
VTS Vitosha 39.29 294 *eP* **P 14 33 49.0 +0.3**
VTS Vitosha 39.29 294 ⇓*iP* **P 14 33 49.1 +0.4**
KKB Krupnik 39.52 293 *eP* **P 14 33 51.3 +0.7**
CRVS Cervenica-Dubn 39.74 304 *eP* **P 14 33 52.2 -0.2**
CRVS *ePP* PP 14 35 32.7 +9.0
CRVS Cervenica-Dubn 39.74 304 *eP* **P 14 33 52.2 -0.2**
CRVS *ePP* PP 14 35 32.7 +9.0
CRVS LR LR
comp=Z,7µm,70.3s
KULM Kulim 39.80 137 *eP* **P 14 33 53.9 +0.9**
IDI Anoyia 39.81 282 P **P 14 33 54.4 +1.3**
comp=Z,17nm,0.8s,mb4.8,baz=8.1,slow=8.5,SNR=8.7
BZS Buzias 39.95 299 ⇓*iP* **P 14 33 54.5 +0.2**
BZS Buzias 39.95 299 ⇓P **P 14 33 54.5 +0.2**
VAY Valandovo 40.00 292 *eP* **P 14 33 52.4 -2.2**
STIP Stip 40.21 293 *eP* **P 14 33 54.1 -2.3**
NIE Niedzica 40.45 305 *eP* **P 14 33 59.6 +1.2**
SKO Skopje 40.70 294 *eP* **P 14 33 58.1 -2.3**
OJC Ojcow 40.74 306 *eP* **P 14 34 00.5 -0.2**
OJC *e* 14 35 35.0
OJC *eS* **S 14 40 14.6 +3.5**
OJC MLR MLR
comp=Z,18µm,19.3s,MS5.9
INCN Inchon 40.76 74 *eP* **P 14 34 00.9 0.0**
comp=Z,47nm,1.0s,mb5.1
INCN LR LR
comp=Z,5µm,20.0s,MS5.3
PSZ Piszkesteto 40.86 303⇓*epP* pP 14 34 06.0 +0.9
PSZ Piszkesteto 40.86 303 ⇓*iP* **P 14 34 03.1 +1.3**
PSZ Piszkesteto 40.86 303 *eP* **P 14 34 00.7 -1.1**
PSZ pmax pmax
comp=Z,19nm,0.8s,mb4.8
PSZ Piszkesteto 40.86 303 *eP* **P 14 34 00.7 -1.1**
comp=Z,19nm,0.8s,mb4.8
PSI Prapat 41.01 141 P **P 14 34 02.6 -0.4**
comp=Z,11nm,0.7s,mb4.6,baz=334,slow=9.4,SNR=8.2
PSI LR LR 14 53 30.4
comp=Z,1µm,18.6s,MS4.9,baz=309,slow=40
PSI Prapat 41.01 141 P **P 14 34 02.6 -0.4**
PSI LR LR 14 53 30.4
KEV Kevo 41.08 337 *ep* **P 14 34 02.3 -1.2**
comp=Z,52nm,0.7s,mb5.3
KEV Kevo 41.08 337 *eP* **P 14 34 02.3 -1.2**
KEV pmax pmax
comp=Z,52nm,0.7s,mb5.3
DIVS Divcibare 41.33 297 ⇓*iP* **P 14 34 05.7 0.0**
MDJ Mudanjiang 41.34 62 P **P 14 34 05.5 -0.2**
MDJ AP pP 14 34 08.9 -0.1
MDJ PP PP 14 35 41.3 +0.2
MDJ SCP ScP 14 39 53.8 -0.1
MDJ PCS PcS 14 39 55.1 -0.1
MDJ S **S 14 40 19.3 -0.7**
MDJ SS SS 14 43 25.3 +1.6
MDJ AMB AMB
comp=Z,26nm,0.9s,mb4.9
MDJ AMB AMB
comp=Z,78nm,4.2s
MDJ LR LR
comp=N,11µm,17.9s,MS5.8
MDJ LR LR
comp=E,3µm,19.2s,MS5.8
MDJ LR LR
comp=Z,4µm,12.6s
MDJ Mudanjiang 41.34 62 *eP* **P 14 34 05.7 0.0**
comp=Z,27nm,1.0s,mb4.8
MDJ LR LR
comp=Z,4µm,19.0s,MS5.3
OHR Ohrid 41.35 292 *eP* **P 14 34 03.4 -2.4**
ARCES ARCESS Array B 41.45 336 P **P 14 34 05.4 -1.2**
comp=Z,85nm,0.7s,mb5.5,baz=109,slow=6.9,SNR=68
ARCES ScP ScP 14 39 57.5 +3.2
comp=Z,11nm,1.1s,baz=90,slow=2.4,SNR=5.0
ARE0 ARCESS Array S 41.45 336 *eP* **P 14 34 05.9 -0.7**
YAK Yakutsk 41.47 36*c iP* **P 14 34 05.6 -1.2**
YAK pmax pmax
comp=Z,34nm,0.9s,mb5.0
YAK MLR MLR
comp=Z,4µm,14.0s,MS5.4
YAK Yakutsk 41.47 36 *eP* **P 14 34 06.1 -0.7**
comp=Z,65nm,0.8s,mb5.3
YAK LR LR
comp=Z,4µm,22.0s,MS5.2
BUD Budapest 41.49 302⇑*epP* pP 14 34 11.0 +0.7
TATO Taipei 41.49 94 PFAKE 14 34 20.0 +13
TATO LR LR
comp=Z,2µm,21.0s,MS5.0
VYHS Vyhne 41.50 304 *eP* **P 14 34 07.6 +0.5**
VYHS *e* 14 35 47.4
VYHS *eSS* SS 14 43 28.7 +1.8
VYHS Vyhne 41.50 304 *eP* **P 14 34 07.6 +0.5**
VYHS *e* 14 35 47.4
VYHS pmax pmax
comp=Z,419nm,5.4s
VYHS MLR MLR
comp=Z,2µm,17.3s,MS5.0
VYHS Vyhne 41.50 304 *eP* **P 14 34 07.6 +0.5**
comp=Z,418nm,5.4s
VYHS *e* 14 35 47.4
VYHS *eSS* SS 14 43 28.7 +1.8
VYHS LR LR
comp=Z,2µm,17.3s,MS5.0
YHNB Yeheng 41.55 94 *eP* **P 14 34 08.0 +0.5**
IVA Berane 41.63 295⇑*iP* **P 14 34 09.1 +1.0**
PVY Plav 41.63 295⇑*iP* **P 14 34 07.1 -1.1**
OKC Ostrava-Krasne 41.83 306 *eP* **P 14 34 15.2 +5.5**
OKC *ePP* PP 14 35 54.7 +8.3
OKC *eS* **S 14 40 33.1 +5.9**
OKC AMS AMS 14 52 20.0
comp=Z,3µm,14.7s
OKC Ostrava-Krasne 41.83 306 *eP* **P 14 34 15.2 +5.5**
OKC *ePP* PP 14 35 54.7 +8.3
OKC *eS* **S 14 40 33.1 +5.9**
PLE Plievlja 41.90 296⇑*iP* **P 14 34 12.1 +1.8**
PKSM Moragy 41.93 300⇑*iP* **P 14 34 11.1 +0.6**
PKSM Moragy 41.93 300 ⇑P **P 14 34 11.1 +0.6**
NACB Ninganchiao 41.97 95 *eP* **P 14 34 10.4 -0.4**
KTK1 Kautokeino 41.99 335 *eP* **P 14 34 10.9 -0.1**
KTK1 *epP* pP 14 34 14.9 +0.5
KLR Kul'dur 42.18 55 *eP* **P 14 34 09.8 -2.8**
KLR *ePPP* 14 36 18.5
KLR *eS* **S 14 40 30.4 -2.0**
KLR *eSSS* 14 44 07.0
KLR MLR MLR
comp=Z,7µm,13.5s,MS5.7
TTG Podgorica 42.18 295⇑*iP* **P 14 34 12.3 -0.3**
GKP Gorka Klasztor 42.19 311 *eP* **P 14 34 15.8 +3.1**
GKP *epP* pP 14 34 17.6 +1.6
GKP *eS* **S 14 40 33.2 +0.6**
GKP *esS* sS 14 40 36.9 -1.2
GKP L 14 52 55.7
comp=Z,3.7nm,17.5s
MORC Moravsky Berou 42.22 306 ⇓*iP* **P 14 34 12.7 -0.2**
MORC Moravsky Berou 42.22 306 ⇓P **P 14 34 12.7 -0.3**
UPM Unac-Piva 42.27 296⇑*iP* **P 14 34 13.9 +0.6**
NKY Niksic 42.29 295⇑*iP* **P 14 34 14.7 +1.2**

ULC Ulcinj 42.29 294⇑*iP* **P 14 34 08.9 -4.6**
BUM Brajici-Budva 42.47 295⇑*iP* **P 14 34 14.4 -0.6**
BRY Bratogost 42.60 296⇑*iP* **P 14 34 15.9 -0.1**
ZST Bratislava 42.69 304 *eP* **P 14 34 20.9 +4.2**
ZST *ePP* PP 14 35 59.9 +4.2
HCY Herceg Novi 42.73 295⇑*iP* **P 14 34 16.6 -0.5**
VRAC Vranov 42.89 305⇑*iP* **P 14 34 18.6 +0.3**
KSP Ksiaz 42.92 308 *eP* **P 14 34 18.4 -0.2**
KSP *epP* pP 14 34 22.5 +0.5
KSP *eS* **S 14 40 42.3 -1.1**
KSP *esS* sS 14 40 47.6 -1.3
KSP L 14 50 46.0
comp=Z,4.9nm,25.2s
KSP Ksiaz 42.92 308 *eP* **P 14 34 18.1 -0.5**
KSP *epP* pP 14 34 22.2 +0.2
KSP *ePP* PP 14 35 57.0 -1.2
KSP *eS* **S 14 40 42.0 -1.4**
KSP *eSS* SS 14 43 44.0 -11
KSP LR LR
comp=Z,9µm,17.0s,MS5.7
DPC Dobruska-Polom 42.95 307 *eP* **P 14 34 19.2 +0.4**
DPC *epP* pP 14 34 23.1 +0.9
DPC *ePP* PP 14 36 07.2 +8.7
DPC *eS* **S 14 40 50.0 +6.2**
DPC AMS AMS 14 53 50.0
comp=Z,4µm,12.2s
UPC Upice 43.13 307 *eP* **P 14 34 20.5 +0.2**
UPC *epP* pP 14 34 24.5 +0.8
VLA Vladivostok 43.26 64 *eP* **P 14 34 20.9 -0.5**
VLA *e**PP pP 14 34 24.7 0.0
VLA *i* 14 34 28.7
VLA *e* 14 36 10.2
VLA *i* S **S 14 40 47.4 -1.0**
VLA *eSS* SS 14 43 57.0 -4.6
VLA pmax pmax
comp=Z,35nm,0.9s,mb5.1
VLA MLR MLR
comp=Z,4µm,16.2s,MS5.5
CONA Conrad Observa 43.55 303⇑*iP* **P 14 34 22.5 -1.2**
comp=Z,68nm,1.2s,mb5.3,SNR=43
TREC Trest 43.61 305 *eP* **P 14 34 25.0 +0.9**
TREC *epP* pP 14 34 28.8 +1.3
TREC *eS* **S 14 41 00.4 +7.0**
TREC AMS AMS 14 53 00.0
comp=Z,4µm,20.2s
TRO Tromso 43.64 335 *eP* **P 14 34 24.2 -0.2**
TRO *epP* pP 14 34 26.6 -1.2
TRO *ePP* PP 14 36 07.7 +1.8
TRO *eS* **S 14 40 53.9 -0.1**
TRO *e* 14 43 55.0
TRO AMS AMS 14 53 23.6
comp=Z,4µm,19.0s,MS5.3
TIXI Tiksi 43.80 22 *eP* **P 14 34 24.0 -1.7**
TIXI *e* 14 36 06.1
TIXI *eS* **S 14 40 47.7 -8.5**
TIXI *eSS* SS 14 44 03.6 -8.4
TIXI pmax pmax
comp=Z,58nm,0.8s,mb5.4
TIXI MLR MLR
comp=Z,4µm,15.0s,MS5.4
TIXI Tiksi 43.80 22 PFAKE 14 34 40.0 +14
TIXI LR LR
comp=Z,3µm,20.0s,MS5.2
ARSA Arzberg 43.88 302 *i P* **P 14 34 26.4 0.0**
comp=Z,18nm,0.9s,mb4.8,SNR=16
PRU Pruhonice 44.13 306 *eP* **P 14 34 29.4 +1.1**
PRU *epP* pP 14 34 32.4 +0.7
PRU *ePP* PP 14 36 22.7 +12
PRU *eS* **S 14 41 08.2 +7.2**
PRU AMS AMS 14 56 00.0
comp=Z,4µm,16.0s
PRU Pruhonice 44.13 306 *eP* **P 14 34 29.4 +1.1**
PRU *e**PP pP 14 34 32.4 +0.7
PRU *eS* **S 14 41 08.2 +7.2**
PRU MLR MLR
comp=Z,4µm,16.0s,MS5.4
PERS Pernice 44.26 302 *eP* **P 14 34 29.7 +0.3**
PERS *i* 14 34 39.0
RUE Ruedersdorf 44.33 310 *eP* **P 14 34 28.9 -1.1**
BOJS Bojanci 44.38 300 *i P* **P 14 34 30.7 +0.3**
BRG Berggiesshubel 44.40 308 *eP* **P 14 34 30.1 -0.4**
comp=Z,35nm,0.8s,mb5.1
BRG Berggiesshubel 44.40 308 *eP* **P 14 34 30.6 0.0**
comp=Z,19nm,1.5s,mb4.6
BRG *i* 14 35 00.2
comp=Z,26nm,1.1s
BRG PP PP 14 36 18.0 +4.0
BRG *eSCS* PcS 14 40 11.9 +4.4
comp=Z,11nm,1.6s
BRG S **S 14 41 06.0 +1.0**
BRG SS SS 14 44 24.0 +0.2
BRG
comp=N,10µm,20.3s
BRG
comp=E,3µm,23.8s
BRG
comp=Z,4µm,13.4s
BRG Berggiesshubel 44.40 308 *eP* **P 14 34 30.6 +0.1**
BRG 14 36 18.0
BRG S **S 14 41 06.0 +1.0**
BRG SS SS 14 44 24.0 +0.2
BRG pmax pmax
comp=Z,190nm,1.5s,mb5.6
BRG MLR MLR
comp=Z,4µm,13.4s,MS5.5
BRG Berggiesshubel 44.40 308 *eP* **P 14 34 30.6 0.0**
comp=Z,19nm,1.5s,mb4.6
BRG *i* 14 35 00.2
BRG PP PP 14 36 18.0 +4.0
BRG *eScS* PcS 14 40 11.9 +4.4
BRG S **S 14 41 06.0 +1.0**
BRG SS SS 14 44 24.0 +0.2
BRG LR LR
comp=Z,4µm,13.4s,MS5.5
HABR Khabarovsk 44.44 56⇑*iP* **P 14 34 31.6 +0.8**
HABR *eS* **S 14 41 07.9 +2.4**
HABR pmax pmax
comp=Z,57nm,0.1s,mb6.3
HABR MLR MLR
comp=Z,4µm,21.0s,MS5.3
MOR8 Moi Rana 44.49 330 *eP* **P 14 34 29.8 -1.4**
MOR8 *epP* pP 14 34 33.6 -0.9
MOA Molln 44.62 303 ⇓*iP* **P 14 34 32.3 +0.1**
comp=Z,30nm,0.8s,mb5.2,SNR=15
DGAR Diego Garcia 44.66 183 PFAKE 14 34 40.0 +7.4
DGAR LR LR
comp=Z,3µm,20.0s,MS5.2
OBKA Obir 44.67 302 *i P* **P 14 34 33.3 +0.6**
comp=Z,68nm,1.2s,mb5.4,SNR=13
FBE Freiberg 44.76 308 *eP* **P 14 34 33.0 -0.4**
comp=Z,54nm,0.7s,mb5.5
LJU Ljubljana 44.77 301 *eP* **P 14 34 34.0 +0.5**
GEC2 GERESS Array S 44.83 305 *eP* **P 14 34 32.3 -1.7**
GERES GERESS Array B 44.83 305 P **P 14 34 33.4 -0.6**
comp=Z,9.1nm,0.8s,mb4.6,baz=69,slow=5.9,SNR=23
GERES LR LR 14 54 28.0
comp=Z,3µm,19.1s,MS5.2,baz=87,slow=38
NVLJ Novalja 44.84 299 *i P* **P 14 34 33.6 -0.5**
KHC Kasperske Hory 44.87 305 *eP* **P 14 34 34.2 -0.1**
KHC *epP* pP 14 34 38.5 +0.9
KHC *ePP* PP 14 36 22.3 +3.3
KHC *eS* **S 14 41 19.4 +7.6**
KHC AMS AMS 14 54 10.0
comp=Z,3µm,15.9s
COP Copenhagen 44.89 315⇑*iP* **P 14 34 37.8 +3.4**
comp=Z,57nm,0.9s,mb5.4
COP *e* 14 36 28.5
COP *i* S **S 14 41 13.5 +1.4**
COP
comp=Z,1µm,17.0s
COP Copenhagen 44.89 315⇑*eP* **P 14 34 37.8 +3.4**
COP *i* S **S 14 41 13.5 +1.4**
COP pmax pmax
comp=Z,57nm,0.9s,mb5.4
COP MLR MLR
comp=Z,1µm,17.0s,MS4.9
COP Copenhagen 44.89 315⇑*eP* **P 14 34 37.8 +3.4**
comp=Z,57nm,0.9s,mb5.4
COP *e* 14 36 28.5
COP *i* S **S 14 41 13.5 +1.4**
COP LR LR
comp=Z,1µm,17.0s,MS4.9
CLL Collm 44.94 308 *i P* **P 14 34 34.4 -0.4**
comp=Z,38nm,0.8s,mb5.3

CLL ePP PP 14 36 22.4 +2.7
CLL eS S **14 41 14.1 +1.3**
CLL eSS SS 14 44 37.5 +3.3
CLL eLR LR 14 48 42.0
CLL eL 14 54 02.0
comp=Z,4μm,20.0s
CLL Collm 44.94 308 P **P** **14 34 34.3 -0.5**
comp=Z,logA/T=1.1,mb4.7
CLL *i* *PP pP 14 34 38.3 +0.1
CLL *i* 14 34 39.7
CLL *i* 14 34 44.9
CLL *e* 14 36 38.0
CLL *e* 14 37 06.0
CLL *e* 14 37 19.0
CLL eS S **14 41 11.0 -1.8**
CLL eSS SS 14 44 37.0 +2.8
CLL Collm 44.94 308 *i* P **P** **14 34 34.3 -0.5**
comp=Z,13nm,1.1s,mb4.7
CLL *i* pP pP 14 34 38.3 +0.1
CLL *i* x x 14 34 39.7
comp=Z,37nm,0.8s
CLL *i* x x 14 34 44.9
CLL *ex* x x 14 36 38.0
CLL ePPPP 14 37 06.0
CLL *ex* x 14 37 19.0
CLL eS S **14 41 11.0 -1.8**
CLL eSS SS 14 44 37.0 +2.8
CLL Collm 44.94 308 *i* P **P** **14 34 34.3 -0.5**
CLL *i* *PP pP 14 34 38.3 +0.1
CLL *i* 14 34 39.7
CLL eS S **14 41 11.0 -1.8**
CLL pmax pmax
comp=Z,130nm,1.1s,mb5.7
CLL MLR MLR
comp=Z,6μm,13.0s,MS5.7
CLL Collm 44.94 308 *i* P **P** **14 34 34.3 -0.5**
comp=Z,13nm,1.1s,mb4.7
CLL *i* pP pP 14 34 38.3 +0.1
CLL *i* 14 34 39.7
CLL eS S **14 41 11.0 -1.8**
CLL LR LR
comp=Z,6μm,13.0s,MS5.7
STOK Stokkvaagen 45.08 330 *e*P **P** **14 34 35.6 -0.3**
LOF Lofoten 45.17 332 *e*P **P** **14 34 36.4 -0.3**
LOF *e* pP 14 34 40.2 +0.1
VOY Vojsko 45.21 301 *e*P **P** **14 34 37.3 +0.3**
VOY *e* 14 34 45.4
NSS Namsos 45.30 327 *e*P **P** **14 34 37.2 -0.5**
NSS AMS AMS 14 56 34.3
comp=Z,2μm,19.9s,MS5.1
WET Wettzell 45.32 305 *e*P **P** **14 34 37.9 0.0**
comp=Z,42nm,1.5s,mb5.0
WET Wettzell 45.32 305 *e*P **P** **14 34 37.9 0.0**
WET pmax pmax
comp=Z,42nm,1.5s,mb5.0
SLCN Sala Consilina 45.33 293 P **P** **14 34 39.1 +1.2**
FG5 Orsara di Pugl 45.35 294 *i* P **P** **14 34 39.3 +1.2**
FG5 Orsara di Pugl 45.35 294 *i* Pr 14 34 39.3
TANN Tannenbergstha 45.39 307 *e*P **P** **14 34 38.3 -0.1**
comp=Z,26nm,1.3s,mb4.9
ROBS Robic 45.43 301 *e*P **P** **14 34 38.4 -0.3**
NKC Novy Kostel 45.43 307 *e*P **P** **14 34 40.5 +1.8**
NKC epP pP 14 34 43.5 +1.4
NKC AMS AMS 14 54 00.7
NKC Novy Kostel 45.43 307 *e*P **P** **14 34 40.5 +1.8**
NKC epP pP 14 34 43.5 +1.4
NB2 NORSAR Subarra 45.45 322 P **P** **14 34 37.2 -1.7**
comp=Z,41nm,0.7s,mb5.4,baz=91,slow=7.9
NOA NORSAR Array B 45.45 322 P **P** **14 34 37.6 -1.2**
comp=Z,18nm,0.7s,mb5.0,baz=97,slow=7.2,SNR=40
NOA LR LR 14 56 31.4
comp=Z,2μm,19.9s,MS5.1,baz=90,slow=40
GUNZ Gunzen 45.48 307 *e*P **P** **14 34 39.1 0.0**
comp=Z,24nm,1.1s,mb4.9
NAO01 NORSAR Array S 45.60 322 *e*P **P** **14 34 39.9 -0.2**
comp=Z,26nm,0.8s,mb5.2
NAO01 LR LR
comp=Z,3μm,19.0s,MS5.2
GMNA Gemona 45.61 301 P **P** **14 34 40.5 +0.4**
ROTZ Rotzenmuhle 45.65 306 *e*P **P** **14 34 41.0 +0.5**
comp=Z,26nm,1.2s,mb5.0
ROTZ eS S **14 41 24.1 +0.9**
MANZ Manzenberg 45.68 307 *e*P **P** **14 34 41.2 +0.5**
comp=Z,18nm,0.9s,mb5.0
MANZ eS S **14 41 24.9 +1.3**
SOI Samo 45.70 290 P **P** **14 34 43.5 +2.6**
MOX Moxa 45.89 308 *e*P **P** **14 34 42.4 0.0**
comp=Z,26nm,1.0s,mb5.1
MOX Moxa 45.89 308 *e*P **P** **14 34 43.1 +0.7**
MOX *e* pP 14 34 46.1 +0.3
comp=Z,52nm,1.5s
MOX *e* 14 35 03.8
MOX *e* 14 36 55.0
MOX
comp=Z,4μm,18.0s
MOX Moxa 45.89 308 *e*P **P** **14 34 43.1 +0.7**
MOX *e* pP 14 34 46.1 +0.3
MOX pmax pmax
comp=Z,52nm,1.5s,mb5.2
MOX MLR MLR
comp=Z,4μm,18.0s,MS5.4
MOX Moxa 45.89 308 *e*P **P** **14 34 43.1 +0.7**
comp=Z,52nm,1.5s,mb5.2
MOX *e* pP 14 34 46.1 +0.3
MOX *e* 14 35 03.8
MOX *e* 14 36 55.0
MOX LR LR
comp=Z,4μm,18.0s,MS5.4
JOW Kunigami 46.03 87 P **P** **14 34 43.4 0.0**
comp=Z,17nm,0.4s,mb5.3,baz=278,slow=20,SNR=6.7
JOW LR LR 14 55 14.0
comp=Z,697nm,21.4s,MS4.6,baz=346,slow=38
KONO Kongsberg 46.25 320 *e*P **P** **14 34 43.2 -2.0**
KONO Kongsberg 46.25 320⇑ *i*P **P** **14 34 43.8 -1.4**
KONO Kongsberg 46.25 320 P **P** **14 34 42.2 -3.0**
comp=Z,36nm,0.8s,mb5.3
KONO LR LR
comp=Z,3μm,19.0s,MS5.2
CING Cingoli 46.30 298 P **P** **14 34 46.2 +0.6**
GRA1 Grafenberg Arr 46.30 306 *e*P **P** **14 34 46.0 +0.4**
comp=Z,49nm,1.1s,mb5.3
GRA1 eS S **14 41 33.1 +0.7**
GRA1 LR LR
comp=Z,3μm,19.1s,MS5.2
GRF Grafenberg Arr 46.30 306 *e*P **P** **14 34 46.0 +0.4**
comp=Z,49nm,1.1s,mb5.3
GRF eS S **14 41 33.1 +0.7**
GRF *e*L 14 54 59.2
comp=Z,3μm,19.1s
GRF Grafenberg Arr 46.30 306 *e*P **P** **14 34 46.0 +0.4**
GRF eS S **14 41 33.1 +0.7**
GRF pmax pmax
comp=Z,49nm,1.1s,mb5.3
GRF MLR MLR
comp=Z,3μm,19.1s,MS5.2
GRF Grafenberg Arr 46.30 306 *e*P **P** **14 34 46.0 +0.4**
GRF eS S **14 41 33.1 +0.7**
GRF pmax pmax
comp=Z,49nm,1.1s,mb5.3
GRF MLR MLR
comp=Z,3μm,19.1s,MS5.2
AQU L'Aquila 46.41 296⇓ *i*P **P** **14 34 50.7 +4.2**
AQU L'Aquila 46.41 296 *e*P **P** **14 34 45.9 -0.6**
AQU pmax pmax
comp=Z,60nm,0.9s,mb5.5
AQU L'Aquila 46.41 296 *e*P **P** **14 34 45.9 -0.6**
comp=Z,60nm,0.9s,mb5.5
WTTA Wattenberg 46.48 303⇑ *i*P **P** **14 34 46.7 -0.3**
comp=Z,40nm,0.8s,mb5.4,SNR=15
WTTA Wattenberg 46.48 303⇑ *i*P **P** **14 34 46.7 -0.3**
WTTA pmax pmax
comp=Z,40nm,0.8s,mb5.4
DOMB Dombas 46.49 324 *e*pP pP 14 34 50.0 -0.5
WATA Walderalm 46.51 303⇓ *i*P **P** **14 34 46.6 -0.6**
comp=Z,16nm,1.0s,mb4.9
WATA Walderalm 46.51 303⇓ *i*P **P** **14 34 46.6 -0.6**
WATA pmax pmax
comp=Z,160nm,1.0s,mb5.9
FUR Furstenfeldbru 46.54 304 *e*P **P** **14 34 48.0 +0.5**
comp=Z,75nm,0.9s,mb5.6
FUR eS S **14 41 37.3 +1.4**
FUR Furstenfeldbru 46.54 304 *e*P **P** **14 34 48.0 +0.5**
FUR eS S **14 41 37.3 +1.4**
FUR pmax pmax
comp=Z,75nm,0.9s,mb5.6
MUD Monsted U'grnd 46.66 316 *i* P **P** **14 34 49.2 +0.8**
comp=Z,50nm,1.4s,mb5.3
MUD *e* 14 36 38.1
MUD *i* S S **14 41 42.4 +4.8**
MUD *i* 14 45 33.0
MUD
comp=Z,3μm,21.0s
MUD Monsted U'grnd 46.66 316 *i* P **P** **14 34 49.2 +0.8**
MUD *e* 14 36 38.1
MUD *i* S S **14 41 42.4 +4.8**
MUD pmax pmax
comp=Z,51nm,1.4s,mb5.3
MUD Monsted U'grnd 46.66 316 *i* P **P** **14 34 49.2 +0.8**
comp=Z,50nm,1.4s,mb5.3
MUD *e* 14 36 38.1
MUD *i* S S **14 41 42.4 +4.8**
MUD *i* 14 45 33.0
CTI Castel Tesino 46.73 301 P **P** **14 34 48.9 -0.1**
ASS Assisi 46.76 297 P **P** **14 34 50.7 +1.5**
SQTA Sankt Quirin 46.77 303⇓ *i*P **P** **14 34 48.9 -0.4**
comp=Z,16nm,1.1s,mb4.9,SNR=6.6
SQTA Sankt Quirin 46.77 303⇓ *i*P **P** **14 34 48.9 -0.4**
SQTA pmax pmax
comp=Z,160nm,1.1s,mb5.9
MURB Monte Urbino 46.80 298 P **P** **14 34 51.5 +2.0**
MOTA Moosalm 46.82 303⇓ *i*P **P** **14 34 49.3 -0.4**
comp=Z,18nm,0.9s,mb5.0,SNR=17
MOTA Moosalm 46.82 303⇓ *i*P **P** **14 34 49.3 -0.4**
MOTA pmax pmax
comp=Z,18nm,0.9s,mb5.0
CERT Cerreto 46.82 296 P **P** **14 34 49.9 +0.2**
MNS Montasola 46.92 296 P **P** **14 34 50.8 +0.3**
TGY Tagaytay City 47.08 107 P **P** **14 34 53.0 +1.3**
comp=Z,111nm,0.3s,baz=177,slow=4.8,SNR=2.3
TGY LR LR 14 54 14.2
comp=Z,4.9nm,19.4s,baz=81,slow=36
VAE Valguarnera 47.13 289 P **P** **14 34 53.8 +1.8**
comp=Z,7.5nm,0.6s,mb4.8,baz=64,slow=3.1,SNR=2.4
VAE Valguarnera 47.13 289 P **P** **14 34 53.8 +1.8**
SPB4 Spitsbergen Ar 47.29 346 *e*P **P** **14 34 53.8 +0.5**
BRMO Bormio 47.50 302 P **P** **14 34 54.7 -0.3**
FNVD Fontana Vidola 47.55 299 P **P** **14 34 57.2 +1.9**
CSNT Castellina Chi 47.61 298 P **P** **14 34 56.1 +0.3**
DAVA Damuels 47.65 304 *i* P **P** **14 34 55.7 -0.4**
comp=Z,101nm,0.9s,mb5.8,SNR=40
STU Stuttgart 47.77 306 *e*P **P** **14 34 55.9 -1.2**
STU pmax pmax
comp=Z,41nm,0.9s,mb5.5
STU Stuttgart 47.77 306 *e*P **P** **14 34 55.9 -1.2**
comp=Z,41nm,0.9s,mb5.5
BLS5 Blasjo 47.86 320 *e* **P** **14 35 02.8 +5.0**
TNS Taunus Mts 47.96 308 *e*P **P** **14 34 58.3 -0.3**
comp=Z,19nm,1.2s,mb5.0
TNS Taunus Mts 47.96 308 *e*P **P** **14 34 58.3 -0.3**
TNS pmax pmax
comp=Z,19nm,1.2s,mb5.0
VLC Villacollemand 48.06 299 *e*P **P** **14 34 59.6 +0.3**
comp=Z,90nm,0.9s,mb5.8
BER Bergen 48.35 322 AMS AMS 14 56 31.3
comp=Z,2μm,18.2s,MS5.2
KBS Kingsbay 48.38 347 *e*P **P** **14 35 01.9 +0.1**
KBS *e*PP PP 14 36 53.5 -0.8
KBS eS S **14 42 02.1 +0.1**
KBS AMS AMS 14 58 18.6
comp=Z,2μm,17.0s,MS5.1
KBS Kingsbay 48.38 347 *e*P **P** **14 35 02.1 +0.4**
KBS pmax pmax
comp=Z,46nm,0.8s,mb5.6
KBS MLR MLR
comp=Z,2μm,21.0s,MS5.1
KBS Kingsbay 48.38 347 *e*P **P** **14 35 02.1 +0.4**
comp=Z,46nm,0.8s,mb5.6
KBS LR LR
comp=Z,2μm,21.0s,MS5.1
BFO Black Forest 48.43 305 P **P** **14 35 02.1 -0.1**
comp=Z,106nm,0.7s,mb6.0,SNR=7.0
BFO Black Forest 48.43 305 *e*P **P** **14 35 01.8 -0.4**
comp=Z,37nm,1.5s,mb5.2
BFO Black Forest 48.43 305 *e*P **P** **14 35 01.8 -0.4**
BFO pmax pmax
comp=Z,37nm,1.5s,mb5.2
BUG Bochum--Univer 48.46 309 *e*P **P** **14 35 02.2 -0.2**
comp=Z,48nm,1.3s,mb5.4
BUG eS S **14 42 02.2 -1.1**
KSM Kuching 48.50 129 *e*P **P** **14 35 02.3 -0.5**
LANF Langenberg 48.63 306 *e*P **P** **14 35 04.7 +1.0**
WTSB Winterswijk 48.65 310⇑ *e*P **P** **14 35 04.8 +0.9**
VAI Varese 48.73 302 P **P** **14 35 03.5 -1.0**
FELD Feldberg im Sc 48.75 305 *e*P **P** **14 35 03.9 -0.7**
KKM Kota Kinabalu 48.98 119 *e*P **P** **14 35 07.3 +0.9**
CDF Champ du Feu 49.10 306 *e*P **P** **14 35 05.9 -1.4**
comp=Z,46nm,1.0s,mb5.1
CDF Champ du Feu 49.10 306 *e*P **P** **14 35 05.9 -1.4**
CDF pmax pmax
comp=Z,23nm,1.0s,mb5.2
CDF Champ du Feu 49.10 306 *e*P **P** **14 35 05.9 -1.4**
comp=Z,23nm,1.0s,mb5.2
ECH Echery 49.22 305 *e*P **P** **14 35 08.8 +0.6**
MCGN Macugnaga 49.23 302 P **P** **14 35 08.2 -0.1**
MOF Molkenrain 49.32 305 *e*P **P** **14 35 06.9 -2.1**
MEM Membach 49.41 309 P **P** **14 35 10.0 +0.3**
HGN Heimansgroeve 49.43 309 *e*P **P** **14 35 12.7 +2.9**
comp=Z,21nm,1.3s,mb5.0
HGN *e*PP PP 14 37 09.4 +5.5
HGN eS S **14 42 12.0 -4.8**
HGN eSS SS 14 46 14.0 +25
HINF Hinteralfeld 49.52 305 *e*P **P** **14 35 08.9 -1.6**
comp=Z,69nm,1.0s,mb5.4
HINF Hinteralfeld 49.52 305 *e*P **P** **14 35 08.9 -1.6**
HINF pmax pmax
comp=Z,35nm,1.0s,mb5.3
HINF Hinteralfeld 49.52 305 *e*P **P** **14 35 08.9 -1.6**
comp=Z,35nm,1.0s,mb5.3
WLF Walferdange 49.53 307 *e*P **P** **14 35 10.7 +0.1**
comp=Z,34nm,0.9s,mb5.4
WLF Walferdange 49.53 307 P **P** **14 35 10.5 -0.1**
WLF Walferdange 49.53 307 *e*P **P** **14 35 10.5 -0.1**
WLF pmax pmax
comp=Z,35nm,0.8s,mb5.4
WLF Walferdange 49.53 307 *e*P **P** **14 35 10.5 -0.1**
comp=Z,35nm,0.8s,mb5.4
LOMF Lomont 49.65 304 *e*P **P** **14 35 11.7 +0.2**
HAU Haudompre 49.80 305 *e*P **P** **14 35 11.2 -1.4**
comp=Z,71nm,0.9s,mb5.4
HAU *e*R
comp=Z,4μm,19.8s
HAU Haudompre 49.80 305 *e*P **P** **14 35 11.2 -1.4**
HAU pmax pmax
comp=Z,36nm,0.9s,mb5.4
HAU MLR MLR
comp=Z,4μm,19.8s,MS5.5
HAU Haudompre 49.80 305 *e*P **P** **14 35 11.2 -1.4**
comp=Z,36nm,0.9s,mb5.4
HAU LR LR
comp=Z,4μm,19.8s,MS5.5
MAJO Matsushiro 49.83 71 *e*P **P** **14 35 11.7 -1.2**
comp=Z,36nm,0.8s,mb5.5
MAJO LR LR
comp=Z,1μm,21.0s,MS4.9
MAT Matsushiro 49.83 71 P **P** **14 35 12.3 -0.6**
MAT S S **14 42 24.0 +1.5**
MAT Matsushiro 49.83 71 *e*P **P** **14 35 12.0 -0.9**
comp=Z,25nm,0.8s,mb5.3
MAT eS S **14 42 25.0 +2.5**
MAT LR LR
comp=Z,13μm,20.0s,MS5.9
MJAR Matsushiro Arr 49.83 71 P **P** **14 35 13.0 +0.1**
comp=Z,32nm,0.9s,mb5.4,baz=290,slow=9.3,SNR=103
MJAR ScP ScP 14 40 33.8 +4.8
comp=Z,2.1nm,0.9s,baz=289,slow=4.9,SNR=5.2
MJAR LR LR 14 56 44.9
comp=Z,1μm,21.1s,MS4.8,baz=290,slow=37
YSS Yuzh-Sakhalins 49.84 56⇑ *i*P **P** **14 35 13.2 +0.2**
YSS *e**SP sP 14 35 17.0 -0.7
YSS *e* 14 36 38.7
YSS eS S **14 42 20.0 -2.6**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.6
YSS MLR MLR
comp=Z,4μm,14.0s,MS5.5
YSS MLR MLR
comp=E,4μm,15.0s
YSS Yuzh-Sakhalins 49.84 56 *e*P **P** **14 35 12.3 -0.6**
comp=E,86nm,1.1s,mb5.7
YSS LR LR
comp=Z,4μm,20.0s,MS5.5
BCLA Clavier 49.89 308 P **P** **14 35 12.2 -1.2**
THEF They Montfort 49.98 306 *e*P **P** **14 35 14.6 +0.6**
SAOF Saorge 50.07 300 *e*P **P** **14 35 14.7 0.0**
AUTN L'Aution 50.16 300 *e*P **P** **14 35 17.0 +1.6**
LPG La Plagne 50.19 302 *e*P **P** **14 35 14.8 -0.8**
comp=Z,107nm,0.7s,mb5.7
LPG La Plagne 50.19 302 *e*P **P** **14 35 14.8 -0.8**
LPG pmax pmax
comp=Z,54nm,0.7s,mb5.7
LPG La Plagne 50.19 302 *e*P **P** **14 35 14.8 -0.8**
comp=Z,54nm,0.7s,mb5.7
SBF Sospel 50.19 300 *e*P **P** **14 35 14.7 -0.9**
comp=Z,234nm,0.8s,mb6.0
SBF Sospel 50.19 300 *e*P **P** **14 35 14.7 -0.9**
comp=Z,117nm,0.8s,mb6.0
LPL La Plagne 50.20 302 *e*P **P** **14 35 14.9 -0.8**
comp=Z,123nm,0.9s,mb5.6
LPL La Plagne 50.20 302 *e*P **P** **14 35 14.9 -0.8**
LPL pmax pmax
comp=Z,62nm,0.9s,mb5.6
LPL La Plagne 50.20 302 *e*P **P** **14 35 14.9 -0.8**
comp=Z,62nm,0.9s,mb5.6
RSL Roselend 50.22 302 *e*P **P** **14 35 15.8 -0.1**
LUCF Luceram 50.24 300 *e*P **P** **14 35 17.3 +1.3**
OG22 Abries 50.25 301 *e*P **P** **14 35 15.8 -0.3**
GIVF Givet 50.27 308 *e*P **P** **14 35 15.3 -0.9**
comp=Z,53nm,0.9s,mb5.2
GIVF Givet 50.27 308 *e*P **P** **14 35 15.3 -0.9**
GIVF pmax pmax
comp=Z,26nm,0.9s,mb5.3
GIVF Givet 50.27 308 *e*P **P** **14 35 15.3 -0.9**
comp=Z,26nm,0.9s,mb5.3
TOUF Mont Tournerai 50.27 300 *e*P **P** **14 35 17.5 +1.2**
CABF La Chapelle 50.33 303 *e*P **P** **14 35 15.4 -1.3**
comp=Z,64nm,0.7s,mb5.5
CABF La Chapelle 50.33 303 *e*P **P** **14 35 15.4 -1.3**
CABF pmax pmax
comp=Z,32nm,0.7s,mb5.5
CABF La Chapelle 50.33 303 *e*P **P** **14 35 15.4 -1.3**
comp=Z,32nm,0.7s,mb5.5
UCC Uccle 50.39 309 P **P** **14 35 20.1 +3.0**
MBDF Montbardon 50.39 301 *e*P **P** **14 35 15.5 -1.7**
comp=Z,69nm,0.8s,mb5.5
MBDF Montbardon 50.39 301 *e*P **P** **14 35 15.5 -1.7**
MBDF pmax pmax
comp=Z,34nm,0.8s,mb5.4
MBDF Montbardon 50.39 301 *e*P **P** **14 35 15.5 -1.7**
comp=Z,34nm,0.8s,mb5.4
DOU Dourbes 50.41 308 P **P** **14 35 17.2 -0.1**
SNF Seneffe 50.51 309 P **P** **14 35 18.2 +0.2**
MEZF Maizieres J'vi 50.51 306 *e*P **P** **14 35 17.0 -1.1**
comp=Z,108nm,1.1s,mb5.4
MEZF Maizieres J'vi 50.51 306 *e*P **P** **14 35 17.0 -1.1**
comp=Z,108nm,1.1s,mb5.7
ASAJ Asahikawa 50.52 60 P **P** **14 35 17.5 -0.6**
comp=Z,8.7nm,0.8s,mb4.7,baz=293,slow=21,SNR=6.8
BAIF Baives 50.66 308 *e*P **P** **14 35 18.3 -0.9**
comp=Z,136nm,1.2s,mb5.5
BAIF Baives 50.66 308 *e*P **P** **14 35 18.3 -0.9**
BAIF pmax pmax
comp=Z,68nm,1.2s,mb5.5
BAIF Baives 50.66 308 *e*P **P** **14 35 18.3 -0.9**
comp=Z,68nm,1.2s,mb5.5
FRF La Foret Royal 50.83 300 *e*P **P** **14 35 19.0 -1.4**
comp=Z,98nm,0.8s,mb5.5
FRF La Foret Royal 50.83 300 *e*P **P** **14 35 19.0 -1.4**
FRF pmax pmax
comp=Z,49nm,0.8s,mb5.5
FRF La Foret Royal 50.83 300 *e*P **P** **14 35 19.0 -1.4**
comp=Z,49nm,0.8s,mb5.5
OG05 Jujurieux 50.91 303 *e*P **P** **14 35 22.0 +1.0**
ORIF Oris-en-Rattie 50.95 301 *e*P **P** **14 35 19.6 -1.7**
comp=Z,52nm,0.7s,mb5.3
ORIF *e*R
comp=Z,4μm,21.0s
ORIF Oris-en-Rattie 50.95 301 *e*P **P** **14 35 19.6 -1.7**
ORIF pmax pmax
comp=Z,26nm,0.7s,mb5.3
ORIF Oris-en-Rattie 50.95 301 *e*P **P** **14 35 19.6 -1.7**
comp=Z,26nm,0.7s,mb5.3
OG25 Le Caire 50.98 301 *e*P **P** **14 35 16.1 -5.5**
LMR La Mourre 50.99 299 *e*P **P** **14 35 20.1 -1.6**
comp=Z,45nm,0.9s,mb5.1
LMR La Mourre 50.99 299 *e*P **P** **14 35 20.1 -1.6**
LMR pmax pmax
comp=Z,22nm,0.9s,mb5.1
LMR La Mourre 50.99 299 *e*P **P** **14 35 20.1 -1.6**
comp=Z,22nm,0.9s,mb5.1
TAVF Tavernes 51.22 300 *e*P **P** **14 35 26.8 +3.4**
VILF Villemus 51.38 300 *e*P **P** **14 35 29.5 +4.9**
SMRF Simiane la Rot 51.44 300 *e*P **P** **14 35 23.8 -1.2**
comp=Z,40nm,0.7s,mb5.1
SMRF Simiane la Rot 51.44 300 *e*P **P** **14 35 23.8 -1.2**
comp=Z,40nm,0.7s,mb5.5
PUYF Puyloubier 51.49 300 *e*P **P** **14 35 26.1 +0.7**
KEST Kesra 51.56 289 P **P** **14 35 26.4 +0.5**
comp=Z,7.3nm,0.7s,mb4.7,baz=188,slow=1.9,SNR=16
KEST LR LR 15 00 49.7
comp=Z,576nm,21.0s,MS4.6,baz=172,slow=40
BERF Bertagne 51.56 300 *e*P **P** **14 35 29.5 +3.5**
LOR Lormes 51.62 305 *e*P **P** **14 35 24.4 -2.0**
comp=Z,30nm,0.9s,mb4.9
LOR *e*R
comp=Z,4μm,18.2s
LOR Lormes 51.62 305 *e*P **P** **14 35 24.4 -2.0**
LOR pmax pmax
comp=Z,15nm,0.9s,mb4.9
LOR MLR MLR
comp=Z,4μm,18.3s,MS5.4
LOR Lormes 51.62 305 *e*P **P** **14 35 24.4 -2.0**
comp=Z,15nm,0.9s,mb4.9
LOR LR LR
comp=Z,4μm,18.3s,MS5.4
TREF Trevaresse 51.68 300 *e*P **P** **14 35 27.3 +0.5**
VIVF Saint-Julien-l 51.78 302 *e*P **P** **14 35 26.4 -1.2**
comp=Z,55nm,0.8s,mb5.2
VIVF Saint-Julien-l 51.78 302 *e*P **P** **14 35 26.4 -1.2**
VIVF pmax pmax
comp=Z,28nm,0.8s,mb5.2
VIVF Saint-Julien-l 51.78 302 *e*P **P** **14 35 26.4 -1.2**
comp=Z,28nm,0.8s,mb5.2
SMF Signal de Mont 51.81 304 *e*P **P** **14 35 26.1 -1.7**
comp=Z,67nm,0.7s,mb5.4
SMF Signal de Mont 51.81 304 *e*P **P** **14 35 26.1 -1.7**
SMF pmax pmax
comp=Z,34nm,0.7s,mb5.4
SMF Signal de Mont 51.81 304 *e*P **P** **14 35 26.1 -1.7**
comp=Z,34nm,0.7s,mb5.4
MENF Mencas 51.81 309 *e*P **P** **14 35 31.5 +3.7**
SSF Saint Saulge 51.91 305 *e*P **P** **14 35 26.8 -1.7**
comp=Z,31nm,0.7s,mb5.0
SSF Saint Saulge 51.91 305 *e*P **P** **14 35 26.8 -1.7**
SSF pmax pmax
comp=Z,16nm,0.7s,mb5.1
SSF Saint Saulge 51.91 305 *e*P **P** **14 35 26.8 -1.7**
comp=Z,16nm,0.7s,mb5.0
AVF Avril sur Loir 52.09 304 *e*P **P** **14 35 28.2 -1.7**
comp=Z,97nm,0.7s,mb5.5
AVF Avril sur Loir 52.09 304 *e*P **P** **14 35 28.2 -1.7**
AVF pmax pmax
comp=Z,49nm,0.7s,mb5.5
AVF Avril sur Loir 52.09 304 *e*P **P** **14 35 28.2 -1.7**
comp=Z,49nm,0.7s,mb5.5
PLDF La Plantade 52.15 303 *e*P **P** **14 35 31.0 +0.6**
COLF Collangettes 52.24 303 *e*P **P** **14 35 30.7 -0.3**
HYF Humbligny 52.41 305 *e*P **P** **14 35 31.2 -1.1**
AGO Saint Agoulin 52.45 304 *e*P **P** **14 35 32.3 -0.3**
BGF Bois d'Agland 52.49 304 *e*P **P** **14 35 31.1 -1.8**
comp=Z,45nm,0.8s,mb5.1
BGF Bois d'Agland 52.49 304 *e*P **P** **14 35 31.1 -1.8**
BGF pmax pmax
comp=Z,23nm,0.8s,mb5.2
BGF Bois d'Agland 52.49 304 *e*P **P** **14 35 31.1 -1.8**
comp=Z,23nm,0.8s,mb5.2
LASF Ste Croix 52.58 301 *e*P **P** **14 35 31.7 -1.9**
comp=Z,102nm,0.9s,mb5.5
LBL Lubilhac 52.63 303 *e*P **P** **14 35 33.5 -0.4**
CMAH Djebel Manchou 52.66 291 P **P** **14 35 39.0 +4.9**
CGMA Guelma 52.73 291 P **P** **14 35 37.0 +2.4**
ABSA Djebel Ababsia 52.75 291 P **P** **14 35 40.5 +5.7**
JMIC Jan Mayen 52.95 336 *e*P **P** **14 35 29.0 -7.3**
JMIC eS S **14 43 08.6 +3.1**
JMIC *i* 14 46 58.8
JMIC AMS AMS 14 58 11.0

VERF **Verneugheol** 52.98 303 *e*P P 14 35 34.3 -2.2
TCF **Toulx Ste Croi** 52.99 304 *e*P P 14 35 35.4 -1.2
comp=Z,51nm,0.7s,mb5.3
TCF **Toulx Ste Croi** 52.99 304 *e*P P 14 35 35.4 -1.2
TCF pmax pmax
comp=Z,25nm,0.7s,mb5.2
TCF **Toulx Ste Croi** 52.99 304 *e*P P 14 35 35.4 -1.2
comp=Z,25nm,0.7s,mb5.3
MCD **Coleburn Disti** 53.18 319 *e*P P 14 35 38.7 +0.7
MCD **Coleburn Disti** 53.18 319 *e*P P 14 35 38.7 +0.7
KBI1 **Birley Grange** 53.31 313 *e*P P 14 35 40.1 +1.2
KBI1 **Birley Grange** 53.31 313 *e*P P 14 35 40.1 +1.2
LHO **Holmfirth** 53.42 314 *e*P P 14 35 40.2 +0.4
LHO **Holmfirth** 53.42 314 *e*P P 14 35 40.2 +0.4
CASM **Ain Smara** 53.49 291 P P 14 35 44.0 +3.8
CAF **Calviac** 53.52 303 *e*P P 14 35 39.5 -1.0
comp=Z,45nm,0.8s,mb5.1
CAF **Calviac** 53.52 303 *e*P P 14 35 39.5 -1.0
CAF pmax pmax
comp=Z,22nm,0.8s,mb5.1
CAF **Calviac** 53.52 303 *e*P P 14 35 39.5 -1.0
comp=Z,22nm,0.8s,mb5.2
COCO **West Island** 53.55 153 PFAKE 14 35 50.0 +9.3
COCO LR LR
comp=Z,2µm,19.0s,MS5.3
KWE **Weaver Farm** 53.55 313 *e*P P 14 35 41.6 +0.9
KWE **Weaver Farm** 53.55 313 *e*P P 14 35 41.6 +0.9
CTEI **Djebel Teioual** 53.63 291 P P 14 35 45.0 +3.7
ECK **Cauldkaine Hil** 53.71 316 *e*P P 14 35 42.3 +0.5
ECK AMb AMB 14 35 50.4
comp=Z,34nm,1.6s,mb5.0
ECK **Cauldkaine Hil** 53.71 316 *e*P P 14 35 42.3 +0.5
ECK AMb AMB 14 35 50.4
comp=Z,34nm,1.6s,mb5.0
ESK **Eskdalemuir** 53.72 316 *e*P P 14 35 41.3 -0.6
ESK pmax pmax
comp=Z,20nm,0.8s,mb5.1
ESK MLR MLR
comp=Z,2µm,20.0s,MS5.3
ESK **Eskdalemuir** 53.72 316 *e*P P 14 35 41.3 -0.6
comp=Z,20nm,0.8s,mb5.1
ESK LR LR
comp=Z,2µm,20.0s,MS5.3
RJF **Les Rejaudoux** 53.76 303 *e*P P 14 35 41.4 -0.8
comp=Z,68nm,0.9s,mb5.3
RJF *e*R
comp=Z,3µm,22.2s
RJF **Les Rejaudoux** 53.76 303 *e*P P 14 35 41.4 -0.8
RJF pmax pmax
comp=Z,34nm,0.9s,mb5.3
RJF MLR MLR
comp=Z,3µm,22.3s,MS5.2
RJF **Les Rejaudoux** 53.76 303 *e*P P 14 35 41.4 -0.8
comp=Z,34nm,0.9s,mb5.3
RJF LR LR
comp=Z,3µm,22.3s,MS5.2
LDF **La Druitiere** 53.79 307 *e*P P 14 35 40.6 -1.8
comp=Z,41nm,0.7s,mb5.2
LDF **La Druitiere** 53.79 307 *e*P P 14 35 40.6 -1.8
LDF pmax pmax
comp=Z,21nm,0.6s,mb5.2
LDF **La Druitiere** 53.79 307 *e*P P 14 35 40.6 -1.8
comp=Z,20nm,0.6s,mb5.2
DFRA **Djebel Bou Aff** 53.83 292 P P 14 35 48.0 +5.3
BBO1 **Bothel** 53.89 315 *e*P P 14 35 45.1 +1.9
BBO1 **Bothel** 53.89 315 *e*P P 14 35 45.1 +1.9
MTLF **Montolieu** 53.95 301 *e*P P 14 35 42.5 -1.1
comp=Z,34nm,0.8s,mb5.0
MTLF **Montolieu** 53.95 301 *e*P P 14 35 42.5 -1.1
MTLF pmax pmax
comp=Z,17nm,0.8s,mb5.0
MTLF **Montolieu** 53.95 301 *e*P P 14 35 42.5 -1.1
comp=Z,17nm,0.8s,mb5.0
FLN **La Foliniere** 53.96 308 *e*P P 14 35 41.8 -1.9
FLN *e*R
comp=Z,3µm,22.2s
FLN **La Foliniere** 53.96 308 *e*P P 14 35 41.8 -1.9
FLN LR LR
comp=Z,3µm,22.3s,MS5.3
BWH **Wardlaw** 54.00 316 *e*P P 14 35 44.8 +0.8
BWH **Wardlaw** 54.00 316 *e*P P 14 35 44.8 +0.8
EAB **Aberfoyle** 54.11 317 *e*P P 14 35 46.7 +1.9
EAB **Aberfoyle** 54.11 317 *e*P P 14 35 46.7 +1.9
HAE **Alders End** 54.24 312 *e*P P 14 35 46.3 +0.5
HAE AMb AMB 14 35 54.4
comp=Z,123nm,1.2s,mb5.7
HAE **Alders End** 54.24 312 *e*P P 14 35 46.3 +0.5
HAE AMb AMB 14 35 54.4
comp=Z,123nm,1.2s,mb5.7
KAC **Achnashellach** 54.27 319 *e*P P 14 35 47.5 +1.5
KAC **Achnashellach** 54.27 319 *e*P P 14 35 47.5 +1.5
CKHR **Kef el Ahmar** 54.31 291 P P 14 35 50.0 +3.8
GRR **Gorron** 54.31 307 *e*P P 14 35 44.2 -2.1
comp=Z,77nm,0.8s,mb5.4
GRR **Gorron** 54.31 307 *e*P P 14 35 44.2 -2.1
GRR pmax pmax
comp=Z,38nm,0.8s,mb5.4
GRR **Gorron** 54.31 307 *e*P P 14 35 44.2 -2.1
comp=Z,38nm,0.8s,mb5.4
SET **Setif** 54.32 291 P P 14 35 48.0 +1.7
SWK **Warminster** 54.33 311 *e*P P 14 35 46.7 +0.3
SWK **Warminster** 54.33 311 *e*P P 14 35 46.7 +0.3
LFF **La Frestale** 54.40 303 *e*P P 14 35 45.8 -1.1
comp=Z,79nm,0.8s,mb5.4
LFF **La Frestale** 54.40 303 *e*P P 14 35 45.8 -1.1
LFF pmax pmax
comp=Z,40nm,0.8s,mb5.4
LFF **La Frestale** 54.40 303 *e*P P 14 35 45.8 -1.1
comp=Z,40nm,0.8s,mb5.4
PMSU **Muirshiel** 54.42 317 *e*P P 14 35 48.4 +1.4
PMSU **Muirshiel** 54.42 317 *e*P P 14 35 48.4 +1.4
MFF **Saint Martin d** 54.43 305 *e*P P 14 35 46.2 -0.9
comp=Z,53nm,1.0s,mb5.1
MFF **Saint Martin d** 54.43 305 *e*P P 14 35 46.2 -0.9
MFF pmax pmax
comp=Z,27nm,1.0s,mb5.1
MFF **Saint Martin d** 54.43 305 *e*P P 14 35 46.2 -0.9
comp=Z,27nm,1.0s,mb5.1
HGH **Gray Hill** 54.52 312 *e*P P 14 35 48.6 +0.8
HGH AMb AMB 14 35 52.1
comp=Z,89nm,1.7s,mb5.5
HGH **Gray Hill** 54.52 312 *e*P P 14 35 48.6 +0.8
HGH AMb AMB 14 35 52.1
comp=Z,89nm,1.7s,mb5.5
MCH1 **Michaelchurch** 54.52 312 *e*P P 14 35 48.2 +0.4
MCH1 **Michaelchurch** 54.52 312 *e*P P 14 35 48.2 +0.4
HTR **Trewern Hill** 54.66 312 *e*P P 14 35 49.3 +0.6
HTR AMb AMB 14 35 57.5
comp=Z,73nm,1.0s,mb5.7
HTR **Trewern Hill** 54.66 312 *e*P P 14 35 49.3 +0.6
HTR AMb AMB 14 35 57.5
comp=Z,73nm,1.0s,mb5.7
WPM1 **Penmaenmawr** 54.68 314 *e*P P 14 35 50.5 +1.5
WPM1 **Penmaenmawr** 54.68 314 *e*P P 14 35 50.5 +1.5
KAR1 **Arisaig** 54.70 318 *e*P P 14 35 49.7 +0.6
KAR1 **Arisaig** 54.70 318 *e*P P 14 35 49.7 +0.6
LCHF **La Chataignera** 54.80 305 *e*P P 14 35 49.1 -0.7
ETOS **Mallorca** 54.82 296 P P 14 35 50.4 +0.4
comp=Z,571nm,2.3s,mb6.2
MLS **Moulis** 54.85 301 *e*P P 14 35 50.1 -0.1
WIM **Isle of Man** 54.86 315 *e*P P 14 35 51.5 +1.3
WIM AMb AMB 14 36 00.0
comp=Z,67nm,1.6s,mb5.4
WIM **Isle of Man** 54.86 315 *e*P P 14 35 51.5 +1.3
WIM AMb AMB 14 36 00.0
comp=Z,67nm,1.6s,mb5.4
YLL **Llanberis** 54.87 314 *e*P P 14 35 52.0 +1.7
YLL **Llanberis** 54.87 314 *e*P P 14 35 52.0 +1.7
DAV **Davao City (W)** 55.06 110 PFAKE 14 36 00.0 +8.3
DAV LR LR
comp=Z,2µm,20.0s,MS5.2
YRC **Rhoscolyn** 55.06 314 *e*P P 14 35 53.7 +2.0
YRC AMb AMB 14 36 00.7
comp=Z,52nm,1.8s,mb5.3
YRC **Rhoscolyn** 55.06 314 *e*P P 14 35 53.7 +2.0
YRC AMb AMB 14 36 00.7
comp=Z,52nm,1.8s,mb5.3
EPF **Esparros** 55.34 301 *e*P P 14 35 51.6 -2.1
comp=Z,31nm,1.0s,mb5.0
EPF **Esparros** 55.34 301 *e*P P 14 35 51.6 -2.1
EPF pmax pmax
comp=Z,15nm,1.0s,mb5.0
EPF **Esparros** 55.34 301 *e*P P 14 35 51.6 -2.1
comp=Z,15nm,1.0s,mb5.0

SGMF **Saint Gilles** 55.43 308 *e*P P 14 35 53.6 -0.8
comp=Z,52nm,0.9s,mb5.3
SGMF **Saint Gilles** 55.43 308 *e*P P 14 35 53.6 -0.8
SGMF pmax pmax
comp=Z,26nm,0.9s,mb5.3
SGMF **Saint Gilles** 55.43 308 *e*P P 14 35 53.6 -0.8
comp=Z,26nm,0.9s,mb5.3
EPOB **Poblet** 55.45 299 P P 14 35 53.8 -0.7
comp=Z,45nm,1.5s,mb5.3
MBAR **Mbarara** 55.50 237⇑*i*P P 14 35 53.1 -1.8
DYA **Yadsworthy** 55.56 311 *e*P P 14 35 57.0 +1.7
DYA **Yadsworthy** 55.56 311 *e*P P 14 35 57.0 +1.7
EBIE **Bielsa** 55.60 301 P P 14 35 55.5 -0.1
comp=Z,82nm,3.0s
VIEF **Viey** 55.61 301 *e*P P 14 35 55.3 -0.4
ROSF **Rostrenen** 55.85 308 *e*P P 14 35 55.6 -1.8
comp=Z,47nm,0.8s,mb5.2
ROSF **Rostrenen** 55.85 308 *e*P P 14 35 55.6 -1.8
ROSF pmax pmax
comp=Z,23nm,0.8s,mb5.3
ROSF **Rostrenen** 55.85 308 *e*P P 14 35 55.6 -1.8
comp=Z,23nm,0.8s,mb5.3
QUIF **Quistinic** 55.93 307 *e*P P 14 35 56.0 -1.9
comp=Z,24nm,0.6s,mb5.1
QUIF **Quistinic** 55.93 307 *e*P P 14 35 56.0 -1.9
QUIF pmax pmax
comp=Z,12nm,0.6s,mb5.1
QUIF **Quistinic** 55.93 307 *e*P P 14 35 56.0 -1.9
comp=Z,12nm,0.6s,mb5.1
ETSF **Etsaut** 56.00 301 *e*P P 14 35 57.4 -1.1
comp=Z,38nm,0.8s,mb5.2
ETSF **Etsaut** 56.00 301 *e*P P 14 35 57.4 -1.1
ETSF pmax pmax
comp=Z,19nm,0.8s,mb5.2
ETSF **Etsaut** 56.00 301 *e*P P 14 35 57.4 -1.1
comp=Z,19nm,0.8s,mb5.2
ERTA **Horta de San J** 56.12 299 P P 14 35 59.2 -0.1
comp=Z,76nm,1.2s,mb5.6
EMHD **Djebel Mahouad** 56.13 292 P P 14 36 04.0 +4.6
EIBI **Ibiza** 56.16 296 P P 14 35 57.9 -1.7
comp=Z,264nm,2.3s,mb5.9
DLF **Lyons Farm** 56.17 314 *e*P P 14 36 02.3 +2.6
CSA1 **St Austell** 56.17 311 *e*P P 14 36 00.8 +1.2
CSA1 **St Austell** 56.17 311 *e*P P 14 36 00.8 +1.2
SJPF **Ste Jean** 56.38 301 *e*P P 14 35 59.4 -1.7
comp=Z,32nm,1.0s,mb5.0
SJPF **Ste Jean** 56.38 301 *e*P P 14 35 59.4 -1.7
SJPF pmax pmax
comp=Z,16nm,1.0s,mb5.0
SJPF **Ste Jean** 56.38 301 *e*P P 14 35 59.4 -1.7
comp=Z,16nm,1.0s,mb5.0
CRQ2 **Rosemanowes 2** 56.40 311 *e*P P 14 36 03.0 +1.7
CRQ2 AMb AMB 14 36 10.2
comp=Z,43nm,2.0s,mb5.1
CRQ2 **Rosemanowes 2** 56.40 311 *e*P P 14 36 03.0 +1.7
CRQ2 AMb AMB 14 36 10.2
comp=Z,43nm,2.0s,mb5.1
CGH1 **Goonhilly** 56.44 310 *e*P P 14 36 03.4 +1.8
CGH1 **Goonhilly** 56.44 310 *e*P P 14 36 03.4 +1.8
BILL **Bilibino** 56.45 27⇑*e*P P 14 36 01.7 +0.1
BILL *i*S S 14 43 45.3 -7.2
BILL pmax pmax
comp=Z,31nm,1.2s,mb5.2
BILL **Bilibino** 56.45 27 *e*P P 14 36 01.3 -0.4
comp=Z,42nm,1.0s,mb5.4
BILL LR LR
comp=Z,3µm,19.0s,MS5.4
EALK **Alkurruntz** 56.53 302 P P 14 36 01.4 -0.9
comp=Z,77nm,2.0s,mb5.4
ELIZ **Elizondo** 56.56 302 P P 14 36 06.8 +4.3
ELIZ pmax pmax
comp=Z,25nm,1.2s,mb5.1
ELIZ **Elizondo** 56.56 302 P P 14 36 06.8 +4.4
comp=Z,25nm,1.2s,mb5.1
DCN **Croghan** 56.58 315 *e*P P 14 36 02.1 -0.5
EMOS **Mosqueruela** 56.91 298 P P 14 36 05.8 +0.8
comp=Z,110nm,2.2s,mb5.5
SKR **Severo-Kuril's** 57.13 48 P P 14 36 01.2 -5.3
SKR *e*PS 14 43 54.0
SKR pmax pmax
comp=N,20nm,0.5s
SKR pmax pmax
comp=Z,40nm,0.5s,mb5.7
SKR MLR MLR
comp=N,2µm,14.0s,MS5.6
SKR MLR MLR
comp=E,3µm,14.0s,MS5.6
SKR MLR MLR
comp=Z,3µm,14.0s,MS5.5
EBNR **Beni Rached** 57.14 293 P P 14 36 07.0 +0.5
ECHA **Ech Chlef** 57.31 293 P P 14 36 09.0 +1.2
EBEN **Beniarda** 57.41 296 P P 14 36 10.7 +2.3
comp=Z,119nm,1.6s,mb5.7
ECHE **Chenar** 57.57 297 P P 14 36 10.0 +0.4
comp=Z,10nm,0.9s,mb4.9
EANR **'Ain N'Sour** 57.60 293 P P 14 36 10.0 +0.2
ETRT **Tiaret** 57.69 292 P P 14 36 11.0 +0.6
PET **Petropavlovsk** 57.78 45 *e*P P 14 36 09.0 -2.1
PET *i*S S 14 44 05.3 -4.8
PET *e*SS SS 14 48 06.9 +6.4
PET pmax pmax
comp=Z,41nm,0.9s,mb5.5
PET MLR MLR
comp=Z,2µm,18.0s,MS5.3
PET MLR MLR
comp=Z,2µm,20.0s
PET **Petropavlovsk** 57.78 45 *e*P P 14 36 09.1 -2.0
comp=Z,30nm,0.9s,mb5.3
PET LR LR
comp=Z,2µm,19.0s,MS5.3
ELAN **Lanestosa** 57.83 302 P P 14 36 11.7 +0.3
comp=Z,42nm,1.2s,mb5.3
ETOB **Tobarra** 58.37 297 P P 14 36 14.8 -0.4
comp=Z,54nm,1.6s,mb5.3
CART **Cartagena** 58.43 295 *e*P P 14 36 19.0 +3.4
comp=Z,102nm,0.8s,mb5.9
EMUR **La Murta** 58.49 296 P P 14 36 16.7 +0.6
comp=Z,92nm,2.2s,mb5.4
VAL **Valentia** 58.76 314 *e*P P 14 36 18.7 +0.8
VAL *e*LQ 14 56 26.4
EARI **Arriondas** 58.99 303 P P 14 36 20.2 +0.7
comp=Z,62nm,1.5s,mb5.4
EVIA **Vianos** 59.05 297 P P 14 36 19.7 -0.3
comp=Z,13nm,1.4s,mb4.8
BORG **Borgarnes** 59.28 330 PFAKE 14 36 30.0 +8.4
BORG LR LR
comp=Z,2µm,22.0s,MS5.2
GUD **Guadarrama** 59.37 300 P P 14 36 21.7 -0.5
comp=Z,3.0nm,0.6s,mb4.5
EHUE **Huescar** 59.47 296 P P 14 36 22.4 -0.5
EHUE pmax pmax
comp=Z,61nm,1.2s,mb5.5
EHUE **Huescar** 59.47 296 P P 14 36 22.4 -0.5
comp=Z,61nm,1.2s,mb5.5
ENIJ **Nijar** 59.56 295 P P 14 36 23.8 +0.3
ENIJ pmax pmax
comp=Z,93nm,1.1s,mb5.7
ENIJ **Nijar** 59.56 295 P P 14 36 23.8 +0.3
comp=Z,93nm,1.1s,mb5.7
ESDC **Sonseca Array** 59.64 299 P P 14 36 22.8 -1.2
comp=Z,4.1nm,0.5s,mb4.7,baz=58,slow=6.9,SNR=30
ESDC LR LR 15 04 20.7
comp=Z,757nm,19.1s,MS4.8,baz=55,slow=38
ESDC PKP2bc 15 06 07.4
comp=Z,0.1nm,0.3s,baz=266,slow=3.9,SNR=4.5
ESDC **Sonseca Array** 59.64 299 P P 14 36 23.1 -0.9
comp=Z,7.8nm,0.7s,mb4.8
ESLA **Sonseca Array** 59.64 299 *e*P P 14 36 23.1 -0.9
comp=Z,10nm,1.2s,mb4.7
ESLA LR LR
comp=Z,5µm,20.0s,MS5.7
EQES **Quesada** 59.82 296 P P 14 36 24.0 -1.2
comp=Z,37nm,1.0s,mb5.4
EBER **Berja** 60.08 295 P P 14 36 26.9 -0.2
comp=Z,22nm,0.8s,mb5.2
EBAN **Banos Encina** 60.17 297 P P 14 36 27.2 -0.5
EBAN pmax pmax
comp=Z,27nm,0.7s,mb5.4
EBAN **Banos Encina** 60.17 297 P P 14 36 27.2 -0.5
comp=Z,27nm,0.7s,mb5.4
EPON **Pontenova** 60.27 304 P P 14 36 28.9 +0.6
comp=Z,26nm,0.8s,mb5.3
ECOG **Cogollos-Vega** 60.40 296 P P 14 36 29.5 +0.2
ECOG pmax pmax
comp=Z,20nm,1.2s,mb5.0
ECOG **Cogollos-Vega** 60.40 296 P P 14 36 29.5 +0.2

comp=Z,20nm,1.2s,mb5.0
ECAL **Calabor** 60.58 302 P P 14 36 30.4 0.0
comp=Z,29nm,1.1s,mb5.3
EGUA **Guajares** 60.60 296 P P 14 36 30.2 -0.4
comp=Z,3.4nm,0.8s,mb4.5
ERON **Agron** 60.69 296 P P 14 36 30.1 -1.1
comp=Z,16nm,0.7s,mb5.3
EADA **Adamuz** 60.73 297 P P 14 36 30.0 -1.4
comp=Z,24nm,1.3s,mb5.2
ELUQ **Luque** 60.78 297 P P 14 36 30.4 -1.4
ELUQ pmax pmax
comp=Z,26nm,0.9s,mb5.4
ELUQ **Luque** 60.78 297 P P 14 36 30.4 -1.4
comp=Z,26nm,0.9s,mb5.4
ELOJ **Sierra Loja** 60.88 296 P P 14 36 32.9 +0.4
ELOJ pmax pmax
comp=Z,11nm,0.6s,mb5.2
ELOJ **Sierra Loja** 60.88 296 P P 14 36 32.9 +0.4
comp=Z,11nm,0.6s,mb5.2
SUMG **Summit** 61.13 342 *e*P P 14 36 34.2 -0.1
comp=Z,109nm,0.9s,mb6.0
ELOB **Lobios** 61.50 303 P P 14 36 37.6 +0.9
comp=Z,57nm,1.5s,mb5.5
EMIJ **Mijas** 61.59 296 P P 14 36 35.7 -1.6
comp=Z,18nm,1.2s,mb5.1
MTE **Manteigas** 61.80 301 *e*P P 14 36 42.4 +3.7
MTE *e*S S 14 45 04.0 +2.1
MTE *e*LQ 14 53 39.4
MTE *e*LR LR 14 59 09.3
comp=Z,970nm,18.9s
MTE **Manteigas** 61.80 301 P P 14 36 38.0 -0.7
comp=Z,78nm,1.4s,mb5.6
PVIS **Viseu** 61.90 301 *e*P P 14 36 40.1 +0.7
comp=Z,33nm,1.0s,mb5.4
PCBR **Castelo Branco** 62.00 300 *e*P P 14 36 42.8 +2.7
comp=Z,28nm,1.4s,mb5.2
EJIF **Jimena Fronter** 62.13 296 P P 14 36 40.5 -0.5
EJIF pmax pmax
comp=Z,26nm,1.2s,mb5.2
EJIF **Jimena Fronter** 62.13 296 P P 14 36 40.5 -0.5
comp=Z,26nm,1.2s,mb5.2
EBAD **Badajoz** 62.17 299 P P 14 36 41.2 0.0
comp=Z,33nm,1.3s,mb5.3
ESPR **Espera** 62.22 297 P P 14 36 40.4 -1.2
comp=Z,140nm,1.8s,mb5.8
EMIN **Mina Concepcio** 62.38 298 P P 14 36 41.8 -0.8
comp=Z,53nm,1.1s,mb5.6
PESTR **Estremoz** 62.52 299 *e*P P 14 36 44.1 +0.5
comp=Z,20nm,1.5s,mb5.0
PTOM **Tomar** 62.75 300 *e*P P 14 36 45.8 +0.7
EGRO **El Granado** 63.06 298 P P 14 36 46.8 -0.3
comp=Z,93nm,1.7s,mb5.6
PBEJ **Beja** 63.10 299 *e*P P 14 36 47.6 +0.1
MDT **Midelt** 63.22 292 LR LR 15 06 35.5
comp=Z,794nm,20.8s,MS4.9,baz=291,slow=38
PTEO **Sao Teotonio** 63.93 298 *e*P P 14 36 52.8 -0.1
TNA **Tin City** 66.53 24 *e*P P 14 37 09.2 -0.6
comp=Z,40nm,1.0s,mb5.4
TNA LR LR
comp=Z,1µm,21.0s,MS5.1
SFJD **Kangerlussuaq** 67.94 340⇑*i*P P 14 37 20.6 +1.9
comp=Z,37nm,1.0s,mb5.4
SFJD *i*S S 14 46 23.2 +5.7
SFJD
comp=Z,850nm,20.0s
SFJD **Kangerlussuaq** 67.94 340⇑*i*P P 14 37 20.6 +1.9
SFJD *i*S S 14 46 23.2 +5.7
SFJD pmax pmax
comp=Z,37nm,1.0s,mb5.4
SFJD MLR MLR
comp=Z,860nm,20.0s,MS5.0
RES **Resolute Bay** 67.95 357 P P 14 37 18.7 -0.1
comp=Z,9.4nm,0.8s,mb4.9
LSZ **Lusaka** 68.28 229 P P 14 37 20.5 -0.4
SNR=5.5
LSZ **Lusaka** 68.28 229 *e*P P 14 37 19.9 -1.0
LSZ pmax pmax
comp=Z,18nm,1.0s,mb5.1
LSZ MLR MLR
comp=Z,755nm,19.0s,MS4.9
LSZ **Lusaka** 68.28 229 *e*P P 14 37 19.9 -1.0
comp=Z,18nm,1.0s,mb5.1
LSZ LR LR
comp=Z,755nm,19.0s,MS4.9
TOA0 **Torodi Ar. Sit** 68.71 270 *e*P P 14 37 21.8 -1.7
TORD **Torodi Ar. Bea** 68.71 270 P P 14 37 22.4 -1.2
comp=Z,12nm,0.5s,mb5.0,baz=46,slow=5.7,SNR=47
TORD LR LR 15 11 10.5
comp=Z,1µm,19.0s,MS5.1,baz=55,slow=39
AMKA **Amchitka** 69.75 40 *e*P P 14 37 29.8 -0.2
IMA2 **Indian Mountai** 70.30 19 *e*P P 14 37 32.6 -0.8
MBWA **Marble Bar** 72.06 136 *e*P P 14 37 43.5 -0.5
comp=Z,38nm,1.0s,mb5.3
MBWA LR LR
comp=Z,884nm,20.0s,MS5.0
TTA **Tatalina** 72.08 22 *e*P P 14 37 44.7 +0.6
INK **Inuvik** 72.47 11 *e*P P 14 37 45.6 -0.9
INK pmax pmax
comp=Z,56nm,1.0s
INK **Inuvik** 72.47 11 *e*P P 14 37 45.5 -0.9
comp=Z,56nm,1.0s,mb5.5
COLA **College** 72.72 18*d i*P P 14 37 46.7 -1.3
COLA **College** 72.72 18 *e*P P 14 37 46.9 -1.1
comp=Z,60nm,1.0s,mb5.5
COLA LR LR
comp=Z,1µm,20.0s,MS5.3
FITZ **Fitzroy Crossi** 73.12 130 *e*P P 14 37 50.5 +0.2
comp=Z,24nm,1.2s,mb5.0
MCK **McKinley** 73.39 19 *e*P P 14 37 50.9 -1.1
comp=Z,7.7nm,0.7s,mb4.7
MCK LR LR
comp=Z,509nm,21.0s,MS4.8
KAKA **Kakadu** 73.59 121 *e*P P 14 37 52.9 -0.2
comp=Z,19nm,0.6s,mb5.2
SVW2 **Sparrevohn** 73.62 23 *e*P P 14 37 53.5 +0.2
UNV **Unalaska Valle** 74.90 33 PFAKE 14 38 10.0 +9.2
UNV LR LR
comp=Z,7µm,22.0s,MS5.9
PMR **Palmer** 75.10 20 *e*P P 14 38 00.9 -1.0
comp=Z,52nm,1.1s,mb5.4
DAWY **Dawson** 75.30 15 *e*P P 14 38 01.7 -1.3
MENT **Mentasta** 75.34 17 *e*P P 14 38 04.2 +0.9
SLKM **Skilak Lake** 75.69 21 *e*P P 14 38 03.6 -1.7
DIV **Divide** 76.38 19 *e*P P 14 38 09.4 +0.1
comp=Z,82nm,0.9s,mb5.7
DIV LR LR
comp=Z,6µm,20.0s,MS5.9
EYAK **Cordova Ski Ar** 76.88 19 *e*P P 14 38 11.7 -0.4
KDAK **Kodiak Island** 77.18 24 P P 14 38 14.2 +0.5
comp=Z,396nm,0.9s,mb6.3,SNR=5.8
KDAK **Kodiak Island** 77.18 24 *e*P P 14 38 13.0 -0.7
comp=Z,79nm,1.0s,mb5.6
KDAK LR LR
comp=Z,434nm,20.0s,MS4.8
LBTB **Lobatse** 77.40 225 *e*P P 14 38 14.0 -1.0
LBTB pmax pmax
comp=Z,38nm,1.0s,mb5.3
LBTB MLR MLR
comp=Z,586nm,19.0s,MS4.9
LBTB **Lobatse** 77.40 225 *e*P P 14 38 14.0 -1.0
comp=Z,38nm,1.0s,mb5.3
LBTB LR LR
comp=Z,586nm,19.0s,MS4.9
DBIC **Dimbokro** 77.71 269 P P 14 38 15.7 -1.0
comp=Z,22nm,1.0s,mb5.0,baz=27,slow=8.0,SNR=8.1
DBIC LR LR 15 16 13.8
comp=Z,1µm,18.1s,MS5.3,baz=220,slow=39
DBIC **Dimbokro** 77.71 269 *e*P P 14 38 16.2 -0.5
DBIC pmax pmax
comp=Z,25nm,0.9s
DBIC MLR MLR
comp=Z,1µm,19.0s
DBIC **Dimbokro** 77.71 269 *e*P P 14 38 16.2 -0.5
comp=Z,25nm,0.9s,mb5.2
DBIC LR LR
comp=Z,1µm,19.0s,MS5.3
TSUM **Tsumeb** 77.86 234 *e*P P 14 38 16.4 -1.1
comp=Z,8.8nm,0.8s,mb4.7
TSUM LR LR
comp=Z,1µm,20.0s,MS5.2
LIC **Lamto** 78.11 269 *e*P P 14 38 15.9 -3.1
comp=Z,57nm,0.9s,mb5.2
LIC *e*R
comp=Z,2µm,20.5s
LIC **Lamto** 78.11 269 *e*P P 14 38 15.9 -3.1
comp=Z,28nm,0.9s,mb5.2
LIC LR LR

comp=Z,1μm,20.5s,MS5.1
WRAB Tennant Creek 80.01 124 P **P** 14 38 29.0 -0.3
comp=Z,203nm,1.3s,mb5.9,SNR=8.0
WRAB Tennant Creek 80.01 124 *e*P **P** 14 38 28.6 -0.7
WRAB Tennant Creek 80.01 124 *e*P **P** 14 38 29.2 -0.2
comp=Z,128nm,1.4s,mb5.7
WRAB LR LR
comp=Z,714nm,19.0s,MS5.0
WB2 Warramunga Arr 80.01 124 *e*P **P** 14 38 28.4 -1.0
WAKE Wake Island 80.02 73 PFAKE 14 38 40.0 +11
WAKE LR LR
comp=Z,595nm,21.0s,MS4.9
YKA Yellowknife Ar 80.13 4 P **P** 14 38 28.6 -1.4
comp=Z,20nm,0.7s,mb5.2,baz=346,slow=5.3,SNR=41
YKA LR LR 15 18 28.0
comp=Z,1μm,18.2s,MS5.2,baz=15,slow=39
YKA Yellowknife Ar 80.13 4 P **P** 14 38 28.6 -1.4
YKA pmax pmax
comp=Z,20nm,0.7s
YKA MLR MLR
comp=Z,1μm,18.2s
SKAG Skagway 80.30 15 *e*P **P** 14 38 30.8 -0.1
BOSA Boshof 80.42 223 P **P** 14 38 29.6 -2.0
comp=Z,12nm,1.0s,mb4.8,baz=49,slow=4.3,SNR=14
BOSA LR LR 15 12 55.5
comp=Z,560nm,20.7s,MS4.9,baz=41,slow=35
NWAO Narrogin (SRO) 80.44 145 LR LR 15 14 04.3
comp=Z,609nm,21.6s,MS4.9,baz=330,slow=36
NWAO Narrogin (SRO) 80.44 145 PFAKE 14 38 40.0 +8.3
NWAO LR LR
comp=Z,675nm,20.0s,MS5.0
PMG Port Moresby 82.03 108 LR LR 15 18 42.2
comp=Z,324nm,22.0s,MS4.7,baz=175,slow=38
PMG Port Moresby 82.03 108 *e*P **P** 14 38 41.9 +1.8
PMG Port Moresby 82.03 108 PFAKE 14 38 50.0 +10
PMG LR LR
comp=Z,417nm,22.0s,MS4.8
DLBC Dease Lake 82.27 13 P **P** 14 38 41.6 +0.2
comp=Z,19nm,1.0s,mb5.0,baz=327,slow=4.5,SNR=5.4
SCHQ Schefferville 82.36 339 P **P** 14 38 41.0 -0.8
comp=Z,8.1nm,0.9s,mb4.7,baz=23,slow=5.2,SNR=7.5
SCHQ LR LR 15 14 26.2
comp=Z,1μm,21.7s,MS5.3,baz=68,slow=35
SCHQ Schefferville 82.36 339 *e*P **P** 14 38 41.4 -0.4
comp=Z,18nm,1.1s,mb4.9
SCHQ LR LR
comp=Z,2μm,22.0s,MS5.5
ASPA Alice Springs 82.39 127 *e*P **P** 14 38 41.6 -0.4
AS31 Alice Springs 82.40 127 *e*P **P** 14 38 41.6 -0.4
ASAR Alice Springs 82.40 127 P **P** 14 38 41.1 -0.9
comp=Z,8.0nm,0.7s,mb4.7,baz=312,slow=5.5,SNR=28
ASAR PKKPbc PKKPbc 14 57 11.3 +2.8
comp=Z,0.4nm,0.6s,baz=115,slow=2.4,SNR=5.2
ASAR LR LR 15 20 51.0
comp=Z,325nm,20.7s,MS4.7,baz=321,slow=40
SIT Sitka 82.50 16 PFAKE 14 38 50.0 +7.4
SIT LR LR
comp=Z,2μm,20.0s,MS5.5
FCC Fort Churchill 83.71 354 *e*P **P** 14 38 49.1 +0.3
FCC pmax pmax
comp=Z,20nm,1.1s,mb5.2
FCC Fort Churchill 83.71 354 *e*P **P** 14 38 49.1 +0.3
comp=Z,20nm,1.1s,mb5.2
FORT Forrest 84.21 136 *e*P **P** 14 38 50.8 -0.6
comp=Z,47nm,0.9s,mb5.6
SUR Sutherland 85.75 223 PFAKE 14 39 10.0 +11
SUR LR LR
comp=Z,1μm,19.0s,MS5.2
MIDW Midway 86.06 57 PFAKE 14 39 10.0 +9.3
MIDW LR LR
comp=Z,523nm,20.0s,MS4.9
FFC Flin Flon 88.16 358 P **P** 14 39 10.0 -0.9
comp=Z,102nm,1.1s,mb6.0,SNR=5.2
CTA Charters Tower 88.26 117 *e*P **P** 14 39 11.3 0.0
comp=Z,12nm,0.9s,mb5.1
CTA Charters Tower 88.26 117 *e*P **P** 14 39 11.3 0.0
CTA pmax pmax
comp=Z,12nm,0.9s
CTAO Charters Tower 88.26 117 *e*P **P** 14 39 11.3 0.0
CTAO pmax pmax
comp=Z,18nm,0.9s,mb5.3
CTAO MLR MLR
comp=Z,602nm,21.0s,MS5.0
CTAO Charters Tower 88.26 117 *e*P **P** 14 39 11.3 0.0
comp=Z,18nm,0.9s,mb5.3
CTAO LR LR
comp=Z,602nm,21.0s,MS5.0
EDM Edmonton 89.44 5 *e*P **P** 14 39 16.2 -0.7
HNR Honiara 91.90 100 LR LR 15 19 43.6
comp=Z,289nm,20.7s,MS4.7,baz=359,slow=35
HNR Honiara 91.90 100 PFAKE 14 39 40.0 +12
HNR LR LR
comp=Z,323nm,20.0s,MS4.8
ULM Lac du Bonnet 92.30 354 P **P** 14 39 29.2 -1.0
comp=Z,7.0nm,0.8s,mb5.0,baz=352,slow=4.4,SNR=5.2
ULM LR LR 15 23 25.8
comp=Z,2μm,20.9s,MS5.5,baz=184,slow=37
ULM Lac du Bonnet 92.30 354 P **P** 14 39 28.7 -1.4
comp=Z,11nm,1.0s,mb5.1
ULM LR LR
comp=Z,3μm,21.0s,MS5.7
STKA Stephens Creek 92.99 128 *e*P **P** 14 39 33.1 -0.2
comp=Z,2.0nm,0.9s,mb4.5
STKA Stephens Creek 92.99 128 P **P** 14 39 32.7 -0.6
comp=Z,2.0nm,0.7s,mb4.7,baz=317,slow=11,SNR=4.5
STKA LR LR 15 25 18.1
comp=Z,706nm,19.6s,MS5.1,baz=130,slow=38
LBNH Lisbon 93.27 337 PFAKE 14 39 50.0 +15
LBNH LR LR
comp=Z,2μm,22.0s,MS5.4
WALA Waterton Lakes 93.54 6 *e*P **P** 14 39 35.5 -0.4
comp=Z,13nm,1.1s,mb5.3
LONY Lake Ozonia 93.73 339 *e*P **P** 14 39 37.2 +0.4
NEW Newport 94.03 8 P **P** 14 39 37.6 -0.5
comp=Z,5.6nm,0.8s,mb5.0,baz=344,slow=4.0,SNR=7.7
NEW PP PP 14 43 21.9 -2.3
comp=Z,2.3nm,0.8s,baz=307,slow=6.5,SNR=3.1
NEW Newport 94.03 8 *e*P **P** 14 39 37.4 -0.8
comp=Z,6.8nm,0.9s,mb5.1
NEW LR LR
comp=Z,1μm,20.0s,MS5.3
EYMN Ely 94.11 351 *e*P **P** 14 39 37.1 -1.4
comp=Z,16nm,0.9s,mb5.5
EYMN LR LR
comp=Z,2μm,19.0s,MS5.5
NCB Newcomb 94.22 338 PFAKE 14 39 50.0 +11
NCB LR LR
comp=Z,800nm,20.0s,MS5.2
HRV Harvard--Oak R 94.71 336 PFAKE 14 39 50.0 +8.7
HRV LR LR
comp=Z,960nm,19.0s,MS5.3
WES Weston 94.74 335 PFAKE 14 39 50.0 +8.6
WES LR LR
comp=Z,809nm,22.0s,MS5.2
EGMT Eagleton 94.83 3 PFAKE 14 39 50.0 +8.2
EGMT LR LR
comp=Z,859nm,20.0s,MS5.2
HAWA Hanford 95.57 10 PFAKE 14 40 00.0 +15
HAWA LR LR
comp=Z,59nm,19.0s
CHMT Chamberlain Mo 95.72 5 *e*P **P** 14 39 44.4 -1.5
MSO Missoula 95.75 6 PFAKE 14 40 00.0 +14
MSO LR LR
comp=Z,812nm,20.0s,MS5.2
LAO LASA Array 96.25 1 *e*P **P** 14 39 49.2 +0.9
comp=Z,16nm,1.1s,mb5.4
LAO LR LR
comp=Z,2μm,19.0s,MS5.5
BINY Binghamton 96.36 339 PFAKE 14 40 00.0 +11
BINY LR LR
comp=Z,1μm,21.0s,MS5.3
COR Corvallis 96.74 13 PFAKE 14 40 00.0 +9.5
COR LR LR
comp=Z,252nm,22.0s,MS4.7
BOZ Bozeman (W) 97.10 4 *e*P **P** 14 39 52.5 +0.4
comp=Z,2.2nm,0.8s,mb4.6
BOZ LR LR
comp=Z,978nm,19.0s,MS5.3
BMO Blue Mountains 97.37 9 PFAKE 14 40 00.0 +6.6
BMO LR LR
comp=Z,806nm,21.0s,MS5.2
ERPA Erie 97.53 341 PFAKE 14 40 00.0 +5.9
ERPA LR LR
comp=Z,1μm,20.0s,MS5.4
YMR Madison River 98.11 4 PFAKE 14 40 10.0 +13
YMR LR LR
comp=Z,1μm,20.0s,MS5.4

AAM Ann Arbor 98.23 344 PFAKE 14 40 10.0 +13
AAM LR LR
comp=Z,886nm,19.0s,MS5.3
LKWY Lake 98.25 4 PFAKE 14 40 10.0 +13
LKWY LR LR
comp=Z,2μm,19.0s,MS5.7
SSPA Standing Stone 98.35 339 PFAKE 14 40 10.0 +12
SSPA LR LR
comp=Z,327nm,22.0s,MS4.8
RSSD Black Hills 98.81 359 PFAKE 14 40 10.0 +10
RSSD LR LR
comp=Z,569nm,20.0s,MS5.1
JFWS Jewell Farm 98.87 349 PFAKE 14 40 10.0 +10
JFWS LR LR
comp=Z,1μm,19.0s,MS5.4
HLID Hailey 98.95 7 PFAKE 14 40 10.0 +10
HLID LR LR
comp=Z,1μm,21.0s,MS5.4
WVOR Wild Horse Val 99.58 10 PFAKE 14 40 10.0 +6.7
WVOR LR LR
comp=Z,1μm,20.0s,MS5.4
YBH Yreka Blue Hor 99.62 13 PFAKE 14 40 10.0 +6.6
YBH LR LR
comp=Z,832nm,20.0s,MS5.2
MCWV Mont Chateau 99.80 340 PFAKE 14 40 20.0 +16
MCWV LR LR
comp=Z,1μm,22.0s,MS5.4
AHID Auburn Hatcher 100.00 4 PFAKE 14 40 20.0 +15
AHID LR LR
comp=Z,946nm,19.0s,MS5.3
ACSO Alum Creek Sta 100.05 343 PFAKE 14 40 20.0 +15
ACSO LR LR
comp=Z,572nm,19.0s,MS5.1
BW06 Boulder Array 100.08 3 PFAKE 14 40 20.0 +15
BW06 LR LR
comp=Z,1μm,19.0s,MS5.4
PDAR Pinedale Array 100.08 3 PP PP 14 44 07.5 -3.3
comp=Z,1.5nm,1.0s,baz=18,slow=6.2,SNR=5.0
CBN Corbin 100.45 338 PFAKE 14 40 20.0 +13
CBN LR LR
comp=Z,2μm,21.0s,MS5.6
WDC Whiskeytown Da 100.76 13 PFAKE 14 40 20.0 +11
WDC LR LR
comp=Z,645nm,22.0s,MS5.1
BBSR BB Station 100.90 326 PFAKE 14 40 20.0 +11
BBSR LR LR
comp=Z,502nm,21.0s,MS5.0
HWUT Hardware Ranch 101.13 5 PFAKE 14 40 20.0 +10
HWUT LR LR
comp=Z,1μm,19.0s,MS5.4
BMN Battle Mountai 101.74 9 PFAKE 14 40 20.0 +7.1
BMN LR LR
comp=Z,653nm,21.0s,MS5.1
HOPS Hopland 102.20 14 PFAKE 14 40 30.0 +15
HOPS LR LR
comp=Z,963nm,22.0s,MS5.3
BLA Blacksburg 102.25 340 PFAKE 14 40 30.0 +15
BLA LR LR
comp=Z,110nm,21.0s,MS4.4
DUG Dugway 102.44 6 PFAKE 14 40 30.0 +14
DUG LR LR
comp=Z,515nm,21.0s,MS5.0
WCI Wyandotte Cave 102.70 345 PFAKE 14 40 30.0 +13
WCI LR LR
comp=Z,196nm,19.0s,MS4.7
MPU Maple Canyon 102.70 5 PFAKE 14 40 30.0 +13
MPU LR LR
comp=Z,1μm,21.0s,MS5.4
ISCO Idaho Springs 103.14 0 PFAKE 14 40 30.0 +11
ISCO LR LR
comp=Z,1μm,22.0s,MS5.5
NVAR Mina Array Bea 103.56 10 Pdiff Pdiff 14 40 22.2 +1.2
comp=Z,0.5nm,0.8s,baz=341,slow=1.9,SNR=4.3
NVAR PKKPbc PKKPbc 14 56 12.8 -0.6
comp=Z,0.2nm,0.4s,baz=207,slow=5.8,SNR=2.8
NVAR Mina Array Bea 103.56 10 Pdif Pdif 14 40 22.2 +1.2
NVAR PKKPbc PKKPbc 14 56 12.8 -0.6
CMB Columbia Colle 103.62 12 PFAKE 14 40 30.0 +8.8
CMB LR LR
comp=Z,831nm,21.0s,MS5.2
CCM Cathedral Cave 103.77 349 PFAKE 14 40 30.0 +8.1
CCM LR LR
comp=Z,224nm,19.0s,MS4.7
TPH Tonopah 104.06 10 PFAKE 14 40 30.0 +6.8
TPH LR LR
comp=Z,976nm,21.0s,MS5.3
MVU Marysvale 104.17 6 PFAKE 14 40 30.0 +6.4
MVU LR LR
comp=Z,922nm,19.0s,MS5.3
SAO San Andreas Ge 104.67 13 PFAKE 14 40 40.0 +14
SAO LR LR
comp=Z,624nm,21.0s,MS5.1
WVT Waverly 105.04 345 PFAKE 14 44 50.0 +7.8
WVT LR LR
comp=Z,1μm,21.0s,MS5.3
SDCO Great Sand Dun 105.19 0 PFAKE 14 44 50.0 +7.5
SDCO LR LR
comp=Z,2μm,20.0s,MS5.7
MYNC Murphy 105.23 342 PFAKE 14 44 50.0 +7.4
MYNC LR LR
comp=Z,1μm,20.0s,MS5.4
TPNV Topopah Spring 105.29 9 PFAKE 14 44 50.0 +7.3
TPNV LR LR
comp=Z,1μm,22.0s,MS5.5
DAC Darwin (Calif) 105.77 10 PFAKE 14 44 50.0 +6.4
DAC LR LR
comp=Z,798nm,19.0s,MS5.3
PLAL Pickwick Lake 106.20 345 PFAKE 14 45 00.0 +16
PLAL LR LR
comp=Z,968nm,19.0s,MS5.4
OXF Oxford 106.91 346 PFAKE 14 45 00.0 +14
OXF LR LR
comp=Z,1μm,20.0s,MS5.5
CASY Casey 107.00 166 PFAKE 14 45 00.0 +14
CASY LR LR
comp=Z,1μm,20.0s,MS5.4
WUAZ Wupatki 107.20 5 PFAKE 14 45 00.0 +14
WUAZ LR LR
comp=Z,1μm,22.0s,MS5.4
MIAR Mount Ida 107.56 350 PFAKE 14 45 00.0 +13
MIAR LR LR
comp=Z,1μm,20.0s,MS5.5
LRAL Lakeview Retre 107.85 344 PFAKE 14 45 00.0 +13
LRAL LR LR
comp=Z,1μm,20.0s,MS5.4
WMOK Wichita Mounta 107.94 354 PFAKE 14 45 00.0 +12
WMOK LR LR
comp=Z,1μm,19.0s,MS5.6
AMTX Amarillo 107.97 357 PFAKE 14 45 00.0 +12
AMTX LR LR
comp=Z,930nm,19.0s,MS5.4
ANMO Albuquerque 107.97 1 PFAKE 14 45 00.0 +12
ANMO LR LR
comp=Z,1μm,20.0s,MS5.5
SNCC San Nicolas Is 108.44 13 PFAKE 14 45 00.0 +11
SNCC LR LR
comp=Z,927nm,19.0s,MS5.4
PFO Pinyon Flat Ob 108.56 10 PFAKE 14 45 00.0 +11
PFO LR LR
comp=Z,868nm,19.0s,MS5.3
TUC Tucson 110.42 5 PFAKE 14 45 00.0 +7.8
TUC LR LR
comp=Z,792nm,19.0s,MS5.3
NATX Nacogdoches 110.45 350 PFAKE 14 45 00.0 +7.7
NATX LR LR
comp=Z,1μm,19.0s,MS5.4
DWPF Disney 111.07 338 PFAKE 14 45 00.0 +6.5
DWPF LR LR
comp=Z,168nm,21.0s,MS4.6
MNTX Cornudas Mount 111.22 0 PFAKE 14 45 00.0 +6.2
MNTX LR LR
comp=Z,1μm,19.0s,MS5.5
JCT Junction City 112.25 355 PFAKE 14 45 10.0 +14
JCT LR LR
comp=Z,890nm,20.0s,MS5.3
HKT Hockley 112.39 351 PFAKE 14 45 10.0 +14
HKT LR LR
comp=Z,249nm,19.0s,MS4.8
SJG San Juan 113.59 319 PFAKE 14 45 10.0 +12
SJG LR LR
comp=Z,574nm,22.0s,MS5.1
DRV Dumont d'Urvil 115.00 156 SP SP 14 55 40.0 +2.1
VNDA Vanda 125.60 165 PKP PKPdf 14 45 19.0 -2.3
comp=Z,5.5nm,1.0s,baz=293,slow=4.4,SNR=19
VNDA Vanda 125.60 165 *e*PKPdf PKPdf 14 45 19.2 -2.2

SBA Scott Base 126.69 165 *e*PKIKP PKPdf 14 45 22.4 -1.0
QSPA South Pole Qui 127.22 180 *e*P PKPdf 14 45 22.7 -1.7
ROSC El Rosal 129.00 319 PKP PKPdf 14 45 29.4 +1.6
comp=Z,11nm,0.4s,baz=100,slow=23,SNR=7.4
SAML Samuel 132.62 296 *e*PKPdf PKPdf 14 45 35.2 +0.5
PPT Papeete 136.47 75 *e*PP PP 14 48 18.7 -4.4
comp=Z,92nm,26.5s
PPT Papeete 136.47 75 *e*SS SS 15 06 22.7 -2.3
comp=Z,886nm,38.2s
PPT *e*LR LR 15 29 41.7
comp=Z,614nm,24.8s
TAOE Nuku Hiva Isla 137.56 57 *e*LR LR 15 30 15.9
comp=Z,2μm,22.8s
CPUP Villa Florida 138.20 271 PKhKP 14 45 40.7
comp=Z,1.2nm,0.7s,baz=27,slow=10,SNR=2.9
CPUP PKP PKPdf 14 45 45.2 +0.2
comp=Z,7.4nm,0.9s,baz=41,slow=3.5,SNR=6.9
CPUP Villa Florida 138.20 271 *e*PKPpre 14 45 39.9
CPUP PKP PKPdf 14 45 45.2 +0.1
LPAZ La Paz 141.08 293 *e*PKIKP PKPdf 14 45 50.7 +0.4
ARE Arequipa 143.64 296 PKHKP 14 45 53.0
LVC Limon Verde 145.46 285 *e*PKP PKPdf 14 45 58.7 +0.7
LCO Las Campanas 150.01 276 *e*P PKPbc 14 46 09.8 -0.7
TLL Tololo Astrono 150.57 274 *e*P PKPbc 14 46 10.0 -1.8
PLCA Paso Flores 152.95 252 PKPbc PKPbc 14 46 16.1 -1.2
comp=Z,6.9nm,0.8s,baz=46,slow=2.6,SNR=8.2

CSEM ***06*** *14:33:55.6, 3906N×2129E, h10km, MD3.8/3, After ATH*
ATH 06 14:33:55.6, 3906N×2129E, h10km, MD3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.43**	**109**	*e*PB	Pg	14 34 04.0	0.0
JAN	**Janina**	**0.69**	**330**	*e*PB	Pb	14 34 08.5	-1.1
VLS	**Valsamata**	**1.04**	**212**	*e*PB	Pb	14 34 15.5	-0.2

ISCJB ***06*** *14:35:23.5±0.4, 3762N±004×725E±0.1, h195km±8km, mb3.7/8, Error ellipse: s-maj=18.3km s-min=5.9km az=18.0*
NEIC ***06*** *14:35:24.5±4.2, 3759N×7227E, h184km±28km, mb3.9/1, Error ellipse: s-maj=46.0km s-min=25.4km az=169.0*
IDC ***06*** *14:35:27.1±5.3, 3757N×7242E, h214km±44km, mb3.6/7, mb1 3.7/11, mb1mx3.4/23, mbtmp4.2/11, MS4.6/1, Ms1 4.6/1, ms1mx3.7/32, Error ellipse: s-maj=41.9km s-min=23.5km az=153.0*
ISC 06 14:35:24.4±0.4, 3763N±004×725E±01, h189km±8km, n37, σ0s80/41, mb3.9/8, 1C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.82**	**187**	P	**Pn**	**14 36 24.5**	**+0.9**
CEP				S	**Sn**	**14 37 04.0**	**-5.9**
CHCP	**Chirah Chowk**	**4.01**	**171**	P	**Pn**	**14 36 27.7**	**+1.8**
CHCP				S	**Sn**	**14 37 11.0**	**-3.1**
AML	**Almayashu**	**4.59**	**11**	P	**Pn**	**14 36 33.7**	**+0.3**
SNR=123							
UCH	**Uchtor**	**4.85**	**18**	P	**Pn**	**14 36 37.1**	**+0.5**
SNR=13							
THW	**Thamme Wali**	**4.86**	**187**	P	**Pn**	**14 36 36.5**	**-0.2**
KZA	**Kyzart**	**4.93**	**25**	P	**Pn**	**14 36 37.5**	**-0.2**
SNR=26							
EKS2	**Erkin-Say**	**5.13**	**11**	P	**Pn**	**14 36 40.4**	**+0.2**
SNR=65							
AAK	**Ala-Archa**	**5.23**	**17**	P	**Pn**	**14 36 39.6**	**-1.9**
SNR=6.6							
AAK	**Ala-Archa**	**5.23**	**17**	*e*P	**Pn**	**14 36 40.9**	**-0.7**
AAK				S	**Sn**	**14 37 40.8**	**-1.4**
KBK	**Karagaybulak**	**5.37**	**20**	P	**Pn**	**14 36 44.6**	**+1.4**
SNR=5.7							
ULHL	**Ulahol**	**5.44**	**31**	P	**Pn**	**14 36 44.6**	**+0.3**
SNR=11							
SBDP	**Sheikh Budin**	**5.49**	**195**	P	**Pn**	**14 36 44.3**	**-0.6**
CHMS	**Chumysh**	**5.64**	**17**	P	**Pn**	**14 36 47.2**	**+0.4**
SNR=11							
KK31	**Karatay Array**	**5.67**	**345**	Pn	**Pn**	**14 36 47.0**	**-0.2**
15nm,0.3s,baz=156,slow=13,SNR=446							
KK31				Sn	**Sn**	**14 37 47.7**	**-4.8**
72nm,0.5s,baz=165,slow=24,SNR=14							
SARP	**Sargodha**	**5.69**	**178**	P	**Pn**	**14 36 46.9**	**-0.6**
TKM2	**Tokmak 2**	**5.80**	**23**	P	**Pn**	**14 36 49.3**	**+0.4**
SNR=7.1							
USP	**Ospennovka**	**5.84**	**15**	P	**Pn**	**14 36 48.9**	**-0.5**
SNR=16							
MKAR	**Makanchi Array**	**11.69**	**35**	P	**Pn**	**14 38 10.2**	**+4.7**
0.2nm,0.3s,baz=210,slow=10.0,SNR=2.3							
AB31	**Akbulak array**	**14.74**	**326**	⇑Pn	**Pn**	**14 38 44.4**	**+0.6**
4.5nm,0.6s,baz=134,slow=13,SNR=29							
AB31				⇓Sn	**Sn**	**14 41 14.9**	**-14**
6.8nm,0.6s,baz=134,slow=23,SNR=17							
BVAR	**Borovoye Array**	**15.47**	**355**	P	**Pn**	**14 38 53.0**	**+0.3**
0.3nm,0.3s,baz=154,slow=9.9,SNR=9.7							
AKTK	**Aktyubinsk**	**16.45**	**326**	P	**Pn**	**14 39 04.7**	**0.0**
AKTO	**Aktyubinsk**	**16.45**	**326**	P	**Pn**	**14 39 04.7**	**0.0**
0.9nm,0.3s,baz=150,slow=6.8,SNR=6.3							
ZAL	**Zalesovo**	**18.39**	**24**	P	**P**	**14 39 25.4**	**+0.3**
1.7nm,0.3s,baz=258,slow=4.7,SNR=7.8							
ZAL	**Zalesovo**	**18.39**	**24**	P	**P**	**14 39 25.4**	**+0.3**
JOF	**Joensuu**	**35.50**	**329**	*e*p	**P**	**14 42 01.3**	**-1.7**
4.2nm,0.4s,mb4.4							
FINES	**FINESS Array B**	**37.23**	**325**	P	**P**	**14 42 17.7**	**+0.1**
0.9nm,0.4s,mb3.8,baz=119,slow=10,SNR=10.0							
FINES	**FINESS Array B**	**37.23**	**325**	P	**P**	**14 42 17.7**	**+0.1**
ARCES	**ARCESS Array B**	**40.57**	**337**	P	**P**	**14 42 45.8**	**+0.4**
2.5nm,0.5s,mb4.1,baz=112,slow=8.6,SNR=20							
HFS	**Hagfors**	**42.92**	**321**	LR	LR	15 03 34.0	
comp=Z,631nm,19.0s,baz=211,slow=39							
NB2	**NORSAR Subarra**	**44.20**	**322**	P	**P**	**14 43 14.3**	**-0.3**
comp=Z,1.5nm,0.5s,mb3.9,baz=92,slow=7.9							
NOA	**NORSAR Array B**	**44.20**	**322**	P	**P**	**14 43 14.7**	**0.0**
comp=Z,1.7nm,0.5s,mb4.0,baz=92,slow=7.7,SNR=6.9							
ESDC	**Sonseca Array**	**57.98**	**298**	P	**P**	**14 44 57.7**	**+0.6**
comp=Z,0.1nm,0.4s,mb3.0,baz=56,slow=7.3,SNR=6.3							
TORD	**Torodi Ar. Bea**	**66.92**	**269**	P	**P**	**14 45 56.1**	**-0.2**
comp=Z,0.9nm,0.4s,mb3.9,baz=44,slow=5.2,SNR=16							
INK	**Inuvik**	**72.60**	**10**	P	**P**	**14 46 31.1**	**+0.1**
comp=Z,1.1nm,0.5s,mb3.9,baz=21,slow=5.9,SNR=4.3							
INK	**Inuvik**	**72.60**	**10**	*e*P	**P**	**14 46 30.7**	**-0.3**
comp=Z,2.5nm,0.9s,mb3.9							
YKA	**Yellowknife Ar**	**80.06**	**3**	P	**P**	**14 47 12.7**	**-0.3**
comp=Z,1.2nm,0.5s,mb3.8,baz=351,slow=5.4,SNR=9.5							
YKA	**Yellowknife Ar**	**80.06**	**3**	P	**P**	**14 47 12.7**	**-0.3**

IDC ***06*** *14:55:09.6±2.1, 2416N×12338E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/18, mbtmp3.5/4, Error ellipse: s-maj=179.8km s-min=26.2km az=67.0*
ISCJB ***06*** *14:55:17.1±1.7, 242N±0.1×12250E±0.10, h41km±17km, mb3.3/4, Error ellipse: s-maj=24.5km s-min=13.9km az=34.3*
JMA ***06*** *14:55:17.3±0.1, 2411N×12254E, h40km±4km, M3.5*
ISC 06 14:55:15.8±2.0, 240N±01×12249E±006, h25km±12km, n12, σ0s85/18, mb3.3/4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.66**	**46**	P	**Pb**	**14 55 28.7**	**-0.1**
YOJ				S	**Sb**	**14 55 36.7**	**-0.9**
IRIF	**Iriomote-Funau**	**1.18**	**73**	P	**Pn**	**14 55 36.5**	**-0.2**
IRIF				*e*S	**Sn**	**14 55 51.1**	**-0.9**
HATJ	**Hateruma jima**	**1.20**	**87**	P	**Pn**	**14 55 37.3**	**+0.3**
HATJ				S	**Sn**	**14 55 52.3**	**-0.2**
JKRS	**Kuro-shima**	**1.41**	**80**	P	**Pn**	**14 55 40.5**	**+0.7**
JKRS				S	**Sn**	**14 55 58.0**	**+0.4**
JIJ	**Ishigaki jima**	**1.55**	**76**	P	**Pn**	**14 55 42.0**	**+0.2**
JIJ				S	**Sn**	**14 56 00.5**	**-0.6**
JTJ	**Tarama**	**2.12**	**72**	P	**Pn**	**14 55 50.0**	**+0.4**
JTJ				*e*S	**Sn**	**14 56 15.4**	**+0.3**
JOGS	**Gusukube**	**2.77**	**73**	P	**Pn**	**14 56 00.4**	**+1.9**
JKE	**Kume jima 2**	**4.53**	**58**	P	**Pn**	**14 56 23.2**	**+0.4**
SONM	**Songino Array**	**27.02**	**336**	P	**P**	**15 00 55.2**	**-0.6**
0.4nm,0.5s,mb3.2,baz=145,slow=11,SNR=4.8							
MKAR	**Makanchi Array**	**39.30**	**316**	P	**P**	**15 02 44.0**	**+1.3**
0.2nm,0.3s,mb3.3,baz=102,slow=11,SNR=3.5							
ASAR	**Alice Springs**	**48.66**	**166**	P	**P**	**15 03 55.2**	**-2.4**
0.4nm,1.0s,mb3.4,baz=344,slow=6.8,SNR=2.7							
FINES	**FINESS Array B**	**72.21**	**330**	P	**P**	**15 06 37.9**	**-0.8**
0.2nm,0.4s,mb3.4,baz=67,slow=6.9,SNR=6.0							

ISCJB ***06*** *15:07:49.4±1.3, 159S±02×1770W±0.1, h379km±15km, mb3.9/11, Error ellipse: s-maj=32.7km s-min=14.4km*

az=130.5
IDC 06 15:07:49.6±2.1, 1589S×17685W, h365km±21km, mb3.4/5, mb1 3.7/6, mb1mx3.5/13, mbtmp4.2/6, Error ellipse: s-maj=33.7km s-min=13.9km az=142.0
NEIC 06 15:07:50.4±1.0, 1588S×17691W, h380km±10km, mb4.1/7, Error ellipse: s-maj=20.9km s-min=9.2km az=149.0
ISC 06 15:07:50.6±1.3**, 160S**±02×**1769W**±01**, h375**km±16km**, n42, σ0s.48**/21**, mb3.9**/11**, 2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.35**	**68**	P	**Pn**	**15 09 15.0**	**0.0**
	8.7nm,0.3s,baz=71,slow=3.7,SNR=12						
AFI	**Afiamalu**	**5.35**	**68**	*e*Pn	**Pn**	**15 09 14.9**	**-0.1**
STKA	**Stephens Creek**	**40.84**	**240**	*e*P	**P**	**15 14 57.4**	**+0.1**
	1.6nm,0.7s,mb3.4						
STKA	**Stephens Creek**	**40.84**	**240**	P	**P**	**15 14 57.4**	**+0.2**
	1.6nm,0.6s,mb3.4,baz=78,slow=7.7,SNR=7.5						
WB2	**Warramunga Arr**	**46.43**	**258**	*e*P	**P**	**15 15 40.7**	**-0.6**
WRAB	**Tennant Creek**	**46.44**	**258**	*e*P	**P**	**15 15 41.0**	**-0.3**
	5.5nm,0.3s,mb4.2						
AS31	**Alice Springs**	**46.74**	**252**	⇓*i*P	**P**	**15 15 43.6**	**0.0**
AS31				*e*S	**S**	**15 22 00.4**	**-4.0**
ASAR	**Alice Springs**	**46.74**	**252**	P	**P**	**15 15 43.6**	**0.0**
	14nm,0.6s,mb4.4,baz=88,slow=7.7,SNR=407						
ASAR				S	**S**	**15 22 09.4**	**+5.0**
	0.4nm,0.8s,baz=86,slow=15,SNR=4.6						
ASPA	**Alice Springs**	**46.74**	**252**	⇓*i*P	**P**	**15 15 43.6**	**-0.1**
ASPA				*e*S	**S**	**15 22 00.4**	**-4.1**
KAKA	**Kakadu**	**49.12**	**267**	*e*P	**P**	**15 16 02.3**	**+0.7**
	5.6nm,0.4s,mb4.2						
FORT	**Forrest**	**52.16**	**243**	*e*P	**P**	**15 16 23.4**	**-0.7**
	11nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**54.81**	**259**	*e*P	**P**	**15 16 44.1**	**+1.0**
	6.1nm,1.2s,mb3.8						
VNDA	**Vanda**	**62.46**	**185**	P	**P**	**15 17 35.5**	**+0.3**
	0.7nm,0.6s,mb3.4,baz=356,slow=6.4,SNR=8.5						
QSPA	**South Pole Qui**	**74.04**	**180**	*e*P	**P**	**15 18 46.3**	**0.0**
	1.1nm,0.6s,mb3.8						
NVAR	**Mina Array Bea**	**77.04**	**43**	P	**P**	**15 19 03.4**	**+0.2**
	1.1nm,0.7s,mb3.7,baz=230,slow=11,SNR=11						
NVAR	**Mina Array Bea**	**77.04**	**43**	P	**P**	**15 19 03.4**	**+0.2**
HLID	**Hailey**	**82.24**	**41**	*e*P	**P**	**15 19 31.0**	**+0.2**
	2.7nm,0.8s,mb4.1						
PDAR	**Pinedale Array**	**84.97**	**43**	P	**P**	**15 19 44.0**	**-0.5**
	0.6nm,0.6s,mb3.6,baz=212,slow=3.3,SNR=6.9						
BDFB	**Brasilia**	**120.53**	**119**	PFAKE		15 26 10.0	+12
BDFB				LR	LR		
	comp=Z,819nm,21.0s						
ARCES	**ARCESS Array B**	**124.70**	**351**	PKP	PKPdf	15 26 04.4	-1.7
	comp=Z,1.3nm,0.6s,baz=356,slow=1.7,SNR=14						
KOLS	**Kolonicke sedl**	**143.62**	**339**	*e*PKP	PKPdf	15 26 39.5	-1.8
BRTR	**Keskin Array B**	**144.43**	**318**	PKP	PKPdf	15 26 42.2	-0.4
	comp=Z,2.9nm,0.9s,baz=113,slow=2.8,SNR=12						
MLR	**Muntele Rosu**	**144.92**	**332**	PKP	PKPdf	15 26 42.8	-0.7
	comp=Z,0.8nm,0.4s,baz=193,slow=3.5,SNR=4.3						
VYHS	**Vyhne**	**145.13**	**342**	*e*PKP	PKPdf	15 26 41.0	-2.9
BAIF	**Baives**	**146.02**	**359**	*e*PKP1	PKPbc	15 26 46.2	-0.8
	comp=Z,6.1nm,0.8s						
GERES	**GERESS Array B**	**146.12**	**347**	PKPbc	PKPbc	15 26 46.8	-0.5
	comp=Z,0.6nm,0.6s,baz=23,slow=3.4,SNR=7.1						
FLN	**La Foliniere**	**147.20**	**4**	*e*PKP1	PKPbc	15 26 49.0	-1.2
LDF	**La Druitiere**	**147.39**	**4**	*e*PKP1	PKPbc	15 26 49.5	-1.2
	comp=Z,4.4nm,0.6s						
CDF	**Champ du Feu**	**147.50**	**355**	*e*PKP1	PKPbc	15 26 50.3	-0.7
	comp=Z,4.6nm,0.7s						
SGMF	**Saint Gilles**	**147.50**	**7**	*e*PKP1	PKPbc	15 26 49.8	-1.2
GRR	**Gorron**	**147.54**	**5**	*e*PKP1	PKPbc	15 26 50.1	-1.0
	comp=Z,7.0nm,0.7s						
DAVOX	**Davos**	**148.81**	**351**	PKPbc	PKPbc	15 26 53.9	-0.4
	comp=Z,3.6nm,0.6s,baz=334,slow=7.9,SNR=8.3						
LOR	**Lormes**	**148.82**	**359**	*e*PKP1	PKPbc	15 26 53.7	-0.7
	comp=Z,2.9nm,0.6s						
SSF	**Saint Saulge**	**149.03**	**359**	*e*PKP1	PKPbc	15 26 54.3	-0.6
	comp=Z,4.2nm,0.8s						
AVF	**Avril sur Loir**	**149.31**	**360**	*e*PKP1	PKPbc	15 26 54.5	-1.1
CABF	**La Chapelle**	**149.39**	**356**	*e*PKP1	PKPbc	15 26 55.8	0.0
LPL	**La Plagne**	**150.43**	**355**	*e*PKP1	PKPbc	15 26 58.6	+0.4
	comp=Z,4.5nm,0.7s						
LPG	**La Plagne**	**150.44**	**355**	*e*PKP1	PKPbc	15 26 58.6	+0.3
ORIF	**Oris-en-Rattie**	**151.09**	**356**	*e*PKP1	PKPbc	15 26 59.5	-0.3
CAF	**Calviac**	**151.16**	**2**	*e*PKP1	PKPbc	15 26 59.3	-0.6
MBDF	**Montbardon**	**151.21**	**355**	*e*PKP1	PKPbc	15 26 59.6	-0.4
	comp=Z,9.8nm,0.8s						
VIVF	**Saint-Julien-l**	**151.21**	**358**	*e*PKP1	PKPbc	15 27 00.7	+0.7

NEIC 06 15:15:08.2, 3192S×6866W, h156km, MG3.6(GUC), After GUC.
GUC 06 15:15:08.2±0.8**, 3192S**×**6866W, h156**km±18km**, MD3.6, ML3.6, 5C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDZ	**Mendoza**	**0.97**	**190**	⇑*i*P	Pn	15 15 32.1	-1.2
MDZ				*i* S	Sn	15 15 49.1	-3.5
JACH	**Jahuel**	**1.81**	**245**	*e*P	Pn	15 15 42.4	+0.9
JACH				*e*S	Sn	15 16 08.1	+1.0
FCH	**Farellones**	**1.97**	**224**	*e*P	Pn	15 15 44.6	+1.3
FCH				*i* S	Sn	15 16 11.8	+1.5
FCH				AML	AML	15 16 16.7	
	comp=E,85nm,0.2s						
PEL	**Peldehue**	**2.10**	**234**	*e*P	Pn	15 15 45.0	+0.1
PEL				*i* S	Sn	15 16 14.0	+0.9
PEL				AML	AML	15 16 17.0	
	comp=N,235nm,0.4s						
PEL	**Peldehue**	**2.10**	**234**	*e*P	Pn	15 15 45.0	+0.1
PEL				*i* S	Sn	15 16 14.0	+0.9
CMCH	**Combarbala**	**2.14**	**290**	⇑*i*P	Pn	15 15 45.9	+0.7
CMCH				*i* S	Sn	15 16 14.8	+1.0
CMCH				AML	AML	15 16 17.4	
	comp=E,3μm,0.8s						
CMCH	**Combarbala**	**2.14**	**290**	⇑*i*P	Pn	15 15 45.9	+0.7
CMCH				*i* S	Sn	15 16 14.8	+1.0
CLCH	**Cerro Calan**	**2.17**	**227**	*e*S	Sn	15 16 15.7	+1.3
CLCH				AML	AML	15 16 22.3	
	comp=E,161nm,0.5s						
PCH	**Pirque**	**2.31**	**222**	*e*P	Pn	15 15 47.9	+0.6
CHNG	**Los Chungos**	**2.42**	**270**	*e*P	Pn	15 15 49.5	+0.9
CHNG				*i* S	Sn	15 16 19.7	-0.1
CHNG				AML	AML	15 16 29.2	
	comp=E,156nm,0.4s						
TLL	**Tololo Astrono**	**2.54**	**313**	*e*P	Pn	15 15 51.6	+1.6
TLL				*i* S	Sn	15 16 23.8	+1.4
TLL				AML	AML	15 16 26.3	
	comp=N,222nm,0.5s						
TLL	**Tololo Astrono**	**2.54**	**313**	*e*P	Pn	15 15 51.6	+1.6
TLL				*i* S	Sn	15 16 23.8	+1.4
TACH	**Talagante**	**2.58**	**227**	⇑*i*P	Pn	15 15 51.4	+0.7
TACH				*i* S	Sn	15 16 23.8	+0.4
LCO	**Las Campanas**	**3.39**	**328**	⇑*i*P	Pn	15 16 02.0	+1.3

ISCJB 06 15:26:15.7±0.6, 3534N±002×2757E±003, h30km±6km, mb3.4/2, Error ellipse: s-maj=4.5km s-min=3.5km az=158.3
CSEM 06 15:26:15.7±0.1, 3534N×2765E, h25km, MD3.6, Error ellipse: s-maj=1.8km s-min=1.4km az=62.0
ATH 06 15:26:17.9, 3563N×2736E, h34km±2km, MD3.6/10
IDC 06 15:26:17.6±1.8, 3535N×2762E, h46km±25km, mb3.3/2, mb1 3.4/6, mb1mx3.2/21, mbtmp3.4/6, ML3.2/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/28, Error ellipse: s-maj=36.4km s-min=13.6km az=169.0
NEIC 06 15:26:17.9, 3563N×2736E, h34km, MD3.6(ATH), After ATH.
HLW 06 15:26:18.6, 3534N×2767E, h33km, Mb3.7
ISC 06 15:26:17.1±0.6**, 3541N**±002×**2754E**±003**, h26**km±6km**, n56, σ1s.02**/65**, mb3.4**/2**, 15C-4D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.34**	**295**	*e*Pb	**Pb**	**15 26 24.5**	**-0.3**
KARP				*e*Sb	**Sb**	**15 26 29.9**	**-0.1**
ARG	**Arkhangelos**	**0.94**	**31**	*e*PN	**Pn**	**15 26 34.6**	**0.0**
ARG				*e*SN	**Sn**	**15 26 46.9**	**-0.2**
NISR	**Nisiros**	**1.25**	**345**	*e*PN	**Pn**	**15 26 36.5**	**-2.3**
DAT	**Datca**	**1.32**	**1**	*i* PN	**Pn**	**15 26 38.8**	**-1.0**
DAT				*i* SN	**Sn**	**15 26 55.4**	**-1.1**
NPS	**Neapolis**	**1.58**	**265**	*e*PB	**Pb**	**15 26 45.0**	**-0.6**
XRY	**Khrisi**	**1.60**	**251**	*e*PN	**Pn**	**15 26 44.0**	**+0.3**
DALT	**Dalyan (Mudla)**	**1.63**	**33**	PN	**Pn**	**15 26 44.6**	**+0.6**
BODT	**Bodrum**	**1.66**	**354**	PN	**Pn**	**15 26 42.9**	**-1.6**
BODT				SN	**Sn**	**15 27 04.7**	**-0.3**
FETY	**Fethiye**	**1.75**	**45**	PN	**Pn**	**15 26 46.4**	**+0.6**
YER	**Yerkesik**	**1.83**	**19**	PN	**Pn**	**15 26 46.9**	**+0.1**
SANT	**Santorini**	**1.94**	**300**	*e*Pn	**Pn**	**15 26 49.8**	**+1.4**
SANT				*e*Sn	**Sn**	**15 27 13.0**	**+1.2**
SANT	**Santorini**	**1.94**	**300**	*e*Pn	**Pn**	**15 26 49.8**	**+1.4**
SANT				*e*Sn	**Sn**	**15 27 13.0**	**+1.1**
IDI	**Anoyia**	**2.17**	**268**	P	**Pn**	**15 26 52.2**	**+0.8**
	16nm,0.3s,baz=52,slow=8.9,SNR=18						
IDI				S	**Sn**	**15 27 19.0**	**+1.6**
	42nm,0.3s,baz=292,slow=16,SNR=9.0						
APE	**Apeiranthos**	**2.32**	**316**	*e*PN	**Pn**	**15 26 52.0**	**-1.6**
SMG	**Samos**	**2.36**	**346**	*e*PN	**Pn**	**15 26 53.2**	**-1.0**
DENT	**Denizli**	**2.63**	**27**	*e*PN	**Pn**	**15 26 58.8**	**+0.9**
VAM	**Vamos**	**2.72**	**271**	*e*PB	**Pb**	**15 27 01.6**	**-3.6**
GVD	**Gavdhos**	**2.88**	**260**	*e*PN	**Pn**	**15 27 02.0**	**+0.7**
ISP	**Isparta**	**3.41**	**44**	*e*PN	**Pn**	**15 27 09.9**	**+1.3**
ISP	**Isparta**	**3.41**	**44**	Pn	**Pn**	**15 27 08.9**	**+0.4**
ISP				*e*		15 27 19.3	
ISP	**Isparta**	**3.41**	**44**	Pn	**Pn**	**15 27 08.9**	**+0.3**
VLI	**Veliai**	**3.95**	**291**	*e*PN	**Pn**	**15 27 15.5**	**-0.5**
HMAT	**Matruh**	**4.32**	**185**	⇑P	**Pn**	**15 27 21.8**	**+0.7**
HMAT				S	**Sn**	**15 28 07.6**	**-2.9**
SLUM		**4.36**	**207**	⇑P	**Pn**	**15 27 22.4**	**+0.8**
SLUM				S	**Sn**	**15 28 09.0**	**-2.6**
CSS	**Prodhromos**	**4.77**	**94**	Pn	**Pn**	**15 27 27.4**	**+0.2**
CSS	**Prodhromos**	**4.77**	**94**	Pn	**Pn**	**15 27 27.4**	**+0.2**
KIZT	**Kizilcal**	**4.91**	**44**	*e*PN	**Pn**	**15 27 30.2**	**+1.1**
IKL	**Isikli**	**5.07**	**79**	*e*PN	**Pn**	**15 27 33.1**	**+1.8**
HBRG	**Burj al ‘Arab**	**5.19**	**157**	⇑P	**Pn**	**15 27 32.7**	**-0.3**
MERS	**Mersin**	**5.84**	**74**	*e*P	**Pn**	**15 27 44.2**	**+2.2**
SWA1		**6.32**	**195**	⇑P	**Pn**	**15 27 49.4**	**+0.8**
SWA1				S	**Sn**	**15 28 55.3**	**-4.5**
SWA2		**6.39**	**197**	⇑P	**Pn**	**15 27 50.1**	**+0.6**
FYM	**Al Fayyum**	**6.42**	**152**	⇑P	**Pn**	**15 27 49.9**	**-0.1**
BR131	**Keskin Array S**	**6.49**	**47**	*e*Pn	**Pn**	**15 27 51.5**	**+0.7**
	0.9nm,0.5s						
BR131	**Keskin Array S**	**6.49**	**47**	*e*Pn	**Pn**	**15 27 51.5**	**+0.7**
	0.9nm,0.5s						
BRTR	**Keskin Array B**	**6.49**	**47**	P	**Pn**	**15 27 50.2**	**-0.6**
	0.2nm,0.3s,baz=223,slow=15,SNR=5.7						
BRTR	**Keskin Array B**	**6.49**	**47**	P	**Pn**	**15 27 50.2**	**-0.6**
KOT	**Kottamia**	**6.55**	**145**	⇓P	**Pn**	**15 27 51.5**	**-0.3**
HHAG	**Hagoal**	**6.66**	**143**	⇑P	**Pn**	**15 27 52.8**	**-0.4**
HSAF	**As Saff**	**6.70**	**148**	⇑P	**Pn**	**15 27 53.5**	**-0.2**
AMAG	**Maghara**	**6.73**	**133**	⇓P	**Pn**	**15 27 53.4**	**-0.8**
GLL	**Jalalah**	**6.80**	**148**	⇑P	**Pn**	**15 27 55.0**	**-0.1**
MMAI	**Mount Meron Ar**	**6.94**	**108**	P	**Pn**	**15 27 56.1**	**-0.9**
	1.0nm,0.3s,baz=300,slow=12,SNR=3.1						
SUZ		**7.12**	**140**	⇑P	**Pn**	**15 27 59.9**	**+0.3**
AWBH		**7.16**	**170**	P	**Pn**	**15 28 00.1**	**0.0**
ZAF		**7.43**	**144**	⇓P	**Pn**	**15 28 03.9**	**0.0**
HFRF	**Wahat Farafira**	**8.26**	**175**	⇓P	**Pn**	**15 28 15.7**	**+0.5**
ASF	**Jabal al Asfar**	**8.43**	**110**	LR	LR	15 33 22.4	
	comp=Z,82nm,18.0s,baz=314,slow=51						
TR2		**8.75**	**141**	⇑P	**Pn**	**15 28 21.5**	**-0.5**
HKAT	**Jabal Katrina**	**8.78**	**140**	⇑P	**Pn**	**15 28 22.0**	**-0.4**
HDHB	**Dhahab**	**8.97**	**136**	⇑P	**Pn**	**15 28 24.9**	**0.0**
HHRG	**Al Ghardaqah**	**9.65**	**146**	⇑P	**Pn**	**15 28 34.5**	**+0.2**
HDK1	**Dakhla**	**9.96**	**170**	⇑P	**Pn**	**15 28 39.8**	**+1.2**
GERES	**GERESS Array B**	**16.86**	**327**	P	**Pn**	**15 30 13.2**	**+1.9**
	0.0nm,0.3s,baz=150,slow=10,SNR=2.7						
TORD	**Torodi Ar. Bea**	**32.16**	**233**	P	**P**	**15 32 41.5**	**-1.0**
	0.2nm,0.3s,mb3.4,baz=37,slow=8.9,SNR=5.9						
MKAR	**Makanchi Array**	**42.01**	**57**	P	**P**	**15 34 03.5**	**-2.7**
	0.4nm,0.4s,mb3.4,baz=286,slow=5.8,SNR=4.1						

ISCJB 06 15:37:29.1±1.6, 375N±0.1×744E±0.1, h10km, mb3.5/3, Error ellipse: s-maj=16.4km s-min=14.0km az=58.5
NNC 06 15:37:33.0±3.7, 3771N×7383E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=34.7km s-min=27.6km az=14.0
IDC 06 15:37:34.3±4.3, 3795N×7457E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.4/22, mbtmp3.6/6, ML3.4/3, Error ellipse: s-maj=75.5km s-min=31.5km az=179.0
ISC 06 15:37:30.1±1.6**, 374N**±01×**744E**±01**, h10**km**, n10, σ1s.27**/13**, mb3.5**/3**, 6C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**5.63**	**9**	⇑Pn	**Pn**	**15 38 53.1**	**-0.6**
	0.7nm,0.6s						
TKM2				⇑Sn	**Sn**	**15 39 58.9**	**+0.5**
	1.5nm,0.6s						
KK31	**Karatay Array**	**6.48**	**334**	⇓Pn	**Pn**	**15 39 04.9**	**-0.5**
	3.3nm,0.6s,baz=144,slow=12,SNR=20						
KK31				⇑Sn	**Sn**	**15 40 20.4**	**+1.0**
	3.0nm,0.4s,baz=157,slow=20,SNR=10						
MKAR	**Makanchi Array**	**11.08**	**29**	Pn	**Pn**	**15 40 07.6**	**-1.0**
	0.1nm,0.3s,baz=211,slow=12,SNR=2.8						
AB31	**Akbulak array**	**15.86**	**323**	⇑Pn	**Pn**	**15 41 10.6**	**-2.7**
	1.0nm,0.7s,baz=130,slow=12,SNR=6.2						
AB31				⇑Sn	**Sn**	**15 43 59.9**	**-9.4**
	0.6nm,0.6s,baz=132,slow=26,SNR=4.4						
AKTO	**Aktyubinsk**	**17.58**	**323**	⇑Pn	**Pn**	**15 41 35.6**	**+0.4**
AKTO	**Aktyubinsk**	**17.58**	**323**	P	**Pn**	**15 41 35.4**	**+0.3**
	0.3nm,0.3s,baz=126,slow=12,SNR=4.1						
ZAL	**Zalesovo**	**18.06**	**20**	P	**Pn**	**15 41 40.0**	**-1.0**
	0.3nm,0.3s,baz=262,slow=10,SNR=5.4						
SONM	**Songino Array**	**25.58**	**56**	P	**P**	**15 43 01.4**	**+2.1**
	0.5nm,0.7s,mb3.2,baz=259,slow=10,SNR=5.3						
FINES	**FINESS Array B**	**38.34**	**325**	P	**P**	**15 44 54.0**	**+3.0**
	0.4nm,0.5s,mb3.4,baz=108,slow=12,SNR=4.5						
ARCES	**ARCESS Array B**	**41.43**	**336**	P	**P**	**15 45 16.7**	**-0.1**
	4.0nm,1.0s,mb4.0,baz=102,slow=13,SNR=4.3						

NIED 06 15:46:00, 3960N×142.10E, h41km, Mw3.7 Best double couple: Mo4.47000×10^14 NP1:φs27.00000°, δ66.00000°, λ108.00000°. NP2:φs169.00000°, δ30.00000°, λ56.00000°.
ISCJB 06 15:46:30.8±0.8, 3964N±004×142.1E±0.1, h57km±4km, mb3.7/10, Error ellipse: s-maj=15.1km s-min=5.7km az=18.1
JMA 06 15:46:31.9±0.1, 3963N×142.11E, h48km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs199.00000°, δ22.00000°, λ85.00000°. NP2:φs24.00000°, δ68.00000°, λ92.00000°. Principal axes: T Plg67.0000°, Azm298.0000°; N Plg2.0000°, Azm204.0000°; P Plg23.0000°, Azm113.0000°;
JMA Felt II J1.
NEIC 06 15:46:32.1±2.8, 3971N×14234E, h64km±22km, mb4.1/2 Error ellipse: s-maj=33.1km s-min=15.0km az=78.0
IDC 06 15:46:34.0±2.4, 3966N×14223E, h80km±20km, mb3.4/8, mb1 3.5/10, mb1mx3.4/22, mbtmp3.7/10, MS2.9/1, Ms1 2.9/1, ms1mx2.5/18, Error ellipse: s-maj=36.0km s-min=15.6km az=98.0
ISC 06 15:46:31.7±0.8**, 3965N**±004×**1421E**±01**, h52**km±5km**, n26, σ0s.93**/36**, mb3.7**/10**, 1C-9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.24**	**253**	⇓P	**Pn**	**15 46 40.3**	**-0.2**
MIYJ				*i* S	**Sn**	**15 46 46.0**	**-0.7**
JTH	**Tanohata**	**0.35**	**326**	⇓P	**Pn**	**15 46 41.4**	**0.0**
JTH				S	**Sn**	**15 46 48.0**	**-0.4**
JOM	**Ohasama**	**0.66**	**255**	⇓P	**Pn**	**15 46 45.1**	**+0.1**
JOM				S	**Sn**	**15 46 54.5**	**-0.1**
OFUJ	**Ofunato**	**0.67**	**212**	⇑P	**Pn**	**15 46 44.7**	**-0.3**
OFUJ				S	**Sn**	**15 46 53.6**	**-1.1**
JKZ	**Kuzumaki**	**0.69**	**299**	⇓P	**Pn**	**15 46 45.7**	**+0.3**
JKZ				S	**Sn**	**15 46 55.2**	**-0.1**
JANG	**Nango**	**0.86**	**328**	⇓P	**Pn**	**15 46 47.5**	**0.0**
JANG				*e*S	**Sn**	**15 46 58.8**	**-0.4**
JMK	**Ichinoseki**	**0.98**	**225**	⇓P	**Pn**	**15 46 49.1**	**-0.1**
JMK				S	**Sn**	**15 47 01.9**	**-0.2**
JAH	**Hinai**	**1.26**	**296**	⇓P	**Pn**	**15 46 53.3**	**+0.4**
JIO	**Ouri**	**1.33**	**207**	⇓P	**Pn**	**15 46 53.6**	**-0.3**
JTM	**Tenmabayashi**	**1.39**	**325**	⇓P	**Pn**	**15 46 55.1**	**+0.4**
MJAR	**Matsushiro Arr**	**4.37**	**226**	P	**Pn**	**15 47 38.9**	**+3.4**
	2.2nm,0.3s,baz=33,slow=13,SNR=55						
MAJO	**Matsushiro**	**4.37**	**226**	*e*P	**Pn**	**15 47 38.0**	**+2.5**
MAT	**Matsushiro**	**4.37**	**226**	P	**Pn**	**15 47 37.9**	**+2.4**
MAT				S	**Sn**	**15 48 33.8**	**+8.6**
MAT	**Matsushiro**	**4.37**	**226**	*e*P	**Pn**	**15 47 38.0**	**+2.5**
MAT				S	**Sn**	**15 48 43.0**	**+18**
ASAJ	**Asahikawa**	**4.48**	**4**	P	**Pn**	**15 47 38.0**	**+1.1**
	2.0nm,0.3s,baz=169,slow=7.1,SNR=13						
ASAJ				S	**Sn**	**15 48 31.1**	**+3.4**
	0.6nm,0.3s,baz=270,slow=20,SNR=2.7						
ASAJ				LR	LR	15 50 15.4	
	comp=Z,129nm,18.6s,baz=344,slow=50						
YAK	**Yakutsk**	**23.66**	**345**	*e*P	**P**	**15 51 37.0**	**-1.3**
	2.9nm,0.5s,mb4.0						
SONM	**Songino Array**	**26.88**	**300**	P	**P**	**15 52 08.1**	**+0.6**
	0.2nm,0.4s,mb3.0,baz=98,slow=10,SNR=3.3						
ZAL	**Zalesovo**	**40.62**	**310**	P	**P**	**15 54 06.8**	**+0.3**
	1.3nm,0.4s,mb3.9,baz=18,slow=10.0,SNR=5.6						
MKAR	**Makanchi Array**	**43.25**	**300**	P	**P**	**15 54 26.9**	**-0.9**
	0.5nm,0.3s,mb3.8,baz=82,slow=10,SNR=6.4						
KURK	**Kurchatov**	**44.80**	**306**	*e*P	**P**	**15 54 39.9**	**-0.4**
	2.4nm,0.7s,mb4.1						
BVAR	**Borovoye Array**	**49.26**	**311**	P	**P**	**15 55 15.4**	**+0.3**
	0.6nm,0.5s,mb3.9,baz=62,slow=7.4,SNR=4.0						
ASAR	**Alice Springs**	**63.45**	**188**	P	**P**	**15 56 55.8**	**-0.3**
	0.3nm,0.9s,mb3.4,baz=355,slow=4.7,SNR=4.1						
FINES	**FINESS Array B**	**66.77**	**332**	P	**P**	**15 57 16.4**	**-1.3**
	0.8nm,0.6s,mb3.9,baz=41,slow=6.1,SNR=5.7						
NOA	**NORSAR Array B**	**72.00**	**337**	P	**P**	**15 57 48.7**	**-1.2**
	0.5nm,0.7s,mb3.6,baz=22,slow=5.9,SNR=3.0						
AKASG	**Malin Array Be**	**72.58**	**322**	P	**P**	**15 57 52.6**	**-0.7**
	0.4nm,0.4s,mb3.7,baz=44,slow=6.8,SNR=5.2						
CLL	**Collm**	**79.11**	**330**	*e*P	**P**	**15 58 32.0**	**+1.4**

NNC 06 15:46:49.7±4.1**, 3778N**×**7416E, h0**km**, mb3.5, mpv3.0, 3D, Error ellipse: s-maj=42.5km s-min=32.3km az=62.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**5.25**	**12**	⇓Pn	Pn	15 48 11.9	+2.4
	0.6nm,0.6s						
TKM2				⇓Sn	Sn	15 49 10.0	-0.7
	3.8nm,1.1s						
KK31	**Karatay Array**	**6.00**	**334**	Pn	Pn	15 48 23.0	+3.2
	2.1nm,0.7s,baz=142,slow=12,SNR=12						
KK31				⇓Sn	Sn	15 49 36.0	+6.8
	1.9nm,0.5s,baz=153,slow=22,SNR=8.0						
AB31	**Akbulak array**	**15.40**	**323**	P	Pn	15 50 26.6	-1.6
	0.9nm,0.8s,baz=133,slow=13,SNR=3.6						

ISCJB 06 16:35:11.9±0.6, 3826N±002×2656E±003, h2km±4km, Error ellipse: s-maj=3.5km s-min=3.3km az=164.4
NEIC 06 16:35:11.9, 3822N×2641E, h4km, MD3.6(ATH), ML3.4(ISK), After ATH.
CSEM 06 16:35:11.9±0.1, 3823N×2665E, h2km, MD3.4, Error ellipse: s-maj=1.6km s-min=1.5km az=59.0
ISK 06 16:35:11.9, 38.18N×2662E, h6km, MD3.4
ATH 06 16:35:11.9, 3822N×2641E, h4km, MD3.6/6, ML3.6
THE 06 16:35:12.2, 3831N×2662E, h0km
ISC 06 16:35:12.7±0.5**, 3826N**±002×**2658E**±003**, h3**km±4km**, n44, σ1s.23**/64**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.39**	**70**	*i* PG	**Pg**	**16 35 19.9**	**-0.2**
BLCB				*i* SG	**Sg**	**16 35 25.7**	**+0.6**
CHOS	**Chios island**	**0.43**	**288**	*e*Pg	**Pg**	**16 35 20.9**	**-0.1**
CHOS				*e*Sg	**Sg**	**16 35 28.5**	**+2.0**
IZM	**Izmir**	**0.56**	**75**	*i* PG	**Pg**	**16 35 23.2**	**-0.1**
KDAG	**Bornova**	**0.56**	**75**	*i* P	**Pg**	**16 35 23.2**	**-0.2**
KDAG				*i* S	**Sg**	**16 35 31.7**	**+1.0**
SMG	**Samos**	**0.58**	**159**	*e*PG	**Pg**	**16 35 23.7**	**-0.2**
PRK	**Paraskevi**	**1.02**	**346**	*e*PG	**Pg**	**16 35 31.5**	**-0.7**
AYVA	**Ayvalik**	**1.05**	**5**	*i* P	**Pg**	**16 35 31.6**	**-1.3**
AYVA				*i* S	**Sg**	**16 35 49.1**	**+2.6**
AKS	**Akhisar**	**1.15**	**57**	*i* PN	**Pn**	**16 35 34.0**	**-1.7**
AKS				*i* SN	**Sn**	**16 35 51.5**	**-0.5**
AYDN	**Tasoluk**	**1.19**	**120**	*i* P	**Pg**	**16 35 34.8**	**-0.7**
AYDN				*i* S	**Sg**	**16 35 51.4**	**+0.5**
BODT	**Bodrum**	**1.33**	**154**	PN	**Pn**	**16 35 35.8**	**-2.3**
APE	**Apeiranthos**	**1.45**	**215**	*e*Sg	**Sg**	**16 36 00.8**	**+1.6**
APE				*e*Sg	**Sg**	**16 36 13.4**	**+14**
APE	**Apeiranthos**	**1.45**	**215**	*e*Pb	**Pb**	**16 35 37.1**	**-3.2**
APE				*e*Sg	**Sg**	**16 36 00.8**	**+1.6**
BOZC	**Bozcaada**	**1.64**	**346**	*i* P	**Pn**	**16 35 40.5**	**-1.9**
BOZC				*i* S	**Sn**	**16 36 04.5**	**+0.6**
DAT	**Datca**	**1.72**	**152**	PN	**Pn**	**16 35 42.3**	**-1.2**
YER	**Yerkesik**	**1.75**	**129**	PN	**Pn**	**16 35 43.2**	**-0.8**
CANB	**Canakkale**	**1.80**	**12**	PN	**Pn**	**16 35 45.4**	**+0.8**
BTOK	**Tokmak**	**1.88**	**37**	*i* P	**Pn**	**16 35 44.1**	**-1.6**
BTOK				*i* S	**Sn**	**16 36 12.4**	**+2.4**
BTOK	**Tokmak**	**1.88**	**37**	*i* P	**Pn**	**16 35 44.1**	**-1.6**
BTOK				*i* S	**Sn**	**16 36 12.4**	**+2.4**
LIA	**Limnos Island**	**1.97**	**327**	*e*PB	**Pn**	**16 35 46.1**	**-0.8**
DENT	**Denizli**	**2.00**	**104**	PN	**Pn**	**16 35 46.7**	**-0.7**
GADA	**Gvkgeada**	**2.00**	**345**	PN	**Pn**	**16 35 48.2**	**+0.8**
SANT	**Santorini**	**2.08**	**206**	*e*Pn	**Pn**	**16 35 47.9**	**-0.6**
SANT				*e*Sn	**Sn**	**16 36 16.4**	**+1.4**
DST	**Dursunbey**	**2.09**	**49**	*e*PN	**Pn**	**16 35 48.3**	**-0.3**
LPK	**Lapseki**	**2.12**	**4**	*e*PN	**Pn**	**16 35 50.1**	**+1.1**
KVR	**Kavouri**	**2.26**	**260**	*e*PG	**Pn**	**16 35 51.0**	**+0.1**
ATH	**Athens Observa**	**2.27**	**264**	*e*PG	**Pn**	**16 35 53.0**	**+1.8**
AOS	**Alonnisos**	**2.30**	**294**	*e*Pn	**Pn**	**16 35 50.4**	**-1.1**
AOS				*e*Sn	**Sn**	**16 36 20.8**	**+0.4**
RKY	**Sarkoy-Tekirda**	**2.47**	**11**	*e*PN	**Pn**	**16 35 55.0**	**+1.1**
ENEZ	**Enez**	**2.50**	**353**	*e*PN	**Pn**	**16 35 56.0**	**+1.8**
MFT	**Murefte**	**2.58**	**12**	*e*PN	**Pn**	**16 35 56.7**	**+1.3**
ALN	**Alexandroupoli**	**2.67**	**351**	*e*Pn	**Pn**	**16 35 55.2**	**-1.4**
ALN				*e*Sn	**Sn**	**16 36 28.3**	**-1.2**
PAIG	**Paliouri**	**2.81**	**307**	*e*Pn	**Pn**	**16 35 56.9**	**-1.5**
XOR	**Xorichti**	**2.87**	**294**	*e*Pn	**Pn**	**16 35 58.1**	**-1.2**
OUR	**Ouranopolis**	**2.89**	**317**	*e*Pn	**Pn**	**16 35 58.0**	**-1.7**
OUR				*e*Sn	**Sn**	**16 36 34.8**	**-0.1**
GEMT	**Gemlik**	**2.97**	**42**	*e*PN	**Pn**	**16 36 02.0**	**+1.3**
ZKR	**Zakros**	**3.15**	**185**	*e*Pn	**Pn**	**16 36 02.6**	**-0.5**
ZKR				*e*Sn	**Sn**	**16 36 43.2**	**+1.9**
YLV	**Yalova**	**3.16**	**42**	*e*PN	**Pn**	**16 36 04.2**	**+0.8**
LAST	**Lasithi**	**3.21**	**196**	*e*Pn	**Pn**	**16 36 03.5**	**-0.6**
LAST				*e*Sn	**Sn**	**16 36 45.0**	**+2.1**
KDZ	**Kurdzhali**	**3.50**	**346**	*e*P	**Pn**	**16 36 06.0**	**-2.1**
HORT	**Hortiatis**	**3.57**	**312**	*e*Pn	**Pn**	**16 36 07.7**	**-1.2**
HORT				*e*Sn	**Sn**	**16 36 51.5**	**-0.1**
MMB	**Musomiste**	**3.98**	**328**	*e*Pn	**Pn**	**16 36 14.0**	**-0.7**
MMB				*e*Sn	**Sn**	**16 37 02.1**	**+0.2**
MMB	**Musomiste**	**3.98**	**328**	*e*P	**Pn**	**16 36 16.0**	**+1.3**
MMB				*e*Sn	**Sn**	**16 37 02.1**	**+0.2**
MDU	**Mudurnu**	**4.22**	**57**	*e*PN	**Pn**	**16 36 19.1**	**+1.3**
VTS	**Vitosha**	**5.04**	**330**	*e*P	**Pn**	**16 36 31.0**	**+1.9**

MAN 06 17:10:07.3, 1365N×**12084E, h2**km**, mb2.4, ML4.0, MS1.9, 4D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.18**	**143**	⇓*e*P	Pg	17 10 11.9	+1.1
PGP				*e*S	Sg	17 10 14.0	+0.9
TGY	**Tagaytay City**	**0.46**	**12**	⇓*e*P	Pg	17 10 17.2	+1.2
TGY				*e*S	Sg	17 10 24.6	+2.6
LUBP	**Lubang**	**0.58**	**278**	*e*P	Pg	17 10 18.2	-0.2
LUBP				*e*S	Sg	17 10 26.3	+0.3
LQP	**Lukban**	**0.82**	**56**	⇓*e*P	Sg	17 10 34.3	+0.7
BOAC	**Boac**	**0.99**	**101**	*e*P	Pg	17 10 24.9	-1.4
BOAC				*e*S	Sg	17 10 39.2	0.0
POLP	**Polilio Island**	**1.51**	**45**	*e*P	Pn	17 10 33.5	-1.9
GQP	**Guinayangan**	**1.58**	**81**	⇓*e*P	Pn	17 10 35.4	-0.9
GQP				*e*S	Sn	17 10 58.7	+1.4
BUSP	**Coron**	**1.75**	**201**	*e*P	Pn	17 10 38.8	+0.1
AUQP	**San Andres**	**1.81**	**100**	*e*P	Pn	17 10 40.9	+1.4
BALP	**Baler**	**2.20**	**19**	*e*P	Pn	17 10 45.9	+1.2
CUYO	**Cuyo Island**	**2.79**	**176**	*e*P	Pn	17 11 00.4	+7.5
BOLP	**Bolinao**	**2.86**	**342**	*e*P	Pn	17 10 47.0	-6.9
CAUP	**Cauayan**	**3.41**	**16**	*e*P	Pn	17 11 07.0	+5.6

PRE 06 17:12:53.5±1.6**, 2126S**×**3325E, h5**km**, ML4.8, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.18**	**250**	*e*P	Pn	17 13 46.2	+2.0
MSNA				*e*S	Sn	17 14 22.6	+0.1
MSNA				AML	AML	17 14 44.8	
	comp=Z,435nm,0.4s						
POGA	**Pongola**	**6.26**	**193**	*e*P	Pn	17 14 26.6	+0.2
POGA				*e*S	Sn	17 15 35.7	-2.7
POGA				AML	AML	17 16 24.1	
	comp=Z,180nm,0.6s						
KSR	**Koster**	**7.40**	**231**	*e*P	Pn	17 14 43.7	+1.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSR				eS	Sn	17 16 02.8	-3.7
KSR				AML	AML	17 17 04.9	
	comp=Z,79nm,0.7s						
KSD	Kokstad	9.86	200	eP	Pn	17 15 16.8	+0.9
KSD				eS	Sn	17 17 01.1	-5.8
KSD				AML	AML	17 18 15.8	
	comp=Z,53nm,0.7s						
BOSA	Boshof	10.30	223	eP	Pn	17 15 23.3	+1.4
BOSA				eS	Sn	17 17 13.5	-4.2
BOSA				AML	AML	17 18 47.8	
	comp=Z,39nm,0.6s						
UPI	Upington	12.98	235	eP	Pn	17 15 59.8	+1.2
UPI				eS	Sn	17 18 17.6	-5.8
UPI				AML	AML	17 20 03.7	
	comp=Z,19nm,0.7s						
SUR	Sutherland	15.66	222	eP	Pn	17 16 37.3	+2.5
SUR				eS	Sn	17 19 21.1	-7.7

ISCJB ***06*** *17:13:38.4±2.8, 37.1N±0.2×70.8E±0.2, h33km, Error ellipse: s-maj=27.8km s-min=19.0km az=64.2*
NNC ***06*** *17:13:43.1±7.8, 37.28N×70.58E, h60km±310km, mb3.2, mpv3.1, Error ellipse: s-maj=125.3km s-min=67.1km az=83.0*
ISC 06 17:13:39.6±2.8**, 37.0N**±0.2×**70.8E**±0.2**, h35km, n9, σ0.52**/11**, 5C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.62	23	P	Pn	17 15 01.2	+0.5
	SNR=17						
KK31	Karatay Array	6.12	358	⇑Pn	Pn	17 15 08.3	+0.7
	1.4nm,0.3s,baz=172,slow=13,SNR=36						
KK31				⇑Sn	Sn	17 16 16.1	-0.2
	1.2nm,0.4s,baz=186,slow=21,SNR=5.0						
EKS2	Erkin-Say	6.13	21	P	Pn	17 15 08.5	+0.9
	SNR=9.7						
KZA	Kyzart	6.16	33	P	Pn	17 15 07.4	-0.6
	SNR=7.1						
CHMS	Chumysh	6.74	26	P	Pn	17 15 16.0	-0.1
	SNR=13						
USP	Ospenovka	6.90	23	P	Pn	17 15 17.8	-0.4
	SNR=7.5						
TKM2	Tokmak 2	7.00	31	P	Pn	17 15 19.2	-0.3
	SNR=8.2						
TKM2	Tokmak 2	7.00	31	⇑Pn	Pn	17 15 19.2	-0.3
	0.4nm,0.5s						
AB31	Akbulak array	14.57	331	⇑Pn	Pn	17 17 02.8	-0.4
	0.2nm,0.5s,baz=0.0,slow=0.1,SNR=6.8						
AB31				⇑Sn	Sn	17 19 35.4	-8.1
	0.1nm,0.3s						

BJI ***06*** *17:14:45.0, 10.34N×92.20E, h34km, mb4.0*
IDC ***06*** *17:14:48.4±0.9, 11.09N×91.97E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.9/21, mbtmp3.9/11, ML3.9/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/27, Error ellipse: s-maj=44.0km s-min=16.8km az=53.0*
ISCJB ***06*** *17:14:51.4±0.5, 11.12N±0.08×91.98E±0.09, h33km, mb4.1/18, MS3.5/1, Error ellipse: s-maj=13.9km s-min=8.5km az=104.5*
NEIC ***06*** *17:14:52.9±0.4, 11.12N×92.05E, h30km, mb4.2/5, Error ellipse: s-maj=14.1km s-min=7.7km az=55.0*
ISC 06 17:14:53.9±0.4**, 11.17N**±0.07×**92.02E**±0.08**, h35km, n28, σ0.64**/30**, mb4.1**/18**, MS3.5**/1**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIS	Vishakhapatnam	10.64	309	eP	Pn	17 17 23.7	-0.2
VIS				eS	Sn	17 19 10.8	-11
VIS				AML	AML	17 19 14.7	
	comp=E,40nm,0.4s						
VIS				AML	AML	17 19 16.4	
	comp=N,34nm,0.1s						
PSI	Prapat	10.77	140	Pn	Pn	17 17 22.9	-2.7
	comp=N,1.0nm,0.3s,baz=172,slow=6.9,SNR=3.0						
PSI				LR	LR	17 22 13.1	
	comp=N,299nm,19.7s,baz=295,slow=41						
PSI	Prapat	10.77	140	Pn	Pn	17 17 22.9	-2.7
PSI				LR	LR	17 22 13.1	
PALK	Pallekele	11.83	252	Pn	Pn	17 17 39.4	-0.6
BOK	Bokaro	13.85	336	eP	Pn	17 18 12.4	+4.7
BOK				eS	Sn	17 20 46.8	+6.7
SHL	Shillong	14.32	359	eP	Pn	17 18 18.9	+4.8
CD2	Chengdu	22.45	27	P	P	17 19 48.8	-1.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.6						
GTA	Gaotai	28.96	13	eP	P	17 20 50.2	+0.2
GTA				AP	pP	17 20 57.9	-2.2
GTA				XP	sP	17 21 01.0	-3.3
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.0						
MKAR	Makanchi Array	36.45	349	P	P	17 21 55.0	-0.3
	comp=Z,2.7nm,0.8s,mb4.2,baz=161,slow=7.7,SNR=20						
SONM	Songino Array	38.49	16	P	P	17 22 12.6	0.0
	comp=Z,0.9nm,0.9s,mb3.5,baz=195,slow=9.2,SNR=7.3						
KURK	Kurchatov	40.94	347	eP	P	17 22 33.3	+0.3
	comp=Z,1.4nm,0.6s,mb3.8						
ZAL	Zalesovo	43.04	354	P	P	17 22 51.0	+0.8
	comp=Z,1.2nm,0.6s,mb3.8,baz=286,slow=9.3,SNR=5.9						
ZAL				LR	LR	17 42 47.5	
	comp=Z,61nm,18.9s,MS3.5,baz=90,slow=39						
FITZ	Fitzroy Crossi	44.13	131	P	P	17 22 59.1	+0.2
	comp=Z,2.4nm,0.8s,mb4.0,baz=323,slow=10,SNR=5.7						
BRVK	Borovoye	45.28	342	eP	P	17 23 07.4	-0.7
	comp=Z,1.1nm,0.8s,mb3.7						
CHKZ	Chkalovo	45.71	342	eP	P	17 23 11.6	+0.1
	comp=Z,5.1nm,1.0s,mb4.4						
WRAB	Tennant Creek	51.88	126	eP	P	17 23 59.0	+0.2
	comp=Z,6.2nm,0.7s,mb4.7						
WB2	Warramunga Arr	51.88	126	eP	P	17 23 58.9	0.0
ASPA	Alice Springs	53.62	131	eP	P	17 24 12.3	+0.6
AS31	Alice Springs	53.62	131	eP	P	17 24 12.3	+0.6
ASAR	Alice Springs	53.62	131	P	P	17 24 12.1	+0.3
	comp=Z,1.2nm,0.8s,mb3.9,baz=304,slow=7.3,SNR=13						
BRTR	Keskin Array B	58.72	310	P	P	17 24 48.2	+0.1
	comp=Z,1.2nm,0.7s,mb4.1,baz=120,slow=7.3,SNR=8.1						
AKASG	Malin Array Be	64.29	321	P	P	17 25 25.3	-0.4
	comp=Z,0.7nm,0.6s,mb3.9,baz=86,slow=6.1,SNR=5.8						
JOF	Joensuu	66.99	334	ep	P	17 25 42.9	-0.2
	comp=Z,5.6nm,0.8s,mb4.7						
FINES	FINESS Array B	68.84	332	P	P	17 25 54.7	0.0
	comp=Z,1.6nm,0.8s,mb4.0,baz=103,slow=8.4,SNR=7.8						
FINES	FINESS Array B	68.84	332	P	P	17 25 54.7	0.0
ARCES	ARCESS Array B	71.47	340	P	P	17 26 11.4	+0.5
	comp=Z,1.1nm,0.7s,mb3.9,baz=85,slow=6.7,SNR=4.3						
GERES	GERESS Array B	74.00	318	P	P	17 26 26.4	+0.5
	comp=Z,1.2nm,0.9s,mb3.8,baz=99,slow=4.2,SNR=7.8						
MAW	Mawson	81.34	191	eP	P	17 27 07.7	+0.9
	comp=Z,2.4nm,0.7s,mb4.2						

IDC ***06*** *17:22:53.7±0.9, 8.97S×157.64E, h0km, mb4.0/7, mb1 4.1/8, mb1mx4.1/13, mbtmp4.0/8, ML3.7/1, MS3.7/11, Ms1 3.6/11, ms1mx3.5/18, Error ellipse: s-maj=25.7km s-min=22.3km az=94.0*
NEIC ***06*** *17:22:54.8±0.6, 9.00S×157.69E, h10km, mb4.5/4, Error ellipse: s-maj=18.5km s-min=14.1km az=153.0*
ISCJB ***06*** *17:22:57.7±0.7, 8.9S±0.1×157.4E±0.2, h33km, mb4.1/10, MS3.6/8, Error ellipse: s-maj=24.6km s-min=13.6km az=61.2*
ISC 06 17:22:59.6±0.7**, 8.9S**±0.1×**157.4E**±0.2**, h35km, n27, σ0.70**/18**, mb4.1**/10**, MS3.6**/8**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.53	102	Pn	Pn	17 23 31.0	-7.2
	21nm,0.3s,baz=254,slow=3.8,SNR=19						
HNR	Honiara	2.53	102	ePn	Pn	17 23 30.4	-7.8
PMG	Port Moresby	10.16	266	LR	LR	17 29 10.7	
	comp=Z,378nm,19.6s,baz=82,slow=36						
CTA	Charters Tower	15.49	223	LR	LR	17 32 01.2	
	comp=Z,213nm,18.2s,baz=207,slow=35						
DZM	Mont Dzumac	15.68	147	LR	LR	17 31 05.4	
	comp=Z,268nm,19.8s,baz=35,slow=32						
WRAB	Tennant Creek	24.86	241	eP	P	17 28 18.2	-0.6
	19nm,1.1s,mb4.5						
WB2	Warramunga Arr	24.86	241	eP	P	17 28 18.9	+0.1
GUMO	Guam	25.61	331	LR	LR	17 37 19.9	
	comp=Z,90nm,20.0s,MS3.3,baz=268,slow=34						
AS31	Alice Springs	26.86	234	eP	P	17 28 37.2	+0.3
ASAR	Alice Springs	26.86	234	P	P	17 28 35.9	-1.0
	1.3nm,0.9s,mb3.5,baz=65,slow=8.7,SNR=8.9						
ASAR				LR	LR	17 38 53.6	
	comp=Z,104nm,20.8s,MS3.4,baz=273,slow=36						
ASPA	Alice Springs	26.86	234	eP	P	17 28 37.2	+0.3
STKA	Stephens Creek	27.17	211	eP	P	17 28 40.1	+0.5
	3.5nm,0.8s,mb3.9						
STKA	Stephens Creek	27.17	211	P	P	17 28 39.8	+0.1
	3.6nm,0.7s,mb4.0,baz=23,slow=13,SNR=5.2						
STKA				LR	LR	17 38 28.9	
	comp=Z,168nm,20.9s,MS3.6,baz=26,slow=34						
FITZ	Fitzroy Crossi	32.19	250	LR	LR	17 42 08.9	
	comp=Z,101nm,18.4s,MS3.5,baz=53,slow=36						
NWAO	Narrogin (SRO)	44.11	231	LR	LR	17 49 12.3	
	comp=Z,123nm,21.6s,MS3.8,baz=31,slow=36						
MJAR	Matsushiro Arr	48.70	339	P	P	17 31 40.2	-0.3
	1.9nm,0.8s,mb4.2,baz=169,slow=8.3,SNR=9.1						
MJAR				LR	LR	17 49 09.7	
	comp=Z,67nm,18.3s,MS3.7,baz=150,slow=32						
PPT	Papeete	52.15	105	LR	LR	17 52 19.6	
	comp=Z,66nm,18.2s,MS3.7,baz=282,slow=34						
VNDA	Vanda	68.61	179	P	P	17 33 59.5	+0.5
	1.4nm,0.9s,mb3.9,baz=334,slow=5.0,SNR=6.4						
VNDA	Vanda	68.61	179	P	P	17 33 59.5	+0.5
SONM	Songino Array	72.26	327	P	P	17 34 23.1	+1.8
	0.7nm,0.7s,mb3.7,baz=146,slow=5.9,SNR=7.1						
QSPA	South Pole Qui	81.06	180	eP	P	17 35 10.9	-0.1
	6.1nm,1.2s,mb4.4						
COLA	College	84.01	21	eP	P	17 35 25.3	-1.1
	1.9nm,0.6s,mb4.4						
MKAR	Makanchi Array	86.44	318	P	P	17 35 38.2	-0.3
	0.3nm,0.2s,mb4.1,baz=80,slow=5.1,SNR=4.7						
RPN	Rapa Nui	88.84	117	LR	LR	18 05 53.6	
	comp=Z,50nm,19.8s,MS3.9,baz=279,slow=29						
NVAR	Mina Array Bea	91.02	51	P	P	17 36 00.3	+0.1
	0.3nm,0.3s,mb4.1,baz=261,slow=3.6,SNR=3.5						
NVAR	Mina Array Bea	91.02	51	P	P	17 36 00.3	+0.1
BDFB	Brasilia	144.91	134	PKP	PKPdf	17 42 32.8	-0.2
	2.7nm,0.7s,baz=155,slow=3.2,SNR=3.9						

MAN 06 17:29:13.1, 16.12N×122.37E, h19km, mb1.9, ML3.7, MS3.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.85	244	eP	Pb	17 29 28.8	-0.5
BALP				eS	Sb	17 29 41.1	+0.8
PALP	Palanan	0.94	3	eP	Pb	17 29 30.2	-0.6
CAUP	Cauayan	0.97	328	eP	Pb	17 29 30.0	-1.4
CAUP				eS	Sb	17 29 36.1	-7.8
APYP	Conner	2.04	328	eP	Pn	17 29 46.2	-0.2
ABRA	Dolores	2.20	314	eP	Pn	17 29 49.9	+1.3
BOLP	Bolinao	2.37	277	eP	Pn	17 29 54.2	+3.2

ISK ***06*** *17:40:12.9, 38.63N×26.57E, h17km, MD3.0*
ISCJB ***06*** *17:40:13.4±0.7, 38.61N±0.03×26.52E±0.06, h16km±6km, Error ellipse: s-maj=8.0km s-min=3.7km az=129.0*
ATH ***06*** *17:40:13.0, 38.61N×26.37E, h24km±1km, MD3.4/4*
CSEM ***06*** *17:40:13.4±0.1, 38.62N×26.62E, h20km, MD3.0, Error ellipse: s-maj=3.3km s-min=1.4km az=61.0*
NEIC ***06*** *17:40:13.5, 38.57N×26.33E, h13km, MD3.3(ISK), MD3.4(ATH), After ATH.*
ISC 06 17:40:12.9±0.7**, 38.60N**±0.03×**26.49E**±0.06**, h10km**±4km**, n23, σ0.71**/32**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.48	116	i PG	Pg	17 40 22.2	-0.1
BLCB				i SG	Sg	17 40 29.0	+0.3
IZM	Izmir	0.64	108	i PG	Pg	17 40 25.2	0.0
KDAG	Bornova	0.64	108	i P	Pg	17 40 24.9	-0.3
KDAG				i S	Sg	17 40 33.8	+0.1
PRK	Paraskevi	0.67	345	ePN	Pg	17 40 26.0	+0.2
PRK				eSN	Sg	17 40 35.0	+0.5
AYVA	Ayvalik	0.72	12	i P	Pg	17 40 25.6	-1.3
AYVA				i S	Sg	17 40 37.8	+1.5
SMG	Samos	0.93	163	ePN	Pn	17 40 31.7	-0.3
SMG				eSN	Sn	17 40 45.4	0.0
AKS	Akhisar	1.07	74	i PG	Pg	17 40 32.5	-1.0
EZN	Ezine	1.23	354	PN	Pn	17 40 35.7	-0.5
BOZC	Bozcaada	1.29	345	i P	Pn	17 40 35.7	-1.2
BOZC				i S	Sb	17 40 54.3	+0.5
AYDN	Tasoluk	1.44	130	i P	Pn	17 40 38.8	-0.2
AYDN				i S	Sn	17 40 59.2	+1.1
CANB	Canakkale	1.48	17	PN	Pn	17 40 38.9	-0.7
CANB				SN	Sn	17 40 57.9	-1.2
LIA	Limnos Island	1.65	322	ePb	Pb	17 40 44.9	+1.5
GADA	Gvkgeada	1.65	344	PN	Pn	17 40 41.4	-0.6
BODT	Bodrum	1.67	157	PN	Pn	17 40 42.3	+0.1
BTOK	Tokmak	1.67	45	i P	Pn	17 40 41.5	-0.6
BTOK				i S	Sn	17 41 05.2	+1.6
APE	Apeiranthos	1.71	207	ePN	Pn	17 40 43.1	+0.4
LPK	Lapseki	1.78	7	ePN	Pn	17 40 43.8	0.0
YER	Yerkesik	2.04	135	ePN	Pn	17 40 47.2	-0.1
DAT	Datca	2.06	155	ePN	Pn	17 40 47.8	+0.3
ENEZ	Enez	2.15	353	ePN	Pn	17 40 48.7	-0.1
MFT	Murefte	2.27	15	ePN	Pn	17 40 50.5	+0.1
RDO	Rodhopi	2.65	344	ePN	Pn	17 40 56.0	+0.3
YLV	Yalova	2.97	48	ePN	Pn	17 41 00.1	0.0

NNC 06 17:47:26.0±4.8**, 37.65N×73.82E, h0km, mb3.4, mpv2.9, 3C-3D, Error ellipse: s-maj=41.0km s-min=31.8km az=20.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	Tokmak 2	5.43	14	⇓Pn	Pn	17 48 48.1	-0.2
	0.4nm,0.5s						
TKM2				⇓Sn	Sn	17 49 52.0	+0.5
	1.2nm,0.7s						
KK31	Karatay Array	6.00	336	⇓Pn	Pn	17 48 59.4	+3.3
	0.6nm,0.3s,baz=141,slow=12,SNR=22						
KK31				⇑Sn	Sn	17 50 13.2	+7.7
	1.5nm,0.3s,baz=144,slow=23,SNR=16						
AB31	Akbulak array	15.34	324	⇑Pn	Pn	17 51 01.4	-2.4
	1.4nm,0.9s,baz=137,slow=12,SNR=4.9						
AB31				⇑Sn	Sn	17 53 52.3	-2.0
	0.3nm,0.5s						

ISCJB ***06*** *17:59:13.0±2.8, 37.4N±0.2×74.2E±0.1, h10km, Error ellipse: s-maj=25.7km s-min=13.9km az=137.5*
NNC ***06*** *17:59:16.6±5.2, 37.67N×73.82E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=47.1km s-min=40.5km az=8.0*
BJI ***06*** *17:59:21.6, 37.67N×75.26E, h10km, ML3.1*
ISC 06 17:59:13.5±2.9**, 37.4N**±0.2×**74.2E**±0.2**, h10km, n4, σ1.19**/8**, 5C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	2.56	32	⇑iP	Pn	17 59 54.9	-0.2
KSH				S	Sn	18 00 26.2	-0.1
KSH				Smax			
	comp=N,196nm,0.6s						
KSH				Smax			
	comp=E,315nm,0.5s						
TKM2	Tokmak 2	5.65	10	⇓Pn	Pn	18 00 38.4	+0.8
	comp=E,0.5nm,0.5s						
TKM2				⇑Sn	Sn	18 01 42.0	-0.5
	comp=E,0.7nm,0.6s						
KK31	Karatay Array	6.39	335	⇓Pn	Pn	18 00 49.7	+2.1
	comp=E,1.1nm,0.4s,baz=150,slow=12,SNR=32						
KK31				⇑Sn	Sn	18 02 03.6	+2.9
	comp=E,2.7nm,0.5s,baz=159,slow=25,SNR=12						
AB31	Akbulak array	15.74	324	⇑Pn	Pn	18 02 53.5	-1.8
	comp=E,0.8nm,0.7s,baz=0.0,slow=0.1,SNR=4.3						
AB31				⇑Sn	Sn	18 05 41.3	-8.6
	comp=E,1.0nm,0.8s						

BGS ***06*** *18:16:30.3±1.3, 24.53N×145.86E, h23km, mb6.0*
ISCJB ***06*** *18:16:39.4±0.1, 26.26N±0.02×143.99E±0.01, h23km, mb6.0/329, MS5.6/214, Error ellipse: s-maj=2.6km s-min=1.8km az=5.8*
NEIC ***06*** *18:16:39.7±0.1, 26.12N×144.01E, h20km, mb6.0/208, ME6.0, MS5.7/148, MW5.8, MW5.5(NIED), Error ellipse: s-maj=2.6km s-min=2.3km az=166.0, Moment Tensor Solution. s78 Moment tensor: Scale 10^{17}Nm; M_{rr}-6.97; $M_{\theta\theta}$1.69; $M_{\phi\phi}$5.27; $M_{r\theta}$-0.85; $M_{\theta\phi}$-2.40; $M_{\phi r}$-0.02; Best double couple: $M_0$6.80000×10^{17} NP1:ϕ_s148.00000°, δ47.00000°, λ-98.00000°. NP2:ϕ_s339.00000°, δ44.00000°, λ-82.00000°. Principal axes: T 6.4900, Plg2.0000°, Azm243.0000°; N 0.5700, Plg6.0000°, Azm153.0000°; P -7.0600, Plg84.0000°, Azm348.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s9.00000°, δ52.00000°, λ-63.00000°. NP2:ϕ_s150.00000°, δ45.00000°, λ-120.00000°. Principal axes: T Plg4.0000°, Azm81.0000°; N Plg0.0000°, Azm0.0000°; P Plg69.0000°, Azm341.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Recorded [2 JMA] in the Chichijima-retto.
BJI ***06*** *18:16:39.5, 26.29N×143.75E, h15km, mB5.8, mb5.6, Ms5.7, Msz5.5*
HRVD ***06*** *18:16:40.2±0.1, 26.23N×144.13E, h19km, MW5.9/106, Centroid moment Tensor Solution. LP body waves: s100,c225; Mantle waves: s106,c336; Half duration: 2.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-7.28±.07; $M_{\theta\theta}$4.49±.05; $M_{\phi\phi}$2.79±.05; $M_{r\theta}$-0.98±.11; $M_{\theta\phi}$-3.65±.04; $M_{\phi r}$1.04±.12; Best double couple: $M_0$7.47200×10^{17} NP1:ϕ_s307.00000°, δ40.00000°, λ-92.00000°. NP2: ϕ_s130.00000°, δ50.00000°, λ-88.00000°. Principal axes: T 7.5230, Plg5.0000°, Azm219.0000°; N -0.1020, Plg2.0000°, Azm309.0000°; P -7.4210, Plg84.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
MOS ***06*** *18:16:40.2±0.9, 26.10N×144.05E, h33km, mb6.3/119, MS5.7/82 Error ellipse: s-maj=8.2km s-min=5.1km az=104.4*
CRAAG ***06*** *18:16:40.3, 26.10N×144.03E, Mb5.8*
IDC ***06*** *18:16:42.5±2.1, 26.02N×144.14E, h40km±17km, mb5.4/31, mb1 5.4/33, mb1mx5.4/34, mbtmp5.6/33, ML4.4/1, MS5.4/26, Ms1 5.4/26, ms1mx5.3/31, Error ellipse: s-maj=13.6km s-min=8.5km az=84.0*
JMA ***06*** *18:16:42.7, 26.64N×144.08E, h24km, M6.2*
JMA Felt II J1.
SZGRF ***06*** *18:16:48.7, 28.19N×143.38E, h26km, mb6.2, MS5.6, Bonin Islands, Japan, region*
NIED ***06*** *18:17:00, 26.50N×144.20E, h11km, Mw5.6 Best double couple: $M_0$2.62000×10^{17} NP1:ϕ_s34.00000°, δ86.00000°, λ158.00000°. NP2:ϕ_s126.00000°, δ68.00000°, λ4.00000°.*
ISC 06 18:16:41.1±0.1**, 26.24N**±0.02×**144.01E**±0.01**, h24km, h24km**±.4km**: pP-P, n1456, σ0.96**/1357**, mb6.0**/326**, MS5.6**/214**, 159C-322D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.68	284	P	Pn	18 17 11.7	+2.7
JHHJ				S	Sn	18 17 32.9	+3.1
CBIJ	Chichi jima	1.84	298	Pn	Pn	18 17 12.4	+1.3
	673nm,0.3s,baz=111,slow=2.8,SNR=114						
CBIJ				Sn	Sn	18 17 35.2	+1.6
	6µm,0.3s,baz=283,slow=20,SNR=33						
CBIJ	Chichi jima	1.84	298	⇓P	Pn	18 17 12.4	+1.2
CBIJ				S	Sn	18 17 34.2	+0.6
JHJ2	Mitsune	7.76	333	P	Pn	18 18 32.2	-0.3
JHJ2				S	Sn	18 19 56.7	-2.8
JHJ	Hachijo jima 2	7.78	333	Pn	Pn	18 18 32.5	-0.2
	81nm,0.3s,baz=57,slow=22,SNR=51						
JHJ				Sn	Sn	18 19 55.4	-4.6
	642nm,0.3s,baz=229,slow=23,SNR=16						
JHJ				LR	LR	18 21 18.4	
	comp=Z,22µm,19.5s,baz=152,slow=34						
JMY	Miyakejima3	8.72	335	P	Pn	18 18 46.6	+0.9
JMY				S	Sn	18 20 19.4	-3.8
BSO1	Boso 1	8.78	343	P	Pn	18 18 45.0	-1.6
BSO1				S	Sn	18 20 21.7	-3.1
JKO	Kozu shima	8.97	333	P	Pn	18 18 49.7	+0.6
JKO				S	Sn	18 20 27.5	-1.8
BSO3	Boso 3	9.05	341	P	Pn	18 18 49.2	-1.0
BSO3				S	Sn	18 20 28.8	-2.5
JIZS	Izushimoda	9.54	334	P	Pn	18 18 57.8	+0.9
JOD2	Odawara 2	9.94	336	P	Pn	18 19 02.2	-0.2
JOD2				S	Sn	18 20 48.6	-4.5
HMMJ	Hamamatsu 2	10.15	329	⇑P	Pn	18 19 06.0	+0.7
HMMJ				S	Sn	18 20 57.1	-1.2
JWZ	Kozaga	10.22	317	P	Pn	18 19 05.7	-0.6
JWZ				S	Sn	18 21 01.1	+1.0
JIE	Ise	10.28	324	P	Pn	18 19 06.9	-0.2
JIE				S	Sn	18 20 58.4	-3.1
JYN	Shimob	10.35	334	P	Pn	18 19 09.0	+1.0
JHU	Hanno	10.40	338	P	Pn	18 19 08.0	-0.7
JHU				S	Sn	18 21 00.7	-3.8
JKN2	Miekihoku	10.40	322	P	Pn	18 19 08.8	+0.1
JKN2				S	Sn	18 21 03.9	-0.6
JYT	Yasato	10.48	343	P	Pn	18 19 09.1	-0.7
JNY	Yasuok	10.51	331	P	Pn	18 19 11.3	+1.1
JNY				S	Sn	18 21 05.4	-1.7
JWM	Minabe	10.66	317	P	Pn	18 19 12.1	-0.1
JRY	Ryogami san	10.68	337	⇓P	Pn	18 19 12.4	-0.1
JRY				eS	Sn	18 21 07.7	-3.6
JAO	Obara	10.70	329	P	Pn	18 19 13.6	+0.7
JAO				eS	Sn	18 21 09.9	-2.0
JHO	Hitachi	10.75	345	⇓P	Pn	18 19 11.9	-1.6
JHO				eS	Sn	18 21 06.4	-6.5
JNT	Takato	10.84	334	P	Pn	18 19 16.8	+2.1
JAG	Ashikaga	10.87	340	P	Pn	18 19 14.1	-1.1
JAG				eS	Sn	18 21 10.5	-5.5
JEG	Eigenji	11.02	325	P	Pn	18 19 18.6	+1.4
JHE	Heguri	11.04	321	P	Pn	18 19 17.9	+0.5
MRT2	Murotomisaki 2	11.13	312	P	Pn	18 19 19.6	+0.9
JAI	Aioi	11.19	315	P	Pn	18 19 20.3	+0.9
JGM	Miyama	11.31	328	P	Pn	18 19 22.2	+1.0
JNG	Nsakai	11.32	335	P	Pn	18 19 22.1	+0.8
MJAR	Matsushiro Arr	11.40	336	Pn	Pn	18 19 22.6	+0.2
	23nm,0.3s,baz=156,slow=9.6,SNR=266						
MJAR				Sn	Sn	18 21 26.7	-2.2
	37nm,0.3s,baz=168,slow=19,SNR=8.8						
MJAR				P3KP		18 56 13.8	
	0.2nm,0.3s,baz=260,slow=1.8,SNR=4.7						
MJAR	Matsushiro Arr	11.40	336	Pn	Pn	18 19 22.6	+0.2
MJAR				Sn	Sn	18 21 26.7	-2.2
MAJO	Matsushiro	11.40	336	eP	Pn	18 19 22.2	-0.2
MAJO				pmax	pmax		
	comp=Z,635nm,0.8s						
MAT	Matsushiro	11.40	336	P	Pn	18 19 21.7	-0.7
MAT				S	Sn	18 21 25.5	-3.4
MAT	Matsushiro	11.40	336	eP	Pn	18 19 22.0	-0.4
MAT				eS	Sn	18 21 26.0	-2.9
MAT				pmax	pmax		
	comp=Z,1µm,1.3s						
MAT	Matsushiro	11.40	336	eP	Pn	18 19 22.0	-0.4
	comp=Z,1µm,1.3s						
MAT				eS	Sn	18 21 26.0	-2.9
JFK	Kawauchi	11.41	347	P	Pn	18 19 19.8	-2.7
JFK				eS	Sn	18 21 17.7	-11
JGN	Niukaw	11.48	332	P	Pn	18 19 24.6	+1.2
JMZ	Minamidaito 2	11.51	271	P	Pn	18 19 30.5	+6.7
JMN	Monobe	11.52	313	P	Pn	18 19 25.2	+1.2
JWT	Wachi	11.66	323	⇓P	Pn	18 19 26.2	+0.3
JKS	Kasai	11.75	320	P	Pn	18 19 27.2	0.0
JTO	Tosashimizu	11.77	307	P	Pn	18 19 28.9	+1.4
JKU	Kubokawa	11.83	309	P	Pn	18 19 29.7	+1.5
JJS	Sakaide	11.89	315	P	Pn	18 19 29.8	+0.7
JKY	Yasaka	12.07	323	P	Pn	18 19 32.1	+0.5
UWA2	Uwa jima 2	12.08	308	P	Pn	18 19 34.3	+2.6
JYS	Shirataka	12.40	345	P	Pn	18 19 34.3	-1.8
GUMO	Guam	12.61	176	Pn	Pn	18 19 39.8	+0.9
	comp=Z,14nm,0.3s,baz=168,slow=4.4,SNR=9.5						
GUMO				Sn	Sn	18 21 57.8	-0.8
	comp=Z,20nm,0.3s,baz=248,slow=23,SNR=2.9						
GUMO				LR	LR	18 23 47.9	
	comp=Z,25µm,22.0s,baz=6.7,slow=34						
GUMO	Guam	12.61	176	P	Pn	18 19 39.8	+0.9
GUMO						18 21 57.8	
JHS	Saijyo	12.80	316	P	Pn	18 19 42.1	+0.5
JMK	Ichinoseki	12.89	350	P	Pn	18 19 40.1	-2.7
JIU2	Izumi 2	13.10	302	P	Pn	18 19 48.9	+3.3
JZO	Okuchi	13.10	300	P	Pn	18 19 49.5	+3.9
JHIK	Hikimi	13.29	311	P	Pn	18 19 49.6	+1.3
JSJ	Shimokoshiki	13.63	297	P	Pn	18 19 55.9	+3.0
NGSJ	Nagasakinomoza	13.92	301	P	Pn	18 19 59.8	+3.0
JUR	Ureshino	13.99	303	P	Pn	18 20 00.8	+3.0
JOW	Kunigami	14.10	276	Pn	Pn	18 20 02.8	+3.6
	comp=Z,3.3nm,0.3s,baz=118,slow=9.5,SNR=9.1						
JOW				Sn	Sn	18 22 33.8	-1.0
	comp=Z,0.9nm,0.3s,baz=114,slow=16,SNR=3.2						

JOW LR LR 18 24 35.2
comp=Z,18μm,20.9s,baz=114,slow=33
JOW Kunigami 14.10 276 P **Pn 18 20 04.2 +5.0**
JTU Tsushima 15.06 307 P **Pn 18 20 14.8 +2.5**
JOT Ohata 15.30 352 P **Pn 18 20 13.0 -2.4**
JKE Kume jima 2 15.45 274 P **Pn 18 20 20.9 +3.5**
ERM Erimo 15.75 358 Pn **Pn 18 20 17.1 -4.2**
comp=Z,2μm,1.2s,SNR=22
ERM Erimo 15.75 358 Pn **Pn 18 20 17.3 -4.0**
JKB Kayabe 15.80 352 P **Pn 18 20 20.3 -1.7**
JOSM Okushiri–Mats 16.24 348 P **Pn 18 20 25.8 -1.8**
NEM2 Nemuro 2 17.14 4 P **Pn 18 20 35.6 -3.4**
JTJ Tarama 17.51 269 P **Pn 18 20 47.5 +4.0**
YUK Yuzh-Kuril'sk 17.82 4 *e*P **Pn 18 20 45.0 -2.4**
YUK pmax pmax
comp=Z,19μm,7.0s
YUK pmax pmax
comp=N,24μm,10.0s
YUK pmax pmax
comp=E,2μm,2.0s
YUK MLR MLR
comp=N,17μm,15.0s
YUK MLR MLR
comp=E,8μm,12.0s
ASAJ Asahikawa 17.87 357 P **Pn 18 20 47.0 -1.1**
comp=E,16nm,0.3s,baz=203,slow=14,SNR=74
ASAJ S **Sn 18 23 58.0 -8.6**
comp=E,7.9nm,0.3s,baz=124,slow=31,SNR=7.3
ASAJ LR LR 18 27 13.1
comp=E,20μm,20.0s,baz=186,slow=35
ASAJ Asahikawa 17.87 357 P **Pn 18 20 47.0 -1.1**
ASAJ S **Sn 18 23 58.0 -8.6**
ASAJ pmax pmax
comp=Z,16nm,0.3s
ASAJ smax
comp=N,8.0nm,0.3s
ASAJ MLR MLR
comp=Z,20μm,20.0s
JKRS Kuro-shima 18.20 268 P **Pn 18 20 54.5 +2.4**
IRIF Iriomote-Funau 18.43 269 P **Pn 18 20 56.1 +1.2**
INCN Inchon 18.50 312 ⇓P **Pn 18 20 56.1 +0.4**
SNR=75
INCN Inchon 18.50 312 *e*P **Pn 18 20 55.5 -0.2**
comp=Z,733nm,1.1s
YOJ Yonaguni jima 19.06 269 P **Pn 18 21 04.0 +1.5**
VLA Vladivostok 19.53 333*c i*P **Pn 18 21 07.7 -0.4**
VLA *i* S **Sn 18 24 50.7 +4.1**
VLA pmax pmax
comp=Z,4μm,1.6s
VLA MLR MLR
comp=Z,9μm,13.4s
TATO Taipei 20.34 271 P **P 18 21 16.9 +1.3**
SNR=12
TATO Taipei 20.34 271 *e*P **P 18 21 16.5 +0.8**
comp=Z,294nm,0.8s
TATO LR LR
comp=Z,22μm,20.0s,MS5.5
NACB Ninganchiao 20.38 269 *e*P **P 18 21 16.6 +0.5**
YHNB Yeheng 20.49 271 *e*P **P 18 21 18.0 +0.8**
SSE Sheshan 20.59 289 P **P 18 21 17.6 -0.7**
SSE AP 18 21 23.3
SSE XP sP 18 21 26.0 -2.1
SSE S **S 18 25 06.6 -0.6**
SSE PCP PcP 18 25 28.1 -0.4
SSE AMB AMB
comp=Z,63nm,1.2s
SSE AMB AMB
comp=Z,665nm,4.4s
SSE LR LR
comp=N,7μm,16.7s,MS5.3
SSE LR LR
comp=E,9μm,16.7s,MS5.3
SSE LR LR
comp=Z,11μm,16.9s,MS5.3
YSS Yuzh-Sakhalins 20.70 358κ *i*P **P 18 21 21.0 +1.5**
YSS *i* *SP sP 18 21 30.0 +0.7
YSS *i* 18 21 47.7
YSS *i* S **S 18 25 02.0 -7.5**
YSS *i* 18 25 16.0
YSS *e* 18 25 30.0
YSS pmax pmax
comp=N,390nm,1.3s
YSS pmax pmax
comp=E,280nm,1.3s
YSS pmax pmax
comp=Z,610nm,1.3s
YSS pmax pmax
comp=N,3μm,5.0s
YSS pmax pmax
comp=Z,4μm,5.0s
YSS smax
comp=E,180nm,1.1s
YSS smax
comp=N,980nm,1.7s
YSS smax
comp=N,3μm,6.0s
YSS smax
comp=E,2μm,6.0s
YSS MLR MLR
comp=N,18μm,17.0s,MS5.6
YSS MLR MLR
comp=Z,18μm,17.0s,MS5.5
YSS MLR MLR
comp=E,14μm,15.0s,MS5.6
YSS Yuzh-Sakhalins 20.70 358 *e*P **P 18 21 21.1 +1.6**
comp=E,619nm,0.9s
YSS LR LR
comp=Z,17μm,22.0s,MS5.4
MDJ Mudanjiang 21.72 331 P **P 18 21 32.3 +1.9**
MDJ AP 18 21 38.0
MDJ XP sP 18 21 41.2 +0.9
MDJ PCP PcP 18 25 30.7 0.0
MDJ S **S 18 25 33.4 +3.9**
MDJ SCP ScP 18 29 06.2 0.0
MDJ PCS PcS 18 29 08.7 -0.4
MDJ SCS ScS 18 32 51.0 +0.4
MDJ AMB AMB
comp=Z,394nm,1.4s,mb5.7
MDJ AMB AMB
comp=Z,7μm,6.2s
MDJ LR LR
comp=N,8μm,16.6s,MS5.3
MDJ LR LR
comp=E,4μm,12.4s,MS5.3
MDJ LR LR
comp=Z,10μm,19.0s
MDJ Mudanjiang 21.72 331 *e*P **P 18 21 32.1 +1.7**
comp=Z,640nm,1.0s,mb6.0
MDJ LR LR
comp=Z,11μm,19.0s,MS5.3
SGCP Mt. Cagua 21.81 253 *e*P **P 18 21 32.7 +1.3**
WAKE Wake Island 21.98 104 *e*P **P 18 21 31.7 -1.6**
comp=Z,982nm,1.3s,mb6.1
WAKE LR LR
comp=Z,16μm,20.0s,MS5.4
PALP Palanan 22.01 250 *e*P **P 18 21 34.7 +1.1**
CVP Callao Caves 22.23 252⇓*e*P **P 18 21 37.0 +1.1**
PVCP Virac 22.46 240⇓*e*P **P 18 21 34.4 -4.0**
PVCP Virac 22.46 240 *e*P **P 18 21 40.4 +2.0**
CAUP Cauayan 22.57 250 *e*P **P 18 21 41.4 +1.8**
DL2 Dalian 22.63 309 *i* PR **P 18 21 37.3 -2.8**
DL2 PCP PcP 18 25 33.4 +0.9
DL2 S **S 18 25 39.9 -7.1**
DL2 SCP ScP 18 29 05.6 -3.0
DL2 PCS PcS 18 29 10.2 -1.2
DL2 SCS ScS 18 32 54.7 +0.7
DL2 AMB AMB
comp=Z,90nm,1.0s,mb5.2
DL2 AMB AMB
comp=Z,1μm,8.7s
DL2 LR LR
comp=N,3μm,12.6s,MS5.1
DL2 LR LR
comp=E,3μm,15.4s,MS5.1
DL2 LR LR
comp=Z,5μm,15.3s,MS5.1
APYP Conner 22.66 253 *e*P **P 18 21 40.2 -0.3**
NJ2 Nanjing 22.69 291 *e*P **P 18 21 40.5 -0.3**
NJ2 AP 18 21 47.5
NJ2 XP sP 18 21 52.0 +1.3
NJ2 PP 18 22 09.7
NJ2 S **S 18 25 42.0 -6.1**
NJ2 XS sS 18 25 53.0 -6.3
NJ2 AMB AMB
comp=Z,140nm,1.0s,mb5.3
NJ2 AMB AMB
comp=Z,1μm,5.0s
NJ2 LR LR
comp=N,14μm,18.0s
NJ2 LR LR
comp=E,11μm,25.0s
NJ2 LR LR
comp=Z,5μm,22.0s,MS5.0
SNY Shenyang 22.90 318 ⇓P **P 18 21 42.9 -0.1**
SNY AP 18 21 49.1
SNY XP sP 18 21 52.7 -0.2
SNY PP 18 22 05.9
SNY S **S 18 25 51.9 +0.4**
SNY AMB AMB
comp=Z,726nm,1.0s,mb6.1
SNY AMB AMB
comp=Z,7μm,10.6s
SNY LR LR
comp=N,6μm,11.8s,MS5.5
SNY LR LR
comp=E,9μm,14.4s,MS5.5
SNY LR LR
comp=Z,8μm,13.5s,MS5.3
QZH Quanzhou 22.95 272⇓*i*P **P 18 21 43.3 -0.2**
QZH S **S 18 25 49.2 -3.1**
QZH AMB AMB
comp=Z,320nm,1.0s,mb5.7
QZH AMB AMB
comp=Z,4μm,5.2s
QZH LR LR
comp=N,8μm,13.8s,MS5.5
QZH LR LR
comp=E,11μm,14.4s,MS5.5
QZH LR LR
comp=Z,23μm,18.2s,MS5.7
PIP Pasuquin 23.00 255⇓*i*P **P 18 21 43.0 -1.1**
CN2 Changchun 23.11 324⇓*i*P **P 18 21 45.9 +0.7**
CN2 *e*XP sP 18 21 54.8 -0.3
CN2 PCP PcP 18 25 33.6 +0.1
CN2 *e*S **S 18 25 53.9 -0.9**
CN2 SCS ScS 18 32 54.9 -0.9
CN2 AMB AMB
comp=Z,30nm,1.0s
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,12μm,19.0s,MS5.4
CN2 LR LR
comp=E,8μm,19.0s,MS5.4
CN2 LR LR
comp=Z,9μm,21.0s,MS5.2
ABRA Dolores 23.21 253 *e*P **P 18 21 45.2 -1.0**
HABR Khabarovsk 23.27 345⇓*i*P **P 18 21 49.1 +2.1**
HABR *e*S **S 18 26 02.8 +5.2**
HABR pmax pmax
comp=Z,3μm,1.9s,mb6.5
HABR MLR MLR
comp=Z,6μm,14.0s,MS5.2
BALP Baler 23.36 248 *e*P **P 18 21 45.8 -2.1**
POLP Polillo Island 23.59 245 *e*P **P 18 21 50.1 +0.1**
OCLP Ormoc 23.74 234 *e*P **P 18 21 53.7 +2.3**
AUQP San Andres 23.78 241 *e*P **P 18 21 54.4 +2.5**
BCPH Baguio City Da 23.89 250⇑*i*P **P 18 21 51.2 -1.6**
comp=Z,3245μm,5.0s
BCPH *i* S **S 18 25 59.1 -8.4**
MSLP Maasin 24.18 232 *e*P **P 18 21 56.6 +1.2**
BOAC Boac 24.36 243 *e*P **P 18 21 56.6 -0.5**
BOLP Bolinao 24.45 251 *e*P **P 18 21 56.6 -1.4**
BUTP Butuan 24.48 229 *e*P **P 18 21 58.4 +0.1**
LLP Lapu-Lapu 24.70 234⇑*e*P **P 18 22 00.0 -0.1**
SCZP Santa Cruz 24.74 250 *e*P **P 18 22 00.2 -0.4**
TGY Tagaytay City 24.74 245 P **P 18 22 02.0 +1.3**
comp=Z,123nm,0.6s,baz=194,slow=2.3,SNR=6.1
TGY LR LR 18 30 35.6
comp=Z,91nm,18.1s,baz=39,slow=34
KLR Kul'dur 24.85 341 *e*P **P 18 22 00.0 -1.6**
KLR *e*PPP 18 22 57.5
KLR *e*S **S 18 26 22.5 -0.5**
KLR pmax pmax
comp=E,580nm,2.0s
KLR pmax pmax
comp=Z,1μm,2.0s,mb6.0
KLR pmax pmax
comp=E,2μm,8.0s
KLR pmax pmax
comp=Z,8μm,8.0s
KLR smax
comp=E,5μm,15.0s
KLR MLR MLR
comp=Z,17μm,15.0s,MS5.7
OTRP Odiongan 24.86 240 *e*P **P 18 22 03.5 +1.8**
TIA Tai'an 24.97 300⇓*i*P **P 18 22 02.2 -0.5**
TIA S **S 18 26 22.0 -3.0**
TIA AMB AMB
comp=Z,358nm,1.0s,mb5.8
TIA AMB AMB
comp=Z,235nm,4.0s
TIA LR LR
comp=N,4μm,13.0s,MS5.4
TIA LR LR
comp=E,6μm,13.0s,MS5.4
TBP Tagbilaran 25.20 233 *e*P **P 18 22 07.0 +2.3**
CGP Cagayan de Oro 25.48 230⇓*i*P **P 18 22 03.6 -3.7**
comp=E,1851μm,1.0s
LUBP Lubang 25.50 245 *e*P **P 18 22 08.1 +0.6**
GUIM Jordan 25.51 236 *e*P **P 18 22 11.1 +3.5**
MATI Mati 25.57 225 *e*P **P 18 22 06.1 -2.1**
BUKP Musuan 25.65 228 *e*P **P 18 22 07.8 -1.0**
SNPH Sibulan 25.88 233 *e*P **P 18 22 13.5 +2.5**
DAV Davao City (W) 25.91 226 P **P 18 22 08.3 -2.9**
DAV LR LR
comp=Z,25μm,20.0s,MS5.8
SKR Severo-Kuril's 26.12 18 *e*P **P 18 22 08.7 -4.4**
SKR *e*PPP 18 23 04.0
SKR *e*S **S 18 26 38.0 -5.1**
SKR pmax pmax
comp=N,110nm,1.0s
SKR pmax pmax
comp=E,160nm,1.0s
SKR pmax pmax
comp=Z,160nm,1.0s,mb5.5
SKR pmax pmax
comp=N,3μm,6.0s
SKR pmax pmax
comp=E,4μm,6.0s
SKR pmax pmax
comp=Z,5μm,6.0s
SKR smax
comp=N,4μm,12.0s
SKR smax
comp=E,4μm,12.0s
SKR smax
comp=N,200nm,1.0s
SKR smax
comp=E,220nm,1.0s
SKR MLR MLR
comp=N,5μm,12.0s,MS5.5
SKR MLR MLR
comp=E,7μm,12.0s,MS5.5
SKR MLR MLR
comp=Z,11μm,12.0s,MS5.6
WHN Wuhan 26.40 286 ⇓P **P 18 22 14.5 -1.1**
WHN S **S 18 26 41.3 -6.3**
WHN LR LR
comp=Z,30μm,17.8s,MS5.9
BUSP Coron 26.51 242 *e*P **P 18 22 13.1 -3.5**
CUYO Cuyo Island 26.56 239 *e*P **P 18 22 17.2 +0.1**
BJT Baijiatuau 26.93 308 *e*P **P 18 22 19.8 -0.6**
BJT pmax pmax
comp=Z,143nm,1.1s
BJT MLR MLR
comp=Z,9μm,20.0s
BJT Baijiatuau 26.93 308 *e*P **P 18 22 19.8 -0.6**
comp=Z,143nm,1.1s,mb5.4
BJT LR LR
comp=Z,9μm,20.0s,MS5.3
BJI Beijing 26.93 308 *e*P **P 18 22 19.6 -0.9**
BJI XP sP 18 22 28.9 -1.8
BJI S **S 18 26 52.9 -3.1**
BJI XS sS 18 27 05.7 -2.3
BJI AMB AMB
comp=Z,112nm,1.2s,mb5.3
BJI AMB AMB
comp=Z,2μm,5.8s
BJI LR LR
comp=N,8μm,15.0s,MS5.5
BJI LR LR
comp=E,7μm,17.2s,MS5.5
BJI LR LR
comp=Z,7μm,20.9s,MS5.2
IPIL Ipil 27.43 232 *e*P **P 18 22 23.4 -1.5**
HKC Hong Kong 27.45 266⇓*i*P **P 18 22 26.0 +0.9**
HKC *i* S **S 18 27 03.0 -1.1**
ENPP El Nido 27.59 242 *e*P **P 18 22 28.2 +1.8**
PET Petropavlovsk 28.92 18κ *i*P **P 18 22 38.6 +0.4**
PET *e* 18 25 46.5
PET *e*S **S 18 27 26.4 -0.9**
PET *e*SS SS 18 28 55.4 -35
PET pmax pmax
comp=Z,171nm,2.0s,mb5.4
PET pmax pmax
comp=Z,3μm,18.3s
PET smax
comp=N,3μm,14.9s
PET smax
comp=N,4μm,19.7s
PET smax
comp=N,66nm,1.3s
PET smax
comp=E,70nm,1.3s
PET MLR MLR
comp=Z,11μm,16.0s,MS5.6
PET MLR MLR
comp=Z,11μm,17.0s
PET Petropavlovsk 28.92 18 *e*P **P 18 22 38.0 -0.2**
comp=Z,526nm,1.7s,mb6.0
PET LR LR
comp=Z,8μm,19.0s,MS5.4
HIA Hailar 29.70 327 *e*P **P 18 22 46.1 +1.0**
HIA pmax pmax
comp=Z,315nm,1.3s
HIA MLR MLR
comp=Z,5μm,20.0s
HIA Hailar 29.70 327 *e*P **P 18 22 46.1 +0.9**
comp=Z,316nm,1.3s,mb5.9
HIA LR LR
comp=Z,5μm,20.0s,MS5.2
BATP Bataraza 30.31 240 *e*P **P 18 22 51.7 +1.1**
HHC Hu-ho-hao-te 30.51 307 *e*P **P 18 22 52.2 -0.1**
HHC AP pP 18 22 58.0 -1.6
HHC XP sP 18 23 00.9 -1.7
HHC PP PP 18 23 52.7 -8.6
HHC PCP PcP 18 25 50.4 -0.6
HHC S **S 18 27 52.9 +0.6**
HHC XS sS 18 28 02.2 -2.1
HHC SCP ScP 18 29 30.8 -1.1
HHC PCS PcS 18 29 33.4 -1.3
HHC SCS ScS 18 33 25.7 -2.3
HHC AMB AMB
comp=Z,102nm,1.1s,mb5.6
HHC AMB AMB
comp=Z,2μm,9.9s
HHC LR LR
comp=N,5μm,20.0s,MS5.3
HHC LR LR
comp=E,6μm,18.8s,MS5.3
HHC LR LR
comp=Z,7μm,21.4s,MS5.3
XAN Xi'an 31.21 293 P **P 18 22 58.3 -0.1**
XAN AP pP 18 23 08.2 +2.5
XAN PP PP 18 24 04.0 -5.0
XAN S **S 18 27 53.4 -10**
XAN AMB AMB
comp=Z,132nm,1.2s,mb5.6
XAN AMB AMB
comp=Z,489nm,4.8s
XAN LR LR
comp=N,5μm,15.6s,MS5.4
XAN LR LR
comp=E,4μm,14.6s,MS5.4
XAN LR LR
comp=Z,8μm,16.1s,MS5.5
BTO Baotou 31.56 306 *e*P **P 18 23 00.7 -0.8**
BTO S **S 18 28 04.9 -3.8**
BTO LR LR
comp=N,2μm,13.9s,MS5.0
BTO LR LR
comp=E,1μm,14.5s,MS5.0
QIZ Qiongzhong 32.27 264 P **P 18 23 08.6 +0.8**
QIZ XP sP 18 23 14.6 -3.4
QIZ PP PP 18 24 19.5 -1.3
QIZ S **S 18 28 19.5 -0.2**
QIZ XS sS 18 28 32.5 +0.7
QIZ SCP ScP 18 29 35.2 -2.5
QIZ AMB AMB
comp=Z,59nm,1.4s,mb5.2
QIZ AMB AMB
comp=Z,923nm,13.9s
QIZ LR LR
comp=E,5μm,18.3s
QIZ LR LR
comp=Z,8μm,19.1s,MS5.4
QIZ Qiongzhong 32.27 264 *e*P **P 18 23 08.8 +1.1**
comp=Z,85nm,1.1s,mb5.5
QIZ LR LR
comp=Z,7μm,19.0s,MS5.4
TSM Tawau 33.20 233 P **P 18 23 16.2 +0.3**
TSM Tawau 33.20 233 P **P 18 23 16.2 +0.3**
TSM Tawau 33.20 233 P **P 18 23 16.2 +0.3**
TSM Tawau 33.20 233 P **P 18 23 16.2 +0.3**
KKM Kota Kinabalu 33.26 238 P **P 18 23 16.9 +0.5**
KKM Kota Kinabalu 33.26 238 P **P 18 23 16.9 +0.5**
KKM Kota Kinabalu 33.26 238 P **P 18 23 16.9 +0.5**
KKM Kota Kinabalu 33.26 238 P **P 18 23 16.9 +0.5**
KKM Kota Kinabalu 33.26 238 *e*P **P 18 23 17.2 +0.7**
GYA Guiyang 33.39 279⇓*i*P **P 18 23 16.6 -0.9**
GYA AP pP 18 23 23.8 -1.0
GYA XP sP 18 23 27.2 -0.6
GYA S **S 18 28 27.5 -10**
GYA SCS ScS 18 33 45.5 +3.0
GYA AMB AMB
comp=Z,110nm,1.3s,mb5.6
GYA AMB AMB
comp=Z,700nm,6.2s
GYA LR LR
comp=N,7μm,18.8s,MS5.6
GYA LR LR
comp=E,8μm,20.3s,MS5.6
GYA LR LR
comp=Z,8μm,18.8s,MS5.5
CLNS Chul'man 33.51 341 *e*P **P 18 23 20.2 +1.6**
CLNS *e**PP pP 18 23 27.5 +1.6
CLNS *e* 18 26 05.1
CLNS *e*S **S 18 28 29.9 -9.2**
CLNS pmax pmax
comp=E,114nm,1.7s
CLNS pmax pmax
comp=Z,407nm,1.7s,mb6.1
CLNS pmax pmax
comp=N,321nm,1.3s
CLNS smax
comp=N,2μm,12.6s
CLNS smax
comp=Z,983nm,11.4s
CLNS smax
comp=E,720nm,12.0s
CLNS MLR MLR
comp=Z,7μm,15.0s,MS5.5
CLNS MLR MLR
comp=N,6μm,16.0s,MS5.5
CLNS MLR MLR
comp=E,3μm,14.0s,MS5.5
MA2 Magadan 33.65 6*d i*P **P 18 23 20.7 +0.9**
MA2 *e* pP 18 23 26.9 -0.2
MA2 *e* 18 24 31.6
MA2 *e*PPP 18 24 57.7
MA2 *i* S **S 18 28 43.0 +1.8**
MA2 *e*SSS 18 31 16.0
MA2 pmax pmax
comp=N,200nm,1.6s
MA2 pmax pmax
comp=Z,400nm,1.6s,mb6.1
MA2 MLR MLR
comp=Z,7μm,13.0s,MS5.5
MA2 Magadan 33.65 6 *e*P **P 18 23 20.6 +0.8**
comp=Z,129nm,0.8s,mb5.9
MA2 LR LR
comp=Z,6μm,19.0s,MS5.3
MIDW Midway 34.31 78 PFAKE 18 23 40.0 +14
MIDW LR LR

comp=Z,6µm,19.0s,MS5.3
SMY Shemya 34.75 32 P P 18 23 30.6 +1.2
SMY pmax pmax
comp=Z,480nm,1.4s,mb6.2
SMY Shemya 34.75 32 *eP* **P 18 23 31.3 +1.9**
comp=Z,558nm,1.4s,mb6.3
CD2 Chengdu 35.52 287 P P **18 23 35.9 -0.1**
CD2 AP pP 18 23 41.9 -1.4
CD2 XP sP 18 23 45.0 -1.3
CD2 PP PP 18 24 56.4 -0.4
CD2 PCP PcP 18 26 04.7 -0.2
CD2 S S **18 29 10.2 +0.2**
CD2 XS sS 18 29 20.0 -2.1
CD2 SCP ScP 18 29 49.4 +0.2
CD2 PCS PcS 18 29 52.6 +0.6
CD2 SS SS 18 31 29.8 -15
CD2 SCS ScS 18 33 51.7 -2.1
CD2 AMB AMB
comp=Z,280nm,1.1s,mb6.1
CD2 AMB AMB
comp=Z,730nm,9.3s
CD2 LR LR
comp=N,8µm,17.4s
CD2 LR LR
comp=Z,10µm,16.2s,MS5.7
LZH Lanzhou 35.53 296 ⇓P P **18 23 36.2 +0.1**
LZH AP pP 18 23 43.5 +0.1
LZH XP sP 18 23 47.1 +0.7
LZH PP PP 18 24 56.7 -0.2
LZH PCP PcP 18 26 04.7 -0.2
LZH S S **18 29 10.2 0.0**
LZH XS sS 18 29 22.5 +0.3
LZH SCP ScP 18 29 47.3 -1.9
LZH PCS PcS 18 29 50.6 -1.5
LZH SS SS 18 31 30.2 -15
LZH SCS ScS 18 33 51.5 -2.4
LZH AMB AMB
comp=Z,289nm,1.4s,mb6.0
LZH AMB AMB
comp=Z,1µm,9.3s
LZH LR LR
comp=N,12µm,17.2s
LZH LR LR
comp=Z,15µm,18.3s,MS5.8
PMG Port Moresby 35.56 175 P P **18 23 33.1 -3.2**
comp=Z,78nm,1.1s,mb5.6,baz=346,slow=5.8,SNR=13
PMG S S **18 29 05.3 -5.4**
comp=Z,12nm,0.9s,baz=216,slow=10,SNR=2.3
PMG Port Moresby 35.56 175 *eP* **P 18 23 33.7 -2.7**
PMG pmax pmax
comp=Z,566nm,1.5s
PMG MLR MLR
comp=Z,4µm,21.0s
PMG Port Moresby 35.56 175 *eP* **P 18 23 33.7 -2.7**
comp=Z,566nm,1.5s,mb6.3
PMG LR LR
comp=Z,4µm,21.0s,MS5.2
ULN Ulaanbaatar 36.06 317 P P **18 23 42.7 +2.1**
SNR=330
ULN Ulaanbaatar 36.06 317 *eP* **P 18 23 42.5 +1.8**
ULN pmax pmax
comp=Z,640nm,1.3s,mb6.4
ULN MLR MLR
comp=Z,3µm,19.0s,MS5.1
ULN Ulaanbaatar 36.06 317 *eP* **P 18 23 42.5 +1.9**
comp=Z,640nm,1.3s,mb6.4
ULN LR LR
comp=Z,3µm,19.0s,MS5.1
SONM Songino Array 36.46 316 P P **18 23 45.5 +1.5**
comp=Z,128nm,1.0s,mb5.8,baz=128,slow=8.1,SNR=345
SONM PcP PcP 18 26 07.4 -0.3
comp=Z,48nm,1.0s,baz=156,slow=2.3,SNR=5.8
SONM PKiKP PKiKP 18 33 25.9 -0.6
comp=Z,0.7nm,0.7s,baz=190,slow=1.0,SNR=4.5
SONM LR LR 18 39 58.7
comp=Z,3µm,19.3s,MS5.1,baz=110,slow=38
SONM P3KPbc 18 54 18.5
comp=Z,1.4nm,0.9s,baz=280,slow=4.2,SNR=8.8
SONM PKPPKP 18 56 37.5
comp=Z,3.8nm,1.3s,baz=262,slow=1.1,SNR=3.6
SONM Songino Array 36.46 316 P P **18 23 45.5 +1.5**
SONM PcP PcP 18 26 07.4 -0.3
AMKA Amchitka 36.67 37 *eP* **P 18 23 46.5 +0.6**
YAK Yakutsk 37.06 349 *d* /P **P 18 23 49.4 +0.3**
YAK *e* 18 26 16.1
YAK *e*S **S 18 29 26.2 -7.3**
YAK *e*SSS 18 32 09.9
YAK *e* 18 34 05.5
YAK pmax pmax
comp=Z,158nm,1.1s,mb5.8
YAK pmax pmax
comp=N,150nm,1.5s
YAK pmax pmax
comp=E,69nm,1.7s
YAK smax
comp=N,19nm,1.5s
YAK smax
comp=E,19nm,1.5s
YAK smax
comp=Z,11nm,1.5s
YAK MLR MLR
comp=Z,2µm,14.0s,MS5.1
YAK MLR MLR
comp=N,1µm,16.0s,MS5.2
YAK MLR MLR
comp=E,3µm,19.0s,MS5.2
YAK Yakutsk 37.06 349 *eP* **P 18 23 49.2 +0.1**
comp=E,516nm,1.3s,mb6.2
YAK LR LR
comp=Z,7µm,20.0s,MS5.5
KMI Kunming 37.09 278 P P **18 23 50.5 +1.0**
KMI AP pP 18 23 57.7 +0.9
KMI PP PP 18 25 16.4 +2.2
KMI PCP PcP 18 26 11.8 +2.2
KMI S S **18 29 30.4 -3.7**
KMI XS sS 18 29 43.5 -2.7
KMI SCP ScP 18 30 00.6 +5.6
KMI SCS ScS 18 34 06.5 +4.0
KMI AMB AMB
comp=Z,119nm,1.3s,mb5.6
KMI AMB AMB
comp=Z,901nm,5.0s
KMI LR LR
comp=N,5µm,17.7s,MS5.5
KMI LR LR
comp=E,4µm,16.0s,MS5.5
KMI LR LR
comp=Z,6µm,17.2s,MS5.4
BOD Bodaibo 38.03 334 ⇑*i*P **P 18 23 57.4 0.0**
BOD pmax pmax
comp=Z,89nm,1.2s,mb5.4
HNR Honiara 38.69 154 P P **18 24 03.6 +0.6**
comp=Z,69nm,0.9s,mb5.4,baz=270,slow=16,SNR=3.8
HNR LR LR 18 38 30.7
comp=Z,4µm,20.1s,MS5.2,baz=358,slow=34
GTA Gaotai 39.02 301 ⇓*i*P **P 18 24 05.8 +0.1**
GTA AP pP 18 24 11.9 -1.2
GTA XP sP 18 24 14.8 -1.2
GTA PP PP 18 25 38.3 +3.0
GTA PCP PcP 18 26 16.7 +1.1
GTA S S **18 30 02.8 -0.4**
GTA PCS PcS 18 30 04.9 -0.2
GTA XS sS 18 30 12.0 -3.4
GTA SS SS 18 32 43.6 -12
GTA SCS ScS 18 34 13.3 -0.3
GTA AMB AMB
comp=Z,130nm,1.0s,mb5.6
GTA AMB AMB
comp=Z,1µm,6.5s
GTA LR LR
comp=N,5µm,14.9s,MS5.7
GTA LR LR
comp=E,7µm,15.3s,MS5.7
GTA LR LR
comp=Z,9µm,15.7s,MS5.7
ZAK Zakamensk 39.33 319 ⇑*i*P **P 18 24 09.9 +1.7**
ZAK pmax pmax
comp=Z,506nm,1.4s,mb6.1
KKTK Khon Kaen 39.47 264 ⇓P **P 18 24 10.5 +1.0**
comp=Z,988nm,0.9s,mb6.5
IRK Irkutsk 39.52 322 ⇓*i*P **P 18 24 11.3 +1.5**
IRK *e* 18 26 12.0
IRK pmax pmax
comp=Z,802nm,1.9s,mb6.1
TLY Talaya 39.63 321 P P **18 24 12.9 +2.1**
comp=Z,1µm,1.2s,mb6.6
TLY Talaya 39.63 321 P P **18 24 13.0 +2.3**
SNR=297
TLY Talaya 39.63 321 *eP* **P 18 24 12.4 +1.6**
TLY pmax pmax
comp=Z,827nm,1.5s,mb6.2
TLY MLR MLR
comp=Z,5µm,20.0s,MS5.4
TLY Talaya 39.63 321 *eP* **P 18 24 12.4 +1.7**
comp=Z,827nm,1.5s,mb6.2
TLY LR LR
comp=Z,5µm,20.0s,MS5.4
KAKA Kakadu 40.32 198 *eP* **P 18 24 15.0 -1.5**
comp=Z,85nm,0.8s,mb5.5
KAKA *ep*P pP 18 24 21.5 -2.4
KAKA *e*PCP PcP 18 26 19.9 +0.2
NANT Nan 40.54 269 ⇓P **P 18 24 16.5 -1.8**
comp=Z,538nm,1.0s,mb6.1
KSM Kuching 40.69 238 *eP* **P 18 24 18.9 -0.7**
MOY Mondy 41.15 320 *eP* **P 18 24 24.8 +1.5**
MOY pmax pmax
comp=Z,586nm,3.3s
CHG Chiang Mai 42.11 269 ⇓P **P 18 24 31.9 +0.7**
comp=Z,150nm,1.2s,mb5.5
CHTO Chiang Mai 42.11 269 P P **18 24 32.1 +0.9**
SNR=58
CHTO Chiang Mai 42.11 269 *eP* **P 18 24 31.6 +0.4**
CHTO pmax pmax
comp=Z,171nm,1.0s,mb5.6
CHTO MLR MLR
comp=Z,4µm,20.0s,MS5.2
CHTO Chiang Mai 42.11 269 *eP* **P 18 24 31.6 +0.4**
comp=Z,174nm,1.0s,mb5.6
CHTO LR LR
comp=Z,4µm,20.0s,MS5.2
NST Nakhon Sawan 42.12 265 ⇑P **P 18 24 32.5 +1.2**
comp=Z,153nm,1.6s,mb5.4
CM31 Chiang Mai Arr 42.22 269 PFAKE 18 24 40.0 +7.9
CM31 LR LR
comp=Z,3µm,21.0s,MS5.1
NNT Nongplab 43.69 261 P P **18 24 46.0 +2.0**
BILL Bilibino 43.94 12 P P **18 24 46.5 +0.5**
BILL pmax pmax
comp=Z,740nm,1.5s,mb6.2
BILL Bilibino 43.94 12 *eP* **P 18 24 46.4 +0.4**
comp=Z,736nm,1.5s,mb6.2
BILL LR LR
comp=Z,6µm,20.0s,MS5.5
NIKO Nikolski 43.98 40 *eP* **P 18 24 45.2 -1.1**
SPIA Saint Paul Isl 44.76 34 *eP* **P 18 24 52.9 +0.4**
SNG Songkhla 45.39 253 P P **18 24 58.0 +0.4**
comp=Z,366nm,1.0s,mb6.2
UNV Unalaska Valle 45.58 39 PFAKE 18 25 10.0 +11
UNV LR LR
comp=Z,32µm,20.0s,MS6.3
KGM Kluang 45.89 245 P P **18 25 03.1 +1.5**
KGM Kluang 45.89 245 P P **18 25 03.1 +1.5**
KGM Kluang 45.89 245 P P **18 25 03.1 +1.5**
KGM Kluang 45.89 245 P P **18 25 03.1 +1.5**
AKUT Akutan 46.08 39 *eP* **P 18 25 02.7 -0.3**
comp=Z,1µm,1.8s,mb6.5
CTA Charters Tower 46.10 177 *eP* **P 18 25 00.6 -2.6**
comp=Z,45nm,0.8s,mb5.5
CTA *ep*P pP 18 25 07.3 -3.4
CTA *e*PCP PcP 18 26 36.0 -3.1
CTA Charters Tower 46.10 177 P P **18 25 01.1 -2.1**
comp=Z,53nm,0.8s,mb5.5,baz=2.0,slow=7.8,SNR=38
CTAO Charters Tower 46.10 177 *eP* **P 18 25 01.1 -2.1**
CTAO *e* pP 18 25 07.8 -2.9
CTAO pmax pmax
comp=Z,270nm,1.4s,mb6.0
CTAO MLR MLR
comp=Z,4µm,21.0s,MS5.3
CTAO Charters Tower 46.10 177 *eP* **P 18 25 01.1 -2.1**
comp=Z,270nm,1.4s,mb6.0
CTAO *e* pP 18 25 07.8 -2.9
CTAO LR LR
comp=Z,4µm,21.0s,MS5.3
TIXI Tiksi 46.24 353 *eP* **P 18 25 03.2 -1.1**
TIXI *e* 18 26 51.9
TIXI *e*S **S 18 31 44.1 -5.3**
TIXI pmax pmax
comp=Z,205nm,1.5s,mb5.8
TIXI MLR MLR
comp=Z,3µm,18.0s,MS5.3
TIXI Tiksi 46.24 353 *i* Pr **P 18 25 04.4 +0.1**
TIXI LR LR
comp=Z,4µm,19.0s,MS5.3
KULM Kulim 46.32 251 *eP* **P 18 25 06.1 +1.2**
IPM Ipoh 46.43 250 P P **18 25 07.0 +1.2**
IPM Ipoh 46.43 250 P P **18 25 07.0 +1.2**
IPM Ipoh 46.43 250 P P **18 25 07.0 +1.2**
IPM Ipoh 46.43 250 P P **18 25 07.0 +1.2**
SHL Shillong 46.62 281 *ex* x 18 24 59.9
WRAB Tennant Creek 46.84 192 P P **18 25 07.0 -2.0**
comp=Z,3µm,1.2s,SNR=66
WRAB Tennant Creek 46.84 192 ⇓*i*P **P 18 25 07.4 -1.6**
WRAB Tennant Creek 46.84 192 *eP* **P 18 25 07.1 -1.9**
comp=Z,2µm,1.6s,mb6.8
WRAB *e* pP 18 25 14.0 -2.5
WRAB LR LR
comp=Z,5µm,19.0s,MS5.5
WB2 Warramunga Arr 46.85 192 ⇓*i*P **P 18 25 07.2 -1.9**
WB2 *ep*P pP 18 25 14.1 -2.5
WB2 *e*S **S 18 31 54.0 -4.2**
KRAR Krasnoyarsk 47.13 323 *d* /P **P 18 25 11.5 +0.2**
KRAR pmax pmax
comp=Z,319nm,1.3s,mb6.1
KRAR MLR MLR
comp=Z,3µm,20.0s,MS5.2
BJII Banjamegara 47.14 230 ⇓*i*P **P 18 25 20.3 +9.0**
BJII *i* S **S 18 32 04.6 +2.3**
FITZ Fitzroy Crossi 47.55 204 *eP* **P 18 25 13.8 -0.8**
comp=Z,245nm,0.8s,mb6.3
FITZ *ep*P pP 18 25 20.2 -1.9
FITZ *e*PCP PcP 18 26 44.5 +0.2
FITZ *e*S **S 18 32 05.9 -2.3**
FITZ *es*S sS 18 32 21.0 +0.5
FITZ Fitzroy Crossi 47.55 204 P P **18 25 13.9 -0.7**
comp=Z,123nm,0.8s,mb6.0,baz=30,slow=10,SNR=170
FITZ S **S 18 32 00.2 -8.0**
comp=Z,1.9nm,0.8s,baz=187,slow=17,SNR=1.5
FALS False Pass 47.60 38 *eP* **P 18 25 13.5 -1.4**
WMQ Urumqi 48.39 306 ⇓*i*P **P 18 25 22.0 +0.9**
WMQ XP sP 18 25 31.0 -0.5
WMQ PP PP 18 27 14.0 +0.2
WMQ SCP ScP 18 30 40.0 -0.4
WMQ S S **18 32 21.0 +0.9**
WMQ SCS ScS 18 35 11.0 -1.3
WMQ SS SS 18 35 46.0 -3.9
WMQ AMB AMB
comp=Z,576nm,1.2s,mb6.5
WMQ AMB AMB
comp=Z,3µm,4.0s
WMQ LR LR
comp=N,3µm,15.0s,MS5.5
WMQ LR LR
comp=E,3µm,15.0s,MS5.5
WMQ LR LR
comp=Z,4µm,16.0s,MS5.5
PSI Prapat 49.10 249 P P **18 25 27.2 +0.8**
comp=Z,157nm,0.8s,mb6.1,baz=42,slow=4.1,SNR=158
PSI PcP PcP 18 26 49.6 -0.2
comp=Z,101nm,0.9s,baz=0.5,slow=0.6,SNR=5.9
SDPT Sand Point 49.36 38 *eP* **P 18 25 27.6 -0.9**
comp=Z,808nm,1.3s,mb6.6
TNA Tin City 49.49 24 *eP* **P 18 25 30.5 +1.0**
comp=Z,400nm,1.7s,mb6.2
TNA LR LR
comp=Z,2µm,19.0s,MS5.2
CAL Calcutta 50.52 278 *eP* **P 18 25 36.0 -1.3**
CAL *ex* x 18 31 16.2
AS31 Alice Springs 50.56 192 *eP* **P 18 25 35.3 -2.3**
AS31 *ep*P pP 18 25 42.9 -2.3
AS31 *e*PcP PcP 18 26 55.5 +0.3
AS31 *e*PP PP 18 27 38.0 +4.5
AS31 *e*PcS PcS 18 30 50.3 -2.2
AS31 *e*S **S 18 32 47.5 -3.0**
ASAR Alice Springs 50.56 192 P P **18 25 35.2 -2.2**
comp=Z,15nm,0.8s,mb5.0,baz=10,slow=7.6,SNR=117
ASAR PcP PcP 18 26 54.5 -0.7
comp=Z,51nm,0.8s,baz=14,slow=3.8,SNR=12
ASAR S **S 18 32 45.6 -4.9**
comp=Z,5.4nm,1.1s,baz=20,slow=18,SNR=5.8
ASAR LR LR 18 46 03.3
comp=Z,7µm,21.4s,MS5.6,baz=3.5,slow=35
ASAR PKPPKP 18 56 03.8
comp=Z,1.2nm,1.0s,baz=238,slow=2.9,SNR=4.5
ASAR Alice Springs 50.56 192 P P **18 25 35.4 -2.2**
ASAR 18 26 54.5
ASAR S **S 18 32 45.6 -4.9**
ASPA Alice Springs 50.56 192 *eP* **P 18 25 35.3 -2.3**
ASPA *ep*P pP 18 25 42.9 -2.3
ASPA *e*PCP PcP 18 26 55.5 +0.3
ASPA *e*PP PP 18 27 38.0 +4.5
ASPA *e*PCS PcS 18 30 50.3 -2.2
ASPA *e*S **S 18 32 47.5 -3.0**
CHGN Chignik 50.69 37 *eP* **P 18 25 37.5 -1.1**
ZAL Zalesovo 51.21 319 P P **18 25 43.6 +1.1**
comp=Z,28nm,0.9s,mb5.2,baz=10,slow=7.4,SNR=121
ZAL PcP PcP 18 26 58.4 +0.8
comp=Z,55nm,0.9s,baz=5.2,slow=3.0,SNR=8.0
ZAL LR LR 18 48 25.4
comp=Z,4µm,18.7s,MS5.5,baz=16,slow=37
ZAL Zalesovo 51.21 319 P P **18 25 43.6 +1.1**
ZAL 18 26 58.4
GUN Gumba 51.36 286 *eP* **P 18 25 44.8 +1.2**
comp=Z,693nm,1.0s,mb6.5
PKI Pulchoki 51.84 285 *eP* **P 18 25 47.5 +0.3**
comp=Z,234nm,1.2s,mb6.0
PKI Pulchoki 51.84 285 *eP* **P 18 25 47.5 +0.3**
PKI pmax pmax
comp=Z,234nm,1.2s,mb6.0
KKN Kakani 51.90 286 *eP* **P 18 25 48.2 +0.5**
comp=Z,342nm,1.2s,mb6.2
KKN Kakani 51.90 286 *eP* **P 18 25 48.2 +0.5**
KKN pmax pmax
comp=Z,342nm,1.2s,mb6.2
DMN Daman 52.09 286 *eP* **P 18 25 49.9 +0.8**
comp=Z,477nm,1.5s,mb6.2
NVS Novosibirsk 52.24 320 ⇓*i*P **P 18 25 50.0 -0.2**
NVS *e*S **S 18 33 12.8 -0.8**
NVS pmax pmax
comp=Z,888nm,2.1s,mb6.3
NVS pmax pmax
comp=N,120nm,1.7s
NVS pmax pmax
comp=E,480nm,1.7s
NVS smax
comp=N,94nm,2.1s
NVS smax
comp=E,108nm,2.3s
MKAR Makanchi Array 52.27 310 P P **18 25 51.4 +1.0**
comp=E,204nm,0.8s,mb6.1,baz=80,slow=7.9,SNR=1095
MKAR PcP PcP 18 27 01.1 -0.5
comp=E,52nm,0.8s,baz=69,slow=6.6,SNR=5.0
MKAR PKPPKP 18 56 15.8
comp=E,0.2nm,0.2s,baz=270,slow=2.4,SNR=4.8
MKAR Makanchi Array 52.27 310 P P **18 25 51.4 +1.0**
MKAR 18 27 01.1
MKAR Makanchi Array 52.27 310 P P **18 25 51.4 +1.0**
MKAR PcP PcP 18 27 01.1 -0.5
MKAR P'P' 18 56 15.8
BOK Bokaro 52.34 281 *eP* **P 18 25 51.3 +0.3**
BOK AMb AMB 18 25 54.8
comp=Z,231nm,0.9s,mb6.1
GKN Gorkha 52.41 286 *eP* **P 18 25 51.9 +0.5**
comp=Z,705nm,1.2s,mb6.5
MBWA Marble Bar 52.67 209 P P **18 25 59.1 +5.8**
SNR=12
MBWA Marble Bar 52.67 209 *eP* **P 18 25 52.1 -1.3**
comp=Z,388nm,1.5s,mb6.1
MBWA LR LR
comp=Z,3µm,22.0s,MS5.3
DZM Mont Dzumac 52.72 154 *eP* **P 18 25 53.4 -0.3**
DZM Mont Dzumac 52.72 154 P P **18 25 51.3 -2.4**
comp=Z,74nm,1.0s,mb5.6,baz=10,slow=8.6,SNR=21
DZM LR LR 18 45 11.5
comp=Z,4µm,19.5s,MS5.4,baz=188,slow=33
KIP Kipapa 52.89 82 *eP* **P 18 25 55.3 +0.3**
KIP pmax pmax
comp=Z,683nm,1.9s,mb6.3
KIP MLR MLR
comp=Z,9µm,19.0s,MS5.8
KIP Kipapa 52.89 82 *eP* **P 18 25 55.3 +0.3**
comp=Z,685nm,1.9s,mb6.3
KIP LR LR
comp=Z,9µm,19.0s,MS5.8
SVW2 Sparrevohn 53.15 32 *eP* **P 18 25 57.7 +0.8**
KOLN Koldanda 53.36 286 *eP* **P 18 25 58.9 +0.5**
comp=Z,1µm,1.6s,mb6.5
TTA Tatalina 53.38 30 *eP* **P 18 25 59.1 +0.5**
KDAK Kodiak Island 54.08 36 P P **18 26 03.0 -0.7**
comp=Z,2µm,1.1s,mb6.9,SNR=41
KDAK Kodiak Island 54.08 36 P P **18 26 03.6 -0.1**
comp=Z,119nm,0.7s,mb5.9,baz=260,slow=3.6,SNR=78
KDAK Kodiak Island 54.08 36 *eP* **P 18 26 03.3 -0.5**
comp=Z,967nm,1.5s,mb6.5
KDAK LR LR
comp=Z,3µm,20.0s,MS5.3
KURK Kurchatov 54.74 315 P P **18 26 09.5 +0.9**
comp=Z,3µm,1.3s
KURK Kurchatov 54.74 315 P P **18 26 09.7 +1.1**
SNR=403
KURK Kurchatov 54.74 315 *eP* **P 18 26 09.5 +0.9**
KURK pmax pmax
comp=Z,330nm,2.3s,mb6.0
KURK MLR MLR
comp=Z,4µm,19.0s,MS5.5
KURK Kurchatov 54.74 315 *eP* **P 18 26 09.4 +0.9**
comp=Z,33nm,2.3s,mb5.0
KURK LR LR
comp=Z,4µm,19.0s,MS5.5
IMA2 Indian Mountai 55.13 26 *eP* **P 18 26 11.9 +0.6**
SLKM Skilak Lake 55.63 33 P P **18 26 14.5 -0.5**
SLKM Skilak Lake 55.63 33 *eP* **P 18 26 14.1 -0.9**
LGTI Lohaghat 55.84 289 *i* P **P 18 26 15.7 -0.8**
LGTI *ex* x 18 27 13.7
AAA Alma-Ata 56.22 306 *eP* **P 18 26 21.5 +2.3**
AAA *es* **S 18 34 12.5 +5.2**
AAA pmax pmax
comp=Z,4µm,7.0s
AAA smax
comp=N,17µm,7.5s
AAA MLR MLR
comp=Z,5µm,17.0s,MS5.7
PMR Palmer 56.29 32 *eP* **P 18 26 19.1 -0.6**
PMR pmax pmax
comp=Z,572nm,1.1s,mb6.5
PMR Palmer 56.29 32 *eP* **P 18 26 19.1 -0.6**
comp=Z,572nm,1.1s,mb6.5
VIS Vishakhapatnam 56.48 275 *eP* **P 18 26 22.0 +1.0**
VIS AMb AMB 18 26 24.6
comp=Z,136nm,1.2s,mb5.8
MCK McKinley 56.66 29 *eP* **P 18 26 22.0 -0.3**
MCK pmax pmax
comp=Z,302nm,1.3s,mb6.2
MCK MLR MLR
comp=Z,3µm,19.0s,MS5.4
MCK McKinley 56.66 29 *eP* **P 18 26 22.0 -0.3**
comp=Z,302nm,1.3s,mb6.2
MCK LR LR
comp=Z,3µm,19.0s,MS5.4
ARMA Armidale 56.81 172 ⇑*i*P **P 18 26 22.2 -1.1**
ARMA *e* pP 18 26 28.8 -2.2
ULHL Ulahol 56.84 305 P P **18 26 26.1 +2.5**
SNR=20
TKM2 Tokmak 2 57.24 306 P P **18 26 28.4 +2.0**
SNR=216
COLA College 57.29 28 *i* P **P 18 26 26.3 -0.5**
COLA College 57.29 28 *eP* **P 18 26 26.2 -0.6**
comp=Z,252nm,1.5s,mb6.0
COLA LR LR
comp=Z,6µm,19.0s,MS5.7
KSH Kashi 57.41 302 *eP* **P 18 26 30.5 +2.9**
KSH AP pP 18 26 38.6 +3.3
KSH XP sP 18 26 41.3 +3.1
KSH PCP PcP 18 27 22.4 +1.1
KSH PP PP 18 28 40.4 +5.3
KSH SCP ScP 18 31 19.5 -0.1
KSH PCS PcS 18 31 22.7 +0.3
KSH S S **18 34 26.7 +3.6**
KSH XS sS 18 34 39.4 +3.7
KSH SCS ScS 18 36 14.9 -0.6
KSH AMB AMB
comp=Z,439nm,0.9s,mb6.5
KSH AMB AMB
comp=Z,4µm,2.7s,mb6.9
KSH LR LR
comp=N,8µm,15.9s,MS6.1
KSH LR LR

comp=E,7μm,14.2s,MS6.1
KSH LR LR
comp=Z,7μm,14.8s,MS5.9
KZA Kyzart 57.60 305 P **P** **18 26 31.7 +2.7**
SNR=222
KBK Karagaybulak 57.74 305 P **P** **18 26 31.9 +1.9**
SNR=188
STKA Stephens Creek 57.84 182⇓*i*P **P** **18 26 28.1 -2.5**
comp=Z,33nm,1.0s,mb5.3
STKA *i* pP pP 18 26 35.5 -2.8
STKA Stephens Creek 57.84 182 P **P** **18 26 28.3 -2.3**
comp=Z,35nm,0.9s,mb5.4,baz=351,slow=7.9,SNR=47
STKA LR LR 18 51 35.8
comp=Z,4μm,18.6s,MS5.6,baz=0.3,slow=36
STKA PKP2bc 18 56 27.4
comp=Z,3.7nm,1.0s,baz=210,slow=3.4,SNR=3.6
EYAK Cordova Ski Ar 57.84 33 *e*P **P** **18 26 31.1 +0.4**
CHMS Chumysh 57.84 306 P **P** **18 26 32.0 +1.3**
SNR=132
DIV Divide 57.86 33 *e*P **P** **18 26 30.1 -0.7**
DIV
comp=Z,3μm,1.6s,mb7.0
LR LR
comp=Z,18μm,20.0s,MS6.2
FRU Bishkek 57.96 306⇓*i*P **P** **18 26 32.5 +1.0**
FRU pmax pmax
comp=Z,1μm,1.8s,mb6.6
FRU MLR MLR
comp=Z,6μm,1.7s
USP Ospenovka 57.99 306 P **P** **18 26 33.0 +1.3**
SNR=134
SMLA Simla 58.05 292 *e*P **P** **18 26 32.7 +0.5**
SMLA AMb AMB 18 26 41.5
comp=Z,273nm,1.5s,mb6.0
AAK Ala-Archa 58.08 305 P **P** **18 26 32.2 -0.1**
comp=Z,972nm,0.9s,mb6.8,SNR=41
AAK Ala-Archa 58.08 305 P **P** **18 26 33.8 +1.5**
SNR=48
AAK Ala-Archa 58.08 305 P **P** **18 26 33.1 +0.8**
SNR=118
AAK Ala-Archa 58.08 305⇓*i*P **P** **18 26 32.9 +0.6**
AAK pmax pmax
comp=Z,392nm,1.7s,mb6.2
AAK Ala-Archa 58.08 305 *e*P **P** **18 26 32.6 +0.3**
comp=Z,319nm,1.3s,mb6.2
AAK LR LR
comp=Z,3μm,19.0s,MS5.5
UCH Uchtor 58.12 305 P **P** **18 26 33.5 +0.9**
SNR=29
SDNR Sundarnagar 58.13 292 *e*P **P** **18 26 33.5 +0.8**
EKS2 Erkin-Say 58.60 306 P **P** **18 26 27.9 -8.1**
SNR=29
NDI New Delhi 58.60 289 *e*P **P** **18 26 35.7 -0.3**
NDI AMb AMB 18 26 38.5
comp=Z,351nm,1.1s,mb6.3
AFI Afiamalu 58.67 128 P **P** **18 26 36.2 -0.2**
comp=Z,30nm,0.9s,mb5.3,baz=248,slow=22,SNR=4.0
AFI Afiamalu 58.67 128 P **P** **18 26 36.2 -0.2**
AFI LR LR
comp=Z,3μm,19.0s,MS5.4
FORT Forrest 58.71 196 *e*P **P** **18 26 35.5 -1.2**
comp=Z,135nm,0.7s,mb6.1
FORT *e* pP 18 26 41.7 -2.7
DLH Dalhousie 58.73 294 *e*P **P** **18 26 35.0 -1.8**
PONG Pong 58.88 293 *e*P **P** **18 26 38.0 +0.1**
MENT Mentasta 58.93 31 *e*P **P** **18 26 38.9 +0.6**
NGP Nagpur 59.16 280⇓*e*P **P** **18 26 38.8 -1.1**
NGP *ex* x 18 26 42.0
comp=Z,301nm,1.6s
NGP *e*S **S** **18 34 46.9 +1.0**
CHKZ Chkalovo 59.59 319 P **P** **18 26 43.1 +0.3**
CHKZ pmax pmax
comp=Z,370nm,1.1s,mb6.3
CHKZ Chkalovo 59.59 319 *e*P **P** **18 26 43.0 +0.2**
comp=Z,173nm,0.6s,mb6.3
COCO West Island 59.69 236 *e*P **P** **18 26 43.7 +0.2**
comp=Z,512nm,1.3s,mb6.4
COCO LR LR
comp=Z,3μm,22.0s,MS5.4
BVAR Borovoye Array 59.77 318 S **S** **18 34 55.1 +1.3**
comp=Z,1.7nm,0.9s,baz=76,slow=6.1,SNR=2.6
BRVK Borovoye 59.83 318 P **P** **18 26 45.7 +1.2**
comp=Z,3μm,1.1s,SNR=82
BRVK Borovoye 59.83 318 P **P** **18 26 45.8 +1.3**
SNR=168
BRVK Borovoye 59.83 318 *e*P **P** **18 26 45.3 +0.8**
BRVK pmax pmax
comp=Z,280nm,1.0s,mb6.2
BRVK MLR MLR
comp=Z,2μm,20.0s,MS5.3
BRVK Borovoye 59.83 318 *e*P **P** **18 26 45.3 +0.8**
comp=Z,444nm,1.0s,mb6.5
BRVK LR LR
comp=Z,4μm,20.0s,MS5.5
ZRNK Zerenda 60.61 318 P **P** **18 26 50.6 +0.8**
ZRNK pmax pmax
comp=Z,370nm,1.0s,mb6.5
ZRNK Zerenda 60.61 318 *e*P **P** **18 26 50.7 +0.9**
comp=Z,462nm,0.7s,mb6.7
NIL Nilore 60.69 295 P **P** **18 26 52.0 +1.6**
comp=Z,329nm,1.6s,mb6.2,SNR=8.9
NIL Nilore 60.69 295 P **P** **18 26 52.4 +2.0**
HYB Hyderabad 60.85 276 *i* P **P** **18 26 52.0 +0.5**
comp=Z,120nm,1.0s,mb6.0
HYB *e* pP 18 26 58.5 -0.6
HYB *e*S **S** **18 35 10.0 +2.4**
HYB *e* 18 35 50.0
HYB *e*ScS ScS 18 36 40.0 -0.9
HYB *e*SS SS 18 39 08.0 +1.2
HYB Hyderabad 60.85 276 *e*P **P** **18 26 52.0 +0.5**
HYB *e*S **S** **18 35 10.0 +2.4**
HYB pmax pmax
comp=Z,120nm,1.0s,mb6.0
HYB Hyderabad 60.85 276 *e*P **P** **18 26 52.0 +0.5**
comp=Z,120nm,1.0s,mb6.0
HYB *e*S **S** **18 35 10.0 +2.4**
DAWY Dawson 60.90 29 *e*P **P** **18 26 52.4 +0.6**
MDRS Chennai 60.94 271 *e*P **P** **18 26 50.5 -1.6**
ADE Adelaide 61.08 185 P **P** **18 26 51.6 -1.4**
AKL Akola 61.10 280 *e*P **P** **18 26 53.5 +0.4**
AKL AMb AMB 18 26 56.6
comp=Z,481nm,1.5s,mb6.4
AJM Ajmer 61.40 287 *i* P **P** **18 26 55.0 -0.2**
CNB Canberra Magne 61.43 175 *e*P **P** **18 26 54.3 -1.1**
comp=Z,66nm,1.0s,mb5.7
CNB *e*pP pP 18 27 00.8 -2.3
LATR Latur 62.28 278 *e*P **P** **18 27 00.0 -1.1**
KLBR Kellerberrin 62.73 205 *e*P **P** **18 27 02.6 -1.5**
comp=Z,64nm,0.8s,mb5.8
KLBR *e*pP pP 18 27 09.8 -2.0
PALK Pallekele 62.90 265 P **P** **18 27 06.2 +1.0**
comp=Z,356nm,1.1s,mb6.4,SNR=5.8
PALK Pallekele 62.90 265 P **P** **18 27 06.1 +0.9**
SNR=8.4
PALK Pallekele 62.90 265 *e*P **P** **18 27 05.8 +0.6**
comp=Z,105nm,1.3s,mb5.8
PALK LR LR
comp=Z,2μm,21.0s,MS5.2
SKAG Skagway 63.10 34 *e*P **P** **18 27 07.0 +0.4**
comp=Z,571nm,1.9s,mb6.4
INK Inuvik 63.13 24 LR LR 18 54 46.7
comp=Z,4μm,20.1s,MS5.6,baz=244,slow=36
INK PKP2bc 18 55 59.0
comp=Z,6.8nm,1.0s,baz=254,slow=1.9,SNR=5.9
INK Inuvik 63.13 24 P **P** **18 27 06.8 0.0**
INK pmax pmax
comp=Z,350nm,1.3s
INK Inuvik 63.13 24 *e*P **P** **18 27 06.6 -0.1**
comp=Z,11μm,1.3s
SIT Sitka 63.40 37 P **P** **18 27 09.8 +1.3**
SIT pmax pmax
comp=Z,120nm,1.0s,mb6.0
SIT Sitka 63.40 37 *e*P **P** **18 27 09.1 +0.6**
comp=Z,121nm,1.0s,mb6.0
SIT LR LR
comp=Z,6μm,22.0s,MS5.7
TOO Toolangi 63.49 179 *e*P **P** **18 27 08.4 -0.7**
comp=Z,33nm,0.9s,mb5.5
TOO *e*pP pP 18 27 14.9 -1.9
MUN Mundaring 63.67 206 *e*P **P** **18 27 09.1 -1.3**
MUN *e*pP pP 18 27 16.4 -1.7
NWAO Narrogin (SRO) 64.12 205 P **P** **18 27 11.8 -1.4**
comp=Z,55nm,0.9s,mb5.6,baz=24,slow=6.3,SNR=16
NWAO Narrogin (SRO) 64.12 205 P **P** **18 27 12.3 -1.0**
NWAO pmax pmax
comp=Z,320nm,1.3s
NWAO Narrogin (SRO) 64.12 205 *e*P **P** **18 27 11.7 -1.6**
comp=Z,319nm,1.3s,mb6.2
NWAO LR LR
comp=Z,2μm,22.0s,MS5.2
POO Poona 64.65 279⇓*i*P **P** **18 27 16.0 -0.8**
comp=Z,440nm,1.0s,mb6.4
KAD Karad 64.79 278 *e*P **P** **18 27 17.8 +0.1**
KAD AMb AMB 18 27 20.1
comp=Z,349nm,1.1s,mb6.3
CRAG Craig 64.86 39 *e*P **P** **18 27 18.5 +0.4**
comp=Z,154nm,1.2s,mb5.9
TRD Trivandrum 65.73 268 *e*P **P** **18 27 24.2 +0.5**
TRD AMb AMB 18 27 26.5
comp=Z,194nm,1.2s,mb6.0
MNGI Mangalore 65.86 273 *e*P **P** **18 27 24.2 -0.4**
ARU Arti 66.09 323 P **P** **18 27 26.8 +0.7**
comp=Z,4μm,1.1s
ARU Arti 66.09 323⇓*i*P **P** **18 27 26.7 +0.6**
ARU *e* 18 27 53.9
ARU *e* 18 29 54.2
ARU *e*PPP 18 31 33.8
ARU *e*S S 18 36 17.0 +4.1
ARU *e* 18 37 23.3
ARU *e*SS SS 18 40 31.9 +3.3
ARU pmax pmax
comp=Z,731nm,1.1s,mb6.6
ARU MLR MLR
comp=E,1μm,20.0s,MS5.3
ARU MLR MLR
comp=Z,2μm,20.0s,MS5.4
ARU MLR MLR
comp=N,1μm,18.0s,MS5.3
ARU Arti 66.09 323 P **P** **18 27 26.7 +0.6**
RAO Raoul Island 66.17 144 PFAKE 18 27 40.0 +13
RAO LR LR
comp=Z,3μm,21.0s,MS5.5
SOKR Solikamsk 66.38 326⇓*i*P **P** **18 27 28.5 +0.6**
SOKR S S 18 36 12.6 -3.8
SOKR pmax pmax
comp=Z,460nm,1.3s,mb6.3
SOKR MLR MLR
comp=Z,4μm,18.0s,MS5.6
AKTO Aktyubinsk 67.78 316 S S 18 36 33.1 -0.2
comp=Z,2.2nm,1.0s,baz=99,slow=9.8,SNR=1.7
AKTO PKPPKP 18 55 54.1
comp=Z,3.1nm,0.9s,baz=216,slow=3.6,SNR=10
BBB Bella Bella 68.47 41 LR LR 18 56 39.9
comp=Z,4μm,18.4s,MS5.7,baz=266,slow=35
TAU Tasmania Unive 68.87 177 P **P** **18 27 42.2 -1.5**
comp=Z,1μm,1.8s,mb6.5,SNR=5.7
TAU Tasmania Unive 68.87 177 *e*P **P** **18 27 42.0 -1.7**
TAU pmax pmax
comp=Z,668nm,1.6s,mb6.3
TAU MLR MLR
comp=Z,3μm,20.0s,MS5.5
TAU Tasmania Unive 68.87 177 *e*P **P** **18 27 42.0 -1.6**
comp=Z,668nm,1.6s,mb6.3
TAU LR LR
comp=Z,3μm,20.0s,MS5.5
ALE Alert 70.72 4 P **P** **18 27 55.0 0.0**
comp=Z,1μm,1.2s,mb6.8
URZ Urewera 71.27 153 P **P** **18 27 54.6 -3.8**
comp=Z,68nm,1.1s,mb5.5,baz=98,slow=0.9,SNR=5.8
ABKT Ailbek 71.33 304 P **P** **18 28 00.5 +1.8**
comp=Z,944nm,1.2s,mb6.6,SNR=52
SPB4 Spitsbergen Ar 71.51 350 *e*P **P** **18 28 00.2 +0.4**
KBS Kingsbay 71.63 351 *e*P **P** **18 27 59.6 -1.0**
KBS AMS AMS 18 59 34.4
comp=Z,1μm,20.5s,MS5.1
KBS Kingsbay 71.63 351 *e*P **P** **18 28 01.1 +0.5**
KBS pmax pmax
comp=Z,96nm,1.0s,mb5.7
KBS MLR MLR
comp=Z,2μm,21.0s,MS5.4
KBS Kingsbay 71.63 351 *e*P **P** **18 28 01.1 +0.5**
comp=Z,96nm,1.0s,mb5.7
KBS LR LR
comp=Z,2μm,21.0s,MS5.4
BKZ Black Stump Fm 71.80 154 PN **P** **18 27 59.2 -2.3**
C03A Quillayute Air 71.91 45⇑P **P** **18 28 03.2 +1.0**
baz=72,SNR=5.2
C03A ⇓S S 18 37 26.1 +4.3
baz=72
YKA Yellowknife Ar 72.12 29 P **P** **18 28 02.8 -0.6**
comp=Z,46nm,0.9s,mb5.4,baz=293,slow=5.7,SNR=147
YKA PKPPKP 18 55 47.0
comp=Z,0.7nm,0.8s,baz=106,slow=2.5,SNR=3.9
YKA LR LR 19 02 09.6
comp=Z,2μm,19.0s,MS5.5,baz=235,slow=38
YKA Yellowknife Ar 72.12 29 P **P** **18 28 02.9 -0.6**
YKA P'P' 18 55 47.0
YKA LR LR 19 02 09.6
RES Resolute Bay 72.50 14 P **P** **18 28 05.7 -0.1**
RES pmax pmax
comp=Z,400nm,1.4s,mb6.2
RES Resolute Bay 72.50 14 *e*P **P** **18 28 05.6 -0.2**
comp=Z,13μm,1.4s
RES *e* pP 18 28 13.0 -0.6
B04A Port Angeles 72.55 45⇑P **P** **18 28 06.7 +0.7**
baz=72,SNR=6.8
B04A ⇑S S 18 37 30.2 +1.1
baz=72
D03A Wishkah Elem. 72.70 46⇓P **P** **18 28 08.1 +1.2**
baz=73,SNR=10
D03A ⇑S S 18 37 32.8 +2.0
baz=73
THZ Tophouse 72.75 158 PN **P** **18 28 04.0 -3.3**
A04A Legoe Bay, Lum 72.82 44⇑P **P** **18 28 08.4 +0.7**
baz=73
A04A ⇓S S 18 37 33.2 +1.0
baz=73
LVZ Lovozero 72.88 338 P **P** **18 28 08.2 +0.2**
comp=Z,656nm,1.3s,mb6.4,SNR=9.6
LVZ Lovozero 72.88 338 P **P** **18 28 08.2 +0.2**
LVZ LR LR
comp=Z,2μm,20.0s,MS5.4
HDW Hoodsport 72.97 45 P **P** **18 28 09.6 +1.1**
SNZO South Karori 72.98 156 *e*P **P** **18 28 06.2 -2.4**
comp=Z,78nm,0.8s,mb5.7
SNZO LR LR
comp=Z,2μm,19.0s,MS5.4
E03A Lebam 73.03 46⇑P **P** **18 28 09.6 +0.7**
baz=73,SNR=18
E03A ⇓S S 18 37 34.8 +0.2
baz=73
A05A Maple Falls 73.11 43⇑P **P** **18 28 09.3 -0.1**
baz=73,SNR=9.7
A05A ⇑S S 18 37 36.7 +1.2
baz=73
F03A Seaside 73.25 47⇓P **P** **18 28 10.3 +0.1**
baz=73,SNR=10
MBW Mount Baker 73.30 44 P **P** **18 28 10.9 +0.4**
D04A Dobbs Creek Ra 73.32 45⇑P **P** **18 28 11.8 +1.2**
baz=73
D04A ⇓S S 18 37 40.4 +2.5
baz=73
B05A Bryant 73.36 44 P **P** **18 28 11.4 +0.6**
baz=73,SNR=24
B05A ⇑S S 18 37 39.2 +0.9
baz=73
APA Apatity 73.45 338⇓*i*P **P** **18 28 12.0 +0.6**
APA *i* pP 18 28 19.4 +0.2
APA *i* 18 28 22.0
APA *e*PPP 18 32 36.0
APA *i* S S 18 37 39.0 -0.4
APA *i* PS 18 38 28.0
APA pmax pmax
comp=Z,260nm,1.2s,mb6.0
APA MLR MLR
comp=Z,3μm,15.0s,MS5.7
APA MLR MLR
comp=Z,3μm,16.0s
KHZ Kahutara 73.55 158 PN **P** **18 28 09.2 -2.8**
E04A Onalaska 73.56 46⇑P **P** **18 28 12.8 +0.8**
baz=74,SNR=7.1
E04A ⇑S S 18 37 42.5 +1.9
baz=74
G03A Yamhill 73.65 47⇑P **P** **18 28 13.1 +0.6**
baz=74,SNR=8.0
G03A ⇑S S 18 37 42.3 +0.7
baz=74
K01A Sixes 73.73 50⇑P **P** **18 28 13.8 +0.8**
baz=74
I02A Mapleton 73.75 49⇓P **P** **18 28 13.4 +0.3**
baz=74,SNR=6.5
I02A ⇑S S 18 37 43.6 +0.9
baz=74
KEBM Edson Butte 73.80 50 *e*P **P** **18 28 14.6 +1.2**
PECR Pechory 73.81 325⇑*i*P **P** **18 28 14.0 +0.5**
PECR *i* 18 28 27.6
PECR *e* 18 32 43.4
PECR *e*S S 18 37 43.2 -0.1
PECR *e* 18 38 08.0
PECR *e* 18 38 22.0
PECR pmax pmax
comp=E,8μm,1.6s
PECR pmax pmax
comp=Z,2μm,10.0s
PECR pmax pmax
comp=N,400nm,5.0s
PECR pmax pmax
comp=E,800nm,6.0s
PECR smax
comp=N,1μm,7.0s
PECR smax
comp=E,1μm,7.0s
PECR MLR MLR
comp=Z,5μm,15.0s,MS5.9
PECR MLR MLR
comp=N,2μm,14.0s,MS5.6
PECR MLR MLR
comp=E,2μm,16.0s,MS5.6
D05A Enumclaw 73.81 45⇑P **P** **18 28 14.1 +0.6**
baz=74,SNR=19
D05A ⇓S S 18 37 44.0 +0.5
baz=74
C05A Tolt Reservoir 73.82 45⇓P **P** **18 28 13.7 +0.1**
baz=74,SNR=15
C05A ⇑S S 18 37 45.1 +1.6
baz=74
COR Corvallis 73.89 48 *e*P **P** **18 28 15.1 +1.1**
COR pmax pmax
comp=Z,168nm,1.0s,mb5.9
COR MLR MLR
comp=Z,5μm,19.0s,MS5.8
COR Corvallis 73.89 48 *e*P **P** **18 28 15.1 +1.1**
comp=Z,168nm,1.0s,mb5.9
COR LR LR
comp=Z,5μm,19.0s,MS5.8
RPZ Rata Peaks 73.91 160 P **P** **18 28 11.8 -2.3**
comp=Z,82nm,0.9s,mb5.7,baz=245,slow=0.5,SNR=16
F04A Amboy 73.99 46⇑P **P** **18 28 14.7 +0.1**
baz=74,SNR=21
F04A ⇓S S 18 37 46.1 +0.6
baz=74
MTMW Mount Mitchell 74.09 46 P **P** **18 28 15.9 +0.7**
KBO Bosley Butte 74.11 51 *e*P **P** **18 28 16.1 +0.9**
I03A Eugene 74.13 49 P **P** **18 28 16.2 +0.8**
baz=74,SNR=22
I03A ⇑S S 18 37 46.2 -0.8
baz=74
KLMR Klimovskoe 74.13 330*d i*P **P** **18 28 15.8 +0.4**
KLMR *e*S S 18 37 52.2 +5.2
KLMR *e*SS SS 18 42 40.7 +8.4
KLMR *e*SSS 18 45 53.4
KLMR pmax pmax
comp=Z,860nm,1.8s,mb6.4
KLMR pmax pmax
comp=Z,960nm,12.4s
KLMR MLR MLR
comp=Z,5μm,23.0s,MS5.7
J02A Umpqua 74.15 49 P **P** **18 28 16.3 +0.8**
baz=74,SNR=16
J02A ⇑S S 18 37 49.1 +1.9
baz=74
E05A Randle 74.19 46 P **P** **18 28 15.7 0.0**
baz=74,SNR=16
E05A ⇑S S 18 37 48.6 +1.0
baz=74
G04A Mulino 74.21 47⇑P **P** **18 28 16.6 +0.7**
baz=74,SNR=16
G04A ⇓S S 18 37 48.4 +0.5
baz=74
EUO Eugene 74.25 48 P **P** **18 28 16.8 +0.7**
M01C Crescent City 74.32 51⇑P **P** **18 28 17.3 +0.9**
baz=74,SNR=9.8
M01C ⇓S S 18 37 48.6 -0.5
baz=74
KEV Kevo 74.32 341 *e*p **P** **18 28 15.7 -0.8**
KEV Kevo 74.32 341 P **P** **18 28 16.8 +0.3**
KEV pmax pmax
comp=Z,340nm,1.6s,mb6.0
K02A Glendale 74.42 50 P **P** **18 28 17.8 +0.7**
baz=74,SNR=24
K02A ⇑S S 18 37 51.7 +1.4
baz=74
J03A Ideyld Park 74.56 49 P **P** **18 28 18.8 +0.9**
baz=74,SNR=22
J03A ⇓S S 18 37 52.9 +1.1
baz=74
L02A Cave Junction 74.57 50⇑P **P** **18 28 18.4 +0.5**
baz=74,SNR=15
L02A ⇓S S 18 37 52.6 +0.7
baz=74
MLZ Mavora Lakes 74.57 163 PN **P** **18 28 16.1 -1.9**
KRMB Red Mountain 74.58 51 *e*P **P** **18 28 17.2 -0.9**
H04A Detroit Lake 74.60 48 P **P** **18 28 18.4 +0.3**
baz=74,SNR=26
H04A ⇓S S 18 37 53.1 +0.8
baz=74
TBM Table Mountain 74.70 45 P **P** **18 28 19.1 +0.3**
HOOD Mount Hood Mea 74.71 47 P **P** **18 28 19.6 +0.8**
JCC Jacoby Creek 74.76 52⇑P **P** **18 28 19.7 +0.7**
baz=75,SNR=13
JCC ⇓S S 18 37 56.1 +2.1
baz=75
EAZ Earnscleugh 74.78 162 PN **P** **18 28 17.4 -1.7**
HBO Huckleberry Mo 74.82 48 P **P** **18 28 20.0 +0.6**
EBG Ellensburg 74.82 45 P **P** **18 28 20.0 +0.6**
VFP Flag Point 74.84 47 P **P** **18 28 20.0 +0.5**
ARCES ARCESS Array B 74.88 341 P **P** **18 28 20.1 +0.4**
comp=Z,88nm,0.9s,mb5.7,baz=52,slow=6.7,SNR=104
BBOR Butler Butte 74.93 49 P **P** **18 28 20.5 +0.5**
KHMM Horse Mountain 74.95 52 *e*P **P** **18 28 21.1 +1.0**
G05A Wamic 74.96 47 P **P** **18 28 21.1 +0.8**
baz=75,SNR=9.6
G05A ⇓S S 18 37 57.3 +1.0
baz=75
ODZ Otahua Downs 74.99 161 PN **P** **18 28 18.9 -1.4**
WHZ Wether Hill Ro 75.01 163 PN **P** **18 28 17.7 -2.8**
WIFE Three Sisters- 75.08 48 P **P** **18 28 21.7 +0.8**
O01C Eel River Cons 75.16 52⇑P **P** **18 28 22.5 +1.2**
baz=75,SNR=20
H05A Madras 75.25 47 P **P** **18 28 22.4 +0.5**
baz=75,SNR=19
H05A ⇑S S 18 38 01.1 +1.6
baz=75
YBH Yreka Blue Hor 75.34 51 LR LR 18 55 07.6
comp=Z,5μm,20.7s,MS5.8,baz=323,slow=31
YBH Yreka Blue Hor 75.34 51 P **P** **18 28 23.2 +0.8**
YBH pmax pmax
comp=Z,100nm,1.0s
YBH Yreka Blue Hor 75.34 51 *e*P **P** **18 28 23.1 +0.7**
comp=Z,101nm,1.0s,mb5.7
YBH LR LR
comp=Z,4μm,20.0s,MS5.7
YBH Yreka Blue Hor 75.34 51 P **P** **18 28 23.3 +0.9**
baz=75,SNR=46
YBH ⇑S S 18 38 01.6 +1.1
baz=75
M02C Callahan 75.37 51 P **P** **18 28 23.5 +1.0**
baz=75,SNR=34
M02C ⇓S S 18 38 02.4 +1.6
baz=75
I05A Bend 75.40 48⇑P **P** **18 28 23.1 +0.4**
baz=75
I05A ⇓S S 18 38 03.0 +1.8
baz=75
KIPM Iron Peak 75.52 53 *e*P **P** **18 28 24.2 +0.8**
TUZ Tuapeka 75.53 162 PN **P** **18 28 21.7 -1.8**
HAWA Hanford 75.68 45 *e*P **P** **18 28 24.4 +0.1**
comp=Z,195nm,1.5s,mb5.8
HAWA LR LR
comp=Z,5μm,20.0s,MS5.8
K04A Chilquin 75.68 49⇑P **P** **18 28 24.8 +0.5**
baz=76,SNR=6.9
K04A ⇑S S 18 38 05.3 +1.0
baz=76
VIPM Ingram Point 75.70 47 P **P** **18 28 25.1 +0.6**
LHEM Herd Peak 75.72 51 P **P** **18 28 25.2 +0.7**
L04A Klamath Falls 75.74 50⇓P **P** **18 28 25.4 +0.7**
baz=76,SNR=25
L04A ⇓S S 18 38 06.0 +1.0

baz=76
P01C Double 8 Ranch 75.75 53 P **P 18 28 25.1 +0.4**
baz=76,SNR=30
P01C ⇓S S 18 38 06.0 +1.0
baz=76
J05A Fort Rock 75.76 49 P **P 18 28 25.7 +0.9**
baz=76,SNR=112
J05A ⇓S S 18 38 05.4 +0.2
baz=76
OD2 Odessa Site #2 75.80 44 P **P 18 28 24.9 -0.2**
KTK1 Kautokeino 75.84 341 *e*P **P 18 28 26.0 +0.7**
KTK1 AMb AMB 18 28 28.7
comp=Z,231nm,1.5s,mb5.9
O02C Red Bluff 75.87 52 P **P 18 28 26.3 +0.9**
baz=76,SNR=70
O02C ⇓S S 18 38 08.1 +1.7
baz=76
WDC Whiskeytown Da 75.89 52 *e*P **P 18 28 25.8 +0.2**
WDC pmax pmax
comp=Z,166nm,1.4s,mb5.8
WDC MLR MLR
comp=Z,4μm,19.0s,MS5.7
WDC Whiskeytown Da 75.89 52 *e*P **P 18 28 25.8 +0.2**
comp=Z,168nm,1.4s,mb5.8
WDC LR LR
comp=Z,4μm,19.0s,MS5.7
WDC Whiskeytown Da 75.89 52 P **P 18 28 25.9 +0.3**
baz=76,SNR=38
WDC ⇓S S 18 38 07.9 +1.3
baz=76
M04C Macdoel 75.92 50 P **P 18 28 26.4 +0.7**
baz=76,SNR=36
M04C ⇑S S 18 38 08.4 +1.5
baz=76
SYZ Scrubby Hill 75.93 162 PN **P 18 28 24.3 -1.4**
WBK Wadi Bani Khal 76.12 289 P **P 18 28 28.7 +1.9**
SNR=28
HOPS Hopland 76.12 53 *e*P **P 18 28 27.1 +0.2**
comp=Z,125nm,1.4s,mb5.7
HOPS LR LR
comp=Z,5μm,19.0s,MS5.8
HOPS Hopland 76.12 53 ⇑P **P 18 28 26.7 -0.1**
baz=76,SNR=7.8
HOPS ⇑S S 18 38 11.0 +1.8
baz=76
GASB Alder Springs 76.12 53 ⇓P **P 18 28 27.8 +1.0**
baz=76,SNR=53
GASB ⇑S S 18 38 11.0 +1.8
baz=76
WSAR Wadi Sarin 76.16 289 LR LR 19 03 41.4
comp=Z,1μm,21.5s,MS5.1,baz=271,slow=37
I06A Prineville 76.19 48 P **P 18 28 28.0 +0.7**
baz=76,SNR=73
I06A ⇑S S 18 38 10.0 +0.1
baz=76
NEW Newport 76.43 43 P **P 18 28 28.7 +0.1**
NEW pmax pmax
comp=Z,110nm,1.0s
NEW Newport 76.43 43 *e*P **P 18 28 28.5 -0.1**
comp=Z,107nm,1.0s,mb5.7
NEW LR LR
comp=Z,4μm,19.0s,MS5.8
O03C Acorn Hollow, 76.48 52 ⇓P **P 18 28 28.9 0.0**
baz=76
O03C ⇑S S 18 38 12.6 -0.4
baz=76
BIDO Bidbid 76.48 290 P **P 18 28 30.7 +1.8**
SNR=51
J06A Christmas Vall 76.50 48 P **P 18 28 29.3 +0.3**
baz=76,SNR=65
J06A ⇑S S 18 38 13.1 -0.2
baz=76
L05A Lakeview 76.51 50 P **P 18 28 29.9 +0.8**
baz=76,SNR=65
L05A ⇓S S 18 38 13.9 +0.4
baz=76
EDM Edmonton 76.52 37 P **P 18 28 29.0 -0.1**
EDM Edmonton 76.52 37 *e*P **P 18 28 28.8 -0.3**
HATC Hat Creek Radi 76.56 51 P **P 18 28 30.1 +0.7**
baz=76,SNR=29
HATC ⇓S S 18 38 13.8 -0.2
baz=76
JOF Joensuu 76.56 334 *e*p **P 18 28 28.9 -0.5**
comp=Z,242nm,0.9s,mb6.1
M05C Lookout 76.57 50 P **P 18 28 29.8 +0.4**
baz=76,SNR=60
M05C ⇓S S 18 38 13.5 -0.6
baz=76
MCCM Marconi Confer 76.59 54 *e*P **P 18 28 29.5 0.0**
comp=Z,524nm,1.8s,mb6.2
MCCM Marconi Confer 76.59 54 ⇓P **P 18 28 29.5 0.0**
baz=76,SNR=6.3
MCCM ⇓S S 18 38 13.9 -0.3
baz=76
I07A Izee 76.61 47 P **P 18 28 30.0 +0.4**
baz=76,SNR=32
I07A ⇑S S 18 38 13.7 -0.7
baz=76
K06A Valley Falls 76.61 49 P **P 18 28 30.2 +0.6**
baz=76,SNR=60
K06A ⇑S S 18 38 13.4 -1.1
baz=76
MNRC McLaughlin Nat 76.62 53 P **P 18 28 30.4 +0.7**
baz=76,SNR=40
MNRC ⇑S S 18 38 15.2 +0.6
baz=76
TRO Tromso 76.63 343 *e*P **P 18 28 28.8 -0.9**
TRO AMb AMB 18 28 31.1
comp=Z,194nm,1.6s,mb5.8
TRO *e*S S 18 38 14.9 +0.2
TRO AMS AMS 19 08 56.2
comp=Z,4μm,18.4s,MS5.7
NSHM Saint Helena R 76.64 54 *e*P **P 18 28 29.6 -0.1**
FARB Farallon Islan 76.67 54 ⇓P **P 18 28 29.8 -0.2**
baz=77,SNR=5.4
FARB ⇑S S 18 38 14.1 -1.1
baz=77
SMDO Samad 76.73 289 P **P 18 28 31.6 +1.3**
SNR=22
CVS Carmenet Viney 76.81 54 ⇑P **P 18 28 30.9 +0.1**
baz=77,SNR=30
CVS ⇑S S 18 38 17.0 +0.2
baz=77
JMDO Jabal Madar 76.95 289 P **P 18 28 32.7 +1.2**
SNR=21
SUTB Sutter Butte 76.95 53 ⇓P **P 18 28 31.1 -0.5**
baz=77
SUTB ⇓S S 18 38 18.5 +0.2
baz=77
DGAR Diego Garcia 76.97 255 *e*P **P 18 28 31.8 +0.2**
DGAR Diego Garcia 76.97 255 *e*P **P 18 28 31.9 +0.3**
DGAR LR LR
comp=Z,2μm,19.0s,MS5.5
H08A Prairie City 76.98 47 P **P 18 28 32.1 +0.5**
baz=77,SNR=80
H08A ⇑S S 18 38 17.6 -1.0
baz=77
J07A Hines 77.02 48 P **P 18 28 32.8 +0.9**
baz=77,SNR=74
O04C Chester 77.02 51 P **P 18 28 32.7 +0.7**
baz=77,SNR=22
O04C ⇑S S 18 38 17.8 -1.2
baz=77
Q03C Winters 77.02 53 ⇓P **P 18 28 32.9 +1.0**
baz=77,SNR=8.4
ORV Oroville 77.03 52 P **P 18 28 31.9 -0.1**
baz=77,SNR=59
ORV ⇑S S 18 38 18.5 -0.5
baz=77
MAK Makhachkala 77.06 312 *d i*P **P 18 28 33.4 +1.2**
MAK *i* 18 28 43.6
MAK *i* 18 31 26.8
MAK *i* PPP 18 33 15.2
MAK *i* S S 18 38 21.8 +2.4
MAK *i* 18 38 46.0
MAK pmax pmax
comp=Z,412nm,1.6s,mb6.1
MAK pmax pmax
comp=Z,2μm,2.9s,mb6.5
MAK smax
comp=N,2μm,6.5s
MAK smax
comp=E,3μm,10.6s
MAK MLR MLR
comp=Z,8μm,18.0s,MS6.1
MAK MLR MLR
comp=N,2μm,14.0s,MS6.3
MAK MLR MLR
comp=E,12μm,15.0s,MS6.3
MAK Makhachkala 77.06 312 *i* Pr **P 18 28 32.9 +0.7**
BANOM Banah 77.08 293 P **P 18 28 34.5 +2.2**
SNR=11
M06C Likely Place G 77.09 50 P **P 18 28 33.0 +0.6**
baz=77,SNR=48
M06C ⇓S S 18 38 20.7 +0.9
baz=77
OHCM Honcut 77.13 52 *e*P **P 18 28 32.2 -0.3**
HOQ Hoqain 77.15 290 P **P 18 28 33.9 +1.3**
SNR=83
ELFS Eagle Lake Fie 77.15 51 P **P 18 28 33.4 +0.8**
baz=77,SNR=39
ELFS ⇓S S 18 38 20.6 +0.2
baz=77
O05C Quincy 77.28 52 P **P 18 28 33.7 +0.3**
baz=77,SNR=15
O05C ⇓S S 18 38 22.4 +0.6
baz=77
I08A Drewsey 77.29 47 ⇑P **P 18 28 33.7 +0.3**
baz=77,SNR=5.9
I08A ⇓S S 18 38 22.5 +0.5
baz=77
VRHR Novokhopersk 77.30 321 *e*P **P 18 28 33.9 +0.4**
VRHR pmax pmax
comp=Z,270nm,0.9s,mb6.2
VRHR pmax pmax
comp=N,60nm,0.7s
VRHR pmax pmax
comp=E,290nm,1.6s
VRHR MLR MLR
comp=Z,1μm,16.0s,MS5.3
VRHR MLR MLR
comp=N,490nm,15.0s,MS5.3
VRHR MLR MLR
comp=E,900nm,14.0s,MS5.3
MOS Moscow 77.33 326 *e*P **P 18 28 29.8 -3.9**
MOS *i* 18 28 41.4
MOS *e* 18 31 23.7
MOS *e*PPP 18 33 13.0
MOS *e*S S 18 38 20.3 -2.0
MOS *e* 18 38 40.4
MOS pmax pmax
comp=N,600nm,2.0s
MOS pmax pmax
comp=E,300nm,2.0s
MOS pmax pmax
comp=Z,2μm,2.0s,mb6.8
MOS pmax pmax
comp=Z,997nm,1.5s,mb6.5
MOS MLR MLR
comp=Z,4μm,16.5s,MS5.8
K07A Rock Creek Ran 77.33 49 ⇓P **P 18 28 34.2 +0.5**
baz=77
K07A ⇑S S 18 38 22.7 +0.3
baz=77
JRSC Jasper Ridge 77.34 55 P **P 18 28 33.8 +0.1**
baz=77,SNR=9.4
BDM Black Diamond 77.40 54 ⇑P **P 18 28 34.2 +0.2**
baz=77,SNR=5.9
Q04C Lincoln 77.40 53 ⇓P **P 18 28 34.2 +0.2**
baz=77,SNR=16
Q04C ⇓S S 18 38 24.1 +1.0
baz=77
BNLO Ben Lomond (Sa 77.50 55 P **P 18 28 34.9 +0.2**
baz=77,SNR=13
L07A Adell 77.55 49 P **P 18 28 35.9 +1.0**
baz=77,SNR=60
L07A ⇓S S 18 38 23.5 -1.1
baz=77
BSY Bisya 77.57 289 P **P 18 28 36.3 +1.2**
SNR=79
H09A Durkee 77.57 46 P **P 18 28 35.7 +0.6**
baz=78,SNR=21
H09A ⇓S S 18 38 25.5 +0.5
baz=78
WENL Wente Brothers 77.61 54 ⇓P **P 18 28 35.4 +0.2**
baz=78,SNR=8.1
WENL ⇓S S 18 38 25.3 -0.1
baz=78
BEKR Beckwourth 77.71 52 P **P 18 28 36.0 +0.2**
baz=78,SNR=117
N06A Buffalo Meadow 77.72 51 P **P 18 28 36.2 +0.4**
baz=78,SNR=82
N06A ⇓S S 18 38 26.6 0.0
baz=78
BMO Blue Mountains 77.73 46 *e*P **P 18 28 36.1 +0.2**
comp=Z,221nm,1.4s,mb5.9
BMO LR LR
comp=Z,4μm,20.0s,MS5.8
P05C Yuba Gap, Truc 77.76 52 P **P 18 28 36.4 +0.3**
baz=78,SNR=42
P05C ⇓S S 18 38 26.5 -0.5
baz=78
ASHO Ashiyiah 77.77 292 P **P 18 28 37.3 +1.2**
SNR=36
I09A Lost Marbles R 77.81 47 ⇓P **P 18 28 36.3 0.0**
baz=78,SNR=34
I09A ⇓S S 18 38 29.6 +2.0
baz=78
PPT Papeete 77.83 117 *e*S S 18 38 22.7 -5.0
comp=Z,2μm,27.5s
PPT *e*SS SS 18 43 24.8 -3.5
comp=Z,488nm,25.8s
PPT *e*LR LR 18 52 33.4
comp=Z,4μm,21.0s,baz=298
PPT Papeete 77.83 117 LR LR 18 57 55.0
comp=Z,3μm,19.4s,MS5.6,baz=291,slow=32
PPT Papeete 77.83 117 *e*P **P 18 28 36.5 0.0**
PPT *e*S S 18 38 22.7 -5.0
PPT *e*SS SS 18 43 24.8 -3.5
PPT pmax pmax
comp=Z,155nm,1.4s
PPT Papeete 77.83 117 *e*P **P 18 28 36.5 0.0**
comp=Z,155nm,1.4s,mb5.7
PPT *e*S S 18 38 22.7 -5.0
PPT *e*SS SS 18 43 24.8 -3.5
K08A Mann Creek Ran 77.83 48 P **P 18 28 37.0 +0.5**
baz=78,SNR=107
K08A ⇓S S 18 38 28.3 +0.5
baz=78
PMOR Pomariorio Ree 77.84 113 *e*P **P 18 28 36.3 -0.2**
comp=Z,215nm,1.3s,mb5.9
WVOR Wild Horse Val 77.85 49 *e*P **P 18 28 36.7 +0.1**
WVOR pmax pmax
comp=Z,196nm,1.2s,mb5.9
WVOR MLR MLR
comp=Z,5μm,20.0s,MS5.9
WVOR Wild Horse Val 77.85 49 *e*P **P 18 28 36.7 +0.1**
comp=Z,182nm,1.2s,mb5.9
WVOR LR LR
comp=Z,4μm,20.0s,MS5.8
PAE Paea 77.88 117 *e*P **P 18 28 36.5 -0.2**
comp=Z,190nm,1.4s,mb5.8
PAE Paea 77.88 117 *e*P **P 18 28 36.5 -0.2**
PAE pmax pmax
comp=Z,190nm,1.4s,mb5.8
LAVA Lava Cap Winer 77.89 53 P **P 18 28 36.9 +0.1**
baz=78,SNR=48
LAVA ⇓S S 18 38 29.7 +1.3
baz=78
ARQ Araqi 77.91 290 P **P 18 28 38.4 +1.5**
SNR=93
M07A Soldier Meadow 77.92 50 P **P 18 28 37.5 +0.6**
baz=78,SNR=136
M07A ⇑S S 18 38 27.7 -1.0
baz=78
R04C Big Horse Ranc 77.95 53 ⇑P **P 18 28 36.7 -0.4**
baz=78,SNR=5.8
R04C ⇑S S 18 38 28.2 -0.8
baz=78
O06A Flanigan 77.96 51 P **P 18 28 37.6 +0.4**
baz=78,SNR=24
O06A ⇓S S 18 38 29.7 +0.5
baz=78
S04C Ingram Canyon, 77.97 54 P **P 18 28 37.4 +0.1**
baz=78,SNR=36
S04C ⇑S S 18 38 29.8 +0.5
baz=78
WALA Waterton Lakes 78.02 41 *e*P **P 18 28 38.0 +0.4**
comp=Z,117nm,0.9s,mb5.8
P06A Stead Airport, 78.11 52 ⇑P **P 18 28 38.6 +0.6**
baz=78,SNR=15
P06A ⇑S S 18 38 30.2 -0.6
baz=78
L08A Fields 78.15 49 P **P 18 28 38.9 +0.7**
baz=78,SNR=238
L08A ⇑S S 18 38 31.5 +0.3
baz=78
OBN Obninsk 78.16 326 P **P 18 28 38.0 -0.3**
comp=Z,2μm,1.1s,mb7.0,SNR=41
OBN Obninsk 78.16 326 ⇓ *i*P **P 18 28 38.5 +0.2**
OBN *e* 18 31 32.0
OBN *i* S S 18 38 38.2 +6.9
OBN *i* SS SS 18 43 31.3 -1.9
OBN pmax pmax
comp=Z,960nm,1.7s,mb6.5
OBN MLR MLR
comp=Z,3μm,18.0s,MS5.7
OBN Obninsk 78.16 326 *e*P **P 18 28 38.5 +0.3**
comp=Z,556nm,1.1s,mb6.4
OBN LR LR
comp=Z,3μm,20.0s,MS5.7
SAO San Andreas Ge 78.18 55 P **P 18 28 38.5 +0.1**
SAO San Andreas Ge 78.18 55 *e*P **P 18 28 38.4 -0.1**
comp=Z,47nm,1.0s,mb5.4
SAO LR LR
comp=Z,4μm,19.0s,MS5.8
PACP Pacheco Peak 78.20 55 P **P 18 28 39.1 +0.6**
baz=78,SNR=53
TVO Taravao 78.20 117 *e*P **P 18 28 38.7 +0.2**
comp=Z,302nm,1.3s,mb6.1
TVO Taravao 78.20 117 *e*P **P 18 28 38.7 +0.2**
TVO pmax pmax
comp=Z,302nm,1.3s,mb6.1
N07B Gerlach 78.31 50 P **P 18 28 39.6 +0.5**
baz=78,SNR=100
N07B ⇓S S 18 38 32.0 -0.9
baz=78
WCN Washoe City 78.37 52 P **P 18 28 40.0 +0.5**
baz=78,SNR=31
WCN ⇑S S 18 38 34.4 +0.9
baz=78
R05C Kirkwood Meado 78.39 53 P **P 18 28 39.9 +0.4**
baz=78,SNR=22
R05C ⇑S S 18 38 32.1 -1.7
baz=78
CMB Columbia Colle 78.44 53 *e*P **P 18 28 40.0 +0.2**
CMB pmax pmax
comp=Z,348nm,1.3s,mb6.1
CMB MLR MLR
comp=Z,5μm,20.0s,MS5.8
CMB Columbia Colle 78.44 53 *e*P **P 18 28 40.0 +0.2**
comp=Z,348nm,1.3s,mb6.1
CMB LR LR
comp=Z,5μm,20.0s,MS5.8
CMB Columbia Colle 78.44 53 P **P 18 28 40.1 +0.3**
baz=78,SNR=156
CMB ⇓S S 18 38 33.7 -0.5
baz=78
M08A Happy Creek Ra 78.44 50 P **P 18 28 40.5 +0.7**
baz=78,SNR=52
M08A ⇓S S 18 38 33.4 -0.9
baz=78
PAHR Pah Rah Range 78.46 51 *e*P **P 18 28 40.0 +0.1**
comp=Z,202nm,1.3s,mb5.9
VRSR Storozhevoye 78.61 322 *d i*P **P 18 28 41.1 +0.3**
VRSR *e* pP 18 28 50.1 +1.4
VRSR *e* 18 31 34.9
VRSR *e*S S 18 38 35.6 -0.6
VRSR pmax pmax
comp=Z,2μm,15.9s
VRSR pmax pmax
comp=N,350nm,1.0s
VRSR pmax pmax
comp=E,560nm,1.0s
VRSR smax
comp=N,920nm,7.4s
VRSR smax
comp=Z,140nm,3.9s
VRSR smax
comp=E,660nm,5.4s
O07A Toulon 78.63 51 P **P 18 28 41.5 +0.6**
baz=78,SNR=25
O07A ⇓S S 18 38 36.2 -0.1
baz=78
LRV Little Rabbit 78.63 55 *e*P **P 18 28 41.7 +0.8**
V03C Hunter Liggett 78.64 55 P **P 18 28 41.7 +0.8**
baz=78,SNR=21
V03C ⇑S S 18 38 37.7 +1.2
baz=78
L09A Wilkinson Ranc 78.68 49 P **P 18 28 41.8 +0.7**
baz=79,SNR=71
L09A ⇓S S 18 38 37.5 +0.7
baz=79
T05C Eagle Field, D 78.69 54 ⇑P **P 18 28 41.5 +0.3**
baz=79
S05C Merced 78.76 54 ⇑P **P 18 28 41.4 -0.2**
baz=79,SNR=18
S05C ⇓S S 18 38 36.9 -0.8
baz=79
U04C Hernandez Rese 78.83 55 P **P 18 28 42.8 +0.8**
baz=79,SNR=44
U04C ⇑S S 18 38 39.8 +1.3
baz=79
P07A Fallon 78.88 51 ⇑P **P 18 28 42.7 +0.5**
baz=79,SNR=8.1
N08A GE Springer Mi 78.88 50 P **P 18 28 42.8 +0.5**
baz=79,SNR=60
N08A ⇓S S 18 38 39.0 0.0
baz=79
S06C San Francisco 78.89 53 P **P 18 28 42.3 0.0**
baz=79,SNR=79
S06C ⇑S S 18 38 39.4 +0.3
baz=79
R06C Coleville 78.91 53 P **P 18 28 43.2 +0.8**
baz=79,SNR=49
R06C ⇑S S 18 38 38.4 -0.9
baz=79
KAF Kangasniemi 78.94 335 *e*p **P 18 28 41.9 -0.7**
comp=E,96nm,0.7s,mb5.8,baz=51,slow=5.2
KAF Kangasniemi 78.94 335 *e*P **P 18 28 41.9 -0.7**
KAF pmax pmax
comp=Z,96nm,0.7s,mb5.8
MSO Missoula 79.00 43 *e*P **P 18 28 42.2 -0.7**
comp=Z,47nm,1.2s,mb5.3
MSO LR LR
comp=Z,2μm,19.0s,MS5.5
V04C Ramage Ranch, 79.06 56 ⇑P **P 18 28 44.1 +0.9**
baz=79,SNR=15
V04C ⇓S S 18 38 42.1 +1.1
baz=79
O08A Rochester Mine 79.08 51 ⇓P **P 18 28 44.0 +0.7**
baz=79
M09A Marrel Ranch, 79.08 49 ⇑P **P 18 28 43.8 +0.5**
baz=79,SNR=26
M09A ⇓S S 18 38 40.4 -0.7
baz=79
GOF Gofitskoye 79.10 315 ⇓ *i*P **P 18 28 44.5 +1.0**
GOF pmax pmax
comp=Z,500nm,1.3s,mb6.3
DGRG David-gareji 79.13 311 P **P 18 28 44.9 +1.2**
DGRG S S 18 38 42.6 +0.9
PKD Parkfield 79.18 55 P **P 18 28 44.3 +0.4**
baz=79,SNR=85
PKD ⇑S S 18 38 44.2 +1.9
baz=79
Q07A Schurz 79.19 52 ⇓P **P 18 28 44.2 +0.3**
baz=79
N09A Rock Creek Ran 79.27 50 P **P 18 28 45.1 +0.7**
baz=79,SNR=58
U05C Westside ANR, 79.33 55 ⇑P **P 18 28 45.4 +0.7**
baz=79
T06C Millerton Lake 79.35 54 P **P 18 28 44.9 0.0**
baz=79,SNR=76
T06C ⇑S S 18 38 42.6 -1.4
baz=79
R07C Lee Vining 79.38 53 P **P 18 28 45.9 +0.9**
baz=79,SNR=60
R07C ⇑S S 18 38 43.8 -0.5
baz=79
CHMT Chamberlain Mo 79.38 43 *e*P **P 18 28 44.3 -0.7**
P08A Dixie Valley 79.38 51 P **P 18 28 45.9 +0.9**
baz=79,SNR=12
P08A ⇑S S 18 38 44.5 +0.2
baz=79
MTA Mtatsminda 79.42 311 P **P 18 28 46.2 +1.0**
MTA S S 18 38 45.8 +1.0
FIA1 FINESS Array S 79.42 334 *e*P **P 18 28 45.3 +0.1**
FINES FINESS Array B 79.43 334 P **P 18 28 45.3 +0.1**
comp=Z,143nm,0.9s,mb5.9,baz=85,slow=6.1,SNR=380
FINES LR LR 19 09 02.5
comp=Z,3μm,20.2s,MS5.5,baz=178,slow=39
FINES FINESS Array B 79.43 334 *i*P **P 18 28 45.2 -0.1**

FINES pmax pmax
comp=Z,143nm,0.9s
TBLG Delisi 79.44 311 P P 18 28 46.2 +0.8
KCC Kaiser Creek 79.50 54 ⇓P P 18 28 45.8 +0.2
baz=79,SNR=38
KCC ⇓S S 18 38 44.8 -0.8
baz=79
ZEI Tsey 79.55 313 *e*P P 18 28 47.3 +1.4
ZEI *e**PP pP 18 28 51.5 -2.3
ZEI *e* 18 31 48.5
ZEI pmax pmax
comp=Z,181nm,0.8s,mb6.0
M10A I.L. Ranch, Tu 79.65 49 P P 18 28 47.2 +0.7
baz=80,SNR=22
BMN Battle Mountai 79.66 50 *e*P P 18 28 46.5 0.0
BMN pmax pmax
comp=Z,168nm,1.4s,mb5.8
BMN MLR MLR
comp=Z,5μm,20.0s,MS5.8
BMN Battle Mountai 79.66 50 *e*P P 18 28 46.5 0.0
comp=Z,168nm,1.4s,mb5.8
BMN LR LR
comp=Z,5μm,20.0s,MS5.8
V05C Boulder Hill, 79.69 55 ⇑P P 18 28 47.4 +0.8
baz=80
NVAR Mina Array Bea 79.76 52 P P 18 28 47.6 +0.5
comp=Z,70nm,0.9s,mb5.6,baz=272,slow=4.4,SNR=257
NVAR PKKPbc PKKPbc 18 47 34.9 +1.4
comp=Z,0.3nm,0.5s,baz=7.6,slow=2.7,SNR=3.1
NVAR PKPPKP 18 55 39.0
comp=Z,2.0nm,1.1s,baz=116,slow=3.4,SNR=3.1
SDP Sudden Peak, L 79.78 57 ⇓P P 18 28 47.5 +0.3
baz=80
O09A Fish Creek Ran 79.80 50 P P 18 28 47.9 +0.6
baz=80,SNR=89
O09A ⇑S S 18 38 48.2 -0.5
baz=80
KIV Kislovodsk 79.81 314 P P 18 28 48.0 +0.6
comp=Z,2μm,1.0s,mb7.0,SNR=94
KIV Kislovodsk 79.81 314 ⇓P P 18 28 49.2 +1.9
SNR=134
KIV Kislovodsk 79.81 314 *d* iP P 18 28 48.8 +1.4
KIV *e* 18 31 47.8
KIV *i* S S 18 38 49.1 +0.2
KIV *e*SS SS 18 43 54.7 -3.4
KIV pmax pmax
comp=Z,836nm,1.7s,mb6.4
KIV MLR MLR
comp=Z,3μm,22.0s,MS5.6
KIV Kislovodsk 79.81 314 *e*P P 18 28 48.9 +1.5
comp=Z,2μm,1.7s,mb6.7
KIV LR LR
comp=Z,3μm,20.0s,MS5.6
Q08A Gabbs 79.84 52 ⇑P P 18 28 47.8 +0.3
baz=80,SNR=76
Q08A ⇑S S 18 38 49.1 -0.1
baz=80
SMMC Simmler 79.85 56 ⇓P P 18 28 48.0 +0.5
baz=80,SNR=15
SMMC ⇓S S 18 38 50.2 +1.0
baz=80
ONI Oni 79.93 312 P P 18 28 49.8 +1.8
ONI S S 18 38 51.7 +1.6
R08A Mina 79.94 52 P P 18 28 48.6 +0.6
baz=80,SNR=35
R08A ⇑S S 18 38 50.7 +0.5
baz=80
RCTC Rector, Farmer 79.98 55 ⇓P P 18 28 48.0 -0.3
baz=80,SNR=9.3
RCTC ⇑S S 18 38 49.9 -0.8
baz=80
HELL Mitchell Peak, 79.99 54 P P 18 28 48.1 -0.2
baz=80,SNR=97
HELL ⇑S S 18 38 49.9 -0.8
baz=80
N10A Dunphy 80.03 50 ⇓P P 18 28 49.0 +0.5
baz=80,SNR=5.3
N10A ⇑S S 18 38 50.5 -0.7
baz=80
MTUM Tungsten Hills 80.03 53 *e*P P 18 28 48.8 +0.3
P09A Austin 80.10 51 P P 18 28 49.5 +0.6
baz=80,SNR=20
P09A ⇑S S 18 38 51.6 -0.3
baz=80
GNI Garni 80.12 310 P P 18 28 50.7 +1.7
GNI Garni 80.12 310 P P 18 28 51.2 +2.2
comp=Z,73nm,0.9s,mb5.6,baz=301,slow=1.4,SNR=81
GNI Garni 80.12 310 P P 18 28 51.2 +2.2
GNI pmax pmax
comp=Z,73nm,0.9s
GNI Garni 80.12 310 *e*P P 18 28 50.9 +1.8
comp=Z,409nm,1.4s,mb6.2
GNI LR LR
comp=Z,2μm,19.0s,MS5.4
PKM Peak Mountain 80.16 56 P P 18 28 50.1 +0.9
baz=80,SNR=47
PKM ⇑S S 18 38 53.3 +0.8
baz=80
HLID Hailey 80.16 46 *e*P P 18 28 49.0 -0.2
comp=Z,200nm,1.8s,mb5.8
HLID LR LR
comp=Z,3μm,20.0s,MS5.6
M11A Holland Ranch, 80.20 49 P P 18 28 50.3 +0.8
baz=80,SNR=69
M11A ⇓S S 18 38 52.5 -0.5
baz=80
O10A Cortez Mining, 80.22 50 ⇑P P 18 28 50.1 +0.6
baz=80,SNR=8.9
O10A ⇓S S 18 38 54.0 +0.8
baz=80
MOR8 Moi Rana 80.25 341 *e*P P 18 28 48.3 -1.4
MOR8 AMb AMB 18 28 50.6
comp=Z,323nm,1.1s,mb6.2
VES Vestal, Richgr 80.30 55 ⇓P P 18 28 49.5 -0.5
baz=80,SNR=82
HRY Holter Researc 80.34 43 *e*P P 18 28 50.1 -0.1
Q09A Carvers 80.38 52 P P 18 28 50.8 +0.4
baz=80,SNR=13
TIN Tinemaha 80.40 54 ⇑P P 18 28 51.1 +0.5
baz=80,SNR=6.5
SBC Santa Barbara 80.42 56 ⇑P P 18 28 51.2 +0.6
baz=80,SNR=5.8
DLMT Dillon 80.50 44 *e*P P 18 28 50.7 -0.4
comp=Z,196nm,1.4s,mb5.8
N11A Elko Archery C 80.51 49 ⇓P P 18 28 51.6 +0.5
baz=80,SNR=14
N11A ⇑S S 18 38 55.2 -1.1
baz=80
P10A Eureka 80.54 51 P P 18 28 51.8 +0.5
baz=80,SNR=43
P10A ⇑S S 18 38 57.1 +0.6
baz=80
MCMT McKenzie Canyo 80.59 45 *e*P P 18 28 51.2 -0.3
BSC Santa Cruz Isl 80.68 57 ⇑P P 18 28 52.1 +0.1
baz=81,SNR=5.0
TPH Tonopah 80.68 52 *e*P P 18 28 52.1 +0.1
TPH pmax pmax
comp=Z,321nm,1.8s,mb6.0
TPH MLR MLR
comp=Z,3μm,20.0s,MS5.7
TPH Tonopah 80.68 52 *e*P P 18 28 52.1 0.0
comp=Z,322nm,1.8s,mb6.0
TPH LR LR
comp=Z,3μm,20.0s,MS5.7
R09A Tonopah 80.72 52 P P 18 28 52.5 +0.3
baz=81,SNR=263
R09A ⇓S S 18 38 59.8 +1.4
baz=81
LCCM Lewis and Clar 80.72 43 P P 18 28 52.4 +0.1
CWC Cottonwood Cre 80.78 54 ⇓P P 18 28 52.5 0.0
baz=81
ARVC Arvin 80.79 55 P P 18 28 52.7 0.0
baz=81,SNR=28
ARVC ⇓S S 18 38 59.5 +0.3
baz=81
M12A Wells 80.80 48 P P 18 28 53.4 +0.7
baz=81,SNR=128
M12A ⇑S S 18 38 59.9 +0.6
baz=81
ISA Isabella 80.82 55 PFAKE 18 29 00.0 +7.2
ISA LR LR
comp=Z,1μm,19.0s,MS5.2
ISA Isabella 80.82 55 P P 18 28 52.3 -0.5
baz=81,SNR=26
ISA ⇑S S 18 38 57.6 -1.9
baz=81
S09A Goldfield 80.83 53 P P 18 28 53.2 +0.3
baz=81,SNR=103
S09A ⇓S S 18 38 59.7 +0.1
baz=81
O11A Cowboy Ranch, 80.87 50 P P 18 28 53.5 +0.4
baz=81,SNR=55
VSU Vasula 80.92 332 *d* iP P 18 28 53.3 0.0
VSU Vasula 80.92 332 *i* Pr P 18 28 53.4 +0.1
EGMT Eagleton 80.95 41 *e*P P 18 28 53.2 -0.3
comp=Z,315nm,1.6s,mb6.0
EGMT LR LR
comp=Z,4μm,19.0s,MS5.8
BOZ Bozeman (W) 80.96 43 P P 18 28 53.5 0.0
BOZ pmax pmax
comp=Z,54nm,1.0s,mb5.4
BOZ Bozeman (W) 80.96 43 *e*P P 18 28 53.7 +0.2
comp=Z,54nm,1.0s,mb5.4
BOZ LR LR
comp=Z,2μm,20.0s,MS5.5
N12A Clover Valley, 80.97 49 P P 18 28 54.2 +0.6
baz=81,SNR=48
N12A ⇓S S 18 39 00.8 -0.2
baz=81
KARS Kars 81.04 311 P P 18 28 57.1 +3.1
GRAC Grapevine Rang 81.05 53 P P 18 28 54.4 +0.5
baz=81,SNR=15
GRAC ⇓S S 18 39 01.6 -0.3
baz=81
BLG Laguna Peak 81.05 56 ⇑P P 18 28 53.6 -0.4
baz=81,SNR=5.4
BLG ⇓S S 18 39 01.3 -0.7
baz=81
SNCC San Nicolas Is 81.08 57 PFAKE 18 29 00.0 +5.9
SNCC LR LR
comp=Z,3μm,20.0s,MS5.7
SNCC San Nicolas Is 81.08 57 ⇑P P 18 28 54.2 +0.1
baz=81
OSI Osito Adit 81.09 56 ⇑P P 18 28 54.3 +0.1
baz=81,SNR=5.6
OSI ⇓S S 18 39 02.2 -0.2
baz=81
JMIC Jan Mayen 81.12 351 *e*P P 18 28 55.2 +0.8
CLDR Caldiran 81.14 309 P P 18 28 56.7 +2.2
DAC Darwin (Calif) 81.20 54 *e*P P 18 28 54.7 -0.1
DAC pmax pmax
comp=Z,110nm,1.3s,mb5.6
DAC MLR MLR
comp=Z,4μm,20.0s,MS5.8
DAC Darwin (Calif) 81.20 54 *e*P P 18 28 54.7 -0.1
comp=Z,110nm,1.3s,mb5.6
DAC LR LR
comp=Z,4μm,20.0s,MS5.8
R10A Warm Springs 81.24 52 P P 18 28 55.5 +0.5
baz=81,SNR=48
R10A ⇑S S 18 39 02.6 -1.3
baz=81
MPMC Manual Prospec 81.37 54 P P 18 28 56.0 +0.3
baz=81,SNR=138
MPMC ⇓S S 18 39 05.4 +0.2
baz=81
TAOE Nuku Hiva Isla 81.39 104 *e*LQ 18 50 46.5
comp=Z,7μm,26.2s
TAOE Nuku Hiva Isla 81.39 104 *e*PP PP 18 31 59.4 -2.4
comp=Z,602nm,25.6s
TAOE Nuku Hiva Isla 81.39 104 *e*SS SS 18 44 17.9 -3.7
comp=Z,2μm,25.9s
TAOE *e*LR LR 18 54 27.4
comp=Z,10μm,21.8s,baz=306
SUMG Summit 81.44 1 *e*P P 18 28 56.9 +0.8
comp=Z,144nm,2.8s,mb5.4
QLMT Earthquake Lak 81.48 44 *e*P P 18 28 57.0 +0.7
LRMC Laurel Mountai 81.48 55 ⇑P P 18 28 56.4 +0.1
baz=81,SNR=90
LRMC ⇓S S 18 39 06.0 -0.4
baz=81
EDW2 Edwards Air Fo 81.52 55 P P 18 28 56.8 +0.3
baz=81,SNR=100
EDW2 ⇑S S 18 39 06.5 -0.2
baz=81
N13A Wendover, West 81.53 49 ⇑P P 18 28 56.6 0.0
baz=81,SNR=8.6
N13A ⇓S S 18 39 07.3 +0.4
baz=81
DECC Green Verdugo 81.54 56 ⇑P P 18 28 56.4 -0.3
baz=81,SNR=9.3
FFC Flin Flon 81.60 32 P P 18 28 56.6 -0.3
comp=Z,922nm,1.3s,mb6.5,SNR=37
FFC Flin Flon 81.60 32 P P 18 28 57.0 0.0
FURC Furnace Creek, 81.65 54 P P 18 28 57.4 +0.2
baz=82,SNR=91
FURC ⇓S S 18 39 06.5 -1.6
baz=82
BCA Borcka 81.65 312 P P 18 28 57.5 +0.3
P12A McGill 81.68 50 P P 18 28 57.7 +0.4
baz=82,SNR=59
P12A ⇑S S 18 39 08.4 0.0
baz=82
TRCR Troy Canyon 81.72 51 *e*P P 18 28 57.6 0.0
VANB Van 81.75 309 P P 18 28 59.5 +1.8
FMP Fort Macarthur 81.81 57 ⇑P P 18 28 57.9 -0.2
baz=82
YMR Madison River 81.84 44 *e*P P 18 28 59.2 +1.0
comp=Z,489nm,1.7s,mb6.2
YMR LR LR
comp=Z,3μm,21.0s,MS5.6
CIS Catalina Islan 81.85 57 ⇓P P 18 28 57.9 -0.4
baz=82
CIS ⇓S S 18 39 09.7 -0.5
baz=82
TPNV Topopah Spring 81.87 53 *e*P P 18 28 58.2 -0.2
TPNV pmax pmax
comp=Z,164nm,1.1s,mb5.9
TPNV MLR MLR
comp=Z,5μm,20.0s,MS5.9
TPNV Topopah Spring 81.87 53 *e*P P 18 28 58.2 -0.1
comp=Z,160nm,1.1s,mb5.9
TPNV LR LR
comp=Z,4μm,20.0s,MS5.8
Q12A Willow Creek R 81.93 51 P P 18 28 59.2 +0.5
baz=82,SNR=19
Q12A ⇑S S 18 39 10.1 -0.9
baz=82
SCI San Clemente I 81.93 57 ⇓P P 18 28 58.4 -0.2
baz=82
HAKT HAKKARI 81.99 308 *i* P P 18 28 59.9 +0.9
YFT Old Faithful 82.03 44 *e*P P 18 29 01.4 +2.3
BFSC Mount Baldy St 82.05 56 P P 18 28 59.0 -0.3
baz=82,SNR=17
BFSC ⇓S S 18 39 12.1 -0.1
baz=82
U10A Ash Meadows, A 82.05 53 ⇓P P 18 28 59.6 +0.3
baz=82,SNR=42
HVU Hansel Valley 82.05 47 *e*P P 18 28 59.7 +0.4
HVU pmax pmax
comp=Z,106nm,1.2s,mb5.7
HVU Hansel Valley 82.05 47 *e*P P 18 28 59.7 +0.4
comp=Z,106nm,1.2s,mb5.7
GCMT Greycliff 82.10 43 *e*P P 18 28 59.7 +0.2
NSS Namsos 82.16 341 *e*P P 18 28 58.5 -1.4
NSS AMb AMB 18 29 00.8
comp=Z,260nm,1.5s,mb6.0
NSS AMS AMS 19 08 30.6
comp=Z,4μm,19.9s,MS5.8
CUKT Cukurca 82.20 308 P P 18 29 01.2 +1.1
GSC Goldstone 82.20 55 ⇓P P 18 29 00.1 0.0
baz=82,SNR=78
GSC ⇓S S 18 39 14.0 +0.2
baz=82
DCID1 Drake Creek 82.22 45 *e*P P 18 29 01.3 +1.1
LKWY Lake 82.25 44 *e*P P 18 29 02.7 +2.4
LKWY pmax pmax
comp=Z,118nm,1.0s,mb5.8
LKWY MLR MLR
comp=Z,4μm,19.0s,MS5.8
LKWY Lake 82.25 44 *e*P P 18 29 02.6 +2.3
comp=Z,89nm,1.0s,mb5.7
LKWY LR LR
comp=Z,3μm,19.0s,MS5.7
RRX Edison Barstow 82.25 55 ⇑P P 18 29 00.8 +0.5
baz=82
RRI2 Red Ridge 82.25 45 *e*P P 18 29 01.0 +0.6
comp=Z,139nm,1.1s,mb5.8
BGU Big Grassy Mou 82.28 48 *e*P P 18 29 00.4 -0.1
FLWY Flagg Ranch 82.29 45 *e*P P 18 29 01.6 +1.1
comp=Z,139nm,1.0s,mb5.8
SHOC Shoshone 82.32 54 P P 18 29 00.9 +0.1
baz=82,SNR=15
SHOC ⇑S S 18 39 20.9 +5.9
baz=82
TPAW Teton Pass 82.42 45 *e*P P 18 29 02.0 +0.7
comp=Z,329nm,1.7s,mb6.0
MOOW Moose Ponds 82.43 45 *e*P P 18 29 01.8 +0.5
comp=Z,167nm,1.5s,mb5.8
WHFO Wadi Hawf 82.47 286 P P 18 29 02.2 +0.7
SNR=29
SPUT South Promonto 82.49 48 *e*P P 18 29 01.4 -0.2
UMR Umm Al-Rimmam 82.53 299 *e*P P 18 29 02.4 +0.6
UMR AMb AMB 18 29 05.8
comp=Z,974nm,1.6s,mb6.6
ERZM Erzurum 82.54 311 *i* P P 18 29 04.2 +2.4
EZM Erzurum 82.55 311 P P 18 29 04.3 +2.4
REDW Red Top Meadow 82.55 45 *e*P P 18 29 02.2 +0.3
comp=Z,194nm,1.5s,mb5.9
SNOW Snow King Moun 82.56 45 *e*P P 18 29 02.8 +0.8
comp=Z,71nm,1.1s,mb5.6
BBRC Big Bear Sol-O 82.58 56 ⇑P P 18 29 01.9 -0.1
baz=82
LOHW Long Hollow 82.58 45 *e*P P 18 29 02.4 +0.4
comp=Z,72nm,1.1s,mb5.6
FCC Fort Churchill 82.65 26 P P 18 29 01.6 -0.8
FCC pmax pmax
comp=Z,270nm,1.5s,mb6.1
FCC Fort Churchill 82.65 26 *e*P P 18 29 01.4 -1.1
comp=Z,268nm,1.5s,mb6.0
MURC Murrieta 82.67 56 ⇓P P 18 29 02.1 -0.4
baz=83,SNR=17
MURC ⇓S S 18 39 18.9 +0.3
baz=83
AHID Auburn Hatcher 82.68 46 *e*P P 18 29 03.2 +0.7
comp=Z,56nm,1.0s,mb5.5
AHID LR LR
comp=Z,4μm,20.0s,MS5.8
KBD Kabd 82.71 299 *e*P P 18 29 03.5 +0.8
KBD AMb AMB 18 29 05.3
comp=Z,2μm,1.2s
MIB Mutribah 82.71 300 *e*P P 18 29 03.4 +0.6
MIB AMb AMB 18 29 05.0
comp=Z,705nm,0.8s,mb6.8
U11A Corn Creek 82.73 53 ⇓P P 18 29 03.2 +0.3
baz=83,SNR=8.0
ANN Anapa 82.74 317 *d* iP P 18 29 03.1 +0.2
ANN *i* *PP pP 18 29 09.8 -1.0
ANN *i* 18 32 15.6
ANN *e*S S 18 39 23.0 +3.7
ANN *e*SS SS 18 44 50.1 +8.4
ANN pmax pmax
comp=Z,1μm,1.3s,mb6.7
ANN Anapa 82.74 317 *i* P P 18 29 02.9 0.0
IZAR Zarasai 82.75 330 *e*P P 18 29 03.1 +0.1
IZAR AMb AMB 18 29 04.7
comp=Z,6μm,1.1s
IZAR *e*pP pP 18 29 10.4 -0.5
MNK Minsk 82.76 328 *e*P P 18 29 01.0 -2.0
MNK *e* 18 32 12.0
MNK *e* 18 39 16.0
MNK pmax pmax
comp=Z,1μm,1.5s,mb6.7
MNK pmax pmax
comp=N,1μm,1.5s
MNK pmax pmax
comp=E,2μm,1.5s
MNK MLR MLR
comp=Z,9μm,18.0s,MS6.2
HEC Hector,Ludlow 82.76 55 ⇓P P 18 29 03.0 -0.1
baz=83,SNR=42
HEC ⇓S S 18 39 19.4 -0.2
baz=83
DUG Dugway 82.77 49 *e*P P 18 29 02.8 -0.3
DUG pmax pmax
comp=Z,209nm,1.4s,mb6.0
DUG MLR MLR
comp=Z,4μm,20.0s,MS5.8
DUG Dugway 82.77 49 *e*P P 18 29 02.8 -0.3
comp=Z,209nm,1.4s,mb6.0
DUG LR LR
comp=Z,4μm,20.0s,MS5.8
IDID Didziasalis 82.79 329 *e*P P 18 29 03.3 +0.1
IDID AMb AMB 18 29 04.8
comp=Z,4μm,0.9s
IDID *e*pP pP 18 29 10.5 -0.6
TUQ Turquoise Mtn. 82.79 54 ⇑P P 18 29 03.2 +0.1
baz=83,SNR=76
TUQ ⇑S S 18 39 19.1 -0.6
baz=83
RDF Al-Radifah 82.93 299 *e*P P 18 29 04.6 +0.7
RDF AMb AMB 18 29 06.4
comp=Z,1μm,0.9s,mb7.0
HWUT Hardware Ranch 82.93 47 *e*P P 18 29 04.0 +0.1
comp=Z,300nm,1.6s,mb6.1
HWUT LR LR
comp=Z,4μm,20.0s,MS5.8
V11A Goodsprings 82.96 54 P P 18 29 04.4 +0.4
baz=83,SNR=39
V11A ⇑S S 18 39 21.1 -0.5
baz=83
MSL Mosul 83.01 307 *i* x x 18 29 05.0
MSL *i* x x 18 29 08.5
MSL *e* x x 18 32 15.0
MSL *e* x x 18 39 21.0
MSL *e* x x 18 39 34.0
MSL *e* x x 18 39 49.0
NOQ North Oquirrh 83.02 48 *e*P P 18 29 04.6 +0.2
comp=Z,448nm,1.8s,mb6.2
NAY Al-Naaiem 83.03 299 *e*P P 18 29 05.0 +0.6
NAY AMb AMB 18 29 06.8
comp=Z,1μm,1.1s,mb6.9
109C Camp Elliot, M 83.06 57 P P 18 29 04.3 -0.2
baz=83,SNR=8.8
109C ⇓S S 18 39 21.6 -0.9
baz=83
RST Umm Al-Ruwaisa 83.11 299 *e*P P 18 29 05.2 +0.4
RST AMb AMB 18 29 06.9
comp=Z,1μm,1.1s,mb6.9
ABTO Aybut 83.12 286 P P 18 29 06.3 +1.5
SNR=22
BNGL BINGOL 83.14 310 *i* P P 18 29 06.5 +1.6
PFO Pinyon Flat Ob 83.22 56 P P 18 29 05.0 -0.4
comp=Z,580nm,1.0s,mb6.6,SNR=24
PFO Pinyon Flat Ob 83.22 56 *e*P P 18 29 05.1 -0.3
PFO pmax pmax
comp=Z,159nm,1.2s,mb5.9
PFO MLR MLR
comp=Z,6μm,20.0s,MS6.0
PFO Pinyon Flat Ob 83.22 56 *e*P P 18 29 05.1 -0.3
comp=Z,156nm,1.2s,mb5.9
PFO LR LR
comp=Z,6μm,20.0s,MS5.9
PFO Pinyon Flat Ob 83.22 56 P P 18 29 05.4 0.0
baz=83,SNR=41
PFO ⇑S S 18 39 23.5 -0.7
baz=83
CTU Camp Tracy 83.25 48 *e*P P 18 29 05.4 -0.1
comp=Z,203nm,1.5s,mb5.9
BTMT Batman 83.26 309 P P 18 29 07.8 +2.2
TCUT Toone Canyon 83.27 47 *e*P P 18 29 05.8 +0.1
U12A Valley of Fire 83.33 53 P P 18 29 06.3 +0.3
baz=83,SNR=17
U12A ⇑S S 18 39 25.1 -0.2
baz=83
BELC Belle Mtn. 83.38 55 P P 18 29 05.9 -0.4
baz=83,SNR=45
BELC ⇓S S 18 39 24.3 -1.5
baz=83
NLU North Lily Min 83.39 49 *e*P P 18 29 06.3 0.0
V12A Nelson 83.43 53 ⇑P P 18 29 06.6 +0.1
baz=83,SNR=44
V12A ⇑S S 18 39 25.3 -1.1
baz=83
BHD Baghdad 83.44 304 *i* x x 18 29 04.0
BHD Baghdad 83.44 304 *e*x x 18 39 25.0
BHD *e*x x 18 39 48.0
ARUT Antelope Range 83.48 51 *e*P P 18 29 06.9 +0.2
BEST Besiri 83.55 309 *i* P P 18 29 08.6 +1.5
MONP Monument Peak 83.57 57 P P 18 29 07.4 +0.2
baz=84,SNR=28
W12A Cal Nev Ari 83.61 54 P P 18 29 07.8 +0.4
baz=84,SNR=10
W12A ⇓S S 18 39 26.9 -1.3
baz=84
CCUT Cedar City 83.64 51 *e*P P 18 29 07.8 +0.2
MPU Maple Canyon 83.66 48 *e*P P 18 29 07.6 0.0
comp=Z,329nm,1.7s,mb6.2
MPU LR LR
comp=Z,6μm,22.0s,MS5.9

BW06 Boulder Array 83.67 45 *e*P **P 18 29 07.2 -0.5**
comp=Z,76nm,1.4s,mb5.6
BW06 LR LR
comp=Z,7µm,20.0s,MS6.0
PDAR Pinedale Array 83.67 45 P **P 18 29 07.3 -0.3**
comp=Z,19nm,1.0s,mb5.2,baz=267,slow=2.8,SNR=109
PDAR PKKPbc PKKPbc 18 47 22.9 -1.6
comp=Z,2.8nm,0.9s,baz=115,slow=2.5,SNR=12
PDAR PKPPKP 18 55 27.1
comp=Z,1.8nm,1.1s,baz=129,slow=2.1,SNR=6.7
PDAR LR LR 19 01 14.7
comp=Z,6µm,20.6s,MS6.0,baz=304,slow=32
EZC Erzincan 83.67 311 P **P 18 29 12.0 +4.3**
LAO LASA Array 83.70 41 *e*P **P 18 29 08.0 +0.2**
comp=Z,880nm,1.8s,mb6.6
LAO LR LR
comp=Z,5µm,19.0s,MS5.9
DAU Daniels Canyon 83.72 48 P **P 18 29 08.3 +0.4**
DAU Daniels Canyon 83.72 48 *e*P **P 18 29 08.2 +0.3**
KELT Kelkit 83.85 312 *i*P **P 18 29 10.5 +1.8**
DVTC Desert V Tower 83.92 57 ⇓P **P 18 29 08.9 0.0**
baz=84,SNR=20
IRM Iron Mountain 83.94 55 P **P 18 29 09.1 +0.1**
baz=84,SNR=50
IRM ⇑S S 18 39 30.0 -1.4
baz=84
MVU Marysvale 83.99 50 PFAKE 18 29 20.0 +11
MVU LR LR
comp=Z,4µm,20.0s,MS5.8
MSU Marysvale 84.01 50 P **P 18 29 09.9 +0.5**
MSU Marysvale 84.01 50 *e*P **P 18 29 10.0 +0.5**
SWSC Sam W. Stewart 84.02 56 P **P 18 29 09.3 -0.2**
baz=84,SNR=17
GRSN GIRESUNGRSN 84.13 313 *i*P **P 18 29 09.8 -0.2**
MARD Mardin 84.17 309 *i*P **P 18 29 11.5 +1.2**
AKASG Malin Array Be 84.26 325 P **P 18 29 09.6 -1.2**
comp=Z,211nm,1.0s,mb6.2,baz=44,slow=5.3,SNR=613
AKASG PKKPbc PKKPbc 18 47 21.8 -1.4
comp=Z,1.4nm,0.6s,baz=257,slow=2.5,SNR=11
AKASG PKPPKP 18 55 25.0
comp=Z,0.3nm,0.4s,baz=249,slow=2.2,SNR=4.6
AKASG LR LR 19 10 39.4
comp=Z,2µm,18.5s,MS5.5,baz=60,slow=38
AKBB Malin Array Si 84.26 325 *e*P **P 18 29 10.3 -0.4**
TMUT Trail Mountain 84.29 49 *e*P **P 18 29 11.2 +0.3**
W13A Hualapai Mount 84.42 54 P **P 18 29 11.8 +0.3**
baz=84,SNR=31
W13A ⇑S S 18 39 36.3 0.0
baz=84
Y12C Blythe 84.59 55 P **P 18 29 12.6 +0.3**
baz=84,SNR=18
Y12C ⇓S S 18 39 37.5 -0.4
baz=84
PDMCI Parker Dam,Lak 84.61 54 P **P 18 29 12.8 +0.3**
baz=84,SNR=18
PDMCI ⇑S S 18 39 37.9 -0.2
baz=84
SIM Simferopol' 84.69 318 *d i*P **P 18 29 13.4 +0.5**
SIM *e*S S 18 39 39.0 +0.1
SIM pmax pmax
comp=Z,308nm,0.9s,mb6.4
GLA Glamis 84.69 56 P **P 18 29 13.1 +0.2**
baz=85,SNR=48
GLA ⇓S S 18 39 38.7 -0.2
baz=85
X13A Yucca 84.70 54 P **P 18 29 13.1 +0.1**
baz=85,SNR=76
X13A ⇓S S 18 39 38.7 -0.3
baz=85
ELZG Elazig 84.84 310 *i*P **P 18 29 15.4 +1.8**
HFS Hagfors 84.84 337 PP PP 18 32 30.9 +0.7
comp=Z,7.4nm,0.9s,baz=33,slow=6.0,SNR=3.7
HFS PKKPbc PKKPbc 18 47 20.3 -1.5
comp=Z,1.5nm,0.8s,baz=196,slow=10,SNR=4.2
SRU San Rafael 84.84 49 P **P 18 29 13.4 -0.3**
SRU pmax pmax
comp=Z,190nm,1.2s,mb6.1
SRU San Rafael 84.84 49 *e*P **P 18 29 13.5 -0.1**
comp=Z,189nm,1.2s,mb6.1
DOMB Dombas 84.90 340 *e*P **P 18 29 13.8 -0.2**
DOMB AMb AMB 18 29 16.2
comp=Z,414nm,1.4s,mb6.4
W14A Seligman 84.95 53 P **P 18 29 14.8 +0.6**
baz=85,SNR=74
W14A ⇓S S 18 39 41.7 +0.2
baz=85
NB2 NORSAR Subarra 85.00 339 P **P 18 29 14.2 -0.2**
comp=Z,469nm,1.0s,mb6.6,baz=44,slow=4.8
NOA NORSAR Array B 85.00 339 **P 18 29 13.9 -0.5**
comp=Z,216nm,0.9s,mb6.3,baz=43,slow=4.8,SNR=328
NOA PP PP 18 32 29.1 -2.3
comp=Z,16nm,1.0s,baz=43,slow=8.2,SNR=4.8
NOA PKKPbc PKKPbc 18 47 20.7 -0.7
comp=Z,1.0nm,0.8s,baz=180,slow=1.7,SNR=3.9
NOA LR LR 19 11 31.5
comp=Z,2µm,18.1s,MS5.5,baz=40,slow=39
NOA NORSAR Array B 85.00 339 P **P 18 29 13.9 -0.5**
NOA 18 32 29.1
Y13A Salome 85.07 55 P **P 18 29 15.3 +0.5**
baz=85,SNR=19
Y13A ⇑S S 18 39 40.9 -1.8
baz=85
SUW Suwalki 85.22 329 *e*Pd **P 18 29 15.0 -0.5**
comp=Z,1.7nm,1.1s
SUW *e*pP pP 18 29 22.2 -1.3
SUW *e*PP PP 18 32 32.1 -1.1
SUW *e*S S 18 39 42.9 -1.3
SUW *e*sS sS 18 39 54.4 -2.9
SUW L 19 05 59.2
comp=Z,2.6nm,22.2s
SUW Suwalki 85.22 329 *e*Pd **P 18 29 15.0 -0.5**
comp=Z,1.7nm,1.1s
SUW *e*pP pP 18 29 22.2 -1.3
SUW *e*PP PP 18 32 32.1 -1.1
SUW *e*S S 18 39 42.9 -1.3
SUW *e*sS sS 18 39 54.4 -2.9
SUW L 19 05 59.2
comp=Z,2.6nm,22.2s
SUW Suwalki 85.22 329 ⇓*e*P **P 18 29 15.0 -0.5**
SUW *e**PP pP 18 29 22.2 -1.3
SUW *e* 18 32 32.1
SUW *e*S S 18 39 42.9 -1.3
SUW Suwalki 85.22 329 ⇓*e*P **P 18 29 15.0 -0.5**
SUW *e*pP pP 18 29 22.2 -1.3
SUW *e*PP PP 18 32 32.1 -1.1
SUW *e*S S 18 39 42.9 -1.3
SUW *e*sS sS 18 39 54.4 -2.9
NAO01 NORSAR Array S 85.25 339 *e*P **P 18 29 15.0 -0.7**
comp=Z,200nm,1.0s,mb6.2
NAO01 LR LR
comp=Z,3µm,19.0s,MS5.6
MYA Malataya 85.31 311 *e*P **P 18 29 18.4 +2.4**
MALT Malatya 85.31 311 ⇓*i*P **P 18 29 17.6 +1.6**
MALT Malatya 85.31 311 P **P 18 29 17.7 +1.7**
MALT Malatya 85.31 311 *e*P **P 18 29 17.4 +1.4**
comp=Z,484nm,1.8s,mb6.3
X14A Yava 85.44 54 P **P 18 29 17.4 +0.7**
baz=85,SNR=52
X14A ⇑S S 18 39 44.9 -1.5
baz=85
SVSK Karacayir 85.47 312 P **P 18 29 18.1 +1.3**
URFA Urfa 85.47 310 P **P 18 29 18.2 +1.4**
W15A Williams 85.55 53 P **P 18 29 18.0 +0.8**
baz=85,SNR=71
W15A ⇑S S 18 39 46.5 -1.0
baz=85
Y14A Wickenburg 85.61 54 P **P 18 29 17.9 +0.4**
baz=86,SNR=59
Y14A ⇓S S 18 39 47.2 -0.9
baz=86
RWWY Rawlins 85.72 45 *e*P **P 18 29 18.0 0.0**
comp=Z,252nm,1.4s,mb6.2
X15A Humboldt 85.91 54 P **P 18 29 19.6 +0.6**
baz=86,SNR=152
X15A ⇑S S 18 39 48.6 -2.3
baz=86
Z14A Wintersburg 85.93 55 P **P 18 29 19.5 +0.4**
baz=86,SNR=23
Z14A ⇑S S 18 39 49.4 -1.7
baz=86
WUAZ Wupatki 86.02 52 *e*P **P 18 29 19.9 +0.3**
comp=Z,194nm,1.2s,mb6.2
WUAZ LR LR
comp=Z,3µm,20.0s,MS5.7
BZK Bozkurt 86.34 315 *e*P **P 18 29 21.6 +0.5**
RSSD Black Hills 86.38 42 *e*P **P 18 29 21.0 -0.3**
RSSD pmax pmax
comp=Z,277nm,1.6s,mb6.2
RSSD MLR MLR
comp=Z,3µm,20.0s,MS5.7
RSSD Black Hills 86.38 42 *e*P **P 18 29 21.0 -0.3**
comp=Z,249nm,1.6s,mb6.2
RSSD LR LR
comp=Z,3µm,20.0s,MS5.6
GZT Gaziantep 86.38 310 *i*P **P 18 29 22.2 +0.9**
SFJD Kangerlussuaq 86.40 6 P **P 18 29 21.5 +0.1**
SFJD Kangerlussuaq 86.40 6 ⇓*i*P **P 18 29 21.5 +0.1**
comp=Z,270nm,1.2s,mb6.3
SFJD *i* pP 18 29 28.9 -0.5
SFJD Kangerlussuaq 86.40 6 *i*S S 18 39 55.9 +0.1
SFJD *i* 18 45 37.3
SFJD
comp=Z,3µm,20.0s
SFJD Kangerlussuaq 86.40 6 P **P 18 29 20.9 -0.5**
SFJD Kangerlussuaq 86.40 6 ⇓*i*P **P 18 29 21.5 +0.1**
comp=Z,270nm,1.2s,mb6.3
SFJD *i* pP 18 29 28.9 -0.5
SFJD *i*S S 18 39 55.9 +0.1
SFJD *i* 18 45 37.3
SFJD LR LR
comp=Z,3µm,20.0s,MS5.7
KONO Kongsberg 86.58 339 *e*P **P 18 29 22.4 +0.1**
KONO *e*PP PP 18 32 43.4 -0.8
KONO Kongsberg 86.58 339 *e*P **P 18 29 21.5 -0.8**
KONO pmax pmax
comp=Z,397nm,1.6s,mb6.4
KONO MLR MLR
comp=Z,3µm,20.0s,MS5.7
KONO Kongsberg 86.58 339 *e*P **P 18 29 21.5 -0.8**
comp=Z,397nm,1.6s,mb6.4
KONO LR LR
comp=Z,3µm,20.0s,MS5.7
KIS Kishinev 86.62 322 *d i*P **P 18 29 20.0 -2.5**
KIS *e* 18 29 32.0
KIS *e* 18 32 44.0
KIS *e* 18 34 40.0
KIS *e*S S 18 39 54.0 -3.9
KIS *e*SS SS 18 45 48.0 +9.0
KIS pmax pmax
comp=N,500nm,2.0s
KIS pmax pmax
comp=E,500nm,2.0s
KIS pmax pmax
comp=Z,1µm,2.0s,mb6.7
KIS MLR MLR
comp=Z,5µm,17.0s,MS6.0
KIS MLR MLR
comp=N,2µm,15.0s,MS5.9
KIS MLR MLR
comp=E,3µm,14.0s,MS5.9
KIS MLR MLR
comp=Z,4µm,16.0s
GAZ Gaziantep 86.72 310 *e*P **P 18 29 24.4 +1.4**
FRB Frobisher Bay 86.72 14 LR LR 19 08 33.8
comp=Z,2µm,19.7s,MS5.6,baz=341,slow=36
115A Sonoran Desert 86.78 55 P **P 18 29 23.9 +0.7**
baz=87,SNR=61
115A ⇓S S 18 40 00.6 +1.2
baz=87
BNN Bunyan 86.78 312 *e*P **P 18 29 24.7 +1.4**
TOS Tosya 86.82 315 *e*P **P 18 29 24.5 +1.0**
CORM Corum 86.89 314 *e*P **P 18 29 24.8 +1.0**
BALT Daday 86.96 315 *i*P **P 18 29 24.9 +0.8**
PHWY Pilot Hill 87.04 45 *e*P **P 18 29 23.3 -1.2**
MVCO Mesa Verde 87.18 50 *e*P **P 18 29 24.8 -0.4**
comp=Z,151nm,1.5s,mb6.0
SMCO Snowmass 87.18 47 *e*P **P 18 29 25.6 +0.3**
comp=Z,149nm,1.3s,mb6.1
116A Eloy 87.23 55 P **P 18 29 26.0 +0.5**
baz=87,SNR=33
116A ⇑S S 18 40 04.6 +0.8
baz=87
ULM Lac du Bonnet 87.26 34 P **P 18 29 24.9 -0.7**
comp=Z,43nm,1.0s,mb5.6,baz=307,slow=5.2,SNR=35
ULM LR LR 19 07 07.2
comp=Z,2µm,18.4s,MS5.5,baz=310,slow=35
ULM Lac du Bonnet 87.26 34 *e*P **P 18 29 24.6 -0.9**
comp=Z,154nm,1.3s,mb6.1
ULM LR LR
comp=Z,3µm,20.0s,MS5.6
BER Bergen 87.33 341 *e*P **P 18 29 24.1 -1.9**
BER *e*PP PP 18 32 51.6 +1.4
BER AMS AMS 19 12 12.7
comp=Z,2µm,20.7s,MS5.5
CDAG Cicekdag 87.35 313 *i*P **P 18 29 26.3 +0.2**
WAR Warsaw 87.36 329 *e*Pd **P 18 29 26.3 +0.2**
comp=Z,0.9nm,0.9s
WAR *e*pP pP 18 29 33.2 -0.8
WAR *e*PP PP 18 32 46.2 -4.3
WAR *e*S S 18 40 10.5 +5.5
WAR *e*sS sS 18 40 17.1 -1.1
WAR L 19 08 00.7
comp=Z,2.0nm,26.5s
WAR Warsaw 87.36 329 *e*Pd **P 18 29 26.3 +0.2**
comp=Z,0.9nm,0.9s
WAR *e*pP pP 18 29 33.2 -0.8
WAR *e*PP PP 18 32 46.2 -4.3
WAR *e*S S 18 40 10.5 +5.5
WAR *e*sS sS 18 40 17.1 -1.1
WAR L 19 08 00.7
comp=Z,2.0nm,26.5s
WAR Warsaw 87.36 329 ⇓*e*P **P 18 29 26.3 +0.2**
WAR *e**PP pP 18 29 33.2 -0.8
WAR *e* 18 32 46.2
WAR *e*S S 18 40 10.5 +5.5
WAR MLR MLR
comp=Z,2µm,26.5s,MS5.4
LVV L'vov 87.46 326 *i*P **P 18 29 26.3 -0.2**
LVV *e* 18 32 50.0
LVV *e*PPP 18 34 48.0
LVV *e* 18 39 54.0
LVV *i*PS 18 41 15.0
LVV MLR MLR
comp=Z,3µm,21.0s,MS5.7
ELDT Eldivan 87.50 314 *i*P **P 18 29 27.0 +0.3**
KOZT Kozan 87.51 311 *e*P **P 18 29 27.2 +0.4**
SAFT Safranbolu 87.56 315 *e*P **P 18 29 27.9 +0.8**
ISCO Idaho Springs 87.74 46 *e*P **P 18 29 28.1 +0.2**
ISCO pmax pmax
comp=Z,84nm,1.4s,mb5.8
ISCO MLR MLR
comp=Z,5µm,19.0s,MS6.0
ISCO Idaho Springs 87.74 46 *e*P **P 18 29 28.1 +0.2**
comp=Z,78nm,1.4s,mb5.7
ISCO LR LR
comp=Z,4µm,19.0s,MS5.9
BR131 Keskin Array S 87.77 314 *e*P **P 18 29 27.9 -0.2**
comp=Z,74nm,1.0s,mb5.9
BR131 LR LR
comp=Z,1µm,22.0s,MS5.2
BRTR Keskin Array B 87.77 314 P **P 18 29 27.9 -0.1**
comp=Z,55nm,0.9s,mb5.8,baz=99,slow=3.9,SNR=246
BRTR PKKPbc PKKPbc 18 47 14.6 -0.3
comp=Z,2.4nm,0.9s,baz=203,slow=2.9,SNR=8.6
BRTR PKPPKP 18 55 21.4
comp=Z,0.7nm,0.9s,baz=204,slow=2.7,SNR=4.7
BRTR LR LR 19 12 15.9
comp=Z,1µm,19.2s,MS5.3,baz=228,slow=38
CEYT Ceyhan 87.80 310 *e*P **P 18 29 29.1 +0.9**
KAMT Kaman 87.92 313 *e*P **P 18 29 29.2 +0.5**
BSD Bornholm Skovb 88.02 334 ⇓*i*P **P 18 29 28.3 -0.9**
comp=Z,154nm,1.3s,mb6.1
BSD *i* 18 32 54.8
BSD *e*S S 18 40 07.1 -4.3
BSD
comp=Z,2µm,19.0s
BSD Bornholm Skovb 88.02 334 ⇓*i*P **P 18 29 28.3 -0.9**
comp=Z,154nm,1.3s,mb6.1
BSD *i* 18 32 54.8
BSD *e*S S 18 40 07.1 -4.3
TUC Tucson 88.03 55 *e*P **P 18 29 29.0 -0.3**
TUC pmax pmax
comp=Z,107nm,1.4s,mb5.9
TUC MLR MLR
comp=Z,4µm,20.0s,MS5.8
TUC Tucson 88.03 55 *e*P **P 18 29 29.0 -0.3**
comp=Z,106nm,1.4s,mb5.9
TUC LR LR
comp=Z,4µm,20.0s,MS5.8
MUKL Al Mukalla 88.06 285 ⇑*e*P **P 18 29 30.7 +1.2**
CFR Carcaliu 88.07 320 ⇓*i*P **P 18 29 28.9 -0.6**
CFR Carcaliu 88.07 320 ⇓P **P 18 29 28.9 -0.6**
KARA Karaisali 88.14 311 *e*P **P 18 29 30.2 +0.4**
BURAR Bucovina Array 88.22 324 ⇓*i*P **P 18 29 30.2 0.0**
BURAR Bucovina Array 88.22 324 ⇓P **P 18 29 30.2 +0.1**
KWP Kalwaria 88.24 326 *e*Pd **P 18 29 30.4 +0.1**
comp=Z,1.5nm,1.3s
KWP *e*pP pP 18 29 38.1 -0.2
KWP *e*PP PP 18 32 56.8 -0.8
KWP *e*S S 18 40 15.8 +2.3
KWP *e*sS sS 18 40 26.0 -0.7
KWP L 19 10 57.8
comp=Z,4.0nm,20.9s
KWP Kalwaria 88.24 326 *e*Pd **P 18 29 30.4 +0.1**
comp=Z,1.5nm,1.3s
KWP *e*pP pP 18 29 38.1 -0.2
KWP *e*PP PP 18 32 56.8 -0.8
KWP *e*S S 18 40 15.8 +2.3
KWP *e*sS sS 18 40 26.0 -0.7
KWP L 19 10 57.8
comp=Z,4.0nm,20.9s
KWP Kalwaria 88.24 326 ⇓*e*P **P 18 29 30.4 +0.1**
KWP *e**PP pP 18 29 38.1 -0.2
KWP *e* 18 32 56.8
KWP *e*S S 18 40 15.8 +2.3
KWP Kalwaria 88.24 326 ⇓*e*P **P 18 29 30.4 +0.1**
KWP *e*pP pP 18 29 38.1 -0.2
KWP *e*PP PP 18 32 56.8 -0.8
KWP *e*S S 18 40 15.8 +2.3
KWP *e*sS sS 18 40 26.0 -0.7
ANTO Ankara 88.24 314 *e*P **P 18 29 30.5 +0.2**
ANTO Ankara 88.24 314 ⇓*i*P **P 18 29 30.3 0.0**
ANTO Ankara 88.24 314 P **P 18 29 30.8 +0.5**
ANTO pmax pmax
comp=Z,130nm,1.3s,mb6.0
ANTO Ankara 88.24 314 *e*P **P 18 29 30.4 +0.1**
comp=Z,128nm,1.3s,mb6.0
ANTO LR LR
comp=Z,2µm,20.0s,MS5.4
SGKT Sivrigoynuk 88.33 315 *i*P **P 18 29 31.0 +0.3**
TIRR Tirgusor 88.33 320 ⇓*i*P **P 18 29 30.5 -0.2**
TIRR Tirgusor 88.33 320 P **P 18 29 30.6 -0.1**
TIRR Tirgusor 88.33 320 *e*P **P 18 29 29.9 -0.8**
comp=Z,118nm,1.3s,mb6.0
GKP Gorka Klasztor 88.36 331 *e*Pd **P 18 29 30.3 -0.5**
comp=Z,0.8nm,2.1s
GKP *e*pP pP 18 29 37.1 -1.7
GKP *e*PP PP 18 32 55.2 -3.3
GKP *e*S S 18 40 11.0 -3.6
GKP *e*sS sS 18 40 24.4 -3.4
GKP L 19 14 08.5
comp=Z,3.3nm,20.7s
GKP Gorka Klasztor 88.36 331 *e*Pd **P 18 29 30.3 -0.5**
comp=Z,0.8nm,2.1s
GKP *e*pP pP 18 29 37.1 -1.7
GKP *e*PP PP 18 32 55.2 -3.3
GKP *e*S S 18 40 11.0 -3.6
GKP *e*sS sS 18 40 24.4 -3.4
GKP L 19 14 08.5
comp=Z,3.3nm,20.7s
GKP Gorka Klasztor 88.36 331 ⇓*e*P **P 18 29 30.3 -0.5**
GKP *e**PP pP 18 29 37.1 -1.7
GKP *e* 18 32 55.2
GKP *e*S S 18 40 11.0 -3.6
GKP MLR MLR
comp=Z,3µm,20.7s,MS5.7
COP Copenhagen 88.57 335 ⇓*i*P **P 18 29 31.3 -0.6**
comp=Z,88nm,1.1s,mb6.0
COP *i* 18 33 02.1
COP *i*S S 18 40 11.7 -4.9
COP *i* 18 46 01.5
COP
comp=Z,800nm,18.0s
COP Copenhagen 88.57 335 ⇓*i*P **P 18 29 31.3 -0.6**
COP *i* 18 33 02.1
COP *i*S S 18 40 11.7 -4.9
COP pmax pmax
comp=Z,88nm,1.1s,mb6.0
COP MLR MLR
comp=Z,810nm,18.0s,MS5.2
BORG Borgarnes 88.60 354 PFAKE 18 29 40.0 +8.0
BORG LR LR
comp=Z,1µm,21.0s,MS5.3
MERS Mersin 88.71 311 *e*P **P 18 29 32.5 0.0**
FKH Fakeheh 88.78 308 *e*P **P 18 29 33.1 +0.2**
KOLS Kolonicke sedl 88.91 326 *e*P **P 18 29 33.2 -0.2**
KOLS *e*PP PP 18 33 01.2 -1.7
KOLS *e* 18 41 19.6
KOLS *e*SS SS 18 46 21.6 +9.2
KOLS Kolonicke sedl 88.91 326 *e*P **P 18 29 33.2 -0.2**
KOLS *e* 18 33 01.2
KOLS *e* 18 41 19.6
SDCO Great Sand Dun 88.92 48 PFAKE 18 29 40.0 +6.5
SDCO LR LR
comp=Z,5µm,20.0s,MS6.0
MEST Erdemli 89.12 311 *i*P **P 18 29 34.0 -0.5**
MLR Muntele Rosu 89.12 322 P **P 18 29 34.2 -0.2**
comp=Z,49nm,1.1s,mb5.8,baz=6.6,slow=4.5,SNR=47
MLR Muntele Rosu 89.12 322 ⇑*i*P **P 18 29 34.1 -0.3**
MLR Muntele Rosu 89.12 322 ⇑P **P 18 29 34.1 -0.4**
MUD Monsted U'grnd 89.19 337 ⇓*i*P **P 18 29 34.1 -0.6**
comp=Z,109nm,1.4s,mb6.0
MUD *i* 18 33 06.5
MUD *i*S S 18 40 15.1 -7.3
MUD
comp=Z,2µm,21.0s
MUD Monsted U'grnd 89.19 337 ⇓*i*P **P 18 29 34.1 -0.6**
comp=Z,109nm,1.4s,mb6.0
MUD *i* 18 33 06.5
MUD *i*S S 18 40 15.1 -7.3
OJC Ojcow 89.28 328 ⇓*i*P **P 18 29 34.9 -0.3**
OJC *e**PP pP 18 29 41.8 -1.3
OJC *e* 18 33 06.3
OJC *e*S S 18 40 22.8 -0.4
OJC MLR MLR
comp=Z,17µm,18.5s,MS6.5
LRW Lerwick 89.33 343 ⇓*e*P **P 18 29 34.7 -0.7**
LRW AMb AMB 18 29 37.6
comp=Z,176nm,2.0s,mb6.0
LRW Lerwick 89.33 343 ⇓*e*P **P 18 29 34.7 -0.7**
LRW AMb AMB 18 29 37.6
comp=Z,176nm,2.0s,mb6.0
CRVS Cervenica-Dubn 89.34 326 *e*P **P 18 29 35.7 +0.3**
CRVS *e*PP PP 18 33 05.8 -0.5
CRVS *e* 18 41 22.3
CRVS *e*SS SS 18 46 32.5 +14
CRVS Cervenica-Dubn 89.34 326 *e*P **P 18 29 35.7 +0.3**
CRVS *e* 18 33 05.8
CRVS *e* 18 41 22.3
WAL1 Walls 89.34 344 ⇓*e*P **P 18 29 34.9 -0.6**
WAL1 Walls 89.34 344 ⇓*e*P **P 18 29 34.9 -0.6**
KIZT Kizilcal 89.38 314 *e*P **P 18 29 35.6 0.0**
KDHN Kadinhani 89.42 313 *i*P **P 18 29 33.1 -2.8**
ASF Jabal al Asfar 89.49 306 P **P 18 29 36.7 +0.5**
comp=Z,24nm,0.9s,mb5.5,baz=271,slow=1.5,SNR=44
ASF PP PP 18 33 09.1 +1.6
comp=Z,15nm,1.0s,baz=255,slow=9.5,SNR=5.0
BHL Bhannes 89.49 308 *e*P **P 18 29 38.2 +2.1**
NIE Niedzica 89.56 327 *i*Pd **P 18 29 36.8 +0.3**
NIE *e*PP PP 18 33 08.8 +0.7
LAZ Ladron 89.58 51 *e*P **P 18 29 37.0 +0.4**
IKL Isikli 89.62 311 *e*P **P 18 29 36.5 -0.3**
VOIR 89.65 322 ⇓*i*P **P 18 29 36.7 -0.2**
VOIR 89.65 322 ⇓P **P 18 29 36.7 -0.2**
PRD Provadia 89.67 319 *e*P **P 18 29 37.0 0.0**
ESKT Eskisehir 89.68 315 *e*P **P 18 29 37.2 +0.1**
ESKT Eskisehir 89.68 315 *i*P **P 18 29 36.5 -0.5**
ANMO Albuquerque 89.77 51 PKKPbc PKKPbc 18 47 10.4 +0.4
comp=Z,3.3nm,0.9s,baz=152,slow=4.3,SNR=7.6
ANMO Albuquerque 89.77 51 *d i*P **P 18 29 37.7 +0.2**
ANMO Albuquerque 89.77 51 *e*P **P 18 29 37.6 +0.1**
comp=Z,114nm,1.2s,mb6.1
ANMO LR LR
comp=Z,2µm,20.0s,MS5.6
BUC1 Bucharest 89.77 321 P **P 18 29 37.6 +0.1**
MTUR Matau 89.77 322 P **P 18 29 37.7 +0.2**
LENM Lemitar 89.82 52 *e*P **P 18 29 37.9 +0.2**
Y22C IRIS PASSCAL I 89.91 52 ⇑P **P 18 29 39.0 +0.9**
baz=90
Y22C ⇓S S 18 40 26.0 -3.1
baz=90
LPM Los Pinos Moun 89.99 51 *e*P **P 18 29 38.5 0.0**
YLV Yalova 90.02 316 *e*P **P 18 29 38.4 -0.2**
DRGR 90.06 324 ⇓*i*P **P 18 29 38.7 -0.1**

DRGR 90.06 324 ⇓P P 18 29 38.7 -0.1
RAC Raciborz 90.13 329 eP P 18 29 39.6 +0.5
RAC MLR MLR
comp=Z,3μm,17.4s,MS5.8
MMAI Mount Meron Ar 90.13 307 P P 18 29 39.2 +0.1
comp=Z,48nm,0.8s,mb5.9,baz=54,slow=6.3,SNR=50
MMAI PP PP 18 33 16.4 +3.7
comp=Z,13nm,1.1s,baz=40,slow=8.0,SNR=3.8
GEMT Gemlik 90.21 316 eP P 18 29 39.3 -0.2
OKC Ostrava-Krasne 90.32 328 eP P 18 29 39.9 -0.1
OKC epP pP 18 29 47.8 -0.2
OKC ePP PP 18 33 16.0 +1.9
OKC eSKKS SKKSac 18 40 23.1 -0.4
OKC eSP SP 18 41 37.4 -1.8
OKC ex x 18 46 44.4
OKC AMS AMS 19 13 40.0
comp=Z,2μm,14.9s
OKC Ostrava-Krasne 90.32 328 eP P 18 29 39.9 -0.1
OKC epP pP 18 29 47.8 -0.2
OKC ePP PP 18 33 16.0 +1.9
OKC eS S 18 40 23.1 -10
OKC ePS PS 18 41 37.4 -4.9
OKC eSS SS 18 46 44.4 +12
RUE Ruedersdorf 90.39 332 eP P 18 29 39.6 -0.8
comp=Z,242nm,1.4s,mb6.3
RUE Ruedersdorf 90.39 332 eP P 18 29 40.0 -0.4
comp=Z,95nm,1.0s,mb6.1
RUE e pP 18 29 47.4 -1.0
KSP Ksiaz 90.47 330 ePd P 18 29 40.5 -0.2
comp=Z,0.9nm,1.6s
KSP epP pP 18 29 48.1 -0.6
KSP ePP PP 18 33 15.2 -0.2
KSP eS S 18 40 36.4 +2.1
KSP esS sS 18 40 47.8 +0.2
KSP eSS SS 18 46 45.5 +10
KSP L 19 11 10.7
comp=Z,5.3nm,22.5s
KSP Ksiaz 90.47 330 ePd P 18 29 40.5 -0.2
comp=Z,0.9nm,1.6s
KSP epP pP 18 29 48.1 -0.6
KSP ePP PP 18 33 15.2 -0.2
KSP eS S 18 40 36.4 +2.1
KSP esS sS 18 40 47.8 +0.2
KSP eSS SS 18 46 45.5 +10
KSP L 19 11 10.7
comp=Z,5.3nm,22.5s
KSP Ksiaz 90.47 330⇓eP P 18 29 40.5 -0.2
KSP e*PP pP 18 29 47.8 -0.9
KSP e 18 33 14.0
KSP eS S 18 40 35.0 +0.7
KSP eSP SP 18 41 38.0 -2.9
KSP MLR MLR
comp=Z,7μm,17.0s,MS6.2
KSP Ksiaz 90.47 330⇓eP P 18 29 40.5 -0.2
KSP epP pP 18 29 47.8 -0.9
KSP ePP PP 18 33 14.0 -1.4
KSP eS S 18 40 35.0 +0.7
KSP eSP SP 18 41 38.0 -2.9
KSP eSS SS 18 46 28.0 -7.1
KSP LR LR
comp=Z,7μm,17.0s,MS6.2
CSS Prodhromos 90.55 310 eP P 18 29 40.5 -0.6
CSS Prodhromos 90.55 310 eP P 18 29 40.8 -0.3
comp=Z,55nm,0.9s,mb5.9
JMB Yambol 90.59 319 eP P 18 29 41.5 +0.2
MORC Moravsky Berou 90.64 329⇓iP P 18 29 41.3 -0.2
MORC Moravsky Berou 90.64 329 ⇓P P 18 29 41.3 -0.3
BSEG Bad Segeberg 90.70 335 eP P 18 29 41.0 -0.8
comp=Z,188nm,1.1s,mb6.3
PSZ Piszkesteto 90.77 326⇓iPcP PcP 18 29 42.3 -0.9
PSZ Piszkesteto 90.77 326 eP P 18 29 41.9 -0.2
comp=Z,343nm,1.3s,mb6.5
PSZ e pP 18 29 49.7 -0.4
DPC Dobruska-Polom 90.81 330 eP P 18 29 42.5 +0.2
DPC epP pP 18 29 50.4 +0.1
DPC ePP PP 18 33 20.7 +2.7
DPC eSKKS SKKSac 18 40 25.9 -1.3
DPC ePS PS 18 41 52.8 +5.0
DPC ex x 18 46 51.7
DPC AMS AMS 19 14 00.0
comp=Z,3μm,16.6s
UPC Upice 90.84 330 eP P 18 29 42.4 0.0
UPC epP pP 18 29 50.8 +0.4
ISP Isparta 90.85 313 eP P 18 29 41.7 -0.8
ISP Isparta 90.85 313 eP P 18 29 41.3 -1.2
ISP Isparta 90.85 313 P P 18 29 42.7 +0.2
ISP pmax pmax
comp=Z,79nm,1.4s,mb5.8
ISP Isparta 90.85 313 eP P 18 29 41.4 -1.1
comp=Z,79nm,1.4s,mb5.8
EDRB Edirne 90.87 318 eP P 18 29 42.9 +0.3
VYHS Vyhne 90.91 327 eP P 18 29 42.9 +0.1
VYHS ePP PP 18 33 20.5 +1.7
VYHS Vyhne 90.91 327⇑eSKKSp 18 40 26.7
VYHS eSS SS 18 46 38.2 -3.1
VYHS Vyhne 90.91 327 eP P 18 29 42.9 +0.1
VYHS e 18 33 20.5
VYHS eS S 18 40 26.7 -12
VYHS eSS SS 18 46 38.2 -3.1
VYHS pmax pmax
comp=Z,212nm,1.5s,mb6.2
VYHS MLR MLR
comp=Z,2μm,17.0s,MS5.7
VYHS Vyhne 90.91 327 eP P 18 29 42.9 +0.1
comp=Z,212nm,1.5s,mb6.2
VYHS ePP PP 18 33 20.5 +1.7
VYHS eS S 18 40 26.7 -12
VYHS eSS SS 18 46 38.2 -3.1
VYHS LR LR
comp=Z,2μm,17.0s,MS5.7
EYMN Ely 90.95 34 eP P 18 29 42.4 -0.6
comp=Z,4μm,1.6s
EYMN LR LR
comp=Z,35μm,19.0s
OBR Brabster 91.16 344⇓eP P 18 29 43.4 -0.5
OBR Brabster 91.16 344⇓eP P 18 29 43.4 -0.5
MFT Murefte 91.18 317 eP P 18 29 43.4 -0.6
RKY Sarkoy-Tekirda 91.30 317 eP P 18 29 45.0 +0.4
BZS Buzias 91.40 324⇓iP P 18 29 44.4 -0.7
BZS Buzias 91.40 324 P P 18 29 44.8 -0.3
VRAC Vranov 91.42 329 PP PP 18 33 23.2 +0.4
comp=Z,9.5nm,1.0s,baz=54,slow=7.8,SNR=2.9
VRAC Vranov 91.42 329⇓iP P 18 29 45.0 -0.1
VRAC Vranov 91.42 329 ⇓P P 18 29 45.0 -0.1
PKSN Nyarlorinc 91.47 325⇑iP P 18 29 46.0 +0.6
BRG Berggiesshubel 91.49 331 eP P 18 29 44.6 -0.9
comp=Z,100nm,1.2s,mb6.0
BRG Berggiesshubel 91.49 331⇓iP P 18 29 45.1 -0.3
comp=Z,61nm,1.2s,mb5.8
BRG i pP 18 29 52.6 -0.9
comp=Z,52nm,1.2s
BRG i 18 30 04.1
comp=Z,27nm,1.1s
BRG PP PP 18 33 01.0 -22
BRG e 18 40 06.7
comp=Z,1.0nm,0.8s
BRG S S 18 40 27.0 -17
BRG SS SS 18 46 46.0 -3.8
BRG ePKKP PKKPbc 18 47 58.8 +53
comp=Z,29nm,1.7s
BRG e 18 55 08.8
comp=Z,1.3nm,1.0s
BRG
comp=N,2μm,16.6s
BRG
comp=E,1μm,15.8s
BRG
comp=Z,2μm,16.3s
BRG Berggiesshubel 91.49 331⇓iP P 18 29 45.2 -0.3
BRG i pP 18 29 52.6 -0.9
BRG i 18 30 04.1
BRG e 18 40 06.7
BRG SS SS 18 46 46.0 -3.8
BRG pmax pmax
comp=Z,61nm,1.2s,mb5.8
BRG MLR MLR
comp=Z,2μm,16.3s,MS5.6
BRG Berggiesshubel 91.49 331⇓iP P 18 29 45.1 -0.3
comp=Z,61nm,1.2s,mb5.8
BRG i pP 18 29 52.6 -0.9
BRG i 18 30 04.1
BRG PP PP 18 33 01.0 -22
BRG e 18 40 06.7
BRG S S 18 40 27.0 -17
BRG SS SS 18 46 46.0 -3.8
BRG ePKKP PKKPbc 18 47 58.8 +53
BRG e 18 55 08.8
BRG LR LR
comp=Z,2μm,16.3s,MS5.6
BUD Budapest 91.50 326⇓iPcP PcP 18 29 45.7 -0.7
CLL Collm 91.58 332⇓iP P 18 29 44.8 -1.1
comp=Z,231nm,1.5s,mb6.3
CLL epP pP 18 29 53.1 -0.8
CLL ePP PP 18 33 24.4 +0.3
CLL ePPPP 18 36 59.1
CLL eSKSac SKSac 18 40 24.6 +7.7
CLL eS S 18 40 44.0 -0.4
CLL ePS PS 18 41 59.3 +3.0
CLL ePPS 18 42 33.1
CLL eSS SS 18 46 57.0 +6.0
CLL ePKKPbc PKKPbc 18 47 05.0 -0.4
CLL eSSSS 18 53 54.3
CLL ePKPPKPdf 18 55 18.0
CLL eL 19 11 54.4
comp=Z,3μm,18.0s
CLL Collm 91.58 332 ⇓P P 18 29 45.2 -0.7
comp=Z,logA/T=2.2,mb6.3
CLL i *SP sP 18 29 52.5 -4.2
CLL ePP PP 18 33 21.0 -3.1
CLL e 18 33 30.0
CLL e 18 40 25.0
CLL eS S 18 40 47.0 +2.6
CLL ePS PS 18 41 50.0 -6.3
CLL ePPS 18 42 33.0
CLL eSS SS 18 46 38.0 -13
CLL i PKKP PKKPbc 18 47 04.9 -0.5
CLL e 18 54 06.0
CLL e 18 55 18.0
CLL Collm 91.58 332⇓iP P 18 29 45.2 -0.7
comp=Z,228nm,1.5s,mb6.3
CLL i sP sP 18 29 52.5 -4.2
CLL ePP PP 18 33 21.0 -3.1
CLL ex x 18 33 30.0
CLL eSKKSac SKKSac 18 40 25.0 -7.9
CLL eS S 18 40 47.0 +2.6
CLL ePS PS 18 41 50.0 -6.3
CLL ePPS 18 42 33.0
CLL e(SS) 18 46 38.0
CLL i PKKPdf PKKPdf 18 47 04.9 +2.6
comp=Z,5.0nm,0.9s
CLL ex x 18 48 06.0
CLL eSSSS 18 54 06.0
CLL ePKPPKPdf 18 55 18.0
CLL Collm 91.58 332⇓iP P 18 29 45.2 -0.7
CLL i *SP sP 18 29 52.5 -4.2
CLL e 18 33 21.0
CLL eS S 18 40 47.0 +2.6
CLL i 18 47 04.9
CLL pmax pmax
comp=Z,228nm,1.5s,mb6.3
CLL MLR MLR
comp=Z,4μm,15.0s,MS5.9
CLL Collm 91.58 332⇓iP P 18 29 45.2 -0.7
comp=Z,228nm,1.5s,mb6.3
CLL i sP sP 18 29 52.5 -4.2
CLL ePP PP 18 33 21.0 -3.1
CLL eSKKS SKKSac 18 40 25.0 -7.9
CLL eS S 18 40 47.0 +2.6
CLL i PKKP PKKPbc 18 47 04.9 -0.5
CLL eP'P' 18 55 18.0
CLL LR LR
comp=Z,4μm,15.0s,MS5.9
LBOS 91.61 286⇓eP P 18 29 46.9 +0.9
FBE Freiberg 91.71 331 eP P 18 29 45.8 -0.7
comp=Z,256nm,1.4s,mb6.4
PKS7 Kunszentmiklos 91.72 326⇑iP P 18 29 46.7 +0.1
CANB Canakkale 91.77 317 eP P 18 29 46.9 +0.1
KDZ Kurdzhali 91.77 319 eP P 18 29 47.2 +0.4
ALN Alexandroupoli 91.86 318 eP P 18 29 46.6 -0.6
PRA Prague 91.86 330 P P 18 29 48.0 +0.8
PRA pP pP 18 29 54.0 -1.2
PRA PP PP 18 33 28.0 +1.7
PRU Pruhonice 91.87 330 eP P 18 29 47.1 -0.1
PRU epP pP 18 29 54.7 -0.5
PRU ePP PP 18 33 28.9 +2.5
PRU eSKKS SKKSac 18 40 32.4 -2.7
PRU ePS PS 18 42 04.1 +4.5
PRU ex x 18 47 07.8
PRU AMS AMS 19 15 30.0
comp=Z,3μm,15.1s
PRU Pruhonice 91.87 330 eP P 18 29 47.1 -0.1
PRU e*PP pP 18 29 54.7 -0.5
PRU e 18 33 28.9
PRU ePS PS 18 42 04.1 +4.5
PRU eSS SS 18 47 07.8 +13
PRU MLR MLR
comp=Z,3μm,15.1s,MS5.8
ENEZ Enez 91.89 318 eP P 18 29 47.5 +0.2
PLD Plovdiv 91.91 320 eP P 18 29 47.1 -0.3
PLD Plovdiv 91.91 320 eP P 18 29 47.2 -0.2
TREC Trest 91.94 329 eP P 18 29 47.5 0.0
TREC epP pP 18 29 55.1 -0.4
TREC ePP PP 18 33 29.6 +2.6
TREC eSKKS SKKSac 18 40 33.7 -1.9
TREC eSP SP 18 41 54.8 -2.3
TREC ex x 18 47 09.1
TREC AMS AMS 19 15 50.0
comp=Z,4μm,16.7s
TREC Trest 91.94 329 eP P 18 29 47.5 0.0
TREC e*PP pP 18 29 55.1 -0.4
TREC e 18 33 29.6
TREC ePS PS 18 41 54.8 -5.5
TREC eSS SS 18 47 09.1 +13
TREC MLR MLR
comp=Z,4μm,16.7s,MS6.0
ZST Bratislava 91.95 328 eP P 18 29 47.9 +0.3
ZST ePP PP 18 33 29.1 +2.0
ZST Bratislava 91.95 328⇑eSKKSp 18 40 33.5
ZST ePNS 18 42 03.1
ZST eSS SS 18 47 05.1 +8.8
ZST Bratislava 91.95 328 eP P 18 29 47.9 +0.3
ZST e 18 33 29.1
ZST e 18 42 03.1
ZST eSS SS 18 47 05.1 +8.8
ZST pmax pmax
comp=Z,67nm,1.1s,mb5.9
ZST MLR MLR
comp=Z,3μm,16.6s,MS5.8
ZST Bratislava 91.95 328 eP P 18 29 47.9 +0.3
comp=Z,67nm,1.1s,mb5.9
ZST ePP PP 18 33 29.1 +2.0
ZST eS S 18 40 33.5 -14
ZST e 18 42 03.1
ZST eSS SS 18 47 05.1 +8.8
ZST LR LR
comp=Z,3μm,16.6s,MS5.8
MVH1 Achvaich 92.03 344⇓eP P 18 29 46.5 -1.4
MVH1 Achvaich 92.03 344⇓eP P 18 29 46.5 -1.4
MCD Coleburn Disti 92.09 343⇓eP P 18 29 46.9 -1.3
MCD Coleburn Disti 92.09 343⇓eP P 18 29 46.9 -1.3
EIL Elat 92.21 305 eP P 18 29 48.3 -0.5
comp=Z,587nm,1.2s,mb6.8
MME1 Meikle Cairn 92.25 343⇓eP P 18 29 47.9 -1.1
MME1 Meikle Cairn 92.25 343⇓eP P 18 29 47.9 -1.1
MNTX Cornudas Mount 92.27 53 eP P 18 29 49.3 +0.2
comp=Z,49nm,1.4s,mb5.7
MNTX LR LR
comp=Z,2μm,20.0s,MS5.6
GADA Gvkgeada 92.38 317 eP P 18 29 49.2 -0.4
RKT Rikitea 92.44 114 ePS PS 18 42 03.7 -2.2
comp=Z,672nm,26.0s
RKT Rikitea 92.44 114 eSS SS 18 47 00.8 -2.6
comp=Z,895nm,26.2s
RKT eLR LR 18 59 33.2
comp=Z,2μm,23.8s
VTS Vitosha 92.47 321 eP P 18 29 49.1 -0.8
VTS Vitosha 92.47 321 eP P 18 29 50.0 0.0
VTS Vitosha 92.47 321⇓iP P 18 29 50.2 +0.2
TANN Tannenbergstha 92.47 331 eP P 18 29 49.3 -0.7
comp=Z,181nm,2.0s,mb6.1
SVIS Svilajnac 92.48 323⇓iP P 18 29 49.3 -0.7
PKS9 Tamasi 92.48 326⇑iP P 18 29 49.9 -0.2
BOZC Bozcaada 92.50 317 i P P 18 29 49.7 -0.4
WERD Werda 92.51 331 eP P 18 29 49.4 -0.8
comp=Z,118nm,1.5s,mb6.1
WERD epP pP 18 29 56.8 -1.4
BEO Belgrade 92.54 324 i P P 18 29 50.9 +0.5
PKSM Moragy 92.55 325⇓iP P 18 29 49.7 -0.7
PKSM Moragy 92.55 325 P P 18 29 50.1 -0.3
PKSM Moragy 92.55 325 ⇓P P 18 29 49.7 -0.7
GUNZ Gunzen 92.57 331 eP P 18 29 49.8 -0.6
comp=Z,277nm,1.8s,mb6.4
IZM Izmir 92.61 315 eP P 18 29 49.8 -0.9
NKC Novy Kostel 92.61 331 epP pP 18 29 58.3 -0.3
NKC ePP PP 18 33 35.0 +2.7
NKC AMS AMS 19 17 30.0
comp=Z,4μm,17.1s
AYDN Tasoluk 92.66 314 i P P 18 29 50.9 +0.1
DRV Dumont d'Urvil 92.66 182 P P 18 29 48.0 -2.9
DRV Dumont d'Urvil 92.66 182 PP PP 18 33 32.0 -0.6
DRV S S 18 40 26.0 -28
DRV SP SP 18 42 06.0 +0.9
DRV SS SS 18 47 08.0 +1.5
DRV L 18 55 00.0
DRV R 19 01 00.0
MOX Moxa 92.66 332 eP P 18 29 50.0 -0.9
comp=Z,176nm,1.7s,mb6.2
MOX Moxa 92.66 332⇑iP P 18 29 50.7 -0.2
comp=Z,287nm,1.9s,mb6.4
MOX e pP 18 29 58.2 -0.7
MOX e 18 33 31.6
MOX
comp=Z,2μm,19.0s
MOX Moxa 92.66 332⇑iP P 18 29 50.7 -0.2
MOX e pP 18 29 58.2 -0.7
MOX e 18 33 31.6
MOX pmax pmax
comp=Z,287nm,1.9s,mb6.4
MOX MLR MLR
comp=Z,2μm,19.0s,MS5.6
GTTG Gvttingen 92.66 333 eP P 18 29 50.0 -0.9
comp=Z,70nm,1.6s,mb5.8
KAC Achnashellach 92.68 344⇓eP P 18 29 49.8 -1.2
KAC Achnashellach 92.68 344⇓eP P 18 29 49.8 -1.2
YER Yerkesik 92.71 314 eP P 18 29 55.5 +4.4
CONA Conrad Observa 92.73 328 i P P 18 29 50.6 -0.6
comp=Z,507nm,1.9s,mb6.6,SNR=113
MMB Musomiste 92.80 320 eP P 18 29 51.7 +0.1
MMB Musomiste 92.80 320 eP P 18 29 51.0 -0.5
KPL Plockton 92.92 344⇓eP P 18 29 50.4 -1.6
KPL Plockton 92.92 344⇓eP P 18 29 50.4 -1.6
KHC Kasperske Hory 92.92 330 eP P 18 29 51.9 -0.2
KHC epP pP 18 30 00.1 0.0
KHC ePP PP 18 33 37.5 +2.8
KHC eSKKS SKKSac 18 40 38.2 -4.7
KHC ePS PS 18 42 16.1 +4.9
KHC ex x 18 47 22.9
KHC AMS AMS 19 16 10.0
comp=Z,4μm,16.6s
KHC Kasperske Hory 92.92 330 eP P 18 29 51.9 -0.2
KHC e*PP pP 18 30 00.1 0.0
KHC e 18 33 37.5
KHC ePS PS 18 42 16.1 +4.9
KHC e 18 47 08.0
KHC eSS SS 18 47 22.9 +13
KHC MLR MLR
comp=Z,4μm,16.6s,MS5.9
KHC Kasperske Hory 92.92 330 eP P 18 29 51.9 -0.2
KHC epP pP 18 30 00.1 0.0
KHC ePP PP 18 33 37.5 +2.8
KHC eS SKKSac 18 40 38.2 -4.7
KHC ePS PS 18 42 16.1 +4.9
KHC e 18 47 08.0
KHC eSS SS 18 47 22.9 +13
KHC LR LR
comp=Z,4μm,16.6s,MS5.9
IBBN Ibbenburen 92.94 335 eP P 18 29 51.3 -0.9
comp=Z,241nm,1.3s,mb6.5
MANZ Manzenberg 92.94 331 eP P 18 29 51.7 -0.5
comp=Z,156nm,1.7s,mb6.2
KSB Sheil Bridge 92.97 344⇓eP P 18 29 51.5 -0.8
KSB Sheil Bridge 92.97 344⇓eP P 18 29 51.5 -0.8
KKB Krupnik 93.00 320 eP P 18 29 52.0 -0.5
ROTZ Rotzenmuhle 93.06 331 eP P 18 29 52.5 -0.2
comp=Z,252nm,1.5s,mb6.4
GEC2 GERESS Array S 93.08 330 eP P 18 29 51.8 -1.0
comp=Z,207nm,1.9s,mb6.2
GEC2 GERESS Array S 93.08 330 P P 18 29 52.2 -0.6
GERES GERESS Array B 93.08 330 P P 18 29 52.3 -0.5
comp=Z,20nm,0.8s,mb5.6,baz=44,slow=4.4,SNR=178
GERES PKKP PKKPbc 18 46 55.4 -6.1
comp=Z,1.6nm,0.8s,baz=205,slow=5.9,SNR=5.0
GERES PKKPbc PKKPbc 18 47 00.8 -0.8
comp=Z,1.9nm,0.9s,baz=199,slow=2.8,SNR=10
GERES LR LR 19 15 49.0
comp=Z,4μm,18.5s,MS5.9,baz=36,slow=38
AMTX Amarillo 93.08 49 eP P 18 29 53.1 +0.3
comp=Z,272nm,1.2s,mb6.5
AMTX LR LR
comp=Z,5μm,20.0s,MS6.0
SRS Serrai 93.18 319 eP P 18 29 52.4 -0.9
UBBA Unterbreizbach 93.20 333 eP P 18 29 52.4 -1.0
comp=Z,129nm,1.8s,mb6.1
WET Wettzell 93.23 330 eP P 18 29 52.9 -0.6
comp=Z,245nm,2.2s,mb6.2
WET Wettzell 93.23 330 eP P 18 29 52.9 -0.6
WET pmax pmax
comp=Z,245nm,2.2s,mb6.2
DIVS Divcibare 93.27 323 i P P 18 29 52.9 -0.8
DIVS Divcibare 93.27 323 eP P 18 29 53.3 -0.4
KAR1 Arisaig 93.33 344⇓eP P 18 29 52.9 -1.1
KAR1 Arisaig 93.33 344⇓eP P 18 29 52.9 -1.1
ESY Stoneypath 93.37 342⇓eP P 18 29 52.8 -1.3
ESY Stoneypath 93.37 342⇓eP P 18 29 52.8 -1.3
ARSA Arzberg 93.37 328 i P P 18 29 53.9 -0.2
comp=Z,376nm,2.0s,mb6.5,SNR=60
BODT Bodrum 93.38 314 eP P 18 29 53.7 -0.5
CHOS Chios island 93.38 316 eP P 18 29 52.5 -1.7
OUR Ouranopolis 93.44 318 eP P 18 29 53.8 -0.7
GRA3 Grafenberg Arr 93.45 331 ePKKP PKKPbc 18 46 59.5 -1.1
GRA3 epPKKP 18 47 06.9
SOH Sokhos 93.51 319 eP P 18 29 53.3 -1.5
MOA Molln 93.54 329 i P P 18 29 54.8 -0.1
comp=Z,333nm,1.9s,mb6.4,SNR=59
GRA1 Grafenberg Arr 93.54 331 eP P 18 29 54.6 -0.4
comp=Z,343nm,1.6s,mb6.5
GRA1 epP pP 18 30 02.1 -0.8
GRA1 LR LR
comp=Z,2μm,19.0s,MS5.6
GRF Grafenberg Arr 93.54 331 eP P 18 29 54.6 -0.4
comp=Z,343nm,1.6s,mb6.5
GRF epP pP 18 30 02.1 -0.8
GRF eL 19 18 41.0
comp=Z,2μm,19.0s
GRF Grafenberg Arr 93.54 331 eP P 18 29 54.6 -0.4
GRF e*PP pP 18 30 02.1 -0.8
GRF pmax pmax
comp=Z,343nm,1.6s,mb6.5
GRF MLR MLR
comp=Z,2μm,19.0s,MS5.6
GRF Grafenberg Arr 93.54 331 eP P 18 29 54.6 -0.4
GRF e*PP pP 18 30 02.1 -0.8
GRF pmax pmax
comp=Z,343nm,1.6s,mb6.5
GRF MLR MLR
comp=Z,2μm,19.0s,MS5.6
KNT Kendrikon 93.56 320 eP P 18 29 54.1 -0.9
WTSB Winterswijk 93.57 335⇓eP P 18 29 54.1 -1.0
comp=Z,80nm,1.9s,mb5.8
KOGS Kog 93.59 327 eP P 18 29 54.0 -1.1
EAB Aberfoyle 93.60 343⇓eP P 18 29 54.2 -1.0
EAB Aberfoyle 93.60 343⇓eP P 18 29 54.2 -1.0
EBL Broad Law 93.62 342⇓eP P 18 29 54.3 -0.9
EBL Broad Law 93.62 342⇓eP P 18 29 54.3 -0.9
STIP Stip 93.63 320 eP P 18 29 54.7 -0.6
STIP Stip 93.63 320 i P P 18 29 53.1 -2.2
VAY Valandovo 93.65 320 eP P 18 29 54.3 -1.1
VAY Valandovo 93.65 320 i P P 18 29 53.5 -1.9
EAU Auchinoon 93.67 342⇓eP P 18 29 54.8 -0.7
EAU Auchinoon 93.67 342⇓eP P 18 29 54.8 -0.7
PCOU Corrie 93.72 343 eP P 18 29 55.0 -0.7
PCOU Corrie 93.72 343 eP P 18 29 55.0 -0.7
HORT Hortiatis 93.80 319 eP P 18 29 54.3 -1.8
BUG Bochum--Univer 93.81 335 eP P 18 29 55.1 -1.1
comp=Z,113nm,1.3s,mb6.1
KSU1 Kansas State U 93.83 43 eP P 18 29 55.3 -1.0
comp=Z,207nm,1.2s,mb6.4
THE Thessaloniki 93.86 319 eP P 18 29 54.8 -1.6

SKO Skopje 93.87 321 *e*P P **18 29 56.8 +0.4**
SKO Skopje 93.87 321 *i* P P **18 29 56.1 -0.3**
PAIG Palioúri 93.88 318 *e*P P **18 29 55.3 -1.2**
PGBU Glenifferbraes 93.97 343⇓*e*P P **18 29 55.8 -1.1**
PGBU Glenifferbraes 93.97 343⇓*e*P P **18 29 55.8 -1.1**
ESK Eskdalemuir 94.06 342⇓*e*P P **18 29 56.3 -1.0**
ESK Eskdalemuir 94.06 342⇓*e*P P **18 29 56.3 -1.0**
ESK Eskdalemuir 94.06 342 *e*P P **18 29 56.9 -0.4**
ESK pmax pmax
comp=Z,24nm,1.0s,mb5.6
ESK MLR MLR
comp=Z,1µm,20.0s,MS5.4
ESK Eskdalemuir 94.06 342 *e*P P **18 29 56.9 -0.4**
comp=Z,24nm,1.0s,mb5.6
ESK LR LR
comp=Z,1µm,20.0s,MS5.4
PLE Plјevlja 94.11 323⇑*i*P P **18 29 57.4 -0.2**
IVA Berane 94.14 322⇑*i*P P **18 29 56.7 -1.0**
ECK Cauldkaine Hil 94.16 342⇓*e*P P **18 29 56.8 -1.0**
ECK AMb AMB 18 30 01.7
comp=Z,77nm,1.6s,mb5.9
ECK Cauldkaine Hil 94.16 342⇓*e*P P **18 29 56.8 -1.0**
ECK AMb AMB 18 30 01.7
comp=Z,77nm,1.6s,mb5.9
LWH Whinny Nab 94.17 340⇓*e*P P **18 29 57.4 -0.5**
LWH Whinny Nab 94.17 340⇓*e*P P **18 29 57.4 -0.5**
BHH Howats Hill 94.26 342⇓*e*P P **18 29 57.7 -0.6**
BHH Howats Hill 94.26 342⇓*e*P P **18 29 57.7 -0.6**
PVY Plav 94.28 322⇑*i*P P **18 29 56.9 -1.4**
TNS Taunus Mts 94.30 333 *e*P P **18 29 57.7 -0.7**
comp=Z,138nm,1.8s,mb6.1
TNS Taunus Mts 94.30 333 *e*P P **18 29 57.7 -0.7**
TNS pmax pmax
comp=Z,138nm,1.8s,mb6.1
BWH Wardlaw 94.31 342⇓*e*P P **18 29 57.7 -0.8**
BWH Wardlaw 94.31 342⇓*e*P P **18 29 57.7 -0.8**
OBKA Obir 94.37 328 *i* P P **18 29 58.0 -0.7**
comp=Z,407nm,3.9s,SNR=12
UPM Unac-Piva 94.45 323⇑*i*P P **18 29 59.4 +0.2**
LIT Litokhoron 94.47 319 *e*P P **18 29 57.1 -2.1**
APE Apeiranthos 94.51 315⇑*i*P P **18 29 56.9 -2.5**
APE Apeiranthos 94.51 315 ⇑P P **18 29 56.9 -2.5**
KBA Koelnbreinsper 94.53 329⇓*i*P P **18 29 58.8 -0.7**
comp=Z,285nm,2.7s,mb6.2
KBA Koelnbreinsper 94.53 329⇓*i*P P **18 29 58.8 -0.7**
KBA pmax pmax
comp=Z,285nm,2.7s,mb6.2
BBO1 Bothel 94.58 342⇓*e*P P **18 29 58.8 -0.9**
BBO1 Bothel 94.58 342⇓*e*P P **18 29 58.8 -0.9**
TOD Tromm 94.63 333 *e*P P **18 29 59.6 -0.3**
FUR Furstenfeldbru 94.67 330 *e*P P **18 29 59.5 -0.6**
comp=Z,347nm,1.6s,mb6.5
FUR Furstenfeldbru 94.67 330 *e*P P **18 29 59.5 -0.6**
FUR pmax pmax
comp=Z,347nm,1.6s,mb6.5
NKY Niksic 94.67 323⇑*i*P P **18 29 58.9 -1.3**
LJU Ljubljana 94.72 327 *e*P P **18 29 59.5 -0.8**
TTG Podgorica 94.78 322⇑*i*P P **18 29 59.0 -1.7**
OHR Ohrid 94.80 321 *e*P P **18 29 59.5 -1.2**
OHR Ohrid 94.80 321 *i* P P **18 29 57.7 -3.1**
ABA1 Baconsthorpe 94.82 338 *e*P P **18 29 59.9 -0.9**
ABA1 Baconsthorpe 94.82 338 *e*P P **18 29 59.9 -0.9**
BRY Bratogost 94.86 323⇑*i*P P **18 29 59.8 -1.1**
HGN Heimansgroeve 94.86 335⇓*e*P P **18 30 00.1 -0.9**
comp=Z,92nm,2.0s,mb5.9
HGN *e*PP PP 18 33 43.5 -6.4
HGN *e*SKS 18 40 40.0
HGN *e*ScSP 18 42 19.7
BEBN Eben Emael 94.93 335 P P **18 30 00.6 -0.7**
BEBN PP PP 18 33 51.5 +1.1
MEM Membach 94.95 335 P P **18 30 00.6 -0.8**
MEM PP PP 18 33 45.9 -4.7
JFWS Jewell Farm 95.00 37 *e*P P **18 30 01.3 -0.3**
JFWS pmax pmax
comp=Z,264nm,1.7s,mb6.4
JFWS MLR MLR
comp=Z,5µm,20.0s,MS6.0
JFWS Jewell Farm 95.00 37 *e*P P **18 30 01.3 -0.3**
comp=Z,251nm,1.7s,mb6.4
JFWS LR LR
comp=Z,5µm,20.0s,MS6.0
SCHQ Schefferville 95.02 17 P P **18 30 01.1 -0.6**
comp=Z,8.7nm,0.9s,mb5.2,baz=344,slow=4.6,SNR=8.4
SCHQ PKKPbc PKKPbc 18 46 54.5 -1.9
comp=Z,4.6nm,0.7s,baz=186,slow=2.6,SNR=6.5
SCHQ LR LR 19 13 27.3
comp=Z,3µm,20.6s,MS5.8,baz=322,slow=36
SCHQ Schefferville 95.02 17 *e*P P **18 30 01.5 -0.2**
comp=Z,73nm,1.5s,mb5.9
SCHQ LR LR
comp=Z,5µm,20.0s,MS6.0
VOY Vojsko 95.03 328 *e*P P **18 30 00.2 -1.6**
VOY *e* 18 30 03.8
BUM Brajici-Budva 95.07 322 *e*P P **18 30 00.7 -1.2**
WMOK Wichita Mounta 95.10 47 P P **18 30 01.7 -0.4**
WMOK pmax pmax
comp=Z,83nm,1.3s,mb6.0
WMOK Wichita Mounta 95.10 47 *e*P P **18 30 01.4 -0.7**
comp=Z,83nm,1.3s,mb6.0
WMOK LR LR
comp=Z,2µm,21.0s,MS5.6
ULC Ulcinj 95.10 322⇑*i*P P **18 30 01.0 -1.1**
STU Stuttgart 95.11 332 *e*P P **18 30 01.3 -0.8**
comp=Z,232nm,1.6s,mb6.4
STU *e*pP pP 18 30 09.0 -1.1
STU Stuttgart 95.11 332 *e*P P **18 30 01.8 -0.3**
STU pmax pmax
comp=Z,84nm,1.1s,mb6.1
STU Stuttgart 95.11 332 *e*P P **18 30 01.8 -0.4**
comp=Z,84nm,1.1s,mb6.1
WATA Walderalm 95.15 330⇓*i*P P **18 30 01.3 -1.0**
comp=Z,333nm,2.8s,mb6.3,SNR=8.7
WATA Walderalm 95.15 330⇓*i*P P **18 30 01.3 -1.0**
WATA pmax pmax
comp=Z,333nm,2.8s,mb6.3
GMNA Gemona 95.17 328 P P **18 30 01.4 -1.0**
comp=Z,335nm,1.4s,mb6.6
TIR Tirane 95.17 321 *e*P P **18 30 02.4 0.0**
WTTA Wattenberg 95.18 330⇓*i*P P **18 30 01.8 -0.7**
comp=Z,317nm,2.5s,mb6.3,SNR=9.5
WTTA Wattenberg 95.18 330⇓*i*P P **18 30 01.8 -0.7**
WTTA pmax pmax
comp=Z,317nm,2.5s,mb6.3
HCY Herceg Novi 95.19 323⇑*i*P P **18 30 01.4 -1.1**
LHO Holmfirth 95.21 340⇓*e*P P **18 30 01.6 -1.0**
LHO Holmfirth 95.21 340⇓*e*P P **18 30 01.6 -1.0**
AGG Agios Georgios 95.26 318 *e*P P **18 30 01.4 -1.4**
TRI Trieste 95.33 328 *i* P P **18 30 01.6 -1.5**
TRI Trieste 95.33 328 *i* Pr P **18 30 01.6 -1.5**
MOTA Moosalm 95.36 330⇑*i*P P **18 30 02.6 -0.7**
comp=Z,41nm,1.3s,mb5.7,SNR=19
MOTA Moosalm 95.36 330⇑*i*P P **18 30 02.6 -0.7**
MOTA pmax pmax
comp=Z,41nm,1.3s,mb5.7
KBI1 Birley Grange 95.36 340⇓*e*P P **18 30 02.2 -1.1**
KBI1 Birley Grange 95.36 340⇓*e*P P **18 30 02.2 -1.1**
BCLA Clavier 95.38 335 P P **18 30 02.3 -1.1**
BCLA PP PP 18 33 54.7 +0.9
SQTA Sankt Quirin 95.41 330⇑*i*P P **18 30 02.8 -0.7**
comp=Z,87nm,1.7s,mb5.9
SQTA Sankt Quirin 95.41 330⇑*i*P P **18 30 02.8 -0.7**
SQTA pmax pmax
comp=Z,87nm,1.7s,mb5.9
UCC Uccle 95.42 336 P P **18 30 02.9 -0.7**
UCC PP PP 18 33 55.3 +1.1
LANF Langenberg 95.53 333 *e*P P **18 30 03.9 -0.1**
WLF Walferdange 95.65 334 *e*P P **18 30 04.3 -0.3**
comp=Z,224nm,1.6s,mb6.3
WLF Walferdange 95.65 334 P P **18 30 04.2 -0.4**
comp=Z,100nm,2.0s,mb5.9
WLF PP PP 18 33 54.5 -1.5
WLF Walferdange 95.65 334 *e*P P **18 30 03.9 -0.7**
WLF pmax pmax
comp=Z,207nm,1.6s,mb6.3
WLF Walferdange 95.65 334 *e*P P **18 30 03.9 -0.7**
comp=Z,207nm,1.6s,mb6.3
KWE Weaver Farm 95.66 340⇓*e*P P **18 30 03.7 -1.0**
KWE Weaver Farm 95.66 340⇓*e*P P **18 30 03.7 -1.0**
CASY Casey 95.68 193 *e*P P **18 30 03.3 -1.4**
CASY *i* pP pP 18 30 10.2 -2.5
SNF Seneffe 95.69 335 P P **18 30 04.0 -0.7**
comp=Z,44nm,2.3s,mb5.5
SNF PP PP 18 33 58.5 +2.2
LAST Lasithi 95.70 314 *e*P P **18 30 04.1 -0.7**

SPAK Spaichingen-Ko 95.80 332 *e*P P **18 30 04.4 -0.9**
BFO Black Forest 95.81 332 P P **18 30 04.5 -0.8**
comp=Z,326nm,1.0s,mb6.7,SNR=31
BFO Black Forest 95.81 332 *e*P P **18 30 04.3 -1.1**
comp=Z,185nm,1.7s,mb6.2
BFO *e*pP pP 18 30 12.1 -1.2
BFO Black Forest 95.81 332 P P **18 30 04.7 -0.7**
GIVF Givet 95.81 335 *e*P P **18 30 04.3 -1.0**
comp=Z,278nm,1.9s,mb6.1
GIVF Givet 95.81 335 *e*P P **18 30 04.3 -1.0**
GIVF pmax pmax
comp=Z,139nm,1.9s,mb6.1
GIVF Givet 95.81 335 *e*P P **18 30 04.3 -1.0**
comp=Z,139nm,1.9s,mb6.1
DAVA Damuels 95.95 331 *i* P P **18 30 05.6 -0.4**
comp=Z,259nm,1.8s,mb6.3,SNR=29
APPI Appiano 95.95 329 P P **18 30 05.5 -0.5**
CTI Castel Tesino 96.08 329 *i* P P **18 30 05.1 -1.5**
CTI Castel Tesino 96.08 329 *i* Pr P **18 30 05.1 -1.5**
BAIF Baives 96.08 335 *e*P P **18 30 05.6 -1.0**
comp=Z,173nm,1.9s,mb5.9
BAIF Baives 96.08 335 *e*P P **18 30 05.6 -1.0**
BAIF pmax pmax
comp=Z,86nm,1.9s,mb5.9
BAIF Baives 96.08 335 *e*P P **18 30 05.6 -1.0**
comp=Z,86nm,1.9s,mb5.9
STEIN Stein am Rhein 96.09 331⇓*i*P P **18 30 05.5 -1.1**
comp=Z,136nm,1.4s,mb6.2
LIENZ Alp Oberkamor 96.11 331⇓*i*P P **18 30 06.0 -0.7**
comp=Z,159nm,1.6s,mb6.2
WEIN Weingarten 96.15 331⇓*i*P P **18 30 06.9 0.0**
comp=Z,154nm,1.9s,mb6.1
WLS Welschbruch 96.16 333 *e*P P **18 30 06.4 -0.5**
SLE Schleitheim 96.18 332⇓*i*P P **18 30 06.7 -0.3**
comp=Z,111nm,1.5s,mb6.1
SBD1 Bryn Du 96.19 341⇓*e*P P **18 30 06.5 -0.6**
SBD1 Bryn Du 96.19 341⇓*e*P P **18 30 06.5 -0.6**
CDF Champ du Feu 96.19 333 *e*P P **18 30 06.3 -0.8**
comp=Z,254nm,1.6s,mb6.1
CDF Champ du Feu 96.19 333 *e*P P **18 30 06.3 -0.8**
CDF pmax pmax
comp=Z,127nm,1.6s,mb6.1
CDF Champ du Feu 96.19 333 *e*P P **18 30 06.3 -0.8**
comp=Z,127nm,1.6s,mb6.1
LIBD Limburg 96.26 332 *e*P P **18 30 06.4 -1.0**
WILA Wila 96.28 331⇓*i*P P **18 30 06.6 -0.8**
comp=Z,144nm,1.6s,mb6.2
FUORN Ofenpass 96.28 330⇓*i*P P **18 30 07.0 -0.5**
comp=Z,255nm,1.5s,mb6.4
FELD Feldberg im Sc 96.30 332⇓*e*P P **18 30 06.9 -0.7**
DAVOX Davos 96.33 330⇓*i*P P **18 30 07.2 -0.5**
comp=Z,126nm,1.7s,mb6.1
DAVOX Davos 96.33 330 PP PP 18 33 58.4 -2.8
comp=Z,5.8nm,0.9s,baz=56,slow=3.6,SNR=3.0
DAVOX PKKPbc PKKPbc 18 46 52.2 -0.7
comp=Z,2.7nm,1.0s,baz=166,slow=19,SNR=5.2
BRMO Bormio 96.34 330 *i* Pr P **18 30 07.4 -0.4**
PLONS Plons 96.35 331⇓*i*P P **18 30 07.5 -0.3**
comp=Z,174nm,2.0s,mb6.1
ECH Echery 96.39 333 *e*P P **18 30 07.1 -0.9**
HLM1 Long Mynd 96.41 340⇓*e*P P **18 30 07.0 -1.1**
HLM1 AMb AMB 18 30 08.4
comp=Z,39nm,1.3s,mb5.7
HLM1 Long Mynd 96.41 340⇓*e*P P **18 30 07.0 -1.1**
HLM1 AMb AMB 18 30 08.4
comp=Z,39nm,1.3s,mb5.7
MENF Mencas 96.42 337 *e*P P **18 30 07.2 -0.9**
ZUR Zurich 96.45 331⇓*i*P P **18 30 07.5 -0.8**
comp=Z,140nm,1.7s,mb6.1
YRE Yr Eifl 96.46 341⇓*e*P P **18 30 07.2 -1.1**
YRE AMb AMB 18 30 09.1
comp=Z,57nm,1.5s,mb5.8
YRE Yr Eifl 96.46 341⇓*e*P P **18 30 07.2 -1.1**
YRE AMb AMB 18 30 09.1
comp=Z,57nm,1.5s,mb5.8
SULZ Sulz-Cheisache 96.53 332⇓*e*P P **18 30 07.5 -1.1**
comp=Z,179nm,1.3s,mb6.3
BERNI Berninapass 96.55 330⇓*i*P P **18 30 08.3 -0.4**
comp=Z,144nm,1.6s,mb6.2
LLS Linth-Limmern 96.67 331⇓*i*P P **18 30 08.6 -0.6**
comp=Z,130nm,2.0s,mb6.0
MOF Molkenrain 96.69 332 *e*P P **18 30 08.3 -1.0**
MUO Muotathal 96.74 331⇓*i*P P **18 30 09.9 +0.4**
comp=Z,190nm,1.5s,mb6.3
VDL Val di Lei 96.74 330⇓*i*P P **18 30 09.2 -0.4**
comp=Z,131nm,2.0s,mb6.0
DLF Lyons Farm 96.76 343⇓*i*P P **18 30 08.7 -0.9**
TUE Stuetta 96.81 330 *i* Pr P **18 30 09.6 -0.3**
HINF Hinteralfeld 96.83 333 *e*P P **18 30 08.8 -1.2**
comp=Z,140nm,1.6s,mb5.8
HINF Hinteralfeld 96.83 333 *e*P P **18 30 08.8 -1.2**
HINF pmax pmax
comp=Z,70nm,1.6s,mb5.8
HINF Hinteralfeld 96.83 333 *e*P P **18 30 08.8 -1.2**
comp=Z,70nm,1.6s,mb5.8
BBS Basel-Blauen 96.83 332 *e*P P **18 30 08.8 -1.2**
LCI Lecce 96.84 321 P P **18 30 09.6 -0.4**
comp=Z,70nm,1.0s,mb6.0
BALST Balsthal 96.86 332⇓*i*P P **18 30 09.2 -0.9**
comp=Z,148nm,1.6s,mb6.2
THEF They Montfort 96.86 333 *e*P P **18 30 09.3 -0.8**
HAU Haudompre 96.89 333 *e*P P **18 30 09.2 -1.0**
comp=Z,208nm,1.8s,mb6.0
HAU *e*R
comp=Z,3µm,18.5s
HAU Haudompre 96.89 333 *e*P P **18 30 09.2 -1.0**
HAU pmax pmax
comp=Z,104nm,1.8s,mb6.0
HAU MLR MLR
comp=Z,3µm,18.5s,MS5.8
HAU Haudompre 96.89 333 *e*P P **18 30 09.2 -1.0**
comp=Z,104nm,1.8s,mb6.0
HAU LR LR
comp=Z,3µm,18.5s,MS5.8
MCH1 Michaelchurch 96.90 340⇓*e*P P **18 30 09.2 -1.1**
MCH1 ⇓*e*P 18 30 09.2
MCH1 Michaelchurch 96.90 340⇓*e*P P **18 30 09.2 -1.1**
MCH1 ⇓*e*P 18 30 09.2
BNALP Bannalp 96.91 331⇓*i*P P **18 30 09.7 -0.6**
comp=Z,130nm,1.5s,mb6.1
HTR Trewern Hill 96.91 340⇓*e*P P **18 30 09.4 -1.0**
HTR AMb AMB 18 30 11.3
comp=Z,64nm,1.5s,mb5.8
HTR Trewern Hill 96.91 340⇓*e*P P **18 30 09.4 -1.0**
HTR AMb AMB 18 30 11.3
comp=Z,64nm,1.5s,mb5.8
JCT Junction City 96.91 51 P P **18 30 10.2 -0.1**
JCT pmax pmax
comp=Z,88nm,1.2s,mb6.1
JCT Junction City 96.91 51 *e*P P **18 30 10.0 -0.3**
comp=Z,88nm,1.2s,mb6.1
JCT LR LR
comp=Z,2µm,22.0s,MS5.5
DCN Croghan 96.91 343⇓*i*P P **18 30 09.5 -0.8**
MEZF Maizieres J'vi 97.02 334 *e*P P **18 30 10.3 -0.5**
comp=Z,469nm,1.9s,mb6.3
MEZF Maizieres J'vi 97.02 334 *e*P P **18 30 10.3 -0.5**
comp=Z,469nm,1.9s,mb6.6
HASLI Hasliberg 97.11 331⇓*i*P P **18 30 10.5 -0.7**
comp=Z,197nm,1.6s,mb6.3
FUSIO Fusio 97.12 331⇓*i*P P **18 30 10.8 -0.5**
comp=Z,143nm,1.8s,mb6.1
HGH Gray Hill 97.15 340⇓*e*P P **18 30 10.2 -1.3**
HGH AMb AMB 18 30 12.1
comp=Z,48nm,1.4s,mb5.7
HGH Gray Hill 97.15 340⇓*e*P P **18 30 10.2 -1.3**
HGH AMb AMB 18 30 12.1
comp=Z,48nm,1.4s,mb5.7
LOMF Lomont 97.21 332 *e*P P **18 30 10.7 -1.0**
RGNG Rignano Grg 97.29 324 P P **18 30 11.4 -0.6**
CING Cingoli 97.30 326 *i* Pr P **18 30 11.7 -0.4**
MUGIO Muggio 97.36 330⇓*i*P P **18 30 11.7 -0.7**
comp=Z,90nm,1.5s,mb6.0
WIMIS Wimmis 97.41 331⇓*i*P P **18 30 10.8 -1.8**
comp=Z,87nm,1.5s,mb6.0
TORNY Torny 97.51 332⇓*i*P P **18 30 12.9 -0.6**
comp=Z,121nm,2.0s,mb6.1
BRANT Les Verrieres 97.69 332⇓*i*P P **18 30 13.2 -0.6**
comp=Z,122nm,1.9s,mb6.1
FG4 Candela 97.71 323 P P **18 30 13.8 -0.1**
comp=Z,105nm,0.8s,mb6.4
CCM Cathedral Cave 97.71 41 P P **18 30 11.9 -2.1**
CCM pmax pmax
comp=Z,64nm,1.2s,mb6.0
CCM Cathedral Cave 97.71 41 *e*P P **18 30 11.8 -2.2**
comp=Z,64nm,1.2s,mb6.0

CCM LR LR
comp=Z,2µm,20.0s,MS5.7
MURB Monte Urbino 97.72 326 *i* Pr P **18 30 13.8 -0.2**
FNVD Fontana Vidola 97.73 328 *i* Pr P **18 30 14.4 +0.4**
MMK Mattmark 97.74 331⇓*i*P P **18 30 13.3 -0.8**
comp=Z,106nm,1.8s,mb6.1
SENIN Lac Senin 97.79 331⇓*e*P P **18 30 13.9 -0.4**
comp=Z,76nm,1.7s,mb5.9
GSCL Gusciola 97.85 328 *i* Pr P **18 30 14.6 0.0**
SLM Saint Louis 97.91 40 P P **18 30 14.6 -0.2**
SLM pmax pmax
comp=Z,16nm,0.5s,mb5.8
SLM Saint Louis 97.91 40 *e*P P **18 30 14.2 -0.7**
comp=Z,16nm,0.5s,mb5.8
AQU L'Aquila 97.94 325⇓*i*P P **18 30 14.7 -0.3**
AQU L'Aquila 97.94 325 P P **18 30 15.4 +0.4**
AQU L'Aquila 97.94 325 *e*P P **18 30 14.2 -0.8**
comp=Z,54nm,1.1s,mb6.0
AIGLE Aigle 97.95 332⇓*i*P P **18 30 14.3 -0.7**
comp=Z,116nm,2.5s,mb6.0
HEX Exmoor 97.96 340⇓*e*P P **18 30 14.0 -1.1**
HEX Exmoor 97.96 340⇓*e*P P **18 30 14.0 -1.1**
DIX Grande Dixence 97.96 331⇓*i*P P **18 30 14.7 -0.4**
comp=Z,99nm,2.1s,mb6.0
MIDA Miranda 98.01 324 *i* Pr P **18 30 15.2 -0.1**
BOB Bobbio (Coli) 98.06 329 *i* P P **18 30 14.8 -0.7**
BOB Bobbio (Coli) 98.06 329 *i* Pr P **18 30 14.8 -0.7**
OG01 Vacheresse 98.08 332 *e*P P **18 30 15.1 -0.5**
GIMEL Gimel 98.09 332⇓*i*P P **18 30 15.8 +0.1**
comp=Z,106nm,2.5s,mb5.9
CABF La Chapelle 98.11 332 *e*P P **18 30 15.0 -0.7**
comp=Z,68nm,1.2s,mb5.8
CABF La Chapelle 98.11 332 *e*P P **18 30 15.0 -0.7**
CABF pmax pmax
comp=Z,34nm,1.2s,mb5.8
CABF La Chapelle 98.11 332 *e*P P **18 30 15.0 -0.7**
comp=Z,34nm,1.2s,mb5.8
EMV Vieux Emosson 98.19 331⇓*i*P P **18 30 15.6 -0.5**
comp=Z,89nm,2.5s,mb5.9
FVM French Village 98.24 41 P P **18 30 15.7 -0.6**
FVM pmax pmax
comp=Z,45nm,1.4s,mb5.8
FVM French Village 98.24 41 *e*P P **18 30 15.5 -0.8**
comp=Z,50nm,1.4s,mb5.8
LOR Lormes 98.49 334 *e*P P **18 30 16.5 -0.9**
comp=Z,161nm,1.7s,mb6.0
LOR *e*R
comp=Z,2µm,17.2s
LOR Lormes 98.49 334 *e*P P **18 30 16.5 -0.9**
LOR pmax pmax
comp=Z,80nm,1.7s,mb6.0
LOR MLR MLR
comp=Z,2µm,17.3s,MS5.7
LOR Lormes 98.49 334 *e*P P **18 30 16.5 -0.9**
comp=Z,80nm,1.7s,mb6.0
LOR LR LR
comp=Z,2µm,17.3s,MS5.7
MIAR Mount Ida 98.59 45 *e*P P **18 30 17.5 -0.4**
MIAR pmax pmax
comp=Z,14nm,1.0s,mb5.5
MIAR MLR MLR
comp=Z,4µm,19.0s,MS5.9
MIAR Mount Ida 98.59 45 *e*P P **18 30 17.5 -0.4**
comp=Z,14nm,1.0s,mb5.4
MIAR LR LR
comp=Z,4µm,19.0s,MS5.9
RSL Roselend 98.61 331 *e*P P **18 30 17.2 -0.8**
LPL La Plagne 98.70 331 *e*P P **18 30 17.8 -0.6**
comp=Z,65nm,1.2s,mb5.7
LPL La Plagne 98.70 331 *e*P P **18 30 17.8 -0.6**
LPL pmax pmax
comp=Z,33nm,1.2s,mb5.7
LPL La Plagne 98.70 331 *e*P P **18 30 17.8 -0.6**
comp=Z,32nm,1.2s,mb5.7
LPG La Plagne 98.70 331 *e*P P **18 30 18.0 -0.4**
comp=Z,99nm,1.3s,mb5.9
LPG La Plagne 98.70 331 *e*P P **18 30 18.0 -0.4**
LPG pmax pmax
comp=Z,50nm,1.3s,mb5.9
LPG La Plagne 98.70 331 *e*P P **18 30 18.0 -0.4**
comp=Z,50nm,1.3s,mb5.9
SSF Saint Saulge 98.80 334 *e*P P **18 30 17.9 -0.9**
comp=Z,84nm,1.5s,mb5.8
SSF Saint Saulge 98.80 334 *e*P P **18 30 17.9 -0.9**
SSF pmax pmax
comp=Z,42nm,1.5s,mb5.8
SSF Saint Saulge 98.80 334 *e*P P **18 30 17.9 -0.9**
comp=Z,42nm,1.5s,mb5.8
AAM Ann Arbor 98.85 34 PFAKE 18 30 30.0 +11
AAM LR LR
comp=Z,3µm,21.0s,MS5.8
FLN La Foliniere 98.86 337 *e*P P **18 30 18.0 -1.1**
FLN *e*R
comp=Z,3µm,22.5s
FLN La Foliniere 98.86 337 *e*P P **18 30 18.0 -1.1**
FLN LR LR
comp=Z,3µm,22.5s,MS5.7
LDF La Druitiere 98.88 337 *e*P P **18 30 18.1 -1.1**
comp=Z,124nm,1.8s,mb5.8
LDF La Druitiere 98.88 337 *e*P P **18 30 18.1 -1.1**
LDF pmax pmax
comp=Z,62nm,1.8s,mb5.8
LDF La Druitiere 98.88 337 *e*P P **18 30 18.1 -1.1**
comp=Z,62nm,1.8s,mb5.8
SMF Signal de Mont 99.00 333 *e*P P **18 30 18.8 -0.9**
comp=Z,124nm,1.6s,mb5.9
SMF Signal de Mont 99.00 333 *e*P P **18 30 18.8 -0.9**
SMF pmax pmax
comp=Z,62nm,1.5s,mb5.9
SMF Signal de Mont 99.00 333 *e*P P **18 30 18.8 -0.9**
comp=Z,62nm,1.5s,mb5.9
AVF Avril sur Loir 99.08 334 *e*P P **18 30 19.2 -0.9**
comp=Z,140nm,1.5s,mb6.0
AVF Avril sur Loir 99.08 334 *e*P P **18 30 19.2 -0.9**
AVF pmax pmax
comp=Z,70nm,1.5s,mb6.0
AVF Avril sur Loir 99.08 334 *e*P P **18 30 19.2 -0.9**
comp=Z,70nm,1.5s,mb6.0
SIUC Southern Illin 99.13 40 *e*P P **18 30 19.9 -0.4**
MBDF Montbardon 99.30 331 *e*P P **18 30 20.5 -0.6**
comp=Z,61nm,1.3s,mb5.7
MBDF Montbardon 99.30 331 *e*P P **18 30 20.5 -0.6**
MBDF pmax pmax
comp=Z,31nm,1.3s,mb5.7
MBDF Montbardon 99.30 331 *e*P P **18 30 20.5 -0.6**
comp=Z,30nm,1.3s,mb5.7
GRR Gorron 99.31 337 *e*P P **18 30 20.3 -0.8**
comp=Z,65nm,1.2s,mb5.7
GRR Gorron 99.31 337 *e*P P **18 30 20.3 -0.8**
GRR pmax pmax
comp=Z,33nm,1.3s,mb5.7
GRR Gorron 99.31 337 *e*P P **18 30 20.3 -0.8**
comp=Z,32nm,1.3s,mb5.7
BGF Bois d'Agland 99.47 334 *e*P P **18 30 21.0 -0.8**
comp=Z,72nm,1.4s,mb5.7
BGF Bois d'Agland 99.47 334 *e*P P **18 30 21.0 -0.8**
BGF pmax pmax
comp=Z,36nm,1.4s,mb5.7
BGF Bois d'Agland 99.47 334 *e*P P **18 30 21.0 -0.8**
comp=Z,36nm,1.4s,mb5.7
CEL Celeste 99.51 321 P P **18 30 22.5 +0.5**
SAOF Saorge 99.53 330 *e*P P **18 30 20.5 -1.6**
ORIF Oris-en-Rattie 99.54 331 *e*P P **18 30 21.4 -0.7**
comp=Z,39nm,1.1s,mb5.4
ORIF *e*R
comp=Z,3µm,18.0s
ORIF Oris-en-Rattie 99.54 331 *e*P P **18 30 21.4 -0.7**
ORIF pmax pmax
comp=Z,19nm,1.1s,mb5.4
ORIF Oris-en-Rattie 99.54 331 *e*P P **18 30 21.4 -0.7**
comp=Z,19nm,1.1s,mb5.5
PLDF La Plantade 99.64 333 *e*P Pdif 18 30 22.2 -0.4
NATX Nacogdoches 99.64 48 *e*P Pdif 18 30 23.2 +0.6
comp=Z,25nm,1.1s
NATX LR LR
comp=Z,4µm,20.0s,MS5.9
SBF Sospel 99.68 330 *e*P Pdif 18 30 21.3 -1.5
comp=Z,63nm,1.1s
SBF Sospel 99.68 330 *e*P Pdif 18 30 21.3 -1.5
SBF pmax pmax
comp=Z,31nm,1.1s,mb5.7
SBF Sospel 99.68 330 *e*P Pdif 18 30 21.3 -1.5
comp=Z,32nm,1.1s
AGO Saint Agoulin 99.77 334 *e*P Pdif 18 30 22.7 -0.4
USIN University of 99.84 39 *e*P Pdif 18 30 23.4 0.0
comp=Z,26nm,1.0s

TCF	Toulx Ste Croi	99.94	334	eP	Pdif	18 30 23.2	-0.7
	comp=Z,77nm,1.8s						
TCF	Toulx Ste Croi	99.94	334	eP	Pdif	18 30 23.2	-0.7
TCF				pmax	pmax		
	comp=Z,38nm,1.8s,mb5.5						
TCF	Toulx Ste Croi	99.94	334	eP	Pdif	18 30 23.2	-0.7
	comp=Z,38nm,1.8s						
HKT	Hockley	99.98	50	eP	Pdif	18 30 24.2	+0.1
HKT				pmax	pmax		
	comp=Z,38nm,1.6s,mb5.6						
HKT				MLR	MLR		
	comp=Z,4µm,19.0s,MS6.0						
HKT	Hockley	99.98	50	eP	Pdif	18 30 24.2	+0.1
	comp=Z,38nm,1.6s						
HKT				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
SGMF	Saint Gilles	100.01	338	eP	Pdif	18 30 23.6	-0.6
	comp=Z,102nm,1.6s						
SGMF	Saint Gilles	100.01	338	eP	Pdif	18 30 23.6	-0.6
SGMF				pmax	pmax		
	comp=Z,51nm,1.6s						
SGMF	Saint Gilles	100.01	338	eP	Pdif	18 30 23.6	-0.6
	comp=Z,51nm,1.6s						
PYM	Petit Puy Mans	100.06	333	eP	Pdif	18 30 24.9	+0.4
GLAT	Glass	100.07	41	ePdif	Pdif	18 30 24.1	-0.3
VIVF	Saint-Julien-l	100.11	332	eP	Pdif	18 30 23.9	-0.7
	comp=Z,77nm,1.4s						
VIVF	Saint-Julien-l	100.11	332	eP	Pdif	18 30 23.9	-0.7
VIVF				pmax	pmax		
	comp=Z,39nm,1.4s						
VIVF	Saint-Julien-l	100.11	332	eP	Pdif	18 30 23.9	-0.7
	comp=Z,39nm,1.4s						
ROSF	Rostrenen	100.18	339	eP	Pdif	18 30 24.3	-0.7
	comp=Z,87nm,1.4s						
ROSF	Rostrenen	100.18	339	eP	Pdif	18 30 24.3	-0.7
ROSF				pmax	pmax		
	comp=Z,44nm,1.4s						
ROSF	Rostrenen	100.18	339	eP	Pdif	18 30 24.3	-0.7
	comp=Z,44nm,1.4s						
MIR	Mirnyy	100.18	198d	iP	Pdif	18 30 21.0	-4.0
MIR				pmax	pmax		
	comp=Z,270nm,1.5s						
HALT	Halls	100.28	41	ePdif	Pdif	18 30 25.3	-0.2
LBL	Lubilhac	100.39	333	eP	Pdif	18 30 25.9	0.0
SMRF	Simiane la Rot	100.42	331	eP	Pdif	18 30 25.2	-0.8
WCI	Wyandotte Cave	100.42	38	P	Pdif	18 30 25.6	-0.4
WCI				pmax	pmax		
	comp=Z,14nm,1.4s						
WCI	Wyandotte Cave	100.42	38	ePdif	Pdif	18 30 25.3	-0.8
	comp=Z,14nm,1.4s						
WCI				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
QUIF	Quistinic	100.51	338	eP	Pdif	18 30 25.5	-0.9
	comp=Z,59nm,1.6s						
QUIF	Quistinic	100.51	338	eP	Pdif	18 30 25.5	-0.9
QUIF				pmax	pmax		
	comp=Z,30nm,1.6s						
QUIF	Quistinic	100.51	338	eP	Pdif	18 30 25.5	-0.9
	comp=Z,30nm,1.6s						
MFF	Saint Martin d	100.57	336	eP	Pdif	18 30 27.1	+0.4
	comp=Z,89nm,1.7s						
MFF	Saint Martin d	100.57	336	eP	Pdif	18 30 27.1	+0.4
MFF				pmax	pmax		
	comp=Z,45nm,1.7s						
MFF	Saint Martin d	100.57	336	eP	Pdif	18 30 27.1	+0.4
	comp=Z,45nm,1.7s						
ACSO	Alum Creek Sta	100.73	35	ePdif	Pdif	18 30 27.5	+0.1
	comp=Z,8.3nm,0.8s						
ACSO				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
ERPA	Erie	100.77	32	PFAKE		18 30 40.0	+12
ERPA				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
HVZN	Vizzini	100.94	321	i Pr		18 30 28.8	
WVT	Waverly	101.02	40	eP	Pdif	18 30 28.4	-0.3
WVT				pmax	pmax		
	comp=Z,39nm,1.6s						
WVT				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.8						
WVT	Waverly	101.02	40	ePdif	Pdif	18 30 28.4	-0.3
	comp=Z,39nm,1.6s						
WVT				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
RJF	Les Rejaudoux	101.03	334	eP	Pdif	18 30 28.4	-0.3
	comp=Z,66nm,1.4s						
RJF				eR			
	comp=Z,3µm,19.5s						
RJF	Les Rejaudoux	101.03	334	eP	Pdif	18 30 28.4	-0.3
RJF				pmax	pmax		
	comp=Z,33nm,1.4s						
RJF				MLR	MLR		
	comp=Z,3µm,19.5s,MS5.8						
RJF	Les Rejaudoux	101.03	334	eP	Pdif	18 30 28.4	-0.3
	comp=Z,33nm,1.4s						
RJF				LR	LR		
	comp=Z,3µm,19.5s,MS5.8						
LASF	Ste Croix	101.08	332	eP	Pdif	18 30 28.4	-0.6
	comp=Z,67nm,1.4s						
CAF	Calviac	101.12	333	eP	Pdif	18 30 29.1	-0.1
	comp=Z,40nm,1.3s						
CAF	Calviac	101.12	333	eP	Pdif	18 30 29.1	-0.1
CAF				pmax	pmax		
	comp=Z,20nm,1.3s						
CAF	Calviac	101.12	333	eP	Pdif	18 30 29.1	-0.1
	comp=Z,20nm,1.3s						
LFF	La Frestale	101.63	334	eP	Pdif	18 30 31.3	-0.1
	comp=Z,63nm,1.3s						
LFF	La Frestale	101.63	334	eP	Pdif	18 30 31.3	-0.1
LFF				pmax	pmax		
	comp=Z,32nm,1.3s						
LFF	La Frestale	101.63	334	eP	Pdif	18 30 31.3	-0.1
	comp=Z,32nm,1.3s						
PLAL	Pickwick Lake	101.67	41	ePdif	Pdif	18 30 30.8	-0.8
	comp=Z,30nm,1.6s						
PLAL				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
NCB	Newcomb	101.84	27	PFAKE		18 30 40.0	+7.6
NCB				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
MTLF	Montolieu	102.36	332	eP	Pdif	18 30 34.2	-0.5
	comp=Z,23nm,1.3s						
MTLF	Montolieu	102.36	332	eP	Pdif	18 30 34.2	-0.5
MTLF				pmax	pmax		
	comp=Z,12nm,1.3s						
MTLF	Montolieu	102.36	332	eP	Pdif	18 30 34.2	-0.5
	comp=Z,12nm,1.3s						
LBNH	Lisbon	102.53	26	PFAKE		18 30 50.0	+15
LBNH				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
MCWV	Mont Chateau	102.74	33	PFAKE		18 30 50.0	+14
MCWV				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
SWET	Sewanee	102.76	40	ePdif	Pdif	18 30 35.8	-0.7
SSPA	Standing Stone	102.92	31	ePdif	Pdif	18 30 37.2	+0.1
	comp=Z,26nm,1.5s						
SSPA				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
ETSF	Etsaut	103.86	334	eP	Pdif	18 30 41.2	-0.1
	comp=Z,49nm,1.5s						
ETSF	Etsaut	103.86	334	eP	Pdif	18 30 41.2	-0.1
ETSF				pmax	pmax		
	comp=Z,24nm,1.5s						
ETSF	Etsaut	103.86	334	eP	Pdif	18 30 41.2	-0.1
	comp=Z,24nm,1.5s						
SJPF	Ste Jean	103.94	335	eP	Pdif	18 30 41.6	-0.1
VNDA	Vanda	104.08	176	PKKPbc	PKKPbc	18 46 31.6	+0.7
	comp=Z,2.8nm,1.1s,baz=300,slow=4.1,SNR=5.1						
VNDA	Vanda	104.08	176	PFAKE		18 30 50.0	+7.7
VNDA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
HRV	Harvard--Oak R	104.14	26	PFAKE		18 30 50.0	+7.4
HRV				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
BLA	Blacksburg	104.32	35	PFAKE		18 30 50.0	+6.6
BLA				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
WES	Weston	104.33	26	PFAKE		18 30 50.0	+6.6
WES				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
SBA	Scott Base	104.73	175	PFAKE		18 30 50.0	+4.8
SBA				LR	LR		
	comp=Z,782nm,21.0s,MS5.2						
KEST	Kesra	104.95	323	Pdiff	Pdif	18 30 45.2	-1.0
	comp=Z,3.8nm,1.0s,baz=249,slow=4.5,SNR=4.9						
CBN	Corbin	105.08	33	PFAKE		18 35 10.0	+8.7
CBN				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
ERTA	Horta de San J	105.12	332	P	PKiKP	18 35 09.3	+7.9
EARI	Arriondas	105.24	337	P	PKiKP	18 35 09.9	+8.4
ESDC	Sonseca Array	107.94	335	PKiKP	PKiKP	18 35 06.2	-0.4
	comp=Z,0.5nm,0.6s,baz=25,slow=5.3,SNR=4.3						
ESDC				PP	PP	18 35 28.7	+0.1
	comp=Z,3.5nm,0.9s,baz=29,slow=6.0,SNR=5.3						
ESDC				PKKPbc	PKKPbc	18 46 18.9	-0.2
	comp=Z,1.5nm,0.8s,baz=193,slow=2.5,SNR=10						
ESLA	Sonseca Array	107.94	335	PFAKE		18 35 20.0	+13
ESLA				LR	LR		
	comp=Z,14µm,22.0s,MS6.5						
CMIG	Matias Romero	108.39	60	PKKPbc	PKKPbc	18 46 15.6	-2.0
	comp=Z,4.3nm,0.9s,baz=53,slow=3.0,SNR=5.8						
DWPF	Disney	110.53	42	PFAKE		18 35 20.0	+8.6
DWPF				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
MAW	Mawson	110.68	204	PKiKP	PKiKP	18 35 10.7	-1.0
	comp=Z,3.4nm,0.9s,baz=16,slow=0.6,SNR=12						
MAW				PP	PP	18 35 49.6	+1.2
	comp=Z,9.1nm,1.1s,baz=58,slow=7.1,SNR=4.6						
MAW				PKKPbc	PKKPbc	18 46 10.7	+0.4
	comp=Z,4.2nm,1.0s,baz=253,slow=2.5,SNR=7.4						
MAW	Mawson	110.68	204	ePKiKP	PKiKP	18 35 10.3	-1.4
MDT	Midelt	114.11	331	PKP	PKiKP	18 35 19.7	+1.4
	comp=Z,4.7nm,0.9s,baz=46,slow=2.5,SNR=9.9						
MDT				PKKPbc	PKKPbc	18 45 59.4	+0.6
	comp=Z,4.0nm,1.1s,baz=192,slow=4.4,SNR=5.6						
RPN	Rapa Nui	115.40	109	PFAKE		18 35 30.0	+9.3
RPN				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
BBSR	BB Station	115.62	27	PFAKE		18 35 30.0	+8.9
BBSR				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
QSPA	South Pole Qui	116.01	180	eP	PKPdf	18 35 20.2	-1.7
QSPA				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
SYO	Syowa Base	119.39	204⇑	ePKPdf	PKPdf	18 35 26.0	-2.4
SYO	Syowa Base	119.39	204⇓	ePP	PP	18 36 50.0	+0.2
LSZ	Lusaka	119.51	267	PKP	PKPdf	18 35 29.1	+0.4
	comp=Z,50nm,0.9s,baz=60,slow=2.0,SNR=48						
LSZ				PKKPbc	PKKPbc	18 45 40.7	+0.9
	comp=Z,2.2nm,0.9s,baz=245,slow=3.2,SNR=4.2						
LSZ	Lusaka	119.51	267	ePKPdf	PKPdf	18 35 29.8	+1.2
LSZ				e		18 35 36.8	
LSZ				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
LBTB	Lobatse	124.93	257	PKP	PKPdf	18 35 39.4	+0.4
	comp=Z,31nm,0.8s,baz=134,slow=1.9,SNR=26						
LBTB	Lobatse	124.93	257	ePKPdf	PKPdf	18 35 39.3	+0.3
LBTB				e		18 35 46.7	
LBTB				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
BOSA	Boshof	126.11	253	PKP	PKPdf	18 35 41.4	+0.1
	comp=Z,14nm,0.9s,baz=62,slow=2.2,SNR=11						
BOSA	Boshof	126.11	253	ePKPdf	PKPdf	18 35 41.4	+0.2
BOSA				e		18 35 48.7	
BOSA				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
TOA0	Torodi Ar. Sit	126.37	312	ePKPdf	PKPdf	18 35 42.0	+0.2
TOA0				e		18 35 49.6	
TORD	Torodi Ar. Bea	126.37	312	PKP	PKPdf	18 35 41.9	+0.1
	comp=Z,42nm,0.9s,baz=15,slow=2.3,SNR=130						
TORD				PP	PP	18 37 21.0	-16
	comp=Z,11nm,1.0s,baz=30,slow=4.6,SNR=4.3						
TORD				PKKP		18 45 58.5	
	comp=Z,2.0nm,1.1s,baz=175,slow=0.9,SNR=4.1						
TORD	Torodi Ar. Bea	126.37	312	PKP	PKPdf	18 35 41.9	+0.1
TORD				PP	PP	18 37 21.0	-16
TORD				PKKP		18 45 58.5	
SJG	San Juan	127.07	37	PKIKP	PKPdf	18 35 42.9	-0.2
SJG				MLR	MLR		
	comp=Z,2µm,20.0s						
NVL	N'lazarevskaya	127.93	198d	iPKIKP	PKPdf	18 35 42.9	-1.9
NVL				pmax	pmax		
	comp=Z,85nm,1.3s						
NVL				MLR	MLR		
	comp=Z,2µm,17.8s,MS5.7						
MAIT	Maitri	127.95	198	ePdiff	PP	18 37 45.6	-1.8
TSUM	Tsumeb	130.37	266	PKP	PKPdf	18 35 50.7	+1.3
	comp=Z,23nm,0.9s,baz=48,slow=1.8,SNR=28						
TSUM				PKKP		18 45 50.6	
	comp=Z,0.4nm,0.3s,baz=105,slow=7.5,SNR=3.5						
TSUM	Tsumeb	130.37	266	ePKPdf	PKPdf	18 35 49.7	+0.3
TSUM				e		18 35 57.8	
TSUM				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
SUR	Sutherland	130.57	249	PKP	PKPdf	18 35 50.0	+0.2
	comp=Z,17nm,0.9s,baz=108,slow=2.3,SNR=5.6						
SUR	Sutherland	130.57	249	PKP	PKPdf	18 35 50.0	+0.2
SUR				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
SNAA	Sanae	130.92	193	PKP	PKPdf	18 35 48.8	-1.6
	comp=Z,9.7nm,0.8s,baz=154,slow=1.9,SNR=58						
SNAA				PP	PP	18 38 04.0	-2.8
	comp=Z,4.4nm,1.1s,baz=163,slow=3.8,SNR=3.0						
SDV	Santo Domingo	131.51	49	ePKPdf	PKPdf	18 35 52.3	+0.8
SDV				LR	LR		
	comp=Z,853nm,20.0s,MS5.5						
ROSC	El Rosal	131.69	56	PKP	PKPdf	18 35 53.0	+1.1
	comp=Z,4.0nm,0.3s,baz=105,slow=19,SNR=28						
ROSC	El Rosal	131.69	56	ePKPdf	PKPdf	18 35 53.6	+1.7
FDF	Fort de France	132.49	34	eP	PKPdf	18 35 54.0	+0.6
DBIC	Dimbokro	135.47	313	PKP	PKPdf	18 35 59.9	+0.9
	comp=Z,31nm,0.7s,baz=32,slow=1.8,SNR=30						
DBIC	Dimbokro	135.47	313	ePKPdf	PKPdf	18 35 59.3	+0.3
DBIC				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
LIC	Lamto	135.91	313	ePKIKP	PKPdf	18 36 00.0	+0.2
	comp=Z,164nm,1.1s						
LIC				eR			
	comp=Z,487nm,21.0s						
LIC	Lamto	135.91	313	ePKPdf	PKPdf	18 36 00.0	+0.2
LIC				LR	LR		
	comp=Z,240nm,21.0s,MS4.9						
PMSA	Palmer Station	137.47	163	PFAKE		18 36 10.0	+7.3
PMSA				LR	LR		
	comp=Z,836nm,19.0s,MS5.5						
NNA	Nana	139.07	78	ePKPdf	PKPdf	18 36 05.0	-0.7
NNA				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
ARE	Arequipa	145.63	81⇓	iPKP2	PKPab	18 36 18.0	+0.1
PLCA	Paso Flores	147.99	126	PKPbc	PKPbc	18 36 22.6	-1.8
	comp=Z,105nm,0.6s,baz=234,slow=3.0,SNR=172						
PLCA	Paso Flores	147.99	126	PKP2	PKPbc	18 36 22.6	-1.8
PLCA				pmax	pmax		
	comp=Z,105nm,0.6s						
PLCA	Paso Flores	147.99	126	ePKPdf	PKPdf	18 36 21.7	+0.4
PLCA				ePKPbc	PKPbc	18 36 24.7	+0.4
PLCA				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
LPAZ	La Paz	148.53	78	ePKIKP	PKPdf	18 36 23.5	+1.3
LPAZ				e		18 36 27.8	
LPAZ				MLR	MLR		
	comp=Z,1µm,21.0s						
CEN1	Los Morros	148.88	92	eP	PKPdf	18 36 23.6	+0.9
CMCH	Combarbala	148.99	107	eP	PKPdf	18 36 22.2	-0.7
SAML	Samuel	149.01	61	ePKPdf	PKPdf	18 36 23.0	+0.1
SAML				ePKPbc	PKPbc	18 36 27.3	+0.3
SAML				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
TLL	Tololo Astrono	149.15	105	eP	PKPdf	18 36 23.8	+0.6
CLCH	Cerro Calan	149.29	112	eP	PKPdf	18 36 23.3	-0.1
FCH	Farellones	149.50	112	eP	PKPdf	18 36 23.5	-0.2
EFI	East Falkland	149.58	152	ePKP2	PKPbc	18 36 27.6	-0.8
EFI				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.8						
LVC	Limon Verde	149.86	90	ePKPdf	PKPdf	18 36 25.4	+1.1
LVC				ePKPbc	PKPbc	18 36 30.3	+1.2
LVC				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
MDZ	Mendoza	150.74	111	eP	PKPdf	18 36 25.4	-0.3
MDZ				i S		18 36 33.0	
CFAA	Coronel Fontan	151.34	108	PKP	PKPdf	18 36 26.3	-0.3
	comp=Z,2.4nm,0.9s,baz=288,slow=1.7,SNR=28						
CFAA				PKPbc	PKPbc	18 36 31.9	-0.7
	comp=Z,20nm,0.8s,baz=270,slow=2.6,SNR=113						
CFAA	Coronel Fontan	151.34	108	PKP	PKPdf	18 36 26.3	-0.2
CFAA				PKPbc	PKPbc	18 36 31.9	-0.7
HOPE	Hope Point	151.98	179	ePKPbc	PKPbc	18 36 32.8	-1.3
HOPE				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
ASCN	Ascension	152.53	308	ePKPdf	PKPdf	18 36 28.4	0.0
ASCN				e		18 36 35.9	
ASCN				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
RCBR	Riachuelo	159.70	360	PFAKE		18 36 50.0	+12
RCBR				LR	LR		
	comp=Z,1µm,21.0s,MS5.8						
CPUP	Villa Florida	160.87	95	PKP	PKPdf	18 36 38.7	-0.4
	comp=Z,12nm,0.9s,baz=299,slow=1.2,SNR=19						
CPUP	Villa Florida	160.87	95	PKIKP	PKPdf	18 36 38.7	-0.4
CPUP				pmax	pmax		
	comp=Z,12nm,0.9s						
CPUP	Villa Florida	160.87	95	ePKPdf	PKPdf	18 36 39.0	-0.1
CPUP				e		18 36 46.4	
CPUP				ePKPab	PKPab	18 37 21.6	+0.1
CPUP				LR	LR		
	comp=Z,308nm,20.0s						
BDFB	Brasilia	164.61	49	PKP	PKPdf	18 36 43.2	+0.5
	comp=Z,20nm,1.1s,baz=360,slow=2.1,SNR=15						
BDFB	Brasilia	164.61	49	PKP	PKPdf	18 36 43.2	+0.5
BDFB				LR	LR		
	comp=Z,3µm,19.0s						
CAM4	Nova Friburgo	172.87	59	eP	PKPdf	18 36 48.7	+0.7
CAM4				i		18 36 52.9	
CAM4				i		18 36 56.2	
CAM4				i		18 37 07.4	
CAM4				i		18 37 41.2	
CAM4				i		18 38 14.7	
CAM4	Nova Friburgo	172.87	59	eP	PKPdf	18 36 48.7	+0.7
CAM4				i		18 36 52.9	

NNC 06 18:32:56.7±3.3,4434N×8117E,h6^{km}±11^{km},mb3.6, mpv3.3,8C-1D,Error ellipse: s-maj=45.3km s-min=10.5km az=133.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK02	Makanchi Array	2.56	18	⇑Pn	Pn	18 33 38.9	+0.1
	5.6nm,0.5s,baz=196,slow=14						
MK02				⇑Pg	Pg	18 33 44.7	-1.0
	baz=190,slow=16						
MK02				⇑Lg		18 34 15.6	
	41nm,0.6s,baz=196,slow=31						
KNDC	Almaty	3.24	251	⇑Pg	Pg	18 33 55.5	-3.4
	21nm,0.5s						
KNDC				⇑Lg		18 34 41.8	
	42nm,0.5s						
TKM2	Tokmak 2	4.29	253	⇑Pg	Pg	18 34 13.3	-5.6
	1.0nm,0.6s						
TKM2				⇓Lg		18 35 10.8	
	1.1nm,0.5s						
KURK	Kurchatov	6.60	346	⇑Lg		18 36 32.1	
	14nm,1.0s						
KK31	Karatay Array	7.82	265	⇑Lg		18 36 60.0	
	2.2nm,0.5s,baz=73,slow=28,SNR=3.9						

*ISCJB **06** 18:57:16.0±0.5,988S±006×10821E±007,h10^{km}, mb4.2/18,Error ellipse: s-maj=10.3km s-min=7.7km az=134.9*
*BJI **06** 18:57:15.0,990S×10820E,h10^{km},mb4.5*
*IDC **06** 18:57:16.7±0.7,983S×10825E,h0^{km},mb4.2/11, mb1 4.2/13,mb1mx4.1/19,mbtmp4.2/13,ML3.8/2,Error ellipse: s-maj=31.1km s-min=14.2km az=61.0*
*NEIC **06** 18:57:18.0±0.5,985S×10822E,h10^{km},mb4.5/7,Error ellipse: s-maj=19.3km s-min=8.4km az=57.0*
ISC 06 18:57:18.1±0.5,989S±006×10822E±007,h10^{km},n37, σ1s10/41,mb4.2/18,3C-1D,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	Yogyakarta	2.91	45⇓	eP	Pn	18 57 54.9	-9.5
YOGI				eS	Sn	18 58 38.8	-0.6
BJII	Banjamegara	2.94	30⇑	iP	Pn	18 58 08.8	+4.0
BJII	Banjamegara	2.94	30⇑	eP	Pn	18 58 07.3	+2.5
BJII				eS	Sn	18 58 43.8	+3.7
PSI	Prapat	15.64	323	Pn	Pn	19 00 56.2	-2.4
	0.3nm,0.3s,baz=148,slow=19,SNR=2.6						
PSI				Sn	Sn	19 03 44.0	-7.9
	0.9nm,0.3s,baz=151,slow=11,SNR=6.7						
PSI	Prapat	15.64	323	Pn	Pn	19 00 56.2	-2.4
PSI				Sn	Sn	19 03 44.0	-7.9
MBWA	Marble Bar	15.75	137	Pn	Pn	19 00 58.5	-1.5
MBWA				Sn	Sn	19 03 36.9	-18
KKM	Kota Kinabalu	17.72	27	eP	Pn	19 01 24.7	-0.2
FITZ	Fitzroy Crossi	18.76	118	eP	Pn	19 01 40.2	+2.6
	8.1nm,1.4s						
FITZ	Fitzroy Crossi	18.76	118	P	Pn	19 01 38.1	+0.5
	0.2nm,0.3s,baz=46,slow=12,SNR=19						
NWAO	Narrogin (SRO)	24.39	161	P	P	19 02 37.1	+0.7
	6.0nm,0.8s,mb4.1,baz=303,slow=13,SNR=3.5						
WRAB	Tennant Creek	27.11	115	eP	P	19 02 52.7	-8.4
	11nm,1.0s,mb4.4						
WB2	Warramunga Arr	27.12	115	eP	P	19 02 53.0	-8.2
ASPA	Alice Springs	28.08	122	eP	P	19 03 09.1	-0.7
AS31	Alice Springs	28.08	122	eP	P	19 03 09.1	-0.7
ASAR	Alice Springs	28.08	122	P	P	19 03 09.3	-0.5
	1.4nm,0.7s,mb3.7,baz=304,slow=8.8,SNR=28						
ASAR				Sn	S	19 08 48.6	+54
	0.4nm,0.7s,baz=304,slow=24,SNR=4.0						
CHTO	Chiang Mai	29.95	342	eP	P	19 03 26.1	-0.3
	7.2nm,0.9s,mb4.4						
GYA	Guiyang	36.16	358⇑	iP	P	19 04 21.7	+1.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
STKA	Stephens Creek	37.84	130	eP	P	19 04 36.6	+1.7
	comp=Z,5.1nm,0.6s,mb4.4						
STKA	Stephens Creek	37.84	130	P	P	19 04 36.8	+1.9
	comp=Z,11nm,0.8s,mb4.6,baz=299,slow=7.5,SNR=22						
XAN	Xi'an	43.69	1	P	P	19 05 23.9	+0.7
XAN				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.5						
GTA	Gaotai	49.67	351	eP	P	19 06 05.4	-4.6
GTA				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb4.1						
MJAR	Matsushiro Arr	54.12	30	P	P	19 06 41.6	-1.5
	comp=Z,0.7nm,0.6s,mb3.8,baz=213,slow=8.9,SNR=4.6						
SONM	Songino Array	57.49	359	P	P	19 07 07.9	+0.5
	comp=Z,3.3nm,0.6s,mb4.5,baz=174,slow=7.9,SNR=30						
ULN	Ulaanbaatar	57.51	359	eP	P	19 07 07.6	+0.1
	comp=Z,7.7nm,0.9s,mb4.7						
MKAR	Makanchi Array	61.00	340	P	P	19 07 31.3	-0.4
	comp=Z,1.8nm,0.5s,mb4.4,baz=141,slow=7.8,SNR=20						
MKAR	Makanchi Array	61.00	340	P	P	19 07 31.3	-0.4
MAW	Mawson	64.98	198	P	P	19 07 58.0	-0.1
	comp=Z,1.9nm,0.7s,mb4.2,baz=59,slow=5.9,SNR=7.6						
MAW	Mawson	64.98	198	eP	P	19 07 57.9	-0.3
	comp=Z,3.5nm,0.9s,mb4.4						
KURK	Kurchatov	65.61	340	eP	P	19 08 01.4	-0.8
ZAL	Zalesovo	66.61	345	P	P	19 08 08.0	-0.7
	comp=Z,0.9nm,0.3s,mb4.2,baz=122,slow=2.9,SNR=4.0						
ZAL	Zalesovo	66.61	345	P	P	19 08 08.0	-0.7
BVAR	Borovoye Array	70.48	337	P	P	19 08 32.6	-0.2
	comp=Z,1.9nm,0.5s,mb4.3,baz=138,slow=9.1,SNR=13						
BRVK	Borovoye	70.55	337	eP	P	19 08 32.6	-0.6
	comp=Z,0.8nm,0.7s,mb3.8						
AKTK	Aktyubinsk	74.21	329	P	P	19 08 57.0	+1.9
AKTO	Aktyubinsk	74.21	329	P	P	19 08 57.0	+1.9
	comp=Z,0.9nm,0.3s,mb4.2,baz=115,slow=4.9,SNR=5.8						
BRTR	Keskin Array B	84.64	312	P	P	19 09 52.0	+0.1
	comp=Z,0.2nm,0.4s,mb3.6,baz=120,slow=5.2,SNR=2.5						
WMOK	Wichita Mounta	145.07	41	PKP	PKPdf	19 16 56.3	+0.6

*ISCJB **06** 19:06:51.4±1.0,1009S±009×1078E±01,h33^{km},mb3.8/7, Error ellipse: s-maj=18.8km s-min=12.8km az=36.9*
*IDC **06** 19:06:51.2±2.7,958S×10856E,h0^{km},mb3.8/5,mb1 3.8/5, mb1mx3.6/15,mbtmp3.8/5,Error ellipse: s-maj=146.0km s-min=22.4km az=53.0*
*NEIC **06** 19:06:52.8±1.8,960S×10856E,h10^{km},mb4.0/2,Error ellipse: s-maj=91.0km s-min=13.3km az=55.0*
ISC 06 19:06:54.3±0.9,1009S±010×1079E±01,h35^{km},n8, σ1s11/9,mb3.8/7,1D,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	3.28	34⇓	eP	Pn	19 07 40.5	-2.7
BJII				eS	Sn	19 08 22.0	+1.0
ASAR	Alice Springs	28.27	122	P	P	19 12 44.1	0.0
	0.3nm,0.7s,mb3.0,baz=295,slow=8.6,SNR=4.5						
CHTO	Chiang Mai	30.03	343	eP	P	19 12 59.9	+0.1
	1.7nm,0.7s,mb3.9						
STKA	Stephens Creek	37.98	130	P	P	19 14 09.0	+0.3
	2.3nm,0.7s,mb4.0,baz=307,slow=9.2,SNR=4.4						
SONM	Songino Array	57.68	359	P	P	19 16 40.2	-0.9
	0.7nm,0.5s,mb4.0,baz=178,slow=8.7,SNR=8.7						
ULN	Ulaanbaatar	57.70	359	eP	P	19 16 40.5	-0.8

	0.8nm,0.5s,mb4.0						
MKAR	**Makanchi Array**	**61.06**	**340**	P	**P**	**19 17 04.5**	**0.0**
	0.4nm,0.5s,mb3.8,baz=146,slow=8.8,SNR=9.0						
BVAR	**Borovoye Array**	**70.53**	**337**	P	**P**	**19 18 07.6**	**+2.1**
	0.5nm,0.5s,mb3.7,baz=135,slow=11,SNR=4.5						

*IDC **06** 19:13:17.3±2.8, 657S×14684E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/12, mbtmp3.6/4, ML2.8/1, MS4.0/1, Ms1 4.0/1, ms1mx2.9/19, Error ellipse: s-maj=93.8km s-min=28.7km az=82.0*

*ISCJB **06** 19:13:24.4±3.4, 68S±02×1469E±02, h70km±28km, mb3.2/2, Error ellipse: s-maj=35.2km s-min=31.3km az=57.6*

*NEIC **06** 19:13:24.6±2.8, 671S×14687E, h56km±24km, mb4.2/1, Error ellipse: s-maj=26.4km s-min=21.9km az=211.0*

ISC 06 19:13:24.9±3.4**, 67S**±02×**1469E**±02**, h58km**±29km**, n12, σ0.43**/13**, mb3.4**/2**, MS3.9**/1**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.69**	**175**	Pn	**Pn**	**19 14 05.7**	**0.0**
	11nm,0.3s,baz=292,slow=16,SNR=36						
PMG				Sn	**Sn**	**19 14 42.1**	**+5.0**
	36nm,0.3s,baz=10,slow=13,SNR=8.7						
PMG	**Port Moresby**	**2.69**	**175**	*e*P	**Pn**	**19 14 05.7**	**-0.1**
PMG				Sn	**Sn**	**19 14 42.1**	**+5.0**
KAKA	**Kakadu**	**15.45**	**246**	*e*P	**Pn**	**19 16 58.7**	**-0.4**
	8.5nm,0.5s						
WRAB	**Tennant Creek**	**17.92**	**222**	*e*Pn	**Pn**	**19 17 29.7**	**-0.3**
WB2	**Warramunga Arr**	**17.93**	**222**	*e*P	**Pn**	**19 17 30.6**	**+0.5**
AS31	**Alice Springs**	**20.98**	**215**	*e*P	**P**	**19 18 03.5**	**+0.2**
ASAR	**Alice Springs**	**20.98**	**215**	P	**P**	**19 18 03.5**	**+0.2**
	1.0nm,0.4s,baz=53,slow=9.3,SNR=26						
ASPA	**Alice Springs**	**20.99**	**215**	*e*P	**P**	**19 17 58.1**	**-5.2**
STKA	**Stephens Creek**	**25.53**	**191**	P	**P**	**19 18 47.5**	**-0.5**
	0.9nm,0.7s,mb3.4,baz=15,slow=16,SNR=2.7						
STKA	**Stephens Creek**	**25.53**	**191**	*e*P	**P**	**19 18 47.4**	**-0.6**
AFI	**Afiamalu**	**41.23**	**103**	LR	LR	19 35 37.4	
	comp=Z,171nm,19.6s,MS3.9,baz=177,slow=32						
MKAR	**Makanchi Array**	**77.98**	**321**	P	**P**	**19 25 17.1**	**+0.2**
	0.3nm,0.6s,mb3.4,baz=105,slow=6.0,SNR=4.2						

IGQ 06 19:18:01.2, 410S×8017W, h17km±8km, Mb4.5, Ms4.3, 4C-1D, Error ellipse: s-maj=10.1km s-min=1.6km az=178.9, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HCA		**1.65**	**154**	⇑P	Pn	19 18 30.1	+0.7
HCA				S	Sn	19 18 52.7	+2.6
PT18	**Porculla**	**1.88**	**159**	⇑P	Pn	19 18 34.5	+1.9
PT18				S	Sn	19 18 59.2	+3.4
CHP8	**Chiclayo**	**2.67**	**173**	P	Pn	19 18 45.1	+1.7
IGUA	**Igualata**	**3.01**	**31**	P	Pn	19 18 49.4	+1.3
ARRY	**Arrayan**	**3.09**	**34**	P	Pn	19 18 49.5	+0.3
ARRY				S	Sn	19 19 26.1	+0.3
PATA	**Patacocha**	**3.11**	**34**	P	Pn	19 18 51.1	+1.7
PATA				S	Sn	19 19 28.1	+1.9
CUSU	**Cusua**	**3.13**	**33**	P	Pn	19 18 53.1	+3.4
CUSU				S	Sn	19 19 30.9	+4.1
JUIV	**Juive**	**3.16**	**33**	P	Pn	19 18 53.0	+2.9
JUIV				S	Sn	19 19 30.7	+3.3
ULBA	**Ulba**	**3.17**	**34**	P	Pn	19 18 52.3	+2.1
ULBA				S	Sn	19 19 30.7	+3.1
RUN5	**Runtun**	**3.19**	**33**	P	Pn	19 18 52.5	+2.0
RUN5				S	Sn	19 19 31.6	+3.5
PP16	**Cajamarca**	**3.43**	**151**	P	Pn	19 18 56.8	+2.9
PP16				S	Sn	19 19 37.2	+3.1
QIL1	**Quilotoa**	**3.46**	**21**	P	Pn	19 18 54.1	-0.2
QIL1				S	Sn	19 19 35.4	+0.5
PISA	**Pisayambo**	**3.51**	**31**	P	Pn	19 18 58.2	+3.2
CAMI	**Rancho Maria**	**3.79**	**26**	⇓P	Pn	19 19 03.3	+4.5
TAMB	**Tambo**	**3.83**	**28**	P	Pn	19 19 02.6	+3.2
VC1	**Cotopaxi 1**	**3.86**	**27**	P	Pn	19 19 04.1	+4.2
MAG1	**Magdalena**	**4.02**	**6**	P	Pn	19 19 04.4	+2.4
ANTI	**Antisana**	**4.14**	**29**	P	Pn	19 19 08.0	+4.3
JUA2	**San Juan 2**	**4.17**	**22**	P	Pn	19 19 09.6	+5.6
TERV	**Terraza Guagua**	**4.20**	**22**	⇑P	Pn	19 19 08.8	+4.3
TERV				S	Sn	19 19 58.7	+5.5
GGP	**Refugio Guagua**	**4.21**	**22**	P	Pn	19 19 08.2	+3.7
GGP				S	Sn	19 19 55.0	+1.8
PINO	**Pino**	**4.21**	**22**	⇑P	Pn	19 19 08.9	+4.2
YANA	**Yana**	**4.27**	**22**	P	Pn	19 19 07.8	+2.4
CAYA	**Cayambe**	**4.68**	**28**	P	Pn	19 19 21.2	+10

*BJI **06** 19:28:15.8, 2267S×17664W, h30km, mB5.5, mb4.9, Ms5.2, Msz4.8*

*ISCJB **06** 19:28:16.7±0.2, 2232S±006×17636W±005, h33km, mb4.9/34, MS4.5/3, Error ellipse: s-maj=9.5km s-min=4.5km az=101.8*

*MOS **06** 19:28:16.8±0.9, 2225S×17630W, h33km, mb5.0/12, Error ellipse: s-maj=14.0km s-min=10.7km az=138.1*

*IDC **06** 19:28:17.2±7.5, 2230S×17636W, h27km±50km, mb4.4/9, mb1 4.6/12, mb1mx4.5/16, mbtmp4.7/12, ML4.2/3, MS4.2/2, Ms1 4.2/2, ms1mx3.5/17, Error ellipse: s-maj=23.5km s-min=16.4km az=132.0*

*NEIC **06** 19:28:18.0±2.5, 2228S×17629W, h33km±17km, mb4.9/17, Error ellipse: s-maj=10.9km s-min=6.0km az=144.0*

ISC 06 19:28:16.6±3.0**, 2230S**±007×**17633W**±005**, h20km**±21km**, h43km**±1.2km**:pP-P, n223, σ0.66**/185**, mb4.9**/34**, MS4.5**/3**, 59C-54D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.40**	**28**	Pn	**Pn**	**19 30 31.4**	**+0.6**
	9.8nm,0.3s,baz=4.4,slow=16,SNR=17						
AFI				Sn	**Sn**	**19 32 07.7**	**-8.2**
	13nm,0.3s,baz=32,slow=23,SNR=3.2						
AFI	**Afiamalu**	**9.40**	**28**	*e*Pn	**Pn**	**19 30 31.4**	**+0.6**
AFI				*e*Sn	**Sn**	**19 32 09.1**	**-6.8**
RAR	**Rarotonga**	**15.42**	**89**	Pn	**Pn**	**19 31 52.1**	**-0.8**
	4.7nm,0.3s,baz=235,slow=7.9,SNR=12						
RAR				Sn	**Sn**	**19 34 28.3**	**-15**
	5.4nm,0.3s,baz=84,slow=17,SNR=4.0						
RAR				LR	LR	19 36 01.7	
	comp=Z,749nm,18.3s,baz=291,slow=30						
DZM	**Mont Dzumac**	**15.96**	**268**	*e*P	**Pn**	**19 32 07.9**	**+7.9**
DZM	**Mont Dzumac**	**15.96**	**268**	Pn	**Pn**	**19 32 09.8**	**+10**
	0.7nm,0.3s,baz=84,slow=19,SNR=18						
URZ	**Urewera**	**16.88**	**198**	Pn	**Pn**	**19 32 10.8**	**-0.9**
	2.3nm,0.3s,baz=350,slow=11,SNR=6.7						
URZ				Sn	**Sn**	**19 35 10.3**	**-8.3**
	1.6nm,0.3s,baz=241,slow=17,SNR=4.9						
BKZ	**Black Stump Fm**	**17.90**	**198**	*e*PN	**Pn**	**19 32 21.9**	**-2.5**
QRZ	**Quartz Range**	**20.74**	**204**	*e*PN	**P**	**19 33 00.2**	**+4.3**
NNZ	**Nelson**	**20.77**	**202**	*e*PN	**P**	**19 33 00.2**	**+4.0**
THZ	**Tophouse**	**21.41**	**203**	*e*PN	**P**	**19 33 05.0**	**+1.8**
THZ				*e*SN	**S**	**19 36 44.7**	**-15**
DSZ	**Denniston Nort**	**21.81**	**204**	*e*PN	**P**	**19 33 09.0**	**+1.6**
WVZ	**Waitaha Valley**	**23.35**	**204**	*e*PN	**P**	**19 33 21.1**	**-2.7**
PPT	**Papeete**	**25.57**	**84**	LR	LR	19 40 46.4	
	comp=Z,632nm,19.9s,MS4.1,baz=320,slow=29						
ARMA	**Armidale**	**29.75**	**247**	*e*P	**P**	**19 34 24.4**	**+2.7**
CNB	**Canberra Magne**	**32.58**	**239**	*e*P	**P**	**19 34 47.7**	**+1.2**
	22nm,1.1s,mb5.0						
CTA	**Charters Tower**	**34.90**	**267**	⇑*i*P	**P**	**19 35 08.4**	**+1.6**
	24nm,0.3s,mb5.6						
CTA	**Charters Tower**	**34.90**	**267**	⇑*i*P	**P**	**19 35 08.4**	**+1.6**
CTA				pmax	pmax		
	comp=Z,24nm,0.3s						
CTAO	**Charters Tower**	**34.90**	**267**	*e*P	**P**	**19 35 08.1**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,35nm,0.4s,mb5.6						
CTAO	**Charters Tower**	**34.90**	**267**	*e*P	**P**	**19 35 08.1**	**+1.3**
	comp=Z,35nm,0.4s,mb5.6						
TOO	**Toolangi**	**36.15**	**236**	*e*P	**P**	**19 35 19.1**	**+1.6**
	comp=Z,3.5nm,0.5s,mb4.5						
PMG	**Port Moresby**	**37.28**	**284**	P	**P**	**19 35 26.8**	**-0.2**
	comp=Z,20nm,0.7s,mb5.0,baz=103,slow=2.1,SNR=8.2						
STKA	**Stephens Creek**	**38.46**	**246**	*e*P	**P**	**19 35 36.8**	**-0.3**
	comp=Z,12nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**38.46**	**246**	P	**P**	**19 35 37.0**	**-0.1**
	comp=Z,13nm,0.6s,mb4.8,baz=86,slow=9.1,SNR=24						
AS31	**Alice Springs**	**45.65**	**258**	*e*P	**P**	**19 36 35.4**	**-0.4**
ASAR	**Alice Springs**	**45.65**	**258**	P	**P**	**19 36 35.2**	**-0.6**
	comp=Z,23nm,0.7s,mb5.2,baz=91,slow=7.0,SNR=134						
ASAR				PcP	PcP	19 38 11.8	-1.9
	comp=Z,2.3nm,0.6s,baz=112,slow=4.0,SNR=4.5						
ASAR				S	**S**	**19 43 08.0**	**-9.5**
	comp=Z,0.4nm,0.7s,baz=97,slow=15,SNR=3.1						
ASPA	**Alice Springs**	**45.66**	**258**	*e*P	**P**	**19 36 35.4**	**-0.4**
WB2	**Warramunga Arr**	**45.91**	**263**	⇑*i*P	**P**	**19 36 37.1**	**-0.7**
WRAB	**Tennant Creek**	**45.91**	**263**	⇑*i*P	**P**	**19 36 38.0**	**+0.2**
WRAB	**Tennant Creek**	**45.91**	**263**	*e*P	**P**	**19 36 36.8**	**-1.0**
	comp=Z,38nm,0.8s,mb5.4						
KAKA	**Kakadu**	**49.59**	**272**	*e*P	**P**	**19 37 05.2**	**-1.1**
	comp=Z,17nm,0.6s,mb5.2						
FORT	**Forrest**	**50.04**	**248**	*e*P	**P**	**19 37 08.4**	**-1.4**
	comp=Z,78nm,0.6s,mb5.9						
FITZ	**Fitzroy Crossi**	**54.35**	**263**	*e*P	**P**	**19 37 42.6**	**+0.8**
	comp=Z,27nm,0.6s,mb5.3						
SBA	**Scott Base**	**56.20**	**184**	*e*P	**P**	**19 37 55.9**	**+0.8**
VNDA	**Vanda**	**56.27**	**186**	P	**P**	**19 37 55.4**	**-0.3**
	comp=Z,0.8nm,0.8s,mb3.8,baz=355,slow=4.8,SNR=5.7						
KLBR	**Kellerberrin**	**58.73**	**246**	*e*P	**P**	**19 38 13.4**	**+0.5**
	comp=Z,21nm,0.8s,mb5.2						
MBWA	**Marble Bar**	**59.00**	**258**	*e*P	**P**	**19 38 14.9**	**+0.1**
MUN	**Mundaring**	**59.97**	**245**	*e*P	**P**	**19 38 22.5**	**+1.0**
QSPA	**South Pole Qui**	**67.78**	**180**	*e*P	**P**	**19 39 11.9**	**-1.1**
	comp=Z,8.7nm,1.1s,mb4.7						
MJAR	**Matsushiro Arr**	**72.58**	**323**	P	**P**	**19 39 41.7**	**-0.7**
	comp=Z,1.9nm,0.5s,mb4.3,baz=159,slow=5.8,SNR=12						
MJAR	**Matsushiro Arr**	**72.58**	**323**	P	**P**	**19 39 41.7**	**-0.7**
MAT	**Matsushiro**	**72.58**	**323**	P	**P**	**19 39 42.2**	**-0.1**
MAT	**Matsushiro**	**72.58**	**323**	P	**P**	**19 39 42.0**	**-0.3**
YSS	**Yuzh-Sakhalins**	**78.19**	**333**	*e*P	**P**	**19 40 13.2**	**-1.4**
YSS				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
MCCM	**Marconi Confer**	**78.30**	**40**	⇓P	**P**	**19 40 15.3**	**+0.2**
	baz=78						
PKD	**Parkfield**	**78.34**	**43**	⇓P	**P**	**19 40 15.1**	**-0.3**
	baz=78						
U04C	**Hernandez Rese**	**78.45**	**43**	⇓P	**P**	**19 40 16.8**	**+0.8**
	baz=79						
PACP	**Pacheco Peak**	**78.54**	**42**	⇓P	**P**	**19 40 16.7**	**+0.2**
	baz=79						
S04C	**Ingram Canyon,**	**78.83**	**42**	⇓P	**P**	**19 40 18.5**	**+0.4**
	baz=79						
P01C	**Double 8 Ranch**	**78.89**	**39**	⇑P	**P**	**19 40 18.9**	**+0.4**
	baz=79						
MNRC	**McLaughlin Nat**	**79.03**	**40**	⇑P	**P**	**19 40 19.7**	**+0.5**
	baz=79						
MURC	**Murrieta**	**79.11**	**47**	⇓P	**P**	**19 40 19.7**	**0.0**
	baz=79						
BFSC	**Mount Baldy St**	**79.18**	**46**	⇓P	**P**	**19 40 19.8**	**-0.3**
	baz=79						
VES	**Vestal, Richgr**	**79.21**	**44**	⇓P	**P**	**19 40 20.0**	**-0.2**
	baz=79						
EDW2	**Edwards Air Fo**	**79.34**	**45**	⇓P	**P**	**19 40 20.8**	**-0.1**
	baz=80						
S05C	**Merced**	**79.34**	**42**	⇓P	**P**	**19 40 21.0**	**0.0**
	baz=80						
GASB	**Alder Springs**	**79.37**	**39**	⇓P	**P**	**19 40 22.2**	**+1.1**
	baz=80						
ISA	**Isabella**	**79.49**	**45**	⇑P	**P**	**19 40 21.7**	**-0.1**
	baz=80						
T06C	**Millerton Lake**	**79.52**	**43**	⇑P	**P**	**19 40 22.2**	**+0.3**
	baz=80						
O02C	**Red Bluff**	**79.67**	**39**	⇓P	**P**	**19 40 22.8**	**0.0**
	baz=80						
CMB	**Columbia Colle**	**79.74**	**42**	⇓P	**P**	**19 40 23.0**	**-0.1**
	baz=80						
HELL	**Mitchell Peak,**	**79.76**	**43**	⇓P	**P**	**19 40 23.0**	**-0.2**
	baz=80						
LRMC	**Laurel Mountai**	**79.89**	**45**	⇓P	**P**	**19 40 23.9**	**0.0**
	baz=80						
KCC	**Kaiser Creek**	**79.96**	**43**	⇓P	**P**	**19 40 24.3**	**0.0**
	baz=80						
S06C	**San Francisco**	**79.98**	**42**	⇑P	**P**	**19 40 25.1**	**+0.8**
	baz=80						
ORV	**Oroville**	**80.03**	**40**	⇓P	**P**	**19 40 25.2**	**+0.6**
	baz=80						
SSE	**Sheshan**	**80.03**	**309**	P	**P**	**19 40 24.1**	**-0.6**
SSE				AMB	AMB		
	comp=Z,27nm,0.6s,mb5.3						
SSE				AMB	AMB		
	comp=Z,249nm,4.7s						
WDC	**Whiskeytown Da**	**80.08**	**39**	⇓P	**P**	**19 40 24.9**	**0.0**
	baz=80						
BELC	**Belle Mtn.**	**80.16**	**47**	⇑P	**P**	**19 40 25.3**	**0.0**
	baz=80						
MPMC	**Manual Prospec**	**80.37**	**45**	⇓P	**P**	**19 40 26.6**	**+0.1**
	baz=80						
GSC	**Goldstone**	**80.37**	**46**	⇑P	**P**	**19 40 26.8**	**+0.2**
	baz=80						
P05C	**Yuba Gap, Truc**	**80.40**	**41**	⇑P	**P**	**19 40 26.5**	**-0.2**
	baz=81						
MAW	**Mawson**	**80.40**	**200**	*e*P	**P**	**19 40 25.4**	**-1.3**
	comp=Z,4.1nm,0.6s,mb4.5						
MAW	**Mawson**	**80.40**	**200**	P	**P**	**19 40 25.9**	**-0.8**
	comp=Z,2.8nm,0.7s,mb4.3,baz=158,slow=6.1,SNR=8.9						
MAW	**Mawson**	**80.40**	**200**	*e*P	**P**	**19 40 25.4**	**-1.3**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HEC	**Hector,Ludlow**	**80.42**	**46**	⇓P	**P**	**19 40 26.8**	**0.0**
	baz=81						
GLA	**Glamis**	**80.42**	**48**	⇑P	**P**	**19 40 27.0**	**+0.2**
	baz=81						
M02C	**Callahan**	**80.43**	**38**	⇑P	**P**	**19 40 27.5**	**+0.7**
	baz=81						
MTUM	**Tungsten Hills**	**80.46**	**43**	*e*P	**P**	**19 40 26.1**	**-0.9**
R07C	**Lee Vining**	**80.60**	**42**	⇑P	**P**	**19 40 28.1**	**+0.4**
	baz=81						
R06C	**Coleville**	**80.62**	**42**	⇑P	**P**	**19 40 27.8**	**0.0**
	baz=81						
O05C	**Quincy**	**80.63**	**40**	⇑P	**P**	**19 40 27.9**	**0.0**
	baz=81						
YBH	**Yreka Blue Hor**	**80.73**	**38**	*e*P	**P**	**19 40 28.1**	**-0.3**
	comp=Z,3.1nm,0.9s,mb4.2						
YBH	**Yreka Blue Hor**	**80.73**	**38**	⇓P	**P**	**19 40 29.0**	**+0.6**
	baz=81						
O04C	**Chester**	**80.76**	**40**	⇑P	**P**	**19 40 28.7**	**+0.1**
	baz=81						
IRM	**Iron Mountain**	**80.83**	**47**	⇓P	**P**	**19 40 29.1**	**+0.1**
	baz=81						
HATC	**Hat Creek Radi**	**80.86**	**39**	⇑P	**P**	**19 40 29.3**	**+0.2**
	baz=81						
BEKR	**Beckwourth**	**80.91**	**40**	⇓P	**P**	**19 40 29.2**	**-0.2**
	baz=81						
WCN	**Washoe City**	**80.91**	**41**	⇑P	**P**	**19 40 29.3**	**-0.1**
	baz=81						
FURC	**Furnace Creek,**	**81.02**	**45**	⇓P	**P**	**19 40 30.1**	**+0.1**
	baz=81						
Y12C	**Blythe**	**81.03**	**48**	⇓P	**P**	**19 40 30.0**	**0.0**
	baz=81						
TUQ	**Turquoise Mtn.**	**81.04**	**46**	⇑P	**P**	**19 40 30.2**	**+0.1**
	baz=81						
M04C	**Macdoel**	**81.26**	**38**	⇓P	**P**	**19 40 31.6**	**+0.4**
	baz=82						
NVAR	**Mina Array Bea**	**81.27**	**42**	P	**P**	**19 40 31.8**	**+0.5**
	comp=Z,2.1nm,0.9s,mb4.0,baz=208,slow=7.6,SNR=11						
NVAR	**Mina Array Bea**	**81.27**	**42**	P	**P**	**19 40 31.8**	**+0.4**
J02A	**Umpqua**	**81.33**	**36**	⇑P	**P**	**19 40 31.8**	**+0.2**
	baz=82						
U10A	**Ash Meadows, A**	**81.34**	**45**	⇓P	**P**	**19 40 32.0**	**+0.3**
	baz=82						
M05C	**Lookout**	**81.39**	**39**	⇑P	**P**	**19 40 32.1**	**+0.2**
	baz=82						
O06A	**Flanigan**	**81.41**	**40**	⇑P	**P**	**19 40 32.0**	**0.0**
	baz=82						
S09A	**Goldfield**	**81.53**	**43**	⇓P	**P**	**19 40 32.5**	**-0.2**
	baz=82						
Y13A	**Salome**	**81.54**	**48**	⇓P	**P**	**19 40 32.9**	**+0.2**
	baz=82						
W12A	**Cal Nev Ari**	**81.67**	**47**	⇑P	**P**	**19 40 33.8**	**+0.4**
	baz=82						
M06C	**Likely Place G**	**81.68**	**39**	⇑P	**P**	**19 40 33.8**	**+0.3**
	baz=82						
TPNV	**Topopah Spring**	**81.70**	**45**	*e*P	**P**	**19 40 33.4**	**-0.2**
	comp=Z,1.3nm,0.6s,mb4.0						
Q08A	**Gabbs**	**81.77**	**42**	⇑P	**P**	**19 40 34.3**	**+0.4**
	baz=82						
N06A	**Buffalo Meadow**	**81.77**	**40**	⇓P	**P**	**19 40 34.5**	**+0.5**
	baz=82						
Z14A	**Wintersburg**	**81.91**	**49**	⇓P	**P**	**19 40 34.9**	**+0.3**
	baz=82						
V12A	**Nelson**	**81.92**	**46**	⇓P	**P**	**19 40 35.3**	**+0.6**
	baz=82						
R09A	**Tonopah**	**81.93**	**43**	⇑P	**P**	**19 40 34.8**	**0.0**
	baz=82						
X13A	**Yucca**	**81.97**	**48**	⇑P	**P**	**19 40 35.1**	**+0.1**
	baz=82						
O07A	**Toulon**	**81.98**	**41**	⇑P	**P**	**19 40 35.0**	**-0.1**
	baz=82						
L05A	**Lakeview**	**82.01**	**38**	⇓P	**P**	**19 40 35.1**	**0.0**
	baz=82						
Y14A	**Wickenburg**	**82.18**	**49**	⇑P	**P**	**19 40 36.1**	**0.0**
	baz=82						
KDAK	**Kodiak Island**	**82.21**	**13**	P	**P**	**19 40 35.4**	**-0.8**
	comp=Z,3.3nm,0.6s,mb4.4,baz=167,slow=6.9,SNR=4.6						
W13A	**Hualapai Mount**	**82.22**	**47**	⇑P	**P**	**19 40 36.4**	**+0.1**
	baz=82						
Q09A	**Carvers**	**82.22**	**43**	⇑P	**P**	**19 40 36.3**	**0.0**
	baz=82						
NJ2	**Nanjing**	**82.22**	**309**	*e*P	**P**	**19 40 37.2**	**+0.9**
NJ2				AP	pP	19 40 50.5	+7.5
NJ2				PP	PP	19 43 47.6	+2.9
NJ2				S	S	19 50 47.0	-3.5
NJ2				XS	sS	19 51 09.0	+7.5
NJ2				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,640nm,6.3s						
NJ2				LR	LR		
	comp=Z,140nm,20.2s,MS4.3						
N07B	**Gerlach**	**82.30**	**40**	⇓P	**P**	**19 40 36.9**	**+0.1**
	baz=82						
116A	**Eloy**	**82.35**	**50**	⇑P	**P**	**19 40 37.2**	**+0.2**
	baz=82						
R10A	**Warm Springs**	**82.45**	**43**	⇓P	**P**	**19 40 37.9**	**+0.4**
	baz=83						
U12A	**Valley of Fire**	**82.53**	**46**	⇑P	**P**	**19 40 38.3**	**+0.4**
	baz=83						
X14A	**Yava**	**82.55**	**48**	⇓P	**P**	**19 40 38.4**	**+0.4**
	baz=83						
M07A	**Soldier Meadow**	**82.56**	**40**	⇑P	**P**	**19 40 38.2**	**+0.1**
	baz=83						
J05A	**Fort Rock**	**82.57**	**37**	P	**P**	**19 40 38.4**	**+0.3**
	baz=83,SNR=6.6						
N08A	**GE Springer Mi**	**82.81**	**41**	⇑P	**P**	**19 40 39.1**	**-0.3**
	baz=83						
K06A	**Valley Falls**	**82.82**	**38**	P	**P**	**19 40 39.6**	**+0.2**
	baz=83,SNR=6.0						
W14A	**Seligman**	**82.83**	**47**	⇓P	**P**	**19 40 40.2**	**+0.7**
	baz=83,SNR=7.3						
L07A	**Adell**	**82.85**	**39**	⇑P	**P**	**19 40 39.8**	**+0.2**
	baz=83						
MDJ	**Mudanjiang**	**82.88**	**324**	P	**P**	**19 40 40.1**	**+0.4**
MDJ				AP	pP	19 40 52.3	+5.9
MDJ				XP	sP	19 40 57.1	+8.3
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,572nm,12.3s						
O09A	**Fish Creek Ran**	**83.01**	**42**	⇑P	**P**	**19 40 40.3**	**-0.1**
	baz=83						
X15A	**Humboldt**	**83.01**	**48**	P	**P**	**19 40 41.1**	**+0.7**
	baz=83,SNR=6.8						
M08A	**Happy Creek Ra**	**83.07**	**40**	⇓P	**P**	**19 40 41.0**	**+0.3**
	baz=83						
I05A	**Bend**	**83.12**	**36**	⇑P	**P**	**19 40 41.0**	**0.0**
	baz=83						
P10A	**Eureka**	**83.13**	**42**	⇑P	**P**	**19 40 41.2**	**+0.1**
	baz=83						
J06A	**Christmas Vall**	**83.16**	**38**	P	**P**	**19 40 40.9**	**-0.3**
	baz=83,SNR=6.7						
N09A	**Rock Creek Ran**	**83.22**	**41**	⇑P	**P**	**19 40 41.3**	**-0.2**
	baz=83						
K07A	**Rock Creek Ran**	**83.32**	**39**	⇑P	**P**	**19 40 42.0**	**-0.1**
	baz=84,SNR=5.9						
H05A	**Madras**	**83.45**	**36**	⇑P	**P**	**19 40 42.3**	**-0.4**
	baz=84						
E03A	**Lebam**	**83.46**	**34**	⇓P	**P**	**19 40 42.7**	**-0.1**
	baz=84						
O10A	**Cortez Mining,**	**83.51**	**42**	⇑P	**P**	**19 40 42.6**	**-0.4**
	baz=84						
WVOR	**Wild Horse Val**	**83.52**	**39**	*e*P	**P**	**19 40 42.5**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
WVOR	**Wild Horse Val**	**83.52**	**39**	*e*P	**P**	**19 40 42.5**	**-0.6**
	comp=Z,8.3nm,1.1s,mb4.8						
L08A	**Fields**	**83.54**	**39**	P	**P**	**19 40 43.5**	**+0.4**
	baz=84,SNR=6.8						
I06A	**Prineville**	**83.56**	**37**	P	**P**	**19 40 43.8**	**+0.5**
	baz=84,SNR=7.4						
M09A	**Marrel Ranch,**	**83.61**	**40**	⇓P	**P**	**19 40 43.1**	**-0.4**
	baz=84						
J07A	**Hines**	**83.71**	**38**	⇓P	**P**	**19 40 43.8**	**-0.2**
	baz=84						
K08A	**Mann Creek Ran**	**83.79**	**39**	⇓P	**P**	**19 40 44.3**	**-0.1**
	baz=84,SNR=11						
Q12A	**Willow Creek R**	**83.83**	**44**	⇑P	**P**	**19 40 44.8**	**+0.1**
	baz=84						
L09A	**Wilkinson Ranc**	**83.84**	**40**	⇑P	**P**	**19 40 44.9**	**+0.3**
	baz=84						
P12A	**McGill**	**84.03**	**43**	⇓P	**P**	**19 40 45.5**	**-0.1**
	baz=84						
I07A	**Izee**	**84.05**	**37**	P	**P**	**19 40 45.9**	**+0.1**
	baz=84,SNR=5.1						
M10A	**I.L. Ranch, Tu**	**84.21**	**41**	⇑P	**P**	**19 40 46.6**	**+0.1**
	baz=84						
N11A	**Elko Archery C**	**84.29**	**42**	⇑P	**P**	**19 40 46.9**	**0.0**
	baz=84						
E05A	**Randle**	**84.41**	**34**	⇓P	**P**	**19 40 47.3**	**-0.3**
	baz=85						
I08A	**Drewsey**	**84.47**	**38**	⇑P	**P**	**19 40 48.1**	**+0.2**
	baz=85						
M11A	**Holland Ranch,**	**84.61**	**41**	⇓P	**P**	**19 40 48.6**	**-0.1**
	baz=85						
CN2	**Changchun**	**84.67**	**322**	*e*P	**P**	**19 40 50.5**	**+1.6**
D05A	**Enumclaw**	**84.70**	**34**	⇓P	**P**	**19 40 49.3**	**+0.2**
	baz=85						
N12A	**Clover Valley,**	**84.74**	**42**	⇓P	**P**	**19 40 48.8**	**-0.4**
	baz=85						
H08A	**Prairie City**	**84.79**	**37**	⇓P	**P**	**19 40 49.0**	**-0.5**
	baz=85						
I09A	**Lost Marbles R**	**84.98**	**38**	⇓P	**P**	**19 40 50.0**	**-0.4**
	baz=85						
M12A	**Wells**	**85.14**	**42**	⇓P	**P**	**19 40 50.8**	**-0.5**
	baz=85						
C05A	**Tolt Reservoir**	**85.18**	**34**	⇑P	**P**	**19 40 51.3**	**-0.2**
	baz=85						
SLKM	**Skilak Lake**	**85.20**	**13**	*e*P	**P**	**19 40 50.3**	**-1.3**
MSU	**Marysvale**	**85.25**	**45**	*e*P	**P**	**19 40 52.1**	**+0.3**
M13A	**Montello**	**85.57**	**42**	⇓P	**P**	**19 40 53.3**	**-0.1**
	baz=86						
PMR	**Palmer**	**86.41**	**13**	P	**P**	**19 40 56.3**	**-1.3**
PMR				pmax	pmax		
	comp=Z,13nm,1.3s,mb5.0						
PMR	**Palmer**	**86.41**	**13**	P	**P**	**19 40 56.2**	**-1.3**
	comp=Z,12nm,1.3s,mb5.0						
TTA	**Tatalina**	**86.45**	**9**	*e*P	**P**	**19 40 56.6**	**-1.2**
TTA				pmax	pmax		
	comp=Z,14nm,1.4s,mb5.0						
TTA	**Tatalina**	**86.45**	**9**	*e*P	**P**	**19 40 56.6**	**-1.2**
	comp=Z,14nm,1.4s,mb5.0						
MNTX	**Cornudas Mount**	**86.53**	**54**	*e*P	**P**	**19 40 57.7**	**-0.5**
	comp=Z,5.8nm,1.1s,mb4.7						
ANMO	**Albuquerque**	**87.32**	**51**	⇑*i*P	**P**	**19 41 01.7**	**-0.3**
PDAR	**Pinedale Array**	**89.21**	**43**	P	**P**	**19 41 10.2**	**-0.8**
	comp=Z,0.4nm,0.3s,mb4.2,baz=230,slow=3.7,SNR=5.4						
COLA	**College**	**89.63**	**12**	*e*P	**P**	**19 41 11.1**	**-1.8**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb5.0						
COLA	**College**	**89.63**	**12**	*e*P	**P**	**19 41 11.1**	**-1.9**
	comp=Z,5.7nm,0.7s,mb5.0						
DAWY	**Dawson**	**90.76**	**15**	*e*P	**P**	**19 41 17.5**	**-0.8**
BILL	**Bilibino**	**90.98**	**354**	⇑*e*P	**P**	**19 41 18.8**	**-0.4**
BILL				*e*		19 45 03.6	
BILL				*e*PS	PS	19 53 58.5	+33
BILL				pmax	pmax		
	comp=Z,16nm,2.1s,mb5.0						
KMI	**Kunming**	**91.55**	**296**	P	**P**	**19 41 23.0**	**+1.1**
KMI				AP	pP	19 41 35.9	+7.3
KMI				XP	sP	19 41 40.2	+9.2
KMI				AMB	AMB		
	comp=Z,3.0nm,1.8s,mb4.3						
HHC	**Hu-ho-hao-te**	**91.72**	**314**	*e*P	**P**	**19 41 23.0**	**+0.3**
HHC				AP	pP	19 41 36.5	+7.1
HHC				XP	sP	19 41 41.7	+10
HHC				PP	PP	19 45 04.7	+3.4
HHC				SKS		19 51 50.3	
HHC				S	S	19 52 17.6	-4.6
HHC				XS	sS	19 52 40.6	+7.3
HHC				SS	SS	19 58 29.6	+0.1
HHC				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,315nm,4.1s						
HHC				LR	LR		
	comp=N,281nm,13.3s,MS5.0						
HHC				LR	LR		
	comp=E,225nm,12.7s,MS5.0						

HHC				LR	LR		
	comp=Z,299nm,12.4s,MS4.9						
CD2	**Chengdu**	**93.06**	**302**	*e*P	**P**	**19 41 27.3**	**-1.6**
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.5						
CD2				AMB	AMB		
	comp=Z,40nm,9.2s						
YAK	**Yakutsk**	**94.36**	**338**	*e*P	**P**	**19 41 34.2**	**-0.6**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.9						
MKAR	**Makanchi Array**	**113.56**	**313**	PKiKP	PKiKP	19 46 51.3	-2.0
	comp=Z,0.3nm,0.7s,baz=29,slow=3.3,SNR=2.6						
ZRNK	**Zerenda**	**122.29**	**319**	*e*PKIKP	PKPdf	19 47 07.6	-2.5
ARU	**Arti**	**127.56**	**325**	*i* PKIKP	PKPdf	19 47 18.8	-1.4
ARU				*e*		19 49 17.1	
ARU				*e*		19 54 20.4	
ARU				*e*PS	PS	19 59 27.7	+1.1
ARU				*e*SS	SS	20 06 26.4	-4.3
ARCES	**ARCESS Array B**	**130.96**	**350**	PKP	PKPdf	19 47 24.4	-2.3
	comp=Z,1.5nm,0.6s,baz=338,slow=2.6,SNR=11						
FINES	**FINESS Array B**	**137.92**	**344**	PKP	PKPdf	19 47 39.5	-0.2
	comp=Z,1.5nm,0.7s,baz=134,slow=4.2,SNR=4.4						
FINES	**FINESS Array B**	**137.92**	**344**	PKP	PKPdf	19 47 39.5	-0.2
OBN	**Obninsk**	**139.07**	**332**	⇑*i*PKIKP	PKPdf	19 47 46.8	+5.0
OBN				*e*		19 54 46.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NOA	**NORSAR Array B**	**140.93**	**354**	PKhKP		19 47 36.6	
	comp=Z,1.3nm,0.8s,baz=93,slow=0.7,SNR=3.3						
KIV	**Kislovodsk**	**141.32**	**313**	⇑*i*PKIKP	PKPdf	19 47 53.2	+7.3
KIV				*e*		19 50 44.6	
KIV				*e*SS	SS	20 09 16.8	+0.4
KIV				*e*SSS		20 14 34.2	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HFS	**Hagfors**	**141.54**	**352**	PKhKP		19 47 38.4	
	comp=Z,1.7nm,0.5s,baz=67,slow=3.5,SNR=22						
SUW	**Suwalki**	**145.06**	**340**	*e*PKP	PKPdf	19 47 51.3	-1.2
MBAR	**Mbarara**	**145.16**	**233**	*i* PKP2	PKPab	19 47 51.7	-0.6
AKASG	**Malin Array Be**	**145.33**	**331**	PKPbc	PKPbc	19 47 51.5	-1.3
	comp=Z,7.1nm,0.5s,baz=42,slow=4.3,SNR=81						
MALT	**Malatya**	**146.25**	**306**	*e*PKP2	PKPab	19 47 55.5	-0.9
SIM	**Simferopol'**	**146.37**	**319**	*e*PKP2	PKPab	19 47 54.7	-2.1
SIM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**146.62**	**7**	PKPbc	PKPbc	19 47 56.0	-0.7
	comp=Z,2.1nm,0.6s,baz=322,slow=2.9,SNR=17						
KWP	**Kalwaria**	**148.86**	**336**	*e*PKP	PKPab	19 48 07.6	+0.9
ASF	**Jabal al Asfar**	**148.97**	**296**	PKPbc	PKPbc	19 48 03.2	+0.1
	comp=Z,2.3nm,0.6s,baz=333,slow=3.5,SNR=4.9						
BRTR	**Keskin Array B**	**149.19**	**311**	PKPbc	PKPbc	19 48 02.8	-0.9
	comp=Z,2.3nm,0.7s,baz=139,slow=4.6,SNR=16						
BURAR	**Bucovina Array**	**149.38**	**331**	⇓*i*P	PKPbc	19 48 05.4	+1.3
KOLS	**Kolonicke sedl**	**149.59**	**335**	*e*PKP	PKPdf	19 48 00.1	+0.1
KOLS				*e*		19 48 10.3	
CRVS	**Cervenica-Dubn**	**149.92**	**336**	*e*PKP	PKPdf	19 47 59.0	-1.5
CRVS				*e*		19 48 07.6	
CRVS				*e*		19 48 11.8	
CRVS	**Cervenica-Dubn**	**149.92**	**336**	*e*PKHKP	PKPdf	19 47 59.1	-1.4
CRVS				*e*		19 48 07.6	
CRVS	**Cervenica-Dubn**	**149.92**	**336**	*e*PKP	PKPdf	19 47 59.1	-1.4
CRVS				*e*		19 48 07.6	
CRVS				*e*		19 48 11.8	
MMAI	**Mount Meron Ar**	**150.04**	**298**	PKPbc	PKPbc	19 48 05.2	-0.5
	comp=Z,6.1nm,0.6s,baz=52,slow=5.5,SNR=8.2						
CLL	**Collm**	**150.15**	**348**	*i* PKPbc	PKPbc	19 48 04.3	-1.7
	comp=Z,7.0nm,1.0s						
CLL				*i* PKPab	PKPab	19 48 10.4	-1.5
	comp=Z,7.0nm,0.9s						
CLL				*e*pPKPab	pPKPab	19 48 19.0	+0.3
CLL				*i* x	x	19 48 43.8	
CLL	**Collm**	**150.15**	**348**	*i* PKP	PKPdf	19 48 04.3	+3.4
CLL				*i* PKP	PKPdf	19 48 10.4	+10
CLL				*e*pPKP	pPKPdf	19 48 19.0	+11
UPC	**Upice**	**150.23**	**344**	⇑*e*PKPB	PKPbc	19 48 05.7	-0.5
DPC	**Dobruska-Polom**	**150.29**	**344**	⇑*e*PKPB	PKPbc	19 48 06.3	0.0
DPC				*e*PKPAB	PKPab	19 48 12.9	+0.3
BRG	**Berggiesshubel**	**150.37**	**347**	*e*P	PKPbc	19 48 06.0	-0.5
	comp=Z,2.8nm,0.9s						
MLR	**Muntele Rosu**	**150.57**	**327**	⇓*i*P	PKPbc	19 48 07.0	0.0
PRU	**Pruhonice**	**151.07**	**345**	⇑*e*PKPB	PKPbc	19 48 08.3	+0.2
VYHS	**Vyhne**	**151.20**	**339**	*e*PKP	PKPbc	19 48 08.7	+0.3
VYHS				*e*		19 48 16.4	
VYHS	**Vyhne**	**151.20**	**339**	*e*PKIKP	PKPdf	19 48 04.1	+1.6
VYHS				*e*		19 48 08.7	
VYHS				*e*		19 48 16.4	
GRA1	**Grafenberg Arr**	**152.02**	**350**	*e*PKP	PKPab	19 48 19.5	-0.2
GRF	**Grafenberg Arr**	**152.02**	**350**	*e*PKP	PKPab	19 48 19.5	-0.2
KHC	**Kasperske Hory**	**152.09**	**346**	⇑*e*PKPB	PKPbc	19 48 10.4	-0.1
KHC				*e*PKPAB	PKPab	19 48 19.1	-0.9
KHC	**Kasperske Hory**	**152.09**	**346**	*e*PKP	PKPbc	19 48 10.4	-0.1
KHC				*e*		19 48 19.1	
GERES	**GERESS Array B**	**152.33**	**346**	PKPbc	PKPbc	19 48 10.7	-0.3
	comp=Z,0.6nm,0.6s,baz=340,slow=1.6,SNR=6.5						
BZS	**Buzias**	**152.51**	**332**	⇓*i*P	PKPbc	19 48 10.3	-1.1
ESDC	**Sonseca Array**	**161.50**	**19**	PKPab	PKPab	19 49 00.9	+0.5
	comp=Z,1.2nm,0.8s,baz=336,slow=4.5,SNR=8.0						
MDT	**Midelt**	**167.21**	**33**	PKPab	PKPab	19 49 24.5	-1.1
	comp=Z,1.3nm,1.0s,baz=331,slow=12,SNR=4.0						
TORD	**Torodi Ar. Bea**	**170.71**	**168**	PKPab	PKPab	19 49 40.8	-0.3
	comp=Z,0.6nm,0.8s,baz=168,slow=1.9,SNR=4.8						

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*MOS **06** 19:33:29.3±1.0, 4194N×1532E, h10km, mb4.0/2, Error ellipse: s-maj=4.9km s-min=3.1km az=112.7*
*ISCJB **06** 19:33:30.4±0.1, 41994N±0009×1546E±001, h10km, mb3.8/4, Error ellipse: s-maj=1.4km s-min=1.4km az=131.9*
*LDG **06** 19:33:30.8±0.1, 4195N×1555E, h10km, Ml4.0/12, Error ellipse: s-maj=2.8km s-min=1.7km az=8.0*
*NEIC **06** 19:33:30.9±0.3, 4189N×1534E, h10km, ML4.0(PDG), Error ellipse: s-maj=5.8km s-min=2.5km az=193.0*
*PDG **06** 19:33:31.2±0.7, 4200N×1551E, h11km±2km*
*CSEM **06** 19:33:31.3±0.0, 4190N×1553E, h12km, ML4.4/19, Error ellipse: s-maj=1.1km s-min=0.9km az=65.0*
*ROM **06** 19:33:31.2±0.3, 4196N×1549E, h6km±3km, Md3.2/6, Ml3.8/52, Error ellipse: s-maj=2.0km s-min=1.3km az=147.0*
*SZGRF **06** 19:33:34.1, 42.18N×1572E, h10km, mb4.2, Adriatic Sea*
*IDC **06** 19:33:35.1±2.0, 4208N×1531E, h35km±18km, mb3.6/4, mb1 3.8/13, mb1mx3.7/26, mbtmp3.7/13, ML3.8/9, MS3.9/1, Ms1 3.9/1, ms1mx3.1/30, Error ellipse: s-maj=18.7km s-min=12.7km az=65.0*
*PRU **06** 19:33:37.2, 4240N×1489E, h0km*
*STR **06** 19:34:01.6±0.9, 4356N×1333E, h10km±1km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 06 19:33:31.7±0.1**, 41958N**±0010×**1546E**±001**, h10**km**, n277, σ1§14**/380**, mb3.8**/4**, 30C-46D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG2	**Serracapriola**	**0.27**	**236**	⇑*i*Pg	**Pg**	**19 33 38.6**	**+1.4**
SGRT	**San Giovanni R**	**0.29**	**134**	⇓*i*Pg	**Pg**	**19 33 38.6**	**+1.0**
SGRT				Sg	**Sg**	**19 33 42.7**	**+1.2**
	30µm,0.1s						
RGNG	**Rignano Grg**	**0.30**	**162**	⇓*i*Pg	**Pg**	**19 33 38.3**	**+0.6**
MSAG	**Monte S. Angel**	**0.41**	**126**	⇓*i*Pg	**Pg**	**19 33 40.7**	**+0.8**
MSAG				Sg	**Sg**	**19 33 46.7**	**+1.3**
	30µm,0.4s						
MS1	**Monte Sant'Ang**	**0.44**	**125**	*e*Pg	**Pg**	**19 33 41.1**	**+0.8**
FGMS	**Monte Sant'Ang**	**0.44**	**124**	⇑*i*Pg	**Pg**	**19 33 41.3**	**+0.9**
CIGN	**Sant'Elia a Pi**	**0.52**	**234**	⇑*i*Pg	**Pg**	**19 33 42.7**	**+0.9**
CIGN				Sg	**Sg**	**19 33 49.4**	**+0.8**
	3µm,0.5s						
FRES	**Fresagrandinar**	**0.59**	**272**	⇑*i*Pg	**Pg**	**19 33 44.4**	**+1.2**
FRES				Sg	**Sg**	**19 33 52.9**	**+1.9**
	11µm,0.6s						
FG5	**Orsara di Pugl**	**0.69**	**192**	Pg	**Pg**	**19 33 45.5**	**+0.4**
TRIV	**Trivento**	**0.71**	**255**	⇑*e*Pg	**Pg**	**19 33 46.3**	**+0.9**
TRIV				Sg	**Sg**	**19 33 56.4**	**+1.7**
	3µm,0.7s						
BSSO	**Busso**	**0.77**	**238**	⇑*i*Pg	**Pg**	**19 33 46.9**	**+0.3**
BSSO				Sg	**Sg**	**19 33 58.5**	**+1.9**
	2µm,0.5s						
SACR	**S. Croce Del S**	**0.80**	**226**	⇑*i*Pg	**Pg**	**19 33 47.0**	**-0.1**
SACR				Sg	**Sg**	**19 33 58.9**	**+1.4**
	1µm,0.5s						
SGTA	**Sant Agata di**	**0.82**	**185**	⇓*e*Pg	**Pg**	**19 33 47.3**	**-0.3**
SGTA				Sg	**Sg**	**19 33 58.6**	**+0.2**
	5µm,0.3s						
FG4	**Candela**	**0.83**	**177**	⇑*e*Pg	**Pg**	**19 33 47.2**	**-0.5**
PSB1	**Pescosannita**	**0.88**	**214**	⇓*i*Pg	**Pg**	**19 33 48.3**	**-0.4**
PSB1				Sg	**Sg**	**19 34 01.7**	**+1.5**
	2µm,0.8s						
CAFE	**Carife**	**0.94**	**190**	⇑*e*Pg	**Pg**	**19 33 49.3**	**-0.6**
CAFE				Sg	**Sg**	**19 34 03.5**	**+1.3**
	4µm,0.7s						
MIDA	**Miranda**	**0.96**	**251**	Pg	**Pg**	**19 33 49.5**	**-0.7**
MIDA				Sg	**Sg**	**19 34 03.8**	**+1.2**
	2µm,0.4s						
VULT	**Monte Vulture**	**1.01**	**173**	Pg	**Pg**	**19 33 50.2**	**-0.9**
VULT				Sg	**Sg**	**19 34 05.4**	**+1.1**
	8µm,0.3s						
RNI2	**Rionero Sannit**	**1.01**	**256**	Pg	**Pg**	**19 33 50.9**	**-0.3**
RNI2				Sg	**Sg**	**19 34 05.3**	**+0.9**
	2µm,0.5s						
SNAL	**S. Angelo Dei**	**1.05**	**191**	Pg	**Pg**	**19 33 50.3**	**-1.6**
SNAL				Sg	**Sg**	**19 34 05.9**	**+0.4**
	3µm,0.6s						
CDT	**Castel del Mon**	**1.07**	**145**	*e*Pg	**Pg**	**19 33 51.1**	**-1.1**
CDT				*e*Sg	**Sg**	**19 34 05.6**	**-0.5**
VAGA	**Valle Agricola**	**1.07**	**240**	⇑*e*Pg	**Pg**	**19 33 51.2**	**-1.1**
VAGA				Sg	**Sg**	**19 34 07.6**	**+1.5**
	2µm,0.4s						
CERA	**Filignano**	**1.14**	**252**	Pn	**Pn**	**19 33 52.8**	**-0.9**
CERA				Sg	**Sg**	**19 34 10.4**	**+2.0**
	2µm,0.5s						
MOCO	**Biccari - m.te**	**1.14**	**239**	⇑*i*Pg	**Pg**	**19 33 44.4**	**-9.2**
MOCO				Sg	**Sg**	**19 33 53.9**	**-15**
	4µm,0.5s						
INTR	**Introdacqua**	**1.16**	**273**	Pn	**Pn**	**19 33 52.3**	**-1.8**
INTR				Sn	**Sn**	**19 34 09.9**	**-0.1**
	4µm,0.5s						
MCRV	**Calabrutti - M**	**1.20**	**191**	Pn	**Pn**	**19 33 52.7**	**-1.8**
	3µm,0.4s						
MRLC	**Muro Lucano**	**1.20**	**179**	Pg	**Pn**	**19 33 52.3**	**-2.3**
MRLC				Sg	**Sg**	**19 34 10.4**	**0.0**
	3µm,0.5s						
SDI	**San Donato**	**1.26**	**259**	Pn	**Pn**	**19 33 54.7**	**-0.7**
RFI	**Roccamonfina**	**1.29**	**240**	Pn	**Pn**	**19 33 56.0**	**+0.2**
	40nm,0.4s						
AMUR	**Altamura**	**1.36**	**140**	Pn	**Pn**	**19 33 55.0**	**-1.7**
	3µm,0.4s						
BAI	**Bari**	**1.36**	**128**	*e*Pg	**Pn**	**19 33 55.4**	**-1.4**
VVLD	**Villa Vallelon**	**1.38**	**267**	Pn	**Pn**	**19 33 56.8**	**-0.2**
	3µm,0.5s						
SGO	**Sicignano**	**1.40**	**185**	⇑*e*Pn	**Pn**	**19 33 55.5**	**-1.8**
FAGN	**Fagnano**	**1.43**	**283**	Pn	**Pn**	**19 33 58.0**	**+0.3**
	4µm,0.4s						
SG1	**Sgolgore (BA)**	**1.44**	**140**	*e*Pg	**Pn**	**19 33 56.2**	**-1.7**
CDRU	**Civita di Ruta**	**1.47**	**185**	Pn	**Pn**	**19 33 56.4**	**-1.9**
	1µm,0.4s						
TERO	**Teramo**	**1.53**	**296**	⇓*e*Pn	**Pn**	**19 33 59.7**	**+0.6**
	1µm,0.5s						
SLCN	**Sala Consilina**	**1.57**	**175**	Pn	**Pn**	**19 33 57.8**	**-1.9**
	2µm,0.5s						
AQU	**L'Aquila**	**1.58**	**285**	⇓*i*P	**Pn**	**19 34 00.2**	**+0.4**
AQU	**L'Aquila**	**1.58**	**285**	*e*P	**Pn**	**19 33 59.0**	**-0.8**
AQU	**L'Aquila**	**1.58**	**285**	*e*P	**Pn**	**19 33 59.0**	**-0.8**
GUAR	**Guarcino**	**1.61**	**265**	Pn	**Pn**	**19 34 01.4**	**+1.1**
	712nm,0.6s						
OFFI	**Offida**	**1.64**	**307**	Pn	**Pn**	**19 34 02.2**	**+1.6**
	4µm,0.5s						
CMPR	**Campora**	**1.64**	**184**	Pn	**Pn**	**19 33 58.9**	**-1.7**
	928nm,0.5s						
NOCI	**Noci**	**1.68**	**134**	Pn	**Pn**	**19 33 59.7**	**-1.4**
	5µm,0.3s						
GIUL	**Giuliano Di Ro**	**1.70**	**257**	Pn	**Pn**	**19 34 01.5**	**+0.1**
	779nm,1.0s						
FIAM	**Fiamignano**	**1.77**	**281**	⇓*e*Pn	**Pn**	**19 34 03.6**	**+1.2**
	1µm,0.6s						
SCHR	**S. Chirico Rap**	**1.82**	**165**	Pn	**Pn**	**19 34 01.1**	**-1.9**
	439nm,0.5s						
CERT	**Cerreto**	**1.85**	**271**	Pn	**Pn**	**19 34 04.3**	**+0.8**
	598nm,0.6s						
PE1	**Pezze di Greco**	**1.87**	**127**	*e*Pg	**Pn**	**19 34 02.5**	**-1.3**
CUC	**Castrocucco**	**1.98**	**172**	Pn	**Pn**	**19 34 03.7**	**-1.6**
	957nm,0.6s						
ORI	**Oriolo Calabro**	**2.03**	**158**	Pn	**Pn**	**19 34 05.7**	**-0.3**
	2µm,0.4s						
AOI	**Ancona**	**2.10**	**320**	Pn	**Pn**	**19 34 07.3**	**+0.4**
	721nm,0.4s						
MNS	**Montasola**	**2.11**	**283**	Pn	**Pn**	**19 34 07.8**	**+0.7**
	427nm,0.6s						
CING	**Cingoli**	**2.19**	**311**	⇓*e*Pn	**Pn**	**19 34 08.7**	**+0.5**
	539nm,0.5s						
SNTG	**Esanatoglia**	**2.27**	**306**	⇑*e*Pn	**Pn**	**19 34 09.8**	**+0.5**
	350nm,0.5s						
TREB	**Trebinje**	**2.27**	**70**	P	**Pn**	**19 34 08.9**	**-0.4**
TREB				S	**Sn**	**19 34 38.3**	**+1.0**
HCY	**Herceg Novi**	**2.31**	**77**	*e*Pn	**Pn**	**19 34 09.2**	**-0.6**
HCY				*e*Sn	**Sn**	**19 34 40.2**	**+2.0**
ASS	**Assisi**	**2.35**	**299**	Pn	**Pn**	**19 34 11.9**	**+1.5**
	13nm,0.4s						
ARV	**Arcevia**	**2.41**	**310**	⇓*e*Pn	**Pn**	**19 34 11.7**	**+0.5**
	200nm,0.4s						
BRY	**Bratogost**	**2.47**	**67**	⇓*i*Pn	**Pn**	**19 34 11.6**	**-0.4**
BRY				*e*Sn	**Sn**	**19 34 43.7**	**+1.5**
MURB	**Monte Urbino**	**2.53**	**302**	Pn	**Pn**	**19 34 14.4**	**+1.5**
	956nm,0.4s						
LCI	**Lecce**	**2.58**	**128**	Pn	**Pn**	**19 34 12.2**	**-1.3**
	349nm,0.2s						
BUM	**Brajici-Budva**	**2.58**	**81**	⇓*i*Pn	**Pn**	**19 34 13.2**	**-0.3**
BUM				*e*Sn	**Sn**	**19 34 46.0**	**+1.0**
TOLF	**Tolfa**	**2.58**	**274**	Pn	**Pn**	**19 34 13.5**	**-0.1**
	102nm,0.6s						
NVLJ	**Novalja**	**2.64**	**351**	⇓*i*Pn	**Pn**	**19 34 14.6**	**+0.2**
NVLJ				*i* Sn	**Sn**	**19 34 46.1**	**-0.3**
NKY	**Niksic**	**2.75**	**71**	⇑*i*Pn	**Pn**	**19 34 15.9**	**-0.1**
NKY				*e*Sn	**Sn**	**19 34 50.7**	**+1.4**
LATE	**Laterza**	**2.79**	**285**	Pn	**Pn**	**19 34 17.1**	**+0.6**
	38nm,1.1s						
ULC	**Ulcinj**	**2.82**	**89**	⇑*i*Pn	**Pn**	**19 34 16.0**	**-0.9**
ULC				*e*Sn	**Sn**	**19 34 52.2**	**+1.2**
BADI	**Badiali**	**2.83**	**304**	Pn	**Pn**	**19 34 18.7**	**+1.7**
	664µm,52.0s						
UPM	**Unac-Piva**	**2.83**	**63**	⇓*i*Pn	**Pn**	**19 34 17.3**	**+0.3**
UPM				*e*Sn	**Sn**	**19 34 52.2**	**+1.0**
TTG	**Podgorica**	**2.86**	**79**	⇓*i*Pn	**Pn**	**19 34 17.6**	**+0.2**
TTG				*e*Sn	**Sn**	**19 34 52.4**	**+0.5**
SCTE	**Santa Cesarea**	**2.95**	**129**	Pn	**Pn**	**19 34 17.4**	**-1.3**
RSM	**Repubblica di**	**2.96**	**313**	⇓*e*Pn	**Pn**	**19 34 19.9**	**+1.1**
	202nm,0.7s						
SDA	**Shkodra**	**3.01**	**87**	*i* Sg	**Sn**	**19 34 53.1**	**-2.5**
SDA	**Shkodra**	**3.01**	**87**	*i* Sg	**Sn**	**19 34 53.1**	**-2.5**
BLY	**Banja Luka**	**3.06**	**24**	P	**Pn**	**19 34 19.8**	**-0.3**
BLY				S	**Sn**	**19 34 57.2**	**+0.4**
SERS	**Sersale**	**3.06**	**162**	Pn	**Pn**	**19 34 20.2**	**0.0**
PLE	**Pljevlja**	**3.21**	**63**	⇓*i*Pn	**Pn**	**19 34 22.3**	**+0.1**
PLE				*e*Sn	**Sn**	**19 35 01.4**	**+0.9**
SFI	**Santa Sofia**	**3.29**	**307**	Pn	**Pn**	**19 34 25.2**	**+1.9**
	125nm,0.8s						
TIR	**Tirane**	**3.35**	**99**	*e*P	**Pn**	**19 34 23.9**	**-0.3**
TIR				*e*S	**Sn**	**19 34 57.1**	**-7.0**
TIR	**Tirane**	**3.35**	**99**	*i* Pg	**Pn**	**19 34 23.8**	**-0.4**
PVY	**Plav**	**3.41**	**78**	⇓*i*Pn	**Pn**	**19 34 25.9**	**+0.9**
PVY				*e*Sn	**Sn**	**19 35 06.7**	**+1.3**
IVA	**Berane**	**3.41**	**73**	⇑*i*Pn	**Pn**	**19 34 26.2**	**+1.3**
IVA				*e*Sn	**Sn**	**19 35 05.7**	**+0.2**
IVA	**Berane**	**3.41**	**73**	⇑*i*Pn	**Pn**	**19 34 26.2**	**+1.3**
CSNT	**Castellina Chi**	**3.43**	**298**	Pn	**Pn**	**19 34 25.7**	**+0.5**
	57nm,0.7s						
GRFL	**Gerfalco**	**3.52**	**291**	Pn	**Pn**	**19 34 27.2**	**+0.7**
	13nm,0.6s						
BOJS	**Bojanci**	**3.55**	**358**	*i* Pn	**Pn**	**19 34 27.8**	**+0.9**
BOJS				*e*Sn	**Sn**	**19 35 08.3**	**-0.5**
PLAC	**Placanica**	**3.58**	**168**	Pn	**Pn**	**19 34 27.8**	**+0.5**
KNDS	**Knezji Dol**	**3.65**	**348**	*e*Pn	**Pn**	**19 34 28.4**	**+0.1**
KNDS				*e*Sn	**Sn**	**19 35 13.1**	**+1.6**
SEI	**Scarperia**	**3.67**	**306**	Pn	**Pn**	**19 34 30.3**	**+1.8**
	132nm,0.3s						
SCLL	**Scilla**	**3.70**	**177**	Pn	**Pn**	**19 34 29.2**	**+0.2**
CEL	**Celeste**	**3.71**	**175**	Pn	**Pn**	**19 34 29.6**	**+0.5**
	94nm,0.9s						
FNVD	**Fontana Vidola**	**3.87**	**306**	Pn	**Pn**	**19 34 32.8**	**+1.5**
	117nm,0.8s						
SOI	**Samo**	**3.91**	**173**	Pn	**Pn**	**19 34 30.5**	**-1.3**
	24nm,0.3s						
TRI	**Trieste**	**3.95**	**342**	Pn	**Pn**	**19 34 31.9**	**-0.4**
	118nm,0.8s						
PZZT	**Monte Pizzetto**	**4.01**	**304**	Pn	**Pn**	**19 34 33.7**	**+0.5**
	57nm,0.5s						
MMME	**Mongiuffi-Meli**	**4.02**	**182**	Pn	**Pn**	**19 34 33.8**	**+0.4**
ZCCA	**Zocca**	**4.06**	**308**	Pn	**Pn**	**19 34 36.8**	**+2.9**
	10.0nm,1.9s						
OHR	**Ohrid**	**4.09**	**100**	*e*P	**Pn**	**19 34 34.2**	**-0.1**
OHR				*e*S	**Sn**	**19 35 15.8**	**-6.5**
OHR	**Ohrid**	**4.09**	**100**	*e*Pn	**Pn**	**19 34 34.4**	**0.0**
OHR				*e*S	**Sn**	**19 35 15.8**	**-6.5**
OHR				*e*Sn	**Sn**	**19 35 17.7**	**-4.6**
LJU	**Ljubljana**	**4.14**	**351**	*e*Pn	**Pn**	**19 34 35.5**	**+0.5**
LJU				*e*		19 34 46.4	
LJU				*e*Sn	**Sn**	**19 35 23.2**	**-0.3**
MAIM		**4.14**	**300**	P	**Pn**	**19 34 35.7**	**+0.7**
VOY	**Vojsko**	**4.23**	**345**	*e*Pn	**Pn**	**19 34 35.8**	**-0.4**
VOY				*e*Sn	**Sn**	**19 35 24.7**	**-0.9**
VLC	**Villacollemand**	**4.32**	**302**	Pn	**Pn**	**19 34 37.8**	**+0.3**
	55nm,1.1s						
SARO	**Sassorosso**	**4.32**	**303**	P	**Pn**	**19 34 38.2**	**+0.7**
RHK3	**Tenkes**	**4.42**	**26**	⇑*e*P	**Pn**	**19 34 38.4**	**-0.4**
IGT	**Igoumenitsa**	**4.42**	**122**	*e*P	**Pn**	**19 34 38.5**	**-0.3**
IGT				*e*S	**Sn**	**19 35 23.3**	**-7.0**
SKO	**Skopje**	**4.46**	**88**	*e*P	**Pn**	**19 34 40.4**	**+1.1**
SKO				*e*S	**Sn**	**19 35 27.2**	**-4.0**
SKO	**Skopje**	**4.46**	**88**	*e*Pn	**Pn**	**19 34 40.2**	**+0.8**
SKO				*e*Sn	**Sn**	**19 35 28.0**	**-3.3**
SKO	**Skopje**	**4.46**	**88**	*e*Pn	**Pn**	**19 34 40.1**	**+0.8**
SKO				*e*Sn	**Sn**	**19 35 27.9**	**-3.4**
VINC	**Vinca**	**4.46**	**301**	P	**Pn**	**19 34 39.9**	**+0.5**
GORS	**Gorjuse**	**4.48**	**347**	*e*Pn	**Pn**	**19 34 39.5**	**-0.2**
BIA	**Bitola**	**4.50**	**100**	*e*P	**Pn**	**19 34 39.4**	**-0.6**
BIA	**Bitola**	**4.50**	**100**	*e*Pn	**Pn**	**19 34 39.4**	**-0.5**
BIA				*e*Sn	**Sn**	**19 35 26.6**	**-5.8**
BIA	**Bitola**	**4.50**	**100**	*e*Pn	**Pn**	**19 34 39.4**	**-0.6**
BIA				*e*Sn	**Sn**	**19 35 26.5**	**-5.9**
VALM		**4.50**	**304**	P	**Pn**	**19 34 41.6**	**+1.6**
ROBS	**Robic**	**4.51**	**342**	*i* Pn	**Pn**	**19 34 39.5**	**-0.6**
ROBS				*e*Sn	**Sn**	**19 35 31.7**	**-0.9**
KOGS	**Kog**	**4.53**	**7**	*i* Pn	**Pn**	**19 34 40.6**	**+0.3**
VAE	**Valguarnera**	**4.55**	**191**	Pn	**Pn**	**19 34 44.3**	**+3.7**
	1.2nm,0.3s,baz=234,slow=12,SNR=2.8						
VAE	**Valguarnera**	**4.55**	**191**	Pn	**Pn**	**19 34 44.3**	**+3.7**
BACM		**4.58**	**302**	P	**Pn**	**19 34 41.0**	**0.0**
OBKA	**Obir**	**4.60**	**352**	*i* Pn	**Pn**	**19 34 41.6**	**+0.4**
	SNR=64						
OBKA				⇑*i*Sn	**Sn**	**19 35 34.8**	**0.0**
OBKA	**Obir**	**4.60**	**352**	*e*Pn	**Pn**	**19 34 41.6**	**+0.3**
OBKA	**Obir**	**4.60**	**352**	Pn	**Pn**	**19 34 41.6**	**+0.3**
	64nm,3.0s						
OBKA				Sn	**Sn**	**19 35 34.8**	**+0.1**
FNA	**Florina**	**4.60**	**103**	*e*P	**Pn**	**19 34 41.3**	**0.0**
FNA				*e*S	**Sn**	**19 35 28.2**	**-6.6**
PERS	**Pernice**	**4.68**	**357**	*i* Pn	**Pn**	**19 34 42.4**	**0.0**
GRAM		**4.69**	**305**	P	**Pn**	**19 34 44.5**	**+2.0**
CODM		**4.77**	**303**	P	**Pn**	**19 34 44.8**	**+1.1**
PKSM	**Moragy**	**4.83**	**27**	⇓*i*P	**Pn**	**19 34 46.1**	**+1.6**
PKSM	**Moragy**	**4.83**	**27**	⇓P	**Pn**	**19 34 46.1**	**+1.6**
CTI	**Castel Tesino**	**4.93**	**327**	⇓*e*Pn	**Pn**	**19 34 45.3**	**-0.5**
SC2M	**Scurtabr**	**4.98**	**301**	P	**Pn**	**19 34 48.7**	**+2.2**
FVI	**Forni Avoltri**	**5.02**	**338**	Pn	**Pn**	**19 34 46.6**	**-0.5**
	36nm,0.4s						
STIP	**Stip**	**5.03**	**91**	*e*Pn	**Pn**	**19 34 47.1**	**-0.2**
STIP				*e*Sn	**Sn**	**19 35 40.6**	**-4.8**
STIP	**Stip**	**5.03**	**91**	*e*Pn	**Pn**	**19 34 47.0**	**-0.2**
STIP				*e*Sn	**Sn**	**19 35 40.5**	**-4.9**
PKS9	**Tamasi**	**5.05**	**23**	*e*P	**Pn**	**19 34 49.2**	**+1.7**
SALO	**Salr**	**5.12**	**317**	⇓*e*Pn	**Pn**	**19 34 48.0**	**-0.4**
	521nm,0.4s						
ARSA	**Arzberg**	**5.29**	**0**	⇑*i*Pn	**Pn**	**19 34 50.8**	**0.0**
ARSA				⇑*i*Sn	**Sn**	**19 35 53.1**	**+1.3**
ARSA	**Arzberg**	**5.29**	**0**	*e*Pn	**Pn**	**19 34 50.7**	**-0.1**
KBA	**Koelnbreinsper**	**5.34**	**344**	⇓*i*Pn	**Pn**	**19 34 52.1**	**+0.7**
KBA				⇓*i*Sn	**Sn**	**19 35 54.1**	**+1.1**
VAY	**Valandovo**	**5.36**	**94**	*e*Pn	**Pn**	**19 34 50.9**	**-1.0**
VAY				*e*Sn	**Sn**	**19 35 47.2**	**-6.4**
VAY	**Valandovo**	**5.36**	**94**	*e*Pn	**Pn**	**19 34 50.8**	**-1.0**
VAY				*e*Sn	**Sn**	**19 35 47.2**	**-6.4**
MABI	**Malga Bissina**	**5.43**	**321**	⇓*e*Pn	**Pn**	**19 34 52.2**	**-0.5**
APPI	**Appiano**	**5.45**	**327**	Pn	**Pn**	**19 34 52.8**	**-0.2**
	245nm,0.3s						
MDI	**Monti di Nese**	**5.64**	**315**	Pn	**Pn**	**19 34 54.5**	**-1.2**
KKB	**Krupnik**	**5.69**	**88**	*i* P	**Pn**	**19 34 57.2**	**+0.9**
SCE	**Schlegeis**	**5.75**	**333**	⇓*i*Pn	**Pn**	**19 34 57.2**	**+0.2**
BZS	**Buzias**	**5.76**	**49**	⇑*i*P	**Pn**	**19 34 57.1**	**-0.2**
BZS	**Buzias**	**5.76**	**49**	⇑P	**Pn**	**19 34 57.1**	**-0.2**
VTS	**Vitosha**	**5.78**	**81**	*i* P	**Pn**	**19 34 58.5**	**+0.9**
VTS	**Vitosha**	**5.78**	**81**	⇓*i*P	**Pn**	**19 34 58.6**	**+1.0**
BRMO	**Bormio**	**5.81**	**323**	Pn	**Pn**	**19 34 58.7**	**+0.7**
	22nm,0.6s						
PKSG		**5.82**	**20**	⇓*e*P	**Pn**	**19 34 58.3**	**+0.2**
MOA	**Molln**	**5.95**	**352**	⇑*i*Sn	**Sn**	**19 36 07.8**	**-0.3**
MOA	**Molln**	**5.95**	**352**	*i* Pn	**Pn**	**19 35 00.6**	**+0.7**
	SNR=25						
MOA				⇑*i*Sn	**Sn**	**19 36 07.8**	**-0.3**
MOA	**Molln**	**5.95**	**352**	*e*Pn	**Pn**	**19 35 00.3**	**+0.4**
MOA				*e*Sn	**Sn**	**19 36 04.8**	**-3.3**
MOA	**Molln**	**5.95**	**352**	Pn	**Pn**	**19 35 00.6**	**+0.7**
	24nm,7.0s						
WTTA	**Wattenberg**	**5.97**	**334**	⇓*i*Sn	**Sn**	**19 36 09.9**	**+1.5**
WTTA	**Wattenberg**	**5.97**	**334**	⇓*i*Pn	**Pn**	**19 35 00.7**	**+0.6**
	SNR=22						
WTTA				⇓*i*Sn	**Sn**	**19 36 09.9**	**+1.5**
WTTA	**Wattenberg**	**5.97**	**334**	*e*Pn	**Pn**	**19 35 00.6**	**+0.5**
WTTA	**Wattenberg**	**5.97**	**334**	⇓*i*Pn	**Pn**	**19 35 00.7**	**+0.6**
WTTA				*i* Sn	**Sn**	**19 36 09.9**	**+1.5**
WTTA	**Wattenberg**	**5.97**	**334**	Pn	**Pn**	**19 35 00.7**	**+0.6**
	21nm,7.0s						
WTTA				*i* S	**Sn**	**19 36 09.9**	**+1.4**
CONA	**Conrad Observa**	**5.98**	**3**	⇑*i*Pn	**Pn**	**19 34 59.9**	**-0.4**
WATA	**Walderalm**	**6.05**	**334**	⇑*i*Sn	**Sn**	**19 36 10.3**	**-0.2**
WATA	**Walderalm**	**6.05**	**334**	⇓*i*Pn	**Pn**	**19 35 01.8**	**+0.6**
	SNR=34						
WATA				⇑*i*Sn	**Sn**	**19 36 10.3**	**-0.2**
WATA	**Walderalm**	**6.05**	**334**	Pn	**Pn**	**19 35 01.8**	**+0.6**
	33nm,6.0s						
SQTA	**Sankt Quirin**	**6.08**	**331**	⇓*i*Pn	**Pn**	**19 35 02.3**	**+0.7**
	SNR=21						
SQTA				⇓*i*Sn	**Sn**	**19 36 12.6**	**+1.5**
SQTA	**Sankt Quirin**	**6.08**	**331**	⇓*i*Pn	**Pn**	**19 35 02.2**	**+0.6**
SQTA				*i* S	**Sn**	**19 36 12.6**	**+1.5**
MUGIO	**Muggio**	**6.10**	**313**	Pn	**Pn**	**19 35 00.7**	**-1.2**
MMB	**Musomiste**	**6.19**	**91**	*i* P	**Pn**	**19 35 03.7**	**+0.5**
SBF	**Sospel**	**6.20**	**291**	*e*Pn	**Pn**	**19 35 01.9**	**-1.3**
MOTA	**Moosalm**	**6.22**	**331**	⇓*i*Sn	**Sn**	**19 36 15.4**	**+0.7**
MOTA	**Moosalm**	**6.22**	**331**	⇑*i*Pn	**Pn**	**19 35 04.2**	**+0.6**
	SNR=17						
MOTA				⇓*i*Sn	**Sn**	**19 36 15.4**	**+0.7**
MOTA	**Moosalm**	**6.22**	**331**	Pn	**Pn**	**19 35 04.2**	**+0.7**
	17nm,2.0s						
DAVOX	**Davos**	**6.26**	**322**	Pn	**Pn**	**19 35 06.1**	**+1.9**
DAVOX	**Davos**	**6.26**	**322**	Pn	**Pn**	**19 35 04.8**	**+0.6**
	4.6nm,0.3s,baz=144,slow=14,SNR=36						
DAVOX				Sn	**Sn**	**19 36 16.4**	**+0.6**
	4.0nm,0.3s,baz=169,slow=22,SNR=3.8						
TUE	**Stuetta**	**6.30**	**318**	Pn	**Pn**	**19 35 05.1**	**+0.5**
	15nm,0.4s						
ZST	**Bratislava**	**6.34**	**10**	*e*PN	**Pn**	**19 35 06.7**	**+1.4**
ZST				*e*SN	**Sn**	**19 36 13.8**	**-4.0**
DAVOS	**Davos**	**6.35**	**322**	P	**Pn**	**19 35 04.8**	**-0.5**
DAVOS						19 36 16.5	
PGB	**Panagyurishte**	**6.49**	**82**	*i* P	**Pn**	**19 35 08.0**	**+0.8**
DAVA	**Damuels**	**6.65**	**325**	⇑*i*Pn	**Pn**	**19 35 10.1**	**+0.6**
	SNR=9.0						
DAVA				⇓*i*Sn	**Sn**	**19 36 25.6**	**+0.3**
DAVA	**Damuels**	**6.65**	**325**	*e*Pn	**Pn**	**19 35 10.6**	**+1.1**
DAVA				*e*Sn	**Sn**	**19 36 23.6**	**-1.7**
FRF	**La Foret Royal**	**6.68**	**287**	*e*Pn	**Pn**	**19 35 07.9**	**-2.0**
LMR	**La Mourre**	**6.74**	**285**	*e*Pn	**Pn**	**19 35 10.4**	**-0.4**
MBDF	**Montbardon**	**6.91**	**297**	*e*Pn	**Pn**	**19 35 12.0**	**-1.1**
MBDF				*e*Sn	**Sn**	**19 36 26.2**	**-5.6**
	2.1nm,0.2s						
MBDF	**Montbardon**	**6.91**	**297**	*e*Pn	**Pn**	**19 35 12.0**	**-1.1**
MBDF				*e*Sn	**Sn**	**19 36 26.2**	**-5.6**
	1.0nm,0.2s						
RZN	**Rozhen**	**6.92**	**89**	*i* P	**Pn**	**19 35 14.0**	**+0.8**
VYHS	**Vyhne**	**6.96**	**19**	*e*PN	**Pn**	**19 35 14.3**	**+0.6**
VYHS				*e*SN	**Sn**	**19 36 28.0**	**-4.8**
GEC2	**GERESS Array S**	**7.00**	**350**	*e*Pn	**Pn**	**19 35 13.6**	**-0.7**
GEC2				*e*Sn	**Sn**	**19 36 28.4**	**-5.5**
GERES	**GERESS Array B**	**7.00**	**350**	Pn	**Pn**	**19 35 14.0**	**-0.3**
	1.6nm,0.3s,baz=176,slow=14,SNR=45						
GERES				Sn	**Sn**	**19 36 29.5**	**-4.4**
	7.8nm,0.3s,baz=164,slow=24,SNR=20						
DRGR		**7.09**	**45**	⇓*i*P	**Pn**	**19 35 18.4**	**+2.8**
DRGR		**7.09**	**45**	⇓P	**Pn**	**19 35 18.4**	**+2.8**
LPG	**La Plagne**	**7.23**	**302**	*e*Pn	**Pn**	**19 35 15.0**	**-2.5**
LPG				*e*Sn	**Sn**	**19 36 34.0**	**-5.7**
	16nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
LPL	La Plagne	7.25	302	ePn	Pn	19 35 16.0	-1.8
LPL				eSn	Sn	19 36 34.4	-5.8
	20nm,0.4s						
KHC	Kasperske Hory	7.29	350	ePN	Pn	19 35 18.1	-0.2
KHC				ex	x	19 35 30.0	
KHC				ex	x	19 35 40.0	
KHC				eSN	Sn	19 36 35.1	-6.1
	6.5nm,0.3s						
VRAC	Vranov	7.39	6	Pn	Pn	19 35 19.7	0.0
	0.5nm,0.3s,baz=197,slow=14,SNR=4.7						
RSL	Roselend	7.40	303	P	Pn	19 35 19.3	-0.4
WET	Wettzell	7.41	347	ePn	Pn	19 35 18.1	-1.8
SMRF	Simiane la Rot	7.53	289	ePn	Pn	19 35 20.3	-1.2
ORIF	Oris-en-Rattie	7.58	296	ePn	Pn	19 35 20.3	-1.9
OG01	Vacheresse	7.68	308	P	Pn	19 35 24.0	+0.4
VOIR		7.77	60	⇓iP	Pn	19 35 28.2	+3.4
VOIR		7.77	60	⇓P	Pn	19 35 28.2	+3.3
KEST	Kesra	7.83	219	Pn	Pn	19 35 26.9	+1.2
	0.3nm,0.3s,baz=290,slow=6.1,SNR=9.1						
FELD	Feldberg im Sc	7.94	321	P	Pn	19 35 26.0	-1.1
FELD				S	Sn	19 36 36.6	-20
PRU	Pruhonice	8.06	356	ePN	Pn	19 35 29.5	+0.7
PRU				eSN	Sn	19 36 54.1	-5.9
	8.9nm,1.1s						
OKC	Ostrava-Krasne	8.10	12	eSN	Sn	19 36 58.0	-3.0
BFO	Black Forest	8.12	324	eP	Pn	19 35 28.2	-1.5
CRVS	Cervenica-Dubn	8.12	29	e	Pn	19 35 36.1	+6.4
CRVS				e		19 36 55.7	
ROTZ	Rotzenmuhle	8.13	345	ePn	Pn	19 35 28.3	-1.5
ROTZ				eSn	Sn	19 36 53.8	-8.0
CABF	La Chapelle	8.18	308	ePn	Pn	19 35 28.5	-1.9
CABF				eSn	Sn	19 36 56.2	-6.7
	8.2nm,0.3s						
CABF	La Chapelle	8.18	308	ePn	Pn	19 35 28.5	-1.9
CABF				eSn	Sn	19 36 56.2	-6.7
	4.1nm,0.3s						
LOMF	Lomont	8.18	314	P	Pn	19 35 29.5	-1.0
MOF	Molkenrain	8.34	318	P	Pn	19 35 31.2	-1.5
MANZ	Manzenberg	8.36	345	ePn	Pn	19 35 30.9	-2.1
MLR	Muntele Rosu	8.37	62	Pn	Pn	19 35 36.1	+3.0
	0.8nm,0.3s,baz=188,slow=6.5,SNR=26						
MLR	Muntele Rosu	8.37	62	⇓iP	Pn	19 35 34.2	+1.1
MLR	Muntele Rosu	8.37	62	P	Pn	19 35 36.1	+3.0
MLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MLR	Muntele Rosu	8.37	62	⇓P	Pn	19 35 34.2	+1.1
VIVF	Saint-Julien-l	8.37	294	ePn	Pn	19 35 31.5	-1.6
KOLS	Kolonicke sedl	8.46	32	e	Pn	19 35 45.1	+11
HINF	Hinteralfeld	8.46	317	ePn	Pn	19 35 33.1	-1.3
HINF				eSn	Sn	19 37 03.2	-6.7
	comp=Z,20nm,0.3s						
HINF	Hinteralfeld	8.46	317	ePn	Pn	19 35 33.1	-1.3
HINF				eSn	Sn	19 37 03.2	-6.7
	comp=Z,9.9nm,0.3s						
NKC	Novy Kostel	8.54	347	ePN	Pn	19 35 34.2	-1.2
ECH	Echery	8.58	320	P	Pn	19 35 34.9	-1.1
WLS	Welschbruch	8.62	321	P	Pn	19 35 36.2	-0.4
CDF	Champ du Feu	8.66	321	ePn	Pn	19 35 35.4	-1.7
CDF				eSn	Sn	19 37 07.6	-7.2
	comp=Z,4.5nm,0.2s						
CDF	Champ du Feu	8.66	321	ePn	Pn	19 35 35.4	-1.7
CDF				eSn	Sn	19 37 07.6	-7.2
	comp=Z,2.2nm,0.2s						
TANN	Tannenbergstha	8.71	347	eSn	Sn	19 37 07.9	-8.1
LASF	Ste Croix	8.76	288	ePn	Pn	19 35 37.8	-0.7
HAU	Haudompre	8.84	316	ePn	Pn	19 35 37.5	-2.1
HAU				eSn	Sn	19 37 11.7	-7.6
	comp=Z,15nm,0.2s						
HAU	Haudompre	8.84	316	ePn	Pn	19 35 37.5	-2.1
HAU				eSn	Sn	19 37 11.7	-7.6
	comp=Z,7.6nm,0.2s						
BRG	Berggiesshubel	8.98	354	e(P)	Pn	19 35 50.5	+9.1
	comp=Z,1.7nm,1.1s						
BRG				i		19 35 59.1	
	comp=Z,2.5nm,0.7s						
BRG				i		19 37 35.0	
	comp=Z,1.4nm,0.6s						
BRG				i		19 37 51.5	
	comp=Z,1.2nm,0.5s						
MOX	Moxa	9.09	344	ePn	Pn	19 35 40.1	-2.8
MOX	Moxa	9.09	344	(PN)	Pn	19 35 41.9	-1.0
MOX				(SN)	Sn	19 37 17.3	-7.9
MOX	Moxa	9.09	344	Pn	Pn	19 35 41.9	-1.0
MOX				Sn	Sn	19 37 17.3	-7.9
THEF	They Montfort	9.17	316	P	Pn	19 35 42.6	-1.5
APE	Apeiranthos	9.18	119	eP	Pn	19 35 42.8	-1.4
CLL	Collm	9.50	351	ePN	Pn	19 35 50.0	+1.4
CLL				ePG	Pn	19 36 29.0	+40
CLL				eSN	Sn	19 37 26.0	-10
CLL				e		19 37 53.0	
CLL				eSG	Sn	19 38 41.0	+65
CLL	Collm	9.50	351	ePn	Pn	19 35 50.0	+1.4
CLL				eSn	Sn	19 37 26.0	-10
CLL				eSg	Sn	19 38 41.0	+65
CLL	Collm	9.50	351	eP	Pn	19 35 50.0	+1.4
CLL				eSn	Sn	19 37 26.0	-10
SMF	Signal de Mont	9.56	303	ePn	Pn	19 35 47.5	-1.9
SMF				eSn	Sn	19 37 29.1	-7.7
	comp=Z,16nm,0.5s						
SMF	Signal de Mont	9.56	303	ePn	Pn	19 35 47.5	-1.9
SMF				eSn	Sn	19 37 29.1	-7.7
	comp=Z,8.1nm,0.5s						
LOR	Lormes	9.83	307	ePn	Pn	19 35 50.4	-2.7
LOR				eSn	Sn	19 37 35.3	-8.1
	comp=Z,14nm,0.3s						
LOR	Lormes	9.83	307	ePn	Pn	19 35 50.4	-2.7
LOR				eSn	Sn	19 37 35.3	-8.1
	comp=Z,6.8nm,0.3s						
MEZF	Maizieres J'vi	9.83	315	ePn	Pn	19 35 52.2	-0.9
MEZF				eSn	Sn	19 37 35.6	-7.9
	comp=Z,8.3nm,0.4s						
MEZF	Maizieres J'vi	9.83	315	ePn	Pn	19 35 52.2	-0.9
MEZF				eSn	Sn	19 37 35.6	-7.9
	comp=Z,4.2nm,0.4s						
MTLF	Montolieu	9.86	282	ePn	Pn	19 35 51.4	-2.1
AVF	Avril sur Loir	9.92	303	ePn	Pn	19 35 52.2	-2.2
AVF				eSn	Sn	19 37 37.9	-7.9
IDI	Anoyia	9.93	129	Pn	Pn	19 35 56.1	+1.6
	comp=Z,1.7nm,0.3s,baz=314,slow=21,SNR=9.7						
IDI				Sn	Sn	19 37 36.6	-9.5
	comp=Z,2.8nm,0.3s,baz=130,slow=23,SNR=6.7						
IDI	Anoyia	9.93	129	Sn	Sn	19 37 36.5	-10
SSF	Saint Saulge	9.95	305	ePn	Pn	19 35 52.0	-2.7
SSF				eSn	Sn	19 37 38.0	-8.3
	comp=Z,8.7nm,0.4s						
SSF	Saint Saulge	9.95	305	ePn	Pn	19 35 52.0	-2.7
SSF				eSn	Sn	19 37 38.0	-8.3
	comp=Z,4.3nm,0.4s						
BGF	Bois d'Agland	10.15	301	ePn	Pn	19 35 54.7	-2.8
TCF	Toulx Ste Croi	10.46	299	ePn	Pn	19 35 59.7	-2.1
TCF				eSn	Sn	19 37 50.9	-8.1
	comp=Z,1.7nm,0.2s						
TCF	Toulx Ste Croi	10.46	299	ePn	Pn	19 35 59.7	-2.1
TCF				eSn	Sn	19 37 50.9	-8.1
	comp=Z,0.9nm,0.2s						
BRTR	Keskin Array B	13.94	93	Pn	Pn	19 36 50.1	+0.8
	comp=Z,0.1nm,0.3s,baz=264,slow=9.8,SNR=4.5						
BRTR	Keskin Array B	13.94	93	iP	Pn	19 36 52.0	+2.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	Keskin Array B	13.94	93	iP	Pn	19 36 52.0	+2.7
	comp=Z,1.0nm,0.9s						
VSU	Vasula	17.98	19	iP	Pn	19 37 42.6	+0.8
HFS	Hagfors	18.23	357	LR	LR	19 44 14.1	
	comp=Z,388nm,18.9s,baz=311,slow=35						
OBN	Obninsk	19.10	39	⇓eP	Pn	19 37 55.3	-0.1
OBN				pmax	pmax		
	comp=Z,14nm,2.1s						
OBN				MLR	MLR		
	comp=Z,300nm,15.0s						
OBN	Obninsk	19.10	39	eP	Pn	19 37 55.3	-0.1
	comp=Z,300nm,15.0s						
NOA	NORSAR Array B	19.28	354	P	Pn	19 37 56.0	-1.6
	comp=Z,0.1nm,0.3s,baz=167,slow=10,SNR=2.3						
KIV	Kislovodsk	20.00	75	eP	Pn	19 38 05.6	-0.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KIV	Kislovodsk	20.00	75	eP	Pn	19 38 05.6	-0.5
	comp=Z,4.0nm,1.7s						
FINES	FINESS Array B	20.54	15	P	P	19 38 09.3	-1.0
	comp=Z,1.7nm,0.4s,baz=178,slow=10,SNR=19						
FINES	FINESS Array B	20.54	15	iP	P	19 38 11.1	+0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	20.54	15	P	P	19 38 09.3	-1.0
FINES	FINESS Array B	20.54	15	iP	P	19 38 11.1	+0.8
	comp=Z,2.0nm,0.4s						
KAF	Kangasniemi	21.20	14	ep	P	19 38 14.9	-2.6
JOF	Joensuu	22.98	19	ep	P	19 38 35.2	-1.3
	comp=Z,0.5nm,0.3s,mb3.4						
ZAL	Zalesovo	46.15	50	P	P	19 41 56.3	-0.1
	comp=Z,1.2nm,0.5s,mb4.1,baz=193,slow=9.8,SNR=4.4						
MKAR	Makanchi Array	46.72	60	P	P	19 42 00.1	-0.7
	comp=Z,0.3nm,0.4s,mb3.5,baz=290,slow=8.1,SNR=6.1						
SONM	Songino Array	61.05	50	P	P	19 43 45.7	+0.1
	comp=Z,1.5nm,0.8s,mb4.2,baz=289,slow=9.0,SNR=10						
ASAR	Alice Springs	126.27	90	PKP	PKPdf	19 52 32.9	-1.7
	comp=Z,0.2nm,0.7s,baz=269,slow=2.3,SNR=4.0						

MAN 06 19:33:47.8, 9.73N×121.84E, h28km, mb2.4, ML4.0, MS3.5, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
GUIM	Jordan	1.16	40	eP	Pn	19 34 08.3	+0.2
GUIM				eS	Sn	19 34 23.4	+0.4
SNPH	Sibulan	1.43	106	eP	Pn	19 34 11.5	-0.4
SNPH				eS	Sn	19 34 31.0	+1.2
IPIL	Ipil	2.06	159	eP	Pn	19 34 20.8	+0.2
IPIL				eS	Sn	19 34 39.6	-5.8
LLP	Lapu-Lapu	2.17	74	⇑eP	Pn	19 34 23.0	+0.8
LLP				eS	Sn	19 34 48.5	+0.3
OCLP	Ormoc	3.02	64	eP	Pn	19 34 34.8	+1.0

HLW 06 19:50:44.2, 30.16N×35.41E, h7km, Mb3.1
ISCJB 06 19:50:47.8±0.5, 30.09N±0.02×35.00E±0.08, h8km±5km, Error ellipse: s-maj=11.2km s-min=4.1km az=3.4
CSEM 06 19:50:48.0±0.1, 30.04N×35.02E, h15km, ML2.0, Error ellipse: s-maj=6.4km s-min=2.1km az=98.0
GII 06 19:50:48.4±0.2, 30.05N×34.99E, h8km±2km, ML2.0/5
ISC 06 19:50:48.3±0.5, 30.07N±0.02×35.02E±0.08, h8km±4km, n18, σ0.64/23, 1D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
HRFI	Mount Harif	0.04	161	Pg	Pg	19 50 50.3	+0.4
HRFI				Sg	Sg	19 50 51.2	+0.1
PRNI	Paran	0.28	357	Pg	Pg	19 50 54.2	+0.4
AQBJ	Aqaba	0.34	176	Pg	Pg	19 50 55.5	+0.5
EIL	Elat	0.41	189	Pg	Pg	19 50 56.1	-0.1
EIL				Sg	Sg	19 51 01.0	-0.6
ZFRI	Zfri	0.50	16	Pg	Pg	19 50 58.3	+0.4
HBST	Basata	0.89	197	P	Pg	19 51 05.5	+0.1
KZIT	Kziot	0.99	327	Pg	Pg	19 51 07.5	+0.2
KZIT				Sg	Sg	19 51 19.8	-0.4
MZDA	Masada	1.27	13	Pg	Pg	19 51 12.0	-0.6
MZDA				Sg	Sg	19 51 28.7	-0.3
HDHB	Dhahab	1.39	195	P	Pn	19 51 13.1	-0.9
DRGI	Dragot	1.55	12	Pn	Pn	19 51 16.2	+0.1
AMAG	Maghara	1.67	290	P	Pn	19 51 17.1	-0.7
AMAG	Maghara	1.67	290	P	Pn	19 51 17.0	-0.7
HKAT	Jabal Katrina	1.79	210	⇓P	Pn	19 51 18.6	-0.8
HKAT				S	Sn	19 51 43.8	+1.6
SUZ		1.92	264	P	Pn	19 51 22.0	+0.9
TR2		2.03	214	P	Pn	19 51 21.6	-1.1
HMDT	Nahal Hemdat	2.21	11	Pn	Pn	19 51 26.0	+0.7
TR1		2.26	205	P	Pn	19 51 25.5	-0.4
ZAF		2.29	250	P	Pn	19 51 26.9	+0.5

ISCJB 06 19:51:57.1±2.2, 34.88N±0.04×73.21E±0.05, h28km±19km, mb3.9/5, MS3.4/1, Error ellipse: s-maj=8.0km s-min=5.4km az=125.8
IDC 06 19:52:07.4±11.0, 35.10N×73.31E, h94km±97km, mb3.3/5, mb1 3.3/8, mb1mx3.1/22, mbtmp3.6/8, ML3.4/3, MS3.6/1, Ms1 3.6/1, ms1mx3.1/13, Error ellipse: s-maj=60.5km s-min=31.8km az=0.0
NEIC 06 19:52:12.9±5.8, 35.24N×73.36E, h149km±46km, mb3.9/2, Error ellipse: s-maj=42.4km s-min=18.8km az=181.0
ISC 06 19:52:00.2±0.6, 34.79N±0.05×73.14E±0.06, h54km±13km, n25, σ1.08/30, mb3.9/5, MS3.4/1, 4C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.13	175	P	Pn	19 52 16.9	-2.9
CEP	Cherat	1.40	227	⇑P	Pn	19 52 21.2	-2.2
CEP				S	Sn	19 52 42.0	+1.2
THW	Thamme Wali	2.30	211	P	Pn	19 52 36.1	+0.4
SARP	Sargodha	2.88	188	P	Pn	19 52 43.4	-0.3
SBDP	Sheikh Budin	3.15	219	P	Pn	19 52 47.5	+0.1
DLH	Dalhousie	3.25	133	eP	Pn	19 52 49.0	+0.3
DLH				eS	Sn	19 53 27.0	+0.9
DRP	Derazinda	3.91	220	⇑P	Pn	19 52 57.9	+0.2
SDNR	Sundarnagar	4.59	134	eP	Pn	19 53 06.5	-0.5
SDNR				ex	x	19 54 16.5	
SMLA	Simla	4.97	136	eP	Pn	19 53 12.8	+0.5
SMLA				eS	Sn	19 54 10.2	+1.7
	232nm,0.3s						
KLP	Kalpa	5.37	126	eP	Pn	19 53 17.8	0.0
KLP				eS	Sn	19 54 16.2	-2.1
KLP				AML	AML	19 54 48.2	
	comp=E,91nm,0.5s						
KLP				AML	AML	19 54 49.5	
	comp=N,78nm,0.6s						
KHET	Khetri	7.07	160	ex	Sn	19 54 55.4	-4.6
KK31	Karatay Array	8.55	347	⇑Pn	Pn	19 54 01.8	+0.4
	comp=N,1.2nm,0.3s,baz=159,slow=13,SNR=5.1						
KK31				⇓Sn	Sn	19 55 36.3	-0.1
	comp=N,1.0nm,0.4s,baz=173,slow=23,SNR=5.1						
MKAR	Makanchi Array	13.84	27	P	Pn	19 55 16.8	+3.2
	comp=N,0.1nm,0.3s,baz=213,slow=6.2,SNR=3.0						
MKAR	Makanchi Array	13.84	27	P	Pn	19 55 16.8	+3.2
AB31	Akbulak array	17.43	330	⇑P	Pn	19 55 58.5	-1.0
	comp=N,0.4nm,0.5s,baz=125,slow=9.6,SNR=6.9						
BVAR	Borovoye Array	18.34	355	P	Pn	19 56 11.5	+0.9
	comp=N,0.3nm,0.3s,baz=163,slow=9.5,SNR=6.8						
CHKZ	Chkalovo	18.97	355	eP	Pn	19 56 17.9	-0.4
	comp=N,0.6nm,0.6s						
AKTK	Aktyubinsk	19.14	329	P	Pn	19 56 20.1	-0.1
AKTO	Aktyubinsk	19.14	329	P	Pn	19 56 20.1	-0.1
	comp=N,0.2nm,0.3s,baz=131,slow=11,SNR=5.7						
ZAL	Zalesovo	20.83	20	P	P	19 56 36.6	-0.7
	comp=N,1.3nm,0.4s,baz=254,slow=10.0,SNR=4.6						
ZAL				LR	LR	20 04 59.5	
	comp=N,153nm,18.6s,MS3.4,baz=235,slow=38						
SONM	Songino Array	27.95	52	P	P	19 57 46.0	+0.5
	comp=N,0.4nm,0.3s,mb3.5,baz=225,slow=3.0,SNR=4.0						
FINES	FINESS Array B	39.87	327	P	P	19 59 29.1	+0.5
	comp=N,0.3nm,0.3s,mb3.5,baz=126,slow=12,SNR=4.5						
ARCES	ARCESS Array B	43.39	338	P	P	19 59 58.9	+1.5
	comp=N,0.9nm,0.4s,mb3.9,baz=116,slow=8.5,SNR=15						
TORD	Torodi Ar. Bea	67.45	271	P	P	20 02 54.5	+4.2
	comp=N,0.2nm,0.4s,mb3.5,baz=36,slow=5.4,SNR=4.4						
UNV	Unalaska Valle	77.82	32	eP	P	20 03 49.8	-2.0
	comp=N,12nm,0.6s,mb5.0						

NNC 06 20:08:41.2±8.2, 37.85N×74.00E, h0km, mb3.4, mpv2.9, 3C-2D, Error ellipse: s-maj=80.6km s-min=61.6km az=155.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
TKM2	Tokmak 2	5.21	13	⇓Pn	Pn	20 10 00.6	+0.2
	0.3nm,0.4s						
TKM2				⇑Sn	Sn	20 11 03.4	+2.3
	1.1nm,0.7s						
KK31	Karatay Array	5.88	334	⇑Pn	Pn	20 10 11.5	+1.9
	1.0nm,0.3s,baz=144,slow=13,SNR=27						
KK31				⇑Sn	Sn	20 11 24.3	+6.5
	1.7nm,0.3s,baz=186,slow=33,SNR=5.3						
AB31	Akbulak array	15.27	323	⇓P	Pn	20 12 20.6	+2.6
	0.8nm,0.6s,baz=139,slow=13,SNR=7.0						

NEIC 06 20:17:18.3, 15.50N×93.61W, h15km, mb4.1/3, MD4.4(MEX), After MEX.
MEX 06 20:17:18.6±1.2, 15.53N×93.60W, h56km±66km, MD4.4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
SCX	San Cristobal	1.51	38	iP	Pn	20 17 41.5	-1.8
SCX				iS	Sn	20 18 01.0	-0.9
CMIG	Matias Romero	1.98	322	iP	Pn	20 17 48.6	-1.1
CMIG				iS	Sn	20 18 11.7	-1.7
HUIG	Huatulco	2.43	276	iP	Pn	20 17 54.6	-1.3
HUIG				iS	Sn	20 18 22.1	-2.4
TUIG	Tuzandepetl	2.61	342	iP	Pn	20 17 56.7	-1.6
TUIG				iS	Sn	20 18 25.8	-3.0
TUIG	Tuzandepetl	2.61	342	iP	Pn	20 17 56.7	-1.6
TUIG				iS	Sn	20 18 23.4	-5.3
OXX	Oaxaca	3.37	298	iP	Pn	20 18 10.0	+1.2
VHO	Vista Hermosa	3.38	297	iP	Pn	20 18 09.4	+0.5
VHO				iS	Sn	20 18 46.1	-1.6
TPIG	Tehuac#an	4.61	309	iP	Pn	20 18 25.7	0.0
TPIG				iS	Sn	20 19 17.1	-0.7
UTMO	Huajuapan	4.63	300	eP	Pn	20 18 26.3	+0.3
PPM	Popocatepetl	5.95	307	iP	Pn	20 18 46.8	+2.7
PPM				eP		20 18 48.0	
PPM				iS	Sn	20 19 47.5	-3.4
MGV	Manicaragua	14.45	61	eP	Pn	20 20 39.5	-0.4
MNTX	Cornudas Mount	19.35	328	eP	Pn	20 21 39.2	-1.8
WMOK	Wichita Mounta	19.68	347	eP	Pn	20 21 49.3	+4.3
AMTX	Amarillo	20.59	341	eP	P	20 21 48.5	-4.5
	4.8nm,0.6s						
TUC	Tucson	22.87	320	P	P	20 22 21.7	+4.5
SDV	Santo Domingo	23.38	104	eP	P	20 22 27.4	+5.1
	1.2nm,0.5s						
SRU	San Rafael	27.79	331	eP	P	20 22 58.1	-4.2
	5.5nm,0.8s						

IDC 06 20:52:53.0±0.9, 19.17S×173.59W, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.2/14, mbtmp4.2/7, MS3.8/2, Ms1 3.8/2, ms1mx3.1/21, Error ellipse: s-maj=41.0km s-min=21.7km az=132.0
ISCJB 06 20:52:56.5±0.6, 19.2S±0.1×173.7W±0.1, h33km, mb4.3/14, MS3.8/1, Error ellipse: s-maj=23.5km s-min=11.0km az=104.4
NEIC 06 20:53:06.1±0.8, 17.62S×175.03W, h35km, mb4.5/11, Error ellipse: s-maj=51.2km s-min=13.0km az=152.0
ISC 06 20:52:58.5±0.6, 19.2S±0.1×173.6W±0.1, h35km, n69, σ0.80/27, mb4.3/14, MS3.8/1, 4C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
AFI	Afiamalu	5.51	19	Pn	Pn	20 54 12.1	-5.9
	4.6nm,0.3s,baz=54,slow=19,SNR=5.8						
AFI				Sn	Sn	20 55 09.9	-10
	13nm,0.3s,baz=153,slow=23,SNR=4.5						
RAR	Rarotonga	13.12	101	Pn	Pn	20 55 49.2	-13
	6.6nm,0.3s,baz=274,slow=5.2,SNR=14						
RAR				LR	LR	20 59 26.9	
	comp=Z,308nm,18.1s,baz=273,slow=30						
DZM	Mont Dzumac	18.92	258	P	Pn	20 57 19.7	+2.7
	0.4nm,0.3s,baz=80,slow=18,SNR=4.6						
URZ	Urewera	20.68	201	P	P	20 57 35.4	0.0
	14nm,0.8s,baz=160,slow=18,SNR=2.7						
PPT	Papeete	22.84	90	eLR	LR	21 02 51.2	
	203nm,21.0s						
PPT	Papeete	22.84	90	LR	LR	21 04 57.9	
	comp=Z,349nm,18.9s,MS3.8,baz=200,slow=32						
CTA	Charters Tower	37.78	262	eP	P	21 00 11.1	-0.1
	6.7nm,0.6s,mb4.5						
CTAO	Charters Tower	37.78	262	eP	P	21 00 11.1	-0.1
	5.8nm,0.4s,mb4.7						
STKA	Stephens Creek	42.10	243	eP	P	21 00 47.7	+0.6
	3.8nm,1.4s,mb3.8						
STKA	Stephens Creek	42.10	243	P	P	21 00 45.8	-1.3
	1.8nm,0.7s,mb3.8,baz=73,slow=14,SNR=3.8						
AS31	Alice Springs	48.87	255	eP	P	21 01 40.6	-0.1
ASAR	Alice Springs	48.87	255	P	P	21 01 40.4	-0.4
	5.4nm,0.7s,mb4.7,baz=96,slow=7.7,SNR=29						
ASPA	Alice Springs	48.88	255	eP	P	21 01 40.6	-0.1
WB2	Warramunga Arr	48.90	260	eP	P	21 01 40.4	-0.5
WRAB	Tennant Creek	48.91	260	eP	P	21 01 40.6	-0.3
	3.8nm,0.6s,mb4.6						
KAKA	Kakadu	52.13	269	eP	P	21 02 05.1	-0.2
	9.1nm,0.6s,mb4.9						
MBWA	Marble Bar	62.21	256	eP	P	21 03 16.7	+0.2
	0.8nm,0.4s,mb4.2						
MJAR	Matsushiro Arr	71.71	321	P	P	21 04 17.6	+0.7
	0.6nm,0.6s,mb3.7,baz=157,slow=3.8,SNR=5.6						
CMB	Columbia Colle	75.71	41	eP	P	21 04 40.3	0.0
	1.1nm,0.6s,mb4.0						
NVAR	Mina Array Bea	77.24	41	P	P	21 04 48.3	-0.7
	1.2nm,0.8s,mb3.9,baz=234,slow=14,SNR=7.0						
CCUT	Cedar City	79.92	44	eP	P	21 05 04.7	+0.9
MDJ	Mudanjiang	81.90	323	P	P	21 05 12.2	-2.1
ANMO	Albuquerque	83.35	50	P	P	21 05 22.9	+1.0
	0.6nm,0.5s,mb3.9,baz=263,slow=4.3,SNR=4.0						
ANMO	Albuquerque	83.35	50	eP	P	21 05 21.5	-0.4
	0.7nm,0.6s,mb3.9						
MAW	Mawson	84.19	199	P	P	21 05 26.1	-0.1
	1.4nm,0.9s,mb4.1,baz=123,slow=2.3,SNR=3.9						
MCK	McKinley	84.84	11	eP	P	21 05 29.9	+0.4
	2.2nm,0.9s,mb4.3						
COLA	College	86.08	11	eP	P	21 05 35.4	-0.3
	6.2nm,1.0s,mb4.8						
INK	Inuvik	91.95	14	eP	P	21 06 04.0	+0.6
	5.3nm,1.3s,mb4.7						
CHKZ	Chkalovo	120.47	322	ePKPdf	PKPdf	21 11 45.2	-1.0
BRVK	Borovoye	120.77	321	ePKPdf	PKPdf	21 11 48.0	+1.2
ZRNK	Zerenda	121.55	321	ePKPdf	PKPdf	21 11 49.3	+1.0
MALT	Malatya	146.31	311	⇑iP	PKPbc	21 12 39.0	+3.6
MALT	Malatya	146.31	311	ePKP	PKPbc	21 12 37.8	+2.4
CLL	Collm	147.51	352	iPKPbc	PKPbc	21 12 41.1	+2.3
	comp=Z,14nm,1.1s						
CLL				ipPKiKP		21 12 56.4	
BURAR	Bucovina Array	147.75	336	⇑iP		21 12 56.6	
BRG	Berggiesshubel	147.81	351	eP	PKPbc	21 12 42.9	+3.3
	comp=Z,3.5nm,1.1s						
UPC	Upice	147.81	348	ePKP	PKPbc	21 12 42.5	+2.8
DPC	Dobruska-Polom	147.90	348	ePKP	PKPbc	21 12 41.1	+1.2
CRVS	Cervenica-Dubn	147.95	341	ePKP	PKPdf	21 12 39.9	+2.9
MORC	Moravsky Berou	148.19	346	⇓iP	PKPbc	21 12 41.5	+0.8
PRU	Pruhonice	148.57	350	ePKP	PKPbc	21 12 43.2	+1.5
NKC	Novy Kostel	148.64	353	ePKP	PKPbc	21 12 43.7	+1.9
VRAC	Vranov	148.84	347	PKPbc	PKPbc	21 12 43.0	+0.7
	comp=Z,2.5nm,0.9s,baz=33,slow=5.6,SNR=3.8						
BRTR	Keskin Array B	148.87	317	PKPbc	PKPbc	21 12 42.6	+0.2
	comp=Z,2.1nm,0.8s,baz=97,slow=1.9,SNR=14						
VYHS	Vyhne	149.07	344	ePKP	PKPbc	21 12 43.2	+0.3
GIVF	Givet	149.11	2	ePKP1	PKPbc	21 12 44.5	+1.5
BAIF	Baives	149.13	3	ePKP1	PKPbc	21 12 44.7	+1.6
	comp=Z,17nm,1.2s						
MLR	Muntele Rosu	149.17	333	PKPbc	PKPbc	21 12 42.5	-0.6
	comp=Z,3.9nm,1.0s,baz=17,slow=4.3,SNR=5.1						
MLR	Muntele Rosu	149.17	333	⇓iP	PKPbc	21 12 46.0	+2.8
GRA1	Grafenberg Arr	149.31	354	ePKP	PKPbc	21 12 45.3	+1.8
GRF	Grafenberg Arr	149.31	354	ePKP	PKPbc	21 12 45.3	+1.8
DRGR		149.38	338	⇑iP	PKPbc	21 12 46.5	+2.8
KHC	Kasperske Hory	149.56	351	ePKP	PKPbc	21 12 46.8	+2.7
GERES	GERESS Array B	149.82	350	PKPbc	PKPbc	21 12 44.7	-0.1
	comp=Z,1.5nm,0.9s,baz=27,slow=4.5,SNR=9.0						
FLN	La Foliniere	149.96	9	ePKP1	PKPbc	21 12 46.0	+0.9
	comp=Z,17nm,1.1s						
LDF	La Druitiere	150.18	9	ePKP1	PKPbc	21 12 46.4	+0.8
	comp=Z,24nm,1.3s						
QUIF	Quistinic	150.28	13	ePKP1	PKPbc	21 12 46.7	+0.8
MMAI	Mount Meron Ar	150.66	304	PKPbc	PKPbc	21 12 47.8	+1.0
	comp=Z,0.6nm,0.3s,baz=320,slow=2.5,SNR=4.2						
MEZF	Maizieres J'vi	150.72	2	ePKP1	PKPbc	21 12 48.5	+1.6
	comp=Z,32nm,1.3s						
BZS	Buzias	150.78	338	⇑iP	PKPbc	21 12 49.3	+2.2
CDF	Champ du Feu	150.82	359	ePKP1	PKPbc	21 12 48.6	+1.4
	comp=Z,16nm,1.2s						
HAU	Haudompre	151.24	0	ePKP1	PKPbc	21 12 49.5	+1.4
LOR	Lormes	151.90	4	ePKP1	PKPbc	21 12 51.0	+1.3
	comp=Z,15nm,1.3s						
SSF	Saint Saulge	152.08	4	ePKP1	PKPbc	21 12 51.4	+1.3
	comp=Z,27nm,1.4s						
MFF	Saint Martin d	152.11	10	ePKP1	PKPbc	21 12 52.0	+1.9
	comp=Z,18nm,1.4s						
AVF	Avril sur Loir	152.34	5	ePKP1	PKPbc	21 12 51.7	+1.0
SMF	Signal de Mont	152.52	4	ePKP1	PKPbc	21 12 52.1	+1.0
CABF	La Chapelle	152.63	0	ePKP1	PKPbc	21 12 52.6	+1.3
	comp=Z,17nm,1.2s						
TCF	Toulx Ste Croi	152.73	6	ePKP1	PKPbc	21 12 52.4	+0.9
	comp=Z,17nm,1.3s						

IDC 06 20:53:37.1±4.3, 9.41S×108.60E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.6/15, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=188.4km s-min=25.1km az=50.0
ISCJB 06 20:53:44.3±5.5, 9.1S±0.2×109.1E±0.4, h61km±43km, mb3.7/3, Error ellipse: s-maj=70.4km s-min=19.9km

az=127.7
ISC 06 20:53:44.8±5.6,**91S**±02×**1090E**±04,**h42**km±47km,**n5**,σ**1s00**/6,**mb3.7**/3,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	1.90	21	eP	Pn	20 54 15.0	+0.4
BJII				eS	Sn	20 54 37.0	-0.2
FITZ	Fitzroy Crossi	18.43	121	P	Pn	20 57 56.3	-0.5
	0.1nm,0.3s,baz=245,slow=18,SNR=4.0						
ASAR	Alice Springs	27.83	124	P	P	20 59 30.5	+0.5
	0.7nm,0.8s,mb3.4,baz=301,slow=8.9,SNR=5.7						
SONM	Songino Array	56.75	358	P	P	21 03 25.0	+0.7
	0.8nm,0.7s,mb3.9,baz=174,slow=7.3,SNR=5.4						
MKAR	Makanchi Array	60.56	339	P	P	21 03 50.0	-0.9
	0.2nm,0.3s,mb3.8,baz=147,slow=8.7,SNR=2.7						

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*NEIC **06** 21:23:19.0,1033N×6130W,h29km,MD3.5(TRN),After TRN.*
TRN 06 21:23:19.0,1033N×6130W,h30km,MD3.5,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.15	266	eP	Pb	21 23 24.5	-0.2
TPP				eS	Sb	21 23 29.6	+1.2
TBH	Brigand Hill	0.28	56	eP	Pb	21 23 25.4	-0.7
TBH				eS	Sb	21 23 32.3	+1.4
TRN	Trinidad (W)	0.33	343	eP	Pb	21 23 25.9	-1.0
TRN				eS	Sb	21 23 32.8	+0.6
GRW	Mount Saint Ca	1.85	349	eP	Pn	21 23 49.6	+0.8
GRW				eS	Sn	21 24 11.3	+0.1
GRHS	Sauteurs	1.91	350	eP	Pn	21 23 49.7	+0.1
GRHS				eS	Sn	21 24 10.0	-2.7
GRSS	Sisters	1.98	351	eP	Pn	21 23 51.1	+0.6
GRSS				eS	Sn	21 24 14.6	+0.2
GRCU	Cariacou	2.13	356	eP	Pn	21 23 54.8	+2.1
GRCU				eS	Sn	21 24 18.4	+0.2

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*CSEM **06** 21:23:33.6±0.4,4021N×1944E,h2km,ML3.1,Error ellipse: s-maj=7.2km s-min=3.8km az=84.0*
*ISCJB **06** 21:23:34.9±1.0,40.16N±003×1958E±007,h10km,Error ellipse: s-maj=7.3km s-min=3.9km az=162.4*
*THE **06** 21:23:35.1,40.15N×1957E,h1km,ML3.1*
*SKO **06** 21:23:38.0,40.16N×1999E,h4km*
ISC 06 21:23:34.6±1.0,**4013N**±003×**1950E**±007,**h10**km,**n19**,σ**1s27**/34,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	Sarande	0.46	123	i Pg	Pg	21 23 40.9	-2.6
SRN				i Sg	Sg	21 23 47.0	-2.6
LSK	Leskovik	0.84	88	i Pg	Pg	21 23 53.3	+2.5
LSK				i Sg	Sg	21 23 58.2	-3.6
IGT	Igoumenitsa	0.87	133	ePg	Pg	21 23 49.0	-2.5
IGT				eSg	Sg	21 24 03.7	+0.9
TIR	Tirane	1.25	13	ePg	Pg	21 23 58.5	-0.1
TIR				eSg	Sg	21 24 15.1	+0.3
TIR	Tirane	1.25	13	i Pg	Pg	21 23 58.5	-0.1
MEV	Metsovon	1.37	104	ePg	Pg	21 24 00.1	-0.9
MEV				eSg	Sg	21 24 18.8	0.0
OHR	Ohrid	1.39	45	ePn	Pn	21 24 01.2	+1.1
OHR				eSn	Sn	21 24 16.5	-2.0
OHR	Ohrid	1.39	45	ePn	Pn	21 24 01.2	+1.1
OHR				eSn	Sn	21 24 16.4	-2.1
FNA	Florina	1.57	65	ePg	Pn	21 24 02.0	-0.5
FNA				eSg	Sg	21 24 24.1	-1.1
BIA	Bitola	1.65	57	ePg	Pn	21 24 03.4	-0.2
BIA				eSg	Sg	21 24 26.1	-1.5
BIA	Bitola	1.65	57	ePn	Pn	21 24 02.1	-1.5
BIA	Bitola	1.65	57	ePg	Pn	21 24 03.4	-0.2
LKD	Levkas	1.68	148	ePb	Pb	21 24 04.5	-1.0
LKD				eSb	Sb	21 24 27.9	+1.2
LIT	Litokhoron	2.29	90	ePn	Pn	21 24 12.6	+0.1
LIT				eSn	Sn	21 24 41.8	+1.1
GRG	Griva	2.36	69	ePn	Pn	21 24 13.4	0.0
GRG				eSn	Sn	21 24 43.5	+1.2
AGG	Agios Georgios	2.45	116	ePn	Pn	21 24 14.9	+0.2
AGG				eSn	Sn	21 24 46.3	+1.7
VAY	Valandovo	2.62	62	ePn	Pn	21 24 17.5	+0.6
KNT	Kendrikon	2.78	67	ePn	Pn	21 24 19.2	0.0
KNT				eSn	Sn	21 24 54.6	+1.8
HORT	Hortiatis	2.79	79	ePn	Pn	21 24 19.4	+0.2
HORT				eSn	Sn	21 24 54.2	+1.3

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*NEIC **06** 21:38:39.5,4024N×1950E,h6km,MD3.4(ATH),ML3.2(THE),After ATH.*
*TIR **06** 21:38:41.8,40.12N×1982E,h17km,Ml3.2*
*ISCJB **06** 21:38:41.2±0.5,40.10N±002×1965E±003,h2km±3km,mb3.3/3,MS3.3/1,Error ellipse: s-maj=4.7km s-min=3.6km az=120.6*
*CSEM **06** 21:38:42.6±0.3,40.12N×1965E,h2km,MD3.4,Error ellipse: s-maj=5.8km s-min=4.1km az=68.0*
*IDC **06** 21:38:44.0±9.4,4055N×2006E,h0km,mb3.2/4,mb1 3.3/5,mb1mx3.2/20,mbtmp3.3/5,ML3.2/1,MS3.4/1,Ms1 3.4/1,ms1mx2.1/22,Error ellipse: s-maj=175.6km s-min=28.9km az=32.0*
*THE **06** 21:38:43.0,40.12N×1971E,h4km,ML3.2*
*ATH **06** 21:38:44.4,3991N×1979E,h25km,MD3.4/4*
*SKO **06** 21:38:47.3,4026N×1999E,h4km*
ISC 06 21:38:41.9±0.5,**4010N**±002×**1963E**±003,**h3**km±3km,**n56**,σ**1s11**/87,**mb3.3**/3,**MS3.3**/1,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.35	56	i Pg	Pg	21 38 47.1	-1.5
TPE				i Sg	Sg	21 38 51.5	-1.7
SRN	Sarande	0.36	127	i Pg	Pg	21 38 48.2	-0.6
SRN				i Sg	Sg	21 38 54.5	+1.1
KEK	Kerkira	0.41	161	ePB	Pg	21 38 50.2	+0.5
LSK	Leskovik	0.74	86	i Pg	Pg	21 38 54.6	-1.6
LSK				i Sg	Sg	21 39 06.5	+0.7
IGT	Igoumenitsa	0.78	136	ePg	Pg	21 38 56.7	-0.2
IGT				eSg	Sg	21 39 08.5	+1.5
IGT	Igoumenitsa	0.78	136	P	Pg	21 38 56.5	-0.4
JAN	Janina	1.04	115	ePn	Pg	21 39 00.9	-0.9
JAN				eSb	Sb	21 39 18.2	+1.7
TIR	Tirane	1.26	8	ePg	Pg	21 39 07.0	+0.9
TIR				eSg	Sg	21 39 23.9	+1.5
TIR	Tirane	1.26	8	i Pg	Pg	21 39 06.9	+0.9
TIR	Tirane	1.26	8	ePg	Pg	21 39 06.9	+0.9
TIR	Tirane	1.26	8	P	Pg	21 39 07.4	+1.4
TIR				eSg	Sg	21 39 23.9	+1.5
MEV	Metsovon	1.27	104	ePg	Pg	21 39 06.7	+0.5
MEV				eSg	Sg	21 39 22.7	+0.1
MEV	Metsovon	1.27	104	P	Pg	21 39 07.1	+0.9
OHR	Ohrid	1.35	41	ePg	Pg	21 39 06.8	-0.9
OHR				eSg	Sg	21 39 25.6	+0.4
OHR	Ohrid	1.35	41	ePg	Pg	21 39 07.0	-0.7
OHR				eSg	Sg	21 39 20.4	-4.8
QSH	Qafa e Shtames	1.44	8	i Pn	Pn	21 39 08.1	-0.7
QSH				i Sn	Sn	21 39 30.5	+2.3
FNA	Florina	1.50	62	ePg	Pn	21 39 08.3	-1.4
FNA				eSg	Sn	21 39 28.0	-1.7
BIA	Bitola	1.58	54	ePg	Pn	21 39 09.5	-1.4
BIA				eSg	Sn	21 39 30.7	-1.2
BIA	Bitola	1.58	54	ePn	Pn	21 39 10.6	-0.2
BIA	Bitola	1.58	54	P	Pn	21 39 10.9	0.0
BIA	Bitola	1.58	54	ePn	Pn	21 39 10.6	-0.3
BIA				eSg	Sn	21 39 30.7	-1.2
LKD	Levkas	1.60	150	ePg	Pg	21 39 11.0	-1.5
LKD				eSg	Sg	21 39 32.2	-1.1
KZN	Kozani	1.65	82	ePn	Pn	21 39 12.8	+1.0
KZN				eSn	Sg	21 39 36.4	+1.4
PE1	Pezze di Greco	1.83	293	ePn	Pg	21 39 17.8	+0.9
EVR	Evrytania	2.06	124	ePN	Pn	21 39 16.7	-0.7
VLS	Valsamata	2.06	158	ePg	Pg	21 39 21.5	+0.2
LIT	Litokhoron	2.19	89	ePn	Pn	21 39 18.0	-1.2
LIT				eSn	Sn	21 39 46.6	-0.2
LIT	Litokhoron	2.19	89	P	Pg	21 39 23.5	-0.4
GRG	Griva	2.28	67	ePn	Pn	21 39 19.2	-1.2
GRG				eSn	Sn	21 39 48.3	-0.7
GRG	Griva	2.28	67	P	Pn	21 39 21.1	+0.7
GRG				eSn	Sn	21 39 48.3	-0.7
AGG	Agios Georgios	2.35	116	ePn	Pn	21 39 21.6	+0.2
AGG				eSn	Sn	21 39 51.4	+0.7
SG1	Sgolgore (BA)	2.37	289	ePn	Pn	21 39 22.6	+0.9
STIP	Stip	2.51	50	ePn	Pn	21 39 23.5	-0.1
STIP				eSn	Sn	21 39 54.9	+0.3
STIP	Stip	2.51	50	ePn	Pn	21 39 24.9	+1.3
STIP	Stip	2.51	50	ePn	Pn	21 39 24.8	+1.2
STIP				eSn	Sn	21 39 54.9	+0.2
VAY	Valandovo	2.55	60	ePn	Pn	21 39 25.6	+1.5
VAY	Valandovo	2.55	60	ePn	Pn	21 39 25.5	+1.4
THE	Thessaloniki	2.60	77	P	Pn	21 39 27.6	+2.7
HORT	Hortiatis	2.70	78	ePn	Pn	21 39 26.1	0.0
HORT				eSn	Sn	21 39 59.3	-0.1
HORT	Hortiatis	2.70	78	P	Pb	21 39 30.0	-0.8
HORT				eSn	Sn	21 39 59.3	0.0
KNT	Kendrikon	2.70	66	ePn	Pn	21 39 25.9	-0.4
KNT				eSn	Sn	21 39 59.7	+0.2
KNT	Kendrikon	2.70	66	P	Pn	21 39 29.1	+2.8
KNT				eSn	Sn	21 39 59.7	+0.2
XOR	Xorichti	2.84	104	ePn	Pn	21 39 28.5	+0.3
XOR				eSn	Sn	21 40 02.9	0.0
PAIG	Paliouri	3.12	92	ePn	Pn	21 39 31.1	-0.7
PAIG				eSn	Sn	21 40 10.0	+0.4
PAIG	Paliouri	3.12	92	ePn	Pn	21 39 31.1	-0.8
PAIG				eSn	Sn	21 40 10.0	+0.4
KKB	Krupnik	3.15	55	eP	Pn	21 39 35.0	+2.5
SRS	Serrai	3.18	70	ePn	Pn	21 39 32.4	-0.5
SRS				eSn	Sn	21 40 11.6	+0.3
MMB	Musomiste	3.45	63	ePn	Pn	21 39 36.3	-0.2
MMB				eSn	Sn	21 40 18.0	+0.2
MMB	Musomiste	3.45	63	eP	Pn	21 39 39.0	+2.5
MMB				eSn	Sn	21 40 18.0	+0.2
VTS	Vitosha	3.67	46	eP	Pn	21 39 41.0	+1.5
GERES	GERESS Array B	9.71	336	Pn	Pn	21 41 01.8	-0.8
	0.1nm,0.3s,baz=155,slow=13,SNR=4.9						
HFS	Hagfors	20.40	351	P	P	21 43 18.2	-1.8
	0.7nm,0.5s,baz=149,slow=12,SNR=5.4						
NOA	NORSAR Array B	21.60	349	P	P	21 43 33.0	+0.1
	0.5nm,0.8s,mb3.0,baz=156,slow=11,SNR=3.2						
FINES	FINESS Array B	21.74	8	P	P	21 43 31.3	-3.0
	0.7nm,0.6s,mb3.3,baz=191,slow=9.1,SNR=4.6						
BVAR	Borovoye Array	36.45	52	LR	LR	22 00 13.3	
	comp=Z,52nm,19.6s,MS3.3,baz=319,slow=36						
MKAR	Makanchi Array	44.91	60	P	P	21 46 55.9	-1.9
	0.2nm,0.2s,mb3.5,baz=285,slow=8.4,SNR=2.4						

MAN 06 21:39:03.5,1331N×12015E,h1km,mb2.7,ML4.1,MS2.8,1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.43	13	eP	Pg	21 39 11.2	-0.6
LUBP				eS	Sg	21 39 16.1	-1.3
PGP	Puerto Galera	0.81	76	eP	Pg	21 39 19.4	+0.5
TGY	Tagaytay City	1.10	44	⇑eP	Pg	21 39 25.5	+0.9
TGY				eS	Sg	21 39 39.9	+1.0
BUSP	Coron	1.30	178	eP	Pg	21 39 29.1	+0.7
BUSP				eS	Sg	21 39 46.0	+0.8
BOAC	Boac	1.66	85	eP	Pn	21 39 33.2	-0.5
OTRP	Odiongan	2.05	117	eP	Pn	21 39 47.5	+8.3
ENPP	El Nido	2.21	199	eP	Pn	21 39 41.8	+0.6
CUYO	Cuyo Island	2.59	161	eP	Pn	21 39 46.7	+0.2
BALP	Baler	2.79	30	eP	Pn	21 39 50.7	+1.5

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*IDC **06** 22:00:15.7±3.7,3548N×7090E,h0km,mb3.6/4,mb1 3.8/6,mb1mx3.5/21,mbtmp3.7/6,ML3.6/2,Error ellipse: s-maj=79.5km s-min=33.9km az=127.0*
*NEIC **06** 22:00:26.8±1.6,3585N×7069E,h68km±21km,mb3.5/2,Error ellipse: s-maj=15.9km s-min=6.5km az=60.0*
*ISCJB **06** 22:00:29.7±0.6,36.15N±003×71.10E±006,h128km±10km,mb3.5/4,Error ellipse: s-maj=8.7km s-min=5.3km az=148.0*
*NNC **06** 22:00:38.9±2.8,3729N×7022E,h0km,mb3.6,mpv3.3,Error ellipse: s-maj=28.5km s-min=18.7km az=23.0*
ISC 06 22:00:30.8±0.5,**3614N**±003×**7106E**±007,**h117**km±9km,**n32**,σ**1s31**/41,**mb3.7**/4,**9C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.42	163	⇓P	Pn	22 01 11.0	+1.6
CHCP	Chirah Chowk	3.07	143	P	Pn	22 01 20.2	+2.3
THW	Thamme Wali	3.39	170	P	Pn	22 01 23.0	+0.9
SBDP	Sheikh Budin	3.84	183	P	Pn	22 01 28.2	+0.1
SARP	Sargodha	4.42	162	P	Pn	22 01 35.7	-0.1
SARP				S	Sn	22 02 25.0	-1.3
DRP	Derazinda	4.45	189	⇑P	Pn	22 01 36.0	-0.2
DLH	Dalhousie	5.42	130	eP	Pn	22 01 48.0	-1.3
DLH				eS	Sn	22 02 49.0	-1.5
SDNR	Sundarnagar	6.75	132	eP	Pn	22 02 09.9	+2.6
SDNR				eS	Sn	22 03 22.5	-0.3
KK31	Karatay Array	6.96	357	⇑Pn	Pn	22 02 09.0	-1.2
	2.6nm,0.3s,baz=175,slow=13,SNR=68						
KK31				⇑Sn	Sn	22 03 21.6	-6.2
	4.2nm,0.4s,baz=191,slow=26,SNR=6.3						
AAK	Ala-Archa	7.00	21	ePn	Pn	22 02 11.1	+0.3
	4.3nm,0.4s						
AAK				eSn	Sn	22 03 27.1	-1.7
TKM2	Tokmak 2	7.62	26	⇑Pn	Pn	22 02 20.9	+1.8
	1.0nm,1.1s						
TKM2				⇑Sn	Sn	22 03 42.8	-1.0
	0.6nm,0.7s						
KOLN	Koldanda	13.52	125	eP	Pn	22 03 37.2	-0.5
	8.2nm,0.6s						
KOLN				eS	Sn	22 06 01.9	-4.8
GKN	Gorkha	14.07	121	eP	Pn	22 03 44.2	-0.7
	11nm,0.4s						
DMN	Daman	14.64	122	eP	Pn	22 03 52.1	0.0
KKN	Kakani	14.65	121	eP	Pn	22 03 52.1	-0.1
PKI	Pulchoki	14.88	121	eP	Pn	22 03 55.6	+0.5
	7.3nm,0.4s						
AB31	Akbulak array	15.42	332	⇑Pn	Pn	22 03 59.3	-2.5
	1.5nm,0.3s						
AB31				⇑Sn	Sn	22 06 37.3	-15
	1.5nm,0.7s						
BVAR	Borovoye Array	16.89	359	P	Pn	22 04 21.0	+1.0
	0.1nm,0.3s,baz=163,slow=10,SNR=4.4						
BRVK	Borovoye	16.92	358	ePn	Pn	22 04 23.9	+3.6
	0.4nm,0.4s						
AKTK	Aktyubinsk	17.11	331	P	Pn	22 04 22.9	+0.2
AKTO	Aktyubinsk	17.11	331	⇑Pn	Pn	22 04 22.9	+0.2
	0.2nm,1.0s						
AKTO				⇑Sn	Sn	22 07 21.5	-12
	0.1nm,1.1s						
AKTO	Aktyubinsk	17.11	331	P	Pn	22 04 22.9	+0.2
	0.3nm,0.3s,baz=147,slow=13,SNR=12						
CHKZ	Chkalovo	17.54	359	ePn	Pn	22 04 30.5	+2.8
ZAL	Zalesovo	20.20	24	P	P	22 04 59.2	+3.0
	1.1nm,0.5s,baz=251,slow=8.6,SNR=5.7						
ZAL	Zalesovo	20.20	24	P	P	22 04 59.2	+3.0
GNI	Garni	21.05	289	P	P	22 05 03.9	-1.4
ISP	Isparta	32.26	285	P	P	22 06 46.6	-1.5
TIRR	Tirgusor	33.26	298	eP	P	22 06 56.2	-0.5
PSZ	Piszkesteto	39.11	304	eP	P	22 07 46.7	+0.1
	1.1nm,0.4s,mb4.0						
ARCES	ARCESS Array B	41.49	338	P	P	22 08 08.7	+2.5
	1.1nm,0.7s,mb3.8,baz=99,slow=7.5,SNR=3.6						
NOA	NORSAR Array B	44.69	323	P	P	22 08 33.8	+1.9
	0.6nm,0.6s,mb3.5,baz=97,slow=7.8,SNR=3.6						
TORD	Torodi Ar. Bea	65.76	269	P	P	22 11 01.8	-1.2
	0.3nm,0.6s,mb3.3,baz=50,slow=5.0,SNR=5.4						

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*STR **06** 22:03:52.1±0.1,4828N×668E,h10km±1km,Ml1.1,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG 06 22:03:52.3±0.4,**4808N×746E,h25km,Md1.8**/3,**Error ellipse: s-maj=9.8km s-min=3.5km az=116.0,France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECH	Echery	0.24	305	Pg	Pb	22 03 59.2	+0.7
ECH				Sg	Sb	22 04 04.0	+1.2
WLS	Welschbruch	0.35	349	Pg	Pb	22 04 01.5	+1.5
WLS				Sg	Sb	22 04 07.9	+2.7
CDF	Champ du Feu	0.36	340	ePg	Pb	22 04 00.5	+0.3
CDF				eSg	Sb	22 04 06.1	+0.5
	1.2nm,0.2s						
HINF	Hinteralfeld	0.48	238	ePg	Pb	22 04 02.7	+0.5
HINF				eSg	Sb	22 04 09.6	+0.7
	2.3nm,0.2s						
HAU	Haudompre	0.75	265	ePn	Pn	22 04 05.4	-1.8
HAU	Haudompre	0.75	265	ePg	Pb	22 04 06.8	+0.1
HAU				eSg	Sb	22 04 17.2	+0.8
	0.6nm,0.2s						
THEF	They Montfort	1.00	279	Pg	Pn	22 04 01.2	-9.5
THEF				Sg	Sb	22 04 07.8	-16

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*NIED **06** 22:21:00,3320N×14050E,h65km,Mw4.0 Best double couple: $M_0$1.23000×10^{15} NP1:ϕ_s312.00000°,δ65.00000°,λ78.00000°. NP2:ϕ_s158.00000°,δ28.00000°,λ113.00000°.*
*ISCJB **06** 22:21:07.7±0.7,33.13N±004×14054E±010,h69km±6km,mb3.8/8,Error ellipse: s-maj=13.6km s-min=6.1km az=153.6*
*IDC **06** 22:21:09.8±2.0,3308N×14027E,h67km±12km,mb3.5/6,mb1 3.7/8,mb1mx3.5/19,mbtmp3.9/8,MS2.8/1,Ms1 2.8/1,ms1mx2.3/17,Error ellipse: s-maj=47.0km s-min=11.6km az=75.0*
*JMA **06** 22:21:09.2±0.1,3323N×14054E,h57km±3km,M3.8*
*NEIC **06** 22:21:11.6±1.6,33.18N×14042E,h88km±11km,mb4.4/2,Error ellipse: s-maj=50.0km s-min=10.7km az=76.0*
ISC 06 22:21:08.9±0.8,**3315N**±004×**14054E**±010,**h62**km±6km,**n29**,σ**1s02**/38,**mb3.9**/8,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.61	267	P	Pn	22 21 22.4	+0.3
JHJ2				S	Sn	22 21 31.7	-0.1
JHJ	Hachijo jima 2	0.64	267	P	Pn	22 21 22.5	+0.1
	739nm,0.3s,baz=161,slow=7.7,SNR=194						
JHJ				S	Sn	22 21 31.8	-0.6
	3µm,0.3s,baz=73,slow=19,SNR=75						
JKO	Kozu shima	1.56	312	P	Pn	22 21 34.6	+0.2
JKO				eS	Sn	22 21 53.2	-0.5
NJJJ	Nii jima 2	1.63	320	P	Pn	22 21 35.7	+0.4
BSO3	Boso 3	1.65	359	P	Pn	22 21 34.9	-0.7
JIM2	Oshima 3	1.81	330	P	Pn	22 21 37.6	-0.2
JIM2				eS	Sn	22 21 57.7	-2.1
BSO4	Boso 4	1.84	355	P	Pn	22 21 38.0	-0.2
JIZS	Izushimoda	2.09	319	P	Pn	22 21 42.0	+0.5
JIZS				eS	Sn	22 22 05.6	-0.8
KTJJ	Kamata 2	2.15	326	P	Pn	22 21 42.5	+0.1
KTJJ				eS	Sn	22 22 06.7	-1.3
JOD2	Odawara 2	2.43	331	P	Pn	22 21 46.1	0.0
JOD2				eS	Sn	22 22 12.7	-2.0
TK04	Tokai 4	2.54	300	eS	Sn	22 22 18.7	+1.3
MJAR	Matsushiro Arr	3.89	331	P	Pn	22 22 07.9	+1.8
	4.9nm,0.3s,baz=152,slow=12,SNR=62						
MJAR				S	Sn	22 22 51.2	+0.7
	1.6nm,0.3s,baz=144,slow=23,SNR=4.3						
MAJO	Matsushiro	3.89	331	ePn	Pn	22 22 08.3	+2.2
MAJO				eSn	Sn	22 22 55.1	+4.6
MAT	Matsushiro	3.89	331	P	Pn	22 22 08.1	+2.0
MAT				S	Sn	22 22 52.8	+2.3
MAT	Matsushiro	3.89	331	eP	Pn	22 22 08.0	+1.9
MAT				eS	Sn	22 22 53.0	+2.5
CBIJ	Chichi jima	6.20	166	P	Pn	22 22 36.6	-1.1
	16nm,0.3s,baz=286,slow=20,SNR=4.4						
ASAJ	Asahikawa	11.07	8	LR	LR	22 28 33.6	
	comp=Z,47nm,21.4s,baz=187,slow=40						
MKAR	Makanchi Array	45.67	305	P	P	22 29 23.0	-0.4
	0.3nm,0.6s,mb3.4,baz=85,slow=9.0,SNR=3.4						
KURK	Kurchatov	47.84	311	eP	P	22 29 39.9	-0.5
	0.8nm,0.6s,mb3.9						
WRAB	Tennant Creek	53.11	187	eP	P	22 30 20.2	+0.1
	3.6nm,0.3s,mb4.8						
WB2	Warramunga Arr	53.12	187	eP	P	22 30 20.1	-0.1
ASAR	Alice Springs	56.85	187	P	P	22 30 47.1	+0.1
	1.3nm,0.5s,mb4.2,baz=3.3,slow=6.7,SNR=22						
MBWA	Marble Bar	57.54	203	eP	P	22 30 51.8	-0.1
STKA	Stephens Creek	64.69	179	P	P	22 31 41.7	+1.4
	0.5nm,0.3s,mb4.0,baz=325,slow=12,SNR=3.7						
FINES	FINESS Array B	71.92	333	P	P	22 32 24.8	-0.7
	0.3nm,0.4s,mb3.5,baz=69,slow=7.6,SNR=4.5						
AKASG	Malin Array Be	76.93	323	P	P	22 32 53.0	-1.6
	0.6nm,0.5s,mb3.8,baz=48,slow=6.6,SNR=4.4						
AKASG	Malin Array Be	76.93	323	P	P	22 32 53.0	-1.7
GERES	GERESS Array B	85.62	328	P	P	22 33 40.9	+0.2
	0.2nm,0.3s,mb3.8,baz=41,slow=6.5,SNR=3.4						
TORD	Torodi Ar. Bea	119.49	313	PKP	PKPdf	22 39 50.9	-0.6
	0.6nm,1.0s,baz=42,slow=0.7,SNR=4.4						

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*CSEM **06** 22:26:01.1,3859N×2220E,h10km,MD3.5/3,After ATH*
ATH 06 22:26:06.1,3876N×2192E,h10km,MD3.4/3,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	Evrytania	0.18	331	ePG	Pg	22 26 10.0	+0.1
EVR	Evrytania	0.18	331	ePb	Pg	22 26 09.5	-0.4
VLS	Valsamata	1.20	241	ePB	Pb	22 26 29.0	+0.2
VLS	Valsamata	1.20	241	ePb	Pb	22 26 26.5	-2.3
JAN	Janina	1.22	317	ePB	Pb	22 26 29.0	-0.3
JAN	Janina	1.22	317	ePb	Pb	22 26 29.5	+0.2

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*LDG **06** 22:32:20.1±0.5,1779S×16627E,h10km,Error ellipse: s-maj=147.6km s-min=9.1km az=84.0*
*ISCJB **06** 22:32:28.7±1.5,2100S±008×170.1E±0.1,h182km±13km,mb3.8/6,Error ellipse: s-maj=21.4km s-min=13.1km az=26.4*
*IDC **06** 22:32:28.2±5.0,2108S×17021E,h163km±37km,mb3.4/3,mb1 3.5/4,mb1mx3.4/11,mbtmp3.9/4,Error ellipse: s-maj=47.6km s-min=32.7km az=73.0*
*NEIC **06** 22:32:37.6±1.9,2169S×16945E,h196km±15km,mb4.1/4,Error ellipse: s-maj=22.0km s-min=14.8km az=62.0*
ISC 06 22:32:29.4±1.4,**2100S**±008×**1701E**±01,**h174**km±12km,**n31**,σ**0s84**/17,**mb3.8**/6,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.59	252	eP	Pn	22 33 24.8	-0.2
DZM				eS	Sn	22 34 08.2	-0.2
DZM	Mont Dzumac	3.59	252	P	Pn	22 33 24.6	-0.5
	4.7nm,0.3s,baz=85,slow=14,SNR=44						
DZM				S	Sn	22 34 08.0	-0.4
	2.4nm,0.3s,baz=180,slow=20,SNR=2.5						
BKM	Butte a Klehm	3.76	332	i P	Pn	22 33 27.6	+0.4
BKM				S	Sn	22 34 12.0	-0.3
SNZO	South Karori	20.62	170	eP	P	22 36 57.2	+2.1
	23nm,0.7s						
CTAO	Charters Tower	22.37	268	P	P	22 37 13.9	+0.8
TAU	Tasmania Unive	29.01	216	P	P	22 38 12.5	-0.4
WRAB	Tennant Creek	33.49	265	eP	P	22 38 51.9	-0.1
	1.1nm,0.4s,mb3.9						
ASAR	Alice Springs	33.55	259	P	P	22 38 53.4	+0.7
	0.3nm,0.3s,mb3.5,baz=92,slow=9.1,SNR=7.9						
MBWA	Marble Bar	46.85	260	P	P	22 40 42.5	+0.7
VNDA	Vanda	56.71	182	P	P	22 41 53.8	-0.9
	0.5nm,0.7s,mb3.4,baz=360,slow=7.6,SNR=4.6						
SBA	Scott Base	56.92	181	eP	P	22 41 57.0	+0.8
	2.7nm,0.6s,mb4.2						
QSPA	South Pole Qui	69.06	180	P	P	22 43 15.6	-0.6
MAW	Mawson	77.12	202	P	P	22 44 03.0	-0.5
	1.6nm,0.7s,mb3.7,baz=90,slow=8.1,SNR=6.7						
SNAA	Sanae	87.45	182	eP	P	22 44 55.4	-1.7
	1.1nm,0.5s,mb3.9						
ARCES	ARCESS Array B	126.97	345	PKP	PKPdf	22 51 10.5	-2.0
	0.8nm,0.5s,baz=34,slow=1.9,SNR=6.8						
ARCES	ARCESS Array B	126.97	345	PKP	PKPdf	22 51 10.5	-2.0
GERES	GERESS Array B	146.43	331	PKPbc	PKPbc	22 51 50.7	+0.8
	0.7nm,0.4s,baz=19,slow=3.8,SNR=12						
CDF	Champ du Feu	149.38	337	ePKP1	PKPbc	22 51 57.3	-0.3
	2.4nm,0.7s						
HINF	Hinteralfeld	150.03	337	ePKP1	PKPbc	22 51 59.2	0.0
	5.9nm,1.0s						
HAU	Haudompre	150.05	338	ePKP1	PKPbc	22 51 59.4	+0.1
	3.7nm,0.7s						
MEZF	Maizieres J'vi	150.06	340	ePKP1	PKPbc	22 51 59.8	+0.5
FLN	La Foliniere	151.29	347	ePKP1	PKPbc	22 52 01.9	-0.3
	6.4nm,0.6s						
CABF	La Chapelle	151.33	337	ePKP1	PKPbc	22 52 03.5	+1.3
	4.1nm,0.7s						
LDF	La Druitiere	151.38	346	ePKP1	PKPbc	22 52 01.9	-0.5
	2.6nm,0.6s						
LOR	Lormes	151.52	340	ePKP1	PKPbc	22 52 02.8	+0.1
	3.9nm,0.7s						
GRR	Gorron	151.73	347	ePKP1	PKPbc	22 52 03.2	0.0
	4.2nm,0.6s						
SSF	Saint Saulge	151.82	340	ePKP1	PKPbc	22 52 03.5	+0.1
	7.5nm,1.0s						
LPL	La Plagne	151.99	335	ePKP1	PKPbc	22 52 04.4	+0.6
	8.9nm,1.0s						
LPG	La Plagne	152.00	335	ePKP1	PKPbc	22 52 04.5	+0.7
SMF	Signal de Mont	152.08	340	ePKP1	PKPbc	22 52 04.7	+0.7
	7.5nm,1.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TCF	**Toulx Ste Croi**	**152.91**	**341**	*e*PKP1	PKPbc	22 52 05.7	-0.1
	2.6nm,0.7s						

*NEIC **06** 22:59:14.2, 30.10S×70.28W, h110km, mb4.1/2, After GUC.*

GUC 06 22:59:14.2±1.1**, 3010S×7028W, h110**km±10km**, MD3.7, ML3.7, 11C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**0.46**	**261**	⇑*i*P	Pn	22 59 32.0	+1.2
TLL				*i* S	Sn	22 59 44.9	+1.7
TLL				AML	AML	22 59 46.8	
	comp=N,4μm,0.3s						
TLL	**Tololo Astrono**	**0.46**	**261**	⇑*i*P	Pn	22 59 32.0	+1.2
TLL				*i* S	Sn	22 59 44.9	+1.7
LSCH	**La Serena**	**0.86**	**283**	⇑*i*P	Pn	22 59 34.4	+0.5
LSCH				*i* S	Sn	22 59 49.4	+0.5
LSCH				AML	AML	22 59 50.0	
	comp=N,462nm,0.3s						
LSCH	**La Serena**	**0.86**	**283**	⇑*i*P	Pn	22 59 34.4	+0.5
LSCH				*i* S	Sn	22 59 49.4	+0.5
OVCH	**Ovalle**	**0.94**	**237**	*e*P	Pn	22 59 35.2	+0.5
OVCH				*i* S	Sn	22 59 50.9	+0.5
OVCH				AML	AML	22 59 51.2	
	comp=E,5μm,0.1s						
OVCH	**Ovalle**	**0.94**	**237**	*e*P	Pn	22 59 35.2	+0.5
OVCH				*i* S	Sn	22 59 50.9	+0.5
CMCH	**Combarbala**	**1.24**	**210**	⇑*i*P	Pn	22 59 37.9	-0.1
CMCH				*i* S	Sn	22 59 56.2	+0.3
CMCH				AML	AML	22 59 57.6	
	comp=N,5μm,0.4s						
CMCH	**Combarbala**	**1.24**	**210**	⇑*i*P	Pn	22 59 37.9	-0.1
CMCH				*i* S	Sn	22 59 56.2	+0.3
VACH	**Vallenar**	**1.57**	**345**	⇑*i*P	Pn	22 59 42.5	+0.6
VACH				*i* S	Sn	23 00 03.2	+0.3
CHNG	**Los Chungos**	**2.06**	**210**	⇑*i*P	Pn	22 59 48.3	+0.3
CHNG				*i* S	Sn	23 00 13.8	+0.1
CHNG				AML	AML	23 00 14.4	
	comp=E,308nm,0.2s						
JACH	**Jahuel**	**2.59**	**186**	⇓*i*P	Pn	22 59 55.8	+1.1
JACH				*i* S	Sn	23 00 26.7	+0.8
CPCH	**Copiapo**	**2.73**	**359**	⇓*i*P	Pn	22 59 55.2	-1.4
CPCH				*i* S	Sn	23 00 27.1	-2.2
PEL	**Peldehue**	**3.06**	**186**	⇑*i*P	Pn	23 00 01.0	+0.1
PEL				*i* S	Sn	23 00 37.8	+0.9
PEL				AML	AML	23 00 43.9	
	comp=E,243nm,0.4s						
PEL	**Peldehue**	**3.06**	**186**	⇑*i*P	Pn	23 00 01.0	+0.1
PEL				*i* S	Sn	23 00 37.8	+0.9
FCH	**Farellones**	**3.22**	**180**	*e*P	Pn	23 00 04.6	+1.5
FCH				*i* S	Sn	23 00 42.5	+1.7
FCH				AML	AML	23 00 51.4	
	comp=E,132nm,0.3s						
CLCH	**Cerro Calan**	**3.29**	**184**	⇑*i*P	Pn	23 00 04.6	+0.6
CLCH				*i* S	Sn	23 00 43.7	+1.1
CLCH				AML	AML	23 00 52.1	
	comp=E,140nm,0.5s						
PCH	**Pirque**	**3.52**	**183**	*e*P	Pn	23 00 07.6	+0.5
PCH				*i* S	Sn	23 00 48.9	+1.0
CHCH	**Chadas Angostu**	**3.84**	**185**	*e*P	Pn	23 00 11.1	-0.2
CHCH				*i* S	Sn	23 00 56.5	+0.9
LVC	**Limon Verde**	**7.56**	**10**	*e*Pn	Pn	23 00 59.2	-2.4
	comp=E,3.2nm,0.3s						
LVC				*e*Sn	Sn	23 02 34.0	+8.4
NNA	**Nana**	**19.02**	**340**	*e*P	P	23 03 27.1	-0.3
	comp=E,2.4nm,0.3s						
SAML	**Samuel**	**22.07**	**19**	P	P	23 03 59.9	-0.1

*ISCJB **06** 23:00:02.4±0.4, 18.09N±0.05×68.04W±0.03, h98km±3km, mb4.1/43, Error ellipse: s-maj=8.5km s-min=4.8km az=17.1*

*IDC **06** 23:00:02.4±1.5, 18.14N×68.14W, h82km±14km, mb3.8/17, mb1 4.0/19, mb1mx3.9/25, mbtmp4.1/19, MS3.2/5, Ms1 3.2/5, ms1mx2.9/23, Error ellipse: s-maj=17.2km s-min=12.4km az=3.0*

*NEIC **06** 23:00:03.7, 18.07N×68.01W, h96km, mb4.3/27, MD4.0(RSPR), After RSPR.*

*RSPR **06** 23:00:03.7, 18.07N×68.01W, h96km±1km, MD4.0/10, MD4.0/10*

ISC 06 23:00:03.5±0.4**, 1814N**±005×**6805W**±003**, h87**km±4km**, n167, σ0.78**/181**, mb4.1**/43**, 39C-22D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPR	**Mayaguez**	**0.87**	**85**	⇑*e*P	**Pn**	**23 00 21.4**	**-0.2**
MPR				*e*S	**Sn**	**23 00 35.6**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.91**	**98**	⇑*e*P	**Pn**	**23 00 21.7**	**-0.3**
CRPR				*e*S	**Sn**	**23 00 36.0**	**+0.3**
AGPR	**Aguadilla, PR**	**0.95**	**70**	⇑*e*P	**Pn**	**23 00 23.0**	**+0.5**
AGPR				*e*S	**Sn**	**23 00 37.5**	**+0.9**
AOPR	**Arecibo Observ**	**1.25**	**80**	⇑*e*P	**Pn**	**23 00 25.8**	**-0.2**
AOPR				*e*S	**Sn**	**23 00 43.8**	**+0.9**
OBIP	**Obispado Ponce**	**1.38**	**94**	⇑*e*P	**Pn**	**23 00 27.7**	**+0.1**
ICM	**Isla Caja Muer**	**1.48**	**99**	⇑*e*P	**Pn**	**23 00 28.6**	**-0.3**
ICM				*e*S	**Sn**	**23 00 47.9**	**-0.1**
SJG	**San Juan**	**1.81**	**91**	⇑*e*P	**Pn**	**23 00 33.0**	**-0.1**
SJG	**San Juan**	**1.81**	**91**	*e*S	**Sn**	**23 00 55.5**	**0.0**
SJG	**San Juan**	**1.81**	**91**	P	**Pn**	**23 00 33.0**	**-0.1**
	75nm,0.3s,baz=284,slow=10,SNR=101						
SJG				S	**Sn**	**23 00 56.6**	**+1.0**
	319nm,0.3s,baz=307,slow=20,SNR=33						
SJG	**San Juan**	**1.81**	**91**	⇑*e*P	**Pn**	**23 00 33.0**	**-0.1**
SJG				*e*S	**Sn**	**23 00 55.5**	**0.0**
CPD	**Cerro la Pandu**	**2.03**	**93**	⇑*e*P	**Pn**	**23 00 35.9**	**-0.2**
CPD				*e*S	**Sn**	**23 01 00.9**	**+0.1**
CBYP	**Canovanas**	**2.09**	**86**	⇑*e*P	**Pn**	**23 00 36.7**	**-0.1**
CBYP				*e*S	**Sn**	**23 01 02.1**	**-0.1**
MTP	**Monte Pirata**	**2.38**	**91**	⇑*e*P	**Pn**	**23 00 40.4**	**-0.3**
MTP				*e*S	**Sn**	**23 01 08.9**	**-0.1**
CULB	**Culebra**	**2.62**	**87**	⇑*e*P	**Pn**	**23 00 43.5**	**-0.4**
CULB	**Culebra**	**2.62**	**87**	*e*S	**Sn**	**23 01 14.3**	**-0.5**
STVI	**Saint Thomas**	**2.95**	**85**	⇑*e*P	**Pn**	**23 00 48.2**	**-0.1**
CDVI	**St. Croix**	**3.15**	**97**	⇑*e*P	**Pn**	**23 00 50.3**	**-0.7**
CDVI				*e*S	**Sn**	**23 01 27.3**	**-0.4**
TBVI	**Tortola**	**3.27**	**85**	⇑*e*P	**Pn**	**23 00 52.6**	**-0.1**
TBVI				*e*S	**Sn**	**23 01 30.5**	**-0.1**
LZG	**Guadaloupe-1**	**6.32**	**107**	*e*P	**Pn**	**23 01 30.8**	**-3.3**
SEG	**Port Louis**	**6.49**	**104**	*e*P	**Pn**	**23 01 36.3**	**-0.1**
SEG				*e*S	**Sn**	**23 02 47.9**	**-1.0**
PCRV	**Puerto La Cruz**	**8.58**	**157**	P	**Pn**	**23 02 05.7**	**+0.7**
	2.2nm,0.3s,baz=355,slow=21,SNR=14						
PCRV				S	**Sn**	**23 03 33.1**	**-7.0**
	3.0nm,0.3s,baz=358,slow=20,SNR=7.1						
SDV	**Santo Domingo**	**9.54**	**196**	P	**Pn**	**23 02 17.9**	**0.0**
	3.1nm,0.3s,baz=346,slow=12,SNR=17						
SDV				S	**Sn**	**23 03 57.0**	**-6.3**
	6.6nm,0.3s,baz=310,slow=20,SNR=7.3						
SDV				LR	LR	23 05 58.2	
	comp=Z,96nm,18.9s,baz=86,slow=37						
SDV	**Santo Domingo**	**9.54**	**196**	*e*Pn	**Pn**	**23 02 17.3**	**-0.6**
	16nm,0.8s						
SDV				*e*Sn	Sn	23 03 41.3	-22
ROSC	**El Rosal**	**14.56**	**206**	P	**Pn**	**23 03 31.7**	**+6.5**
	0.8nm,0.3s,baz=86,slow=10.0,SNR=14						
ROSC				S	**Sn**	**23 05 59.1**	**-6.3**
	1.1nm,0.3s,baz=94,slow=19,SNR=2.7						
ROSC				LR	LR	23 08 26.4	
	comp=Z,31nm,18.6s,baz=358,slow=35						
MYNC	**Murphy**	**22.11**	**323**	*e*P	**P**	**23 04 52.7**	**+1.1**
TZTN	**Tazewell**	**22.87**	**326**	*e*P	**P**	**23 04 59.8**	**+0.2**
BRNJ	**Basking Ridge**	**23.15**	**347**	*e*P	**P**	**23 05 01.6**	**-0.7**
PLAL	**Pickwick Lake**	**24.46**	**317**	*e*P	**P**	**23 05 10.5**	**-3.7**
	18nm,1.4s,mb4.2						
WVT	**Waverly**	**25.03**	**320**	*e*P	**P**	**23 05 18.4**	**-1.0**
	8.1nm,0.6s,mb4.3						
ACSO	**Alum Creek Sta**	**25.51**	**333**	P	**P**	**23 05 23.3**	**-0.4**
SIUC	**Southern Illin**	**26.90**	**321**	*e*P	**P**	**23 05 36.2**	**-0.1**
ATAH	**Atahualpa**	**26.99**	**203**	LR	LR	23 15 55.1	
	comp=Z,100nm,20.9s,baz=158,slow=35						
SAML	**Samuel**	**27.34**	**169**	*e*P	**P**	**23 05 40.2**	**0.0**
	3.0nm,0.5s,mb4.1						
SAML				*e*	pP	23 05 57.8	-2.3
NATX	**Nacogdoches**	**27.59**	**305**	P	**P**	**23 05 41.8**	**-0.6**
SADO	**Sadowa**	**28.13**	**343**	P	**P**	**23 05 46.2**	**-1.0**
	3.8nm,0.5s,mb4.2,baz=198,slow=6.2,SNR=4.0						
SADO	**Sadowa**	**28.13**	**343**	P	**P**	**23 05 46.2**	**-1.0**
CCM	**Cathedral Cave**	**28.36**	**319**	*e*P	**P**	**23 05 48.6**	**-0.7**
WMOK	**Wichita Mounta**	**31.93**	**307**	*e*P	**P**	**23 06 19.9**	**-0.9**
	2.2nm,0.6s,mb4.1						
SIV	**San Ignacio**	**34.61**	**168**	P	**P**	**23 06 42.8**	**-1.3**
	0.7nm,0.7s,mb3.6,baz=24,slow=8.0,SNR=5.0						
MNTX	**Cornudas Mount**	**36.26**	**299**	*e*P	**P**	**23 06 57.8**	**-0.5**
	0.7nm,0.5s,mb3.9						
SCHQ	**Schefferville**	**36.63**	**1**	P	**P**	**23 07 00.9**	**-0.5**
	2.4nm,0.6s,mb4.3,baz=173,slow=4.9,SNR=8.3						
ANMO	**Albuquerque**	**37.95**	**304**	P	**P**	**23 07 12.2**	**-0.3**
	2.3nm,1.1s,mb3.9,baz=119,slow=6.8,SNR=5.6						
BDFB	**Brasilia**	**38.94**	**148**	LR	LR	23 24 11.3	
	comp=Z,66nm,18.1s,baz=120,slow=37						
ULM	**Lac du Bonnet**	**39.00**	**332**	P	**P**	**23 07 19.7**	**-1.7**
	1.4nm,0.3s,mb4.2,baz=109,slow=4.9,SNR=5.8						
ULM	**Lac du Bonnet**	**39.00**	**332**	P	**P**	**23 07 19.7**	**-1.7**
PDAR	**Pinedale Array**	**42.80**	**314**	P	**P**	**23 07 51.4**	**-1.1**
	1.0nm,0.4s,mb3.9,baz=116,slow=11,SNR=10.0						
Y14A	**Wickenburg**	**42.99**	**301**	⇓P	**P**	**23 07 54.9**	**+0.8**
	baz=43						
W14A	**Seligman**	**43.29**	**302**	⇓P	**P**	**23 07 57.5**	**+1.0**
	baz=43						
MSU	**Marysvale**	**43.33**	**307**	*e*P	**P**	**23 07 57.4**	**+0.5**
Y13A	**Salome**	**43.65**	**300**	⇑P	**P**	**23 08 00.9**	**+1.5**
	baz=44						
REDW	**Red Top Meadow**	**43.90**	**314**	*e*P	**P**	**23 08 01.1**	**-0.3**
	7.5nm,1.1s,mb4.3						
W13A	**Hualapai Mount**	**43.91**	**302**	⇓P	**P**	**23 08 02.1**	**+0.6**
	baz=44						
TPAW	**Teton Pass**	**44.01**	**315**	*e*P	**P**	**23 08 02.1**	**-0.2**
	2.2nm,0.6s,mb4.1						
GCMT	**Greycliff**	**44.07**	**318**	*e*P	**P**	**23 08 02.2**	**-0.5**
IMW	**Indian Meadow**	**44.15**	**315**	*e*P	**P**	**23 08 07.1**	**+3.6**
	2.2nm,0.5s,mb4.1						
DUG	**Dugway**	**44.26**	**309**	*e*P	**P**	**23 08 03.6**	**-0.8**
BGU	**Big Grassy Mou**	**44.63**	**310**	*e*P	**P**	**23 08 06.8**	**-0.4**
BGU				*e*	pP	23 08 26.2	-2.0
IRM	**Iron Mountain**	**44.79**	**300**	⇓P	**P**	**23 08 09.9**	**+1.5**
	baz=45						
FCC	**Fort Churchill**	**44.81**	**341**	*e*P	**P**	**23 08 07.6**	**-1.1**
	5.9nm,0.6s,mb4.5						
BOZ	**Bozeman (W)**	**45.27**	**317**	*e*P	**P**	**23 08 12.3**	**0.0**
	5.1nm,0.7s,mb4.4						
Q12A	**Willow Creek R**	**45.47**	**307**	⇑P	**P**	**23 08 13.0**	**-0.9**
	baz=46						
M13A	**Montello**	**45.58**	**311**	⇑P	**P**	**23 08 13.3**	**-1.4**
	baz=46						
P12A	**McGill**	**45.63**	**308**	⇓P	**P**	**23 08 15.7**	**+0.5**
	baz=46						
MCMT	**McKenzie Canyo**	**45.77**	**316**	*e*P	**P**	**23 08 16.3**	**+0.1**
DLMT	**Dillon**	**45.79**	**316**	*e*P	**P**	**23 08 16.6**	**+0.2**
	6.5nm,0.9s,mb4.4						
HRY	**Holter Researc**	**45.81**	**318**	*e*P	**P**	**23 08 16.3**	**-0.3**
LRM	**Limekiln Ridge**	**45.87**	**317**	*e*P	**P**	**23 08 17.4**	**+0.4**
U10A	**Ash Meadows, A**	**46.10**	**303**	⇓P	**P**	**23 08 20.4**	**+1.5**
	baz=46						
TPNV	**Topopah Spring**	**46.13**	**304**	*e*P	**P**	**23 08 20.2**	**+1.1**
	5.3nm,0.8s,mb4.3						
O11A	**Cowboy Ranch,**	**46.35**	**309**	⇓P	**P**	**23 08 20.9**	**+0.1**
	baz=46						
HLID	**Hailey**	**46.41**	**313**	*e*P	**P**	**23 08 21.4**	**+0.2**
R10A	**Warm Springs**	**46.43**	**306**	⇑P	**P**	**23 08 22.2**	**+0.8**
	baz=46						
M11A	**Holland Ranch,**	**46.77**	**310**	⇓P	**P**	**23 08 24.0**	**-0.1**
	baz=47						
MPMC	**Manual Prospec**	**46.97**	**303**	⇓P	**P**	**23 08 26.8**	**+1.2**
	baz=47						
R09A	**Tonopah**	**47.02**	**306**	⇓P	**P**	**23 08 26.7**	**+0.7**
	baz=47						
GRAC	**Grapevine Rang**	**47.02**	**304**	⇑P	**P**	**23 08 27.6**	**+1.5**
	baz=47						
S09A	**Goldfield**	**47.04**	**305**	⇑P	**P**	**23 08 26.9**	**+0.8**
	baz=47						
O09A	**Fish Creek Ran**	**47.50**	**308**	⇓P	**P**	**23 08 29.9**	**+0.1**
	baz=48						
Q08A	**Gabbs**	**47.80**	**306**	P	**P**	**23 08 32.6**	**+0.6**
	baz=48,SNR=7.8						
N09A	**Rock Creek Ran**	**47.90**	**309**	⇓P	**P**	**23 08 33.0**	**+0.1**
	baz=48						
M09A	**Marrel Ranch,**	**47.98**	**310**	⇓P	**P**	**23 08 34.2**	**+0.7**
	baz=48						
NVAR	**Mina Array Bea**	**48.00**	**306**	P	**P**	**23 08 33.6**	**0.0**
	1.8nm,0.6s,mb4.1,baz=94,slow=8.3,SNR=12						
WALA	**Waterton Lakes**	**48.03**	**321**	*e*P	**P**	**23 08 34.5**	**+0.6**
HELL	**Mitchell Peak,**	**48.28**	**303**	⇑P	**P**	**23 08 36.9**	**+1.1**
	baz=48						
N08A	**GE Springer Mi**	**48.34**	**309**	P	**P**	**23 08 36.5**	**+0.2**
	baz=48,SNR=5.3						
K09A	**Rome**	**48.49**	**311**	⇑P	**P**	**23 08 36.5**	**-0.9**
	baz=48						
R07C	**Lee Vining**	**48.52**	**305**	⇑P	**P**	**23 08 38.2**	**+0.6**
	baz=49						
KCC	**Kaiser Creek**	**48.61**	**304**	⇑P	**P**	**23 08 38.9**	**+0.6**
	baz=49						
M08A	**Happy Creek Ra**	**48.67**	**310**	P	**P**	**23 08 39.2**	**+0.5**
	baz=49,SNR=5.3						
O07A	**Toulon**	**48.77**	**308**	⇑P	**P**	**23 08 39.3**	**-0.2**
	baz=49						
BMO	**Blue Mountains**	**48.78**	**314**	*e*P	**P**	**23 08 38.6**	**-1.0**
L08A	**Fields**	**48.81**	**311**	⇑P	**P**	**23 08 39.6**	**-0.3**
	baz=49,SNR=8.2						
I09A	**Lost Marbles R**	**48.83**	**313**	⇓P	**P**	**23 08 38.9**	**-1.1**
	baz=49						
R06C	**Coleville**	**48.91**	**306**	⇑P	**P**	**23 08 42.3**	**+1.8**
	baz=49						
H09A	**Durkee**	**48.97**	**314**	⇓P	**P**	**23 08 40.1**	**-1.0**
	baz=49						
K08A	**Mann Creek Ran**	**49.04**	**311**	⇑P	**P**	**23 08 41.2**	**-0.5**
	baz=49						
S06C	**San Francisco**	**49.11**	**305**	⇓P	**P**	**23 08 43.0**	**+0.9**
	baz=49						
M07A	**Soldier Meadow**	**49.23**	**309**	P	**P**	**23 08 43.1**	**0.0**
	baz=49,SNR=6.5						
R05C	**Kirkwood Meado**	**49.42**	**306**	⇓P	**P**	**23 08 45.7**	**+1.2**
	baz=50						
L07A	**Adell**	**49.49**	**310**	P	**P**	**23 08 44.8**	**-0.3**
	baz=50,SNR=6.3						
N06A	**Buffalo Meadow**	**49.60**	**308**	⇑P	**P**	**23 08 45.4**	**-0.5**
	baz=50						
H08A	**Prairie City**	**49.62**	**313**	⇑P	**P**	**23 08 45.3**	**-0.7**
	baz=50						
U04C	**Hernandez Rese**	**49.65**	**303**	⇑P	**P**	**23 08 46.9**	**+0.7**
	baz=50						
NEW	**Newport**	**49.72**	**319**	P	**P**	**23 08 45.1**	**-1.7**
	6.0nm,0.7s,mb4.7,baz=119,slow=8.5,SNR=7.0						
NEW	**Newport**	**49.72**	**319**	*e*P	**P**	**23 08 46.0**	**-0.8**
	6.3nm,0.7s,mb4.7						
P05C	**Yuba Gap, Truc**	**49.92**	**306**	⇑P	**P**	**23 08 48.6**	**+0.3**
	baz=50						
LAVA	**Lava Cap Winer**	**49.94**	**306**	⇑P	**P**	**23 08 48.8**	**+0.4**
	baz=50						
I07A	**Izee**	**50.09**	**313**	⇑P	**P**	**23 08 49.0**	**-0.5**
	baz=50						
PACP	**Pacheco Peak**	**50.13**	**303**	⇓P	**P**	**23 08 52.6**	**+2.7**
	baz=50						
M06C	**Likely Place G**	**50.16**	**309**	⇑P	**P**	**23 08 49.8**	**-0.4**
	baz=50						
I06A	**Prineville**	**50.55**	**312**	⇑P	**P**	**23 08 53.0**	**-0.1**
	baz=51						
M05C	**Lookout**	**50.69**	**309**	⇓P	**P**	**23 08 53.9**	**-0.2**
	baz=51						
J05A	**Fort Rock**	**51.13**	**311**	⇓P	**P**	**23 08 57.6**	**+0.1**
	baz=51						
F05A	**White Salmon**	**51.87**	**315**	⇓P	**P**	**23 09 02.3**	**-0.6**
	baz=52						
M02C	**Callahan**	**51.96**	**309**	⇑P	**P**	**23 09 02.5**	**-1.1**
	baz=52						
P01C	**Double 8 Ranch**	**52.04**	**306**	⇑P	**P**	**23 09 03.1**	**-1.1**
	baz=52						
D05A	**Enumclaw**	**52.55**	**316**	⇓P	**P**	**23 09 05.5**	**-2.4**
	baz=53						
YKA	**Yellowknife Ar**	**54.71**	**336**	P	**P**	**23 09 21.7**	**-2.0**
	2.7nm,0.8s,mb4.4,baz=115,slow=7.4,SNR=10						
YKA				LR	LR	23 33 17.3	
	comp=Z,24nm,21.0s,baz=235,slow=36						
YKA	**Yellowknife Ar**	**54.71**	**336**	P	**P**	**23 09 21.7**	**-2.0**
YKA				LR	LR	23 33 17.3	
SUMG	**Summit**	**57.03**	**10**	*e*P	**P**	**23 09 40.4**	**+0.1**
ESDC	**Sonseca Array**	**58.83**	**54**	P	**P**	**23 09 54.1**	**+1.1**
	1.3nm,0.6s,mb4.1,baz=274,slow=7.5,SNR=10						
QUIF	**Quistinic**	**59.97**	**45**	*e*P	**P**	**23 10 01.0**	**+0.3**
	4.4nm,0.6s,mb4.3						
QUIF	**Quistinic**	**59.97**	**45**	*e*P	**P**	**23 10 01.0**	**+0.3**
	2.2nm,0.6s,mb4.4						
SJPF	**Ste Jean**	**61.00**	**50**	*e*P	**P**	**23 10 08.8**	**+1.1**
	5.0nm,0.7s,mb4.3						
SJPF	**Ste Jean**	**61.00**	**50**	*e*P	**P**	**23 10 08.8**	**+1.1**
	2.5nm,0.7s,mb4.3						
GRR	**Gorron**	**61.55**	**44**	*e*P	**P**	**23 10 12.2**	**+0.8**
FLN	**La Foliniere**	**61.83**	**44**	*e*P	**P**	**23 10 13.7**	**+0.4**
MFF	**Saint Martin d**	**61.91**	**46**	*e*P	**P**	**23 10 15.5**	**+1.6**
	4.4nm,0.4s,mb4.5						
MFF	**Saint Martin d**	**61.91**	**46**	*e*P	**P**	**23 10 15.5**	**+1.6**
	2.2nm,0.4s,mb4.5						
LDF	**La Druitiere**	**62.05**	**44**	*e*P	**P**	**23 10 14.9**	**+0.1**
EPF	**Esparros**	**62.15**	**50**	*e*P	**P**	**23 10 16.4**	**+1.0**
	14nm,1.1s,mb4.6						
EPF	**Esparros**	**62.15**	**50**	*e*P	**P**	**23 10 16.4**	**+1.0**
	7.0nm,1.1s,mb4.6						
LFF	**La Frestale**	**62.47**	**48**	*e*P	**P**	**23 10 18.0**	**+0.4**
RJF	**Les Rejaudoux**	**63.03**	**48**	*e*P	**P**	**23 10 21.5**	**+0.2**
CAF	**Calviac**	**63.41**	**48**	*e*P	**P**	**23 10 24.2**	**+0.4**
	2.6nm,0.5s,mb4.1						
CAF	**Calviac**	**63.41**	**48**	*e*P	**P**	**23 10 24.2**	**+0.4**
	1.3nm,0.5s,mb4.1						
MTLF	**Montolieu**	**63.52**	**50**	*e*P	**P**	**23 10 24.9**	**+0.3**
	5.7nm,0.7s,mb4.2						
MTLF	**Montolieu**	**63.52**	**50**	*e*P	**P**	**23 10 24.9**	**+0.3**
	2.8nm,0.7s,mb4.2						
TCF	**Toulx Ste Croi**	**63.53**	**47**	*e*P	**P**	**23 10 24.8**	**+0.2**
	2.3nm,0.6s,mb3.9						
TCF	**Toulx Ste Croi**	**63.53**	**47**	*e*P	**P**	**23 10 24.8**	**+0.2**
	1.1nm,0.6s,mb3.9						
BGF	**Bois d'Agland**	**63.98**	**47**	*e*P	**P**	**23 10 27.6**	**0.0**
	3.3nm,0.5s,mb4.1						
BGF	**Bois d'Agland**	**63.98**	**47**	*e*P	**P**	**23 10 27.6**	**0.0**
	1.6nm,0.5s,mb4.1						
INK	**Inuvik**	**64.27**	**338**	*e*P	**P**	**23 10 27.1**	**-2.4**
	1.5nm,0.6s,mb4.0						
AVF	**Avril sur Loir**	**64.33**	**46**	*e*P	**P**	**23 10 29.7**	**-0.2**
SSF	**Saint Saulge**	**64.44**	**46**	*e*P	**P**	**23 10 30.2**	**-0.4**
SMF	**Signal de Mont**	**64.66**	**46**	*e*P	**P**	**23 10 32.1**	**+0.1**
	4.3nm,0.7s,mb4.1						
SMF	**Signal de Mont**	**64.66**	**46**	*e*P	**P**	**23 10 32.1**	**+0.1**
	2.2nm,0.7s,mb4.1						
LOR	**Lormes**	**64.68**	**46**	*e*P	**P**	**23 10 32.0**	**-0.1**
	4.6nm,0.7s,mb4.1						
LOR	**Lormes**	**64.68**	**46**	*e*P	**P**	**23 10 32.0**	**-0.1**
	2.3nm,0.7s,mb4.1						
BAIF	**Baives**	**64.95**	**43**	*e*P	**P**	**23 10 33.2**	**-0.7**
	1.1nm,0.5s,mb3.7						
BAIF	**Baives**	**64.95**	**43**	*e*P	**P**	**23 10 33.2**	**-0.7**
	0.6nm,0.4s,mb3.8						
MEZF	**Maizieres J'vi**	**65.48**	**44**	*e*P	**P**	**23 10 37.6**	**+0.2**
	16nm,0.7s,mb4.7						
MEZF	**Maizieres J'vi**	**65.48**	**44**	*e*P	**P**	**23 10 37.6**	**+0.2**
	16nm,0.7s,mb5.0						
HAU	**Haudompre**	**66.36**	**45**	*e*P	**P**	**23 10 42.8**	**-0.1**
HINF	**Hinteralfeld**	**66.70**	**45**	*e*P	**P**	**23 10 44.7**	**-0.4**
LPL	**La Plagne**	**66.70**	**48**	*e*P	**P**	**23 10 46.2**	**+1.1**
LPG	**La Plagne**	**66.71**	**48**	*e*P	**P**	**23 10 46.3**	**+1.1**
CDF	**Champ du Feu**	**66.97**	**44**	*e*P	**P**	**23 10 46.8**	**0.0**
	2.7nm,0.6s,mb4.0						
CDF	**Champ du Feu**	**66.97**	**44**	*e*P	**P**	**23 10 46.8**	**0.0**
	1.4nm,0.6s,mb4.0						
TORD	**Torodi Ar. Bea**	**67.01**	**83**	P	**P**	**23 10 47.5**	**+0.4**
	0.7nm,0.6s,mb3.7,baz=292,slow=7.4,SNR=14						
NOA	**NORSAR Array B**	**69.11**	**31**	P	**P**	**23 10 59.8**	**-0.4**
	1.2nm,0.8s,mb3.8,baz=270,slow=6.2,SNR=3.3						
GERES	**GERESS Array B**	**71.19**	**44**	P	**P**	**23 11 13.1**	**+0.2**
	0.4nm,0.7s,mb3.4,baz=293,slow=6.9,SNR=3.8						
ARCES	**ARCESS Array B**	**74.40**	**21**	P	**P**	**23 11 31.2**	**-0.7**
	1.6nm,0.6s,mb3.9,baz=288,slow=4.2,SNR=17						
FINES	**FINESS Array B**	**76.20**	**30**	P	**P**	**23 11 42.5**	**+0.2**
	1.6nm,0.7s,mb3.9,baz=300,slow=3.8,SNR=7.3						
FINES	**FINESS Array B**	**76.20**	**30**	P	**P**	**23 11 42.5**	**+0.2**
AKASG	**Malin Array Be**	**80.66**	**40**	P	**P**	**23 12 06.3**	**-0.5**
	0.4nm,0.4s,mb3.6,baz=283,slow=4.7,SNR=4.3						
BRTR	**Keskin Array B**	**87.22**	**49**	P	**P**	**23 12 40.6**	**+0.5**
	0.9nm,0.9s,mb3.7,baz=264,slow=3.7,SNR=4.6						

*MOS **06** 23:01:28.6±1.2, 54.30N×163.32E, h33km, mb4.5/2, Error ellipse: s-maj=18.1km s-min=13.7km az=85.4*

*ISCJB **06** 23:01:33.6±0.8, 54.42N±0.03×162.59E±0.09, h33km, mb4.2/2, Error ellipse: s-maj=7.9km s-min=3.3km az=30.4*

*KRSC **06** 23:01:33, 54.44N×162.52E, h33km, ML4.2*

ISC 06 23:01:33.8±1.1**, 5442N**±003×**16262E**±009**, h29**km±6km**, n35, σ1.01**/63**, mb4.2**/2**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.53**	**285**	P	**Pb**	**23 01 43.8**	**-0.9**
MKZ				S	**Sb**	**23 01 51.3**	**-0.8**
MKZ	**Mys Kozlova**	**0.53**	**285**	*i* P	**Pb**	**23 01 43.8**	**-0.9**
MKZ				*i* S	**Sb**	**23 01 51.3**	**-0.8**
TUMR	**Tumrok**	**1.67**	**302**	P	**Pn**	**23 02 01.0**	**0.0**
TUMR				*i* S	**Sn**	**23 02 21.3**	**-0.1**
KBTR	**Krutoberegovo**	**1.79**	**4**	P	**Pn**	**23 02 01.5**	**-1.2**
KBTR				S	**Sn**	**23 02 22.1**	**-2.4**
KBTR	**Krutoberegovo**	**1.79**	**4**	*e*P	**Pn**	**23 02 01.5**	**-1.2**
KBTR				*e*S	**Sn**	**23 02 22.1**	**-2.4**
KII	**Karymskiy**	**1.90**	**259**	P	**Pn**	**23 02 04.0**	**-0.2**
KII				S	**Sn**	**23 02 26.0**	**-1.1**
KII	**Karymskiy**	**1.90**	**259**	*e*P	**Pn**	**23 02 04.0**	**-0.2**
KII				*i* S	**Sn**	**23 02 26.0**	**-1.1**
ZLN	**Zelenaya**	**1.91**	**328**	*e*P	**Pn**	**23 02 05.0**	**+0.7**
ZLN				*i* S	**Sn**	**23 02 27.9**	**+0.6**
KMNR	**Kamenistaya**	**1.91**	**315**	*e*P	**Pn**	**23 02 04.8**	**+0.4**
KMNR				*i* S	**Sn**	**23 02 28.2**	**+0.8**
SPN	**Mys Shipunski**	**2.03**	**230**	P	**Pn**	**23 02 05.3**	**-0.7**
SPN				S	**Sn**	**23 02 28.5**	**-1.9**
SPN	**Mys Shipunski**	**2.03**	**230**	*e*P	**Pn**	**23 02 05.3**	**-0.7**
SPN				*i* S	**Sn**	**23 02 28.5**	**-1.9**
KPT	**Kopyto**	**2.07**	**319**	*e*P	**Pn**	**23 02 07.1**	**+0.6**
KPT				*i* S	**Sn**	**23 02 31.8**	**+0.5**
KRSR	**Krestovskiy**	**2.15**	**328**	P	**Pn**	**23 02 07.9**	**+0.3**
KRSR				*i* S	**Sn**	**23 02 33.1**	**-0.1**
KLY	**Klyuchi**	**2.20**	**330**	P	**Pn**	**23 02 07.9**	**-0.4**
KLY				S	**Sn**	**23 02 33.6**	**-1.0**
KLY	**Klyuchi**	**2.20**	**330**	*e*P	**Pn**	**23 02 07.9**	**-0.4**
KLY				*i* S	**Sn**	**23 02 33.6**	**-1.0**
KOZR	**Kozyr**	**2.27**	**318**	PN	**Pn**	**23 02 09.9**	**+0.7**
KOZ	**Kozyrevsk**	**2.27**	**317**	P	**Pn**	**23 02 09.9**	**+0.6**
KOZ				S	**Sn**	**23 02 36.8**	**+0.5**
KOZ	**Kozyrevsk**	**2.27**	**317**	*e*P	**Pn**	**23 02 09.9**	**+0.6**
KOZ				*i* S	**Sn**	**23 02 36.8**	**+0.5**
NLC	**Nalytchevo**	**2.31**	**238**	P	**Pn**	**23 02 09.5**	**-0.4**
NLC				S	**Sn**	**23 02 36.4**	**-0.9**
NLC	**Nalytchevo**	**2.31**	**238**	*e*P	**Pn**	**23 02 09.5**	**-0.4**
NLC				*i* S	**Sn**	**23 02 36.4**	**-0.9**
SRKR	**Sorokina**	**2.38**	**340**	*e*P	**Pn**	**23 02 11.6**	**+0.8**
SRKR				*i* S	**Sn**	**23 02 39.4**	**+0.3**
SRDR	**Sredinnyy**	**2.52**	**320**	*e*P	**Pn**	**23 02 12.8**	**+0.1**
SRDR				*i* S	**Sn**	**23 02 41.9**	**-0.5**
AVH	**Avacha**	**2.58**	**245**	*e*P	**Pn**	**23 02 14.6**	**+1.1**
AVH				*i* S	**Sn**	**23 02 44.5**	**+0.7**
PET	**Petropavlovsk**	**2.74**	**241**	P	**Pn**	**23 02 16.7**	**+0.9**
PET				S	**Sn**	**23 02 47.8**	**-0.1**
PET	**Petropavlovsk**	**2.74**	**241**	*e*PN	**Pn**	**23 02 16.6**	**+0.8**
PET				pmax	pmax		
	comp=Z,52nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	**Petropavlovsk**	**2.74**	**241**	*e*P	**Pn**	**23 02 16.7**	**+0.9**
PET				*i* S	**Sn**	**23 02 47.8**	**-0.1**
GNL	**Ganaly**	**2.85**	**257**	*e*P	**Pn**	**23 02 18.5**	**+1.2**
GNL				*i* S	**Sn**	**23 02 50.6**	**0.0**
RUS	**Russkaya**	**3.16**	**233**	P	**Pn**	**23 02 21.7**	**+0.1**
RUS				S	**Sn**	**23 02 56.2**	**-2.1**
RUS	**Russkaya**	**3.16**	**233**	*e*P	**Pn**	**23 02 21.7**	**+0.1**
RUS				*i* S	**Sn**	**23 02 56.2**	**-2.1**
GRL	**Gorelyy**	**3.30**	**237**	P	**Pn**	**23 02 25.0**	**+1.6**
GRL				*i* S	**Sn**	**23 03 02.9**	**+1.2**
MIPR	**Malaya Ipel'ka**	**4.12**	**241**	P	**Pn**	**23 02 37.2**	**+2.5**
JOF	**Joensuu**	**56.98**	**336**	*e*p	**P**	**23 11 13.5**	**-3.1**
	comp=Z,1.2nm,0.4s,mb4.3						
JOF	**Joensuu**	**56.98**	**336**	*e*P	**P**	**23 11 13.5**	**-3.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**58.84**	**338**	*e*p	**P**	**23 11 26.0**	**-3.6**
	comp=Z,0.9nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**58.84**	**338**	*e*P	**P**	**23 11 26.0**	**-3.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						

*IDC **06** 23:15:42.9±2.5, 26.35S×178.28E, h623km±27km, mb3.5/5, mb1 3.6/6, mb1mx3.5/12, mbtmp4.6/6, Error ellipse: s-maj=25.1km s-min=17.3km az=40.0*

*ISCJB **06** 23:15:46.7±1.3, 26.4S±0.1×178.0E±0.1, h695km±18km, mb4.2/12, Error ellipse: s-maj=15.3km s-min=14.5km az=44.8*

*NEIC **06** 23:15:48.6±0.6, 2637S×17799E, h698km±8km, mb4.3/11, Error ellipse: s-maj=9.5km s-min=8.7km az=193.0*

ISC 06 23:15:48.8±0.8**, 2638S**±010×**1781E**±01**, h712**km±13km**, n43, σ0s54**/35**, mb4.2**/12**, 2C-2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.55	130	eP	P	23 17 25.4	-0.1
DZM	Mont Dzumac	11.45	290	eP	P	23 18 16.2	-6.0
DZM	Mont Dzumac	11.45	290	P	P	23 18 17.3	-4.9
	2.6nm,0.3s,baz=96,slow=15,SNR=24						
URZ	Urewera	11.87	184	P	P	23 18 14.8	-11
	3.6nm,0.3s,baz=52,slow=8.4,SNR=11						
URZ				S	S	23 20 20.7	-13
	1.4nm,0.3s,baz=263,slow=9.0,SNR=6.0						
SNZO	South Karori	15.15	190	eP	P	23 18 49.6	-6.0
AFI	Afiamalu	15.63	39	P	P	23 19 00.0	+0.2
CTA	Charters Tower	29.86	275	⇑iP	P	23 21 04.3	-0.2
	4.1nm,0.3s,mb4.3						
CTA	Charters Tower	29.86	275	P	P	23 21 04.4	-0.1
	6.4nm,0.5s,mb4.3,baz=99,slow=10.0,SNR=12						
CTAO	Charters Tower	29.86	275	eP	P	23 21 04.3	-0.1
	5.6nm,0.3s,mb4.5						
TAU	Tasmania Unive	29.99	229	eP	P	23 21 05.4	-0.2
	12nm,0.8s,mb4.4						
STKA	Stephens Creek	32.24	252	⇑iP	P	23 21 24.0	-0.4
	4.0nm,0.4s,mb4.3						
STKA	Stephens Creek	32.24	252	P	P	23 21 24.1	-0.4
	5.1nm,0.4s,mb4.4,baz=95,slow=10,SNR=21						
STKA				PcP	PcP	23 23 52.9	+3.9
	1.3nm,0.6s,baz=307,slow=22,SNR=2.9						
PMG	Port Moresby	33.79	294	P	P	23 21 38.2	+1.0
AS31	Alice Springs	39.98	264	eP	P	23 22 27.1	+0.1
ASAR	Alice Springs	39.98	264	P	P	23 22 27.2	+0.2
	4.4nm,0.5s,mb4.2,baz=92,slow=7.0,SNR=43						
ASAR				S	S	23 27 51.5	+5.7
	5.5nm,1.1s,baz=101,slow=16,SNR=6.6						
ASPA	Alice Springs	39.98	264	eP	P	23 22 27.1	+0.1
WB2	Warramunga Arr	40.57	270	eP	P	23 22 31.4	-0.2
WRAB	Tennant Creek	40.57	270	eP	P	23 22 31.6	-0.1
	6.7nm,0.6s,mb4.3						
FORT	Forrest	43.86	252	eP	P	23 22 56.2	-0.8
	19nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	48.97	268	eP	P	23 23 36.0	+1.1
	9.5nm,0.9s,mb4.2						
VNDA	Vanda	51.78	184	P	P	23 23 54.5	-0.6
	1.4nm,0.6s,mb3.5,baz=359,slow=8.2,SNR=12						
SBA	Scott Base	51.81	183	eP	P	23 23 55.8	+0.5
	7.3nm,0.8s,mb4.1						
MBWA	Marble Bar	53.28	262	eP	P	23 24 06.0	+0.4
CASY	Casey	57.13	206	eP	P	23 24 30.9	-1.1
QSPA	South Pole Qui	63.71	180	eP	P	23 25 15.0	+0.3
	11nm,0.7s,mb4.2						
MAJO	Matsushiro	73.00	327	P	P	23 26 09.2	-0.8
MAW	Mawson	74.83	201	eP	P	23 26 21.0	+0.7
	3.5nm,0.6s,mb4.0						
MAW	Mawson	74.83	201	P	P	23 26 21.1	+0.8
	4.0nm,0.6s,mb4.0,baz=126,slow=6.1,SNR=25						
PMSA	Palmer Station	77.31	157	P	P	23 26 34.6	+0.8
SYO	Syowa Base	80.20	194	⇓eP	P	23 26 48.6	-0.3
SYO	Syowa Base	80.20	194	⇓ePcP	PcP	23 26 52.0	-1.4
SNAA	Sanae	82.22	180	eP	P	23 26 59.3	+0.1
	1.8nm,0.4s,mb3.9						
MDJ	Mudanjiang	83.38	327	P	P	23 27 04.6	-0.3
MCK	McKinley	93.49	14	P	P	23 27 51.7	-0.3
ARCES	ARCESS Array B	133.93	347	PKP	PKPdf	23 33 49.0	+0.8
	2.3nm,1.0s,baz=62,slow=2.9,SNR=7.5						
ARCES	ARCESS Array B	133.93	347	PKP	PKPdf	23 33 49.0	+0.8
FINES	FINESS Array B	140.19	339	PKhKP		23 33 54.7	
	0.9nm,0.9s,baz=48,slow=2.8,SNR=4.2						
FINES				PKP	PKPdf	23 34 02.5	+2.8
	0.8nm,0.9s,baz=50,slow=3.0,SNR=5.1						
FINES	FINESS Array B	140.19	339	PKP	PKPdf	23 33 54.7	-5.0
FINES				PKP	PKPdf	23 34 02.5	+2.9
NB2	NORSAR Subarra	144.22	349	PKPa	PKPdf	23 34 08.3	+1.5
	comp=Z,0.6nm,0.5s,baz=12,slow=2.9						
NOA	NORSAR Array B	144.22	349	PKP	PKPdf	23 34 08.4	+1.6
	comp=Z,1.3nm,0.8s,baz=14,slow=4.4,SNR=3.6						
AKASG	Malin Array Be	146.03	324	PKPbc	PKPbc	23 34 13.3	+1.1
	comp=Z,0.7nm,0.4s,baz=43,slow=3.3,SNR=8.8						
BRTR	Keskin Array B	147.58	303	PKPbc	PKPbc	23 34 18.5	+2.2
	comp=Z,0.6nm,0.4s,baz=125,slow=2.6,SNR=8.7						
TORD	Torodi Ar. Bea	166.41	195	PKPab	PKPab	23 35 44.7	+1.9
	comp=Z,1.7nm,0.5s,baz=163,slow=3.6,SNR=24						

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*ISCJB **06** 23:28:34.2±2.6, 66S±02×1243E±03, h259km±34km, mb3.8/3, Error ellipse: s-maj=51.3km s-min=13.9km az=118.4*
*IDC **06** 23:28:34.7±15.0, 640S×12472E, h243km±163km, mb3.7/2, mb1 3.8/3, mb1mx3.3/13, mbtmp4.3/3, Error ellipse: s-maj=414.7km s-min=36.6km az=58.0*
*NEIC **06** 23:28:36.7±3.1, 658S×12431E, h267km±40km, mb4.2/2, Error ellipse: s-maj=43.2km s-min=12.2km az=57.0*

ISC 06 23:28:35.2±2.4**, 66S**±02×**1243E**±03**, h247**km±32km**, n11, σ0s94**/11**, mb3.9**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.53	173	eP	Px	23 31 02.3	
	9.7nm,0.6s						
FITZ				eS	Sx	23 33 00.7	
KKM	Kota Kinabalu	14.88	327	P	Pn	23 31 54.5	+0.5
WRAB	Tennant Creek	16.51	144	eP	P	23 32 13.2	+1.6
	7.9nm,0.4s						
WRAB				eS	S	23 35 12.7	+1.2
WB2	Warramunga Arr	16.51	145	eP	P	23 32 13.0	+1.2
AS31	Alice Springs	19.36	152	eP	P	23 32 41.5	-1.0
ASPA	Alice Springs	19.36	152	eP	P	23 32 41.5	-1.0
ASAR	Alice Springs	19.36	152	P	P	23 32 41.9	-0.6
	1.4nm,0.3s,baz=331,slow=12,SNR=86						
STKA	Stephens Creek	29.93	149	P	P	23 34 19.6	-0.8
	4.7nm,0.5s,mb4.4,baz=321,slow=9.7,SNR=15						
HNR	Honiara	35.45	97	P	P	23 35 07.3	-0.9
TAU	Tasmania Unive	41.52	154	eP	P	23 35 58.0	-0.4
	2.1nm,0.5s,mb3.8						
MKAR	Makanchi Array	64.86	330	P	P	23 38 48.5	+0.5
	0.5nm,0.4s,mb3.5,baz=143,slow=7.1,SNR=7.4						

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*NEIC **06** 23:34:21.4, 3305S×7092W, h78km, MD3.8(GUC), After GUC.*
NEIC Felt [II] at Santiago.

GUC 06 23:34:21.4±0.7**, 3305S**×**7092W, h78**km±2km**, MD3.8, ML3.8, 6C-10D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	El Roble	0.11	315	⇓eP	Pn	23 34 33.0	+0.5
ROCH				iS	Sn	23 34 41.4	+0.7
PEL	Peldehue	0.22	116	⇓iP	Pn	23 34 33.5	+0.5
PEL				iS	Sn	23 34 42.1	+0.7
PEL				AML	AML	23 34 43.0	
	comp=E,15μm,0.3s						
PEL	Peldehue	0.22	116	⇓iP	Pn	23 34 33.5	+0.5
PEL				iS	Sn	23 34 42.1	+0.7
DSCH	Colegio Aleman	0.46	140	⇓eP	Pn	23 34 34.3	-0.3
DSCH				iS	Sn	23 34 44.2	0.0
JACH	Jahuel	0.46	37	⇓iP	Pn	23 34 35.1	+0.6
JACH				iS	Sn	23 34 44.7	+0.5
SAN	Santiago	0.46	152	⇓iP	Pn	23 34 34.7	+0.2
SAN				iS	Sn	23 34 44.6	+0.3
CLCH	Cerro Calan	0.47	137	⇑iP	Pn	23 34 35.1	+0.4
CLCH				iS	Sn	23 34 45.2	+0.8
CLCH				AML	AML	23 34 46.4	
	comp=N,5μm,0.6s						
ANTU	Antumapu	0.57	155	eP	Pn	23 34 35.6	+0.1
ANTU				iS	Sn	23 34 46.3	+0.3
ANTU				AML	AML	23 34 46.7	
	comp=E,7μm,0.2s						
ANTU	Antumapu	0.57	155	eP	Pn	23 34 35.6	+0.1
ANTU				iS	Sn	23 34 46.3	+0.3
FCH	Farellones	0.60	118	⇑iP	Pn	23 34 36.7	+0.9
FCH				iS	Sn	23 34 48.2	+1.7
FCH				AML	AML	23 34 48.9	
	comp=E,5μm,0.1s						
IHA	Instituto Hidr	0.60	272	⇑iP	Pn	23 34 35.9	+0.1
IHA				iS	Sn	23 34 46.8	+0.3
TACH	Talagante	0.60	181	⇑iP	Pn	23 34 35.8	-0.1
PCH	Pirque	0.67	149	⇓iP	Pn	23 34 36.6	+0.1
PCH				iS	Sn	23 34 48.6	+0.9
LCCH	Las Cruces	0.69	232	⇑iP	Pn	23 34 36.8	0.0
CHCH	Chadas Angostu	0.91	166	⇓iP	Pn	23 34 39.6	+0.4
CHCH				iS	Sn	23 34 53.3	+0.8
LNV	Longovilo	0.99	204	⇓iP	Pn	23 34 39.8	-0.4
CACH	El Canelo	1.10	166	⇓iP	Pn	23 34 42.2	+0.7
CHNG	Los Chungos	1.26	337	eP	Pn	23 34 44.0	+0.5
SFDO	San Fernando	1.56	183	⇑iP	Pn	23 34 47.9	+0.4
TLL	Tololo Astrono	2.87	2	eP	Pn	23 35 06.4	+1.4
TLL				iS	Sn	23 35 39.7	+1.2
TLL				AML	AML	23 35 43.6	
	comp=N,350nm,0.7s						
TLL	Tololo Astrono	2.87	2	eP	Pn	23 35 06.4	+1.4
TLL				iS	Sn	23 35 39.7	+1.2
LCO	Las Campanas	4.03	3	eP	Pn	23 35 21.1	+0.4

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*CSEM **06** 23:58:57.6±0.2, 3677N×2400E, h136km±3km, ML3.5, Error ellipse: s-maj=3.4km s-min=2.0km az=63.0*
*ISCJB **06** 23:58:58.9±0.7, 3676N±003×2387E±005, h121km±9km, Error ellipse: s-maj=7.1km s-min=4.3km az=105.4*
*ATH **06** 23:58:58.8, 3673N×2389E, h124km±5km, ML3.5*
*NEIC **06** 23:58:58.8, 3673N×2389E, h124km, MG3.5(ATH), After ATH.*
*THE **06** 23:59:00.3, 3673N×2376E, h88km, ML3.4*

ISC 06 23:58:59.7±0.7**, 3674N**±003×**2386E**±005**, h119**km±9km**, n37, σ0s66**/54**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLI	Veliai	0.74	268	eP	Pn	23 59 19.8	+0.5
VLI				eS	Sn	23 59 34.0	-0.1
KYTH	Kithira	0.81	236	eP	Pn	23 59 21.0	+1.2
ATH	Athens Observa	1.23	355	eP	Pn	23 59 24.4	+0.3
PTL	Penteli	1.30	0	eP	Pn	23 59 25.0	+0.2
MGER	Gerania Oros	1.33	339	eP	Pn	23 59 25.0	-0.1
SANT	Santorini	1.34	106	ePg	Pn	23 59 25.2	-0.1
SANT				eSg	Sn	23 59 43.3	-1.3
SANT	Santorini	1.34	106	ePn	Pn	23 59 26.7	+1.5
SANT				eSn	Sn	23 59 44.8	+0.2
SANT	Santorini	1.34	106	ePn	Pn	23 59 26.7	+1.5
SANT				eSg	Sn	23 59 43.3	-1.3
SANT				eSn	Sn	23 59 44.8	+0.2
VAM	Vamos	1.36	168	eP	Pn	23 59 25.9	+0.4
APE	Apeiranthos	1.38	76	ePg	Pn	23 59 25.8	+0.2
APE				eSg	Sn	23 59 45.0	-0.4
APE	Apeiranthos	1.38	76	eP	Pn	23 59 26.3	+0.6
APE				eSg	Sn	23 59 45.0	-0.4
ITM	Ithomi	1.61	286	eP	Pn	23 59 29.2	+0.9
SIVA	Sivas	1.89	156	ePb	Pn	23 59 31.9	+0.2
SIVA				eSb	Sn	23 59 55.2	-0.9
LKR	Lokris	2.02	341	eP	Pn	23 59 33.5	+0.1
NPS	Neapolis	2.05	136	eP	Pn	23 59 33.3	-0.4
LAST	Lasithi	2.05	140	ePn	Pn	23 59 33.6	-0.1
LAST				eSn	Sn	23 59 59.4	-0.4
RLS	Riolos of Patr	2.31	305	eP	Pn	23 59 38.5	+1.4
XRY	Khrisi	2.39	141	eP	Pn	23 59 37.0	-1.0
CHOS	Chios island	2.40	46	ePn	Pn	23 59 38.6	+0.5
AOS	Alonnisos	2.42	0	ePn	Pn	23 59 38.6	+0.1
SMG	Samos	2.56	67	eP	Pn	23 59 40.8	+0.5
AGG	Agios Georgios	2.58	332	ePn	Pn	23 59 40.5	0.0
AGG				eSn	Sn	00 00 10.1	-1.6
XOR	Xorichti	2.67	349	ePn	Pn	23 59 41.4	-0.3
XOR				eSn	Sn	00 00 13.4	-0.6
EVR	Evrytania	2.71	324	eP	Pn	23 59 42.7	+0.5
VLS	Valsamata	2.97	300	eP	Pn	23 59 44.8	-0.8
PRK	Paraskevi	3.14	37	eP	Pn	23 59 48.0	+0.2
PAIG	Paliouri	3.18	358	ePn	Pn	23 59 48.2	-0.1
PAIG				eSn	Sn	00 00 26.8	+0.9
LKD	Levkas	3.21	309	ePn	Pn	23 59 48.4	-0.3
LIT	Litokhoron	3.52	343	ePn	Pn	23 59 52.4	-0.4
LIT				eSn	Sn	00 00 33.8	-0.1
OUR	Ouranopolis	3.59	1	ePn	Pn	23 59 54.1	+0.4
MEV	Metsovon	3.68	327	ePn	Pn	23 59 55.3	+0.4
MEV				eSn	Sn	00 00 37.8	+0.2
JAN	Janina	3.75	322	eP	Pn	23 59 56.2	+0.3
HORT	Hortiatis	3.90	351	ePn	Pn	23 59 57.8	0.0
HORT				eSn	Sn	00 00 42.9	+0.1
IGT	Igoumenitsa	3.94	316	ePn	Pn	23 59 57.6	-0.8
IGT				eSn	Sn	00 00 42.8	-1.0
SOH	Sokhos	4.09	355	ePn	Pn	00 00 00.7	+0.2
SOH	Sokhos	4.09	355	ePn	Pn	00 00 00.6	+0.2
LSK	Leskovik	4.26	324	i Pn	Pn	23 59 59.3	-3.3
LSK				i Sn	Sn	00 00 45.5	-6.0

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*ROM **07** 00:02:23.8±0.5, 3996N×1988E, h10km, Md3.2/20, Ml3.3/10, Error ellipse: s-maj=8.1km s-min=3.7km az=55.0*
*ATH **07** 00:02:24.7, 4007N×1960E, h22km±6km, MD3.6/5*
*ISCJB **07** 00:02:24.6±0.2, 4008N±002×1972E±002, h10km, mb3.4/6, Error ellipse: s-maj=2.3km s-min=1.7km az=35.5*
*TIR **07** 00:02:24.2, 4013N×1983E, h16km, Ml3.1*
*CSEM **07** 00:02:25.2±0.1, 4009N×1969E, h2km, MD3.6, Error ellipse: s-maj=2.1km s-min=1.5km az=22.0*
*PDG **07** 00:02:25.1±0.3, 4011N×1966E, h9km±1km*
*NEIC **07** 00:02:25.1, 4011N×1966E, h9km, mb3.5/1, MD3.3(PDG), MD3.6(ATH), After PDG.*
*THE **07** 00:02:25.7, 4010N×1976E, h2km, ML3.4*
*IDC **07** 00:02:27.4±3.3, 4016N×1963E, h35km±33km, mb3.2/5, mb1 3.4/8, mb1mx3.3/21, mbtmp3.4/8, ML3.2/3, Error ellipse: s-maj=24.3km s-min=16.1km az=59.0*
*SKO **07** 00:02:27.7, 4015N×1995E, h7km, M2.6, ML2.9*
*LDG **07** 00:02:27.0±0.2, 4003N×1958E, h5km, Ml3.7/3, Error ellipse: s-maj=7.1km s-min=4.1km az=48.0*

ISC 07 00:02:24.7±0.4**, 4009N**±002×**1972E**±002**, h0**km±3km**, n130, σ1s15**/180**, mb3.5**/6**, 20C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.30	134	i Pg	Pg	00 02 30.4	-0.1
SRN				i Sg	Sg	00 02 26.9	-7.5
TPE	Tepelena	0.30	47	i Pg	Pg	00 02 29.5	-1.1
TPE				i Sg	Sg	00 02 34.0	-0.5
KEK	Kerkira	0.38	170	ePB	Pg	00 02 32.5	+0.5
KEK				eSB	Sg	00 02 40.0	+3.0
VLO	Vlora	0.42	336	i Pg	Pg	00 02 33.2	+0.5
VLO				i Sg	Sg	00 02 43.3	+5.2
LSK	Leskovik	0.68	85	i Pg	Pg	00 02 36.6	-1.2
LSK				i Sg	Sg	00 02 47.9	+1.3
IGT	Igoumenitsa	0.73	139	ePg	Pg	00 02 37.9	-0.8
IGT				eSg	Sg	00 02 49.8	+1.6
SCTE	Santa Cesarea	0.96	269	⇓ePg	Pg	00 02 44.6	+1.5
SCTE				Sg	Sg	00 02 59.1	+3.5
JAN	Janina	0.97	116	ePN	Pg	00 02 42.7	-0.7
JAN				eSN	Sn	00 02 59.2	-0.9
KBN	Korca	0.98	56	i Pn	Pg	00 02 42.2	-1.3
KBN				i Sn	Sn	00 03 00.9	+0.7
MEV	Metsovon	1.20	104	ePg	Pg	00 02 47.8	0.0
MEV				eSg	Sg	00 03 05.4	+2.0
TIR	Tirane	1.26	5	ePg	Pg	00 02 48.8	-0.2
TIR				eSg	Sg	00 03 07.6	+2.3
TIR	Tirane	1.26	5	Pg	Pg	00 02 49.4	+0.5
TIR				Sg	Sg	00 03 08.9	+3.6
OHR	Ohrid	1.31	39	ePg	Pg	00 02 48.5	-1.4
OHR				eSg	Sg	00 03 08.8	+1.9
OHR	Ohrid	1.31	39	ePg	Pg	00 02 48.4	-1.5
OHR				eSg	Sg	00 03 04.3	-2.6
OHR				eLg		00 03 10.4	
	comp=N,476nm,1.2s						
OHR				eLg		00 03 10.6	
	comp=E,289nm,0.6s						
OHR	Ohrid	1.31	39	ePg	Pg	00 02 48.4	-1.5
OHR				eSg	Sg	00 03 08.8	+1.9
FNA	Florina	1.44	61	ePg	Pg	00 02 50.7	-1.7
FNA				eSg	Sg	00 03 11.9	+0.8
BIA	Bitola	1.54	52	ePg	Pn	00 02 51.8	-1.6
BIA				eSg	Sg	00 03 14.7	+0.6
BIA	Bitola	1.54	52	ePg	Pn	00 02 51.7	-1.7
BIA				eSg	Sg	00 03 10.3	-3.9
BIA				eLg		00 03 14.8	
	comp=E,178nm,0.5s						
BIA				eLg		00 03 14.9	
	comp=N,94nm,0.4s						
BIA	Bitola	1.54	52	ePg	Pn	00 02 51.6	-1.8
BIA				eSg	Sg	00 03 14.7	+0.6
LKD	Levkas	1.56	152	ePg	Pg	00 02 53.5	-1.1
LKD				eSg	Sg	00 03 15.5	+0.7
KZN	Kozani	1.59	81	ePN	Pn	00 02 55.0	+0.9
ULC	Ulcinj	1.91	349	⇓iPn	Pn	00 02 58.7	+0.3
ULC				eSn	Sn	00 03 25.0	+1.8
EVR	Evrytania	2.00	125	ePN	Pn	00 03 01.1	+1.4
VLS	Valsamata	2.03	160	ePN	Pn	00 03 00.0	-0.1
LIT	Litokhoron	2.13	89	ePn	Pn	00 03 01.4	-0.1
LIT				eSn	Sn	00 03 29.0	+0.4
NOCI	Noci	2.14	290	Pn	Pn	00 03 00.9	-0.8
GRG	Griva	2.22	66	ePn	Pn	00 03 03.0	+0.2
AGG	Agios Georgios	2.28	117	ePn	Pn	00 03 04.5	+0.9
AGG				eSn	Sn	00 03 33.8	+1.3
SKO	Skopje	2.29	34	ePn	Pn	00 03 03.1	-0.7
SKO				eSn	Sn	00 03 34.8	+2.2
SKO	Skopje	2.29	34	ePn	Pn	00 03 03.9	+0.1
SKO	Skopje	2.29	34	ePn	Pn	00 03 03.8	+0.1
SKO				eSn	Sn	00 03 34.8	+2.2
BUM	Brajici-Budva	2.29	345	⇑iPn	Pn	00 03 04.2	+0.4
BUM				eSn	Sn	00 03 34.1	+1.4
TTG	Podgorica	2.36	352	⇑iPn	Pn	00 03 04.9	+0.2
TTG				eSn	Sn	00 03 35.8	+1.3
BAI	Bari	2.39	296	ePn	Pn	00 03 03.8	-1.3
SG1	Sgolgore (BA)	2.44	289	ePn	Pn	00 03 04.5	-1.3
RLS	Riolos of Patr	2.44	146	ePN	Pn	00 03 06.0	+0.1
STIP	Stip	2.46	49	ePn	Pn	00 03 05.6	-0.5
STIP	Stip	2.46	49	ePn	Pn	00 03 05.4	-0.8
VAY	Valandovo	2.49	59	ePn	Pn	00 03 06.2	-0.3
VAY				eSn	Sn	00 03 36.9	-0.8
VAY	Valandovo	2.49	59	ePn	Pn	00 03 06.3	-0.2
AMUR	Altamura	2.51	290	Pn	Pn	00 03 05.9	-0.9
PVY	Plav	2.51	4	⇓iPn	Pn	00 03 06.9	+0.1
PVY				eSn	Sn	00 03 39.6	+1.5
HCY	Herceg Novi	2.53	339	⇓iPn	Pn	00 03 06.9	-0.1
HCY				eSn	Sn	00 03 39.6	+1.0
SERS	Sersale	2.57	247	Pn	Pn	00 03 06.9	-0.6
	comp=N,42nm,0.9s						
HORT	Hortiatis	2.63	78	ePn	Pn	00 03 07.5	-1.0
KNT	Kendrikon	2.65	65	ePn	Pn	00 03 08.4	-0.2
KNT				eSn	Sn	00 03 42.1	+0.6
NKY	Niksic	2.77	349	⇑iPn	Pn	00 03 10.3	-0.1
NKY				eSn	Sn	00 03 45.6	+1.0
XOR	Xorichti	2.77	104	ePn	Pn	00 03 10.7	+0.3
IVA	Berane	2.78	3	⇑iPn	Pn	00 03 10.6	+0.1
IVA				eSn	Sn	00 03 46.3	+1.4
CDT	Castel del Mon	2.80	292	ePn	Pn	00 03 09.7	-1.1
NEO	Neokhori	2.82	105	ePN	Pn	00 03 10.9	-0.1
TREB	Trebinje	2.82	339	P	Pn	00 03 09.4	-1.6
TREB				S	Sn	00 03 43.2	-2.5
SOH	Sokhos	2.87	74	ePn	Pn	00 03 11.6	-0.2
SOH				eSn	Sn	00 03 46.8	-0.1
LKR	Lokris	2.92	118	ePN	Pn	00 03 13.4	+1.0
BRY	Bratogost	2.94	343	⇑iPn	Pn	00 03 12.9	+0.1
BRY				eSn	Sn	00 03 49.7	+0.9
CUC	Castrocucco	3.00	269	Pn	Pn	00 03 14.3	+0.8
PAIG	Paliouri	3.05	92	ePn	Pn	00 03 13.3	-0.8
PAIG				eSn	Sn	00 03 49.4	-1.9
KKB	Krupnik	3.11	54	eP	Pn	00 03 15.7	+0.7
SRS	Serrai	3.12	70	ePn	Pn	00 03 16.0	+0.7
SRS				eSn	Sn	00 03 53.1	-0.1
SLCN	Sala Consilina	3.14	277	Pn	Pn	00 03 15.8	+0.4
	comp=N,90nm,0.6s						
UPM	Unac-Piva	3.17	349	⇑iPn	Pn	00 03 16.0	+0.2
UPM				eSn	Sn	00 03 55.3	+1.0
PLE	Pljevlja	3.25	356	⇑iPn	Pn	00 03 17.3	+0.4
PLE				eSn	Sn	00 03 57.3	+1.0
OUR	Ouranopolis	3.27	84	ePn	Pn	00 03 17.5	+0.2
FGMS	Monte Sant'Ang	3.28	301	Pn	Pn	00 03 16.4	-1.0
MRLC	Muro Lucano	3.30	283	Pn	Pn	00 03 18.8	+1.2
	comp=N,32nm,0.4s						
MSAG	Monte S. Angel	3.31	301	Pn	Pn	00 03 17.0	-0.8
CMPR	Campora	3.39	275	Pn	Pn	00 03 20.2	+1.3
MMB	Musomiste	3.39	62	ePn	Pn	00 03 18.6	-0.3
MMB				eSn	Sn	00 03 58.4	-1.4
MMB	Musomiste	3.39	62	eP	Pn	00 03 19.0	+0.1
MMB				eSn	Sn	00 03 58.4	-1.4
NVR	Nevrokopi	3.39	67	ePB	Pb	00 03 21.8	-3.9
CDRU	Civita di Ruta	3.40	278	Pn	Pn	00 03 20.0	+1.0
	comp=N,23nm,0.4s						
SGO	Sicignano	3.40	279	Pn	Pn	00 03 20.0	+0.9
	comp=N,9.0nm,0.3s						
SGTA	Sant Agata di	3.47	289	Pn	Pn	00 03 21.3	+1.3
SOI	Samo	3.49	236	⇑iPn	Pn	00 03 19.4	-0.8
	comp=N,40nm,0.5s						
RGNG	Rignano Grg	3.51	298	Pn	Pn	00 03 19.6	-0.9
CAFE	Carife	3.54	287	Pn	Pn	00 03 21.9	+1.0
MCRV	Calabrutti - M	3.54	283	Pn	Pn	00 03 21.9	+1.0
	comp=N,26nm,0.3s						
FG5	Orsara di Pugl	3.59	291	Pn	Pn	00 03 22.8	+1.2
VTS	Vitosha	3.63	45	⇓iP	Pn	00 03 22.4	+0.3
VTS	Vitosha	3.63	45	eP	Pn	00 03 22.0	-0.1
MTTG	Motta San Giov	3.76	238	⇓iPn	Pn	00 03 23.2	-0.8
	comp=N,41nm,0.6s						
FG2	Serracapriola	3.85	298	Pn	Pn	00 03 25.1	-0.1
DIVS	Divcibare	4.01	3	⇓iPn	Pn	00 03 23.8	-3.6
VAGA	Valle Agricola	4.37	289	Pn	Pn	00 03 34.2	+1.8
	comp=N,93nm,1.4s						
MIDA	Miranda	4.42	292	Pn	Pn	00 03 33.7	+0.6
RNI2	Rionero Sannit	4.51	293	Pn	Pn	00 03 35.5	+1.2
	comp=N,111nm,1.5s						
CERA	Filignano	4.58	291	Pn	Pn	00 03 36.0	+0.8
	comp=N,66nm,0.9s						
SDI	San Donato	4.76	292	Pn	Pn	00 03 39.6	+1.9
	comp=N,7.0nm,0.4s						
INTR	Introdacqua	4.80	295	Pn	Pn	00 03 37.6	-0.6
DIM	Dimitrovgrad	4.81	64	eP	Pn	00 03 40.0	+1.6
VVLD	Villa Vallelon	4.95	293	Pn	Pn	00 03 40.5	+0.2
	comp=N,49nm,0.8s						
FAGN	Fagnano	5.11	297	Pn	Pn	00 03 44.3	+1.7
	comp=N,53nm,0.5s						
TERO	Teramo	5.25	301	Pn	Pn	00 03 43.8	-0.7
AQU	L'Aquila	5.27	297	⇑iP	Pn	00 03 44.8	0.0
AQU	L'Aquila	5.27	297	⇑P	Pn	00 03 44.8	0.0
FIAM	Fiamignano	5.43	296	Pn	Pn	00 03 47.8	+0.8
	comp=N,100nm,2.4s						
BZS	Buzias	5.70	14	⇑iP	Pn	00 03 49.4	-1.2
BZS	Buzias	5.70	14	⇑P	Pn	00 03 49.4	-1.2
NVLJ	Novalja	5.74	323	i Sn	Sn	00 04 52.5	-5.1
CING	Cingoli	5.88	306	Pn	Pn	00 03 51.9	-1.2
SNTG	Esanatoglia	5.98	304	Pn	Pn	00 03 54.1	-0.4
ARV	Arcevia	6.10	306	Pn	Pn	00 03 55.5	-0.7
PKSM	Moragy	6.17	353	⇓iP	Pn	00 03 57.1	0.0
PKSM	Moragy	6.17	353	⇓P	Pn	00 03 57.1	0.0
MURB	Monte Urbino	6.25	303	Pn	Pn	00 03 59.7	+1.5
IDI	Anoyia	6.31	138	Pn	Pn	00 03 58.0	-1.0
	comp=N,0.5nm,0.3s,baz=262,slow=14,SNR=3.7						
IDI				Sn	Sn	00 05 04.5	-7.2
	comp=N,1.8nm,0.3s,baz=310,slow=18,SNR=5.0						
DRGR		7.04	17	⇑iP	Pn	00 04 08.8	-0.3
DRGR		7.04	17	⇑P	Pn	00 04 08.8	-0.3
MLR	Muntele Rosu	7.08	38	Pn	Pn	00 04 11.0	+1.4
	comp=N,0.1nm,0.3s,baz=243,slow=9.0,SNR=2.0						
MLR	Muntele Rosu	7.08	38	⇑iP	Pn	00 04 09.5	-0.1
MLR	Muntele Rosu	7.08	38	⇑P	Pn	00 04 09.5	0.0
VOY	Vojsko	7.31	326	ePn	Pn	00 04 10.4	-2.3
VOY				e		00 04 11.4	
VOY				eSn	Sn	00 05 30.9	-5.5
OBKA	Obir	7.44	331	⇑iPn	Pn	00 04 13.1	-1.4
OBKA				⇑iSn	Sn	00 05 33.6	-6.0
PTCC	Patocco-Chiusa	7.84	326	Pn	Pn	00 04 19.3	-0.7
MOTA	Moosalm	9.56	322	⇑iPn	Pn	00 04 43.3	-0.3
MOTA				⇑iSn	Sn	00 06 26.2	-5.6
GERES	GERESS Array B	9.75	336	Pn	Pn	00 04 44.5	-1.7
	comp=N,0.2nm,0.3s,baz=155,slow=13,SNR=5.3						
GERES				Sn	Sn	00 06 29.5	-6.9
	comp=N,0.2nm,0.3s,baz=154,slow=22,SNR=3.8						
LPG	La Plagne	10.95	304	ePn	Pn	00 05 01.1	-1.5
LPG				eSn	Sn	00 06 58.7	-7.1
	comp=N,3.4nm,0.5s						
LPL	La Plagne	10.97	304	ePn	Pn	00 05 02.0	-0.9
LPL				eSn	Sn	00 06 56.3	-10
	comp=N,5.9nm,0.7s						
HINF	Hinteralfeld	12.06	314	ePn	Pn	00 05 14.8	-3.0
LOR	Lormes	13.52	307	ePn	Pn	00 05 36.0	-1.8
LOR				eSn	Sn	00 07 57.4	-11
	comp=N,2.1nm,0.5s						
WLF	Walferdange	13.55	319	Pn	Pn	00 05 37.1	-1.1
WLF	Walferdange	13.55	319	Pn	Pn	00 05 37.1	-1.1
HFS	Hagfors	20.42	351	P	P	00 07 01.3	-2.1
	comp=N,2.5nm,1.0s,baz=183,slow=7.2,SNR=5.0						
NB2	NORSAR Subarra	21.62	349	P	P	00 07 14.3	-2.1
	comp=Z,0.9nm,0.6s,mb3.4,baz=155,slow=10						
NOA	NORSAR Array B	21.62	349	P	P	00 07 13.6	-2.8
	comp=Z,0.5nm,0.7s,mb3.1,baz=157,slow=10,SNR=3.0						
FINES	FINESS Array B	21.74	8	P	P	00 07 14.3	-3.3
	comp=Z,0.6nm,0.4s,mb3.3,baz=181,slow=11,SNR=6.9						
KAF	Kangasniemi	22.41	8	ep	P	00 07 22.1	-2.8
	comp=Z,1.2nm,0.6s,mb3.5						
JOF	Joensuu	23.90	13	ep	P	00 07 42.6	+2.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.4nm,0.5s,mb3.8						
TORD	Torodi Ar. Bea	31.17	216	P	P	00 08 44.1	-1.3
	comp=Z,0.2nm,0.7s,mb3.2,baz=17,slow=9.6,SNR=3.1						
MKAR	Makanchi Array	44.86	60	P	P	00 10 37.4	-3.3
	comp=Z,0.3nm,0.3s,mb3.7,baz=280,slow=6.9,SNR=5.3						

NIED **07** *00:09:00, 24.00N×122.70E, h32km, Mw3.9 Best double couple: $M_0$6.81000×10^{14} NP1:ϕ_s63.00000°, δ78.00000°, λ74.00000°. NP2:ϕ_s297.00000°, δ19.00000°, λ143.00000°.*
IDC **07** *00:09:04.7±1.8, 24.35N×123.18E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.6/18, mbtmp3.7/6, MS3.2/1, Ms1 3.2/1, ms1mx2.4/26, Error ellipse: s-maj=130.3km s-min=25.2km az=66.0*
ISCJB **07** *00:09:11.0±0.7, 24.04N±0.10×122.67E±0.04, h51km±6km, mb3.5/7, MS3.1/1, Error ellipse: s-maj=16.4km s-min=5.6km az=7.9*
NEIC **07** *00:09:10.8±1.0, 24.01N×122.68E, h35km, mb3.8/1, Error ellipse: s-maj=24.9km s-min=16.4km az=46.0*
JMA **07** *00:09:10.3±0.3, 23.97N×122.67E, h26km, M3.5*
ISC 07 00:09:11.7±0.8**, 24.05N**±0.09×**122.66E**±0.04**, h41**km±7km**, n19, $\sigma 1^s.02$**/24**, mb3.5**/7**, MS3.1**/1**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.52	37	P	Pn	00 09 21.7	-1.0
YOJ				S	Sn	00 09 29.4	-1.1
NACB	Ninganchiao	0.98	278	ePn	Pn	00 09 27.3	-1.7
NACB				S	Sn	00 09 42.5	+0.7
IRIF	Iriomote-Funau	1.02	73	P	Pn	00 09 28.8	-0.7
IRIF				S	Sn	00 09 43.7	+1.2
HATJ	Hateruma jima	1.04	89	P	Pn	00 09 29.0	-0.8
JKRS	Kuro-shima	1.25	81	P	Pn	00 09 32.3	-0.3
JKRS				S	Sn	00 09 49.1	+1.0
YHNB	Yeheng	1.33	298	eP	Pn	00 09 33.7	0.0
JIJ	Ishigaki jima	1.39	76	P	Pn	00 09 34.0	-0.6
JIJ				S	Sn	00 09 52.4	+0.7
TATO	Taipei	1.42	311	ePn	Pn	00 09 36.2	+1.3
TATO				Sn	Sn	00 09 55.7	+3.4
JTJ	Tarama	1.95	72	P	Pn	00 09 43.2	+0.9
ULN	Ulaanbaatar	26.82	336	P	P	00 14 48.6	+0.6
	0.8nm,0.3s,mb3.7						
SONM	Songino Array	27.04	335	P	P	00 14 48.8	-1.2
	0.3nm,0.4s,mb3.2,baz=152,slow=12,SNR=3.5						
SONM				LR	LR	00 25 21.7	
	comp=Z,46nm,18.0s,MS3.1,baz=116,slow=36						
TLY	Talaya	31.22	337	P	P	00 15 28.0	+0.8
MKAR	Makanchi Array	39.38	315	P	P	00 16 37.3	0.0
	0.4nm,0.4s,mb3.5,baz=104,slow=11,SNR=5.0						
BVAR	Borovoye Array	48.64	320	PcP	PcP	00 19 15.0	-1.4
	0.5nm,0.5s,baz=116,slow=3.4,SNR=4.0						
ASAR	Alice Springs	48.66	166	P	P	00 17 52.2	+0.5
	0.3nm,0.5s,mb3.6,baz=346,slow=7.3,SNR=9.7						
ZRNK	Zerenda	49.43	320	P	P	00 17 58.5	+1.0
FINES	FINESS Array B	72.25	330	P	P	00 20 30.6	-2.0
	0.4nm,0.6s,mb3.5,baz=72,slow=6.2,SNR=5.8						
BRTR	Keskin Array B	74.34	307	P	P	00 20 45.4	+0.4
	0.3nm,0.5s,mb3.5,baz=134,slow=4.6,SNR=3.5						
HFS	Hagfors	78.34	331	P	P	00 21 06.7	-1.0
	1.2nm,0.8s,mb3.9,baz=99,slow=9.2,SNR=4.8						

ISCJB **07** *00:33:35.2±1.2, 9.5S±0.2×107.5E±0.2, h10km, mb4.1/8, Error ellipse: s-maj=30.3km s-min=21.8km az=71.0*
IDC **07** *00:33:35.7±12.0, 9.48S×107.42E, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.7/15, mbtmp4.0/4, Error ellipse: s-maj=334.3km s-min=93.0km az=134.0*
NEIC **07** *00:33:37.2±0.8, 9.46S×107.54E, h10km, mb4.2/3, Error ellipse: s-maj=20.3km s-min=14.6km az=216.0*
ISC 07 00:33:37.4±1.2**, 9.5S**±0.2×**107.5E**±0.2**, h10**km**, n10, $\sigma 0^s.17$**/10**, mb4.1**/8**, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	17.66	30	Pn	Pn	00 37 43.5	0.0
WRAB	Tennant Creek	27.93	115	eP	P	00 39 27.8	0.0
	1.2nm,0.6s,mb3.7						
SONM	Songino Array	57.03	359	P	P	00 43 23.6	+0.1
	0.9nm,0.6s,mb4.0,baz=182,slow=8.6,SNR=5.7						
MKAR	Makanchi Array	60.34	340	P	P	00 43 46.3	-0.2
	1.6nm,0.5s,mb4.3,baz=144,slow=8.4,SNR=20						
KURK	Kurchatov	64.96	340	eP	P	00 44 17.4	+0.1
	2.1nm,0.8s,mb4.2						
BVAR	Borovoye Array	69.80	337	P	P	00 44 48.2	+0.2
	1.5nm,0.6s,mb4.1,baz=142,slow=9.1,SNR=9.2						
BRVK	Borovoye	69.87	337	P	P	00 44 48.0	-0.4
CHKZ	Chkalovo	70.22	338	eP	P	00 44 50.8	+0.2
	3.0nm,0.6s,mb4.4						
ZRNK	Zerenda	70.28	336	eP	P	00 44 50.8	-0.1
	1.2nm,0.5s,mb4.1						
BRTR	Keskin Array B	83.83	312	P	P	00 46 07.2	+0.1
	0.5nm,0.8s,mb3.7,baz=120,slow=4.7,SNR=4.1						

ROM **07** *00:39:31.7±0.2, 44.62N×7.30E, h5km, Md2.8/7, Ml2.4/4, Error ellipse: s-maj=4.9km s-min=2.3km az=92.0*
STR **07** *00:39:31.8±0.2, 44.61N×7.27E, h5km±1km, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISCJB **07** *00:39:31.4±0.2, 44.60N±0.01×7.21E±0.02, h8km±2km, Error ellipse: s-maj=2.7km s-min=1.9km az=141.8*
CSEM **07** *00:39:32.0±0.1, 44.60N×7.24E, h10km, ML3.4/9, Error ellipse: s-maj=1.4km s-min=0.9km az=76.0*
GEN **07** *00:39:32.3, 44.57N×7.17E, h9km, ML2.0*
NEIC **07** *00:39:33.8, 44.51N×7.25E, h3km, ML2.9(STR), ML2.9(LDG), After LDG.*
LDG **07** *00:39:33.8±0.2, 44.51N×7.25E, h3km, Ml2.9/16, Error ellipse: s-maj=4.4km s-min=2.9km az=104.0*
ISC 07 00:39:32.3±0.2**, 44.59N**±0.01×**7.24E**±0.02**, h6**km±2km**, n83,** $\sigma 0^s.94$**/140, 1C, Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DOI	San Damiano	0.09	177⇑	ePg	Pg	00 39 34.7	+0.4
DOI				Sg	Sg	00 39 36.1	+0.5
	2μm,0.3s						
PZZ	Prazzo	0.13	229	P	Pg	00 39 34.7	-0.3
OG22	Abries	0.31	318	Pg	Pg	00 39 38.4	0.0
OG22				Sg	Sg	00 39 42.3	-0.2
STV	Sta Anna Valdi	0.35	170	P	Pg	00 39 39.2	+0.1
MBDF	Montbardon	0.36	292	ePg	Pg	00 39 39.0	-0.3
MBDF				eSg	Sg	00 39 43.8	-0.3
	710nm,0.2s						
MBDF	Montbardon	0.36	292	ePg	Pg	00 39 39.0	-0.3
MBDF				eSg	Sg	00 39 43.8	-0.3
	355nm,0.2s						
ENR	Entracque	0.39	160	P	Pg	00 39 39.9	+0.1
ROB	Roburent	0.54	123	P	Pg	00 39 43.3	+0.6
RSP	Reno Superiore	0.56	1	Pg	Pg	00 39 43.0	-0.1
RSP				Sg	Sg	00 39 51.2	+0.8
	155nm,0.3s						
TOUF	Mont Tournerai	0.58	179	Pg	Pg	00 39 43.5	+0.1
AUTN	L'Aution	0.61	167	Pg	Pg	00 39 44.0	0.0
AUTN				Sg	Sg	00 39 51.9	-0.1
MONE	Monesi	0.63	144	P	Pg	00 39 44.5	+0.1
SAOF	Saorge	0.65	159	Pg	Pg	00 39 44.6	-0.1
SAOF				Sg	Sg	00 39 52.9	-0.2
MONC	Moncucco Torin	0.69	45	Pg	Pg	00 39 46.6	+1.1
	125nm,0.3s						
MVIF	Mont Vial	0.70	185	Pg	Pg	00 39 45.7	0.0
MVIF				Sg	Sg	00 39 55.1	+0.3
LUCF	Luceram	0.70	174	Pg	Pg	00 39 45.8	0.0
LUCF				Sg	Sg	00 39 55.1	+0.2
SBF	Sospel	0.74	169	ePg	Pg	00 39 46.2	-0.3
SBF				eSg	Sg	00 39 55.0	-1.2
	155nm,0.3s						
SBF	Sospel	0.74	169	ePg	Pg	00 39 46.2	-0.3
SBF				eSg	Sg	00 39 55.0	-1.2
	78nm,0.3s						
RORO		0.76	129	P	Pg	00 39 47.5	+0.6
FIN	Finale Ligure	0.79	118	Pg	Pg	00 39 47.7	+0.2
FIN				Sg	Sg	00 39 58.3	+0.5
	52nm,0.2s						
FIN	Finale Ligure	0.79	118	P	Pg	00 39 47.5	0.0
FIN	Finale Ligure	0.79	118	Pg	Pg	00 39 47.7	+0.2
FIN				Sg	Sg	00 39 58.3	+0.5
	52nm,0.2s						
IMI	Imperia	0.82	145	Pg	Pg	00 39 48.1	0.0
IMI				Sg	Sg	00 39 59.3	+0.4
	53nm,0.1s						
REVF	Revere	0.85	174	Pg	Pg	00 39 48.6	-0.1
REVF				Sg	Sg	00 40 00.4	+0.6
PCP	Pian Castagno	0.93	93	P	Pg	00 39 50.2	0.0
LPG	La Plagne	0.97	339	ePg	Pg	00 39 50.6	-0.4
LPG				eSg	Sg	00 40 02.9	-0.7
	80nm,0.3s						
LPG	La Plagne	0.97	339	ePg	Pg	00 39 50.6	-0.4
LPG				eSg	Sg	00 40 02.9	-0.7
	40nm,0.3s						
LPL	La Plagne	0.99	339	ePg	Pg	00 39 51.0	-0.4
ORIF	Oris-en-Rattie	1.02	289	ePg	Pg	00 39 51.0	-0.9
ORIF				eSg	Sg	00 40 03.8	-1.4
	67nm,0.2s						
ORIF	Oris-en-Rattie	1.02	289	ePg	Pg	00 39 51.0	-0.9
ORIF				eSg	Sg	00 40 03.8	-1.4
	33nm,0.2s						
FRF	La Foret Royal	1.11	203	ePg	Pg	00 39 52.9	-0.8
FRF				eSg	Sg	00 40 07.2	-1.0
	105nm,0.2s						
FRF	La Foret Royal	1.11	203	ePg	Pg	00 39 52.9	-0.8
FRF				eSg	Sg	00 40 07.2	-1.0
	52nm,0.2s						
STOF	St-Etienne Org	1.12	239	Pg	Pg	00 39 54.9	+1.0
STOF				Sg	Sg	00 40 10.9	+2.4
ORO	Oropa	1.16	27	Pg	Pg	00 39 52.1	-2.5
	22nm,0.2s						
RSL	Roselend	1.18	339	Pg	Pg	00 39 54.9	-0.1
MRGE	Morge	1.19	354	Pg	Pg	00 39 54.4	-0.7
MRGE				Sg	Sg	00 40 09.9	-0.6
	110nm,0.9s						
TAVF	Tavernes	1.29	222	Pg	Pg	00 39 56.7	-0.4
VILF	Villemus	1.32	237	Pg	Pg	00 39 57.7	+0.1
VILF				Sg	Sg	00 40 16.5	+1.7
SMRF	Simiane la Rot	1.34	243	ePn	Pn	00 39 58.0	+0.4
SMRF				eSg	Sg	00 40 16.3	+0.8
	135nm,0.4s						
SMRF	Simiane la Rot	1.34	243	ePn	Pn	00 39 58.0	+0.4
SMRF				eSg	Sg	00 40 16.3	+0.8
	67nm,0.4s						
LMR	La Mourre	1.36	203	ePg	Pg	00 39 57.3	-1.1
LMR				eSg	Sg	00 40 14.6	-1.5
	159nm,0.2s						
LMR	La Mourre	1.36	203	ePg	Pg	00 39 57.3	-1.1
LMR				eSg	Sg	00 40 14.6	-1.5
	79nm,0.2s						
MCGN	Macugnaga	1.47	21	Pg	Pn	00 39 57.1	-2.1
	9.0nm,0.3s						
EMV	Vieux Emosson	1.49	351	Pg	Pg	00 40 01.2	+0.3
PUYF	Puyloubier	1.53	227	Pg	Pg	00 40 01.1	-0.6
PUYF				Sg	Sg	00 40 21.0	-0.6
MMK	Mattmark	1.55	19	Pg	Pn	00 39 59.0	-1.4
TREF	Trevaresse	1.65	235	Pg	Pg	00 40 04.2	+0.3
VAI	Varese	1.67	40	Pn	Pn	00 40 00.8	-1.3
	5.0nm,0.3s						
PRAF	Pradon	1.68	243	Pg	Pg	00 40 04.6	0.0
PRAF				Sg	Sg	00 40 28.1	+1.7
BERF	Bertagne	1.70	222	Pg	Pg	00 40 03.4	-1.5
GELF	Grande-Etoile	1.78	228	Pg	Pg	00 40 04.9	-1.5
VIVF	Saint-Julien-l	1.85	279	ePg	Pg	00 40 07.7	-0.1
VIVF				eSg	Sg	00 40 31.2	-0.5
	34nm,0.4s						
VIVF	Saint-Julien-l	1.85	279	ePn	Pn	00 40 04.7	+0.2
VIVF				ePg	Pg	00 40 07.7	-0.1
VIVF				eSg	Sg	00 40 31.2	-0.5
VIVF	Saint-Julien-l	1.85	279	ePg	Pg	00 40 07.7	-0.1
VIVF				eSg	Sg	00 40 31.2	-0.5
	17nm,0.4s						
OG05	Jujurieux	1.92	320	Pg	Pg	00 40 07.5	-1.6
OG05				Sg	Sg	00 40 34.0	0.0
CABF	La Chapelle	2.18	339	ePn	Pn	00 40 10.4	+1.4
CABF				eSg	Sg	00 40 44.8	+2.5
	23nm,0.6s						
CABF	La Chapelle	2.18	339	ePn	Pn	00 40 10.4	+1.4
CABF				eSg	Sg	00 40 44.8	+2.5
	12nm,0.6s						
LASF	Ste Croix	2.48	259	ePn	Pn	00 40 12.7	-0.5
LASF				eSn	Sn	00 40 41.7	-2.1
SMF	Signal de Mont	3.15	312	ePn	Pn	00 40 23.8	+1.4
SMF				eSn	Sn	00 40 59.6	-0.6
SMF				eSg	Sg	00 41 13.7	+0.3
	4.8nm,0.3s						
SMF	Signal de Mont	3.15	312	ePn	Pn	00 40 23.8	+1.4
SMF				eSn	Sn	00 40 59.6	-0.6
SMF				eSg	Sg	00 41 13.7	+0.3
	2.4nm,0.3s						
HINF	Hinteralfeld	3.24	355	ePn	Pn	00 40 23.9	+0.3
HINF				eSn	Sn	00 41 02.2	-0.3
	2.7nm,0.3s						
HINF				eSg	Sg	00 41 16.8	+0.5
	9.0nm,0.6s						
HINF	Hinteralfeld	3.24	355	ePn	Pn	00 40 23.9	+0.3
HINF				eSn	Sn	00 41 02.2	-0.3
	1.4nm,0.3s						
HINF				eSg	Sg	00 41 16.8	+0.5
	4.5nm,0.6s						
HAU	Haudompre	3.47	350	ePn	Pn	00 40 27.3	+0.5
AVF	Avril sur Loir	3.50	310	ePn	Pn	00 40 28.7	+1.5
AVF				eSg	Sg	00 41 24.9	+0.1
	5.1nm,0.5s						
AVF	Avril sur Loir	3.50	310	ePn	Pn	00 40 28.7	+1.5
AVF				eSg	Sg	00 41 24.9	+0.1
	2.5nm,0.5s						
LOR	Lormes	3.57	320	ePn	Pn	00 40 29.4	+1.2
LOR				eSn	Sn	00 41 09.2	-1.4
	2.4nm,0.3s						
LOR	Lormes	3.57	320	ePn	Pn	00 40 29.4	+1.2
LOR				eSn	Sn	00 41 09.2	-1.4
	1.2nm,0.3s						
SSF	Saint Saulge	3.59	315	ePn	Pn	00 40 29.7	+1.2
BGF	Bois d'Agland	3.66	304	ePn	Pn	00 40 29.8	+0.4
CAF	Calviac	3.70	277	ePn	Pn	00 40 30.6	+0.6
CDF	Champ du Feu	3.82	0	ePn	Pn	00 40 31.3	-0.4
CDF				eSn	Sn	00 41 15.1	-1.8
	2.5nm,0.3s						
CDF	Champ du Feu	3.82	0	ePn	Pn	00 40 31.3	-0.4
CDF				eSn	Sn	00 41 15.1	-1.8
	1.2nm,0.3s						
MTLF	Montolieu	3.83	253	ePn	Pn	00 40 31.7	-0.1
MTLF				eSn	Sn	00 41 14.6	-2.6
	3.7nm,0.4s						
MTLF	Montolieu	3.83	253	ePn	Pn	00 40 31.7	-0.1
MTLF				eSn	Sn	00 41 14.6	-2.6
	1.9nm,0.4s						
TCF	Toulx Ste Croi	3.93	297	ePn	Pn	00 40 33.8	+0.7
RJF	Les Rejaudoux	4.13	282	ePn	Pn	00 40 36.7	+0.9
HYF	Humbligny	4.18	311	ePn	Pn	00 40 38.7	+2.1
HYF				eSn	Sn	00 41 25.5	-0.2
MEZF	Maizieres J'vi	4.19	340	ePn	Pn	00 40 37.6	+0.8
MEZF				eSn	Sn	00 41 25.7	-0.3
	4.8nm,0.4s						
MEZF	Maizieres J'vi	4.19	340	ePn	Pn	00 40 37.6	+0.8
MEZF				eSn	Sn	00 41 25.7	-0.3
	2.4nm,0.4s						
MFF	Saint Martin d	5.56	294	ePn	Pn	00 40 56.3	+0.8
BAIF	Baives	5.85	340	ePn	Pn	00 41 00.6	+1.1
ETSF	Etsaut	5.90	256	ePn	Pn	00 41 02.5	+2.3
GRR	Gorron	6.76	307	ePn	Pn	00 41 13.3	+1.3

NEIC **07** *00:42:00.1, 16.90N×99.27W, h20km, MD4.0(MEX), After MEX.*
MEX 07 00:42:00.1±1.3**, 16.90N**×**99.27W, h30**km±29km**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.62	267	*i* P	Pb	00 42 10.5	-1.9
ACX				*i* S	Sb	00 42 18.5	-2.3
CAIG	El Cayaco	0.96	279	*i* P	Pn	00 42 16.2	-1.3
CAIG				*i* S	Sn	00 42 25.4	-4.8
MEIG	Mezcala	1.07	342	*i* P	Pn	00 42 16.6	-2.4
MEIG				*i* S	Sn	00 42 30.2	-2.7
PLIG	Platanillo	1.50	352	*i* P	Pn	00 42 23.0	-1.9
PLIG				*i* S	Sn	00 42 41.5	-1.9
UTMO	Huajuapan	1.68	56	*i* P	Pn	00 42 24.6	-2.8
UTMO				*i* S	Sn	00 42 45.7	-2.2
YAIG	Yautepec	1.96	6	*i* P	Pn	00 42 29.8	-1.4
YAIG				*i* S	Sn	00 42 53.2	-1.6
ZIIG	Zihuatanejo	2.21	289	eP	Pn	00 42 33.5	-1.2
ZIIG				*i* S	Sn	00 42 58.7	-2.2
ZIIG	Zihuatanejo	2.21	289	*i* P	Pn	00 42 39.9	+5.2
ZIIG				*i* S	Sn	00 43 05.3	+4.4
PPM	Popocatepetl	2.24	16	*i* P	Pn	00 42 32.4	-2.7
PPM				eP		00 42 34.0	
PPM				*i* S	Sn	00 43 00.5	-1.2
PPM	Popocatepetl	2.24	16	*i* P	Pn	00 42 32.4	-2.7
PPM				eP		00 42 34.0	
PPM				*i* S	Sn	00 43 01.9	+0.2
TPIG	Tehuac#an	2.37	50	*i* P	Pn	00 42 35.0	-1.9
TPIG				*i* S	Sn	00 43 03.2	-1.7
UNM	Universidad Na	2.42	2	eP	Pn	00 42 34.9	-2.6
UNM				eP		00 42 40.0	
UNM				*i* S	Sn	00 43 04.0	-2.1
UNM	Universidad Na	2.42	2	eP	Pn	00 42 30.0	-7.5
UNM				*i* P		00 42 34.0	
VHO	Vista Hermosa	2.44	86	*i* P	Pn	00 42 34.7	-3.1
VHO				*i* S	Sn	00 43 02.2	-4.4
VHO				*i* S	Sn	00 43 04.3	-2.3
OXX	Oaxaca	2.45	85	*i* P	Pn	00 42 35.5	-2.5
HUIG	Huatulco	3.24	110	eP	Pn	00 42 47.7	-1.2
HUIG				*i* S	Sn	00 43 25.2	-1.2
HUIG	Huatulco	3.24	110	*i* P	Pn	00 42 54.7	+5.8
HUIG				*i* S	Sn	00 43 30.7	+4.2
MOIG	Morelia	3.31	327	eP	Pn	00 42 53.9	+4.1
MOIG	Morelia	3.31	327	*i* P	Pn	00 42 55.4	+5.6
SFJM	Santa Fe	5.04	316	eP	Pn	00 43 27.0	+13

BJI **07** *00:53:31.6, 8.18S×128.52E, h145km, mB4.8, mb4.9*
MOS **07** *00:53:35.9±0.8, 7.42S×127.73E, h118km, mb5.0/22, Error ellipse: s-maj=13.3km s-min=6.5km az=114.8*
ISCJB **07** *00:53:38.0±0.2, 7.58S±0.03×128.00E±0.05, h148km, mb4.9/70, Error ellipse: s-maj=6.8km s-min=3.6km az=153.5*
IDC **07** *00:53:39.9±0.6, 7.48S×127.87E, h146km±5km, mb4.5/18, mb1 4.6/20, mb1mx4.6/21, mbtmp5.0/20, MS3.8/8, Ms1 3.8/8, ms1mx3.5/21, Error ellipse: s-maj=14.6km s-min=8.7km az=66.0*
NEIC **07** *00:53:39.6±0.1, 7.51S×127.85E, mb5.2/29, Error ellipse: s-maj=6.1km s-min=3.5km az=64.0*
NEIC Felt at Darwin, Australia.
HRVD **07** *00:53:39.6±0.3, 7.62S×128.00E, h160km±2km, MW5.0/72, Centroid moment Tensor Solution. LP body waves: s33,c39;Mantle waves: s72,c107; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.62±.13; $M_{\theta\theta}$0.13±.13; $M_{\phi\phi}$-3.75±.18; $M_{r\theta}$-1.32±.10; $M_{\theta\phi}$-1.86±.17; $M_{\phi r}$1.00±.15; Best double couple: $M_0$4.44600×10^{16} NP1:ϕ_s225.00000°, δ47.00000°, λ124.00000°. NP2:ϕ_s359.00000°, δ53.00000°, λ59.00000°. Principal axes: T 4.3700, Plg65.0000°, Azm208.0000°; N 0.1480, Plg24.0000°, Azm19.0000°; P -4.5220, Plg3.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 07 00:53:40.0±0.2**, 7.59S**±0.03×**128.03E**±0.05**, h150**km**, h150**km±1.7km**:pP-P, n309,** $\sigma 1^s.17$/165**, mb4.9**/70**, 48C-40D, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.88	2	P	Pn	00 54 40.6	+2.0
	1μm,0.8s						
KAKA	Kakadu	6.69	140	eP	Pn	00 55 15.8	-0.1
KAKA				eS	Sn	00 56 25.3	-5.7
SWI	Sorong	7.41	26	P	Pn	00 55 26.9	+1.4
	393nm,0.5s						
WSI	Waingapu	7.92	254	P	Pn	00 55 31.7	-0.6
	3μm,1.1s						
BAKI	Biak	10.25	52	P	Pn	00 56 03.4	+0.1
	861nm,0.8s						
PCI	Palu	10.52	309	P	Pn	00 56 13.8	+7.0
	97nm,1.2s						
FITZ	Fitzroy Crossi	10.71	192	eP	Pn	00 56 05.3	-4.0
	66nm,0.3s						
FITZ				eS	Sn	00 58 00.9	-6.8
FITZ	Fitzroy Crossi	10.71	192	P	Pn	00 56 06.6	-2.7
	5.7nm,0.3s,baz=26,slow=11,SNR=106						
FITZ				S	Sn	00 57 58.3	-9.4
	11nm,0.3s,baz=19,slow=15,SNR=9.3						
FITZ				LR	LR	01 00 46.0	
	comp=Z,158nm,21.9s,baz=14,slow=40						
JAY	Jayapura	13.59	69	P	Pn	00 56 49.8	+3.2
	168nm,0.8s						
WRAB	Tennant Creek	13.72	154	eP	Pn	00 56 45.6	-2.7
WRAB	Tennant Creek	13.72	154	ePn	Pn	00 56 45.7	-2.6
	557nm,0.6s						
WRAB				eSn	Sn	00 59 09.3	-11
WB2	Warramunga Arr	13.73	154⇓	*i*P	Pn	00 56 44.9	-3.5
WB2				eS	Sn	00 59 09.1	-11
TSM	Tawau	15.55	319	P	Pn	00 57 14.8	+3.6
MBWA	Marble Bar	15.70	210	ePn	Pn	00 57 12.5	-0.5
	0.5nm,0.8s						
MBWA				eSn	Sn	01 00 01.1	-6.5
AS31	Alice Springs	16.95	161	eP	Pn	00 57 27.9	-0.3
AS31				eS	S	01 00 28.3	-8.3
ASPA	Alice Springs	16.95	161	eP	Pn	00 57 27.9	-0.3
ASPA				eS	S	01 00 28.3	-8.3
ASAR	Alice Springs	16.95	161	P	Pn	00 57 27.9	-0.3
	22nm,0.3s,baz=336,slow=8.6,SNR=804						
ASAR				S	S	01 00 23.9	-13
	14nm,0.3s,baz=335,slow=18,SNR=5.0						
KKM	Kota Kinabalu	17.95	319	P	Pn	00 57 42.8	+2.7
KKM	Kota Kinabalu	17.95	319	P	Pn	00 57 43.2	+3.1
PMG	Port Moresby	19.01	97	P	P	00 57 51.4	+1.3
	42nm,0.3s,baz=271,slow=4.8,SNR=141						
PMG				LR	LR	01 06 14.4	
	comp=Z,434nm,20.4s,baz=34,slow=39						
PMG	Port Moresby	19.01	97d	*i*P	P	00 57 55.9	+5.8
KSM	Kuching	19.84	296	P	P	00 58 01.3	+2.2
CTA	Charters Tower	21.59	127⇓	*i*P	P	00 58 20.0	+2.2
	68nm,1.1s,mb5.0						
CTA				e		01 02 08.3	
CTA	Charters Tower	21.59	127	P	P	00 58 20.0	+2.2
	21nm,0.6s,mb4.7,baz=300,slow=12,SNR=22						
CTA				LR	LR	01 07 37.3	
	comp=Z,750nm,20.5s,baz=126,slow=38						
CTA	Charters Tower	21.59	127⇓	*i*P	P	00 58 20.0	+2.2
CTA				e		01 02 08.3	
CTA				pmax	pmax		
	comp=Z,68nm,1.1s						
CTAO	Charters Tower	21.59	127	eP	P	00 58 20.3	+2.5
CTAO				eS	S	01 02 07.6	-0.1
CTAO				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.1						
CTAO	Charters Tower	21.59	127	eP	P	00 58 20.3	+2.5
	comp=Z,60nm,0.8s,mb5.1						
CTAO				eS	S	01 02 07.6	-0.1
TGY	Tagaytay City	22.67	342	P	P	00 58 27.0	-1.6
	comp=Z,676nm,0.8s,baz=175,slow=3.1,SNR=11						
FORT	Forrest	23.07	180	eP	P	00 58 33.6	+1.3
	comp=Z,271nm,0.6s,mb5.8						
FORT				eS	S	01 02 48.8	+17
KLBR	Kellerberrin	25.74	201	eP	P	00 58 56.2	-0.3
	comp=Z,99nm,0.9s,mb5.4						
KLBR				eS	S	01 03 51.7	+38
KGM	Kluang	26.43	290	P	P	00 59 03.7	+1.0
MUN	Mundaring	26.65	203	eP	P	00 59 08.9	+4.2
MUN				eS	S	01 04 08.7	+40
NWAO	Narrogin (SRO)	27.13	200	P	P	00 59 09.6	+0.6
	comp=Z,25nm,0.7s,mb4.9,baz=42,slow=8.2,SNR=17						
NWAO				LR	LR	01 10 17.0	
	comp=Z,155nm,21.2s,baz=188,slow=37						
STKA	Stephens Creek	27.28	154⇑	*i*P	P	00 59 11.7	+1.4
	comp=Z,37nm,0.6s,mb5.2						
STKA	Stephens Creek	27.28	154	P	P	00 59 11.8	+1.5
	comp=Z,42nm,0.6s,mb5.3,baz=325,slow=8.9,SNR=67						
STKA				pP	pP	00 59 41.4	-0.3
	comp=Z,60nm,0.6s,baz=326,slow=12,SNR=4.3						
STKA				LR	LR	01 11 39.7	
	comp=Z,249nm,19.1s,baz=208,slow=39						
ADE	Adelaide	28.97	162	eP	P	00 59 27.9	+2.6
IPM	Ipoh	29.49	293	P	P	00 59 31.1	+1.2
PSI	Prapat	30.82	288	P	P	00 59 40.9	-0.7
	comp=Z,69nm,0.9s,mb5.4,baz=144,slow=5.5,SNR=46						
TSI	Tuntungan	31.39	290	eP	P	00 59 40.9	-5.8
HNR	Honiara	31.61	96	LR	LR	01 12 34.0	
	comp=Z,189nm,19.3s,baz=358,slow=36						
ARMA	Armidale	31.70	139	eP	P	00 59 52.7	+3.4
YHNB	Yeheng	32.71	349	eP	P	00 59 56.6	-1.5
TOO	Toolangi	33.80	155⇑	*i*P	P	01 00 10.8	+3.2
	comp=Z,12nm,0.7s,mb4.7						
TOO	Toolangi	33.80	155⇑	*i*P	P	01 00 10.8	+3.2
TOO				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
JOW	Kunigami	34.21	0	P	P	01 00 11.4	+0.2
	comp=Z,50nm,0.9s,mb5.2,baz=188,slow=7.3,SNR=5.3						

NANT Nan 37.60 315 P **P** **01 00 42.5 +2.5**
CHTO Chiang Mai 38.87 313 P **P** **01 00 52.7 +2.2**
SNR=7.5
CHTO Chiang Mai 38.87 313 *e*P **P** **01 00 52.8 +2.2**
CHTO pmax pmax
comp=Z,11nm,0.8s,mb4.5
CHTO Chiang Mai 38.87 313 *e*P **P** **01 00 52.8 +2.2**
comp=Z,11nm,0.8s,mb4.5
CHTO *e* pP 01 01 28.4 +5.1
CHRT Chiangrai 38.95 315 ⇑P **P** **01 00 52.0 +0.7**
comp=Z,129nm,0.9s,mb5.6
SSE Sheshan 39.01 351 P **P** **01 00 51.1 -0.7**
SSE AMB AMB
comp=Z,44nm,0.8s,mb5.1
SSE AMB AMB
comp=Z,62µm,3.0s
GYA Guiyang 39.69 329⇑ *i*P **P** **01 00 58.1 +0.7**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
DZM Mont Dzumac 39.69 116 P **P** **01 01 01.1 +3.7**
comp=Z,10nm,1.0s,mb4.4,baz=298,slow=17,SNR=6.9
WHN Wuhan 40.12 342 P **P** **01 01 01.5 +0.6**
NJ2 Nanjing 40.38 348 *e*P **P** **01 01 03.6 +0.5**
NJ2 AP pP 01 01 38.8 +2.8
NJ2 XP sP 01 01 57.1 +4.1
NJ2 PP PP 01 02 42.7 +3.6
NJ2 S **S** **01 07 02.0 +2.2**
NJ2 XS sS 01 08 02.0 +4.8
NJ2 AMB AMB
comp=Z,30nm,0.6s,mb5.1
NJ2 AMB AMB
comp=Z,80nm,6.0s
NJ2 LR LR
comp=E,800nm,20.2s
NJ2 LR LR
comp=Z,260nm,33.7s
KMI Kunming 40.78 324 P **P** **01 01 08.1 +1.7**
KMI AMB AMB
comp=Z,17nm,1.0s,mb4.6
KMI AMB AMB
comp=Z,52nm,3.2s
KMI LR LR
comp=N,170nm,15.7s
KMI LR LR
comp=E,163nm,15.1s
KMI LR LR
comp=Z,193nm,19.2s
CD2 Chengdu 44.79 330 P **P** **01 01 38.3 -0.3**
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
MJAR Matsushiro Arr 44.92 12 P **P** **01 01 38.7 -1.0**
comp=Z,3.7nm,0.8s,mb4.0,baz=193,slow=7.6,SNR=9.3
MJAR pP pP 01 02 11.0 -2.2
comp=Z,5.6nm,0.8s,baz=185,slow=8.8,SNR=4.6
MJAR ScP ScP 01 06 55.5 -1.3
comp=Z,0.5nm,0.3s,baz=204,slow=2.7,SNR=4.1
MJAR Matsushiro Arr 44.92 12 P **P** **01 01 38.7 -1.0**
MJAR *PP pP 01 02 11.0 -2.2
MJAR Matsushiro Arr 44.92 12 P **P** **01 01 38.7 -1.0**
MJAR pP pP 01 02 11.0 -2.2
MJAR ScP ScP 01 06 55.5 -1.3
XAN Xi'an 45.19 337 P **P** **01 01 41.1 -0.7**
XAN AMB AMB
comp=Z,13nm,0.8s,mb4.6
BJT Baijiatuau 48.62 348 *e*P **P** **01 02 08.0 -0.4**
BJT pmax pmax
comp=Z,17nm,0.8s
BJT Baijiatuau 48.62 348 *e*P **P** **01 02 08.0 -0.4**
comp=Z,17nm,0.8s,mb4.7
BJI Beijing 48.64 348 *e*P **P** **01 02 08.1 -0.5**
BJI AMB AMB
comp=Z,22nm,1.2s,mb4.7
BJI LR LR
comp=Z,50nm,19.3s
LZH Lanzhou 49.03 334 *e*P **P** **01 02 12.0 +0.4**
LZH AMB AMB
comp=Z,28nm,1.5s,mb4.7
LZH AMB AMB
comp=Z,78nm,5.2s
SNY Shenyang 49.34 356 ⇑P **P** **01 02 13.1 -0.8**
SNY AMB AMB
comp=Z,19nm,1.0s,mb4.7
MDJ Mudanjiang 51.98 1 *e*P **P** **01 02 33.7 0.0**
comp=Z,32nm,1.4s,mb4.8
JIRN Jiri 53.52 313 *e*P **P** **01 02 45.2 +0.2**
comp=Z,95nm,1.2s,mb5.4
GTA Gaotai 53.57 333 *e*P **P** **01 02 46.1 +0.8**
GTA AMB AMB
comp=Z,25nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,67nm,3.8s
GTA LR LR
comp=N,88nm,14.1s
GTA LR LR
comp=E,92nm,13.0s
GTA LR LR
comp=Z,90nm,13.0s
GUN Gumba 53.89 313 *e*P **P** **01 02 47.7 +0.1**
comp=Z,82nm,0.8s,mb5.5
PKI Pulchoki 54.04 312 *e*P **P** **01 02 48.7 -0.1**
comp=Z,41nm,0.8s,mb5.2
PKI Pulchoki 54.04 312 *e*P **P** **01 02 48.7 -0.1**
PKI pmax pmax
comp=Z,41nm,0.8s,mb5.2
KKN Kakani 54.26 312 *e*P **P** **01 02 50.2 -0.1**
comp=Z,49nm,0.9s,mb5.3
KKN Kakani 54.26 312 *e*P **P** **01 02 50.2 -0.1**
KKN pmax pmax
comp=Z,49nm,0.9s,mb5.2
DMN Daman 54.28 312 *e*P **P** **01 02 50.5 0.0**
comp=Z,79nm,1.0s,mb5.4
GKN Gorkha 54.85 312 *e*P **P** **01 02 54.3 -0.3**
comp=Z,77nm,0.9s,mb5.4
KOLN Koldanda 55.49 311 *e*P **P** **01 02 58.0 -1.2**
comp=Z,104nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 55.85 12*c i*P **P** **01 03 00.9 -0.9**
YSS pmax pmax
comp=Z,34nm,1.7s,mb4.9
HABR Khabarovsk 56.16 6 *e*P **P** **01 03 04.6 +0.7**
HABR *e*S **S** **01 10 44.6 +3.2**
KLR Kul'dur 56.67 3 *e*P **P** **01 03 04.0 -3.6**
HIA Hailar 57.07 354⇑ *i*P **P** **01 03 10.3 -0.1**
ULN Ulaanbaatar 58.24 344 P **P** **01 03 19.3 +0.7**
SNR=13
ULN Ulaanbaatar 58.24 344 *e*P **P** **01 03 18.9 +0.3**
ULN *e**PP pP 01 03 52.4 -1.3
ULN pmax pmax
comp=Z,14nm,0.9s,mb4.8
ULN Ulaanbaatar 58.24 344*c i*P **P** **01 03 19.0 +0.4**
ULN Ulaanbaatar 58.24 344 *e*P **P** **01 03 18.9 +0.4**
comp=Z,14nm,0.9s,mb4.8
ULN *e*pP pP 01 03 52.4 -1.3
SONM Songino Array 58.40 343 P **P** **01 03 20.3 +0.6**
comp=Z,11nm,0.9s,mb4.7,baz=155,slow=7.2,SNR=41
SONM pP pP 01 03 54.5 -0.4
comp=Z,5.2nm,0.9s,baz=170,slow=8.8,SNR=3.7
CASY Casey 59.84 188 *e*P **P** **01 03 30.4 +0.8**
TLY Talaya 62.64 343 *e*P **P** **01 03 48.9 +0.5**
TLY *e*S **S** **01 12 16.4 +12**
TLY pmax pmax
comp=Z,14nm,1.2s,mb4.7
TLY MLR MLR
comp=Z,44nm,16.0s
WMQ Urumqi 62.84 328 P **P** **01 03 50.0 +0.3**
WMQ AMB AMB
comp=Z,15nm,1.0s,mb4.8
IRK Irkutsk 62.97 344 *e*P **P** **01 03 49.3 -1.3**
IRK pmax pmax
comp=Z,44nm,0.7s,mb5.4
MIR Mirnyy 63.57 195*d i*P **P** **01 03 57.5 +3.0**
MIR pmax pmax
comp=Z,25nm,1.5s,mb4.8
BOD Bodaibo 66.17 352⇑ *i*P **P** **01 04 11.0 -0.4**
BOD pmax pmax
comp=Z,12nm,1.4s,mb4.5
MKAR Makanchi Array 67.66 328 P **P** **01 04 20.2 -0.5**
comp=Z,3.2nm,0.7s,mb4.2,baz=130,slow=7.8,SNR=23
MKAR pP pP 01 04 55.0 -1.9
comp=Z,4.1nm,0.7s,baz=124,slow=7.5,SNR=4.2
MKAR Makanchi Array 67.66 328⇑ *e*P **P** **01 04 20.8 0.0**
MKAR Makanchi Array 67.66 328 P **P** **01 04 20.2 -0.5**
MKAR pP pP 01 04 55.0 -1.9
KZA Kyzart 68.97 321 P **P** **01 04 30.5 +1.6**
SNR=5.5
TKM2 Tokmak 2 69.20 321 P **P** **01 04 31.2 +0.8**
SNR=7.4
TKM2 Tokmak 2 69.20 321 *i*P **P** **01 04 30.4 0.0**
TKM2 pmax pmax
comp=Z,11nm,0.9s,mb4.6
MA2 Magadan 69.36 12 P **P** **01 04 30.2 -1.1**
MA2 pmax pmax
comp=Z,20nm,0.8s,mb4.9
YAK Yakutsk 69.42 1 *e*P **P** **01 04 30.7 -1.0**
YAK pmax pmax
comp=Z,62nm,0.9s,mb5.3
YAK Yakutsk 69.42 1 *e*P **P** **01 04 30.7 -1.0**
comp=Z,62nm,0.9s,mb5.3
YAK *e*pP pP 01 05 06.7 -1.3
AAK Ala-Archa 69.74 321 P **P** **01 04 33.7 +0.1**
SNR=6.5
AAK Ala-Archa 69.74 321 *e*P **P** **01 04 33.5 -0.1**
AAK *e* 01 04 55.0
AAK pmax pmax
comp=Z,13nm,1.1s,mb4.6
AAK Ala-Archa 69.74 321 *e*P **P** **01 04 33.5 -0.2**
comp=Z,13nm,1.1s,mb4.6
AAK *e*PcP PcP 01 04 55.0 -0.4
AAK *e*pP pP 01 05 08.7 -1.2
AML Almayashu 69.98 320 P **P** **01 04 36.4 +1.3**
SNR=7.7
USP Ospenovka 70.07 321 P **P** **01 04 35.8 +0.2**
SNR=15
EKS2 Erkin-Say 70.20 320 P **P** **01 04 37.7 +1.2**
SNR=8.7
KURK Kurchatov 72.01 329 P **P** **01 04 47.2 -0.1**
SNR=16
KURK Kurchatov 72.01 329 *e*P **P** **01 04 46.9 -0.4**
KURK pmax pmax
comp=Z,46nm,1.1s,mb5.1
KURK Kurchatov 72.01 329 *e*P **P** **01 04 46.9 -0.5**
comp=Z,46nm,1.1s,mb5.1
KURK *e*pP pP 01 05 22.4 -1.4
VNDA Vanda 72.11 173 P **P** **01 04 48.5 +0.6**
comp=Z,6.7nm,0.7s,mb4.5,baz=316,slow=6.3,SNR=41
VNDA LR LR 01 35 13.9
comp=Z,94nm,21.5s,baz=346,slow=34
KK31 Karatay Array 72.50 320 *i*P **P** **01 04 49.7 -0.6**
KK31 pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
NVS Novosibirsk 72.54 335⇑ *i*P **P** **01 04 48.0 -2.5**
NVS *i* *PP pP 01 05 27.4 +0.3
NVS *e*S S 01 13 55.9 -6.8
NVS *e* 01 14 29.6
NVS pmax pmax
comp=Z,32nm,1.1s,mb5.0
NVS pmax pmax
comp=N,20nm,1.3s
NVS pmax pmax
comp=E,18nm,1.3s
NVS smax
comp=E,13nm,1.5s
MAW Mawson 73.70 201⇑ *i*P **P** **01 04 58.5 +1.2**
comp=E,17nm,0.8s,mb4.8
MAW Mawson 73.70 201 P **P** **01 04 58.6 +1.3**
comp=E,27nm,0.9s,mb5.0,baz=74,slow=7.1,SNR=65
MAW LR LR 01 31 31.6
comp=E,52nm,21.3s,baz=245,slow=31
MAW Mawson 73.70 201⇑ *i*P **P** **01 04 58.5 +1.2**
MAW pmax pmax
comp=Z,17nm,0.8s
WSAR Wadi Sarin 74.37 297 P **P** **01 05 00.8 -0.4**
comp=Z,14nm,1.1s,mb4.6,baz=72,slow=5.6,SNR=4.1
BIDO Bidbid 74.89 297 P **P** **01 05 04.7 +0.5**
SNR=6.2
HOQ Hoqain 75.63 297 P **P** **01 05 08.6 +0.2**
SNR=6.5
BVAR Borovoye Array 77.53 328 P **P** **01 05 18.8 -0.2**
comp=Z,14nm,0.9s,mb4.6,baz=134,slow=6.4,SNR=82
BVAR pP pP 01 05 55.6 -0.5
comp=Z,8.5nm,1.0s,baz=119,slow=5.4,SNR=3.6
BRVK Borovoye 77.60 328 P **P** **01 05 19.4 -0.1**
SNR=14
BRVK Borovoye 77.60 328 *e*P **P** **01 05 18.6 -0.9**
BRVK pmax pmax
comp=Z,18nm,1.0s,mb4.7
BRVK Borovoye 77.60 328 *e*P **P** **01 05 18.6 -0.9**
comp=Z,18nm,1.0s,mb4.7
BRVK *e*pP pP 01 05 54.2 -2.3
BRVK sP sP 01 06 11.2 -1.2
CHKZ Chkalovo 77.75 329 *i*P **P** **01 05 18.3 -2.0**
CHKZ pmax pmax
comp=Z,17nm,0.9s,mb4.7
ZRNK Zerenda 78.21 328 *e*P **P** **01 05 22.0 -0.8**
ZRNK pmax pmax
comp=Z,26nm,0.9s,mb4.9
ZRNK Zerenda 78.21 328 *e*P **P** **01 05 22.0 -0.9**
comp=Z,26nm,0.9s,mb4.9
ZRNK *e*pP pP 01 05 57.8 -2.1
QSPA South Pole Qui 82.40 180 *e*P **P** **01 05 45.5 +0.3**
comp=Z,20nm,0.6s,mb4.9
SYO Syowa Base 82.41 201⇓ *e*P **P** **01 05 45.7 +0.4**
SYO Syowa Base 82.41 201⇓ *e*P **P** **01 05 47.5 +2.2**
AKTK Aktyubinsk 83.34 323 P **P** **01 05 48.7 -1.4**
AKTK pP pP 01 06 26.6 -1.0
AKTO Aktyubinsk 83.34 323 P **P** **01 05 48.7 -1.4**
comp=Z,17nm,0.9s,mb4.8,baz=111,slow=5.4,SNR=36
AKTO pP pP 01 06 26.6 -1.0
comp=Z,4.1nm,1.0s,baz=102,slow=13,SNR=1.5
ARU Arti 85.17 329⇑ *i*P **P** **01 05 57.7 -1.6**
ARU *e* pP 01 06 37.6 +0.6
ARU *e* 01 09 17.8
ARU *e*PPP 01 11 08.2
ARU *e*S S 01 16 05.8 -11
ARU *e*SS SS 01 21 52.8 -1.0
ARU pmax pmax
comp=Z,25nm,0.9s,mb4.9
NAY Al-Naaiem 85.70 300 *e*P **P** **01 06 00.8 -1.2**
NAY AMb AMB 01 06 02.7
comp=Z,21nm,0.8s,mb4.9
MIB Mutribah 85.72 301 *e*P **P** **01 06 01.3 -0.8**
MIB AMb AMB 01 06 03.1
comp=Z,36nm,0.9s,mb5.1
RST Umm Al-Ruwaisa 85.96 300 *e*P **P** **01 06 02.1 -1.1**
RST AMb AMB 01 06 03.8
comp=Z,44nm,0.8s,mb5.2
GNI Garni 89.74 310 P **P** **01 06 21.4 +0.2**
comp=Z,0.9nm,0.4s,mb4.1,baz=280,slow=19,SNR=3.2
TTA Tatalina 90.38 26 *e*P **P** **01 06 23.5 -0.7**
TTA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TTA Tatalina 90.38 26 *e*P **P** **01 06 23.5 -0.7**
comp=Z,3.0nm,0.8s,mb4.3
TTA *e*pP pP 01 07 00.1 -2.0
KIV Kislovodsk 91.87 314⇑ *i*P **P** **01 06 30.3 -0.8**
KIV pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MALT Malatya 94.33 308 *e*P **P** **01 06 42.1 -0.3**
MALT pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
MALT Malatya 94.33 308 *e*P **P** **01 06 42.0 -0.4**
comp=Z,5.2nm,1.0s,mb4.6
MALT *e*pP pP 01 07 20.2 -0.2
SNAA Sanae 94.64 194⇑ *i*P **P** **01 06 44.9 +1.1**
SNAA *e* 01 06 45.3
SNAA *e* 01 07 46.2
SNAA Sanae 94.64 194 *e*P **P** **01 06 45.0 +1.2**
SNAA pmax pmax
comp=Z,16nm,0.8s
SNAA Sanae 94.64 194 *e*P **P** **01 06 45.0 +1.1**
comp=Z,16nm,0.8s,mb5.3
ANN Anapa 95.71 314 *e*P **P** **01 06 46.3 -2.4**
ANN pmax pmax
comp=Z,14nm,0.8s,mb5.3
OBN Obninsk 97.00 325⇓ *i*P **P** **01 06 52.6 -1.9**
OBN pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
LSZ Lusaka 97.42 254 P **P** **01 06 56.8 +0.4**
comp=Z,2.2nm,0.8s,mb4.6,baz=119,slow=5.7,SNR=6.8
LSZ Lusaka 97.42 254 P **P** **01 06 56.8 +0.4**
BOSA Boshof 97.48 240 P **P** **01 06 56.2 -0.5**
comp=Z,4.2nm,1.0s,mb4.7,baz=101,slow=8.6,SNR=5.1
DAWY Dawson 97.90 26 *e*P **P** **01 06 57.9 -0.7**
BRTR Keskin Array B 98.16 309 P **P** **01 06 58.2 -1.6**
comp=Z,0.9nm,0.9s,mb4.2,baz=84,slow=3.8,SNR=5.7
AKASG Malin Array Be 101.40 320 P Pdif 01 07 11.7 -2.5
comp=Z,0.4nm,0.4s,baz=74,slow=4.7,SNR=4.9
AKASG Malin Array Be 101.40 320 *i*P Pdif 01 07 12.5 -1.7
ARCES ARCESS Array B 101.44 339 P Pdif 01 07 13.9 -0.5
comp=Z,3.9nm,0.8s,baz=79,slow=4.8,SNR=6.9
ARCES PKKPbc PKKPbc 01 23 19.4 -2.6
comp=Z,2.1nm,0.9s,baz=236,slow=1.3,SNR=4.1
FINES FINESS Array B 102.34 331 P Pdif 01 07 16.2 -2.1
comp=Z,0.6nm,0.8s,baz=72,slow=13,SNR=5.1
MLR Muntele Rosu 103.84 315 Pdiff Pdif 01 07 24.3 -0.7
comp=Z,2.5nm,0.9s,baz=48,slow=14,SNR=4.0
MLR PKiKP PKiKP 01 11 44.6 +2.5
comp=Z,1.8nm,0.8s,baz=270,slow=9.1,SNR=3.1
J03A Ideyld Park 108.97 47 ⇓P PKiKP 01 11 51.9 +0.3
baz=109
YKA Yellowknife Ar 109.13 26 PKiKP PKiKP 01 11 51.1 -0.7
comp=Z,2.1nm,0.7s,baz=297,slow=1.6,SNR=12
NOA NORSAR Array B 109.40 333 Pdiff Pdif 01 07 46.4 -3.4
comp=Z,0.8nm,0.8s,baz=66,slow=4.8,SNR=4.1
NOA PKiKP PKiKP 01 11 51.9 -0.5
comp=Z,1.4nm,0.7s,baz=262,slow=3.3,SNR=5.1
O02C Red Bluff 109.50 50⇑P PKiKP 01 11 53.6 +1.0
baz=110
MCCM Marconi Confer 109.65 52 ⇓P PKiKP 01 11 54.1 +1.2
baz=110
MNRC McLaughlin Nat 109.92 51 ⇓P PKiKP 01 11 55.0 +1.6
baz=110
J05A Fort Rock 110.24 47 ⇓P PKiKP 01 11 55.5 +1.5
baz=110
L05A Lakeview 110.72 48⇑P PKiKP 01 11 56.6 +1.7
baz=111
S04C Ingram Canyon, 110.94 53 ⇓P PKiKP 01 11 57.1 +1.8
baz=111
O05C Quincy 110.95 50 ⇓P PKiKP 01 11 56.8 +1.5
baz=111
J06A Christmas Vall 111.02 47⇑P PKiKP 01 11 57.0 +1.5
baz=111
K06A Valley Falls 111.03 47 ⇓P PKiKP 01 11 57.0 +1.5
baz=111
LAVA Lava Cap Winer 111.25 51⇑P PKiKP 01 11 56.8 +0.9
baz=111
P05C Yuba Gap, Truc 111.28 51 ⇓P PKiKP 01 11 57.1 +1.2
baz=111
BEKR Beckwourth 111.39 50⇑P PKiKP 01 11 57.6 +1.4
baz=112
V04C Ramage Ranch, 111.52 55 ⇓P PKiKP 01 11 56.8 +0.4
baz=112
GERES GERESS Array B 111.61 320 PKiKP PKiKP 01 11 56.4 -0.2
comp=Z,1.4nm,0.7s,baz=112,slow=1.4,SNR=10
GERES PKKPbc PKKPbc 01 22 52.2 +1.6
comp=Z,0.3nm,0.6s,baz=242,slow=2.9,SNR=4.0
KHC Kasperske Hory 111.62 320⇑PKiKP PKiKP 01 11 55.9 -0.7
N06A Buffalo Meadow 111.66 49 ⇓P PKiKP 01 11 57.5 +0.9
baz=112
PKD Parkfield 111.75 54⇑P PKiKP 01 11 58.9 +2.0
baz=112
O06A Flanigan 111.75 50⇑P PKiKP 01 11 57.9 +1.0
baz=112
R05C Kirkwood Meado 111.77 51 ⇓P PKiKP 01 11 58.4 +1.5
baz=112
K07A Rock Creek Ran 111.77 47⇑P PKiKP 01 11 58.5 +1.6
baz=112
M07A Soldier Meadow 112.05 48⇑P PKiKP 01 11 59.2 +1.7
baz=112
S06C San Francisco 112.06 52⇑P PKiKP 01 11 59.0 +1.5
baz=112
WVOR Wild Horse Val 112.26 47 *e*PKiKP PKiKP 01 11 59.1 +1.3
R06C Coleville 112.28 52 ⇓P PKiKP 01 11 59.7 +1.9
baz=112
PKM Peak Mountain 112.45 55⇑P PKiKP 01 11 60.0 +1.8
baz=113
O07A Toulon 112.47 50⇑P PKiKP 01 11 59.6 +1.4
baz=113
L08A Fields 112.52 47 ⇓P PKiKP 01 12 00.0 +1.7
baz=113
M08A Happy Creek Ra 112.63 48⇑P PKiKP 01 12 00.4 +1.9
baz=113
K09A Rome 112.87 47 ⇓P PKiKP 01 12 00.5 +1.5
baz=113
HELL Mitchell Peak, 112.88 53 ⇓P PKiKP 01 11 59.7 +0.7
baz=113
N08A GE Springer Mi 112.93 49 ⇓P PKiKP 01 12 00.5 +1.4
baz=113
VES Vestal, Richgr 112.94 54 ⇓P PKiKP 01 12 00.0 +0.9
baz=113
GRA1 Grafenberg Arr 112.96 321 *e*PKP PKiKP 01 11 58.5 -0.6
GRF Grafenberg Arr 112.96 321 *e*PKIKP PKiKP 01 11 58.5 -0.6
NVAR Mina Array Bea 113.19 51 PKiKP PKiKP 01 12 01.1 +1.5
comp=Z,2.3nm,0.9s,baz=288,slow=0.6,SNR=9.8
M09A Marrel Ranch, 113.32 48 ⇓P PKiKP 01 12 01.3 +1.5
baz=113
N09A Rock Creek Ran 113.37 49 ⇓P PKiKP 01 12 01.5 +1.6
baz=113
Q08A Gabbs 113.41 51⇑P PKiKP 01 12 01.4 +1.4
baz=114
EDW2 Edwards Air Fo 113.95 55⇑P PKiKP 01 12 02.3 +1.3
baz=114
S09A Goldfield 114.14 52 ⇓P PKiKP 01 12 02.9 +1.5
baz=114
GRAC Grapevine Rang 114.14 53⇑P PKiKP 01 12 02.8 +1.4
baz=114
R09A Tonopah 114.17 52⇑P PKiKP 01 12 03.1 +1.6
baz=114
MPMC Manual Prospec 114.19 54 ⇓P PKiKP 01 12 03.2 +1.7
baz=114
FURC Furnace Creek, 114.63 53 ⇓P PKiKP 01 12 03.9 +1.5
baz=115
GSC Goldstone 114.85 55⇑P PKiKP 01 12 04.1 +1.3
baz=115
O11A Cowboy Ranch, 114.91 49 ⇓P PKiKP 01 12 04.4 +1.5
baz=115
CHMT Chamberlain Mo 114.96 42 *e*PKiKP PKiKP 01 12 03.6 +0.6
HLID Hailey 115.05 45 *e*PKiKP PKiKP 01 12 04.9 +1.7
U10A Ash Meadows, A 115.06 53⇑P PKiKP 01 12 04.9 +1.8
baz=115
SHOC Shoshone 115.18 54⇑P PKiKP 01 12 05.5 +2.1
baz=115
N12A Clover Valley, 115.22 48⇑P PKiKP 01 12 05.2 +1.7
baz=115
PFO Pinyon Flat Ob 115.38 56 ⇓P PKPdf 01 12 05.7 +1.9
baz=116
TUQ Turquoise Mtn. 115.54 54 ⇓P PKPdf 01 12 05.5 +1.4
baz=116
P12A McGill 115.60 50⇑P PKPdf 01 12 05.9 +1.7
baz=116
BELC Belle Mtn. 115.70 56⇑P PKPdf 01 12 06.5 +2.1
baz=116
MCMT McKenzie Canyo 115.81 44 *e*PKPdf PKPdf 01 12 06.3 +1.7
MCMT *e*pPKPdf pPKPdf 01 12 48.1 +3.8
CDF Champ du Feu 115.82 320 *e*PKP1 PKPdf 01 12 04.6 0.0
HINF Hinteralfeld 116.28 320 *e*PKP1 PKPdf 01 12 04.8 -0.7
comp=Z,7.1nm,0.7s
V12A Nelson 116.36 54 ⇓P PKPdf 01 12 07.9 +2.2
baz=116
IRM Iron Mountain 116.37 56 ⇓P PKPdf 01 12 07.1 +1.4
baz=116
U12A Valley of Fire 116.48 53 ⇓P PKPdf 01 12 07.5 +1.6
baz=117
HAU Haudompre 116.54 320 *e*PKP1 PKPdf 01 12 05.6 -0.4
comp=Z,10nm,1.0s
GIVF Givet 116.74 323 *e*PKP1 PKPdf 01 12 06.3 -0.1
GLA Glamis 116.81 57⇑P PKPdf 01 12 07.3 +0.8
baz=117
Y12C Blythe 116.95 56⇑P PKPdf 01 12 08.7 +1.9
baz=117
DUG Dugway 117.02 49 *e*PKIKP PKPdf 01 12 08.4 +1.5
LPG La Plagne 117.08 318 *e*PKP1 PKPdf 01 12 07.3 +0.2
comp=Z,16nm,1.3s
LPL La Plagne 117.09 318 *e*PKP1 PKPdf 01 12 07.2 +0.1
comp=Z,3.0nm,0.6s
SBF Sospel 117.10 316 *e*PKP1 PKPdf 01 12 07.1 0.0
comp=Z,44nm,1.1s
BAIF Baives 117.12 323 *e*PKP1 PKPdf 01 12 07.1 0.0
comp=Z,8.5nm,1.0s
CABF La Chapelle 117.17 319 *e*PKP1 PKPdf 01 12 07.3 +0.1
comp=Z,14nm,0.8s
W13A Hualapai Mount 117.24 54⇑P PKPdf 01 12 09.1 +1.7
baz=117
RRI2 Red Ridge 117.28 45 *e*PKPdf PKPdf 01 12 09.0 +1.6
MBDF Montbardon 117.30 317 *e*PKP1 PKPdf 01 12 08.3 +0.8
comp=Z,16nm,1.2s
X13A Yucca 117.38 55⇑P PKPdf 01 12 09.3 +1.6
baz=118
IMW Indian Meadow 117.39 44 *e*PKPdf PKPdf 01 12 12.4 +4.7
TPAW Teton Pass 117.50 45 *e*PKPdf PKPdf 01 12 09.6 +1.7
FLWY Flagg Ranch 117.50 44 *e*PKPdf PKPdf 01 12 09.9 +2.1
MOOW Moose Ponds 117.57 44 *e*PKPdf PKPdf 01 12 09.1 +1.1
MOOW *e*pPKPdf pPKPdf 01 12 47.2 -0.6
HWUT Hardware Ranch 117.58 47 *e*PKPdf PKPdf 01 12 09.2 +1.1
HWUT *e*pPKPdf pPKPdf 01 12 50.0 +2.3
REDW Red Top Meadow 117.61 45 *e*PKPdf PKPdf 01 12 09.3 +1.3
REDW *e*pPKPdf pPKPdf 01 12 50.5 +2.7
SNOW Snow King Moun 117.64 45 *e*PKPdf PKPdf 01 12 09.9 +1.8
ORIF Oris-en-Rattie 117.84 317 *e*PKP1 PKPdf 01 12 08.4 -0.1
comp=Z,5.4nm,0.8s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
W14A	Seligman	117.87	54	⇑P	PKPdf	01 12 10.2	+1.6
	baz=118						
DAU	Daniels Canyon	118.12	48	ePKIKP	PKPdf	01 12 10.1	+1.0
X14A	Yava	118.16	55	⇓P	PKPdf	01 12 10.8	+1.6
	baz=118						
Y14A	Wickenburg	118.17	56	⇓P	PKPdf	01 12 10.4	+1.3
	baz=118						
Z14A	Wintersburg	118.31	56	⇓P	PKPdf	01 12 10.6	+1.1
	baz=118						
SMRF	Simiane la Rot	118.35	316	ePKP1	PKPdf	01 12 09.8	+0.3
LOR	Lormes	118.37	320	ePKP1	PKPdf	01 12 09.3	-0.2
	comp=Z,6.2nm,0.8s						
TMUT	Trail Mountain	118.44	49	ePKPdf	PKPdf	01 12 11.5	+1.9
SMF	Signal de Mont	118.61	320	ePKP1	PKPdf	01 12 09.6	-0.4
SSF	Saint Saulge	118.67	320	ePKP1	PKPdf	01 12 10.0	-0.1
	comp=Z,23nm,1.1s						
VIVF	Saint-Julien-l	118.68	317	ePKP1	PKPdf	01 12 09.9	-0.2
	comp=Z,30nm,1.5s						
PDAR	Pinedale Array	118.69	45	PKP	PKPdf	01 12 10.6	+0.5
	comp=Z,3.1nm,0.7s,baz=292,slow=1.0,SNR=29						
PDAR				PKKPbc	PKKPbc	01 22 30.7	+4.4
	comp=Z,1.2nm,0.9s,baz=106,slow=5.3,SNR=7.1						
X15A	Humboldt	118.69	55	⇑P	PKPdf	01 12 11.6	+1.5
	baz=119						
EKA	Eskdalemuir Ar	118.73	331	PKP	PKPdf	01 12 09.7	-0.5
	comp=Z,1.4nm,0.6s,baz=357,slow=2.5,SNR=6.6						
AVF	Avril sur Loir	118.87	320	ePKP1	PKPdf	01 12 09.9	-0.6
	comp=Z,9.4nm,1.0s						
SRU	San Rafael	119.00	49	ePKIKP	PKPdf	01 12 11.9	+1.2
115A	Sonoran Desert	119.03	57	⇓P	PKPdf	01 12 12.4	+1.6
	baz=119						
WUAZ	Wupatki	119.17	54	ePKPdf	PKPdf	01 12 13.1	+2.0
BGF	Bois d'Agland	119.28	320	ePKP1	PKPdf	01 12 11.4	+0.1
	comp=Z,20nm,0.7s						
116A	Eloy	119.48	57	⇑P	PKPdf	01 12 13.3	+1.6
	baz=120						
LASF	Ste Croix	119.49	317	ePKP1	PKPdf	01 12 11.7	0.0
	comp=Z,69nm,1.5s						
LAO	LASA Array	119.59	40	ePKPdf	PKPdf	01 12 13.2	+1.3
TCF	Toulx Ste Croi	119.79	320	ePKP1	PKPdf	01 12 12.3	0.0
	comp=Z,10nm,1.0s						
TUC	Tucson	120.30	57	ePKIKP	PKPdf	01 12 15.0	+1.8
CAF	Calviac	120.39	318	ePKP1	PKPdf	01 12 13.9	+0.5
	comp=Z,10nm,0.9s						
FLN	La Foliniere	120.45	323	ePKP1	PKPdf	01 12 13.1	-0.4
RJF	Les Rejaudoux	120.61	319	ePKP1	PKPdf	01 12 14.1	+0.3
MTLF	Montolieu	120.86	316	ePKP1	PKPdf	01 12 14.2	-0.1
	comp=Z,39nm,1.2s						
MFF	Saint Martin d	121.16	321	ePKP1	PKPdf	01 12 15.7	+0.8
	comp=Z,13nm,0.8s						
LFF	La Frestale	121.26	319	ePKP1	PKPdf	01 12 15.5	+0.4
SGMF	Saint Gilles	121.91	323	ePKP1	PKPdf	01 12 15.9	-0.4
	comp=Z,14nm,0.9s						
RSSD	Black Hills	122.00	42	ePKIKP	PKPdf	01 12 16.6	+0.1
EPF	Esparros	122.25	317	ePKP1	PKPdf	01 12 17.0	0.0
	comp=Z,11nm,1.0s						
QUIF	Quistinic	122.43	323	ePKP1	PKPdf	01 12 16.9	-0.4
	comp=Z,13nm,1.0s						
ISCO	Idaho Springs	122.44	47	ePKIKP	PKPdf	01 12 18.4	+1.0
LAZ	Ladron	122.82	54	ePKPdf	PKPdf	01 12 20.2	+2.1
ETSF	Etsaut	122.91	317	ePKP1	PKPdf	01 12 19.1	+0.8
	comp=Z,11nm,1.0s						
ANMO	Albuquerque	123.22	53	PKP	PKPdf	01 12 21.0	+2.2
	comp=Z,5.8nm,0.9s,baz=218,slow=3.5,SNR=19						
ULM	Lac du Bonnet	123.99	32	PKP	PKPdf	01 12 20.1	-0.2
	comp=Z,5.7nm,0.8s,baz=313,slow=4.6,SNR=5.3						
MNTX	Cornudas Mount	124.91	57	epPKPdf	pPKPdf	01 13 04.0	+2.2
ESDC	Sonseca Array	126.53	314	PKP	PKPdf	01 12 25.2	0.0
	comp=Z,1.9nm,0.9s,baz=12,slow=2.4,SNR=11						
TORD	Torodi Ar. Bea	127.00	281	PKP	PKPdf	01 12 26.6	+0.5
	comp=Z,7.6nm,1.0s,baz=72,slow=1.8,SNR=31						
PLCA	Paso Flores	128.97	162	PKP	PKPdf	01 12 30.3	+0.4
	comp=Z,6.2nm,1.0s,baz=181,slow=4.7,SNR=5.1						
PLCA	Paso Flores	128.97	162	PKP	PKPdf	01 12 30.3	+0.4
WMOK	Wichita Mounta	129.28	51	ePKIKP	PKPdf	01 12 31.9	+1.5
WMOK				e		01 13 13.0	
SCHQ	Schefferville	131.40	11	PKP	PKPdf	01 12 34.9	+0.5
	comp=Z,4.0nm,0.8s,baz=88,slow=1.0,SNR=6.6						
SCHQ				SKPbc	SKPbc	01 15 44.2	-1.5
	comp=Z,11nm,0.9s,baz=0.8,slow=3.8,SNR=13						
SCHQ	Schefferville	131.40	11	PKP	PKPdf	01 12 34.9	+0.5
SCHQ				SKPbc	SKPbc	01 15 44.2	-1.5
CCM	Cathedral Cave	133.34	43	ePKIKP	PKPdf	01 12 39.5	+1.4
PARMO	Parma	135.07	44	ePKPdf	PKPdf	01 12 42.0	+0.6
BLO	Bloomington	135.82	39	ePKIKP	PKPdf	01 12 43.3	+0.5
WCI	Wyandotte Cave	136.52	40	ePKIKP	PKPdf	01 12 45.1	+1.1
WVT	Waverly	136.67	44	ePKIKP	PKPdf	01 12 44.8	+0.5
PLAL	Pickwick Lake	137.10	45	ePKPdf	PKPdf	01 12 44.5	-0.6
CMIG	Matias Romero	137.11	73	PKP	PKPdf	01 12 47.2	+2.1
	comp=Z,5.6nm,0.8s,baz=236,slow=4.0,SNR=6.9						
CMIG				SKPbc	SKPbc	01 16 05.6	+1.4
	comp=Z,0.5nm,0.3s,baz=231,slow=2.1,SNR=3.7						
LRAL	Lakeview Retre	138.86	47	ePKPdf	PKPdf	01 12 49.2	+0.8
MYNC	Murphy	139.77	43	ePKHKP		01 12 44.5	
MYNC				e		01 12 50.4	
SSPA	Standing Stone	139.79	31	ePKPdf	PKPdf	01 12 50.5	+0.4
SSPA				eSKP		01 16 10.6	
FWV	Forest Hill	140.31	37	ePKP		01 12 39.4	
FWV				eSKPdf	SKPdf	01 16 13.0	+1.3
DWPF	Disney	145.48	50	ePKP	PKPdf	01 13 01.6	+1.5
LVC	Limon Verde	145.71	151	ePKP	PKPdf	01 13 04.2	+3.7
LVC				eSKP		01 16 22.1	
CPUP	Villa Florida	145.89	171	PKPbc	PKPbc	01 13 03.2	+1.5
	comp=Z,21nm,0.7s,baz=171,slow=2.3,SNR=77						
NNA	Nana	148.54	128	ePKPbc	PKPbc	01 13 10.2	+1.1
NNA				epPKP	pPKPdf	01 13 48.9	+3.8
ARE	Arequipa	149.28	141	ePKP2	PKPab	01 13 13.0	-2.9
BDFB	Brasilia	156.59	190	PKP	PKPdf	01 13 18.5	+1.5
	comp=Z,5.7nm,1.1s,baz=131,slow=3.5,SNR=3.9						
BDFB				PKPab	PKPab	01 13 48.9	+2.1
	comp=Z,8.4nm,0.9s,baz=128,slow=1.1,SNR=7.6						
ROSC	El Rosal	157.61	96	PKP	PKPdf	01 13 19.7	+1.4
	comp=Z,2.8nm,0.5s,baz=283,slow=4.8,SNR=3.6						
ROSC				PKPab	PKPab	01 13 55.8	+4.7
	comp=Z,7.0nm,0.8s,baz=269,slow=16,SNR=5.3						
SAML	Samuel	160.14	146	ePKPdf	PKPdf	01 13 23.0	+1.7
SAML				epPKP	pPKPdf	01 14 03.2	+2.0
SDV	Santo Domingo	161.49	85	ePKPdf	PKPdf	01 13 23.6	+0.8

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*ISCJB **07** 01:01:39.8±0.2, 3333N±002×11605W±002, h9km, Error ellipse: s-maj=2.4km s-min=2.1km az=88.4*
*NEIC **07** 01:01:42.4, 3324N×11604W, h9km, ML3.6(PAS), After PAS.*
ISC 07 01:01:40.8±0.3**, 3327N**±001×**11603W**±002**, h4**km±3km**, n78,** σ**1.19**/111**, 24C-36D, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWSC	Sam W. Stewart	0.38	149	P	Pg	01 01 49.0	+0.9
	baz=0.4,SNR=1000						
SWSC				⇑S	Sg	01 01 54.1	+1.0
	baz=0.4						
PFO	Pinyon Flat Ob	0.49	314	ePg	Pg	01 01 51.5	+1.3
PFO				eSg	Sg	01 01 58.2	+1.6
PFO	Pinyon Flat Ob	0.49	314	P	Pg	01 01 51.7	+1.4
	baz=0.5,SNR=1000						
PFO				⇓S	Sg	01 01 58.5	+1.9
	baz=0.5						
MONP	Monument Peak	0.50	221	P	Pg	01 01 51.2	+0.8
	baz=0.5,SNR=363						
MONP				⇓S	Sg	01 01 57.3	+0.4
	baz=0.5						
DVTC	Desert V Tower	0.61	186	⇓P	Pg	01 01 53.2	+0.7
	baz=0.6,SNR=139						
DVTC				⇓S	Sg	01 02 01.3	+0.8
	baz=0.6						
BELC	Belle Mtn.	0.73	2	⇓P	Pg	01 01 56.2	+1.4
	baz=0.8,SNR=212						
BELC				⇓S	Sg	01 02 06.4	+2.2
	baz=0.8						
BAR	Barrett	0.80	223	ePb	Pb	01 01 56.4	-0.8
BAR				eSg	Sg	01 02 05.8	-0.7
109C	Camp Elliot, M	0.98	248	P	Pg	01 01 59.9	+0.3
	baz=1.0,SNR=744						
109C				⇓S	Sg	01 02 12.3	0.0
	baz=1.0						
GLA	Glamis	1.03	102	ePb	Pb	01 02 00.1	-1.0
GLA				eSg	Sg	01 02 14.6	+0.7
GLA	Glamis	1.03	102	P	Pg	01 02 00.2	-0.4
	baz=1.0,SNR=245						
GLA				⇑S	Sg	01 02 13.9	0.0
	baz=1.0						
MURC	Murrieta	1.03	289	P	Pg	01 02 01.4	+0.8
	baz=1.0,SNR=211						
MURC				⇓S	Sg	01 02 14.9	+0.9
	baz=1.0						
IRM	Iron Mountain	1.15	39	P	Pg	01 02 02.6	-0.3
	baz=1.2,SNR=312						
IRM				⇓S	Sg	01 02 18.8	+1.1
	baz=1.2						
BBRC	Big Bear Sol-O	1.24	323	⇓P	Pg	01 02 05.1	+0.6
	baz=1.3,SNR=30						
BBRC				⇓S	Sg	01 02 21.9	+1.4
	baz=1.3						
Y12C	Blythe	1.35	69	⇑P	Pn	01 02 05.0	-1.3
	baz=1.4,SNR=69						
Y12C				⇓S	Sg	01 02 24.4	+0.4
	baz=1.4						
HEC	Hector,Ludlow	1.58	351	⇓P	Pg	01 02 11.2	+0.2
	baz=1.6,SNR=28						
BFSC	Mount Baldy St	1.67	306	⇑P	Pg	01 02 12.3	-0.5
	baz=1.7,SNR=16						
RRX	Edison Barstow	1.80	334	⇑P	Pg	01 02 15.4	+0.2
	baz=1.8,SNR=23						
PDMCI	Parker Dam,Lak	1.88	56	⇑P	Pg	01 02 16.3	-0.5
	baz=1.9						
Y13A	Salome	1.92	73	⇓P	Pg	01 02 17.2	-0.3
	baz=1.9						
FMP	Fort Macarthur	1.94	284	⇓P	Pn	01 02 16.4	+2.0
	baz=1.9						
MWC	Mount Wilson	1.94	300	ePg	Pg	01 02 17.1	-0.9
MWC				eSg	Sg	01 02 42.8	-0.3
CIS	Catalina Islan	1.99	275	⇑P	Pg	01 02 17.5	-1.5
	baz=2.0						
GSC	Goldstone	2.13	343	ePg	Pg	01 02 21.4	-0.1
GSC				eSg	Sg	01 02 47.1	-2.0
GSC	Goldstone	2.13	343	⇑P	Pg	01 02 21.5	0.0
	baz=2.2						
SCI	San Clemente I	2.13	263	⇑P	Pn	01 02 18.6	+1.5
	baz=2.1						
DECC	Green Verdugo	2.15	298	⇑P	Pg	01 02 20.8	-1.2
	baz=2.2,SNR=12						
TUQ	Turquoise Mtn.	2.16	2	⇑P	Pn	01 02 18.5	+1.0
	baz=2.2,SNR=23						
W12A	Cal Nev Ari	2.24	25	⇑P	Pg	01 02 23.9	+0.2
	baz=2.3,SNR=11						
X13A	Yucca	2.25	54	P	Pn	01 02 19.0	+0.2
	baz=2.3,SNR=31						
EDW2	Edwards Air Fo	2.29	315	⇓P	Pn	01 02 19.3	+0.1
	baz=2.3						
W13A	Hualapai Mount	2.55	44	P	Pn	01 02 22.6	-0.2
	baz=2.6,SNR=15						
Z14A	Wintersburg	2.58	87	⇓P	Pn	01 02 22.6	-0.7
	baz=2.6						
LRMC	Laurel Mountai	2.59	329	⇑P	Pg	01 02 30.3	-0.2
	baz=2.6						
OSI	Osito Adit	2.61	302	⇓P	Pg	01 02 30.0	-0.8
	baz=2.6						
Y14A	Wickenburg	2.61	74	⇑P	Pn	01 02 23.5	-0.1
	baz=2.6						
SHOC	Shoshone	2.63	356	⇓P	Pg	01 02 31.2	0.0
	baz=2.7						
V12A	Nelson	2.64	21	⇓P	Pn	01 02 24.8	+0.7
	baz=2.7,SNR=13						
BLG	Laguna Peak	2.67	289	⇓P	Pg	01 02 31.8	0.0
	baz=2.7						
X14A	Yava	2.87	65	⇓P	Pn	01 02 27.5	+0.2
	baz=2.9						
SNCC	San Nicolas Is	2.93	271	⇑S	Sn	01 03 04.3	+0.7
	baz=2.9						
ARVC	Arvin	2.97	309	⇓P	Pn	01 02 28.9	+0.3
	baz=3.0						
MPMC	Manual Prospec	3.03	337	⇓P	Pn	01 02 29.9	+0.4
	baz=3.1						
W14A	Seligman	3.12	51	⇑P	Pn	01 02 31.5	+0.9
	baz=3.1						
ISA	Isabella	3.13	320	ePn	Pn	01 02 32.4	+1.7
ISA				eSg	Sg	01 03 20.6	-0.7
ISA	Isabella	3.13	320	⇓P	Pn	01 02 32.1	+1.3
	baz=3.1						
U10A	Ash Meadows, A	3.15	356	⇓P	Pg	01 02 40.6	-0.5
	baz=3.2						
115A	Sonoran Desert	3.25	99	⇓P	Pn	01 02 31.7	-0.7
	baz=3.2						
115A				⇓S	Sn	01 03 09.8	-1.6
	baz=3.2						
DAC	Darwin (Calif)	3.27	337	ePg	Pg	01 02 41.5	-1.9
DAC				eSg	Sg	01 03 27.4	+1.7
FURC	Furnace Creek,	3.27	348	⇑P	Pg	01 02 42.6	-0.8
	baz=3.3						
SHPR	Sheep Range	3.31	12	ePb	Pb	01 02 34.1	-5.8
SHPR				ePg	Pg	01 02 44.5	+0.4
SHPR				eSg	Sg	01 03 27.8	+0.8
X15A	Humboldt	3.38	68	⇑P	Pn	01 02 34.2	0.0
	baz=3.4						
U12A	Valley of Fire	3.38	21	⇑P	Pn	01 02 34.8	+0.5
	baz=3.4						
PKM	Peak Mountain	3.54	298	⇓P	Pn	01 02 38.1	+1.6
	baz=3.5						
CWC	Cottonwood Cre	3.58	333	⇓P	Pg	01 02 48.6	-0.9
	baz=3.6						
VES	Vestal, Richgr	3.59	316	⇓P	Pg	01 02 48.2	-1.5
	baz=3.6						
W15A	Williams	3.65	58	⇑P	Pn	01 02 39.0	+1.0
	baz=3.7						
TPNV	Topopah Spring	3.67	357	ePn	Pn	01 02 40.5	+2.2
TPNV				ePg	Pg	01 02 50.8	-0.4
TPNV				eSg	Sg	01 03 39.7	+0.9
116A	Eloy	3.71	100	⇓P	Pn	01 02 37.5	-1.2
	baz=3.7						
SMMC	Simmler	3.87	303	⇑S	Sn	01 03 24.3	-2.5
	baz=3.9						
GRAC	Grapevine Rang	3.88	344	⇓P	Pg	01 02 53.2	-2.0
	baz=3.9						
HELL	Mitchell Peak,	4.20	325	⇓P	Pg	01 02 58.6	-2.6
	baz=4.2						
WUAZ	Wupatki	4.45	58	ePn	Pn	01 02 47.9	-1.1
WUAZ				eSg	Sg	01 04 03.4	-0.5
TUC	Tucson	4.52	101	ePn	Pn	01 02 48.1	-1.9
TUC				ePg	Pg	01 03 09.7	+2.3
TUC				eSg	Sg	01 04 04.1	-1.9
S09A	Goldfield	4.55	348	⇑P	Pg	01 03 05.5	-2.5
	baz=4.6						
MTUM	Tungsten Hills	4.57	334	ePg	Pg	01 03 06.4	-2.0
MTUM				eSg	Sg	01 04 07.8	+0.2
CCUT	Cedar City	4.79	26	ePn	Pn	01 02 55.3	+1.6
CCUT				ePg	Pg	01 03 15.2	+2.5
CCUT				eSn	Sn	01 03 54.2	+4.6
TPH	Tonopah	4.89	349	ePg	Pg	01 03 12.6	-2.0
TPH				eSg	Sg	01 04 17.8	-0.2
ARUT	Antelope Range	4.98	24	ePn	Pn	01 03 03.4	+7.1
ARUT				ePg	Pg	01 03 18.1	+1.9
U04C	Hernandez Rese	4.98	310	⇑P	Pg	01 03 10.3	-6.0
	baz=5.0						
S05C	Merced	5.38	320	⇑P	Pg	01 03 16.3	-7.4
	baz=5.4						
R07C	Lee Vining	5.40	334	⇓P	Pg	01 03 21.8	-2.4
	baz=5.4						
S06C	San Francisco	5.55	327	⇓P	Pg	01 03 22.6	-4.6
	baz=5.6						
SAO	San Andreas Ge	5.65	310	ePg	Pg	01 03 24.0	-5.0
WAKR	Walker	5.91	333	ePn	Pn	01 03 05.0	-4.0
WAKR				ePg	Pg	01 03 31.2	-2.7
WAKR				eSg	Sg	01 04 50.8	+0.2
CMB	Columbia Colle	5.93	325	ePb	Pb	01 03 20.9	-3.8
CMB				eSg	Sg	01 04 47.7	-3.6
MSU	Marysvale	6.09	30	ePg	Pb	01 03 22.2	-5.2
DUG	Dugway	7.38	20	ePg	Pg	01 04 03.7	+1.6
ANMO	Albuquerque	8.11	75	ePg		01 04 15.6	

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*ISCJB **07** 01:09:04.2±0.6, 648S±008×308E±02, h10km, mb3.8/8, MS3.4/2, Error ellipse: s-maj=27.0km s-min=9.8km az=30.8*
*IDC **07** 01:09:05.2±0.9, 643S×3080E, h0km, mb3.8/8, mb1 3.8/11, mb1mx3.7/25, mbtmp3.8/11, ML2.4/3, MS3.2/5, Ms1 3.2/5, ms1mx2.9/27, Error ellipse: s-maj=42.6km s-min=16.6km az=101.0*
*NEIC **07** 01:09:06.8±0.7, 642S×3068E, h10km, Error ellipse: s-maj=28.1km s-min=10.3km az=103.0*
ISC 07 01:09:06.2±0.6**, 652S**±007×**308E**±02**, h10**km**, n18,** σ**1.27**/21**, mb3.8**/8**, MS3.4**/2**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	Lusaka	9.08	196	Pn	Pn	01 11 19.6	+2.4
	0.3nm,0.3s,baz=18,slow=14,SNR=23						
LSZ				Sn	Sn	01 12 57.8	-1.6
	1.0nm,0.3s,baz=107,slow=22,SNR=3.2						
LSZ				Lg		01 13 49.0	
	3.2nm,0.3s,baz=112,slow=22,SNR=5.8						
LSZ				LR	LR	01 15 22.4	
	comp=Z,87nm,21.5s,baz=34,slow=41						
LSZ	Lusaka	9.08	196	Pn	Pn	01 11 19.6	+2.4
LSZ				Sn	Sn	01 12 57.8	-1.6
LSZ				Lg		01 13 49.0	
LSZ				LR	LR	01 15 22.4	
TSUM	Tsumeb	18.01	224	Pn	Pn	01 13 16.1	-0.5
	0.1nm,0.3s,baz=21,slow=13,SNR=6.1						
TSUM				Sn	Sn	01 16 27.9	-9.5
	0.2nm,0.3s,baz=288,slow=20,SNR=3.8						
TSUM				Lg		01 18 31.9	
	0.1nm,0.3s,baz=131,slow=19,SNR=2.6						
TSUM				LR	LR	01 20 44.0	
	comp=Z,98nm,19.6s,baz=215,slow=39						
TSUM	Tsumeb	18.01	224	Pn	Pn	01 13 16.1	-0.5
TSUM				Sn	Sn	01 16 27.9	-9.5
TSUM				Lg		01 18 31.9	
TSUM				LR	LR	01 20 44.0	
LBTB	Lobatse	19.06	195	P	Pn	01 13 29.1	-0.2
	0.1nm,0.3s,baz=52,slow=6.4,SNR=4.1						
LBTB				Lg		01 19 02.7	
	0.2nm,0.3s,baz=288,slow=19,SNR=3.6						
LBTB				LR	LR	01 21 26.7	
	comp=Z,38nm,18.9s,baz=66,slow=39						
LBTB	Lobatse	19.06	195	P	Pn	01 13 29.1	-0.2
LBTB				Lg		01 19 02.7	
LBTB				LR	LR	01 21 26.7	
BOSA	Boshof	22.60	193	P	P	01 14 09.9	+3.0
	2.9nm,0.8s,mb3.7,baz=16,slow=9.8,SNR=4.4						
BOSA				LR	LR	01 23 17.8	
	comp=Z,109nm,19.5s,MS3.3,baz=91,slow=38						
TORD	Torodi Ar. Bea	34.89	304	P	P	01 15 58.2	+0.4
	0.9nm,0.9s,mb3.7,baz=112,slow=5.8,SNR=3.0						
BRTR	Keskin Array B	46.08	3	P	P	01 17 32.1	+1.9
	0.7nm,0.8s,mb3.7,baz=176,slow=9.9,SNR=5.5						
AKTK	Aktyubinsk	61.42	19	P	P	01 19 21.0	-1.6
AKTO	Aktyubinsk	61.42	19	P	P	01 19 21.0	-1.6
	1.1nm,0.5s,mb4.2,baz=214,slow=7.1,SNR=4.4						
MAW	Mawson	64.74	167	P	P	01 19 45.5	+0.9
	0.7nm,0.6s,mb3.9,baz=291,slow=8.6,SNR=2.8						
FINES	FINESS Array B	67.85	358	P	P	01 20 04.5	-0.1
	0.9nm,0.8s,mb3.8,baz=151,slow=8.7,SNR=3.5						
FINES	FINESS Array B	67.85	358	P	P	01 20 04.5	-0.1
BVAR	Borovoye Array	68.12	25	P	P	01 20 06.4	+0.2
	0.4nm,0.6s,mb3.6,baz=243,slow=6.3,SNR=3.4						
ZAL	Zalesovo	75.26	30	LR	LR	01 54 42.1	
	comp=Z,23nm,19.9s,MS3.5,baz=156,slow=36						
ARCES	ARCESS Array B	75.97	358	P	P	01 20 52.9	-0.4
	1.6nm,0.8s,mb4.0,baz=171,slow=6.4,SNR=6.1						
ARCES	ARCESS Array B	75.97	358	P	P	01 20 52.9	-0.4

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*ISCJB **07** 01:28:26.1±0.7, 10.1S±02×108.8E±02, h10km, mb4.0/11, Error ellipse: s-maj=31.6km s-min=12.1km az=91.9*
*IDC **07** 01:28:26.7±1.0, 1009S×10882E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.8/14, mbtmp3.9/6, ML3.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/19, Error ellipse: s-maj=40.7km s-min=22.3km az=60.0*
*NEIC **07** 01:28:28.2±0.5, 1008S×10884E, h10km, mb4.1/7, Error ellipse: s-maj=22.5km s-min=8.5km az=225.0*
ISC 07 01:28:28.2±0.7**, 101S**±02×**1088E**±02**, h10**km**, n15,** σ**0.43**/17**, mb4.0**/11**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	Marble Bar	15.22	138	ePn	Pn	01 31 57.6	-5.5
MBWA				eSn	Sn	01 34 33.4	-18
PSI	Prapat	16.15	322	LR	LR	01 39 27.9	
	comp=Z,135nm,18.8s,baz=117,slow=41						
FITZ	Fitzroy Crossi	18.16	118	eP	Pn	01 32 41.4	+1.0
	7.7nm,1.1s						
FITZ				eS	Sn	01 35 44.8	-18
FITZ	Fitzroy Crossi	18.16	118	P	Pn	01 32 41.1	+0.7
	0.3nm,0.3s,baz=253,slow=14,SNR=5.9						
FITZ				S	Sn	01 35 45.2	-18
	0.1nm,0.3s,baz=126,slow=18,SNR=3.7						
WRAB	Tennant Creek	26.51	115	eP	P	01 34 05.8	-0.1
	2.9nm,0.7s,mb3.9						
ASAR	Alice Springs	27.49	123	P	P	01 34 14.6	-0.1
	0.4nm,0.5s,mb3.2,baz=300,slow=9.9,SNR=8.2						
CTAO	Charters Tower	37.42	110	eP	P	01 35 40.6	-0.9
	13nm,1.0s,mb4.7						
SONM	Songino Array	57.71	358	P	P	01 38 19.1	0.0
	1.0nm,0.6s,mb4.0,baz=172,slow=10.0,SNR=6.2						
MKAR	Makanchi Array	61.38	340	P	P	01 38 44.7	+0.3
	1.9nm,0.6s,mb4.4,baz=134,slow=8.7,SNR=11						
MAW	Mawson	64.96	198	P	P	01 39 08.0	-0.1
	1.5nm,0.8s,mb4.1,baz=45,slow=6.7,SNR=6.3						
KURK	Kurchatov	66.00	340	eP	P	01 39 14.9	+0.1
	0.7nm,0.4s,mb4.0						
BRVK	Borovoye	70.96	337	eP	P	01 39 45.5	-0.4
	0.6nm,0.5s,mb3.8						
CHKZ	Chkalovo	71.30	337	eP	P	01 39 48.2	+0.3
	1.3nm,0.6s,mb4.0						
ZRNK	Zerenda	71.39	336	eP	P	01 39 48.0	-0.4
	1.1nm,0.6s,mb4.0						
BRTR	Keskin Array B	85.20	312	P	P	01 41 05.3	+0.5
	0.2nm,0.3s,mb3.7,baz=108,slow=4.0,SNR=3.9						

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*ATH **07** 02:36:26.1, 3863N×2186E, h10km±5km, MD3.5/11, ML3.6*
*NEIC **07** 02:36:26.1, 3863N×2186E, h10km, ML3.6(ATH), After ATH.*
*CSEM **07** 02:36:27.0±0.1, 3859N×2187E, h5km, ML3.6, Error ellipse: s-maj=2.3km s-min=2.2km az=105.0*
*ISCJB **07** 02:36:29.1±0.6, 3869N±002×22.18E±003, h8km±4km, mb3.4/5, Error ellipse: s-maj=4.6km s-min=3.9km az=112.1*
*THE **07** 02:36:30.6, 3865N×2224E, h15km, ML3.4*
*SKO **07** 02:36:35.7, 39.17N×2221E, h0km*
*IDC **07** 02:36:36.0±2.7, 3846N×2241E, h52km±34km, mb3.2/5, mb1 3.4/8, mb1mx3.3/23, mbtmp3.5/8, ML3.4/3, Error ellipse: s-maj=27.5km s-min=15.0km az=81.0*
ISC 07 02:36:29.8±0.6**, 3868N**±002×**2220E**±003**, h7**km±4km**, n69,** σ**0.99**/92**, mb3.4**/5**, 5C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGG	Agios Georgios	0.36	16	ePg	Pg	02 36 37.5	+0.7
EVR	Evrytania	0.39	308	ePG	Pg	02 36 30.7	-6.7
NEO	Neokhori	1.01	51	ePB	Pb	02 36 51.0	+1.3
XOR	Xorichti	1.03	48	ePg	Pg	02 36 51.0	+1.4
LKD	Levkas	1.22	272	ePg	Pg	02 36 51.8	-1.3
LKD				eSg	Sg	02 37 09.4	+0.5
MEV	Metsovon	1.34	326	ePg	Pg	02 36 54.0	-1.6
MEV				eSg	Sg	02 37 14.4	+1.5
VLS	Valsamata	1.36	249	ePB	Pb	02 36 47.2	-8.5
NAIG	Nisos Aigina	1.37	132	ePN	Pn	02 36 54.0	-1.3
ATH	Athens Observa	1.38	120	ePB	Pb	02 36 56.5	+0.5
JAN	Janina	1.44	313	ePB	Pb	02 36 50.5	-6.4
LIT	Litokhoron	1.44	9	ePg	Pg	02 36 56.2	-1.2
LIT				eSg	Sg	02 37 15.3	-0.8
PTL	Penteli	1.45	115	ePB	Pb	02 36 57.0	-0.1
KVR	Kavouri	1.50	124	ePN	Pn	02 36 58.0	+0.9
ITM	Ithomi	1.51	188	ePG	Pn	02 36 52.5	-4.8
KZN	Kozani	1.66	349	ePB	Pn	02 36 59.2	-0.2
IGT	Igoumenitsa	1.69	301	ePb	Pn	02 36 58.8	-0.9
IGT				eSb	Sb	02 37 22.2	-0.4
PAIG	Paliouri	1.69	42	ePb	Pn	02 36 59.2	-0.6
LSK	Leskovik	1.93	320	i Pn	Pn	02 37 03.8	+0.8
PLG	Polygyros	1.95	29	ePB	Pn	02 37 02.5	-0.8
HORT	Hortiatis	2.04	20	ePn	Pn	02 37 03.8	-0.8
HORT				eSn	Sn	02 37 29.1	-1.2
THE	Thessaloniki	2.04	17	ePn	Pn	02 37 03.8	-0.8
THE				eSn	Sn	02 37 30.6	+0.3
VLI	Veliai	2.04	163	ePN	Pn	02 37 04.0	-0.6
SRN	Sarande	2.09	306	i Pn	Pn	02 37 06.4	+1.1
OUR	Ouranopolis	2.15	39	ePn	Pn	02 37 05.0	-1.1
OUR				eSn	Sn	02 37 32.7	-0.4
FNA	Florina	2.20	343	ePn	Pn	02 37 07.1	+0.3
FNA				eSn	Sn	02 37 35.1	+0.9
GRG	Griva	2.28	4	ePn	Pn	02 37 07.8	-0.1
GRG	Griva	2.28	4	ePn	Pn	02 37 07.8	-0.1
SOH	Sokhos	2.32	22	ePn	Pn	02 37 08.8	+0.4
SOH				eSn	Sn	02 37 36.2	-1.0
BIA	Bitola	2.44	344	ePn	Pn	02 37 09.7	-0.3
BIA				eSn	Sn	02 37 40.3	+0.3
BIA	Bitola	2.44	344	ePn	Pn	02 37 09.6	-0.4
KNT	Kendrikon	2.54	12	ePn	Pn	02 37 10.8	-0.6
KNT				eSn	Sn	02 37 42.6	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	2.66	6	ePn	Pn	02 37 12.6	-0.5
VAY				eSn	Sn	02 37 46.0	+0.5
VAY	Valandovo	2.66	6	ePn	Pn	02 37 12.5	-0.6
OHR	Ohrid	2.66	336	ePn	Pn	02 37 13.9	+0.8
OHR	Ohrid	2.66	336	ePn	Pn	02 37 13.9	+0.8
SRS	Serrai	2.66	23	ePn	Pn	02 37 11.6	-1.5
SRS				eSn	Sn	02 37 45.9	+0.3
STIP	Stip	3.01	360	ePn	Pn	02 37 18.5	+0.5
STIP				eSn	Sn	02 37 53.7	-0.7
STIP	Stip	3.01	360	ePn	Pn	02 37 18.4	+0.4
STIP	Stip	3.01	360	ePn	Pn	02 37 18.4	+0.4
STIP				eSn	Sn	02 37 53.7	-0.6
APE	Apeiranthos	3.08	120	⇓iP	Pn	02 37 20.0	+1.0
APE	Apeiranthos	3.08	120	⇓P	Pn	02 37 20.0	+1.0
MMB	Musomiste	3.13	21	ePn	Pn	02 37 19.8	+0.1
MMB				eSn	Sn	02 37 56.8	-0.5
MMB	Musomiste	3.13	21	i P	Pn	02 37 20.1	+0.5
MMB				eSn	Sn	02 37 56.8	-0.5
VTS	Vitosha	3.98	11	ePn	Pn	02 37 32.4	+1.0
VTS				eSn	Sn	02 38 17.9	-0.4
VTS	Vitosha	3.98	11	⇑iP	Pn	02 37 32.5	+1.2
VTS	Vitosha	3.98	11	S	Sn	02 38 20.0	+1.7
VTS	Vitosha	3.98	11	ePn	Pn	02 37 32.3	+1.0
VTS	Vitosha	3.98	11	i P	Pn	02 37 32.6	+1.3
VTS				eSn	Sn	02 38 17.9	-0.4
IDI	Anoyia	4.01	147	P	Pn	02 37 31.6	0.0
	0.5nm,0.3s,baz=1.0,slow=3.6,SNR=7.7						
IDI				S	Sn	02 38 14.7	-4.2
	1.4nm,0.3s,baz=195,slow=20,SNR=2.6						
SG1	Sgolgore (BA)	4.77	299	ePn	Pn	02 37 41.7	-0.5
DIVS	Divcibare	5.67	344	i Pn	Pn	02 37 54.6	+0.2
DIVS				Sg	Sn	02 38 56.7	-3.1
BZS	Buzias	6.95	357	⇑iP	Pn	02 38 12.7	+0.6
BZS	Buzias	6.95	357	⇑P	Pn	02 38 12.7	+0.7
INTR	Introdacqua	7.16	300	Pn	Pn	02 38 14.7	-0.3
MLR	Muntele Rosu	7.35	21	P	Pn	02 38 22.5	+4.9
	0.6nm,0.3s,baz=296,slow=11,SNR=7.4						
MLR	Muntele Rosu	7.35	21	⇓iP	Pn	02 38 16.9	-0.7
MLR	Muntele Rosu	7.35	21	⇓P	Pn	02 38 16.9	-0.7
PKSM	Moragy	7.98	342	⇑iP	Pn	02 38 26.3	+0.1
PKSM	Moragy	7.98	342	⇑P	Pn	02 38 26.3	+0.2
NVLJ	Novalja	8.04	319	i Pn	Pn	02 38 25.8	-1.3
NVLJ				i Sn	Sn	02 39 53.0	-5.3
NVLJ	Novalja	8.04	319	i Pn	Pn	02 38 25.7	-1.4
NVLJ				i Sn	Sn	02 39 53.0	-5.3
BRTR	Keskin Array B	8.94	80	P	Pn	02 38 41.8	+2.4
	0.2nm,0.3s,baz=257,slow=13,SNR=6.6						
VYHS	Vyhne	10.11	347	e	Pn	02 38 57.1	+1.7
VYHS				e		02 39 03.8	
VYHS	Vyhne	10.11	347	eSN	Sn	02 40 51.1	+2.0
VYHS				e		02 48 19.4	
HFS	Hagfors	22.14	349	P	P	02 41 28.8	+2.7
	0.7nm,0.5s,mb3.3,baz=151,slow=13,SNR=5.2						
NOA	NORSAR Array B	23.41	346	P	P	02 41 42.7	+3.1
	0.8nm,0.8s,mb3.2,baz=158,slow=10,SNR=3.6						
EKA	Eskdalemuir Ar	23.81	323	P	P	02 41 47.6	+4.2
	2.1nm,0.9s,mb3.5,baz=126,slow=9.7,SNR=4.4						
TORD	Torodi Ar. Bea	31.26	221	P	P	02 42 49.9	-0.3
	0.4nm,1.0s,mb3.2,baz=32,slow=8.9,SNR=5.2						
MKAR	Makanchi Array	43.91	59	P	P	02 44 36.7	-0.5
	0.6nm,0.6s,mb3.5,baz=294,slow=7.1,SNR=5.4						

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*ISCJB **07** 02:44:33.9±0.3, 4193N±0.02×2293E±0.02, h9km±3km, Error ellipse: s-maj=3.1km s-min=2.8km az=60.0*
*SOF **07** 02:44:33.7, 4195N×2297E, h20km, MD3.1*
*CSEM **07** 02:44:33.9±0.1, 4198N×2287E, h10km, MD3.1, Error ellipse: s-maj=1.2km s-min=1.0km az=86.0*
*SKO **07** 02:44:34.2, 4192N×2293E, h15km, M2.5, ML2.5*
*NEIC **07** 02:44:35.3±0.8, 4193N×2302E, h10km, MD3.1(SOF), MD3.4(ATH), ML2.6(BUC), Error ellipse: s-maj=10.0km s-min=5.5km az=60.0*
*THE **07** 02:44:35.3, 4191N×2294E, h8km, ML3.1*
*ATH **07** 02:44:37.7, 4175N×2298E, h5km, MD3.4/4*
ISC 07 02:44:34.9±0.3, **4192N**±002×**2292E**±002, **h11**km±3km, **n55**, σ**0s77**/86, **12C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KKB	Krupnik	0.13	114	i Pg	Pg	02 44 38.6	+0.6
STIP	Stip	0.59	248	ePg	Pg	02 44 46.5	0.0
STIP				eSg	Sg	02 44 55.0	+0.8
STIP	Stip	0.59	248	ePg	Pg	02 44 46.5	0.0
STIP				eSg	Sg	02 44 54.5	+0.2
STIP				eLg		02 44 54.8	
	comp=E,81nm,0.2s						
STIP				eLg		02 44 55.1	
	comp=N,139nm,0.2s						
STIP	Stip	0.59	248	ePg	Pg	02 44 46.4	0.0
STIP				eSg	Sg	02 44 55.0	+0.7
VAY	Valandovo	0.66	204	ePg	Pg	02 44 47.3	-0.2
VAY				eSg	Sg	02 44 56.5	+0.3
VAY				eLg		02 44 56.8	
	comp=N,460nm,0.7s						
VAY				eLg		02 44 56.9	
	comp=E,402nm,0.3s						
VAY	Valandovo	0.66	204	ePg	Pg	02 44 47.3	-0.3
VAY				eSg	Sg	02 44 56.8	+0.6
MMB	Musomiste	0.69	119	ePg	Pg	02 44 48.3	+0.1
MMB				eSg	Sg	02 44 58.0	+0.8
MMB	Musomiste	0.69	119	i Pg	Pg	02 44 48.5	+0.3
MMB				eSg	Sg	02 44 58.0	+0.8
VTS	Vitosha	0.70	17	ePg	Pg	02 44 48.0	-0.4
VTS				eSg	Sg	02 44 57.6	-0.1
VTS	Vitosha	0.70	17	i P	Pg	02 44 47.7	-0.8
VTS				i Pg	Pg	02 44 48.2	-0.3
VTS	Vitosha	0.70	17	⇑iP	Pg	02 44 48.1	-0.4
VTS				S	Sg	02 44 57.5	-0.2
VTS	Vitosha	0.70	17	i Pg	Pg	02 44 48.2	-0.3
VTS				eSg	Sg	02 44 57.6	-0.1
KNT	Kendrikon	0.76	181	ePg	Pg	02 44 49.5	-0.1
KNT				eSg	Sg	02 44 59.6	+0.2
NVR	Nevrokopi	0.91	129	ePG	Pg	02 44 51.9	-0.4
NVR				eSB	Sb	02 45 03.9	-0.8
SRS	Serrai	0.95	148	ePg	Pg	02 44 52.7	-0.4
SRS				eSg	Sg	02 45 06.0	+0.5
GRG	Griva	1.04	202	ePg	Pg	02 44 54.4	-0.5
GRG				eSg	Sg	02 45 09.0	+0.6
SKO	Skopje	1.11	273	ePg	Pg	02 44 57.7	+1.5
SKO				eSg	Sg	02 45 11.0	+0.4
SKO	Skopje	1.11	273	ePg	Pg	02 44 56.3	+0.1
SKO	Skopje	1.11	273	ePg	Pg	02 44 56.2	0.0
SKO				eSg	Sg	02 45 11.0	+0.4
PGB	Panagyurishte	1.12	55	i Pg	Pg	02 44 55.1	-1.3
SOH	Sokhos	1.15	163	ePg	Pg	02 44 56.4	-0.5
SOH				eSg	Sg	02 45 13.5	+1.7
THE	Thessaloniki	1.29	179	ePg	Pg	02 44 59.0	-0.6
THE				eSg	Sg	02 45 15.9	-0.4
HORT	Hortiatis	1.33	174	ePg	Pg	02 44 60.0	-0.4
HORT				eSg	Sg	02 45 17.7	0.0
PLD	Plovdiv	1.34	82	ePg	Pg	02 45 00.1	-0.4
PLD				eSg	Sg	02 45 18.9	+0.9
PLD	Plovdiv	1.34	82	i Pg	Pg	02 45 00.4	-0.2
RZN	Rozhen	1.36	99	i Pg	Pg	02 45 00.0	-1.0
BIA	Bitola	1.50	234	ePg	Pn	02 45 01.9	+0.2
BIA				eSg	Sg	02 45 22.3	-0.9
BIA	Bitola	1.50	234	ePg	Pb	02 45 02.2	-0.5
BIA				eSg	Sg	02 45 22.3	-0.9
PLG	Polygyros	1.60	165	ePN	Pn	02 45 03.5	+0.5
FNA	Florina	1.63	226	ePb	Pb	02 45 04.7	-0.2
FNA				eSb	Sb	02 45 26.2	+0.9
OUR	Ouranopolis	1.78	153	ePb	Pn	02 45 05.8	+0.3
LIT	Litokhoron	1.85	190	ePb	Pn	02 45 06.0	-0.5
LIT				eSb	Sb	02 45 31.0	-0.7
KDZ	Kurdzhali	1.89	97	i Pg	Pn	02 45 08.0	+1.0
DIM	Dimitrovgrad	1.95	85	i Pg	Pg	02 45 11.0	-1.3
PAIG	Paliouri	2.07	164	ePn	Pn	02 45 09.8	+0.2
PAIG				eSn	Sn	02 45 35.5	+0.1
RDO	Rodhopi	2.11	111	ePB	Pb	02 45 13.0	-0.1
RDO				eSN	Sg	02 45 43.0	+0.3
XOR	Xorichti	2.56	175	ePn	Pn	02 45 16.7	+0.5
XOR				eSn	Sn	02 45 46.5	-0.9
ALN	Alexandroupoli	2.56	112	ePn	Pn	02 45 16.9	+0.6
LOS	Limnos	2.57	140	ePn	Pn	02 45 15.6	-0.8
LIA	Limnos Island	2.65	139	ePG	Pg	02 45 24.5	-1.1
SRN	Sarande	3.01	228	i Sg	Sg	02 46 17.6	+6.0
DIVS	Divcibare	3.06	316	ePn	Pn	02 45 23.4	+0.3
DIVS				eSn	Sn	02 45 59.1	-0.5
BZS	Buzias	3.81	346	⇑iP	Pn	02 45 33.1	-0.4
BZS	Buzias	3.81	346	⇑P	Pn	02 45 33.1	-0.4
BZS				S	Sn	02 46 16.5	-1.8
BZS	Buzias	3.81	346	⇑P	Pn	02 45 33.1	-0.4
BZS				S	Sn	02 46 16.5	-1.8
VOIR		3.84	23	⇑iP	Pn	02 45 35.8	+2.0
VOIR		3.84	23	⇑P	Pn	02 45 35.8	+2.0
MLR	Muntele Rosu	4.19	31	⇑iP	Pn	02 45 40.7	+2.1
MLR	Muntele Rosu	4.19	31	⇑P	Pn	02 45 40.7	+2.0
TIRR	Tirgusor	4.75	56	⇓iP	Pn	02 45 50.8	+4.5
TIRR	Tirgusor	4.75	56	⇓P	Pn	02 45 50.8	+4.5
DRGR		4.87	358	⇑iP	Pn	02 45 49.3	+1.3
DRGR		4.87	358	⇑P	Pn	02 45 49.3	+1.2
PKSM	Moragy	5.28	326	⇑iP	Pn	02 45 53.9	+0.2
PKSM	Moragy	5.28	326	⇑P	Pn	02 45 53.9	+0.2

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*IDC **07** 02:50:54.2±1.6, 27.16N×11248W, h0km, mb4.2/4, mb1 4.2/6, mb1mx3.9/21, mbtmp4.0/6, ML3.5/2, MS3.4/4, Ms1 3.4/4, ms1mx2.9/28, Error ellipse: s-maj=62.4km s-min=17.3km az=64.0*
*ISCJB **07** 02:50:55.2±0.9, 2727N±0.08×11227W±0.08, h10km, mb4.3/8, MS3.4/4, Error ellipse: s-maj=13.5km s-min=7.4km az=83.6*
*NEIC **07** 02:50:56.9±0.9, 2720N×11226W, h10km, mb4.3/13, Error ellipse: s-maj=13.7km s-min=7.6km az=223.0*
ISC 07 02:50:58.0±8.1, **272N**±02×**11225W**±009, **h15**km±51km, **n38**, σ**1s15**/35, **mb4.3**/8, **MS3.4**/4, **Baja California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TUC	Tucson	5.23	14	ePn	Pn	02 52 11.0	-4.6
	14nm,0.8s						
MNTX	Cornudas Mount	7.47	52	ePn	Pn	02 52 44.4	-1.9
	3.7nm,0.7s						
LAZ	Ladron	8.40	30	ePn	Pn	02 52 57.9	-1.2
ANMO	Albuquerque	9.16	31	ePn	Pn	02 53 08.2	-1.4
	3.3nm,1.0s						
DAC	Darwin (Calif)	10.11	335	ePn	Pn	02 53 21.6	-0.8
	15nm,1.1s						
TPNV	Topopah Spring	10.28	342	ePn	Pn	02 53 25.7	+1.0
	24nm,1.7s						
CCUT	Cedar City	10.35	355	ePn	Pn	02 53 24.7	-1.0
ARUT	Antelope Range	10.59	355	ePn	Pn	02 53 29.3	+0.3
JCT	Junction City	11.39	70	ePn	Pn	02 53 42.1	+2.1
	40nm,0.9s						
MTUM	Tungsten Hills	11.43	334	ePn	Pn	02 53 40.1	-0.4
AMTX	Amarillo	11.85	47	ePn	Pn	02 53 45.3	-1.0
	5.7nm,1.0s						
NVAR	Mina Array Bea	12.28	337	Pn	Pn	02 53 52.0	-0.1
	0.1nm,0.3s,baz=160,slow=14,SNR=8.7						
HWUT	Hardware Ranch	14.36	2	ePn	Pn	02 54 22.4	+1.7
	8.3nm,1.4s						
HKT	Hockley	14.68	75	ePn	Pn	02 54 28.7	+3.8
	43nm,1.8s						
PDAR	Pinedale Array	15.67	7	Pn	Pn	02 54 40.7	+2.7
	0.0nm,0.3s,baz=184,slow=10,SNR=8.8						
NATX	Nacogdoches	15.97	69	ePn	Pn	02 54 42.0	0.0
	33nm,1.2s						
IMW	Indian Meadow	16.68	3	ePn	Pn	02 54 52.4	+1.5
	10nm,1.3s						
MCMT	McKenzie Canyo	17.58	359	ePn	Pn	02 55 03.0	+0.7
MIAR	Mount Ida	17.60	61	ePn	Pn	02 55 02.4	-0.2
	11nm,1.3s						
BMO	Blue Mountains	18.06	348	eP	Pn	02 55 08.0	-0.2
	6.6nm,1.5s						
CCM	Cathedral Cave	20.68	53	eP	P	02 55 38.9	+1.6
	14nm,1.4s						
OXF	Oxford	20.89	64	eP	P	02 55 39.6	+0.1
	44nm,1.4s						
NEW	Newport	21.35	351	eP	P	02 55 43.0	-1.5
	9.6nm,1.2s,mb4.0						
PLAL	Pickwick Lake	22.07	64	eP	P	02 55 51.8	-0.4
	9.5nm,1.1s,mb4.1						
WVT	Waverly	22.56	61	eP	P	02 55 57.4	0.0
	26nm,1.0s,mb4.6						
SWET	Sewanee	23.83	64	eP	P	02 56 09.2	-1.2
CPCT	Cooper Cave	25.01	64	eP	P	02 56 20.4	-0.7
YKA	Yellowknife Ar	35.31	358	LR	LR	03 13 52.7	
	comp=Z,41nm,18.8s,MS3.2,baz=210,slow=39						
WES	Weston	36.48	55	eP	P	02 58 03.5	+1.2
	18nm,1.3s,mb4.8						
SDV	Santo Domingo	43.31	107	P	P	02 59 01.3	+2.2
	4.2nm,0.8s,mb4.2,baz=5.3,slow=6.5,SNR=5.4						
SDV				LR	LR	03 15 26.0	
	comp=Z,46nm,21.7s,MS3.3,baz=290,slow=34						
SDV	Santo Domingo	43.31	107	eP	P	02 59 00.9	+1.8
	5.2nm,1.0s,mb4.2						
SDV				LR	LR	03 15 26.0	
PCRV	Puerto La Cruz	47.87	101	LR	LR	03 23 22.5	
	comp=Z,45nm,18.8s,MS3.5,baz=188,slow=40						
SIV	San Ignacio	65.65	125	P	P	03 01 40.0	-1.4
	1.0nm,0.8s,mb3.9,baz=303,slow=7.9,SNR=5.7						
CPUP	Villa Florida	75.01	131	P	P	03 02 38.5	-0.2
	1.0nm,0.7s,mb3.9,baz=314,slow=10,SNR=5.1						
CPUP	Villa Florida	75.01	131	eP	P	03 02 38.4	-0.3
	5.5nm,0.8s,mb4.5						
PLCA	Paso Flores	77.90	149	P	P	03 02 55.0	-0.1
	5.3nm,1.1s,mb4.4,baz=330,slow=8.1,SNR=2.9						
PLCA	Paso Flores	77.90	149	eP	P	03 02 55.4	+0.3
	18nm,1.3s,mb4.8						
ARCES	ARCESS Array B	78.81	14	LR	LR	03 39 54.2	
	comp=Z,25nm,18.3s,MS3.6,baz=34,slow=37						

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*ISCJB **07** 03:39:12.1±0.4, 59.15N±0.04×150.44W±0.09, h33km, mb3.7/4, Error ellipse: s-maj=7.0km s-min=4.7km az=54.6*
*NEIC **07** 03:39:14.6, 59.18N×150.46W, h33km, ML3.8(PMR), ML3.8(AEIC), After AEIC.*
NEIC Felt at Homer.
*IDC **07** 03:39:14.2±3.6, 5929N×15062W, h36km±36km, mb3.6/4, mb1 3.8/5, mb1mx3.5/19, mbtmp3.8/5, ML4.5/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/26, Error ellipse: s-maj=28.3km s-min=17.0km az=160.0*
ISC 07 03:39:13.7±0.5, **5917N**±004×**15051W**±009, **h35**km, **n27**, σ**0s86**/32, **mb3.7**/4, **Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SEW	Seward	1.08	30	P	Pn	03 39 32.1	-0.2
SEW				S	Sn	03 39 45.5	-0.6
SLKM	Skilak Lake	1.35	6	P	Pn	03 39 36.2	+0.2
SLKM				S	Sn	03 39 52.2	-0.5
KDAK	Kodiak Island	1.77	219	Pn	Pn	03 39 42.1	+0.3
	74nm,0.3s,baz=40,slow=9.7,SNR=1131						
KDAK				Sn	Sn	03 40 02.1	-0.9
	72nm,0.3s,baz=126,slow=24,SNR=16						
KDAK	Kodiak Island	1.77	219	P	Pn	03 39 41.8	+0.1
RC01	Rabbit Creek A	1.96	11	P	Pn	03 39 44.6	+0.1
FIB	Fire Island	2.01	5	P	Pn	03 39 46.2	+1.1
MID	Middleton Isla	2.16	81	eP	Pn	03 39 47.0	-0.1
PMR	Palmer	2.52	15	P	Pn	03 39 52.2	0.0
GHO	Glory Hole Cre	2.73	16	P	Pn	03 39 55.5	+0.5
EYAK	Cordova Ski Ar	2.77	58	P	Pn	03 39 55.5	-0.1
TRF	Thorofare Moun	4.30	1	P	Pn	03 40 17.5	+0.9
KTH	Kantishna Hill	4.40	358	P	Pn	03 40 19.0	+1.0
MCK	McKinley	4.64	9	P	Pn	03 40 21.5	+0.2
CHGN	Chignik	5.12	239	eP	Pn	03 40 28.3	+0.5
PNL	Peninsula	5.70	80	P	Pn	03 40 36.2	+0.4
COLA	College	5.86	11	P	Pn	03 40 38.0	-0.1
DAWY	Dawson	7.22	42	P	Pn	03 40 56.0	-0.7
WHY	Whitehorse	8.00	73	P	Pn	03 41 07.1	-0.2
COLD	Coldfoot	8.09	1	P	Pn	03 41 07.8	-0.8
SIT	Sitka	8.31	98	P	Pn	03 41 10.2	-1.5
DLBC	Dease Lake	10.65	85	Pn	Pn	03 41 44.9	+1.3
	5.5nm,0.3s,baz=274,slow=14,SNR=34						
DLBC				Sn	Sn	03 43 37.1	-4.5
	0.4nm,0.3s,baz=140,slow=16,SNR=3.8						
BBB	Bella Bella	14.39	109	Pn	Pn	03 42 33.6	-1.2
	0.4nm,0.3s,baz=240,slow=6.4,SNR=10						
BBB				Sn	Sn	03 45 07.3	-5.8
	0.1nm,0.3s,baz=217,slow=12,SNR=3.3						
YKA	Yellowknife Ar	17.66	64	P	Pn	03 43 16.8	-0.1
	baz=273,slow=10.0,SNR=19						
YKA				LR	LR	03 50 10.9	
	comp=Z,33nm,22.0s,baz=270,slow=37						
NVAR	Mina Array Bea	29.21	121	P	P	03 45 14.0	+2.0
	0.2nm,0.4s,mb3.2,baz=301,slow=10,SNR=3.3						
PDAR	Pinedale Array	29.96	105	P	P	03 45 20.3	+1.7
	0.3nm,0.5s,mb3.3,baz=333,slow=5.1,SNR=4.8						
SONM	Songino Array	56.30	308	P	P	03 48 50.0	-0.8
	3.7nm,0.8s,mb4.5,baz=46,slow=6.2,SNR=6.1						
FINES	FINESS Array B	59.69	2	P	P	03 49 13.0	-1.6
	1.1nm,0.8s,mb3.9,baz=347,slow=5.9,SNR=3.8						

JMA 07 03:57:56.3±0.2, **2616N**×**12512E**, **h130**km, **M3.5**, **Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMJ	Miyako jima 2	1.35	173	P	Pn	03 58 23.1	+0.4
JMJ				S	Sn	03 58 42.7	-0.1
JOGS	Gusukube	1.42	169	P	Pn	03 58 24.0	+0.5
JOGS				S	Sn	03 58 44.5	+0.3
JKE	Kume jima 2	1.50	83	P	Pn	03 58 24.9	+0.5
JKE				S	Sn	03 58 46.3	+0.4
JTJ	Tarama	1.56	194	P	Pn	03 58 25.5	+0.5
JTJ				S	Sn	03 58 46.5	-0.5
JAGN	Aguni-jima	1.95	77	P	Pn	03 58 29.8	+0.1
JAGN				S	Sn	03 58 54.3	-0.9
JIJ	Ishigaki jima	2.00	207	P	Pn	03 58 30.0	-0.2
JIJ				S	Sn	03 58 54.3	-1.8
JKRS	Kuro-shima	2.16	208	P	Pn	03 58 32.2	0.0
JKRS				S	Sn	03 58 59.2	-0.6
IRIF	Iriomote-Funau	2.21	215	P	Pn	03 58 32.8	0.0
IRIF				S	Sn	03 59 00.8	-0.1
NAH1	Naha	2.31	88	eS	Sn	03 59 02.2	-0.9
JJT2	Tamagusuku 2	2.36	90	eS	Sn	03 59 03.9	-0.4
HATJ	Hateruma jima	2.41	210	P	Pn	03 58 35.1	-0.2
HATJ				S	Sn	03 59 04.8	-0.5
YOJ	Yonaguni jima	2.55	229	P	Pn	03 58 38.3	+1.2
YOJ				S	Sn	03 59 10.6	+2.1
JIH	Iheya	2.69	70	P	Pn	03 58 38.7	-0.2
JIH				S	Sn	03 59 09.5	-2.3
JOW	Kunigami	2.91	76	P	Pn	03 58 40.8	-0.9
JOW				S	Sn	03 59 13.0	-3.6
JTK	Tokunoshima	3.78	64	P	Pn	03 58 51.7	-1.4
JTK				eS	Sn	03 59 33.0	-4.2
JAM	Amami Oshima	4.58	60	eS	Sn	03 59 51.3	-4.8
JMZ	Minamidaito 2	5.50	92	eS	Sn	04 00 10.7	-7.5

CASC 07 04:28:57.0±1.7, **1235N**×**8845W**, **h20**km±11km, **MD3.9**, **4C-4D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VSM	San Miguel	1.09	9	⇑eP	x	04 29 40.8	
VSM				eS	x	04 29 56.1	
CNCH	Conchagua	1.10	33	⇓eP	x	04 29 40.4	
CNCH				eS	x	04 29 55.0	
BLLM	Bellamira	1.11	11	⇑eP	x	04 29 40.6	
SNVI	San Vicente	1.31	343	eP	x	04 29 43.9	
SNVI				eS	x	04 30 01.7	
LCBS	La Ceiba	1.40	339	⇓eP	x	04 29 44.5	
LCBS				eS	x	04 30 03.5	
LFRS	El Faro	1.40	335	⇑eP	x	04 29 44.4	
LFRS				eS	x	04 30 03.3	
LBRS	Las Brisas	1.50	337	⇑eP	x	04 29 46.3	
LEON	Leon	1.53	87	eP	Pn	04 29 22.4	-0.7
LEON				eS	Sn	04 29 43.7	+1.3
BOQS	Boqueron	1.60	330	eP	x	04 29 47.7	
MIRN	Miramar	1.71	87	eP	Pn	04 29 25.3	-0.3
MIRN				eS	Sn	04 29 47.5	+0.8
CNGN	Cerro Negro	1.72	85	eP	Pn	04 29 25.8	0.0
CNGN				eS	Sn	04 29 49.2	+2.0
SBLS	San Blas	1.87	323	⇓eP	x	04 29 52.0	
SBLS				eS	x	04 30 15.8	
SNJE	San Jose	1.88	324	⇓eP	x	04 29 52.1	
SNJE				eS	x	04 30 17.8	
APYN	Apoyeque	2.06	93	eP	Pn	04 29 30.6	+0.1
APYN				eS	Sn	04 29 57.1	+1.6
TISN	Laguna Tiscapa	2.15	95	eP	Pn	04 29 31.5	-0.1
TISN				eS	Sn	04 29 58.2	+0.6
MGAN	Managua	2.17	95	eP	Pn	04 29 31.0	-0.9
MGAN				eS	Sn	04 29 58.4	+0.2
TICN	Ticuantepe	2.19	98	eP	Pn	04 29 32.8	+0.5
TICN				eS	Sn	04 29 59.4	+0.5
BOA	Boaco	2.68	87	eP	Pn	04 29 39.3	+0.3

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*IDC **07** 04:57:38.6±3.3, 3725N×7457E, h0km, mb3.8/3, mb1 3.9/6, mb1mx3.6/21, mbtmp3.8/6, ML3.4/2, Error ellipse: s-maj=70.5km s-min=28.4km az=133.0*
*BJI **07** 04:57:41.2, 3705N×7474E, h17km, mb3.7, ML4.2, Ms3.5*
*NEIC **07** 04:57:42.8±2.3, 37.15N×7467E, h35km, mb3.3/2, Error ellipse: s-maj=36.4km s-min=19.0km az=138.0*
*ISCJB **07** 04:57:43.3±2.4, 373N±0.1×7435E±0.10, h43km±21km, mb3.7/3, Error ellipse: s-maj=19.4km s-min=12.9km az=21.1*
*NNC **07** 04:57:46.4±6.7, 3736N×7442E, h83km±95km, mb3.1, mpv3.3, Error ellipse: s-maj=53.7km s-min=48.3km az=160.0*
ISC 07 04:57:43.0±3.0, **3723N**±008×**7434E**±009, **h24**km±25km, **n20**, σ**1s08**/23, **mb3.7**/3, **3C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.62	29	P	Pn	04 58 24.0	+0.2
KSH				S	Sn	04 58 55.4	+0.5
KSH				Smax			
	comp=N,655nm,0.7s						
KSH				Smax			
	comp=E,857nm,0.8s						
AAK	Ala-Archa	5.40	1	ePn	Pn	04 59 03.0	+1.0
	comp=E,23nm,0.8s						
TKM2	Tokmak 2	5.77	9	⇑Pn	Pn	04 59 07.8	+0.8
	comp=E,0.8nm,0.4s						
TKM2				⇑Sn	Sn	05 00 11.8	-0.7
	comp=E,2.8nm,0.7s						
KK31	Karatay Array	6.56	335	⇓Pn	Pn	04 59 18.9	+1.0
	comp=E,1.7nm,0.3s,baz=137,slow=12,SNR=42						
KK31				⇓Sn	Sn	05 00 32.0	+0.1
	comp=E,4.9nm,0.5s,baz=158,slow=24,SNR=7.7						
MKAR	Makanchi Array	11.23	29	Pn	Pn	05 00 20.9	-1.1
	comp=E,0.1nm,0.3s,baz=210,slow=13,SNR=7.3						
MKAR	Makanchi Array	11.23	29	Pn	Pn	05 00 20.9	-1.1
KURK	Kurchatov	13.83	11	ePn	Pn	05 00 54.7	-2.8
	comp=E,6.9nm,1.3s						
AB31	Akbulak array	15.92	324	⇓P	Pn	05 01 22.6	-2.7
	comp=E,0.8nm,0.6s,baz=131,slow=13,SNR=13						
AB31				⇑S	Sn	05 04 10.9	-10
	comp=E,0.8nm,0.6s						
BVAR	Borovoye Array	16.04	351	Pn	Pn	05 01 27.6	+0.8
	comp=E,0.3nm,0.3s,baz=156,slow=11,SNR=13						
BRVK	Borovoye	16.08	351	ePn	Pn	05 01 28.9	+1.5
	comp=E,2.3nm,0.8s						
ZRNK	Zerenda	16.16	348	ePn	Pn	05 01 29.5	+1.0
	comp=E,1.1nm,0.5s						
AKTK	Aktyubinsk	17.64	324	P	Pn	05 01 46.0	-0.9
AKTO	Aktyubinsk	17.64	324	P	Pn	05 01 46.2	-0.7
AKTO	Aktyubinsk	17.64	324	P	Pn	05 01 46.0	-0.9
	comp=E,0.4nm,0.3s,baz=125,slow=15,SNR=8.2						
ZAL	Zalesovo	18.21	20	P	Pn	05 01 50.5	-3.5
	comp=E,0.4nm,0.3s,baz=277,slow=13,SNR=3.8						
GTA	Gaotai	20.09	76	eP	P	05 02 14.7	-0.1
GTA				AP		05 02 17.9	
GTA				XP	sP	05 02 20.1	-4.4
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	38.40	325	P	P	05 05 02.2	-0.2
	comp=Z,1.0nm,0.7s,mb3.6,baz=96,slow=8.5,SNR=4.7						
FINES	FINESS Array B	38.40	325	P	P	05 05 02.2	-0.2
ARCES	ARCESS Array B	41.52	336	P	P	05 05 27.8	-0.5
	comp=Z,1.3nm,0.6s,mb3.8,baz=100,slow=6.7,SNR=7.3						
TORD	Torodi Ar. Bea	68.40	270	P	P	05 08 43.6	+1.0
	comp=Z,0.3nm,0.4s,mb3.6,baz=46,slow=5.6,SNR=16						

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*ISCJB **07** 04:59:57.9±0.3, 4522N±0.02×1472E±0.02, h9km±2km, Error ellipse: s-maj=2.6km s-min=2.3km az=7.3*
*NEIC **07** 04:59:59.1±0.4, 4524N×1476E, h10km, ML3.0(LJU), Error ellipse: s-maj=5.4km s-min=2.8km az=127.0*
NEIC Felt at Rijeka.
*CSEM **07** 04:59:59.2±0.1, 4523N×1479E, h12km, ML3.6/7, Error ellipse: s-maj=1.3km s-min=1.1km az=113.0*
*LDG **07** 05:00:00.6±0.1, 4523N×1483E, h6km, Ml3.4/8, Error ellipse: s-maj=3.2km s-min=2.7km az=153.0*
*PRU **07** 05:00:01.2, 4525N×1430E, h0km*
ISC 07 04:59:58.9±0.3, **4522N**±001×**1474E**±002, **h6**km±2km, **n104**, σ**1s16**/179, **14C-12D, Northwestern Balkan Peninsula**

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

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KNDS	**Knezji Dol**	**0.40**	**321**	⇓*i*Pg	**Pg**	**05 00 06.5**	**-0.1**
KNDS				*e*Sg	**Sg**	**05 00 13.2**	**+1.4**
KNDS							
	comp=Z,583nm,0.2s						
KNDS	**Knezji Dol**	**0.40**	**321**	⇓*i*Pg	**Pg**	**05 00 06.5**	**-0.1**
KNDS				*e*Sg	**Sg**	**05 00 13.2**	**+1.4**
	comp=Z,583nm,0.2s						
BOJS	**Bojanci**	**0.46**	**52**	⇑*i*Pg	**Pg**	**05 00 07.5**	**-0.3**
BOJS				*e*Sg	**Sg**	**05 00 14.1**	**+0.2**
BOJS							
	comp=Z,810nm,0.2s						
BOJS	**Bojanci**	**0.46**	**52**	⇑*i*Pg	**Pg**	**05 00 07.5**	**-0.3**
BOJS				*e*Sg	**Sg**	**05 00 14.1**	**+0.2**
	comp=Z,810nm,0.2s						
CEY	**Cerknica**	**0.57**	**337**	*e*Pg	**Pg**	**05 00 09.3**	**-0.4**
CEY				*e*Sg	**Sg**	**05 00 19.0**	**+1.9**
VISS	**Visnje**	**0.59**	**7**	*i* Pg	**Pg**	**05 00 10.0**	**-0.3**
VISS				*i* Sg	**Sg**	**05 00 18.2**	**+0.3**
VISS							
	comp=Z,706nm,0.2s						
VISS	**Visnje**	**0.59**	**7**	*i* Pg	**Pg**	**05 00 10.0**	**-0.2**
VISS				*i* Sg	**Sg**	**05 00 18.2**	**+0.3**
	comp=Z,706nm,0.2s						
NVLJ	**Novalja**	**0.66**	**172**	*i* Pg	**Pg**	**05 00 10.6**	**-1.0**
NVLJ				*i* Sg	**Sg**	**05 00 20.6**	**+0.5**
NVLJ	**Novalja**	**0.66**	**172**	*i* Pg	**Pg**	**05 00 10.5**	**-1.1**
NVLJ				*i* Sg	**Sg**	**05 00 20.6**	**+0.4**
CRES	**Cresnjev**	**0.79**	**39**	*e*Pg	**Pg**	**05 00 13.8**	**-0.3**
CRES				*e*Sg	**Sg**	**05 00 24.5**	**+0.2**
CRES							
	comp=Z,265nm,0.2s						
CRES	**Cresnjev**	**0.79**	**39**	*e*Pg	**Pg**	**05 00 13.8**	**-0.3**
CRES				*e*Sg	**Sg**	**05 00 24.5**	**+0.2**
CRES	**Cresnjev**	**0.79**	**39**	*e*Pg	**Pg**	**05 00 13.8**	**-0.3**
CRES				*e*Sg	**Sg**	**05 00 24.5**	**+0.1**
JAVS	**Javornik**	**0.82**	**325**	*e*Pg	**Pg**	**05 00 13.4**	**-1.3**
JAVS				*e*Sg	**Sg**	**05 00 26.6**	**+1.2**
JAVS							
	comp=Z,186nm,0.2s						
JAVS	**Javornik**	**0.82**	**325**	*e*Pg	**Pg**	**05 00 13.4**	**-1.3**
JAVS				*e*Sg	**Sg**	**05 00 26.6**	**+1.2**
	comp=Z,186nm,0.2s						
LEGS	**Legarje**	**0.84**	**29**	*e*Pg	**Pg**	**05 00 14.6**	**-0.4**
LEGS				*e*Sg	**Sg**	**05 00 26.1**	**+0.3**
LJU	**Ljubljana**	**0.84**	**350**	*e*Pg	**Pg**	**05 00 15.0**	**0.0**
LJU				*e*Sg	**Sg**	**05 00 27.3**	**+1.4**
TRI	**Trieste**	**0.84**	**306**	Pn	**Pg**	**05 00 14.3**	**-0.7**
TRI				Sn	**Sn**	**05 00 28.1**	**-1.8**
PDKS	**Podkum**	**0.86**	**12**	*i* Pg	**Pg**	**05 00 15.4**	**-0.1**
PDKS				*e*Sg	**Sg**	**05 00 27.1**	**+0.5**
PDKS							
	comp=Z,173nm,0.1s						
PDKS	**Podkum**	**0.86**	**12**	*i* Pg	**Pg**	**05 00 15.4**	**-0.1**
PDKS				*e*Sg	**Sg**	**05 00 27.1**	**+0.5**
GCIS	**Gornji Cirnik**	**0.90**	**44**	*e*Pg	**Pg**	**05 00 15.9**	**-0.3**
GCIS				*e*Sg	**Sg**	**05 00 27.6**	**-0.3**
GCIS							
	comp=Z,424nm,0.3s						
CESS	**Cesta pri Krsk**	**0.91**	**34**	*e*Pg	**Pg**	**05 00 16.6**	**+0.2**
CESS				*e*Sg	**Sg**	**05 00 28.7**	**+0.4**
CESS							
	comp=Z,303nm,0.2s						
CESS	**Cesta pri Krsk**	**0.91**	**34**	*e*Pg	**Pg**	**05 00 16.6**	**+0.2**
CESS				*e*Sg	**Sg**	**05 00 28.7**	**+0.4**
CESS	**Cesta pri Krsk**	**0.91**	**34**	*e*Pg	**Pg**	**05 00 16.6**	**+0.2**
CESS				*e*Sg	**Sg**	**05 00 28.7**	**+0.5**
GOLS	**Golise**	**1.01**	**38**	*i* Pg	**Pg**	**05 00 18.4**	**+0.2**
GOLS				Sg	**Sg**	**05 00 32.2**	**+0.9**
GOLS							
	comp=Z,399nm,0.2s						
VOJS	**Vojsko**	**1.01**	**324**	*i* Pg	**Pg**	**05 00 17.0**	**-1.3**
VOJS				*e*Sg	**Sg**	**05 00 33.2**	**+1.8**
GORS	**Gorjuse**	**1.22**	**335**	*e*Pg	**Pg**	**05 00 21.6**	**-0.6**
GORS				*e*Sg	**Sg**	**05 00 39.9**	**+1.9**
GORS	**Gorjuse**	**1.22**	**335**	*e*Pg	**Pg**	**05 00 21.5**	**-0.7**
GORS				*e*Sg	**Sg**	**05 00 39.9**	**+1.9**
DRE	**Drenchia**	**1.23**	**322**	⇑*e*Pg	**Pg**	**05 00 20.9**	**-1.5**
DRE				*e*Sg	**Sg**	**05 00 39.7**	**+1.4**
CADS	**Cadrg**	**1.23**	**326**	*i* Pg	**Pg**	**05 00 20.6**	**-1.8**
CADS				*e*Sg	**Sg**	**05 00 40.3**	**+1.9**
OBKA	**Obir**	**1.30**	**354**	⇓*e*Pg	**Pg**	**05 00 23.4**	**-0.4**
	SNR=130						
OBKA				⇓*i*Sg	**Sg**	**05 00 40.6**	**-0.1**
	comp=Z,261nm,0.3s						
COLI	**Coloredo**	**1.32**	**314**	*e*Pg	**Pg**	**05 00 23.3**	**-0.9**
COLI				*e*Sg	**Sg**	**05 00 43.6**	**+2.3**
ROBS	**Robic**	**1.34**	**321**	*i* Pg	**Pg**	**05 00 23.1**	**-1.4**
ROBS				*e*Sg	**Sg**	**05 00 43.5**	**+1.5**
ROBS	**Robic**	**1.34**	**321**	*i* Pg	**Pg**	**05 00 23.1**	**-1.5**
ROBS				*e*Sg	**Sg**	**05 00 43.5**	**+1.6**
TLI	**Talmassons**	**1.35**	**302**	⇑*e*Pg	**Pg**	**05 00 24.9**	**+0.2**
TLI				*e*Sg	**Sg**	**05 00 44.2**	**+2.0**
GROS	**Grobnik**	**1.35**	**23**	*i* Pg	**Pg**	**05 00 24.4**	**-0.4**
GROS				*e*Sg	**Sg**	**05 00 42.5**	**+0.1**
PERS	**Pernice**	**1.44**	**10**	*e*Pg	**Pg**	**05 00 25.5**	**-1.0**
BISS	**Bistriski jare**	**1.46**	**11**	*e*Pg	**Pg**	**05 00 26.0**	**-0.8**
BAD	**Bernadia**	**1.46**	**315**	⇓*i*Pg	**Pg**	**05 00 26.3**	**-0.6**
BAD				*i* Sg	**Sg**	**05 00 47.3**	**+1.5**
GMNA	**Gemona**	**1.49**	**316**	Pn	**Pn**	**05 00 27.8**	**+1.7**
GMNA				Sn	**Sg**	**05 00 50.8**	**+4.0**
PTCC	**Patocco-Chiusa**	**1.53**	**321**	Pn	**Pn**	**05 00 27.4**	**+0.7**
PTCC				Sn	**Sn**	**05 00 49.7**	**+2.8**
BOO	**Bordano**	**1.59**	**315**	⇓*e*Pg	**Pg**	**05 00 28.0**	**-1.4**
BOO				*e*Sg	**Sg**	**05 00 51.9**	**+1.9**
MPRI	**Monte Prat**	**1.60**	**311**	⇑*i*Pg	**Pg**	**05 00 28.3**	**-1.2**
MPRI				*i* Sg	**Sg**	**05 00 51.6**	**+1.5**
KOGS	**Kog**	**1.62**	**40**	*e*Pg	**Pn**	**05 00 28.4**	**+0.4**
KOGS				*e*Sg	**Sg**	**05 00 50.6**	**-0.4**
PLRO	**Paularo**	**1.73**	**321**	⇓*e*Pg	**Pg**	**05 00 30.9**	**-1.2**
PLRO				*e*Sg	**Sg**	**05 00 55.3**	**+0.7**
MLNI	**Malnisio**	**1.76**	**303**	⇑*i*Pg	**Pn**	**05 00 30.4**	**+0.6**
MLNI				*i* Sg	**Sg**	**05 00 53.4**	**-2.0**
CAE	**Caneva**	**1.80**	**297**	⇓*e*Pg	**Pg**	**05 00 40.5**	**+7.2**
BLY	**Banja Luka**	**1.80**	**104**	P	**Pn**	**05 00 30.4**	**0.0**
BLY				S	**Sn**	**05 00 54.9**	**+1.4**
ZOU	**Zoufplan**	**1.82**	**318**	⇑*i*Pg	**Pg**	**05 00 31.8**	**-1.9**
ZOU				*i* Sg	**Sg**	**05 00 57.7**	**+0.3**
AOI	**Ancona**	**1.85**	**206**	Pn	**Pn**	**05 00 31.9**	**+0.8**
AOI				Sn	**Sn**	**05 00 57.4**	**+2.5**
FVI	**Forni Avoltri**	**1.94**	**316**	Pn	**Pn**	**05 00 31.9**	**-0.4**
CSMI	**Casera Mimoias**	**1.95**	**312**	⇑*i*Pg	**Pn**	**05 00 33.2**	**+0.8**
CSMI				*i* Sg	**Sg**	**05 01 00.3**	**-1.2**
MTLO	**Montello**	**1.95**	**289**	*e*Pg	**Pn**	**05 00 33.2**	**+0.8**
CSO	**Casso**	**1.99**	**303**	⇓*i*Pg	**Pn**	**05 00 33.2**	**+0.2**
CSO				*i* Sg	**Sg**	**05 01 01.7**	**-1.2**
ARSA	**Arzberg**	**2.11**	**15**	⇓*i*Pg	**Pg**	**05 00 37.7**	**-1.5**
ARSA				⇑*i*Sg	**Sg**	**05 01 04.2**	**-2.3**
	comp=Z,59nm,0.4s						
ARV	**Arcevia**	**2.15**	**217**	Pn	**Pn**	**05 00 35.3**	**+0.1**
CING	**Cingoli**	**2.15**	**212**	Pn	**Pn**	**05 00 35.4**	**+0.2**
TEOL	**Teolo**	**2.17**	**275**	*e*Pg	**Pn**	**05 00 34.8**	**-0.7**
CTI	**Castel Tesino**	**2.32**	**292**	Pn	**Pn**	**05 00 38.3**	**+0.8**
SNTG	**Esanatoglia**	**2.35**	**214**	Pn	**Pn**	**05 00 38.1**	**+0.2**
SFI	**Santa Sofia**	**2.45**	**239**	Pn	**Pn**	**05 00 39.6**	**+0.3**
MURB	**Monte Urbino**	**2.52**	**220**	Pn	**Pn**	**05 00 41.3**	**+1.0**
CRE	**Caprese Michel**	**2.56**	**232**	Pn	**Pn**	**05 00 41.8**	**+1.0**
APPI	**Appiano**	**2.76**	**298**	Pn	**Pn**	**05 00 44.9**	**+1.4**
CONA	**Conrad Observa**	**2.82**	**16**	⇑*i*Pn	**Pn**	**05 00 43.6**	**-0.8**
CONA				⇑*i*Sn	**Sn**	**05 01 18.3**	**-0.4**
PKSM	**Moragy**	**2.91**	**69**	⇓*i*P	**Pn**	**05 00 44.4**	**-1.3**
WTTA	**Wattenberg**	**2.97**	**315**	⇑*e*Pn	**Pn**	**05 00 46.1**	**-0.4**
	SNR=6.7						
WTTA				⇓*i*Sn	**Sn**	**05 01 22.8**	**+0.4**
WTTA	**Wattenberg**	**2.97**	**315**	⇑*e*Pn	**Pn**	**05 00 46.0**	**-0.5**
WTTA				Sn	**Sn**	**05 01 22.8**	**+0.4**
MABI	**Malga Bissina**	**3.08**	**287**	Pn	**Pn**	**05 00 48.7**	**+0.7**
ZST	**Bratislava**	**3.40**	**28**	*e*	**Sg**	**05 01 46.3**	**-1.6**
RGNG	**Rignano Grg**	**3.59**	**170**	Pn	**Pn**	**05 00 54.2**	**-0.9**
TREB	**Trebinje**	**3.61**	**133**	P	**Pn**	**05 00 56.2**	**+0.9**
TREB				S	**Sn**	**05 01 39.6**	**+1.4**
GEC2	**GERESS Array S**	**3.70**	**349**	*e*Pn	**Pn**	**05 00 57.0**	**+0.5**
GEC2				*e*Sn	**Sn**	**05 01 41.4**	**+1.1**
KHC	**Kasperske Hory**	**4.00**	**349**	*e*PN	**Pn**	**05 01 01.5**	**+0.9**
KHC				*e*SN	**Sn**	**05 01 46.8**	**-0.9**
KHC				*e*SG	**Sg**	**05 02 05.6**	**-1.6**
WET	**Wettzell**	**4.13**	**343**	*e*Pn	**Pn**	**05 01 02.6**	**+0.2**
WET				*e*Sn	**Sn**	**05 01 52.2**	**+1.2**
VAI	**Varese**	**4.24**	**281**	Pn	**Pn**	**05 01 03.9**	**-0.1**
VYHS	**Vyhne**	**4.32**	**39**	*e*PG	**Pg**	**05 01 21.2**	**-0.4**
VYHS				*e*		05 01 53.5	
VYHS	**Vyhne**	**4.32**	**39**	*e*SG	**Sg**	**05 02 23.3**	**+5.7**
PRU	**Pruhonice**	**4.78**	**358**	*e*PN	**Pn**	**05 01 12.6**	**+1.3**
PRU				*e*SN	**Sn**	**05 02 05.5**	**-1.4**
BZS	**Buzias**	**4.86**	**83**	⇑*i*P	**Pb**	**05 01 27.2**	**+2.8**
DPC	**Dobruska-Polom**	**5.25**	**11**	*e*PN	**Pn**	**05 01 18.5**	**+0.7**
NKC	**Novy Kostel**	**5.25**	**344**	*e*SN	**Sn**	**05 02 16.2**	**-2.4**
SBF	**Sospel**	**5.39**	**258**	*e*Pn	**Pn**	**05 01 20.5**	**+0.7**
LPG	**La Plagne**	**5.63**	**276**	*e*Pn	**Pn**	**05 01 23.9**	**+0.8**
LPG				*e*Sn	**Sn**	**05 02 25.2**	**-2.9**
	comp=Z,12nm,0.6s						
LPG	**La Plagne**	**5.63**	**276**	*e*Pn	**Pn**	**05 01 23.9**	**+0.8**
LPG				*e*Sn	**Sn**	**05 02 25.2**	**-2.9**
	comp=Z,6.0nm,0.6s						
LPL	**La Plagne**	**5.65**	**276**	*e*Pn	**Pn**	**05 01 24.5**	**+1.2**
LPL				*e*Sn	**Sn**	**05 02 26.6**	**-1.8**
	comp=Z,12nm,0.7s						
LPL	**La Plagne**	**5.65**	**276**	*e*Pn	**Pn**	**05 01 24.5**	**+1.2**
LPL				*e*Sn	**Sn**	**05 02 26.6**	**-1.8**
	comp=Z,6.2nm,0.7s						
MBDF	**Montbardon**	**5.67**	**268**	*e*Pn	**Pn**	**05 01 22.3**	**-1.3**
MBDF				*e*Sn	**Sn**	**05 02 26.9**	**-2.1**
	comp=Z,9.2nm,0.4s						
MBDF	**Montbardon**	**5.67**	**268**	*e*Pn	**Pn**	**05 01 22.3**	**-1.3**
MBDF				*e*Sn	**Sn**	**05 02 26.9**	**-2.1**
	comp=Z,4.6nm,0.4s						
BRG	**Berggiesshubel**	**5.69**	**355**	PG	**Sn**	**05 02 30.4**	**+1.0**
BRG				SG	**Sg**	**05 03 04.2**	**+2.7**
	comp=Z,3.6nm,0.6s						
MOX	**Moxa**	**5.82**	**340**	*e*PN	**Pn**	**05 01 25.4**	**-0.3**
MOX				(PG)	**Pg**	**05 01 53.6**	**+3.2**
MOX				*e*SN	**Sn**	**05 02 31.0**	**-1.7**
MOX				*e*SG	**Sg**	**05 03 06.1**	**+0.3**
FRF	**La Foret Royal**	**6.03**	**257**	*e*Pn	**Pn**	**05 01 27.3**	**-1.2**
HINF	**Hinteralfeld**	**6.03**	**298**	*e*Pn	**Pn**	**05 01 28.2**	**-0.3**
HINF				*e*Sn	**Sn**	**05 02 34.8**	**-3.0**
	comp=Z,3.8nm,0.3s						
CABF	**La Chapelle**	**6.19**	**286**	*e*Pn	**Pn**	**05 01 31.5**	**+0.7**
LMR	**La Mourre**	**6.20**	**255**	*e*Pn	**Pn**	**05 01 29.4**	**-1.5**
CLL	**Collm**	**6.20**	**350**	*e*Sg	**Sg**	**05 03 16.0**	**-2.1**
	comp=Z,19nm,1.1s						
ORIF	**Oris-en-Rattie**	**6.28**	**270**	*e*Pn	**Pn**	**05 01 32.2**	**+0.2**
ORIF				*e*Sn	**Sn**	**05 02 39.3**	**-4.7**
	comp=Z,11nm,0.5s						
ORIF	**Oris-en-Rattie**	**6.28**	**270**	*e*Pn	**Pn**	**05 01 32.2**	**+0.2**
ORIF				*e*Sn	**Sn**	**05 02 39.3**	**-4.7**
	comp=Z,5.6nm,0.5s						
VIVF	**Saint-Julien-l**	**7.14**	**271**	*e*Pn	**Pn**	**05 01 42.5**	**-1.3**
SMF	**Signal de Mont**	**7.73**	**285**	*e*Pn	**Pn**	**05 01 51.5**	**-0.4**
SMF				*e*Sn	**Sn**	**05 03 14.8**	**-4.9**
	comp=Z,4.7nm,0.4s						
SMF	**Signal de Mont**	**7.73**	**285**	*e*Pn	**Pn**	**05 01 51.5**	**-0.4**
SMF				*e*Sn	**Sn**	**05 03 14.8**	**-4.9**
	comp=Z,2.3nm,0.4s						
LOR	**Lormes**	**7.82**	**289**	*e*Pn	**Pn**	**05 01 53.1**	**+0.1**
LOR				*e*Sn	**Sn**	**05 03 18.4**	**-3.4**
	comp=Z,3.3nm,0.3s						
SSF	**Saint Saulge**	**8.02**	**287**	*e*Pn	**Pn**	**05 01 54.8**	**-1.0**
SSF				*e*Sn	**Sn**	**05 03 22.5**	**-4.2**
	comp=Z,2.9nm,0.6s						
AVF	**Avril sur Loir**	**8.08**	**285**	*e*Pn	**Pn**	**05 01 56.5**	**-0.2**
BGF	**Bois d'Agland**	**8.40**	**283**	*e*Pn	**Pn**	**05 02 01.5**	**+0.4**

IDC ***07*** *05:02:46.4±0.6, 9.14S×108.02E, h0km, mb4.4/11, mb1 4.4/12, mb1mx4.3/17, mbtmp4.4/12, ML3.8/1, MS3.9/5, Ms1 3.9/5, ms1mx3.3/33, Error ellipse: s-maj=24.6km s-min=15.5km az=64.0*

NEIC ***07*** *05:02:48.2±0.3, 9.07S×108.05E, h10km, mb5.1/12, Error ellipse: s-maj=13.4km s-min=6.2km az=55.0*

BJI ***07*** *05:02:48.1, 9.10S×108.10E, h12km, mB5.0, mb4.7, Ms4.5, Msz4.1*

MOS ***07*** *05:02:50.3±1.1, 8.97S×108.16E, h33km, mb4.8/16, Error ellipse: s-maj=21.4km s-min=8.9km az=108.4*

ISCJB ***07*** *05:02:51.9±1.7, 9.15S±0.06×108.07E±0.08, h54km±15km, mb4.7/44, MS4.0/10, Error ellipse: s-maj=14.7km s-min=8.8km az=130.8*

ISC 07 05:02:53.5±1.5**, 9.15S**±0.06×**108.08E**±0.08**, h50**km±14km**, h28**km±4.4km**: pP-P, n86,** σ**0.77**/69**, mb4.7**/44**, MS4.0**/10**, 7C-1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.42**	**42**	⇑*i*P	**Pn**	**05 03 31.4**	**+0.8**
BJII				*i* S	**Sn**	**05 03 50.6**	**-8.4**
BJII	**Banjamegara**	**2.42**	**42**	⇑*e*P	**Pn**	**05 03 30.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.23**	**119**	*e*P	**Pn**	**05 07 14.1**	**-0.8**
	11nm,0.7s						
FITZ				*e*S	**S**	**05 10 33.5**	**-15**
FITZ	**Fitzroy Crossi**	**19.23**	**119**	P	**Pn**	**05 07 14.3**	**-0.5**
	0.2nm,0.3s,baz=241,slow=10,SNR=6.8						
NWAO	**Narrogin (SRO)**	**25.13**	**162**	P	**P**	**05 08 17.0**	**+3.3**
	18nm,0.9s,mb4.6,baz=312,slow=9.7,SNR=6.0						
NWAO	**Narrogin (SRO)**	**25.13**	**162**	P	**P**	**05 08 17.0**	**+3.3**
WRAB	**Tennant Creek**	**27.55**	**116**	*e*P	**P**	**05 08 36.9**	**+1.3**
WB2	**Warramunga Arr**	**27.56**	**116**	*e*P	**P**	**05 08 35.9**	**+0.3**
ASAR	**Alice Springs**	**28.60**	**123**	P	**P**	**05 08 44.6**	**-0.3**
	2.0nm,0.8s,mb3.9,baz=305,slow=8.2,SNR=10						
ASAR				PcP	PcP	05 11 56.8	+1.8
	1.2nm,0.7s,baz=271,slow=2.1,SNR=6.4						
ASAR				LR	LR	05 20 16.6	
	comp=Z,141nm,21.0s,MS3.5,baz=307,slow=37						
ASAR	**Alice Springs**	**28.60**	**123**	P	**P**	**05 08 44.6**	**-0.3**
ASAR						05 11 56.8	
KMI	**Kunming**	**34.46**	**351**	P	**P**	**05 09 41.1**	**+4.7**
KMI				AMB	AMB		
	comp=Z,13nm,2.0s,mb4.5						
KMI				LR	LR		
	comp=N,483nm,11.6s						
KMI				LR	LR		
	comp=E,291nm,17.4s						
KMI				LR	LR		
	comp=Z,571nm,13.1s,MS4.5						
STKA	**Stephens Creek**	**38.43**	**131**	*e*P	**P**	**05 10 10.0**	**-0.2**
	comp=Z,6.8nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**38.43**	**131**	P	**P**	**05 10 10.2**	**0.0**
	comp=Z,7.1nm,0.8s,mb4.5,baz=302,slow=7.8,SNR=11						
STKA				PcP	PcP	05 12 23.0	+0.4
	comp=Z,1.0nm,0.4s,baz=46,slow=4.8,SNR=2.9						
CD2	**Chengdu**	**40.04**	**354**	P	**P**	**05 10 24.0**	**+0.3**
SSE	**Sheshan**	**41.94**	**17**	P	**P**	**05 10 38.5**	**-0.8**
SSE				AMB	AMB		
	comp=Z,39nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,97nm,6.2s						
NJ2	**Nanjing**	**42.24**	**14**	*e*P	**P**	**05 10 42.2**	**+0.5**
NJ2				AP	pP	05 10 52.0	-3.0
NJ2				XP	sP	05 10 56.0	-4.9
NJ2				PP	PP	05 12 23.1	+2.9
NJ2				S	**S**	**05 16 58.0**	**-0.6**
NJ2				XS	sS	05 17 15.0	-5.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,30nm,8.3s						
NJ2				LR	LR		
	comp=N,2μm,28.0s						
NJ2				LR	LR		
	comp=E,1μm,16.2s						
NJ2				LR	LR		
	comp=Z,280nm,20.1s						
JIRN	**Jiri**	**42.29**	**331**	*e*P	**P**	**05 10 42.4**	**+0.3**
	comp=Z,36nm,0.7s,mb5.1						
PKI	**Pulchoki**	**42.60**	**330**	*e*P	**P**	**05 10 44.5**	**-0.1**
GUN	**Gumba**	**42.65**	**330**	*e*P	**P**	**05 10 44.8**	**-0.2**
	comp=Z,54nm,0.8s,mb5.3						
DMN	**Daman**	**42.78**	**329**	*e*P	**P**	**05 10 46.2**	**+0.1**
	comp=Z,47nm,0.8s,mb5.3						
KKN	**Kakani**	**42.84**	**330**	*e*P	**P**	**05 10 46.5**	**-0.1**
	comp=Z,48nm,0.8s,mb5.3						
XAN	**Xi'an**	**42.96**	**1**	P	**P**	**05 10 47.4**	**-0.1**
XAN				AMB	AMB		
	comp=Z,15nm,0.7s,mb4.8						
GKN	**Gorkha**	**43.34**	**329**	*e*P	**P**	**05 10 50.5**	**-0.1**
	comp=Z,44nm,0.8s,mb5.2						
KOLN	**Koldanda**	**43.69**	**328**	*e*P	**P**	**05 10 53.4**	**0.0**
	comp=Z,72nm,0.8s,mb5.5						
LZH	**Lanzhou**	**45.17**	**355**	*e*P	**P**	**05 11 06.5**	**+1.3**
LZH				AP	pP	05 11 15.0	-3.6
LZH				XP	sP	05 11 19.0	-5.5
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,78nm,4.1s						
GTA	**Gaotai**	**48.92**	**352**	*e*P	**P**	**05 11 34.8**	**+0.3**
GTA				AP	pP	05 11 40.2	-7.8
GTA				XP	sP	05 11 43.0	-11
GTA				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
GTA				AMB	AMB		
	comp=Z,108nm,3.8s						
GTA				LR	LR		
	comp=N,142nm,16.1s,MS4.2						
GTA				LR	LR		
	comp=E,110nm,15.3s,MS4.2						
GTA				LR	LR		
	comp=Z,125nm,13.0s,MS4.1						
BJI	**Beijing**	**49.51**	**8**	*e*P	**P**	**05 11 39.2**	**+0.2**
BJI				S	**S**	**05 18 44.8**	**+1.8**
BJI				AMB	AMB		
	comp=Z,12nm,0.6s,mb5.1						
BJI				LR	LR		
	comp=N,181nm,19.7s,MS4.3						
BJI				LR	LR		
	comp=E,207nm,19.1s,MS4.3						
BJI				LR	LR		
	comp=Z,118nm,16.5s,MS4.0						
JHJ	**Hachijo jima 2**	**51.75**	**34**	LR	LR	05 36 40.9	
	comp=Z,144nm,18.3s,MS4.0,baz=153,slow=39						
SNY	**Shenyang**	**52.68**	**15**	⇑P	**P**	**05 12 03.9**	**+1.1**
SNY				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.8						
MJAR	**Matsushiro Arr**	**53.55**	**30**	P	**P**	**05 12 07.9**	**-1.3**
	comp=Z,1.1nm,0.5s,mb4.1,baz=209,slow=8.7,SNR=4.2						
MJAR				LR	LR	05 36 09.7	
	comp=Z,114nm,18.1s,MS4.0,baz=195,slow=37						
WMQ	**Urumqi**	**55.87**	**342**	P	**P**	**05 12 26.4**	**+0.4**
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
SONM	**Songino Array**	**56.75**	**359**	P	**P**	**05 12 32.1**	**-0.1**
	comp=Z,5.8nm,0.7s,mb4.7,baz=175,slow=8.0,SNR=23						
ZAK	**Zakamensk**	**59.43**	**356**	*e*P	**P**	**05 12 51.0**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s,mb3.9						
OPO	**Ambohidratompo**	**59.62**	**254**	P	**P**	**05 12 52.3**	**0.0**
	comp=Z,1.4nm,0.3s,mb4.5,baz=149,slow=1.0,SNR=4.0						
AAK	**Ala-Archa**	**59.97**	**332**	⇑*i*P	**P**	**05 12 55.7**	**+1.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
AAK				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.0						
MK31	**Makanchi Array**	**60.26**	**340**	P	**P**	**05 12 56.4**	**-0.3**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
MKAR	**Makanchi Array**	**60.26**	**340**	P	**P**	**05 12 56.5**	**-0.2**
	comp=Z,16nm,0.6s,mb5.3,baz=144,slow=7.7,SNR=138						
TLY	**Talaya**	**60.70**	**357**	*e*P	**P**	**05 12 59.3**	**-0.4**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
TLY				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.3						
ASAJ	**Asahikawa**	**61.55**	**28**	LR	LR	05 41 35.1	
	comp=Z,43nm,18.2s,MS3.6,baz=164,slow=38						
KLR	**Kul'dur**	**61.73**	**17**	*e*P	**P**	**05 13 02.9**	**-3.8**
YSS	**Yuzh-Sakhalins**	**63.82**	**26**	*e*P	**P**	**05 13 19.5**	**-1.0**
YSS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
KURK	**Kurchatov**	**64.87**	**340**	⇑*e*P	**P**	**05 13 27.0**	**-0.4**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
KURK	**Kurchatov**	**64.87**	**340**	⇑*e*P	**P**	**05 13 27.0**	**-0.4**
	comp=Z,10nm,0.8s,mb4.9						
MAW	**Mawson**	**65.64**	**197**	P	**P**	**05 13 31.6**	**-0.8**
	comp=Z,2.5nm,0.6s,mb4.4,baz=39,slow=5.8,SNR=12						
ZAL	**Zalesovo**	**65.86**	**345**	P	**P**	**05 13 33.7**	**-0.2**
	comp=Z,2.3nm,0.5s,mb4.4,baz=296,slow=2.7,SNR=5.5						
ZAL	**Zalesovo**	**65.86**	**345**	P	**P**	**05 13 33.7**	**-0.2**
BOD	**Bodaibo**	**66.91**	**3**	*e*P	**P**	**05 13 40.0**	**-0.5**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.2						
VOSK	**Vostochnaya**	**69.29**	**337**	P	**P**	**05 13 56.5**	**+1.1**
BVA0	**Borovoye Array**	**69.75**	**337**	P	**P**	**05 13 58.1**	**-0.2**
BRVK	**Borovoye**	**69.82**	**337**	*e*P	**P**	**05 13 57.2**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	**69.82**	**337**	*e*P	**P**	**05 13 57.2**	**-1.5**
	comp=Z,4.3nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**70.16**	**337**	*e*P	**P**	**05 14 00.5**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
CHKZ	**Chkalovo**	**70.16**	**337**	*e*P	**P**	**05 14 00.5**	**-0.3**
	comp=Z,8.9nm,0.6s,mb4.9						
ZRNK	**Zerenda**	**70.24**	**336**	*e*P	**P**	**05 14 00.1**	**-1.2**
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
ZRNK	**Zerenda**	**70.24**	**336**	*e*P	**P**	**05 14 00.1**	**-1.2**
	comp=Z,6.8nm,0.8s,mb4.6						
AB31	**Akbulak array**	**71.79**	**329**	*i* P	**P**	**05 14 10.3**	**-0.4**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
YAK	**Yakutsk**	**72.93**	**10***c*	*i*P	**P**	**05 14 16.6**	**-0.9**
YAK				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.2						
VNDA	**Vanda**	**73.67**	**169**	P	**P**	**05 14 21.1**	**-0.7**
	comp=Z,1.6nm,0.7s,mb4.0,baz=317,slow=6.0,SNR=8.0						
MA2	**Magadan**	**76.50**	**21**	*e*P	**P**	**05 14 38.7**	**+0.6**
MA2				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ARU	**Arti**	**77.01**	**334**	⇓*i*P	**P**	**05 14 42.7**	**+1.7**
ARU				*e*	pP	05 14 52.4	-2.9
ARU				*e*		05 17 36.9	
ARU				*e*S	S	05 24 31.2	+5.5
ARU				*e*SS	SS	05 29 29.3	+6.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KIV	**Kislovodsk**	**79.18**	**318**	*e*P	**P**	**05 14 53.9**	**+0.9**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
QSPA	**South Pole Qui**	**80.85**	**180**	*e*P	**P**	**05 15 01.4**	**-0.7**
BRTR	**Keskin Array B**	**84.05**	**312**	P	**P**	**05 15 18.7**	**0.0**
	comp=Z,2.1nm,0.8s,mb4.3,baz=131,slow=6.9,SNR=11						
OBN	**Obninsk**	**87.10**	**327**	*e*P	**P**	**05 15 33.4**	**-0.5**
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.9						
BILL	**Bilibino**	**87.17**	**19**	*e*P	**P**	**05 15 34.7**	**+0.5**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.4						
SNAA	**Sanae**	**87.81**	**197**	*e*P	**P**	**05 15 39.1**	**+1.8**
SNAA				*e*		05 15 48.0	
FINES	**FINESS Array B**	**94.16**	**332**	P	**P**	**05 16 06.1**	**-0.7**
	comp=Z,1.7nm,0.9s,mb4.5,baz=62,slow=4.5,SNR=4.3						
ARCES	**ARCESS Array B**	**95.91**	**339**	LR	LR	06 05 32.8	
	comp=Z,86nm,18.1s,MS4.3,baz=107,slow=39						
TORD	**Torodi Ar. Bea**	**107.88**	**281**	PKiKP	PKiKP	05 21 17.1	+1.7
	comp=Z,0.4nm,1.1s,baz=111,slow=1.9,SNR=4.5						
NVAR	**Mina Array Bea**	**129.26**	**47**	PKP	PKPdf	05 21 59.3	+3.1
	comp=Z,0.5nm,0.8s,baz=179,slow=1.2,SNR=4.2						
CPUP	**Villa Florida**	**141.99**	**202**	PKP	PKPdf	05 22 22.4	+2.6
	comp=Z,0.5nm,0.6s,baz=172,slow=7.9,SNR=2.9						
CPUP	**Villa Florida**	**141.99**	**202**	PKP	PKPdf	05 22 22.4	+2.6
WMOK	**Wichita Mounta**	**144.60**	**40**	*e*PKIKP	PKPdf	05 22 24.7	+0.3
WMOK				*e*		05 22 34.0	
NCB	**Newcomb**	**145.25**	**3**	*e*PKPdf	PKPdf	05 22 26.3	+0.8
NCB				*e*pPKPdf	pPKPdf	05 22 36.2	-4.5
BDFB	**Brasilia**	**145.83**	**224**	PKPbc	PKPbc	05 22 29.0	+1.9
	comp=Z,5.2nm,0.8s,baz=166,slow=3.7,SNR=11						
BDFB	**Brasilia**	**145.83**	**224**	*e*PKPdf	PKPdf	05 22 29.0	+2.5
CCM	**Cathedral Cave**	**146.36**	**28**	*e*PKPab	PKPab	05 22 29.9	+0.3
CCM				*e*pPKPdf	pPKPdf	05 22 38.9	-3.7
JCT	**Junction City**	**146.43**	**47**	*e*PKPab	PKPab	05 22 31.4	+1.4
JCT				*e*pPKPdf	pPKPdf	05 22 40.1	-2.6
ACSO	**Alum Creek Sta**	**147.52**	**16**	*e*PKPbc	PKPbc	05 22 33.2	+1.1
MIAR	**Mount Ida**	**147.86**	**35**	*e*PKPbc	PKPbc	05 22 34.2	+1.3
MIAR				*e*pPKPdf	pPKPdf	05 22 44.1	-1.0
SSPA	**Standing Stone**	**148.20**	**9**	*e*PKPbc	PKPbc	05 22 34.6	+0.7
WCI	**Wyandotte Cave**	**148.29**	**22**	*e*PKPbc	PKPbc	05 22 35.7	+1.6
WCI				*e*pPKPdf	pPKPdf	05 22 43.8	-2.0
OXF	**Oxford**	**150.09**	**30**	*e*PKP2	PKPab	05 22 40.2	-4.4
PLAL	**Pickwick Lake**	**150.34**	**27**	*e*PKPbc	PKPbc	05 22 39.7	+0.6
PLAL				*e*		05 22 49.1	
SWET	**Sewanee**	**151.06**	**24**	*e*PKPbc	PKPbc	05 22 41.7	+0.8
CPCT	**Cooper Cave**	**151.40**	**22**	*e*PKPbc	PKPbc	05 22 43.2	+1.5

BJI 07 05:06:37.0, 22.43N×100.55E, h18km**, ML3.7, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.35**	**36**	PG	Pg	05 07 37.3	-3.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KMI				SG	Sg	05 08 16.2	-8.4
KMI				Smax			
	comp=N,65nm,1.1s						
KMI				Smax			
	comp=E,71nm,1.3s						
NANT	Nan	3.61	178	PN	Pn	05 07 33.0	+0.9
NANT				PG	Pg	05 07 43.5	-2.8
NANT				SG	Sg	05 08 35.0	+1.9
CHG	Chiang Mai	3.90	203	PG	Pg	05 07 48.3	-3.4
CHG				SG	Sg	05 08 40.1	-2.1

PRE 07 05:18:29.7±1.4, 2159S×3260E, h5km, ML3.4, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	Messina	2.51	252	eP	Pn	05 19 12.9	+1.8
MSNA				eS	Sn	05 19 42.5	+0.4
MSNA				AML	AML	05 20 14.6	
	comp=Z,66nm,0.2s						
POGA	Pongola	5.82	189	eP	Pn	05 19 56.3	-0.4
POGA				eS	Sn	05 21 01.1	-2.7
POGA				AML	AML	05 21 46.0	
	comp=Z,14nm,0.5s						
BOSA	Boshof	9.65	222	eP	Pn	05 20 50.5	+1.3
BOSA				eS	Sn	05 22 33.6	-4.4
BOSA				AML	AML	05 23 50.1	
	comp=Z,4.4nm,0.6s						
HVD	Hendrik Verwoe	11.01	214	eP		05 19 57.3	

*JMA **07** 05:27:28.8±0.2, 2665N×14428E, h38km, M4.4*
*ISCJB **07** 05:27:30.7±0.7, 2668N±004×14422E±006, h33km, mb4.1/14, Error ellipse: s-maj=7.3km s-min=6.0km az=172.6*
*NEIC **07** 05:27:30.9±0.6, 2633N×144.13E, h35km, mb4.4/4, Error ellipse: s-maj=27.1km s-min=10.2km az=69.0*
*IDC **07** 05:27:31.1±7.7, 2639N×144.12E, h31km±54km, mb3.9/8, mb1 4.1/9, mb1mx3.9/17, mbtmp4.1/9, ML4.1/1, Error ellipse: s-maj=34.5km s-min=23.8km az=60.0*
ISC 07 05:27:31.8±0.7, 2652N±004×14419E±007, h35km, n35, σ1s02/40, mb4.1/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.81	274	P	Pn	05 27 59.5	-0.9
JHHJ				eS	Sn	05 28 23.3	+1.3
CBIJ	Chichi jima	1.88	288	Pn	Pn	05 28 00.4	-1.0
	75nm,0.3s,baz=97,slow=23,SNR=26						
CBIJ				Sn	Sn	05 28 23.7	-0.2
	159nm,0.3s,baz=274,slow=23,SNR=14						
CBIJ	Chichi jima	1.88	288	P	Pn	05 28 00.3	-1.1
CBIJ				S	Sn	05 28 23.5	-0.4
JHJ2	Mitsune	7.59	331	eS	Sn	05 30 45.0	+0.4
BSO1	Boso 1	8.57	342	eS	Sn	05 31 06.7	-1.9
BSO2	Boso 2	8.72	341	eS	Sn	05 31 15.3	+2.9
BSO3	Boso 3	8.84	340	eS	Sn	05 31 15.5	+0.1
BSO4	Boso 4	9.07	340	eS	Sn	05 31 20.9	-0.1
JHU	Hanno	10.21	337	eS	Sn	05 31 46.3	-2.6
JRY	Ryogami san	10.49	336	eS	Sn	05 31 55.6	-0.2
JHO	Hitachi	10.52	344	eS	Sn	05 31 52.3	-4.3
JAG	Ashikaga	10.67	339	eS	Sn	05 31 59.2	-1.0
MJAR	Matsushiro Arr	11.21	334	Pn	Pn	05 30 10.0	+0.5
	1.3nm,0.3s,baz=155,slow=10.0,SNR=20						
MJAR				Sn	Sn	05 32 15.8	+2.2
	0.6nm,0.3s,baz=183,slow=20,SNR=4.6						
MAJO	Matsushiro	11.22	334	ePn	Pn	05 30 10.3	+0.8
	17nm,0.9s						
MAT	Matsushiro	11.22	334	P	Pn	05 30 10.4	+0.9
MAT				S	Sn	05 32 13.2	-0.4
MAT	Matsushiro	11.22	334	P	Pn	05 30 10.0	+0.5
	9.0nm,0.8s						
MAT				eS	Sn	05 32 13.0	-0.6
SONM	Songino Array	36.37	316	P	P	05 34 33.5	+1.0
	1.1nm,0.7s,mb3.9,baz=114,slow=7.9,SNR=4.7						
ASAR	Alice Springs	50.87	192	P	P	05 36 27.9	-1.2
	0.3nm,0.5s,mb3.4,baz=13,slow=14,SNR=4.6						
MKAR	Makanchi Array	52.22	310	P	P	05 36 40.1	+0.9
	2.7nm,0.5s,mb4.4,baz=90,slow=9.2,SNR=27						
KURK	Kurchatov	54.66	315	eP	P	05 36 57.1	0.0
	10nm,1.4s,mb4.7						
STKA	Stephens Creek	58.12	183	P	P	05 37 17.1	-4.7
	0.7nm,0.4s,mb4.0,baz=14,slow=10,SNR=2.9						
CHKZ	Chkalovo	59.49	319	eP	P	05 37 31.4	+0.1
	1.5nm,0.6s,mb4.2						
ZRNK	Zerenda	60.52	318	eP	P	05 37 39.0	+0.7
	1.2nm,0.4s,mb4.4						
JOF	Joensuu	76.38	334	ep	P	05 39 16.6	-0.8
	1.3nm,0.5s,mb4.1						
KAF	Kangasniemi	78.76	335	ep	P	05 39 30.1	-0.6
	2.3nm,0.5s,mb4.4,baz=52,slow=5.0						
FINES	FINESS Array B	79.25	334	P	P	05 39 33.4	+0.1
	0.8nm,0.4s,mb4.0,baz=67,slow=3.9,SNR=12						
FINES	FINESS Array B	79.25	334	P	P	05 39 33.4	0.0
NVAR	Mina Array Bea	79.46	52	P	P	05 39 35.9	+1.4
	0.7nm,0.7s,mb3.7,baz=296,slow=3.3,SNR=6.8						
NVAR	Mina Array Bea	79.46	52	P	P	05 39 35.9	+1.4
AKASG	Malin Array Be	84.13	325	P	P	05 39 58.6	-0.5
	1.3nm,0.6s,mb4.2,baz=50,slow=5.3,SNR=7.0						
NB2	NORSAR Subarra	84.80	339	P	P	05 40 02.6	+0.1
	comp=Z,1.1nm,0.7s,mb4.1,baz=41,slow=5.1						
NOA	NORSAR Array B	84.80	339	P	P	05 40 01.7	-0.8
	comp=Z,1.8nm,0.8s,mb4.3,baz=43,slow=4.8,SNR=4.5						
NOA	NORSAR Array B	84.80	339	P	P	05 40 01.7	-0.8
GERES	GERESS Array B	92.92	330	P	P	05 40 41.4	+0.2
	comp=Z,0.2nm,0.3s,mb4.1,baz=58,slow=3.3,SNR=3.8						
PLCA	Paso Flores	148.01	125	PKPbc	PKPbc	05 47 13.1	-0.4
	comp=Z,2.2nm,0.9s,baz=30,slow=4.5,SNR=2.8						

IDC 07 05:48:33.3±4.1, 2028S×17452W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.8/12, mbtmp3.9/2, Error ellipse: s-maj=287.3km s-min=34.7km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	47.74	256	P	P	05 57 11.9	0.0
	2.7nm,0.7s,baz=89,slow=8.2,SNR=34						
ASAR				PcP	PcP	05 58 41.8	+0.6
	1.2nm,0.9s,baz=110,slow=3.8,SNR=5.0						
NVAR	Mina Array Bea	78.66	42	P	P	06 00 37.4	+0.3
	0.7nm,0.8s,baz=200,slow=7.9,SNR=4.2						
BRTR	Keskin Array B	149.05	315	PKPbc	PKPbc	06 08 24.2	+0.9
	1.2nm,0.8s,baz=116,slow=2.8,SNR=5.4						
GERES	GERESS Array B	150.74	349	PKPbc	PKPbc	06 08 26.7	-0.7
	0.5nm,0.7s,baz=20,slow=3.2,SNR=4.2						

*IDC **07** 05:54:06.8±1.4, 3061N×5092E, h0km, mb3.8/9, mb1 3.9/12, mb1mx3.8/25, mbtmp3.8/12, ML3.6/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/25, Error ellipse: s-maj=27.9km s-min=22.7km az=169.0*
*NEIC **07** 05:54:07.0, 3056N×5084E, h14km, mb4.3/3, ML3.8(THR), MN3.7(TEH), After THR.*
*CSEM **07** 05:54:08.2±0.1, 3055N×5087E, h15km, ML3.7, Error ellipse: s-maj=3.5km s-min=1.9km az=55.0*
*ISCJB **07** 05:54:08.5±0.3, 3076N±003×5099E±003, h10km, mb3.9/12, Error ellipse: s-maj=4.4km s-min=3.9km az=32.6*
*TEH **07** 05:54:09.9, 3060N×5094E, h4km, Mn3.7*
*THR **07** 05:54:09.0±0.9, 3059N×5096E, h18km±10km, ML3.8*
ISC 07 05:54:10.0±0.3, 3068N±003×5100E±003, h10km, n59, σ1s42/72, mb3.9/12, 2C-1D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	Kazeroon	1.15	141	ePn	Pn	05 54 31.6	-0.6
SHI	Shiraz	1.67	128	ePn	Pn	05 54 39.4	+0.2
SHI				eSn	Sn	05 55 01.6	+0.9
IPIR	Pirpir	2.00	357	ePn	Pn	05 54 45.3	+1.5
IPIR				eSn	Sn	05 55 11.6	+2.7
IMOK	Mook	2.20	137	ePn	Pn	05 54 47.1	+0.5
ISRV	Sarvestan	2.24	125	ePn	Pn	05 54 47.5	+0.4
SHGR	Shooshtar-Gavs	2.36	308	ePn	Pn	05 54 49.7	+1.0
SHGR				eSg	Sg	05 55 23.7	-2.1
SHGR				AML	AML	05 55 33.3	
	comp=E,843nm,0.5s						
SHGR				AML	AML	05 55 36.8	
	comp=N,725nm,0.5s						
SHGR	Shooshtar-Gavs	2.36	308	ePg	Pn	05 54 49.0	+0.2
SHGR				eSg	Sn	05 55 20.0	+2.2
SHGR	Shooshtar-Gavs	2.36	308	ePn	Pn	05 54 49.7	+0.9
	SNR=52						
IZEF	Zefreh	2.48	27	ePn	Pn	05 54 52.4	+1.9
IZEF				eSn	Sn	05 55 23.2	+2.4
NASN	Na'in	2.61	36	ePN	Pn	05 54 54.1	+1.8
NASN	Na'in	2.61	36	ePn	Pn	05 54 54.0	+1.7
IKLH	Kalahroud	2.68	10	ePn	Pn	05 54 54.2	+1.1
GHIR	Ghir-Karzin	2.95	144	ePN	Pn	05 54 56.1	-0.7
GHIR				AML	AML	05 55 54.4	
	comp=E,264nm,0.6s						
GHIR				AML	AML	05 55 54.8	
	comp=N,209nm,0.8s						
GHIR	Ghir-Karzin	2.95	144	ePn	Pn	05 54 56.0	-0.8
UMR	Umm Al-Rimmam	3.06	249	eP	Pn	05 54 58.9	+0.5
KBD	Kabd	3.24	243	eP	Pn	05 55 01.4	+0.6
KBD				eS	Sn	05 55 40.3	+0.8
KBD				AML	AML	05 55 40.8	
	comp=Z,372nm,0.4s						
MIB	Mutribah	3.29	256	eP	Pn	05 55 02.0	+0.5
MIB				eS	Sn	05 55 41.8	+1.2
MIB				AML	AML	05 55 50.0	
	comp=Z,163nm,0.5s						
RDF	Al-Radifah	3.47	241	eP	Pn	05 55 04.8	+0.7
RDF				eS	Sn	05 55 46.4	+1.2
RDF				AML	AML	05 55 48.5	
	comp=Z,286nm,0.4s						
NAY	Al-Naaiem	3.56	247	eP	Pn	05 55 06.0	+0.7
NAY				eS	Sn	05 55 48.2	+0.8
NAY				AML	AML	05 55 50.6	
	comp=Z,106nm,0.4s						
ASAO	Ashtian	3.95	348	ePn	Pn	05 55 12.1	+1.6
ASAO				SN	Sn	05 55 58.1	+1.2
ASAO				AML	AML	05 56 02.9	
	comp=E,74nm,0.4s						
ASAO				AML	AML	05 56 02.9	
	comp=N,123nm,0.3s						
ASAO	Ashtian	3.95	348	ePn	Pn	05 55 11.0	+0.4
ASAO				eSn	Sn	05 55 58.0	+1.1
ASAO	Ashtian	3.95	348	ePn	Pn	05 55 12.1	+1.5
	SNR=52						
ASAO				Sn	Sn	05 55 58.1	+1.2
	SNR=52						
IKOM	Komasi	4.57	321	ePn	Pn	05 55 19.5	+0.4
KRBR	Kerman	5.03	96	ePn	Pn	05 55 26.7	+1.3
SNGE	Sanandaj	5.37	326	ePn	Pn	05 55 31.1	+1.0
SNGE				AML	AML	05 56 41.5	
	comp=N,66nm,0.5s						
SNGE	Sanandaj	5.37	326	ePn	Pn	05 55 30.0	-0.1
ILIN	Laeen	5.43	322	ePn	Pn	05 55 31.0	+0.1
BHD	Baghdad	6.19	296	ex	x	05 56 07.0	
BHD				ex	x	05 57 37.0	
WSAR	Wadi Sarin	10.06	136	Pn	Pn	05 56 31.4	-3.1
	comp=N,0.4nm,0.3s,baz=322,slow=8.7,SNR=8.2						
WSAR				Sn	Sn	05 58 18.2	-9.1
	comp=N,0.4nm,0.3s,baz=5.2,slow=23,SNR=3.1						
WSAR				LR	LR	06 00 54.2	
	comp=N,54nm,18.6s,baz=6.2,slow=40						
WSAR	Wadi Sarin	10.06	136	Pn	Pn	05 56 31.4	-3.1
WSAR				Sn	Sn	05 58 18.2	-9.1
ASF	Jabal al Asfar	12.14	281	Pn	Pn	05 56 59.9	-3.1
	comp=N,0.7nm,0.3s,baz=308,slow=16,SNR=5.0						
BRTR	Keskin Array B	16.80	307	Pn	Pn	05 58 04.6	-0.7
	comp=N,0.1nm,0.3s,baz=122,slow=12,SNR=5.7						
AKTK	Aktyubinsk	20.42	13	P	P	05 58 46.7	-0.6
AKTK	Aktyubinsk	20.42	13	P	P	05 58 46.7	-0.6
AKTO	Aktyubinsk	20.42	13	P	P	05 58 46.7	-0.6
	comp=N,0.7nm,0.4s,baz=217,slow=15,SNR=2.7						
MLR	Muntele Rosu	24.52	314	P	P	05 59 29.8	+0.3
	comp=N,5.4nm,0.7s,mb4.2,baz=180,slow=4.0,SNR=12						
MLR	Muntele Rosu	24.52	314	⇑iP	P	05 59 28.2	-1.3
VOIR		25.05	313	⇑iP	P	05 59 34.7	+0.3
AKASG	Malin Array Be	25.77	327	P	P	05 59 38.4	-2.5
	comp=N,0.7nm,0.4s,mb3.6,baz=136,slow=9.1,SNR=9.1						
AKASG	Malin Array Be	25.77	327	P	P	05 59 38.3	-2.6
BURAR	Bucovina Array	26.01	318	⇓iP	P	05 59 43.2	+0.1
BVAR	Borovoye Array	26.43	27	P	P	05 59 46.8	0.0
	comp=N,0.4nm,0.3s,mb3.4,baz=205,slow=6.4,SNR=3.4						
MKAR	Makanchi Array	28.99	47	P	P	06 00 10.0	+0.2
	comp=N,0.3nm,0.8s,mb3.1,baz=223,slow=7.4,SNR=2.5						
MKAR	Makanchi Array	28.99	47	P	P	06 00 09.9	+0.1
JOF	Joensuu	34.65	344	ep	P	06 00 56.6	-2.9
	comp=N,1.2nm,0.4s,mb4.2						
FIA1	FINESS Array S	34.85	339	eP	P	06 00 58.7	-2.5
FIA1	FINESS Array S	34.85	339	eP	P	06 00 58.7	-2.5
FINES	FINESS Array B	34.85	339	P	P	06 00 59.0	-2.2
	comp=N,1.3nm,0.4s,mb4.2,baz=143,slow=10,SNR=26						
FINES	FINESS Array B	34.85	339	P	P	06 00 59.0	-2.2
KAF	Kangasniemi	35.30	340	ep	P	06 01 02.5	-2.6
	comp=N,1.4nm,0.4s,mb4.2,baz=142,slow=8.8						
NOA	NORSAR Array B	40.03	331	P	P	06 01 42.2	-2.9
	comp=N,0.3nm,0.4s,mb3.4,baz=120,slow=8.3,SNR=2.7						
KEV	Kevo	41.42	348	ep	P	06 01 53.8	-2.8
	comp=N,2.4nm,0.6s,mb4.0						
ARCES	ARCESS Array B	41.52	347	P	P	06 01 54.9	-2.5
	comp=N,0.9nm,0.7s,mb3.5,baz=153,slow=11,SNR=6.6						
ARCES	ARCESS Array B	41.52	347	P	P	06 01 54.8	-2.6
ARE0	ARCESS Array S	41.52	347	P	P	06 01 53.9	-3.5
ARE0	ARCESS Array S	41.52	347	P	P	06 01 53.9	-3.5
TORD	Torodi Ar. Bea	48.55	260	P	P	06 02 51.7	-1.6
	comp=N,1.4nm,0.4s,mb4.3,baz=54,slow=8.4,SNR=37						
SUMG	Summit	60.89	340	eP	P	06 04 21.9	-0.9
	comp=N,4.8nm,0.8s,mb4.7						
SUMG	Summit	60.89	340	eP	P	06 04 21.9	-0.9

*ISCJB **07** 06:09:45.0±3.1, 163S±0.1×1667E±0.1, h58km±37km, mb4.0/2, MS3.6/4, Error ellipse: s-maj=27.5km s-min=19.3km az=95.7*
*IDC **07** 06:09:47.8±8.4, 1633S×16692E, h76km±76km, mb3.8/2, mb1 4.1/4, mb1mx3.7/14, mbtmp4.2/4, ML4.5/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/18, Error ellipse: s-maj=60.4km s-min=40.3km az=13.0*
ISC 07 06:09:45.2±2.9, 162S±02×1668E±01, h50km±35km, n18, σ0s45/9, mb4.0/2, MS3.6/4, 1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKM	Butte a Klehm	2.04	138	⇓iP	Pn	06 10 16.4	-0.6
BKM				S	Sn	06 10 41.9	+0.6
DZM	Mont Dzumac	5.90	183	eP	Pn	06 11 10.2	+0.2
DZM				eS	Sn	06 12 16.0	-0.2
DZM	Mont Dzumac	5.90	183	P	Pn	06 11 10.2	+0.2
	13nm,0.3s,baz=221,slow=22,SNR=336						
DZM				S	Sn	06 12 15.5	-0.7
	3.8nm,0.3s,baz=97,slow=22,SNR=3.2						
DZM				LR	LR	06 13 19.2	
	comp=Z,686nm,19.1s,baz=18,slow=37						
CTA	Charters Tower	19.92	256	P	Pn	06 14 15.0	+0.2
	0.3nm,0.3s,baz=80,slow=13,SNR=7.3						
CTA				LR	LR	06 21 09.7	
	comp=Z,116nm,18.9s,baz=54,slow=34						
URZ	Urewera	23.82	160	LR	LR	06 22 25.5	
	comp=Z,208nm,21.2s,MS3.6,baz=155,slow=32						
STKA	Stephens Creek	27.75	231	LR	LR	06 25 48.0	
	comp=Z,152nm,21.2s,MS3.5,baz=28,slow=35						
ASAR	Alice Springs	31.77	251	P	P	06 16 05.1	+0.4
	2.5nm,0.7s,mb4.2,baz=77,slow=9.0,SNR=33						
ASAR				LR	LR	06 28 13.1	
	comp=Z,168nm,18.4s,MS3.8,baz=266,slow=35						
PPT	Papeete	41.70	98	eLR	LR	06 29 46.9	
	78nm,24.5s						
PDAR	Pinedale Array	96.23	47	LR	LR	07 02 03.3	
	comp=Z,17nm,20.1s,MS3.5,baz=69,slow=33						
MKAR	Makanchi Array	97.92	316	P	P	06 23 15.3	-0.4
	0.2nm,0.7s,mb3.8,baz=116,slow=3.4,SNR=2.3						
ARCES	ARCESS Array B	121.51	345	PKP	PKPdf	06 28 32.5	-0.7
	1.7nm,0.9s,baz=27,slow=2.2,SNR=4.9						
CABF	La Chapelle	145.65	336	ePKP1	PKPbc	06 29 24.1	+5.7
	21nm,1.2s						
FLN	La Foliniere	145.85	345	ePKP1	PKPbc	06 29 23.1	+4.1
	15nm,0.8s						
LDF	La Druitiere	145.92	344	ePKP1	PKPbc	06 29 24.2	+5.0
SSF	Saint Saulge	146.21	339	ePKP1	PKPbc	06 29 23.1	+3.0
LPL	La Plagne	146.29	334	ePKP1	PKPbc	06 29 26.9	+6.6
	2.9nm,0.5s						
LPG	La Plagne	146.30	334	ePKP1	PKPbc	06 29 26.8	+6.5
AVF	Avril sur Loir	146.50	339	ePKP1	PKPbc	06 29 24.1	+3.2

MAN 07 06:21:03.1, 1332N×12014E, h1km, mb2.7, ML4.2, MS1.5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.43	15	eP	Pg	06 21 11.2	-0.1
LUBP				eS	Sg	06 21 16.2	-0.7
PGP	Puerto Galera	0.82	77	⇓eP	Pg	06 21 19.0	+0.2
PGP				eS	Sg	06 21 28.2	-1.1
BUSP	Coron	1.31	177	eP	Pg	06 21 29.2	+1.0
BUSP				eS	Sg	06 21 46.9	+1.7
BOAC	Boac	1.67	85	eP	Pn	06 21 33.1	-0.4
BOAC				eS	Sn	06 21 56.7	+1.2
OTRP	Odiongan	2.07	117	eP	Pn	06 21 40.0	+1.0
ENPP	El Nido	2.21	198	eP	Pn	06 21 42.1	+1.2
ENPP				eS	Sn	06 22 08.8	0.0
POLP	Polilio Island	2.24	51	eP	Pn	06 21 42.0	+0.6
POLP				eS	Sn	06 22 10.4	+0.8
CUYO	Cuyo Island	2.60	161	eP	Pn	06 21 46.9	+0.6
BALP	Baler	2.78	30	eP	Pn	06 21 49.9	+1.1

CASC 07 06:23:10.8±1.9, 1174N×8630W, h91km±23km, MD4.1, ML2.1, 3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGAN	Managua	0.41	7	eP	Pn	06 23 25.2	+0.3
CONN	Concepcion	0.68	105	⇓eP	Pn	06 23 27.4	+0.3
MOMJ	Momotombo	0.71	340	eP	Pn	06 23 27.0	-0.5
MIRN	Miramar	0.81	330	eP	Pn	06 23 28.1	-0.3
MIRN				eS	Sn	06 23 43.5	+1.9
MIRN				i		06 23 44.7	
	comp=Z,91nm,0.6s						
MADN	Villa Maderas	0.82	114	⇓eP	Pn	06 23 28.7	+0.2
LEON	Leon	0.89	319	⇓iP	Pn	06 23 28.8	-0.5
BOA	Boaco	0.93	37	iP	Pn	06 23 29.3	-0.5
BOA				eS	Sn	06 23 44.5	+0.6
BOA				i		06 23 45.2	
	comp=E,9.6nm,0.6s						
JCR	Jicaral	2.21	148	eS	Sn	06 24 12.6	+0.2
CGA2	Cerro Gallo 2	2.48	133	eS	Sn	06 24 20.5	+1.5
PRS1	Puriscal	2.62	132	eS	Sn	06 24 24.4	+2.3
BUS	Buena Vista	3.31	131	eP	Pn	06 24 03.6	+3.2
BUS				eS	Sn	06 24 42.0	+3.3

BJI 07 06:31:54.6, 3742N×7463E, h14km, ML3.2, 5C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.34	26	⇑iP	Pn	06 32 34.2	+1.5
KSH				S	Sn	06 33 05.0	+3.8
KSH				Smax			
	comp=N,188nm,0.7s						
KSH				Smax			
	comp=E,271nm,1.0s						
TKM2	Tokmak 2	5.54	7	⇓Pn	Pn	06 33 18.0	+1.4
	comp=E,0.3nm,0.5s						
TKM2				⇑Sn	Sn	06 34 20.7	+0.5
	comp=E,0.9nm,0.6s						
KK31	Karatay Array	6.49	332	⇑Pn	Pn	06 33 29.2	-0.5
	comp=E,0.6nm,0.3s,baz=137,slow=12,SNR=14						
KK31				⇑Sn	Sn	06 34 43.2	-0.3
	comp=E,5.3nm,0.8s,baz=193,slow=50						
MK07	Makanchi Array	10.93	29	⇑Pn	Pn	06 34 23.4	-7.1
	comp=E,0.9nm,0.9s,baz=107,slow=14						
MK07				⇓Sn	Sn	06 36 01.4	-31
	comp=E,0.6nm,0.6s,baz=95,slow=26						

*ISCJB **07** 06:42:37.9±0.6, 1047N±005×6227W±003, h20km±7km, Error ellipse: s-maj=8.0km s-min=5.4km az=165.4*
*FUNV **07** 06:42:39.3, 1047N×6233W, h5km, MW3.2*
*NEIC **07** 06:42:42.8, 1046N×6189W, h6km, MD3.7(TRN), After TRN.*
*TRN **07** 06:42:45.2, 1046N×6169W, h19km, MD3.7*
ISC 07 06:42:38.1±0.6, 1047N±004×6227W±003, h13km±5km, n21, σ1s02/33, 1C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.18	14	eP	Pg	06 42 43.0	+0.8
GUIV				eS	Sg	06 42 46.6	+1.4
GUNV	Guanoco	0.73	245	⇓eP	Pg	06 42 51.1	-1.3
GUNV				eS	Sg	06 43 02.2	+0.2
TPP	Pointe-a-Pierr	0.82	101	eP	Pg	06 42 50.8	-3.2
TPP				eS	Sg	06 42 56.5	-8.2
TRN	Trinidad (W)	0.87	78	eP	Pg	06 42 53.1	-1.8
TRN				eS	Sg	06 42 57.7	-8.6
CRUV	Carupano	0.97	282	eP	Pb	06 42 55.5	-1.3
CRUV				eS	Sb	06 43 07.6	-1.9
TBH	Brigand Hill	1.18	89	eP	Pn	06 42 60.0	-0.3
TBH				eS	Sb	06 43 06.3	-9.2
ITEV	Isla Los Testi	1.22	316	⇓eP	Pn	06 43 00.3	-0.5
ITEV				eS	Sb	06 43 17.4	+0.8
TPR	Prospect	1.63	64	eP	Pn	06 43 06.8	+0.4
TPR				eS	Sg	06 43 31.0	+0.4
GRW	Mount Saint Ca	1.78	19	eP	Pg	06 43 14.0	+1.7
GRW				eS	Sg	06 43 34.3	-1.1
ORIV	Oritupano	1.79	219	⇑eP	Pn	06 43 09.8	+1.1
ORIV				eS	Sn	06 43 32.5	+1.3
PCRV	Puerto La Cruz	2.35	263	eP	Pn	06 43 16.6	+0.2
PCRV				eS	Sn	06 43 44.2	-0.8
IBAV	Isla La Blanqu	2.63	301	eP	Pn	06 43 20.4	+0.1
GURV	El Guri	2.81	197	eP	Pn	06 43 23.9	+1.2
PRGV	PARIAGUAN	2.90	234	eP	Pn	06 43 24.6	+0.7
PRGV				eS	Sn	06 43 58.1	-0.4
CUPV	Cœpira	3.49	264	eP	Pn	06 43 32.6	+0.6
BIRV	Birongo	3.94	270	eP	Pn	06 43 38.6	+0.4
MERV	Las Mercedes	4.15	253	eP	Pn	06 43 41.5	+0.4
TURV	Turiamo	5.48	270	eP	Pn	06 43 59.3	-0.1
BAUV	El Baul	5.89	256	eP	Pn	06 44 05.0	-0.1
TEPV	Terepaima	6.83	266	eP	Pn	06 44 17.9	0.0
MONV	Montecano	7.70	282	⇓eP	Pn	06 44 29.0	-0.8

IDC 07 06:43:38.2±1.2, 1110N×9199E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.8/22, mbtmp4.0/9, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/32, Error ellipse: s-maj=71.4km s-min=16.9km az=55.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	0.92	53	eP	x	06 43 36.7	
PBA				eS	x	06 43 47.3	
PBA				eS	x	06 43 47.5	
PBA				ex	x	06 43 47.7	
	comp=N,15µm,0.5s						
PBA				ex	x	06 43 48.6	
	comp=E,15µm,0.4s						
PSI	Prapat	10.74	140	Pn	Pn	06 46 14.2	+1.0
	comp=E,0.3nm,0.3s,baz=148,slow=14,SNR=12						
PSI				LR	LR	06 50 41.1	
	comp=E,138nm,20.9s,baz=99,slow=39						
MKAR	Makanchi Array	36.51	349	P	P	06 50 45.0	-0.2
	comp=E,1.5nm,0.6s,baz=168,slow=8.2,SNR=17						
ZAL	Zalesovo	43.11	354	P	P	06 51 40.4	+0.2
	comp=E,1.3nm,0.3s,baz=355,slow=10.0,SNR=5.2						
FITZ	Fitzroy Crossi	44.11	131	P	P	06 51 48.4	+0.2
	comp=E,2.4nm,0.9s,baz=322,slow=12,SNR=4.3						
BVAR	Borovoye Array	45.27	342	P	P	06 51 56.8	-0.7
	comp=E,0.3nm,0.5s,baz=139,slow=9.9,SNR=3.8						
ASAR	Alice Springs	53.61	130	P	P	06 53 01.6	+0.5
	comp=E,0.8nm,0.7s,baz=303,slow=6.6,SNR=11						
BRTR	Keskin Array B	58.73	310	P	P	06 53 38.2	+0.5
	comp=E,1.0nm,0.7s,baz=122,slow=9.0,SNR=5.8						
JOF	Joensuu	67.04	334	ep	P	06 54 32.5	-0.6
	comp=E,4.4nm,0.6s						
FINES	FINESS Array B	68.88	332	P	P	06 54 44.5	-0.2
	comp=E,1.0nm,0.6s,baz=104,slow=6.9,SNR=6.7						
ARCES	ARCESS Array B	71.53	340	P	P	06 55 01.1	+0.1
	comp=E,2.2nm,0.8s,baz=71,slow=4.5,SNR=6.6						

*LDG **07** 07:02:02.5±0.3, 1533S×16724E, h10km, Mb5.2/1, Ms4.0/6, Error ellipse: s-maj=60.2km s-min=6.5km az=91.0*
*ISCJB **07** 07:02:04.9±0.5, 1568S±006×16753E±009, h33km, mb4.5/12, MS4.1/17, Error ellipse: s-maj=11.9km s-min=9.2km az=175.5*
*IDC **07** 07:02:06.5±3.7, 1555S×16767E, h41km±32km, mb4.1/9, mb1 4.2/11, mb1mx4.1/15, mbtmp4.4/11, ML4.8/2, MS4.0/16, Ms1 4.0/16, ms1mx3.9/20, Error ellipse: s-maj=26.3km s-min=24.2km az=83.0*
*NEIC **07** 07:02:07.2±1.8, 1561S×16755E, h46km±15km, mb5.0/4, MS4.4/2, Error ellipse: s-maj=16.2km s-min=13.5km az=80.0*

ISC 07 07:02:05.4±3.7**, 15.69S**±0.07×**167.65E**±0.09**, h25**km±26km**, n58,** σ**1.26**/33**, mb4.5**/12**, MS4.1**/16**, 1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKM	**Butte a Klehm**	**2.04**	**164**	⇑*i*P	**Pn**	**07 02 36.8**	**-1.4**
DZM	**Mont Dzumac**	**6.45**	**190**	*e*P	**Pn**	**07 03 39.4**	**+0.7**
DZM				*e*S	**Sn**	**07 04 49.1**	**-2.4**
DZM	**Mont Dzumac**	**6.45**	**190**	P	**Pn**	**07 03 39.2**	**+0.4**
	13nm,0.3s,baz=50,slow=17,SNR=59						
DZM				S	**Sn**	**07 04 52.5**	**+1.0**
	18nm,0.3s,baz=54,slow=18,SNR=4.3						
DZM				LR	LR	07 05 52.9	
	comp=Z,726nm,21.4s,baz=200,slow=34						
DZM	**Mont Dzumac**	**6.45**	**190**	*e*P	**Pn**	**07 03 39.4**	**+0.7**
DZM				*e*S	**Sn**	**07 04 49.0**	**-2.4**
HNR	**Honiara**	**9.76**	**309**	P	**Pn**	**07 04 23.3**	**-0.9**
	12nm,0.3s,baz=275,slow=8.5,SNR=5.2						
HNR				LR	LR	07 07 40.3	
	comp=Z,2µm,20.5s,baz=176,slow=34						
HNR	**Honiara**	**9.76**	**309**	P	**Pn**	**07 04 23.3**	**-0.9**
RAO	**Raoul Island**	**18.95**	**138**	LR	LR	07 12 19.2	
	comp=Z,426nm,21.4s,baz=278,slow=32						
AFI	**Afiamalu**	**19.97**	**88**	LR	LR	07 12 29.1	
	comp=Z,338nm,19.3s,baz=72,slow=31						
ARMA	**Armidale**	**20.75**	**222**	*e*P	**P**	**07 06 48.2**	**+3.9**
CTA	**Charters Tower**	**20.82**	**255**	*e*P	**P**	**07 06 47.8**	**+2.8**
	14nm,1.7s						
CTA	**Charters Tower**	**20.82**	**255**	P	**P**	**07 06 46.6**	**+1.6**
	6.0nm,0.8s,baz=42,slow=15,SNR=6.0						
CTA				LR	LR	07 13 06.5	
	comp=Z,242nm,20.1s,MS3.6,baz=48,slow=32						
URZ	**Urewera**	**23.98**	**161**	P	**P**	**07 07 19.3**	**+1.4**
	13nm,1.0s,mb4.3,baz=343,slow=12,SNR=3.0						
URZ				LR	LR	07 15 21.1	
	comp=Z,712nm,19.4s,MS4.2,baz=8.1,slow=33						
RPZ	**Rata Peaks**	**28.08**	**175**	LR	LR	07 16 45.4	
	comp=Z,465nm,20.6s,MS4.1,baz=166,slow=31						
STKA	**Stephens Creek**	**28.66**	**231**	*e*P	**P**	**07 08 09.0**	**+8.8**
	8.9nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**28.66**	**231**	P	**P**	**07 08 01.0**	**+0.8**
	2.2nm,0.8s,mb4.0,baz=72,slow=13,SNR=2.7						
STKA				LR	LR	07 18 56.7	
	comp=Z,400nm,18.8s,MS4.0,baz=225,slow=35						
RAR	**Rarotonga**	**31.35**	**105**	LR	LR	07 18 03.3	
	comp=Z,354nm,18.8s,MS4.1,baz=289,slow=30						
WB2	**Warramunga Arr**	**31.95**	**257**	*e*P	**P**	**07 08 28.8**	**-0.4**
AS31	**Alice Springs**	**32.68**	**251**	*e*P	**P**	**07 08 36.2**	**+0.5**
ASAR	**Alice Springs**	**32.69**	**251**	P	**P**	**07 08 36.0**	**+0.3**
	4.2nm,0.7s,mb4.5,baz=81,slow=8.9,SNR=43						
ASAR				LR	LR	07 22 23.4	
	comp=Z,260nm,19.1s,MS4.0,baz=44,slow=37						
ASPA	**Alice Springs**	**32.69**	**251**	*e*P	**P**	**07 08 36.2**	**+0.5**
FITZ	**Fitzroy Crossi**	**40.21**	**260**	*e*P	**P**	**07 09 34.6**	**-5.2**
	12nm,0.9s,mb4.6						
PPT	**Papeete**	**40.97**	**99**	*e*S	**S**	**07 15 52.5**	**-4.1**
	84nm,25.8s						
PPT				*e*LQ		07 19 07.0	
	1µm,39.0s						
PPT				*e*LR	LR	07 20 47.9	
	376nm,25.5s						
PPT	**Papeete**	**40.97**	**99**	LR	LR	07 22 19.6	
	comp=Z,293nm,21.9s,MS4.1,baz=206,slow=30						
VNDA	**Vanda**	**61.91**	**181**	LR	LR	07 36 02.2	
	comp=Z,94nm,20.5s,MS3.9,baz=262,slow=33						
KMI	**Kunming**	**75.12**	**302**	P	**P**	**07 13 55.6**	**+10**
KMI				pP	pP	07 14 08.4	+15
KMI				sP	sP	07 14 14.4	+18
KMI				PP	PP	07 16 14.9	-19
KMI				PPP		07 17 48.9	
KMI				LR	LR		
	comp=Z,130nm,14.7s,MS4.4						
LZH	**Lanzhou**	**79.23**	**312**	*e*P	**P**	**07 14 19.0**	**+11**
LZH				pP	pP	07 14 23.5	+7.0
LZH				sP	sP	07 14 26.0	+6.6
MAW	**Mawson**	**81.13**	**202**	P	**P**	**07 14 16.5**	**-2.2**
	comp=Z,0.5nm,0.2s,mb4.1,baz=191,slow=14,SNR=2.6						
MAW				LR	LR	07 47 02.2	
	comp=Z,90nm,19.6s,MS4.1,baz=248,slow=33						
SONM	**Songino Array**	**83.48**	**324**	P	**P**	**07 14 28.2**	**-2.8**
	comp=Z,2.9nm,0.9s,mb4.3,baz=108,slow=3.3,SNR=6.7						
SONM				LR	LR	07 53 51.8	
	comp=Z,99nm,18.6s,MS4.2,baz=160,slow=37						
CMB	**Columbia Colle**	**85.95**	**49**	P	**P**	**07 14 44.7**	**+1.3**
	comp=Z,11nm,1.1s,mb5.0						
NVAR	**Mina Array Bea**	**87.62**	**49**	P	**P**	**07 14 51.2**	**-0.3**
	comp=Z,1.5nm,0.8s,mb4.3,baz=230,slow=6.8,SNR=10						
NVAR	**Mina Array Bea**	**87.62**	**49**	P	**P**	**07 14 51.2**	**-0.4**
TPNV	**Topopah Spring**	**88.60**	**51**	P	**P**	**07 14 56.8**	**+0.6**
	comp=Z,30nm,1.8s,mb5.3						
BMO	**Blue Mountains**	**90.70**	**43**	P	**P**	**07 15 07.3**	**+1.3**
	comp=Z,11nm,1.4s,mb5.0						
PDAR	**Pinedale Array**	**95.33**	**47**	P	**P**	**07 15 27.0**	**-0.4**
	comp=Z,0.2nm,0.6s,mb3.7,baz=222,slow=5.9,SNR=2.2						
PDAR				LR	LR	07 55 52.4	
	comp=Z,38nm,18.9s,MS3.9,baz=71,slow=34						
MKAR	**Makanchi Array**	**98.15**	**316**	P	**P**	**07 15 38.7**	**-1.5**
	comp=Z,1.1nm,0.9s,mb4.4,baz=116,slow=5.5,SNR=6.0						
MKAR	**Makanchi Array**	**98.15**	**316**	P	**P**	**07 15 38.7**	**-1.5**
ZAL	**Zalesovo**	**98.39**	**324**	LR	LR	08 00 08.7	
	comp=Z,70nm,22.0s,MS4.1,baz=259,slow=35						
ARCES	**ARCESS Array B**	**121.27**	**345**	PKP	PKPdf	07 20 52.9	-3.4
	comp=Z,1.0nm,0.7s,baz=83,slow=1.9,SNR=6.1						
CABF	**La Chapelle**	**145.55**	**337**	*e*PKP1	PKPbc	07 21 40.3	-1.3
	comp=Z,79nm,1.4s						
FLN	**La Foliniere**	**145.61**	**346**	*e*PKP1	PKPbc	07 21 38.3	-3.5
	comp=Z,62nm,1.2s						
FLN				*e*R			
	comp=Z,55nm,21.0s						
FLN	**La Foliniere**	**145.61**	**346**	*e*PKP	PKPdf	07 21 38.3	-3.2
FLN				LR	LR		
	comp=Z,50nm,21.0s,MS4.3						
LDF	**La Druitiere**	**145.69**	**346**	*e*PKP1	PKPbc	07 21 38.6	-3.4
	comp=Z,39nm,1.1s						
LOR	**Lormes**	**145.76**	**340**	*e*PKP1	PKPbc	07 21 39.4	-2.8
	comp=Z,71nm,1.4s						
LOR				*e*R			
	comp=Z,61nm,22.2s						
LOR	**Lormes**	**145.76**	**340**	*e*PKP	PKPdf	07 21 39.4	-2.4
LOR				LR	LR		
	comp=Z,60nm,22.3s,MS4.3						
GRR	**Gorron**	**146.05**	**346**	*e*PKP1	PKPbc	07 21 40.1	-3.0
	comp=Z,89nm,1.2s						
SSF	**Saint Saulge**	**146.06**	**340**	*e*PKP1	PKPbc	07 21 40.4	-2.7
	comp=Z,107nm,1.4s						
LPL	**La Plagne**	**146.22**	**336**	*e*PKP1	PKPbc	07 21 41.3	-2.3
LPG	**La Plagne**	**146.22**	**336**	*e*PKP1	PKPbc	07 21 41.4	-2.2
SMF	**Signal de Mont**	**146.31**	**340**	*e*PKP1	PKPbc	07 21 42.5	-1.4
	comp=Z,57nm,1.5s						
AVF	**Avril sur Loir**	**146.35**	**340**	*e*PKP1	PKPbc	07 21 42.6	-1.4
	comp=Z,46nm,1.4s						
SGMF	**Saint Gilles**	**146.54**	**348**	*e*PKP1	PKPbc	07 21 41.4	-3.2
	comp=Z,39nm,1.1s						
ROSF	**Rostrenen**	**146.60**	**349**	*e*PKP1	PKPbc	07 21 41.3	-3.4
	comp=Z,55nm,1.3s						
BGF	**Bois d'Agland**	**146.72**	**341**	*e*PKP1	PKPbc	07 21 42.1	-3.0
TCF	**Toulx Ste Croi**	**147.16**	**341**	*e*PKP1	PKPbc	07 21 43.3	-3.0
	comp=Z,29nm,1.2s						
MFF	**Saint Martin d**	**147.54**	**344**	*e*PKP1	PKPbc	07 21 45.3	-2.1
	comp=Z,57nm,1.2s						
RJF	**Les Rejaudoux**	**148.25**	**341**	*e*PKP1	PKPdf	07 21 46.5	+0.6
RJF				*e*R			
	comp=Z,71nm,20.5s						
RJF	**Les Rejaudoux**	**148.25**	**341**	*e*PKP	PKPdf	07 21 46.5	+0.6
RJF				LR	LR		
	comp=Z,70nm,20.5s,MS4.4						
TORD	**Torodi Ar. Bea**	**166.16**	**261**	PKPab	PKPab	07 23 09.6	+0.5
	comp=Z,0.6nm,0.9s,baz=88,slow=4.6,SNR=3.0						

BEO ***07*** *07:19:12.8±0.2, 43.19N×20.06E, h6km*
PRU ***07*** *07:19:12.0, 43.07N×20.64E, h0km*
CSEM ***07*** *07:19:13.7±0.1, 43.19N×20.05E, h2km, ML3.7, Error ellipse: s-maj=1.6km s-min=1.3km az=98.0*
ISCJB ***07*** *07:19:13.3±0.2, 43.23N±0.01×20.04E±0.02, h2km, Error ellipse: s-maj=2.1km s-min=1.8km az=10.3*
PDG ***07*** *07:19:14.2±0.4, 43.18N×20.01E, h11km±1km*
SKO ***07*** *07:19:14.7, 43.19N×20.10E, h2km*
NEIC ***07*** *07:19:14.2, 43.18N×20.01E, h11km, ML3.2(PDG), ML3.6(BUC), After PDG.*
THE ***07*** *07:19:14.5, 43.29N×19.96E, h0km, ML3.7*
TIR ***07*** *07:19:20.8, 42.57N×19.75E, h6km*
ATH ***07*** *07:20:07.9, 39.45N×20.62E, h10km, MD3.3/3*

ISC 07 07:19:14.4±0.2**, 43.21N**±0.01×**20.06E**±0.02**, h2**km**, n90,** σ**1.10**/133**, 23C-17D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.10**	**305**	Pg	**Pg**	**07 19 15.0**	**-1.4**
SJES				Sg	**Sg**	**07 19 16.6**	**-1.2**
IVA	**Berane**	**0.36**	**199**	⇓*i*Pg	**Pg**	**07 19 20.0**	**-1.2**
IVA				*e*Sg	**Sg**	**07 19 24.9**	**-1.0**
PLE	**Pljevlja**	**0.50**	**284**	⇓*i*Pg	**Pg**	**07 19 23.6**	**-0.4**
PLE				*e*Sg	**Sg**	**07 19 30.2**	**-0.2**
PVY	**Plav**	**0.61**	**186**	⇑*i*Pg	**Pg**	**07 19 24.4**	**-1.7**
PVY				*e*Sg	**Sg**	**07 19 33.3**	**-0.9**
BBLS	**Bajina Basta -**	**0.81**	**325**	*i* Pg	**Pg**	**07 19 29.8**	**-0.1**
BBLS				*i* Sg	**Sg**	**07 19 41.1**	**+0.7**
UPM	**Unac-Piva**	**0.84**	**270**	⇓*i*Pg	**Pg**	**07 19 29.7**	**-0.8**
UPM				*e*Sg	**Sg**	**07 19 42.0**	**+0.6**
NKY	**Niksic**	**0.87**	**243**	⇓*i*Pg	**Pg**	**07 19 29.7**	**-1.4**
NKY				*e*Sg	**Sg**	**07 19 42.5**	**+0.1**
DIVS	**Divcibare**	**0.89**	**357**	*i* Pg	**Pg**	**07 19 31.5**	**0.0**
DIVS				Sg	**Sg**	**07 19 43.7**	**+0.7**
DIVS	**Divcibare**	**0.89**	**357**	*e*Pg	**Pg**	**07 19 31.0**	**-0.4**
DIVS				*e*Sg	**Sg**	**07 19 42.2**	**-0.8**
DIVS	**Divcibare**	**0.89**	**357**	*e*Pg	**Pg**	**07 19 31.0**	**-0.5**
DIVS				Sg	**Sg**	**07 19 43.7**	**+0.7**
TTG	**Podgorica**	**0.97**	**217**	⇑*i*Pg	**Pg**	**07 19 31.0**	**-2.0**
TTG				*i* Sg	**Sg**	**07 19 45.9**	**+0.2**
BRY	**Bratogost**	**1.15**	**255**	⇓*i*Pg	**Pg**	**07 19 34.4**	**-2.1**
BRY				*e*Sg	**Sg**	**07 19 51.8**	**+0.4**
SDA	**Shkodra**	**1.23**	**200**	*i* Pg	**Pg**	**07 19 31.8**	**-6.1**
SDA				*i* Sg	**Sg**	**07 19 37.3**	**-16**
BUM	**Brajici-Budva**	**1.25**	**224**	⇓*i*Pg	**Pg**	**07 19 36.6**	**-1.6**
BUM				*e*Sg	**Sg**	**07 19 55.2**	**+0.8**
TREB	**Trebinje**	**1.35**	**249**	P	**Pn**	**07 19 38.2**	**-2.0**
TREB				S	**Sg**	**07 19 58.3**	**+0.7**
SVIS	**Svilajnac**	**1.38**	**37**	⇑*i*Pg	**Pg**	**07 19 39.6**	**-1.1**
SVIS				Sg	**Sg**	**07 20 00.1**	**+1.5**
HCY	**Herceg Novi**	**1.38**	**237**	⇑*i*Pg	**Pg**	**07 19 39.4**	**-1.3**
HCY				*e*Sg	**Sg**	**07 19 59.5**	**+0.9**
ULC	**Ulcinj**	**1.38**	**206**	⇑*i*Pg	**Pg**	**07 19 39.1**	**-1.7**
ULC				*e*Sg	**Sg**	**07 19 59.5**	**+0.9**
ULC	**Ulcinj**	**1.38**	**206**	⇑*i*Pg	**Pg**	**07 19 39.1**	**-1.7**
ULC				*e*Sg	**Sg**	**07 19 59.5**	**+0.8**
SKO	**Skopje**	**1.60**	**140**	*e*Pb	**Pb**	**07 19 45.1**	**+0.5**
SKO				*e*Sb	**Sb**	**07 20 10.0**	**+4.7**
SKO	**Skopje**	**1.60**	**140**	*e*Pg	**Pn**	**07 19 42.8**	**-0.8**
SKO				*e*Sn	**Sn**	**07 20 04.5**	**-0.4**
SKO	**Skopje**	**1.60**	**140**	*e*Pg	**Pn**	**07 19 42.8**	**-0.9**
SKO				*e*Sn	**Sn**	**07 20 04.4**	**-0.5**
BEO	**Belgrade**	**1.64**	**10**	*i* Pg	**Pn**	**07 19 43.7**	**-0.5**
BEO				Sg	**Sg**	**07 20 08.1**	**+1.1**
TIR	**Tirane**	**1.86**	**184**	*e*Pb	**Pb**	**07 19 48.8**	**-0.4**
TIR				*e*Sb	**Sb**	**07 20 14.8**	**+1.9**
TIR	**Tirane**	**1.86**	**184**	*i* Pg	**Pn**	**07 19 45.1**	**-2.2**
FGSL	**Fruska Gora**	**1.96**	**355**	Pn	**Pn**	**07 19 48.7**	**+0.1**
OHR	**Ohrid**	**2.17**	**165**	*e*Pn	**Pn**	**07 19 52.5**	**+1.0**
OHR				*e*Sn	**Sb**	**07 20 22.7**	**+1.1**
OHR	**Ohrid**	**2.17**	**165**	*e*Pn	**Pn**	**07 19 50.9**	**-0.6**
OHR				*e*Sn	**Sn**	**07 20 18.4**	**-0.5**
BIA	**Bitola**	**2.38**	**156**	*e*Pn	**Pn**	**07 19 55.7**	**+1.3**
BIA				*e*Sn	**Sb**	**07 20 28.0**	**+0.2**
BIA	**Bitola**	**2.38**	**156**	*e*Pn	**Pn**	**07 19 54.3**	**-0.1**
VTS	**Vitosha**	**2.40**	**104**	*e*Pn	**Pn**	**07 19 54.2**	**-0.3**
VTS				*e*Sn	**Sb**	**07 20 27.6**	**-0.6**
VTS	**Vitosha**	**2.40**	**104**	⇑*i*P	**Pn**	**07 19 54.3**	**-0.3**
VTS	**Vitosha**	**2.40**	**104**	⇑P	**Pn**	**07 19 54.3**	**-0.2**
VTS				S	**Sn**	**07 20 24.9**	**+0.4**
VTS	**Vitosha**	**2.40**	**104**	*e*Pn	**Pn**	**07 19 54.2**	**-0.4**
VTS				S	**Sn**	**07 20 24.9**	**+0.4**
VTS				*e*Sn	**Sb**	**07 20 27.6**	**-0.6**
FNA	**Florina**	**2.61**	**157**	*e*Pn	**Pn**	**07 19 58.8**	**+1.2**
FNA				*e*Sn	**Sb**	**07 20 34.0**	**-0.4**
BZS	**Buzias**	**2.66**	**24**	⇑*i*P	**Pn**	**07 19 57.1**	**-1.1**
BZS	**Buzias**	**2.66**	**24**	S	**Sg**	**07 20 39.1**	**-0.6**
BZS	**Buzias**	**2.66**	**24**	⇑P	**Pn**	**07 19 57.1**	**-1.0**
GRG	**Griva**	**2.85**	**141**	*e*Pn	**Pn**	**07 20 00.4**	**-0.4**
KNT	**Kendrikon**	**2.94**	**133**	*e*Pn	**Pn**	**07 20 01.4**	**-0.6**
RHK3	**Tenkes**	**2.98**	**335**	⇑*e*P	**Pn**	**07 20 02.0**	**-0.6**
MMB	**Musomiste**	**3.16**	**120**	*e*Pn	**Pn**	**07 20 05.1**	**0.0**
MMB				*e*Sn	**Sb**	**07 20 50.5**	**+0.3**
PKSM	**Moragy**	**3.17**	**342**	⇑*i*P	**Pn**	**07 20 04.5**	**-0.7**
PKSM	**Moragy**	**3.17**	**342**	⇑P	**Pn**	**07 20 04.5**	**-0.7**
PKSM	**Moragy**	**3.17**	**342**	⇑*e*Pn	**Pn**	**07 20 04.5**	**-0.7**
KEK	**Kerkira**	**3.50**	**183**	*e*PB	**Pg**	**07 20 21.0**	**-0.4**
JAN	**Janina**	**3.60**	**170**	*e*PG	**Pg**	**07 20 13.3**	**-10**
PKS9	**Tamasi**	**3.61**	**340**	⇑*i*P	**Pn**	**07 20 10.7**	**-0.6**
RGNG	**Rignano Grg**	**3.65**	**247**	Pn	**Pn**	**07 20 13.1**	**+1.3**
DRGR		**4.05**	**27**	⇑*i*P	**Pn**	**07 20 18.1**	**+0.8**
DRGR		**4.05**	**27**	⇑P	**Pn**	**07 20 18.1**	**+0.8**
BOJS	**Bojanci**	**4.14**	**305**	*i* Pn	**Pn**	**07 20 19.4**	**+0.8**
MRLC	**Muro Lucano**	**4.20**	**236**	Pn	**Pn**	**07 20 21.2**	**+1.9**
VOIR		**4.22**	**56**	⇑*i*P	**Pn**	**07 20 20.5**	**+0.8**
VOIR		**4.22**	**56**	⇑P	**Pn**	**07 20 20.4**	**+0.8**
BUD	**Budapest**	**4.34**	**351**	⇓*i*Pn	**Pn**	**07 20 20.8**	**-0.5**
SLCN	**Sala Consilina**	**4.34**	**231**	Pn	**Pn**	**07 20 23.2**	**+1.8**
SGO	**Sicignano**	**4.42**	**235**	Pn	**Pn**	**07 20 23.3**	**+0.8**
EVR	**Evrytania**	**4.49**	**162**	*e*PB	**Pb**	**07 20 28.0**	**-5.8**
CUC	**Castrocucco**	**4.52**	**226**	Pn	**Pn**	**07 20 25.6**	**+1.8**
PSZ	**Piszkesteto**	**4.71**	**359**	⇓*i*Pn	**Pn**	**07 20 25.8**	**-0.7**
PSZ				*e*Sn	**Sn**	**07 21 22.5**	**+0.8**
PSZ	**Piszkesteto**	**4.71**	**359**	*e*Pn	**Pn**	**07 20 25.0**	**-1.5**
PSZ				*e*Sn	**Sn**	**07 21 21.0**	**-0.7**
PSZ	**Piszkesteto**	**4.71**	**359**	*e*Pn	**Pn**	**07 20 25.0**	**-1.5**
PSZ				*e*Sn	**Sn**	**07 21 21.0**	**-0.7**
MLR	**Muntele Rosu**	**4.80**	**60**	⇓*i*P	**Pn**	**07 20 28.8**	**+1.2**
MLR	**Muntele Rosu**	**4.80**	**60**	⇓P	**Pn**	**07 20 28.8**	**+1.2**
MLR				S	**Sn**	**07 21 27.3**	**+3.5**
MLR	**Muntele Rosu**	**4.80**	**60**	⇓P	**Pn**	**07 20 28.8**	**+1.2**
MLR				S	**Sn**	**07 21 27.3**	**+3.5**
PERS	**Pernice**	**4.91**	**316**	*e*Pn	**Pn**	**07 20 28.8**	**-0.3**
VVLD	**Villa Vallelon**	**4.94**	**257**	Pn	**Pn**	**07 20 31.4**	**+1.8**
CING	**Cingoli**	**5.01**	**274**	Pn	**Pn**	**07 20 32.8**	**+2.2**
OBKA	**Obir**	**5.12**	**312**	⇓*i*Pn	**Pn**	**07 20 32.3**	**+0.2**
OBKA				⇓*i*Sg	**Sg**	**07 22 02.1**	**+3.2**
	14nm,0.7s						
ARSA	**Arzberg**	**5.16**	**323**	⇑*i*Pn	**Pn**	**07 20 32.5**	**-0.1**
ARSA				⇑*i*Sn	**Sn**	**07 21 30.8**	**-1.8**
SNTG	**Esanatoglia**	**5.20**	**273**	Pn	**Pn**	**07 20 33.5**	**+0.3**
VOY	**Vojsko**	**5.23**	**305**	*e*Pn	**Pn**	**07 20 34.3**	**+0.8**
VYHS	**Vyhne**	**5.36**	**351**	*e*PN	**Pn**	**07 20 35.4**	**+0.1**
VYHS				*e*SN	**Sn**	**07 21 33.6**	**-3.9**
ZST	**Bratislava**	**5.40**	**338**	*e*SN	**Sn**	**07 21 36.3**	**-2.4**
ASS	**Assisi**	**5.42**	**271**	Pn	**Pn**	**07 20 37.6**	**+1.4**
CONA	**Conrad Observa**	**5.56**	**329**	⇑*i*Pn	**Pn**	**07 20 37.3**	**-0.8**
ROBS	**Robic**	**5.57**	**305**	*e*Pn	**Pn**	**07 20 38.7**	**+0.6**
SMOL	**Smolenice**	**5.62**	**342**	*e*PN	**Pn**	**07 20 39.1**	**+0.2**
BURAR	**Bucovina Array**	**5.71**	**38**	⇓*i*P	**Pn**	**07 20 42.2**	**+2.1**
BURAR	**Bucovina Array**	**5.71**	**38**	⇓P	**Pn**	**07 20 42.2**	**+2.0**
CRVS	**Cervenica-Dubn**	**5.78**	**9**	*e*PN	**Pn**	**07 20 41.0**	**-0.1**
CRVS				*e*SN	**Sn**	**07 21 41.9**	**-6.1**
CRVS	**Cervenica-Dubn**	**5.78**	**9**	*e*Pn	**Pn**	**07 20 41.1**	**0.0**
CRVS				*e*Sn	**Sn**	**07 21 41.9**	**-6.1**
KOLS	**Kolonicke sedl**	**5.93**	**14**	*e*PN	**Pn**	**07 20 46.9**	**+3.7**
SOI	**Samo**	**5.96**	**212**	Pn	**Pn**	**07 20 45.2**	**+1.5**
SFI	**Santa Sofia**	**6.01**	**279**	Pn	**Pn**	**07 20 46.1**	**+1.8**
CFR	**Carcaliu**	**6.13**	**68**	⇓*i*P	**Pn**	**07 20 45.2**	**-0.8**
CFR	**Carcaliu**	**6.13**	**68**	⇓P	**Pn**	**07 20 45.2**	**-0.8**
TIRR	**Tirgusor**	**6.17**	**75**	⇑*i*P	**Pn**	**07 20 51.4**	**+4.9**
KHC	**Kasperske Hory**	**7.44**	**325**	*e*PN	**Pn**	**07 21 04.5**	**+0.6**
KHC				*e*x	x	07 21 17.5	
KHC				*e*x	x	07 22 40.0	

IDC ***07*** *07:44:12.7±0.8, 2.77N×128.57E, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.1/15, mbtmp4.0/8, MS3.6/1, Ms1 3.6/1, ms1mx2.9/26, Error ellipse: s-maj=57.5km s-min=16.7km az=80.0*
ISCJB ***07*** *07:44:16.0±0.7, 2.8N±0.1×128.6E±0.3, h33km, mb4.0/7, Error ellipse: s-maj=47.0km s-min=13.2km az=163.1*

ISC 07 07:44:18.0±0.7**, 2.76N**±0.10×**128.7E**±0.3**, h35**km**, n14,** σ**0.95**/12**, mb4.0**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**19.26**	**55**	LR	LR	07 55 06.8	
	comp=Z,162nm,19.4s,baz=258,slow=34						
FITZ	**Fitzroy Crossi**	**20.95**	**188**	*e*P	**P**	**07 48 58.7**	**+0.9**
	5.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.95**	**188**	P	**P**	**07 48 56.8**	**-1.0**
	2.3nm,0.7s,baz=19,slow=15,SNR=3.4						
WB2	**Warramunga Arr**	**23.23**	**166**	*e*P	**P**	**07 49 22.4**	**+0.3**
ASAR	**Alice Springs**	**26.75**	**169**	P	**P**	**07 49 54.4**	**+0.1**
	1.7nm,0.6s,mb3.8,baz=356,slow=7.9,SNR=27						
ASAR				PcP	PcP	07 53 16.8	-0.1
	0.8nm,0.5s,baz=354,slow=2.1,SNR=7.5						
ASPA	**Alice Springs**	**26.75**	**169**	*e*P	**P**	**07 49 51.3**	**-3.0**
MJAR	**Matsushiro Arr**	**34.74**	**13**	P	**P**	**07 51 04.7**	**-0.1**
	1.2nm,0.4s,mb4.2,baz=187,slow=9.3,SNR=5.5						
STKA	**Stephens Creek**	**36.56**	**161**	*e*P	**P**	**07 51 24.1**	**+3.7**
	3.0nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**36.56**	**161**	P	**P**	**07 51 22.2**	**+1.8**
	3.1nm,0.4s,mb4.5,baz=339,slow=10,SNR=6.4						
SONM	**Songino Array**	**48.85**	**340**	P	**P**	**07 53 00.4**	**+0.4**
	0.6nm,0.8s,mb3.7,baz=159,slow=8.0,SNR=3.5						
MKAR	**Makanchi Array**	**59.47**	**325**	P	**P**	**07 54 17.1**	**-0.3**
	1.4nm,0.6s,mb4.2,baz=117,slow=8.1,SNR=14						
VNDA	**Vanda**	**82.23**	**173**	P	**P**	**07 56 34.8**	**-0.8**
	0.4nm,0.5s,mb3.6,baz=315,slow=6.0,SNR=5.2						
MAW	**Mawson**	**83.54**	**201**	P	**P**	**07 56 43.1**	**+0.7**
	0.4nm,0.2s,mb4.2,baz=61,slow=10,SNR=4.0						
TORD	**Torodi Ar. Bea**	**125.09**	**288**	PKP	PKPdf	08 03 14.5	-0.1
	0.1nm,0.4s,baz=66,slow=1.1,SNR=4.1						

ISCJB ***07*** *08:12:13.8±1.2, 18.0S±0.2×178.5W±0.1, h590km±17km, mb4.3/17, Error ellipse: s-maj=30.0km s-min=11.4km az=123.9*
IDC ***07*** *08:12:14.5±2.0, 18.12S×178.32W, h587km±25km, mb3.7/6, mb1 3.8/8, mb1mx3.6/15, mbtmp4.6/8, Error ellipse: s-maj=43.5km s-min=14.4km az=152.0*
NEIC ***07*** *08:12:14.4±0.8, 17.98S×178.45W, h588km±11km, mb4.5/13, Error ellipse: s-maj=18.8km s-min=7.4km az=153.0*

ISC 07 08:12:14.6±1.2**, 18.1S**±0.2×**178.4W**±0.1**, h585**km±16km**, n27,** σ**0.75**/27**, mb4.3**/17**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.61**	**58**	P	**P**	**08 14 09.1**	**-0.5**
	5.5nm,0.3s,baz=92,slow=20,SNR=7.9						
DZM	**Mont Dzumac**	**14.77**	**252**	P	**P**	**08 15 22.1**	**+1.0**
	0.5nm,0.3s,baz=321,slow=14,SNR=4.0						
ARMA	**Armidale**	**29.85**	**240**	*e*P	**P**	**08 17 36.9**	**+1.2**
CNB	**Canberra Magne**	**33.32**	**233**	*e*P	**P**	**08 18 05.9**	**+0.8**
	11nm,0.5s,mb4.7						
CTA	**Charters Tower**	**33.41**	**261**	*e*P	**P**	**08 18 05.7**	**-0.3**
	5.7nm,0.8s,mb4.2						
CTAO	**Charters Tower**	**33.41**	**261**	*e*P	**P**	**08 18 05.8**	**-0.2**
	7.6nm,0.6s,mb4.5						
PMG	**Port Moresby**	**34.49**	**280**	P	**P**	**08 18 16.0**	**+1.1**
	29nm,0.8s,mb4.9,baz=61,slow=4.2,SNR=7.0						
PMG	**Port Moresby**	**34.49**	**280**	*e*P	**P**	**08 18 15.2**	**+0.2**
	28nm,0.8s,mb5.0						
TOO	**Toolangi**	**37.05**	**231**	*e*P	**P**	**08 18 36.5**	**+0.4**
	6.8nm,0.7s,mb4.3						
STKA	**Stephens Creek**	**38.54**	**241**	⇓*i*P	**P**	**08 18 48.7**	**+0.6**
	8.2nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**08 18 48.9**	**+0.7**
	12nm,0.8s,mb4.5,baz=85,slow=9.2,SNR=14						
STKA	**Stephens Creek**	**38.54**	**241**	*e*P	**P**	**08 18 48.7**	**+0.5**
WB2	**Warramunga Arr**	**44.59**	**260**	*e*P	**P**	**08 19 35.1**	**-0.6**
WRAB	**Tennant Creek**	**44.59**	**260**	*e*P	**P**	**08 19 35.0**	**-0.6**
	12nm,0.6s,mb4.6						
AS31	**Alice Springs**	**44.74**	**254**	*e*P	**P**	**08 19 36.5**	**-0.3**
ASAR	**Alice Springs**	**44.74**	**254**	P	**P**	**08 19 36.7**	**-0.1**
	33nm,0.6s,mb5.0,baz=87,slow=8.6,SNR=487						
ASPA	**Alice Springs**	**44.74**	**254**	*e*P	**P**	**08 19 36.5**	**-0.4**
KAKA	**Kakadu**	**47.58**	**269**	*e*P	**P**	**08 19 57.8**	**-0.5**
	12nm,0.4s,mb4.8						
FORT	**Forrest**	**49.93**	**245**	*e*P	**P**	**08 20 14.6**	**-1.0**
	13nm,0.5s,mb4.6						
MBWA	**Marble Bar**	**58.03**	**256**	*e*P	**P**	**08 21 11.7**	**-0.8**
	5.6nm,0.6s,mb3.9						
QSPA	**South Pole Qui**	**71.97**	**180**	*e*P	**P**	**08 22 39.6**	**-0.2**
	40nm,2.0s,mb4.6						
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**08 23 22.0**	**+0.4**
	1.6nm,0.7s,mb3.5,baz=218,slow=7.8,SNR=18						
WVOR	**Wild Horse Val**	**81.54**	**40**	*e*P	**P**	**08 23 31.5**	**-0.4**
	3.1nm,0.9s,mb3.8						
MAW	**Mawson**	**83.69**	**200**	P	**P**	**08 23 41.9**	**-0.8**
	0.4nm,0.3s,mb3.5,baz=71,slow=7.7,SNR=4.2						
IMW	**Indian Meadow**	**87.12**	**42**	*e*P	**P**	**08 24 01.6**	**+2.5**
	2.6nm,1.0s,mb3.9						
FLWY	**Flagg Ranch**	**87.36**	**42**	*e*P	**P**	**08 24 00.6**	**+0.3**
	9.9nm,1.5s,mb4.3						
PDAR	**Pinedale Array**	**87.48**	**43**	P	**P**	**08 24 00.2**	**-0.6**
	1.2nm,0.6s,mb3.8,baz=239,slow=2.9,SNR=15						

NEIC ***07*** *08:17:40.5, 32.92S×71.10W, h53km, MG2.7(GUC), After GUC.*

GUC 07 08:17:40.5±0.7**, 32.92S**×**71.10W, h53**km±3km**, MD3.6, ML2.7, 12C-9D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.09**	**128**	⇓*i*P	Pn	08 17 49.6	+0.9
ROCH				*i* S	Sn	08 17 56.1	+1.6
PEL	**Peldehue**	**0.41**	**123**	⇓*i*P	Pn	08 17 52.0	+0.9
PEL				*i* S	Sn	08 18 00.3	+1.8
PEL				AML	AML	08 18 01.2	
	comp=E,2µm,0.2s						
PEL	**Peldehue**	**0.41**	**123**	⇓*i*P	Pn	08 17 52.0	+0.9
PEL				*i* S	Sn	08 18 00.3	+1.8
IHA	**Instituto Hidr**	**0.47**	**256**	⇑*i*P	Pn	08 17 51.6	0.0
IHA				*i* S	Sn	08 18 00.6	+1.0
JACH	**Jahuel**	**0.48**	**61**	⇓*i*P	Pn	08 17 52.5	+0.7
JACH				*i* S	Sn	08 18 01.2	+1.3
STL	**Santa Lucia**	**0.65**	**144**	⇑*i*P	Pn	08 17 53.5	-0.2
STL				*i* S	Sn	08 18 03.8	+0.6
STL				AML	AML	08 18 07.2	
	comp=N,134nm,0.3s						
SAN	**Santiago**	**0.65**	**146**	⇓*i*P	Pn	08 17 54.3	+0.5
SAN				*i* S	Sn	08 18 04.3	+0.9
SAN				AML	AML	08 18 04.9	
	comp=E,274nm,0.1s						
SAN	**Santiago**	**0.65**	**146**	⇓*i*P	Pn	08 17 54.3	+0.5
SAN				*i* S	Sn	08 18 04.3	+0.9
DSCH	**Colegio Aleman**	**0.66**	**138**	⇑*i*P	Pn	08 17 53.8	0.0
DSCH				*i* S	Sn	08 18 04.5	+1.0
DSCH				AML	AML	08 18 06.5	
	comp=E,128nm,0.2s						
DSCH	**Colegio Aleman**	**0.66**	**138**	⇑*i*P	Pn	08 17 53.8	0.0
DSCH				*i* S	Sn	08 18 04.5	+1.0
CLCH	**Cerro Calan**	**0.67**	**136**	⇑*i*P	Pn	08 17 54.9	+0.9
CLCH				*i* S	Sn	08 18 05.5	+1.7
CLCH				AML	AML	08 18 07.7	
	comp=E,592nm,0.2s						
CLCH				AML	AML	08 18 08.0	
	comp=E,509nm,0.6s						
LCCH	**Las Cruces**	**0.69**	**215**	⇑*i*P	Pn	08 17 54.8	+0.6
LCCH				*i* S	Sn	08 18 04.6	+0.5
TACH	**Talagante**	**0.75**	**170**	⇓*i*P	Pn	08 17 55.6	+0.6
TACH				*i* S	Sn	08 18 06.3	+0.8
ANTU	**Antumapu**	**0.76**	**149**	⇑*i*P	Pn	08 17 55.7	+0.6
ANTU				*i* S	Sn	08 18 07.1	+1.3
ANTU				AML	AML	08 18 07.8	
	comp=E,799nm,0.2s						
ANTU	**Antumapu**	**0.76**	**149**	⇑*i*P	Pn	08 17 55.7	+0.6
ANTU				*i* S	Sn	08 18 07.1	+1.3
FCH	**Farellones**	**0.79**	**121**	⇑*i*P	Pn	08 17 56.6	+1.0
FCH				*i* S	Sn	08 18 08.5	+2.0
FCH				AML	AML	08 18 08.8	
	comp=N,826nm,0.2s						
PCH	**Pirque**	**0.86**	**145**	⇑*i*P	Pn	08 17 57.1	+0.7
PCH				*i* S	Sn	08 18 09.5	+1.4
SJCH	**San Jose de Ma**	**0.95**	**139**	⇓*i*P	Pn	08 17 57.7	0.0
SJCH				*i* S	Sn	08 18 11.2	+0.9
SJCH				AML	AML	08 18 11.9	
	comp=E,237nm,0.3s						
SJCH	**San Jose de Ma**	**0.95**	**139**	⇓*i*P	Pn	08 17 57.7	0.0
SJCH				*i* S	Sn	08 18 11.2	+0.9
LNV	**Longovilo**	**1.07**	**194**	*e*P	Pn	08 17 59.7	+0.4
LNV				*i* S	Sn	08 18 13.9	+0.8
CHCH	**Chadas Angostu**	**1.08**	**160**	⇑*i*P	Pn	08 17 60.0	+0.6
CHCH				*i* S	Sn	08 18 15.0	+1.6
CHNG	**Los Chungos**	**1.08**	**342**	⇑*i*P	Pn	08 17 60.0	+0.6
CHNG				*i* S	Sn	08 18 14.2	+0.8
CHNG				AML	AML	08 18 16.8	
	comp=N,170nm,0.5s						
CACH	**El Canelo**	**1.27**	**161**	*i* P	Pn	08 18 03.2	+1.3
CACH				*i* S	Sn	08 18 20.6	+2.7
CMCH	**Combarbala**	**1.74**	**3**	*e*P	Pn	08 18 08.7	+0.5
CMCH				*i* S	Sn	08 18 30.7	+1.4
CMCH				AML	AML	08 18 37.0	
	comp=E,446nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CMCH	Combarbala	1.74	3	eP	Pn	08 18 08.7	+0.5
CMCH				iS	Sn	08 18 30.7	+1.4
TLL	Tololo Astrono	2.75	5	eP	Pn	08 18 24.9	+2.8
TLL				iS	Sn	08 18 57.4	+3.3
TLL				AML	AML	08 19 13.4	
	comp=E,66nm,0.4s						
TLL	Tololo Astrono	2.75	5	eP	Pn	08 18 24.9	+2.8
TLL				iS	Sn	08 18 57.4	+3.3

*NEIC **07** 08:26:16.8,37.18S×176.84E,h251^{km},MG4.0(WEL),After WEL.*

WEL 07 08:26:16.8±0.3**,37.18S×176.86E,h250^{km}±3^{km},ML4.0**/10**, Error ellipse: s-maj=4.0km s-min=3.9km az=0.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	1.10	170	eP	Pn	08 26 52.4	0.0
URZ	Urewera	1.10	170	PN	Pn	08 26 52.4	0.0
URZ				SN	S	08 27 19.7	-0.8
MWZ	Matawai	1.27	156	eP	Pn	08 26 53.7	+0.2
MWZ	Matawai	1.27	156	PN	Pn	08 26 53.6	+0.1
MWZ				SN	S	08 27 22.2	-0.3
PUZ	Puketiti	1.43	129	P	Pn	08 26 54.6	0.0
PUZ				S	S	08 27 23.6	-0.8
PUZ	Puketiti	1.43	129	PN	Pn	08 26 54.6	0.0
PUZ				SN	S	08 27 23.6	-0.7
KNZ	Kokohu	1.95	161	eP	Pn	08 26 59.0	+0.1
KNZ	Kokohu	1.95	161	PN	Pn	08 26 59.0	+0.1
BKZ	Black Stump Fm	2.01	188	P	Pn	08 26 59.5	+0.1
BKZ	Black Stump Fm	2.01	188	PN	Pn	08 26 59.4	0.0
TUVZ	Tukino	2.29	204	P	Pn	08 27 02.4	+0.3
TUVZ	Tukino	2.29	204	PN	Pn	08 27 02.7	+0.6
WNVZ	Wahianoa	2.37	204	P	Pn	08 27 03.2	+0.4
WNVZ	Wahianoa	2.37	204	PN	Pn	08 27 03.2	+0.5
PXZ	Pawanui	2.85	180	PN	Pn	08 27 07.6	-0.2
PXZ				SN	S	08 27 47.1	-0.9
TSZ	Takapari Road	2.96	193	eP	Pn	08 27 08.7	-0.2
TSZ	Takapari Road	2.96	193	PN	Pn	08 27 08.4	-0.5
MRZ	Mangatainoka R	3.62	196	eP	Pn	08 27 14.0	-2.2
MRZ	Mangatainoka R	3.62	196	SN	S	08 28 01.3	-2.1
MTW	Mount Morrison	4.12	194	eP	Pn	08 27 19.9	-2.1
MTW	Mount Morrison	4.12	194	PN	Pn	08 27 19.9	-2.0
CAW	Cannon Point	4.17	199	P	Pn	08 27 20.8	-1.8

*CSEM **07** 08:46:16.4±0.5,37.00N×24.30W,h5^{km},ML2.5,Error ellipse: s-maj=4.8km s-min=2.7km az=96.0,After PDA*

*PDA **07** 08:46:16.4±0.5,37.00N×24.30W,h5^{km},MD3.0,ML2.5, Error ellipse: s-maj=4.8km s-min=2.7km az=96.0*

SVSA 07 08:46:16.4±0.5**,37.00N×24.30W,h5^{km},MD3.0,ML2.5, Error ellipse: s-maj=4.8km s-min=2.7km az=96.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.62	271	eP	Pg	08 46 26.8	-1.4
PSMN				eS	Sg	08 46 34.6	-1.6
MIRA	Miradouro	1.11	315	eP	Pg	08 46 33.5	-4.2
MIRA				eS	Sg	08 46 46.6	-5.5
PCNG	Congro	1.17	312	eS	Sg	08 46 48.2	-5.7
PCNG							
	13nm,0.2s						
PFAD	Fenais da Ajud	1.17	316	eS	Sg	08 46 48.3	-5.8
VIF	Vila Franca	1.18	310	eS	Sg	08 46 48.3	-6.0
VIF							
	36nm,0.3s						
PRCH	Ribeira Ch	1.19	308	eS	Sg	08 46 48.6	-6.1
PRCH							
	72nm,0.2s						
MESC	Monte Escuro	1.21	311	eS	Sg	08 46 49.4	-6.0
LFA	Lagoa do Fogo	1.22	310	eP	Pg	08 46 35.5	-4.3
CML	Cha da Macela	1.26	308	eS	Sg	08 46 50.2	-6.7

*NIED **07** 09:02:00,46.40N×153.20E,h11^{km},Mw4.0 Best double couple: M₀1.20000×10^{15} NP1:φ$_s$161.00000°,δ55.00000°, λ55.00000°. NP2:φ$_s$32.00000°,δ48.00000°,λ129.00000°.*

*ISCJB **07** 09:02:34.5±1.6,46.35N±0.07×152.95E±0.07,h5^{km}±10^{km}, mb4.4/58,MS3.8/6,Error ellipse: s-maj=13.6km s-min=5.2km az=115.6*

*JMA **07** 09:02:36.2±0.8,46.42N×153.20E,h30^{km},M4.4*

*MOS **07** 09:02:37.2±1.1,46.61N×152.91E,h19^{km},mb4.4/24,Error ellipse: s-maj=9.8km s-min=7.5km az=113.6*

*BJI **07** 09:02:40.8,46.67N×152.97E,h52^{km},mB4.6,mb4.6,Ms3.9, Msz3.7*

*IDC **07** 09:02:42.5±4.1,46.43N×152.94E,h54^{km}±38^{km},mb3.9/16, mb1 4.0/18,mb1mx4.0/24,mbtmp4.1/18,ML3.8/2,MS3.7/2, Ms1 3.7/2,ms1mx2.9/31,Error ellipse: s-maj=24.7km s-min=17.8km az=177.0*

*NEIC **07** 09:02:42.9±0.4,46.63N×152.95E,mb4.4/21,Error ellipse: s-maj=12.2km s-min=6.3km az=153.0*

ISC 07 09:02:38.8±1.4**,46.42N**±0.07×**152.93E**±0.07**,h21**^{km}±10^{km}**, h43**^{km}±4.1^{km}**:pP-P,n144,σ1.28**/156**,mb4.4**/58**,MS3.8**/6**, 11C-3D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.73	253	⇑iPN	Pn	09 03 33.5	-1.6
KUR				iS	Sn	09 04 20.6	+2.2
KUR				pmax	pmax		
	comp=Z,610nm,0.5s						
KUR				pmax	pmax		
	comp=N,210nm,0.4s						
KUR				smax			
	comp=N,260nm,0.5s						
KUR				smax			
	comp=E,170nm,0.5s						
SKR	Severo-Kuril's	4.77	25	ePN	Pn	09 03 44.7	-4.7
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=E,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,70nm,0.5s						
SKR				MLR	MLR		
	comp=N,900nm,16.0s						
SKR				MLR	MLR		
	comp=E,1μm,16.0s						
SKR				MLR	MLR		
	comp=Z,900nm,16.0s						
YUK	Yuzh-Kuril'sk	5.53	247	PN	Pn	09 04 00.5	+0.6
YUK				eS	Sn	09 05 07.8	+5.0
YUK				pmax	pmax		
	comp=Z,170nm,0.4s						
YUK				smax			
	comp=N,230nm,0.6s						
YUK				smax			
	comp=E,190nm,0.5s						
NEM2	Nemuro 2	5.95	242	P	Pn	09 04 03.1	-2.5
NEM2				eS	Sn	09 05 07.2	-5.8
JNK	Nakash	6.47	247	P	Pn	09 04 12.8	0.0
JAK	Akkeshi	6.79	243	P	Pn	09 04 15.0	-2.1
JAK				eS	Sn	09 05 28.4	-5.4
JTKR	Abashiri--Toko	6.83	252	P	Pn	09 04 18.9	+1.2
YSS	Yuzh-Sakhalins	7.02	278	⇑ePN	Pn	09 04 26.5	+6.2
YSS	Yuzh-Sakhalins	7.02	278	ePn	Pn	09 04 24.8	+4.5
	comp=E,21nm,0.9s						
JMP	Maruseppu	7.17	254	P	Pn	09 04 24.4	+2.0
JAR	Ashorobuto	7.22	248	P	Pn	09 04 23.2	+0.2
JAR				eS	Sn	09 05 42.8	-1.5
JOB	Onbets	7.37	245	P	Pn	09 04 24.4	-0.8
JOB				eS	Sn	09 05 45.0	-3.2
PET	Petropavlovsk	7.58	27	⇑ePN	Pn	09 04 30.3	+2.3
JKK2	Kamakawa 2	7.63	254	P	Pn	09 04 30.6	+1.9
ASAJ	Asahikawa	7.64	256	P	Pn	09 04 31.0	+2.1
	comp=E,2.0nm,0.3s,baz=52,slow=13,SNR=10						
ASAJ	Asahikawa	7.64	256	P	Pn	09 04 31.5	+2.6
ASAJ	Asahikawa	7.64	256	PN	Pn	09 04 31.0	+2.1
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JCH	Churui	7.82	244	P	Pn	09 04 29.8	-1.5
JCH				eS	Sn	09 05 54.0	-5.2
JEM	Erimo	8.28	241	P	Pn	09 04 36.3	-1.3
JBT2	Biratori 2	8.37	248	P	Pn	09 04 38.5	-0.3
JNBK	Urakawa-nobuka	8.38	244	P	Pn	09 04 37.0	-2.0
JNBK				eS	Sn	09 06 06.7	-6.3
JNB	Noboribetsu	9.37	249	P	Pn	09 04 52.2	-0.4
JKB	Kayabe	9.67	246	P	Pn	09 04 54.9	-1.8
JKB				eS	Sn	09 06 38.1	-6.6
JSH	Shimam	9.94	252	P	Pn	09 05 01.5	+1.1
JSR	Shiriuchi	10.25	246	P	Pn	09 05 03.1	-1.5
JANG	Nango	10.26	238	P	Pn	09 04 59.8	-5.0
JANG				eS	Sn	09 06 47.5	-12
JTM	Tenmabayashi	10.27	241	P	Pn	09 05 01.7	-3.2
JTM				eS	Sn	09 06 50.2	-9.3
JOSM	Okushiri--Mats	10.58	251	P	Pn	09 05 08.1	-1.0
JIO	Ouri	11.67	231	eS	Sn	09 07 20.1	-14
HABR	Khabarovsk	12.28	286	ePN	Pn	09 05 33.1	+0.7
KLR	Kul'dur	14.50	289	eP	Pn	09 06 03.8	+1.2
KLR				MLR	MLR		
	comp=Z,500nm,16.0s						
MAJO	Matsushiro	14.78	233	eP	Pn	09 06 11.8	+5.3
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s						
MAJO	Matsushiro	14.78	233	ePn	Pn	09 06 11.8	+5.3
	comp=Z,16nm,0.9s						
MAT	Matsushiro	14.78	233	P	Pn	09 06 11.8	+5.3
MAT	Matsushiro	14.78	233	eP	Pn	09 06 12.0	+5.5
MAT				pmax	pmax		
	comp=Z,15nm,1.0s						
MAT	Matsushiro	14.78	233	eP	Pn	09 06 12.0	+5.5
	comp=Z,15nm,1.0s						
MJAR	Matsushiro Arr	14.78	233	P	Pn	09 06 08.6	+2.1
	comp=Z,0.2nm,0.3s,baz=39,slow=11,SNR=5.3						
MDJ	Mudanjiang	16.45	272	P	Pn	09 06 29.4	+1.2
MDJ				AMB	AMB		
	comp=Z,18nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,71nm,5.3s						
MDJ				LR	LR		
	comp=N,43nm,16.3s						
MDJ				LR	LR		
	comp=E,25nm,15.1s						
MDJ				LR	LR		
	comp=Z,72nm,15.1s						
MDJ	Mudanjiang	16.45	272	ePn	Pn	09 06 29.8	+1.5
	comp=Z,20nm,1.0s						
CN2	Changchun	19.53	272	eP	Pn	09 07 06.1	-0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
YAK	Yakutsk	20.53	328	eP	P	09 07 14.0	-1.8
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
SNY	Shenyang	21.50	268	⇑P	P	09 07 28.8	+2.6
SNY				AP		09 07 43.8	
SNY				S	S	09 11 26.2	+2.7
SNY				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.2						
SNY				AMB	AMB		
	comp=Z,78nm,5.1s						
SNY				LR	LR		
	comp=N,143nm,14.9s,MS3.7						
SNY				LR	LR		
	comp=E,153nm,13.3s,MS3.7						
SNY				LR	LR		
	comp=Z,173nm,18.2s,MS3.5						
BILL	Bilibino	22.75	13	eP	P	09 07 38.9	-0.6
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
BOD	Bodaibo	26.10	310	eP	P	09 08 09.6	-1.5
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
SSE	Sheshan	28.86	249	P	P	09 08 38.5	+2.7
SSE				AMB	AMB		
	comp=Z,33nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,47nm,3.7s						
NJ2	Nanjing	29.78	253	eP	P	09 08 46.1	+2.2
NJ2				PP	PP	09 09 41.5	-10
NJ2				S	S	09 13 38.0	-1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,50nm,3.8s						
NJ2				LR	LR		
	comp=N,250nm,22.0s						
NJ2				LR	LR		
	comp=Z,200nm,22.0s,MS3.7						
ULN	Ulaanbaatar	30.89	290	⇑eP	P	09 08 56.0	+2.3
SONM	Songino Array	31.32	290	P	P	09 08 58.0	+0.4
	comp=Z,1.1nm,0.7s,mb3.8,baz=76,slow=8.6,SNR=6.5						
TLY	Talaya	32.22	298	eP	P	09 09 05.2	-0.3
TLY				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.1						
ZAK	Zakamensk	32.70	295	eP	P	09 09 04.0	-5.7
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
XAN	Xi'an	35.36	265	P	P	09 09 33.1	+0.3
XAN				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.4						
COLA	College	36.48	38	eP	P	09 09 40.7	-1.6
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
COLA	College	36.48	38	eP	P	09 09 40.7	-1.6
	comp=Z,2.8nm,0.8s,mb4.2						
LZH	Lanzhou	37.77	272	eP	P	09 09 55.5	+2.2
LZH				AP	pP	09 10 08.5	+8.8
LZH				XP	sP	09 10 13.5	+11
LZH				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,123nm,4.7s						
GTA	Gaotai	38.90	279	⇓P	P	09 10 04.7	+1.9
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,53nm,4.9s						
GTA				LR	LR		
	comp=N,89nm,14.4s,MS4.0						
GTA				LR	LR		
	comp=E,102nm,12.2s,MS4.0						
GTA				LR	LR		
	comp=Z,111nm,13.3s,MS3.9						
CD2	Chengdu	40.72	265	P	P	09 10 18.7	+0.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
INK	Inuvik	42.00	32	P	P	09 10 27.5	-1.0
	comp=Z,1.7nm,0.6s,mb3.9,baz=264,slow=7.0,SNR=7.6						
INK	Inuvik	42.00	32	eP	P	09 10 26.4	-2.1
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	Inuvik	42.00	32	eP	P	09 10 26.4	-2.1
	comp=Z,2.8nm,0.9s,mb3.9						
ZAL	Zalesovo	42.72	306	P	P	09 10 32.4	-1.9
	comp=Z,2.2nm,0.4s,mb4.3,baz=42,slow=8.3,SNR=4.7						
ZAL				LR	LR	09 30 29.5	
	comp=Z,132nm,18.2s,MS3.9,baz=52,slow=39						
ZAL	Zalesovo	42.72	306	P	P	09 10 32.4	-1.9
ZAL				LR	LR	09 30 29.5	
WMQ	Urumqi	44.93	291	eP	P	09 10 54.0	+1.9
WMQ				XP	sP	09 11 12.0	+11
WMQ				PP	PP	09 12 40.0	+2.9
WMQ				S	S	09 17 27.0	-2.0
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,75nm,12.0s,MS4.1						
WMQ				LR	LR		
	comp=E,126nm,12.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,56nm,12.0s,MS3.7						
KMI	Kunming	45.06	260	P	P	09 10 52.3	-0.8
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
MK31	Makanchi Array	46.98	298	P	P	09 11 07.8	-0.5
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MKAR	Makanchi Array	46.98	298	P	P	09 11 08.0	-0.3
	comp=Z,5.4nm,0.8s,mb4.5,baz=64,slow=8.2,SNR=24						
MKAR	Makanchi Array	46.98	298	P	P	09 11 08.0	-0.3
KURK	Kurchatov	47.44	304	eP	P	09 11 11.0	-0.9
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
KURK	Kurchatov	47.44	304	eP	P	09 11 11.0	-0.9
	comp=Z,11nm,0.8s,mb4.8						
CHKZ	Chkalovo	50.55	310	P	P	09 11 34.2	-1.5
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
CHKZ	Chkalovo	50.55	310	eP	P	09 11 34.0	-1.6
	comp=Z,8.7nm,0.7s,mb4.8						
BVA0	Borovoye Array	50.97	310	P	P	09 11 38.0	-0.8
BVAR	Borovoye Array	50.97	310	P	P	09 11 38.3	-0.6
	comp=Z,1.6nm,0.4s,mb4.3,baz=62,slow=8.8,SNR=9.5						
BVAR				LR	LR	09 35 32.0	
	comp=Z,45nm,18.4s,MS3.5,baz=231,slow=39						
BRVK	Borovoye	51.01	310	eP	P	09 11 38.2	-1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BRVK	Borovoye	51.01	310	eP	P	09 11 38.2	-1.0
	comp=Z,2.8nm,0.9s,mb4.2						
YKA	Yellowknife Ar	51.27	36	P	P	09 11 41.8	+0.8
	comp=Z,2.6nm,0.9s,mb4.2,baz=300,slow=7.8,SNR=3.8						
ZRNK	Zerenda	51.74	310	eP	P	09 11 43.6	-1.0
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
ZRNK	Zerenda	51.74	310	eP	P	09 11 43.5	-1.1
	comp=Z,1.9nm,0.5s,mb4.3						
AAK	Ala-Archa	53.87	296	⇑eP	P	09 11 59.9	-0.4
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
AAK	Ala-Archa	53.87	296	eP	P	09 11 59.5	-0.8
	comp=Z,4.3nm,0.6s,mb4.6						
JIRN	Jiri	54.84	275	eP	P	09 12 08.8	+1.4
	comp=Z,15nm,0.4s,mb5.3						
GUN	Gumba	54.90	275	eP	P	09 12 09.2	+1.3
ARU	Arti	55.17	318	⇑eP	P	09 12 09.5	-0.3
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KKN	Kakani	55.39	275	eP	P	09 12 13.1	+1.7
PKI	Pulchoki	55.44	275	eP	P	09 12 13.1	+1.4
DMN	Daman	55.62	275	eP	P	09 12 14.5	+1.4
	comp=Z,25nm,0.8s,mb5.3						
GKN	Gorkha	55.70	276	eP	P	09 12 14.6	+1.0
	comp=Z,37nm,0.9s,mb5.4						
KOLN	Koldanda	56.56	277	eP	P	09 12 21.1	+1.4
	comp=Z,35nm,0.9s,mb5.4						
EDM	Edmonton	56.64	46	eP	P	09 12 19.4	-0.9
EDM				e*PP	pP	09 12 30.9	+4.0
ARCES	ARCESS Array B	58.13	341	P	P	09 12 30.1	-0.7
	comp=Z,2.3nm,0.8s,mb4.2,baz=23,slow=6.6,SNR=5.3						
AB31	Akbulak array	58.54	310	eP	P	09 12 33.0	-0.7
AKTK	Aktyubinsk	58.85	312	P	P	09 12 34.4	-1.5
AKTO	Aktyubinsk	58.85	312	P	P	09 12 34.4	-1.4
	comp=Z,0.9nm,0.5s,mb4.1,baz=44,slow=7.2,SNR=7.3						
SUMG	Summit	61.04	4	eP	P	09 12 50.8	-0.1
	comp=Z,14nm,1.0s,mb5.1						
JOF	Joensuu	61.58	334	ep	P	09 12 53.1	-1.4
BOZ	Bozeman (W)	62.06	52	eP	P	09 12 56.5	-1.3
	comp=Z,0.6nm,0.5s,mb4.0						
NVAR	Mina Array Bea	62.70	62	P	P	09 13 01.0	-1.0
	comp=Z,1.0nm,0.7s,mb4.0,baz=296,slow=6.1,SNR=3.8						
KAF	Kangasniemi	63.69	335	ep	P	09 13 06.1	-2.5
	comp=Z,0.9nm,0.4s,mb4.2,baz=36,slow=6.2						
KAF	Kangasniemi	63.69	335	eP	P	09 13 06.1	-2.5
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
REDW	Red Top Meadow	63.94	54	eP	P	09 13 11.5	+1.3
	comp=Z,4.6nm,1.1s,mb4.4						
REDW				epP	pP	09 13 25.6	+8.6
FINES	FINESS Array B	64.29	335	P	P	09 13 11.6	-0.9
	comp=Z,3.3nm,0.6s,mb4.5,baz=42,slow=7.0,SNR=19						
PDAR	Pinedale Array	65.05	54	P	P	09 13 17.2	-0.3
	comp=Z,1.0nm,0.8s,mb3.9,baz=289,slow=4.5,SNR=9.1						
SRU	San Rafael	66.91	57	eP	P	09 13 29.8	+0.3
SRU				e*PP	pP	09 13 40.0	+3.8
SRU				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
SRU	San Rafael	66.91	57	eP	P	09 13 29.8	+0.4
	comp=Z,3.2nm,0.9s,mb4.3						
SRU				epP	pP	09 13 40.0	+3.8
NB2	NORSAR Subarra	68.50	341	P	P	09 13 38.4	-1.1
	comp=Z,1.5nm,0.7s,mb4.0,baz=28,slow=6.2						
NOA	NORSAR Array B	68.50	341	P	P	09 13 38.7	-0.8
	comp=Z,2.9nm,0.9s,mb4.2,baz=28,slow=6.3,SNR=10						
ISCO	Idaho Springs	69.24	54	eP	P	09 13 45.7	+1.6
	comp=Z,1.5nm,1.1s,mb3.8						
ISCO				epP	pP	09 13 59.7	+8.9
KIV	Kislovodsk	70.94	314	eP	P	09 13 55.4	+0.9
KIV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
AKASG	Malin Array Be	71.75	326	P	P	09 13 58.5	-1.0
	comp=Z,2.4nm,0.4s,mb4.4,baz=34,slow=6.2,SNR=20						
AKBB	Malin Array Si	71.75	326	eP	P	09 13 58.4	-1.1
ASAR	Alice Springs	71.85	198	P	P	09 14 00.1	+0.1
	comp=Z,0.6nm,0.9s,mb3.5,baz=17,slow=6.4,SNR=5.0						
GNI	Garni	72.65	310	eP	P	09 14 06.4	+1.6
GNI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KOLS	Kolonicke sedl	75.78	329	eP	P	09 14 23.5	+0.4
BURAR	Bucovina Array	75.80	326	⇓iP	P	09 14 23.1	-0.1
CRVS	Cervenica-Dubn	76.10	329	eP	P	09 14 27.9	+3.0
MORC	Moravsky Berou	76.67	332	⇑iP	P	09 14 28.0	-0.2
MORC	Moravsky Berou	76.67	332	eP	P	09 14 27.8	-0.4
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
MORC	Moravsky Berou	76.67	332	eP	P	09 14 27.8	-0.3
	comp=Z,5.7nm,0.9s,mb4.5						
CLL	Collm	76.72	335	P	P	09 14 28.0	-0.4
	comp=Z,logA/T=1.0,mb4.7						
CLL				i *PP	pP	09 14 43.0	+7.8
CLL				i		09 14 50.1	
CLL	Collm	76.72	335	i P	P	09 14 28.0	-0.4
	comp=Z,8.0nm,0.8s,mb4.7						
CLL				i pP	pP	09 14 43.0	+7.8
CLL				i x	x	09 14 50.1	
CLL	Collm	76.72	335	i P	P	09 14 28.0	-0.4
CLL				i *PP	pP	09 14 43.0	+7.8
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
BRG	Berggiesshubel	76.83	335	e(P)	P	09 14 28.9	-0.1
	comp=Z,3.8nm,1.2s,mb4.2						
BRG	Berggiesshubel	76.83	335	P	P	09 14 28.9	-0.1
BRG				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
MLR	Muntele Rosu	77.26	325	⇑iP	P	09 14 32.6	+1.1
VYHS	Vyhne	77.36	331	eP	P	09 14 32.9	+0.9
VYHS				e	pP	09 14 39.8	+1.0
VYHS				e		09 14 45.5	
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
VYHS	Vyhne	77.36	331	eP	P	09 14 32.9	+0.9
	comp=Z,2.0nm,1.0s,mb4.0						
VYHS				ePcP	PcP	09 14 39.8	-2.7
VYHS				e		09 14 45.5	
VOIR		77.66	325	⇓iP	P	09 14 32.9	-0.8
KHC	Kasperske Hory	78.48	334	eP	P	09 14 37.0	-1.3
BRTR	Keskin Array B	78.55	317	P	P	09 14 39.7	+1.1
	comp=Z,1.2nm,0.9s,mb3.8,baz=46,slow=3.6,SNR=5.0						
GERES	GERESS Array B	78.70	334	P	P	09 14 38.7	-0.8
	comp=Z,0.7nm,0.7s,mb3.7,baz=48,slow=2.0,SNR=5.1						
PKSM	Moragy	79.39	330	⇑iP	P	09 14 31.3	-12
VTS	Vitosha	80.77	325	⇑iP	P	09 14 52.1	+1.4
CDF	Champ du Feu	80.92	338	eP	P	09 14 52.3	+0.8
LOR	Lormes	82.84	339	eP	P	09 15 01.9	+0.3
CABF	La Chapelle	82.89	338	eP	P	09 15 02.4	+0.6
	comp=Z,5.5nm,0.7s,mb4.4						
SSF	Saint Saulge	83.12	339	eP	P	09 15 03.3	+0.2
	comp=Z,4.5nm,0.7s,mb4.3						
AVF	Avril sur Loir	83.41	339	eP	P	09 15 05.0	+0.4
	comp=Z,13nm,1.0s,mb4.6						
SMF	Signal de Mont	83.43	339	eP	P	09 15 04.2	-0.4
	comp=Z,23nm,1.2s,mb4.8						
LPL	La Plagne	83.73	337	eP	P	09 15 06.5	+0.3
LPG	La Plagne	83.74	337	eP	P	09 15 06.8	+0.6
TCF	Toulx Ste Croi	84.16	340	eP	P	09 15 09.2	+0.8
VIVF	Saint-Julien-l	84.89	338	eP	P	09 15 13.0	+0.9
	comp=Z,13nm,0.9s,mb4.8						
SBF	Sospel	85.06	336	eP	P	09 15 13.0	+0.1
	comp=Z,30nm,1.0s,mb5.1						
CPUP	Villa Florida	148.74	61	PKPbc	PKPbc	09 22 21.8	-2.7
	comp=Z,1.0nm,0.6s,baz=20,slow=4.3,SNR=6.4						
CPUP	Villa Florida	148.74	61	PKIKP	PKPdf	09 22 21.8	+1.1
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*CSEM **07** 09:26:40.0±0.1,36.10N×21.32E,h10^{km},MD3.6,Error ellipse: s-maj=3.3km s-min=0.8km az=43.0*

*NEIC **07** 09:26:41.1,36.19N×21.45E,h24^{km},MD3.6(ATH),After ATH.*

*ATH **07** 09:26:41.1,36.19N×21.45E,h24^{km}±9^{km},MD3.6/6*

*ISCJB **07** 09:26:43.7±2.3,36.2N±0.2×21.5E±0.2,h64^{km}±14^{km}, mb3.6/3,Error ellipse: s-maj=36.5km s-min=13.1km az=99.0*

*IDC **07** 09:26:47.8±39.0,37.31N×22.63E,h0^{km},mb3.6/3, mb1 3.6/3,mb1mx3.4/19,mbtmp3.6/3,Error ellipse: s-maj=766.3km s-min=59.0km az=37.0*

ISC 07 09:26:41.0±2.2**, 36.2N**±0.1×**21.2E**±0.2**, h30**km±17km**, n9, σ0.89**/10**, mb3.6**/3**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	1.17	29	ePN	Pn	09 27 01.7	+0.4
ITM				eSN	Sn	09 27 15.6	-0.6
KYTH	Kithira	1.47	85	ePN	Pn	09 27 05.7	+0.2
VLI	Veliai	1.49	68	ePN	Pn	09 27 06.2	+0.4
RLS	Riolos of Patr	1.91	6	ePN	Pn	09 27 13.9	+2.5
VLS	Valsamata	2.08	346	ePB	Pb	09 27 17.1	-0.9
VAM	Vamos	2.54	106	ePN	Pn	09 27 20.0	-0.1
FINES	FINESS Array B	25.49	5	P	P	09 32 06.4	-0.2
	0.3nm,0.4s,mb3.2,baz=187,slow=11,SNR=4.9						
ARCES	ARCESS Array B	33.52	3	P	P	09 33 18.1	+0.3
	2.0nm,1.1s,mb4.0,baz=192,slow=11,SNR=5.0						
MKAR	Makanchi Array	45.91	57	P	P	09 34 59.5	-1.4
	0.4nm,0.3s,mb3.8,baz=274,slow=8.8,SNR=4.2						

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*IDC **07** 09:30:26.5±0.8, 5.85N×93.31E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/23, mbtmp4.0/13, ML4.1/1, Error ellipse: s-maj=44.4km s-min=15.3km az=53.0*

*ISCJB **07** 09:30:29.6±3.8, 5.8N±0.2×93.4E±0.2, h35km±32km, mb4.0/15, Error ellipse: s-maj=46.5km s-min=12.9km az=102.3*

*NEIC **07** 09:30:31.0±0.5, 5.84N×93.32E, h30km, mb4.2/3, Error ellipse: s-maj=21.9km s-min=7.1km az=50.0*

ISC 07 09:30:32.4±3.3**, 5.9N**±0.2×**93.4E**±0.2**, h39**km±29km**, n21, σ0.63**/21**, mb4.0**/15**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.34	119	Pn	Pn	09 32 03.8	+0.6
	3.9nm,0.3s,baz=311,slow=15,SNR=14						
PSI				Sn	Sn	09 33 13.8	-0.5
	2.3nm,0.3s,baz=152,slow=15,SNR=13						
PSI	Prapat	6.34	119	Pn	Pn	09 32 03.8	+0.6
PSI				Sn	Sn	09 33 13.8	-0.5
FITZ	Fitzroy Crossi	39.78	127	P	P	09 37 59.9	-1.5
	1.4nm,0.6s,mb3.9,baz=317,slow=18,SNR=3.8						
MKAR	Makanchi Array	41.86	349	P	P	09 38 18.3	-0.3
	1.1nm,0.4s,mb3.8,baz=168,slow=8.9,SNR=12						
SONM	Songino Array	43.27	13	P	P	09 38 31.0	+1.0
	0.3nm,0.4s,mb3.3,baz=197,slow=11,SNR=3.1						
KURK	Kurchatov	46.36	347	eP	P	09 38 54.6	0.0
	1.5nm,0.6s,mb4.1						
WRAB	Tennant Creek	47.78	124	eP	P	09 39 06.3	+0.6
	5.8nm,0.7s,mb4.7						
ZAL	Zalesovo	48.42	353	P	P	09 39 11.2	+0.6
	1.1nm,0.3s,mb4.4,baz=197,slow=12,SNR=4.1						
ASAR	Alice Springs	49.27	128	P	P	09 39 17.6	+0.4
	2.5nm,0.8s,mb4.3,baz=302,slow=8.2,SNR=39						
BVAR	Borovoye Array	50.63	342	P	P	09 39 26.6	-0.8
	0.5nm,0.6s,mb3.6,baz=151,slow=6.8,SNR=4.2						
CHKZ	Chkalovo	51.12	343	eP	P	09 39 30.7	-0.5
	1.1nm,0.5s,mb4.0						
AKTK	Aktyubinsk	53.33	333	P	P	09 39 47.4	-0.2
AKTO	Aktyubinsk	53.33	333	P	P	09 39 47.4	-0.2
	0.5nm,0.4s,mb3.8,baz=151,slow=13,SNR=3.9						
STKA	Stephens Creek	59.32	132	P	P	09 40 31.0	+0.7
	2.1nm,0.7s,mb4.3,baz=315,slow=6.7,SNR=5.2						
BRTR	Keskin Array B	63.15	312	P	P	09 40 56.2	+0.1
	0.6nm,0.7s,mb3.8,baz=278,slow=39,SNR=3.2						
FINES	FINESS Array B	74.11	333	P	P	09 42 03.9	-0.5
	1.1nm,0.7s,mb3.9,baz=76,slow=8.0,SNR=6.1						
FINES	FINESS Array B	74.11	333	P	P	09 42 03.9	-0.5
ARCES	ARCESS Array B	76.87	340	P	P	09 42 20.1	-0.2
	0.8nm,0.3s,mb4.1,baz=96,slow=6.3,SNR=12						
GERES	GERESS Array B	78.79	319	P	P	09 42 31.8	+0.8
	0.3nm,0.3s,mb3.7,baz=79,slow=6.9,SNR=4.4						
PDAR	Pinedale Array	127.30	21	PKP	PKPdf	09 49 33.0	+0.3
	0.4nm,0.8s,baz=67,slow=5.0,SNR=3.7						
CPUP	Villa Florida	145.42	231	PKPbc	PKPbc	09 50 07.4	+1.3
	0.5nm,0.4s,baz=178,slow=1.5,SNR=4.2						

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*IDC **07** 09:36:37.0±1.1, 14.12N×122.18E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/17, mbtmp4.0/5, MS3.3/2, Ms1 3.3/2, ms1mx2.9/20, Error ellipse: s-maj=23.3km s-min=13.8km az=11.0*

*ISCJB **07** 09:36:38.8±1.1, 13.32N±0.04×120.07E±0.05, h10km±7km, mb4.0/5, MS3.4/1, Error ellipse: s-maj=8.9km s-min=5.3km az=48.6*

*MAN **07** 09:36:39.0, 13.34N×120.15E, h1km, mb3.0, ML4.4, MS2.5*

ISC 07 09:36:39.3±0.9**, 13.31N**±0.03×**120.11E**±0.05**, h5**km±5km**, n22, σ1.13**/29**, mb4.0**/5**, MS3.4**/1**, 4D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.45	17	eP	Pg	09 36 47.0	-1.0
PGP	Puerto Galera	0.84	77	eP	Pg	09 36 55.1	-0.5
PGP				eS	Sg	09 37 04.8	-1.8
TGY	Tagaytay City	1.13	45⇓	eP	Pg	09 37 02.6	+1.6
TGY				eS	Sg	09 37 16.4	+0.8
TGY	Tagaytay City	1.13	45	Pg	Pg	09 37 01.3	+0.3
	1μm,0.3s,baz=229,slow=2.8,SNR=38						
TGY				Lg		09 37 15.4	
	3μm,0.3s,baz=311,slow=23,SNR=33						
BUSP	Coron	1.30	176	eP	Pn	09 37 04.8	+0.7
BUSP				eS	Sg	09 37 22.2	+1.1
LQP	Lukban	1.60	60⇓	eP	Pn	09 37 10.0	+1.7
BOAC	Boac	1.70	85	eP	Pn	09 37 08.3	-1.3
BOAC				eS	Sn	09 37 31.8	+0.2
OTRP	Odiongan	2.09	116	eP	Pn	09 37 14.9	0.0
ENPP	El Nido	2.19	198	eP	Pn	09 37 17.7	+1.3
POLP	Polilio Island	2.27	51	eP	Pn	09 37 17.6	+0.1
GQP	Guinayangan	2.35	75⇓	eP	Pn	09 37 18.9	+0.4
GQP				eS	Sn	09 37 48.2	+0.5
PCPH	Palayan	2.44	23⇓	eP	Pn	09 37 19.0	-0.8
PCPH				eS	Sn	09 37 49.7	-0.2
SCZP	Santa Cruz	2.46	356	eP	Pn	09 37 24.0	+3.9
SCZP				eS	Sn	09 37 58.6	+8.0
BALP	Baler	2.81	30	eP	Pn	09 37 25.7	+0.8
BALP				eS	Sn	09 38 01.2	+2.1
JOW	Kunigami	15.48	28	LR	LR	09 44 38.8	
	comp=Z,86nm,19.9s,baz=137,slow=35						
WB2	Warramunga Arr	35.89	157	eP	P	09 43 39.1	-1.1
SONM	Songino Array	36.27	344	P	P	09 43 41.9	-1.6
	0.7nm,0.6s,mb3.8,baz=165,slow=9.3,SNR=4.6						
SONM				LR	LR	09 59 45.8	
	comp=Z,66nm,18.4s,MS3.4,baz=344,slow=38						
ASAR	Alice Springs	39.14	160	P	P	09 44 07.5	-0.3
	4.1nm,0.6s,mb4.3,baz=340,slow=7.2,SNR=76						
ASPA	Alice Springs	39.14	160	eP	P	09 44 07.5	-0.3
MKAR	Makanchi Array	46.01	324	P	P	09 45 04.7	+1.1
	0.1nm,0.2s,mb3.3,baz=134,slow=8.3,SNR=3.2						
STKA	Stephens Creek	49.42	156	P	P	09 45 28.4	-1.7
	1.7nm,0.7s,mb4.2,baz=356,slow=10.0,SNR=4.0						
ARCES	ARCESS Array B	79.25	339	P	P	09 48 43.4	-2.2
	4.8nm,1.1s,mb4.3,baz=76,slow=6.4,SNR=4.4						

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*IDC **07** 10:21:54.6±0.9, 13.30N×120.05E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/18, mbtmp4.0/7, MS3.8/2, Ms1 3.8/2, ms1mx3.0/41, Error ellipse: s-maj=20.1km s-min=13.1km az=132.0*

*MAN **07** 10:21:56.0, 13.35N×120.14E, h4km, mb2.7, ML4.2, MS2.0*

*ISCJB **07** 10:21:59.2±0.7, 13.32N±0.04×120.12E±0.06, h48km±8km, mb4.1/8, MS3.8/2, Error ellipse: s-maj=9.9km s-min=5.2km az=37.9*

*NEIC **07** 10:22:03.8±2.0, 13.56N×120.78E, h76km±21km, mb4.8/1, Error ellipse: s-maj=89.7km s-min=8.7km az=67.0*

ISC 07 10:21:56.3±1.0**, 13.35N**±0.03×**120.08E**±0.05**, h9**km±6km**, n28, σ1.02**/37**, mb4.1**/8**, MS3.8**/2**, 1C-6D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.42	23	eP	Pg	10 22 04.0	-0.5
LUBP				eS	Sg	10 22 08.9	-1.1
PGP	Puerto Galera	0.87	80⇓	eP	Sg	10 22 26.1	+1.8
PGP	Puerto Galera	0.87	80⇓	eP	Pg	10 22 12.0	-1.0
PGP				eS	Sg	10 22 18.5	-5.8
TGY	Tagaytay City	1.12	48⇓	eP	Pg	10 22 19.3	+1.4
TGY				eS	Pg	10 22 19.3	+1.4
TGY	Tagaytay City	1.12	48	Pg	Pg	10 22 17.8	-0.1
	2μm,0.3s,baz=227,slow=3.5,SNR=30						
TGY				Lg		10 22 32.6	
	2μm,0.3s,baz=303,slow=23,SNR=16						
BUSP	Coron	1.34	175	eP	Pn	10 22 21.6	+0.4
BUSP				eS	Sb	10 22 39.4	+0.5
BOAC	Boac	1.73	86	eP	Pn	10 22 25.0	-1.5
BOAC				eS	Sn	10 22 48.4	-0.2
OTRP	Odiongan	2.13	117	eP	Pn	10 22 35.5	+3.4
OTRP				eS	Sn	10 23 03.5	+4.8
ENPP	El Nido	2.22	197	eP	Pn	10 22 34.4	+1.1
ENPP				eS	Sn	10 23 01.4	+0.5
POLP	Polilio Island	2.27	53	eP	Pn	10 22 34.4	+0.5
GQP	Guinayangan	2.37	76⇓	eP	Pn	10 22 36.0	+0.7
GQP				eS	Sn	10 23 05.2	+0.6
PCPH	Palayan	2.41	24⇓	eP	Pn	10 22 36.0	0.0
PCPH				eS	Sn	10 23 05.7	+0.1
AUQP	San Andres	2.53	90	eP	Pn	10 22 39.6	+2.1
CUYO	Cuyo Island	2.65	160	eP	Pn	10 22 39.3	+0.1
CUYO				eS	Sn	10 23 09.4	-2.0
KALP	Kalibo	2.76	127⇓	eP	Sn	10 23 10.2	-4.1
BOLP	Bolinao	3.02	357	eP	Pn	10 22 51.9	+7.6
WRAB	Tennant Creek	35.93	157	eP	P	10 28 56.1	-0.9
	7.7nm,0.6s,mb4.8						
WB2	Warramunga Arr	35.94	157⇑	iP	P	10 28 55.9	-1.1
SONM	Songino Array	36.23	344	P	P	10 28 59.9	+0.4
	0.7nm,0.5s,mb3.8,baz=164,slow=8.3,SNR=5.3						
SONM				LR	LR	10 43 52.3	
	comp=Z,48nm,19.9s,MS3.3,baz=290,slow=36						
AS31	Alice Springs	39.19	160	eP	P	10 29 24.5	-0.1
ASAR	Alice Springs	39.19	160	P	P	10 29 24.4	-0.1
	5.5nm,0.6s,mb4.5,baz=340,slow=7.1,SNR=104						
ASPA	Alice Springs	39.19	160	eP	P	10 29 24.5	-0.1
MKAR	Makanchi Array	45.96	324	P	P	10 30 21.1	+1.6
	0.2nm,0.3s,mb3.5,baz=142,slow=11,SNR=3.8						
STKA	Stephens Creek	49.47	156	P	P	10 30 46.4	-0.5
	1.5nm,0.6s,mb4.2,baz=337,slow=7.7,SNR=4.4						
BVAR	Borovoye Array	55.72	326	P	P	10 31 34.3	+1.1
	0.6nm,0.6s,mb3.8,baz=111,slow=11,SNR=3.3						
URZ	Urewera	74.01	137	LR	LR	11 08 17.8	
	comp=Z,166nm,19.4s,MS4.3,baz=28,slow=38						
ARCES	ARCESS Array B	79.20	339	P	P	10 34 00.3	-1.3
	1.6nm,0.8s,mb4.0,baz=66,slow=6.8,SNR=5.3						
FINES	FINESS Array B	80.30	331	P	P	10 34 06.0	-1.6
	1.5nm,0.6s,mb4.1,baz=69,slow=15,SNR=8.4						

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*SZGRF **07** 10:59:38.7, 34.19N×3.94E, h10km, mb4.6, MS3.6, Northern Algeria*

*CSEM **07** 10:59:43.8, 34.80N×3.92E, h10km, mb4.8*

*MOS **07** 10:59:43.3±1.2, 34.89N×3.83E, h10km, mb5.0/27, Error ellipse: s-maj=4.5km s-min=2.0km az=75.0*

*ISCJB **07** 10:59:44.0±0.2, 34.96N±0.02×3.76E±0.01, h10km, mb4.6/88, MS4.1/33, Error ellipse: s-maj=2.7km s-min=1.7km az=169.6*

*IDC **07** 10:59:44.2±0.4, 35.12N×3.82E, h0km, mb4.3/35, mb1 4.5/41, mb1mx4.4/44, mbtmp4.4/41, ML4.5/6, MS4.0/23, Ms1 4.0/23, ms1mx3.9/31, Error ellipse: s-maj=10.9km s-min=9.4km az=168.0*

*NEIC **07** 10:59:45.4±0.3, 34.84N×3.80E, h10km, mb4.7/39, Error ellipse: s-maj=4.2km s-min=2.9km az=173.0*

*HRVD **07** 10:59:45.4±0.6, 35.00N×3.70E, h18km±2km, MW4.9/64, Centroid moment Tensor Solution. LP body waves: s13,c15;Mantle waves: s64,c91; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.34±.13; $M_{\theta\theta}$1.90±.12; $M_{\phi\phi}$-2.25±.13; $M_{r\theta}$0.62±.25; $M_{\theta\phi}$-1.18±.10; $M_{\phi r}$-0.52±.26; Best double couple: $M_0$2.53500×10^{16} NP1:ϕ_s58.00000°, δ71.00000°, λ171.00000°. NP2:ϕ_s151.00000°, δ82.00000°, λ19.00000°. Principal axes: T 2.4650, Plg19.0000°, Azm16.0000°; N 0.1310, Plg70.0000°, Azm175.0000°; P -2.6050, Plg7.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*LDG **07** 10:59:47.2±0.3, 34.61N×3.82E, h30km, Ml4.6/25 Error ellipse: s-maj=7.4km s-min=4.2km az=174.0*

*BJI **07** 10:59:48.7, 35.63N×4.58E, h10km, mB4.9, mb4.9, Ms4.7, Msz4.3*

*MDD **07** 10:59:51.1±1.3, 35.34N×3.43E, h12km±14km, mb4.8/36, Error ellipse: s-maj=15.5km s-min=7.6km az=140.0, PRXIMO*

*CRAAG **07** 10:59:52.6, 35.54N×3.89E, Ml4.9*

*STR **07** 11:00:05.1±0.9, 36.33N×3.89E, h10km±1km, Ml4.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 07 10:59:46.1±0.2**, 34.95N**±0.02×**3.80E**±0.01**, h10**km**, (h13**km±.9km**:pP-P), n640, σ1.43**/778**, mb4.6**/88**, MS4.1**/33**, 30C-29D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKET	Djebel Ketaf	1.09	4	P	Pg	11 00 04.0	-3.1
ADJB	Djebel Djouab	1.24	346	P	Pn	11 00 07.2	-2.2
EMHD	Djebel Mahouad	1.42	331	P	Pn	11 00 13.0	+1.0
CKHR	Kef el Ahmar	1.76	52	P	Pn	11 00 26.2	+10
SET	Setif	1.81	46	P	Pn	11 00 17.0	-0.2
ABMS	Boumerdes	1.81	352	P	Pn	11 00 15.8	-1.5
ABA	Alger-Bouzarea	1.95	342	P	Pn	11 00 18.0	-1.2
ETRT	Tiaret	2.09	283	P	Pn	11 00 20.0	-1.2
EBNR	Beni Rached	2.28	307	P	Pn	11 00 24.0	+0.3
ECHA	Ech Chlef	2.31	302	P	Pg	11 00 33.0	+2.6
DFRA	Djebel Bou Aff	2.32	46	P	Pn	11 00 23.8	-0.5
ECHF	Ech Chlef	2.34	302	P	Pg	11 00 33.0	+2.2
EANR	'Ain N'Sour	2.42	295	P	Pn	11 00 25.0	-0.6
CASM	Ain Smara	2.55	58	P	Pn	11 00 27.0	-0.5
OJGS	Djebel Guires	2.56	283	P	Pn	11 00 21.0	-6.5
CKFL	Kef-Lekhel	2.78	58	P	Pn	11 00 29.0	-1.7
OJBR	Djebel Berber	2.89	284	P	Pn	11 00 31.0	-1.2
CAEH	'Ain El Ouahch	3.08	53	P	Pn	11 00 32.0	-2.7
ODJA	Bouhanifia	3.26	278	P	Pn	11 00 42.0	+4.8
ABSA	Djebel Ababsia	3.28	65	P	Pn	11 00 37.0	-0.4
CABS	Djebel Ababsia	3.28	65	P	Pn	11 00 37.0	-0.4
CMAH	Djebel Manchou	3.38	59	P	Pn	11 00 37.6	-1.3
USTO	Oran	3.64	284	P	Pn	11 00 46.0	+3.6
OTSS	Djebel Tessala	3.78	276	P	Pn	11 00 47.0	+2.7
EIBI	Ibiza	4.52	335	P	Pn	11 00 53.7	-0.7
	56nm,0.3s,SNR=67						
EIBI				S	Sn	11 01 41.6	-5.4
	415nm,0.8s						
EIBI	Ibiza	4.52	335	Pn	Pn	11 00 53.7	-0.8
	56nm,0.3s,SNR=67						
EIBI				Sn	Sn	11 01 41.6	-5.5
	415nm,0.8s						
KEST	Kesra	4.60	79	Pn	Pn	11 00 55.9	+0.2
	4.8nm,0.3s,baz=234,slow=1.1,SNR=64						
KEST				Sn	Sn	11 01 51.9	+2.7
	3.0nm,0.3s,baz=139,slow=19,SNR=2.7						
KEST				Lg		11 02 09.5	
	1.1nm,0.3s,baz=317,slow=21,SNR=3.2						
CART	Cartagena	4.68	306	ePn	Pn	11 00 54.6	-2.2
CART				eSn	Sn	11 01 46.1	-5.0
CART	Cartagena	4.68	306	ePn	Pn	11 00 54.6	-2.2
CART				eSn	Sn	11 01 46.2	-5.0
ETOS	Mallorca	4.87	351	P	Pn	11 00 58.0	-1.4
	107nm,0.7s,SNR=32						
ETOS				S	Sn	11 01 52.5	-3.3
	407nm,0.7s,SNR=6.9						
ETOS	Mallorca	4.87	351	Pn	Pn	11 00 58.5	-0.9
ETOS				Sn	Sn	11 01 52.5	-3.3
ETOS	Mallorca	4.87	351	Pn	Pn	11 00 58.4	-1.0
	107nm,0.7s,SNR=32						
ETOS				Sn	Sn	11 01 52.5	-3.3
	407nm,0.7s,SNR=6.9						
EBEN	Beniarda	4.94	320	P	Pn	11 00 59.5	-0.8
	17nm,0.3s,SNR=26						
EBEN				S	Sn	11 01 52.7	-4.8
	59nm,0.4s,SNR=5.1						
EBEN	Beniarda	4.94	320	Pn	Pn	11 00 59.9	-0.5
EBEN				Sn	Sn	11 01 54.5	-3.1
EBEN	Beniarda	4.94	320	Pn	Pn	11 00 59.9	-0.4
	17nm,0.3s,SNR=26						
EBEN				Sn	Sn	11 01 54.5	-3.1
	59nm,0.4s,SNR=5.1						
EMUR	La Murta	4.98	307	P	Pn	11 00 59.3	-1.6
	44nm,0.3s,SNR=19						
EMUR				S	Sn	11 01 53.5	-5.0
	204nm,0.8s,SNR=6.2						
EMUR	La Murta	4.98	307	Pn	Pn	11 00 59.6	-1.3
EMUR				Sn	Sn	11 01 53.5	-5.0
EMUR	La Murta	4.98	307	Pn	Pn	11 00 59.6	-1.3
	44nm,0.3s,SNR=19						
EMUR				Sn	Sn	11 01 53.5	-5.1
	204nm,0.8s,SNR=6.2						
ENIJ	Nijar	5.27	294	P	Pn	11 01 03.5	-1.4
	25nm,0.3s,SNR=9.6						
ENIJ				S	Sn	11 02 00.0	-5.6
	135nm,0.5s						
ENIJ	Nijar	5.27	294	Pn	Pn	11 01 02.6	-2.3
ENIJ				Sn	Sn	11 02 01.9	-3.7
ENIJ	Nijar	5.27	294	Pn	Pn	11 01 02.6	-2.3
	25nm,0.3s,SNR=9.6						
ENIJ				Sn	Sn	11 02 01.9	-3.7
	135nm,0.5s						
ZAI	Zaio	5.37	272	iP	Pn	11 01 06.0	-0.3
ETOB	Tobarra	5.65	312	P	Pn	11 01 09.9	-0.2
	30nm,0.4s,SNR=52						
ETOB				S	Sn	11 02 10.4	-4.7
	944nm,1.2s,SNR=8.2						
ETOB	Tobarra	5.65	312	Pn	Pn	11 01 10.4	+0.3
ETOB				Sn	Sn	11 02 09.6	-5.5
ETOB	Tobarra	5.65	312	Pn	Pn	11 01 10.4	+0.3
	30nm,0.4s,SNR=52						
ETOB				Sn	Sn	11 02 09.6	-5.5
	944nm,1.2s,SNR=8.2						
EBER	Berja	5.76	292	P	Pn	11 01 10.5	-1.1
	31nm,0.4s,SNR=30						
EBER				S	Sn	11 02 15.0	-2.8
	138nm,0.6s						
EBER	Berja	5.76	292	Pn	Pn	11 01 10.5	-1.1
	31nm,0.4s,SNR=30						
EBER				Sn	Sn	11 02 15.0	-2.8
	138nm,0.6s						
EHUE	Huescar	5.89	301	P	Pn	11 01 14.8	+1.4
	6.5nm,0.3s,SNR=13						
EHUE				S	Sn	11 02 17.6	-3.4
	90nm,0.8s,SNR=5.6						
EHUE	Huescar	5.89	301	Pn	Pn	11 01 12.8	-0.6
EHUE				Sn	Sn	11 02 17.6	-3.4
EHUE	Huescar	5.89	301	Pn	Pn	11 01 12.8	-0.6
	6.5nm,0.3s,SNR=13						
EHUE				Sn	Sn	11 02 17.6	-3.4
	90nm,0.8s,SNR=5.6						
ECHE	Chera	5.99	322	P	Pn	11 01 15.4	+0.6
	35nm,0.5s,SNR=13						
ECHE				S	Sn	11 02 18.7	-4.6
	126nm,0.7s,SNR=5.3						
ECHE	Chera	5.99	322	Pn	Pn	11 01 16.0	+1.3
ECHE				Sn	Sn	11 02 22.0	-1.4
ECHE	Chera	5.99	322	P	Pn	11 01 16.0	+1.3
ECHE				Sn	Sn	11 02 22.0	-1.3
	126nm,0.7s,SNR=5.3						
TOU	Touzarine	6.20	272	iP	Pn	11 01 18.0	+0.4
EQES	Quesada	6.23	299	P	Pn	11 01 18.7	+0.7
	56nm,0.4s,SNR=35						
EQES				S	Sn	11 02 26.4	-2.9
	277nm,0.5s						
EQES	Quesada	6.23	299	Pn	Pn	11 01 18.7	+0.7
EQES				Sn	Sn	11 02 26.9	-2.4
EQES	Quesada	6.23	299	Sn	Sn	11 02 26.9	-2.3
	277nm,0.5s						
EVIA	Vianos	6.25	308	P	Pn	11 01 17.6	-0.7
	40nm,0.4s,SNR=27						
EVIA				S	Sn	11 02 24.0	-5.9
	300nm,0.7s						
EVIA	Vianos	6.25	308	Pn	Pn	11 01 17.8	-0.5
EVIA				Sn	Sn	11 02 28.2	-1.6
EVIA	Vianos	6.25	308	Pn	Pn	11 01 17.8	-0.5
	40nm,0.4s,SNR=27						
EVIA				Sn	Sn	11 02 28.2	-1.6
	300nm,0.7s						
EGUA	Guajares	6.26	290	P	Pn	11 01 18.8	+0.3
	3.6nm,0.2s,SNR=7.9						
EGUA	Guajares	6.26	290	Pn	Pn	11 01 18.5	-0.1
EGUA	Guajares	6.26	290	Pn	Pn	11 01 18.5	0.0
	SNR=7.9						
EQUE	Quentar	6.28	293	P	Pn	11 01 18.3	-0.4
	51nm,0.4s,SNR=51						
EQUE				S	Sn	11 02 26.4	-4.0
	183nm,0.5s,SNR=5.0						
EQUE	Quentar	6.28	293	Pn	Pn	11 01 18.8	+0.1
	51nm,0.4s,SNR=51						
MPAL	Palemas	6.35	275	iP	Pn	11 01 21.0	+1.3
VSL	Villasalto	6.36	43	ePn	Pn	11 01 19.0	-0.7
VSL				eSn	Sn	11 02 28.6	-3.7
VSL	Villasalto	6.36	43	ePn	Pn	11 01 19.0	-0.8
VSL				eSn	Sn	11 02 28.6	-3.8
EMOS	Mosqueruela	6.38	329	P	Pn	11 01 19.9	-0.1
	126nm,0.9s,SNR=36						
EMOS				S	Sn	11 02 27.8	-5.0
	2μm,1.3s,SNR=12						
EMOS	Mosqueruela	6.38	329	Pn	Pn	11 01 20.0	0.0
EMOS				Sn	Sn	11 02 27.2	-5.6
EMOS	Mosqueruela	6.38	329	Pn	Pn	11 01 20.0	0.0
	126nm,0.9s,SNR=36						
ECOG	Cogollos-Vega	6.40	293	P	Pn	11 01 21.1	+0.7
	40nm,0.7s,SNR=18						
ECOG				S	Sn	11 02 31.7	-1.6
	130nm,0.6s						
ECOG	Cogollos-Vega	6.40	293	Pn	Pn	11 01 21.1	+0.7
ECOG				Sn	Sn	11 02 35.5	+2.1
ECOG	Cogollos-Vega	6.40	293	P	Pn	11 01 21.1	+0.8
ECOG				S	Sn	11 02 35.5	+2.1
ERON	Agron	6.50	291	P	Pn	11 01 21.4	-0.3
	7.1nm,0.3s,SNR=15						
ERON				S	Sn	11 02 32.8	-3.2
	40nm,0.6s						
ERTA	Horta de San J	6.59	336	P	Pn	11 01 23.2	+0.3
	2.0nm,0.2s,SNR=9.3						
ERTA				S	Sn	11 02 32.9	-5.2
	128nm,0.6s,SNR=4.7						
ERTA	Horta de San J	6.59	336	Pn	Pn	11 01 25.0	+2.0
ERTA				Sn	Sn	11 02 31.4	-6.8
TZK	Tazeka	6.64	265	iP	Pn	11 01 24.0	+0.3
EPOB	Poblet	6.74	342	P	Pn	11 01 25.7	+0.6
	8.4nm,0.4s,SNR=9.7						
EPOB				S	Sn	11 02 36.6	-5.2
	42nm,0.6s						
EPOB	Poblet	6.74	342	Pn	Pn	11 01 26.7	+1.6
EPOB				Sn	Sn	11 02 35.5	-6.4
ELOJ	Sierra Loja	6.80	291	P	Pn	11 01 26.7	+0.8
	26nm,0.7s,SNR=18						
ELOJ				S	Sn	11 02 39.6	-3.7
	82nm,0.7s						
ELOJ	Sierra Loja	6.80	291	Pn	Pn	11 01 26.7	+0.8
ELOJ				Sn	Sn	11 02 38.8	-4.6
ELOJ	Sierra Loja	6.80	291	P	Pn	11 01 26.7	+0.8
ELOJ				Sn	Sn	11 02 38.8	-4.6
	82nm,0.7s						
EBAN	Banos Encina	6.89	300	P	Pn	11 01 27.3	+0.2
	8.7nm,0.4s,SNR=8.1						
EBAN				S	Sn	11 02 42.3	-3.3
	65nm,0.6s,SNR=5.0						
ELUQ	Luque	7.01	294	P	Pn	11 01 29.7	+0.9
	6.7nm,0.2s,SNR=7.9						
ELUQ				S	Sn	11 02 46.6	-2.0
	5.0nm,0.2s,SNR=7.9						
ELUQ	Luque	7.01	294	P	Pn	11 01 29.7	+0.9
ELUQ				Sn	Sn	11 02 44.4	-4.2
	SNR=7.9						
EMIJ	Mijas	7.15	285	P	Pn	11 01 29.1	-1.6
	44nm,0.9s,SNR=10						
EMIJ				S	Sn	11 02 46.9	-5.1
	60nm,0.5s,SNR=4.9						
EMIJ	Mijas	7.15	285	Pn	Pn	11 01 28.3	-2.4
EMIJ				Sn	Sn	11 02 44.2	-7.8
EMIJ	Mijas	7.15	285	Pn	Pn	11 01 28.3	-2.4
	44nm,0.9s,SNR=10						
MDT	Midelt	7.31	255	Pn	Pn	11 01 33.8	+0.9
	9.2nm,0.3s,baz=77,slow=14,SNR=184						
MDT				Sn	Sn	11 02 58.0	+2.1
	11nm,0.3s,baz=250,slow=20,SNR=2.2						
MDT				Lg		11 03 40.5	
	13nm,0.3s,baz=39,slow=9.4,SNR=4.8						
MDT				LR	LR	11 04 56.9	
	comp=Z,587nm,20.1s,baz=74,slow=42						
ZFT	Errachidia	7.40	249	iP	Pn	11 01 35.0	+0.9
EADA	Adamuz	7.46	298	P	Pn	11 01 34.6	-0.4
	11nm,0.9s,SNR=8.5						
EADA				S	Sn	11 02 55.3	-4.3
	74nm,0.6s						
EADA	Adamuz	7.46	298	Pn	Pn	11 01 34.6	-0.4
	11nm,0.9s,SNR=8.5						
EADA				Sn	Sn	11 02 55.3	-4.4
	74nm,0.6s						
SJAF	Saint Jean de	7.55	355	P	Pn	11 01 35.5	-0.7
VALF	Valcebollere	7.57	350	P	Pn	11 01 37.4	+1.0
CZD	Col de Zad	7.59	258	iP	Pn	11 01 39.0	+2.3
MIF	Mishlifen	7.64	261	iP	Pn	11 01 36.5	-0.9
FILF	Fillols	7.66	353	P	Pn	11 01 38.3	+0.7
EJIF	Jimena Fronter	7.69	284	P	Pn	11 01 38.8	+0.8
	9.2nm,0.5s,SNR=7.0						
ERC	Erice	7.72	64	P	Pn	11 01 38.6	+0.1
ESDC	Sonseca Array	7.77	310	Pn	Pn	11 01 38.1	-1.1

4.7nm,0.3s,baz=125,slow=13,SNR=28
ESDC Sn **Sn** 11 03 06.4 -0.9
6.7nm,0.3s,baz=122,slow=25,SNR=5.3
ESDC LR LR 11 04 22.4
comp=Z,537nm,21.4s,baz=130,slow=36
ESDC Sonseca Array 7.77 310 P **Pn** 11 01 38.1 -1.1
18nm,0.8s,baz=125,slow=13,SNR=20
ESDC S **Sn** 11 03 03.7 -3.6
34nm,0.6s,baz=122,slow=24,SNR=8.5
ESDC Sonseca Array 7.77 310 Pn **Pn** 11 01 38.1 -1.1
18nm,0.8s,SNR=20
ESDC Sn **Sn** 11 03 03.7 -3.6
34nm,0.6s,SNR=8.5
ESLA Sonseca Array 7.77 310 *e*Pn **Pn** 11 01 38.2 -1.0
ESLA *e*Sn **Sn** 11 03 16.6 +9.3
ESLA Sonseca Array 7.77 310 *e*Pn **Pn** 11 01 38.2 -1.0
CARF Carcanieres 7.86 351 P **Pn** 11 01 42.2 +1.7
LRDF Laroque-de-Fa 8.03 353 P **Pn** 11 01 42.9 +0.1
SALF Salau 8.06 346 P **Pn** 11 01 42.9 -0.2
SALF S **Sn** 11 03 06.5 -7.8
ESPR Espera 8.06 287 P **Pn** 11 01 44.4 +1.2
11nm,0.5s,SNR=7.3
EBIE Bielsa 8.23 341 P **Pn** 11 01 46.7 +1.2
5.6nm,0.4s,SNR=17
EBIE S **Sn** 11 03 14.6 -4.0
SNR=5.0
EBIE Bielsa 8.23 341 Pn **Pn** 11 01 46.7 +1.2
5.6nm,0.4s,SNR=17
MELF Melles 8.26 344 P **Pn** 11 01 47.0 +1.2
MELF S **Sn** 11 03 12.9 -6.2
MLS Moulis 8.27 346 P **Pn** 11 01 47.7 +1.7
MLS S **Sn** 11 03 12.3 -7.1
VIEF Viey 8.45 341 P **Pn** 11 01 50.4 +1.9
MTLF Montolieu 8.47 352 *e*Pn **Pn** 11 01 50.7 +2.0
MTLF *e*Sn **Sn** 11 03 20.6 -3.7
30nm,0.6s
MTLF Montolieu 8.47 352 P **Pn** 11 01 50.7 +2.0
MTLF S **Sn** 11 03 20.6 -3.7
15nm,0.6s
GUD Guadarrama 8.47 314 P **Pn** 11 01 49.2 +0.4
15nm,0.5s,SNR=14
GUD S **Sn** 11 03 21.2 -3.3
35nm,0.6s,SNR=5.0
GUD Guadarrama 8.47 314 Pn **Pn** 11 01 49.6 +0.7
GUD Sn **Sn** 11 03 18.6 -5.9
GUD Guadarrama 8.47 314 Pn **Pn** 11 01 49.6 +0.7
15nm,0.5s,SNR=14
GUD Sn **Sn** 11 03 18.6 -6.0
35nm,0.6s,SNR=5.0
BERF Bertagne 8.48 9 P **Pn** 11 01 51.2 +2.3
EPF Esparros 8.50 343 *e*Pn **Pn** 11 01 51.6 +2.4
EPF *e*Sn **Sn** 11 03 19.1 -6.1
115nm,0.8s
EPF Esparros 8.50 343 P **Pn** 11 01 51.6 +2.4
EPF S **Sn** 11 03 19.1 -6.1
58nm,0.8s
GELF Grande-Etoile 8.51 8 P **Pn** 11 01 48.2 -1.2
KIB El Ksiba 8.53 257 *i*P **Pn** 11 01 51.0 +1.4
LABF Labassere 8.59 341 P **Pn** 11 01 52.3 +1.9
LABF S **Sn** 11 03 20.5 -6.8
ETSF Etsaut 8.63 338 *e*Pn **Pn** 11 01 53.5 +2.5
ETSF *e*Sn **Sn** 11 03 21.8 -6.5
140nm,0.9s
ETSF Etsaut 8.63 338 P **Pn** 11 01 53.5 +2.5
ETSF S **Sn** 11 03 21.8 -6.5
70nm,0.9s
LMR La Mourre 8.63 13 *e*Pn **Pn** 11 01 49.6 -1.4
LMR *e*Sn **Sn** 11 03 20.2 -8.2
11nm,0.2s
LMR La Mourre 8.63 13 P **Pn** 11 01 49.6 -1.4
LMR S **Sn** 11 03 20.2 -8.2
5.3nm,0.2s
GIB Gibilmanna 8.78 67 P **Pn** 11 01 55.0 +2.0
CSLB Castelbuono 8.79 67 P **Pn** 11 01 54.0 +0.9
IPRE Itoiz 8.81 334 Pn **Pn** 11 01 55.5 +2.1
7.3nm,0.5s,SNR=4.9
TAVF Tavernes 8.83 11 P **Pn** 11 01 50.6 -3.1
ATE Arette 8.84 338 S **Sn** 11 03 26.5 -7.1
RAFF Raffo Rosso 8.85 72 P **Pn** 11 01 58.9 +4.9
FRF La Foret Royal 8.88 14 *e*Pn **Pn** 11 01 53.0 -1.3
FRF *e*Sn **Sn** 11 03 27.2 -7.2
42nm,0.5s
FRF La Foret Royal 8.88 14 P **Pn** 11 01 53.0 -1.3
FRF S **Sn** 11 03 27.2 -7.2
21nm,0.5s
LARF Larrau 8.89 337 P **Pn** 11 01 56.1 +1.6
EMIN Mina Concepcio 8.90 291 P **Pn** 11 01 54.6 -0.1
10nm,0.6s,SNR=12
EMIN Mina Concepcio 8.90 291 Pn **Pn** 11 01 54.6 -0.1
10nm,0.6s,SNR=12
VAE Valguarnera 8.94 71 Pn **Pn** 11 01 56.4 +1.1
14nm,0.3s,baz=311,slow=11,SNR=3.2
VAE Valguarnera 8.94 71 Pn **Pn** 11 01 56.4 +1.1
SJPF Ste Jean 9.04 336 *e*Pn **Pn** 11 01 58.6 +2.1
SJPF *e*Sn **Sn** 11 03 31.3 -7.0
114nm,0.9s
SJPF Ste Jean 9.04 336 P **Pn** 11 01 58.6 +2.1
SJPF S **Sn** 11 03 31.3 -7.0
57nm,0.9s
LASF Ste Croix 9.11 0 *e*Pn **Pn** 11 01 57.1 -0.5
LASF *e*Sn **Sn** 11 03 30.3 -10
94nm,0.7s
LASF Ste Croix 9.11 0 P **Pn** 11 01 57.1 -0.5
LASF S **Sn** 11 03 30.3 -10
47nm,0.7s
SMRF Simiane la Rot 9.12 8 *e*Pn **Pn** 11 01 57.7 +0.1
OSSF Osses 9.17 336 P **Pn** 11 02 00.3 +1.9
ELIZ Elizondo 9.18 335 Pn **Pn** 11 02 00.7 +2.1
EALK Alkurruntz 9.22 335 P **Pn** 11 02 00.7 +1.5
10.0nm,0.4s,SNR=6.9
EALK S **Sn** 11 03 37.3 -5.7
40nm,0.9s,SNR=6.5
EALK Alkurruntz 9.22 335 Pn **Pn** 11 02 02.1 +3.0
EALK Sn **Sn** 11 03 37.3 -5.7
EALK Alkurruntz 9.22 335 Pn **Pn** 11 02 02.1 +3.0
MNO Monte Soro 9.27 68 P **Pn** 11 02 03.6 +3.8
SBF Sospel 9.33 16 *e*Pn **Pn** 11 02 01.8 +1.2
SBF *e*Sn **Sn** 11 03 37.1 -8.5
41nm,0.3s
SBF Sospel 9.33 16 P **Pn** 11 02 01.8 +1.2
SBF S **Sn** 11 03 37.1 -8.5
20nm,0.3s
SSY Sortino 9.39 73 P **Pn** 11 02 05.6 +4.2
TOUF Mont Tournerai 9.43 15 P **Pn** 11 02 00.9 -1.1
AUTN L'Aution 9.46 16 P **Pn** 11 02 01.2 -1.1
EBAD Badajoz 9.46 297 P **Pn** 11 02 02.4 0.0
11nm,0.6s,SNR=4.2
EBAD Badajoz 9.46 297 Pn **Pn** 11 02 02.2 -0.2
EBAD Badajoz 9.46 297 Pn **Pn** 11 02 02.2 -0.1
EGRO El Granado 9.47 289 P **Pn** 11 02 02.1 -0.4
9.1nm,0.4s,SNR=9.5
EGRO El Granado 9.47 289 Pn **Pn** 11 02 02.1 -0.4
SAOF Saorge 9.48 17 P **Pn** 11 02 02.7 +0.1
FIN Finale Ligure 9.85 19 P **Pn** 11 02 06.0 -1.7
LATE Laterza 9.87 37 P **Pn** 11 02 09.5 +1.5
PBEJ Beja 9.88 291 *e*P **Pn** 11 02 07.9 -0.2
DOI San Damiano 9.90 14 P **Pn** 11 02 09.8 +1.4
GRFL Gerfalco 9.90 32 P **Pn** 11 02 08.0 -0.4
VIVF Saint-Julien-l 9.91 4 *e*Pn **Pn** 11 02 07.3 -1.3
VIVF *e*Sn **Sn** 11 03 50.8 -9.1
99nm,0.8s
VIVF Saint-Julien-l 9.91 4 P **Pn** 11 02 07.3 -1.3
VIVF S **Sn** 11 03 50.8 -9.1
50nm,0.8s
PESTR Estremoz 9.92 297 *e*P **Pn** 11 02 10.4 +1.7
32nm,1.4s
PESTR *e*LR LR 11 04 55.6
1µm,18.0s
ELAN Lanestosa 9.99 328 P **Pn** 11 02 09.3 -0.4
32nm,0.8s,SNR=13
ELAN Lanestosa 9.99 328 Pn **Pn** 11 02 12.4 +2.7
32nm,0.8s
MBDF Montbardon 10.03 12 *e*Pn **Pn** 11 02 09.2 -0.9
MBDF *e*Sn **Sn** 11 03 57.2 -5.4
38nm,0.8s
MBDF Montbardon 10.03 12 P **Pn** 11 02 09.2 -0.9
MBDF S **Sn** 11 03 57.2 -5.4
19nm,0.8s
CERT Cerreto 10.03 43 P **Pn** 11 02 12.3 +2.1
CAF Calviac 10.05 353 *e*Pn **Pn** 11 02 11.8 +1.4
CAF *e*Sn **Sn** 11 03 59.0 -4.2
36nm,0.8s
CAF Calviac 10.05 353 P **Pn** 11 02 11.8 +1.4
CAF S **Sn** 11 03 59.0 -4.2
18nm,0.8s

ORIF Oris-en-Rattie 10.08 8 *e*Pn **Pn** 11 02 11.6 +0.7
ORIF *e*Sn **Sn** 11 04 01.4 -2.6
22nm,0.7s
ORIF Oris-en-Rattie 10.08 8 P **Pn** 11 02 11.6 +0.7
ORIF S **Sn** 11 04 01.4 -2.6
11nm,0.7s
PCBR Castelo Branco 10.21 302 *e*P **Pn** 11 02 12.7 +0.1
39nm,1.7s
RRL Cesana Torines 10.21 12 P **Pn** 11 02 12.3 -0.4
LFF La Frestale 10.25 348 *e*Pn **Pn** 11 02 14.8 +1.7
LFF *e*Sn **Sn** 11 04 02.2 -5.9
34nm,0.6s
LFF La Frestale 10.25 348 P **Pn** 11 02 14.8 +1.7
LFF S **Sn** 11 04 02.2 -5.9
17nm,0.6s
LBL Lubilhac 10.28 358 P **Pn** 11 02 13.6 0.0
CSNT Castellina Chi 10.30 32 P **Pn** 11 02 17.4 +3.5
VVLD Villa Vallelon 10.35 45 P **Pn** 11 02 17.3 +2.8
SDI San Donato 10.36 46 P **Pn** 11 02 19.5 +4.9
SC2M Scurtabr 10.42 23 P **Pn** 11 02 17.3 +1.8
PTEO Sao Teotonio 10.44 288 *e*P **Pn** 11 02 16.2 +0.4
60nm,1.2s
RJF Les Rejaudoux 10.49 351 *e*Pn **Pn** 11 02 18.6 +2.2
BACM 10.49 26 P **Pn** 11 02 15.6 -0.9
MTE Manteigas 10.50 305 *e*P **Pn** 11 02 17.6 +1.0
45nm,2.0s
MTE *e*LR LR 11 04 34.7
926nm,18.0s
MTE Manteigas 10.50 305 *e*Pn **Pn** 11 02 15.8 -0.8
CODM 10.51 24 P **Pn** 11 02 18.8 +2.0
RSP Reno Superiore 10.53 14 P **Pn** 11 02 18.3 +1.3
AQU L'Aquila 10.53 43 *e*Pn **Pn** 11 02 21.2 +4.2
AQU *e*Sn **Sn** 11 04 19.5 +4.5
AQU L'Aquila 10.53 43 *e*S **Sn** 11 04 19.5 +4.5
SARO Sassorosso 10.53 27 P **Pn** 11 02 17.0 0.0
COLF Collangettes 10.55 360 P **Pn** 11 02 17.8 +0.5
RNI2 Rionero Sannit 10.56 47 P **Pn** 11 02 27.6 +10
INTR Introdacqua 10.60 45 P **Pn** 11 02 20.3 +2.3
ASS Assisi 10.63 38 P **Pn** 11 02 20.8 +2.5
GRAM 10.68 25 P **Pn** 11 02 19.4 +0.4
CRE Caprese Michel 10.71 34 P **Pn** 11 02 22.5 +3.0
MURB Monte Urbino 10.71 37 P **Pn** 11 02 22.0 +2.5
BOB Bobbio (Coli) 10.72 22 P **Pn** 11 02 22.7 +3.1
PBRG Braganca 10.73 313 *e*P **Pn** 11 02 19.2 -0.5
27nm,0.8s
ERBM Eremo 10.74 26 P **Pn** 11 02 22.6 +2.8
GSCL Gusciola 10.74 27 P **Pn** 11 02 26.7 +6.8
BADI Badiali 10.76 35 P **Pn** 11 02 22.8 +2.6
LPG La Plagne 10.77 11 *e*Pn **Pn** 11 02 21.4 +1.1
LPG *e*Sn **Sn** 11 04 13.9 -7.0
42nm,0.8s
LPG La Plagne 10.77 11 P **Pn** 11 02 21.4 +1.1
LPG S **Sn** 11 04 13.9 -7.0
21nm,0.8s
PTOM Tomar 10.78 299 *e*P **Pn** 11 02 22.7 +2.2
26nm,1.5s
LPL La Plagne 10.79 11 *e*Pn **Pn** 11 02 21.6 +1.1
LPL *e*Sn **Sn** 11 04 16.7 -4.6
30nm,0.6s
LPL La Plagne 10.79 11 P **Pn** 11 02 21.6 +1.1
LPL S **Sn** 11 04 16.7 -4.6
15nm,0.6s
FNVD Fontana Vidola 10.80 29 P **Pn** 11 02 26.1 +5.4
PYM Petit Puy Mans 10.80 357 P **Pn** 11 02 22.3 +1.5
ECAL Calabor 10.81 313 P **Pn** 11 02 20.2 -0.6
22nm,0.3s,SNR=19
ECAL S **Sn** 11 04 17.6 -4.2
3.1nm,0.2s,SNR=7.9
ECAL Calabor 10.81 313 Pn **Pn** 11 02 21.0 +0.2
22nm,0.3s
ECAL Sn **Sn** 11 04 17.3 -4.6
ECAL Calabor 10.81 313 Pn **Pn** 11 02 21.0 +0.2
22nm,0.3s
ECAL Sn **Sn** 11 04 17.3 -4.5
TERO Teramo 10.82 42 P **Pn** 11 02 24.0 +3.0
EARI Arriondas 10.88 323 P **Pn** 11 02 22.6 +0.9
40nm,0.6s,SNR=20
EARI Arriondas 10.88 323 Pn **Pn** 11 02 23.7 +2.0
40nm,0.6s
PVIS Viseu 10.88 305 *e*P **Pn** 11 02 22.2 +0.3
33nm,1.6s
SFI Santa Sofia 10.89 32 P **Pn** 11 02 24.7 +2.8
PLDF La Plantade 11.01 359 P **Pn** 11 02 23.1 -0.4
CIA Chichaoua 11.04 256 *i*P **Pn** 11 02 24.0 0.0
PVRL Vila Real 11.04 308 *e*P **Pn** 11 02 23.9 -0.2
31nm,1.6s
ARV Arcevia 11.09 37 P **Pn** 11 02 27.1 +2.4
CING Cingoli 11.13 38 P **Pn** 11 02 29.6 +4.4
ORO Oropa 11.13 15 P **Pn** 11 02 28.4 +3.2
OG05 Jujurieux 11.15 6 P **Pn** 11 02 23.7 -1.8
PMAFR Mafra 11.20 295 *e*P **Pn** 11 02 26.6 +0.4
PMAFR *e*- 11 02 34.3
TCF Toulx Ste Croi 11.39 354 *e*Pn **Pn** 11 02 30.7 +1.9
TCF *e*Sn **Sn** 11 04 33.5 -2.5
37nm,0.9s
TCF Toulx Ste Croi 11.39 354 P **Pn** 11 02 30.7 +1.9
TCF S **Sn** 11 04 33.5 -2.5
18nm,0.9s
MCGN Macugnaga 11.45 15 P **Pn** 11 02 33.2 +3.7
DIX Grande Dixence 11.45 13 ⇑P **Pn** 11 02 33.7 +4.1
MMK Mattmark 11.53 15 ⇑P **Pn** 11 02 34.6 +3.9
VAI Varese 11.54 18 P **Pn** 11 02 33.8 +3.0
ELOB Lobios 11.58 310 P **Pn** 11 02 31.6 +0.2
6.9nm,0.4s,SNR=4.6
ELOB Lobios 11.58 310 Pn **Pn** 11 02 32.5 +1.1
6.9nm,0.4s
ELOB Lobios 11.58 310 Pn **Pn** 11 02 32.5 +1.1
6.9nm,0.4s
BGF Bois d'Agland 11.62 357 *e*Pn **Pn** 11 02 33.1 +1.2
BGF *e*Sn **Sn** 11 04 34.6 -7.0
48nm,0.7s
BGF Bois d'Agland 11.62 357 P **Pn** 11 02 33.1 +1.2
BGF S **Sn** 11 04 34.6 -7.0
24nm,0.7s
SMF Signal de Mont 11.68 0 *e*Pn **Pn** 11 02 33.3 +0.5
SMF *e*Sn **Sn** 11 04 40.6 -2.6
29nm,0.8s
SMF Signal de Mont 11.68 0 P **Pn** 11 02 33.3 +0.5
SMF S **Sn** 11 04 40.6 -2.6
15nm,0.8s
LKBD Leukerbad 11.79 13 ⇓P **Pn** 11 02 37.9 +3.7
AVF Avril sur Loir 11.83 359 *e*Pn **Pn** 11 02 36.1 +1.3
EPON Pontenova 11.91 318 P **Pn** 11 02 35.1 -0.8
9.7nm,0.7s,SNR=10
EPON Pontenova 11.91 318 Pn **Pn** 11 02 37.3 +1.3
9.7nm,0.7s
EPON Pontenova 11.91 318 Pn **Pn** 11 02 37.3 +1.3
9.7nm,0.7s
MFF Saint Martin d 12.01 347 *e*Pn **Pn** 11 02 38.5 +1.2
MFF *e*Sn **Sn** 11 04 41.1 -10
38nm,0.8s
MFF Saint Martin d 12.01 347 P **Pn** 11 02 38.5 +1.2
MFF S **Sn** 11 04 41.1 -10
19nm,0.8s
SSF Saint Saulge 12.10 359 *e*Pn **Pn** 11 02 40.6 +2.1
SSF *e*Sn **Sn** 11 04 52.3 -1.2
24nm,0.9s
SSF Saint Saulge 12.10 359 P **Pn** 11 02 40.6 +2.1
SSF S **Sn** 11 04 52.3 -1.2
12nm,0.9s
MABI Malga Bissina 12.21 23 P **Pn** 11 02 42.2 +2.3
TUE Stuetta 12.25 18 P **Pn** 11 02 43.0 +2.5
VDL Val di Lei 12.29 19 ⇑P **Pn** 11 02 44.1 +2.9
LOR Lormes 12.30 0 *e*Pn **Pn** 11 02 44.5 +3.2
LLS Linth-Limmern 12.52 17 ⇓P **Pn** 11 02 48.5 +4.3
BRMO Bormio 12.54 21 P **Pn** 11 02 43.5 -1.0
MUO Muotathal 12.54 15 ⇑P **Pn** 11 02 49.1 +4.5
CTI Castel Tesino 12.58 26 P **Pn** 11 02 46.5 +1.4
LOMF Lomont 12.59 9 P **Pn** 11 02 47.3 +2.0
DAVOX Davos 12.68 19 Pn **Pn** 11 02 48.2 +1.9
0.5nm,0.3s,baz=208,slow=12,SNR=12
DAVOX LR LR 11 07 25.7
comp=Z,779nm,21.1s,baz=268,slow=37
DAVOX Davos 12.68 19 Pn **Pn** 11 02 48.2 +1.9
DAVOX LR LR 11 07 25.7
DAVOS Davos 12.71 19 P **Pn** 11 02 48.2 +1.4
BBS Basel-Blauen 12.81 11 P **Pn** 11 02 48.8 +0.6
APPI Appiano 12.81 24 P **Pn** 11 02 51.3 +3.1
SULZ Sulz-Cheisache 12.97 13 ⇓P **Pn** 11 02 50.5 +0.1
WILA Wila 13.03 16 ⇓P **Pn** 11 02 52.8 +1.6
MOF Molkenrain 13.13 10 P **Pn** 11 02 53.4 +0.9
DAVA Damuels 13.14 19 ⇑*i*P **Pn** 11 02 54.5 +1.8
comp=Z,151nm,2.1s,SNR=11
FELD Feldberg im Sc 13.29 12 P **Pn** 11 02 54.2 -0.6

GMNA Gemona 13.38 29 P **Pn** 11 02 57.1 +1.1
SEST Monte Rota 13.39 26 P **Pn** 11 02 59.4 +3.3
VOY Vojsko 13.46 32 *e*P **Pn** 11 02 57.3 +0.2
VOY *e* 11 02 59.3
VOY *e* 11 03 06.7
VOY *e* 11 03 34.8
VOY *e* 11 03 45.8
SQTA Sankt Quirin 13.46 22⇓*i*P **Pn** 11 02 59.7 +2.6
comp=Z,60nm,1.4s,SNR=6.8
SQTA Sankt Quirin 13.46 22⇓*i*P **Pn** 11 02 59.7 +2.6
SQTA pmax pmax
comp=Z,60nm,1.4s
FVI Forni Avoltri 13.46 28 P **Pn** 11 02 58.4 +1.2
ECH Echery 13.49 10 P **Pn** 11 02 57.5 0.0
PTCC Patocco-Chiusa 13.53 29 P **Pn** 11 02 59.1 +1.0
MOTA Moosalm 13.54 22⇑*i*P **Pn** 11 03 00.4 +2.2
comp=Z,160nm,1.9s,SNR=11
MOTA Moosalm 13.54 22⇑*i*P **Pn** 11 03 00.4 +2.2
MOTA pmax pmax
comp=Z,160nm,1.9s
MEZF Maizieres J'vi 13.57 4 *e*Pn **Pn** 11 03 00.7 +2.1
WTTA Wattenberg 13.63 23⇑*i*P **Pn** 11 03 01.6 +2.1
comp=Z,148nm,2.1s,SNR=12
WTTA Wattenberg 13.63 23⇑*i*P **Pn** 11 03 01.6 +2.1
WTTA pmax pmax
comp=Z,148nm,2.1s
WATA Walderalm 13.68 23⇑*i*P **Pn** 11 03 01.8 +1.7
comp=Z,43nm,1.2s
WATA Walderalm 13.68 23⇑*i*P **Pn** 11 03 01.8 +1.7
WATA pmax pmax
comp=Z,43nm,1.2s
CDF Champ du Feu 13.70 10 *e*Pn **Pn** 11 03 01.4 +1.1
CDF *e*Sn **Sn** 11 05 25.6 -6.9
comp=Z,4.7nm,0.4s
CDF Champ du Feu 13.70 10 P **Pn** 11 03 01.4 +1.1
CDF Sn **Sn** 11 05 25.6 -6.9
comp=Z,2.3nm,0.4s
WLS Welschbruch 13.71 10 P **Pn** 11 03 00.5 0.0
LJU Ljubljana 13.75 33 *e*P **Pn** 11 03 01.0 0.0
BFO Black Forest 13.79 13 *e*Pn **Pn** 11 03 00.8 -0.7
GRR Gorron 13.86 347 *e*Pn **Pn** 11 03 03.2 +0.6
LDF La Druitiere 13.94 349 *e*Pn **Pn** 11 03 02.8 -0.8
QUIF Quistinic 13.96 340 *e*Pn **Pn** 11 03 03.1 -0.8
QUIF *e*Sn **Sn** 11 05 28.9 -10
comp=Z,40nm,1.1s
QUIF Quistinic 13.96 340 P **Pn** 11 03 03.1 -0.8
QUIF S **Sn** 11 05 28.9 -10
comp=Z,20nm,1.1s
CRES Cresnjev 14.02 36 P **Pn** 11 03 07.6 +2.9
KBA Koelnbreinsper 14.08 28⇑*i*P **Pn** 11 03 07.8 +2.3
comp=Z,136nm,2.0s
KBA Koelnbreinsper 14.08 28⇑*i*P **Pn** 11 03 07.8 +2.2
KBA pmax pmax
comp=Z,136nm,2.0s
SGMF Saint Gilles 14.11 342 *e*Pn **Pn** 11 02 59.7 -6.2
SGMF *e*Sn **Sn** 11 05 28.7 -14
comp=Z,13nm,0.5s
SGMF Saint Gilles 14.11 342 P **Pn** 11 02 59.7 -6.2
SGMF S **Sn** 11 05 28.7 -14
comp=Z,6.7nm,0.5s
OBKA Obir 14.12 32⇓*i*P **Pn** 11 03 06.2 +0.2
comp=Z,194nm,1.6s
TIR Tirane 14.15 58 P **Pn** 11 03 07.6 +1.0
FLN La Foliniere 14.16 348 *e*Pn **Pn** 11 03 05.6 -1.0
LANF Langenberg 14.33 11 P **Pn** 11 03 09.8 +0.9
FUR Furstenfeldbru 14.33 21 *e*Pn **Pn** 11 03 09.6 +0.7
ROSF Rostrenen 14.37 341 *e*Pn **Pn** 11 03 10.4 +0.9
ROSF *e*Sn **Sn** 11 05 38.2 -11
comp=Z,24nm,0.8s
ROSF Rostrenen 14.37 341 P **Pn** 11 03 10.4 +0.9
ROSF S **Sn** 11 05 38.2 -11
comp=Z,12nm,0.8s
OHR Ohrid 14.73 60 *e*P **Pn** 11 03 14.7 +0.3
WLF Walferdange 14.80 6 P **Pn** 11 03 17.9 +2.5
ITM Ithomi 14.83 76 P **Pn** 11 03 19.4 +3.6
MOA Molln 15.07 28⇓*i*P **Pn** 11 03 20.4 +1.4
comp=Z,195nm,2.5s
BAIF Baives 15.10 1 *e*Pn **Pn** 11 03 21.4 +2.0
ARSA Arzberg 15.11 32⇓*i*P **Pn** 11 03 19.3 -0.3
comp=Z,247nm,2.0s,SNR=24
DOU Dourbes 15.15 2 P **Pn** 11 03 20.6 +0.6
DOU Dourbes 15.15 2 P **Pn** 11 03 20.5 +0.5
GIVF Givet 15.16 3 *e*Pn **Pn** 11 03 20.6 +0.4
SKO Skopje 15.48 58 *e*P **Pn** 11 03 22.3 -2.2
SKO Skopje 15.48 58 P **Pn** 11 03 23.8 -0.6
BCLA Clavier 15.50 4 P **Pn** 11 03 26.8 +2.2
SNF Seneffe 15.55 1 P **Pn** 11 03 25.7 +0.3
TNS Taunus Mts 15.63 11 *e*P **Pn** 11 03 26.0 -0.4
comp=Z,80nm,1.5s
TNS Taunus Mts 15.63 11 *e*P **Pn** 11 03 26.0 -0.4
TNS pmax pmax
comp=Z,80nm,1.5s
WET Wettzell 15.69 23 *e*P **Pn** 11 03 25.6 -1.5
comp=Z,116nm,1.7s
WET Wettzell 15.69 23 *e*P **Pn** 11 03 25.6 -1.5
WET pmax pmax
comp=Z,116nm,1.7s
LIT Litokhoron 15.69 65 P **Pn** 11 03 26.4 -0.7
GEC2 GERESS Array S 15.70 25 *e*P **Pn** 11 03 25.5 -1.8
comp=Z,51nm,1.3s
GEC2 GERESS Array S 15.70 25 *e*P **Pn** 11 03 25.5 -1.8
GEC2 pmax pmax
comp=Z,51nm,1.3s
GERES GERESS Array B 15.70 25 Pn **Pn** 11 03 26.0 -1.3
comp=Z,0.6nm,0.3s,baz=200,slow=11,SNR=14
GERES LR LR 11 09 52.4
comp=Z,523nm,19.0s,baz=254,slow=39
GRA1 Grafenberg Arr 15.71 18 *e*P **Pn** 11 03 25.4 -2.0
comp=Z,147nm,1.5s
GRF Grafenberg Arr 15.71 18 *e*P **Pn** 11 03 25.4 -2.0
comp=Z,147nm,1.5s
GRF *e*L 11 08 50.6
comp=Z,379nm,22.0s
MEM Membach 15.73 5 P **Pn** 11 03 26.9 -0.8
MEM Membach 15.73 5 P **Pn** 11 03 26.8 -0.9
CONA Conrad Observa 15.78 31⇑*i*Pn **Pn** 11 03 26.5 -1.8
comp=Z,241nm,1.6s,SNR=8.4
UCC Uccle 15.84 1 P **Pn** 11 03 28.4 -0.8
HGN Heimansgroeve 15.88 5 *e*P **Pn** 11 03 29.8 +0.2
comp=Z,30nm,1.6s
BEBN Eben Emael 15.89 4 P **Pn** 11 03 31.2 +1.4
PKSM Moragy 15.90 41⇓*i*P **Pn** 11 03 29.3 -0.5
PKSM Moragy 15.90 41 P **Pn** 11 03 29.6 -0.2
PKSM Moragy 15.90 41 ⇓P **Pn** 11 03 29.3 -0.5
KHC Kasperske Hory 15.90 24 *e*P **Pn** 11 03 29.4 -0.5
KHC *e*pP pP 11 03 33.5 -2.9
KHC *e*S **Sn** 11 06 30.6 +4.4
KHC AMS AMS 11 09 00.0
comp=Z,700nm,18.5s
KHC Kasperske Hory 15.90 24 *e*P **Pn** 11 03 29.4 -0.5
KHC *e* 11 03 33.5
KHC *e*S **Sn** 11 06 30.6 +4.4
ROTZ Rotzenmuhle 16.04 20 *e*P **Pn** 11 03 30.2 -1.5
comp=Z,68nm,1.5s
VAY Valandovo 16.07 61 *e*P **Pn** 11 03 31.9 -0.2
VAY Valandovo 16.07 61 *e*P **Pn** 11 03 31.8 -0.2
MANZ Manzenberg 16.21 20 *e*P **Pn** 11 03 32.2 -1.7
comp=Z,88nm,1.3s
UBBA Unterbreizbach 16.49 14 *e*P **Pn** 11 03 37.4 0.0
comp=Z,83nm,1.7s
SOH Sokhos 16.50 63 P **Pn** 11 03 36.2 -1.4
ZST Bratislava 16.52 33 *e*P **Pn** 11 03 41.1 +3.2
ZST pmax pmax
comp=Z,84nm,1.2s
ZST Bratislava 16.52 33 *e*P **Pn** 11 03 41.1 +3.2
comp=Z,84nm,1.2s
ZST *e* 11 03 54.7
NKC Novy Kostel 16.53 20 *e*P **Pn** 11 03 39.2 +1.3
NKC AMS AMS 11 10 00.0
comp=Z,400nm,17.4s
WERN Wernitzgruen 16.56 20 *e*P **Pn** 11 03 39.2 +0.9
comp=Z,139nm,1.9s
KKB Krupnik 16.60 60 *e*P **Pn** 11 03 39.0 +0.1
GUNZ Gunzen 16.61 19 *e*P **Pn** 11 03 39.5 +0.5
comp=Z,53nm,1.2s
BUG Bochum--Univer 16.67 8 *e*P **Pn** 11 03 40.5 +0.8
comp=Z,94nm,1.5s
WERD Werda 16.68 19 *e*P **Pn** 11 03 40.8 +0.9
comp=Z,72nm,1.8s
MOX Moxa 16.68 18 *e*P **Pn** 11 03 38.2 -1.7
comp=Z,29nm,0.9s
MOX Moxa 16.68 18 *e*P **Pn** 11 03 40.6 +0.7
comp=Z,97nm,2.0s
MOX *e* 11 06 57.0

MOX
comp=Z,200nm,20.0s
MOX Moxa 16.68 18 eP Pn 11 03 40.6 +0.7
comp=Z,97nm,2.0s
MOX e 11 06 57.0
TANN Tannenbergstha 16.70 20 eP Pn 11 03 40.7 +0.6
comp=Z,173nm,2.1s
TREC Trest 16.72 27 AMS AMS 11 10 20.0
comp=Z,400nm,19.4s
KRUC Moravsky 16.89 30 P Pn 11 03 41.8 -0.7
SMOL Smolenice 16.91 33 eP Pn 11 03 45.9 +3.2
VTS Vitosha 16.93 57 eP Pn 11 03 42.0 -1.0
VTS Vitosha 16.93 57⇓ iP Pn 11 03 42.6 -0.4
VTS Vitosha 16.93 57 P Pn 11 03 42.9 -0.1
BUD Budapest 16.93 38⇑ eP Pn 11 03 45.2 +2.2
PRU Pruhonice 16.96 24 eP Pn 11 03 43.7 +0.3
PRU eS Sn 11 07 01.6 +10
PRU AMS AMS 11 09 50.0
comp=Z,500nm,18.2s
PRU Pruhonice 16.96 24 eP Pn 11 03 43.7 +0.3
PRU eS Sn 11 07 01.6 +10
MMB Musomiste 16.98 61 i P Pn 11 03 41.2 -2.4
WTSB Winterswijk 17.14 6 eP Pn 11 03 45.8 +0.1
comp=Z,58nm,2.5s
VRAC Vranov 17.16 29 P Pn 11 03 47.5 +1.6
comp=Z,1.5nm,0.3s,baz=220,slow=10,SNR=50
VRAC LR LR 11 10 40.5
comp=Z,506nm,19.0s,baz=212,slow=39
VRAC Vranov 17.16 29⇑ iP Pn 11 03 46.3 +0.3
VRAC Vranov 17.16 29 P Pn 11 03 48.3 +2.3
VRAC Vranov 17.16 29 ⇑P Pn 11 03 46.4 +0.4
GTTG Gvttingen 17.17 13 eP Pn 11 03 47.6 +1.6
comp=Z,110nm,2.6s
BZS Buzias 17.23 46⇑ iP Pn 11 03 46.0 -0.8
BZS Buzias 17.23 46 ⇑P Pn 11 03 46.0 -0.9
IDI Anoyia 17.26 83 P Pn 11 03 47.9 +0.7
comp=Z,1.4nm,0.3s,baz=268,slow=11,SNR=4.4
IDI Anoyia 17.26 83 P Pn 11 03 47.8 +0.6
JAVC Velka Javorina 17.27 32 P Pn 11 03 47.6 +0.3
FBE Freiberg 17.40 21 eP Pn 11 03 48.6 -0.3
comp=Z,63nm,1.5s
CLZ Clausthal 17.53 14 eP Pn 11 03 49.7 -0.8
comp=Z,67nm,1.4s
CLZ Clausthal 17.53 14 eP Pn 11 03 49.7 -0.8
CLZ pmax pmax
comp=Z,67nm,1.4s
BRG Berggiesshubel 17.53 22 eP Pn 11 03 48.9 -1.7
comp=Z,14nm,0.9s
BRG Berggiesshubel 17.53 22 eP Pn 11 03 49.0 -1.6
comp=Z,8.1nm,1.2s
BRG S Sn **11 07 10.0 +4.2**
BRG
comp=N,228nm,19.6s
BRG
comp=E,328nm,14.4s
BRG
comp=Z,336nm,15.5s
VYHS Vyhne 17.54 35 eP Pn 11 03 51.6 +1.0
VYHS pmax pmax
comp=Z,24nm,1.4s
VYHS Vyhne 17.54 35 eP Pn 11 03 51.6 +1.0
comp=Z,24nm,1.4s
VYHS e 11 03 53.1
VYHS e 11 03 58.7
PGB Panagyurishte 17.58 58 eP Pn 11 03 50.2 -1.0
CLL Collm 17.65 19 eP Pn 11 03 51.0 -1.0
comp=Z,60nm,1.3s
CLL eS Sn **11 07 13.0 +4.4**
CLL eLR LR 11 08 28.9
CLL eL 11 09 59.7
comp=Z,331nm,22.0s
CLL Collm 17.65 19 ⇓P Pn 11 03 51.0 -1.0
comp=Z,logA/T=1.2
CLL *i* *SP sP 11 03 54.0 -3.1
CLL ePP 11 04 00.0
CLL eS Sn **11 07 13.0 +4.4**
CLL eSS 11 07 31.0
CLL Collm 17.65 19⇓ iP Pn 11 03 51.0 -1.0
comp=Z,25nm,1.5s
CLL *i* (sP) sP 11 03 54.0 -3.1
comp=Z,134nm,1.9s
CLL e(PP) 11 04 00.0
CLL eS Sn **11 07 13.0 +4.4**
CLL eSS 11 07 31.0
CLL Collm 17.65 19⇓ iP Pn 11 03 51.0 -1.0
CLL eS Sn **11 07 13.0 +4.4**
CLL pmax pmax
comp=Z,25nm,1.5s
CLL Collm 17.65 19⇓ iP Pn 11 03 51.0 -1.0
comp=Z,25nm,1.5s
CLL *i* 11 03 54.0
CLL eS Sn **11 07 13.0 +4.4**
PSZ Piszkesteto 17.66 38⇑ eP Pn 11 03 52.7 +0.6
PSZ Piszkesteto 17.66 38⇑ iP Pn 11 03 51.8 -0.3
PSZ Piszkesteto 17.66 38 eP Pn 11 03 51.9 -0.2
PSZ pmax pmax
comp=Z,117nm,1.6s
PSZ Piszkesteto 17.66 38 ePn Pn 11 03 51.9 -0.2
comp=Z,116nm,1.6s
PSZ Piszkesteto 17.66 38 eP Pn 11 03 51.9 -0.2
comp=Z,117nm,1.6s
APE Apeiranthos 17.71 77 i P Pn 11 03 49.6 -3.1
RZN Rozhen 17.72 61 P Pn 11 03 51.1 -1.7
PLD Plovdiv 17.82 60 P Pn 11 03 55.1 +0.9
DPC Dobruska-Polom 17.89 27 eP Pn 11 03 55.4 +0.4
DPC eS Sn **11 07 17.3 +2.8**
DPC AMS AMS 11 10 00.0
comp=Z,600nm,21.4s
DPC Dobruska-Polom 17.89 27 eP Pn 11 03 55.4 +0.4
DPC eS Sn **11 07 17.3 +2.8**
UPC Upice 17.91 26 eP Pn 11 03 56.1 +0.9
MORC Moravsky Berou 17.92 30⇑ iP Pn 11 03 54.6 -0.7
MORC Moravsky Berou 17.92 30 eP Pn 11 03 54.2 -1.1
comp=Z,86nm,1.3s
MORC Moravsky Berou 17.92 30 P Pn 11 03 55.0 -0.3
KDZ Kurdzhali 18.21 62 i P Pn 11 03 55.8 -3.2
OKC Ostrava-Krasne 18.21 31 eP Pn 11 03 58.6 -0.4
OKC eS Sn **11 07 27.8 +5.5**
OKC AMS AMS 11 10 40.0
comp=Z,400nm,20.2s
OKC Ostrava-Krasne 18.21 31 eP Pn 11 03 58.6 -0.4
OKC eS Sn **11 07 27.8 +5.5**
KSP Ksiaz 18.29 26 eP Pn 11 03 59.3 -0.6
KSP epP pP 11 04 01.2 -1.6
KSP eS Sn **11 07 25.2 +1.1**
KSP L 11 10 13.2
comp=Z,0.9nm,23.0s
KSP Ksiaz 18.29 26⇓ eP Pn 11 03 59.4 -0.5
KSP epP pP 11 04 01.1 -1.7
KSP eS Sn **11 07 25.0 +0.9**
KSP Ksiaz 18.29 26⇓ eP Pn 11 03 59.4 -0.5
KSP epP pP 11 04 01.1 -1.7
BOZC Bozcaada 18.33 68 i P Pn 11 03 56.7 -3.7
DIM Dimitrovgrad 18.40 61 eP Pn 11 04 01.0 -0.3
DRGR 18.50 45⇑ iP Pn 11 04 02.8 +0.3
DRGR 18.50 45 ⇑P Pn 11 04 02.8 +0.3
NIE Niedzica 18.88 35 eP Pn 11 04 07.1 0.0
CRVS Cervenica-Dubn 19.09 38 eP Pn 11 04 10.8 +1.2
CRVS pmax pmax
comp=Z,32nm,1.4s
CRVS Cervenica-Dubn 19.09 38 eP Pn 11 04 10.8 +1.2
comp=Z,32nm,1.4s
OJC Ojcow 19.21 33 eP Pn 11 04 09.8 -1.3
OJC eS Sn **11 07 46.4 0.0**
VOIR 19.26 51⇓ iP Pn 11 04 10.5 -1.2
VOIR 19.26 51 ⇓P Pn 11 04 10.5 -1.2
JMB Yambol 19.27 60 P Pn 11 04 11.3 -0.4
UZH Uzhgorod 19.35 39 eP Pn 11 04 10.0 -2.7
UZH MLR MLR
comp=Z,400nm,11.0s
UZH Uzhgorod 19.35 39 eP Pn 11 04 10.0 -2.7
comp=Z,400nm,11.0s
KOLS Kolonicke sedl 19.52 39 eP Pn 11 04 13.7 -1.1
KOLS pmax pmax
comp=Z,31nm,1.2s
KOLS Kolonicke sedl 19.52 39 eP Pn 11 04 13.7 -1.1
comp=Z,31nm,1.2s
KOLS e 11 04 15.6
KOLS e 11 04 17.4
BSEG Bad Segeberg 19.53 12 eP Pn 11 04 12.2 -2.6
comp=Z,77nm,0.9s
AYDN Tasoluk 19.59 75 i P Pn 11 04 17.8 +2.2
MLR Muntele Rosu 19.86 51 P Pn 11 04 16.1 -2.7
comp=Z,0.5nm,0.3s,baz=191,slow=4.0,SNR=13
MLR LR 11 11 37.9
comp=Z,371nm,20.8s,baz=247,slow=36
MLR Muntele Rosu 19.86 51⇓ iP Pn 11 04 16.2 -2.6
MLR Muntele Rosu 19.86 51 ⇓P Pn 11 04 16.2 -2.6
MLR Muntele Rosu 19.86 51 P Pn 11 04 16.3 -2.5
KWP Kalwaria 20.19 38 eP P 11 04 21.0 +0.2
KWP epP 11 04 22.6
KWP L 11 12 27.2
comp=Z,0.4nm,23.1s
KWP Kalwaria 20.19 38 eP P 11 04 21.0 +0.2
KWP epP 11 04 22.6
ELBA Catalca 20.33 65 i P P 11 04 20.9 -1.5
BURAR Bucovina Array 20.39 45⇓ iP P 11 04 23.2 +0.2
BURAR Bucovina Array 20.39 45 ⇓P P 11 04 23.2 +0.2
GKP Gorka Klasztor 20.64 23 eP P 11 04 25.3 -0.4
GKP epP 11 04 26.5
GKP eS S **11 08 15.8 -0.4**
GKP L 11 12 59.7
comp=Z,0.4nm,16.5s
GKP Gorka Klasztor 20.64 23 eP P 11 04 25.3 -0.4
GKP epP 11 04 26.5
GDZ Gediz 20.89 71 i P P 11 04 28.0 -0.5
ESK Eskdalemuir 20.93 349 eP P 11 04 28.8 -0.1
ESK pmax pmax
comp=Z,33nm,1.1s
ESK Eskdalemuir 20.93 349 eP P 11 04 28.8 -0.1
comp=Z,33nm,1.1s
EKA Eskdalemuir Ar 20.94 349 P P 11 04 26.6 -2.3
comp=Z,17nm,1.0s,baz=156,slow=10.0,SNR=23
LVV L'vov 20.98 39 d iP P 11 04 28.8 -0.5
LVV eS S **11 08 16.0 -7.0**
LVV MLR MLR
comp=Z,300nm,12.8s,MS3.9
TIRR Tirgusor 21.12 56⇑ iP P 11 04 30.0 -0.9
TIRR Tirgusor 21.12 56 eP P 11 04 30.4 -0.5
CFR Carcaliu 21.17 54⇓ iP P 11 04 30.1 -1.3
CFR Carcaliu 21.17 54 ⇓P P 11 04 30.1 -1.4
WAR Warsaw 21.22 30 eP P 11 04 32.5 +0.5
WAR epP 11 04 35.0
WAR eS S **11 08 25.5 -2.3**
WAR L 11 12 37.0
comp=Z,0.5nm,22.1s
WAR Warsaw 21.22 30 eP P 11 04 32.5 +0.5
WAR epP 11 04 35.0
WAR eS S **11 08 25.5 -2.3**
TKTP Tekketepe 21.52 74 i P P 11 04 34.7 -0.5
TOA0 Torodi Ar. Sit 21.79 186 eP P 11 04 37.7 -0.4
TORD Torodi Ar. Bea 21.79 186 P P 11 04 37.7 -0.4
comp=Z,16nm,0.8s,mb4.5,baz=1.8,slow=11,SNR=79
TORD Lg 11 11 15.0
comp=Z,8.1nm,0.8s,baz=16,slow=21,SNR=3.7
TORD LR LR 11 12 45.0
comp=Z,554nm,20.0s,MS4.0,baz=350,slow=36
TORD Torodi Ar. Bea 21.79 186 P P 11 04 37.7 -0.4
TORD Lg 11 11 15.0
TORD LR LR 11 12 45.0
SGKT Sivrigoynuk 22.98 67 i P P 11 04 49.8 -1.0
SUW Suwalki 23.41 30 eP P 11 04 51.8 -3.5
SUW L 11 13 48.9
comp=Z,0.4nm,22.2s
ELDT Eldivan 24.02 68 i P P 11 05 01.3 +0.3
BALT Daday 24.08 65 i P P 11 04 59.9 -1.6
BR131 Keskin Array S 24.14 70 eP P 11 05 02.8 +0.7
BR131 Keskin Array S 24.14 70 eP P 11 05 02.8 +0.6
BRTR Keskin Array B 24.14 70 P P 11 05 01.2 -1.0
comp=Z,4.5nm,1.0s,mb3.9,baz=270,slow=6.2,SNR=23
AKASG Malin Array Be 24.23 42 P P 11 04 58.8 -4.2
comp=Z,12nm,0.7s,mb4.5,baz=240,slow=9.3,SNR=41
AKBB Malin Array Si 24.23 42 eP P 11 04 58.6 -4.4
MEST Erdemli 24.63 77 i P P 11 05 04.3 -2.4
CDAG Cicekdag 24.70 70 i P P 11 05 06.8 -0.5
CDAG Cicekdag 24.70 70 i P P 11 05 09.9 +2.7
KONO Kongsberg 25.00 7⇑ eP P 11 05 07.5 -2.5
CTKT Corum 25.06 68 i P P 11 05 09.6 -1.0
BOYT Boyabat 25.20 66 i P P 11 05 10.9 -0.9
MNK Minsk 25.73 33 eP P 11 05 10.0 -6.6
MNK pmax pmax
comp=E,420nm,1.5s
MNK pmax pmax
comp=N,590nm,1.0s
HFS Hagfors 26.01 11 P P 11 05 16.9 -2.2
comp=N,2.6nm,0.6s,mb4.0,baz=194,slow=10,SNR=12
HFS LR LR 11 15 56.2
comp=N,384nm,19.5s,MS3.9,baz=199,slow=38
MMAI Mount Meron Ar 26.23 85 P P 11 05 20.7 -0.4
comp=N,7.6nm,0.7s,mb4.4,baz=249,slow=12,SNR=6.8
NAO01 NORSAR Array S 26.31 8 eP P 11 05 20.4 -1.4
comp=N,20nm,1.1s,mb4.6
NAO01 NORSAR Array S 26.31 8 eP P 11 05 20.4 -1.5
comp=N,20nm,1.1s,mb4.6
COBT Iskenderun 26.33 77 i P P 11 05 21.0 -1.1
NB2 NORSAR Subarra 26.54 8 P P 11 05 22.0 -1.9
comp=Z,13nm,1.1s,mb4.4,baz=194,slow=8.6
NOA NORSAR Array B 26.54 8 P P 11 05 21.9 -2.0
comp=Z,5.9nm,1.0s,mb4.1,baz=194,slow=8.8,SNR=6.1
NOA LR LR 11 16 21.0
comp=Z,267nm,18.6s,MS3.8,baz=205,slow=38
EIL Elat 26.79 93 eP P 11 05 26.6 +0.4
EIL Elat 26.79 93 eP P 11 05 26.6 +0.4
ANN Anapa 27.45 59 eP P 11 05 30.0 -2.2
ANN eS S **11 10 08.2 -4.4**
ANN pmax pmax
comp=Z,36nm,1.4s,mb4.7
ASF Jabal al Asfar 27.65 86 P P 11 05 34.6 +0.7
comp=Z,6.3nm,0.9s,mb4.2,baz=144,slow=4.7,SNR=5.5
MALT Malatya 27.89 73 eP P 11 05 35.6 -0.5
MALT pmax pmax
comp=Z,19nm,1.1s,mb4.6
MALT Malatya 27.89 73 eP P 11 05 35.6 -0.5
comp=Z,19nm,1.1s,mb4.6
MALT Malatya 27.89 73 eP P 11 05 35.6 -0.5
comp=Z,19nm,1.1s,mb4.6
VSU Vasula 28.02 26 eP P 11 05 35.6 -1.6
DBIC Dimbokro 29.25 198 P P 11 05 50.9 +2.7
comp=Z,6.2nm,0.8s,mb4.4,baz=330,slow=9.4,SNR=6.0
DBIC LR LR 11 18 24.9
comp=Z,486nm,18.2s,MS4.2,baz=357,slow=38
FINES FINESS Array B 30.07 21 P P 11 05 53.4 -2.1
comp=Z,2.7nm,0.7s,mb4.1,baz=212,slow=6.8,SNR=11
FINES PcP PcP 11 08 55.5 -1.7
comp=Z,1.7nm,0.8s,baz=94,slow=5.6,SNR=3.9
FINES LR LR 11 17 55.6
comp=Z,133nm,18.5s,MS3.6,baz=333,slow=36
FINES FINESS Array B 30.07 21 P P 11 05 53.4 -2.1
FINES 11 08 55.5
FINES FINESS Array B 30.07 21 P P 11 05 53.4 -2.1
FINES PcP PcP 11 08 55.5 -1.7
FINES LR LR 11 17 55.6
FINES FINESS Array B 30.07 21 PcP PcP 11 08 55.5 -1.6
FIA1 FINESS Array S 30.07 21 eP P 11 05 53.4 -2.1
OBN Obninsk 30.28 38 c iP P 11 05 55.7 -1.6
OBN e 11 08 57.6
OBN pmax pmax
comp=Z,54nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,400nm,22.0s,MS4.0
KAF Kangasniemi 30.67 21 ep P 11 05 57.2 -3.5
comp=Z,0.5nm,0.3s,mb3.8
MOS Moscow 31.10 38 eP P 11 06 01.5 -3.0
MOS pmax pmax
comp=Z,51nm,0.6s,mb5.5
KIV Kislovodsk 31.11 61 eP P 11 06 02.1 -2.5
KIV pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
KIV MLR MLR
comp=Z,100nm,19.0s,MS3.5
GNI Garni 32.66 69 P P 11 06 16.0 -2.3
comp=Z,5.0nm,0.4s,mb4.8,baz=162,slow=20,SNR=2.3
JOF Joensuu 32.81 23 ep P 11 06 15.8 -3.7
comp=Z,3.8nm,0.6s,mb4.5
KLMR Klimovskoe 34.54 30 eP P 11 06 32.2 -2.4
KLMR pmax pmax
comp=Z,60nm,1.5s,mb5.3
KLMR MLR MLR
comp=Z,300nm,20.0s,MS4.0
ARCES ARCESS Array B 36.65 13 P P 11 06 49.9 -2.9
comp=Z,3.0nm,0.8s,mb4.2,baz=206,slow=8.0,SNR=7.9
ARCES PcP PcP 11 09 13.4 -2.2
comp=Z,1.0nm,0.7s,baz=173,slow=3.6,SNR=3.3
ARCES LR LR 11 21 42.9
comp=Z,208nm,21.9s,MS3.9,baz=285,slow=36
ARCES ARCESS Array B 36.65 13 P P 11 06 49.9 -2.9
ARCES 11 09 13.4
ARCES ARCESS Array B 36.65 13 PcP PcP 11 09 13.4 -2.2
APA Apatity 36.80 18⇑ eP P 11 06 53.0 -1.0
APA pmax pmax
comp=Z,13nm,1.0s,mb4.7
APA MLR MLR
comp=Z,500nm,13.0s,MS4.5
AKTK Aktyubinsk 41.79 51 P P 11 07 32.8 -2.9
AKTK Aktyubinsk 41.79 51 P P 11 07 32.8 -2.9
AKTO Aktyubinsk 41.79 51 P P 11 07 32.8 -2.9
comp=Z,1.7nm,0.7s,mb3.8,baz=277,slow=10.0,SNR=8.0
SOKR Solikamsk 42.05 37 eP P 11 07 37.0 -0.8
SOKR pmax pmax
comp=Z,20nm,1.1s,mb4.7
SOKR MLR MLR
comp=Z,210nm,16.0s,MS4.1
ATD Arta Tunnel 42.40 114 P P 11 07 41.5 +0.9
comp=Z,10nm,0.9s,mb4.4,baz=242,slow=6.7,SNR=3.7
ATD Arta Tunnel 42.40 114 P P 11 07 41.5 +0.8
ARU Arti 42.48 42⇓ iP P 11 07 38.4 -3.0
ARU eS S **11 13 55.9 -7.4**
ARU pmax pmax
comp=Z,32nm,1.0s,mb4.9
ARU MLR MLR
comp=Z,200nm,19.0s,MS4.0
ARU MLR MLR
comp=N,80nm,17.0s,MS3.9
ARU MLR MLR
comp=E,100nm,18.0s,MS3.9
ARU Arti 42.48 42 eP P 11 07 38.7 -2.7
ARU Arti 42.48 42 eP P 11 07 38.7 -2.7
ZRNK Zerenda 48.51 47 eP P 11 08 27.2 -1.9
ZRNK pmax pmax
comp=Z,11nm,0.8s,mb4.9
ZRNK Zerenda 48.51 47 eP P 11 08 27.2 -1.9
comp=Z,10nm,0.8s,mb4.9
ZRNK Zerenda 48.51 47 eP P 11 08 27.2 -1.9
comp=Z,10nm,0.8s,mb4.9
WSAR Wadi Sarin 48.78 88 P P 11 08 30.7 -0.5
comp=Z,6.6nm,0.9s,mb4.7,baz=52,slow=2.5,SNR=3.3
BRVK Borovoye 49.27 47 eP P 11 08 33.1 -1.8
BRVK pmax pmax
comp=Z,11nm,0.9s,mb4.9
BRVK Borovoye 49.27 47 eP P 11 08 33.1 -1.8
comp=Z,11nm,0.9s,mb4.9
BRVK Borovoye 49.27 47 eP P 11 08 33.1 -1.8
comp=Z,11nm,0.9s,mb4.9
BVAR Borovoye Array 49.34 47 P P 11 08 33.9 -1.6
comp=Z,2.1nm,0.7s,mb4.3,baz=292,slow=4.7,SNR=9.9
BVAR LR LR 11 30 04.4
comp=Z,230nm,20.1s,MS4.2,baz=139,slow=37
CHKZ Chkalovo 49.40 46 eP P 11 08 33.8 -2.1
CHKZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CHKZ Chkalovo 49.40 46 eP P 11 08 33.8 -2.1
comp=Z,8.0nm,0.9s,mb4.8
CHKZ Chkalovo 49.40 46 eP P 11 08 33.8 -2.1
comp=Z,8.0nm,0.9s,mb4.8
SCHQ Schefferville 51.48 316 P P 11 08 50.0 -1.6
comp=Z,3.4nm,0.6s,mb4.5,baz=82,slow=5.3,SNR=7.2
SCHQ LR LR 11 26 04.9
comp=Z,94nm,18.9s,MS3.8,baz=95,slow=31
SCHQ Schefferville 51.48 316 eP P 11 08 50.0 -1.7
comp=Z,56nm,1.8s,mb5.2
SCHQ Schefferville 51.48 316 eP P 11 08 50.0 -1.7
comp=Z,56nm,1.8s,mb5.2
FRB Frobisher Bay 51.57 327 P P 11 08 52.0 -0.3
comp=Z,1.9nm,0.7s,mb4.1,baz=125,slow=12,SNR=1.9
AAK Ala-Archa 54.18 59 eP P 11 09 10.2 -1.4
AAK pmax pmax
comp=Z,13nm,1.7s,mb4.6
FRU Bishkek 54.21 59 eP P 11 09 10.0 -1.8
FRU pmax pmax
comp=Z,60nm,1.4s,mb5.3
KURK Kurchatov 54.77 49⇑ eP P 11 09 13.8 -2.1
KURK Kurchatov 54.77 49 eP P 11 09 13.5 -2.3
KURK Kurchatov 54.77 49 eP P 11 09 13.5 -2.4
LSZ Lusaka 55.06 151 P P 11 09 19.9 +1.9
comp=Z,3.5nm,0.9s,mb4.4,baz=355,slow=5.2,SNR=5.9
TSUM Tsumeb 55.42 164 P P 11 09 22.8 +2.2
comp=Z,2.3nm,1.1s,mb4.1,baz=73,slow=6.9,SNR=4.1
NVS Novosibirsk 56.48 43 i P P 11 09 27.6 -0.5
NVS pmax pmax
comp=Z,18nm,1.8s,mb4.8
NVS pmax pmax
comp=N,5.0nm,1.7s
NVS pmax pmax
comp=E,11nm,2.0s
ZAL Zalesovo 57.59 44 P P 11 09 36.2 +0.2
comp=E,1.8nm,0.6s,mb4.3,baz=192,slow=5.1,SNR=6.2
ZAL LR LR 11 35 14.8
comp=E,116nm,18.1s,MS4.0,baz=178,slow=37
ZAL Zalesovo 57.59 44 P P 11 09 36.2 +0.1
MKAR Makanchi Array 58.20 52 P P 11 09 38.6 -1.7
comp=E,7.0nm,0.9s,mb4.7,baz=297,slow=5.3,SNR=19
KRAR Krasnoyarsk 61.36 40 eP P 11 09 59.5 -2.6
KRAR pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
SADO Sadowa 61.82 307 P P 11 10 04.9 -0.3
comp=Z,2.9nm,0.6s,mb4.6,baz=22,slow=8.3,SNR=2.8
WMQ Urumqi 62.83 54 eP P 11 10 12.0 +0.1
WMQ XP sP 11 10 19.0 +2.6
WMQ PP PP 11 12 32.0 +2.0
WMQ S S **11 18 38.0 -3.2**
WMQ SCS ScS 11 20 00.0 -4.7
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,102nm,6.0s
WMQ LR LR
comp=N,205nm,15.0s,MS4.6
WMQ LR LR
comp=E,218nm,15.0s,MS4.6
WMQ LR LR
comp=Z,87nm,14.0s,MS4.1
LBTB Lobatse 63.12 158 P P 11 10 14.0 +0.1
comp=Z,3.2nm,0.7s,mb4.6,baz=323,slow=10,SNR=4.3
BOSA Boshof 66.39 159 P P 11 10 34.9 -0.3
comp=Z,3.6nm,0.8s,mb4.4,baz=234,slow=8.7,SNR=4.3
BOSA LR LR 11 42 55.2
comp=Z,166nm,20.8s,MS4.2,baz=167,slow=39
KOLN Koldanda 66.85 72 eP P 11 10 36.1 -2.0
comp=Z,96nm,1.5s,mb5.6
GKN Gorkha 67.54 71 eP P 11 10 40.8 -1.7
comp=Z,61nm,1.1s,mb5.5
DMN Daman 68.10 71 eP P 11 10 44.7 -1.3
comp=Z,214nm,1.5s
KKN Kakani 68.14 71 eP P 11 10 45.5 -0.8
PKI Pulchoki 68.35 71 eP P 11 10 46.9 -0.7
comp=Z,105nm,1.4s,mb5.7
PKI Pulchoki 68.35 71 eP P 11 10 46.9 -0.7
PKI pmax pmax
comp=Z,105nm,1.4s,mb5.7
GUN Gumba 68.55 70 eP P 11 10 47.9 -1.0
JIRN Jiri 68.91 70 eP P 11 10 50.6 -0.5
TLY Talaya 68.97 41 eP P 11 10 52.2 +0.7
TLY eS S 11 19 48.1 -8.1
TLY pmax pmax
comp=Z,27nm,1.3s,mb5.0
TLY MLR MLR
comp=Z,141nm,19.0s,MS4.2
TLY Talaya 68.97 41 eP P 11 10 52.7 +1.2
comp=Z,27nm,1.4s,mb5.0
TLY Talaya 68.97 41 eP P 11 10 52.7 +1.2
comp=Z,27nm,1.4s,mb5.0
IRK Irkutsk 69.03 40 eP P 11 10 50.9 -0.9
IRK pmax pmax
comp=Z,49nm,1.7s,mb5.2
ZAK Zakamensk 69.42 42 eP P 11 10 54.6 +0.3
ZAK pmax pmax
comp=Z,12nm,1.7s,mb4.5
ULM Lac du Bonnet 69.59 318 P P 11 10 53.2 -2.1
comp=Z,3.9nm,0.6s,mb4.5,baz=81,slow=5.4,SNR=9.8
ULM LR LR 11 36 32.8
comp=Z,99nm,18.6s,MS4.1,baz=27,slow=32
ULM Lac du Bonnet 69.59 318 eP P 11 10 53.5 -1.8
comp=Z,5.7nm,0.7s,mb4.6
ULM Lac du Bonnet 69.59 318 eP P 11 10 53.5 -1.9
comp=Z,5.7nm,0.7s,mb4.6
BDFB Brasilia 70.34 234 LR LR 11 39 49.6
comp=Z,228nm,19.0s,MS4.5,baz=178,slow=34
BOD Bodaibo 70.74 32 eP P 11 11 00.0 -2.4
BOD pmax pmax
comp=Z,16nm,1.1s,mb4.9
YKA Yellowknife Ar 71.11 334 P P 11 11 02.9 -1.7
comp=Z,4.9nm,1.0s,mb4.4,baz=50,slow=6.4,SNR=6.7
YKA LR LR 11 40 19.4
comp=Z,88nm,18.6s,MS4.0,baz=35,slow=34

YKA	**Yellowknife Ar**	**71.11**	**334**	P	**P**	**11 11 02.9**	**-1.8**
YKA				LR	LR	11 40 19.4	
SDV	**Santo Domingo**	**72.22**	**268**	P	**P**	**11 11 11.9**	**+0.6**
	comp=Z,2.9nm,0.7s,mb4.3,baz=58,slow=6.4,SNR=3.0						
INK	**Inuvik**	**72.25**	**345**	P	**P**	**11 11 09.9**	**-1.6**
	comp=Z,3.8nm,1.0s,mb4.3,baz=57,slow=8.2,SNR=6.3						
INK	**Inuvik**	**72.25**	**345**	*e*P	**P**	**11 11 10.4**	**-1.1**
	comp=Z,5.3nm,1.1s,mb4.4						
INK	**Inuvik**	**72.25**	**345**	*e*P	**P**	**11 11 10.4**	**-1.1**
	comp=Z,5.3nm,1.1s,mb4.4						
PLAL	**Pickwick Lake**	**72.33**	**301**	*e*P	**P**	**11 11 12.1**	**+0.1**
	comp=Z,7.4nm,0.9s,mb4.6						
PLAL	**Pickwick Lake**	**72.33**	**301**	*e*P	**P**	**11 11 12.1**	**+0.1**
	comp=Z,7.4nm,0.9s,mb4.6						
SONM	**Songino Array**	**72.50**	**44**	P	**P**	**11 11 12.3**	**-0.7**
	comp=Z,8.3nm,1.1s,mb4.6,baz=307,slow=6.6,SNR=11						
SONM				LR	LR	11 45 20.4	
	comp=Z,167nm,19.2s,MS4.3,baz=60,slow=38						
ULN	**Ulaanbaatar**	**72.86**	**43**⇑	*e*P	**P**	**11 11 15.4**	**+0.3**
ULN	**Ulaanbaatar**	**72.86**	**43**	*e*P	**P**	**11 11 14.9**	**-0.1**
	comp=Z,11nm,1.3s,mb4.6						
GTA	**Gaotai**	**72.91**	**54**	*e*P	**P**	**11 11 15.5**	**+0.1**
GTA				AP	pP	11 11 18.9	+0.2
GTA				XP	sP	11 11 21.4	+1.5
GTA				PP	PP	11 14 01.1	+3.5
GTA				S	S	11 20 40.3	-1.6
GTA				XS	sS	11 20 47.9	+0.6
GTA				SKS		11 21 16.8	
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
GTA				AMB	AMB		
	comp=Z,52nm,3.8s						
GTA				LR	LR		
	comp=N,97nm,18.6s,MS4.3						
GTA				LR	LR		
	comp=E,131nm,17.9s,MS4.3						
GTA				LR	LR		
	comp=Z,128nm,16.4s,MS4.3						
CCM	**Cathedral Cave**	**72.96**	**305**	*e*P	**P**	**11 11 15.6**	**-0.1**
CCM				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
CCM	**Cathedral Cave**	**72.96**	**305**	*e*P	**P**	**11 11 15.6**	**-0.1**
	comp=Z,5.8nm,1.0s,mb4.5						
OXF	**Oxford**	**73.52**	**301**	*e*P	**P**	**11 11 19.1**	**+0.1**
YAK	**Yakutsk**	**73.98**	**23**	*e*P	**P**	**11 11 22.2**	**+0.5**
YAK				*e*		11 11 29.2	
YAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
MIAR	**Mount Ida**	**76.41**	**303**	*e*P	**P**	**11 11 35.6**	**-0.1**
BILL	**Bilibino**	**76.48**	**7**	*e*P	**P**	**11 11 35.2**	**-0.9**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
EDM	**Edmonton**	**76.69**	**327**	*e*P	**P**	**11 11 36.7**	**-0.6**
DAWY	**Dawson**	**77.11**	**344**	*e*P	**P**	**11 11 39.4**	**-0.3**
LAO	**LASA Array**	**77.29**	**318**	*e*P	**P**	**11 11 43.0**	**+2.3**
LZH	**Lanzhou**	**77.39**	**55**	*e*P	**P**	**11 11 41.5**	**+0.3**
LZH				AP	pP	11 11 45.0	+0.5
LZH				XP	sP	11 11 47.5	+1.8
LZH				PP	PP	11 14 36.1	+0.6
LZH				AMB	AMB		
	comp=Z,17nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,115nm,5.2s						
IMA2	**Indian Mountai**	**77.81**	**351**	*e*P	**P**	**11 11 44.5**	**+0.9**
EGMT	**Eagleton**	**78.33**	**321**	*e*P	**P**	**11 11 46.0**	**-0.4**
	comp=Z,4.7nm,0.9s,mb4.4						
HHC	**Hu-ho-hao-te**	**79.55**	**47**	*e*P	**P**	**11 11 52.5**	**-0.6**
HHC				AP	pP	11 11 57.2	+0.7
HHC				XP	sP	11 11 59.6	+2.0
HHC				PCP	PcP	11 12 01.4	+0.3
HHC				PP	PP	11 14 53.2	-0.4
HHC				S	S	11 21 49.8	-5.0
HHC				XS	sS	11 21 58.0	-2.3
HHC				SKS		11 22 02.6	
HHC				SCS	ScS	11 22 11.0	-5.8
HHC				SS	SS	11 26 58.7	-3.9
HHC				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,99nm,5.8s						
HHC				LR	LR		
	comp=N,125nm,17.1s,MS4.6						
HHC				LR	LR		
	comp=E,194nm,18.0s,MS4.6						
HHC				LR	LR		
	comp=Z,153nm,20.9s,MS4.3						
SIV	**San Ignacio**	**79.67**	**242**	P	**P**	**11 11 54.3**	**+0.5**
	comp=Z,2.1nm,0.7s,mb4.2,baz=87,slow=5.4,SNR=14						
WMOK	**Wichita Mounta**	**79.85**	**305**	*e*P	**P**	**11 11 55.9**	**+1.1**
WMOK				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.6						
WMOK	**Wichita Mounta**	**79.85**	**305**	*e*P	**P**	**11 11 55.9**	**+1.0**
	comp=Z,13nm,1.7s,mb4.6						
PHWY	**Pilot Hill**	**80.16**	**314**	*e*P	**P**	**11 11 58.3**	**+1.8**
CD2	**Chengdu**	**80.25**	**59**	P	**P**	**11 11 57.4**	**+0.5**
BOZ	**Bozeman (W)**	**80.85**	**320**	*e*P	**P**	**11 12 00.6**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
BOZ	**Bozeman (W)**	**80.85**	**320**	*e*P	**P**	**11 12 00.6**	**+0.4**
	comp=Z,7.2nm,1.3s,mb4.4						
RWWY	**Rawlins**	**80.95**	**315**	*e*P	**P**	**11 12 03.6**	**+2.9**
BSMT	**Bassoo Peak**	**80.98**	**323**	*e*P	**P**	**11 12 02.9**	**+2.0**
ISCO	**Idaho Springs**	**81.18**	**313**	*e*P	**P**	**11 12 05.7**	**+3.8**
DLMT	**Dillon**	**81.55**	**320**	P	**P**	**11 12 02.5**	**-1.3**
	comp=Z,10nm,1.3s,mb4.6						
BW06	**Boulder Array**	**81.60**	**317**	*e*P	**P**	**11 12 06.1**	**+1.9**
	comp=Z,7.6nm,1.3s,mb4.5						
PDAR	**Pinedale Array**	**81.60**	**317**	P	**P**	**11 12 03.1**	**-1.1**
	comp=Z,1.3nm,0.7s,mb3.9,baz=55,slow=5.6,SNR=12						
PDAR				LR	LR	11 45 24.7	
	comp=Z,103nm,21.1s,MS4.2,baz=204,slow=34						
IMW	**Indian Meadow**	**81.63**	**318**	*e*P	**P**	**11 12 03.1**	**-1.2**
LOHW	**Long Hollow**	**81.63**	**318**	*e*P	**P**	**11 12 04.6**	**+0.2**
NEW	**Newport**	**81.82**	**325**	P	**P**	**11 12 05.7**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=25,slow=14,SNR=3.6						
TPAW	**Teton Pass**	**81.91**	**318**	*e*P	**P**	**11 12 06.2**	**+0.5**
	comp=Z,4.2nm,0.9s,mb4.4						
REDW	**Red Top Meadow**	**81.93**	**318**	*e*P	**P**	**11 12 06.8**	**+0.9**
	comp=Z,8.9nm,1.3s,mb4.5						
XAN	**Xi'an**	**81.97**	**54**	P	**P**	**11 12 06.7**	**+0.6**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.5						
RRI2	**Red Ridge**	**82.20**	**318**	*e*P	**P**	**11 12 08.2**	**+0.8**
BJI	**Beijing**	**82.80**	**46**	*e*P	**P**	**11 12 12.3**	**+1.9**
BJI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.7						
BJI				LR	LR		
	comp=Z,145nm,20.0s,MS4.3						
KMI	**Kunming**	**82.82**	**64**	P	**P**	**11 12 12.0**	**+1.5**
KMI				AP	pP	11 12 15.7	+1.8
KMI				XP	sP	11 12 17.6	+2.6
KMI				PP	PP	11 15 23.0	+2.4
KMI				S	S	11 22 27.2	-1.6
KMI				SS	SS	11 27 49.6	-1.8
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
KMI				AMB	AMB		
	comp=Z,50nm,4.1s						
KMI				LR	LR		
	comp=N,145nm,14.8s,MS4.6						
KMI				LR	LR		
	comp=E,102nm,14.8s,MS4.6						
KMI				LR	LR		
	comp=Z,103nm,16.9s,MS4.3						
SVW2	**Sparrevohn**	**82.82**	**350**	*e*P	**P**	**11 12 10.9**	**+0.3**
OTAV	**Otavalo**	**83.50**	**266**	*e*P	**P**	**11 12 19.7**	**+5.6**
CPUP	**Villa Florida**	**84.01**	**232**	P	**P**	**11 12 16.9**	**+0.3**
	comp=Z,1.2nm,0.6s,mb4.2,baz=14,slow=3.5,SNR=6.2						
CPUP				LR	LR	11 48 42.6	
	comp=Z,300nm,18.4s,MS4.7,baz=35,slow=35						
CPUP	**Villa Florida**	**84.01**	**232**	P	**P**	**11 12 16.9**	**+0.3**
CPUP				LR	LR	11 48 42.6	
KLR	**Kul'dur**	**84.29**	**31**	*e*P	**P**	**11 12 15.7**	**-2.4**
KLR				pmax	pmax		
	comp=Z,42nm,1.8s,mb5.3						
BMO	**Blue Mountains**	**84.32**	**322**	*e*P	**P**	**11 12 16.9**	**-1.3**
SRU	**San Rafael**	**84.54**	**315**	*e*P	**P**	**11 12 22.6**	**+3.2**
ANMO	**Albuquerque**	**84.75**	**309**	P	**P**	**11 12 20.6**	**+0.1**
	comp=Z,0.3nm,0.3s,mb3.9,baz=340,slow=5.9,SNR=3.1						
GYA	**Guiyang**	**84.91**	**61**	P	**P**	**11 12 21.1**	**-0.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.1						
GNW	**Green Mountain**	**84.97**	**327**	*e*P	**P**	**11 12 24.5**	**+3.0**
GDL2	**Guadalupe Moun**	**85.10**	**306**	*e*P	**P**	**11 12 26.0**	**+3.8**
CN2	**Changchun**	**85.34**	**38**	*e*P	**P**	**11 12 23.9**	**+0.5**
CN2				*e*XP	sP	11 12 31.0	+3.1
CN2				*e*S	S	11 22 50.1	-4.0
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.8						
CN2				LR	LR		
	comp=Z,200nm,21.0s,MS4.5						
SNY	**Shenyang**	**85.76**	**41**	⇓P	**P**	**11 12 27.4**	**+1.9**
SNY				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb5.3						
MSU	**Marysvale**	**85.91**	**315**	*e*P	**P**	**11 12 26.5**	**+0.3**
HABR	**Khabarovsk**	**86.26**	**30**	*e*P	**P**	**11 12 24.2**	**-3.8**
HABR				*e*S	S	11 22 46.1	-17
MDJ	**Mudanjiang**	**86.79**	**35**	P	**P**	**11 12 30.6**	**+0.1**
MDJ				AP	pP	11 12 33.8	-0.1
MDJ				XP	sP	11 12 35.1	0.0
MDJ				PP	PP	11 15 51.5	-1.4
MDJ				S	S	11 23 05.1	-3.2
MDJ				XS	sS	11 23 12.4	-1.4
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,64nm,5.2s						
MDJ				LR	LR		
	comp=N,128nm,22.3s,MS4.5						
MDJ				LR	LR		
	comp=E,145nm,22.3s,MS4.5						
MDJ				LR	LR		
	comp=Z,113nm,18.8s,MS4.3						
NVAR	**Mina Array Bea**	**89.42**	**318**	P	**P**	**11 12 44.5**	**+1.4**
	comp=Z,0.2nm,0.5s,mb3.7,baz=70,slow=3.0,SNR=4.1						
NJ2	**Nanjing**	**89.67**	**50**	*e*P	**P**	**11 12 46.1**	**+1.8**
NJ2				AP	pP	11 12 50.9	+3.3
NJ2				XP	sP	11 12 53.1	+4.3
NJ2				PP	PP	11 16 20.2	+4.1
NJ2				S	S	11 23 36.0	+0.3
NJ2				XS	sS	11 23 44.0	+2.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,10.0nm,6.4s						
NJ2				LR	LR		
	comp=N,50nm,20.0s						
NJ2				LR	LR		
	comp=E,200nm,26.0s						
NJ2				LR	LR		
	comp=Z,290nm,26.0s						
ISA	**Isabella**	**91.50**	**316**	*e*P	**P**	**11 12 56.6**	**+3.8**
ISA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
ISA	**Isabella**	**91.50**	**316**	*e*P	**P**	**11 12 56.6**	**+3.9**
	comp=Z,2.3nm,0.8s,mb4.6						
SSE	**Sheshan**	**91.78**	**50**	P	**P**	**11 12 52.7**	**-1.4**
SSE				PP	PP	11 16 29.5	-3.3
SSE				S	S	11 23 52.0	-3.0
SSE				XS	sS	11 23 57.9	-2.7
SSE				SS	SS	11 29 57.4	-5.0
SSE				AMB	AMB		
	comp=Z,22nm,0.6s,mb5.7						
SSE				AMB	AMB		
	comp=Z,43nm,3.2s						
SSE				LR	LR		
	comp=N,20nm,20.5s,MS4.0						
SSE				LR	LR		
	comp=E,54nm,20.5s,MS4.0						
SSE				LR	LR		
	comp=Z,55nm,22.5s,MS4.0						
MJAR	**Matsushiro Arr**	**97.17**	**35**	LR	LR	11 58 38.1	
	comp=Z,134nm,18.8s,MS4.5,baz=270,slow=36						
ASAR	**Alice Springs**	**135.47**	**89**	PKP	PKPdf	11 19 04.3	-2.0
	comp=Z,0.8nm,0.9s,baz=345,slow=1.9,SNR=5.5						
ASAR	**Alice Springs**	**135.47**	**89**	PKIKP	PKPdf	11 19 04.3	-2.0
ASAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
STKA	**Stephens Creek**	**144.83**	**97**	*e*P	PKPdf	11 19 21.1	-2.1
	comp=Z,6.4nm,0.8s						
STKA	**Stephens Creek**	**144.83**	**97**	PKP	PKPdf	11 19 21.6	-1.7
	comp=Z,4.3nm,0.8s,baz=354,slow=5.5,SNR=7.3						

HEL 07 11:34:42.2, 5938N×2715E, h0^{km}, ML1.8(FIA0)**, Explosion, Baltic States - Belarus - Northwestern Russia**

ISCJB ***07*** *12:02:58.3±0.5, 4298N±004×028E±003, h14^{km}±4^{km}, Error ellipse: s-maj=7.4km s-min=3.5km az=9.8*

LDG ***07*** *12:02:58.9±0.2, 4290N×029E, h2^{km}, Md1.9/2, Ml1.8/2, Error ellipse: s-maj=5.8km s-min=2.1km az=164.0*

MDD ***07*** *12:02:59.1±0.5, 4298N×027E, h11^{km}±4^{km}, mbLg1.0/6, Error ellipse: s-maj=3.3km s-min=2.0km az=9.0, PRXIMO*

STR ***07*** *12:02:59.1±0.3, 4300N×029E, h2^{km}±1^{km}, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 07 12:02:58.6±0.6**, 4297N**±004×**028E**±003**, h16**^{km}±5^{km}**, n21, σ0^{s}44**/34**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPF	**Esparros**	**0.08**	**37**	*e*Pg	**Pg**	**12 03 01.6**	**-0.1**
EPF				*e*Sg	**Sg**	**12 03 04.1**	**+0.4**
	39nm,0.2s						
EPF	**Esparros**	**0.08**	**37**	Pg	**Pg**	**12 03 01.6**	**-0.1**
EPF				Lg		12 03 04.1	
	20nm,0.2s						
LABF	**Labassere**	**0.17**	**297**	Pg	**Pg**	**12 03 02.5**	**-0.3**
LABF				Sg	**Sg**	**12 03 05.3**	**-0.4**
LABF	**Labassere**	**0.17**	**297**	P	**Pg**	**12 03 02.5**	**-0.3**
LABF				S	**Sg**	**12 03 05.3**	**-0.4**
RESF	**Ens**	**0.17**	**165**	Pg	**Pg**	**12 03 03.2**	**+0.4**
RESF				Sg	**Sg**	**12 03 06.3**	**+0.6**
RESF	**Ens**	**0.17**	**165**	P	**Pg**	**12 03 03.2**	**+0.4**
RESF				S	**Sg**	**12 03 06.2**	**+0.5**
VIEF	**Viey**	**0.21**	**245**	Pg	**Pg**	**12 03 03.3**	**-0.1**
VIEF				Sg	**Sg**	**12 03 06.3**	**-0.3**
VIEF	**Viey**	**0.21**	**245**	P	**Pg**	**12 03 03.3**	**-0.1**
VIEF				S	**Sg**	**12 03 06.4**	**-0.3**
EBIE	**Bielsa**	**0.30**	**199**	Pg	**Pg**	**12 03 05.2**	**+0.3**
	3.5nm,0.2s,SNR=46						
EBIE				Lg		12 03 09.3	
	29nm,1.9s,SNR=5.0						
MELF	**Melles**	**0.37**	**105**	Pg	**Pg**	**12 03 05.8**	**-0.3**
MELF	**Melles**	**0.37**	**105**	P	**Pg**	**12 03 06.4**	**+0.2**
MELF				S	**Sg**	**12 03 11.2**	**0.0**
ETSF	**Etsaut**	**0.62**	**264**	*e*Pg	**Pg**	**12 03 10.6**	**-0.2**
ETSF	**Etsaut**	**0.62**	**264**	*e*Pn	**Pn**	**12 03 13.3**	**+0.6**
ETSF				*e*Sg	**Sg**	**12 03 18.3**	**-0.7**
	8.5nm,0.3s						
ETSF	**Etsaut**	**0.62**	**264**	Pg	**Pg**	**12 03 10.6**	**-0.2**
ETSF				Pn	**Pn**	**12 03 13.3**	**+0.6**
ETSF				Lg		12 03 18.3	
	4.2nm,0.3s						
SALF	**Salau**	**0.70**	**107**	P	**Pg**	**12 03 12.5**	**+0.2**
SALF				S	**Sg**	**12 03 21.8**	**+0.1**
ATE	**Arette**	**0.73**	**279**	S	**Sg**	**12 03 22.4**	**0.0**
SJPF	**Ste Jean**	**1.11**	**278**	*e*Pg	**Pg**	**12 03 20.2**	**+0.1**
SJPF				*e*Sg	**Sg**	**12 03 35.5**	**+0.9**
	2.1nm,0.2s						
SJPF	**Ste Jean**	**1.11**	**278**	Pg	**Pg**	**12 03 20.2**	**+0.1**
SJPF				Lg		12 03 35.5	
	1.1nm,0.2s						
MTLF	**Montolieu**	**1.47**	**75**	*e*Pg	**Pg**	**12 03 26.5**	**-0.3**
MTLF				*e*Sg	**Sg**	**12 03 45.8**	**-0.1**
	1.2nm,0.2s						
MTLF	**Montolieu**	**1.47**	**75**	Pg	**Pg**	**12 03 26.5**	**-0.3**
MTLF				Lg		12 03 45.8	
	0.6nm,0.2s						
EPOB	**Poblet**	**1.72**	**160**	Pg	**Pg**	**12 03 30.6**	**-1.1**
	0.6nm,0.3s,SNR=7.9						
EPOB				Lg		12 03 53.7	
	2.0nm,0.2s,SNR=7.9						

IDC 07 12:09:41.0±4.2**, 943S×11282E, h0**^{km}**, mb3.5**/3**, mb1 3.5**/3**, mb1mx3.4**/13**, mbtmp3.5**/3**, Error ellipse: s-maj=223.6km s-min=31.0km az=54.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**24.62**	**128**	P	P	12 15 03.4	+0.4
	0.4nm,0.7s,baz=301,slow=9.0,SNR=5.3						
SONM	**Songino Array**	**57.30**	**355**	P	P	12 19 30.5	-0.1
	0.5nm,0.7s,baz=166,slow=6.0,SNR=4.2						
MKAR	**Makanchi Array**	**62.25**	**337**	P	P	12 20 04.8	+0.2
	0.4nm,0.4s,baz=162,slow=7.8,SNR=3.5						

ISCJB ***07*** *12:11:03.2±1.0, 93S±02×1130E±03, h10^{km}, mb4.2/7, Error ellipse: s-maj=45.9km s-min=11.7km az=105.1*

IDC ***07*** *12:11:04.2±1.6, 925S×113.14E, h0^{km}, mb4.2/6, mb1 4.2/7, mb1mx3.9/15, mbtmp4.1/7, ML3.7/1, Error ellipse: s-maj=69.8km s-min=20.0km az=54.0*

NEIC ***07*** *12:11:05.8±1.1, 924S×113.12E, h10^{km}, mb4.4/1, Error ellipse: s-maj=47.6km s-min=10.4km az=52.0*

ISC 07 12:11:05.2±0.9**, 94S**±02×**1129E**±02**, h10**^{km}**, n14, σ1^{s}37**/16**, mb4.2**/7**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBWA	**Marble Bar**	**13.39**	**151**	*e*P	**Pn**	**12 14 11.1**	**-4.2**
MBWA				*e*S	**Sn**	**12 16 26.6**	**-18**
FITZ	**Fitzroy Crossi**	**15.08**	**126**	Pn	**Pn**	**12 14 36.5**	**-1.8**
	0.2nm,0.3s,baz=304,slow=12,SNR=12						
FITZ				Sn	**Sn**	**12 17 15.0**	**-10**
	0.2nm,0.3s,baz=180,slow=20,SNR=5.7						
WRAB	**Tennant Creek**	**23.20**	**119**	P	**P**	**12 16 13.6**	**+1.4**
ASPA	**Alice Springs**	**24.57**	**128**	*e*P	**P**	**12 16 27.0**	**+1.8**
AS31	**Alice Springs**	**24.57**	**128**	*e*P	**P**	**12 16 27.0**	**+1.8**
ASAR	**Alice Springs**	**24.57**	**128**	P	**P**	**12 16 25.2**	**+0.1**
	1.9nm,0.7s,mb3.7,baz=303,slow=9.0,SNR=23						
STKA	**Stephens Creek**	**34.73**	**134**	P	**P**	**12 17 56.1**	**+0.7**
	0.8nm,0.5s,mb3.9,baz=306,slow=14,SNR=3.0						
MJAR	**Matsushiro Arr**	**51.55**	**26**	P	**P**	**12 20 09.4**	**-1.9**
	1.3nm,0.8s,mb3.9,baz=198,slow=7.1,SNR=4.2						
ULN	**Ulaanbaatar**	**57.27**	**355**	*e*P	**P**	**12 20 53.1**	**+0.2**
	3.4nm,0.8s,mb4.4						
SONM	**Songino Array**	**57.30**	**355**	P	**P**	**12 20 53.6**	**+0.5**
	1.6nm,0.3s,mb4.5,baz=172,slow=8.5,SNR=18						
MKAR	**Makanchi Array**	**62.27**	**337**	P	**P**	**12 21 27.3**	**0.0**
	2.9nm,0.4s,mb4.8,baz=151,slow=7.4,SNR=24						
CHKZ	**Chkalovo**	**72.33**	**335**	*e*P	**P**	**12 22 30.4**	**-0.6**
AKTK	**Aktyubinsk**	**76.23**	**327**	P	**P**	**12 22 54.0**	**+0.2**
AKTO	**Aktyubinsk**	**76.23**	**327**	P	**P**	**12 22 54.0**	**+0.2**
	0.8nm,0.4s,mb4.0,baz=127,slow=5.7,SNR=3.9						

MAN 07 12:12:21.1, 1331N×12013E, h1^{km}**, mb2.7, ML4.1, MS1.4, 2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.44**	**15**	*e*P	Pg	12 12 29.3	-0.2
LUBP				*e*S	Sg	12 12 34.2	-1.1
PGP	**Puerto Galera**	**0.83**	**76**⇓	*e*P	Pg	12 12 37.5	+0.5
TGY	**Tagaytay City**	**1.11**	**45**⇓	*e*P	Pg	12 12 44.1	+1.6
TGY				*e*S	Sg	12 12 44.1	-13
BUSP	**Coron**	**1.30**	**177**	*e*P	Pg	12 12 46.9	+0.9
BUSP				*e*S	Sg	12 13 04.7	+1.9
BOAC	**Boac**	**1.68**	**85**	*e*P	Pn	12 12 51.1	-0.5
BOAC				*e*S	Sn	12 13 15.0	+1.4
ENPP	**El Nido**	**2.20**	**198**	*e*P	Pn	12 13 02.0	+3.3
ENPP				*e*S	Sn	12 13 26.6	0.0
CUYO	**Cuyo Island**	**2.59**	**160**	*e*P	Pn	12 13 04.8	+0.7
BALP	**Baler**	**2.80**	**30**	*e*P	Pn	12 13 08.1	+1.1

BJI ***07*** *12:15:45.7, 1272N×5049E, h10^{km}, mB4.9, mb4.7, Ms4.5, Msz4.2*

ISCJB ***07*** *12:15:51.5±0.4, 13.14N±005×5109E±004, h10^{km}, mb4.4/46, MS4.1/28, Error ellipse: s-maj=8.0km s-min=5.3km az=160.6*

IDC ***07*** *12:15:52.2±0.6, 13.14N×5109E, h0^{km}, mb4.1/21, mb1 4.2/23, mb1mx4.1/28, mbtmp4.1/23, ML4.1/2, MS4.0/17, Ms1 4.0/17, ms1mx3.9/22, Error ellipse: s-maj=17.7km s-min=13.5km az=93.0*

MOS ***07*** *12:15:52.5±1.6, 1323N×5135E, h10^{km}, mb4.7/12, Error ellipse: s-maj=13.5km s-min=6.9km az=94.1*

DHMR ***07*** *12:15:52.6±1.8, 1307N×5094E, h10^{km}, mb4.7*

HRVD ***07*** *12:15:53.6±0.4, 13.18N×5088E, h12^{km}, MW4.9/53, Centroid moment Tensor Solution. LP body waves: s23,c29;Mantle waves: s53,c82; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.38±.13; $M_{\theta\theta}$2.46±.11; $M_{\phi\phi}$-0.08±.14; $M_{r\theta}$0.66±.35; $M_{\theta\phi}$-1.74±.10; $M_{\phi r}$-0.27±.42; Best double couple: $M_0$2.95100×10^{16} NP1:ϕ_s119.00000°, δ38.00000°, λ-87.00000°. NP2: ϕ_s295.00000°, δ52.00000°, λ-93.00000°. Principal axes: T 3.4320, Plg7.0000°, Azm27.0000°; N -0.9620, Plg2.0000°, Azm297.0000°; P -2.4700, Plg83.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

CSEM ***07*** *12:15:53.4±0.1, 13.19N×5100E, h20^{km}, mb4.7/14 Error ellipse: s-maj=4.6km s-min=3.1km az=58.0*

NEIC ***07*** *12:15:53.6±0.3, 13.13N×51.12E, h10^{km}, mb4.6/10, Error ellipse: s-maj=8.4km s-min=7.1km az=106.0*

ISC 07 12:15:53.6±0.4**, 1316N**±006×**5112E**±004**, h10**^{km}**, (h15**^{km}±3.5^{km}**:pP-P), n104, σ1^{s}07**/108**, mb4.4**/46**, MS4.1**/28**, 5C-3D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDHA	**Al Bayda'**	**5.46**	**279**⇓	*i*P	**Pn**	**12 17 13.9**	**-1.1**
BDHA				*e*		12 17 14.1	
	baz=112,slow=18						
BDHA				*i* S	**Sn**	**12 18 17.8**	**0.0**
LBOS		**5.75**	**278**⇑	*e*P	**Pn**	**12 17 17.6**	**-1.4**
LBOS				AMb	AMB	12 17 19.6	
	comp=Z,83nm,0.9s						
TRBA	**At Turbah**	**6.82**	**271**	*i* P	**Pn**	**12 17 32.9**	**-0.7**
TRBA				AMb	AMB	12 17 33.2	
	comp=Z,3.9nm,0.3s						
ATD	**Arta Tunnel**	**8.24**	**260**	Pn	**Pn**	**12 17 52.3**	**-0.9**
	comp=Z,10nm,0.3s,baz=225,slow=21,SNR=19						
ATD				LR	LR	12 20 17.0	
	comp=Z,4µm,18.8s,baz=76,slow=32						
WSAR	**Wadi Sarin**	**12.30**	**34**	Pn	**Pn**	**12 18 47.9**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=219,slow=13,SNR=3.0						
WSAR				LR	LR	12 23 15.4	
	comp=Z,3µm,20.8s,baz=209,slow=36						
WSAR	**Wadi Sarin**	**12.30**	**34**	Pn	**Pn**	**12 18 47.9**	**-0.9**
WSAR				LR	LR	12 23 15.3	
BHD	**Baghdad**	**20.94**	**344**	*e*x	x	12 20 33.5	
BHD				*e*x	x	12 24 28.0	
BHD				*e*x	x	12 27 27.0	
ASF	**Jabal al Asfar**	**22.98**	**328**	P	**P**	**12 21 00.3**	**+2.0**
	comp=Z,1.4nm,0.4s,mb3.8,baz=71,slow=7.0,SNR=2.0						
ASF				LR	LR	12 30 22.7	
	comp=Z,232nm,18.7s,MS3.6,baz=156,slow=38						
MSL	**Mosul**	**24.14**	**344**	*e*x	x	12 21 12.0	
MSL				*e*x	x	12 25 29.0	
MBAR	**Mbarara**	**24.40**	**237**	*e*P	**P**	**12 21 17.9**	**+5.9**
MMAI	**Mount Meron Ar**	**24.43**	**327**	P	**P**	**12 21 13.3**	**+1.0**
	comp=Z,2.9nm,0.7s,mb3.8,baz=315,slow=57,SNR=4.3						
MMAI				LR	LR	12 30 58.9	
	comp=Z,216nm,18.6s,MS3.7,baz=165,slow=37						
GNI	**Garni**	**27.46**	**349**	P	**P**	**12 21 40.8**	**+1.0**
	comp=Z,5.5nm,0.5s,mb4.3,baz=305,slow=15,SNR=4.6						
GNI				LR	LR	12 34 51.4	
	comp=Z,844nm,18.2s,MS4.3,baz=168,slow=42						
GNI	**Garni**	**27.46**	**349**⇑	*e*P	**P**	**12 21 41.3**	**+1.5**
GNI				pmax	pmax		
	comp=Z,11nm,1.1s						
GNI				MLR	MLR		
	comp=Z,1µm,24.0s						
GNI	**Garni**	**27.46**	**349**	*e*P	**P**	**12 21 40.8**	**+0.9**
	comp=Z,17nm,1.1s,mb4.5						
GNI	**Garni**	**27.46**	**349**	*e*P	**P**	**12 21 40.8**	**+1.0**
	comp=Z,17nm,1.1s,mb4.5						
MALT	**Malatya**	**27.48**	**338**	*e*P	**P**	**12 21 41.9**	**+2.0**
MALT				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
MALT	**Malatya**	**27.48**	**338**	*e*P	**P**	**12 21 41.9**	**+2.0**
	comp=Z,6.7nm,0.9s,mb4.2						
MALT	**Malatya**	**27.48**	**338**	*e*P	**P**	**12 21 41.9**	**+2.0**
	comp=Z,6.7nm,0.9s,mb4.2						
BR131	**Keskin Array S**	**30.62**	**333**	P	**P**	**12 22 08.0**	**+0.2**
BR131	**Keskin Array S**	**30.62**	**333**	P	**P**	**12 22 08.0**	**+0.1**
BRTR	**Keskin Array B**	**30.62**	**333**	P	**P**	**12 22 09.3**	**+1.4**
	comp=Z,0.8nm,0.8s,mb3.6,baz=153,slow=8.3,SNR=6.1						
BRTR				PcP	PcP	12 25 08.3	+2.2
	comp=Z,0.8nm,0.8s,baz=183,slow=7.4,SNR=3.0						
BRTR				LR	LR	12 34 43.5	
	comp=Z,140nm,20.4s,MS3.6,baz=131,slow=37						

BRTR Keskin Array B 30.62 333 P P 12 22 09.3 +1.4
BRTR 12 25 08.3
ISP Isparta 30.68 327 *e*P **P 12 22 13.4 +5.0**
ANTO Ankara 31.12 332 *e*P **P 12 22 13.8 +1.6**
ANTO pmax pmax
comp=Z,15nm,1.0s,mb4.8
ANTO Ankara 31.12 332 *e*P **P 12 22 13.8 +1.5**
comp=Z,15nm,1.0s,mb4.8
ANTO Ankara 31.12 332 *e*P **P 12 22 13.8 +1.6**
comp=Z,15nm,1.0s,mb4.8
KIV Kislovodsk 31.53 348 *e*P **P 12 22 17.3 +1.4**
KIV Kislovodsk 31.53 348 *e*P **P 12 22 17.3 +1.4**
OPO Ambohidratompo 31.77 187 P **P 12 22 20.2 +2.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=337,slow=12,SNR=3.3
APE Apeiranthos 33.02 321 *e*P **P 12 22 31.1 +2.2**
ANN Anapa 33.63 342 *e*P **P 12 22 33.5 -0.7**
ANN *e*S **S 12 27 54.0 -2.9**
ANN pmax pmax
comp=Z,34nm,1.4s,mb5.1
ANN MLR MLR
comp=Z,433nm,15.0s,MS4.3
ANN Anapa 33.63 342 *e*P **P 12 22 33.5 -0.7**
comp=Z,433nm,15.0s
ANN *e*S **S 12 27 54.0 -2.9**
AAK Ala-Archa 35.66 30⇑ *e*P **P 12 22 52.1 +0.3**
AAK pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
AAK MLR MLR
comp=Z,500nm,21.0s,MS4.2
AAK Ala-Archa 35.66 30 *e*P **P 12 22 52.1 +0.3**
comp=Z,500nm,21.0s
AKTK Aktyubinsk 37.60 7 P **P 12 23 07.8 -0.6**
AKTK Aktyubinsk 37.60 7 P **P 12 23 07.8 -0.5**
AKTO Aktyubinsk 37.60 7 P **P 12 23 07.8 -0.6**
comp=Z,2.6nm,0.6s,mb4.1,baz=213,slow=7.8,SNR=8.2
AKASG Malin Array Be 41.47 339 P **P 12 23 39.9 -0.7**
comp=Z,0.2nm,0.3s,mb3.3,baz=152,slow=7.5,SNR=13
AKASG Malin Array Be 41.47 339 P **P 12 23 39.9 -0.7**
ZRNK Zerenda 42.18 16 *e*P **P 12 23 46.4 -0.1**
ZRNK pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
ZRNK Zerenda 42.18 16 *e*P **P 12 23 46.4 0.0**
comp=Z,8.4nm,1.0s,mb4.3
ZRNK Zerenda 42.18 16 *e*P **P 12 23 46.4 -0.1**
comp=Z,8.4nm,1.0s,mb4.3
MKAR Makanchi Array 42.52 32 P **P 12 23 49.5 +0.2**
comp=Z,2.4nm,0.6s,mb4.1,baz=220,slow=8.8,SNR=17
BRVK Borovoye 42.63 17 *e*P **P 12 23 50.3 +0.2**
BVAR Borovoye Array 42.63 17 P **P 12 23 50.4 +0.2**
comp=Z,1.7nm,0.6s,mb4.0,baz=201,slow=7.9,SNR=11
BVAR PcP PcP 12 25 42.9 +0.8
comp=Z,1.3nm,0.6s,baz=205,slow=3.0,SNR=4.2
CHKZ Chkalovo 43.27 17 *e*P **P 12 23 55.2 -0.1**
CHKZ pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
CHKZ Chkalovo 43.27 17 *e*P **P 12 23 55.2 -0.1**
comp=Z,3.8nm,1.3s,mb4.0
CHKZ Chkalovo 43.27 17 *e*P **P 12 23 55.2 -0.1**
comp=Z,3.8nm,1.3s,mb4.0
OBN Obninsk 43.38 348⇑ *e*P **P 12 23 57.5 +1.3**
OBN pmax pmax
comp=Z,10.0nm,1.6s,mb4.3
OBN MLR MLR
comp=Z,300nm,22.0s,MS4.2
OBN Obninsk 43.38 348 *e*P **P 12 23 57.5 +1.3**
comp=Z,300nm,22.0s
ARU Arti 43.56 6 *e*P **P 12 23 57.8 +0.2**
ARU *e* 12 25 36.7
ARU *e*PPP 12 26 11.0
ARU *e*S **S 12 30 25.5 -1.2**
ARU MLR MLR
comp=N,200nm,19.0s,MS4.2
ARU MLR MLR
comp=Z,300nm,19.0s,MS4.2
ARU MLR MLR
comp=E,200nm,21.0s,MS4.2
ARU Arti 43.56 6 *e*P **P 12 23 57.8 +0.2**
ARU *e*S **S 12 30 25.5 -1.2**
KURK Kurchatov 43.62 25 *e*P **P 12 23 58.5 +0.3**
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KURK Kurchatov 43.62 25 *e*P **P 12 23 58.5 +0.3**
comp=Z,2.2nm,0.8s,mb3.9
KURK Kurchatov 43.62 25 *e*P **P 12 23 58.5 +0.3**
comp=Z,2.2nm,0.8s,mb3.9
KEST Kesra 43.73 308 LR LR 12 45 13.0
comp=Z,49nm,18.8s,MS3.4,baz=210,slow=40
WMQ Urumqi 43.76 39 P **P 12 24 00.0 +0.8**
WMQ XP sP 12 24 07.0 +3.4
WMQ PP PP 12 25 43.0 +2.0
WMQ S **S 12 30 30.0 +0.4**
WMQ AMB AMB
comp=Z,19nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,101nm,5.0s
WMQ LR LR
comp=N,165nm,15.0s,MS4.3
WMQ LR LR
comp=E,215nm,15.0s,MS4.3
WMQ LR LR
comp=Z,216nm,15.0s,MS4.2
LBTB Lobatse 45.38 213 P **P 12 24 12.9 +0.7**
comp=Z,4.6nm,0.9s,mb4.3,baz=48,slow=9.6,SNR=4.6
CM31 Chiang Mai Arr 46.22 77 *e*P **P 12 24 18.8 0.0**
comp=Z,10nm,0.6s,mb4.9
CM31 Chiang Mai Arr 46.22 77 *e*P **P 12 24 18.8 0.0**
comp=Z,10nm,0.6s,mb4.9
GERES GERESS Array B 47.08 327 P **P 12 24 25.5 -0.1**
comp=Z,0.4nm,0.5s,mb3.6,baz=155,slow=14,SNR=3.5
KHC Kasperske Hory 47.32 327⇑ *e*P **P 12 24 31.2 +3.8**
TORD Torodi Ar. Bea 48.06 276 P **P 12 24 31.9 -1.2**
comp=Z,1.3nm,0.7s,mb4.1,baz=91,slow=6.9,SNR=9.3
TORD LR LR 12 45 45.4
comp=Z,54nm,19.0s,MS3.5,baz=90,slow=37
KLMR Klimovskoe 48.37 352 *e*P **P 12 24 34.2 -1.3**
KLMR pmax pmax
comp=Z,20nm,1.7s,mb4.9
KLMR Klimovskoe 48.37 352 *e*P **P 12 24 34.2 -1.3**
comp=Z,20nm,1.7s,mb4.9
BOSA Boshof 48.48 211 P **P 12 24 35.7 -0.7**
comp=Z,3.1nm,1.0s,mb4.3,baz=307,slow=19,SNR=2.5
BOSA LR LR 12 46 57.6
comp=Z,253nm,18.7s,MS4.2,baz=53,slow=38
BOSA Boshof 48.48 211 P **P 12 24 35.7 -0.7**
BOSA LR LR 12 46 57.6
CLL Collm 48.92 329 *e*P **P 12 24 39.0 -0.8**
BFO Black Forest 49.80 324 *e*P **P 12 24 46.3 -0.2**
KMI Kunming 49.93 68 P **P 12 24 49.4 +1.9**
KMI S **S 12 31 57.1 -0.7**
KMI AMB AMB
comp=Z,74nm,6.0s
KMI LR LR
comp=N,204nm,15.1s,MS4.4
KMI LR LR
comp=E,211nm,17.8s,MS4.4
KMI LR LR
comp=Z,245nm,21.1s,MS4.2
CD2 Chengdu 51.42 61 *e*P **P 12 24 58.0 -0.7**
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
FINES FINESS Array B 51.50 345 P **P 12 24 59.7 +0.3**
comp=Z,1.2nm,0.8s,mb3.9,baz=142,slow=9.6,SNR=4.4
FINES LR LR 12 50 17.9
comp=Z,111nm,18.3s,MS3.9,baz=340,slow=40
FINES FINESS Array B 51.50 345 P **P 12 24 59.7 +0.3**
FINES LR LR 12 50 17.9
KRAR Krasnoyarsk 53.47 28 *e*P **P 12 25 12.1 -1.9**
KRAR pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ESLA Sonseca Array 54.96 309 P **P 12 25 25.7 +0.9**
comp=Z,15nm,1.8s,mb4.7
ESLA Sonseca Array 54.96 309 P **P 12 25 25.7 +0.9**
comp=Z,15nm,1.8s,mb4.7
ESDC Sonseca Array 54.96 309 P **P 12 25 25.2 +0.4**
comp=Z,1.6nm,0.6s,mb4.2,baz=94,slow=6.5,SNR=11
ESDC LR LR 12 50 29.9
comp=Z,52nm,19.9s,MS3.6,baz=145,slow=38
DBIC Dimbokro 55.42 269 LR LR 12 48 43.3
comp=Z,114nm,19.8s,MS4.0,baz=60,slow=36
NOA NORSAR Array B 55.85 338 P **P 12 25 30.7 -0.6**
comp=Z,0.4nm,0.3s,mb4.0,baz=125,slow=8.0,SNR=2.3
NOA LR LR 12 53 09.6
comp=Z,123nm,19.0s,MS4.0,baz=90,slow=40
NOA NORSAR Array B 55.85 338 P **P 12 25 30.7 -0.6**
NOA LR LR 12 53 09.6
TLY Talaya 56.91 36 *e*P **P 12 25 48.4 +10**
TLY *e* 12 27 41.7
TLY *e*S **S 12 33 40.5 +7.9**
TLY *e*SS SS 12 37 17.9 -2.9
TLY *e*SSS 12 39 26.4
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
TLY MLR MLR
comp=Z,256nm,27.0s,MS4.2
SONM Songino Array 57.25 41 P **P 12 25 42.2 +1.0**
comp=Z,3.0nm,1.0s,mb4.3,baz=244,slow=6.9,SNR=17
SONM LR LR 12 53 31.0
comp=Z,163nm,20.8s,MS4.1,baz=249,slow=39
ULN Ulaanbaatar 57.68 41 *e*P **P 12 25 42.8 -1.4**
ARCES ARCESS Array B 58.62 350 P **P 12 25 50.0 -0.8**
comp=Z,1.8nm,0.8s,mb4.2,baz=139,slow=7.6,SNR=5.3
HHC Hu-ho-hao-te 59.21 50 *e*P **P 12 25 55.9 +1.0**
HHC AP pP 12 26 00.5 +2.3
HHC XP sP 12 26 02.9 +3.5
HHC PCP PcP 12 26 44.0 +0.7
HHC PP PP 12 28 08.5 +2.8
HHC SCP ScP 12 30 42.7 -1.3
HHC PCS PcS 12 30 44.5 -0.7
HHC S **S 12 34 00.9 -1.8**
HHC SCS ScS 12 35 41.8 -3.3
HHC SS SS 12 37 57.4 +0.4
HHC AMB AMB
comp=Z,13nm,0.8s,mb5.0
HHC AMB AMB
comp=Z,55nm,5.4s
HHC LR LR
comp=N,134nm,23.7s,MS4.2
HHC LR LR
comp=E,220nm,26.6s,MS4.2
HHC LR LR
comp=Z,243nm,27.5s,MS4.2
NJ2 Nanjing 64.35 61 *e*P **P 12 26 30.2 +0.6**
NJ2 AP pP 12 26 34.9 +2.1
NJ2 XP sP 12 26 37.2 +3.2
NJ2 PP PP 12 28 53.7 +2.7
NJ2 S **S 12 35 07.0 -0.8**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
NJ2 AMB AMB
comp=Z,90nm,10.5s
NJ2 LR LR
comp=N,390nm,32.2s,MS4.7
NJ2 LR LR
comp=E,650nm,28.5s,MS4.7
NJ2 LR LR
comp=Z,1μm,24.4s,MS5.0
BOD Bodaibo 64.62 32 *e*P **P 12 26 27.0 -4.3**
BOD pmax pmax
comp=Z,5.0nm,1.8s,mb4.2
SSE Sheshan 66.35 62 P **P 12 26 39.7 -2.8**
SSE XP sP 12 26 52.7 +5.7
SSE PCP PcP 12 27 10.5 -1.8
SSE S S 12 35 25.2 -7.1
SSE XS sS 12 35 40.4 +2.7
SSE SCS ScS 12 36 32.9 -6.4
SSE AMB AMB
comp=Z,32nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,76nm,3.2s
SSE LR LR
comp=N,39nm,24.7s,MS3.8
SSE LR LR
comp=E,65nm,25.0s,MS3.8
SSE LR LR
comp=Z,71nm,22.9s,MS3.8
SNY Shenyang 68.31 50 ⇓P **P 12 26 53.1 -1.8**
SNY AP pP 12 27 03.5 +5.4
SNY XP sP 12 27 08.0 +8.7
SNY S S 12 36 00.2 +4.4
SNY SS SS 12 40 21.5 +2.6
SNY AMB AMB
comp=Z,6.0nm,0.7s,mb4.7
SNY AMB AMB
comp=Z,93nm,5.0s
SNY LR LR
comp=N,112nm,17.8s,MS4.4
SNY LR LR
comp=E,200nm,22.0s,MS4.4
SNY LR LR
comp=Z,185nm,27.5s
CN2 Changchun 69.73 48 *e*P **P 12 27 03.8 +0.1**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
MDJ Mudanjiang 72.70 47 P **P 12 27 20.9 -0.8**
MDJ AP pP 12 27 23.8 -1.2
MDJ XP sP 12 27 25.6 -0.6
MDJ PP PP 12 30 02.2 -1.2
MDJ S S 12 36 46.7 -0.4
MDJ SCS ScS 12 37 28.1 -1.1
MDJ AMB AMB
comp=Z,2.0nm,0.9s,mb4.0
MDJ AMB AMB
comp=Z,44nm,7.0s
MDJ LR LR
comp=N,28nm,21.9s,MS4.0
MDJ LR LR
comp=E,74nm,21.9s,MS4.0
MDJ LR LR
comp=Z,94nm,24.1s,MS4.0
KLR Kul'dur 74.05 42 *e*P **P 12 27 26.8 -2.9**
HABR Khabarovsk 76.27 43⇓*e*P **P 12 27 43.6 +1.1**
HABR *e*S S 12 37 26.5 -0.5
HABR pmax pmax
comp=Z,25nm,1.9s,mb4.8
HABR MLR MLR
comp=Z,100nm,20.0s,MS4.1
SUMG Summit 77.41 342 *e*P **P 12 27 49.1 +0.2**
comp=Z,9.7nm,1.3s,mb4.6
SUMG Summit 77.41 342 *e*P **P 12 27 49.1 +0.2**
comp=Z,9.7nm,1.3s,mb4.6
FITZ Fitzroy Crossi 79.78 111 P **P 12 28 02.6 +0.6**
comp=Z,7.2nm,1.0s,mb4.6,baz=293,slow=5.3,SNR=6.0
MJAR Matsushiro Arr 79.99 55 LR LR 13 06 22.4
comp=Z,141nm,19.0s,MS4.3,baz=290,slow=38
MAW Mawson 81.00 175 P **P 12 28 08.1 -0.4**
comp=Z,2.5nm,1.1s,mb4.1,baz=358,slow=4.9,SNR=4.8
MAW LR LR 13 00 05.0
comp=Z,144nm,18.8s,MS4.3,baz=263,slow=33
WRAB Tennant Creek 88.21 111 *e*P **P 12 28 45.5 +0.6**
WRAB Tennant Creek 88.21 111 *e*P **P 12 28 45.2 +0.3**
comp=Z,23nm,1.2s,mb5.3
WRAB Tennant Creek 88.21 111 *e*P **P 12 28 45.2 +0.3**
comp=Z,23nm,1.2s,mb5.3
ASAR Alice Springs 88.75 115 P **P 12 28 47.6 +0.1**
comp=Z,3.3nm,1.0s,mb4.6,baz=291,slow=4.7,SNR=12
ASAR LR LR 13 05 30.2
comp=Z,126nm,19.6s,MS4.3,baz=356,slow=34
ASAR Alice Springs 88.75 115 P **P 12 28 47.6 +0.1**
ASAR LR LR 13 05 30.2
NVAR Mina Array Bea 127.74 349 PKP PKPdf 12 35 01.3 +2.1
comp=Z,0.9nm,0.7s,baz=72,slow=2.4,SNR=7.7

NEIC ***07*** *12:31:17.5,2682S×7091W,h31km,ML4.0(GUC), After GUC.*
GUC 07 12:31:17.5±1.0,2682S×7091W,h31km±3km,MD3.9, ML4.0,2C-5D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDCH	**Caldera**	**0.26**	**165**	⇓*i*P	Pb	12 31 24.4	-0.2
CDCH				*i* S	Sb	12 31 29.5	+0.1
CDCH				AML	AML	12 31 29.8	
	comp=N,14μm,0.3s						
CDCH	**Caldera**	**0.26**	**165**	⇓*i*P	Pb	12 31 24.4	-0.2
CDCH				*i* S	Sb	12 31 29.5	+0.1
CPCH	**Copiapo**	**0.73**	**138**	⇓*i*P	Pn	12 31 31.1	-0.5
CPCH				*i* S	Sb	12 31 41.6	+0.1
CPCH				AML	AML	12 31 41.8	
	comp=N,46μm,0.0s						
CPCH	**Copiapo**	**0.73**	**138**	⇓*i*P	Pn	12 31 31.1	-0.5
CPCH				*i* S	Sb	12 31 41.6	+0.1
VACH	**Vallenar**	**1.75**	**176**	⇑*i*P	Pn	12 31 47.5	+1.7
VACH				*i* S	Sn	12 32 10.1	+3.0
VACH				AML	AML	12 32 16.6	
	comp=N,2μm,0.3s						
VACH	**Vallenar**	**1.75**	**176**	⇑*i*P	Pn	12 31 47.5	+1.7
VACH				*i* S	Sn	12 32 10.1	+3.0
LCO	**Las Campanas**	**2.19**	**175**	*e*P	Pn	12 31 53.5	+1.7
LCO				*i* S	Sn	12 32 20.6	+2.8
CPN1	**Cerro Paranal**	**2.23**	**12**	*i* S	Sn	12 32 22.4	+3.6
CPN1				AML	AML	12 32 24.8	
	comp=E,434nm,0.5s						
TLL	**Tololo Astrono**	**3.34**	**178**	⇓*i*P	Pn	12 32 06.9	-0.6
TLL				*i* S	Sn	12 32 49.2	+3.2
TLL				AML	AML	12 33 12.5	
	comp=N,442nm,0.7s						
TLL	**Tololo Astrono**	**3.34**	**178**	P	Pn	12 32 06.9	-0.6
TLL				*i* S	Sn	12 32 49.2	+3.2

CSEM ***07*** *12:31:44.8,32.12N×48.60E,h29km,ML3.2,After THR*
THR ***07*** *12:31:44.8±0.6,32.12N×48.60E,h29km±3km,ML3.2*
ISCJB ***07*** *12:31:46.0±1.2,32.30N±005×487E±0.1,h11km±9km,Error ellipse: s-maj=20.5km s-min=6.3km az=31.1*
KISR ***07*** *12:31:47.6±1.2,32.21N×48.71E,h33km,ML2.8*
ISC 07 12:31:47.0±1.4,3228N±005×487E±01,h7km±11km,n10, σ0$44/14,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.19**	**158**	*e*PG	**Pg**	**12 31 50.5**	**-0.3**
SHGR				AML	AML	12 31 56.5	
	comp=E,6μm,0.2s						
SHGR				AML	AML	12 32 00.5	
	comp=N,3μm,0.3s						
ASAO	**Ashtian**	**2.51**	**25**	*e*PN	**Pn**	**12 32 28.4**	**+0.2**
ASAO				*e*SG	**Sg**	**12 33 07.6**	**-0.1**
ASAO				AML	AML	12 33 12.3	
	comp=N,78nm,0.6s						
ASAO				AML	AML	12 33 12.3	
	comp=E,55nm,0.7s						
ASAO	**Ashtian**	**2.51**	**25**	*e*Pn	**Pn**	**12 32 28.4**	**+0.2**
	SNR=54						
ASAO				*e*Sg	**Sg**	**12 33 07.6**	**-0.1**
	comp=E,55nm,0.7s,SNR=92						
UMR	**Umm Al-Rimmam**	**2.85**	**198**	AML	AML	12 33 24.5	
	comp=Z,52nm,0.4s						
SNGE	**Sanandaj**	**3.03**	**338**	*e*PN	**Pn**	**12 32 34.9**	**-0.4**
SNGE				AML	AML	12 33 34.5	
	comp=N,52nm,0.6s						
KBD	**Kabd**	**3.22**	**196**	*e*P	**Pn**	**12 32 37.9**	**0.0**
KBD				AML	AML	12 33 20.1	
	comp=Z,80nm,0.3s						
NAY	**Al-Naaiem**	**3.28**	**203**	*e*P	**Pn**	**12 32 39.0**	**+0.3**
NAY				*e*S	**Sn**	**12 33 18.2**	**+0.2**
NAY				AML	AML	12 33 37.4	
	comp=Z,7.4nm,0.4s						
RDF	**Al-Radifah**	**3.49**	**197**	*e*P	**Pn**	**12 32 42.4**	**+0.7**
RDF				*e*S	**Sn**	**12 33 22.1**	**-1.1**
RDF				AML	AML	12 33 23.6	
	comp=Z,13nm,0.3s						
NASN	**Na'in**	**3.49**	**80**	*e*PN	**Pn**	**12 32 41.7**	**-0.1**
QRN	**Al-Qurain**	**3.59**	**191**	*e*P	**Pn**	**12 32 43.5**	**+0.5**
QRN				AML	AML	12 33 21.3	
	comp=Z,15nm,0.4s						
QRN				*e*S	**Sn**	**12 33 25.8**	**+0.1**

ISCJB ***07*** *12:42:44.7±1.2,160S±06×1753W±04,h293km±13km, mb3.9/7,Error ellipse: s-maj=120.7km s-min=13.5km az=117.5*
IDC ***07*** *12:42:44.9±2.2,1634S×17497W,h288km±14km,mb3.5/4, mb1 3.8/5,mb1mx3.4/13,mbtmp4.2/5,Error ellipse: s-maj=151.7km s-min=16.2km az=147.0*
NEIC ***07*** *12:42:46.1±0.9,1611S×17514W,h297km±9km,mb4.2/3, Error ellipse: s-maj=63.8km s-min=8.5km az=149.0*
ISC 07 12:42:46.0±1.1,158S±06×1753W±04,h287km±14km,n17, σ0$45/16,mb3.9/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.90**	**61**	P	**Pn**	**12 43 51.4**	**+1.0**
	5.9nm,0.3s,baz=67,slow=18,SNR=11						
AFI				S	**S**	**12 44 41.1**	**-0.8**
	23nm,0.3s,baz=138,slow=20,SNR=8.0						
STKA	**Stephens Creek**	**42.24**	**240**	P	**P**	**12 50 10.9**	**-0.5**
	1.0nm,0.5s,mb3.3,baz=96,slow=16,SNR=2.9						
STKA	**Stephens Creek**	**42.24**	**240**	*e*P	**P**	**12 50 11.4**	**0.0**
WRAB	**Tennant Creek**	**47.96**	**257**	*e*P	**P**	**12 50 56.5**	**+0.4**
AS31	**Alice Springs**	**48.24**	**252**	*e*P	**P**	**12 50 58.1**	**-0.2**
ASAR	**Alice Springs**	**48.24**	**252**	P	**P**	**12 50 58.1**	**-0.1**
	2.6nm,0.5s,mb3.8,baz=89,slow=7.8,SNR=101						
ASAR				pP	pP	12 51 59.6	+1.1
	0.9nm,0.7s,baz=95,slow=7.3,SNR=2.4						
ASPA	**Alice Springs**	**48.25**	**252**	*e*P	**P**	**12 50 58.1**	**-0.2**
CMB	**Columbia Colle**	**74.30**	**42**	*e*P	**P**	**12 53 52.3**	**+0.3**
	1.8nm,0.7s,mb3.8						
NVAR	**Mina Array Bea**	**75.88**	**43**	P	**P**	**12 54 01.3**	**+0.3**
	2.2nm,0.8s,mb3.8,baz=231,slow=11,SNR=18						
TPNV	**Topopah Spring**	**76.45**	**45**	*e*P	**P**	**12 54 04.2**	**0.0**
MCMT	**McKenzie Canyo**	**82.74**	**39**	*e*P	**P**	**12 54 38.4**	**+0.5**
RRI2	**Red Ridge**	**82.96**	**41**	P	**P**	**12 54 39.2**	**+0.2**
	2.5nm,0.6s,mb4.2						
COLA	**College**	**83.14**	**11**	*e*P	**P**	**12 54 39.7**	**-0.3**
	5.6nm,0.8s,mb4.5						
BW06	**Boulder Array**	**83.81**	**42**	*e*P	**P**	**12 54 42.8**	**-0.5**
PDAR	**Pinedale Array**	**83.81**	**42**	P	**P**	**12 54 43.0**	**-0.4**
	1.5nm,0.8s,mb3.9,baz=215,slow=2.9,SNR=12						
ARCES	**ARCESS Array B**	**124.78**	**351**	PKP	PKPdf	13 01 10.3	-1.3
	2.4nm,0.9s,baz=1.9,slow=2.7,SNR=4.2						
BRTR	**Keskin Array B**	**145.32**	**319**	PKPbc	PKPbc	13 01 51.1	+1.2
	0.7nm,0.4s,baz=46,slow=4.2,SNR=4.0						

MAN 07 12:44:36.6,1369N×11980E,h32km,mb1.9,ML3.7,MS4.7, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.44**	**84**	*e*P	Pb	12 44 47.4	+1.2
LUBP				*e*S	Sb	12 44 52.4	-0.3
PGP	**Puerto Galera**	**1.14**	**99**⇓*e*P		Pn	12 44 55.6	-0.7
BUSP	**Coron**	**1.72**	**167**	*e*P	Pn	12 45 05.4	+1.1
BUSP				*e*S	Sn	12 45 22.8	-2.3
BOAC	**Boac**	**2.00**	**96**	*e*P	Pn	12 45 09.4	+1.2
BOAC				*e*S	Sn	12 45 32.9	+0.8
CUYO	**Cuyo Island**	**3.06**	**157**	*e*P	Pn	12 45 22.9	+0.2

MOS 07 12:54:19.9±2.8,5110N×9840E,h13km,mb4.3/1,Error ellipse: s-maj=49.4km s-min=24.7km az=159.7, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOY	**Mondy**	**1.72**	**70**	*e*PN	Pn	12 54 51.4	+1.9
MOY				*e*		12 55 15.4	
MOY				pmax	pmax		
	comp=Z,30nm,0.3s						
MOY				smax			
	comp=N,372nm,1.4s						
ARS	**Arshan**	**2.65**	**70**	*e*PN	Pn	12 55 06.5	+4.3
ARS				*e*		12 55 44.5	
ARS				pmax	pmax		
	comp=Z,27nm,0.4s						
ARS				smax			
	comp=E,165nm,0.6s						
ZAK	**Zakamensk**	**3.18**	**101**	*e*PN	Pn	12 55 16.4	+6.8
ZAK				*e*S	Sn	12 56 00.2	+13
ZAK				pmax	pmax		
	comp=Z,19nm,1.1s						
ZAK				smax			
	comp=N,147nm,1.8s						
IRK	**Irkutsk**	**3.83**	**70**	*e*PN	Pn	12 55 31.5	+13
IRK				*e*		12 56 19.6	
IRK				pmax	pmax		
	comp=Z,75nm,0.1s						
IRK				smax			
	comp=N,346nm,0.8s						
LSTR	**Listvyanka**	**4.09**	**77**	*e*PN	Pn	12 55 33.5	+11
LSTR				*e*		12 56 27.1	
LSTR				pmax	pmax		
	comp=Z,18nm,1.3s						
LSTR				smax			
	comp=N,88nm,1.1s						
OGRR	**Ongureny**	**6.18**	**62**	*e*PN	Pn	12 55 54.9	+4.1
OGRR				*e*		12 56 13.5	
OGRR				*e*		12 57 31.4	
OGRR				smax			
	comp=E,55nm,1.2s						

ISCJB ***07*** *13:43:11.0±0.9,3963N±004×26.1E±0.1,h2km±11km,Error*

ellipse: s-maj=13.8km s-min=5.2km az=152.3
*ATH **07** 13:43:11.7,3968N×2607E,h5^{km},MD3.1/4*
*NEIC **07** 13:43:11.7,3968N×2607E,h5^{km},MD3.1(ATH),After ATH.*
*CSEM **07** 13:43:12.8±0.1,3964N×2605E,h2^{km},MD3.1,Error ellipse: s-maj=4.4km s-min=1.6km az=73.0*
*THE **07** 13:43:12.5,3963N×2607E,h1^{km}*
ISC 07 13:43:12.0±0.7,**3963N**±004×**261E**±01,**h18**^{km}±10^{km},**n8**,σ**0^{s}44**/11,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.42**	**156**	*e*PB	**Pb**	**13 43 20.9**	**-0.1**
PRK				*e*SB	**Sb**	**13 43 27.2**	**+0.2**
LIA	**Limnos Island**	**0.72**	**292**	*e*PB	**Pb**	**13 43 25.7**	**-0.3**
LOS	**Limnos**	**0.81**	**292**	*e*Pg	**Pg**	**13 43 27.7**	**-0.1**
CHOS	**Chios island**	**1.25**	**180**	*e*Pg	**Pg**	**13 43 35.2**	**-0.8**
CHOS				*e*Sg	**Sg**	**13 43 53.2**	**+0.8**
ALN	**Alexandroupoli**	**1.26**	**360**	*e*Pg	**Pg**	**13 43 36.1**	**-0.3**
ALN				*e*Sg	**Sg**	**13 43 53.4**	**+0.5**
RDO	**Rodhopi**	**1.56**	**346**	*e*PB	**Pb**	**13 43 40.3**	**-0.1**
OUR	**Ouranopolis**	**1.74**	**294**	*e*Pb	**Pb**	**13 43 43.8**	**+0.5**
SMG	**Samos**	**2.02**	**162**	*e*PG	**Pg**	**13 43 50.5**	**-0.3**

WEL 07 13:54:51.9±0.5,**3684S**×**17768E**,**h159**^{km}±4^{km},**ML3.5**/8,**Error ellipse: s-maj=6.1km s-min=5.4km az=0.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**1.32**	**160**	PN	Pn	13 55 20.3	0.0
PUZ				SN	Sn	13 55 41.5	-0.6
URZ	**Urewera**	**1.49**	**197**	PN	Pn	13 55 22.2	+0.1
URZ				SN	Sn	13 55 45.6	+0.4
MWZ	**Matawai**	**1.50**	**184**	PN	Pn	13 55 22.4	+0.2
MWZ				SN	Sn	13 55 45.2	-0.2
KNZ	**Kokohu**	**2.18**	**180**	PN	Pn	13 55 29.9	+0.3
BKZ	**Black Stump Fm**	**2.51**	**202**	PN	Pn	13 55 33.9	+0.4
PXZ	**Pawanui**	**3.25**	**191**	PN	Pn	13 55 41.8	-1.0
TSZ	**Takapari Road**	**3.49**	**202**	PN	Pn	13 55 45.2	-0.6
TSZ				SN	Sn	13 56 27.1	-0.6

*ROM **07** 14:00:05.5±0.5,3991N×1993E,h10^{km},Md3.5/21,Ml3.7/20,Error ellipse: s-maj=6.1km s-min=4.2km az=137.0*
*ATH **07** 14:00:05.2,40.14N×1954E,h18^{km}±3^{km},MD3.8/11*
*ISCJB **07** 14:00:06.5±0.3,40.12N±001×1971E±002,h5^{km}±2^{km},mb3.6/4,Error ellipse: s-maj=2.5km s-min=2.2km az=43.7*
*NEIC **07** 14:00:07.3±1.3,3997N×1949E,h17^{km}±11^{km},MD3.5(PDG),MD4.1(ATH),Error ellipse: s-maj=13.2km s-min=5.1km az=50.0*
*THE **07** 14:00:08.0,40.12N×1979E,h0^{km},ML3.7*
*SKO **07** 14:00:07.3,40.11N×1985E,h0^{km}*
*TIR **07** 14:00:08.5,40.12N×2002E,h8^{km},Ml3.4*
*PDG **07** 14:00:09.9±0.6,40.17N×1952E,h20^{km}±2^{km}*
*CSEM **07** 14:00:09.0±0.1,4029N×1984E,h15^{km},MD4.1,Error ellipse: s-maj=2.3km s-min=1.6km az=12.0*
*IDC **07** 14:00:09.0±5.2,4066N×20.17E,h0^{km},mb3.7/4,mb1 3.8/5,mb1mx3.6/19,mbtmp3.7/5,ML3.6/1,Error ellipse: s-maj=100.7km s-min=21.0km az=41.0*
ISC 07 14:00:07.4±0.4,**4011N**±001×**1971E**±002,**h5**^{km}±2^{km},**n120**,σ**1^{s}19**/180,**mb3.6**/4,**11C-9D**,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.29**	**52**	*i* Pg	**Pg**	**14 00 12.1**	**-0.9**
TPE				*i* Sg	**Sg**	**14 00 16.2**	**-0.7**
SRN	**Sarande**	**0.32**	**136**	*i* Pg	**Pg**	**14 00 12.7**	**-0.9**
SRN				*i* Sg	**Sg**	**14 00 18.2**	**+0.4**
VLO	**Vlora**	**0.39**	**335**	*i* Pg	**Pg**	**14 00 21.0**	**+6.1**
VLO				*i* Sg	**Sg**	**14 00 25.9**	**+5.9**
KEK	**Kerkira**	**0.41**	**171**	*e*PB	**Pg**	**14 00 14.7**	**-0.5**
KEK				*e*SB	**Sg**	**14 00 22.0**	**+1.5**
LSK	**Leskovik**	**0.68**	**87**	*i* Pg	**Pg**	**14 00 18.3**	**-2.2**
LSK				*i* Sg	**Sg**	**14 00 28.7**	**-0.6**
IGT	**Igoumenitsa**	**0.75**	**140**	*e*Pg	**Pg**	**14 00 20.5**	**-1.3**
IGT				*e*Sg	**Sg**	**14 00 32.7**	**+1.1**
SCTE	**Santa Cesarea**	**0.96**	**268**	Pg	**Pg**	**14 00 26.3**	**+0.6**
SCTE				Sg	**Sg**	**14 00 42.2**	**+4.1**
	3µm,0.5s						
KBN	**Korca**	**0.97**	**58**	*i* Pg	**Pg**	**14 00 25.8**	**-0.1**
KBN				*i* Sg	**Sg**	**14 00 40.4**	**+1.9**
JAN	**Janina**	**0.99**	**117**	*e*PB	**Pb**	**14 00 25.6**	**-1.4**
JAN				*e*SN	**Sn**	**14 00 41.4**	**-0.9**
MEV	**Metsovon**	**1.21**	**105**	*e*Pg	**Pg**	**14 00 29.8**	**-0.8**
TIR	**Tirane**	**1.24**	**5**	*e*Pg	**Pg**	**14 00 31.1**	**-0.1**
TIR				*e*Sg	**Sg**	**14 00 49.4**	**+2.2**
TIR	**Tirane**	**1.24**	**5**	*i* Pg	**Pg**	**14 00 31.1**	**0.0**
TIR	**Tirane**	**1.24**	**5**	*e*Pg	**Pg**	**14 00 31.0**	**-0.1**
TIR	**Tirane**	**1.24**	**5**	Pn	**Pn**	**14 00 32.3**	**+0.9**
TIR				*e*Sg	**Sg**	**14 00 49.4**	**+2.2**
TIR				Sn	**Sn**	**14 00 51.4**	**+2.9**
	2µm,0.9s						
LCI	**Lecce**	**1.25**	**281**	⇑*i*Pg	**Pg**	**14 00 31.0**	**-0.2**
LCI				Sg	**Sg**	**14 00 51.5**	**+4.1**
	245nm,0.3s						
OHR	**Ohrid**	**1.29**	**39**	*e*Pg	**Pg**	**14 00 30.6**	**-1.6**
OHR				*e*Sg	**Sg**	**14 00 50.5**	**+1.5**
OHR	**Ohrid**	**1.29**	**39**	*e*Pn	**Pn**	**14 00 31.1**	**-1.0**
OHR				*e*Sn	**Sn**	**14 00 48.5**	**-1.4**
OHR	**Ohrid**	**1.29**	**39**	*e*Pn	**Pn**	**14 00 31.1**	**-1.1**
OHR				*e*Sn	**Sn**	**14 00 48.4**	**-1.5**
OHR				*e*Sg	**Sg**	**14 00 50.5**	**+1.5**
FNA	**Florina**	**1.44**	**62**	*e*Pg	**Pg**	**14 00 32.9**	**-2.0**
FNA				*e*Sg	**Sg**	**14 00 54.6**	**+1.1**
BIA	**Bitola**	**1.52**	**53**	*e*Pg	**Pn**	**14 00 34.3**	**-1.0**
BIA				*e*Sg	**Sg**	**14 00 56.6**	**+0.3**
BIA	**Bitola**	**1.52**	**53**	*e*Pn	**Pn**	**14 00 34.3**	**-1.0**
LKD	**Levkas**	**1.58**	**152**	*e*Pg	**Pn**	**14 00 36.1**	**-0.1**
LKD				*e*Sg	**Sg**	**14 00 58.2**	**0.0**
KZN	**Kozani**	**1.59**	**82**	*e*PN	**Pn**	**14 00 36.9**	**+0.7**
KZN				*e*SN	**Sn**	**14 00 59.3**	**+2.2**
PE1	**Pezze di Greco**	**1.88**	**292**	*e*Pn	**Pn**	**14 00 39.5**	**-0.7**
ULC	**Ulcinj**	**1.88**	**349**	⇓*i*Pn	**Pn**	**14 00 40.5**	**+0.3**
ULC				*e*Sn	**Sn**	**14 01 05.8**	**+1.4**
EVR	**Evrytania**	**2.02**	**126**	*e*PN	**Pn**	**14 00 43.2**	**+1.1**
VLS	**Valsamata**	**2.05**	**160**	*e*PB	**Pn**	**14 00 41.4**	**-1.2**
NOCI	**Noci**	**2.13**	**289**	Pn	**Pb**	**14 00 46.6**	**+0.1**
	614nm,0.4s						
LIT	**Litokhoron**	**2.13**	**89**	*e*Pn	**Pn**	**14 00 43.9**	**+0.2**
LIT				*e*Sn	**Sn**	**14 01 11.5**	**+0.9**
LIT	**Litokhoron**	**2.13**	**89**	*e*Pn	**Pn**	**14 00 43.8**	**+0.1**
LIT				*e*Sn	**Sn**	**14 01 11.5**	**+1.0**
GRG	**Griva**	**2.22**	**67**	*e*Pn	**Pn**	**14 00 45.0**	**+0.1**
BUM	**Brajici-Budva**	**2.27**	**345**	⇑*i*Pn	**Pn**	**14 00 45.8**	**+0.3**
BUM				*e*Sn	**Sn**	**14 01 14.8**	**+0.8**
SKO	**Skopje**	**2.27**	**35**	*e*Pn	**Pn**	**14 00 47.3**	**+1.7**
SKO				*e*Sn	**Sn**	**14 01 15.7**	**+1.8**
SKO	**Skopje**	**2.27**	**35**	*e*Pn	**Pn**	**14 00 45.1**	**-0.5**
SKO				*e*Sn	**Sn**	**14 01 12.6**	**-1.4**
SKO	**Skopje**	**2.27**	**35**	*e*Pn	**Pn**	**14 00 45.1**	**-0.5**
SKO				*e*Sn	**Sn**	**14 01 12.5**	**-1.5**
AGG	**Agios Georgios**	**2.30**	**117**	*e*Pn	**Pn**	**14 00 46.7**	**+0.7**
AGG				*e*Sn	**Sn**	**14 01 15.8**	**+1.1**
TTG	**Podgorica**	**2.34**	**352**	⇓*i*Pn	**Pn**	**14 00 47.4**	**+0.8**
TTG				*e*Sn	**Sn**	**14 01 16.2**	**+0.6**
TTG	**Podgorica**	**2.34**	**352**	⇓*i*Pn	**Pn**	**14 00 47.4**	**+0.9**
TTG				*e*Sn	**Sn**	**14 01 16.2**	**+0.6**
BAI	**Bari**	**2.37**	**296**	*e*Pn	**Pn**	**14 00 46.3**	**-0.7**
SG1	**Sgolgore (BA)**	**2.42**	**288**	*e*Pn	**Pn**	**14 00 47.2**	**-0.5**
STIP	**Stip**	**2.45**	**49**	*e*Pn	**Pn**	**14 00 47.9**	**-0.2**
STIP				*e*Sn	**Sn**	**14 01 18.8**	**+0.3**
STIP	**Stip**	**2.45**	**49**	*e*Pn	**Pn**	**14 00 47.8**	**-0.2**
RLS	**Riolos of Patr**	**2.47**	**146**	*e*PN	**Pn**	**14 00 48.5**	**+0.2**
VAY	**Valandovo**	**2.48**	**60**	*e*Pn	**Pn**	**14 00 48.1**	**-0.4**
VAY				*e*Sn	**Sn**	**14 01 19.9**	**+0.7**
VAY	**Valandovo**	**2.48**	**60**	*e*Pn	**Pn**	**14 00 48.4**	**-0.1**
VAY				*e*Sn	**Sn**	**14 01 18.4**	**-0.8**
VAY	**Valandovo**	**2.48**	**60**	*e*Pn	**Pn**	**14 00 48.3**	**-0.2**
VAY				*e*Sn	**Sn**	**14 01 18.4**	**-0.8**
PVY	**Plav**	**2.49**	**4**	⇑*i*Pn	**Pn**	**14 00 50.0**	**+1.5**
PVY				*e*Sn	**Sn**	**14 01 21.1**	**+1.8**
AMUR	**Altamura**	**2.50**	**289**	Pn	**Pn**	**14 00 48.3**	**-0.4**
	210nm,0.3s						
HCY	**Herceg Novi**	**2.50**	**339**	⇑*i*Pn	**Pn**	**14 00 49.0**	**+0.2**
HCY				*e*Sn	**Sn**	**14 01 20.1**	**+0.3**
SERS	**Sersale**	**2.57**	**246**	Pn	**Pn**	**14 00 49.2**	**-0.5**
	169nm,1.2s						
NKY	**Niksic**	**2.75**	**349**	⇓*i*Pn	**Pn**	**14 00 52.9**	**+0.8**
NKY				*e*Sn	**Sn**	**14 01 25.5**	**-0.3**
IVA	**Berane**	**2.76**	**3**	⇓*i*Pn	**Pn**	**14 00 53.6**	**+1.3**
IVA				*e*Sn	**Sn**	**14 01 26.8**	**+0.8**
XOR	**Xorichti**	**2.79**	**104**	*e*Pn	**Pn**	**14 00 52.5**	**-0.1**
XOR	**Xorichti**	**2.79**	**104**	*e*Pn	**Pn**	**14 00 52.5**	**-0.2**
TREB	**Trebinje**	**2.79**	**339**	P	**Pn**	**14 00 51.1**	**-1.7**
TREB				S	**Sn**	**14 01 24.8**	**-2.1**
NEO	**Neokhori**	**2.83**	**105**	*e*PN	**Pn**	**14 00 53.2**	**0.0**
SOH	**Sokhos**	**2.87**	**75**	*e*Pn	**Pn**	**14 00 54.0**	**+0.2**
SOH				*e*Sn	**Sn**	**14 01 29.0**	**+0.3**
PLG	**Polygyros**	**2.87**	**84**	*e*PN	**Pn**	**14 00 54.0**	**+0.2**
BRY	**Bratogost**	**2.92**	**343**	⇓*i*Pn	**Pn**	**14 00 54.8**	**+0.3**
BRY				*e*Sn	**Sn**	**14 01 30.0**	**0.0**
LKR	**Lokris**	**2.94**	**119**	*e*PN	**Pn**	**14 00 55.2**	**+0.5**
CUC	**Castrocucco**	**2.99**	**269**	Pn	**Pn**	**14 00 57.7**	**+2.2**
PLAC	**Placanica**	**3.04**	**238**	Pn	**Pn**	**14 00 55.5**	**-0.6**
PLAC				Sn	**Sn**	**14 01 31.5**	**-1.4**
	57nm,0.6s						
PAIG	**Paliouri**	**3.05**	**92**	*e*Pn	**Pn**	**14 00 55.7**	**-0.7**
PAIG				*e*Sn	**Sn**	**14 01 33.0**	**-0.3**
KKB	**Krupnik**	**3.10**	**54**	*e*P	**Pn**	**14 00 58.7**	**+1.8**
UPM	**Unac-Piva**	**3.14**	**349**	⇑*i*Pn	**Pn**	**14 00 58.0**	**+0.4**
UPM				*e*Sn	**Sn**	**14 01 35.6**	**+0.1**
SJES	**Sjenica**	**3.16**	**3**	Pn	**Pn**	**14 00 59.9**	**+2.1**
SJES				Sn	**Sn**	**14 01 34.3**	**-1.5**
PLE	**Pljevlja**	**3.22**	**356**	⇓*i*Pn	**Pn**	**14 01 00.0**	**+1.4**
PLE				*e*Sn	**Sn**	**14 01 37.9**	**+0.5**
MS1	**Monte Sant'Ang**	**3.27**	**300**	*e*Pn	**Pn**	**14 00 58.8**	**-0.5**
OUR	**Ouranopolis**	**3.28**	**85**	*e*Pn	**Pn**	**14 00 59.4**	**0.0**
MSAG	**Monte S. Angel**	**3.29**	**300**	Pn	**Pn**	**14 00 59.2**	**-0.5**
	248nm,0.6s						
MMB	**Musomiste**	**3.38**	**63**	*e*Pn	**Pn**	**14 01 00.7**	**-0.2**
MMB				*e*Sn	**Sn**	**14 01 41.4**	**0.0**
CDRU	**Civita di Ruta**	**3.39**	**278**	Pn	**Pn**	**14 01 02.7**	**+1.7**
	50nm,0.7s						
SGRT	**San Giovanni R**	**3.42**	**300**	Pn	**Pn**	**14 01 01.2**	**-0.2**
	123nm,0.6s						
SGTA	**Sant Agata di**	**3.46**	**289**	Pn	**Pn**	**14 01 03.5**	**+1.5**
	191nm,0.7s						
CEL	**Celeste**	**3.50**	**239**	Pn	**Pn**	**14 01 01.7**	**-0.8**
	154nm,0.8s						
CAFE	**Carife**	**3.53**	**286**	Pn	**Pn**	**14 01 04.3**	**+1.4**
	135nm,0.6s						
MCRV	**Calabrutti - M**	**3.53**	**282**	Pn	**Pn**	**14 01 04.6**	**+1.7**
	103nm,0.7s						
VTS	**Vitosha**	**3.61**	**46**	⇓*i*P	**Pb**	**14 01 09.1**	**-2.7**
VTS	**Vitosha**	**3.61**	**46**	S	**Sn**	**14 01 46.8**	**-0.3**
VTS	**Vitosha**	**3.61**	**46**	*e*P	**Pn**	**14 01 07.6**	**+3.6**
BBLS	**Bajina Basta -**	**3.76**	**357**	*i* Pn	**Pn**	**14 01 06.9**	**+0.8**
BBLS				Sn	**Sn**	**14 01 45.2**	**-5.4**
BBLS	**Bajina Basta -**	**3.76**	**357**	Pn	**Pn**	**14 01 06.9**	**+0.9**
BBLS				Sn	**Sn**	**14 01 45.2**	**-5.5**
GRUS	**Gruza**	**3.84**	**11**	*i* Pn	**Pn**	**14 01 06.0**	**-1.2**
GRUS				Sn	**Sn**	**14 01 49.8**	**-3.0**
DIVS	**Divcibare**	**3.99**	**3**	*i* Pn	**Pn**	**14 01 08.3**	**-0.8**
DIVS				Sn	**Sn**	**14 01 54.4**	**-1.9**
RZN	**Rozhen**	**4.11**	**66**	*e*P	**Pn**	**14 01 14.0**	**+3.2**
VLI	**Veliai**	**4.23**	**142**	*e*PN	**Pn**	**14 01 12.5**	**-0.1**
FRES	**Fresagrandinar**	**4.24**	**298**	Pn	**Pn**	**14 01 13.3**	**+0.6**
	143nm,0.7s						
VAGA	**Valle Agricola**	**4.36**	**289**	Pn	**Pn**	**14 01 16.6**	**+2.3**
	92nm,0.7s						
MOCO	**Biccari - m.te**	**4.40**	**288**	Pn	**Pn**	**14 01 06.4**	**-8.5**
	130nm,0.7s						
MIDA	**Miranda**	**4.41**	**292**	Pn	**Pn**	**14 01 16.2**	**+1.2**
	83nm,1.0s						
RNI2	**Rionero Sannit**	**4.50**	**292**	Pn	**Pn**	**14 01 18.0**	**+1.7**
	120nm,1.3s						
CERA	**Filignano**	**4.56**	**291**	Pn	**Pn**	**14 01 18.4**	**+1.3**
	79nm,0.7s						
KYTH	**Kithira**	**4.64**	**145**	*e*PN	**Pn**	**14 01 20.0**	**+1.9**
SDI	**San Donato**	**4.75**	**292**	Pn	**Pn**	**14 01 21.6**	**+2.0**
	11nm,0.4s						
HAVL	**Avola**	**4.78**	**230**	Pn	**Pn**	**14 01 16.4**	**-3.7**
INTR	**Introdacqua**	**4.78**	**295**	Pn	**Pn**	**14 01 19.8**	**-0.3**
	91nm,0.7s						
HMDC	**Modica**	**4.99**	**232**	Pn	**Pn**	**14 01 20.0**	**-2.9**
TERO	**Teramo**	**5.23**	**301**	Pn	**Pn**	**14 01 26.6**	**+0.3**
	38nm,0.8s						
AQU	**L'Aquila**	**5.26**	**297**	P	**Pn**	**14 01 27.7**	**+1.1**
AQU	**L'Aquila**	**5.26**	**297**	P	**Pn**	**14 01 27.7**	**+1.1**
BZS	**Buzias**	**5.67**	**14**	⇑*i*P	**Pn**	**14 01 32.5**	**+0.1**
NVLJ	**Novalja**	**5.71**	**323**	*i* Pn	**Pn**	**14 01 31.7**	**-1.2**
NVLJ				*i* Sn	**Sn**	**14 02 35.8**	**-3.1**
NVLJ	**Novalja**	**5.71**	**323**	*i* Pn	**Pn**	**14 01 31.7**	**-1.2**
NVLJ				*i* Sn	**Sn**	**14 02 35.7**	**-3.2**
CING	**Cingoli**	**5.86**	**306**	Pn	**Pn**	**14 01 34.1**	**-0.9**
ARV	**Arcevia**	**6.08**	**306**	Pn	**Pn**	**14 01 37.1**	**-0.9**
PKSM	**Moragy**	**6.14**	**353**	⇑*i*P	**Pn**	**14 01 47.4**	**+8.6**
BOJS	**Bojanci**	**6.31**	**330**	*e*Pn	**Pn**	**14 01 40.1**	**-1.0**
MLR	**Muntele Rosu**	**7.06**	**38**	⇑*i*P	**Pn**	**14 01 56.7**	**+5.3**
VOY	**Vojsko**	**7.29**	**326**	*e*Pn	**Pn**	**14 01 53.2**	**-1.3**
VOY				*e*Sn	**Sn**	**14 03 13.2**	**-4.4**
PERS	**Pernice**	**7.33**	**334**	*i* Pn	**Pn**	**14 01 53.9**	**-1.2**
PERS				*e*Sn	**Sn**	**14 03 12.9**	**-5.8**
OBKA	**Obir**	**7.42**	**331**	⇑*i*Pn	**Pn**	**14 01 55.4**	**-0.9**
OBKA				⇓*i*Sn	**Sn**	**14 03 16.1**	**-4.7**
OBKA	**Obir**	**7.42**	**331**	⇑*i*Pn	**Pn**	**14 01 55.4**	**-0.9**
OBKA				⇑*i*Sn	**Sn**	**14 03 18.0**	**-2.8**
ROBS	**Robic**	**7.62**	**326**	*i* Pn	**Pn**	**14 01 57.1**	**-1.9**
ROBS				*i* Sn	**Sn**	**14 03 20.6**	**-5.2**
GERES	**GERESS Array B**	**9.72**	**336**	Pn	**Pn**	**14 02 26.3**	**-1.6**
	0.3nm,0.3s,baz=152,slow=13,SNR=3.2						
GERES				Sn	**Sn**	**14 04 10.7**	**-6.9**
	0.4nm,0.3s,baz=148,slow=26,SNR=2.8						
NB2	**NORSAR Subarra**	**21.60**	**349**	P	**P**	**14 04 55.8**	**-2.3**
	comp=Z,2.9nm,0.9s,mb3.7,baz=162,slow=11						
NOA	**NORSAR Array B**	**21.60**	**349**	P	**P**	**14 04 57.0**	**-1.1**
	comp=Z,1.2nm,0.5s,mb3.6,baz=162,slow=11,SNR=6.2						
FINES	**FINESS Array B**	**21.71**	**8**	P	**P**	**14 04 56.7**	**-2.6**
	comp=Z,0.5nm,0.5s,mb3.2,baz=186,slow=9.4,SNR=5.3						
FINES	**FINESS Array B**	**21.71**	**8**	P	**P**	**14 04 56.7**	**-2.6**
ARCES	**ARCESS Array B**	**29.64**	**4**	P	**P**	**14 06 09.9**	**-3.9**
	comp=Z,1.6nm,0.7s,mb3.9,baz=184,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**44.85**	**60**	P	**P**	**14 08 19.8**	**-2.8**
	comp=Z,0.7nm,0.4s,mb3.8,baz=281,slow=6.9,SNR=6.1						

*SZGRF **07** 14:16:52.1,1701S×17472W,h33^{km},Tonga Islands*
*BJI **07** 14:17:18.6,1702S×17479W,h286^{km},mB4.7,mb4.5*
*ISCJB **07** 14:17:22.2±0.9,1621S±008×17520W±007,h280^{km}±7^{km},mb4.4/36,Error ellipse: s-maj=14.8km s-min=6.5km az=106.7*
*IDC **07** 14:17:23.1±1.3,1622S×175.13W,h278^{km}±12^{km},mb3.9/9,mb1 4.1/10,mb1mx4.0/14,mbtmp4.5/10,Error ellipse: s-maj=20.1km s-min=11.0km az=128.0*
*NEIC **07** 14:17:23.6±0.9,1623S×175.17W,h281^{km}±8^{km},mb4.4/24,Error ellipse: s-maj=12.7km s-min=6.1km az=138.0*
ISC 07 14:17:23.1±0.9,**1623S**±008×**17519W**±007,**h273**^{km}±7^{km},**h287**^{km}±5.2^{km}**:pP-P**,**n265**,σ**0^{s}54**/193,**mb4.4**/36,**60C-45D**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.02**	**55**	P	**Pn**	**14 18 29.1**	**+0.9**
	55nm,0.3s,baz=140,slow=0.9,SNR=77						
AFI				S	**S**	**14 19 18.2**	**-1.9**
	103nm,0.3s,baz=52,slow=23,SNR=12						
AFI	**Afiamalu**	**4.02**	**55**	*e*Pn	**Pn**	**14 18 28.9**	**+0.7**
AFI				*e*S	**S**	**14 19 19.5**	**-0.7**
URZ	**Urewera**	**22.97**	**196**	P	**P**	**14 22 04.3**	**+0.4**
	15nm,0.4s,mb4.7,baz=337,slow=10,SNR=15						
STKA	**Stephens Creek**	**42.13**	**240**	*e*P	**P**	**14 24 49.3**	**+0.4**
	3.9nm,0.8s,mb3.7						
STKA	**Stephens Creek**	**42.13**	**240**	P	**P**	**14 24 49.3**	**+0.4**
	4.4nm,0.7s,mb3.8,baz=75,slow=9.5,SNR=11						
WB2	**Warramunga Arr**	**47.97**	**258**	*e*P	**P**	**14 25 34.7**	**+0.1**
WRAB	**Tennant Creek**	**47.97**	**258**	*e*P	**P**	**14 25 34.6**	**0.0**
	3.0nm,0.5s,mb3.9						
AS31	**Alice Springs**	**48.22**	**253**	⇑*i*P	**P**	**14 25 36.6**	**+0.1**
ASAR	**Alice Springs**	**48.22**	**253**	P	**P**	**14 25 36.8**	**+0.2**
	9.7nm,0.5s,mb4.4,baz=88,slow=7.9,SNR=289						
ASAR				pP	pP	14 26 39.1	+4.9
	5.7nm,0.7s,baz=87,slow=8.3,SNR=3.0						
ASAR				S	**S**	**14 32 12.9**	**-1.6**
	0.5nm,0.8s,baz=75,slow=16,SNR=3.0						
ASPA	**Alice Springs**	**48.22**	**253**	⇑*i*P	**P**	**14 25 36.6**	**+0.1**
KAKA	**Kakadu**	**50.73**	**267**	*e*P	**P**	**14 25 56.2**	**+0.9**
	7.7nm,0.5s,mb4.3						
SBA	**Scott Base**	**62.29**	**184**	*e*P	**P**	**14 27 16.8**	**+0.4**
	5.0nm,0.8s,mb4.2						
VNDA	**Vanda**	**62.38**	**185**	P	**P**	**14 27 16.5**	**-0.6**
	3.7nm,0.9s,mb4.0,baz=15,slow=5.2,SNR=17						
VNDA	**Vanda**	**62.38**	**185**	*e*P	**P**	**14 27 16.5**	**-0.5**
	4.4nm,1.0s,mb4.0						
MJAR	**Matsushiro Arr**	**68.48**	**321**	P	**P**	**14 27 56.4**	**+0.5**
	0.8nm,0.5s,mb3.8,baz=94,slow=1.1,SNR=4.0						
FARB	**Farallon Islan**	**72.66**	**41**	⇓P	**P**	**14 28 21.4**	**+0.3**
	baz=73						
BSC	**Santa Cruz Isl**	**72.73**	**46**	⇑P	**P**	**14 28 21.3**	**-0.2**
	baz=73						
V03C	**Hunter Liggett**	**72.81**	**43**	⇑P	**P**	**14 28 22.2**	**+0.3**
	baz=73						
V04C	**Ramage Ranch,**	**72.82**	**44**	⇓P	**P**	**14 28 22.4**	**+0.3**
	baz=73						
SCI	**San Clemente I**	**72.93**	**47**	⇓P	**P**	**14 28 22.4**	**-0.2**
	baz=73						
JRSC	**Jasper Ridge**	**72.97**	**42**	⇑P	**P**	**14 28 22.9**	**0.0**
	baz=73						
SAO	**San Andreas Ge**	**73.10**	**43**	*e*P	**P**	**14 28 23.9**	**+0.2**
	4.8nm,0.8s,mb4.2						
PKM	**Peak Mountain**	**73.11**	**45**	⇑P	**P**	**14 28 24.5**	**+0.7**
	baz=73						
PKD	**Parkfield**	**73.22**	**44**	⇑P	**P**	**14 28 24.2**	**-0.2**
	baz=73						
CIS	**Catalina Islan**	**73.27**	**47**	⇑P	**P**	**14 28 24.8**	**+0.2**
	baz=73						
U04C	**Hernandez Rese**	**73.30**	**43**	⇓P	**P**	**14 28 25.5**	**+0.6**
	baz=74,SNR=6.0						
PACP	**Pacheco Peak**	**73.35**	**42**	⇑P	**P**	**14 28 25.9**	**+0.8**
	baz=74						
P01C	**Double 8 Ranch**	**73.53**	**39**	⇑P	**P**	**14 28 26.5**	**+0.3**
	baz=74						
S04C	**Ingram Canyon,**	**73.61**	**42**	P	**P**	**14 28 27.0**	**+0.4**
	baz=74,SNR=5.9						
O01C	**Eel River Cons**	**73.66**	**39**	⇑P	**P**	**14 28 27.4**	**+0.5**
	baz=74						
T05C	**Eagle Field, D**	**73.68**	**43**	⇑P	**P**	**14 28 27.5**	**+0.5**
	baz=74						
QSPA	**South Pole Qui**	**73.81**	**180**	*e*P	**P**	**14 28 27.0**	**-0.8**
	8.6nm,0.7s,mb4.5						
ARVC	**Arvin**	**73.91**	**45**	⇓P	**P**	**14 28 28.3**	**-0.1**
	baz=74						
GASB	**Alder Springs**	**74.02**	**40**	⇑P	**P**	**14 28 28.7**	**-0.3**
	baz=74						
VES	**Vestal, Richgr**	**74.14**	**45**	⇑P	**P**	**14 28 29.1**	**-0.6**
	baz=74						
MURC	**Murrieta**	**74.22**	**47**	⇓P	**P**	**14 28 29.7**	**-0.4**
	baz=74						
BFSC	**Mount Baldy St**	**74.23**	**47**	⇑P	**P**	**14 28 30.3**	**+0.1**
	baz=74						
O02C	**Red Bluff**	**74.30**	**39**	P	**P**	**14 28 31.4**	**+0.8**
	baz=74,SNR=5.7						
EDW2	**Edwards Air Fo**	**74.35**	**46**	P	**P**	**14 28 31.0**	**+0.1**
	baz=74,SNR=12						
T06C	**Millerton Lake**	**74.38**	**43**	⇓P	**P**	**14 28 31.0**	**0.0**
	baz=74						
MONP	**Monument Peak**	**74.40**	**48**	⇑P	**P**	**14 28 31.1**	**-0.1**
	baz=74						
ISA	**Isabella**	**74.45**	**45**	P	**P**	**14 28 31.7**	**+0.2**
	baz=75,SNR=6.6						
DVTC	**Desert V Tower**	**74.51**	**49**	⇓P	**P**	**14 28 31.7**	**-0.1**
	baz=75						
CMB	**Columbia Colle**	**74.53**	**42**	⇑P	**P**	**14 28 31.6**	**-0.4**
	baz=75						
HELL	**Mitchell Peak,**	**74.65**	**44**	P	**P**	**14 28 32.2**	**-0.4**
	baz=75,SNR=6.0						
WDC	**Whiskeytown Da**	**74.70**	**39**	⇓P	**P**	**14 28 32.7**	**-0.1**
	baz=75						
ORV	**Oroville**	**74.72**	**40**	⇓P	**P**	**14 28 32.8**	**-0.2**
	baz=75						
LAVA	**Lava Cap Winer**	**74.72**	**41**	⇑P	**P**	**14 28 32.5**	**-0.5**
	baz=75						
PFO	**Pinyon Flat Ob**	**74.75**	**48**	⇑P	**P**	**14 28 32.9**	**-0.3**
	baz=75						
S06C	**San Francisco**	**74.78**	**42**	⇑P	**P**	**14 28 32.9**	**-0.5**
	baz=75						
KCC	**Kaiser Creek**	**74.81**	**43**	⇑P	**P**	**14 28 33.3**	**-0.2**
	baz=75						
SWSC	**Sam W. Stewart**	**74.87**	**49**	⇑P	**P**	**14 28 34.2**	**+0.3**
	baz=75						
LRMC	**Laurel Mountai**	**74.88**	**45**	⇓P	**P**	**14 28 33.9**	**-0.1**
	baz=75						
M02C	**Callahan**	**75.01**	**38**	⇓P	**P**	**14 28 34.7**	**0.0**
	baz=75						
R05C	**Kirkwood Meado**	**75.11**	**42**	P	**P**	**14 28 35.2**	**0.0**
	baz=75,SNR=7.1						
P05C	**Yuba Gap, Truc**	**75.12**	**41**	⇓P	**P**	**14 28 35.0**	**-0.3**
	baz=75						
CWC	**Cottonwood Cre**	**75.14**	**44**	⇑P	**P**	**14 28 35.5**	**+0.1**
	baz=75						
BELC	**Belle Mtn.**	**75.28**	**48**	P	**P**	**14 28 36.1**	**-0.1**
	baz=75,SNR=7.8						
YBH	**Yreka Blue Hor**	**75.30**	**38**	*e*P	**P**	**14 28 36.8**	**+0.4**
	10nm,1.0s,mb4.4						
YBH	**Yreka Blue Hor**	**75.30**	**38**	⇑P	**P**	**14 28 36.2**	**-0.1**
	baz=76						
O05C	**Quincy**	**75.32**	**40**	⇑P	**P**	**14 28 36.6**	**+0.1**
	baz=76						
MTUM	**Tungsten Hills**	**75.33**	**43**	*e*P	**P**	**14 28 36.7**	**+0.2**
MPMC	**Manual Prospec**	**75.33**	**45**	P	**P**	**14 28 36.8**	**+0.3**
	baz=76,SNR=14						
TIN	**Tinemaha**	**75.38**	**44**	⇑P	**P**	**14 28 37.0**	**+0.2**
	baz=76						
GSC	**Goldstone**	**75.40**	**46**	P	**P**	**14 28 36.8**	**-0.1**
	baz=76,SNR=5.8						
R06C	**Coleville**	**75.41**	**42**	⇓P	**P**	**14 28 37.5**	**+0.6**
	baz=76						
R07C	**Lee Vining**	**75.42**	**43**	P	**P**	**14 28 37.7**	**+0.7**
	baz=76,SNR=6.2						
O04C	**Chester**	**75.43**	**40**	⇑P	**P**	**14 28 37.2**	**+0.1**
	baz=76						
HEC	**Hector,Ludlow**	**75.48**	**47**	⇓P	**P**	**14 28 37.4**	**0.0**
	baz=76						
HATC	**Hat Creek Radi**	**75.49**	**39**	⇑P	**P**	**14 28 37.6**	**+0.1**
	baz=76						
BEKR	**Beckwourth**	**75.61**	**41**	P	**P**	**14 28 38.1**	**0.0**
	baz=76,SNR=5.9						
GLA	**Glamis**	**75.63**	**49**	⇓P	**P**	**14 28 38.2**	**0.0**
	baz=76,SNR=5.7						
WCN	**Washoe City**	**75.66**	**41**	⇓P	**P**	**14 28 38.2**	**-0.2**
	baz=76						
M04C	**Macdoel**	**75.85**	**38**	⇓P	**P**	**14 28 39.6**	**+0.2**
	baz=76						
GRAC	**Grapevine Rang**	**75.93**	**44**	⇓P	**P**	**14 28 39.6**	**-0.2**
	baz=76						
IRM	**Iron Mountain**	**75.96**	**48**	P	**P**	**14 28 40.2**	**+0.1**
	baz=76,SNR=7.9						
FURC	**Furnace Creek,**	**75.98**	**45**	⇓P	**P**	**14 28 40.6**	**+0.4**
	baz=76						
M05C	**Lookout**	**76.01**	**39**	⇓P	**P**	**14 28 40.6**	**+0.3**
	baz=76						
SHOC	**Shoshone**	**76.08**	**46**	⇑P	**P**	**14 28 40.3**	**-0.4**
	baz=76						
TUQ	**Turquoise Mtn.**	**76.08**	**46**	P	**P**	**14 28 40.8**	**+0.1**
	baz=76,SNR=6.6						
NVAR	**Mina Array Bea**	**76.10**	**43**	P	**P**	**14 28 40.8**	**0.0**
	4.9nm,0.7s,mb4.2,baz=231,slow=11,SNR=38						
J03A	**Ideyld Park**	**76.17**	**36**	⇓P	**P**	**14 28 41.7**	**+0.5**
	baz=76						
Y12C	**Blythe**	**76.20**	**48**	⇑P	**P**	**14 28 41.9**	**+0.5**
	baz=76						
U10A	**Ash Meadows, A**	**76.32**	**45**	⇓P	**P**	**14 28 42.3**	**+0.2**
	baz=76						
M06C	**Likely Place G**	**76.32**	**39**	⇑P	**P**	**14 28 42.2**	**+0.1**
	baz=76						
S09A	**Goldfield**	**76.42**	**44**	⇓P	**P**	**14 28 42.4**	**-0.3**
	baz=77						
N06A	**Buffalo Meadow**	**76.45**	**40**	P	**P**	**14 28 42.8**	**0.0**
	baz=77,SNR=7.6						
Q08A	**Gabbs**	**76.58**	**42**	⇓P	**P**	**14 28 43.5**	**-0.1**
	baz=77						
L05A	**Lakeview**	**76.61**	**38**	⇓P	**P**	**14 28 44.1**	**+0.5**
	baz=77						
V11A	**Goodsprings**	**76.63**	**46**	⇓P	**P**	**14 28 43.7**	**-0.1**
	baz=77						
O07A	**Toulon**	**76.71**	**41**	P	**P**	**14 28 44.3**	**+0.1**
	baz=77,SNR=8.8						
Y13A	**Salome**	**76.73**	**49**	⇑P	**P**	**14 28 44.4**	**0.0**
	baz=77						
W12A	**Cal Nev Ari**	**76.74**	**47**	⇓P	**P**	**14 28 44.5**	**0.0**
	baz=77						
PDMCI	**Parker Dam,Lak**	**76.75**	**48**	⇓P	**P**	**14 28 44.8**	**+0.3**
	baz=77						
R09A	**Tonopah**	**76.80**	**43**	P	**P**	**14 28 44.7**	**-0.1**
	baz=77,SNR=6.1						
U11A	**Corn Creek**	**76.97**	**46**	⇑P	**P**	**14 28 45.9**	**+0.2**
	baz=77						

V12A	**Nelson**	**76.98**	**47**	⇑P	**P**	**14 28 45.9**	**+0.2**
	baz=77						
SSE	**Sheshan**	**77.10**	**308**	P	**P**	**14 28 47.2**	**+0.8**
SSE				AMB	AMB		
	comp=Z,58nm,4.4s						
X13A	**Yucca**	**77.12**	**48**	P	**P**	**14 28 46.7**	**+0.1**
	baz=77,SNR=8.4						
Z14A	**Wintersburg**	**77.15**	**49**	⇓P	**P**	**14 28 46.8**	**+0.1**
	baz=77						
M07A	**Soldier Meadow**	**77.23**	**40**	P	**P**	**14 28 47.2**	**+0.1**
	baz=77,SNR=5.6						
O08A	**Rochester Mine**	**77.24**	**41**	⇑P	**P**	**14 28 47.4**	**+0.2**
	baz=77						
W13A	**Hualapai Mount**	**77.34**	**47**	P	**P**	**14 28 48.1**	**+0.4**
	baz=78,SNR=5.3						
R10A	**Warm Springs**	**77.34**	**44**	⇓P	**P**	**14 28 48.3**	**+0.5**
	baz=78						
115A	**Sonoran Desert**	**77.36**	**50**	⇑P	**P**	**14 28 47.8**	**0.0**
	baz=78						
Y14A	**Wickenburg**	**77.39**	**49**	P	**P**	**14 28 48.1**	**+0.1**
	baz=78,SNR=6.8						
K06A	**Valley Falls**	**77.40**	**38**	⇓P	**P**	**14 28 48.4**	**+0.3**
	baz=78						
H04A	**Detroit Lake**	**77.42**	**36**	⇓P	**P**	**14 28 48.0**	**-0.2**
	baz=78						
F03A	**Seaside**	**77.45**	**34**	⇑P	**P**	**14 28 48.7**	**+0.3**
	baz=78						
P09A	**Austin**	**77.47**	**42**	⇑P	**P**	**14 28 48.4**	**-0.1**
	baz=78						
L07A	**Adell**	**77.49**	**39**	P	**P**	**14 28 49.0**	**+0.4**
	baz=78,SNR=7.0						
N08A	**GE Springer Mi**	**77.53**	**41**	⇓P	**P**	**14 28 48.9**	**+0.1**
	baz=78						
U12A	**Valley of Fire**	**77.56**	**46**	⇑P	**P**	**14 28 49.4**	**+0.5**
	baz=78						
116A	**Eloy**	**77.68**	**51**	⇑P	**P**	**14 28 49.4**	**-0.2**
	baz=78						
J06A	**Christmas Vall**	**77.73**	**38**	P	**P**	**14 28 49.4**	**-0.5**
	baz=78,SNR=5.6						
X14A	**Yava**	**77.73**	**48**	P	**P**	**14 28 50.4**	**+0.5**
	baz=78,SNR=9.2						
M08A	**Happy Creek Ra**	**77.75**	**40**	⇑P	**P**	**14 28 49.5**	**-0.6**
	baz=78						
O09A	**Fish Creek Ran**	**77.78**	**42**	P	**P**	**14 28 50.2**	**0.0**
	baz=78,SNR=6.9						
E03A	**Lebam**	**77.84**	**34**	⇑P	**P**	**14 28 50.5**	**0.0**
	baz=78						
H05A	**Madras**	**77.94**	**36**	⇑P	**P**	**14 28 51.0**	**0.0**
	baz=78						
N09A	**Rock Creek Ran**	**77.95**	**41**	⇑P	**P**	**14 28 51.3**	**+0.2**
	baz=78						
W14A	**Seligman**	**77.96**	**48**	P	**P**	**14 28 51.8**	**+0.7**
	baz=78,SNR=13						
F04A	**Amboy**	**78.07**	**35**	⇑P	**P**	**14 28 51.9**	**+0.1**
	baz=78						
D03A	**Wishkah Elem.**	**78.10**	**33**	⇓P	**P**	**14 28 51.7**	**-0.2**
	baz=78						
I06A	**Prineville**	**78.10**	**37**	⇑P	**P**	**14 28 51.9**	**-0.1**
	baz=78						
WVOR	**Wild Horse Val**	**78.16**	**39**	*e*P	**P**	**14 28 52.1**	**-0.1**
	comp=Z,3.6nm,0.8s,mb4.2						
L08A	**Fields**	**78.19**	**39**	P	**P**	**14 28 52.5**	**+0.1**
	baz=78,SNR=12						
X15A	**Humboldt**	**78.21**	**49**	⇑P	**P**	**14 28 52.5**	**0.0**
	baz=78,SNR=6.6						
TUC	**Tucson**	**78.25**	**51**	*e*P	**P**	**14 28 53.1**	**+0.4**
	comp=Z,4.8nm,0.8s,mb4.3						
G05A	**Wamic**	**78.25**	**36**	⇑P	**P**	**14 28 52.7**	**0.0**
	baz=78						
J07A	**Hines**	**78.30**	**38**	⇓P	**P**	**14 28 52.9**	**-0.1**
	baz=78						
M09A	**Marrel Ranch,**	**78.31**	**40**	⇓P	**P**	**14 28 52.8**	**-0.3**
	baz=78						
K08A	**Mann Creek Ran**	**78.42**	**39**	P	**P**	**14 28 53.8**	**+0.1**
	baz=79,SNR=13						
L09A	**Wilkinson Ranc**	**78.51**	**40**	⇑P	**P**	**14 28 54.1**	**-0.1**
	baz=79						
W15A	**Williams**	**78.53**	**48**	⇑P	**P**	**14 28 54.4**	**+0.1**
	baz=79						
F05A	**White Salmon**	**78.57**	**35**	⇑P	**P**	**14 28 54.1**	**-0.4**
	baz=79						
I07A	**Izee**	**78.60**	**37**	P	**P**	**14 28 54.7**	**+0.1**
	baz=79,SNR=5.6						
MDJ	**Mudanjiang**	**78.64**	**323**	P	**P**	**14 28 55.9**	**+1.0**
MDJ				AP	pP	14 29 59.1	+0.3
MDJ				XP	sP	14 30 27.9	+0.2
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,39nm,4.8s						
Q12A	**Willow Creek R**	**78.71**	**44**	⇓P	**P**	**14 28 55.3**	**0.0**
	baz=79						
O11A	**Cowboy Ranch,**	**78.75**	**42**	P	**P**	**14 28 55.9**	**+0.4**
	baz=79,SNR=5.4						
E05A	**Randle**	**78.82**	**34**	⇓P	**P**	**14 28 55.6**	**-0.2**
	baz=79						
P12A	**McGill**	**78.89**	**43**	⇑P	**P**	**14 28 55.6**	**-0.6**
	baz=79						
C04A	**Brinnon**	**78.90**	**33**	⇑P	**P**	**14 28 56.2**	**0.0**
	baz=79						
M10A	**I.L. Ranch, Tu**	**78.94**	**41**	P	**P**	**14 28 56.9**	**+0.4**
	baz=79,SNR=5.3						
I08A	**Drewsey**	**79.05**	**38**	⇓P	**P**	**14 28 57.5**	**+0.4**
	baz=79						
NJ2	**Nanjing**	**79.30**	**308**	*e*P	**P**	**14 28 57.7**	**-0.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
H08A	**Prairie City**	**79.34**	**37**	⇓P	**P**	**14 28 57.7**	**-0.9**
	baz=80						
M11A	**Holland Ranch,**	**79.36**	**41**	⇑P	**P**	**14 28 58.9**	**+0.2**
	baz=80						
N12A	**Clover Valley,**	**79.53**	**42**	⇓P	**P**	**14 29 00.0**	**+0.3**
	baz=80						
C05A	**Tolt Reservoir**	**79.56**	**34**	⇓P	**P**	**14 28 59.4**	**-0.4**
	baz=80						
I09A	**Lost Marbles R**	**79.57**	**38**	⇑P	**P**	**14 28 59.1**	**-0.8**
	baz=80						
B05A	**Bryant**	**79.70**	**33**	⇓P	**P**	**14 29 00.5**	**-0.1**
	baz=80						
M12A	**Wells**	**79.91**	**42**	⇑P	**P**	**14 29 01.4**	**-0.3**
	baz=80						
F08A	**Pendleton**	**80.02**	**36**	⇑P	**P**	**14 29 02.3**	**+0.1**
	baz=80						
MSU	**Marysvale**	**80.23**	**45**	*e*P	**P**	**14 29 04.1**	**+0.7**
BMO	**Blue Mountains**	**80.33**	**38**	*e*P	**P**	**14 29 03.3**	**-0.7**
	comp=Z,6.4nm,1.2s,mb4.2						
CN2	**Changchun**	**80.63**	**321**	*e*P	**P**	**14 29 06.0**	**+0.5**
LAZ	**Ladron**	**81.91**	**51**	*e*P	**P**	**14 29 12.8**	**+0.6**
TCUT	**Toone Canyon**	**82.03**	**43**	*e*P	**P**	**14 29 13.0**	**+0.2**
MNTX	**Cornudas Mount**	**82.10**	**54**	*e*P	**P**	**14 29 13.1**	**-0.2**
	comp=Z,1.8nm,0.5s,mb4.1						
MCK	**McKinley**	**82.27**	**11**	*e*P	**P**	**14 29 12.8**	**-1.2**
	comp=Z,2.4nm,0.7s,mb4.0						
ANMO	**Albuquerque**	**82.65**	**51**	*e*P	**P**	**14 29 16.0**	**-0.1**
	comp=Z,12nm,1.3s,mb4.6						
MCMT	**McKenzie Canyo**	**82.98**	**39**	*e*P	**P**	**14 29 17.7**	**-0.1**
RRI2	**Red Ridge**	**83.19**	**41**	*e*P	**P**	**14 29 18.7**	**0.0**
	comp=Z,38nm,1.4s,mb5.0						
DLMT	**Dillon**	**83.41**	**39**	*e*P	**P**	**14 29 19.7**	**-0.2**
	comp=Z,4.6nm,0.7s,mb4.4						
TPAW	**Teton Pass**	**83.49**	**41**	*e*P	**P**	**14 29 20.3**	**-0.1**
	comp=Z,6.4nm,0.7s,mb4.6						
COLA	**College**	**83.50**	**11**	*e*P	**P**	**14 29 19.1**	**-1.3**
	comp=Z,6.5nm,0.8s,mb4.5						
IMW	**Indian Meadow**	**83.70**	**41**	*e*P	**P**	**14 29 24.1**	**+2.7**
	comp=Z,8.4nm,0.8s,mb4.6						
CHMT	**Chamberlain Mo**	**83.82**	**37**	*e*P	**P**	**14 29 21.1**	**-1.0**
QLMT	**Earthquake Lak**	**83.85**	**40**	*e*P	**P**	**14 29 22.5**	**+0.3**
FLWY	**Flagg Ranch**	**83.94**	**41**	*e*P	**P**	**14 29 22.5**	**-0.1**
	comp=Z,17nm,1.3s,mb4.7						
BW06	**Boulder Array**	**84.03**	**42**	*e*P	**P**	**14 29 22.2**	**-0.8**
	comp=Z,5.8nm,0.9s,mb4.4						
PDAR	**Pinedale Array**	**84.03**	**42**	P	**P**	**14 29 22.4**	**-0.7**
	comp=Z,4.8nm,0.8s,mb4.4,baz=210,slow=3.2,SNR=31						
PMSA	**Palmer Station**	**84.11**	**156**	*e*P	**P**	**14 29 31.6**	**+8.1**
	comp=Z,35nm,0.5s,mb5.4						
PMSA				*e*		14 29 35.8	
SMCO	**Snowmass**	**84.13**	**47**	*e*P	**P**	**14 29 23.3**	**-0.2**
	comp=Z,5.9nm,0.8s,mb4.5						
BOZ	**Bozeman (W)**	**84.14**	**39**	*e*P	**P**	**14 29 23.1**	**-0.5**
	comp=Z,5.4nm,1.1s,mb4.3						
HRY	**Holter Researc**	**84.56**	**38**	*e*P	**P**	**14 29 25.1**	**-0.5**
DAWY	**Dawson**	**84.66**	**15**	*e*P	**P**	**14 29 25.6**	**-0.6**
MAW	**Mawson**	**86.45**	**199**	P	**P**	**14 29 33.9**	**-1.1**
	comp=Z,4.6nm,0.6s,mb4.5,baz=130,slow=7.1,SNR=16						
MAW	**Mawson**	**86.45**	**199**	*e*P	**P**	**14 29 33.8**	**-1.2**
	comp=Z,4.7nm,0.6s,mb4.5						
EDM	**Edmonton**	**87.10**	**32**	*e*P	**P**	**14 29 37.0**	**-1.1**
HHC	**Hu-ho-hao-te**	**88.34**	**313**	*e*P	**P**	**14 29 43.8**	**-0.1**
HHC				AP	pP	14 30 52.5	+3.1
HHC				XP	sP	14 31 21.9	+3.9
HHC				PP	PP	14 33 18.4	+2.8
HHC				SKS		14 39 43.1	
HHC				S	S	14 40 02.3	-2.9
HHC				XS	sS	14 42 03.0	+2.5
HHC				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
HHC				AMB	AMB		
	comp=Z,59nm,4.5s						
KMI	**Kunming**	**89.84**	**296**	P	**P**	**14 29 52.2**	**+1.3**
KMI				AMB	AMB		
	comp=Z,5.0nm,0.5s,mb4.6						
CD2	**Chengdu**	**90.78**	**302**	*e*P	**P**	**14 29 52.9**	**-2.4**
SYO	**Syowa Base**	**91.44**	**192**	⇑*e*P	**P**	**14 29 55.8**	**-2.6**
YKA	**Yellowknife Ar**	**91.55**	**24**	P	**P**	**14 29 56.5**	**-2.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=236,slow=4.5,SNR=4.7						
YKA	**Yellowknife Ar**	**91.55**	**24**	P	**P**	**14 29 56.5**	**-2.4**
SNAA	**Sanae**	**92.16**	**178**	*e*P	**P**	**14 30 02.1**	**+0.4**
SNAA				*e*		14 30 06.9	
LZH	**Lanzhou**	**92.34**	**307**	*e*P	**P**	**14 30 02.3**	**-0.2**
LZH				AP	pP	14 31 11.4	+3.2
LZH				XP	sP	14 31 40.8	+4.1
LZH				PP	PP	14 33 50.6	+3.4
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
VNA1	**Neumayer--Stat**	**92.86**	**176**	*e*P	**P**	**14 30 06.5**	**+1.6**
VNA1				*e*		14 30 12.1	
VNA1				*e*		14 30 14.3	
MKAR	**Makanchi Array**	**110.18**	**314**	PKiKP	PKiKP	14 35 21.0	-1.3
	comp=Z,0.3nm,0.2s,baz=90,slow=1.2,SNR=4.8						
ARCES	**ARCESS Array B**	**125.18**	**351**	PKP	PKPdf	14 35 49.6	-1.5
	comp=Z,1.7nm,0.6s,baz=350,slow=0.9,SNR=13						
FINES	**FINESS Array B**	**132.36**	**346**	PKP	PKPdf	14 36 02.5	-2.2
	comp=Z,0.7nm,0.6s,baz=64,slow=4.4,SNR=4.6						
CLZ	**Clausthal**	**144.20**	**354**	*e*PKPbc	PKPdf	14 36 24.6	-1.7
CLL	**Collm**	**144.40**	**351**	*e*PKPbc	PKPdf	14 36 25.0	-1.7
CLL	**Collm**	**144.40**	**351**	*i* PKIKP	PKPdf	14 36 25.1	-1.6
	comp=Z,logA/T=1.1						
CLL	**Collm**	**144.40**	**351**	*i* PKPdf	PKPdf	14 36 25.1	-1.6
	comp=Z,9.0nm,0.8s						
CLL	**Collm**	**144.40**	**351**	*i* P	PKPdf	14 36 25.1	-1.6
CLL				*i*		14 38 44.1	
KOLS	**Kolonicke sedl**	**144.40**	**340**	*e*PKP	PKPdf	14 36 26.1	-0.6
BURAR	**Bucovina Array**	**144.46**	**336**	⇑*i*P	PKPdf	14 36 26.6	-0.2
UPC	**Upice**	**144.64**	**348**	*e*PKP	PKPdf	14 36 26.8	-0.3
BRG	**Berggiesshubel**	**144.67**	**350**	*e*PKPbc	PKPdf	14 36 25.9	-1.2
BRG	**Berggiesshubel**	**144.67**	**350**	*e*PKP	PKPdf	14 36 26.5	-0.6
	comp=Z,8.9nm,1.5s						
CRVS	**Cervenica-Dubn**	**144.69**	**341**	*e*PKP	PKPdf	14 36 26.9	-0.3
DPC	**Dobruska-Polom**	**144.72**	**347**	*e*PKP	PKPdf	14 36 27.2	0.0
FBE	**Freiberg**	**144.72**	**351**	*e*PKPbc	PKPdf	14 36 26.5	-0.7
BUG	**Bochum--Univer**	**144.82**	**357**	*e*PKPbc	PKPdf	14 36 26.5	-0.9
MOX	**Moxa**	**145.24**	**352**	*e*PKPbc	PKPbc	14 36 28.0	-0.4
MOX	**Moxa**	**145.24**	**352**	*e*P	PKPdf	14 36 28.1	0.0
	comp=Z,15nm,1.3s						
TANN	**Tannenbergstha**	**145.35**	**351**	*e*PKPbc	PKPbc	14 36 28.5	-0.3
GUNZ	**Gunzen**	**145.42**	**352**	*e*PKPbc	PKPbc	14 36 28.4	-0.6
PRU	**Pruhonice**	**145.42**	**349**	*e*PKP	PKPdf	14 36 28.8	+0.4
WERN	**Wernitzgruen**	**145.49**	**351**	*e*PKPbc	PKPbc	14 36 28.7	-0.5
NKC	**Novy Kostel**	**145.53**	**351**	*e*PKP	PKPdf	14 36 29.4	+0.8
BR131	**Keskin Array S**	**145.68**	**319**	*e*PKP	PKPdf	14 36 30.0	+1.2
BRTR	**Keskin Array B**	**145.68**	**319**	PKPbc	PKPbc	14 36 30.1	+0.3
	comp=Z,1.9nm,0.6s,baz=142,slow=4.1,SNR=9.5						
MEM	**Membach**	**145.70**	**359**	PKPbc	PKPbc	14 36 29.7	-0.1
SNF	**Seneffe**	**145.81**	**1**	PKPbc	PKPbc	14 36 29.6	-0.6
MANZ	**Manzenberg**	**145.82**	**352**	*e*PKPbc	PKPbc	14 36 30.0	-0.2
VYHS	**Vyhne**	**145.83**	**343**	*e*PKP	PKPdf	14 36 30.5	+1.4
VYHS	**Vyhne**	**145.83**	**343**	*e*PKP	PKPdf	14 36 30.6	+1.5
MLR	**Muntele Rosu**	**145.87**	**333**	⇓*i*P	PKPdf	14 36 31.2	+2.0
TNS	**Taunus Mts**	**145.97**	**356**	*e*PKPbc	PKPbc	14 36 30.1	-0.5
ROTZ	**Rotzenmuhle**	**146.02**	**351**	*e*PKPbc	PKPbc	14 36 30.8	0.0
DRGR		**146.09**	**338**	⇑*i*P	PKPdf	14 36 30.3	+0.7
GIVF	**Givet**	**146.22**	**360**	*e*PKP1	PKPbc	14 36 30.8	-0.5
DOU	**Dourbes**	**146.22**	**0**	PKPbc	PKPbc	14 36 31.3	-0.1
GRA1	**Grafenberg Arr**	**146.22**	**353**	*e*PKPbc	PKPbc	14 36 31.8	+0.4
GRF	**Grafenberg Arr**	**146.22**	**353**	*e*PKPbc	PKPbc	14 36 31.8	+0.4
BAIF	**Baives**	**146.26**	**1**	*e*PKP1	PKPbc	14 36 31.1	-0.4
	comp=Z,14nm,0.7s						
KHC	**Kasperske Hory**	**146.42**	**350**	*e*PKP	PKPdf	14 36 31.8	+1.7
WET	**Wettzell**	**146.52**	**350**	*e*PKPbc	PKPbc	14 36 32.4	+0.2
WLF	**Walferdange**	**146.64**	**358**	*e*PKPbc	PKPbc	14 36 32.6	+0.1
WLF	**Walferdange**	**146.64**	**358**	PKPbc	PKPbc	14 36 32.8	+0.3
GEC2	**GERESS Array S**	**146.67**	**349**	*e*PKPbc	PKPbc	14 36 32.4	-0.2
GERES	**GERESS Array B**	**146.67**	**349**	PKPbc	PKPbc	14 36 32.1	-0.6
	comp=Z,1.6nm,0.6s,baz=29,slow=3.0,SNR=11						
FLN	**La Foliniere**	**147.27**	**6**	*e*PKP1	PKPbc	14 36 33.3	-1.0
	comp=Z,27nm,0.8s						
ROSF	**Rostrenen**	**147.30**	**10**	*e*PKP1	PKPbc	14 36 33.1	-1.3
	comp=Z,22nm,0.8s						
LDF	**La Druitiere**	**147.47**	**6**	*e*PKP1	PKPbc	14 36 33.9	-0.9
	comp=Z,10nm,0.6s						
SGMF	**Saint Gilles**	**147.50**	**9**	*e*PKP1	PKPbc	14 36 33.9	-1.0
	comp=Z,22nm,0.7s						
GRR	**Gorron**	**147.60**	**7**	*e*PKP1	PKPbc	14 36 34.4	-0.8
	comp=Z,25nm,0.7s						
QUIF	**Quistinic**	**147.73**	**10**	*e*PKP1	PKPbc	14 36 34.4	-1.1
	comp=Z,18nm,0.9s						
CDF	**Champ du Feu**	**147.84**	**357**	*e*PKP1	PKPbc	14 36 35.4	-0.4
	comp=Z,19nm,0.9s						
BFO	**Black Forest**	**147.86**	**356**	*e*PKPbc	PKPbc	14 36 34.8	-1.1
HINF	**Hinteralfeld**	**148.46**	**357**	*e*PKP1	PKPbc	14 36 36.6	-0.8
	comp=Z,6.0nm,0.6s						
LOR	**Lormes**	**149.04**	**1**	*e*PKP1	PKPbc	14 36 38.4	-0.5
	comp=Z,25nm,1.1s						
SSF	**Saint Saulge**	**149.24**	**2**	*e*PKP1	PKPbc	14 36 39.1	-0.2
	comp=Z,44nm,1.1s						
MFF	**Saint Martin d**	**149.44**	**7**	*e*PKP1	PKPbc	14 36 40.1	+0.3
	comp=Z,11nm,0.6s						
AVF	**Avril sur Loir**	**149.51**	**2**	*e*PKP1	PKPbc	14 36 39.3	-0.7
	comp=Z,19nm,1.0s						
SMF	**Signal de Mont**	**149.67**	**1**	*e*PKP1	PKPbc	14 36 39.6	-0.8
	comp=Z,11nm,0.8s						
CABF	**La Chapelle**	**149.69**	**358**	*e*PKP1	PKPbc	14 36 40.7	+0.3
	comp=Z,44nm,0.9s						
BGF	**Bois d'Agland**	**149.72**	**3**	*e*PKP1	PKPbc	14 36 40.1	-0.4
	comp=Z,23nm,0.7s						
TCF	**Toulx Ste Croi**	**149.96**	**4**	*e*PKP1	PKPbc	14 36 40.4	-0.7
	comp=Z,27nm,1.0s						
LPL	**La Plagne**	**150.76**	**357**	*e*PKP1	PKPbc	14 36 43.5	+0.5
	comp=Z,12nm,0.8s						
LPG	**La Plagne**	**150.78**	**357**	*e*PKP1	PKPbc	14 36 43.6	+0.6
	comp=Z,13nm,0.9s						
RJF	**Les Rejaudoux**	**150.89**	**5**	*e*PKP1	PKPbc	14 36 42.6	-0.7
	comp=Z,9.1nm,0.7s						
LFF	**La Frestale**	**151.18**	**6**	*e*PKP1	PKPbc	14 36 44.2	+0.3
CAF	**Calviac**	**151.30**	**4**	*e*PKP1	PKPbc	14 36 43.8	-0.4
ORIF	**Oris-en-Rattie**	**151.39**	**358**	*e*PKP1	PKPbc	14 36 44.4	0.0
	comp=Z,14nm,0.9s						
VIVF	**Saint-Julien-l**	**151.47**	**0**	*e*PKP1	PKPbc	14 36 44.5	-0.1
	comp=Z,13nm,0.8s						
MBDF	**Montbardon**	**151.55**	**357**	*e*PKP1	PKPbc	14 36 44.8	0.0
	comp=Z,9.8nm,0.6s						
LASF	**Ste Croix**	**152.23**	**1**	*e*PKP1	PKPbc	14 36 46.3	0.0
	comp=Z,16nm,0.8s						
ETSF	**Etsaut**	**153.03**	**9**	*e*PKP1	PKPbc	14 36 47.8	-0.3
ESDC	**Sonseca Array**	**155.42**	**16**	PKPab	PKPab	14 37 10.6	-0.2
	comp=Z,0.4nm,0.4s,baz=333,slow=3.7,SNR=5.7						
TORD	**Torodi Ar. Bea**	**175.70**	**135**	PKP	PKPdf	14 36 58.7	-1.5
	comp=Z,1.3nm,0.9s,baz=238,slow=1.3,SNR=5.5						
TORD				PKPab	PKPab	14 38 38.9	-1.2
	comp=Z,2.0nm,0.9s,baz=241,slow=5.0,SNR=8.1						

NEIC 07 14:18:49.8, 5409N×16489W, h34km, ML3.6(AEIC)**, After AEIC., Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	**Akutan**	**0.52**	**276**	P	Pb	14 18 59.9	-0.9
AKUT				S	Sb	14 19 08.6	+0.2
AKLV	**Akutan Long Va**	**0.63**	**277**	P	Pn	14 19 01.4	-1.0
AKLV				S	Sb	14 19 10.4	-0.8
OKCD	**Okmok Cone D**	**2.02**	**252**	P	Pn	14 19 21.0	-0.5
OKCE	**Okmok Cone E**	**2.06**	**253**	P	Pn	14 19 21.9	0.0
NIKO	**Nikolski**	**2.62**	**246**	P	Pn	14 19 28.8	-0.9
SDPT	**Sand Point**	**2.85**	**62**	P	Pn	14 19 32.3	-0.6

DHMR ***07*** *15:00:31.8±1.4, 1166N×4299E, h6km±12km, ML4.1*
ISCJB ***07*** *15:00:33.8±1.5, 115N±0.1×43.16E±0.09, h10km, Error ellipse: s-maj=19.1km s-min=6.2km az=103.5*
ISC 07 15:00:33.9±1.6**, 114N**±01×**4325E**±010**, h10km, n9, σ1§23**/18**, 1C-2D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.99**	**25**	⇓*i*P	**Pn**	**15 01 06.0**	**-1.6**
TRBA				*i* S	**Sn**	**15 01 33.4**	**+0.8**
TRBA				AML	AML	15 01 41.6	
	comp=N,3μm,0.5s						
TRBA	**At Turbah**	**1.99**	**25**	⇓*i*P	**Pn**	**15 01 06.0**	**-1.6**
TRBA				*i* S	**Sn**	**15 01 33.4**	**+0.8**
UDYN	**Al 'Udayn**	**2.63**	**15**	⇑*i*P	**Pn**	**15 01 14.3**	**-2.0**
UDYN				*i* S	**Sn**	**15 01 48.7**	**+0.4**
DHBB	**Dhamar BB**	**3.33**	**19**	*i* P	**Pn**	**15 01 26.2**	**+0.2**
DHBB				*i* S	**Sn**	**15 02 07.2**	**+1.7**
BDHA	**Al Bayda'**	**3.40**	**41**	*i* P	**Pn**	**15 01 28.5**	**+1.5**
BDHA				*i* S	**Sn**	**15 02 12.0**	**+4.6**
BDHA				AML	AML	15 02 30.4	
	comp=N,1μm,0.4s						
BDHA	**Al Bayda'**	**3.40**	**41**	*i* P	**Pn**	**15 01 28.5**	**+1.5**
BDHA				*i* S	**Sn**	**15 02 12.0**	**+4.6**
DESE	**Dese**	**3.56**	**266**	*e*PN	**Pn**	**15 01 29.5**	**+0.4**
DESE				*e*S	**Sn**	**15 02 11.8**	**+0.7**
HAJJ	**Hajjah**	**4.27**	**5**	*i* P	**Pn**	**15 01 37.0**	**-1.9**
HAJJ				*i* S	**Sn**	**15 02 28.0**	**-0.7**
HAJJ				AML	AML	15 02 49.9	
	comp=E,485nm,0.5s						
HAJJ	**Hajjah**	**4.27**	**5**	*i* P	**Pn**	**15 01 37.0**	**-1.9**
HAJJ				*i* S	**Sn**	**15 02 28.0**	**-0.8**

ISCJB ***07*** *15:36:50.8±4.7, 661N±0.09×93.11E±0.09, h8km±31km, mb3.9/10, Error ellipse: s-maj=17.3km s-min=11.0km az=88.3*
IDC ***07*** *15:36:53.7±1.5, 694N×9360E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/22, mbtmp3.8/8, ML3.9/1, Error ellipse: s-maj=74.4km s-min=19.1km az=56.0*
BJI ***07*** *15:36:54.0, 660N×93.10E, h30km, mb4.2*
NEIC ***07*** *15:36:56.1±0.6, 661N×93.14E, h30km, mb4.2/3, Error ellipse: s-maj=14.5km s-min=9.0km az=219.0*
ISC 07 15:36:55.4±3.3**, 663N**±008×**9312E**±008**, h23km**±25km**, n21, σ1§01**/20**, mb3.9**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.92**	**123**	Pn	**Pn**	**15 38 35.5**	**+0.2**
	2.3nm,0.3s,baz=316,slow=7.9,SNR=8.5						
KULM	**Kulim**	**7.61**	**100**	Pn	**Pn**	**15 38 44.1**	**-0.7**
PALK	**Pallekele**	**12.35**	**274**	*e*P	**Pn**	**15 39 49.1**	**-0.6**
CHTO	**Chiang Mai**	**13.38**	**25**	P	**Pn**	**15 40 05.5**	**+1.7**
	4.9nm,0.7s						
QIZ	**Qiongzhong**	**20.41**	**51**	P	**P**	**15 41 29.0**	**-1.8**
	44nm,1.5s						
KMI	**Kunming**	**20.57**	**26**	P	**P**	**15 41 34.3**	**+1.8**
KMI				AMB	AMB		
	comp=Z,7.0nm,1.2s						
XAN	**Xi'an**	**30.95**	**26**	P	**P**	**15 43 08.9**	**-1.7**
XAN				AP	pP	15 43 17.8	+0.3
XAN				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.6						
MKAR	**Makanchi Array**	**41.09**	**349**	P	**P**	**15 44 37.0**	**-0.4**
	comp=Z,0.1nm,0.4s,mb2.8,baz=152,slow=6.5,SNR=3.2						
SONM	**Songino Array**	**42.60**	**13**	P	**P**	**15 44 48.2**	**-1.4**
	comp=Z,0.7nm,0.7s,mb3.5,baz=182,slow=8.0,SNR=4.2						
ZAL	**Zalesovo**	**47.65**	**353**	P	**P**	**15 45 29.6**	**-0.2**
	comp=Z,1.2nm,0.4s,mb4.3,baz=315,slow=2.9,SNR=2.9						
WB2	**Warramunga Arr**	**48.39**	**124**	*e*P	**P**	**15 45 36.2**	**+0.6**
BVAR	**Borovoye Array**	**49.85**	**342**	P	**P**	**15 45 47.6**	**+0.9**
	comp=Z,0.5nm,0.6s,mb3.7,baz=130,slow=4.5,SNR=4.0						
BRVK	**Borovoye**	**49.91**	**342**	*e*P	**P**	**15 45 47.7**	**+0.5**
	comp=Z,0.6nm,0.5s,mb3.9						
ASPA	**Alice Springs**	**49.91**	**128**	*e*P	**P**	**15 45 47.3**	**+0.1**
AS31	**Alice Springs**	**49.91**	**128**	*e*P	**P**	**15 45 47.3**	**+0.1**
ASAR	**Alice Springs**	**49.91**	**128**	P	**P**	**15 45 47.7**	**+0.5**
	comp=Z,0.7nm,0.5s,mb4.0,baz=300,slow=7.9,SNR=23						
ASAR				PcP	PcP	15 47 08.7	+1.4
	comp=Z,0.5nm,0.5s,baz=308,slow=3.2,SNR=5.4						
CHKZ	**Chkalovo**	**50.35**	**343**	*e*P	**P**	**15 45 49.8**	**-0.6**
	comp=Z,1.3nm,0.4s,mb4.3						
AKTK	**Aktyubinsk**	**52.56**	**332**	P	**P**	**15 46 07.0**	**0.0**
AKTO	**Aktyubinsk**	**52.56**	**332**	P	**P**	**15 46 07.0**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.8,baz=98,slow=7.1,SNR=2.4						
FINES	**FINESS Array B**	**73.34**	**332**	P	**P**	**15 48 28.4**	**+3.2**
	comp=Z,1.1nm,0.7s,mb3.9,baz=114,slow=8.5,SNR=4.6						
PDAR	**Pinedale Array**	**126.69**	**21**	PKP	PKPdf	15 55 59.4	+2.5
	comp=Z,0.2nm,0.5s,baz=306,slow=3.2,SNR=2.2						

NIED ***07*** *15:47:00, 4570N×15190E, h32km, Mw3.9 Best double couple: M₀6.69000×10¹⁴ NP1:φs228.00000°, δ58.00000°, λ122.00000°. NP2:φs358.00000°, δ44.00000°, λ50.00000°.*
ISCJB ***07*** *15:47:27.6±0.6, 45.19N±0.09×151.85E±0.09, h33km, mb3.9/14, Error ellipse: s-maj=14.2km s-min=5.1km az=115.4*
JMA ***07*** *15:47:27.8±0.8, 4566N×15187E, h30km, M4.1*
MOS ***07*** *15:47:28.5±1.2, 4555N×15190E, h34km, mb4.3/1, Error ellipse: s-maj=13.5km s-min=12.7km az=69.3*
BJI ***07*** *15:47:33.7, 4544N×15149E, h66km, mB4.5, mb4.2*
NEIC ***07*** *15:47:35.4±1.7, 4547N×15163E, h75km±15km, mb3.9/2, Error ellipse: s-maj=13.6km s-min=12.5km az=180.0*
IDC ***07*** *15:47:35.1±4.0, 4539N×15165E, h75km±37km, mb3.6/11, mb1 3.8/13, mb1mx3.7/22, mbtmp3.9/13, ML3.5/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/27, Error ellipse: s-maj=24.4km s-min=21.2km az=177.0*
ISC 07 15:47:29.8±0.6**, 4520N**±008×**15193E**±008**, h35km, n55, σ1§46**/65**, mb3.9**/14**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.87**	**272**	*e*PN	**Pn**	**15 48 10.5**	**-2.5**
KUR				*i* S	**Sn**	**15 48 48.2**	**+1.9**
KUR				smax			
	comp=N,330nm,0.5s						
KUR				smax			
	comp=E,90nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.48**	**257**	*e*PN	**Pn**	**15 48 36.7**	**+1.5**
YUK				*e*S	**Sn**	**15 49 34.0**	**+7.9**
YUK				smax			
	comp=N,210nm,0.5s						
YUK				smax			
	comp=E,190nm,0.5s						
YUK				smax			
	comp=E,2μm,1.0s						
NEM2	**Nemuro 2**	**4.80**	**250**	P	**Pn**	**15 48 39.1**	**-0.5**
NEM2				*e*S	**Sn**	**15 49 32.6**	**-1.4**
JRA	**Rausu**	**5.02**	**258**	P	**Pn**	**15 48 44.1**	**+1.5**
JNK	**Nakash**	**5.41**	**255**	P	**Pn**	**15 48 48.7**	**+0.8**
JAK	**Akkeshi**	**5.65**	**250**	P	**Pn**	**15 48 50.9**	**-0.3**
JAK				*e*S	**Sn**	**15 49 51.9**	**-3.0**
JTKR	**Abashiri--Toko**	**5.86**	**261**	P	**Pn**	**15 48 55.5**	**+1.5**
JAR	**Ashorobuto**	**6.16**	**255**	P	**Pn**	**15 48 59.5**	**+1.3**
SKR	**Severo-Kuril's**	**6.17**	**26**	*e*PN	**Pn**	**15 48 54.0**	**-4.3**
SKR				pmax	pmax		
	comp=N,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				MLR	MLR		
	comp=E,800nm,14.0s						
SKR				MLR	MLR		
	comp=Z,600nm,14.0s						
JMP	**Maruseppu**	**6.23**	**262**	P	**Pn**	**15 49 01.1**	**+1.9**
JOB	**Onbets**	**6.27**	**251**	P	**Pn**	**15 49 00.6**	**+0.9**
YSS	**Yuzh-Sakhalins**	**6.62**	**289**	PN	**Pn**	**15 49 06.0**	**+1.5**
YSS	**Yuzh-Sakhalins**	**6.62**	**289**	*e*Pn	**Pn**	**15 49 05.1**	**+0.7**
JKK2	**Kamakawa 2**	**6.69**	**262**	P	**Pn**	**15 49 07.5**	**+2.0**
JCH	**Churui**	**6.70**	**250**	P	**Pn**	**15 49 06.5**	**+0.8**
ASAJ	**Asahikawa**	**6.74**	**264**	P	**Pn**	**15 49 08.2**	**+2.1**
	comp=Z,1.4nm,0.3s,baz=61,slow=14,SNR=7.6						
ASAJ				LR	LR	15 52 01.6	
	comp=Z,88nm,18.2s,baz=58,slow=41						
JFR	**Furan**	**7.01**	**256**	P	**Pn**	**15 49 11.6**	**+1.7**
JBT2	**Biratori 2**	**7.31**	**254**	P	**Pn**	**15 49 14.0**	**0.0**
JNB	**Noboribetsu**	**8.33**	**255**	P	**Pn**	**15 49 28.5**	**+0.5**
JNB				*e*S	**Sn**	**15 50 58.7**	**-2.1**
JKB	**Kayabe**	**8.58**	**251**	P	**Pn**	**15 49 31.0**	**-0.4**
JKB				*e*S	**Sn**	**15 51 01.6**	**-5.2**
JYM2	**Yakumo 2**	**8.93**	**254**	P	**Pn**	**15 49 36.3**	**+0.2**
JSH	**Shimam**	**8.95**	**258**	P	**Pn**	**15 49 38.4**	**+1.9**
JANG	**Nango**	**9.04**	**241**	P	**Pn**	**15 49 35.8**	**-2.0**
JANG				*e*S	**Sn**	**15 51 11.5**	**-6.9**
JTH	**Tanohata**	**9.09**	**238**	*e*S	**Sn**	**15 51 13.4**	**-6.2**
JTM	**Tenmabayashi**	**9.10**	**245**	P	**Pn**	**15 49 37.5**	**-1.0**
JTM				*e*S	**Sn**	**15 51 12.6**	**-7.0**

JSR	Shiriuchi	9.15	250	P	Pn	15 49 38.6	-0.6
JOSM	Okushiri--Mats	9.55	255	P	Pn	15 49 44.6	-0.1
OFUJ	Ofunato	9.76	235	P	Pn	15 49 46.2	-1.4
JRG	Rokugo	10.17	239	P	Pn	15 49 51.9	-1.4
JRG				eS	Sn	15 51 38.5	-7.6
JIO	Ouri	10.37	233	P	Pn	15 49 53.8	-2.2
JIO				eS	Sn	15 51 43.1	-7.9
MJAR	Matsushiro Arr	13.50	235	P	Pn	15 50 44.3	+5.7
	comp=Z,0.1nm,0.3s,baz=250,slow=25,SNR=3.3						
MDJ	Mudanjiang	15.83	276	P	Pn	15 51 12.2	+2.3
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,62nm,4.9s						
CN2	Changchun	18.91	275	eP	Pn	15 51 45.1	-3.1
SONM	Songino Array	31.10	291	P	P	15 53 44.7	0.0
	comp=Z,0.6nm,0.7s,mb3.5,baz=69,slow=8.1,SNR=4.3						
GTA	Gaotai	38.41	280	eP	P	15 54 49.7	+1.9
GTA				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.4						
MKAR	Makanchi Array	46.93	298	P	P	15 55 56.0	-0.9
	comp=Z,0.2nm,0.3s,mb3.5,baz=52,slow=6.3,SNR=8.6						
MKAR				PcP	PcP	15 57 29.3	+0.2
	comp=Z,0.6nm,0.7s,baz=57,slow=5.3,SNR=3.9						
MKAR	Makanchi Array	46.93	298	P	P	15 55 56.0	-0.9
MKAR				PcP	PcP	15 57 29.3	+0.2
KURK	Kurchatov	47.55	304	eP	P	15 56 00.1	-1.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KURK	Kurchatov	47.55	304	eP	P	15 56 00.1	-1.5
	comp=Z,0.9nm,0.4s,mb4.2						
YKA	Yellowknife Ar	52.66	36	P	P	15 56 41.4	+0.9
	comp=Z,1.0nm,0.6s,mb3.9,baz=297,slow=6.5,SNR=3.5						
KEV	Kevo	58.53	340	ep	P	15 57 20.8	-1.8
ARCES	ARCESS Array B	59.04	341	P	P	15 57 25.1	-1.1
	comp=Z,2.2nm,0.8s,mb4.2,baz=47,slow=6.9,SNR=18						
AKTK	Aktyubinsk	59.15	312	P	P	15 57 25.9	-1.0
AKTO	Aktyubinsk	59.15	312	P	P	15 57 25.9	-1.0
	comp=Z,0.3nm,0.4s,mb3.7,baz=75,slow=5.4,SNR=3.7						
JOF	Joensuu	62.36	334	ep	P	15 57 47.1	-1.6
NVAR	Mina Array Bea	63.90	61	P	P	15 58 00.8	+1.8
	comp=Z,1.2nm,0.7s,mb4.1,baz=291,slow=5.8,SNR=7.7						
KAF	Kangasniemi	64.50	335	ep	P	15 58 00.9	-2.0
FINES	FINESS Array B	65.09	335	P	P	15 58 05.2	-1.5
	comp=Z,1.6nm,0.4s,mb4.4,baz=45,slow=6.9,SNR=24						
BW06	Boulder Array	66.34	53	eP	P	15 58 16.1	+1.3
	comp=Z,0.7nm,0.5s,mb4.0						
PDAR	Pinedale Array	66.34	53	P	P	15 58 16.0	+1.2
	comp=Z,0.6nm,0.6s,mb3.8,baz=232,slow=1.7,SNR=5.0						
NB2	NORSAR Subarra	69.42	341	P	P	15 58 33.5	-0.7
	comp=Z,0.7nm,0.5s,mb3.9,baz=28,slow=6.5						
NOA	NORSAR Array B	69.42	341	P	P	15 58 33.7	-0.5
	comp=Z,0.9nm,0.6s,mb3.9,baz=29,slow=6.4,SNR=4.2						
NOA	NORSAR Array B	69.42	341	P	P	15 58 33.7	-0.5
ASAR	Alice Springs	70.48	198	P	P	15 58 41.9	+1.2
	comp=Z,0.6nm,0.7s,mb3.6,baz=10,slow=5.4,SNR=6.4						
AKASG	Malin Array Be	72.37	326	P	P	15 58 49.8	-2.3
	comp=Z,1.0nm,0.4s,mb4.1,baz=38,slow=6.1,SNR=5.2						

*MOS **07** 15:54:44.3±2.2, 4887N×15620E, h5^{km}, mb4.5/1, Error ellipse: s-maj=61.9km s-min=14.0km az=74.5*

KRSC 07 15:54:44, 4887N×15620E, h5^{km}, ML4.5, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.82	358	ePN	Pn	15 55 12.2	-3.7
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=N,60nm,0.3s						
SKR				pmax	pmax		
	comp=E,50nm,0.3s						
ALID	Alaid	2.04	348	eP	Pn	15 55 18.5	-0.5
ALID				i S	Sn	15 55 43.4	-1.5
MIPR	Malaya Ipel'ka	3.43	6	eP	Pn	15 55 39.8	+1.7
MIPR				eS	Sn	15 56 20.2	+1.1
RUS	Russkaya	3.86	22	P	Pn	15 55 47.1	+3.1
RUS				S	Sn	15 56 32.5	+2.8
RUS	Russkaya	3.86	22	eP	Pn	15 55 47.1	+3.1
RUS				i S	Sn	15 56 32.5	+2.8
GRL	Gorelyy	3.87	17	eP	Pn	15 55 48.2	+4.0
GRL				i S	Sn	15 56 34.7	+4.6
PET	Petropavlovsk	4.44	20	P	Pn	15 55 55.7	+3.7
PET				S	Sn	15 56 48.7	+4.7
PET	Petropavlovsk	4.44	20	⇓iPN	Pn	15 55 55.7	+3.7
PET				eS	Sn	15 56 50.3	+6.3
PET				pmax	pmax		
	comp=Z,15nm,0.5s						
PET				smax			
	comp=N,83nm,0.7s						
PET				smax			
	comp=E,58nm,0.5s						
PET	Petropavlovsk	4.44	20	eP	Pn	15 55 55.7	+3.7
PET				i S	Sn	15 56 48.7	+4.7
SDLR	Sedlovina	4.73	20	eP	Pn	15 55 59.8	+3.9
SDLR				i S	Sn	15 56 55.5	+4.4
SPN	Mys Shipunski	4.87	28	P	Pn	15 56 01.6	+3.7
SPN				S	Sn	15 56 58.8	+4.1
SPN	Mys Shipunski	4.87	28	eP	Pn	15 56 01.6	+3.7
SPN				i S	Sn	15 56 58.8	+4.1
GNL	Ganaly	4.95	12	eP	Pn	15 56 03.2	+4.2
GNL				i S	Sn	15 57 01.5	+4.8
MKZ	Mys Kozlova	6.65	29	P	Pn	15 56 24.8	+2.5
MKZ				S	Sn	15 57 39.7	+1.2
MKZ	Mys Kozlova	6.65	29	eP	Pn	15 56 24.8	+2.5
MKZ				i S	Sn	15 57 39.7	+1.2
KUR	Kuril'sk	6.75	241	ePN	Pn	15 56 12.0	-12
ZLN	Zelenaya	7.69	20	P	Pn	15 56 41.4	+4.8
SRDR	Sredinnyy	7.76	15	P	Pn	15 56 42.5	+4.9
SRKR	Sorokina	8.36	19	P	Pn	15 56 48.7	+2.9
KBTR	Krutoberegovo	8.38	26	P	Pn	15 56 48.8	+2.7
KBTR	Krutoberegovo	8.38	26	eP	Pn	15 56 48.8	+2.7

MAN 07 15:56:40.7, 1361N×12012E, h39^{km}, mb2.2, ML3.8, MS3.8, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.17	46	eP	Pn	15 56 49.3	+1.7
LUBP				eS	Sn	15 56 54.4	+2.0
PGP	Puerto Galera	0.82	98	⇑eP	Pn	15 56 57.0	+1.3
BUSP	Coron	1.60	177	eP	Pn	15 57 07.2	+0.7
BUSP				eS	Sn	15 57 27.2	+1.3
BOAC	Boac	1.69	95	eP	Pn	15 57 12.2	+4.6
ENPP	El Nido	2.49	196	eP	Pn	15 57 19.7	+1.0
ENPP				eS	Sn	15 57 46.4	-1.4
CUYO	Cuyo Island	2.88	162	eP	Pn	15 57 24.9	+0.8
CUYO				eS	Sn	15 57 55.1	-2.4

*ORF **07** 15:57:51.6, 1779S×17943E, h30^{km}, mb6.0*
*MOS **07** 15:58:30.6±1.2, 2350S×17987W, h518^{km}, mb4.9/27, Error ellipse: s-maj=10.3km s-min=9.5km az=149.3*
*ISCJB **07** 15:58:32.2±0.7, 2373S±005×17995W±004, h536^{km}±8^{km}, mb4.7/73, Error ellipse: s-maj=7.9km s-min=4.5km az=128.4*
*BJI **07** 15:58:32.0, 2351S×179.14W, h558^{km}, mB4.8, mb4.9*
*IDC **07** 15:58:33.3±0.7, 2361S×17983W, h542^{km}±6^{km}, mb4.1/15, mb1 4.1/17, mb1mx4.0/20, mbtmp5.0/17, Error ellipse: s-maj=10.7km s-min=9.6km az=171.0*
*NEIC **07** 15:58:33.2±0.6, 2373S×17982W, h544^{km}±7^{km}, mb4.7/49, Error ellipse: s-maj=6.5km s-min=4.9km az=157.0*
*BGS **07** 15:58:34.0±4.0, 2373S×17982W, h544^{km}, mb4.7(NEIC)*

ISC 07 15:58:33.3±0.6**, 2379S**±004×**17988W**±004**, h538**^{km}±8^{km}**, h539**^{km}±7.9^{km}**:pP-P, n545,** σ0^{s}**78**/317**, mb4.7**/72**, 89C-78D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.72	163	P	P	16 00 10.1	+1.4
	baz=255,slow=20						
RAO				S	S	16 01 25.6	-1.1
	157nm,0.3s,baz=83,slow=23,SNR=4.3						
AFI	Afiamalu	12.46	39	P	P	16 01 10.6	-5.8
	20nm,0.3s,baz=22,slow=4.3,SNR=26						
AFI				S	S	16 03 20.4	-10
	8.9nm,0.3s,baz=78,slow=22,SNR=4.2						
AFI	Afiamalu	12.46	39	eP	P	16 01 10.5	-6.0
AFI				pmax	pmax		
	comp=Z,114nm,0.6s						
AFI	Afiamalu	12.46	39	eP	P	16 01 10.4	-6.0
	comp=Z,114nm,0.6s						
DZM	Mont Dzumac	12.72	275	P	P	16 01 20.6	+1.5
	comp=Z,2.0nm,0.3s,baz=224,slow=14,SNR=13						
PUZ	Puketiti	14.33	186	eP	P	16 01 37.7	+1.8
PUZ	Puketiti	14.33	186	PN	P	16 01 37.7	+1.8
URZ	Urewera	14.65	189	P	P	16 01 36.5	-2.8
	comp=Z,14nm,0.3s,baz=327,slow=4.3,SNR=21						
URZ				S	S	16 04 12.5	+0.1
	comp=Z,4.7nm,0.3s,baz=238,slow=23,SNR=11						
URZ	Urewera	14.65	189	eP	P	16 01 37.1	-2.1
URZ	Urewera	14.65	189	PN	P	16 01 36.8	-2.4
BKZ	Black Stump Fm	15.64	191	eP	P	16 01 47.3	-2.1
BKZ	Black Stump Fm	15.64	191	PN	P	16 01 47.3	-2.1
TSZ	Takapari Road	16.60	191	eP	P	16 01 57.3	-1.5
TSZ	Takapari Road	16.60	191	PN	P	16 01 57.3	-1.5
QRZ	Quartz Range	18.15	199	P	P	16 02 14.6	+1.6
QRZ	Quartz Range	18.15	199	PN	P	16 02 14.3	+1.4
NNZ	Nelson	18.28	196	eP	P	16 02 13.8	-0.3
NNZ	Nelson	18.28	196	PN	P	16 02 13.6	-0.5
NNZ				SN	S	16 05 12.1	-1.8
TUWZ	Tuamarina	18.34	195	PN	P	16 02 14.3	-0.4
RAR	Rarotonga	18.75	86	P	P	16 02 16.4	-2.1
	comp=Z,0.9nm,0.3s,baz=266,slow=7.3,SNR=3.5						
KHZ	Kahutara	19.37	195	eP	P	16 02 24.3	+0.2
KHZ	Kahutara	19.37	195	PN	P	16 02 24.2	+0.1
LTZ	Lake Taylor	20.03	197	eP	P	16 02 29.4	-0.7
LTZ	Lake Taylor	20.03	197	PN	P	16 02 29.2	-0.9
WVZ	Waitaha Valley	20.75	200	PN	P	16 02 36.1	-0.4
RPZ	Rata Peaks	21.23	198	P	P	16 02 41.0	0.0
	comp=Z,38nm,0.7s,mb5.2,baz=6.2,slow=5.5,SNR=18						
LBZ	Lake Benmore	22.10	199	eP	P	16 02 47.7	-1.1
LBZ	Lake Benmore	22.10	199	PN	P	16 02 47.3	-1.4
ODZ	Otahua Downs	22.57	198	eP	P	16 02 52.4	-0.5
ODZ	Otahua Downs	22.57	198	PN	P	16 02 52.4	-0.6
EAZ	Earnscleugh	23.13	200	eP	P	16 02 57.6	-0.4
EAZ	Earnscleugh	23.13	200	PN	P	16 02 57.3	-0.7
HNR	Honiara	23.98	303	P	P	16 03 04.1	-1.4
	comp=Z,52nm,0.8s,mb5.2,baz=258,slow=6.3,SNR=3.6						
WHZ	Wether Hill Ro	24.16	201	eP	P	16 03 07.4	+0.3
WHZ	Wether Hill Ro	24.16	201	PN	P	16 03 07.4	+0.3
ARMA	Armidale	26.16	249	eP	P	16 03 27.9	+3.1
PAE	Paea	28.95	84	eP	P	16 03 48.2	-1.0
	comp=Z,37nm,0.9s,mb5.0						
PAE	Paea	28.95	84	eP	P	16 03 48.2	-1.0
PAE				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.0						
PPT	Papeete	28.98	83	eP	P	16 03 48.7	-0.7
	comp=Z,18nm,0.9s,mb4.7						
PPT	Papeete	28.98	83	eP	P	16 03 48.7	-0.7
PPT				pmax	pmax		
	comp=Z,18nm,0.9s						
CNB	Canberra Magne	29.00	240	eP	P	16 03 51.8	+2.2
	comp=Z,12nm,0.8s,mb4.6						
PMOR	Pomariorio Ree	31.35	80	eP	P	16 04 08.7	-1.1
	comp=Z,21nm,0.9s,mb4.7						
CTA	Charters Tower	31.59	270	⇓iP	P	16 04 13.2	+1.4
	comp=Z,26nm,0.4s,mb5.1						
CTA	Charters Tower	31.59	270	P	P	16 04 13.2	+1.3
	comp=Z,29nm,0.4s,mb5.2,baz=91,slow=11,SNR=103						
CTA	Charters Tower	31.59	270	⇓iP	P	16 04 13.2	+1.4
CTA				pmax	pmax		
	comp=Z,26nm,0.4s						
CTAO	Charters Tower	31.59	270	⇓eP	P	16 04 12.8	+1.0
CTAO				pmax	pmax		
	comp=Z,21nm,0.3s,mb5.2						
CTAO	Charters Tower	31.59	270	⇓eP	P	16 04 12.8	+1.0
	comp=Z,21nm,0.3s,mb5.2						
TOO	Toolangi	32.60	237	eP	P	16 04 22.4	+1.9
	comp=Z,9.2nm,0.6s,mb4.5						
TOO	Toolangi	32.60	237	eP	P	16 04 22.4	+1.9
TOO				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.5						
PMG	Port Moresby	34.56	289	P	P	16 04 37.3	+0.4
	comp=Z,66nm,0.8s,mb5.2,baz=97,slow=5.9,SNR=21						
PMG	Port Moresby	34.56	289	⇑eP	P	16 04 37.3	+0.3
PMG	Port Moresby	34.56	289	⇓eP	P	16 04 37.2	+0.2
	comp=Z,73nm,1.0s,mb5.2						
STKA	Stephens Creek	34.87	248	eP	P	16 04 40.9	+1.4
	comp=Z,4.2nm,0.6s,mb4.2						
STKA				ePCP	PcP	16 06 58.2	+1.0
STKA				eS	S	16 09 32.4	0.0
STKA	Stephens Creek	34.87	248	P	P	16 04 41.1	+1.6
	comp=Z,5.3nm,0.6s,mb4.2,baz=90,slow=9.3,SNR=19						
STKA				PcP	PcP	16 06 58.2	+1.1
	comp=Z,4.0nm,0.6s,baz=103,slow=4.4,SNR=5.2						
AS31	Alice Springs	42.16	260	⇓iP	P	16 05 39.4	+0.8
AS31				eS	S	16 11 19.1	-0.5
ASAR	Alice Springs	42.16	260	P	P	16 05 39.5	+0.8
	comp=Z,5.9nm,0.4s,mb4.5,baz=95,slow=7.4,SNR=107						
ASAR				pP	pP	16 07 14.7	-0.2
	comp=Z,4.2nm,0.9s,baz=86,slow=8.5,SNR=3.7						
ASAR				ScP	ScP	16 10 21.2	+1.5
	comp=Z,2.1nm,1.0s,baz=127,slow=4.7,SNR=4.2						
ASAR				S	S	16 11 19.4	-0.2
	comp=Z,2.3nm,0.7s,baz=96,slow=15,SNR=12						
ASAR	Alice Springs	42.16	260	P	P	16 05 39.5	+0.9
ASAR				*PP	pP	16 07 14.7	-0.2
ASAR				S	S	16 11 19.5	-0.1
ASPA	Alice Springs	42.16	260	⇓iP	P	16 05 39.4	+0.8
ASPA				eS	S	16 11 19.1	-0.5
WB2	Warramunga Arr	42.51	266	⇓iP	P	16 05 41.5	+0.1
WB2				eS	S	16 11 22.2	-2.4
WRAB	Tennant Creek	42.52	266	eP	P	16 05 40.8	-0.6
WRAB				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.0						
WRAB	Tennant Creek	42.52	266	eP	P	16 05 40.8	-0.6
	comp=Z,41nm,0.8s,mb5.0						
KAKA	Kakadu	46.41	275	⇓iP	P	16 06 11.1	-0.3
	comp=Z,19nm,0.5s,mb4.9						
FORT	Forrest	46.45	249	eP	P	16 06 12.2	+0.5
	comp=Z,29nm,0.5s,mb5.1						
GUMO	Guam	50.67	313	P	P	16 06 42.5	-0.5
	comp=Z,47nm,0.5s,mb5.1,baz=50,slow=15,SNR=4.3						
FITZ	Fitzroy Crossi	50.95	265	eP	P	16 06 45.8	+0.8
	comp=Z,29nm,0.8s,mb4.7						
FITZ				eS	S	16 13 22.8	+1.1
FITZ	Fitzroy Crossi	50.95	265	P	P	16 06 45.9	+0.8
	comp=Z,19nm,0.9s,mb4.4,baz=117,slow=6.1,SNR=71						
FITZ				S	S	16 13 22.5	+0.8
	comp=Z,3.0nm,1.0s,baz=285,slow=20,SNR=3.3						
VNDA	Vanda	54.50	185	P	P	16 07 12.2	+1.8
	comp=Z,1.7nm,0.6s,baz=358,slow=5.6,SNR=14						
VNDA				PcP	PcP	16 08 05.5	0.0
	comp=Z,2.1nm,0.7s,baz=348,slow=5.2,SNR=8.2						
VNDA				ScP	ScP	16 11 11.9	-0.2
	comp=Z,2.5nm,0.8s,baz=335,slow=3.3,SNR=9.8						
VNDA	Vanda	54.50	185	eP	P	16 07 12.1	+1.7
VNDA				e		16 08 06.0	
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VNDA	Vanda	54.50	185	eP	P	16 07 12.1	+1.7
	comp=Z,1.3nm,0.6s						
VNDA				ePcP	PcP	16 08 06.0	+0.5
KLBR	Kellerberrin	55.13	247	eP	P	16 07 15.2	+0.4
	comp=Z,18nm,0.6s,mb4.5						
NWAO	Narrogin (SRO)	55.38	245	P	P	16 07 16.9	+0.3
	comp=Z,21nm,0.9s,mb4.3,baz=51,slow=4.0,SNR=6.6						
MUN	Mundaring	56.38	246	eP	P	16 07 24.5	+1.1
CASY	Casey	60.26	206	eP	P	16 07 49.9	+0.3
QSPA	South Pole Qui	66.30	180	eP	P	16 08 30.1	+1.8
	comp=Z,7.8nm,1.2s,mb4.1						
JOW	Kunigami	71.00	312	P	P	16 08 56.4	-0.3
	comp=Z,35nm,0.6s,mb5.1,baz=126,slow=11,SNR=7.6						
MJAR	Matsushiro Arr	71.86	326	P	P	16 09 00.7	-1.1
	comp=Z,14nm,0.9s,mb4.4,baz=158,slow=5.4,SNR=32						
MAJO	Matsushiro	71.87	326	eP	P	16 09 00.4	-1.4
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.5						
MAJO	Matsushiro	71.87	326	eP	P	16 09 00.4	-1.4
	comp=Z,18nm,0.9s,mb4.5						
MAT	Matsushiro	71.87	326	P	P	16 09 00.6	-1.2
MAT	Matsushiro	71.87	326	eP	P	16 09 01.0	-0.8
MAT				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
MAT	Matsushiro	71.87	326	eP	P	16 09 01.0	-0.8
	comp=Z,14nm,0.8s,mb4.5						
NACB	Ninganchiao	74.12	306	eP	P	16 09 13.8	-0.9
TATO	Taipei	74.67	307	eP	P	16 09 16.8	-1.0
	comp=Z,86nm,1.3s,mb5.0						
MAW	Mawson	77.89	200	P	P	16 09 35.8	+0.3
	comp=Z,4.4nm,0.7s,mb3.9,baz=132,slow=7.5,SNR=12						
MAW	Mawson	77.89	200	eP	P	16 09 35.9	+0.4
	comp=Z,17nm,1.4s,mb4.2						
YSS	Yuzh-Sakhalins	78.08	335	⇓eP	P	16 09 36.0	-0.5
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.6						
YSS	Yuzh-Sakhalins	78.08	335	eP	P	16 09 36.5	0.0
	comp=Z,55nm,0.9s,mb4.9						
SSE	Sheshan	78.50	311	P	P	16 09 38.7	0.0
SSE				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.4						
SSE				AMB	AMB		
	comp=Z,71nm,3.9s						
AKUT	Akutan	78.55	8	eP	P	16 09 36.5	-2.5
PET	Petropavlovsk	78.73	347	eP	P	16 09 38.4	-1.6
PET				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.5						
PET	Petropavlovsk	78.73	347	eP	P	16 09 37.8	-2.2
	comp=Z,7.9nm,0.6s,mb4.2						
INCN	Inchon	79.01	319	eP	P	16 09 41.5	0.0
	comp=Z,15nm,0.8s,mb4.4						
VLA	Vladivostok	80.00	326	eP	P	16 09 45.0	-1.7
VLA				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.5						
NJ2	Nanjing	80.67	311	eP	P	16 09 50.6	+0.4
NJ2				PP	PP	16 13 06.3	+2.6
NJ2				S	S	16 19 07.0	-6.4
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,40nm,10.2s						
V03C	Hunter Liggett	81.28	44	⇓P	P	16 09 53.9	+0.6
	baz=81						
V04C	Ramage Ranch,	81.28	45	⇓P	P	16 09 54.0	+0.7
	baz=81						
BNLO	Ben Lomond (Sa	81.37	43	⇑P	P	16 09 54.2	+0.5
	baz=82						
SAO	San Andreas Ge	81.60	44	P	P	16 09 54.4	-0.6
	comp=Z,12nm,1.1s,mb4.2						
PKD	Parkfield	81.68	45	⇓P	P	16 09 55.6	+0.2
	baz=82						
U04C	Hernandez Rese	81.78	44	⇓P	P	16 09 56.7	+0.8
	baz=82						
PACP	Pacheco Peak	81.85	44	⇓P	P	16 09 57.0	+0.8
	baz=82						
WENL	Wente Brothers	81.93	43	⇑P	P	16 09 57.3	+0.6
	baz=82						
CVS	Carmenet Viney	81.95	42	⇓P	P	16 09 57.0	+0.3
	baz=82						
NSHM	Saint Helena R	81.97	42	eP	P	16 09 56.7	-0.1
HOPS	Hopland	81.98	41	P	P	16 09 57.2	+0.3
	baz=82,SNR=5.2						
P01C	Double 8 Ranch	82.12	41	⇑P	P	16 09 58.2	+0.6
	baz=82						
S04C	Ingram Canyon,	82.13	43	P	P	16 09 58.2	+0.5
	baz=82,SNR=7.7						
MDJ	Mudanjiang	82.23	326	P	P	16 09 58.1	-0.1
MDJ				AMB	AMB		
	comp=Z,32nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,39nm,4.0s						
ARVC	Arvin	82.31	46	⇑P	P	16 09 58.7	+0.1
	baz=82						
Q03C	Winters	82.40	42	⇑P	P	16 09 59.5	+0.4
	baz=82						
HABR	Khabarovsk	82.46	332	⇓iP	P	16 09 59.3	0.0
HABR				pmax	pmax		
	comp=Z,67nm,1.4s,mb4.9						
BFSC	Mount Baldy St	82.58	48	⇑P	P	16 09 60.0	0.0
	baz=83						
GASB	Alder Springs	82.61	41	P	P	16 10 01.2	+1.1
	baz=83,SNR=8.0						
S05C	Merced	82.66	44	⇑P	P	16 10 01.0	+0.6
	baz=83						
MONP	Monument Peak	82.67	49	⇓P	P	16 10 01.1	+0.7
	baz=83						
EDW2	Edwards Air Fo	82.73	47	P	P	16 10 00.8	+0.2
	baz=83,SNR=6.2						
DVTC	Desert V Tower	82.76	50	⇑P	P	16 10 01.4	+0.6
	baz=83						
T06C	Millerton Lake	82.85	44	⇓P	P	16 10 01.5	+0.2
	baz=83						
ISA	Isabella	82.86	46	eP	P	16 10 01.3	0.0
	comp=Z,15nm,1.4s,mb4.3						
ISA	Isabella	82.86	46	P	P	16 10 01.5	+0.2
	baz=83,SNR=14						
O02C	Red Bluff	82.90	40	P	P	16 10 02.4	+0.9
	baz=83,SNR=9.2						
SUTB	Sutter Butte	82.91	42	⇓P	P	16 10 01.5	-0.1
	baz=83						
CMB	Columbia Colle	83.04	43	eP	P	16 10 02.0	-0.3
CMB				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
CMB	Columbia Colle	83.04	43	eP	P	16 10 01.9	-0.3
	comp=Z,13nm,0.9s,mb4.5						
CMB	Columbia Colle	83.04	43	P	P	16 10 02.1	-0.1
	baz=83,SNR=7.4						
HELL	Mitchell Peak,	83.10	45	P	P	16 10 02.1	-0.4
	baz=83,SNR=8.7						
SYO	Syowa Base	83.15	193	⇑eP	P	16 10 01.8	-1.0
SYO	Syowa Base	83.15	193	⇑ePcP	PcP	16 10 05.3	-0.6
OHCM	Honcut	83.16	42	eP	P	16 10 02.2	-0.6
O03C	Acorn Hollow,	83.24	41	⇑P	P	16 10 03.6	+0.3
	baz=83						
LAVA	Lava Cap Winer	83.26	43	⇓P	P	16 10 03.4	0.0
	baz=83						
LRMC	Laurel Mountai	83.28	47	⇑P	P	16 10 03.3	-0.1
	baz=83						
ORV	Oroville	83.28	42	P	P	16 10 03.4	-0.1
	baz=83,SNR=5.3						
S06C	San Francisco	83.29	44	P	P	16 10 03.2	-0.3
	baz=83,SNR=10						
KCC	Kaiser Creek	83.29	44	P	P	16 10 03.6	+0.1
	baz=83,SNR=6.0						
WDC	Whiskeytown Da	83.30	40	eP	P	16 10 03.5	0.0
	comp=Z,10nm,1.1s,mb4.3						
WDC	Whiskeytown Da	83.30	40	P	P	16 10 04.0	+0.4
	baz=83,SNR=5.2						
RRX	Edison Barstow	83.40	47	⇑P	P	16 10 04.3	+0.3
	baz=84						
BELC	Belle Mtn.	83.58	49	P	P	16 10 05.4	+0.5
	baz=84,SNR=8.6						
SNY	Shenyang	83.63	321	⇓P	P	16 10 04.6	-0.6
SNY				AMB	AMB		
	comp=Z,22nm,0.8s,mb4.7						
M02C	Callahan	83.63	39	P	P	16 10 06.0	+0.8
	baz=84,SNR=5.9						
R05C	Kirkwood Meado	83.64	43	P	P	16 10 05.4	+0.1
	baz=84,SNR=14						
P05C	Yuba Gap, Truc	83.68	42	P	P	16 10 05.5	+0.1
	baz=84,SNR=11						
L02A	Cave Junction	83.69	38	⇑P	P	16 10 05.6	+0.1
	baz=84						
MPMC	Manual Prospec	83.74	46	P	P	16 10 05.9	+0.2
	baz=84,SNR=8.7						
GSC	Goldstone	83.77	47	P	P	16 10 06.2	+0.3
	baz=84,SNR=6.1						
MTUM	Tungsten Hills	83.80	45	eP	P	16 10 06.2	+0.2
HEC	Hector,Ludlow	83.82	48	⇑P	P	16 10 06.0	-0.1
	baz=84						
TIN	Tinemaha	83.84	45	⇑P	P	16 10 06.9	+0.7
	baz=84						
CN2	Changchun	83.86	324	⇓iP	P	16 10 05.9	-0.4
CN2				eS	S	16 19 40.3	-4.8
CN2				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.9						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
GLA	Glamis	83.87	50	P	P	16 10 07.3	+0.9
	baz=84,SNR=7.6						
R07C	Lee Vining	83.92	44	⇑P	P	16 10 06.9	+0.3
	baz=84						
R06C	Coleville	83.92	43	P	P	16 10 07.3	+0.7
	baz=84,SNR=5.4						
YBH	Yreka Blue Hor	83.93	39	⇓P	P	16 10 07.1	+0.4
	baz=84						
O04C	Chester	84.01	41	⇑P	P	16 10 07.3	+0.3
	baz=84						
HATC	Hat Creek Radi	84.09	41	P	P	16 10 08.0	+0.5
	baz=84,SNR=5.3						
K02A	Glendale	84.14	38	⇑P	P	16 10 08.1	+0.4
	baz=84						
BEKR	Beckwourth	84.17	42	P	P	16 10 07.8	0.0
	baz=84,SNR=6.4						
WCN	Washoe City	84.20	43	⇓P	P	16 10 08.5	+0.5
	baz=84						
IRM	Iron Mountain	84.25	49	P	P	16 10 08.8	+0.5
	baz=84,SNR=9.7						
GRAC	Grapevine Rang	84.36	46	⇑P	P	16 10 09.2	+0.4
	baz=84						

FURC Furnace Creek, 84.40 46 ⇑P **P 16 10 09.1 +0.1**
baz=84
ELFS Eagle Lake Fie 84.41 41 ⇓P **P 16 10 09.4 +0.4**
baz=84
TUQ Turquoise Mtn. 84.44 47 ⇑P **P 16 10 09.4 +0.3**
baz=85
SHOC Shoshone 84.46 47 ⇑P **P 16 10 09.2 0.0**
baz=85
Y12C Blythe 84.46 50 ⇑P **P 16 10 09.6 +0.3**
baz=85
M04C Macdoel 84.47 40 ⇓P **P 16 10 09.6 +0.3**
baz=85
J02A Umpqua 84.48 38 ⇓P **P 16 10 09.2 -0.1**
baz=85
KLR Kul'dur 84.49 331 *e*P **P 16 10 06.0 -3.4**
KLR pmax pmax
comp=E,24nm,1.4s
KLR pmax pmax
comp=Z,33nm,1.4s,mb4.7
NVAR Mina Array Bea 84.59 44 P **P 16 10 09.5 -0.4**
comp=Z,3.3nm,0.7s,mb4.0,baz=215,slow=6.7,SNR=16
NVAR Mina Array Bea 84.59 44 P **P 16 10 09.5 -0.4**
M05C Lookout 84.61 40 P **P 16 10 10.1 +0.1**
baz=85,SNR=7.8
R08A Mina 84.67 44 ⇓P **P 16 10 10.4 +0.1**
baz=85
O06A Flanigan 84.68 42 P **P 16 10 10.2 -0.1**
baz=85,SNR=7.7
L04A Klamath Falls 84.68 39 ⇑P **P 16 10 10.5 +0.2**
baz=85
U10A Ash Meadows, A 84.72 46 ⇑P **P 16 10 10.8 +0.3**
baz=85
I02A Mapleton 84.75 37 ⇑P **P 16 10 10.9 +0.3**
baz=85
SNAA Sanae 84.78 179 *e*P **P 16 10 08.7 -2.1**
SNAA *e* 16 10 10.7
SNAA *e* 16 10 16.1
SNAA *e* 16 10 16.6
J03A Ideyld Park 84.82 38 ⇑P **P 16 10 10.9 -0.1**
baz=85
S09A Goldfield 84.88 45 ⇓P **P 16 10 11.2 -0.1**
baz=85
M06C Likely Place G 84.92 41 ⇑P **P 16 10 11.8 +0.3**
baz=85
Y13A Salome 84.98 50 P **P 16 10 12.7 +0.8**
baz=85,SNR=6.5
N06A Buffalo Meadow 85.02 41 ⇓P **P 16 10 12.0 -0.1**
baz=85
PDMCI Parker Dam,Lak 85.03 49 ⇓P **P 16 10 12.7 +0.6**
baz=85
I03A Eugene 85.03 37 ⇑P **P 16 10 12.5 +0.4**
baz=85
Q08A Gabbs 85.08 44 ⇓P **P 16 10 12.1 -0.2**
baz=85
L05A Lakeview 85.22 40 ⇑P **P 16 10 13.2 +0.2**
baz=85
O07A Toulon 85.26 42 P **P 16 10 13.0 -0.1**
baz=85,SNR=10
R09A Tonopah 85.27 45 ⇓P **P 16 10 13.1 -0.1**
baz=85
V12A Nelson 85.32 48 ⇓P **P 16 10 13.9 +0.5**
baz=85
U11A Corn Creek 85.35 47 ⇑P **P 16 10 13.8 +0.2**
baz=86
Z14A Wintersburg 85.36 51 ⇑P **P 16 10 14.1 +0.5**
baz=86
X13A Yucca 85.41 49 P **P 16 10 14.6 +0.7**
baz=86,SNR=5.1
115A Sonoran Desert 85.52 51 ⇑P **P 16 10 15.2 +0.7**
baz=86
Q09A Carvers 85.54 44 ⇓P **P 16 10 14.6 +0.1**
baz=86
Y14A Wickenburg 85.63 50 ⇓P **P 16 10 15.5 +0.5**
baz=86
VNA1 Neumayer--Stat 85.64 177 *e*P **P 16 10 13.9 -1.1**
VNA1 *e* 16 10 15.3
W13A Hualapai Mount 85.64 49 ⇓P **P 16 10 15.7 +0.7**
baz=86
J05A Fort Rock 85.75 39 P **P 16 10 15.8 +0.3**
baz=86,SNR=9.4
R10A Warm Springs 85.80 45 ⇓P **P 16 10 15.9 +0.2**
baz=86
M07A Soldier Meadow 85.81 41 P **P 16 10 16.0 +0.2**
baz=86,SNR=5.5
116A Eloy 85.83 52 ⇓P **P 16 10 16.4 +0.5**
baz=86
U12A Valley of Fire 85.92 47 P **P 16 10 16.9 +0.5**
baz=86,SNR=5.0
P09A Austin 85.98 44 ⇑P **P 16 10 16.7 +0.1**
baz=86
X14A Yava 85.99 50 ⇑P **P 16 10 17.1 +0.4**
baz=86
K06A Valley Falls 86.02 40 P **P 16 10 16.9 +0.1**
baz=86,SNR=13
N08A GE Springer Mi 86.08 42 ⇓P **P 16 10 17.3 +0.2**
baz=86
L07A Adell 86.09 41 ⇑P **P 16 10 17.4 +0.3**
baz=86
H04A Detroit Lake 86.09 37 ⇓P **P 16 10 16.8 -0.4**
baz=86
W14A Seligman 86.25 49 ⇑P **P 16 10 18.3 +0.4**
baz=86,SNR=5.6
I05A Bend 86.28 38 ⇑P **P 16 10 18.2 +0.2**
baz=86
O09A Fish Creek Ran 86.31 43 ⇑P **P 16 10 18.0 -0.1**
baz=86
M08A Happy Creek Ra 86.32 41 ⇑P **P 16 10 18.6 +0.3**
baz=86
J06A Christmas Vall 86.35 39 P **P 16 10 18.1 -0.2**
baz=86,SNR=11
P10A Eureka 86.45 44 ⇑P **P 16 10 19.1 +0.3**
baz=87
X15A Humboldt 86.46 50 ⇓P **P 16 10 19.4 +0.5**
baz=87
MA2 Magadan 86.49 346*d* iP **P 16 10 17.2 -1.8**
MA2 pmax pmax
comp=Z,70nm,0.9s,mb5.3
MA2 Magadan 86.49 346 *e*P **P 16 10 17.2 -1.8**
comp=Z,97nm,1.4s,mb5.2
N09A Rock Creek Ran 86.50 42 ⇓P **P 16 10 19.2 +0.1**
baz=87
E03A Lebam 86.53 35 ⇓P **P 16 10 19.1 -0.1**
baz=87
H05A Madras 86.60 38 ⇓P **P 16 10 19.5 -0.1**
baz=87
I06A Prineville 86.74 39 ⇑P **P 16 10 20.5 +0.2**
baz=87
F04A Amboy 86.75 36 ⇑P **P 16 10 20.3 +0.1**
baz=87
WVOR Wild Horse Val 86.75 41 *e*P **P 16 10 19.9 -0.4**
WVOR pmax pmax
comp=Z,18nm,1.4s,mb4.5
WVOR Wild Horse Val 86.75 41 *e*P **P 16 10 19.9 -0.4**
comp=Z,18nm,1.4s,mb4.5
GYA Guiyang 86.78 301 ⇓ *i*P **P 16 10 20.6 +0.2**
GYA AP pP 16 12 19.2 +1.3
GYA XP sP 16 13 12.7 +0.3
GYA PP PP 16 13 52.8 0.0
GYA SKS 16 19 53.9
GYA S S 16 20 09.5 -3.6
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
GYA AMB AMB
comp=Z,70nm,4.5s
L08A Fields 86.78 41 P **P 16 10 20.6 +0.1**
baz=87,SNR=6.9
SVW2 Sparrevohn 86.84 12 *e*P **P 16 10 18.3 -2.4**
M09A Marrel Ranch, 86.88 42 ⇑P **P 16 10 21.3 +0.5**
baz=87
J07A Hines 86.92 39 P **P 16 10 21.4 +0.4**
baz=87,SNR=11
G05A Wamic 86.92 37 ⇓P **P 16 10 21.1 0.0**
baz=87
K08A Mann Creek Ran 87.02 40 P **P 16 10 21.8 +0.3**
baz=87,SNR=6.8
BJI Beijing 87.02 316 *e*P **P 16 10 21.7 +0.2**
BJI AMB AMB
comp=Z,21nm,0.7s,mb4.9
L09A Wilkinson Ranc 87.09 41 ⇑P **P 16 10 22.2 +0.3**
baz=87
Q12A Willow Creek R 87.17 45 ⇑P **P 16 10 22.5 +0.2**
baz=87
I07A Izee 87.23 39 P **P 16 10 22.7 +0.2**
baz=87,SNR=19
F05A White Salmon 87.24 37 ⇓P **P 16 10 22.5 -0.1**
baz=87
O11A Cowboy Ranch, 87.25 44 ⇑P **P 16 10 22.6 0.0**
baz=87
P12A McGill 87.36 45 ⇑P **P 16 10 23.4 +0.2**
baz=88
SLKM Skilak Lake 87.40 14 *e*P **P 16 10 21.5 -1.8**
M10A I.L. Ranch, Tu 87.49 42 ⇑P **P 16 10 24.3 +0.5**
baz=88
E05A Randle 87.50 36 ⇑P **P 16 10 23.6 -0.2**
baz=88
B04A Port Angeles 87.54 34 ⇓P **P 16 10 24.3 +0.3**
baz=88
C04A Brinnon 87.60 34 ⇑P **P 16 10 24.0 -0.2**
baz=88
I08A Drewsey 87.67 39 ⇑P **P 16 10 24.9 +0.3**
baz=88
D05A Enumclaw 87.78 35 ⇓P **P 16 10 25.4 +0.3**
baz=88
FMW Mount Fremont 87.78 36 P **P 16 10 25.1 0.0**
M11A Holland Ranch, 87.90 43 ⇓P **P 16 10 25.9 +0.2**
baz=88,SNR=5.3
H08A Prairie City 87.97 39 P **P 16 10 26.1 +0.1**
baz=88,SNR=5.2
N12A Clover Valley, 88.05 43 P **P 16 10 26.4 +0.1**
baz=88,SNR=5.4
I09A Lost Marbles R 88.19 40 P **P 16 10 26.8 -0.2**
baz=88,SNR=8.9
C05A Tolt Reservoir 88.25 35 P **P 16 10 26.9 -0.3**
baz=88,SNR=7.1
MCW Mount Constitu 88.28 34 P **P 16 10 27.6 +0.2**
EBG Ellensburg 88.36 36 P **P 16 10 27.9 +0.1**
A04A Legoe Bay, Lum 88.37 34 ⇑P **P 16 10 27.8 0.0**
baz=88
B05A Bryant 88.40 34 ⇓P **P 16 10 27.9 0.0**
baz=89
M12A Wells 88.44 43 ⇓P **P 16 10 28.5 +0.4**
baz=89
TTA Tatalina 88.47 11 *e*P **P 16 10 27.0 -1.3**
TTA pmax pmax
comp=Z,28nm,1.3s,mb4.8
TTA Tatalina 88.47 11 *e*P **P 16 10 26.9 -1.4**
comp=Z,28nm,1.3s,mb4.8
N13A Wendover, West 88.58 44 ⇑P **P 16 10 28.9 +0.1**
baz=89
PMR Palmer 88.61 14 *e*P **P 16 10 26.9 -2.0**
PMR pmax pmax
comp=Z,30nm,1.2s,mb5.0
PMR Palmer 88.61 14 *e*P **P 16 10 26.9 -2.1**
comp=Z,30nm,1.2s,mb5.0
HAWA Hanford 88.61 37 *e*P **P 16 10 28.7 -0.3**
comp=Z,1.0nm,0.9s,mb3.6
MSU Marysvale 88.63 47 *e*P **P 16 10 29.7 +0.7**
H09A Durkee 88.64 39 P **P 16 10 28.9 -0.1**
baz=89,SNR=12
F08A Pendleton 88.67 38 ⇑P **P 16 10 29.3 0.0**
baz=89
H2OWA Water 88.67 37 P **P 16 10 29.3 +0.1**
XAN Xi'an 88.76 308 P **P 16 10 30.3 +0.7**
XAN AMB AMB
comp=Z,30nm,0.8s,mb5.2
RPW Rockport 88.82 35 P **P 16 10 29.3 -0.6**
A05A Maple Falls 88.87 34 ⇓P **P 16 10 29.6 -0.5**
baz=89
M13A Montello 88.88 43 ⇓P **P 16 10 30.2 0.0**
baz=89
ETW Entiat 88.92 36 P **P 16 10 30.2 -0.2**
BMO Blue Mountains 88.96 39 *e*P **P 16 10 29.4 -1.2**
comp=Z,11nm,1.4s,mb4.5
DIV Divide 89.00 16 *e*P **P 16 10 29.2 -1.6**
comp=Z,80nm,1.1s,mb5.5
WTV Waterville 89.18 36 P **P 16 10 31.1 -0.5**
KMI Kunming 89.31 298 P **P 16 10 33.8 +1.6**
KMI AP pP 16 12 39.0 +8.5
KMI XP sP 16 13 35.4 +11
KMI AMB AMB
comp=Z,18nm,1.2s,mb4.8
KMI AMB AMB
comp=Z,52nm,5.2s
TMUT Trail Mountain 89.68 46 *e*P **P 16 10 34.0 0.0**
CHTO Chiang Mai 89.74 291 *e*P **P 16 10 35.5 +1.3**
CHTO pmax pmax
comp=Z,33nm,1.3s,mb5.0
CHTO Chiang Mai 89.74 291 *e*P **P 16 10 35.5 +1.3**
comp=Z,33nm,1.3s,mb5.0
HLID Hailey 89.94 41 *e*P **P 16 10 35.1 0.0**
comp=Z,10.0nm,1.1s,mb4.6
HVU Hansel Valley 89.98 44 *e*P **P 16 10 35.2 -0.1**
HVU pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
HVU Hansel Valley 89.98 44 *e*P **P 16 10 35.1 -0.2**
comp=Z,5.9nm,0.6s,mb4.6
SRU San Rafael 90.04 47 *e*P **P 16 10 35.4 -0.2**
SRU pmax pmax
comp=Z,18nm,0.9s,mb4.9
SRU San Rafael 90.04 47 *e*P **P 16 10 35.4 -0.1**
comp=Z,18nm,0.9s,mb4.9
MNTX Cornudas Mount 90.06 55 *e*P **P 16 10 35.9 +0.2**
comp=Z,4.1nm,0.8s,mb4.3
DAU Daniels Canyon 90.23 45 *e*P **P 16 10 37.3 +0.8**
HHC Hu-ho-hao-te 90.42 315 *e*P **P 16 10 35.1 -2.2**
HHC AP pP 16 12 34.8 -1.0
HHC PP PP 16 14 21.1 -0.2
HHC S S 16 20 43.0 -3.4
HHC SS SS 16 27 03.4 +0.5
HHC AMB AMB
comp=Z,18nm,1.1s,mb4.8
HHC AMB AMB
comp=Z,169nm,5.6s
TCUT Toone Canyon 90.50 45 *e*P **P 16 10 37.9 +0.1**
MCK McKinley 90.55 13 *e*P **P 16 10 35.7 -2.2**
comp=Z,3.5nm,0.8s,mb4.3
HWUT Hardware Ranch 90.66 44 *e*P **P 16 10 37.5 -1.0**
comp=Z,5.9nm,0.6s,mb4.7
ANMO Albuquerque 90.80 52⇑ *e*P **P 16 10 39.0 -0.1**
ANMO Albuquerque 90.80 52 *e*P **P 16 10 38.4 -0.7**
comp=Z,6.3nm,1.2s,mb4.4
CD2 Chengdu 91.11 303 P **P 16 10 41.7 +1.2**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
MCMT McKenzie Canyo 91.57 41 *e*P **P 16 10 42.6 -0.1**
RRI2 Red Ridge 91.72 43 P **P 16 10 42.4 -1.0**
comp=Z,9.1nm,1.0s,mb4.8
BILL Bilibino 92.12 355 *e*P **P 16 10 43.6 -1.6**
BILL pmax pmax
comp=Z,16nm,0.8s,mb5.1
BILL Bilibino 92.12 355 *e*P **P 16 10 43.6 -1.6**
comp=Z,16nm,0.8s,mb5.1
SMCO Snowmass 92.47 48 *e*P **P 16 10 46.6 -0.2**
comp=Z,4.3nm,0.6s,mb4.7
PDAR Pinedale Array 92.53 44 P **P 16 10 46.0 -1.0**
comp=Z,3.0nm,0.7s,mb4.4,baz=217,slow=3.4,SNR=21
BOZ Bozeman (W) 92.73 41 *e*P **P 16 10 47.1 -0.8**
comp=Z,2.4nm,0.8s,mb4.3
LZH Lanzhou 93.39 308 *e*P **P 16 10 51.5 +0.5**
LZH PP PP 16 14 50.1 +5.8
LZH AMB AMB
comp=Z,26nm,1.2s,mb5.1
LZH AMB AMB
comp=Z,130nm,4.8s
JCT Junction City 93.79 58 *e*P **P 16 10 52.1 -0.7**
JCT pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
JCT Junction City 93.79 58 *e*P **P 16 10 52.1 -0.7**
comp=Z,4.4nm,0.7s,mb4.7
YAK Yakutsk 94.51 339⇑ *e*P **P 16 10 54.5 -1.6**
YAK pmax pmax
comp=Z,19nm,0.6s,mb5.4
ULN Ulaanbaatar 96.71 320 *e*P **P 16 11 04.6 -1.4**
ULN pmax pmax
comp=Z,3.0nm,0.5s,mb4.8
ULN Ulaanbaatar 96.71 320 *e*P **P 16 11 04.6 -1.4**
comp=Z,2.6nm,0.5s,mb4.7
GTA Gaotai 97.71 310 *e*P Pdif 16 11 10.8 +0.4
GTA AP pP 16 13 14.1 +4.6
GTA XP sP 16 14 07.4 +3.9
GTA PP PP 16 15 17.7 +0.5
GTA SKS 16 20 56.6
GTA S S 16 21 44.2 -5.1
GTA SS SS 16 28 45.5 +0.1
GTA AMB AMB
comp=Z,4.0nm,1.0s,mb4.7
GTA AMB AMB
comp=Z,71nm,4.6s
INK Inuvik 97.89 16 *e*P Pdif 16 11 08.6 -2.6
comp=Z,2.1nm,0.9s
ZAL Zalesovo 111.94 321 PKiKP PKiKP 16 16 05.6 -1.6
comp=Z,2.4nm,0.3s,baz=98,slow=1.6,SNR=5.1
MKAR Makanchi Array 112.16 313 Pdiff Pdif 16 12 14.2 -0.5
comp=Z,0.4nm,0.5s,baz=103,slow=4.6,SNR=4.2
MKAR PKiKP PKiKP 16 16 06.0 -1.7
comp=Z,2.7nm,0.6s,baz=258,slow=0.5,SNR=26
MKAR PKKPbc PKKPbc 16 27 10.4 +10
comp=Z,0.4nm,0.7s,baz=286,slow=4.5,SNR=4.1
MKAR Makanchi Array 112.16 313 P Pdif 16 12 14.2 -0.5
MKAR 16 16 06.0
MKAR Makanchi Array 112.16 313 Pdif Pdif 16 12 14.2 -0.5
MKAR PKPdf PKiKP 16 16 06.0 -1.7
MKAR PKKPbc PKKPbc 16 27 10.4 +10
TKM2 Tokmak 2 116.16 308 P PKPdf 16 16 14.6 -0.7
SNR=5.5
CHMS Chumysh 116.78 308 P PKPdf 16 16 15.3 -1.2
SNR=5.0
UCH Uchtor 116.84 307 P PKPdf 16 16 16.8 +0.1
SNR=5.4
USP Ospenovka 117.00 308 P PKPdf 16 16 15.9 -1.1
SNR=5.1
AML Almayashu 117.43 306 P PKPdf 16 16 17.6 -0.2
SNR=6.7
BDFB Brasilia 118.79 125 PKP PKPdf 16 16 19.8 -0.6
comp=Z,1.1nm,0.4s,baz=180,slow=4.0,SNR=3.1
CHKZ Chkalovo 120.29 320 *e*PKIKP PKPdf 16 16 21.1 -2.2
BVAR Borovoye Array 120.43 319 PKP PKPdf 16 16 21.9 -1.6
comp=Z,5.1nm,0.4s,baz=106,slow=2.2,SNR=43
BVAR PP PP 16 18 05.1 +5.8
comp=Z,1.4nm,0.9s,baz=85,slow=7.9,SNR=3.7
BRVK Borovoye 120.49 319 *e*PKIKP PKPdf 16 16 21.7 -2.0
ZRNK Zerenda 121.26 319 *e*PKIKP PKPdf 16 16 23.3 -1.8
SCHQ Schefferville 122.32 39 PKP PKPdf 16 16 25.2 -1.9
comp=Z,3.9nm,1.0s,baz=45,slow=1.4,SNR=4.4
BOSA Boshof 122.55 206 PKP PKPdf 16 16 27.8 +0.2
comp=Z,3.0nm,0.6s,baz=220,slow=4.9,SNR=7.8
BOSA Boshof 122.55 206 PKP PKPdf 16 16 27.8 +0.2
ARU Arti 126.86 324 *i* PKIKP PKPdf 16 16 34.6 -1.2
ARU *e* 16 18 43.3
ARU Arti 126.86 324 *e*PKPdf PKPdf 16 16 34.3 -1.6
AKTK Aktyubinsk 128.29 316 PKP PKPdf 16 16 37.4 -1.2
AKTO Aktyubinsk 128.29 316 PKP PKPdf 16 16 37.4 -1.2
comp=Z,6.5nm,0.6s,baz=93,slow=3.6,SNR=28
ARCES ARCESS Array B 131.80 348 PKHKP 16 16 34.1
comp=Z,0.9nm,0.5s,baz=53,slow=0.6,SNR=11
ARCES PKP PKPdf 16 16 43.0 -2.2
comp=Z,7.2nm,0.5s,baz=48,slow=1.8,SNR=40
JOF Joensuu 135.66 340 *e*pkp 16 16 38.7
KAF Kangasniemi 137.77 342 *e*pkp 16 16 43.6
FIA1 FINESS Array S 138.37 342 *e*PKPpre 16 16 46.9
FINES FINESS Array B 138.37 342 PKhKP 16 16 45.2
comp=Z,1.1nm,0.4s,baz=31,slow=4.4,SNR=13
FINES PKP PKPdf 16 16 55.2 -2.2
comp=Z,5.0nm,0.8s,baz=116,slow=4.4,SNR=13
FINES SKPbc SKPbc 16 19 40.1 -1.2
comp=Z,1.9nm,0.7s,baz=29,slow=4.4,SNR=5.9
FINES FINESS Array B 138.37 342 PKHKP 16 16 45.3
FINES 16 16 55.3
OBN Obninsk 138.73 329 *i* PKIKP PKPdf 16 16 55.4 -2.7
OBN pmax pmax
comp=Z,21nm,1.4s
KIV Kislovodsk 139.88 311 *i* PKIKP PKPdf 16 16 58.6 -1.6
NB2 NORSAR Subarra 141.99 351 PKPa PKPdf 16 16 58.2 -5.8
comp=Z,9.8nm,0.7s,baz=7.2,slow=3.0
NOA NORSAR Array B 141.99 351 PKhKP 16 16 57.4
comp=Z,10.0nm,0.7s,baz=16,slow=4.5,SNR=22
NOA PKP PKPdf 16 17 03.3 -0.7
comp=Z,4.5nm,0.7s,baz=14,slow=4.0,SNR=5.3
MARD Mardin 142.76 301 *i* P PKPdf 16 17 02.8 -2.6
ANN Anapa 143.16 314 *i* PKIKP PKPdf 16 17 02.9 -3.1
ANN pmax pmax
comp=Z,123nm,0.9s
KELT Kelkit 143.34 306 *i* P PKPdf 16 17 05.3 -1.1
KONO Kongsberg 143.55 352 *e*PKIKP PKPdf 16 17 03.3 -3.4
GRSN GIRESUNGRSN 143.86 307 *i* P PKPdf 16 17 04.8 -2.4
ELZG Elazig 143.93 303 *i* P PKPdf 16 17 07.8 +0.4
MALT Malatya 144.40 303 ⇓ *i*P PKPdf 16 17 05.4 -2.8
MALT Malatya 144.40 303 *e*PKP PKPdf 16 17 08.2 0.0
AKASG Malin Array Be 144.94 327 PKP PKPdf 16 17 07.5 -1.6
comp=Z,15nm,0.4s,baz=43,slow=4.3,SNR=130
AKASG SKPbc SKPbc 16 19 57.8 +0.1
comp=Z,2.2nm,0.7s,baz=34,slow=2.0,SNR=6.2
AKASG PKKPbc 16 24 56.1
comp=Z,0.2nm,0.3s,baz=220,slow=2.1,SNR=4.9
AKASG Malin Array Be 144.94 327 PKIKP PKPdf 16 17 07.5 -1.6
AKASG 16 19 57.8
AKBB Malin Array Si 144.94 327 *e*PKIKP PKPdf 16 17 07.9 -1.2
SUW Suwalki 145.21 336 *e*PKP PKPdf 16 17 09.1 -0.5
SIM Simferopol' 145.25 316*d* iPKP2 PKPab 16 17 10.3 -1.5
SIM pmax pmax
comp=Z,47nm,0.9s
GZT Gaziantep 145.27 302 *i* P PKPdf 16 17 09.6 -0.1
KAC Achnashellach 146.09 5 *e*P PKPdf 16 17 10.9 -0.1
KAC Achnashellach 146.09 5 *e*P PKPdf 16 17 10.9 -0.1
BOYT Boyabat 146.12 310 *i* P PKPdf 16 17 13.4 +2.3
MCD Coleburn Disti 146.15 3 *e*P PKPdf 16 17 07.9 -3.3
MCD Coleburn Disti 146.15 3 *e*P PKPdf 16 17 07.9 -3.3
KSB Sheil Bridge 146.37 5 *e*P PKPdf 16 17 10.8 -0.7
KSB Sheil Bridge 146.37 5 *e*P PKPdf 16 17 10.8 -0.7
CTKT Corum 146.47 308 *i* P PKPdf 16 17 14.1 +2.4
COBT Iskenderun 146.47 301 *i* P PKPbc 16 17 14.7 +0.6
KAR1 Arisaig 146.62 6 *e*P PKPdf 16 17 10.8 -1.1
KAR1 Arisaig 146.62 6 *e*P PKPdf 16 17 10.8 -1.1
CDAG Cicekdag 147.09 307 *i* P PKPdf 16 17 15.1 +2.3
BALT Daday 147.14 311 *i* P PKPdf 16 17 14.4 +1.6
WAR Warsaw 147.40 336 *e*PKP PKPdf 16 17 15.2 +2.0
EAB Aberfoyle 147.47 5 *e*P PKPdf 16 17 10.5 -2.8
EAB Aberfoyle 147.47 5 *e*P PKPdf 16 17 10.5 -2.8
ELDT Eldivan 147.49 309 *i* P PKPbc 16 17 16.8 0.0
BR131 Keskin Array S 147.60 307 *e*PKPdf PKPdf 16 17 13.1 -0.4
BR131 *e*PKPbc PKPbc 16 17 16.5 -0.6
BR131 *e*PKPab PKPab 16 17 21.5 +0.3
BRTR Keskin Array B 147.60 307 PKP PKPdf 16 17 12.0 -1.6
comp=Z,7.0nm,0.7s,baz=124,slow=3.1,SNR=6.4
BRTR PKPbc PKPbc 16 17 16.6 -0.6
comp=Z,8.0nm,0.7s,baz=141,slow=4.7,SNR=38
BRTR PKPab PKPab 16 17 20.8 -0.5
comp=Z,15nm,0.7s,baz=91,slow=3.2,SNR=30
EDI Edinburgh 147.81 3 *e*P PKPbc 16 17 17.9 +0.3
EDI Edinburgh 147.81 3 *e*P PKPbc 16 17 17.9 +0.3
PGBU Glenifferbraes 147.83 5 *e*P PKPdf 16 17 13.0 -1.0
PGBU Glenifferbraes 147.83 5 *e*P PKPdf 16 17 13.0 -1.0
GKP Gorka Klasztor 147.83 341 *e*PKP PKPbc 16 17 16.7 -1.0
ESY Stoneypath 147.84 3 *e*P PKPdf 16 17 12.7 -1.3
ESY Stoneypath 147.84 3 *e*P PKPdf 16 17 12.7 -1.3
EAU Auchinoon 147.87 4 *e*P PKPdf 16 17 12.8 -1.2
EAU Auchinoon 147.87 4 *e*P PKPdf 16 17 12.8 -1.2
EBL Broad Law 147.97 3 *e*P PKPdf 16 17 15.0 +0.8
EBL Broad Law 147.97 3 *e*P PKPdf 16 17 15.0 +0.8
LVV L'vov 147.99 330 *e*PKHKP 16 17 16.2
LVV MLR MLR
comp=N,500nm,19.0s
LVV MLR MLR
comp=Z,100nm,19.0s
LVV MLR MLR
comp=E,500nm,20.0s
MEST Erdemli 148.11 302 *i* P PKPbc 16 17 18.2 -0.2
ANTO Ankara 148.16 308 ⇓ *i*P 16 17 02.1
ANTO Ankara 148.16 308 *e*PKP2 PKPbc 16 17 18.3 -0.2
ESK Eskdalemuir 148.41 4 *e*P PKPdf 16 17 14.1 -0.8
ESK Eskdalemuir 148.41 4 *e*P PKPdf 16 17 14.1 -0.8
EIL Elat 148.42 288 *e*PKPbc PKPbc 16 17 19.7 +0.5
SGKT Sivrigoynuk 148.43 310 *i* P PKPbc 16 17 18.6 -0.7
BWH Wardlaw 148.52 4 *e*P PKPdf 16 17 14.6 -0.5
BWH Wardlaw 148.52 4 *e*P PKPdf 16 17 14.6 -0.5
ECK Cauldkaine Hil 148.55 4 *e*P PKPdf 16 17 13.6 -1.5
ECK Cauldkaine Hil 148.55 4 *e*P PKPdf 16 17 13.6 -1.5
KWP Kalwaria 148.72 331 *e*PKP PKPbc 16 17 19.4 -0.5
CFR Carcaliu 148.81 320 ⇑ *i*P PKPdf 16 17 13.5 -2.0
BSEG Bad Segeberg 148.93 348 *e*pPKPbc pPKPbc 16 19 28.6 +3.2
BSEG *e*PP PP 16 20 51.6 -5.3
BURAR Bucovina Array 148.94 326⇑ *i*P PKPbc 16 17 20.2 -0.3
BDL Dobcross Hall 148.94 3 *e*P PKPdf 16 17 15.3 -0.5
BDL Dobcross Hall 148.94 3 *e*P PKPdf 16 17 15.3 -0.5
BBO1 Bothel 148.99 4 *e*P PKPdf 16 17 15.1 -0.7
BBO1 Bothel 148.99 4 *e*P PKPdf 16 17 15.1 -0.7
TIRR Tirgusor 149.04 319⇑ *i*P PKPdf 16 17 15.6 -0.3
KDHN Kadinhani 149.11 306 *i* P PKPbc 16 17 20.1 -0.8
HENT Hendek 149.14 311 *i* P PKPbc 16 17 20.0 -0.9
KOLS Kolonicke sedl 149.43 331 *e*PKP PKPbc 16 17 21.4 -0.2
WIM Isle of Man 149.47 6 *e*P PKPdf 16 17 15.0 -1.5
WIM Isle of Man 149.47 6 *e*P PKPdf 16 17 15.0 -1.5
OJC Ojcow 149.48 335 *i* PKPd PKPbc 16 17 21.0 -0.8
RUE Ruedersdorf 149.51 343 *e*PKPbc PKPbc 16 17 21.0 -0.8
PSN Preselentsi 149.59 318 *e*PKHKP 16 17 22.0
ESKT Eskisehir 149.68 308 *i* P PKPbc 16 17 21.6 -0.6

CRVS	**Cervenica-Dubn**	**149.81**	**331**	ePKP	PKPbc	16 17 22.3	-0.2
MLR	**Muntele Rosu**	**149.89**	**322**	⇓iP	PKPdf	16 17 12.9	-4.3
NIE	**Niedzica**	**149.90**	**333**	i PKPd	PKPbc	16 17 22.7	-0.1
NIE	**Niedzica**	**149.90**	**333**	⇓iPKP	PKPbc	16 17 22.8	0.0
DCN	**Croghan**	**149.96**	**9**	⇓iP	PKPbc	16 17 21.4	-1.5
DLF	**Lyons Farm**	**150.10**	**8**	⇓iP	PKPbc	16 17 21.5	-1.7
KSP	**Ksiaz**	**150.22**	**339**	ePKP	PKPbc	16 17 23.2	-0.3
KSP	**Ksiaz**	**150.22**	**339**	⇓iPKPdf	PKPbc	16 17 23.1	-0.4
KSP				ePKPab	PKPab	16 17 31.4	-0.7
WCB1	**Church Bay**	**150.24**	**6**	eP	PKPdf	16 17 14.3	-3.4
WCB1	**Church Bay**	**150.24**	**6**	eP	PKPdf	16 17 14.3	-3.4
LHO	**Holmfirth**	**150.25**	**2**	eP	PKPdf	16 17 17.8	0.0
LHO	**Holmfirth**	**150.25**	**2**	eP	PKPdf	16 17 17.8	0.0
NRDL	**Niedersach Rie**	**150.34**	**348**	ePKPbc	PKPbc	16 17 22.7	-1.1
YRC	**Rhoscolyn**	**150.36**	**6**	eP	PKPdf	16 17 21.9	+4.0
YRC	**Rhoscolyn**	**150.36**	**6**	eP	PKPdf	16 17 21.9	+4.0
OKC	**Ostrava-Krasne**	**150.42**	**336**	⇑ePKPB	PKPbc	16 17 23.3	-0.7
OKC				ePKPAB	PKPab	16 17 32.4	-0.5
OKC				AMS	AMS	17 25 00.0	
	comp=E,100nm,14.8s						
OKC	**Ostrava-Krasne**	**150.42**	**336**	ePKP	PKPbc	16 17 23.3	-0.7
OKC				e		16 17 32.4	
VOIR		**150.42**	**323**	⇑iP	PKPdf	16 17 13.8	-4.3
KBI1	**Birley Grange**	**150.55**	**2**	eP	PKPdf	16 17 18.7	+0.5
KBI1	**Birley Grange**	**150.55**	**2**	eP	PKPdf	16 17 18.7	+0.5
UPC	**Upice**	**150.60**	**339**	ePKPDF	PKPdf	16 17 19.7	+1.4
UPC				⇑ePKPB	PKPbc	16 17 23.9	-0.5
UPC				ePKPAB	PKPab	16 17 33.2	-0.4
TKTP	**Tekketepe**	**150.60**	**306**	i P	PKPbc	16 17 23.7	-0.7
DPC	**Dobruska-Polom**	**150.63**	**339**	ePKPDF	PKPdf	16 17 18.9	+0.5
DPC				⇑ePKPB	PKPbc	16 17 24.2	-0.3
DPC				ePKPAB	PKPab	16 17 33.7	-0.1
DPC				AMS	AMS	17 24 50.0	
	comp=E,200nm,22.8s						
ULDT	**Uludag**	**150.65**	**311**	i P	PKPbc	16 17 24.3	-0.2
MORC	**Moravsky Berou**	**150.69**	**337**	⇑iP		16 17 06.9	
MORC	**Moravsky Berou**	**150.69**	**337**	ePKIKP	PKPbc	16 17 23.8	-0.8
MORC				e		16 17 33.3	
DRGR		**150.75**	**327**	⇓iP	PKPdf	16 17 17.0	-1.6
KWE	**Weaver Farm**	**150.78**	**2**	eP	PKPdf	16 17 18.7	+0.1
KWE	**Weaver Farm**	**150.78**	**2**	eP	PKPdf	16 17 18.7	+0.1
CLL	**Collm**	**150.78**	**343**	ePKPbc	PKPbc	16 17 23.9	-0.9
CLL				ePKPab	PKPab	16 17 33.3	-1.1
CLL				epPKPbc	pPKPbc	16 19 33.6	+3.4
CLL	**Collm**	**150.78**	**343**	⇓iPKPbc	PKPbc	16 17 24.0	-0.8
	comp=Z,69nm,0.8s						
CLL				⇑iPKPab	PKPab	16 17 33.3	-1.1
	comp=Z,30nm,0.9s						
CLL				ex	x	16 17 44.0	
CLL				epPKPab	pPKPab	16 19 34.0	-0.9
CLL	**Collm**	**150.78**	**343**	⇓iPKIKP	PKPbc	16 17 24.0	-0.8
CLL				i		16 17 33.3	
CLL	**Collm**	**150.78**	**343**	⇓iPKP	PKPbc	16 17 24.0	-0.8
CLL				⇑iPKP	PKPab	16 17 33.3	-1.1
CLL				epPKP	pPKPdf	16 19 34.0	+8.7
SBD1	**Bryn Du**	**150.81**	**4**	eP	PKPdf	16 17 11.3	-7.3
SBD1	**Bryn Du**	**150.81**	**4**	eP	PKPdf	16 17 11.3	-7.3
GDZ	**Gediz**	**150.83**	**308**	i P	PKPbc	16 17 24.4	-0.6
CLZ	**Clausthal**	**150.90**	**347**	ePKPbc	PKPbc	16 17 24.4	-0.7
CLZ				ePKPab	PKPab	16 17 34.0	-0.9
BRG	**Berggiesshubel**	**150.91**	**342**	ePKPbc	PKPbc	16 17 24.3	-0.8
BRG				ePKPab	PKPab	16 17 34.1	-0.9
BRG	**Berggiesshubel**	**150.91**	**342**	⇓ePKP	PKPdf	16 17 18.1	-0.7
	comp=Z,2.1nm,1.1s						
BRG	**Berggiesshubel**	**150.91**	**342**	i PKP	PKPbc	16 17 24.5	-0.6
	comp=Z,24nm,0.6s						
BRG				i		16 17 34.2	
	comp=Z,12nm,0.9s						
BRG				epPKP	pPKPdf	16 19 34.5	+9.0
	comp=Z,4.9nm,1.4s						
BRG	**Berggiesshubel**	**150.91**	**342**	⇓ePKIKP	PKPdf	16 17 18.1	-0.7
BRG				i	PKPab	16 17 34.2	-0.8
BRG	**Berggiesshubel**	**150.91**	**342**	⇓ePKP	PKPdf	16 17 18.1	-0.7
BRG				i PKP	PKPbc	16 17 24.5	-0.6
BRG				i	PKPab	16 17 34.2	-0.8
BRG				epPKP	pPKPdf	16 19 34.5	+9.0
IBBN	**Ibbenburen**	**150.93**	**350**	ePKPbc	PKPbc	16 17 24.3	-0.8
FBE	**Freiberg**	**151.03**	**343**	ePKPbc	PKPbc	16 17 24.8	-0.6
FBE				ePKPab	PKPab	16 17 34.8	-0.7
FBE				epPKPbc	pPKPbc	16 19 34.7	+3.9
SZH	**Strazhica**	**151.20**	**319**	ePKIKP	PKPbc	16 17 24.2	-1.5
HLM1	**Long Mynd**	**151.22**	**4**	eP	PKPdf	16 17 17.8	-1.5
HLM1	**Long Mynd**	**151.22**	**4**	eP	PKPdf	16 17 17.8	-1.5
VYHS	**Vyhne**	**151.23**	**334**	ePKP	PKPbc	16 17 25.0	-0.8
VYHS				e		16 17 35.8	
PSZ	**Piszkesteto**	**151.24**	**332**	ePKIKP	PKPbc	16 17 24.7	-1.1
PSZ				e		16 17 36.4	
GTTG	**Gvttingen**	**151.27**	**347**	ePKPbc	PKPbc	16 17 26.2	+0.3
GTTG				ePKPab	PKPab	16 17 36.4	0.0
WTSB	**Winterswijk**	**151.40**	**351**	ePKiKP	PKiKP	16 17 25.2	-1.3
VRAC	**Vranov**	**151.42**	**337**	⇑iP	PKPbc	16 17 25.6	-0.7
PRU	**Pruhonice**	**151.52**	**340**	⇑ePKPB	PKPbc	16 17 25.7	-0.8
PRU				ePKPAB	PKPab	16 17 37.0	-0.5
PRU				AMS	AMS	17 24 40.0	
PRU	**Pruhonice**	**151.52**	**340**	ePKP	PKPbc	16 17 25.7	-0.8
PRU				e		16 17 37.0	
HTR	**Trewern Hill**	**151.63**	**4**	eP	PKPdf	16 17 17.5	-2.4
HTR	**Trewern Hill**	**151.63**	**4**	eP	PKPdf	16 17 17.5	-2.4
HAE	**Alders End**	**151.72**	**3**	eP	PKPdf	16 17 22.7	+2.7
HAE	**Alders End**	**151.72**	**3**	eP	PKPdf	16 17 22.7	+2.7
TANN	**Tannenbergstha**	**151.73**	**343**	ePKPbc	PKPbc	16 17 25.9	-1.0
TANN				ePKPab	PKPab	16 17 37.6	-0.8
MOX	**Moxa**	**151.74**	**344**	ePKPbc	PKPbc	16 17 25.9	-1.1
MOX				ePKPab	PKPab	16 17 37.3	-1.1
MOX	**Moxa**	**151.74**	**344**	eP	PKPbc	16 17 25.9	-1.1
	comp=Z,26nm,1.4s						
MOX				e		16 17 37.2	
MOX							
	comp=Z,100nm,21.0s						
WERD	**Werda**	**151.75**	**343**	ePKPbc	PKPbc	16 17 26.1	-0.9
WERD				ePKPab	PKPab	16 17 37.6	-0.9
SMOL	**Smolenice**	**151.77**	**335**	ePKP	PKPbc	16 17 26.9	-0.1
SMOL				e		16 17 38.9	
GUNZ	**Gunzen**	**151.81**	**343**	ePKPbc	PKPbc	16 17 26.5	-0.6
GUNZ				ePKPab	PKPab	16 17 38.2	-0.6
TREC	**Trest**	**151.82**	**338**	⇑ePKPB	PKPbc	16 17 27.1	0.0
TREC				ePKPAB	PKPab	16 17 38.1	-0.7
TREC				AMS	AMS	17 22 20.0	
TREC	**Trest**	**151.82**	**338**	ePKIKP	PKPbc	16 17 27.1	0.0
TREC				e		16 17 38.1	
WERN	**Wernitzgruen**	**151.87**	**343**	ePKPbc	PKPbc	16 17 26.7	-0.6
WERN				ePKPab	PKPab	16 17 38.3	-0.7
NKC	**Novy Kostel**	**151.90**	**343**	⇑ePKPB	PKPbc	16 17 26.6	-0.7
NKC				ePKPAB	PKPab	16 17 38.5	-0.6
UBBA	**Unterbreizbach**	**151.95**	**347**	ePKPbc	PKPbc	16 17 26.0	-1.4
UBBA				ePKPab	PKPab	16 17 37.6	-1.7
SKP1	**Kophill**	**152.10**	**1**	eP	PKPdf	16 17 24.0	+3.4
SKP1	**Kophill**	**152.10**	**1**	eP	PKPdf	16 17 24.0	+3.4
HGH	**Gray Hill**	**152.10**	**4**	eP	PKPdf	16 17 21.1	+0.6
HGH	**Gray Hill**	**152.10**	**4**	eP	PKPdf	16 17 21.1	+0.6
BZS	**Buzias**	**152.12**	**327**	⇑iP	PKPdf	16 17 14.0	-6.6
ZST	**Bratislava**	**152.16**	**335**	ePKP	PKPbc	16 17 27.2	-0.7
ZST				e		16 17 40.1	
MANZ	**Manzenberg**	**152.22**	**343**	ePKPbc	PKPbc	16 17 27.4	-0.6
MANZ				ePKPab	PKPab	16 17 39.8	-0.7
ROTZ	**Rotzenmuhle**	**152.39**	**343**	ePKPbc	PKPbc	16 17 27.4	-1.0
ROTZ				ePKPab	PKPab	16 17 40.7	-0.5
KHC	**Kasperske Hory**	**152.57**	**341**	ePKPDF	PKPdf	16 17 20.3	-1.0
KHC				⇑ePKPB	PKPbc	16 17 28.1	-0.7
KHC				ePKPAB	PKPab	16 17 41.5	-0.5
KHC				AMS	AMS	17 19 40.0	
	comp=Z,200nm,34.4s						
BEBN	**Eben Emael**	**152.69**	**352**	PKPab	PKPab	16 17 41.1	-1.4
HGN	**Heimansgroeve**	**152.69**	**352**	ePKiKP	PKPab	16 17 40.7	-1.8
	comp=Z,23nm,1.1s						
GRA1	**Grafenberg Arr**	**152.72**	**344**	ePKPbc	PKPbc	16 17 28.1	-1.0
GRA1				ePKPab	PKPab	16 17 42.1	-0.5
GRF	**Grafenberg Arr**	**152.72**	**344**	ePKPbc	PKPbc	16 17 28.1	-1.0
GRF				ePKPab	PKPab	16 17 42.1	-0.5
WET	**Wettzell**	**152.77**	**342**	ePKPbc	PKPbc	16 17 28.1	-1.1
WET				ePKPab	PKPab	16 17 42.4	-0.4
GEC2	**GERESS Array S**	**152.79**	**340**	ePKPbc	PKPbc	16 17 28.1	-1.2
GEC2				ePKPab	PKPab	16 17 42.0	-0.9
GERES	**GERESS Array B**	**152.79**	**340**	PKP	PKPdf	16 17 20.5	-1.0
	comp=Z,0.4nm,0.3s,baz=169,slow=2.0,SNR=5.9						
GERES				PKPbc	PKPbc	16 17 28.3	-1.0
	comp=Z,5.1nm,0.8s,baz=48,slow=2.0,SNR=25						
GERES				PKPab	PKPab	16 17 41.8	-1.1
	comp=Z,2.8nm,0.7s,baz=35,slow=4.9,SNR=8.2						
GERES				pPKPbc	pPKPbc	16 19 36.1	+1.2
	comp=Z,0.7nm,0.7s,baz=11,slow=2.7,SNR=3.2						
GERES	**GERESS Array B**	**152.79**	**340**	PKIKP	PKPdf	16 17 20.5	-1.1
GERES						16 17 41.8	
TNS	**Taunus Mts**	**152.82**	**348**	ePKPbc	PKPbc	16 17 28.3	-1.0
TNS				ePKPab	PKPab	16 17 41.8	-1.2
MEM	**Membach**	**152.84**	**352**	PKPbc	PKPbc	16 17 28.5	-0.9
MEM				PKPab	PKPab	16 17 41.6	-1.5
CONA	**Conrad Observa**	**152.85**	**336**	⇓iPKPdf	PKPdf	16 17 19.5	-2.1
CONA				⇑iPKPbc	PKPbc	16 17 27.5	-1.8
	comp=Z,16nm,1.2s						
CONA				⇑iPKPab	PKPab	16 17 42.1	-1.0
	comp=Z,25nm,0.8s						
PKSM	**Moragy**	**153.10**	**331**	⇓iP	PKPdf	16 17 12.8	-9.2
BCLA	**Clavier**	**153.11**	**353**	PKPab	PKPab	16 17 42.6	-1.7
SNF	**Seneffe**	**153.13**	**354**	PKPab	PKPab	16 17 43.0	-1.4
VTS	**Vitosha**	**153.22**	**320**	⇓iP	PKPbc	16 17 29.2	-1.0
VTS	**Vitosha**	**153.22**	**320**	eP	PKPbc	16 17 29.0	-1.2
BEO	**Belgrade**	**153.26**	**327**	i PKP	PKPdf	16 17 20.8	-1.4
MMB	**Musomiste**	**153.49**	**318**	ePKIKP	PKPbc	16 17 28.0	-2.8
DOU	**Dourbes**	**153.51**	**354**	PKPbc	PKPbc	16 17 30.1	-0.7
DOU				PKPab	PKPab	16 17 44.4	-1.6
ARSA	**Arzberg**	**153.54**	**336**	⇑i	PKPab	16 17 45.8	-0.3
	comp=Z,15nm,1.1s						
ARSA	**Arzberg**	**153.54**	**336**	⇑iPKiKP	PKiKP	16 17 30.4	-0.5
	comp=Z,3.7nm,0.9s						
ARSA				⇑iPKPab	PKPab	16 17 45.8	-0.3
	comp=Z,15nm,1.1s						
BAIF	**Baives**	**153.58**	**354**	ePKIKP	PKPdf	16 17 22.6	-0.1
WLF	**Walferdange**	**153.74**	**351**	ePKPbc	PKPbc	16 17 30.6	-0.7
WLF				ePKPab	PKPab	16 17 46.0	-1.0
WLF				ePP	PP	16 21 21.9	-2.1
WLF	**Walferdange**	**153.74**	**351**	PKPbc	PKPbc	16 17 31.1	-0.2
WLF				PKPab	PKPab	16 17 46.0	-1.0
DIVS	**Divcibare**	**154.00**	**326**	i PKP	PKPbc	16 17 30.8	-1.1
STU	**Stuttgart**	**154.05**	**346**	ePKPab	PKPab	16 17 47.2	-1.1
FUR	**Furstenfeldbru**	**154.11**	**343**	ePKPab	PKPab	16 17 48.2	-0.3
BFO	**Black Forest**	**154.65**	**347**	ePKPab	PKPab	16 17 49.6	-1.3
CDF	**Champ du Feu**	**154.78**	**349**	ePKIKP	PKPdf	16 17 23.5	-0.9
WTTA	**Wattenberg**	**154.82**	**341**	⇑iP	PKPdf	16 17 32.9	+8.5
	comp=Z,6.2nm,0.5s						
WTTA	**Wattenberg**	**154.82**	**341**	⇑i	PKPab	16 17 51.4	-0.2
	comp=Z,14nm,0.5s						
WTTA	**Wattenberg**	**154.82**	**341**	⇑iPKPdf	PKPdf	16 17 23.5	-0.9
	comp=Z,5.1nm,0.7s						
WTTA				⇑iPKPdf	PKPdf	16 17 32.9	+8.5
	comp=Z,6.2nm,0.5s						
WTTA				⇑iPKPab	PKPab	16 17 51.4	-0.2
	comp=Z,14nm,0.5s						
WTTA	**Wattenberg**	**154.82**	**341**	⇑iP	PKPdf	16 17 32.9	+8.5
WTTA				i	PKPab	16 17 51.4	-0.3
MOTA	**Moosalm**	**154.90**	**342**	⇓iP	PKPdf	16 17 33.5	+8.9
	comp=Z,7.0nm,1.2s						
MOTA	**Moosalm**	**154.90**	**342**	⇑i	PKPab	16 17 51.3	-0.7
	comp=Z,15nm,1.0s						
MOTA	**Moosalm**	**154.90**	**342**	⇑iPKPdf	PKPdf	16 17 22.9	-1.6
	comp=Z,2.9nm,0.6s						
MOTA				⇓iPKPdf	PKPdf	16 17 33.5	+8.9
	comp=Z,7.0nm,1.2s						
MOTA				⇑iPKPab	PKPab	16 17 51.3	-0.7
	comp=Z,15nm,1.0s						
MOTA	**Moosalm**	**154.90**	**342**	⇓iP	PKPdf	16 17 33.5	+8.9
MOTA				i	PKPab	16 17 51.3	-0.7
FLN	**La Foliniere**	**155.07**	**1**	ePKIKP	PKPdf	16 17 23.9	-0.9
HINF	**Hinteralfeld**	**155.43**	**349**	ePKIKP	PKPdf	16 17 24.6	-0.6
GRR	**Gorron**	**155.44**	**2**	ePKIKP	PKPdf	16 17 24.4	-0.8
LOR	**Lormes**	**156.38**	**354**	ePKIKP	PKPdf	16 17 25.0	-1.5
	comp=Z,12nm,1.1s						
SSF	**Saint Saulge**	**156.62**	**354**	ePKIKP	PKPdf	16 17 25.3	-1.5
	comp=Z,8.9nm,0.9s						
CABF	**La Chapelle**	**156.72**	**350**	ePKIKP	PKPdf	16 17 25.9	-1.0
	comp=Z,12nm,0.9s						
SMF	**Signal de Mont**	**157.00**	**353**	ePKIKP	PKPdf	16 17 26.8	-0.4
MFF	**Saint Martin d**	**157.23**	**0**	ePKIKP	PKPdf	16 17 27.9	+0.4
TCF	**Toulx Ste Croi**	**157.49**	**356**	ePKIKP	PKPdf	16 17 26.3	-1.6
	comp=Z,44nm,1.5s						
RJF	**Les Rejaudoux**	**158.50**	**357**	ePKIKP	PKPdf	16 17 28.8	-0.3
ETSF	**Etsaut**	**160.93**	**2**	ePKIKP	PKPdf	16 17 31.8	0.0
	comp=Z,8.9nm,0.9s						
LIC	**Lamto**	**161.85**	**163**	ePKIKP	PKPdf	16 17 31.4	-1.3
	comp=Z,47nm,1.2s						
DBIC	**Dimbokro**	**162.32**	**164**	PKP	PKPdf	16 17 33.1	-0.1
	comp=Z,7.1nm,0.8s,baz=284,slow=0.9,SNR=6.1						
DBIC				PKPab	PKPab	16 18 25.3	+1.0
	comp=Z,2.9nm,0.8s,baz=180,slow=7.1,SNR=2.6						
DBIC	**Dimbokro**	**162.32**	**164**	PKP	PKPdf	16 17 33.1	-0.1
DBIC				PKPab	PKPab	16 18 25.3	+1.0
ESDC	**Sonseca Array**	**163.79**	**11**	PKPab	PKPab	16 18 29.2	-1.6
	comp=Z,3.5nm,0.8s,baz=346,slow=4.9,SNR=15						
KEST	**Kesra**	**165.66**	**328**	PKPab	PKPab	16 18 38.8	-0.3
	comp=Z,4.2nm,0.9s,baz=188,slow=5.0,SNR=8.1						
TORD	**Torodi Ar. Bea**	**169.31**	**188**	PKP	PKPdf	16 17 37.9	-0.9
	comp=Z,5.1nm,1.1s,baz=285,slow=0.3,SNR=16						
TORD				PKPab	PKPab	16 18 55.5	+0.3
	comp=Z,1.5nm,0.7s,baz=166,slow=5.0,SNR=7.8						
TORD				pPKP	pPKPdf	16 19 47.5	+1.3
	comp=Z,1.1nm,1.0s,baz=220,slow=1.5,SNR=4.2						
TORD				pPKPab	pPKPab	16 20 57.9	+3.3
	comp=Z,1.9nm,1.0s,baz=177,slow=4.2,SNR=6.4						

CSEM ***07*** *16:09:27.5±0.3, 4569N×1099E, h2km, ML2.9/4, Error ellipse: s-maj=5.8km s-min=3.0km az=57.0*
ISCJB ***07*** *16:09:28.5±0.6, 4578N±003×1103E±004, h10km, Error ellipse: s-maj=4.0km s-min=3.8km az=159.5*
ROM ***07*** *16:09:28.7±0.5, 4575N×1106E, h10km, Md2.3/4, Ml1.9/3, Error ellipse: s-maj=8.3km s-min=3.5km az=163.0*
VIE ***07*** *16:09:29.9±0.6, 4582N×1105E, h8km, mb1.8/1, ML2.6/4, Error ellipse: s-maj=3.4km s-min=2.3km az=154.0 28 km SSW of Trento*
ISC 07 16:09:29.1±0.6**, 4575N**±003×**1103E**±004**, h10**km**, n14, σ0.49**/26**, 6C-6D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALO	**Salr**	**0.38**	**250**	Pg	**Pg**	**16 09 36.7**	**+0.1**
	298nm,0.3s						
MABI	**Malga Bissina**	**0.47**	**310**	⇓iPg	**Pg**	**16 09 38.3**	**0.0**
MABI				Sg	**Sg**	**16 09 45.0**	**+0.4**
	12nm,0.1s						
CTI	**Castel Tesino**	**0.52**	**55**	Pg	**Pg**	**16 09 39.2**	**0.0**
CTI				Sg	**Sg**	**16 09 45.7**	**-0.4**
	55nm,0.1s						
TEOL	**Teolo**	**0.59**	**131**	⇓iPg	**Pg**	**16 09 40.3**	**-0.3**
TEOL				i Sg	**Sg**	**16 09 47.8**	**-0.6**
MDI	**Monti di Nese**	**0.93**	**272**	Pg	**Pg**	**16 09 47.1**	**+0.2**
MDI				Sg	**Sg**	**16 09 59.2**	**+0.2**
	34nm,0.2s						
CAE	**Caneva**	**1.01**	**75**	⇓iPg	**Pg**	**16 09 58.2**	**+10**
CAE				i Sg	**Sg**	**16 10 14.8**	**+13**
DAVOX	**Davos**	**1.30**	**323**	Pg	**Pg**	**16 09 53.8**	**-0.3**
SCE	**Schlegeis**	**1.37**	**20**	⇓iPg	**Pg**	**16 09 55.1**	**-0.3**
SCE				eSg	**Sg**	**16 10 13.3**	**+0.1**
SQTA	**Sankt Quirin**	**1.48**	**5**	⇓iPg	**Pg**	**16 09 57.2**	**-0.1**
SQTA				⇑iSg	**Sg**	**16 10 16.8**	**+0.3**
	8.4nm,0.1s						
WTTA	**Wattenberg**	**1.57**	**15**	⇑iPg	**Pg**	**16 09 58.6**	**-0.6**
WTTA				⇑iSg	**Sg**	**16 10 19.4**	**-0.2**
	19nm,0.3s						
MOTA	**Moosalm**	**1.59**	**2**	⇑iPg	**Pg**	**16 09 59.5**	**-0.2**
MOTA				⇑iSg	**Sg**	**16 10 20.6**	**+0.2**
	2.9nm,0.2s						
WATA	**Walderalm**	**1.63**	**13**	⇑iPg	**Pg**	**16 09 59.6**	**-0.7**
WATA				⇓iSg	**Sg**	**16 10 21.5**	**0.0**
	7.3nm,0.2s						
WATA	**Walderalm**	**1.63**	**13**	Pg	**Pg**	**16 09 59.6**	**-0.7**
WATA				Sg	**Sg**	**16 10 21.5**	**0.0**
	7.3nm,0.2s						
VOY	**Vojsko**	**2.02**	**81**	ePn	**Pb**	**16 10 06.4**	**+0.6**
VOY				eSn	**Sb**	**16 10 32.7**	**+1.7**

ISCJB ***07*** *16:16:32.2±2.8, 369N±02×71.1E±02, h33km, Error ellipse: s-maj=28.1km s-min=18.1km az=62.1*
NNC ***07*** *16:16:42.5±13.0, 3751N×7159E, h250km±147km, mb2.5, mpv3.9, Error ellipse: s-maj=155.8km s-min=85.0km az=29.0*
ISC 07 16:16:33.2±2.8**, 368N**±02×**710E**±02**, h35**km**, n12, σ0.74**/14**, 1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.71**	**20**	P	**Pn**	**16 17 56.0**	**+0.6**
	SNR=47						
UCH	**Uchtor**	**6.05**	**25**	P	**Pn**	**16 18 00.2**	**+0.1**
	SNR=8.8						
KZA	**Kyzart**	**6.20**	**30**	P	**Pn**	**16 18 01.8**	**-0.4**
	SNR=6.5						
EKS2	**Erkin-Say**	**6.22**	**19**	P	**Pn**	**16 18 03.2**	**+0.7**
	SNR=14						
KK31	**Karatay Array**	**6.31**	**356**	P	**Pn**	**16 18 05.3**	**+1.6**
	3.8nm,0.2s,baz=177,slow=13,SNR=225						
KK31				⇑S	**Sn**	**16 19 14.1**	**-0.4**
	4.1nm,0.4s,baz=170,slow=23						
AAK	**Ala-Archa**	**6.40**	**24**	P	**Pn**	**16 18 05.5**	**+0.4**
	SNR=7.1						
ULHL	**Ulahol**	**6.76**	**35**	P	**Pn**	**16 18 08.8**	**-1.1**
	SNR=6.3						
CHMS	**Chumysh**	**6.81**	**24**	P	**Pn**	**16 18 10.4**	**-0.3**
	SNR=5.5						
USP	**Ospenovka**	**6.98**	**21**	P	**Pn**	**16 18 13.3**	**+0.3**
	SNR=9.8						
TKM2	**Tokmak 2**	**7.04**	**28**	P	**Pn**	**16 18 13.8**	**-0.1**
	SNR=11						
TKM2	**Tokmak 2**	**7.04**	**28**	P	**Pn**	**16 18 12.9**	**-0.9**
AB31	**Akbulak array**	**14.84**	**331**	⇓P	**Pn**	**16 19 59.4**	**-1.0**
	0.4nm,0.5s,baz=160,slow=11,SNR=7.8						
AB31				⇓S	**Sn**	**16 22 32.6**	**-11**
	0.4nm,0.4s,baz=156,slow=23,SNR=4.9						

MAN 07 16:18:11.7, 1339N×12019E, h3km, mb2.3, ML3.9, MS1.4, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.35**	**8**	eP	Pg	16 18 18.9	+0.5
LUBP				eS	Sg	16 18 23.9	+1.0
PGP	**Puerto Galera**	**0.75**	**81**	⇓eP	Pg	16 18 26.8	+0.7
TGY	**Tagaytay City**	**1.01**	**45**	⇓eP	Pg	16 18 34.2	+3.1
TGY				eS	Sg	16 18 48.2	+4.0
BUSP	**Coron**	**1.38**	**180**	eP	Pn	16 18 37.1	-0.7
BUSP				eS	Sg	16 18 54.0	-2.0
BOAC	**Boac**	**1.61**	**87**	eP	Pn	16 18 40.5	-0.4
BOAC				eS	Sn	16 19 05.7	+3.5

CSEM ***07*** *16:25:18.2, 1226N×4489E, h10km, ML3.8, After DHMR*
DHMR 07 16:25:18.2±0.5**, 1226N×4489E, h10**km±2km**, ML3.8, 2D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**0.52**	**10**	i P	Pg	16 25 28.3	-0.1
ADEN				i S	Sg	16 25 35.5	+0.2
ADEN				AML	AML	16 25 44.9	
	comp=E,6μm,0.5s						
ADEN	**Aden**	**0.52**	**10**	i P	Pg	16 25 28.3	-0.1
ADEN				i S	Sg	16 25 35.5	+0.2
	comp=E,3μm,0.5s						
TRBA	**At Turbah**	**1.23**	**322**	⇓iP	Pn	16 25 40.9	-0.5
TRBA				i S	Sb	16 25 58.8	+1.5
TRBA				AML	AML	16 26 11.4	
	comp=E,2μm,0.6s						
BDHA	**Al Bayda'**	**1.83**	**21**	eP	Pn	16 25 50.9	+1.2
BDHA				i S	Sn	16 26 16.5	+3.6
UDYN	**Al 'Udayn**	**1.92**	**332**	⇓iP	Pn	16 25 51.9	+0.9
UDYN				i S	Sn	16 26 18.2	+3.1
DHBB	**Dhamar BB**	**2.35**	**348**	i P	Pn	16 25 59.1	+2.3
HAJJ	**Hajjah**	**3.64**	**340**	i P	Pn	16 26 17.4	+2.8
HAJJ				i S	Sn	16 27 03.7	+6.1

KRSC 07 16:27:24, 5388N×15949E, h10km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.72**	**187**	eP	Pg	16 27 38.9	+1.1
NLC				i S	Sg	16 27 49.3	+2.1
AVH	**Avacha**	**0.76**	**216**	eP	Pg	16 27 40.0	+1.3
AVH				eS	Sg	16 27 51.3	+2.6
SPN	**Mys Shipunski**	**0.85**	**158**	i P	Pg	16 27 40.5	+0.2
SPN				i S	Sg	16 27 51.7	+0.4
GNL	**Ganaly**	**0.94**	**259**	eP	Pg	16 27 41.4	-0.6
GNL				i S	Sg	16 27 53.8	-0.4
PET	**Petropavlovsk**	**0.99**	**211**	eP	Pg	16 27 43.0	-0.1
PET				i S	Sg	16 27 56.2	+0.2
TUMR	**Tumrok**	**1.46**	**15**	P	Pn	16 27 51.2	+0.8
TUMR				i S	Sn	16 28 10.5	+1.0
MKZ	**Mys Kozlova**	**1.48**	**62**	eP	Pn	16 27 50.7	0.0
MKZ				i S	Sn	16 28 10.3	+0.2
RUS	**Russkaya**	**1.56**	**202**	eP	Pn	16 27 52.6	+0.8
RUS				i S	Sn	16 28 13.2	+1.0
GRL	**Gorelyy**	**1.58**	**213**	eP	Pn	16 27 54.0	+2.0
GRL				i S	Sn	16 28 15.5	+3.0
KMNR	**Kamenistaya**	**1.93**	**13**	eP	Pn	16 27 59.4	+2.5
KMNR				i S	Sn	16 28 24.4	+3.2
KPT	**Kopyto**	**2.13**	**11**	P	Pn	16 28 00.4	+0.7
KPT				i S	Sn	16 28 27.6	+1.4
KOZ	**Kozyrevsk**	**2.19**	**6**	P	Pn	16 28 01.7	+1.2
KOZ				i S	Sn	16 28 28.3	+0.6
ZLN	**Zelenaya**	**2.27**	**19**	P	Pn	16 28 02.5	+0.9
MIPR	**Malaya Ipel'ka**	**2.30**	**227**	eP	Pn	16 28 04.8	+2.8
KRSR	**Krestovskiy**	**2.42**	**14**	P	Pn	16 28 04.9	+1.3
SRDR	**Sredinnyy**	**2.45**	**3**	eP	Pn	16 28 05.1	+1.1
SRDR				eS	Sn	16 28 34.3	+0.4
KLY	**Klyuchi**	**2.53**	**15**	P	Pn	16 28 08.1	+3.0
KLY				i S	Sn	16 28 40.1	+4.2
SRKR	**Sorokina**	**2.94**	**18**	P	Pn	16 28 12.7	+1.9
KBTR	**Krutoberegovo**	**3.02**	**38**	eP	Pn	16 28 14.0	+2.2
KBTR				i S	Sn	16 28 49.5	+1.5

IDC ***07*** *16:32:48.6±1.3, 203N×12575E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/14, mbtmp3.7/4, Error ellipse: s-maj=201.3km s-min=21.0km az=68.0*
ISCJB ***07*** *16:32:56.3±2.3, 23N±0.1×1265E±02, h88km±23km, mb3.7/5, Error ellipse: s-maj=44.0km s-min=12.3km az=136.1*
NEIC ***07*** *16:32:59.5±0.7, 2.16N×12642E, h100km, mb4.1/2, Error ellipse: s-maj=29.1km s-min=9.7km az=60.0*
ISC 07 16:32:57.7±2.1**, 23N**±01×**1266E**±03**, h81**km±21km**, n15, σ0.81**/16**, mb3.7**/5**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**6.40**	**330**	eP	**Pn**	**16 34 29.1**	**-0.2**
IPIL	**Ipil**	**6.79**	**324**	⇓eP	**Pn**	**16 34 34.7**	**+0.1**
IPIL				eS	**Sn**	**16 35 45.4**	**-5.0**
IPIL	**Ipil**	**6.79**	**324**	eP	**Pn**	**16 34 34.0**	**-0.6**
KKM	**Kota Kinabalu**	**11.00**	**290**	eP	**Pn**	**16 35 32.7**	**+0.7**
FITZ	**Fitzroy Crossi**	**20.25**	**183**	eP	**P**	**16 37 25.3**	**-1.1**
	7.9nm,1.1s						
WRAB	**Tennant Creek**	**23.34**	**161**	eP	**P**	**16 37 57.5**	**-1.2**
WB2	**Warramunga Arr**	**23.34**	**161**	eP	**P**	**16 37 57.9**	**-0.8**
AS31	**Alice Springs**	**26.73**	**165**	eP	**P**	**16 38 30.0**	**+0.5**
ASAR	**Alice Springs**	**26.74**	**165**	P	**P**	**16 38 30.1**	**+0.6**
	0.3nm,0.4s,mb3.1,baz=344,slow=8.6,SNR=17						
ASPA	**Alice Springs**	**26.74**	**165**	eP	**P**	**16 38 30.0**	**+0.5**
STKA	**Stephens Creek**	**36.82**	**158**	P	**P**	**16 39 59.4**	**+1.7**
	0.7nm,0.3s,mb4.0,baz=350,slow=11,SNR=3.9						
STKA	**Stephens Creek**	**36.82**	**158**	eP	**P**	**16 39 59.2**	**+1.5**
SONM	**Songino Array**	**48.64**	**342**	P	**P**	**16 41 34.1**	**+0.8**
	0.4nm,0.8s,mb3.4,baz=162,slow=6.1,SNR=3.4						
MKAR	**Makanchi Array**	**58.67**	**326**	P	**P**	**16 42 46.0**	**-0.5**
	0.7nm,0.4s,mb4.0,baz=118,slow=8.3,SNR=10						
KURK	**Kurchatov**	**62.90**	**328**	eP	**P**	**16 43 14.6**	**-0.6**
	1.3nm,0.5s,mb4.1						

ISCJB ***07*** *16:48:06.8±3.2, 2.11N±0.06×1218E±0.1, h17km±24km, mb4.1/10, Error ellipse: s-maj=21.1km s-min=8.3km az=142.5*
IDC ***07*** *16:48:06.1±0.9, 208N×12182E, h0km, mb4.1/8, mb1 4.1/8, mb1mx3.9/18, mbtmp4.1/8, Error ellipse: s-maj=103.4km s-min=18.2km az=63.0*
NEIC ***07*** *16:48:09.9±3.5, 196N×12161E, h23km±26km, mb4.5/5, Error ellipse: s-maj=31.3km s-min=5.6km az=57.0*
ISC 07 16:48:10.5±3.3**, 215N**±005×**1219E**±01**, h28**km±25km**, n23, σ0.86**/26**, mb4.1**/10**, 1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**5.64**	**7**	⇓eP	**Pn**	**16 49 33.0**	**+0.5**
IPIL				eS	**Sn**	**16 50 32.8**	**-3.4**
IPIL	**Ipil**	**5.64**	**7**	eP	**Pn**	**16 49 33.5**	**+1.1**

IPIL				eS	Sn	16 50 34.2	-2.0
PAGZ	Pagadian	5.85	15	eP	Pn	16 49 37.1	+1.8
PAGZ				eS	Sn	16 50 40.0	-1.4
KKM	Kota Kinabalu	6.86	304	eP	Pn	16 49 47.4	-1.8
KAKA	Kakadu	18.10	145	eP	Pn	16 52 20.3	+0.4
	20nm,0.6s						
FITZ	Fitzroy Crossi	20.46	170	eP	P	16 52 44.5	-1.3
	12nm,0.6s						
WRAB	Tennant Creek	25.12	151	eP	P	16 53 32.7	-0.3
WB2	Warramunga Arr	25.13	151	eP	P	16 53 32.3	-0.8
AS31	Alice Springs	28.20	156	eP	P	16 54 00.7	0.0
ASPA	Alice Springs	28.20	156	eP	P	16 54 00.7	0.0
ASAR	Alice Springs	28.20	156	P	P	16 54 00.6	-0.2
	0.9nm,0.6s,mb3.6,baz=332,slow=9.2,SNR=16						
STKA	Stephens Creek	38.67	153	eP	P	16 55 32.1	+0.5
	3.2nm,0.8s,mb4.1						
STKA	Stephens Creek	38.67	153	P	P	16 55 31.8	+0.1
	4.0nm,0.8s,mb4.2,baz=321,slow=10,SNR=5.5						
SONM	Songino Array	47.44	346	P	P	16 56 43.4	+0.8
	0.8nm,0.9s,mb3.7,baz=155,slow=8.7,SNR=4.8						
SONM				PcP	PcP	16 58 11.2	-1.5
	0.9nm,0.8s,baz=166,slow=4.3,SNR=5.7						
MKAR	Makanchi Array	56.21	328	P	P	16 57 48.8	+0.8
	1.3nm,0.5s,mb4.3,baz=126,slow=8.6,SNR=18						
MKAR				PcP	PcP	16 58 45.1	-0.3
	0.9nm,0.6s,baz=117,slow=4.2,SNR=5.9						
ZAL	Zalesovo	59.91	336	P	P	16 58 14.6	+0.7
	0.9nm,0.7s,mb3.9,baz=14,slow=6.0,SNR=5.6						
ZAL	Zalesovo	59.91	336	P	P	16 58 14.6	+0.7
KURK	Kurchatov	60.57	330	eP	P	16 58 18.6	+0.2
	7.5nm,0.9s,mb4.8						
BVAR	Borovoye Array	66.08	329	P	P	16 58 54.9	0.0
	0.9nm,0.7s,mb3.9,baz=131,slow=8.8,SNR=6.4						
AKTK	Aktyubinsk	71.94	323	P	P	16 59 31.6	+0.4
AKTO	Aktyubinsk	71.94	323	P	P	16 59 31.6	+0.4
	2.6nm,0.8s,mb4.2,baz=126,slow=4.2,SNR=6.7						
ARU	Arti	73.73	329	eP	P	16 59 41.5	-0.4
	6.1nm,1.1s,mb4.4						
ASF	Jabal al Asfar	84.62	302	P	P	17 00 41.7	+0.3
	2.6nm,0.8s,mb4.4,baz=76,slow=12,SNR=4.2						

*NEIC **07** 16:56:34.2±1.7, 1143N×4520E, h10^{km}, mb4.7/18, Error ellipse: s-maj=34.9km s-min=15.1km az=171.0*
*DHMR **07** 16:56:34.2±1.4, 1207N×4495E, h6^{km}±6^{km}, ML4.7*
*IDC **07** 16:56:35.5±2.1, 1192N×4539E, h0^{km}, mb3.7/15, mb1 3.9/16, mb1mx3.8/24, mbtmp3.8/16, ML3.4/1, MS4.0/20, Ms1 4.0/20, ms1mx3.9/26, Error ellipse: s-maj=43.6km s-min=23.0km az=176.0*
*MOS **07** 16:56:38.2±1.9, 1201N×4546E, h10^{km}, mb4.8/18, Error ellipse: s-maj=13.5km s-min=6.0km az=101.4*
*BJI **07** 16:56:38.2, 1140N×4520E, h10^{km}, mB4.9, mb4.8, Ms4.6, Msz4.2*
*ISCJB **07** 16:56:41.4±0.5, 1234N±004×4504E±004, h10^{km}, mb4.4/43, MS4.0/23, Error ellipse: s-maj=6.7km s-min=6.1km az=76.9*
*CSEM **07** 16:56:44.3±0.3, 1275N×4511E, h8^{km}, mb4.8/14, Ms3.7, Error ellipse: s-maj=10.3km s-min=4.2km az=168.0*
ISC 07 16:56:43.5±0.5, **1233N**±005×**4498E**±005, **h10**^{km}, **(h20**^{km}±4.4^{km}**:pP-P), n132,** σ1^{s}**73**/133, **mb4.4**/43, **MS4.0**/23, **4C-3D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	Aden	0.44	0	iP	Pg	16 56 47.9	-4.2
ADEN				iS	Sg	16 56 57.2	-0.8
ADEN				AML	AML	16 57 05.1	
	comp=E,40µm,0.4s						
ADEN	Aden	0.44	0	iP	Pg	16 56 47.9	-4.2
ADEN				iS	Sg	16 56 57.2	-0.8
	comp=E,20µm,0.4s						
TRBA	At Turbah	1.23	317⇑	iP	Pn	16 57 00.8	-6.0
TRBA				iS	Sb	16 57 20.2	-2.5
BDHA	Al Bayda'	1.73	19	eP	Pn	16 57 09.0	-4.5
BDHA				iS	Sn	16 57 37.4	+1.7
BDHA				AML	AML	16 57 53.2	
	comp=E,13µm,0.9s						
UDYN	Al 'Udayn	1.90	329⇓	eP	Pn	16 57 11.5	-4.5
UDYN				iS	Sn	16 57 40.2	+0.2
ATD	Arta Tunnel	2.23	249	Pn	Pn	16 57 11.4	-9.1
	comp=E,36nm,0.3s,baz=55,slow=11,SNR=26						
ATD				Sn	Sg	16 57 48.6	-6.7
	comp=E,113nm,0.3s,baz=96,slow=23,SNR=6.8						
ATD				Lg		16 57 56.2	
	comp=E,215nm,0.3s,baz=174,slow=20,SNR=11						
ATD				LR	LR	16 58 13.8	
	comp=E,2µm,19.5s,baz=230,slow=39						
ATD	Arta Tunnel	2.23	249	Sn	Sg	16 57 48.6	-6.7
DHBB	Dhamar BB	2.30	346	iP	Pn	16 57 18.7	-2.7
DHBB				iS	Sn	16 57 54.3	+4.6
HAJJ	Hajjah	3.61	338⇑	eP	Pn	16 57 36.1	-3.3
HAJJ				iP		16 57 36.8	
HAJJ				iS	Sn	16 58 25.2	+3.2
HAJJ				AML	AML	16 59 00.3	
	comp=Z,3µm,1.0s						
HAJJ	Hajjah	3.61	338	iP	Pn	16 57 36.8	-2.6
DESE	Dese	5.37	258	eS	Sb	16 59 19.4	-2.6
RDF	Al-Radifah	16.68	8	eP	Pn	17 00 35.2	-2.1
RDF				AMb	AMB	17 00 48.9	
	comp=Z,142nm,1.3s						
WSAR	Wadi Sarin	16.91	48	Pn	Pn	17 00 32.2	-8.0
	comp=Z,0.1nm,0.3s,baz=240,slow=14,SNR=2.1						
WSAR				LR	LR	17 07 29.4	
	comp=Z,366nm,19.2s,baz=224,slow=39						
WSAR	Wadi Sarin	16.91	48	Pn	Pn	17 00 32.2	-8.0
WSAR				LR	LR	17 07 29.4	
NAY	Al-Naaiem	16.96	7	eP	Pn	17 00 38.4	-2.5
NAY				AMb	AMB	17 00 49.7	
	comp=Z,83nm,1.2s						
UMR	Umm Al-Rimmam	17.32	8	eP	Pn	17 00 42.5	-2.9
UMR				AMb	AMB	17 00 50.3	
	comp=Z,115nm,1.4s						
MIB	Mutribah	17.52	7	eP	Pn	17 00 44.5	-3.3
MIB				AMb	AMB	17 00 55.0	
	comp=Z,73nm,1.0s						
EIL	Elat	19.61	333	P	Pn	17 01 17.4	+4.2
	comp=Z,397nm,1.3s						
BHD	Baghdad	20.85	359	ex	x	17 01 21.0	
BHD				ex	x	17 05 10.0	
BHD				ex	x	17 09 53.0	
BHD				ex	x	17 11 39.0	
ASF	Jabal al Asfar	21.10	341	P	P	17 01 27.8	-0.3
	comp=Z,5.0nm,0.8s,mb3.9,baz=12,slow=5.1,SNR=5.5						
ASF				LR	LR	17 09 32.1	
	comp=Z,398nm,20.7s,MS3.8,baz=193,slow=36						
ASF	Jabal al Asfar	21.10	341	P	P	17 01 27.8	-0.3
ASF				LR	LR	17 09 32.1	
MMAI	Mount Meron Ar	22.38	338	P	P	17 01 41.2	-0.6
	comp=Z,1.4nm,0.6s,mb3.6,baz=156,slow=7.6,SNR=2.4						
MMAI				LR	LR	17 10 28.5	
	comp=Z,433nm,19.0s,MS3.9,baz=185,slow=36						
MSL	Mosul	23.92	356	ex	x	17 02 03.0	
MSL				ex	x	17 09 40.0	
MALT	Malatya	26.53	348	eP	P	17 02 24.0	+2.8
	comp=Z,1.4nm,0.4s,mb3.8						
MALT	Malatya	26.53	348	eP	P	17 02 24.0	+2.8
GNI	Garni	27.71	360	LR	LR	17 15 02.4	
	comp=Z,700nm,18.1s,MS4.3,baz=350,slow=39						
GNI	Garni	27.71	360	eP	P	17 02 31.5	-0.3
GNI				pmax	pmax		
	comp=Z,25nm,1.1s						
GNI	Garni	27.71	360	eP	P	17 02 31.5	-0.4
	comp=Z,25nm,1.1s,mb4.8						
GNI	Garni	27.71	360	eP	P	17 02 31.5	-0.3
	comp=Z,25nm,1.1s,mb4.8						
BRTR	Keskin Array B	29.07	342	P	P	17 02 41.4	-2.6
	comp=Z,0.5nm,0.7s,baz=163,slow=9.4,SNR=3.0						
BRTR				LR	LR	17 13 43.0	
	comp=Z,589nm,22.0s,MS4.2,baz=150,slow=35						
IDI	Anoyia	29.21	325	LR	LR	17 15 50.8	
	comp=Z,164nm,18.5s,MS3.7,baz=84,slow=39						
KIV	Kislovodsk	31.57	357	eP	P	17 03 06.5	+0.4
KIV				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.2						
KIV	Kislovodsk	31.57	357	eP	P	17 03 06.5	+0.4
	comp=Z,60nm,1.5s,mb5.2						
KIV	Kislovodsk	31.57	357	eP	P	17 03 06.5	+0.4
	comp=Z,60nm,1.5s,mb5.2						
GOF	Gofitskoye	32.66	357	eP	P	17 03 19.9	+4.3
ANN	Anapa	33.00	350	eP	P	17 03 23.3	+4.7
ANN				eS	S	17 08 37.7	+0.8
ANN				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
ANN				MLR	MLR		
	comp=Z,564nm,12.0s,MS4.5						
ANN	Anapa	33.00	350	eP	P	17 03 23.3	+4.7
	comp=Z,16nm,1.1s,mb4.9						
ANN				eS	S	17 08 37.7	+0.8
	comp=Z,564nm,12.0s						
VRSR	Storozhevoye	39.06	354	eP	P	17 04 16.2	+5.7
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
VRSR				pmax	pmax		
	comp=N,20nm,0.9s						
VRSR				pmax	pmax		
	comp=E,7.0nm,0.9s						
VRSR	Storozhevoye	39.06	354	eP	P	17 04 16.2	+5.7
	comp=E,10.0nm,1.0s,mb4.5						
AKTK	Aktyubinsk	39.47	13	P	P	17 04 10.0	-3.9
AKTK				LR	LR	17 23 52.7	
AKTK	Aktyubinsk	39.47	13	P	P	17 04 10.0	-3.9
AKTO	Aktyubinsk	39.47	13	P	P	17 04 10.0	-3.9
	comp=E,0.6nm,0.3s,mb3.8,baz=211,slow=18,SNR=2.4						
AKTO				LR	LR	17 23 52.7	
	comp=E,254nm,19.4s,MS4.1,baz=181,slow=41						
VOR	Voronezh	39.57	354	P	P	17 04 17.0	+2.2
VOR				pmax	pmax		
	comp=Z,50nm,1.8s,mb4.9						
VOR	Voronezh	39.57	354	P	P	17 04 17.0	+2.2
	comp=Z,50nm,1.8s,mb4.9						
AAK	Ala-Archa	39.58	35	eP	P	17 04 14.2	-0.6
KEST	Kesra	39.69	312	LR	LR	17 22 45.5	
	comp=Z,98nm,19.0s,MS3.7,baz=354,slow=39						
AKASG	Malin Array Be	40.37	345	P	P	17 04 20.1	-1.4
	comp=Z,1.5nm,0.8s,mb3.8,baz=168,slow=7.6,SNR=6.1						
AKASG				LR	LR	17 23 06.9	
	comp=Z,178nm,19.1s,MS3.9,baz=145,slow=39						
TORD	Torodi Ar. Bea	42.19	276	P	P	17 04 34.4	-2.0
	comp=Z,1.3nm,0.8s,mb3.6,baz=92,slow=7.0,SNR=4.7						
TORD				LR	LR	17 22 19.8	
	comp=Z,175nm,18.3s,MS4.0,baz=95,slow=36						
OBN	Obninsk	43.19	353⇓	iP	P	17 04 46.6	+2.1
OBN				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.6						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.1						
OBN	Obninsk	43.19	353	iP	P	17 04 46.6	+2.1
	comp=Z,200nm,17.0s						
MOS	Moscow	43.69	354	eP	P	17 04 47.8	-0.7
DPC	Dobruska-Polom	44.58	334	eP	P	17 04 54.8	-0.8
GEC2	GERESS Array S	44.68	331	eP	P	17 04 55.4	-1.1
GERES	GERESS Array B	44.68	331	P	P	17 04 53.5	-2.9
	comp=Z,2.3nm,0.9s,mb4.0,baz=152,slow=9.1,SNR=11						
GERES				LR	LR	17 27 43.0	
	comp=Z,72nm,18.1s,MS3.6,baz=96,slow=41						
UPC	Upice	44.83	334	eP	P	17 05 00.0	+2.4
ZRNK	Zerenda	44.84	20	eP	P	17 04 54.2	-3.5
ZRNK				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.5						
ZRNK	Zerenda	44.84	20	eP	P	17 04 54.2	-3.6
	comp=Z,12nm,1.4s,mb4.5						
ZRNK	Zerenda	44.84	20	eP	P	17 04 54.2	-3.5
	comp=Z,12nm,1.4s,mb4.5						
KHC	Kasperske Hory	44.94	331	eP	P	17 04 58.4	-0.1
BOSA	Boshof	44.95	205	LR	LR	17 24 43.5	
	comp=Z,212nm,19.6s,MS4.1,baz=41,slow=38						
PRU	Pruhonice	45.10	333	eP	P	17 05 01.6	+1.8
ARU	Arti	45.24	11	eP	P	17 04 58.8	-2.1
ARU				e		17 06 40.2	
ARU				MLR	MLR		
	comp=N,90nm,17.0s,MS3.8						
ARU				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.8						
ARU				MLR	MLR		
	comp=E,30nm,15.0s,MS3.8						
BRVK	Borovoye	45.38	21	eP	P	17 05 00.9	-1.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
BRVK	Borovoye	45.38	21	eP	P	17 05 00.9	-1.1
	comp=Z,4.1nm,1.0s,mb4.2						
BRVK	Borovoye	45.38	21	eP	P	17 05 00.9	-1.1
	comp=Z,4.1nm,1.0s,mb4.2						
BVAR	Borovoye Array	45.39	21	P	P	17 04 57.4	-4.6
	comp=Z,1.2nm,0.8s,mb3.8,baz=215,slow=6.7,SNR=6.3						
CHKZ	Chkalovo	45.99	21	P	P	17 05 01.4	-5.5
	comp=Z,2.4nm,0.8s,mb4.2						
CHKZ	Chkalovo	45.99	21	P	P	17 05 01.4	-5.5
BRG	Berggiesshubel	46.00	333	eP	P	17 05 08.5	+1.6
	comp=Z,2.5nm,1.0s,mb4.1						
BRG				e	pP	17 05 12.0	+1.9
	comp=Z,2.5nm,1.1s						
BRG	Berggiesshubel	46.00	333	eP	P	17 05 08.5	+1.6
BRG				e	pP	17 05 12.0	+2.0
BRG				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
LPG	La Plagne	46.31	323	eP	P	17 05 10.5	+1.1
	comp=Z,24nm,1.3s,mb4.7						
LPG	La Plagne	46.31	323	eP	P	17 05 10.5	+1.1
LPG				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
LPG	La Plagne	46.31	323	eP	P	17 05 10.5	+1.1
	comp=Z,12nm,1.3s,mb4.7						
LPL	La Plagne	46.33	323	eP	P	17 05 10.5	+1.0
	comp=Z,13nm,1.1s,mb4.5						
LPL	La Plagne	46.33	323	eP	P	17 05 10.5	+1.0
LPL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
LPL	La Plagne	46.33	323	eP	P	17 05 10.5	+1.0
	comp=Z,6.6nm,1.1s,mb4.5						
MKAR	Makanchi Array	46.51	35	P	P	17 05 05.4	-5.5
	comp=Z,0.6nm,0.8s,mb3.6,baz=245,slow=5.2,SNR=6.6						
MKAR	Makanchi Array	46.51	35⇑	eP	P	17 05 09.3	-1.6
ORIF	Oris-en-Rattie	46.52	322	eP	P	17 05 12.5	+1.5
	comp=Z,17nm,1.2s,mb4.5						
ORIF				eR			
	comp=Z,141nm,19.5s						
ORIF	Oris-en-Rattie	46.52	322	eP	P	17 05 12.5	+1.5
ORIF				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
ORIF	Oris-en-Rattie	46.52	322	eP	P	17 05 12.5	+1.5
	comp=Z,8.4nm,1.2s,mb4.5						
CLL	Collm	46.73	333	e(P)	P	17 05 14.0	+1.4
KURK	Kurchatov	47.08	29	eP	P	17 05 12.7	-2.7
	comp=Z,9.7nm,1.4s,mb4.5						
KURK	Kurchatov	47.08	29	eP	P	17 05 14.7	-0.7
CABF	La Chapelle	47.31	324	eP	P	17 05 18.6	+1.4
	comp=Z,32nm,1.2s,mb4.8						
CABF	La Chapelle	47.31	324	eP	P	17 05 18.6	+1.4
CABF				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
CABF	La Chapelle	47.31	324	eP	P	17 05 18.6	+1.4
	comp=Z,16nm,1.2s,mb4.8						
HINF	Hinteralfeld	47.56	326	eP	P	17 05 20.5	+1.4
	comp=Z,22nm,1.3s,mb4.7						
HINF	Hinteralfeld	47.56	326	eP	P	17 05 20.5	+1.4
HINF				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
HINF	Hinteralfeld	47.56	326	eP	P	17 05 20.5	+1.4
	comp=Z,11nm,1.3s,mb4.7						
CDF	Champ du Feu	47.67	327	eP	P	17 05 21.6	+1.6
	comp=Z,18nm,1.2s,mb4.7						
CDF	Champ du Feu	47.67	327	eP	P	17 05 21.6	+1.6
CDF				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
CDF	Champ du Feu	47.67	327	eP	P	17 05 21.6	+1.6
	comp=Z,9.1nm,1.2s,mb4.7						
KLMR	Klimovskoe	48.60	356	eP	P	17 05 25.3	-1.9
KLMR				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.4						
MEZF	Maizieres J'vi	48.94	326	eP	P	17 05 31.7	+1.9
LOR	Lormes	48.95	324	eP	P	17 05 31.2	+1.3
	comp=Z,48nm,1.4s,mb5.0						
LOR				eR			
	comp=Z,92nm,19.0s						
LOR	Lormes	48.95	324	eP	P	17 05 31.2	+1.3
LOR				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.0						
LOR				MLR	MLR		
	comp=Z,90nm,19.0s,MS3.8						
LOR	Lormes	48.95	324	eP	P	17 05 31.2	+1.3
	comp=Z,24nm,1.4s,mb5.0						
LOR				LR	LR		
	comp=Z,90nm,19.0s,MS3.8						
SSF	Saint Saulge	49.05	323	eP	P	17 05 31.8	+1.2
	comp=Z,15nm,1.1s,mb4.6						
SSF	Saint Saulge	49.05	323	eP	P	17 05 31.8	+1.2
SSF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
SSF	Saint Saulge	49.05	323	eP	P	17 05 31.8	+1.2
	comp=Z,7.4nm,1.1s,mb4.6						
BGF	Bois d'Agland	49.18	322	eP	P	17 05 33.3	+1.7
	comp=Z,24nm,1.1s,mb4.8						
BGF	Bois d'Agland	49.18	322	eP	P	17 05 33.3	+1.7
BGF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
BGF	Bois d'Agland	49.18	322	eP	P	17 05 33.3	+1.7
	comp=Z,12nm,1.1s,mb4.8						
DBIC	Dimbokro	49.42	268	LR	LR	17 25 26.5	
	comp=Z,71nm,20.0s,MS3.7,baz=65,slow=35						
TCF	Toulx Ste Croi	49.43	322	eP	P	17 05 35.7	+2.1
LFF	La Frestale	49.71	319	eP	P	17 05 37.7	+2.0
BAIF	Baives	50.27	327	eP	P	17 05 41.2	+1.3
FINES	FINESS Array B	50.92	348	P	P	17 05 43.2	-1.6
	comp=Z,1.3nm,0.9s,mb3.8,baz=131,slow=5.7,SNR=3.2						
FINES				LR	LR	17 30 47.3	
	comp=Z,143nm,18.6s,MS4.0,baz=171,slow=40						
ESDC	Sonseca Array	50.93	311	P	P	17 05 41.6	-3.3
	comp=Z,0.2nm,0.3s,mb3.6,baz=114,slow=8.7,SNR=3.0						
NVS	Novosibirsk	51.90	27	eP	P	17 05 50.7	-1.5
NVS				e		17 07 09.2	
NVS				pmax	pmax		
	comp=Z,18nm,1.8s,mb4.7						
NVS				pmax	pmax		
	comp=N,25nm,2.1s						
ZAL	Zalesovo	52.05	29	P	P	17 05 47.4	-5.9
	comp=N,1.1nm,0.6s,mb4.0,baz=249,slow=3.1,SNR=5.9						
ZAL				LR	LR	17 30 40.1	
	comp=N,301nm,19.1s,MS4.3,baz=240,slow=39						
ZAL	Zalesovo	52.05	29	iP	P	17 05 50.4	-2.9
ZAL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZAL	Zalesovo	52.05	29	P	P	17 05 47.4	-5.9
ZAL				LR	LR	17 30 40.1	
NB2	NORSAR Subarra	54.50	341	P	P	17 06 12.2	+0.9
	comp=Z,4.8nm,0.8s,mb4.5,baz=137,slow=7.4						
NOA	NORSAR Array B	54.50	341	P	P	17 06 09.3	-2.0
	comp=Z,0.5nm,0.5s,mb3.7,baz=137,slow=8.3,SNR=2.8						
NOA				LR	LR	17 30 52.9	
	comp=Z,176nm,20.6s,MS4.1,baz=130,slow=37						
NOA	NORSAR Array B	54.50	341	P	P	17 06 09.3	-2.0
NOA				LR	LR	17 30 52.9	
GTA	Gaotai	55.23	50	eP	P	17 06 22.5	+5.9
GTA				AP	pP	17 06 28.7	+8.9
GTA				XP	sP	17 06 31.6	+11
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.2						
GTA				AMB	AMB		
	comp=Z,54nm,3.8s						
GTA				LR	LR		
	comp=N,115nm,17.9s,MS4.1						
GTA				LR	LR		
	comp=E,91nm,16.0s,MS4.1						
GTA				LR	LR		
	comp=Z,95nm,17.1s,MS3.9						
KRAR	Krasnoyarsk	57.07	30	eP	P	17 06 20.1	-10
LZH	Lanzhou	57.74	55	eP	P	17 06 37.5	+3.0
LZH				AP	pP	17 06 45.1	+7.4
LZH				XP	sP	17 06 49.2	+10
LZH				AMB	AMB		
	comp=Z,21nm,1.4s,mb5.0						
SONM	Songino Array	61.85	42	P	P	17 06 57.1	-5.7
	comp=Z,2.1nm,1.1s,mb4.2,baz=242,slow=4.6,SNR=5.9						
SONM				LR	LR	17 38 36.9	
	comp=Z,126nm,19.2s,MS4.1,baz=274,slow=41						
BOD	Bodaibo	68.50	32	eP	P	17 07 39.7	-6.2
NJ2	Nanjing	69.97	60	eP	P	17 07 56.8	+1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
SSE	Sheshan	72.00	61	P	P	17 08 07.1	-0.3
SSE				AMB	AMB		
	comp=Z,27nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,68nm,5.4s						
SNY	Shenyang	73.42	50	⇓P	P	17 08 17.0	+1.2
SNY				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.8						
CN2	Changchun	74.72	48	eP	P	17 08 23.5	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
YAK	Yakutsk	76.72	29⇑	eP	P	17 08 37.2	+2.3
KLR	Kul'dur	78.68	42	eP	P	17 08 41.2	-4.6
KLR				MLR	MLR		
	comp=E,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,800nm,14.0s						
MAW	Mawson	80.77	173	LR	LR	17 38 09.8	
	comp=Z,78nm,20.5s,MS4.0,baz=43,slow=31						
HABR	Khabarovsk	80.93	42	eP	P	17 08 57.2	-0.8
HABR				eS	S	17 18 56.7	-10
MJAR	Matsushiro Arr	85.33	54	P	P	17 09 14.8	-5.9
	comp=Z,1.9nm,1.0s,mb4.2,baz=277,slow=7.0,SNR=2.8						
ASAR	Alice Springs	93.89	113	LR	LR	17 43 40.2	
	comp=Z,157nm,21.9s,MS4.4,baz=91,slow=30						

*CSEM **07** 16:59:50.6±0.7, 3887N×2924W, h0^{km}, ML2.7, Error ellipse: s-maj=6.8km s-min=3.9km az=86.0, After PDA*
*PDA **07** 16:59:50.6±0.7, 3887N×2924W, h0^{km}, MD3.4, ML2.7, Error ellipse: s-maj=6.8km s-min=3.9km az=86.0*
SVSA 07 16:59:50.6±0.7, **3887N**×**2924W, h0**^{km}**, MD3.4, ML2.7, Error ellipse: s-maj=6.8km s-min=3.9km az=86.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	Caldeira	0.51	125	erx		17 00 04.5	
HOR	Horta	0.59	126	eS	Sg	17 00 08.8	-0.8
PCND	Candelaria	0.73	123	eS	Sg	17 00 12.8	-1.3
PCND							
	181nm,0.2s						
PICO	Pico	0.74	120	eP	Pg	17 00 03.7	-1.1
PICO				eS	Sg	17 00 13.0	-1.3
PTEI	Pico do Teixo	0.79	118	eS	Sg	17 00 14.4	-1.6
PTEI							
	154nm,0.3s						
ROSA	Rosais	0.80	101	eP	Pg	17 00 04.0	-1.9
ROSA				eS	Sg	17 00 14.4	-1.8
PBOI	Pico dos Bois	0.81	123	eS	Sg	17 00 14.7	-1.8
PBOI							
	187nm,0.2s						
PAMA	Santo Amaro	0.85	103	eS	Sg	17 00 15.5	-2.5
PAMA							
	48nm,0.2s						
PMAN	Manadas	0.93	105	eP	Pg	17 00 05.8	-2.7
PMAN				eS	Sg	17 00 17.4	-3.2
PMAN							
	97nm,0.1s						
PMAN	Manadas	0.93	105	eP	Pg	17 00 05.8	-2.7
PMAN				eS	Sg	17 00 17.4	-3.2
SRBC	Serra Branca	0.95	80	erx		17 00 23.6	
PID	Ribeirinha	0.98	116	erx		17 00 15.7	
STGR	Santa Cruz	0.99	78	eS	Sg	17 00 18.9	-3.4
STGR							
	19nm,0.2s						

*ISCJB **07** 17:37:05.0±2.4, 2036S±009×1696E±02, h128^{km}±20^{km}, mb3.9/4, Error ellipse: s-maj=38.1km s-min=11.7km az=32.7*
*NEIC **07** 17:37:07.0±4.3, 2036S×16958E, h131^{km}±31^{km}, mb4.4/1, Error ellipse: s-maj=51.9km s-min=25.6km az=68.0*
*IDC **07** 17:37:08.0±5.3, 2050S×16954E, h137^{km}±39^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.4/10, mbtmp3.9/4, Error ellipse: s-maj=48.4km s-min=38.2km az=63.0*
ISC 07 17:37:06.1±2.3, **2035S**±009×**1696E**±02, **h122**^{km}±19^{km}, **n11,** σ0^{s}**72**/12, **mb3.9**/4, **1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKM	Butte a Klehm	2.97	334⇓	iP	Pn	17 37 52.3	+0.2
BKM				S	Sn	17 38 27.1	-0.4
DZM	Mont Dzumac	3.42	239	eP	Pn	17 37 58.5	+0.5
DZM				eS	Sn	17 38 37.5	-0.5
DZM	Mont Dzumac	3.42	239	P	Pn	17 37 58.7	+0.8
	29nm,0.3s,baz=52,slow=18,SNR=407						
DZM				S	Sn	17 38 37.9	-0.1
	27nm,0.3s,baz=328,slow=23,SNR=14						
ASAR	Alice Springs	33.22	258	P	P	17 43 31.4	+0.1
	1.0nm,0.6s,mb3.8,baz=89,slow=9.2,SNR=20						
ASAR	Alice Springs	33.22	258	P	P	17 43 31.4	+0.1
VNDA	Vanda	57.33	182	P	P	17 46 39.7	-1.6
	0.8nm,0.9s,mb3.7,baz=357,slow=7.3,SNR=2.7						
VNDA	Vanda	57.33	182	eP	P	17 46 39.6	-1.6
SBA	Scott Base	57.56	181	eP	P	17 46 43.6	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	3.4nm,0.8s,mb4.4						
SONM	Songino Array	88.32	323	P	P	17 49 44.4	+0.5
	0.3nm,0.5s,mb3.6,baz=134,slow=4.2,SNR=2.4						
KHC	Kasperske Hory	145.48	332	ePKP	PKPdf	17 56 29.0	-0.6
GERES	GERESS Array B	145.64	331	PKPbc	PKPbc	17 56 30.2	-0.2
	0.7nm,0.4s,baz=18,slow=2.1,SNR=7.6						

*IDC **07** 18:29:16.6±0.8, 0.72N×97.21E, h0^{km}, mb4.2/12, mb1 4.3/13, mb1mx4.1/19, mbtmp4.2/13, ML3.8/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/19, Error ellipse: s-maj=19.0km s-min=17.6km az=49.0*
*MOS **07** 18:29:19.6±0.9, 0.92N×97.62E, h33^{km}, mb4.7/12, Error ellipse: s-maj=49.1km s-min=10.9km az=108.8*
*BJI **07** 18:29:19.7, 0.64N×97.53E, h48^{km}, mB4.6, mb4.9, Ms4.1, Msz3.8*
*ISCJB **07** 18:29:20.5±1.2, 0.83N±0.06×97.37E±0.07, h38^{km}±9^{km}, mb4.5/39, MS3.9/5, Error ellipse: s-maj=12.8km s-min=8.8km az=113.3*
*NEIC **07** 18:29:22.7±2.7, 0.80N×97.41E, h39^{km}±22^{km}, mb4.5/13, Error ellipse: s-maj=25.8km s-min=7.5km az=52.0*
ISC 07 18:29:23.1±1.1, **0.87N**±0.06×**97.39E**±0.07, **h41**^{km}±9^{km}, **n65**, σ0^s**96**/69, **mb4.5**/39, **MS3.9**/5, **3C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.46	39	Pn	Pn	18 29 59.6	-1.0
	18nm,0.3s,baz=178,slow=7.8,SNR=26						
PSI				Lg		18 30 40.6	
	23nm,0.3s,baz=139,slow=18,SNR=3.9						
PSI				LR	LR	18 30 50.1	
	comp=Z,410nm,20.9s,baz=295,slow=36						
TSI	Tuntungan	2.86	24	⇓eP	Pn	18 30 06.9	+0.7
TSI				eS	Sn	18 30 49.3	+10
TSI	Tuntungan	2.86	24	eP	Pn	18 30 00.0	-6.2
PPI	Padang Panjang	3.29	114	P	Pn	18 30 20.3	+8.3
	144nm,0.6s						
IPM	Ipoh	5.10	45	P	Pn	18 30 38.2	+1.2
KULM	Kulim	5.46	37	eP	Pn	18 30 41.5	-0.5
KGM	Kluang	6.04	79	P	Pn	18 30 50.5	+0.7
CHTO	Chiang Mai	17.89	5	eP	Pn	18 33 26.7	-2.1
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHTO	Chiang Mai	17.89	5	eP	Pn	18 33 26.7	-2.1
	comp=Z,6.7nm,0.8s						
KMI	Kunming	24.66	12	P	P	18 34 40.1	+0.2
KMI				AP		18 34 47.2	
KMI				PP		18 35 16.2	
KMI				S	S	18 38 57.9	-0.7
KMI				SS		18 39 53.3	
KMI				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.4						
KMI				AMB	AMB		
	comp=Z,87nm,4.2s						
KMI				LR	LR		
	comp=N,265nm,16.1s,MS3.9						
KMI				LR	LR		
	comp=E,192nm,15.2s,MS3.9						
KMI				LR	LR		
	comp=Z,331nm,14.4s,MS4.0						
JIRN	Jiri	28.72	339	eP	P	18 35 19.5	+3.1
GUN	Gumba	29.06	339	eP	P	18 35 21.4	+2.0
	comp=Z,40nm,0.9s,mb5.2						
DMN	Daman	29.08	337	eP	P	18 35 23.3	+3.7
	comp=Z,13nm,0.8s,mb4.7						
KKN	Kakani	29.17	338	eP	P	18 35 22.6	+2.1
GKN	Gorkha	29.61	337	eP	P	18 35 25.3	+0.9
	comp=Z,13nm,0.7s,mb4.8						
KOLN	Koldanda	29.83	335	eP	P	18 35 27.5	+1.2
	comp=Z,13nm,0.7s,mb4.7						
FITZ	Fitzroy Crossi	33.59	126	P	P	18 35 58.2	-1.1
	comp=Z,2.4nm,0.9s,mb4.1,baz=97,slow=17,SNR=5.3						
XAN	Xi'an	34.72	17	P	P	18 36 07.9	-1.2
XAN				AMB	AMB		
	comp=Z,17nm,0.8s,mb5.0						
LZH	Lanzhou	35.55	9	eP	P	18 36 15.5	-0.7
LZH				AP	pP	18 36 25.1	-2.4
LZH				XP	sP	18 36 30.2	-2.2
LZH				AMB	AMB		
	comp=Z,22nm,1.4s,mb4.9						
NJ2	Nanjing	37.04	31	eP	P	18 36 28.9	-0.1
NJ2				PP	PP	18 37 53.9	0.0
NJ2				S	S	18 42 12.0	0.0
NJ2				XS	sS	18 42 31.0	+0.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,50nm,4.1s						
NJ2				LR	LR		
	comp=E,610nm,18.0s						
NJ2				LR	LR		
	comp=Z,610nm,18.2s,MS4.4						
SSE	Sheshan	37.57	35	P	P	18 36 30.8	-2.7
SSE				PP	PP	18 37 57.5	-2.2
SSE				PCP	PcP	18 38 46.3	-4.4
SSE				S	S	18 42 20.9	+0.9
SSE				XS	sS	18 42 36.1	-2.7
SSE				AMB	AMB		
	comp=Z,33nm,0.6s,mb5.2						
SSE				AMB	AMB		
	comp=Z,69nm,6.5s						
SSE				LR	LR		
	comp=N,40nm,14.4s,MS3.5						
SSE				LR	LR		
	comp=E,38nm,14.4s,MS3.5						
SSE				LR	LR		
	comp=Z,69nm,15.6s,MS3.6						
GTA	Gaotai	38.42	3	eP	P	18 36 40.7	+0.1
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.5						
WRAB	Tennant Creek	41.71	122	eP	P	18 37 08.0	+0.1
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
WRAB	Tennant Creek	41.71	122	eP	P	18 37 08.0	+0.1
	comp=Z,2.5nm,0.6s,mb4.0						
WB2	Warramunga Arr	41.71	122	eP	P	18 37 08.0	+0.1
BJT	Baijiatuau	42.55	21	eP	P	18 37 16.2	+1.4
BJT				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJT	Baijiatuau	42.55	21	eP	P	18 37 16.2	+1.5
	comp=Z,5.7nm,0.5s,mb4.6						
BJI	Beijing	42.57	21	eP	P	18 37 15.7	+0.8
BJI				AMB	AMB		
	comp=Z,21nm,0.7s,mb5.0						
BJI				LR	LR		
	comp=Z,48nm,15.9s,MS3.5						
ASPA	Alice Springs	43.05	127	eP	P	18 37 19.3	+0.5
AS31	Alice Springs	43.05	127	eP	P	18 37 19.3	+0.5
ASAR	Alice Springs	43.05	127	P	P	18 37 18.8	0.0
	comp=Z,1.4nm,0.6s,mb3.9,baz=324,slow=6.8,SNR=5.4						
AAK	Ala-Archa	46.37	337	eP	P	18 37 45.0	-0.3
SNY	Shenyang	47.11	27	⇓P	P	18 37 51.2	+0.2
SNY				AMB	AMB		
	comp=Z,12nm,0.5s,mb5.1						
SONM	Songino Array	47.42	8	P	P	18 37 54.0	+0.5
	comp=Z,2.0nm,0.4s,mb4.4,baz=189,slow=10.0,SNR=26						
SONM				PcP	PcP	18 39 24.3	+0.8
	comp=Z,1.1nm,0.8s,baz=182,slow=4.4,SNR=3.9						
ULN	Ulaanbaatar	47.55	9	eP	P	18 37 54.9	+0.4
	comp=Z,1.8nm,0.7s,mb4.2						
MKAR	Makanchi Array	47.60	346	P	P	18 37 55.5	+0.6
	comp=Z,9.0nm,0.5s,mb5.1,baz=160,slow=8.0,SNR=140						
CN2	Changchun	49.51	27	eP	P	18 38 09.3	-0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
MJAR	Matsushiro Arr	51.80	42	P	P	18 38 27.2	+0.4
	comp=Z,1.8nm,0.7s,mb4.1,baz=225,slow=5.8,SNR=6.6						
KURK	Kurchatov	52.16	345	⇑eP	P	18 38 29.8	+0.4
KURK	Kurchatov	52.16	345	eP	P	18 38 29.7	+0.2
	comp=Z,5.9nm,0.9s,mb4.5						
STKA	Stephens Creek	53.00	132	P	P	18 38 37.0	+1.3
	comp=Z,2.3nm,0.8s,mb4.2,baz=324,slow=14,SNR=4.1						
STKA				LR	LR	19 03 46.0	
	comp=Z,115nm,20.3s,MS3.9,baz=206,slow=39						
STKA	Stephens Creek	53.00	132	eP	P	18 38 35.7	0.0
STKA				LR	LR	19 03 46.0	
NVS	Novosibirsk	55.03	350	iP	P	18 38 50.5	0.0
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BRVK	Borovoye	56.68	341	eP	P	18 39 00.9	-1.4
	comp=Z,1.3nm,0.6s,mb4.1						
ZRNK	Zerenda	57.02	340	eP	P	18 39 04.1	-0.6
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ZRNK	Zerenda	57.02	340	eP	P	18 39 04.1	-0.6
	comp=Z,2.4nm,0.8s,mb4.3						
CHKZ	Chkalovo	57.09	341	eP	P	18 39 04.8	-0.5
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
CHKZ	Chkalovo	57.09	341	eP	P	18 39 04.8	-0.5
	comp=Z,6.0nm,0.8s,mb4.7						
BOD	Bodaibo	58.30	10	eP	P	18 39 13.3	-0.4
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
ARU	Arti	63.56	337	⇑iP	P	18 39 48.5	-0.9
ARU				eS	S	18 48 22.1	+2.0
ARU				eSS	SS	18 52 31.1	+3.4
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
KIV	Kislovodsk	64.68	319	eP	P	18 39 56.9	+0.1
KIV				pmax	pmax		
	comp=Z,14nm,2.5s,mb4.5						
YAK	Yakutsk	65.68	16	⇑eP	P	18 40 02.0	-1.3
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
BRTR	Keskin Array B	69.47	312	P	P	18 40 26.8	-0.4
	comp=Z,0.6nm,0.9s,mb3.5,baz=130,slow=6.0,SNR=3.2						
BRTR	Keskin Array B	69.47	312	P	P	18 40 26.8	-0.4
OBN	Obninsk	72.99	328	eP	P	18 40 47.3	-1.2
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
AKASG	Malin Array Be	75.63	322	P	P	18 41 03.2	-0.6
	comp=Z,1.8nm,0.7s,mb4.1,baz=92,slow=4.7,SNR=9.3						
AKASG	Malin Array Be	75.63	322	P	P	18 41 03.2	-0.7
JOF	Joensuu	78.52	335	ep	P	18 41 18.8	-1.2
FINES	FINESS Array B	80.37	333	P	P	18 41 30.1	-0.1
	comp=Z,1.3nm,0.6s,mb4.0,baz=92,slow=6.7,SNR=12						
KAF	Kangasniemi	80.46	333	ep	P	18 41 29.5	-1.1
	comp=Z,2.8nm,0.5s,mb4.5,baz=103,slow=4.9						
KAF	Kangasniemi	80.46	333	eP	P	18 41 29.5	-1.1
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
ARCES	ARCESS Array B	82.91	340	P	P	18 41 43.5	+0.1
	comp=Z,1.2nm,0.6s,mb4.1,baz=101,slow=5.2,SNR=12						
GERES	GERESS Array B	85.18	319	P	P	18 41 55.8	+0.7
	comp=Z,1.2nm,0.8s,mb4.0,baz=104,slow=5.6,SNR=7.8						
NOA	NORSAR Array B	87.38	331	P	P	18 42 05.9	0.0
	comp=Z,1.3nm,0.8s,mb4.2,baz=95,slow=4.9,SNR=3.3						
CPUP	Villa Florida	144.89	222	PKIKP	PKPdf	18 48 56.7	+1.1
CPUP				e		18 49 03.5	

*ISCJB **07** 18:58:15.5±0.7, 60.00N±0.08×142.32W±0.06, h10^{km}, mb3.7/4, Error ellipse: s-maj=11.8km s-min=4.3km az=7.6*
*PGC **07** 18:58:16.1, 59.67N×142.45W, h10^{km}, ML3.6/3, 172km northwest of Yakutat, Ak Off coast of southeastern Alaska.*
*NEIC **07** 18:58:18.2, 60.07N×142.45W, h1^{km}, ML3.4(AEIC), ML3.6(PGC), ML3.7(PMR), After AEIC.*
*IDC **07** 18:58:32.6±4.6, 62.58N×143.61W, h0^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.5/20, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=118.5km s-min=22.8km az=7.0*
ISC 07 18:58:16.5±0.7, **59.90N**±0.07×**142.43W**±0.06, **h10**^{km}, **n28**, σ1^s**35**/38, **mb3.7**/4, **Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCA	Pinnacle	1.11	79	P	Pb	18 58 38.6	+0.8
BMRM	Bremner River	1.52	316	P	Pn	18 58 42.5	-1.2
PNL	Peninsula	1.55	97	P	Pn	18 58 45.7	+1.5
EYAK	Cordova Ski Ar	1.78	293	P	Pn	18 58 47.2	-0.1
DIV	Divide	2.06	308	P	Pn	18 58 51.4	+0.2
HYT	Haines Junctio	2.62	67	Pn	Pn	18 59 00.6	+1.8
HYT				Pg	Pg	18 59 03.9	-2.8
HYT				Sg	Sg	18 59 40.3	-0.4
HYT				Trac		18 59 45.1	
	comp=Z,132nm,0.6s						
HYT	Haines Junctio	2.62	67	ePn	Pn	18 59 00.6	+1.8
HYT				ePg	Pg	18 59 03.9	-2.8
HYT				eSg	Sg	18 59 40.3	-0.4
PLBC	Pleasant Camp	3.11	96	ePn	Pn	18 59 03.8	-1.8
PLBC				ePg	Pb	18 59 07.9	-4.0
SKAG	Skagway	3.63	94	eP	Pn	18 59 14.0	+1.3
PMR	Palmer	3.70	300	eP	Pn	18 59 17.2	+3.5
RC01	Rabbit Creek A	3.81	291	P	Pn	18 59 14.8	-0.3
WHY	Whitehorse	3.84	75	Pn	Pn	18 59 15.3	-0.2
WHY				Pg	Pg	18 59 26.6	-3.4
WHY				Sg	Sg	19 00 18.7	-1.0
WHY				Trac		19 00 33.1	
	comp=Z,30nm,0.6s						
WHY	Whitehorse	3.84	75	P	Pn	18 59 17.3	+1.7
SLKM	Skilak Lake	3.94	282	ePn	Pn	18 59 15.2	-1.7
DAWY	Dawson	4.42	18	Pn	Pn	18 59 25.8	+2.1
DAWY				Pg	Pg	18 59 34.9	-6.3
DAWY				Sn	Sn	19 00 16.6	+1.4
DAWY				Trac		19 00 41.9	
	comp=Z,68nm,0.8s						
DAWY	Dawson	4.42	18	ePn	Pn	18 59 20.9	-2.7
MCK	McKinley	4.93	324	ePn	Pn	18 59 30.5	-0.1
COLA	College	5.59	336	eP	Pn	18 59 38.0	-1.7
	12nm,0.9s						
TTA	Tatalina	7.19	301	ePn	Pn	19 00 02.8	+1.1
	7.5nm,0.8s						
INK	Inuvik	9.29	21	Pn	Pn	19 00 32.4	+1.9
INK				Sn	Sn	19 02 09.0	-5.9
INK				Trac		19 03 26.9	
	comp=Z,4.0nm,0.8s						
INK	Inuvik	9.29	21	ePn	Pn	19 00 30.7	+0.3
	2.3nm,0.7s						
YKA	Yellowknife Ar	13.61	67	Pn	Pn	19 01 40.9	+11
	baz=269,slow=13,SNR=3.7						
JOF	Joensuu	57.41	3	ep	P	19 08 04.6	-0.6
FINES	FINESS Array B	58.66	6	P	P	19 08 13.3	-0.7
	0.6nm,0.5s,mb3.9,baz=15,slow=7.9,SNR=9.0						
FINES	FINESS Array B	58.66	6	P	P	19 08 13.3	-0.7
SONM	Songino Array	58.97	313	P	P	19 08 18.5	+2.4
	0.4nm,0.7s,mb3.5,baz=31,slow=8.7,SNR=3.3						
MKAR	Makanchi Array	67.58	328	P	P	19 09 13.2	0.0
	0.2nm,0.4s,mb3.5,baz=39,slow=7.8,SNR=5.6						
AKASG	Malin Array Be	69.55	6	P	P	19 09 25.3	-0.2
	0.8nm,0.6s,mb3.8,baz=356,slow=6.0,SNR=7.7						

*NEIC **07** 19:50:47.9±4.2, 18.15S×177.90W, h602^{km}±45^{km}, mb4.3/6, Error ellipse: s-maj=32.9km s-min=14.0km az=47.0*
*ISCJB **07** 19:50:48.6±2.9, 18.3S±0.2×178.0W±0.2, h629^{km}±42^{km}, mb4.3/10, Error ellipse: s-maj=35.6km s-min=23.2km az=116.1*
*IDC **07** 19:50:50.3±2.4, 18.24S×178.02W, h624^{km}±29^{km}, mb3.5/8, mb1 3.6/8, mb1mx3.4/15, mbtmp4.6/8, Error ellipse: s-maj=19.7km s-min=17.9km az=49.0*
ISC 07 19:50:49.9±3.0, **18.3S**±0.2×**177.9W**±0.2, **h624**^{km}±42^{km}, **n24**, σ0^s**55**/20, **mb4.3**/10, **3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	20.40	191	P	P	19 54 45.0	-1.1
	3.3nm,0.3s,baz=281,slow=1.9,SNR=4.9						
RPZ	Rata Peaks	27.04	198	P	P	19 55 44.6	-0.1
	17nm,1.0s,mb4.7,baz=18,slow=3.2,SNR=3.4						
CTA	Charters Tower	33.85	261	eP	P	19 56 42.8	0.0
	6.4nm,0.8s,mb4.3						
CTA	Charters Tower	33.85	261	P	P	19 56 42.9	+0.1
	4.5nm,0.4s,mb4.4,baz=96,slow=13,SNR=14						
CTAO	Charters Tower	33.85	261	eP	P	19 56 42.7	-0.1
	10nm,0.8s,mb4.5						
PMG	Port Moresby	34.98	280	P	P	19 56 52.6	+0.5
	16nm,0.8s,mb4.7,baz=65,slow=7.9,SNR=5.0						
STKA	Stephens Creek	38.88	242	eP	P	19 57 24.7	+0.9
	4.6nm,0.9s,mb4.0						
STKA	Stephens Creek	38.88	242	P	P	19 57 24.8	+1.0
	5.7nm,0.7s,mb4.2,baz=85,slow=11,SNR=9.1						
WB2	Warramunga Arr	45.02	260	eP	P	19 58 11.6	-0.1
WRAB	Tennant Creek	45.02	260	eP	P	19 58 11.3	-0.5
	10.0nm,0.7s,mb4.5						
AS31	Alice Springs	45.15	255	⇓iP	P	19 58 12.8	+0.1
ASAR	Alice Springs	45.15	255	P	P	19 58 12.9	+0.2
	27nm,1.1s,mb4.7,baz=93,slow=7.8,SNR=242						
ASAR				PcP	PcP	19 59 40.0	+0.7
	0.7nm,0.4s,baz=103,slow=4.1,SNR=6.7						
ASAR				S	S	20 04 07.7	-0.6
	0.6nm,0.8s,baz=91,slow=16,SNR=4.0						
ASPA	Alice Springs	45.15	255	⇓iP	P	19 58 12.8	+0.1
KAKA	Kakadu	48.05	269	eP	P	19 58 34.3	-0.1
	7.3nm,0.3s,mb4.7						
FITZ	Fitzroy Crossi	53.44	261	eP	P	19 59 13.7	+0.4
	8.3nm,1.0s,mb4.0						
MBWA	Marble Bar	58.45	256	P	P	19 59 47.2	-0.5
VNDA	Vanda	60.14	185	P	P	20 00 00.0	+1.1
	0.6nm,0.6s,mb3.0,baz=354,slow=5.2,SNR=6.1						
MJAR	Matsushiro Arr	68.46	323	P	P	20 00 50.7	-0.5
	2.7nm,0.5s,mb3.9,baz=155,slow=5.7,SNR=9.5						
MJAR	Matsushiro Arr	68.46	323	P	P	20 00 50.7	-0.5
ARCES	ARCESS Array B	126.73	350	PKP	PKPdf	20 08 42.9	-0.9
	2.2nm,1.0s,baz=64,slow=2.8,SNR=6.9						
AKASG	Malin Array Be	141.08	332	PKhKP		20 09 04.7	
	0.3nm,0.3s,baz=41,slow=3.7,SNR=5.2						
BRTR	Keskin Array B	145.36	315	PKPbc	PKPbc	20 09 19.6	+0.2
	1.0nm,0.5s,baz=122,slow=3.2,SNR=6.5						
CLL	Collm	145.90	348	⇓iPKPbc	PKPbc	20 09 20.8	-0.1
	comp=Z,5.0nm,0.5s						
GERES	GERESS Array B	148.06	345	PKPbc	PKPbc	20 09 26.7	+0.2
	comp=Z,1.1nm,0.7s,baz=90,slow=2.7,SNR=7.8						

*NEIC **07** 19:57:38.1, 38.09S×179.23E, h11^{km}, ML3.7(WEL), After WEL.*
WEL 07 19:57:40.1±0.5, **37.98S**×**179.16E**, **h33**^{km}, **ML3.7**/7, **1D, Error ellipse: s-maj=4.5km s-min=2.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	0.71	262	eP	Pn	19 57 52.8	-1.1
PUZ				S	Sn	19 58 03.0	-0.7
PUZ	Puketiti	0.71	262	⇓PN	Pn	19 57 52.8	-1.1
PUZ				SN	Sn	19 58 03.0	-0.7
MXZ	Matakaoa Point	0.79	302	P	Pn	19 57 54.9	0.0
MXZ	Matakaoa Point	0.79	302	PN	Pn	19 57 54.7	-0.2
MXZ				SN	Sn	19 58 05.2	-0.4
MWZ	Matawai	1.33	254	P	Pn	19 58 01.8	-0.6
MWZ	Matawai	1.33	254	PN	Pn	19 58 01.7	-0.6
MWZ				SN	Sn	19 58 18.8	-0.1
KNZ	Kokohu	1.56	228	eP	Pn	19 58 05.0	-0.5
KNZ	Kokohu	1.56	228	PN	Pn	19 58 05.0	-0.5
URZ	Urewera	1.64	260	eP	Pn	19 58 06.7	+0.1
URZ	Urewera	1.64	260	PN	Pn	19 58 06.6	0.0
BKZ	Black Stump Fm	2.40	240	eP	Pn	19 58 17.1	0.0
BKZ	Black Stump Fm	2.40	240	PN	Pn	19 58 16.8	-0.3
BKZ				SN	Sn	19 58 44.6	-0.7
TSZ	Takapari Road	3.24	229	eP	Pn	19 58 27.0	-1.6
TSZ	Takapari Road	3.24	229	PN	Pn	19 58 26.7	-1.9
BFZ	Birch Farm	3.52	219	eP	Pn	19 58 29.9	-2.5
LTZ	Lake Taylor	7.11	225	eP	Pn	19 59 18.3	-3.5

*IDC **07** 20:05:32.9±2.3, 43.48N×105.31W, h0^{km}, mb3.9/2, mb1 4.1/4, mb1mx3.6/22, mbtmp4.0/4, ML3.9/2, Error ellipse: s-maj=61.9km s-min=7.5km az=153.0*
*ISCJB **07** 20:05:33.2±0.6, 43.78N±0.04×105.06W±0.08, h0^{km}, mb4.0/2, Error ellipse: s-maj=7.9km s-min=5.6km az=11.0*
*NEIC **07** 20:05:35.1±0.5, 43.69N×105.13W, h0^{km}, ML3.4, Error ellipse: s-maj=9.4km s-min=6.2km az=149.0, Suspected Mining explosion.*
NEIC 75 km [45 miles] SSE of Gillette.
ISC 07 20:05:35.2±0.5, **43.75N**±0.04×**105.14W**±0.07, **h0**^{km}, **n21**, σ1^s**09**/26, **mb4.0**/2, **Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.88	65	eP	Pg	20 05 53.9	+1.8
PHWY	Pilot Hill	2.46	186	ePn	Pn	20 06 15.6	-0.9
PHWY				eSn	Sn	20 06 48.1	+0.9
RWWY	Rawlins	2.56	217	ePn	Pn	20 06 17.7	-0.2
RWWY				eSn	Sn	20 06 49.4	-0.4
LAO	LASA Array	3.04	346	ePn	Pn	20 06 24.9	+0.4
BW06	Boulder Array	3.37	255	ePn	Pn	20 06 27.2	-1.8
BW06				eSn	Sn	20 07 13.6	+3.8
PDAR	Pinedale Array	3.37	255	Pn	Pn	20 06 28.5	-0.6
	14nm,0.3s,baz=78,slow=17,SNR=52						
PDAR				Pg	Pg	20 06 32.9	-6.9
	15nm,0.3s,baz=72,slow=21,SNR=62						
PDAR				Lg		20 07 13.4	
	21nm,0.3s,baz=69,slow=33,SNR=13						
LKWY	Lake	3.87	284	ePn	Pn	20 06 38.5	+2.6
ISCO	Idaho Springs	3.96	185	ePn	Pn	20 06 36.9	-0.3
ISCO				eSn	Sb	20 07 35.1	+0.8
FLWY	Flagg Ranch	4.03	277	ePn	Pn	20 06 38.2	+0.1
MOOW	Moose Ponds	4.06	272	ePn	Pn	20 06 38.6	+0.1
SNOW	Snow King Moun	4.09	268	Pn	Pn	20 06 38.8	-0.1
REDW	Red Top Meadow	4.17	267	ePn	Pn	20 06 40.6	+0.6
IMW	Indian Meadow	4.20	274	ePn	Pn	20 06 42.1	+1.7
YMR	Madison River	4.29	284	ePn	Pn	20 06 42.5	+0.8
RRI2	Red Ridge	4.51	267	ePn	Pn	20 06 44.2	-0.5
BOZ	Bozeman (W)	5.00	295	Pn	Pn	20 06 56.1	+4.7
DAU	Daniels Canyon	5.64	236	ePn	Pn	20 07 00.8	+0.5
BGU	Big Grassy Mou	6.49	247	ePn	Pn	20 07 10.0	-1.9
ULM	Lac du Bonnet	9.07	41	Pn	Pn	20 07 47.0	-0.4
	1.9nm,0.3s,baz=231,slow=11,SNR=24						
ULM				Lg		20 10 20.7	
	0.4nm,0.3s,baz=133,slow=18,SNR=2.3						
ARCES	ARCESS Array B	61.38	18	P	P	20 15 51.5	-1.4
	0.4nm,0.4s,mb3.9,baz=337,slow=6.9,SNR=12						
FINES	FINESS Array B	67.99	23	P	P	20 16 34.6	-1.5
	1.5nm,1.0s,mb4.2,baz=328,slow=6.8,SNR=4.4						

*BJI **07** 20:07:19.4, 10.68S×108.41E, h10^{km}, mB4.8, mb4.8, Ms4.4, Msz4.0*
*IDC **07** 20:07:26.1±0.6, 9.92S×108.00E, h0^{km}, mb4.4/13, mb1 4.5/14, mb1mx4.4/18, mbtmp4.4/14, ML3.8/1, MS3.9/10, Ms1 3.9/10, ms1mx3.5/22, Error ellipse: s-maj=24.9km s-min=13.8km az=63.0*
*NEIC **07** 20:07:27.6±0.3, 9.84S×108.06E, h10^{km}, mb4.9/12, Error ellipse: s-maj=10.9km s-min=5.6km az=53.0*
*ISCJB **07** 20:07:29.5±1.1, 9.86S±0.05×108.06E±0.06, h37^{km}±9^{km}, mb4.7/41, MS3.9/12, Error ellipse: s-maj=11.4km s-min=6.8km az=106.5*
*MOS **07** 20:07:29.1±1.0, 9.77S×108.23E, h33^{km}, mb4.8/13, Error ellipse: s-maj=19.6km s-min=8.9km az=108.7*
ISC 07 20:07:32.0±0.9, **9.86S**±0.05×**108.06E**±0.06, **h41**^{km}±8^{km}, **h34**^{km}±4.6^{km}**:pP-P**, **n91**, σ0^s**99**/90, **mb4.7**/41, **MS3.9**/12, **7C-2D, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	2.99	33	P	Pn	20 08 15.4	-1.5
	118nm,1.2s						
BJII	Banjamegara	2.99	33	⇓iP	Pn	20 08 11.2	-5.7
BJII				iS	Sn	20 08 43.3	-8.2
BJII	Banjamegara	2.99	33	⇑eP	Pn	20 08 17.1	+0.2
BJII				eS	Sn	20 08 57.0	+5.5
LEM	Lembang	3.05	352	P	Pn	20 08 16.7	-1.0
	1µm,0.9s						
JCJI	Jatiwangi	3.35	4	P	Pn	20 08 17.8	-4.1
	2µm,0.9s						
CBJI	Citeko	3.62	341	P	Pn	20 08 19.9	-5.7
	2µm,0.7s						
SBJI	Serang	4.18	333	P	Pn	20 08 35.2	+2.0
	422nm,0.9s						
KRKI	Karangkates	4.65	69	P	Pn	20 08 39.2	-0.5
	798nm,1.0s						
NBBI	Negara	6.64	78	P	Pn	20 09 07.9	+0.9
	705nm,0.7s						
KSI	Kapahiang	8.22	318	P	Pn	20 09 27.8	-0.9
	114nm,0.8s						
PSI	Prapat	15.53	324	LR	LR	20 18 42.8	
	comp=Z,288nm,18.6s,baz=140,slow=44						
MBWA	Marble Bar	15.88	136	eP	Pn	20 11 06.7	-5.8
	129nm,2.2s						
FITZ	Fitzroy Crossi	18.91	118	eP	Pn	20 11 50.0	0.0
	8.8nm,0.6s						
FITZ	Fitzroy Crossi	18.91	118	P	Pn	20 11 49.9	-0.1
	0.2nm,0.3s,baz=246,slow=6.7,SNR=13						
BSI	Banda Aceh	19.86	320	P	Pn	20 11 59.3	-2.1
	123nm,1.1s						
NWAO	Narrogin (SRO)	24.46	161	P	P	20 12 46.5	-0.5
	17nm,1.1s,mb4.4,baz=238,slow=23,SNR=5.3						
NWAO				LR	LR	20 20 27.4	
	comp=Z,309nm,20.1s,MS3.8,baz=16,slow=32						
NST	Nakhon Sawan	26.56	343	P	P	20 13 06.0	0.0
WRAB	Tennant Creek	27.27	115	eP	P	20 13 11.9	-0.5
WRAB	Tennant Creek	27.27	115	eP	P	20 13 12.6	+0.2
WB2	Warramunga Arr	27.27	115	eP	P	20 13 12.8	+0.4
ASPA	Alice Springs	28.22	122	eP	P	20 13 22.0	+1.1
ASAR	Alice Springs	28.23	122	P	P	20 13 20.8	-0.2
	4.2nm,0.9s,mb4.1,baz=299,slow=9.1,SNR=18						

ASAR				LR	LR	20 24 23.7	
	comp=Z,156nm,20.5s,MS3.6,baz=92,slow=36						
AS31	Alice Springs	28.23	122	eP	P	20 13 22.0	+1.0
CHG	Chiang Mai	29.88	342	⇓P	P	20 13 36.4	+0.8
	21nm,0.9s,mb4.9						
CHTO	Chiang Mai	29.88	342	eP	P	20 13 34.8	-0.8
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
CHTO	Chiang Mai	29.88	342	eP	P	20 13 34.8	-0.9
	comp=Z,16nm,0.9s,mb4.8						
KMI	Kunming	35.16	352	P	P	20 14 23.1	+1.3
KMI				AP	pP	20 14 33.0	0.0
KMI				XP	sP	20 14 37.7	-0.2
KMI				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.5						
KMI				AMB	AMB		
	comp=Z,70nm,4.3s						
KMI				LR	LR		
	comp=N,243nm,12.2s,MS4.2						
KMI				LR	LR		
	comp=E,164nm,14.6s,MS4.2						
KMI				LR	LR		
	comp=Z,194nm,12.2s,MS4.1						
STKA	Stephens Creek	37.98	130	P	P	20 14 46.0	+0.2
	comp=Z,20nm,0.8s,mb4.9,baz=296,slow=8.9,SNR=25						
STKA				LR	LR	20 28 56.5	
	comp=Z,190nm,18.2s,MS3.9,baz=207,slow=34						
STKA	Stephens Creek	37.98	130	eP	P	20 14 45.9	0.0
STKA				e	pP	20 14 57.5	+0.3
STKA				LR	LR	20 28 56.5	
HYB	Hyderabad	39.81	313	iP	P	20 14 58.0	-3.2
HYB				e		20 15 12.0	
WHN	Wuhan	40.62	8	eP	P	20 15 08.5	+0.6
CD2	Chengdu	40.74	354	P	P	20 15 09.4	+0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
SSE	Sheshan	42.62	17	P	P	20 15 23.6	-0.7
SSE				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,112nm,6.2s						
NJ2	Nanjing	42.93	13	eP	P	20 15 26.2	-0.6
NJ2				PP	PP	20 17 08.9	+2.0
NJ2				S	S	20 21 48.0	-0.9
NJ2				XS	sS	20 22 10.0	+2.0
NJ2				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,150nm,8.3s						
NJ2				LR	LR		
	comp=N,120nm,14.0s						
NJ2				LR	LR		
	comp=E,500nm,22.0s						
PKI	Pulchoki	43.20	330	eP	P	20 15 29.5	+0.6
GUN	Gumba	43.26	331	eP	P	20 15 29.8	+0.4
	comp=E,51nm,1.0s,mb5.2						
DMN	Daman	43.38	330	eP	P	20 15 31.0	+0.6
	comp=E,49nm,1.0s,mb5.2						
KKN	Kakani	43.45	330	eP	P	20 15 31.2	+0.3
	comp=E,39nm,1.0s,mb5.1						
KKN	Kakani	43.45	330	eP	P	20 15 31.2	+0.3
KKN				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.1						
XAN	Xi'an	43.66	1	P	P	20 15 32.3	-0.4
XAN				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.9						
GKN	Gorkha	43.94	330	eP	P	20 15 35.2	+0.3
KOLN	Koldanda	44.28	328	eP	P	20 15 37.8	+0.2
	comp=Z,26nm,0.8s,mb5.0						
LZH	Lanzhou	45.87	355	eP	P	20 15 52.0	+1.8
LZH				AP	pP	20 15 58.5	-3.3
LZH				XP	sP	20 16 02.0	-4.6
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,155nm,5.7s						
GTA	Gaotai	49.61	352	eP	P	20 16 20.9	+1.7
GTA				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.5						
GTA				AMB	AMB		
	comp=Z,130nm,5.3s						
GTA				LR	LR		
	comp=N,113nm,19.0s,MS4.0						
GTA				LR	LR		
	comp=E,83nm,15.6s,MS4.0						
GTA				LR	LR		
	comp=Z,112nm,17.5s,MS3.9						
BJI	Beijing	50.21	8	eP	P	20 16 23.7	-0.1
BJI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
BJI				LR	LR		
	comp=Z,71nm,18.4s,MS3.7						
BTO	Baotou	50.24	2	eP	P	20 16 23.9	-0.1
SNY	Shenyang	53.37	14	⇑P	P	20 16 49.4	+2.1
SNY				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb5.0						
MJAR	Matsushiro Arr	54.17	30	P	P	20 16 50.5	-2.7
	comp=Z,2.7nm,1.0s,mb4.1,baz=205,slow=7.6,SNR=5.5						
MJAR				LR	LR	20 43 41.7	
	comp=Z,69nm,18.3s,MS3.8,baz=265,slow=40						
WMQ	Urumqi	56.54	342	eP	P	20 17 10.5	+0.2
WMQ				AMB	AMB		
	comp=Z,14nm,1.0s,mb5.0						
SONM	Songino Array	57.46	359	P	P	20 17 16.9	+0.2
	comp=Z,6.4nm,0.8s,mb4.7,baz=171,slow=7.9,SNR=20						
SONM				LR	LR	20 43 12.3	
	comp=Z,146nm,21.4s,MS4.0,baz=86,slow=37						
ULN	Ulaanbaatar	57.48	359	eP	P	20 17 16.5	-0.4
MDJ	Mudanjiang	57.62	18	P	P	20 17 16.7	-1.1
OPO	Ambohidratompo	59.42	254	P	P	20 17 30.4	0.0
	comp=Z,1.8nm,1.0s,mb4.0,baz=106,slow=7.4,SNR=3.6						
ZAK	Zakamensk	60.13	356	eP	P	20 17 35.6	+0.3
AAK	Ala-Archa	60.59	332	eP	P	20 17 38.4	0.0
AAK				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.6						
MKAR	Makanchi Array	60.92	340	P	P	20 17 40.8	+0.2
	comp=Z,4.9nm,0.8s,mb4.7,baz=134,slow=6.9,SNR=23						
MKAR	Makanchi Array	60.92	340	iP	P	20 17 40.7	+0.1
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLR	Kul'dur	62.41	17	eP	P	20 17 45.7	-5.0
YSS	Yuzh-Sakhalins	64.46	26	⇑eP	P	20 18 05.6	+1.3
YSS				pmax	pmax		
	comp=Z,27nm,2.3s,mb4.9						
MAW	Mawson	64.96	197	P	P	20 18 06.7	-0.8
	comp=Z,6.2nm,0.9s,mb4.7,baz=41,slow=6.8,SNR=18						
KURK	Kurchatov	65.53	340	eP	P	20 18 10.0	-1.2
KURK	Kurchatov	65.53	340	eP	P	20 18 10.8	-0.4
	comp=Z,5.8nm,1.0s,mb4.6						
ZAL	Zalesovo	66.54	345	P	P	20 18 18.1	+0.4
	comp=Z,1.4nm,0.4s,mb4.3,baz=344,slow=6.0,SNR=7.7						
ZAL				LR	LR	20 51 55.1	
	comp=Z,72nm,18.3s,MS3.9,baz=118,slow=40						
BOD	Bodaibo	67.61	3	eP	P	20 18 22.0	-2.5
BOD				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.3						
NVS	Novosibirsk	67.76	345	eP	P	20 18 26.4	+1.0
BVAR	Borovoye Array	70.39	337	P	P	20 18 41.8	0.0
	comp=Z,3.9nm,0.6s,mb4.5,baz=138,slow=9.1,SNR=24						
BRVK	Borovoye	70.46	337	eP	P	20 18 42.1	-0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BRVK	Borovoye	70.46	337	eP	P	20 18 42.1	-0.1
	comp=Z,2.8nm,0.8s,mb4.2						
CHKZ	Chkalovo	70.81	337	eP	P	20 18 44.3	0.0
CHKZ				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
CHKZ	Chkalovo	70.81	337	eP	P	20 18 44.3	0.0
	comp=Z,8.5nm,0.7s,mb4.8						
ZRNK	Zerenda	70.88	336	eP	P	20 18 44.6	-0.1
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ZRNK	Zerenda	70.88	336	eP	P	20 18 44.6	-0.1
	comp=Z,4.4nm,0.6s,mb4.6						
VNDA	Vanda	72.98	169	P	P	20 18 56.2	-1.1
	comp=Z,1.3nm,0.8s,mb3.9,baz=280,slow=7.4,SNR=6.2						
VNDA				LR	LR	20 45 11.7	
	comp=Z,129nm,19.2s,MS4.2,baz=340,slow=31						
VNDA	Vanda	72.98	169	P	P	20 18 56.2	-1.2
VNDA				LR	LR	20 45 11.7	
SYO	Syowa Base	73.20	200	⇑eP	P	20 18 57.7	-0.9
SYO	Syowa Base	73.20	200	⇑eP	pP	20 19 09.2	-1.6
YAK	Yakutsk	73.63	10	⇑eP	P	20 18 59.5	-1.6
YAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
AKTK	Aktyubinsk	74.10	329	P	P	20 19 05.3	+1.4
AKTO	Aktyubinsk	74.10	329	P	P	20 19 05.3	+1.4
	comp=Z,1.1nm,0.3s,mb4.2,baz=89,slow=4.8,SNR=8.2						
ARU	Arti	77.64	334	eP	P	20 19 24.4	+0.3
ARU				e	pP	20 19 35.0	-1.4
ARU				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
ARU	Arti	77.64	334	eP	P	20 19 24.4	+0.3
	comp=Z,14nm,1.1s,mb4.8						
ARU				e	pP	20 19 35.0	-1.3
LSZ	Lusaka	77.78	256	eP	P	20 19 26.1	+1.2
BOSA	Boshof	79.08	243	P	P	20 19 33.1	+1.1
	comp=Z,3.6nm,1.0s,mb4.3,baz=126,slow=14,SNR=3.8						
BOSA				LR	LR	20 48 11.5	
	comp=Z,97nm,20.0s,MS4.1,baz=126,slow=31						
KIV	Kislovodsk	79.70	318	⇑eP	P	20 19 34.3	-1.1
BRTR	Keskin Array B	84.50	312	P	P	20 20 00.0	-0.6
	comp=Z,0.8nm,0.9s,mb3.9,baz=141,slow=8.0,SNR=3.6						
BRTR				LR	LR	21 01 57.0	
	comp=Z,21nm,19.3s,MS3.5,baz=193,slow=39						
BRTR	Keskin Array B	84.50	312	iP	P	20 20 01.7	+1.1
OBN	Obninsk	87.68	327	eP	P	20 20 15.7	-0.6
OBN				pmax	pmax		
	comp=Z,17nm,1.6s,mb5.0						
BILL	Bilibino	87.84	19	eP	P	20 20 15.6	-1.4
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.5						
KLMR	Klimovskoe	88.39	333	eP	P	20 20 18.0	-1.6
KLMR				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.3						
WMOK	Wichita Mounta	145.14	41	ePKIKP	PKPdf	20 27 06.5	+1.5
WMOK				e		20 27 17.1	
BDFB	Brasilia	145.31	223	PKPbc	PKPbc	20 27 07.1	+2.0
	comp=Z,6.9nm,0.8s,baz=16,slow=2.5,SNR=6.6						

*IDC **07** 20:10:14.3±1.1, 9.90S×108.02E, h0km, mb4.2/5, mb1 4.2/5, mb1mx3.9/15, mbtmp4.2/5, Error ellipse: s-maj=58.4km s-min=25.0km az=73.0*
*NEIC **07** 20:10:15.9±0.6, 9.90S×108.06E, h10km, mb4.4/4, Error ellipse: s-maj=35.7km s-min=14.2km az=68.0*
*ISCJB **07** 20:10:17.4±0.8, 9.9S±0.2×108.1E±0.3, h33km, mb4.1/9, Error ellipse: s-maj=46.8km s-min=18.6km az=135.6*
ISC 07 20:10:19.7±0.8**, 9.9S**±0.2×**108.0E**±0.3**, h35**km**, n11,** σ0.s**50**/10**, mb4.1**/9**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	Marble Bar	15.87	136	eP	Pn	20 13 48.6	-12
STKA	Stephens Creek	37.97	130	P	P	20 17 34.0	0.0
	4.6nm,0.9s,mb4.2,baz=321,slow=11,SNR=3.8						
SONM	Songino Array	57.52	359	P	P	20 20 05.3	-0.1
	1.6nm,0.5s,mb4.3,baz=176,slow=8.0,SNR=7.0						
WSAR	Wadi Sarin	58.48	305	P	pP	20 20 23.4	+0.6
	4.9nm,0.9s,baz=126,slow=8.7,SNR=4.0						
MKAR	Makanchi Array	60.96	340	P	P	20 20 29.0	-0.2
	0.9nm,0.5s,mb4.2,baz=165,slow=7.7,SNR=4.6						
MAW	Mawson	64.89	197	P	P	20 20 55.2	-0.1
	0.8nm,0.6s,mb3.9,baz=46,slow=8.4,SNR=3.7						
BVAR	Borovoye Array	70.43	337	P	P	20 21 30.3	0.0
	1.5nm,0.6s,mb4.1,baz=143,slow=8.6,SNR=5.6						
BRVK	Borovoye	70.50	337	P	P	20 21 31.4	+0.7
	1.0nm,0.7s,mb3.9						
CHKZ	Chkalovo	70.85	338	eP	P	20 21 32.0	-0.9
	2.5nm,0.8s,mb4.2						
ZRNK	Zerenda	70.92	336	eP	P	20 21 33.0	-0.3
	1.9nm,0.6s,mb4.2						
ARU	Arti	77.68	334	P	P	20 22 13.5	+0.9
	3.6nm,1.1s,mb4.2						

MAN 07 20:45:22.9, 11.06N×125.75E, h20km, mb2.0, ML3.7, MS3.5, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.62	330	eP	Pb	20 45 35.0	-0.1
BESP				eS	Sb	20 45 47.3	+4.0
PLP	Palo	0.77	278	eP	Pb	20 45 38.0	+0.5
PLP				iS	Sb	20 45 49.8	+2.2
MSLP	Maasin	1.27	224	eP	Pn	20 45 46.3	+0.8
MSLP				eS	Sn	20 46 05.3	+3.3
SCPH	Surigao	1.29	192	eP	Pn	20 45 44.0	-1.8
SCPH				eS	Sn	20 46 03.5	+1.0

*NEIC **07** 21:04:16.6, 33.30S×72.16W, h36km, MG2.6(GUC), After GUC.*
GUC 07 21:04:16.6±0.9**, 33.30S×72.16W, h36**km±3km**, MD3.5, ML2.6, 5C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCH	Las Cruces	0.52	110	eP	Pn	21 04 27.2	-0.3
LCCH				iS	Sn	21 04 35.0	-0.2
LNV	Longovilo	0.90	137	⇑iP	Pn	21 04 33.0	+0.2
LNV				iS	Sn	21 04 44.6	0.0
ROCH	El Roble	1.02	72	⇑iP	Pn	21 04 35.2	+0.8
ROCH				iS	Sn	21 04 49.2	+1.9
TACH	Talagante	1.08	109	eP	Pn	21 04 35.9	+0.7
TACH				iS	Sn	21 04 49.1	+0.1
RCDM	Rinconada Maip	1.15	100	iP	Pn	21 04 36.8	+0.7
RCDM				iS	Sn	21 04 52.2	+1.6
RCDM				AML	AML	21 04 53.8	
	comp=E,355nm,0.1s						
RCDM	Rinconada Maip	1.15	100	iP	Pn	21 04 36.8	+0.7
RCDM				iS	Sn	21 04 52.2	+1.6
PEL	Peldehue	1.24	83	eP	Pn	21 04 38.9	+1.4
PEL				iS	Sn	21 04 55.4	+2.4
PEL				AML	AML	21 04 58.6	
	comp=N,252nm,0.5s						
PEL	Peldehue	1.24	83	eP	Pn	21 04 38.9	+1.4
PEL				iS	Sn	21 04 55.4	+2.4
CLCH	Cerro Calan	1.36	94	eP	Pn	21 04 40.8	+1.7
CLCH				iS	Sn	21 04 58.5	+2.7
CLCH				AML	AML	21 04 59.8	
	comp=E,144nm,0.4s						
CHCH	Chadas Angostu	1.41	117	⇑iP	Pn	21 04 40.5	+0.8
CHCH				iS	Sn	21 04 58.4	+1.4
PCH	Pirque	1.41	104	⇑iP	Pn	21 04 41.7	+1.9
PCH				iS	Sn	21 05 00.4	+3.3
CACH	El Canelo	1.53	123	⇑iP	Pn	21 04 43.3	+1.9
FCH	Farellones	1.56	92	eP	Pn	21 04 43.6	+1.8
FCH				iS	Sn	21 05 04.8	+3.9
FCH				AML	AML	21 05 05.1	
	comp=E,145nm,0.3s						
SFDO	San Fernando	1.62	144	⇓iP	Pn	21 04 44.4	+1.8
CICH	Cipreses	1.77	126	⇓iP	Pn	21 04 46.5	+1.8

*IDC **07** 21:05:54.8±0.7, 9.37S×108.69E, h0km, mb4.3/10, mb1 4.3/11, mb1mx4.3/16, mbtmp4.3/11, ML3.8/1, Error ellipse: s-maj=37.0km s-min=15.2km az=59.0*
*NEIC **07** 21:05:56.3±0.3, 9.35S×108.73E, h10km, mb4.8/11, Error ellipse: s-maj=17.5km s-min=5.7km az=49.0*
*ISCJB **07** 21:06:01.5±3.1, 9.3S±0.1×108.9E±0.2, h66km±27km, mb4.4/18, Error ellipse: s-maj=38.2km s-min=10.2km az=107.8*
ISC 07 21:06:00.8±3.1**, 9.4S**±0.1×**108.8E**±0.2**, h42**km±28km**, n29,** σ0.s**52**/29**, mb4.5**/18**, 1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJII	Banjamegara	2.26	25	⇑iP	Pn	21 06 35.8	+0.1
BJII				iS	Sn	21 07 09.4	+7.1
MBWA	Marble Bar	15.77	139	eP	Pn	21 09 36.1	-3.7
FITZ	Fitzroy Crossi	18.54	120	eP	Pn	21 10 14.8	+0.5
	8.4nm,0.8s						
FITZ				eS	S	21 13 25.8	-17
FITZ	Fitzroy Crossi	18.54	120	P	Pn	21 10 14.4	+0.1
	0.2nm,0.3s,baz=253,slow=8.6,SNR=8.9						
WRAB	Tennant Creek	26.85	116	eP	P	21 11 37.5	+0.2
	7.5nm,0.8s,mb4.3						
WB2	Warramunga Arr	26.86	116	eP	P	21 11 37.1	-0.3
ASAR	Alice Springs	27.91	124	P	P	21 11 47.0	+0.1
	1.2nm,0.8s,mb3.6,baz=307,slow=9.3,SNR=11						
ASAR				PcP	PcP	21 15 02.5	+0.9
	0.9nm,0.7s,baz=304,slow=2.0,SNR=6.7						
STKA	Stephens Creek	37.77	131	eP	P	21 13 13.4	+0.7
	8.6nm,0.6s,mb4.7						
STKA	Stephens Creek	37.77	131	P	P	21 13 13.2	+0.4
	10.0nm,0.7s,mb4.7,baz=305,slow=8.3,SNR=28						
PKI	Pulchoki	43.15	329	eP	P	21 13 57.8	+0.6
GUN	Gumba	43.19	330	eP	P	21 13 57.3	-0.2
DMN	Daman	43.33	329	eP	P	21 13 58.6	-0.1
	18nm,0.8s,mb4.9						
KKN	Kakani	43.39	329	eP	P	21 13 59.4	+0.3
	17nm,0.9s,mb4.8						
GKN	Gorkha	43.89	329	eP	P	21 14 03.1	-0.1
	15nm,0.7s,mb4.8						
KOLN	Koldanda	44.25	327	eP	P	21 14 06.1	+0.1
	30nm,0.8s,mb5.1						
SONM	Songino Array	57.01	358	P	P	21 15 42.1	-0.2
	2.6nm,0.5s,mb4.5,baz=180,slow=8.4,SNR=10						
MKAR	Makanchi Array	60.72	339	P	P	21 16 07.7	-0.3
	4.5nm,0.5s,mb4.8,baz=147,slow=6.9,SNR=72						
KURK	Kurchatov	65.33	339	eP	P	21 16 38.4	-0.2
	5.8nm,0.8s,mb4.7						
KURK				e	pP	21 16 49.3	-1.7
MAW	Mawson	65.60	198	P	P	21 16 40.7	+0.3
	1.0nm,0.7s,mb4.0,baz=77,slow=14,SNR=4.6						
ZAL	Zalesovo	66.27	345	P	P	21 16 44.9	+0.2
	1.8nm,0.5s,mb4.4,baz=342,slow=3.0,SNR=6.5						
BVAR	Borovoye Array	70.24	337	P	P	21 17 09.7	+0.2
	4.0nm,0.6s,mb4.5,baz=140,slow=8.3,SNR=16						
CHKZ	Chkalovo	70.64	337	eP	P	21 17 11.6	-0.3
	5.4nm,0.7s,mb4.6						
CHKZ				e	pP	21 17 22.6	-1.9
ZRNK	Zerenda	70.73	336	eP	P	21 17 12.3	-0.2
	3.6nm,0.6s,mb4.5						
VNDA	Vanda	73.31	170	P	P	21 17 27.8	-0.2
	1.6nm,0.9s,mb3.9,baz=299,slow=7.4,SNR=7.3						
BR131	Keskin Array S	84.70	312	eP	P	21 18 31.3	+1.1
	5.3nm,1.1s,mb4.6						
BRTR	Keskin Array B	84.70	312	P	P	21 18 30.7	+0.5
	3.1nm,1.0s,mb4.4,baz=124,slow=6.1,SNR=11						
AKASG	Malin Array Be	90.63	321	P	P	21 18 57.6	-1.1
	0.2nm,0.3s,mb3.9,baz=86,slow=3.9,SNR=4.2						
WMOK	Wichita Mounta	144.36	41	ePKPdf	PKPdf	21 25 31.7	-0.6
PLAL	Pickwick Lake	150.25	29	ePKPbc	PKPbc	21 25 47.7	+0.5

*ISCJB **07** 21:11:12.4±3.6, 2.59S±0.08×129.9E±0.2, h7km±22km, mb4.1/12, Error ellipse: s-maj=39.0km s-min=9.9km az=151.6*
*IDC **07** 21:11:13.6±0.9, 2.68S×129.64E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.1/16, mbtmp4.1/10, ML4.1/1, Error ellipse: s-maj=48.4km s-min=17.1km az=78.0*
*NEIC **07** 21:11:19.0±2.1, 2.64S×129.92E, h40km±20km, mb4.2/5, Error ellipse: s-maj=29.0km s-min=11.9km az=78.0*
ISC 07 21:11:19.7±2.0**, 2.65S**±0.09×**129.9E**±0.2**, h48**km±20km**, n22,** σ0.s**58**/21**, mb4.1**/12**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	10.30	166	eP	Pn	21 13 44.8	0.0
	8.5nm,0.6s						
FITZ	Fitzroy Crossi	15.92	195	eP	Pn	21 15 01.6	+1.2
	8.6nm,0.7s						
FITZ	Fitzroy Crossi	15.92	195	Pn	Pn	21 14 59.7	-0.7
	0.5nm,0.3s,baz=128,slow=10,SNR=7.8						
WRAB	Tennant Creek	17.71	166	eP	Pn	21 15 21.9	-0.9
	17nm,0.9s						
WB2	Warramunga Arr	17.72	166	eP	Pn	21 15 22.1	-0.8
AS31	Alice Springs	21.24	170	eP	P	21 16 02.3	+0.7
ASAR	Alice Springs	21.24	170	P	P	21 16 02.5	+0.8
	20nm,0.8s,mb4.5,baz=352,slow=10.0,SNR=83						
ASAR				S	S	21 19 54.9	-0.1
	1.9nm,0.7s,baz=349,slow=21,SNR=4.6						
ASPA	Alice Springs	21.24	170	eP	P	21 16 02.3	+0.7
STKA	Stephens Creek	31.07	161	P	P	21 17 33.0	-0.2
	4.5nm,1.0s,mb4.2,baz=350,slow=14,SNR=3.9						
MJAR	Matsushiro Arr	39.75	10	P	P	21 18 47.1	-0.5
	0.7nm,0.4s,mb3.7,baz=200,slow=9.4,SNR=2.5						
MKAR	Makanchi Array	64.60	326	P	P	21 21 52.5	+0.4
	1.1nm,0.8s,mb3.9,baz=120,slow=7.2,SNR=8.2						
MKAR	Makanchi Array	64.60	326	P	P	21 21 52.5	+0.4
ZAL	Zalesovo	67.69	333	P	P	21 22 12.7	+0.7
	0.8nm,0.4s,mb4.1,baz=53,slow=2.3,SNR=5.8						
KURK	Kurchatov	68.81	328	eP	P	21 22 19.0	0.0
	3.5nm,0.8s,mb4.3						
BVAR	Borovoye Array	74.39	327	P	P	21 22 52.6	+0.1
	1.6nm,0.7s,mb4.1,baz=134,slow=14,SNR=8.9						
CHKZ	Chkalovo	74.56	328	eP	P	21 22 53.3	-0.2
	2.1nm,0.9s,mb4.1						
ZRNK	Zerenda	75.11	327	eP	P	21 22 56.7	+0.1
	3.9nm,1.0s,mb4.3						
VNDA	Vanda	76.74	173	P	P	21 23 06.3	+0.3
	0.4nm,0.5s,mb3.6,baz=312,slow=8.2,SNR=4.4						
MAW	Mawson	78.95	201	P	P	21 23 17.7	-0.5
	0.5nm,0.4s,mb3.8,baz=54,slow=7.1,SNR=7.2						
OPO	Ambohidratompo	82.29	252	P	P	21 23 35.1	-1.0
	3.0nm,0.8s,mb4.3,baz=126,slow=4.5,SNR=6.7						
CPUP	Villa Florida	150.34	167	PKPbc	PKPbc	21 31 09.0	+3.4
	3.1nm,0.7s,baz=231,slow=1.8,SNR=10						
CPUP	Villa Florida	150.34	167	PKPbc	PKPbc	21 31 09.0	+3.4

*IDC **07** 21:12:55.7±1.0, 10.01S×107.93E, h0km, mb4.2/6, mb1 4.2/7, mb1mx4.0/16, mbtmp4.1/7, ML3.5/1, Error ellipse: s-maj=41.9km s-min=18.6km az=57.0*
*NEIC **07** 21:12:57.1±0.5, 10.01S×107.89E, h10km, mb4.4/4, Error ellipse: s-maj=26.3km s-min=9.7km az=52.0*
*ISCJB **07** 21:12:58.5±0.7, 10.0S±0.1×108.0E±0.1, h33km, mb4.2/10, Error ellipse: s-maj=20.6km s-min=12.4km az=115.4*
ISC 07 21:13:00.8±0.7**, 10.0S**±0.1×**108.0E**±0.1**, h35**km**, n14,** σ0.s**65**/17**, mb4.2**/10**, 1C-1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJII	Banjamegara	3.15	33	⇓iP	Pn	21 13 52.4	+4.4
BJII				iS	Sn	21 14 17.6	-6.8
BJII	Banjamegara	3.15	33	⇑iP	Pn	21 13 45.7	-2.3
BJII				iS	Sn	21 14 26.8	+2.4
FITZ	Fitzroy Crossi	18.94	117	P	Pn	21 17 20.1	+0.4
	0.1nm,0.3s,baz=297,slow=16,SNR=2.6						
FITZ				S	S	21 20 33.9	-18
	0.1nm,0.3s,baz=336,slow=20,SNR=2.1						
ASAR	Alice Springs	28.25	122	P	P	21 18 50.7	+0.2
	0.9nm,0.7s,mb3.5,baz=301,slow=9.1,SNR=3.3						
STKA	Stephens Creek	37.98	130	P	P	21 20 14.9	-0.3
	4.0nm,0.6s,mb4.3,baz=318,slow=13,SNR=7.7						
STKA	Stephens Creek	37.98	130	eP	P	21 20 14.6	-0.6
SONM	Songino Array	57.58	359	P	P	21 22 47.5	+0.5
	2.1nm,0.6s,mb4.4,baz=178,slow=7.9,SNR=8.3						
MKAR	Makanchi Array	61.00	340	P	P	21 23 10.8	+0.1
	1.3nm,0.5s,mb4.3,baz=151,slow=7.2,SNR=17						
MAW	Mawson	64.81	197	P	P	21 23 35.9	-0.1
	2.9nm,1.0s,mb4.2,baz=57,slow=11,SNR=5.0						
KURK	Kurchatov	65.61	340	P	P	21 23 41.1	0.0
	3.2nm,1.0s,mb4.3						
BVAR	Borovoye Array	70.47	337	P	P	21 24 12.4	+0.7
	1.7nm,0.6s,mb4.1,baz=136,slow=8.1,SNR=5.3						
BRVK	Borovoye	70.53	337	eP	P	21 24 11.8	-0.3
	2.8nm,0.9s,mb4.2						
CHKZ	Chkalovo	70.89	338	eP	P	21 24 14.3	+0.1
	2.7nm,0.7s,mb4.3						
CHKZ				e		21 24 18.2	
ZRNK	Zerenda	70.95	336	eP	P	21 24 14.3	-0.4
	2.0nm,0.6s,mb4.2						
ZRNK				e		21 24 18.9	

*IDC **07** 21:13:34.0±1.0, 9.43S×108.58E, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.1/16, mbtmp4.1/9, ML3.8/1, Error ellipse: s-maj=55.3km s-min=17.2km az=55.0*
*NEIC **07** 21:13:35.6±0.6, 9.41S×108.59E, h10km, Error ellipse: s-maj=35.6km s-min=10.2km az=52.0*
*ISCJB **07** 21:13:37.3±0.8, 9.3S±0.2×108.7E±0.2, h33km, mb4.0/8, Error ellipse: s-maj=43.6km s-min=12.4km az=101.3*
ISC 07 21:13:39.4±0.8**, 9.4S**±0.2×**108.6E**±0.2**, h35**km**, n14,** σ0.s**78**/15**, mb4.0**/8**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.63	119	P	Pn	21 17 54.2	-0.1
	0.2nm,0.3s,baz=306,slow=1.4,SNR=4.9						
FITZ				S	S	21 21 05.4	-19
	0.4nm,0.3s,baz=158,slow=16,SNR=4.6						
ASAR	Alice Springs	28.00	124	P	P	21 19 27.6	+0.7
	0.7nm,0.5s,mb3.5,baz=297,slow=9.2,SNR=4.3						
STKA	Stephens Creek	37.84	131	P	P	21 20 52.6	0.0
	8.4nm,0.8s,mb4.5,baz=290,slow=9.0,SNR=12						
STKA	Stephens Creek	37.84	131	eP	P	21 20 52.7	0.0
SONM	Songino Array	57.02	358	P	P	21 23 21.3	-0.4
	0.6nm,0.4s,mb4.0,baz=173,slow=10.0,SNR=2.3						
SONM	Songino Array	57.02	358	P	P	21 23 21.2	-0.4
MKAR	Makanchi Array	60.68	340	P	P	21 23 47.0	-0.1

1.3nm,0.4s,mb4.4,baz=148,slow=7.6,SNR=12
KURK Kurchatov 65.30 340 eP **P 21 24 16.1 -1.6**
ZAL Zalesovo 66.25 345 P **P 21 24 23.9 0.0**
0.6nm,0.3s,mb4.1,baz=340,slow=5.2,SNR=3.1
BVAR Borovoye Array 70.20 337 P **P 21 24 48.7 +0.1**
1.1nm,0.6s,mb4.0,baz=135,slow=6.9,SNR=3.4
ZRNK Zerenda 70.69 336 eP **P 21 24 52.7 +1.1**
VNDA Vanda 73.33 170 P **P 21 25 06.6 -0.8**
1.6nm,0.9s,mb4.0,baz=272,slow=9.4,SNR=4.1
VNDA Vanda 73.33 170 P **P 21 25 06.6 -0.8**
BRTR Keskin Array B 84.63 312 P **P 21 26 10.2 +0.9**
0.5nm,0.8s,mb3.7,baz=100,slow=5.1,SNR=2.6

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*ISCJB **07** 21:34:41.4±1.2, 56.6S±0.1×142.0W±0.6, h10km, mb4.5/4, MS4.0/4, Error ellipse: s-maj=47.6km s-min=17.6km az=147.8*
*IDC **07** 21:34:43.1±3.4, 56.63S×142.49W, h0km, mb4.2/2, mb1 4.3/2, mb1mx3.9/10, mbtmp4.2/2, MS4.0/4, Ms1 4.0/4, ms1mx3.7/13, Error ellipse: s-maj=105.8km s-min=50.3km az=62.0*
*NEIC **07** 21:34:43.1±2.4, 56.52S×141.88W, h10km, mb4.8/2, Error ellipse: s-maj=78.1km s-min=28.4km az=55.0*
*HRVD **07** 21:34:43.1±0.4, 56.79S×141.73W, h15km, MW5.1/44, Centroid moment Tensor Solution. LP body waves: s28,c34;Mantle waves: s44,c57; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.62±.26; $M_{\theta\theta}$2.87±.27; $M_{\phi\phi}$-3.49±.20; $M_{r\theta}$3.44±.76; $M_{\theta\phi}$3.39±.19; $M_{\phi r}$2.30±.70; Best double couple: $M_0$6.03200×10^{16} NP1:ϕ_s118.00000°, δ59.00000°, λ17.00000°. NP2:ϕ_s19.00000°, δ75.00000°, λ148.00000°. Principal axes: T 6.9670, Plg33.0000°, Azm334.0000°; N -1.8710, Plg55.0000°, Azm177.0000°; P -5.0980, Plg11.0000°, Azm71.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 07 21:34:42.6±1.2**, 56.5S**±0.2×**141.8W**±0.6**, h10**km**, n13, σ0.57**/7**, mb4.5**/4**, MS4.0**/4**, Pacific-Antarctic Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VNDA Vanda 28.43 202 LR LR 21 49 05.6
comp=Z,186nm,20.3s,MS3.7,baz=260,slow=31
QSPA South Pole Qui 33.62 180 eP **P 21 41 24.2 +1.0**
14nm,1.3s,mb4.7
RKT Rikitea 33.76 11 eLR LR 21 50 25.6
615nm,26.5s
RAR Rarotonga 37.70 332 LR LR 21 52 41.7
comp=Z,330nm,20.8s,MS4.1,baz=102,slow=29
PPT Papeete 39.34 348 eS **S 21 48 13.5 +0.3**
160nm,26.5s
PPT eLR LR 21 52 45.0
1µm,28.8s
PPT Papeete 39.34 348 LR LR 21 53 40.7
comp=Z,453nm,19.0s,MS4.3,baz=160,slow=29
TAOE Nuku Hiva Isla 47.58 2 eLR LR 21 56 44.4
2µm,29.1s
VNA1 Neumayer--Stat 48.88 161 e **P 21 43 28.4 -0.1**
VNA1 e pP 21 43 30.7 -0.9
VNA1 e 21 43 35.5
SNAA Sanae 48.89 164 e **P 21 43 27.9 -0.7**
SNAA e pP 21 43 28.9 -2.8
SNAA e 21 43 36.0
SNAA Sanae 48.89 164 eP **P 21 43 27.7 -0.9**
7.2nm,0.7s,mb4.8
MAW Mawson 54.82 191 P **P 21 44 12.9 0.0**
3.7nm,0.9s,mb4.4,baz=169,slow=7.9,SNR=11
MAW LR LR 22 05 57.5
comp=Z,106nm,20.6s,MS3.9,baz=333,slow=34
ASAR Alice Springs 67.48 261 P **P 21 45 38.4 -0.4**
2.2nm,0.9s,mb4.2,baz=138,slow=6.6,SNR=12
MKAR Makanchi Array 151.43 269 PKPbc PKPbc 21 54 36.7 0.0
3.1nm,0.9s,baz=153,slow=1.3,SNR=14

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*IDC **07** 21:50:44.5±3.6, 9.88S×107.96E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/13, mbtmp3.9/4, Error ellipse: s-maj=178.5km s-min=23.0km az=55.0*
*ISCJB **07** 21:50:46.4±1.3, 10.0S±0.1×107.8E±0.2, h33km, mb3.9/4, Error ellipse: s-maj=24.7km s-min=13.6km az=38.4*
ISC 07 21:50:49.1±1.3**, 10.0S**±0.1×**107.8E**±0.2**, h35**km**, n5, σ1.32**/6**, mb3.9**/4**, 1C, South of Jawa**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BJII Banjamegara 3.25 36⇑iP **Pn 21 51 35.3 -2.2**
BJII iS **Sn 21 52 15.8 +0.9**
ASAR Alice Springs 28.38 122 P **P 21 56 40.4 +0.4**
0.5nm,0.6s,mb3.3,baz=300,slow=9.2,SNR=6.6
STKA Stephens Creek 38.10 130 P **P 21 58 04.3 -0.1**
3.8nm,0.7s,mb4.2,baz=294,slow=9.4,SNR=8.7
SONM Songino Array 57.58 359 P **P 22 00 35.3 0.0**
1.2nm,0.6s,mb4.1,baz=171,slow=7.8,SNR=6.4
MKAR Makanchi Array 60.95 340 P **P 22 00 59.0 +0.5**
0.8nm,0.7s,mb3.9,baz=155,slow=8.0,SNR=7.7

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*BGS **07** 22:18:51.1±7.1, 15.78S×167.80E, h141km*
*BJI **07** 22:18:52.6, 15.64S×168.01E, h141km, mB6.8, mb6.5*
*ISCJB **07** 22:18:53.7±0.1, 15.83S±0.02×167.73E±0.02, h147km, mb6.1/133, Error ellipse: s-maj=2.5km s-min=2.4km az=91.7*
*CRAAG **07** 22:18:53.5, 15.77S×167.65E, Mw6.8*
*HRVD **07** 22:18:54.0±0.1, 15.76S×167.63E, h158km, MW6.8/111, Centroid moment Tensor Solution. LP body waves: s111,c293;Mantle waves: s109,c513; Half duration: 6.1 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.10±.01; $M_{\theta\theta}$1.32±.01; $M_{\phi\phi}$-0.22±.01; $M_{r\theta}$-0.40±.01; $M_{\theta\phi}$1.27±.01; $M_{\phi r}$-0.93±.01; Best double couple: $M_0$1.98800×10^{19} NP1:ϕ_s275.00000°, δ43.00000°, λ-34.00000°. NP2: ϕ_s31.00000°, δ68.00000°, λ-128.00000°. Principal axes: T 2.2360, Plg14.0000°, Azm148.0000°; N -0.4990, Plg35.0000°, Azm48.0000°; P -1.7400, Plg52.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IGIL **07** 22:18:54.7, 15.87S×167.76E, h149km, MS6.3*
*NEIC **07** 22:18:55.1±0.1, 15.80S×167.79E, h150km, mb6.0/73, ME6.5, MW6.8, Error ellipse: s-maj=3.6km s-min=3.2km az=107.0, Moment Tensor Solution. s60 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.05; $M_{\theta\theta}$1.45; $M_{\phi\phi}$-0.40; $M_{r\theta}$-0.36; $M_{\theta\phi}$1.03; $M_{\phi r}$-0.85; Best double couple: $M_0$1.90000×10^{19} NP1:ϕ_s36.00000°, δ67.00000°, λ-130.00000°. NP2: ϕ_s280.00000°, δ45.00000°, λ-34.00000°. Principal axes: T 2.0600, Plg13.0000°, Azm153.0000°; N -0.3900, Plg36.0000°, Azm54.0000°; P -1.6700, Plg51.0000°, Azm260.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s41.00000°, δ63.00000°, λ-127.00000°. NP2: ϕ_s280.00000°, δ45.00000°, λ-40.00000°. Principal axes: T Plg10.0000°, Azm157.0000°; N Plg0.0000°, Azm0.0000°; P Plg55.0000°, Azm262.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Luganville, Espiritu Santo.
*IDC **07** 22:18:56.5±0.7, 15.79S×167.79E, h162km±5km, mb6.1/23, mb1 6.1/24, mb1mx6.1/24, mbtmp6.5/24, MS6.2/12, Ms1 6.1/12, ms1mx5.7/30 Error ellipse: s-maj=6.7km s-min=6.3km az=36.0*
*MOS **07** 22:18:56.6±0.9, 15.83S×167.72E, h176km, mb6.1/34, MS6.1/49, Error ellipse: s-maj=6.4km s-min=6.0km az=154.7*
*LDG **07** 22:18:56.3±0.2, 15.96S×167.47E, h160km, Mb6.5/4, Ms6.0/9, Error ellipse: s-maj=22.2km s-min=7.8km az=91.0*
ISC 07 22:18:55.5±0.1**, 15.84S**±0.02×**167.82E**±0.02**, h149**km**, h149**km±1.3km**:pP-P, n1784, σ0.88**/792**, mb6.1**/133**, 250C-478D, Vanuatu Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BKM Butte a Klehm 1.86 167⇑iP **Pn 22 19 27.0 -1.9**
DZM Mont Dzumac 6.33 192 eP **Pn 22 20 25.6 -1.0**
DZM eS **Sn 22 21 33.9 -4.0**
DZM Mont Dzumac 6.33 192 P **Pn 22 20 25.3 -1.3**
436nm,0.3s,baz=36,slow=16,SNR=584
DZM S **Sn 22 21 37.2 -0.6**
90nm,0.3s,baz=305,slow=23,SNR=3.8
DZM LR LR 22 22 41.8
comp=Z,174µm,19.6s,baz=18,slow=35
DZM ScP ScP 22 30 26.4 -0.4
0.9nm,0.3s,baz=86,slow=4.4,SNR=14
DZM ScS ScS 22 34 04.8 +4.8
baz=355,slow=23,SNR=8.3
HNR Honiara 9.98 309 P **Pn 22 21 16.0 +0.8**
100nm,0.3s,baz=233,slow=1.8,SNR=139
HNR S **Sn 22 23 10.3 +4.7**
242nm,0.3s,baz=89,slow=23,SNR=5.4
HNR LR LR 22 23 38.7
comp=Z,169µm,19.1s,baz=174,slow=28
HNR ScS ScS 22 34 06.0 +0.8
baz=86,slow=15,SNR=6.0
HNR Honiara 9.98 309 P **Pn 22 21 16.0 +0.8**
HNR S **Sn 22 23 10.3 +4.7**
HNR Honiara 9.98 309 P **Pn 22 21 16.0 +0.8**
HNR S **Sn 22 23 10.3 +4.7**
HNR LR LR 22 23 38.7
HNR ScS ScS 22 34 06.0 +0.8
RAO Raoul Island 18.73 138 P **P 22 23 05.9 +3.1**
43nm,0.3s,baz=233,slow=4.0,SNR=7.5
RAO S **S 22 26 33.4 +5.4**
68nm,0.3s,baz=98,slow=21,SNR=1.7
RAO LR LR 22 29 10.1
comp=Z,80µm,21.8s,baz=240,slow=33
RAO Raoul Island 18.73 138 P **P 22 23 05.9 +3.2**
RAO S **S 22 26 33.4 +5.3**
RAO pmax pmax
comp=Z,43nm,0.3s
RAO smax
comp=N,68nm,0.3s
RAO MLR MLR
comp=Z,80µm,21.8s
RAO Raoul Island 18.73 138 eP **P 22 23 08.3 +5.6**
comp=Z,4µm,0.9s
RAO e 22 23 31.7
RAO S **S 22 26 33.4 +5.4**
RAO eS **S 22 26 37.0 +8.9**
RAO LR LR 22 29 10.1
AFI Afiamalu 19.82 87 P **P 22 23 14.0 -0.5**
comp=Z,12nm,0.3s,baz=239,slow=2.0,SNR=28
AFI S **S 22 26 50.8 +1.2**
comp=Z,0.8nm,0.3s,baz=293,slow=20,SNR=1.7
AFI ScP ScP 22 30 47.6 -0.6
comp=Z,2.6nm,0.3s,baz=313,slow=0.8,SNR=16
AFI Afiamalu 19.82 87 P **P 22 23 15.0 +0.5**
AFI pmax pmax
comp=Z,900nm,1.1s
OUZ Omahuta 19.98 166 eP **P 22 23 18.2 +1.9**
OUZ Omahuta 19.98 166 PN **P 22 23 18.2 +1.9**
ARMA Armidale 20.75 223⇓iP **P 22 23 26.1 +1.6**
ARMA eS **S 22 27 13.4 +5.6**
ARMA eSCP ScP 22 30 52.8 +2.4
ARMA eSCS ScS 22 34 37.9 +4.1
WCZ Waipu Caves 20.85 165 eP **P 22 23 27.6 +2.0**
WCZ Waipu Caves 20.85 165 PN **P 22 23 27.6 +2.0**
WCZ ScP ScP 22 30 51.2 +0.6
CTA Charters Tower 20.94 255⇓iP **P 22 23 26.8 +0.3**
comp=Z,1µm,0.8s
CTA eS **S 22 27 14.6 +3.1**
CTA eSCP ScP 22 30 52.2 +1.3
CTA eSCS ScS 22 34 36.6 +2.1
CTA Charters Tower 20.94 255 P **P 22 23 27.1 +0.6**
comp=Z,2µm,1.1s,baz=80,slow=12,SNR=156
CTA S **S 22 27 13.6 +2.1**
comp=Z,98nm,1.0s,baz=272,slow=17,SNR=2.3
CTA LR LR 22 29 49.3
comp=Z,34µm,20.8s,baz=82,slow=31
CTA ScP ScP 22 30 50.8 0.0
comp=Z,374nm,1.1s,baz=346,slow=4.2,SNR=11
CTA ScS ScS 22 34 36.8 +2.3
comp=Z,25nm,1.0s,baz=186,slow=22,SNR=14
CTAO Charters Tower 20.94 255 P **P 22 23 26.9 +0.4**
CTAO S **S 22 27 13.2 +1.7**
CTAO ScP ScP 22 30 52.2 +1.3
CTAO ScS ScS 22 34 36.6 +2.1
CTAO Charters Tower 20.94 255⇓iP **P 22 23 27.1 +0.6**
CTAO e 22 24 19.0
CTAO MLR MLR
comp=Z,46µm,20.0s
CTAO Charters Tower 20.94 255⇓iP **P 22 23 27.1 +0.6**
CTAO e 22 24 19.0
CTAO eS **S 22 27 13.6 +2.2**
CTAO eScP ScP 22 30 52.0 +1.2
CTAO LR LR
comp=Z,46µm,20.0s
PMG Port Moresby 21.14 285 P **P 22 23 29.7 +1.0**
comp=Z,1µm,0.8s,mb6.3,baz=92,slow=6.3,SNR=180
PMG S **S 22 27 17.8 +2.4**
comp=Z,64nm,1.0s,baz=240,slow=20,SNR=5.0
PMG LR LR 22 30 20.3
comp=Z,167µm,18.7s,baz=94,slow=32
PMG ScP ScP 22 30 51.6 +0.3
comp=Z,627nm,1.1s,baz=59,slow=2.7,SNR=16
PMG Port Moresby 21.14 285⇓iP **P 22 23 29.6 +0.9**
comp=Z,3µm,0.8s,mb6.6
PMG e 22 23 54.2
PMG eS **S 22 27 18.0 +2.6**
PMG LR LR
comp=Z,143µm,20.0s
WIZ White Island 23.14 161 PN **P 22 23 50.5 +1.9**
RIV Riverview 23.38 217⇓iP **P 22 23 51.1 +0.3**
RIV eS **S 22 27 55.1 +2.6**
RIV eSCP ScP 22 30 59.4 +2.3
RIV eSCS ScS 22 34 47.4 +3.8
RIV Riverview 23.38 217⇓iP **P 22 23 51.1 +0.3**
RIV eS **S 22 27 55.1 +2.6**
HIZ Hauiti 23.42 166 eP **P 22 23 52.7 +1.6**
HIZ Hauiti 23.42 166 ePN **P 22 23 52.1 +1.0**
TAZ Tarawera 23.59 163 eP **P 22 23 54.5 +1.9**
TAZ Tarawera 23.59 163 PN **P 22 23 54.5 +1.9**
PATZ Paeroa 23.65 163 eP **P 22 23 55.6 +2.3**
PATZ Paeroa 23.65 163 PN **P 22 23 55.3 +2.0**
URZ Urewera 23.79 162 P **P 22 23 54.7 +0.2**
comp=Z,373nm,0.9s,mb5.9,baz=0.3,slow=4.3,SNR=33
URZ S **S 22 27 59.4 +0.3**
comp=Z,217nm,0.9s,baz=214,slow=20,SNR=11
URZ ScP ScP 22 30 55.9 -2.3
comp=Z,50nm,1.0s,baz=308,slow=3.2,SNR=3.9
URZ ScS ScS 22 34 40.7 -4.5
comp=Z,20nm,0.9s,baz=107,slow=22,SNR=6.8
URZ Urewera 23.79 162 eP **P 22 23 55.1 +0.6**
URZ Urewera 23.79 162 PN **P 22 23 55.1 +0.6**
URZ SN **S 22 27 59.7 +0.6**
PUZ Puketiti 23.98 159 eP **P 22 23 59.1 +2.8**
PUZ Puketiti 23.98 159 PN **P 22 23 55.9 -0.4**
PUZ SN **S 22 27 59.6 -2.6**
MWZ Matawai 23.99 161 eP **P 22 23 56.6 +0.3**
MWZ Matawai 23.99 161 PN **P 22 23 56.6 +0.3**
MWZ SN **S 22 28 01.5 -0.7**
OTVZ Oturere 24.23 165 PN **P 22 24 00.3 +1.7**
FWVZ Far West T-bar 24.29 165 eP **P 22 24 00.2 +1.1**
FWVZ Far West T-bar 24.29 165 PN **P 22 24 00.7 +1.7**
TUVZ Tukino 24.33 165 eP **P 22 24 01.5 +2.1**
TUVZ Tukino 24.33 165 PN **P 22 24 01.5 +2.1**
WNVZ Wahianoa 24.37 165 eP **P 22 24 01.4 +1.6**
WNVZ Wahianoa 24.37 165 PN **P 22 24 01.4 +1.6**
BKZ Black Stump Fm 24.45 164 eP **P 22 24 00.5 0.0**
BKZ Black Stump Fm 24.45 164 PN **P 22 24 00.5 0.0**
BKZ SN **S 22 28 07.4 -2.3**
MOVZ Moawhango 24.49 165 eP **P 22 24 01.2 +0.4**
MOVZ Moawhango 24.49 165 PN **P 22 24 01.2 +0.3**
KNZ Kokohu 24.66 161 eP **P 22 24 02.9 +0.5**
KNZ Kokohu 24.66 161 PN **P 22 24 02.9 +0.5**
TSZ Takapari Road 25.15 165 eP **P 22 24 06.6 -0.3**
TSZ Takapari Road 25.15 165 PN **P 22 24 06.6 -0.2**
QRZ Quartz Range 25.23 172 eP **P 22 24 09.0 +1.4**
QRZ Quartz Range 25.23 172 PN **P 22 24 08.3 +0.7**
QRZ ScP ScP 22 31 01.2 -1.0
PXZ Pawanui 25.36 164 PN **P 22 24 08.3 -0.5**
DUWZ D'Urville Isla 25.43 169 PN **P 22 24 10.3 +0.9**
CNB Canberra Magne 25.47 217⇓iP **P 22 24 10.0 +0.2**
comp=Z,2µm,1.4s,mb6.4
CNB eS **S 22 28 26.8 +1.0**
CNB eSCP ScP 22 31 04.3 +1.4
CNB eSCS ScS 22 34 54.6 +2.5
MRZ Mangatainoka R 25.64 166 eP **P 22 24 10.2 -1.0**
MRZ Mangatainoka R 25.64 166 PN **P 22 24 10.2 -1.1**
MRZ SN **S 22 28 27.8 -0.6**
KIW Kapiti Island 25.68 168 P **P 22 24 11.9 +0.3**
KIW Kapiti Island 25.68 168 ePN **P 22 24 11.5 -0.1**
NNZ Nelson 25.74 170 eP **P 22 24 12.5 +0.3**
NNZ Nelson 25.74 170 PN **P 22 24 12.5 +0.3**
NNZ SN **S 22 28 33.6 +3.5**
NNZ ScP ScP 22 31 01.3 -2.4
BFZ Birch Farm 25.81 165 eP **P 22 24 11.9 -0.9**
BFZ Birch Farm 25.81 165 PN **P 22 24 11.9 -0.9**
BFZ eSN **S 22 28 32.8 +1.6**
TCW Tory Channel 25.89 169 eP **P 22 24 13.6 0.0**
TCW Tory Channel 25.89 169 PN **P 22 24 13.6 +0.1**
CAW Cannon Point 25.95 167 eP **P 22 24 13.0 -1.1**
DSZ Denniston Nort 26.04 173 PN **P 22 24 16.4 +1.5**
TUWZ Tuamarina 26.05 169 PN **P 22 24 15.0 +0.1**
SNZO South Karori 26.07 168 eP **P 22 24 16.0 +0.8**
comp=Z,643nm,1.2s,mb6.1
SNZO e 22 25 01.8
SNZO eS **S 22 28 21.0 -14**
SNZO LR LR
comp=Z,66µm,20.0s
MTW Mount Morrison 26.09 167 P **P 22 24 14.0 -1.3**
MTW Mount Morrison 26.09 167 PN **P 22 24 14.0 -1.4**
THZ Tophouse 26.20 171 eP **P 22 24 16.4 +0.1**
THZ Tophouse 26.20 171 PN **P 22 24 16.4 0.0**
PAWZ Paruwai Farm 26.29 167 P **P 22 24 15.9 -1.2**
PAWZ Paruwai Farm 26.29 167 PN **P 22 24 15.5 -1.6**
TRWZ Traveller 26.36 167 PN **P 22 24 17.7 -0.1**
KHZ Kahutara 26.94 171 eP **P 22 24 22.4 -0.5**
KHZ Kahutara 26.94 171 ePN **P 22 24 21.5 -1.5**
LTZ Lake Taylor 27.12 173 eP **P 22 24 24.3 -0.3**
LTZ Lake Taylor 27.12 173 PN **P 22 24 24.0 -0.6**
LTZ eSN **S 22 29 02.3 +10**
WVZ Waitaha Valley 27.26 175 PN **P 22 24 25.9 +0.1**
FOZ Fox Glacier 27.68 177 PN **P 22 24 29.6 0.0**
RPZ Rata Peaks 27.92 175 P **P 22 24 31.3 -0.4**
comp=Z,362nm,0.6s,mb6.3,baz=303,slow=2.9,SNR=69
RPZ S **S 22 29 04.3 -0.1**
comp=Z,24nm,0.8s,baz=357,slow=17,SNR=2.8
RPZ ScP ScP 22 31 08.4 -1.8
comp=Z,500nm,1.4s,baz=353,slow=1.3,SNR=9.2
RPZ ScS ScS 22 35 01.4 -1.3
comp=Z,161nm,1.2s,baz=180,slow=22,SNR=16
RPZ Rata Peaks 27.92 175 eP **P 22 24 31.6 -0.1**
RPZ Rata Peaks 27.92 175 PN **P 22 24 31.3 -0.4**
comp=Z,399nm,0.6s,mb6.3
MQZ McQueen's Vall 28.08 173 eP **P 22 24 32.6 -0.5**
MQZ McQueen's Vall 28.08 173 ePN **P 22 24 31.9 -1.2**
LBZ Lake Benmore 28.52 176 eP **P 22 24 36.3 -0.7**
LBZ Lake Benmore 28.52 176 PN **P 22 24 35.9 -1.1**
LBZ SN **S 22 29 11.9 -2.0**
LBZ ScP ScP 22 31 12.4 +0.3
STKA Stephens Creek 28.70 232⇓iP **P 22 24 38.6 0.0**
comp=Z,1µm,0.9s,mb6.7
STKA ePCP PcP 22 27 46.0 +0.7
STKA eS **S 22 29 17.6 +1.0**
STKA eSCP ScP 22 31 14.3 +1.6
STKA eSCS ScS 22 35 06.2 -0.1
STKA Stephens Creek 28.70 232 P **P 22 24 38.8 +0.2**
comp=Z,1µm,0.9s,mb6.7,baz=49,slow=8.2,SNR=679
STKA PcP PcP 22 27 45.6 +0.3
comp=Z,256nm,0.7s,baz=322,slow=1.7,SNR=6.8
STKA S **S 22 29 16.1 -0.5**
comp=Z,66nm,1.0s,baz=51,slow=18,SNR=2.0
STKA ScP ScP 22 31 11.9 -0.8
comp=Z,127nm,0.9s,baz=31,slow=4.9,SNR=5.3
STKA ScS ScS 22 35 06.3 0.0
comp=Z,68nm,1.2s,baz=240,slow=22,SNR=18
STKA LR LR 22 36 43.0
comp=Z,29µm,19.8s,baz=54,slow=37
STKA Stephens Creek 28.70 232⇓iP **P 22 24 38.2 -0.4**
STKA e 22 25 24.2
STKA ePcP PcP 22 27 46.0 +0.7
STKA eS **S 22 29 17.6 +1.0**
STKA eS **S 22 29 18.3 +1.7**
STKA eScP ScP 22 31 14.3 +1.6
STKA eScS ScS 22 35 06.2 -0.1
ODZ Otahua Downs 29.21 176 eP **P 22 24 42.0 -1.1**
ODZ Otahua Downs 29.21 176 ePN **P 22 24 40.5 -2.6**
TOO Toolangi 29.29 218⇓iP **P 22 24 43.9 +0.1**
comp=Z,444nm,1.0s,mb6.2
TOO eS **S 22 29 23.9 -2.0**
TOO eSCP ScP 22 31 16.1 +1.6
TOO eSCS ScS 22 35 11.3 +2.2
TOO Toolangi 29.29 218⇓iP **P 22 24 43.9 +0.1**
TOO eS **S 22 29 23.9 -2.0**
TOO e 22 31 16.1
TOO pmax pmax
comp=Z,444nm,1.0s,mb6.2
EAZ Earnscleugh 29.33 178 eP **P 22 24 43.8 -0.3**
EAZ Earnscleugh 29.33 178 ePN **P 22 24 42.5 -1.6**
MLZ Mavora Lakes 29.42 179 eP **P 22 24 42.6 -2.3**
MLZ Mavora Lakes 29.42 179 PN **P 22 24 44.1 -0.8**
JAY Jayapura 29.80 294 P **P 22 24 48.0 -0.3**
TUZ Tuapeka 30.06 177 eP **P 22 24 50.5 -0.1**
TUZ Tuapeka 30.06 177 PN **P 22 24 50.5 -0.2**
comp=Z,433nm,0.7s,mb6.3
SYZ Scrubby Hill 30.63 178 PN **P 22 24 55.6 +0.1**
APZ The Paps 30.90 180 PN **P 22 24 56.0 -2.0**
RAR Rarotonga 31.16 105 P **P 22 25 00.2 0.0**
comp=Z,66nm,0.6s,mb5.5,baz=252,slow=7.4,SNR=15
RAR ScP ScP 22 31 19.1 -1.6
comp=Z,52nm,1.0s,baz=249,slow=7.9,SNR=4.6
RAR Rarotonga 31.16 105 P **P 22 25 00.2 0.0**
RAR ScP ScP 22 31 19.1 -1.6
RAR LR LR
comp=Z,1.0nm,21.0s
WB2 Warramunga Arr 32.08 258⇓iP **P 22 25 06.8 -1.5**
WB2 ePCP PcP 22 27 55.1 +1.0
WB2 eS **S 22 30 06.4 -3.0**
WB2 eSCP ScP 22 31 26.2 +2.5
WB2 e 22 31 38.5
WB2 eSCS ScS 22 35 22.3 -0.5
WRAB Tennant Creek 32.08 258⇓iP **P 22 25 06.9 -1.4**
WRAB *PP pP 22 25 45.5 +5.6
WRAB e 22 26 24.6
WRAB e 22 27 53.0
WRAB eS **S 22 30 04.0 -5.4**
WRAB MLR MLR
comp=Z,51µm,20.0s
WRAB Tennant Creek 32.08 258⇓iP **P 22 25 06.9 -1.4**
WRAB pP pP 22 25 45.5 +5.6
WRAB sP sP 22 26 10.1 +13
WRAB ePP PP 22 26 24.6 +0.9
WRAB ePcP PcP 22 27 53.0 -1.2
WRAB eS **S 22 30 04.0 -5.4**
WRAB eScP ScP 22 31 21.9 -1.8
WRAB LR LR
comp=Z,51µm,20.0s
TAU Tasmania Unive 32.18 209 eP **P 22 25 08.9 -0.3**
TAU e 22 27 55.7
TAU eS **S 22 30 03.2 -7.8**
TAU pmax pmax
comp=Z,431nm,1.3s,mb6.0
TAU MLR MLR
comp=Z,27µm,19.0s
TAU Tasmania Unive 32.18 209 eP **P 22 25 08.9 -0.3**
comp=Z,431nm,1.3s,mb6.0
TAU ePP PP 22 26 32.1 +7.3
TAU ePcP PcP 22 27 55.7 +1.3
TAU eS **S 22 30 03.2 -7.8**
TAU eScP ScP 22 31 28.9 +4.8
TAU LR LR
comp=Z,27µm,19.0s
ADE Adelaide 32.28 228⇓iP **P 22 25 10.6 +0.5**
AS31 Alice Springs 32.79 251⇓iP **P 22 25 13.8 -0.8**
AS31 ePcP PcP 22 27 55.7 -0.4
AS31 eS **S 22 30 22.9 +2.4**
AS31 eScP ScP 22 31 29.5 +3.3
ASAR Alice Springs 32.79 251 P **P 22 25 13.7 -0.9**
comp=Z,1µm,0.5s,mb6.8,baz=78,slow=8.8,SNR=2639
ASAR PcP PcP 22 27 55.6 -0.5
comp=Z,130nm,0.7s,baz=77,slow=2.8,SNR=6.1
ASAR S **S 22 30 19.1 -1.4**
comp=Z,40nm,1.0s,baz=59,slow=28,SNR=2.4
ASAR ScP ScP 22 31 26.1 -0.1
comp=Z,303nm,1.0s,baz=92,slow=3.4,SNR=25
ASAR ScS ScS 22 35 26.2 -0.2
comp=Z,70nm,1.2s,baz=85,slow=5.6,SNR=7.6
ASAR LR LR 22 36 40.5
comp=Z,49µm,21.1s,baz=88,slow=32
ASAR P3KPbc 22 56 30.9
comp=Z,1.7nm,1.0s,baz=289,slow=2.8,SNR=5.1
ASAR Alice Springs 32.79 251 P **P 22 25 13.7 -0.8**
ASAR 22 27 55.7
ASAR S **S 22 30 19.1 -1.4**
ASAR 22 31 26.2
ASAR 22 35 26.3
ASAR Alice Springs 32.79 251 P **P 22 25 13.7 -0.9**

ASAR PcP PcP 22 27 55.6 -0.5
ASAR S **S** **22 30 19.1 -1.4**
ASAR ScP ScP 22 31 26.1 -0.1
ASAR ScS ScS 22 35 26.2 -0.2
ASAR LR LR 22 36 40.5
ASAR *e* 22 56 30.9
ASPA Alice Springs 32.79 251 ⇓*iP* **P** **22 25 13.6 -1.0**
ASPA *eS* **S** **22 30 18.7 -1.8**
ASPA *e*ScP ScP 22 31 28.8 +2.6
ASPA *e*ScS ScS 22 35 25.1 -1.3
KAKA Kakadu 34.40 271 ⇓*iP* **P** **22 25 27.5 -1.0**
comp=Z,1μm,0.7s,mb6.8
KAKA *e*PCP PcP 22 28 01.9 +1.2
KAKA *e*SCP ScP 22 31 34.3 +2.4
KAKA *e*SCS ScS 22 35 35.8 +0.9
BAKI Biak 34.49 292 P **P** **22 25 30.5 +1.3**
WAKE Wake Island 34.92 358 ⇓*eP* **P** **22 25 33.4 +0.4**
comp=Z,616nm,1.1s,mb6.2
WAKE *e*pP pP 22 26 16.9 +12
WAKE *e*PP PP 22 26 53.3 -1.8
WAKE *i* S **S** **22 30 49.8 -3.6**
WAKE *e*ScP ScP 22 31 36.6 +2.8
WAKE LR LR
comp=Z,38μm,21.0s
GUMO Guam 37.01 321 P **P** **22 25 51.1 +0.4**
comp=Z,680nm,0.7s,mb6.4,baz=159,slow=9.0,SNR=30
GUMO ScP ScP 22 31 42.1 +0.6
comp=Z,296nm,1.0s,baz=232,slow=2.6,SNR=8.2
SWI Sorong 39.00 289 P **P** **22 26 06.4 -1.0**
MCQ Macquarie Isla 39.19 188 *eP* **P** **22 26 09.4 +0.5**
MCQ *eS* **S** **22 32 00.9 +3.0**
FORT Forrest 39.20 241 *eP* **P** **22 26 08.9 -0.1**
comp=Z,8μm,1.5s,mb7.1
FORT *e*PP PP 22 27 51.8 +10
FORT *e*PCP PcP 22 28 15.2 0.0
FORT *eS* **S** **22 31 57.6 -0.5**
FORT *e*SCS ScS 22 36 00.6 -1.2
FITZ Fitzroy Crossi 40.34 261 ⇓*iP* **P** **22 26 18.1 -0.4**
comp=Z,4μm,0.8s,mb7.1
FITZ *e*PP PP 22 27 56.2 +1.8
FITZ *e*PCP PcP 22 28 17.3 -1.6
FITZ *e*SCP ScP 22 31 56.2 +2.0
FITZ *eS* **S** **22 32 13.1 -2.1**
FITZ *e*SCS ScS 22 36 10.0 +1.4
FITZ Fitzroy Crossi 40.34 261 P **P** **22 26 18.0 -0.4**
comp=Z,2μm,0.8s,mb6.8,baz=98,slow=9.0,SNR=1172
FITZ ScP ScP 22 31 56.4 +2.2
comp=Z,131nm,1.1s,baz=114,slow=11,SNR=4.3
FITZ S **S** **22 32 11.4 -3.7**
comp=Z,44nm,1.0s,baz=188,slow=22,SNR=3.0
FITZ LR LR 22 42 03.0
comp=Z,37μm,20.8s,baz=87,slow=34
PAE Paea 40.77 99 *eP* **P** **22 26 23.0 +1.0**
comp=Z,171nm,1.2s,mb5.6
PAE Paea 40.77 99 *eP* **P** **22 26 23.0 +1.0**
PAE pmax pmax
comp=Z,171nm,1.2s,mb5.5
AAI Ambon 40.78 283 P **P** **22 26 19.5 -2.6**
PPT Papeete 40.78 99 *eP* **P** **22 26 23.5 +1.4**
comp=Z,141nm,1.2s,mb5.5
PPT Papeete 40.78 99 *e*LQ 22 36 08.8
PPT *e*LR LR 22 37 57.7
comp=Z,124μm,79.2s
PPT Papeete 40.78 99 P **P** **22 26 23.4 +1.3**
comp=Z,44nm,0.5s,mb5.3,baz=247,slow=7.2,SNR=4.6
TVO Taravao 41.08 99 *eP* **P** **22 26 25.8 +1.3**
comp=Z,344nm,1.4s,mb5.8
TVO Taravao 41.08 99 *eP* **P** **22 26 25.8 +1.3**
TVO pmax pmax
comp=Z,344nm,1.4s,mb5.8
PMOR Pomariorio Ree 42.64 95 *eP* **P** **22 26 38.2 +1.0**
comp=Z,246nm,1.0s,mb5.8
PMOR *e*pP pP 22 27 12.3 +2.2
comp=Z,444nm,1.3s
MBWA Marble Bar 45.77 256 P **P** **22 27 02.7 +0.6**
SNR=117
MBWA Marble Bar 45.77 256 ⇓*iP* **P** **22 27 02.1 0.0**
MBWA pP pP 22 27 45.9 +10
MBWA sP sP 22 28 01.0 +8.9
MBWA *e*PcP PcP 22 28 36.3 -0.9
MBWA *e*PP PP 22 28 51.6 -0.6
MBWA *i* ScP ScP 22 32 16.4 +0.2
MBWA *eS* **S** **22 33 35.0 +0.6**
MBWA LR LR
comp=Z,47μm,19.0s
MIDW Midway 46.08 18 P **P** **22 27 05.5 +1.0**
MIDW *e*pP pP 22 27 45.6 +7.7
MIDW *e*PcP PcP 22 28 32.9 -5.4
MIDW *e*ScP ScP 22 32 19.9 +2.4
MIDW LR LR
comp=Z,22μm,22.0s
WSI Waingapu 46.67 272 P **P** **22 27 08.9 -0.2**
MATI Mati 46.97 296 *eP* **P** **22 27 10.5 -1.0**
DAV Davao City (W) 47.62 295 P **P** **22 27 16.8 +0.4**
SNR=13
DAV P 22 27 18.0
SNR=6.2
DAV Davao City (W) 47.62 295 ⇓*iP* **P** **22 27 16.7 +0.3**
DAV *e*pP pP 22 27 54.6 +4.6
DAV *e*sP sP 22 28 17.0 +10
DAV *e*ScP ScP 22 32 27.8 +3.9
DAV *eS* **S** **22 33 56.5 -4.0**
DAV LR LR
comp=Z,24μm,21.0s
KLBR Kellerberrin 48.03 242 ⇓*iP* **P** **22 27 18.9 -0.7**
comp=Z,11μm,2.0s,mb7.1
KLBR *eS* **S** **22 34 08.0 +1.6**
KLBR *e*SCS ScS 22 36 56.3 -1.1
BUKP Musuan 48.45 296 *eP* **P** **22 27 23.4 +0.6**
BUTP Butuan 48.51 298 *eP* **P** **22 27 24.2 +0.9**
NWAO Narrogin (SRO) 48.64 240 P **P** **22 27 23.7 -0.6**
NWAO S **S** **22 34 14.1 -0.9**
NWAO ScS ScS 22 36 59.4 -2.1
NWAO Narrogin (SRO) 48.64 240 P **P** **22 27 23.6 -0.8**
comp=Z,3μm,0.9s,mb6.9,baz=81,slow=8.1,SNR=303
NWAO S **S** **22 34 14.3 -0.7**
comp=Z,48nm,1.0s,baz=1.1,slow=23,SNR=2.5
NWAO LR LR 22 47 14.6
comp=Z,43μm,20.8s,baz=201,slow=35
NWAO Narrogin (SRO) 48.64 240 ⇓*iP* **P** **22 27 23.7 -0.6**
NWAO *e* 22 28 19.3
NWAO *e* 22 29 17.4
NWAO *i* S **S** **22 34 13.1 -1.9**
NWAO MLR MLR
comp=Z,36μm,20.0s
NWAO Narrogin (SRO) 48.64 240 ⇓*iP* **P** **22 27 23.7 -0.6**
NWAO *e* 22 28 19.3
NWAO *e*PP PP 22 29 17.4 -1.2
NWAO *e*ScP ScP 22 32 21.6 -6.6
NWAO *i* S **S** **22 34 13.1 -1.9**
NWAO LR LR
comp=Z,36μm,20.0s
CTBH Cotabato--PC H 48.85 295 ⇑*iP* **P** **22 27 27.3 +1.4**
SCPH Surigao 49.04 298 *eP* **P** **22 27 27.6 +0.3**
MUN Mundaring 49.39 241 *eP* **P** **22 27 29.6 -0.4**
MUN *e*PCP PcP 22 28 52.3 +2.2
MUN *e*PP PP 22 29 27.8 +2.4
MUN *eS* **S** **22 34 26.8 +1.4**
CBIJ Chichi jima 49.40 329 P **P** **22 27 28.9 -1.2**
comp=Z,3μm,0.6s,mb7.1,baz=193,slow=1.7,SNR=143
CBIJ ScP ScP 22 32 32.4 +0.9
comp=Z,343nm,1.0s,baz=229,slow=4.1,SNR=6.1
CBIJ S **S** **22 34 19.2 -6.4**
comp=Z,290nm,1.1s,baz=302,slow=18,SNR=6.0
PCI Palu 49.57 283 P **P** **22 27 31.9 +0.5**
MSLP Maasin 49.75 298 *eP* **P** **22 27 33.7 +1.0**
HON Honolulu 49.88 43 *e*ScP ScP 22 32 35.9 +2.3
PAGZ Pagadian 49.90 295 *eP* **P** **22 27 34.9 +1.0**
KIP Kipapa 49.95 43 ⇓*eP* **P** **22 27 34.4 +0.2**
KIP *i* S **S** **22 34 35.6 +2.4**
KIP pmax pmax
comp=Z,438nm,1.0s,mb6.0
KIP MLR MLR
comp=Z,16μm,21.0s
KIP Kipapa 49.95 43 ⇓*eP* **P** **22 27 34.4 +0.2**
comp=Z,440nm,1.0s,mb6.0
KIP *e*ScP ScP 22 32 36.1 +2.2
KIP *i* S **S** **22 34 35.5 +2.4**
KIP LR LR
comp=Z,16μm,21.0s
KKH Kailua Kona 50.09 46 *eP* **P** **22 27 36.0 +0.7**
PLP Palo 50.18 300 *eP* **P** **22 27 36.5 +0.5**
DCPH Dipolog City 50.27 296 ⇑*eP* **P** **22 27 38.2 +1.5**

TBP Tagbilaran 50.37 297 *eP* **P** **22 27 38.0 +0.6**
POHA Pohakuloa 50.49 47 ⇓*eP* **P** **22 27 39.3 +1.0**
POHA LR LR
comp=Z,15μm,21.0s
IPIL Ipil 50.58 294 ⇓*eP* **P** **22 27 40.1 +1.1**
IPIL Ipil 50.58 294 *eP* **P** **22 27 39.8 +0.8**
HKL Haleakala 50.63 45 *eP* **P** **22 27 41.3 +2.0**
SNPH Sibulan 50.74 297 ⇓*eP* **P** **22 27 41.0 +0.8**
TAOE Nuku Hiva Isla 51.20 89 *e*LQ 22 40 32.1
comp=Z,327μm,22.2s
TAOE Nuku Hiva Isla 51.20 89 *eP* **P** **22 27 44.4 +0.8**
comp=Z,4μm,1.2s,mb6.9
TAOE *e*pP pP 22 28 19.4 +1.8
comp=Z,2μm,1.3s
TAOE Nuku Hiva Isla 51.20 89 *eS* **S** **22 34 50.2 -0.2**
comp=Z,97μm,20.2s
TAOE *e*SS SS 22 38 30.3 +2.7
comp=Z,33μm,21.8s
TAOE *e*LR LR 22 42 40.8
comp=Z,227μm,48.1s
TAOE Nuku Hiva Isla 51.20 89 *eP* **P** **22 27 44.4 +0.8**
comp=Z,4μm,1.2s,mb6.9
TAOE *e*pP pP 22 28 19.4 +1.8
TAOE *eS* **S** **22 34 50.2 -0.2**
TAOE *e*SS SS 22 38 30.3 +2.7
TAOE *e*LQ 22 40 32.1
DNP Denpasar 51.79 271 P **P** **22 27 48.2 +0.2**
GUIM Jordan 51.92 298 *eP* **P** **22 27 48.9 -0.1**
MMPH Masbate 51.93 300 ⇑*iP* **P** **22 27 50.1 +1.1**
PVCP Virac 52.15 302 ⇓*eP* **P** **22 27 50.7 +0.1**
PVCP Virac 52.15 302 *eP* **P** **22 27 51.6 +1.0**
RCP Roxas 52.26 299 ⇑*eP* **P** **22 27 52.3 +0.8**
NBBI Negara 52.43 272 P **P** **22 27 52.2 -0.5**
KALP Kalibo 52.66 299 ⇑*eP* **P** **22 27 55.6 +1.2**
AUQP San Andres 53.22 301 *eP* **P** **22 28 00.9 +2.4**
OTRP Odiongan 53.27 299 *eP* **P** **22 27 59.3 +0.4**
TSM Tawau 53.31 288 P **P** **22 28 00.3 +1.1**
KMMI Kalianget 53.37 273 P **P** **22 27 57.2 -2.4**
CUYO Cuyo Island 53.38 297 *eP* **P** **22 28 00.0 +0.4**
GQP Guinayangan 53.71 301 ⇓*eP* **P** **22 28 02.9 +0.8**
BOAC Boac 53.98 300 *eP* **P** **22 28 04.2 +0.2**
DRV Dumont d'Urvil 53.99 193 P **P** **22 28 07.0 +2.9**
DRV S **S** **22 35 38.0 +10**
DRV SS SS 22 39 23.0 +11
DRV L 22 41 00.0
DRV R 22 45 00.0
RKT Rikitea 54.14 107 *eS* **S** **22 35 30.7 +0.3**
RKT *e*LR LR 22 44 08.9
comp=Z,102μm,60.8s
POLP Polillo Island 54.56 302 *eP* **P** **22 28 08.6 +0.3**
BUSP Coron 54.64 298 *eP* **P** **22 28 09.5 +0.7**
PPR Puerto Princes 54.86 294 ⇓*iP* **P** **22 28 12.0 +1.6**
ENPP El Nido 54.92 296 *eP* **P** **22 28 11.6 +0.8**
TGY Tagaytay City 55.06 300 ⇓*eP* **P** **22 28 10.6 -1.3**
TGY Tagaytay City 55.06 300 P **P** **22 28 13.5 +1.7**
comp=Z,2μm,0.7s,baz=292,slow=6.4,SNR=50
TGY S **S** **22 35 45.1 +2.3**
comp=Z,101nm,0.3s,baz=259,slow=11,SNR=4.0
BATP Bataraza 55.24 293 *eP* **P** **22 28 14.1 +1.0**
BALP Baler 55.40 302 *eP* **P** **22 28 14.5 +0.3**
PALP Palanan 55.43 304 ⇓*eP* **P** **22 28 16.1 +1.6**
PALP Palanan 55.43 304 *eP* **P** **22 28 16.4 +2.0**
LUBP Lubang 55.45 299 *eP* **P** **22 28 12.9 -1.7**
KKM Kota Kinabalu 55.52 289 P **P** **22 28 15.9 +0.8**
KKM Kota Kinabalu 55.52 289 P **P** **22 28 14.3 -0.8**
JHJ Hachijo jima 2 55.56 331 P **P** **22 28 15.6 +0.2**
comp=Z,1μm,0.8s,mb6.8,baz=193,slow=8.0,SNR=23
JHJ ScP ScP 22 32 58.1 -0.2
comp=Z,452nm,0.7s,baz=180,slow=8.9,SNR=7.6
CAUP Cauayan 55.84 304 *eP* **P** **22 28 18.3 +0.9**
CVP Callao Caves 56.26 304 ⇓*eP* **P** **22 28 21.0 +0.6**
SGCP Mt. Cagua 56.38 305 *eP* **P** **22 28 22.6 +1.3**
BCPH Baguio City Da 56.54 302 ⇑*iP* **P** **22 28 21.9 -0.5**
SCZP Santa Cruz 56.77 301 *eP* **P** **22 28 24.2 +0.2**
APYP Conner 56.81 304 *eP* **P** **22 28 24.3 +0.1**
ABRA Dolores 57.12 304 *eP* **P** **22 28 25.7 -0.7**
BJII Banjamegara 57.40 271 ⇓*iP* **P** **22 28 28.8 +0.4**
PTCN Pitcairn Islan 58.47 110 P **P** **22 28 34.0 -1.8**
PTCN *eS* **S** **22 36 26.9 -0.5**
PTCN LR LR
comp=Z,13μm,19.0s
MJAR Matsushiro Arr 59.13 332 P **P** **22 28 40.0 -0.4**
comp=Z,2μm,1.1s,mb6.8,baz=168,slow=7.5,SNR=926
MJAR ScP ScP 22 33 13.6 -0.4
comp=Z,54nm,0.9s,baz=162,slow=4.3,SNR=8.6
MJAR S **S** **22 36 29.2 -6.8**
comp=Z,6.1nm,0.9s,baz=131,slow=5.1,SNR=4.1
MJAR PKP2bc 22 58 19.1
comp=Z,11nm,1.2s,baz=317,slow=4.0,SNR=4.9
MJAR Matsushiro Arr 59.13 332 P **P** **22 28 40.0 -0.4**
MJAR S **S** **22 36 29.2 -6.8**
MJAR Matsushiro Arr 59.13 332 P **P** **22 28 40.0 -0.4**
MJAR ScP ScP 22 33 13.6 -0.4
MJAR S **S** **22 36 29.2 -6.8**
MJAR ⇑*e* 22 58 19.1
MAJO Matsushiro 59.13 332 ⇓*iP* **P** **22 28 40.2 -0.2**
MAJO *e* 22 29 28.2
MAJO MLR MLR
comp=Z,12μm,22.0s
MAJO Matsushiro 59.13 332 ⇓*iP* **P** **22 28 40.2 -0.2**
MAJO *e*PcP PcP 22 29 28.2 +0.7
MAJO *e*ScP ScP 22 33 16.5 +2.5
MAJO *eS* **S** **22 36 20.9 -15**
MAJO LR LR
comp=Z,12μm,22.0s
MAT Matsushiro 59.13 332 P **P** **22 28 39.7 -0.7**
MAT S **S** **22 36 29.0 -7.0**
MAT Matsushiro 59.13 332 *eP* **P** **22 28 40.0 -0.4**
MAT *eS* **S** **22 36 29.0 -7.0**
MAT LR LR
comp=Z,8μm,20.0s
KSM Kuching 59.34 281 P **P** **22 28 41.1 -0.8**
NACB Ninganchiao 60.15 311 ⇓*iP* **P** **22 28 47.3 -0.1**
NACB *e*pP pP 22 29 29.9 +7.5
NACB *e*sP sP 22 29 48.8 +10
NACB *e*PP PP 22 31 01.2 -0.5
NACB *eS* **S** **22 36 43.0 -6.0**
YHNB Yeheng 60.60 311 ⇓*iP* **P** **22 28 50.4 -0.1**
YHNB *e*pP pP 22 29 32.9 +7.4
YHNB *e*sP sP 22 29 51.6 +10
YHNB *e*PP PP 22 31 03.2 -2.5
TNG Tangerang 60.63 272 P **P** **22 28 50.5 -0.2**
TATO Taipei 60.71 311 P **P** **22 28 51.1 0.0**
TATO ScP ScP 22 33 23.3 +2.3
TATO S **S** **22 36 55.6 -0.6**
TATO Taipei 60.71 311 P **P** **22 28 51.9 +0.8**
SNR=39
TATO Taipei 60.71 311 ⇓*iP* **P** **22 28 50.8 -0.4**
TATO *e*pP pP 22 29 33.4 +7.2
TATO *e*sP sP 22 29 52.9 +11
TATO PP PP 22 31 03.3 -3.3
TATO LR LR
comp=Z,30μm,20.0s
VNDA Vanda 61.77 181 P **P** **22 28 57.8 -0.5**
VNDA sP sP 22 29 50.7 +1.1
VNDA S **S** **22 37 09.8 +0.2**
VNDA ScS ScS 22 38 35.2 -0.3
VNDA Vanda 61.77 181 P **P** **22 28 57.6 -0.7**
comp=Z,67nm,0.6s,mb5.6,baz=353,slow=7.3,SNR=170
VNDA PcP PcP 22 29 38.0 -0.1
comp=Z,62nm,0.7s,baz=29,slow=6.5,SNR=4.0
VNDA ScP ScP 22 33 26.5 +0.8
comp=Z,22nm,1.1s,baz=351,slow=6.5,SNR=3.7
VNDA S **S** **22 37 08.2 -1.4**
comp=Z,1.7nm,0.9s,baz=250,slow=23,SNR=5.7
VNDA PKPPKP 22 57 54.8
comp=Z,4.4nm,1.1s,baz=245,slow=1.6,SNR=5.2
VNDA Vanda 61.77 181 P **P** **22 28 57.6 -0.7**
VNDA 22 29 38.0
VNDA S **S** **22 37 08.2 -1.4**
VNDA MLR MLR
comp=Z,12μm,20.0s
VNDA Vanda 61.77 181 P **P** **22 28 57.6 -0.7**
VNDA PcP PcP 22 29 38.0 -0.1
VNDA ScP ScP 22 33 26.5 +0.8
VNDA S **S** **22 37 08.2 -1.4**
VNDA P'P' 22 57 54.8
VNDA LR LR
comp=Z,12μm,20.0s
SBA Scott Base 62.03 180 ⇓*iP* **P** **22 29 00.2 +0.1**
SBA *e* pP 22 29 38.2 +2.9
SBA *i* 22 31 22.8
SBA *i* S **S** **22 37 10.4 -2.5**
SBA pmax pmax
comp=Z,766nm,1.3s,mb6.4
SBA MLR MLR
comp=Z,10μm,20.0s
SBA Scott Base 62.03 180 ⇓*iP* **P** **22 29 00.2 +0.1**
comp=Z,766nm,1.3s,mb6.4
SBA *e* pP 22 29 38.1 +2.9
SBA *i* PP PP 22 31 22.8 +4.5
SBA *e*ScP ScP 22 33 27.5 +0.6
SBA *i* S **S** **22 37 10.4 -2.5**
SBA LR LR
comp=Z,10μm,20.0s
KLI Kotabumi 62.69 273 P **P** **22 29 02.6 -1.8**
CASY Casey 62.71 203 *eP* **P** **22 29 03.7 -0.9**
CASY *e*SCP ScP 22 33 30.0 +0.1
CASY *eS* **S** **22 37 19.3 -2.0**
CASY *e*SCS ScS 22 38 39.4 -3.3
CASY Casey 62.71 203 *eP* **P** **22 29 03.7 -0.9**
CASY *e*ScP ScP 22 33 30.0 +0.1
CASY *eS* **S** **22 37 19.3 -2.0**
CASY *e*ScS ScS 22 38 39.4 -3.3
CASY LR LR
comp=Z,9μm,19.0s
QZH Quanzhou 62.81 309 *i* PR **P** **22 29 06.7 +1.4**
QZH AP pP 22 29 40.1 -0.4
QZH XP sP 22 29 55.3 -1.4
QZH PP PP 22 31 29.0 +3.8
QZH S **S** **22 37 23.8 +1.1**
QZH AMB AMB
comp=Z,2μm,0.8s,mb7.0
QZH AMB AMB
comp=Z,30μm,9.0s
QZH LR LR
comp=N,17μm,10.1s
QZH LR LR
comp=E,16μm,7.6s
QZH LR LR
comp=Z,35μm,28.0s
YUK Yuzh-Kuril'sk 62.87 342 ⇓*iP* **P** **22 29 05.4 -0.3**
YUK *e* 22 29 46.5
YUK *i* S **S** **22 37 22.0 -1.4**
YUK pmax pmax
comp=Z,15μm,7.0s
YUK pmax pmax
comp=N,14μm,5.0s
YUK pmax pmax
comp=E,5μm,5.0s
YUK smax
comp=N,13μm,7.0s
YUK smax
comp=E,15μm,7.0s
SSE Sheshan 64.69 316 P **P** **22 29 17.1 -0.4**
SSE PP PP 22 31 40.5 -1.1
SSE S **S** **22 37 44.9 -0.9**
SSE SS SS 22 41 56.5 -2.9
SSE AMB AMB
comp=Z,955nm,0.9s,mb6.6
SSE AMB AMB
comp=Z,8μm,7.3s
SSE LR LR
comp=N,11μm,20.0s
SSE LR LR
comp=E,14μm,19.6s
SSE LR LR
comp=Z,27μm,20.1s
HKC Hong Kong 64.78 304 ⇓*iP* **P** **22 29 21.0 +2.8**
HKC *i* S **S** **22 37 44.0 -3.0**
KSI Kapahiang 65.18 273 P **P** **22 29 19.3 -1.4**
INCN Inchon 65.68 325 P **P** **22 29 24.5 +0.6**
SNR=254
INCN Inchon 65.68 325 ⇓*iP* **P** **22 29 23.1 -0.8**
INCN *e*pP pP 22 30 03.6 +4.1
INCN *e*sP sP 22 30 23.8 +8.3
INCN *i* S S 22 37 51.2 -6.7
INCN LR LR
comp=Z,15μm,22.0s
GZH Guangzhou 65.84 305 P **P** **22 29 25.1 +0.1**
GZH S S 22 37 59.8 -0.1
GZH AMB AMB
comp=Z,354nm,1.3s,mb6.0
GZH LR LR
comp=N,17μm,19.8s
GZH LR LR
comp=E,20μm,23.1s
GZH LR LR
comp=Z,34μm,24.2s
KGM Kluang 66.13 279 P **P** **22 29 27.6 +0.8**
YSS Yuzh-Sakhalins 66.44 342 P **P** **22 29 29.6 +0.8**
YSS S S 22 38 07.3 +0.2
YSS Yuzh-Sakhalins 66.44 342 ⇓*iP* **P** **22 29 29.5 +0.7**
YSS *e*PcP PcP 22 30 00.7 +3.4
YSS *e*pP pP 22 30 11.1 +6.7
YSS PP PP 22 31 53.5 -3.4
YSS *i* S S 22 38 07.2 +0.1
YSS LR LR
comp=Z,15μm,21.0s
QIZ Qiongzhong 66.74 299 ⇓P **P** **22 29 31.5 +0.8**
QIZ AP pP 22 30 07.0 +0.7
QIZ XP sP 22 30 23.3 +0.9
QIZ S S 22 38 11.4 +0.7
QIZ XS sS 22 39 08.0 -4.3
QIZ SS SS 22 42 27.3 -3.9
QIZ AMB AMB
comp=Z,503nm,1.3s,mb6.2
QIZ AMB AMB
comp=Z,13μm,12.1s
QIZ LR LR
comp=N,20μm,22.6s
QIZ LR LR
comp=Z,24μm,33.7s
QIZ Qiongzhong 66.74 299 ⇓*iP* **P** **22 29 31.7 +1.0**
comp=Z,735nm,1.2s,mb6.4
QIZ *e*pP pP 22 30 09.8 +3.5
QIZ *e*sP sP 22 30 30.8 +8.4
QIZ *e*PP PP 22 31 57.5 -1.9
QIZ *eS* S 22 38 09.4 -1.2
QIZ LR LR
comp=Z,9μm,21.0s
NJ2 Nanjing 66.84 316 *eP* **P** **22 29 32.5 +1.2**
NJ2 AP pP 22 30 10.8 +3.8
NJ2 PP PP 22 32 03.5 +3.2
NJ2 S S 22 38 10.0 -1.9
NJ2 XS sS 22 39 17.0 +3.5
NJ2 AMB AMB
comp=Z,860nm,1.0s,mb6.5
NJ2 AMB AMB
comp=Z,10μm,8.9s
NJ2 LR LR
comp=N,72μm,23.1s
NJ2 LR LR
comp=E,50μm,29.7s
NJ2 LR LR
comp=Z,20μm,21.7s
SKR Severo-Kuril's 67.03 352 ⇓*iP* **P** **22 29 28.0 -4.5**
SKR *e**PP pP 22 30 14.0 +5.8
SKR *e*PPP 22 33 37.0
SKR *i* S S 22 38 09.0 -5.2
SKR *e*SSS 22 45 30.0
SKR pmax pmax
comp=Z,60nm,0.6s,mb5.6
SKR pmax pmax
comp=N,4μm,5.0s
SKR pmax pmax
comp=E,2μm,5.0s
SKR pmax pmax
comp=Z,4μm,5.0s
SKR smax
comp=N,3μm,3.0s
SKR smax
comp=E,3μm,3.0s
SKR smax
comp=N,17μm,10.0s
SKR smax
comp=E,21μm,14.0s
SKR MLR MLR
comp=N,7μm,18.0s
SKR MLR MLR
comp=Z,12μm,18.0s
SKR MLR MLR
comp=E,8μm,16.0s
VLA Vladivostok 67.30 332*c iP* **P** **22 29 33.9 -0.3**
VLA *e* 22 32 01.2
VLA *i* S S 22 38 18.0 +0.6
VLA pmax pmax

VLA MLR MLR
comp=Z,6µm,16.4s
VLA Vladivostok 67.30 332⇑ *i*P **P** **22 29 33.1 -1.1**
AMKA Amchitka 67.68 8 *e*P **P** **22 29 37.2 +0.6**
AMKA *i*S S 22 38 21.2 -0.7
PPI Padang Panjang 68.18 276 P **P** **22 29 38.2 -1.5**
SMY Shemya 68.50 4 *e*P **P** **22 29 42.5 +0.8**
SMY pmax pmax
comp=Z,200nm,1.0s,mb5.8
SMY Shemya 68.50 4 *e*P **P** **22 29 43.9 +2.2**
comp=Z,411nm,1.5s,mb5.9
SMY LR LR
comp=Z,31µm,22.0s
COCO West Island 68.68 263 P **P** **22 29 44.6 +1.7**
SNR=35
COCO P 22 29 45.0
SNR=18
COCO West Island 68.68 263⇓ *i*P **P** **22 29 43.8 +1.0**
COCO *e*PP PP 22 32 14.5 -1.9
COCO S S 22 38 39.6 +5.8
COCO LR LR
comp=Z,17µm,21.0s
PET Petropavlovsk 69.03 354k *i*P **P** **22 29 44.4 -0.6**
PET *e* 22 30 04.7
PET *e* 22 32 21.6
PET *i*S S 22 38 37.0 -1.0
PET *e*SS SS 22 43 09.0 +2.4
PET *e*SSS 22 46 17.3
PET pmax pmax
comp=Z,8µm,6.6s
PET pmax pmax
comp=N,3µm,6.7s
PET pmax pmax
comp=E,2µm,7.0s
PET smax
comp=N,79nm,1.9s
PET smax
comp=N,11µm,9.8s
PET MLR MLR
comp=Z,9µm,18.0s
PET MLR MLR
comp=Z,7µm,18.0s
PET Petropavlovsk 69.03 354 *e*P **P** **22 29 44.7 -0.3**
PET pmax pmax
comp=Z,190nm,1.0s,mb5.8
PET Petropavlovsk 69.03 354⇓ *i*P **P** **22 29 44.0 -1.0**
comp=Z,187nm,1.0s,mb5.8
PET *e*PcP PcP 22 30 04.4 -3.7
PET *e*pP pP 22 30 26.1 +5.2
PET *e*sP sP 22 30 45.7 +8.8
PET PP PP 22 32 25.9 +6.5
PET *i*S S 22 38 34.9 -3.1
PET LR LR
comp=Z,14µm,20.0s
WHN Wuhan 69.08 312 P **P** **22 29 45.4 +0.1**
WHN XP sP 22 30 34.7 -2.4
WHN *i*S S 22 38 37.2 -1.3
WHN LR LR
comp=Z,28µm,22.0s
IPM Ipoh 69.08 281 P **P** **22 29 45.9 +0.6**
UBT Ubonrachathani 69.28 293⇓ P **P** **22 29 47.8 +1.3**
comp=Z,2µm,0.8s,mb6.9
DL2 Dalian 69.50 323 *i*PR **P** **22 29 48.3 +0.4**
DL2 XP sP 22 30 40.6 +0.8
DL2 S S 22 38 42.9 -0.6
DL2 AMB AMB
comp=Z,2µm,0.9s,mb6.9
DL2 AMB AMB
comp=Z,5µm,6.9s
MDJ Mudanjiang 69.50 332 P **P** **22 29 48.4 +0.5**
MDJ PCP PcP 22 30 09.8 -0.3
MDJ AP pP 22 30 24.7 +0.9
MDJ XP sP 22 30 41.0 +1.2
MDJ PP PP 22 32 24.5 +1.1
MDJ S S 22 38 46.2 +2.7
MDJ SCS ScS 22 39 35.6 +0.3
MDJ SS SS 22 43 15.0 +1.1
MDJ AMB AMB
comp=Z,2µm,1.1s,mb6.8
MDJ AMB AMB
comp=Z,10µm,8.5s
MDJ Mudanjiang 69.50 332⇓ *i*P **P** **22 29 48.5 +0.6**
comp=Z,2µm,0.9s,mb6.8
MDJ *e*pP pP 22 30 29.8 +6.0
MDJ PP PP 22 32 19.4 -4.0
MDJ *e*S S 22 38 42.9 -0.6
MDJ LR LR
comp=Z,10µm,21.0s
MIR Mirnyy 69.54 204*d* iP **P** **22 29 49.0 +0.9**
MIR *e*PS 22 38 40.0
MIR pmax pmax
comp=Z,4µm,1.0s
MIR pmax pmax
comp=Z,8µm,8.0s
KULM Kulim 69.69 282⇓ *i*P **P** **22 29 48.7 -0.4**
KULM *e*pP pP 22 30 26.2 +1.2
KULM *e*sP sP 22 30 48.9 +7.9
KULM *e*PP PP 22 32 19.9 -5.2
KULM *e*S S 22 39 16.2 +30
SNG Songkhla 70.34 284 P **P** **22 29 54.0 +1.0**
comp=Z,556nm,1.0s,mb6.2
HABR Khabarovsk 70.36 338⇓ *i*P **P** **22 29 54.5 +1.4**
HABR *e*S S 22 38 54.1 +0.6
HABR pmax pmax
comp=Z,3µm,1.2s,mb6.9
HABR MLR MLR
comp=Z,2µm,16.0s
SNY Shenyang 70.42 326 ⇓P **P** **22 29 53.7 +0.2**
SNY AP pP 22 30 23.7 -5.8
SNY XP sP 22 30 42.5 -3.0
SNY PP PP 22 32 33.2 +1.9
SNY S S 22 38 55.0 +0.8
SNY AMB AMB
comp=Z,475nm,0.7s,mb6.3
SNY AMB AMB
comp=Z,12µm,12.0s
SNY LR LR
comp=N,13µm,20.1s
SNY LR LR
comp=Z,20µm,47.9s
TIA Tai'an 70.52 318 ⇓P **P** **22 29 54.0 -0.1**
TIA AP pP 22 30 26.0 -4.1
TIA AMB AMB
comp=Z,731nm,1.0s,mb6.4
TIA AMB AMB
comp=Z,7µm,8.0s
TIA LR LR
comp=N,3µm,16.0s
PSI Prapat 70.55 279 P **P** **22 29 53.5 -0.8**
comp=N,404nm,0.9s,mb6.2,baz=128,slow=5.3,SNR=169
PSI S S 22 38 52.9 -2.7
comp=N,2.6nm,0.5s,baz=325,slow=21,SNR=5.2
PSI Prapat 70.55 279 P **P** **22 29 53.5 -0.8**
PSI S S 22 38 52.9 -2.8
CN2 Changchun 70.86 329⇓ *i*P **P** **22 29 56.4 +0.2**
CN2 *e*PCP PcP 22 30 17.6 +1.7
CN2 *e*S S 22 38 55.0 -4.3
CN2 LR LR
comp=N,10µm,20.0s
CN2 LR LR
comp=E,8µm,20.0s
CN2 LR LR
comp=Z,15µm,21.0s
TSI Tuntungan 71.10 279 *i*P **P** **22 29 53.2 -4.4**
NIKO Nikolski 71.43 15⇓ *i*P **P** **22 29 57.9 -1.7**
NIKO *e*PcP PcP 22 30 17.5 -0.8
NIKO *e*pP pP 22 30 40.6 +4.9
NIKO *e*sP sP 22 30 59.5 +7.8
NIKO *e*PP PP 22 32 34.9 -5.1
KKTK Khon Kaen 71.65 294 PG **P** **22 30 00.0 -0.9**
KLR Kul'dur 72.23 336⇑ *i*P **P** **22 30 02.0 -2.4**
KLR pmax pmax
comp=E,2µm,2.0s
KLR pmax pmax
comp=Z,5µm,2.0s,mb6.9
GYA Guiyang 72.78 305⇓ *i*P **P** **22 30 06.8 -0.8**
GYA AP pP 22 30 46.2 +2.4
GYA XP sP 22 30 56.5 -3.2
GYA PP PP 22 32 53.8 +2.4
GYA S S 22 39 20.6 -0.6
GYA SKS 22 39 52.5
GYA XS sS 22 40 28.1 +4.3
GYA SS SS 22 44 07.4 +3.4
GYA AMB AMB
comp=Z,1µm,1.0s,mb6.5
GYA AMB AMB
comp=Z,11µm,9.3s
GYA LR LR
comp=N,10µm,21.2s
GYA LR LR
comp=E,15µm,20.9s
GYA LR LR
comp=Z,16µm,23.0s
NNT Nongplab 73.02 289 P **P** **22 30 10.3 +1.2**
AKUT Akutan 73.26 16 *e*P **P** **22 30 07.9 -2.6**
comp=Z,524nm,2.0s,mb5.9
AKUT LR LR
comp=Z,20µm,21.0s
BJT Baijiatuao 73.45 321⇓ *i*P **P** **22 30 11.7 +0.2**
BJT *e**SP sP 22 31 16.3 +13
BJT *e*S S 22 39 24.2 -4.6
BJT pmax pmax
comp=Z,2µm,0.8s
BJT MLR MLR
comp=Z,18µm,22.0s
BJT Baijiatuao 73.45 321⇓ *i*P **P** **22 30 11.7 +0.2**
comp=Z,2µm,0.8s,mb6.9
BJT *e*pP pP 22 30 47.7 -0.2
BJT *e*sP sP 22 31 16.3 +13
BJT *e*S S 22 39 24.2 -4.6
BJT LR LR
comp=Z,18µm,22.0s
BJI Beijing 73.46 321 P **P** **22 30 12.2 +0.6**
BJI PCP PcP 22 30 23.9 -3.0
BJI XP sP 22 31 04.7 +0.9
BJI S S 22 39 25.3 -3.6
BJI AMB AMB
comp=Z,2µm,0.9s,mb6.9
BJI AMB AMB
comp=Z,20µm,6.1s
BJI LR LR
comp=N,16µm,18.4s
BJI LR LR
comp=E,16µm,18.4s
BJI LR LR
comp=Z,33µm,26.3s
NST Nakhon Sawan 73.79 292 ⇑P **P** **22 30 14.2 +0.7**
comp=Z,785nm,0.8s,mb6.5
QSPA South Pole Qui 74.19 180⇓ *i*P **P** **22 30 15.6 -0.2**
QSPA *e*pP pP 22 30 56.7 +4.5
QSPA *e*sP sP 22 31 21.6 +14
QSPA *e*PP PP 22 33 06.0 +2.5
QSPA *i*S S 22 39 21.6 -16
QSPA LR LR
comp=Z,13µm,20.0s
FALS False Pass 74.54 17⇓ *i*P **P** **22 30 15.4 -2.5**
FALS PP PP 22 33 05.8 -0.7
FALS *e*S S 22 39 36.0 -5.1
XAN Xi'an 74.83 313 P **P** **22 30 20.0 +0.5**
XAN S S 22 39 41.6 -2.6
XAN AMB AMB
comp=Z,566nm,0.9s,mb6.2
XAN AMB AMB
comp=Z,13µm,10.8s
XAN LR LR
comp=N,4µm,18.9s
XAN LR LR
comp=E,10µm,19.2s
XAN LR LR
comp=Z,20µm,19.6s
SPIA Saint Paul Isl 75.00 12⇓ *i*P **P** **22 30 18.9 -1.6**
SPIA *e*PcP PcP 22 30 31.8 -1.8
SPIA *e*pP pP 22 31 03.4 +6.4
SPIA *e*sP sP 22 31 20.6 +7.8
SPIA *e*PP PP 22 33 10.8 +0.5
KMI Kunming 75.34 302 P **P** **22 30 24.2 +1.7**
KMI PCP PcP 22 30 36.8 +1.8
KMI AP pP 22 31 02.4 +3.5
KMI XP sP 22 31 18.3 +3.5
KMI PP PP 22 33 12.9 -0.2
KMI S S 22 39 52.8 +3.0
KMI SCS ScS 22 40 22.7 +0.9
KMI SS SS 22 44 49.6 +6.7
KMI AMB AMB
comp=Z,977nm,1.1s,mb6.3
KMI AMB AMB
comp=Z,14µm,8.3s
KMI LR LR
comp=N,15µm,22.6s
KMI LR LR
comp=E,13µm,23.4s
KMI LR LR
comp=Z,18µm,25.7s
SDPT Sand Point 75.82 18 *e*P **P** **22 30 24.5 -0.7**
comp=Z,509nm,1.7s,mb5.9
SDPT LR LR
comp=Z,17µm,20.0s
CM31 Chiang Mai Arr 75.88 294⇓ *i*P **P** **22 30 26.9 +1.3**
comp=Z,7.4nm,0.6s
CM31 *e*pP pP 22 31 07.9 +5.8
CM31 *e* 22 33 07.9
CM31 PP PP 22 33 18.5 +0.8
CM31 *e*S S 22 40 00.7 +4.8
CM31 LR LR
comp=Z,8µm,20.0s
CHTO Chiang Mai 76.02 294 P **P** **22 30 27.2 +0.9**
CHTO S S 22 39 58.9 +1.6
CHTO Chiang Mai 76.02 294 P **P** **22 30 27.5 +1.2**
SNR=132
CHTO Chiang Mai 76.02 294⇓ *i*P **P** **22 30 27.4 +1.1**
CHTO *e**PP pP 22 31 05.6 +2.8
CHTO *e**SP sP 22 31 25.8 +7.1
CHTO *e*S S 22 40 00.4 +3.1
CHTO pmax pmax
comp=Z,485nm,0.9s,mb6.1
CHTO MLR MLR
comp=Z,8µm,20.0s
CHTO Chiang Mai 76.02 294⇓ *i*P **P** **22 30 27.4 +1.0**
comp=Z,493nm,0.9s,mb6.1
CHTO *e*pP pP 22 31 05.5 +2.7
CHTO *e*sP sP 22 31 25.8 +7.1
CHTO *e*PP PP 22 33 02.6 -16
CHTO *e*S S 22 40 00.4 +3.1
CHTO LR LR
comp=Z,8µm,20.0s
MA2 Magadan 76.42 351*d* iP **P** **22 30 27.3 -1.3**
MA2 22 30 40.1
MA2 *e*S S 22 39 57.3 -4.4
MA2 *e*PS 22 40 26.3
MA2 *e**SS sS 22 41 07.2 +2.3
MA2 *e*SSS 22 48 08.6
MA2 pmax pmax
comp=Z,200nm,0.8s,mb5.8
MA2 Magadan 76.42 351 *e*P **P** **22 30 27.5 -1.1**
MA2 *e*PcP PcP 22 30 39.1 -0.6
MA2 *e*pP pP 22 31 08.0 +2.9
MA2 *e*sP sP 22 31 29.5 +8.6
MA2 *i*S S 22 39 53.8 -7.9
MA2 LR LR
comp=Z,13µm,21.0s
RPN Rapa Nui 76.71 115 P **P** **22 30 31.4 +1.1**
comp=Z,18nm,0.4s,mb5.0,baz=343,slow=2.9,SNR=5.2
RPN Rapa Nui 76.71 115⇑ *i*P **P** **22 30 29.4 -0.9**
RPN *e*pP pP 22 31 03.9 -2.9
RPN *i*S S 22 40 12.5 +7.6
HHC Hu-ho-hao-te 76.77 320 *e*P **P** **22 30 31.2 +0.6**
HHC PCP PcP 22 30 42.0 +0.8
HHC AP pP 22 31 06.0 -1.1
HHC XP sP 22 31 21.3 -1.6
HHC S S 22 40 05.8 +0.3
HHC SKS 22 40 25.1
HHC SCS ScS 22 40 31.2 -2.2
HHC XS sS 22 41 07.3 -1.4
HHC SS SS 22 45 09.1 +4.6
HHC AMB AMB
comp=Z,1µm,1.1s,mb6.4
HHC AMB AMB
comp=Z,12µm,9.9s
HHC LR LR
comp=N,12µm,19.8s
HHC LR LR
comp=E,6µm,19.8s
HHC LR LR
comp=Z,14µm,19.8s
CD2 Chengdu 77.10 308⇓ *i*P **P** **22 30 33.0 +0.6**
CD2 AP pP 22 31 12.3 +3.3
CD2 XP sP 22 31 27.9 +3.1
CD2 PP PP 22 33 32.9 +4.9
CD2 S S 22 40 10.8 +1.7
CD2 SKS 22 40 29.3
CD2 AMB AMB
comp=Z,510nm,1.2s,mb6.0
CD2 AMB AMB
comp=Z,8µm,9.2s
CD2 LR LR
comp=N,10µm,21.6s
CD2 LR LR
comp=Z,12µm,25.2s
CHGN Chignik 77.25 19 *e*P **P** **22 30 32.3 -0.9**
HIA Hailar 77.51 330*d* iP **P** **22 30 34.6 -0.1**
HIA Hailar 77.51 330 *i*Pr **P** **22 30 34.7 0.0**
BTO Baotou 77.60 319 *e*P **P** **22 30 35.3 +0.1**
BTO S S 22 40 04.9 -10
BTO AMB AMB
comp=Z,199nm,0.8s,mb5.8
PBA Port Blair 79.14 285 *ex* x 22 30 24.2
LZH Lanzhou 79.45 312 ⇓P **P** **22 30 47.0 +1.6**
LZH AP pP 22 31 24.0 +1.8
LZH XP sP 22 31 40.1 +2.2
LZH PP PP 22 33 51.2 +3.6
LZH S S 22 40 29.1 -5.1
LZH SS SS 22 45 50.3 +5.5
LZH AMB AMB
comp=Z,2µm,1.1s,mb6.7
LZH AMB AMB
comp=Z,17µm,8.8s
LZH LR LR
comp=E,14µm,17.8s
LZH LR LR
comp=Z,40µm,18.2s
KDAK Kodiak Island 80.31 20 P **P** **22 30 49.1 -0.9**
comp=Z,48nm,0.8s,mb5.2,baz=202,slow=4.1,SNR=20
KDAK S S 22 40 40.2 -3.1
comp=Z,10nm,1.1s,baz=313,slow=21,SNR=4.8
KDAK PKKPbc PKKPbc 22 49 30.9 -0.1
comp=Z,7.4nm,0.7s,baz=11,slow=1.8,SNR=5.6
KDAK Kodiak Island 80.31 20 P **P** **22 30 49.1 -0.9**
KDAK S S 22 40 40.2 -3.1
KDAK PKKPbc PKKPbc 22 49 30.9 -0.1
CLNS Chul'man 80.75 338 *e*P **P** **22 30 51.4 -0.9**
MAW Mawson 81.06 202⇓ *i*P **P** **22 30 53.1 -0.8**
comp=Z,160nm,0.8s,mb5.7
MAW *e*S S 22 40 50.3 -0.7
MAW Mawson 81.06 202 P **P** **22 30 53.5 -0.4**
comp=Z,221nm,0.9s,mb5.8,baz=104,slow=6.6,SNR=313
MAW S S 22 40 50.6 -0.4
comp=Z,2.3nm,0.8s,baz=210,slow=22,SNR=2.0
MAW PKKPbc PKKPbc 22 49 28.2 -1.2
comp=Z,3.4nm,0.6s,baz=290,slow=3.0,SNR=12
MAW LR LR 23 02 41.9
comp=Z,7µm,19.7s,baz=97,slow=32
MAW Mawson 81.06 202 P **P** **22 30 53.6 -0.3**
MAW pmax pmax
comp=Z,330nm,1.0s
SVW2 Sparrevohn 82.05 17⇓ *i*P **P** **22 30 57.9 -1.2**
SVW2 *e*PcP PcP 22 31 02.8 -1.4
SVW2 pP pP 22 31 42.9 +6.7
SLKM Skilak Lake 83.20 19 P **P** **22 31 04.0 -1.1**
SLKM Skilak Lake 83.20 19⇓ *e*P **P** **22 31 03.7 -1.3**
SLKM S S 22 40 59.9 -13
TNA Tin City 83.20 10⇓ *i*P **P** **22 31 04.2 -0.9**
comp=Z,188nm,1.2s,mb5.7
TNA *e*PcP PcP 22 31 07.3 -2.0
TNA *e*pP pP 22 31 50.8 +8.6
TNA *e*sP sP 22 32 06.2 +8.3
TNA *e*PP PP 22 34 15.4 -3.0
TNA *e*S S 22 41 10.0 -2.8
TNA LR LR
comp=Z,7µm,21.0s
YAK Yakutsk 83.24 343*d* iP **P** **22 31 05.5 +0.2**
YAK *i*S S 22 41 10.1 -3.1
YAK *e*SS SS 22 46 33.3 -7.8
YAK pmax pmax
comp=Z,393nm,0.9s,mb6.1
YAK pmax pmax
comp=N,92nm,1.0s
YAK pmax pmax
comp=E,62nm,1.1s
YAK smax
comp=Z,46nm,1.1s
YAK smax
comp=N,414nm,1.6s
YAK smax
comp=E,367nm,1.7s
YAK Yakutsk 83.24 343⇓ *i*P **P** **22 31 04.6 -0.7**
YAK *e*PcP PcP 22 31 08.1 -1.3
YAK *e*PP pP 22 31 44.1 +1.7
YAK *e*S S 22 41 01.9 -11
YAK LR LR
comp=Z,10µm,20.0s
ULN Ulaanbaatar 83.34 324 P **P** **22 31 06.0 +0.2**
ULN SKSac SKSac 22 41 13.1 -1.0
ULN Ulaanbaatar 83.34 324 P **P** **22 31 06.0 +0.2**
SNR=2404
ULN P 22 31 06.3
SNR=1250
ULN Ulaanbaatar 83.34 324⇓ *i*P **P** **22 31 06.0 +0.2**
ULN *e*PcP PcP 22 31 09.9 0.0
ULN *e*pP pP 22 31 43.5 +0.6
ULN *e* 22 31 54.6
ULN *e*sP sP 22 32 08.3 +10
ULN *e*S S 22 41 09.1 -5.2
ULN LR LR
comp=Z,11µm,20.0s
TTA Tatalina 83.44 16 *e*P **P** **22 31 05.7 -0.6**
TTA Tatalina 83.44 16 *e*P **P** **22 31 05.4 -0.9**
TTA *e*PcP PcP 22 31 08.6 -1.7
TTA *e*S S 22 41 09.4 -5.8
BILL Bilibino 83.65 359 P **P** **22 31 07.0 -0.4**
BILL pmax pmax
comp=Z,380nm,1.1s,mb6.0
BILL Bilibino 83.65 359 *i*Pr **P** **22 31 06.2 -1.2**
SONM Songino Array 83.70 323 P **P** **22 31 07.5 -0.1**
comp=Z,936nm,1.0s,mb6.5,baz=146,slow=5.2,SNR=1237
SONM S S 22 41 13.3 -4.5
comp=Z,12nm,1.2s,baz=122,slow=1.9,SNR=3.9
SONM PKPPKP 22 57 24.2
comp=Z,2.3nm,1.1s,baz=234,slow=2.7,SNR=4.7
SONM LR LR 23 06 12.4
comp=Z,11µm,21.1s,baz=138,slow=34
SONM Songino Array 83.70 323 P **P** **22 31 07.5 -0.1**
SONM S S 22 41 13.3 -4.5
MID Middleton Isla 83.71 22 *e*P **P** **22 31 08.9 +1.2**
GTA Gaotai 83.81 314⇓ *i*P **P** **22 31 09.0 +0.8**
GTA AP pP 22 31 44.8 -0.6
GTA XP sP 22 31 59.6 -1.4
GTA PP PP 22 34 23.0 -0.4
GTA S S 22 41 14.1 -4.9
GTA AMB AMB
comp=Z,1µm,1.2s,mb6.5
GTA AMB AMB
comp=Z,13µm,11.0s
GTA LR LR
comp=N,9µm,22.8s
GTA LR LR
comp=E,5µm,18.3s
GTA LR LR
comp=Z,8µm,28.9s
FARB Farallon Islan 83.91 48 ⇑P **P** **22 31 08.3 -0.4**
baz=84
FARB ⇑S S 22 41 21.1 +1.2
baz=84
MCCM Marconi Confer 84.18 48⇓ *i*P **P** **22 31 09.7 -0.4**
comp=Z,235nm,1.4s,mb5.7
MCCM *e*PcP PcP 22 31 13.7 +0.1
MCCM *e*pP pP 22 31 47.9 +0.6
MCCM *e*sP sP 22 32 13.5 +11
MCCM *e*PP PP 22 34 25.4 -1.0
MCCM *e*S S 22 41 10.8 -12
MCCM Marconi Confer 84.18 48 ⇑P **P** **22 31 09.8 -0.3**
baz=84,SNR=5.7
MCCM ⇑S S 22 41 24.2 +1.6
baz=84
BNLO Ben Lomond (Sa 84.27 49 ⇓P **P** **22 31 10.4 -0.1**
baz=84
BNLO ⇑S S 22 41 24.6 +1.2
baz=84
SAC San Andreas 84.28 49 *e*P **P** **22 31 11.3 +0.7**
SAC *e* 22 34 29.4
JRSC Jasper Ridge 84.33 49 ⇓P **P** **22 31 10.9 +0.1**
baz=84

JRSC ⇑S S 22 41 26.0 +1.9
baz=84
PMR Palmer 84.37 19 *e*P **P 22 31 09.9 -1.1**
PMR pmax pmax
comp=Z,540nm,1.4s,mb6.1
PMR Palmer 84.37 19 *e*P **P 22 31 12.6 +1.6**
comp=Z,374nm,1.2s,mb6.0
PMR LR LR
comp=Z,20µm,21.0s
O01C Eel River Cons 84.38 46 ⇑P **P 22 31 11.6 +0.5**
baz=84,SNR=6.8
O01C ⇑S S 22 41 26.0 +1.3
baz=84
HOPS Hopland 84.41 47⇓*i*P **P 22 31 11.3 0.0**
comp=Z,238nm,1.3s,mb5.8
HOPS *e*PcP PcP 22 31 14.8 +0.2
HOPS *e*pP pP 22 31 47.5 -0.9
HOPS *e*PP PP 22 34 27.9 -0.3
HOPS *e*S S 22 41 27.5 +2.6
HOPS LR LR
comp=Z,21µm,19.0s
HOPS Hopland 84.41 47 ⇓P **P 22 31 11.3 +0.1**
baz=84,SNR=17
HOPS ⇓S S 22 41 26.8 +1.9
baz=84
HAST UC Hastings Re 84.41 50 ⇓P **P 22 31 11.6 +0.3**
baz=84,SNR=20
HAST ⇑S S 22 41 26.4 +1.5
baz=84
P01C Double 8 Ranch 84.42 46 ⇑P **P 22 31 11.4 +0.1**
baz=84,SNR=22
P01C ⇑S S 22 41 26.9 +1.8
baz=84
SDP Sudden Peak, L 84.47 52 ⇑P **P 22 31 11.7 +0.2**
baz=85
SDP ⇓S S 22 41 26.7 +1.2
baz=85
KIPM Iron Peak 84.47 46⇓*e*P **P 22 31 11.6 0.0**
KIPM *e*PcP PcP 22 31 14.9 0.0
KIPM *e*pP pP 22 31 51.5 +2.7
KIPM PP PP 22 34 26.8 -2.0
V03C Hunter Liggett 84.50 50 ⇓P **P 22 31 12.3 +0.7**
baz=85
V03C ⇓S S 22 41 27.5 +1.8
baz=85
NSHM Saint Helena R 84.53 48⇓*e*P **P 22 31 11.5 -0.3**
JCC Jacoby Creek 84.54 45 ⇑P **P 22 31 11.9 +0.1**
baz=85
JCC ⇓S S 22 41 28.2 +2.0
baz=85
SHL Shillong 84.56 298 *ex* x 22 31 18.9
CVS Carmenet Viney 84.57 48 ⇓P **P 22 31 11.6 -0.5**
baz=85,SNR=8.1
CVS ⇑S S 22 41 28.3 +1.8
baz=85
V04C Ramage Ranch, 84.61 51 ⇓P **P 22 31 12.3 0.0**
baz=85
V04C ⇑S S 22 41 29.9 +2.9
baz=85
SAO San Andreas Ge 84.64 50 *e*P **P 22 31 13.2 +0.8**
SAO *e* 22 34 29.4
SAO San Andreas Ge 84.64 50⇓*i*P **P 22 31 12.4 0.0**
SAO *e*PcP PcP 22 31 15.7 +0.1
SAO *e*pP pP 22 31 47.5 -2.2
SAO *es*P sP 22 32 17.4 +12
SAO *e*PP PP 22 34 29.4 -0.8
SAO *i* S S 22 41 18.7 -8.6
SAO LR LR
comp=Z,9µm,20.0s
SNCC San Nicolas Is 84.70 53⇓*i*P **P 22 31 13.1 +0.4**
SNCC *e*PcP PcP 22 31 17.0 +1.2
SNCC *e*pP pP 22 31 46.6 -3.3
SNCC *e*S S 22 41 28.6 +0.8
SNCC LR LR
comp=Z,10µm,20.0s
SNCC San Nicolas Is 84.70 53 ⇑P **P 22 31 13.0 +0.3**
baz=85
SNCC ⇓S S 22 41 30.3 +2.5
baz=85
EYAK Cordova Ski Ar 84.72 21⇓*i*P **P 22 31 10.2 -2.6**
EYAK PcP PcP 22 31 14.7 -1.3
EYAK *e*pP pP 22 31 52.8 +2.8
EYAK *es*P sP 22 32 14.0 +8.3
EYAK *e*PP PP 22 34 27.9 -2.9
EYAK *e*S S 22 41 23.4 -4.6
KHMM Horse Mountain 84.77 45⇓*i*P **P 22 31 13.5 +0.5**
KHMM *e*PcP PcP 22 31 17.3 +1.2
KHMM *e*pP pP 22 31 51.6 +1.3
KHMM *es*P sP 22 32 16.5 +11
KHMM *e*PP PP 22 34 32.3 +1.2
WENL Wente Brothers 84.77 49 ⇑P **P 22 31 13.5 +0.5**
baz=85
WENL ⇓S S 22 41 30.0 +1.5
baz=85
SML Sawmill 84.78 19 *e*P **P 22 31 04.4 -8.7**
SML *e* 22 34 29.2
MNRC McLaughlin Nat 84.80 47 S S 22 41 31.2 +2.4
baz=85
BDM Black Diamond 84.83 48 ⇓P **P 22 31 13.7 +0.3**
baz=85
BDM ⇑S S 22 41 29.9 +0.9
baz=85
PACP Pacheco Peak 84.86 49 ⇓P **P 22 31 14.1 +0.6**
baz=85,SNR=9.9
PACP ⇓S S 22 41 31.5 +2.1
baz=85
BSC Santa Cruz Isl 84.90 53 ⇓P **P 22 31 13.8 +0.1**
baz=85
BSC ⇓S S 22 41 30.9 +1.1
baz=85
M01C Crescent City 84.93 44 ⇑P **P 22 31 14.2 +0.3**
baz=85
M01C ⇑S S 22 41 30.8 +0.8
baz=85
GASB Alder Springs 84.93 47 ⇑P **P 22 31 14.9 +1.0**
baz=85,SNR=35
GASB ⇑S S 22 41 32.6 +2.5
baz=85
U04C Hernandez Rese 84.97 50 ⇑P **P 22 31 14.8 +0.7**
baz=85,SNR=23
U04C ⇓S S 22 41 31.6 +1.2
baz=85
PKD Parkfield 84.98 51 ⇑P **P 22 31 14.5 +0.4**
baz=85,SNR=23
PKD ⇑S S 22 41 32.8 +2.2
baz=85
Q03C Winters 85.00 48 ⇓P **P 22 31 14.9 +0.7**
baz=85
Q03C ⇑S S 22 41 34.0 +3.2
baz=85
SBC Santa Barbara 85.01 52 ⇓P **P 22 31 14.6 +0.4**
baz=85
SBC ⇑S S 22 41 31.5 +0.6
baz=85
S04C Ingram Canyon, 85.03 49 ⇑P **P 22 31 14.6 +0.3**
baz=85,SNR=16
S04C ⇑S S 22 41 31.6 +0.6
baz=85
O02C Red Bluff 85.11 46 ⇑P **P 22 31 15.5 +0.7**
baz=85,SNR=56
O02C ⇓S S 22 41 33.1 +1.3
baz=85
PKM Peak Mountain 85.11 52 P **P 22 31 15.5 +0.8**
baz=85,SNR=13
PKM ⇓S S 22 41 32.7 +0.8
baz=85
K01A Sixes 85.13 43 ⇓P **P 22 31 14.9 +0.1**
baz=85
DIV Divide 85.13 21⇓*i*P **P 22 31 14.1 -0.8**
DIV *e*S S 22 41 31.9 -0.1
SMMC Simmler 85.14 51 ⇓P **P 22 31 15.6 +0.7**
baz=85
SMMC ⇑S S 22 41 33.2 +1.1
baz=85
KEBM Edson Butte 85.24 43⇓*e*P **P 22 31 14.9 -0.5**
KEBM *e*pP pP 22 31 53.3 +0.6
KEBM *es*P sP 22 32 20.5 +12
KEBM *e*PP PP 22 34 38.8 +3.8
T05C Eagle Field, D 85.26 50 ⇑P **P 22 31 16.2 +0.7**
baz=85
T05C ⇑S S 22 41 35.6 +2.2
baz=85
SCI San Clemente I 85.36 54 ⇓P **P 22 31 16.1 +0.1**
baz=86
SCI ⇓S S 22 41 35.2 +1.0
baz=86
BLG Laguna Peak 85.38 53 ⇓P **P 22 31 15.7 -0.4**
baz=86
BLG ⇑S S 22 41 34.7 +0.2
baz=86
L02A Cave Junction 85.41 44 ⇑P **P 22 31 16.5 +0.2**
baz=86
L02A ⇓S S 22 41 35.7 +0.9
baz=86
SUTB Sutter Butte 85.41 47 ⇓P **P 22 31 15.7 -0.6**
baz=86
SUTB ⇑S S 22 41 35.3 +0.5
baz=86
V05C Boulder Hill, 85.43 51 ⇑P **P 22 31 17.1 +0.8**
baz=86
V05C ⇑S S 22 41 36.4 +1.4
baz=86
U05C Westside ANR, 85.45 50 ⇓P **P 22 31 16.4 0.0**
baz=86
U05C ⇓S S 22 41 37.2 +2.0
baz=86
WDC Whiskeytown Da 85.45 46⇓*i*P **P 22 31 16.1 -0.3**
WDC *e**SP sP 22 32 21.8 +12
WDC *e*S S 22 41 34.4 -0.8
WDC pmax pmax
comp=Z,175nm,1.3s,mb5.6
WDC MLR MLR
comp=Z,11µm,20.0s
WDC Whiskeytown Da 85.45 46⇓*i*P **P 22 31 16.1 -0.4**
comp=Z,177nm,1.3s,mb5.6
WDC *e*PcP PcP 22 31 20.0 +0.8
WDC *e*pP pP 22 31 52.2 -1.5
WDC *es*P sP 22 32 21.8 +12
WDC *e*S S 22 41 34.4 -0.8
WDC LR LR
comp=Z,11µm,20.0s
WDC Whiskeytown Da 85.45 46 ⇑P **P 22 31 16.4 -0.1**
baz=86,SNR=21
WDC ⇑S S 22 41 35.1 -0.1
baz=86
Q04C Lincoln 85.54 48 ⇓P **P 22 31 16.9 0.0**
baz=86
Q04C ⇓S S 22 41 35.6 -0.5
baz=86
O03C Acorn Hollow, 85.56 46 ⇓P **P 22 31 17.0 +0.1**
baz=86
O03C ⇓S S 22 41 36.0 -0.2
baz=86
M02C Callahan 85.59 45 ⇓P **P 22 31 17.5 +0.4**
baz=86,SNR=16
M02C ⇓S S 22 41 36.9 +0.4
baz=86
R04C Big Horse Ranc 85.62 48 ⇓P **P 22 31 16.7 -0.6**
baz=86
R04C ⇓S S 22 41 37.7 +0.8
baz=86
CIS Catalina Islan 85.63 54 ⇓P **P 22 31 17.2 -0.1**
baz=86
CIS ⇑S S 22 41 37.2 +0.3
baz=86
S05C Merced 85.70 49 ⇑P **P 22 31 17.4 -0.2**
baz=86
S05C ⇑S S 22 41 37.7 +0.1
baz=86
BOD Bodaibo 85.70 334 *e*P **P 22 31 15.5 -2.2**
BOD *e*S S 22 41 24.4 -13
BOD pmax pmax
comp=Z,397nm,1.9s,mb5.8
ORV Oroville 85.75 47 ⇓P **P 22 31 17.5 -0.4**
baz=86,SNR=24
ORV ⇓S S 22 41 37.6 -0.5
baz=86
K02A Glendale 85.75 43 ⇑P **P 22 31 17.9 0.0**
baz=86,SNR=5.2
K02A ⇓S S 22 41 40.2 +2.0
baz=86
FMP Fort Macarthur 85.83 53 ⇑P **P 22 31 17.9 -0.4**
baz=86
FMP ⇑S S 22 41 40.4 +1.5
baz=86
YBH Yreka Blue Hor 85.83 45⇓*i*P **P 22 31 18.4 +0.1**
YBH *e**SP sP 22 32 24.7 +13
YBH *e* 22 34 39.1
YBH *e*S S 22 41 38.5 -0.4
YBH pmax pmax
comp=Z,112nm,1.1s
YBH MLR MLR
comp=Z,9µm,20.0s
YBH Yreka Blue Hor 85.83 45⇓*i*P **P 22 31 18.4 +0.1**
comp=Z,112nm,1.1s,mb5.5
YBH *e*PcP PcP 22 31 22.3 +1.4
YBH *e*pP pP 22 31 54.0 -1.6
YBH *es*P sP 22 32 24.7 +13
YBH *e*PP PP 22 34 39.1 -0.7
YBH *e*S S 22 41 38.5 -0.3
YBH LR LR
comp=Z,9µm,20.0s
YBH Yreka Blue Hor 85.83 45 ⇓P **P 22 31 18.6 +0.3**
baz=86,SNR=17
YBH ⇓S S 22 41 39.8 +0.9
baz=86
OSI Osito Adit 85.83 52 ⇑P **P 22 31 18.6 +0.3**
baz=86
OSI ⇓S S 22 41 39.4 +0.5
baz=86
CMB Columbia Colle 85.93 49⇓*i*P **P 22 31 18.7 -0.1**
CMB *e**SP sP 22 32 22.6 +11
CMB *e* 22 34 40.7
CMB *e*S S 22 41 38.4 -1.4
CMB pmax pmax
comp=Z,90nm,1.0s,mb5.5
CMB MLR MLR
comp=Z,17µm,20.0s
CMB Columbia Colle 85.93 49⇓*i*P **P 22 31 18.7 -0.1**
comp=Z,90nm,1.0s,mb5.5
CMB *e*PcP PcP 22 31 21.9 +0.6
CMB *e*pP pP 22 31 53.9 -2.2
CMB *es*P sP 22 32 22.6 +11
CMB *e*PP PP 22 34 40.7 +0.1
CMB *e*S S 22 41 38.4 -1.4
CMB LR LR
comp=Z,17µm,20.0s
CMB Columbia Colle 85.93 49 ⇓P **P 22 31 18.5 -0.2**
baz=86,SNR=20
CMB ⇓S S 22 41 40.9 +1.1
baz=86
ARVC Arvin 85.95 52 ⇓P **P 22 31 18.9 0.0**
baz=86
ARVC ⇑S S 22 41 42.8 +2.7
baz=86
J02A Umpqua 85.96 43 ⇑P **P 22 31 18.9 0.0**
baz=86,SNR=9.3
J02A ⇑S S 22 41 41.5 +1.4
baz=86
LAVA Lava Cap Winer 85.96 48 ⇓P **P 22 31 18.8 -0.2**
baz=86
LAVA ⇓S S 22 41 40.1 -0.1
baz=86
DECC Green Verdugo 86.00 53 ⇓P **P 22 31 18.9 -0.2**
baz=86
DECC ⇓S S 22 41 40.5 0.0
baz=86
T06C Millerton Lake 86.02 50 ⇑P **P 22 31 18.9 -0.3**
baz=86,SNR=14
T06C ⇓S S 22 41 41.7 +1.0
baz=86
VES Vestal, Richgr 86.03 51 ⇑P **P 22 31 18.9 -0.4**
baz=86,SNR=12
VES ⇓S S 22 41 41.4 +0.5
baz=86
MCK McKinley 86.04 18⇓*i*P **P 22 31 16.9 -2.4**
MCK *e**PP pP 22 32 00.2 +3.5
MCK *e**SP sP 22 32 18.3 +6.0
MCK *e* 22 34 38.4
MCK *e*S S 22 41 27.8 -13
MCK MLR MLR
comp=Z,8µm,20.0s
I02A Mapleton 86.08 42 ⇓P **P 22 31 19.5 0.0**
baz=86
I02A ⇑S S 22 41 42.4 +1.2
baz=86
RCTC Rector, Farmer 86.09 51 ⇑P **P 22 31 19.0 -0.6**
baz=86
MWC Mount Wilson 86.20 53 *e*P **P 22 31 20.6 +0.5**
S06C San Francisco 86.26 49 P **P 22 31 20.3 -0.1**
baz=86,SNR=44
S06C ⇓S S 22 41 43.2 +0.2
baz=86
H02A Toledo 86.27 42 ⇓P **P 22 31 20.7 +0.3**
baz=86
H02A ⇑S S 22 41 44.1 +1.0
baz=86
P05C Yuba Gap, Truc 86.28 48 ⇑P **P 22 31 20.6 +0.1**
baz=86,SNR=18
P05C ⇓S S 22 41 44.1 +0.8
baz=86
HATC Hat Creek Radi 86.30 46 ⇓P **P 22 31 20.7 +0.1**
baz=86,SNR=8.2
HATC ⇓S S 22 41 44.5 +1.1
baz=86
O05C Quincy 86.33 47 ⇓P **P 22 31 20.8 0.0**
baz=86
O05C ⇓S S 22 41 44.0 +0.3
baz=86
O04C Chester 86.35 46 ⇓P **P 22 31 20.9 0.0**
baz=86,SNR=6.5
O04C ⇑S S 22 41 44.4 +0.5
baz=86
J03A Ideyld Park 86.36 43 ⇓P **P 22 31 21.3 +0.4**
baz=86
J03A ⇑S S 22 41 45.6 +1.5
baz=86
HELL Mitchell Peak, 86.40 50 P **P 22 31 20.7 -0.3**
baz=86,SNR=56
HELL ⇓S S 22 41 43.9 -0.5
baz=86
R05C Kirkwood Meado 86.42 48 ⇑P **P 22 31 21.3 +0.1**
baz=86,SNR=17
R05C ⇓S S 22 41 45.8 +1.2
baz=86
I03A Eugene 86.42 42 ⇑P **P 22 31 21.1 -0.1**
baz=86
I03A ⇑S S 22 41 45.9 +1.3
baz=86
ISA Isabella 86.42 52⇓*i*P **P 22 31 21.4 +0.2**
ISA *e*PcP PcP 22 31 25.2 +1.7
ISA *e*pP pP 22 31 56.6 -1.9
ISA *es*P sP 22 32 22.5 +8.3
ISA *e*S S 22 41 36.9 -7.7
ISA LR LR
comp=Z,4µm,19.0s
ISA Isabella 86.42 52 P **P 22 31 21.5 +0.3**
baz=86,SNR=33
ISA ⇑S S 22 41 44.4 -0.3
baz=86
KCC Kaiser Creek 86.43 50 ⇑P **P 22 31 21.3 +0.1**
baz=86,SNR=28
KCC ⇓S S 22 41 47.2 +2.5
baz=86
M04C Macdoel 86.44 45 ⇓P **P 22 31 21.4 +0.1**
baz=87,SNR=8.0
M04C ⇑S S 22 41 44.9 +0.1
baz=87
109C Camp Elliot, M 86.45 55 ⇑P **P 22 31 21.3 -0.1**
baz=86
109C ⇓S S 22 41 45.5 +0.6
baz=86
EDW2 Edwards Air Fo 86.50 52 P **P 22 31 21.9 +0.3**
baz=87,SNR=68
EDW2 ⇓S S 22 41 46.4 +1.1
baz=87
BFSC Mount Baldy St 86.51 53 ⇑P **P 22 31 21.4 -0.3**
baz=87,SNR=19
BFSC ⇑S S 22 41 46.9 +1.4
baz=87
SIT Sitka 86.54 27⇓*i*P **P 22 31 20.1 -1.6**
SIT *e*pP pP 22 31 51.0 -8.1
SIT *e*PP PP 22 34 44.6 -0.9
SIT *e*S S 22 41 36.3 -9.4
SIT LR LR
comp=Z,17µm,19.0s
L04A Klamath Falls 86.57 45 ⇓P **P 22 31 21.8 -0.2**
baz=87
L04A ⇓S S 22 41 46.6 +0.5
baz=87
IMA2 Indian Mountai 86.58 15 *e*P **P 22 31 20.6 -1.4**
CAL Calcutta 86.62 294 *e*P **P 22 31 21.1 -1.1**
CAL *ex* x 22 40 52.8
CAL AMP 22 43 37.2
comp=Z,8µm,20.8s
CRAG Craig 86.63 29⇓*i*P **P 22 31 20.3 -1.9**
CRAG ⇓*i*P 22 31 20.7
CRAG *e*pP pP 22 32 04.0 +4.4
MURC Murrieta 86.63 54 ⇓P **P 22 31 22.0 -0.3**
baz=87
MURC ⇑S S 22 41 48.2 +1.5
baz=87
COR Corvallis 86.67 42 *e*P **P 22 31 22.1 -0.3**
COR *e*pP PcP 22 31 30.3 +5.7
COR LR LR
comp=Z,8µm,20.0s
BEKR Beckwourth 86.68 47 P **P 22 31 22.6 +0.2**
baz=87,SNR=25
BAR Barrett 86.71 55 *e*P **P 22 31 22.7 0.0**
ELFS Eagle Lake Fie 86.72 46 ⇓P **P 22 31 22.7 0.0**
baz=87
ELFS ⇓S S 22 41 48.7 +1.1
baz=87
M05C Lookout 86.74 45 ⇑P **P 22 31 22.6 -0.1**
baz=87,SNR=16
M05C ⇑S S 22 41 48.4 +0.7
baz=87
ZAK Zakamensk 86.76 325⇑*i*P **P 22 31 21.7 -1.1**
ZAK *e* 22 41 34.4
ZAK pmax pmax
comp=Z,375nm,1.4s,mb6.0
R06C Coleville 86.80 49 ⇑P **P 22 31 23.4 +0.4**
baz=87,SNR=17
R06C ⇑S S 22 41 49.0 +0.8
baz=87
WAKR Walker 86.80 49 *e*P **P 22 31 23.4 +0.4**
K04A Chilquin 86.86 44 ⇑P **P 22 31 23.2 -0.1**
baz=87
K04A ⇑S S 22 41 49.4 +0.5
baz=87
WCN Washoe City 86.88 48 ⇓P **P 22 31 23.5 +0.1**
baz=87
WCN ⇑S S 22 41 49.8 +0.7
baz=87
R07C Lee Vining 86.92 49 ⇓P **P 22 31 23.9 +0.2**
baz=87
R07C ⇑S S 22 41 51.7 +2.3
baz=87
P06A Stead Airport, 86.93 47 ⇓P **P 22 31 23.9 +0.3**
baz=87
P06A ⇑S S 22 41 50.7 +1.2
baz=87
LRMC Laurel Mountai 86.94 52 ⇓P **P 22 31 24.2 +0.4**
baz=87
LRMC ⇑S S 22 41 50.4 +0.7
baz=87
MONP Monument Peak 86.99 55 ⇑P **P 22 31 24.2 +0.3**
baz=87,SNR=14
MONP ⇓S S 22 41 51.6 +1.5
baz=87
MTUM Tungsten Hills 86.99 50 *e*P **P 22 31 24.4 +0.4**
MTUM *e*PP PP 22 34 52.2 +3.0
G03A Yamhill 87.00 41 ⇑P **P 22 31 23.7 -0.4**
baz=87
G03A ⇓S S 22 41 50.1 -0.2
baz=87
CWC Cottonwood Cre 87.01 51 ⇓P **P 22 31 24.3 +0.3**
baz=87
CWC ⇑S S 22 41 50.7 +0.4
baz=87
BBRC Big Bear Sol-O 87.09 53 ⇓P **P 22 31 24.5 0.0**
baz=87
BBRC ⇓S S 22 41 51.4 +0.3
baz=87
MENT Mentasta 87.09 20 *e*P **P 22 31 23.6 -0.9**
F03A Seaside 87.10 41 ⇓P **P 22 31 24.0 -0.5**
baz=87
F03A ⇓S S 22 41 51.6 +0.4
baz=87
TIN Tinemaha 87.13 50 ⇑P **P 22 31 25.0 +0.3**
baz=87
TIN ⇑S S 22 41 52.7 +1.2
baz=87
M06C Likely Place G 87.14 46 ⇓P **P 22 31 24.9 +0.3**
baz=87,SNR=6.3
M06C ⇓S S 22 41 52.1 +0.6
baz=87
IRK Irkutsk 87.15 327⇓*i*P **P 22 31 23.4 -1.3**
IRK *e*S S 22 41 36.7 -15
IRK pmax pmax

comp=Z,520nm,2.4s,mb5.9
DVTC Desert V Tower 87.16 55 ⇑P P 22 31 25.0 +0.2
baz=87
DVTC ⇓S S 22 41 52.7 +1.0
baz=87
O06A Flanigan 87.17 47 ⇓P P 22 31 24.8 0.0
baz=87,SNR=48
O06A ⇑S S 22 41 52.6 +0.7
baz=87
TLY Talaya 87.20 326 P P 22 31 24.6 -0.4
SNR=172
TLY P 22 31 25.1
SNR=8.4
TLY Talaya 87.20 326 *d iP* **P 22 31 23.1 -1.9**
TLY *e* 22 41 30.9
TLY *e*S S 22 41 47.9 -4.2
TLY pmax pmax
comp=Z,341nm,1.1s,mb6.1
TLY Talaya 87.20 326 *eP* **P 22 31 24.4 -0.6**
TLY LR LR
comp=Z,12µm,22.0s
COLA College 87.21 17 P P 22 31 23.0 -2.0
COLA pmax pmax
comp=Z,110nm,1.0s,mb5.6
COLA College 87.21 17 *i* Pr **P 22 31 22.7 -2.3**
PFO Pinyon Flat Ob 87.22 54 ⇓*iP* **P 22 31 25.2 +0.1**
PFO *e*PcP PcP 22 31 28.7 +1.7
PFO *e*pP pP 22 32 01.1 -1.4
PFO *e*PP PP 22 34 53.6 +2.6
PFO *e*S S 22 41 32.8 -19
PFO LR LR
comp=Z,14µm,19.0s
PFO Pinyon Flat Ob 87.22 54 ⇑P **P 22 31 25.1 0.0**
baz=87,SNR=8.9
PFO ⇑S S 22 41 55.1 +2.9
baz=87
L05A Lakeview 87.23 45 ⇓P **P 22 31 25.3 +0.2**
baz=87,SNR=16
L05A ⇑S S 22 41 52.2 -0.3
baz=87
RRX Edison Barstow 87.25 53 ⇑P **P 22 31 25.1 -0.2**
baz=87
RRX ⇑S S 22 41 52.9 +0.3
baz=87
PAHR Pah Rah Range 87.31 48 *eP* **P 22 31 25.5 0.0**
comp=Z,224nm,1.2s,mb5.9
MPMC Manual Prospec 87.31 51 P **P 22 31 25.8 +0.3**
baz=87,SNR=37
MPMC ⇓S S 22 41 53.9 +0.7
baz=87
DAC Darwin (Calif) 87.31 51 ⇓*iP* **P 22 31 23.7 -1.8**
DAC *e* 22 34 52.0
DAC pmax pmax
comp=Z,281nm,1.7s,mb5.8
DAC MLR MLR
comp=Z,13µm,19.0s
DAC Darwin (Calif) 87.31 51 ⇓*iP* **P 22 31 23.7 -1.8**
comp=Z,281nm,1.7s,mb5.8
DAC *e*pP pP 22 32 02.1 -0.9
DAC *e*PP PP 22 34 52.0 +0.2
DAC *e*S S 22 42 02.7 +10
DAC LR LR
comp=Z,13µm,19.0s
E03A Lebam 87.37 40 ⇓P **P 22 31 25.6 -0.2**
baz=88,SNR=6.8
E03A ⇑S S 22 41 54.6 +0.9
baz=88
C03A Quillayute Air 87.39 38 ⇓P **P 22 31 25.7 -0.2**
baz=88
C03A ⇓S S 22 41 54.7 +0.8
baz=88
N06A Buffalo Meadow 87.40 46 P **P 22 31 25.9 0.0**
baz=88,SNR=37
N06A ⇑S S 22 41 54.7 +0.7
baz=88
Q07A Schurz 87.42 48 ⇓P **P 22 31 26.3 +0.3**
baz=88
Q07A ⇑S S 22 41 55.5 +1.2
baz=88
H04A Detroit Lake 87.43 42 ⇑P **P 22 31 25.5 -0.6**
baz=88,SNR=8.2
H04A ⇑S S 22 41 54.1 -0.2
baz=88
G04A Mulino 87.47 42 ⇑P **P 22 31 25.9 -0.3**
baz=88
G04A ⇓S S 22 41 54.4 -0.3
baz=88
J05A Fort Rock 87.47 44 ⇑P **P 22 31 26.3 0.0**
baz=88,SNR=43
J05A ⇓S S 22 41 55.4 +0.7
baz=88
D03A Wishkah Elem. 87.49 39 ⇑P **P 22 31 26.8 +0.5**
baz=88
D03A ⇓S S 22 41 54.9 -0.1
baz=88
SWSC Sam W. Stewart 87.50 55 ⇓P **P 22 31 26.4 0.0**
baz=88,SNR=10.0
SWSC ⇓S S 22 41 56.4 +1.5
baz=88
GSC Goldstone 87.55 52 *eP* **P 22 31 26.8 +0.1**
GSC *e* 22 34 54.9
GSC Goldstone 87.55 52 P **P 22 31 26.9 +0.2**
baz=88,SNR=21
GSC ⇑S S 22 41 57.1 +1.6
baz=88
NVAR Mina Array Bea 87.59 49 P **P 22 31 26.6 -0.2**
comp=Z,14nm,0.7s,baz=218,slow=5.7,SNR=49
NVAR PKKPbc PKKPbc 22 49 16.6 +2.4
comp=Z,16nm,0.7s,baz=87,slow=4.0,SNR=39
NVAR SKKPbc 22 52 41.1
comp=Z,3.9nm,0.8s,baz=104,slow=4.1,SNR=9.7
NVAR PKPPKP 22 57 18.9
comp=Z,15nm,1.0s,baz=90,slow=3.9,SNR=16
R08A Mina 87.71 49 ⇑P **P 22 31 27.6 +0.2**
baz=88
R08A ⇑S S 22 41 58.6 +1.6
baz=88
BELC Belle Mtn. 87.71 54 P **P 22 31 27.7 +0.3**
baz=88,SNR=43
BELC ⇑S S 22 41 58.5 +1.6
baz=88
GRAC Grapevine Rang 87.75 51 ⇑P **P 22 31 27.9 +0.3**
baz=88
GRAC ⇓S S 22 41 57.3 0.0
baz=88
HEC Hector,Ludlow 87.75 53 ⇑P **P 22 31 27.5 -0.1**
baz=88
HEC ⇑S S 22 41 58.0 +0.7
baz=88
SYO Syowa Base 87.80 196 ⇑*iP* **P 22 31 26.2 -1.6**
I05A Bend 87.81 43 ⇓P **P 22 31 27.8 -0.1**
baz=88
I05A ⇑S S 22 41 57.7 -0.2
baz=88
F04A Amboy 87.82 41 ⇑P **P 22 31 27.4 -0.5**
baz=88
F04A ⇓S S 22 41 57.4 -0.6
baz=88
O07A Toulon 87.84 47 ⇑P **P 22 31 28.0 -0.1**
baz=88,SNR=23
O07A ⇓S S 22 41 57.8 -0.4
baz=88
SLGI Shiliguri 87.87 298 *eP* **P 22 31 27.4 -0.8**
GTK Gangtok 87.91 299 *eP* **P 22 31 30.0 +1.7**
E04A Onalaska 87.91 40 ⇓P **P 22 31 28.2 -0.1**
baz=88
E04A ⇓S S 22 41 59.3 +0.4
baz=88
K06A Valley Falls 87.93 44 ⇑P **P 22 31 28.6 +0.1**
baz=88,SNR=12
K06A ⇑S S 22 42 00.0 +1.0
baz=88
FURC Furnace Creek, 87.93 51 ⇓P **P 22 31 28.5 0.0**
baz=88,SNR=9.7
FURC ⇑S S 22 41 59.9 +0.8
baz=88
SKAG Skagway 87.96 25 *eP* **P 22 31 28.3 -0.3**
comp=Z,108nm,1.6s,mb5.4
SKAG LR LR
comp=Z,9µm,18.0s
N07B Gerlach 88.02 47 ⇑P **P 22 31 28.6 -0.2**
baz=88
N07B ⇑S S 22 42 00.7 +0.8
baz=88
Q08A Gabbs 88.03 49 P **P 22 31 29.1 +0.2**
baz=88,SNR=14
Q08A ⇑S S 22 42 00.8 +0.8
baz=88
H05A Madras 88.04 42 ⇓P **P 22 31 28.6 -0.4**
baz=88
H05A ⇓S S 22 41 59.9 -0.2
baz=88
HOOD Mount Hood Mea 88.05 42 *eP* **P 22 31 28.8 -0.2**
B04A Port Angeles 88.07 39 ⇓P **P 22 31 29.1 0.0**
baz=88
B04A ⇑S S 22 42 01.1 +0.7
baz=88
D04A Dobbs Creek Ra 88.08 40 ⇑P **P 22 31 29.1 -0.1**
baz=88
D04A ⇓S S 22 42 02.9 +2.4
baz=88
M07A Soldier Meadow 88.11 46 ⇓P **P 22 31 29.5 +0.2**
baz=88,SNR=38
M07A ⇑S S 22 42 01.6 +0.8
baz=88
S09A Goldfield 88.12 50 ⇑P **P 22 31 29.2 -0.1**
baz=88,SNR=26
S09A ⇓S S 22 42 01.2 +0.3
baz=88
SHOC Shoshone 88.17 52 ⇑P **P 22 31 29.2 -0.4**
baz=88,SNR=16
SHOC ⇑S S 22 42 03.5 +2.2
baz=88
J06A Christmas Vall 88.18 44 P **P 22 31 29.4 -0.2**
baz=88,SNR=34
J06A ⇑S S 22 42 01.5 +0.1
baz=88
G05A Wamic 88.23 42 ⇑P **P 22 31 29.5 -0.4**
baz=88
G05A ⇓S S 22 42 02.1 +0.3
baz=88
P08A Dixie Valley 88.23 48 ⇓P **P 22 31 30.4 +0.6**
baz=88
P08A ⇓S S 22 42 03.5 +1.6
baz=88
L07A Adell 88.24 45 ⇓P **P 22 31 30.2 +0.3**
baz=88,SNR=20
L07A ⇓S S 22 42 02.5 +0.5
baz=88
TPH Tonopah 88.25 50 *eP* **P 22 31 30.4 +0.4**
TPH pmax pmax
comp=Z,281nm,1.6s,mb5.8
TPH MLR MLR
comp=Z,8µm,20.0s
TPH Tonopah 88.25 50 *eP* **P 22 31 30.4 +0.5**
comp=Z,281nm,1.6s,mb5.8
TPH LR LR
comp=Z,8µm,20.0s
TUQ Turquoise Mtn. 88.27 53 ⇓P **P 22 31 30.2 +0.2**
baz=88
TUQ ⇓S S 22 42 03.6 +1.3
baz=88
GLA Glamis 88.30 55 *eP* **P 22 31 30.6 +0.4**
GLA Glamis 88.30 55 ⇓P **P 22 31 30.6 +0.5**
baz=88,SNR=18
GLA ⇑S S 22 42 04.8 +2.2
baz=88
U10A Ash Meadows, A 88.31 51 ⇓P **P 22 31 30.7 +0.4**
baz=88,SNR=16
U10A ⇓S S 22 42 04.9 +2.2
baz=88
O08A Rochester Mine 88.40 47 ⇓P **P 22 31 31.0 +0.3**
baz=88
O08A ⇓S S 22 42 04.7 +1.1
baz=88
F05A White Salmon 88.40 41 ⇓P **P 22 31 30.3 -0.4**
baz=88
F05A ⇓S S 22 42 03.3 -0.2
baz=88
I06A Prineville 88.42 43 ⇑P **P 22 31 30.9 +0.2**
baz=88,SNR=21
I06A ⇓S S 22 42 03.7 +0.1
baz=88
R09A Tonopah 88.42 50 ⇓P **P 22 31 30.9 +0.1**
baz=88
R09A ⇓S S 22 42 04.7 +1.0
baz=88
IRM Iron Mountain 88.42 54 P **P 22 31 31.1 +0.3**
baz=88,SNR=35
IRM ⇓S S 22 42 05.4 +1.7
baz=88
E05A Randle 88.50 41 ⇓P **P 22 31 30.6 -0.5**
baz=89,SNR=22
E05A ⇑S S 22 42 03.1 -1.3
baz=89
Q09A Carvers 88.56 49 ⇓P **P 22 31 31.7 +0.3**
baz=89
Q09A ⇓S S 22 42 05.7 +0.7
baz=89
TPNV Topopah Spring 88.56 51 *eP* **P 22 31 31.8 +0.4**
TPNV pmax pmax
comp=Z,820nm,2.1s,mb6.3
TPNV Topopah Spring 88.56 51 ⇓*iP* **P 22 31 31.7 +0.3**
comp=Z,801nm,2.1s,mb6.3
TPNV *i* pP pP 22 32 06.1 -2.9
TPNV *es*P sP 22 32 37.3 +13
TPNV *e*PP PP 22 35 01.6 -0.1
TPNV LR LR
comp=Z,10µm,19.0s
K07A Rock Creek Ran 88.57 45 P **P 22 31 31.6 +0.2**
baz=89,SNR=49
K07A ⇓S S 22 42 06.2 +1.1
baz=89
N08A GE Springer Mi 88.60 47 P **P 22 31 31.7 +0.1**
baz=89,SNR=48
N08A ⇑S S 22 42 05.6 +0.2
baz=89
D05A Enumclaw 88.62 40 ⇑P **P 22 31 31.8 +0.1**
baz=89,SNR=18
D05A ⇓S S 22 42 04.3 -1.2
baz=89
MOY Mondy 88.64 325 *eP* **P 22 31 31.2 -0.6**
MOY *e* 22 42 05.3
MOY pmax pmax
comp=Z,798nm,2.7s,mb6.2
M08A Happy Creek Ra 88.69 46 P **P 22 31 32.3 +0.3**
baz=89,SNR=33
M08A ⇑S S 22 42 06.7 +0.5
baz=89
GSM Grass Mountain 88.75 40 P **P 22 31 32.0 -0.3**
Y12C Blythe 88.77 55 ⇑P **P 22 31 32.7 +0.3**
baz=89,SNR=17
Y12C ⇓S S 22 42 07.7 +0.7
baz=89
J07A Hines 88.79 44 ⇑P **P 22 31 32.5 0.0**
baz=89,SNR=7.8
J07A ⇑S S 22 42 07.6 +0.4
baz=89
A04A Legoe Bay, Lum 88.84 38 ⇑P **P 22 31 32.4 -0.3**
baz=89
A04A ⇓S S 22 42 07.5 -0.1
baz=89
P09A Austin 88.85 48 ⇓P **P 22 31 32.9 +0.1**
baz=89,SNR=12
P09A ⇑S S 22 42 07.5 -0.3
baz=89
WVOR Wild Horse Val 88.88 45 ⇓*iP* **P 22 31 32.7 -0.2**
WVOR *e**SP sP 22 32 34.0 +7.9
WVOR pmax pmax
comp=Z,444nm,1.6s,mb6.1
WVOR MLR MLR
comp=Z,12µm,21.0s
WVOR Wild Horse Val 88.88 45 P **P 22 31 32.8 -0.1**
WVOR pmax pmax
comp=Z,440nm,1.6s,mb6.1
WVOR Wild Horse Val 88.88 45 ⇓*iP* **P 22 31 32.7 -0.2**
comp=Z,411nm,1.6s,mb6.1
WVOR *e*PcP PcP 22 31 34.3 -0.1
WVOR *e*pP pP 22 32 09.6 -0.9
WVOR *es*P sP 22 32 34.0 +7.9
WVOR LR LR
comp=Z,9µm,21.0s
I07A Izee 88.94 43 P **P 22 31 33.3 +0.1**
baz=89,SNR=39
I07A ⇓S S 22 42 08.3 -0.3
baz=89
L08A Fields 88.99 46 ⇓P **P 22 31 33.7 +0.3**
baz=89,SNR=50
L08A ⇓S S 22 42 09.2 +0.1
baz=89
R10A Warm Springs 89.00 50 ⇓P **P 22 31 33.7 +0.2**
baz=89,SNR=9.0
R10A ⇓S S 22 42 09.9 +0.7
baz=89
B05A Bryant 89.01 39 ⇓P **P 22 31 33.4 -0.1**
baz=89,SNR=5.2
B05A ⇑S S 22 42 09.0 -0.2
baz=89
C05A Tolt Reservoir 89.02 40 ⇑P **P 22 31 32.9 -0.7**
baz=89,SNR=6.0
C05A ⇑S S 22 42 07.6 -1.7
baz=89
U11A Corn Creek 89.03 52 ⇑P **P 22 31 33.8 +0.2**
baz=89
U11A ⇓S S 22 42 09.6 +0.2
baz=89
W12A Cal Nev Ari 89.03 53 ⇓P **P 22 31 33.6 0.0**
baz=89
W12A ⇓S S 22 42 11.8 +2.3
baz=89
O09A Fish Creek Ran 89.04 48 P **P 22 31 34.1 +0.4**
baz=89,SNR=31
O09A ⇑S S 22 42 09.4 -0.1
baz=89
N09A Rock Creek Ran 89.06 47 ⇓P **P 22 31 33.9 +0.2**
baz=89,SNR=25
N09A ⇓S S 22 42 10.2 +0.5
baz=89
K08A Mann Creek Ran 89.10 45 ⇓P **P 22 31 34.1 +0.1**
baz=89,SNR=6.4
K08A ⇑S S 22 42 09.7 -0.4
baz=89
BMN Battle Mountai 89.12 48 *eP* **P 22 31 34.0 0.0**
BMN *e* 22 35 02.8
BMN pmax pmax
comp=Z,297nm,1.6s,mb6.0
BMN MLR MLR
comp=Z,11µm,20.0s
BMN Battle Mountai 89.12 48 *eP* **P 22 31 34.0 0.0**
comp=Z,297nm,1.6s,mb6.0
BMN *e*PP PP 22 35 02.8 -3.3
BMN LR LR
comp=Z,11µm,20.0s
BOK Bokaro 89.14 295 *eP* **P 22 31 33.6 -0.5**
BOK AMb AMB 22 31 38.0
comp=Z,315nm,0.9s,mb6.3
V12A Nelson 89.19 53 P **P 22 31 34.8 +0.4**
baz=89,SNR=16
V12A ⇓S S 22 42 13.6 +2.6
baz=89
PALK Pallekele 89.20 278 P **P 22 31 35.7 +1.3**
SNR=15
PALK P 22 31 36.0
SNR=30
PALK Pallekele 89.20 278 *eP* **P 22 31 35.9 +1.5**
comp=Z,208nm,0.9s,mb6.1
PALK LR LR
comp=Z,12µm,21.0s
SHPR Sheep Range 89.23 52 *eP* **P 22 31 35.0 +0.5**
PDMCI Parker Dam,Lak 89.26 54 ⇓P **P 22 31 34.9 +0.2**
baz=89,SNR=21
PDMCI ⇓S S 22 42 13.5 +2.0
baz=89
DAWY Dawson 89.29 21 *eP* **P 22 31 33.2 -1.6**
M09A Marrel Ranch, 89.32 47 ⇑P **P 22 31 35.4 +0.4**
baz=89,SNR=23
M09A ⇓S S 22 42 12.1 0.0
baz=89
A05A Maple Falls 89.33 38 ⇓P **P 22 31 34.3 -0.7**
baz=90
A05A ⇓S S 22 42 11.5 -0.7
baz=90
Y13A Salome 89.34 55 ⇑P **P 22 31 35.4 +0.4**
baz=89,SNR=25
Y13A ⇑S S 22 42 14.6 +2.3
baz=89
P10A Eureka 89.36 48 ⇑P **P 22 31 35.3 +0.2**
baz=90,SNR=5.2
P10A ⇓S S 22 42 13.0 +0.5
baz=90
L09A Wilkinson Ranc 89.39 46 ⇓P **P 22 31 35.4 +0.1**
baz=90,SNR=27
L09A ⇓S S 22 42 13.5 +0.7
baz=90
LTY Liberty 89.47 40 P **P 22 31 35.1 -0.5**
TBM Table Mountain 89.48 40 P **P 22 31 34.4 -1.3**
I08A Drewsey 89.50 44 ⇑P **P 22 31 35.7 -0.1**
baz=90
I08A ⇑S S 22 42 14.0 +0.3
baz=90
TRCR Troy Canyon 89.55 50 ⇓*iP* **P 22 31 35.7 -0.4**
TRCR *e*pP pP 22 32 15.1 +1.5
TRCR sP sP 22 32 41.6 +12
TRCR *e*PP PP 22 35 10.3 +0.7
O10A Cortez Mining, 89.58 48 ⇑P **P 22 31 36.2 0.0**
baz=90,SNR=28
O10A ⇓S S 22 42 15.1 +0.5
baz=90
X13A Yucca 89.60 54 ⇓P **P 22 31 36.4 +0.2**
baz=90,SNR=34
X13A ⇓S S 22 42 17.2 +2.5
baz=90
VIS Vishakhapatnam 89.65 288 *eP* **P 22 31 36.2 -0.3**
VIS AMb AMB 22 31 43.0
comp=Z,381nm,1.9s,mb6.0
VIS *i* S S 22 41 51.6 -24
U12A Valley of Fire 89.67 52 ⇑P **P 22 31 37.0 +0.3**
baz=90,SNR=19
U12A ⇓S S 22 42 17.2 +1.8
baz=90
W13A Hualapai Mount 89.72 53 P **P 22 31 37.6 +0.8**
baz=90,SNR=18
W13A ⇑S S 22 42 18.8 +3.0
baz=90
N10A Dunphy 89.73 47 ⇓P **P 22 31 37.3 +0.5**
baz=90
N10A ⇓S S 22 42 16.4 +0.6
baz=90
HAWA Hanford 89.83 41 *eP* **P 22 31 37.2 -0.2**
HAWA LR LR
comp=Z,7µm,22.0s
Z14A Wintersburg 89.89 55 ⇓P **P 22 31 38.1 +0.4**
baz=90,SNR=8.3
Z14A ⇓S S 22 42 22.0 +4.7
baz=90
M10A I.L. Ranch, Tu 90.00 47 ⇓P **P 22 31 38.5 +0.4**
baz=90,SNR=48
M10A ⇑S S 22 42 19.1 +0.8
baz=90
Y14A Wickenburg 90.03 55 ⇑P **P 22 31 38.3 0.0**
baz=90,SNR=14
Y14A ⇓S S 22 42 22.0 +3.3
baz=90
I09A Lost Marbles R 90.07 44 ⇓P **P 22 31 38.1 -0.4**
baz=90
I09A ⇑S S 22 42 17.4 -1.7
baz=90
O11A Cowboy Ranch, 90.13 48 ⇓P **P 22 31 39.0 +0.2**
baz=90,SNR=44
O11A ⇓S S 22 42 19.7 +0.1
baz=90
115A Sonoran Desert 90.25 56 ⇑P **P 22 31 39.7 +0.4**
baz=90,SNR=12
115A ⇓S S 22 42 24.4 +3.7
baz=90
X14A Yava 90.29 54 P **P 22 31 40.4 +0.9**
baz=90,SNR=31
X14A ⇑S S 22 42 24.9 +3.9
baz=90
N11A Elko Archery C 90.31 48 ⇑P **P 22 31 39.7 +0.2**
baz=90
N11A ⇑S S 22 42 22.0 +0.7
baz=90
Q12A Willow Creek R 90.35 49 ⇓P **P 22 31 39.8 0.0**
baz=90,SNR=23
Q12A ⇑S S 22 42 22.1 +0.5
baz=90
W14A Seligman 90.38 54 ⇓P **P 22 31 40.6 +0.7**
baz=90,SNR=21
W14A ⇑S S 22 42 25.4 +3.5
baz=90
H09A Durkee 90.38 43 ⇑P **P 22 31 39.8 -0.1**
baz=90,SNR=5.5
H09A ⇓S S 22 42 20.9 -1.0
baz=90
GUN Gumba 90.39 299 *eP* **P 22 31 40.3 +0.3**
comp=Z,1µm,1.1s,mb6.8
P12A McGill 90.44 49 ⇓P **P 22 31 40.5 +0.3**
baz=90,SNR=21
P12A ⇑S S 22 42 22.9 +0.5
baz=90
M11A Holland Ranch, 90.49 47 ⇑P **P 22 31 41.1 +0.6**
baz=91,SNR=26

M11A ⇑S S 22 42 24.2 +1.3
baz=91
PMSA Palmer Station 90.55 160⇓*i*P **P 22 31 40.0 -0.7**
comp=Z,516nm,1.4s,mb6.4
PMSA LR LR
comp=Z,8µm,20.0s
116A Eloy 90.62 56⇓P **P 22 31 41.1 +0.1**
baz=91
116A ⇑S S 22 42 28.9 +4.8
baz=91
PKI Pulchoki 90.69 298 *e*P **P 22 31 41.2 -0.1**
comp=Z,1µm,1.0s,mb6.9
PKI Pulchoki 90.69 298 *e*P **P 22 31 41.2 -0.1**
PKI pmax pmax
comp=Z,1µm,1.0s,mb6.9
BMO Blue Mountains 90.69 43 *e*P **P 22 31 41.4 0.0**
BMO pmax pmax
comp=Z,309nm,1.8s,mb6.0
BMO MLR MLR
comp=Z,7µm,20.0s
BMO Blue Mountains 90.69 43 *e*P **P 22 31 41.4 +0.1**
comp=Z,309nm,1.8s,mb6.0
BMO *e*pP pP 22 32 17.8 -1.2
BMO LR LR
comp=Z,7µm,20.0s
X15A Humboldt 90.81 54⇑P **P 22 31 42.5 +0.6**
baz=91,SNR=19
X15A ⇓S S 22 42 29.4 +3.7
baz=91
N12A Clover Valley, 90.82 48⇓P **P 22 31 42.0 +0.1**
baz=91,SNR=30
N12A ⇑S S 22 42 27.1 +1.2
baz=91
KKN Kakani 90.86 299 *e*P **P 22 31 42.1 -0.1**
comp=Z,785nm,0.9s,mb6.7
KKN Kakani 90.86 299 *e*P **P 22 31 42.1 -0.1**
KKN pmax pmax
comp=Z,785nm,0.9s,mb6.7
CCUT Cedar City 90.93 51⇓*i*P **P 22 31 42.9 +0.4**
CCUT *e*pP pP 22 32 19.5 -0.6
CCUT *e*PP PP 22 35 20.8 +0.3
ARUT Antelope Range 90.95 51 *e*P **P 22 31 39.4 -3.2**
ARUT *e**PP pP 22 32 23.4 +3.2
ARUT *e* 22 35 23.7
ARUT Antelope Range 90.95 51 P **P 22 31 42.6 0.0**
DMN Daman 90.96 298 *e*P **P 22 31 42.6 0.0**
comp=Z,2µm,1.1s,mb7.1
W15A Williams 91.00 54⇑P **P 22 31 43.6 +0.8**
baz=91,SNR=12
W15A ⇑S S 22 42 32.1 +4.6
baz=91
M12A Wells 91.10 47⇓P **P 22 31 43.5 +0.2**
baz=91,SNR=18
M12A ⇓S S 22 42 30.2 +1.7
baz=91
TIXI Tiksi 91.16 349 *i* P **P 22 31 41.0 -2.5**
TIXI Tiksi 91.16 349 *d* iP **P 22 31 41.9 -1.6**
TIXI pmax pmax
comp=Z,136nm,1.3s,mb5.8
TIXI MLR MLR
comp=Z,4µm,20.0s
TIXI Tiksi 91.16 349 *e*P **P 22 31 42.5 -1.0**
TIXI Tiksi 91.16 349 *i* Pr **P 22 31 41.0 -2.5**
MDRS Chennai 91.21 283 *e*P **P 22 31 43.6 -0.1**
MDRS *ex* x 22 41 06.9
TUC Tucson 91.28 57 *e*P **P 22 31 44.7 +0.6**
TUC pmax pmax
comp=Z,79nm,1.3s,mb5.6
TUC MLR MLR
comp=Z,6µm,19.0s
TUC Tucson 91.28 57 *e*P **P 22 31 44.7 +0.6**
comp=Z,79nm,1.3s,mb5.6
TUC LR LR
comp=Z,6µm,19.0s
N13A Wendover, West 91.42 48⇑P **P 22 31 44.7 0.0**
baz=92
N13A ⇓S S 22 42 33.4 +2.1
baz=92
GKN Gorkha 91.47 299 *e*P **P 22 31 44.7 -0.3**
comp=Z,924nm,1.1s,mb6.7
M13A Montello 91.61 47⇑P **P 22 31 45.5 -0.1**
baz=92,SNR=26
M13A ⇓S S 22 42 36.0 +3.0
baz=92
WUAZ Wupatki 91.80 54 *e*P **P 22 31 47.4 +0.9**
comp=Z,143nm,1.5s,mb5.8
WUAZ LR LR
comp=Z,11µm,20.0s
BLSP Bilaspur 91.97 292 *ex* **P 22 31 39.0 -8.3**
NVL N'lazarevskaya 92.03 188 *d* iP **P 22 31 37.9 -10**
NVL *i* 22 42 19.9
NVL pmax pmax
comp=Z,557nm,1.3s,mb6.4
NEW Newport 92.06 40⇓*i*P **P 22 31 46.6 -1.1**
NEW *e*pP pP 22 32 25.3 0.0
NEW *e*PP PP 22 35 22.6 -6.9
NEW LR LR
comp=Z,5µm,21.0s
MVU Marysvale 92.10 51 PFAKE 22 32 00.0 +12
MVU LR LR
comp=Z,10µm,19.0s
MSU Marysvale 92.13 51 *e*P **P 22 31 48.7 +0.7**
HLID Hailey 92.18 45⇓*i*P **P 22 31 47.9 -0.3**
comp=Z,156nm,1.7s,mb5.8
HLID *e*pP pP 22 32 23.9 -2.0
HLID *e*sP sP 22 32 51.8 +10
HLID *e*PP PP 22 35 30.2 -0.1
HLID LR LR
comp=Z,10µm,20.0s
DUG Dugway 92.20 49 *e*P **P 22 31 48.8 +0.5**
DUG pmax pmax
comp=Z,132nm,1.6s,mb5.7
DUG MLR MLR
comp=Z,13µm,19.0s
DUG Dugway 92.20 49 *e*P **P 22 31 48.8 +0.4**
comp=Z,132nm,1.6s,mb5.7
DUG LR LR
comp=Z,13µm,19.0s
BGU Big Grassy Mou 92.28 48⇓*i*P **P 22 31 48.4 -0.3**
BGU *e*pP pP 22 32 25.6 -0.7
BGU *e*sP sP 22 32 51.7 +10
BGU *e*PP PP 22 35 31.2 +0.1
KOLN Koldanda 92.28 298 *e*P **P 22 31 48.0 -0.7**
comp=Z,274nm,0.8s,mb6.4
SNAA Sanae 92.47 183 P **P 22 31 48.0 -1.6**
comp=Z,68nm,0.8s,mb5.7,baz=194,slow=4.6,SNR=425
SNAA PKKP PKKPbc 22 49 00.4 -1.6
comp=Z,1.1nm,0.8s,baz=230,slow=12,SNR=5.9
SNAA SKKPbc 22 52 24.8
comp=Z,3.0nm,1.1s,baz=9.1,slow=4.3,SNR=6.8
SNAA Sanae 92.47 183⇓*i*P **P 22 31 48.2 -1.4**
SNAA *e* 22 31 49.4
SNAA *e* 22 31 51.9
SNAA *e* 22 31 52.8
SNAA *e* 22 31 56.7
SNAA *e* pP 22 32 28.5 +1.3
SNAA *e* 22 32 42.2
SNAA Sanae 92.47 183 P **P 22 31 48.0 -1.6**
SNAA 22 49 00.4
NLU North Lily Min 92.66 49⇓*i*P **P 22 31 50.5 +0.1**
NLU *e*pP pP 22 32 29.5 +1.4
NLU *e*PP PP 22 35 34.5 +0.4
NLU *e* 22 35 44.6
HVU Hansel Valley 92.73 47 P **P 22 31 51.9 +1.1**
HVU pmax pmax
comp=Z,210nm,1.6s,mb6.0
HVU Hansel Valley 92.73 47 *e*P **P 22 31 48.9 -1.9**
comp=Z,210nm,1.6s,mb6.0
HVU *e*pP pP 22 32 28.5 +0.1
HVU *e*PP PP 22 35 37.0 +2.3
SALM Salem 92.76 281 *e*P **P 22 31 53.0 +2.1**
SPUT South Promonto 92.82 48 *e*P **P 22 31 51.0 -0.1**
MPU Maple Canyon 93.00 49⇓*e*P **P 22 31 50.6 -1.4**
comp=Z,8.2nm,0.5s,mb5.1
MPU *e*pP pP 22 32 27.4 -2.3
MPU *e*sP sP 22 32 57.0 +12
MPU *e*PP PP 22 35 38.0 +1.3
MPU LR LR
comp=Z,15µm,21.0s
TMUT Trail Mountain 93.09 50 *e*P **P 22 31 56.0 +3.5**
TRD Trivandrum 93.10 278 *e*P **P 22 31 52.3 -0.2**
TRD AMb AMB 22 32 01.6
comp=Z,265nm,1.5s,mb6.2
DGAR Diego Garcia 93.12 261 PFAKE 22 32 00.0 +7.4
DGAR LR LR
comp=Z,7µm,20.0s
DAU Daniels Canyon 93.40 49 *e*P **P 22 31 52.7 -1.2**
DAU *e* 22 35 41.7
TCUT Toone Canyon 93.50 48 *e*P **P 22 31 55.0 +0.7**
HWUT Hardware Ranch 93.54 48 *e*P **P 22 31 54.6 +0.1**
HWUT LR LR
comp=Z,6µm,20.0s
SRU San Rafael 93.54 50⇓*i*P **P 22 31 53.5 -1.1**
comp=Z,14nm,0.7s,mb5.2
SRU *e*pP pP 22 32 29.6 -2.6
SRU *e*sP sP 22 32 49.0 +1.3
MSO Missoula 93.58 42⇓*i*P **P 22 31 52.8 -2.0**
comp=Z,8.0nm,0.9s
MSO *e*pP pP 22 32 27.1 -5.3
MSO *e*PP PP 22 35 40.0 -1.3
MSO LR LR
comp=Z,4µm,20.0s
VNA1 Neumayer--Stat 93.69 181⇓*i*P **P 22 31 54.2 -1.0**
VNA1 *e* 22 31 55.6
VNA1 *e* 22 31 56.2
VNA1 *e* 22 31 57.9
VNA1 *e* 22 32 00.9
VNA1 *e* 22 32 18.9
VNA1 *e* 22 32 55.8
INK Inuvik 93.77 19 *e*P **P 22 31 53.5 -2.1**
WMQ Urumqi 93.88 314⇓*i*P **P 22 31 56.0 -0.1**
WMQ AP pP 22 32 32.0 -1.7
WMQ XP sP 22 32 47.0 -2.3
WMQ PP PP 22 35 46.0 +2.4
WMQ SKS 22 42 16.0
WMQ S S 22 42 50.0 -3.1
WMQ SS SS 22 49 16.0 +0.5
WMQ AMB AMB
comp=Z,634nm,1.0s,mb6.7
WMQ AMB AMB
comp=Z,5µm,6.0s
WMQ LR LR
comp=N,17µm,16.0s
WMQ LR LR
comp=E,14µm,16.0s
WMQ LR LR
comp=Z,14µm,15.0s
HYB Hyderabad 93.95 287⇓*i*P **P 22 31 55.5 -0.9**
comp=Z,800nm,1.4s,mb6.7
HYB *e* 22 31 59.0
HYB *e*pP pP 22 32 35.0 +0.9
HYB *e*sP sP 22 32 50.0 +0.4
HYB *e*PP PP 22 35 40.0 -4.2
HYB *e*SKS 22 42 17.5
HYB *e*S S 22 42 50.0 -3.7
HYB *es*SKS 22 43 28.0
HYB *e* 22 43 48.0
HYB *e*PPS 22 45 00.0
HYB *e* 22 49 04.0
HYB Hyderabad 93.95 287⇓*e*P **P 22 31 55.5 -0.9**
HYB *e* 22 35 42.0
HYB *e* 22 42 17.5
HYB *e*S S 22 42 55.0 +1.3
HYB pmax pmax
comp=Z,800nm,1.4s,mb6.7
HYB Hyderabad 93.95 287⇓*e*P **P 22 31 55.5 -0.9**
comp=Z,800nm,1.4s,mb6.7
HYB *e*PP PP 22 35 42.0 -2.2
HYB *e*SKS 22 42 17.5
HYB *e*S S 22 42 55.0 +1.3
DLMT Dillon 94.00 44⇓*i*P **P 22 31 56.1 -0.5**
comp=Z,30nm,1.0s,mb5.4
DLMT *e*pP pP 22 32 32.8 -1.5
DLMT *e*PP PP 22 35 45.8 +1.3
JBP Jabalpur 94.17 293⇓*e*P **P 22 31 57.4 0.0**
JBP *i* x x 22 34 43.1
AHID Auburn Hatcher 94.22 47⇓*i*P **P 22 31 57.0 -0.6**
AHID *e*pP pP 22 32 32.0 -3.3
AHID *e*sP sP 22 32 59.8 +8.9
AHID *e*PP PP 22 35 45.9 -0.4
AHID LR LR
comp=Z,7µm,19.0s
LRM Limekiln Ridge 94.24 44 *e*P **P 22 31 59.5 +1.8**
RRI2 Red Ridge 94.25 46⇓*i*P **P 22 31 57.6 -0.2**
comp=Z,18nm,0.7s,mb5.3
RRI2 *e*pP pP 22 32 11.9 -24
RRI2 *e*pP pP 22 32 32.4 -3.0
RRI2 *e*sP sP 22 33 01.3 +10
RRI2 *e*PP PP 22 35 42.2 -4.2
WALA Waterton Lakes 94.34 40 *e*P **P 22 31 52.6 -5.6**
DCID1 Drake Creek 94.41 46⇓*i*P **P 22 31 57.5 -1.1**
DCID1 *e*pP pP 22 32 34.1 -2.1
DCID1 *e*sP sP 22 33 02.7 +11
DCID1 *e*PP PP 22 35 46.9 -0.9
NGP Nagpur 94.47 291 *e*P **P 22 31 58.0 -0.8**
NGP *e*S SKSac 22 42 17.6 -2.3
MVCO Mesa Verde 94.52 53⇓*i*P **P 22 31 59.0 0.0**
comp=Z,200nm,1.6s,mb6.1
MVCO *e*pP pP 22 32 34.4 -2.3
TPAW Teton Pass 94.55 46⇓*i*P **P 22 31 59.1 -0.1**
comp=Z,29nm,1.3s,mb5.3
TPAW *e*pP pP 22 32 33.5 -3.3
TPAW *e*sP sP 22 33 03.3 +11
TPAW *e*PP PP 22 35 49.1 +0.3
TPAW *e*S S 22 43 01.3 +2.4
REDW Red Top Meadow 94.58 46⇓*e*P **P 22 31 58.8 -0.5**
comp=Z,22nm,1.1s,mb5.3
REDW *e*pP pP 22 32 33.2 -3.8
REDW *e*sP sP 22 33 03.1 +11
REDW *e*PP PP 22 35 45.0 -4.0
QLMT Earthquake Lak 94.62 45 *e*PP PP 22 35 52.2 +2.8
SFJM Santa Fe 94.64 70 *e*P **P 22 32 01.0 +1.4**
SNOW Snow King Moun 94.67 46 *e*PP PP 22 35 45.6 -4.1
IMW Indian Meadow 94.67 46⇑*e*P **P 22 31 59.4 -0.4**
IMW *e*pP pP 22 32 41.8 +4.4
BOZ Bozeman (W) 94.73 44⇓*i*P **P 22 31 59.2 -0.8**
BOZ *e**SP sP 22 33 03.4 +10
BOZ *i* 22 35 50.7
BOZ *e*S S 22 43 02.7 +2.2
BOZ pmax pmax
comp=Z,96nm,1.9s,mb5.7
BOZ MLR MLR
comp=Z,7µm,19.0s
BOZ Bozeman (W) 94.73 44⇓*i*P **P 22 31 59.2 -0.7**
comp=Z,96nm,1.9s,mb5.7
BOZ *e*sP sP 22 33 03.4 +10
BOZ *i* PP PP 22 35 50.7 +0.4
BOZ *e*S S 22 43 02.7 +2.2
BOZ LR LR
comp=Z,8µm,19.0s
MOOW Moose Ponds 94.77 46⇓*e*P **P 22 31 59.7 -0.4**
comp=Z,41nm,1.8s,mb5.4
MOOW *e*sP sP 22 33 04.1 +11
MOOW *e*PP PP 22 35 53.0 +2.5
LAZ Ladron 94.81 56 P **P 22 32 01.5 +1.2**
KRAR Krasnoyarsk 94.82 327*c* iP **P 22 31 59.6 -0.8**
KRAR pmax pmax
comp=Z,84nm,0.3s,mb6.5
LOHW Long Hollow 94.82 46⇓*i*P **P 22 31 60.0 -0.4**
comp=Z,25nm,1.3s,mb5.3
LOHW *e*pP pP 22 32 36.3 -1.7
LOHW *e*sP sP 22 33 05.7 +12
LOHW *e*PP PP 22 35 53.9 +3.0
LENM Lemitar 94.87 56 *e*PP PP 22 35 52.4 +1.1
YMR Madison River 94.89 45⇓*e*P **P 22 32 01.2 +0.6**
YMR *e*pP pP 22 32 36.6 -1.8
YMR *e*sP sP 22 33 06.4 +12
YMR *e*PP PP 22 35 51.5 0.0
YMR LR LR
comp=Z,15µm,20.0s
Y22C IRIS PASSCAL I 94.89 56⇑P **P 22 32 01.0 +0.3**
baz=95
Y22C ⇑S S 22 43 08.1 +6.2
baz=95
FLWY Flagg Ranch 94.89 46⇓*e*P **P 22 31 60.0 -0.8**
comp=Z,30nm,1.4s,mb5.3
FLWY *e*pP pP 22 32 38.1 -0.3
FLWY *e*sP sP 22 33 04.7 +11
YFT Old Faithful 94.91 45 *e*PP PP 22 35 55.8 +4.1
HRY Holter Researc 94.92 43 *e*P **P 22 32 01.9 +1.1**
LPM Los Pinos Moun 95.19 56 P **P 22 32 03.1 +1.0**
LKWY Lake 95.24 45⇓*i*P **P 22 32 02.2 -0.1**
LKWY *e*pP pP 22 32 39.1 -0.9
LKWY LR LR
comp=Z,19µm,20.0s
BW06 Boulder Array 95.31 47 *e*P **P 22 32 02.2 -0.4**
BW06 LR LR
comp=Z,6µm,20.0s
PDAR Pinedale Array 95.31 47 P **P 22 32 01.1 -1.6**
comp=Z,3.3nm,0.9s,baz=205,slow=3.1,SNR=12
PDAR PP PP 22 35 48.5 -6.3
comp=Z,6.5nm,1.0s,baz=251,slow=4.5,SNR=4.2
PDAR S SKSac 22 42 20.9 -3.5
comp=Z,4.8nm,1.2s,baz=263,slow=6.1,SNR=3.1
PDAR PKKPbc PKKPbc 22 48 51.4 -3.3
comp=Z,14nm,0.8s,baz=92,slow=4.1,SNR=28
PDAR SKKPbc 22 52 21.7
comp=Z,3.9nm,0.8s,baz=83,slow=4.5,SNR=7.1
PDAR PKPPKP 22 56 57.9
comp=Z,2.3nm,1.2s,baz=90,slow=7.4,SNR=3.4
PDAR LR LR 23 11 31.2
comp=Z,5µm,18.7s,baz=258,slow=33
ANMO Albuquerque 95.49 55 *e*P **P 22 32 03.7 +0.3**
ANMO MLR MLR
comp=Z,6µm,20.0s
MNTX Cornudas Mount 95.51 59 *e*P **P 22 32 03.7 +0.1**
MNTX LR LR
comp=Z,8µm,21.0s
LGTI Lohaghat 95.57 299 *i* P **P 22 32 06.0 +2.2**
PTH Pithoragarh 95.62 299 *ex* SKSac 22 42 28.1 +2.0
EDM Edmonton 96.01 36 *e*PP PP 22 35 54.5 -5.6
LATR Latur 96.04 287 *e*P **P 22 32 04.1 -1.8**
AKL Akola 96.20 290 *e*P **P 22 32 06.4 -0.2**
AKL *e*S SKSac 22 42 28.1 -1.0
SMCO Snowmass 96.21 51⇓*e*P **P 22 32 06.0 -0.7**
comp=Z,30nm,1.2s,mb5.5
SMCO *e*pP pP 22 32 42.9 -1.5
SMCO *e*sP sP 22 33 11.8 +12
SMCO *e*PP PP 22 36 01.6 -0.1
MNGI Mangalore 96.28 282 *e*P **P 22 32 05.2 -1.9**
MNGI *i* S SKSac 22 42 28.2 -1.3
MNGI *ex* x 23 12 31.2
comp=Z,6µm,20.5s
BHPL Bhopal 96.46 292 *e*P **P 22 32 07.8 -0.1**
GDL2 Guadalupe Moun 96.48 58 *e*P **P 22 32 10.0 +2.1**
GDL2 *e*PP PP 22 36 05.3 +1.6
EGMT Eagleton 96.66 42⇓*i*P **P 22 32 06.2 -2.5**
comp=Z,51nm,1.5s,mb5.6
EGMT *e*sP sP 22 33 10.0 +8.0
EGMT *e*PP PP 22 35 55.0 -10
EGMT LR LR
comp=Z,7µm,19.0s
RWWY Rawlins 96.69 49⇓*i*P **P 22 32 06.9 -2.0**
comp=Z,57nm,1.4s,mb5.7
RWWY *e*pP pP 22 32 45.1 -1.5
RWWY *e*sP sP 22 33 12.7 +11
RWWY *e*PP PP 22 36 03.3 -2.1
SDCO Great Sand Dun 96.96 53 *e*PP PP 22 36 08.3 +0.9
SDCO LR LR
comp=Z,14µm,21.0s
ISCO Idaho Springs 97.39 51⇓*i*P **P 22 32 12.0 0.0**
ISCO *e**SP sP 22 33 17.0 +12
ISCO *e* 22 36 09.8
ISCO pmax pmax
comp=Z,63nm,1.9s,mb5.6
ISCO MLR MLR
comp=Z,14µm,19.0s
ISCO Idaho Springs 97.39 51⇓*i*P **P 22 32 12.0 0.0**
comp=Z,59nm,1.9s,mb5.6
ISCO *e*pP pP 22 32 47.8 -2.0
ISCO *e*sP sP 22 33 17.0 +12
ISCO *e*PP PP 22 36 09.8 -0.9
ISCO LR LR
comp=Z,11µm,19.0s
PHWY Pilot Hill 97.87 49⇓*e*P **P 22 32 12.5 -1.7**
PHWY *e*pP pP 22 32 48.5 -3.4
PHWY *e*sP sP 22 33 18.3 +11
PHWY *e*PP PP 22 36 06.4 -8.0
NDI New Delhi 97.95 297 *e*P **P 22 32 13.3 -1.2**
NDI AMb AMB 22 32 18.0
comp=Z,152nm,1.4s,mb6.2
NDI *ex* x 22 36 09.9
KAD Karad 97.96 286 *e*P **P 22 32 14.3 -0.3**
YKA Yellowknife Ar 98.29 27 P **P 22 32 13.9 -2.2**
comp=Z,18nm,0.9s,mb5.5,baz=255,slow=4.4,SNR=35
YKA SKP 22 40 09.3
comp=Z,1.8nm,0.7s,baz=264,slow=1.6,SNR=4.3
YKA S SKSac 22 42 35.0 -4.8
comp=Z,5.6nm,1.0s,baz=269,slow=5.3,SNR=3.8
YKA PKKPbc PKKPbc 22 48 44.4 -2.2
comp=Z,6.9nm,0.8s,baz=66,slow=2.7,SNR=11
YKA PKPPKP 22 56 55.2
comp=Z,1.1nm,0.9s,baz=74,slow=2.8,SNR=3.8
YKA Yellowknife Ar 98.29 27 P **P 22 32 13.9 -2.2**
YKA S SKSac 22 42 35.0 -4.8
YKA Yellowknife Ar 98.29 27 P **P 22 32 13.9 -2.2**
YKA SKP 22 40 09.3
YKA S SKSac 22 42 35.0 -4.8
YKA PKKPbc PKKPbc 22 48 44.4 -2.2
YKA P'P' 22 56 55.2
YKW3 Yellowknife Ar 98.30 27 *e*P **P 22 32 14.6 -1.5**
MKAR Makanchi Array 98.37 316 P **P 22 32 16.0 -0.4**
comp=Z,119nm,0.8s,mb6.4,baz=95,slow=5.1,SNR=234
MKAR PP PP 22 36 03.8 -14
comp=Z,50nm,1.2s,baz=94,slow=7.5,SNR=4.8
MKAR S SKSac 22 42 38.5 -1.7
comp=Z,34nm,0.9s,baz=96,slow=6.7,SNR=18
MKAR PKKPbc PKKPbc 22 48 43.5 -2.9
comp=Z,1.6nm,0.5s,baz=268,slow=4.5,SNR=6.9
MKAR SKKPbc 22 52 12.3
comp=Z,2.6nm,0.7s,baz=336,slow=2.7,SNR=5.8
MKAR Makanchi Array 98.37 316 P **P 22 32 16.0 -0.4**
MKAR S SKSac 22 42 38.5 -1.7
MKAR Makanchi Array 98.37 316 P **P 22 32 16.0 -0.4**
MKAR PP PP 22 36 03.8 -14
MKAR S SKSac 22 42 38.5 -1.7
MKAR PKKPbc PKKPbc 22 48 43.5 -2.8
MKAR SKKPbc 22 52 12.3
POO Poona 98.56 287⇓*i*P **P 22 32 17.0 -0.3**
POO *i* x x 22 35 30.5
POO *ex* x 22 37 20.0
POO *i* S SKSac 22 42 40.0 -1.2
SMLA Simla 98.56 300 *e*P **P 22 32 16.8 -0.5**
ZAL Zalesovo 98.60 324 P **P 22 32 16.7 -0.8**
comp=Z,114nm,1.0s,mb6.2,baz=1.8,slow=4.9,SNR=271
ZAL PP PP 22 36 08.2 -12
comp=Z,16nm,0.9s,baz=342,slow=7.6,SNR=5.2
ZAL S SKSac 22 42 38.6 -2.7
comp=Z,8.6nm,0.9s,baz=210,slow=24,SNR=55
LAO LASA Array 98.63 44 PFAKE 22 32 30.0 +12
LAO LR LR
comp=Z,10µm,20.0s
SDNR Sundarnagar 98.81 300 *e*P **P 22 32 18.2 -0.2**
SDNR *ex* x 22 36 14.0
AMTX Amarillo 99.29 56⇓*i*PP PP 22 36 21.2 -4.0
comp=Z,64nm,1.6s
AMTX LR LR
comp=Z,7µm,20.0s
RSSD Black Hills 99.54 47 *e*Pdif Pdif 22 32 21.0 -0.6
RSSD *e*pP pP 22 32 56.4 -3.0
RSSD *e*PP PP 22 36 21.6 -5.5
RSSD LR LR
comp=Z,6µm,20.0s
AJM Ajmer 99.67 295 *e*P Pdif 22 32 21.1 -1.2
AJM AMb AMB 22 32 25.0
comp=Z,237nm,1.0s,mb6.6
NVS Novosibirsk 99.71 324⇓*i*P Pdif 22 32 21.4 -1.0
NVS *e* 22 33 01.8
NVS *i* 22 42 42.6
NVS pmax pmax
comp=Z,240nm,1.5s,mb6.4
NVS pmax pmax
comp=N,86nm,1.6s
NVS pmax pmax
comp=E,157nm,1.5s
NVS pmax pmax
comp=E,157nm,1.5s
JCT Junction City 99.87 61 *e*P Pdif 22 32 20.9 -2.2
JCT *i* 22 36 28.9
JCT pmax pmax
comp=Z,4.0nm,0.3s,mb5.3
JCT MLR MLR
comp=Z,7µm,20.0s
JCT Junction City 99.87 61 *e*Pdif Pdif 22 32 20.9 -2.3
comp=Z,3.7nm,0.3s
JCT *i* PP PP 22 36 28.9 -0.7
JCT LR LR
comp=Z,7µm,20.0s
KVTX Kingsville 100.88 64 Pdif Pdif 22 32 25.8 -1.8
KSH Kashi 101.30 308 *i* PR Pdif 22 32 30.8 +1.3
KSH PP PP 22 36 41.9 +1.5
KSH SKS 22 42 54.7

KSH S Sdif 22 43 53.9 -2.3
KSH XS 22 44 56.1
KSH SS SS 22 51 00.5 +0.9
KSH AMB AMB
comp=Z,90nm,1.2s
KSH AMB AMB
comp=Z,3µm,9.0s
KSH LR LR
comp=N,11µm,15.6s
KSH LR LR
comp=E,8µm,16.4s
KSH LR LR
comp=Z,8µm,32.0s
KURK Kurchatov 101.58 320 P Pdif 22 32 29.6 -1.2
SNR=93
KURK P 22 32 29.8
SNR=48
KURK Kurchatov 101.58 320⇓*i*P Pdif 22 32 29.6 -1.1
KURK *i* 22 36 41.4
KURK pmax pmax
comp=Z,92nm,1.2s
KURK MLR MLR
comp=Z,9µm,20.0s
KURK Kurchatov 101.58 320⇓*i*Pdif Pdif 22 32 29.6 -1.2
comp=Z,92nm,1.2s
KURK *i* PP PP 22 36 41.4 -1.1
KURK LR LR
comp=Z,9µm,20.0s
WMOK Wichita Mounta 101.59 57 *e*Pdif Pdif 22 32 20.5 -10
WMOK *e*PP PP 22 36 34.2 -8.4
WMOK *e*PKKPbc PKKPbc 22 48 38.4 +1.1
WMOK LR LR
comp=Z,7µm,20.0s
EFI East Falkland 101.83 153 PFAKE 22 32 40.0 +8.2
EFI LR LR
comp=Z,6µm,21.0s
PLCA Paso Flores 101.96 139 *e*PP PP 22 36 42.9 -2.5
PLCA LR LR
comp=Z,4µm,19.0s
TKM2 Tokmak 2 102.21 311 P Pdif 22 32 33.1 -0.4
SNR=16
KZA Kyzart 102.31 310 P Pdif 22 32 34.9 +1.0
SNR=12
CHMS Chumysh 102.83 311 P Pdif 22 32 35.9 -0.4
SNR=18
UCH Uchtor 102.88 310 P Pdif 22 32 39.5 +3.0
SNR=19
FFC Flin Flon 102.88 37⇓*i*P Pdif 22 32 34.9 -1.6
FFC MLR MLR
comp=Z,17µm,22.0s
FRU Bishkek 102.90 311 *e*P Pdif 22 32 36.0 -0.6
FRU *e* 22 36 48.0
FRU *i* 22 43 04.0
FRU *e* 22 46 40.0
FRU pmax pmax
comp=Z,2µm,6.0s
AAK Ala-Archa 102.96 311 P Pdif 22 32 36.1 -0.8
SNR=12
AAK Ala-Archa 102.96 311⇓*i*P Pdif 22 32 35.6 -1.2
AAK *e* 22 36 47.2
AAK pmax pmax
comp=Z,17nm,0.8s
AAK MLR MLR
comp=Z,9µm,22.0s
AAK Ala-Archa 102.96 311⇓*i*Pdif Pdif 22 32 35.6 -1.2
comp=Z,17nm,0.8s
AAK *e*PP PP 22 36 47.2 -5.7
AAK LR LR
comp=Z,9µm,22.0s
USP Ospenovka 103.06 312 P Pdif 22 32 37.0 -0.2
SNR=21
HKT Hockley 103.13 62 *e*P Pdif 22 32 37.3 -0.3
HKT *e* 22 36 53.9
HKT pmax pmax
comp=Z,111nm,1.7s
HKT MLR MLR
comp=Z,7µm,20.0s
HKT Hockley 103.13 62 *e*Pdif Pdif 22 32 37.3 -0.3
comp=Z,110nm,1.7s
HKT *e*PP PP 22 36 53.9 -0.2
HKT LR LR
comp=Z,7µm,20.0s
AML Almayashu 103.46 310 P Pdif 22 32 39.9 +0.8
SNR=25
EKS2 Erkin-Say 103.48 311 P Pdif 22 32 41.0 +1.8
SNR=13
KSU1 Kansas State U 104.07 53 *e*PKiKP PKiKP 22 36 58.3 0.0
comp=Z,204nm,1.7s
NATX Nacogdoches 104.44 61 PFAKE 22 32 50.0 +6.6
NATX LR LR
comp=Z,8µm,19.0s
MIAR Mount Ida 105.79 58 *e*PKiKP PKiKP 22 37 10.2 +8.8
MIAR *e* 22 46 06.7
MIAR LR LR
comp=Z,6µm,19.0s
ULM Lac du Bonnet 106.01 42 PKiKP PKiKP 22 36 59.8 -2.1
comp=Z,7.8nm,0.5s,baz=287,slow=2.5,SNR=21
ULM SKP 22 40 20.7
comp=Z,26nm,1.1s,baz=291,slow=2.9,SNR=8.7
ULM SKSac SKSac 22 43 09.7 -6.6
comp=Z,5.1nm,1.0s,baz=292,slow=4.1,SNR=3.5
ULM PKKPab PKKPab 22 48 37.2 -3.9
comp=Z,11nm,0.7s,baz=85,slow=4.8,SNR=7.9
CHKZ Chkalovo 106.85 322 *e*P Pdif 22 32 52.3 -1.8
CHKZ *e* 22 37 16.5
CHKZ pmax pmax
comp=Z,275nm,0.7s
CHKZ Chkalovo 106.85 322 *e*Pdif Pdif 22 32 52.3 -1.8
comp=Z,275nm,0.7s
CHKZ *e*PKiKP PKiKP 22 36 58.4 -4.9
CHKZ *e*PP PP 22 37 16.5 -5.0
BVAR Borovoye Array 106.94 321 SKP 22 40 23.2
comp=Z,22nm,0.9s,baz=99,slow=1.3,SNR=6.9
BVAR SKSac SKSac 22 43 20.0 -0.4
comp=Z,9.8nm,1.0s,baz=131,slow=4.0,SNR=3.6
BVAR SKKPbc 22 51 48.9
comp=Z,3.0nm,0.8s,baz=274,slow=4.3,SNR=5.0
BRVK Borovoye 107.00 321⇓*i*Pdif Pdif 22 32 53.5 -1.3
BRVK *e*PKiKP PKiKP 22 37 03.6 -0.1
BRVK *e*PKKPbc PKKPbc 22 48 33.1 +12
BRVK LR LR
comp=Z,12µm,21.0s
RES Resolute Bay 107.09 16 *e*PKiKP PKiKP 22 37 02.8 -1.0
HOPE Hope Point 107.14 165 *e*PKiKP PKiKP 22 37 03.2 -0.7
HOPE LR LR
comp=Z,4µm,20.0s
FCC Fort Churchill 107.59 33 *e*PKiKP PKiKP 22 37 03.7 -1.1
FCC *e*PP PP 22 37 26.4 -0.6
ZRNK Zerenda 107.77 321⇓*i*P Pdif 22 32 56.4 -1.8
ZRNK *e* 22 37 26.1
ZRNK pmax pmax
comp=Z,158nm,0.3s
ZRNK Zerenda 107.77 321⇓*i*Pdif Pdif 22 32 56.4 -1.9
comp=Z,158nm,0.3s
ZRNK *e*PKiKP PKiKP 22 37 01.4 -3.7
ZRNK *e*PP PP 22 37 26.1 -2.2
CCM Cathedral Cave 108.10 55 *e*PP PP 22 37 26.2 -4.5
CCM LR LR
comp=Z,7µm,19.0s
CFAA Coronel Fontan 108.49 132 PKKPab PKKPab 22 48 30.8 +0.7
comp=Z,4.1nm,0.8s,baz=106,slow=4.3,SNR=10
EYMN Ely 108.71 44 PKiKP PKiKP 22 37 08.9 +2.1
EYMN *e*PP PP 22 37 30.7 -4.4
EYMN LR LR
comp=Z,120µm,19.0s
OXF Oxford 109.19 59 PFAKE 22 37 20.0 +12
OXF LR LR
comp=Z,9µm,21.0s
JFWS Jewell Farm 109.28 50 *e*PKiKP PKiKP 22 37 08.0 +0.1
JFWS LR LR
comp=Z,13µm,20.0s
HALT Halls 109.39 57 PKiKP PKiKP 22 37 11.2 +3.1
HALT *e*PP PP 22 37 41.8 +1.7
GLAT Glass 109.47 57 *e*PP PP 22 37 40.7 0.0
NNA Nana 110.31 109 PKKPbc PKKPbc 22 48 11.4 +0.8
comp=Z,75nm,0.9s,baz=313,slow=0.8,SNR=9.7
NNA Nana 110.31 109 *e*PP PP 22 37 42.8 -4.0
NNA LR LR
comp=Z,9µm,21.0s
PLAL Pickwick Lake 110.33 58 *e*PKiKP PKiKP 22 37 09.8 -0.1
PLAL *e*PKKPbc PKKPbc 22 48 11.0 +0.5
PLAL *e*PKKPab PKKPab 22 48 21.5 -0.4
PLAL LR LR
comp=Z,7µm,20.0s
WVT Waverly 110.63 57 PFAKE 22 37 20.0 +10
WVT LR LR
comp=Z,7µm,19.0s
ATAH Atahualpa 110.64 104 PKKPbc PKKPbc 22 48 10.7 +1.2
comp=Z,22nm,0.7s,baz=29,slow=4.8,SNR=6.9
LRAL Lakeview Retre 111.04 60 *e*PKiKP PKiKP 22 37 10.2 -1.0
LRAL LR LR
comp=Z,6µm,20.0s
BLO Bloomington 111.88 54 PKiKP PKiKP 22 37 13.8 +1.0
BLO Bloomington 111.88 54 PP PP 22 37 54.9 -3.1
WCI Wyandotte Cave 112.00 55 *e*PKiKP PKiKP 22 37 11.6 -1.5
WCI *e* 22 37 59.3
WCI *e* 22 40 32.7
WCI MLR MLR
comp=Z,6µm,19.0s
SWET Sewanee 112.10 58 PKiKP PKiKP 22 37 12.1 -1.2
SWET *e*PP PP 22 37 55.5 -4.1
OPO Ambohidratompo 112.29 242 Pdiff Pdif 22 33 21.1 +2.8
comp=Z,4.5nm,0.9s,baz=93,slow=2.5,SNR=5.9
OPO PKiKP PKiKP 22 37 14.6 +1.0
comp=Z,41nm,0.8s,baz=119,slow=1.9,SNR=37
OPO SKP 22 40 34.5
comp=Z,20nm,0.8s,baz=135,slow=1.2,SNR=11
LVC Limon Verde 112.60 123 PKKPbc PKKPbc 22 48 03.8 +0.8
comp=Z,84nm,0.7s,baz=45,slow=1.9,SNR=4.3
LVC Limon Verde 112.60 123 *e*Pdif Pdif 22 33 22.4 +2.7
LVC *e*PP PP 22 38 04.0 +0.9
LVC LR LR
comp=Z,10µm,19.0s
OTAV Otavalo 112.86 97 *e*PKiKP PKiKP 22 37 15.6 +0.9
OTAV *e*PP PP 22 38 12.7 +7.7
OTAV LR LR
comp=Z,3µm,21.0s
CPCT Cooper Cave 113.27 58 *e*PKiKP PKiKP 22 37 14.4 -1.1
CPCT *e*PP PP 22 38 06.1 -1.8
MYNC Murphy 113.57 58 PFAKE 22 37 30.0 +14
MYNC LR LR
comp=Z,8µm,19.0s
ARU Arti 113.70 325 *e*P Pdif 22 33 22.3 -2.3
ARU *i* 22 37 14.8
ARU *e* 22 38 03.6
ARU *e* 22 43 45.5
ARU *e*SP SP 22 47 28.0 -3.9
ARU *e*PS PS 22 47 41.8 -7.4
ARU *e*SS SS 22 53 40.7 -6.4
ARU Arti 113.70 325⇓*i*Pdif Pdif 22 33 18.6 -6.0
ARU *e*PKiKP PKiKP 22 37 12.7 -3.6
ARU ⇑*e*PKP PKiKP 22 37 15.7 -0.6
ARU *i*PP PP 22 37 53.2 -18
ARU *e*SKPdf SKPdf 22 40 35.4 -2.4
ARU LR LR
comp=Z,8µm,20.0s
JMDO Jabal Madar 113.78 288 P PKiKP 22 37 16.9 +0.5
SNR=11
BIDO Bidbid 113.91 289 ⇑P PKiKP 22 37 17.4 +0.7
SNR=5.8
SMDO Samad 113.92 289 P PKiKP 22 37 17.5 +0.8
SNR=16
TZTN Tazewell 114.11 57 *e*PKiKP PKiKP 22 37 16.2 -0.9
TZTN *e*PP PP 22 38 15.4 +1.6
TZTN *e*SKPdf SKPdf 22 40 37.1 -1.5
AAM Ann Arbor 114.13 50 *e*PKiKP PKiKP 22 37 16.3 -0.8
AAM MLR MLR
comp=Z,8µm,20.0s
SOKR Solikamsk 114.16 329*d i*PKiKP PKiKP 22 37 15.6 -1.6
SOKR *i* 22 38 24.2
SOKR PS PS 22 47 48.7 -4.7
SOKR SS SS 22 53 47.7 -5.5
SOKR pmax pmax
comp=Z,130nm,1.2s
SOKR MLR MLR
comp=Z,13µm,26.0s
ACSO Alum Creek Sta 114.64 53 *e*PKiKP PKiKP 22 37 16.8 -1.3
ACSO LR LR
comp=Z,9µm,21.0s
AKTO Aktyubinsk 114.65 319 SKP 22 40 37.9
comp=Z,87nm,0.9s,baz=82,slow=3.7,SNR=23
AKTO SKSac SKSac 22 43 53.8 +1.9
comp=Z,8.5nm,1.1s,baz=208,slow=23,SNR=18
AKTO PKKPab PKKPab 22 48 01.8 -1.0
comp=Z,16nm,1.1s,baz=282,slow=4.2,SNR=6.8
AKTO SKKPbc 22 51 26.0
comp=Z,8.7nm,1.2s,baz=270,slow=5.9,SNR=5.1
BSY Bisya 114.66 288 P PKiKP 22 37 18.6 +0.4
SNR=6.9
DWPF Disney 115.36 66 *e*PKPdf PKPdf 22 37 19.2 -0.3
DWPF *e*SKPdf SKPdf 22 40 40.9 -0.2
DWPF LR LR
comp=Z,3µm,20.0s
BANOM Banah 115.84 291 ⇓P PKPdf 22 37 20.8 +0.4
SNR=5.5
KBS Kingsbay 115.85 355 *e* Pdif 22 33 32.3 -1.8
KBS *e* 22 37 18.9
KBS *e*SS SS 22 54 14.7 -0.6
KBS Kingsbay 115.85 355 *e*PKIKP PKPdf 22 37 19.1 -1.3
KBS MLR MLR
comp=Z,5µm,19.0s
ASHO Ashiyiah 115.93 290 P PKPdf 22 37 20.5 -0.1
SNR=18
SPB4 Spitsbergen Ar 116.09 354 *e*PKPdf PKPdf 22 37 19.3 -1.6
SPB4 *e*SKPdf SKPdf 22 40 41.9 -0.5
LPAZ La Paz 116.23 117 *e*PKIKP PKPdf 22 37 22.4 +1.2
LPAZ *e* 22 38 07.9
LPAZ MLR MLR
comp=Z,6µm,21.0s
LPAZ La Paz 116.23 117 *e*PKPdf PKPdf 22 37 22.4 +1.2
LPAZ *ep*PKPdf pPKPdf 22 38 07.9 +7.4
LPAZ *e*SKPdf SKPdf 22 40 37.3 -5.4
LPAZ LR LR
comp=Z,6µm,21.0s
FWV Forest Hill 116.32 56 *e*PKPdf PKPdf 22 37 19.9 -1.5
FWV *e*SKPdf SKPdf 22 40 41.0 -1.9
ELN Prospectdale 116.37 56 PKPdf PKPdf 22 37 20.8 -0.7
BLA Blacksburg 116.63 56 PKIKP PKPdf 22 37 20.7 -1.2
BLA Blacksburg 116.63 56 *e*PKPdf PKPdf 22 37 20.6 -1.3
BLA *e*SKPdf SKPdf 22 40 41.8 -1.6
BLA LR LR
comp=Z,9µm,19.0s
ALLY Alegheny Colle 116.76 51 *e*PP PP 22 38 33.0 +0.7
ERPA Erie 116.86 51 *e*PKPdf PKPdf 22 37 21.0 -1.4
ERPA *e*SKPdf SKPdf 22 40 42.3 -1.6
ERPA LR LR
comp=Z,4µm,20.0s
MCWV Mont Chateau 117.05 53 *e*PKPdf PKPdf 22 37 21.5 -1.2
MCWV *ep*PKPdf pPKPdf 22 38 10.1 +8.0
MCWV LR LR
comp=Z,11µm,19.0s
WHFO Wadi Hawf 117.15 282 P PKPdf 22 37 23.5 +0.5
SNR=16
ABTO Aybut 117.51 282 P PKPdf 22 37 24.4 +0.8
SNR=13
ROSC El Rosal 118.09 93 PKP PKPdf 22 37 22.1 -2.6
comp=Z,4.8nm,0.5s,baz=96,slow=21,SNR=4.1
ROSC PKKPab PKKPab 22 47 45.9 -1.7
comp=Z,17nm,0.7s,baz=292,slow=0.4,SNR=3.9
ROSC SKKPbc 22 51 20.8
comp=Z,20nm,0.9s,baz=87,slow=12,SNR=4.9
ROSC El Rosal 118.09 93 *e*PKPdf PKPdf 22 37 22.1 -2.6
ROSC *ep*PKPdf pPKPdf 22 38 13.8 +10
ROSC PKKPab PKKPab 22 47 45.9 -1.7
ROSC SKKPbc 22 51 20.8
SSPA Standing Stone 118.51 52 *e*PKPdf PKPdf 22 37 24.1 -1.4
SSPA *e*SKPdf SKPdf 22 40 45.2 -1.9
SSPA LR LR
comp=Z,7µm,20.0s
CNNC Cliffs of the 118.68 58 *e*PKPdf PKPdf 22 37 25.4 -0.5
CPUP Villa Florida 119.31 133 PKP PKPdf 22 37 25.9 -1.1
comp=Z,2.3nm,0.6s,baz=230,slow=1.9,SNR=9.5
CPUP PP PP 22 38 43.4 -6.6
comp=Z,6.1nm,0.8s,baz=228,slow=5.7,SNR=3.2
CPUP SKP 22 40 45.7
comp=Z,15nm,1.0s,baz=203,slow=4.3,SNR=3.9
CPUP PKKPbc PKKPbc 22 47 40.5 +0.7
comp=Z,12nm,0.7s,baz=40,slow=1.9,SNR=9.7
CPUP SKKPbc 22 51 28.1
comp=Z,4.5nm,0.8s,baz=43,slow=6.9,SNR=3.8
CPUP Villa Florida 119.31 133⇑*i*PKPdf PKPdf 22 37 26.4 -0.7
CPUP LR LR
comp=Z,632nm,21.0s
SDMD Soldier's Deli 119.39 53 *e*PKPdf PKPdf 22 37 22.2 -5.0
SDMD *ep*PKPdf pPKPdf 22 38 13.5 +6.9
SDMD *e*SKPdf SKPdf 22 40 43.7 -5.0
MVL Millersville 119.72 53 *e*PKPdf PKPdf 22 37 26.8 -1.1
MVL *e*SKPdf SKPdf 22 40 47.8 -1.6
BINY Binghamton 119.82 50 PFAKE 22 37 40.0 +12
BINY LR LR
comp=Z,8µm,20.0s
LVZ Lovozero 120.02 341 PFAKE 22 37 40.0 +12
LVZ LR LR
comp=Z,9µm,22.0s
LONY Lake Ozonia 120.55 47 *e*PKPdf PKPdf 22 37 27.9 -1.6
LONY *e*SKPdf SKPdf 22 40 47.5 -3.5
APA Apatity 120.60 341⇓*e*P Pdif 22 33 50.0 -5.3
APA pmax pmax
comp=Z,7µm,10.0s
NCB Newcomb 120.90 48 *e*PKPdf PKPdf 22 37 28.9 -1.3
NCB *e*SKPdf SKPdf 22 40 50.2 -1.4
NCB LR LR
comp=Z,7µm,19.0s
KEV Kevo 120.93 345 *e*p PKPdf 22 37 27.9 -2.3
comp=Z,42nm,0.7s
KEV Kevo 120.93 345 *e*p SKPdf 22 40 50.4 -1.3
KEV Kevo 120.93 345 PKIKP PKPdf 22 37 28.5 -1.7
KEV Kevo 120.93 345 *e*P PKPdf 22 37 27.9 -2.3
MUKL Al Mukalla 121.08 278 *e*P PKPdf 22 37 31.6 +1.1
FRNY Flat Rock 121.22 47 *e*PKPdf PKPdf 22 37 29.0 -1.8
FRNY *e*PP PP 22 39 03.8 +0.7
FRNY *e*SKPdf SKPdf 22 40 50.7 -1.5
SUMG Summit 121.24 9 *e*PKPdf PKPdf 22 37 29.9 -0.9
SUMG *e*SKPdf SKPdf 22 40 51.2 -1.1
ACCN Adirondack Com 121.38 49 *e*PKPdf PKPdf 22 37 29.4 -1.6
ACCN *e*PP PP 22 38 58.6 -5.5
ARCES ARCESS Array B 121.45 345 PKP PKPdf 22 37 29.7 -1.5
comp=Z,45nm,0.6s,baz=75,slow=1.8,SNR=137
ARCES SKP 22 40 50.8
comp=Z,77nm,0.9s,baz=51,slow=0.8,SNR=13
ARCES PKKPab PKKPab 22 47 29.8 -3.2
comp=Z,15nm,0.9s,baz=210,slow=4.2,SNR=5.5
ARCES SKKPbc 22 51 03.8
comp=Z,5.0nm,0.9s,baz=197,slow=1.6,SNR=3.8
ARCES ARCESS Array B 121.45 345 PKP PKPdf 22 37 29.7 -1.5
ARCES SKP 22 40 50.8
ARCES PKKPab PKKPab 22 47 29.8 -3.2
ARCES SKKPbc 22 51 03.8
PAL Palisades 121.49 51 *e*PKIKP PKPdf 22 37 30.4 -0.9
PAL *e* 22 38 17.6
PAL *e* 22 39 04.7
PAL Palisades 121.49 51 *e*PKPdf PKPdf 22 37 30.4 -0.9
PAL *ep*PKPdf pPKPdf 22 38 17.6 +7.0
PAL *e*PP PP 22 39 04.7 -0.2
PAL *e*SKPdf SKPdf 22 40 52.0 -0.8
PECR Pechory 121.54 327⇑*i*PKIKP PKPdf 22 37 30.3 -1.1
PECR *i* 22 38 11.0
PECR *i* 22 44 15.0
PECR *e* 22 48 43.0
PECR *e* 22 55 23.0
PECR pmax pmax
comp=Z,2µm,1.4s
PECR pmax pmax
comp=Z,1µm,8.0s
PECR pmax pmax
comp=Z,3µm,12.0s
PECR pmax pmax
comp=E,2µm,10.0s
KLMR Klimovskoe 121.91 333*d i*PKIKP PKPdf 22 37 30.3 -1.8
KLMR *e* 22 44 16.4
KLMR *e*PS PS 22 48 42.4 -21
KLMR *e*SS SS 22 55 31.0 -2.4
KLMR pmax pmax
comp=Z,420nm,1.5s
KLMR MLR MLR
comp=Z,8µm,21.0s
SIV San Ignacio 122.30 121 PKKPab PKKPab 22 47 29.1 -0.2
comp=Z,28nm,0.8s,baz=70,slow=3.8,SNR=43
HNH Hanover 122.32 48 *e*PKPdf PKPdf 22 37 32.1 -0.8
HNH *ep*PKPdf pPKPdf 22 38 18.1 +5.9
HNH *e*PP PP 22 39 02.4 -8.1
HNH *e*SKPdf SKPdf 22 40 53.5 -0.9
KTK1 Kautokeino 122.39 346 *e*PKPd PKPdf 22 37 31.9 -1.1
KTK1 Kautokeino 122.39 346 *e*P PKPdf 22 37 32.4 -0.6
QUA2 Belchertown 122.49 50 *e*PKPdf PKPdf 22 37 32.1 -1.1
QUA2 *e*SKPdf SKPdf 22 40 53.9 -0.8
LBNH Lisbon 122.49 47 *e*PKIKP PKPdf 22 37 32.2 -1.0
LBNH *e* 22 39 08.7
LBNH MLR MLR
comp=Z,14µm,21.0s
SUR Sutherland 122.58 213 SKP 22 40 56.4
comp=Z,30nm,0.9s,baz=153,slow=2.7,SNR=5.4
SUR SKKPbc 22 51 02.8
comp=Z,34nm,1.0s,baz=161,slow=4.3,SNR=5.2
SUR Sutherland 122.58 213 P PKPdf 22 37 34.3 +0.9
SNR=23
SUR P 22 37 34.8
SNR=6.9
SUR Sutherland 122.58 213 *e*PKPdf PKPdf 22 37 34.6 +1.2
SUR LR LR
comp=Z,6µm,20.0s
SDV Santo Domingo 122.64 89 PKKPab PKKPab 22 47 28.9 +1.1
comp=Z,19nm,0.9s,baz=114,slow=1.4,SNR=6.2
SDV Santo Domingo 122.64 89 *e*PKPdf PKPdf 22 37 32.1 -1.4
SDV *e*SKPdf SKPdf 22 40 54.4 -0.6
SDV *e*PKKPbc PKKPbc 22 47 29.1 +1.7
SDV LR LR
comp=Z,2µm,22.0s
MAK Makhachkala 122.74 311*de*P Pdif 22 34 03.1 -1.7
MAK *i* 22 39 10.1
MAK *i* 22 44 16.3
MAK *i*PS PS 22 48 55.6 -15
MAK *i*SS SS 22 55 46.8 +2.8
MAK pmax pmax
comp=Z,616nm,1.4s
MAK MLR MLR
comp=Z,6µm,17.0s
MAK Makhachkala 122.74 311 *i*PKPr PKPdf 22 37 34.0 +0.3
FFD Franklin Falls 122.81 48 *e*PKPdf PKPdf 22 37 33.6 -0.2
TRO Tromso 122.86 348 *e*PKPd PKPdf 22 37 31.3 -2.6
TRO *e*PP PP 22 39 09.3 -4.9
TRO AMS AMS 23 22 31.2
comp=Z,3µm,20.3s
TRO Tromso 122.86 348 *e*P PKPdf 22 37 31.1 -2.8
TRO LR LR
comp=Z,3µm,20.3s
BOSA Boshof 122.87 220 PKP PKPdf 22 37 34.1 +0.2
comp=Z,81nm,0.8s,baz=126,slow=1.9,SNR=82
BOSA PKKPab PKKPab 22 47 30.1 +3.3
comp=Z,2.4nm,0.8s,baz=324,slow=14,SNR=3.7
BOSA SKKPbc 22 51 00.4
comp=Z,19nm,1.1s,baz=336,slow=2.2,SNR=5.9
BOSA Boshof 122.87 220 PKIKP PKPdf 22 37 34.6 +0.7
SCHQ Schefferville 122.92 34 PKP PKPdf 22 37 32.0 -2.0
comp=Z,19nm,0.6s,baz=338,slow=1.4,SNR=22
SCHQ PP PP 22 39 09.6 -5.0
comp=Z,16nm,1.1s,baz=237,slow=2.1,SNR=5.0
SCHQ SKP 22 40 54.0
comp=Z,60nm,1.2s,baz=0.6,slow=2.3,SNR=9.4
SCHQ PKKPbc PKKPbc 22 47 26.8 +0.6
comp=Z,24nm,0.6s,baz=92,slow=5.7,SNR=28
SCHQ SKKPbc 22 51 02.6
comp=Z,13nm,1.0s,baz=128,slow=2.7,SNR=3.7
SCHQ Schefferville 122.92 34 PKP PKPdf 22 37 32.0 -2.0
SCHQ PP PP 22 39 09.6 -5.0
SCHQ SKP 22 40 54.0
SCHQ PKKPbc PKKPbc 22 47 26.8 +0.6
SCHQ SKKPbc 22 51 02.6
HRV Harvard--Oak R 123.04 49 PKIKP PKPdf 22 37 33.5 -0.7
HRV Harvard--Oak R 123.04 49 *e*PKPdf PKPdf 22 37 33.4 -0.9
HRV *e*SKPdf SKPdf 22 40 55.4 -0.3
HRV LR LR
comp=Z,11µm,20.0s
SFJD Kangerlussuaq 123.08 17 SKKPbc 22 51 01.4
comp=Z,20nm,1.1s,baz=120,slow=2.3,SNR=8.0
SFJD Kangerlussuaq 123.08 17 *i*P PKPdf 22 37 32.5 -1.8
comp=Z,32nm,0.9s
SFJD *i* 22 39 10.3
SFJD *i* 22 56 26.3
SFJD
comp=Z,5µm,20.0s
SFJD Kangerlussuaq 123.08 17 PKIKP PKPdf 22 37 34.1 -0.2
WES Weston 123.23 49 *e*PKIKP PKPdf 22 37 33.8 -0.8
WES *e* 22 39 18.0
WES MLR MLR
comp=Z,8µm,20.0s
QRN Al-Qurain 123.44 294 *e*P PKPdf 22 37 35.1 +0.1
QRN AMb AMB 22 37 38.5
comp=Z,1µm,0.8s
UMR Umm Al-Rimmam 123.62 295 *e*P PKPdf 22 37 35.4 0.0
UMR AMb AMB 22 37 38.4
comp=Z,799nm,0.7s
KBD Kabd 123.64 295 *e*P PKPdf 22 37 35.6 +0.2

KBD AMb AMB 22 37 38.3
comp=Z,1µm,0.8s
RDF Al-Radifah 123.77 294 *e*P PKPdf 22 37 35.7 0.0
RDF AMb AMB 22 37 38.7
comp=Z,984nm,0.8s
SAML Samuel 123.82 112 *e*PKPdf PKPdf 22 37 34.8 -1.0
SAML *e*SKPdf SKPdf 22 40 55.8 -1.4
SAML LR LR
comp=Z,6µm,22.0s
MIB Mutribah 123.95 295 *e*P PKPdf 22 37 36.1 +0.1
MIB AMb AMB 22 37 39.8
comp=Z,695nm,1.0s
JOF Joensuu 124.11 338 *e*p PKPdf 22 37 34.0 -2.3
comp=Z,83nm,0.8s
JOF Joensuu 124.11 338 *e*p SKPd 22 40 36.0 -22
comp=Z,25nm,0.7s
JOF Joensuu 124.11 338 *e*p 22 50 53.8
PKME Peaks-Kenny Pk 124.14 46 *e*PKPdf PKPdf 22 37 35.5 -0.8
PKME *e*pPKPdf pPKPdf 22 38 23.2 +7.5
PKME *e*SKPdf SKPdf 22 40 57.4 -0.4
DGRG David-gareji 124.55 310 P PKPdf 22 37 38.2 +1.1
DGRG S PP 22 39 27.9 +2.4
LBOS 124.60 276‖ *e*P PKPdf 22 37 39.2 +1.9
VRHR Novokhopersk 124.68 322 *e*PKIKP PKPdf 22 37 36.5 -0.9
VRHR pmax pmax
comp=Z,100nm,0.7s
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,8.0nm,0.5s
JMIC Jan Mayen 124.83 359 *e*P PKPdf 22 37 41.6 +4.0
JMIC *e*PP PP 22 39 25.7 -1.6
MTA Mtatsminda 124.93 310 P PKPdf 22 37 38.2 +0.4
MTA S PP 22 39 33.8 +5.7
TBLG Delisi 124.97 310 P PKPdf 22 37 38.9 +0.9
SCO Scoresbysund 125.05 4 *i* P PKPdf 22 37 37.4 -0.7
comp=E,31nm,0.7s
SCO *i* 22 37 39.5
MOS Moscow 125.10 328ĸ *i*PKIKP PKPdf 22 37 37.0 -1.2
MOS *i* 22 44 26.7
MOS *i* PS PS 22 49 05.6 -26
MOS pmax pmax
comp=Z,600nm,1.7s
MOS pmax pmax
comp=N,200nm,1.4s
MOS pmax pmax
comp=Z,374nm,1.5s
MOS pmax pmax
comp=N,117nm,1.3s
MOS MLR MLR
comp=Z,8µm,19.0s
LBTB Lobatse 125.18 223 PKPdf PKPdf 22 37 38.5 +0.2
LBTB SKPdf SKPdf 22 41 00.1 +0.3
LBTB Sdiff Sdif 22 47 26.1 +11
LBTB SS SS 22 56 19.7 +5.0
LBTB Lobatse 125.18 223 *e*PKPdf PKPdf 22 37 39.2 +0.9
LBTB *e*SKPdf SKPdf 22 41 01.2 +1.4
LBTB LR LR
comp=Z,6µm,19.0s
LOF Lofoten 125.20 349 *e*P PKPdf 22 37 38.7 +0.3
LOF Lofoten 125.20 349 *e*P PKPdf 22 37 39.8 +1.4
GNI Garni 125.23 308 *e*P PKPdf 22 37 38.8 +0.4
GNI Garni 125.23 308 SKP SKPdf 22 41 01.7 +1.8
comp=Z,63nm,1.0s,baz=211,slow=2.5,SNR=4.0
GNI Garni 125.23 308 P PKPdf 22 37 39.6 +1.1
SNR=37
GNI Garni 125.23 308 *i* PKPr PKPdf 22 37 38.3 -0.1
GOR Gori 125.38 310 P PKPdf 22 37 40.0 +1.2
ZEI Tsey 125.38 311 *e*PKIKP PKPdf 22 37 39.6 +0.9
ZEI *e* 22 39 28.8
GOF Gofitskoye 125.49 314 *e*PKIKP PKPdf 22 37 39.2 +0.3
GOF *i* 22 39 26.9
GOF pmax pmax
comp=Z,270nm,1.3s
DHBB Dhamar BB 125.53 277‖ *e*P PKPdf 22 37 40.5 +1.5
TRBA At Turbah 125.58 275 *e*P PKPdf 22 37 40.4 +1.3
ONI Oni 125.75 311 P PKPdf 22 37 40.0 +0.5
ONI S PP 22 39 34.4 +1.0
OBN Obninsk 125.92 328‖ *e*P Pdif 22 34 18.8 -0.1
OBN *i* 22 37 38.6
OBN *i* 22 39 31.2
OBN *i* 22 44 30.1
OBN pmax pmax
comp=Z,200nm,16.7s
OBN MLR MLR
comp=Z,6µm,19.0s
OBN Obninsk 125.92 328 *i* PKPr PKPdf 22 37 38.6 -1.2
OBN LR LR
comp=Z,6µm,23.0s
KIV Kislovodsk 125.99 313 P PKPdf 22 37 40.6 +0.7
SNR=38
KIV P 22 37 40.8
SNR=46
KIV Kislovodsk 125.99 313⇑ *i*PKIKP PKPdf 22 37 39.1 -0.8
KIV Kislovodsk 125.99 313⇑ *e*PKP PKPdf 22 37 39.2 -0.7
CLDR Caldiran 126.02 307 *e*P PKPdf 22 37 40.8 +0.9
VRSR Storozhevoye 126.07 323*d i*PKIKP PKPdf 22 37 39.0 -1.1
VRSR pmax pmax
comp=Z,250nm,1.0s
VRSR pmax pmax
comp=N,10.0nm,0.6s
VRSR pmax pmax
comp=E,100nm,1.1s
DIGO Kars 126.22 309 *i* P PKPdf 22 37 39.4 -1.0
BHD Baghdad 126.33 300 *ex* x 22 37 38.0
BHD *ex* x 22 38 51.0
BHD *ex* x 22 44 31.0
BHD *ex* x 22 46 16.0
BHD *ex* x 22 46 31.0
KARS Kars 126.39 309 *e*P PKPdf 22 37 42.1 +1.4
KAF Kangasniemi 126.42 339 *e*p PKPdf 22 37 38.5 -2.2
comp=E,28nm,0.6s
TVAN Van 126.51 306 *i* P PKPdf 22 37 40.4 -0.5
VANB Van 126.51 306 *e*P PKPdf 22 37 41.5 +0.6
VANT Van 126.53 306 *e*P PKPdf 22 37 41.4 +0.5
CUKT Cukurca 126.53 305 *e*P PKPdf 22 37 41.3 +0.4
MOR8 Moi Rana 126.69 347 *e*PKPd PKPdf 22 37 39.4 -1.8
MOR8 *e* 22 40 42.3
STOK Stokkvaagen 126.85 348 *e*PKPd PKPdf 22 37 40.3 -1.3
STOK Stokkvaagen 126.85 348 *e*P PKPdf 22 37 40.3 -1.3
FIA1 FINESS Array S 126.94 338 *e*PKPdf PKPdf 22 37 40.1 -1.7
FIA1 *e*pPKPdf pPKPdf 22 38 22.0 +5.9
FIA1 *e*PP PP 22 39 41.2 -0.2
FIA1 *e*SKPdf SKPdf 22 40 45.3 -18
FINES FINESS Array B 126.94 338 PKhKP 22 37 25.1
comp=E,1.6nm,0.6s,baz=69,slow=3.0,SNR=4.8
FINES PKP PKPdf 22 37 39.6 -2.1
comp=E,114nm,1.1s,baz=92,slow=4.6,SNR=19
FINES PP PP 22 39 29.7 -12
comp=E,22nm,1.0s,baz=104,slow=4.4,SNR=4.2
FINES SKPab 22 40 45.4
comp=E,35nm,0.7s,baz=61,slow=4.7,SNR=12
FINES FINESS Array B 126.94 338 PKP PKPdf 22 37 39.6 -2.1
FINES PP PP 22 39 29.7 -12
FINES SKPab 22 40 45.4
MSL Mosul 127.07 304 *ex* x 22 37 43.0
MSL *ex* x 22 44 35.0
BCA Borcka 127.31 310 *e*P PKPdf 22 37 42.9 +0.5
TRIS Tristan da Cun 127.38 180 *e*PKPdf PKPdf 22 37 42.4 -0.2
TRIS *ep*PKPdf pPKPdf 22 38 27.9 +6.0
TRIS LR LR
comp=Z,6µm,20.0s
ERZM Erzurum 127.82 308 *i* P PKPdf 22 37 44.4 +1.0
EZM Erzurum 127.83 308 *e*P PKPdf 22 37 44.7 +1.3
BTMT Batman 128.05 306 *e*P PKPdf 22 37 45.0 +1.2
BNGL BINGOL 128.17 307 *i* P PKPdf 22 37 45.0 +0.9
SJG San Juan 128.48 79 PKIKP PKPdf 22 37 44.1 -0.6
SJG San Juan 128.48 79 *e*PKPdf PKPdf 22 37 43.1 -1.5
SJG PP PP 22 39 53.0 +1.6
SJG LR LR
comp=Z,4µm,22.0s
NSS Namsos 128.63 347 *e*PKPd PKPdf 22 37 41.9 -3.0
NSS *e*PP PP 22 39 51.5 -1.0
NSS AMS AMS 23 26 43.6
comp=Z,4µm,22.6s
NSS Namsos 128.63 347 *e*P PKPdf 22 37 42.5 -2.5
NSS *e*PP PP 22 39 51.5 -1.0
NSS LR LR
comp=Z,4µm,22.6s
BINT Bingol 128.69 307 *e*P PKPdf 22 37 45.7 +0.7
MARD Mardin 128.75 305 *i* P PKPdf 22 37 44.6 -0.6
MACK Trabzon 128.79 310 *i* P PKPdf 22 37 44.6 -0.6
EZC Erzincan 129.02 309 *e*P PKPdf 22 37 44.3 -1.4
DIY Diyarbakir 129.08 306 *e*P PKPdf 22 37 47.0 +1.2
KELT Kelkit 129.35 309 *i* P PKPdf 22 37 47.0 +0.7
ANN Anapa 129.38 315 *i* PKIKP PKPdf 22 37 45.6 -0.8
DESE Dese 129.49 271 *i* P PKPdf 22 37 49.1 +2.6
DESE *e*S PP 22 39 26.4 -32
LSZ Lusaka 129.55 234 PKPdf PKPdf 22 37 47.9 +1.2
LSZ PP PP 22 39 55.3 -3.1
LSZ SKPdf SKPdf 22 40 57.1 -11
LSZ SKSdf SKSdf 22 44 46.4 +2.1
LSZ SKKSac SKKSac 22 46 40.9 +0.2
LSZ Lusaka 129.55 234 SKKPbc 22 50 38.0
comp=Z,19nm,1.1s,baz=351,slow=1.4,SNR=5.8
LSZ Lusaka 129.55 234 P PKPdf 22 37 48.7 +2.0
SNR=27
LSZ Lusaka 129.55 234 *e*PKIKP PKPdf 22 37 48.0 +1.3
LSZ *e* 22 39 56.6
LSZ MLR MLR
comp=Z,8µm,22.0s
LSZ Lusaka 129.55 234 *e*PKPdf PKPdf 22 37 48.0 +1.3
LSZ *e*PP PP 22 39 56.6 -1.8
LSZ *e*SKPdf SKPdf 22 40 57.2 -11
LSZ LR LR
comp=Z,8µm,22.0s
BBSR BB Station 129.81 61 *e*PKPdf PKPdf 22 37 46.7 -0.5
BBSR LR LR
comp=Z,4µm,20.0s
GRSN GIRESUNGRSN 129.90 310 *i* P PKPdf 22 37 44.9 -2.5
ELZG Elazig 129.92 307 *i* P PKPdf 22 37 46.2 -1.2
URFA Urfa 130.26 306 *e*P PKPdf 22 37 47.1 -0.9
MYA Malatya 130.39 307 *e*P PKPdf 22 37 49.5 +1.2
MALT Malatya 130.39 307‖ *i*P PKPdf 22 37 45.5 -2.8
MALT Malatya 130.39 307‖ P PKPdf 22 37 45.5 -2.8
MALT *e*PP PP 22 39 53.2 -11
MALT *e*SKP 22 41 00.0
IZAR Zarasai 130.55 332 *e*P PKPdf 22 37 47.7 -0.9
IZAR AMb AMB 22 37 51.9
comp=Z,2µm,0.9s
IZAR Zarasai 130.55 332 *i* P 22 40 59.0
IZAR AMb AMB 22 41 02.3
comp=Z,726nm,1.3s
MNK Minsk 130.56 330 *e*PKIKP PKPd 22 37 44.0 -4.6
MNK *e* 22 38 32.0
MNK *e*PS PS 22 49 56.0 -23
MNK *e*SSS 23 02 18.0
IDID Didziasalis 130.59 332 *e*P PKPdf 22 37 47.7 -1.0
IDID AMb AMB 22 37 52.4
comp=Z,2µm,0.9s
IDID Didziasalis 130.59 332 *i* P SKPd 22 40 59.1 -11
IDID AMb AMB 22 41 02.5
comp=Z,551nm,1.2s
ATAB Bozova 130.67 306 *i* P PKPdf 22 37 48.9 +0.1
BORG Borgarnes 130.74 5 PKP PKPdf 22 37 48.9 -0.1
comp=Z,22nm,0.8s,baz=279,slow=3.1,SNR=7.6
BORG SKPbc SKPbc 22 40 59.4 +0.3
comp=Z,2µm,1.0s,baz=330,slow=1.8,SNR=133
BORG Borgarnes 130.74 5 PKP PKPdf 22 37 48.9 -0.1
BORG SKPbc SKPbc 22 40 59.4 +0.3
BORG LR LR
comp=Z,5µm,21.0s
SVSK Karacayir 131.09 309 *e*P PKPdf 22 37 50.5 +0.9
SVST Sivas 131.16 309 *i* P PKPdf 22 37 49.9 +0.1
GZT Gaziantep 131.26 306 *i* P PKPdf 22 37 45.8 -4.2
TOKT Tokat 131.32 310 *e*P PKPdf 22 37 50.7 +0.7
DOMB Dombas 131.46 347 *e*PKPd PKPdf 22 37 50.2 -0.1
DOMB *e* 22 41 01.3
SIM Simferopol' 131.54 317 *e*P Pdif 22 34 42.0 -1.9
SIM pmax pmax
comp=Z,2µm,9.6s
SIM MLR MLR
comp=Z,4µm,16.8s
SIM Simferopol' 131.54 317‖ *i*PKP PKPdf 22 37 50.2 -0.3
GAZ Gaziantep 131.57 306 *e*P PKPdf 22 37 46.4 -4.1
CAM4 Nova Friburgo 131.76 141⇑ *i*P PKPdf 22 37 51.5 +0.7
CAM4 *i* 22 37 55.8
CAM4 *i* 22 38 07.7
CAM4 *i* 22 38 07.8
CAM4 *i* 22 39 13.8
CAM4 *i* 22 38 42.0
CAM4 Nova Friburgo 131.76 141⇑ *i*P PKPdf 22 37 51.5 +0.7
CAM4 *i* 22 37 55.8
CAM4 *i* 22 38 07.7
CAM4 *i* 22 38 07.7
CAM4 *i* 22 38 07.8
CAM4 *i* 22 38 13.8
CAM4 *i* 22 38 42.0
NB2 NORSAR Subarra131.83 345 PKPd 22 37 39.2
comp=Z,91nm,1.4s,baz=27,slow=1.8
NB2 NORSAR Subarra131.83 345 PKPd 22 37 39.2
baz=27,slow=1.8
NOA NORSAR Array B 131.83 345 PKhKP 22 37 38.5
comp=Z,11nm,1.0s,baz=53,slow=2.0,SNR=12
NOA PKP PKPdf 22 37 49.3 -1.7
comp=Z,13nm,0.6s,baz=39,slow=2.0,SNR=26
NOA PP PP 22 40 07.2 -5.9
comp=Z,6.4nm,0.9s,baz=13,slow=4.6,SNR=3.7
NOA SKPbc SKPbc 22 41 01.2 -1.9
comp=Z,617nm,1.1s,baz=28,slow=4.4,SNR=60
NOA SKKPbc 22 50 40.8
comp=Z,20nm,1.2s,baz=208,slow=4.0,SNR=3.6
NOA NORSAR Array B 131.83 345 PKHKP 22 37 38.5
NOA 22 37 49.3
NOA NORSAR Array B 131.83 345 PKP 22 37 38.5
NOA PKP PKPdf 22 37 49.3 -1.7
NOA PP PP 22 40 07.2 -5.9
NOA SKPbc SKPbc 22 41 01.2 -1.9
NOA SKKPbc 22 50 40.8
DIKM Dikmen 131.87 312 *e*P PKPdf 22 37 48.6 -2.5
HFS Hagfors 131.93 343 SKKPbc 22 50 28.7
comp=Z,8.0nm,1.0s,baz=282,slow=6.8,SNR=3.9
AKASG Malin Array Be 131.95 326 PKhKP 22 37 34.2
comp=Z,3.3nm,0.6s,baz=59,slow=2.9,SNR=10.0
AKASG PKP PKPdf 22 37 49.5 -1.7
comp=Z,56nm,0.9s,baz=47,slow=2.6,SNR=42
AKASG PP PP 22 40 03.3 -11
comp=Z,11nm,0.9s,baz=48,slow=8.0,SNR=4.2
AKASG SKPbc SKPbc 22 41 03.5 0.0
comp=Z,212nm,0.7s,baz=50,slow=4.6,SNR=50
AKASG SKKPbc 22 50 27.9
comp=Z,4.6nm,0.9s,baz=235,slow=4.2,SNR=7.6
AKASG Malin Array Be 131.95 326 PKIKP PKPdf 22 37 49.5 -1.7
AKASG 22 50 27.9
AKASG Malin Array Be 131.95 326 PKP PKPdf 22 37 49.5 -1.7
AKASG PP PP 22 40 03.3 -11
AKASG SKPbc SKPbc 22 41 03.5 0.0
AKASG SKKPbc 22 50 27.9
AKBB Malin Array Si 131.95 326 *e*PKIKP PKPdf 22 37 50.6 -0.6
AKBB *e* 22 40 09.5
NAO01 NORSAR Array S 132.08 345 *e*PKPdf PKPdf 22 37 49.9 -1.6
NAO01 *e*PP PP 22 40 15.3 +0.6
NAO01 LR LR
comp=Z,6µm,19.0s
BOYT Boyabat 132.20 312 *i* P 22 37 35.6
BOYT Boyabat 132.20 312 *i* P SKPd 22 41 06.2 -6.7
BNN Bunyan 132.23 308 *e*P 22 37 42.1
BYBT Boyabat 132.28 312 *e*P PKPdf 22 37 52.8 +1.0
YOZ Yozgat 132.41 310 *e*P PKPdf 22 37 52.2 +0.1
COBT Iskenderun 132.46 305 *i* P PKPdf 22 37 53.9 +1.7
CTKT Corum 132.52 311 *i* P PKPdf 22 37 49.5 -2.8
CTKT Corum 132.52 311 *i* P SKPdf 22 41 07.0 -6.5
KOZT Kozan 132.58 307 *e*P PKPdf 22 37 52.9 +0.5
HTY Hatay 132.64 305 *e*P PKPdf 22 37 42.9 -10
BZK Bozkurt 132.66 313 *e*P PKPdf 22 37 53.2 +0.6
ASF Jabal al Asfar 132.72 299 PKhKP 22 37 40.6
comp=Z,14nm,0.8s,baz=270,slow=1.3,SNR=15
ASF PKP PKPdf 22 37 53.7 +1.1
comp=Z,56nm,0.8s,baz=315,slow=1.4,SNR=27
ASF PP PP 22 40 13.6 -5.2
comp=Z,22nm,1.1s,baz=176,slow=3.1,SNR=3.5
ASF SKP 22 41 08.2
comp=Z,103nm,1.0s,baz=19,slow=2.9,SNR=11
ASF Jabal al Asfar 132.72 299 PKHKP 22 37 40.6
ASF 22 37 53.7
ASF 22 40 13.6
CEYT Ceyhan 132.75 306 *e*P PKPdf 22 37 52.9 +0.2
CORM Corum 132.77 310 *e*P PKPdf 22 37 52.9 +0.1
BDFB Brasilia 132.78 130 PKP PKPdf 22 37 53.1 +0.3
comp=Z,8.1nm,0.6s,baz=307,slow=3.0,SNR=11
BDFB SKPbc SKPbc 22 41 05.0 -1.4
comp=Z,91nm,0.8s,baz=261,slow=2.8,SNR=21
BDFB SKKPbc 22 50 20.8
comp=Z,14nm,1.0s,baz=74,slow=5.9,SNR=3.8
BDFB Brasilia 132.78 130 PKP PKPdf 22 37 53.1 +0.3
BDFB SKPbc SKPbc 22 41 05.0 -1.4
BDFB SKKPbc 22 50 20.8
BDFB LR LR
comp=Z,8µm,22.0s
BAO Brasilia Array 132.80 130 PKPdf PKPdf 22 37 51.0 -1.8
FDF Fort de France 132.84 84 *e*P PKPdf 22 37 54.8 +1.9
BIM Bigot 132.88 85 *e*P PKPdf 22 37 53.5 +0.5
OSL Oslo 132.90 344 *e* PP 22 40 31.4 +11
TOS Tosya 132.95 312 *e*P PKPdf 22 37 52.9 -0.2
SUW Suwalki 133.02 332 *e*PKP PKPdf 22 37 52.7 -0.5
SUW *e*PKiKP PKiKP 22 37 54.1 -0.3
SUW *e*PP PP 22 40 18.8 -1.9
SUW *e*PKS 22 41 21.9
SUW *e*SKS SKSdf 22 44 51.3 +0.7
SUW *e*SKKS SKKSac 22 47 02.9 +0.9
SUW *e*SP SP 22 50 18.2 -4.7
SUW L 23 24 03.6
comp=Z,12nm,27.3s
SUW Suwalki 133.02 332 *e*PKIKP PKPdf 22 37 52.7 -0.5
SUW *e* 22 40 18.8
SUW *e*SP SP 22 50 18.2 -4.7
SUW MLR MLR
comp=Z,12µm,27.3s
SUW Suwalki 133.02 332 *e*P 22 37 38.9
SUW *e*pPKPdf PKPdf 22 37 52.3 -1.0
SUW *e*PKP PKPdf 22 37 52.7 -0.5
SUW *e*PKPdf PKPdf 22 37 54.1 +0.9
SUW *e*PP PP 22 40 14.2 -6.6
SUW *e*PP PP 22 40 18.8 -1.9
SUW *e*PKS 22 41 21.9
SUW *e*SKS SKSdf 22 44 51.3 +0.7
SUW *e*SKKS SKKSac 22 47 02.9 +0.9
SUW *e*SP SP 22 50 18.2 -4.7
CDAG Cicekdag 133.12 310 *i* P PKPdf 22 37 52.5 -0.9
CDAG Cicekdag 133.12 310 *i* P SKPd 22 41 08.4 -6.2
KRTS Karatas 133.14 305 *e*P PKPdf 22 37 57.9 +4.4
KARA Karaisali 133.23 306 *e*P PKPdf 22 37 52.2 -1.4
BALT Daday 133.24 313 *i* P PKPdf 22 37 54.1 +0.4
BALT Daday 133.24 313 *i* P SKPd 22 41 09.5 -5.3
CANT Cankiri 133.37 311 *e*P PKPdf 22 37 54.3 +0.4
KONO Kongsberg 133.44 345 *e*P PKPdf 22 37 54.4 +0.3
KONO *e*PP PP 22 40 20.4 -3.0
KONO Kongsberg 133.44 345⇑ *e*PKP PKPdf 22 37 54.0 0.0
BHL Bhannes 133.47 302 *e*P 22 37 43.7
ELDT Eldivan 133.55 311 *i* P PKPdf 22 37 49.1 -5.1
ELDT Eldivan 133.55 311 *i* P SKPdf 22 41 10.0 -5.5
BR131 Keskin Array S 133.63 310 *e*P 22 37 40.5
BR131 *e*pPKPdf PKPdf 22 37 53.7 -0.7
BR131 *e*PP PP 22 40 12.4 -12
BR131 *e*SKPdf SKPdf 22 41 13.9 -1.7
BR131 LR LR
comp=Z,3µm,22.0s
BRTR Keskin Array B 133.63 310 PKhKP 22 37 40.9
comp=Z,4.9nm,0.7s,baz=126,slow=2.3,SNR=13
BRTR PKP PKPdf 22 37 53.0 -1.3
comp=Z,51nm,1.0s,baz=144,slow=4.6,SNR=17
BRTR PP PP 22 40 20.7 -3.9
comp=Z,28nm,1.0s,baz=103,slow=4.6,SNR=6.4
BRTR SKP 22 41 10.6
comp=Z,83nm,0.8s,baz=90,slow=1.2,SNR=13
BRTR SKKPbc 22 50 23.9
comp=Z,2.0nm,0.8s,baz=237,slow=3.2,SNR=4.0
BRTR Keskin Array B 133.63 310 PKHKP 22 37 40.9
BRTR 22 37 53.1
BRTR 22 40 20.7
BRTR 22 50 23.9
ASK Askoy 133.67 348 *e* SKPbc 22 41 09.9 +0.5
KAMT Kaman 133.68 310 *e*P 22 37 43.0
RUND Rundenannen 133.70 348 *e*P PKPdf 22 37 56.6 +2.1
BER Bergen 133.74 348 *e*PKPd PKPdf 22 37 53.1 -1.5
BER *e*PP PP 22 40 21.3 -4.0
BER *e* 22 41 10.0
BER Bergen 133.74 348 *e*P PKPdf 22 37 52.7 -1.9
MERS Mersin 133.74 306 *e*P PKPdf 22 37 53.6 -1.0
SAFT Safranbolu 133.83 312 *e*P 22 37 42.1
EGD Espegrend 133.86 348 *e* SKPdf 22 41 10.4 -5.6
KIS Kishinev 134.03 321*d i*PKIKP PKPdf 22 37 52.0 -3.1
KIS pmax pmax
comp=Z,3µm,8.0s
KIS pmax pmax
comp=Z,3µm,12.0s
KIS MLR MLR
comp=N,500nm,20.0s
KIS MLR MLR
comp=Z,500nm,20.0s
KIS MLR MLR
comp=E,7µm,22.0s
ANTO Ankara 134.21 311 *e*P PKPdf 22 37 55.2 -0.3
ANTO Ankara 134.21 311⇑ *i*P 22 37 43.9
ANTO Ankara 134.21 311 P PKPdf 22 37 56.6 +1.1
SNR=34
ANTO Ankara 134.21 311⇑P 22 37 43.9
BLS5 Blasjo 134.38 347 *e* SKPd 22 41 12.7 -4.2
TSUM Tsumeb 134.50 221 PP PP 22 40 26.4 -3.7
comp=E,16nm,1.0s,baz=121,slow=11,SNR=3.5
TSUM SKP 22 41 14.3
comp=E,64nm,1.1s,baz=124,slow=4.4,SNR=14
TSUM SKKPbc 22 50 20.5
comp=E,9.8nm,0.8s,baz=320,slow=4.0,SNR=9.3
TSUM Tsumeb 134.50 221 *e*P 22 37 43.0
TSUM *e*pPKPdf PKPdf 22 37 56.8 +0.8
TSUM *e*PP PP 22 40 28.3 -1.8
TSUM *e*SKP 22 41 14.7
TSUM LR LR
comp=Z,9µm,20.0s
SGKT Sivrigoynuk 134.51 312 *i* P PKPdf 22 37 44.3 -12
SGKT Sivrigoynuk 134.51 312 *i* P SKPd 22 41 12.5 -4.7
IKL Isikli 134.55 305 *e*P PKPdf 22 37 46.4 -10
IAS Iasi 134.68 322‖ *i*P PKPdf 22 37 55.6 -0.8
IAS Iasi 134.68 322‖ P PKPdf 22 37 55.6 -0.7
KDZE Karadeniz Ereo 134.69 313 *e*P PKPdf 22 37 54.3 -2.1
EIL Elat 134.71 296 *e*P 22 37 44.9
EIL *e*PKPdf PKPdf 22 37 57.2 +0.8
EIL *e*PP PP 22 40 34.0 +2.5
EIL *e*SKP 22 41 14.3
STAV Stavanger 134.99 347 *e* SKPd 22 41 13.0 -5.1
LRW Lerwick 135.05 352 *e*P PKPdf 22 37 55.5 -1.5
LRW Lerwick 135.05 352 *e*P PKPdf 22 37 55.5 -1.5
KONT Konya--Tatoy 135.11 308 *e*P PKPdf 22 37 55.7 -1.5
KDHN Kadinhani 135.12 309 *i* P PKPdf 22 37 56.1 -1.1
KDHN Kadinhani 135.12 309 *i* P SKPd 22 41 16.1 -0.2
CSS Prodhromos 135.13 304 *e*P PKPdf 22 37 55.7 -1.5
CSS Prodhromos 135.13 304 *e*P PKPdf 22 37 47.3 -10
CSS *e*PKPdf PKPdf 22 37 58.0 +0.8
CSS *e*PP PP 22 40 34.0 -0.2
CSS *e*SKP 22 41 15.8
MDU Mudurnu 135.15 312 *e*P PKPdf 22 37 57.1 -0.1
WAR Warsaw 135.16 331 *e*PKP PKPdf 22 37 57.4 +0.1
WAR *e*PKiKP PKiKP 22 37 59.2 +0.4
WAR *e*PP PP 22 40 33.0 -1.3
WAR *e*PKS 22 41 29.2
WAR *e*SKS SKSdf 22 44 54.7 +0.3
WAR *e*SP SP 22 50 40.4 -0.8
WAR L 23 27 53.9
comp=Z,11nm,26.7s
WAR Warsaw 135.16 331 *e*PKIKP PKPdf 22 37 57.4 +0.1
WAR *e* 22 40 33.0
WAR *e*SP SP 22 50 40.4 -0.8
WAR MLR MLR
comp=Z,11µm,26.7s
LVV L'vov 135.21 327 *e*PKHKP 22 37 38.6
LVV *e* 22 40 30.2
LVV *e* 22 50 32.0
LVV *i* SS SS 22 58 10.8 -6.7
LVV MLR MLR
comp=N,5µm,19.0s
LVV MLR MLR
comp=E,5µm,19.0s
LVV MLR MLR
comp=Z,5µm,19.0s
HENT Hendek 135.25 313 *i* P PKPdf 22 37 52.7 -4.7
HENT Hendek 135.25 313 *i* P SKPd 22 41 15.2 -3.4
HDMB Hadim 135.29 307 *e*P PKPdf 22 37 49.3 -8.2
CFR Carcaliu 135.30 319⇑ *i*P 22 37 45.2
CFR Carcaliu 135.30 319⇑ *i*P PP 22 40 35.2 0.0
CFR Carcaliu 135.30 319⇑P 22 37 45.2
LEF Lefka 135.44 304 *e*P PKPdf 22 37 59.3 +1.5
TIRR Tirgusor 135.46 318⇑ *i*P PKPdf 22 37 57.2 -0.6
TIRR Tirgusor 135.46 318⇑ PKIKP PKPdf 22 37 57.2 -0.6
TIRR *e* 22 40 32.4
TIRR Tirgusor 135.46 318⇑P PKPdf 22 37 57.2 -0.6
TIRR *e*PKPdf PKPdf 22 37 57.4 -0.4
TIRR *e*PP PP 22 40 32.4 -3.8

TIRR				eSKP		22 41 15.7	
BSD	**Bornholm Skovb**	**135.59**	**338**	i P		22 37 43.7	
BSD				e		22 40 33.3	
BSD				i		22 41 14.8	
BSD				i		22 52 28.4	
BSD				e		22 54 50.1	
BSD							
	comp=Z,7µm,19.0s						
BSD	**Bornholm Skovb**	**135.59**	**338**	i PKHKP		22 37 43.7	
BSD				e		22 40 33.3	
BSD				i		22 52 28.4	
BSD	**Bornholm Skovb**	**135.59**	**338**	i P		22 37 43.7	
BSD				e		22 40 33.3	
BSD				i		22 41 14.8	
BSD				i		22 52 28.4	
BSD				e		22 54 50.1	
HARR	**Harsova**	**135.66**	**319**	⇑iP	PKPdf	22 37 58.3	+0.1
HARR	**Harsova**	**135.66**	**319**	⇑P	PKPdf	22 37 58.3	+0.1
ESKT	**Eskisehir**	**135.74**	**311**	eP	PKPdf	22 37 55.7	-2.6
ESKT	**Eskisehir**	**135.74**	**311**	i P		22 37 46.2	
ESKT	**Eskisehir**	**135.74**	**311**	i P	SKPdf	22 41 12.5	-7.0
BURAR	**Bucovina Array**	**135.81**	**324**	⇑iP		22 37 47.5	
BURAR	**Bucovina Array**	**135.81**	**324**	⇑P		22 37 47.5	
BORA	**Eskisehir**	**135.90**	**311**	i P	PKPdf	22 37 57.4	-1.2
BORA	**Eskisehir**	**135.90**	**311**	i P	SKPdf	22 41 17.0	-2.7
COP	**Copenhagen**	**135.98**	**340**	i P		22 37 43.2	
COP				e		22 40 34.2	
COP				i		22 41 16.4	
COP				e		22 41 33.0	
COP				e		22 58 28.1	
COP							
	comp=Z,3µm,20.0s						
COP	**Copenhagen**	**135.98**	**340**	i PKHKP		22 37 43.2	
COP				e		22 40 34.2	
COP				e		22 58 28.1	
COP				MLR	MLR		
	comp=Z,3µm,20.0s						
KWP	**Kalwaria**	**136.01**	**328**	ePKP	PKPdf	22 37 58.8	0.0
KWP				ePKiKP	PKiKP	22 38 00.6	+0.1
KWP				ePP	PP	22 40 38.0	-1.6
KWP				ePKS		22 41 31.1	
KWP				eSKS	SKSdf	22 45 04.5	+8.7
KWP				eSKKS	SKKSac	22 47 16.1	-3.9
KWP				L		23 29 55.8	
	comp=Z,8.5nm,25.2s						
KWP	**Kalwaria**	**136.01**	**328**	ePKIKP	PKPdf	22 37 58.8	0.0
KWP				e		22 40 38.0	
KWP				MLR	MLR		
	comp=Z,8µm,25.2s						
KWP	**Kalwaria**	**136.01**	**328**	⇓iPKPdf	PKPdf	22 37 58.7	-0.2
KWP				ePKP	PKPdf	22 37 58.8	0.0
KWP				ePKPdf	PKPdf	22 38 00.6	+1.8
KWP				epPKPdf	pPKPdf	22 38 44.7	+6.5
KWP				ePP	PP	22 40 37.6	-2.0
KWP				ePP	PP	22 40 38.0	-1.6
KWP				eSKPdf	SKPdf	22 41 17.9	-2.0
KWP				ePKS		22 41 31.1	
KWP				eSKS	SKSdf	22 45 04.5	+8.7
KWP				eSKKS	SKKSac	22 47 16.1	-3.9
GKP	**Gorka Klasztor**	**136.09**	**335**	ePKP	PKPdf	22 37 58.5	-0.5
GKP				ePKiKP	PKiKP	22 38 00.6	-0.1
GKP				ePP	PP	22 40 40.8	+0.6
GKP				ePKS		22 41 33.0	
GKP				eSKS	SKSdf	22 44 57.2	+1.2
GKP				eSKKS	SKKSac	22 47 20.7	+0.2
GKP				eSP	SP	22 50 54.0	+5.0
GKP				L		23 27 54.9	
	comp=Z,15nm,28.5s						
GKP	**Gorka Klasztor**	**136.09**	**335**	ePKIKP	PKPdf	22 37 58.5	-0.5
GKP				e		22 40 40.8	
GKP				MLR	MLR		
	comp=Z,15µm,28.5s						
HRT	**Hereke**	**136.12**	**313**	eP	PKPdf	22 37 57.9	-1.1
ADVT	**Abdulvahap**	**136.21**	**313**	eP	PKPdf	22 37 59.1	-0.1
MUD	**Monsted U'grnd**	**136.33**	**343**	i P		22 37 47.0	
MUD				e		22 40 39.9	
MUD				i		22 41 16.4	
MUD				i		22 41 34.8	
MUD				i		22 58 40.4	
MUD							
	comp=Z,4µm,21.0s						
MUD	**Monsted U'grnd**	**136.33**	**343**	i PKHKP		22 37 47.0	
MUD				e		22 40 39.9	
MUD	**Monsted U'grnd**	**136.33**	**343**	i P		22 37 47.0	
MUD				e		22 40 39.9	
MUD				i		22 41 16.4	
MUD				i		22 41 34.8	
MUD				i		22 58 40.4	
KLYT	**Kilyos**	**136.39**	**314**	eP	PKPdf	22 37 55.7	-3.8
YLV	**Yalova**	**136.42**	**313**	eP	PKPdf	22 37 54.3	-5.3
ISK	**Istanbul-Kandi**	**136.45**	**314**	eP	PKPdf	22 37 55.7	-4.0
MLR	**Muntele Rosu**	**136.50**	**321**	PKhKP		22 37 49.4	
	comp=Z,13nm,0.7s,baz=308,slow=4.5,SNR=7.8						
MLR				PKP	PKPdf	22 37 59.3	-0.4
	comp=Z,90nm,1.1s,baz=180,slow=0.9,SNR=15						
MLR				PP	PP	22 40 40.4	-2.3
	comp=Z,110nm,1.1s,baz=42,slow=4.2,SNR=7.1						
MLR				SKPbc	SKPbc	22 41 18.1	-0.3
	comp=Z,361nm,1.3s,baz=39,slow=6.4,SNR=13						
MLR				SKKPbc		22 50 12.4	
	comp=Z,30nm,1.3s,baz=204,slow=0.3,SNR=6.8						
MLR	**Muntele Rosu**	**136.50**	**321**	⇑iP		22 37 45.8	
MLR	**Muntele Rosu**	**136.50**	**321**	⇑iP	SKPdf	22 41 18.2	-2.6
MLR	**Muntele Rosu**	**136.50**	**321**	⇑PKHKP		22 37 45.8	
MLR						22 37 59.3	
MLR						22 40 40.4	
MLR	**Muntele Rosu**	**136.50**	**321**	⇑P		22 37 45.8	
MLR				P		22 37 50.7	
MLR				PKP	PKPdf	22 37 59.3	-0.4
MLR				PP	PP	22 40 40.4	-2.3
MLR				SKPbc	SKPbc	22 41 18.1	-0.3
MLR				SKKPbc		22 50 12.4	
ISP	**Isparta**	**136.54**	**309**	eP	PKPdf	22 37 59.0	-0.8
ISP	**Isparta**	**136.54**	**309**	PKIKP	PKPdf	22 38 00.1	+0.3
ISP	**Isparta**	**136.54**	**309**	ePKPdf	PKPdf	22 37 58.7	-1.1
ISP				ePP	PP	22 40 42.6	-0.3
ISP				eSKP		22 41 17.7	
BCK	**Bucak**	**136.59**	**308**	eP	PKPdf	22 37 50.7	-9.2
GEMT	**Gemlik**	**136.60**	**313**	eP	PKPdf	22 37 55.0	-4.9
TKTP	**Tekketepe**	**136.62**	**309**	i P	PKPdf	22 37 49.9	-10
TKTP	**Tekketepe**	**136.62**	**309**	i P	SKPdf	22 41 17.6	-3.4
KOLS	**Kolonicke sedl**	**136.66**	**327**	e		22 37 48.0	
KOLS				e		22 37 52.0	
KOLS	**Kolonicke sedl**	**136.66**	**327**	ePKP	PKPdf	22 38 00.9	+0.9
KOLS				ePP	PP	22 40 41.4	-2.3
KOLS				eSKPDF		22 41 19.8	
KOLS				e		22 50 15.7	
KOLS	**Kolonicke sedl**	**136.66**	**327**	ePKHKP		22 37 48.1	
KOLS				e		22 38 00.9	
KOLS				e		22 40 41.5	
KOLS	**Kolonicke sedl**	**136.66**	**327**	ePKP		22 37 48.1	
KOLS				e		22 37 52.0	
KOLS				e		22 38 00.9	
KOLS				ePP	PP	22 40 41.5	-2.2
KOLS				e		22 41 19.8	
KOLS				e		22 50 15.7	
ANTB	**Antalya**	**136.72**	**307**	eP	PKPdf	22 37 57.2	-2.9
ULDT	**Uludag**	**136.75**	**312**	i P	PKPdf	22 37 49.7	-10
ULDT	**Uludag**	**136.75**	**312**	i P	SKPdf	22 41 19.6	-1.6
ARMT	**Armutlu**	**136.78**	**313**	eP	PKPdf	22 37 54.3	-6.0
CTT	**Catalca**	**136.85**	**314**	eP	PKPdf	22 37 59.3	-1.1
ELBA	**Catalca**	**136.85**	**314**	i P	PKPdf	22 37 52.4	-8.0
ELBA	**Catalca**	**136.85**	**314**	i P	SKPdf	22 41 18.7	-2.7
GDZ	**Gediz**	**136.88**	**311**	i P	PKPdf	22 37 49.6	-11
GDZ	**Gediz**	**136.88**	**311**	i P	SKPdf	22 41 18.6	-2.9
ORLT	**Orhaneli**	**136.96**	**312**	eP	PKPdf	22 37 56.4	-4.2
BUC1	**Bucharest**	**137.02**	**319**	⇑iP	PKPdf	22 37 59.6	-1.1
BUC1	**Bucharest**	**137.02**	**319**	⇑P	PKPdf	22 37 59.6	-1.1
VOIR		**137.07**	**321**	⇑iP		22 37 50.9	
VOIR		**137.07**	**321**	⇓iP	PP	22 40 45.3	-1.0
VOIR		**137.07**	**321**	⇑P		22 37 50.9	
OJC	**Ojcow**	**137.08**	**330**	ePKIKP	PKPdf	22 38 00.3	-0.5
OJC				e		22 40 45.8	
OJC				eSS	SS	22 58 33.7	-6.2
OJC	**Ojcow**	**137.08**	**330**	ePKPdf	PKPdf	22 38 00.3	-0.5
OJC				ePP	PP	22 40 45.8	-0.6
OJC				eSKSdf	SKSdf	22 44 58.5	+0.8
OJC				eSS	SS	22 58 33.7	-6.2
OJC				LR	LR		
	comp=Z,45µm,26.0s						
CRVS	**Cervenica-Dubn**	**137.10**	**328**	e		22 37 50.3	

CRVS				e		22 37 53.0	
CRVS				e		22 37 56.1	
CRVS	**Cervenica-Dubn**	**137.10**	**328**	ePKP	PKPdf	22 38 01.4	+0.5
CRVS				ePP	PP	22 40 45.0	-1.5
CRVS				eSKPDF		22 41 21.2	
CRVS				e		22 50 11.0	
CRVS				e		22 50 15.5	
CRVS	**Cervenica-Dubn**	**137.10**	**328**	ePKHKP		22 37 50.3	
CRVS				e		22 38 01.4	
CRVS				e		22 40 45.0	
CRVS	**Cervenica-Dubn**	**137.10**	**328**	ePKP		22 37 50.3	
CRVS				e		22 37 53.0	
CRVS				e		22 37 56.1	
CRVS				e		22 38 01.4	
CRVS				ePP	PP	22 40 45.0	-1.5
CRVS				e		22 41 21.2	
CRVS				e		22 50 11.0	
CRVS				e		22 50 15.5	
DST	**Dursunbey**	**137.31**	**312**	eP	PKPdf	22 37 52.9	-8.3
ELL	**Elmali**	**137.33**	**307**	eP	PKPdf	22 37 52.9	-8.4
NIE	**Niedzica**	**137.36**	**329**	ePKP		22 37 52.0	
NIE				e		22 38 01.9	
NIE				ePP	PP	22 40 45.4	-2.7
NIE				e		22 41 21.8	
NIE	**Niedzica**	**137.36**	**329**	ePKHKP		22 37 52.0	
NIE				e		22 38 01.9	
NIE				e		22 40 45.4	
NIE	**Niedzica**	**137.36**	**329**	ePKP		22 37 52.0	
NIE				e		22 38 01.9	
NIE				ePP	PP	22 40 45.4	-2.7
NIE				e		22 41 21.8	
BNT	**Bandirma**	**137.52**	**313**	eP	PKPdf	22 37 52.2	-9.4
JMB	**Yambol**	**137.54**	**317**	eP	PKPdf	22 37 52.6	-9.1
MRMT	**Marmara Adasi**	**137.65**	**314**	eP	PKPdf	22 37 52.9	-9.0
DENT	**Denizli**	**137.67**	**309**	eP	PKPdf	22 37 54.3	-7.6
DRGR		**137.69**	**324**	⇓iP		22 37 46.1	
DRGR		**137.69**	**324**	⇑iP	PP	22 40 49.0	-1.1
DRGR		**137.69**	**324**	P		22 37 52.7	
EDRB	**Edirne**	**137.71**	**316**	eP	PKPdf	22 37 51.4	-11
MFT	**Murefte**	**137.79**	**314**	eP	PKPdf	22 37 51.4	-11
RKY	**Sarkoy-Tekirda**	**137.91**	**314**	eP	PKPdf	22 37 50.0	-12
RAC	**Raciborz**	**137.94**	**331**	ePKHKP		22 37 50.3	
RAC				e		22 40 49.2	
RAC				MLR	MLR		
	comp=Z,10µm,21.2s						
FETY	**Fethiye**	**138.00**	**308**	eP	PKPdf	22 37 56.4	-6.1
RUE	**Ruedersdorf**	**138.06**	**336**	ePKPdf	PKPdf	22 38 01.7	-0.9
RUE				epPKPdf	pPKPdf	22 38 46.7	+4.7
RUE				ePP	PP	22 40 51.9	-0.5
RUE				eSKP		22 41 22.8	
BSEG	**Bad Segeberg**	**138.12**	**340**	ePKPdf		22 37 53.5	
OKC	**Ostrava-Krasne**	**138.13**	**331**	ePKPpre		22 37 57.2	
OKC				ePP	PP	22 40 56.8	+4.0
OKC				eSKP		22 41 23.6	
OKC				ex	x	22 41 33.7	
OKC				ex	x	22 54 05.5	
OKC				eSS	SS	22 59 03.8	+12
OKC				AMS	AMS	23 37 20.0	
	comp=Z,6µm,21.8s						
OKC	**Ostrava-Krasne**	**138.13**	**331**	ePKIKP	PKPdf	22 37 57.2	-5.6
OKC				e		22 40 56.8	
OKC	**Ostrava-Krasne**	**138.13**	**331**	ePKP	PKPdf	22 37 57.2	-5.6
OKC				ePP	PP	22 40 56.8	+4.0
OKC				e		22 41 23.6	
OKC				e		22 41 33.7	
OKC				e		22 54 05.5	
OKC				eSS	SS	22 59 03.8	+12
AKHS	**Akhisar**	**138.17**	**311**	i P	PKPdf	22 37 49.6	-13
AKHS	**Akhisar**	**138.17**	**311**	i P	SKPdf	22 41 23.6	-0.1
LIKS	**Likavka**	**138.20**	**329**	e	PKPdf	22 38 07.5	+4.6
LIKS				ePP	PP	22 40 55.8	+2.5
LIKS				eSKPDF		22 41 24.6	
LIKS	**Likavka**	**138.20**	**329**	ePKIKP	PKPdf	22 38 07.5	+4.6
LIKS				e		22 40 55.8	
KSP	**Ksiaz**	**138.26**	**333**	ePKP	PKPdf	22 38 02.6	-0.4
KSP				ePKiKP	PKiKP	22 38 05.0	-0.1
KSP				ePP	PP	22 40 51.9	-1.8
KSP				ePKS		22 41 38.4	
KSP				eSKS	SKSdf	22 45 05.3	+5.6
KSP				L		23 29 55.1	
	comp=Z,19nm,30.3s						
KSP	**Ksiaz**	**138.26**	**333**	ePKHKP		22 37 52.5	
KSP				e		22 38 02.4	
KSP				e		22 52 51.0	
KSP				eSS	SS	22 58 49.0	-4.8
KSP	**Ksiaz**	**138.26**	**333**	ePdif	Pdif	22 35 13.0	-0.8
KSP				ePKP	PKPdf	22 37 52.5	-10
KSP				e		22 38 02.4	
KSP				ePP	PP	22 40 48.0	-5.7
KSP				e		22 41 23.7	
KSP				e		22 41 33.3	
KSP				e		22 52 51.0	
KSP				eSS	SS	22 58 49.0	-4.8
CANB	**Canakkale**	**138.26**	**313**	eP	PKPdf	22 37 50.7	-12
DALT	**Dalyan (Mudla)**	**138.29**	**308**	eP	PKPdf	22 37 57.9	-5.2
LPK	**Lapseki**	**138.33**	**314**	eP	PKPdf	22 37 57.9	-5.2
DIM	**Dimitrovgrad**	**138.43**	**317**	eP		22 37 54.3	
YER	**Yerkesik**	**138.44**	**309**	eP	PKPdf	22 37 54.3	-9.0
MORC	**Moravsky Berou**	**138.45**	**331**	⇓iP		22 37 52.1	
PSZ	**Piszkesteto**	**138.53**	**327**	epPKP/D		22 37 54.3	
PSZ	**Piszkesteto**	**138.53**	**327**	P		22 37 54.8	
AYDN	**Tasoluk**	**138.56**	**309**	i P	PKPdf	22 37 54.2	-9.3
AYDN	**Tasoluk**	**138.56**	**309**	i P	SKPdf	22 41 25.5	+1.0
ENEZ	**Enez**	**138.59**	**315**	eP	PKPdf	22 37 53.6	-10
ALN	**Alexandroupoli**	**138.60**	**315**	eP	PKPdf	22 37 52.4	-11
DPC	**Dobruska-Polom**	**138.60**	**332**	ePKPpre		22 37 53.5	
DPC				ePP	PP	22 40 59.5	+3.7
DPC				eSKP		22 41 25.5	
DPC				ePKS		22 41 35.9	
DPC				ex	x	22 54 07.2	
DPC				eSS	SS	22 59 05.8	+8.0
DPC				AMS	AMS	23 33 20.0	
	comp=Z,12µm,27.0s						
DPC	**Dobruska-Polom**	**138.60**	**332**	ePKHKP		22 37 53.5	
DPC				e		22 40 59.5	
DPC				MLR	MLR		
	comp=Z,12µm,27.0s						
DPC	**Dobruska-Polom**	**138.60**	**332**	ePKP		22 37 53.5	
DPC				ePP	PP	22 40 59.5	+3.7
DPC				e		22 41 25.5	
DPC				e		22 41 35.9	
DPC				e		22 54 07.2	
DPC				eSS	SS	22 59 05.8	+8.0
DPC				LR	LR		
	comp=Z,12µm,27.0s						
UPC	**Upice**	**138.63**	**333**	ePKPpre		22 37 54.1	
UPC				ePP	PP	22 40 56.5	+0.6
UPC				eSKP		22 41 25.4	
UPC				ePKS		22 41 35.9	
UPC	**Upice**	**138.63**	**333**	ePKHKP		22 37 54.1	
UPC				e		22 40 56.5	
KDZ	**Kurdzhali**	**138.69**	**316**	eP		22 37 52.2	
VYHS	**Vyhne**	**138.70**	**329**	e	PKPdf	22 37 54.0	-10
VYHS				e		22 37 58.6	
VYHS	**Vyhne**	**138.70**	**329**	ePKP	PKPdf	22 38 06.4	+2.6
VYHS				ePP	PP	22 40 58.6	+2.2
VYHS				eSKPDF		22 41 25.5	
VYHS				eSKPpB		22 41 35.3	
VYHS				e		22 50 00.2	
VYHS				e		22 50 06.6	
VYHS	**Vyhne**	**138.70**	**329**	ePKHKP		22 37 54.0	
VYHS				e		22 37 58.6	
VYHS				e		22 40 58.6	
VYHS	**Vyhne**	**138.70**	**329**	ePKP	PKPdf	22 37 54.0	-10
VYHS				e		22 37 58.6	
VYHS				e		22 38 06.4	
VYHS				ePP	PP	22 40 58.6	+2.2
VYHS				e		22 41 25.6	
VYHS				e		22 41 35.3	
VYHS				e		22 50 00.2	
VYHS				e		22 50 06.6	
KDAG	**Bornova**	**138.74**	**311**	i P	PKPdf	22 37 55.1	-8.8
KDAG	**Bornova**	**138.74**	**311**	i P	SKPdf	22 41 23.8	-0.9
IZM	**Izmir**	**138.75**	**311**	eP	PKPdf	22 37 54.3	-10
AYVA	**Ayvalik**	**138.81**	**312**	i P	PKPdf	22 37 55.3	-8.7
AYVA	**Ayvalik**	**138.81**	**312**	i P	SKPdf	22 41 24.9	0.0
RDO	**Rodhopi**	**138.83**	**315**	eP	PKPdf	22 37 55.0	-9.0
EZN	**Ezine**	**138.86**	**313**	eP	PKPdf	22 37 54.3	-10
ARG	**Arkhangelos**	**138.86**	**307**	eP	PKPdf	22 37 57.0	-7.1
BLCB	**Balcova**	**138.91**	**311**	eP	PKPdf	22 37 53.6	-11

BZS	**Buzias**	**138.99**	**323**	⇑iP		22 37 51.0	
BZS	**Buzias**	**138.99**	**323**	⇓iP	PP	22 40 53.7	-4.5
BZS	**Buzias**	**138.99**	**323**	PKHKP		22 37 55.4	
BZS	**Buzias**	**138.99**	**323**	⇑P		22 37 51.0	
BZS				P		22 37 55.4	
GADA	**Gvkgeada**	**139.00**	**314**	eP	PKPdf	22 37 50.7	-14
DJES	**Djerdap**	**139.01**	**322**	i PKP	PKPdf	22 37 52.7	-12
BOZC	**Bozcaada**	**139.04**	**313**	i P	PKPdf	22 37 50.6	-14
BOZC	**Bozcaada**	**139.04**	**313**	i P	SKPdf	22 41 24.8	-0.5
DAT	**Datca**	**139.11**	**308**	eP	PKPdf	22 37 58.6	-5.9
PRK	**Paraskevi**	**139.13**	**312**	eP	PKPdf	22 37 56.2	-8.4
BODT	**Bodrum**	**139.20**	**309**	eP	PKPdf	22 37 55.7	-9.0
VRAC	**Vranov**	**139.22**	**331**	SKKPbc		22 50 02.5	
	comp=Z,31nm,1.2s,baz=237,slow=6.4,SNR=11						
VRAC	**Vranov**	**139.22**	**331**	⇑iP	PKPdf	22 37 56.0	-8.8
VRAC	**Vranov**	**139.22**	**331**	⇑P	PKPdf	22 37 56.0	-8.8
BRG	**Berggiesshubel**	**139.24**	**335**	ePKPdf	PKPdf	22 37 56.1	-8.7
BRG				eSKPdf	SKPdf	22 41 26.0	+0.3
BRG	**Berggiesshubel**	**139.24**	**335**	i PKP	PKPdf	22 37 56.1	-8.7
	comp=Z,10nm,0.7s						
BRG				i		22 38 04.5	
	comp=Z,52nm,1.2s						
BRG				i		22 38 08.5	
	comp=Z,129nm,1.4s						
BRG				i pPKP	pPKPdf	22 38 48.4	+4.2
	comp=Z,41nm,1.4s						
BRG				PP	PP	22 40 51.3	-8.4
	comp=Z,18nm,1.2s						
BRG				i SKP		22 41 26.6	
	comp=Z,493nm,1.3s						
BRG				i		22 44 44.0	
BRG				i SKKP		22 50 04.8	
	comp=Z,65nm,1.8s						
BRG				SS	SS	22 59 04.0	-1.3
BRG							
	comp=N,2µm,18.9s						
BRG							
	comp=E,4µm,19.8s						
BRG							
	comp=Z,5µm,19.6s						
BRG	**Berggiesshubel**	**139.24**	**335**	i PKHKP		22 37 56.1	
BRG				i		22 38 04.5	
BRG				i		22 38 48.4	
BRG				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRG				MLR	MLR		
	comp=N,2µm,18.9s						
BRG				MLR	MLR		
	comp=E,4µm,19.8s						
BRG				MLR	MLR		
	comp=Z,5µm,19.6s						
BRG	**Berggiesshubel**	**139.24**	**335**	Pdif	Pdif	22 35 15.0	-3.1
BRG				i PKP	PKPdf	22 37 56.1	-8.7
BRG				i		22 38 04.5	
BRG				i		22 38 08.5	
BRG				i pPKP	pPKPdf	22 38 48.4	+4.2
BRG				PP	PP	22 40 51.3	-8.4
BRG				i SKP		22 41 26.6	
BRG				i		22 44 44.0	
BRG				i SKKP		22 50 04.8	
BRG				SS	SS	22 59 04.0	-1.3
BRG				LR	LR		
	comp=Z,5µm,19.6s						
BUD	**Budapest**	**139.26**	**327**	epPKP/D	PKPdf	22 37 56.1	-8.7
CLL	**Collm**	**139.28**	**336**	ePdiff	Pdif	22 35 18.1	-0.2
CLL				ePKPpre		22 37 55.1	
CLL				ePKPdf	PKPdf	22 38 08.1	+3.2
CLL				epPKPdf	pPKPdf	22 38 43.1	-1.1
CLL				ePP	PP	22 41 01.6	+1.7
CLL				eSKPdf	SKPdf	22 41 25.5	-0.2
CLL				epPP		22 41 44.9	
CLL				eSKKP		22 50 03.0	
CLL				eSKSP		22 50 50.5	
CLL				eSKKSdf	SKKSdf	22 54 28.4	-1.7
CLL				eSS	SS	22 58 59.6	-6.2
CLL				esSS		23 00 02.7	
CLL				eSSS		23 04 40.2	
CLL				eLR	LR	23 24 35.6	
CLL				eL		23 31 17.3	
	comp=Z,11µm,22.0s						
CLL	**Collm**	**139.28**	**336**	ePDIF	Pdif	22 35 20.0	+1.7
CLL				e		22 36 10.0	
CLL				e		22 37 56.0	
CLL				i		22 38 08.0	
CLL				i		22 38 24.4	
CLL				e*PPKP		22 38 43.0	
CLL				e		22 40 30.0	
CLL				e		22 41 00.0	
CLL				i PP	PP	22 41 03.5	+3.6
CLL				e		22 41 26.2	
CLL				i *PPP		22 41 37.5	
CLL				ePKS		22 41 41.0	
CLL				i		22 41 45.9	
CLL				e*SPP		22 41 52.0	
CLL				e		22 42 45.0	
CLL				e		22 44 53.0	
CLL				e		22 49 42.0	
CLL				i SKKP		22 50 02.4	
CLL				eSKSP		22 50 51.0	
CLL				eSPP		22 52 59.0	
CLL				e		22 53 46.0	
CLL				e		22 53 58.0	
CLL				e		22 54 12.0	
CLL				e		22 55 59.0	
CLL				eSS	SS	22 58 50.0	-16
CLL				e*SSS		22 59 52.0	
CLL	**Collm**	**139.28**	**336**	ePdif	Pdif	22 35 20.0	+1.7
CLL				esPdif		22 36 10.0	
CLL				ePKPpre		22 37 56.0	
CLL				i PKiKP	PKiKP	22 38 08.0	+0.8
	comp=Z,169nm,1.2s						
CLL				i x	x	22 38 24.4	
CLL				epPKPdf	pPKPdf	22 38 43.0	-1.2
CLL				ex	x	22 40 30.0	
CLL				ePPlp		22 41 00.0	
	comp=Z,5µm,13.2s						
CLL				i PP	PP	22 41 03.5	+3.6
CLL				⇑eSKPdf	SKPdf	22 41 26.2	+0.5
	comp=Z,559nm,1.1s						
CLL				i pPP		22 41 37.5	
CLL				ePKSdf		22 41 41.0	
CLL				i x	x	22 41 45.9	
CLL				esPP		22 41 52.0	
CLL				ex	x	22 42 45.0	
CLL				esPPP		22 44 53.0	
CLL				ex	x	22 49 42.0	
CLL				i SKKPbc		22 50 02.4	
	comp=Z,127nm,1.7s						
CLL				eSKSP		22 50 51.0	
CLL				eSPP		22 52 59.0	
CLL				epSPP		22 53 46.0	
CLL				ex	x	22 53 58.0	
CLL				esPPPrev		22 54 12.0	
CLL				ex	x	22 55 06.0	
CLL				ex	x	22 55 59.0	
CLL				eSS	SS	22 58 50.0	-16
CLL				esSS		22 59 52.0	
CLL				eSSS		23 04 32.0	
CLL				ex	x	23 05 48.0	
CLL				LmV		23 30 00.0	
	comp=Z,10µm,20.9s						
CLL				LmV		23 42 00.0	
	comp=Z,9µm,19.5s						
CLL	**Collm**	**139.28**	**336**	eP	Pdif	22 35 20.0	+1.7
CLL				e		22 37 56.0	
CLL				e		22 41 00.0	
CLL	**Collm**	**139.28**	**336**	ePdif	Pdif	22 35 20.0	+1.7
CLL				ePKP	PKPdf	22 37 56.0	-8.9
CLL				i PKP	PKPdf	22 38 08.0	+3.1
CLL				epPKP	pPKPdf	22 38 43.0	-1.2
CLL				ePP	PP	22 41 00.0	+0.1
CLL				eSKP		22 41 26.2	
CLL				i SKKP		22 50 02.4	
EAB	**Aberfoyle**	**139.29**	**353**	eP	PKPdf	22 37 58.5	-6.4
EAB	**Aberfoyle**	**139.29**	**353**	eP	PKPdf	22 37 58.5	-6.4
SMG	**Samos**	**139.32**	**310**	eP	PKPdf	22 37 56.5	-8.4
ESY	**Stoneypath**	**139.33**	**352**	eP	PKPdf	22 37 55.5	-9.4
ESY	**Stoneypath**	**139.33**	**352**	eP	PKPdf	22 37 55.5	-9.4
SMOL	**Smolenice**	**139.38**	**330**	ePKP	PKPdf	22 38 02.2	-2.8
SMOL				eSKP		22 41 28.1	
SMOL				ePKSDF		22 41 39.3	
NRDL	**Niedersach Rie**	**139.39**	**339**	ePKPdf	PKPdf	22 37 57.1	-8.0

FBE Freiberg 139.44 335 *e*PKPdf PKPdf 22 37 57.1 -8.0
EAU Auchinoon 139.51 352 *e*P PKPdf 22 37 56.0 -9.3
EAU Auchinoon 139.51 352 *e*P PKPdf 22 37 56.0 -9.3
EBL Broad Law 139.53 352 *e*P PKPdf 22 37 55.2 -10
EBL Broad Law 139.53 352 *e*P PKPdf 22 37 55.2 -10
CHOS Chios island 139.63 311 *e*P PKPdf 22 37 55.0 -10
PRA Prague 139.63 334 PKPpre 22 38 02.0
PRA *ex* x 22 38 08.0
PRA PP PP 22 41 04.0 +1.9
PRA SKP 22 41 29.0
PRA PKS 22 41 40.0
PRA *ex* x 22 50 04.0
PRU Pruhonice 139.65 333 *e*PKPpre 22 37 56.9
PRU *e*PP PP 22 41 03.2 +1.0
PRU *e*SKP 22 41 27.4
PRU *e*PKS 22 41 40.3
PRU *ex* x 22 54 15.4
PRU *e*SS SS 22 59 08.1 -2.0
PRU AMS AMS 23 24 50.0
comp=Z,17µm,47.7s
PRU Pruhonice 139.65 333 *e*PKHKP 22 37 56.9
PRU *e* 22 41 03.2
PRU *e*SS SS 22 59 08.1 -2.0
PRU MLR MLR
comp=Z,17µm,47.7s
VTS Vitosha 139.67 319 *e*P PKPdf 22 37 56.0 -10
VTS Vitosha 139.67 319⇑*i*P PKPdf 22 37 56.2 -9.4
LOS Limnos 139.68 314 *e*P PKPdf 22 37 57.7 -7.9
TREC Trest 139.74 332 *e*PKPpre 22 37 56.9
TREC *e*PP PP 22 41 06.3 +3.5
TREC *e*SKP 22 41 28.2
TREC *e*PKS 22 41 39.9
TREC *ex* x 22 54 18.1
TREC *ex* x 22 59 30.4
TREC AMS AMS 23 39 30.0
comp=Z,12µm,22.8s
TREC Trest 139.74 332 *e*PKHKP 22 37 56.9
TREC *e* 22 41 06.3
TREC MLR MLR
comp=Z,12µm,22.8s
ZST Bratislava 139.75 330 *e* PKPdf 22 37 59.0 -6.7
ZST *e* 22 38 11.9
ZST *e*PP PP 22 41 06.1 +3.2
ZST *e*SKP 22 41 29.3
ZST *e*PKSDF 22 41 39.4
ZST *e* 22 49 41.1
ZST *e* 22 50 01.2
ZST Bratislava 139.75 330 *e*PKHKP 22 37 59.0
ZST *e* 22 41 06.1
BOLS Boljevac 139.79 321⇑*i*PKP PKPdf 22 37 56.8 -9.0
MMB Musomiste 139.83 317 *e*P PKPdf 22 37 58.4 -7.5
CLZ Clausthal 139.84 338 *e*PKPdf PKPdf 22 37 57.9 -8.0
CLZ *e* 22 40 24.9
SVIS Svilajnac 139.98 322⇓*i*PKP PKPdf 22 37 57.2 -8.9
EKA Eskdalemuir Ar 139.98 352 SKKPbc 22 49 59.4
comp=Z,33nm,1.1s,baz=178,slow=5.7,SNR=8.6
ESK Eskdalemuir 140.00 352 PKIKP PKPdf 22 38 00.1 -6.1
ESK Eskdalemuir 140.00 352 *e*PKPdf PKPdf 22 37 60.0 -6.2
ESK *e*SKPdf SKPdf 22 41 27.6 +0.6
ESK LR LR
comp=Z,5µm,22.0s
KKB Krupnik 140.12 318 *e*P PKPdf 22 37 57.0 -9.4
BEO Belgrade 140.12 323 *i* PKP PKPdf 22 37 54.2 -12
ECK Cauldkaine Hil 140.12 352 *e*P PKPdf 22 37 59.0 -7.4
ECK Cauldkaine Hil 140.12 352 *e*P PKPdf 22 37 59.0 -7.4
TANN Tannenbergstha 140.19 335 *e*PKPdf PKPdf 22 37 58.8 -7.7
BHH Howats Hill 140.22 352 *e*P PKPdf 22 37 59.8 -6.8
BHH Howats Hill 140.22 352 *e*P PKPdf 22 37 59.8 -6.8
GTTG Gyttingen 140.23 338 *e*PKPdf PKPdf 22 38 00.7 -5.9
WERD Werda 140.23 336 *e*PKPdf PKPdf 22 37 59.1 -7.5
OUR Ouranopolis 140.25 315 *e*P PKPdf 22 37 58.2 -8.5
PKSM Moragy 140.28 326⇑*i*P PKPdf 22 37 58.6 -8.1
PKSM Moragy 140.28 326⇓*i*P PP 22 41 00.2 -5.9
PKSM Moragy 140.28 326⇑*i*P PKPdf 22 37 58.6 -8.1
GUNZ Gunzen 140.28 335 *e*PKPdf PKPdf 22 37 59.7 -7.0
GUNZ *e* 22 40 25.8
GUNZ *e*SKPdf SKPdf 22 41 27.7 +0.2
IBBN Ibbenburen 140.32 341 *e*PKPdf PKPdf 22 38 00.0 -6.8
WERN Wernitzgruen 140.32 335 *e*PKPdf PKPdf 22 37 59.6 -7.2
NKC Novy Kostel 140.34 335 *e*PKPpre 22 37 59.5
NKC *e*PP PP 22 41 06.1 -0.3
NKC *e*SKP 22 41 29.9
NKC *e*PKS 22 41 43.5
NKC *e*SKKS SKKSdf 22 54 23.4 -4.7
NKC *e*SS SS 22 59 17.7 -0.5
NKC AMS AMS 23 25 50.0
NKC Novy Kostel 140.34 335 *e*PKHKP 22 37 59.5
NKC *e* 22 41 06.1
NKC *e*SS SS 22 59 17.7 -0.5
NKC Novy Kostel 140.34 335 *e*PKP PKPdf 22 37 59.5 -7.3
NKC *e*PP PP 22 41 06.1 -0.3
NKC *e* 22 41 29.9
NKC *e* 22 41 43.5
NKC *e* 22 54 23.4
NKC *e*SS SS 22 59 17.7 -0.5
MOX Moxa 140.34 336 *e*PKPdf PKPdf 22 37 59.5 -7.3
MOX Moxa 140.34 336 *e*PKP PKPdf 22 37 59.4 -7.4
comp=Z,181nm,1.6s
MOX *e* 22 38 29.4
MOX
comp=Z,5µm,22.0s
SOH Sokhos 140.45 316 *e*P PKPdf 22 37 53.2 -14
GRUS Gruza 140.51 322 *i* PKP PKPdf 22 37 59.4 -7.7
APE Apeiranthos 140.52 310 *e*P PKPdf 22 37 58.5 -8.6
APE Apeiranthos 140.52 310⇓*i*P PKPdf 22 37 57.8 -9.3
APE Apeiranthos 140.52 310⇓P PKPdf 22 37 57.8 -9.3
CONA Conrad Observa 140.54 330⇓*i*PKPdf 22 37 50.6
comp=Z,2µm,4.8s,SNR=26
LWH Whinny Nab 140.56 349 *e*P PKPdf 22 37 59.9 -7.3
LWH Whinny Nab 140.56 349 *e*P PKPdf 22 37 59.9 -7.3
BBO1 Bothel 140.57 352 *e*P PKPdf 22 38 00.8 -6.4
BBO1 Bothel 140.57 352 *e*P PKPdf 22 38 00.8 -6.4
KNT Kendrikon 140.59 317 *e*P PKPdf 22 37 58.8 -8.5
PLG Polygyros 140.60 315 *e*P PKPdf 22 37 59.5 -7.8
PAIG Palíouri 140.65 315 *e*P PKPdf 22 37 59.7 -7.6
MANZ Manzenberg 140.67 335 *e*PKP PKPdf 22 37 59.2 -8.2
MANZ *e* 22 40 26.7
MANZ *e*SKPdf SKPdf 22 41 27.2 -0.9
KHC Kasperske Hory 140.71 333 *e*PKPpre 22 38 00.5
KHC *e*PP PP 22 41 10.4 +1.7
KHC *e*SKP 22 41 31.0
KHC *e*PKS 22 41 44.4
KHC *e*SKKS SKKSdf 22 54 24.8 -2.6
KHC *e*SS SS 22 59 20.2 -2.3
KHC AMS AMS 23 30 20.0
comp=Z,15µm,31.9s
KHC Kasperske Hory 140.71 333 *e*P 22 49 44.5
KHC *ex* x 22 49 58.0
KHC Kasperske Hory 140.71 333 *e*PKHKP 22 38 00.5
KHC *e* 22 41 10.4
KHC *e*SS SS 22 59 20.2 -2.3
KHC MLR MLR
comp=Z,15µm,31.9s
VAY Valandovo 140.72 317 *e*PKP PKPdf 22 37 55.1 -12
HORT Hortiatis 140.72 316 *e*P PKPdf 22 37 54.0 -13
STIP Stip 140.78 318 *e*PKP PKPdf 22 37 59.5 -8.1
ROTZ Rotzenmuhle 140.80 335 *e*PKPdf PKPdf 22 38 01.7 -5.9
THE Thessaloniki 140.80 316 *e*P PKPdf 22 37 54.0 -14
UBBA Unterbreizbach 140.81 338 *e*PKPdf PKPdf 22 38 02.0 -5.6
UBBA *e* 22 40 28.6
DIVS Divcibare 140.81 323⇓*i*PKP PKPdf 22 38 00.5 -7.2
GEC2 GERESS Array S 140.87 333 *e*PKPdf PKPdf 22 38 00.4 -7.3
GERES GERESS Array B 140.87 333 PKhKP 22 38 00.7
comp=Z,15nm,0.6s,baz=36,slow=4.0,SNR=46
GERES SKPbc SKPbc 22 41 28.9 -1.6
comp=Z,172nm,0.9s,baz=45,slow=1.4,SNR=26
GERES SKKPbc 22 49 57.6
comp=Z,8.6nm,1.2s,baz=238,slow=2.5,SNR=5.8
WTSB Winterswijk 140.92 341 *e*PKiKP PKiKP 22 38 00.3 -10
WTSB *ex* x 22 40 28.7
comp=Z,236nm,1.7s
WTSB *e*PKiKP SKPbc 22 41 29.1 -1.6
comp=Z,878nm,1.3s
WTSB *e*PKPpre 22 41 45.7
WET Wettzell 141.00 334 *e*PKPdf PKPdf 22 38 02.2 -5.8
GRG Griva 141.01 317 *e*P PKPdf 22 38 00.2 -7.8
SKO Skopje 141.12 319 *e*PKP PKPdf 22 37 59.9 -8.3
XRY Khrisi 141.17 306 *e*P PKPdf 22 38 03.5 -4.8
ARSA Arzberg 141.18 330⇓*i*P 22 37 55.6
comp=Z,2µm,4.0s,SNR=26
ARSA Arzberg 141.18 330⇑*i* SKPbc 22 41 31.7 +0.4
comp=Z,2µm,2.5s
ARSA Arzberg 141.18 330⇑*i* 22 49 56.4
comp=Z,1µm,5.5s
ARSA Arzberg 141.18 330 S SKPbc 22 41 31.7 +0.4
comp=Z,2µm,2.5s
ARSA 22 49 56.4
comp=Z,1µm,5.5s
ARSA Arzberg 141.18 330⇓*i*P 22 37 55.6
BUG Bochum–Univer 141.22 341 *e*PKPdf PKPdf 22 38 02.3 -6.1
XOR Xorichti 141.24 314 *e*P PKPdf 22 38 00.6 -7.8
NEO Neokhori 141.24 314 *e*P PKPdf 22 38 02.4 -6.0
GRA1 Grafenberg Arr 141.25 336 *e*PKP PKPdf 22 38 03.0 -5.4
GRA1 *e*PP PP 22 41 10.0 -2.0
GRA1 *e*SKPdf SKPdf 22 41 30.0 +0.9
GRA1 *e* 22 49 45.7
GRA1 *e*SKKP 22 49 54.1
GRA1 *e* 22 53 43.9
GRF Grafenberg Arr 141.25 336 *e*PKPdf PKPdf 22 38 03.0 -5.4
GRF *e*PP PP 22 41 10.0 -2.0
GRF *e*SKPdf SKPdf 22 41 30.0 +0.9
GRF *e* 22 49 45.7
GRF *e*SKKP 22 49 54.1
GRF *e* 22 53 43.9
GRF Grafenberg Arr 141.25 336 *e*PKIKP PKPdf 22 38 03.0 -5.4
GRF *e* 22 41 10.0
GRF *e* 22 53 43.9
GRF Grafenberg Arr 141.25 336 *e*PKIKP PKPdf 22 38 03.0 -5.4
GRF *e* 22 41 10.0
GRF *e* 22 53 43.9
PTL Penteli 141.34 312 *e*P PKPdf 22 38 02.5 -6.1
MOA Molln 141.35 331⇓*i*P PKPdf 22 37 58.6 -10
comp=Z,3µm,5.5s,SNR=9.0
MOA Molln 141.35 331⇑*i* SKPbc 22 41 32.2 +0.5
comp=Z,998nm,1.9s
MOA Molln 141.35 331 S SKPbc 22 41 32.2 +0.5
comp=Z,998nm,1.9s
MOA Molln 141.35 331⇓*i*P PKPdf 22 37 58.6 -10
KOGS Kog 141.37 328 *e*PKPdf PKPdf 22 38 02.7 -6.0
LIT Litokhoron 141.37 316 *e*P PKPdf 22 37 59.1 -10
ATH Athens Observa 141.48 312 *e*P PKPdf 22 38 02.3 -6.5
LHO Holmfirth 141.51 350 *e*P PKPdf 22 38 01.9 -6.9
LHO Holmfirth 141.51 350 *e*P PKPdf 22 38 01.9 -6.9
IVA Berane 141.58 321⇑*i*PKP PKPdf 22 38 03.8 -5.2
PLE Pljevlja 141.61 322⇑*i*PKP PKPdf 22 38 04.2 -4.8
BIA Bitola 141.69 318 *e*PKP PKPdf 22 37 58.5 -11
PVY Plav 141.69 321⇑*i*PKP PKPdf 22 38 03.9 -5.3
NAIG Nisos Aigina 141.73 312 *e*P PKPdf 22 38 02.6 -6.7
KBI1 Birley Grange 141.74 350 *e*P PKPdf 22 38 03.3 -6.0
KBI1 Birley Grange 141.74 350 *e*P PKPdf 22 38 03.3 -6.0
KZN Kozani 141.75 316 *e*P PKPdf 22 38 04.0 -5.3
FNA Florina 141.77 317 *e*P PKPdf 22 38 02.4 -6.9
MGER Gerania Oros 141.80 312 *e*P PKPdf 22 38 03.0 -6.4
PERS Pernice 141.81 329 *e*PKPdf PKPdf 22 38 03.8 -5.6
TNS Taunus Mts 141.86 339 *e*PKPdf PKPdf 22 38 04.2 -5.3
UPM Unac-Piva 141.97 322⇑*i*PKP PKPdf 22 38 04.8 -4.9
OHR Ohrid 141.98 318 *e*PKP PKPdf 22 38 02.1 -7.6
AGG Agios Georgios 141.99 314 *e*P PKPdf 22 38 03.2 -6.6
KWE Weaver Farm 142.02 350 *e*P PKPdf 22 38 03.8 -6.0
KWE Weaver Farm 142.02 350 *e*P PKPdf 22 38 03.8 -6.0
WLF1 Llynfaes 142.13 352 *e*P PKPdf 22 38 05.7 -4.3
WLF1 AMb AMB 22 38 13.9
comp=Z,176nm,1.1s
WLF1 Llynfaes 142.13 352 *e*P PKPdf 22 38 05.7 -4.3
WLF1 AMb AMB 22 38 13.9
comp=Z,176nm,1.1s
VAM Vamos 142.14 308 *e*P PKPdf 22 38 06.2 -3.8
VAM Vamos 142.14 308 *e*P PKPdf 22 38 06.6 -3.4
NIKY Niksic 142.15 322⇑*i*PKP PKPdf 22 38 05.3 -4.7
SIND Sindeldorf 142.16 337 P PKPdf 22 38 05.8 -4.2
OBKA Obir 142.18 330⇓*i*P PKPdf 22 38 00.9 -9.2
comp=Z,2µm,3.6s,SNR=49
OBKA Obir 142.18 330⇑*i* PP 22 41 17.2 -0.4
comp=Z,3µm,3.7s
OBKA Obir 142.18 330⇓*i* 22 49 53.4
comp=Z,553nm,3.0s
OBKA Obir 142.18 330 PP 22 41 17.2 -0.4
comp=Z,3µm,3.7s
OBKA 22 49 53.4
comp=Z,553nm,3.0s
OBKA Obir 142.18 330⇓*i*P PKPdf 22 38 00.9 -9.2
OBKA P 22 38 05.6
YRC Rhoscolyn 142.20 353 *e*P PKPdf 22 38 06.8 -3.3
YRC AMb AMB 22 38 10.5
comp=Z,120nm,1.4s
YRC Rhoscolyn 142.20 353 *e*P PKPdf 22 38 06.8 -3.3
YRC AMb AMB 22 38 10.5
comp=Z,120nm,1.4s
TTG Podgorica 142.21 321⇑*i*PKP PKPdf 22 38 05.6 -4.5
HGN Heimansgroeve 142.23 341 *e*PKiKP PKiKP 22 38 05.5 -7.7
HGN *ex* x 22 40 32.8
comp=Z,294nm,2.2s
HGN *e*PP PP 22 41 21.5 +3.6
HGN *e*PKiKP SKPbc 22 41 31.7 -2.3
comp=Z,495nm,2.2s
HGN *e*PKPpre 22 41 50.4
TOD Tromm 142.25 338 PKIKP PKPdf 22 38 06.1 -4.1
BEBN Eben Emael 142.28 341 SKPdf SKPdf 22 41 33.7 +2.8
BEBN PKSbc 22 41 52.1
KBA Koelnbreinsper 142.34 331⇓*i*P PKPdf 22 38 02.8 -7.5
comp=Z,2µm,3.4s,SNR=18
KBA Koelnbreinsper 142.34 331 PP 22 41 18.6 +0.1
comp=Z,3µm,3.9s
KBA S SKPbc 22 41 34.0 -0.3
comp=Z,894nm,1.7s
KBA Koelnbreinsper 142.34 331⇓*i*PKHKP PKPdf 22 38 02.8 -7.6
KBA 22 38 07.0
KBA Koelnbreinsper 142.34 331⇓*i*P PKPdf 22 38 02.8 -7.5
KBA P 22 38 07.0
MEM Membach 142.34 341 PP PP 22 41 20.0 +1.4
MEM SKPdf SKPdf 22 41 33.4 +2.4
SBD1 Bryn Du 142.35 351 *e*P PKPdf 22 38 06.2 -4.2
SBD1 AMb AMB 22 38 14.6
comp=Z,185nm,1.1s
SBD1 Bryn Du 142.35 351 *e*P PKPdf 22 38 06.2 -4.2
SBD1 AMb AMB 22 38 14.6
comp=Z,185nm,1.1s
DLF Lyons Farm 142.37 354⇑*i* 22 49 49.8
DLF Lyons Farm 142.37 354 *e*P PKPdf 22 38 00.5 -10
DLF ⇓*i*P 22 41 30.3
BRY Bratogost 142.37 322⇑*i*PKP PKPdf 22 38 05.1 -5.3
MEV Metsovon 142.37 316 *e*P PKPdf 22 38 06.8 -3.6
DCN Croghan 142.38 355⇑*i* 22 49 49.6
DCN Croghan 142.38 355 *e*P PKPdf 22 38 00.4 -10
DCN ⇓*i*P 22 41 30.1
EVR Evrytania 142.40 314 *e*P PKPdf 22 38 06.2 -4.3
DSB Dublin 142.40 354 *e*PKPdf PKPdf 22 38 06.9 -3.6
DSB *e*SKPbc SKPbc 22 41 30.9 -3.5
GVD Gavdhos 142.43 307 *e*P PKPdf 22 38 06.5 -4.0
GVD Gavdhos 142.43 307 *e*PKPdf PKPdf 22 38 06.9 -3.7
GVD *e*SKPbc SKPbc 22 41 32.0 -2.4
FUR Furstenfeldbru 142.43 334 *e*PKPdf PKPdf 22 38 06.0 -4.5
FUR *e* 22 40 32.7
YRE Yr Eifl 142.44 352 *e*P PKPdf 22 38 06.9 -3.6
YRE AMb AMB 22 38 14.2
comp=Z,177nm,1.9s
YRE Yr Eifl 142.44 352 *e*P PKPdf 22 38 06.9 -3.6
YRE AMb AMB 22 38 14.2
comp=Z,177nm,1.9s
TIR Tirane 142.44 319 PKIKP PKPdf 22 38 06.5 -4.1
ULC Ulcinj 142.49 320⇑*i*PKP PKPdf 22 38 06.1 -4.5
BUM Brajici-Budva 142.51 321⇑*i*PKP PKPdf 22 38 06.0 -4.7
LJU Ljubljana 142.51 329 *e*PKPdf PKPdf 22 38 05.0 -5.7
LJU *e* 22 40 32.7
LJU *e*PP PP 22 41 18.4 -1.3
LJU *e*SKPdf SKPdf 22 41 34.7 +3.4
LJU *e*SKKSac SKKSac 22 47 56.6 -1.6
LJU *e*Sdiff Sdif 22 49 49.0 +9.0
LJU *e*pSdiff 22 50 20.5
LJU Ljubljana 142.51 329 *e*PKHKP PKPdf 22 38 05.0 -5.7
LJU *e* 22 41 18.4
LJU Ljubljana 142.51 329 *e*PKPdf PKPdf 22 38 05.0 -5.7
LJU *e* 22 40 32.7
LJU *e*PP PP 22 41 18.4 -1.3
LJU *e*SKPdf SKPdf 22 41 34.7 +3.4
BOJS Bojanci 142.53 328 *e*Pdiff Pdif 22 35 34.8 +2.0
BOJS *e*PKPdf PKPdf 22 38 04.1 -6.6
BOJS *e* 22 40 33.0
BOJS *e*PP PP 22 41 19.2 -0.5
BOJS *e*SKPdf SKPdf 22 41 35.1 +3.8
HDH Heidenheim-Cha 142.54 335 P PKPdf 22 38 07.6 -3.1
HCY Herceg Novi 142.66 321⇑*i*PKP PKPdf 22 38 05.7 -5.2
HLM1 Long Mynd 142.67 351 *e*P PKPdf 22 38 07.2 -3.8
HLM1 AMb AMB 22 38 15.2
comp=Z,254nm,1.4s
HLM1 Long Mynd 142.67 351 *e*P PKPdf 22 38 07.2 -3.8
HLM1 AMb AMB 22 38 15.2
comp=Z,254nm,1.4s
KYTH Kithira 142.67 310 *e*P PKPdf 22 38 08.0 -3.0
UCC Uccle 142.67 343 PKP PKPdf 22 38 04.6 -6.4
UCC E 22 40 33.6
UCC E 22 41 10.5
UCC SKPdf SKPdf 22 41 32.3 +0.8
JAN Janina 142.69 316 *e*P PKPdf 22 38 07.7 -3.3
BCLA Clavier 142.73 341 E 22 41 08.4
BCLA PP PP 22 41 22.8 +1.8
BCLA SKPdf SKPdf 22 41 32.6 +1.0
KTD Kalmit 142.75 338 PKIKP PKPdf 22 38 10.5 -0.6
CADS Cadrg 142.77 330 *e*PKPdf PKPdf 22 38 06.3 -4.8
STU Stuttgart 142.78 337 *e*PKPdf PKPdf 22 38 07.5 -3.7
STU *e*SKPdf SKPdf 22 41 31.2 -0.5
STU Stuttgart 142.78 337 *e*PKIKP PKPdf 22 38 09.2 -2.0
STU *e* 22 41 22.3
STU Stuttgart 142.78 337 *e*PKPdf PKPdf 22 38 09.2 -1.9
STU *e*PP PP 22 41 22.3 +1.0
STU *e*SKPbc SKPbc 22 41 34.9 -0.4
PTCC Patocco-Chiusa 142.83 330 P PKPdf 22 38 06.9 -4.3
VOY Vojsko 142.84 330 *e*PKPdf PKPdf 22 38 06.9 -4.3
WATA Walderalm 142.94 333⇑*i*P PKPdf 22 38 08.0 -3.4
comp=Z,297nm,1.2s,SNR=37
WATA Walderalm 142.94 333 *i* 22 49 48.6
comp=Z,172nm,1.8s,SNR=5.9
WATA Walderalm 142.94 333⇑*i*P PKPdf 22 38 08.1 -3.4
WATA *i* SKPbc 22 41 35.9 +0.2
SNF Seneffe 142.95 343 E 22 40 33.6
SNF SKPdf SKPdf 22 41 31.8 -0.2
SNF PKSbc 22 41 54.9
FVI Forni Avoltri 142.96 331 PKIKP PKPdf 22 38 06.8 -4.7
WTTA Wattenberg 142.97 333⇑*i*P PKPdf 22 38 03.2 -8.3
comp=Z,4µm,3.4s,SNR=119
WTTA Wattenberg 142.97 333 *i* 22 49 48.3
comp=Z,404nm,2.1s,SNR=9.1
WTTA Wattenberg 142.97 333 PP 22 41 22.9 +0.5
comp=Z,3µm,3.5s
WTTA S SKPbc 22 41 36.2 +0.5
comp=Z,3µm,2.0s,SNR=11
WTTA 22 49 48.3
comp=Z,404nm,2.1s,SNR=9.1
WTTA Wattenberg 142.97 333⇑*i*PKHKP 22 38 03.2
WTTA PKPdf 22 38 09.2 -2.3
WTTA Wattenberg 142.97 333⇑*i*P PKPdf 22 38 03.2 -8.3
WTTA P 22 38 09.2
GMNA Gemona 142.98 330 P PKPdf 22 38 07.6 -4.0
SSW Stow on the Wo 143.03 349 *e*P PKPdf 22 38 08.6 -3.0
SSW Stow on the Wo 143.03 349 *e*P PKPdf 22 38 08.6 -3.0
SKP1 Kophill 143.07 348 *e*P PKPdf 22 38 07.1 -4.6
SKP1 Kophill 143.07 348 *e*P PKPdf 22 38 07.1 -4.6
IGT Igoumenitsa 143.10 316 *e*P PKPdf 22 38 07.4 -4.3
ITM Ithomi 143.10 312 *e*P PKPdf 22 38 09.1 -2.6
WLF Walferdange 143.12 340 *e*PKPdf PKPdf 22 38 08.0 -3.7
WLF Walferdange 143.12 340 SKPbc SKPbc 22 41 37.1 +1.0
WLF Walferdange 143.12 340 *e*PKPdf PKPdf 22 38 09.2 -2.5
WLF *e*SKPbc SKPbc 22 41 33.2 -2.9
LANF Langenberg 143.13 338 PKP PKPdf 22 38 08.1 -3.7
MOTA Moosalm 143.14 333⇑*i*P PKPdf 22 38 08.9 -2.9
comp=Z,563nm,1.1s,SNR=271
MOTA Moosalm 143.14 333⇓*i* 22 49 48.0
comp=Z,196nm,1.9s
MOTA Moosalm 143.14 333⇑*i*P PKPdf 22 38 08.9 -2.9
MOTA *i* 22 41 36.3
GIVF Givet 143.15 342 *e*PKP1 PKPdf 22 38 08.0 -3.8
comp=Z,209nm,0.9s
HTR Trewern Hill 143.16 351 *e*P PKPdf 22 38 06.5 -5.3
HTR AMb AMB 22 38 15.1
comp=Z,180nm,1.8s
HTR Trewern Hill 143.16 351 *e*P PKPdf 22 38 06.5 -5.3
HTR AMb AMB 22 38 15.1
comp=Z,180nm,1.8s
SQTA Sankt Quirin 143.19 333 *i* P PKPdf 22 38 09.2 -2.7
comp=Z,418nm,1.0s,SNR=204
SQTA Sankt Quirin 143.19 333 *i* P PKPdf 22 38 09.2 -2.7
SQTA *i* 22 41 36.8
MCH1 Michaelchurch 143.19 351 *e*P PKPdf 22 38 07.6 -4.3
MCH1 Michaelchurch 143.19 351 *e*P PKPdf 22 38 07.6 -4.3
DOU Dourbes 143.23 342 SKPbc SKPbc 22 41 25.9 -10
LKD Levkas 143.29 315 *e*P PKPdf 22 38 04.7 -7.4
UBR Ueberruh 143.30 335 P PKPdf 22 38 09.5 -2.6
TSA1 Sevenoaks 143.32 347 *e*P PKPdf 22 38 10.1 -2.0
TSA1 Sevenoaks 143.32 347 *e*P PKPdf 22 38 10.1 -2.0
KEK Kerkira 143.36 317 *e*P PKPdf 22 38 09.5 -2.7
NVLJ Novalja 143.36 327⇓*i*P PKPdf 22 38 06.1 -6.1
BAIF Baives 143.38 342 *e*PKP1 PKPdf 22 38 07.6 -4.6
comp=Z,181nm,0.9s
GUT Gutenstein 143.39 336 P PKPdf 22 38 09.5 -2.7
SWN1 Swindon 143.46 349 *e*P PKPdf 22 38 08.8 -3.5
SWN1 Swindon 143.46 349 *e*P PKPdf 22 38 08.8 -3.5
STR Strasbourg 143.48 338 PKP PKPdf 22 38 09.6 -2.8
BFO Black Forest 143.48 337 *e*PKPdf PKPdf 22 38 08.5 -3.9
BFO *e* 22 40 37.6
MENF Mencas 143.49 345 PKP PKPdf 22 38 10.4 -2.0
SPAK Spaichingen-Ko 143.49 336 PKP PKPdf 22 38 09.6 -2.8
HGH Gray Hill 143.51 350 *e*P PKPdf 22 38 08.9 -3.5
HGH AMb AMB 22 38 17.3
comp=Z,331nm,1.3s
HGH Gray Hill 143.51 350 *e*P PKPdf 22 38 08.9 -3.5
HGH AMb AMB 22 38 17.3
comp=Z,331nm,1.3s
VLS Valsamata 143.59 314 *e*P PKPdf 22 38 10.0 -2.6
DAVA Damuels 143.71 334⇓*i*P PKPdf 22 38 08.9 -3.8
comp=Z,1µm,2.1s,SNR=243
DAVA Damuels 143.71 334⇓*i*P PKPdf 22 38 08.9 -3.8
DAVA *i* 22 41 25.8
DAVA *i* 22 41 38.0
DAVA *i* 22 49 46.0
SISB Singen-Schiene 143.76 336 P PKPdf 22 38 11.4 -1.5
WLS Welschbruch 143.77 338 PKP PKPdf 22 38 09.8 -3.1
CDF Champ du Feu 143.80 338 *e*PKP1 PKPdf 22 38 09.7 -3.2
comp=Z,619nm,0.9s
STEIN Stein am Rhein 143.81 336⇓*i*Pdiff PKPdf 22 38 09.2 -3.8
comp=Z,2µm,2.1s
LIENZ Alp Oberkamor 143.86 335⇓*e*Pdiff PKPdf 22 38 09.9 -3.1
comp=Z,2µm,1.9s
WEIN Weingarten 143.88 335⇓*e*Pdiff PKPdf 22 38 09.8 -3.3
comp=Z,1µm,1.7s
SLE Schleitheim 143.88 336⇓*e*Pdiff PKPdf 22 38 09.5 -3.6
comp=Z,3µm,2.6s
CTI Castel Tesino 143.89 331 PKIKP PKPdf 22 38 10.1 -3.0
SWK Warminster 143.89 349⇓*e*P PKPdf 22 38 10.0 -3.1
SWK Warminster 143.89 349⇓*e*P PKPdf 22 38 10.0 -3.1
LIBD Limburg 143.90 337 PKIKP PKPdf 22 38 11.1 -2.0
TRULL Truellikon 143.90 336⇓*e*Pdiff PKPdf 22 38 09.5 -3.6
comp=Z,2µm,2.5s
KIZ Kirchzarten 143.94 337 PKIKP PKPdf 22 38 11.3 -1.9
VAL Valentia 143.96 358⇓*i*PKIKP PKPdf 22 38 11.4 -1.8
VAL *i* 22 41 37.1
FELD Feldberg im Sc 143.97 337⇓*e*P PKPdf 22 38 11.0 -2.2
WILA Wila 144.00 335⇓*e*Pdiff PKPdf 22 38 10.4 -2.9
comp=Z,2µm,1.9s
ECH Echery 144.01 338 PKP PKPdf 22 38 10.2 -3.1
PLONS Plons 144.10 335⇓*i*Pdiff PKPdf 22 38 11.3 -2.2
comp=Z,2µm,2.4s
DAVOX Davos 144.10 334⇓*e*Pdiff PKPdf 22 38 11.5 -2.0
comp=Z,1µm,0.7s
DAVOX Davos 144.10 334 SKKPbc 22 49 42.9
comp=Z,14nm,1.0s,baz=216,slow=8.0,SNR=6.4
LCI Lecce 144.11 319 PKIKP PKPdf 22 38 11.8 -1.7
BRMO Bormio 144.13 333 P PKPdf 22 38 11.9 -1.6
ZUR Zurich 144.17 336⇓*e*Pdiff PKPdf 22 38 10.9 -2.7
comp=Z,1µm,1.4s
SULZ Sulz-Cheisache 144.22 336⇓*e*Pdiff PKPdf 22 38 10.7 -3.0
comp=Z,2µm,1.3s
HEX Exmoor 144.22 351 *e*P PKPdf 22 38 10.8 -2.9
HEX Exmoor 144.22 351 *e*P PKPdf 22 38 10.8 -2.9
MOF Molkenrain 144.32 338 PKP PKPdf 22 38 11.5 -2.4
BERNI Berninapass 144.33 333⇓*e*Pdiff PKPdf 22 38 13.2 -0.7
comp=Z,3µm,1.2s
MABI Malga Bissina 144.40 333 P PKPdf 22 38 09.8 -4.2
THEF They Montfort 144.41 339 PKP PKPdf 22 38 12.0 -2.0
LLS Linth-Limmern 144.41 335⇓*e*Pdiff PKPdf 22 38 12.9 -1.1
comp=Z,2µm,2.4s
HINF Hinteralfeld 144.45 338 *e*PKP1 PKPdf 22 38 11.5 -2.6
comp=Z,531nm,0.9s
MUO Muotathal 144.47 335⇓*e*Pdiff PKPdf 22 38 12.8 -1.3
comp=Z,3µm,1.4s
HAU Haudompre 144.47 338 *e*PKP1 PKPdf 22 38 11.8 -2.3
comp=Z,3µm,1.3s

HAU				eR			
	comp=Z,9µm,22.5s						
HAU	Haudompre	144.47	338	ePKP	PKPdf	22 38 11.8	-2.3
HAU				LR	LR		
	comp=Z,9µm,22.5s						
MEZF	Maizieres J'vi	144.49	340	ePKP1	PKPdf	22 38 12.2	-1.9
	comp=Z,4µm,1.4s						
BBS	Basel-Blauen	144.50	337	PKIKP	PKPdf	22 38 12.4	-1.8
VDL	Val di Lei	144.51	334	⇓ePdiff	PKPdf	22 38 13.3	-0.9
	comp=Z,4µm,1.4s						
BALST	Balsthal	144.54	337	⇓iPdiff	PKPdf	22 38 12.7	-1.5
	comp=Z,2µm,1.5s						
TUE	Stuetta	144.57	334	i PKPr	PKPdf	22 38 13.6	-0.7
FGMS	Monte Sant'Ang	144.62	322	P	PKPdf	22 38 13.2	-1.2
BNALP	Bannalp	144.63	335	⇓ePdiff	PKPdf	22 38 12.9	-1.5
	comp=Z,2µm,1.1s						
MSAG	Monte S. Angel	144.64	322	P	PKPdf	22 38 13.1	-1.3
BOURR	Bourrignon	144.67	337	⇓ePdiff	PKPdf	22 38 12.7	-1.8
	comp=Z,4µm,1.9s						
SGRT	San Giovanni R	144.71	323	P	PKPdf	22 38 13.9	-0.6
HASLI	Hasliberg	144.84	335	⇓iPdiff	PKPdf	22 38 13.3	-1.4
	comp=Z,3µm,1.2s						
LOMF	Lomont	144.85	337	PKP	PKPdf	22 38 14.1	-0.7
DYA	Yadsworthy	144.85	351	⇓eP	PKPdf	22 38 13.0	-1.8
DYA	Yadsworthy	144.85	351	⇓eP	PKPdf	22 38 13.0	-1.8
RGNG	Rignano Grg	144.86	323	P	PKPdf	22 38 13.7	-1.1
FUSIO	Fusio	144.87	335	⇓ePdiff	PKPdf	22 38 13.3	-1.5
	comp=Z,4µm,0.9s						
BRSN	Barisano	144.99	329	P	PKPdf	22 38 16.1	+1.1
FG2	Serracapriola	145.02	323	P	PKPbc	22 38 14.2	-0.6
RSM	Repubblica di	145.05	328	PKIKP	PKPdf	22 38 15.3	+0.2
CING	Cingoli	145.06	327	P	PKPbc	22 38 14.5	-0.4
CSA1	St Austell	145.07	352	⇓eP	PKPbc	22 38 13.7	-1.3
CSA1	St Austell	145.07	352	⇓eP	PKPbc	22 38 13.7	-1.3
OFFI	Offida	145.10	326	P	PKPbc	22 38 16.5	+1.5
ARV	Arcevia	145.11	327	PKIKP	PKPdf	22 38 14.7	-0.5
WIMIS	Wimmis	145.12	336	⇓ePdiff	PKPbc	22 38 13.9	-1.2
	comp=Z,2µm,1.1s						
MUGIO	Muggio	145.14	334	⇓ePdiff	PKPbc	22 38 15.2	+0.1
	comp=Z,5µm,1.4s						
FG4	Candela	145.23	322	PKP2	PKPab	22 38 15.5	-0.2
SNTG	Esanatoglia	145.28	327	P	PKPdf	22 38 15.1	-0.4
CCA1	Carnmenellis	145.28	352	⇓eP	PKPdf	22 38 14.3	-1.2
CCA1	Carnmenellis	145.28	352	⇓eP	PKPdf	22 38 14.3	-1.2
TORNY	Torny	145.29	337	⇓iPdiff	PKPdf	22 38 14.5	-1.0
	comp=Z,4µm,1.2s						
FG5	Orsara di Pugl	145.29	322	PKP2	PKPab	22 38 14.9	-1.0
CRQ2	Rosemanowes 2	145.29	352	⇓eP	PKPdf	22 38 14.5	-1.0
CRQ2				AMb	AMB	22 38 19.3	
	comp=Z,2µm,1.4s						
CRQ2	Rosemanowes 2	145.29	352	⇓eP	PKPdf	22 38 14.5	-1.0
CRQ2				AMb	AMB	22 38 19.3	
	comp=Z,2µm,1.4s						
VAI	Varese	145.30	334	PKP2	PKPab	22 38 14.5	-1.4
BRANT	Les Verrieres	145.33	337	⇓iPdiff	PKPdf	22 38 14.1	-1.5
	comp=Z,5µm,2.5s						
LKBD	Leukerbad	145.35	336	⇓ePdiff	PKPdf	22 38 14.9	-0.7
	comp=Z,3µm,1.3s						
TERO	Teramo	145.36	326	P	PKPdf	22 38 15.4	-0.2
CPZ	Penzance	145.36	353	⇓eP	PKPdf	22 38 14.4	-1.2
CPZ				AMb	AMB	22 38 19.4	
	comp=Z,1µm,1.6s						
CPZ	Penzance	145.36	353	⇓eP	PKPdf	22 38 14.4	-1.2
CPZ				AMb	AMB	22 38 19.4	
	comp=Z,1µm,1.6s						
CGW	Gweek	145.37	352	eP	PKPdf	22 38 14.3	-1.3
CGW	Gweek	145.37	352	eP	PKPdf	22 38 14.3	-1.3
CMA1	Manaccan	145.37	352	⇓eP	PKPdf	22 38 15.3	-0.3
CMA1	Manaccan	145.37	352	⇓eP	PKPdf	22 38 15.3	-0.3
SFI	Santa Sofia	145.37	329	PKP2	PKPab	22 38 15.7	-0.5
CGH1	Goonhilly	145.41	352	⇓eP	PKPdf	22 38 14.8	-0.9
CGH1	Goonhilly	145.41	352	⇓eP	PKPdf	22 38 14.8	-0.9
ZCCA	Zocca	145.47	330	P	PKPdf	22 38 16.6	+0.8
MRLC	Muro Lucano	145.48	321	P	PKPdf	22 38 14.9	-1.0
MMK	Mattmark	145.48	335	⇓ePdiff	PKPdf	22 38 15.9	0.0
	comp=Z,5µm,1.3s						
MURB	Monte Urbino	145.49	327	PKP	PKPdf	22 38 15.0	-0.9
SENIN	Lac Senin	145.50	336	⇓ePdiff	PKPdf	22 38 15.3	-0.6
	comp=Z,2µm,0.9s						
CDCA	Citt' di Caste	145.50	328	P	PKPdf	22 38 15.9	0.0
SEI	Scarperia	145.51	329	P	PKPdf	22 38 16.1	+0.2
CRE	Caprese Michel	145.53	328	PKIKP	PKPdf	22 38 14.4	-1.5
FNVD	Fontana Vidola	145.54	330	P	PKPdf	22 38 15.8	-0.1
MCGN	Macugnaga	145.55	335	P	PKPdf	22 38 15.1	-0.9
ASS	Assisi	145.56	327	PKP2	PKPab	22 38 14.7	-2.2
PSB1	Pescosannita	145.59	323	P	PKPdf	22 38 14.7	-1.3
INTR	Introdacqua	145.60	325	P	PKPdf	22 38 15.0	-1.1
TIP	Timpagrande	145.62	318	⇓iPKP	PKPdf	22 38 16.3	+0.2
TIP				eSKPdf	SKPdf	22 41 32.4	-4.0
TIP				ePP	PP	22 41 39.5	+1.3
MIDA	Miranda	145.65	324	P	PKPdf	22 38 15.4	-0.7
AIGLE	Aigle	145.65	336	⇓ePdiff	PKPdf	22 38 15.7	-0.4
	comp=Z,2µm,1.1s						
AQU	L'Aquila	145.65	325	⇓iP	PKPdf	22 38 16.0	-0.1
GSCL	Gusciola	145.66	331	P	PKPdf	22 38 16.9	+0.7
GRYON	Gryon	145.66	336	⇓iPdiff	PKPdf	22 38 16.0	-0.2
	comp=Z,2µm,1.0s						
RNI2	Rionero Sannit	145.66	324	P	PKPdf	22 38 15.9	-0.3
DIX	Grande Dixence	145.68	336	⇓iPdiff	PKPdf	22 38 16.4	+0.2
	comp=Z,2µm,1.2s						
ERBM	Eremo	145.69	331	P	PKPdf	22 38 16.0	-0.2
CABF	La Chapelle	145.75	337	ePKP1	PKPbc	22 38 16.6	-0.4
	comp=Z,8µm,1.4s						
FLN	La Foliniere	145.79	346	ePKP1	PKPbc	22 38 15.9	-1.3
	comp=Z,3µm,1.2s						
FLN				eR			
	comp=Z,6µm,22.8s						
FLN	La Foliniere	145.79	346	ePKP	PKPdf	22 38 15.9	-0.5
FLN				LR	LR		
	comp=Z,6µm,22.8s						
MGR	Morigerati	145.82	321	P	PKPdf	22 38 18.2	+1.8
ORO	Oropa	145.82	334	PKIKP	PKPdf	22 38 15.1	-1.3
SDI	San Donato	145.85	324	PKP2	PKPab	22 38 15.5	-2.5
FIAM	Fiamignano	145.86	326	P	PKPdf	22 38 17.2	+0.7
BOB	Bobbio (Coli)	145.87	332	PKP2	PKPab	22 38 15.8	-2.3
BDI	Bagni Di Lucca	145.87	330	PKP2	PKPab	22 38 17.0	-1.1
LDF	La Druitiere	145.87	346	ePKP1	PKPbc	22 38 16.1	-1.3
	comp=Z,3µm,1.2s						
PTQR	Pietraquaria	145.87	325	P	PKPdf	22 38 17.3	+0.8
VLC	Villacollemand	145.90	330	ePKPdf	PKPdf	22 38 15.3	-1.3
VLC				ePP	PP	22 41 38.1	-1.7
EMV	Vieux Emosson	145.90	336	⇓iPdiff	PKPdf	22 38 16.1	-0.5
	comp=Z,2µm,1.6s						
LOR	Lormes	145.96	340	ePKP1	PKPbc	22 38 16.8	-0.8
	comp=Z,3µm,1.3s						
LOR				eR			
	comp=Z,3µm,20.5s						
LOR	Lormes	145.96	340	ePKP	PKPdf	22 38 16.8	+0.1
LOR				LR	LR		
	comp=Z,3µm,20.5s						
CSNT	Castellina Chi	145.97	329	P	PKPdf	22 38 14.9	-1.8
RFI	Roccamonfina	146.02	324	P	PKPdf	22 38 16.0	-0.8
GRI	Girifalco	146.04	318	PKP2	PKPab	22 38 17.7	-1.0
CERT	Cerreto	146.15	325	ePKPr	PKPdf	22 38 15.9	-1.1
PII	Pisa	146.16	330	PKIKP	PKPdf	22 38 15.1	-1.9
GRR	Gorron	146.23	346	ePKP1	PKPbc	22 38 17.4	-1.1
	comp=Z,2µm,0.8s						
SSF	Saint Saulge	146.25	341	ePKP1	PKPbc	22 38 17.8	-0.7
	comp=Z,2µm,0.7s						
LATE	Laterza	146.32	327	P	PKPdf	22 38 17.2	-0.1
HYF	Humbligny	146.34	342	ePKP1	PKPbc	22 38 18.3	-0.5
GRFL	Gerfalco	146.36	329	P	PKPdf	22 38 16.2	-1.1
LPL	La Plagne	146.42	336	ePKP1	PKPbc	22 38 18.7	-0.3
	comp=Z,1µm,0.9s						
LPG	La Plagne	146.43	336	ePKP1	PKPbc	22 38 18.8	-0.2
	comp=Z,2µm,1.0s						
MA9	Marino	146.45	325	P	PKPdf	22 38 17.6	+0.1
ROM9	Roma	146.49	326	P	PKPdf	22 38 12.5	-5.1
LAV9	Lanuvio	146.49	325	P	PKPdf	22 38 19.2	+1.6
SMF	Signal de Mont	146.51	340	ePKP1	PKPbc	22 38 18.2	-1.1
	comp=Z,2µm,1.1s						
AVF	Avril sur Loir	146.54	341	ePKP1	PKPbc	22 38 18.1	-1.3
	comp=Z,640nm,0.8s						
TOLF	Tolfa	146.60	326	P	PKPdf	22 38 19.8	+2.0
CEL	Celeste	146.70	318	P	PKPdf	22 38 16.9	-1.0
SOI	Samo	146.70	317	PKIKP	PKPdf	22 38 17.6	-0.3
SGMF	Saint Gilles	146.72	348	ePKP1	PKPbc	22 38 18.7	-1.2
	comp=Z,1µm,0.8s						
ROSF	Rostrenen	146.78	349	ePKP1	PKPbc	22 38 18.7	-1.3
	comp=Z,1µm,1.2s						
MAON	Monte Argentar	146.80	328	P	PKPdf	22 38 16.3	-1.8
SCLL	Scilla	146.82	318	P	PKPdf	22 38 18.5	+0.4
FIN	Finale Ligure	146.86	333	PKIKP	PKPdf	22 38 17.6	-0.6
BGF	Bois d'Agland	146.91	341	ePKP1	PKPbc	22 38 19.4	-1.0
	comp=Z,1µm,0.7s						
MSI	Messina ING	146.95	318	PKP2	PKPab	22 38 20.0	-2.3
MTTG	Motta San Giov	146.98	317	P	PKPdf	22 38 18.6	+0.2
DOI	San Damiano	147.03	334	PKIKP	PKPdf	22 38 16.6	-1.9
MBDF	Montbardon	147.05	335	ePKP1	PKPbc	22 38 19.7	-1.1
	comp=Z,1µm,0.9s						
QUIF	Quistinic	147.16	349	ePKP1	PKPbc	22 38 19.7	-1.4
	comp=Z,1µm,1.3s						
PLDF	La Plantade	147.17	339	PKP	PKPdf	22 38 18.8	+0.1
SLNA	Salina	147.21	319	P	PKPdf	22 38 19.7	+0.9
ORIF	Oris-en-Rattie	147.25	336	ePKP1	PKPbc	22 38 20.6	-0.8
	comp=Z,1µm,0.8s						
ORIF				eR			
	comp=Z,5µm,22.5s						
SAOF	Saorge	147.32	333	PKP	PKPdf	22 38 18.1	-0.9
TCF	Toulx Ste Croi	147.35	341	ePKP1	PKPbc	22 38 20.7	-0.9
	comp=Z,3µm,1.2s						
AUTN	L'Aution	147.37	333	PKP	PKPdf	22 38 20.7	+1.7
TOUF	Mont Tournerai	147.43	334	PKP	PKPdf	22 38 19.6	+0.5
SBF	Sospel	147.47	333	ePKP1	PKPbc	22 38 20.6	-1.3
	comp=Z,4µm,1.1s						
LUCF	Luceram	147.48	333	PKP	PKPdf	22 38 19.1	-0.1
MVIF	Mont Vial	147.56	333	PKP	PKPdf	22 38 19.5	+0.1
PYM	Petit Puy Mans	147.57	340	PKP	PKPdf	22 38 19.4	0.0
REVF	Revere	147.60	333	PKP	PKPdf	22 38 18.6	-0.8
MNO	Monte Soro	147.66	318	PKP2	PKPab	22 38 21.8	-3.3
MFF	Saint Martin d	147.73	344	ePKP1	PKPbc	22 38 22.7	+0.1
	comp=Z,2µm,0.9s						
VIVF	Saint-Julien-l	147.76	337	ePKP1	PKPbc	22 38 21.9	-0.8
	comp=Z,2µm,1.3s						
LBL	Lubilhac	147.95	339	PKP	PKPdf	22 38 19.7	-0.3
STOF	St-Etienne Org	148.00	335	PKP	PKPdf	22 38 20.4	+0.3
FRF	La Foret Royal	148.05	334	ePKP1	PKPbc	22 38 22.3	-1.2
	comp=Z,4µm,1.3s						
GIB	Gibilmanna	148.06	319	PKIKP	PKPdf	22 38 21.2	+1.0
CSLB	Castelbuono	148.07	319	P	PKPdf	22 38 21.3	+1.1
HVZN	Vizzini	148.08	317	P	PKPbc	22 38 23.4	-0.2
RCBR	Riachuelo	148.14	131	ePKPbc	PKPbc	22 38 23.3	-0.4
RCBR				epPKPdf	pPKPdf	22 39 06.6	+6.9
RCBR				eSKPbc	SKPbc	22 41 46.6	-1.0
RCBR				ePP	PP	22 41 53.6	+0.6
RCBR				LR	LR		
	comp=Z,5µm,21.0s						
USI	Ustica	148.15	321	P	PKPdf	22 38 19.5	-0.8
SMRF	Simiane la Rot	148.16	335	ePKP1	PKPbc	22 38 23.2	-0.6
	comp=Z,1µm,0.9s						
HMDC	Modica	148.16	316	PKP	PKPbc	22 38 24.1	+0.3
TAVF	Tavernes	148.25	334	PKP	PKPdf	22 38 20.4	-0.1
RAFF	Raffo Rosso	148.29	317	P	PKPdf	22 38 21.0	+0.4
LMR	La Mourre	148.29	334	ePKP1	PKPbc	22 38 23.0	-1.1
	comp=Z,3µm,1.2s						
MPG	Monte Pellegri	148.37	320	P	PKPdf	22 38 17.1	-3.6
RJF	Les Rejaudoux	148.44	341	ePKP1	PKPbc	22 38 23.7	-0.8
	comp=Z,2µm,1.4s						
RJF				eR			
	comp=Z,7µm,21.2s						
RJF	Les Rejaudoux	148.44	341	ePKP	PKPbc	22 38 23.7	-0.8
RJF				LR	LR		
	comp=Z,7µm,21.3s						
PRAF	Pradon	148.46	336	PKP	PKPdf	22 38 20.8	0.0
PUYF	Puyloubier	148.47	335	PKP	PKPdf	22 38 20.2	-0.6
TREF	Trevaresse	148.53	335	PKP	PKPdf	22 38 21.1	+0.2
CAF	Calviac	148.61	340	ePKP1	PKPbc	22 38 24.2	-0.7
	comp=Z,1µm,1.2s						
BERF	Bertagne	148.66	334	PKP	PKPdf	22 38 20.6	-0.5
GELF	Grande-Etoile	148.71	335	PKP	PKPdf	22 38 21.3	+0.1
LASF	Ste Croix	148.73	337	ePKP1	PKPbc	22 38 24.6	-0.7
	comp=Z,3µm,1.3s						
ERC	Erice	148.93	320	P	PKPdf	22 38 21.8	+0.2
LFF	La Frestale	149.01	342	ePKP1	PKPbc	22 38 25.1	-0.8
	comp=Z,2µm,1.3s						
VSL	Villasalto	149.82	326	ePKPdf	PKPdf	22 38 23.2	+0.2
VSL				ePKPbc	PKPbc	22 38 28.3	+0.4
VSL				ePP	PP	22 41 59.5	-3.3
MTLF	Montolieu	149.96	339	ePKP1	PKPbc	22 38 27.5	-0.8
	comp=Z,2µm,1.3s						
CGL	Cagliari Serpe	149.96	325	PKHKP	PKPdf	22 38 24.0	+0.8
LRDF	Laroque-de-Fa	150.20	338	PKP	PKPdf	22 38 23.4	-0.2
LRDF	Laroque-de-Fa	150.20	338	PKP	PKPdf	22 38 26.1	+2.5
SJAF	Saint Jean de	150.47	337	PKP	PKPdf	22 38 24.2	+0.2
FILF	Fillols	150.52	338	PKP	PKPdf	22 38 23.0	-1.1
CARF	Carcanieres	150.55	338	PKP	PKPdf	22 38 24.4	+0.2
MLS	Moulis	150.68	340	PKP	PKPdf	22 38 26.4	+2.0
SALF	Salau	150.83	340	PKP	PKPdf	22 38 23.8	-0.8
VALF	Valcebollere	150.85	338	PKP	PKPdf	22 38 24.7	+0.1
EPF	Esparros	150.86	341	ePKP1	PKPbc	22 38 29.5	-0.9
	comp=Z,1µm,1.4s						
MELF	Melles	150.87	340	PKP	PKPdf	22 38 23.8	-0.8
MELF	Melles	150.87	340	PKP	PKPdf	22 38 25.9	+1.3
LABF	Labassere	150.93	341	PKP	PKPdf	22 38 24.8	+0.1
LABF	Labassere	150.93	341	PKP	PKPdf	22 38 24.9	+0.2
LABF				PKP	PKPbc	22 38 32.0	+1.4
REYF	Montagne du Re	151.05	342	PKP	PKPdf	22 38 24.7	-0.2
RESF	Ens	151.06	341	PKP	PKPdf	22 38 26.1	+1.2
ORDF	Ordiarp	151.07	343	PKP	PKPdf	22 38 25.9	+0.9
VIEF	Viey	151.09	341	PKP	PKPdf	22 38 25.4	+0.4
ATE	Arette	151.12	342	PKP	PKPdf	22 38 25.2	+0.2
OSSF	Osses	151.13	343	PKP	PKPdf	22 38 26.9	+1.9
EALK	Alkurruntz	151.23	344	⇓PKP	PKPdf	22 38 25.0	-0.2
EBIE	Bielsa	151.23	341	⇓PKP	PKPdf	22 38 25.6	+0.4
SJPF	Ste Jean	151.25	343	ePKP1	PKPbc	22 38 31.6	+0.3
	comp=Z,307nm,0.8s						
ETSF	Etsaut	151.25	342	ePKP1	PKPbc	22 38 30.7	-0.6
	comp=Z,471nm,0.8s						
ELIZ	Elizondo	151.28	344	PKIKP	PKPdf	22 38 26.5	+1.2
ELAN	Lanestosa	151.69	346	⇓PKP	PKPdf	22 38 25.1	-0.8
EARI	Arriondas	151.99	349	⇓PKP	PKPdf	22 38 25.8	-0.6
EPOB	Poblet	152.11	338	⇓PKP	PKPdf	22 38 25.0	-1.5
EPON	Pontenova	152.27	352	⇓PKP	PKPdf	22 38 25.9	-0.9
KEST	Kesra	152.40	320	PKP	PKPdf	22 38 26.9	0.0
	comp=Z,3.8nm,0.8s,baz=173,slow=3.3,SNR=7.4						
KEST				PKPbc	PKPbc	22 38 35.0	+1.1
	comp=Z,165nm,1.1s,baz=168,slow=2.7,SNR=9.8						
ERTA	Horta de San J	152.72	339	⇓PKP	PKPdf	22 38 27.0	-0.4
ETOS	Mallorca	152.80	334	⇓PKP	PKPdf	22 38 27.2	-0.3
EMAZ	Mazaricos	152.84	355	⇓PKP	PKPdf	22 38 26.4	-1.2
STS	Santiago	152.87	354	PKIKP	PKPdf	22 38 27.3	-0.3
CMAH	Djebel Manchou	152.94	324	P	PKPbc	22 38 36.0	+0.9
CGMA	Guelma	153.07	323	P	PKPbc	22 38 36.5	+1.1
CAEH	'Ain El Ouahch	153.16	325	P	PKPbc	22 38 37.0	+1.4
ABSA	Djebel Ababsia	153.16	323	P	PKPbc	22 38 37.5	+1.9
CKFL	Kef-Lekhel	153.50	324	P	PKPbc	22 38 37.0	+0.7
EMOS	Mosqueruela	153.53	340	⇑PKP	PKPdf	22 38 29.0	+0.5
ECAL	Calabor	153.57	351	⇓PKP	PKPdf	22 38 28.0	-0.7
EZAM	Zamans	153.61	354	PKIKP	PKPdf	22 38 28.8	+0.1
PBRG	Braganca	153.70	351	ePKPdf	PKPdf	22 38 28.8	0.0
PBRG	Braganca	153.70	351	ePKPab	PKPab	22 38 50.8	+0.7
PBRG	Braganca	153.70	351	ePP	PP	22 42 23.5	-1.3
CASM	Ain Smara	153.73	324	P	PKPbc	22 38 37.0	+0.2
ELOB	Lobios	153.82	353	⇓PKP	PKPdf	22 38 28.5	-0.5
DFRA	Djebel Bou Aff	153.86	325	P	PKPdf	22 38 33.0	+3.9
CTEI	Djebel Teioual	153.92	324	P	PKPbc	22 38 37.0	-0.2
PCAB	Cabril	153.97	353	ePKPdf	PKPdf	22 38 28.8	-0.4
PCAB	Cabril	153.97	353	ePKPab	PKPab	22 38 52.1	+0.8
PCAB	Cabril	153.97	353	ePP	PP	22 42 26.9	+0.6
EIBI	Ibiza	154.03	335	PKP	PKPdf	22 38 28.5	-0.8
GUD	Guadarrama	154.32	346	PKIKP	PKPdf	22 38 29.7	0.0
PVRL	Vila Real	154.36	352	ePKPdf	PKPdf	22 38 29.7	-0.1
PVRL	Vila Real	154.36	352	ePKPab	PKPab	22 38 53.8	+0.9
PVRL	Vila Real	154.36	352	ePP	PP	22 42 30.7	+2.2
SET	Setif	154.38	326	P	PKPdf	22 38 31.0	+1.2
ECHE	Chera	154.39	340	PKIKP	PKPdf	22 38 30.0	+0.2
CKHR	Kef el Ahmar	154.45	325	P	PKPdf	22 38 34.0	+4.1
CMER	Merouana	154.52	324	P	PKPdf	22 38 30.0	0.0
EBEN	Beniarda	154.92	338	⇓PKP	PKPdf	22 38 30.1	-0.5
PVIS	Viseu	154.94	352	ePKPdf	PKPdf	22 38 30.3	-0.3
PVIS	Viseu	154.94	352	ePKPab	PKPab	22 38 56.3	+0.9
PVIS	Viseu	154.94	352	ePP	PP	22 42 31.2	-0.5
ABA	Alger-Bouzarea	155.13	330	P	PKPdf	22 38 31.0	+0.2
ESDC	Sonseca Array	155.19	345	PKP	PKPdf	22 38 30.5	-0.4
	comp=Z,8.4nm,1.1s,baz=351,slow=2.4,SNR=20						
ESDC				PKPab	PKPab	22 38 56.0	-0.4
	comp=Z,30nm,0.6s,baz=12,slow=3.1,SNR=23						
ESDC				PP	PP	22 42 28.4	-4.7
	comp=Z,38nm,1.1s,baz=24,slow=6.2,SNR=7.3						
ESDC	Sonseca Array	155.19	345	PKP	PKPdf	22 38 30.6	-0.3
ESLA	Sonseca Array	155.19	345	ePKPdf	PKPdf	22 38 30.8	-0.1
ESLA				ePKPbc	PKPdf	22 38 40.2	+9.3
ESLA				ePP	PP	22 42 30.6	-2.6
ESLA				LR	LR		
	comp=Z,31µm,21.0s						
MTE	Manteigas	155.20	352	ePKPdf	PKPdf	22 38 30.4	-0.5
MTE	Manteigas	155.20	352	ePKPab	PKPab	22 38 56.9	+0.4
MTE	Manteigas	155.20	352	ePP	PP	22 42 33.2	0.0
MTE	Manteigas	155.20	352	e-		23 01 55.4	
MTE	Manteigas	155.20	352	eLQ		23 23 04.3	
MTE	Manteigas	155.20	352	⇓iPKPdf	PKPdf	22 38 30.3	-0.6
MTE				⇓iPKPbc	PKPdf	22 38 39.8	+8.8
MTE				eSKPdf	SKPdf	22 41 46.4	-3.4
MTE				ePP	PP	22 42 33.5	+0.3
EPLA	Plasencia	155.28	349	⇓PKIKP	PKPdf	22 38 30.9	-0.1
ETOB	Tobarra	155.43	340	⇓PKP	PKPdf	22 38 31.2	-0.1
EMHD	Djebel Mahouad	155.65	329	P	PKPdf	22 38 32.0	+0.5
PCBR	Castelo Branco	155.74	351	ePKPdf	PKPdf	22 38 31.3	-0.3
PCBR	Castelo Branco	155.74	351	ePKPab	PKPab	22 38 59.7	+0.9
PCBR	Castelo Branco	155.74	351	ePP	PP	22 42 33.8	-2.4
EVIA	Vianos	155.75	341	PKIKP	PKPdf	22 38 32.4	+0.8
EMUR	La Murta	156.05	338	⇓PKP	PKPdf	22 38 31.4	-0.7
PTOM	Tomar	156.08	353	ePKPdf	PKPdf	22 38 31.9	-0.2
PTOM	Tomar	156.08	353	ePKPab	PKPab	22 39 00.9	+0.6
PTOM	Tomar	156.08	353	ePP	PP	22 42 41.5	+3.4
CART	Cartagena	156.19	338	ePKPdf	PKPdf	22 38 31.0	-1.3
CART				ePKPab	PKPab	22 38 59.9	-0.9
CART				ePP	PP	22 42 40.0	+1.3
EBNR	Beni Rached	156.25	332	P	PKPdf	22 38 40.0	+7.7
ASCN	Ascension	156.28	175	⇓iPKPdf	PKPdf	22 38 32.7	+0.4
ASCN				epPKPab	PKPab	22 38 59.5	-1.7
ASCN				LR	LR		
	comp=Z,4µm,20.0s						
ECHA	Ech Chlef	156.44	332	P	PKPdf	22 38 43.0	+10
EHUE	Huescar	156.53	341	PKIKP	PKPdf	22 38 31.3	-1.4
EBAN	Banos Encina	156.56	343	PKIKP	PKPdf	22 38 33.1	+0.4
EQES	Quesada	156.69	342	⇓PKP	PKPdf	22 38 31.8	-1.1
PESTR	Estremoz	156.71	351	ePKPdf	PKPdf	22 38 32.2	-0.7
PESTR	Estremoz	156.71	351	ePKPab	PKPab	22 39 02.7	-0.3
PESTR	Estremoz	156.71	351	ePP	PP	22 42 41.4	-0.1
EBAD	Badajoz	156.72	350	⇓PKP	PKPdf	22 38 32.2	-0.7
EANR	'Ain N'Sour	156.73	332	P	PKPdf	22 38 44.0	+11
EADA	Adamuz	156.77	345	PKP	PKPdf	22 38 32.8	-0.2
PMAFR	Mafra	156.83	354	ePKPdf	PKPdf	22 38 32.3	-0.8
PMAFR	Mafra	156.83	354	ePKPab	PKPab	22 39 03.1	-0.4
PMAFR	Mafra	156.83	354	ePP	PP	22 42 42.5	+0.3
OKGL	Djebel Kef Gue	156.86	333	P	PKPab	22 38 58.0	-5.6
PLOU	Loures	156.89	354	ePKPdf	PKPdf	22 38 34.5	+1.4
PLOU	Loures	156.89	354	ePKPab	PKPab	22 39 04.8	+1.0
PLOU	Loures	156.89	354	ePP	PP	22 42 45.2	+2.7
LIS	Lisbon	157.06	354	eP	PKPdf	22 38 32.3	-1.1
LIS				eSS	SS	23 02 26.0	+1.0
LIS				eSS	SS	23 02 26.0	+1.0
LIS				AMS	AMS	23 48 20.1	
	comp=E,6µm,18.5s						
LIS	Lisbon	157.06	354	ePKIKP	PKPdf	22 38 32.3	-1.1
LIS				eSS	SS	23 02 26.0	+1.0
LIS				pmax	pmax		
	comp=Z,500nm,1.0s						
LIS				pmax	pmax		
	comp=N,400nm,1.0s						
ETRT	Tiaret	157.09	331	P	PKPdf	22 38 46.0	+13
ENIJ	Nijar	157.17	339	PKIKP	PKPdf	22 38 33.4	-0.1
ELUQ	Luque	157.26	344	PKIKP	PKPdf	22 38 33.8	+0.2
ECOG	Cogollos-Vega	157.32	342	PKIKP	PKPdf	22 38 32.8	-0.9
EBER	Berja	157.46	340	⇓PKP	PKPdf	22 38 33.0	-0.9
PBEJ	Beja	157.57	351	ePKPdf	PKPdf	22 38 33.8	-0.2
PBEJ	Beja	157.57	351	ePKPab	PKPab	22 39 08.0	+1.3
PBEJ	Beja	157.57	351	ePP	PP	22 42 47.5	+1.2
ELOJ	Sierra Loja	157.61	343	PKIKP	PKPdf	22 38 33.8	-0.3
EMIN	Mina Concepcio	157.62	348	⇓PKP	PKPdf	22 38 33.1	-0.9
ERON	Agron	157.63	342	PKP	PKPdf	22 38 34.4	+0.3
EGRO	El Granado	158.00	350	⇓PKP	PKPdf	22 38 33.9	-0.6
PTEO	Sao Teotonio	158.16	353	ePKPdf	PKPdf	22 38 35.0	+0.3
PTEO	Sao Teotonio	158.16	353	ePKPab	PKPab	22 39 10.7	+1.4
PTEO	Sao Teotonio	158.16	353	ePP	PP	22 42 52.0	+2.5
ESPR	Espera	158.31	346	⇓PKP	PKPdf	22 38 35.0	+0.1
EMIJ	Mijas	158.33	344	⇓PKP	PKPdf	22 38 33.6	-1.3
EALB	Alboran	158.38	340	PKP	PKPdf	22 38 33.4	-1.6
MORF	Marmelete	158.39	352	eP	PKPdf	22 38 33.7	-1.3
MORF				eSS	SS	23 02 38.9	-0.3
MORF				eSS	SS	23 02 39.4	+0.1
MORF				AMS	AMS	23 52 22.9	
	comp=Z,4µm,25.5s						
MORF	Marmelete	158.39	352	ePKIKP	PKPdf	22 38 33.7	-1.3
MORF				eSS	SS	23 02 38.9	-0.4
MORF				pmax	pmax		
	comp=Z,100nm,1.0s						
MORF				pmax	pmax		
	comp=E,1µm,1.0s						
EJIF	Jimena Fronter	158.62	345	PKIKP	PKPdf	22 38 35.6	+0.3
PMPS	Porto Santo	162.45	12	ePKPdf	PKPdf	22 38 40.0	+0.5
PMPS	Porto Santo	162.45	12	ePKPab	PKPab	22 39 30.6	+2.6
PMPS	Porto Santo	162.45	12	ePP	PP	22 43 13.8	+1.2
PMAR	Madeira	162.65	13	ePKPdf	PKPdf	22 38 40.3	+0.7
PMAR	Madeira	162.65	13	ePKPab	PKPab	22 39 30.1	+1.2
PMAR	Madeira	162.65	13	ePP	PP	22 43 16.1	+2.5
TOA0	Torodi Ar. Sit	166.30	261	ePKPdf	PKPdf	22 38 42.7	-0.1
TOA0				ePKPab	PKPab	22 39 45.0	+0.1
TOA0				ePP	PP	22 43 31.8	-0.9
TORD	Torodi Ar. Bea	166.30	261	PKP	PKPdf	22 38 42.4	-0.5
	comp=E,48nm,0.7s,baz=24,slow=0.5,SNR=231						
TORD				PKPab	PKPab	22 39 44.5	-0.4
	comp=E,127nm,0.9s,baz=102,slow=3.7,SNR=23						
TORD				PP	PP	22 43 26.4	-6.2
	comp=E,13nm,0.8s,baz=142,slow=7.5,SNR=4.3						
EHIG	Higuera	166.32	21	⇓PKP	PKPdf	22 38 44.4	+1.5
EFAM	Famara	166.72	5	⇓PKP	PKPdf	22 38 43.8	+0.6
EBAJ	Bajamar	166.79	16	⇓PKP	PKPdf	22 38 43.5	+0.3
EGOM	La Gomera	166.89	20	⇓PKP	PKPdf	22 38 43.8	+0.5
CCAN	Las Canadas	167.02	18	PKP	PKPdf	22 38 44.9	+1.5
CFTV	Fuerteventura	167.36	8	PKP	PKPdf	22 38 44.1	+0.5
EOSO	Osorio	167.43	14	⇓PKP	PKPdf	22 38 44.0	+0.3
LIC	Lamto	168.15	217	ePKIKP	PKPdf	22 38 43.1	-1.1
	comp=E,614nm,1.7s						
LIC				eR			
	comp=E,3µm,22.8s						
LIC	Lamto	168.15	217	ePKPdf	PKPdf	22 38 43.1	-1.1
LIC				LR	LR		
	comp=Z,1µm,22.8s						
DBIC	Dimbokro	168.40	219	PKPdf	PKPdf	22 38 43.9	-0.5
DBIC				PKPab	PKPab	22 39 54.5	+0.3
DBIC				SKKSac	SKKSac	22 50 17.8	+1.5
DBIC				SS	SS	23 04 25.1	+2.7
DBIC	Dimbokro	168.40	219	PKP	PKPdf	22 38 43.4	-1.0
	comp=Z,48nm,0.9s,baz=145,slow=2.3,SNR=20						
DBIC				PKPab	PKPab	22 39 54.2	0.0
	comp=Z,63nm,0.7s,baz=104,slow=6.1,SNR=4.3						
DBIC				PP	PP	22 43 36.3	-7.1
	comp=Z,20nm,0.9s,baz=92,slow=11,SNR=3.8						
DBIC	Dimbokro	168.40	219	PKP	PKPdf	22 38 43.4	-1.0
DBIC				PKPab	PKPab	22 39 54.2	0.0
DBIC				PP	PP	22 43 36.3	-7.1

MEX 07 22:27:33.6±0.8, 1794N×9975W, h4km±12km, MD3.5, 1C, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	Mezcala	0.13	98	⇑iP	Pg	22 27 35.7	-0.4
MEIG				iS	Sg	22 27 37.8	-0.1
PLIG	Platanillo	0.51	28	iP	Pg	22 27 43.2	-0.2
PLIG				iS	Sg	22 27 49.8	-0.1
ACX	Acapulco	1.08	188	eP	Pg	22 27 52.0	-2.3
ACX				iS	Sg	22 28 05.0	-3.4
UTMO	Huajuapan	1.86	93	eP	Pn	22 28 05.3	-1.0
UTMO				iS	Sn	22 28 25.9	-4.4

NEIC 07 22:53:39.1±1.8, 7.20S×129.14E, h68km±16km, mb4.6/3, Error ellipse: s-maj=18.2km s-min=9.1km az=54.0

IDC 07 22:53:40.6±3.7, 7.20S×128.96E, h82km±32km, mb4.1/7, mb1 4.3/10, mb1mx4.1/15, mbtmp4.5/10, Error ellipse: s-maj=26.5km s-min=17.5km az=76.0

ISCJB 07 22:53:43.7±1.3, 7.53S±0.05×129.00E±0.08, h122km±14km, mb4.2/8, Error ellipse: s-maj=13.0km s-min=7.5km az=132.6

ISC 07 22:53:44.2±1.5, 7.59S±0.07×128.82E±0.07, h101km±16km, n30, σ1.56/34, mb4.2/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.21	145	eP	Pn	22 55 14.7	+1.5
	54nm,0.3s						
KAKA				eS	Sn	22 56 21.4	-1.4
FITZ	Fitzroy Crossi	10.89	196	eP	Pn	22 56 18.0	+1.1

	92nm,0.5s						
FITZ				*e*S	**Sn**	**22 58 15.3**	**-1.4**
FITZ	**Fitzroy Crossi**	**10.89**	**196**	P	**Pn**	**22 56 18.3**	**+1.4**
	9.4nm,0.3s,baz=28,slow=12,SNR=254						
FITZ				S	**Sn**	**22 58 15.7**	**-1.0**
	8.0nm,0.3s,baz=103,slow=20,SNR=5.7						
WRAB	**Tennant Creek**	**13.39**	**157**	*e*Pn	**Pn**	**22 56 48.6**	**-1.3**
	32nm,0.8s						
WRAB				*e*Sn	**Sn**	**22 59 10.3**	**-7.0**
WB2	**Warramunga Arr**	**13.40**	**157**	*e*P	**Pn**	**22 56 48.6**	**-1.5**
WB2				*e*S	**Sn**	**22 59 08.6**	**-8.8**
MBWA	**Marble Bar**	**16.09**	**212**	*e*Pn	**Pn**	**22 57 27.6**	**+3.2**
	11nm,0.5s						
MBWA				*e*Sn	**Sn**	**23 00 21.3**	**-1.3**
AS31	**Alice Springs**	**16.71**	**164**	*e*P	**Pn**	**22 57 33.3**	**+1.3**
AS31				*e*S	**S**	**23 00 31.7**	**-10**
ASAR	**Alice Springs**	**16.71**	**164**	P	**Pn**	**22 57 33.5**	**+1.4**
	2.6nm,0.3s,baz=336,slow=9.4,SNR=62						
ASAR				S	**S**	**23 00 31.4**	**-11**
	3.2nm,0.3s,baz=354,slow=23,SNR=9.5						
ASPA	**Alice Springs**	**16.71**	**164**	*e*P	**Pn**	**22 57 33.3**	**+1.3**
ASPA				*e*S	**S**	**23 00 31.7**	**-10**
PMG	**Port Moresby**	**18.23**	**97**	P	**P**	**22 57 48.3**	**-1.1**
	0.6nm,0.3s,baz=261,slow=9.0,SNR=3.1						
KKM	**Kota Kinabalu**	**18.48**	**317**	*e*P	**P**	**22 57 54.9**	**+2.8**
KSM	**Kuching**	**20.54**	**295**	P	**P**	**22 58 15.7**	**+1.2**
STKA	**Stephens Creek**	**26.93**	**155**	P	**P**	**22 59 16.8**	**+0.8**
	2.8nm,0.8s,mb3.8,baz=318,slow=12,SNR=4.4						
STKA	**Stephens Creek**	**26.93**	**155**	P	**P**	**22 59 16.8**	**+0.8**
NWAO	**Narrogin (SRO)**	**27.40**	**202**	P	**P**	**22 59 22.7**	**+2.6**
	8.2nm,0.5s,mb4.5,baz=301,slow=8.3,SNR=8.0						
NWAO	**Narrogin (SRO)**	**27.40**	**202**	*e*P	**P**	**22 59 22.9**	**+2.8**
	9.5nm,0.7s,mb4.4						
KULM	**Kulim**	**30.88**	**294**	P	**P**	**22 59 48.5**	**-2.4**
PSI	**Prapat**	**31.56**	**288**	P	**P**	**22 59 56.4**	**-0.5**
	3.1nm,0.3s,mb4.5,baz=173,slow=8.9,SNR=3.7						
QIZ	**Qiongzhong**	**32.40**	**325**	P	**P**	**23 00 01.8**	**-2.4**
TAU	**Tasmania Unive**	**38.76**	**158**	P	**P**	**23 00 59.9**	**+1.3**
MJAR	**Matsushiro Arr**	**44.78**	**11**	P	**P**	**23 01 41.8**	**-5.9**
	1.5nm,0.6s,mb3.9,baz=185,slow=9.1,SNR=4.1						
MKAR	**Makanchi Array**	**68.08**	**327**	P	**P**	**23 04 30.7**	**-2.3**
	3.1nm,0.5s,mb4.4,baz=116,slow=8.5,SNR=9.3						
VNDA	**Vanda**	**72.00**	**173**	P	**P**	**23 04 57.1**	**+0.1**
	1.4nm,0.7s,mb3.9,baz=305,slow=7.0,SNR=8.6						
KURK	**Kurchatov**	**72.42**	**329**	*e*P	**P**	**23 04 58.1**	**-1.3**
	8.2nm,0.4s,mb4.9						
MAW	**Mawson**	**73.97**	**201**	P	**P**	**23 05 09.5**	**+0.9**
	1.6nm,0.5s,mb4.0,baz=68,slow=4.4,SNR=13						
GERES	**GERESS Array B**	**112.12**	**320**	PKiKP	PKiKP	23 12 04.5	-3.3
	0.5nm,0.6s,baz=64,slow=3.1,SNR=6.2						
TORD	**Torodi Ar. Bea**	**127.77**	**281**	PKP	PKPdf	23 12 36.7	-1.1
	1.1nm,0.7s,baz=40,slow=2.1,SNR=9.5						
CPUP	**Villa Florida**	**145.75**	**170**	PKPbc	PKPbc	23 13 11.3	-0.1
	1.2nm,0.4s,baz=175,slow=3.7,SNR=8.5						
JTS	**JuntasAbangare**	**146.54**	**83**	PKPbc	PKPbc	23 13 13.7	0.0
	4.6nm,0.4s,baz=286,slow=6.5,SNR=4.0						
SIV	**San Ignacio**	**154.60**	**157**	PKPab	PKPab	23 13 48.7	+0.5
	1.1nm,0.7s,baz=78,slow=4.5,SNR=3.6						

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*CSEM **07** 22:54:46.5, 35.50N×3.73E, h0km, ML3.6, After ALG*
*CRAAG **07** 22:54:46.5, 35.50N×3.73E, Ml3.6*
*ISCJB **07** 22:54:48.5±1.0, 35.65N±0.10×3.83E±0.06, h10km, Error ellipse: s-maj=14.0km s-min=6.7km az=164.6*
*MDD **07** 22:54:49.1±3.8, 35.59N×3.69E, h23km±19km, mb3.1/1, Error ellipse: s-maj=41.1km s-min=13.7km az=12.0, PRXIMO*
ISC 07 22:54:49.4±0.9**, 35.68N**±0.09×**3.82E**±0.06**, h10km, n13,** σ**1.00**/14**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKET	**Djebel Ketaf**	**0.37**	**8**	P	**Pg**	**22 54 58.5**	**+1.9**
ADJB	**Djebel Djouab**	**0.56**	**327**	P	**Pg**	**22 55 01.0**	**+0.7**
EMHD	**Djebel Mahouad**	**0.87**	**307**	P	**Pg**	**22 55 05.0**	**-1.2**
AKF	**Akfadou**	**1.12**	**32**	P	**Pb**	**22 55 10.8**	**-0.1**
SET	**Setif**	**1.38**	**68**	P	**Pn**	**22 55 11.0**	**-3.7**
CMER	**Merouana**	**1.70**	**92**	P	**Pn**	**22 55 19.0**	**0.0**
DFRA	**Djebel Bou Aff**	**1.88**	**62**	P	**Pg**	**22 55 25.0**	**-0.3**
EBNR	**Beni Rached**	**1.95**	**289**	P	**Pn**	**22 55 23.0**	**+0.5**
ECHA	**Ech Chlef**	**2.04**	**284**	P	**Pn**	**22 55 24.0**	**+0.2**
ECHF	**Ech Chlef**	**2.06**	**284**	P	**Pn**	**22 55 24.0**	**-0.1**
ETRT	**Tiaret**	**2.07**	**263**	P	**Pg**	**22 55 30.0**	**+0.8**
EANR	**'Ain N'Sour**	**2.23**	**278**	P	**Pn**	**22 55 27.0**	**+0.7**
ETOB	**Tobarra**	**5.21**	**306**	P	**Pn**	**22 56 04.8**	**-2.4**
	0.3nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**22 57 06.7**	**-0.6**
	0.4nm,0.3s,SNR=7.9						

MAN 07 22:56:12.7, 9.26N×122.39E, h23km, mb2.7, ML4.2, MS3.8, 1C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.84**	**84**	⇓*i*P	Pb	22 56 27.5	-1.1
SNPH				*i* S	Sb	22 56 38.0	-1.5
DCPH	**Dipolog City**	**1.17**	**125**	⇓*e*P	Pn	22 56 32.1	-1.4
GUIM	**Jordan**	**1.37**	**8**	*e*P	Pn	22 56 36.6	+0.2
GUIM				*e*S	Sn	22 56 54.7	+0.7
IPIL	**Ipil**	**1.47**	**173**	⇓*e*P	Pn	22 56 37.8	0.0
IPIL				*e*S	Sn	22 56 55.5	-0.8
IPIL	**Ipil**	**1.47**	**173**	*e*P	Pn	22 56 37.6	-0.2
IPIL				*e*S	Sn	22 56 55.0	-1.3
TBP	**Tagbilaran**	**1.52**	**73**	*e*P	Pn	22 56 38.4	0.0
PAGZ	**Pagadian**	**1.71**	**145**	*e*P	Pn	22 56 42.0	+0.9
PAGZ				*e*S	Sn	22 57 05.0	+2.7
LLP	**Lapu-Lapu**	**1.88**	**56**	*e*P	Pn	22 56 52.9	+9.5
LLP				*e*S	Sn	22 57 03.1	-3.2
CUYO	**Cuyo Island**	**2.08**	**320**	*e*P	Pn	22 56 46.1	0.0
CUYO				*e*S	Sn	22 57 10.0	-1.3
RCP	**Roxas**	**2.31**	**9**	⇑*e*P	Sn	22 57 20.7	+3.5

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*ISCJB **07** 22:57:05.6±0.4, 36.31N±0.02×71.15E±0.04, h108km±5km, mb4.4/41, Error ellipse: s-maj=5.2km s-min=3.4km az=151.4*
*MOS **07** 22:57:06.2±1.2, 36.35N×71.15E, h111km, mb4.6/19, Error ellipse: s-maj=9.1km s-min=5.4km az=105.5*
*NEIC **07** 22:57:07.7±0.3, 36.31N×71.32E, mb4.5/21, Error ellipse: s-maj=7.6km s-min=4.8km az=221.0*
*IDC **07** 22:57:08.1±0.9, 36.17N×70.97E, h121km±6km, mb3.9/18, mb1 4.0/19, mb1mx3.9/25, mbtmp4.3/19, Error ellipse: s-maj=15.5km s-min=13.8km az=20.0*
*BJI **07** 22:57:09.4, 36.77N×71.19E, h104km, mb4.7*
*NNC **07** 22:57:11.8±7.4, 36.82N×70.60E, h118km±79km, mb4.0, mpv4.7, Error ellipse: s-maj=56.9km s-min=38.3km az=14.0*
ISC 07 22:57:07.5±0.3**, 36.34N**±0.02×**71.22E**±0.04**, h116km**±4km**, h123km**±.9km**: pP-P, n153,** σ**1.35**/182**, mb4.4**/43**, 18C-9D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.57**	**167**	⇓P	**Pn**	**22 57 50.4**	**+2.4**
THW	**Thamme Wali**	**3.56**	**173**	P	**Pn**	**22 58 02.6**	**+1.5**
SBDP	**Sheikh Budin**	**4.04**	**185**	⇑P	**Pn**	**22 58 07.4**	**-0.1**
SARP	**Sargodha**	**4.57**	**164**	⇓P	**Pn**	**22 58 15.2**	**+0.7**
DRP	**Derazinda**	**4.66**	**191**	⇓P	**Pn**	**22 58 16.5**	**+0.7**
KSH	**Kashi**	**4.92**	**48**	P	**Pn**	**22 58 23.0**	**+3.7**
KSH				S	**Sn**	**22 59 15.6**	**+0.5**
KSH				Smax			
	comp=N,1μm,0.3s						
KSH				Smax			
	comp=E,1μm,0.2s						
TAS	**Tashkent**	**5.20**	**344**	*e*PN	**Pn**	**22 58 23.0**	**-0.1**
DLH	**Dalhousie**	**5.45**	**133**	*e*P	**Pn**	**22 58 25.0**	**-1.5**
DLH				*e*S	**Sn**	**22 59 26.0**	**-2.0**
PONG	**Pong**	**5.87**	**137**	*e*P	**Pn**	**22 58 34.0**	**+1.8**
PONG				*e*S	**Sn**	**22 59 38.0**	**-0.2**
AML	**Almayashu**	**6.10**	**18**	P	**Pn**	**22 58 35.7**	**+0.5**
	SNR=556						
UCH	**Uchtor**	**6.41**	**22**	P	**Pn**	**22 58 40.2**	**+0.8**
	SNR=145						
KZA	**Kyzart**	**6.53**	**27**	P	**Pn**	**22 58 41.8**	**+0.7**
	SNR=73						
BHK	**Bhakra**	**6.54**	**137**	*e*x	x	22 58 48.0	
BHK				*e*x	x	23 00 13.0	
EKS2	**Erkin-Say**	**6.62**	**17**	P	**Pn**	**22 58 42.7**	**+0.4**
	SNR=92						
AAK	**Ala-Archa**	**6.78**	**21**	P	**Pn**	**22 58 45.6**	**+1.2**
	SNR=51						
AAK	**Ala-Archa**	**6.78**	**21**	*e*PN	**Pn**	**22 58 45.1**	**+0.7**
AAK				pmax	pmax		
	comp=Z,78nm,0.4s						
AAK	**Ala-Archa**	**6.78**	**21**	*e*Pn	**Pn**	**22 58 45.0**	**+0.6**
	comp=Z,78nm,0.4s						
AAK				*e*Sn	**Sn**	**22 59 57.9**	**-2.2**
KK31	**Karatay Array**	**6.78**	**356**	⇓P	**Pn**	**22 58 43.4**	**-1.0**
	comp=Z,107nm,0.3s,baz=174,slow=11,SNR=3061						
KK31				⇑S	**Sn**	**22 59 54.7**	**-5.4**
	comp=Z,117nm,0.4s						
SDNR	**Sundarnagar**	**6.79**	**134**	*e*P	**Pn**	**22 58 46.0**	**+1.4**
SDNR				*e*S	**Sn**	**22 59 59.0**	**-1.4**
KBK	**Karagaybulak**	**6.94**	**23**	P	**Pn**	**22 58 47.7**	**+1.2**
	SNR=60						
FRU	**Bishkek**	**7.00**	**21**	*e*PN	**Pn**	**22 58 47.0**	**-0.4**
FRU				pmax	pmax		
	comp=Z,140nm,1.4s						
ULHL	**Ulahol**	**7.07**	**32**	P	**Pn**	**22 58 49.1**	**+0.8**
	SNR=27						
CHMS	**Chumysh**	**7.19**	**21**	P	**Pn**	**22 58 50.6**	**+0.6**
	SNR=44						
USP	**Ospenovka**	**7.37**	**19**	P	**Pn**	**22 58 52.4**	**0.0**
	SNR=150						
TKM2	**Tokmak 2**	**7.39**	**26**	P	**Pn**	**22 58 53.3**	**+0.6**
	SNR=99						
TKM2	**Tokmak 2**	**7.39**	**26**	⇓P	**Pn**	**22 58 53.3**	**+0.6**
	comp=Z,9.1nm,0.8s						
TKM2				⇓S	**Sn**	**23 00 13.2**	**-1.8**
	comp=Z,30nm,1.1s						
KLP	**Kalpa**	**7.55**	**127**	*e*P	**Pn**	**22 58 56.3**	**+1.4**
KLP				*e*S	**Sn**	**23 00 17.5**	**-1.4**
KLP				AML	AML	23 00 30.5	
	comp=E,1μm,0.3s						
KLP				AML	AML	23 00 31.0	
	comp=N,1μm,0.7s						
KKR	**Kurukshetra**	**7.90**	**142**	*e*P	**Pn**	**22 59 00.8**	**+1.1**
KKR				*e*S	**Sn**	**23 00 23.2**	**-4.2**
KKR				AML	AML	23 00 44.9	
	comp=Z,135nm,0.1s						
DDI	**Dehra Dun**	**8.29**	**134**	*e*P	**Pn**	**22 59 06.5**	**+1.7**
DDI				*e*S	**Sn**	**23 00 32.0**	**-4.7**
KHET	**Khetri**	**9.11**	**153**	*e*P	**Pn**	**22 59 15.0**	**-1.0**
KHET				*e*S	**Sn**	**23 00 50.3**	**-6.3**
KHET				AML	AML	23 00 54.6	
	comp=E,188nm,0.4s						
KHET				AML	AML	23 00 54.8	
	comp=N,261nm,0.4s						
NDI	**New Delhi**	**9.16**	**145**	*e*P	**Pn**	**22 59 16.0**	**-0.6**
NDI				*e*S	**Sn**	**23 00 53.0**	**-4.8**
AYAN	**Aya Nagar**	**9.29**	**146**	*e*x	x	22 59 15.9	
AYAN				*e*S	**Sn**	**23 00 54.5**	**-6.4**
AYAN				AML	AML	23 00 57.6	
	comp=Z,128nm,0.4s						
PTH	**Pithoragarh**	**10.14**	**129**	*e*S	**Sn**	**23 01 17.1**	**-4.6**
LGTI	**Lohaghat**	**10.23**	**130**	*i* P	**Pn**	**22 59 32.5**	**+1.4**
LGTI				*e*x	x	23 01 21.3	
AJM	**Ajmer**	**10.25**	**162**	*i* P	**Pn**	**22 59 29.0**	**-2.4**
AJM				*i* S	**Sn**	**23 01 18.0**	**-6.4**
AGRA	**Agra**	**10.73**	**146**	*e*P	**Pn**	**22 59 36.5**	**-1.3**
AGRA				*e*S	**Sn**	**23 01 30.0**	**-5.9**
AGRA				AML	AML	23 01 34.1	
	comp=N,142nm,0.4s						
AGRA				AML	AML	23 01 34.5	
	comp=E,140nm,0.6s						
MK05	**Makanchi Array**	**13.32**	**35**	⇑P	**Pn**	**23 00 13.6**	**+1.6**
	comp=E,25nm,1.1s						
MKAR	**Makanchi Array**	**13.32**	**35**	P	**Pn**	**23 00 11.7**	**-0.3**
	comp=E,0.9nm,0.3s,baz=222,slow=13,SNR=34						
KOLN	**Koldanda**	**13.53**	**126**	*e*P	**Pn**	**23 00 13.4**	**-1.2**
	comp=E,52nm,0.4s						
KOLN				*e*S	**Sn**	**23 02 37.5**	**-6.1**
GKN	**Gorkha**	**14.07**	**122**	*e*P	**Pn**	**23 00 21.4**	**-0.2**
	comp=E,157nm,0.5s						
GKN				*e*S	**Sn**	**23 02 48.3**	**-8.4**
DMN	**Daman**	**14.64**	**123**	*e*P	**Pn**	**23 00 28.5**	**-0.4**
DMN				*e*S	**Sn**	**23 03 02.6**	**-7.9**
	comp=E,807nm,1.0s						
KKN	**Kakani**	**14.64**	**122**	*e*P	**Pn**	**23 00 27.9**	**-1.0**
WMQ	**Urumqi**	**14.65**	**54**	P	**Pn**	**23 00 29.0**	**0.0**
WMQ				AMB	AMB		
	comp=Z,46nm,1.0s						
PKI	**Pulchoki**	**14.87**	**122**	*e*P	**Pn**	**23 00 30.6**	**-1.2**
	comp=Z,130nm,0.6s						
PKI				*e*S	**Sn**	**23 03 07.3**	**-8.8**
PKI	**Pulchoki**	**14.87**	**122**	*e*P	**Pn**	**23 00 30.6**	**-1.2**
PKI				*e*S	**Sn**	**23 03 07.3**	**-8.8**
PKI				pmax	pmax		
	comp=Z,130nm,0.6s						
GUN	**Gumba**	**14.98**	**120**	*e*P	**Pn**	**23 00 31.8**	**-1.4**
	comp=Z,74nm,0.4s						
JBP	**Jabalpur**	**15.16**	**148**	⇑*i*P	**Pn**	**23 00 39.8**	**+4.3**
JBP				*i* x	x	23 03 14.2	
AB31	**Akbulak array**	**15.31**	**331**	⇑P	**Pn**	**23 00 33.8**	**-3.5**
	comp=Z,11nm,0.3s						
AB31				⇑S	S	23 03 10.3	-25
	comp=Z,22nm,0.5s						
KURK	**Kurchatov**	**15.33**	**18**	⇓P	**Pn**	**23 00 38.5**	**+1.0**
	comp=Z,11nm,0.8s						
KURK				⇑S	**S**	**23 03 32.7**	**-2.7**
	comp=Z,19nm,1.5s						
KURK	**Kurchatov**	**15.33**	**18**	*e*P	**Pn**	**23 00 38.7**	**+1.2**
KURK				pmax	pmax		
	comp=Z,20nm,0.8s						
KURK	**Kurchatov**	**15.33**	**18**	*e*Pn	**Pn**	**23 00 38.7**	**+1.2**
	comp=Z,20nm,0.8s						
VOSK	**Vostochnaya**	**16.39**	**359**	⇑P	**Pn**	**23 00 47.9**	**-2.7**
	comp=Z,21nm,1.5s						
ZRNK	**Zerenda**	**16.68**	**355**	⇑P	**Pn**	**23 00 52.6**	**-1.7**
	comp=Z,10nm,0.6s						
ZRNK	**Zerenda**	**16.68**	**355**	*e*P	**Pn**	**23 00 52.6**	**-1.7**
ZRNK				*e*		23 03 55.3	
ZRNK				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ZRNK	**Zerenda**	**16.68**	**355**	*e*Pn	**Pn**	**23 00 52.6**	**-1.7**
	comp=Z,7.9nm,0.3s						
ZRNK				*e*Sn	**Sn**	**23 03 55.3**	**-4.5**
BVA0	**Borovoye Array**	**16.70**	**358**	⇓P	**Pn**	**23 00 51.9**	**-2.6**
	comp=Z,3.3nm,1.0s,baz=173,slow=13,SNR=78						
BVAR	**Borovoye Array**	**16.70**	**358**	P	**Pn**	**23 00 52.3**	**-2.1**
	comp=Z,3.0nm,0.3s,baz=170,slow=13,SNR=53						
BRVK	**Borovoye**	**16.73**	**358**	*e*P	**Pn**	**23 00 52.8**	**-2.1**
BRVK				*e*		23 04 03.9	
BRVK				pmax	pmax		
	comp=Z,26nm,0.8s						
BRVK	**Borovoye**	**16.73**	**358**	*e*Pn	**Pn**	**23 00 52.8**	**-2.1**
	comp=Z,26nm,0.8s						
BRVK				*e*Sn	**Sn**	**23 04 03.9**	**+3.0**
WSAR	**Wadi Sarin**	**17.00**	**223**	P	**Pn**	**23 00 59.1**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=226,slow=16,SNR=9.2						
AKTK	**Aktyubinsk**	**17.01**	**330**	P	**Pn**	**23 00 57.5**	**-0.8**
AKTK				S	**S**	**23 03 54.3**	**-14**
AKTO	**Aktyubinsk**	**17.01**	**330**	⇑P	**Pn**	**23 00 56.9**	**-1.4**
	comp=Z,2.6nm,1.2s						
AKTO				⇑S	**S**	**23 03 49.8**	**-18**
	comp=Z,2.1nm,1.1s						
AKTO	**Aktyubinsk**	**17.01**	**330**	P	**Pn**	**23 00 57.5**	**-0.8**
	comp=Z,9.0nm,0.3s,baz=141,slow=13,SNR=69						
AKTO				S	**S**	**23 03 54.3**	**-14**
	comp=Z,1.7nm,0.3s,baz=248,slow=22,SNR=7.0						
CHKZ	**Chkalovo**	**17.34**	**359**	⇑P	**Pn**	**23 01 00.5**	**-1.8**
	comp=Z,8.5nm,0.7s						
CHKZ	**Chkalovo**	**17.34**	**359**	*e*P	**Pn**	**23 01 00.5**	**-1.8**
CHKZ				S	**S**	**23 04 14.9**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHKZ	**Chkalovo**	**17.34**	**359**	*e*P	**Pn**	**23 01 00.5**	**-1.8**
	comp=Z,7.4nm,0.9s						
CHKZ				S	**S**	**23 04 14.9**	**-0.7**
POO	**Poona**	**17.89**	**172**	*e*x	x	23 00 50.0	
LATR	**Latur**	**18.46**	**164**	*e*x	x	23 01 16.0	
HYB	**Hyderabad**	**19.93**	**159**	*i* P	**P**	**23 01 32.5**	**+2.3**
HYB				*e*		23 01 35.0	
HYB				*e*S	**S**	**23 04 59.0**	**-9.1**
HYB	**Hyderabad**	**19.93**	**159**	*e*P	**P**	**23 01 32.5**	**+2.3**
ZAL	**Zalesovo**	**19.98**	**24**	S	**S**	**23 05 05.8**	**-3.1**
	comp=Z,0.9nm,0.4s,baz=330,slow=20,SNR=3.3						
NVS	**Novosibirsk**	**20.27**	**20**	⇑*i*P	**P**	**23 01 34.5**	**+0.7**
NVS				*i* S	**S**	**23 05 13.2**	**-1.6**
NVS				pmax	pmax		
	comp=Z,32nm,1.0s						
NVS				pmax	pmax		
	comp=N,23nm,0.8s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.1s						
NVS				smax			
	comp=N,43nm,1.7s						
NVS				smax			
	comp=E,12nm,1.6s						
UMR	**Umm Al-Rimmam**	**20.82**	**258**	*e*P	**P**	**23 01 38.6**	**-1.1**
UMR				AMb	AMB	23 01 42.5	
	comp=Z,64nm,0.4s						
KBD	**Kabd**	**21.00**	**257**	*e*P	**P**	**23 01 40.6**	**-1.1**
KBD				AMb	AMB	23 01 43.9	
	comp=Z,94nm,0.5s,mb5.4						
MIB	**Mutribah**	**21.02**	**259**	*e*P	**P**	**23 01 40.6**	**-1.2**
MIB				AMb	AMB	23 01 46.2	
	comp=Z,63nm,0.7s,mb5.1						
GNI	**Garni**	**21.11**	**288**	P	**P**	**23 01 44.8**	**+2.0**
	comp=Z,27nm,0.6s,mb4.7,baz=330,slow=1.2,SNR=22						
GNI	**Garni**	**21.11**	**288**	⇑*e*P	**P**	**23 01 46.0**	**+3.2**
GNI				pmax	pmax		
	comp=Z,55nm,1.1s						
GNI	**Garni**	**21.11**	**288**	*e*P	**P**	**23 01 45.0**	**+2.2**
	comp=Z,49nm,0.9s,mb4.8						
RDF	**Al-Radifah**	**21.23**	**256**	*e*P	**P**	**23 01 42.8**	**-1.2**
RDF				AMb	AMB	23 01 43.4	
	comp=Z,29nm,0.5s,mb4.9						
ARU	**Arti**	**21.84**	**341**	⇓*i*P	**P**	**23 01 50.8**	**+0.2**
ARU				*e*PPP		23 02 24.0	
ARU				*e*S	**S**	**23 05 39.8**	**-5.1**
ARU				pmax	pmax		
	comp=Z,61nm,1.0s,mb4.9						
ARU	**Arti**	**21.84**	**341**	*e*P	**P**	**23 01 50.7**	**+0.1**
	comp=Z,6.1nm,0.6s,mb4.1						
ZEI	**Tsey**	**21.97**	**295**	*e*P	**P**	**23 01 53.0**	**+1.1**
ZEI				pmax	pmax		
	comp=Z,11nm,0.4s,mb4.5						
GTA	**Gaotai**	**22.74**	**74**	*e*P	**P**	**23 02 03.1**	**+3.2**
GTA				AMB	AMB		
	comp=Z,38nm,0.9s,mb4.7						
KIV	**Kislovodsk**	**23.02**	**298**	⇑*e*P	**P**	**23 02 05.7**	**+3.3**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.0						
KIV	**Kislovodsk**	**23.02**	**298**	*e*P	**P**	**23 02 00.1**	**-2.3**
	comp=Z,34nm,0.9s,mb4.7						
KIV				S	**S**	**23 06 08.1**	**+4.0**
ZAK	**Zakamensk**	**26.97**	**49**	*e*P	**P**	**23 02 39.9**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.8						
SONM	**Songino Array**	**28.29**	**55**	P	**P**	**23 02 52.6**	**+2.7**
	comp=Z,3.1nm,0.7s,mb4.0,baz=262,slow=8.8,SNR=12						
ULN	**Ulaanbaatar**	**28.73**	**55**	⇑*e*P	**P**	**23 02 56.1**	**+2.3**
BRTR	**Keskin Array B**	**29.65**	**288**	P	**P**	**23 03 04.5**	**+2.5**
	comp=Z,0.3nm,0.4s,baz=98,slow=7.4,SNR=3.0						
AKASG	**Malin Array Be**	**33.18**	**309**	P	**P**	**23 03 32.1**	**-0.9**
	comp=Z,1.1nm,0.4s,mb4.0,baz=83,slow=6.8,SNR=9.2						
AKASG				pP	pP	23 03 59.0	+0.5
	comp=Z,1.6nm,0.6s,baz=87,slow=7.6,SNR=2.5						
MLR	**Muntele Rosu**	**35.01**	**299**	P	**P**	**23 03 49.6**	**+0.8**
	comp=Z,8.2nm,1.0s,mb4.5,baz=76,slow=4.5,SNR=8.3						
BOD	**Bodaibo**	**35.37**	**39**	*e*P	**P**	**23 03 52.3**	**+0.5**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
JOF	**Joensuu**	**36.10**	**330**	*e*p	**P**	**23 03 58.4**	**+0.3**
	comp=Z,5.3nm,0.4s,mb4.8						
KWP	**Kalwaria**	**37.25**	**306**	*e*P	**P**	**23 04 09.9**	**+2.1**
KWP				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KWP	**Kalwaria**	**37.25**	**306**	*e*P	**P**	**23 04 09.9**	**+2.1**
	comp=Z,4.4nm,0.8s,mb4.4						
FINES	**FINESS Array B**	**37.72**	**326**	P	**P**	**23 04 11.8**	**0.0**
	comp=Z,1.5nm,0.5s,mb4.1,baz=115,slow=10,SNR=21						
FINES				pP	pP	23 04 39.0	+1.2
	comp=Z,3.2nm,0.7s,baz=116,slow=13,SNR=4.7						
FINES	**FINESS Array B**	**37.72**	**326**	P	**P**	**23 04 11.8**	**0.0**
FINES				pP	pP	23 04 39.0	+1.2
KAF	**Kangasniemi**	**37.86**	**327**	*e*p	**P**	**23 04 13.5**	**+0.5**
GVD	**Gavdhos**	**38.06**	**282**	*e*P	**P**	**23 04 12.3**	**-2.4**
PSZ	**Piszkesteto**	**39.11**	**304**	P	**P**	**23 04 21.2**	**-2.2**
NJ2	**Nanjing**	**39.32**	**82**	*e*P	**P**	**23 04 30.0**	**+4.8**
NJ2				PP	PP	23 06 07.3	+10
NJ2				S	**S**	**23 10 22.0**	**+4.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				LR	LR		
	comp=N,3μm,22.0s						
NJ2				LR	LR		
	comp=E,5μm,22.0s						
NJ2				LR	LR		
	comp=Z,560nm,30.0s						
KEV	**Kevo**	**41.02**	**338**	*e*p	**P**	**23 04 39.1**	**-0.1**
	comp=Z,2.0nm,0.4s,mb4.3						
KEV	**Kevo**	**41.02**	**338**	*e*P	**P**	**23 04 39.6**	**+0.4**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
KEV	**Kevo**	**41.02**	**338**	*e*P	**P**	**23 04 39.5**	**+0.4**
	comp=Z,2.0nm,0.4s,mb4.3						
VRAC	**Vranov**	**41.24**	**306**	P	**P**	**23 04 42.0**	**+1.1**
	comp=Z,2.8nm,0.9s,mb4.1,baz=92,slow=8.9,SNR=4.1						
ARCES	**ARCESS Array B**	**41.36**	**338**	P	**P**	**23 04 42.4**	**+0.4**
	comp=Z,2.1nm,0.5s,mb4.3,baz=115,slow=8.2,SNR=51						
ARCES				pP	pP	23 05 09.2	+0.9
	comp=Z,3.8nm,0.8s,baz=121,slow=8.7,SNR=3.3						
TIP	**Timpagrande**	**42.61**	**291**	*e*P	**P**	**23 04 50.6**	**-1.5**
HFS	**Hagfors**	**43.30**	**322**	P	**P**	**23 04 57.3**	**-0.4**
	comp=Z,5.6nm,0.6s,mb4.5,baz=89,slow=10,SNR=24						
HFS				pP	pP	23 05 25.2	+0.9
	comp=Z,4.0nm,0.5s,baz=95,slow=8.9,SNR=3.7						
YAK	**Yakutsk**	**44.00**	**35**	⇑*e*P	**P**	**23 05 04.6**	**+1.3**
YAK				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
NB2	**NORSAR Subarra**	**44.62**	**323**	P	**P**	**23 05 07.7**	**-0.5**
	comp=Z,7.6nm,0.9s,mb4.4,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.62**	**323**	P	**P**	**23 05 07.5**	**-0.7**
	comp=Z,4.6nm,0.7s,mb4.3,baz=96,slow=7.8,SNR=23						
NOA				pP	pP	23 05 35.7	+0.8
	comp=Z,1.4nm,0.5s,baz=96,slow=7.8,SNR=2.4						
NOA	**NORSAR Array B**	**44.62**	**323**	P	**P**	**23 05 07.5**	**-0.7**
NOA				pP	pP	23 05 35.7	+0.8
DAVOX	**Davos**	**46.00**	**303**	P	**P**	**23 05 18.9**	**-0.2**
	comp=Z,1.7nm,0.7s,mb3.9,baz=101,slow=16,SNR=2.9						
DAVOS	**Davos**	**46.04**	**303**	P	**P**	**23 05 18.9**	**-0.6**
CDF	**Champ du Feu**	**47.45**	**306**	*e*P	**P**	**23 05 31.9**	**+1.5**
LPG	**La Plagne**	**48.38**	**302**	*e*P	**P**	**23 05 38.4**	**+0.8**
	comp=Z,7.9nm,1.0s,mb4.2						
LPG	**La Plagne**	**48.38**	**302**	*e*P	**P**	**23 05 38.4**	**+0.8**
LPG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
LPG	**La Plagne**	**48.38**	**302**	*e*P	**P**	**23 05 38.4**	**+0.8**
	comp=Z,4.0nm,1.0s,mb4.2						
LPL	**La Plagne**	**48.39**	**302**	*e*P	**P**	**23 05 38.5**	**+0.8**
MBDF	**Montbardon**	**48.55**	**301**	*e*P	**P**	**23 05 39.7**	**+0.8**
	comp=Z,6.1nm,0.8s,mb4.3						
MBDF	**Montbardon**	**48.55**	**301**	*e*P	**P**	**23 05 39.7**	**+0.8**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MBDF	**Montbardon**	**48.55**	**301**	*e*P	**P**	**23 05 39.7**	**+0.8**
	comp=Z,3.0nm,0.8s,mb4.3						
CABF	**La Chapelle**	**48.59**	**303**	*e*P	**P**	**23 05 40.6**	**+1.4**
	comp=Z,43nm,1.6s,mb4.8						
CABF	**La Chapelle**	**48.59**	**303**	*e*P	**P**	**23 05 40.6**	**+1.4**
CABF				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.8						
CABF	**La Chapelle**	**48.59**	**303**	*e*P	**P**	**23 05 40.6**	**+1.4**
	comp=Z,22nm,1.6s,mb4.8						
BAIF	**Baives**	**49.13**	**308**	*e*P	**P**	**23 05 44.5**	**+1.2**
KEST	**Kesra**	**49.25**	**289**	P	**P**	**23 05 43.5**	**-0.8**
	comp=Z,1.6nm,0.9s,mb4.0,baz=224,slow=12,SNR=5.2						
LOR	**Lormes**	**49.93**	**305**	*e*P	**P**	**23 05 50.3**	**+0.9**
SSF	**Saint Saulge**	**50.22**	**305**	*e*P	**P**	**23 05 52.6**	**+1.1**
AVF	**Avril sur Loir**	**50.38**	**304**	*e*P	**P**	**23 05 52.5**	**-0.3**
	comp=Z,4.1nm,0.8s,mb4.1						
AVF	**Avril sur Loir**	**50.38**	**304**	*e*P	**P**	**23 05 52.5**	**-0.3**
	comp=Z,2.0nm,0.8s,mb4.1						
TCF	**Toulx Ste Croi**	**51.27**	**304**	*e*P	**P**	**23 06 00.6**	**+1.1**
MTLF	**Montolieu**	**52.08**	**300**	*e*P	**P**	**23 06 05.5**	**0.0**
	comp=Z,10nm,1.1s,mb4.5						
MTLF	**Montolieu**	**52.08**	**300**	*e*P	**P**	**23 06 05.5**	**0.0**
MTLF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
MTLF	**Montolieu**	**52.08**	**300**	*e*P	**P**	**23 06 05.5**	**0.0**
	comp=Z,5.3nm,1.1s,mb4.5						
EKA	**Eskdalemuir Ar**	**52.53**	**316**	P	**P**	**23 06 06.9**	**-1.9**
	comp=Z,1.8nm,1.0s,mb4.1,baz=73,slow=9.7,SNR=3.5						
YSS	**Yuzh-Sakhalins**	**52.78**	**55**	⇑*e*P	**P**	**23 06 13.8**	**+3.2**
YSS				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
MAJO	**Matsushiro**	**52.85**	**68**	*e*P	**P**	**23 06 14.5**	**+3.4**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
MAJO	**Matsushiro**	**52.85**	**68**	*e*P	**P**	**23 06 14.5**	**+3.4**

	comp=Z,4.3nm,0.4s,mb4.8						
MJAR	**Matsushiro Arr**	**52.85**	**68**	P	**P**	**23 06 13.7**	**+2.6**
	comp=Z,2.3nm,0.7s,mb4.3,baz=292,slow=9.1,SNR=6.9						
SUMG	**Summit**	**61.27**	**341**	eP	**P**	**23 07 12.6**	**+2.2**
	comp=Z,2.6nm,0.4s,mb4.6						
LSZ	**Lusaka**	**65.47**	**226**	P	**P**	**23 07 36.4**	**-1.7**
	comp=Z,1.8nm,0.7s,mb4.0,baz=34,slow=7.2,SNR=6.2						
TORD	**Torodi Ar. Bea**	**65.89**	**269**	P	**P**	**23 07 38.5**	**-2.3**
	comp=Z,3.8nm,0.8s,mb4.3,baz=50,slow=5.9,SNR=50						
TSUM	**Tsumeb**	**74.95**	**232**	P	**P**	**23 08 34.8**	**-1.1**
	comp=Z,1.1nm,0.9s,mb3.6,baz=36,slow=8.7,SNR=5.0						
TSUM	**Tsumeb**	**74.95**	**232**	P	**P**	**23 08 34.8**	**-1.1**
BOSA	**Boshof**	**77.73**	**220**	P	**P**	**23 08 51.1**	**-0.5**
	comp=Z,5.9nm,0.7s,mb4.4,baz=31,slow=7.2,SNR=12						
YKA	**Yellowknife Ar**	**81.40**	**3**	P	**P**	**23 09 11.2**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.0,baz=350,slow=5.4,SNR=12						
YKA				pP	pP	23 09 42.4	+1.5
	comp=Z,1.9nm,0.6s,baz=351,slow=5.5,SNR=4.8						
YKA	**Yellowknife Ar**	**81.40**	**3**	P	**P**	**23 09 11.2**	**-0.2**
YKA				pP	pP	23 09 42.4	+1.5
WRAB	**Tennant Creek**	**81.76**	**122**	eP	**P**	**23 09 13.8**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	**81.76**	**122**	eP	**P**	**23 09 13.8**	**+0.4**
	comp=Z,3.1nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**84.02**	**125**	P	**P**	**23 09 25.2**	**+0.3**
	comp=Z,2.4nm,0.7s,mb4.1,baz=309,slow=4.9,SNR=14						
BOZ	**Bozeman (W)**	**98.35**	**2**	eP	**P**	**23 10 31.9**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb5.1						
BOZ	**Bozeman (W)**	**98.35**	**2**	eP	**P**	**23 10 31.9**	**-0.3**
	comp=Z,3.5nm,0.6s,mb5.1						

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*ISCJB **07** 23:08:19.4±0.8, 2127S±006×684W±02, h120km±12km, mb3.6/1, Error ellipse: s-maj=24.9km s-min=9.1km az=11.4*

*IDC **07** 23:08:20.0±2.4, 2125S×6845W, h114km±22km, mb3.4/2, mb1 3.5/4, mb1mx3.3/17, mbtmp3.9/4, Error ellipse: s-maj=50.6km s-min=23.2km az=139.0*

*NEIC **07** 23:08:20.5±0.9, 2127S×6838W, h114km±13km, mb3.5/1, Error ellipse: s-maj=20.9km s-min=10.8km az=104.0*

ISC 07 23:08:20.8±0.8**, 2128S**±006×**684W**±02**, h111**km±12km**, n10, σ0ˢ76**/11**, mb3.6**/1**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.43**	**201**	P	**Pn**	**23 08 46.5**	**-0.3**
	baz=10,slow=11						
LVC				S	**Sn**	**23 09 06.4**	**0.0**
	112nm,0.3s,baz=274,slow=24,SNR=78						
LPAZ	**La Paz**	**4.97**	**3**	ePn	**Pn**	**23 09 34.6**	**+1.4**
LPAZ				Sn	**Sn**	**23 10 29.1**	**-0.3**
ARE	**Arequipa**	**5.63**	**328**	eP	**Pn**	**23 09 36.0**	**-6.1**
SIV	**San Ignacio**	**8.68**	**54**	P	**Pn**	**23 10 22.9**	**-0.7**
	2.0nm,0.3s,baz=255,slow=11,SNR=48						
CPUP	**Villa Florida**	**11.28**	**119**	P	**Pn**	**23 10 58.6**	**0.0**
	0.3nm,0.3s,baz=271,slow=11,SNR=7.3						
SAML	**Samuel**	**13.23**	**23**	ePn	**Pn**	**23 11 23.6**	**-0.7**
	0.9nm,0.5s						
PLCA	**Paso Flores**	**19.48**	**185**	P	**P**	**23 12 39.2**	**+0.2**
BDFB	**Brasilia**	**20.09**	**77**	P	**P**	**23 12 47.0**	**+1.4**
	1.4nm,0.4s,baz=253,slow=9.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**76.80**	**70**	P	**P**	**23 19 59.4**	**-0.9**
	0.7nm,0.5s,mb3.6,baz=254,slow=5.4,SNR=16						
MKAR	**Makanchi Array**	**145.15**	**36**	PKPbc	PKPbc	23 27 44.0	-1.0
	1.2nm,0.6s,baz=325,slow=4.2,SNR=12						

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*MDD **07** 23:22:47.9±0.8, 3694N×847W, h70km±5km, mb3.9/37, Error ellipse: s-maj=6.5km s-min=3.2km az=34.0, PRXIMO*

*NEIC **07** 23:22:48.4, 3692N×851W, h19km, ML2.8(LIS), MN3.1(MDD), After MDD.*

*IGIL **07** 23:22:49.1, 3690N×840W, h21km, ML3.0*

*ISCJB **07** 23:22:50.0±0.5, 37.16N±003×8.18W±003, h20km, Error ellipse: s-maj=4.8km s-min=2.2km az=63.4*

*INMG **07** 23:22:49.3±1.1, 3689N×848W, h20km±3km, ML2.8, Error ellipse: s-maj=4.7km s-min=1.6km az=54.0*

*CSEM **07** 23:22:50.0±0.2, 37.10N×828W, h30km, ML2.8, Error ellipse: s-maj=4.4km s-min=1.8km az=38.0*

ISC 07 23:22:49.7±0.5**, 3704N**±003×**831W**±003**, h20**km**, n106, σ1ˢ11**/200**, 8C, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORF	**Marmelete**	**0.38**	**315**	eP	**Pb**	**23 22 58.2**	**+0.5**
MORF				eS	**Sb**	**23 23 04.0**	**+0.8**
MORF				eS	**Sb**	**23 23 04.0**	**+0.8**
MORF				AML	AML	23 23 06.1	
	comp=E,1μm,0.1s						
MORF	**Marmelete**	**0.38**	**315**	eP	**Pb**	**23 22 58.2**	**+0.5**
MORF				eS	**Sb**	**23 23 04.0**	**+0.9**
PTEO	**Sao Teotonio**	**0.60**	**327**	i P	**Pb**	**23 23 01.9**	**+0.4**
PTEO				eS	**Sb**	**23 23 11.4**	**+1.8**
PTEO							
	comp=E,216nm,0.1s						
EGRO	**El Granado**	**0.83**	**53**	⇑P	**Pb**	**23 23 06.7**	**+1.4**
	comp=E,76nm,0.1s,SNR=18						
EGRO				S	**Sb**	**23 23 20.5**	**+4.5**
	comp=E,144nm,0.1s,SNR=16						
EGRO	**El Granado**	**0.83**	**53**	⇑P	**Pb**	**23 23 07.0**	**+1.7**
EGRO				S	**Sb**	**23 23 20.5**	**+4.5**
EGRO	**El Granado**	**0.83**	**53**	P	**Pb**	**23 23 07.0**	**+1.7**
	comp=E,76nm,0.1s,SNR=18						
EGRO				S	**Sb**	**23 23 20.5**	**+4.5**
	comp=E,144nm,0.1s,SNR=16						
ERIP	**Rio Piedras**	**0.91**	**68**	⇑P	**Pb**	**23 23 07.7**	**+0.9**
	comp=E,116nm,0.1s,SNR=18						
ERIP				S	**Sb**	**23 23 21.7**	**+3.3**
	comp=E,178nm,0.1s,SNR=7.9						
ERIP	**Rio Piedras**	**0.91**	**68**	⇑P	**Pb**	**23 23 07.8**	**+1.1**
ERIP				S	**Sb**	**23 23 21.7**	**+3.3**
ERIP	**Rio Piedras**	**0.91**	**68**	P	**Pb**	**23 23 07.8**	**+1.1**
	comp=E,116nm,0.1s,SNR=18						
ERIP				S	**Sb**	**23 23 21.7**	**+3.3**
	comp=E,178nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**1.05**	**20**	eP	**Pn**	**23 23 09.7**	**+0.5**
PBEJ				eS	**Sb**	**23 23 25.5**	**+3.1**
PBEJ							
	comp=E,55nm,0.1s						
PBEJ	**Beja**	**1.05**	**20**	eP	**Pn**	**23 23 09.7**	**+0.5**
PBEJ				eS	**Sb**	**23 23 25.5**	**+3.1**
	comp=E,55nm,0.1s						
EMIN	**Mina Concepcio**	**1.50**	**60**	⇑P	**Pn**	**23 23 15.5**	**+0.2**
	comp=E,2.2nm,0.1s,SNR=18						
EMIN				S	**Sn**	**23 23 36.2**	**+1.9**
	comp=E,13nm,0.1s						
EMIN	**Mina Concepcio**	**1.50**	**60**	⇑P	**Pn**	**23 23 15.7**	**+0.4**
EMIN				S	**Sn**	**23 23 36.1**	**+1.9**
EMIN	**Mina Concepcio**	**1.50**	**60**	P	**Pn**	**23 23 15.7**	**+0.3**
	comp=E,2.2nm,0.1s,SNR=18						
EMIN				S	**Sn**	**23 23 36.2**	**+1.9**
	comp=E,13nm,0.1s						
LIS	**Lisbon**	**1.80**	**339**	eP	**Pn**	**23 23 18.9**	**-0.6**
LIS				eS	**Sn**	**23 23 40.3**	**-1.5**
LIS				eS	**Sn**	**23 23 40.3**	**-1.5**
LIS				AML	AML	23 23 43.6	
	comp=N,118nm,0.3s						
LIS	**Lisbon**	**1.80**	**339**	eP	**Pn**	**23 23 18.9**	**-0.6**
LIS				eS	**Sn**	**23 23 40.3**	**-1.5**
PESTR	**Estremoz**	**1.91**	**17**	ePn	**Pn**	**23 23 21.4**	**+0.3**
PESTR				eSn	**Sn**	**23 23 47.4**	**+2.8**
PESTR							
	comp=N,14nm,0.4s						
PLOU	**Loures**	**1.96**	**341**	ePn	**Pn**	**23 23 21.2**	**-0.5**
PLOU				eSn	**Sn**	**23 23 45.8**	**+0.1**
PLOU							
	comp=N,50nm,0.2s						
PLOU	**Loures**	**1.96**	**341**	ePn	**Pn**	**23 23 21.2**	**-0.5**
PLOU				eSn	**Sn**	**23 23 45.8**	**+0.1**
ESPR	**Espera**	**1.98**	**94**	P	**Pn**	**23 23 21.8**	**-0.1**
	comp=N,20nm,0.1s,SNR=72						
ESPR				S	**Sn**	**23 23 46.1**	**0.0**
	comp=N,96nm,0.2s,SNR=6.8						
ESPR	**Espera**	**1.98**	**94**	P	**Pn**	**23 23 21.8**	**-0.2**
	comp=N,20nm,0.1s,SNR=72						
ESPR				S	**Sn**	**23 23 46.1**	**0.0**
	comp=N,96nm,0.2s,SNR=6.8						
EBAD	**Badajoz**	**2.00**	**31**	⇑P	**Pn**	**23 23 22.6**	**+0.3**
	comp=N,22nm,0.1s,SNR=18						
EBAD				S	**Sn**	**23 23 48.6**	**+1.9**
	comp=N,23nm,0.1s,SNR=6.2						
EBAD	**Badajoz**	**2.00**	**31**	⇑P	**Pn**	**23 23 22.6**	**+0.3**
EBAD				S	**Sn**	**23 23 49.0**	**+2.3**
EBAD	**Badajoz**	**2.00**	**31**	P	**Pn**	**23 23 22.6**	**+0.3**
	comp=N,22nm,0.1s,SNR=18						
EBAD				S	**Sn**	**23 23 49.0**	**+2.3**
	comp=N,23nm,0.1s,SNR=6.2						
PMAFR	**Mafra**	**2.06**	**339**	ePn	**Pn**	**23 23 22.5**	**-0.6**
PMAFR				eSn	**Sn**	**23 23 47.0**	**-1.2**
ALMR	**Almeirim**	**2.12**	**354**	eP	**Pn**	**23 23 23.4**	**-0.6**
ALMR				eS	**Sn**	**23 23 48.6**	**-1.2**
ALMR				eS	**Sn**	**23 23 48.6**	**-1.2**
ALMR				AML	AML	23 24 03.6	
	comp=N,82nm,0.3s						
ALMR	**Almeirim**	**2.12**	**354**	eP	**Pn**	**23 23 23.4**	**-0.6**
ALMR				eS	**Sn**	**23 23 48.6**	**-1.2**
EJIF	**Jimena Fronter**	**2.36**	**104**	P	**Pn**	**23 23 27.3**	**+0.1**
	comp=N,2.6nm,0.2s,SNR=16						
EJIF				S	**Sn**	**23 23 53.6**	**-1.9**
	comp=N,1.7nm,0.2s,SNR=4.0						
EJIF	**Jimena Fronter**	**2.36**	**104**	P	**Pn**	**23 23 27.3**	**+0.1**
EJIF				S	**Sn**	**23 24 00.3**	**+4.8**
PTOM	**Tomar**	**2.58**	**358**	i Pn	**Pn**	**23 23 30.3**	**+0.1**
PTOM				eSn	**Sn**	**23 24 00.4**	**-0.5**
PTOM							
	comp=N,93nm,0.1s						
PCBR	**Castelo Branco**	**2.87**	**13**	ePn	**Pn**	**23 23 34.5**	**+0.2**
PCBR				eSn	**Sn**	**23 24 08.6**	**+0.3**
PCBR							
	comp=N,21nm,0.1s						
EMIJ	**Mijas**	**2.88**	**98**	P	**Pn**	**23 23 33.9**	**-0.5**
	comp=N,1.4nm,0.1s,SNR=13						
EMIJ				S	**Sn**	**23 24 08.0**	**-0.5**
	comp=N,1.3nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**3.17**	**68**	P	**Pn**	**23 23 38.9**	**+0.5**
	comp=N,7.5nm,0.1s,SNR=73						
EADA				S	**Sn**	**23 24 15.0**	**-0.7**
	comp=N,27nm,0.1s						
EADA	**Adamuz**	**3.17**	**68**	P	**Pn**	**23 23 38.9**	**+0.5**
	comp=N,7.5nm,0.1s,SNR=73						
EADA				S	**Sn**	**23 24 15.0**	**-0.7**
	comp=N,27nm,0.1s						
ELUQ	**Luque**	**3.27**	**80**	P	**Pn**	**23 23 40.0**	**+0.3**
	comp=N,2.4nm,0.1s,SNR=4.0						
ELUQ				S	**Sn**	**23 24 17.3**	**-0.7**
	comp=N,16nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**3.33**	**87**	S	**Sn**	**23 24 20.2**	**+0.7**
	comp=N,3.0nm,0.2s,SNR=4.7						
MTE	**Manteigas**	**3.41**	**10**	ePn	**Pn**	**23 23 41.9**	**+0.2**
MTE				eSn	**Sn**	**23 24 21.7**	**+0.2**
MTE							
	comp=N,17nm,0.2s						
EPLA	**Plasencia**	**3.49**	**29**	P	**Pn**	**23 23 43.1**	**+0.3**
	comp=N,4.3nm,0.1s,SNR=15						
EPLA				S	**Sn**	**23 24 23.4**	**-0.1**
	comp=N,8.8nm,0.1s						
EPLA	**Plasencia**	**3.49**	**29**	P	**Pn**	**23 23 43.2**	**+0.4**
EPLA				S	**Sn**	**23 24 23.4**	**-0.1**
EPLA	**Plasencia**	**3.49**	**29**	P	**Pn**	**23 23 43.2**	**+0.4**
	comp=N,4.3nm,0.1s,SNR=15						
EPLA				S	**Sn**	**23 24 23.5**	**0.0**
	comp=N,8.8nm,0.1s						
PVIS	**Viseu**	**3.69**	**5**	ePn	**Pn**	**23 23 46.0**	**+0.5**
PVIS				eSn	**Sn**	**23 24 27.6**	**-0.7**
PVIS							
	comp=N,12nm,0.1s						
EBAN	**Banos Encina**	**3.77**	**71**	P	**Pn**	**23 23 46.7**	**+0.2**
	comp=N,8.7nm,0.1s,SNR=33						
EBAN				S	**Sn**	**23 24 28.3**	**-2.1**
	comp=N,8.4nm,0.1s						
ECOG	**Cogollos-Vega**	**3.80**	**85**	P	**Pn**	**23 23 49.0**	**+2.0**
	comp=N,1.7nm,0.1s,SNR=4.0						
ECOG				S	**Sn**	**23 24 31.5**	**+0.4**
	comp=N,2.7nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**3.80**	**85**	P	**Pn**	**23 23 49.1**	**+2.1**
ECOG				S	**Sn**	**23 24 31.5**	**+0.4**
ECOG	**Cogollos-Vega**	**3.80**	**85**	P	**Pn**	**23 23 49.1**	**+2.1**
	comp=N,1.7nm,0.1s,SNR=4.0						
ECOG				S	**Sn**	**23 24 31.5**	**+0.4**
	comp=N,2.7nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**3.81**	**92**	P	**Pn**	**23 23 47.2**	**0.0**
	comp=N,0.5nm,0.1s,SNR=4.0						
EGUA				S	**Sn**	**23 24 31.3**	**-0.1**
	comp=N,0.6nm,0.2s,SNR=4.0						
EGUA	**Guajares**	**3.81**	**92**	P	**Pn**	**23 23 48.5**	**+1.4**
EGUA				S	**Sn**	**23 24 31.3**	**-0.1**
EGUA	**Guajares**	**3.81**	**92**	P	**Pn**	**23 23 48.5**	**+1.3**
	comp=N,0.5nm,0.1s,SNR=4.0						
EGUA				S	**Sn**	**23 24 31.3**	**-0.1**
	comp=N,0.6nm,0.2s,SNR=4.0						
EQUE	**Quentar**	**3.90**	**86**	P	**Pn**	**23 23 49.1**	**+0.7**
	comp=N,1.4nm,0.1s,SNR=28						
EQUE				S	**Sn**	**23 24 33.1**	**-0.4**
	comp=N,5.1nm,0.2s,SNR=4.5						
EQUE	**Quentar**	**3.90**	**86**	P	**Pn**	**23 23 49.3**	**+0.9**
	comp=N,1.4nm,0.1s,SNR=28						
EQUE				S	**Sn**	**23 24 33.1**	**-0.5**
	comp=N,5.1nm,0.2s,SNR=4.5						
EQES	**Quesada**	**4.24**	**78**	P	**Pn**	**23 23 53.0**	**-0.1**
	comp=N,1.9nm,0.1s,SNR=42						
EQES				S	**Sn**	**23 24 42.2**	**+0.1**
	comp=N,12nm,0.1s,SNR=17						
EQES	**Quesada**	**4.24**	**78**	P	**Pn**	**23 23 53.0**	**-0.1**
EQES				S	**Sn**	**23 24 41.1**	**-1.0**
EQES	**Quesada**	**4.24**	**78**	P	**Pn**	**23 23 53.0**	**-0.1**
	comp=N,1.9nm,0.1s,SNR=42						
EQES				S	**Sn**	**23 24 41.1**	**-0.9**
	comp=N,12nm,0.1s,SNR=17						
PVRL	**Vila Real**	**4.26**	**6**	ePn	**Pn**	**23 23 53.6**	**+0.3**
PVRL				eSn	**Sn**	**23 24 40.9**	**-1.5**
PVRL							
	comp=N,26nm,0.2s						
ESDC	**Sonseca Array**	**4.32**	**51**	P	**Pn**	**23 23 54.4**	**+0.3**
	comp=N,11nm,0.1s,baz=237,slow=13,SNR=7.9						
ESDC				S	**Sn**	**23 24 44.8**	**+1.0**
	comp=N,5.0nm,0.2s,baz=238,slow=23,SNR=22						
ESDC	**Sonseca Array**	**4.32**	**51**	P	**Pn**	**23 23 54.4**	**+0.3**
	comp=N,11nm,0.1s,SNR=7.9						
ESLA	**Sonseca Array**	**4.32**	**51**	ePn	**Pn**	**23 23 54.7**	**+0.5**
ESLA				eSn	**Sn**	**23 24 45.8**	**+2.0**
ESLA	**Sonseca Array**	**4.32**	**51**	ePn	**Pn**	**23 23 54.7**	**+0.6**
EBER	**Berja**	**4.35**	**90**	P	**Pn**	**23 23 55.6**	**+1.1**
	comp=N,1.1nm,0.1s,SNR=12						
EBER				S	**Sn**	**23 24 46.8**	**+2.2**
	comp=N,2.5nm,0.2s						
EBER	**Berja**	**4.35**	**90**	P	**Pn**	**23 23 55.8**	**+1.2**
EBER				S	**Sn**	**23 24 46.8**	**+2.2**
EBER	**Berja**	**4.35**	**90**	P	**Pn**	**23 23 55.8**	**+1.3**
	comp=N,1.1nm,0.1s,SNR=12						
EBER				S	**Sn**	**23 24 46.8**	**+2.2**
	comp=N,2.5nm,0.2s						
MIF	**Mishlifen**	**4.41**	**144**	P	**Pn**	**23 23 52.0**	**-3.5**
MIF				S	**Sn**	**23 24 41.0**	**-5.3**
MIF	**Mishlifen**	**4.41**	**144**	i P	**Pn**	**23 23 52.0**	**-3.5**
EHUE	**Huescar**	**4.62**	**79**	P	**Pn**	**23 23 58.2**	**-0.1**
	comp=N,1.0nm,0.1s,SNR=18						
EHUE				S	**Sn**	**23 24 50.7**	**-0.7**
	comp=N,9.4nm,0.2s						
EHUE	**Huescar**	**4.62**	**79**	P	**Pn**	**23 23 58.2**	**-0.1**
EHUE				S	**Sn**	**23 24 50.3**	**-1.0**
EHUE	**Huescar**	**4.62**	**79**	P	**Pn**	**23 23 58.2**	**-0.1**
	comp=N,1.0nm,0.1s,SNR=18						
EHUE				S	**Sn**	**23 24 50.3**	**-1.0**
	comp=N,9.4nm,0.2s						
PCAB	**Cabril**	**4.67**	**3**	ePn	**Pn**	**23 23 58.9**	**-0.1**
PCAB				eSn	**Sn**	**23 24 50.7**	**-1.9**
PCAB							
	comp=N,6.8nm,0.1s						
CZD	**Col de Zad**	**4.81**	**145**	P	**Pn**	**23 23 57.0**	**-4.0**
CZD				S	**Sn**	**23 24 48.0**	**-8.1**
CZD	**Col de Zad**	**4.81**	**145**	i P	**Pn**	**23 23 57.0**	**-4.0**
ELOB	**Lobios**	**4.83**	**2**	P	**Pn**	**23 24 00.8**	**-0.3**
	comp=N,1.7nm,0.1s,SNR=28						
ELOB				S	**Sn**	**23 24 54.1**	**-2.3**
	comp=N,16nm,0.4s						
ELOB	**Lobios**	**4.83**	**2**	P	**Pn**	**23 24 00.8**	**-0.3**
ELOB				S	**Sn**	**23 24 53.8**	**-2.7**
ELOB	**Lobios**	**4.83**	**2**	P	**Pn**	**23 24 00.9**	**-0.2**
ELOB				S	**Sn**	**23 24 53.8**	**-2.6**
	comp=N,16nm,0.4s						
GUD	**Guadarrama**	**4.85**	**41**	P	**Pn**	**23 24 02.2**	**+0.8**
	comp=N,1.7nm,0.1s,SNR=9.2						
GUD				S	**Sn**	**23 24 57.8**	**+0.8**
	comp=N,3.0nm,0.2s						
EVIA	**Vianos**	**4.87**	**69**	P	**Pn**	**23 24 01.5**	**-0.2**
	comp=N,2.6nm,0.1s,SNR=13						
EVIA				S	**Sn**	**23 24 54.6**	**-2.9**
	comp=N,4.6nm,0.1s						
PBRG	**Braganca**	**4.91**	**14**	ePn	**Pn**	**23 24 02.4**	**+0.1**
PBRG				eSn	**Sn**	**23 24 57.5**	**-1.1**
PBRG							
	comp=N,8.8nm,0.1s						
ECAL	**Calabor**	**5.05**	**14**	P	**Pn**	**23 24 04.6**	**+0.4**
	comp=N,1.9nm,0.1s,SNR=10						
ECAL				S	**Sn**	**23 25 00.9**	**-0.9**
	comp=N,3.4nm,0.1s,SNR=5.6						
ECAL	**Calabor**	**5.05**	**14**	P	**Pn**	**23 24 04.6**	**+0.4**
ECAL				S	**Sn**	**23 25 00.9**	**-1.0**
ECAL	**Calabor**	**5.05**	**14**	P	**Pn**	**23 24 04.6**	**+0.4**
	comp=N,1.9nm,0.1s,SNR=10						
ECAL				S	**Sn**	**23 25 00.9**	**-1.0**
	comp=N,3.4nm,0.1s,SNR=5.6						
EZAM	**Zamans**	**5.11**	**357**	P	**Pn**	**23 24 05.4**	**+0.3**
	comp=N,2.1nm,0.2s,SNR=4.0						
EZAM				S	**Sn**	**23 24 59.4**	**-4.1**
	comp=N,4.8nm,0.2s,SNR=4.0						
ETOB	**Tobarra**	**5.59**	**71**	P	**Pn**	**23 24 11.2**	**-0.4**
	comp=N,0.8nm,0.1s,SNR=23						
ETOB				S	**Sn**	**23 25 13.7**	**-1.6**
	comp=N,3.2nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**5.59**	**71**	P	**Pn**	**23 24 11.2**	**-0.4**
	comp=N,0.8nm,0.1s,SNR=23						
ETOB				S	**Sn**	**23 25 13.7**	**-1.6**
	comp=N,3.2nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**5.69**	**80**	P	**Pn**	**23 24 12.9**	**0.0**
	comp=N,0.6nm,0.1s,SNR=7.9						
EMUR				S	**Sn**	**23 25 15.3**	**-2.3**
	comp=N,2.9nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**5.69**	**80**	P	**Pn**	**23 24 12.9**	**0.0**
	comp=N,0.6nm,0.1s,SNR=7.9						
EMUR				S	**Sn**	**23 25 15.3**	**-2.3**
	comp=N,2.9nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**5.93**	**355**	P	**Pn**	**23 24 15.5**	**-0.7**
	comp=N,2.6nm,0.1s,SNR=4.0						
EMAZ				S	**Sn**	**23 25 19.4**	**-4.1**
	comp=N,3.8nm,0.1s,SNR=4.0						
EMAZ	**Mazaricos**	**5.93**	**355**	P	**Pn**	**23 24 15.5**	**-0.7**
	comp=N,2.6nm,0.1s,SNR=4.0						
ECHE	**Chera**	**6.31**	**64**	P	**Pn**	**23 24 20.9**	**-0.7**
	comp=N,0.2nm,0.1s,SNR=4.0						
ECHE	**Chera**	**6.31**	**64**	P	**Pn**	**23 24 20.9**	**-0.7**
ECHE				S	**Sn**	**23 25 32.5**	**-0.6**
ECHE	**Chera**	**6.31**	**64**	P	**Pn**	**23 24 20.9**	**-0.7**
	comp=N,0.2nm,0.1s,SNR=4.0						
ECHE				S	**Sn**	**23 25 32.5**	**-0.6**
	comp=N,0.5nm,0.1s,SNR=4.0						
EPON	**Pontenova**	**6.34**	**8**	P	**Pn**	**23 24 21.7**	**-0.3**
	comp=N,0.1nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**23 25 31.2**	**-2.7**
	comp=N,0.9nm,0.2s,SNR=4.0						
EBEN	**Beniarda**	**6.61**	**73**	P	**Pn**	**23 24 25.0**	**-0.6**
	comp=N,0.5nm,0.1s,SNR=7.7						
EBEN				S	**Sn**	**23 25 38.4**	**-2.0**
	comp=N,2.2nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**6.61**	**73**	P	**Pn**	**23 24 25.0**	**-0.7**
	comp=N,0.5nm,0.1s,SNR=7.7						
EBEN				S	**Sn**	**23 25 38.4**	**-2.0**
	comp=N,2.2nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**6.69**	**20**	P	**Pn**	**23 24 27.3**	**+0.6**
	comp=N,0.3nm,0.2s,SNR=4.0						
EARI				S	**Sn**	**23 25 42.0**	**-0.4**
	comp=N,0.1nm,0.1s,SNR=4.0						
EARI	**Arriondas**	**6.69**	**20**	P	**Pn**	**23 24 28.1**	**+1.3**
EARI				S	**Sn**	**23 25 41.6**	**-0.8**
EARI	**Arriondas**	**6.69**	**20**	P	**Pn**	**23 24 28.1**	**+1.3**
	SNR=4.0						
EARI				S	**Sn**	**23 25 41.6**	**-0.8**
	SNR=4.0						
EMOS	**Mosqueruela**	**6.97**	**59**	P	**Pn**	**23 24 32.1**	**+1.5**
	comp=N,1.4nm,0.1s,SNR=23						
EMOS				S	**Sn**	**23 25 48.2**	**-1.1**
	comp=N,0.7nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**6.97**	**59**	P	**Pn**	**23 24 32.1**	**+1.5**
	comp=N,1.4nm,0.1s,SNR=23						
EMOS				S	**Sn**	**23 25 48.2**	**-1.1**
	comp=N,0.7nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**7.23**	**30**	P	**Pn**	**23 24 34.3**	**+0.1**
	comp=N,5.1nm,0.9s,SNR=5.6						
ELAN				S	**Sn**	**23 25 54.5**	**-1.1**
	comp=N,0.3nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**7.23**	**30**	P	**Pn**	**23 24 34.3**	**+0.2**
	comp=N,5.1nm,0.9s,SNR=5.6						
ERTA	**Horta de San J**	**7.79**	**57**	P	**Pn**	**23 24 43.2**	**+1.4**
	comp=N,0.7nm,0.1s,SNR=8.4						
ERTA	**Horta de San J**	**7.79**	**57**	P	**Pn**	**23 24 43.2**	**+1.4**
EIBI	**Ibiza**	**7.88**	**72**	P	**Pn**	**23 24 42.2**	**-0.8**
	comp=N,0.4nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**23 26 08.3**	**-3.3**
	comp=N,0.8nm,0.2s,SNR=4.0						
ELIZ	**Elizondo**	**8.03**	**38**	P	**Pn**	**23 24 45.8**	**+0.7**
	comp=N,0.8nm,0.1s,SNR=9.0						
EALK	**Alkurruntz**	**8.08**	**38**	P	**Pn**	**23 24 46.2**	**+0.4**
	comp=N,0.8nm,0.1s,SNR=4.0						
EPOB	**Poblet**	**8.47**	**57**	P	**Pn**	**23 24 51.7**	**+0.5**
	comp=N,0.3nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**8.61**	**46**	P	**Pn**	**23 24 53.5**	**+0.5**
	comp=N,0.7nm,0.1s,SNR=11						
EBIE	**Bielsa**	**8.61**	**46**	P	**Pn**	**23 24 53.5**	**+0.5**

IDC 07 23:58:02.7±6.1**, 1767S**×**17985W, h573**km±40km**, mb3.8**/2**, mb1 3.9**/2**, mb1mx3.1**/11**, mbtmp4.8**/2**, 1C, Error ellipse: s-maj=170.2km s-min=41.9km az=136.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.55**	**240**	eP	P	00 04 28.9	0.0
	3.0nm,0.6s						
STKA	**Stephens Creek**	**37.55**	**240**	P	P	00 04 29.1	+0.1
	3.3nm,0.5s,baz=103,slow=11,SNR=12						
WB2	**Warramunga Arr**	**43.31**	**259**	eP	P	00 05 14.1	-0.6
ASAR	**Alice Springs**	**43.53**	**254**	P	P	00 05 16.6	+0.1
	17nm,0.6s,baz=88,slow=8.2,SNR=147						
ASAR				ScP	ScP	00 09 48.5	+0.1
	0.2nm,0.6s,baz=97,slow=4.6,SNR=4.4						
ASPA	**Alice Springs**	**43.54**	**254**	eP	P	00 05 16.5	0.0
KAKA	**Kakadu**	**46.21**	**269**	⇑iP	P	00 05 37.7	+0.8
	16nm,0.4s						
GERES	**GERESS Array B**	**147.01**	**343**	PKPbc	PKPbc	00 16 41.1	-0.6
	0.3nm,0.4s,baz=27,slow=6.4,SNR=5.0						

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*CSEM **08** 00:07:57.6, 3537N×391E, h0km, ML3.4, After ALG*

*CRAAG **08** 00:07:57.6, 3537N×391E, Ml3.4*

*ISCJB **08** 00:08:05.2±1.1, 3579N±007×396E±007, h10km, Error ellipse: s-maj=9.9km s-min=8.6km az=154.1*

*MDD **08** 00:08:05.2±2.0, 3577N×393E, h6km±20km, mb3.1/4, Error ellipse: s-maj=26.7km s-min=14.3km az=168.0, PRXIMO*

ISC 08 00:08:04.9±1.2**, 3569N**±007×**400E**±008**, h10**km**, n11, σ0ˢ79**/15**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMHD	**Djebel Mahouad**	**0.99**	**301**	P	**Pg**	**00 08 22.0**	**-2.0**
SET	**Setif**	**1.25**	**65**	P	**Pn**	**00 08 28.0**	**-0.4**
EBNR	**Beni Rached**	**2.09**	**287**	P	**Pn**	**00 08 41.0**	**+1.0**
ECHA	**Ech Chlef**	**2.19**	**283**	P	**Pn**	**00 08 42.0**	**+0.7**
ECHF	**Ech Chlef**	**2.21**	**283**	P	**Pn**	**00 08 42.0**	**+0.4**
ETRT	**Tiaret**	**2.22**	**263**	P	**Pb**	**00 08 45.0**	**-0.1**
EANR	**’Ain N’Sour**	**2.37**	**277**	P	**Pn**	**00 08 44.0**	**+0.2**
EIBI	**Ibiza**	**3.95**	**328**	P	**Pn**	**00 09 04.6**	**-0.9**
	0.7nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**00 09 51.8**	**-0.1**
	0.5nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**4.18**	**347**	P	**Pn**	**00 09 09.5**	**+0.8**
	0.2nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**00 09 58.3**	**+0.6**
	0.4nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.52**	**313**	P	**Pn**	**00 09 12.7**	**-0.6**
	0.2nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**00 10 06.6**	**+0.6**
	0.4nm,0.5s,SNR=7.9						
ETOB	**Tobarra**	**5.32**	**305**	P	**Pn**	**00 09 20.4**	**-4.0**
	0.2nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**00 10 25.5**	**-0.3**
	0.3nm,0.3s,SNR=7.9						

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*NEIC **08** 00:31:14.8, 31.16S×6943W, h161km, mb4.1/4, After GUC.*

GUC 08 00:31:14.8±0.8**, 3116S**×**6943W, h161**km±9km**, MD3.9, ML4.3, 19C-4D, San Juan Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	1.35	269	⇓iP	Pn	00 31 44.0	+0.3
CMCH				iS	Sn	00 32 06.6	+0.7
CMCH				AML	AML	00 32 07.2	
	comp=N,7μm,0.9s						
CMCH	Combarbala	1.35	269	⇓iP	Pn	00 31 44.0	+0.3
CMCH				iS	Sn	00 32 06.6	+0.7
TLL	Tololo Astrono	1.54	309	⇑iP	Pn	00 31 47.0	+1.3
TLL				iS	Sn	00 32 10.8	+1.5
TLL				AML	AML	00 32 14.4	
	comp=N,3μm,0.4s						
TLL	Tololo Astrono	1.54	309	⇑iP	Pn	00 31 47.0	+1.3
TLL				iS	Sn	00 32 10.8	+1.5
OVCH	Ovalle	1.62	289	⇑iP	Pn	00 31 47.4	+0.9
OVCH				iS	Sn	00 32 11.6	+0.8
OVCH				AML	AML	00 32 13.7	
	comp=E,3μm,0.4s						
OVCH	Ovalle	1.62	289	⇑iP	Pn	00 31 47.4	+0.9
OVCH				iS	Sn	00 32 11.6	+0.8
MDZ	Mendoza	1.79	164	⇑iP	Pn	00 31 46.1	-2.1
MDZ				iS	Sn	00 32 04.3	-10
JACH	Jahuel	1.81	213	⇑iP	Pn	00 31 49.2	+0.7
JACH				iS	Sn	00 32 15.7	+1.2
CHNG	Los Chungos	1.91	247	⇑iP	Pn	00 31 50.1	+0.5
CHNG				iS	Sn	00 32 16.3	-0.1
CHNG				AML	AML	00 32 27.2	
	comp=E,638nm,0.4s						
PEL	Peldehue	2.25	208	⇑iP	Pn	00 31 54.1	+0.6
PEL				iS	Sn	00 32 23.6	+0.3
PEL				AML	AML	00 32 28.3	
	comp=N,939nm,0.3s						
PEL	Peldehue	2.25	208	⇑iP	Pn	00 31 54.1	+0.6
PEL				iS	Sn	00 32 23.6	+0.3
ROCH	El Roble	2.25	216	eP	Pn	00 31 54.3	+0.8
ROCH				iS	Sn	00 32 24.4	+1.0
FCH	Farellones	2.28	198	⇑iP	Pn	00 31 55.1	+1.2
FCH				iS	Sn	00 32 25.8	+1.7
FCH				AML	AML	00 32 28.1	
	comp=N,628nm,0.3s						
LCO	Las Campanas	2.41	332	⇑iP	Pn	00 31 56.5	+1.2
LCO				iS	Sn	00 32 28.1	+1.5
CLCH	Cerro Calan	2.42	203	⇓iP	Pn	00 31 56.4	+0.9
CLCH				iS	Sn	00 32 27.6	+0.7
CLCH				AML	AML	00 32 35.1	
	comp=N,656nm,0.7s						
STL	Santa Lucia	2.49	204	iS	Sn	00 32 29.1	+0.7
RCDM	Rinconada Maip	2.60	206	eP	Pn	00 31 58.3	+0.7
RCDM				iS	Sn	00 32 31.8	+0.9
RCDM				AML	AML	00 32 32.8	
	comp=E,1μm,0.2s						
RCDM	Rinconada Maip	2.60	206	eP	Pn	00 31 58.3	+0.7
RCDM				iS	Sn	00 32 31.8	+0.9
ANTU	Antumapu	2.61	203	⇑iP	Pn	00 31 58.7	+0.9
ANTU				iS	Sn	00 32 32.0	+1.0
ANTU				AML	AML	00 32 35.0	
	comp=E,705nm,0.3s						
ANTU	Antumapu	2.61	203	⇑iP	Pn	00 31 58.7	+0.9
ANTU				iS	Sn	00 32 32.0	+1.0
PCH	Pirque	2.62	200	eP	Pn	00 31 59.1	+1.1
PCH				iS	Sn	00 32 31.9	+0.6
TACH	Talagante	2.80	207	⇑iP	Pn	00 32 00.5	+0.4
TACH				iS	Sn	00 32 35.8	+0.7
VACH	Vallenar	2.82	335	⇑iP	Pn	00 32 01.3	+1.0
VACH				iS	Sn	00 32 35.8	+0.1
VACH				AML	AML	00 32 37.8	
	comp=E,2μm,0.6s						
VACH	Vallenar	2.82	335	⇑iP	Pn	00 32 01.3	+1.0
VACH				iS	Sn	00 32 35.8	+0.1
LCCH	Las Cruces	2.94	218	⇑iP	Pn	00 32 02.3	+0.5
CHCH	Chadas Angostu	2.96	200	⇑iP	Pn	00 32 02.8	+0.8
CHCH				iS	Sn	00 32 39.3	+0.7
CACH	El Canelo	3.11	198	⇑iP	Pn	00 32 05.2	+1.3
CACH				iS	Sn	00 32 44.5	+2.3
LNV	Longovilo	3.25	210	⇓iP	Pn	00 32 05.5	-0.3
CICH	Cipreses	3.26	195	eP	Pn	00 32 07.3	+1.4
SFDO	San Fernando	3.70	201	iP	Pn	00 32 11.3	-0.1
CDCH	Caldera	4.25	343	eP	Pn	00 32 19.4	+0.8
CDCH				iS	Sn	00 33 08.4	+0.2
LVC	Limon Verde	8.52	3	ePn	Pn	00 33 14.0	-1.1
LVC				eSn	Sn	00 34 53.4	+3.5
PLCA	Paso Flores	9.60	185	Pn	Pn	00 33 29.6	+0.3
CPUP	Villa Florida	11.65	69	ePn	Pn	00 33 50.6	-5.5
	comp=E,12nm,0.4s						
LPAZ	La Paz	14.85	5	ePn	Pn	00 34 39.5	+2.7
	comp=E,2.5nm,0.9s						
BDFB	Brasilia	24.92	57	P	P	00 36 26.5	+3.6
	comp=E,6.1nm,1.1s						
SNAA	Sanae	53.40	159	eP	P	00 40 22.9	+5.1
QSPA	South Pole Qui	59.07	180	eP	P	00 41 05.0	+7.0
	comp=E,1.4nm,0.5s						
DBIC	Dimbokro	72.17	70	P	P	00 42 27.5	+5.6

*MDD **08** 00:34:46.4±1.1,3669N×734W,h73km±8km,mb2.4/12, Error ellipse: s-maj=9.0km s-min=4.3km az=21.0,PRXIMO*

INMG 08 00:34:45.6±1.0**,3657N×734W,h10km,ML1.4,1C,Error ellipse: s-maj=6.2km s-min=3.7km az=35.0,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ERIP	Rio Piedras	0.81	5	P	Pg	00 35 01.5	+0.4
	8.8nm,0.1s,SNR=7.9						
ERIP				S	Sg	00 35 11.6	-0.1
	27nm,0.1s,SNR=7.9						
EGRO	El Granado	0.97	353	P	Pg	00 35 03.7	-0.6
	1.6nm,0.1s,SNR=32						
EGRO				S	Sg	00 35 16.3	-0.6
	9.4nm,0.1s,SNR=16						
ESPR	Espera	1.23	75	⇑P	Pn	00 35 07.5	-1.4
	2.6nm,0.1s,SNR=18						
ESPR				S	Sb	00 35 23.5	-1.4
	8.1nm,0.3s						
EMIN	Mina Concepcio	1.31	24	P	Pn	00 35 08.3	-1.7
	0.3nm,0.0s,SNR=6.6						
EMIN				S	Sb	00 35 23.8	-3.4
	1.8nm,0.1s,SNR=7.2						
PTEO	Sao Teotonio	1.47	312	eP	Pn	00 35 10.1	-2.1
PTEO				eS	Sn	00 35 27.0	-4.5
PTEO							
	3.4nm,0.1s						
PBEJ	Beja	1.51	344	eP	Pn	00 35 10.9	-1.8
PBEJ				eS	Sn	00 35 28.3	-4.2
EJIF	Jimena Fronter	1.52	94	P	Pn	00 35 12.0	-0.7
	0.2nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.20	7	P	Pn	00 35 20.3	-1.8
	0.9nm,0.1s,SNR=7.9						
EBAD				S	Sn	00 35 44.9	-4.5
	1.1nm,0.1s,SNR=7.9						
PESTR	Estremoz	2.30	355	ePn	Pn	00 35 21.8	-1.8
PESTR				eSn	Sn	00 35 47.9	-4.1
EADA	Adamuz	2.72	53	P	Pn	00 35 28.1	-1.2
	0.4nm,0.2s,SNR=7.9						
EADA				S	Sn	00 35 57.0	-5.3
	2.2nm,0.1s,SNR=7.9						
PMAFR	Mafra	2.84	328	ePn	Pn	00 35 29.3	-1.6
PMAFR				eSn	Sn	00 36 01.3	-3.8
PTOM	Tomar	3.16	345	ePn	Pn	00 35 33.9	-1.5
EQUE	Quentar	3.19	77	P	Pn	00 35 35.5	-0.3
	0.1nm,0.1s,SNR=7.9						
EQUE				S	Sn	00 36 11.4	-2.6
	0.2nm,0.2s,SNR=7.9						
EBAN	Banos Encina	3.25	60	P	Pn	00 35 34.2	-2.4
	2.6nm,0.6s,SNR=7.9						
EBAN				S	Sn	00 36 12.5	-2.9
	0.6nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	3.27	358	ePn	Pn	00 35 35.2	-1.7
PCBR				eSn	Sn	00 36 10.4	-5.4
EQES	Quesada	3.63	69	P	Pn	00 35 40.0	-1.8
	0.3nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	4.09	40	P	Pn	00 35 48.4	+0.2
	0.1nm,0.1s,baz=218,slow=17,SNR=7.9						
ESDC				S	Sn	00 36 31.5	-4.6
	0.2nm,0.1s,baz=223,slow=23,SNR=3.9						
ETOB	Tobarra	5.05	64	P	Pn	00 35 59.1	-2.3
	0.1nm,0.1s,SNR=7.9						
ETOB				S	Sn	00 36 54.2	-5.5
	0.3nm,0.1s,SNR=7.9						
ELOB	Lobios	5.32	354	S	Sn	00 37 01.9	-4.6
	0.3nm,0.1s,SNR=7.9						

*STR **08** 01:23:00.7±0.5,4799N×642E,h10km±1km,Ml1.3,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG 08 01:23:01.0±0.1**,4794N×646E,h2km,Ml1.6**/4**,Error ellipse: s-maj=1.4km s-min=1.1km az=16.0,France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HAU	Haudompre	0.10	314	ePg	Pg	01 23 03.3	+0.3
HAU				eSg	Sg	01 23 04.9	+0.5
	33nm,0.2s						
HINF	Hinteralfeld	0.29	114	ePg	Pg	01 23 06.9	+0.3
HINF				eSg	Sg	01 23 10.8	+0.4
	4.5nm,0.2s						
THEF	They Montfort	0.43	313	Pg	Pg	01 23 08.5	-0.8
THEF				Sg	Sg	01 23 13.7	-1.2
MOF	Molkenrain	0.46	100	Pg	Pg	01 23 10.9	+1.1
MOF				Sg	Sg	01 23 16.7	+0.9
ECH	Echery	0.55	59	Pg	Pg	01 23 11.6	+0.1
CDF	Champ du Feu	0.73	49	ePg	Pg	01 23 14.8	-0.1
CDF				eSg	Sg	01 23 23.9	-0.4
	2.6nm,0.3s						
WLS	Welschbruch	0.77	51	Pg	Pg	01 23 16.3	+0.6
WLS				Sg	Sg	01 23 25.3	-0.3
SFTF	Sexfontaines	0.99	286	ePg	Pg	01 23 19.6	-0.4
SFTF				eSg	Sg	01 23 32.7	-0.1
	2.5nm,0.2s						
MEZF	Maizieres J'vi	1.10	302	ePg	Pg	01 23 21.4	-0.7
MEZF				eSg	Sg	01 23 35.7	-0.6
	1.2nm,0.2s						
CABF	La Chapelle	1.35	191	ePn	Pn	01 23 26.4	-0.4
CABF				eSg	Sg	01 23 43.3	-1.0
	0.6nm,0.2s						
LOR	Lormes	1.88	250	ePg	Pg	01 23 36.0	-1.1
LOR				eSg	Sg	01 23 59.5	-2.0
	0.6nm,0.2s						
AVF	Avril sur Loir	2.40	243	ePn	Pn	01 23 39.9	-1.4
AVF	Avril sur Loir	2.40	243	ePg	Pg	01 23 45.8	-1.2
LPG	La Plagne	2.45	175	ePn	Pn	01 23 40.4	-1.5
SMRF	Simiane la Rot	4.01	189	ePg	Pg	01 24 15.1	-2.7

*IDC **08** 01:30:57.0±1.6,530S×10227E,h0km,mb4.1/7,mb1 4.2/7, mb1mx3.9/17,mbtmp4.1/7,Error ellipse: s-maj=78.4km s-min=19.5km az=54.0*

*ISCJB **08** 01:30:59.0±0.5,540S±007×1023E±0.1,h30km,mb4.2/13, Error ellipse: s-maj=16.1km s-min=9.3km az=137.6*

*NEIC **08** 01:31:01.2±0.3,538S×10230E,h30km,mb4.5/6,Error ellipse: s-maj=12.8km s-min=7.2km az=68.0*

ISC 08 01:31:01.1±6.8**,538S**±009×**1023E**±01**,h27km**±50km**,n27,** σ**0s88**/27**,mb4.2**/13**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COCO	West Island	8.65	218	Pn	Pn	01 33 03.9	-0.5
NWAO	Narrogin (SRO)	30.74	155	P	P	01 37 12.8	-1.1
WRAB	Tennant Creek	34.36	118	eP	P	01 37 45.6	0.0
	5.3nm,0.6s,mb4.7						
NACB	Ninganchiao	34.88	32	P	P	01 37 50.1	0.0
ASAR	Alice Springs	35.45	124	P	P	01 37 55.2	+0.3
	0.7nm,0.4s,mb3.9,baz=293,slow=7.5,SNR=11						
AS31	Alice Springs	35.45	124	eP	P	01 38 00.8	+5.8
JIRN	Jiri	36.34	335	eP	P	01 38 02.1	-0.5
	5.3nm,0.3s,mb5.0						
PKI	Pulchoki	36.60	334	eP	P	01 38 06.1	+1.3
GUN	Gumba	36.69	335	eP	P	01 38 04.5	-1.1
DMN	Daman	36.76	334	eP	P	01 38 08.2	+2.0
KKN	Kakani	36.84	334	eP	P	01 38 07.7	+0.8
GKN	Gorkha	37.31	334	eP	P	01 38 11.1	+0.3
KOLN	Koldanda	37.58	332	eP	P	01 38 14.7	+1.6
	9.2nm,0.7s,mb4.6						
STKA	Stephens Creek	45.22	131	P	P	01 39 17.1	+1.4
	1.6nm,0.4s,mb4.2,baz=304,slow=14,SNR=8.9						
STKA	Stephens Creek	45.22	131	eP	P	01 39 16.8	+1.0
SONM	Songino Array	53.11	3	P	P	01 40 15.8	-0.4
	3.1nm,0.8s,mb4.3,baz=181,slow=8.6,SNR=16						
MKAR	Makanchi Array	54.89	343	P	P	01 40 28.7	-0.4
	0.8nm,0.4s,mb4.1,baz=153,slow=7.8,SNR=11						
KURK	Kurchatov	59.48	343	eP	P	01 41 00.6	-1.0
	1.0nm,0.6s,mb4.0						
ZAL	Zalesovo	60.90	348	P	P	01 41 10.9	-0.4
	2.2nm,0.4s,mb4.7,baz=359,slow=1.3,SNR=6.5						
BVAR	Borovoye Array	64.13	339	P	P	01 41 32.2	-0.7
	1.0nm,0.6s,mb4.0,baz=125,slow=6.8,SNR=5.3						
BRVK	Borovoye	64.19	339	P	P	01 41 32.4	-0.9
ZRNK	Zerenda	64.57	338	eP	P	01 41 35.1	-0.7
	1.4nm,0.9s,mb4.0						
CHKZ	Chkalovo	64.58	340	eP	P	01 41 34.6	-1.3
	2.0nm,0.5s,mb4.4						
MAW	Mawson	67.62	195	P	P	01 41 56.1	+0.8
GNI	Garni	69.53	316	P	P	01 42 07.9	+0.6
ARU	Arti	71.20	336	P	P	01 42 17.4	-0.1
BRTR	Keskin Array B	77.28	313	P	P	01 42 53.2	+0.4
	0.4nm,0.8s,mb3.4,baz=354,slow=12,SNR=3.1						

*IDC **08** 01:35:59.3±1.4,1173N×8634W,h0km,mb3.9/5,mb1 4.1/5, mb1mx3.8/17,mbtmp3.9/5,Error ellipse: s-maj=61.7km s-min=19.8km az=53.0*

*ISCJB **08** 01:36:00.3±0.6,1098N±004×8707W±005,h33km, mb4.0/13,Error ellipse: s-maj=8.7km s-min=4.3km az=100.9*

*CASC **08** 01:36:01.5±2.9,1102N×8699W,h34km±18km,MD4.2, mb4.2(NEIC)*

*NEIC **08** 01:36:05.0±2.1,1156N×8642W,h46km±25km,mb4.2/9, Error ellipse: s-maj=29.8km s-min=13.8km az=64.0*

ISC 08 01:36:02.7±0.6**,1108N**±005×**8695W**±006**,h35km,n55,** σ**1s22**/48**,mb4.0**/13**,13C-5D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	1.15	18	⇓eP	Pn	01 36 22.4	+0.2
TICN	Ticuantepe	1.18	36	⇑eP	Pn	01 36 22.7	0.0
XAVN	Gruta Xavier	1.23	30	eP	Pn	01 36 23.3	-0.1
TISN	Laguna Tiscapa	1.25	32	⇓eP	Pn	01 36 23.6	-0.1
MGAN	Managua	1.27	33	⇑eP	Pn	01 36 23.8	-0.1
APYN	Apoyeque	1.29	27	⇓eP	Pn	01 36 24.3	+0.1
LEON	Leon	1.33	2	⇑eP	Pn	01 36 25.0	+0.2
LEON				eS	Sn	01 36 44.4	+3.1
MIRN	Miramar	1.37	10	⇓eP	Pn	01 36 25.5	+0.1
MIRN				eS	Sn	01 36 44.6	+2.3
MOMJ	Momotombo	1.38	17	⇑eP	Pn	01 36 25.5	0.0
CONN	Concepcion	1.38	69	⇑eP	Pn	01 36 24.7	-0.8
MADN	Villa Maderas	1.43	76	⇑eP	Pn	01 36 25.4	-0.7
CNGN	Cerro Negro	1.44	10	⇑eP	Pn	01 36 26.3	+0.1
CRIN	San Cristobal	1.62	356	⇓eP	Pn	01 36 29.5	+0.7
PYTN	Playitas	1.69	31	⇑eP	Pn	01 36 29.5	-0.3
LIM1	Limonal	1.70	103	iP	Pn	01 36 28.3	-1.6
BOA	Boaco	1.84	41	⇑iP	Pn	01 36 30.4	-1.4
BOA				eP		01 36 30.4	
JTS	JuntasAbangare	2.11	112	Pn	Pn	01 36 34.7	-0.8
	7.2nm,0.3s,baz=318,slow=18,SNR=26						
JTS				Sn	Sn	01 36 59.3	-1.2
	45nm,0.3s,baz=290,slow=19,SNR=6.9						
JCR	Jicaral	2.18	124	eP	Pn	01 36 35.5	-0.9
JCR				eS	Sn	01 37 02.1	-0.1
CNCH	Conchagua	2.35	338	⇑eP	x	01 36 38.6	
CNCH				eS	x	01 37 07.7	
CGA2	Cerro Gallo 2	2.66	113	eP	Pn	01 36 44.9	+1.9
BLLM	Bellamira	2.67	332	eP	x	01 36 43.6	
VSM	San Miguel	2.67	331	eP	x	01 36 44.1	
VSM				eS	x	01 37 16.3	
PRS1	Puriscal	2.81	112	⇑eP	Pn	01 36 47.0	+1.9
SNVI	San Vicente	3.13	324	eP	x	01 36 49.0	
SNVI				eS	x	01 37 25.5	
LCR2	La Lucha 2	3.18	114	⇑eP	Pn	01 36 51.1	+0.8
LCBS	La Ceiba	3.24	322	eP	x	01 36 51.0	
LCBS				eS	x	01 37 27.6	
ICR	Volcan Irazu	3.25	109	eP	Pn	01 36 53.7	+2.5
LFRS	El Faro	3.27	321	eP	x	01 36 51.0	
URSC	Urasca	3.35	111	⇑eP	Pn	01 36 54.5	+1.9
BUS	Buena Vista	3.48	115	eP	Pn	01 36 55.2	+0.8
BOQS	Boqueron	3.49	319	eP	x	01 36 54.2	
SBLS	San Blas	3.79	317	eP	x	01 36 58.7	
SBLS				eS	x	01 37 41.9	
SNJE	San Jose	3.80	317	eP	x	01 36 59.0	
RTR	El Retiro	3.85	317	eP	x	01 36 58.9	
RBDL	Robledal	4.03	319	eP	x	01 37 02.1	
CMIG	Matias Romero	9.75	309	Pn	Pn	01 38 12.1	-8.3
	1.2nm,0.3s,baz=123,slow=17,SNR=8.7						
CMIG	Matias Romero	9.75	309	Pn	Pn	01 38 12.1	-8.3
HKT	Hockley	20.52	338	eP	P	01 40 38.5	+0.6
	8.8nm,1.0s						
LRAL	Lakeview Retre	21.86	360	eP	P	01 40 52.5	+0.2
	7.8nm,0.8s,mb4.2						
PLAL	Pickwick Lake	23.82	358	eP	P	01 41 10.1	-2.3
	2.7nm,0.8s,mb3.7						
SWET	Sewanee	24.05	2	eP	P	01 41 12.5	-2.0
MIAR	Mount Ida	24.13	347	eP	P	01 41 14.0	-1.3
	5.7nm,0.8s,mb4.0						
CPCT	Cooper Cave	24.36	5	eP	P	01 41 17.3	-0.1
NNA	Nana	25.01	156	eP	P	01 41 28.2	+4.9
	4.7nm,0.3s,mb4.5						
WMOK	Wichita Mounta	25.91	337	eP	P	01 41 31.3	-0.1
	15nm,1.2s,mb4.4						
MNTX	Cornudas Mount	26.67	323	eP	P	01 41 39.5	+1.2
	1.4nm,0.6s,mb3.7						
AMTX	Amarillo	27.23	333	eP	P	01 41 46.4	+3.0
	7.3nm,0.8s,mb4.3						
ANMO	Albuquerque	29.67	326	eP	P	01 42 04.7	-0.3
PDAR	Pinedale Array	37.21	332	P	P	01 43 10.2	-0.4
	0.8nm,0.6s,mb3.7,baz=124,slow=11,SNR=9.8						
HWUT	Hardware Ranch	37.30	329	eP	P	01 43 10.9	-0.5
	3.2nm,0.7s,mb4.3						
NVAR	Mina Array Bea	39.06	320	P	P	01 43 27.9	+1.7
	0.9nm,0.8s,mb3.5,baz=127,slow=8.4,SNR=5.6						
NVAR				PcP	PcP	01 45 38.0	+2.4
	1.2nm,0.7s,baz=141,slow=3.4,SNR=8.3						
ULM	Lac du Bonnet	39.74	351	P	P	01 43 29.0	-2.9
	2.9nm,0.6s,mb4.2,baz=162,slow=8.1,SNR=8.2						
ULM	Lac du Bonnet	39.74	351	P	P	01 43 29.0	-2.9
SCHQ	Schefferville	46.45	16	P	P	01 44 22.4	-3.7
	1.9nm,0.7s,mb4.2,baz=207,slow=4.5,SNR=3.6						
YKA	Yellowknife Ar	55.06	345	P	P	01 45 28.1	-2.8
	0.6nm,0.7s,mb3.7,baz=130,slow=7.3,SNR=4.6						
YKA				PcP	PcP	01 46 31.4	-0.8
	0.4nm,0.5s,baz=142,slow=4.3,SNR=5.3						

*NEIC **08** 01:47:46.6,4246S×17269E,h7km,ML4.4(WEL),After WEL.*

NEIC Felt at Christchurch.

WEL 08 01:47:46.5±0.1**,4246S×17270E,h5km,ML4.4**/42**,5C-2D, Error ellipse: s-maj=1.1km s-min=0.7km az=90.0,South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LTZ	Lake Taylor	0.45	224	P	Pg	01 47 55.5	+0.3
LTZ				S	Sg	01 48 01.6	+0.5
LTZ	Lake Taylor	0.45	224	⇑PG	Pg	01 47 55.5	+0.3
LTZ				SG	Sg	01 48 01.7	+0.6
KHZ	Kahutara	0.63	87	⇓P*	Pb	01 47 59.0	-0.9
KHZ				SG	Sg	01 48 07.3	+0.7
THZ	Tophouse	0.71	13	⇑P*	Pb	01 47 59.7	-1.6
DSZ	Denniston Nort	0.97	317	P	Pg	01 48 05.1	0.0
DSZ				S	Sg	01 48 18.2	+0.5
DSZ	Denniston Nort	0.97	317	⇓P*	Pb	01 48 05.1	-0.7
DSZ				S*	Sb	01 48 18.2	-0.7
CRLZ	Canterbury Las	1.12	183	P	Pg	01 48 07.8	-0.2
CRLZ	Canterbury Las	1.12	183	P*	Pb	01 48 07.7	-0.6
CRLZ				S*	Sb	01 48 22.8	-0.4
BSWZ	Blackbirch Sta	1.15	50	P	Pg	01 48 07.7	-0.8
BSWZ	Blackbirch Sta	1.15	50	P*	Pb	01 48 07.7	-1.1
MQZ	McQueen's Vall	1.25	181	P	Pg	01 48 09.0	-1.5
MQZ	McQueen's Vall	1.25	181	P*	Pb	01 48 09.0	-1.6
MQZ				S*	Sb	01 48 25.1	-1.9
NNZ	Nelson	1.34	23	P	Pn	01 48 10.5	-1.3
NNZ	Nelson	1.34	23	⇑P*	Pb	01 48 10.5	-1.6
TUWZ	Tuamarina	1.38	43	⇑PN	Pn	01 48 11.7	-0.8
WVZ	Waitaha Valley	1.57	246	PN	Pn	01 48 14.8	-0.3
QRZ	Quartz Range	1.63	356	P	Pn	01 48 15.6	-0.3
QRZ	Quartz Range	1.63	356	⇑PN	Pn	01 48 15.6	-0.2
TCW	Tory Channel	1.71	44	P	Pn	01 48 16.9	-0.1
TCW	Tory Channel	1.71	44	PN	Pn	01 48 16.8	-0.2
RPZ	Rata Peaks	1.74	223	eP	Pn	01 48 16.2	-1.2
RPZ	Rata Peaks	1.74	223	PN	Pn	01 48 16.1	-1.3
SNZO	South Karori	1.89	53	P	Pn	01 48 19.3	-0.1
SNZO	South Karori	1.89	53	PN	Pn	01 48 19.3	-0.1
DUWZ	D'Urville Isla	1.89	30	PN	Pn	01 48 19.3	-0.1
MRW	Makara Radio	1.94	51	P	Pn	01 48 19.9	-0.1
MRW	Makara Radio	1.94	51	PN	Pn	01 48 19.9	-0.1
MSWZ	Moikau Station	2.17	62	P	Pn	01 48 21.4	-1.9
MSWZ	Moikau Station	2.17	62	PN	Pn	01 48 21.3	-1.9
MSWZ				SN	Sn	01 48 48.6	-1.9
CAW	Cannon Point	2.23	54	P	Pn	01 48 23.4	-0.6
CAW	Cannon Point	2.23	54	PN	Pn	01 48 23.4	-0.6
CAW				SN	Sn	01 48 51.5	-0.5
KIW	Kapiti Island	2.30	47	P	Pn	01 48 25.3	+0.3
KIW	Kapiti Island	2.30	47	PN	Pn	01 48 25.3	+0.2
PAWZ	Paruwai Farm	2.30	63	P	Pn	01 48 23.7	-1.4
PAWZ	Paruwai Farm	2.30	63	PN	Pn	01 48 23.7	-1.4
PAWZ				SN	Sn	01 48 52.4	-1.4
MTW	Mount Morrison	2.47	59	PN	Pn	01 48 25.8	-1.5
MTW				SN	Sn	01 48 56.0	-1.8
FOZ	Fox Glacier	2.47	242	eP	Pn	01 48 26.2	-1.2
FOZ	Fox Glacier	2.47	242	PN	Pn	01 48 26.1	-1.2
LBZ	Lake Benmore	2.66	223	P	Pn	01 48 28.9	-1.1
LBZ	Lake Benmore	2.66	223	PN	Pn	01 48 28.9	-1.1
MRZ	Mangatainoka R	2.81	51	eP	Pn	01 48 30.9	-1.1
MRZ	Mangatainoka R	2.81	51	PN	Pn	01 48 30.9	-1.2
ODZ	Otahua Downs	2.98	209	eP	Pn	01 48 32.8	-1.7
ODZ	Otahua Downs	2.98	209	PN	Pn	01 48 32.8	-1.7
WAZ	Wanganui	3.20	33	eP	Pn	01 48 39.4	+1.9
NRZ	Ngariki Road	3.25	17	P	Pn	01 48 40.3	+2.1
NWEZ	Newall Road	3.30	16	P	Pn	01 48 40.7	+1.9
NEZ	North Egmont	3.35	19	P	Pn	01 48 42.4	+2.9
PKE	Pukeiti	3.40	17	P	Pn	01 48 41.8	+1.6
RAEZ	Rainy Point	3.42	23	P	Pn	01 48 43.3	+2.9
VRZ	Vera Road	3.68	26	eP	Pn	01 48 45.9	+1.9
WNVZ	Wahianoa	3.82	36	P	Pn	01 48 47.0	+1.1
MOVZ	Moawhango	3.83	38	P	Pn	01 48 46.4	+0.4
FWVZ	Far West T-bar	3.86	35	eP	Pn	01 48 47.4	+0.9
TUVZ	Tukino	3.89	36	P	Pn	01 48 47.7	+0.7
TWVZ	Taurewa	3.97	33	P	Pn	01 48 48.7	+0.7
HIZ	Hauiti	4.27	23	eP	Pn	01 48 53.6	+1.5
WCZ	Waipu Caves	6.63	12	eP	Pn	01 49 25.5	+0.9
TAU	Tasmania Unive	18.65	260	P	Pn	01 52 05.1	-0.2
AFI	Afiamalu	31.45	30	P	P	01 54 08.7	-0.1

*CSEM **08** 02:10:04.1,4009N×1966E,h15km,ML3.5,After NEIC*

NEIC 08 02:10:04.1,4009N×1966E,h15km,ML3.5(BUC)**,9C-11D, After BUC.,Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VTS	Vitosha	3.66	46	⇑P	Pn	02 10 59.9	-0.2
VTS	Vitosha	3.66	46	⇑P	Pn	02 10 59.9	-0.2
AQU	L'Aquila	5.23	298	⇓P	Pn	02 11 22.3	+0.6
AQU	L'Aquila	5.23	298	⇓P	Pn	02 11 22.3	+0.6
APE	Apeiranthos	5.50	121	⇑P	Pn	02 11 24.8	-0.7
APE	Apeiranthos	5.50	121	⇑P	Pn	02 11 24.8	-0.7
BZS	Buzias	5.71	14	⇓P	Pn	02 11 26.3	-1.9
BZS	Buzias	5.71	14	⇓P	Pn	02 11 26.3	-1.9
SANT	Santorini	5.89	127	ePn	Pn	02 11 28.1	-2.6
	25nm,0.3s						
SANT	Santorini	5.89	127	ePn	Pn	02 11 28.1	-2.7
	25nm,0.3s						
VOIR		6.65	35	⇑P	Pn	02 11 41.9	+0.6
DRGR		7.05	17	⇓P	Pn	02 11 45.4	-1.4
DRGR		7.05	17	⇓P	Pn	02 11 45.4	-1.4
MLR	Muntele Rosu	7.10	39	⇓P	Pn	02 11 48.5	+1.0
MLR	Muntele Rosu	7.10	39	⇓P	Pn	02 11 48.5	+1.0
HARR	Harsova	7.65	50	⇑P	Pn	02 11 55.4	+0.4
HARR	Harsova	7.65	50	⇑P	Pn	02 11 55.4	+0.4
TIRR	Tirgusor	7.82	53	⇓P	Pn	02 11 57.7	+0.4
PSZ	Piszkesteto	7.83	1	⇑P	Pn	02 11 57.8	+0.4
PSZ	Piszkesteto	7.83	1	⇑P	Pn	02 11 57.8	+0.4
BURAR	Bucovina Array	8.52	26	⇓P	Pn	02 12 07.8	+0.9
BURAR	Bucovina Array	8.52	26	⇓P	Pn	02 12 07.8	+0.9
BR131	Keskin Array S	10.75	87	ePn	Pn	02 12 34.2	-3.3
	0.5nm,0.5s						
BR131	Keskin Array S	10.75	87	ePn	Pn	02 12 34.2	-3.3
	0.5nm,0.5s						

*ISCJB **08** 02:32:41.1±1.6,1941N±004×6607W±004,h29km±14km, mb3.5/5,Error ellipse: s-maj=6.8km s-min=6.2km az=93.4*

*NEIC **08** 02:32:42.5,1947N×6606W,h25km,MD3.7(RSPR),After RSPR.*

*RSPR **08** 02:32:42.5,1947N×6606W,h25km±16km,MD3.7/9, MD3.7/9*

*IDC **08** 02:32:46.1±2.5,1919N×6612W,h67km±27km,mb3.3/5,*

mb1 3.6/6, mb1mx3.4/19, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=37.9km s-min=23.3km az=39.0

ISC 08 02:32:40.6±1.6, **1940N**±003×**6610W**±004, **h17**^{km}±11^{km}, **n30**, σ0^{s}**82**/46, **mb3.5**/5, **16C**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**1.14**	**168**	⇑eP	**Pn**	**02 33 01.6**	**-0.2**
CBYP				eS	**Sb**	**02 33 16.2**	**-0.2**
AOPR	**Arecibo Observ**	**1.21**	**211**	⇑eP	**Pn**	**02 33 02.8**	**0.0**
AOPR				eS	**Sb**	**02 33 18.7**	**+0.2**
HUMP	**Col San Antoni**	**1.27**	**169**	⇑eP	**Pn**	**02 33 03.4**	**-0.1**
HUMP				eS	**Sb**	**02 33 20.0**	**-0.1**
SJG	**San Juan**	**1.28**	**182**	eS	**Sb**	**02 33 19.9**	**-0.4**
SJG	**San Juan**	**1.28**	**182**	⇑eP	**Pn**	**02 33 03.7**	**0.0**
SJG	**San Juan**	**1.28**	**182**	P	**Pn**	**02 33 03.8**	**+0.1**
	138nm,0.3s,baz=20,slow=7.7,SNR=262						
SJG				S	**Sb**	**02 33 20.1**	**-0.2**
	478nm,0.3s,baz=342,slow=10,SNR=36						
SJG	**San Juan**	**1.28**	**182**	⇑eP	**Pn**	**02 33 03.7**	**0.0**
SJG				eS	**Sb**	**02 33 19.9**	**-0.4**
CULB	**Culebra**	**1.30**	**146**	eS	**Sn**	**02 33 21.3**	**+0.3**
CULB	**Culebra**	**1.30**	**146**	⇑eP	**Pn**	**02 33 04.0**	**0.0**
LRS	**Lares**	**1.30**	**213**	⇑eP	**Pn**	**02 33 04.0**	**-0.1**
LRS				eS	**Sn**	**02 33 20.8**	**-0.2**
AGPR	**Aguadilla, PR**	**1.33**	**226**	⇑eP	**Pn**	**02 33 04.0**	**-0.4**
AGPR				eS	**Sn**	**02 33 21.7**	**-0.1**
CPD	**Cerro la Pandu**	**1.36**	**173**	⇑eP	**Pn**	**02 33 04.9**	**+0.1**
CPD				eS	**Sn**	**02 33 22.1**	**-0.3**
CELP	**Cerrillos**	**1.39**	**199**	⇑eP	**Pn**	**02 33 05.5**	**+0.2**
CELP				eS	**Sn**	**02 33 23.1**	**-0.1**
MTP	**Monte Pirata**	**1.39**	**158**	⇑eP	**Pn**	**02 33 05.3**	**+0.1**
MTP				eS	**Sn**	**02 33 22.1**	**-1.1**
OBIP	**Obispado Ponce**	**1.43**	**200**	⇑eP	**Pn**	**02 33 06.1**	**+0.3**
OBIP				eS	**Sn**	**02 33 24.4**	**+0.3**
LSP	**Las Mesas**	**1.53**	**218**	⇑eP	**Pn**	**02 33 07.4**	**+0.2**
LSP				eS	**Sn**	**02 33 26.7**	**0.0**
MPR	**Mayaguez**	**1.54**	**220**	⇑eP	**Pn**	**02 33 07.4**	**+0.2**
MPR				eS	**Sn**	**02 33 26.8**	**0.0**
ICM	**Isla Caja Muer**	**1.55**	**195**	⇑eP	**Pn**	**02 33 07.4**	**+0.1**
ICM				eS	**Sn**	**02 33 27.1**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.68**	**215**	⇑eP	**Pn**	**02 33 09.2**	**0.0**
CRPR				eS	**Sn**	**02 33 30.2**	**-0.2**
LZG	**Guadaloupe-1**	**5.24**	**127**	eP	**Pn**	**02 34 00.8**	**+2.7**
SEG	**Port Louis**	**5.29**	**124**	eP	**Pn**	**02 33 57.8**	**-1.0**
MASC	**Masc**	**7.70**	**277**	eP	**Pn**	**02 34 30.4**	**-1.5**
	baz=145						
MASC				eS	**Sn**	**02 35 47.9**	**-11**
	comp=N,675nm,0.3s						
MASC				e			
	comp=E,765nm,0.3s						
SDV	**Santo Domingo**	**11.33**	**203**	P	**Pn**	**02 35 24.6**	**+2.9**
	comp=E,0.6nm,0.3s,baz=68,slow=7.5,SNR=3.3						
BBSR	**BB Station**	**12.98**	**5**	P	**Pn**	**02 35 41.9**	**-2.4**
	comp=E,14nm,0.6s						
ROSC	**El Rosal**	**16.53**	**210**	P	**Pn**	**02 36 35.4**	**+3.8**
	comp=E,0.6nm,0.3s,baz=68,slow=13,SNR=6.4						
PDAR	**Pinedale Array**	**43.29**	**312**	P	**P**	**02 40 42.1**	**+0.8**
	comp=E,0.6nm,0.8s,mb3.4,baz=119,slow=9.2,SNR=5.2						
CPUP	**Villa Florida**	**46.24**	**169**	P	**P**	**02 41 01.8**	**-3.1**
	comp=E,0.4nm,0.5s,mb3.6,baz=340,slow=8.2,SNR=4.5						
NVAR	**Mina Array Bea**	**48.80**	**304**	P	**P**	**02 41 26.1**	**+1.3**
	comp=E,0.3nm,0.5s,mb3.5,baz=106,slow=9.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**65.03**	**84**	P	**P**	**02 43 20.6**	**+0.8**
	comp=E,0.3nm,0.6s,mb3.5,baz=276,slow=7.8,SNR=7.6						
BRTR	**Keskin Array B**	**85.01**	**50**	P	**P**	**02 45 15.7**	**+0.5**
	comp=E,0.6nm,0.8s,mb3.8,baz=282,slow=7.5,SNR=3.5						

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*NEIC **08** 03:09:44.4, 4769N×7001W, h19^{km}, MN2.8(OTT), After OTT.*

NEIC Felt in the La Malbaie area.

OTT 08 03:09:44.4±0.2, **4769N**×**7001W**, **h19**^{km}±1^{km}, **MN2.8**/16, **8C-4D**, **Southern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
A61	**Sainte Mathild**	**0.06**	**273**	⇑PG	Pg	03 09 47.8	-0.1
A61				SG	Sg	03 09 50.3	0.0
A61				Trac		03 09 50.4	
	comp=Z,658nm,0.0s						
A61	**Sainte Mathild**	**0.06**	**273**	⇑Pg	Pg	03 09 47.8	-0.1
A61				Sg	Sg	03 09 50.3	0.0
A64	**Saint Simeon**	**0.16**	**29**	⇑PG	Pg	03 09 48.6	-0.3
A64				SG	Sg	03 09 51.7	-0.2
A64				Trac		03 09 51.8	
	comp=Z,352nm,0.0s						
A64	**Saint Simeon**	**0.16**	**29**	⇑Pg	Pg	03 09 48.6	-0.3
A64				Sg	Sg	03 09 51.7	-0.2
A21	**Saint Andre**	**0.21**	**86**	⇓PG	Pg	03 09 49.5	-0.2
A21				SG	Sg	03 09 52.3	-1.0
A21				Trac		03 09 52.4	
	comp=Z,504nm,0.1s						
A21	**Saint Andre**	**0.21**	**86**	⇓Pg	Pg	03 09 49.5	-0.2
A21				Sg	Sg	03 09 52.3	-1.0
A16	**Riviere Ouelle**	**0.22**	**180**	⇑PG	Pg	03 09 49.6	-0.2
A16				SG	Sg	03 09 52.9	-0.5
A16				Trac		03 09 53.5	
	comp=Z,403nm,0.0s						
A16	**Riviere Ouelle**	**0.22**	**180**	⇑Pg	Pg	03 09 49.6	-0.2
A16				Sg	Sg	03 09 52.9	-0.5
LMQ	**La Malbaie**	**0.26**	**237**	PG	Pg	03 09 50.1	-0.3
LMQ				SG	Sg	03 09 54.3	-0.2
LMQ				Trac		03 09 54.5	
	comp=Z,917nm,0.1s						
LMQ	**La Malbaie**	**0.26**	**237**	Pg	Pg	03 09 50.1	-0.3
LMQ				Sg	Sg	03 09 54.3	-0.2
A11	**Saint Roch-des**	**0.47**	**196**	⇑PG	Pg	03 09 53.3	-0.7
A11				SG	Sg	03 09 60.0	-0.4
A11				Trac		03 10 00.9	
	comp=Z,25nm,0.0s						
A11	**Saint Roch-des**	**0.47**	**196**	⇑Pg	Pg	03 09 53.3	-0.7
A11				Sg	Sg	03 09 60.0	-0.4
DAQ	**Lac Daran**	**0.88**	**289**	⇓PG	Pg	03 09 59.8	-1.8
DAQ				SG	Sg	03 10 11.9	-1.3
DAQ				Trac		03 10 12.6	
	comp=Z,37nm,0.0s						
DAQ	**Lac Daran**	**0.88**	**289**	⇓Pg	Pg	03 09 59.8	-1.8
DAQ				Sg	Sg	03 10 11.9	-1.3
QCQ	**Quebec**	**1.26**	**224**	PG	Pg	03 10 05.9	-2.8
QCQ				SG	Sg	03 10 23.1	-2.1
QCQ				Trac		03 10 26.4	
	comp=Z,16nm,0.1s						
QCQ	**Quebec**	**1.26**	**224**	Pg	Pg	03 10 05.9	-2.8
QCQ				Sg	Sg	03 10 23.1	-2.1
CNQ	**Baie Comeau**	**2.06**	**38**	PN	Pn	03 10 17.5	-0.5
CNQ				SN	Sn	03 10 43.5	+0.3
CNQ				Trac		03 10 50.3	
	comp=Z,9.1nm,0.1s						
CNQ	**Baie Comeau**	**2.06**	**38**	Pn	Pn	03 10 17.5	-0.5
CNQ				Sn	Sn	03 10 43.5	+0.3
DPQ	**Saint Jean**	**2.14**	**243**	PN	Pn	03 10 19.1	0.0
DPQ				PG	Pg	03 10 20.4	-5.2
DPQ				SN	Sn	03 10 45.9	+0.7
DPQ				Trac		03 10 54.2	
	comp=Z,7.1nm,0.1s						
DPQ	**Saint Jean**	**2.14**	**243**	Pn	Pn	03 10 19.1	0.0
DPQ				Pg	Pg	03 10 20.4	-5.2
DPQ				Sn	Sn	03 10 45.9	+0.7
GSQ	**Grosses Roches**	**2.29**	**57**	PN	Pn	03 10 21.9	+0.8
GSQ				SN	Sn	03 10 49.7	+1.1
GSQ				Trac		03 11 00.9	
	comp=Z,5.1nm,0.1s						
GSQ	**Grosses Roches**	**2.29**	**57**	Pn	Pn	03 10 21.9	+0.8
GSQ				Sn	Sn	03 10 49.7	+1.1
ICQ	**Pointe Anglais**	**2.58**	**44**	PN	Pn	03 10 24.7	-0.4
ICQ				SN	Sn	03 10 55.7	-0.2
ICQ				SG	Sg	03 11 00.7	-6.7
ICQ				Trac		03 11 07.1	
	comp=Z,7.0nm,0.1s						
ICQ	**Pointe Anglais**	**2.58**	**44**	Pn	Pn	03 10 24.7	-0.4
ICQ				Sn	Sn	03 10 55.7	-0.2
ICQ				Sg	Sg	03 11 00.7	-6.7
BATG	**Bathurst New B**	**2.71**	**97**	PN	Pn	03 10 25.9	-1.0
BATG				SN	Sn	03 10 56.7	-2.4
BATG				Trac		03 11 08.4	
	comp=Z,5.1nm,0.0s						
BATG	**Bathurst New B**	**2.71**	**97**	Pn	Pn	03 10 25.9	-1.0
BATG				Sn	Sn	03 10 56.7	-2.4
MOQ	**Mont Orford**	**2.84**	**214**	PN	Pn	03 10 29.5	+0.8
MOQ				SN	Sn	03 11 03.4	+1.0
MOQ				SG	Sg	03 11 11.4	-4.4
MOQ				Trac		03 11 19.7	
	comp=Z,1.7nm,0.0s						
MOQ	**Mont Orford**	**2.84**	**214**	Pn	Pn	03 10 29.5	+0.8
MOQ				Sn	Sn	03 11 03.4	+1.0
MOQ				Sg	Sg	03 11 11.4	-4.4
GASG	**Gaspe, Quebec**	**2.88**	**63**	PN	Pn	03 10 31.3	+2.0
GASG				SN	Sn	03 11 04.0	+0.6
GASG				SG	Sg	03 11 12.8	-4.4
GASG				Trac		03 11 19.6	
	comp=Z,41nm,0.1s						
GASG	**Gaspe, Quebec**	**2.88**	**63**	Pn	Pn	03 10 31.3	+2.0
GASG				Sn	Sn	03 11 04.0	+0.6
GASG				Sg	Sg	03 11 12.8	-4.4
MNQ	**Manicouagan**	**2.96**	**15**	PN	Pn	03 10 29.6	-0.7
MNQ				SN	Sn	03 11 04.0	-1.2
MNQ				Trac		03 11 12.7	
	comp=Z,3.0nm,0.0s						
MNQ	**Manicouagan**	**2.96**	**15**	Pn	Pn	03 10 29.6	-0.7
MNQ				Sn	Sn	03 11 04.0	-1.2
SMQ	**Clarke City**	**3.34**	**39**	PN	Pn	03 10 34.6	-0.9
SMQ				SN	Sn	03 11 12.5	-2.1
SMQ				SG	Sg	03 11 25.2	-6.6
SMQ				Trac		03 11 35.0	
	comp=Z,1.7nm,0.0s						
SMQ	**Clarke City**	**3.34**	**39**	Pn	Pn	03 10 34.6	-0.9
SMQ				Sn	Sn	03 11 12.5	-2.1
SMQ				Sg	Sg	03 11 25.2	-6.6
GGN	**Saint George**	**3.38**	**138**	PN	Pn	03 10 35.7	-0.4
GGN				SN	Sn	03 11 13.3	-2.3
GGN				Trac		03 11 16.9	
	comp=Z,3.5nm,0.1s						
GGN	**Saint George**	**3.38**	**138**	Pn	Pn	03 10 35.7	-0.4
GGN				Sn	Sn	03 11 13.3	-2.3
MRHQ	**Morin Heights**	**3.41**	**240**	PN	Pn	03 10 35.9	-0.5
MRHQ				SN	Sn	03 11 18.2	+1.9
MRHQ				SG	Sg	03 11 28.3	-5.5
MRHQ				Trac		03 11 34.8	
	comp=Z,4.4nm,0.2s						
MRHQ	**Morin Heights**	**3.41**	**240**	Pn	Pn	03 10 35.9	-0.5
MRHQ				Sn	Sn	03 11 18.2	+1.9
MRHQ				Sg	Sg	03 11 28.3	-5.5
TRQ	**Mont Tremblant**	**3.44**	**246**	PN	Pn	03 10 36.2	-0.8
TRQ				SN	Sn	03 11 16.2	-1.1
TRQ				Trac		03 11 35.0	
	comp=Z,1.1nm,0.0s						
TRQ	**Mont Tremblant**	**3.44**	**246**	Pn	Pn	03 10 36.2	-0.8
TRQ				Sn	Sn	03 11 16.2	-1.1
FRNY	**Flat Rock**	**3.79**	**222**	Pn	Pn	03 10 40.0	-1.7
FRNY				Sn	Sn	03 11 23.4	-2.2
FRNY				Sg	Sg	03 11 37.5	-8.5
ALFO	**Alfred**	**3.94**	**240**	PN	Pn	03 10 48.6	+4.8
ALFO				SG	Sg	03 11 42.9	-8.1
ALFO				Trac		03 11 47.6	
	comp=Z,2.4nm,0.2s						
ALFO	**Alfred**	**3.94**	**240**	Pn	Pn	03 10 48.6	+4.8
ALFO				Sg	Sg	03 11 42.9	-8.1
LMN	**Caledonia Moun**	**4.02**	**115**	PN	Pn	03 10 43.7	-1.2
LMN				SN	Sn	03 11 27.4	-4.0
LMN				Trac		03 11 31.5	
	comp=Z,4.1nm,0.3s						
LMN	**Caledonia Moun**	**4.02**	**115**	Pn	Pn	03 10 43.7	-1.2
LMN				Sn	Sn	03 11 27.4	-4.0
GRQ	**Grand Remous**	**4.14**	**257**	PN	Pn	03 10 46.0	-0.5
GRQ				SN	Sn	03 11 33.0	-1.3
GRQ				SG	Sg	03 11 52.6	-4.7
GRQ				Trac		03 11 58.2	
	comp=Z,3.5nm,0.1s						
GRQ	**Grand Remous**	**4.14**	**257**	Pn	Pn	03 10 46.0	-0.5
GRQ				Sn	Sn	03 11 33.0	-1.3
GRQ				Sg	Sg	03 11 52.6	-4.7
GAC	**Glen Almond**	**4.26**	**244**	PN	Pn	03 10 47.8	-0.3
GAC				SN	Sn	03 11 39.4	+2.1
GAC				SG	Sg	03 11 52.1	-9.0
GAC				Trac		03 11 59.4	
	comp=Z,2.7nm,0.1s						
GAC				Trac		03 12 02.4	
	comp=Z,12nm,0.6s						
GAC	**Glen Almond**	**4.26**	**244**	Pn	Pn	03 10 47.8	-0.3
GAC				Sn	Sn	03 11 39.4	+2.1
GAC				Sg	Sg	03 11 52.1	-9.0
LONY	**Lake Ozonia**	**4.42**	**228**	Pn	Pn	03 10 53.7	+3.3
LONY				Sn	Sn	03 11 41.3	0.0
LONY				Sg	Sg	03 11 55.6	-11
WBO	**Williamsburg**	**4.53**	**236**	SN	Sn	03 11 44.1	+0.1
WBO				Trac		03 12 05.3	
	comp=Z,1.2nm,0.1s						
NCB	**Newcomb**	**4.75**	**220**	Pn	Pn	03 10 57.4	+2.5
NCB				Sn	Sn	03 11 48.1	-1.2
NCB				Sg	Sg	03 12 06.3	-10
VLDQ	**Val d'Or**	**5.03**	**278**	SN	Sn	03 11 58.7	+2.4
VLDQ				SG	Sg	03 12 22.5	-3.3
VLDQ				Trac		03 12 30.0	
	comp=Z,2.0nm,0.2s						
VLDQ	**Val d'Or**	**5.03**	**278**	Sn	Sn	03 11 58.7	+2.4
VLDQ				Sg	Sg	03 12 22.5	-3.3
MPPO	**Murphy's Point**	**5.23**	**238**	PN	Pn	03 11 01.1	-0.5
MPPO				SN	Sn	03 11 59.8	-1.6
MPPO				SG	Sg	03 12 23.8	-8.6
CRLO	**Chalk River**	**5.32**	**255**	PN	Pn	03 10 58.8	-4.0
CRLO				SN	Sn	03 11 59.9	-3.6
CRLO				SG	Sn	03 12 26.1	+23
CRLO				Trac		03 12 29.3	
	comp=Z,2.3nm,0.2s						
CRLO	**Chalk River**	**5.32**	**255**	Pn	Pn	03 10 58.8	-4.0
CRLO				Sn	Sn	03 11 59.9	-3.6
CRLO				Sg	Sn	03 12 26.1	+23
YOSQ	**Ashton Mining**	**5.37**	**346**	PN	Pn	03 11 01.9	-1.6
YOSQ				SN	Sn	03 12 01.4	-3.4
YOSQ				Trac		03 12 04.0	
	comp=Z,0.7nm,0.1s						
YOSQ				SG	Sn	03 12 27.5	+23
YOSQ	**Ashton Mining**	**5.37**	**346**	Pn	Pn	03 11 01.9	-1.6
YOSQ				Sn	Sn	03 12 01.4	-3.4
YOSQ				Sg	Sn	03 12 27.5	+23
PEMO	**Pembroke**	**5.37**	**251**	PN	Pn	03 11 02.7	-0.8
PEMO				SN	Sn	03 12 02.7	-2.1
PEMO				SG	Sn	03 12 26.2	+21
PEMO				Trac		03 12 30.5	
	comp=Z,2.6nm,0.2s						
PEMO	**Pembroke**	**5.37**	**251**	Pn	Pn	03 11 02.7	-0.8
PEMO				Sn	Sn	03 12 02.7	-2.1
PEMO				Sg	Sn	03 12 26.2	+21
PLVO	**Plevna**	**5.56**	**244**	PN	Pn	03 11 04.2	-1.9
PLVO				SN	Sn	03 12 04.2	-5.3
PLVO				SG	Sn	03 12 33.5	+24
ALGO	**Algonquin Park**	**5.79**	**256**	SN	Sn	03 12 11.2	-3.8
ALGO				Trac		03 12 18.9	
	comp=Z,4.1nm,0.1s						
ALGO				SG	Sn	03 12 40.8	+26
GBN	**Guysborough**	**6.29**	**108**	PN	Pn	03 11 15.0	-1.0
GBN				SN	Sn	03 12 23.0	-4.3
CHEG	**Cheticamp, Nov**	**6.41**	**94**	PN	Pn	03 11 16.0	-1.8
CHEG				SN	Sn	03 12 25.7	-4.8
HSMO	**Haileybury Sch**	**6.55**	**271**	PN	Pn	03 11 16.4	-3.2
HSMO				SN	Sn	03 12 27.1	-6.7
HSMO				Trac		03 12 32.3	
	comp=Z,0.7nm,0.1s						
HSMO				SG	Sn	03 13 06.0	+32
HSMO	**Haileybury Sch**	**6.55**	**271**	Pn	Pn	03 11 16.4	-3.2
HSMO				Sn	Sn	03 12 27.1	-6.7
HSMO				Sg	Sn	03 13 06.0	+32
KILO	**Kirkland Lake**	**6.56**	**281**	PN	Pn	03 11 19.0	-0.8
KILO				SN	Sn	03 12 30.3	-3.7
KILO				Trac		03 12 38.4	
	comp=Z,0.4nm,0.1s						
KILO				SG	Sn	03 13 04.0	+30
MALO	**McAlpine Lake**	**6.85**	**294**	PN	Pn	03 11 20.7	-3.1
MALO				SN	Sn	03 12 35.6	-5.6
MALO				Trac		03 12 48.9	
	comp=Z,0.4nm,0.1s						
MALO				SG	Sn	03 13 14.3	+33
RSPO	**Restoule Provi**	**6.88**	**260**	SN	Sn	03 12 36.3	-5.6
RSPO				SG	Sn	03 13 15.6	+34
WEMQ	**Wemindji, Queb**	**7.40**	**319**	PN	Pn	03 11 28.7	-2.6
WEMQ				SN	Sn	03 12 48.6	-6.1
WEMQ				SG	Sn	03 13 28.9	+34
WEMQ				Trac		03 13 38.8	
	comp=Z,1.2nm,0.2s						
WEMQ	**Wemindji, Queb**	**7.40**	**319**	Pn	Pn	03 11 28.7	-2.6
WEMQ				Sn	Sn	03 12 48.6	-6.1
WEMQ				Sg	Sn	03 13 29.9	+35
SCHQ	**Schefferville**	**7.42**	**14**	PN	Pn	03 11 29.7	-2.0
SCHQ				SN	Sn	03 12 47.6	-7.6
SCHQ				Trac		03 13 11.7	
	comp=Z,1.2nm,0.3s						
SCHQ	**Schefferville**	**7.42**	**14**	Pn	Pn	03 11 29.7	-2.0
SCHQ				Sn	Sn	03 12 47.6	-7.7
DRLN	**Deer Lake**	**8.46**	**75**	PN	Pn	03 11 45.0	-0.8
DRLN				SN	Sn	03 13 13.3	-7.4
DRLN	**Deer Lake**	**8.46**	**75**	Pn	Pn	03 11 45.0	-0.8
DRLN				Sn	Sn	03 13 13.3	-7.4
VIMO	**Victor Mine**	**10.18**	**305**	SN	Sn	03 13 53.2	-10

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*ISCJB **08** 03:09:47.9±0.8, 3465N±004×2528E±006, h23^{km}±10^{km}, Error ellipse: s-maj=8.5km s-min=6.7km az=2.2*

*HLW **08** 03:09:47.1, 3499N×2559E, h33^{km}, Mb3.0*

*CSEM **08** 03:09:47.9±0.2, 3468N×2528E, h40^{km}, MD3.5, Error ellipse: s-maj=5.6km s-min=4.1km az=95.0*

*NEIC **08** 03:09:48.4, 3472N×2518E, h12^{km}, MD3.5(ATH), After ATH.*

*ATH **08** 03:09:48.4, 3472N×2518E, h12^{km}±4^{km}, MD3.5/7*

ISC 08 03:09:47.9±1.2, **3466N**±004×**2518E**±006, **h6**^{km}±9^{km}, **n14**, σ**1**^{s}**18**/18, **3C-1D**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.48**	**64**	ePB	**Pg**	**03 09 57.5**	**+0.4**
NPS	**Neapolis**	**0.70**	**31**	ePB	**Pg**	**03 10 00.1**	**-1.2**
NPS				eSB	**Sg**	**03 10 09.8**	**-0.5**
GVD	**Gavdhos**	**0.91**	**281**	ePB	**Pb**	**03 10 06.0**	**-0.1**
VAM	**Vamos**	**1.09**	**313**	ePB	**Pb**	**03 10 07.5**	**-1.7**
VAM				eSB	**Sb**	**03 10 23.7**	**0.0**
KARP	**Karpathos**	**1.85**	**61**	ePn	**Pn**	**03 10 22.1**	**+1.9**
KAP	**Karpathos**	**1.86**	**61**	ePN	**Pn**	**03 10 22.1**	**+1.8**
KYTH	**Kithira**	**2.38**	**313**	ePN	**Pn**	**03 10 30.0**	**+2.6**
VLI	**Veliai**	**2.74**	**319**	ePB	**Pn**	**03 10 33.0**	**+0.6**
SLUM		**3.16**	**179**	⇑P	**Pn**	**03 10 39.1**	**+0.8**
SWA1		**5.40**	**175**	⇓P	**Pn**	**03 11 10.1**	**+1.1**
SWA1				S	**Sn**	**03 12 10.2**	**-1.4**
SWA2		**5.41**	**177**	⇑P	**Pn**	**03 11 09.9**	**+0.8**
SWA2				S	**Sn**	**03 12 10.8**	**-0.9**
BTOK	**Tokmak**	**5.58**	**23**	i S	**Sn**	**03 12 14.2**	**-1.5**
AWBH		**7.08**	**152**	⇑P	**Pn**	**03 11 31.0**	**-1.1**
HFRF	**Wahat Farafira**	**7.96**	**159**	P	**Pn**	**03 11 43.6**	**-0.5**

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*NIED **08** 03:51:00, 3250N×14190E, h38^{km}, Mw4.4 Best double couple: $M_0$4.53000×10^{15} NP1:ϕ_s303.00000°, δ76.00000°, λ-77.00000°. NP2:ϕ_s80.00000°, δ18.00000°, λ-132.00000°.*

*IDC **08** 03:51:17.1±1.1, 3249N×14186E, h0^{km}, mb4.0/6, mb1 4.1/8, mb1mx3.9/20, mbtmp4.0/8, ML3.9/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/24, Error ellipse: s-maj=33.6km s-min=18.9km az=54.0*

*ISCJB **08** 03:51:19.1±1.1, 3257N±005×14204E±009, h33^{km}±10^{km}, mb4.0/8, Error ellipse: s-maj=13.0km s-min=8.2km az=133.8*

*JMA **08** 03:51:19.9±0.4, 3252N×14195E, h66^{km}, M3.6*

*NEIC **08** 03:51:22.6±0.8, 3247N×14165E, h35^{km}, mb4.5/2, MW4.4(NIED), Error ellipse: s-maj=28.8km s-min=11.9km az=61.0*

ISC 08 03:51:20.5±2.0, **3255N**±005×**14196E**±008, **h26**^{km}±17^{km}, **n24**, σ**1**^{s}**08**/33, **mb4.0**/8, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.89**	**288**	P	**Pn**	**03 51 50.5**	**-0.5**
JHJ2				eS	**Sn**	**03 52 13.7**	**-0.2**
JHJ	**Hachijo jima 2**	**1.91**	**288**	Pn	**Pn**	**03 51 50.8**	**-0.7**
	55nm,0.3s,baz=127,slow=14,SNR=31						
JHJ				Sn	**Sn**	**03 52 15.7**	**+1.0**
	95nm,0.3s,baz=239,slow=23,SNR=5.6						
BSO1	**Boso 1**	**2.25**	**339**	P	**Pn**	**03 51 55.9**	**-0.1**
BSO1				eS	**Sn**	**03 52 24.1**	**+1.2**
JOD2	**Odawara 2**	**3.60**	**319**	P	**Pn**	**03 52 15.9**	**+1.2**
JOD2				eS	**Sn**	**03 52 55.5**	**-0.9**
JHU	**Hanno**	**3.97**	**327**	P	**Pn**	**03 52 20.0**	**+0.4**
JHU				eS	**Sn**	**03 53 04.7**	**-0.6**
JYN	**Shimob**	**4.08**	**317**	P	**Pn**	**03 52 24.4**	**+3.2**
JYN				eS	**Sn**	**03 53 10.5**	**+2.4**
JHO	**Hitachi**	**4.21**	**345**	P	**Pn**	**03 52 22.5**	**-0.4**
JHO				eS	**Sn**	**03 53 08.6**	**-2.6**
JRY	**Ryogami san**	**4.28**	**325**	P	**Pn**	**03 52 24.2**	**+0.2**
JRY				eS	**Sn**	**03 53 12.4**	**-0.7**
MJAR	**Matsushiro Arr**	**5.04**	**323**	Pn	**Pn**	**03 52 34.3**	**0.0**
	1.4nm,0.3s,baz=144,slow=11,SNR=16						
MJAR				LR	LR	03 54 37.7	
	comp=Z,460nm,18.8s,baz=195,slow=40						
MAJO	**Matsushiro**	**5.04**	**323**	ePn	**Pn**	**03 52 34.5**	**+0.1**
MAT	**Matsushiro**	**5.04**	**323**	P	**Pn**	**03 52 34.8**	**+0.4**
MAT				S	**Sn**	**03 53 30.4**	**-1.4**
MAT	**Matsushiro**	**5.04**	**323**	eP	**Pn**	**03 52 35.0**	**+0.6**
MAT				eS	**Sn**	**03 53 30.0**	**-1.8**
CBIJ	**Chichi jima**	**5.44**	**178**	Pn	**Pn**	**03 52 38.5**	**-1.4**
	16nm,0.3s,baz=86,slow=21,SNR=8.6						
CBIJ				Sn	**Sn**	**03 53 36.4**	**-5.3**
	23nm,0.3s,baz=268,slow=22,SNR=6.1						
CBIJ				LR	LR	03 54 33.6	
	comp=Z,469nm,18.1s,baz=136,slow=36						
SONM	**Songino Array**	**30.84**	**310**	P	**P**	**03 57 35.5**	**+1.1**
	4.8nm,0.9s,mb4.3,baz=111,slow=8.5,SNR=21						
ZAL	**Zalesovo**	**45.36**	**316**	P	**P**	**03 59 36.0**	**-0.5**
	1.0nm,0.5s,mb3.9,baz=345,slow=14,SNR=4.6						
ZAL	**Zalesovo**	**45.36**	**316**	P	**P**	**03 59 36.0**	**-0.5**
MKAR	**Makanchi Array**	**46.99**	**306**	P	**P**	**03 59 48.9**	**-0.5**
	4.5nm,0.8s,mb4.5,baz=91,slow=9.2,SNR=20						
KURK	**Kurchatov**	**49.13**	**311**	eP	**P**	**04 00 04.5**	**-1.4**
	7.5nm,1.0s,mb4.7						
CHKZ	**Chkalovo**	**53.76**	**316**	eP	**P**	**04 00 40.0**	**-0.5**
	2.4nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**56.43**	**189**	P	**P**	**04 01 00.5**	**+0.6**
	0.5nm,0.4s,mb3.9,baz=6.3,slow=7.5,SNR=10						
PDAR	**Pinedale Array**	**80.50**	**45**	P	**P**	**04 03 33.1**	**+2.9**
	0.2nm,0.6s,mb3.2,baz=311,slow=5.5,SNR=2.9						
BRTR	**Keskin Array B**	**82.17**	**312**	P	**P**	**04 03 39.8**	**+0.7**
	0.7nm,0.8s,mb3.6,baz=76,slow=5.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**120.77**	**314**	PKP	PKPdf	04 10 10.6	+0.4
	0.2nm,0.8s,baz=24,slow=0.6,SNR=6.0						
TORD	**Torodi Ar. Bea**	**120.77**	**314**	PKP	PKPdf	04 10 10.6	+0.4

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*ATH **08** 04:09:53.7, 4025N×1946E, h4^{km}±2^{km}, MD3.8/10*

*NEIC **08** 04:09:53.7, 4025N×1946E, h4^{km}, MD3.8(ATH), After ATH.*

*IDC **08** 04:09:55.9±1.2, 4018N×1962E, h0^{km}, mb3.7/9, mb1 3.7/13, mb1mx3.7/24, mbtmp3.6/13, ML3.3/4, Error ellipse: s-maj=22.4km s-min=14.4km az=56.0*

*ISCJB **08** 04:09:56.5±0.4, 4014N±001×1967E±002, h0^{km}±3^{km}, mb3.6/9, Error ellipse: s-maj=2.5km s-min=2.2km az=46.8*

*SKO **08** 04:09:56.4, 4008N×1960E, h0^{km}*

*TIR **08** 04:09:57.3, 4013N×1980E, h17^{km}, Ml3.4*

*CSEM **08** 04:09:58.6±0.1, 4019N×1975E, h5^{km}, MD3.8, Error ellipse: s-maj=1.6km s-min=1.2km az=9.0*

*THE **08** 04:09:58.4, 4016N×1975E, h0^{km}, ML3.8*

*PDG **08** 04:09:59.1±0.7, 4017N×1973E, h11^{km}±2^{km}*

*HLW **08** 04:10:00.7, 4048N×2187E, h33^{km}, Mb4.1*

*LDG **08** 04:10:01.6±0.2, 4008N×1974E, h10^{km}, Ml4.0/6, Error ellipse: s-maj=4.7km s-min=3.3km az=3.0*

ISC 08 04:09:58.0±0.4, **4012N**±001×**1970E**±002, **h1**^{km}±3^{km}, **n161**, σ**1**^{s}**16**/223, **mb3.6**/9, **25C-23D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.30**	**53**	i Pg	**Pg**	**04 10 03.0**	**-0.7**
TPE				i Sg	**Sg**	**04 10 07.2**	**-0.3**
SRN	**Sarande**	**0.33**	**136**	i Pg	**Pg**	**04 10 03.9**	**-0.4**
SRN				i Sg	**Sg**	**04 10 10.2**	**+1.6**
KEK	**Kerkira**	**0.41**	**169**	ePB	**Pg**	**04 10 06.0**	**+0.1**
KEK				eSG	**Sg**	**04 10 13.5**	**+2.3**
LSK	**Leskovik**	**0.69**	**87**	i Pg	**Pg**	**04 10 09.7**	**-1.5**
LSK				i Sg	**Sg**	**04 10 19.9**	**-0.3**
IGT	**Igoumenitsa**	**0.76**	**140**	ePg	**Pg**	**04 10 12.1**	**-0.5**
IGT				eSg	**Sg**	**04 10 24.1**	**+1.6**
KBN	**Korca**	**0.97**	**58**	i Pg	**Pg**	**04 10 16.0**	**-0.6**
KBN				i Sg	**Sg**	**04 10 31.1**	**+1.9**
JAN	**Janina**	**1.00**	**117**	ePB	**Pg**	**04 10 16.1**	**-1.0**
MEV	**Metsovon**	**1.22**	**105**	ePg	**Pg**	**04 10 20.7**	**-0.7**
MEV				eSg	**Sg**	**04 10 38.8**	**+1.6**
TIR	**Tirane**	**1.23**	**6**	ePg	**Pg**	**04 10 21.4**	**-0.2**
TIR				eSg	**Sg**	**04 10 38.6**	**+1.0**

TIR	**Tirane**	**1.23**	**6**	i Pg	**Pg**	**04 10 21.4**	**-0.2**
LCI	**Lecce**	**1.23**	**281**	Pn	**Pn**	**04 10 22.5**	**+0.1**
OHR	**Ohrid**	**1.30**	**40**	ePg	**Pg**	**04 10 21.2**	**-1.7**
OHR				eSg	**Sg**	**04 10 39.4**	**-0.3**
OHR	**Ohrid**	**1.30**	**40**	i Pn	**Pn**	**04 10 22.1**	**-1.2**
OHR				eSn	**Sn**	**04 10 42.4**	**+1.2**
OHR	**Ohrid**	**1.30**	**40**	i Pn	**Pn**	**04 10 22.0**	**-1.2**
OHR				eSg	**Sg**	**04 10 39.4**	**-0.3**
OHR				eSn	**Sn**	**04 10 42.3**	**+1.1**
FNA	**Florina**	**1.44**	**62**	ePg	**Pn**	**04 10 23.9**	**-1.3**
FNA				eSg	**Sg**	**04 10 44.6**	**+0.3**
BIA	**Bitola**	**1.53**	**53**	ePg	**Pn**	**04 10 25.1**	**-1.3**
BIA				eSg	**Sg**	**04 10 46.2**	**-0.9**
BIA	**Bitola**	**1.53**	**53**	i Pn	**Pn**	**04 10 25.3**	**-1.2**
BIA				eSn	**Sn**	**04 10 47.6**	**+0.7**
BIA	**Bitola**	**1.53**	**53**	i Pn	**Pn**	**04 10 25.2**	**-1.2**
BIA				eSn	**Sn**	**04 10 47.6**	**+0.7**
LKD	**Levkas**	**1.59**	**152**	ePg	**Pn**	**04 10 27.2**	**-0.1**
LKD				eSg	**Sg**	**04 10 50.1**	**+1.0**
KZN	**Kozani**	**1.60**	**83**	ePB	**Pn**	**04 10 27.1**	**-0.2**
KZN				eSB	**Sb**	**04 10 51.4**	**+2.5**
PE1	**Pezze di Greco**	**1.87**	**292**	ePn	**Pn**	**04 10 31.0**	**-0.1**
ULC	**Ulcinj**	**1.87**	**350**	⇓iPn	**Pn**	**04 10 30.9**	**-0.3**
ULC				eSn	**Sn**	**04 10 57.5**	**+2.0**
EVR	**Evrytania**	**2.02**	**126**	ePN	**Pn**	**04 10 34.3**	**+1.1**
EVR				eSN	**Sg**	**04 11 03.6**	**+0.5**
VLS	**Valsamata**	**2.06**	**160**	ePB	**Pn**	**04 10 33.0**	**-0.7**
VLS				eSN	**Sg**	**04 11 04.3**	**+0.2**
LIT	**Litokhoron**	**2.14**	**90**	ePn	**Pn**	**04 10 34.5**	**-0.3**
LIT				eSn	**Sn**	**04 11 02.5**	**+0.5**
GRG	**Griva**	**2.22**	**67**	ePn	**Pn**	**04 10 34.9**	**-1.1**
BUM	**Brajici-Budva**	**2.26**	**345**	⇑iPn	**Pn**	**04 10 36.7**	**+0.2**
BUM				eSn	**Sn**	**04 11 06.8**	**+1.7**
SKO	**Skopje**	**2.27**	**35**	ePn	**Pn**	**04 10 37.4**	**+0.8**
SKO				eSn	**Sn**	**04 11 06.1**	**+0.9**
SKO	**Skopje**	**2.27**	**35**	i Pn	**Pn**	**04 10 37.0**	**+0.4**
SKO				eSg	**Sg**	**04 11 10.8**	**-0.2**
SKO	**Skopje**	**2.27**	**35**	ePn	**Pn**	**04 10 37.4**	**+0.8**
SKO				eSn	**Sn**	**04 11 06.1**	**+0.9**
SKO				eSg	**Sg**	**04 11 10.7**	**-0.3**
AGG	**Agios Georgios**	**2.31**	**117**	ePn	**Pn**	**04 10 38.0**	**+0.9**
AGG				eSn	**Sn**	**04 11 06.5**	**+0.3**
TTG	**Podgorica**	**2.33**	**352**	⇓iPn	**Pn**	**04 10 37.1**	**-0.4**
TTG				eSn	**Sn**	**04 11 08.4**	**+1.6**
BAI	**Bari**	**2.36**	**296**	ePn	**Pn**	**04 10 37.6**	**-0.3**
SG1	**Sgolgore (BA)**	**2.42**	**288**	ePn	**Pn**	**04 10 38.5**	**-0.1**
STIP	**Stip**	**2.45**	**49**	ePn	**Pn**	**04 10 39.1**	**-0.1**
STIP				eSn	**Sn**	**04 11 10.6**	**+0.8**
STIP	**Stip**	**2.45**	**49**	ePn	**Pn**	**04 10 39.1**	**-0.1**
STIP				eSg	**Sg**	**04 11 16.8**	**0.0**
STIP	**Stip**	**2.45**	**49**	ePn	**Pn**	**04 10 39.1**	**0.0**
STIP				eSn	**Sn**	**04 11 10.6**	**+0.8**
STIP				eSg	**Sg**	**04 11 16.8**	**-0.1**
RLS	**Riolos of Patr**	**2.48**	**146**	ePN	**Pn**	**04 10 39.8**	**+0.4**
PVY	**Plav**	**2.48**	**5**	⇓iPn	**Pn**	**04 10 40.2**	**+0.7**
PVY				eSn	**Sn**	**04 11 12.0**	**+1.6**
VAY	**Valandovo**	**2.49**	**60**	ePn	**Pn**	**04 10 38.7**	**-1.0**
VAY				eSn	**Sn**	**04 11 10.7**	**+0.1**
VAY	**Valandovo**	**2.49**	**60**	i Pn	**Pn**	**04 10 39.1**	**-0.5**
VAY				eSg	**Sg**	**04 11 18.4**	**+0.4**
VAY	**Valandovo**	**2.49**	**60**	i Pn	**Pn**	**04 10 39.1**	**-0.5**
VAY				eSn	**Sn**	**04 11 10.7**	**+0.1**
VAY				eSg	**Sg**	**04 11 18.3**	**+0.3**
HCY	**Herceg Novi**	**2.50**	**339**	⇓iPn	**Pn**	**04 10 39.4**	**-0.3**
HCY				eSn	**Sn**	**04 11 12.3**	**+1.5**
THE	**Thessaloniki**	**2.55**	**77**	ePn	**Pn**	**04 10 39.4**	**-1.0**
HORT	**Hortiatis**	**2.64**	**78**	ePn	**Pn**	**04 10 40.7**	**-1.0**
HORT				eSn	**Sn**	**04 11 14.2**	**-0.2**
KNT	**Kendrikon**	**2.65**	**66**	ePn	**Pn**	**04 10 41.4**	**-0.4**
KNT				eSn	**Sn**	**04 11 14.9**	**+0.4**
NKY	**Niksic**	**2.74**	**349**	⇑iPn	**Pn**	**04 10 42.9**	**-0.3**
NKY				eSn	**Sn**	**04 11 18.2**	**+1.3**
NKY	**Niksic**	**2.74**	**349**	⇑iPn	**Pn**	**04 10 42.8**	**-0.3**
IVA	**Berane**	**2.75**	**3**	⇑iPn	**Pn**	**04 10 44.3**	**+1.0**
IVA				eSn	**Sn**	**04 11 19.0**	**+1.8**
CDT	**Castel del Mon**	**2.78**	**291**	ePn	**Pn**	**04 10 45.0**	**+1.4**
TREB	**Trebinje**	**2.79**	**339**	P	**Pn**	**04 10 43.6**	**-0.1**
TREB				S	**Sn**	**04 11 18.0**	**0.0**
XOR	**Xorichti**	**2.79**	**104**	ePn	**Pn**	**04 10 44.1**	**+0.3**
NEO	**Neokhori**	**2.84**	**105**	ePN	**Pn**	**04 10 44.5**	**+0.1**
GRI	**Girifalco**	**2.85**	**244**	Pn	**Pn**	**04 10 45.6**	**+1.0**
SOH	**Sokhos**	**2.87**	**75**	ePn	**Pn**	**04 10 44.8**	**-0.1**
SOH				eSn	**Sn**	**04 11 20.1**	**-0.1**
PLG	**Polygyros**	**2.88**	**84**	ePN	**Pn**	**04 10 44.8**	**-0.2**
BRY	**Bratogost**	**2.91**	**343**	⇓iPn	**Pn**	**04 10 45.6**	**+0.2**
BRY				eSn	**Sn**	**04 11 21.9**	**+0.8**
LKR	**Lokris**	**2.95**	**119**	ePN	**Pn**	**04 10 46.6**	**+0.7**
CUC	**Castrocucco**	**2.98**	**269**	Pn	**Pn**	**04 10 48.5**	**+2.1**
UPM	**Unac-Piva**	**3.14**	**349**	⇓iPn	**Pn**	**04 10 50.0**	**+1.4**
UPM				eSn	**Sn**	**04 11 27.7**	**+1.1**
PLE	**Pljevlja**	**3.22**	**356**	⇓iPn	**Pn**	**04 10 50.2**	**+0.6**
PLE				eSn	**Sn**	**04 11 29.1**	**+0.6**
MS1	**Monte Sant'Ang**	**3.26**	**300**	ePn	**Pn**	**04 10 46.4**	**-3.8**
MRLC	**Muro Lucano**	**3.28**	**283**	Pn	**Pn**	**04 10 52.2**	**+1.7**
OUR	**Ouranopolis**	**3.29**	**85**	ePn	**Pn**	**04 10 50.0**	**-0.5**
FG4	**Candela**	**3.34**	**289**	Pn	**Pn**	**04 10 54.1**	**+2.8**
AOS	**Alonnisos**	**3.36**	**105**	ePn	**Pn**	**04 10 51.6**	**0.0**
MMB	**Musomiste**	**3.39**	**63**	ePn	**Pn**	**04 10 52.1**	**+0.1**
NVR	**Nevrokopi**	**3.39**	**67**	ePN	**Pn**	**04 10 52.5**	**+0.5**
RGNG	**Rignano Grg**	**3.48**	**298**	Pn	**Pn**	**04 10 53.1**	**-0.2**
CEL	**Celeste**	**3.49**	**239**	Pn	**Pn**	**04 10 53.4**	**0.0**
SOI	**Samo**	**3.50**	**235**	Pn	**Pn**	**04 10 53.3**	**-0.2**
FG5	**Orsara di Pugl**	**3.56**	**290**	i Pnu		04 10 56.5	
VTS	**Vitosha**	**3.62**	**46**	ePn	**Pn**	**04 10 55.4**	**+0.3**
VTS	**Vitosha**	**3.62**	**46**	⇓iP	**Pn**	**04 10 55.9**	**+0.8**
VTS	**Vitosha**	**3.62**	**46**	⇓P	**Pn**	**04 10 55.9**	**+0.8**
VTS	**Vitosha**	**3.62**	**46**	⇓P	**Pn**	**04 10 55.9**	**+0.8**
BBLS	**Bajina Basta -**	**3.75**	**357**	⇑iPn	**Pn**	**04 10 57.6**	**+0.6**
MTTG	**Motta San Giov**	**3.77**	**237**	Pn	**Pn**	**04 10 57.1**	**-0.1**
FG2	**Serracapriola**	**3.83**	**298**	Pn	**Pn**	**04 10 58.5**	**+0.5**
GRUS	**Gruza**	**3.84**	**11**	⇓iPn	**Pn**	**04 10 57.9**	**-0.3**
DIVS	**Divcibare**	**3.98**	**3**	⇓iPn	**Pn**	**04 10 58.8**	**-1.4**
DIVS	**Divcibare**	**3.98**	**3**	ePn	**Pn**	**04 10 59.3**	**-0.8**
PLD	**Plovdiv**	**4.27**	**61**	ePn	**Pn**	**04 11 04.2**	**+0.1**
MIDA	**Miranda**	**4.40**	**292**	Pn	**Pn**	**04 11 07.7**	**+1.8**
INTR	**Introdacqua**	**4.77**	**295**	Pn	**Pn**	**04 11 11.2**	**+0.2**
ALN	**Alexandroupoli**	**4.90**	**79**	ePn	**Pn**	**04 11 12.2**	**-0.5**
ALN	**Alexandroupoli**	**4.90**	**79**	ePn	**Pn**	**04 11 12.2**	**-0.5**
TERO	**Teramo**	**5.22**	**301**	Pn	**Pn**	**04 11 18.2**	**+1.0**
AQU	**L'Aquila**	**5.25**	**297**	⇓iP	**Pb**	**04 11 30.5**	**0.0**
AQU	**L'Aquila**	**5.25**	**297**	ePn	**Pn**	**04 11 15.9**	**-1.6**
	12nm,0.6s						
AQU	**L'Aquila**	**5.25**	**297**	ePn	**Pn**	**04 11 15.9**	**-1.6**
	12nm,0.6s						
APE	**Apeiranthos**	**5.49**	**122**	⇓iP	**Pn**	**04 11 19.7**	**-1.2**
APE	**Apeiranthos**	**5.49**	**122**	⇓P	**Pn**	**04 11 19.7**	**-1.2**
BZS	**Buzias**	**5.67**	**14**	⇑iP	**Pn**	**04 11 21.7**	**-1.7**
BZS	**Buzias**	**5.67**	**14**	⇑P	**Pn**	**04 11 21.7**	**-1.7**
NVLJ	**Novalja**	**5.70**	**323**	i Pn	**Pn**	**04 11 21.5**	**-2.3**
NVLJ				i Sn	**Sn**	**04 12 26.2**	**-3.6**
SNTG	**Esanatoglia**	**5.95**	**304**	Pn	**Pn**	**04 11 28.2**	**+1.0**
ARV	**Arcevia**	**6.07**	**306**	Pn	**Pn**	**04 11 28.7**	**-0.2**
PKSM	**Moragy**	**6.14**	**353**	⇑iP	**Pn**	**04 11 28.6**	**-1.2**
MURB	**Monte Urbino**	**6.22**	**303**	Pn	**Pn**	**04 11 33.3**	**+2.4**
BOJS	**Bojanci**	**6.30**	**330**	ePn	**Pn**	**04 11 31.8**	**-0.1**
BOJS				eSn	**Sn**	**04 12 41.5**	**-3.0**
IDI	**Anoyia**	**6.34**	**138**	Pn	**Pn**	**04 11 30.8**	**-1.7**
	0.5nm,0.3s,baz=44,slow=14,SNR=6.0						
IDI				Sn	**Sn**	**04 12 35.9**	**-10**
	1.5nm,0.3s,baz=94,slow=23,SNR=4.9						
VOIR		**6.61**	**35**	⇑iP	**Pn**	**04 11 37.9**	**+1.6**
VOIR		**6.61**	**35**	⇑P	**Pn**	**04 11 37.9**	**+1.6**
SNX	**Sinaia**	**6.76**	**37**	⇑iP	**Pn**	**04 11 39.7**	**+1.4**
SNX	**Sinaia**	**6.76**	**37**	⇑P	**Pn**	**04 11 39.7**	**+1.4**
SFI	**Santa Sofia**	**6.96**	**305**	Pn	**Pn**	**04 11 43.8**	**+2.7**
DRGR		**7.02**	**17**	⇓iP		04 11 53.2	
DRGR		**7.02**	**17**	⇓P		04 11 53.2	
MLR	**Muntele Rosu**	**7.06**	**38**	Pn	**Pn**	**04 11 45.0**	**+2.5**
	0.5nm,0.3s,baz=221,slow=9.3,SNR=8.8						
MLR	**Muntele Rosu**	**7.06**	**38**	⇑iP	**Pn**	**04 11 46.2**	**+3.7**
MLR	**Muntele Rosu**	**7.06**	**38**	⇑P	**Pn**	**04 11 46.1**	**+3.7**
VOY	**Vojsko**	**7.28**	**326**	ePn	**Pn**	**04 11 44.7**	**-0.7**
VOY				eSn	**Sn**	**04 13 03.8**	**-4.9**
PERS	**Pernice**	**7.32**	**334**	ePn	**Pn**	**04 11 45.8**	**-0.2**
PERS				eSn	**Sn**	**04 13 03.4**	**-6.2**
OBKA	**Obir**	**7.41**	**331**	⇑iPn	**Pn**	**04 11 46.9**	**-0.4**
OBKA				⇓iSn	**Sn**	**04 13 10.0**	**-1.9**
ROBS	**Robic**	**7.61**	**326**	ePn	**Pn**	**04 11 49.3**	**-0.7**
ROBS				eSn	**Sn**	**04 13 11.9**	**-5.0**
HARR	**Harsova**	**7.61**	**50**	⇑iP	**Pn**	**04 11 49.3**	**-0.7**
HARR	**Harsova**	**7.61**	**50**	⇑P	**Pn**	**04 11 49.3**	**-0.7**
ARSA	**Arzberg**	**7.74**	**338**	⇑iPn	**Pn**	**04 11 52.0**	**+0.2**
ARSA				⇑iSn	**Sn**	**04 13 17.4**	**-2.8**
PSZ	**Piszkesteto**	**7.80**	**1**	ePn	**Pn**	**04 11 50.9**	**-1.7**
PSZ	**Piszkesteto**	**7.80**	**1**	⇑iP	**Pn**	**04 11 48.1**	**-4.5**
PSZ	**Piszkesteto**	**7.80**	**1**	⇑P	**Pn**	**04 11 48.1**	**-4.5**
PTCC	**Patocco-Chiusa**	**7.80**	**326**	Pn	**Pn**	**04 11 53.0**	**+0.4**
CFR	**Carcaliu**	**8.01**	**48**	⇑iP	**Pn**	**04 12 00.1**	**+4.6**
CFR	**Carcaliu**	**8.01**	**48**	⇑P	**Pn**	**04 12 00.1**	**+4.7**
CTI	**Castel Tesino**	**8.35**	**318**	Pn	**Pn**	**04 11 59.3**	**-0.9**
VYHS	**Vyhne**	**8.40**	**356**	e	**Pn**	**04 12 00.9**	**+0.1**
VYHS				e		04 13 12.1	
BURAR	**Bucovina Array**	**8.48**	**26**	⇓iP	**Pn**	**04 12 04.6**	**+2.6**
BURAR	**Bucovina Array**	**8.48**	**26**	⇓P	**Pn**	**04 12 04.5**	**+2.6**
WTTA	**Wattenberg**	**9.22**	**323**	⇓iPn	**Pn**	**04 12 11.7**	**-0.4**
WTTA				⇑iSn	**Sn**	**04 13 52.3**	**-4.2**
SLUM		**9.70**	**151**	⇓P	**Pn**	**04 12 14.6**	**-4.0**
GERES	**GERESS Array B**	**9.72**	**336**	Pn	**Pn**	**04 12 15.7**	**-3.2**
	0.2nm,0.3s,baz=163,slow=15,SNR=4.9						
GERES				Sn	**Sn**	**04 14 04.1**	**-4.6**
	0.3nm,0.3s,baz=147,slow=24,SNR=4.2						
DAVOX	**Davos**	**9.76**	**316**	Pn	**Pn**	**04 12 20.4**	**+0.9**
	0.1nm,0.3s,baz=240,slow=18,SNR=2.2						
DAVOX				Sn	**Sn**	**04 14 04.1**	**-5.6**
	0.4nm,0.3s,baz=139,slow=19,SNR=3.9						
KHC	**Kasperske Hory**	**10.01**	**336**	ePN	**Pn**	**04 12 19.0**	**-3.9**
KHC				x	x	04 12 31.5	
KHC	**Kasperske Hory**	**10.01**	**336**	eP	**Pn**	**04 12 19.0**	**-3.9**
KHC				e		04 12 31.5	
BRTR	**Keskin Array B**	**10.71**	**88**	Pn	**Pn**	**04 12 33.2**	**+0.6**
	0.1nm,0.3s,baz=273,slow=13,SNR=2.1						
LPG	**La Plagne**	**10.92**	**304**	ePn	**Pn**	**04 12 37.0**	**+1.6**
LPG				eSn	**Sn**	**04 14 26.5**	**-12**
	10nm,0.6s						
LPL	**La Plagne**	**10.94**	**304**	ePn	**Pn**	**04 12 36.2**	**+0.5**
LPL				eSn	**Sn**	**04 14 27.1**	**-12**
	7.5nm,0.4s						
SWA2		**11.83**	**155**	⇓P	**Pn**	**04 12 44.9**	**-3.0**
SWA2				S	**Sn**	**04 14 45.7**	**-15**
CABF	**La Chapelle**	**11.84**	**308**	eSn	**Sn**	**04 14 52.6**	**-8.0**
	8.3nm,0.7s						
SWA1		**11.90**	**154**	⇑P	**Pn**	**04 12 45.6**	**-3.2**
SWA1				S	**Sn**	**04 14 46.1**	**-16**
HINF	**Hinteralfeld**	**12.03**	**314**	ePn	**Pn**	**04 12 50.1**	**-0.4**
HINF				eSn	**Sn**	**04 14 58.6**	**-6.7**
	2.9nm,0.4s						
HAU	**Haudompre**	**12.41**	**314**	ePn	**Pn**	**04 12 54.9**	**-0.9**
AKASG	**Malin Array Be**	**12.51**	**29**	Pn	**Pn**	**04 12 55.6**	**-1.4**
	0.1nm,0.3s,baz=210,slow=11,SNR=2.7						
LOR	**Lormes**	**13.49**	**307**	ePn	**Pn**	**04 13 11.3**	**+0.8**
LOR				eSn	**Sn**	**04 15 31.6**	**-10**
	4.3nm,0.4s						
AVF	**Avril sur Loir**	**13.61**	**305**	ePn	**Pn**	**04 13 12.7**	**+0.6**
AWBH		**14.01**	**144**	P	**Pn**	**04 13 10.9**	**-6.6**
TCF	**Toulx Ste Croi**	**14.16**	**302**	eSn	**Sn**	**04 15 49.7**	**-7.6**
	2.7nm,0.5s						
HFS	**Hagfors**	**20.39**	**351**	P	**P**	**04 14 34.1**	**-2.1**
	1.3nm,0.5s,baz=160,slow=11,SNR=7.8						
EKA	**Eskdalemuir Ar**	**21.49**	**323**	P	**P**	**04 14 46.1**	**-2.0**
	0.9nm,0.9s,mb3.1,baz=51,slow=10,SNR=3.2						
NB2	**NORSAR Subarra**	**21.59**	**349**	P	**P**	**04 14 47.2**	**-2.0**
	comp=Z,2.7nm,0.8s,mb3.7,baz=160,slow=10						
NOA	**NORSAR Array B**	**21.59**	**349**	P	**P**	**04 14 47.3**	**-1.8**
	comp=Z,1.8nm,0.7s,mb3.6,baz=162,slow=10,SNR=6.4						
FINES	**FINESS Array B**	**21.71**	**8**	P	**P**	**04 14 47.6**	**-2.8**
	comp=Z,0.9nm,0.5s,mb3.5,baz=193,slow=9.7,SNR=7.0						
KAF	**Kangasniemi**	**22.39**	**8**	ep	**P**	**04 14 53.5**	**-4.2**
	baz=189,slow=11						
JOF	**Joensuu**	**23.87**	**13**	ep	**P**	**04 15 10.0**	**-3.0**
	comp=Z,0.5nm,0.3s,mb3.5						
ARCES	**ARCESS Array B**	**29.64**	**4**	P	**P**	**04 16 01.9**	**-3.1**
	comp=Z,0.7nm,0.7s,mb3.6,baz=181,slow=12,SNR=7.1						
TORD	**Torodi Ar. Bea**	**31.19**	**216**	P	**P**	**04 16 17.5**	**-1.1**
	comp=Z,0.2nm,0.7s,mb3.1,baz=20,slow=9.4,SNR=4.3						
MKAR	**Makanchi Array**	**44.85**	**60**	P	**P**	**04 18 11.0**	**-2.7**
	comp=Z,2.4nm,0.5s,mb4.4,baz=283,slow=6.8,SNR=18						
MKAR	**Makanchi Array**	**44.85**	**60**	P	**P**	**04 18 11.0**	**-2.8**
ZAL	**Zalesovo**	**44.88**	**49**	P	**P**	**04 18 10.8**	**-3.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=199,slow=9.3						
SONM	**Songino Array**	**59.73**	**51**	P	**P**	**04 20 03.0**	**-1.3**
	comp=Z,0.7nm,0.9s,mb3.7,baz=268,slow=6.6,SNR=3.4						

IDC 08 04:21:06.2±1.8**, 497S×12267E, h0km, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.5**/14**, mbtmp3.6**/3**, Error ellipse: s-maj=233.7km s-min=29.7km az=64.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**21.51**	**151**	P	P	04 25 57.0	+0.3
	0.9nm,0.6s,baz=335,slow=13,SNR=6.6						
SONM	**Songino Array**	**54.50**	**347**	P	P	04 30 36.1	+0.4
	0.2nm,0.4s,baz=142,slow=7.2,SNR=3.8						
MKAR	**Makanchi Array**	**62.68**	**330**	P	P	04 31 32.6	-0.1
	0.3nm,0.4s,baz=138,slow=7.4,SNR=4.2						

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*NEIC **08** 04:28:32.3±3.8, 3631N×1003W, h10km, MG2.8(MDD), Error ellipse: s-maj=45.1km s-min=7.1km az=221.0*
*CSEM **08** 04:28:37.3±0.5, 3636N×947W, h15km, ML2.6, Error ellipse: s-maj=10.4km s-min=5.6km az=32.0*
*IGIL **08** 04:28:37.0, 3630N×990W, h32km, ML3.0*
*INMG **08** 04:28:37.7±0.8, 3646N×980W, h10km, ML2.6, Error ellipse: s-maj=3.9km s-min=2.5km az=65.0*
MDD 08 04:28:39.5±1.4**, 3659N×964W, h97km**±8km**, mb2.6**/20**, Error ellipse: s-maj=10.9km s-min=5.7km az=43.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORF	**Marmelete**	**1.06**	**47**	eP	Pn	04 28 59.6	-0.8
MORF				eS	Sn	04 29 15.8	-0.3
MORF				eS	Sn	04 29 15.8	-0.3
MORF				AML	AML	04 29 18.7	
	comp=E,116nm,0.4s						
MORF	**Marmelete**	**1.06**	**47**	eP	Pn	04 28 59.6	-0.8
MORF				eS	Sn	04 29 15.8	-0.3
PTEO	**Sao Teotonio**	**1.20**	**37**	eP	Pn	04 29 01.5	-0.5
PTEO				eS	Sn	04 29 19.4	+0.5
PTEO							
	comp=E,24nm,0.1s						
PTEO	**Sao Teotonio**	**1.20**	**37**	eP	Pn	04 29 01.5	-0.5
PTEO				eS	Sn	04 29 19.4	+0.5
	comp=E,24nm,0.1s						
EGRO	**El Granado**	**1.96**	**61**	P	Pn	04 29 11.6	+0.2
	comp=E,0.6nm,0.1s,SNR=21						
EGRO				S	Sn	04 29 37.1	+1.2
	comp=E,15nm,0.1s,SNR=15						
EGRO	**El Granado**	**1.96**	**61**	P	Pn	04 29 11.6	+0.1
	comp=E,0.6nm,0.1s,SNR=21						
EGRO				S	Sn	04 29 37.1	+1.3
	comp=E,15nm,0.1s,SNR=15						
PBEJ	**Beja**	**2.01**	**44**	ePn	Pn	04 29 12.5	+0.4
PBEJ				eSn	Sn	04 29 38.6	+1.7
PBEJ							
	comp=E,12nm,0.1s						
ERIP	**Rio Piedras**	**2.06**	**67**	P	Pn	04 29 12.7	0.0
	SNR=7.9						
ERIP				S	Sn	04 29 37.8	-0.2
	SNR=7.9						
LIS	**Lisbon**	**2.16**	**10**	eP	Pn	04 29 13.9	-0.1
LIS				eS	Sn	04 29 41.0	+0.6
LIS				eS	Sn	04 29 41.0	+0.6
LIS				AML	AML	04 29 44.2	
	comp=E,97nm,0.3s						
LIS	**Lisbon**	**2.16**	**10**	eP	Pn	04 29 13.9	-0.1
LIS				eS	Sn	04 29 41.0	+0.6
PLOU	**Loures**	**2.32**	**9**	ePn	Pn	04 29 16.0	-0.2
PLOU				eSn	Sn	04 29 45.3	+1.1
PLOU							
	comp=E,30nm,0.1s						
PLOU	**Loures**	**2.32**	**9**	ePn	Pn	04 29 16.0	-0.2
PLOU				eSn	Sn	04 29 45.3	+1.1
PMAFR	**Mafra**	**2.38**	**7**	ePn	Pn	04 29 16.4	-0.5
PMAFR				eSn	Sn	04 29 46.2	+0.7
EMIN	**Mina Concepcio**	**2.64**	**63**	P	Pn	04 29 20.6	+0.2
	comp=E,0.4nm,0.1s,SNR=13						
EMIN				S	Sn	04 29 52.8	+1.1
	comp=E,3.4nm,0.1s,SNR=9.0						
EMIN	**Mina Concepcio**	**2.64**	**63**	P	Pn	04 29 20.6	+0.2
	comp=E,0.4nm,0.1s,SNR=13						
EMIN				S	Sn	04 29 52.8	+1.0
	comp=E,3.4nm,0.1s,SNR=9.0						
ALMR	**Almeirim**	**2.70**	**18**	eS	Sn	04 29 54.1	+1.0
ALMR				eS	Sn	04 29 54.1	+1.0
ALMR				AML	AML	04 29 57.3	
	comp=N,46nm,0.1s						
PESTR	**Estremoz**	**2.79**	**35**	ePn	Pn	04 29 22.7	+0.3
PESTR				eSn	Sn	04 29 57.2	+1.8
PESTR							
	comp=N,6.2nm,0.2s						
EBAD	**Badajoz**	**3.00**	**43**	P	Pn	04 29 25.5	+0.3
	comp=N,0.9nm,0.1s,SNR=13						
EBAD				S	Sn	04 30 02.3	+2.0
	comp=N,11nm,0.1s,SNR=8.5						
EBAD	**Badajoz**	**3.00**	**43**	P	Pn	04 29 25.5	+0.3
EBAD				S	Sn	04 30 02.3	+2.0
EBAD	**Badajoz**	**3.00**	**43**	P	Pn	04 29 25.5	+0.3
	comp=N,0.9nm,0.1s,SNR=13						
EBAD				S	Sn	04 30 02.3	+2.0
	comp=N,11nm,0.1s,SNR=8.5						
ESPR	**Espera**	**3.05**	**84**	P	Pn	04 29 26.0	+0.2
	comp=N,1.6nm,0.1s,SNR=10.0						
ESPR				S	Sn	04 30 02.0	+0.5
	comp=N,50nm,0.3s,SNR=6.8						
ESPR	**Espera**	**3.05**	**84**	P	Pn	04 29 26.0	+0.2
	comp=N,1.6nm,0.1s,SNR=10.0						
ESPR				S	Sn	04 30 02.0	+0.5
	comp=N,50nm,0.3s,SNR=6.8						
PTOM	**Tomar**	**3.17**	**17**	ePn	Pn	04 29 28.1	+0.6
PTOM				eSn	Sn	04 30 05.4	+0.9
PTOM							
	comp=N,17nm,0.1s						
EJIF	**Jimena Fronter**	**3.36**	**91**	S	Sn	04 30 11.4	+2.4
	comp=N,0.8nm,0.2s,SNR=4.0						
PCBR	**Castelo Branco**	**3.66**	**27**	ePn	Pn	04 29 35.1	+1.0
PCBR				eSn	Sn	04 30 18.0	+1.7
PCBR							
	comp=N,6.1nm,0.3s						
EMIJ	**Mijas**	**3.91**	**89**	P	Pn	04 29 37.8	+0.3
	comp=N,0.6nm,0.2s,SNR=7.9						
EMIJ				S	Sn	04 30 23.6	+1.2
	comp=N,2.3nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**4.33**	**67**	P	Pn	04 29 43.6	+0.5
	comp=N,2.0nm,0.2s,SNR=12						
EADA				S	Sn	04 30 33.7	+1.3
	comp=N,2.2nm,0.2s,SNR=6.7						
EADA	**Adamuz**	**4.33**	**67**	P	Pn	04 29 43.6	+0.5
EADA				S	Sn	04 30 33.6	+1.3
EADA	**Adamuz**	**4.33**	**67**	P	Pn	04 29 43.6	+0.6
	comp=N,2.0nm,0.2s,SNR=12						
EADA				S	Sn	04 30 33.7	+1.4
	comp=N,2.2nm,0.2s,SNR=6.7						
PVIS	**Viseu**	**4.34**	**18**	eSn	Sn	04 30 33.1	+0.4
PVIS							
	comp=N,9.4nm,0.1s						
PVIS	**Viseu**	**4.34**	**18**	S	Sn	04 30 33.1	+0.4
	comp=N,4.7nm,0.1s						
ELUQ	**Luque**	**4.40**	**76**	S	Sn	04 30 36.5	+2.4
	comp=N,3.0nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**4.40**	**76**	S	Sn	04 30 36.7	+2.5
	comp=N,3.0nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**4.46**	**38**	P	Pn	04 29 45.5	+0.8
	comp=N,0.7nm,0.1s,SNR=7.9						
EPLA				S	Sn	04 30 36.5	+1.0
	comp=N,4.9nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**4.46**	**38**	P	Pn	04 29 45.5	+0.7
	comp=N,0.7nm,0.1s,SNR=7.9						
EPLA				S	Sn	04 30 36.5	+1.0
	comp=N,4.9nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**4.91**	**17**	ePn	Pn	04 29 51.9	+0.9
PVRL				eSn	Sn	04 30 46.8	+0.2
PVRL							
	comp=N,12nm,0.2s						
EBAN	**Banos Encina**	**4.92**	**70**	P	Pn	04 29 52.0	+1.0
	comp=N,1.6nm,0.2s,SNR=7.9						
EBAN				S	Sn	04 30 48.1	+1.4
	comp=N,1.2nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**5.00**	**81**	P	Pn	04 29 53.6	+1.4
	comp=N,0.3nm,0.2s,SNR=7.9						
EQUE				S	Sn	04 30 50.1	+1.3
	comp=N,1.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.38**	**75**	P	Pn	04 29 58.0	+0.7
	comp=N,0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	04 30 58.9	+1.0
	comp=N,2.1nm,0.1s,SNR=7.9						
EQES	**Quesada**	**5.38**	**75**	P	Pn	04 29 58.0	+0.7
EQES				S	Sn	04 30 58.2	+0.3
EQES	**Quesada**	**5.38**	**75**	P	Pn	04 29 58.0	+0.7
	comp=N,0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	04 30 58.2	+0.3
	comp=N,2.1nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.41**	**13**	P	Pn	04 29 57.8	+0.1
	comp=N,1.6nm,0.2s,SNR=8.3						
ELOB				S	Sn	04 30 57.4	-1.3
	comp=N,3.6nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**5.43**	**54**	P	Pn	04 29 59.3	+1.3
	comp=N,3.0nm,0.2s,baz=241,slow=14,SNR=11						
ESDC				S	Sn	04 31 00.5	+1.3
	comp=N,2.8nm,0.3s,baz=240,slow=23,SNR=20						
ESDC	**Sonseca Array**	**5.43**	**54**	P	Pn	04 29 59.3	+1.3
	comp=N,3.0nm,0.2s,SNR=11						
ESDC				S	Sn	04 31 00.5	+1.4
	comp=N,2.8nm,0.3s,SNR=20						
EZAM	**Zamans**	**5.60**	**7**	P	Pn	04 30 00.5	+0.2
	comp=N,1.1nm,0.1s,SNR=7.9						
EZAM				S	Sn	04 31 03.8	+0.5
	comp=N,1.2nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**5.67**	**22**	ePn	Pn	04 30 02.6	+1.3
PBRG				eSn	Sn	04 31 04.8	-0.3
PBRG							
	comp=N,3.9nm,0.2s						
EHUE	**Huescar**	**5.75**	**76**	P	Pn	04 30 02.9	+0.5
	comp=N,0.1nm,0.1s,SNR=7.9						
EHUE				S	Sn	04 31 09.6	+2.6
	comp=N,1.3nm,0.1s,SNR=6.4						
EHUE	**Huescar**	**5.75**	**76**	P	Pn	04 30 02.9	+0.5
EHUE				S	Sn	04 31 09.6	+2.6
ECAL	**Calabor**	**5.80**	**22**	P	Pn	04 30 04.2	+1.2
	comp=N,2.4nm,0.2s,SNR=7.9						
ECAL				S	Sn	04 31 09.2	+1.1
	comp=N,7.6nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**5.80**	**22**	P	Pn	04 30 04.2	+1.2
ECAL				S	Sn	04 31 07.1	-1.0
GUD	**Guadarrama**	**5.90**	**45**	P	Pn	04 30 05.5	+1.2
	comp=N,0.6nm,0.2s,SNR=7.9						
GUD				S	Sn	04 31 12.3	+1.7
	comp=N,2.2nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**5.90**	**45**	P	Pn	04 30 05.9	+1.6
GUD				S	Sn	04 31 11.1	+0.5
GUD	**Guadarrama**	**5.90**	**45**	P	Pn	04 30 05.9	+1.5
	comp=N,0.6nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**6.02**	**68**	P	Pn	04 30 07.1	+1.1
	comp=N,0.8nm,0.4s,SNR=7.9						
EVIA				S	Sn	04 31 14.3	+0.8
	comp=N,1.3nm,0.2s,SNR=7.9						
STS	**Santiago**	**6.34**	**7**	P	Pn	04 30 10.2	-0.2
STS				S	Sn	04 31 15.3	-6.1
EMAZ	**Mazaricos**	**6.37**	**4**	P	Pn	04 30 10.2	-0.7
EMAZ				S	Sn	04 31 21.1	-1.0
ETOB	**Tobarra**	**6.74**	**70**	P	Pn	04 30 15.9	+0.1
	comp=N,0.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	04 31 32.8	+1.7
	comp=N,0.6nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**6.74**	**70**	P	Pn	04 30 15.9	+0.1
ETOB				S	Sn	04 31 31.3	+0.3
ETOB	**Tobarra**	**6.74**	**70**	P	Pn	04 30 15.9	+0.1
	comp=N,0.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	04 31 31.3	+0.3
	comp=N,0.6nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**7.00**	**15**	P	Pn	04 30 19.6	+0.3
	comp=N,0.4nm,0.1s,SNR=7.9						
EPON				S	Sn	04 31 38.2	+0.9
	comp=N,0.6nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**7.51**	**26**	P	Pn	04 30 27.4	+1.0
	comp=N,0.1nm,0.2s,SNR=7.9						
EARI				S	Sn	04 31 52.1	+2.2
	comp=N,0.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**8.11**	**60**	S	Sn	04 32 08.0	+3.4
	comp=N,0.7nm,0.2s,SNR=7.9						

NEIC 08 04:29:38.8±2.8**, 2749N×11207W, h10km, mb3.8**/7**, Error ellipse: s-maj=37.9km s-min=10.0km az=207.0, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUC	**Tucson**	**4.93**	**13**	ePn	Pn	04 30 49.8	-3.2
TUC				eSn	Sn	04 31 46.0	-4.1
MNTX	**Cornudas Mount**	**7.17**	**53**	ePn	Pn	04 31 23.2	-0.5

	2.8nm,0.5s						
MNTX				eSn	Sn	04 32 44.5	-0.8
PFO	Pinyon Flat Ob	7.18	329	ePn	Pn	04 31 21.7	-2.1
	6.1nm,0.9s						
WUAZ	Wupatki	8.03	4	ePn	Pn	04 31 34.3	-1.1
	6.7nm,0.9s						
WUAZ				Sn	Sn	04 33 04.3	-2.0
ANMO	Albuquerque	8.85	31	ePn	Pn	04 31 47.3	+0.5
	1.4nm,0.7s						
ANMO				Sn	Sn	04 33 23.5	-3.1
TPNV	Topopah Spring	10.07	340	ePn	Pn	04 32 04.3	+0.8
	22nm,1.7s						
TPNV				eSn	Sn	04 33 47.3	-9.3
CCUT	Cedar City	10.09	354	ePn	Pn	04 32 04.1	+0.3
ARUT	Antelope Range	10.34	354	ePn	Pn	04 32 07.6	+0.5
MSU	Marysvale	10.99	360	ePn	Pn	04 32 19.1	+3.0
JCT	Junction City	11.15	72	ePn	Pn	04 32 19.9	+1.7
	32nm,0.9s						
MTUM	Tungsten Hills	11.26	333	ePn	Pn	04 32 20.1	+0.3
TPH	Tonopah	11.41	339	ePn	Pn	04 32 23.6	+1.8
	11nm,1.0s						
WMOK	Wichita Mounta	13.48	54	ePn	Pn	04 32 49.6	-0.4
	2.3nm,0.8s						
WMOK				e		04 34 43.1	
HWUT	Hardware Ranch	14.09	2	ePn	Pn	04 32 59.1	+0.6
	8.9nm,1.3s						
HKT	Hockley	14.46	76	ePn	Pn	04 33 02.0	-1.4
	35nm,1.8s						
LOHW	Long Hollow	16.13	4	ePn	Pn	04 33 25.2	-0.4
	10nm,1.5s						
IMW	Indian Meadow	16.40	3	ePn	Pn	04 33 31.6	+2.5
	8.6nm,1.1s						
FLWY	Flagg Ranch	16.60	3	ePn	Pn	04 33 32.5	+0.9
	8.9nm,1.1s						
MIAR	Mount Ida	17.33	62	ePn	Pn	04 33 40.8	0.0
	9.2nm,1.3s						
CHMT	Chamberlain Mo	19.41	358	eP	Pn	04 34 05.6	-0.7
NEW	Newport	21.11	351	eP	P	04 34 21.9	-1.6
	11nm,1.3s						
PLAL	Pickwick Lake	21.80	64	eP	P	04 34 31.7	+0.7
	10nm,1.1s						
LRAL	Lakeview Retre	22.33	70	eP	P	04 34 37.3	+0.7
	3.9nm,0.9s						

*MOS **08** 05:02:17.0±2.3, 5377N×8781E, h13km, mb4.3/1, Error ellipse: s-maj=18.3km s-min=11.7km az=67.5*
*ISCJB **08** 05:02:18.7±0.7, 5368N±006×877E±0.1, h10km, Error ellipse: s-maj=9.7km s-min=7.5km az=86.7*
*NNC **08** 05:02:33.0±5.0, 5326N×8603E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=38.9km s-min=29.3km az=69.0*
ISC 08 05:02:21.0±0.7, **5382N**±007×**8751E**±009, **h10km, n18, σ1§56**/24, **11C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELT	Yel'tsovka	0.94	234	ePG	Pg	05 02 38.2	-0.9
ELT				e		05 02 51.1	
TASR	Tashtagol	1.08	168	ePG	Pg	05 02 37.8	-4.0
TASR				e		05 02 52.2	
CERR	Cheremushki	2.53	111	ePN	Pn	05 03 03.7	+1.5
CERR				e		05 03 33.8	
NVS	Novosibirsk	2.71	294	ePN	Pn	05 03 07.6	+3.0
NVS				e		05 03 43.4	
ELDR	Elanda	2.75	199	ePN	Pn	05 03 09.1	+4.0
ELDR				e		05 03 43.7	
KRAR	Krasnoyarsk	3.80	52	⇑ePN	Pn	05 03 17.1	-2.5
KURK	Kurchatov	6.28	244	⇑Pn	Pn	05 03 55.2	+1.5
	3.9nm,0.5s						
KURK				⇑Sn	Sn	05 04 57.5	-7.9
	4.6nm,0.5s						
KURK				⇑Lg		05 05 22.1	
	38nm,0.8s						
KURK	Kurchatov	6.28	244	ePN	Pn	05 03 54.3	+0.6
MK05	Makanchi Array	7.78	207	⇓Pn	Pn	05 04 14.8	+0.5
	4.8nm,0.5s						
MK05				⇑Sn	Sn	05 05 41.1	-1.3
	7.5nm,0.5s						
MK05				⇑Lg		05 06 12.8	
	22nm,0.7s						
MKAR	Makanchi Array	7.78	207	iP	Pn	05 04 14.8	+0.5
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VOSK	Vostochnaya	9.97	270	⇑Pn	Pn	05 04 46.0	+1.7
	comp=Z,3.4nm,0.5s						
VOSK				⇑Sn	Sn	05 06 31.9	-4.3
	comp=Z,13nm,0.7s						
CHKZ	Chkalovo	10.01	276	⇑Pn	Pn	05 04 47.2	+2.3
	comp=Z,3.3nm,0.6s						
CHKZ				⇓Sn	Sn	05 06 30.7	-6.6
	comp=Z,11nm,0.6s						
TLY	Talaya	10.01	96	⇓iP	Pn	05 04 39.8	-5.1
BVA0	Borovoye Array	10.25	272	Pn	Pn	05 04 49.1	+0.9
	comp=Z,0.3nm,0.4s,baz=78,slow=15,SNR=15						
BVA0				⇓Sn	Sn	05 06 39.7	-3.5
	comp=Z,1.7nm,0.6s						
AAK	Ala-Archa	14.13	223	⇑eP	Pn	05 05 40.4	-0.8
BOD	Bodaibo	15.37	64	eP	Pn	05 05 56.9	-1.1
KK31	Karatay Array	15.51	233	⇓Pn	Pn	05 06 00.3	+0.5
	comp=Z,0.8nm,0.5s,baz=43,slow=13,SNR=9.1						
KK31				⇑Sn	Sn	05 08 43.4	-8.3
	comp=Z,1.1nm,0.5s,baz=69,slow=9.7,SNR=4.5						
ARU	Arti	16.70	291	eP	Pn	05 06 19.2	+4.1

*STR **08** 05:03:53.7±1.3, 5367N×567E, h10km±1km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*UCC **08** 05:03:55.3±2.1, 5358N×683E, h0km, ML3.0*
*ISCJB **08** 05:03:55.7±0.2, 5340N±002×639E±003, h0km, mb3.0/2, Error ellipse: s-maj=2.7km s-min=2.2km az=2.4*
*CSEM **08** 05:03:59.3±0.1, 5341N×660E, h1km, ML3.7/13, Error ellipse: s-maj=1.7km s-min=1.4km az=115.0*
*IDC **08** 05:03:59.2±1.2, 5323N×632E, h0km, mb3.2/2, mb1 3.5/10, mb1mx3.5/24, mbtmp3.4/10, ML3.4/7, Error ellipse: s-maj=21.9km s-min=14.0km az=92.0*
*NEIC **08** 05:03:59.3±0.3, 5336N×654E, h10km, ML3.7(LDG), ML3.8(STR), Error ellipse: s-maj=4.7km s-min=3.5km az=98.0*
*BGR **08** 05:04:00.4±0.4, 5335N×660E, h5km, ML3.5/7, Error ellipse: s-maj=6.7km s-min=3.3km az=121.0*
*LDG **08** 05:04:02.1±0.3, 5348N×648E, h25km, Ml3.7/14, Error ellipse: s-maj=7.5km s-min=3.6km az=165.0*
*BNS **08** 05:04:04.1±0.7, 5306N×638E, h5km, ML3.1*
*NAO **08** 05:04:06.3±4.7, 5377N×629E, h16km±25km, ML2.3*
ISC 08 05:03:57.8±0.2, **5339N**±001×**646E**±003, **h0km, n126, σ1§22**/222, **mb3.0**/2, **1C, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIT	Witteveen	0.59	168	ePg	Pg	05 04 12.0	+2.9
WIT				ex	x	05 04 21.9	
WIT				ex	x	05 04 24.3	
WIT	Witteveen	0.59	168	ePg	Pg	05 04 12.1	+3.0
	SNR=7.6						
HLG	Helgoland	1.16	46	ePg	Pg	05 04 21.4	+1.3
	SNR=4.8						
HLG				eSg	Sg	05 04 36.6	+1.5
	SNR=4.2						
IBBN	Ibbenburen	1.34	143	ePg	Pg	05 04 24.0	+0.5
	SNR=24						
IBBN				eSg	Sg	05 04 41.2	+0.4
	SNR=2.7						
IBBN	Ibbenburen	1.34	143	ePn	Pn	05 04 24.2	+0.5
IBBN				eSg	Sg	05 04 41.5	+0.7
WTSB	Winterswijk	1.44	172	ePg	Pg	05 04 25.2	-0.2
	149nm,0.3s						
WTSB				eSg	Sg	05 04 44.6	+0.5
WTSB	Winterswijk	1.44	172	ePn	Pn	05 04 25.2	+0.1
	SNR=9.1						
WTSB				ePg	Pg	05 04 26.8	+1.4
	SNR=25						
WTSB				eSg	Sg	05 04 44.2	+0.2
	SNR=3.3						
WTSB	Winterswijk	1.44	172	Pg	Pg	05 04 26.8	+1.4
	SNR=25						
WTSB				Sg	Sg	05 04 44.2	+0.1
	SNR=3.3						
BUG	Bochum--Univer	2.01	165	ePn	Pn	05 04 33.1	+0.1
	SNR=2.2						
BUG				ePg	Pg	05 04 37.3	+0.9
	SNR=6.1						
BUG				eSg	Sg	05 05 02.2	-0.3
	SNR=2.6						
BUG	Bochum--Univer	2.01	165	ePn	Pn	05 04 32.7	-0.3
LAUG	Laupendahl	2.06	172	ePg	Pn	05 04 33.5	-0.2
LAUG				eSg	Sn	05 04 55.8	-4.3
	191nm,0.5s						
BSEG	Bad Segeberg	2.36	75	ePn	Pn	05 04 38.0	+0.3
	SNR=1.8						
BSEG				ePg	Pg	05 04 43.0	0.0
	SNR=3.5						
BSEG				eSg	Sg	05 05 10.9	-2.8
	SNR=1.4						
BSEG	Bad Segeberg	2.36	75	ePn	Pn	05 04 37.4	-0.4
BSEG	Bad Segeberg	2.36	75	Pg	Pg	05 04 43.0	0.0
	SNR=3.5						
BSEG				Sg	Sg	05 05 10.9	-2.7
	SNR=1.4						
NRDL	Niedersach Rie	2.38	111	ePn	Pn	05 04 37.5	-0.6
	SNR=4.0						
NRDL				ePg	Pg	05 04 44.4	+0.9
	SNR=3.8						
NRDL				eSn	Sn	05 05 03.1	-4.8
	SNR=3.2						
NRDL				eSg	Sg	05 05 15.1	+0.7
	SNR=2.1						
BNS	Bensberg	2.47	169	ePg	Pn	05 04 39.4	+0.1
HOBG	Hohbusch	2.47	167	ePg	Pn	05 04 39.1	-0.2
HOBG				eSg	Sn	05 05 05.9	-4.2
BEBN	Eben Emael	2.64	191	PN	Pn	05 04 41.7	+0.1
BEBN	Eben Emael	2.64	191	P	Pg	05 04 49.4	+1.0
HGN	Heimansgroeve	2.65	187	ePn	Pn	05 04 41.4	-0.3
	23nm,0.7s						
HGN				ePg	Pg	05 04 49.4	+0.9
	42nm,0.4s						
HGN				eSn	Sn	05 05 13.7	-0.8
HGN				eSg	Sg	05 05 22.3	-0.6
HGN	Heimansgroeve	2.65	187	ePn	Pn	05 04 41.7	-0.1
	SNR=5.8						
HGN				ePg	Pg	05 04 49.7	+1.2
	SNR=3.7						
HGN				eSn	Sn	05 05 12.5	-2.1
	SNR=1.7						
HGN				eSg	Sg	05 05 23.7	+0.8
	SNR=1.9						
HGN	Heimansgroeve	2.65	187	Pg	Pg	05 04 49.7	+1.1
	SNR=3.7						
HGN				Sn	Sn	05 05 12.5	-2.1
	SNR=1.7						
HGN				Sg	Sg	05 05 23.7	+0.8
	SNR=1.9						
STB	Steinbach	2.81	175	ePg	Pn	05 04 44.1	+0.1
STB				eSg	Sn	05 05 13.7	-4.8
	75nm,0.6s						
CLZ	Clausthal	2.84	121	ePn	Pn	05 04 43.6	-0.8
	SNR=4.6						
CLZ				eSn	Sn	05 05 14.2	-5.2
	SNR=4.1						
CLZ	Clausthal	2.84	121	ePn	Pn	05 04 43.7	-0.7
CLZ				eSn	Sn	05 05 14.0	-5.4
CLZ	Clausthal	2.84	121	ePn	Pn	05 04 43.7	-0.7
CLZ				Sn	Sn	05 05 14.2	-5.2
	SNR=4.1						
SNF	Seneffe	3.18	206	PN	Pn	05 04 49.9	+0.8
BGG	Burgeitz	3.23	170	ePg	Pn	05 04 49.9	+0.1
UBBA	Unterbreizbach	3.38	138	ePn	Pn	05 04 50.6	-1.1
	SNR=1.9						
UBBA				eSn	Sn	05 05 26.7	-5.8
	SNR=2.5						
UBBA				eSg	Sg	05 05 43.9	-2.4
	SNR=1.4						
TNS	Taunus Mts	3.40	158	ePn	Pn	05 04 52.3	+0.2
	SNR=12						
TNS				ePg	Pg	05 05 04.6	+1.6
	SNR=1.7						
TNS				eSn	Sn	05 05 31.2	-2.0
	SNR=1.6						
TNS	Taunus Mts	3.40	158	ePn	Pn	05 04 52.2	+0.1
GIVF	Givet	3.44	198	ePg	Pg	05 05 10.1	+6.3
GIVF				eSn	Sn	05 05 32.1	-2.1
	216nm,0.9s						
GIVF	Givet	3.44	198	ePn	Pn	05 04 53.5	+0.8
GIVF				ePg	Pg	05 05 10.1	+6.3
GIVF				eSn	Sn	05 05 32.1	-2.1
GIVF	Givet	3.44	198	ePg	Pg	05 05 10.1	+6.3
GIVF				eSn	Sn	05 05 32.1	-2.1
	108nm,0.9s						
MUD	Monsted U'grnd	3.45	26	iP	Pg	05 05 06.6	+2.7
MUD				iS	Sg	05 05 47.5	-1.1
DOU	Dourbes	3.50	200	⇑PN	Pn	05 04 54.1	+0.8
DOU	Dourbes	3.50	200	P	Pg	05 05 08.8	+4.0
DOU				S	Sg	05 05 53.6	+3.5
	comp=E,36nm,0.8s						
BAIF	Baives	3.62	204	ePg	Pg	05 05 11.2	+4.1
BAIF				eSn	Sn	05 05 36.0	-2.4
	comp=E,34nm,0.6s						
BAIF	Baives	3.62	204	ePn	Pn	05 04 56.7	+1.7
BAIF				ePg	Pg	05 05 11.2	+4.1
BAIF				eSn	Sn	05 05 36.0	-2.4
BAIF	Baives	3.62	204	ePg	Pg	05 05 11.2	+4.1
BAIF				eSn	Sn	05 05 36.0	-2.4
	comp=E,17nm,0.6s						
WLF	Walferdange	3.73	183	ePn	Pn	05 04 57.3	+0.6
	SNR=2.2						
WLF				ePg	Pg	05 05 09.3	-0.1
	SNR=3.6						
WLF				eSg	Sg	05 05 54.2	-3.6
	SNR=1.1						
WLF	Walferdange	3.73	183	P	Pg	05 05 09.6	+0.2
WLF	Walferdange	3.73	183	Pn	Pn	05 04 57.5	+0.8
TOD	Tromm	4.06	158	P	Pn	05 05 01.2	0.0
TOD				S	Sb	05 05 59.1	-0.7
MOX	Moxa	4.21	129	(PG)	Pg	05 05 23.9	+5.5
MOX				(SG)	Sg	05 06 18.1	+5.2
LANF	Langenberg	4.50	169	P	Pn	05 05 07.0	-0.1
LANF				S	Sn	05 06 07.4	+7.3
CLL	Collm	4.52	115	ePn	Pn	05 05 07.5	0.0
	SNR=2.0						
CLL				eSn	Sn	05 05 54.9	-5.9
	SNR=1.4						
CLL	Collm	4.52	115	ePn	Pn	05 05 07.0	-0.5
CLL				ePg	Pg	05 05 30.0	+5.6
CLL				eSn	Sn	05 05 54.0	-6.7
CLL				ex	x	05 06 07.0	
CLL				eSg	Sg	05 06 22.0	-1.0
CLL				ex	x	05 06 31.0	
CLL	Collm	4.52	115	ePg	Pn	05 05 07.0	-0.5
CLL				eSg	x	05 06 07.0	
GRF	Grafenberg Arr	4.75	139	eSg	Sg	05 06 28.4	-1.9
NKC	Novy Kostel	4.88	128	ePN	Pn	05 05 08.7	-3.7
NKC				eSG	Sg	05 06 39.5	+5.0
	comp=E,26nm,0.6s						
SNART	Snartemo	4.98	5	eP	Pn	05 05 14.6	+0.8
SNART				eS	Sn	05 06 10.8	-1.3
SNART				AML	AML	05 06 13.4	
	comp=Z,7.8nm,0.3s						
CDF	Champ du Feu	5.01	174	ePn	Pn	05 05 13.9	-0.3
WLS	Welschbruch	5.01	173	P	Pn	05 05 14.7	+0.4
BFO	Black Forest	5.20	166	ePn	Pn	05 05 16.7	-0.1
	SNR=3.7						
BFO				eSn	Sn	05 06 10.0	-7.5
	SNR=2.1						
BFO	Black Forest	5.20	166	ePn	Pn	05 05 16.6	-0.2
BSD	Bornholm Skovb	5.25	67	iP	Pn	05 05 15.7	-1.8
BSD				iS	Sn	05 06 10.9	-7.8
BSD				eS	Sn	05 06 12.0	-6.7
BRG	Berggiesshubel	5.25	116	ePn	Pn	05 05 17.7	+0.2
	SNR=2.4						
BRG	Berggiesshubel	5.25	116	PG	Pn	05 05 17.2	-0.3
BRG				i		05 05 19.3	
BRG				i		05 05 49.0	
BRG				i		05 06 11.5	
BRG	Berggiesshubel	5.25	116	SG	Sg	05 06 54.4	+7.9
	comp=Z,9.5nm,1.0s						
BRG	Berggiesshubel	5.25	116	Pg	Pn	05 05 17.2	-0.3
BRG				i		05 05 19.3	
BRG				i		05 05 49.0	
BRG				i		05 06 11.5	
BRG				Sg	Sg	05 06 54.4	+7.9
HAU	Haudompre	5.39	181	ePn	Pn	05 05 19.4	0.0
HINF	Hinteralfeld	5.58	177	ePn	Pn	05 05 21.8	-0.3
HINF				ePg	Pg	05 05 47.4	+2.6
FELD	Feldberg im Sc	5.61	169	P	Pn	05 05 22.0	-0.4
KMY	Karmoy	5.88	354	eP	Pn	05 05 26.5	+0.4
KMY				eS	Sn	05 06 31.9	-2.3
KMY				AML	AML	05 06 33.8	
	comp=Z,7.5nm,0.6s						
KMY	Karmoy	5.88	354	eP	Pn	05 05 26.5	+0.4
KMY				eS	Sn	05 06 31.9	-2.3
EKA	Eskdalemuir Ar	5.95	293	Pn	Pn	05 05 29.3	+2.2
	comp=Z,3.9nm,0.3s,baz=109,slow=14,SNR=61						
EKA				Sn	Sn	05 06 36.6	+0.7
	comp=Z,1.2nm,0.3s,baz=104,slow=24,SNR=4.2						
ESK	Eskdalemuir	5.97	293	ePn	Pn	05 05 29.5	+2.0
	comp=Z,13nm,0.6s						
ESK				eSn	Sn	05 06 35.8	-0.7
ESK	Eskdalemuir	5.97	293	ePn	Pn	05 05 29.5	+2.1
	comp=Z,13nm,0.6s						
ESK				eSn	Sn	05 06 35.8	-0.7
BLS5	Blasjo	6.05	360	eP	Pn	05 05 29.7	+1.3
BLS5	Blasjo	6.05	360	eP	Pn	05 05 31.4	+3.0
BLS5	Blasjo	6.05	360	eP	Pn	05 05 31.4	+2.9
PRU	Pruhonice	6.07	121	ePN	Pn	05 05 28.7	-0.1
PRU				eSG	Sg	05 07 14.8	+2.0
	comp=Z,17nm,1.0s						
KHC	Kasperske Hory	6.17	131	ePN	Pn	05 05 32.0	+1.8
KHC				eSG	Sg	05 07 20.4	+4.3
	comp=Z,39nm,2.0s						
LDF	La Druitiere	6.35	223	ePn	Pn	05 05 32.2	-0.4
LDF				eSn	Sn	05 06 41.1	-4.7
	comp=Z,29nm,0.7s						
LDF	La Druitiere	6.35	223	ePn	Pn	05 05 32.2	-0.4
LDF				eSn	Sn	05 06 41.1	-4.7
	comp=Z,15nm,0.7s						
LOR	Lormes	6.35	196	ePn	Pn	05 05 32.9	+0.3
LOR				eSn	Sn	05 06 42.1	-3.7
	comp=Z,11nm,0.6s						
LOR	Lormes	6.35	196	ePn	Pn	05 05 32.9	+0.3
LOR				eSn	Sn	05 06 42.1	-3.7
	comp=Z,5.5nm,0.6s						
FLN	La Foliniere	6.37	226	ePn	Pn	05 05 33.1	+0.2
FLN				eSn	Sn	05 06 43.6	-2.7
	comp=Z,6.8nm,0.3s						
FLN	La Foliniere	6.37	226	ePn	Pn	05 05 33.1	+0.2
FLN				eSn	Sn	05 06 43.6	-2.7
	comp=Z,3.4nm,0.3s						
GERES	GERESS Array B	6.44	132	Pn	Pn	05 05 34.2	+0.4
	comp=Z,0.3nm,0.3s,baz=316,slow=14,SNR=4.0						
GERES	GERESS Array B	6.44	132	Pn	Pn	05 05 34.2	+0.4
ODD1	Odda	6.54	1	eP	Pn	05 05 36.4	+1.2
ODD1				eS	Sn	05 06 47.7	-2.8
SSF	Saint Saulge	6.61	198	ePg	Pg	05 06 07.6	+3.1
SSF				eSn	Sn	05 06 47.3	-5.0
	comp=Z,12nm,0.6s						
SSF	Saint Saulge	6.61	198	ePn	Pn	05 05 36.2	0.0
SSF				ePg	Pg	05 06 07.6	+3.1
SSF				eSn	Sn	05 06 47.3	-5.0
SSF	Saint Saulge	6.61	198	ePn	Pn	05 05 36.2	0.0
SSF				eSn	Sn	05 06 47.3	-5.0
	comp=Z,6.2nm,0.6s						
CABF	La Chapelle	6.79	182	ePn	Pn	05 05 38.9	+0.3
GRR	Gorron	6.82	226	ePn	Pn	05 05 39.1	+0.1
GRR				eSn	Sn	05 06 52.3	-5.0
	comp=Z,16nm,0.4s						
GRR	Gorron	6.82	226	ePn	Pn	05 05 39.1	+0.1
GRR				eSn	Sn	05 06 52.3	-5.0
	comp=Z,8.1nm,0.4s						
AVF	Avril sur Loir	6.90	198	ePn	Pn	05 05 40.4	+0.2
SMF	Signal de Mont	6.96	195	ePn	Pn	05 05 40.7	-0.3
SMF				eSn	Sn	05 06 56.2	-4.6
	comp=Z,12nm,0.6s						
SMF	Signal de Mont	6.96	195	ePn	Pn	05 05 40.7	-0.3
SMF				eSn	Sn	05 06 56.2	-4.6
	comp=Z,6.2nm,0.6s						
DAVOX	Davos	6.97	160	Pn	Pn	05 05 41.7	+0.6
	comp=Z,0.6nm,0.3s,baz=342,slow=22,SNR=4.4						
BGF	Bois d'Agland	7.22	200	ePn	Pn	05 05 44.8	+0.2
TCF	Toulx Ste Croi	7.62	203	ePn	Pn	05 05 50.0	0.0
TCF				eSn	Sn	05 07 11.6	-5.5
	comp=Z,8.5nm,0.7s						
TCF	Toulx Ste Croi	7.62	203	ePn	Pn	05 05 50.0	0.0
TCF				eSn	Sn	05 07 11.6	-5.5
	comp=Z,4.2nm,0.7s						
SGMF	Saint Gilles	7.68	232	ePn	Pn	05 05 51.1	+0.2
SGMF				eSn	Sn	05 07 13.0	-5.6
	comp=Z,39nm,1.0s						
SGMF	Saint Gilles	7.68	232	ePn	Pn	05 05 51.1	+0.2
SGMF				eSn	Sn	05 07 13.0	-5.6
	comp=Z,20nm,1.0s						
DLF	Lyons Farm	7.78	275	eP	Pn	05 05 52.6	+0.4
HFS	Hagfors	7.84	28	Pn	Pn	05 05 52.0	-1.0
	baz=219,slow=14						
HFS				Sn	Sn	05 07 14.8	-7.7
	baz=214,slow=28						
HFS	Hagfors	7.84	28	Pn	Pn	05 05 52.5	-0.6
	comp=Z,0.5nm,0.3s,baz=204,slow=13,SNR=12						
HFS				Sn	Sn	05 07 16.3	-6.2
	comp=Z,1.8nm,0.3s,baz=207,slow=26,SNR=12						
HFS	Hagfors	7.84	28	Pn	Pn	05 05 52.5	-0.5
HFS				Sn	Sn	05 07 14.8	-7.7
	SNR=9.8						
LPL	La Plagne	7.88	179	ePn	Pn	05 05 54.4	+0.8
LPG	La Plagne	7.90	179	ePn	Pn	05 05 55.0	+1.1
ROSF	Rostrenen	7.96	234	eSn	Sn	05 07 19.5	-6.1
	comp=Z,29nm,0.8s						
ROSF	Rostrenen	7.96	234	eSn	Sn	05 07 19.5	-6.1
	comp=Z,15nm,0.8s						
MFF	Saint Martin d	8.01	215	ePn	Pn	05 05 55.4	0.0
MFF				eSn	Sn	05 07 21.3	-5.5
	comp=Z,8.1nm,0.6s						
MFF	Saint Martin d	8.01	215	ePn	Pn	05 05 55.4	0.0
MFF				eSn	Sn	05 07 21.3	-5.5
	comp=Z,4.1nm,0.6s						
NB2	NORSAR Subarra	8.09	17	Pn	Pn	05 05 55.9	-0.6
	baz=196,slow=16						
NB2				Sn	Sn	05 07 22.3	-6.4
	baz=200,slow=28						
NOA	NORSAR Array B	8.09	17	Pn	Pn	05 05 55.0	-1.5
	comp=Z,0.6nm,0.3s,baz=206,slow=12,SNR=4.7						
NOA				Sn	Sn	05 07 25.5	-3.2
	comp=Z,0.8nm,0.3s,baz=192,slow=18,SNR=5.1						
QUIF	Quistinic	8.21	232	ePn	Pn	05 05 57.5	-0.6
QUIF				eSn	Sn	05 07 25.9	-5.6
	comp=Z,15nm,0.7s						
QUIF	Quistinic	8.21	232	ePn	Pn	05 05 57.5	-0.6
QUIF				eSn	Sn	05 07 25.9	-5.6
	comp=Z,7.6nm,0.7s						
DCN	Croghan	8.22	275	eP	Pn	05 05 52.3	-6.0
ORIF	Oris-en-Rattie	8.49	183	ePn	Pn	05 06 01.6	-0.3
RJF	Les Rejaudoux	8.71	204	ePn	Pn	05 06 02.9	-2.1
CAF	Calviac	8.95	200	ePn	Pn	05 06 08.1	-0.1
LFF	La Frestale	9.25	206	ePn	Pn	05 06 11.8	-0.5
ETSF	Etsaut	11.49	207	ePn	Pn	05 06 40.7	-2.4
FIA0	FINESS Array S	13.25	45	Pn	Pn	05 07 05.7	-1.5
	baz=240,slow=11						
FIA0				Sn	Sn	05 09 23.9	-11
	baz=229,slow=28						
FINES	FINESS Array B	13.25	45	Pn	Pn	05 07 05.2	-1.9
	comp=Z,0.1nm,0.3s,baz=248,slow=10,SNR=5.2						
FINES				Sn	Sn	05 09 25.5	-10
	comp=Z,0.2nm,0.3s,baz=242,slow=20,SNR=3.8						
ESDC	Sonseca Array	15.45	212	Pn	Pn	05 07 35.0	-2.0
	comp=Z,0.6nm,0.3s,baz=28,slow=13,SNR=4.4						
JOF	Joensuu	16.11	44	ep	Pn	05 07 47.9	+2.3
	comp=Z,1.4nm,0.4s						
ARA0	ARCESS Array S	18.43	21	P	Pn	05 08 12.9	-1.7
	baz=208,slow=14						
ARCES	ARCESS Array B	18.43	21	P	Pn	05 08 17.1	+2.5
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=5.3						
BRTR	Keskin Array B	22.98	116	P	P	05 09 06.8	+2.9
	comp=Z,0.7nm,0.9s,mb3.2,baz=312,slow=13,SNR=3.7						
TORD	Torodi Ar. Bea	40.32	187	P	P	05 11 36.7	-0.2
	comp=Z,0.2nm,0.6s,mb2.9,baz=358,slow=9.2,SNR=2.9						

*NEIC **08** 05:17:50.7, 4078N×1969E, h16km, MD3.5(ATH), After ATH.*
*ATH **08** 05:17:50.7, 4078N×1969E, h16km±11km, MD3.5/3*
*ISCJB **08** 05:17:58.8±1.8, 40.17N±005×196E±0.1, h12km±9km, Error ellipse: s-maj=16.5km s-min=7.8km az=19.8*
*SKO **08** 05:18:05.3, 40.13N×1988E, h4km*
ISC 08 05:18:02.3±1.6, **4013N**±004×**198E**±01, **h11**km±9km, **n8, σ1§27**/13, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	Sarande	0.31	142	i Pg	Pg	05 18 09.3	+0.7
SRN				i Sg	Sg	05 18 14.7	+1.9
KEK	Kerkira	0.41	175	ePN	Pg	05 18 10.5	0.0
LSK	Leskovik	0.65	88	i Pg	Pg	05 18 14.8	-0.1
LSK				i Sg	Sg	05 18 21.9	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAN	Janina	0.97	119	ePN	Pg	05 18 18.2	-2.8
JAN				eSN	Sn	05 18 36.8	+1.3
OHR	Ohrid	1.27	39	ePg	Pg	05 18 27.1	+0.4
OHR				eSg	Sg	05 18 43.9	+0.8
BIA	Bitola	1.49	53	ePg	Pg	05 18 30.8	-0.2
BIA				eSg	Sg	05 18 50.5	+0.1
KZN	Kozani	1.56	83	ePN	Pn	05 18 21.3	-8.6
VLS	Valsamata	2.05	161	ePB	Pb	05 18 36.5	-3.1

*NEIC **08** 05:18:34.9, 4398N×486E, h2^{km}, ML2.6(STR), ML3.0(LDG), After LDG.*
*LDG **08** 05:18:34.9±0.1, 4398N×486E, h2^{km}, Md3.0/3, Ml3.0/17, Error ellipse: s-maj=2.2km s-min=1.4km az=19.0*
*MDD **08** 05:18:35.3±0.6, 4398N×485E, h10^{km}±4^{km}, mb2.8/1, mbLg2.1/7, Error ellipse: s-maj=4.8km s-min=3.3km az=8.0, PRXIMO*
*CSEM **08** 05:18:35.2±0.1, 4399N×487E, h10^{km}, ML2.9/16, Error ellipse: s-maj=1.4km s-min=0.9km az=26.0*
STR 08 05:18:34.5±0.3, 4398N×475E, h5^{km}±1^{km}, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRAF	Pradon	0.35	120	Pg	Pg	05 18 40.2	-1.1
PRAF				Sg	Sg	05 18 46.5	+0.6
TREF	Trevaresse	0.58	128	Pg	Pg	05 18 46.2	+0.5
TREF				Sg	Sg	05 18 56.4	+3.2
TREF	Trevaresse	0.58	128	Pg	Pg	05 18 45.6	-0.1
TREF				Sg	Sg	05 18 57.5	+4.3
SMRF	Simiane la Rot	0.60	90	ePn	Pg	05 18 46.8	+0.9
SMRF				eSn	Sg	05 18 55.5	+1.8
	190nm,0.3s						
SMRF	Simiane la Rot	0.60	90	Pg	Pg	05 18 44.8	-1.1
SMRF				Lg		05 18 55.5	
	190nm,0.3s						
SMRF	Simiane la Rot	0.60	90	ePg	Pg	05 18 44.8	-1.1
SMRF				ePn	Pg	05 18 46.8	+0.9
SMRF				eSn	Sg	05 18 55.5	+1.8
SMRF	Simiane la Rot	0.60	90	ePn	Pg	05 18 46.8	+0.9
SMRF				eSn	Sg	05 18 55.5	+1.8
	95nm,0.3s						
LASF	Ste Croix	0.65	279	ePn	Pg	05 18 50.2	+3.2
LASF				eSg	Sg	05 18 58.1	+2.6
	62nm,0.2s						
LASF	Ste Croix	0.65	279	Pg	Pg	05 18 48.2	+1.2
LASF				Pn	Pg	05 18 50.2	+3.2
LASF				Lg		05 18 58.1	
	31nm,0.2s						
LASF	Ste Croix	0.65	279	ePg	Pg	05 18 48.2	+1.2
LASF				ePn	Pg	05 18 50.2	+3.2
LASF				eSg	Sg	05 18 58.1	+2.6
LASF	Ste Croix	0.65	279	ePn	Pg	05 18 50.2	+3.2
LASF				eSg	Sg	05 18 58.1	+2.6
	31nm,0.2s						
VILF	Villemus	0.71	100	Pg	Pg	05 18 47.5	-0.6
VILF				Sg	Sg	05 19 00.1	+2.8
GELF	Grande-Etoile	0.77	140	Pg	Pg	05 18 48.2	-1.1
GELF				Sg	Sg	05 19 01.1	+1.7
GELF	Grande-Etoile	0.77	140	Pg	Pg	05 18 49.8	+0.5
GELF				Sg	Sg	05 19 01.1	+1.7
PUYF	Puyloubier	0.82	123	Pg	Pg	05 18 49.1	-1.2
STOF	St-Etienne Org	0.84	88	Pg	Pg	05 18 47.8	-2.8
STOF				Sg	Sg	05 19 00.4	-1.0
STOF	St-Etienne Org	0.84	88	Pg	Pg	05 18 47.8	-2.8
STOF				Sg	Sg	05 19 00.6	-0.8
VIVF	Saint-Julien-l	0.88	356	ePg	Pg	05 18 50.5	-0.8
VIVF				eSg	Sg	05 19 03.6	+0.9
	94nm,0.3s						
VIVF	Saint-Julien-l	0.88	356	ePg	Pg	05 18 50.5	-0.8
VIVF				eSg	Sg	05 19 03.6	+0.9
	47nm,0.3s						
BERF	Bertagne	0.95	134	Pg	Pg	05 18 52.4	-0.4
BERF				Sg	Sg	05 19 06.4	+1.2
TAVF	Tavernes	1.01	110	Pg	Pg	05 18 52.9	-1.1
TAVF				Sg	Sg	05 19 07.4	+0.3
ORIF	Oris-en-Rattie	1.24	40	ePn	Pn	05 18 58.1	-0.4
ORIF				eSg	Sg	05 19 14.0	-0.3
	24nm,0.4s						
ORIF	Oris-en-Rattie	1.24	40	ePn	Pn	05 18 58.1	-0.4
ORIF				eSg	Sg	05 19 14.0	-0.3
	12nm,0.4s						
LMR	La Mourre	1.43	116	ePg	Pg	05 19 00.4	-1.5
LMR				eSn	Sn	05 19 16.7	-3.6
	36nm,0.2s						
LMR	La Mourre	1.43	116	Pn	Pn	05 18 58.4	-2.7
LMR				Pg	Pg	05 19 00.4	-1.5
LMR				Sn	Sn	05 19 16.7	-3.6
	18nm,0.2s						
LMR	La Mourre	1.43	116	ePn	Pn	05 18 58.4	-2.7
LMR				ePg	Pg	05 19 00.4	-1.5
LMR				eSn	Sn	05 19 16.7	-3.6
LMR	La Mourre	1.43	116	ePg	Pg	05 19 00.4	-1.5
LMR				eSn	Sn	05 19 16.7	-3.6
	18nm,0.2s						
FRF	La Foret Royal	1.44	106	ePg	Pg	05 19 00.7	-1.3
FRF				eSn	Sn	05 19 16.8	-3.6
	40nm,0.3s						
FRF	La Foret Royal	1.44	106	Pn	Pn	05 18 58.7	-2.5
FRF				Pg	Pg	05 19 00.7	-1.3
FRF				Sn	Sn	05 19 16.8	-3.6
	20nm,0.3s						
FRF	La Foret Royal	1.44	106	ePn	Pn	05 18 58.7	-2.5
FRF				ePg	Pg	05 19 00.7	-1.3
FRF				eSn	Sn	05 19 16.8	-3.6
FRF	La Foret Royal	1.44	106	ePg	Pg	05 19 00.7	-1.3
FRF				eSn	Sn	05 19 16.8	-3.6
	20nm,0.3s						
MBDF	Montbardon	1.63	62	ePg	Pg	05 19 04.5	-1.3
LBL	Lubilhac	1.65	320	Pg	Pg	05 19 05.9	-0.2
LBL				Sg	Sg	05 19 28.9	+1.4
LBL	Lubilhac	1.65	320	Pn	Pn	05 19 03.6	-0.5
LBL				Pg	Pg	05 19 05.9	-0.2
LBL				Sg	Sg	05 19 28.9	+1.4
LBL	Lubilhac	1.65	320	Pg	Pg	05 19 05.9	-0.2
LBL				Sg	Sg	05 19 28.9	+1.4
COLF	Collangettes	1.71	334	Pn	Pn	05 19 03.8	-1.2
COLF	Collangettes	1.71	334	Pn	Pn	05 19 06.2	+1.2
MVIF	Mont Vial	1.74	92	Pn	Pn	05 19 03.9	-1.4
TOUF	Mont Tournerai	1.80	88	Pn	Pn	05 19 04.2	-2.0
LUCF	Luceram	1.88	92	Pn	Pn	05 19 04.9	-2.3
AUTN	L'Aution	1.93	89	Pn	Pn	05 19 05.9	-2.1
SBF	Sospel	1.94	93	ePn	Pn	05 19 05.7	-2.5
MTLF	Montolieu	1.95	252	ePg	Pg	05 19 12.7	+0.9
MTLF				eSn	Sn	05 19 32.5	-0.5
MTLF				eSg	Sg	05 19 39.0	+2.0
	17nm,0.3s						
MTLF	Montolieu	1.95	252	Pn	Pn	05 19 08.1	-0.1
MTLF				Pg	Pg	05 19 12.7	+0.9
MTLF				Sn	Sn	05 19 32.5	-0.5
MTLF				Lg		05 19 39.0	
	8.6nm,0.3s						
MTLF	Montolieu	1.95	252	ePn	Pn	05 19 08.1	-0.1
MTLF				ePg	Pg	05 19 12.7	+0.9
MTLF				eSn	Sn	05 19 32.5	-0.5
MTLF				eSg	Sg	05 19 39.0	+2.0
MTLF	Montolieu	1.95	252	ePg	Pg	05 19 12.7	+0.9
MTLF				eSn	Sn	05 19 32.5	-0.5
MTLF				eSg	Sg	05 19 39.0	+2.0
	8.6nm,0.3s						
SAOF	Saorge	2.02	89	Pn	Pn	05 19 07.2	-2.1
LPG	La Plagne	2.08	43	ePn	Pn	05 19 08.5	-1.6
CAF	Calviac	2.14	297	ePg	Pg	05 19 16.6	+1.0
CAF				eSg	Sg	05 19 43.5	+0.1
	30nm,0.4s						
CAF	Calviac	2.14	297	Pn	Pn	05 19 10.7	-0.2
CAF				Pg	Pg	05 19 16.6	+1.0
CAF				Lg		05 19 43.5	
	15nm,0.4s						
CAF	Calviac	2.14	297	ePn	Pn	05 19 10.7	-0.2
CAF				ePg	Pg	05 19 16.6	+1.0
CAF				eSg	Sg	05 19 43.5	+0.1
CAF	Calviac	2.14	297	ePg	Pg	05 19 16.6	+1.0
CAF				eSg	Sg	05 19 43.5	+0.1
	15nm,0.4s						
PYM	Petit Puy Mans	2.16	326	Pn	Pn	05 19 10.3	-0.8
AGO	Saint Agoulin	2.37	332	Pg	Pg	05 19 19.7	-0.2
AGO	Saint Agoulin	2.37	332	Pg	Pg	05 19 20.7	+0.8
RJF	Les Rejaudoux	2.66	301	ePg	Pg	05 19 26.4	+0.9
RJF				eSn	Sn	05 19 50.5	-0.1
RJF				eSg	Sg	05 19 59.3	-0.7
	24nm,0.4s						
RJF	Les Rejaudoux	2.66	301	Pn	Pn	05 19 18.1	+0.1
RJF				Pg	Pg	05 19 26.4	+0.9
RJF				Sn	Sn	05 19 50.5	-0.1
RJF				Lg		05 19 59.3	
	12nm,0.4s						
RJF	Les Rejaudoux	2.66	301	ePn	Pn	05 19 18.1	+0.1
RJF				ePg	Pg	05 19 26.4	+0.9
RJF				eSn	Sn	05 19 50.5	-0.1
RJF				eSg	Sg	05 19 59.3	-0.7
RJF	Les Rejaudoux	2.66	301	ePg	Pg	05 19 26.4	+0.9
RJF				eSn	Sn	05 19 50.5	-0.1
RJF				eSg	Sg	05 19 59.3	-0.7
	12nm,0.4s						
SMF	Signal de Mont	2.74	347	ePg	Pg	05 19 26.1	-0.9
SMF				eSn	Sn	05 19 48.6	-4.0
SMF				eSg	Sg	05 20 02.9	+0.3
	16nm,0.5s						
SMF	Signal de Mont	2.74	347	ePg	Pg	05 19 26.1	-0.9
SMF				eSn	Sn	05 19 48.6	-4.0
SMF				eSg	Sg	05 20 02.9	+0.3
	8.0nm,0.5s						
CABF	La Chapelle	2.79	19	ePn	Pn	05 19 18.1	-1.8
BGF	Bois d'Agland	2.91	333	ePg	Pg	05 19 29.2	-1.0
BGF				eSg	Sg	05 20 04.6	-3.3
	27nm,0.4s						
BGF	Bois d'Agland	2.91	333	Pn	Pn	05 19 21.1	-0.3
BGF				Pg	Pg	05 19 29.2	-1.0
BGF				Lg		05 20 04.6	
	13nm,0.4s						
BGF	Bois d'Agland	2.91	333	ePn	Pn	05 19 21.1	-0.3
BGF				ePg	Pg	05 19 29.2	-1.0
BGF				eSg	Sg	05 20 04.6	-3.3
BGF	Bois d'Agland	2.91	333	ePg	Pg	05 19 29.2	-1.0
BGF				eSg	Sg	05 20 04.6	-3.3
	13nm,0.4s						
TCF	Toulx Ste Croi	2.92	323	ePg	Pg	05 19 30.0	-0.6
TCF				eSg	Sg	05 20 06.5	-2.0
	9.9nm,0.4s						
TCF	Toulx Ste Croi	2.92	323	Pn	Pn	05 19 21.6	-0.1
TCF				Pg	Pg	05 19 30.0	-0.6
TCF				Lg		05 20 06.5	
	4.9nm,0.4s						
TCF	Toulx Ste Croi	2.92	323	ePn	Pn	05 19 21.6	-0.1
TCF				ePg	Pg	05 19 30.0	-0.6
TCF				eSg	Sg	05 20 06.5	-2.0
TCF	Toulx Ste Croi	2.92	323	ePg	Pg	05 19 30.0	-0.6
TCF				eSg	Sg	05 20 06.5	-2.0
	4.9nm,0.4s						
AVF	Avril sur Loir	2.98	341	ePg	Pg	05 19 30.5	-1.1
AVF				eSg	Sg	05 20 09.3	-0.9
	17nm,0.7s						
AVF	Avril sur Loir	2.98	341	ePg	Pg	05 19 30.5	-1.1
AVF				eSg	Sg	05 20 09.3	-0.9
	8.4nm,0.7s						
LFF	La Frestale	3.03	290	eSg	Sg	05 20 14.4	+2.7
	20nm,0.4s						
LFF	La Frestale	3.03	290	eSg	Sg	05 20 14.4	+2.7
	10.0nm,0.4s						
SSF	Saint Saulge	3.20	345	ePg	Pg	05 19 34.7	-1.2
SSF				eSg	Sg	05 20 16.2	-1.2
	5.3nm,0.4s						
SSF	Saint Saulge	3.20	345	ePg	Pg	05 19 34.7	-1.2
SSF				eSg	Sg	05 20 16.2	-1.2
	2.7nm,0.4s						
EPF	Esparros	3.35	255	ePg	Pg	05 19 38.2	-0.4
EPF				eSg	Sg	05 20 22.6	+0.6
	12nm,0.3s						
EPF	Esparros	3.35	255	ePg	Pg	05 19 38.2	-0.4
EPF				eSg	Sg	05 20 22.6	+0.6
	6.1nm,0.3s						
LOR	Lormes	3.35	350	ePg	Pg	05 19 35.9	-2.8
LOR				eSg	Sg	05 20 19.4	-2.6
	10nm,0.4s						
LOR	Lormes	3.35	350	ePg	Pg	05 19 35.9	-2.8
LOR				eSg	Sg	05 20 19.4	-2.6
	5.1nm,0.4s						
EBIE	Bielsa	3.60	251	Pn	Pn	05 19 32.6	+1.6
	0.2nm,0.1s,SNR=7.9						
EBIE				Pg	Pg	05 19 43.0	-0.5
	0.4nm,0.2s,SNR=7.9						
EBIE				Sn	Sn	05 20 12.5	-1.4
	0.4nm,0.3s,SNR=7.9						
EBIE				Lg		05 20 32.9	
	0.8nm,0.3s,SNR=7.9						
HINF	Hinteralfeld	4.11	20	eSn	Sn	05 20 21.1	-5.3
MFF	Saint Martin d	4.34	309	eSg	Sg	05 20 53.0	-0.8
	7.4nm,0.5s						
MFF	Saint Martin d	4.34	309	eSg	Sg	05 20 53.0	-0.8
	3.7nm,0.5s						

*IDC **08** 05:23:43.6±1.1, 992S×10801E, h0^{km}, mb4.1/5, mb1 4.1/6, mb1mx3.9/14, mbtmp4.0/6, ML3.6/1, Error ellipse: s-maj=42.4km s-min=21.5km az=59.0*
*NEIC **08** 05:23:45.1±0.7, 986S×10804E, h10^{km}, mb4.1/1, Error ellipse: s-maj=27.7km s-min=10.3km az=56.0*
*ISCJB **08** 05:23:48.2±3.5, 99S±02×108.1E±02, h54^{km}±31^{km}, mb4.0/6, Error ellipse: s-maj=40.3km s-min=15.5km az=107.1*
ISC 08 05:23:47.6±7.2, 99S±01×1080E±02, h28^{km}±53^{km}, n11, σ0^{s}68/10, mb4.0/6, 1C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOGI	Yogyakarta	3.09	48	⇑iP	Pn	05 24 35.0	+0.5
KULM	Kulim	16.78	334	ePn	Pn	05 27 40.5	-0.1
FITZ	Fitzroy Crossi	18.95	117	P	Pn	05 28 06.4	-0.9
	0.1nm,0.3s,baz=308,slow=12,SNR=3.8						
ASAR	Alice Springs	28.27	122	P	P	05 29 39.0	+0.6
	1.1nm,0.7s,mb3.6,baz=305,slow=10.0,SNR=7.9						
STKA	Stephens Creek	38.00	130	P	P	05 31 03.1	-0.1
	6.2nm,0.8s,mb4.4,baz=302,slow=8.6,SNR=6.5						
STKA	Stephens Creek	38.00	130	eP	P	05 31 03.4	+0.3
SONM	Songino Array	57.51	359	P	P	05 33 35.0	+0.7
	1.5nm,0.6s,mb4.2,baz=170,slow=7.3,SNR=11						
ULN	Ulaanbaatar	57.53	359	eP	P	05 33 32.9	-1.5
	1.3nm,0.6s,mb4.1						
MKAR	Makanchi Array	60.94	340	P	P	05 33 58.2	+0.2
	0.6nm,0.6s,mb3.9,baz=149,slow=7.3,SNR=3.8						
MAW	Mawson	64.89	197	P	P	05 34 24.5	+0.2
	1.2nm,0.9s,mb3.9,baz=54,slow=7.2,SNR=4.8						
TMUT	Trail Mountain	134.46	43	ePKPdf	PKPdf	05 43 04.3	+1.2

MEX 08 05:44:43.6±1.2, 1690N×9467W, h176^{km}±63^{km}, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.78	231	i P	Pn	05 45 16.0	-2.1
HUIG				i S	Sn	05 45 43.0	-1.7
OXX	Oaxaca	1.98	275	i P	Pn	05 45 20.0	-0.1
OXX				i S	Sn	05 45 47.0	-1.3
VHO	Vista Hermosa	1.98	275	i P	Pn	05 45 19.6	-0.6
VHO				i S	Sn	05 45 46.6	-1.9
TPIG	Tehuac#an	2.98	301	i P	Pn	05 45 30.8	-1.0
TPIG				i S	Sn	05 46 05.5	-3.7
UTMO	Huajuapan	3.13	288	i P	Pn	05 45 33.3	-0.3
UTMO				i S	Sn	05 46 09.4	-3.2
MEIG	Mezcala	4.84	283	i P	Pn	05 45 55.4	+0.1
MEIG				i S	Sn	05 46 48.7	-2.8

*ISCJB **08** 05:48:11.7±0.7, 676N±007×7302W±007, h175^{km}±6^{km}, mb3.6/10, Error ellipse: s-maj=14.8km s-min=8.1km az=90.5*
*IDC **08** 05:48:12.0±0.6, 675N×7298W, h162^{km}±6^{km}, mb3.5/10, mb1 3.6/13, mb1mx3.5/22, mbtmp4.0/13, Error ellipse: s-maj=15.3km s-min=7.1km az=132.0*
*NEIC **08** 05:48:13.0±0.8, 677N×7304W, h171^{km}±9^{km}, mb3.8/1, Error ellipse: s-maj=13.8km s-min=10.7km az=100.0*
ISC 08 05:48:12.8±0.7, 680N±007×7303W±007, h166^{km}±6^{km}, n16, σ0^{s}71/17, mb3.6/10, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.32	214	P	Pn	05 48 53.6	+1.0
	56nm,0.3s,baz=87,slow=23,SNR=260						
ROSC				S	Sn	05 49 22.7	-0.5
	60nm,0.3s,baz=110,slow=17,SNR=17						
SDV	Santo Domingo	3.15	49	P	Pn	05 49 03.0	+0.4
	27nm,0.3s,baz=237,slow=3.1,SNR=174						
SDV				S	Sn	05 49 40.3	-1.2
	32nm,0.3s,baz=298,slow=16,SNR=22						
PCRV	Puerto La Cruz	8.96	67	P	Pn	05 50 19.5	+0.9
	0.6nm,0.3s,baz=332,slow=23,SNR=6.1						
PCRV				S	Sn	05 51 58.7	+0.3
	0.5nm,0.3s,baz=339,slow=22,SNR=2.6						
SAML	Samuel	18.46	148	eP	P	05 52 15.7	-0.2
	2.0nm,0.5s						
SIV	San Ignacio	25.55	152	P	P	05 53 25.2	-0.9
	0.6nm,0.7s,mb3.3,baz=331,slow=7.3,SNR=3.8						
BDFB	Brasilia	33.33	132	P	P	05 54 35.6	+0.8
	2.2nm,0.6s,mb4.1,baz=275,slow=6.5,SNR=6.9						
ULM	Lac du Bonnet	47.34	340	P	P	05 56 29.2	-0.5
	0.8nm,0.4s,mb3.7,baz=135,slow=5.7,SNR=4.5						
PDAR	Pinedale Array	48.15	324	P	P	05 56 35.8	-0.2
	0.4nm,0.6s,mb3.2,baz=126,slow=9.9,SNR=4.1						
SCHQ	Schefferville	48.16	5	P	P	05 56 37.1	+1.0
	2.8nm,0.5s,mb4.1,baz=358,slow=15,SNR=11						
YKA	Yellowknife Ar	63.32	340	P	P	05 58 23.9	-0.1
	0.2nm,0.5s,mb3.2,baz=134,slow=6.1,SNR=3.9						
DBIC	Dimbokro	67.65	86	P	P	05 58 51.4	-0.3
	3.2nm,0.7s,mb4.2,baz=258,slow=8.1,SNR=11						
TORD	Torodi Ar. Bea	73.66	78	P	P	05 59 27.3	-0.8
	0.3nm,0.4s,mb3.4,baz=285,slow=6.4,SNR=12						
NOA	NORSAR Array B	81.31	29	P	P	06 00 11.5	+1.0
	0.6nm,0.7s,mb3.3,baz=256,slow=6.8,SNR=2.8						
ARCES	ARCESS Array B	86.67	20	P	P	06 00 36.9	-0.7
	1.7nm,0.9s,mb3.9,baz=277,slow=3.4,SNR=7.4						
MKAR	Makanchi Array	122.32	20	PKP	PKPdf	06 06 47.6	-0.3
	0.3nm,0.4s,baz=308,slow=2.4,SNR=4.5						
ASAR	Alice Springs	149.17	234	PKPbc	PKPbc	06 07 41.9	+0.4
	1.2nm,0.5s,baz=120,slow=3.5,SNR=13						

MAN 08 06:22:13.5, 1471N×12023E, h27^{km}, mb3.0, ML4.4, MS3.6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.97	179	eP	Pn	06 22 33.3	+2.0
SCZP	Santa Cruz	1.11	344	eP	Pn	06 22 33.5	+0.2
SCZP				eS	Sn	06 22 48.4	+0.8
BALP	Baler	1.66	51	eP	Pn	06 22 40.9	+0.1
BALP				eS	Sn	06 23 02.1	+0.9
BOLP	Bolinao	1.69	350	eP	Pn	06 22 40.4	-0.9
BOLP				eS	Sn	06 23 01.3	-0.8
BCPH	Baguio City Da	1.70	11	⇑iP	Pn	06 22 40.0	-1.4
BCPH				eS	Sn	06 23 00.0	-2.2
BUSP	Coron	2.69	181	eP	Pn	06 22 56.4	+1.4
BUSP				eS	Sn	06 23 27.4	+0.8
ENPP	El Nido	3.57	193	eP	Pn	06 23 08.7	+1.6
ENPP				eS	Sn	06 23 48.8	+0.5

IDC 08 06:47:44.6±1.4, 5478S×12669W, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.9/12, mbtmp3.9/4, MS4.0/6, Ms1 3.9/6, ms1mx3.7/11, Error ellipse: s-maj=43.3km s-min=32.1km az=179.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	33.31	202	P	P	06 54 24.8	+0.8
	1.3nm,1.0s,baz=101,slow=10,SNR=5.0						
PPT	Papeete	41.09	326	LR	LR	07 07 44.9	
	comp=Z,171nm,20.4s,baz=124,slow=29						
VNA1	Neumayer--Stat	47.42	157	e	P	06 56 20.9	+0.1
VNA1				e		06 56 28.2	
SNAA	Sanae	47.85	159	P	P	06 56 22.8	-1.3
	1.2nm,0.9s,baz=208,slow=5.3,SNR=8.2						
SNAA	Sanae	47.85	159	e	P	06 56 23.2	-0.8
SNAA				e		06 56 29.5	
CPUP	Villa Florida	57.12	90	P	P	06 57 32.6	-0.2
	1.3nm,0.8s,baz=206,slow=7.9,SNR=4.2						
CPUP				LR	LR	07 18 54.7	
	comp=Z,110nm,18.2s,baz=24,slow=33						
STKA	Stephens Creek	65.57	249	LR	LR	07 20 34.0	
	comp=Z,86nm,21.7s,baz=26,slow=30						
BDFB	Brasilia	70.86	90	LR	LR	07 27 11.4	
	comp=Z,116nm,18.5s,baz=202,slow=33						
ASAR	Alice Springs	76.20	249	P	P	06 59 33.7	-1.0
	2.2nm,0.8s,baz=148,slow=6.2,SNR=20						
BOSA	Boshof	93.51	156	LR	LR	07 41 18.3	
	comp=Z,84nm,18.1s,baz=324,slow=34						
PDAR	Pinedale Array	98.27	13	LR	LR	07 37 44.3	
	comp=Z,56nm,19.4s,baz=70,slow=30						
SONM	Songino Array	146.80	280	PKPbc	PKPbc	07 07 28.1	-0.4
	2.1nm,0.8s,baz=132,slow=2.2,SNR=12						

*NSSP **08** 07:10:12.9, 4138N×4635E, h10^{km}, ML4.0*
*IDC **08** 07:10:15.9±0.8, 4155N×4606E, h0^{km}, mb3.9/10, mb1 4.0/12, mb1mx3.8/22, mbtmp3.9/12, ML4.0/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/44, Error ellipse: s-maj=20.3km s-min=8.3km az=126.0*
*ISCJB **08** 07:10:15.8±0.5, 4136N±002×4645E±003, h11^{km}±3^{km}, mb3.9/13, MS3.3/2, Error ellipse: s-maj=4.4km s-min=3.1km az=121.9*
*MOS **08** 07:10:15.3±2.4, 4131N×4639E, h4^{km}, mb4.6/5, Error ellipse: s-maj=5.9km s-min=4.1km az=104.6*
*NNC **08** 07:10:17.3±10.0, 4186N×4648E, h0^{km}, mb3.7, Error ellipse: s-maj=129.4km s-min=74.7km az=85.0*
*TIF **08** 07:10:18.1, 4136N×46.18E, h28^{km}±2^{km}*
*CSEM **08** 07:10:19.2±0.1, 4139N×4643E, h55^{km}±1^{km}, mb4.6, Error ellipse: s-maj=3.1km s-min=2.0km az=146.0*
*NEIC **08** 07:10:21.1±1.0, 4160N×46.16E, h37^{km}±11^{km}, mb3.9/4, Error ellipse: s-maj=11.5km s-min=7.0km az=155.0*
ISC 08 07:10:17.4±0.5, 4141N±002×4640E±003, h10^{km}±3^{km}, n101, σ1^{s}62/138, mb3.9/13, MS3.3/2, 16C-5D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGRG	David-gareji	0.77	273	ePG	Pg	07 10 32.8	+0.5
DGRG				eS	Sg	07 10 43.8	+1.5
DGRG	David-gareji	0.77	273	P	Pg	07 10 32.8	+0.5
DGRG				S	Sg	07 10 43.8	+1.5
AKT	Akhty	1.01	86	i PG	Pg	07 10 37.0	+0.2
AKT				i S	Sg	07 10 52.3	+2.4
GNBR	Gunib	1.07	23	⇑iPG	Pg	07 10 36.2	-1.7
GNBR				eS	Sg	07 10 51.2	-0.6
GNBR				pmax	pmax		
	comp=Z,458nm,0.2s						
XNZR	Khunzakh	1.15	11	i PG	Pg	07 10 40.0	+0.4
XNZR				i S	Sg	07 10 56.0	+1.4
XNZR				pmax	pmax		
	comp=Z,725nm,0.2s						
XNZR	Khunzakh	1.15	11	i Pg	Pg	07 10 40.0	+0.4
	comp=Z,725nm,0.2s						
XNZR				i Sg	Sg	07 10 56.0	+1.4
URKR	Urkarakh	1.19	50	⇑iPG	Pg	07 10 40.3	-0.1
URKR				i S	Sg	07 10 57.3	+1.4
URKR				pmax	pmax		
	comp=Z,366nm,0.3s						
URKR	Urkarakh	1.19	50	i Pg	Pg	07 10 40.3	-0.1
	comp=Z,366nm,0.3s						
URKR				i Sg	Sg	07 10 57.3	+1.4
MTA	Mtatsminda	1.24	284	P	Pn	07 10 38.8	-2.0
MTA				S	Sb	07 10 54.0	-2.9
BTLR	Botlikh	1.26	354	i PG	Pg	07 10 39.0	-2.6
ARKR	Arakani	1.27	20	i PG	Pg	07 10 40.5	-1.4
ARKR				eS	Sb	07 10 57.5	-0.4
ARKR				pmax	pmax		
	comp=Z,352nm,0.3s						
ARKR	Arakani	1.27	20	i Pg	Pg	07 10 40.5	-1.4
	comp=Z,352nm,0.3s						
ARKR				eSg	Sb	07 10 57.5	-0.4
TBLG	Delisi	1.28	285	P	Pn	07 10 39.8	-1.7
TBLG				S	Sb	07 10 55.2	-3.1
KSMR	Kasumkent	1.31	81	⇑iPG	Pg	07 10 47.5	+4.8
KSMR				pmax	pmax		
	comp=Z,259nm,0.2s						
UNCR	Uncukul	1.34	13	i Pg	Pg	07 10 41.5	-1.6
UNCR				eSg	Sg	07 10 59.5	-0.9
KZR	Kazreti	1.49	270	P	Pn	07 10 42.3	-2.0
KZR				S	Sn	07 10 59.9	-4.0
DBC	Dubki	1.64	11	⇑iPN	Pn	07 10 45.5	-0.9
DBC				pmax	pmax		
	comp=Z,578nm,0.2s						
DBC	Dubki	1.64	11	i Pn	Pn	07 10 45.5	-0.9
	comp=Z,578nm,0.2s						
MAK	Makhachkala	1.75	28	PN	Pg	07 10 51.9	+0.8
MAK				i S	Sg	07 11 19.6	+5.7

MAK				smax			
	comp=N,4µm,0.7s						
GNI	**Garni**	**1.78**	**225**	PN	**Pn**	**07 10 49.0**	**+0.7**
GNI	**Garni**	**1.78**	**225**	Pn	**Pn**	**07 10 50.0**	**+1.7**
	comp=N,211nm,0.3s,baz=311,slow=2.4,SNR=206						
GNI				Sn	**Sn**	**07 11 14.2**	**+3.3**
	comp=N,294nm,0.3s,baz=27,slow=22,SNR=28						
GOR	**Gori**	**1.81**	**289**	P	**Pn**	**07 10 48.4**	**-0.3**
GOR				S	**Sn**	**07 11 10.3**	**-1.4**
GOR	**Gori**	**1.81**	**289**	*e*Pn	**Pn**	**07 10 48.4**	**-0.3**
SNJR	**Sundja**	**2.03**	**325**	⇓*i*PN	**Pn**	**07 10 54.2**	**+2.4**
SNJR				*e*S	**Sn**	**07 11 20.6**	**+3.4**
VLKR	**Vladikavkaz**	**2.07**	**323**	⇑*i*PN	**Pn**	**07 10 54.5**	**+2.2**
VLKR				*i* S	**Sn**	**07 11 20.8**	**+2.6**
LACR	**Lac**	**2.11**	**313**	*i* Pn	**Pn**	**07 10 53.1**	**+0.3**
LACR				*i* Sn	**Sn**	**07 11 18.4**	**-0.7**
AKH	**Akhalkalaki**	**2.18**	**271**	P	**Pn**	**07 10 53.6**	**-0.2**
AKH				S	**Sn**	**07 11 20.2**	**-0.7**
AKH	**Akhalkalaki**	**2.18**	**271**	*e*Pn	**Pn**	**07 10 53.6**	**-0.2**
AKH				*e*Sn	**Sn**	**07 11 20.2**	**-0.7**
NARZ	**Nor Artik**	**2.24**	**246**	P	**Pn**	**07 10 52.4**	**-2.2**
NARZ				S	**Sn**	**07 11 20.5**	**-1.8**
ZEI	**Tsey**	**2.30**	**307**	*e*PN	**Pn**	**07 10 56.0**	**+0.5**
ZEI				*e*		07 11 27.0	
ZEI				pmax	pmax		
	comp=Z,206nm,0.2s						
ZEI				smax			
	comp=E,2.0nm,0.4s						
ZEI	**Tsey**	**2.30**	**307**	*e*Pn	**Pn**	**07 10 56.0**	**+0.5**
	comp=E,206nm,0.2s						
ARNR	**Ardon**	**2.37**	**319**	*e*PN	**Pn**	**07 10 57.9**	**+1.5**
ARNR				*e*S	**Sn**	**07 11 26.8**	**+1.2**
BTKR	**Batakoyurt**	**2.39**	**326**	*e*PN	**Pn**	**07 10 59.2**	**+2.5**
BTKR				*e*S	**Sn**	**07 11 29.1**	**+3.0**
KORR	**Kora**	**2.41**	**315**	*e*Pn	**Pn**	**07 10 57.7**	**+0.8**
KORR				*e*Sn	**Sn**	**07 11 26.5**	**+0.1**
ONI	**Oni**	**2.49**	**299**	*e*PN	**Pn**	**07 10 58.1**	**+0.1**
ONI				*e*S	**Sn**	**07 11 30.9**	**+2.5**
ONI	**Oni**	**2.49**	**299**	P	**Pn**	**07 10 58.1**	**+0.1**
ONI				S	**Sn**	**07 11 30.9**	**+2.5**
DIGO	**Kars**	**2.50**	**248**	*i* P	**Pn**	**07 11 00.5**	**+2.3**
KMSR	**Komsomolskaya**	**2.50**	**322**	⇑*i*PN	**Pn**	**07 11 00.0**	**+1.8**
KMSR				*i* S	**Sn**	**07 11 30.6**	**+1.8**
DIGR	**Digorskoe uzhe**	**2.57**	**306**	*e*Pn	**Pn**	**07 10 58.6**	**-0.5**
DIGR				*e*Sn	**Sn**	**07 11 28.1**	**-2.3**
KARS	**Kars**	**2.62**	**253**	*e*PN	**Pn**	**07 11 02.4**	**+2.5**
PRTR	**Priterechnaya**	**2.81**	**327**	*e*PN	**Pn**	**07 11 04.9**	**+2.4**
PRTR				*e*S	**Sn**	**07 11 38.9**	**+2.4**
CLDR	**Caldiran**	**2.95**	**221**	*e*PN	**Pn**	**07 11 06.2**	**+1.7**
KUBR	**Kubataba**	**3.25**	**318**	⇑*e*PN	**Pb**	**07 11 15.7**	**+0.5**
BCA	**Borcka**	**3.59**	**272**	*e*PN	**Pn**	**07 11 19.7**	**+6.5**
SHAR	**Shatzhatmas**	**3.61**	**312**	⇑*e*PN	**Pn**	**07 11 17.9**	**+4.5**
VANB	**Van**	**3.64**	**220**	*e*PN	**Pn**	**07 11 16.1**	**+2.2**
TVAN	**Van**	**3.68**	**220**	*i* P	**Pg**	**07 11 28.9**	**+0.9**
KIV	**Kislovodsk**	**3.73**	**314**	⇑*i*PN	**Pb**	**07 11 21.6**	**-1.9**
ERZM	**Erzurum**	**4.11**	**250**	*i* P	**Pb**	**07 11 27.7**	**-2.2**
EZM	**Erzurum**	**4.11**	**250**	*e*P	**Pn**	**07 11 21.8**	**+1.4**
HAKT	**HAKKARI**	**4.37**	**209**	*i* P	**Pb**	**07 11 35.4**	**+1.0**
GOF	**Gofitskoye**	**4.39**	**327**	*e*PN	**Pn**	**07 11 27.7**	**+3.4**
ANN	**Anapa**	**7.38**	**300**	*e*P	**Pn**	**07 12 13.1**	**+7.8**
ANN				*e*S	**Sn**	**07 13 36.0**	**+6.9**
BRTR	**Keskin Array B**	**9.85**	**264**	Pn	**Pn**	**07 12 39.3**	**+0.1**
	comp=E,0.1nm,0.3s,baz=99,slow=7.6,SNR=4.8						
AKTK	**Aktyubinsk**	**12.11**	**38**	Pn	**Pn**	**07 13 09.1**	**-1.0**
AKTK				Sn	**Sn**	**07 15 19.0**	**-6.1**
AKTK	**Aktyubinsk**	**12.11**	**38**	Pn	**Pn**	**07 13 09.1**	**-0.9**
AKTO	**Aktyubinsk**	**12.11**	**38**	⇑Pn	**Pn**	**07 13 07.4**	**-2.6**
AKTO				⇑Sn	**Sn**	**07 15 17.3**	**-7.8**
	comp=E,0.1nm,0.6s						
AKTO	**Aktyubinsk**	**12.11**	**38**	Pn	**Pn**	**07 13 09.1**	**-1.0**
	comp=E,0.5nm,0.3s,baz=225,slow=12,SNR=7.1						
AKTO				Sn	**Sn**	**07 15 19.0**	**-6.1**
	comp=E,1.2nm,0.3s,baz=178,slow=23,SNR=5.8						
AB31	**Akbulak array**	**12.33**	**46**	Pn	**Pn**	**07 13 12.7**	**-0.4**
	comp=E,2.1nm,0.6s,baz=242,slow=13,SNR=21						
AB31				⇓Sn	**Sn**	**07 15 23.3**	**-7.3**
	comp=E,3.8nm,0.5s,baz=246,slow=28,SNR=5.8						
AKASG	**Malin Array Be**	**15.08**	**314**	Pn	**Pn**	**07 13 47.5**	**-3.1**
	comp=E,1.1nm,0.3s,baz=44,slow=56,SNR=6.9						
AKASG	**Malin Array Be**	**15.08**	**314**	Pn	**Pn**	**07 13 47.5**	**-3.1**
OBN	**Obninsk**	**15.17**	**338**	*e*P	**Pn**	**07 13 56.6**	**+4.8**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
MLR	**Muntele Rosu**	**15.39**	**292**	⇑*i*P	**Pn**	**07 14 00.3**	**+5.6**
BURAR	**Bucovina Array**	**16.31**	**299**	⇓*i*P	**Pn**	**07 14 09.6**	**+3.1**
ARU	**Arti**	**16.98**	**24**	*e*P	**Pn**	**07 14 16.0**	**+0.9**
ARU				*e*S	**Sn**	**07 17 25.9**	**+2.0**
KK31	**Karatay Array**	**17.92**	**77**	⇑Pn	**Pn**	**07 14 26.5**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=280,slow=12,SNR=11						
ZRNK	**Zerenda**	**19.13**	**45**	⇓Pn	**Pn**	**07 14 36.5**	**-5.0**
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**19.86**	**46**	*e*P	**Pn**	**07 14 48.6**	**-1.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**19.86**	**46**	*e*P	**Pn**	**07 14 48.6**	**-1.7**
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**19.86**	**46**	*e*P	**Pn**	**07 14 48.6**	**-1.7**
	comp=Z,3.0nm,0.6s						
BVA0	**Borovoye Array**	**19.91**	**46**	⇓Pn	**Pn**	**07 14 46.9**	**-3.9**
	comp=Z,0.8nm,1.0s,baz=245,slow=11,SNR=8.5						
BVAR	**Borovoye Array**	**19.91**	**46**	P	**Pn**	**07 14 48.3**	**-2.5**
	comp=Z,0.9nm,0.3s,baz=243,slow=9.7,SNR=8.7						
BVAR				LR	LR	07 24 52.3	
	comp=Z,24nm,21.1s,baz=67,slow=44						
BVAR	**Borovoye Array**	**19.91**	**46**	Pn	**Pn**	**07 14 46.9**	**-3.9**
	comp=Z,0.8nm,1.0s,SNR=8.5						
BVAR	**Borovoye Array**	**19.91**	**46**	P	**Pn**	**07 14 48.3**	**-2.5**
KLMR	**Klimovskoe**	**19.92**	**350**	*e*P	**Pn**	**07 14 52.5**	**+1.5**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
VOSK	**Vostochnaya**	**20.10**	**47**	⇑Pn	**P**	**07 14 51.9**	**+0.6**
	comp=Z,3.1nm,0.5s						
CHKZ	**Chkalovo**	**20.32**	**45**	⇑Pn	**P**	**07 14 53.5**	**-0.1**
	comp=Z,5.6nm,0.8s						
CHKZ	**Chkalovo**	**20.32**	**45**	*e*P	**P**	**07 14 53.7**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHKZ	**Chkalovo**	**20.32**	**45**	*e*P	**P**	**07 14 53.7**	**0.0**
	comp=Z,7.4nm,0.8s						
CHKZ	**Chkalovo**	**20.32**	**45**	*e*P	**P**	**07 14 53.7**	**0.0**
	comp=Z,7.4nm,0.8s						
AAK	**Ala-Archa**	**20.88**	**77**	⇑*e*P	**P**	**07 15 00.3**	**+0.6**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AAK				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.3						
AAK	**Ala-Archa**	**20.88**	**77**	*e*P	**P**	**07 15 00.3**	**+0.6**
	comp=Z,100nm,15.0s						
JOF	**Joensuu**	**23.32**	**342**	*e*p	**P**	**07 15 23.7**	**-2.1**
FINES	**FINESS Array B**	**23.53**	**335**	P	**P**	**07 15 25.6**	**-2.5**
	comp=Z,1.4nm,0.6s,mb3.6,baz=135,slow=12,SNR=7.4						
FINES				LR	LR	07 25 38.5	
	comp=Z,98nm,19.3s,MS3.3,baz=335,slow=40						
FINES	**FINESS Array B**	**23.53**	**335**	P	**P**	**07 15 25.5**	**-2.5**
KAF	**Kangasniemi**	**23.98**	**337**	*e*p	**P**	**07 15 29.4**	**-2.7**
	comp=Z,1.1nm,0.4s,mb3.6						
KURK	**Kurchatov**	**24.05**	**56**	*e*P	**P**	**07 15 31.4**	**-1.4**
GERES	**GERESS Array B**	**24.09**	**299**	P	**P**	**07 15 29.6**	**-3.6**
	comp=Z,0.7nm,0.5s,mb3.3,baz=108,slow=8.6,SNR=5.6						
MKAR	**Makanchi Array**	**26.18**	**66**	P	**P**	**07 15 54.4**	**+2.3**
	comp=Z,1.5nm,0.6s,mb3.7,baz=269,slow=9.3,SNR=16						
HFS	**Hagfors**	**27.47**	**324**	P	**P**	**07 16 01.6**	**-2.1**
	comp=Z,0.8nm,0.4s,mb3.6,baz=123,slow=16,SNR=4.0						
ZAL	**Zalesovo**	**28.36**	**51**	P	**P**	**07 16 11.8**	**0.0**
	comp=Z,2.4nm,0.4s,mb4.2,baz=155,slow=3.9,SNR=3.5						
ZAL	**Zalesovo**	**28.36**	**51**	P	**P**	**07 16 11.8**	**0.0**
NOA	**NORSAR Array B**	**28.97**	**325**	P	**P**	**07 16 14.7**	**-2.5**
	comp=Z,0.7nm,0.7s,mb3.5,baz=100,slow=12,SNR=2.3						
ARCES	**ARCESS Array B**	**30.23**	**346**	P	**P**	**07 16 26.6**	**-1.7**
	comp=Z,1.3nm,0.7s,mb3.8,baz=161,slow=7.7,SNR=6.4						
EKA	**Eskdalemuir Ar**	**34.95**	**311**	P	**P**	**07 17 07.4**	**-2.2**
	comp=Z,2.1nm,0.6s,mb4.2,baz=102,slow=8.1,SNR=9.3						
ULN	**Ulaanbaatar**	**42.66**	**60**	*e*P	**P**	**07 18 15.2**	**+1.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
ULN	**Ulaanbaatar**	**42.66**	**60**	*e*P	**P**	**07 18 15.2**	**+1.0**
	comp=Z,1.8nm,0.5s,mb4.1						
BOD	**Bodaibo**	**44.77**	**45**	*e*P	**P**	**07 18 30.6**	**-0.6**
BOD				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
TORD	**Torodi Ar. Bea**	**47.95**	**247**	P	**P**	**07 18 54.4**	**-1.8**
	comp=Z,0.6nm,0.6s,mb3.8,baz=33,slow=7.2,SNR=7.9						
TORD	**Torodi Ar. Bea**	**47.95**	**247**	P	**P**	**07 18 54.4**	**-1.8**
DBIC	**Dimbokro**	**57.06**	**247**	P	**P**	**07 20 02.1**	**-1.7**
	comp=Z,2.2nm,0.6s,mb4.4,baz=30,slow=10,SNR=4.8						

*MOS **08** 07:25:41.6±1.2, 3457N×2390E, h14^{km}, mb4.2/10, Error ellipse: s-maj=23.4km s-min=8.5km az=67.2*
*ISCJB **08** 07:25:45.8±0.4, 3468N±003×2407E±006, h33^{km}, mb4.1/14, Error ellipse: s-maj=7.1km s-min=3.3km az=150.1*
*CSEM **08** 07:25:46.0±0.1, 3469N×2440E, h20^{km}, mb4.4/4, Error ellipse: s-maj=4.6km s-min=1.7km az=71.0*
*IDC **08** 07:25:46.7±2.9, 3488N×2393E, h23^{km}±17^{km}, mb4.0/10, mb1 4.0/12, mb1mx3.8/24, mbtmp4.0/12, ML3.0/1, Error ellipse: s-maj=26.2km s-min=17.5km az=149.0*
*HLW **08** 07:25:46.1, 3486N×24.13E, h33^{km}, Mb3.6*
*ATH **08** 07:25:48.0, 3478N×24.13E, h19^{km}±1^{km}, MD3.8/9*
*NEIC **08** 07:25:48.0, 3478N×24.13E, h19^{km}, MD3.8(ATH), After ATH.*
*THE **08** 07:25:51.6, 3489N×24.12E, h20^{km}*
ISC 08 07:25:47.1±0.7**, 3471N**±003×**2407E**±006**, h26**^{km}±5^{km}**, n62,** σ**1^{s}27**/69**, mb4.1**/14**, 7C-6D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.13**	**8**	*e*PB	**Pb**	**07 25 51.6**	**-0.5**
VAM	**Vamos**	**0.70**	**9**	*e*PB	**Pb**	**07 26 00.0**	**-0.7**
VAM				*e*SN	**Sn**	**07 26 09.7**	**-1.5**
IDI	**Anoyia**	**0.89**	**49**	Pg	**Pb**	**07 26 02.8**	**-1.1**
	90nm,0.3s,baz=230,slow=16,SNR=93						
IDI				Lg		07 26 16.2	
	226nm,0.3s,baz=315,slow=20,SNR=30						
LAST	**Lasithi**	**1.24**	**69**	*e*Pg	**Pn**	**07 26 09.8**	**+1.1**
XRY	**Khrisi**	**1.35**	**83**	*e*PN	**Pn**	**07 26 12.2**	**+2.0**
NPS	**Neapolis**	**1.38**	**66**	*e*PN	**Pn**	**07 26 13.0**	**+2.3**
KYTH	**Kithira**	**1.77**	**332**	*e*PN	**Pn**	**07 26 20.0**	**+3.9**
SANT	**Santorini**	**2.01**	**34**	*e*Pb	**Pb**	**07 26 21.2**	**-1.6**
SANT	**Santorini**	**2.01**	**34**	*e*Pb	**Pb**	**07 26 21.2**	**-1.7**
VLI	**Veliai**	**2.20**	**336**	*e*PB	**Pb**	**07 26 25.0**	**-1.2**
APE	**Apeiranthos**	**2.63**	**26**	*e*Pn	**Pn**	**07 26 29.1**	**+1.2**
APE				*e*Sn	**Sn**	**07 26 58.5**	**-0.5**
APE	**Apeiranthos**	**2.63**	**26***c*	*i*P	**Pn**	**07 26 28.5**	**+0.6**
APE	**Apeiranthos**	**2.63**	**26**	*i* P	**Pn**	**07 26 28.5**	**+0.6**
APE	**Apeiranthos**	**2.63**	**26**	*e*Pn	**Pn**	**07 26 29.1**	**+1.2**
APE				*e*Sn	**Sn**	**07 26 58.5**	**-0.5**
KARP	**Karpathos**	**2.67**	**71**	*e*PN	**Pn**	**07 26 31.4**	**+3.0**
SLUM		**3.35**	**163**	⇓P	**Pn**	**07 26 38.0**	**+0.3**
SLUM				S	**Sn**	**07 27 15.9**	**-0.8**
ARG	**Arkhangelos**	**3.64**	**64**	*e*PN	**Pn**	**07 26 44.5**	**+2.8**
SMG	**Samos**	**3.73**	**36**	*e*PN	**Pn**	**07 26 46.0**	**+3.0**
AGG	**Agios Georgios**	**4.52**	**343**	*e*Pn	**Pn**	**07 26 55.4**	**+1.6**
AGG				*e*Sn	**Sn**	**07 27 44.8**	**-0.7**
XOR	**Xorichti**	**4.70**	**352**	*e*Pn	**Pn**	**07 26 57.6**	**+1.4**
LKD	**Levkas**	**4.84**	**326**	*e*Pn	**Pn**	**07 27 01.4**	**+3.2**
LKD				*e*Sn	**Sn**	**07 27 54.4**	**+1.1**
MEV	**Metsovon**	**5.54**	**337**	*e*Pn	**Pn**	**07 27 10.4**	**+2.5**
SWA2		**5.58**	**167**	⇓P	**Pn**	**07 27 08.7**	**+0.3**
SWA1		**5.61**	**165**	⇑P	**Pn**	**07 27 09.5**	**+0.7**
SWA1				S	**Sn**	**07 28 09.9**	**-2.5**
AWBH		**7.59**	**146**	⇑P	**Pn**	**07 27 35.8**	**-0.2**
KOT	**Kottamia**	**8.12**	**124**	⇓P	**Pn**	**07 27 43.1**	**-0.1**
HSAF	**As Saff**	**8.13**	**127**	P	**Pn**	**07 27 43.1**	**-0.2**
GLL	**Jalalah**	**8.26**	**126**	⇓P	**Pn**	**07 27 45.2**	**+0.1**
HFRF	**Wahat Farafira**	**8.37**	**153**	⇑P	**Pn**	**07 27 47.3**	**+0.6**
SUZ		**8.87**	**121**	⇑*e*P	**Pn**	**07 27 53.1**	**-0.4**
BRTR	**Keskin Array B**	**9.12**	**54**	Pn	**Pn**	**07 27 57.0**	**-0.1**
	0.2nm,0.3s,baz=224,slow=6.4,SNR=7.5						
MMAI	**Mount Meron Ar**	**9.58**	**97**	Pn	**Pn**	**07 28 03.8**	**+0.5**
	2.0nm,0.3s,baz=283,slow=14,SNR=4.3						
MLR	**Muntele Rosu**	**10.86**	**7**	Pn	**Pn**	**07 28 23.5**	**+2.7**
	0.2nm,0.3s,baz=158,slow=6.9,SNR=3.9						
GERES	**GERESS Array B**	**16.07**	**335**	Pn	**Pn**	**07 29 35.4**	**+4.1**
	0.3nm,0.3s,baz=152,slow=13,SNR=6.7						
AKASG	**Malin Array Be**	**16.41**	**12**	Pn	**Pn**	**07 29 36.3**	**+0.7**
	1.8nm,0.3s,baz=202,slow=10,SNR=11						
AKASG	**Malin Array Be**	**16.41**	**12**	P	**Pn**	**07 29 36.3**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
OBN	**Obninsk**	**22.17**	**19***d*	*i*P	**P**	**07 30 38.6**	**-2.4**
OBN				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.7						
OBN	**Obninsk**	**22.17**	**19**	*i* P	**P**	**07 30 38.6**	**-2.4**
	comp=Z,14nm,0.5s,mb4.7						
HFS	**Hagfors**	**26.32**	**348**	P	**P**	**07 31 19.0**	**-1.6**
	comp=Z,1.9nm,0.5s,mb3.9,baz=159,slow=13,SNR=11						
HFS	**Hagfors**	**26.32**	**348**	P	**P**	**07 31 19.0**	**-1.6**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**26.78**	**2**	P	**P**	**07 31 22.3**	**-2.5**
	comp=Z,1.0nm,0.5s,mb3.6,baz=161,slow=12,SNR=6.9						
FINES	**FINESS Array B**	**26.78**	**2**	*i* P	**P**	**07 31 24.0**	**-0.8**
NB2	**NORSAR Subarra**	**27.61**	**346**	P	**P**	**07 31 30.9**	**-1.4**
	comp=Z,1.2nm,0.5s,mb3.8,baz=153,slow=9.3						
NOA	**NORSAR Array B**	**27.61**	**346**	P	**P**	**07 31 30.9**	**-1.4**
	comp=Z,1.1nm,0.5s,mb3.8,baz=153,slow=8.7,SNR=4.0						
AKTK	**Aktyubinsk**	**29.21**	**47**	P	**P**	**07 31 45.3**	**-1.2**
	comp=Z,2.0nm,0.5s,mb4.1						
AKTO	**Aktyubinsk**	**29.21**	**47**	P	**P**	**07 31 45.3**	**-1.2**
	comp=Z,1.9nm,0.5s,mb4.1,baz=253,slow=7.3,SNR=9.3						
AKTO	**Aktyubinsk**	**29.21**	**47**	P	**P**	**07 31 45.3**	**-1.2**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
TORD	**Torodi Ar. Bea**	**29.52**	**229**	P	**P**	**07 31 50.1**	**+0.9**
	comp=Z,1.5nm,0.5s,mb4.0,baz=34,slow=8.6,SNR=28						
ARU	**Arti**	**31.95**	**36**	⇓*e*P	**P**	**07 32 10.0**	**-0.7**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.4						
ARU	**Arti**	**31.95**	**36**	*e*P	**P**	**07 32 10.0**	**-0.7**
	comp=Z,10.0nm,1.7s,mb4.4						
ARCES	**ARCESS Array B**	**34.88**	**1**	P	**P**	**07 32 34.0**	**-2.3**
	comp=Z,0.9nm,0.6s,mb3.9,baz=182,slow=8.5,SNR=11						
BVAR	**Borovoye Array**	**37.30**	**46**	P	**P**	**07 32 56.8**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.9,baz=262,slow=7.2,SNR=7.5						
AAK	**Ala-Archa**	**39.66**	**63**	⇑*e*P	**P**	**07 33 17.6**	**+0.9**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
KURK	**Kurchatov**	**42.16**	**51**	*i* P	**P**	**07 33 36.7**	**-0.6**
MKAR	**Makanchi Array**	**44.77**	**56**	P	**P**	**07 33 58.0**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.1,baz=284,slow=6.1,SNR=12						
MKAR	**Makanchi Array**	**44.77**	**56**	⇑*e*P	**P**	**07 33 58.7**	**+0.3**
NVS	**Novosibirsk**	**45.04**	**45**	*i* P	**P**	**07 33 59.8**	**-0.7**
ZAL	**Zalesovo**	**45.95**	**46**	P	**P**	**07 34 07.5**	**-0.2**
	comp=Z,5.5nm,0.4s,mb4.8,baz=200,slow=7.4,SNR=8.5						
ZAL	**Zalesovo**	**45.95**	**46**	P	**P**	**07 34 07.5**	**-0.2**
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ZAK	**Zakamensk**	**57.71**	**48**	*e*P	**P**	**07 35 35.9**	**+0.5**
SONM	**Songino Array**	**60.46**	**50**	P	**P**	**07 35 54.3**	**-0.2**
	comp=Z,1.1nm,0.5s,mb4.1,baz=283,slow=7.1,SNR=12						
SONM	**Songino Array**	**60.46**	**50**	P	**P**	**07 35 54.3**	**-0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						

IDC 08 07:43:22.3±7.6**, 742N**×**13544E, h0**^{km}**, mb4.1**/3**, mb1 4.2**/3**, mb1mx3.8**/16**, mbtmp4.1**/3**, Error ellipse: s-maj=237.5km s-min=147.5km az=34.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**47.24**	**334**	P	P	07 51 57.2	+0.2
	0.5nm,0.4s,baz=153,slow=7.8,SNR=5.8						
MKAR	**Makanchi Array**	**59.88**	**321**	P	P	07 53 29.9	+0.1
	1.9nm,0.7s,baz=106,slow=8.6,SNR=17						
ARCES	**ARCESS Array B**	**89.93**	**341**	P	P	07 56 23.1	-0.3
	1.8nm,0.9s,baz=69,slow=6.3,SNR=4.1						

*ISCJB **08** 07:45:43.8±1.0, 10N±03×1238E±06, h250^{km}, mb3.5/4, Error ellipse: s-maj=92.6km s-min=15.8km az=138.7*
*IDC **08** 07:45:45.3±13.0, 095N×12378E, h246^{km}±144^{km}, mb3.3/4, mb1 3.3/5, mb1mx3.2/16, mbtmp3.9/5, Error ellipse: s-maj=113.6km s-min=22.6km az=61.0*
ISC 08 07:45:45.7±1.0**, 10N**±02×**1238E**±06**, h250**^{km}**, n6,** σ**0^{s}23**/6**, mb3.5**/4**, 1C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.02**	**175**	P	**P**	**07 49 49.2**	**0.0**
	0.2nm,0.3s,baz=6.4,slow=14,SNR=6.5						
WB2	**Warramunga Arr**	**23.20**	**154**	⇑*i*P	**P**	**07 50 30.3**	**-0.2**
ASAR	**Alice Springs**	**26.37**	**159**	P	**P**	**07 50 59.4**	**+0.3**
	0.4nm,0.3s,mb3.5,baz=339,slow=8.7,SNR=12						
STKA	**Stephens Creek**	**36.75**	**154**	P	**P**	**07 52 29.3**	**0.0**
	1.3nm,0.6s,mb3.6,baz=333,slow=10,SNR=4.0						
SONM	**Songino Array**	**49.08**	**345**	P	**P**	**07 54 07.8**	**0.0**
	0.8nm,0.6s,mb3.2,baz=164,slow=9.2,SNR=5.4						
MKAR	**Makanchi Array**	**58.23**	**328**	P	**P**	**07 55 13.9**	**0.0**
	0.6nm,0.3s,mb3.8,baz=121,slow=8.5,SNR=16						

*IDC **08** 07:46:40.1±0.7, 988S×10802E, h0^{km}, mb4.4/8, mb1 4.4/9, mb1mx4.3/16, mbtmp4.4/9, ML4.2/1, MS3.8/8, Ms1 3.8/8, ms1mx3.5/18, Error ellipse: s-maj=31.2km s-min=16.6km az=62.0*
*ISCJB **08** 07:46:42.5±0.4, 995S±005×10804E±007, h25^{km}, mb4.7/35, MS3.9/11, Error ellipse: s-maj=9.3km s-min=6.6km az=169.6*
*BJI **08** 07:46:43.0, 997S×10850E, h31^{km}, mB4.9, mb4.7, Ms4.5, Msz4.2*
*NEIC **08** 07:46:44.5±5.9, 993S×10803E, h28^{km}±42^{km}, mb4.8/16, Error ellipse: s-maj=20.8km s-min=7.9km az=58.0*
ISC 08 07:46:44.7±0.4**, 997S**±005×**10806E**±007**, h27**^{km}**, h27**^{km}±3.3^{km}**:pP-P, n72,** σ**1^{s}12**/60**, mb4.7**/35**, MS3.9**/11**, 7C-3D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**3.07**	**46**	⇓*e*P	**Pn**	**07 47 30.0**	**-1.5**
YOGI				*e*S	**Sn**	**07 48 03.0**	**-4.3**
YOGI	**Yogyakarta**	**3.07**	**46**	⇑*i*P	**Pn**	**07 47 31.3**	**-0.2**
YOGI				*i* S	**Sn**	**07 48 12.7**	**+5.4**
BJII	**Banjamegara**	**3.08**	**32**	⇑*i*P	**Pn**	**07 47 30.0**	**-1.6**
BJII				*i* S	**Sn**	**07 48 08.2**	**+0.6**
PSI	**Prapat**	**15.61**	**324**	LR	LR	07 56 24.5	
	comp=Z,152nm,19.5s,baz=131,slow=38						
FITZ	**Fitzroy Crossi**	**18.86**	**117**	*e*P	**Pn**	**07 51 04.3**	**+0.9**
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.86**	**117**	P	**Pn**	**07 51 03.5**	**+0.1**
	0.6nm,0.3s,baz=302,slow=11,SNR=12						
FITZ				S	**Sn**	**07 54 18.3**	**-15**
	0.3nm,0.3s,baz=88,slow=21,SNR=4.5						
NWAO	**Narrogin (SRO)**	**24.36**	**161**	P	**P**	**07 51 60.0**	**-0.5**
	20nm,0.8s,mb4.6,baz=335,slow=9.0,SNR=6.0						
NWAO				LR	LR	08 01 58.0	
	comp=Z,146nm,20.2s,MS3.5,baz=281,slow=38						
NWAO	**Narrogin (SRO)**	**24.36**	**161**	P	**P**	**07 51 60.0**	**-0.5**
NWAO				LR	LR	08 01 58.0	
WRAB	**Tennant Creek**	**27.22**	**114**	*e*P	**P**	**07 52 26.5**	**+0.2**
	7.8nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**28.17**	**122**	P	**P**	**07 52 34.5**	**-0.3**
	3.6nm,0.9s,mb4.0,baz=300,slow=8.5,SNR=14						
ASAR				LR	LR	08 02 28.0	
	comp=Z,114nm,21.6s,MS3.4,baz=179,slow=34						
CHTO	**Chiang Mai**	**29.98**	**343**	*e*P	**P**	**07 52 50.0**	**-0.8**
	12nm,1.0s,mb4.6						
CHTO				*e*		07 53 00.4	
GYA	**Guiyang**	**36.23**	**358**	⇑*i*P	**P**	**07 53 45.0**	**-0.4**
GYA				AP	pP	07 53 49.8	-3.5
GYA				PP	PP	07 55 06.2	-1.8
GYA				S	**S**	**07 59 21.2**	**-2.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,3.9s						
GYA				LR	LR		
	comp=N,340nm,16.8s,MS4.3						
GYA				LR	LR		
	comp=E,340nm,17.0s,MS4.3						
GYA				LR	LR		
	comp=Z,290nm,16.9s,MS4.1						
STKA	**Stephens Creek**	**37.91**	**130**	⇓*i*P	**P**	**07 54 00.2**	**+0.6**
	comp=Z,5.4nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**37.91**	**130**	P	**P**	**07 54 00.5**	**+0.8**
	comp=Z,14nm,0.7s,mb4.8,baz=308,slow=6.7,SNR=22						
CD2	**Chengdu**	**40.85**	**354**	*e*P	**P**	**07 54 24.7**	**+0.5**
CD2				AP	pP	07 54 29.2	-3.0
CD2				PP	PP	07 56 02.7	+4.2
CD2				S	**S**	**08 00 36.3**	**+2.5**
CD2				SS	SS	08 03 33.7	-1.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
CD2				LR	LR		
	comp=E,60nm,9.6s						
CD2				LR	LR		
	comp=Z,50nm,12.0s,MS3.6						
JIRN	**Jiri**	**42.99**	**331**	*e*P	**P**	**07 54 41.8**	**+0.2**
	comp=Z,52nm,1.0s,mb5.2						
PKI	**Pulchoki**	**43.29**	**330**	*e*P	**P**	**07 54 45.5**	**+1.4**
GUN	**Gumba**	**43.35**	**331**	*e*P	**P**	**07 54 43.3**	**-1.2**
	comp=Z,35nm,0.7s,mb5.2						
DMN	**Daman**	**43.48**	**330**	*e*P	**P**	**07 54 46.4**	**+0.8**
	comp=Z,38nm,1.0s,mb5.1						
KKN	**Kakani**	**43.54**	**330**	*e*P	**P**	**07 54 46.0**	**-0.1**
	comp=Z,42nm,1.0s,mb5.1						
XAN	**Xi'an**	**43.77**	**1**	P	**P**	**07 54 47.5**	**-0.4**
GKN	**Gorkha**	**44.03**	**330**	*e*P	**P**	**07 54 48.7**	**-1.3**
KOLN	**Koldanda**	**44.37**	**328**	*e*P	**P**	**07 54 51.8**	**-0.9**
	comp=Z,32nm,0.8s,mb5.1						
LZH	**Lanzhou**	**45.98**	**355**	*e*P	**P**	**07 55 06.3**	**+0.8**
LZH				AP	pP	07 55 15.9	+2.3
LZH				XP	sP	07 55 18.3	+1.5
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.9						
GTA	**Gaotai**	**49.72**	**352**	*e*P	**P**	**07 55 36.3**	**+1.8**
GTA				AP	pP	07 55 41.5	-1.1
GTA				XP	sP	07 55 45.0	-0.8
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.5						
HHC	**Hu-ho-hao-te**	**50.66**	**3**	*e*P	**P**	**07 55 43.9**	**+2.2**
HHC				AP	pP	07 55 48.3	-1.5
HHC				XP	sP	07 55 50.9	-2.1
HHC				PCP	PcP	07 57 01.1	+2.3
HHC				PCS	PcS	08 00 55.8	-0.4
HHC				S	**S**	**08 03 01.2**	**+6.2**
HHC				XS	sS	08 03 05.4	-3.0
HHC				SCS	ScS	08 05 30.8	+0.1
HHC				SS	SS	08 06 28.6	-0.8
HHC				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,102nm,4.5s						
HHC				LR	LR		
	comp=N,152nm,15.7s,MS4.3						
HHC				LR	LR		
	comp=E,144nm,13.1s,MS4.3						
HHC				LR	LR		
	comp=Z,150nm,18.0s,MS4.0						
MJAR	**Matsushiro Arr**	**54.26**	**30**	LR	LR	08 21 23.7	
	comp=Z,117nm,18.3s,MS4.0,baz=235,slow=38						
WMQ	**Urumqi**	**56.65**	**342**	*e*P	**P**	**07 56 27.0**	**+1.5**
WMQ				PP	PP	07 58 35.0	+3.5
WMQ				S	**S**	**08 04 17.0**	**+1.0**
WMQ				SCS	ScS	08 06 12.0	-0.9
WMQ				SS	SS	08 08 05.0	+1.2
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,89nm,15.0s,MS4.2						
WMQ				LR	LR		
	comp=E,124nm,15.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,54nm,14.0s,MS3.8						
SONM	**Songino Array**	**57.56**	**359**	P	**P**	**07 56 31.4**	**-0.6**
	comp=Z,6.4nm,0.6s,mb4.9,baz=176,slow=7.6,SNR=38						
SONM				LR	LR	08 23 02.7	
	comp=Z,194nm,18.1s,MS4.2,baz=28,slow=38						
ULN	**Ulaanbaatar**	**57.58**	**359**	*e*P	**P**	**07 56 31.2**	**-0.9**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
ULN	**Ulaanbaatar**	**57.58**	**359**	*e*P	**P**	**07 56 31.2**	**-0.9**
	comp=Z,7.0nm,0.5s,mb5.0						
MDJ	**Mudanjiang**	**57.72**	**18**	P	**P**	**07 56 33.9**	**+0.9**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,59nm,4.3s						
WSAR	**Wadi Sarin**	**58.54**	**305**	pP	pP	07 56 49.3	+2.2
	comp=Z,8.2nm,0.8s,baz=104,slow=6.6,SNR=3.7						
ZAK	**Zakamensk**	**60.24**	**356**	*e*P	**P**	**07 56 46.2**	**-4.3**
AAK	**Ala-Archa**	**60.68**	**332**	⇑*e*P	**P**	**07 56 49.8**	**-3.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.5						
MKAR	**Makanchi Array**	**61.02**	**340**	P	**P**	**07 56 54.5**	**-1.3**
	comp=Z,2.3nm,0.5s,mb4.6,baz=148,slow=7.7,SNR=19						

MKAR				pP	pP	07 57 05.7	+1.5
	comp=Z,4.3nm,0.6s,baz=141,slow=7.7,SNR=10						
TLY	Talaya	61.51	357⇑	eP	P	07 56 59.4	+0.2
MAW	Mawson	64.86	197	eP	P	07 57 21.3	-0.1
	comp=Z,2.9nm,0.8s,mb4.4						
MAW	Mawson	64.86	197	P	P	07 57 21.2	-0.1
	comp=Z,3.2nm,0.7s,mb4.5,baz=45,slow=6.7,SNR=10						
KURK	Kurchatov	65.63	340	eP	P	07 57 25.2	-1.2
KURK				e*PP	pP	07 57 35.8	+1.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KURK	Kurchatov	65.63	340⇑	eP	P	07 57 27.9	+1.5
KURK	Kurchatov	65.63	340	eP	P	07 57 25.2	-1.2
	comp=Z,2.0nm,0.6s,mb4.3						
KURK				epP	pP	07 57 35.8	+1.1
ZAL	Zalesovo	66.65	345	LR	LR	08 31 00.4	
	comp=Z,71nm,19.0s,MS3.9,baz=84,slow=40						
BOD	Bodaibo	67.72	3	eP	P	07 57 38.1	-1.6
BOD				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.2						
QRN	Al-Qurain	69.61	306	eP	pP	07 58 01.6	+1.7
QRN				AMb	AMB	07 58 02.8	
	comp=Z,21nm,0.4s,mb5.4						
RDF	Al-Radifah	69.98	306	eP	pP	07 58 03.1	+0.9
RDF				AMb	AMB	07 58 05.2	
	comp=Z,12nm,0.5s,mb5.1						
UMR	Umm Al-Rimmam	70.11	306	eP	pP	07 58 04.7	+1.7
UMR				AMb	AMB	07 58 05.9	
	comp=Z,28nm,0.5s,mb5.5						
NAY	Al-Naaiem	70.36	306	eP	pP	07 58 06.0	+1.5
NAY				AMb	AMB	07 58 07.3	
	comp=Z,8.1nm,0.5s,mb4.9						
BRVK	Borovoye	70.56	337	eP	P	07 57 59.1	+1.8
BRVK				e	pP	07 58 07.3	+1.6
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
BRVK	Borovoye	70.56	337	eP	P	07 57 59.1	+1.8
	comp=Z,4.8nm,1.4s,mb4.2						
BRVK				e	pP	07 58 07.3	+1.6
RST	Umm Al-Ruwaisa	70.66	306	eP	pP	07 58 07.7	+1.3
RST				AMb	AMB	07 58 09.0	
	comp=Z,18nm,0.5s,mb5.3						
CHKZ	Chkalovo	70.91	337	eP	P	07 57 58.1	-1.3
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
CHKZ	Chkalovo	70.91	337	i P	P	07 57 58.3	-1.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	Chkalovo	70.91	337	eP	P	07 57 58.0	-1.4
	comp=Z,5.9nm,0.7s,mb4.6						
VNDA	Vanda	72.88	169	P	P	07 58 10.9	-0.3
	comp=Z,0.9nm,0.8s,mb3.7,baz=316,slow=6.8,SNR=4.0						
SYO	Syowa Base	73.10	201⇑	eP	P	07 58 11.8	-0.8
ARU	Arti	77.73	334⇓	eP	pP	07 58 48.8	+1.1
ARU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
ARU	Arti	77.73	334	eP	P	07 58 41.4	+2.2
	comp=Z,6.4nm,0.3s,mb5.0						
ARU				e	pP	07 58 48.9	+1.2
BOSA	Boshof	79.02	243	LR	LR	08 28 11.9	
	comp=Z,115nm,18.8s,MS4.2,baz=307,slow=32						
BRTR	Keskin Array B	84.58	312	P	P	07 59 14.4	-1.1
	comp=Z,0.8nm,0.8s,mb3.9,baz=106,slow=4.5,SNR=6.3						
BRTR				pP	pP	07 59 25.8	+1.6
	comp=Z,4.2nm,1.1s,baz=137,slow=6.1,SNR=6.9						
SNAA	Sanae	87.02	197	e	P	07 59 28.5	+0.8
SNAA				e		07 59 30.1	
SNAA	Sanae	87.02	197	eP	P	07 59 27.4	-0.2
	comp=Z,2.0nm,0.7s,mb4.5						
VNA1	Neumayer--Stat	89.05	197	e	P	07 59 38.3	+1.0
VNA1				e		07 59 40.2	
ARCES	ARCESS Array B	96.67	339	LR	LR	08 52 59.5	
	comp=Z,44nm,18.0s,MS4.0,baz=102,slow=41						
WMOK	Wichita Mounta	145.23	41	ePKPdf	PKPdf	08 06 20.1	+0.2
BDFB	Brasilia	145.23	223	PKPbc	PKPbc	08 06 20.8	+1.3
	comp=Z,3.1nm,0.5s,baz=120,slow=3.5,SNR=6.1						
JCT	Junction City	147.00	48	ePKPbc	PKPbc	08 06 25.6	+0.7
LVC	Limon Verde	147.49	185	PKPbc	PKPbc	08 06 28.0	+1.8
	comp=Z,2.9nm,0.8s,baz=300,slow=9.4,SNR=3.1						
WVT	Waverly	150.22	27	ePKPbc	PKPbc	08 06 33.2	0.0
PLAL	Pickwick Lake	151.07	28	ePKPbc	PKPbc	08 06 34.8	-0.4
SIV	San Ignacio	152.06	203	PKPbc	PKPbc	08 06 38.6	+1.1
	comp=Z,2.9nm,0.7s,baz=138,slow=3.6,SNR=20						
CPCT	Cooper Cave	152.16	22	ePKPab	PKPab	08 06 47.4	0.0

IDC 08 07:56:44.7±7.8, 823S×12734E, h287km±83km, mb3.2/2, mb1 3.4/4, mb1mx3.1/12, mbtmp4.0/4, Error ellipse: s-maj=95.3km s-min=24.5km az=57.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.95	189	P	Pn	07 59 02.0	-0.2
	0.6nm,0.3s,baz=8.3,slow=11,SNR=20						
FITZ				S	S	08 00 55.7	+1.4
	2.2nm,0.3s,baz=139,slow=23,SNR=9.0						
ASAR	Alice Springs	16.59	158	P	P	08 00 20.1	+0.3
	0.7nm,0.3s,baz=338,slow=10,SNR=46						
ASAR				S	S	08 03 19.8	+1.3
	0.6nm,0.3s,baz=326,slow=15,SNR=5.9						
STKA	Stephens Creek	27.01	153	P	P	08 02 00.7	0.0
	2.1nm,0.6s,baz=319,slow=11,SNR=4.2						
MKAR	Makanchi Array	67.84	328	P	P	08 07 12.4	+0.2
	0.3nm,0.4s,baz=119,slow=8.4,SNR=2.8						

*ROM **08** 08:25:59.9±0.9, 3982N×2002E, h10km, Md2.8/3, Ml3.2/3, Error ellipse: s-maj=13.7km s-min=4.4km az=152.0*
*NEIC **08** 08:26:00.1, 4022N×1955E, h15km, MD3.5(ATH), After ATH.*
*ATH **08** 08:26:00.1, 4022N×1955E, h15km±1km, MD3.5/4*
*CSEM **08** 08:26:02.7±0.2, 40.17N×1973E, h2km, MD3.5, Error ellipse: s-maj=3.7km s-min=3.2km az=56.0*
*ISCJB **08** 08:26:03.1±0.4, 40.15N±002×1979E±003, h2km, Error ellipse: s-maj=3.3km s-min=3.1km az=146.0*
*THE **08** 08:26:05.2, 40.15N×1987E, h5km, ML3.2*
*SKO **08** 08:26:06.0, 4026N×1996E, h0km*
ISC 08 08:26:03.5±0.5, 4016N±002×1977E±003, h1km±5km, n30, σ1°07/51, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.33	147	i Pg	Pg	08 26 06.5	-3.3
SRN				i Sg	Sg	08 26 15.4	+1.4
SRN	Sarande	0.33	147	ePg	Pg	08 26 06.5	-3.3
SRN				i Sg	Sg	08 26 15.4	+1.4
KEK	Kerkira	0.44	177	ePN	Pg	08 26 10.9	-1.1
KEK				eSN	Sg	08 26 18.4	+0.6
LSK	Leskovik	0.64	90	i Pg	Pg	08 26 14.5	-1.2
LSK				i Sg	Sg	08 26 24.8	+0.9
LSK	Leskovik	0.64	90	ePg	Pg	08 26 14.5	-1.2
LSK				i Sg	Sg	08 26 24.8	+0.9
IGT	Igoumenitsa	0.76	145	ePg	Pg	08 26 17.9	-0.1
IGT				eSg	Sg	08 26 29.6	+1.7
IGT	Igoumenitsa	0.76	145	ePg	Pg	08 26 17.9	-0.1
IGT				eSg	Sg	08 26 29.5	+1.6
JAN	Janina	0.97	121	ePN	Pg	08 26 21.7	-0.4
SCTE	Santa Cesarea	1.00	266	Pn	Pg	08 26 22.6	-0.1
SCTE				Sn	Sg	08 26 38.8	+3.1
	353nm,0.3s						
MEV	Metsovon	1.18	108	ePg	Pg	08 26 25.9	-0.2
MEV				eSg	Sg	08 26 42.0	+0.6
TIR	Tirane	1.19	3	ePg	Pg	08 26 27.8	+1.5
TIR				eSg	Sg	08 26 45.5	+3.7
TIR	Tirane	1.19	3	Pn	Pn	08 26 27.8	+0.5
	158nm,0.5s						
TIR				eSg	Sg	08 26 45.5	+3.7
OHR	Ohrid	1.23	39	ePn	Pn	08 26 28.0	+0.2
OHR				eSn	Sn	08 26 40.0	-5.1
OHR	Ohrid	1.23	39	ePg	Pg	08 26 27.8	+0.7
OHR	Ohrid	1.23	39	ePn	Pn	08 26 28.0	+0.2
OHR				eSn	Sn	08 26 40.0	-5.1
LCI	Lecce	1.28	278	Pn	Pn	08 26 27.7	-0.8
	56nm,0.2s						
FNA	Florina	1.38	62	ePg	Pg	08 26 28.8	-1.1
FNA				eSg	Sg	08 26 48.6	+1.0
BIA	Bitola	1.46	53	ePg	Pg	08 26 30.0	-1.6
BIA				eSg	Sg	08 26 49.8	-0.7
BIA	Bitola	1.46	53	ePn	Pn	08 26 29.9	-1.1
BIA	Bitola	1.46	53	ePn	Pn	08 26 29.8	-1.2
BIA	Bitola	1.46	53	ePg	Pg	08 26 30.0	-1.5
BIA				eSg	Sg	08 26 49.8	-0.7
KZN	Kozani	1.54	84	ePN	Pn	08 26 31.5	-0.5
LKD	Levkas	1.60	155	ePg	Pg	08 26 32.2	-1.9
LKD				eSg	Sg	08 26 54.4	-0.5
EVR	Evrytania	2.00	128	ePN	Pn	08 26 38.6	+0.2
EVR				eSN	Sn	08 27 05.9	+1.8
VLS	Valsamata	2.08	162	ePB	Pn	08 26 37.8	-1.6
NOCI	Noci	2.16	288	Pn	Pn	08 26 41.3	+0.7
	183nm,0.7s						
AGG	Agios Georgios	2.28	119	ePn	Pn	08 26 42.9	+0.7
AGG				eSn	Sn	08 27 10.6	-0.3
VAY	Valandovo	2.42	60	ePn	Pn	08 26 45.1	+0.9
VAY				eSg	Sb	08 27 18.0	-0.3
VAY	Valandovo	2.42	60	ePn	Pn	08 26 45.1	+0.9
VAY				eSg	Sb	08 27 17.9	-0.3
AMUR	Altamura	2.53	288	Pn	Pn	08 26 44.9	-0.7

MAN 08 09:22:39.4, 1638N×12043E, h11km, mb2.2, ML3.9, MS0.6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.14	88⇑	i P	Pg	09 22 44.4	+1.7
BCPH				i S	Sg	09 22 49.1	+4.1
BOLP	Bolinao	0.50	271	eP	Pg	09 22 49.6	+0.4
BOLP				eS	Sg	09 22 59.0	+3.3
BALP	Baler	1.27	120	eP	Pn	09 23 01.9	-1.1
CAUP	Cauayan	1.45	67	eP	Pn	09 23 04.6	-0.8

IDC 08 09:26:51.7±1.3, 2381S×17615W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.9/10, mbtmp3.9/4, MS3.8/3, Ms1 3.8/3, ms1mx3.3/18, Error ellipse: s-maj=61.3km s-min=31.8km az=143.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	25.60	81	eLR	LR	09 38 50.4	
	178nm,26.5s						
PPT	Papeete	25.60	81	LR	LR	09 40 21.7	
	comp=Z,257nm,18.9s,baz=236,slow=32						
STKA	Stephens Creek	38.03	248	P	P	09 34 11.8	+0.3
	2.7nm,1.0s,baz=113,slow=7.7,SNR=2.4						
STKA				LR	LR	09 47 46.1	
	comp=Z,145nm,18.9s,baz=28,slow=33						
ASAR	Alice Springs	45.52	260	P	P	09 35 12.9	0.0
	1.2nm,0.7s,baz=90,slow=8.3,SNR=10						
MAW	Mawson	79.04	200	P	P	09 38 57.4	-0.2
	1.0nm,0.5s,baz=113,slow=7.7,SNR=5.1						
NVAR	Mina Array Bea	82.28	42	P	P	09 39 15.1	+0.1
	0.3nm,0.5s,baz=234,slow=11,SNR=3.8						
PDAR	Pinedale Array	90.21	43	LR	LR	10 11 05.2	
	comp=Z,33nm,19.8s,baz=76,slow=29						
AKASG	Malin Array Be	146.73	330	PKPbc	PKPbc	09 46 35.0	-0.5
	1.0nm,0.5s,baz=42,slow=3.8,SNR=10						
BRTR	Keskin Array B	150.29	309	PKPbc	PKPbc	09 46 44.8	0.0
	1.0nm,0.8s,baz=86,slow=2.8,SNR=5.0						

*NEIC **08** 09:38:49.9, 4001N×1968E, h25km, MD3.5(ATH), After ATH.*
*ATH **08** 09:38:49.9, 4001N×1968E, h25km±2km, MD3.5/4*
*SKO **08** 09:38:51.6, 4009N×1986E, h0km*
CSEM 08 09:38:49.1±0.3, 4016N×1980E, h3km±1km, MD3.5, Error ellipse: s-maj=5.6km s-min=4.1km az=129.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.21	49	i Pg	Pg	09 38 53.6	+0.4
TPE				i Sg	Sg	09 38 58.0	+2.0
SRN	Sarande	0.32	151	i Pg	Pg	09 38 55.3	+0.1
SRN				i Sg	Sg	09 39 01.2	+1.9
KEK	Kerkira	0.44	180	ePB	Pg	09 38 57.2	-0.4
KEK				eSB	Sg	09 39 02.8	-0.5
LSK	Leskovik	0.61	90	i Pg	Pg	09 39 00.6	-0.3
LSK				i Sg	Sg	09 39 11.7	+2.8
JAN	Janina	0.95	121	ePN	Pg	09 39 08.1	+0.8
JAN				eSN	Sg	09 39 21.9	+2.2
OHR	Ohrid	1.22	38	i Pg	Pg	09 39 14.6	+2.1
OHR				i Sg	Sg	09 39 31.5	+3.1
OHR	Ohrid	1.22	38	i Pg	Pg	09 39 14.6	+2.1
OHR				i Sg	Sg	09 39 31.4	+3.0
LCI	Lecce	1.30	278	Pn	Pn	09 39 14.7	+0.5
BIA	Bitola	1.45	53	i Pg	Pn	09 39 16.2	0.0
BIA				i Sg	Sg	09 39 37.2	+1.6
BIA	Bitola	1.45	53	i Pg	Pn	09 39 16.1	-0.1
BIA				i Sg	Sg	09 39 37.2	+1.6
KZN	Kozani	1.52	84	ePN	Pn	09 39 19.2	+2.0
KZN				eSN	Sn	09 39 40.8	+3.4
EVR	Evrytania	1.99	128	ePN	Pn	09 39 24.5	+0.9
VLS	Valsamata	2.07	162	ePB	Pn	09 39 23.6	-1.2
VAY	Valandovo	2.41	60	i Pn	Pn	09 39 32.3	+2.9

*IDC **08** 09:45:08.7±1.1, 034S×12330E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.8/15, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=71.4km s-min=21.3km az=77.0*
*ISCJB **08** 09:45:11.8±0.9, 04S±0.1×1232E±04, h33km, mb3.9/4, Error ellipse: s-maj=54.0km s-min=14.1km az=152.9*
ISC 08 09:45:14.2±0.9, 04S±01×1233E±04, h35km, n6, σ0°98/6, mb3.9/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	17.77	173	P	Pn	09 49 17.6	-1.1
	0.1nm,0.3s,baz=360,slow=19,SNR=2.9						
WB2	Warramunga Arr	22.27	151	eP	P	09 50 08.4	+0.2
ASAR	Alice Springs	25.35	157	P	P	09 50 38.9	+1.0
	2.0nm,0.5s,mb3.9,baz=334,slow=8.9,SNR=30						
ASAR				PcP	PcP	09 54 08.7	-1.1
	0.6nm,0.5s,baz=344,slow=2.2,SNR=7.6						
MJAR	Matsushiro Arr	39.27	19	P	P	09 52 38.8	-0.6
	1.8nm,0.7s,mb3.9,baz=189,slow=9.2,SNR=5.0						
SONM	Songino Array	50.21	345	P	P	09 54 06.4	-0.2
	0.5nm,0.6s,mb3.7,baz=158,slow=9.1,SNR=4.2						
MKAR	Makanchi Array	59.06	328	P	P	09 55 11.3	+0.5
	0.3nm,0.3s,mb3.8,baz=139,slow=7.6,SNR=3.7						

MOS 08 09:59:03.3±1.6, 4320N×4530E, h31km, mb4.0/1, 1C-1D, Error ellipse: s-maj=22.4km s-min=13.8km az=178.4, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNJR	Sundja	0.38	250	ePG	Pb	09 59 13.1	+1.2
SNJR				i S	Sb	09 59 20.2	+2.3
VLKR	Vladikavkaz	0.48	252⇑	i PG	Pb	09 59 14.6	+1.1
VLKR				i S	Sb	09 59 22.8	+2.4
BTKR	Batakoyurt	0.58	288	ePG	Pb	09 59 16.9	+1.8
BTKR				eS	Sb	09 59 26.7	+3.6
TRKR	Terskaya	0.67	322	ePG	Pb	09 59 18.5	+2.0
TRKR				eS	Sb	09 59 29.6	+4.1
ARNR	Ardon	0.75	270	ePG	Pn	09 59 19.2	+1.5
ARNR				eS	Sb	09 59 30.8	+3.1
KMSR	Komsomolskaya	0.76	283	ePG	Pn	09 59 19.5	+1.7
KMSR				eS	Sb	09 59 31.3	+3.3
LACR	Lac	0.83	243	ePG	Pn	09 59 20.1	+1.3
LACR				eS	Sn	09 59 32.3	+2.4
KORR	Kora	0.91	263⇓	i PG	Pn	09 59 21.7	+1.8
KORR				i S	Sn	09 59 35.1	+3.1
PRTR	Priterechnaya	0.92	307	ePG	Pn	09 59 22.5	+2.4
PRTR				eS	Sn	09 59 36.5	+4.2
ZEI	Tsey	1.11	248	ePG	Pn	09 59 25.3	+2.5
ZEI				i		09 59 40.3	

IDC 08 09:59:20.7±18.0, 1739S×17825W, h491km±171km, mb3.6/4, mb1 3.7/4, mb1mx3.2/12, mbtmp4.5/4, Error ellipse: s-maj=120.6km s-min=47.7km az=99.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.68	260	P	P	10 05 20.1	+0.2
	7.6nm,1.0s,baz=97,slow=17,SNR=2.7						
STKA	Stephens Creek	39.01	241	P	P	10 06 04.5	+0.5
	3.1nm,0.6s,baz=109,slow=7.6,SNR=8.3						
WB2	Warramunga Arr	44.86	259	eP	P	10 06 49.8	-0.5
ASAR	Alice Springs	45.08	254	P	P	10 06 52.0	0.0
	20nm,0.5s,baz=88,slow=8.3,SNR=331						
ASPA	Alice Springs	45.08	254	eP	P	10 06 51.9	-0.1
FITZ	Fitzroy Crossi	53.26	260	P	P	10 07 52.8	+0.2
	baz=108,slow=19						
MJAR	Matsushiro Arr	67.58	323	P	P	10 09 27.8	+0.2
	1.9nm,0.7s,baz=134,slow=10,SNR=4.1						
BRTR	Keskin Array B	144.52	315	PKP	PKPdf	10 18 00.1	-0.5
	0.7nm,0.5s,baz=34,slow=4.2,SNR=5.5						
MMAI	Mount Meron Ar	145.98	304	PKPbc	PKPbc	10 18 05.6	+0.7
	0.3nm,0.2s,baz=46,slow=3.6,SNR=3.6						
GERES	GERESS Array B	147.15	345	PKPbc	PKPbc	10 18 07.4	-0.7
	0.6nm,0.4s,baz=8.5,slow=2.7,SNR=5.9						
DAVOX	Davos	149.93	349	PKPbc	PKPbc	10 18 14.7	-0.3
	1.9nm,0.4s,baz=186,slow=2.3,SNR=3.8						

*IDC **08** 10:07:01.7±1.3, 108N×9699E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/19, Error ellipse: s-maj=43.4km s-min=19.7km az=55.0*
*ISCJB **08** 10:07:07.7±4.4, 12N±02×973E±02, h53km±35km, mb4.3/14, Error ellipse: s-maj=49.4km s-min=16.2km az=106.1*
*BJI **08** 10:07:08.5, 084N×9707E, h90km, mB4.9, mb4.8, Ms4.1, Msz3.9*
*NEIC **08** 10:07:13.2±4.2, 137N×9755E, h80km±33km, mb4.6/4, Error ellipse: s-maj=52.3km s-min=12.0km az=53.0*
ISC 08 10:07:10.8±4.2, 13N±02×974E±03, h59km±34km, n21, σ1°08/21, mb4.3/14, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.16	45	Pn	Pn	10 07 43.8	-0.7
	8.8nm,0.3s,baz=262,slow=8.0,SNR=24						
PSI				LR	LR	10 08 33.0	
	comp=Z,264nm,18.4s,baz=286,slow=36						
TSI	Tuntungan	2.52	28⇑	i P	Pn	10 07 59.1	+10
KULM	Kulim	5.16	39	ePn	Pn	10 08 25.2	-0.2
KMI	Kunming	24.28	12	P	P	10 12 23.6	+1.1
KMI				AMB	AMB		
	comp=Z,16nm,1.4s,mb4.3						
KMI				LR	LR		
	comp=N,253nm,11.7s						
KMI				LR	LR		
	comp=E,141nm,13.0s						
KMI				LR	LR		
	comp=Z,227nm,11.7s						
PKI	Pulchoki	28.57	337	eP	P	10 13 03.3	+2.1
GUN	Gumba	28.70	338	eP	P	10 13 02.9	+0.6
	comp=Z,27nm,0.7s,mb5.1						
DMN	Daman	28.73	337	eP	P	10 13 04.5	+2.0
KKN	Kakani	28.82	337	eP	P	10 13 04.3	+0.9
	comp=Z,14nm,0.9s,mb4.7						
GKN	Gorkha	29.26	336	eP	P	10 13 07.5	+0.2
KOLN	Koldanda	29.49	335	eP	P	10 13 09.9	+0.6
	comp=Z,11nm,0.7s,mb4.7						
GTA	Gaotai	38.04	3	eP	P	10 14 23.8	+0.5
GTA				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.5						
ASAR	Alice Springs	43.27	127	P	P	10 15 06.8	+0.2
	comp=Z,0.6nm,0.4s,mb3.6,baz=298,slow=7.5,SNR=14						
SONM	Songino Array	47.05	8	P	P	10 15 36.8	+0.4
	comp=Z,1.7nm,0.7s,mb4.1,baz=190,slow=9.1,SNR=10						
MKAR	Makanchi Array	47.23	346	P	P	10 15 37.3	-0.5
	comp=Z,1.8nm,0.6s,mb4.2,baz=158,slow=8.1,SNR=10						
STKA	Stephens Creek	53.25	132	P	P	10 16 24.2	+0.9
	comp=Z,3.4nm,1.0s,mb4.2,baz=330,slow=16,SNR=3.9						
ZAL	Zalesovo	53.52	351	P	P	10 16 24.8	-0.5
	comp=Z,2.8nm,0.7s,mb4.3,baz=315,slow=6.8,SNR=12						
BVAR	Borovoye Array	56.26	341	P	P	10 16 43.9	-1.2
	comp=Z,1.7nm,0.8s,mb4.1,baz=126,slow=7.5,SNR=8.1						
CHKZ	Chkalovo	56.73	341	eP	P	10 16 47.0	-1.5
	comp=Z,3.2nm,0.8s,mb4.4						
AKTK	Aktyubinsk	59.27	332	P	P	10 17 04.7	-1.6
AKTO	Aktyubinsk	59.27	332	P	P	10 17 04.7	-1.6
	comp=Z,0.8nm,0.5s,mb4.0,baz=90,slow=8.1,SNR=3.0						
ARCES	ARCESS Array B	82.55	340	P	P	10 19 25.8	-1.5
	comp=Z,0.8nm,0.6s,mb3.9,baz=90,slow=2.9,SNR=5.7						

*ISCJB **08** 10:11:29.8±0.3, 3926N±002×2243E±003, h4km, Error ellipse: s-maj=3.1km s-min=2.7km az=81.8*
*ATH **08** 10:11:30.4, 3921N×2240E, h4km, MD3.5/8*
*NEIC **08** 10:11:30.4, 3921N×2240E, h4km, MD3.5(ATH), After ATH.*
*CSEM **08** 10:11:30.4±0.1, 3926N×2240E, h2km, ML3.1, Error ellipse: s-maj=2.3km s-min=1.7km az=172.0*
*THE **08** 10:11:30.6, 3926N×2245E, h0km, ML3.1*
ISC 08 10:11:30.4±0.4, 3926N±002×2244E±003, h6km±4km, n33, σ0°99/51, 2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGG	Agios Georgios	0.25	199	ePg	Pg	10 11 35.2	-0.1
AGG				eSg	Sg	10 11 40.2	+1.7
EVR	Evrytania	0.59	236	ePG	Pg	10 11 40.7	-1.2
EVR				eSG	Sg	10 11 48.5	-1.1
XOR	Xorichti	0.60	79	ePg	Pg	10 11 42.1	+0.2
NEO	Neokhori	0.61	85⇓	i PB	Pb	10 11 43.0	-0.5
NEO				eSG	Sg	10 11 52.1	+1.9
LKR	Lokris	0.75	144	ePG	Pg	10 11 43.9	-0.9
LIT	Litokhoron	0.85	3	ePg	Pg	10 11 45.7	-0.9
LIT				eSg	Sg	10 12 00.1	+2.4
MEV	Metsovon	1.07	300	ePg	Pg	10 11 49.9	-1.1
MEV				eSg	Sg	10 12 05.4	+0.5
AOS	Alonnisos	1.12	94	ePg	Pg	10 11 51.5	-0.5
AOS				eSg	Sg	10 12 07.7	+1.0
KZN	Kozani	1.17	334	ePB	Pb	10 11 52.5	-0.5
KZN				eSB	Sb	10 12 10.1	+1.7
PAIG	Paliouri	1.17	55	ePg	Pg	10 11 52.1	-0.8
JAN	Janina	1.29	289	ePN	Pn	10 11 54.9	0.0
PLG	Polygyros	1.36	35	ePB	Pb	10 11 55.6	-0.7
RLS	Riolos of Patr	1.42	213	ePN	Pn	10 11 56.3	-0.3
HORT	Hortiatis	1.44	21	ePg	Pg	10 11 56.8	-1.1
HORT				eSg	Sg	10 12 18.2	+1.6
THE	Thessaloniki	1.44	16	ePg	Pg	10 11 56.4	-1.5
LKD	Levkas	1.50	249	ePg	Pg	10 11 59.0	-0.1
LKD				eSg	Sg	10 12 19.6	+1.2
OUR	Ouranopolis	1.61	47	ePg	Pn	10 11 58.7	-0.6
GRG	Griva	1.70	359	ePb	Pn	10 12 00.8	+0.3
SOH	Sokhos	1.72	24	ePb	Pn	10 12 00.5	-0.3
SOH				eSb	Sb	10 12 24.0	-0.1
FNA	Florina	1.73	332	ePb	Pn	10 12 00.8	-0.2
FNA				eSb	Sg	10 12 26.0	0.0
VLS	Valsamata	1.80	234⇓	i PB	Pb	10 12 04.2	+0.4
KNT	Kendrikon	1.94	10	ePb	Pn	10 12 03.9	+0.1
BIA	Bitola	1.96	335	ePb	Pb	10 12 04.8	-1.6
BIA				eSb	Sb	10 12 31.9	+0.9
BIA	Bitola	1.96	335	ePn	Pn	10 12 04.7	+0.6
BIA				eSn	Sn	10 12 31.5	+2.6
BIA	Bitola	1.96	335	ePn	Pn	10 12 04.6	+0.5
BIA				eSn	Sn	10 12 31.5	+2.6
VAY	Valandovo	2.07	3	ePn	Pn	10 12 05.6	0.0
VAY	Valandovo	2.07	3	ePn	Pn	10 12 04.5	-1.1
VAY				eSn	Sn	10 12 30.6	-1.1
VAY	Valandovo	2.07	3	ePn	Pn	10 12 05.6	0.0
VAY				eSn	Sn	10 12 30.5	-1.1
KEK	Kerkira	2.09	283	ePG	Pb	10 12 08.8	+0.1
ITM	Ithomi	2.11	191	ePN	Pn	10 12 07.7	+1.5
OHR	Ohrid	2.24	326	ePn	Pn	10 12 08.4	+0.4
OHR				eSn	Sn	10 12 35.0	-0.9
OHR	Ohrid	2.24	326	ePn	Pn	10 12 08.4	+0.4
OHR				eSn	Sn	10 12 34.9	-1.0
MMB	Musomiste	2.53	23	ePn	Pn	10 12 11.5	-0.5

*NEIC **08** 10:30:19.5, 3991N×1968E, h41km, MG3.5(ATH), After ATH.*
*ATH **08** 10:30:19.5, 3991N×1968E, h41km±1km, MD3.5/4*
*ISCJB **08** 10:30:19.3±0.7, 4009N±002×1973E±005, h10km, Error ellipse: s-maj=5.3km s-min=3.2km az=20.9*
*CSEM **08** 10:30:20.4±0.1, 40.13N×1992E, h15km, MD3.5, Error ellipse: s-maj=2.7km s-min=1.8km az=99.0*
*SKO **08** 10:30:20.5, 40.15N×1986E, h0km*
*THE **08** 10:30:20.1, 4009N×1970E, h0km, ML3.2*
ISC 08 10:30:19.7±0.7, 4009N±002×1973E±005, h10km, n27, σ1°15/46, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.30	135	i Pg	Pg	10 30 25.2	-0.4
SRN				i Sg	Sg	10 30 31.1	+1.5
TPE	Tepelena	0.30	46	i Pg	Pg	10 30 23.7	-2.0
TPE				i Sg	Sg	10 30 28.6	-1.2

KEK	**Kerkira**	**0.38**	**172**	*e*P	**Pg**	**10 30 27.1**	**-0.1**
KEK				*e*S	**Sg**	**10 30 33.2**	**+1.0**
LSK	**Leskovik**	**0.67**	**84**	*i* Pg	**Pg**	**10 30 30.5**	**-2.2**
LSK				*i* Sg	**Sg**	**10 30 41.3**	**-0.2**
IGT	**Igoumenitsa**	**0.72**	**140**	*e*Pg	**Pg**	**10 30 33.4**	**-0.3**
JAN	**Janina**	**0.97**	**116**	*e*P	**Pg**	**10 30 37.5**	**-0.8**
JAN				*e*S	**Sg**	**10 30 50.2**	**-0.7**
MEV	**Metsovon**	**1.19**	**104**	*e*Pg	**Pg**	**10 30 42.4**	**-0.2**
MEV				*e*Sg	**Sg**	**10 31 00.5**	**+2.3**
LCI	**Lecce**	**1.26**	**282**	Pn	**Pn**	**10 30 44.9**	**+1.5**
OHR	**Ohrid**	**1.31**	**38**	*e*Pg	**Pg**	**10 30 44.7**	**-0.1**
OHR				*e*Sg	**Sg**	**10 31 05.2**	**+3.4**
OHR	**Ohrid**	**1.31**	**38**	*e*Pn	**Pn**	**10 30 44.7**	**+0.7**
OHR				*e*Sn	**Sn**	**10 31 00.2**	**-1.4**
OHR	**Ohrid**	**1.31**	**38**	*e*Pn	**Pn**	**10 30 44.6**	**+0.6**
OHR				*e*Sn	**Sn**	**10 31 00.1**	**-1.4**
FNA	**Florina**	**1.44**	**61**	*e*Pg	**Pn**	**10 30 45.6**	**-0.2**
FNA				*e*Sg	**Sg**	**10 31 08.2**	**+2.3**
BIA	**Bitola**	**1.53**	**52**	*e*Pg	**Pn**	**10 30 47.0**	**0.0**
BIA				*e*Sg	**Sg**	**10 31 09.3**	**+0.4**
BIA	**Bitola**	**1.53**	**52**	*e*Pn	**Pn**	**10 30 46.6**	**-0.5**
BIA	**Bitola**	**1.53**	**52**	*e*Pn	**Pn**	**10 30 46.5**	**-0.6**
BIA	**Bitola**	**1.53**	**52**	*e*Pg	**Pn**	**10 30 47.0**	**-0.1**
BIA				*e*Sg	**Sg**	**10 31 09.3**	**+0.3**
LKD	**Levkas**	**1.55**	**152**	*e*Pg	**Pg**	**10 30 49.1**	**-0.4**
LKD				*e*Sg	**Sg**	**10 31 09.8**	**+0.1**
KZN	**Kozani**	**1.58**	**81**	*e*P	**Pn**	**10 30 47.7**	**-0.1**
EVR	**Evrytania**	**1.99**	**125**	*e*P	**Pn**	**10 30 50.7**	**-2.7**
VLS	**Valsamata**	**2.02**	**160**	*e*P	**Pn**	**10 30 51.0**	**-2.8**
LIT	**Litokhoron**	**2.12**	**89**	*e*Pn	**Pn**	**10 30 56.3**	**+1.1**
LIT				*e*Sn	**Sb**	**10 31 24.9**	**+0.3**
GRG	**Griva**	**2.22**	**66**	*e*Pn	**Pn**	**10 30 58.4**	**+1.9**
AGG	**Agios Georgios**	**2.28**	**117**	*e*Pn	**Pb**	**10 31 00.2**	**-0.7**
AGG				*e*Sn	**Sb**	**10 31 28.8**	**-0.3**
STIP	**Stip**	**2.46**	**48**	*e*Pn	**Pn**	**10 31 00.6**	**+0.7**
STIP				*e*Sn	**Sn**	**10 31 29.9**	**-0.1**
STIP	**Stip**	**2.46**	**48**	*e*Pn	**Pn**	**10 31 00.5**	**+0.6**
STIP				*e*Sn	**Sn**	**10 31 29.8**	**-0.1**
VAY	**Valandovo**	**2.49**	**59**	*e*Pn	**Pn**	**10 31 01.4**	**+1.1**
VAY				*e*Sn	**Sn**	**10 31 30.4**	**-0.2**
VAY	**Valandovo**	**2.49**	**59**	*e*Pn	**Pn**	**10 31 01.3**	**+1.1**
VAY				*e*Sn	**Sn**	**10 31 30.4**	**-0.2**

*CSEM **08** 10:49:13.1, 1205N×4388E, h8km, ML3.7, After DHMR*

DHMR 08 10:49:13.1±1.3**, 1205N×4388E, h8**km±9km**, ML3.7, 4C-3D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.19**	**11**	⇑*e*P	Pb	10 49 36.0	+0.1
TRBA				*i* S	Sg	10 49 52.0	+0.4
ADEN	**Aden**	**1.29**	**56**	⇓*i*P	Pn	10 49 37.1	-0.3
ADEN				*i* S	Sb	10 49 55.7	+1.3
ADEN				AML	AML	10 50 02.7	
	comp=E,2µm,0.8s						
ADEN	**Aden**	**1.29**	**56**	⇓*i*P	Pn	10 49 37.2	-0.2
ADEN				*i* S	Sb	10 49 55.7	+1.3
	comp=E,752nm,0.8s						
UDYN	**Al 'Udayn**	**1.91**	**3**	⇑*e*P	Pn	10 49 46.5	+0.7
UDYN				*i* S	Sn	10 50 14.1	+4.1
LBOS		**2.25**	**36**	*i* P	Pn	10 49 52.3	+1.8
LBOS				*i* S	Sn	10 50 22.6	+4.2
BDHA	**Al Bayda'**	**2.52**	**41**	⇓*i*P	Pn	10 49 57.0	+2.7
BDHA				*i* S	Sn	10 50 31.2	+6.0
DHBB	**Dhamar BB**	**2.55**	**11**	*i* P	Pn	10 49 57.3	+2.6
DHBB				*i* S	Sn	10 50 32.2	+6.3
HAJJ	**Hajjah**	**3.64**	**356**	⇑*i*P	Pn	10 50 11.9	+2.3
HAJJ				*i* S	Sn	10 50 59.0	+6.3
HAJJ				AML	AML	10 51 12.5	
	comp=Z,240nm,0.8s						
HAJJ	**Hajjah**	**3.64**	**356**	⇑*i*P	Pn	10 50 11.9	+2.3
HAJJ				*i* S	Sn	10 50 59.0	+6.3
	comp=Z,120nm,0.8s						

*IDC **08** 10:51:56.2±54.0, 4249N×14667E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.5/19, mbtmp3.8/3, Error ellipse: s-maj=1228.0km s-min=77.5km az=157.0*

*ISCJB **08** 10:52:16.6±0.9, 4331N±008×14549E±009, h112km±5km, mb3.6/3, Error ellipse: s-maj=13.4km s-min=10.2km az=125.2*

*JMA **08** 10:52:17.9±0.1, 4331N×14550E, h105km±1km, M3.2*

ISC 08 10:52:17.4±0.9**, 4330N**±008×**14550E**±009**, h108**km±5km**, n12,** σ0ˢ**41**/21**, mb3.6**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.19**	**69**	P	**Pn**	**10 52 32.6**	**+0.1**
NEM2				*e*S	**Sn**	**10 52 43.5**	**-0.3**
JNK	**Nakash**	**0.64**	**297**	P	**Pn**	**10 52 35.1**	**+0.1**
JNK				*e*S	**Sn**	**10 52 47.8**	**-0.5**
JAK	**Akkeshi**	**0.66**	**243**	P	**Pn**	**10 52 35.5**	**+0.3**
JAK				*e*S	**Sn**	**10 52 48.7**	**+0.1**
JRA	**Rausu**	**0.70**	**337**	P	**Pn**	**10 52 35.7**	**+0.2**
JRA				*e*S	**Sn**	**10 52 49.2**	**+0.1**
JAR	**Ashorobuto**	**1.26**	**271**	P	**Pn**	**10 52 41.7**	**+0.4**
JAR				*e*S	**Sn**	**10 52 59.5**	**+0.1**
JOB	**Onbets**	**1.28**	**253**	P	**Pn**	**10 52 41.9**	**+0.4**
JOB				*e*S	**Sn**	**10 52 59.8**	**0.0**
JTKR	**Abashiri--Toko**	**1.34**	**301**	P	**Pn**	**10 52 42.3**	**+0.1**
JTKR				*e*S	**Sn**	**10 53 00.8**	**-0.1**
JMP	**Maruseppu**	**1.71**	**295**	P	**Pn**	**10 52 46.9**	**+0.3**
JMP				*e*S	**Sn**	**10 53 08.9**	**0.0**
JCH	**Churui**	**1.71**	**247**	P	**Pn**	**10 52 46.9**	**+0.2**
JCH				*e*S	**Sn**	**10 53 08.0**	**-0.9**
SONM	**Songino Array**	**27.54**	**293**	P	**P**	**10 57 54.5**	**+0.5**
	1.3nm,0.7s,mb3.6,baz=81,slow=8.7,SNR=9.2						
MKAR	**Makanchi Array**	**43.73**	**297**	P	**P**	**11 00 12.1**	**+0.2**
	0.6nm,0.5s,mb3.5,baz=90,slow=9.5,SNR=3.1						
FINES	**FINESS Array B**	**64.73**	**332**	P	**P**	**11 02 42.9**	**-1.2**
	0.7nm,0.6s,mb3.7,baz=38,slow=7.2,SNR=6.2						

*BJI **08** 11:13:57.1, 3747N×7421E, h10km, mB4.4, mb4.0, ML4.1, Ms3.7, Msz3.5*

*IDC **08** 11:13:58.6±1.9, 3723N×7454E, h0km, mb3.8/6, mb1 4.0/9, mb1mx3.8/21, mbtmp3.8/9, ML3.8/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/24, Error ellipse: s-maj=42.0km s-min=22.4km az=152.0*

*ISCJB **08** 11:13:58.8±0.5, 3719N±004×7445E±007, h10km, mb3.9/9, MS3.4/1, Error ellipse: s-maj=8.7km s-min=4.6km az=125.7*

*NEIC **08** 11:14:00.5±0.7, 3727N×7451E, h10km, mb3.7/2, Error ellipse: s-maj=17.0km s-min=6.3km az=63.0*

*MOS **08** 11:14:02.4±1.9, 3727N×7455E, h33km, mb4.7/4, Error ellipse: s-maj=15.6km s-min=7.8km az=89.2*

*NNC **08** 11:14:06.1±2.1, 3776N×7407E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=16.1km s-min=14.3km az=15.0*

ISC 08 11:14:01.6±0.4**, 3728N**±003×**7454E**±007**, h10**km**, n58,** σ1ˢ**54**/66**, mb3.9**/9**, 14C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.50**	**26**	⇑*i*PG	**Pn**	**11 14 43.9**	**+1.5**
KSH				S	**Sn**	**11 15 14.8**	**+1.8**
KSH				Smax			
	comp=N,1µm,0.4s						
KSH				Smax			
	comp=E,2µm,0.7s						
CEP	**Cherat**	**4.06**	**213**	⇑P	**Pn**	**11 15 09.4**	**+5.7**
KZA	**Kyzart**	**4.83**	**6**	P	**Pn**	**11 15 15.4**	**+1.1**
	SNR=17						
DLH	**Dalhousie**	**4.87**	**166**	*e*P	**Pn**	**11 15 18.0**	**+3.2**
DLH				*e*S	**Sn**	**11 16 17.0**	**+5.8**
AML	**Almayashu**	**4.89**	**353**	P	**Pn**	**11 15 16.2**	**+1.0**
	SNR=55						
UCH	**Uchtor**	**4.95**	**360**	P	**Pn**	**11 15 17.3**	**+1.4**
	SNR=61						
THW	**Thamme Wali**	**5.03**	**208**	P	**Pn**	**11 15 21.4**	**+4.4**
AAK	**Ala-Archa**	**5.35**	**360**	*e*PN	**Pn**	**11 15 23.6**	**+2.1**
AAK				*e*		11 16 30.5	
AAK				pmax	pmax		
	comp=Z,55nm,0.7s						
AAK	**Ala-Archa**	**5.35**	**360**	*e*Pn	**Pn**	**11 15 23.6**	**+2.1**
	comp=Z,55nm,0.7s						
AAK				*e*Sn	**Sn**	**11 16 30.5**	**+7.4**
EKS2	**Erkin-Say**	**5.41**	**354**	P	**Pn**	**11 15 24.9**	**+2.6**
	SNR=8.5						
SARP	**Sargodha**	**5.56**	**197**	P	**Pn**	**11 15 28.5**	**+4.2**
TKM2	**Tokmak 2**	**5.70**	**8**	P	**Pn**	**11 15 27.6**	**+1.4**
	SNR=25						
TKM2	**Tokmak 2**	**5.70**	**8**	⇑Pn	**Pn**	**11 15 27.2**	**+0.9**
	comp=Z,1.5nm,0.5s						
TKM2				⇓Sn	**Sn**	**11 16 29.5**	**-2.2**
	comp=Z,3.4nm,0.6s						
TKM2				⇑Lg		11 16 53.2	
	comp=Z,4.5nm,0.7s						
CHMS	**Chumysh**	**5.72**	**2**	P	**Pn**	**11 15 28.0**	**+1.5**
	SNR=9.7						
SBDP	**Sheikh Budin**	**5.84**	**213**	P	**Pn**	**11 15 32.4**	**+4.2**
SDNR	**Sundarnagar**	**6.10**	**160**	*e*P	**Pn**	**11 15 35.2**	**+3.4**
SDNR				*e*S	**Sg**	**11 17 14.2**	**-3.2**
KK31	**Karatay Array**	**6.59**	**333**	⇓Pn	**Pn**	**11 15 38.7**	**+0.3**
	comp=Z,9.6nm,0.5s,baz=149,slow=13,SNR=76						
KK31				⇑Sn	**Sn**	**11 16 51.9**	**-1.7**
	comp=Z,21nm,0.6s,baz=161,slow=26,SNR=4.0						
MKAR	**Makanchi Array**	**11.11**	**29**	Pn	**Pn**	**11 16 39.5**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=231,slow=15,SNR=8.0						
WMQ	**Urumqi**	**11.95**	**53**	*e*P	**Pn**	**11 16 50.4**	**-1.5**
KOLN	**Koldanda**	**12.17**	**139**	*e*P	**Pn**	**11 16 54.3**	**-0.7**
	comp=Z,32nm,0.7s						
GKN	**Gorkha**	**12.56**	**135**	*e*P	**Pn**	**11 16 59.7**	**-0.6**
	comp=Z,20nm,0.4s						
KKN	**Kakani**	**13.09**	**133**	*e*P	**Pn**	**11 17 07.6**	**+0.1**
	comp=Z,17nm,0.5s						
KKN	**Kakani**	**13.09**	**133**	*e*P	**Pn**	**11 17 07.6**	**+0.1**
KKN				pmax	pmax		
	comp=Z,17nm,0.5s						
DMN	**Daman**	**13.12**	**134**	*e*P	**Pn**	**11 17 06.2**	**-1.8**
	comp=Z,16nm,0.4s						
PKI	**Pulchoki**	**13.33**	**133**	*e*P	**Pn**	**11 17 09.8**	**-1.0**
	comp=Z,15nm,0.5s						
PKI	**Pulchoki**	**13.33**	**133**	*e*P	**Pn**	**11 17 09.8**	**-1.0**
PKI				pmax	pmax		
	comp=Z,15nm,0.5s						
GUN	**Gumba**	**13.35**	**131**	*e*P	**Pn**	**11 17 11.9**	**+0.8**
JIRN	**Jiri**	**13.72**	**131**	*e*P	**Pn**	**11 17 15.2**	**-1.0**
	comp=Z,23nm,0.4s						
KURK	**Kurchatov**	**13.75**	**11**	*e*P	**Pn**	**11 17 15.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURK	**Kurchatov**	**13.75**	**11**	*e*Pn	**Pn**	**11 17 15.6**	**-0.9**
	comp=Z,9.4nm,1.0s						
VOSK	**Vostochnaya**	**15.65**	**352**	⇑P	**Pn**	**11 17 37.8**	**-4.3**
	comp=Z,5.3nm,1.2s						
AB31	**Akbulak array**	**15.98**	**323**	⇑Pn	**Pn**	**11 17 42.2**	**-4.2**
	comp=Z,3.6nm,0.8s,baz=133,slow=13,SNR=22						
AB31				⇑Sn	**Sn**	**11 20 33.1**	**-10**
	comp=Z,1.2nm,0.6s,baz=128,slow=24,SNR=2.9						
BVA0	**Borovoye Array**	**16.01**	**351**	⇑P	**Pn**	**11 17 46.6**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=153,slow=11,SNR=32						
BVAR	**Borovoye Array**	**16.01**	**351**	Pn	**Pn**	**11 17 44.7**	**-2.1**
	comp=Z,1.4nm,0.3s,baz=163,slow=11,SNR=6.6						
BVAR				Lg		11 22 24.5	
	comp=Z,0.2nm,0.3s,baz=167,slow=27,SNR=2.5						
BVAR				LR	LR	11 23 56.5	
	comp=Z,60nm,20.8s,baz=317,slow=37						
BRVK	**Borovoye**	**16.06**	**351**	*e*P	**Pn**	**11 17 52.0**	**+4.5**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRVK	**Borovoye**	**16.06**	**351**	*e*P	**Pn**	**11 17 52.0**	**+4.5**
	comp=Z,10nm,0.9s						
CHKZ	**Chkalovo**	**16.63**	**352**	⇑P	**Pn**	**11 17 52.3**	**-2.4**
	comp=Z,6.6nm,1.6s						
CHKZ	**Chkalovo**	**16.63**	**352**	*e*P	**Pn**	**11 17 52.2**	**-2.5**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHKZ	**Chkalovo**	**16.63**	**352**	*e*P	**Pn**	**11 17 52.2**	**-2.5**
	comp=Z,4.5nm,1.0s						
AKTO	**Aktyubinsk**	**17.70**	**323**	⇑Pn	**Pn**	**11 18 07.6**	**-0.4**
	comp=Z,0.1nm,0.7s						
AKTO				⇑Sn	**Sn**	**11 21 19.6**	**-5.6**
	comp=Z,0.2nm,1.2s						
ZAL	**Zalesovo**	**18.11**	**20**	P	**Pn**	**11 18 10.5**	**-2.7**
	comp=Z,0.7nm,0.3s,baz=259,slow=12,SNR=11						
NVS	**Novosibirsk**	**18.55**	**16**	*e*P	**Pn**	**11 18 18.7**	**+0.1**
NVS				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA	**Gaotai**	**19.92**	**76**	*e*P	**Pn**	**11 18 35.7**	**+0.6**
GTA				AP	pP	11 18 39.4	+3.1
GTA				XP	sP	11 18 41.6	+4.0
GTA				AMB	AMB		
	comp=Z,8.0nm,1.3s						
GTA				AMB	AMB		
	comp=Z,59nm,3.8s						
GTA				LR	LR		
	comp=N,103nm,12.2s						
GTA				LR	LR		
	comp=E,90nm,12.2s						
GTA				LR	LR		
	comp=Z,85nm,14.8s						
ARU	**Arti**	**21.96**	**336**	⇓*i*P	**P**	**11 18 56.8**	**+1.4**
ARU				*i* *PP		11 19 12.3	
ARU				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb3.9						
KRAR	**Krasnoyarsk**	**22.45**	**28**	*i* P	**P**	**11 19 00.2**	**-0.4**
KIV	**Kislovodsk**	**24.98**	**295**	*e*P	**P**	**11 19 27.3**	**+2.0**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
TLY	**Talaya**	**25.06**	**46**	*i* P	**P**	**11 19 27.6**	**+1.5**
SONM	**Songino Array**	**25.56**	**56**	P	**P**	**11 19 30.5**	**-0.1**
	comp=Z,1.8nm,0.5s,mb3.9,baz=254,slow=10,SNR=12						
SONM				LR	LR	11 31 09.4	
	comp=Z,33nm,20.5s,baz=264,slow=40						
ULN	**Ulaanbaatar**	**26.00**	**56**	⇑*e*P	**P**	**11 19 35.7**	**+1.1**
BRTR	**Keskin Array B**	**31.91**	**287**	P	**P**	**11 20 26.7**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.4,baz=82,slow=10,SNR=2.7						
NJ2	**Nanjing**	**36.57**	**85**	*e*P	**P**	**11 21 04.7**	**-2.8**
SSE	**Sheshan**	**38.77**	**85**	P	**P**	**11 21 30.7**	**+4.5**
ARCES	**ARCESS Array B**	**41.54**	**336**	P	**P**	**11 21 48.1**	**-1.1**
	comp=Z,2.8nm,0.6s,mb4.1,baz=104,slow=6.9,SNR=10.0						
YAK	**Yakutsk**	**41.69**	**36**	⇑*e*P	**P**	**11 21 52.5**	**+2.1**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
NOA	**NORSAR Array B**	**45.48**	**322**	P	**P**	**11 22 18.6**	**-2.4**
	comp=Z,0.5nm,0.6s,mb3.5,baz=91,slow=7.8,SNR=2.6						
TORD	**Torodi Ar. Bea**	**68.56**	**270**	P	**P**	**11 25 03.3**	**-1.2**
	comp=Z,0.7nm,0.5s,mb3.8,baz=43,slow=6.0,SNR=7.4						
YKA	**Yellowknife Ar**	**80.30**	**4**	P	**P**	**11 26 10.6**	**-2.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=345,slow=5.5,SNR=5.4						
YKA	**Yellowknife Ar**	**80.30**	**4**	P	**P**	**11 26 10.6**	**-2.2**

*IDC **08** 11:25:19.3±2.2, 1395N×8904W, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.8/19, mbtmp3.7/6, ML3.1/2, MS2.9/2, Ms1 2.8/2, ms1mx2.4/27, Error ellipse: s-maj=66.6km s-min=27.1km az=39.0*

*CASC **08** 11:25:23.9±3.1, 1307N×8939W, h37km±57km, MD4.0, ML3.9*

*NEIC **08** 11:25:23.6±0.9, 1384N×8912W, h35km, MD4.4(SNET), Error ellipse: s-maj=37.7km s-min=11.7km az=42.0*

NEIC Felt [III] at San Salvador.

*ISCJB **08** 11:25:25.3±0.7, 136N±03×890W±02, h92km±14km, mb3.9/4, Error ellipse: s-maj=49.7km s-min=6.5km az=67.0*

ISC 08 11:25:25.4±0.8**, 137N**±03×**891W**±02**, h66**km±18km**, n25,** σ1ˢ**12**/14**, mb3.9**/4**, 5C-8D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.04**	**133**	⇓*i*P	x	11 25 39.1	
LBRS	**Las Brisas**	**0.10**	**27**	⇓*i*P	x	11 25 40.7	
LBRS				*e*S	x	11 25 52.4	
LCBS	**La Ceiba**	**0.11**	**87**	⇓*i*P	x	11 25 39.8	
SNET	**Serv Nac Est T**	**0.14**	**285**	*e*P	x	11 25 36.1	
SNET				*e*S	x	11 25 46.7	
SNET				*i*		11 25 48.4	
	comp=Z,18µm,0.2s						
BOQS	**Boqueron**	**0.20**	**295**	⇑*i*P	x	11 25 39.5	
BOQS				*e*S	x	11 25 48.5	
SNVI	**San Vicente**	**0.25**	**98**	⇓*e*P	x	11 25 40.6	
SNVI				*e*S	x	11 25 50.9	
SNVI				*e*S	x	11 25 51.9	
SNJE	**San Jose**	**0.55**	**294**	⇓*i*P	x	11 25 41.1	
SBLS	**San Blas**	**0.55**	**290**	⇓*i*P	x	11 25 40.8	
RTR	**El Retiro**	**0.59**	**295**	⇓*i*P	x	11 25 41.8	
RBDL	**Robledal**	**0.74**	**309**	⇑*e*P	x	11 25 44.5	
MTO2	**Montecristo 2**	**0.79**	**341**	⇑*i*P	x	11 25 47.8	
MTO2				*e*S	x	11 26 03.5	
VSM	**San Miguel**	**0.82**	**105**	⇓*e*P	x	11 25 46.6	
VSM				*e*S	x	11 26 02.9	
BLLM	**Bellamira**	**0.85**	**104**	⇑*i*P	x	11 25 47.2	
BLLM				*e*S	x	11 26 02.7	
BLLM				*e*S	x	11 26 03.2	
CNCH	**Conchagua**	**1.28**	**107**	⇑*e*P	x	11 25 51.9	
CNCH				*e*S	x	11 26 12.0	
TP2	**Tecpan 2**	**2.19**	**301**	*e*P	**Pn**	**11 26 01.4**	**+2.0**
TP2				*e*S	**Sn**	**11 26 29.8**	**+4.4**
LEON	**Leon**	**2.47**	**120**	*e*P	**Pn**	**11 26 01.4**	**-1.8**
MGAN	**Managua**	**3.15**	**118**	*e*S	**Sn**	**11 26 49.0**	**+0.1**
BOA	**Boaco**	**3.48**	**109**	*e*P	**Pn**	**11 26 18.0**	**+1.0**
JTS	**JuntasAbangare**	**5.25**	**129**	Pn	**Pn**	**11 26 41.7**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=309,slow=21,SNR=10.0						
JTS				Sn	**Sn**	**11 27 40.0**	**-0.3**
	baz=286,slow=18,SNR=1.9						
JTS				LR	LR	11 29 18.9	
	comp=Z,72nm,21.4s,baz=60,slow=44						
CMIG	**Matias Romero**	**6.55**	**302**	Pn	**Pn**	**11 26 55.5**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=125,slow=7.5,SNR=5.2						
CMIG				Sn	**Sn**	**11 28 11.1**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=250,slow=21,SNR=7.6						
PDAR	**Pinedale Array**	**33.97**	**333**	P	**P**	**11 32 03.6**	**+1.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=128,slow=12,SNR=4.4						
NVAR	**Mina Array Bea**	**35.76**	**319**	P	**P**	**11 32 18.3**	**+0.5**
	comp=Z,0.7nm,0.9s,mb3.6,baz=140,slow=7.1,SNR=5.2						
NVAR	**Mina Array Bea**	**35.76**	**319**	P	**P**	**11 32 18.3**	**+0.5**
ULM	**Lac du Bonnet**	**36.92**	**353**	P	**P**	**11 32 26.9**	**-0.9**
	comp=Z,1.8nm,0.6s,mb4.2,baz=165,slow=11,SNR=3.8						
ULM				LR	LR	11 50 29.7	
	comp=Z,27nm,19.1s,baz=349,slow=41						
YKA	**Yellowknife Ar**	**52.05**	**345**	P	**P**	**11 34 27.9**	**-0.4**
	comp=Z,1.1nm,0.4s,mb4.2,baz=150,slow=6.3,SNR=27						

GUC 08 11:33:53.5±0.6**, 3310S×6900W, h12**km±5km**, MD3.7, ML2.2, 1C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	**Farellones**	**1.10**	**258**	⇓*i*P	Pb	11 34 14.1	-0.5
FCH				*i* S	Sb	11 34 30.3	+1.4
FCH				AML	AML	11 34 30.9	
	comp=N,106nm,0.4s						
PCH	**Pirque**	**1.37**	**247**	⇓*i*P	Pn	11 34 18.7	+0.2
PCH				*i* S	Sb	11 34 38.2	+1.7
JACH	**Jahuel**	**1.40**	**287**	*e*P	Pn	11 34 19.3	+0.4
JACH				*i* S	Sn	11 34 39.0	+1.6
CHCH	**Chadas Angostu**	**1.61**	**239**	⇑*i*P	Pn	11 34 22.7	+0.9
CHCH				*i* S	Sn	11 34 44.7	+2.2
CACH	**El Canelo**	**1.68**	**232**	⇓*i*P	Pn	11 34 24.0	+1.3
CACH				*i* S	Sn	11 34 47.4	+3.3
CICH	**Cipreses**	**1.70**	**224**	*e*P	Pn	11 34 24.1	+1.1
CICH				*i* S	Sn	11 34 47.6	+3.0
TACH	**Talagante**	**1.71**	**251**	⇓*i*P	Pn	11 34 24.6	+1.5
TACH				*i* S	Sn	11 34 47.7	+2.7
LCCH	**Las Cruces**	**2.18**	**259**	⇓*i*P	Pn	11 34 32.4	+2.7
SFDO	**San Fernando**	**2.25**	**227**	⇓*i*P	Pn	11 34 34.1	+3.5
SFDO				*i* S	Sn	11 35 04.1	+5.7

MAN 08 12:03:00.9, 1048N×12613E, h1km**, mb3.0, ML4.4, MS1.9, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.94**	**222**	*e*P	Pg	12 03 19.3	+0.4
SCPH				*e*S	Sg	12 03 33.1	+2.1
MSLP	**Maasin**	**1.29**	**255**	*e*P	Pg	12 03 26.0	+0.3
MSLP				*e*S	Sg	12 03 44.6	+2.1
BESP	**Borongan**	**1.30**	**329**	*e*P	Pg	12 03 26.0	+0.2
BESP				*e*S	Sg	12 03 44.3	+1.6
PLP	**Palo**	**1.31**	**301**	*e*P	Pg	12 03 25.8	-0.3
PLP				*e*S	Sg	12 03 43.4	+0.2
BUTP	**Butuan**	**1.59**	**198**	*e*P	Pn	12 03 29.3	-0.8
OCLP	**Ormoc**	**1.59**	**291**	*e*P	Pn	12 03 32.5	+2.3
TBP	**Tagbilaran**	**2.37**	**251**	*e*P	Pn	12 03 42.9	+2.1
TBP				*e*S	Sn	12 04 11.9	+1.4
BUKP	**Musuan**	**2.79**	**202**	*e*P	Pn	12 03 48.1	+1.4
BUKP				*e*S	Sn	12 04 24.4	+3.3
PVCP	**Virac**	**3.65**	**328**	*e*P	Pn	12 03 59.8	+1.4

ZUR 08 13:11:25.4, 4658N×741E, h-5km±8km**, ML1.2**/3**, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIMIS	**Wimmis**	**0.17**	**59**	*e*Sg		13 11 29.9	
	103nm,0.7s						
WIMIS	**Wimmis**	**0.17**	**59**	*e*Pg		13 11 33.3	
	103nm,0.7s						
SENIN	**Lac Senin**	**0.23**	**200**	*e*Sg		13 11 30.6	
	67nm,0.4s						
SENIN	**Lac Senin**	**0.23**	**200**	*e*Pg		13 11 34.7	
	67nm,0.4s						
LKBD	**Leukerbad**	**0.24**	**141**	*i* Pg		13 11 31.2	
	22nm,0.3s						
GRYON	**Gryon**	**0.39**	**213**	*e*Sg		13 11 39.7	
	8.9nm,0.7s						
AIGLE	**Aigle**	**0.39**	**234**	*e*Sg		13 11 40.7	
	138nm,0.5s						

*ISCJB **08** 13:12:22.4±0.2, 4495N±001×655E±002, h6km±3km, Error ellipse: s-maj=2.7km s-min=2.1km az=143.0*

*GEN **08** 13:12:23.1, 4494N×660E, h0km, ML2.0*

*STR **08** 13:12:23.8±0.3, 4497N×666E, h5km±1km, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **08** 13:12:23.2±0.0, 4495N×665E, h5km, ML3.1/8, Error ellipse: s-maj=1.2km s-min=0.8km az=68.0*

*LDG **08** 13:12:24.1±0.1, 4496N×655E, h2km, Md3.0/4, Ml3.1/11, Error ellipse: s-maj=2.7km s-min=1.9km az=84.0*

*ROM **08** 13:12:24.1±0.4, 4492N×666E, h10km, Md2.7/10, Ml2.3/3, Error ellipse: s-maj=6.7km s-min=2.3km az=102.0*

*NEIC **08** 13:12:24.1, 4496N×655E, h2km, ML2.9(STR), ML3.1(LDG), After LDG.*

ISC 08 13:12:23.2±0.2**, 4495N**±001×**657E**±002**, h8**km±3km**, n91,** σ0ˢ**99**/155**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RRL	**Cesana Torines**	**0.15**	**103**	P	**Pg**	**13 12 26.3**	**-0.2**
MBDF	**Montbardon**	**0.27**	**148**	*e*Pg	**Pg**	**13 12 28.1**	**-0.4**
MBDF				*e*Sg	**Sg**	**13 12 31.1**	**-1.0**
	433nm,0.2s						
MBDF	**Montbardon**	**0.27**	**148**	*e*Pg	**Pg**	**13 12 28.1**	**-0.4**
MBDF				*e*Sg	**Sg**	**13 12 31.1**	**-1.0**
	217nm,0.2s						
OG22	**Abries**	**0.30**	**116**	Pg	**Pg**	**13 12 29.0**	**0.0**
OG22				Sg	**Sg**	**13 12 32.9**	**-0.1**
ORIF	**Oris-en-Rattie**	**0.49**	**266**	*e*Pg	**Pg**	**13 12 32.9**	**+0.1**
ORIF				*e*Sg	**Sg**	**13 12 38.9**	**-0.3**
	268nm,0.3s						
ORIF	**Oris-en-Rattie**	**0.49**	**266**	*e*Pg	**Pg**	**13 12 32.9**	**+0.1**
ORIF				*e*Sg	**Sg**	**13 12 38.9**	**-0.3**
	134nm,0.3s						
RSP	**Reno Superiore**	**0.52**	**68**	Pg	**Pg**	**13 12 33.4**	**0.0**
RSP				Sg	**Sg**	**13 12 41.1**	**+0.9**
	134nm,0.2s						
LPG	**La Plagne**	**0.56**	**13**	*e*Pg	**Pg**	**13 12 34.1**	**+0.1**
LPG				*e*Sg	**Sg**	**13 12 42.2**	**+0.9**
	131nm,0.2s						
LPG	**La Plagne**	**0.56**	**13**	*e*Pg	**Pg**	**13 12 34.1**	**+0.1**
LPG				*e*Sg	**Sg**	**13 12 42.2**	**+0.9**
	66nm,0.2s						
LPL	**La Plagne**	**0.57**	**11**	*e*Pg	**Pg**	**13 12 34.4**	**+0.1**
LPL				*e*Sg	**Sg**	**13 12 43.1**	**+1.3**
	93nm,0.2s						
LPL	**La Plagne**	**0.57**	**11**	*e*Pg	**Pg**	**13 12 34.4**	**+0.1**
LPL				*e*Sg	**Sg**	**13 12 43.1**	**+1.3**
	46nm,0.2s						
PZZ	**Prazzo**	**0.59**	**140**	P	**Pg**	**13 12 34.0**	**-0.5**
DOI	**San Damiano**	**0.66**	**133**	Pg	**Pg**	**13 12 35.2**	**-0.7**
DOI				Sg	**Sg**	**13 12 44.1**	**-0.4**
	422nm,0.4s						
OG25	**Le Caire**	**0.68**	**212**	Pg	**Pg**	**13 12 31.7**	**-4.7**
MRGE	**Morge**	**0.89**	**23**	Pg	**Pg**	**13 12 40.8**	**+0.6**
	59nm,0.7s						
STV	**Sta Anna Valdi**	**0.89**	**143**	P	**Pg**	**13 12 39.5**	**-0.8**
ENR	**Entracque**	**0.95**	**140**	P	**Pg**	**13 12 40.6**	**-0.8**
TOUF	**Mont Tournerai**	**1.06**	**153**	Pg	**Pg**	**13 12 43.2**	**-0.3**
EMV	**Vieux Emosson**	**1.13**	**12**	Pg	**Pg**	**13 12 45.1**	**+0.1**
MVIF	**Mont Vial**	**1.14**	**158**	Pg	**Pg**	**13 12 45.1**	**+0.1**
AUTN	**L'Aution**	**1.14**	**147**	Pg	**Pg**	**13 12 44.7**	**-0.3**
AUTN				Sg	**Sg**	**13 13 00.9**	**+1.1**

ROB	**Roburent**	**1.14**	**125**	P	**Pg**	**13 12 43.9**	**-1.2**
SAOF	**Saorge**	**1.20**	**144**	Pg	**Pg**	**13 12 45.4**	**-0.8**
LUCF	**Luceram**	**1.20**	**152**	Pg	**Pg**	**13 12 46.1**	**-0.1**
ORO	**Oropa**	**1.20**	**55**	Pn	**Pn**	**13 12 46.0**	**-0.3**
	42nm,0.2s						
ORX	**Oropa**	**1.20**	**55**	P	**Pb**	**13 12 45.4**	**-0.9**
SMRF	**Simiane la Rot**	**1.21**	**216**	*e*Pg	**Pg**	**13 12 47.0**	**+0.5**
SMRF				*e*Sg	**Sg**	**13 13 02.8**	**+0.6**
	31nm,0.2s						
SMRF	**Simiane la Rot**	**1.21**	**216**	*e*Pg	**Pg**	**13 12 47.0**	**+0.5**
SMRF				*e*Sg	**Sg**	**13 13 02.8**	**+0.6**
	16nm,0.2s						
MONE	**Monesi**	**1.22**	**136**	P	**Pb**	**13 12 45.7**	**-0.8**
SBF	**Sospel**	**1.25**	**150**	*e*Pg	**Pg**	**13 12 48.6**	**+1.3**
SBF				*e*Sg	**Sg**	**13 13 04.5**	**+0.9**
	126nm,0.3s						
SBF	**Sospel**	**1.25**	**150**	*e*Pn	**Pn**	**13 12 46.8**	**-0.2**
SBF				*e*Pg	**Pg**	**13 12 48.6**	**+1.3**
SBF				*e*Sg	**Sg**	**13 13 04.5**	**+0.9**
SBF	**Sospel**	**1.25**	**150**	*e*Pg	**Pg**	**13 12 48.6**	**+1.3**
SBF				*e*Sg	**Sg**	**13 13 04.5**	**+0.9**
	63nm,0.3s						
VILF	**Villemus**	**1.26**	**209**	Pg	**Pg**	**13 12 49.6**	**+2.2**
DIX	**Grande Dixence**	**1.27**	**27**	Pn	**Pn**	**13 12 47.7**	**+0.4**
OG05	**Jujurieux**	**1.34**	**325**	Pg	**Pg**	**13 12 49.8**	**+0.9**
OG05				Sg	**Sg**	**13 13 08.2**	**+1.9**
VIVF	**Saint-Julien-l**	**1.35**	**267**	*e*Pg	**Pg**	**13 12 49.3**	**+0.1**
VIVF				*e*Sg	**Sg**	**13 13 08.4**	**+1.7**
	62nm,0.4s						
VIVF	**Saint-Julien-l**	**1.35**	**267**	*e*Pg	**Pg**	**13 12 49.3**	**+0.1**
VIVF				*e*Sg	**Sg**	**13 13 08.4**	**+1.7**
	31nm,0.4s						
RORO		**1.36**	**128**	P	**Pn**	**13 12 48.3**	**-0.2**
NEGI	**Negi**	**1.37**	**143**	P	**Pn**	**13 12 48.5**	**-0.2**
FIN	**Finale Ligure**	**1.39**	**122**	Pn	**Pn**	**13 12 48.1**	**-0.8**
	57nm,0.5s						
FIN	**Finale Ligure**	**1.39**	**122**	P	**Pn**	**13 12 47.0**	**-1.9**
FIN	**Finale Ligure**	**1.39**	**122**	Pn	**Pn**	**13 12 48.1**	**-0.8**
	57nm,0.5s						
TAVF	**Tavernes**	**1.39**	**196**	Pg	**Pg**	**13 12 50.2**	**+0.4**
TAVF				Sg	**Sg**	**13 13 11.5**	**+3.7**
FRF	**La Foret Royal**	**1.39**	**178**	*e*Pg	**Pg**	**13 12 50.0**	**0.0**
FRF				*e*Sg	**Sg**	**13 13 08.9**	**+0.9**
	51nm,0.3s						
FRF	**La Foret Royal**	**1.39**	**178**	*e*Pn	**Pn**	**13 12 49.0**	**0.0**
FRF				*e*Pg	**Pg**	**13 12 50.0**	**0.0**
FRF				*e*Sg	**Sg**	**13 13 08.9**	**+0.9**
FRF	**La Foret Royal**	**1.39**	**178**	*e*Pg	**Pg**	**13 12 50.0**	**0.0**
FRF				*e*Sg	**Sg**	**13 13 08.9**	**+0.9**
	25nm,0.3s						
IMI	**Imperia**	**1.41**	**137**	Pn	**Pn**	**13 12 49.3**	**+0.2**
	52nm,0.3s						
MCGN	**Macugnaga**	**1.41**	**44**	Pn	**Pn**	**13 12 49.9**	**+0.7**
	18nm,0.4s						
PCP	**Pian Castagno**	**1.47**	**106**	P	**Pn**	**13 12 49.6**	**-0.3**
MMK	**Mattmark**	**1.47**	**41**	Pn	**Pn**	**13 12 51.7**	**+1.7**
PRAF	**Pradon**	**1.53**	**222**	Pg	**Pg**	**13 12 54.0**	**+1.5**
PUYF	**Puyloubier**	**1.55**	**204**	Pg	**Pg**	**13 12 53.8**	**+0.8**
TREF	**Trevaresse**	**1.58**	**213**	Pg	**Pg**	**13 12 55.9**	**+2.4**
LMR	**La Mourre**	**1.62**	**182**	*e*Pg	**Pg**	**13 12 53.8**	**-0.5**
LMR				*e*Sn	**Sn**	**13 13 12.3**	**-0.9**
LMR				*e*Sg	**Sg**	**13 13 15.0**	**-0.3**
	43nm,0.3s						
LMR	**La Mourre**	**1.62**	**182**	*e*Pn	**Pn**	**13 12 52.4**	**+0.3**
LMR				*e*Pg	**Pg**	**13 12 53.8**	**-0.5**
LMR				*e*Sn	**Sn**	**13 13 12.3**	**-0.9**
LMR				*e*Sg	**Sg**	**13 13 15.0**	**-0.3**
LMR	**La Mourre**	**1.62**	**182**	*e*Pg	**Pg**	**13 12 53.8**	**-0.5**
LMR				*e*Sn	**Sn**	**13 13 12.3**	**-0.9**
LMR				*e*Sg	**Sg**	**13 13 15.0**	**-0.3**
	21nm,0.3s						
CABF	**La Chapelle**	**1.69**	**349**	*e*Pg	**Pg**	**13 12 55.4**	**-0.3**
CABF				*e*Sn	**Sn**	**13 13 13.4**	**-1.5**
CABF				*e*Sg	**Sg**	**13 13 18.0**	**+0.4**
	34nm,0.3s						
CABF	**La Chapelle**	**1.69**	**349**	*e*Pn	**Pn**	**13 12 51.4**	**-1.7**
CABF				*e*Pg	**Pg**	**13 12 55.4**	**-0.3**
CABF				*e*Sn	**Sn**	**13 13 13.4**	**-1.5**
CABF				*e*Sg	**Sg**	**13 13 18.0**	**+0.4**
CABF	**La Chapelle**	**1.69**	**349**	*e*Pg	**Pg**	**13 12 55.4**	**-0.3**
CABF				*e*Sn	**Sn**	**13 13 13.4**	**-1.5**
CABF				*e*Sg	**Sg**	**13 13 18.0**	**+0.4**
	17nm,0.3s						
GELF	**Grande-Etoile**	**1.77**	**208**	Pg	**Pg**	**13 12 56.8**	**-0.4**
GELF				Sg	**Sg**	**13 13 21.7**	**+1.5**
COLF	**Collangettes**	**2.11**	**287**	Pg	**Pg**	**13 13 03.4**	**-0.3**
COLF	**Collangettes**	**2.11**	**287**	Pn	**Pn**	**13 13 01.1**	**+2.3**
COLF				Pg	**Pg**	**13 13 03.4**	**-0.3**
COLF	**Collangettes**	**2.11**	**287**	Pg	**Pg**	**13 13 03.4**	**-0.3**
LASF	**Ste Croix**	**2.13**	**247**	*e*Pg	**Pg**	**13 13 03.0**	**-1.1**
LASF				*e*Sn	**Sn**	**13 13 24.0**	**-1.8**
LASF				*e*Sg	**Sg**	**13 13 29.1**	**-2.6**
	8.1nm,0.4s						
LASF	**Ste Croix**	**2.13**	**247**	*e*Pn	**Pn**	**13 12 59.5**	**+0.4**
LASF				*e*Pg	**Pg**	**13 13 03.0**	**-1.1**
LASF				*e*Sn	**Sn**	**13 13 24.0**	**-1.8**
LASF				*e*Sg	**Sg**	**13 13 29.1**	**-2.6**
LASF	**Ste Croix**	**2.13**	**247**	*e*Pg	**Pg**	**13 13 03.0**	**-1.1**
LASF				*e*Sn	**Sn**	**13 13 24.0**	**-1.8**
LASF				*e*Sg	**Sg**	**13 13 29.1**	**-2.6**
	4.1nm,0.4s						
PLDF	**La Plantade**	**2.31**	**297**	Pn	**Pn**	**13 13 01.9**	**+0.3**
LBL	**Lubilhac**	**2.37**	**278**	Pg	**Pg**	**13 13 08.5**	**-0.2**
LBL	**Lubilhac**	**2.37**	**278**	Pn	**Pn**	**13 13 03.3**	**+0.9**
LBL				Pg	**Pg**	**13 13 08.5**	**-0.2**
LBL	**Lubilhac**	**2.37**	**278**	Pg	**Pg**	**13 13 08.5**	**-0.2**
SMF	**Signal de Mont**	**2.55**	**312**	*e*Pg	**Pg**	**13 13 11.3**	**-0.8**
SMF				*e*Sg	**Sg**	**13 13 43.2**	**-2.0**
	18nm,0.3s						
SMF	**Signal de Mont**	**2.55**	**312**	*e*Pn	**Pn**	**13 13 05.5**	**+0.6**
SMF				*e*Pg	**Pg**	**13 13 11.3**	**-0.8**
SMF				*e*Sg	**Sg**	**13 13 43.2**	**-2.0**
SMF	**Signal de Mont**	**2.55**	**312**	*e*Pg	**Pg**	**13 13 11.3**	**-0.8**
SMF				*e*Sg	**Sg**	**13 13 43.2**	**-2.0**
	8.8nm,0.3s						
HINF	**Hinteralfeld**	**2.87**	**4**	*e*Pg	**Pg**	**13 13 17.4**	**-0.8**
HINF	**Hinteralfeld**	**2.87**	**4**	*e*Pn	**Pn**	**13 13 09.3**	**0.0**
HINF				*e*Pg	**Pg**	**13 13 17.4**	**-0.8**
HINF	**Hinteralfeld**	**2.87**	**4**	*e*Pg	**Pg**	**13 13 17.4**	**-0.8**
AVF	**Avril sur Loir**	**2.90**	**310**	*e*Pn	**Pn**	**13 13 10.8**	**+1.1**
LOR	**Lormes**	**2.99**	**322**	*e*Pg	**Pg**	**13 13 19.1**	**-1.3**
LOR	**Lormes**	**2.99**	**322**	*e*Pn	**Pn**	**13 13 11.6**	**+0.7**
LOR				*e*Pg	**Pg**	**13 13 19.1**	**-1.3**
LOR	**Lormes**	**2.99**	**322**	*e*Pg	**Pg**	**13 13 19.1**	**-1.3**
SSF	**Saint Saulge**	**3.00**	**316**	*e*Pg	**Pg**	**13 13 19.3**	**-1.4**
SSF				*e*Sg	**Sg**	**13 13 56.5**	**-3.1**
	8.6nm,0.4s						
SSF	**Saint Saulge**	**3.00**	**316**	*e*Pn	**Pn**	**13 13 12.3**	**+1.2**
SSF				*e*Pg	**Pg**	**13 13 19.3**	**-1.4**
SSF				*e*Sg	**Sg**	**13 13 56.5**	**-3.1**
SSF	**Saint Saulge**	**3.00**	**316**	*e*Pg	**Pg**	**13 13 19.3**	**-1.4**
SSF				*e*Sg	**Sg**	**13 13 56.5**	**-3.1**
	4.3nm,0.4s						
HAU	**Haudompre**	**3.06**	**357**	*e*Pg	**Pg**	**13 13 21.0**	**-0.8**
HAU	**Haudompre**	**3.06**	**357**	*e*Pn	**Pn**	**13 13 12.7**	**+0.9**
HAU				*e*Pg	**Pg**	**13 13 21.0**	**-0.8**
HAU	**Haudompre**	**3.06**	**357**	*e*Pg	**Pg**	**13 13 21.0**	**-0.8**
BGF	**Bois d'Agland**	**3.06**	**303**	*e*Pn	**Pn**	**13 13 13.1**	**+1.2**
BGF				*e*Sg	**Sg**	**13 13 57.9**	**-3.7**
	20nm,0.4s						
BGF	**Bois d'Agland**	**3.06**	**303**	*e*Pn	**Pn**	**13 13 13.1**	**+1.2**
BGF				*e*Sg	**Sg**	**13 13 57.9**	**-3.7**
	10nm,0.4s						
CDF	**Champ du Feu**	**3.49**	**8**	*e*Pn	**Pn**	**13 13 18.0**	**+0.2**
MTLF	**Montolieu**	**3.52**	**244**	*e*Pn	**Pn**	**13 13 17.7**	**-0.6**
MTLF				*e*Pg	**Pg**	**13 13 29.0**	**-1.8**
RJF	**Les Rejaudoux**	**3.60**	**277**	*e*Pg	**Pg**	**13 13 30.1**	**-2.0**

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*LDG **08** 13:31:03.8±0.3, 16.50S×168.19E, h150^{km}, Mb4.3/2, Error ellipse: s-maj=39.2km s-min=5.6km az=98.0*
*ISCJB **08** 13:31:08.8±0.7, 17.09S±0.08×168.2E±0.1, h221^{km}±5^{km}, mb4.4/17, Error ellipse: s-maj=16.3km s-min=12.1km az=151.7*
*BJI **08** 13:31:09.3, 17.20S×168.10E, h223^{km}, mB4.5, mb4.5*
*IDC **08** 13:31:11.1±2.3, 17.05S×168.22E, h232^{km}±19^{km}, mb3.8/9, mb1 4.0/11, mb1mx3.9/16, mbtmp4.5/11, Error ellipse: s-maj=20.5km s-min=14.2km az=64.0*
*NEIC **08** 13:31:11.3±1.8, 17.15S×168.09E, h224^{km}±15^{km}, mb4.7/6, Error ellipse: s-maj=17.0km s-min=13.2km az=67.0*

ISC 08 13:31:09.9±0.7**, 17.10S**±0.07×**168.2E**±0.1**, h216**^{km}±5^{km}**, n55, σ0**^{s}**74**/33**, mb4.4**/18**, 2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKM	**Butte a Klehm**	**0.57**	**180**	⇑*i*P	**Pn**	**13 31 38.5**	**-0.6**
BKM				S	**S**	**13 32 01.4**	**-0.4**
DZM	**Mont Dzumac**	**5.23**	**199**	*e*P	**Pn**	**13 32 27.7**	**+0.2**
DZM				*e*S	**S**	**13 33 30.7**	**+1.6**
DZM	**Mont Dzumac**	**5.23**	**199**	P	**Pn**	**13 32 28.2**	**+0.6**
	12nm,0.3s,baz=36,slow=14,SNR=43						
DZM				S	**S**	**13 33 33.6**	**+4.5**
	2.1nm,0.3s,baz=356,slow=23,SNR=3.7						
HNR	**Honiara**	**11.10**	**312**	P	**Pn**	**13 33 44.1**	**+1.3**
	4.9nm,0.3s,baz=92,slow=4.0,SNR=3.6						
CTA	**Charters Tower**	**21.05**	**258**	*e*P	**P**	**13 35 37.4**	**+0.3**
	9.2nm,0.5s,mb4.6						
CTA	**Charters Tower**	**21.05**	**258**	P	**P**	**13 35 37.5**	**+0.3**
	15nm,0.6s,mb4.7,baz=79,slow=12,SNR=16						
URZ	**Urewera**	**22.48**	**161**	P	**P**	**13 35 51.2**	**+0.3**
	5.6nm,0.3s,mb4.5,baz=329,slow=14,SNR=6.1						
RPZ	**Rata Peaks**	**26.64**	**175**	P	**P**	**13 36 29.4**	**+0.9**
	15nm,1.0s,mb4.6,baz=334,slow=8.0,SNR=3.8						
STKA	**Stephens Creek**	**28.26**	**234**	P	**P**	**13 36 43.6**	**+0.6**
	19nm,0.6s,mb4.9,baz=60,slow=8.2,SNR=27						
STKA				PcP	PcP	13 39 49.4	-1.0
	1.5nm,0.7s,baz=76,slow=4.2,SNR=2.9						
WB2	**Warramunga Arr**	**32.23**	**260**	⇑*i*P	**P**	**13 37 16.6**	**-1.2**
WB2				*e*PCP	PcP	13 40 00.6	-0.2
AS31	**Alice Springs**	**32.79**	**253**	*e*P	**P**	**13 37 22.2**	**-0.4**
ASAR	**Alice Springs**	**32.79**	**253**	P	**P**	**13 37 22.4**	**-0.2**
	28nm,0.4s,mb5.2,baz=79,slow=9.1,SNR=511						
ASAR				PcP	PcP	13 40 01.8	-0.6
	0.7nm,0.6s,baz=130,slow=3.7,SNR=4.7						
ASPA	**Alice Springs**	**32.79**	**253**	*e*P	**P**	**13 37 22.2**	**-0.4**
KAKA	**Kakadu**	**34.84**	**272**	*e*P	**P**	**13 37 39.5**	**-0.8**
	7.2nm,0.5s,mb4.5						
FORT	**Forrest**	**38.96**	**242**	*e*P	**P**	**13 38 15.0**	**+0.1**
	26nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**40.55**	**262**	*e*P	**P**	**13 38 28.2**	**+0.1**
	54nm,0.8s,mb5.0						
KLBR	**Kellerberrin**	**47.81**	**243**	*e*P	**P**	**13 39 24.4**	**-1.1**
	37nm,1.5s,mb4.5						
MUN	**Mundaring**	**49.16**	**242**	*e*P	**P**	**13 39 35.5**	**-0.3**
MJAR	**Matsushiro Arr**	**60.42**	**332**	P	**P**	**13 40 55.4**	**-1.1**
	2.4nm,0.8s,mb3.9,baz=169,slow=5.8,SNR=5.8						
MJAR	**Matsushiro Arr**	**60.42**	**332**	P	**P**	**13 40 55.4**	**-1.1**
VNDA	**Vanda**	**60.53**	**182**	P	**P**	**13 40 56.7**	**-0.6**
	0.8nm,0.7s,mb3.5,baz=26,slow=6.2,SNR=6.7						
VNDA	**Vanda**	**60.53**	**182**	P	**P**	**13 40 56.7**	**-0.6**
CN2	**Changchun**	**72.14**	**329**	*e*P	**P**	**13 42 11.0**	**+0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
QSPA	**South Pole Qui**	**72.94**	**180**	*e*P	**P**	**13 42 15.0**	**-0.5**
	comp=Z,11nm,0.8s,mb4.5						
KMI	**Kunming**	**76.34**	**302**	P	**P**	**13 42 36.5**	**+1.5**
KMI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.3						
KMI				LR	LR		
	comp=Z,31nm,15.9s						
MAW	**Mawson**	**80.05**	**202**	P	**P**	**13 42 55.1**	**-0.3**
	comp=Z,1.8nm,0.9s,mb3.7,baz=197,slow=6.0,SNR=4.4						
SONM	**Songino Array**	**84.94**	**323**	P	**P**	**13 43 20.7**	**+0.1**
	comp=Z,1.6nm,0.7s,mb3.9,baz=162,slow=7.2,SNR=9.3						
GTA	**Gaotai**	**84.97**	**314**	*e*P	**P**	**13 43 22.0**	**+1.3**
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**88.11**	**49**	P	**P**	**13 43 36.0**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.8,baz=230,slow=9.7,SNR=10.0						
NVAR	**Mina Array Bea**	**88.11**	**49**	P	**P**	**13 43 36.0**	**+0.1**
ARCES	**ARCESS Array B**	**122.77**	**345**	PKP	PKPdf	13 49 38.2	-1.7
	comp=Z,1.6nm,0.4s,baz=67,slow=1.9,SNR=37						
JOF	**Joensuu**	**125.42**	**337**	*e*p	PKPdf	13 49 41.8	-3.1
KAF	**Kangasniemi**	**127.73**	**338**	*e*p	PKPdf	13 49 47.1	-2.3
FINES	**FINESS Array B**	**128.25**	**338**	PKP	PKPdf	13 49 49.1	-1.2
	comp=Z,0.6nm,0.5s,baz=66,slow=4.8,SNR=6.8						
BFO	**Black Forest**	**144.78**	**337**	*e*PKPbc	PKPdf	13 50 19.8	-0.9
CDF	**Champ du Feu**	**145.11**	**338**	*e*PKP1	PKPbc	13 50 21.1	-0.2
	comp=Z,15nm,0.6s						
HINF	**Hinteralfeld**	**145.76**	**338**	*e*PKP1	PKPbc	13 50 22.7	-0.6
	comp=Z,5.0nm,0.6s						
HAU	**Haudompre**	**145.78**	**338**	*e*PKP1	PKPbc	13 50 23.1	-0.3
	comp=Z,11nm,0.5s						
MEZF	**Maizieres J'vi**	**145.80**	**340**	*e*PKP1	PKPbc	13 50 23.6	+0.1
	comp=Z,20nm,0.5s						
FLN	**La Foliniere**	**147.10**	**346**	*e*PKP1	PKPbc	13 50 26.5	-0.7
LOR	**Lormes**	**147.27**	**340**	*e*PKP1	PKPbc	13 50 27.3	-0.3
	comp=Z,8.2nm,0.5s						
GRR	**Gorron**	**147.54**	**346**	*e*PKP1	PKPbc	13 50 27.9	-0.5
SSF	**Saint Saulge**	**147.56**	**340**	*e*PKP1	PKPbc	13 50 28.3	-0.1
	comp=Z,10.0nm,0.6s						
LPL	**La Plagne**	**147.72**	**335**	*e*PKP1	PKPbc	13 50 29.1	+0.2
LPG	**La Plagne**	**147.73**	**335**	*e*PKP1	PKPbc	13 50 29.2	+0.3
ORIF	**Oris-en-Rattie**	**148.56**	**336**	*e*PKP1	PKPbc	13 50 31.7	+0.7
	comp=Z,9.8nm,0.6s						
TCF	**Toulx Ste Croi**	**148.66**	**341**	*e*PKP1	PKPbc	13 50 30.9	-0.4
	comp=Z,4.8nm,0.5s						
MFF	**Saint Martin d**	**149.04**	**344**	*e*PKP1	PKPbc	13 50 32.8	+0.6
	comp=Z,9.4nm,0.6s						
FRF	**La Foret Royal**	**149.35**	**333**	*e*PKP1	PKPbc	13 50 32.4	-0.6
	comp=Z,9.3nm,0.6s						
LMR	**La Mourre**	**149.59**	**333**	*e*PKP1	PKPbc	13 50 33.1	-0.5
	comp=Z,7.9nm,0.5s						
RJF	**Les Rejaudoux**	**149.76**	**341**	*e*PKP1	PKPbc	13 50 33.8	-0.2
LASF	**Ste Croix**	**150.04**	**337**	*e*PKP1	PKPbc	13 50 34.7	0.0
	comp=Z,5.4nm,0.6s						
MTLF	**Montolieu**	**151.27**	**338**	*e*PKP1	PKPbc	13 50 37.4	-0.2
	comp=Z,6.4nm,0.7s						
ETSF	**Etsaut**	**152.57**	**342**	*e*PKP1	PKPbc	13 50 40.7	+0.2
	comp=Z,5.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**166.43**	**255**	PKPab	PKPab	13 51 51.8	-0.2
	comp=Z,1.0nm,0.8s,baz=103,slow=4.6,SNR=6.0						

IDC 08 13:53:19.9±2.3**, 23.94N**×**94.14E, h0**^{km}**, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.4**/20**, mbtmp3.5**/3**, Error ellipse: s-maj=96.0km s-min=27.3km az=70.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**24.71**	**340**	P	P	13 58 42.8	+0.1
	0.7nm,0.7s,baz=151,slow=9.8,SNR=4.9						
SONM	**Songino Array**	**25.77**	**19**	P	P	13 58 52.4	+0.2
	0.3nm,0.3s,baz=199,slow=8.5,SNR=4.6						
ASAR	**Alice Springs**	**61.06**	**138**	P	P	14 03 35.8	+0.3
	0.3nm,0.5s,baz=322,slow=6.7,SNR=15						

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*NEIC **08** 14:03:08.1, 37.97S×176.40E, h150^{km}, MG3.8(WEL), After WEL.*

WEL 08 14:03:07.6±0.2**, 37.97S**×**176.42E, h153**^{km}±2^{km}**, ML3.8**/13**, 3C, Error ellipse: s-maj=2.9km s-min=2.5km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.61**	**118**	*e*P	Pn	14 03 30.0	+0.1
URZ	**Urewera**	**0.61**	**118**	PN	Pn	14 03 30.0	+0.1
URZ				SN	Sn	14 03 47.1	+0.2
MWZ	**Matawai**	**0.94**	**113**	*e*P	Pn	14 03 32.8	+0.6
MWZ	**Matawai**	**0.94**	**113**	PN	Pn	14 03 32.5	+0.3
MWZ				SN	Sn	14 03 51.6	+0.7
BKZ	**Black Stump Fm**	**1.20**	**177**	P	Pn	14 03 34.4	0.0
BKZ				S	Sn	14 03 54.6	-0.3
BKZ	**Black Stump Fm**	**1.20**	**177**	PN	Pn	14 03 34.4	0.0
BKZ				SN	Sn	14 03 54.6	-0.2
OTVZ	**Oturere**	**1.33**	**206**	PN	Pn	14 03 36.2	+0.5
TWVZ	**Taurewa**	**1.34**	**215**	P	Pn	14 03 35.9	+0.1
TWVZ	**Taurewa**	**1.34**	**215**	PN	Pn	14 03 35.9	+0.1
WPVZ	**Whakapapa**	**1.41**	**209**	PN	Pn	14 03 36.7	+0.2
TUVZ	**Tukino**	**1.43**	**205**	P	Pn	14 03 36.9	+0.2
TUVZ	**Tukino**	**1.43**	**205**	⇑PN	Pn	14 03 36.9	+0.2
KNZ	**Kokohu**	**1.44**	**137**	*e*P	Pn	14 03 37.2	+0.5
KNZ	**Kokohu**	**1.44**	**137**	PN	Pn	14 03 37.2	+0.5
PUZ	**Puketiti**	**1.45**	**95**	P	Pn	14 03 36.7	-0.2
PUZ	**Puketiti**	**1.45**	**95**	PN	Pn	14 03 36.6	-0.3
PUZ				SN	Sn	14 03 58.9	-0.5
WNVZ	**Wahianoa**	**1.50**	**205**	P	Pn	14 03 37.5	+0.1
WNVZ	**Wahianoa**	**1.50**	**205**	⇑PN	Pn	14 03 37.5	+0.1
MXZ	**Matakaoa Point**	**1.55**	**75**	P	Pn	14 03 37.9	0.0
MXZ	**Matakaoa Point**	**1.55**	**75**	PN	Pn	14 03 37.8	0.0
PXZ	**Pawanui**	**2.09**	**171**	PN	Pn	14 03 43.4	-0.5
PXZ				SN	Sn	14 04 10.4	-1.5
WAZ	**Wanganui**	**2.11**	**212**	PN	Pn	14 03 43.5	-0.6
TSZ	**Takapari Road**	**2.12**	**190**	P	Pn	14 03 43.3	-1.0
TSZ	**Takapari Road**	**2.12**	**190**	PN	Pn	14 03 43.2	-1.0
BFZ	**Birch Farm**	**2.71**	**183**	*e*P	Pn	14 03 49.9	-1.6
BFZ	**Birch Farm**	**2.71**	**183**	PN	Pn	14 03 49.9	-1.6
MRZ	**Mangatainoka R**	**2.77**	**193**	*e*P	Pn	14 03 50.1	-2.0
MRZ	**Mangatainoka R**	**2.77**	**193**	⇑PN	Pn	14 03 50.1	-2.0
KIW	**Kapiti Island**	**3.12**	**202**	P	Pn	14 03 53.9	-2.6
MTW	**Mount Morrison**	**3.26**	**192**	P	Pn	14 03 55.5	-2.9
PAWZ	**Paruwai Farm**	**3.49**	**192**	P	Pn	14 03 58.3	-3.0
MSWZ	**Moikau Station**	**3.56**	**194**	P	Pn	14 03 58.9	-3.3
TCW	**Tory Channel**	**3.64**	**206**	P	Pn	14 04 00.0	-3.2
NNZ	**Nelson**	**4.01**	**215**	*e*P	Pn	14 04 04.6	-3.4
QRZ	**Quartz Range**	**4.15**	**225**	*e*P	Pn	14 04 05.7	-4.2
BSWZ	**Blackbirch Sta**	**4.22**	**207**	P	Pn	14 04 07.5	-3.3
LTZ	**Lake Taylor**	**5.76**	**212**	*e*P	Pn	14 04 26.7	-4.4

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*ISCJB **08** 14:51:28.9±0.7, 12.47S±0.10×57.31W±0.09, h10^{km}, mb4.2/6, MS3.1/4, Error ellipse: s-maj=14.0km s-min=12.8km az=166.4*
*IDC **08** 14:51:29.8±0.8, 12.56S×57.13W, h0^{km}, mb4.3/5, mb1 4.4/7, mb1mx4.0/23, mbtmp4.2/7, ML4.2/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/32, Error ellipse: s-maj=24.1km s-min=20.1km az=20.0*
*NEIC **08** 14:51:30.8±0.6, 12.50S×57.23W, h10^{km}, mb4.2/1, Error ellipse: s-maj=14.5km s-min=11.9km az=189.0*

ISC 08 14:51:31.0±0.6**, 12.64S**±0.09×**57.28W**±0.07**, h10**^{km}**, n21, σ1**^{s}**40**/20**, mb4.2**/6**, MS3.1**/4**, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIV	**San Ignacio**	**4.96**	**227**	Pn	**Pn**	**14 52 47.1**	**+1.5**
	1.9nm,0.3s,baz=59,slow=14,SNR=40						
SIV				Pg	**Pg**	**14 53 03.9**	**-2.3**
	13nm,0.3s,baz=61,slow=18,SNR=30						
SIV				Lg		14 54 05.1	
	29nm,0.3s,baz=354,slow=22,SNR=6.4						
SAML	**Samuel**	**6.86**	**302**	*e*Pn	**Pn**	**14 53 09.7**	**-2.0**
	2.2nm,1.0s						
SAML				*e*Sn	**Sn**	**14 54 22.1**	**-7.7**
BDFB	**Brasilia**	**9.47**	**109**	Pn	**Pn**	**14 53 45.3**	**-2.1**
	1.6nm,0.3s,baz=289,slow=15,SNR=7.4						
BDFB				Sn	**Sn**	**14 55 27.2**	**-6.6**
	4.6nm,0.3s,baz=240,slow=22,SNR=4.0						
BDFB				Lg		14 56 27.8	
	7.2nm,0.3s,baz=8.6,slow=16,SNR=2.7						
BDFB				LR	LR	14 57 42.0	
	comp=Z,169nm,19.8s,baz=12,slow=40						
BDFB	**Brasilia**	**9.47**	**109**	*e*Pn	**Pn**	**14 53 45.4**	**-2.0**
BDFB				Sn	**Sn**	**14 55 27.2**	**-6.6**
BDFB				Lg		14 56 27.8	
BDFB				LR	LR	14 57 42.0	
LPAZ	**La Paz**	**11.12**	**250**	*e*Pn	**Pn**	**14 54 10.3**	**+0.3**
	0.2nm,0.2s						
LPAZ				*e*Sn	**Sn**	**14 56 09.3**	**-5.1**
CPUP	**Villa Florida**	**13.62**	**180**	Pn	**Pn**	**14 54 48.3**	**+4.0**
	0.2nm,0.3s,baz=3.0,slow=15,SNR=2.5						
CPUP				Lg		14 58 41.1	
	0.7nm,0.3s,baz=354,slow=12,SNR=3.9						
CPUP	**Villa Florida**	**13.62**	**180**	*e*Pn	**Pn**	**14 54 47.4**	**+3.2**
	20nm,0.4s						
CPUP				Lg		14 58 41.1	
ATAH	**Atahualpa**	**21.54**	**283**	LR	LR	15 05 15.1	
	comp=Z,126nm,19.1s,MS3.3,baz=278,slow=38						
PCRV	**Puerto La Cruz**	**23.82**	**342**	LR	LR	15 07 15.4	
	comp=Z,30nm,19.9s,MS2.8,baz=141,slow=40						
ROSC	**El Rosal**	**24.28**	**315**	LR	LR	15 07 03.2	
	comp=Z,73nm,20.2s,MS3.1,baz=59,slow=38						
SDV	**Santo Domingo**	**25.17**	**328**	LR	LR	15 07 16.2	
	comp=Z,69nm,18.2s,MS3.2,baz=66,slow=38						
TOA0	**Torodi Ar. Sit**	**63.83**	**68**	*e*P	**P**	**15 02 03.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**63.83**	**68**	P	**P**	**15 02 03.6**	**+0.1**
	4.9nm,0.6s,mb4.7,baz=250,slow=7.3,SNR=50						
SNAA	**Sanae**	**67.31**	**164**	P	**P**	**15 02 26.3**	**+0.3**
	1.7nm,0.9s,mb4.1,baz=318,slow=7.4,SNR=13						
PDAR	**Pinedale Array**	**72.98**	**322**	P	**P**	**15 03 00.3**	**-0.4**
	1.3nm,0.6s,mb4.0,baz=108,slow=8.1,SNR=12						
BW06	**Boulder Array**	**72.98**	**322**	P	**P**	**15 03 02.3**	**+1.5**
	1.5nm,0.7s,mb4.0						
NVAR	**Mina Array Bea**	**76.30**	**315**	P	**P**	**15 03 22.8**	**+2.7**
	1.1nm,0.8s,mb3.8,baz=123,slow=7.1,SNR=6.9						
NVAR	**Mina Array Bea**	**76.30**	**315**	P	**P**	**15 03 22.8**	**+2.7**
MAW	**Mawson**	**89.26**	**161**	P	**P**	**15 04 27.6**	**+0.3**
	3.2nm,1.0s,mb4.6,baz=247,slow=9.1,SNR=6.2						
ASAR	**Alice Springs**	**142.30**	**197**	PKhKP		15 11 01.8	
	0.6nm,0.8s,baz=144,slow=2.2,SNR=5.8						
MJAR	**Matsushiro Arr**	**152.43**	**332**	PKPbc	PKPbc	15 11 29.1	+1.8
	1.9nm,1.0s,baz=100,slow=0.7,SNR=4.8						

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*NEIC **08** 14:52:51.2, 24.32S×67.61W, h220^{km}, MG4.6(GUC), After GUC.*

GUC 08 14:52:51.2±1.0**, 24.32S**×**67.61W, h220**^{km}**, ML4.6, 3C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.08**	**325**	⇑*e*Pn	Pn	14 53 31.9	-0.1
LVC				*e*S	S	14 53 57.2	-6.8
CEN1	**Los Morros**	**2.55**	**291**	⇓*i*P	Pn	14 53 39.0	+2.1
CEN1				*i* S	S	14 54 15.7	+3.0
CEN1				AML	AML	14 54 17.9	
	comp=N,913nm,0.5s						
CPN1	**Cerro Paranal**	**2.57**	**263**	⇑*i*P	Pn	14 53 39.6	+2.6
CPN1				*i* S	S	14 54 16.1	+3.0
CPN1				AML	AML	14 54 18.1	
	comp=E,1μm,0.4s						
ANCH	**Antofagasta**	**2.64**	**283**	*e*P	Pn	14 53 40.1	+2.2
ANCH				*i* S	S	14 54 16.7	+2.2
ANCH				AML	AML	14 54 19.8	
	comp=N,2μm,0.7s						
ANCH	**Antofagasta**	**2.64**	**283**	*e*P	Pn	14 53 40.1	+2.2
ANCH				*i* S	S	14 54 16.7	+2.2
CPCH	**Copiapo**	**3.91**	**219**	⇓*i*P	Pn	14 53 53.6	+1.1
CPCH				*i* S	S	14 54 43.0	+2.0
CDCH	**Caldera**	**4.00**	**226**	⇑*i*P	Pn	14 53 54.7	+1.0
CDCH				*i* S	S	14 54 44.1	+1.2
LCO	**Las Campanas**	**5.43**	**210**	*e*P	Pn	14 54 13.5	+2.0
LCO				*i* S	S	14 55 16.8	+1.7

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*ISCJB **08** 14:54:43.2±0.6, 50.25N±0.04×18.73E±0.03, h0^{km}, Error ellipse: s-maj=5.4km s-min=2.6km az=36.3*
*WAR **08** 14:54:44.6, 50.24N×18.90E, ML2.7, Mining Induced*
*PRU **08** 14:54:45.6, 50.23N×18.78E, h0^{km}*
*VIE **08** 14:54:49.7±0.5, 50.15N×18.43E, h0^{km}, mb1.8/3, ML2.4/4, Error ellipse: s-maj=3.9km s-min=2.7km az=137.0 37 km NNE of Ostrava Suspected Mining induced.*

ISC 08 14:54:44.5±0.6**, 50.27N**±0.04×**18.82E**±0.03**, h0**^{km}**, n18, σ1**^{s}**26**/31**, 2C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.44**	**245**	*e*Pg	**Pg**	**14 54 54.2**	**+1.2**
RAC				*e*Sg	**Sg**	**14 55 01.3**	**+2.5**
OKC	**Ostrava-Krasne**	**0.61**	**225**	*e*PG	**Pg**	**14 54 56.6**	**+0.3**
OKC				*e*SG	**Sg**	**14 55 05.4**	**+1.2**
	68nm,0.8s						
OJC	**Ojcow**	**0.63**	**95**	*e*Pg	**Pg**	**14 54 56.0**	**-0.6**
OJC				*e*Sg	**Sg**	**14 55 04.4**	**-0.4**
LIKS	**Likavka**	**1.24**	**171**	*e*PG	**Pg**	**14 55 08.9**	**+0.7**
LIKS				*e*SG	**Sg**	**14 55 23.6**	**-0.7**
NIE	**Niedzica**	**1.29**	**131**	*e*Pgc		14 55 08.3	
NIE				*e*Sg	**Sg**	**14 55 26.3**	**+0.3**
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*PG	**Pg**	**14 55 13.4**	**-1.8**
DPC				*e*SG	**Sg**	**14 55 35.7**	**-0.3**
	29nm,0.6s						
KSP	**Ksiaz**	**1.71**	**290**	*e*Pg	**Pg**	**14 55 16.9**	**-0.3**
KSP				*e*Sg	**Sg**	**14 55 40.1**	**+0.7**
VYHS	**Vyhne**	**1.78**	**180**	*e*PN	**Pn**	**14 55 15.3**	**-1.2**
VYHS				*e*SN	**Sn**	**14 55 37.6**	**-2.2**
SMOL	**Smolenice**	**1.98**	**208**	*e*	**Sn**	**14 55 45.8**	**+1.0**
CRVS	**Cervenica-Dubn**	**2.20**	**128**	*e*PN	**Pn**	**14 55 24.1**	**+1.8**
CRVS				*e*SN	**Sn**	**14 55 52.0**	**+1.8**
KOLS	**Kolonicke sedl**	**2.62**	**120**	*e*PN	**Pn**	**14 55 31.8**	**+3.8**
KOLS				*e*SN	**Sn**	**14 55 59.1**	**-1.4**
PRU	**Pruhonice**	**2.77**	**266**	*e*PG	**Pg**	**14 55 34.7**	**-2.8**
PRU				*e*SG	**Sg**	**14 56 13.0**	**-0.4**
	8.7nm,0.8s						
CONA	**Conrad Observa**	**3.05**	**221**	⇑*i*Pn	**Pn**	**14 55 35.8**	**+1.8**
CONA				⇓*i*Sg	**Sg**	**14 56 22.1**	**-0.3**
	6.4nm,0.5s						
BRG	**Berggiesshubel**	**3.17**	**283**	SG	**Sg**	**14 56 25.4**	**-0.8**
	5.2nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHC	**Kasperske Hory**	**3.59**	**253**	*e*PG	**Pg**	**14 55 48.9**	**-4.4**
KHC				*e*SN	**Sn**	**14 56 24.0**	**-0.4**
KHC				*e*SG	**Sg**	**14 56 38.4**	**-1.4**
	7.9nm,0.5s						
CLL	**Collm**	**3.83**	**288**	*e*SG	**Sg**	**14 56 50.0**	**+2.4**
MOA	**Molln**	**3.85**	**233**	⇑*i*Sg	**Sg**	**14 56 47.3**	**-1.0**
	comp=Z,4.7nm,0.5s						
NKC	**Novy Kostel**	**4.09**	**272**	*e*SG	**Sg**	**14 56 55.9**	**+0.1**

*IDC **08** 14:57:17.1±1.8, 4.85N×125.11E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.8/16, mbtmp4.0/4, Error ellipse: s-maj=133.1km s-min=22.6km az=67.0*
*ISCJB **08** 14:57:46.0±1.0, 4.6N±0.1×124.9E±0.2, h300km, mb3.7/5, Error ellipse: s-maj=29.7km s-min=12.6km az=107.6*
*NEIC **08** 14:57:52.2±0.8, 4.44N×124.78E, h350km, mb4.1/3, Error ellipse: s-maj=27.1km s-min=11.1km az=55.0*
ISC 08 14:57:47.8±1.0**, 4.6N**±0.2×**124.9E**±0.2**, h300km, n14, σ0.70**/14**, mb3.7**/5**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**14.93**	**258**	*e*P	**P**	**15 01 04.3**	**+0.3**
KAKA	**Kakadu**	**18.74**	**157**	*e*P	**P**	**15 01 45.9**	**+0.6**
	9.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**22.56**	**178**	*e*P	**P**	**15 02 22.1**	**-0.7**
	7.0nm,1.2s,mb3.9						
FITZ	**Fitzroy Crossi**	**22.56**	**178**	P	**P**	**15 02 21.9**	**-0.9**
	1.4nm,0.5s,mb3.5,baz=7.1,slow=8.1,SNR=8.9						
WRAB	**Tennant Creek**	**26.07**	**159**	*e*P	**P**	**15 02 53.9**	**-0.5**
	3.3nm,0.4s,mb4.1						
WB2	**Warramunga Arr**	**26.08**	**160**	*e*P	**P**	**15 02 53.9**	**-0.6**
AS31	**Alice Springs**	**29.42**	**163**	*e*P	**P**	**15 03 24.2**	**+0.2**
ASAR	**Alice Springs**	**29.42**	**163**	P	**P**	**15 03 23.9**	**-0.2**
	0.5nm,0.3s,mb3.4,baz=341,slow=7.6,SNR=35						
ASPA	**Alice Springs**	**29.42**	**163**	*e*P	**P**	**15 03 24.2**	**+0.2**
STKA	**Stephens Creek**	**39.59**	**157**	*e*P	**P**	**15 04 51.7**	**+1.1**
	2.5nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**39.59**	**157**	P	**P**	**15 04 51.8**	**+1.2**
	3.1nm,0.4s,mb4.0,baz=332,slow=9.8,SNR=18						
STKA	**Stephens Creek**	**39.59**	**157**	*e*P	**P**	**15 04 51.7**	**+1.1**
MKAR	**Makanchi Array**	**55.83**	**326**	P	**P**	**15 06 55.5**	**+1.0**
	0.6nm,0.4s,mb3.4,baz=124,slow=7.6,SNR=13						
KURK	**Kurchatov**	**60.06**	**328**	*e*P	**P**	**15 07 22.5**	**-1.2**

*IDC **08** 15:07:19.2±1.6, 35.69N×70.92E, h0km, mb3.9/5, mb1 3.9/8, mb1mx3.7/22, mbtmp3.8/8, ML3.6/3, Error ellipse: s-maj=38.0km s-min=27.4km az=53.0*
*MOS **08** 15:07:30.4±0.8, 36.25N×70.81E, h76km, mb4.5/1, Error ellipse: s-maj=19.5km s-min=8.8km az=95.3*
*NEIC **08** 15:07:31.5±1.8, 36.27N×70.85E, h67km±21km, mb4.6/1, Error ellipse: s-maj=20.4km s-min=5.5km az=63.0*
*ISCJB **08** 15:07:34.6±0.5, 36.39N±0.03×71.11E±0.08, h124km±9km, mb3.7/4, Error ellipse: s-maj=10.7km s-min=4.9km az=158.3*
*NNC **08** 15:07:43.2±10.0, 37.05N×70.77E, h178km±117km, mb2.5, mpv3.5, Error ellipse: s-maj=91.1km s-min=57.3km az=23.0*
ISC 08 15:07:35.8±0.5**, 36.40N**±0.03×**71.18E**±0.07**, h121km**±7km**, n45, σ1.30**/53**, mb3.7**/4**, 7C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.63**	**167**	⇓P	**Pn**	**15 08 19.1**	**+1.8**
CEP				S	**Sn**	**15 08 49.0**	**-0.3**
THW	**Thamme Wali**	**3.62**	**172**	P	**Pn**	**15 08 31.4**	**+1.1**
SBDP	**Sheikh Budin**	**4.10**	**184**	P	**Pn**	**15 08 36.5**	**-0.1**
SARP	**Sargodha**	**4.63**	**164**	⇑P	**Pn**	**15 08 44.1**	**+0.4**
SARP				S	**Sn**	**15 09 35.0**	**-1.6**
DRP	**Derazinda**	**4.71**	**190**	P	**Pn**	**15 08 44.8**	**0.0**
DLH	**Dalhousie**	**5.52**	**133**	*e*P	**Pn**	**15 08 55.0**	**-0.6**
DLH				*e*S	**Sn**	**15 09 56.0**	**-1.9**
AML	**Almayashu**	**6.05**	**18**	P	**Pn**	**15 09 03.8**	**+0.9**
	SNR=119						
UCH	**Uchtor**	**6.37**	**23**	P	**Pn**	**15 09 08.3**	**+1.1**
	SNR=26						
EKS2	**Erkin-Say**	**6.57**	**17**	P	**Pn**	**15 09 11.0**	**+1.1**
	SNR=23						
KK31	**Karatay Array**	**6.72**	**356**	⇑P	**Pn**	**15 09 10.7**	**-1.2**
	8.5nm,0.3s,baz=175,slow=13,SNR=137						
KK31				⇑S	**Sn**	**15 10 21.9**	**-5.1**
	6.8nm,0.4s,baz=184,slow=22,SNR=8.8						
KKAR	**Karatay Array**	**6.72**	**356**	PN	**Pn**	**15 09 10.7**	**-1.2**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.2s						
AAK	**Ala-Archa**	**6.74**	**21**	P	**Pn**	**15 09 13.3**	**+1.2**
	SNR=5.3						
AAK	**Ala-Archa**	**6.74**	**21**	*e*PN	**Pn**	**15 09 12.0**	**-0.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.3s						
AAK	**Ala-Archa**	**6.74**	**21**	*e*P	**Pn**	**15 09 12.0**	**-0.2**
	comp=Z,9.5nm,0.3s						
AAK				*e*S	**Sn**	**15 10 24.7**	**-2.7**
SDNR	**Sundarnagar**	**6.86**	**134**	*e*P	**Pn**	**15 09 16.2**	**+2.5**
SDNR				*e*S	**Sn**	**15 10 28.0**	**-2.3**
CHMS	**Chumysh**	**7.15**	**22**	P	**Pn**	**15 09 19.1**	**+1.5**
	SNR=12						
USP	**Ospenovka**	**7.32**	**19**	P	**Pn**	**15 09 21.4**	**+1.3**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.36**	**26**	P	**Pn**	**15 09 22.2**	**+1.8**
	SNR=8.8						
TKM2	**Tokmak 2**	**7.36**	**26**	⇑P	**Pn**	**15 09 21.2**	**+0.7**
	comp=Z,0.4nm,0.5s						
TKM2				⇓S	**Sn**	**15 10 40.2**	**-2.1**
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**13.29**	**35**	Pn	**Pn**	**15 10 40.5**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=220,slow=12,SNR=3.6						
KOLN	**Koldanda**	**13.59**	**126**	*e*P	**Pn**	**15 10 43.1**	**-0.4**
	comp=Z,5.6nm,0.3s						
GKN	**Gorkha**	**14.13**	**123**	*e*P	**Pn**	**15 10 50.2**	**-0.2**
	comp=Z,17nm,0.5s						
DMN	**Daman**	**14.70**	**123**	*e*P	**Pn**	**15 10 58.9**	**+1.3**
	comp=Z,8.9nm,0.4s						
KKN	**Kakani**	**14.70**	**122**	*e*P	**Pn**	**15 10 57.1**	**-0.6**
	comp=Z,7.2nm,0.3s						
KKN	**Kakani**	**14.70**	**122**	*e*P	**Pn**	**15 10 57.1**	**-0.6**
KKN				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PKI	**Pulchoki**	**14.93**	**122**	*e*P	**Pn**	**15 11 01.4**	**+0.9**
AB31	**Akbulak array**	**15.24**	**331**	⇑P	**Pn**	**15 11 01.9**	**-2.6**
	comp=Z,1.3nm,0.4s						
AB31				⇑S	S	15 13 36.7	-25
	comp=Z,1.9nm,0.6s						
AB31	**Akbulak array**	**15.24**	**331**	P	**Pn**	**15 11 02.2**	**-2.3**
KURK	**Kurchatov**	**15.29**	**18**	P	**Pn**	**15 11 05.6**	**+0.6**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**15.29**	**18**	P	**Pn**	**15 11 05.6**	**+0.6**
	comp=Z,1.7nm,0.8s						
JIRN	**Jiri**	**15.41**	**120**	*e*P	**Pn**	**15 11 07.4**	**+0.8**
	comp=Z,22nm,0.5s						
BVAR	**Borovoye Array**	**16.64**	**358**	P	**Pn**	**15 11 21.5**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=170,slow=12,SNR=11						
AKTK	**Aktyubinsk**	**16.94**	**330**	P	**Pn**	**15 11 23.1**	**-2.3**
AKTO	**Aktyubinsk**	**16.94**	**330**	⇓P	**Pn**	**15 11 24.4**	**-1.0**
	comp=Z,0.1nm,1.0s						
AKTO				⇑S	**S**	**15 14 20.2**	**-14**
	comp=Z,0.1nm,1.1s						
AKTO	**Aktyubinsk**	**16.94**	**330**	P	**Pn**	**15 11 23.1**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=135,slow=12,SNR=10.0						
CHKZ	**Chkalovo**	**17.29**	**359**	*e*P	**Pn**	**15 11 29.2**	**-0.4**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CHKZ	**Chkalovo**	**17.29**	**359**	*e*Pn	**Pn**	**15 11 29.2**	**-0.4**
	comp=Z,0.8nm,0.4s						
ZAL	**Zalesovo**	**19.94**	**24**	P	**P**	**15 11 59.9**	**+1.8**
	comp=Z,3.7nm,0.4s,baz=265,slow=5.5,SNR=13						
NVS	**Novosibirsk**	**20.23**	**20**	*e*P	**P**	**15 12 00.5**	**-0.7**
FINES	**FINESS Array B**	**37.65**	**326**	P	**P**	**15 14 39.9**	**+1.0**
	comp=Z,1.0nm,0.7s,mb3.8,baz=106,slow=6.8,SNR=5.0						
FINES	**FINESS Array B**	**37.65**	**326**	P	**P**	**15 14 39.9**	**+1.0**
ARCES	**ARCESS Array B**	**41.30**	**338**	P	**P**	**15 15 10.7**	**+1.4**
	comp=Z,1.3nm,0.9s,mb3.8,baz=114,slow=8.2,SNR=5.6						
NB2	**NORSAR Subarra**	**44.55**	**323**	P	**P**	**15 15 35.7**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.8,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.55**	**323**	P	**P**	**15 15 36.0**	**+0.6**
	comp=Z,1.4nm,0.6s,mb3.8,baz=97,slow=7.8,SNR=5.9						
ASAR	**Alice Springs**	**84.08**	**125**	P	**P**	**15 19 50.8**	**-2.2**
	comp=Z,0.3nm,0.6s,mb3.3,baz=320,slow=5.1,SNR=7.2						

*NEIC **08** 15:28:14.8, 44.23S×168.65E, h5km, ML3.8(WEL), After WEL.*
WEL 08 15:28:14.4±0.2**, 44.19S**×**168.59E, h12km, ML3.8**/9**, 1D, Error ellipse: s-maj=1.6km s-min=1.5km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.68**	**224**	*e*P	Pg	15 28 27.2	-0.3
MSZ	**Milford Sound**	**0.68**	**224**	P*	Pb	15 28 27.0	-1.1
MSZ				S*	Sb	15 28 36.1	-1.4
MSZ				S*	Sb	15 28 36.8	-0.7
WKZ	**Wanaka**	**0.71**	**155**	P	Pg	15 28 27.4	-0.7
WKZ				S	Sg	15 28 36.7	-0.7
WKZ	**Wanaka**	**0.71**	**155**	⇓P*	Pb	15 28 27.4	-1.2
WKZ				S*	Sb	15 28 36.6	-1.7
WKZ				S*	Sb	15 28 36.7	-1.6
FOZ	**Fox Glacier**	**1.01**	**52**	*e*P	Pb	15 28 33.4	-0.4
FOZ	**Fox Glacier**	**1.01**	**52**	*e*P*	Pb	15 28 33.4	-0.4
FOZ				S*	Sb	15 28 49.3	+2.2
EAZ	**Earnscleugh**	**1.16**	**154**	*e*P	Pb	15 28 35.6	-0.8
EAZ	**Earnscleugh**	**1.16**	**154**	*e*P*	Pb	15 28 35.6	-0.8
EAZ				*e*S*	Sb	15 28 50.5	-0.9
LBZ	**Lake Benmore**	**1.16**	**100**	P	Pb	15 28 35.7	-0.7
LBZ				S	Sb	15 28 50.2	-1.2
LBZ	**Lake Benmore**	**1.16**	**100**	P*	Pb	15 28 35.7	-0.7
LBZ				S*	Sb	15 28 50.2	-1.2
LBZ				S*	Sb	15 28 50.3	-1.1
MLZ	**Mavora Lakes**	**1.20**	**194**	*e*P	Pn	15 28 36.8	-0.1
MLZ	**Mavora Lakes**	**1.20**	**194**	P*	Pb	15 28 36.6	-0.3
DCZ	**Deep Cove**	**1.64**	**218**	*e*P	Pn	15 28 43.5	+0.4
DCZ	**Deep Cove**	**1.64**	**218**	PN	Pn	15 28 43.9	+0.8
ODZ	**Otahua Downs**	**1.70**	**121**	*e*P	Pn	15 28 43.9	+0.1
ODZ	**Otahua Downs**	**1.70**	**121**	PN	Pn	15 28 43.8	0.0
ODZ				SN	Sn	15 29 06.8	+1.4
WHZ	**Wether Hill Ro**	**1.76**	**195**	P	Pn	15 28 45.9	+1.2
WHZ	**Wether Hill Ro**	**1.76**	**195**	PN	Pn	15 28 45.8	+1.1
RPZ	**Rata Peaks**	**1.84**	**76**	*e*P	Pn	15 28 45.5	-0.3
RPZ	**Rata Peaks**	**1.84**	**76**	PN	Pn	15 28 45.2	-0.6
TUZ	**Tuapeka**	**1.91**	**158**	*e*P	Pn	15 28 49.3	+2.5
TUZ	**Tuapeka**	**1.91**	**158**	PN	Pn	15 28 49.1	+2.3
TUZ				SN	Sn	15 29 13.0	+2.2
WVZ	**Waitaha Valley**	**1.92**	**55**	PN	Pn	15 28 44.9	-1.9
HHSZ	**Highcliff Hill**	**2.21**	**141**	PN	Pn	15 28 54.2	+3.3
APZ	**The Paps**	**2.68**	**189**	PN	Pn	15 28 59.3	+2.0
LTZ	**Lake Taylor**	**3.02**	**64**	*e*P	Pn	15 29 02.7	+0.7
LTZ	**Lake Taylor**	**3.02**	**64**	PN	Pn	15 29 01.1	-0.9
DSZ	**Denniston Nort**	**3.39**	**45**	*e*P	Pn	15 29 05.7	-1.4
DSZ	**Denniston Nort**	**3.39**	**45**	PN	Pn	15 29 05.7	-1.4
THZ	**Tophouse**	**3.99**	**54**	*e*P	Pn	15 29 14.5	-0.8
QRZ	**Quartz Range**	**4.45**	**42**	*e*P	Pn	15 29 20.3	-1.3
NNZ	**Nelson**	**4.61**	**52**	*e*P	Pn	15 29 23.7	-0.2

CASC 08 15:29:14.2±2.1**, 11.01N**×**87.00W, h25km**±26km**, MD3.9, ML2.5, 2C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.23**	**19**	⇓*i*P	Pn	15 29 35.2	-0.6
COPN				*e*S	Sn	15 29 53.2	+1.7
TICN	**Ticuantepe**	**1.26**	**36**	⇓*e*P	Pn	15 29 36.2	0.0
TISN	**Laguna Tiscapa**	**1.33**	**32**	*e*P	Pn	15 29 36.8	-0.4
MGAN	**Managua**	**1.34**	**33**	*e*P	Pn	15 29 36.7	-0.7
APYN	**Apoyeque**	**1.37**	**27**	*e*P	Pn	15 29 37.2	-0.5
LEON	**Leon**	**1.40**	**4**	⇑*e*P	Pn	15 29 37.4	-0.7
LEON				*e*S	Sn	15 29 56.9	+1.1
MIRN	**Miramar**	**1.45**	**11**	⇓*e*P	Pn	15 29 38.5	-0.3
MIRN				*e*S	Sn	15 29 58.9	+2.0
CONN	**Concepcion**	**1.45**	**68**	⇓*e*P	Pn	15 29 39.1	+0.3
CGA2	**Cerro Gallo 2**	**2.68**	**111**	*e*S	Sn	15 30 28.7	+1.3
PRS1	**Puriscal**	**2.83**	**111**	*e*S	Sn	15 30 32.0	+0.9
LCR2	**La Lucha 2**	**3.20**	**113**	*e*P	Pn	15 30 05.1	+2.2
LCR2				*e*S	Sn	15 30 41.6	+1.3
URSC	**Urasca**	**3.38**	**110**	⇑*e*P	Pn	15 30 08.5	+3.2
URSC				*e*S	Sn	15 30 48.8	+4.3
BUS	**Buena Vista**	**3.50**	**114**	*e*P	Pn	15 30 08.7	+1.7
BUS				*e*S	Sn	15 30 48.7	+1.1

*PRE **08** 15:46:31.5±1.4, 26.95S×26.71E, h2km, ML4.2*
*ISCJB **08** 15:46:32.1±0.4, 27.02S±0.03×26.81E±0.04, h2km, mb4.0/9, Error ellipse: s-maj=5.3km s-min=4.2km az=22.9*
*IDC **08** 15:46:36.4±1.0, 26.92S×26.61E, h0km, mb4.0/8, mb1 4.2/12, mb1mx4.0/21, mbtmp4.1/12, ML3.8/3, Error ellipse: s-maj=22.5km s-min=10.1km az=103.0*
*NEIC **08** 15:46:36.7±0.6, 26.88S×26.68E, h5km, mb4.7/1, Error ellipse: s-maj=17.0km s-min=8.2km az=98.0*
ISC 08 15:46:33.7±0.4**, 27.03S**±0.03×**26.81E**±0.04**, h2km, n33, σ1.55**/50**, mb4.0**/9**, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSR	**Koster**	**1.17**	**4**	*e*P	**Pg**	**15 46 52.1**	**-4.2**
KSR				*e*S	**Sg**	**15 47 07.7**	**-3.7**
KSR				AML	AML	15 47 17.6	
	comp=Z,648nm,0.9s						
SLR	**Silverton**	**1.84**	**46**	*e*P	**Pn**	**15 47 05.5**	**-0.9**
SLR				*e*S	**Sn**	**15 47 29.8**	**-0.5**
SLR				AML	AML	15 47 34.8	
	comp=Z,1μm,0.3s						
BOSA	**Boshof**	**2.10**	**221**	*e*P	**Pn**	**15 47 08.9**	**-0.9**
BOSA				*e*S	**Sn**	**15 47 35.1**	**-1.4**
BOSA				AML	AML	15 47 44.4	
	comp=Z,424nm,0.8s						
BOSA	**Boshof**	**2.10**	**221**	Pn	**Pb**	**15 47 12.8**	**+0.4**
	comp=Z,14nm,0.3s,baz=38,slow=13,SNR=41						
BOSA				Pg	**Pg**	**15 47 15.0**	**+1.1**
	comp=Z,48nm,0.3s,baz=43,slow=16,SNR=98						
BOSA				Sn	**Sn**	**15 47 39.4**	**+2.9**
	comp=Z,112nm,0.3s,baz=30,slow=13,SNR=17						
BOSA				Lg		15 47 42.0	
	comp=Z,129nm,0.3s,baz=317,slow=19,SNR=13						
BOSA	**Boshof**	**2.10**	**221**	*e*Pn	**Pb**	**15 47 12.8**	**+0.4**
BOSA				Pg	**Pg**	**15 47 15.0**	**+1.1**
BOSA				*e*S	**Sn**	**15 47 39.7**	**+3.3**
BOSA				Lg		15 47 42.0	
LBTB	**Lobatse**	**2.28**	**331**	Pn	**Pb**	**15 47 14.2**	**-1.4**
	comp=Z,13nm,0.3s,baz=166,slow=17,SNR=70						
LBTB				Lg		15 47 43.4	
	comp=Z,78nm,0.3s,baz=244,slow=23,SNR=20						
LBTB				Rg		15 47 51.2	
	comp=Z,866nm,1.0s,baz=60,slow=2.1,SNR=26						
LBTB	**Lobatse**	**2.28**	**331**	*e*Pn	**Pb**	**15 47 14.1**	**-1.5**
LBTB				*e*S	**Sn**	**15 47 41.0**	**-0.1**
KSD	**Kokstad**	**4.18**	**147**	*e*P	**Pn**	**15 47 37.8**	**-0.7**
KSD				*e*S	**Sn**	**15 48 27.2**	**-0.7**
KSD				AML	AML	15 48 49.9	
	comp=Z,430nm,0.9s						
POGA	**Pongola**	**4.29**	**96**	*e*P	**Pn**	**15 47 40.4**	**+0.4**
POGA				*e*S	**Sn**	**15 48 31.5**	**+0.9**
POGA				AML	AML	15 48 59.8	
	comp=Z,386nm,0.7s						
UPI	**Upington**	**5.10**	**254**	*e*P	**Pn**	**15 47 49.4**	**-1.8**
UPI				*e*S	**Sn**	**15 48 45.4**	**-5.3**
UPI				AML	AML	15 49 18.2	
	comp=Z,256nm,0.5s						
MSNA	**Messina**	**5.50**	**33**	*e*P	**Pn**	**15 47 54.0**	**-2.7**
MSNA				*e*S	**Sn**	**15 48 54.4**	**-6.1**
MSNA				AML	AML	15 49 34.0	
	comp=Z,55nm,0.9s						
GRM	**Grahamstown**	**6.27**	**182**	*e*P	**Pn**	**15 48 06.4**	**-0.8**
GRM				*e*S	**Sn**	**15 49 17.3**	**-2.1**
GRM				AML	AML	15 50 06.1	
	comp=Z,139nm,0.7s						
SUR	**Sutherland**	**7.46**	**223**	*e*P	**Pn**	**15 48 22.1**	**-1.5**
SUR				*e*S	**Sn**	**15 49 44.3**	**-4.4**
SUR	**Sutherland**	**7.46**	**223**	Pn	**Pn**	**15 48 26.5**	**+2.9**
	comp=Z,4.6nm,0.3s,baz=57,slow=13,SNR=28						
SUR				Sn	**Sn**	**15 49 47.4**	**-1.3**
	comp=Z,9.3nm,0.3s,baz=15,slow=19,SNR=7.5						
SUR				Lg		15 50 30.6	
	comp=Z,17nm,0.3s,baz=122,slow=24,SNR=9.5						
SUR	**Sutherland**	**7.46**	**223**	*e*Pn	**Pn**	**15 48 26.6**	**+3.0**
	comp=Z,161nm,0.8s						
CVNA	**Calvinia**	**7.59**	**233**	*e*P	**Pn**	**15 48 23.3**	**-2.0**
CVNA				*e*S	**Sn**	**15 49 45.8**	**-6.1**
CVNA				AML	AML	15 50 34.1	
	comp=Z,293nm,0.6s						
TSUM	**Tsumeb**	**11.52**	**311**	Pn	**Pn**	**15 49 18.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=124,slow=12,SNR=8.2						
TSUM				Sn	**Sn**	**15 51 21.8**	**-6.6**
	comp=Z,0.4nm,0.3s,baz=29,slow=23,SNR=4.0						
TSUM				Lg		15 52 30.0	
	comp=Z,0.5nm,0.3s,baz=250,slow=18,SNR=4.1						
TSUM	**Tsumeb**	**11.52**	**311**	*e*P	**Pn**	**15 49 18.8**	**-0.4**
TSUM				Sn	**Sn**	**15 51 21.8**	**-6.6**
TSUM				Lg		15 52 30.0	
LSZ	**Lusaka**	**11.76**	**7**	Pn	**Pn**	**15 49 21.5**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=189,slow=13,SNR=37						
LSZ				Sn	**Sn**	**15 51 26.8**	**-7.6**
	comp=Z,0.4nm,0.3s,baz=182,slow=9.1,SNR=4.7						
LSZ				Lg		15 52 36.2	
	comp=Z,0.5nm,0.3s,baz=88,slow=22,SNR=6.3						
LSZ	**Lusaka**	**11.76**	**7**	*e*Pn	**Pn**	**15 49 21.6**	**-0.9**
	comp=Z,18nm,0.9s						
DBIC	**Dimbokro**	**45.41**	**313**	P	**P**	**15 54 55.4**	**+1.6**
	comp=Z,5.5nm,0.9s,mb4.4,baz=146,slow=11,SNR=3.2						
TORD	**Torodi Ar. Bea**	**46.79**	**325**	P	**P**	**15 55 06.0**	**+1.3**
	comp=Z,3.8nm,0.8s,mb4.4,baz=141,slow=7.2,SNR=21						
SNAA	**Sanae**	**47.62**	**192**	*e*	**P**	**15 55 13.7**	**+2.6**
SNAA				*e*		15 55 15.5	
SNAA	**Sanae**	**47.62**	**192**	*e*P	**P**	**15 55 14.1**	**+3.0**
	comp=Z,5.5nm,0.9s,mb4.6						
VNA1	**Neumayer--Stat**	**47.97**	**195**	*e*	**P**	**15 55 17.2**	**+3.3**
VNA1				*e*		15 55 18.3	
BRTR	**Keskin Array B**	**66.71**	**6**	P	**P**	**15 57 28.7**	**+2.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=180,slow=8.2,SNR=4.4						
BDFB	**Brasilia**	**69.75**	**262**	P	**P**	**15 57 47.3**	**+2.0**
	comp=Z,5.6nm,0.8s,mb4.5,baz=148,slow=9.0,SNR=3.2						
ESDC	**Sonseca Array**	**72.30**	**336**	P	**P**	**15 58 02.4**	**+1.7**
	comp=Z,0.2nm,0.3s,mb3.5,baz=153,slow=6.8,SNR=5.2						
VNDA	**Vanda**	**72.31**	**171**	P	**P**	**15 58 03.9**	**+3.1**
	comp=Z,0.8nm,1.0s,mb3.6,baz=280,slow=5.6,SNR=3.7						
GERES	**GERESS Array B**	**76.43**	**351**	P	**P**	**15 58 26.6**	**+1.8**
	comp=Z,0.2nm,0.2s,mb3.6,baz=224,slow=5.6,SNR=4.3						
AKASG	**Malin Array Be**	**77.41**	**2**	P	**P**	**15 58 31.6**	**+1.3**
	comp=Z,0.8nm,0.6s,mb3.8,baz=187,slow=5.5,SNR=6.1						
HLID	**Hailey**	**144.68**	**308**	*e*PKP	PKPdf	16 06 14.2	+2.2
NVAR	**Mina Array Bea**	**148.70**	**300**	PKPbc	PKPbc	16 06 26.9	+4.3
	comp=Z,2.5nm,0.7s,baz=122,slow=2.0,SNR=15						

SKHL 08 15:46:35.1±0.2**, 53.66N**×**124.46E, h10km**±1km**, mb3.5**/4**, 1D, Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZEA	**Zeya**	**1.66**	**86**	⇓*i*Pg	Pg	15 47 05.4	-1.6
ZEA				AMB	AMB	15 47 05.7	
	19nm,0.4s						
ZEA				AMB	AMB	15 47 05.7	
	49nm,0.4s						
ZEA				*e*Sg	Sg	15 47 27.7	-0.8
ZEA				A		15 47 29.6	
	130nm,0.4s						
ZEA				A		15 47 29.6	
	51nm,0.4s						
KROS	**Kirovskiy**	**1.67**	**61**	*e*Pg	Pg	15 47 05.5	-1.7
KROS				AMB	AMB	15 47 06.0	
	9.0nm,0.3s						
KROS				pPg		15 47 09.4	
KROS				*e*Sg	Sg	15 47 27.6	-1.2
KROS				A		15 47 29.7	
	60nm,0.5s						
YASR	**Yasnyy**	**2.14**	**99**	*e*Pg	Pg	15 47 13.4	-2.7
YASR				AMB	AMB	15 47 15.2	
	2.0nm,0.4s						
YASR				AMB	AMB	15 47 15.2	
	8.0nm,0.4s						
YASR				sPg		15 47 18.4	
YASR				*e*Sg	Sg	15 47 41.2	-2.6
YASR				A		15 47 42.1	
	30nm,0.6s						
YASR				A		15 47 42.1	
	50nm,0.6s						
YASR				A		15 47 42.1	
	15nm,0.6s						
TUP	**Tupik**	**2.77**	**288**	*e*Pn	Pn	15 47 22.8	+3.3
TUP				*e*Sn	Sn	15 47 55.6	+2.7
TUP				*e*Sg	Sg	15 48 02.3	-1.6
TUP				A		15 48 04.3	
	37nm,0.5s						
CLNS	**Chul'man**	**3.19**	**4**	*e*Pg	Pg	15 47 35.3	-1.0
CLNS				AMB	AMB	15 47 36.8	
	3.0nm,0.3s						
CLNS				AMB	AMB	15 47 36.8	
	4.0nm,0.3s						
CLNS				*e*Sg	Sg	15 48 16.7	-1.0
CLNS				A		15 48 24.8	
	58nm,0.5s						
CLNS				A		15 48 24.8	
	37nm,0.5s						
CLNS				A		15 48 24.8	
	16nm,0.5s						

CASC 08 15:47:16.1±2.8**, 12.49N**×**85.12W, h22km**±27km**, MD4.0, 1C-2D, Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CGA2	**Cerro Gallo 2**	**2.54**	**165**	*e*P	Pn	15 47 55.9	-0.1
CGA2				*e*S	Sn	15 48 26.0	-0.2
PRS1	**Puriscal**	**2.62**	**162**	*e*P	Pn	15 47 57.8	+0.8
CNCH	**Conchagua**	**2.76**	**287**	*e*P	x	15 48 01.8	
CNCH				*e*S	x	15 48 35.0	
URSC	**Urasca**	**2.95**	**153**	*e*P	Pn	15 48 04.0	+2.4
URSC				*e*S	Sn	15 48 39.4	+3.0
BLLM	**Bellamira**	**3.19**	**288**	*e*P	x	15 48 06.5	
BLLM				*e*S	x	15 48 43.9	
BUS	**Buena Vista**	**3.21**	**155**	*e*P	Pn	15 48 06.2	+1.0
VSM	**San Miguel**	**3.22**	**287**	⇑*e*P	x	15 48 07.7	
VSM				*e*S	x	15 48 44.4	
LCBS	**La Ceiba**	**3.94**	**287**	*e*P	x	15 48 14.9	
LFRS	**El Faro**	**4.01**	**287**	*e*P	x	15 48 15.8	
LFRS				*e*S	x	15 49 01.9	
BOQS	**Boqueron**	**4.24**	**287**	*e*P	x	15 48 19.7	
SNJE	**San Jose**	**4.58**	**288**	*e*P	x	15 48 23.6	
SBLS	**San Blas**	**4.59**	**287**	⇓*e*P	x	15 48 23.2	
RBDL	**Robledal**	**4.73**	**290**	⇓*e*P	x	15 48 26.1	

*ISCJB **08** 15:53:57.8±0.7, 20.94S±0.07×68.64W±0.09, h121km±8km, mb4.1/12, Error ellipse: s-maj=14.4km s-min=10.6km az=33.7*
*IDC **08** 15:53:58.9±0.6, 20.93S×68.70W, h114km±6km, mb3.9/8, mb1 4.0/10, mb1mx3.9/16, mbtmp4.2/10, MS2.9/1, Ms1 2.9/1, ms1mx2.3/24, Error ellipse: s-maj=17.9km s-min=9.0km az=103.0*
*NEIC **08** 15:53:58.2±0.3, 21.01S×68.67W, mb4.2/6, Error ellipse: s-maj=9.5km s-min=7.0km az=88.0*
ISC 08 15:53:58.7±0.7**, 20.96S**±0.06×**68.67W**±0.09**, h115km**±8km**, h115km**±1.4km**:pP-P, n29, σ0.93**/28**, mb4.1**/12**, 1C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.66**	**188**	P	**Pn**	**15 54 28.1**	**+0.4**
	259nm,0.3s,baz=7.0,slow=9.6,SNR=1784						
LVC				S	**Sn**	**15 54 51.0**	**+1.2**
	895nm,0.3s,baz=270,slow=21,SNR=42						
LVC	**Limon Verde**	**1.66**	**188**	⇑*i*Pn	**Pn**	**15 54 28.2**	**+0.4**
LVC				*e*Sn	**Sn**	**15 54 50.7**	**+0.9**
LVC				S	**Sn**	**15 54 51.0**	**+1.2**
LPAZ	**La Paz**	**4.67**	**6**	*e*Pn	**Pn**	**15 55 07.7**	**+0.6**
SIV	**San Ignacio**	**8.74**	**57**	P	**Pn**	**15 56 01.1**	**-1.1**
	1.4nm,0.3s,baz=238,slow=13,SNR=22						
CFAA	**Coronel Fontan**	**10.61**	**178**	P	**Pn**	**15 56 24.6**	**-2.9**
	0.7nm,0.3s,baz=354,slow=15,SNR=16						
CPUP	**Villa Florida**	**11.69**	**119**	P	**Pn**	**15 56 42.3**	**+0.5**
	0.6nm,0.3s,baz=284,slow=12,SNR=5.9						
CPUP				LR	LR	16 02 30.7	
	comp=Z,52nm,18.6s,baz=306,slow=44						
CPUP	**Villa Florida**	**11.69**	**119**	Pn	**Pn**	**15 56 41.7**	**-0.1**
CPUP				LR	LR	16 02 30.7	
SAML	**Samuel**	**13.06**	**25**	*e*Pn	**Pn**	**15 56 59.0**	**-0.9**
PLCA	**Paso Flores**	**19.78**	**184**	*e*Pn	**Pn**	**15 58 20.4**	**-2.0**
	10nm,0.8s						
BDFB	**Brasilia**	**20.31**	**78**	P	**P**	**15 58 25.4**	**-0.1**
	4.8nm,0.4s,baz=242,slow=9.3,SNR=5.4						
DBIC	**Dimbokro**	**68.37**	**74**	P	**P**	**16 04 49.0**	**+1.2**
	9.8nm,0.8s,mb4.7,baz=217,slow=7.6,SNR=12						
SRU	**San Rafael**	**71.44**	**327**	*e*P	**P**	**16 05 06.9**	**+0.3**
	5.3nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**73.75**	**330**	P	**P**	**16 05 20.4**	**+0.1**
	0.5nm,0.8s,mb3.3,baz=122,slow=5.4,SNR=4.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HWUT	Hardware Ranch	73.84	328	eP	P	16 05 20.4	-0.4
	3.3nm,0.7s,mb4.2						
ULM	Lac du Bonnet	74.87	342	P	P	16 05 25.2	-1.5
	2.6nm,0.5s,mb4.2,baz=140,slow=8.4,SNR=5.4						
RRI2	Red Ridge	75.03	329	eP	P	16 05 27.8	+0.1
	2.8nm,0.8s,mb4.0						
NVAR	Mina Array Bea	75.20	322	P	P	16 05 29.4	+0.7
	1.0nm,0.7s,mb3.7,baz=136,slow=6.2,SNR=9.4						
GCMT	Greycliff	76.14	332	eP	P	16 05 33.9	-0.1
HLID	Hailey	76.70	328	eP	P	16 05 38.0	+0.8
	2.7nm,0.9s,mb4.0						
TOA0	Torodi Ar. Sit	76.97	70	eP	P	16 05 39.1	+0.5
TORD	Torodi Ar. Bea	76.97	70	P	P	16 05 39.6	+0.9
	3.4nm,0.4s,mb4.4,baz=254,slow=5.3,SNR=76						
TORD				pP	pP	16 06 08.8	+1.1
	1.6nm,0.5s,baz=251,slow=5.3,SNR=3.9						
BMO	Blue Mountains	79.08	327	eP	P	16 05 50.3	-0.1
	2.4nm,0.8s,mb4.1						
BMO				epP	pP	16 06 18.6	-0.9
MAW	Mawson	84.78	163	pP	pP	16 06 50.5	+0.9
	1.5nm,0.6s,baz=246,slow=7.4,SNR=3.9						
ESDC	Sonseca Array	85.29	44	P	P	16 06 23.9	+1.2
	0.2nm,0.2s,mb3.6,baz=254,slow=7.5,SNR=4.2						
YKA	Yellowknife Ar	90.75	341	P	P	16 06 47.8	-1.0
	1.1nm,0.5s,mb4.2,baz=132,slow=4.6,SNR=12						
YKA				pP	pP	16 07 17.9	-0.6
	1.2nm,0.9s,baz=140,slow=4.3,SNR=3.3						
YKA	Yellowknife Ar	90.75	341	P	P	16 06 47.8	-1.0
YKA				pP	pP	16 07 17.9	-0.6
MKAR	Makanchi Array	145.07	36	PKPbc	PKPbc	16 13 23.1	+1.0
	12nm,0.7s,baz=322,slow=3.7,SNR=113						
MKAR				pPKPbc		16 13 52.5	
	5.4nm,0.9s,baz=316,slow=3.3,SNR=5.1						
MJAR	Matsushiro Arr	151.91	309	PKPbc	PKPbc	16 13 40.8	+0.7
	1.6nm,0.6s,baz=71,slow=1.0,SNR=6.0						
SONM	Songino Array	152.89	7	PKPbc	PKPbc	16 13 43.4	+1.1
	1.7nm,0.8s,baz=310,slow=2.5,SNR=4.1						

*CSEM **08** 16:10:04.2±0.1, 3874N×2794E, h10km, MD3.4, Error ellipse: s-maj=1.4km s-min=1.0km az=118.0*
*ISK **08** 16:10:04.8, 3875N×2792E, h16km, MD3.4, ML3.6*
*ISCJB **08** 16:10:05.1±0.4, 3875N±002×2790E±002, h12km±3km, Error ellipse: s-maj=3.5km s-min=3.0km az=99.4*
*NEIC **08** 16:10:07.7±0.8, 3868N×2763E, h10km, MD3.3(ISK), MD3.6(ATH), ML3.7(THE), Error ellipse: s-maj=12.6km s-min=8.7km az=51.0*
*ATH **08** 16:10:07.7, 3864N×2766E, h29km±2km, MD3.6/3*
*THE **08** 16:10:08.7, 3860N×2759E, h0km, ML3.7*
ISC 08 16:10:05.5±0.4, **3875N**±002×**2790E**±003, **h12**km±3km, **n51**, σ**0.61**/66, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.14	333	iP	Pg	16 10 08.9	+0.1
AKHS				iS	Sg	16 10 10.7	-0.6
AKS	Akhisar	0.14	333	iPG	Pg	16 10 09.0	+0.1
KDAG	Bornova	0.60	235	iP	Pg	16 10 17.1	-0.1
KDAG				iS	Sg	16 10 24.4	-0.7
IZM	Izmir	0.61	235	iPG	Pg	16 10 17.1	-0.2
BLCB	Balcova	0.76	242	iPG	Pg	16 10 20.5	+0.3
BLCB				iSG	Sg	16 10 31.6	+1.4
BTOK	Tokmak	1.01	6	iP	Pb	16 10 25.2	+0.3
BTOK				iS	Sg	16 10 38.1	-0.1
DST	Dursunbey	1.02	33	iPG	Pg	16 10 24.4	-0.8
DST				iSG	Sg	16 10 39.4	+0.8
AYDN	Tasoluk	1.09	181	iP	Pb	16 10 26.4	+0.1
AYDN				iS	Sb	16 10 40.1	-0.4
URLA	Izmir	1.09	249	iP	Pb	16 10 26.8	+0.5
URLA				iS	Sb	16 10 41.0	+0.5
GDZ	Gediz	1.28	74	iP	Pn	16 10 29.5	+0.3
GDZ				iS	Sb	16 10 45.1	-0.9
SMG	Samos	1.33	219	ePN	Pn	16 10 29.3	-0.6
DENT	Denizli	1.34	138	PN	Pn	16 10 30.2	+0.2
PRK	Paraskevi	1.36	292	ePN	Pn	16 10 30.8	+0.5
PRK				eSN	Sn	16 10 48.3	+0.1
CANB	Canakkale	1.42	333	PN	Pn	16 10 31.2	+0.1
CHOS	Chios island	1.49	256	ePg	Pn	16 10 32.5	+0.4
CHOS				eSg	Sn	16 10 49.9	-1.6
EDC	Edincik	1.59	359	PN	Pn	16 10 33.0	-0.5
BNT	Bandirma	1.60	1	PN	Pn	16 10 33.8	+0.2
EZN	Ezine	1.62	312	PN	Pn	16 10 34.3	+0.4
YER	Yerkesik	1.64	169	PN	Pn	16 10 33.9	-0.3
ULDT	Uludag	1.69	34	iP	Pn	16 10 36.3	+1.5
ULDT				iS	Sn	16 10 56.8	+0.4
BODT	Bodrum	1.75	196	PN	Pn	16 10 35.0	-0.6
ALT	Altintas	1.75	79	PN	Pn	16 10 35.3	-0.4
BOZC	Bozcaada	1.80	308	iP	Pn	16 10 36.7	+0.4
BOZC				iS	Sn	16 10 58.7	-0.4
LPK	Lapseki	1.84	332	PN	Pn	16 10 36.6	-0.3
MRMT	Marmara Adasi	1.86	353	PN	Pn	16 10 37.1	-0.1
GEMT	Gemlik	1.96	30	PN	Pn	16 10 38.0	-0.5
ARMT	Armutlu	1.96	22	PN	Pn	16 10 38.2	-0.3
RKY	Sarkoy-Tekirda	2.01	344	PN	Pn	16 10 39.4	+0.2
DAT	Datca	2.04	187	PN	Pn	16 10 39.4	-0.2
DALT	Dalyan (Mudla)	2.06	163	ePN	Pn	16 10 39.8	-0.2
MFT	Murefte	2.09	347	ePN	Pn	16 10 40.3	0.0
GADA	Gvkgeada	2.11	314	ePN	Pn	16 10 40.9	+0.3
YLV	Yalova	2.14	32	ePN	Pn	16 10 40.3	-0.7
ADVT	Abdulvahap	2.20	40	ePN	Pn	16 10 41.7	-0.2
ISP	Isparta	2.25	113	ePN	Pn	16 10 42.2	-0.3
ISP	Isparta	2.25	113	ePn	Pg	16 10 48.0	-0.6
ISP				eSn	Sg	16 11 20.6	+2.9
ENEZ	Enez	2.39	326	ePN	Pn	16 10 45.1	+0.6
LIA	Limnos Island	2.40	299	ePN	Pn	16 10 45.4	+0.9
LIA				eSN	Sn	16 11 13.4	-0.4
GPA	Golpazari	2.42	50	ePN	Pn	16 10 44.8	0.0
ESKT	Eskisehir	2.42	71	ePN	Pn	16 10 44.9	0.0
CTT	Catalca	2.43	10	ePN	Pn	16 10 44.6	-0.4
HRT	Hereke	2.48	33	ePN	Pn	16 10 45.8	+0.2
ISK	Istanbul-Kandi	2.48	21	ePN	Pn	16 10 45.4	-0.3
LOS	Limnos	2.48	299	ePn	Pn	16 10 46.9	+1.2
APE	Apeiranthos	2.52	229	ePn	Pn	16 10 46.1	-0.1
APE	Apeiranthos	2.52	229	ePn	Pn	16 10 45.7	-0.5
ELL	Elmali	2.56	141	ePN	Pn	16 10 46.8	0.0
ALN	Alexandroupoli	2.57	327	ePn	Pn	16 10 47.7	+0.7
ALN				eSn	Sg	16 11 26.6	-1.5
KLYT	Kilyos	2.65	19	ePN	Pn	16 10 48.2	+0.2
EDRB	Edirne	3.21	344	ePN	Pn	16 10 55.5	-0.3
OUR	Ouranopolis	3.41	299	ePn	Pn	16 10 59.1	+0.6

*CSEM **08** 16:29:00.8±0.1, 3729N×2681E, h40km, MD3.0, Error ellipse: s-maj=2.8km s-min=1.9km az=31.0*
*ISCJB **08** 16:29:01.4±1.3, 3728N±009×268E±01, h45km±25km, Error ellipse: s-maj=21.6km s-min=9.5km az=104.9*
*ISK **08** 16:29:01.9, 3745N×2768E, h27km, ML2.5*
*ATH **08** 16:29:02.4, 3692N×2659E, h45km, MD3.0/3*
ISC 08 16:29:01.7±1.2, **3728N**±009×**268E**±01, **h42**km±25km, **n6**, σ**1.00**/8, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMG	Samos	0.43	6	eP	Sn	16 29 18.3	-0.4
BODT	Bodrum	0.47	117	PG	Pn	16 29 12.2	0.0
BODT				SG	Sn	16 29 20.5	+0.9
DAT	Datca	0.84	131	PG	Pn	16 29 17.2	+0.1
DAT				SG	Sn	16 29 26.7	-1.6
APE	Apeiranthos	1.02	259	eP	Pn	16 29 19.5	-0.1
BLCB	Balcova	1.12	10	ePG	Pn	16 29 21.1	+0.1
ARG	Arkhangelos	1.51	134	eP	Pn	16 29 27.1	+0.8

*STR **08** 16:34:30.8±0.7, 4707N×489E, h5km±1km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **08** 16:34:31.1, 4705N×493E, h17km, ML2.4(STR), ML2.5(LDG), After LDG.*
*CSEM **08** 16:34:31.2±0.1, 4707N×491E, h20km, ML2.5/18, Error ellipse: s-maj=1.5km s-min=1.0km az=164.0*
LDG 08 16:34:31.1±0.1, **4705N**×**493E**, **h17**km, **Md2.6**/2, **Ml2.5**/17, **Error ellipse: s-maj=1.5km s-min=1.1km az=168.0, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LOR	Lormes	0.76	287	ePg	Pg	16 34 45.6	-0.4
LOR				eSg	Sg	16 34 55.8	-0.3
	100nm,0.2s						
LOR	Lormes	0.76	287	ePg	Pg	16 34 45.6	-0.4
LOR				eSg	Sg	16 34 55.8	-0.3
	50nm,0.2s						
SMF	Signal de Mont	0.85	242	ePg	Pg	16 34 47.8	+0.2
SMF				eSg	Sg	16 34 58.8	+0.1
	52nm,0.2s						
SMF	Signal de Mont	0.85	242	ePn	Pn	16 34 46.8	-1.4
SMF				ePg	Pg	16 34 47.8	+0.2
SMF				eSg	Sg	16 34 58.8	+0.1
SMF	Signal de Mont	0.85	242	ePg	Pg	16 34 47.8	+0.2
SMF				eSg	Sg	16 34 58.8	+0.1
	26nm,0.2s						
CABF	La Chapelle	0.91	118	ePg	Pg	16 34 48.6	-0.2
CABF				eSg	Sg	16 35 01.1	+0.4
	23nm,0.2s						
CABF	La Chapelle	0.91	118	ePg	Pg	16 34 48.6	-0.2
CABF				eSg	Sg	16 35 01.1	+0.4
	11nm,0.2s						
SSF	Saint Saulge	0.97	271	ePg	Pg	16 34 49.6	-0.4
SSF				eSg	Sg	16 35 02.1	-0.6
	19nm,0.3s						
SSF	Saint Saulge	0.97	271	ePg	Pg	16 34 49.6	-0.4
SSF				eSg	Sg	16 35 02.1	-0.6
	9.5nm,0.3s						
OG05	Jujurieux	1.07	160	Pg	Pg	16 34 51.8	0.0
AVF	Avril sur Loir	1.11	257	ePg	Pg	16 34 51.8	-0.8
AVF				eSg	Sg	16 35 06.2	-0.9
	5.2nm,0.2s						
AVF	Avril sur Loir	1.11	257	ePg	Pg	16 34 51.8	-0.8
AVF				eSg	Sg	16 35 06.2	-0.9
	2.6nm,0.2s						
LOMF	Lomont	1.33	76	Pg	Pg	16 34 56.2	-0.6
LOMF				Sg	Sg	16 35 14.1	-0.1
LOMF	Lomont	1.33	76	Pg	Pg	16 34 56.2	-0.6
LOMF				Sg	Sg	16 35 13.5	-0.7
HAU	Haudompre	1.36	45	eSg	Sg	16 35 14.2	-0.9
	22nm,0.3s						
HAU	Haudompre	1.36	45	eSg	Sg	16 35 14.2	-0.9
	11nm,0.3s						
PLDF	La Plantade	1.40	220	Pg	Pg	16 34 57.5	-0.7
PLDF				Sg	Sg	16 35 16.4	-0.1
PLDF	La Plantade	1.40	220	Pg	Pg	16 34 57.5	-0.7
PLDF				Sg	Sg	16 35 15.6	-0.9
MEZF	Maizieres J'vi	1.46	3	ePn	Pn	16 34 55.0	-1.6
MEZF				eSg	Sg	16 35 17.1	-1.1
	13nm,0.3s						
MEZF	Maizieres J'vi	1.46	3	ePn	Pn	16 34 55.0	-1.6
MEZF				eSg	Sg	16 35 17.1	-1.1
	6.6nm,0.3s						
BGF	Bois d'Agland	1.51	252	ePg	Pg	16 35 01.0	+0.8
BGF				eSg	Sg	16 35 18.1	-1.7
	15nm,0.3s						
BGF	Bois d'Agland	1.51	252	ePn	Pn	16 34 55.0	-2.4
BGF				ePg	Pg	16 35 01.0	+0.8
BGF				eSg	Sg	16 35 18.1	-1.7
BGF	Bois d'Agland	1.51	252	ePg	Pg	16 35 01.0	+0.8
BGF				eSg	Sg	16 35 18.1	-1.7
	7.3nm,0.3s						
HINF	Hinteralfeld	1.52	59	ePg	Pg	16 34 59.8	-0.5
HINF				eSg	Sg	16 35 18.3	-1.8
	7.3nm,0.2s						
HINF	Hinteralfeld	1.52	59	ePn	Pn	16 34 55.1	-2.4
HINF				ePg	Pg	16 34 59.8	-0.5
HINF				eSg	Sg	16 35 18.3	-1.8
HINF	Hinteralfeld	1.52	59	ePg	Pg	16 34 59.8	-0.5
HINF				eSg	Sg	16 35 18.3	-1.8
	3.7nm,0.2s						
AGO	Saint Agoulin	1.59	232	Pn	Pn	16 34 56.8	-1.6
AGO				Sg	Sg	16 35 20.7	-1.6
AGO	Saint Agoulin	1.59	232	Pg	Pg	16 35 03.4	+1.7
AGO				Sg	Sg	16 35 20.7	-1.6
MOF	Molkenrain	1.70	61	Pg	Pg	16 35 02.8	-1.0
PYM	Petit Puy Mans	1.85	226	Pg	Pg	16 35 08.2	+1.4
ECH	Echery	1.91	51	Pg	Pg	16 35 07.6	-0.2
LPL	La Plagne	1.98	140	ePg	Pg	16 35 08.3	-0.8
LPL				eSg	Sg	16 35 32.8	-2.0
	2.6nm,0.2s						
LPL	La Plagne	1.98	140	ePg	Pg	16 35 08.3	-0.8
LPL				eSg	Sg	16 35 32.8	-2.0
	1.3nm,0.2s						
LPG	La Plagne	2.00	140	ePg	Pg	16 35 08.6	-0.9
LPG				eSg	Sg	16 35 35.2	-0.3
	2.9nm,0.2s						
LPG	La Plagne	2.00	140	ePn	Pn	16 35 02.8	-1.3
LPG				ePg	Pg	16 35 08.6	-0.9
LPG				eSg	Sg	16 35 35.2	-0.3
LPG	La Plagne	2.00	140	ePg	Pg	16 35 08.6	-0.9
LPG				eSg	Sg	16 35 35.2	-0.3
	1.5nm,0.2s						
TCF	Toulx Ste Croi	2.02	249	ePg	Pg	16 35 08.4	-1.5
TCF				eSg	Sg	16 35 35.5	-0.6
	3.2nm,0.2s						
TCF	Toulx Ste Croi	2.02	249	ePn	Pn	16 35 03.2	-1.1
TCF				ePg	Pg	16 35 08.4	-1.5
TCF				eSg	Sg	16 35 35.5	-0.6
TCF	Toulx Ste Croi	2.02	249	ePg	Pg	16 35 08.4	-1.5
TCF				eSg	Sg	16 35 35.5	-0.6
	1.6nm,0.2s						
CDF	Champ du Feu	2.09	48	ePg	Pg	16 35 10.1	-1.2
CDF				eSg	Sg	16 35 37.1	-1.4
	4.1nm,0.3s						
CDF	Champ du Feu	2.09	48	ePg	Pg	16 35 10.1	-1.2
CDF				eSg	Sg	16 35 37.1	-1.4
	2.0nm,0.3s						
LBL	Lubilhac	2.16	213	Pg	Pg	16 35 13.0	+0.5
VIVF	Saint-Julien-l	2.20	185	ePg	Pg	16 35 13.2	-0.1
VIVF				eSg	Sg	16 35 39.1	-2.7
	3.8nm,0.2s						
VIVF	Saint-Julien-l	2.20	185	ePg	Pg	16 35 13.2	-0.1
VIVF				eSg	Sg	16 35 39.1	-2.7
	1.9nm,0.2s						
MBDF	Montbardon	2.65	150	ePg	Pg	16 35 20.0	-2.0
CAF	Calviac	2.91	224	eSg	Sg	16 36 02.3	-2.4
	1.2nm,0.2s						
CAF	Calviac	2.91	224	eSg	Sg	16 36 02.3	-2.4
	0.6nm,0.2s						
RJF	Les Rejaudoux	2.94	235	ePn	Pn	16 35 15.1	-1.9
RJF				eSg	Sg	16 36 03.6	-2.0
	2.4nm,0.3s						
RJF	Les Rejaudoux	2.94	235	ePn	Pn	16 35 15.1	-1.9
RJF				eSg	Sg	16 36 03.6	-2.0
	1.2nm,0.3s						
BAIF	Baives	3.05	351	ePn	Pn	16 35 17.1	-1.5
BAIF				eSg	Sg	16 36 06.5	-2.7
	2.1nm,0.2s						
BAIF	Baives	3.05	351	ePn	Pn	16 35 17.1	-1.5
BAIF				eSg	Sg	16 36 06.5	-2.7
	1.0nm,0.2s						
MFF	Saint Martin d	3.51	265	eSg	Sg	16 36 20.8	-3.1
	0.8nm,0.2s						
MFF	Saint Martin d	3.51	265	eSg	Sg	16 36 20.8	-3.1
	0.4nm,0.2s						

MAN 08 16:45:40.0, 1714N×11927E, h1km, mb2.7, ML4.2, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.98	141	eP	Pg	16 45 58.4	-0.3
ABRA	Dolores	1.47	70	eP	Pn	16 46 07.6	0.0
ABRA				eS	Sg	16 46 28.5	+1.4
APYP	Conner	2.02	69	eP	Pn	16 46 15.7	+0.6
APYP				eS	Sn	16 46 42.2	+1.3
CAUP	Cauayan	2.45	94	eP	Pn	16 46 23.7	+2.7

*NEIC **08** 16:46:24.6, 1456N×9406W, h13km, MD4.3(MEX), After MEX.*
MEX 08 16:46:22.6±0.7, **1441N**×**9412W**, **h34**km±999km, **MD4.3, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCIG	Comitan	2.67	46	eP	Pn	16 47 01.5	-1.7
CCIG				iS	Sn	16 47 32.7	-1.7
SCX	San Cristobal	2.72	32	iP	Pn	16 47 04.0	+0.1
SCX	San Cristobal	2.72	32	iP	Pn	16 47 05.0	+1.1
CMIG	Matias Romero	2.76	345	iP	Pn	16 47 03.2	-1.3
CMIG				iS	Sn	16 47 34.5	-2.1
CMIG	Matias Romero	2.76	345	iP	Pn	16 47 04.1	-0.4
CMIG				iS	Sn	16 47 34.5	-2.1
OXX	Oaxaca	3.65	317	eP	Pn	16 47 15.0	-1.7
OXX	Oaxaca	3.65	317	eP	Pn	16 47 18.5	+1.8

IDC 08 17:26:05.1±4.3, **1011S**×**10801E**, **h0**km, **mb3.7**/3, **mb1 3.8**/4, **mb1mx3.6**/14, **mbtmp3.7**/4, **ML3.4**/1, **Error ellipse: s-maj=177.7km s-min=24.3km az=50.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.84	117	P	Pn	17 30 26.8	-0.1
	0.1nm,0.3s,baz=279,slow=19,SNR=6.2						
ASAR	Alice Springs	28.14	122	P	P	17 31 59.2	+0.4
	0.3nm,0.9s,baz=297,slow=8.6,SNR=3.6						
SONM	Songino Array	57.70	359	P	P	17 35 57.6	+0.1
	1.3nm,0.5s,baz=175,slow=8.0,SNR=13						
MKAR	Makanchi Array	61.13	340	P	P	17 36 21.2	+0.1
	0.9nm,0.7s,baz=152,slow=8.0,SNR=8.9						

MAN 08 17:28:10.8, 901N×12620E, h24km, mb2.2, ML3.9, MS1.6, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.57	266	eP	Pb	17 28 22.4	+0.3
BUTP				eS	Sb	17 28 33.0	+3.1
SCPH	Surigao	1.04	318	eP	Pn	17 28 29.4	-0.4
SCPH				eS	Sb	17 28 43.9	+0.6
BUKP	Musuan	1.59	225	eP	Pn	17 28 38.0	+0.7
BUKP				eS	Sn	17 28 57.9	+0.7
MATI	Mati	2.05	178	eP	Pn	17 28 43.8	+0.1
MATI				eS	Sn	17 29 09.6	+1.0

*ISCJB **08** 17:40:47.9±0.3, 4827N±002×881E±003, h12km±3km, Error ellipse: s-maj=3.1km s-min=2.9km az=155.3*
*ZUR **08** 17:40:48.6, 4824N×885E, h13km±4km, ML1.8/7*
*LEDBW **08** 17:40:48.3±0.1, 48265N±0007×886E±001, h17km, ML1.7, Error ellipse: s-maj=4.0km s-min=2.2km az=77.0*
*LDG **08** 17:40:50.6±0.6, 4840N×870E, h2km, Md2.2/2, Ml2.0/3, Error ellipse: s-maj=12.4km s-min=8.1km az=133.0*
*STR **08** 17:40:50.9±0.8, 4827N×864E, h10km±1km, Ml1.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 08 17:40:48.2±0.4, **4827N**±002×**883E**±003, **h18**km±4km, **n28**, σ**0.72**/49, **2C-7D, Germany**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BHBD	Braunhartsberg	0.12	100	⇑iPg	Pg	17 40 52.0	+0.1
BHBD				iSg	Sg	17 40 54.6	+0.1
MSS	Messtetten	0.13	136	⇓iP*	Pg	17 40 52.1	+0.1
MSS				iS*	Sg	17 40 54.8	+0.2
GUT	Gutenstein	0.28	136	⇓iP*	Pg	17 40 54.1	-0.1
GUT				iS*	Sg	17 40 58.0	-0.4
TUBL	Tuebingen-Lenn	0.30	34	⇑iP*	Pg	17 40 55.4	+0.7
TUBL				iS*	Sg	17 40 59.7	+0.5
TUBL	Tuebingen-Lenn	0.30	34	⇑iPg	Pg	17 40 55.4	+0.7
TUBL				iSg	Sg	17 40 59.7	+0.5
BFO	Black Forest	0.34	281	ePg	Pg	17 40 55.8	+0.4
BFO				eSg	Sg	17 41 00.8	+0.6
LBG	Lerchenberg	0.40	357	⇓iP*	Pg	17 40 56.4	+0.1
LBG				PmP		17 40 57.4	
LBG				iS*	Sg	17 41 02.2	+0.3
LBG				SmS		17 41 04.1	
LBG	Lerchenberg	0.40	357	⇓iPg	Pg	17 40 56.4	+0.1
LBG				iSg	Sg	17 41 02.2	+0.3
LBG	Lerchenberg	0.40	357	P	Pg	17 40 57.4	+1.1
LBG				S	Sg	17 41 04.1	+2.2
SLE	Schleitheim	0.55	204	⇓iPg	Pg	17 40 59.2	+0.1
	80nm,0.4s						
SLE				iSg	Sg	17 41 06.6	+0.1
	80nm,0.4s						
SISB	Singen-Schiene	0.59	171	P*	Pb	17 40 59.7	-0.2
SISB				S*	Sb	17 41 08.3	+0.3
STEIN	Stein am Rhein	0.60	177	⇓iPg	Pg	17 41 00.1	+0.1
	23nm,0.5s						
TRULL	Truellikon	0.63	189	eSg	Pg	17 41 00.6	0.0
	70nm,0.2s						
TRULL	Truellikon	0.63	189	⇓iPg	Sg	17 41 09.2	+0.2
	70nm,0.2s						
KIZ	Kirchzarten	0.69	243	P	Pb	17 41 01.9	+0.2
KIZ				S	Sg	17 41 11.0	+0.3
WEIN	Weingarten	0.75	172	ePg	Pg	17 41 02.7	-0.1
	14nm,1.0s						
WILA	Wila	0.86	176	⇑iPg	Pg	17 41 04.7	-0.2
	62nm,0.3s						
WILA				iSg	Sg	17 41 16.3	+0.1
	62nm,0.3s						
SULZ	Sulz-Cheisache	0.88	213	eSg	Sg	17 41 17.4	+0.4
	79nm,0.3s						
HDH	Heidenheim-Cha	0.97	71	P	Pb	17 41 05.9	-0.6
HDH				Sg	Sg	17 41 18.7	-1.1
LANF	Langenberg	0.98	317	Pg	Pg	17 41 08.7	+1.4
LANF				Sg	Sg	17 41 20.6	+0.4
WLS	Welschbruch	0.99	279	Pg	Pg	17 41 07.4	-0.1
WLS				Sg	Sg	17 41 18.7	-1.9
CDF	Champ du Feu	1.05	278	ePg	Pg	17 41 08.0	-0.4
CDF				eSg	Sg	17 41 21.8	-0.4
	2.6nm,0.2s						
ECH	Echery	1.12	268	Pg	Pg	17 41 09.0	-0.8
ECH				Sg	Sg	17 41 24.3	-0.1
SIND	Sindeldorf	1.20	25	Pg	Pg	17 41 11.0	-0.3
SIND				Sg	Sg	17 41 25.6	-1.4
HINF	Hinteralfeld	1.40	252	ePn	Pn	17 41 15.2	+2.4
HINF	Hinteralfeld	1.40	252	ePg	Pg	17 41 16.2	+1.0
HINF				eSg	Sg	17 41 32.8	-0.6
	2.9nm,0.4s						
LOR	Lormes	3.50	255	ePg	Pg	17 41 54.7	-0.5
LOR				eSg	Sg	17 42 38.9	-1.6
	1.0nm,0.3s						
BAIF	Baives	3.52	302	ePn	Pn	17 41 42.3	+0.3

*ISCJB **08** 17:51:34.4±0.3, 4833N±002×658E±002, h13km±5km, Error ellipse: s-maj=3.1km s-min=2.7km az=163.7*
*BGR **08** 17:51:36.1±1.6, 4834N×672E, h10km, ML1.9, Error ellipse: s-maj=18.9km s-min=6.7km az=45.0*
*NEIC **08** 17:51:36.5, 4833N×666E, h8km, ML2.3(STR), ML2.6(LDG), After LDG.*
*STR **08** 17:51:36.2±0.2, 4834N×665E, h10km±1km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **08** 17:51:36.5±0.1, 4833N×666E, h8km, Md2.7/3, Ml2.6/14, Error ellipse: s-maj=1.2km s-min=1.1km az=72.0*
*CSEM **08** 17:51:36.5±0.1, 4834N×665E, h10km, ML2.6/13, Error ellipse: s-maj=1.0km s-min=0.8km az=1.0*
ISC 08 17:51:35.5±0.3, **4832N**±002×**663E**±002, **h17**km±4km, **n54**, σ**0.82**/101, **France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HAU	Haudompre	0.37	211	ePg	Pg	17 51 44.0	+0.8
HAU				eSg	Sg	17 51 49.2	+0.8
	61nm,0.2s						
HAU	Haudompre	0.37	211	ePg	Pg	17 51 44.0	+0.8
HAU				eSg	Sg	17 51 49.2	+0.8
	30nm,0.2s						
ECH	Echery	0.37	107	Pg	Pg	17 51 43.7	+0.5
ECH				Sg	Sg	17 51 48.5	+0.1
THEF	They Montfort	0.44	257	Pg	Pg	17 51 45.1	+0.6
THEF				Sg	Sg	17 51 51.1	+0.6
CDF	Champ du Feu	0.44	78	ePn	Pg	17 51 45.9	+1.4
CDF				eSg	Sg	17 51 49.4	-1.1
	29nm,0.2s						
CDF	Champ du Feu	0.44	78	ePg	Pg	17 51 44.8	+0.3
CDF				ePn	Pg	17 51 45.9	+1.4
CDF				eSg	Sg	17 51 49.4	-1.1
CDF	Champ du Feu	0.44	78	ePn	Pg	17 51 45.9	+1.4
CDF				eSg	Sg	17 51 49.4	-1.1
	15nm,0.2s						
WLS	Welschbruch	0.49	79	Pg	Pg	17 51 45.6	+0.2
WLS				Sg	Sg	17 51 52.2	+0.1
HINF	Hinteralfeld	0.53	163	ePg	Pg	17 51 46.7	+0.6
HINF				eSg	Sg	17 51 53.6	+0.4
	46nm,0.2s						
HINF	Hinteralfeld	0.53	163	ePg	Pg	17 51 46.7	+0.6
HINF				eSg	Sg	17 51 53.6	+0.4
	23nm,0.2s						
MOF	Molkenrain	0.58	144	Pg	Pg	17 51 47.8	+0.7
LIBD	Limburg	0.68	105	Pg	Pg	17 51 49.8	+1.0
LOMF	Lomont	0.98	172	Pg	Pg	17 51 55.7	+1.1
LOMF				Sg	Sg	17 52 08.8	+1.3
LANF	Langenberg	1.02	49	Pg	Pg	17 51 55.4	+0.1
FELD	Feldberg im Sc	1.03	115	Pg	Pg	17 51 55.9	+0.5

FELD				Sg	Sg	17 52 09.0	+0.1
BBS	Basel-Blauen	1.04	145	Pg	Pg	17 51 56.5	+0.7
MEZF	Maizieres J'vi	1.06	280	*e*Pg	Pg	17 51 56.8	+0.6
MEZF				*e*Sg	Sg	17 52 11.2	+1.1
	20nm,0.2s						
MEZF	Maizieres J'vi	1.06	280	*e*Pg	Pg	17 51 56.8	+0.6
MEZF				*e*Sg	Sg	17 52 11.2	+1.1
	9.9nm,0.2s						
BFO	Black Forest	1.14	89	*e*Pg	Pg	17 51 56.5	-1.0
BFO				*e*Sg	Sg	17 52 10.4	-2.0
WLF	Walferdange	1.38	347	*e*Sg	Sg	17 52 20.0	-0.1
CABF	La Chapelle	1.75	192	*e*Pg	Pg	17 52 09.9	+0.7
CABF				*e*Sg	Sg	17 52 32.5	+0.5
	4.5nm,0.2s						
CABF	La Chapelle	1.75	192	*e*Pn	Pn	17 52 06.2	+1.1
CABF				*e*Pg	Pg	17 52 09.9	+0.7
CABF				*e*Sg	Sg	17 52 32.5	+0.5
CABF	La Chapelle	1.75	192	*e*Pg	Pg	17 52 09.9	+0.7
CABF				*e*Sg	Sg	17 52 32.5	+0.5
	2.2nm,0.2s						
GIVF	Givet	2.14	327	*e*Pg	Pg	17 52 16.2	-0.4
GIVF				*e*Sg	Sg	17 52 43.9	-0.4
	6.3nm,0.2s						
GIVF	Givet	2.14	327	*e*Pg	Pg	17 52 16.2	-0.4
GIVF				*e*Sg	Sg	17 52 43.9	-0.4
	3.2nm,0.2s						
LOR	Lormes	2.15	242	*e*Pg	Pg	17 52 17.0	+0.3
LOR				*e*Sg	Sg	17 52 44.2	-0.3
	9.5nm,0.2s						
LOR	Lormes	2.15	242	*e*Pn	Pn	17 52 11.0	+0.5
LOR				*e*Pg	Pg	17 52 17.0	+0.3
LOR				*e*Sg	Sg	17 52 44.2	-0.3
LOR	Lormes	2.15	242	*e*Pg	Pg	17 52 17.0	+0.3
LOR				*e*Sg	Sg	17 52 44.2	-0.3
	4.8nm,0.2s						
TNS	Taunus Mts	2.24	31	*e*Sg	Sg	17 52 46.1	-1.6
BAIF	Baives	2.35	318	*e*Pg	Pg	17 52 20.2	-0.5
BAIF				*e*Sg	Sg	17 52 51.3	+0.1
	2.9nm,0.2s						
BAIF	Baives	2.35	318	*e*Pn	Pn	17 52 14.8	+1.5
BAIF				*e*Pg	Pg	17 52 20.2	-0.5
BAIF				*e*Sg	Sg	17 52 51.3	+0.1
BAIF	Baives	2.35	318	*e*Pg	Pg	17 52 20.2	-0.5
BAIF				*e*Sg	Sg	17 52 51.3	+0.1
	1.5nm,0.2s						
SSF	Saint Saulge	2.46	240	*e*Pg	Pg	17 52 22.4	-0.3
SSF				*e*Sg	Sg	17 52 54.1	-0.5
	5.7nm,0.3s						
SSF	Saint Saulge	2.46	240	*e*Pn	Pn	17 52 15.3	+0.5
SSF				*e*Pg	Pg	17 52 22.4	-0.3
SSF				*e*Sg	Sg	17 52 54.1	-0.5
SSF	Saint Saulge	2.46	240	*e*Pg	Pg	17 52 22.4	-0.3
SSF				*e*Sg	Sg	17 52 54.1	-0.5
	2.8nm,0.3s						
SMF	Signal de Mont	2.53	229	*e*Pg	Pg	17 52 23.9	-0.1
SMF				*e*Sg	Sg	17 52 56.3	-0.5
	11nm,0.2s						
SMF	Signal de Mont	2.53	229	*e*Pn	Pn	17 52 15.9	+0.2
SMF				*e*Pg	Pg	17 52 23.9	-0.1
SMF				*e*Sg	Sg	17 52 56.3	-0.5
SMF	Signal de Mont	2.53	229	*e*Pg	Pg	17 52 23.9	-0.1
SMF				*e*Sg	Sg	17 52 56.3	-0.5
	5.6nm,0.2s						
AVF	Avril sur Loir	2.70	237	*e*Pg	Pg	17 52 27.1	-0.1
AVF				*e*Sg	Sg	17 53 02.0	-0.2
	2.3nm,0.2s						
AVF	Avril sur Loir	2.70	237	*e*Pn	Pn	17 52 18.4	+0.3
AVF				*e*Pg	Pg	17 52 27.1	-0.1
AVF				*e*Sg	Sg	17 53 02.0	-0.2
AVF	Avril sur Loir	2.70	237	*e*Pg	Pg	17 52 27.1	-0.1
AVF				*e*Sg	Sg	17 53 02.0	-0.2
	1.1nm,0.2s						
LPL	La Plagne	2.81	178	*e*Pn	Pn	17 52 18.8	-0.8
LPL				*e*Pg	Pg	17 52 28.8	-0.6
LPG	La Plagne	2.83	178	*e*Pg	Pg	17 52 29.6	-0.2
LPG				*e*Sg	Sg	17 53 05.8	-0.7
	1.6nm,0.3s						
LPG	La Plagne	2.83	178	*e*Pg	Pg	17 52 29.6	-0.2
LPG				*e*Sg	Sg	17 53 05.8	-0.7
	0.8nm,0.3s						
HYF	Humbligny	2.89	250	*e*Sg	Sg	17 53 08.6	+0.2
BGF	Bois d'Agland	3.12	237	*e*Sg	Sg	17 53 13.7	-1.9
	9.0nm,0.3s						
BGF	Bois d'Agland	3.12	237	*e*Sg	Sg	17 53 13.7	-1.9
	4.5nm,0.3s						
ORIF	Oris-en-Rattie	3.45	189	*e*Pg	Pg	17 52 40.8	-0.8
ORIF				*e*Sg	Sg	17 53 24.8	-1.4
	1.4nm,0.2s						
ORIF	Oris-en-Rattie	3.45	189	*e*Pg	Pg	17 52 40.8	-0.8
ORIF				*e*Sg	Sg	17 53 24.8	-1.4
	0.7nm,0.2s						
MBDF	Montbardon	3.60	178	*e*Pg	Pg	17 52 43.8	-0.7
TCF	Toulx Ste Croi	3.63	238	*e*Sg	Sg	17 53 30.4	-1.7
	1.3nm,0.2s						
TCF	Toulx Ste Croi	3.63	238	*e*Sg	Sg	17 53 30.4	-1.7
	0.6nm,0.2s						
VIVF	Saint-Julien-l	3.72	202	*e*Sg	Sg	17 53 33.3	-1.8
	1.7nm,0.2s						
VIVF	Saint-Julien-l	3.72	202	*e*Sg	Sg	17 53 33.3	-1.8
	0.9nm,0.2s						

*NNC **08** 18:09:26.4±2.1, 4236N×7340E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=43.9km s-min=5.4km az=179.0*
*KNET **08** 18:09:26.3±0.5, 42.16N×7356E, h11^{km}±1^{km}, ml2.4, Error ellipse: s-maj=3.0km s-min=1.7km az=58.0*
*ISCJB **08** 18:09:27.5±0.9, 42.15N±005×7354E±005, h10^{km}, Error ellipse: s-maj=7.0km s-min=5.1km az=29.7*
ISC 08 18:09:26.7±0.9**, 4215N**±005×**7349E**±006**, h10**^{km}**, n13, σ1^{s}06**/24**, 18C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	0.15	97	P	Pg	18 09 29.4	-0.6
	486nm,0.1s,SNR=890						
AML				⇓S	Sg	18 09 32.1	-0.3
	3μm,0.1s						
EKS2	Erkin-Say	0.55	22	⇑P	Pg	18 09 36.7	-0.7
	19nm,0.2s,SNR=84						
EKS2				⇑S	Sg	18 09 44.8	+0.1
	90nm,0.1s						
UCH	Uchtor	0.76	84	⇑P	Pg	18 09 40.4	-1.0
	34nm,0.2s,SNR=140						
UCH				⇑S	Sg	18 09 51.4	0.0
	50nm,0.1s						
AAK	Ala-Archa	0.89	57	⇑P	Pg	18 09 42.8	-0.9
	15nm,0.2s,SNR=11						
AAK				⇓S	Sg	18 09 55.2	-0.1
	66nm,0.3s						
KBK	Karagaybulak	1.19	64	⇑P	Pb	18 09 48.4	-1.0
	23nm,0.1s,SNR=41						
KBK				⇑S	Sb	18 10 05.7	+0.8
	50nm,0.2s						
CHMS	Chumysh	1.26	47	⇑P	Pn	18 09 49.6	-0.7
	14nm,0.1s,SNR=9.6						
CHMS				⇑S	Sb	18 10 06.7	-0.1
	35nm,0.2s						
KZA	Kyzart	1.31	93	⇑P	Pn	18 09 50.4	-0.6
	40nm,0.2s,SNR=109						
KZA				⇓S	Sb	18 10 08.6	+0.3
	77nm,0.2s						
USP	Ospenovka	1.34	33	⇓P	Pn	18 09 51.1	-0.3
	11nm,0.1s,SNR=12						
USP				⇑S	Sb	18 10 09.4	+0.2
	89nm,0.2s						
TKM2	Tokmak 2	1.74	63	⇑P	Pn	18 09 57.8	+0.9
	42nm,0.2s,SNR=62						
TKM2				⇑S	Sn	18 10 22.0	+2.9
	27nm,0.1s						
TKM2	Tokmak 2	1.74	63	⇑Pn	Pn	18 09 57.7	+0.9
	1.4nm,0.4s						
TKM2				⇑Sn	Sn	18 10 21.4	+2.3
	3.6nm,0.5s						
ULHL	Ulahol	2.05	86	⇑P	Pn	18 10 03.2	+2.0
	20nm,0.2s,SNR=109						
KK31	Karatay Array	2.40	294	⇑Pn	Pn	18 10 08.5	+2.6
	1.5nm,0.2s,baz=111,slow=12,SNR=99						
KK31				⇓Sn	Sn	18 10 39.8	+4.4
	20nm,0.5s,baz=115,slow=35,SNR=18						
AB31	Akbulak array	11.83	312	⇑Pn	Pn	18 12 13.7	-1.8
	0.3nm,0.5s,baz=116,slow=13,SNR=5.3						

NNC 08 18:24:39.0±15.0**, 3714N**×**7035E, h310**^{km}±155^{km}**, mb1.8, mpv3.0, 3C-1D, Error ellipse: s-maj=201.2km s-min=105.6km az=41.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.95	1	P	Pn	18 26 05.9	-2.1
	1.9nm,0.3s,baz=171,slow=11,SNR=52						
KK31				⇑S	S	18 27 20.7	+0.9
	1.8nm,0.7s,baz=182,slow=23,SNR=4.6						
TKM2	Tokmak 2	7.03	33	⇑P	Pn	18 26 22.4	+1.5
	0.2nm,0.8s						
AB31	Akbulak array	14.27	331	⇑P	P	18 27 49.3	+1.9
	0.4nm,0.4s,baz=154,slow=14,SNR=14						
AB31				⇓S	S	18 30 22.4	-1.4
	0.3nm,0.5s						

*ISK **08** 18:45:48.3, 3706N×2794E, h4^{km}, MD3.5, ML3.3*
*CSEM **08** 18:45:48.8±0.1, 3704N×2795E, h10^{km}, MD3.5, Error ellipse: s-maj=1.6km s-min=1.4km az=119.0*
*ISCJB **08** 18:45:49.2±0.4, 3702N±002×2796E±002, h12^{km}±3^{km}, mb3.5/5, Error ellipse: s-maj=3.7km s-min=3.3km az=176.6*
*NEIC **08** 18:45:49.4±2.5, 3690N×2792E, h7^{km}±18^{km}, mb3.9/5, MD3.6(ATH), Error ellipse: s-maj=6.7km s-min=5.3km az=190.0*
*ATH **08** 18:45:49.6, 3699N×2798E, h29^{km}±2^{km}, MD3.6/7*
*IDC **08** 18:45:52.6±3.9, 3692N×2785E, h34^{km}±38^{km}, mb3.3/4, mb1 3.5/9, mb1mx3.4/22, mbtmp3.5/9, ML3.6/4, Error ellipse: s-maj=24.6km s-min=18.8km az=162.0*
ISC 08 18:45:49.7±0.5**, 3704N**±002×**2795E**±002**, h6**^{km}±3^{km}**, n66, σ0^{s}98**/82**, mb3.5**/5**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.28	69	PG	Pg	18 45 54.9	-0.2
YER				SG	Sg	18 45 59.2	+0.3
DAT	Datca	0.43	225	PG	Pg	18 45 57.5	-0.5
DAT				SG	Sg	18 46 04.3	+0.7
BODT	Bodrum	0.52	273	PG	Pg	18 45 58.7	-0.9
BODT				SG	Sg	18 46 06.8	+0.5
DALT	Dalyan (Mudla)	0.61	116	PG	Pg	18 46 00.7	-0.7
AYDN	Tasoluk	0.63	355	*i* P	Pg	18 46 02.1	+0.4
AYDN				*i* S	Sg	18 46 08.2	-1.7
NISR	Nisiros	0.79	238	*e*PN	Pg	18 46 04.8	+0.1
ARG	Arkhangelos	0.83	170	*e*PN	Pg	18 46 05.2	-0.4
ARG				*e*SN	Sg	18 46 17.3	+0.9
SMG	Samos	1.11	307	*e*PB	Pb	18 46 10.7	-0.6
SMG				*e*SN	Sn	18 46 27.6	+0.1
DENT	Denizli	1.12	50	PN	Pn	18 46 10.5	-1.3
IZM	Izmir	1.47	338	PN	Pn	18 46 15.6	-1.0
KDAG	Bornova	1.47	338	*i* P	Pn	18 46 15.6	-1.1
KDAG				*i* S	Sn	18 46 29.5	-6.7
BLCB	Balcova	1.53	332	PN	Pn	18 46 17.0	-0.5
KSL	Kastellorizon	1.58	123	*e*PN	Pn	18 46 17.0	-1.2
ELL	Elmali	1.59	100	PN	Pn	18 46 18.4	0.0
KARP	Karpathos	1.62	204	*e*PN	Pn	18 46 17.6	-1.1
KARP				*e*SN	Sn	18 46 38.7	-1.2
URLA	Izmir	1.71	321	*i* P	Pn	18 46 20.6	+0.7
URLA				*i* S	Sn	18 46 42.7	+0.6
AKHS	Akhisar	1.84	357	*i* P	Pn	18 46 21.2	-0.6
AKHS				*i* S	Sn	18 46 42.1	-3.3
AKS	Akhisar	1.84	357	PN	Pn	18 46 20.9	-0.9
APE	Apeiranthos	1.94	272	*e*PN	Pn	18 46 22.7	-0.4
TKTP	Tekketepe	2.13	61	*i* P	Pn	18 46 26.7	+0.9
TKTP				*i* S	Sn	18 46 51.9	-0.6
BCK	Bucak	2.15	78	PN	Pn	18 46 26.5	+0.5
ANTB	Antalya	2.17	93	*e*PN	Pn	18 46 27.0	+0.8
ISP	Isparta	2.19	68	*e*PN	Pn	18 46 27.0	+0.5
ISP	Isparta	2.19	68	*e*Pn	Pn	18 46 26.8	+0.2
ISP	Isparta	2.19	68	*e*Pn	Pn	18 46 26.8	+0.3
PRK	Paraskevi	2.58	330	*e*PN	Pn	18 46 32.8	+0.9
ALT	Altintas	2.64	40	*e*PN	Pn	18 46 33.4	+0.7
BTOK	Tokmak	2.72	1	*i* P	Pb	18 46 39.9	+1.2
BTOK				*i* S	Sb	18 47 11.9	-0.4
IDI	Anoyia	3.03	236	Pn	Pn	18 46 37.0	-1.2
	0.4nm,0.3s,baz=41,slow=18,SNR=5.4						
IDI				Sn	Sn	18 47 16.2	+1.4
	1.9nm,0.3s,baz=314,slow=12,SNR=6.8						
GADA	Gvkgeada	3.54	334	*e*PN	Pn	18 46 44.6	-0.5
YLV	Yalova	3.70	17	*e*PN	Pn	18 46 47.7	+0.4
ENEZ	Enez	3.95	340	*e*PN	Pn	18 46 50.7	-0.1
ERMK	Ermenek	4.00	94	*i* P	Pn	18 46 56.4	+4.9
ERMK				*i* S	Sn	18 47 44.0	+5.4
ERMK	Ermenek	4.00	94	*i* S	Sn	18 47 44.0	+5.4
IKL	Isikli	4.68	98	*e*PN	Pn	18 47 02.9	+2.1
ANTO	Ankara	4.74	52	*e*P	Pn	18 47 03.5	+1.9
ANTO	Ankara	4.74	52	*e*P	Pn	18 47 03.5	+1.9
CSS	Prodhromos	4.83	114	*e*P	Pn	18 47 03.5	+0.8
CSS	Prodhromos	4.83	114	*e*P	Pn	18 47 03.5	+0.7
MEST	Erdemli	4.99	93	*i* P	Pn	18 47 04.2	-0.9
MEST				*i* S	Sn	18 48 02.7	-0.3
BRTR	Keskin Array B	5.21	57	Pn	Pn	18 47 09.9	+1.8
	1.4nm,0.3s,baz=239,slow=17,SNR=32						
MMAI	Mount Meron Ar	7.31	121	Pn	Pn	18 47 35.6	-1.3
	3.2nm,0.3s,baz=300,slow=13,SNR=5.0						
MMAI				Sn	Sn	18 48 58.7	-1.5
	baz=300,slow=23,SNR=2.4						
ASF	Jabal al Asfar	8.82	121	Pn	Pn	18 47 59.9	+2.2
	0.3nm,0.3s,baz=315,slow=20,SNR=4.7						
GERES	GERESS Array B	15.72	323	Pn	Pn	18 49 32.4	+0.7
	0.1nm,0.3s,baz=149,slow=12,SNR=2.1						
KHC	Kasperske Hory	15.98	324	*e*P	Pn	18 49 41.0	+6.0
MBDF	Montbardon	17.73	302	*e*P	Pn	18 50 01.8	+4.6
CLL	Collm	17.80	328	*i*	Pn	18 50 05.6	+7.7
CLL				*i* PP		18 50 07.3	
CLL	Collm	17.80	328	*i* x	Pn	18 50 05.6	+7.7
CLL				*i* (PP)		18 50 07.3	
	comp=Z,6.0nm,0.9s						
LPG	La Plagne	18.00	305	*e*P	Pn	18 50 05.7	+5.2
	comp=Z,5.9nm,0.8s						
LPG	La Plagne	18.00	305	*e*P	Pn	18 50 05.7	+5.2
	comp=Z,3.0nm,0.8s						
LPL	La Plagne	18.02	305	*e*P	Pn	18 50 05.4	+4.7
	comp=Z,7.3nm,0.8s						
LPL	La Plagne	18.02	305	*e*P	Pn	18 50 05.4	+4.7
	comp=Z,3.7nm,0.8s						
CABF	La Chapelle	18.84	307	*e*P	Pn	18 50 12.2	+1.4
	comp=Z,52nm,1.5s						
CABF	La Chapelle	18.84	307	*e*P	Pn	18 50 12.2	+1.4
	comp=Z,26nm,1.5s						
SMF	Signal de Mont	20.30	306	*e*P	P	18 50 27.8	+1.6
	comp=Z,13nm,1.0s						
SMF	Signal de Mont	20.30	306	*e*P	P	18 50 27.8	+1.6
	comp=Z,6.7nm,1.0s						
LOR	Lormes	20.51	307	*e*P	P	18 50 27.9	-0.5
SSF	Saint Saulge	20.66	307	*e*P	P	18 50 30.2	+0.1
AVF	Avril sur Loir	20.67	306	*e*P	P	18 50 30.5	+0.4
TCF	Toulx Ste Croi	21.26	304	*e*P	P	18 50 37.4	+0.8
BAIF	Baives	21.47	315	*e*P	P	18 50 33.4	-5.4
FINES	FINESS Array B	24.46	358	P	P	18 51 09.5	+0.3
	comp=Z,0.9nm,0.7s,mb3.3,baz=182,slow=11,SNR=4.2						
BRVK	Borovoye	33.36	48	*e*P	P	18 52 28.3	-0.2
	comp=Z,2.2nm,0.9s,mb4.1						
TORD	Torodi Ar. Bea	33.42	231	P	P	18 52 26.8	-2.3
	comp=Z,0.4nm,0.7s,mb3.5,baz=36,slow=8.6,SNR=8.4						
MKAR	Makanchi Array	40.86	59	P	P	18 53 31.4	-0.9
	comp=Z,0.5nm,0.7s,mb3.3,baz=282,slow=7.3,SNR=4.9						
SONM	Songino Array	56.55	52	P	P	18 55 33.2	+0.3
	comp=Z,0.3nm,0.5s,mb3.6,baz=283,slow=7.2,SNR=3.0						

*CSEM **08** 18:56:21.7±0.1, 3703N×2800E, h11^{km}±1^{km}, MD3.6, Error ellipse: s-maj=2.7km s-min=1.6km az=11.0*
*ISK **08** 18:56:21.7, 3697N×2797E, h18^{km}, MD3.6, ML3.4*
*IDC **08** 18:56:22.1±0.9, 3695N×2795E, h0^{km}, mb3.6/7, mb1 3.7/13, mb1mx3.7/25, mbtmp3.6/13, ML3.5/6, MS2.8/3, Ms1 2.8/3, ms1mx2.3/29, Error ellipse: s-maj=17.9km s-min=15.9km az=167.0*
*ISCJB **08** 18:56:22.4±0.5, 3701N±002×2798E±002, h13^{km}±3^{km}, mb3.5/7, Error ellipse: s-maj=3.5km s-min=3.3km az=31.5*
*NEIC **08** 18:56:23.5±0.3, 3697N×2782E, h10^{km}, MD3.6(ATH), Error ellipse: s-maj=5.3km s-min=4.8km az=195.0*
*ATH **08** 18:56:23.9, 3701N×2785E, h29^{km}±1^{km}, MD3.6/7*
ISC 08 18:56:23.0±0.5**, 3701N**±002×**2795E**±003**, h9**^{km}±3^{km}**, n68, σ1^{s}11**/78**, mb3.5**/7**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.30	65	*i* PG	Pg	18 56 28.7	-0.2
YER				*i* SG	Sg	18 56 33.5	+0.7
DAT	Datca	0.41	227	*i* PG	Pg	18 56 30.1	-0.9
BODT	Bodrum	0.51	276	*i* PG	Pg	18 56 32.7	-0.2
BODT				*i* SG	Sg	18 56 41.2	+1.5
DALT	Dalyan (Mudla)	0.60	113	*i* PG	Pg	18 56 33.7	-1.0
AYDN	Tasoluk	0.65	355	*i* P	Pg	18 56 35.4	-0.2
AYDN				*i* S	Sg	18 56 43.1	-1.0
NISR	Nisiros	0.77	239	*e*PN	Pn	18 56 38.5	-1.5
ARG	Arkhangelos	0.81	170	*e*PB	Pb	18 56 39.6	+0.5
ARG				*e*SN	Sn	18 56 52.2	-0.4
SMG	Samos	1.13	309	*e*PN	Pn	18 56 44.3	-0.6
SMG				*e*SN	Sn	18 56 59.7	-0.8
DENT	Denizli	1.14	49	*i* PN	Pn	18 56 43.5	-1.6
IZM	Izmir	1.49	339	*i* PN	Pn	18 56 49.3	-0.6
KDAG	Bornova	1.49	339	*i* P	Pn	18 56 49.6	-0.3
KDAG				*i* S	Sn	18 57 07.1	-2.5
BLCB	Balcova	1.55	333	PN	Pn	18 56 50.2	-0.6
KSL	Kastellorizon	1.57	123	*e*PN	Pn	18 56 53.0	+1.9
KARP	Karpathos	1.59	204	*e*PB	Pb	18 56 51.1	-1.5
KARP				*e*SN	Sn	18 57 12.1	+0.1
ELL	Elmali	1.59	99	PN	Pn	18 56 50.0	-1.4
URLA	Izmir	1.72	322	*i* P	Pn	18 56 53.7	+0.6
URLA				*i* S	Sn	18 57 16.3	+1.0
AKHS	Akhisar	1.87	357	*i* P	Pn	18 56 54.8	-0.3
AKHS				*i* S	Sn	18 57 18.9	+0.1
AKS	Akhisar	1.87	357	PN	Pn	18 56 54.1	-1.1
APE	Apeiranthos	1.94	272	*e*PB	Pn	18 56 55.8	-0.2
TKTP	Tekketepe	2.15	61	*i* P	Pn	18 57 00.3	+1.3
TKTP				*i* S	Sn	18 57 25.7	-0.1
BCK	Bucak	2.16	77	PN	Pn	18 56 57.0	-2.1
ANTB	Antalya	2.17	92	PN	Pn	18 56 58.1	-1.2
ISP	Isparta	2.20	67	PN	Pn	18 56 57.6	-2.1
ISP	Isparta	2.20	67	*e*Pn	Pn	18 57 01.3	+1.5
GDZ	Gediz	2.40	30	*i* P	Pg	18 57 10.4	+1.4
GDZ				*i* S	Sg	18 57 43.3	+3.1
PRK	Paraskevi	2.59	330	*e*PN	Pn	18 57 05.6	+0.5
DST	Dursunbey	2.65	11	PN	Pn	18 57 04.6	-1.2
IDI	Anoyia	3.01	236	Pn	Pn	18 57 11.3	+0.4
	1.3nm,0.3s,baz=10,slow=4.3,SNR=10						
IDI				Sn	Sn	18 57 49.0	+1.9
	1.6nm,0.3s,baz=329,slow=20,SNR=3.6						
CANB	Canakkale	3.08	347	PN	Pn	18 57 11.7	-0.1
BNT	Bandirma	3.34	360	PN	Pn	18 57 15.2	-0.2
ESKT	Eskisehir	3.39	41	PN	Pn	18 57 16.3	+0.2
ADVT	Abdulvahap	3.69	22	*e*PN	Pn	18 57 19.2	-1.0
YLV	Yalova	3.72	17	*e*PN	Pn	18 57 20.3	-0.3
ENEZ	Enez	3.98	340	*e*PN	Pn	18 57 23.9	-0.2
ERMK	Ermenek	4.00	94	*i* P	Pn	18 57 28.2	+3.7
ERMK				*i* S	Sb	18 58 19.1	-3.0
MDU	Mudurnu	4.29	36	*e*PN	Pn	18 57 28.3	-0.2
KLYT	Kilyos	4.32	11	*e*PN	Pn	18 57 29.5	+0.6
IKL	Isikli	4.68	98	*e*PN	Pn	18 57 32.8	-1.0
ANTO	Ankara	4.76	52	*e*PN	Pn	18 57 35.0	+0.2
ANTO	Ankara	4.76	52	*e*Pn	Pn	18 57 36.2	+1.4
CSS	Prodhromos	4.82	113	*e*Pn	Pn	18 57 38.5	+2.7
BRTR	Keskin Array B	5.23	57	Pn	Pn	18 57 43.2	+1.9
	1.5nm,0.3s,baz=239,slow=15,SNR=34						
BRTR	Keskin Array B	5.23	57	Pn	Pn	18 57 43.2	+1.9
MMAI	Mount Meron Ar	7.30	121	Pn	Pn	18 58 08.7	-1.1
	2.9nm,0.3s,baz=311,slow=14,SNR=3.5						
MMAI				Sn	Sn	18 59 33.1	+0.3
	3.3nm,0.3s,baz=304,slow=23,SNR=4.5						
MALT	Malatya	8.41	78	Pn	Pn	18 58 27.2	+2.2
MALT	Malatya	8.41	78	Pn	Pn	18 58 27.2	+2.1
MLR	Muntele Rosu	8.61	351	Pn	Pn	18 58 28.9	+1.2
	0.2nm,0.3s,baz=155,slow=19,SNR=2.8						
MLR				LR	LR	19 02 03.9	
	comp=Z,59nm,20.3s,baz=153,slow=39						
ASF	Jabal al Asfar	8.81	121	Pn	Pn	18 58 31.7	+1.1
	0.3nm,0.3s,baz=193,slow=13,SNR=3.8						
EIL	Elat	9.37	139	Pn	Pn	18 58 37.9	-0.3
VRAC	Vranov	14.80	330	LR	LR	19 05 57.2	
	comp=Z,35nm,18.0s,baz=238,slow=39						
GERES	GERESS Array B	15.74	323	Pn	Pn	19 00 09.0	+4.1
	0.1nm,0.3s,baz=132,slow=13,SNR=7.4						
KHC	Kasperske Hory	16.00	324	*e*P	Pn	19 00 14.5	+6.3
DAVOX	Davos	16.59	312	LR	LR	19 07 51.7	
	comp=Z,26nm,18.3s,baz=85,slow=42						
BRG	Berggiesshubel	17.10	329	*e*(P)	Pn	19 00 29.8	+7.6
	2.1nm,0.9s						
CLL	Collm	17.82	328	*e*PP		19 00 39.0	
CLL	Collm	17.82	328	*e*(PP)		19 00 39.0	
FINES	FINESS Array B	24.48	358	P	P	19 01 42.9	+0.5
	2.1nm,0.8s,mb3.6,baz=179,slow=7.6,SNR=7.0						
HFS	Hagfors	24.88	343	P	P	19 01 45.5	-0.4
	2.7nm,0.9s,mb3.8,baz=209,slow=2.7,SNR=3.8						
HFS	Hagfors	24.88	343	P	P	19 01 45.5	-0.4
HFS	Hagfors	24.88	343	P	P	19 01 45.5	-0.5
ESDC	Sonseca Array	25.10	286	P	P	19 01 48.5	+0.5
	1.0nm,0.5s,mb3.6,baz=82,slow=10,SNR=5.8						
ESDC	Sonseca Array	25.10	286	P	P	19 01 48.5	+0.5
NOA	NORSAR Array B	26.27	342	P	P	19 02 00.5	+1.9
	0.8nm,0.8s,mb3.3,baz=160,slow=10,SNR=3.8						
NOA	NORSAR Array B	26.27	342	P	P	19 02 00.5	+1.8
TORD	Torodi Ar. Bea	33.41	232	P	P	19 03 01.7	-0.1
	0.3nm,0.4s,mb3.5,baz=32,slow=8.3,SNR=11						
MKAR	Makanchi Array	40.88	59	P	P	19 04 05.8	+0.5
	1.0nm,0.9s,mb3.5,baz=286,slow=6.2,SNR=6.5						
MKAR	Makanchi Array	40.88	59	P	P	19 04 05.8	+0.5
SONM	Songino Array	56.57	52	P	P	19 06 06.8	+0.8
	0.4nm,0.8s,mb3.5,baz=297,slow=9.4,SNR=3.6						

IDC 08 19:13:02.1±4.0**, 517S**×**6904E, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.6**/19**, mbtmp3.8**/4**, MS3.5**/4**, Ms1 3.5**/4**, ms1mx3.0**/23**, Error ellipse: s-maj=137.4km s-min=32.7km az=65.0, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	Arta Tunnel	30.89	303	LR	LR	19 28 28.3	
	comp=Z,109nm,19.0s,baz=266,slow=30						
BOSA	Boshof	47.56	236	LR	LR	19 41 01.0	
	comp=Z,63nm,19.1s,baz=265,slow=35						
MKAR	Makanchi Array	53.06	11	P	P	19 22 20.0	-1.0
	0.5nm,0.6s,baz=204,slow=8.6,SNR=5.7						
ZAL	Zalesovo	60.36	11	P	P	19 23 12.7	-0.3
	0.7nm,0.3s,baz=250,slow=9.8,SNR=4.8						
SONM	Songino Array	62.15	28	P	P	19 23 26.1	+1.1
	0.7nm,0.7s,baz=216,slow=7.1,SNR=6.1						
ASAR	Alice Springs	64.93	114	P	P	19 23 44.0	+0.5
	1.1nm,0.7s,baz=280,slow=6.4,SNR=13						
TORD	Torodi Ar. Bea	69.30	286	LR	LR	19 51 30.7	
	comp=Z,32nm,18.9s,baz=30,slow=33						
NOA	NORSAR Array B	79.64	335	LR	LR	19 59 54.8	
	comp=Z,15nm,18.6s,baz=85,slow=35						
NVAR	Mina Array Bea	146.23	10	PKPbc	PKPbc	19 32 45.0	+0.5
	0.4nm,0.6s,baz=347,slow=2.8,SNR=4.2						

*IDC **08** 19:20:33.5±1.2, 3773N×2527E, h0^{km}, mb3.3/2, mb1 3.5/6, mb1mx3.4/22, mbtmp3.2/6, ML3.2/4, MS2.6/2, Ms1 2.6/2, ms1mx2.2/22, Error ellipse: s-maj=25.1km s-min=17.1km az=96.0*
*NEIC **08** 19:20:34.2, 3771N×2545E, h36^{km}, MD3.8(ATH), After ATH.*
*ATH **08** 19:20:34.2, 3771N×2545E, h36^{km}±4^{km}, MD3.8/12, ML3.7*
*THE **08** 19:20:34.3, 3775N×2539E, h0^{km}, ML3.7*
*ISCJB **08** 19:20:35.5±0.7, 3770N±002×2543E±003, h33^{km}±7^{km}, mb3.1/2, MS2.6/1, Error ellipse: s-maj=3.7km s-min=3.5km az=76.9*
*CSEM **08** 19:20:36.0±0.1, 3773N×2548E, h40^{km}, ML3.7, Error ellipse: s-maj=1.5km s-min=1.4km az=58.0*
*ISK **08** 19:20:38.2, 3783N×2571E, h65^{km}, MD3.6, ML3.6*
ISC 08 19:20:35.2±0.5**, 3771N**±002×**2543E**±003**, h19**^{km}±4^{km}**, n69, σ0^{s}98**/85**, mb3.1**/2**, MS2.6**/1**, 1C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APE	Apeiranthos	0.64	173	*e*Pg	Pg	19 20 47.7	-0.2
APE				*e*Sg	Sg	19 20 58.1	+1.6
APE	Apeiranthos	0.64	173	⇑*i*PN	Pn	19 20 47.9	-1.4
APE				*e*SN	Sb	19 20 56.7	+0.3
CHOS	Chios island	0.84	36	*e*Pg	Pg	19 20 50.7	-1.0
CHOS				*e*Sg	Sg	19 21 03.1	+0.3
SMG	Samos	1.12	89	⇓*i*PN	Pn	19 20 55.2	-0.7
SMG				*e*SN	Sn	19 21 09.7	-1.1
URLA	Izmir	1.13	54	*i* P	Pn	19 20 55.4	-0.6
URLA				*i* S	Sb	19 21 10.5	0.0
KVR	Kavouri	1.32	276	*e*PN	Pn	19 20 58.0	-0.7
SANT	Santorini	1.33	179	*e*Pg	Pn	19 20 58.4	-0.4
SANT				*e*Sg	Sg	19 21 19.7	+1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANT	**Santorini**	**1.33**	**179**	*e*Pn	**Pn**	**19 20 58.2**	**-0.7**
SANT				P		19 20 58.4	
SANT				S	**Sg**	**19 21 19.7**	**+1.3**
SANT	**Santorini**	**1.33**	**179**	*e*Pn	**Pn**	**19 20 58.2**	**-0.6**
SANT	**Santorini**	**1.33**	**179**	*e*Pg	**Pn**	**19 20 58.4**	**-0.4**
SANT				*e*Sg	**Sg**	**19 21 19.7**	**+1.3**
ATH	**Athens Observa**	**1.38**	**282**	*e*PN	**Pn**	**19 20 59.3**	**-0.2**
ATH				*e*SN	**Sn**	**19 21 17.3**	**+0.1**
BLCB	**Balcova**	**1.44**	**61**	PN	**Pn**	**19 21 00.0**	**-0.4**
BLCB				SN	**Sn**	**19 21 15.5**	**-3.3**
NAIG	**Nisos Aigina**	**1.54**	**273**	*e*PN	**Pn**	**19 21 00.5**	**-1.2**
IZM	**Izmir**	**1.60**	**64**	PN	**Pn**	**19 21 01.7**	**-0.9**
KDAG	**Bornova**	**1.61**	**64**	*i* P	**Pn**	**19 21 02.3**	**-0.3**
KDAG				*i* S	**Sn**	**19 21 20.3**	**-2.6**
BODT	**Bodrum**	**1.63**	**113**	PN	**Pn**	**19 21 04.2**	**+1.3**
PRK	**Paraskevi**	**1.68**	**23**	*e*PN	**Pn**	**19 21 02.4**	**-1.1**
MGER	**Gerania Oros**	**1.74**	**280**	*e*PB	**Pn**	**19 21 04.5**	**+0.1**
AYVA	**Ayvalik**	**1.88**	**31**	*i* P	**Pb**	**19 21 09.8**	**+0.8**
AYVA				*i* S	**Sg**	**19 21 35.6**	**-0.3**
AOS	**Alonnisos**	**1.90**	**321**	*e*Pb	**Pn**	**19 21 06.3**	**-0.4**
DAT	**Datca**	**1.97**	**119**	PN	**Pn**	**19 21 08.5**	**+0.8**
LKR	**Lokris**	**2.13**	**297**	*e*PN	**Pn**	**19 21 09.7**	**-0.1**
BOZC	**Bozcaada**	**2.19**	**13**	*i* P	**Pn**	**19 21 11.8**	**+1.2**
BOZC				*i* S	**Sg**	**19 21 43.0**	**-2.7**
LIA	**Limnos Island**	**2.20**	**355**	*e*PN	**Pn**	**19 21 09.7**	**-1.0**
AKHS	**Akhisar**	**2.21**	**57**	*i* P	**Pn**	**19 21 10.5**	**-0.4**
AKHS				*i* S	**Sg**	**19 21 46.2**	**-0.3**
AKS	**Akhisar**	**2.21**	**57**	PN	**Pn**	**19 21 10.4**	**-0.5**
VLI	**Veliai**	**2.22**	**244**	*e*PN	**Pn**	**19 21 11.0**	**0.0**
LOS	**Limnos**	**2.24**	**353**	*e*Pn	**Pn**	**19 21 10.7**	**-0.7**
LOS	**Limnos**	**2.24**	**353**	*e*Pn	**Pn**	**19 21 10.6**	**-0.7**
YER	**Yerkesik**	**2.34**	**103**	*e*PN	**Pn**	**19 21 13.6**	**+0.9**
NEO	**Neokhori**	**2.35**	**313**	*e*PN	**Pn**	**19 21 12.8**	**-0.1**
XOR	**Xorichti**	**2.41**	**314**	*e*Pn	**Pn**	**19 21 13.4**	**-0.3**
NPS	**Neapolis**	**2.44**	**176**	*e*PN	**Pn**	**19 21 13.1**	**-1.0**
IDI	**Anoyia**	**2.45**	**190**	Pn	**Pn**	**19 21 13.8**	**-0.4**
	3.7nm,0.3s,baz=7.3,slow=13,SNR=74						
IDI				Pg	**Pg**	**19 21 19.2**	**-3.0**
	12nm,0.3s,baz=4.3,slow=17,SNR=31						
IDI				Lg		19 21 55.5	
	35nm,0.3s,baz=271,slow=18,SNR=6.2						
VAM	**Vamos**	**2.50**	**204**	*e*PN	**Pn**	**19 21 14.5**	**-0.4**
GADA	**Gvkgeada**	**2.51**	**8**	*e*PN	**Pn**	**19 21 16.8**	**+1.8**
LAST	**Lasithi**	**2.54**	**179**	*e*Pn	**Pn**	**19 21 16.2**	**+0.7**
PAIG	**Paliouri**	**2.60**	**329**	*e*Pn	**Pn**	**19 21 15.6**	**-0.8**
CANB	**Canakkale**	**2.64**	**28**	*e*PN	**Pn**	**19 21 16.8**	**0.0**
ZKR	**Zakros**	**2.66**	**166**	*e*Pn	**Pn**	**19 21 17.5**	**+0.3**
DALT	**Dalyan (Mudla)**	**2.73**	**109**	*e*PN	**Pn**	**19 21 18.6**	**+0.6**
SIVA	**Sivas**	**2.73**	**191**	*e*Pn	**Pn**	**19 21 19.7**	**+1.7**
SIVA				*e*Sn	**Sb**	**19 21 54.8**	**-1.6**
AGG	**Agios Georgios**	**2.77**	**299**	*e*Pn	**Pn**	**19 21 19.2**	**+0.6**
XRY	**Khrisi**	**2.83**	**176**	*e*PN	**Pn**	**19 21 19.3**	**-0.2**
ITM	**Ithomi**	**2.83**	**260**	*e*PN	**Pn**	**19 21 20.3**	**+0.8**
OUR	**Ouranopolis**	**2.86**	**337**	*e*Pn	**Pn**	**19 21 19.3**	**-0.4**
GVD	**Gavdhos**	**3.06**	**201**	*e*Pn	**Pn**	**19 21 20.2**	**-2.3**
GVD	**Gavdhos**	**3.06**	**201**	*e*Pn	**Pn**	**19 21 20.2**	**-2.4**
ENEZ	**Enez**	**3.08**	**10**	*e*PN	**Pn**	**19 21 23.6**	**+0.8**
ALN	**Alexandroupoli**	**3.22**	**8**	*e*Pn	**Pn**	**19 21 26.6**	**+1.8**
ALN				*e*Sn	**Sn**	**19 22 03.3**	**+0.6**
ALN	**Alexandroupoli**	**3.22**	**8**	*e*Pn	**Pn**	**19 21 26.6**	**+1.8**
ALN				S	**Sn**	**19 22 03.3**	**+0.6**
BNT	**Bandirma**	**3.28**	**35**	*e*PN	**Pn**	**19 21 26.0**	**+0.4**
LIT	**Litokhoron**	**3.31**	**317**	*e*PN	**Pn**	**19 21 26.2**	**+0.2**
ORLT	**Orhaneli**	**3.58**	**48**	*e*PN	**Pn**	**19 21 29.2**	**-0.5**
ELL	**Elmali**	**3.70**	**104**	*e*PN	**Pn**	**19 21 31.5**	**+0.1**
KNT	**Kendrikon**	**3.97**	**331**	*e*Pn	**Pn**	**19 21 35.5**	**+0.5**
GRG	**Griva**	**4.01**	**325**	*e*Pn	**Pn**	**19 21 36.3**	**+0.7**
MMB	**Musomiste**	**4.09**	**342**	*e*Pn	**Pn**	**19 21 36.5**	**-0.3**
YLV	**Yalova**	**4.19**	**46**	*e*PN	**Pn**	**19 21 38.0**	**-0.1**
EDRB	**Edirne**	**4.26**	**13**	*e*PN	**Pn**	**19 21 40.4**	**+1.3**
KLYT	**Kilyos**	**4.51**	**37**	*e*PN	**Pn**	**19 21 43.5**	**+0.9**
ESKT	**Eskisehir**	**4.62**	**65**	*e*PN	**Pn**	**19 21 44.8**	**+0.8**
BRTR	**Keskin Array B**	**6.73**	**70**	Pn	**Pn**	**19 22 14.3**	**+1.3**
	0.1nm,0.3s,baz=241,slow=14,SNR=3.7						
MLR	**Muntele Rosu**	**7.79**	**3**	Pn	**Pn**	**19 22 29.6**	**+2.0**
	0.2nm,0.3s,baz=139,slow=16,SNR=4.7						
VRAC	**Vranov**	**13.24**	**334**	LR	LR	19 28 27.6	
	comp=Z,19nm,18.6s,baz=137,slow=36						
GERES	**GERESS Array B**	**14.01**	**326**	Pn	**Pn**	**19 23 53.0**	**+0.3**
	0.1nm,0.3s,baz=140,slow=14,SNR=3.8						
ESDC	**Sonseca Array**	**22.98**	**284**	P	**P**	**19 25 38.4**	**-0.3**
	1.2nm,0.7s,mb3.5,baz=83,slow=10,SNR=7.0						
HFS	**Hagfors**	**23.66**	**345**	LR	LR	19 34 06.8	
	comp=Z,19nm,19.2s,MS2.6,baz=232,slow=34						
MKAR	**Makanchi Array**	**42.23**	**59**	P	**P**	**19 28 29.1**	**+2.0**
	0.1nm,0.4s,mb2.8,baz=266,slow=8.7,SNR=5.1						

*MOS **08** 19:28:02.0±2.2, 5431N×16534E, h39^{km}, mb4.5/1, Error ellipse: s-maj=18.7km s-min=15.9km az=177.7*

KRSC 08 19:28:01, 5429N×16535E, h41^{km}, ML4.3, 1D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**2.13**	**279**	P	Pn	19 28 37.1	+3.0
MKZ				S	Sn	19 29 02.5	+3.2
MKZ	**Mys Kozlova**	**2.13**	**279**	*i* P	Pn	19 28 37.1	+3.0
MKZ				*i* S	Sn	19 29 02.5	+3.2
KBTR	**Krutoberegovo**	**2.41**	**324**	P	Pn	19 28 38.6	+0.7
KBTR				S	Sn	19 29 05.7	-0.4
KBTR	**Krutoberegovo**	**2.41**	**324**	*e*P	Pn	19 28 38.6	+0.7
KBTR				*e*S	Sn	19 29 05.7	-0.4
ZLN	**Zelenaya**	**3.13**	**305**	*e*P	Pn	19 28 51.6	+3.8
ZLN				*i* S	Sn	19 29 27.9	+4.0
TUMR	**Tumrok**	**3.17**	**290**	P	Pn	19 28 53.2	+4.8
TUMR				*i* S	Sn	19 29 30.6	+5.6
KMNR	**Kamenistaya**	**3.29**	**299**	*e*P	Pn	19 28 53.8	+3.8
KMNR				*i* S	Sn	19 29 31.6	+3.8
KRSR	**Krestovskiy**	**3.35**	**307**	*e*P	Pn	19 28 54.0	+3.2
KRSR				*e*S	Sn	19 29 32.3	+2.9
SRKR	**Sorokina**	**3.36**	**317**	*e*P	Pn	19 28 54.4	+3.5
SRKR				*i* S	Sn	19 29 33.0	+3.5
KLY	**Klyuchi**	**3.37**	**309**	P	Pn	19 28 52.8	+1.8
KLY				S	Sn	19 29 30.8	+1.1
KLY	**Klyuchi**	**3.37**	**309**	P	Pn	19 28 52.8	+1.8
KLY				*i* S	Sn	19 29 30.8	+1.1
SPN	**Mys Shipunski**	**3.38**	**251**	P	Pn	19 28 54.2	+2.9
SPN				S	Sn	19 29 31.8	+1.6
SPN	**Mys Shipunski**	**3.38**	**251**	*e*P	Pn	19 28 54.2	+2.9
SPN				*i* S	Sn	19 29 31.8	+1.6
KPT	**Kopyto**	**3.39**	**302**	*e*P	Pn	19 28 55.2	+3.8
KPT				*i* S	Sn	19 29 34.3	+4.0
KII	**Karymskiy**	**3.48**	**268**	P	Pn	19 28 57.0	+4.4
KII				S	Sn	19 29 37.3	+4.8
KII	**Karymskiy**	**3.48**	**268**	*e*P	Pn	19 28 57.0	+4.4
KII				*e*S	Sn	19 29 37.3	+4.8
KOZR	**Kozyr**	**3.60**	**302**	PN	Pn	19 28 59.2	+5.0
KOZR				S	Sn	19 29 41.0	+5.5
KOZ	**Kozyrevsk**	**3.61**	**302**	P	Pn	19 28 59.2	+4.9
KOZ				S	Sn	19 29 41.0	+5.4
KOZ	**Kozyrevsk**	**3.61**	**302**	P	Pn	19 28 59.2	+4.9
KOZ				*i* S	Sn	19 29 41.0	+5.4
NLC	**Nalytchevo**	**3.74**	**255**	P	Pn	19 28 59.6	+3.4
NLC				S	Sn	19 29 41.4	+2.5
NLC	**Nalytchevo**	**3.74**	**255**	*e*P	Pn	19 28 59.6	+3.4
NLC				*i* S	Sn	19 29 41.4	+2.5
SRDR	**Sredinnyy**	**3.81**	**305**	*e*P	Pn	19 29 01.2	+4.1
SRDR				*i* S	Sn	19 29 44.6	+4.0
AVH	**Avacha**	**4.05**	**258**	*i* P	Pn	19 29 04.5	+4.0
AVH				*i* S	Sn	19 29 51.0	+4.3
PET	**Petropavlovsk**	**4.18**	**255**	P	Pn	19 29 05.9	+3.7
PET				S	Sn	19 29 52.5	+2.7
PET	**Petropavlovsk**	**4.18**	**255**	⇓*i*PN	Pn	19 29 05.8	+3.6
PET				*e*S	Sn	19 29 52.9	+3.1
PET				pmax	pmax		
	comp=Z,107nm,0.4s						
PET				smax			
	comp=N,64nm,0.4s						
PET				smax			
	comp=E,133nm,0.3s						
PET	**Petropavlovsk**	**4.18**	**255**	*e*P	Pn	19 29 05.9	+3.7
PET				*i* S	Sn	19 29 52.5	+2.7
GNL	**Ganaly**	**4.41**	**265**	*i* P	Pn	19 29 10.1	+4.7
GNL				*i* S	Sn	19 29 59.9	+4.4
RUS	**Russkaya**	**4.50**	**248**	P	Pn	19 29 09.6	+3.0
RUS				S	Sn	19 29 59.0	+1.4
RUS	**Russkaya**	**4.50**	**248**	*e*P	Pn	19 29 09.6	+3.0
RUS				*i* S	Sn	19 29 59.0	+1.4
GRL	**Gorelyy**	**4.69**	**251**	*i* P	Pn	19 29 13.5	+4.3
GRL				*e*S	Sn	19 30 05.0	+2.7
MIPR	**Malaya Ipel'ka**	**5.54**	**252**	*e*P	Pn	19 29 25.5	+4.7
SKR	**Severo-Kuril's**	**6.70**	**241**	*e*PN	Pn	19 29 35.0	-1.8
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						

*CSEM **08** 19:41:26.3±0.1, 36.11N×28.05E, h100^{km}, MD3.2, Error ellipse: s-maj=2.6km s-min=1.3km az=82.0*
*ISCJB **08** 19:41:27.4±0.5, 3602N±005×2806E±007, h92^{km}±11^{km}, Error ellipse: s-maj=9.5km s-min=8.0km az=171.0*
*HLW **08** 19:41:29.8, 3590N×28.15E, h33^{km}, Mb3.4*
*ATH **08** 19:41:30.6, 3629N×2774E, h59^{km}, MD3.3/4*
*NEIC **08** 19:41:30.6, 3629N×2774E, h59^{km}, MD3.3(ATH), After ATH.*
*ISK **08** 19:41:31.1, 3627N×2807E, h75^{km}, MD3.2, ML3.1*

ISC 08 19:41:28.9±0.6**, 3604N**±004×**2805E**±007**, h80**^{km}±12^{km}**, n29,** σ**0**^{s}**76**/36**, 1C-3D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.18**	**19**	*e*P	**Pn**	**19 41 41.4**	**+0.8**
DAT	**Datca**	**0.79**	**331**	PG	**Pn**	**19 41 45.9**	**+0.4**
DAT				SG	**Sn**	**19 41 57.2**	**-0.6**
DALT	**Dalyan (Mudla)**	**0.87**	**33**	PG	**Pn**	**19 41 46.8**	**+0.4**
DALT				SG	**Sn**	**19 41 58.0**	**-1.4**
KARP	**Karpathos**	**0.88**	**236**	*e*P	**Pn**	**19 41 47.7**	**+1.2**
YER	**Yerkesik**	**1.11**	**10**	PG	**Pn**	**19 41 49.6**	**+0.4**
BODT	**Bodrum**	**1.18**	**330**	PG	**Pn**	**19 41 50.5**	**+0.4**
BODT				SG	**Sn**	**19 42 04.9**	**-1.2**
ELL	**Elmali**	**1.66**	**64**	PN	**Pn**	**19 41 58.0**	**+1.8**
DENT	**Denizli**	**1.88**	**24**	PN	**Pn**	**19 41 59.8**	**+0.6**
SMG	**Samos**	**1.93**	**330**	*e*P	**Pn**	**19 41 57.6**	**-2.2**
NPS	**Neapolis**	**2.13**	**249**	*e*P	**Pn**	**19 42 03.3**	**+0.8**
IZM	**Izmir**	**2.44**	**345**	*e*PN	**Pn**	**19 42 07.3**	**+0.7**
BLCB	**Balcova**	**2.48**	**341**	*e*PN	**Pn**	**19 42 07.3**	**+0.2**
AKS	**Akhisar**	**2.84**	**356**	*e*PN	**Pn**	**19 42 12.1**	**0.0**
HMAT	**Matruh**	**5.00**	**189**	P	**Pn**	**19 42 41.2**	**-0.1**
HMAT				S	**Sn**	**19 43 33.1**	**-4.7**
HMAT	**Matruh**	**5.00**	**189**	P	**Pn**	**19 42 41.2**	**-0.2**
SLUM		**5.12**	**208**	⇓P	**Pn**	**19 42 43.1**	**+0.1**
SLUM				S	**Sn**	**19 43 36.4**	**-4.3**
KOT	**Kottamia**	**6.87**	**151**	P	**Pn**	**19 43 06.9**	**-0.1**
AMAG	**Maghara**	**6.90**	**140**	P	**Pn**	**19 43 06.8**	**-0.6**
HHAG	**Hagoal**	**6.96**	**150**	P	**Pn**	**19 43 07.3**	**-0.8**
SWA1		**7.04**	**197**	P	**Pn**	**19 43 09.3**	**+0.1**
SWA1				S	**Sn**	**19 44 22.3**	**-5.5**
HSAF	**As Saff**	**7.05**	**154**	⇑P	**Pn**	**19 43 09.3**	**-0.1**
SWA2		**7.12**	**199**	P	**Pn**	**19 43 10.4**	**0.0**
GLL	**Jalalah**	**7.14**	**153**	P	**Pn**	**19 43 10.6**	**-0.1**
SUZ		**7.37**	**146**	P	**Pn**	**19 43 13.5**	**-0.3**
AWBH		**7.73**	**174**	⇓P	**Pn**	**19 43 18.1**	**-0.6**
AWBH		**7.73**	**174**	P	**Pn**	**19 43 18.0**	**-0.7**
HNKL	**Nakhl**	**7.87**	**139**	P	**Pn**	**19 43 20.5**	**-0.1**
HNKL				S	**Sn**	**19 44 40.9**	**-7.1**
HFRF	**Wahat Farafira**	**8.87**	**179**	⇓P	**Pn**	**19 43 34.2**	**0.0**
HKAT	**Jabal Katrina**	**9.02**	**144**	P	**Pn**	**19 43 36.5**	**+0.1**

*ROM **08** 19:48:26.9±0.1, 4349N×1244E, h5^{km}±1^{km}, Md3.0/22, Ml2.5/13, Error ellipse: s-maj=1.5km s-min=1.1km az=162.0*
*CSEM **08** 19:48:27.5±0.1, 4342N×1247E, h12^{km}, ML2.8/8, Error ellipse: s-maj=1.2km s-min=1.0km az=35.0*
*ISCJB **08** 19:48:27.1±0.2, 4345N±002×1237E±002, h15^{km}±2^{km}, Error ellipse: s-maj=3.7km s-min=2.6km az=35.3*
*LDG **08** 19:48:30.0±0.2, 4347N×1247E, h10^{km}, Ml2.7/7, Error ellipse: s-maj=7.4km s-min=4.9km az=38.0*
*NEIC **08** 19:48:30.0, 4347N×1247E, h10^{km}, ML2.7(LDG), After LDG.*
*PRU **08** 19:48:31.6, 4378N×1276E, h0^{km}*

ISC 08 19:48:28.0±0.3**, 4345N**±002×**1238E**±002**, h9**^{km}±2^{km}**, n68,** σ**1**^{s}**01**/108**, 19C-6D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CDCA	**Citt' di Caste**	**0.11**	**272**	⇑Pg	**Pg**	**19 48 30.6**	**0.0**
CDCA				Sg	**Sg**	**19 48 33.1**	**+0.7**
	4µm,0.2s						
BADI	**Badiali**	**0.12**	**299**	Pg	**Pg**	**19 48 30.4**	**-0.3**
BADI				Sg	**Sg**	**19 48 32.9**	**+0.3**
	13µm,0.1s						
MURB	**Monte Urbino**	**0.22**	**152**	⇑*i*Pg	**Pg**	**19 48 32.4**	**0.0**
MURB				Sg	**Sg**	**19 48 36.6**	**+1.2**
CRE	**Caprese Michel**	**0.35**	**298**	Pg	**Pg**	**19 48 34.6**	**-0.4**
CRE				Sg	**Sg**	**19 48 40.9**	**+1.2**
	722nm,0.5s						
ARV	**Arcevia**	**0.41**	**84**	⇑*i*Pg	**Pg**	**19 48 35.0**	**-1.0**
ARV				Sg	**Sg**	**19 48 41.2**	**-0.2**
	598nm,1.0s						
ASS	**Assisi**	**0.44**	**153**	⇑Pg	**Pg**	**19 48 36.1**	**-0.4**
ASS				Sg	**Sg**	**19 48 43.3**	**+1.0**
	19nm,0.4s						
SNTG	**Esanatoglia**	**0.45**	**116**	Pg	**Pg**	**19 48 36.0**	**-0.8**
SNTG				Sg	**Sg**	**19 48 43.9**	**+1.1**
	249nm,0.4s						
RSM	**Repubblica di**	**0.48**	**6**	⇑*i*Pg	**Pg**	**19 48 37.0**	**-0.3**
	487nm,0.9s						
SFI	**Santa Sofia**	**0.59**	**319**	Pg	**Pg**	**19 48 38.6**	**-0.9**
SFI				Sg	**Sg**	**19 48 48.1**	**+0.8**
	211nm,0.4s						
CING	**Cingoli**	**0.60**	**97**	Pg	**Pg**	**19 48 38.5**	**-1.1**
CING				Sg	**Sg**	**19 48 47.9**	**+0.5**
	194nm,0.4s						
CSNT	**Castellina Chi**	**0.80**	**272**	Pg	**Pg**	**19 48 43.4**	**+0.1**
	371nm,0.7s						
AOI	**Ancona**	**0.89**	**83**	Pg	**Pg**	**19 48 44.0**	**-1.2**
AOI				Sg	**Sg**	**19 48 56.7**	**-0.1**
	136nm,0.4s						
ARCI	**Arcidosso**	**0.90**	**228**	Pg	**Pg**	**19 48 45.5**	**+0.2**
	182nm,0.9s						
LATE	**Laterza**	**0.94**	**207**	Pg	**Pg**	**19 48 46.2**	**+0.1**
	31nm,0.6s						
SEI	**Scarperia**	**0.96**	**309**	Pg	**Pg**	**19 48 47.0**	**+0.6**
	297nm,0.3s						
GRFL	**Gerfalco**	**1.07**	**254**	Pg	**Pg**	**19 48 48.4**	**-0.2**
	52nm,0.7s						
MNS	**Montasola**	**1.09**	**168**	Pg	**Pg**	**19 48 48.3**	**-0.7**
MNS				Sg	**Sg**	**19 49 05.4**	**+2.3**
	97nm,0.5s						
FNVD	**Fontana Vidola**	**1.16**	**308**	Pg	**Pg**	**19 48 50.0**	**-0.3**
	148nm,0.8s						
TERO	**Teramo**	**1.22**	**132**	Pg	**Pg**	**19 48 50.2**	**-1.3**
	152nm,0.6s						
PZZT	**Monte Pizzetto**	**1.29**	**302**	Pg	**Pg**	**19 48 51.7**	**-1.1**
	92nm,0.6s						
FIAM	**Fiamignano**	**1.30**	**155**	Pg	**Pg**	**19 48 51.6**	**-1.4**
	106nm,0.6s						
AQU	**L'Aquila**	**1.33**	**145**	*e*Pn	**Pn**	**19 48 52.5**	**-0.3**
AQU				*e*Sn	**Sn**	**19 49 18.1**	**+7.5**
AQU	**L'Aquila**	**1.33**	**145**	*e*Pn	**Pn**	**19 48 52.5**	**-0.3**
GSCL	**Gusciola**	**1.58**	**305**	Pg	**Pg**	**19 48 57.0**	**-1.3**
	13nm,0.4s						
VLC	**Villacollemand**	**1.61**	**297**	Pg	**Pg**	**19 48 57.1**	**-1.8**
	31nm,0.7s						
CTI	**Castel Tesino**	**2.65**	**349**	Pn	**Pn**	**19 49 11.5**	**+0.6**
	16nm,0.6s						
VOY	**Vojsko**	**2.79**	**22**	*e*Pn	**Pn**	**19 49 11.3**	**-1.6**
VOY				*e*Sn	**Sn**	**19 49 47.6**	**+0.9**
MABI	**Malga Bissina**	**2.92**	**334**	Pn	**Pn**	**19 49 16.0**	**+1.3**
	2.0nm,0.5s						
PTCC	**Patocco-Chiusa**	**3.03**	**13**	Pn	**Pn**	**19 49 15.1**	**-1.1**
	3.0nm,0.3s						
OBKA	**Obir**	**3.42**	**26**	⇑*i*Pn	**Pn**	**19 49 20.7**	**-0.8**
OBKA				⇑*i*Sn	**Sn**	**19 50 02.6**	**+0.4**
SBF	**Sospel**	**3.61**	**278**	*e*Pn	**Pn**	**19 49 25.1**	**+0.9**
SBF				*e*Sn	**Sn**	**19 50 06.0**	**-1.0**
	4.0nm,0.3s						
SBF	**Sospel**	**3.61**	**278**	*e*Pn	**Pn**	**19 49 25.1**	**+0.9**
SBF				*e*Sn	**Sn**	**19 50 06.0**	**-1.0**
	2.0nm,0.3s						
WTTA	**Wattenberg**	**3.85**	**352**	⇓*i*Pn	**Pn**	**19 49 29.3**	**+1.9**
WTTA				⇓*i*Sn	**Sn**	**19 50 17.9**	**+5.1**
SQTA	**Sankt Quirin**	**3.86**	**348**	⇓*i*Pn	**Pn**	**19 49 29.9**	**+2.3**
	SNR=7.5						
SQTA				⇑*i*Sn	**Sn**	**19 50 16.6**	**+3.7**
SQTA	**Sankt Quirin**	**3.86**	**348**	⇓*i*Pn	**Pn**	**19 49 29.9**	**+2.3**
SQTA				*i* Sn	**Sn**	**19 50 18.5**	**+5.5**
SQTA	**Sankt Quirin**	**3.86**	**348**	Pn	**Pn**	**19 49 29.9**	**+2.4**
	7.0nm,5.0s						
SQTA				Sn	**Sn**	**19 50 18.5**	**+5.5**
MOTA	**Moosalm**	**3.99**	**347**	⇑*i*Sn	**Sn**	**19 50 22.0**	**+5.6**
MOTA	**Moosalm**	**3.99**	**347**	⇑*i*Pn	**Pn**	**19 49 31.4**	**+2.0**
MOTA				⇑*i*Sn	**Sn**	**19 50 20.3**	**+4.0**
MOTA	**Moosalm**	**3.99**	**347**	⇑*i*Pn	**Pn**	**19 49 31.4**	**+2.0**
MOTA				*i* Sn	**Sn**	**19 50 22.0**	**+5.6**
MOTA	**Moosalm**	**3.99**	**347**	Pn	**Pn**	**19 49 31.4**	**+2.0**
MOTA				Sn	**Sn**	**19 50 22.0**	**+5.6**
FRF	**La Foret Royal**	**4.17**	**273**	*e*Pn	**Pn**	**19 49 32.6**	**+0.7**
FRF				*e*Sn	**Sn**	**19 50 19.9**	**-0.9**
	4.6nm,0.3s						
FRF	**La Foret Royal**	**4.17**	**273**	*e*Pn	**Pn**	**19 49 32.6**	**+0.7**
FRF				*e*Sn	**Sn**	**19 50 19.9**	**-0.9**
	2.3nm,0.3s						
DAVA	**Damuels**	**4.22**	**336**	⇑*i*Sn	**Sn**	**19 50 28.8**	**+6.8**
DAVA	**Damuels**	**4.22**	**336**	⇑*i*Pn	**Pn**	**19 49 35.3**	**+2.8**
DAVA				⇓*i*Sn	**Sn**	**19 50 26.2**	**+4.3**
DAVA	**Damuels**	**4.22**	**336**	⇑*i*Pn	**Pn**	**19 49 35.4**	**+2.8**
DAVA				*i* Sn	**Sn**	**19 50 28.8**	**+6.8**
DAVA	**Damuels**	**4.22**	**336**	Pn	**Pn**	**19 49 35.3**	**+2.8**
DAVA				Sn	**Sn**	**19 50 28.8**	**+6.9**
MBDF	**Montbardon**	**4.24**	**289**	*e*Pn	**Pn**	**19 49 32.8**	**0.0**
MBDF				*e*Sn	**Sn**	**19 50 21.3**	**-1.1**
	5.5nm,0.6s						
MBDF	**Montbardon**	**4.24**	**289**	*e*Pn	**Pn**	**19 49 32.8**	**0.0**
MBDF				*e*Sn	**Sn**	**19 50 21.3**	**-1.1**
	2.8nm,0.6s						
LMR	**La Mourre**	**4.28**	**270**	*e*Pn	**Pn**	**19 49 33.5**	**+0.1**
LMR				*e*Sn	**Sn**	**19 50 22.2**	**-1.3**
	1.2nm,0.2s						
LMR	**La Mourre**	**4.28**	**270**	*e*Pn	**Pn**	**19 49 33.5**	**+0.1**
LMR				*e*Sn	**Sn**	**19 50 22.2**	**-1.3**
	0.6nm,0.2s						
ARSA	**Arzberg**	**4.39**	**29**	⇑*i*Pn	**Pn**	**19 49 33.5**	**-1.4**
ARSA				⇓*i*Sn	**Sn**	**19 50 26.0**	**-0.3**
ARSA	**Arzberg**	**4.39**	**29**	⇑*i*Pn	**Pn**	**19 49 33.5**	**-1.4**
ARSA				*i* Sn	**Sn**	**19 50 26.0**	**-0.3**
LPG	**La Plagne**	**4.52**	**299**	*e*Pn	**Pn**	**19 49 37.2**	**+0.6**
LPL	**La Plagne**	**4.54**	**299**	*e*Pn	**Pn**	**19 49 37.4**	**+0.5**
LPL				*e*Sn	**Sn**	**19 50 27.8**	**-2.0**
	4.3nm,0.5s						
LPL	**La Plagne**	**4.54**	**299**	*e*Pn	**Pn**	**19 49 37.4**	**+0.5**
LPL				*e*Sn	**Sn**	**19 50 27.8**	**-2.0**
	2.2nm,0.5s						
MOA	**Molln**	**4.59**	**16**	⇑*i*Pn	**Pn**	**19 49 37.7**	**+0.1**
MOA				⇑*i*Sn	**Sn**	**19 50 32.1**	**+1.1**
ORIF	**Oris-en-Rattie**	**4.90**	**290**	*e*Pn	**Pn**	**19 49 42.3**	**+0.4**
SMRF	**Simiane la Rot**	**4.96**	**278**	*e*Pn	**Pn**	**19 49 42.9**	**+0.2**
CABF	**La Chapelle**	**5.46**	**307**	*e*Pn	**Pn**	**19 49 50.1**	**+0.5**
VIVF	**Saint-Julien-l**	**5.72**	**287**	*e*Pn	**Pn**	**19 49 54.4**	**+1.2**
KHC	**Kasperske Hory**	**5.74**	**8**	*e*PN	**Pn**	**19 49 51.8**	**-1.6**
KHC				*e*x	x	19 50 02.0	
KHC				*e*SN	**Sn**	**19 50 53.6**	**-5.8**
HINF	**Hinteralfeld**	**5.84**	**320**	*e*Pn	**Pn**	**19 49 55.2**	**+0.5**
CDF	**Champ du Feu**	**6.10**	**326**	*e*Pn	**Pn**	**19 49 59.0**	**+0.6**
CDF				*e*Sn	**Sn**	**19 51 04.6**	**-3.8**
	0.8nm,0.2s						
HAU	**Haudompre**	**6.21**	**319**	*e*Pn	**Pn**	**19 50 01.1**	**+1.3**
PRU	**Pruhonice**	**6.70**	**12**	*e*SN	**Sn**	**19 51 15.8**	**-7.3**
LOR	**Lormes**	**7.11**	**305**	*e*Pn	**Pn**	**19 50 11.9**	**-0.4**
LOR				*e*Sn	**Sn**	**19 51 29.6**	**-3.6**
	1.8nm,0.4s						
MTLF	**Montolieu**	**7.41**	**273**	*e*Pn	**Pn**	**19 50 16.2**	**-0.1**
OKC	**Ostrava-Krasne**	**7.51**	**30**	*e*SN	**Sn**	**19 51 33.5**	**-10**

MAN 08 20:08:26.4, 1709N×12173E, h30^{km}, mb2.3, ML3.9, MS1.7, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.17**	**148**	*e*P	Pb	20 08 34.5	+2.1
CAUP				*e*S	Sb	20 08 39.0	+2.7
PALP	**Palanan**	**0.67**	**92**	*e*P	Pb	20 08 39.8	+0.2
PALP				*e*S	Sb	20 08 52.9	+4.3
APYP	**Conner**	**0.89**	**329**	*e*P	Pn	20 08 43.0	+0.1
APYP				*e*S	Sn	20 08 56.1	+1.3
ABRA	**Dolores**	**1.12**	**300**	*e*P	Pn	20 08 45.8	-0.2
ABRA				*e*S	Sn	20 09 01.0	+0.7
BOLP	**Bolinao**	**1.88**	**248**	*e*P	Pn	20 08 56.7	+0.3

*BJI **08** 20:11:31.9, 1579S×16634E, h16^{km}, mB5.2, mb4.7, Ms4.9, Msz4.5*
*IDC **08** 20:11:31.3±0.6, 1586S×16621E, h0^{km}, mb4.5/14, mb1 4.7/18, mb1mx4.7/20, mbtmp4.7/18, ML5.4/3, MS4.2/17, Ms1 4.2/17, ms1mx4.1/26, Error ellipse: s-maj=19.4km s-min=15.3km az=98.0*
*NEIC **08** 20:11:33.0±4.4, 1588S×16605E, h11^{km}±26^{km}, mb5.1/30, Error ellipse: s-maj=9.7km s-min=7.7km az=96.0*
*ISCJB **08** 20:11:33.8±0.2, 1586S±004×16597E±004, h23^{km}, mb4.8/50, MS4.3/24, Error ellipse: s-maj=6.4km s-min=5.4km az=111.2*
*HRVD **08** 20:11:33.0±0.2, 1584S×166.17E, h21^{km}±1^{km}, MW5.2/73, Centroid moment Tensor Solution. LP body waves: s47,c74;Mantle waves: s73,c124; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.18±.21; $M_{\theta\theta}$2.37±.18; $M_{\phi\phi}$-5.55±.21; $M_{r\theta}$-0.51±.31; $M_{\theta\phi}$5.24±.15; $M_{\phi r}$-1.76±.33; Best double couple: $M_0$6.97700×10^{16} NP1:ϕ_s291.00000°, δ65.00000°, λ16.00000°. NP2:ϕ_s194.00000°, δ76.00000°, λ155.00000°. Principal axes: T 5.6360, Plg28.0000°, Azm151.0000°; N 2.6820, Plg61.0000°, Azm347.0000°; P -8.3180, Plg7.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*LDG **08** 20:11:34.2±0.1, 1595S×16535E, h10^{km}, Mb4.8/2 Error ellipse: s-maj=47.2km s-min=3.6km az=77.0*
*MOS **08** 20:11:36.2±1.6, 1575S×16595E, h33^{km}, mb5.2/16, Error ellipse: s-maj=10.7km s-min=9.0km az=103.9*

ISC 08 20:11:35.7±0.2**, 1591S**±004×**16606E**±004**, h25**^{km}**, h25**^{km}±2.9^{km}**:pP-P, n215,** σ**1**^{s}**06**/158**, mb4.8**/50**, MS4.3**/24**, 24C-19D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BKM	**Butte a Klehm**	**2.73**	**130**	⇑*i*P	**Pn**	**20 12 14.4**	**-3.6**
DZM	**Mont Dzumac**	**6.14**	**177**	*e*P	**Pn**	**20 13 03.3**	**-1.6**
DZM				*e*S	**Sn**	**20 14 06.6**	**-7.7**
DZM	**Mont Dzumac**	**6.14**	**177**	Pn	**Pn**	**20 13 03.2**	**-1.7**
	118nm,0.3s,baz=15,slow=18,SNR=348						
DZM				Sn	**Sn**	**20 14 12.8**	**-1.6**
	54nm,0.3s,baz=124,slow=23,SNR=4.6						
DZM				LR	LR	20 15 07.9	
	comp=Z,4µm,19.2s,baz=0.1,slow=35						
HNR	**Honiara**	**8.77**	**316**	Pn	**Pn**	**20 13 41.0**	**0.0**
	62nm,0.3s,baz=119,slow=0.4,SNR=25						
HNR				Sn	**Sn**	**20 15 18.2**	**-0.9**
	58nm,0.3s,baz=94,slow=19,SNR=5.6						
HNR	**Honiara**	**8.77**	**316**	P	**Pn**	**20 13 41.0**	**0.0**
HNR						20 15 18.2	
HNR				pmax	pmax		
	comp=Z,62nm,0.3s						
HNR				smax			
	comp=N,58nm,0.3s						
HNR	**Honiara**	**8.77**	**316**	*e*Pn	**Pn**	**20 13 41.2**	**+0.3**
	comp=N,629nm,0.8s						
HNR				*e*S	**Sn**	**20 15 16.3**	**-2.8**
CTA	**Charters Tower**	**19.29**	**255**	⇓*i*P	**Pn**	**20 16 01.6**	**+1.8**
	comp=N,48nm,0.7s						
CTA				*e*S	**Sn**	**20 19 39.9**	**+4.6**
CTA	**Charters Tower**	**19.29**	**255**	P	**Pn**	**20 16 01.5**	**+1.7**
	comp=N,3.5nm,0.3s,baz=82,slow=12,SNR=52						
CTA	**Charters Tower**	**19.29**	**255**	⇓*i*P	**Pn**	**20 16 01.6**	**+1.8**
CTA				*e*S	**Sn**	**20 19 39.9**	**+4.6**
CTA				pmax	pmax		
	comp=Z,48nm,0.7s						
CTAO	**Charters Tower**	**19.29**	**255**	P	**Pn**	**20 15 55.7**	**-4.1**
CTAO				pmax	pmax		
	comp=Z,47nm,0.8s						
CTAO	**Charters Tower**	**19.29**	**255**	P	**Pn**	**20 15 55.7**	**-4.1**
	comp=Z,47nm,0.8s						
CTAO				*e*		20 16 12.6	
PMG	**Port Moresby**	**19.53**	**287**	P	**Pn**	**20 16 03.6**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=96,slow=4.8,SNR=6.7						
PMG				LR	LR	20 22 47.0	
	comp=Z,730nm,18.2s,baz=48,slow=34						
PMG	**Port Moresby**	**19.53**	**287**	*e*P	**Pn**	**20 16 03.6**	**+0.9**
PMG				pmax	pmax		
	comp=Z,91nm,1.0s						
PMG	**Port Moresby**	**19.53**	**287**	*e*P	**Pn**	**20 16 03.6**	**+0.9**

comp=Z,91nm,1.0s
ARMA Armidale 19.58 220 ⇑*i*P **Pn** **20 16 04.7 +1.4**
ARMA eS **Sn** **20 19 50.0 +7.6**
RAO Raoul Island 19.85 135 LR LR 20 22 10.0
comp=Z,697nm,18.3s,baz=357,slow=32
RAO Raoul Island 19.85 135 P **Pn** **20 16 09.0 +2.5**
RIV Riverview 22.34 214 *e*P **P** **20 16 34.6 +2.9**
URZ Urewera 24.30 158 P **P** **20 16 51.3 +0.1**
comp=Z,22nm,0.9s,mb4.6,baz=326,slow=6.0,SNR=7.3
URZ LR LR 20 23 26.6
comp=Z,297nm,19.2s,MS3.8,baz=164,slow=29
CNB Canberra Magne 24.43 215 *e*P **P** **20 16 53.6 +1.3**
comp=Z,63nm,0.7s,mb5.2
STKA Stephens Creek 27.35 230 ⇑*i*P **P** **20 17 19.9 +1.2**
comp=Z,26nm,0.9s,mb4.8
STKA eS **S** **20 22 07.9 +11**
STKA Stephens Creek 27.35 230 P **P** **20 17 20.0 +1.3**
comp=Z,20nm,1.0s,mb4.6,baz=44,slow=9.9,SNR=23
STKA PcP PcP 20 20 37.8 +0.2
comp=Z,4.7nm,1.0s,baz=107,slow=2.9,SNR=3.6
STKA LR LR 20 27 15.8
comp=Z,502nm,18.6s,MS4.1,baz=229,slow=34
RPZ Rata Peaks 28.04 172 LR LR 20 27 18.3
comp=Z,1μm,19.0s,MS4.4,baz=348,slow=34
TOO Toolangi 28.22 216 *e*P **P** **20 17 26.2 -0.3**
comp=Z,17nm,0.7s,mb4.8
TOO Toolangi 28.22 216 *e*P **P** **20 17 26.2 -0.3**
TOO pmax pmax
comp=Z,17nm,0.7s,mb4.8
WB2 Warramunga Arr 30.41 258 *e*P **P** **20 17 45.1 -0.9**
WRAB Tennant Creek 30.41 258 *e*P **P** **20 17 45.0 -1.0**
WRAB *e* pP 20 17 51.9 -1.4
WRAB pmax pmax
comp=Z,17nm,0.6s,mb5.0
WRAB Tennant Creek 30.41 258 *e*P **P** **20 17 45.0 -1.0**
comp=Z,17nm,0.6s,mb5.0
WRAB *e* pP 20 17 51.9 -1.4
AS31 Alice Springs 31.17 251 *e*P **P** **20 17 52.6 -0.1**
ASAR Alice Springs 31.17 251 P **P** **20 17 52.7 0.0**
comp=Z,13nm,0.7s,mb4.9,baz=73,slow=9.9,SNR=160
ASAR LR LR 20 29 12.6
comp=Z,327nm,20.9s,MS4.0,baz=86,slow=34
ASPA Alice Springs 31.18 251 *e*P **P** **20 17 52.6 -0.1**
KAKA Kakadu 32.71 271 *e*P **P** **20 18 05.1 -1.1**
comp=Z,12nm,0.6s,mb5.0
FORT Forrest 37.70 240 *e*P **P** **20 18 47.5 -1.6**
comp=Z,71nm,0.6s,mb5.6
FITZ Fitzroy Crossi 38.66 261 *e*P **P** **20 18 57.0 -0.3**
comp=Z,19nm,0.8s,mb4.9
FITZ Fitzroy Crossi 38.66 261 P **P** **20 18 57.5 +0.2**
comp=Z,3.5nm,0.6s,mb4.3,baz=70,slow=5.8,SNR=21
PPT Papeete 42.45 99 *e*LQ 20 29 23.9
comp=Z,1μm,28.8s
PPT *e*LR LR 20 31 18.2
comp=Z,514nm,26.0s,baz=267
PPT Papeete 42.45 99 LR LR 20 32 00.0
comp=Z,343nm,20.2s,MS4.2,baz=268,slow=29
KLBR Kellerberrin 46.52 241 ⇓*i*P **P** **20 20 00.2 -0.8**
comp=Z,27nm,0.7s,mb5.3
NWAO Narrogin (SRO) 47.15 240 P **P** **20 20 06.6 +0.6**
comp=Z,93nm,0.8s,mb5.8,baz=84,slow=7.2,SNR=55
NWAO Narrogin (SRO) 47.15 240 *e*P **P** **20 20 06.6 +0.6**
NWAO pmax pmax
comp=Z,73nm,0.8s
NWAO Narrogin (SRO) 47.15 240 *e*P **P** **20 20 06.5 +0.6**
comp=Z,73nm,0.8s,mb5.7
MUN Mundaring 47.87 241 ⇓*i*P **P** **20 20 11.7 +0.1**
RKT Rikitea 55.73 107 *e*LR LR 20 37 26.0
comp=Z,404nm,38.2s
KSM Kuching 57.70 282 *e*P **P** **20 21 24.8 +0.6**
MJAR Matsushiro Arr 58.42 334 P **P** **20 21 28.7 -0.6**
comp=Z,1.1nm,0.6s,mb4.1,baz=163,slow=11,SNR=4.2
MAJO Matsushiro 58.42 334 *e*P **P** **20 21 29.6 +0.3**
MAJO pmax pmax
comp=Z,25nm,1.1s,mb5.2
MAJO Matsushiro 58.42 334 *e*P **P** **20 21 29.6 +0.3**
comp=Z,25nm,1.1s,mb5.2
MAT Matsushiro 58.42 334 P **P** **20 21 30.7 +1.4**
MAT Matsushiro 58.42 334 P **P** **20 21 31.0 +1.7**
VNDA Vanda 61.67 181 P **P** **20 21 50.7 -0.8**
comp=Z,4.1nm,0.9s,mb4.5,baz=355,slow=6.1,SNR=19
VNDA LR LR 20 43 00.3
comp=Z,103nm,21.4s,MS4.0,baz=189,slow=31
CASY Casey 62.00 202 *e*P **P** **20 21 53.1 -0.7**
ASAJ Asahikawa 63.46 341 P **P** **20 22 02.5 -1.0**
comp=Z,10nm,0.9s,mb5.0,baz=224,slow=9.4,SNR=12
ASAJ LR LR 20 48 29.1
comp=Z,171nm,19.4s,MS4.2,baz=172,slow=35
ASAJ Asahikawa 63.46 341 P **P** **20 22 02.5 -1.0**
ASAJ pmax pmax
comp=Z,10.0nm,0.9s
ASAJ MLR MLR
comp=Z,171nm,19.4s
NJ2 Nanjing 65.72 317 *e*P **P** **20 22 19.3 +1.1**
NJ2 PP PP 20 24 46.4 +3.5
NJ2 S S 20 30 57.0 -5.9
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
NJ2 AMB AMB
comp=Z,130nm,4.6s
NJ2 LR LR
comp=N,260nm,15.1s,MS4.9
NJ2 LR LR
comp=E,510nm,17.9s,MS4.9
NJ2 LR LR
comp=Z,210nm,14.3s,MS4.5
YSS Yuzh-Sakhalins 65.99 343 *e*P **P** **20 22 20.0 0.0**
YSS *e* 20 22 37.8
YSS MLR MLR
comp=Z,1.0nm,18.0s
YSS Yuzh-Sakhalins 65.99 343 *e*P **P** **20 22 19.2 -0.8**
comp=Z,46nm,1.0s,mb5.5
MDJ Mudanjiang 68.78 333 P **P** **20 22 38.0 +0.4**
MDJ PP PP 20 25 10.9 +1.3
MDJ S S 20 31 38.0 -1.7
MDJ SCS ScS 20 32 32.7 -3.6
MDJ AMB AMB
comp=Z,8.0nm,1.6s,mb4.4
MDJ AMB AMB
comp=Z,91nm,4.6s
MDJ LR LR
comp=N,89nm,22.1s,MS4.0
MDJ LR LR
comp=E,32nm,25.0s,MS4.0
MDJ LR LR
comp=Z,145nm,25.0s,MS4.1
MDJ Mudanjiang 68.78 333 *e*P **P** **20 22 36.9 -0.8**
comp=Z,11nm,1.0s,mb4.8
MIR Mirnyy 68.78 204 *e*P **P** **20 22 40.0 +2.3**
MIR pmax pmax
comp=Z,200nm,1.7s,mb5.8
CN2 Changchun 70.06 330 *e*P **P** **20 22 46.3 +0.7**
CN2 eS S 20 31 51.3 -3.5
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,17.0s,MS4.7
CN2 LR LR
comp=E,300nm,17.0s,MS4.7
CN2 LR LR
comp=Z,300nm,19.0s,MS4.6
ENH Enshi 71.22 310 *e*P **P** **20 22 50.9 -1.7**
KLR Kul'dur 71.62 337 *e*P **P** **20 22 53.0 -2.0**
BJI Beijing 72.46 322 *e*P **P** **20 23 00.4 +0.3**
BJI S S 20 32 27.0 +4.4
BJI AMB AMB
comp=Z,4.0nm,1.1s,mb4.3
BJI LR LR
comp=N,169nm,24.6s,MS4.4
BJI LR LR
comp=E,181nm,22.3s,MS4.4
BJI LR LR
comp=Z,243nm,37.3s
XAN Xi'an 73.63 313 P **P** **20 23 07.5 +0.5**
XAN AP pP 20 23 15.4 +0.5
XAN AMB AMB
comp=Z,5.0nm,0.8s,mb4.5
KMI Kunming 73.94 303 P **P** **20 23 10.9 +2.1**
KMI AP pP 20 23 16.6 -0.1
KMI XP sP 20 23 18.9 -0.7
KMI PP PP 20 25 57.9 +4.0
KMI S S 20 32 45.5 +6.1
KMI SKS 20 33 14.2
KMI AMB AMB
comp=Z,8.0nm,1.2s,mb4.5
KMI AMB AMB
comp=Z,141nm,4.3s
KMI LR LR
comp=Z,141nm,25.8s,MS4.1
QSPA South Pole Qui 74.13 180 *e*P **P** **20 23 09.5 -0.4**
comp=Z,14nm,1.0s,mb4.8
HHC Hu-ho-hao-te 75.73 320 *e*P **P** **20 23 21.1 +1.9**
HHC PCP PcP 20 23 34.1 +2.3
HHC PP PP 20 26 13.6 +4.5
HHC S S 20 32 56.1 -3.3
HHC SKS 20 33 20.7
HHC SCS ScS 20 33 26.4 -5.2
HHC SS SS 20 37 51.2 0.0
HHC AMB AMB
comp=Z,13nm,1.0s,mb4.8
HHC AMB AMB
comp=Z,110nm,4.1s
HHC LR LR
comp=N,152nm,17.1s,MS4.4
HHC LR LR
comp=E,109nm,21.8s,MS4.4
HHC LR LR
comp=Z,125nm,19.9s,MS4.2
CD2 Chengdu 75.81 308 P **P** **20 23 20.6 +1.0**
CD2 PP PP 20 26 13.2 +3.5
CD2 S S 20 32 56.6 -3.6
CD2 SS SS 20 37 52.0 -0.3
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CD2 AMB AMB
comp=Z,40nm,6.4s
CD2 LR LR
comp=E,140nm,25.2s
CD2 LR LR
comp=Z,160nm,20.4s,MS4.3
HIA Hailar 76.73 331 *e*P **P** **20 23 24.2 -0.7**
HIA pmax pmax
comp=Z,18nm,1.0s
HIA Hailar 76.73 331 *e*P **P** **20 23 24.2 -0.6**
comp=Z,18nm,1.0s,mb5.0
LZH Lanzhou 78.25 313 *e*P **P** **20 23 35.5 +2.1**
LZH AP pP 20 23 41.0 -0.3
LZH XP sP 20 23 45.0 +0.8
LZH PP PP 20 26 34.0 +3.7
LZH *e*S S 20 33 29.0 +2.1
LZH SS SS 20 38 32.0 +2.8
LZH AMB AMB
comp=Z,14nm,1.5s,mb4.7
LZH AMB AMB
comp=Z,71nm,7.0s
LZH LR LR
comp=E,635nm,17.2s
LZH LR LR
comp=Z,875nm,18.2s,MS5.1
MAW Mawson 80.36 202 *e*P **P** **20 23 41.9 -3.0**
comp=Z,3.5nm,1.1s,mb4.2
MAW Mawson 80.36 202 P **P** **20 23 45.1 +0.2**
comp=Z,4.5nm,1.1s,mb4.3,baz=96,slow=4.7,SNR=3.8
MAW LR LR 20 53 52.6
comp=Z,174nm,21.7s,MS4.4,baz=236,slow=32
ULN Ulaanbaatar 82.40 324 *e*P **P** **20 23 55.9 +0.2**
ULN pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ULN Ulaanbaatar 82.40 324 *e*P **P** **20 23 55.9 +0.2**
comp=Z,9.9nm,0.9s,mb4.7
GTA Gaotai 82.64 314 *e*P **P** **20 23 58.1 +1.1**
GTA AP pP 20 24 08.7 +3.8
GTA XP sP 20 24 12.9 +5.1
GTA SKS 20 34 15.5
GTA S S 20 34 22.0 +9.1
GTA AMB AMB
comp=Z,7.0nm,1.5s,mb4.5
GTA AMB AMB
comp=Z,141nm,4.2s
GTA LR LR
comp=N,103nm,19.4s,MS4.4
GTA LR LR
comp=E,116nm,17.5s,MS4.4
GTA LR LR
comp=Z,164nm,17.1s,MS4.5
SONM Songino Array 82.75 324 P **P** **20 23 57.9 +0.4**
comp=Z,1.9nm,0.7s,mb4.2,baz=152,slow=7.6,SNR=14
SONM LR LR 21 02 35.3
comp=Z,145nm,18.6s,MS4.4,baz=255,slow=37
YAK Yakutsk 82.82 344 *e*P **P** **20 23 54.2 -3.7**
YAK pmax pmax
comp=Z,22nm,0.7s,mb5.3
YAK Yakutsk 82.82 344 *e*P **P** **20 23 54.2 -3.6**
comp=Z,22nm,0.7s,mb5.3
BILL Bilibino 83.71 0 *e*P **P** **20 23 58.8 -3.7**
BILL *e* 20 24 13.5
BILL pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
BILL Bilibino 83.71 0 *e*P **P** **20 23 58.8 -3.7**
comp=Z,9.6nm,0.5s,mb5.2
BILL *e* 20 24 13.5
SLKM Skilak Lake 83.83 20 *e*P **P** **20 24 01.1 -2.0**
SLKM *e* 20 24 12.9
TTA Tatalina 83.97 16 P **P** **20 24 01.8 -2.0**
TTA *e* 20 24 14.9
TTA pmax pmax
comp=Z,17nm,0.8s,mb5.2
TTA Tatalina 83.97 16 P **P** **20 24 01.8 -2.0**
comp=Z,17nm,0.8s,mb5.2
TTA *e* 20 24 14.9
PMR Palmer 84.99 20 *e*P **P** **20 24 07.5 -1.5**
PMR *e* 20 24 19.0
PMR pmax pmax
comp=Z,24nm,0.9s,mb5.3
PMR Palmer 84.99 20 *e*P **P** **20 24 07.5 -1.5**
comp=Z,24nm,0.9s,mb5.3
PMR *e* 20 24 19.0
BOD Bodaibo 85.03 335 *e*P **P** **20 24 08.1 -1.1**
ZAK Zakamensk 85.84 325 *e*P **P** **20 24 12.4 -0.8**
KBO Bosley Butte 86.24 44 *e*P **P** **20 24 16.9 +1.7**
OHCM Honcut 86.96 48 *e*P **P** **20 24 21.9 +3.2**
OHCM *e*pP pP 20 24 49.7 +23
YBH Yreka Blue Hor 87.07 45 P **P** **20 24 18.6 -0.6**
comp=Z,0.6nm,0.3s,mb4.2,baz=198,slow=18,SNR=3.3
CMB Columbia Colle 87.25 49 *e*P **P** **20 24 20.8 +0.7**
CMB pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
CMB Columbia Colle 87.25 49 *e*P **P** **20 24 20.8 +0.7**
comp=Z,2.9nm,0.7s,mb4.6
SYO Syowa Base 87.25 197 ⇓*e*P **P** **20 24 19.8 -0.3**
SYO Syowa Base 87.25 197 ⇓*e*PcP PcP 20 24 24.4 +2.2
COLA College 87.78 18 P **P** **20 24 21.4 -1.3**
COLA *e* 20 24 32.6
COLA pmax pmax
comp=Z,22nm,0.8s,mb5.4
COLA College 87.78 18 P **P** **20 24 21.4 -1.3**
comp=Z,22nm,0.8s,mb5.4
COLA *e* 20 24 32.6
ISA Isabella 87.79 52 *e*P **P** **20 24 22.7 0.0**
ISA pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
ISA Isabella 87.79 52 *e*P **P** **20 24 22.7 0.0**
comp=Z,4.5nm,0.9s,mb4.7
BBB Bella Bella 88.40 34 LR LR 20 54 14.1
comp=Z,218nm,21.9s,MS4.5,baz=148,slow=29
NVAR Mina Array Bea 88.92 50 P **P** **20 24 28.8 +0.8**
comp=Z,0.5nm,0.6s,mb4.0,baz=243,slow=4.0,SNR=5.1
N07B Gerlach 89.30 47 ⇑P **P** **20 24 29.9 +0.1**
baz=89
M07A Soldier Meadow 89.38 47 ⇑P **P** **20 24 30.6 +0.4**
baz=90
J06A Christmas Vall 89.41 45 ⇓P **P** **20 24 30.2 -0.2**
baz=90
S09A Goldfield 89.46 51 ⇑P **P** **20 24 30.6 0.0**
baz=90
L07A Adell 89.50 46 ⇓P **P** **20 24 30.3 -0.5**
baz=90
F05A White Salmon 89.57 42 ⇑P **P** **20 24 30.5 -0.6**
baz=90
I06A Prineville 89.63 44 ⇑P **P** **20 24 31.5 +0.1**
baz=90
TUQ Turquoise Mtn. 89.66 53 ⇑P **P** **20 24 31.2 -0.3**
baz=90
GLA Glamis 89.72 56 ⇓P **P** **20 24 32.5 +0.7**
baz=90
D05A Enumclaw 89.76 40 ⇑P **P** **20 24 33.2 +1.2**
baz=90
N08A GE Springer Mi 89.89 47 ⇓P **P** **20 24 32.8 +0.2**
baz=90
TPNV Topopah Spring 89.92 52 *e*P **P** **20 24 39.9 +7.1**
comp=Z,26nm,0.3s
A04A Legoe Bay, Lum 89.95 39 ⇑P **P** **20 24 33.1 +0.3**
baz=90
DAWY Dawson 89.95 21 P **P** **20 24 32.7 -0.2**
DAWY *e* 20 24 42.7
M08A Happy Creek Ra 89.95 47 ⇓P **P** **20 24 33.1 +0.2**
baz=90
WVOR Wild Horse Val 90.14 46 *e*P **P** **20 24 33.0 -0.7**
WVOR pmax pmax
comp=Z,4.0nm,1.4s,mb4.6
WVOR Wild Horse Val 90.14 46 *e*P **P** **20 24 33.0 -0.7**
comp=Z,4.4nm,1.4s,mb4.6
I07A Izee 90.16 44 ⇓P **P** **20 24 33.7 -0.2**
baz=90
O09A Fish Creek Ran 90.34 48 ⇑P **P** **20 24 34.8 +0.1**
baz=90
N09A Rock Creek Ran 90.34 48 ⇓P **P** **20 24 34.8 +0.1**
baz=90
K08A Mann Creek Ran 90.35 45 ⇑P **P** **20 24 34.9 +0.2**
baz=90
P10A Eureka 90.68 49 ⇓P **P** **20 24 36.7 +0.5**
baz=91
Y13A Salome 90.76 55 ⇑P **P** **20 24 37.2 +0.5**
baz=91
K09A Rome 90.86 46 ⇑P **P** **20 24 36.7 -0.4**
baz=91
H08A Prairie City 90.88 44 ⇑P **P** **20 24 37.5 +0.4**
baz=91
O10A Cortez Mining, 90.88 48 ⇓P **P** **20 24 37.7 +0.5**
baz=91
HAWA Hanford 91.00 42 *e*P **P** **20 24 37.3 -0.5**
comp=Z,0.8nm,0.9s,mb4.0
HAWA *e* 20 24 48.4
F08A Pendleton 91.27 43 ⇓P **P** **20 24 39.7 +0.6**
baz=91
M10A I.L. Ranch, Tu 91.27 47 ⇓P **P** **20 24 39.5 +0.5**
baz=91
I09A Lost Marbles R 91.30 45 ⇓P **P** **20 24 38.9 -0.2**
baz=91
O11A Cowboy Ranch, 91.43 49 ⇓P **P** **20 24 39.1 -0.7**
baz=92
Y14A Wickenburg 91.45 55 ⇓P **P** **20 24 39.7 -0.2**
baz=92
Q12A Willow Creek R 91.68 50 ⇑P **P** **20 24 40.8 -0.1**
baz=92
X14A Yava 91.70 55 ⇑P **P** **20 24 40.1 -0.9**
baz=92
P12A McGill 91.76 49 ⇑P **P** **20 24 40.3 -1.0**
baz=92
M11A Holland Ranch, 91.77 47 ⇑P **P** **20 24 41.6 +0.3**
baz=92
W14A Seligman 91.78 54 ⇑P **P** **20 24 41.1 -0.3**
baz=92
BMO Blue Mountains 91.90 44 *e*P **P** **20 24 41.3 -0.6**
BMO pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
BMO Blue Mountains 91.90 44 *e*P **P** **20 24 41.3 -0.6**
comp=Z,6.3nm,1.1s,mb4.9
N12A Clover Valley, 92.12 48 ⇑P **P** **20 24 43.5 +0.6**
baz=92
SNAA Sanae 92.31 183 *e* **P** **20 24 41.7 -2.1**
SNAA *e* 20 24 45.8
SNAA *e* 20 24 52.0
SNAA Sanae 92.31 183 *e*P **P** **20 24 42.0 -1.8**
SNAA pmax pmax
comp=Z,8.0nm,1.2s
SNAA Sanae 92.31 183 *e*P **P** **20 24 42.0 -1.9**
comp=Z,8.3nm,1.2s,mb4.9
W15A Williams 92.41 54 ⇑P **P** **20 24 44.7 +0.4**
baz=92
WMQ Urumqi 92.72 315 *e*P **P** **20 24 45.0 -0.7**
WMQ PP PP 20 28 29.0 +1.3
WMQ SKS 20 35 11.0
WMQ S S 20 35 41.0 -8.2
WMQ AMB AMB
comp=Z,16nm,1.0s,mb5.4
WMQ LR LR
comp=N,116nm,15.0s,MS4.6
WMQ LR LR
comp=E,108nm,15.0s,MS4.6
WMQ LR LR
comp=Z,135nm,15.0s,MS4.5
NEW Newport 93.21 41 LR LR 21 01 43.9
comp=Z,78nm,18.5s,MS4.2,baz=169,slow=32
VNA1 Neumayer--Stat 93.58 182 *e* **P** **20 24 49.1 -0.6**
VNA1 *e* 20 24 53.4
VNA1 *e* 20 24 59.0
MVCO Mesa Verde 95.91 53 *e*P **P** **20 25 02.9 +2.5**
BOZ Bozeman (W) 95.96 44 *e*P **P** **20 24 56.7 -3.9**
BW06 Boulder Array 96.60 48 *e*P **P** **20 25 07.3 +3.8**
comp=Z,14nm,1.2s,mb5.2
PDAR Pinedale Array 96.60 48 LR LR 20 59 46.1
comp=Z,84nm,19.8s,MS4.2,baz=132,slow=30
MKAR Makanchi Array 97.25 316 P **P** **20 25 06.5 +0.1**
comp=Z,0.9nm,0.6s,mb4.4,baz=91,slow=6.2,SNR=9.6
ZAL Zalesovo 97.66 324 P **P** **20 25 07.3 -0.9**
comp=Z,1.0nm,0.6s,mb4.5,baz=350,slow=6.8,SNR=5.6
ZAL LR LR 21 11 06.3
comp=Z,112nm,19.3s,MS4.4,baz=253,slow=37
ZAL Zalesovo 97.66 324 P **P** **20 25 07.3 -0.9**
ZAL LR LR 21 11 06.3
YKA Yellowknife Ar 99.12 28 P **P** **20 25 13.0 -1.8**
comp=Z,0.5nm,0.5s,mb4.3,baz=258,slow=4.0,SNR=3.0
YKA LR LR 21 03 11.7
comp=Z,66nm,19.6s,MS4.1,baz=265,slow=31
YKA Yellowknife Ar 99.12 28 P **P** **20 25 13.0 -1.8**
YKA LR LR 21 03 11.7
YKW3 Yellowknife Ar 99.14 27 *e*P **P** **20 25 17.2 +2.4**
PHWY Pilot Hill 99.20 50 *e*P **P** **20 25 17.4 +2.2**
ARCES ARCESS Array B 121.08 345 PKP PKPdf 20 30 24.6 -1.6
comp=Z,1.5nm,0.7s,baz=112,slow=1.3,SNR=7.8
FINES FINESS Array B 126.37 337 PKP PKPdf 20 30 33.6 -2.7
comp=Z,0.7nm,0.9s,baz=98,slow=2.8,SNR=3.2
NB2 NORSAR Subarra131.44 344 PKPd PKPdf 20 30 55.8 +10
comp=Z,0.9nm,0.7s,baz=31,slow=1.9
GERES GERESS Array B 140.13 331 PKP PKPdf 20 31 00.2 -2.0
comp=Z,0.5nm,0.6s,baz=116,slow=3.1,SNR=5.0
DAVOS Davos 143.39 332 PKIKP PKPdf 20 31 07.7 -0.3
DAVOX Davos 143.40 332 PKP PKPdf 20 31 07.7 -0.3
comp=Z,1.9nm,0.6s,baz=10,slow=11,SNR=4.4
HINF Hinteralfeld 143.85 336 ePKP1 PKPdf 20 31 09.8 +1.0
LOMF Lomont 144.24 336 PKP PKPdf 20 31 21.3 +12
SFI Santa Sofia 144.53 327 PKIKP PKPdf 20 31 09.8 -0.2
VAI Varese 144.59 332 PKIKP PKPdf 20 31 08.5 -1.6
BADI Badiali 144.59 326 PKP PKPdf 20 31 09.3 -0.8
ZCCA Zocca 144.66 328 PKP PKPdf 20 31 10.6 +0.4
FNVD Fontana Vidola 144.72 328 PKP PKPdf 20 31 10.6 +0.3
AQU L'Aquila 144.72 324 *e*PKHKP 20 31 04.3
GSCL Gusciola 144.86 329 PKP PKPdf 20 31 11.4 +0.9
MCGN Macugnaga 144.87 333 PKP PKPdf 20 31 10.2 -0.3
CABF La Chapelle 145.13 336 *e*PKP1 PKPbc 20 31 10.5 -0.1
comp=Z,24nm,1.1s
LOR Lormes 145.42 338 *e*PKP1 PKPbc 20 31 11.1 -0.4
comp=Z,13nm,0.8s
FLN La Foliniere 145.43 344 *e*PKP1 PKPbc 20 31 10.5 -1.0
comp=Z,13nm,0.6s
LDF La Druitiere 145.49 344 *e*PKP1 PKPbc 20 31 10.8 -0.9
comp=Z,26nm,0.9s
SOI Samo 145.58 316 PKIKP PKPdf 20 31 12.5 +0.7
SSF Saint Saulge 145.72 339 *e*PKP1 PKPbc 20 31 12.2 -0.2
comp=Z,21nm,1.0s
LPL La Plagne 145.75 334 *e*PKP1 PKPbc 20 31 12.7 +0.2
LPG La Plagne 145.76 334 *e*PKP1 PKPbc 20 31 12.8 +0.2
HYF Humbligny 145.84 340 *e*PKP1 PKPbc 20 31 13.4 +0.6
OG05 Jujurieux 145.85 336 PKP PKPdf 20 31 20.6 +8.4
GRR Gorron 145.87 344 *e*PKP1 PKPbc 20 31 12.3 -0.6
SMF Signal de Mont 145.96 338 *e*PKP1 PKPbc 20 31 13.4 +0.2
AVF Avril sur Loir 146.01 339 *e*PKP1 PKPbc 20 31 13.3 0.0
MBDF Montbardon 146.36 333 *e*PKP1 PKPbc 20 31 14.5 +0.1
comp=Z,7.4nm,0.8s
BGF Bois d'Agland 146.39 339 *e*PKP1 PKPbc 20 31 14.0 -0.4
SGMF Saint Gilles 146.41 346 *e*PKP1 PKPbc 20 31 13.6 -0.9
comp=Z,7.3nm,0.5s
SAOF Saorge 146.59 331 PKP PKPdf 20 31 26.5 +13
ORIF Oris-en-Rattie 146.59 334 *e*PKP1 PKPbc 20 31 14.8 -0.2
comp=Z,11nm,0.7s
PLDF La Plantade 146.62 338 PKP PKPdf 20 31 15.7 +2.2
PLDF La Plantade 146.62 338 *e*P PKPdf 20 31 15.7 +2.2
TOUF Mont Tournerai 146.71 332 PKP PKPdf 20 31 27.1 +13
SBF Sospel 146.74 331 *e*PKP1 PKPbc 20 31 14.7 -0.8
LUCF Luceram 146.76 331 PKP PKPdf 20 31 26.9 +13
TCF Toulx Ste Croi 146.84 339 *e*PKP1 PKPbc 20 31 15.4 -0.3
PYM Petit Puy Mans 147.03 338 PKP PKPdf 20 31 15.9 +1.7
VIVF Saint-Julien-l 147.14 335 *e*PKP1 PKPbc 20 31 16.3 -0.3
MFF Saint Martin d 147.31 342 *e*PKP1 PKPbc 20 31 17.4 +0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FRF	La Foret Royal	147.33	332	ePKP1	PKPbc	20 31 16.4	-0.7
LBL	Lubilhac	147.38	337	PKP	PKPdf	20 31 17.6	+2.8
LBL	Lubilhac	147.38	337	eP	PKPdf	20 31 17.2	+2.4
SMRF	Simiane la Rot	147.48	333	ePKP1	PKPbc	20 31 16.7	-0.8
	comp=Z,5.1nm,0.7s						
LMR	La Mourre	147.57	332	ePKP1	PKPbc	20 31 17.1	-0.7
LASF	Ste Croix	148.12	335	ePKP1	PKPbc	20 31 19.1	-0.2
	comp=Z,8.8nm,0.7s						
MTLF	Montolieu	149.38	337	ePKP1	PKPbc	20 31 22.1	-0.4
	comp=Z,6.3nm,0.7s						
EPF	Esparros	150.34	339	ePKP1	PKPbc	20 31 24.8	0.0
	comp=Z,4.1nm,0.7s						
ETSF	Etsaut	150.76	340	ePKP1	PKPbc	20 31 26.0	+0.2
SJPF	Ste Jean	150.79	341	ePKP1	PKPbc	20 31 26.0	+0.1
KEST	Kesra	151.34	318	PKPbc	PKPbc	20 31 27.8	+0.6
	comp=Z,1.4nm,0.7s,baz=52,slow=15,SNR=5.4						
ESDC	Sonseca Array	154.77	342	PKPab	PKPab	20 31 50.3	+0.6
	comp=Z,0.1nm,0.3s,baz=108,slow=0.4,SNR=4.4						
TORD	Torodi Ar. Bea	164.62	262	PKPab	PKPab	20 32 33.1	+0.5
	comp=Z,1.2nm,0.7s,baz=89,slow=2.9,SNR=7.7						

*CSEM **08** 20:14:38.7±0.1, 4574N×2676E, h80km, MD3.7/3, Error ellipse: s-maj=2.0km s-min=1.6km az=120.0*
*ISCJB **08** 20:14:38.9±0.4, 4576N±002×2678E±003, h92km±4km, Error ellipse: s-maj=4.0km s-min=3.4km az=111.5*
*BUC **08** 20:14:39.5±0.7, 4577N×2676E, h88km±8km, MD3.8/3, Error ellipse: s-maj=5.2km s-min=4.6km az=134.0*
*NEIC **08** 20:14:40.8, 4575N×2678E, h70km, MD3.8(BUC), After BUC.*
*SOF **08** 20:14:41.2, 4539N×2654E, h10km, MD3.0*
*THE **08** 20:14:43.9, 4527N×2648E, h7km, ML3.3*
ISC 08 20:14:39.8±0.4**, 4576N**±002×**2678E**±003**, h87**km±4km**, n70, σ0.94**/124**, 19C-20D, Romania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VRI	Vrincioaia	0.11	339	⇑iP	Pn	20 14 52.1	-0.1
VRI				iS	Sn	20 15 00.8	-0.5
PLOR	Plostina	0.13	314	⇑iP	Pn	20 14 52.0	-0.2
PLOR				iS	Sn	20 15 00.8	-0.6
PETR		0.32	97	⇓iP	Pn	20 14 53.7	+0.7
PETR				iS	Sn	20 15 03.7	+1.0
GHRR		0.53	55	⇓iP	Pn	20 14 55.2	+0.7
GHRR				iS	Sn	20 15 06.1	+0.7
TUDR		0.64	105	⇑iP	Pn	20 14 55.6	+0.1
TUDR				iS	Sn	20 15 07.2	+0.1
MLR	Muntele Rosu	0.65	246	⇑iP	Pn	20 14 55.6	+0.1
MLR				iS	Sn	20 15 06.4	-0.8
MLR	Muntele Rosu	0.65	246	⇑P	Pn	20 14 55.6	+0.1
MLR				S	Sn	20 15 07.0	-0.3
MLR	Muntele Rosu	0.65	246	P	Pn	20 14 55.6	+0.1
MLR				S	Sn	20 15 07.0	-0.2
TESR		0.76	353	⇓iP	Pn	20 14 56.5	-0.1
TESR				iS	Sn	20 15 07.9	-1.2
VARR		0.76	81	⇓iP	Pn	20 14 57.6	+1.0
VARR				iS	Sn	20 15 10.1	+0.9
ONCR	Oncesti	0.78	25	⇓iP	Pn	20 14 57.0	+0.1
ONCR				iS	Sn	20 15 09.5	-0.1
SECR		0.88	215	⇓iP	Pn	20 14 58.8	+0.8
SECR				iS	Sn	20 15 12.7	+1.1
FULR		0.91	196	⇓iP	Pn	20 14 59.0	+0.8
FULR				iS	Sn	20 15 13.4	+1.4
SNX	Sinaia	0.98	246	⇑iP	Pn	20 15 00.2	+1.1
SNX				iS	Sn	20 15 12.3	-1.2
SNX	Sinaia	0.98	246	⇓P	Pn	20 14 59.5	+0.5
SNX				S	Sn	20 15 12.5	-0.9
SNX	Sinaia	0.98	246	P	Pn	20 14 59.5	+0.4
SNX				S	Sn	20 15 12.5	-1.0
DOPR	Dopca	1.00	282	⇑iP	Pn	20 14 58.9	-0.4
DOPR				iS	Sn	20 15 13.1	-0.7
KGL	Cahul	1.00	81	eP	Pn	20 14 59.0	-0.3
KGL				iS	Sn	20 15 13.6	-0.3
	800nm,0.4s						
CFR	Carcaliu	1.12	121	⇑iP	Pn	20 15 01.0	+0.3
CFR				iS	Sn	20 15 16.8	+0.5
CFR	Carcaliu	1.12	121	⇑P	Pn	20 15 01.1	+0.5
CFR				S	Sn	20 15 16.8	+0.5
CFR	Carcaliu	1.12	121	P	Pn	20 15 01.1	+0.5
CFR				S	Sn	20 15 16.7	+0.4
LEOM	Leova	1.24	54	iP	Pn	20 15 00.2	-2.0
	390nm,0.5s						
LEOM				iS	Sn	20 15 17.0	-2.0
	480nm,0.8s						
VOIR		1.26	256	⇑iP	Pn	20 15 01.9	-0.5
VOIR				iS	Sn	20 15 18.4	-1.0
VOIR		1.26	256	⇑P	Pn	20 15 01.9	-0.5
VOIR				S	Sn	20 15 18.4	-1.0
VOIR		1.26	256	P	Pn	20 15 01.9	-0.5
VOIR				S	Sn	20 15 18.5	-0.9
MTUR	Matau	1.32	247	⇓iP	Pn	20 15 04.3	+1.1
MTUR				iS	Sn	20 15 21.5	+0.7
MTUR	Matau	1.32	247	⇑P	Pn	20 15 04.3	+1.1
MTUR	Matau	1.32	247	P	Pn	20 15 04.2	+1.0
MTUR				iS	Sn	20 15 21.5	+0.7
HARR	Harsova	1.34	142	⇑iP	Pn	20 15 03.9	+0.5
HARR				iS	Sn	20 15 20.4	-0.8
HARR	Harsova	1.34	142	⇓P	Pn	20 15 04.3	+0.9
HARR				S	Sn	20 15 20.5	-0.8
HARR	Harsova	1.34	142	⇑iP	Pn	20 15 03.9	+0.5
HARR				S	Sn	20 15 20.5	-0.7
BUC1	Bucharest	1.51	201	⇓iP	Pn	20 15 05.7	+0.1
BUC1				iS	Sn	20 15 24.4	-0.6
BUC1	Bucharest	1.51	201	⇓P	Pn	20 15 05.7	+0.1
BUC1				S	Sn	20 15 24.4	-0.6
BUC1	Bucharest	1.51	201	P	Pn	20 15 05.6	0.0
BUC1				S	Sn	20 15 24.4	-0.6
IAS	Iasi	1.53	20	⇓iP	Pn	20 15 06.1	+0.3
IAS				iS	Sn	20 15 24.8	-0.6
IAS	Iasi	1.53	20	⇓P	Pn	20 15 06.2	+0.4
IAS				S	Sn	20 15 25.3	-0.2
IAS	Iasi	1.53	20	⇓iP	Pn	20 15 06.1	+0.3
IAS				S	Sn	20 15 25.3	-0.1
TIRR	Tirgusor	1.74	138	⇑iP	Pn	20 15 09.0	+0.5
TIRR				iS	Sn	20 15 29.3	-1.0
TIRR	Tirgusor	1.74	138	⇑P	Pn	20 15 09.0	+0.5
TIRR				S	Sn	20 15 29.4	-0.9
TIRR	Tirgusor	1.74	138	P	Pn	20 15 09.0	+0.5
TIRR				S	Sn	20 15 29.4	-0.9
KIS	Kishinev	1.87	48	eP	Pn	20 15 10.0	-0.2
	410nm,0.5s						
KIS				eS	Sn	20 15 32.0	-1.4
	390nm,1.2s						
BURAR	Bucovina Array	2.15	330	⇓iP	Pn	20 15 15.4	+1.6
BURAR				iS	Sn	20 15 40.5	+0.7
BURAR	Bucovina Array	2.15	330	⇓P	Pn	20 15 15.3	+1.5
BURAR				S	Sn	20 15 40.9	+1.1
BURAR	Bucovina Array	2.15	330	P	Pn	20 15 15.3	+1.5
BURAR				iS	Sn	20 15 40.5	+0.7
PSN	Preselentsi	2.31	154	iP	Pn	20 15 17.9	+2.0
ZIMR		2.33	206	⇓iP	Pn	20 15 15.9	-0.4
ZIMR				iS	Sn	20 15 42.0	-2.3
CRAR	CRAIOVA	2.56	237	iS	Sn	20 15 47.8	-1.8
SZH	Strazhica	2.57	194	iP	Pn	20 15 19.1	-0.3
PRD	Provadia	2.60	170	iP	Pn	20 15 20.9	+1.0
PVL	Pavlikeni	2.75	203	iP	Pn	20 15 23.2	+1.3
DRGR		3.01	291	⇓iP	Pn	20 15 25.1	-0.2
DRGR				iS	Sn	20 16 00.5	+0.1
DRGR		3.01	291	⇑P	Pn	20 15 26.6	+1.2
DRGR				S	Sn	20 16 02.4	+2.0
JMB	Yambol	3.30	183	iP	Pn	20 15 28.8	-0.5
BZS	Buzias	3.62	270	⇑iP	Pn	20 15 33.7	0.0
BZS				iS	Sn	20 16 16.5	+1.1
BZS	Buzias	3.62	270	⇑P	Pn	20 15 33.7	0.0
DIM	Dimitrovgrad	3.82	194	iP	Pn	20 15 37.4	+1.1
PLD	Plovdiv	3.95	203	ePn	Pn	20 15 37.2	-0.9
VTS	Vitosha	4.08	220	ePn	Pn	20 15 39.3	-0.5
VTS				eSn	Sn	20 16 22.5	-4.0
VTS	Vitosha	4.08	220	⇓iP	Pn	20 15 39.3	-0.6
VTS				iS	Sn	20 16 21.5	-5.0
VTS	Vitosha	4.08	220	iP	Pn	20 15 39.7	-0.2
VTS				eSn	Sn	20 16 22.5	-4.0
KDZ	Kurdzhali	4.23	194	iP	Pn	20 15 42.1	+0.2
RZN	Rozhen	4.34	201	iP	Pn	20 15 44.1	+0.7
MMB	Musomiste	4.72	209	ePn	Pn	20 15 49.0	+0.4
MMB				eSn	Sn	20 16 39.2	-2.9
MMB	Musomiste	4.72	209	iP	Pn	20 15 49.1	+0.5
KKB	Krupnik	4.72	216	iP	Pn	20 15 48.8	+0.2
ALN	Alexandroupoli	4.89	187	ePn	Pn	20 15 51.1	+0.2
ALN				eSn	Sn	20 16 43.3	-3.0
AKBB	Malin Array Si	5.21	17	ePn	Pn	20 15 53.9	-1.3
AKBB				eSn	Sn	20 16 45.9	-8.0
KNT	Kendrikon	5.40	213	ePn	Pn	20 15 57.8	+0.1
KNT				eSn	Sn	20 16 54.8	-3.7
OUR	Ouranopolis	5.80	202	ePn	Pn	20 16 03.0	-0.2
PAIG	Paliouri	6.26	202	ePn	Pn	20 16 09.3	-0.3

MAN 08 20:18:21.3, 694N×12379E, h8km, mb3.5, ML4.7, MS0.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.53	59	⇓iP	Pg	20 18 32.0	+0.3
CTBH				iS	Sg	20 18 39.2	+0.6
PAGZ	Pagadian	0.98	336	eP	Pg	20 18 39.8	-0.5
PAGZ				eS	Sg	20 18 54.9	+1.9
IPIL	Ipil	1.47	305	eP	Pn	20 18 47.8	-0.3
IPIL				eS	Sn	20 19 07.0	-0.5
BUKP	Musuan	1.57	54	eP	Pn	20 18 49.1	-0.3
BUKP				eS	Sn	20 19 10.6	+0.6
CGP	Cagayan de Oro	1.75	31	eS	Sn	20 19 10.9	-3.6

*IDC **08** 20:29:54.6±3.3, 237S×13976E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.8/10, mbtmp4.1/4, Error ellipse: s-maj=167.9km s-min=24.6km az=81.0*
*NEIC **08** 20:29:59.9±1.1, 241S×13957E, h35km, mb4.1/4, Error ellipse: s-maj=43.2km s-min=10.9km az=91.0*
*ISCJB **08** 20:30:01.8±2.7, 252S±008×1393E±02, h58km±25km, mb4.0/6, Error ellipse: s-maj=30.8km s-min=11.8km az=28.3*
ISC 08 20:30:06.0±3.0**, 26S**±01×**1392E**±02**, h80**km±26km**, n14, σ0.78**/16**, mb3.8**/6**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	12.11	213	eP	Pn	20 32 53.9	-1.5
	18nm,0.6s						
KAKA				eS	Sn	20 35 09.7	+1.2
WRAB	Tennant Creek	17.91	195	eP	Pn	20 34 09.3	-0.3
	11nm,0.8s						
WB2	Warramunga Arr	17.92	195	eP	Pn	20 34 09.8	0.0
WB2				eS	S	20 37 24.3	-5.7
FITZ	Fitzroy Crossi	20.38	220	eP	P	20 34 41.4	+5.2
	13nm,1.5s						
FITZ				eS	S	20 38 17.8	-2.3
AS31	Alice Springs	21.60	193	eP	P	20 34 49.9	+0.6
ASAR	Alice Springs	21.61	193	P	P	20 34 49.5	+0.2
	1.9nm,0.6s,mb3.6,baz=25,slow=11,SNR=14						
ASPA	Alice Springs	21.61	193	eP	P	20 34 49.9	+0.6
STKA	Stephens Creek	29.26	176	P	P	20 35 59.9	-0.5
	3.8nm,1.1s,mb4.0,baz=342,slow=9.6,SNR=2.6						
STKA	Stephens Creek	29.26	176	P	P	20 35 59.9	-0.5
MKAR	Makanchi Array	69.96	322	P	P	20 41 09.6	+0.9
	1.3nm,0.7s,mb3.9,baz=112,slow=7.3,SNR=12						
KURK	Kurchatov	73.86	325	eP	P	20 41 31.6	-0.5
	1.9nm,0.8s,mb3.9						
BVAR	Borovoye Array	79.46	325	P	P	20 42 03.7	0.0
	1.5nm,0.7s,mb3.9,baz=110,slow=6.8,SNR=11						
BRVK	Borovoye	79.53	325	eP	P	20 42 04.1	+0.1
	1.3nm,0.9s,mb3.8						
DBIC	Dimbokro	143.94	278	eP	PKPdf	20 49 30.9	-1.2

*IDC **08** 21:16:55.7±1.0, 1831S×16761E, h0km, mb4.3/7, mb1 4.4/8, mb1mx4.3/12, mbtmp4.3/8, ML3.5/1, MS4.1/9, Ms1 4.1/9, ms1mx3.9/21, Error ellipse: s-maj=29.2km s-min=25.0km az=89.0*
*LDG **08** 21:16:56.1±0.6, 1852S×16831E, h10km, Error ellipse: s-maj=92.8km s-min=3.3km az=109.0*
*ISCJB **08** 21:16:58.8±0.5, 1848S±005×16753E±008, h33km, mb4.6/22, MS4.3/9, Error ellipse: s-maj=11.2km s-min=7.3km az=11.4*
*MOS **08** 21:16:59.1±1.1, 1869S×16765E, h33km, mb5.0/13, Error ellipse: s-maj=22.7km s-min=16.4km az=165.4*
*HRVD **08** 21:17:00.5±0.5, 1820S×16741E, h22km±1km, MW5.0/52, Centroid moment Tensor Solution. LP body waves: s19,c23; Mantle waves: s52,c71; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.91±.28; $M_{\theta\theta}$-0.48±.15; $M_{\phi\phi}$-3.43±.19; $M_{r\theta}$0.91±.31; $M_{\theta\phi}$-0.00±.11; $M_{\phi r}$-1.20±.26; Best double couple: $M_0$3.95000×10^{16} NP1:ϕ_s10.00000°, δ37.00000°, λ107.00000°. NP2: ϕ_s168.00000°, δ55.00000°, λ78.00000°. Principal axes: T 4.2730, Plg76.0000°, Azm39.0000°; N -0.6480, Plg10.0000°, Azm176.0000°; P -3.6280, Plg9.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **08** 21:17:00.5±6.5, 1835S×16762E, h35km±44km, mb4.7/18 Error ellipse: s-maj=20.0km s-min=13.1km az=216.0*
*BJI **08** 21:17:12.0, 1806S×167.13E, h134km, mB4.8, mb4.5*
ISC 08 21:16:55.5±1.7**, 1843S**±007×**16774E**±008**, h4**km±11km**, n108, σ1.16**/60**, mb4.6**/22**, MS4.3**/9**, 3C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BKM	Butte a Klehm	0.90	33	⇑iP	Pg	21 17 12.3	-0.4
DZM	Mont Dzumac	3.82	198	eP	Pn	21 17 54.9	-0.2
DZM				eS	Sn	21 18 35.2	-5.2
DZM	Mont Dzumac	3.82	198	Pn	Pn	21 17 55.9	+0.9
	3.5nm,0.3s,baz=17,slow=21,SNR=25						
DZM				Sn	Sn	21 18 38.2	-2.2
	37nm,0.3s,baz=132,slow=23,SNR=14						
HNR	Honiara	11.71	319	LR	LR	21 22 50.8	
	comp=Z,756nm,19.2s,baz=177,slow=31						
RAO	Raoul Island	16.96	132	LR	LR	21 25 09.8	
	comp=Z,139nm,21.5s,baz=346,slow=29						
ARMA	Armidale	18.88	228	eP	Pn	21 21 26.9	+10
CTA	Charters Tower	20.35	262	eP	P	21 21 34.8	+2.0
	22nm,0.8s						
CTA				eS	S	21 25 29.8	+8.5
CTA	Charters Tower	20.35	262	eP	P	21 21 34.8	+2.0
	22nm,0.8s						
CTA	Charters Tower	20.35	262	P	P	21 21 34.6	+1.8
	24nm,0.8s,baz=79,slow=11,SNR=17						
CTA				LR	LR	21 28 40.6	
	comp=Z,1μm,18.0s,MS4.2,baz=86,slow=35						
CTA	Charters Tower	20.35	262	eP	P	21 21 34.8	+2.0
CTA				pmax	pmax		
	comp=Z,22nm,0.8s						
CTAO	Charters Tower	20.35	262	eP	P	21 21 34.4	+1.6
CTAO				pmax	pmax		
	comp=Z,36nm,1.0s						
CTAO	Charters Tower	20.35	262	eP	P	21 21 34.4	+1.6
	comp=Z,36nm,1.0s						
URZ	Urewera	21.39	159	P	P	21 21 48.3	+4.3
	comp=Z,17nm,0.9s,mb4.4,baz=48,slow=4.2,SNR=3.2						
PMG	Port Moresby	21.87	291	LR	LR	21 29 11.3	
	comp=Z,807nm,19.5s,MS4.1,baz=108,slow=34						
CNB	Canberra Magne	23.42	220	eP	P	21 22 08.3	+2.7
	comp=Z,4.9nm,1.2s,mb3.8						
CNB	Canberra Magne	23.42	220	eP	P	21 22 08.4	+2.8
	comp=Z,24nm,0.9s,mb4.6						
RPZ	Rata Peaks	25.36	174	LR	LR	21 29 46.8	
	comp=Z,390nm,20.5s,MS3.9,baz=165,slow=30						
STKA	Stephens Creek	27.10	235	eP	P	21 22 40.3	+1.0
	comp=Z,3.7nm,1.6s,mb3.7						
STKA	Stephens Creek	27.10	235	eP	P	21 22 40.6	+1.3
	comp=Z,12nm,1.0s,mb4.4						
STKA	Stephens Creek	27.10	235	P	P	21 22 39.9	+0.6
	comp=Z,11nm,0.8s,mb4.4,baz=54,slow=8.0,SNR=8.0						
STKA				LR	LR	21 32 56.2	
	comp=Z,623nm,20.3s,MS4.2,baz=150,slow=36						
WB2	Warramunga Arr	31.54	262	eP	P	21 23 18.1	-0.6
WB2	Warramunga Arr	31.54	262	eP	P	21 23 18.1	-0.6
WRAB	Tennant Creek	31.54	262	eP	P	21 23 17.7	-1.0
WRAB				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.8						
WRAB	Tennant Creek	31.54	262	eP	P	21 23 17.7	-1.0
	comp=Z,21nm,1.3s,mb4.8						
AS31	Alice Springs	31.95	255	eP	P	21 23 21.7	-0.6
ASAR	Alice Springs	31.95	255	P	P	21 23 21.8	-0.6
	comp=Z,7.9nm,0.9s,mb4.6,baz=82,slow=8.8,SNR=71						
ASAR				LR	LR	21 35 51.9	
	comp=Z,763nm,19.3s,MS4.4,baz=43,slow=36						
ASPA	Alice Springs	31.96	255	eP	P	21 23 21.7	-0.7
ASPA	Alice Springs	31.96	255	eP	P	21 23 21.7	-0.7
FITZ	Fitzroy Crossi	39.91	264	eP	P	21 24 30.6	+0.1
	comp=Z,3.3nm,0.9s,mb4.1						
FITZ	Fitzroy Crossi	39.91	264	eP	P	21 24 30.8	+0.3
	comp=Z,29nm,1.0s,mb5.0						
PPT	Papeete	40.54	96	eS	S	21 30 45.9	+0.5
	comp=Z,204nm,23.5s						
PPT				eLQ		21 34 01.8	
	comp=Z,516nm,25.8s						
PPT				eLR	LR	21 35 53.4	
	comp=Z,702nm,30.5s						
PPT	Papeete	40.54	96	LR	LR	21 37 04.9	
	comp=Z,158nm,19.9s,MS3.9,baz=164,slow=30						
KLBR	Kellerberrin	46.78	244	eP	P	21 25 34.0	+8.0
	comp=Z,20nm,0.9s,mb5.0						
NWAO	Narrogin (SRO)	47.33	242	eP	P	21 25 36.1	+5.9
NWAO				pmax	pmax		
	comp=Z,12nm,0.8s						
NWAO	Narrogin (SRO)	47.33	242	eP	P	21 25 36.1	+5.9
	comp=Z,12nm,0.8s,mb4.9						
TAOE	Nuku Hiva Isla	51.38	87	eLR	LR	21 41 12.1	
	comp=Z,1μm,29.6s						
TBP	Tagbilaran	51.52	299	eP	P	21 26 02.9	+0.5
RKT	Rikitea	53.49	105	eLR	LR	21 41 58.5	
	comp=Z,392nm,30.5s						
VNDA	Vanda	59.19	181	P	P	21 26 57.6	+0.1
	comp=Z,0.3nm,0.4s,mb3.7,baz=328,slow=4.3,SNR=4.2						
VNDA	Vanda	59.19	181	eP	P	21 26 56.9	-0.7
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.5s						
VNDA	Vanda	59.19	181	eP	P	21 26 56.9	-0.7
	comp=Z,8.3nm,1.5s,mb4.5						
CASY	Casey	60.30	203	eP	P	21 27 13.3	+8.1
CASY	Casey	60.30	203	eP	P	21 27 09.2	+4.0
	comp=Z,3.4nm,0.6s,mb4.5						
MAJO	Matsushiro	61.38	333	P	P	21 27 16.8	+4.2
MAJO				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.0						
MAJO	Matsushiro	61.38	333	P	P	21 27 16.8	+4.2
	comp=Z,18nm,1.3s,mb5.0						
KULM	Kulim	70.17	283	P	P	21 28 05.9	-3.3
QSPA	South Pole Qui	71.62	180	eP	P	21 28 18.7	+0.6
	comp=Z,5.3nm,0.8s,mb4.5						
MDJ	Mudanjiang	71.74	332	P	P	21 28 19.9	+1.1
MDJ				AP	pP	21 28 54.5	+34
MDJ				XP	sP	21 29 09.9	+49
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,66nm,4.6s						
MDJ				LR	LR		
	comp=N,268nm,19.0s,MS4.7						
MDJ				LR	LR		
	comp=E,289nm,18.0s,MS4.7						
MDJ				LR	LR		
	comp=Z,184nm,15.0s,MS4.5						
MDJ	Mudanjiang	71.74	332	P	P	21 28 18.2	-0.6
	comp=Z,20nm,1.2s,mb4.9						
CN2	Changchun	73.03	329	eP	P	21 28 28.7	+2.2
KLR	Kul'dur	74.56	336	eP	P	21 28 42.3	+6.9
KMI	Kunming	76.64	302	P	P	21 28 47.3	-0.1
KMI				AP	pP	21 29 22.2	+33
KMI				XP	sP	21 29 37.5	+48
KMI				AMB	AMB		
	comp=Z,8.0nm,2.0s,mb4.3						
KMI				AMB	AMB		
	comp=Z,111nm,3.2s						
KMI				LR	LR		
	comp=N,133nm,23.2s						
KMI				LR	LR		
	comp=E,147nm,17.9s						
KMI				LR	LR		
	comp=Z,133nm,16.1s						
CD2	Chengdu	78.62	308	eP	P	21 28 56.0	-2.4
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
MAW	Mawson	78.64	202	eP	P	21 28 57.6	-1.0
	comp=Z,1.7nm,0.6s,mb4.2						
MAW	Mawson	78.64	202	P	P	21 29 00.6	+2.0
	comp=Z,2.4nm,1.1s,mb4.0,baz=90,slow=3.0,SNR=2.8						
MAW				LR	LR	21 59 12.2	
	comp=Z,136nm,19.1s,MS4.3,baz=230,slow=32						
HHC	Hu-ho-hao-te	78.69	320	eP	P	21 28 58.7	-0.1
HHC				PCP	PcP	21 29 07.4	-0.3
HHC				AP	pP	21 29 33.7	+34
HHC				XP	sP	21 29 49.0	+48
HHC				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
HHC				AMB	AMB		
	comp=Z,88nm,4.8s						
HHC				LR	LR		
	comp=N,250nm,17.1s,MS4.8						
HHC				LR	LR		
	comp=E,301nm,18.0s,MS4.8						
HHC				LR	LR		
	comp=Z,301nm,17.1s,MS4.7						
SYO	Syowa Base	85.31	197	⇓eP	P	21 29 31.8	-1.8
SONM	Songino Array	85.72	324	P	P	21 29 36.6	+0.9
	comp=Z,0.6nm,0.8s,mb3.9,baz=180,slow=7.6,SNR=3.6						
CMB	Columbia Colle	87.69	49	eP	P	21 29 45.3	0.0
CMB				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.1						
CMB	Columbia Colle	87.69	49	eP	P	21 29 45.3	0.0
	comp=Z,6.6nm,0.6s,mb5.0						
YBH	Yreka Blue Hor	87.72	45	eP	P	21 29 45.5	+0.1
	comp=Z,2.9nm,0.9s,mb4.5						
SNAA	Sanae	89.90	183	eP	P	21 29 55.8	+0.1
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SNAA	Sanae	89.90	183	eP	P	21 29 55.8	+0.1
	comp=Z,9.2nm,1.0s,mb5.1						
WMQ	Urumqi	95.62	314	eP	P	21 30 21.0	-1.1
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.4						
ARCES	ARCESS Array B	123.92	345	PKP	PKPdf	21 35 53.8	-1.1
	comp=Z,1.9nm,0.7s,baz=103,slow=2.6,SNR=7.1						
SFJD	Kangerlussuaq	125.56	17	PKP	PKPdf	21 35 57.7	-0.2
	comp=Z,11nm,0.6s,baz=238,slow=9.5,SNR=4.5						
NB2	NORSAR Subarra	134.29	344	PKPd	PKPdf	21 36 15.1	+0.6
	comp=Z,0.7nm,0.7s,baz=33,slow=1.9						
NOA	NORSAR Array B	134.29	344	PKP	PKPdf	21 36 13.2	-1.4
	comp=Z,0.9nm,0.7s,baz=38,slow=2.0,SNR=4.4						
CONA	Conrad Observa	142.72	328	P	PKPdf	21 36 38.7	+8.8
	comp=Z,1.9nm,0.7s						
GERES	GERESS Array B	143.10	331	PKP	PKPdf	21 36 31.3	+0.6
	comp=Z,0.9nm,0.8s,baz=48,slow=2.0,SNR=6.1						
GRA1	Grafenberg Arr	143.55	334	ePKP	PKPdf	21 36 39.3	+7.9
DLF	Lyons Farm	144.92	354	eP	PKPdf	21 36 29.4	-4.4
DCN	Croghan	144.94	355	eP	PKPdf	21 36 32.8	-1.0
MOTA	Moosalm	145.39	332	⇑iP	PKPbc	21 36 34.8	+0.3
	comp=Z,10.0nm,0.8s						
SQTA	Sankt Quirin	145.44	331	⇑iP	PKPbc	21 36 34.5	-0.1
	comp=Z,8.6nm,0.7s						
GIVF	Givet	145.56	340	ePKP1	PKPbc	21 36 34.6	-0.5
BAIF	Baives	145.79	341	ePKP1	PKPbc	21 36 35.6	-0.2
BFO	Black Forest	145.80	335	ePKP2	PKPab	21 36 35.3	-0.9
DAVA	Damuels	145.97	333	⇓iP	PKPdf	21 36 37.3	+1.7
	comp=Z,28nm,1.7s						
CDF	Champ du Feu	146.14	336	ePKP1	PKPbc	21 36 36.6	-0.3
HAU	Haudompre	146.83	337	ePKP1	PKPbc	21 36 38.5	-0.4
	comp=Z,9.8nm,0.8s						
MEZF	Maizieres J'vi	146.87	339	ePKP1	PKPbc	21 36 39.2	+0.2
CABF	La Chapelle	148.08	336	ePKP1	PKPbc	21 36 43.3	+1.0
	comp=Z,65nm,1.3s						
FLN	La Foliniere	148.27	345	ePKP1	PKPbc	21 36 42.3	-0.5
	comp=Z,12nm,0.7s						
LDF	La Druitiere	148.34	345	ePKP1	PKPbc	21 36 43.1	+0.1
	comp=Z,6.5nm,0.6s						
LOR	Lormes	148.34	339	ePKP1	PKPbc	21 36 42.9	-0.1
	comp=Z,10nm,0.8s						
SSF	Saint Saulge	148.64	339	ePKP1	PKPbc	21 36 43.8	0.0
	comp=Z,16nm,0.9s						
GRR	Gorron	148.71	345	ePKP1	PKPbc	21 36 43.7	-0.3
	comp=Z,13nm,0.9s						
LPL	La Plagne	148.71	334	ePKP1	PKPbc	21 36 44.4	+0.4
LPG	La Plagne	148.72	334	ePKP1	PKPbc	21 36 44.5	+0.5
	comp=Z,12nm,0.8s						
AVF	Avril sur Loir	148.93	339	ePKP1	PKPbc	21 36 44.9	+0.4
	comp=Z,8.9nm,1.0s						
SGMF	Saint Gilles	149.22	347	ePKP1	PKPbc	21 36 44.7	-0.5
	comp=Z,8.9nm,0.7s						
BGF	Bois d'Agland	149.30	339	ePKP1	PKPbc	21 36 45.3	-0.2
	comp=Z,14nm,0.7s						
ORIF	Oris-en-Rattie	149.55	334	ePKP1	PKPbc	21 36 46.2	+0.1
QUIF	Quistinic	149.66	348	ePKP1	PKPbc	21 36 46.2	-0.1
	comp=Z,23nm,1.1s						
SBF	Sospel	149.71	331	ePKP1	PKPbc	21 36 46.2	-0.3
TCF	Toulx Ste Croi	149.75	340	ePKP1	PKPbc	21 36 46.5	-0.1
	comp=Z,13nm,1.0s						
VIVF	Saint-Julien-l	150.09	335	ePKP1	PKPbc	21 36 47.5	+0.1

MFF	**Saint Martin d**	**150.18**	**343**	*e*PKP1	PKPbc	21 36 48.4	+0.8
	comp=Z,15nm,0.7s						
FRF	**La Foret Royal**	**150.30**	**332**	*e*PKP1	PKPbc	21 36 47.7	-0.2
	comp=Z,14nm,0.9s						
SMRF	**Simiane la Rot**	**150.44**	**333**	*e*PKP1	PKPbc	21 36 48.6	+0.4
	comp=Z,16nm,1.0s						
LMR	**La Mourre**	**150.54**	**331**	*e*PKP1	PKPbc	21 36 48.3	-0.2
	comp=Z,9.6nm,0.9s						
RJF	**Les Rejaudoux**	**150.85**	**340**	*e*PKP1	PKPbc	21 36 49.1	-0.1
LASF	**Ste Croix**	**151.06**	**336**	*e*PKP1	PKPbc	21 36 49.9	+0.2
	comp=Z,24nm,0.9s						
LFF	**La Frestale**	**151.42**	**340**	*e*PKP1	PKPbc	21 36 50.5	0.0
	comp=Z,24nm,0.8s						
MTLF	**Montolieu**	**152.31**	**337**	*e*PKP1	PKPbc	21 36 52.4	-0.2
	comp=Z,11nm,1.0s						
ETSF	**Etsaut**	**153.67**	**340**	*e*PKP1	PKPbc	21 36 55.9	+0.4
	comp=Z,14nm,1.0s						
TORD	**Torodi Ar. Bea**	**165.58**	**251**	PKP	PKPdf	21 37 04.2	+2.9
	comp=Z,0.8nm,1.1s,baz=64,slow=3.4,SNR=2.6						

*ORF **08** 21:18:58.9, 34.98N×21.48E, h30km, mb4.8*

*BGS **08** 21:20:03.8±2.9, 39.56N×19.94E, h15km±999km, mb4.9*

*PRU **08** 21:20:04.6, 39.97N×19.50E, h0km, M4.9*

*SZGRF **08** 21:20:05.1, 39.84N×19.71E, h10km, mb4.1, Greece-Albania border region*

*ISCJB **08** 21:20:06.6±0.3, 40.20N±0.01×19.690E±0.009, h3km±2km, mb5.0/135, MS4.4/41, Error ellipse: s-maj=1.7km s-min=1.2km az=33.3*

*SKO **08** 21:20:06.5, 40.06N×19.54E, h2km, M4.7, ML4.9*

*CSEM **08** 21:20:07.7, 40.27N×19.70E, h10km, mb5.0*

*BJI **08** 21:20:07.5, 40.59N×20.01E, h8km, mB5.2, mb5.0, Ms5.0, Msz4.8*

*MOS **08** 21:20:07.0±1.2, 40.23N×19.68E, h10km, mb5.3/47, Error ellipse: s-maj=2.7km s-min=2.0km az=109.4*

*CRAAG **08** 21:20:07.0, 40.17N×19.78E, Mb4.9*

*IDC **08** 21:20:07.0±0.4, 40.20N×19.73E, h0km, mb4.8/27, mb1 4.9/39, mb1mx4.8/41, mbtmp4.8/39, ML4.4/8, MS4.1/19, Ms1 4.1/19, ms1mx4.0/34, Error ellipse: s-maj=9.6km s-min=8.5km az=87.0*

*ATH **08** 21:20:08.3, 40.10N×19.72E, h20km±1km, MD4.7/16, ML5.0*

*THE **08** 21:20:08.2, 40.17N×19.68E, h0km, ML4.8*

*PDG **08** 21:20:08.9±1.1, 40.20N×19.70E, h17km±3km*

*TIR **08** 21:20:08.4, 40.18N×19.86E, h9km, Ml4.5*

*NEIC **08** 21:20:09.1±0.6, 40.18N×19.75E, h12km±4km, mb5.0/110, ML4.9(THE), ML5.0(PDG), ML5.0(ATH), Error ellipse: s-maj=2.2km s-min=1.5km az=198.0*

*LDG **08** 21:20:09.9±0.1, 40.09N×19.76E, h10km, Ml4.8/20, Error ellipse: s-maj=4.5km s-min=2.9km az=13.0*

*HRVD **08** 21:20:09.0±0.5, 40.04N×19.60E, h20km±1km, MW4.8/56, Centroid moment Tensor Solution. LP body waves: s18,c21;Mantle waves: s56,c85; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.26±.20; $M_{\theta\theta}$0.76±.11; $M_{\phi\phi}$-2.02±.13; $M_{r\theta}$0.68±.25; $M_{\theta\phi}$1.06±.08; $M_{\phi r}$-0.89±.22; Best double couple: $M_0$2.20300×10^{16} NP1:ϕ_s13.00000°, δ38.00000°, λ138.00000°. NP2:ϕ_s138.00000°, δ66.00000°, λ59.00000°. Principal axes: T 1.7390, Plg58.0000°, Azm6.0000°; N 0.9290, Plg28.0000°, Azm152.0000°; P -2.6680, Plg15.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 08 21:20:09.2±0.3**, 40.188N**±0.010×**19.710E**±0.009**, h10**km±1km**, h16**km±1.8km**:pP-P, n1064,** σ1.**22**/1204**, mb5.0**/135**, MS4.4**/41**, 117C-98D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.25**	**65**	*i* Pg	**Pg**	**21 20 13.5**	**-0.8**
TPE				*i* Sg	**Sg**	**21 20 18.2**	**+0.4**
VLO	**Vlora**	**0.33**	**330**	*i* Pg	**Pg**	**21 20 16.9**	**+1.3**
VLO				*i* Sg	**Sg**	**21 20 25.8**	**+5.8**
SRN	**Sarande**	**0.38**	**144**	*i* Pg	**Pg**	**21 20 14.7**	**-1.9**
SRN				*i* Sg	**Sg**	**21 20 20.1**	**-1.6**
KEK	**Kerkira**	**0.48**	**172**	⇓*i*PB	**Pg**	**21 20 16.7**	**-1.8**
KEK				*e*SB	**Sg**	**21 20 22.8**	**-2.0**
LSK	**Leskovik**	**0.68**	**93**	*i* Pg	**Pg**	**21 20 20.0**	**-2.4**
LSK				*i* Sg	**Sg**	**21 20 31.9**	**+0.6**
IGT	**Igoumenitsa**	**0.81**	**144**	*e*Pg	**Pg**	**21 20 22.4**	**-2.4**
IGT				*e*Sg	**Sg**	**21 20 34.6**	**-0.8**
KBN	**Korca**	**0.93**	**62**	*i* Pg	**Pg**	**21 20 26.8**	**-0.3**
JAN	**Janina**	**1.02**	**121**	*e*PN	**Pn**	**21 20 26.9**	**-2.7**
JAN				*e*SN	**Sn**	**21 20 40.1**	**-4.0**
TIR	**Tirane**	**1.16**	**6**	*e*Pg	**Pg**	**21 20 30.8**	**-0.8**
TIR				*e*Sg	**Sg**	**21 20 47.5**	**+0.8**
TIR	**Tirane**	**1.16**	**6**	*i* Pg	**Pg**	**21 20 30.7**	**-0.8**
LCI	**Lecce**	**1.23**	**277**	P	**Pn**	**21 20 31.8**	**-0.7**
MEV	**Metsovon**	**1.23**	**109**	*e*Pg	**Pg**	**21 20 30.7**	**-2.1**
OHR	**Ohrid**	**1.24**	**42**	*e*Pg	**Pg**	**21 20 30.7**	**-2.3**
OHR				*e*Sg	**Sg**	**21 20 51.4**	**+2.3**
OHR	**Ohrid**	**1.24**	**42**	*i* Pn	**Pn**	**21 20 32.5**	**-0.1**
OHR				*e*Sn	**Sn**	**21 20 53.0**	**+3.6**
OHR				*e*Lg		21 20 54.8	
	comp=E,23µm,0.8s						
OHR				*e*Lg		21 20 54.9	
	comp=N,42µm,1.1s						
OHR	**Ohrid**	**1.24**	**42**	*i* Pn	**Pn**	**21 20 32.4**	**-0.2**
OHR				*e*Sg	**Sg**	**21 20 51.4**	**+2.3**
OHR				*e*Sn	**Sn**	**21 20 52.9**	**+3.5**
FNA	**Florina**	**1.40**	**64**	*e*Pg	**Pg**	**21 20 33.4**	**-2.7**
BIA	**Bitola**	**1.48**	**55**	*e*Pg	**Pg**	**21 20 34.4**	**-3.3**
BIA				*e*Sg	**Sg**	**21 20 57.8**	**+1.0**
BIA	**Bitola**	**1.48**	**55**	*i* Pn	**Pn**	**21 20 36.0**	**0.0**
BIA				*e*Sn	**Sn**	**21 20 59.0**	**+3.7**
BIA				*e*Lg		21 20 59.6	
	comp=E,9µm,0.7s						
BIA				*e*Lg		21 21 00.2	
	comp=N,7µm,0.6s						
BIA	**Bitola**	**1.48**	**55**	*i* Pn	**Pn**	**21 20 35.9**	**0.0**
BIA				*e*Sg	**Sg**	**21 20 57.8**	**+0.9**
BIA				*e*Sn	**Sn**	**21 20 59.0**	**+3.6**
KZN	**Kozani**	**1.58**	**85**	*e*PN	**Pn**	**21 20 38.0**	**+0.7**
KZN				*e*SN	**Sn**	**21 20 59.0**	**+1.2**
LKD	**Levkas**	**1.65**	**153**	*e*Pb	**Pb**	**21 20 37.4**	**-2.2**
LKD				*e*Sb	**Sb**	**21 21 00.7**	**+0.2**
ULC	**Ulcinj**	**1.81**	**349**	⇑*i*Pn	**Pn**	**21 20 40.5**	**+0.1**
ULC				*e*Sn	**Sn**	**21 21 05.1**	**+1.7**
PE1	**Pezze di Greco**	**1.85**	**290**	⇓*i*Pn	**Pn**	**21 20 41.1**	**+0.1**
SDA	**Shkodra**	**1.87**	**355**	*i* Pn	**Pn**	**21 20 41.9**	**+0.7**
EVR	**Evrytania**	**2.06**	**127**	⇑*i*PB	**Pb**	**21 20 42.5**	**-4.2**
VLS	**Valsamata**	**2.12**	**161**	⇓*i*PB	**Pb**	**21 20 43.5**	**-4.2**
VLS				*e*SN	**Sn**	**21 21 10.5**	**-0.6**
LIT	**Litokhoron**	**2.13**	**91**	*e*Pn	**Pn**	**21 20 45.5**	**+0.6**
LIT				*e*Sn	**Sn**	**21 21 14.1**	**+2.7**
GRG	**Griva**	**2.19**	**69**	*e*Pn	**Pn**	**21 20 46.1**	**+0.5**
GRG				*e*Sn	**Sn**	**21 21 13.8**	**+1.0**
BUM	**Brajici-Budva**	**2.20**	**344**	⇑*i*Pn	**Pn**	**21 20 45.9**	**+0.1**
BUM				*e*Sn	**Sn**	**21 21 14.2**	**+1.2**
SKO	**Skopje**	**2.21**	**36**	*e*Pn	**Pn**	**21 20 47.9**	**+2.0**
SKO				*e*Sn	**Sn**	**21 21 16.5**	**+3.2**
SKO	**Skopje**	**2.21**	**36**	*i* Pn	**Pn**	**21 20 47.8**	**+1.9**
SKO				*e*Sn	**Sn**	**21 21 17.1**	**+3.8**
SKO				*e*Lg		21 21 20.0	
	comp=N,8µm,0.6s						
SKO				*e*Lg		21 21 20.1	
	comp=E,12µm,0.8s						
SKO	**Skopje**	**2.21**	**36**	*i* Pn	**Pn**	**21 20 47.7**	**+1.8**
SKO				*e*Sn	**Sn**	**21 21 16.5**	**+3.2**
TTG	**Podgorica**	**2.27**	**352**	⇑*i*Pn	**Pn**	**21 20 47.0**	**+0.3**
TTG				*e*Sn	**Sn**	**21 21 15.9**	**+1.3**
AGG	**Agios Georgios**	**2.33**	**119**	*e*Pn	**Pn**	**21 20 48.2**	**+0.5**
AGG				*e*Sn	**Sn**	**21 21 19.0**	**+2.6**
BAI	**Bari**	**2.34**	**294**	⇓*i*Pn	**Pn**	**21 20 47.8**	**+0.1**
SG1	**Sgolgore (BA)**	**2.40**	**287**	⇓*i*Pn	**Pn**	**21 20 48.6**	**+0.1**
STIP	**Stip**	**2.40**	**50**	*i* Pn	**Pn**	**21 20 49.7**	**+1.1**
STIP				*e*Sn	**Sn**	**21 21 20.8**	**+2.7**
STIP				*e*Lg		21 21 24.6	
	comp=E,2µm,1.1s						
STIP				*e*Lg		21 21 24.8	
	comp=N,1µm,0.7s						
STIP	**Stip**	**2.40**	**50**	*e*Pn	**Pn**	**21 20 49.3**	**+0.7**
STIP				*e*Sn	**Sn**	**21 21 20.1**	**+2.0**
PVY	**Plav**	**2.41**	**5**	⇑*i*Pn	**Pn**	**21 20 50.4**	**+1.7**
PVY				*e*Sn	**Sn**	**21 21 19.3**	**+1.0**
HCY	**Herceg Novi**	**2.44**	**338**	⇑*i*Pn	**Pn**	**21 20 48.6**	**-0.4**
HCY				*e*Sn	**Sn**	**21 21 19.7**	**+0.9**
VAY	**Valandovo**	**2.45**	**62**	*e*Pn	**Pn**	**21 20 49.4**	**+0.2**
VAY				*e*Sn	**Sn**	**21 21 20.5**	**+1.3**
VAY	**Valandovo**	**2.45**	**62**	*i* Pn	**Pn**	**21 20 49.4**	**+0.2**
VAY				*e*Sn	**Sn**	**21 21 22.6**	**+3.4**
VAY				*e*Lg		21 21 24.0	
	comp=E,33µm,2.3s						
VAY				*e*Lg		21 21 26.3	
	comp=N,17µm,1.7s						
VAY	**Valandovo**	**2.45**	**62**	*i* Pn	**Pn**	**21 20 49.4**	**+0.2**
VAY				*e*Sn	**Sn**	**21 21 20.5**	**+1.3**
TIP	**Timpagrande**	**2.49**	**247**	*e*Pn	**Pn**	**21 20 49.1**	**-0.7**
ORI	**Oriolo Calabro**	**2.50**	**268**	P	**Pn**	**21 20 49.8**	**-0.2**
THE	**Thessaloniki**	**2.52**	**79**	*e*Pn	**Pn**	**21 20 50.2**	**0.0**
THE				*e*Sn	**Sn**	**21 21 23.4**	**+2.3**
RLS	**Riolos of Patr**	**2.53**	**147**	⇓*i*PB	**Pb**	**21 20 50.4**	**-4.2**
KNT	**Kendrikon**	**2.61**	**67**	*e*Pn	**Pn**	**21 20 51.9**	**+0.5**
KNT				*e*Sn	**Sn**	**21 21 24.5**	**+1.3**
HORT	**Hortiatis**	**2.62**	**80**	*e*Pn	**Pn**	**21 20 51.5**	**-0.1**
HORT				*e*Sn	**Sn**	**21 21 26.5**	**+3.1**
NKY	**Niksic**	**2.68**	**349**	⇑*i*Pn	**Pn**	**21 20 52.5**	**+0.2**
NKY				*e*Sn	**Sn**	**21 21 25.6**	**+0.7**
IVA	**Berane**	**2.69**	**3**	⇑*i*Pn	**Pn**	**21 20 54.5**	**+2.0**
IVA				*e*Sn	**Sn**	**21 21 26.1**	**+1.1**
TREB	**Trebinje**	**2.73**	**338**	P	**Pn**	**21 20 52.8**	**-0.2**
TREB				S	**Sn**	**21 21 27.2**	**+1.2**
CDT	**Castel del Mon**	**2.76**	**290**	⇓*i*Pn	**Pn**	**21 20 53.6**	**+0.1**
XOR	**Xorichti**	**2.81**	**106**	*e*Pn	**Pn**	**21 20 54.2**	**+0.1**
BRY	**Bratogost**	**2.85**	**342**	⇑*i*Pn	**Pn**	**21 20 54.5**	**-0.2**
BRY				*e*Sn	**Sn**	**21 21 29.9**	**+0.8**
NEO	**Neokhori**	**2.85**	**107**	*e*PN	**Pn**	**21 20 54.9**	**+0.2**
SOH	**Sokhos**	**2.85**	**76**	*e*Pn	**Pn**	**21 20 54.9**	**+0.2**
SOH				*e*Sn	**Sn**	**21 21 31.9**	**+2.8**
PLG	**Polygyros**	**2.86**	**85**	*e*PN	**Pn**	**21 20 55.1**	**+0.2**
GRI	**Girifalco**	**2.89**	**243**	P	**Pn**	**21 20 54.2**	**-1.0**
LKR	**Lokris**	**2.97**	**120**	P	**Pn**	**21 20 57.8**	**+1.4**
CUC	**Castrocucco**	**2.99**	**268**	P	**Pn**	**21 20 56.9**	**+0.2**
PAIG	**Paliouri**	**3.06**	**94**	*e*Pn	**Pn**	**21 20 57.2**	**-0.4**
PAIG				*e*Sn	**Sn**	**21 21 34.4**	**+0.1**
UPM	**Unac-Piva**	**3.07**	**349**	⇑*i*Pn	**Pn**	**21 20 58.4**	**+0.6**
UPM				*e*Sn	**Sn**	**21 21 35.7**	**+1.2**
STON	**Ston**	**3.08**	**331**	P	**Pn**	**21 20 54.1**	**-3.7**
SJES	**Sjenica**	**3.08**	**3**	Pn	**Pn**	**21 20 59.7**	**+1.8**
SLCN	**Sala Consilina**	**3.12**	**275**	P	**Pn**	**21 20 58.8**	**+0.3**
PLE	**Pljevlja**	**3.15**	**356**	⇑*i*Pn	**Pn**	**21 20 59.6**	**+0.8**
PLE				*e*Sn	**Sn**	**21 21 37.5**	**+1.0**
FGMS	**Monte Sant'Ang**	**3.23**	**299**	P	**Pn**	**21 21 00.0**	**+0.1**
MSAG	**Monte S. Angel**	**3.26**	**299**	P	**Pn**	**21 21 00.5**	**+0.2**
MRLC	**Muro Lucano**	**3.27**	**281**	P	**Pn**	**21 21 00.7**	**+0.2**
FG4	**Candela**	**3.33**	**288**	P	**Pn**	**21 21 01.9**	**+0.6**
MMB	**Musomiste**	**3.35**	**64**	*e*Pn	**Pn**	**21 21 02.5**	**+0.9**
NVR	**Nevrokopi**	**3.36**	**68**	*e*PN	**Pn**	**21 21 02.2**	**+0.5**
AOS	**Alonnisos**	**3.37**	**106**	*e*Pn	**Pn**	**21 21 01.8**	**-0.2**
AOS				*e*Sn	**Sn**	**21 21 43.0**	**+0.9**
SGRT	**San Giovanni R**	**3.39**	**299**	P	**Pn**	**21 21 02.2**	**+0.1**
RGNG	**Rignano Grg**	**3.46**	**297**	P	**Pn**	**21 21 03.3**	**+0.2**
ITM	**Ithomi**	**3.47**	**149**	*e*PN	**Pn**	**21 21 02.8**	**-0.4**
MGER	**Gerania Oros**	**3.53**	**127**	*e*PN	**Pn**	**21 21 03.5**	**-0.6**
CEL	**Celeste**	**3.54**	**238**	P	**Pn**	**21 21 03.2**	**-0.9**
SOI	**Samo**	**3.54**	**235**	P	**Pn**	**21 21 02.8**	**-1.4**
FG5	**Orsara di Pugl**	**3.55**	**289**	P	**Pn**	**21 21 05.3**	**+1.0**
VTS	**Vitosha**	**3.56**	**46**	*e*Pn	**Pn**	**21 21 06.2**	**+1.7**
VTS				*e*Sn	**Sn**	**21 21 48.5**	**+1.8**
VTS	**Vitosha**	**3.56**	**46**	⇓*i*P	**Pn**	**21 21 06.7**	**+2.2**
SCLL	**Scilla**	**3.65**	**239**	P	**Pn**	**21 21 07.3**	**+1.5**
BBLS	**Bajina Basta -**	**3.68**	**357**	*i* Pn	**Pn**	**21 21 08.0**	**+1.8**
GRUS	**Gruza**	**3.77**	**11**	*i* Pn	**Pn**	**21 21 07.8**	**+0.4**
FG2	**Serracapriola**	**3.80**	**297**	P	**Pn**	**21 21 08.5**	**+0.7**
MTTG	**Motta San Giov**	**3.81**	**236**	P	**Pn**	**21 21 06.5**	**-1.4**
NAIG	**Nisos Aigina**	**3.81**	**128**	*e*PN	**Pn**	**21 21 07.8**	**-0.2**
ATH	**Athens Observa**	**3.82**	**124**	*e*PN	**Pn**	**21 21 07.8**	**-0.3**
PSB1	**Pescosannita**	**3.87**	**287**	P	**Pn**	**21 21 09.6**	**+0.9**
PTL	**Penteli**	**3.87**	**122**	*e*PN	**Pn**	**21 21 08.8**	**0.0**
DIVS	**Divcibare**	**3.91**	**3**	⇓*i*Pn	**Pn**	**21 21 09.4**	**+0.1**
DIVS	**Divcibare**	**3.91**	**3**	*e*Pn	**Pn**	**21 21 09.7**	**+0.3**
DIVS				*e*Sn	**Sn**	**21 21 56.1**	**+0.8**
CIGN	**Sant'Elia a Pi**	**3.92**	**293**	P	**Pn**	**21 21 10.6**	**+1.1**
BOLS	**Boljevac**	**4.01**	**24**	⇓*i*Pn	**Pn**	**21 21 12.0**	**+1.4**
RZN	**Rozhen**	**4.08**	**67**	P	**Pn**	**21 21 12.2**	**+0.6**
PGB	**Panagyurishte**	**4.10**	**53**	P	**Pn**	**21 21 13.3**	**+1.4**
SLNA	**Salina**	**4.11**	**248**	P	**Pn**	**21 21 10.8**	**-1.3**
LOS	**Limnos**	**4.13**	**92**	*e*Pn	**Pn**	**21 21 12.0**	**-0.3**
LOS				*e*Sn	**Sn**	**21 22 03.4**	**+2.7**
LOS	**Limnos**	**4.13**	**92**	*e*Pn	**Pn**	**21 21 12.0**	**-0.3**
LOS				S	**Sn**	**21 22 03.3**	**+2.6**
LIA	**Limnos Island**	**4.21**	**92**	⇑*i*PN	**Pn**	**21 21 13.7**	**+0.3**
PLD	**Plovdiv**	**4.23**	**61**	*e*Pn	**Pn**	**21 21 15.4**	**+1.7**
VLI	**Veliai**	**4.29**	**143**	*e*PN	**Pn**	**21 21 14.0**	**-0.5**
MIDA	**Miranda**	**4.38**	**291**	P	**Pn**	**21 21 17.2**	**+1.4**
RNI2	**Rionero Sannit**	**4.47**	**292**	P	**Pn**	**21 21 19.0**	**+2.0**
RFI	**Roccamonfina**	**4.49**	**286**	P	**Pn**	**21 21 18.6**	**+1.3**
MNO	**Monte Soro**	**4.51**	**242**	P	**Pn**	**21 21 17.4**	**-0.1**
KDZ	**Kurdzhali**	**4.56**	**69**	P	**Pn**	**21 21 17.5**	**-0.8**
AGST	**Augusta-Monte**	**4.57**	**232**	Pn	**Pn**	**21 21 14.4**	**-3.9**
BEO	**Belgrade**	**4.66**	**7**	*e*Pn	**Pn**	**21 21 20.1**	**+0.5**
BEO	**Belgrade**	**4.66**	**7**	P	**Pn**	**21 21 18.2**	**-1.4**
BEO	**Belgrade**	**4.66**	**7**	Pn	**Pn**	**21 21 20.1**	**+0.5**
KYTH	**Kithira**	**4.70**	**145**	*e*PN	**Pn**	**21 21 20.0**	**-0.1**
SSY	**Sortino**	**4.73**	**232**	Pn	**Pn**	**21 21 16.5**	**-4.0**
GADA	**Gvkgeada**	**4.74**	**88**	PN	**Pn**	**21 21 20.8**	**+0.1**
INTR	**Introdacqua**	**4.75**	**294**	P	**Pn**	**21 21 21.0**	**+0.2**
DIM	**Dimitrovgrad**	**4.78**	**65**	P	**Pn**	**21 21 23.1**	**+1.9**
VENT	**Ventotene**	**4.83**	**279**	P	**Pn**	**21 21 22.3**	**+0.3**
ALN	**Alexandroupoli**	**4.88**	**80**	*e*Pn	**Pn**	**21 21 22.7**	**+0.1**
BOZC	**Bozcaada**	**4.88**	**92**	*i* P	**Pn**	**21 21 22.4**	**-0.2**
VVLD	**Villa Vallelon**	**4.90**	**292**	P	**Pn**	**21 21 24.1**	**+1.2**
DJES	**Djerdap**	**4.91**	**24**	*e*Pn	**Pn**	**21 21 23.3**	**+0.4**
BLY	**Banja Luka**	**4.93**	**339**	P	**Pn**	**21 21 23.4**	**+0.1**
BLY				S	**Sn**	**21 22 19.9**	**-0.4**
HVZN	**Vizzini**	**4.93**	**234**	Pn	**Pn**	**21 21 18.5**	**-4.8**
GIB	**Gibilmanna**	**4.94**	**245**	P	**Pn**	**21 21 21.7**	**-1.7**
VAE	**Valguarnera**	**4.94**	**238**	Pn	**Pn**	**21 21 23.1**	**-0.4**
	comp=N,3.4nm,0.3s,baz=233,slow=1.1,SNR=20						
ENEZ	**Enez**	**4.95**	**82**	PN	**Pn**	**21 21 24.2**	**+0.7**
FGSL	**Fruska Gora**	**4.97**	**1**	Pn	**Pn**	**21 21 23.5**	**-0.3**
HMDC	**Modica**	**5.03**	**232**	Pn	**Pn**	**21 21 21.0**	**-3.7**
	comp=N,2µm,0.5s						
EZN	**Ezine**	**5.09**	**92**	PN	**Pn**	**21 21 25.6**	**+0.1**
GUAR	**Guarcino**	**5.10**	**290**	P	**Pn**	**21 21 27.3**	**+1.6**
PTQR	**Pietraquaria**	**5.11**	**293**	P	**Pn**	**21 21 29.7**	**+4.0**
RAFF	**Raffo Rosso**	**5.12**	**236**	P	**Pn**	**21 21 24.1**	**-1.9**
PRK	**Paraskevi**	**5.15**	**98**	*e*PN	**Pn**	**21 21 27.0**	**+0.7**
PVL	**Pavlikeni**	**5.18**	**52**	P	**Pn**	**21 21 28.8**	**+2.0**
TERO	**Teramo**	**5.20**	**300**	P	**Pn**	**21 21 27.8**	**+0.8**
AQU	**L'Aquila**	**5.22**	**297**	⇓*i*P	**Pn**	**21 21 29.0**	**+1.7**
AQU	**L'Aquila**	**5.22**	**297**	*e*Pn	**Pn**	**21 21 28.3**	**+1.0**
CHOS	**Chios island**	**5.24**	**108**	*e*Pn	**Pn**	**21 21 28.6**	**+1.0**
CHOS				*e*Sn	**Sn**	**21 22 31.5**	**+3.4**
USI	**Ustica**	**5.27**	**256**	P	**Pn**	**21 21 30.1**	**+2.2**
OFFI	**Offida**	**5.29**	**303**	P	**Pn**	**21 21 29.9**	**+1.7**
CERT	**Cerreto**	**5.38**	**291**	Pn	**Pn**	**21 21 30.5**	**+1.0**
	comp=N,452nm,0.8s						
FIAM	**Fiamignano**	**5.39**	**295**	P	**Pn**	**21 21 31.3**	**+1.7**
LPK	**Lapseki**	**5.39**	**86**	PN	**Pn**	**21 21 30.3**	**+0.6**
AYVA	**Ayvalik**	**5.45**	**97**	*i* P	**Pn**	**21 21 29.1**	**-1.3**
LAV9	**Lanuvio**	**5.51**	**288**	P	**Pn**	**21 21 32.2**	**+0.8**
APE	**Apeiranthos**	**5.52**	**123**	*e*Pn	**Pn**	**21 21 30.8**	**-0.6**
APE				*e*Sn	**Sn**	**21 22 39.1**	**+4.1**
APE	**Apeiranthos**	**5.52**	**123**	⇓*i*P	**Pn**	**21 21 39.0**	**+7.6**
APE	**Apeiranthos**	**5.52**	**123**	P	**Pn**	**21 21 30.8**	**-0.6**
APE				⇓P		21 21 39.0	
APE				S	**Sn**	**21 22 39.1**	**+4.1**
RDP	**Rocca di Papa**	**5.52**	**289**	P	**Pn**	**21 21 32.4**	**+1.0**
FAVR	**Favara**	**5.55**	**240**	P	**Pn**	**21 21 33.9**	**+2.0**
MA9	**Marino**	**5.57**	**289**	P	**Pn**	**21 21 33.1**	**+1.1**
EDRB	**Edirne**	**5.57**	**70**	PN	**Pn**	**21 21 34.7**	**+2.6**
MTCE	**Montecelio**	**5.57**	**291**	P	**Pn**	**21 21 33.2**	**+1.0**
BZS	**Buzias**	**5.60**	**14**	⇑*i*P	**Pn**	**21 21 32.8**	**+0.2**
BZS	**Buzias**	**5.60**	**14**	P	**Pn**	**21 21 32.7**	**+0.2**
BZS	**Buzias**	**5.60**	**14**	P	**Pn**	**21 21 32.7**	**+0.1**
URLA	**Izmir**	**5.65**	**107**	*i* P	**Pn**	**21 21 33.9**	**+0.8**
JMB	**Yambol**	**5.65**	**64**	*e*Pn	**Pn**	**21 21 33.4**	**+0.2**
JMB				*e*Sn	**Sn**	**21 22 39.8**	**+1.5**
NVLJ	**Novalja**	**5.65**	**322**	⇑*i*Pn	**Pn**	**21 21 33.3**	**0.0**
NVLJ				*i* Sn	**Sn**	**21 22 38.1**	**-0.1**
AOI	**Ancona**	**5.66**	**308**	P	**Pn**	**21 21 33.2**	**-0.2**
ROM9	**Roma**	**5.68**	**289**	P	**Pn**	**21 21 35.2**	**+1.5**
RKY	**Sarkoy-Tekirda**	**5.72**	**83**	PN	**Pn**	**21 21 35.4**	**+1.2**
MNS	**Montasola**	**5.73**	**295**	P	**Pn**	**21 21 35.7**	**+1.4**
RHK3	**Tenkes**	**5.80**	**350**	*e*P	**Pn**	**21 21 34.2**	**-1.0**
MFT	**Murefte**	**5.80**	**82**	PN	**Pn**	**21 21 35.4**	**+0.1**
CING	**Cingoli**	**5.82**	**305**	P	**Pn**	**21 21 35.6**	**+0.1**
SANT	**Santorini**	**5.91**	**128**	*e*Pn	**Pn**	**21 21 36.7**	**-0.1**
SNTG	**Esanatoglia**	**5.92**	**303**	P	**Pn**	**21 21 36.9**	**0.0**
ERC	**Erice**	**5.94**	**251**	P	**Pn**	**21 21 37.3**	**+0.1**
WDD	**Wield Dalam**	**5.95**	**225**	P	**Pn**	**21 21 36.5**	**-0.8**
VAM	**Vamos**	**5.95**	**142**	P	**Pn**	**21 21 36.2**	**-1.1**
ASS	**Assisi**	**6.02**	**301**	P	**Pn**	**21 21 39.8**	**+1.5**
MRMT	**Marmara Adasi**	**6.04**	**84**	PN	**Pn**	**21 21 39.3**	**+0.8**
ARV	**Arcevia**	**6.04**	**305**	P	**Pn**	**21 21 38.5**	**-0.1**
PKSM	**Moragy**	**6.07**	**353**	⇓*i*P	**Pn**	**21 21 38.6**	**-0.4**
PKSM	**Moragy**	**6.07**	**353**	⇑*e*P	**Pn**	**21 21 38.0**	**-1.0**
SMG	**Samos**	**6.08**	**112**	*e*PN	**Pn**	**21 21 39.5**	**+0.4**
TOLF	**Tolfa**	**6.12**	**290**	P	**Pn**	**21 21 40.5**	**+0.9**
IZM	**Izmir**	**6.12**	**105**	PN	**Pn**	**21 21 41.4**	**+1.7**
MURB	**Monte Urbino**	**6.19**	**302**	P	**Pn**	**21 21 41.9**	**+1.3**
BOJS	**Bojanci**	**6.24**	**330**	*e*Pn	**Pn**	**21 21 41.4**	**+0.1**
BOJS				*e*Sn	**Sn**	**21 22 52.1**	**-0.6**
BUC1	**Bucharest**	**6.26**	**46**	P	**Pn**	**21 21 44.2**	**+2.6**
IDI	**Anoyia**	**6.38**	**138**	Pn	**Pn**	**21 21 40.7**	**-2.6**
	comp=N,9.0nm,0.3s,baz=319,slow=13,SNR=44						
IDI				Sn	**Sn**	**21 22 47.1**	**-9.1**
	comp=N,43nm,0.3s,baz=303,slow=20,SNR=7.5						
IDI				LR	LR	21 23 39.3	
	comp=N,226nm,19.9s,baz=326,slow=33						
IDI	**Anoyia**	**6.38**	**138**	Pn	**Pn**	**21 21 40.7**	**-2.6**
IDI				P		21 21 44.4	
IDI				Sn	**Sn**	**21 22 47.1**	**-9.2**
IDI				LR	LR	21 23 39.3	
MTUR	**Matau**	**6.39**	**36**	⇓*i*P	**Pn**	**21 21 47.0**	**+3.6**
MTUR	**Matau**	**6.39**	**36**	P	**Pn**	**21 21 46.5**	**+3.1**
MTUR				⇓P		21 21 47.0	
AKHS	**Akhisar**	**6.40**	**99**	*i* P	**Pn**	**21 21 45.4**	**+1.9**
AKS	**Akhisar**	**6.40**	**99**	PN	**Pn**	**21 21 44.2**	**+0.7**
PKS6	**Bocsa**	**6.41**	**359**	⇓*e*P	**Pn**	**21 21 43.6**	**0.0**
LATE	**Laterza**	**6.42**	**295**	P	**Pn**	**21 21 44.9**	**+1.1**
CDCA	**Citt' di Caste**	**6.47**	**303**	P	**Pn**	**21 21 46.5**	**+2.0**
BADI	**Badiali**	**6.49**	**303**	P	**Pn**	**21 21 45.7**	**+1.0**
VOIR		**6.55**	**35**	⇓*i*P	**Pn**	**21 21 48.3**	**+2.7**
SIVA	**Sivas**	**6.56**	**140**	*e*Pn	**Pn**	**21 21 44.8**	**-0.9**
RSM	**Repubblica di**	**6.57**	**307**	P	**Pn**	**21 21 46.1**	**+0.3**
CTT	**Catalca**	**6.70**	**79**	*e*PN	**Pn**	**21 21 48.9**	**+1.3**
SNX	**Sinaia**	**6.70**	**38**	⇓*i*P	**Pn**	**21 21 39.8**	**-7.8**
PKSN	**Nyarlorinc**	**6.71**	**1**	⇑*e*P	**Pn**	**21 21 47.5**	**-0.2**
BODT	**Bodrum**	**6.72**	**115**	*e*PN	**Pn**	**21 21 49.2**	**+1.3**
CRE	**Caprese Michel**	**6.73**	**303**	P	**Pn**	**21 21 48.4**	**+0.4**
CEY	**Cerknica**	**6.77**	**327**	*i* Pn	**Pn**	**21 21 48.5**	**0.0**
PDKS	**Podkum**	**6.81**	**331**	*e*Pn	**Pn**	**21 21 48.8**	**-0.3**
MAON	**Monte Argentar**	**6.84**	**292**	P	**Pn**	**21 21 49.7**	**+0.2**
PKS7	**Kunszentmiklos**	**6.87**	**357**	⇓*e*P	**Pn**	**21 21 49.5**	**-0.4**
DST	**Dursunbey**	**6.88**	**92**	*e*PN	**Pn**	**21 21 51.2**	**+1.1**
SFI	**Santa Sofia**	**6.93**	**305**	P	**Pn**	**21 21 51.9**	**+1.1**
DRGR		**6.95**	**17**	⇓*i*P	**Pn**	**21 21 51.3**	**+0.2**
DRGR		**6.95**	**17**	⇓P	**Pn**	**21 21 51.3**	**+0.2**
DRGR				P		21 21 52.2	
DRGR		**6.95**	**17**	P	**Pn**	**21 21 52.2**	**+1.1**
LJU	**Ljubljana**	**6.97**	**329**	*e*Pn	**Pn**	**21 21 51.0**	**-0.4**
LJU				*e*Sn	**Sn**	**21 23 12.0**	**+1.3**
BRSN	**Barisano**	**6.99**	**308**	P	**Pn**	**21 21 53.0**	**+1.4**
MLR	**Muntele Rosu**	**7.00**	**39**	Pn	**Pn**	**21 21 53.4**	**+1.6**
	comp=N,2.5nm,0.3s,baz=196,slow=7.3,SNR=58						
MLR	**Muntele Rosu**	**7.00**	**39**	⇓*i*P	**Pn**	**21 21 54.7**	**+2.9**
MLR	**Muntele Rosu**	**7.00**	**39**	P	**Pn**	**21 21 53.4**	**+1.6**
MLR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MLR	**Muntele Rosu**	**7.00**	**39**	P	**Pn**	**21 21 54.2**	**+2.4**
MLR				⇓P		21 21 54.7	
TRI	**Trieste**	**7.03**	**324**	P	**Pn**	**21 21 50.6**	**-1.6**
DAT	**Datca**	**7.07**	**117**	*e*PN	**Pn**	**21 21 55.1**	**+2.4**
CSNT	**Castellina Chi**	**7.09**	**300**	P	**Pn**	**21 21 53.3**	**+0.3**
ISK	**Istanbul-Kandi**	**7.17**	**80**	*e*PN	**Pn**	**21 21 54.8**	**+0.8**
KLYT	**Kilyos**	**7.17**	**78**	*e*PN	**Pn**	**21 21 55.1**	**+1.0**
GRFL	**Gerfalco**	**7.18**	**297**	P	**Pn**	**21 21 55.3**	**+1.1**
VOY	**Vojsko**	**7.22**	**326**	*e*Sn	**Sn**	**21 23 17.1**	**+0.2**
VOJS	**Vojsko**	**7.23**	**326**	*i* Pn	**Pn**	**21 21 54.4**	**-0.5**
ZKR	**Zakros**	**7.23**	**132**	*e*Pn	**Pn**	**21 21 55.0**	**+0.1**
ZKR				*e*Sn	**Sn**	**21 23 18.6**	**+1.5**
GEMT	**Gemlik**	**7.25**	**85**	*e*PN	**Pn**	**21 21 56.4**	**+1.2**
PERS	**Pernice**	**7.26**	**334**	*i* Pn	**Pn**	**21 21 54.6**	**-0.7**
PERS				*e*Sn	**Sn**	**21 23 15.2**	**-2.6**
PKSG		**7.26**	**353**	⇓*e*P	**Pn**	**21 21 54.9**	**-0.5**
BUD	**Budapest**	**7.31**	**356**	*e*Pn	**Pn**	**21 22 06.8**	**+11**
BUD	**Budapest**	**7.31**	**356**	P	**Pn**	**21 21 55.3**	**-0.7**
SEI	**Scarperia**	**7.31**	**305**	P	**Pn**	**21 21 57.5**	**+1.5**
OBKA	**Obir**	**7.35**	**331**	⇑*i*Sn	**Sn**	**21 23 18.1**	**-2.0**
OBKA	**Obir**	**7.35**	**331**	⇑*i*Pn	**Pn**	**21 21 56.0**	**-0.6**
	SNR=170						
OBKA				⇑*i*Sn	**Sn**	**21 23 21.6**	**+1.5**
OBKA	**Obir**	**7.35**	**331**	⇑*i*Pn	**Pn**	**21 21 56.0**	**-0.6**
OBKA				*i* Sn	**Sn**	**21 23 18.1**	**-2.0**
YER	**Yerkesik**	**7.37**	**112**	*e*PN	**Pn**	**21 21 56.4**	**-0.4**
YLV	**Yalova**	**7.39**	**84**	*e*PN	**Pn**	**21 21 57.9**	**+0.8**
CVD	**Cernavoda**	**7.42**	**54**	P	**Pn**	**21 22 00.7**	**+3.2**
FNVD	**Fontana Vidola**	**7.51**	**305**	P	**Pn**	**21 22 00.0**	**+1.2**
ROBS	**Robic**	**7.56**	**325**	*e*Pn	**Pn**	**21 21 58.5**	**-0.9**
ROBS				*e*Sn	**Sn**	**21 23 22.4**	**-2.7**
HARR	**Harsova**	**7.56**	**51**	⇓*i*P	**Pn**	**21 22 01.4**	**+1.9**
HRT	**Hereke**	**7.62**	**82**	*e*PN	**Pn**	**21 22 00.1**	**-0.1**
GDZ	**Gediz**	**7.62**	**95**	*i* P	**Pn**	**21 22 00.8**	**+0.5**
DENT	**Denizli**	**7.66**	**106**	*e*PN	**Pn**	**21 22 03.5**	**+2.7**
ADVT	**Abdulvahap**	**7.67**	**85**	*e*PN	**Pn**	**21 22 01.5**	**+0.6**
ARSA	**Arzberg**	**7.68**	**338**	⇓*i*Sn	**Sn**	**21 23 26.6**	**-1.6**
ARSA	**Arzberg**	**7.68**	**338**	⇓*i*Pn	**Pn**	**21 22 00.3**	**-0.8**
	SNR=25						
ARSA				⇑*i*Sn	**Sn**	**21 23 29.1**	**+0.9**
ARSA	**Arzberg**	**7.68**	**338**	⇓*i*Pn	**Pn**	**21 22 00.3**	**-0.8**
ARSA				*i* Sn	**Sn**	**21 23 26.6**	**-1.6**
ARSA	**Arzberg**	**7.68**	**338**	Pn	**Pn**	**21 22 00.3**	**-0.8**
	comp=Z,25nm,4.0s						
ZCCA	**Zocca**	**7.70**	**306**	P	**Pn**	**21 22 03.1**	**+1.8**
GMNA	**Gemona**	**7.70**	**324**	P	**Pn**	**21 22 00.9**	**-0.5**
PII	**Pisa**	**7.70**	**300**	P	**Pn**	**21 22 02.4**	**+1.0**
ARG	**Arkhangelos**	**7.72**	**118**	P	**Pn**	**21 22 03.8**	**+2.2**
PSZ	**Piszkesteto**	**7.73**	**1**	⇓*e*Pn	**Pn**	**21 22 01.7**	**-0.1**
PSZ	**Piszkesteto**	**7.73**	**1**	⇓*i*P	**Pn**	**21 22 01.4**	**-0.4**
PSZ	**Piszkesteto**	**7.73**	**1**	*e*Pn	**Pn**	**21 22 01.1**	**-0.7**
PSZ	**Piszkesteto**	**7.73**	**1**	⇓*e*P	**Pn**	**21 22 01.7**	**-0.1**
TIRR	**Tirgusor**	**7.73**	**54**	⇑*i*P	**Pn**	**21 22 02.8**	**+1.0**
TIRR	**Tirgusor**	**7.73**	**54**	⇑*e*Pn	**Pn**	**21 22 02.4**	**+0.7**
	comp=Z,72nm,0.8s						
TIRR	**Tirgusor**	**7.73**	**54**	P	**Pn**	**21 22 03.7**	**+1.9**
PTCC	**Patocco-Chiusa**	**7.75**	**325**	P	**Pn**	**21 22 01.2**	**-0.9**
DALT	**Dalyan (Mudla)**	**7.79**	**113**	*e*PN	**Pn**	**21 22 03.8**	**+1.2**
BDI	**Bagni Di Lucca**	**7.80**	**303**	P	**Pn**	**21 22 03.2**	**+0.5**
RAVA	**Ravarino**	**7.82**	**309**	P	**Pn**	**21 22 03.7**	**+0.7**
SOP	**Sopron**	**7.83**	**344**	*e*Pn	**Pn**	**21 22 05.0**	**+1.9**
SOP	**Sopron**	**7.83**	**344**	P	**Pn**	**21 22 02.3**	**-0.8**
GSCL	**Gusciola**	**7.94**	**305**	P	**Pn**	**21 22 06.5**	**+1.9**
CFR	**Carcaliu**	**7.96**	**48**	⇓*i*P	**Pn**	**21 22 06.2**	**+1.3**
CFR	**Carcaliu**	**7.96**	**48**	⇓P	**Pn**	**21 22 06.2**	**+1.3**
VLC	**Villacollemand**	**7.98**	**303**	*e*Pn	**Pn**	**21 22 05.1**	**-0.1**
VLC				*e*Sn	**Sn**	**21 23 32.2**	**-3.3**
VSL	**Villasalto**	**7.98**	**268**	*e*Pn	**Pn**	**21 22 05.0**	**-0.2**
CGL	**Cagliari Serpe**	**8.06**	**267**	P	**Pn**	**21 22 08.3**	**+2.0**
ERBM	**Eremo**	**8.08**	**305**	P	**Pn**	**21 22 08.3**	**+1.7**
ALT	**Altintas**	**8.11**	**95**	*e*PN	**Pn**	**21 22 07.3**	**+0.4**
GPA	**Golpazari**	**8.11**	**86**	*e*PN	**Pn**	**21 22 07.3**	**+0.3**
VINC	**Vinca**	**8.12**	**302**	P	**Pn**	**21 22 09.8**	**+2.6**
FVI	**Forni Avoltri**	**8.15**	**324**	P	**Pn**	**21 22 05.4**	**-2.1**
VALM		**8.15**	**304**	P	**Pn**	**21 22 10.1**	**+2.5**
CONA	**Conrad Observa**	**8.22**	**342**	⇓*i*Pn	**Pn**	**21 22 06.3**	**-2.1**
	SNR=14						
ZST	**Bratislava**	**8.22**	**348**	*e*PN	**Pn**	**21 22 09.0**	**+0.5**
ZST				*e*		21 22 48.8	
ZST	**Bratislava**	**8.22**	**348**	*e*SN	**Sn**	**21 23 39.5**	**-2.0**
ZST	**Bratislava**	**8.22**	**348**	*e*Pn	**Pn**	**21 22 09.0**	**+0.5**
	comp=Z,0.3nm,3.0s						
ZST				*e*		21 22 48.8	
ZST				*e*Sn	**Sn**	**21 23 39.5**	**-2.0**
BACM		**8.23**	**303**	P	**Pn**	**21 22 09.5**	**+0.8**
BORA	**Eskisehir**	**8.25**	**89**	*i* P	**Pn**	**21 22 11.3**	**+2.4**
KBA	**Koelnbreinsper**	**8.29**	**328**	⇓*i*Pn	**Pn**	**21 22 08.8**	**-0.6**
	SNR=39						
KBA				⇓*i*Sn	**Sn**	**21 23 41.3**	**-1.8**
VYHS	**Vyhne**	**8.33**	**356**	*e*PN	**Pn**	**21 22 08.8**	**-1.2**
VYHS				*e*		21 22 45.8	
VYHS	**Vyhne**	**8.33**	**356**	*e*SN	**Sn**	**21 23 43.1**	**-1.0**
VYHS				*e*		21 24 16.6	
VYHS	**Vyhne**	**8.33**	**356**	*e*P	**Pn**	**21 22 08.9**	**-1.1**
VYHS				*e*		21 23 43.2	
VYHS	**Vyhne**	**8.33**	**356**	*e*Pn	**Pn**	**21 22 08.9**	**-1.1**
VYHS				*e*		21 22 45.8	
VYHS				*e*Sn	**Sn**	**21 23 43.2**	**-0.9**

VYHS *e* 21 24 16.6
GRAM 8.34 304 P **Pn** **21 22 10.4 +0.3**
BURAR Bucovina Array 8.42 26 ⇑*i*P **Pn** **21 22 13.7 +2.5**
BURAR Bucovina Array 8.42 26 ⇑P **Pn** **21 22 13.7 +2.5**
CODM 8.43 303 P **Pn** **21 22 12.4 +1.1**
SMOL Smolenice 8.48 350 *e*PN **Pn** **21 22 13.4 +1.3**
SEST Monte Rota 8.52 323 P **Pn** **21 22 11.9 -0.7**
ESKT Eskisehir 8.60 91 *e*PN **Pn** **21 22 13.5 -0.1**
ESKT Eskisehir 8.60 91 *i* P **Pn** **21 22 15.1 +1.5**
SEYT Eskypehyr 8.60 91 *i* P **Pn** **21 22 15.1 +1.5**
MOA Molln 8.60 335 ⇓*i*Sn **Sn** **21 23 48.6 -2.3**
MOA Molln 8.60 335 ⇑*i*Pn **Pn** **21 22 13.6 -0.1**
SNR=43
MOA ⇓*i*Sn **Sn** **21 23 48.6 -2.3**
MOA Molln 8.60 335 Pn **Pn** **21 22 13.6 -0.1**
comp=Z,42nm,6.0s
SC2M Scurtabr 8.64 303 P **Pn** **21 22 13.6 -0.6**
ELL Elmali 8.70 110 *e*PN **Pn** **21 22 16.8 +1.7**
ISP Isparta 8.73 102 *e*Pn **Pn** **21 22 18.6 +3.1**
JAVC Velka Javorina 8.79 351 P **Pn** **21 22 17.2 +0.9**
MDU Mudurnu 8.79 84 *e*PN **Pn** **21 22 16.6 +0.2**
CRVS Cervenica-Dubn 8.80 8 *e*PN **Pn** **21 22 17.1 +0.6**
CRVS *e*SN **Sn** **21 23 54.1 -1.6**
CRVS *e* 21 24 36.0
CRVS Cervenica-Dubn 8.80 8 *e*P **Pn** **21 22 17.1 +0.6**
CRVS *e* 21 23 54.2
CRVS Cervenica-Dubn 8.80 8 *e*Pn **Pn** **21 22 17.1 +0.6**
CRVS *e*Sn **Sn** **21 23 54.2 -1.5**
CRVS *e* 21 24 36.0
APPI Appiano 8.81 318 P **Pn** **21 22 16.0 -0.6**
BOB Bobbio (Coli) 8.86 304 P **Pn** **21 22 18.1 +0.9**
LIKS Likavka 8.87 357 *e*PN **Pn** **21 22 20.0 +2.6**
BCK Bucak 8.92 104 *e*PN **Pn** **21 22 18.8 +0.8**
MABI Malga Bissina 8.92 314 P **Pn** **21 22 18.1 0.0**
KOLS Kolonicke sedl 8.93 11 *e*PN **Pn** **21 22 19.1 +0.8**
KOLS *e* 21 22 56.4
KOLS Kolonicke sedl 8.93 11 *e*SN **Sn** **21 23 55.8 -3.1**
KOLS *e* 21 24 40.5
KOLS Kolonicke sedl 8.93 11 *e*P **Pn** **21 22 19.1 +0.8**
KOLS *e* 21 23 55.8
KOLS Kolonicke sedl 8.93 11 *e*Pn **Pn** **21 22 19.1 +0.8**
KOLS *e* 21 22 56.4
KOLS *e*Sn **Sn** **21 23 55.8 -3.1**
KOLS *e* 21 24 40.5
IAS Iasi 9.02 36 P **Pn** **21 22 21.2 +1.8**
WTTA Wattenberg 9.17 323 ⇓*i*Sn **Sn** **21 24 03.4 -1.4**
WTTA Wattenberg 9.17 323 *i* Pn **Pn** **21 22 21.4 -0.1**
SNR=69
WTTA ⇓*i*Sn **Sn** **21 24 03.4 -1.4**
WTTA Wattenberg 9.17 323 Pn **Pn** **21 22 21.4 -0.1**
comp=Z,68nm,6.0s
KRUC Moravsky 9.18 346 P **Pn** **21 22 21.4 -0.3**
NIE Niedzica 9.24 2 *i* Pc **Pn** **21 22 24.9 +2.4**
NIE *e*S **Sn** **21 24 03.8 -2.7**
WATA Walderalm 9.25 323 ⇑*i*Sn **Sn** **21 24 05.5 -1.2**
WATA Walderalm 9.25 323 ⇑*i*Pn **Pn** **21 22 22.5 -0.1**
SNR=78
WATA ⇑*i*Sn **Sn** **21 24 05.5 -1.2**
WATA Walderalm 9.25 323 Pn **Pn** **21 22 22.5 -0.1**
comp=Z,77nm,5.0s
BRMO Bormio 9.26 316 P **Pn** **21 22 22.1 -0.6**
KEST Kesra 9.31 245 Pn **Pn** **21 22 23.8 +0.3**
comp=Z,0.2nm,0.3s,baz=30,slow=8.9,SNR=20
PCP Pian Castagno 9.34 301 P **Pn** **21 22 23.2 -0.6**
SQTA Sankt Quirin 9.34 322 ⇓*i*Sn **Sn** **21 24 10.1 +1.1**
SQTA Sankt Quirin 9.34 322 ⇓*i*Pn **Pn** **21 22 24.3 +0.4**
SNR=93
SQTA ⇓*i*Sn **Sn** **21 24 10.1 +1.1**
SQTA Sankt Quirin 9.34 322 Pn **Pn** **21 22 24.3 +0.5**
comp=Z,93nm,3.0s
SQTA *i* S **Sn** **21 24 10.1 +1.2**
VRAC Vranov 9.38 347 Pn **Pn** **21 22 24.4 0.0**
baz=167,slow=13,SNR=14
FIN Finale Ligure 9.43 299 P **Pn** **21 22 26.8 +1.7**
MOTA Moosalm 9.48 322 ⇓*i*Sn **Sn** **21 24 10.7 -1.7**
MOTA Moosalm 9.48 322 ⇑*i*Pn **Pn** **21 22 25.6 -0.2**
SNR=281
MOTA ⇓*i*Sn **Sn** **21 24 10.7 -1.7**
MOTA Moosalm 9.48 322 Pn **Pn** **21 22 25.6 -0.1**
comp=Z,280nm,8.0s
KIS Kishinev 9.48 41 *e*P **Pn** **21 22 25.0 -0.8**
KIS *e*S **Sn** **21 24 10.0 -2.4**
KIS MLR MLR
comp=Z,5µm,11.0s
KIS MLR MLR
comp=N,3µm,7.0s
KIS MLR MLR
comp=E,3µm,8.0s
KIS MLR MLR
comp=Z,3µm,12.0s
RORO 9.49 298 P **Pn** **21 22 27.3 +1.3**
IMI Imperia 9.55 297 P **Pn** **21 22 29.2 +2.5**
TREC Trest 9.59 343 *e*P **Pn** **21 22 27.3 +0.1**
TREC MLR MLR
comp=N,2µm,8.4s
TREC Trest 9.59 343 *e*P **Pn** **21 22 27.3 +0.1**
comp=N,2µm,8.4s
NEGI Negi 9.65 296 P **Pn** **21 22 28.5 +0.3**
GEC2 GERESS Array S 9.66 336 *e*Pn **Pn** **21 22 27.1 -1.1**
GEC2 *e*Sn **Sn** **21 24 14.8 -1.9**
GERES GERESS Array B 9.66 336 Pn **Pn** **21 22 27.1 -1.1**
comp=N,3.6nm,0.3s,baz=156,slow=14,SNR=114
GERES Sn **Sn** **21 24 13.6 -3.1**
comp=N,3.6nm,0.3s,baz=148,slow=23,SNR=6.1
KWP Kalwaria 9.68 12 *e*P **Pn** **21 22 31.1 +2.6**
KWP L 21 26 45.9
comp=Z,3.5nm,14.7s
ROB Roburent 9.69 299 P **Pn** **21 22 29.0 +0.4**
MONE Monesi 9.69 298 P **Pn** **21 22 31.0 +2.3**
MORC Moravsky Berou 9.71 352 ⇓*i*P **Pn** **21 22 29.4 +0.5**
MORC Moravsky Berou 9.71 352 ⇑*e*Pn **Pn** **21 22 29.1 +0.2**
MORC Moravsky Berou 9.71 352 P **Pn** **21 22 29.9 +1.0**
OKC Ostrava-Krasne 9.71 354 *e*P **Pn** **21 22 29.9 +1.0**
OKC *e*S **Sn** **21 24 16.4 -1.7**
OKC AMS AMS 21 27 30.0
comp=Z,4µm,10.2s
OKC Ostrava-Krasne 9.71 354 *e*Pn **Pn** **21 22 29.9 +1.0**
OKC *e*Sn **Sn** **21 24 16.4 -1.7**
DAVOX Davos 9.71 316 Pn **Pn** **21 22 29.1 +0.1**
comp=Z,4.3nm,0.3s,baz=146,slow=14,SNR=40
DAVOX Sn **Sn** **21 24 14.2 -3.9**
comp=Z,2.5nm,0.3s,baz=139,slow=19,SNR=2.1
DAVOX LR LR 21 26 54.5
comp=Z,1µm,20.7s,baz=124,slow=42
DAVOS Davos 9.80 316 P **Pn** **21 22 29.1 -1.0**
DAVOS 21 24 14.2
SAOF Saorge 9.80 297 *e*P **Pn** **21 22 31.3 +1.2**
VAI Varese 9.81 309 P **Pn** **21 22 28.4 -2.0**
TUE Stuetta 9.82 313 P **Pn** **21 22 30.2 -0.2**
SBF Sospel 9.84 296 *e*Pn **Pn** **21 22 30.9 +0.2**
SBF *e*Sn **Sn** **21 24 15.1 -6.2**
comp=Z,76nm,0.9s
REVF Revere 9.85 295 *e*P **Pn** **21 22 32.3 +1.4**
AUTN L'Aution 9.89 297 *e*P **Pn** **21 22 32.6 +1.2**
SAFT Safranbolu 9.91 80 *e*PN **Pn** **21 22 32.0 +0.3**
LUCF Luceram 9.91 296 *e*P **Pn** **21 22 32.8 +1.1**
KHC Kasperske Hory 9.95 336 *e*P **Pn** **21 22 30.8 -1.4**
KHC *ex* x 21 22 42.5
KHC *e*S **Sn** **21 24 21.0 -2.9**
KHC AMS AMS 21 27 10.0
comp=Z,3µm,10.7s
KHC Kasperske Hory 9.95 336 *c i*P **Pn** **21 22 30.9 -1.3**
KHC Kasperske Hory 9.95 336 *e*Pn **Pn** **21 22 30.8 -1.4**
KHC *e* 21 22 42.5
KHC *e*Sn **Sn** **21 24 21.0 -2.9**
KHC Kasperske Hory 9.95 336 *i* P **Pn** **21 22 30.9 -1.3**
RAC Raciborz 9.95 354 *e*P **Pn** **21 22 33.4 +1.2**
ENR Entracque 9.97 298 P **Pn** **21 22 34.6 +2.1**
FUR Furstenfeldbru 10.01 326 *e*Pn **Pn** **21 22 31.9 -1.1**
FUR *e*Sn **Sn** **21 24 20.5 -4.9**
TOUF Mont Tournerai 10.02 296 *e*P **Pn** **21 22 35.0 +1.9**
OJC Ojcow 10.03 0 ⇑*i*P **Pn** **21 22 34.4 +1.1**
OJC *e*S **Sn** **21 24 27.6 +1.7**
DAVA Damuels 10.04 318 ⇓*i*Sn **Sn** **21 24 24.0 -2.2**
DAVA Damuels 10.04 318 ⇑*i*Pn **Pn** **21 22 33.1 -0.4**
SNR=20
DAVA ⇓*i*Sn **Sn** **21 24 24.0 -2.2**
DAVA Damuels 10.04 318 Pn **Pn** **21 22 33.1 -0.4**
comp=Z,19nm,6.0s
STV Sta Anna Valdi 10.04 298 P **Pn** **21 22 34.0 +0.5**
ANTO Ankara 10.04 88 ⇓*i*P **Pn** **21 22 37.8 +4.3**
ANTO Ankara 10.04 88 *e*Pn **Pn** **21 22 31.9 -1.6**

MVIF Mont Vial 10.05 296 *e*P **Pn** **21 22 35.2 +1.6**
KONT Konya--Tatoy 10.09 99 *e*PN **Pn** **21 22 33.5 -0.6**
LVV L'vov 10.10 16 *i* P **Pn** **21 22 37.8 +3.5**
LVV *e*S **Sn** **21 24 30.7 +3.0**
LVV MLR MLR
comp=Z,3µm,10.0s
LVV L'vov 10.10 16 *i* P **Pn** **21 22 37.8 +3.5**
comp=Z,3µm,10.0s
LVV *e*S **Sn** **21 24 30.7 +3.0**
DOI San Damiano 10.18 299 P **Pn** **21 22 36.5 +1.1**
WET Wettzell 10.19 334 *e*Pn **Pn** **21 22 33.7 -1.7**
UBR Ueberruh 10.19 320 P **Pn** **21 22 35.6 0.0**
CMAH Djebel Manchou 10.28 254 P **Pn** **21 22 43.0 +6.3**
PZZ Prazzo 10.28 299 P **Pn** **21 22 37.7 +1.0**
FRF La Foret Royal 10.31 293 *e*Pn **Pn** **21 22 37.8 +0.7**
FRF *e*Sn **Sn** **21 24 26.6 -6.1**
comp=Z,35nm,0.8s
MCGN Macugnaga 10.33 308 P **Pn** **21 22 35.9 -1.5**
LMR La Mourre 10.35 292 *e*Pn **Pn** **21 22 37.5 -0.2**
ABSA Djebel Ababsia 10.38 252 P **Pn** **21 22 44.0 +5.8**
RSP Reno Superiore 10.42 302 P **Pn** **21 22 39.5 +0.8**
PRU Pruhonice 10.46 341 *e*P **Pn** **21 22 38.9 -0.2**
PRU AMS AMS 21 28 00.0
comp=Z,2µm,9.3s
PRU Pruhonice 10.46 341 *e*Pn **Pn** **21 22 38.9 -0.2**
PRA Prague 10.56 341 P **Pn** **21 22 40.0 -0.5**
MBDF Montbardon 10.58 300 *e*Pn **Pn** **21 22 40.7 -0.1**
MBDF *e*Sn **Sn** **21 24 33.2 -6.2**
comp=Z,47nm,0.7s
RRL Cesana Torines 10.64 301 P **Pn** **21 22 40.7 -1.0**
UPC Upice 10.64 347 *e*P **Pn** **21 22 41.6 -0.1**
BR131 Keskin Array S 10.71 88 *e*Pn **Pn** **21 22 44.2 +1.7**
BR131 Keskin Array S 10.71 88 *e*Pn **Pn** **21 22 44.2 +1.6**
BRTR Keskin Array B 10.71 88 Pn **Pn** **21 22 43.5 +0.9**
comp=Z,0.2nm,0.3s,baz=273,slow=11,SNR=27
BRTR Keskin Array B 10.71 88 *i* P **Pn** **21 22 44.5 +1.9**
BRTR pmax pmax
comp=Z,9.0nm,0.9s
BRTR Keskin Array B 10.71 88 *i* P **Pn** **21 22 44.5 +1.9**
comp=Z,9.0nm,0.9s
TAVF Tavernes 10.74 293 *e*P **Pn** **21 22 44.9 +1.9**
SISB Singen-Schiene 10.77 318 P **Pn** **21 22 45.0 +1.5**
HDH Heidenheim-Cha 10.79 324 P **Pn** **21 22 41.9 -1.9**
KAMT Kaman 10.81 90 *e*PN **Pn** **21 22 44.3 +0.3**
LPG La Plagne 10.89 303 *e*Pn **Pn** **21 22 44.1 -1.0**
LPG *e*Sn **Sn** **21 24 39.7 -7.3**
comp=Z,161nm,0.9s
LPL La Plagne 10.91 303 *e*Pn **Pn** **21 22 44.9 -0.5**
LPL *e*Sn **Sn** **21 24 37.9 -10**
comp=Z,104nm,0.6s
KSP Ksiaz 10.92 348 *e*P **Pn** **21 22 49.3 +3.8**
KSP L 21 27 25.6
comp=Z,2.3nm,16.8s
KSP Ksiaz 10.92 348 *e*P **Pn** **21 22 48.5 +3.0**
BERF Bertagne 10.93 291 *e*P **Pn** **21 22 46.4 +0.8**
OG25 Le Caire 10.93 297 *e*P **Pn** **21 22 43.3 -2.4**
STOF St-Etienne Org 10.94 295 *e*P **Pn** **21 22 49.5 +3.8**
ERMK Ermenek 10.95 105 *i* P **Pn** **21 22 49.6 +3.8**
ROTZ Rotzenmuhle 10.95 334 *e*Pn **Pn** **21 22 43.3 -2.6**
GUT Gutenstein 10.95 320 P **Pn** **21 22 44.6 -1.3**
PVCC Panska Ves 10.95 342 *e*P **Pn** **21 22 45.6 -0.3**
PVCC AMS AMS 21 28 20.0
comp=Z,2µm,8.7s
VILF Villemus 11.04 294 *e*P **Pn** **21 22 49.0 +1.9**
GELF Grande-Etoile 11.13 291 *e*P **Pn** **21 22 49.7 +1.3**
SPAK Spaichingen-Ko 11.13 319 *e*P **Pn** **21 22 47.5 -0.9**
SMRF Simiane la Rot 11.16 294 *e*Pn **Pn** **21 22 48.5 -0.3**
SMRF *e*Sn **Sn** **21 24 47.8 -5.9**
comp=Z,118nm,1.5s
MANZ Manzenberg 11.17 334 *e*Pn **Pn** **21 22 46.6 -2.3**
TREF Trevaresse 11.21 292 *e*P **Pn** **21 22 51.4 +1.9**
GRA1 Grafenberg Arr 11.24 331 *e*Pn **Pn** **21 22 47.1 -2.7**
GRF Grafenberg Arr 11.24 331 *e*Pn **Pn** **21 22 47.1 -2.7**
GRF *e*L 21 28 27.7
comp=Z,2µm,16.8s
ORIF Oris-en-Rattie 11.24 299 *e*Pn **Pn** **21 22 48.4 -1.5**
ORIF *e*Sn **Sn** **21 24 49.3 -6.3**
comp=Z,46nm,0.6s
NKC Novy Kostel 11.27 335 *e*P **Pn** **21 22 49.7 -0.6**
NKC *e*S **Sn** **21 24 53.7 -2.6**
NKC AMS AMS 21 28 10.0
comp=Z,3µm,12.4s
NKC Novy Kostel 11.27 335 *e*Pn **Pn** **21 22 49.7 -0.6**
NKC *e*Sn **Sn** **21 24 53.7 -2.6**
STU Stuttgart 11.39 322 *e*Pn **Pn** **21 22 50.3 -1.7**
FELD Feldberg im Sc 11.39 316 *e*P **Pn** **21 22 50.5 -1.5**
PRAF Pradon 11.41 293 *e*P **Pn** **21 22 54.0 +1.8**
CORM Corum 11.42 85 *e*PN **Pn** **21 22 53.2 +0.9**
BBS Basel-Blauen 11.42 314 *e*P **Pn** **21 22 51.0 -1.3**
GUNZ Gunzen 11.42 335 *e*Pn **Pn** **21 22 49.9 -2.4**
BRG Berggiesshubel 11.42 341 *e*Pn **Pn** **21 22 51.5 -0.8**
BRG Berggiesshubel 11.42 341 *e*P **Pn** **21 22 51.6 -0.8**
comp=Z,8.3nm,0.9s
BRG *i* 21 24 09.8
comp=Z,11nm,1.3s
BRG *i* 21 26 24.0
comp=Z,18nm,1.1s
BRG
comp=N,975nm,10.1s
BRG
comp=E,1µm,10.7s
BRG
comp=Z,1µm,12.4s
BRG Berggiesshubel 11.42 341 *e*P **Pn** **21 22 51.6 -0.8**
comp=Z,8.3nm,0.9s
BRG *i* 21 24 09.8
BRG *i* 21 26 24.0
TANN Tannenbergstha 11.42 336 *e*Pn **Pn** **21 22 51.2 -1.2**
DFRA Djebel Bou Aff 11.45 256 P **Pn** **21 22 57.0 +4.2**
KIZ Kirchzarten 11.49 316 P **Pn** **21 22 51.8 -1.5**
WERD Werda 11.50 336 *e*Pn **Pn** **21 22 52.4 -1.0**
LBG Lerchenberg 11.51 321 P **Pn** **21 22 52.1 -1.5**
BFO Black Forest 11.52 319 Pn **Pn** **21 22 52.3 -1.3**
comp=Z,130nm,0.6s,SNR=6.2
BFO Black Forest 11.52 319 *e*Pn **Pn** **21 22 51.4 -2.2**
BFO *e*Sn **Sn** **21 24 57.7 -4.6**
SIND Sindeldorf 11.63 325 P **Pn** **21 22 53.4 -1.8**
SIM Simferopol' 11.64 61 *de*P **Pn** **21 22 57.3 +2.0**
SIM S **Sn** **21 25 07.0 +1.7**
SIM pmax pmax
comp=Z,35nm,0.9s
SIM Simferopol' 11.64 61 *e*P **Pn** **21 22 57.3 +2.0**
comp=Z,35nm,0.9s
SIM S **Sn** **21 25 07.0 +1.7**
LOMF Lomont 11.74 312 *e*P **Pn** **21 22 55.2 -1.5**
LIBD Limburg 11.78 317 *e*P **Pn** **21 22 57.1 -0.1**
CABF La Chapelle 11.80 307 *e*Pn **Pn** **21 22 55.8 -1.7**
CABF *e*Sn **Sn** **21 25 03.2 -6.1**
comp=Z,115nm,0.8s
MOF Molkenrain 11.85 314 *e*P **Pn** **21 22 56.8 -1.4**
DIKM Dikmen 11.86 78 *e*PN **Pn** **21 22 58.9 +0.6**
MOX Moxa 11.89 334 *e*Pn **Pn** **21 22 57.0 -1.8**
MOX Moxa 11.89 334 *e*P **Pn** **21 22 57.3 -1.5**
comp=Z,75nm,0.9s
MOX *e* 21 23 02.7
MOX *e* 21 25 46.0
MOX
comp=Z,3µm,17.0s
MOX Moxa 11.89 334 *e*P **Pn** **21 22 57.3 -1.5**
comp=Z,75nm,0.9s
MOX *e*PP 21 23 02.7
MOX *e*SS 21 25 46.0
MOX *e* 21 26 58.0
CKHR Kef el Ahmar 11.93 254 P **Pn** **21 23 03.0 +3.6**
OG05 Jujurieux 11.94 304 *e*P **Pn** **21 23 00.7 +1.3**
SET Setif 11.94 255 P **Pn** **21 23 04.0 +4.5**
HINF Hinteralfeld 11.98 314 *e*Pn **Pn** **21 22 58.3 -1.7**
HINF *e*Sn **Sn** **21 25 05.8 -8.0**
comp=Z,45nm,0.6s
CSS Prodhromos 12.00 111 *e*Pn **Pn** **21 22 59.0 -1.2**
comp=Z,33nm,0.7s
CSS *e*Sn **Sn** **21 25 12.5 -1.5**
CSS Prodhromos 12.00 111 *e*Pn **Pn** **21 22 59.0 -1.2**
comp=Z,33nm,0.7s
VIVF Saint-Julien-l 12.03 298 *e*Pn **Pn** **21 23 00.8 +0.1**
ECH Echery 12.05 316 *e*P **Pn** **21 23 02.3 +1.3**
CLL Collm 12.06 339 P **Pn** **21 23 02.0 +0.9**
comp=Z,logA/T=0.7
CLL *e**SPP 21 23 13.0
CLL *e*PPP 21 23 16.0
CLL *i* 21 23 43.2
CLL *e* 21 25 44.0
CLL *e*L 21 27 06.0

CLL Collm 12.06 339 *e*P **Pn** **21 23 02.0 +0.9**
comp=Z,7.0nm,1.4s
CLL *es*PP 21 23 13.0
CLL *e*(PPP) 21 23 16.0
CLL *i* x x 21 23 43.2
CLL *ex* x 21 25 44.0
CLL Collm 12.06 339 P **Pn** **21 23 02.2 +1.1**
CLL pmax pmax
comp=Z,7.0nm,1.4s
MERS Mersin 12.06 101 *e*PN **Pn** **21 22 58.9 -2.3**
WLS Welschbruch 12.07 317 *e*P **Pn** **21 23 00.1 -1.1**
CDF Champ du Feu 12.11 317 *e*Pn **Pn** **21 22 59.6 -2.2**
CDF *e*Sn **Sn** **21 25 11.8 -5.1**
comp=Z,48nm,0.8s
TOD Tromm 12.17 324 P **Pn** **21 23 02.2 -0.4**
LANF Langenberg 12.21 320 *e*P **Pn** **21 23 02.2 -0.9**
KARA Karaisali 12.34 99 *e*PN **Pn** **21 23 04.3 -0.6**
HAU Haudompre 12.37 314 *e*Pn **Pn** **21 23 03.5 -1.8**
HAU *e*Sn **Sn** **21 25 15.7 -7.5**
comp=Z,95nm,0.6s
LASF Ste Croix 12.39 293 *e*Pn **Pn** **21 23 06.5 +0.9**
AKASG Malin Array Be 12.44 29 Pn **Pn** **21 23 05.4 -1.0**
comp=Z,0.3nm,0.3s,baz=213,slow=13,SNR=27
AKASG Malin Array Be 12.44 29 *i* P **Pn** **21 23 06.5 +0.2**
AKASG pmax pmax
comp=Z,10.0nm,1.0s
AKASG Malin Array Be 12.44 29 *i* P **Pn** **21 23 06.5 +0.2**
comp=Z,10.0nm,1.0s
AKBB Malin Array Si 12.44 29 *e*P **Pn** **21 23 06.0 -0.3**
THEF They Montfort 12.70 314 *e*P **Pn** **21 23 08.1 -1.7**
TNS Taunus Mts 12.78 325 *e*Pn **Pn** **21 23 09.2 -1.7**
KOZT Kozan 12.86 97 *e*PN **Pn** **21 23 09.8 -2.2**
PLDF La Plantade 13.10 301 *e*P **Pn** **21 23 14.8 -0.5**
FILF Fillols 13.10 286 *e*P **Pn** **21 23 15.7 +0.4**
LBL Lubilhac 13.11 298 *e*P **Pn** **21 23 16.7 +1.3**
GKP Gorka Klasztor 13.20 353 *e*P **Pn** **21 23 19.3 +2.7**
GKP L 21 29 47.2
comp=Z,2.1nm,13.5s
SMF Signal de Mont 13.21 304 *e*Pn **Pn** **21 23 14.7 -2.1**
SMF *e*Sn **Sn** **21 25 33.8 -10**
comp=Z,55nm,0.7s
SVSK Karacayir 13.25 86 *e*PN **Pn** **21 23 17.1 -0.3**
MEZF Maizieres J'vi 13.37 313 *e*Pn **Pn** **21 23 16.7 -2.2**
MEZF *e*Sn **Sn** **21 25 40.2 -7.4**
comp=Z,39nm,0.7s
MTLF Montolieu 13.43 289 *e*Pn **Pn** **21 23 17.9 -1.9**
AGO Saint Agoulin 13.45 301 *e*P **Pn** **21 23 18.1 -1.9**
LOR Lormes 13.46 307 *e*Pn **Pn** **21 23 17.6 -2.6**
LOR *e*Sn **Sn** **21 25 41.5 -8.3**
comp=Z,34nm,0.5s
WLF Walferdange 13.47 319 P **Pn** **21 23 21.4 +1.0**
WLF Walferdange 13.47 319 *e*Pn **Pn** **21 23 19.8 -0.6**
WLF Walferdange 13.47 319 *e*Pn **Pn** **21 23 19.8 -0.6**
ABA Alger-Bouzarea 13.49 261 P **Pn** **21 23 20.0 -0.7**
AVF Avril sur Loir 13.57 304 *e*Pn **Pn** **21 23 20.6 -1.2**
AVF *e*Sn **Sn** **21 25 43.9 -8.8**
comp=Z,42nm,1.0s
SSF Saint Saulge 13.59 306 *e*Pn **Pn** **21 23 19.2 -2.8**
SSF *e*Sn **Sn** **21 25 44.7 -8.3**
comp=Z,24nm,0.5s
EMHD Djebel Mahouad 13.77 259 P **Pn** **21 23 26.0 +1.6**
BGF Bois d'Agland 13.81 303 *e*Pn **Pn** **21 23 24.0 -1.0**
BGF *e*Sn **Sn** **21 25 48.8 -10**
comp=Z,15nm,0.4s
CAF Calviac 13.84 296 *e*Pn **Pn** **21 23 26.6 +1.2**
ANN Anapa 13.86 65 *e*P **Pn** **21 23 21.2 -4.5**
ANN *e*S **Sn** **21 25 54.3 -5.3**
ANN pmax pmax
comp=Z,59nm,1.3s
SUW Suwalki 14.03 8 *e*P **Pn** **21 23 28.1 +0.1**
SUW L 21 29 37.8
comp=Z,2.7nm,14.4s
TCF Toulx Ste Croi 14.13 301 *e*Pn **Pn** **21 23 29.1 -0.2**
TCF *e*Sn **Sn** **21 25 55.8 -10**
comp=Z,6.4nm,0.4s
MEM Membach 14.16 322 P **Pn** **21 23 29.8 0.0**
EPOB Poblet 14.17 281 P **Pn** **21 23 36.7 +6.8**
comp=Z,65nm,1.3s
EIBI Ibiza 14.21 271 P **Pn** **21 23 35.8 +5.3**
comp=Z,244nm,2.0s
HYF Humbligny 14.21 305 *e*Pn **Pn** **21 23 29.6 -0.9**
HYF *e*Sn **Sn** **21 25 59.6 -8.6**
HGN Heimansgroeve 14.30 322 *e*P **Pn** **21 23 31.0 -0.7**
comp=Z,17nm,1.7s
HGN *e*S **Sn** **21 26 27.7 +17**
RJF Les Rejaudoux 14.31 297 *e*Pn **Pn** **21 23 32.3 +0.5**
BCLA Clavier 14.38 320 P **Pn** **21 23 33.8 +1.0**
BCLA Clavier 14.38 320 P **Pn** **21 23 33.7 +1.0**
GIVF Givet 14.42 318 *e*Pn **Pn** **21 23 33.7 +0.4**
GIVF *e*Sn **Sn** **21 26 08.1 -5.1**
comp=Z,4.2nm,0.3s
MMAI Mount Meron Ar 14.48 115 Pn **Pn** **21 23 30.6 -3.5**
comp=Z,4.5nm,0.3s,baz=302,slow=13,SNR=12
DOU Dourbes 14.53 318 P **Pn** **21 23 36.0 +1.2**
BAIF Baives 14.71 317 *e*Pn **Pn** **21 23 36.8 -0.4**
ERTA Horta de San J 14.75 279 P **Pn** **21 23 43.0 +5.2**
comp=Z,122nm,1.3s
LFF La Frestale 14.76 295 *e*Pn **Pn** **21 23 38.3 +0.4**
EPF Esparros 14.77 287 *e*Pn **Pn** **21 23 39.0 +1.0**
WTSB Winterswijk 14.77 327 *e*P **Pn** **21 23 45.3 +7.2**
comp=Z,33nm,1.1s
EBNR Beni Rached 14.81 261 P **Pn** **21 23 41.0 +2.4**
EBIE Bielsa 14.89 286 P **Pn** **21 23 45.2 +5.5**
comp=Z,149nm,1.9s
KELT Kelkit 14.95 84 *i* P **Pn** **21 23 43.3 +2.8**
ECHA Ech Chlef 14.98 260 P **Pn** **21 23 42.5 +1.6**
EANR 'Ain N'Sour 15.25 260 P **Pn** **21 23 45.5 +0.9**
BSD Bornholm Skovb 15.27 349 *e*S **Sn** **21 26 42.9 +8.8**
BSD
comp=Z,360nm,17.0s
ETRT Tiaret 15.32 258 P **Pn** **21 23 46.0 +0.6**
MNK Minsk 15.32 18 *e*P **Pn** **21 23 40.0 -5.5**
MNK *e*S **Sn** **21 26 40.0 +4.7**
MNK pmax pmax
comp=Z,720nm,0.8s
MNK pmax pmax
comp=N,1µm,1.0s
ESAC San Caprasio 15.33 282 P **Pn** **21 23 51.2 +5.7**
comp=N,324nm,1.8s
EMOS Mosqueruela 15.41 277 P **Pn** **21 23 50.0 +3.4**
comp=N,258nm,1.6s
ETSF Etsaut 15.42 287 *e*Pn **Pn** **21 23 46.7 0.0**
EZC Erzincan 15.43 85 *e*P **Pn** **21 23 41.8 -5.0**
EBEN Beniarda 15.47 271 P **Pn** **21 23 52.4 +4.9**
comp=N,66nm,1.0s
MFF Saint Martin d 15.77 301 *e*Pn **Pn** **21 23 49.3 -2.1**
MFF *e*Sn **Sn** **21 26 37.4 -8.8**
ECHE Chera 15.88 275 P **Pn** **21 23 58.2 +5.4**
ECHE pmax pmax
comp=Z,15nm,0.8s
ECHE Chera 15.88 275 P **Pn** **21 23 58.2 +5.4**
comp=Z,15nm,0.8s
SJPF Ste Jean 15.92 287 *e*Pn **Pn** **21 23 55.1 +1.9**
ASF Jabal al Asfar 16.00 115 Pn **Pn** **21 23 52.6 -1.7**
comp=Z,0.7nm,0.3s,baz=175,slow=6.4,SNR=9.0
ASF LR LR 21 31 08.6
comp=Z,320nm,19.0s,baz=162,slow=41
EIL Elat 16.30 125 *e*Pn **Pn** **21 23 51.5 -6.6**
EIL *e*Sn **Sn** **21 26 42.5 -16**
ODJA Bouhanifia 16.43 259 P **Pn** **21 24 02.0 +2.2**
LDF La Druitiere 16.44 307 *e*Pn **Pn** **21 24 00.1 +0.1**
EMUR La Murta 16.45 269 P **Pn** **21 24 00.1 0.0**
comp=Z,27nm,1.4s
ETOB Tobarra 16.50 271 P **Pn** **21 24 03.7 +3.0**
comp=Z,31nm,1.7s
ERZM Erzurum 16.59 84 *i* P **Pn** **21 24 03.5 +1.7**
FLN La Foliniere 16.73 307 *e*Pn **Pn** **21 24 03.7 +0.1**
GRR Gorron 16.82 306 *e*Pn **Pn** **21 24 03.8 -0.9**
EVIA Vianos 17.23 272 P **Pn** **21 24 11.8 +1.9**
EVIA pmax pmax
comp=Z,25nm,0.9s
EVIA Vianos 17.23 272 P **Pn** **21 24 11.8 +1.9**
comp=Z,25nm,0.9s
ENIJ Nijar 17.43 266 P **Pn** **21 24 11.6 -0.8**
ENIJ pmax pmax
comp=Z,6.0nm,0.6s
ENIJ Nijar 17.43 266 P **Pn** **21 24 11.6 -0.8**
comp=Z,6.4nm,0.6s
ENIJ Nijar 17.43 266 P **Pn** **21 24 11.6 -0.8**
comp=Z,6.4nm,0.6s
KIV Kislovodsk 17.45 70 P **Pn** **21 24 13.4 +0.7**
comp=Z,188nm,1.0s,SNR=5.3
KIV Kislovodsk 17.45 70 *e*P **Pn** **21 24 12.6 -0.1**
KIV *e*S **Sn** **21 27 23.6 -3.4**

KIV pmax pmax
comp=Z,42nm,1.1s
KIV MLR MLR
comp=Z,353nm,11.0s
KIV Kislovodsk 17.45 70 *e*Pn **Pn 21 24 12.3 -0.4**
comp=Z,60nm,1.0s
VRSR Storozhevoye 17.45 44*c i*P **Pn 21 24 12.2 -0.5**
VRSR pmax pmax
comp=Z,20nm,0.8s
VRSR pmax pmax
comp=N,70nm,1.0s
VRSR pmax pmax
comp=E,80nm,0.9s
VRSR MLR MLR
comp=Z,1μm,15.0s
VRSR MLR MLR
comp=E,1μm,14.0s
VRSR Storozhevoye 17.45 44 *i*P **Pn 21 24 12.2 -0.5**
comp=E,1μm,15.0s
EHUE Huescar 17.49 269 P **Pn 21 24 15.4 +2.2**
EHUE pmax pmax
comp=Z,22nm,1.2s
EHUE Huescar 17.49 269 P **Pn 21 24 15.4 +2.2**
comp=Z,22nm,1.2s
ELAN Lanestosa 17.54 288 P **Pn 21 24 14.6 +0.9**
comp=Z,28nm,1.0s
ELAN Lanestosa 17.54 288 P **Pn 21 24 14.6 +0.9**
comp=Z,28nm,1.0s
VOR Voronezh 17.74 43 P **Pn 21 24 14.0 -2.2**
VOR pmax pmax
comp=N,100nm,2.0s
VOR pmax pmax
comp=E,180nm,2.0s
VOR pmax pmax
comp=Z,180nm,2.0s
GOF Gofitskoye 17.82 66 *e*P **Pn 21 24 16.8 -0.4**
GOF pmax pmax
comp=Z,89nm,0.8s
GOF Gofitskoye 17.82 66 *e*P **Pn 21 24 16.8 -0.4**
comp=Z,89nm,0.8s
SGMF Saint Gilles 17.84 304 *e*Pn **Pn 21 24 18.4 +0.9**
EQES Quesada 17.86 270 P **Pn 21 24 20.3 +2.5**
comp=Z,67nm,0.9s
ONI Oni 17.96 75 P **Pn 21 24 29.4 +10**
ONI S **Sn 21 27 49.6 +10**
EBER Berja 17.97 267 P **Pn 21 24 20.2 +1.1**
comp=Z,27nm,0.9s
DIGO Kars 18.05 82 *i*P **Pn 21 24 19.7 -0.3**
QUIF Quistinic 18.12 303 *e*Pn **Pn 21 24 22.8 +1.8**
ESDC Sonseca Array 18.16 276 P **Pn 21 24 20.3 -1.1**
comp=Z,0.5nm,0.3s,baz=75,slow=11,SNR=55
ESDC LR LR 21 31 38.1
comp=Z,669nm,18.6s,baz=75,slow=38
ESDC Sonseca Array 18.16 276 P **Pn 21 24 22.1 +0.7**
comp=Z,16nm,0.8s
ESDC Sonseca Array 18.16 276 P **Pn 21 24 22.0 +0.6**
comp=Z,16nm,0.8s
ESLA Sonseca Array 18.16 276⇓ *e*Pn **Pn 21 24 21.5 +0.1**
comp=Z,18nm,1.2s
ESLA Sonseca Array 18.16 276⇓ *e*Pn **Pn 21 24 21.5 +0.1**
comp=Z,18nm,1.2s
GUD Guadarrama 18.17 279 P **Pn 21 24 22.6 +1.0**
GUD pmax pmax
comp=Z,28nm,0.8s
GUD Guadarrama 18.17 279 P **Pn 21 24 22.6 +1.0**
comp=Z,28nm,0.8s
GUD Guadarrama 18.17 279 P **Pn 21 24 22.6 +1.0**
comp=Z,28nm,0.8s
ZEI Tsey 18.29 74 *e*P **Pn 21 24 20.5 -2.6**
ROSF Rostrenen 18.32 304 *e*Pn **Pn 21 24 20.3 -3.1**
EBAN Banos Encina 18.32 271 P **Pn 21 24 23.9 +0.5**
EBAN pmax pmax
comp=Z,16nm,0.9s
EBAN Banos Encina 18.32 271 P **Pn 21 24 23.9 +0.5**
comp=Z,16nm,0.9s
EBAN Banos Encina 18.32 271 P **Pn 21 24 23.9 +0.5**
comp=Z,16nm,0.9s
ECOG Cogollos-Vega 18.38 268 P **Pn 21 24 24.6 +0.5**
ECOG pmax pmax
comp=Z,10.0nm,0.8s
ECOG Cogollos-Vega 18.38 268 P **Pn 21 24 24.6 +0.5**
comp=Z,9.9nm,0.8s
ECOG Cogollos-Vega 18.38 268 P **Pn 21 24 24.6 +0.5**
comp=Z,9.9nm,0.8s
EALB Alboran 18.39 264 P **Pn 21 24 24.1 -0.2**
comp=Z,36nm,0.8s
EALB Alboran 18.39 264 P **Pn 21 24 24.1 -0.2**
comp=Z,36nm,0.8s
EGUA Guajares 18.51 267 P **Pn 21 24 25.9 +0.2**
EGUA pmax pmax
comp=Z,7.0nm,1.2s
EGUA Guajares 18.51 267 P **Pn 21 24 25.9 +0.2**
comp=Z,6.9nm,1.2s
EGUA Guajares 18.51 267 P **Pn 21 24 25.9 +0.2**
comp=Z,6.9nm,1.2s
ERON Agron 18.64 268 P **Pn 21 24 27.8 +0.5**
comp=Z,10nm,0.7s
OBN Obninsk 18.68 31 P **Pn 21 24 25.8 -2.0**
comp=Z,617nm,1.0s,SNR=9.5
OBN Obninsk 18.68 31*c i*P **Pn 21 24 24.1 -3.7**
OBN *e*S **Sn 21 27 55.6 -1.2**
OBN pmax pmax
comp=Z,124nm,1.0s
OBN MLR MLR
comp=Z,900nm,16.0s
OBN Obninsk 18.68 31⇑ *e*Pn **Pn 21 24 24.2 -3.7**
comp=Z,134nm,1.1s
VRHR Novokhopersk 18.73 47 *e*P **Pn 21 24 27.2 -1.2**
VRHR pmax pmax
comp=Z,80nm,0.6s
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,110nm,0.7s
VRHR MLR MLR
comp=Z,480nm,6.0s
VRHR MLR MLR
comp=N,290nm,8.0s
VRHR MLR MLR
comp=E,620nm,9.0s
VRHR Novokhopersk 18.73 47 *e*P **Pn 21 24 27.2 -1.2**
comp=E,290nm,8.0s
MSL Mosul 18.76 95 *ex* x 21 24 31.0
MSL *ex* x 21 28 03.0
EARI Arriondas 18.84 288 P **Pn 21 24 29.1 -0.5**
comp=E,24nm,0.9s
EARI Arriondas 18.84 288 P **Pn 21 24 29.1 -0.5**
comp=E,24nm,0.9s
VSU Vasula 18.84 11*c i*P **Pn 21 24 26.8 -2.9**
VSU Vasula 18.84 11 *i*P **Pn 21 24 26.8 -2.9**
ELUQ Luque 18.84 270 P **Pn 21 24 29.2 -0.5**
ELUQ pmax pmax
comp=Z,17nm,0.5s
ELUQ Luque 18.84 270 P **Pn 21 24 29.2 -0.5**
comp=Z,17nm,0.5s
HAKT HAKKARI 18.86 90 *i*P **Pn 21 24 25.5 -4.4**
ELOJ Sierra Loja 18.87 268 P **Pn 21 24 31.1 +1.1**
ELOJ pmax pmax
comp=Z,7.0nm,0.7s
ELOJ Sierra Loja 18.87 268 P **Pn 21 24 31.1 +1.0**
comp=Z,7.3nm,0.7s
ELOJ Sierra Loja 18.87 268 P **Pn 21 24 31.1 +1.1**
comp=Z,7.3nm,0.7s
EADA Adamuz 18.93 272 P **Pn 21 24 29.9 -0.8**
comp=Z,26nm,0.9s
EADA Adamuz 18.93 272 P **Pn 21 24 29.9 -0.9**
comp=Z,26nm,0.9s
TBLG Delisi 18.95 77 P **Pn 21 24 30.9 -0.2**
TBLG S **Sn 21 27 43.7 -20**
MTA Mtatsminda 18.99 77 P **Pn 21 24 33.8 +2.3**
MTA S **Sn 21 28 10.6 +6.3**
GNI Garni 19.12 82 P **Pn 21 24 32.1 -1.0**
comp=Z,1.0nm,0.3s,baz=294,slow=2.0,SNR=17
GNI LR LR 21 32 19.9
comp=Z,336nm,19.4s,baz=79,slow=38
GNI Garni 19.12 82 P **Pn 21 24 33.4 +0.3**
SNR=22
GNI Garni 19.12 82*c i*P **Pn 21 24 32.2 -0.9**
GNI pmax pmax
comp=Z,88nm,1.7s
GNI MLR MLR
comp=Z,400nm,16.0s
GNI Garni 19.12 82⇑ *e*Pn **Pn 21 24 32.0 -1.0**
comp=Z,69nm,0.9s
GNI *e*Sn **Sn 21 28 17.5 +10**
GNI Garni 19.12 82 *i*P **Pn 21 24 32.2 -0.9**
comp=Z,400nm,16.0s

TOU Touzarine 19.30 262 *i*P **Pn 21 24 35.0 -0.2**
MPAL Palemas 19.34 263 *i*P **Pn 21 24 35.0 -0.7**
DGRG David-gareji 19.45 78 P **Pn 21 24 36.4 -0.6**
DGRG S **Sn 21 28 29.3 +14**
KBI1 Birley Grange 19.47 319 *e*P **Pn 21 24 36.9 -0.4**
KBI1 Birley Grange 19.47 319 *e*P **Pn 21 24 36.9 -0.4**
KWE Weaver Farm 19.50 318 *e*P **Pn 21 24 36.6 -1.0**
KWE Weaver Farm 19.50 318 *e*P **Pn 21 24 36.6 -1.0**
EMIJ Mijas 19.52 267 P **Pn 21 24 35.5 -2.3**
comp=Z,48nm,0.8s
EMIJ Mijas 19.52 267 P **Pn 21 24 35.5 -2.3**
comp=Z,48nm,0.8s
MOS Moscow 19.55 31 *i*P **Pn 21 24 35.5 -2.8**
MOS *e*S **Sn 21 28 12.3 -5.4**
MOS pmax pmax
comp=Z,800nm,2.5s
MOS pmax pmax
comp=Z,202nm,2.0s
MOS MLR MLR
comp=N,700nm,10.9s
MOS MLR MLR
comp=Z,900nm,10.9s
MOS Moscow 19.55 31 *i*P **Pn 21 24 35.5 -2.8**
comp=Z,202nm,2.0s
MCH1 Michaelchurch 19.59 315 *e*P **Pn 21 24 37.4 -1.3**
MCH1 Michaelchurch 19.59 315 *e*P **Pn 21 24 37.4 -1.3**
HEX Exmoor 19.63 311 *e*P **Pn 21 24 38.5 -0.7**
HEX Exmoor 19.63 311 *e*P **Pn 21 24 38.5 -0.7**
HTR Trewern Hill 19.78 315 *e*P **Pn 21 24 39.1 -1.8**
HTR AMb AMB 21 24 46.5
comp=Z,97nm,1.2s
HTR Trewern Hill 19.78 315 *e*P **Pn 21 24 39.1 -1.8**
HTR AMb AMB 21 24 46.5
comp=Z,97nm,1.2s
HLM1 Long Mynd 19.78 316 *e*P **Pn 21 24 37.9 -3.1**
HLM1 AMb AMB 21 24 49.4
comp=Z,106nm,1.6s
HLM1 Long Mynd 19.78 316 *e*P **Pn 21 24 37.9 -3.1**
HLM1 AMb AMB 21 24 49.4
comp=Z,106nm,1.6s
LHO Holmfirth 19.79 320⇑ *e*P **Pn 21 24 39.6 -1.5**
LHO AMb AMB 21 24 43.4
comp=Z,60nm,1.0s
LHO Holmfirth 19.79 320⇑ *e*P **Pn 21 24 39.6 -1.5**
LHO AMb AMB 21 24 43.4
comp=Z,60nm,1.0s
TZK Tazeka 19.97 260 *i*P **Pn 21 24 42.0 -1.3**
CSA1 St Austell 19.99 309 *e*P **Pn 21 24 41.5 -2.0**
CSA1 St Austell 19.99 309 *e*P **Pn 21 24 41.5 -2.0**
ECAL Calabor 20.00 284 P **Pn 21 24 43.2 -0.4**
comp=Z,28nm,1.1s
ECAL Calabor 20.00 284 P **Pn 21 24 43.2 -0.4**
comp=Z,28nm,1.1s
PBRG Braganca 20.01 283 *e*P **P 21 24 42.9 +0.9**
comp=Z,61nm,1.4s
CMA1 Manaccan 20.04 308 *e*P **P 21 24 42.8 +0.5**
CMA1 Manaccan 20.04 308 *e*P **P 21 24 42.8 +0.5**
EJIF Jimena Fronter 20.08 267 P **P 21 24 42.0 -0.8**
EJIF pmax pmax
comp=Z,180nm,0.7s
EJIF Jimena Fronter 20.08 267 P **P 21 24 42.0 -0.8**
comp=Z,18nm,0.7s
EJIF Jimena Fronter 20.08 267 P **P 21 24 42.0 -0.8**
comp=Z,18nm,0.7s
CRQ2 Rosemanowes 2 20.09 308 *e*P **P 21 24 41.3 -1.5**
CRQ2 AMb AMB 21 24 47.5
comp=Z,82nm,1.7s
CRQ2 Rosemanowes 2 20.09 308 *e*P **P 21 24 41.3 -1.5**
CRQ2 AMb AMB 21 24 47.5
comp=Z,82nm,1.7s
CGW Gweek 20.10 308 *e*P **P 21 24 41.6 -1.4**
CGW Gweek 20.10 308 *e*P **P 21 24 41.6 -1.4**
CCA1 Carnmenellis 20.13 308 *e*P **P 21 24 43.5 +0.2**
CCA1 Carnmenellis 20.13 308 *e*P **P 21 24 43.5 +0.2**
SBD1 Bryn Du 20.17 317 *e*P **P 21 24 43.1 -0.7**
SBD1 AMb AMB 21 24 54.2
comp=Z,127nm,1.3s
SBD1 Bryn Du 20.17 317 *e*P **P 21 24 43.1 -0.7**
SBD1 AMb AMB 21 24 54.2
comp=Z,127nm,1.3s
EPON Pontenova 20.25 288 P **P 21 24 44.6 0.0**
comp=Z,29nm,0.9s
EPON Pontenova 20.25 288 P **P 21 24 44.7 +0.1**
comp=Z,29nm,0.9s
ESPR Espera 20.25 269 P **P 21 24 43.0 -1.6**
comp=Z,23nm,0.8s
ESPR Espera 20.25 269 P **P 21 24 43.0 -1.6**
comp=Z,23nm,0.8s
HFS Hagfors 20.32 351 P **P 21 24 43.8 -1.6**
comp=Z,59nm,0.7s,baz=158,slow=12,SNR=171
HFS LR LR 21 33 01.9
comp=Z,370nm,20.4s,MS3.7,baz=172,slow=38
KONO Kongsberg 20.50 345 *e*P **P 21 24 46.4 -0.9**
KONO *e*S **S 21 28 37.1 +0.5**
KONO Kongsberg 20.50 345⇑ *e*P **P 21 24 45.7 -1.6**
KONO Kongsberg 20.50 345 *e*P **P 21 24 46.6 -0.7**
EMIN Mina Concepcio 20.63 272 P **P 21 24 48.5 -0.2**
comp=Z,148nm,1.5s
EMIN Mina Concepcio 20.63 272 P **P 21 24 48.5 -0.2**
comp=Z,148nm,1.5s
EBAD Badajoz 20.66 275 P **P 21 24 47.8 -1.2**
comp=Z,28nm,1.4s
WPM1 Penmaenmawr 20.69 317 *e*P **P 21 24 49.4 +0.1**
WPM1 Penmaenmawr 20.69 317 *e*P **P 21 24 49.4 +0.1**
PUL Pulkovo 20.70 15⇑ *e*P **P 21 24 48.4 -1.1**
PUL *e*S **S 21 28 32.6 -8.1**
PUL pmax pmax
comp=Z,267nm,0.9s
PUL pmax pmax
comp=N,540nm,1.3s
PUL pmax pmax
comp=E,240nm,1.2s
PUL MLR MLR
comp=N,1μm,10.0s,MS4.6
PUL MLR MLR
comp=Z,1μm,10.0s,MS4.6
PUL MLR MLR
comp=E,928nm,11.0s,MS4.6
PUL Pulkovo 20.70 15 *e*P **P 21 24 48.4 -1.1**
comp=E,540nm,1.3s
MTE Manteigas 20.77 279 *e*P **P 21 24 51.3 +1.1**
comp=E,88nm,1.1s
MTE *e*LQ 21 28 49.4
MTE Manteigas 20.77 279⇓ *e*P **P 21 24 51.0 +0.8**
comp=E,71nm,1.2s
PVRL Vila Real 20.79 282 *e*P **P 21 24 53.2 +2.8**
comp=E,43nm,1.3s
PCBR Castelo Branco 20.80 278 *e*P **P 21 24 52.1 +1.5**
comp=E,59nm,1.9s
YRE Yr Eifl 20.83 316 *e*P **P 21 24 51.2 +0.4**
YRE Yr Eifl 20.83 316 *e*P **P 21 24 51.2 +0.4**
MDT Midelt 20.85 257 P **P 21 24 50.3 -0.8**
comp=E,19nm,0.9s,baz=71,slow=11,SNR=30
MDT LR LR 21 32 37.8
comp=E,392nm,21.3s,MS3.8,baz=69,slow=36
BHD Baghdad 20.91 101 *ex* x 21 24 47.0
BHD *ex* x 21 25 16.0
BHD *ex* x 21 25 31.0
BHD *ex* x 21 28 55.0
BHD *ex* x 21 34 34.0
PVIS Viseu 20.99 280 *e*P **P 21 24 52.7 +0.1**
comp=E,73nm,1.3s
ELOB Lobios 20.99 284 P **P 21 24 52.9 +0.3**
comp=E,23nm,1.1s
ELOB Lobios 20.99 284 P **P 21 24 52.9 +0.3**
comp=E,23nm,1.1s
BLS5 Blasjo 20.99 341 *e*P **P 21 24 54.4 +1.8**
BLS5 AMb AMB 21 24 56.2
comp=Z,100nm,1.4s
BLS5 Blasjo 20.99 341 *e*P **P 21 24 54.4 +1.8**
comp=Z,100nm,1.4s
BLS5 Blasjo 20.99 341 *e*P **P 21 24 54.4 +1.7**
comp=Z,100nm,1.4s,SNR=39
ZFT Errachidia 21.03 255 *i*P **P 21 24 52.5 -0.6**
YRC Rhoscolyn 21.03 316 *e*P **P 21 24 53.3 +0.2**
YRC Rhoscolyn 21.03 316 *e*P **P 21 24 53.3 +0.2**
MIF Mishlifen 21.05 259 *i*P **P 21 24 52.0 -1.2**
PESTR Estremoz 21.07 275 *e-* **P 21 24 53.5 0.0**
PESTR Estremoz 21.07 275 *e*P **P 21 24 53.5 0.0**
comp=Z,57nm,1.1s,mb4.8
PESTR *e*LQ 21 28 45.6
CZD Col de Zad 21.07 258 *i*P **P 21 24 54.0 +0.5**
WCB1 Church Bay 21.08 317 *e*P **P 21 24 54.9 +1.3**
WCB1 Church Bay 21.08 317 *e*P **P 21 24 54.9 +1.3**
BBO1 Bothel 21.14 321 *e*P **P 21 24 53.5 -0.7**

BBO1 Bothel 21.14 321 *e*P **P 21 24 53.5 -0.7**
EGRO El Granado 21.31 272 P **P 21 24 56.0 -0.1**
comp=Z,42nm,1.2s,mb4.7
EGRO El Granado 21.31 272 P **P 21 24 56.0 -0.1**
comp=Z,42nm,1.2s,mb4.7
BHH Howats Hill 21.33 322 *e*P **P 21 24 56.4 +0.1**
BHH Howats Hill 21.33 322 *e*P **P 21 24 56.4 +0.1**
ECK Cauldkaine Hil 21.34 322 *e*P **P 21 24 55.3 -1.0**
ECK Cauldkaine Hil 21.34 322 *e*P **P 21 24 55.3 -1.0**
NAO01 NORSAR Array S 21.39 348⇑ *e*P **P 21 24 55.8 -1.2**
comp=Z,80nm,0.9s,mb5.0
NAO01 NORSAR Array S 21.39 348⇑ *e*P **P 21 24 55.8 -1.1**
comp=Z,80nm,0.9s,mb5.0
EZAM Zamans 21.44 285 P **P 21 24 56.8 -0.6**
EZAM pmax pmax
comp=Z,170nm,1.0s,mb5.3
EZAM Zamans 21.44 285 P **P 21 24 56.8 -0.6**
comp=Z,17nm,1.0s,mb4.3
EZAM Zamans 21.44 285 P **P 21 24 56.8 -0.6**
comp=Z,17nm,1.0s,mb4.3
EKA Eskdalemuir Ar 21.44 323 P **P 21 24 57.2 -0.2**
comp=Z,33nm,0.9s,mb4.7,baz=125,slow=10,SNR=55
ESK Eskdalemuir 21.45 323 P **P 21 24 57.1 -0.5**
comp=Z,434nm,0.8s,mb5.8,SNR=8.3
ESK Eskdalemuir 21.45 323 *e*P **P 21 24 56.6 -1.0**
ESK Eskdalemuir 21.45 323 *e*P **P 21 24 56.6 -1.0**
ESK Eskdalemuir 21.45 323 *e*P **P 21 24 57.2 -0.4**
ESK pmax pmax
comp=Z,93nm,1.0s,mb5.1
ESK Eskdalemuir 21.45 323 *e*P **P 21 24 57.2 -0.4**
comp=Z,93nm,1.0s,mb5.1
ESK Eskdalemuir 21.45 323 *e*P **P 21 24 57.2 -0.4**
comp=Z,93nm,1.0s,mb5.1
PBEJ Beja 21.48 273 *e*P **P 21 24 57.8 -0.1**
comp=Z,70nm,1.6s,mb4.7
NB2 NORSAR Subarra 21.53 349 P **P 21 24 57.1 -1.3**
comp=Z,86nm,0.8s,mb5.2,baz=163,slow=10
NOA NORSAR Array B 21.53 349 P **P 21 24 57.4 -1.0**
comp=Z,78nm,0.8s,mb5.2,baz=155,slow=9.5,SNR=231
WIM Isle of Man 21.53 319 *e*P **P 21 24 58.2 -0.2**
WIM AMb AMB 21 25 04.2
comp=Z,136nm,1.3s,mb5.2
WIM Isle of Man 21.53 319 *e*P **P 21 24 58.2 -0.2**
WIM AMb AMB 21 25 04.2
comp=Z,136nm,1.3s,mb5.2
ESY Stoneypath 21.54 324 *e*P **P 21 24 59.9 +1.4**
ESY Stoneypath 21.54 324 *e*P **P 21 24 59.9 +1.4**
PTOM Tomar 21.55 278 *e*P **P 21 24 59.1 +0.4**
comp=Z,98nm,1.4s,mb5.0
BWH Wardlaw 21.58 322 *e*P **P 21 25 00.8 +1.8**
BWH Wardlaw 21.58 322 *e*P **P 21 25 00.8 +1.8**
EMAZ Mazaricos 21.60 287 P **P 21 24 58.2 -1.0**
comp=Z,23nm,0.9s,mb4.6
EMAZ Mazaricos 21.60 287 P **P 21 24 58.2 -1.0**
comp=Z,23nm,0.9s,mb4.6
FINES FINESS Array B 21.64 8 P **P 21 24 57.6 -2.0**
comp=Z,27nm,0.6s,mb4.8,baz=168,slow=11,SNR=138
FINES LR LR 21 34 28.0
comp=Z,591nm,20.1s,MS4.0,baz=194,slow=40
FIA1 FINESS Array S 21.64 8⇑ *i*P **P 21 24 57.5 -2.2**
FIA1 *e*S **S 21 28 51.1 -8.1**
FIA1 FINESS Array S 21.64 8⇑ *i*P **P 21 24 57.5 -2.1**
EBL Broad Law 21.64 324 *e*P **P 21 24 59.2 -0.5**
EBL Broad Law 21.64 324 *e*P **P 21 24 59.2 -0.5**
EDI Edinburgh 21.80 324 *e*P **P 21 25 02.4 +1.1**
EDI Edinburgh 21.80 324 *e*P **P 21 25 02.4 +1.1**
KIB El Ksiba 22.03 258 *i*P **P 21 25 03.0 -0.8**
DLF Lyons Farm 22.10 315 *e*P **P 21 25 04.0 -0.5**
BER Bergen 22.11 341 *e*P **P 21 25 05.4 +0.7**
BER pmax AMb AMB 21 25 08.6
comp=Z,151nm,1.4s,mb5.2
BER AMS AMS 21 36 18.4
comp=Z,567nm,14.3s,MS4.1
BER Bergen 22.11 341 *e*P **P 21 25 05.4 +0.7**
comp=Z,151nm,1.4s,mb5.2
BER LR LR
comp=Z,570nm,14.3s,MS4.1
BER Bergen 22.11 341 *e*P **P 21 25 05.4 +0.7**
comp=Z,151nm,1.4s,mb5.2,SNR=38
PTEO Sao Teotonio 22.26 272 *e*P **P 21 25 05.5 -0.7**
comp=Z,48nm,1.3s,mb4.8
KAF Kangasniemi 22.32 8 *e*p **P 21 25 04.5 -2.4**
comp=Z,30nm,0.6s,mb4.9,baz=191,slow=10
KAF Kangasniemi 22.32 8 *e*P **P 21 25 04.5 -2.4**
KAF pmax pmax
comp=Z,30nm,0.6s,mb4.9
EAB Aberfoyle 22.48 323 *e*P **P 21 25 09.8 +1.2**
EAB Aberfoyle 22.48 323 *e*P **P 21 25 09.8 +1.2**
DCN Croghan 22.52 315 *e*P **P 21 25 01.5 -7.6**
PECR Pechory 22.70 37⇓ *i*P **P 21 25 08.8 -2.1**
PECR *i* 21 25 08.8
PECR *e*S **S 21 29 19.6 -0.1**
PECR pmax pmax
comp=Z,440nm,2.0s,mb5.5
PECR pmax pmax
comp=Z,500nm,2.4s,mb5.5
PECR smax
comp=E,800nm,5.0s
PECR MLR MLR
comp=Z,2μm,14.0s,MS4.7
PECR MLR MLR
comp=E,800nm,13.0s,MS4.6
PECR MLR MLR
comp=Z,2μm,13.0s
PECR MLR MLR
comp=N,1μm,11.0s,MS4.6
DOMB Dombas 22.82 347 *e*P **P 21 25 12.3 0.0**
DOMB AMb AMB 21 25 14.7
comp=Z,138nm,1.7s,mb5.1
DOMB Dombas 22.82 347 *e*P **P 21 25 12.3 0.0**
comp=Z,138nm,1.7s,mb5.1
KAR1 Arisaig 23.57 324 *e*P **P 21 25 19.9 -0.2**
KAR1 Arisaig 23.57 324 *e*P **P 21 25 19.9 -0.2**
KAC Achnashellach 23.67 325 *e*P **P 21 25 19.5 -1.5**
KAC Achnashellach 23.67 325 *e*P **P 21 25 19.5 -1.5**
JOF Joensuu 23.80 13 *e*p **P 21 25 19.9 -2.3**
LRW Lerwick 23.84 334 *e*P **P 21 25 21.0 -1.6**
LRW Lerwick 23.84 334 *e*P **P 21 25 21.0 -1.6**
KLMR Klimovskoe 24.03 24*c i*P **P 21 25 22.0 -2.3**
KLMR *e*S **S 21 29 40.1 -1.3**
KLMR pmax pmax
comp=Z,230nm,1.2s,mb5.5
KLMR pmax pmax
comp=Z,110nm,4.2s
KLMR MLR MLR
comp=Z,1μm,11.0s,MS4.5
OUK Oukaimeden 24.05 257 *i*P **P 21 25 25.0 +0.6**
CIA Chichaoua 24.54 258 *i*P **P 21 25 26.0 -2.9**
RST Umm Al-Ruwaisa 24.71 107 *e*P **P 21 25 27.6 -2.9**
RST AMb AMB 21 25 32.1
comp=Z,66nm,0.7s,mb5.3
NSS Namsos 24.80 352 *e*P **P 21 25 29.1 -2.2**
NSS AMb AMB 21 25 32.4
comp=Z,153nm,1.6s,mb5.3
NSS AMS AMS 21 36 40.2
comp=Z,408nm,17.0s,MS4.0
NSS Namsos 24.80 352 *e*P **P 21 25 29.1 -2.2**
comp=Z,153nm,1.5s,mb5.3
NSS LR LR
comp=Z,410nm,17.0s,MS4.0
MIB Mutribah 24.80 106 *e*P **P 21 25 28.5 -2.8**
MIB AMb AMB 21 25 32.1
comp=Z,120nm,0.7s,mb5.5
NAY Al-Naaiem 25.03 107 *e*P **P 21 25 31.1 -2.3**
NAY AMb AMB 21 25 34.5
comp=Z,25nm,0.7s,mb4.9
UMR Umm Al-Rimmam 25.21 106 *e*P **P 21 25 32.1 -2.9**
UMR AMb AMB 21 25 37.0
comp=Z,102nm,0.8s,mb5.4
KBD Kabd 25.40 107 *e*P **P 21 25 34.3 -2.5**
KBD AMb AMB 21 25 37.9
comp=Z,152nm,1.2s,mb5.4
MOR8 Moi Rana 26.20 355 *e*P **P 21 25 43.6 -0.4**
MOR8 AMb AMB 21 25 45.1
comp=Z,20nm,1.2s,mb4.5
MOR8 Moi Rana 26.20 355 *e*P **P 21 25 43.6 -0.4**
comp=Z,20nm,1.2s,mb4.5
APA Apatity 28.46 11⇓ *i*P **P 21 26 02.6 -1.7**
APA *e*S **S 21 30 51.0 -0.6**
APA pmax pmax
comp=Z,18nm,1.0s,mb4.7
APA MLR MLR
comp=Z,2μm,13.0s,MS4.8
AKTK Aktyubinsk 28.53 56 P **P 21 26 03.0 -1.9**
AKTK LR LR 21 39 27.6

AKTO Aktyubinsk 28.53 56 P **P** **21 26 03.0 -1.9**
comp=Z,4.5nm,0.5s,mb4.5,baz=260,slow=8.2,SNR=29
AKTO LR LR 21 39 27.6
comp=Z,380nm,19.5s,MS4.0,baz=95,slow=41
KTK1 Kautokeino 28.95 3 *e*P **P** **21 26 08.3 -0.3**
LVZ Lovozero 28.95 12⇓*e*P **P** **21 26 06.8 -1.8**
LVZ *e*S **S** **21 30 58.8 -0.5**
LVZ pmax pmax
comp=Z,24nm,0.9s,mb4.9
LVZ smax
comp=N,59nm,1.9s
LVZ MLR MLR
comp=Z,2μm,13.0s,MS4.9
TRO Tromso 29.51 359 *e*P **P** **21 26 11.3 -2.3**
TRO AMS AMS 21 40 15.5
comp=Z,622nm,16.5s,MS4.3
ARCES ARCESS Array B 29.57 4 P **P** **21 26 12.2 -1.9**
comp=Z,25nm,0.8s,mb5.0,baz=183,slow=9.2,SNR=68
ARCES LR LR 21 39 24.3
comp=Z,750nm,19.8s,MS4.3,baz=14,slow=39
ARE0 ARCESS Array S 29.57 4 *e*P **P** **21 26 12.0 -2.1**
AB31 Akbulak array 29.68 59 *i* P **P** **21 26 12.3 -2.9**
AB31 pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
TRBA At Turbah 29.79 131⇓*i*P P 21 25 46.1 +43
TRBA ⇓*e* 21 25 46.5
baz=139,slow=8.6
TRBA *i* S 21 26 03.5
TRBA AML AML 21 26 15.4
comp=N,43nm,0.5s
KEV Kevo 29.88 5 *e*p **P** **21 26 14.3 -2.6**
comp=N,14nm,0.6s,mb4.9
KEV Kevo 29.88 5 *e*P **P** **21 26 14.3 -2.6**
KEV pmax pmax
comp=Z,14nm,0.6s,mb4.9
ARU Arti 30.02 44 P **P** **21 26 16.9 -1.2**
comp=Z,89nm,1.0s,mb5.5,SNR=9.0
ARU Arti 30.02 44⇑*i*P **P** **21 26 16.0 -2.1**
ARU *e*PPP 21 27 20.0
ARU *e* 21 29 20.9
ARU *e*S **S** **21 31 13.7 -2.4**
ARU *e*SS SS 21 32 45.1 -39
ARU *e* 21 36 51.3
ARU pmax pmax
comp=Z,28nm,1.7s,mb4.7
ARU MLR MLR
comp=Z,500nm,15.0s,MS4.3
ARU MLR MLR
comp=N,200nm,14.5s,MS4.2
ARU MLR MLR
comp=E,400nm,15.0s,MS4.2
ARU Arti 30.02 44⇑*e*P **P** **21 26 15.6 -2.5**
comp=E,13nm,0.8s,mb4.7
LBOS 30.02 129⇓*i*P P 21 25 52.5 +47
LBOS *i* S 21 26 12.7
SOKR Solikamsk 30.19 38⇑*i*P **P** **21 26 18.3 -1.3**
SOKR pmax pmax
comp=Z,40nm,1.2s,mb5.0
SOKR MLR MLR
comp=Z,1μm,23.0s,MS4.5
TORD Torodi Ar. Bea 31.25 216 P **P** **21 26 28.1 -0.9**
comp=Z,15nm,0.9s,mb4.8,baz=21,slow=9.3,SNR=43
TORD ScP ScP 21 33 05.8 -0.7
comp=Z,2.8nm,1.1s,baz=20,slow=3.7,SNR=6.3
TORD LR LR 21 41 55.3
comp=Z,409nm,18.9s,MS4.1,baz=15,slow=42
JMIC Jan Mayen 34.06 344 AMS AMS 21 45 14.3
comp=Z,136nm,15.7s,MS3.8
BRVK Borovoye 36.28 52 P **P** **21 27 11.0 -1.7**
comp=Z,177nm,1.1s,mb5.9,SNR=23
BRVK Borovoye 36.28 52⇑*i*P **P** **21 27 11.3 -1.4**
BRVK *e* 21 28 31.9
BRVK pmax pmax
comp=Z,18nm,0.9s,mb5.0
BRVK Borovoye 36.28 52⇑*i*P **P** **21 27 11.3 -1.4**
comp=Z,28nm,0.9s,mb5.2
BRVK *e*PP PP 21 28 31.9 -3.3
BRVK Borovoye 36.28 52 P **P** **21 27 12.0 -0.7**
SNR=18
BVA0 Borovoye Array 36.34 52 *i* P **P** **21 27 11.9 -1.4**
BVAR Borovoye Array 36.34 52 P **P** **21 27 12.1 -1.2**
comp=Z,7.9nm,0.9s,mb4.6,baz=261,slow=5.9,SNR=53
BVAR LR LR 21 43 10.3
comp=Z,246nm,20.0s,MS4.0,baz=139,slow=38
CHKZ Chkalovo 36.48 51⇑*i*P **P** **21 27 12.9 -1.5**
CHKZ pmax pmax
comp=Z,26nm,1.0s,mb5.1
CHKZ Chkalovo 36.48 51⇑*i*P **P** **21 27 12.9 -1.5**
comp=Z,26nm,1.0s,mb5.1
VOSK Vostochnaya 36.70 53 P **P** **21 27 14.5 -1.8**
VOSK pmax pmax
comp=Z,12nm,1.1s,mb4.6
WSAR Wadi Sarin 36.83 105 P **P** **21 27 16.1 -1.3**
comp=Z,3.9nm,0.6s,mb4.4,baz=304,slow=14,SNR=5.4
KK31 Karatay Array 37.60 68 *i* P **P** **21 27 22.0 -2.0**
KK31 pmax pmax
comp=Z,13nm,0.7s,mb4.8
KKAR Karatay Array 37.60 68 *i* P **P** **21 27 22.0 -2.0**
KKAR pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
KBS Kingsbay 38.98 358 *e*P **P** **21 27 32.9 -2.6**
KBS AMS AMS 21 46 51.0
comp=Z,185nm,19.6s,MS3.9
DBIC Dimbokro 39.98 220 P **P** **21 27 43.1 -0.9**
comp=Z,11nm,0.9s,mb4.6,baz=12,slow=10,SNR=6.5
DBIC LR LR 21 46 12.0
comp=Z,414nm,18.7s,MS4.3,baz=13,slow=39
DBIC Dimbokro 39.98 220 P **P** **21 27 43.1 -0.8**
DBIC pmax pmax
comp=Z,11nm,0.9s
DBIC MLR MLR
comp=Z,414nm,18.7s
DBIC Dimbokro 39.98 220 *e*P **P** **21 27 42.4 -1.6**
comp=Z,20nm,1.0s,mb4.8
EKS2 Erkin-Say 40.04 68 P **P** **21 27 43.5 -0.9**
SNR=34
DAG Danmarks Havn 40.20 347⇑*i*P **P** **21 27 45.3 -0.4**
comp=Z,2.1nm,0.7s,mb4.0
AAK Ala-Archa 40.56 68 P **P** **21 27 47.1 -1.5**
SNR=16
AAK Ala-Archa 40.56 68⇑*i*P **P** **21 27 46.6 -2.1**
AAK pmax pmax
comp=Z,36nm,1.7s,mb4.7
AAK Ala-Archa 40.56 68⇑*e*P **P** **21 27 46.5 -2.2**
FRU Bishkek 40.59 68⇑*i*P **P** **21 27 48.0 -1.0**
FRU pmax pmax
comp=Z,100nm,1.8s,mb5.1
CHMS Chumysh 40.64 67 P **P** **21 27 48.4 -1.0**
SNR=5.6
UCH Uchtor 40.68 69 P **P** **21 27 49.1 -0.6**
SNR=15
KBK Karagaybulak 40.87 68 P **P** **21 27 50.8 -0.5**
SNR=6.7
KZA Kyzart 41.25 69 P **P** **21 27 54.3 -0.1**
SNR=13
TKM2 Tokmak 2 41.26 67 P **P** **21 27 53.4 -1.1**
SNR=5.4
KURK Kurchatov 41.61 55 P **P** **21 27 55.0 -2.4**
comp=Z,66nm,1.2s,mb5.1,SNR=9.8
KURK Kurchatov 41.61 55 P **P** **21 27 55.3 -2.1**
KURK pmax pmax
comp=Z,12nm,1.3s,mb4.4
KURK Kurchatov 41.61 55⇑*e*P **P** **21 27 55.2 -2.2**
comp=Z,16nm,1.1s,mb4.6
KURK *e*PP PP 21 29 25.5 -8.0
KURK Kurchatov 41.61 55 P **P** **21 27 55.4 -2.0**
SNR=6.5
MBAR Mbarara 41.83 163 *i* P **P** **21 27 58.3 -0.8**
ULHL Ulahol 41.91 68 P **P** **21 27 59.0 -0.8**
SNR=7.6
SUMG Summit 42.72 338 *e*P **P** **21 28 05.9 -0.5**
comp=Z,88nm,2.0s,mb5.1
NVS Novosibirsk 43.79 48⇑*i*P **P** **21 28 13.5 -1.6**
NVS *e*S **S** **21 34 40.8 -4.9**
NVS pmax pmax
comp=E,30nm,1.6s
NVS pmax pmax
comp=Z,59nm,1.6s,mb5.1
NVS smax
comp=N,24nm,1.9s
NVS smax
comp=E,21nm,2.1s
MK31 Makanchi Array 44.81 60 P **P** **21 28 21.4 -1.9**
MK31 pmax pmax
comp=Z,29nm,0.9s,mb5.1
MKAR Makanchi Array 44.81 60 P **P** **21 28 21.6 -1.6**
comp=Z,18nm,0.6s,mb5.1,baz=283,slow=6.4,SNR=182
ZAL Zalesovo 44.83 50 P **P** **21 28 22.3 -1.1**
comp=Z,7.6nm,0.6s,mb4.7,baz=189,slow=7.3,SNR=43
ZAL LR LR 21 49 02.4
comp=Z,353nm,19.2s,MS4.3,baz=285,slow=39
ZAL Zalesovo 44.83 50 P **P** **21 28 22.3 -1.1**
ZAL LR LR 21 49 02.4
KRAR Krasnoyarsk 48.97 45⇓*i*P **P** **21 28 53.7 -2.1**
KRAR pmax pmax
comp=Z,30nm,1.3s,mb5.2
KRAR MLR MLR
comp=Z,300nm,13.0s,MS4.5
WMQ Urumqi 49.36 62 P **P** **21 28 58.0 -0.7**
WMQ XP sP 21 29 05.0 +2.0
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.1
WMQ LR LR
comp=N,68nm,12.0s,MS4.0
WMQ LR LR
comp=E,54nm,12.0s,MS4.0
KOLN Koldanda 53.37 83 *e*P **P** **21 29 26.3 -2.5**
comp=E,20nm,0.6s,mb5.2
GKN Gorkha 54.04 82 *e*P **P** **21 29 30.5 -3.2**
comp=E,26nm,0.6s,mb5.3
DMN Daman 54.60 82 *e*P **P** **21 29 35.3 -2.5**
comp=E,30nm,0.7s,mb5.4
KKN Kakani 54.63 82 *e*P **P** **21 29 35.5 -2.5**
comp=E,19nm,0.6s,mb5.3
KKN Kakani 54.63 82 *e*P **P** **21 29 35.5 -2.5**
KKN pmax pmax
comp=Z,19nm,0.6s,mb5.3
PKI Pulchoki 54.84 82 *e*P **P** **21 29 36.7 -2.9**
comp=Z,15nm,0.8s,mb5.1
PKI Pulchoki 54.84 82 *e*P **P** **21 29 36.7 -2.9**
PKI pmax pmax
comp=Z,15nm,0.8s,mb5.1
MOY Mondy 54.89 49 *e*P **P** **21 29 39.4 -0.5**
MOY pmax pmax
comp=Z,16nm,2.0s,mb4.7
GUN Gumba 55.03 81 *e*P **P** **21 29 38.8 -2.1**
LSZ Lusaka 55.74 170 P **P** **21 29 47.3 +1.2**
comp=Z,2.2nm,0.8s,mb4.2,baz=357,slow=8.1,SNR=4.4
LSZ Lusaka 55.74 170 P **P** **21 29 46.3 +0.3**
comp=Z,7.0nm,1.1s,mb4.6
TLY Talaya 56.40 48 P **P** **21 29 50.2 -0.6**
comp=Z,75nm,1.3s,mb5.6,SNR=6.4
TLY Talaya 56.40 48 *e*P **P** **21 29 50.3 -0.5**
TLY pmax pmax
comp=Z,17nm,1.1s,mb5.0
TLY Talaya 56.40 48 *e*P **P** **21 29 50.2 -0.6**
TLY *e*S **S** **21 37 34.9 -6.6**
TLY pmax pmax
comp=Z,23nm,1.3s,mb5.0
TLY MLR MLR
comp=Z,586nm,14.0s,MS4.8
TLY Talaya 56.40 48 *e*P **P** **21 29 50.3 -0.5**
comp=Z,17nm,1.1s,mb5.0
TLY Talaya 56.40 48 P **P** **21 29 50.9 +0.1**
SNR=10
SCHQ Schefferville 56.57 316 P **P** **21 29 51.2 -0.7**
comp=Z,9.4nm,0.6s,mb5.0,baz=75,slow=5.9,SNR=22
SCHQ LR LR 21 53 45.0
comp=Z,132nm,18.6s,MS4.1,baz=299,slow=36
SCHQ Schefferville 56.57 316⇑*e*P **P** **21 29 51.0 -1.0**
comp=Z,15nm,0.9s,mb5.0
ZAK Zakamensk 56.72 50 *e*P **P** **21 29 52.7 -0.3**
RES Resolute Bay 57.67 343 *e*P **P** **21 29 59.5 -0.2**
RES pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
RES Resolute Bay 57.67 343 *e*P **P** **21 29 59.5 -0.2**
comp=Z,197nm,0.8s
TIXI Tiksi 57.99 21 *d*iP **P** **21 30 01.7 -0.3**
TIXI pmax pmax
comp=Z,21nm,1.3s,mb5.0
TIXI MLR MLR
comp=Z,500nm,17.0s,MS4.7
TSUM Tsumeb 59.11 182 P **P** **21 30 09.7 -0.2**
BOD Bodaibo 59.19 38 *e*P **P** **21 30 08.4 -1.9**
BOD pmax pmax
comp=Z,17nm,1.6s,mb4.8
GTA Gaotai 59.44 62 *e*P **P** **21 30 10.7 -1.4**
GTA AP pP 21 30 14.1 -1.1
GTA XP sP 21 30 16.5 +0.1
GTA PP PP 21 32 22.6 -0.7
GTA S **S** **21 38 15.4 -5.9**
GTA XS sS 21 38 22.5 -4.0
GTA SS SS 21 42 12.5 -3.7
GTA AMB AMB
comp=Z,12nm,1.2s,mb4.8
GTA AMB AMB
comp=Z,148nm,5.3s
GTA LR LR
comp=N,363nm,18.6s,MS4.7
GTA LR LR
comp=E,351nm,20.5s,MS4.7
GTA LR LR
comp=Z,644nm,19.8s,MS4.8
SONM Songino Array 59.68 51 P **P** **21 30 13.3 -0.5**
comp=Z,9.3nm,0.8s,mb4.9,baz=292,slow=7.8,SNR=23
ULN Ulaanbaatar 60.06 51⇑*i*P **P** **21 30 16.4 +0.1**
ULN Ulaanbaatar 60.06 51 *e*P **P** **21 30 14.7 -1.6**
comp=Z,11nm,0.8s,mb4.9
YAK Yakutsk 63.67 30*c iP* **P** **21 30 38.8 -1.9**
YAK pmax pmax
comp=Z,22nm,0.7s,mb5.3
YAK MLR MLR
comp=Z,400nm,19.0s,MS4.6
LZH Lanzhou 63.87 64 *e*P **P** **21 30 40.5 -1.5**
LZH AP pP 21 30 44.7 -0.5
LZH XP sP 21 30 47.2 +0.8
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,130nm,4.8s
LZH LR LR
comp=N,521nm,16.9s
LZH LR LR
comp=Z,841nm,18.1s,MS5.0
LZH Lanzhou 63.87 64 *e*P **P** **21 30 40.5 -1.5**
comp=Z,28nm,1.5s,mb5.1
LZH pP pP 21 30 44.7 -0.5
LZH sP sP 21 30 47.2 +0.8
LZH PP PP 21 33 01.6 -0.8
LZH *e*S **S** **21 39 12.5 -5.0**
LZH sS sS 21 39 20.1 -2.6
LZH *e*SS SS 21 43 21.3 -4.3
LZH LR LR
comp=Z,840nm,18.1s,MS5.0
LBTB Lobatse 65.10 174 *e*P **P** **21 30 49.7 -0.3**
LBTB pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
LBTB Lobatse 65.10 174 *e*P **P** **21 30 49.7 -0.3**
comp=Z,5.2nm,0.6s,mb4.7
ACCN Adirondack Com 65.98 307⇓*e*P **P** **21 30 56.8 +1.1**
HHC Hu-ho-hao-te 66.42 56 *e*P **P** **21 30 57.1 -1.4**
HHC AP pP 21 31 01.8 +0.1
HHC XP sP 21 31 04.2 +1.3
HHC PCP PcP 21 31 27.3 -0.9
HHC PP PP 21 33 25.2 +0.5
HHC SCP 21 35 28.6
HHC PCS 21 35 30.3
HHC S S 21 39 44.2 -4.5
HHC XS sS 21 39 51.8 -2.2
HHC SCS ScS 21 40 49.3 -6.1
HHC SS SS 21 44 01.3 -4.0
HHC AMB AMB
comp=Z,16nm,1.3s,mb4.9
HHC AMB AMB
comp=Z,86nm,4.9s
HHC LR LR
comp=N,359nm,18.2s,MS4.7
HHC LR LR
comp=E,294nm,17.6s,MS4.7
HHC LR LR
comp=Z,301nm,16.1s,MS4.6
HIA Hailar 66.53 45*c iP* **P** **21 30 58.8 -0.4**
HIA Hailar 66.53 45 *e*P **P** **21 30 58.5 -0.7**
comp=Z,12nm,0.8s,mb5.0
HIA *e*PP PP 21 33 11.7 -14
CD2 Chengdu 66.62 69 P **P** **21 30 58.1 -1.7**
CD2 XP sP 21 31 05.9 +1.7
CD2 PP PP 21 33 24.1 -2.4
CD2 S S 21 39 45.3 -5.8
CD2 SS SS 21 44 04.4 -4.0
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,80nm,6.0s
CD2 LR LR
comp=N,200nm,4.6s
CD2 LR LR
comp=Z,170nm,7.8s
FCC Fort Churchill 67.20 329 *e*P **P** **21 31 02.7 -0.8**
FCC pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
FCC Fort Churchill 67.20 329 *e*P **P** **21 31 02.7 -0.8**
comp=Z,9.1nm,0.7s,mb4.9
XAN Xi'an 68.48 63 P **P** **21 31 09.9 -1.6**
XAN AP pP 21 31 17.3 +2.6
XAN AMB AMB
comp=Z,10.0nm,1.2s,mb4.7
BOSA Boshof 68.64 175 P **P** **21 31 12.3 -0.3**
comp=Z,7.7nm,0.7s,mb4.8,baz=320,slow=9.0,SNR=10
BOSA Boshof 68.64 175 P **P** **21 31 12.3 -0.3**
BOSA pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
BOSA Boshof 68.64 175 *e*P **P** **21 31 11.9 -0.7**
comp=Z,10nm,0.7s,mb4.9
BILL Bilibino 69.20 13*c iP* **P** **21 31 14.8 -1.3**
BILL *e* 21 31 38.2
BILL *e* 21 33 46.1
BILL pmax pmax
comp=Z,26nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.4
BILL Bilibino 69.20 13 *e*P **P** **21 31 14.5 -1.6**
comp=Z,17nm,0.8s,mb5.0
BJI Beijing 69.78 54 *e*P **P** **21 31 18.0 -1.6**
BJI AMB AMB
comp=Z,9.0nm,1.2s,mb4.6
BJI LR LR
comp=N,280nm,16.6s,MS4.7
BJI LR LR
comp=E,193nm,16.4s,MS4.7
BJI LR LR
comp=Z,201nm,24.3s
BJI Beijing 69.78 54 *e*P **P** **21 31 18.0 -1.6**
comp=Z,9.0nm,1.2s,mb4.6
BJI S S 21 40 36.0 +7.2
BJI LR LR
comp=Z,200nm,24.3s,MS4.3
INK Inuvik 69.98 350 P **P** **21 31 19.9 -1.0**
comp=Z,4.3nm,0.8s,mb4.5,baz=13,slow=9.0,SNR=6.4
INK Inuvik 69.98 350 P **P** **21 31 19.9 -0.9**
INK pmax pmax
comp=Z,4.0nm,0.8s
INK Inuvik 69.98 350 *e*P **P** **21 31 18.8 -2.1**
comp=Z,123nm,0.6s,mb6.0
GYA Guiyang 71.26 71 P **P** **21 31 28.8 +0.2**
GYA AP pP 21 31 33.5 +1.6
GYA XP sP 21 31 36.4 +3.4
GYA PP PP 21 34 08.8 +2.2
GYA S S 21 40 45.2 -0.9
GYA SKS 21 41 26.7
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.1
GYA AMB AMB
comp=Z,120nm,4.2s
GYA LR LR
comp=N,420nm,18.4s,MS4.9
GYA LR LR
comp=E,410nm,18.0s,MS4.9
GYA LR LR
comp=Z,460nm,18.6s,MS4.8
YKA Yellowknife Ar 71.29 339 P **P** **21 31 28.3 -0.6**
comp=Z,6.7nm,0.8s,mb4.6,baz=33,slow=5.5,SNR=23
MA2 Magadan 72.71 24*c iP* **P** **21 31 36.9 -0.5**
MA2 *e* 21 41 07.5
MA2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
MA2 pmax pmax
comp=N,20nm,0.8s
MA2 Magadan 72.71 24 *e*P **P** **21 31 36.8 -0.6**
comp=N,29nm,1.0s,mb5.2
KLR Kul'dur 72.73 40 *e*P **P** **21 31 33.7 -3.8**
CN2 Changchun 72.97 47⇑P **P** **21 31 38.1 -0.8**
CN2 *e*XP sP 21 31 45.8 +2.5
CN2 *e*S S 21 41 01.7 -4.0
CN2 AMB AMB
comp=Z,40nm,0.9s,mb5.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,19.0s,MS4.6
CN2 LR LR
comp=E,200nm,19.0s,MS4.6
CN2 LR LR
comp=Z,300nm,21.0s,MS4.5
FFC Flin Flon 73.14 329 *e*P **P** **21 31 38.8 -1.1**
FFC pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
FFC Flin Flon 73.14 329 *e*P **P** **21 31 38.8 -1.1**
comp=Z,7.9nm,0.8s,mb4.7
SNY Shenyang 73.15 49 ⇓P **P** **21 31 38.9 -1.1**
SNY AMB AMB
comp=Z,12nm,1.0s,mb4.8
EYMN Ely 73.17 319⇑*e*P **P** **21 31 39.9 -0.2**
comp=Z,122nm,1.1s,mb5.8
ULM Lac du Bonnet 73.72 323 P **P** **21 31 42.9 -0.4**
comp=Z,18nm,0.8s,mb5.0,baz=51,slow=5.3,SNR=18
ULM LR LR 22 03 15.2
comp=Z,127nm,19.5s,MS4.2,baz=22,slow=35
ULM Lac du Bonnet 73.72 323⇑*e*P **P** **21 31 42.6 -0.7**
comp=Z,16nm,0.8s,mb5.0
FWV Forest Hill 73.79 306 *e*P **P** **21 31 43.1 -0.6**
IMA2 Indian Mountai 73.95 357 *e*P **P** **21 31 44.7 0.0**
MDJ Mudanjiang 74.70 44 P **P** **21 31 48.7 -0.4**
MDJ PCP PcP 21 32 03.3 +0.1
MDJ AMB AMB
comp=Z,8.0nm,1.1s,mb4.6
MDJ AMB AMB
comp=Z,91nm,4.3s
MDJ LR LR
comp=N,268nm,18.6s,MS4.7
MDJ LR LR
comp=E,289nm,18.6s,MS4.7
MDJ LR LR
comp=Z,184nm,15.1s,MS4.5
DAWY Dawson 74.78 351⇑*e*P **P** **21 31 49.4 -0.1**
COLA College 74.82 355 *e*P **P** **21 31 49.9 +0.1**
COLA pmax pmax
comp=Z,12nm,0.9s,mb4.8
COLA College 74.82 355 *e*P **P** **21 31 49.9 +0.2**
comp=Z,12nm,0.9s,mb4.8
BLO Bloomington 76.24 310 *e*P **P** **21 31 54.9 -3.0**
BLO pmax pmax
comp=Z,35nm,0.7s,mb5.4
BLO Bloomington 76.24 310 *e*P **P** **21 31 54.9 -3.0**
comp=Z,35nm,0.7s,mb5.4
NJ2 Nanjing 76.34 60 *e*P **P** **21 31 59.2 +0.7**
NJ2 AP pP 21 32 03.9 +2.2
NJ2 XP sP 21 32 06.2 +3.3
NJ2 PP PP 21 34 52.3 +2.4
NJ2 S S 21 41 43.0 -0.5
NJ2 XS sS 21 41 51.0 +2.2
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
NJ2 AMB AMB
comp=Z,210nm,8.1s
NJ2 LR LR
comp=N,550nm,22.1s,MS5.2
NJ2 LR LR
comp=E,1μm,24.2s,MS5.2
NJ2 LR LR
comp=Z,340nm,21.4s,MS4.6
WCI Wyandotte Cave 76.72 309 P **P** **21 32 01.2 +0.6**
WCI pmax pmax
comp=Z,46nm,0.8s,mb5.5
WCI Wyandotte Cave 76.72 309 P **P** **21 32 01.2 +0.6**
comp=Z,46nm,0.8s,mb5.5
TTA Tatalina 77.17 358 *e*P **P** **21 32 03.4 +0.2**
INCN Inchon 77.76 51 *e*P **P** **21 32 05.6 -0.8**
comp=Z,23nm,0.9s,mb5.1
PMR Palmer 78.17 355 *e*P **P** **21 32 08.4 -0.3**
PMR pmax pmax
comp=Z,36nm,1.0s,mb5.3
PMR Palmer 78.17 355 *e*P **P** **21 32 08.4 -0.3**
comp=Z,36nm,1.0s,mb5.3
SSE Sheshan 78.49 59 P **P** **21 32 09.4 -1.1**
SSE AMB AMB
comp=Z,25nm,0.8s,mb5.2

SSE				AMB	AMB		
	comp=Z,108nm,5.0s						
SSE	**Sheshan**	**78.49**	**59**	P	**P**	**21 32 09.4**	**-1.1**
	comp=Z,25nm,0.8s,mb5.2						
EDM	**Edmonton**	**78.52**	**333**	*e*P	**P**	**21 32 08.0**	**-2.6**
SVW2	**Sparrevohn**	**79.00**	**358**	*e*P	**P**	**21 32 13.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**79.51**	**36***c*	*i*P	**P**	**21 32 15.6**	**-0.5**
YSS				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.5						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.8						
YSS	**Yuzh-Sakhalins**	**79.51**	**36**	*e*P	**P**	**21 32 15.0**	**-1.1**
	comp=Z,69nm,1.0s,mb5.5						
PLAL	**Pickwick Lake**	**79.94**	**307**	*e*P	**P**	**21 32 17.7**	**-0.7**
	comp=Z,14nm,0.8s,mb4.9						
PSI	**Prapat**	**79.96**	**95**	P	**P**	**21 32 17.1**	**-1.5**
	comp=Z,10.0nm,0.7s,mb4.8,baz=44,slow=5.0,SNR=5.2						
LRAL	**Lakeview Retre**	**80.58**	**305**	*e*P	**P**	**21 32 22.1**	**+0.3**
	comp=Z,28nm,0.9s,mb5.2						
LAO	**LASA Array**	**80.98**	**326**	*e*P	**P**	**21 32 24.9**	**+0.9**
	comp=Z,26nm,0.8s,mb5.2						
OXF	**Oxford**	**81.07**	**308**	*e*P	**P**	**21 32 25.4**	**+0.9**
OXF				pmax	pmax		
	comp=Z,68nm,1.2s,mb5.5						
OXF	**Oxford**	**81.07**	**308**	*e*P	**P**	**21 32 25.4**	**+1.0**
	comp=Z,68nm,1.2s,mb5.5						
EGMT	**Eagleton**	**81.40**	**328**	*e*P	**P**	**21 32 26.9**	**+0.7**
	comp=Z,51nm,0.9s,mb5.5						
ASAJ	**Asahikawa**	**81.59**	**38**	P	**P**	**21 32 25.8**	**-1.5**
	comp=Z,22nm,1.0s,mb5.0,baz=298,slow=8.6,SNR=12						
ASAJ	**Asahikawa**	**81.59**	**38**	P	**P**	**21 32 25.8**	**-1.4**
ASAJ				pmax	pmax		
	comp=Z,23nm,1.0s						
KSU1	**Kansas State U**	**81.98**	**315**	*e*P	**P**	**21 32 29.7**	**+0.3**
	comp=Z,53nm,0.9s,mb5.5						
RSSD	**Black Hills**	**81.99**	**323**	*e*P	**P**	**21 32 28.5**	**-0.8**
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
RSSD	**Black Hills**	**81.99**	**323**	*e*P	**P**	**21 32 28.5**	**-0.9**
	comp=Z,7.1nm,0.7s,mb4.7						
WALA	**Waterton Lakes**	**82.16**	**331**	*e*P	**P**	**21 32 29.9**	**-0.3**
	comp=Z,16nm,0.8s,mb5.0						
KDAK	**Kodiak Island**	**82.18**	**356**	P	**P**	**21 32 30.6**	**+0.2**
	comp=Z,18nm,0.8s,mb5.1,baz=33,slow=6.5,SNR=11						
GCMT	**Greycliff**	**83.16**	**327**	*e*P	**P**	**21 32 36.0**	**+0.6**
HRY	**Holter Researc**	**83.29**	**329**	*e*P	**P**	**21 32 36.4**	**+0.2**
MIAR	**Mount Ida**	**83.52**	**310**	*e*P	**P**	**21 32 37.9**	**+0.6**
MIAR				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.3						
MIAR	**Mount Ida**	**83.52**	**310**	*e*P	**P**	**21 32 37.9**	**+0.6**
	comp=Z,26nm,1.0s,mb5.3						
CHMT	**Chamberlain Mo**	**83.68**	**330**	*e*P	**P**	**21 32 37.8**	**-0.3**
BDFB	**Brasilia**	**83.83**	**244**	P	**P**	**21 32 40.2**	**+1.3**
	comp=Z,11nm,0.9s,mb5.0,baz=38,slow=4.2,SNR=12						
BDFB				LR	LR	22 06 51.6	
	comp=Z,166nm,21.2s,MS4.4,baz=46,slow=33						
NEW	**Newport**	**83.98**	**333**	*e*P	**P**	**21 32 40.0**	**+0.3**
NEW				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NEW	**Newport**	**83.98**	**333**	*e*P	**P**	**21 32 40.0**	**+0.3**
	comp=Z,5.7nm,0.7s,mb4.8						
MSO	**Missoula**	**84.02**	**330**	*e*P	**P**	**21 32 39.2**	**-0.6**
	comp=Z,10nm,1.3s,mb4.8						
BOZ	**Bozeman (W)**	**84.08**	**328**	*e*P	**P**	**21 32 40.9**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
BOZ	**Bozeman (W)**	**84.08**	**328**	*e*P	**P**	**21 32 40.9**	**+0.7**
	comp=Z,12nm,1.0s,mb5.0						
YMR	**Madison River**	**84.60**	**327**	P	**P**	**21 32 44.8**	**+2.0**
DLMT	**Dillon**	**84.70**	**328**	*e*P	**P**	**21 32 43.8**	**+0.4**
	comp=Z,20nm,1.0s,mb5.2						
YFT	**Old Faithful**	**84.73**	**327**	*e*P	**P**	**21 32 46.2**	**+2.7**
PHWY	**Pilot Hill**	**84.83**	**322**	*e*P	**P**	**21 32 44.4**	**+0.4**
FLWY	**Flagg Ranch**	**84.97**	**327**	*e*P	**P**	**21 32 44.0**	**-0.6**
	comp=Z,19nm,1.1s,mb5.1						
MAJO	**Matsushiro**	**85.03**	**45**	*e*P	**P**	**21 32 43.6**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.2						
MAJO	**Matsushiro**	**85.03**	**45**	*e*P	**P**	**21 32 43.6**	**-1.3**
	comp=Z,30nm,1.4s,mb5.2						
MAT	**Matsushiro**	**85.03**	**45**	P	**P**	**21 32 43.4**	**-1.6**
MAT	**Matsushiro**	**85.03**	**45**	*e*P	**P**	**21 32 43.0**	**-2.0**
MAT				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.1						
MAT	**Matsushiro**	**85.03**	**45**	*e*P	**P**	**21 32 43.0**	**-2.0**
	comp=Z,19nm,1.2s,mb5.1						
MJAR	**Matsushiro Arr**	**85.03**	**45**	P	**P**	**21 32 44.7**	**-0.2**
	comp=Z,16nm,1.0s,mb5.1,baz=316,slow=5.1,SNR=13						
MJAR	**Matsushiro Arr**	**85.03**	**45**	P	**P**	**21 32 44.7**	**-0.2**
IMW	**Indian Meadow**	**85.22**	**327**	*e*P	**P**	**21 32 46.0**	**+0.1**
	comp=Z,13nm,0.8s,mb5.1						
NLW	**Nelson Butte**	**85.24**	**334**	P	**P**	**21 32 46.6**	**+0.6**
MOOW	**Moose Ponds**	**85.26**	**326**	*e*P	**P**	**21 32 46.5**	**+0.4**
	comp=Z,6.0nm,0.9s,mb4.7						
OD2	**Odessa Site #2**	**85.28**	**333**	P	**P**	**21 32 47.0**	**+0.8**
LOHW	**Long Hollow**	**85.31**	**326**	*e*P	**P**	**21 32 43.9**	**-2.4**
	comp=Z,6.4nm,0.9s,mb4.8						
WTV	**Waterville**	**85.44**	**334**	P	**P**	**21 32 47.4**	**+0.4**
SNB	**Saturna Island**	**85.53**	**336**	P	**P**	**21 32 47.6**	**+0.1**
PDAR	**Pinedale Array**	**85.54**	**325**	P	**P**	**21 32 47.3**	**-0.2**
	comp=Z,2.0nm,0.5s,mb4.6,baz=34,slow=3.9,SNR=8.8						
PDAR				LR	LR	22 14 08.9	
	comp=Z,187nm,18.0s,MS4.5,baz=39,slow=38						
TPAW	**Teton Pass**	**85.56**	**326**	*e*P	**P**	**21 32 49.2**	**+1.6**
	comp=Z,9.5nm,1.0s,mb5.0						
EPH	**Ephrata**	**85.62**	**334**	P	**P**	**21 32 48.9**	**+1.0**
B05A	**Bryant**	**85.65**	**336**	⇓P	**P**	**21 32 47.3**	**-0.8**
	baz=85						
C05A	**Tolt Reservoir**	**86.02**	**335**	⇓P	**P**	**21 32 49.2**	**-0.7**
	baz=86,SNR=7.7						
GBL	**Gable Mountain**	**86.23**	**333**	P	**P**	**21 32 52.1**	**+1.2**
B04A	**Port Angeles**	**86.27**	**336**	⇓P	**P**	**21 32 51.5**	**+0.3**
	baz=86						
EBG	**Ellensburg**	**86.33**	**334**	P	**P**	**21 32 52.1**	**+0.6**
WMOK	**Wichita Mounta**	**86.35**	**314**	*e*P	**P**	**21 32 52.0**	**+0.5**
WMOK				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.3						
WMOK	**Wichita Mounta**	**86.35**	**314**	*e*P	**P**	**21 32 52.0**	**+0.5**
	comp=Z,22nm,1.0s,mb5.3						
HAWA	**Hanford**	**86.43**	**333**	*e*P	**P**	**21 32 52.2**	**+0.3**
	comp=Z,22nm,0.9s,mb5.4						
RSW	**Rattlesnake Hi**	**86.45**	**333**	P	**P**	**21 32 53.3**	**+1.3**
F08A	**Pendleton**	**86.68**	**332**	⇑P	**P**	**21 32 53.1**	**0.0**
	baz=86						
WPW	**White Pass**	**86.85**	**334**	P	**P**	**21 32 54.8**	**+0.9**
HLID	**Hailey**	**86.92**	**328**	*e*P	**P**	**21 32 55.2**	**+0.9**
	comp=Z,2.7nm,0.9s,mb4.5						
E05A	**Randle**	**87.04**	**335**	⇑P	**P**	**21 32 54.6**	**-0.3**
	baz=87						
HWUT	**Hardware Ranch**	**87.35**	**326**	*e*P	**P**	**21 32 56.2**	**-0.2**
	comp=Z,14nm,0.8s,mb5.2						
F05A	**White Salmon**	**87.53**	**334**	⇓P	**P**	**21 32 57.2**	**-0.1**
	baz=87						
H08A	**Prairie City**	**87.74**	**332**	⇑P	**P**	**21 32 58.3**	**0.0**
	baz=87						
I09A	**Lost Marbles R**	**87.86**	**331**	⇓P	**P**	**21 32 58.6**	**-0.3**
	baz=88						
I07A	**Izee**	**88.42**	**332**	⇑P	**P**	**21 33 02.0**	**+0.5**
	baz=88						
G04A	**Mulino**	**88.47**	**334**	⇓P	**P**	**21 33 02.0**	**+0.3**
	baz=88						
BGU	**Big Grassy Mou**	**88.54**	**326**	*e*P	**P**	**21 33 02.3**	**+0.2**
G03A	**Yamhill**	**88.64**	**335**	⇑P	**P**	**21 33 02.7**	**+0.1**
	baz=88						
M13A	**Montello**	**88.66**	**327**	⇑P	**P**	**21 33 03.3**	**+0.7**
	baz=88						
I06A	**Prineville**	**88.79**	**332**	⇓P	**P**	**21 33 04.4**	**+1.1**
	baz=88,SNR=8.6						
H04A	**Detroit Lake**	**88.83**	**334**	⇑P	**P**	**21 33 03.7**	**+0.3**
	baz=88						
SRU	**San Rafael**	**88.92**	**324**	*e*P	**P**	**21 33 03.7**	**-0.2**
SRU				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.4						
SRU	**San Rafael**	**88.92**	**324**	*e*P	**P**	**21 33 03.7**	**-0.2**
	comp=Z,12nm,0.6s,mb5.4						
M12A	**Wells**	**88.92**	**328**	⇓P	**P**	**21 33 05.0**	**+1.1**
	baz=89,SNR=11						
NLU	**North Lily Min**	**88.93**	**325**	*e*P	**P**	**21 33 02.7**	**-1.2**
DUG	**Dugway**	**89.05**	**326**	*e*P	**P**	**21 33 04.2**	**-0.3**
DUG				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.3						
DUG	**Dugway**	**89.05**	**326**	*e*P	**P**	**21 33 04.2**	**-0.3**
	comp=Z,13nm,0.8s,mb5.3						
N13A	**Wendover, West**	**89.09**	**327**	⇑P	**P**	**21 33 05.3**	**+0.6**
	baz=89						
K08A	**Mann Creek Ran**	**89.21**	**331**	⇑P	**P**	**21 33 05.6**	**+0.3**
	baz=89,SNR=6.6						
J06A	**Christmas Vall**	**89.37**	**332**	⇑P	**P**	**21 33 06.9**	**+0.9**
	baz=89						
N12A	**Clover Valley,**	**89.44**	**327**	⇑P	**P**	**21 33 07.6**	**+1.3**
	baz=89						
M10A	**I.L. Ranch, Tu**	**89.49**	**329**	⇓P	**P**	**21 33 07.5**	**+1.0**
	baz=89						
WVOR	**Wild Horse Val**	**89.52**	**331**	*e*P	**P**	**21 33 07.1**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.1						
WVOR	**Wild Horse Val**	**89.52**	**331**	*e*P	**P**	**21 33 07.1**	**+0.4**
	comp=Z,7.6nm,0.8s,mb5.1						
L08A	**Fields**	**89.62**	**330**	⇑P	**P**	**21 33 07.9**	**+0.8**
	baz=89,SNR=13						
J05A	**Fort Rock**	**89.73**	**333**	⇓P	**P**	**21 33 08.9**	**+1.2**
	baz=89,SNR=13						
K06A	**Valley Falls**	**89.80**	**332**	⇑P	**P**	**21 33 08.8**	**+0.8**
	baz=90						
I03A	**Eugene**	**89.83**	**334**	⇑P	**P**	**21 33 08.6**	**+0.5**
	baz=90						
M09A	**Marrel Ranch,**	**89.93**	**329**	⇑P	**P**	**21 33 09.7**	**+1.1**
	baz=90						
I02A	**Mapleton**	**89.98**	**335**	⇓P	**P**	**21 33 09.6**	**+0.8**
	baz=90						
JCT	**Junction City**	**90.08**	**311**	*e*P	**P**	**21 33 10.0**	**+0.7**
JCT				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.4						
JCT	**Junction City**	**90.08**	**311**	*e*P	**P**	**21 33 10.0**	**+0.6**
	comp=Z,19nm,1.0s,mb5.4						
L07A	**Adell**	**90.14**	**331**	⇓P	**P**	**21 33 10.9**	**+1.2**
	baz=90						
MSU	**Marysvale**	**90.15**	**324**	*e*P	**P**	**21 33 09.9**	**+0.2**
J03A	**Ideyld Park**	**90.25**	**334**	⇑P	**P**	**21 33 10.9**	**+0.8**
	baz=90						
M08A	**Happy Creek Ra**	**90.27**	**330**	⇑P	**P**	**21 33 11.0**	**+0.8**
	baz=90						
ANMO	**Albuquerque**	**90.28**	**318**	⇑*i*P	**P**	**21 33 11.5**	**+1.3**
ANMO	**Albuquerque**	**90.28**	**318**	*e*P	**P**	**21 33 11.2**	**+0.9**
	comp=Z,2.8nm,0.9s,mb4.6						
N09A	**Rock Creek Ran**	**90.45**	**329**	⇑P	**P**	**21 33 11.8**	**+0.7**
	baz=90						
J02A	**Umpqua**	**90.46**	**334**	⇑P	**P**	**21 33 11.7**	**+0.6**
	baz=90						
P12A	**McGill**	**90.55**	**327**	⇑P	**P**	**21 33 12.3**	**+0.8**
	baz=90,SNR=8.2						
M07A	**Soldier Meadow**	**90.62**	**330**	⇑P	**P**	**21 33 13.0**	**+1.1**
	baz=90						
L05A	**Lakeview**	**90.67**	**332**	⇑P	**P**	**21 33 12.9**	**+0.8**
	baz=90,SNR=10						
N08A	**GE Springer Mi**	**90.75**	**329**	⇑P	**P**	**21 33 13.4**	**+1.0**
	baz=90						
Q12A	**Willow Creek R**	**90.88**	**326**	⇓P	**P**	**21 33 14.0**	**+1.0**
	baz=91,SNR=8.0						
O09A	**Fish Creek Ran**	**90.90**	**328**	⇓P	**P**	**21 33 14.2**	**+1.1**
	baz=91						
L04A	**Klamath Falls**	**90.94**	**332**	⇓P	**P**	**21 33 13.6**	**+0.3**
	baz=91						
K02A	**Glendale**	**90.97**	**334**	⇓P	**P**	**21 33 14.0**	**+0.5**
	baz=91						
LAZ	**Ladron**	**91.05**	**319**	*e*P	**P**	**21 33 15.0**	**+1.2**
N07B	**Gerlach**	**91.07**	**330**	⇑P	**P**	**21 33 14.7**	**+0.8**
	baz=91						
K01A	**Sixes**	**91.26**	**334**	⇓P	**P**	**21 33 15.2**	**+0.4**
	baz=91						
M04C	**Macdoel**	**91.26**	**332**	⇑P	**P**	**21 33 15.6**	**+0.7**
	baz=91						
M06C	**Likely Place G**	**91.27**	**331**	⇓P	**P**	**21 33 15.4**	**+0.5**
	baz=91						
M05C	**Lookout**	**91.38**	**332**	⇓P	**P**	**21 33 16.1**	**+0.7**
	baz=91						
N06A	**Buffalo Meadow**	**91.43**	**330**	⇓P	**P**	**21 33 16.3**	**+0.7**
	baz=91,SNR=6.8						
L02A	**Cave Junction**	**91.55**	**334**	⇓P	**P**	**21 33 16.5**	**+0.4**
	baz=91						
O07A	**Toulon**	**91.57**	**330**	⇑P	**P**	**21 33 17.3**	**+1.1**
	baz=91						
YBH	**Yreka Blue Hor**	**91.61**	**333**	*e*P	**P**	**21 33 15.1**	**-1.3**
YBH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YBH	**Yreka Blue Hor**	**91.61**	**333**	*e*P	**P**	**21 33 15.1**	**-1.4**
	comp=Z,4.6nm,1.0s,mb4.8						
YBH	**Yreka Blue Hor**	**91.61**	**333**	⇓P	**P**	**21 33 16.9**	**+0.5**
	baz=91						
O06A	**Flanigan**	**91.93**	**330**	⇑P	**P**	**21 33 18.4**	**+0.5**
	baz=92						
M02C	**Callahan**	**91.97**	**333**	⇑P	**P**	**21 33 18.2**	**+0.2**
	baz=92						
HATC	**Hat Creek Radi**	**91.97**	**332**	⇑P	**P**	**21 33 18.7**	**+0.6**
	baz=92						
M01C	**Crescent City**	**92.00**	**334**	⇑P	**P**	**21 33 19.1**	**+0.9**
	baz=92						
MNTX	**Cornudas Mount**	**92.25**	**316**	*e*P	**P**	**21 33 19.2**	**-0.2**
	comp=Z,8.1nm,1.0s,mb5.0						
NVAR	**Mina Array Bea**	**92.83**	**328**	P	**P**	**21 33 23.1**	**+1.0**
	comp=Z,1.6nm,0.8s,mb4.5,baz=58,slow=2.2,SNR=5.0						
P05C	**Yuba Gap, Truc**	**92.98**	**330**	⇓P	**P**	**21 33 23.2**	**+0.4**
	baz=93						
S09A	**Goldfield**	**92.99**	**327**	⇓P	**P**	**21 33 22.7**	**-0.1**
	baz=93						
O02C	**Red Bluff**	**93.02**	**332**	⇑P	**P**	**21 33 23.2**	**+0.3**
	baz=93						
ORV	**Oroville**	**93.09**	**331**	⇓P	**P**	**21 33 23.2**	**-0.1**
	baz=93						
R06C	**Coleville**	**93.21**	**329**	⇓P	**P**	**21 33 24.1**	**+0.3**
	baz=93						
OHCM	**Honcut**	**93.28**	**331**	*e*P	**P**	**21 33 24.4**	**+0.3**
W14A	**Seligman**	**93.28**	**323**	⇑P	**P**	**21 33 25.0**	**+0.9**
	baz=93						
R05C	**Kirkwood Meado**	**93.30**	**330**	⇓P	**P**	**21 33 25.1**	**+0.9**
	baz=93						
X15A	**Humboldt**	**93.48**	**322**	⇑P	**P**	**21 33 25.7**	**+0.7**
	baz=93						
V12A	**Nelson**	**93.65**	**324**	⇑P	**P**	**21 33 26.6**	**+0.7**
	baz=93						
GRAC	**Grapevine Rang**	**93.67**	**327**	⇓P	**P**	**21 33 26.8**	**+0.8**
	baz=93						
X14A	**Yava**	**93.80**	**322**	⇓P	**P**	**21 33 27.2**	**+0.7**
	baz=94						
FURC	**Furnace Creek,**	**93.90**	**326**	⇑P	**P**	**21 33 27.7**	**+0.7**
	baz=94						
S06C	**San Francisco**	**93.92**	**329**	⇓P	**P**	**21 33 27.8**	**+0.7**
	baz=94						
X13A	**Yucca**	**94.14**	**323**	⇑P	**P**	**21 33 28.6**	**+0.5**
	baz=94						
CWC	**Cottonwood Cre**	**94.44**	**327**	⇑P	**P**	**21 33 29.6**	**+0.2**
	baz=94						
MPMC	**Manual Prospec**	**94.52**	**326**	⇑P	**P**	**21 33 30.5**	**+0.7**
	baz=94						
HELL	**Mitchell Peak,**	**94.62**	**328**	⇑P	**P**	**21 33 30.6**	**+0.3**
	baz=94						
Z14A	**Wintersburg**	**94.74**	**322**	⇑P	**P**	**21 33 31.3**	**+0.5**
	baz=94						
115A	**Sonoran Desert**	**94.94**	**321**	⇓P	**P**	**21 33 32.5**	**+0.7**
	baz=95						
IRM	**Iron Mountain**	**95.10**	**324**	⇓P	**P**	**21 33 33.0**	**+0.6**
	baz=95						
Y12C	**Blythe**	**95.15**	**323**	⇑P	**P**	**21 33 33.4**	**+0.6**
	baz=95						
PACP	**Pacheco Peak**	**95.24**	**330**	⇓P	**P**	**21 33 33.8**	**+0.6**
	baz=95						
ISA	**Isabella**	**95.27**	**327**	⇑P	**P**	**21 33 33.7**	**+0.4**
	baz=95						
BELC	**Belle Mtn.**	**95.61**	**324**	⇓P	**P**	**21 33 35.8**	**+1.0**
	baz=95						
PFO	**Pinyon Flat Ob**	**96.14**	**324**	⇑P	**P**	**21 33 38.1**	**+0.8**
	baz=96						
CPUP	**Villa Florida**	**97.43**	**242**	LR	LR	22 17 29.5	
	comp=Z,141nm,19.3s,MS4.5,baz=42,slow=35						
ASAR	**Alice Springs**	**122.98**	**94**	PKP	PKPdf	21 39 04.2	-1.5
	comp=Z,2.3nm,0.7s,baz=339,slow=2.2,SNR=19						
QSPA	**South Pole Qui**	**130.04**	**180**	*e*PKPdf	PKPdf	21 39 15.7	-3.5

*NIED **08** 21:21:00, 3260N×14190E, h5km, Mw3.8 Best double couple: M₀5.24000×10¹⁴ NP1:φs3.00000°, δ49.00000°, λ99.00000°. NP2:φs169.00000°, δ42.00000°, λ80.00000°.*
*IDC **08** 21:21:20.0±2.4, 3240N×14180E, h0km, mb3.8/3, mb1 3.8/5, mb1mx3.6/20, mbtmp3.9/5, ML3.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/32, Error ellipse: s-maj=65.4km s-min=20.1km az=58.0*
*JMA **08** 21:21:20.7±0.9, 3260N×14194E, h11km, M3.9*
*ISCJB **08** 21:21:21.2±0.8, 3258N±005×14207E±009, h33km, mb3.8/3, Error ellipse: s-maj=11.6km s-min=6.5km az=143.1*
ISC 08 21:21:23.7±0.8**, 3257N**±005×**14199E**±009**, h35**km**, n16, σ1ˢ06**/25**, mb3.8**/3**, 1C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.91**	**287**	P	**Pn**	**21 21 52.9**	**-0.8**
JHJ	**Hachijo jima 2**	**1.94**	**287**	Pn	**Pn**	**21 21 52.9**	**-1.2**
	42nm,0.3s,baz=273,slow=20,SNR=19						
JHJ				Sn	**Sn**	**21 22 16.6**	**-0.6**
	94nm,0.3s,baz=85,slow=21,SNR=6.2						
BSO1	**Boso 1**	**2.24**	**338**	P	**Pn**	**21 21 57.8**	**-0.5**
BSO1				*e*S	**Sn**	**21 22 25.8**	**+1.1**
BSO3	**Boso 3**	**2.54**	**331**	P	**Pn**	**21 22 04.6**	**+2.2**
JYN	**Shimob**	**4.09**	**317**	P	**Pn**	**21 22 24.6**	**+1.0**
JYN				*e*S	**Sn**	**21 23 13.5**	**+3.3**
JRY	**Ryogami san**	**4.28**	**324**	P	**Pn**	**21 22 26.7**	**+0.4**
JRY				S	**Sn**	**21 23 15.0**	**-0.1**
JAG	**Ashikaga**	**4.38**	**332**	P	**Pn**	**21 22 27.9**	**+0.3**
JAG				*e*S	**Sn**	**21 23 16.2**	**-1.2**
MJAR	**Matsushiro Arr**	**5.04**	**323**	Pn	**Pn**	**21 22 37.5**	**+0.7**
	1.6nm,0.3s,baz=157,slow=13,SNR=6.8						
MAT	**Matsushiro**	**5.04**	**323**	P	**Pn**	**21 22 37.4**	**+0.6**
MAT				*e*S	**Sn**	**21 23 32.9**	**-0.9**
JMM	**Marumori**	**5.37**	**350**	P	**Pn**	**21 22 40.8**	**-0.5**
JMM				S	**Sn**	**21 23 40.2**	**-1.7**
CBIJ	**Chichi jima**	**5.46**	**178**	Pn	**Pn**	**21 22 41.5**	**-0.9**
	15nm,0.3s,baz=315,slow=19,SNR=5.7						
CBIJ				Sn	**Sn**	**21 23 39.4**	**-4.7**
	14nm,0.3s,baz=287,slow=19,SNR=3.6						
CBIJ				LR	LR	21 24 26.2	
	comp=Z,129nm,19.4s,baz=213,slow=35						
JMK	**Ichinoseki**	**6.40**	**355**	P	**Pn**	**21 22 54.6**	**-0.8**
JMK				*e*S	**Sn**	**21 24 03.1**	**-4.1**
SONM	**Songino Array**	**30.85**	**310**	P	**P**	**21 27 38.1**	**+1.7**
	0.9nm,0.5s,mb3.8,baz=113,slow=9.1,SNR=11						
PPR	**Puerto Princes**	**31.24**	**229**	⇑*i*P	**P**	**21 27 45.5**	**+5.6**
MKAR	**Makanchi Array**	**47.00**	**306**	P	**P**	**21 29 52.1**	**+0.7**
	1.1nm,0.4s,mb4.1,baz=88,slow=7.8,SNR=5.3						
ASAR	**Alice Springs**	**56.45**	**189**	P	**P**	**21 31 01.8**	**-0.1**
	0.2nm,0.4s,mb3.5,baz=3.5,slow=7.3,SNR=7.4						

*MAN **08** 21:25:12.0, 665N×12371E, h1km, mb4.7, ML5.4, MS2.1*
MAN F COTABATO CITY; PALIMBANG SULTAN KUDARAT - INTENSITY III.
*IDC **08** 21:25:14.0±0.7, 691N×12395E, h0km, mb4.4/15, mb1 4.4/15, mb1mx4.3/21, mbtmp4.4/15, MS4.1/12, Ms1 4.1/12, ms1mx3.8/31, Error ellipse: s-maj=31.5km s-min=13.6km az=74.0*
*ISCJB **08** 21:25:18.0±0.6, 683N±004×12379E±003, h41km±5km, mb4.5/31, MS4.1/13, Error ellipse: s-maj=6.6km s-min=4.7km az=66.9*
*NEIC **08** 21:25:20.7±1.1, 685N×12389E, h54km±10km, mb4.8/16, Error ellipse: s-maj=10.4km s-min=7.0km az=61.0*
NEIC Felt [III PIVS] at Cotabato. Felt at Palimbang.
*BJI **08** 21:25:20.6, 676N×12382E, h62km, mB4.5, mb4.7, Ms4.0, Msz4.0*
*HRVD **08** 21:25:20.7±0.3, 698N×12378E, h34km±1km, MW5.0/57, Centroid moment Tensor Solution. LP body waves: s29,c32;Mantle waves: s57,c83; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.51±.26; Mθθ0.75±.14; Mφφ-4.26±.17; Mrθ-1.08±.15; Mθφ0.31±.10; Mφr-1.53±.18; Best double couple: M₀4.36000×10¹⁶ NP1:φs338.00000°, δ38.00000°, λ60.00000°. NP2:φs194.00000°, δ58.00000°, λ111.00000°. Principal axes: T 4.1670, Plg69.0000°, Azm150.0000°; N 0.3870, Plg18.0000°, Azm2.0000°; P -4.5520, Plg11.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 08 21:25:19.6±0.5**, 685N**±004×**12382E**±003**, h37**km±5km**, n94, σ1ˢ23**/101**, mb4.5**/31**, MS4.1**/13**, 3C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.56**	**49**	⇓*i*P	**Pn**	**21 25 27.1**	**-3.9**
CTBH				*i* S	**Sn**	**21 25 34.5**	**-4.6**
PAGZ	**Pagadian**	**1.08**	**336**	*e*P	**Pn**	**21 25 35.1**	**-3.2**
PAGZ				*e*S	**Sn**	**21 25 51.5**	**-0.5**
KCP	**Kidapawan**	**1.27**	**83**	*e*P	**Pn**	**21 25 40.0**	**-0.8**
KCP				*i* S	**Sn**	**21 25 58.0**	**+1.4**
IPIL	**Ipil**	**1.55**	**307**	⇑*i*P	**Pn**	**21 25 40.2**	**-4.5**
IPIL				*i* S	**Sn**	**21 26 03.7**	**+0.1**
IPIL	**Ipil**	**1.55**	**307**	*e*P	**Pn**	**21 25 43.0**	**-1.8**
IPIL				*e*S	**Sn**	**21 26 02.9**	**-0.7**
BUKP	**Musuan**	**1.60**	**50**	*e*P	**Pn**	**21 25 44.3**	**-1.1**
BUKP				*e*S	**Sn**	**21 26 06.2**	**+1.4**
DAV	**Davao City (W)**	**1.76**	**83**	*e*Pn	**Pn**	**21 25 47.9**	**+0.3**
DCPH	**Dipolog City**	**1.78**	**345**	⇓*i*P	**Pn**	**21 25 46.9**	**-1.0**
CGP	**Cagayan de Oro**	**1.81**	**28**	⇑*i*P	**Pn**	**21 25 48.4**	**+0.1**
CGP				*i* S	**Sn**	**21 26 10.5**	**+0.4**
MATI	**Mati**	**2.42**	**88**	*e*P	**Pn**	**21 25 55.9**	**-0.7**
SNPH	**Sibulan**	**2.54**	**347**	*i* P	**Pn**	**21 25 58.5**	**+0.2**
SNPH	**Sibulan**	**2.54**	**347**	⇓*e*P	**Pn**	**21 25 58.5**	**+0.2**
SNPH				*i* S	**Sn**	**21 26 32.5**	**+4.5**
BUTP	**Butuan**	**2.76**	**40**	*e*P	**Pn**	**21 26 05.2**	**+3.9**
SCPH	**Surigao**	**3.34**	**29**	*e*P	**Pn**	**21 26 13.1**	**+3.7**
MSLP	**Maasin**	**3.42**	**17**	*e*P	**Pn**	**21 26 12.4**	**+2.0**
LLP	**Lapu-Lapu**	**3.44**	**2**	*e*P	**Pn**	**21 26 09.5**	**-1.3**
LLP				*e*S	**Sn**	**21 26 45.8**	**-4.5**
GUIM	**Jordan**	**3.94**	**342**	*e*P	**Pn**	**21 26 17.5**	**-0.1**
GUIM				*e*S	**Sn**	**21 27 02.2**	**-0.4**
PLP	**Palo**	**4.43**	**15**	*i* P	**Pn**	**21 26 23.9**	**-0.5**
RCP	**Roxas**	**4.80**	**347**	⇓*e*P	**Pn**	**21 26 31.7**	**+2.4**
CUYO	**Cuyo Island**	**4.84**	**325**	*e*P	**Pn**	**21 26 29.5**	**-0.4**
KALP	**Kalibo**	**5.01**	**343**	*e*P	**Pn**	**21 26 38.5**	**+6.2**
OTRP	**Odiongan**	**5.75**	**342**	*e*P	**Pn**	**21 26 43.3**	**+0.8**
ENPP	**El Nido**	**6.13**	**315**	*e*P	**Pn**	**21 26 46.6**	**-1.0**
BUSP	**Coron**	**6.24**	**325**	*e*P	**Pn**	**21 26 48.1**	**-1.1**
BATP	**Bataraza**	**6.27**	**288**	*e*P	**Pn**	**21 26 47.7**	**-1.9**
TSM	**Tawau**	**6.44**	**247**	P	**Pn**	**21 26 52.8**	**+0.8**
KKM	**Kota Kinabalu**	**7.60**	**264**	P	**Pn**	**21 27 12.0**	**+4.1**
KKM	**Kota Kinabalu**	**7.60**	**264**	*e*P	**Pn**	**21 27 09.1**	**+1.3**
KSM	**Kuching**	**14.49**	**249**	P	**Pn**	**21 28 51.1**	**+9.0**
QIZ	**Qiongzhong**	**18.20**	**313**	P	**Pn**	**21 29 30.2**	**+0.9**
QIZ				S	**S**	**21 32 47.8**	**-7.9**
QIZ				SS		21 33 08.7	
QIZ				AMB	AMB		
	comp=Z,21nm,1.4s						
QIZ				AMB	AMB		
	comp=Z,173nm,6.7s						
QIZ				LR	LR		
	comp=E,425nm,14.6s						
QIZ				LR	LR		
	comp=Z,694nm,14.6s						
QIZ	**Qiongzhong**	**18.20**	**313**	*e*P	**Pn**	**21 29 29.9**	**+0.6**
	comp=Z,38nm,1.5s						
UBT	**Ubonrachathani**	**20.24**	**296**	⇑P	**P**	**21 29 54.0**	**+2.5**
JOW	**Kunigami**	**20.32**	**12**	LR	LR	21 38 19.4	
	comp=Z,409nm,19.3s,MS3.8,baz=18,slow=39						
KGM	**Kluang**	**20.99**	**258**	P	**P**	**21 30 02.3**	**+2.6**
KAKA	**Kakadu**	**21.24**	**156**	*e*P	**P**	**21 30 02.0**	**-0.3**
	comp=Z,7.8nm,1.0s,mb4.0						
KAKA	**Kakadu**	**21.24**	**156**	*e*P	**P**	**21 30 02.0**	**-0.3**
	comp=Z,42nm,0.7s,mb4.9						
KKTK	**Khon Kaen**	**22.61**	**296**	PG	**P**	**21 30 12.5**	**-4.4**
KKTK				PN	**P**	**21 30 17.0**	**+0.1**
IPM	**Ipoh**	**22.81**	**265**	P	**P**	**21 30 23.4**	**+4.3**
NST	**Nakhon Sawan**	**24.81**	**293**	P	**P**	**21 30 41.0**	**+2.9**
FITZ	**Fitzroy Crossi**	**24.86**	**176**	*e*P	**P**	**21 30 38.3**	**-0.3**
	comp=Z,10nm,1.4s,mb4.2						
FITZ	**Fitzroy Crossi**	**24.86**	**176**	*e*P	**P**	**21 30 38.3**	**-0.3**
	comp=Z,9.3nm,0.7s,mb4.4						
FITZ	**Fitzroy Crossi**	**24.86**	**176**	P	**P**	**21 30 38.2**	**-0.4**
	comp=Z,5.2nm,0.8s,mb4.1,baz=18,slow=12,SNR=9.8						
PSI	**Prapat**	**25.13**	**262**	P	**P**	**21 30 43.4**	**+2.4**
	comp=Z,11nm,1.0s,mb4.3,baz=24,slow=10.0,SNR=3.0						
PSI	**Prapat**	**25.13**	**262**	P	**P**	**21 30 43.4**	**+2.4**
WHN	**Wuhan**	**25.19**	**341**	*e*P	**P**	**21 30 44.0**	**+2.4**
NANT	**Nan**	**25.44**	**300**	P	**P**	**21 30 47.0**	**+3.1**
CHTO	**Chiang Mai**	**26.97**	**299**	*e*P	**P**	**21 30 53.1**	**-4.5**
	comp=Z,20nm,1.3s,mb4.5						
KMI	**Kunming**	**27.14**	**314**	P	**P**	**21 31 01.2**	**+2.0**
KMI				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.2						
KMI				AMB	AMB		
	comp=Z,71nm,5.1s						
KMI				LR	LR		
	comp=E,288nm,22.0s						
KMI				LR	LR		
	comp=Z,546nm,25.6s,MS4.0						
KMI	**Kunming**	**27.14**	**314**	P	pP	21 31 15.5	+5.8
	comp=Z,13nm,1.6s						
KMI				PP		21 31 43.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KMI				PPP		21 31 58.1	
KMI				S	S	21 35 30.4	-4.7
KMI				sS	sS	21 35 44.3	-8.2
KMI				SS		21 36 39.9	
KMI				SSS		21 36 57.1	
KMI				LR	LR		
	comp=Z,550nm,25.6s,MS4.0						
WRAB	Tennant Creek	28.56	159	eP	P	21 31 10.5	-1.4
	comp=Z,48nm,1.3s,mb5.1						
WB2	Warramunga Arr	28.57	159	eP	P	21 31 10.0	-2.0
WB2	Warramunga Arr	28.57	159	eP	P	21 31 10.1	-1.9
AS31	Alice Springs	31.89	162	eP	P	21 31 41.5	+0.2
ASAR	Alice Springs	31.89	162	P	P	21 31 41.4	0.0
	comp=Z,1.3nm,0.6s,mb3.9,baz=351,slow=6.7,SNR=14						
ASAR				PcP	PcP	21 34 30.9	-0.3
	comp=Z,0.7nm,0.5s,baz=348,slow=2.7,SNR=5.4						
ASPA	Alice Springs	31.89	162	eP	P	21 31 41.5	+0.2
ASPA	Alice Springs	31.89	162	eP	P	21 31 41.6	+0.3
MJAR	Matsushiro Arr	32.34	22	P	P	21 31 45.1	-0.2
	comp=Z,1.5nm,0.8s,mb3.9,baz=168,slow=12,SNR=3.0						
MJAR				LR	LR	21 43 27.2	
	comp=Z,247nm,21.3s,MS3.9,baz=225,slow=34						
LZH	Lanzhou	34.37	331	eP	P	21 32 03.2	+0.2
LZH				AP	pP	21 32 15.1	+1.6
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
MDJ	Mudanjiang	37.95	7	P	P	21 32 35.3	+1.7
MDJ				AMB	AMB		
	comp=Z,15nm,0.6s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,37nm,4.9s						
MDJ	Mudanjiang	37.95	7	eP	P	21 32 34.1	+0.6
	comp=Z,12nm,0.7s,mb4.8						
NWAO	Narrogin (SRO)	40.05	189	P	P	21 32 52.1	+1.0
	comp=Z,8.2nm,0.9s,mb4.4,baz=1.2,slow=6.9,SNR=6.0						
STKA	Stephens Creek	42.08	157	eP	P	21 33 08.1	+0.3
	comp=Z,4.4nm,1.0s,mb4.0						
STKA	Stephens Creek	42.08	157	eP	P	21 33 08.2	+0.4
	comp=Z,15nm,0.7s,mb4.7						
STKA	Stephens Creek	42.08	157	P	P	21 33 08.8	+1.0
	comp=Z,20nm,0.7s,mb4.8,baz=329,slow=7.6,SNR=26						
STKA				LR	LR	21 52 45.6	
	comp=Z,207nm,18.5s,MS4.0,baz=24,slow=39						
STKA	Stephens Creek	42.08	157	eP	P	21 33 07.8	-0.1
ULN	Ulaanbaatar	43.30	344	eP	P	21 33 17.2	-0.5
	comp=Z,3.3nm,0.9s,mb4.1						
SONM	Songino Array	43.46	343	P	P	21 33 20.2	+1.2
	comp=Z,1.0nm,0.8s,mb3.6,baz=166,slow=8.7,SNR=4.4						
SONM				LR	LR	21 53 20.3	
	comp=Z,180nm,19.4s,MS4.0,baz=151,slow=39						
TLY	Talaya	47.70	343	eP	P	21 33 51.9	-0.6
	comp=Z,4.1nm,0.8s,mb4.5						
MKAR	Makanchi Array	53.36	325	P	P	21 34 36.1	+0.9
	comp=Z,1.9nm,0.7s,mb4.1,baz=124,slow=7.3,SNR=12						
AAK	Ala-Archa	56.11	318	eP	P	21 35 00.3	+5.2
	comp=Z,13nm,1.3s,mb4.8						
KURK	Kurchatov	57.57	328	eP	P	21 35 05.5	0.0
	comp=Z,16nm,1.0s,mb5.0						
BVAR	Borovoye Array	63.14	327	P	P	21 35 43.8	+0.2
	comp=Z,6.6nm,0.9s,mb4.8,baz=133,slow=11,SNR=19						
BRVK	Borovoye	63.21	327	eP	P	21 35 43.7	-0.3
	comp=Z,7.0nm,0.8s,mb4.8						
CHKZ	Chkalovo	63.32	328	eP	P	21 35 43.8	-0.9
	comp=Z,11nm,1.2s,mb4.9						
AKTK	Aktyubinsk	69.43	321	P	P	21 36 24.4	+0.6
AKTK				LR	LR	22 08 54.9	
AKTO	Aktyubinsk	69.43	321	P	P	21 36 24.4	+0.6
	comp=Z,4.4nm,0.6s,mb4.5,baz=96,slow=8.9,SNR=12						
AKTO				LR	LR	22 08 54.9	
	comp=Z,203nm,18.6s,MS4.4,baz=111,slow=38						
ARU	Arti	70.77	328	eP	P	21 36 28.8	-3.3
	comp=Z,12nm,1.0s,mb4.8						
GNI	Garni	77.27	310	LR	LR	22 15 32.3	
	comp=Z,78nm,20.5s,MS4.0,baz=227,slow=39						
KIV	Kislovodsk	78.90	313	P	P	21 37 14.5	-4.5
	comp=Z,12nm,1.1s,mb4.7						
POHA	Pohakuloa	78.94	71	eP	P	21 37 19.3	+0.1
	comp=Z,1μm,0.7s						
MALT	Malatya	82.19	308	P	P	21 37 37.1	+0.4
MMAI	Mount Meron Ar	84.99	303	LR	LR	22 16 43.6	
	comp=Z,46nm,18.1s,MS3.9,baz=180,slow=36						
JOF	Joensuu	85.10	333	ep	P	21 37 49.3	-2.3
BR131	Keskin Array S	85.81	309	eP	P	21 37 54.7	-0.5
	comp=Z,3.6nm,0.9s,mb4.6						
BRTR	Keskin Array B	85.81	309	P	P	21 37 56.0	+0.9
	comp=Z,2.7nm,1.0s,mb4.4,baz=104,slow=5.2,SNR=9.3						
ARCES	ARCESS Array B	86.53	340	P	P	21 37 57.8	-0.9
	comp=Z,3.7nm,1.0s,mb4.6,baz=30,slow=5.6,SNR=4.9						
ARCES				LR	LR	22 22 48.7	
	comp=Z,126nm,18.6s,MS4.3,baz=85,slow=40						
VNDA	Vanda	86.88	172	LR	LR	22 16 09.2	
	comp=Z,104nm,20.3s,MS4.2,baz=274,slow=35						
KAF	Kangasniemi	87.50	332	ep	P	21 38 01.4	-2.0
	comp=Z,3.5nm,0.6s,mb4.8,baz=76,slow=4.4						
AKASG	Malin Array Be	87.66	321	P	P	21 38 03.2	-1.0
	comp=Z,1.7nm,0.6s,mb4.5,baz=67,slow=5.1,SNR=7.5						
FINES	FINESS Array B	87.73	332	P	P	21 38 03.5	-1.0
	comp=Z,2.1nm,0.7s,mb4.5,baz=76,slow=8.0,SNR=9.4						
FINES				LR	LR	22 21 29.2	
	comp=Z,91nm,18.3s,MS4.2,baz=203,slow=38						
FINES	FINESS Array B	87.73	332	P	P	21 38 03.5	-1.0
FINES				LR	LR	22 21 29.2	
PPT	Papeete	88.82	108	LR	LR	22 10 19.5	
	comp=Z,146nm,20.0s,MS4.4,baz=309,slow=30						
SUW	Suwalki	90.72	325	eP	P	21 38 16.9	-1.7
	comp=Z,15nm,0.8s,mb5.4						
NOA	NORSAR Array B	94.72	333	P	P	21 38 35.5	-1.5
	comp=Z,1.1nm,0.8s,mb4.3,baz=76,slow=4.3,SNR=3.8						
NOA				LR	LR	22 24 31.8	
	comp=Z,120nm,18.2s,MS4.4,baz=0.0,slow=38						

*NEIC **08** 21:32:09.4, 3909S×17496E, h220km, MG3.9(WEL), After WEL.*

WEL 08 21:32:10.3±0.3**, 3915S×17494E, h212**km±2km**, ML3.9**/10**, 3C-1D, Error ellipse: s-maj=2.5km s-min=2.1km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	Vera Road	0.14	280	eP	Pn	21 32 37.5	-0.5
VRZ				S	S	21 32 58.9	-0.7
VRZ	Vera Road	0.14	280	PN	Pn	21 32 37.5	-0.5
VRZ				SN	S	21 32 58.9	-0.6
TWVZ	Taurewa	0.40	79	P	Pn	21 32 38.1	-0.4
TWVZ	Taurewa	0.40	79	PN	Pn	21 32 38.1	-0.4
TWVZ				SN	S	21 32 59.4	-1.0
WPVZ	Whakapapa	0.47	97	P	Pn	21 32 38.7	0.0
WPVZ	Whakapapa	0.47	97	PN	Pn	21 32 38.7	0.0
FWVZ	Far West T-bar	0.49	103	P	Pn	21 32 38.8	0.0
FWVZ	Far West T-bar	0.49	103	PN	Pn	21 32 38.8	0.0
FWVZ				SN	S	21 33 00.6	-0.3
WNVZ	Wahianoa	0.54	109	P	Pn	21 32 39.1	+0.1
WNVZ	Wahianoa	0.54	109	PN	Pn	21 32 39.1	+0.2
TUVZ	Tukino	0.57	102	P	Pn	21 32 39.1	0.0
TUVZ	Tukino	0.57	102	PN	Pn	21 32 39.1	+0.1
WAZ	Wanganui	0.61	177	eP	Pn	21 32 39.7	+0.5
WAZ	Wanganui	0.61	177	PN	Pn	21 32 39.6	+0.4
WAZ				SN	S	21 33 02.3	+0.6
NEZ	North Egmont	0.67	259	P	Pn	21 32 39.2	-0.3
NEZ	North Egmont	0.67	259	PN	Pn	21 32 38.9	-0.5
NRZ	Ngariki Road	0.80	256	P	Pn	21 32 40.0	-0.2
NRZ	Ngariki Road	0.80	256	PN	Pn	21 32 40.0	-0.1
TSZ	Takapari Road	1.20	139	P	Pn	21 32 43.0	+0.3
TSZ	Takapari Road	1.20	139	PN	Pn	21 32 43.1	+0.4
TSZ				SN	S	21 33 07.6	-0.4
BKZ	Black Stump Fm	1.21	91	eP	Pn	21 32 41.6	-1.2
BKZ	Black Stump Fm	1.21	91	PN	Pn	21 32 42.1	-0.6
BKZ				SN	S	21 33 06.8	-1.3
MRZ	Mangatainoka R	1.59	162	P	Pn	21 32 45.6	-0.2
MRZ	Mangatainoka R	1.59	162	PN	Pn	21 32 45.6	-0.2
MRZ				SN	S	21 33 12.6	-0.9
KIW	Kapiti Island	1.71	181	P	Pn	21 32 46.7	-0.2
KIW	Kapiti Island	1.71	181	PN	Pn	21 32 46.7	-0.2
PXZ	Pawanui	1.73	121	⇓PN	Pn	21 32 47.0	-0.1
PXZ				SN	S	21 33 15.4	-0.4
DUWZ	D'Urville Isla	1.83	205	⇑PN	Pn	21 32 47.6	-0.4
DUWZ				SN	S	21 33 16.2	-1.3
BFZ	Birch Farm	1.83	147	eP	Pn	21 32 47.7	-0.4
BFZ	Birch Farm	1.83	147	PN	Pn	21 32 47.8	-0.3
BFZ				SN	S	21 33 16.6	-1.0
URZ	Urewera	1.92	63	eP	Pn	21 32 46.5	-2.4
URZ	Urewera	1.92	63	PN	Pn	21 32 46.5	-2.4
MTW	Mount Morrison	2.05	168	P	Pn	21 32 49.5	-0.7
MTW	Mount Morrison	2.05	168	PN	Pn	21 32 49.5	-0.7
MRW	Makara Radio	2.08	185	P	Pn	21 32 50.1	-0.5
MRW	Makara Radio	2.08	185	PN	Pn	21 32 50.0	-0.5
MRW				SN	S	21 33 20.6	-1.4
TCW	Tory Channel	2.12	194	P	Pn	21 32 50.7	-0.2
TCW	Tory Channel	2.12	194	PN	Pn	21 32 50.6	-0.4
SNZO	South Karori	2.16	185	P	Pn	21 32 50.7	-0.7
SNZO	South Karori	2.16	185	PN	Pn	21 32 50.7	-0.7
MWZ	Matawai	2.18	69	eP	Pn	21 32 49.6	-2.0
MWZ	Matawai	2.18	69	PN	Pn	21 32 49.2	-2.4
PAWZ	Paruwai Farm	2.26	171	⇑PN	Pn	21 32 51.7	-0.7
PAWZ				SN	S	21 33 23.8	-1.5
MSWZ	Moikau Station	2.27	174	P	Pn	21 32 51.8	-0.7
MSWZ	Moikau Station	2.27	174	PN	Pn	21 32 51.8	-0.7
NNZ	Nelson	2.39	210	P	Pn	21 32 52.7	-1.0
NNZ	Nelson	2.39	210	⇑PN	Pn	21 32 52.7	-1.0
NNZ				SN	S	21 33 26.2	-1.5
QRZ	Quartz Range	2.50	227	P	Pn	21 32 52.9	-2.0
BSWZ	Blackbirch Sta	2.69	197	P	Pn	21 32 56.5	-0.5
PUZ	Puketiti	2.81	69	eP	Pn	21 32 55.4	-3.0
THZ	Tophouse	3.04	210	P	Pn	21 32 59.6	-1.4
MXZ	Matakaoa Point	3.09	60	eP	Pn	21 32 58.7	-2.8
KHZ	Kahutara	3.43	198	P	Pn	21 33 04.5	-1.1
DSZ	Denniston Nort	3.53	222	eP	Pn	21 33 04.4	-2.4
LTZ	Lake Taylor	4.15	208	eP	Pn	21 33 12.4	-2.0
MQZ	McQueen's Vall	4.87	200	eP	Pn	21 33 20.1	-3.2
RPZ	Rata Peaks	5.42	211	P	Pn	21 33 27.2	-3.0
FOZ	Fox Glacier	5.92	220	eP	Pn	21 33 32.2	-4.5
LBZ	Lake Benmore	6.32	213	eP	Pn	21 33 38.3	-3.6
ODZ	Otahua Downs	6.70	207	eP	Pn	21 33 44.7	-2.0

*IDC **08** 21:40:42.5±2.8, 3382N×8707E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.7/22, mbtmp3.7/9, ML3.1/1, Error ellipse: s-maj=53.3km s-min=33.4km az=142.0*
*NEIC **08** 21:40:47.9±0.5, 3428N×8707E, h10km, mb3.8/3, Error ellipse: s-maj=14.4km s-min=5.6km az=92.0*
*ISCJB **08** 21:40:49.2±1.3, 3422N±007×871E±01, h48km±18km, mb3.6/8, Error ellipse: s-maj=19.1km s-min=11.0km az=10.4*

ISC 08 21:40:51.2±0.9**, 3425N**±006×**871E**±01**, h49**km±13km**, n25,** σ**0.73**/25**, mb3.6**/8**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	Gumba	6.41	190	eP	Pn	21 42 24.0	+1.0
	27nm,0.6s						
GKN	Gorkha	6.58	200	eP	Pn	21 42 25.2	-0.2
KKN	Kakani	6.63	194	eP	Pn	21 42 26.3	+0.3
	11nm,0.6s						
PKI	Pulchoki	6.82	193	eP	Pn	21 42 28.2	-0.4
DMN	Daman	6.84	195	eP	Pn	21 42 28.7	-0.2
	12nm,0.6s						
KOLN	Koldanda	7.13	206	eP	Pn	21 42 32.6	-0.3
	15nm,1.1s						
AAK	Ala-Archa	12.96	314	P	Pn	21 43 52.6	+0.1
	4.8nm,1.0s						
MKAR	Makanchi Array	13.05	345	Pn	Pn	21 43 53.8	-0.1
	0.1nm,0.3s,baz=169,slow=14,SNR=10						
KURK	Kurchatov	17.59	342	eP	Pn	21 44 52.4	-0.3
	6.3nm,1.0s						
ZAL	Zalesovo	19.75	356	P	Pn	21 45 17.7	-1.1
	1.6nm,0.3s,baz=112,slow=19,SNR=4.0						
ZAL	Zalesovo	19.75	356	P	Pn	21 45 17.7	-1.1
SONM	Songino Array	19.81	41	P	Pn	21 45 18.8	-0.6
	2.0nm,1.0s,baz=235,slow=11,SNR=9.1						
ULN	Ulaanbaatar	20.19	42	eP	P	21 45 22.4	+0.8
	4.8nm,1.0s						
BVAR	Borovoye Array	22.24	333	P	P	21 45 44.5	+0.8
	0.4nm,0.4s,mb3.2,baz=141,slow=9.6,SNR=6.2						
BRVK	Borovoye	22.30	333	eP	P	21 45 44.5	+0.2
	4.7nm,1.1s,mb3.8						
AKTK	Aktyubinsk	26.69	316	P	P	21 46 26.0	+0.4
AKTO	Aktyubinsk	26.69	316	P	P	21 46 26.0	+0.4
	0.6nm,0.5s,mb3.4,baz=95,slow=12,SNR=2.3						
AKASG	Malin Array Be	44.59	310	P	P	21 48 58.0	-0.4
	0.2nm,0.3s,mb3.5,baz=83,slow=6.5,SNR=3.7						
AKASG	Malin Array Be	44.59	310	P	P	21 48 58.0	-0.4
JOF	Joensuu	44.68	327	ep	P	21 49 02.0	+2.9
	1.8nm,0.5s,mb4.2						
KEV	Kevo	48.02	336	ep	P	21 49 29.7	+4.3
NB2	NORSAR Subarra	54.02	324	P	P	21 50 09.6	-0.8
	comp=Z,2.4nm,0.9s,mb4.1,baz=83,slow=7.4						
NOA	NORSAR Array B	54.02	324	P	P	21 50 09.9	-0.5
	comp=Z,2.4nm,1.0s,mb4.1,baz=83,slow=7.4,SNR=4.5						
GERES	GERESS Array B	54.79	309	P	P	21 50 15.8	-0.2
	comp=Z,0.4nm,0.6s,mb3.6,baz=46,slow=4.2,SNR=4.0						
TORD	Torodi Ar. Bea	79.00	278	P	P	21 52 48.8	-1.0
	comp=Z,0.3nm,0.6s,mb3.4,baz=44,slow=6.0,SNR=4.1						

*CSEM **08** 21:42:08.4±0.1, 3933N×2688E, h5km, MD3.9, Error ellipse: s-maj=1.6km s-min=1.1km az=179.0*
*ISK **08** 21:42:08.9, 3931N×2679E, h16km, MD3.7, ML3.9*
*THE **08** 21:42:08.9, 3929N×2690E, h0km, ML3.8*
*ISCJB **08** 21:42:08.7±0.5, 3933N±002×2684E±002, h5km±4km, Error ellipse: s-maj=3.1km s-min=2.6km az=97.2*
*NEIC **08** 21:42:09.2±1.7, 3924N×2686E, h9km±11km, ML3.7(ISK), ML3.9(THE), ML3.9(ATH), Error ellipse: s-maj=9.2km s-min=5.9km az=116.0*
*ATH **08** 21:42:09.3, 3923N×2676E, h29km±2km, MD3.9/5*

ISC 08 21:42:09.6±0.4**, 3933N**±002×**2685E**±002**, h6**km±3km**, n86,** σ**0.94**/104**, 19D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.13	261	i P	Pg	21 42 12.2	-0.1
AYVA	Ayvalik	0.13	261	i P	Pg	21 42 12.1	-0.2
PRK	Paraskevi	0.46	260	ePB	Pg	21 42 18.1	-0.4
PRK				eSB	Sg	21 42 24.5	+0.1
EZN	Ezine	0.64	321	PG	Pg	21 42 21.8	-0.2
EZN				SG	Sg	21 42 30.4	0.0
BOZC	Bozcaada	0.80	310	i P	Pg	21 42 24.5	-0.6
BOZC				i S	Sg	21 42 35.3	-0.2
AKS	Akhisar	0.87	121	PG	Pg	21 42 26.4	+0.1
AKHS	Akhisar	0.87	121	i P	Pg	21 42 26.4	+0.1
AKHS				i S	Sg	21 42 39.4	+1.8
KDAG	Bornova	0.98	161	i P	Pg	21 42 28.4	0.0
KDAG				i S	Sg	21 42 41.9	+0.8
IZM	Izmir	0.98	161	PG	Pg	21 42 28.1	-0.4
IZM				SG	Sg	21 42 42.8	+1.6
URLA	Izmir	0.99	192	i P	Pg	21 42 27.1	-1.5
URLA				i S	Sg	21 42 41.9	+0.5
URLA	Izmir	0.99	192	i P	Pg	21 42 27.0	-1.6
URLA				i S	Sg	21 42 41.9	+0.5
BTOK	Tokmak	1.01	64	i P	Pg	21 42 30.0	+1.0
LPK	Lapseki	1.05	356	PG	Pg	21 42 29.4	-0.3
CHOS	Chios island	1.13	214	ePg	Pg	21 42 29.8	-1.4
CHOS				eSg	Sg	21 42 46.5	+0.6
GADA	Gvkgeada	1.13	320	PN	Pn	21 42 30.4	-1.6
EDC	Edincik	1.28	37	PN	Pn	21 42 33.5	-0.6
BNT	Bandirma	1.31	38	PN	Pn	21 42 33.9	-0.6
RKY	Sarkoy-Tekirda	1.38	10	PN	Pn	21 42 34.9	-0.5
RKY				SN	Sn	21 42 53.4	-0.6
MRMT	Marmara Adasi	1.40	24	PN	Pn	21 42 34.7	-0.9
DST	Dursunbey	1.40	78	PN	Pn	21 42 35.4	-0.3
LIA	Limnos Island	1.41	294	ePN	Pn	21 42 34.8	-1.0
MFT	Murefte	1.49	13	PN	Pn	21 42 36.6	-0.4
LOS	Limnos	1.50	294	ePg	Pn	21 42 36.3	-0.7
LOS				eSg	Sg	21 42 58.2	+0.5
LOS	Limnos	1.50	294	ePg	Pn	21 42 36.3	-0.7
LOS				eSg	Sg	21 42 58.2	+0.5
ENEZ	Enez	1.51	339	PN	Pn	21 42 36.8	-0.3
SMG	Samos	1.62	180	ePN	Pn	21 42 36.8	-1.9
ALN	Alexandroupoli	1.69	339	ePb	Pn	21 42 39.4	-0.3
ALN				eSb	Sb	21 43 03.4	+0.9
ORLT	Orhaneli	1.73	65	ePN	Pn	21 42 40.2	-0.1
ARMT	Armutlu	1.98	51	ePN	Pn	21 42 43.4	-0.2
RDO	Rodhopi	2.08	331	ePN	Pn	21 42 44.8	-0.2
GEMT	Gemlik	2.11	58	PN	Pn	21 42 45.5	0.0
CTT	Catalca	2.18	33	PN	Pn	21 42 46.2	-0.2
YLV	Yalova	2.30	57	ePN	Pn	21 42 47.5	-0.6
AOS	Alonnisos	2.31	267	ePn	Pn	21 42 48.9	+0.6
DENT	Denizli	2.32	132	ePN	Pn	21 42 48.0	-0.4
ISK	Istanbul-Kandi	2.42	44	PN	Pn	21 42 49.7	-0.1
OUR	Ouranopolis	2.43	295	ePn	Pn	21 42 49.0	-0.9
YER	Yerkesik	2.46	152	ePN	Pn	21 42 49.6	-0.7
ADVT	Abdulvahap	2.48	63	ePN	Pn	21 42 50.6	+0.1
APE	Apeiranthos	2.48	205	ePn	Pn	21 42 48.1	-2.5
APE				eSn	Sn	21 43 22.6	+1.4
APE	Apeiranthos	2.48	205	⇓i P	Pn	21 42 48.1	-2.5
EDRB	Edirne	2.52	358	PN	Pn	21 42 50.7	-0.4
PAIG	Paliouri	2.52	285	ePn	Pn	21 42 49.9	-1.2
PAIG				eSn	Sn	21 43 23.9	+1.7
ALT	Altintas	2.55	95	PN	Pn	21 42 51.0	-0.5
KLYT	Kilyos	2.55	40	ePN	Pn	21 42 51.0	-0.5
HRT	Hereke	2.62	54	ePN	Pn	21 42 52.7	+0.2
DAT	Datca	2.66	167	PN	Pn	21 42 51.9	-1.1
NEO	Neokhori	2.81	271	ePN	Pn	21 42 53.9	-1.3
PLG	Polygyros	2.82	293	ePN	Pn	21 42 54.7	-0.6
GPA	Golpazari	2.83	69	PN	Pn	21 42 55.7	+0.3
XOR	Xorichti	2.84	272	ePn	Pn	21 42 56.1	+0.6
DALT	Dalyan (Mudla)	2.92	151	ePN	Pn	21 42 55.9	-0.7
NVR	Nevrokopi	3.05	312	ePN	Pn	21 42 57.9	-0.5
ESKT	Eskisehir	3.10	85	ePN	Pn	21 42 59.5	+0.4
JMB	Yambol	3.14	356	ePn	Pn	21 43 00.2	+0.6
PLD	Plovdiv	3.22	330	ePn	Pn	21 43 01.1	+0.4
MMB	Musomiste	3.28	314	ePn	Pn	21 43 01.3	-0.3
LIT	Litokhoron	3.45	284	ePn	Pn	21 43 03.4	-0.5
AGG	Agios Georgios	3.53	266	ePn	Pn	21 43 06.0	+1.0
AGG				eSn	Sn	21 43 49.2	+2.2
ELL	Elmali	3.53	136	ePN	Pn	21 43 04.5	-0.5
KNT	Kendrikon	3.54	302	ePn	Pn	21 43 05.6	+0.5
GRG	Griva	3.78	297	ePn	Pn	21 43 07.4	-1.1
VAY	Valandovo	3.83	303	ePn	Pn	21 43 10.1	+1.0
STIP	Stip	4.27	305	ePn	Pn	21 43 17.2	+2.0
STIP				eSn	Sn	21 44 01.4	-3.9
STIP	Stip	4.27	305	ePn	Pn	21 43 17.1	+1.9
STIP				eSn	Sn	21 44 01.4	-3.9
VTS	Vitosha	4.27	321	⇓i P	Pn	21 43 18.1	+2.9
VTS	Vitosha	4.27	321	⇓P	Pn	21 43 18.1	+2.9
FNA	Florina	4.45	291	ePn	Pn	21 43 18.3	+0.7
SAFT	Safranbolu	4.85	65	ePN	Pn	21 43 24.3	+1.1
TIRR	Tirgusor	5.26	12	⇓i P	Pn	21 43 28.4	-0.3
TIRR	Tirgusor	5.26	12	⇓P	Pn	21 43 28.4	-0.3
KAMT	Kaman	5.32	87	ePN	Pn	21 43 30.3	+0.7
HARR	Harsova	5.42	8	⇓i P	Pn	21 43 31.1	+0.2
HARR	Harsova	5.42	8	⇓P	Pn	21 43 31.1	+0.1
CFR	Carcaliu	5.92	9	⇓i P	Pn	21 43 38.0	+0.1
CFR	Carcaliu	5.92	9	⇓P	Pn	21 43 38.0	+0.1
MLR	Muntele Rosu	6.20	354	⇓i P	Pn	21 43 45.7	+4.1
VOIR		6.25	348	⇓i P	Pn	21 43 44.9	+2.5
VOIR		6.25	348	⇓P	Pn	21 43 44.9	+2.5
PLOR	Plostina	6.52	359	⇓i P	Pn	21 43 48.5	+2.4
BZS	Buzias	7.38	330	⇓i P	Pn	21 43 57.6	-0.3
BZS	Buzias	7.38	330	⇓P	Pn	21 43 57.6	-0.3
DRGR		8.05	339	⇓i P	Pn	21 44 12.4	+5.3
DRGR		8.05	339	⇓P	Pn	21 44 12.4	+5.3
BURAR	Bucovina Array	8.37	352	⇓i P	Pn	21 44 13.6	+2.2
BURAR	Bucovina Array	8.37	352	⇓P	Pn	21 44 13.6	+2.2

KRSC 08 21:55:19, 4903N×15659E, h5km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	Alaid	1.96	340	eP	Pn	21 55 54.8	+1.9
ALID				i S	Sn	21 56 20.2	+2.4
MIPR	Malaya Ipel'ka	3.25	2	P	Pn	21 56 12.6	+2.0
RUS	Russkaya	3.62	19	eP	Pn	21 56 18.9	+3.2
RUS				i S	Sn	21 57 02.3	+3.5
GRL	Gorelyy	3.65	14	P	Pn	21 56 18.9	+2.8
SDLR	Sedlovina	4.49	18	P	Pn	21 56 31.6	+3.9
SPN	Mys Shipunski	4.61	27	eP	Pn	21 56 33.1	+3.8
SPN				eS	Sn	21 57 26.7	+3.4
GNL	Ganaly	4.75	10	P	Pn	21 56 35.3	+4.1
MKZ	Mys Kozlova	6.38	28	P	Pn	21 56 56.8	+3.1
KBTR	Krutoberegovo	8.12	25	P	Pn	21 57 20.4	+2.8

*ISCJB **08** 21:57:36.1±0.9, 134N±01×573E±01, h10km, mb4.1/24, MS3.6/4, Error ellipse: s-maj=20.9km s-min=11.8km az=75.8*
*IDC **08** 21:57:36.1±1.2, 1323N×5756E, h0km, mb3.9/10, mb1 3.9/11, mb1mx3.8/23, mbtmp3.9/11, ML3.3/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/26, Error ellipse: s-maj=35.3km s-min=17.8km az=125.0*
*CSEM **08** 21:57:37.7, 1331N×5737E, h10km, mb4.3/14, After NEIC*
*NEIC **08** 21:57:37.7±0.7, 1331N×5737E, h10km, mb4.4/15, Error ellipse: s-maj=16.5km s-min=9.6km az=128.0*

ISC 08 21:57:38.0±0.9**, 134N**±01×**574E**±01**, h10**km**, n49,** σ**0.79**/47**, mb4.1**/24**, MS3.6**/4**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	9.91	7	Pn	Pn	22 00 00.7	+0.2
	0.2nm,0.3s,baz=191,slow=10,SNR=3.2						
WSAR				LR	LR	22 03 37.9	
	comp=Z,294nm,18.1s,baz=173,slow=36						
ATD	Arta Tunnel	14.31	264	LR	LR	22 05 02.3	
	comp=Z,139nm,20.7s,baz=295,slow=31						
ASF	Jabal al Asfar	26.52	318	P	P	22 03 17.9	+2.2
	3.1nm,1.0s,mb3.8,baz=6.3,slow=9.2,SNR=3.9						
ASF				LR	LR	22 14 29.6	
	comp=Z,74nm,19.5s,MS3.2,baz=112,slow=38						
BRTR	Keskin Array B	33.58	326	P	P	22 04 20.0	+1.8
	0.8nm,0.7s,mb3.8,baz=132,slow=12,SNR=5.3						
AKTK	Aktyubinsk	36.99	1	P	P	22 04 48.0	+0.4
AKTK	Aktyubinsk	36.99	1	P	P	22 04 48.0	+0.4
AKTO	Aktyubinsk	36.99	1	P	P	22 04 48.0	+0.4
	2.4nm,0.9s,mb4.0,baz=199,slow=7.4,SNR=8.4						
MKAR	Makanchi Array	39.36	27	P	P	22 05 07.7	+0.2
	1.2nm,0.8s,mb3.7,baz=213,slow=8.7,SNR=8.0						
MKAR	Makanchi Array	39.36	27	P	P	22 05 07.7	+0.2
LSZ	Lusaka	40.54	226	P	P	22 05 18.1	+0.7
	1.3nm,0.8s,mb3.6,baz=80,slow=6.6,SNR=4.7						
LSZ	Lusaka	40.54	226	eP	P	22 05 17.7	+0.4
	1.5nm,0.6s,mb3.8						
LSZ	Lusaka	40.54	226	eP	P	22 05 17.7	+0.4
	1.5nm,0.6s,mb3.8						
BRVK	Borovoye	40.92	12	eP	P	22 05 26.9	+6.4
	1.2nm,0.6s,mb3.7						
BRVK	Borovoye	40.92	12	eP	P	22 05 26.9	+6.3
	1.1nm,0.6s,mb3.7						
KURK	Kurchatov	41.08	21	eP	P	22 05 22.1	+0.3
	2.8nm,0.9s,mb3.9						
KURK	Kurchatov	41.08	21	eP	P	22 05 22.1	+0.3
	2.8nm,0.9s,mb3.9						
CHKZ	Chkalovo	41.58	12	eP	P	22 05 26.1	+0.2
	7.6nm,1.2s,mb4.2						
CHKZ	Chkalovo	41.58	12	eP	P	22 05 26.1	+0.2
	7.6nm,1.2s,mb4.2						
ARU	Arti	43.00	1	P	P	22 05 37.8	+0.3
	4.8nm,1.2s,mb4.1						
ARU	Arti	43.00	1	P	P	22 05 37.8	+0.3
	4.8nm,1.2s,mb4.1						
ZAL	Zalesovo	45.90	22	P	P	22 06 00.9	+0.2
	2.3nm,0.8s,mb4.2,baz=255,slow=8.4,SNR=15						
ZAL				LR	LR	22 26 44.5	
	comp=Z,89nm,21.5s,MS3.7,baz=301,slow=38						
ZAL	Zalesovo	45.90	22	P	P	22 06 00.9	+0.2
ZAL				LR	LR	22 26 44.5	
SUW	Suwalki	48.68	334	P	P	22 06 21.5	-0.9
	16nm,1.1s,mb5.0						
SUW	Suwalki	48.68	334	P	P	22 06 21.5	-0.8
	16nm,1.1s,mb5.0						
MORC	Moravsky Berou	48.76	326	eP	P	22 06 23.1	+0.1
	2.5nm,0.9s,mb4.2						
MORC	Moravsky Berou	48.76	326	eP	P	22 06 23.1	+0.1
	2.5nm,0.9s,mb4.2						
BOSA	Boshof	52.01	216	P	P	22 06 47.4	-0.2
	1.6nm,0.6s,mb4.2,baz=64,slow=13,SNR=3.9						
BOSA				LR	LR	22 26 08.4	
	comp=Z,138nm,20.3s,MS4.0,baz=65,slow=33						
FINES	FINESS Array B	53.07	342	P	P	22 06 55.2	-0.3
	1.0nm,0.9s,mb3.8,baz=153,slow=10,SNR=3.5						
FINES	FINESS Array B	53.07	342	P	P	22 06 55.2	-0.3
SONM	Songino Array	53.16	39	P	P	22 06 55.6	-0.5
	1.1nm,1.1s,mb3.7,baz=249,slow=7.8,SNR=5.8						
SONM				LR	LR	22 28 18.2	
	comp=Z,70nm,19.9s,MS3.7,baz=249,slow=35						
LPG	La Plagne	53.32	317	eP	P	22 06 56.7	-0.6
	6.8nm,0.9s,mb4.3						
LPG	La Plagne	53.32	317	eP	P	22 06 56.7	-0.6
	3.4nm,0.9s,mb4.3						
LPL	La Plagne	53.34	317	eP	P	22 06 56.6	-0.8
	13nm,1.1s,mb4.5						
LPL	La Plagne	53.34	317	eP	P	22 06 56.6	-0.8
	6.4nm,1.1s,mb4.5						
CDF	Champ du Feu	54.05	321	eP	P	22 07 01.7	-1.0
	4.7nm,1.0s,mb4.1						
CDF	Champ du Feu	54.05	321	eP	P	22 07 01.7	-1.0
	2.3nm,1.0s,mb4.1						

TORD Torodi Ar. Bea 54.10 277 P P 22 07 04.8 +1.8
0.4nm,0.9s,mb3.4,baz=81,slow=6.5,SNR=2.7
TORD PcP PcP 22 08 08.4 +0.7
0.9nm,1.1s,baz=72,slow=4.7,SNR=4.0
TORD Torodi Ar. Bea 54.10 277 PcP PcP 22 08 08.4 +0.7
CABF La Chapelle 54.14 318 *e*P P 22 07 03.1 -0.2
16nm,1.0s,mb4.6
CABF La Chapelle 54.14 318 *e*P P 22 07 03.1 -0.2
8.2nm,1.0s,mb4.6
MEZF Maizieres J'vi 55.46 320 *e*P P 22 07 12.3 -0.6
LOR Lormes 55.80 319 *e*P P 22 07 14.7 -0.6
17nm,1.2s,mb4.7
LOR Lormes 55.80 319 *e*P P 22 07 14.7 -0.6
8.7nm,1.2s,mb4.7
SSF Saint Saulge 55.96 318 *e*P P 22 07 15.7 -0.8
7.2nm,1.0s,mb4.4
SSF Saint Saulge 55.96 318 *e*P P 22 07 15.7 -0.8
3.6nm,1.0s,mb4.4
AVF Avril sur Loir 55.98 318 *e*P P 22 07 15.5 -1.1
14nm,1.3s,mb4.6
AVF Avril sur Loir 55.98 318 *e*P P 22 07 15.5 -1.1
7.2nm,1.3s,mb4.5
BGF Bois d'Agland 56.24 317 *e*P P 22 07 18.0 -0.4
10nm,0.9s,mb4.5
BGF Bois d'Agland 56.24 317 *e*P P 22 07 18.0 -0.4
5.2nm,0.9s,mb4.6

IDC 08 22:42:21.2±9.4**,2339N×14230E,h0**km**,mb3.9**/4**, mb1 3.9**/4**,mb1mx3.7**/18**,mbtmp3.9**/4**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.7**/26**,Error ellipse: s-maj=316.0km s-min=110.7km az=17.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**13.16**	**288**	LR	LR	22 49 47.3	
	comp=Z,141nm,19.4s,baz=156,slow=34						
SONM	**Songino Array**	**37.52**	**320**	P	P	22 49 36.9	+0.1
	0.4nm,0.4s,baz=118,slow=7.3,SNR=6.4						
MKAR	**Makanchi Array**	**52.96**	**312**	P	P	22 51 39.4	0.0
	0.4nm,0.5s,baz=86,slow=8.6,SNR=7.4						
BVAR	**Borovoye Array**	**60.86**	**319**	P	P	22 52 35.4	0.0
	2.0nm,0.4s,baz=86,slow=7.2,SNR=16						
JOF	**Joensuu**	**78.44**	**334**	*e*p	P	22 54 22.8	-1.1
KAF	**Kangasniemi**	**80.85**	**335**	*e*p	P	22 54 36.4	-0.6
FINES	**FINESS Array B**	**81.31**	**334**	P	P	22 54 39.2	-0.2
	0.4nm,0.3s,baz=72,slow=5.1,SNR=15						

NEIC ***08*** *22:46:45.9,1794N×9955W,h5km,MD3.7(MEX),After MEX.*
MEX 08 22:46:45.5±1.6**,1788N×9951W,h8**km±29km**,MD3.7,1C, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.12**	**295**	⇑*i*P	Pg	22 46 46.8	-1.4
MEIG				*i* S	Sg	22 46 50.3	+0.3
PLIG	**Platanillo**	**0.51**	**0**	*i* P	Pg	22 46 55.6	+0.1
PLIG				*i* S	Sg	22 47 02.0	-0.1
PLIG	**Platanillo**	**0.51**	**0**	*i* P	Pg	22 46 53.8	-1.7
PLIG				*i* S	Sg	22 47 02.6	+0.4
ACX	**Acapulco**	**1.08**	**201**	*e*P	Pg	22 47 03.5	-2.7
ACX				*i* S	Sg	22 47 16.0	-4.2
ACX	**Acapulco**	**1.08**	**201**	*e*P	Pg	22 47 04.0	-2.2
ACX				*i* S	Sg	22 47 19.5	-0.7
CAIG	**El Cayaco**	**1.10**	**221**	*i* P	Pg	22 47 03.8	-2.7
CAIG				*i* S	Sg	22 47 16.8	-4.0
CAIG	**El Cayaco**	**1.10**	**221**	*i* P	Pg	22 47 04.5	-2.1
CAIG				*i* S	Sg	22 47 19.4	-1.4
PPM	**Popocatepetl**	**1.45**	**35**	*e*P	Pn	22 47 14.0	+2.0
PPM				*i* S	Sn	22 47 35.2	+4.1
PPM	**Popocatepetl**	**1.45**	**35**	*i* P	Pn	22 47 13.2	+1.2
PPM				*i* S	Sn	22 47 35.4	+4.2
UTMO	**Huajuapan**	**1.62**	**91**	*i* P	Pn	22 47 17.9	+3.5
UTMO				*i* S	Sn	22 47 37.5	+2.0

MEX 08 22:52:42.0±0.9**,1738N×10067W,h8**km±9km**,MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.50**	**131**	*i* P	Pg	22 52 51.3	-0.4
CAIG				*i* S	Sg	22 52 59.1	+0.9
ACX	**Acapulco**	**0.88**	**125**	*i* P	Pg	22 52 57.0	-1.9
ACX				*i* S	Sg	22 53 07.0	-3.3
MEIG	**Mezcala**	**1.14**	**61**	*i* P	Pg	22 52 59.0	-4.8
MEIG				*i* S	Sg	22 53 14.4	-4.2
PLIG	**Platanillo**	**1.50**	**47**	*i* P	Pn	22 53 06.3	-2.9
PLIG				*i* S	Sn	22 53 26.2	-2.7
UTMO	**Huajuapan**	**2.77**	**80**	*e*P	Pn	22 53 23.3	-3.4
UTMO				*i* S	Sn	22 53 55.9	-4.3

ISCJB ***08*** *23:01:08.9±1.9,3215S±004×17889W±006,h15km±13km, mb5.0/33,MS4.0/15,Error ellipse: s-maj=9.9km s-min=5.0km az=67.9*
CSEM ***08*** *23:01:10.7,3190S×17858W,h33km,mb5.5*
MOS ***08*** *23:01:11.5±1.3,3192S×17875W,h33km,mb5.1/9,Error ellipse: s-maj=15.4km s-min=11.1km az=78.1*
NEIC ***08*** *23:01:12.9±0.3,3193S×17887W,h35km,mb5.2/17,Error ellipse: s-maj=11.5km s-min=7.3km az=122.0*
BJI ***08*** *23:01:12.8,3190S×17890W,h32km,mB5.3,mb5.1,Ms5.0, Msz4.6*
IDC ***08*** *23:01:15.9±2.4,3192S×17867W,h61km±20km,mb4.4/10, mb1 4.6/11,mb1mx4.6/13,mbtmp4.7/11,MS3.8/14, Ms1 3.8/14,ms1mx3.7/24,Error ellipse: s-maj=21.5km s-min=14.0km az=127.0*
ISC 08 23:01:08.6±2.0**,3211S**±004×**17883W**±006**,h3**km±12km**, h21**km±3.9km**:pP-P,n266,**σ0.92/207**,mb5.0**/33**,MS4.0**/15**, 62C-64D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.96**	**16**	P	**Pn**	**23 01 57.6**	**+1.1**
	175nm,0.3s,baz=172,slow=21,SNR=10						
RAO				S	**Sn**	**23 02 29.6**	**-2.8**
	707nm,0.3s,baz=104,slow=21,SNR=9.5						
RAO				LR	LR	23 02 38.3	
	comp=Z,251nm,19.4s,baz=178,slow=30						
RAO	**Raoul Island**	**2.96**	**16**	*e*Pn	**Pn**	**23 01 53.9**	**-2.6**
RAO				*e*Sn	**Sn**	**23 02 29.0**	**-3.4**
MXZ	**Matakaoa Point**	**5.93**	**203**	PN	**Pn**	**23 02 38.0**	**+0.8**
MXZ				SN	**Sn**	**23 03 44.9**	**-0.8**
PUZ	**Puketiti**	**6.41**	**201**	PN	**Pn**	**23 02 44.5**	**+0.6**
PUZ				SN	**Sn**	**23 03 55.9**	**-1.7**
WCZ	**Waipu Caves**	**6.83**	**234**	PN	**Pn**	**23 02 57.9**	**+8.2**
MWZ	**Matawai**	**6.89**	**205**	PN	**Pn**	**23 02 50.9**	**+0.4**
MWZ				SN	**Sn**	**23 04 10.3**	**+0.9**
URZ	**Urewera**	**6.98**	**207**	P	**Pn**	**23 02 53.5**	**+1.8**
	14nm,0.3s,baz=36,slow=2.6,SNR=34						
URZ				S	**Sn**	**23 04 12.4**	**+0.8**
	32nm,0.3s,baz=127,slow=22,SNR=14						
URZ				LR	LR	23 05 36.5	
	comp=Z,454nm,19.5s,baz=109,slow=36						
URZ	**Urewera**	**6.98**	**207**	PN	**Pn**	**23 02 52.7**	**+1.0**
OUZ	**Omahuta**	**7.03**	**242**	PN	**Pn**	**23 03 02.0**	**+9.5**
BKZ	**Black Stump Fm**	**8.00**	**207**	PN	**Pn**	**23 03 05.8**	**+0.1**
WNVZ	**Wahianoa**	**8.51**	**211**	PN	**Pn**	**23 03 16.3**	**+3.6**
PXZ	**Pawanui**	**8.64**	**203**	*e*PN	**Pn**	**23 03 13.2**	**-1.3**
BFZ	**Birch Farm**	**9.43**	**203**	SN	**Sn**	**23 05 06.9**	**-4.9**
MRZ	**Mangatainoka R**	**9.65**	**206**	PN	**Pn**	**23 03 26.0**	**-2.4**
MRZ				SN	**Sn**	**23 05 06.5**	**-11**
KIW	**Kapiti Island**	**10.08**	**208**	PN	**Pn**	**23 03 32.4**	**-1.9**
KIW				SN	**Sn**	**23 05 20.9**	**-6.9**
PAWZ	**Paruwai Farm**	**10.33**	**205**	SN	**Sn**	**23 05 27.7**	**-6.4**
SNZO	**South Karori**	**10.54**	**208**	*e*Pn	**Pn**	**23 03 43.0**	**+2.5**
SNZO				*e*Sn	**Sn**	**23 05 33.0**	**-6.1**
TCW	**Tory Channel**	**10.63**	**209**	SN	**Sn**	**23 05 34.1**	**-7.3**
QRZ	**Quartz Range**	**11.13**	**216**	PN	**Pn**	**23 03 46.1**	**-2.5**
QRZ				SN	**Sn**	**23 05 48.8**	**-4.9**
THZ	**Tophouse**	**11.68**	**212**	PN	**Pn**	**23 03 54.5**	**-1.7**
THZ				SN	**Sn**	**23 05 58.2**	**-8.8**
LTZ	**Lake Taylor**	**12.78**	**211**	PN	**Pn**	**23 04 07.3**	**-3.8**
LTZ				SN	**Sn**	**23 06 21.9**	**-12**
MQZ	**McQueen's Vall**	**13.38**	**208**	*e*SN	**Sn**	**23 06 35.5**	**-13**
RPZ	**Rata Peaks**	**14.06**	**212**	P	**Pn**	**23 04 28.0**	**-0.7**
	1.1nm,0.3s,baz=36,slow=7.7,SNR=5.4						
RPZ				S	**Sn**	**23 06 53.0**	**-12**
	5.1nm,0.3s,baz=35,slow=13,SNR=11						
RPZ				LR	LR	23 09 53.5	
	comp=Z,568nm,20.9s,baz=32,slow=36						
DZM	**Mont Dzumac**	**16.47**	**304**	LR	LR	23 09 50.9	
	comp=Z,831nm,21.4s,baz=202,slow=31						
AFI	**Afiamalu**	**19.23**	**21**	*e*P	**Pn**	**23 05 32.7**	**-2.1**
RAR	**Rarotonga**	**20.17**	**62**	LR	LR	23 11 54.9	
	comp=Z,231nm,20.1s,MS3.5,baz=270,slow=32						
PPT	**Papeete**	**30.12**	**68**	LR	LR	23 17 12.3	
	comp=Z,161nm,18.0s,MS3.7,baz=143,slow=32						
CTA	**Charters Tower**	**33.42**	**282**	*e*P	**P**	**23 07 51.9**	**+3.4**
	20nm,1.0s,mb5.0						
CTA	**Charters Tower**	**33.42**	**282**	P	**P**	**23 07 50.8**	**+2.3**
	16nm,0.5s,mb5.2,baz=106,slow=9.8,SNR=20						
CTA				LR	LR	23 19 29.7	
	comp=Z,256nm,18.3s,MS4.0,baz=42,slow=33						
CTA	**Charters Tower**	**33.42**	**282**	*e*P	**P**	**23 07 51.9**	**+3.4**
CTA				pmax	pmax		
	comp=Z,20nm,1.0s						
CTAO	**Charters Tower**	**33.42**	**282**	*e*P	**P**	**23 07 52.4**	**+3.9**
CTAO				pmax	pmax		
	comp=Z,131nm,1.7s,mb5.6						
CTAO	**Charters Tower**	**33.42**	**282**	*e*P	**P**	**23 07 52.4**	**+3.9**
	comp=Z,130nm,1.7s,mb5.6						
STKA	**Stephens Creek**	**33.43**	**260**	*e*P	**P**	**23 07 51.2**	**+2.6**
	comp=Z,6.9nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**33.43**	**260**	P	**P**	**23 07 51.2**	**+2.6**
	comp=Z,6.9nm,0.5s,mb4.8,baz=97,slow=11,SNR=12						
STKA				LR	LR	23 19 44.2	
	comp=Z,252nm,19.0s,MS4.0,baz=289,slow=33						
STKA	**Stephens Creek**	**33.43**	**260**	*e*P	**P**	**23 07 51.7**	**+3.0**
PMG	**Port Moresby**	**38.74**	**298**	P	**P**	**23 08 35.5**	**+1.5**
	comp=Z,34nm,1.0s,mb5.0,baz=108,slow=20,SNR=3.9						
PMG				LR	LR	23 22 30.1	
	comp=Z,245nm,18.4s,MS4.1,baz=207,slow=33						
PMG	**Port Moresby**	**38.74**	**298**	P	**P**	**23 08 35.4**	**+1.4**
AS31	**Alice Springs**	**42.34**	**269**	*e*P	**P**	**23 09 05.1**	**+1.3**
ASAR	**Alice Springs**	**42.34**	**269**	P	**P**	**23 09 05.0**	**+1.2**
	comp=Z,36nm,0.7s,mb5.1,baz=107,slow=7.4,SNR=254						
ASAR				S	**S**	**23 15 21.4**	**-4.2**
	comp=Z,3.3nm,1.0s,baz=107,slow=14,SNR=8.0						
ASAR				LR	LR	23 26 19.5	
	comp=Z,155nm,18.1s,MS3.9,baz=298,slow=35						
ASAR	**Alice Springs**	**42.34**	**269**	P	**P**	**23 09 05.1**	**+1.3**
ASAR				S	**S**	**23 15 21.4**	**-4.2**
ASPA	**Alice Springs**	**42.34**	**269**	*e*P	**P**	**23 09 05.1**	**+1.3**
WB2	**Warramunga Arr**	**43.47**	**274**	*e*P	**P**	**23 09 13.2**	**+0.2**
WRAB	**Tennant Creek**	**43.48**	**274**	P	**P**	**23 09 14.0**	**+0.9**
	comp=Z,469nm,0.5s,mb6.5,SNR=41						
WRAB	**Tennant Creek**	**43.48**	**274**	*e*P	**P**	**23 09 14.2**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,74nm,0.6s,mb5.6						
WRAB	**Tennant Creek**	**43.48**	**274**	*e*P	**P**	**23 09 14.2**	**+1.1**
	comp=Z,74nm,0.6s,mb5.6						
FORT	**Forrest**	**44.94**	**257**	⇑*i*P	**P**	**23 09 24.7**	**-0.1**
	comp=Z,58nm,0.7s,mb5.5						
SBA	**Scott Base**	**46.28**	**184**	*e*P	**P**	**23 09 38.1**	**+2.7**
SBA				*e*		23 11 11.2	
SBA				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
SBA	**Scott Base**	**46.28**	**184**	*e*P	**P**	**23 09 38.0**	**+2.6**
	comp=Z,13nm,0.9s,mb4.8						
SBA				*e*PcP	PcP	23 11 11.2	+0.3
VNDA	**Vanda**	**46.33**	**186**	P	**P**	**23 09 37.7**	**+1.9**
	comp=Z,1.8nm,0.6s,mb4.2,baz=358,slow=8.1,SNR=14						
VNDA				LR	LR	23 25 16.2	
	comp=Z,50nm,20.9s,MS3.4,baz=45,slow=31						
VNDA	**Vanda**	**46.33**	**186**	*e*P	**P**	**23 09 37.6**	**+1.8**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VNDA	**Vanda**	**46.33**	**186**	*e*P	**P**	**23 09 37.5**	**+1.8**
	comp=Z,2.2nm,0.7s,mb4.2						
KAKA	**Kakadu**	**48.55**	**282**	*e*P	**P**	**23 09 52.9**	**-0.2**
	comp=Z,29nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**51.67**	**272**	*e*P	**P**	**23 10 16.4**	**-0.3**
	comp=Z,29nm,1.1s,mb5.1						
KLBR	**Kellerberrin**	**53.14**	**253**	⇑*i*P	**P**	**23 10 26.2**	**-1.4**
	comp=Z,29nm,0.7s,mb5.3						
NWAO	**Narrogin (SRO)**	**53.15**	**251**	LR	LR	23 28 15.1	
	comp=Z,146nm,21.8s,MS4.0,baz=73,slow=30						
CASY	**Casey**	**53.30**	**208**	*e*P	**P**	**23 10 27.4**	**-1.4**
	comp=Z,26nm,0.8s,mb5.2						
CASY				*e*PcP	PcP	23 11 35.0	-1.5
MUN	**Mundaring**	**54.26**	**252**	*e*P	**P**	**23 10 35.2**	**-0.7**
QSPA	**South Pole Qui**	**58.01**	**180**	*e*P	**P**	**23 11 04.2**	**+1.6**
	comp=Z,35nm,0.7s,mb5.5						
MIR	**Mirnyy**	**60.28**	**207**	*d i*P	**P**	**23 11 19.0**	**+0.6**
MIR				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.9						
MAW	**Mawson**	**70.46**	**201**	P	**P**	**23 12 23.7**	**-0.7**
	comp=Z,8.7nm,0.9s,mb4.7,baz=112,slow=7.9,SNR=22						
MAW				LR	LR	23 41 34.5	
	comp=Z,92nm,19.3s,MS4.0,baz=64,slow=34						
SYO	**Syowa Base**	**75.29**	**193**	⇓*e*P	**P**	**23 12 51.3**	**-1.7**
SYO	**Syowa Base**	**75.29**	**193**	⇑*e*pP	pP	23 13 00.2	+6.2
SYO	**Syowa Base**	**75.29**	**193**	⇑*e*PcP	PcP	23 13 05.7	-0.7
SNAA	**Sanae**	**76.47**	**179**	*e*P	**P**	**23 12 58.8**	**-1.0**
SNAA				*e*	pP	23 13 00.3	-0.4
SNAA				*e*		23 13 03.3	
SNAA				*e*		23 13 07.2	
SNAA				*e*		23 13 09.8	
SNAA				*e*		23 13 13.6	
SNAA	**Sanae**	**76.47**	**179**	⇓*e*P	**P**	**23 12 59.4**	**-0.4**
SNAA	**Sanae**	**76.47**	**179**	*e*P	**P**	**23 12 59.3**	**-0.4**
	comp=Z,19nm,0.9s,mb5.0						
MAIT	**Maitri**	**77.13**	**184**	*e*P	**P**	**23 13 05.3**	**+1.8**
VNA1	**Neumayer--Stat**	**77.31**	**177**	*e*P	**P**	**23 13 03.6**	**-0.9**
VNA1				*e*	pP	23 13 04.4	-1.1
VNA1				*e*		23 13 09.4	
VNA1				*e*		23 13 13.2	
VNA1				*e*		23 13 23.6	
VNA1				*e*		23 18 42.3	
VNA1				*e*		23 18 51.4	
VNA1				*e*		23 18 55.2	
VNA1				*e*		23 19 05.8	
MJAR	**Matsushiro Arr**	**79.25**	**326**	P	**P**	**23 13 13.0**	**-2.2**
	comp=Z,1.6nm,0.7s,mb4.1,baz=158,slow=6.3,SNR=4.1						
PLCA	**Paso Flores**	**81.86**	**133**	P	**P**	**23 13 30.2**	**+1.0**
	comp=Z,4.0nm,0.8s,mb4.4						
SSE	**Sheshan**	**84.70**	**312**	P	**P**	**23 13 42.2**	**-1.7**
SSE				AMB	AMB		
	comp=Z,35nm,0.6s,mb5.7						
SSE				AMB	AMB		
	comp=Z,160nm,4.8s						
YSS	**Yuzh-Sakhalins**	**85.98**	**335**	⇓*e*P	**P**	**23 13 47.8**	**-2.5**
YSS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.9						
PKM	**Peak Mountain**	**86.68**	**45**	⇓P	**P**	**23 13 54.1**	**+0.3**
	baz=87						
HAST	**UC Hastings Re**	**86.69**	**43**	⇓P	**P**	**23 13 54.0**	**+0.2**
	baz=87						
NJ2	**Nanjing**	**86.82**	**311**	*e*P	**P**	**23 13 55.2**	**+0.8**
NJ2				AP	pP	23 14 03.1	+7.7
NJ2				XP	sP	23 14 06.3	+11
NJ2				PP	PP	23 17 20.2	+3.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,60nm,8.0s						
NJ2				LR	LR		
	comp=N,60nm,16.0s,MS4.8						
NJ2				LR	LR		
	comp=E,330nm,15.8s,MS4.8						
NJ2				LR	LR		
	comp=Z,90nm,10.9s,MS4.4						
BNLO	**Ben Lomond (Sa**	**86.86**	**42**	⇑P	**P**	**23 13 54.5**	**-0.1**
	baz=87						
PKD	**Parkfield**	**86.97**	**44**	⇓P	**P**	**23 13 55.2**	**+0.1**
	baz=87						
PET	**Petropavlovsk**	**87.02**	**347**	*e*P	**P**	**23 13 59.4**	**+4.0**
PET				*e*		23 25 51.3	
U04C	**Hernandez Rese**	**87.12**	**43**	⇓P	**P**	**23 13 57.0**	**+1.1**
	baz=87						
PACP	**Pacheco Peak**	**87.28**	**43**	⇓P	**P**	**23 13 57.0**	**+0.3**
	baz=87						
ARVC	**Arvin**	**87.43**	**45**	⇓P	**P**	**23 13 57.2**	**-0.2**
	baz=88						
MONP	**Monument Peak**	**87.43**	**48**	⇑P	**P**	**23 13 57.3**	**-0.1**
	baz=88						
BFSC	**Mount Baldy St**	**87.55**	**47**	⇓P	**P**	**23 13 58.4**	**+0.4**
	baz=88						
CVS	**Carmenet Viney**	**87.55**	**41**	⇑P	**P**	**23 13 57.5**	**-0.5**
	baz=88						
S04C	**Ingram Canyon,**	**87.60**	**42**	⇓P	**P**	**23 13 58.0**	**-0.3**
	baz=88						
HOPS	**Hopland**	**87.67**	**40**	⇑P	**P**	**23 13 58.7**	**+0.1**
	baz=88						
VES	**Vestal, Richgr**	**87.77**	**45**	⇑P	**P**	**23 13 58.5**	**-0.5**
	baz=88						
EDW2	**Edwards Air Fo**	**87.78**	**46**	⇓P	**P**	**23 13 58.9**	**-0.2**
	baz=88						
PFO	**Pinyon Flat Ob**	**87.88**	**48**	⇓P	**P**	**23 14 00.1**	**+0.6**
	baz=88						
MNRC	**McLaughlin Nat**	**87.94**	**41**	⇑P	**P**	**23 14 00.6**	**+0.7**
	baz=88						
ISA	**Isabella**	**88.01**	**45**	⇑P	**P**	**23 14 00.4**	**+0.2**
	baz=88						
T06C	**Millerton Lake**	**88.19**	**43**	⇓P	**P**	**23 14 00.6**	**-0.4**
	baz=88						
GASB	**Alder Springs**	**88.33**	**40**	⇑P	**P**	**23 14 02.0**	**+0.4**
	baz=88						
LRMC	**Laurel Mountai**	**88.36**	**46**	⇑P	**P**	**23 14 02.3**	**+0.5**
	baz=88						
HELL	**Mitchell Peak,**	**88.37**	**44**	⇑P	**P**	**23 14 01.4**	**-0.5**
	baz=88						
BELC	**Belle Mtn.**	**88.43**	**48**	⇓P	**P**	**23 14 02.7**	**+0.6**
	baz=89						
CMB	**Columbia Colle**	**88.50**	**42**	*e*P	**P**	**23 14 02.4**	**-0.1**
CMB				pmax	pmax		
	comp=Z,16nm,1.4s,mb5.2						
CMB	**Columbia Colle**	**88.50**	**42**	*e*P	**P**	**23 14 02.4**	**-0.1**
	comp=Z,16nm,1.4s,mb5.2						
CMB	**Columbia Colle**	**88.50**	**42**	⇑P	**P**	**23 14 02.2**	**-0.3**
	baz=89						
GLA	**Glamis**	**88.55**	**49**	⇑P	**P**	**23 14 02.9**	**+0.1**
	baz=89						
KCC	**Kaiser Creek**	**88.63**	**43**	⇑P	**P**	**23 14 02.5**	**-0.6**
	baz=89						
O02C	**Red Bluff**	**88.67**	**39**	⇑P	**P**	**23 14 03.6**	**+0.3**
	baz=89						
S06C	**San Francisco**	**88.71**	**43**	⇓P	**P**	**23 14 03.5**	**0.0**
	baz=89						
HEC	**Hector,Ludlow**	**88.76**	**47**	⇓P	**P**	**23 14 04.3**	**+0.5**
	baz=89						
GSC	**Goldstone**	**88.78**	**46**	⇓P	**P**	**23 14 04.0**	**+0.2**
	baz=89						
MPMC	**Manual Prospec**	**88.87**	**45**	⇑P	**P**	**23 14 04.8**	**+0.6**
	baz=89						
ORV	**Oroville**	**88.93**	**41**	⇑P	**P**	**23 14 04.2**	**-0.4**
	baz=89						
IRM	**Iron Mountain**	**89.06**	**48**	⇑P	**P**	**23 14 05.6**	**+0.4**
	baz=89						
WDC	**Whiskeytown Da**	**89.09**	**39**	*e*P	**P**	**23 14 04.8**	**-0.5**
WDC				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.0						
WDC	**Whiskeytown Da**	**89.09**	**39**	*e*P	**P**	**23 14 04.8**	**-0.4**
	comp=Z,7.7nm,1.1s,mb5.0						
WDC	**Whiskeytown Da**	**89.09**	**39**	⇑P	**P**	**23 14 05.3**	**0.0**
	baz=89						
MTUM	**Tungsten Hills**	**89.09**	**44**	*e*P	**P**	**23 14 05.4**	**+0.1**
R05C	**Kirkwood Meado**	**89.14**	**42**	⇑P	**P**	**23 14 05.2**	**-0.3**
	baz=89						
Y12C	**Blythe**	**89.20**	**49**	⇑P	**P**	**23 14 06.1**	**+0.3**
	baz=89						
P05C	**Yuba Gap, Truc**	**89.25**	**41**	⇓P	**P**	**23 14 06.0**	**0.0**
	baz=89						
R07C	**Lee Vining**	**89.31**	**43**	⇓P	**P**	**23 14 07.3**	**+1.0**
	baz=90						
R06C	**Coleville**	**89.37**	**42**	⇓P	**P**	**23 14 06.7**	**+0.1**
	baz=90						
TUQ	**Turquoise Mtn.**	**89.41**	**47**	⇓P	**P**	**23 14 07.6**	**+0.8**
	baz=90						
M02C	**Callahan**	**89.50**	**39**	⇓P	**P**	**23 14 07.2**	**0.0**
	baz=90						
SHOC	**Shoshone**	**89.50**	**46**	⇑P	**P**	**23 14 07.7**	**+0.6**
	baz=90						
FURC	**Furnace Creek,**	**89.52**	**45**	⇑P	**P**	**23 14 07.1**	**-0.1**
	baz=90						
MDJ	**Mudanjiang**	**89.63**	**326**	P	**P**	**23 14 09.7**	**+1.9**
MDJ				AP	pP	23 14 15.8	+7.0
MDJ				XP	sP	23 14 18.8	+10
MDJ				PP	PP	23 17 42.3	+2.9
MDJ				S	S	23 25 01.2	+1.3
MDJ				XS	sS	23 25 13.1	+12
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,59nm,4.3s						
MDJ				LR	LR		
	comp=N,37nm,23.3s						
MDJ				LR	LR		
	comp=E,12nm,14.2s						
MDJ				LR	LR		
	comp=Z,47nm,21.4s,MS3.9						
Y13A	**Salome**	**89.68**	**49**	⇑P	**P**	**23 14 09.3**	**+1.2**
	baz=90						
WCN	**Washoe City**	**89.73**	**42**	⇓P	**P**	**23 14 08.5**	**+0.2**
	baz=90						
BEKR	**Beckwourth**	**89.78**	**41**	⇑P	**P**	**23 14 08.4**	**-0.1**
	baz=90						
PDMCI	**Parker Dam,Lak**	**89.79**	**48**	⇑P	**P**	**23 14 08.4**	**-0.2**
	baz=90						
U10A	**Ash Meadows, A**	**89.81**	**46**	⇓P	**P**	**23 14 08.7**	**+0.1**
	baz=90						
YBH	**Yreka Blue Hor**	**89.81**	**38**	P	**P**	**23 14 08.1**	**-0.6**
	comp=Z,2.8nm,0.9s,mb4.6,baz=184,slow=6.0,SNR=6.3						
YBH	**Yreka Blue Hor**	**89.81**	**38**	⇓P	**P**	**23 14 09.1**	**+0.4**
	baz=90						
HATC	**Hat Creek Radi**	**89.83**	**40**	⇑P	**P**	**23 14 08.5**	**-0.3**
	baz=90						
Z14A	**Wintersburg**	**89.97**	**50**	⇓P	**P**	**23 14 09.9**	**+0.5**
	baz=90						
NVAR	**Mina Array Bea**	**89.97**	**43**	P	**P**	**23 14 08.9**	**-0.5**
	comp=Z,5.9nm,1.0s,mb4.9,baz=210,slow=6.5,SNR=20						
V11A	**Goodsprings**	**89.98**	**47**	⇓P	**P**	**23 14 10.2**	**+0.7**
	baz=90						
115A	**Sonoran Desert**	**90.02**	**51**	⇑P	**P**	**23 14 10.5**	**+0.9**
	baz=90						
S09A	**Goldfield**	**90.13**	**44**	⇑P	**P**	**23 14 09.9**	**-0.2**
	baz=90						
K02A	**Glendale**	**90.14**	**37**	⇑P	**P**	**23 14 09.9**	**-0.3**
	baz=90						
X13A	**Yucca**	**90.18**	**48**	⇑P	**P**	**23 14 11.4**	**+1.0**
	baz=90						
HABR	**Khabarovsk**	**90.19**	**331**	*e*P	**P**	**23 14 06.8**	**-3.6**
HABR				*e*S	SKSac	23 24 34.6	-7.8
TPNV	**Topopah Spring**	**90.20**	**45**	*e*P	**P**	**23 14 10.5**	**0.0**
TPNV				pmax	pmax		
	comp=Z,14nm,1.4s,mb5.1						
TPNV	**Topopah Spring**	**90.20**	**45**	*e*P	**P**	**23 14 10.5**	**0.0**
	comp=Z,14nm,1.4s,mb5.1						
V12A	**Nelson**	**90.26**	**47**	⇓P	**P**	**23 14 11.0**	**+0.2**
	baz=90						
O06A	**Flanigan**	**90.28**	**41**	⇓P	**P**	**23 14 10.5**	**-0.4**
	baz=90						
Y14A	**Wickenburg**	**90.29**	**49**	⇑P	**P**	**23 14 10.9**	**0.0**
	baz=90						
M04C	**Macdoel**	**90.31**	**39**	⇓P	**P**	**23 14 10.8**	**-0.2**
	baz=90						
M05C	**Lookout**	**90.39**	**40**	⇑P	**P**	**23 14 11.1**	**-0.2**
	baz=90						
W13A	**Hualapai Mount**	**90.47**	**48**	⇑P	**P**	**23 14 11.3**	**-0.4**
	baz=91						
Q08A	**Gabbs**	**90.48**	**43**	⇑P	**P**	**23 14 11.1**	**-0.6**
	baz=91						
J02A	**Umpqua**	**90.53**	**37**	⇓P	**P**	**23 14 11.3**	**-0.7**
	baz=91						
L04A	**Klamath Falls**	**90.56**	**39**	⇓P	**P**	**23 14 11.7**	**-0.4**
	baz=91						
R09A	**Tonopah**	**90.56**	**44**	⇑P	**P**	**23 14 12.3**	**+0.2**
	baz=91						
M06C	**Likely Place G**	**90.64**	**40**	⇓P	**P**	**23 14 12.3**	**-0.2**
	baz=91						
N06A	**Buffalo Meadow**	**90.68**	**41**	⇑P	**P**	**23 14 12.2**	**-0.5**
	baz=91						
X14A	**Yava**	**90.70**	**49**	⇑P	**P**	**23 14 13.1**	**+0.3**
	baz=91						
TUC	**Tucson**	**90.73**	**52**	*e*P	**P**	**23 14 13.6**	**+0.7**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.8						
TUC	**Tucson**	**90.73**	**52**	*e*P	**P**	**23 14 13.6**	**+0.6**
	comp=Z,6.7nm,1.3s,mb4.8						
O07A	**Toulon**	**90.81**	**42**	⇑P	**P**	**23 14 12.7**	**-0.6**
	baz=91						
J03A	**Ideyld Park**	**90.84**	**37**	⇑P	**P**	**23 14 13.4**	**-0.1**
	baz=91						
I02A	**Mapleton**	**90.86**	**36**	⇑P	**P**	**23 14 13.6**	**+0.1**
	baz=91						
Q09A	**Carvers**	**90.89**	**43**	⇓P	**P**	**23 14 14.0**	**+0.3**
	baz=91						
U12A	**Valley of Fire**	**90.91**	**47**	⇑P	**P**	**23 14 14.5**	**+0.7**
	baz=91						
L05A	**Lakeview**	**91.03**	**39**	⇑P	**P**	**23 14 14.0**	**-0.3**
	baz=91						
W14A	**Seligman**	**91.04**	**48**	⇓P	**P**	**23 14 15.2**	**+0.8**
	baz=91						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CN2	**Changchun**	**91.07**	**323**	eP	**P**	**23 14 13.6**	**-0.9**
CN2				eS	S	23 25 08.0	-5.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.2						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s,MS4.8						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS4.8						
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS4.6						
I03A	**Eugene**	**91.11**	**37**	⇑P	**P**	**23 14 14.9**	**+0.2**
	baz=91						
X15A	**Humboldt**	**91.13**	**49**	⇓P	**P**	**23 14 15.6**	**+0.8**
	baz=91						
M07A	**Soldier Meadow**	**91.48**	**41**	⇓P	**P**	**23 14 16.1**	**-0.3**
	baz=92						
J05A	**Fort Rock**	**91.68**	**38**	⇓P	**P**	**23 14 17.1**	**-0.2**
	baz=92						
O09A	**Fish Creek Ran**	**91.78**	**42**	⇓P	**P**	**23 14 17.6**	**-0.2**
	baz=92						
L07A	**Adell**	**91.82**	**40**	⇓P	**P**	**23 14 18.1**	**+0.1**
	baz=92						
P10A	**Eureka**	**91.83**	**43**	⇑P	**P**	**23 14 18.1**	**0.0**
	baz=92						
K06A	**Valley Falls**	**91.86**	**39**	⇑P	**P**	**23 14 17.4**	**-0.8**
	baz=92						
M08A	**Happy Creek Ra**	**91.96**	**41**	⇓P	**P**	**23 14 18.5**	**-0.1**
	baz=92						
N09A	**Rock Creek Ran**	**92.04**	**42**	⇑P	**P**	**23 14 18.9**	**-0.1**
	baz=92						
H04A	**Detroit Lake**	**92.17**	**37**	⇓P	**P**	**23 14 18.9**	**-0.7**
	baz=92						
J06A	**Christmas Vall**	**92.23**	**39**	⇓P	**P**	**23 14 19.3**	**-0.6**
	baz=92						
Q12A	**Willow Creek R**	**92.42**	**44**	⇑P	**P**	**23 14 20.8**	**0.0**
	baz=93						
M09A	**Marrel Ranch,**	**92.46**	**41**	⇑P	**P**	**23 14 20.8**	**-0.2**
	baz=93						
L08A	**Fields**	**92.48**	**40**	⇓P	**P**	**23 14 20.7**	**-0.3**
	baz=93						
H05A	**Madras**	**92.63**	**37**	⇑P	**P**	**23 14 21.5**	**-0.2**
	baz=93						
O11A	**Cowboy Ranch,**	**92.64**	**43**	⇓P	**P**	**23 14 21.5**	**-0.3**
	baz=93						
P12A	**McGill**	**92.65**	**44**	⇑P	**P**	**23 14 21.8**	**0.0**
	baz=93						
I06A	**Prineville**	**92.67**	**38**	⇓P	**P**	**23 14 21.7**	**-0.2**
	baz=93						
L09A	**Wilkinson Ranc**	**92.74**	**41**	⇑P	**P**	**23 14 22.1**	**-0.2**
	baz=93						
K08A	**Mann Creek Ran**	**92.77**	**40**	⇑P	**P**	**23 14 21.9**	**-0.4**
	baz=93						
M10A	**I.L. Ranch, Tu**	**93.04**	**42**	⇑P	**P**	**23 14 23.6**	**-0.1**
	baz=93						
I07A	**Izee**	**93.14**	**38**	⇑P	**P**	**23 14 24.1**	**0.0**
	baz=93						
K09A	**Rome**	**93.16**	**40**	⇓P	**P**	**23 14 24.0**	**-0.2**
	baz=93						
F05A	**White Salmon**	**93.38**	**36**	⇑P	**P**	**23 14 24.9**	**-0.2**
	baz=94						
M11A	**Holland Ranch,**	**93.41**	**42**	⇓P	**P**	**23 14 25.4**	**+0.1**
	baz=94						
N12A	**Clover Valley,**	**93.46**	**43**	⇓P	**P**	**23 14 25.7**	**+0.1**
	baz=94						
M12A	**Wells**	**93.90**	**43**	⇓P	**P**	**23 14 27.4**	**-0.2**
	baz=94						
KMI	**Kunming**	**93.96**	**297**	P	**P**	**23 14 30.7**	**+2.8**
KMI				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb5.3						
M13A	**Montello**	**94.29**	**43**	⇓P	**P**	**23 14 29.2**	**-0.2**
	baz=94						
ANMO	**Albuquerque**	**95.20**	**52**	⇑eP	**P**	**23 14 30.7**	**-2.8**
ANMO	**Albuquerque**	**95.20**	**52**	P	**P**	**23 14 30.1**	**-3.5**
CD2	**Chengdu**	**96.39**	**302**	eP	**P**	**23 14 38.0**	**-1.0**
CD2				AP	pP	23 14 46.0	+6.0
CD2				XP	sP	23 14 49.2	+8.9
CD2				PP	PP	23 18 35.1	+2.6
CD2				SKS		23 25 11.8	
CD2				S	S	23 25 54.1	-6.0
CD2				XS	sS	23 26 07.6	+5.9
CD2				SS	SS	23 32 32.4	-0.3
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.7						
CD2				AMB	AMB		
	comp=Z,60nm,6.8s						
CD2				LR	LR		
	comp=E,110nm,9.6s						
CD2				LR	LR		
	comp=Z,90nm,15.6s,MS4.3						
HHC	**Hu-ho-hao-te**	**96.91**	**314**	eP	**P**	**23 14 43.6**	**+2.3**
HHC				AP	pP	23 14 51.6	+9.3
HHC				XP	sP	23 14 54.8	+12
HHC				PP	PP	23 18 42.7	+6.2
HHC				SKS		23 25 17.1	
HHC				S	S	23 26 02.1	-2.4
HHC				XS	sS	23 26 15.7	+10
HHC				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,113nm,7.3s						
HHC				LR	LR		
	comp=N,76nm,24.7s,MS4.4						
HHC				LR	LR		
	comp=E,107nm,20.9s,MS4.4						
HHC				LR	LR		
	comp=Z,78nm,23.7s,MS4.1						
PDAR	**Pinedale Array**	**97.86**	**44**	P	**P**	**23 14 44.4**	**-1.3**
	comp=Z,0.3nm,0.5s,mb4.1,baz=222,slow=2.0,SNR=4.3						
CPUP	**Villa Florida**	**99.47**	**129**	LR	LR	23 50 16.3	
	comp=Z,77nm,20.1s,MS4.2,baz=36,slow=30						
INK	**Inuvik**	**105.61**	**16**	ePKiKP	PKiKP	23 19 30.7	-2.6
WMQ	**Urumqi**	**113.72**	**308**	ePKP	PKiKP	23 19 46.0	-2.6
BOSA	**Boshof**	**115.41**	**203**	PKP	PKPdf	23 19 51.3	-0.5
	comp=Z,4.8nm,1.0s,baz=188,slow=7.1,SNR=3.0						
MKAR	**Makanchi Array**	**118.31**	**310**	PKP	PKPdf	23 19 54.1	-3.3
	comp=Z,2.0nm,0.9s,baz=93,slow=2.6,SNR=7.3						
MKAR	**Makanchi Array**	**118.31**	**310**	i PKIKP	PKPdf	23 19 54.7	-2.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**121.70**	**313**	ePKIKP	PKPdf	23 20 00.8	-3.1
AAK	**Ala-Archa**	**122.46**	**303**	⇑iPKIKP	PKPdf	23 20 02.7	-2.7
CHKZ	**Chkalovo**	**127.04**	**316**	ePKIKP	PKPdf	23 20 11.1	-3.1
BRVK	**Borovoye**	**127.18**	**315**	ePKIKP	PKPdf	23 20 11.5	-2.9
ARU	**Arti**	**133.94**	**319**	i PKIKP	PKPdf	23 20 24.5	-2.7
ARU				eSS	SS	23 40 35.5	-10
ARU	**Arti**	**133.94**	**319**	ePKPdf	PKPdf	23 20 25.9	-1.3
JOF	**Joensuu**	**143.73**	**337**	ePKP	PKPdf	23 20 38.6	-6.5
GNI	**Garni**	**144.19**	**295**	ePKIKP	PKPdf	23 20 43.3	-2.6
ZEI	**Tsey**	**144.78**	**300**	ePKIKP	PKPdf	23 20 44.5	-2.4
ZEI				e		23 24 01.6	
GOF	**Gofitskoye**	**145.19**	**304**	ePKP2	PKPab	23 20 45.0	-2.3
MOS	**Moscow**	**145.31**	**324**	ePKP2	PKPab	23 20 43.3	-4.4
MOS				pmax	pmax		
	comp=Z,37nm,0.8s						
KIV	**Kislovodsk**	**145.57**	**302**	ePKP2	PKPab	23 20 46.4	-2.3
KIV	**Kislovodsk**	**145.57**	**302**	ePKP	PKPdf	23 20 46.4	-1.9
KAF	**Kangasniemi**	**145.90**	**339**	ePKIKP	PKPdf	23 20 45.4	-3.5
OBN	**Obninsk**	**146.14**	**323**	ePKP2	PKPab	23 20 47.2	-3.6
OBN				pmax	pmax		
	comp=Z,29nm,1.0s						
OBN	**Obninsk**	**146.14**	**323**	ePKP	PKPdf	23 20 47.4	-1.9
VRSR	**Storozhevoye**	**146.28**	**316**	ePKP2	PKPab	23 20 47.8	-3.6
VRSR				pmax	pmax		
	comp=N,9.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,30nm,0.9s						
VRSR				pmax	pmax		
	comp=E,20nm,1.0s						
FIA1	**FINESS Array S**	**146.49**	**338**	ePKP	PKPdf	23 20 48.2	-1.6
FINES	**FINESS Array B**	**146.49**	**338**	PKPbc	PKPbc	23 20 48.2	-3.0
	comp=E,21nm,0.7s,baz=66,slow=4.6,SNR=99						
VSU	**Vasula**	**148.47**	**334**	c iPKIKP	PKPdf	23 20 51.7	-1.5
MALT	**Malatya**	**149.08**	**292**	⇓iP	PKPdf	23 20 54.0	-0.1
MALT	**Malatya**	**149.08**	**292**	⇓P	PKPdf	23 20 54.0	-0.1
MALT				ePKPbc	PKPbc	23 20 56.5	-1.8
ANN	**Anapa**	**149.16**	**305**	i PKIKP	PKPdf	23 20 50.1	-4.2
ANN				pmax	pmax		
	comp=Z,35nm,1.0s						
NB2	**NORSAR Subarra**	**150.32**	**350**	PKPa	PKPbc	23 20 58.2	-3.1
	comp=Z,30nm,1.1s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.32**	**350**	PKP	PKPdf	23 20 53.9	-2.2
	comp=Z,6.1nm,0.7s,baz=14,slow=4.2,SNR=10						
NOA				PKPbc	PKPbc	23 20 58.4	-2.9
	comp=Z,12nm,0.7s,baz=15,slow=4.2,SNR=50						
NAO01	**NORSAR Array S**	**150.55**	**350**	ePKPbc	PKPbc	23 20 59.6	-2.3
EIL	**Elat**	**150.97**	**274**	ePKPbc	PKPbc	23 21 02.4	-0.4
KONO	**Kongsberg**	**151.88**	**351**	d iPKIKP	PKPbc	23 21 02.5	-2.4
AKASG	**Malin Array Be**	**152.19**	**320**	PKPbc	PKPbc	23 21 03.2	-2.4
	comp=Z,6.2nm,0.9s,baz=15,slow=1.2,SNR=4.1						
AKASG	**Malin Array Be**	**152.19**	**320**	i PKIKP	PKPdf	23 20 59.5	+0.5
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKASG	**Malin Array Be**	**152.19**	**320**	PKPbc	PKPbc	23 21 03.2	-2.4
AKBB	**Malin Array Si**	**152.19**	**320**	ePKIKP	PKPbc	23 21 03.1	-2.5
BR131	**Keskin Array S**	**152.73**	**295**	ePKPbc	PKPbc	23 21 04.8	-2.0
BRTR	**Keskin Array B**	**152.73**	**295**	PKPbc	PKPbc	23 21 04.2	-2.7
	comp=Z,3.0nm,0.7s,baz=119,slow=3.5,SNR=20						
SUW	**Suwalki**	**153.05**	**331**	ePKPbc	PKPbc	23 21 05.2	-2.4
CSS	**Prodhromos**	**153.10**	**285**	ePKPdf	PKPdf	23 21 00.9	+0.6
LIC	**Lamto**	**153.60**	**166**	ePKIKP	PKPbc	23 21 05.4	-3.4
	comp=Z,19nm,0.7s						
BURAR	**Bucovina Array**	**156.04**	**317**	⇓iP	PKPab	23 21 30.7	-1.0
BURAR	**Bucovina Array**	**156.04**	**317**	⇓P	PKPab	23 21 30.7	-0.9
DRGR		**157.93**	**318**	⇓iP	PKPdf	23 21 05.9	-0.9
DRGR		**157.93**	**318**	⇓P	PKPdf	23 21 05.9	-0.9
CLL	**Collm**	**158.93**	**339**	ePKP2	PKPab	23 21 42.0	-2.1
BRG	**Berggiesshubel**	**159.01**	**337**	eP	PKPab	23 21 42.7	-1.8
	comp=Z,2.2nm,0.9s						
BRG				e		23 24 43.4	
	comp=Z,2.4nm,1.0s						
BZS	**Buzias**	**159.21**	**316**	⇓iP	PKPdf	23 21 07.0	-1.3
BZS	**Buzias**	**159.21**	**316**	⇓P	PKPdf	23 21 07.0	-1.3
PKSM	**Moragy**	**160.52**	**321**	⇓iP	PKPdf	23 21 07.8	-2.0
PKSM	**Moragy**	**160.52**	**321**	⇓P	PKPdf	23 21 07.8	-2.0
KHC	**Kasperske Hory**	**160.61**	**335**	ePKPab	PKPab	23 21 49.5	-1.9
GERES	**GERESS Array B**	**160.80**	**334**	PKP	PKPdf	23 21 07.8	-2.3
	comp=Z,0.6nm,0.8s,baz=83,slow=3.1,SNR=4.9						
GERES				PKPab	PKPab	23 21 50.7	-1.6
	comp=Z,0.8nm,0.7s,baz=27,slow=3.3,SNR=6.0						
TOA0	**Torodi Ar. Sit**	**161.12**	**182**	ePKPdf	PKPdf	23 21 09.5	-1.0
TORD	**Torodi Ar. Bea**	**161.12**	**182**	PKP	PKPdf	23 21 09.9	-0.5
	comp=Z,2.4nm,1.1s,baz=238,slow=1.9,SNR=23						
TORD				PKPab	PKPab	23 21 52.9	-0.8
	comp=Z,9.0nm,0.8s,baz=179,slow=3.5,SNR=24						
TORD	**Torodi Ar. Bea**	**161.12**	**182**	PKP	PKPdf	23 21 09.9	-0.5
TORD				PKPab	PKPab	23 21 52.9	-0.8
GIVF	**Givet**	**161.82**	**352**	ePKP2	PKPab	23 21 55.0	-1.7
CDF	**Champ du Feu**	**163.07**	**346**	ePKP2	PKPab	23 21 59.4	-2.8
LOR	**Lormes**	**164.72**	**353**	ePKP2	PKPab	23 22 06.4	-3.1
	comp=Z,12nm,1.2s						
SSF	**Saint Saulge**	**164.96**	**354**	ePKP2	PKPab	23 22 07.9	-2.6
	comp=Z,7.0nm,0.8s						
AVF	**Avril sur Loir**	**165.24**	**354**	ePKP2	PKPab	23 22 08.9	-2.9
	comp=Z,16nm,1.2s						
SMF	**Signal de Mont**	**165.34**	**353**	ePKP2	PKPab	23 22 09.3	-2.9
	comp=Z,10nm,0.8s						
LPL	**La Plagne**	**165.93**	**344**	ePKP2	PKPab	23 22 13.2	-1.6
	comp=Z,6.1nm,0.9s						
LPG	**La Plagne**	**165.95**	**344**	ePKP2	PKPab	23 22 13.1	-1.8
	comp=Z,6.9nm,0.8s						
ORIF	**Oris-en-Rattie**	**166.69**	**345**	ePKP2	PKPab	23 22 14.5	-3.7
ESDC	**Sonseca Array**	**171.38**	**27**	PKP	PKPdf	23 21 18.2	-0.3
	comp=Z,2.2nm,1.0s,baz=299,slow=1.4,SNR=8.9						
ESDC				PKPab	PKPab	23 22 37.6	-1.4
	comp=Z,0.8nm,0.7s,baz=334,slow=3.1,SNR=4.6						

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*SKO **08** 23:07:39.1, 39.87N×19.86E, h0km*
*ISCJB **08** 23:07:40.8±1.3, 40.10N±0.05×19.67E±0.10, h10km, Error ellipse: s-maj=11.5km s-min=5.4km az=41.3*
*NEIC **08** 23:07:40.2, 40.00N×19.46E, h39km, MD3.2(ATH), After ATH.*
*CSEM **08** 23:07:40.0±0.5, 40.18N×19.68E, h10km, MD3.2, Error ellipse: s-maj=9.8km s-min=4.5km az=99.0*
*ATH **08** 23:07:40.2, 40.00N×19.46E, h39km±1km, MD3.2/3*
ISC 08 23:07:40.9±1.6**, 40.12N**±0.05×**19.7E**±0.1**, h9**km±6km**, n10,** $\sigma 1^{s}$**12**/18**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.33**	**58**	i Pg	**Pg**	**23 07 46.9**	**-0.4**
TPE				i Sg	**Sg**	**23 07 51.2**	**-0.5**
KEK	**Kerkira**	**0.42**	**164**	ePb	**Pg**	**23 07 50.0**	**+0.8**
KEK				Sb	**Sg**	**23 07 56.9**	**+2.1**
LSK	**Leskovik**	**0.73**	**88**	i Pg	**Pg**	**23 07 53.9**	**-1.0**
LSK				i Sg	**Sg**	**23 08 04.6**	**+0.1**
JAN	**Janina**	**1.04**	**116**	ePn	**Pn**	**23 08 00.8**	**-0.7**
JAN				Sn	**Sn**	**23 08 15.9**	**-0.2**
OHR	**Ohrid**	**1.32**	**41**	ePn	**Pn**	**23 08 05.8**	**+0.3**
OHR				eSn	**Sn**	**23 08 26.1**	**+3.0**
OHR	**Ohrid**	**1.32**	**41**	ePn	**Pn**	**23 08 05.7**	**+0.3**
OHR				eSn	**Sn**	**23 08 26.0**	**+2.9**
BIA	**Bitola**	**1.56**	**54**	ePn	**Pn**	**23 08 08.7**	**-0.1**
BIA				eSn	**Sn**	**23 08 30.4**	**+1.4**
BIA	**Bitola**	**1.56**	**54**	ePn	**Pn**	**23 08 08.6**	**-0.1**
BIA				eSn	**Sn**	**23 08 30.4**	**+1.4**
EVR	**Evrytania**	**2.06**	**125**	ePN	**Pn**	**23 08 14.5**	**-1.1**
VLS	**Valsamata**	**2.08**	**159**	ePN	**Pn**	**23 08 14.0**	**-1.8**

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*ISCJB **08** 23:25:59.1±0.6, 8.2S±0.1×107.91E±0.06, h10km, mb4.3/13, MS3.5/2, Error ellipse: s-maj=15.6km s-min=8.5km az=31.7*
*IDC **08** 23:25:59.4±0.9, 8.35S×107.27E, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.9/15, mbtmp4.1/6, MS3.5/2, Ms1 3.5/2, ms1mx3.0/28, Error ellipse: s-maj=54.4km s-min=22.0km az=74.0*
*NEIC **08** 23:26:01.1±0.5, 8.35S×107.50E, h10km, mb4.4/2, Error ellipse: s-maj=25.9km s-min=9.3km az=58.0*
ISC 08 23:26:00.4±0.7**, 8.3S**±0.1×**107.96E**±0.07**, h10**km**, n20,** $\sigma 1^{s}$**09**/19**, mb4.4**/13**, MS3.5**/2**, 1D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**2.36**	**79**	⇓iP	**Pn**	**23 26 37.2**	**-2.0**
YOGI				i S	**Sn**	**23 27 08.5**	**+0.4**
WRAB	**Tennant Creek**	**28.04**	**117**	P	**P**	**23 31 55.8**	**+4.0**
ASAR	**Alice Springs**	**29.18**	**125**	LR	LR	23 44 13.8	
	comp=Z,86nm,20.8s,MS3.4,baz=181,slow=37						
STKA	**Stephens Creek**	**39.08**	**132**	P	**P**	**23 33 31.6**	**+4.0**
	2.3nm,0.9s,mb3.9,baz=283,slow=14,SNR=2.9						
PKI	**Pulchoki**	**41.80**	**329**	eP	**P**	**23 33 50.9**	**+0.8**
GUN	**Gumba**	**41.84**	**330**	eP	**P**	**23 33 50.1**	**-0.4**
DMN	**Daman**	**41.98**	**329**	eP	**P**	**23 33 52.4**	**+0.8**
	24nm,0.8s,mb4.8						
KKN	**Kakani**	**42.04**	**329**	eP	**P**	**23 33 52.0**	**-0.1**
	25nm,0.9s,mb4.8						
GKN	**Gorkha**	**42.54**	**329**	eP	**P**	**23 33 56.4**	**+0.2**
	26nm,0.9s,mb4.9						
KOLN	**Koldanda**	**42.90**	**328**	eP	**P**	**23 33 59.7**	**+0.6**
	25nm,0.8s,mb5.0						
SONM	**Songino Array**	**55.89**	**359**	P	**P**	**23 35 40.0**	**+1.7**
	1.5nm,0.7s,mb4.1,baz=173,slow=8.4,SNR=9.4						
MKAR	**Makanchi Array**	**59.41**	**340**	P	**P**	**23 36 02.7**	**-0.4**
	2.3nm,0.6s,mb4.4,baz=145,slow=7.6,SNR=21						
MKAR	**Makanchi Array**	**59.41**	**340**	P	**P**	**23 36 02.7**	**-0.4**
KURK	**Kurchatov**	**64.02**	**340**	eP	**P**	**23 36 34.0**	**-0.2**
	4.5nm,0.8s,mb4.5						
ZAL	**Zalesovo**	**65.00**	**345**	LR	LR	00 11 22.9	
	comp=Z,40nm,18.5s,MS3.6,baz=351,slow=42						
MAW	**Mawson**	**66.42**	**197**	P	**P**	**23 36 49.1**	**-0.7**
	0.9nm,0.6s,mb4.0,baz=59,slow=12,SNR=3.9						
BRVK	**Borovoye**	**68.98**	**337**	eP	**P**	**23 37 05.4**	**-0.5**
	1.2nm,0.7s,mb3.9						
CHKZ	**Chkalovo**	**69.33**	**337**	eP	**P**	**23 37 07.3**	**-0.7**
	6.4nm,0.8s,mb4.6						
VNDA	**Vanda**	**74.54**	**169**	P	**P**	**23 37 40.1**	**+0.8**
	1.5nm,1.1s,mb3.8,baz=300,slow=6.4,SNR=4.3						
BRTR	**Keskin Array B**	**83.39**	**312**	P	**P**	**23 38 25.6**	**-2.3**
	0.8nm,0.8s,mb3.8,baz=128,slow=8.3,SNR=5.9						

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*IDC **08** 23:28:10.7±4.4, 14.65S×167.31E, h191km±37km, mb3.7/6, mb1 3.7/7, mb1mx3.7/13, mbtmp4.1/7, Error ellipse: s-maj=32.8km s-min=27.2km az=70.0*
*NEIC **08** 23:28:10.8±2.4, 14.66S×167.17E, h186km±21km, mb4.1/6, Error ellipse: s-maj=20.5km s-min=13.7km az=76.0*
*ISCJB **08** 23:28:11.6±2.3, 14.7S±0.1×167.1E±0.2, h208km±19km, mb3.9/11, Error ellipse: s-maj=25.5km s-min=15.0km az=140.9*
ISC 08 23:28:12.0±2.2**, 14.7S**±0.1×**167.2E**±0.2**, h199**km±18km**, n52,** $\sigma 0^{s}$**58**/20**, mb3.9**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.37**	**186**	P	**Pn**	**23 29 56.5**	**-0.4**
	1.7nm,0.3s,baz=40,slow=17,SNR=7.1						
DZM				S	**Sn**	**23 31 20.7**	**+0.3**
	0.7nm,0.3s,baz=127,slow=20,SNR=2.8						
PMG	**Port Moresby**	**20.30**	**283**	P	**P**	**23 32 32.2**	**-0.2**
STKA	**Stephens Creek**	**28.97**	**229**	P	**P**	**23 33 54.6**	**+1.7**
	5.0nm,0.5s,mb4.4,baz=47,slow=6.9,SNR=14						
STKA	**Stephens Creek**	**28.97**	**229**	eP	**P**	**23 33 54.8**	**+1.9**
WRAB	**Tennant Creek**	**31.77**	**256**	eP	**P**	**23 34 17.3**	**-0.1**
	4.4nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**32.63**	**249**	P	**P**	**23 34 24.5**	**-0.4**
	1.0nm,0.4s,mb3.7,baz=81,slow=9.1,SNR=17						
TAU	**Tasmania Unive**	**32.90**	**207**	eP	**P**	**23 34 27.5**	**+0.2**
	12nm,0.8s,mb4.5						
MAJO	**Matsushiro**	**57.85**	**333**	P	**P**	**23 37 42.2**	**-0.5**
VNDA	**Vanda**	**62.89**	**181**	P	**P**	**23 38 16.2**	**-0.7**
	0.6nm,0.5s,mb3.5,baz=359,slow=7.7,SNR=7.2						
VNDA	**Vanda**	**62.89**	**181**	eP	**P**	**23 38 16.4**	**-0.5**
	1.4nm,0.9s,mb3.6						
SBA	**Scott Base**	**63.17**	**180**	eP	**P**	**23 38 18.9**	**+0.2**
	2.6nm,0.8s,mb3.9						
CASY	**Casey**	**63.54**	**202**	eP	**P**	**23 38 20.9**	**-0.2**
	1.4nm,0.6s,mb3.8						
MDJ	**Mudanjiang**	**68.22**	**332**	P	**P**	**23 38 50.9**	**-0.1**
QSPA	**South Pole Qui**	**75.33**	**180**	eP	**P**	**23 39 32.8**	**-0.5**
	2.9nm,0.6s,mb4.1						
MAW	**Mawson**	**81.89**	**202**	P	**P**	**23 40 08.8**	**-0.3**
	1.3nm,0.7s,mb3.7,baz=128,slow=14,SNR=7.6						
SONM	**Songino Array**	**82.44**	**324**	P	**P**	**23 40 12.4**	**+0.5**
	0.2nm,0.3s,mb3.2,baz=157,slow=4.9,SNR=3.6						
SNAA	**Sanae**	**93.58**	**183**	P	**P**	**23 41 05.0**	**-0.3**
WALA	**Waterton Lakes**	**93.85**	**40**	P	**P**	**23 41 07.6**	**+1.1**
MKAR	**Makanchi Array**	**97.14**	**316**	P	**P**	**23 41 21.5**	**-0.1**
	0.7nm,0.7s,mb4.0,baz=81,slow=7.9,SNR=4.3						
KURK	**Kurchatov**	**100.34**	**320**	Pdif	Pdif	23 41 35.3	-0.5
ARCES	**ARCESS Array B**	**120.21**	**345**	PKP	PKPdf	23 46 37.3	-1.9
	1.1nm,0.5s,baz=60,slow=2.3,SNR=12						
JOF	**Joensuu**	**122.83**	**338**	ep	PKPdf	23 46 41.6	-2.6
FINES	**FINESS Array B**	**125.67**	**338**	PKP	PKPdf	23 46 48.7	-0.9
	0.7nm,0.8s,baz=93,slow=3.8,SNR=4.7						
CABF	**La Chapelle**	**144.47**	**337**	ePKP1	PKPdf	23 47 23.8	-0.6
	9.2nm,0.9s						
FLN	**La Foliniere**	**144.55**	**346**	ePKP1	PKPdf	23 47 22.7	-1.9
	5.8nm,0.7s						
LDF	**La Druitiere**	**144.62**	**345**	ePKP1	PKPdf	23 47 23.5	-1.2
LOR	**Lormes**	**144.69**	**340**	ePKP1	PKPdf	23 47 23.8	-1.0
	3.0nm,0.6s						
SSF	**Saint Saulge**	**144.98**	**340**	ePKP1	PKPdf	23 47 25.0	-0.3
	13nm,0.7s						
GRR	**Gorron**	**144.99**	**346**	ePKP1	PKPdf	23 47 24.4	-0.9
	9.7nm,0.6s						
HYF	**Humbligny**	**145.07**	**342**	ePKP1	PKPbc	23 47 25.5	+0.1
LPL	**La Plagne**	**145.14**	**336**	ePKP1	PKPbc	23 47 26.0	+0.4
	9.4nm,0.7s						
LPG	**La Plagne**	**145.15**	**336**	ePKP1	PKPbc	23 47 26.1	+0.5
	11nm,0.7s						
SMF	**Signal de Mont**	**145.24**	**340**	ePKP1	PKPbc	23 47 25.5	-0.4
	14nm,1.0s						
AVF	**Avril sur Loir**	**145.27**	**340**	ePKP1	PKPbc	23 47 25.6	-0.4
	6.5nm,0.8s						
SGMF	**Saint Gilles**	**145.49**	**348**	ePKP1	PKPbc	23 47 26.0	-0.7
	8.0nm,0.8s						
BGF	**Bois d'Agland**	**145.64**	**341**	ePKP1	PKPbc	23 47 26.9	-0.2
	4.7nm,0.7s						
MBDF	**Montbardon**	**145.77**	**335**	ePKP1	PKPbc	23 47 27.3	-0.2
	9.3nm,0.9s						
ORIF	**Oris-en-Rattie**	**145.97**	**336**	ePKP1	PKPbc	23 47 28.3	+0.2
	13nm,0.7s						
TCF	**Toulx Ste Croi**	**146.08**	**341**	ePKP1	PKPbc	23 47 28.2	-0.2
	3.5nm,0.7s						
SBF	**Sospel**	**146.19**	**333**	ePKP1	PKPbc	23 47 28.3	-0.5
	18nm,0.8s						
MFF	**Saint Martin d**	**146.47**	**344**	ePKP1	PKPbc	23 47 30.2	+0.6
	8.2nm,0.8s						
VIVF	**Saint-Julien-l**	**146.49**	**337**	ePKP1	PKPbc	23 47 29.7	+0.1
FRF	**La Foret Royal**	**146.77**	**334**	ePKP1	PKPbc	23 47 30.1	-0.3
	6.2nm,0.7s						
SMRF	**Simiane la Rot**	**146.88**	**335**	ePKP1	PKPbc	23 47 31.6	+0.9
LMR	**La Mourre**	**147.01**	**334**	ePKP1	PKPbc	23 47 30.8	-0.3
	17nm,1.1s						
RJF	**Les Rejaudoux**	**147.18**	**341**	ePKP1	PKPbc	23 47 31.4	-0.1
	3.6nm,0.6s						
CAF	**Calviac**	**147.34**	**340**	ePKP1	PKPbc	23 47 32.2	+0.2
	7.5nm,1.0s						
LASF	**Ste Croix**	**147.46**	**337**	ePKP1	PKPbc	23 47 32.4	+0.1
	8.1nm,0.8s						
LFF	**La Frestale**	**147.75**	**342**	ePKP1	PKPbc	23 47 33.0	-0.1
	7.2nm,0.6s						
MTLF	**Montolieu**	**148.69**	**339**	ePKP1	PKPbc	23 47 35.6	+0.1
	6.5nm,0.8s						
ETSF	**Etsaut**	**149.99**	**342**	ePKP1	PKPbc	23 47 39.2	+0.5
	5.6nm,0.6s						
KEST	**Kesra**	**151.15**	**321**	PKPbc	PKPbc	23 47 42.1	+0.7
	0.5nm,0.5s,baz=124,slow=3.6,SNR=11						

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*ROM **08** 23:29:25.0±0.8, 39.96N×19.91E, h10km, Ml2.7/2, Error ellipse: s-maj=11.2km s-min=3.3km az=139.0*
*ISCJB **08** 23:29:25.9±0.7, 40.08N±0.02×19.70E±0.04, h2km±4km, Error ellipse: s-maj=4.8km s-min=3.8km az=168.8*
*ATH **08** 23:29:25.6, 40.12N×19.71E, h11km±2km, MD3.3/4*
*NEIC **08** 23:29:26.5, 40.07N×19.68E, h2km, MD3.3(ATH), After THE.*
*THE **08** 23:29:26.5, 40.07N×19.68E, h1km*
*CSEM **08** 23:29:26.0±0.2, 40.15N×19.74E, h8km, MD3.3, Error ellipse: s-maj=4.0km s-min=3.6km az=56.0*
*SKO **08** 23:29:30.9, 40.13N×20.00E, h0km*
ISC 08 23:29:26.6±0.6**, 40.07N**±0.02×**19.68E**±0.04**, h5**km±4km**, n25,** $\sigma 1^{s}$**20**/44**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.31**	**128**	i Pg	**Pg**	**23 29 31.4**	**-1.3**
SRN				i Sg	**Sg**	**23 29 37.7**	**+1.0**
KEK	**Kerkira**	**0.37**	**166**	ePG	**Pg**	**23 29 33.5**	**-0.3**
KEK				eSB	**Sg**	**23 29 39.9**	**+1.3**
IGT	**Igoumenitsa**	**0.73**	**137**	ePg	**Pg**	**23 29 39.2**	**-1.6**
IGT				eSg	**Sg**	**23 29 51.1**	**+0.8**
SCTE	**Santa Cesarea**	**0.93**	**271**	Pn	**Pn**	**23 29 45.8**	**-0.6**
SCTE				Sn	**Sn**	**23 30 00.6**	**+0.5**
	229nm,0.3s						
JAN	**Janina**	**0.99**	**114**	ePB	**Pb**	**23 29 44.4**	**-1.8**
JAN				eSB	**Sb**	**23 29 57.8**	**-1.7**
MEV	**Metsovon**	**1.22**	**103**	ePg	**Pg**	**23 29 49.4**	**-0.7**
MEV				eSg	**Sg**	**23 30 07.5**	**+1.6**
LCI	**Lecce**	**1.23**	**283**	Pn	**Pn**	**23 29 50.5**	**0.0**
	30nm,0.3s						
TIR	**Tirane**	**1.28**	**6**	Pn	**Pn**	**23 29 50.3**	**-0.9**
TIR				Sn	**Sn**	**23 30 09.2**	**+0.5**
	88nm,0.8s						
TIR	**Tirane**	**1.28**	**6**	ePg	**Pg**	**23 29 51.1**	**-0.1**
TIR				eSg	**Sg**	**23 30 10.0**	**+2.1**
TIR	**Tirane**	**1.28**	**6**	i Pn	**Pn**	**23 29 51.2**	**0.0**
TIR	**Tirane**	**1.28**	**6**	ePg	**Pn**	**23 29 51.2**	**0.0**
TIR				Sn	**Sn**	**23 30 09.2**	**+0.5**
OHR	**Ohrid**	**1.34**	**39**	ePg	**Pg**	**23 29 52.1**	**-0.3**
OHR				eSg	**Sg**	**23 30 09.4**	**-0.4**
OHR	**Ohrid**	**1.34**	**39**	ePg	**Pg**	**23 29 52.0**	**-0.4**
OHR				eSg	**Sg**	**23 30 09.3**	**-0.5**
FNA	**Florina**	**1.48**	**61**	ePg	**Pn**	**23 29 52.0**	**-1.9**
FNA				eSg	**Sg**	**23 30 15.6**	**+1.5**
LKD	**Levkas**	**1.55**	**151**	ePg	**Pg**	**23 29 55.5**	**-1.0**
BIA	**Bitola**	**1.57**	**52**	ePg	**Pn**	**23 29 52.9**	**-2.2**
BIA				eSg	**Sg**	**23 30 16.1**	**-1.0**
BIA	**Bitola**	**1.57**	**52**	ePg	**Pn**	**23 29 53.0**	**-2.1**
BIA				eSg	**Sg**	**23 30 11.6**	**-5.4**
BIA	**Bitola**	**1.57**	**52**	ePg	**Pn**	**23 29 52.9**	**-2.2**
BIA				eSg	**Sg**	**23 30 11.6**	**-5.5**
BIA				S	**Sn**	**23 30 16.1**	**+0.3**
KZN	**Kozani**	**1.62**	**81**	ePB	**Pb**	**23 29 55.8**	**-1.1**
EVR	**Evrytania**	**2.01**	**124**	ePN	**Pn**	**23 30 01.8**	**+0.7**
VLS	**Valsamata**	**2.02**	**159**	ePN	**Pn**	**23 30 02.9**	**+1.6**
AGG	**Agios Georgios**	**2.30**	**116**	ePn	**Pn**	**23 30 05.9**	**+0.7**
AGG				eSn	**Sn**	**23 30 35.2**	**+1.4**
STIP	**Stip**	**2.50**	**49**	ePn	**Pn**	**23 30 10.8**	**+3.0**
STIP				eSn	**Sn**	**23 30 38.3**	**-0.3**
VAY	**Valandovo**	**2.53**	**59**	ePn	**Pn**	**23 30 11.1**	**+2.8**
VAY				eSn	**Sn**	**23 30 39.4**	**0.0**
KNT	**Kendrikon**	**2.68**	**65**	ePn	**Pn**	**23 30 09.3**	**-1.1**

IDC 08 23:39:57.4±3.3**, 16.18S**×**173.41W, h0**km**, mb4.7**/3**, mb1 4.7**/3**, mb1mx4.1**/12**, mbtmp4.7**/3**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.7**/21**, Error ellipse: s-maj=187.7km**

s-min=50.1km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.47	258	P	P	23 47 21.4	+0.4
	6.5nm,0.7s,baz=84,slow=8.4,SNR=4.4						
STKA	Stephens Creek	43.65	241	eP	P	23 48 04.5	+0.8
	3.4nm,0.6s						
STKA	Stephens Creek	43.65	241	P	P	23 48 04.0	+0.3
	4.7nm,0.7s,baz=113,slow=5.5,SNR=7.5						
WB2	Warramunga Arr	49.66	257	eP	P	23 48 50.9	+0.2
ASAR	Alice Springs	49.87	253	P	P	23 48 52.6	+0.3
	12nm,0.6s,baz=88,slow=8.4,SNR=104						
ASPA	Alice Springs	49.87	253	eP	P	23 48 52.5	+0.1
CBIJ	Chichi jima	60.89	314	LR	LR	00 17 00.6	
	comp=Z,59nm,18.1s,baz=124,slow=36						
ARCES	ARCESS Array B	125.38	352	PKP	PKPdf	23 58 59.5	-0.7
	1.3nm,0.8s,baz=358,slow=2.3,SNR=3.7						

*MOS **08** 23:51:54.7±0.8, 5.96S×149.69E, h62^{km}, mb5.2/13, Error ellipse: s-maj=11.5km s-min=7.5km az=89.5*
*IDC **08** 23:51:54.5±1.6, 6.00S×149.75E, h48^{km}±14^{km}, mb4.5/14, mb1 4.7/16, mb1mx4.6/18, mbtmp4.8/16, ML4.0/2, MS4.2/9, Ms1 4.2/9, ms1mx3.9/15, Error ellipse: s-maj=15.8km s-min=10.3km az=108.0*
*ISCJB **08** 23:51:54.7±1.2, 6.02S±0.04×149.74E±0.05, h63^{km}±11^{km}, mb4.9/45, Error ellipse: s-maj=9.1km s-min=7.2km az=19.2*
*BJI **08** 23:51:56.0, 6.15S×150.11E, h97^{km}, mB5.0, mb4.9*
*HRVD **08** 23:51:58.2±0.2, 6.32S×149.85E, h52^{km}±1^{km}, MW5.1/68, Centroid moment Tensor Solution. LP body waves: s60,c97;Mantle waves: s68,c100; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.58±.18; $M_{\theta\theta}$-5.64±.11; $M_{\phi\phi}$1.07±.14; $M_{r\theta}$0.61±.13; $M_{\theta\phi}$-0.45±.14; $M_{\phi r}$-0.27±.13; Best double couple: $M_0$5.17300×10^{16} NP1:ϕ_s261.00000°,δ42.00000°,λ83.00000°. NP2: ϕ_s91.00000°,δ48.00000°,λ97.00000°. Principal axes: T 4.6410, Plg84.0000°, Azm53.0000°; N 1.0740, Plg5.0000°, Azm267.0000°; P -5.7040, Plg3.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **08** 23:51:58.2±1.1, 6.07S×149.74E, h84^{km}±9^{km}, mb5.1/21 Error ellipse: s-maj=8.0km s-min=6.4km az=91.0*

ISC 08 23:51:57.5±1.0, **6.08S**±0.04×**149.76E**±0.05, **h72**^{km}±9^{km}, **h77**^{km}±.3^{km}**:pP-P, n134,** σ1.15/106, **mb4.8**/45, **4C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.19	218	P	Pn	23 52 57.9	-1.0
	89nm,0.3s,baz=28,slow=12,SNR=152						
PMG				S	Sn	23 53 45.0	-1.6
	127nm,0.3s,baz=66,slow=22,SNR=14						
PMG	Port Moresby	4.19	218⇓	iPn	Pn	23 52 58.2	-0.7
PMG				eSn	Sn	23 53 46.8	+0.1
HNR	Honiara	10.63	109	LR	LR	23 57 02.6	
	comp=Z,216nm,20.8s,baz=355,slow=29						
HNR	Honiara	10.63	109	eP	Pn	23 54 28.6	+1.7
CTA	Charters Tower	14.34	193	eP	Pn	23 55 16.6	-0.2
	16nm,0.9s						
CTA	Charters Tower	14.34	193	P	Pn	23 55 17.1	+0.3
	0.3nm,0.3s,baz=11,slow=16,SNR=7.0						
CTA	Charters Tower	14.34	193	eP	Pn	23 55 16.6	-0.2
CTA				pmax	pmax		
	comp=Z,16nm,0.9s						
CTAO	Charters Tower	14.34	193	eP	Pn	23 55 17.4	+0.6
CTAO				pmax	pmax		
	comp=Z,59nm,1.3s						
CTAO	Charters Tower	14.34	193	ePn	Pn	23 55 17.4	+0.5
	comp=Z,59nm,1.3s						
KAKA	Kakadu	18.30	248	eP	Pn	23 56 04.6	-1.8
	comp=Z,35nm,0.4s						
GUMO	Guam	20.13	346	P	P	23 56 25.6	+0.1
	comp=Z,93nm,0.6s,baz=184,slow=13,SNR=8.1						
GUMO				LR	LR	00 02 48.2	
	comp=Z,762nm,19.3s,baz=233,slow=33						
WRAB	Tennant Creek	20.34	226	eP	P	23 56 28.3	+0.4
WRAB				pmax	pmax		
	comp=Z,232nm,0.8s						
WRAB	Tennant Creek	20.34	226	eP	P	23 56 28.2	+0.3
	comp=Z,232nm,0.8s						
WB2	Warramunga Arr	20.35	226	eP	P	23 56 27.8	-0.2
DZM	Mont Dzumac	22.65	136	P	P	23 56 53.4	+0.9
	comp=Z,32nm,0.7s,mb4.7,baz=336,slow=7.1,SNR=9.5						
DZM				LR	LR	00 04 17.7	
	comp=Z,1µm,21.9s,baz=244,slow=33						
AS31	Alice Springs	23.20	219	eP	P	23 56 58.6	+0.5
ASAR	Alice Springs	23.21	219	P	P	23 56 57.7	-0.4
	comp=Z,15nm,0.7s,mb4.4,baz=54,slow=8.1,SNR=39						
ASAR				PcP	PcP	00 00 44.5	+0.6
	comp=Z,4.9nm,0.7s,baz=64,slow=2.6,SNR=9.2						
ASAR				S	S	00 01 09.0	+4.7
	comp=Z,14nm,1.1s,baz=38,slow=21,SNR=14						
ASAR				ScP	ScP	00 04 18.6	+3.1
	comp=Z,1.4nm,0.7s,baz=50,slow=2.4,SNR=5.6						
ASAR	Alice Springs	23.21	219	P	P	23 56 57.7	-0.4
ASAR						00 00 44.5	
ASAR				S	S	00 01 09.0	+4.7
ASPA	Alice Springs	23.21	219	eP	P	23 56 58.6	+0.4
ARMA	Armidale	24.28	176	eP	P	23 57 09.8	+1.9
FITZ	Fitzroy Crossi	26.39	241⇑	iP	P	23 57 26.7	-0.4
	comp=Z,155nm,0.9s,mb5.4						
FITZ	Fitzroy Crossi	26.39	241	P	P	23 57 26.8	-0.3
	comp=Z,32nm,0.8s,mb4.8,baz=78,slow=9.7,SNR=37						
FITZ				PcP	PcP	00 00 51.0	+0.1
	comp=Z,5.7nm,0.8s,baz=129,slow=6.5,SNR=2.7						
FITZ				LR	LR	00 08 14.5	
	comp=Z,343nm,21.8s,baz=69,slow=37						
STKA	Stephens Creek	26.78	196	eP	P	23 57 32.7	+2.1
	comp=Z,26nm,0.9s,mb4.8						
STKA	Stephens Creek	26.78	196	P	P	23 57 31.2	+0.6
	comp=Z,7.9nm,0.7s,mb4.3,baz=15,slow=9.3,SNR=11						
STKA				LR	LR	00 09 05.4	
	comp=Z,769nm,18.1s,baz=24,slow=38						
STKA	Stephens Creek	26.78	196	ePn	P	23 57 30.9	+0.3
FORT	Forrest	31.92	217	eP	P	23 58 15.8	-0.3
	comp=Z,32nm,0.6s,mb5.2						
AFI	Afiamalu	38.63	105	P	P	23 59 13.9	+0.2
	comp=Z,34nm,0.8s,mb5.2,baz=290,slow=12,SNR=2.5						
KLBR	Kellerberrin	39.24	226	eP	P	23 59 17.4	-1.4
	comp=Z,22nm,0.6s,mb5.2						
NWAO	Narrogin (SRO)	40.35	224	eP	P	23 59 28.3	+0.3
NWAO				pmax	pmax		
	comp=Z,14nm,0.9s						
NWAO	Narrogin (SRO)	40.35	224	eP	P	23 59 28.3	+0.3
	comp=Z,14nm,0.9s,mb4.8						
MUN	Mundaring	40.56	226	eP	P	23 59 29.2	-0.5
NACB	Ninganchiao	40.72	319	P	P	23 59 32.3	+1.2
YHNB	Yeheng	41.20	319	eP	P	23 59 36.5	+1.5
RPZ	Rata Peaks	41.91	157	P	P	23 59 40.4	-0.4
	comp=Z,14nm,1.0s,mb4.7,baz=266,slow=22,SNR=5.9						
QZH	Quanzhou	43.25	317	P	P	23 59 53.9	+2.2
QZH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.5						
MJAR	Matsushiro Arr	43.75	347	P	P	23 59 54.4	-1.3
	comp=Z,9.8nm,0.7s,mb4.7,baz=170,slow=8.4,SNR=18						
MJAR	Matsushiro Arr	43.75	347	P	P	23 59 54.4	-1.3
MAJO	Matsushiro	43.75	347	eP	P	23 59 54.2	-1.5
MAJO				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
MAJO	Matsushiro	43.75	347	eP	P	23 59 54.2	-1.5
	comp=Z,22nm,0.8s,mb5.0						
MAT	Matsushiro	43.75	347	P	P	23 59 54.3	-1.4
MAT	Matsushiro	43.75	347	eP	P	23 59 54.0	-1.7
QIZ	Qiongzhong	46.57	303	P	P	00 00 20.4	+2.4
NJ2	Nanjing	48.01	324	eP	P	00 00 31.8	+2.6
NJ2				AP	pP	00 00 50.5	+3.2
NJ2				XP	sP	00 00 59.3	+3.8
NJ2				PP	PP	00 02 24.2	+2.5
NJ2				S	S	00 07 25.0	+3.2
NJ2				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,50nm,6.1s						
NJ2				LR	LR		
	comp=N,640nm,18.0s						
NJ2				LR	LR		
	comp=E,760nm,18.0s						
NJ2				LR	LR		
	comp=Z,260nm,22.0s						
YSS	Yuzh-Sakhalins	53.16	354⇑	eP	P	00 01 06.9	-1.1
YSS				e		00 01 19.8	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
MDJ	Mudanjiang	53.62	342	P	P	00 01 11.7	+0.3
MDJ				PP	PP	00 03 13.0	+0.3
MDJ				PCS	PcS	00 06 16.2	0.0
MDJ				S	S	00 08 42.7	+3.2
MDJ				AMB	AMB		
	comp=Z,14nm,0.8s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,64nm,4.9s						
MDJ				LR	LR		
	comp=N,173nm,29.8s						
MDJ				LR	LR		
	comp=E,136nm,27.9s						
MDJ				LR	LR		
	comp=Z,290nm,29.2s						
MDJ	Mudanjiang	53.62	342	eP	P	00 01 11.8	+0.4
	comp=Z,9.2nm,0.6s,mb5.0						
CN2	Changchun	54.29	338	eP	P	00 01 20.2	+4.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
KMI	Kunming	55.24	306	P	P	00 01 26.1	+3.0
KMI				AP	pP	00 01 45.2	+3.6
KMI				PP	PP	00 03 31.8	+4.6
KMI				S	S	00 09 01.6	+0.5
KMI				SS	SS	00 12 47.1	+0.9
KMI				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.4						
KMI				AMB	AMB		
	comp=Z,116nm,6.5s						
KMI				LR	LR		
	comp=N,189nm,13.2s						
KMI				LR	LR		
	comp=E,192nm,16.4s						
KMI				LR	LR		
	comp=Z,177nm,19.9s						
BJT	Baijiatuau	55.33	329	eP	P	00 01 23.6	-0.1
BJI	Beijing	55.34	329	eP	P	00 01 22.2	-1.6
BJI				PP	PP	00 03 26.9	-1.2
BJI				S	S	00 08 53.4	-9.2
BJI				SS	SS	00 12 44.4	-3.5
BJI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.7						
BJI				LR	LR		
	comp=N,250nm,20.2s						
BJI				LR	LR		
	comp=E,226nm,20.2s						
BJI				LR	LR		
	comp=Z,355nm,27.3s						
XAN	Xi'an	55.51	319	P	P	00 01 24.2	-0.9
XAN				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.4						
KLR	Kul'dur	57.28	346	eP	P	00 01 34.2	-3.4
KLR				e		00 01 47.2	
KLR				pmax	pmax		
	comp=E,45nm,2.0s						
KLR				pmax	pmax		
	comp=Z,67nm,2.0s,mb5.3						
CD2	Chengdu	57.32	313	eP	P	00 01 38.0	+0.1
CD2				PP	PP	00 03 47.8	+2.1
CD2				S	S	00 09 27.2	-1.5
CD2				SS	SS	00 13 19.1	+0.2
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
CD2				AMB	AMB		
	comp=Z,40nm,5.8s						
CD2				LR	LR		
	comp=E,130nm,21.6s						
CD2				LR	LR		
	comp=Z,130nm,19.2s						
PET	Petropavlovsk	59.36	6⇑	iP	P	00 01 51.4	-0.7
PET				eS	S	00 09 59.2	+4.0
PET				ePS		00 10 18.9	
PET				pmax	pmax		
	comp=Z,33nm,0.6s,mb5.5						
LZH	Lanzhou	60.08	318	eP	P	00 01 57.5	+0.4
LZH				AP	pP	00 02 17.1	+1.3
LZH				PP	PP	00 04 12.9	+2.7
LZH				eS	S	00 10 03.8	-0.7
LZH				eSS	SS	00 14 03.2	+0.9
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,97nm,4.2s						
LZH				LR	LR		
	comp=E,360nm,14.8s						
LZH				LR	LR		
	comp=Z,456nm,15.4s						
PPT	Papeete	60.25	107	eLQ		00 17 20.3	
	comp=Z,516nm,30.8s						
PPT				eLR	LR	00 19 50.2	
	comp=Z,112nm,30.8s						
HIA	Hailar	61.01	338	eP	P	00 02 03.6	+0.2
HIA				pmax	pmax		
	comp=Z,19nm,0.7s						
HIA	Hailar	61.01	338	eP	P	00 02 03.6	+0.2
	comp=Z,19nm,0.7s,mb5.2						
GTA	Gaotai	64.58	319	eP	P	00 02 27.3	+0.2
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.1						
GTA				AMB	AMB		
	comp=Z,81nm,3.8s						
GTA				LR	LR		
	comp=N,87nm,15.2s						
GTA				LR	LR		
	comp=E,135nm,16.3s						
GTA				LR	LR		
	comp=Z,168nm,17.5s						
MA2	Magadan	65.45	1	eP	P	00 02 31.6	-1.1
ULN	Ulaanbaatar	65.52	330	eP	P	00 02 33.8	+0.6
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
ULN	Ulaanbaatar	65.52	330	eP	P	00 02 33.8	+0.6
	comp=Z,4.1nm,0.6s,mb4.4						
SONM	Songino Array	65.83	330	P	P	00 02 35.5	+0.3
	comp=Z,4.8nm,0.5s,mb4.6,baz=149,slow=4.4,SNR=36						
CASY	Casey	65.93	196	eP	P	00 02 34.9	-0.9
CASY	Casey	65.93	196	eP	P	00 02 35.3	-0.6
	comp=Z,8.9nm,0.9s,mb4.6						
ZAK	Zakamensk	69.04	330	eP	P	00 02 55.1	-0.4
GUN	Gumba	70.21	302	eP	P	00 03 04.1	+1.5
	comp=Z,38nm,0.5s,mb5.5						
PKI	Pulchoki	70.50	302	eP	P	00 03 05.4	+1.0
	comp=Z,11nm,0.5s,mb4.9						
PKI	Pulchoki	70.50	302	eP	P	00 03 05.4	+1.0
PKI				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.9						
KKN	Kakani	70.68	302	eP	P	00 03 06.7	+1.2
	comp=Z,15nm,0.5s,mb5.1						
KKN	Kakani	70.68	302	eP	P	00 03 06.7	+1.2
KKN				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.1						
DMN	Daman	70.77	302	eP	P	00 03 07.5	+1.5
	comp=Z,24nm,0.5s,mb5.3						
GKN	Gorkha	71.29	302	eP	P	00 03 10.1	+0.9
	comp=Z,22nm,0.5s,mb5.2						
MIR	Mirnyy	71.66	201	eP	P	00 03 12.0	+0.6
MIR				pmax	pmax		
	comp=Z,23nm,2.0s,mb4.7						
VNDA	Vanda	71.69	177	P	P	00 03 11.2	-0.3
	comp=Z,11nm,0.8s,mb4.7,baz=326,slow=6.5,SNR=84						
VNDA				LR	LR	00 34 18.8	
	comp=Z,187nm,18.6s,baz=291,slow=36						
KOLN	Koldanda	72.09	302	eP	P	00 03 15.0	+1.0
	comp=Z,15nm,0.6s,mb5.0						
SBA	Scott Base	72.29	176	eP	P	00 03 16.4	+1.2
SBA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
SBA	Scott Base	72.29	176	eP	P	00 03 16.4	+1.2
	comp=Z,5.7nm,0.9s,mb4.4						
WMQ	Urumqi	74.65	318	eP	P	00 03 30.0	+1.0
WMQ				AP	pP	00 03 50.0	+1.6
WMQ				PP	PP	00 06 19.0	+2.3
WMQ				S	S	00 12 58.0	-1.2
WMQ				SCS	ScS	00 13 31.0	-3.2
WMQ				SS	SS	00 17 49.0	+1.3
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,102nm,5.0s						
WMQ				LR	LR		
	comp=N,128nm,15.0s						
WMQ				LR	LR		
	comp=E,119nm,15.0s						
WMQ				LR	LR		
	comp=Z,98nm,15.0s						
SVW2	Sparrevohn	79.19	24	eP	P	00 03 54.1	-0.4
MKAR	Makanchi Array	79.31	320	P	P	00 03 54.0	-1.2
	comp=Z,1.6nm,0.6s,mb4.0,baz=95,slow=7.8,SNR=12						
MKAR	Makanchi Array	79.31	320	P	P	00 03 54.0	-1.2
ZAL	Zalesovo	80.56	327	P	P	00 04 01.3	-0.6
	comp=Z,2.9nm,0.5s,mb4.3,baz=358,slow=4.4,SNR=15						
ZAL				LR	LR	00 40 40.3	
	comp=Z,168nm,18.4s,baz=357,slow=36						
SLKM	Skilak Lake	81.11	26	eP	P	00 04 03.4	-1.5
KURK	Kurchatov	82.92	323	eP	P	00 04 14.5	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
KURK	Kurchatov	82.92	323	eP	P	00 04 14.5	+0.2
	comp=Z,5.3nm,1.0s,mb4.3						
MAW	Mawson	83.23	203	eP	P	00 04 15.1	-0.9
MAW	Mawson	83.23	203	P	P	00 04 15.3	-0.7
	comp=Z,3.8nm,0.9s,mb4.2,baz=90,slow=7.3,SNR=16						
MAW				LR	LR	00 39 07.2	
	comp=Z,223nm,21.4s,baz=74,slow=34						
QSPA	South Pole Qui	83.89	180	eP	P	00 04 18.9	-0.4
QSPA				e		00 04 32.5	
COLA	College	84.16	22	eP	P	00 04 18.2	-2.5
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
COLA	College	84.16	22	eP	P	00 04 18.2	-2.5
	comp=Z,7.9nm,0.8s,mb4.6						
DAWY	Dawson	87.19	25	eP	P	00 04 34.1	-1.6
CHKZ	Chkalovo	88.46	324	eP	P	00 04 38.8	-2.9
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	88.46	324	eP	P	00 04 38.8	-3.0
	comp=Z,1.7nm,0.6s,mb4.2						
SYO	Syowa Base	91.46	200⇑	eP	P	00 04 54.3	-1.5
NVAR	Mina Array Bea	95.25	52	P	P	00 05 13.8	+0.6
	comp=Z,0.6nm,0.6s,mb4.2,baz=248,slow=9.1,SNR=4.2						
NVAR	Mina Array Bea	95.25	52	P	P	00 05 13.8	+0.6
YKA	Yellowknife Ar	97.96	28	LR	LR	00 45 47.8	
	comp=Z,99nm,21.4s,baz=270,slow=33						
SNAA	Sanae	100.35	189	eP	Pdif	00 05 35.3	-0.8
FINES	FINESS Array B	110.93	335	Pdiff	Pdif	00 06 21.8	-1.3
	comp=Z,0.3nm,0.5s,baz=65,slow=9.8,SNR=4.1						
FINES	FINESS Array B	110.93	335	Pdif	Pdif	00 06 21.8	-1.3
LBTB	Lobatse	117.54	238	PKIKP	PKPdf	00 10 34.8	-0.2
KHC	Kasperske Hory	123.41	327	eP	PKPdf	00 10 43.5	-2.8
GERES	GERESS Array B	123.50	327	PKP	PKPdf	00 10 45.4	-1.0
	comp=Z,1.7nm,0.7s,baz=69,slow=1.4,SNR=20						
DAVOX	Davos	126.80	326	PKP	PKPdf	00 10 52.6	-0.1
	comp=Z,1.7nm,0.7s,baz=306,slow=8.7,SNR=3.6						
DAVOS	Davos	126.81	327	PKIKP	PKPdf	00 10 52.7	-0.1
HINF	Hinteralfeld	127.75	329	ePKIKP	PKPdf	00 10 53.0	-1.6
HAU	Haudompre	127.89	330	ePKIKP	PKPdf	00 10 53.5	-1.3
HAU				eR			
	comp=Z,198nm,22.8s						
HAU	Haudompre	127.89	330	ePKPdf	PKPdf	00 10 53.5	-1.3
HAU				LR	LR		
	comp=Z,200nm,22.8s						
CABF	La Chapelle	128.94	328	ePKIKP	PKPdf	00 10 56.2	-0.6
	comp=Z,42nm,1.4s						
LPL	La Plagne	129.30	327	ePKIKP	PKPdf	00 10 56.7	-0.8
LPG	La Plagne	129.30	327	ePKIKP	PKPdf	00 10 57.0	-0.5
MBDF	Montbardon	129.78	326	ePKIKP	PKPdf	00 10 57.2	-1.2
SSF	Saint Saulge	129.94	330	ePKIKP	PKPdf	00 10 57.9	-0.8
	comp=Z,20nm,1.4s						
SMF	Signal de Mont	130.06	330	ePKIKP	PKPdf	00 10 57.3	-1.7
ORIF	Oris-en-Rattie	130.14	327	ePKIKP	PKPdf	00 10 58.1	-1.0
ORIF				eR			
	comp=Z,306nm,22.8s						
AVF	Avril sur Loir	130.21	330	ePKIKP	PKPdf	00 10 57.2	-2.0
SMRF	Simiane la Rot	130.91	326	ePKIKP	PKPdf	00 10 58.9	-1.7
TCF	Toulx Ste Croi	131.12	330	ePKIKP	PKPdf	00 11 00.8	-0.2
	comp=Z,11nm,1.1s						
LVC	Limon Verde	132.63	128	PKP	PKPdf	00 11 05.5	+1.7
	comp=Z,3.7nm,0.6s,baz=177,slow=3.7,SNR=7.4						
LVC	Limon Verde	132.63	128	ePKPdf	PKPdf	00 11 06.2	+2.4
ROSC	El Rosal	136.10	89	PKP	PKPdf	00 11 11.5	+1.2
	comp=Z,8.7nm,0.7s,baz=99,slow=19,SNR=7.6						
ROSC	El Rosal	136.10	89	ePKPdf	PKPdf	00 11 10.9	+0.6
CPUP	Villa Florida	138.43	142	PKhKP		00 11 06.8	
	comp=Z,1.6nm,0.6s,baz=288,slow=2.8,SNR=4.7						
CPUP				PKP	PKPdf	00 11 15.9	+1.3
	comp=Z,6.9nm,0.7s,baz=292,slow=2.4,SNR=21						
CPUP	Villa Florida	138.43	142	PKPdf	PKPdf	00 11 15.8	+1.2
CPUP				PKP	PKPdf	00 11 15.9	+1.3
SDV	Santo Domingo	139.87	83	PKhKP		00 11 11.8	
	comp=Z,3.1nm,0.6s,baz=15,slow=8.7,SNR=3.6						
SDV				PKP	PKPdf	00 11 17.7	+0.4
	comp=Z,24nm,0.8s,baz=284,slow=3.3,SNR=22						
SIV	San Ignacio	142.42	126	PKhKP		00 11 17.2	
	comp=Z,6.7nm,0.7s,baz=215,slow=3.6,SNR=28						
SAML	Samuel	143.93	114	ePKPdf	PKPdf	00 11 21.9	-2.6
MDT	Midelt	144.26	321	PKP	PKPdf	00 11 24.3	-0.8
	comp=Z,2.0nm,0.8s,baz=76,slow=8.6,SNR=5.8						
TOA0	Torodi Ar. Sit	147.76	285	ePKPdf	PKPdf	00 11 34.1	+3.0
TORD	Torodi Ar. Bea	147.76	285	PKP	PKPdf	00 11 30.2	-0.8
	comp=Z,5.6nm,0.6s,baz=16,slow=1.4,SNR=39						
TORD				PKPbc	PKPbc	00 11 34.1	+0.1
	comp=Z,9.8nm,0.7s,baz=84,slow=2.2,SNR=62						
CAM4	Nova Friburgo	149.28	157	eP	PKPdf	00 11 35.2	+1.7
CAM4				i		00 11 37.9	
CAM4				i		00 11 40.4	
CAM4				i		00 11 52.8	
CAM4				i		00 12 00.4	
CAM4				i		00 12 08.0	
CAM4				i		00 12 28.8	
CAM4				i		00 13 42.6	
BDFB	Brasilia	152.15	141	PKP	PKPdf	00 11 39.8	+1.8
	comp=Z,11nm,0.8s,baz=222,slow=3.0,SNR=18						
BDFB				PKPbc	PKPbc	00 11 45.4	+0.7
	comp=Z,45nm,0.7s,baz=221,slow=2.1,SNR=45						
BAO	Brasilia Array	152.17	141	P	PKPbc	00 11 46.0	+1.3

*TRN **08** 23:55:03.9, 14.42N×60.59W, h69^{km}, MD4.0, M3.5(FDF), Md3.7(FDF)*
TRN Felt (II) & (III) in Martinique. Also felt in Saint Lucia and Dominica.
*ISCJB **08** 23:55:04.2±0.5, 14.42N±0.02×60.61W±0.09, h89^{km}±5^{km}, mb3.8/9, Error ellipse: s-maj=14.1km s-min=3.2km az=177.8*
*NEIC **08** 23:55:04.4, 14.41N×60.66W, h75^{km}, MD3.7(FDF), MD4.0(TRN), After TRN.*
NEIC Felt [III] on Martinique. Felt at Entreport, Gardet, Gros Isle Town, Monier, Morne Fortune and Soufrier, St. Lucia. Also felt at Portsmouth, Dominica.
*IDC **08** 23:55:04.3±0.7, 14.42N×60.75W, h77^{km}±6^{km}, mb3.5/9, mb1 3.7/9, mb1mx3.5/21, mbtmp3.9/9, MS3.4/2, Ms1 3.3/2, ms1mx2.7/24, Error ellipse: s-maj=18.8km s-min=9.8km az=89.0*

ISC 08 23:55:05.4±0.5, **14.42N**±0.02×**60.65W**±0.09, **h83**^{km}±5^{km}**, n44,** σ0.81/61, **mb3.8**/9, **8C-6D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVM	Montagne Vaucl	0.27	300⇑	iP	Pn	23 55 16.3	-1.5
BIM	Bigot	0.42	283⇑	eP	Pn	23 55 17.6	-1.2
FDF	Fort de France	0.57	303⇑	iP	Pn	23 55 19.1	-0.9
FDF				eS	Sn	23 55 30.2	-0.7
DSHT	Scott's Head	1.05	319	eP	Pn	23 55 25.8	+0.6
DSHT				eS	Sn	23 55 40.7	+0.6
DBCT	Belle View Cho	1.08	322	eP	Pn	23 55 26.0	+0.4
DBCT				eS	Sn	23 55 41.0	+0.3
MDN	Morne-Daniel	1.14	321	eP	Pn	23 55 27.1	+0.7
MDN				eS	Sn	23 55 41.8	-0.3
SSV	Crater Summit	1.21	206⇓	eP	Pn	23 55 27.2	+0.1
SSV				eS	Sn	23 55 43.7	+0.2
SSV				eT		19 14 51.2	
SSV	Crater Summit	1.21	206⇓	eP	Pn	23 55 27.2	+0.1
SSV				eS	Sn	23 55 43.7	+0.2
SVV	Soufriere Volc	1.22	207	eP	Pn	23 55 27.8	+0.4
SVV				eS	Sn	23 55 44.6	+0.8
SVB	Belmont	1.28	207⇑	iP	Pn	23 55 28.4	+0.4
SVB				eS	Sn	23 55 45.5	+0.5
SVB				eT		19 14 54.5	
SVB	Belmont	1.28	207⇑	iP	Pn	23 55 28.4	+0.4
SVB				eS	Sn	23 55 45.5	+0.5
DWS	Wesley	1.31	331	eP	Pn	23 55 28.8	+0.4
DWS				eS	Sn	23 55 45.9	+0.2
BBL	Barber's Block	1.35	324⇑	eP	Pn	23 55 28.9	0.0
BBL				eS	Sn	23 55 47.4	+0.7
FCV	Fort Charlotte	1.38	205⇓	iP	Pn	23 55 29.2	-0.1
FCV				eS	Sn	23 55 46.3	-1.0
MGG	Marie-Galante	1.62	337⇓	iP	Pn	23 55 31.8	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TBG	**Guadaloupe-3**	**1.72**	**326**	*e*P	**Pn**	**23 55 33.5**	**-0.2**
PHG	**Guadaloupe-2**	**1.85**	**329**⥥	*e*P	**Pn**	**23 55 35.6**	**+0.2**
HMG	**Houelmont**	**1.85**	**327**	*e*P	**Pn**	**23 55 35.7**	**+0.3**
DOG	**Dongo Capester**	**1.85**	**330**⥥	*e*P	**Pn**	**23 55 35.4**	**-0.1**
SCG	**Saint Claude**	**1.88**	**328**	*e*P	**Pn**	**23 55 35.9**	**+0.1**
SFG	**Saint Francois**	**1.90**	**344**⥣	*e*P	**Pn**	**23 55 35.0**	**-1.1**
BCG	**Bois Riant Cap**	**1.90**	**331**	*e*P	**Pn**	**23 55 36.4**	**+0.3**
LZG	**Guadaloupe-1**	**2.02**	**328**⥣	*e*P	**Pn**	**23 55 38.2**	**+0.5**
GRCU	**Cariacou**	**2.09**	**202**	*e*P	**Pn**	**23 55 38.9**	**+0.3**
GRCU				*e*S	**Sn**	**23 56 03.2**	**-0.6**
SEG	**Port Louis**	**2.14**	**337**	*e*P	**Pn**	**23 55 39.1**	**-0.1**
GRSS	**Sisters**	**2.31**	**204**	*e*P	**Pn**	**23 55 41.6**	**+0.2**
GRSS				*e*S	**Sn**	**23 56 08.2**	**-0.8**
GRIC	**Isle de Caille**	**2.31**	**203**	*e*P	**Pn**	**23 55 40.4**	**-1.0**
GRIC				*e*S	**Sn**	**23 56 09.6**	**+0.5**
GRHS	**Sauteurs**	**2.38**	**204**	*e*P	**Pn**	**23 55 43.0**	**+0.5**
GRHS				*e*S	**Sn**	**23 56 11.5**	**+0.6**
GRW	**Mount Saint Ca**	**2.45**	**204**	*e*P	**Pn**	**23 55 44.2**	**+0.8**
TPR	**Prospect**	**3.22**	**182**	*e*P	**Pn**	**23 55 53.5**	**-0.2**
TPR				*e*S	**Sn**	**23 56 29.4**	**-1.6**
TRN	**Trinidad (W)**	**3.82**	**191**	*e*P	**Pn**	**23 56 03.0**	**+1.1**
TRN				*e*S	**Sn**	**23 56 46.4**	**+0.7**
PCRV	**Puerto La Cruz**	**5.74**	**223**	P	**Pn**	**23 56 28.8**	**+0.7**
	2.7nm,0.3s,baz=337,slow=5.2,SNR=13						
PCRV				S	**Sn**	**23 57 29.5**	**-2.9**
	baz=128,slow=19,SNR=2.2						
SDV	**Santo Domingo**	**11.21**	**242**	P	**Pn**	**23 57 45.6**	**+3.0**
	0.8nm,0.3s,baz=79,slow=10,SNR=3.6						
BDFB	**Brasilia**	**32.38**	**157**	LR	LR	00 15 41.4	
	comp=Z,45nm,18.2s,baz=206,slow=38						
ULM	**Lac du Bonnet**	**45.74**	**329**	P	**P**	**00 03 17.4**	**-1.0**
	1.3nm,0.5s,mb3.9,baz=121,slow=12,SNR=3.7						
PDAR	**Pinedale Array**	**50.48**	**314**	P	**P**	**00 03 54.9**	**0.0**
	1.5nm,0.5s,mb4.2,baz=117,slow=8.2,SNR=16						
MDT	**Midelt**	**53.90**	**60**	P	**P**	**00 04 22.0**	**+1.8**
	1.6nm,0.9s,mb4.0,baz=283,slow=6.4,SNR=3.2						
ESDC	**Sonseca Array**	**55.39**	**52**	P	**P**	**00 04 32.0**	**+1.0**
	0.7nm,0.6s,mb3.8,baz=268,slow=7.4,SNR=6.8						
NVAR	**Mina Array Bea**	**55.92**	**307**	P	**P**	**00 04 34.5**	**-0.2**
	0.2nm,0.5s,mb3.4,baz=90,slow=5.8,SNR=3.8						
YBH	**Yreka Blue Hor**	**59.74**	**310**	P	**P**	**00 04 59.4**	**-2.1**
	1.2nm,0.6s,mb4.1,baz=114,slow=10.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**60.40**	**83**	P	**P**	**00 05 05.5**	**-0.6**
	0.7nm,0.8s,mb3.8,baz=284,slow=4.8,SNR=9.7						
GERES	**GERESS Array B**	**69.00**	**43**	P	**P**	**00 06 01.7**	**-0.3**
	0.2nm,0.6s,mb3.1,baz=282,slow=6.7,SNR=4.9						
VRAC	**Vranov**	**70.91**	**42**	LR	LR	00 30 56.6	
	comp=Z,30nm,20.0s,baz=172,slow=30						
FINES	**FINESS Array B**	**75.90**	**30**	P	**P**	**00 06 42.5**	**-0.5**
	0.8nm,0.7s,mb3.5,baz=257,slow=7.6,SNR=4.5						

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*CSEM **08** 23:59:08.4±0.2, 4023N×1976E, h2km, MD2.5/2, Error ellipse: s-maj=7.4km s-min=3.8km az=10.0*
*ISCJB **08** 23:59:09.1±0.6, 40.12N±007×1975E±005, h2km, Error ellipse: s-maj=10.5km s-min=4.9km az=13.1*
*ROM **08** 23:59:09.0±0.6, 4007N×1987E, h10km, Md2.5/2, Ml2.1/1, Error ellipse: s-maj=9.2km s-min=4.3km az=157.0*
*ATH **08** 23:59:11.5, 3992N×1973E, h17km, MD3.1/3*
ISC 08 23:59:09.4±1.1**, 4012N**±008×**1975E**±006**, h3**km±10km**, n8,** σ**0.99**/11**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.41**	**174**	*e*PB	**Pg**	**23 59 16.6**	**-0.7**
LSK	**Leskovik**	**0.66**	**87**	*i* Pg	**Pg**	**23 59 20.5**	**-1.5**
LSK				*i* Sg	**Sg**	**23 59 32.4**	**+1.9**
JAN	**Janina**	**0.97**	**118**	*e*PN	**Pn**	**23 59 28.7**	**-1.3**
SCTE	**Santa Cesarea**	**0.98**	**267**	Pn	**Pg**	**23 59 29.1**	**+0.8**
SCTE				Sn	**Sn**	**23 59 44.3**	**-0.2**
TIR	**Tirane**	**1.23**	**4**	Pn	**Pn**	**23 59 32.8**	**-0.7**
	35nm,0.7s						
LCI	**Lecce**	**1.27**	**280**	Pn	**Pn**	**23 59 33.6**	**-0.5**
LCI				Sn	**Sn**	**23 59 52.3**	**+0.7**
	9.0nm,0.2s						
EVR	**Evrytania**	**2.00**	**126**	*e*PN	**Pn**	**23 59 45.1**	**+1.0**
VLS	**Valsamata**	**2.05**	**161**	*e*PN	**Pn**	**23 59 45.4**	**+0.6**

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*TRN **09** 00:13:28.6, 1937N×6298W, h35km*
*NEIC **09** 00:13:30.3, 1922N×6289W, h75km, MD3.8(RSPR), After RSPR.*
RSPR 09 00:13:30.3, 1922N×6289W, h75km±20km**, MD3.8**/4**, MD3.8**/4**, 6C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.81**	**244**⥣	*e*P	Pn	00 13 56.5	-3.0
TBVI				*e*S	Sn	00 14 21.1	-0.6
STVI	**Saint Thomas**	**2.14**	**247**⥣	*e*P	Pn	00 14 03.2	-0.7
MTP	**Monte Pirata**	**2.76**	**246**⥣	*e*P	Pn	00 14 12.1	-0.2
MTP				*e*S	Sn	00 14 44.9	+0.3
CBYP	**Canovanas**	**2.96**	**252**⥣	*e*P	Pn	00 14 15.0	0.0
HUMP	**Col San Antoni**	**3.00**	**249**	*e*P	Pn	00 14 15.3	-0.2
HUMP				*e*S	Sn	00 14 48.8	-1.5
AOPR	**Arecibo Observ**	**3.76**	**257**⥣	*e*P	Pn	00 14 25.1	-0.7
LSP	**Las Mesas**	**4.11**	**256**⥣	*e*P	Pn	00 14 31.0	+0.4
CRPR	**Cabo Rojo, PR**	**4.18**	**254**⥥	*e*P	Pn	00 14 31.6	0.0

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*CSEM **09** 00:15:33.7, 653N×12684E, h60km, mb5.6*
*MOS **09** 00:15:35.1±0.9, 6.16N×12679E, h84km, mb5.1/31, Error ellipse: s-maj=15.9km s-min=6.5km az=113.5*
*BJI **09** 00:15:36.3, 569N×12683E, h124km, mB4.9, mb4.8*
*ISCJB **09** 00:15:38.2±0.2, 6.14N±003×12689E±005, h113km, mb5.0/78, Error ellipse: s-maj=7.4km s-min=3.8km az=128.0*
*NEIC **09** 00:15:39.8±0.9, 6.15N×12685E, h114km±7km, mb5.0/29, Error ellipse: s-maj=9.7km s-min=4.3km az=73.0*
*IDC **09** 00:15:39.0±2.7, 6.18N×12698E, h109km±23km, mb4.5/20, mb1 4.5/20, mb1mx4.5/22, mbtmp4.8/20, MS3.6/3, Ms1 3.6/3, ms1mx3.0/28, Error ellipse: s-maj=24.5km s-min=9.6km az=76.0*
*MAN **09** 00:15:46.7, 657N×12641E, h60km, mb4.9, ML5.5, MS3.7*
ISC 09 00:15:40.2±0.2**, 614N**±003×**12685E**±005**, h115**km**, h115**km±1.9km**:pP-P, n195,** σ**1.01**/191**, mb4.9**/76**, 11C-10D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.00**	**324**	*e*P	**Pn**	**00 15 59.1**	**-2.6**
MATI				*e*S	**Sn**	**00 16 11.4**	**-6.5**
DAV	**Davao City (W)**	**1.57**	**306**⥥	*i*P	**Pn**	**00 16 07.5**	**-0.5**
DAV	**Davao City (W)**	**1.57**	**306**	P	**Pn**	**00 16 07.8**	**-0.2**
	SNR=30						
DAV	**Davao City (W)**	**1.57**	**306**	*e*Pn	**Pn**	**00 16 07.6**	**-0.4**
KCP	**Kidapawan**	**1.95**	**296**	*i* P	**Pn**	**00 16 11.0**	**-1.7**
BUKP	**Musuan**	**2.48**	**314**	*e*P	**Pn**	**00 16 18.8**	**-0.7**
BUKP				*e*S	**Sn**	**00 16 49.1**	**-0.5**
CTBH	**Cotabato--PC H**	**2.80**	**293**	*e*P	**Pn**	**00 16 22.0**	**-1.7**
CTBH				*i* S	**Sn**	**00 16 43.0**	**-14**
BUTP	**Butuan**	**3.07**	**337**	*e*P	**Pn**	**00 16 27.6**	**+0.5**
CGP	**Cagayan de Oro**	**3.14**	**317**	*i* S	**Sn**	**00 17 02.9**	**-2.2**
PAGZ	**Pagadian**	**3.84**	**296**	*e*P	**Pn**	**00 16 36.6**	**-0.8**
SCPH	**Surigao**	**3.86**	**340**	*e*P	**Pn**	**00 16 37.4**	**-0.3**
SCPH				*e*S	**Sn**	**00 17 15.9**	**-6.4**
MSLP	**Maasin**	**4.43**	**334**	*e*P	**Pn**	**00 16 40.6**	**-4.8**
IPIL	**Ipil**	**4.55**	**291**	*e*P	**Pn**	**00 16 47.2**	**+0.2**
TBP	**Tagbilaran**	**4.61**	**320**	*e*P	**Pn**	**00 16 46.9**	**-0.8**
SNPH	**Sibulan**	**4.79**	**312**	*i* P	**Pn**	**00 16 50.3**	**+0.1**
LLP	**Lapu-Lapu**	**5.04**	**326**	*e*P	**Pn**	**00 16 53.6**	**+0.1**
PLP	**Palo**	**5.33**	**340**	*e*P	**Pn**	**00 16 58.6**	**+1.2**
PLP				*e*S	**Sn**	**00 17 55.5**	**-2.1**
CUYO	**Cuyo Island**	**7.43**	**309**	*e*P	**Pn**	**00 17 28.6**	**+2.7**
PVCP	**Virac**	**7.87**	**340**	*e*P	**Pn**	**00 17 32.6**	**+0.7**
BUSP	**Coron**	**8.78**	**312**	*e*P	**Pn**	**00 17 45.6**	**+1.5**
ENPP	**El Nido**	**8.90**	**305**	*e*P	**Pn**	**00 17 46.1**	**+0.3**
KSM	**Kuching**	**17.14**	**255**	*e*Pn	**Pn**	**00 19 32.5**	**0.0**
YHNB	**Yeheng**	**19.16**	**345**	P	**P**	**00 19 54.8**	**+0.2**
KAKA	**Kakadu**	**19.53**	**163**	*e*P	**P**	**00 19 58.4**	**-0.1**
	99nm,1.1s						
QIZ	**Qiongzhong**	**20.94**	**309**	P	**P**	**00 20 14.2**	**+0.5**
QIZ				S	**S**	**00 23 59.5**	**-1.1**
QIZ				XS	sS	00 24 34.4	-1.9
QIZ				AMB	AMB		
	comp=Z,12nm,1.1s						
QIZ	**Qiongzhong**	**20.94**	**309**	*e*P	**P**	**00 20 14.4**	**+0.7**
GZH	**Guangzhou**	**21.29**	**324**	P	**P**	**00 20 17.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**24.11**	**183**	*e*P	**P**	**00 20 45.6**	**+0.5**
	comp=Z,18nm,0.9s,mb4.4						
FITZ	**Fitzroy Crossi**	**24.11**	**183**	P	**P**	**00 20 46.0**	**+0.9**
	comp=Z,12nm,0.9s,mb4.2,baz=32,slow=9.4,SNR=16						
SSE	**Sheshan**	**25.39**	**349**	*e*P	**P**	**00 20 58.6**	**+1.9**
SSE				AMB	AMB		
	comp=Z,35nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,64nm,3.5s						
CBIJ	**Chichi jima**	**25.45**	**33**	P	**P**	**00 20 55.2**	**-2.0**
	comp=Z,110nm,0.4s,mb5.6,baz=165,slow=5.4,SNR=8.4						
PMG	**Port Moresby**	**25.46**	**127**	LR	LR	00 32 09.0	
	comp=Z,89nm,18.2s,baz=240,slow=39						
NJ2	**Nanjing**	**26.84**	**345**	*e*P	**P**	**00 21 11.2**	**+1.4**
NJ2				AP	pP	00 21 37.8	+3.1
NJ2				XP	sP	00 21 52.9	+4.9
NJ2				PP		00 22 01.8	
NJ2				S	**S**	**00 25 39.0**	**+1.3**
NJ2				XS	sS	00 26 24.0	+2.6
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,1μm,5.9s						
NJ2				LR	LR		
	comp=N,290nm,14.3s						
NJ2				LR	LR		
	comp=E,600nm,29.0s						
NJ2				LR	LR		
	comp=Z,160nm,19.5s						
WRAB	**Tennant Creek**	**26.94**	**164**	P	**P**	**00 21 13.0**	**+2.4**
	comp=Z,139nm,0.4s,mb5.8,SNR=10.0						
WRAB	**Tennant Creek**	**26.94**	**164**	*e*P	**P**	**00 21 10.0**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,17nm,0.4s,mb4.9						
WRAB	**Tennant Creek**	**26.94**	**164**	*e*P	**P**	**00 21 10.0**	**-0.6**
	comp=Z,17nm,0.4s,mb4.9						
WB2	**Warramunga Arr**	**26.95**	**164**	*e*P	**P**	**00 21 09.9**	**-0.8**
WHN	**Wuhan**	**26.97**	**336**	P	**P**	**00 21 12.6**	**+1.6**
KMI	**Kunming**	**29.82**	**312**	P	**P**	**00 21 38.1**	**+1.8**
KMI				AP	pP	00 22 04.3	+2.9
KMI				XP	sP	00 22 18.3	+3.6
KMI				PP	PP	00 22 41.1	-4.6
KMI				PCP	PcP	00 24 38.5	+1.6
KMI				S	**S**	**00 26 25.9**	**+1.3**
KMI				XS	sS	00 27 12.2	+3.8
KMI				SS	SS	00 28 10.3	-26
KMI				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.6						
KMI				AMB	AMB		
	comp=Z,110nm,4.1s						
KMI				LR	LR		
	comp=N,180nm,7.9s						
KMI				LR	LR		
	comp=E,126nm,16.4s						
KMI				LR	LR		
	comp=Z,115nm,17.0s						
ASAR	**Alice Springs**	**30.41**	**167**	P	**P**	**00 21 41.1**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=345,slow=6.9,SNR=17						
ASAR				PcP	PcP	00 24 39.0	+0.6
	comp=Z,1.8nm,0.5s,baz=346,slow=2.4,SNR=7.5						
ASAR				S	**S**	**00 26 35.2**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=344,slow=13,SNR=3.0						
ASAR				ScP	ScP	00 28 11.7	+1.4
	comp=Z,1.9nm,0.9s,baz=356,slow=3.2,SNR=5.5						
ASAR				LR	LR	00 32 17.7	
	comp=Z,151nm,21.9s,baz=0.1,slow=33						
ASAR	**Alice Springs**	**30.41**	**167**	P	**P**	**00 21 41.2**	**-0.3**
ASAR						00 24 39.0	
ASAR				S	**S**	**00 26 35.2**	**+1.4**
MJAR	**Matsushiro Arr**	**32.00**	**17**	P	**P**	**00 21 53.1**	**-2.3**
	comp=Z,2.1nm,0.7s,mb4.0,baz=193,slow=8.7,SNR=5.6						
MJAR				LR	LR	00 33 48.2	
	comp=Z,91nm,18.6s,baz=95,slow=34						
XAN	**Xi'an**	**32.35**	**331**	P	**P**	**00 21 58.4**	**-0.1**
XAN				AMB	AMB		
	comp=Z,48nm,1.0s,mb5.2						
CD2	**Chengdu**	**32.81**	**322**⥥	*i*P	**P**	**00 22 02.0**	**-0.5**
CD2				AP	pP	00 22 27.0	-0.8
CD2				XP	sP	00 22 41.2	+0.2
CD2				PP	PP	00 23 16.0	-2.8
CD2				S	**S**	**00 27 09.9**	**-1.3**
CD2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
CD2				AMB	AMB		
	comp=Z,40nm,5.2s						
BJT	**Baijiatuau**	**35.07**	**346**	*e*P	**P**	**00 22 25.3**	**+3.2**
BJT				pmax	pmax		
	comp=Z,37nm,0.8s						
BJT	**Baijiatuau**	**35.07**	**346**	*e*P	**P**	**00 22 25.3**	**+3.2**
	comp=Z,37nm,0.8s,mb5.3						
BJI	**Beijing**	**35.09**	**346**	*e*P	**P**	**00 22 24.9**	**+2.7**
BJI				AP	pP	00 22 51.1	+3.4
BJI				AMB	AMB		
	comp=Z,48nm,0.9s,mb5.3						
LZH	**Lanzhou**	**36.52**	**328**	*e*P	**P**	**00 22 36.0**	**+1.6**
LZH				AP	pP	00 23 01.1	+1.0
LZH				XP	sP	00 23 14.3	+1.1
LZH				PP	PP	00 24 04.5	+4.8
LZH				*e*S	**S**	**00 28 10.1**	**+1.9**
LZH				*e*SS	SS	00 30 43.1	-8.0
LZH				AMB	AMB		
	comp=Z,102nm,1.0s,mb5.7						
LZH				AMB	AMB		
	comp=Z,571nm,4.1s						
LZH				LR	LR		
	comp=E,222nm,14.5s						
LZH				LR	LR		
	comp=Z,563nm,15.2s						
FORT	**Forrest**	**36.72**	**178**	*e*P	**P**	**00 22 36.5**	**+0.3**
	comp=Z,12nm,0.4s,mb5.2						
HHC	**Hu-ho-hao-te**	**37.17**	**341**	*e*P	**P**	**00 22 39.6**	**-0.3**
HHC				AP	pP	00 23 04.8	-0.8
HHC				PP	PP	00 24 11.0	+4.1
HHC				PCP	PcP	00 24 57.1	-0.5
HHC				S	**S**	**00 28 18.9**	**+0.8**
HHC				SCP	ScP	00 28 31.8	-2.3
HHC				PCS	PcS	00 28 43.4	-2.6
HHC				SS	SS	00 31 00.4	-5.1
HHC				SCS	ScS	00 32 39.2	-2.8
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,286nm,4.8s						
HHC				LR	LR		
	comp=N,131nm,15.2s						
HHC				LR	LR		
	comp=E,152nm,16.1s						
HHC				LR	LR		
	comp=Z,58nm,15.2s						
CN2	**Changchun**	**37.53**	**358**	*e*P	**P**	**00 22 46.3**	**+3.3**
CN2				*e*S	**S**	**00 28 27.8**	**+4.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
MDJ	**Mudanjiang**	**38.40**	**3**	P	**P**	**00 22 51.7**	**+1.4**
MDJ				AP	pP	00 23 16.6	+0.5
MDJ				XP	sP	00 23 29.0	-0.2
MDJ				PP	PP	00 24 22.1	+1.8
MDJ				PCP	PcP	00 25 01.9	+0.5
MDJ				SCP	ScP	00 28 39.6	+0.9
MDJ				PCS	PcS	00 28 51.1	+0.4
MDJ				XS	sS	00 29 23.8	+2.4
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,96nm,5.7s						
MDJ				LR	LR		
	comp=N,17nm,21.0s						
MDJ				LR	LR		
	comp=E,20nm,17.8s						
MDJ				LR	LR		
	comp=Z,33nm,17.8s						
MDJ	**Mudanjiang**	**38.40**	**3**	P	**P**	**00 22 50.6**	**+0.4**
KLBR	**Kellerberrin**	**38.51**	**193**	*e*P	**P**	**00 22 51.2**	**0.0**
	comp=Z,146nm,2.0s,mb5.5						
MUN	**Mundaring**	**39.24**	**194**	*e*P	**P**	**00 22 57.3**	**0.0**
NWAO	**Narrogin (SRO)**	**39.91**	**193**	*e*P	**P**	**00 23 03.9**	**+1.1**
NWAO				pmax	pmax		
	comp=Z,9.0nm,0.4s						
NWAO	**Narrogin (SRO)**	**39.91**	**193**	*e*P	**P**	**00 23 03.9**	**+1.1**
	comp=Z,8.9nm,0.4s,mb5.0						
ASAJ	**Asahikawa**	**40.27**	**18**	P	**P**	**00 23 05.8**	**0.0**
	comp=Z,16nm,0.6s,mb5.0,baz=219,slow=9.2,SNR=13						
ASAJ	**Asahikawa**	**40.27**	**18**	P	**P**	**00 23 05.8**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,16nm,0.6s						
STKA	**Stephens Creek**	**40.33**	**160**⥥	*i*P	**P**	**00 23 06.3**	**0.0**
	comp=Z,6.2nm,0.3s,mb4.9						
STKA	**Stephens Creek**	**40.33**	**160**	P	**P**	**00 23 06.3**	**0.0**
	comp=Z,9.7nm,0.3s,mb5.1,baz=341,slow=7.2,SNR=46						
GTA	**Gaotai**	**41.12**	**328**⥣	*i*P	**P**	**00 23 13.6**	**+0.8**
GTA				AP	pP	00 23 40.4	+1.5
GTA				XP	sP	00 23 53.0	+1.1
GTA				PCP	PcP	00 25 13.6	+3.5
GTA				SCP	ScP	00 28 50.1	+0.8
GTA				S	**S**	**00 29 16.2**	**-1.1**
GTA				SCS	ScS	00 33 05.6	+0.4
GTA				AMB	AMB		
	comp=Z,39nm,1.1s,mb5.2						
GTA				AMB	AMB		
	comp=Z,90nm,3.8s						
GTA				LR	LR		
	comp=N,94nm,14.1s						
GTA				LR	LR		
	comp=E,110nm,14.1s						
GTA				LR	LR		
	comp=Z,119nm,15.2s						
HABR	**Khabarovsk**	**42.76**	**8**	*e*P	**P**	**00 23 24.9**	**-1.2**
YSS	**Yuzh-Sakhalins**	**42.91**	**16**	*de*P	**P**	**00 23 27.4**	**+0.1**
YSS				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
GUN	**Gumba**	**44.45**	**304**	*e*P	**P**	**00 23 40.2**	**+0.6**
	comp=Z,42nm,0.6s,mb5.3						
PKI	**Pulchoki**	**44.72**	**303**	*e*P	**P**	**00 23 41.8**	**0.0**
	comp=Z,16nm,0.6s,mb4.9						
PKI	**Pulchoki**	**44.72**	**303**	*e*P	**P**	**00 23 41.8**	**0.0**
PKI				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.9						
ULN	**Ulaanbaatar**	**44.89**	**341**	⥥P	**P**	**00 23 43.3**	**+0.2**
	SNR=9.7						
ULN	**Ulaanbaatar**	**44.89**	**341**	*e*P	**P**	**00 23 43.3**	**+0.2**
ULN				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
ULN	**Ulaanbaatar**	**44.89**	**341**	*e*P	**P**	**00 23 43.2**	**+0.1**
	comp=Z,20nm,1.0s,mb4.8						
KKN	**Kakani**	**44.90**	**304**	*e*P	**P**	**00 23 43.0**	**-0.2**
DMN	**Daman**	**44.98**	**303**	*e*P	**P**	**00 23 43.9**	**0.0**
	comp=Z,24nm,0.8s,mb5.0						
SONM	**Songino Array**	**45.08**	**341**	P	**P**	**00 23 44.6**	**0.0**
	comp=Z,5.3nm,0.7s,mb4.4,baz=154,slow=8.3,SNR=32						
SONM				PcP	PcP	00 25 23.3	-0.1
	comp=Z,2.0nm,0.8s,baz=166,slow=5.3,SNR=4.6						
GKN	**Gorkha**	**45.51**	**304**	*e*P	**P**	**00 23 48.0**	**0.0**
	comp=Z,14nm,0.6s,mb4.9						
KOLN	**Koldanda**	**46.29**	**303**	*e*P	**P**	**00 23 54.2**	**0.0**
	comp=Z,54nm,0.7s,mb5.4						
ZAK	**Zakamensk**	**48.31**	**340**	*e*P	**P**	**00 24 10.9**	**+1.1**
TLY	**Talaya**	**49.30**	**341**	*e*P	**P**	**00 24 19.3**	**+1.9**
TLY	**Talaya**	**49.30**	**341**	P	**P**	**00 24 18.6**	**+1.2**
MOY	**Mondy**	**50.18**	**339**	*e*P	**P**	**00 24 24.4**	**+0.4**
WMQ	**Urumqi**	**50.85**	**324**	P	**P**	**00 24 31.0**	**+1.9**
WMQ				AP	pP	00 24 57.0	+1.0
WMQ				XP	sP	00 25 10.0	+1.2
WMQ				PP	PP	00 26 30.0	+3.7
WMQ				S	**S**	**00 31 37.0**	**+0.6**
WMQ				SCS	ScS	00 34 07.0	-1.3
WMQ				SS	SS	00 35 10.0	-2.4
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,101nm,5.0s						
WMQ				LR	LR		
	comp=N,175nm,12.0s						
WMQ				LR	LR		
	comp=E,128nm,12.0s						
WMQ				LR	LR		
	comp=Z,98nm,12.0s						
MK31	**Makanchi Array**	**55.67**	**324**	P	**P**	**00 25 04.4**	**+0.1**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb5.0						
MKAR	**Makanchi Array**	**55.67**	**324**	P	**P**	**00 25 04.7**	**+0.3**
	comp=Z,27nm,0.6s,mb5.4,baz=123,slow=8.1,SNR=171						
MKAR				PcP	PcP	00 26 01.8	-0.6
	comp=Z,5.6nm,0.7s,baz=120,slow=4.8,SNR=4.3						
YAK	**Yakutsk**	**55.81**	**2**	*c i*P	**P**	**00 25 04.6**	**-0.8**
YAK				*i* *PP	pP	00 25 32.0	-0.8
YAK				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.4						
KZA	**Kyzart**	**57.95**	**316**	P	**P**	**00 25 22.3**	**+1.8**
	SNR=11						
TKM2	**Tokmak 2**	**58.05**	**318**	P	**P**	**00 25 21.7**	**+0.5**
	SNR=16						
KBK	**Karagaybulak**	**58.38**	**317**	P	**P**	**00 25 24.4**	**+0.9**
	SNR=6.6						
UCH	**Uchtor**	**58.51**	**316**	P	**P**	**00 25 25.9**	**+1.5**
	SNR=32						
ZAL	**Zalesovo**	**58.52**	**332**	P	**P**	**00 25 24.2**	**-0.2**
	comp=Z,5.2nm,0.4s,mb4.9,baz=343,slow=6.6,SNR=18						
AAK	**Ala-Archa**	**58.68**	**317**	*d i*P	**P**	**00 25 25.6**	**+0.1**
AAK				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.7						
USP	**Ospenovka**	**58.92**	**318**	P	**P**	**00 25 27.7**	**+0.5**
	SNR=11						
AML	**Almayashu**	**59.04**	**316**	P	**P**	**00 25 29.2**	**+1.2**
	SNR=16						
EKS2	**Erkin-Say**	**59.18**	**317**	P	**P**	**00 25 29.8**	**+0.8**
	SNR=22						
KURK	**Kurchatov**	**59.80**	**327**	P	**P**	**00 25 33.0**	**-0.2**
	comp=Z,796nm,0.5s,SNR=63						
KURK	**Kurchatov**	**59.80**	**327**	P	**P**	**00 25 33.6**	**+0.4**
	SNR=32						
KURK	**Kurchatov**	**59.80**	**327**	*c i*P	**P**	**00 25 33.2**	**0.0**
KURK				*i* *PP	pP	00 25 59.1	-1.9
KURK	**Kurchatov**	**59.80**	**327**	*e*P	**P**	**00 25 33.2**	**0.0**
NVS	**Novosibirsk**	**59.80**	**333**⥣	*i*P	**P**	**00 25 32.2**	**-1.0**
NVS				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.2						
NVS				pmax	pmax		
	comp=N,25nm,1.6s						
NVS				pmax	pmax		
	comp=E,21nm,1.3s						
KK31	**Karatay Array**	**61.58**	**316**	*i* P	**P**	**00 25 45.6**	**+0.3**
KK31				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
KKAR	**Karatay Array**	**61.58**	**316**	*i* P	**P**	**00 25 45.6**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
VOSK	**Vostochnaya**	**64.94**	**326**	P	**P**	**00 26 06.8**	**-0.6**
VOSK				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.1						
BVA0	**Borovoye Array**	**65.39**	**326**	*i* P	**P**	**00 26 10.3**	**0.0**
BVAR	**Borovoye Array**	**65.39**	**326**	P	**P**	**00 26 10.3**	**0.0**
	comp=Z,35nm,0.7s,mb5.3,baz=120,slow=8.8,SNR=164						
TIXI	**Tiksi**	**65.45**	**1**	*d i*P	**P**	**00 26 11.3**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.8						
BRVK	**Borovoye**	**65.46**	**326**	P	**P**	**00 26 10.8**	**0.0**
	comp=Z,458nm,0.8s,SNR=32						
BRVK	**Borovoye**	**65.46**	**326**	*e*P	**P**	**00 26 10.9**	**+0.1**
CHKZ	**Chkalovo**	**65.53**	**327**	*e*P	**P**	**00 26 11.0**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.1						
CHKZ	**Chkalovo**	**65.53**	**327**	*e*P	**P**	**00 26 11.0**	**-0.3**
	comp=Z,38nm,1.2s,mb5.1						
BILL	**Bilibino**	**67.21**	**15**⥣	*e*P	**P**	**00 26 20.9**	**-1.1**
BILL				pmax	pmax		
	comp=Z,20nm,0.4s,mb5.3						
ABKT	**Ailbek**	**69.50**	**308**	P	**P**	**00 26 36.2**	**0.0**
	comp=Z,118nm,0.9s,mb5.7,SNR=7.8						
AB31	**Akbulak array**	**70.38**	**320**	*i* P	**P**	**00 26 41.3**	**-0.3**
AB31				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.1						
AKTK	**Aktyubinsk**	**71.86**	**321**	P	**P**	**00 26 50.6**	**0.0**
AKTO	**Aktyubinsk**	**71.86**	**321**	P	**P**	**00 26 50.6**	**0.0**
	comp=Z,26nm,0.7s,mb5.2,baz=96,slow=7.6,SNR=105						
ARU	**Arti**	**72.98**	**327**	P	**P**	**00 26 56.7**	**-0.5**
	comp=Z,420nm,0.4s,SNR=19						
ARU	**Arti**	**72.98**	**327**	*e*P	**P**	**00 26 56.5**	**-0.7**
CASY	**Casey**	**73.20**	**187**	*e*P	**P**	**00 26 58.7**	**+0.2**
	comp=Z,5.3nm,0.8s,mb4.4						
MIB	**Mutribah**	**77.89**	**299**	*e*P	**P**	**00 27 24.4**	**-0.9**
MIB				AMb	AMB	00 27 26.6	
	comp=Z,58nm,0.8s,mb5.4						
NAY	**Al-Naaiem**	**77.97**	**298**	*e*P	**P**	**00 27 24.6**	**-1.0**
NAY				AMb	AMB	00 27 26.6	
	comp=Z,21nm,0.9s,mb4.9						
RST	**Umm Al-Ruwaisa**	**78.19**	**299**	*e*P	**P**	**00 27 25.5**	**-1.3**
RST				AMb	AMB	00 27 27.5	
	comp=Z,50nm,0.8s,mb5.3						
GNI	**Garni**	**80.05**	**310**	P	**P**	**00 27 38.1**	**+1.1**
	comp=Z,3.8nm,0.6s,mb4.4,baz=225,slow=4.1,SNR=9.0						
GNI	**Garni**	**80.05**	**310**	*e*P	**P**	**00 27 38.6**	**+1.6**
GNI				pmax	pmax		
	comp=Z,17nm,0.9s						

GNI	Garni	80.05	310	eP	P	00 27 38.6	+1.6
	comp=Z,17nm,0.9s,mb4.9						
TBLG	Delisi	80.06	311	P	P	00 27 38.1	+1.0
TBLG	Delisi	80.06	311	S	P	00 27 38.1	+1.0
ZEI	Tsey	80.69	312	eP	P	00 27 41.1	+0.6
ZEI				e*PP	pP	00 28 09.2	-0.5
ZEI				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.2						
SLKM	Skilak Lake	81.21	30	eP	P	00 27 42.5	-0.7
KIV	Kislovodsk	81.58	313	P	P	00 27 46.5	+1.4
	comp=Z,197nm,0.8s,mb6.0,SNR=6.1						
KIV	Kislovodsk	81.58	313	P	P	00 27 45.8	+0.6
	SNR=5.9						
KIV	Kislovodsk	81.58	313	d iP	P	00 27 46.2	+1.1
KIV				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.2						
KIV	Kislovodsk	81.58	313	eP	P	00 27 45.3	+0.1
	comp=Z,26nm,0.8s,mb5.1						
COLA	College	82.48	25	eP	P	00 27 49.8	-0.1
COLA				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.6						
COLA	College	82.48	25	eP	P	00 27 49.8	-0.1
	comp=Z,3.6nm,0.4s,mb4.5						
KLMR	Klimovskoe	83.38	331	i P	P	00 27 53.8	-0.7
KLMR				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.0						
VOR	Voronezh	83.77	321	eP	P	00 27 55.1	-1.4
VOR				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.2						
VRSR	Storozhevoye	83.79	321	eP	P	00 27 56.2	-0.4
VRSR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
MALT	Malatya	85.00	308	⇓iP	P	00 28 04.3	+1.6
MALT	Malatya	85.00	308	eP	P	00 28 03.4	+0.7
MALT				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
MALT	Malatya	85.00	308	eP	P	00 28 03.4	+0.7
	comp=Z,20nm,0.9s,mb5.0						
OBN	Obninsk	85.17	325	P	P	00 28 03.1	-0.5
	comp=Z,255nm,0.6s,SNR=5.1						
OBN	Obninsk	85.17	325	c iP	P	00 28 03.0	-0.6
OBN				i *PP	pP	00 28 29.8	-3.2
OBN				e*PP	pP	00 28 34.6	+1.6
OBN				eS	S	00 38 14.1	-10
OBN				eSS	SS	00 43 55.5	-4.7
OBN				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
OBN	Obninsk	85.17	325	eP	P	00 28 03.5	-0.1
	comp=Z,30nm,0.8s,mb5.3						
ANN	Anapa	85.31	314	eP	P	00 28 02.7	-1.5
ANN				e*PP	pP	00 28 33.0	-0.7
ANN				eS	S	00 38 15.6	-10
ANN				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
VNDA	Vanda	85.78	173	P	P	00 28 05.1	-1.4
	comp=Z,1.4nm,0.8s,mb4.0,baz=319,slow=6.3,SNR=3.2						
MAW	Mawson	86.04	200	P	P	00 28 06.0	-1.8
	comp=Z,2.3nm,0.8s,mb4.2,baz=70,slow=3.8,SNR=7.7						
SBA	Scott Base	86.69	172	eP	P	00 28 12.0	+1.0
	comp=Z,0.9nm,0.5s,mb4.0						
JOF	Joensuu	87.11	333	ep	P	00 28 11.5	-1.5
	comp=Z,9.1nm,0.5s,mb5.0						
KEV	Kevo	87.69	340	ep	P	00 28 14.7	-1.1
INK	Inuvik	87.89	22	eP	P	00 28 17.6	+0.8
	comp=Z,2.3nm,0.5s,mb4.5						
ARCES	ARCESS Array B	88.25	340	P	P	00 28 17.0	-1.4
	comp=Z,4.0nm,0.6s,mb4.6,baz=91,slow=6.0,SNR=41						
ARCES	ARCESS Array B	88.25	340	P	P	00 28 17.0	-1.4
ARE0	ARCESS Array S	88.25	340	eP	P	00 28 17.4	-1.1
BR131	Keskin Array S	88.59	310	eP	P	00 28 20.0	-0.1
BRTR	Keskin Array B	88.59	310	P	P	00 28 19.6	-0.5
	comp=Z,6.6nm,0.9s,mb4.7,baz=107,slow=3.9,SNR=32						
CSS	Prodhromos	89.40	305	eP	P	00 28 24.0	+0.1
	comp=Z,23nm,0.8s,mb5.3						
KAF	Kangasniemi	89.53	332	ep	P	00 28 22.9	-1.6
	comp=Z,7.2nm,0.5s,mb5.1,baz=75,slow=4.3						
KAF	Kangasniemi	89.53	332	eP	P	00 28 22.9	-1.6
KAF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
FINES	FINESS Array B	89.78	332	P	P	00 28 25.0	-0.7
	comp=Z,3.1nm,0.6s,mb4.6,baz=68,slow=5.1,SNR=33						
AKASG	Malin Array Be	90.11	321	P	P	00 28 26.2	-1.0
	comp=Z,2.3nm,0.5s,mb4.6,baz=68,slow=4.6,SNR=14						
CFR	Carcaliu	91.80	316	⇑iP	P	00 28 34.6	-0.4
SUW	Suwalki	93.04	325	eP	P	00 28 41.3	+0.6
SUW	Suwalki	93.04	325	eP	P	00 28 41.6	+0.9
SUW				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.5						
SUW	Suwalki	93.04	325	eP	P	00 28 41.6	+0.8
	comp=Z,17nm,0.7s,mb5.5						
MLR	Muntele Rosu	93.26	316	P	P	00 28 41.3	-0.5
	comp=Z,3.2nm,0.6s,mb4.8,baz=168,slow=8.9,SNR=5.7						
MLR	Muntele Rosu	93.26	316	⇑iP	P	00 28 41.3	-0.5
BURAR	Bucovina Array	93.29	318	⇑iP	P	00 28 42.2	+0.3
KWP	Kalwaria	94.43	321	eP	P	00 28 47.3	+0.1
SYO	Syowa Base	94.70	201	⇑eP	P	00 28 48.2	-0.2
SYO	Syowa Base	94.70	201	⇓ePcP	PcP	00 28 49.8	+1.1
KOLS	Kolonicke sedl	94.89	320	eP	P	00 28 52.7	+3.5
CRVS	Cervenica-Dubn	95.41	320	eP	P	00 28 51.9	+0.3
SANT	Santorini	95.50	307	ePKKPbc	PKKPbc	00 45 35.8	-7.1
QSPA	South Pole Qui	96.03	180	eP	P	00 28 54.3	-0.1
BZS	Buzias	96.18	317	⇑iP	P	00 28 53.4	-1.7
NB2	NORSAR Subarra	96.70	334	P	P	00 28 55.7	-1.8
	comp=Z,2.8nm,0.7s,mb4.8,baz=68,slow=4.6						
NOA	NORSAR Array B	96.70	334	P	P	00 28 55.8	-1.7
	comp=Z,2.3nm,0.7s,mb4.7,baz=66,slow=4.5,SNR=11						
VYHS	Vyhne	97.19	320	e	P	00 29 07.0	+7.3
VYHS				e		00 29 23.9	
VYHS				ePP	PP	00 32 53.5	-3.8
VYHS	Vyhne	97.19	320	eP	P	00 29 07.0	+7.3
VYHS				e		00 29 23.9	
VYHS				ePP	PP	00 32 53.5	-3.8
MORC	Moravsky Berou	97.60	322	eP	P	00 29 01.6	+0.1
	comp=Z,0.8nm,0.4s,mb4.6						
VRAC	Vranov	98.34	322	P	P	00 29 05.4	+0.5
	comp=Z,2.0nm,0.7s,mb4.8,baz=101,slow=6.5,SNR=3.9						
BRG	Berggiesshubel	99.39	324	eP	Pdif	00 29 10.3	+0.8
	comp=Z,3.9nm,1.1s						
BRG							
	comp=N,87nm,24.4s						
BRG							
	comp=E,90nm,25.8s						
BRG							
	comp=Z,113nm,25.6s						
CLL	Collm	99.77	324	ePDIF	Pdif	00 29 11.0	-0.2
CLL				ePPS		00 43 07.0	
CLL	Collm	99.77	324	ePdif	Pdif	00 29 11.0	-0.2
	comp=Z,6.0nm,1.2s						
CLL				ePPS		00 43 07.0	
CLL				LmV		01 05 00.0	
	comp=Z,200nm,20.3s						
GERES	GERESS Array B	100.28	322	P	Pdif	00 29 13.3	-0.2
	comp=Z,0.9nm,0.7s,baz=67,slow=4.5,SNR=8.7						
HLID	Hailey	105.94	42	PKiKP	PKiKP	00 33 50.6	+0.2
DAC	Darwin (Calif)	106.50	49	ePKKPbc	PKKPbc	00 45 00.1	-11
RSSD	Black Hills	112.22	37	ePKIKP	PKiKP	00 34 03.2	+1.0
ISCO	Idaho Springs	113.52	42	ePKIKP	PKiKP	00 34 07.5	+2.8
ANMO	Albuquerque	115.31	47	ePKIKP	PKPdf	00 34 07.8	-0.3
SCHQ	Schefferville	118.19	9	ePKPdf	PKPdf	00 34 13.5	-0.2
TOA0	Torodi Ar. Sit	122.26	290	ePKPdf	PKPdf	00 34 22.2	+0.7
TORD	Torodi Ar. Bea	122.26	290	PKP	PKPdf	00 34 22.2	+0.7
	comp=Z,6.8nm,0.7s,baz=49,slow=2.1,SNR=58						
TORD	Torodi Ar. Bea	122.26	290	PKP	PKPdf	00 34 22.2	+0.7
JCT	Junction City	122.39	48	ePKIKP	PKPdf	00 34 23.6	+1.9
DBIC	Dimbokro	130.16	284	PKP	PKPdf	00 34 38.0	+1.5
	comp=Z,7.1nm,0.9s,baz=163,slow=6.0,SNR=6.5						
NNA	Nana	155.90	106	ePKPdf	PKPdf	00 35 22.7	+2.1
LVC	Limon Verde	157.65	139	ePKPdf	PKPdf	00 35 23.9	+1.1

*THE **09** 00:16:04.6, 4008N×1963E, h0km, ML2.9*
*CSEM **09** 00:16:04.8±0.1, 40.11N×1973E, h5km, MD3.4, Error ellipse: s-maj=1.9km s-min=1.5km az=63.0*
*TIR **09** 00:16:04.8, 40.14N×1983E, h5km, Ml2.9*
*ISCJB **09** 00:16:04.7±0.4, 40.10N±002×1970E±003, h5km, Error ellipse: s-maj=3.5km s-min=3.1km az=175.3*
*ROM **09** 00:16:05.6±1.4, 40.11N×1968E, h1km, Md3.0, Ml2.8, Error ellipse: s-maj=17.1km s-min=5.1km az=144.0*
*ATH **09** 00:16:07.1, 4001N×1990E, h13km±4km, MD3.4/3*
*NEIC **09** 00:16:07.1, 4001N×1990E, h13km, MD3.4(ATH), After ATH.*
*SKO **09** 00:16:08.3, 40.11N×1996E, h16km*

ISC 09 00:16:04.7±0.7**, 4013N**±002×**1968E**±004**, h1**km±5km**, n30,** σ**1.05**/53**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.31	57	i Pg	Pg	00 16 09.4	-1.1
TPE				i Sg	Sg	00 16 13.4	-1.1
SRN	Sarande	0.35	135	i Pg	Pg	00 16 10.7	-0.7
SRN				i Sg	Sg	00 16 16.5	+0.5
KEK	Kerkira	0.43	167	ePB	Pg	00 16 13.2	+0.3
KEK				eSB	Sg	00 16 18.1	-0.3
LSK	Leskovik	0.71	88	i Pg	Pg	00 16 16.7	-1.6
LSK				i Sg	Sg	00 16 28.4	+0.9
IGT	Igoumenitsa	0.78	139	ePg	Pg	00 16 18.5	-1.2
IGT				eSg	Sg	00 16 30.7	+0.9
SCTE	Santa Cesarea	0.93	267	Pn	Pn	00 16 24.5	-0.4
SCTE				Sn	Sn	00 16 39.9	+1.1
LCI	Lecce	1.22	280	Pn	Pn	00 16 28.8	0.0
	25nm,0.2s						
TIR	Tirane	1.23	7	Pn	Pn	00 16 28.6	-0.3
TIR				Sn	Sn	00 16 50.7	+4.6
	237nm,0.8s						
TIR	Tirane	1.23	7	ePg	Pg	00 16 28.4	+0.2
TIR				eSg	Sg	00 16 48.2	+4.1
TIR	Tirane	1.23	7	i Pg	Pg	00 16 28.4	+0.2
TIR	Tirane	1.23	7	Pn	Pn	00 16 28.6	-0.3
TIR				eSg	Sg	00 16 48.2	+4.1
TIR				Sn	Sn	00 16 50.7	+4.6
MEV	Metsovon	1.24	106	ePg	Pg	00 16 28.0	-0.5
MEV				eSg	Sg	00 16 46.7	+2.1
OHR	Ohrid	1.30	41	ePg	Pg	00 16 29.9	+0.3
OHR				eSg	Sg	00 16 50.1	+3.6
OHR	Ohrid	1.30	41	i Pg	Pg	00 16 30.3	+0.6
OHR				i Sg	Sg	00 16 46.5	0.0
FNA	Florina	1.45	63	ePg	Pn	00 16 31.3	-0.8
FNA				eSg	Sg	00 16 54.0	+2.7
FNA	Florina	1.45	63	ePg	Pn	00 16 31.3	-0.8
FNA				eSg	Sg	00 16 54.0	+2.6
BIA	Bitola	1.54	54	ePg	Pn	00 16 32.0	-1.3
BIA				eSg	Sg	00 16 55.9	+1.8
BIA	Bitola	1.54	54	i Pg	Pn	00 16 32.8	-0.5
BIA				i Sg	Sg	00 16 52.1	-2.0
BIA	Bitola	1.54	54	i Pg	Pn	00 16 32.7	-0.5
BIA				eSg	Sg	00 16 55.9	+1.8
LKD	Levkas	1.61	152	ePg	Pb	00 16 33.4	-1.8
LKD				eSg	Sg	00 16 55.8	-0.6
KZN	Kozani	1.61	83	ePB	Pb	00 16 35.1	-0.2
KZN				eSB	Sb	00 16 54.7	-1.4
EVR	Evrytania	2.05	126	ePG	Pn	00 16 41.2	+1.0
VLS	Valsamata	2.08	160	ePN	Pn	00 16 41.2	+0.6
NOCI	Noci	2.10	289	Pn	Pn	00 16 41.4	+0.5
GRG	Griva	2.23	67	ePn	Pn	00 16 42.6	-0.2
AGG	Agios Georgios	2.33	117	ePn	Pn	00 16 44.7	+0.6
AGG				eSn	Sn	00 17 13.9	+0.5
STIP	Stip	2.46	50	ePn	Pn	00 16 46.5	+0.6
STIP	Stip	2.46	50	ePn	Pn	00 16 46.3	+0.3
STIP				eSn	Sn	00 17 13.7	-3.0
STIP	Stip	2.46	50	ePn	Pn	00 16 46.5	+0.5
STIP				eSn	Sn	00 17 13.7	-3.0
KNT	Kendrikon	2.66	66	ePn	Pn	00 16 49.7	+1.0

*IDC **09** 00:18:52.2±1.9, 126N×12625E, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.9/14, mbtmp4.1/4, ML4.3/1, Error ellipse: s-maj=136.8km s-min=24.4km az=68.0*
*ISCJB **09** 00:19:06.6±6.1, 08N±02×1254E±04, h135km±54km, mb4.2/9, Error ellipse: s-maj=74.0km s-min=26.6km az=132.0*
*NEIC **09** 00:19:08.1±5.8, 1.14N×12623E, h149km±51km, mb4.4/5, Error ellipse: s-maj=32.0km s-min=22.5km az=72.0*
NEIC Felt [III] at Belong, Indonesia.

ISC 09 00:19:09.9±5.9**, 10N**±02×**1260E**±02**, h162**km±54km**, n19,** σ**1.16**/17**, mb4.2**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.96	181	P	P	00 23 18.8	+0.1
	0.6nm,0.3s,baz=8.7,slow=13,SNR=3.1						
WRAB	Tennant Creek	22.33	159	eP	P	00 23 54.8	+0.5
	19nm,0.6s,mb4.7						
WB2	Warramunga Arr	22.34	159	eP	P	00 23 54.7	+0.3
ASAR	Alice Springs	25.66	163	P	P	00 24 24.9	+0.2
	2.9nm,0.5s,mb4.1,baz=338,slow=7.9,SNR=6.8						
FORT	Forrest	31.64	177	eP	P	00 25 14.9	-2.7
	9.6nm,0.5s,mb4.8						
KLBR	Kellerberrin	33.33	193	eP	P	00 25 25.5	-6.8
	64nm,1.7s,mb5.1						
NWAO	Narrogin (SRO)	34.73	193	P	P	00 25 38.3	-6.1
HNR	Honiara	35.33	108	P	P	00 25 48.2	-1.3
STKA	Stephens Creek	35.85	157	eP	P	00 25 55.9	+1.9
	3.3nm,0.6s,mb4.1						
STKA	Stephens Creek	35.85	157	P	P	00 25 55.9	+1.9
	4.0nm,0.6s,mb4.2,baz=318,slow=10,SNR=3.9						
STKA	Stephens Creek	35.85	157	eP	P	00 25 55.8	+1.7
MKAR	Makanchi Array	59.42	327	P	P	00 28 55.9	+0.5
	0.7nm,0.6s,mb3.7,baz=110,slow=9.4,SNR=3.8						
CASY	Casey	68.02	187	eP	P	00 29 51.6	0.0
	10nm,1.2s,mb4.4						
VNDA	Vanda	80.80	173	eP	P	00 31 05.5	0.0
	0.3nm,0.3s,mb3.4						
MAW	Mawson	80.94	200	eP	P	00 31 03.7	-2.6
	1.5nm,0.6s,mb3.8						
SBA	Scott Base	81.72	172	eP	P	00 31 11.7	+1.3
QSPA	South Pole Qui	90.90	180	eP	P	00 31 55.6	+0.4
ISA	Isabella	109.92	51	Pdif	Pdif	00 33 19.6	-1.1
DCID1	Drake Creek	112.45	41	ePKiKP	PKiKP	00 37 24.5	-2.2

*NEIC **09** 00:26:35.4, 2891S×7142W, h7km, ML3.9(GUC), After GUC.*

GUC 09 00:26:35.4±0.8**, 2891S**×**7142W, h7**km±7km**, ML3.9, 2C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.64	99	⇓iP	Pg	00 26 48.7	+1.0
LCO				i S	Sg	00 26 59.1	+3.0
VACH	Vallenar	0.67	60	⇑iP	Pg	00 26 49.0	+0.6
VACH				i S	Sg	00 26 58.5	+1.4
VACH				AML	AML	00 26 59.8	
	comp=E,14μm,0.1s						
VACH	Vallenar	0.67	60	⇑iP	Pg	00 26 49.0	+0.6
VACH				i S	Sg	00 26 58.5	+1.4
TLL	Tololo Astrono	1.36	157	⇓iP	Pn	00 27 00.4	-0.3
TLL				i S	Sb	00 27 19.4	+0.7
TLL				AML	AML	00 27 24.2	
	comp=N,3μm,0.6s						
TLL	Tololo Astrono	1.36	157	⇓iP	Pn	00 27 00.4	-0.3
TLL				i S	Sb	00 27 19.4	+0.7
OVCH	Ovalle	1.70	174	eP	Pn	00 27 05.1	-0.3
OVCH				i S	Sn	00 27 27.0	-0.4
OVCH				AML	AML	00 27 35.5	
	comp=N,738nm,0.5s						
OVCH	Ovalle	1.70	174	eP	Pn	00 27 05.1	-0.3
OVCH				i S	Sn	00 27 27.0	-0.4
CPCH	Copiapo	1.81	32	eP	Pn	00 27 06.4	-0.5
CPCH				i S	Sn	00 27 31.2	+1.0
CPCH				AML	AML	00 27 33.1	
	comp=E,6μm,0.0s						
CPCH	Copiapo	1.81	32	eP	Pn	00 27 06.4	-0.5
CPCH				i S	Sn	00 27 31.2	+1.0
LVC	Limon Verde	6.67	20	ePn	Pn	00 28 13.5	-0.2
LVC				eSn	Sn	00 29 30.3	+0.4
NNA	Nana	17.58	342	ePn	Pn	00 30 41.9	+1.1
SAML	Samuel	21.32	23	eP	P	00 31 22.4	-0.3
	comp=E,0.7nm,0.4s						

*ATH **09** 00:30:40.5, 40.14N×1961E, h21km±4km, MD3.3/4*
*ISCJB **09** 00:30:41.9±0.7, 40.11N±003×1974E±006, h10km, Error ellipse: s-maj=6.8km s-min=3.5km az=17.8*
*NEIC **09** 00:30:42.8, 4009N×1973E, h0km, MD3.3(ATH), After THE.*
*TIR **09** 00:30:42.2, 40.12N×1992E, h3km, Ml2.8*
*THE **09** 00:30:42.8, 4009N×1973E, h0km*
*CSEM **09** 00:30:43.2±0.1, 40.13N×1989E, h2km, MD3.3, Error ellipse: s-maj=3.5km s-min=1.5km az=94.0*

ISC 09 00:30:42.1±0.8**, 4011N**±003×**1971E**±007**, h10**km**, n22,** σ**1.35**/33**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.29	51	i Pg	Pg	00 30 46.4	-1.6
TPE				i Sg	Sg	00 30 50.6	-1.4
SRN	Sarande	0.32	136	i Pg	Pg	00 30 47.1	-1.4
SRN				i Sg	Sg	00 30 53.2	+0.4
KEK	Kerkira	0.40	170	ePB	Pg	00 30 49.7	-0.4
KEK				eSB	Sg	00 30 56.9	+1.5
LSK	Leskovik	0.68	87	i Pg	Pg	00 30 53.0	-2.3
LSK				i Sg	Sg	00 31 04.7	+0.5
IGT	Igoumenitsa	0.75	140	ePg	Pg	00 30 55.1	-1.5
JAN	Janina	0.99	117	ePN	Pg	00 31 00.6	-0.5
MEV	Metsovon	1.21	105	ePg	Pg	00 31 05.3	-0.1
TIR	Tirane	1.24	5	ePg	Pg	00 31 06.5	+0.6
TIR				eSg	Sg	00 31 25.9	+3.9
TIR	Tirane	1.24	5	i Pn	Pn	00 31 06.5	+1.0
OHR	Ohrid	1.30	39	ePn	Pn	00 31 04.1	-2.2
OHR				eSn	Sn	00 31 25.4	+1.7
OHR	Ohrid	1.30	39	ePn	Pn	00 31 04.1	-2.2
OHR				eSn	Sn	00 31 25.3	+1.6
FNA	Florina	1.44	62	ePg	Pg	00 31 07.8	-1.9
FNA				eSg	Sg	00 31 29.8	+1.5
BIA	Bitola	1.53	53	ePg	Pg	00 31 09.7	-1.7
BIA				eSg	Sg	00 31 32.4	+1.2
BIA	Bitola	1.53	53	ePn	Pn	00 31 08.3	-1.1
BIA	Bitola	1.53	53	ePn	Pn	00 31 08.2	-1.2
BIA	Bitola	1.53	53	ePg	Pn	00 31 09.7	+0.3
BIA				eSg	Sg	00 31 32.4	+1.2
LKD	Levkas	1.58	152	ePg	Pg	00 31 11.7	-0.7
KZN	Kozani	1.59	82	ePN	Pn	00 31 10.8	+0.5
EVR	Evrytania	2.01	126	ePN	Pn	00 31 17.5	+1.4
VLS	Valsamata	2.05	160	ePB	Pn	00 31 16.8	+0.2
GRG	Griva	2.22	67	ePn	Pn	00 31 20.8	+1.9
AGG	Agios Georgios	2.30	117	ePn	Pn	00 31 21.7	+1.7
AGG				eSn	Sn	00 31 51.6	+3.2

*NEIC **09** 00:30:52.0, 3174S×7035W, h127km, mb3.5/1, After GUC.*

GUC 09 00:30:52.0±0.9**, 3174S**×**7035W, h127**km±5km**, MD3.9, ML3.9, 11C-14D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	0.79	315	⇓iP	Pn	00 31 13.4	+0.7
CMCH				i S	Sn	00 31 29.2	+0.7
CMCH				AML	AML	00 31 31.0	
	comp=N,9μm,0.4s						
CMCH	Combarbala	0.79	315	⇓iP	Pn	00 31 13.4	+0.7
CMCH				i S	Sn	00 31 29.2	+0.7
JACH	Jahuel	0.97	192	⇑iP	Pn	00 31 15.1	+0.7
JACH				i S	Sn	00 31 32.0	+0.8
CHNG	Los Chungos	0.99	261	⇓iP	Pn	00 31 15.8	+1.3
CHNG				i S	Sn	00 31 32.8	+1.2
CHNG				AML	AML	00 31 35.9	
	comp=E,3μm,0.4s						
OVCH	Ovalle	1.34	327	⇓iP	Pn	00 31 19.5	+1.4
OVCH				i S	Sn	00 31 39.2	+1.2
OVCH				AML	AML	00 31 40.7	
	comp=N,5μm,0.2s						
OVCH	Ovalle	1.34	327	⇓iP	Pn	00 31 19.5	+1.4
OVCH				i S	Sn	00 31 39.2	+1.2
ROCH	El Roble	1.35	204	⇑iP	Pn	00 31 18.9	+0.7
ROCH				i S	Sn	00 31 39.4	+1.2
PEL	Peldehue	1.43	191	⇑iP	Pn	00 31 19.6	+0.4
PEL				i S	Sn	00 31 40.1	+0.3
PEL				AML	AML	00 31 41.0	
	comp=E,2μm,0.4s						
PEL	Peldehue	1.43	191	⇑iP	Pn	00 31 19.6	+0.4
PEL				i S	Sn	00 31 40.1	+0.3
FCH	Farellones	1.59	178	⇓iP	Pn	00 31 22.2	+1.3
FCH				i S	Sn	00 31 45.1	+2.1
FCH				AML	AML	00 31 47.4	
	comp=E,2μm,0.5s						
TLL	Tololo Astrono	1.61	346	⇑iP	Pn	00 31 22.8	+1.6
TLL				i S	Sn	00 31 44.8	+1.4
TLL				AML	AML	00 31 46.7	
	comp=E,5μm,0.3s						
TLL	Tololo Astrono	1.61	346	⇑iP	Pn	00 31 22.8	+1.6
TLL				i S	Sn	00 31 44.8	+1.4
CLCH	Cerro Calan	1.66	185	⇓iP	Pn	00 31 22.5	+0.8
CLCH				i S	Sn	00 31 45.8	+1.3
CLCH				AML	AML	00 31 49.0	
	comp=E,1μm,0.7s						
DSCH	Colegio Aleman	1.67	186	⇓iP	Pn	00 31 22.2	+0.4
DSCH				i S	Sn	00 31 45.3	+0.7
DSCH				AML	AML	00 31 48.9	
	comp=E,145nm,0.2s						
DSCH	Colegio Aleman	1.67	186	⇓iP	Pn	00 31 22.2	+0.4
DSCH				i S	Sn	00 31 45.3	+0.7
IHA	Instituto Hidr	1.69	220	⇓iP	Pn	00 31 22.6	+0.5
IHA				i S	Sn	00 31 45.3	+0.4
MDZ	Mendoza	1.71	132	⇑iP	Pn	00 31 23.2	+0.8
MDZ				i S	Sn	00 31 46.2	+0.7
STL	Santa Lucia	1.71	188	eP	Pn	00 31 22.5	+0.1
STL				i S	Sn	00 31 45.8	+0.3
STL				AML	AML	00 31 48.6	
	comp=N,422nm,0.1s						
LACH	Colegio Las Am	1.72	185	eP	Pn	00 31 23.6	+1.2
LACH				i S	Sn	00 31 47.2	+1.5
LACH				AML	AML	00 31 52.0	
	comp=E,299nm,0.4s						
SAN	Santiago	1.73	189	eP	Pn	00 31 23.5	+0.9
SAN				i S	Sn	00 31 47.1	+1.1
SAN				AML	AML	00 31 50.5	
	comp=E,978nm,0.7s						
SAN	Santiago	1.73	189	eP	Pn	00 31 23.5	+0.9
SAN				i S	Sn	00 31 47.1	+1.1
RCDM	Rinconada Maip	1.79	192	eP	Pn	00 31 23.8	+0.5
RCDM				i S	Sn	00 31 47.8	+0.6
RCDM				AML	AML	00 31 51.0	
	comp=E,3μm,0.2s						
RCDM	Rinconada Maip	1.79	192	eP	Pn	00 31 23.8	+0.5
RCDM				i S	Sn	00 31 47.8	+0.6
ANTU	Antumapu	1.84	187	eP	Pn	00 31 24.5	+0.6
ANTU				i S	Sn	00 31 49.0	+0.7
ANTU				AML	AML	00 31 50.9	
	comp=E,1μm,0.1s						
ANTU	Antumapu	1.84	187	eP	Pn	00 31 24.5	+0.6
ANTU				i S	Sn	00 31 49.0	+0.7
PCH	Pirque	1.89	184	⇑iP	Pn	00 31 25.1	+0.7
PCH				i S	Sn	00 31 50.5	+1.3
SJCH	San Jose de Ma	1.90	180	eP	Pn	00 31 24.9	+0.3
SJCH				eS	Sn	00 31 49.9	+0.4
SJCH				AML	AML	00 31 51.8	
	comp=E,528nm,0.2s						
SJCH	San Jose de Ma	1.90	180	eP	Pn	00 31 24.9	+0.3
SJCH				eS	Sn	00 31 49.9	+0.4
TACH	Talagante	1.98	194	⇑iP	Pn	00 31 25.6	+0.1
TACH				i S	Sn	00 31 51.6	+0.5
LCCH	Las Cruces	2.02	210	⇑iP	Pn	00 31 26.4	+0.4
LCCH				i S	Sn	00 31 52.6	+0.6
CHCH	Chadas Angostu	2.21	186	⇓iP	Pn	00 31 28.8	+0.5
CHCH				i S	Sn	00 31 57.3	+1.1
CACH	El Canelo	2.38	185	⇓iP	Pn	00 31 31.5	+0.9
CACH				eS	Sn	00 32 01.6	+1.3
LNV	Longovilo	2.39	202	⇓iP	Pn	00 31 30.4	-0.2
LNV				i S	Sn	00 31 59.8	-0.5
LCO	Las Campanas	2.73	354	⇓iP	Pn	00 31 36.2	+1.2
LCO				i S	Sn	00 32 08.2	0.0
VACH	Vallenar	3.17	354	⇑iP	Pn	00 31 41.6	+0.9
VACH				i S	Sn	00 32 18.1	-0.1
PLCA	Paso Flores	8.98	181	ePn	Pn	00 32 58.1	-0.5
LVC	Limon Verde	9.18	8	ePn	Pn	00 32 58.5	-2.8
SAML	Samuel	23.63	18	eP	P	00 35 53.6	+2.2
	comp=E,1.0nm,0.6s						
HKT	Hockley	65.95	336	P	P	00 41 23.6	-0.7

*BJI **09** 00:43:39.0, 700S×15460E, h65km, mB5.1, mb4.8, Ms4.4*
*ISCJB **09** 00:43:41.3±1.8, 703S±008×15463E±006, h80km±17km, mb4.5/23, Error ellipse: s-maj=13.4km s-min=10.6km az=4.3*
*NEIC **09** 00:43:41.0±1.3, 698S×15462E, h66km±11km, mb4.8/9, Error ellipse: s-maj=11.0km s-min=9.1km az=179.0*
*IDC **09** 00:43:42.1±2.6, 690S×15442E, h75km±24km, mb4.0/11, mb1 4.2/14, mb1mx4.1/16, mbtmp4.3/14, MS3.8/5, Ms1 3.8/5, ms1mx3.4/19, Error ellipse: s-maj=19.2km s-min=15.3km az=174.0*

ISC 09 00:43:44.2±1.5, 711S±008×15470E±006, h92km±14km, n59, σ1s10/45, mb4.5/23, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.68	114	P	Pn	00 45 08.4	+2.3
	10.0nm,0.3s,baz=263,slow=9.0,SNR=3.8						
HNR				S	Sn	00 46 19.1	+9.2
	8.9nm,0.3s,baz=316,slow=0.6,SNR=3.6						
HNR				LR	LR	00 47 27.8	
	comp=Z,1μm,18.8s,baz=356,slow=38						
HNR	Honiara	5.68	114	ePn	Pn	00 45 05.3	-0.8
PMG	Port Moresby	7.81	252	P	Pn	00 45 29.9	-5.1
	3.8nm,0.3s,baz=57,slow=8.1,SNR=6.6						
PMG				S	Sn	00 47 02.0	+0.3
	6.4nm,0.3s,baz=248,slow=16,SNR=5.5						
PMG				LR	LR	00 48 36.8	
	comp=Z,562nm,18.2s,baz=50,slow=39						
CTAO	Charters Tower	15.29	212	ePn	Pn	00 47 15.5	+0.7
	6.6nm,0.7s						
DZM	Mont Dzumac	18.70	144	P	Pn	00 47 56.3	-0.3
	0.4nm,0.3s,baz=248,slow=22,SNR=3.5						
WRAB	Tennant Creek	23.50	235	eP	P	00 48 45.1	-0.6
	8.1nm,0.5s,mb4.3						
WRAB				e		00 48 55.6	
WB2	Warramunga Arr	23.50	235	eP	P	00 48 44.5	-1.2
ASAR	Alice Springs	25.88	228	P	P	00 49 06.1	-1.2
	1.3nm,0.6s,mb3.6,baz=60,slow=8.8,SNR=13						
ASAR				LR	LR	00 59 34.2	
	comp=Z,251nm,21.6s,baz=252,slow=37						
STKA	Stephens Creek	27.51	205	P	P	00 49 20.9	-1.1
	2.9nm,0.8s,mb3.8,baz=266,slow=22,SNR=2.7						
STKA				LR	LR	01 01 00.6	
	comp=Z,296nm,20.2s,baz=32,slow=38						
STKA	Stephens Creek	27.51	205	eP	P	00 49 21.8	-0.2
FITZ	Fitzroy Crossi	30.34	246	P	P	00 49 45.4	-1.7
	3.7nm,0.8s,mb4.1,baz=346,slow=6.6,SNR=10						
AFI	Afiamalu	33.61	104	LR	LR	01 00 58.5	
	comp=Z,97nm,18.3s,baz=48,slow=30						
TAU	Tasmania Unive	36.25	189	P	P	00 50 38.0	-0.4
YHNB	Yeheng	45.30	315	P	P	00 51 52.3	-0.5
COCO	West Island	57.19	260	P	P	00 53 24.3	+2.7
XAN	Xi'an	59.59	316	P	P	00 53 36.6	-1.7
XAN				AMB	AMB		
	comp=Z,8.0nm,1.4s,mb4.6						
KMI	Kunming	59.84	304	P	P	00 53 41.6	+1.6
KMI				S	S	01 01 48.0	+3.6
KMI				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.9						
KMI				AMB	AMB		
	comp=Z,139nm,4.4s						
KMI				LR	LR		
	comp=N,98nm,13.5s						
KMI				LR	LR		
	comp=E,117nm,16.6s						
CD2	Chengdu	61.67	311⇑	iP	P	00 53 51.6	-0.8
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
LZH	Lanzhou	64.19	316	eP	P	00 54 09.5	+0.4
LZH				AMB	AMB		
	comp=Z,27nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,74nm,4.5s						
CASY	Casey	66.40	198	P	P	00 54 23.4	0.0
GTA	Gaotai	68.62	317	eP	P	00 54 37.6	+0.2
GTA				AMB	AMB		
	comp=Z,8.0nm,1.5s,mb4.3						
SONM	Songino Array	69.27	327	P	P	00 54 40.2	-1.2
	comp=Z,1.4nm,0.4s,mb4.1,baz=142,slow=5.5,SNR=15						
VNDA	Vanda	70.48	178	P	P	00 54 51.4	+2.7
	comp=Z,0.8nm,1.0s,mb3.5,baz=315,slow=5.0,SNR=4.6						
VNDA	Vanda	70.48	178	eP	P	00 54 53.5	+4.7
	comp=Z,1.6nm,0.8s,mb3.9						
JIRN	Jiri	74.59	301	eP	P	00 55 14.4	+1.2
GUN	Gumba	74.93	301	eP	P	00 55 15.6	+0.5
	comp=Z,19nm,0.5s,mb5.0						
PKI	Pulchoki	75.23	301	eP	P	00 55 17.2	+0.3
	comp=Z,10nm,0.5s,mb4.8						
KKN	Kakani	75.40	301	eP	P	00 55 18.2	+0.3
	comp=Z,20nm,0.7s,mb5.0						
DMN	Daman	75.50	301	eP	P	00 55 19.2	+0.8
GKN	Gorkha	76.01	301	eP	P	00 55 21.5	+0.2
KOLN	Koldanda	76.83	301	eP	P	00 55 25.7	-0.2
	comp=Z,35nm,1.0s,mb5.0						
WMQ	Urumqi	78.71	317	eP	P	00 55 38.0	+1.6
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8						
QSPA	South Pole Qui	82.87	180	eP	P	00 55 59.2	+0.7
	comp=Z,12nm,1.1s,mb4.6						
MKAR	Makanchi Array	83.30	319	P	P	00 56 00.0	-0.7
	comp=Z,2.0nm,0.6s,mb4.1,baz=101,slow=4.5,SNR=13						
ZAL	Zalesovo	84.12	326	P	P	00 56 03.1	-1.8
	comp=Z,1.2nm,0.3s,mb4.1,baz=15,slow=12,SNR=3.4						
MAW	Mawson	84.18	203	P	P	00 56 06.2	+0.9
	comp=Z,1.4nm,0.7s,mb3.9,baz=121,slow=8.7,SNR=3.2						
MAW	Mawson	84.18	203	eP	P	00 56 06.5	+1.2
	comp=Z,3.6nm,0.8s,mb4.2						
NVAR	Mina Array Bea	92.02	52	P	P	00 56 42.1	-0.6
	comp=Z,3.0nm,0.8s,mb4.5,baz=246,slow=4.7,SNR=15						
CHKZ	Chkalovo	92.18	324	P	P	00 56 46.3	+2.8
ARUT	Antelope Range	95.77	53	P	P	00 57 00.8	+0.8
YKA	Yellowknife Ar	96.57	28	P	P	00 57 02.1	-1.5
	comp=Z,2.5nm,0.9s,mb4.6,baz=269,slow=4.2,SNR=6.9						
YKA	Yellowknife Ar	96.57	28	P	P	00 57 02.1	-1.5
PDAR	Pinedale Array	98.99	48	P	P	00 57 13.8	-0.7
	comp=Z,0.3nm,0.6s,mb4.0,baz=319,slow=3.6,SNR=3.1						
SNAA	Sanae	100.00	187	ePdif	Pdif	00 57 21.4	+2.4
FINES	FINESS Array B	113.92	336	PKiKP	PKiKP	01 02 10.8	-1.5
	comp=Z,0.2nm,0.3s,baz=88,slow=2.8,SNR=7.2						
FINES	FINESS Array B	113.92	336	PKPdf	PKiKP	01 02 10.8	-1.5
EIL	Elat	119.28	300	ePKPdf	PKPdf	01 02 24.2	+1.6
NOA	NORSAR Array B	119.71	341	PKP	PKPdf	01 02 22.1	-1.3
	comp=Z,0.5nm,0.8s,baz=91,slow=2.1,SNR=3.3						
KOLS	Kolonicke sedl	122.27	325	eP	PKPdf	01 02 30.4	+2.0
KOLS	Kolonicke sedl	122.27	325	e	PKPdf	01 02 30.4	+2.0
CRVS	Cervenica-Dubn	122.75	325	eP	PKPdf	01 02 28.9	-0.4
CRVS	Cervenica-Dubn	122.75	325	e	PKPdf	01 02 28.8	-0.5
VYHS	Vyhne	124.44	326	eP	PKPdf	01 02 33.0	+0.5
VYHS	Vyhne	124.44	326	e	PKPdf	01 02 33.0	+0.5
KHC	Kasperske Hory	126.88	329	ePKPdf	PKPdf	01 02 37.0	-0.2
GERES	GERESS Array B	127.00	329	PKP	PKPdf	01 02 37.6	+0.2
	comp=Z,0.9nm,0.5s,baz=84,slow=1.4,SNR=14						
BDFB	Brasilia	148.10	135	PKPbc	PKPbc	01 03 20.8	+1.7
	comp=Z,3.8nm,0.8s,baz=109,slow=1.1,SNR=4.5						
TOA0	Torodi Ar. Sit	152.78	285	ePKPbc	PKPbc	01 03 30.9	+0.5
TORD	Torodi Ar. Bea	152.78	285	PKPbc	PKPbc	01 03 29.8	-0.5
	comp=Z,2.7nm,0.7s,baz=84,slow=2.2,SNR=59						

*ISCJB **09** 00:48:43.8±2.8, 14.1S±0.1×166.25E±0.10, h35km±24km, mb4.3/11, MS3.6/3, Error ellipse: s-maj=18.4km s-min=16.0km az=38.4*

*IDC **09** 00:48:47.3±5.6, 14.06S×166.22E, h53km±49km, mb3.9/7, mb1 4.0/8, mb1mx3.9/13, mbtmp4.1/8, ML3.5/1, MS3.5/4, Ms1 3.5/4, ms1mx3.2/17, Error ellipse: s-maj=33.0km s-min=29.5km az=118.0*

*NEIC **09** 00:48:47.1±2.1, 14.00S×166.31E, h55km±18km, mb4.5/4, Error ellipse: s-maj=14.3km s-min=13.2km az=176.0*

ISC 09 00:48:47.0±2.1, 141S±01×16627E±010, h49km±19km, n40, σ1s06/21, mb4.3/11, MS3.6/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.97	179	P	Pn	00 50 39.6	-0.6
	0.6nm,0.3s,baz=17,slow=19,SNR=4.2						
PMG	Port Moresby	19.27	282	LR	LR	00 59 11.3	
	comp=Z,81nm,21.1s,baz=57,slow=32						
PMG	Port Moresby	19.27	282	eP	Pn	00 53 07.8	-1.1
CTAO	Charters Tower	20.04	250	P	P	00 53 18.0	+2.1
RAO	Raoul Island	21.05	138	LR	LR	00 59 06.1	
	comp=Z,128nm,18.2s,MS3.3,baz=14,slow=29						
AFI	Afiamalu	21.31	92	P	P	00 53 30.1	+0.5
STKA	Stephens Creek	28.70	228	P	P	00 54 40.5	+1.0
	2.6nm,0.9s,mb4.0,baz=32,slow=9.5,SNR=2.4						
ASAR	Alice Springs	32.01	248	P	P	00 55 08.8	0.0
	1.7nm,0.6s,mb4.0,baz=73,slow=9.2,SNR=19						
TAU	Tasmania Unive	33.06	206	P	P	00 55 17.6	-0.3
GUMO	Guam	34.69	321	LR	LR	01 06 59.7	
	comp=Z,99nm,18.2s,MS3.6,baz=88,slow=32						
PPT	Papeete	42.56	101	LR	LR	01 11 07.1	
	comp=Z,103nm,18.2s,MS3.8,baz=334,slow=31						
NWAO	Narrogin (SRO)	48.26	238	eP	P	00 57 25.1	+1.9
VNDA	Vanda	63.50	181	P	P	00 59 11.5	-0.6
	2.0nm,0.9s,mb4.1,baz=0.2,slow=4.6,SNR=8.9						
VNDA	Vanda	63.50	181	eP	P	00 59 11.8	-0.4
	2.2nm,0.8s,mb4.2						
CASY	Casey	63.78	202	P	P	00 59 12.6	-1.4
SBA	Scott Base	63.80	180	eP	P	00 59 15.1	+1.0
	6.3nm,0.8s,mb4.7						
MDJ	Mudanjiang	67.24	332	eP	P	00 59 36.0	-0.4
	3.3nm,0.4s,mb4.7						
QSPA	South Pole Qui	75.96	180	eP	P	01 00 28.7	0.0
	15nm,0.9s,mb4.9						
SONM	Songino Array	81.39	324	P	P	01 00 58.6	0.0
	0.5nm,0.3s,mb3.9,baz=138,slow=5.3,SNR=6.3						
MAW	Mawson	82.13	202	P	P	01 01 01.3	-1.2
	2.2nm,1.1s,mb4.0,baz=86,slow=8.9,SNR=4.4						
MAW	Mawson	82.13	202	eP	P	01 01 01.5	-1.0
	3.3nm,1.0s,mb4.2						
NVAR	Mina Array Bea	87.58	50	P	P	01 01 31.6	+1.7
	0.4nm,0.4s,mb4.0,baz=203,slow=6.4,SNR=3.0						
SNAA	Sanae	94.16	183	eP	P	01 01 59.7	-0.8
	2.8nm,1.1s,mb4.6						
MKAR	Makanchi Array	96.05	317	P	P	01 02 07.7	-1.5
	1.1nm,0.7s,mb4.4,baz=92,slow=6.7,SNR=6.5						
MKAR	Makanchi Array	96.05	317	P	P	01 02 07.7	-1.5
ARCES	ARCESS Array B	119.36	345	PKP	PKPdf	01 07 28.9	-2.0
	4.1nm,1.0s,baz=64,slow=2.1,SNR=4.5						
ARCES	ARCESS Array B	119.36	345	PKP	PKPdf	01 07 28.9	-2.0
LPL	La Plagne	144.19	335	ePKP1	PKPdf	01 08 15.9	-1.5
	7.9nm,1.1s						
LPG	La Plagne	144.19	335	ePKP1	PKPdf	01 08 15.4	-2.0
MBDF	Montbardon	144.81	334	ePKP1	PKPdf	01 08 16.1	-2.4
	6.6nm,0.9s						
ORIF	Oris-en-Rattie	145.02	335	ePKP1	PKPbc	01 08 17.2	-1.1
	14nm,0.8s						
TCF	Toulx Ste Croi	145.19	341	ePKP1	PKPbc	01 08 17.3	-1.5
	31nm,1.4s						
SBF	Sospel	145.21	333	ePKP1	PKPbc	01 08 17.2	-1.7
	52nm,1.3s						
VIVF	Saint-Julien-l	145.55	337	ePKP1	PKPbc	01 08 18.8	-1.2
	21nm,1.2s						
MFF	Saint Martin d	145.61	343	ePKP1	PKPbc	01 08 19.4	-0.8
	30nm,1.2s						
FRF	La Foret Royal	145.80	333	ePKP1	PKPbc	01 08 19.1	-1.7
	8.1nm,0.8s						
SMRF	Simiane la Rot	145.92	335	ePKP1	PKPbc	01 08 20.7	-0.4
LMR	La Mourre	146.04	333	ePKP1	PKPbc	01 08 19.9	-1.6
	45nm,1.4s						
LASF	Ste Croix	146.52	337	ePKP1	PKPbc	01 08 21.7	-1.2
	9.2nm,0.8s						
MTLF	Montolieu	147.76	338	ePKP1	PKPbc	01 08 25.1	-1.3
	28nm,1.3s						

*NEIC **09** 01:10:51.5, 19.17N×62.45W, h25km, MD3.8(RSPR), After RSPR.*

*RSPR **09** 01:10:51.5, 19.17N×62.45W, h25km±59km, MD3.8/8, MD3.8/8*

TRN 09 01:10:50.0, 1900N×6248W, h35km, 6C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	2.11	254	eP	Pn	01 11 22.9	+0.2
TBVI				eS	Sn	01 11 49.2	+1.5
STVI	Saint Thomas	2.44	255⇑	eP	Pn	01 11 28.9	+1.6
STVI				eS	Sn	01 11 57.8	+1.8
CDVI	St. Croix	2.50	241⇑	eP	Pn	01 11 31.0	+2.8
CDVI				eS	Sn	01 11 58.8	+1.3
MTP	Monte Pirata	3.06	253⇓	eP	Pn	01 11 37.8	+1.9
MTP				eS	Sn	01 12 13.2	+2.0
CBYP	Canovanas	3.29	258⇓	eP	Pn	01 11 40.6	+1.6
CBYP				eS	Sn	01 12 21.1	+4.3
HUMP	Col San Antoni	3.31	256⇑	eP	Pn	01 11 41.0	+1.7
HUMP				eS	Sn	01 12 19.8	+2.3
AOPR	Arecibo Observ	4.10	262⇑	eP	Pn	01 11 52.5	+2.3
LSP	Las Mesas	4.45	260⇑	eP	Pn	01 11 57.4	+2.5
CRPR	Cabo Rojo, PR	4.51	258⇑	eP	Pn	01 11 57.7	+1.9

*IDC **09** 01:19:14.2±2.1, 3.27S×130.64E, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.8/14, mbtmp3.9/4, ML3.7/1, MS3.7/3, Ms1 3.7/3, ms1mx3.2/22, Error ellipse: s-maj=137.5km s-min=15.7km az=77.0*

*ISCJB **09** 01:19:17.4±1.3, 3.2S±0.1×130.5E±0.4, h33km, mb3.8/2, MS4.0/2, Error ellipse: s-maj=57.3km s-min=14.9km az=159.6*

*NEIC **09** 01:19:19.8±1.0, 3.27S×130.45E, h35km, mb3.9/1, Error ellipse: s-maj=47.9km s-min=12.5km az=80.0*

ISC 09 01:19:17.2±5.6, 32S±01×1305E±04, h14km±34km, n7, σ0s41/6, mb3.8/2, MS4.0/2, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.52	197	Pn	Pn	01 22 55.5	0.0
	0.2nm,0.3s,baz=25,slow=15,SNR=3.0						
FITZ				LR	LR	01 28 43.3	
	comp=Z,91nm,20.0s,baz=175,slow=37						
WRAB	Tennant Creek	17.03	167	ePn	Pn	01 23 14.5	-0.3
	4.1nm,0.4s						
ASAR	Alice Springs	20.59	171	P	P	01 23 56.1	+0.4
	7.9nm,0.6s,baz=351,slow=11,SNR=46						
ASAR				S	S	01 27 45.4	-0.1
	1.1nm,0.7s,baz=351,slow=17,SNR=5.9						
STKA	Stephens Creek	30.36	161	LR	LR	01 38 47.0	
	comp=Z,106nm,18.1s,MS3.5,baz=23,slow=39						
SONM	Songino Array	55.05	340	P	P	01 28 48.2	-0.1
	0.3nm,0.2s,mb3.9,baz=165,slow=6.7,SNR=4.0						
MKAR	Makanchi Array	65.37	326	P	P	01 29 59.1	+0.1
	0.4nm,0.6s,mb3.6,baz=123,slow=8.0,SNR=3.8						
BRTR	Keskin Array B	97.31	309	LR	LR	02 17 40.2	
	comp=Z,139nm,19.8s,MS4.5,baz=56,slow=36						

*NEIC **09** 01:24:01.7, 35.67S×71.30W, h105km, MG3.8(GUC), After GUC.*

GUC 09 01:24:01.7±0.9, 3567S×7130W, h105km±5km, ML3.8, 13C-4D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNCH	Linares	0.30	235⇑	iP	Pn	01 24 16.7	-0.2
LNCH				iS	Sn	01 24 28.2	0.0
LNCH				AML	AML	01 24 28.9	
	comp=N,7μm,0.6s						
LNCH	Linares	0.30	235⇑	iP	Pn	01 24 16.7	-0.2
LNCH				iS	Sn	01 24 28.2	0.0
TALC	Talca	0.39	315⇑	iP	Pn	01 24 17.3	0.0
TALC				iS	Sn	01 24 29.4	+0.5
TALC				AML	AML	01 24 30.3	
	comp=E,10μm,0.1s						
TALC	Talca	0.39	315⇑	iP	Pn	01 24 17.3	0.0
TALC				iS	Sn	01 24 29.4	+0.5
NICH	Los Niches	0.67	5⇓	iP	Pn	01 24 19.7	+0.3
NICH				iS	Sn	01 24 33.2	+0.7
SFDO	San Fernando	1.08	12⇑	iP	Pn	01 24 23.7	+0.4
SFDO				iS	Sn	01 24 40.9	+1.2
CCHI	Chillan	1.12	214⇑	iP	Pn	01 24 24.0	+0.2
CCHI				iS	Sn	01 24 40.8	+0.3
CCHI				AML	AML	01 24 42.0	
	comp=E,1μm,0.5s						
CCHI				AML	AML	01 24 43.5	
	comp=N,751nm,0.3s						
CCHI	Chillan	1.12	214⇑	iP	Pn	01 24 24.0	+0.2
CCHI				iS	Sn	01 24 40.8	+0.3
LNV	Longovilo	1.72	357⇑	iP	Pn	01 24 31.6	+0.8
LNV				iS	Sn	01 24 53.8	+0.7
CHCH	Chadas Angostu	1.81	17	eP	Pn	01 24 32.9	+0.8
CHCH				iS	Sn	01 24 55.9	+0.7
TACH	Talagante	2.04	8⇑	iP	Pn	01 24 35.3	+0.4
TACH				iS	Sn	01 25 00.7	+0.4
PCH	Pirque	2.15	18⇑	iP	Pn	01 24 37.4	+1.1
PCH				iS	Sn	01 25 04.0	+1.2
ANTU	Antumapu	2.17	15	iP	Pn	01 24 37.5	+0.9
ANTU				iS	Sn	01 25 04.1	+0.8
ANTU				AML	AML	01 25 06.4	
	comp=E,689nm,0.3s						
ANTU	Antumapu	2.17	15	iP	Pn	01 24 37.5	+0.9
ANTU				iS	Sn	01 25 04.1	+0.8
RCDM	Rinconada Maip	2.22	11	eP	Pn	01 24 37.7	+0.5
RCDM				iS	Sn	01 25 04.2	-0.2
RCDM				AML	AML	01 25 05.8	
	comp=E,1μm,0.1s						
RCDM	Rinconada Maip	2.22	11	eP	Pn	01 24 37.7	+0.5
RCDM				iS	Sn	01 25 04.2	-0.2
SAN	Santiago	2.28	14	eP	Pn	01 24 39.0	+1.0
SAN				iS	Sn	01 25 05.9	+0.1
SAN				AML	AML	01 25 08.6	
	comp=E,586nm,0.6s						
SAN	Santiago	2.28	14	eP	Pn	01 24 39.0	+1.0
SAN				iS	Sn	01 25 05.9	+0.1
DSCH	Colegio Aleman	2.35	15⇑	iP	Pn	01 24 39.2	+0.3
CLCH	Cerro Calan	2.36	16⇑	iP	Pn	01 24 39.9	+0.9
CLCH				iS	Sn	01 25 08.5	+0.9
CLCH				AML	AML	01 25 11.8	
	comp=E,584nm,0.4s						
FCH	Farellones	2.48	20⇑	iP	Pn	01 24 41.6	+0.9
FCH				iS	Sn	01 25 11.3	+0.7
FCH				AML	AML	01 25 18.1	
	comp=N,493nm,0.3s						
PEL	Peldehue	2.57	12⇓	iP	Pn	01 24 42.7	+0.8
PEL				iS	Sn	01 25 13.3	+0.6
PEL				AML	AML	01 25 16.0	
	comp=E,962nm,0.3s						
PEL	Peldehue	2.57	12⇓	iP	Pn	01 24 42.7	+0.8
PEL				iS	Sn	01 25 13.3	+0.6
ROCH	El Roble	2.71	5	iP	Pn	01 24 44.6	+1.0
ROCH				iS	Sn	01 25 17.3	+1.4
JACH	Jahuel	3.04	11⇓	iP	Pn	01 24 48.4	+0.3
JACH				iS	Sn	01 25 24.4	+0.6

TRN 09 02:08:41.0, 1573N×6154W, h2km, M3.5(FDF), Md3.5(FDF), 2C-5D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBG	Guadaloupe-3	0.16	321⇓	eP	Pg	02 08 44.2	0.0
BBL	Barber's Block	0.21	161	eP	Pg	02 08 44.3	-0.8
MGG	Marie-Galante	0.29	49⇑	iP	Pg	02 08 46.3	-0.2
HMG	Houelmont	0.30	329⇓	eP	Pg	02 08 46.8	+0.1
PHG	Guadaloupe-2	0.30	341⇓	eP	Pg	02 08 47.2	+0.3
DOG	Dongo Capester	0.31	346	eP	Pg	02 08 47.2	+0.2
SCG	Saint Claude	0.33	336⇓	eP	Pg	02 08 47.5	+0.1
LZG	Guadaloupe-1	0.47	331⇓	eP	Pg	02 08 49.8	-0.3
DBCT	Belle View Cho	0.49	158	eP	Pg	02 08 50.8	+0.3
DBCT				eS	Sg	02 08 56.8	0.0
DSHT	Scott's Head	0.54	163	eP	Pg	02 08 51.6	+0.3
DSHT				eS	Sg	02 08 57.9	-0.4
SEG	Port Louis	0.67	3⇑	eP	Pg	02 08 53.2	-0.8
FDF	Fort de France	1.06	159	eP	Pg	02 08 58.8	-2.6
FDF				eS	Sg	02 09 13.4	-1.6
BIM	Bigot	1.29	159	eP	Pg	02 09 02.5	-3.2
MVM	Montagne Vaucl	1.32	152	eP	Pg	02 09 03.1	-3.2
MVM				eS	Sg	02 09 20.3	-3.3
BPA	Boggy Peak	1.34	347	eP	Pn	02 09 04.1	-2.7
BPA				eS	Sg	02 09 22.4	-1.9

*PRU **09** 02:09:57.5, 39.84N×19.16E, h0km, M4.2*

*SKO **09** 02:10:00.3, 40.01N×19.60E, h1km*

*IDC **09** 02:10:00.8±0.7, 40.23N×19.59E, h0km, mb4.0/14, mb1 4.1/24, mb1mx4.0/29, mbtmp4.0/24, ML3.5/10, MS3.2/5, Ms1 3.3/5, ms1mx2.7/32, Error ellipse: s-maj=11.8km s-min=11.1km az=106.0*

*ISCJB **09** 02:10:00.6±0.3, 40.13N±0.01×19.60E±0.01, h7km±2km, mb4.3/31, MS3.6/6, Error ellipse: s-maj=2.2km s-min=1.7km az=67.2*

*MOS **09** 02:10:01.2±1.1, 40.21N×19.63E, h10km, mb4.4/11, Error ellipse: s-maj=3.8km s-min=2.8km az=100.2*

*ATH **09** 02:10:01.2, 40.11N×19.59E, h19km±1km, MD4.3/16, ML4.6*

*THE **09** 02:10:01.3, 40.12N×19.61E, h0km, ML4.1*

*BJI **09** 02:10:01.2, 40.10N×19.60E, h20km, mB5.0, mb4.7, Ms4.4, Msz4.0*

*NEIC **09** 02:10:01.2, 40.11N×19.59E, h19km, mb4.2/19, MD3.9(PDG), ML4.1(THE), ML4.6(ATH), After ATH.*

*PDG **09** 02:10:02.4±0.8, 40.16N×19.67E, h11km±2km*

*TIR **09** 02:10:02.2, 40.13N×19.80E, h12km, Ml3.7*

*CSEM **09** 02:10:02.8±0.0, 40.21N×19.74E, h10km, mb4.2/4, Error ellipse: s-maj=1.2km s-min=0.9km az=8.0*

*LDG **09** 02:10:04.9±0.1, 40.15N×19.76E, h10km, Ml4.2/12, Error ellipse: s-maj=3.7km s-min=3.0km az=13.0*

ISC 09 02:10:02.1±0.3, 4013N±001×1963E±001, h5km±2km, h31km±2.4km:pP-P, n333, σ1s28/437, mb4.3/31, MS3.6/6, 42C-17D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.34	60	iPg	Pg	02 10 07.3	-1.3
TPE				iSg	Sg	02 10 12.2	-0.8
VLO	Vlora	0.36	343	iPg	Pg	02 10 10.7	+1.7
VLO				iSg	Sg	02 10 21.1	+7.4
SRN	Sarande	0.38	131	iPg	Pg	02 10 08.4	-1.0
SRN				iSg	Sg	02 10 14.6	+0.3
KEK	Kerkira	0.43	163	ePB	Pg	02 10 10.3	-0.2
KEK				eSB	Sg	02 10 16.5	+0.4
LSK	Leskovik	0.74	88	iPg	Pg	02 10 14.7	-1.7
LSK				iSg	Sg	02 10 27.0	+0.9
IGT	Igoumenitsa	0.80	137	ePg	Pg	02 10 16.0	-1.6
IGT				eSg	Sg	02 10 28.6	+0.7
IGT	Igoumenitsa	0.80	137	P	Pg	02 10 15.9	-1.6
IGT				S	Sg	02 10 26.9	-1.1
KBN	Korca	1.01	60	iPn	Pn	02 10 20.5	-2.5
KBN				iSn	Sn	02 10 38.2	+0.6
JAN	Janina	1.05	116	ePN	Pn	02 10 21.0	-2.5
JAN				eSN	Sn	02 10 35.8	-2.7
LCI	Lecce	1.18	281	Pn	Pn	02 10 26.1	+0.8
TIR	Tirane	1.23	8	ePg	Pg	02 10 24.3	-1.5
TIR				eSg	Sg	02 10 42.5	+0.8
TIR	Tirane	1.23	8	P	Pg	02 10 26.1	+0.3
TIR				S	Sg	02 10 45.9	+4.2
MEV	Metsovon	1.27	105	ePg	Pg	02 10 25.4	-1.1
OHR	Ohrid	1.33	42	ePg	Pg	02 10 25.9	-1.7
OHR				eSg	Sg	02 10 46.0	+1.3
OHR	Ohrid	1.33	42	ePg	Pg	02 10 25.3	-2.2
OHR				eSg	Sg	02 10 46.2	+1.5
OHR	Ohrid	1.33	42	P	Pn	02 10 25.7	-1.6
OHR				S	Sb	02 10 47.5	+2.7
OHR	Ohrid	1.33	42	ePg	Pg	02 10 25.9	-1.7
OHR				eSg	Sg	02 10 46.0	+1.2
OHR				S	Sb	02 10 47.5	+2.7
FNA	Florina	1.48	63	ePg	Pg	02 10 28.1	-2.5
FNA				eSg	Sg	02 10 50.1	+0.2
BIA	Bitola	1.57	55	ePg	Pg	02 10 29.0	-3.2
BIA				eSg	Sg	02 10 52.9	+0.4
BIA	Bitola	1.57	55	ePn	Pn	02 10 29.6	-1.0
BIA				eSn	Sn	02 10 52.5	+1.2
BIA	Bitola	1.57	55	P	Pn	02 10 29.5	-1.2
BIA				S	Sn	02 10 53.2	+1.9
BIA	Bitola	1.57	55	ePn	Pn	02 10 29.6	-1.0
BIA				eSn	Sn	02 10 52.5	+1.2
BIA				eSg	Sg	02 10 52.9	+0.4
LKD	Levkas	1.62	151	ePb	Pb	02 10 30.9	-1.7
LKD				eSb	Sb	02 10 52.9	-0.4
KZN	Kozani	1.65	83	ePN	Pn	02 10 31.6	-0.1
KZN				eSN	Sn	02 10 54.5	+1.2
ULC	Ulcinj	1.86	351⇑	iPn	Pn	02 10 34.3	-0.3
ULC				eSn	Sn	02 11 00.3	+1.9
SDA	Shkodra	1.93	357	i pn?	Sg	02 11 05.9	+1.9
EVR	Evrytania	2.07	125	ePN	Pn	02 10 38.4	+0.8
EVR				eSN	Sn	02 11 03.9	+0.1
VLS	Valsamata	2.08	159	ePB	Pb	02 10 36.8	-3.6
LIT	Litokhoron	2.19	90	ePn	Pn	02 10 39.2	0.0
LIT				eSn	Sn	02 11 07.5	+0.7
BUM	Brajici-Budva	2.24	346⇑	iPn	Pn	02 10 40.0	+0.2
BUM				eSn	Sn	02 11 09.7	+1.8
BUM	Brajici-Budva	2.24	346⇑	iPn	Pn	02 10 40.0	+0.1
BUM				eSn	Sn	02 11 09.7	+1.8
GRG	Griva	2.27	68	ePn	Pn	02 10 39.9	-0.4
GRG				eSn	Sn	02 11 09.8	+1.3
GRG	Griva	2.27	68	P	Pn	02 10 39.9	-0.4
GRG				S	Sn	02 11 10.7	+2.1
GRG	Griva	2.27	68	ePn	Pn	02 10 39.8	-0.5
GRG				eSn	Sn	02 11 09.9	+1.3
SKO	Skopje	2.30	36	ePn	Pn	02 10 41.9	+1.2
SKO				eSn	Sn	02 11 12.1	+2.8
SKO	Skopje	2.30	36⇑	iPn	Pn	02 10 41.4	+0.8
SKO				eSn	Sn	02 11 10.8	+1.5
SKO	Skopje	2.30	36⇑	iPn	Pn	02 10 41.4	+0.8
SKO				eSn	Sn	02 11 10.7	+1.4
BAI	Bari	2.31	296⇓	iPn	Pn	02 10 41.4	+0.5
TTG	Podgorica	2.32	353⇑	iPn	Pn	02 10 41.4	+0.4
TTG				eSn	Sn	02 11 12.1	+2.3
AGG	Agios Georgios	2.36	117	ePn	Pn	02 10 42.4	+0.9

AGG eSn Sn 02 11 11.4 +0.5
AGG Agios Georgios 2.36 117 P Pn 02 10 42.4 +0.9
AGG S Sn 02 11 09.0 -1.9
SG1 Sgolgore (BA) 2.36 289⇓*i*Pn Pn 02 10 42.1 +0.6
ORI Oriolo Calabro 2.44 270 Pn Pn 02 10 43.8 +1.2
HCY Herceg Novi 2.47 340⇑*i*Pn Pn 02 10 42.4 -0.6
HCY eSn Sn 02 11 14.9 +1.3
PVY Plav 2.48 6⇑*i*Pn Pn 02 10 44.0 +0.8
PVY eSn Sn 02 11 14.7 +0.9
STIP Stip 2.49 50 *e*Pn Pn 02 10 43.2 -0.1
STIP Stip 2.49 50 *e*Pn Pn 02 10 43.5 +0.2
STIP eSn Sn 02 11 15.3 +1.2
STIP Stip 2.49 50 *e*Pn Pn 02 10 43.4 +0.1
STIP eSn Sn 02 11 15.3 +1.2
RLS Riolos of Patr 2.51 145 *e*PB Pb 02 10 43.8 -3.9
VAY Valandovo 2.53 61 *e*Pn Pn 02 10 43.1 -0.8
VAY Valandovo 2.53 61 *e*Pn Pn 02 10 43.1 -0.8
VAY eSn Sn 02 11 16.5 +1.4
THE Thessaloniki 2.60 78 *e*Pn Pn 02 10 44.6 -0.1
THE eSn Sn 02 11 18.0 +1.3
HORT Hortiatis 2.69 79 *e*Pn Pn 02 10 45.4 -0.7
KNT Kendrikon 2.69 66 *e*Pn Pn 02 10 46.2 +0.1
KNT Kendrikon 2.69 66 P Pn 02 10 46.4 +0.3
NKY Niksic 2.73 350⇑*i*Pn Pn 02 10 47.0 +0.5
NKY eSn Sn 02 11 21.3 +1.4
CDT Castel del Mon 2.73 292 *e*Pn Pn 02 10 46.2 -0.4
IVA Berane 2.75 4⇑*i*Pn Pn 02 10 47.8 +1.0
IVA eSn Sn 02 11 21.6 +1.1
TREB Trebinje 2.76 340 P Pn 02 10 47.1 +0.1
TREB S Sn 02 11 22.5 +1.7
GRI Girifalco 2.81 243 Pn Pn 02 10 47.9 +0.2
XOR Xorichti 2.85 104 *e*Pn Pn 02 10 48.1 -0.1
BRY Bratogost 2.89 344⇑*i*Pn Pn 02 10 48.9 +0.1
BRY eSn Sn 02 11 25.0 +1.1
NEO Neokhori 2.89 105 *e*PN Pn 02 10 49.0 +0.2
SOH Sokhos 2.92 75 *e*Pn Pn 02 10 49.3 0.0
SOH eSn Sn 02 11 25.7 +0.9
SOH Sokhos 2.92 75 P Pn 02 10 49.6 +0.3
SOH S Sn 02 11 25.7 +0.9
PLG Polygyros 2.93 84 *e*PN Pn 02 10 49.8 +0.4
CUC Castrocucco 2.93 269 Pn Pn 02 10 50.8 +1.4
LKR Lokris 3.00 118 *e*PN Pn 02 10 50.7 +0.4
SLCN Sala Consilina 3.07 276 Pn Pn 02 10 52.6 +1.3
PAIG Paliouri 3.12 92 *e*Pn Pn 02 10 51.3 -0.6
PAIG Paliouri 3.12 92 P Pn 02 10 51.3 -0.6
PAIG S Sn 02 11 27.3 -2.1
PAIG Paliouri 3.12 92 *e*Pn Pn 02 10 51.3 -0.6
PAIG S Sn 02 11 27.3 -2.2
UPM Unac-Piva 3.12 350⇑*i*Pn Pn 02 10 52.4 +0.4
UPM eSn Sn 02 11 30.4 +0.8
SJES Sjenica 3.15 4 Pn Pn 02 10 54.9 +2.5
SJES Sn Sn 02 11 31.2 +0.9
PLE Pljevlja 3.21 357⇓*i*Pn Pn 02 10 53.7 +0.6
PLE eSn Sn 02 11 32.6 +0.9
MRLC Muro Lucano 3.22 283 Pn Pn 02 10 54.1 +0.7
AOS Alonnisos 3.42 105 *e*Pn Pn 02 10 56.0 -0.1
MMB Musomiste 3.43 63 *e*Pn Pn 02 10 55.5 -0.8
MMB eSn Sn 02 11 38.6 +1.3
MMB Musomiste 3.43 63 P Pn 02 10 55.5 -0.8
MMB S Sn 02 11 36.8 -0.6
MMB Musomiste 3.43 63 *e*Pn Pn 02 10 55.5 -0.8
MMB S Sn 02 11 36.8 -0.5
RGNG Rignano Grg 3.43 298 Pn Pn 02 10 56.7 +0.4
NVR Nevrokopi 3.44 68 *e*PN Pn 02 10 56.7 +0.3
ITM Ithomi 3.45 148 *e*PN Pn 02 10 56.9 +0.4
CEL Celeste 3.45 238 Pn Pn 02 10 56.6 +0.1
SOI Samo 3.46 305 Pn Pn 02 10 58.0 -0.2
FG5 Orsara di Pugl 3.51 291 Pn Pn 02 10 58.7 +1.3
MGER Gerania Oros 3.54 126 *e*PN Pn 02 10 57.5 -0.3
VTS Vitosha 3.65 46 *e*Pn Pn 02 10 59.8 +0.6
VTS Vitosha 3.65 46⇑P Pn 02 10 59.9 +0.7
MSI Messina ING 3.71 240 Pn Pn 02 11 01.3 +1.3
MTTG Motta San Giov 3.73 237 Pn Pn 02 11 00.1 -0.2
BBLS Bajina Basta - 3.74 358⇑*i*Pn Pn 02 11 03.8 +3.3
BBLS Sn Sn 02 11 44.8 -0.2
FG2 Serracapriola 3.78 298 Pn Pn 02 11 01.8 +0.8
NAIG Nisos Aigina 3.83 127 *e*PN Pn 02 11 02.0 +0.3
ATH Athens Observa 3.84 123 *e*PN Pn 02 11 01.8 -0.1
GRUS Gruza 3.84 12⇑*i*Pn Pn 02 11 02.0 0.0
GRUS Sn Sn 02 11 44.8 -2.7
PTL Penteli 3.89 121 *e*PN Pn 02 11 02.5 -0.1
KVR Kavouri 3.96 124 *e*PN Pn 02 11 04.3 +0.8
DIVS Divcibare 3.98 4⇓*i*Pn Pn 02 11 02.3 -1.5
DIVS Sn Sn 02 11 49.8 -1.0
DIVS Divcibare 3.98 4 *e*Pn Pn 02 11 03.3 -0.4
DIVS Divcibare 3.98 4 *e*Pn Pn 02 11 03.3 -0.5
DIVS Sn Sn 02 11 49.8 -1.0
LOS Limnos 4.19 91 *e*Pn Pn 02 11 06.0 -0.7
VLI Veliai 4.28 142 *e*PN Pn 02 11 08.0 +0.1
PLD Plovdiv 4.31 61 *e*Pn Pn 02 11 08.9 +0.5
PLD Plovdiv 4.31 61 P Pn 02 11 09.3 +1.0
SVIS Svilajnac 4.33 15⇑*i*Pn Pn 02 11 07.1 -1.5
MIDA Miranda 4.35 292 Pn Pn 02 11 10.9 +2.0
RDO Rodhopi 4.61 75 *e*PN Pn 02 11 13.6 +1.2
SSY Sortino 4.64 232 Pn Pn 02 11 10.7 -2.2
KYTH Kithira 4.68 144 *e*PN Pn 02 11 14.5 +1.0
INTR Introdacqua 4.72 295 Pn Pn 02 11 14.7 +0.7
HAVL Avola 4.74 230 Pn Pn 02 11 11.8 -2.4
VAE Valguarnera 4.86 239 Pn Pn 02 11 16.9 +1.1
1.3nm,0.3s,baz=76,slow=4.2,SNR=6.6
VAE Sn Sn 02 12 08.8 -3.7
1.5nm,0.3s,baz=114,slow=14,SNR=2.0
VAE Valguarnera 4.86 239 Pn Pn 02 11 16.9 +1.1
VAE Sn Sn 02 12 08.8 -3.7
BOZC Bozcaada 4.94 91 *i*P Pn 02 11 13.8 -3.2
HMDC Modica 4.95 232 Pn Pn 02 11 15.4 -1.7
ALN Alexandroupoli 4.95 79 *e*Pn Pn 02 11 16.8 -0.4
ALN Alexandroupoli 4.95 79 P Pn 02 11 19.4 +2.3
ALN S Sn 02 12 14.4 -0.3
ALN Alexandroupoli 4.95 79 P Pn 02 11 19.4 +2.3
ALN S Sn 02 12 14.4 -0.3
BLY Banja Luka 4.96 339 P Pn 02 11 17.9 +0.6
BLY S Sn 02 12 15.4 +0.4
DJES Djerdap 4.99 24 *e*Pn Pn 02 11 17.2 -0.4
AQU L'Aquila 5.20 297⇓*i*P Pn 02 11 22.3 +1.8
AQU L'Aquila 5.20 297 *e*P Pn 02 11 22.1 +1.6
AQU pmax pmax
comp=Z,109nm,0.8s
AQU L'Aquila 5.20 297 *e*Pn Pn 02 11 22.1 +1.6
comp=Z,109nm,0.8s
AQU L'Aquila 5.20 297 *e*Pn Pn 02 11 22.1 +1.6
comp=Z,109nm,0.8s
PRK Paraskevi 5.20 98 *e*PN Pn 02 11 21.2 +0.7
CHOS Chios island 5.28 107 *e*Pn Pn 02 11 22.3 +0.6
AYVA Ayvalik 5.50 96 *i*P Pn 02 11 27.2 +2.5
APE Apeiranthos 5.54 122 *e*Pn Pn 02 11 25.2 0.0
APE Apeiranthos 5.54 122⇑P Pn 02 11 24.8 -0.4
APE Apeiranthos 5.54 122 *e*Pn Pn 02 11 25.2 0.0
AOI Ancona 5.65 309 Pn Pn 02 11 26.9 +0.1
NVLJ Novalja 5.67 323⇑*i*Pn Pn 02 11 26.5 +1.5
NVLJ *i* Sn Sn 02 12 30.6 -1.8
BZS Buzias 5.68 14⇓*i*P Pn 02 11 26.3 -0.8
URLA Izmir 5.69 106 *i*P Pn 02 11 27.2 0.0
MNS Montasola 5.70 296 Pn Pn 02 11 29.2 +1.7
TOLF Tolfa 6.08 291 Pn Pn 02 11 33.9 +1.2
PKSM Moragy 6.12 354⇑*i*P Pn 02 11 32.6 -0.7
MURB Monte Urbino 6.17 303 Pn Pn 02 11 35.6 +1.7
BOJS Bojanci 6.26 331 *i* Pn Pn 02 11 35.5 +0.3
BOJS eSn Sn 02 12 46.3 -0.8
IDI Anoyia 6.38 138 Pn Pn 02 11 37.0 +0.2
comp=Z,1.0nm,0.3s,baz=180,slow=14,SNR=30
IDI Sn Sn 02 12 44.0 -6.0
comp=Z,15nm,0.3s,baz=108,slow=23,SNR=11
IDI LR LR 02 13 57.9
comp=Z,87nm,19.0s,baz=155,slow=37
IDI Anoyia 6.38 138 Pn Pn 02 11 37.0 +0.2
IDI Sn Sn 02 12 44.0 -6.0
BADI Badiali 6.47 304 Pn Pn 02 11 39.6 +1.6
SIVA Sivas 6.55 140 *e*Pn Pn 02 11 39.5 +0.4
SIVA Sivas 6.55 140 *e*Pn Pn 02 11 39.5 +0.4
RSM Repubblica di 6.56 308 P Pn 02 11 33.5 -5.7
VOIR 6.64 35⇑*i*P Pn 02 11 41.9 +1.6
CRE Caprese Michel 6.71 304 Pn Pn 02 11 42.8 +1.5
LJU Ljubljana 6.99 329 *e*Pn Pn 02 11 45.1 -0.1
LJU eSn Sn 02 13 05.0 -0.1
DRGR 7.03 18⇓*i*P Pn 02 11 45.4 -0.3
TRI Trieste 7.05 324 Pn Pn 02 11 44.4 -1.5
JAVS Javornik 7.06 327 *i* Pn Pn 02 11 45.7 -0.4
JAVS eSn Sn 02 13 03.6 -3.1
MLR Muntele Rosu 7.09 39 Pn Pn 02 11 47.7 +1.2
comp=Z,0.4nm,0.3s,baz=294,slow=14,SNR=9.2
MLR Muntele Rosu 7.09 39⇓*i*P Pn 02 11 48.5 +2.0
VOY Vojsko 7.24 326 *e*Pn Pn 02 11 48.2 -0.4
VOY eSn Sn 02 13 09.1 -2.1
PERS Pernice 7.29 335 *i* Pn Pn 02 11 48.8 -0.5
PERS eSn Sn 02 13 08.2 -4.2
BUD Budapest 7.37 357 *e*Pn Pn 02 12 02.1 +12
OBKA Obir 7.38 332⇑*i*Pn Pn 02 11 50.1 -0.4
SNR=12
OBKA ⇑*i*Sn Sn 02 13 11.4 -3.1
FNVD Fontana Vidola 7.50 305 Pn Pn 02 11 55.0 +2.8
HARR Harsova 7.65 51⇑*i*P Pn 02 11 55.4 +1.2
PLOR Plostina 7.69 40⇑*i*P Pn 02 11 56.7 +1.9
ARSA Arzberg 7.72 339⇓*i*Pn Pn 02 11 54.2 -1.0
ARSA ⇓*i*Sn Sn 02 13 19.7 -3.2
PSZ Piszkesteto 7.79 1⇑*i*P Pn 02 11 57.8 +1.6
PSZ Piszkesteto 7.79 1 *e*Pn Pn 02 11 53.1 -3.1
comp=Z,8.5nm,0.6s
TIRR Tirgusor 7.82 54⇓*i*P Pn 02 11 57.7 +1.2
CONA Conrad Observa 8.26 342⇑*i*Pn Pn 02 12 02.7 +0.2
KBA Koelnbreinsper 8.31 329⇑*i*Pn Pn 02 12 02.9 -0.4
KBA ⇑*i*Sn Sn 02 13 36.2 -1.2
VYHS Vyhne 8.38 356 *e*PN Pn 02 12 04.0 -0.3
VYHS *e*SN Sn 02 13 37.2 -2.1
VYHS *e* 02 14 10.1
VYHS Vyhne 8.38 356 *e*P Pn 02 12 04.0 -0.3
VYHS *e* 02 13 37.2
BURAR Bucovina Array 8.50 26⇓*i*P Pn 02 12 07.8 +1.9
TKTP Tekketepe 8.57 101 *i* P Pn 02 12 12.3 +5.4
MOA Molln 8.63 335⇑*i*Pn Pn 02 12 07.2 -0.4
SNR=11
MOA ⇑*i*Sn Sn 02 13 42.5 -2.9
ESKT Eskisehir 8.66 90 *i* P Pn 02 12 06.5 -1.5
APPI Appiano 8.82 319 Pn Pn 02 12 09.8 -0.4
CRVS Cervenica-Dubn 8.87 8 *e*PN Pn 02 12 11.5 +0.5
CRVS *e* 02 12 20.2
CRVS *e* 02 14 55.6
MABI Malga Bissina 8.92 315 Pn Pn 02 12 11.6 0.0
KOLS Kolonicke sedl 9.00 11 *e*PN Pn 02 12 13.4 +0.6
KOLS *e* 02 12 23.5
KOLS *e* 02 15 12.7
WTTA Wattenberg 9.18 324⇑*i*Pn Pn 02 12 15.5 +0.3
SNR=11
WTTA ⇓*i*Sn Sn 02 13 56.1 -2.9
KEST Kesra 9.23 245 Pn Pn 02 12 16.8 +0.9
comp=Z,0.1nm,0.3s,baz=58,slow=12,SNR=2.7
WATA Walderalm 9.27 324⇑*i*Pn Pn 02 12 16.9 +0.5
SNR=14
WATA ⇑*i*Sn Sn 02 13 58.0 -3.0
NIE Niedzica 9.30 3 *e*P Pn 02 12 18.9 +2.0
SQTA Sankt Quirin 9.35 322⇑*i*Pn Pn 02 12 17.8 +0.3
SNR=11
SQTA ⇑*i*Sn Sn 02 14 00.9 -2.2
VRAC Vranov 9.43 348 Pn Pn 02 12 22.5 +3.9
comp=Z,0.2nm,0.3s,baz=135,slow=11,SNR=3.3
MOTA Moosalm 9.49 322⇑*i*Pn Pn 02 12 19.8 +0.3
SNR=34
MOTA ⇓*i*Sn Sn 02 14 05.2 -1.3
KIS Kishinev 9.57 41 *e*P Pn 02 12 18.0 -2.5
KIS *e* 02 14 17.0
KIS MLR MLR
comp=Z,500nm,10.0s
KIS MLR MLR
comp=Z,500nm,12.0s
GEC2 GERESS Array S 9.69 336 *e*Pn Pn 02 12 20.4 -1.8
GEC2 *e*Sg Sn 02 14 08.2 -3.2
GERES GERESS Array B 9.69 336 Pn Pn 02 12 20.6 -1.6
comp=Z,0.9nm,0.3s,baz=163,slow=14,SNR=28
GERES Sn Sn 02 14 05.7 -5.7
comp=Z,0.7nm,0.3s,baz=152,slow=23,SNR=4.6
DAVOX Davos 9.72 316 Pn Pn 02 12 22.7 +0.2
comp=Z,1.3nm,0.3s,baz=121,slow=15,SNR=14
DAVOX Sn Sn 02 14 07.3 -4.7
comp=Z,0.5nm,0.3s,baz=151,slow=19,SNR=2.3
DAVOX Davos 9.72 316 Pn Pn 02 12 22.7 +0.2
DAVOX Sn Sn 02 14 07.3 -4.7
KWP Kalwaria 9.75 12 *e*Pn Pn 02 12 18.7 -4.3
comp=Z,10nm,1.0s
KWP Kalwaria 9.75 12 *e*Pn Pn 02 12 18.7 -4.3
comp=Z,10nm,1.0s
KWP Kalwaria 9.75 12 *e*P Pn 02 12 25.7 +2.7
MORC Moravsky Berou 9.76 352 *e*Pn Pn 02 12 22.7 -0.5
OKC Ostrava-Krasne 9.77 354 *e*P Pn 02 12 23.9 +0.7
OKC *e*S Sn 02 14 09.0 -4.3
OKC AMS AMS 02 17 30.0
comp=Z,300nm,9.9s
OKC Ostrava-Krasne 9.77 354 *e*Pn Pn 02 12 23.9 +0.7
OKC *e*Sn Sn 02 14 09.0 -4.3
DAVOS Davos 9.80 316 P Pn 02 12 22.7 -1.0
DAVOS 02 14 07.3
SBF Sospel 9.82 296 *e*Pn Pn 02 12 27.1 +3.2
KHC Kasperske Hory 9.98 336 *e*P Pn 02 12 24.7 -1.4
KHC *e*S Sn 02 14 14.3 -4.2
KHC AMS AMS 02 17 00.0
comp=Z,400nm,14.2s
KHC Kasperske Hory 9.98 336⇑*i*P Pn 02 12 25.4 -0.7
KHC Kasperske Hory 9.98 336 *e*Pn Pn 02 12 24.7 -1.4
KHC *e*Sn Sn 02 14 14.3 -4.2
DAVA Damuels 10.05 319⇑*i*Pn Pn 02 12 27.6 +0.5
DAVA ⇑*i*Sn Sn 02 14 17.0 -3.2
OJC Ojcow 10.09 1 *e*P Pn 02 12 28.8 +0.6
WET Wettzell 10.21 334 *e*Pn Pn 02 12 28.3 -1.1
FRF La Foret Royal 10.28 294 *e*Pn Pn 02 12 34.9 +4.7
LMR La Mourre 10.32 292 *e*Pn Pn 02 12 33.0 +2.2
DPC Dobruska-Polom 10.48 348 AMS AMS 02 17 00.0
comp=Z,300nm,5.7s
PRU Pruhonice 10.49 342 *e*P Pn 02 12 32.8 -0.4
PRU AMS AMS 02 17 50.0
comp=Z,300nm,7.9s
MBDF Montbardon 10.56 300 *e*Pn Pn 02 12 36.7 +2.6
MBDF *e*Sn Sn 02 14 27.9 -4.8
comp=Z,8.3nm,0.7s
BR131 Keskin Array S 10.77 88 *e*Pn Pn 02 12 37.5 +0.5
BRTR Keskin Array B 10.77 88 Pn Pn 02 12 36.5 -0.4
comp=Z,0.1nm,0.3s,baz=267,slow=13,SNR=7.6
LPG La Plagne 10.87 304 *e*Pn Pn 02 12 38.8 +0.4
LPG *e*Sn Sn 02 14 29.1 -11
comp=Z,19nm,0.6s
LPL La Plagne 10.89 304 *e*Pn Pn 02 12 38.8 +0.1
LPL *e*Sn Sn 02 14 28.8 -12
comp=Z,15nm,0.5s
PVCC Panska Ves 10.99 343 AMS AMS 02 18 10.0
comp=Z,300nm,8.9s
SMRF Simiane la Rot 11.14 295 *e*Pn Pn 02 12 45.7 +3.7
ORIF Oris-en-Rattie 11.22 300 *e*Pn Pn 02 12 46.6 +3.5
ORIF *e*Sn Sn 02 14 45.3 -3.6
comp=Z,9.7nm,0.7s
NKC Novy Kostel 11.30 336 *e*S Sn 02 14 44.4 -6.5
NKC AMS AMS 02 17 50.0
comp=Z,400nm,16.9s
BRG Berggiesshubel 11.46 342 *e*(P) Pn 02 12 45.8 -0.6
comp=Z,1.2nm,0.8s
BRG *e* 02 13 01.3
comp=Z,3.6nm,1.2s
BRG *e* 02 13 13.5
comp=Z,2.3nm,1.1s
BFO Black Forest 11.52 319 *e*Pn Pn 02 12 46.1 -1.2
CABF La Chapelle 11.79 308 *e*Pn Pn 02 12 48.7 -2.2
CABF *e*Sn Sn 02 14 57.0 -5.9
comp=Z,9.9nm,0.6s
MOX Moxa 11.92 335 *e*(P) Pn 02 12 52.9 +0.1
MOX *e* 02 16 39.0
MOX
comp=Z,300nm,17.0s
MOX Moxa 11.92 335 P Pn 02 12 52.9 +0.1
MOX *e* 02 16 39.0
HINF Hinteralfeld 11.98 314 *e*Pn Pn 02 12 53.3 -0.3
HINF *e*Sn Sn 02 15 01.5 -6.1
comp=Z,15nm,0.7s
CSS Prodhromos 12.03 111 *e*Pn Pn 02 12 57.0 +2.8
CLL Collm 12.10 340 P Pn 02 12 55.0 -0.1
CLL *e*PP 02 13 02.0
CLL *e*L 02 16 31.0
CLL Collm 12.10 340 *e*P Pn 02 12 55.0 -0.1
CLL *e*PP 02 13 02.0
CDF Champ du Feu 12.11 317 *e*Pn Pn 02 12 55.2 -0.2
HAU Haudompre 12.37 314 *e*Pn Pn 02 12 58.5 -0.4
HAU *e*Sn Sn 02 15 07.4 -10
comp=Z,20nm,0.5s
AKASG Malin Array Be 12.53 29 Pn Pn 02 12 59.8 -1.2
comp=Z,0.3nm,0.3s,baz=208,slow=11,SNR=4.0
SMF Signal de Mont 13.19 305 *e*Pn Pn 02 13 10.4 +0.3
SMF *e*Sn Sn 02 15 30.5 -6.7
comp=Z,11nm,0.6s
LOR Lormes 13.45 307 *e*Pn Pn 02 13 13.4 -0.2
LOR *e*Sn Sn 02 15 35.5 -7.9
comp=Z,15nm,0.6s
AVF Avril sur Loir 13.56 305 *e*Pn Pn 02 13 13.9 -1.2
AVF *e*Sn Sn 02 15 40.3 -5.9
comp=Z,6.6nm,0.7s
SSF Saint Saulge 13.57 306 *e*Sn Sn 02 15 38.8 -7.7
comp=Z,6.3nm,0.6s
BGF Bois d'Agland 13.79 303 *e*Pn Pn 02 13 17.8 -0.5
BGF *e*Sn Sn 02 15 44.9 -6.9
comp=Z,9.6nm,0.7s
ANN Anapa 13.94 65 *e*P Pn 02 13 25.8 +5.5
ANN *e*S Sn 02 16 03.9 +8.4
ANN pmax pmax
comp=Z,67nm,1.2s
MALT Malatya 14.69 91 *e*P Pn 02 13 34.9 +4.4
MALT pmax pmax
comp=Z,3.0nm,0.6s
MALT Malatya 14.69 91 *e*P Pn 02 13 34.9 +4.4
comp=Z,2.8nm,0.6s
EIL Elat 16.31 125 *e*P Pn 02 13 54.0 +2.2
comp=Z,132nm,0.8s
EVIA Vianos 17.17 272 P Pn 02 14 05.4 +2.6
EVIA pmax pmax
comp=Z,21nm,1.4s
EVIA Vianos 17.17 272 P Pn 02 14 05.4 +2.6
comp=Z,21nm,1.4s
EVIA Vianos 17.17 272 P Pn 02 14 05.4 +2.6
comp=Z,21nm,1.4s
EHUE Huescar 17.43 270 P Pn 02 14 10.0 +4.0
KIV Kislovodsk 17.53 70⇑*i*P Pn 02 14 08.3 +1.0
KIV pmax pmax
comp=Z,9.0nm,1.3s
KIV Kislovodsk 17.53 70 *i* P Pn 02 14 08.3 +1.0
comp=Z,9.0nm,1.3s
EQES Quesada 17.80 270 P Pn 02 14 15.0 +4.4
comp=Z,600nm,2.4s
ESDC Sonseca Array 18.10 276 P Pn 02 14 13.2 -1.1
comp=Z,0.1nm,0.3s,baz=76,slow=11,SNR=14
ESDC LR LR 02 21 31.0
comp=Z,73nm,18.4s,baz=40,slow=38
GUD Guadarrama 18.12 279 P Pn 02 14 17.0 +2.5
GUD pmax pmax
comp=Z,6.0nm,0.8s
GUD Guadarrama 18.12 279 P Pn 02 14 17.0 +2.5
comp=Z,6.0nm,0.8s
GUD Guadarrama 18.12 279 P Pn 02 14 17.0 +2.5
comp=Z,6.0nm,0.8s
OBN Obninsk 18.77 31⇑*e*P Pn 02 14 23.8 +1.4
OBN *e* 02 17 51.9
OBN pmax pmax
comp=Z,8.0nm,0.6s
OBN MLR MLR
comp=Z,100nm,16.0s
ELUQ Luque 18.78 270 P Pn 02 14 24.8 +2.2
ELUQ pmax pmax
comp=Z,3.0nm,0.2s
ELUQ Luque 18.78 270 P Pn 02 14 24.8 +2.2
comp=Z,3.0nm,0.2s
ELUQ Luque 18.78 270 P Pn 02 14 24.8 +2.2
comp=Z,3.0nm,0.2s
ELOJ Sierra Loja 18.80 269 P Pn 02 14 24.9 +2.0
ELOJ pmax pmax
comp=Z,1.0nm,0.5s
ELOJ Sierra Loja 18.80 269 P Pn 02 14 24.9 +2.0
comp=Z,1.0nm,0.5s
ELOJ Sierra Loja 18.80 269 P Pn 02 14 24.9 +2.0
comp=Z,1.0nm,0.5s
EADA Adamuz 18.87 272 P Pn 02 14 26.6 +2.9
comp=Z,0.9nm,1.0s
VSU Vasula 18.91 12 *i* P Pn 02 14 22.5 -1.6
GNI Garni 19.19 82 P Pn 02 14 26.8 -0.7
comp=Z,0.5nm,0.3s,baz=202,slow=12,SNR=4.7
GNI Garni 19.19 82 P Pn 02 14 26.8 -0.7
GNI pmax pmax
comp=Z,1.0nm,0.3s
GNI Garni 19.19 82 *e*P Pn 02 14 28.0 +0.5
comp=Z,18nm,1.0s
MOS Moscow 19.64 31 *e*P Pn 02 14 30.8 -2.1
MOS pmax pmax
comp=Z,52nm,1.2s
MOS pmax pmax
comp=Z,136nm,2.0s
MOS Moscow 19.64 31 *e*P Pn 02 14 30.8 -2.1
comp=Z,136nm,2.0s
ECAL Calabor 19.95 284 P Pn 02 14 34.9 -1.7
comp=Z,219nm,3.1s
ECAL Calabor 19.95 284 P Pn 02 14 34.9 -1.8
comp=Z,219nm,3.1s
EJIF Jimena Fronter 20.02 267 P P 02 14 37.0 +1.3
comp=Z,4.3nm,0.7s
EJIF Jimena Fronter 20.02 267 P P 02 14 37.0 +1.2
comp=Z,4.3nm,0.7s
HFS Hagfors 20.37 351 P P 02 14 36.1 -3.4
comp=Z,8.6nm,0.9s,baz=163,slow=11,SNR=22
KONO Kongsberg 20.54 345⇓*e*P P 02 14 45.4 +4.0
EMIN Mina Concepcio 20.57 272 P P 02 14 42.7 +0.9
comp=Z,74nm,1.5s
EMIN Mina Concepcio 20.57 272 P P 02 14 42.7 +1.0
comp=Z,74nm,1.5s
MDT Midelt 20.78 257 P P 02 14 42.9 -1.1
comp=Z,2.1nm,0.9s,baz=69,slow=8.7,SNR=6.0
MDT LR LR 02 23 18.4
comp=Z,54nm,18.1s,MS3.0,baz=330,slow=38
NAO01 NORSAR Array S 21.44 348 *e*P P 02 14 49.4 -1.7
comp=Z,7.6nm,0.8s,mb4.1
NAO01 NORSAR Array S 21.44 348 *e*P P 02 14 49.4 -1.7
comp=Z,7.6nm,0.8s,mb4.1
EKA Eskdalemuir Ar 21.45 323 P P 02 14 50.2 -1.0
comp=Z,5.5nm,0.9s,mb3.9,baz=130,slow=10,SNR=6.3
ESK Eskdalemuir 21.46 323 *e*P P 02 14 51.5 +0.1
ESK pmax pmax
comp=Z,24nm,1.2s,mb4.4
ESK Eskdalemuir 21.46 323 *e*P P 02 14 51.5 +0.2
comp=Z,24nm,1.2s,mb4.4
ESK Eskdalemuir 21.46 323 *e*P P 02 14 51.5 +0.1
comp=Z,24nm,1.2s,mb4.4
NB2 NORSAR Subarra 21.57 349 P P 02 14 51.2 -1.4
comp=Z,14nm,1.0s,mb4.3,baz=160,slow=10
NOA NORSAR Array B 21.57 349 P P 02 14 51.6 -0.9
comp=Z,4.0nm,0.7s,mb4.0,baz=153,slow=10.0,SNR=15
FINES FINESS Array B 21.71 8 P P 02 14 51.7 -2.3
comp=Z,5.6nm,0.8s,mb4.0,baz=169,slow=10,SNR=22
FINES FINESS Array B 21.71 8 P P 02 14 51.7 -2.3
FIA1 FINESS Array S 21.71 8 *e*P P 02 14 51.3 -2.8
FIA1 FINESS Array S 21.71 8 *e*P P 02 14 51.3 -2.7
KAF Kangasniemi 22.39 8 *e*p P 02 14 58.2 -3.1
comp=Z,6.1nm,0.7s,mb4.1,baz=192,slow=11
KAF Kangasniemi 22.39 8 *e*P P 02 14 58.2 -3.1
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
JOF Joensuu 23.88 13 *e*p P 02 15 14.0 -2.6
KLMR Klimovskoe 24.11 24 *e*P P 02 15 15.7 -3.0
KLMR pmax pmax
comp=Z,20nm,1.4s,mb4.3
KLMR Klimovskoe 24.11 24 *e*P P 02 15 15.7 -3.0
comp=Z,20nm,1.4s,mb4.3
AKTK Aktyubinsk 28.61 56 P P 02 15 57.2 -2.1
AKTO Aktyubinsk 28.61 56 P P 02 15 57.2 -2.1
comp=Z,0.8nm,0.4s,mb3.9,baz=256,slow=9.4,SNR=7.3
ARCES ARCESS Array B 29.64 4 P P 02 16 06.2 -2.3
comp=Z,3.9nm,0.8s,mb4.2,baz=189,slow=11,SNR=16
ARCES LR LR 02 29 43.7
comp=Z,59nm,19.9s,MS3.2,baz=181,slow=40
KEV Kevo 29.95 5 *e*p P 02 16 08.9 -2.3
comp=Z,4.1nm,0.8s,mb4.2
KEV Kevo 29.95 5 *e*P P 02 16 08.9 -2.3
KEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
ARU Arti 30.10 44⇓*e*P P 02 16 11.7 -0.9
ARU pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
ARU Arti 30.10 44 *e*P P 02 16 11.7 -0.9
comp=Z,4.0nm,1.3s,mb4.0
TOA0 Torodi Ar. Sit 31.16 215 *e*P P 02 16 22.7 +0.8
TOA0 Torodi Ar. Sit 31.16 215 *e*P P 02 16 22.7 +0.8
TORD Torodi Ar. Bea 31.16 215 P P 02 16 21.4 -0.5
comp=Z,2.1nm,0.8s,mb4.0,baz=20,slow=8.8,SNR=11
BRVK Borovoye 36.37 52 *e*P P 02 17 05.7 -1.5
BRVK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BRVK Borovoye 36.37 52 *e*P P 02 17 05.7 -1.5
comp=Z,1.8nm,0.9s,mb4.0
BRVK Borovoye 36.37 52 *e*P P 02 17 05.7 -1.5
comp=Z,1.8nm,0.9s,mb4.0
CHKZ Chkalovo 36.57 51 *e*P P 02 17 07.1 -1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
CHKZ	**Chkalovo**	**36.57**	**51**	*e*P	**P**	**02 17 07.1**	**-1.8**
	comp=Z,4.5nm,0.9s,mb4.3						
CHKZ	**Chkalovo**	**36.57**	**51**	*e*P	**P**	**02 17 07.1**	**-1.8**
	comp=Z,4.5nm,0.9s,mb4.3						
AAK	**Ala-Archa**	**40.64**	**68**	*d i*P	**P**	**02 17 42.6**	**-0.5**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.2						
AAK	**Ala-Archa**	**40.64**	**68**	*i* P	**P**	**02 17 42.6**	**-0.5**
	comp=Z,10.0nm,1.7s,mb4.2						
KURK	**Kurchatov**	**41.70**	**55**	*i* P	**P**	**02 17 51.2**	**-0.6**
NVS	**Novosibirsk**	**43.88**	**48**	*e*P	**P**	**02 18 07.6**	**-1.9**
MKAR	**Makanchi Array**	**44.90**	**60**	P	**P**	**02 18 15.4**	**-2.2**
	comp=Z,5.4nm,0.6s,mb4.6,baz=281,slow=6.8,SNR=31						
MKAR	**Makanchi Array**	**44.90**	**60**	⇑*e*P	**P**	**02 18 15.3**	**-2.3**
WMQ	**Urumqi**	**49.44**	**62**	*e*P	**P**	**02 18 54.0**	**+0.9**
WMQ				AP	pP	02 19 04.0	+9.3
WMQ				XP	sP	02 19 08.0	+13
WMQ				PP	PP	02 20 48.0	+0.9
WMQ				S	**S**	**02 25 57.0**	**-3.7**
WMQ				SCS	ScS	02 28 40.0	-5.7
WMQ				SS	SS	02 29 25.0	-7.4
WMQ				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.1						
WMQ				LR	LR		
	comp=N,59nm,14.0s,MS3.8						
WMQ				LR	LR		
	comp=E,34nm,13.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,29nm,12.0s,MS3.5						
SCHQ	**Schefferville**	**56.57**	**316**	P	**P**	**02 19 44.8**	**-0.9**
	comp=Z,2.1nm,0.7s,mb4.3,baz=28,slow=6.5,SNR=7.2						
SONM	**Songino Array**	**59.77**	**51**	P	**P**	**02 20 07.3**	**-0.7**
	comp=Z,1.4nm,1.0s,mb4.0,baz=289,slow=8.6,SNR=8.4						
LZH	**Lanzhou**	**63.96**	**64**	*e*P	**P**	**02 20 36.8**	**+0.5**
LZH				AP	pP	02 20 47.1	+9.2
LZH				XP	sP	02 20 50.9	+12
LZH				PP	PP	02 22 58.5	+1.7
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb5.0						
HHC	**Hu-ho-hao-te**	**66.51**	**56**	*e*P	**P**	**02 20 53.3**	**+0.5**
HHC				AP	pP	02 21 03.6	+9.1
HHC				XP	sP	02 21 07.6	+13
HHC				PCP	PcP	02 21 23.4	+1.1
HHC				PP	PP	02 23 21.9	+2.7
HHC				SCP		02 25 22.7	
HHC				PCS		02 25 27.0	
HHC				S	S	02 29 35.3	-8.7
HHC				XS	sS	02 29 56.0	+9.3
HHC				SCS	ScS	02 30 43.4	-7.0
HHC				SS	SS	02 33 55.6	-5.2
HHC				AMB	AMB		
	comp=Z,14nm,1.0s,mb5.0						
HHC				AMB	AMB		
	comp=Z,112nm,4.5s						
HHC				LR	LR		
	comp=N,159nm,22.6s,MS4.2						
HHC				LR	LR		
	comp=E,110nm,25.0s,MS4.2						
HHC				LR	LR		
	comp=Z,96nm,25.0s,MS3.9						
BOSA	**Boshof**	**68.59**	**175**	P	**P**	**02 21 05.9**	**-0.1**
	comp=Z,3.0nm,1.0s,mb4.2,baz=346,slow=4.2,SNR=2.8						
BOSA				LR	LR	02 56 01.4	
	comp=Z,50nm,19.7s,MS3.8,baz=169,slow=40						
KMI	**Kunming**	**69.24**	**74**	P	**P**	**02 21 12.4**	**+2.4**
KMI				AP	pP	02 21 21.0	+9.3
KMI				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.8						
YKA	**Yellowknife Ar**	**71.33**	**339**	P	**P**	**02 21 26.3**	**+3.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=35,slow=6.6,SNR=3.3						
ULM	**Lac du Bonnet**	**73.73**	**323**	P	**P**	**02 21 36.8**	**-0.3**
	comp=Z,2.0nm,0.9s,mb4.1,baz=56,slow=7.1,SNR=3.9						
IMA2	**Indian Mountai**	**74.01**	**357**	*e*P	**P**	**02 21 39.1**	**+0.3**
MDJ	**Mudanjiang**	**74.79**	**44**	P	**P**	**02 21 43.1**	**-0.2**
MDJ				AP	pP	02 21 49.7	+4.7
MDJ				XP	sP	02 21 52.3	+6.7
MDJ				PP	PP	02 24 28.6	-1.9
MDJ				S	S	02 31 16.9	-3.6
MDJ				XS	sS	02 31 28.2	+5.0
MDJ				SCS	ScS	02 31 52.6	-3.2
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,62nm,5.6s						
MDJ				LR	LR		
	comp=N,29nm,18.7s,MS3.8						
MDJ				LR	LR		
	comp=E,39nm,18.7s,MS3.8						
MDJ				LR	LR		
	comp=Z,20nm,13.5s						
DAWY	**Dawson**	**74.83**	**351**	*e*P	**P**	**02 21 43.2**	**-0.3**
DAWY	**Dawson**	**74.83**	**351**	*e*P	**P**	**02 21 43.2**	**-0.3**
NJ2	**Nanjing**	**76.43**	**60**	*e*P	**P**	**02 21 54.7**	**+2.0**
SSE	**Sheshan**	**78.57**	**59**	*e*P	**P**	**02 22 01.1**	**-3.6**
SSE				AMB	AMB		
	comp=Z,143nm,3.5s						
EGMT	**Eagleton**	**81.42**	**328**	*e*P	**P**	**02 22 20.7**	**+0.6**
	comp=Z,2.2nm,0.8s,mb4.1						
BOZ	**Bozeman (W)**	**84.10**	**328**	*e*P	**P**	**02 22 34.6**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb4.0						
BOZ	**Bozeman (W)**	**84.10**	**328**	*e*P	**P**	**02 22 34.6**	**+0.5**
	comp=Z,1.4nm,0.8s,mb4.1						
PDAR	**Pinedale Array**	**85.56**	**325**	P	**P**	**02 22 41.4**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.9,baz=71,slow=6.8,SNR=4.6						
WMOK	**Wichita Mounta**	**86.35**	**313**	*e*P	**P**	**02 22 46.0**	**+0.7**
WMOK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.4						
WMOK	**Wichita Mounta**	**86.35**	**313**	*e*P	**P**	**02 22 46.0**	**+0.7**
	comp=Z,2.5nm,1.1s,mb4.4						
WVOR	**Wild Horse Val**	**89.55**	**330**	*e*P	**P**	**02 23 01.2**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
WVOR	**Wild Horse Val**	**89.55**	**330**	*e*P	**P**	**02 23 01.2**	**+0.6**
	comp=Z,10.0nm,0.9s,mb5.2						

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*IDC **09** 02:56:31.8±6.3, 3646N×7127E, h182^{km}±59^{km}, mb3.6/8, mb1 3.7/11, mb1mx3.5/20, mbtmp4.2/11, Error ellipse: s-maj=29.0km s-min=23.2km az=31.0*
*BJI **09** 02:56:32.1, 3664N×7138E, h147^{km}*
*MOS **09** 02:56:32.5±1.0, 3664N×7133E, h194^{km}, mb4.2/4, Error ellipse: s-maj=17.3km s-min=8.2km az=103.1*
*ISCJB **09** 02:56:32.3±0.4, 3667N±002×7135E±006, h188^{km}±6^{km}, mb3.9/13, Error ellipse: s-maj=7.3km s-min=4.0km az=164.4*
*NEIC **09** 02:56:34.0±1.1, 3665N×7140E, h198^{km}±14^{km}, mb3.7/3, Error ellipse: s-maj=12.3km s-min=5.3km az=65.0*
*NNC **09** 02:56:41.8±3.1, 3741N×7107E, h214^{km}±22^{km}, mb2.9, mpv3.8, Error ellipse: s-maj=33.9km s-min=18.4km az=32.0*
ISC 09 02:56:33.0±0.4, **3668N**±003×**7132E**±006, **h186**^{km}±6^{km}, **n74**, σ**1**^{s}**12**/91, **mb3.9**/13, **6C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.89**	**170**	⇓P	**Pn**	**02 57 22.1**	**+1.5**
CEP				S	**Sn**	**02 57 59.0**	**+1.3**
SBDP	**Sheikh Budin**	**4.39**	**186**	P	**Pn**	**02 57 39.3**	**0.0**
KSH	**Kashi**	**4.63**	**51**	*e*P	**Pn**	**02 57 43.9**	**+1.6**
KSH				S	**Sn**	**02 58 37.3**	**+0.6**
KSH				Smax			
	comp=N,318nm,0.4s						
KSH				Smax			
	comp=E,326nm,0.4s						
SARP	**Sargodha**	**4.88**	**166**	P	**Pn**	**02 57 46.0**	**+0.5**
DRP	**Derazinda**	**5.01**	**191**	P	**Pn**	**02 57 48.1**	**+0.9**
DRP				S	**Sn**	**02 58 39.0**	**-6.5**
DLH	**Dalhousie**	**5.63**	**136**	*e*P	**Pn**	**02 57 52.0**	**-3.2**
DLH				*e*S	**Sn**	**02 58 54.0**	**-6.0**
AML	**Almayashu**	**5.74**	**18**	P	**Pn**	**02 57 57.2**	**+0.5**
	SNR=108						
UCH	**Uchtor**	**6.06**	**23**	P	**Pn**	**02 58 01.4**	**+0.6**
	SNR=70						
PONG	**Pong**	**6.07**	**140**	*e*P	**Pn**	**02 58 01.0**	**0.0**
PONG				*e*x	x	02 59 09.0	
KZA	**Kyzart**	**6.19**	**28**	P	**Pn**	**02 58 02.5**	**0.0**
	SNR=23						
EKS2	**Erkin-Say**	**6.26**	**17**	P	**Pn**	**02 58 04.0**	**+0.5**
	SNR=40						
AAK	**Ala-Archa**	**6.43**	**21**	P	**Pn**	**02 58 06.3**	**+0.7**
	SNR=27						
AAK	**Ala-Archa**	**6.43**	**21**	*e*PN	**Pn**	**02 58 05.1**	**-0.5**
AAK				pmax	pmax		
	comp=Z,48nm,0.6s						
AAK	**Ala-Archa**	**6.43**	**21**	*e*Pn	**Pn**	**02 58 05.1**	**-0.5**
	comp=Z,48nm,0.6s						
AAK				*e*Sn	**Sn**	**02 59 15.7**	**-3.0**
KK31	**Karatay Array**	**6.44**	**355**	⇑P	**Pn**	**02 58 05.6**	**-0.3**
	comp=Z,7.7nm,0.2s,baz=155,slow=11,SNR=465						
KK31				⇓S	**Sn**	**02 59 13.8**	**-5.4**
	comp=Z,50nm,0.4s,baz=178,slow=23,SNR=23						
KBK	**Karagaybulak**	**6.59**	**24**	P	**Pn**	**02 58 09.1**	**+1.3**
	SNR=14						
ULHL	**Ulahol**	**6.73**	**33**	P	**Pn**	**02 58 09.7**	**+0.1**
	SNR=14						
BHK	**Bhakra**	**6.74**	**140**	*e*x	x	02 59 25.0	
CHMS	**Chumysh**	**6.84**	**22**	P	**Pn**	**02 58 10.9**	**-0.1**
	SNR=17						
SDNR	**Sundarnagar**	**6.97**	**136**	*e*P	**Pn**	**02 58 12.0**	**-0.8**
SDNR				*e*x	x	02 59 27.4	
USP	**Ospenovka**	**7.01**	**19**	P	**Pn**	**02 58 12.9**	**-0.4**
	SNR=31						
TKM2	**Tokmak 2**	**7.05**	**27**	P	**Pn**	**02 58 14.1**	**+0.3**
	SNR=40						
TKM2	**Tokmak 2**	**7.05**	**27**	⇑P	**Pn**	**02 58 13.9**	**+0.2**
	comp=Z,1.0nm,0.5s						
TKM2				⇑S	**Sn**	**02 59 31.3**	**-2.1**
	comp=Z,8.9nm,0.8s						
KLP	**Kalpa**	**7.70**	**130**	*e*P	**Pn**	**02 58 21.9**	**-0.5**
KLP				*e*S	**Sn**	**02 59 44.6**	**-4.3**
KHET	**Khetri**	**9.38**	**155**	*e*P	**Pn**	**02 58 42.9**	**-1.4**
KHET				*e*S	**Sn**	**03 00 19.7**	**-9.3**
KHET				AML	AML	03 00 24.7	
	comp=N,46nm,0.2s						
KHET				AML	AML	03 00 25.9	
	comp=E,34nm,0.3s						
NDI	**New Delhi**	**9.39**	**146**	*e*P	**Pn**	**02 58 42.5**	**-2.0**
NDI				*e*S	**Sn**	**03 00 20.0**	**-9.3**
ABKT	**Ailbek**	**10.59**	**281**	Pn	**Pn**	**02 58 57.5**	**-2.6**
	comp=E,167nm,0.5s,SNR=5.3						
MKAR	**Makanchi Array**	**12.99**	**36**	P	**Pn**	**02 59 31.5**	**+0.7**
	comp=E,0.5nm,0.3s,baz=220,slow=11,SNR=6.9						
KOLN	**Koldanda**	**13.66**	**127**	*e*P	**Pn**	**02 59 38.4**	**-0.8**
	comp=E,33nm,0.4s						
GKN	**Gorkha**	**14.19**	**124**	*e*P	**Pn**	**02 59 45.6**	**-0.1**
KKN	**Kakani**	**14.76**	**123**	*e*P	**Pn**	**02 59 52.8**	**0.0**
	comp=E,82nm,0.4s						
KKN	**Kakani**	**14.76**	**123**	*e*P	**Pn**	**02 59 52.8**	**0.0**
KKN				pmax	pmax		
	comp=Z,83nm,0.4s						
DMN	**Daman**	**14.76**	**124**	*e*P	**Pn**	**02 59 53.0**	**+0.2**
	comp=Z,46nm,0.3s						
KURK	**Kurchatov**	**14.98**	**18**	*e*P	**Pn**	**02 59 56.6**	**+1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**14.98**	**18**	*e*Pn	**Pn**	**02 59 56.5**	**+1.1**
	comp=Z,1.0nm,0.6s						
PKI	**Pulchoki**	**14.98**	**123**	*e*P	**Pn**	**02 59 55.8**	**+0.2**
	comp=Z,71nm,0.4s						
PKI	**Pulchoki**	**14.98**	**123**	*e*P	**Pn**	**02 59 55.8**	**+0.2**
PKI				pmax	pmax		
	comp=Z,71nm,0.4s						
AB31	**Akbulak array**	**15.05**	**330**	P	**Pn**	**02 59 54.9**	**-1.6**
	comp=Z,5.1nm,0.5s,baz=144,slow=12,SNR=129						
AB31				S	**S**	**03 02 33.0**	**-11**
	comp=Z,19nm,0.7s,baz=149,slow=22,SNR=15						
GUN	**Gumba**	**15.09**	**121**	*e*P	**Pn**	**02 59 57.4**	**+0.6**
	comp=Z,49nm,0.4s						
JIRN	**Jiri**	**15.46**	**121**	*e*P	**Pn**	**03 00 01.8**	**+0.4**
	comp=Z,184nm,0.4s						
VOSK	**Vostochnaya**	**16.04**	**359**	⇑P	**Pn**	**03 00 07.8**	**-0.6**
	comp=Z,5.7nm,1.3s						
BVAR	**Borovoye Array**	**16.36**	**358**	P	**Pn**	**03 00 13.0**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=165,slow=12,SNR=24						
BVAR				S	**S**	**03 03 10.3**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=164,slow=22,SNR=4.9						
BRVK	**Borovoye**	**16.39**	**358**	*e*P	**Pn**	**03 00 12.6**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**16.39**	**358**	*e*P	**Pn**	**03 00 12.6**	**-0.1**
	comp=Z,2.2nm,0.7s						
AKTK	**Aktyubinsk**	**16.75**	**329**	P	**Pn**	**03 00 17.1**	**+0.1**
AKTK				S	**S**	**03 03 17.6**	**-3.9**
AKTO	**Aktyubinsk**	**16.75**	**329**	⇓P	**Pn**	**03 00 15.6**	**-1.4**
	comp=Z,0.2nm,0.4s						
AKTO				⇑S	**S**	**03 03 12.8**	**-8.7**
	comp=Z,0.1nm,0.7s						
AKTO	**Aktyubinsk**	**16.75**	**329**	P	**Pn**	**03 00 17.1**	**+0.1**
	comp=Z,7.1nm,0.3s,baz=136,slow=10.0,SNR=159						
AKTO				S	**S**	**03 03 17.6**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=0.9,slow=23,SNR=7.2						
CHKZ	**Chkalovo**	**17.00**	**359**	⇓P	**Pn**	**03 00 18.2**	**-1.7**
	comp=Z,1.0nm,0.2s						
CHKZ	**Chkalovo**	**17.00**	**359**	*e*P	**Pn**	**03 00 19.6**	**-0.4**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CHKZ	**Chkalovo**	**17.00**	**359**	*e*P	**Pn**	**03 00 19.6**	**-0.3**
	comp=Z,2.5nm,0.4s						
WSAR	**Wadi Sarin**	**17.31**	**223**	P	**Pn**	**03 00 24.2**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=78,slow=13,SNR=4.4						
GNI	**Garni**	**21.09**	**288**	⇓*e*P	**P**	**03 01 09.2**	**+6.3**
GNI				pmax	pmax		
	comp=Z,12nm,1.3s						
ARU	**Arti**	**21.55**	**340**	⇓*i*P	**P**	**03 01 07.2**	**-0.5**
ARU				*e*S	**S**	**03 04 51.8**	**-2.4**
ARU	**Arti**	**21.55**	**340**	*e*P	**P**	**03 01 08.3**	**+0.6**
KIV	**Kislovodsk**	**22.93**	**297**	*e*P	**P**	**03 01 22.3**	**+1.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
TLY	**Talaya**	**27.33**	**46**	⇑*e*P	**P**	**03 02 06.9**	**+6.4**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.8						
ULN	**Ulaanbaatar**	**28.46**	**56**	*i* P	**P**	**03 02 18.7**	**+8.1**
OBN	**Obninsk**	**29.97**	**319**	*e*P	**P**	**03 02 26.8**	**+2.9**
OBN				*e*S	**S**	**03 07 09.2**	**+1.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
HHC	**Hu-ho-hao-te**	**31.46**	**70**	*e*P	**P**	**03 02 40.4**	**+3.4**
HHC				AP	pP	03 03 10.6	-4.7
HHC				XP	sP	03 03 26.9	-10
HHC				PP	PP	03 03 50.9	-0.9
HHC				PCP	PcP	03 05 30.7	+5.2
HHC				S	**S**	**03 07 42.3**	**+11**
HHC				XS	sS	03 08 31.6	-7.3
HHC				SCP	ScP	03 08 57.8	+6.8
HHC				PCS	PcS	03 09 13.5	+3.4
HHC				SS	SS	03 09 38.1	-16
HHC				SCS	ScS	03 12 54.8	+5.7
HHC				LR	LR		
	comp=N,121nm,17.8s						
HHC				LR	LR		
	comp=E,120nm,19.0s						
HHC				LR	LR		
	comp=Z,51nm,19.0s						
AKASG	**Malin Array Be**	**33.03**	**309**	P	**P**	**03 02 50.8**	**+0.1**
	comp=Z,1.1nm,0.4s,mb3.9,baz=80,slow=7.3,SNR=8.1						
JOF	**Joensuu**	**35.84**	**330**	*e*p	**P**	**03 03 14.8**	**0.0**
	comp=Z,3.2nm,0.3s,mb4.4						
FINES	**FINESS Array B**	**37.48**	**326**	P	**P**	**03 03 28.4**	**-0.2**
	comp=Z,0.9nm,0.4s,mb3.7,baz=118,slow=9.8,SNR=15						
KAF	**Kangasniemi**	**37.62**	**327**	*e*p	**P**	**03 03 29.9**	**+0.1**
	baz=111,slow=8.5						
ARCES	**ARCESS Array B**	**41.08**	**337**	P	**P**	**03 03 59.0**	**+0.6**
	comp=Z,1.5nm,0.5s,mb3.9,baz=113,slow=8.4,SNR=16						
SSE	**Sheshan**	**41.39**	**83**	*e*P	**P**	**03 04 08.1**	**+7.1**
CLL	**Collm**	**43.28**	**309**	*e*P	**P**	**03 04 21.0**	**+4.8**
NB2	**NORSAR Subarra**	**44.39**	**323**	P	**P**	**03 04 24.9**	**-0.2**
	comp=Z,1.0nm,0.5s,mb3.7,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**03 04 25.1**	**+0.1**
	comp=Z,1.7nm,0.6s,mb3.9,baz=96,slow=7.7,SNR=11						
NOA				pP	pP	03 05 05.6	+0.2
	comp=Z,0.8nm,0.6s,baz=97,slow=8.0,SNR=2.4						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**03 04 25.1**	**+0.1**
NOA				pP	pP	03 05 05.6	+0.2
KEST	**Kesra**	**49.22**	**288**	P	**P**	**03 05 04.8**	**+2.3**
	comp=Z,1.5nm,1.1s,mb3.5,baz=35,slow=15,SNR=4.3						
TORD	**Torodi Ar. Bea**	**65.98**	**269**	P	**P**	**03 06 57.8**	**-1.6**
	comp=Z,2.1nm,0.6s,mb4.2,baz=50,slow=5.9,SNR=70						
BOSA	**Boshof**	**78.05**	**220**	P	**P**	**03 08 10.7**	**-0.4**
	comp=Z,4.1nm,1.1s,mb4.0,baz=191,slow=12,SNR=3.0						
YKA	**Yellowknife Ar**	**81.05**	**3**	P	**P**	**03 08 26.6**	**-0.6**
	comp=Z,1.3nm,0.7s,mb3.6,baz=348,slow=6.0,SNR=4.2						
ASAR	**Alice Springs**	**84.14**	**125**	P	**P**	**03 08 42.1**	**-1.0**
	comp=Z,0.9nm,0.8s,mb3.5,baz=309,slow=5.1,SNR=4.7						

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*ISCJB **09** 03:20:59.5±0.3, 3979N±002×2674E±003, h5^{km}, Error ellipse: s-maj=2.9km s-min=2.7km az=74.8*
*ATH **09** 03:20:59.9, 3963N×2677E, h41^{km}±7^{km}, MD3.4/3*
*CSEM **09** 03:20:59.0±0.1, 3978N×2673E, h5^{km}, MD3.3, Error ellipse: s-maj=1.7km s-min=1.4km az=41.0*
*ISK **09** 03:20:59.5, 3983N×2670E, h11^{km}, MD3.3*
*SOF **09** 03:21:05.2, 4002N×2612E, h10^{km}, MD2.5*
ISC 09 03:20:59.6±0.4, **3978N**±002×**2674E**±003, **h0**^{km}±4^{km}, **n37**, σ**0**^{s}**76**/50, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.33**	**279**	*i* PG	**Pg**	**03 21 06.4**	**+0.5**
EZN				*i* SG	**Sg**	**03 21 09.9**	**-0.2**
CANB	**Canakkale**	**0.34**	**45**	*i* PG	**Pg**	**03 21 06.8**	**+0.6**
CANB				*i* SG	**Sg**	**03 21 11.7**	**+1.0**
AYVA	**Ayvalik**	**0.47**	**185**	*i* P	**Pg**	**03 21 09.2**	**+0.6**
AYVA				*i* S	**Sg**	**03 21 14.5**	**-0.2**
BOZC	**Bozcaada**	**0.54**	**277**	*i* P	**Pg**	**03 21 10.3**	**+0.4**
BOZC				*i* S	**Sg**	**03 21 18.1**	**+1.2**
LPK	**Lapseki**	**0.60**	**1**	*i* PG	**Pg**	**03 21 10.2**	**-0.9**
PRK	**Paraskevi**	**0.64**	**215**	*e*P	**Pg**	**03 21 12.1**	**+0.2**
PRK				*e*S	**Sg**	**03 21 20.3**	**+0.1**
GADA	**Gvkgeada**	**0.77**	**303**	*i* PG	**Pg**	**03 21 14.3**	**-0.1**
RKY	**Sarkoy-Tekirda**	**0.97**	**20**	*i* PG	**Pg**	**03 21 17.6**	**-0.6**
RKY				*i* SG	**Sg**	**03 21 31.5**	**+0.7**
BTOK	**Tokmak**	**0.99**	**90**	*i* P	**Pg**	**03 21 18.7**	**0.0**
BTOK				*i* S	**Sg**	**03 21 31.6**	**+0.1**
BTOK	**Tokmak**	**0.99**	**90**	*i* P	**Pg**	**03 21 18.7**	**0.0**
BTOK				*i* S	**Sg**	**03 21 31.6**	**0.0**
EDC	**Edincik**	**1.03**	**56**	PG	**Pg**	**03 21 19.3**	**-0.1**
MRMT	**Marmara Adasi**	**1.05**	**38**	PG	**Pg**	**03 21 19.0**	**-0.8**
ENEZ	**Enez**	**1.06**	**335**	PG	**Pg**	**03 21 19.4**	**-0.6**
BNT	**Bandirma**	**1.07**	**57**	PG	**Pg**	**03 21 20.5**	**+0.3**
MFT	**Murefte**	**1.09**	**22**	PG	**Pg**	**03 21 19.5**	**-1.1**
LIA	**Limnos Island**	**1.21**	**276**	*e*P	**Pg**	**03 21 22.3**	**-0.5**
LIA				*e*S	**Sg**	**03 21 38.7**	**+0.3**
AKHS	**Akhisar**	**1.22**	**137**	*i* P	**Pg**	**03 21 23.3**	**+0.3**
AKHS				*i* S	**Sg**	**03 21 39.6**	**+0.7**
AKS	**Akhisar**	**1.22**	**137**	PN	**Pn**	**03 21 23.4**	**-0.5**
KCT	**Karacabey**	**1.33**	**68**	PN	**Pn**	**03 21 24.1**	**-1.4**
BLCB	**Balcova**	**1.41**	**170**	PN	**Pn**	**03 21 25.9**	**-0.6**
URLA	**Izmir**	**1.42**	**185**	*i* P	**Pn**	**03 21 25.3**	**-1.3**
URLA				*i* S	**Sg**	**03 21 43.6**	**-1.6**
KDAG	**Bornova**	**1.43**	**163**	*i* P	**Pn**	**03 21 27.3**	**+0.5**
KDAG				*i* S	**Sg**	**03 21 44.5**	**-1.0**
IZM	**Izmir**	**1.43**	**163**	PN	**Pn**	**03 21 27.3**	**+0.5**
DST	**Dursunbey**	**1.47**	**96**	PN	**Pn**	**03 21 27.5**	**+0.2**
RDO	**Rodhopi**	**1.65**	**327**	*e*P	**Pn**	**03 21 29.5**	**-0.3**
ORLT	**Orhaneli**	**1.68**	**80**	PN	**Pn**	**03 21 30.7**	**+0.5**
ULDT	**Uludag**	**1.88**	**78**	*i* P	**Pn**	**03 21 33.8**	**+0.8**
ULDT				*i* S	**Sn**	**03 21 53.1**	**-4.2**
EDRB	**Edirne**	**2.07**	**0**	PN	**Pn**	**03 21 34.6**	**-1.0**
KDZ	**Kurdzhali**	**2.13**	**332**	P	**Pn**	**03 21 35.9**	**-0.5**
YLV	**Yalova**	**2.17**	**68**	*e*PN	**Pn**	**03 21 36.9**	**0.0**
ISK	**Istanbul-Kandi**	**2.19**	**53**	*e*PN	**Pn**	**03 21 37.6**	**+0.4**
ADVT	**Abdulvahap**	**2.39**	**73**	*e*PN	**Pn**	**03 21 40.2**	**+0.2**
DIM	**Dimitrovgrad**	**2.45**	**338**	P	**Pn**	**03 21 44.0**	**+3.2**
RZN	**Rozhen**	**2.45**	**322**	P	**Pn**	**03 21 40.8**	**-0.1**
BODT	**Bodrum**	**2.75**	**170**	*e*PN	**Pn**	**03 21 46.3**	**+1.4**
MMB	**Musomiste**	**2.92**	**309**	P	**Pn**	**03 21 47.0**	**-0.3**
DAT	**Datca**	**3.11**	**168**	*e*PN	**Pn**	**03 21 51.4**	**+1.5**

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*ISCJB **09** 03:30:44.6±0.6, 38.11N±003×2277E±003, h1^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=3.7km az=96.6*
*ATH **09** 03:30:45.4, 3808N×2270E, h12^{km}±3^{km}, MD3.5/8, ML3.1*
*NEIC **09** 03:30:45.4, 3808N×2270E, h12^{km}, ML2.9(THE), ML3.1(ATH), After ATH.*
*CSEM **09** 03:30:46.7±0.1, 38.14N×2278E, h10^{km}, ML3.1, Error ellipse: s-maj=2.4km s-min=1.8km az=62.0*
*THE **09** 03:30:47.6, 38.18N×2290E, h7^{km}, ML3.0*
ISC 09 03:30:45.4±0.6, **3809N**±003×**2274E**±003, **h8**^{km}±4^{km}, **n29**, σ**0**^{s}**95**/42, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGER	**Gerania Oros**	**0.43**	**104**	*e*PB	**Pg**	**03 30 53.8**	**+0.1**
MGER				*e*SB	**Sg**	**03 31 00.5**	**+1.2**
LKR	**Lokris**	**0.59**	**20**	*e*PG	**Pg**	**03 30 56.9**	**0.0**
LKR				*e*SB	**Sg**	**03 31 06.1**	**+1.5**
NAIG	**Nisos Aigina**	**0.68**	**119**	*e*PG	**Pg**	**03 30 58.5**	**0.0**
NAIG				*e*SB	**Sb**	**03 31 09.0**	**-0.1**
ATH	**Athens Observa**	**0.78**	**99**	*e*PB	**Pb**	**03 31 01.0**	**-0.3**
ATH				*e*SB	**Sb**	**03 31 12.1**	**+0.1**
PTL	**Penteli**	**0.89**	**92**	*e*PG	**Pg**	**03 31 03.0**	**+0.5**
AGG	**Agios Georgios**	**0.98**	**341**	*e*Pg	**Pg**	**03 31 04.7**	**+0.4**
AGG				*e*Sg	**Sg**	**03 31 19.4**	**+2.4**
RLS	**Riolos of Patr**	**1.00**	**268**	*e*PG	**Pg**	**03 31 03.6**	**-1.1**
EVR	**Evrytania**	**1.10**	**319**	*e*PN	**Pn**	**03 31 06.5**	**-0.6**
ITM	**Ithomi**	**1.12**	**215**	*e*PN	**Pn**	**03 31 06.3**	**-1.0**
NEO	**Neokhori**	**1.27**	**17**	*e*PG	**Pg**	**03 31 09.3**	**-0.5**
XOR	**Xorichti**	**1.32**	**15**	*e*Pg	**Pn**	**03 31 10.0**	**-0.1**
XOR				*e*Sg	**Sg**	**03 31 27.7**	**-0.2**
XOR	**Xorichti**	**1.32**	**15**	P	**Pn**	**03 31 10.0**	**-0.1**
XOR				S	**Sb**	**03 31 28.8**	**+1.2**
VLI	**Veliai**	**1.38**	**173**	*e*PB	**Pb**	**03 31 11.3**	**-0.2**
AOS	**Alonnisos**	**1.40**	**39**	*e*Pg	**Pg**	**03 31 10.9**	**-1.4**
AOS				*e*Sg	**Sg**	**03 31 28.6**	**-1.8**
VLS	**Valsamata**	**1.70**	**274**	*e*PB	**Pb**	**03 31 16.9**	**0.0**
LKD	**Levkas**	**1.75**	**291**	*e*Pb	**Pb**	**03 31 18.9**	**+1.1**
LKD				*e*Sb	**Sb**	**03 31 43.0**	**+3.1**
PAIG	**Paliouri**	**1.97**	**22**	*e*Pb	**Pn**	**03 31 18.7**	**-0.4**
LIT	**Litokhoron**	**2.02**	**355**	*e*Pb	**Pb**	**03 31 20.8**	**-1.5**
LIT				*e*Sb	**Sb**	**03 31 45.3**	**-2.2**
LIT	**Litokhoron**	**2.02**	**355**	P	**Pn**	**03 31 21.3**	**+1.6**
MEV	**Metsovon**	**2.06**	**326**	*e*Pn	**Pb**	**03 31 22.8**	**-0.3**
MEV	**Metsovon**	**2.06**	**326**	P	**Pg**	**03 31 24.1**	**-0.8**
OUR	**Ouranopolis**	**2.44**	**23**	*e*Pn	**Pn**	**03 31 25.4**	**-0.1**
APE	**Apeiranthos**	**2.44**	**114**	*e*Pn	**Pn**	**03 31 25.7**	**+0.1**
APE				*e*Sn	**Sn**	**03 31 56.2**	**+0.5**
CHOS	**Chios island**	**2.63**	**83**	*e*Pn	**Pn**	**03 31 28.4**	**+0.3**
FNA	**Florina**	**2.89**	**339**	P	**Pn**	**03 31 31.9**	**+0.1**
FNA	**Florina**	**2.89**	**339**	P	**Pn**	**03 31 31.9**	**+0.2**
KNT	**Kendrikon**	**3.07**	**2**	*e*Pn	**Pn**	**03 31 35.1**	**+0.9**
MMB	**Musomiste**	**3.57**	**12**	*e*Pn	**Pn**	**03 31 41.2**	**+0.1**
MMB				*e*Sn	**Sn**	**03 32 23.2**	**-0.3**
MMB	**Musomiste**	**3.57**	**12**	*e*Pn	**Pn**	**03 31 41.2**	**0.0**
MMB				*e*Sn	**Sn**	**03 32 23.2**	**-0.4**

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*ISCJB **09** 03:39:06.5±2.3, 798N±0.1×244E±04, h7^{km}±11^{km}, Error ellipse: s-maj=24.7km s-min=10.6km az=35.1*
*CSEM **09** 03:39:07.6±0.7, 7989N×2489E, h5^{km}, ML2.6, Error ellipse: s-maj=15.9km s-min=6.6km az=26.0*
*BER **09** 03:39:08.5±3.6, 7986N×2495E, h5^{km}±23^{km}, ML2.6, ML2.6(NAO)*
*NAO **09** 03:39:09.8±3.6, 7987N×2429E, h17^{km}±15^{km}, ML2.6*
ISC 09 03:39:08.2±2.4, **799N**±01×**244E**±04, **h17**^{km}±11^{km}, **n8**, σ**0**^{s}**57**/18, **Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**2.28**	**226**	Pn	**Pn**	**03 39 45.4**	**+0.3**
	baz=51,slow=14						
SPA0				Sn	**Sn**	**03 40 13.5**	**+0.7**
SPA0				Lg		03 40 21.6	
	baz=51,slow=28						
SPA0	**Spitsbergen Ar**	**2.28**	**226**	Pn	**Pn**	**03 39 45.4**	**+0.3**
	SNR=50						
SPA0				Sn	**Sn**	**03 40 13.5**	**+0.7**
	SNR=50						
KBS	**Kingsbay**	**2.49**	**254**	Pn	**Pn**	**03 39 48.5**	**+0.6**
KBS				Pg	**Pg**	**03 39 55.1**	**-0.8**
KBS				Sn	**Sn**	**03 40 17.0**	**-0.9**
KBS				Lg		03 40 27.3	
KBS	**Kingsbay**	**2.49**	**254**	*e*P	**Pn**	**03 39 48.5**	**+0.6**
KBS				*e*Pg	**Pg**	**03 39 55.5**	**-0.4**
KBS				*e*Sg	**Sg**	**03 40 28.3**	**+0.2**
KBS				AML	AML	03 40 33.1	
	comp=Z,22nm,0.5s						
KBS	**Kingsbay**	**2.49**	**254**	*e*Pg	**Pg**	**03 39 55.5**	**-0.4**
	SNR=91						
KBS				Sn	**Sn**	**03 40 17.0**	**-0.9**
KBS				*e*Sg	**Sg**	**03 40 28.3**	**+0.2**
	SNR=91						
HOPEN	**Hopen**	**3.37**	**178**	*e*P	**Pn**	**03 40 00.7**	**+0.6**
HOPEN				*e*S	**Sn**	**03 40 39.3**	**-0.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPEN				AML	AML	03 41 01.1	
	comp=N,109nm,0.4s						
HSP	**Hornsund**	**3.37**	**216**	P	**Pn**	**03 40 06.6**	**+6.5**
ARA0	**ARCESS Array S**	**10.38**	**178**	Pn	**Pn**	**03 41 35.7**	**-0.7**
	baz=345,slow=12						
ARA0				Sn	**Sn**	**03 43 25.4**	**-6.9**
	baz=2.5,slow=22						

*ISCJB **09** 03:51:23.6±0.9, 30.48S±0.06×176.9W±0.1, h33km, mb4.4/8, MS3.6/5, Error ellipse: s-maj=17.0km s-min=7.7km az=151.9*
*IDC **09** 03:51:24.8±3.6, 30.15S×176.58W, h49km±28km, mb4.0/5, mb1 4.1/5, mb1mx4.0/10, mbtmp4.3/5, MS3.7/6, Ms1 3.7/6, ms1mx3.5/12, Error ellipse: s-maj=35.5km s-min=20.7km az=74.0*
*NEIC **09** 03:51:24.6±2.3, 30.03S×176.55W, h51km±17km, mb4.5/3, Error ellipse: s-maj=22.6km s-min=15.8km az=69.0*
ISC 09 03:51:24.6±0.9**, 30.38S**±0.06×**176.8W**±0.1**, h35km, n30, σ0.98**/18**, mb4.4**/8**, MS3.6**/5**, 1C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.49**	**319**	P	**Pn**	**03 51 47.9**	**-0.9**
	218nm,0.3s,baz=98,slow=11,SNR=20						
RAO				S	**Sn**	**03 52 07.3**	**+0.3**
	1μm,0.3s,baz=90,slow=20,SNR=24						
RAO	**Raoul Island**	**1.49**	**319**	P	**Pn**	**03 51 47.9**	**-0.9**
RAO				S	**Sn**	**03 52 07.3**	**+0.3**
URZ	**Urewera**	**9.34**	**211**	P	**Pn**	**03 53 33.1**	**-3.5**
	0.7nm,0.3s,baz=304,slow=14,SNR=3.8						
URZ				S	**Sn**	**03 55 20.1**	**-0.2**
	3.1nm,0.3s,baz=174,slow=21,SNR=7.4						
DZM	**Mont Dzumac**	**17.15**	**295**	LR	LR	04 00 06.0	
	comp=Z,437nm,18.8s,baz=220,slow=30						
PPT	**Papeete**	**27.87**	**69**	*e*LQ		04 02 15.2	
	408nm,26.0s						
PPT				*e*LR	LR	04 03 46.9	
	252nm,30.0s,baz=246						
PPT	**Papeete**	**27.87**	**69**	LR	LR	04 06 17.4	
	comp=Z,52nm,18.2s,MS3.1,baz=189,slow=32						
HNR	**Honiara**	**30.09**	**309**	LR	LR	04 07 47.9	
	comp=Z,85nm,18.2s,MS3.4,baz=178,slow=33						
CTA	**Charters Tower**	**34.82**	**278**	P	**P**	**03 58 12.3**	**+0.3**
	7.4nm,0.7s,mb4.7,baz=130,slow=8.9,SNR=5.8						
CTAO	**Charters Tower**	**34.82**	**278**	*e*P	**P**	**03 58 13.9**	**+1.9**
	3.3nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**35.50**	**257**	P	**P**	**03 58 19.2**	**+1.4**
	2.1nm,0.7s,mb4.2,baz=90,slow=11,SNR=3.3						
STKA				LR	LR	04 09 46.1	
	comp=Z,109nm,19.1s,MS3.6,baz=213,slow=31						
RKT	**Rikitea**	**37.88**	**89**	*e*LR	LR	04 08 22.2	
	179nm,33.8s						
ASAR	**Alice Springs**	**44.15**	**266**	P	**P**	**03 59 28.9**	**-0.7**
	3.3nm,0.7s,mb4.2,baz=105,slow=7.8,SNR=25						
ASAR				LR	LR	04 17 57.3	
	comp=Z,136nm,18.3s,MS3.9,baz=177,slow=36						
WRAB	**Tennant Creek**	**45.13**	**272**	*e*P	**P**	**03 59 37.0**	**-0.5**
	9.3nm,0.8s,mb4.7						
VNDA	**Vanda**	**48.22**	**186**	P	**P**	**04 00 03.0**	**+1.2**
	1.4nm,0.9s,mb4.0,baz=359,slow=6.2,SNR=8.3						
QSPA	**South Pole Qui**	**59.73**	**180**	*e*P	**P**	**04 01 27.1**	**+1.4**
	16nm,1.0s,mb5.0						
MAW	**Mawson**	**72.69**	**200**	P	**P**	**04 02 48.7**	**-0.1**
	3.9nm,1.1s,mb4.3,baz=76,slow=7.0,SNR=8.3						
SYO	**Syowa Base**	**77.37**	**193**⇑	*e*P	**P**	**04 03 14.8**	**-1.0**
SNAA	**Sanae**	**78.14**	**178**	*e*	**P**	**04 03 19.4**	**-0.7**
SNAA				*e*		04 03 22.0	
SNAA				*e*		04 03 33.2	
SNAA	**Sanae**	**78.14**	**178**	*e*P	**P**	**04 03 18.9**	**-1.2**
	4.1nm,1.1s,mb4.3						
VNA1	**Neumayer--Stat**	**78.92**	**176**	*e*	**P**	**04 03 24.1**	**-0.3**
VNA1				*e*		04 03 27.3	
VNA1				*e*		04 03 37.6	
CPUP	**Villa Florida**	**99.18**	**128**	LR	LR	04 40 27.9	
	comp=Z,38nm,21.1s,MS3.9,baz=99,slow=30						
KAF	**Kangasniemi**	**144.87**	**341**	*e*p	PKPdf	04 10 52.0	-5.8
FIA1	**FINESS Array S**	**145.47**	**341**	*e*PKPbc	PKPbc	04 10 55.8	-3.1
FIA1				*e*		04 11 08.0	
FINES	**FINESS Array B**	**145.48**	**341**	PKPbc	PKPbc	04 10 56.2	-2.7
	7.3nm,0.8s,baz=54,slow=2.4,SNR=27						
FINES	**FINESS Array B**	**145.48**	**341**	PKPbc	PKPbc	04 10 56.2	-2.7
NB2	**NORSAR Subarra**	**148.88**	**352**	PKPa	PKPbc	04 11 05.1	-3.4
	comp=Z,15nm,1.2s,baz=11,slow=2.8						
NOA	**NORSAR Array B**	**148.88**	**352**	PKPbc	PKPbc	04 11 04.5	-3.9
	comp=Z,5.5nm,0.9s,baz=14,slow=4.3,SNR=12						
AKASG	**Malin Array Be**	**151.91**	**324**	PKPbc	PKPbc	04 11 12.7	-3.0
	comp=Z,2.3nm,0.6s,baz=46,slow=2.6,SNR=20						
AKASG				PKPab	PKPab	04 11 23.9	-1.1
	comp=Z,0.4nm,0.4s,baz=40,slow=2.2,SNR=5.6						
BRTR	**Keskin Array B**	**153.50**	**299**	PKPbc	PKPbc	04 11 18.1	-1.2
	comp=Z,0.5nm,0.8s,baz=103,slow=1.6,SNR=3.9						
BRTR				PKPab	PKPab	04 11 31.2	-0.5
	comp=Z,0.6nm,0.7s,baz=56,slow=3.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**162.79**	**175**	PKPab	PKPab	04 12 11.2	-0.6
	comp=Z,2.4nm,1.0s,baz=175,slow=3.2,SNR=8.4						

IDC 09 04:10:39.0±3.8**, 10.10S**×**106.88E, h0km, mb3.9**/4**, mb1 3.9**/4**, mb1mx3.7**/15**, mbtmp3.9**/4**, 1D, Error ellipse: s-maj=181.6km s-min=24.0km az=54.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**3.92**	**46**⇓	*i*P	Pn	04 11 31.4	-9.1
ASAR	**Alice Springs**	**29.09**	**121**	P	P	04 16 43.3	+2.0
	0.4nm,0.5s,baz=298,slow=9.4,SNR=8.8						
STKA	**Stephens Creek**	**38.72**	**129**	P	P	04 18 03.2	-1.6
	2.1nm,0.6s,baz=294,slow=21,SNR=4.3						
SONM	**Songino Array**	**57.68**	**360**	P	P	04 20 30.5	-0.8
	0.7nm,0.5s,baz=177,slow=7.1,SNR=5.2						
MKAR	**Makanchi Array**	**60.75**	**341**	P	P	04 20 53.2	+0.7
	0.5nm,0.4s,baz=161,slow=8.6,SNR=7.4						

KRSC 09 04:32:46, 49.93N×156.90E, h14km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**2.35**	**358**	*e*P	Pn	04 33 25.4	+1.2
MIPR				*i* S	Sn	04 33 53.5	+0.7
RUS	**Russkaya**	**2.70**	**21**	*i* P	Pn	04 33 31.1	+2.1
RUS				*i* S	Sn	04 34 03.5	+2.0
GRL	**Gorelyy**	**2.73**	**15**	*e*P	Pn	04 33 31.9	+2.6
GRL				*i* S	Sn	04 34 05.3	+3.2
AVH	**Avacha**	**3.53**	**18**	*e*P	Pn	04 33 43.3	+2.9
NLC	**Nalytchevo**	**3.59**	**24**	*e*P	Pn	04 33 42.1	+0.9
NLC				*i* S	Sn	04 34 22.5	-0.8
SPN	**Mys Shipunski**	**3.72**	**30**	*e*P	Pn	04 33 45.5	+2.4
SPN				*i* S	Sn	04 34 28.3	+1.6
GNL	**Ganaly**	**3.83**	**9**	*e*P	Pn	04 33 46.3	+1.8
MKZ	**Mys Kozlova**	**5.50**	**31**	*e*P	Pn	04 34 08.4	+0.9
MKZ				*i* S	Sn	04 35 08.3	-2.2
KBTR	**Krutoberegovo**	**7.23**	**27**	*e*P	Pn	04 34 33.6	+2.4

*NEIC **09** 04:46:12.6, 28.58S×72.42W, h35km, ML3.5(GUC), After GUC.*
GUC 09 04:46:12.6±0.9**, 28.58S**×**72.42W, h35km**±6km**, MD3.9, ML3.5, 3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	**Vallenar**	**1.46**	**90**	*e*P	Pn	04 46 37.4	+0.9
VACH				*i* S	Sn	04 46 56.8	+2.5
VACH				AML	AML	04 47 01.4	
	comp=E,1μm,0.6s						
VACH	**Vallenar**	**1.46**	**90**	*e*P	Pn	04 46 37.4	+0.9
VACH				*i* S	Sn	04 46 56.8	+2.5
LCO	**Las Campanas**	**1.57**	**106**	*e*P	Pn	04 46 39.8	+1.8
LCO				*i* S	Sn	04 47 01.3	+4.3
CDCH	**Caldera**	**2.05**	**44**	*e*P	Pn	04 46 46.1	+1.4
CDCH				*i* S	Sn	04 47 11.3	+2.2
TLL	**Tololo Astrono**	**2.12**	**139**⇓	*e*P	Pn	04 46 48.0	+2.5
TLL				*i* S	Sn	04 47 13.9	+3.2
TLL				AML	AML	04 47 16.7	
	comp=E,322nm,0.5s						
TLL	**Tololo Astrono**	**2.12**	**139**⇓	*e*P	Pn	04 46 48.0	+2.5
TLL				*i* S	Sn	04 47 13.9	+3.2
CPCH	**Copiapo**	**2.19**	**57**⇓	*e*P	Pn	04 46 48.2	+1.6
CPCH				*i* S	Sn	04 47 16.9	+4.5
CMCH	**Combarbala**	**2.86**	**155**	*e*P	Pn	04 46 56.4	+0.6
CMCH				*i* S	Sn	04 47 27.8	-1.2
CMCH				AML	AML	04 47 35.3	
	comp=N,317nm,0.4s						
CMCH	**Combarbala**	**2.86**	**155**	P	Pn	04 46 56.4	+0.6
CMCH				S	Sn	04 47 27.8	-1.2

MAN 09 04:53:43.3, 18.56N×120.91E, h16km, mb1.7, ML3.5, MS2.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	**Conner**	**0.76**	**155**	*e*P	Pg	04 53 58.0	-0.1
APYP				*e*S	Sg	04 54 11.1	+2.9
ABRA	**Dolores**	**0.92**	**192**	*e*P	Pb	04 53 59.8	-1.1
SGCP	**Mt. Cagua**	**1.12**	**106**	*e*P	Pb	04 54 03.2	-1.2
CVP	**Callao Caves**	**1.21**	**134**⇓	*e*P	Pn	04 54 04.5	-1.1
CAUP	**Cauayan**	**1.82**	**151**	*e*P	Pn	04 54 16.1	+2.1

*NEIC **09** 05:11:29.9, 27.63S×69.29W, h120km, mb4.4/1, After GUC.*
GUC 09 05:11:29.9±0.9**, 27.63S**×**69.29W, h120km**±19km**, MD3.7, ML3.8, 5C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**0.98**	**286**⇓	*i*P	Pn	05 11 52.3	+0.5
CPCH				*i* S	Sn	05 12 08.6	+0.3
CDCH	**Caldera**	**1.48**	**292**⇑	*i*P	Pn	05 11 57.4	+0.4
CDCH				*i* S	Sn	05 12 17.9	+0.2
CDCH				AML	AML	05 12 18.9	
	comp=E,557nm,0.4s						
CDCH	**Caldera**	**1.48**	**292**⇑	*i*P	Pn	05 11 57.4	+0.4
CDCH				*i* S	Sn	05 12 17.9	+0.2
VACH	**Vallenar**	**1.60**	**234**⇑	*i*P	Pn	05 11 59.3	+0.7
VACH				*i* S	Sn	05 12 21.2	+0.9
VACH				AML	AML	05 12 24.0	
	comp=N,4μm,0.1s						
VACH	**Vallenar**	**1.60**	**234**⇑	*i*P	Pn	05 11 59.3	+0.7
VACH				*i* S	Sn	05 12 21.2	+0.9
LCO	**Las Campanas**	**1.85**	**222**⇑	*i*P	Pn	05 12 02.4	+0.8
LCO				*i* S	Sn	05 12 26.9	+1.2
TLL	**Tololo Astrono**	**2.85**	**207**	*e*P	Pn	05 12 14.9	+0.6
TLL				AML	AML	05 12 56.9	
	comp=N,324nm,0.5s						
CPN1	**Cerro Paranal**	**3.16**	**341**	*e*P	Pn	05 12 19.7	+1.5
CPN1				*i* S	Sn	05 12 56.7	+1.2
CPN1				AML	AML	05 13 10.0	
	comp=N,120nm,0.7s						
CMCH	**Combarbala**	**3.83**	**203**	*e*P	Pn	05 12 25.9	-1.3
CMCH				*i* S	Sn	05 13 10.1	-1.4
LVC	**Limon Verde**	**5.01**	**4**	*e*Pn	Pn	05 12 43.2	+0.2
	comp=N,19nm,0.8s						

*NEIC **09** 05:16:41.8, 37.30S×176.54E, h263km, MG3.7(WEL), After WEL.*
WEL 09 05:16:41.2±0.6**, 37.19S**×**176.65E, h263km**±6km**, ML3.8**/8**, Error ellipse: s-maj=16.4km s-min=8.9km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.13**	**161**	*e*P	Pn	05 17 18.4	+0.1
URZ	**Urewera**	**1.13**	**161**	PN	Pn	05 17 18.3	-0.1
URZ				SN	S	05 17 47.1	-0.6
MWZ	**Matawai**	**1.34**	**149**	P	Pn	05 17 20.1	+0.5
MWZ	**Matawai**	**1.34**	**149**	PN	Pn	05 17 19.9	+0.3
MWZ				SN	S	05 17 49.5	-0.4
TUVZ	**Tukino**	**2.22**	**200**	P	Pn	05 17 27.7	+1.0
TUVZ	**Tukino**	**2.22**	**200**	PN	Pn	05 17 27.7	+1.0
FWVZ	**Far West T-bar**	**2.23**	**202**	*e*P	Pn	05 17 28.1	+1.2
FWVZ	**Far West T-bar**	**2.23**	**202**	PN	Pn	05 17 28.1	+1.2
WNVZ	**Wahianoa**	**2.29**	**201**	P	Pn	05 17 28.3	+0.9
WNVZ	**Wahianoa**	**2.29**	**201**	PN	Pn	05 17 28.3	+0.9
MRZ	**Mangatainoka R**	**3.56**	**193**	*e*P	Pn	05 17 39.7	-0.9
MRZ	**Mangatainoka R**	**3.56**	**193**	*e*PN	Pn	05 17 39.5	-1.1
MRZ				SN	S	05 18 27.0	-0.9
KIW	**Kapiti Island**	**3.91**	**200**	P	Pn	05 17 43.5	-1.0
KIW	**Kapiti Island**	**3.91**	**200**	*e*PN	Pn	05 17 43.4	-1.1
CAW	**Cannon Point**	**4.10**	**197**	PN	Pn	05 17 45.8	-0.9
TCW	**Tory Channel**	**4.42**	**204**	P	Pn	05 17 49.3	-1.2
TCW	**Tory Channel**	**4.42**	**204**	*e*PN	Pn	05 17 49.2	-1.2
TUWZ	**Tuamarina**	**4.72**	**206**	*e*PN	Pn	05 17 52.8	-1.3
NNZ	**Nelson**	**4.76**	**211**	*e*P	Pn	05 17 52.7	-1.8
NNZ	**Nelson**	**4.76**	**211**	PN	Pn	05 17 52.5	-2.0
QRZ	**Quartz Range**	**4.84**	**220**	*e*P	Pn	05 17 53.6	-1.9
QRZ	**Quartz Range**	**4.84**	**220**	PN	Pn	05 17 53.5	-2.0
THZ	**Tophouse**	**5.41**	**211**	*e*P	Pn	05 18 00.9	-1.4
THZ	**Tophouse**	**5.41**	**211**	PN	Pn	05 18 00.5	-1.8
KHZ	**Kahutara**	**5.74**	**204**	*e*P	Pn	05 18 05.2	-1.2
KHZ	**Kahutara**	**5.74**	**204**	PN	Pn	05 18 05.1	-1.3
LTZ	**Lake Taylor**	**6.52**	**210**	*e*PN	Pn	05 18 13.9	-2.1

MAN 09 05:48:13.6, 13.83N×119.88E, h96km, mb1.3, ML3.3, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.37**	**105**	*e*P	Pn	05 48 28.7	+0.7
LUBP				*e*S	Sn	05 48 42.2	+3.4
PGP	**Puerto Galera**	**1.10**	**107**⇓	*e*P	Pn	05 48 29.6	-5.2
BUSP	**Coron**	**1.84**	**170**	*e*P	Pn	05 48 42.2	-1.7
SCZP	**Santa Cruz**	**1.94**	**1**	*e*P	Pn	05 48 46.0	+1.0
POLP	**Polilio Island**	**2.19**	**66**	*e*P	Pn	05 48 49.4	+1.0
BALP	**Baler**	**2.51**	**41**	*e*P	Pn	05 48 47.6	-5.0
BOLP	**Bolinao**	**2.54**	**1**	*e*P	Pn	05 48 53.6	+0.6
ENPP	**El Nido**	**2.65**	**190**	*e*P	Pn	05 48 55.6	+1.2

*IDC **09** 05:52:04.7±1.5, 7.17S×131.71E, h0km, mb3.9/3, mb1 4.3/5, mb1mx4.1/10, mbtmp4.2/5, ML4.8/2, Error ellipse: s-maj=77.3km s-min=27.3km az=80.0*
*NEIC **09** 05:52:10.1±1.1, 7.33S×131.74E, h35km, Error ellipse: s-maj=34.9km s-min=16.3km az=81.0*
*ISCJB **09** 05:52:12.6±1.7, 7.8S±0.1×131.6E±0.1, h33km, mb3.8/3, Error ellipse: s-maj=19.7km s-min=15.3km az=167.3*
ISC 09 05:52:14.0±1.7**, 7.7S**±0.1×**131.7E**±0.1**, h35km, n7, σ0.89**/9**, mb3.8**/3**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.86**	**209**	Pn	**Pn**	**05 55 02.1**	**+1.6**
	8.0nm,0.3s,baz=37,slow=12,SNR=179						
FITZ				Sn	**Sn**	**05 57 11.0**	**-0.6**
	5.2nm,0.3s,baz=191,slow=16,SNR=10						
WRAB	**Tennant Creek**	**12.40**	**168**	*e*Pn	**Pn**	**05 55 08.8**	**+0.9**
	24nm,0.6s						
WRAB				*e*Sn	**Sn**	**05 57 24.5**	**-0.3**
ASAR	**Alice Springs**	**15.98**	**173**	Pn	**Pn**	**05 55 56.8**	**+0.7**
	1.1nm,0.3s,baz=14,slow=14,SNR=32						
ASAR				Sn	**Sn**	**05 58 51.8**	**-0.4**
	0.6nm,0.3s,baz=354,slow=28,SNR=9.5						
MKAR	**Makanchi Array**	**69.75**	**326**	P	**P**	**06 03 13.8**	**-6.7**
	0.6nm,0.4s,mb3.9,baz=112,slow=9.2,SNR=9.2						
VNDA	**Vanda**	**71.52**	**173**	P	**P**	**06 03 30.1**	**-1.2**
	0.5nm,0.9s,mb3.4,baz=293,slow=5.9,SNR=5.0						
MAW	**Mawson**	**74.88**	**202**	P	**P**	**06 03 50.3**	**-0.7**
	1.2nm,0.5s,mb4.0,baz=58,slow=8.4,SNR=12						
CPUP	**Villa Florida**	**145.03**	**166**	PKPbc	PKPbc	06 11 45.8	-1.1
	2.0nm,0.7s,baz=126,slow=2.1,SNR=7.0						

*PRU **09** 06:49:09.7, 50.32N×18.84E, h0km*
WAR 09 06:49:10.1, 50.24N×18.96E, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.54**	**92**	*i* Pgd	Pg	06 49 20.0	-0.5
OJC				*e*Sg	Sg	06 49 27.9	+0.4
OKC	**Ostrava-Krasne**	**0.66**	**232**	*e*PG	Pg	06 49 21.5	-1.3
OKC				*e*SG	Sg	06 49 30.8	-0.6
	22nm,0.8s						
LIKS	**Likavka**	**1.20**	**175**	*e*PG	Pg	06 49 34.1	+1.0
NIE	**Niedzica**	**1.21**	**133**	*e*Pg	Pg	06 49 33.5	+0.3
NIE				*e*Sg	Sg	06 49 51.1	+2.3
DPC	**Dobruska-Polom**	**1.69**	**275**	*e*PG	Pg	06 49 39.1	-3.5
DPC				*e*SG	Sg	06 50 01.4	-3.1
	16nm,0.6s						
VYHS	**Vyhne**	**1.75**	**183**	*e*PN	Pn	06 49 41.8	+0.1
VYHS				*e*PG	Pg	06 49 43.0	-0.7
VYHS				*e*SN	Sn	06 50 03.4	-1.4
KSP	**Ksiaz**	**1.80**	**290**	*e*Pg	Pg	06 49 42.8	-1.9
KSP				*e*Sg	Sg	06 50 07.0	-1.0
CRVS	**Cervenica-Dubn**	**2.11**	**129**	*e*PN	Pn	06 49 49.1	+2.4
CRVS				*e*PG	Pg	06 49 52.1	+1.5
KWP	**Kalwaria**	**2.50**	**103**	*e*Pg	Pg	06 49 58.4	+0.4
KOLS	**Kolonicke sedl**	**2.52**	**120**	*e*PN	Pn	06 49 53.9	+1.5
KOLS				*e*PG	Pg	06 49 58.6	+0.1
PRU	**Pruhonice**	**2.85**	**267**	*e*SG	Sg	06 50 38.6	-3.2
	4.3nm,0.3s						
KHC	**Kasperske Hory**	**3.67**	**254**	*e*PG	Pg	06 50 14.9	-5.5
KHC				*e*SG	Sg	06 51 05.4	-2.5
	4.2nm,0.5s						

*ISCJB **09** 07:09:23.5±0.6, 31.5N±0.1×40.8W±0.1, h10km, mb4.1/13, MS3.6/16, Error ellipse: s-maj=21.3km s-min=11.9km az=106.5*
*IDC **09** 07:09:23.6±0.9, 31.60N×40.89W, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/24, mbtmp3.9/8, MS3.7/16, Ms1 3.7/16, ms1mx3.5/23, Error ellipse: s-maj=31.2km s-min=18.6km az=146.0*
*NEIC **09** 07:09:25.2±0.5, 31.56N×40.82W, h10km, mb4.5/4, Error ellipse: s-maj=18.9km s-min=11.0km az=144.0*
ISC 09 07:09:25.6±0.6**, 31.6N**±0.1×**40.8W**±0.1**, h10km, n25, σ0.83**/14**, mb4.1**/13**, MS3.6**/16**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	**San Juan**	**26.53**	**246**	LR	LR	07 23 36.5	
	comp=Z,58nm,18.8s,MS3.1,baz=180,slow=32						
SCHQ	**Schefferville**	**29.68**	**329**	LR	LR	07 26 53.0	
	comp=Z,291nm,18.2s,MS4.0,baz=108,slow=35						
MDT	**Midelt**	**30.57**	**78**	LR	LR	07 24 59.9	
	comp=Z,204nm,20.8s,MS3.8,baz=281,slow=31						
ESDC	**Sonseca Array**	**30.86**	**64**	LR	LR	07 24 29.5	
	comp=Z,69nm,21.9s,MS3.3,baz=315,slow=29						
SDV	**Santo Domingo**	**35.73**	**237**	P	**P**	**07 16 24.8**	**+0.4**
	4.8nm,0.9s,mb4.4,baz=42,slow=4.9,SNR=5.0						
KEST	**Kesra**	**41.60**	**70**	LR	LR	07 31 20.0	
	comp=Z,29nm,21.7s,MS3.1,baz=255,slow=32						
DBIC	**Dimbokro**	**41.72**	**119**	LR	LR	07 32 37.3	
	comp=Z,181nm,19.2s,MS4.0,baz=359,slow=33						
TORD	**Torodi Ar. Bea**	**43.06**	**105**	P	**P**	**07 17 25.6**	**+0.1**
	2.9nm,1.1s,mb3.9,baz=304,slow=6.4,SNR=9.7						
TORD				LR	LR	07 33 14.0	
	comp=Z,93nm,18.3s,MS3.7,baz=300,slow=33						
CLL	**Collm**	**43.79**	**47**	P	**P**	**07 17 32.2**	**+0.8**
	logA/T=0.9,mb4.4						
CLL	**Collm**	**43.79**	**47**	*i* P	**P**	**07 17 32.2**	**+0.8**
	comp=Z,8.0nm,0.9s,mb4.5						
GERES	**GERESS Array B**	**44.07**	**51**	P	**P**	**07 17 32.9**	**-0.8**
	comp=Z,0.4nm,0.2s,mb3.7,baz=265,slow=6.6,SNR=5.6						
GERES				LR	LR	07 34 37.7	
	comp=Z,41nm,18.1s,MS3.4,baz=96,slow=34						
ULM	**Lac du Bonnet**	**44.49**	**311**	LR	LR	07 33 48.7	
	comp=Z,101nm,22.0s,MS3.7,baz=108,slow=33						
NOA	**NORSAR Array B**	**44.70**	**33**	P	**P**	**07 17 39.7**	**+0.9**
	comp=Z,0.5nm,0.6s,mb3.5,baz=253,slow=8.0,SNR=2.4						
NOA				LR	LR	07 32 28.6	
	comp=Z,37nm,21.9s,MS3.3,baz=205,slow=31						
SAML	**Samuel**	**45.63**	**212**	*e*P	**P**	**07 17 45.6**	**-0.4**
	comp=Z,4.0nm,1.1s,mb4.3						
OTAV	**Otavalo**	**47.31**	**236**	*e*P	**P**	**07 18 00.0**	**+0.8**
	comp=Z,6.3nm,1.3s,mb4.4						
BDFB	**Brasilia**	**47.45**	**189**	LR	LR	07 34 57.7	
	comp=Z,81nm,18.8s,MS3.7,baz=18,slow=32						
SIV	**San Ignacio**	**51.13**	**205**	P	**P**	**07 18 28.1**	**-0.4**
	comp=Z,0.5nm,0.8s,mb3.5,baz=5.7,slow=10,SNR=3.1						
EGMT	**Eagleton**	**53.69**	**309**	*e*P	**P**	**07 18 48.0**	**+0.4**
	comp=Z,7.0nm,1.1s,mb4.5						
AKASG	**Malin Array Be**	**54.03**	**48**	P	**P**	**07 18 48.4**	**-1.6**
	comp=Z,3.8nm,0.8s,mb4.4,baz=277,slow=6.3,SNR=13						
PDAR	**Pinedale Array**	**54.52**	**303**	P	**P**	**07 18 52.4**	**-1.2**
	comp=Z,1.6nm,1.0s,mb4.0,baz=76,slow=7.8,SNR=8.5						
PDAR				LR	LR	07 41 47.6	
	comp=Z,192nm,18.1s,MS4.2,baz=117,slow=36						
YKA	**Yellowknife Ar**	**55.10**	**327**	LR	LR	07 41 36.3	
	comp=Z,128nm,19.7s,MS4.0,baz=85,slow=35						
IMW	**Indian Meadow**	**55.26**	**304**	*e*P	**P**	**07 19 03.1**	**+4.1**
	comp=Z,6.2nm,1.1s,mb4.5						
BRTR	**Keskin Array B**	**59.47**	**60**	P	**P**	**07 19 29.2**	**+0.6**
	comp=Z,0.4nm,0.4s,mb3.8,baz=308,slow=37,SNR=4.4						
BRTR				LR	LR	07 44 38.2	
	comp=Z,19nm,18.6s,MS3.3,baz=184,slow=36						
CPUP	**Villa Florida**	**59.70**	**197**	LR	LR	07 41 57.9	
	comp=Z,36nm,18.8s,MS3.5,baz=205,slow=33						
BOSA	**Boshof**	**86.78**	**126**	LR	LR	07 54 51.3	
	comp=Z,95nm,19.5s,MS4.2,baz=112,slow=31						

*IDC **09** 07:19:12.4±1.5, 6.25S×147.55E, h0km, mb4.3/4, mb1 4.5/6, mb1mx4.2/14, mbtmp4.5/6, ML4.1/2, MS3.4/7, Ms1 3.3/7, ms1mx3.2/15, Error ellipse: s-maj=37.2km s-min=26.4km az=91.0*
*ISCJB **09** 07:19:17.7±2.6, 6.4S±0.1×147.7E±0.1, h56km±25km, mb4.3/5, MS3.3/5, Error ellipse: s-maj=25.0km s-min=15.5km az=118.2*
*NEIC **09** 07:19:19.3±1.6, 6.41S×147.64E, h53km±16km, mb4.3/5, Error ellipse: s-maj=19.3km s-min=10.2km az=153.0*
ISC 09 07:19:19.5±2.2**, 6.4S**±0.1×**147.6E**±0.1**, h51km**±24km**, n19, σ0.65**/16**, mb4.3**/5**, MS3.3**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.00**	**189**	Pn	**Pn**	**07 20 03.7**	**-0.8**
	47nm,0.3s,baz=35,slow=7.6,SNR=26						
PMG				Sn	**Sn**	**07 20 39.4**	**+0.2**
	39nm,0.3s,baz=175,slow=22,SNR=5.1						
HNR	**Honiara**	**12.55**	**105**	Pn	**Pn**	**07 22 15.8**	**+0.5**
	8.3nm,0.3s,baz=269,slow=18,SNR=6.0						
HNR				LR	LR	07 26 31.8	
	comp=Z,88nm,18.5s,baz=7.6,slow=35						
CTA	**Charters Tower**	**13.65**	**186**	LR	LR	07 26 04.7	
	comp=Z,54nm,21.8s,baz=42,slow=30						
KAKA	**Kakadu**	**16.23**	**246**	*e*P	**Pn**	**07 23 05.1**	**+1.1**
	9.4nm,0.6s						
WRAB	**Tennant Creek**	**18.63**	**223**	*e*P	**Pn**	**07 23 32.3**	**-1.2**
	4.4nm,0.4s						
WB2	**Warramunga Arr**	**18.63**	**223**	*e*P	**Pn**	**07 23 33.1**	**-0.5**
GUMO	**Guam**	**20.07**	**352**	LR	LR	07 29 57.5	
	comp=Z,86nm,18.4s,MS3.1,baz=57,slow=32						
AS31	**Alice Springs**	**21.64**	**216**	*e*P	**P**	**07 24 05.9**	**+0.5**
ASAR	**Alice Springs**	**21.64**	**216**	P	**P**	**07 24 05.7**	**+0.2**
	7.0nm,0.5s,mb4.3,baz=52,slow=9.0,SNR=121						
ASAR				LR	LR	07 31 40.9	
	comp=Z,108nm,19.3s,MS3.3,baz=348,slow=34						
ASPA	**Alice Springs**	**21.64**	**216**	*e*P	**P**	**07 24 05.9**	**+0.4**
DZM	**Mont Dzumac**	**23.91**	**132**	LR	LR	07 31 19.2	
	comp=Z,254nm,18.1s,MS3.7,baz=303,slow=30						
FITZ	**Fitzroy Crossi**	**24.40**	**240**	*e*P	**P**	**07 24 33.5**	**+0.5**
	26nm,0.5s,mb4.9						
FITZ	**Fitzroy Crossi**	**24.40**	**240**	P	**P**	**07 24 33.6**	**+0.7**
	16nm,0.6s,mb4.6,baz=59,slow=9.2,SNR=57						
FITZ				LR	LR	07 35 03.2	
	comp=Z,52nm,18.8s,MS3.0,baz=264,slow=39						
STKA	**Stephens Creek**	**25.94**	**192**	*e*P	**P**	**07 24 47.2**	**+0.2**
	4.9nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**25.94**	**192**	P	**P**	**07 24 46.7**	**-0.3**
	1.4nm,0.3s,mb3.9,baz=17,slow=10,SNR=4.6						
STKA				LR	LR	07 34 15.5	
	comp=Z,118nm,20.1s,MS3.4,baz=26,slow=35						
KLBR	**Kellerberrin**	**37.51**	**224**	*e*P	**P**	**07 26 28.1**	**-0.3**
	6.1nm,0.5s,mb4.6						
COCO	**West Island**	**50.40**	**260**	*e*P	**P**	**07 28 12.1**	**+0.4**
	91nm,0.5s						
MKAR	**Makanchi Array**	**78.23**	**320**	P	**P**	**07 31 12.7**	**-1.0**
	0.5nm,0.6s,mb3.7,baz=99,slow=8.0,SNR=5.7						
TORD	**Torodi Ar. Bea**	**145.81**	**284**	PKPbc	PKPbc	07 38 53.6	+0.6
	1.1nm,0.4s,baz=67,slow=3.8,SNR=18						

*NEIC **09** 07:53:40.8, 29.09S×70.81W, h68km, MG3.6(GUC), After GUC.*
GUC 09 07:53:40.8±0.5**, 29.09S**×**70.81W, h68km**±3km**, MD3.7, ML3.6, 3D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.12**	**51**⇓	*e*P	Pn	07 53 51.5	+0.6
LCO				*i* S	Sn	07 54 00.1	+1.9
VACH	**Vallenar**	**0.51**	**5**⇓	*i*P	Pn	07 53 54.0	+0.4
VACH				*i* S	Sn	07 54 03.6	+0.6
VACH				AML	AML	07 54 04.5	
	comp=N,5μm,0.1s						
VACH	**Vallenar**	**0.51**	**5**⇓	*i*P	Pn	07 53 54.0	+0.4
VACH				*i* S	Sn	07 54 03.6	+0.6
TLL	**Tololo Astrono**	**1.07**	**180**	*e*P	Pn	07 54 01.4	+1.2

TLL i S Sn 07 54 16.4 +1.8
CPCH Copiapo 1.77 13 eP Pn 07 54 09.8 +0.6
CPCH i S Sn 07 54 31.7 +0.8
CDCH Caldera 2.01 360 eP Pn 07 54 12.6 +0.1

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*ISCJB **09** 07:56:22.2±2.0, 4.82S±0.04×144.46E±0.05, h28km±14km, mb5.0/58, MS4.5/11, Error ellipse: s-maj=7.9km s-min=6.1km az=148.2*
*MOS **09** 07:56:23.2±0.7, 4.74S×144.43E, h33km, mb5.2/20, Error ellipse: s-maj=13.1km s-min=7.2km az=103.7*
*BJI **09** 07:56:23.5, 4.96S×145.24E, h74km, mB5.1, mb4.9, Ms4.6, Msz4.2*
*IDC **09** 07:56:26.7±2.8, 4.87S×144.38E, h52km±26km, mb4.7/15, mb1 4.7/17, mb1mx4.7/19, mbtmp5.0/17, ML4.4/2, MS4.5/3, Ms1 4.5/3, ms1mx3.7/16, Error ellipse: s-maj=17.3km s-min=10.6km az=89.0*
*HRVD **09** 07:56:28.2±0.2, 4.79S×144.35E, h67km±2km, MW5.2/66, Centroid moment Tensor Solution. LP body waves: s41,c60;Mantle waves: s66,c96; Half duration: 1.0s Moment tensor: Scale 10^{16}Nm; M_{rr}6.32±.33; $M_{\theta\theta}$-4.44±.27; $M_{\phi\phi}$-1.89±.31; $M_{r\theta}$-2.88±.18; $M_{\theta\phi}$3.43±.23; $M_{\phi r}$3.93±.23; Best double couple: $M_0$8.19000×10^{16} NP1:ϕ_s113.00000°,δ29.00000°,λ69.00000°. NP2: ϕ_s316.00000°,δ63.00000°,λ101.00000°. Principal axes: T 8.0760, Plg70.0000°, Azm249.0000°; N 0.2190, Plg10.0000°, Azm131.0000°; P -8.3050, Plg18.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **09** 07:56:28.2±1.1, 4.87S×144.39E, h68km±9km, mb5.1/30 Error ellipse: s-maj=6.4km s-min=6.0km az=67.0*
ISC 09 07:56:26.0±1.1**, 4.85S**±0.04×**144.49E**±0.05**, h44**km±10km**, h63**km±2.8km**:pP-P, n190,** σ0.98/152**, mb5.0**/58**, MS4.5**/11**, 17C-16D, Near north coast of New Guinea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 5.24 150 P **Pn 07 57 42.6 +0.8**
46nm,0.3s,baz=359,slow=6.3,SNR=61
PMG S **Sn 07 58 38.7 -2.2**
81nm,0.3s,baz=114,slow=21,SNR=9.1
PMG Port Moresby 5.24 150 eP **Pn 07 57 42.5 +0.7**
PMG e 07 58 40.7
PMG pmax pmax
comp=Z,444nm,0.6s
PMG Port Moresby 5.24 150 ePn **Pn 07 57 42.5 +0.7**
comp=Z,444nm,0.6s
PMG eSn **Sn 07 58 40.7 -0.2**
KAKA Kakadu 14.23 236 eP **Pn 07 59 43.3 -1.6**
comp=Z,726nm,1.6s
CTA Charters Tower 15.24 174 eP **Pn 07 59 59.7 +1.6**
comp=Z,14nm,0.5s
CTA Charters Tower 15.24 174 P **Pn 07 59 59.8 +1.7**
comp=Z,2.4nm,0.3s,baz=359,slow=13,SNR=18
CTA Charters Tower 15.24 174 eP **Pn 07 59 59.7 +1.6**
CTA pmax pmax
comp=Z,14nm,0.5s
CTAO Charters Tower 15.24 174 eP **Pn 08 00 00.9 +2.8**
CTAO pmax pmax
comp=Z,63nm,1.1s
CTAO Charters Tower 15.24 174 ePn **Pn 08 00 00.9 +2.7**
comp=Z,63nm,1.1s
HNR Honiara 15.99 107 P **Pn 08 00 13.8 +6.0**
comp=Z,16nm,0.3s,baz=264,slow=7.6,SNR=3.6
WRAB Tennant Creek 17.95 213 P **Pn 08 00 31.9 -0.3**
comp=Z,1μm,1.1s,SNR=32
WRAB Tennant Creek 17.95 213 eP **Pn 08 00 32.0 -0.2**
WRAB Tennant Creek 17.95 213 eP **Pn 08 00 31.3 -1.0**
comp=Z,324nm,1.0s
WB2 Warramunga Arr 17.96 213 eP **Pn 08 00 31.5 -0.8**
WB2 eS **S 08 03 44.3 -12**
AS31 Alice Springs 21.31 208 ⇓iP **P 08 01 09.4 +0.4**
AS31 epP 08 01 15.4
ASAR Alice Springs 21.31 208 P **P 08 01 09.1 +0.1**
comp=Z,48nm,0.8s,mb4.9,baz=35,slow=9.6,SNR=326
ASAR S **S 08 05 01.4 -1.7**
comp=Z,10nm,1.1s,baz=20,slow=19,SNR=5.5
ASAR Alice Springs 21.31 208 P **P 08 01 09.1 +0.1**
ASAR S **S 08 05 01.4 -1.7**
ASPA Alice Springs 21.31 208 ⇓iP **P 08 01 09.4 +0.4**
ASPA epP 08 01 15.4
FITZ Fitzroy Crossi 22.65 233 eP **P 08 01 21.8 -1.5**
comp=Z,87nm,1.1s,mb5.1
FITZ Fitzroy Crossi 22.65 233 P **P 08 01 21.9 -1.4**
comp=Z,20nm,0.8s,mb4.6,baz=47,slow=9.0,SNR=20
FITZ LR LR 08 11 12.1
comp=Z,2μm,19.2s,MS4.6,baz=56,slow=39
ARMA Armidale 26.30 166 ⇓iP **P 08 01 58.4 +1.0**
STKA Stephens Creek 27.02 185 eP **P 08 02 03.5 -0.4**
comp=Z,5.4nm,0.4s,mb4.4
STKA Stephens Creek 27.02 185 P **P 08 02 03.5 -0.4**
comp=Z,6.5nm,0.5s,mb4.4,baz=356,slow=9.5,SNR=12
DZM Mont Dzumac 27.29 131 P **P 08 02 06.9 +0.6**
comp=Z,22nm,0.8s,mb4.8,baz=310,slow=11,SNR=6.2
TGY Tagaytay City 30.02 309 P **P 08 02 26.9 -3.6**
comp=Z,144nm,0.3s,baz=170,slow=11,SNR=2.8
FORT Forrest 30.07 209 eP **P 08 02 30.7 -0.4**
comp=Z,38nm,0.9s,mb5.1
CNB Canberra Magne 30.64 172 eP **P 08 02 38.2 +2.1**
comp=Z,55nm,1.6s,mb5.1
CBIJ Chichi jima 31.84 356 P **P 08 02 46.0 -0.7**
comp=Z,89nm,0.7s,mb5.7,baz=290,slow=18,SNR=4.1
KLBR Kellerberrin 36.56 220 eP **P 08 03 26.9 -0.6**
comp=Z,23nm,0.6s,mb5.2
NWAO Narrogin (SRO) 37.77 219 P **P 08 03 37.8 0.0**
comp=Z,19nm,0.8s,mb4.9,baz=42,slow=7.2,SNR=16
MUN Mundaring 37.81 221 ⇓iP **P 08 03 38.2 +0.1**
QIZ Qiongzhong 41.56 306 eP **P 08 04 10.8 +1.5**
comp=Z,19nm,1.3s,mb4.6
MJAR Matsushiro Arr 41.60 352 P **P 08 04 08.1 -1.5**
comp=Z,4.0nm,0.8s,mb4.1,baz=180,slow=8.5,SNR=9.7
MAT Matsushiro 41.60 352 P **P 08 04 08.8 -0.8**
MAT S **S 08 10 27.0 +4.3**
MAT Matsushiro 41.60 352 P **P 08 04 09.0 -0.6**
MAT pmax pmax
comp=Z,19nm,1.3s,mb4.6
MAT Matsushiro 41.60 352 P **P 08 04 09.0 -0.6**
comp=Z,19nm,1.3s,mb4.6
SSE Sheshan 42.11 330 eP **P 08 04 12.1 -1.7**
SSE PCP PcP 08 06 05.6 -2.2
SSE AMB AMB
comp=Z,41nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,83nm,6.5s
SSE LR LR
comp=N,262nm,26.8s,MS4.2
SSE LR LR
comp=E,320nm,26.7s,MS4.2
SSE LR LR
comp=Z,423nm,25.1s,MS4.2
NJ2 Nanjing 44.07 328 eP **P 08 04 29.2 -0.4**
NJ2 PP PP 08 06 13.6 +0.7
NJ2 S **S 08 10 58.0 -1.0**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
NJ2 AMB AMB
comp=Z,120nm,10.1s
NJ2 LR LR
comp=N,1μm,17.0s,MS5.1
NJ2 LR LR
comp=E,1μm,19.0s,MS5.1
NJ2 LR LR
comp=Z,520nm,23.0s,MS4.4
URZ Urewera 44.56 143 P **P 08 04 34.1 +0.6**
comp=Z,16nm,0.4s,mb5.2,baz=281,slow=4.9,SNR=22
RPZ Rata Peaks 45.24 153 P **P 08 04 39.2 +0.3**
comp=Z,35nm,0.5s,mb5.4,baz=16,slow=2.2,SNR=44
RPZ LR LR 08 19 41.3
comp=Z,368nm,18.4s,MS4.3,baz=324,slow=31
WHN Wuhan 45.50 323 eP **P 08 04 40.3 -0.7**
PSI Prapat 46.16 279 P **P 08 04 46.5 +0.3**
comp=Z,46nm,0.9s,mb5.4,baz=67,slow=3.7,SNR=12
PSI Prapat 46.16 279 P **P 08 04 46.5 +0.3**
GYA Guiyang 48.06 312 ⇑iP **P 08 05 02.8 +1.8**
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
NST Nakhon Sawan 48.42 296 P **P 08 04 55.5 -8.3**
NANT Nan 49.12 300 P **P 08 05 06.0 -3.2**
KMI Kunming 50.33 308 P **P 08 05 22.0 +3.6**
KMI AP pP 08 05 38.0 +7.3
KMI XP sP 08 05 46.3 +10
KMI PP PP 08 07 15.7 +1.6
KMI AMB AMB
comp=Z,7.0nm,1.0s,mb4.7
KMI AMB AMB
comp=Z,70nm,4.0s
KMI LR LR
comp=N,241nm,24.6s,MS4.2
KMI LR LR
comp=E,187nm,23.3s,MS4.2
KMI LR LR
comp=Z,265nm,27.2s,MS4.1
CHRT Chiangrai 50.35 301 ⇓P **P 08 05 20.0 +1.5**
CHTO Chiang Mai 50.65 299 eP **P 08 05 21.5 +0.7**
CHTO pmax pmax
comp=Z,31nm,1.2s,mb5.1
CHTO Chiang Mai 50.65 299 eP **P 08 05 21.5 +0.7**
comp=Z,31nm,1.2s,mb5.1
XAN Xi'an 51.23 322 P **P 08 05 25.0 -0.1**
XAN AMB AMB
comp=Z,8.0nm,0.8s,mb4.7
YSS Yuzh-Sakhalins 51.61 358⇑eP **P 08 05 27.2 -0.7**
YSS e*SP sP 08 05 41.3 -4.2
YSS S **S 08 12 46.0 +0.3**
BJI Beijing 51.71 332 eP **P 08 05 29.5 +0.8**
BJI AMB AMB
comp=Z,13nm,1.3s,mb4.7
BJI LR LR
comp=N,287nm,23.5s,MS4.3
BJI LR LR
comp=E,239nm,23.1s,MS4.3
BJI LR LR
comp=Z,244nm,28.5s
CD2 Chengdu 52.70 315 P **P 08 05 37.6 +1.5**
CD2 XP sP 08 06 00.6 +7.0
CD2 PP PP 08 07 39.0 +3.5
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
CD2 AMB AMB
comp=Z,30nm,5.6s
HABR Khabarovsk 53.74 352 eP **P 08 05 41.9 -1.8**
HABR eS **S 08 13 14.4 -0.5**
HHC Hu-ho-hao-te 54.57 330 eP **P 08 05 52.2 +2.4**
HHC AP pP 08 06 09.0 +6.7
HHC XP sP 08 06 14.8 +7.4
HHC PCP PcP 08 06 54.4 +1.9
HHC PP PP 08 07 55.9 +3.5
HHC SCP ScP 08 10 45.8 -1.4
HHC PCS PcS 08 10 53.9 +1.8
HHC AMB AMB
comp=Z,12nm,0.9s,mb4.9
HHC AMB AMB
comp=Z,140nm,5.4s
HHC LR LR
comp=N,263nm,22.6s,MS4.3
HHC LR LR
comp=E,156nm,21.4s,MS4.3
HHC LR LR
comp=Z,243nm,27.4s
KLR Kul'dur 54.99 350 eP **P 08 05 50.0 -2.8**
KLR pmax pmax
comp=Z,28nm,1.4s,mb5.1
GTA Gaotai 60.28 321 eP **P 08 06 31.0 +1.0**
GTA AMB AMB
comp=Z,5.0nm,0.4s,mb4.9
ULN Ulaanbaatar 61.93 332 eP **P 08 06 41.9 +0.8**
ULN pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
ULN Ulaanbaatar 61.93 332 eP **P 08 06 41.9 +0.7**
comp=Z,5.4nm,0.7s,mb4.8
SONM Songino Array 62.21 332 P **P 08 06 43.1 +0.1**
comp=Z,2.2nm,0.6s,mb4.5,baz=153,slow=6.6,SNR=18
POHA Pohakuloa 63.81 65 eP **P 08 06 55.3 +1.7**
comp=Z,1μm,1.4s
POHA epP pP 08 07 12.8 +6.4
JIRN Jiri 64.81 303 eP **P 08 07 01.6 +1.4**
comp=Z,23nm,0.5s,mb5.5
GUN Gumba 65.16 304 eP **P 08 07 03.8 +1.3**
comp=Z,86nm,0.8s,mb5.9
PKI Pulchoki 65.43 303 eP **P 08 07 05.0 +0.8**
ZAK Zakamensk 65.46 332 eP **P 08 07 03.9 -0.5**
ZAK e pP 08 07 18.4 +1.2
ZAK pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
ZAK pmax pmax
comp=Z,11nm,1.0s,mb4.8
KKN Kakani 65.61 303 eP **P 08 07 06.3 +0.9**
comp=Z,126nm,1.0s,mb5.9
KKN Kakani 65.61 303 eP **P 08 07 06.3 +0.9**
KKN pmax pmax
comp=Z,126nm,1.0s,mb5.9
DMN Daman 65.70 303 eP **P 08 07 06.9 +0.9**
comp=Z,145nm,1.0s,mb6.0
CASY Casey 65.72 194 ⇓iP **P 08 07 05.5 -0.6**
TLY Talaya 66.20 334 eP **P 08 07 09.4 +0.2**
TLY pmax pmax
comp=Z,12nm,1.5s,mb4.7
GKN Gorkha 66.22 303 eP **P 08 07 09.8 +0.5**
KOLN Koldanda 67.01 303 eP **P 08 07 14.8 +0.4**
MOY Mondy 67.39 332 eP **P 08 07 17.7 +0.9**
WMQ Urumqi 70.31 320 eP **P 08 07 35.0 +0.1**
WMQ XP sP 08 07 58.0 +5.2
WMQ PP PP 08 10 13.0 +2.1
WMQ AMB AMB
comp=Z,16nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,101nm,5.0s
WMQ LR LR
comp=N,153nm,15.0s,MS4.6
WMQ LR LR
comp=E,175nm,15.0s,MS4.6
WMQ LR LR
comp=Z,89nm,15.0s,MS4.1
VNDA Vanda 73.20 176 P **P 08 07 51.6 -0.7**
comp=Z,8.7nm,0.6s,mb4.8,baz=327,slow=6.7,SNR=111
VNDA LR LR 08 41 44.0
comp=Z,257nm,18.0s,MS4.5,baz=343,slow=37
VNDA Vanda 73.20 176 eP **P 08 07 51.4 -0.9**
VNDA pmax pmax
comp=Z,9.0nm,0.6s
VNDA Vanda 73.20 176 eP **P 08 07 51.4 -0.9**
comp=Z,9.2nm,0.6s,mb4.9
SBA Scott Base 73.89 175 eP **P 08 07 57.0 +0.7**
SBA pmax pmax
comp=Z,11nm,1.1s,mb4.7
SBA Scott Base 73.89 175 eP **P 08 07 57.0 +0.7**
comp=Z,11nm,1.1s,mb4.7
BILL Bilibino 74.33 8 eP **P 08 07 57.2 -1.7**
BILL pmax pmax
comp=Z,20nm,1.3s,mb4.9
MKAR Makanchi Array 75.04 321 P **P 08 08 02.8 -0.2**
comp=Z,7.2nm,0.4s,mb4.9,baz=96,slow=9.1,SNR=64
ZAL Zalesovo 76.73 328 P **P 08 08 11.9 -0.7**
comp=Z,4.0nm,0.5s,mb4.6,baz=359,slow=6.4,SNR=7.8
NVS Novosibirsk 77.96 329 eP **P 08 08 18.7 -0.8**
NVS pmax pmax
comp=Z,35nm,1.4s,mb5.1
NVS pmax pmax
comp=N,29nm,1.9s
NVS pmax pmax
comp=E,30nm,1.6s
KZA Kyzart 78.07 315 P **P 08 08 21.5 +1.4**
SNR=28
TKM2 Tokmak 2 78.08 316 P **P 08 08 20.5 +0.3**
SNR=8.4
UCH Uchtor 78.63 315 P **P 08 08 25.0 +1.8**
SNR=24
FRU Bishkek 78.74 315 eP **P 08 08 24.8 +1.0**
FRU pmax pmax
comp=Z,110nm,2.9s,mb5.3
AAK Ala-Archa 78.77 315 eP **P 08 08 23.6 -0.4**
AAK pmax pmax
comp=Z,11nm,0.9s,mb4.8
AAK Ala-Archa 78.77 315 eP **P 08 08 23.6 -0.4**
comp=Z,11nm,0.9s,mb4.8
KURK Kurchatov 78.81 324 P **P 08 08 23.4 -0.8**
comp=Z,80nm,1.3s,mb5.5,SNR=9.5
KURK Kurchatov 78.81 324c iP **P 08 08 23.7 -0.5**
KURK Kurchatov 78.81 324 eP **P 08 08 23.3 -0.9**
comp=Z,18nm,1.1s,mb4.9
USP Ospenovka 78.95 316 P **P 08 08 25.3 +0.3**
SNR=19
AML Almayashu 79.19 314 P **P 08 08 27.9 +1.7**
SNR=5.5
EKS2 Erkin-Say 79.28 315 P **P 08 08 27.9 +1.1**
SNR=18
KDAK Kodiak Island 80.10 29 eP **P 08 08 31.4 +0.2**
comp=Z,20nm,0.9s,mb5.0
SVW2 Sparrevohn 80.26 25 eP **P 08 08 32.0 -0.1**
TTA Tatalina 80.99 24 eP **P 08 08 35.5 -0.5**
KK31 Karatay Array 81.71 315 i P **P 08 08 39.1 -0.7**
KK31 pmax pmax
comp=Z,14nm,1.2s,mb4.8
KKAR Karatay Array 81.71 315 P **P 08 08 39.1 -0.7**
KKAR pmax pmax
comp=Z,18nm,1.3s,mb4.8
MAW Mawson 82.34 202 ⇓iP **P 08 08 42.5 -0.6**
comp=Z,6.6nm,0.8s,mb4.6
MAW Mawson 82.34 202 P **P 08 08 42.0 -1.1**
comp=Z,7.2nm,0.8s,mb4.7,baz=76,slow=6.5,SNR=31
MAW Mawson 82.34 202 ⇓iP **P 08 08 42.5 -0.6**
MAW pmax pmax
comp=Z,7.0nm,0.8s
PMR Palmer 83.27 26 eP **P 08 08 46.6 -1.4**
PMR pmax pmax
comp=Z,32nm,1.4s,mb5.2
PMR MLR MLR
comp=Z,1μm,23.0s,MS5.1
PMR Palmer 83.27 26 eP **P 08 08 46.6 -1.4**
comp=Z,32nm,1.4s,mb5.2
PMR LR LR
comp=Z,1μm,23.0s,MS5.1
IMA2 Indian Mountai 83.38 21 eP **P 08 08 48.0 -0.5**
VOSK Vostochnaya 83.96 324 P **P 08 08 50.3 -1.2**
VOSK pmax pmax
comp=Z,14nm,1.0s,mb5.0
CHKZ Chkalovo 84.43 325 eP **P 08 08 53.0 -0.9**
CHKZ pmax pmax
comp=Z,9.0nm,0.5s,mb5.2
CHKZ Chkalovo 84.43 325 eP **P 08 08 53.0 -0.9**
comp=Z,8.9nm,0.5s,mb5.2
BRVK Borovoye 84.45 324 P **P 08 08 53.1 -0.9**
comp=Z,139nm,1.0s,mb6.0,SNR=5.4
BRVK Borovoye 84.45 324 eP **P 08 08 53.7 -0.3**
BRVK pmax pmax
comp=Z,17nm,1.0s,mb5.1
BRVK Borovoye 84.45 324 eP **P 08 08 53.6 -0.3**
comp=Z,17nm,1.0s,mb5.1
COLA College 85.08 23 eP **P 08 08 55.7 -1.4**
COLA College 85.08 23 eP **P 08 08 55.5 -1.7**
comp=Z,23nm,0.9s,mb5.3
QSPA South Pole Qui 85.11 180 eP **P 08 08 56.3 -1.0**
comp=Z,44nm,0.6s,mb5.8
DAWY Dawson 88.30 25 eP **P 08 09 13.0 +0.1**
SKAG Skagway 89.17 30 eP **P 08 09 16.3 -0.6**
comp=Z,46nm,1.6s,mb5.6
SKAG LR LR
comp=Z,400nm,19.0s,MS4.9
AB31 Akbulak array 90.08 319 i P **P 08 09 18.8 -2.4**
SYO Syowa Base 90.80 200⇑eP **P 08 09 23.3 -1.2**
SYO Syowa Base 90.80 200⇑ePcP PcP 08 09 25.0 -0.6
INK Inuvik 91.51 22 eP **P 08 09 26.4 -1.4**
INK pmax pmax
comp=Z,17nm,1.1s
INK Inuvik 91.51 22 eP **P 08 09 26.4 -1.4**
comp=Z,17nm,1.1s,mb5.3
D03A Wishkah Elem. 94.70 43 ⇓P **P 08 09 43.2 +0.7**
baz=95
J02A Umpqua 94.70 47 ⇓P **P 08 09 42.6 0.0**
baz=95
E03A Lebam 94.83 44 ⇑P **P 08 09 44.0 +0.9**
baz=95
M02C Callahan 95.17 49 ⇑P **P 08 09 44.8 +0.1**
baz=95
O02C Red Bluff 95.18 50 ⇑P **P 08 09 45.1 +0.3**
baz=95
F04A Amboy 95.60 44 ⇑P **P 08 09 46.9 +0.2**
baz=96
F05A White Salmon 96.27 45 ⇑P **P 08 09 50.1 +0.4**
baz=96
G05A Wamic 96.37 45 ⇓P **P 08 09 50.3 +0.2**
baz=96
J05A Fort Rock 96.41 47 ⇓P **P 08 09 51.2 +0.9**
baz=96
H05A Madras 96.43 46 ⇓P **P 08 09 50.7 +0.3**
baz=96
ELFS Eagle Lake Fie 96.76 50 ⇓P **P 08 09 52.1 +0.2**
baz=97
S05C Merced 97.03 53 ⇑P **P 08 09 53.1 -0.1**
baz=97
I06A Prineville 97.16 46 ⇓P **P 08 09 54.1 +0.4**
baz=97
J06A Christmas Vall 97.20 47 ⇑P **P 08 09 53.7 -0.2**
baz=97
S06C San Francisco 97.42 53 ⇑P **P 08 09 54.9 0.0**
baz=98
I07A Izee 97.67 46 ⇑P **P 08 09 56.0 0.0**
baz=98
H08A Prairie City 98.26 46 ⇓P **P 08 09 58.7 0.0**
baz=98
I08A Drewsey 98.34 46 ⇑P **P 08 09 59.0 -0.1**
baz=98
NVAR Mina Array Bea 98.64 52 P **P 08 09 59.2 -1.2**
comp=Z,0.8nm,0.8s,mb4.3,baz=273,slow=4.7,SNR=6.0
BMO Blue Mountains 99.22 45 eP **P 08 10 03.1 +0.2**
BMO pmax pmax
comp=Z,7.0nm,1.1s,mb5.1
BMO Blue Mountains 99.22 45 eP **P 08 10 03.0 +0.1**
comp=Z,6.8nm,1.1s,mb5.1
OBN Obninsk 104.18 326 eP Pdif 08 10 24.3 -0.7
OBN pmax pmax
comp=Z,4.0nm,1.5s
ARCES ARCESS Array B 104.39 341 Pdiff Pdif 08 10 25.8 -0.1
comp=Z,2.4nm,1.0s,baz=69,slow=6.6,SNR=5.8
PDAR Pinedale Array 104.98 47 Pdiff Pdif 08 10 28.2 -0.3
comp=Z,0.6nm,0.9s,baz=305,slow=5.2,SNR=4.0
TUC Tucson 105.02 58 ePKPdf PKiKP 08 14 43.7 +0.4
ECSD EROS,Sioux Fal 114.01 44 ePKPdf PKiKP 08 14 58.8 -1.4
BRG Berggiesshubel 118.39 327 eP PKPdf 08 15 07.0 -1.6
comp=Z,3.6nm,1.2s
CLL Collm 118.67 328 ePKIKP PKPdf 08 15 09.0 -0.2
comp=Z,logA/T=0.9
CLL Collm 118.67 328 ePKPdf PKPdf 08 15 09.0 -0.2
comp=Z,12nm,1.5s
CLL L 08 18 00.0
comp=Z,300nm,21.7s
KHC Kasperske Hory 119.48 325⇑ePKIKP PKPdf 08 15 10.5 -0.2
GERES GERESS Array B 119.55 325 PKP PKPdf 08 15 10.4 -0.4
comp=Z,1.2nm,0.4s,baz=50,slow=2.1,SNR=13
GERES PKKPbc PKKPbc 08 25 21.9 0.0
comp=Z,0.4nm,0.2s,baz=176,slow=4.0,SNR=3.9
CCM Cathedral Cave 119.63 49 ePKIKP PKPdf 08 15 10.5 -0.5
BLO Bloomington 122.70 46 ePKIKP PKPdf 08 15 16.2 -0.7
WCI Wyandotte Cave 123.23 47 ePKIKP PKPdf 08 15 17.5 -0.4
CDF Champ du Feu 123.36 327 ePKIKP PKPdf 08 15 17.2 -1.0
GIVF Givet 123.61 330 ePKIKP PKPdf 08 15 18.2 -0.4
BAIF Baives 123.94 330 ePKIKP PKPdf 08 15 18.4 -0.9
HINF Hinteralfeld 123.94 327 ePKIKP PKPdf 08 15 18.4 -0.9
comp=Z,10nm,0.7s
SCHQ Schefferville 124.13 21 PKP PKPdf 08 15 19.3 -0.4
comp=Z,8.0nm,0.7s,baz=332,slow=3.3,SNR=16
SCHQ Schefferville 124.13 21 PKP PKPdf 08 15 19.3 -0.4
CABF La Chapelle 125.07 326 ePKIKP PKPdf 08 15 21.2 -0.3
comp=Z,67nm,1.5s
LPG La Plagne 125.34 325 ePKIKP PKPdf 08 15 21.9 -0.1
LPL La Plagne 125.34 325 ePKIKP PKPdf 08 15 21.8 -0.2
MBDF Montbardon 125.77 324 ePKIKP PKPdf 08 15 22.2 -0.6
SBF Sospel 125.85 323 ePKIKP PKPdf 08 15 22.2 -0.7
LOR Lormes 125.89 328 ePKIKP PKPdf 08 15 22.5 -0.5
comp=Z,21nm,1.2s
ORIF Oris-en-Rattie 126.18 324 ePKIKP PKPdf 08 15 23.1 -0.5
comp=Z,48nm,1.6s
SSF Saint Saulge 126.20 328 ePKIKP PKPdf 08 15 23.1 -0.5
comp=Z,35nm,1.3s
SMF Signal de Mont 126.29 327 ePKIKP PKPdf 08 15 23.2 -0.6
comp=Z,51nm,1.4s
AVF Avril sur Loir 126.46 328 ePKIKP PKPdf 08 15 23.2 -0.9
comp=Z,40nm,1.4s
LMR La Mourre 126.70 322 ePKIKP PKPdf 08 15 23.1 -1.5
BGF Bois d'Agland 126.88 328 ePKIKP PKPdf 08 15 23.5 -1.4
SMRF Simiane la Rot 126.90 324 ePKIKP PKPdf 08 15 24.8 -0.2
comp=Z,55nm,1.6s
VIVF Saint-Julien-l 126.91 325 ePKIKP PKPdf 08 15 24.4 -0.6
comp=Z,32nm,1.3s
TCF Toulx Ste Croi 127.39 328 ePKIKP PKPdf 08 15 25.5 -0.4
comp=Z,49nm,1.4s
SGMF Saint Gilles 128.42 332 ePKIKP PKPdf 08 15 27.2 -0.6
ROSF Rostrenen 128.69 333 ePKIKP PKPdf 08 15 27.2 -1.2
TORD Torodi Ar. Bea 142.39 285 PKhKP 08 15 49.2
comp=Z,3.8nm,0.9s,baz=67,slow=3.5,SNR=13
TORD SKPbc SKPbc 08 19 28.4 +0.4
comp=Z,2.9nm,1.0s,baz=54,slow=2.1,SNR=4.2
CPUP Villa Florida 142.48 147 PKhKP 08 15 49.5
comp=Z,1.9nm,0.5s,baz=170,slow=1.2,SNR=14

CPUP Villa Florida 142.48 147 ePKPdf 08 15 49.4
SDV Santo Domingo 144.91 82 ePKPdf PKPdf 08 15 57.8 -0.4
SAML Samuel 149.19 116 ePKPdf PKPdf 08 16 06.3 +0.9
SAML ePKPbc PKPbc 08 16 10.2 +0.6
DBIC Dimbokro 149.45 275 PKPbc PKPbc 08 16 11.0 +0.7
comp=Z,29nm,0.8s,baz=110,slow=2.4,SNR=37
DBIC Dimbokro 149.45 275 ePKPbc PKPbc 08 16 11.7 +1.4
LIC Lamto 149.63 274 ePKIKP PKPbc 08 16 11.4 +0.7
comp=Z,88nm,1.0s
CAM4 Nova Friburgo 152.09 166 ⇑iP PKPbc 08 16 17.8 +1.4
CAM4 i 08 16 19.9
CAM4 i 08 16 26.0
CAM4 i 08 16 35.8
CAM4 i 08 16 59.0
BDFB Brasilia 156.17 149 PKP PKPdf 08 16 16.2 +0.6
comp=Z,12nm,1.1s,baz=89,slow=2.7,SNR=7.6

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*CSEM **09** 08:01:21.1, 6.10S×154.53E, h40km, mb5.7*
*MOS **09** 08:01:22.6±1.0, 6.16S×154.55E, h57km, mb5.8/45, MS4.8/6, Error ellipse: s-maj=7.8km s-min=5.9km az=86.8*
*ISCJB **09** 08:01:23.5±1.1, 6.26S±0.03×154.63E±0.02, h65km±9km, mb5.5/134, Error ellipse: s-maj=5.0km s-min=3.9km az=41.0*
*IDC **09** 08:01:24.8±1.2, 6.18S×154.75E, h69km±10km, mb5.2/19, mb1 5.3/23, mb1mx5.3/24, mbtmp5.5/23, MS4.8/10, Ms1 4.8/10, ms1mx4.4/18, Error ellipse: s-maj=11.7km s-min=8.8km az=50.0*
*BJI **09** 08:01:27.1, 5.92S×155.10E, h107km, mB5.1, mb5.5*
*NEIC **09** 08:01:29.3±0.1, 6.29S×154.62E, mb5.5/80, Error ellipse: s-maj=4.3km s-min=3.5km az=116.0*
*HRVD **09** 08:01:29.3±0.1, 6.43S×154.75E, h54km, MW5.4/85, Centroid moment Tensor Solution. LP body waves: s85,c139;Mantle waves: s68,c115; Half duration: 1.3 Moment tensor: Scale 10^17Nm; Mrr1.62±.03; Mθθ-0.76±.02; Mφφ-0.86±.02; Mrθ-0.03±.02; Mθφ1.02±.02; Mφr0.05±.02; Best double couple: M0 1.72700×10^17 NP1:φs136.00000°,δ44.00000°,λ89.00000°. NP2: φs317.00000°,δ46.00000°,λ91.00000°. Principal axes: T 1.6210, Plg89.0000°, Azm255.0000°; N 0.2120, Plg1.0000°, Azm137.0000°; P -1.8320, Plg1.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 09 08:01:25.4±0.9, **6.25S**±0.03×**154.70E**±0.02, **h65**km±8km, **h107**km±3.5km**:pP-P, n690, σ0.86**/556, **mb5.5**/134, **119C-89D, Bougainville - Solomon Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
HNR Honiara 6.08 122 P Pn 08 02 52.1 -0.5
158nm,0.3s,baz=268,slow=2.8,SNR=31
HNR S Sn 08 04 01.8 +1.0
261nm,0.3s,baz=265,slow=12,SNR=15
PMG Port Moresby 8.11 247 P Pn 08 03 20.3 0.0
19nm,0.3s,baz=48,slow=6.9,SNR=18
PMG S Sn 08 04 54.3 +3.9
6.6nm,0.3s,baz=352,slow=20,SNR=6.0
PMG LR LR 08 06 24.1
comp=Z,8µm,20.8s,baz=235,slow=37
PMG Port Moresby 8.11 247 P Pn 08 03 20.4 +0.1
PMG S Sn 08 04 54.3 +3.9
CTA Charters Tower 16.02 210 eP Pn 08 05 07.9 +1.4
36nm,0.9s
CTA Charters Tower 16.02 210 P Pn 08 05 05.9 -0.6
0.8nm,0.3s,baz=58,slow=18,SNR=6.2
CTA LR LR 08 10 22.6
comp=Z,4µm,21.4s,baz=21,slow=33
CTA Charters Tower 16.02 210 eP Pn 08 05 07.9 +1.4
CTA pmax pmax
comp=Z,36nm,0.9s
CTAO Charters Tower 16.02 210 eP Pn 08 05 09.4 +2.9
DZM Mont Dzumac 19.39 145 eP Pn 08 05 46.0 -1.6
DZM Mont Dzumac 19.39 145 P Pn 08 05 45.9 -1.8
comp=Z,12nm,0.3s,baz=339,slow=9.6,SNR=57
DZM LR LR 08 12 10.0
comp=Z,2µm,21.7s,baz=82,slow=33
GUMO Guam 22.00 334 P P 08 06 13.7 -0.4
comp=Z,258nm,0.8s,mb5.6,baz=174,slow=8.3,SNR=11
GUMO LR LR 08 13 22.6
comp=Z,1µm,19.5s,baz=154,slow=33
KAKA Kakadu 22.87 252 eP P 08 06 24.4 +1.2
comp=Z,75nm,0.6s,mb5.2
WRAB Tennant Creek 24.00 234 eP P 08 06 33.3 -0.6
WB2 Warramunga Arr 24.00 234 eP P 08 06 35.4 +1.5
WB2 ePCP PcP 08 10 14.8 +0.5
WB2 eS S 08 10 47.2 +1.0
WB2 ePCS PcS 08 13 54.3 +0.3
ARMA Armidale 24.21 186 ⇑iP P 08 06 36.1 +0.3
ARMA eS S 08 10 53.6 +4.0
FUNA Funafuti 24.39 97 eP P 08 06 35.4 -2.1
AS31 Alice Springs 26.45 227 eP P 08 06 56.3 +0.2
AS31 ePcP PcP 08 10 20.3 +0.5
AS31 ePcS PcS 08 13 59.7 -1.3
ASAR Alice Springs 26.45 227 P P 08 06 55.7 -0.5
comp=Z,46nm,0.8s,mb5.0,baz=61,slow=8.4,SNR=35
ASAR PcP PcP 08 10 20.2 +0.4
comp=Z,38nm,0.8s,baz=61,slow=2.4,SNR=19
ASAR ScP ScP 08 13 55.8 +1.8
comp=Z,3.1nm,0.7s,baz=53,slow=1.9,SNR=5.5
ASAR LR LR 08 17 00.7
comp=Z,2µm,20.6s,baz=148,slow=35
ASAR P3KPbc 08 39 39.6
comp=Z,1.4nm,0.7s,baz=242,slow=3.8,SNR=6.0
ASAR Alice Springs 26.45 227 P P 08 06 55.7 -0.5
ASAR 08 10 20.2
ASAR Alice Springs 26.45 227 P P 08 06 55.7 -0.4
ASAR PcP PcP 08 10 20.2 +0.4
ASAR ScP ScP 08 13 55.8 +1.8
ASAR LR LR 08 17 00.7
ASAR e 08 39 39.6
ASPA Alice Springs 26.46 227 eP P 08 06 56.3 +0.1
ASPA ePCP PcP 08 10 20.3 +0.5
ASPA ePCS PcS 08 13 59.7 -1.3
RIV Riverview 27.64 186 eP P 08 07 05.5 -1.3
STKA Stephens Creek 28.29 204 eP P 08 07 11.8 -0.7
comp=Z,20nm,0.6s,mb4.8
STKA ePCP PcP 08 10 24.0 -0.2
STKA ePCS PcS 08 14 03.2 -3.3
STKA Stephens Creek 28.29 204 P P 08 07 12.1 -0.5
comp=Z,16nm,0.8s,mb4.6,baz=14,slow=10,SNR=9.9
STKA PcP PcP 08 10 23.8 -0.4
comp=Z,35nm,0.8s,baz=17,slow=2.7,SNR=9.2
STKA ScP ScP 08 14 00.1 +0.5
comp=Z,8.7nm,0.9s,baz=113,slow=3.8,SNR=3.9
STKA LR LR 08 17 48.0
comp=Z,3µm,21.5s,baz=15,slow=35
CNB Canberra Magne 29.34 189 eP P 08 07 22.4 +0.5
comp=Z,29nm,1.0s,mb4.9
FITZ Fitzroy Crossi 30.70 245 eP P 08 07 34.1 +0.2
comp=Z,110nm,0.6s,mb5.8
FITZ ePCP PcP 08 10 31.2 +0.8
FITZ ePCS PcS 08 14 13.3 -1.0
FITZ Fitzroy Crossi 30.70 245 P P 08 07 34.2 +0.3
comp=Z,51nm,0.8s,mb5.3,baz=96,slow=7.5,SNR=7.0
FITZ PcP PcP 08 10 31.2 +0.9
comp=Z,43nm,0.9s,baz=128,slow=1.7,SNR=5.4
FITZ LR LR 08 20 31.9
comp=Z,2µm,19.9s,baz=79,slow=37
ADE Adelaide 32.16 205 P P 08 07 46.4 -0.3
TOO Toolangi 32.28 194 eP P 08 07 48.2 +0.4
comp=Z,12nm,0.8s,mb4.7
TOO ePCP PcP 08 10 34.6 0.0
TOO Toolangi 32.28 194 eP P 08 07 48.2 +0.4
TOO e 08 10 34.6
TOO pmax pmax
comp=Z,120nm,0.8s,mb5.7
BUKP Musuan 32.73 295 eP P 08 07 52.6 +0.9
AFI Afiamalu 33.83 106 P P 08 07 59.2 -2.1
comp=Z,109nm,1.0s,mb5.6,baz=89,slow=21,SNR=6.1
MSLP Maasin 33.89 299 eP P 08 08 02.6 +0.8
PLP Palo 34.27 300 eP P 08 08 04.3 -0.8
FORT Forrest 34.93 222 eP P 08 08 10.8 0.0
comp=Z,263nm,0.5s,mb6.3
FORT ePCP PcP 08 10 42.4 +0.3
GUIM Jordan 36.10 298 eP P 08 08 21.8 +0.9
PVCP Virac 36.18 303 eP P 08 08 22.1 +0.6
TAU Tasmania Unive 37.09 189 P P 08 08 30.4 +1.2
comp=Z,739nm,0.8s,SNR=6.7
TAU Tasmania Unive 37.09 189 eP P 08 08 29.4 +0.2
TAU e 08 10 48.6
TAU pmax pmax
comp=Z,90nm,0.8s,mb5.8
TAU Tasmania Unive 37.09 189 eP P 08 08 29.4 +0.2
comp=Z,90nm,0.8s,mb5.8
TAU ePcP PcP 08 10 48.6 0.0
OTRP Odiongan 37.39 300 eP P 08 08 33.0 +1.2
PATZ Paeroa 37.48 152 P P 08 08 33.4 +0.8
PATZ Paeroa 37.48 152 ePN P 08 08 33.4 +0.8
TAZ Tarawera 37.48 151 P P 08 08 33.8 +1.2
TAZ Tarawera 37.48 151 PN P 08 08 33.6 +1.0
CUYO Cuyo Island 37.59 297 eP P 08 08 35.0 +1.5
URZ Urewera 37.79 151 P P 08 08 34.5 -0.7
comp=Z,104nm,0.7s,mb5.8,baz=12,slow=3.2,SNR=34
URZ S S 08 14 22.6 +1.4
comp=Z,11nm,1.0s,baz=300,slow=20,SNR=6.5
MWZ Matawai 38.05 150 eP P 08 08 38.0 +0.6
MWZ Matawai 38.05 150 PN P 08 08 36.5 -1.0
PUZ Puketiti 38.22 149 eP P 08 08 35.1 -3.7
PUZ Puketiti 38.22 149 PN P 08 08 37.3 -1.5
BKZ Black Stump Fm 38.22 152 PN P 08 08 39.0 +0.2
TSM Tawau 38.24 285 P P 08 08 40.4 +1.4
DSZ Denniston Nort 38.48 159 eP P 08 08 40.5 -0.5
NNZ Nelson 38.60 157 eP P 08 08 42.0 0.0
NNZ Nelson 38.60 157 ePN P 08 08 41.5 -0.5
THZ Tophouse 38.89 158 eP P 08 08 43.6 -0.9
THZ Tophouse 38.89 158 PN P 08 08 43.5 -1.0
PPR Puerto Princes 39.22 294 eP P 08 08 48.7 +1.5
WVZ Waitaha Valley 39.31 161 PN P 08 08 47.5 -0.5
MTW Mount Morrison 39.41 155 eP P 08 08 47.1 -1.6
MTW Mount Morrison 39.41 155 PN P 08 08 47.1 -1.6
BALP Baler 39.42 304 eP P 08 08 49.3 +0.4
LTZ Lake Taylor 39.56 160 eP P 08 08 49.5 -0.5
LTZ Lake Taylor 39.56 160 PN P 08 08 48.9 -1.1
JCZ Jackson Bay 39.64 164 PN P 08 08 50.2 -0.5
KHZ Kahutara 39.70 158 eP P 08 08 49.7 -1.4
KHZ Kahutara 39.70 158 PN P 08 08 49.7 -1.4
BATP Bataraza 39.71 292 eP P 08 08 52.8 +1.5
RPZ Rata Peaks 39.99 161 P P 08 08 52.8 -0.8
comp=Z,97nm,0.8s,mb5.7,baz=325,slow=2.2,SNR=25
KKM Kota Kinabalu 40.31 287 P P 08 08 57.7 +1.5
KKM Kota Kinabalu 40.31 287 eP P 08 08 57.4 +1.1
KLBR Kellerberrin 42.74 229 eP P 08 09 15.0 -1.1
comp=Z,111nm,0.8s,mb5.6
KLBR ePCP PcP 08 11 06.5 -0.1
MIDW Midway 43.59 37 eP P 08 09 24.4 +1.5
comp=Z,141nm,0.5s,mb6.0
NWAO Narrogin (SRO) 43.77 228 P P 08 09 24.4 0.0
comp=Z,38nm,0.8s,mb5.2,baz=56,slow=5.9,SNR=14
NWAO PcP PcP 08 11 09.6 -0.5
comp=Z,29nm,0.9s,baz=113,slow=4.9,SNR=5.2
NWAO LR LR 08 27 43.2
comp=Z,2µm,20.1s,baz=230,slow=36
NWAO Narrogin (SRO) 43.77 228 P P 08 09 24.4 0.0
NWAO 08 11 09.6
NWAO Narrogin (SRO) 43.77 228 P P 08 09 24.4 0.0
NWAO PcP PcP 08 11 09.6 -0.5
NWAO LR LR 08 27 43.2
MUN Mundaring 44.09 229 eP P 08 09 26.5 -0.5
MUN ePCP PcP 08 11 11.0 -0.2
NACB Ninganchiao 44.23 314 eP P 08 09 28.9 +0.8
YHNB Yeheng 44.70 315 eP P 08 09 32.5 +0.7
KSM Kuching 44.98 278 eP P 08 09 35.1 +1.0
MJAR Matsushiro Arr 45.29 341 P P 08 09 33.9 -2.7
comp=Z,6.6nm,0.6s,mb4.6,baz=170,slow=7.5,SNR=16
MJAR PcP PcP 08 11 14.5 -0.8
comp=Z,21nm,0.9s,baz=162,slow=3.7,SNR=9.1
MAJO Matsushiro 45.29 341 eP P 08 09 34.8 -1.7
MAJO pmax pmax
comp=Z,130nm,0.5s,mb5.9
MAJO Matsushiro 45.29 341 eP P 08 09 34.8 -1.7
comp=Z,13nm,0.5s,mb4.9
MAT Matsushiro 45.29 341 P P 08 09 36.9 +0.4
MAT eS S 08 16 09.0 -3.2
MAT Matsushiro 45.29 341 eP P 08 09 37.0 +0.5
MAT S S 08 16 17.0 +4.8
MAT pmax pmax
comp=Z,90nm,0.8s,mb5.5
MAT Matsushiro 45.29 341 eP P 08 09 37.0 +0.5
comp=Z,9.0nm,0.8s,mb4.5
MAT S S 08 16 17.0 +4.8
RAR Rarotonga 46.46 113 P P 08 09 43.7 -2.1
comp=Z,46nm,0.8s,mb5.2,baz=252,slow=8.6,SNR=6.0
QZH Quanzhou 46.87 313 ⇑iP P 08 09 49.7 +0.8
QZH AMB AMB
comp=Z,210nm,0.8s,mb5.9
SSE Sheshan 49.05 321 eP P 08 10 06.5 +0.7
SSE PCP PcP 08 11 29.4 +0.7
SSE PP PP 08 12 02.5 +2.7
SSE S S 08 16 59.0 -6.6
SSE SCS ScS 08 19 43.1 -8.7
SSE AMB AMB
comp=Z,38nm,0.7s,mb5.4
SSE AMB AMB
comp=Z,68nm,3.5s
SSE LR LR
comp=N,262nm,26.8s
SSE LR LR
comp=E,320nm,26.7s
SSE LR LR
comp=Z,423nm,25.1s
GZH Guangzhou 49.84 307 P P 08 10 12.6 +0.8
INCN Inchon 50.78 331 ⇓P P 08 10 18.7 -0.2
SNR=21
INCN Inchon 50.78 331 eP P 08 10 18.9 0.0
comp=Z,93nm,0.6s,mb6.0
QIZ Qiongzhong 50.84 301 P P 08 10 20.9 +1.6
QIZ PCP PcP 08 11 35.8 +0.6
QIZ S S 08 17 22.2 -8.3
QIZ XS sS 08 18 17.2 +18
QIZ SS SS 08 20 57.3 -8.4
QIZ AMB AMB
comp=Z,66nm,0.9s,mb5.7
QIZ AMB AMB
comp=Z,287nm,5.6s
QIZ Qiongzhong 50.84 301 eP P 08 10 20.7 +1.4
comp=Z,46nm,0.8s,mb5.6
QIZ ePcP PcP 08 11 33.9 -1.3
KGM Kluang 51.96 277 P P 08 10 28.8 +1.1
WHN Wuhan 53.21 316 ⇑P P 08 10 37.6 +0.7
WHN LR LR
comp=Z,2µm,29.2s
VLA Vladivostok 53.32 339 eP P 08 10 37.5 -0.3
YSS Yuzh-Sakhalins 54.02 350 eP P 08 10 42.8 -0.1
YSS e 08 11 46.9
YSS pmax pmax
comp=Z,25nm,0.9s,mb5.2
YSS Yuzh-Sakhalins 54.02 350 eP P 08 10 42.8 -0.1
comp=Z,25nm,0.9s,mb5.2
YSS ePcP PcP 08 11 46.9 -0.3
DL2 Dalian 54.39 328 P P 08 10 45.5 0.0
DL2 AMB AMB
comp=Z,40nm,0.8s,mb5.5
IPM Ipoh 54.64 280 P P 08 10 47.9 +0.5
TIA Tai'an 55.00 323 ⇑P P 08 10 49.4 -0.6
KULM Kulim 55.16 281 eP P 08 10 50.4 -0.8
MDJ Mudanjiang 55.45 338 P P 08 10 52.7 -0.5
MDJ PP PP 08 12 57.7 +0.1
MDJ SCP ScP 08 15 36.9 -8.9
MDJ PCS PcS 08 15 51.6 -1.2
MDJ SCS ScS 08 20 27.6 -8.8
MDJ AMB AMB
comp=Z,32nm,1.0s,mb5.3
MDJ AMB AMB
comp=Z,150nm,5.6s
MDJ LR LR
comp=N,335nm,29.1s
MDJ LR LR
comp=E,82nm,29.1s
MDJ LR LR
comp=Z,531nm,26.6s
MDJ Mudanjiang 55.45 338 eP P 08 10 52.8 -0.4
comp=Z,22nm,0.8s,mb5.2
PPT Papeete 55.49 107 eS S 08 18 35.3 +1.6
comp=Z,346nm,27.5s
PPT eLQ 08 24 44.3
comp=Z,782nm,28.0s
PPT eLR LR 08 27 05.9
comp=Z,850nm,26.8s,baz=282
SNG Songkhla 55.59 283 P P 08 10 54.5 +0.3
comp=Z,116nm,0.8s,mb6.0
SNY Shenyang 55.66 332 ⇑P P 08 10 53.7 -1.0
SNY S S 08 18 26.3 -10
SNY SS SS 08 22 11.0 -11
SNY AMB AMB
comp=Z,13nm,0.5s,mb5.2
SNY AMB AMB
comp=Z,160nm,4.1s
SNY LR LR
comp=N,396nm,20.2s
SNY LR LR
comp=Z,455nm,27.9s
KKTK Khon Kaen 56.02 294 P P 08 10 59.0 +1.7
comp=Z,679nm,0.5s
CN2 Changchun 56.40 335 ⇑P P 08 10 59.4 -0.6
CN2 eS S 08 18 38.5 -7.3
CN2 AMB AMB
comp=Z,40nm,0.9s,mb5.5
CN2 AMB AMB
comp=Z,200nm,6.0s
PSI Prapat 56.42 278 P P 08 10 59.4 -0.7
comp=Z,31nm,0.8s,mb5.4,baz=120,slow=6.3,SNR=8.8
SKR Severo-Kuril's 56.72 1 eP P 08 10 59.1 -3.1
SKR e pP 08 11 15.0 -4.3
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.1
GYA Guiyang 56.78 307 ⇑iP P 08 11 03.5 +0.8
GYA AMB AMB
comp=Z,40nm,1.1s,mb5.4
GYA AMB AMB
comp=Z,110nm,4.9s
GYA LR LR
comp=N,450nm,18.4s
GYA LR LR
comp=E,420nm,17.8s
GYA LR LR
comp=Z,470nm,18.0s
HABR Khabarovsk 57.16 345 eP P 08 11 04.8 -0.6
HABR eS S 08 18 51.1 -4.7
HABR pmax pmax
comp=Z,81nm,1.4s,mb5.6
NNT Nongplab 57.75 289 P P 08 11 11.5 +2.0
BJT Baijiatuau 58.14 326 eP P 08 11 11.6 -0.6
BJT pmax pmax
comp=Z,35nm,0.7s
BJT Baijiatuau 58.14 326 eP P 08 11 11.6 -0.6
comp=Z,35nm,0.7s,mb5.5
BJI Beijing 58.15 326 P P 08 11 11.3 -1.0
BJI S S 08 18 57.3 -11
BJI AMB AMB
comp=Z,35nm,0.8s,mb5.4
BJI LR LR
comp=N,221nm,26.3s
BJI LR LR
comp=E,323nm,20.0s
BJI LR LR
comp=Z,404nm,23.7s
NST Nakhon Sawan 58.26 293 P P 08 11 14.5 +1.4
comp=Z,143nm,0.9s,mb6.0
NANT Nan 58.75 296 ⇑P P 08 11 15.0 -1.5
comp=Z,1µm,1.0s
KLR Kul'dur 58.77 343 eP P 08 11 13.0 -3.7
KLR pmax pmax
comp=E,28nm,1.2s
KLR pmax pmax
comp=Z,77nm,1.2s,mb5.6
XAN Xi'an 58.97 316 P P 08 11 17.4 -0.7
XAN AMB AMB
comp=Z,78nm,0.8s,mb5.8
PET Petropavlovsk 59.14 3α iP P 08 11 18.8 -0.4
PET e*SP sP 08 12 08.5 +25
PET eS S 08 19 21.0 -0.7
PET pmax pmax
comp=Z,400nm,4.3s
PET pmax pmax
comp=Z,200nm,19.8s
PET pmax pmax
comp=Z,222nm,0.6s,mb6.4
PET smax
comp=N,300nm,18.1s
PET Petropavlovsk 59.14 3 eP P 08 11 19.1 -0.2
comp=N,110nm,0.6s,mb6.1
KMI Kunming 59.36 304 ⇑P P 08 11 22.7 +2.0
KMI PCP PcP 08 12 08.7 +0.6
KMI PP PP 08 13 35.5 +3.1
KMI PCS PcS 08 16 09.3 -0.8
KMI S S 08 19 15.1 -9.4
KMI SCS ScS 08 20 55.0 -10
KMI SS SS 08 23 16.6 -3.6
KMI AMB AMB
comp=Z,179nm,1.0s,mb6.0
KMI AMB AMB
comp=Z,325nm,3.1s
KMI LR LR
comp=N,295nm,16.0s
KMI LR LR
comp=E,384nm,22.8s
KMI LR LR
comp=Z,591nm,24.0s
CHRT Chiangrai 59.92 297 ⇑P P 08 11 26.0 +1.4
comp=Z,947nm,1.0s
CHG Chiang Mai 60.32 296 ⇑P P 08 11 28.6 +1.3
comp=Z,150nm,0.9s,mb6.0
CHTO Chiang Mai 60.32 296 ⇑P P 08 11 28.1 +0.8
SNR=20
CHTO Chiang Mai 60.32 296 eP P 08 11 28.7 +1.4
CHTO pmax pmax
comp=Z,45nm,0.8s,mb5.5
CHTO Chiang Mai 60.32 296 eP P 08 11 28.7 +1.4
comp=Z,46nm,0.8s,mb5.5
CD2 Chengdu 61.12 310 P P 08 11 33.2 +0.5
CD2 PCP PcP 08 12 13.8 -1.3
CD2 PP PP 08 13 54.4 +6.5
CD2 SCP ScP 08 15 59.2 -12
CD2 PCS PcS 08 16 15.4 -2.5
CD2 S S 08 19 39.9 -7.0
CD2 SCS ScS 08 21 04.6 -13
CD2 SS SS 08 23 43.9 -3.7
CD2 AMB AMB
comp=Z,80nm,0.6s,mb5.9
CD2 AMB AMB
comp=Z,200nm,8.4s
CD2 LR LR
comp=N,230nm,6.6s
CD2 LR LR
comp=Z,340nm,23.4s
DRV Dumont d'Urvil 61.16 187 P P 08 11 32.0 -1.0
DRV S S 08 19 43.0 -4.6
DRV SS SS 08 23 46.0 -2.4
DRV L 08 27 00.0
DRV R 08 31 00.0
AMKA Amchitka 61.17 17 eP P 08 11 32.9 -0.2
HHC Hu-ho-hao-te 61.33 324 eP P 08 11 33.2 -0.9
HHC PCP PcP 08 12 13.4 -2.6
HHC PP PP 08 13 52.3 +2.6
HHC PCS PcS 08 16 14.3 -4.5
HHC S S 08 19 39.5 -10
HHC SS SS 08 23 44.9 -6.0
HHC AMB AMB
comp=Z,29nm,0.8s,mb5.4
HHC AMB AMB
comp=Z,147nm,6.1s
HHC LR LR
comp=N,228nm,19.9s
HHC LR LR
comp=E,321nm,16.1s
HHC LR LR
comp=Z,408nm,19.0s
BTO Baotou 62.09 323 eP P 08 11 36.7 -2.6
HIA Hailar 63.13 335 iP P 08 11 45.4 -0.8
HIA Hailar 63.13 335 iPu 08 11 45.4
LZH Lanzhou 63.59 315 eP P 08 11 50.0 +0.8
LZH AP pP 08 12 11.0 +4.4
LZH XP sP 08 12 28.0 +14
LZH eS S 08 20 10.2 -7.8
LZH SS SS 08 24 23.0 -3.3
LZH AMB AMB
comp=Z,72nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,178nm,4.8s
MA2 Magadan 65.69 358c iP P 08 12 01.7 -1.2
MA2 e 08 12 29.5
MA2 eS S 08 20 42.5 -1.4
MA2 eSSS 08 27 50.5
MA2 pmax pmax
comp=N,50nm,0.7s
MA2 pmax pmax
comp=Z,120nm,0.7s,mb5.8
MA2 MLR MLR
comp=Z,500nm,17.1s
MA2 Magadan 65.69 358 eP P 08 12 02.0 -0.9

comp=Z,79nm,0.6s,mb5.7
CASY Casey 67.20 198 ⇑*i*P P **08 12 11.3 -1.3**
CLNS Chul'man 67.44 343 *e*P P **08 12 13.9 -0.1**
CLNS pmax pmax
comp=N,18nm,0.8s
CLNS pmax pmax
comp=Z,35nm,0.8s,mb5.2
CLNS pmax pmax
comp=E,19nm,0.7s
GTA Gaotai 68.00 317 ⇑*i*P P **08 12 18.4 +0.8**
GTA PCP PcP 08 12 43.9 +0.4
GTA PP PP 08 14 52.2 +4.0
GTA SCP 08 16 36.3
GTA S S 08 21 05.6 -6.2
GTA SS SS 08 25 29.9 -5.0
GTA AMB AMB
comp=Z,44nm,0.8s,mb5.3
GTA AMB AMB
comp=Z,242nm,4.6s
GTA LR LR
comp=N,170nm,22.1s
GTA LR LR
comp=E,272nm,23.6s
GTA LR LR
comp=Z,381nm,25.9s
ULN Ulaanbaatar 68.22 328 P P **08 12 18.8 -0.2**
SNR=18
ULN Ulaanbaatar 68.22 328*c i*P P **08 12 18.9 -0.1**
ULN Ulaanbaatar 68.22 328 *i*Pu P **08 12 18.0 -1.0**
SONM Songino Array 68.56 327 P P **08 12 21.1 0.0**
comp=Z,22nm,0.5s,mb5.2,baz=138,slow=5.4,SNR=112
AKUT Akutan 68.67 24 *e*P P **08 12 20.9 -0.9**
comp=Z,196nm,1.2s,mb5.8
AKUT LR LR
comp=Z,1μm,23.0s
SHL Shillong 68.67 300 *ex* P **08 12 15.1 -6.7**
SPIA Saint Paul Isl 69.36 20 *e*P P **08 12 26.2 +0.1**
RKT Rikitea 69.49 112 *e*LR LR 08 33 34.4
comp=Z,1μm,29.0s
FALS False Pass 70.14 24 *e*P P **08 12 30.4 -0.4**
YAK Yakutsk 70.77 348 *e*P P **08 12 34.1 -0.6**
YAK *e* pP 08 12 53.3 +1.0
YAK pmax pmax
comp=Z,84nm,0.7s,mb5.7
YAK Yakutsk 70.77 348 *e*P P **08 12 34.1 -0.6**
comp=Z,84nm,0.7s,mb5.7
YAK *e*PcP PcP 08 12 53.3 -1.8
YAK *e*pP pP 08 13 06.7 +14
VNDA Vanda 71.33 178 P P **08 12 37.3 -0.8**
comp=Z,16nm,0.7s,mb4.9,baz=333,slow=6.5,SNR=53
VNDA Vanda 71.33 178 *e*P P **08 12 37.3 -0.8**
comp=Z,15nm,0.7s,mb4.9
VNDA *e*PcP PcP 08 12 55.9 -1.6
SDPT Sand Point 71.70 25 *e*P P **08 12 39.4 -0.9**
ZAK Zakamensk 71.71 328 ⇑*i*P P **08 12 40.0 -0.4**
ZAK pmax pmax
comp=Z,41nm,0.9s,mb5.3
BOD Bodaibo 71.82 338 *e*P P **08 12 38.1 -2.9**
BOD pmax pmax
comp=Z,24nm,0.8s,mb5.1
SBA Scott Base 71.84 177 *e*P P **08 12 41.6 +0.5**
SBA pmax pmax
comp=Z,101nm,1.6s,mb5.4
SBA Scott Base 71.84 177 *e*P P **08 12 41.6 +0.5**
comp=Z,101nm,1.6s,mb5.4
TLY Talaya 72.28 329 ⇑P P **08 12 43.1 -0.7**
SNR=6.3
TLY Talaya 72.28 329 *e*P P **08 12 43.1 -0.7**
TLY *e* pP 08 13 03.2 +1.8
TLY pmax pmax
comp=Z,26nm,0.9s,mb5.1
TLY MLR MLR
comp=Z,199nm,20.0s
TLY Talaya 72.28 329 *e*P P **08 12 42.7 -1.1**
IRK Irkutsk 72.30 330 *i*P P **08 12 42.5 -1.4**
IRK *e* pP 08 12 55.8 -5.8
IRK pmax pmax
comp=Z,72nm,0.8s,mb5.5
CHGN Chignik 73.21 25 *e*P P **08 12 48.4 -0.9**
MIR Mirnyy 73.27 202*d i*P P **08 12 51.5 +1.9**
MIR pmax pmax
comp=Z,82nm,1.5s,mb5.3
BOK Bokaro 73.40 297 *e*P P **08 12 50.4 -0.1**
BOK AMb AMB 08 12 53.3
comp=Z,124nm,0.8s,mb5.8
MOY Mondy 73.63 328 *e*P P **08 12 51.5 -0.3**
MOY pmax pmax
comp=Z,41nm,1.1s,mb5.1
JIRN Jiri 74.16 301 *e*P P **08 12 55.5 +0.7**
comp=Z,107nm,0.7s,mb5.7
VIS Vishakhapatnam 74.34 290 *e*P P **08 12 55.6 -0.3**
GUN Gumba 74.49 301 *e*P P **08 12 57.5 +0.7**
comp=Z,264nm,0.7s,mb6.1
BILL Bilibino 74.57 4 *i*P P **08 12 56.7 -0.5**
BILL Bilibino 74.57 4 *i*Pu P **08 12 56.7 -0.5**
PKI Pulchoki 74.80 301 *e*P P **08 12 59.0 +0.4**
comp=Z,49nm,0.5s,mb5.5
PKI Pulchoki 74.80 301 *e*P P **08 12 59.0 +0.4**
PKI pmax pmax
comp=Z,49nm,0.5s,mb5.5
KKN Kakani 74.97 301 *e*P P **08 12 59.9 +0.4**
comp=Z,133nm,0.7s,mb5.8
KKN Kakani 74.97 301 *e*P P **08 12 59.9 +0.4**
KKN pmax pmax
comp=Z,133nm,0.7s,mb5.8
PALK Pallekele 75.04 279 P P **08 13 01.9 +2.0**
comp=Z,621nm,0.9s,mb6.3,SNR=8.4
PALK Pallekele 75.04 279 ⇓P P **08 13 01.5 +1.6**
SNR=6.8
PALK Pallekele 75.04 279 *e*P P **08 13 01.2 +1.3**
comp=Z,101nm,0.9s,mb5.5
DMN Daman 75.07 301 *e*P P **08 13 00.6 +0.5**
comp=Z,148nm,0.6s,mb5.9
GKN Gorkha 75.57 301 *e*P P **08 13 03.3 +0.3**
comp=Z,173nm,0.8s,mb5.8
KOLN Koldanda 76.40 300 *e*P P **08 13 07.6 -0.1**
comp=Z,236nm,0.8s,mb6.0
KDAK Kodiak Island 76.63 26 P P **08 13 08.0 -1.0**
comp=Z,302nm,0.8s,mb6.1,SNR=8.9
KDAK Kodiak Island 76.63 26 *e*P P **08 13 08.8 -0.2**
comp=Z,43nm,1.0s,mb5.1
SVW2 Sparrevohn 77.42 22 *e*P P **08 13 13.4 -0.1**
WMQ Urumqi 78.09 317 P P **08 13 17.5 +0.4**
WMQ PP PP 08 16 17.5 +3.3
WMQ S S 08 22 57.5 -8.6
WMQ SCS ScS 08 23 20.5 -11
WMQ SS SS 08 28 04.5 -4.2
WMQ AMB AMB
comp=Z,37nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,212nm,6.0s
WMQ LR LR
comp=N,275nm,15.0s
WMQ LR LR
comp=E,284nm,15.0s
WMQ LR LR
comp=Z,287nm,16.0s
SALM Salem 78.14 283 *ex* P **08 13 20.0 +2.6**
TTA Tatalina 78.44 21 *e*P P **08 13 18.9 -0.2**
HYB Hyderabad 78.75 289 ⇑*i*P P **08 13 21.0 +0.2**
comp=Z,190nm,1.0s,mb5.9
HYB *e* 08 13 53.0
HYB Hyderabad 78.75 289 ⇑*e*P P **08 13 21.0 +0.2**
HYB pmax pmax
comp=Z,190nm,1.0s,mb5.9
HYB Hyderabad 78.75 289 ⇑*e*P P **08 13 21.0 +0.2**
comp=Z,190nm,1.0s,mb5.9
TRD Trivandrum 78.88 280 *e*P P **08 13 20.3 -1.3**
NGP Nagpur 78.98 293 *e*P P **08 13 20.2 -1.9**
NGP AMb AMB 08 13 22.1
comp=Z,104nm,1.2s,mb5.5
SLKM Skilak Lake 79.19 24 *e*P P **08 13 22.3 -0.9**
TIXI Tiksi 79.58 352 *e*P P **08 13 24.1 -1.2**
LGTI Lohaghat 79.67 301 *i*P P **08 13 26.3 +0.5**
PMR Palmer 80.23 24 *e*P P **08 13 27.7 -1.1**
PMR pmax pmax
comp=Z,69nm,0.8s,mb5.5
PMR MLR MLR
comp=Z,1μm,23.0s
PMR Palmer 80.23 24 *e*P P **08 13 27.7 -1.1**
comp=Z,69nm,0.8s,mb5.5
PMR LR LR
comp=Z,1μm,23.0s
AKL Akola 80.77 292 *e*P P **08 13 31.7 0.0**
AKL AMb AMB 08 13 32.7
comp=Z,187nm,0.9s,mb5.9
BHPL Bhopal 80.86 295 *e*P P **08 13 32.0 -0.2**
BHPL AMb AMB 08 13 33.6
comp=Z,72nm,0.6s,mb5.7
EYAK Cordova Ski Ar 81.09 26 *e*P P **08 13 32.8 -0.6**
IMA2 Indian Mountai 81.19 19 *e*P P **08 13 33.4 -0.6**
MNGI Mangalore 81.59 284 *e*P P **08 13 33.7 -2.4**
MNGI AMb AMB 08 13 37.8
comp=Z,72nm,1.0s,mb5.5
NDI New Delhi 82.09 300 *e*P P **08 13 36.0 -2.7**
NDI *e*P 08 13 37.4
NDI AMb AMB 08 13 39.1
comp=Z,73nm,0.8s,mb5.6
COLA College 82.50 21 *i*P P **08 13 38.2 -2.6**
SMLA Simla 82.63 302 *e*P P **08 13 40.5 -1.0**
SMLA AMb AMB 08 13 42.5
comp=Z,98nm,0.6s,mb5.8
MK31 Makanchi Array 82.66 319 P P **08 13 40.6 -1.1**
MK31 pmax pmax
comp=Z,55nm,0.8s,mb5.4
MKAR Makanchi Array 82.66 319 P P **08 13 40.9 -0.8**
comp=Z,57nm,0.7s,mb5.5,baz=95,slow=5.1,SNR=172
MKAR PKKPbc PKKPbc 08 32 04.1 -1.7
comp=Z,1.2nm,0.8s,baz=337,slow=2.8,SNR=5.8
KAD Karad 82.85 288 *e*P P **08 13 42.6 -0.1**
KAD *i*P 08 13 42.9
POO Poona 83.35 289 *e*P P **08 13 43.0 -2.3**
ZAL Zalesovo 83.41 326 P P **08 13 44.1 -1.5**
comp=Z,38nm,0.9s,mb5.2,baz=0.1,slow=5.8,SNR=95
ZAL S S 08 23 58.3 -3.4
comp=Z,1.3nm,0.4s,baz=85,slow=19,SNR=3.0
QSPA South Pole Qui 83.72 180 *e*P P **08 13 46.5 -0.6**
comp=Z,159nm,0.7s,mb6.0
AJM Ajmer 83.93 297 *i*P P **08 13 47.0 -1.2**
AJM *e*P 08 13 47.4
AJM AMb AMB 08 13 49.5
comp=Z,154nm,1.1s,mb5.8
SIT Sitka 84.52 31 *e*P P **08 13 51.4 +0.2**
SIT pmax pmax
comp=Z,37nm,0.9s,mb5.3
SIT Sitka 84.52 31 *e*P P **08 13 51.4 +0.2**
comp=Z,37nm,0.9s,mb5.3
NVS Novosibirsk 84.58 327 *i*P P **08 13 49.9 -1.6**
NVS pmax pmax
comp=Z,84nm,1.2s,mb5.5
NVS pmax pmax
comp=N,29nm,1.4s
NVS pmax pmax
comp=E,55nm,1.4s
MAW Mawson 84.97 203 P P **08 13 52.2 -1.2**
comp=E,100nm,0.7s,mb5.9,baz=96,slow=6.5,SNR=416
MAW S S 08 24 07.9 -9.2
comp=E,0.8nm,1.0s,baz=278,slow=19,SNR=3.1
MAW Mawson 84.97 203 ⇑*i*P P **08 13 52.2 -1.2**
MAW *e*S S 08 24 07.8 -9.3
MAW pmax pmax
comp=Z,74nm,0.6s
MAW Mawson 84.97 203 ⇑*i*P P **08 13 52.2 -1.2**
comp=Z,74nm,0.6s,mb5.8
MAW *e*S S 08 24 07.8 -9.3
KSH Kashi 85.31 310 P P **08 13 56.4 +1.2**
KSH PP PP 08 17 18.1 +4.4
KSH SKS 08 24 05.5
KSH S S 08 24 13.3 -7.3
KSH SS SS 08 29 55.6 -0.6
KSH AMB AMB
comp=Z,367nm,1.0s,mb6.3
KSH LR LR
comp=N,276nm,4.0s
KSH LR LR
comp=E,383nm,4.8s
KSH LR LR
comp=Z,528nm,14.2s
DAWY Dawson 85.34 24 *e*P P **08 13 55.2 -0.1**
DAWY *e*pP pP 08 14 24.2 +11
SKAG Skagway 85.36 29 *e*P P **08 13 55.3 -0.1**
comp=Z,60nm,1.4s,mb5.3
ULHL Ulahol 85.69 313 P P **08 13 57.1 0.0**
SNR=37
KURK Kurchatov 86.07 322 P P **08 13 57.0 -1.9**
comp=Z,334nm,0.5s,mb6.5,SNR=29
KURK Kurchatov 86.07 322 ⇑P P **08 13 56.8 -2.2**
SNR=15
KURK Kurchatov 86.07 322 *e*P P **08 13 57.3 -1.6**
KURK pmax pmax
comp=Z,47nm,0.8s,mb5.5
KURK Kurchatov 86.07 322 *e*P P **08 13 57.3 -1.7**
comp=Z,47nm,0.8s,mb5.5
KURK *e*PcP PcP 08 14 00.8 -0.7
TKM2 Tokmak 2 86.30 314 P P **08 13 59.9 -0.2**
SNR=20
KZA Kyzart 86.38 313 P P **08 14 01.2 +0.7**
SNR=20
KBK Karagaybulak 86.71 313 P P **08 14 02.5 +0.4**
SNR=7.0
CHMS Chumysh 86.92 314 P P **08 14 03.3 +0.2**
SNR=18
UCH Uchtor 86.94 313 P P **08 14 03.4 +0.2**
SNR=20
FRU Bishkek 86.98 313 *e*P P **08 14 02.0 -1.4**
FRU pmax pmax
comp=Z,40nm,1.9s,mb5.0
AAK Ala-Archa 87.03 313 P P **08 14 02.2 -1.4**
comp=Z,214nm,0.7s,mb6.2,SNR=9.4
AAK Ala-Archa 87.03 313 P P **08 14 03.0 -0.7**
SNR=14
AAK Ala-Archa 87.03 313 ⇑P P **08 14 02.2 -1.5**
SNR=9.3
AAK Ala-Archa 87.03 313 *e*P P **08 14 02.1 -1.5**
AAK pmax pmax
comp=Z,30nm,0.7s,mb5.3
AAK Ala-Archa 87.03 313 *e*P P **08 14 02.1 -1.6**
comp=Z,30nm,0.7s,mb5.3
USP Osenovka 87.15 314 P P **08 14 03.4 -0.9**
SNR=31
O01C Eel River Cons 87.51 49 ⇑P P **08 14 06.3 +0.4**
baz=88,SNR=5.6
K01A Sixes 87.51 47 ⇑P P **08 14 06.3 +0.3**
baz=88
AML Almayashu 87.52 313 P P **08 14 07.2 +1.3**
SNR=20
EKS2 Erkin-Say 87.56 313 P P **08 14 06.1 -0.1**
SNR=33
M01C Crescent City 87.59 48 ⇓P P **08 14 07.2 +0.9**
baz=88
KEBM Edson Butte 87.62 47 *e*P P **08 14 07.4 +0.9**
KRMB Red Mountain 87.69 48 *e*P P **08 14 06.8 0.0**
KRMB *e*pP pP 08 14 34.8 +10
KRMB *e*PP PP 08 17 42.7 +10
KIPM Iron Peak 87.70 50 *e*P P **08 14 07.9 +1.1**
P01C Double 8 Ranch 87.76 50 ⇓P P **08 14 07.3 +0.1**
baz=88,SNR=8.1
HOPS Hopland 87.88 51 *e*P P **08 14 08.7 +1.0**
comp=Z,35nm,1.1s,mb5.3
HOPS Hopland 87.88 51 ⇑P P **08 14 07.6 -0.1**
baz=88
MCCM Marconi Confer 87.89 51 ⇓P P **08 14 07.5 -0.3**
baz=88
L02A Cave Junction 88.03 47 ⇓P P **08 14 08.3 -0.1**
baz=88,SNR=6.3
I02A Mapleton 88.19 46 ⇑P P **08 14 08.8 -0.3**
baz=88
CVS Carmenet Viney 88.25 51 ⇑P P **08 14 09.3 -0.2**
baz=88
GASB Alder Springs 88.26 50 ⇑P P **08 14 10.3 +0.8**
baz=88,SNR=16
J02A Umpqua 88.26 46 ⇑P P **08 14 09.3 -0.2**
baz=88,SNR=8.2
JRSC Jasper Ridge 88.27 52 ⇓P P **08 14 09.6 +0.1**
baz=88
BNLO Ben Lomond (Sa 88.28 53 ⇓P P **08 14 09.9 +0.3**
baz=88
O02C Red Bluff 88.29 49 ⇓P P **08 14 10.2 +0.6**
baz=88,SNR=24
MNRC McLaughlin Nat 88.34 51 P P **08 14 10.6 +0.7**
baz=88,SNR=13
C03A Quillayute Air 88.42 42 ⇓P P **08 14 10.6 +0.3**
baz=89
M02C Callahan 88.45 48 ⇓P P **08 14 10.7 +0.3**
baz=89,SNR=15
WDC Whiskeytown Da 88.55 49 *e*P P **08 14 11.2 +0.4**
comp=Z,5.7nm,0.6s,mb4.8
WDC Whiskeytown Da 88.55 49 ⇓P P **08 14 10.8 0.0**
baz=89,SNR=8.5
I03A Eugene 88.58 46 ⇑P P **08 14 10.8 -0.2**
baz=89
OTR Olympics--Tyee 88.59 41 P P **08 14 11.4 +0.4**
YBH Yreka Blue Hor 88.61 48 ⇑P P **08 14 11.2 +0.1**
baz=89,SNR=16
OOW Octopus West 88.63 42 P P **08 14 11.8 +0.6**
BDM Black Diamond 88.64 52 ⇑P P **08 14 11.4 +0.1**
baz=89
HAST UC Hastings Re 88.65 53 ⇓P P **08 14 11.8 +0.4**
baz=89,SNR=8.2
COR Corvallis 88.67 45 *e*P P **08 14 11.8 +0.4**
COR pmax pmax
comp=Z,25nm,0.9s,mb5.2
COR Corvallis 88.67 45 *e*P P **08 14 11.8 +0.3**
comp=Z,25nm,0.9s,mb5.2
WENL Wente Brothers 88.68 52 ⇑P P **08 14 11.6 +0.2**
baz=89
J03A Ideyld Park 88.70 46 ⇓P P **08 14 11.2 -0.3**
baz=89,SNR=8.9
F03A Seaside 88.73 44 ⇓P P **08 14 11.2 -0.5**
baz=89,SNR=5.9
D03A Wishkah Elem. 88.79 43 ⇓P P **08 14 11.7 -0.3**
baz=89
G03A Yamhill 88.81 44 ⇓P P **08 14 11.7 -0.4**
baz=89
E03A Lebam 88.83 43 ⇑P P **08 14 11.7 -0.5**
baz=89,SNR=16
O03C Acorn Hollow, 88.84 50 ⇓P P **08 14 12.4 +0.2**
baz=89,SNR=8.6
V03C Hunter Liggett 88.85 54 ⇑P P **08 14 13.2 +0.9**
baz=89,SNR=5.7
SUTB Sutter Butte 88.90 51 ⇑P P **08 14 11.9 -0.7**
baz=89,SNR=7.8
PACP Pacheco Peak 88.96 53 ⇓P P **08 14 13.1 +0.4**
baz=89,SNR=13
S04C Ingram Canyon, 89.00 52 ⇑P P **08 14 13.3 +0.4**
baz=89,SNR=7.0
INK Inuvik 89.13 21 PKKPbc PKKPbc 08 31 48.9 -1.6
comp=Z,3.6nm,0.8s,baz=85,slow=5.9,SNR=5.0
INK Inuvik 89.13 21 *e*P P **08 14 12.4 -1.2**
INK pmax pmax
comp=Z,20nm,0.8s
INK Inuvik 89.13 21 *e*P P **08 14 12.4 -1.2**
comp=Z,20nm,0.8s,mb5.2
INK *e*pP pP 08 14 41.6 +10
B04A Port Angeles 89.14 42 ⇑P P **08 14 12.9 -0.7**
baz=89
OHCM Honcut 89.15 50 *e*P P **08 14 13.9 +0.2**
Q04C Lincoln 89.16 51 ⇑P P **08 14 13.3 -0.5**
baz=89
ORV Oroville 89.17 50 ⇓P P **08 14 13.5 -0.3**
baz=89,SNR=27
M04C Macdoel 89.26 48 ⇑P P **08 14 14.1 -0.1**
baz=89,SNR=14
U04C Hernandez Rese 89.26 53 ⇑P P **08 14 15.0 +0.8**
baz=89,SNR=14
L04A Klamath Falls 89.28 48 ⇑P P **08 14 14.1 -0.2**
baz=89
G04A Mulino 89.35 45 ⇓P P **08 14 13.9 -0.8**
baz=90,SNR=12
HDW Hoodsport 89.37 42 P P **08 14 14.8 +0.1**
HATC Hat Creek Radi 89.39 49 ⇑P P **08 14 14.7 -0.1**
baz=90,SNR=10
PKD Parkfield 89.40 54 ⇑P P **08 14 15.2 +0.4**
baz=90,SNR=11
E04A Onalaska 89.41 43 ⇑P P **08 14 14.4 -0.5**
baz=90
R04C Big Horse Ranc 89.42 52 ⇓P P **08 14 14.1 -0.8**
baz=90
T05C Eagle Field, D 89.43 53 ⇓P P **08 14 14.6 -0.3**
baz=90,SNR=5.7
D04A Dobbs Creek Ra 89.44 43 ⇓P P **08 14 14.6 -0.5**
baz=90
H04A Detroit Lake 89.47 45 ⇓P P **08 14 14.1 -1.0**
baz=90,SNR=17
K04A Chilquin 89.47 47 ⇑P P **08 14 14.4 -0.8**
baz=90
GNW Green Mountain 89.51 42 *e*P P **08 14 15.4 0.0**
F04A Amboy 89.51 44 ⇑P P **08 14 14.7 -0.7**
baz=90,SNR=9.4
O04C Chester 89.60 50 ⇓P P **08 14 15.6 -0.2**
baz=90,SNR=8.6
PTRM Twissleman Ran 89.62 54 *e*P P **08 14 17.1 +1.2**
LAVA Lava Cap Winer 89.64 51 ⇑P P **08 14 15.4 -0.5**
baz=90,SNR=16
O05C Quincy 89.68 50 ⇑P P **08 14 15.9 -0.3**
baz=90,SNR=8.2
M05C Lookout 89.71 48 ⇓P P **08 14 15.9 -0.4**
baz=90,SNR=8.4
TDL Tradedollar La 89.72 43 P P **08 14 16.6 +0.3**
SMMC Simmler 89.75 55 ⇑P P **08 14 16.9 +0.4**
baz=90
S05C Merced 89.76 53 ⇑P P **08 14 16.5 -0.1**
baz=90,SNR=17
A04A Legoe Bay, Lum 89.78 41 ⇑P P **08 14 15.8 -0.8**
baz=90,SNR=32
CMB Columbia Colle 89.81 52 *e*P P **08 14 17.3 +0.5**
comp=Z,10nm,0.8s,mb5.0
CMB Columbia Colle 89.81 52 ⇓P P **08 14 16.3 -0.5**
baz=90,SNR=7.8
P05C Yuba Gap, Truc 89.82 51 ⇓P P **08 14 17.2 +0.3**
baz=90,SNR=16
PKM Peak Mountain 89.84 55 ⇓P P **08 14 17.9 +1.0**
baz=90,SNR=16
SNCC San Nicolas Is 89.86 57 ⇓P P **08 14 17.7 +0.7**
baz=90
BSC Santa Cruz Isl 89.87 56 ⇑P P **08 14 17.6 +0.5**
baz=90
V05C Boulder Hill, 89.90 54 ⇑P P **08 14 17.8 +0.6**
baz=90
ELFS Eagle Lake Fie 89.92 49 ⇓P P **08 14 17.5 +0.3**
baz=90,SNR=11
J05A Fort Rock 89.93 47 ⇓P P **08 14 17.2 -0.1**
baz=90,SNR=46
HOOD Mount Hood Mea 89.94 45 *e*P P **08 14 17.4 0.0**
KK31 Karatay Array 90.00 313 *i*P P **08 14 16.1 -1.6**
KKAR Karatay Array 90.00 313 *i*P P **08 14 16.0 -1.7**
D05A Enumclaw 90.00 43 ⇑P P **08 14 16.0 -1.6**
baz=90,SNR=9.0
I05A Bend 90.04 46 ⇓P P **08 14 17.2 -0.6**
baz=90
L05A Lakeview 90.04 48 ⇑P P **08 14 17.8 -0.1**
baz=90,SNR=8.5
BEKR Beckwourth 90.09 50 ⇓P P **08 14 18.2 +0.1**
baz=90,SNR=36
B05A Bryant 90.11 42 ⇓P P **08 14 17.3 -0.8**
baz=90,SNR=12
H05A Madras 90.14 45 ⇓P P **08 14 17.5 -0.8**
baz=90,SNR=12
R05C Kirkwood Meado 90.15 51 ⇓P P **08 14 18.6 +0.3**
baz=90,SNR=10
F05A White Salmon 90.16 44 ⇑P P **08 14 17.9 -0.6**
baz=90,SNR=14
G05A Wamic 90.17 45 ⇑P P **08 14 17.9 -0.5**
baz=90,SNR=11
M06C Likely Place G 90.19 49 ⇑P P **08 14 18.3 -0.2**
baz=90,SNR=15
JCW Jim Creek 90.20 42 P P **08 14 18.1 -0.5**
T06C Millerton Lake 90.21 53 ⇑P P **08 14 18.5 -0.1**
baz=90,SNR=20
S06C San Francisco 90.21 52 ⇑P P **08 14 18.6 0.0**
baz=90,SNR=43
WPW White Pass 90.23 43 P P **08 14 18.5 -0.2**
A05A Maple Falls 90.23 41 ⇓P P **08 14 17.5 -1.3**
baz=90,SNR=5.5
C05A Tolt Reservoir 90.28 42 ⇑P P **08 14 18.0 -1.0**
baz=90,SNR=6.4
BLG Laguna Peak 90.35 56 ⇑P P **08 14 19.8 +0.4**
baz=90
P06A Stead Airport, 90.42 50 ⇑P P **08 14 19.8 +0.2**
baz=91,SNR=9.6
WCN Washoe City 90.47 51 ⇓P P **08 14 20.4 +0.5**
baz=91,SNR=32
RCTC Rector, Farmer 90.49 54 ⇑P P **08 14 19.6 -0.3**
baz=91
O06A Flanigan 90.53 50 ⇑P P **08 14 20.2 0.0**
baz=91,SNR=30
KCC Kaiser Creek 90.56 53 ⇑P P **08 14 20.6 +0.3**
baz=91,SNR=14
VES Vestal, Richgr 90.56 54 ⇓P P **08 14 19.7 -0.6**
baz=91,SNR=14
K06A Valley Falls 90.58 47 ⇑P P **08 14 20.2 -0.2**
baz=91,SNR=15
N06A Buffalo Meadow 90.61 49 P P **08 14 20.7 +0.2**
baz=91,SNR=35
R06C Coleville 90.61 51 ⇓P P **08 14 21.0 +0.5**
baz=91,SNR=20
WAKR Walker 90.62 51 *e*P P **08 14 21.4 +0.9**
SCI San Clemente I 90.64 57 ⇑P P **08 14 21.3 +0.6**
baz=91

ARVC Arvin 90.67 55 ⇑P P 08 14 21.1 +0.3
baz=91,SNR=9.1
OSI Osito Adit 90.70 55 ⇑P P 08 14 21.3 +0.4
baz=91
J06A Christmas Vall 90.71 47 ⇓P P 08 14 20.1 -0.9
baz=91,SNR=24
HELL Mitchell Peak, 90.71 53 ⇑P P 08 14 20.7 -0.3
baz=91,SNR=26
I06A Prineville 90.76 46 ⇑P P 08 14 20.6 -0.6
baz=91,SNR=22
PAHR Pah Rah Range 90.81 50 *e*P P 08 14 22.2 +0.8
comp=Z,37nm,0.9s,mb5.5
CIS Catalina Islan 90.81 57 ⇑P P 08 14 21.7 +0.3
baz=91,SNR=8.9
R07C Lee Vining 90.87 52 ⇑P P 08 14 22.0 +0.3
baz=91,SNR=6.3
FMP Fort Macarthur 90.94 56 ⇑P P 08 14 22.4 +0.3
baz=91
DECC Green Verdugo 90.97 56 ⇓P P 08 14 22.5 +0.3
baz=91
ISA Isabella 91.03 54 *e*P P 08 14 23.0 +0.6
ISA pmax pmax
comp=Z,27nm,1.1s,mb5.3
ISA Isabella 91.03 54 *e*P P 08 14 23.0 +0.5
comp=Z,26nm,1.1s,mb5.3
ISA Isabella 91.03 54 ⇑P P 08 14 22.6 +0.1
baz=91,SNR=17
VOSK Vostochnaya 91.13 323 P P 08 14 19.4 -3.5
VOSK pmax pmax
comp=Z,20nm,0.8s,mb5.3
L07A Adell 91.14 48 ⇓P P 08 14 23.3 +0.3
baz=91,SNR=26
MTUM Tungsten Hills 91.16 53 *e*P P 08 14 23.7 +0.7
Q07A Schurz 91.16 51 ⇓P P 08 14 23.6 +0.5
baz=91,SNR=7.4
P07A Fallon 91.17 51 ⇓P P 08 14 23.3 +0.2
baz=91
M07A Soldier Meadow 91.19 49 ⇓P P 08 14 23.1 -0.1
baz=91,SNR=11
MWC Mount Wilson 91.20 56 *e*P P 08 14 24.2 +1.0
O07A Toulon 91.25 50 ⇑P P 08 14 23.8 +0.3
baz=91,SNR=49
I07A Izee 91.28 46 ⇑P P 08 14 23.3 -0.4
baz=91
EDW2 Edwards Air Fo 91.33 55 ⇓P P 08 14 24.3 +0.5
baz=92,SNR=51
TIN Tinemaha 91.39 53 ⇓P P 08 14 24.9 +0.7
baz=92
CWC Cottonwood Cre 91.44 54 ⇑P P 08 14 24.7 +0.4
baz=92
WTV Waterville 91.45 42 P P 08 14 23.7 -0.7
NVAR Mina Array Bea 91.49 52 P P 08 14 25.4 +0.8
comp=Z,500nm,0.8s,mb5.7,baz=256,slow=9.5,SNR=226
NVAR PKKPbc PKKPbc 08 31 46.7 +2.1
comp=Z,1.8nm,0.7s,baz=213,slow=2.1,SNR=11
NVAR PKPPKP 08 39 53.1
comp=Z,0.5nm,0.7s,baz=101,slow=5.1,SNR=4.3
NVAR Mina Array Bea 91.49 52 P P 08 14 25.4 +0.8
NVAR PKKPbc PKKPbc 08 31 46.7 +2.1
NVAR P'P' 08 39 53.1
CHKZ Chkalovo 91.49 324 *e*P P 08 14 21.6 -3.0
CHKZ pmax pmax
comp=Z,33nm,0.6s,mb5.6
CHKZ Chkalovo 91.49 324 *e*P P 08 14 21.6 -3.0
comp=Z,33nm,0.6s,mb5.6
BFSC Mount Baldy St 91.53 56 ⇑P P 08 14 24.9 +0.2
baz=92,SNR=23
BVA0 Borovoye Array 91.53 323 *i* P P 08 14 21.4 -3.4
BVA0 pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
BVAR Borovoye Array 91.53 323 LR LR 08 54 25.8
comp=Z,200nm,21.0s,baz=320,slow=35
HAWA Hanford 91.56 44 *e*P P 08 14 24.4 -0.5
comp=Z,2.0nm,0.8s
BRVK Borovoye 91.60 323 P P 08 14 22.8 -2.3
comp=Z,309nm,1.0s,mb6.5,SNR=11
BRVK Borovoye 91.60 323 *e*P P 08 14 22.5 -2.6
BRVK pmax pmax
comp=Z,28nm,0.9s,mb5.5
BRVK Borovoye 91.60 323 *e*P P 08 14 22.5 -2.6
comp=Z,28nm,0.9s,mb5.5
R08A Mina 91.63 52 ⇓P P 08 14 25.7 +0.5
baz=92,SNR=36
GBL Gable Mountain 91.64 43 P P 08 14 25.2 -0.1
LRMC Laurel Mountai 91.64 55 P P 08 14 26.2 +1.0
baz=92,SNR=52
EPH Ephrata 91.64 43 P P 08 14 24.9 -0.4
WVOR Wild Horse Val 91.71 48 P P 08 14 25.5 -0.1
M08A Happy Creek Ra 91.78 49 ⇑P P 08 14 26.2 +0.3
baz=92,SNR=13
DAC Darwin (Calif) 91.81 54 *e*P P 08 14 27.2 +1.1
DAC pmax pmax
comp=Z,37nm,0.8s,mb5.7
DAC Darwin (Calif) 91.81 54 *e*P P 08 14 27.2 +1.2
comp=Z,37nm,0.8s,mb5.7
DAC *e*pP pP 08 14 60.0 +16
P08A Dixie Valley 91.81 50 ⇓P P 08 14 26.3 +0.3
baz=92,SNR=7.1
O08A Rochester Mine 91.82 50 ⇑P P 08 14 26.4 +0.3
baz=92
Q08A Gabbs 91.83 51 ⇓P P 08 14 26.3 +0.1
baz=92,SNR=54
MURC Murrieta 91.83 57 ⇑P P 08 14 26.5 +0.3
baz=92,SNR=13
109C Camp Elliot, M 91.84 57 ⇓P P 08 14 26.6 +0.4
baz=92,SNR=7.5
K08A Mann Creek Ran 91.86 47 P P 08 14 26.0 -0.3
baz=92,SNR=6.3
MPMC Manual Prospec 91.87 54 ⇓P P 08 14 26.8 +0.5
baz=92,SNR=53
L08A Fields 91.90 48 ⇓P P 08 14 26.4 -0.1
baz=92,SNR=19
H08A Prairie City 91.93 46 ⇓P P 08 14 26.0 -0.6
baz=92,SNR=9.9
I08A Drewsey 91.93 46 ⇓P P 08 14 25.7 -0.9
baz=92,SNR=5.7
F08A Pendleton 92.01 44 ⇑P P 08 14 26.2 -0.8
baz=92,SNR=7.7
GRAC Grapevine Rang 92.06 53 ⇑P P 08 14 27.7 +0.5
baz=92,SNR=19
BBRC Big Bear Sol-O 92.14 56 ⇓P P 08 14 28.4 +0.8
baz=92,SNR=18
RRX Edison Barstow 92.14 55 ⇓P P 08 14 27.9 +0.3
baz=92
BAR Barrett 92.18 58 *e*P P 08 14 29.0 +1.2
S09A Goldfield 92.26 52 ⇑P P 08 14 28.5 +0.3
baz=92,SNR=59
TPH Tonopah 92.30 52 *e*P P 08 14 29.0 +0.7
TPH pmax pmax
comp=Z,37nm,0.8s,mb5.7
TPH Tonopah 92.30 52 *e*P P 08 14 29.0 +0.7
comp=Z,37nm,0.8s,mb5.7
GSC Goldstone 92.34 55 *e*P P 08 14 29.6 +1.1
GSC Goldstone 92.34 55 ⇑P P 08 14 29.0 +0.4
baz=92,SNR=28
N09A Rock Creek Ran 92.36 49 ⇑P P 08 14 29.0 +0.4
baz=92,SNR=19
L09A Wilkinson Ranc 92.38 48 ⇑P P 08 14 28.7 0.0
baz=92,SNR=14
Q09A Carvers 92.41 51 ⇓P P 08 14 29.3 +0.5
baz=92,SNR=17
MONP Monument Peak 92.41 57 ⇑P P 08 14 29.8 +1.0
baz=92,SNR=20
FURC Furnace Creek, 92.42 54 ⇑P P 08 14 29.2 +0.4
baz=93,SNR=46
R09A Tonopah 92.43 52 ⇓P P 08 14 29.2 +0.3
baz=93,SNR=55
PFO Pinyon Flat Ob 92.45 57 P P 08 14 30.0 +1.0
comp=Z,228nm,0.7s,mb6.5,SNR=11
PFO Pinyon Flat Ob 92.45 57 *e*P P 08 14 29.9 +0.9
PFO pmax pmax
comp=Z,39nm,0.9s,mb5.6
PFO Pinyon Flat Ob 92.45 57 *e*P P 08 14 29.9 +0.8
comp=Z,39nm,0.9s,mb5.6
PFO Pinyon Flat Ob 92.45 57 ⇓P P 08 14 29.5 +0.4
baz=93,SNR=23
M09A Marrel Ranch, 92.48 49 ⇑P P 08 14 29.3 +0.1
baz=93,SNR=16
P09A Austin 92.52 51 ⇑P P 08 14 29.2 -0.1
baz=93,SNR=13
I09A Lost Marbles R 92.53 46 ⇑P P 08 14 28.5 -1.0
baz=93
O09A Fish Creek Ran 92.54 50 ⇑P P 08 14 29.8 +0.3
baz=93,SNR=44
BMN Battle Mountai 92.54 50 *e*P P 08 14 30.4 +0.9
BMN pmax pmax
comp=Z,57nm,1.1s,mb5.8
BMN Battle Mountai 92.54 50 *e*P P 08 14 30.4 +0.9
comp=Z,57nm,1.1s,mb5.8
DVTC Desert V Tower 92.66 58 ⇓P P 08 14 30.8 +0.8
baz=93,SNR=6.8
H09A Durkee 92.66 46 ⇑P P 08 14 29.2 -0.8
baz=93,SNR=12
HEC Hector,Ludlow 92.68 55 ⇑P P 08 14 30.6 +0.5
baz=93,SNR=32
SHOC Shoshone 92.83 54 ⇓P P 08 14 30.9 +0.2
baz=93
U10A Ash Meadows, A 92.84 54 ⇓P P 08 14 31.6 +0.8
baz=93,SNR=32
BELC Belle Mtn. 92.87 56 ⇓P P 08 14 31.7 +0.7
baz=93,SNR=66
SYO Syowa Base 92.93 199⇓*e*P P 08 14 29.3 -1.9
BMO Blue Mountains 92.94 45 *e*P P 08 14 30.6 -0.7
BMO pmax pmax
comp=Z,19nm,0.9s,mb5.4
BMO Blue Mountains 92.94 45 *e*P P 08 14 30.6 -0.6
comp=Z,18nm,0.9s,mb5.4
SWSC Sam W. Stewart 92.94 57 ⇑P P 08 14 31.9 +0.7
baz=93,SNR=9.7
TPNV Topopah Spring 92.95 53 *e*P P 08 14 31.8 +0.5
TPNV pmax pmax
comp=Z,36nm,0.9s,mb5.7
TPNV Topopah Spring 92.95 53 *e*P P 08 14 31.8 +0.5
comp=Z,36nm,0.9s,mb5.7
R10A Warm Springs 93.04 52 ⇓P P 08 14 32.2 +0.4
baz=93,SNR=20
P10A Eureka 93.04 51 ⇓P P 08 14 31.8 0.0
baz=93
TUQ Turquoise Mtn. 93.07 55 ⇓P P 08 14 32.4 +0.5
baz=93,SNR=39
O10A Cortez Mining, 93.08 50 ⇓P P 08 14 32.0 +0.1
baz=93,SNR=10
N10A Dunphy 93.11 50 ⇑P P 08 14 32.3 +0.2
baz=93,SNR=5.8
M10A I.L. Ranch, Tu 93.17 49 ⇑P P 08 14 32.2 -0.1
baz=93,SNR=6.3
NEW Newport 93.40 42 *e*P P 08 14 32.6 -0.8
NEW pmax pmax
comp=Z,38nm,1.0s
NEW Newport 93.40 42 *e*P P 08 14 32.6 -0.8
comp=Z,38nm,1.0s,mb5.7
V11A Goodsprings 93.51 54 ⇓P P 08 14 34.4 +0.5
baz=94
IRM Iron Mountain 93.59 56 ⇑P P 08 14 35.0 +0.7
baz=94,SNR=88
U11A Corn Creek 93.60 54 ⇑P P 08 14 35.2 +0.9
baz=94,SNR=15
TRCR Troy Canyon 93.61 52 *e*P P 08 14 35.0 +0.7
N11A Elko Archery C 93.71 50 ⇓P P 08 14 34.8 0.0
baz=94,SNR=11
O11A Cowboy Ranch, 93.71 50 ⇓P P 08 14 34.9 0.0
baz=94,SNR=39
M11A Holland Ranch, 93.72 49 ⇑P P 08 14 35.0 +0.1
baz=94,SNR=13
GLA Glamis 93.76 57 *e*P P 08 14 36.7 +1.6
GLA e*PP pP 08 15 03.9 +11
GLA Glamis 93.76 57 ⇑P P 08 14 36.0 +1.0
baz=94,SNR=19
SHPR Sheep Range 93.78 54 *e*P P 08 14 36.6 +1.5
W12A Cal Nev Ari 93.92 55 ⇓P P 08 14 36.3 +0.5
baz=94
V12A Nelson 93.97 55 P P 08 14 36.8 +0.8
baz=94,SNR=30
Y12C Blythe 94.07 57 ⇓P P 08 14 36.9 +0.4
baz=94,SNR=8.9
P12A McGill 94.23 51 ⇑P P 08 14 37.5 +0.3
baz=94,SNR=35
N12A Clover Valley, 94.24 50 ⇓P P 08 14 37.4 +0.1
baz=94,SNR=27
Q12A Willow Creek R 94.25 51 ⇑P P 08 14 37.9 +0.5
baz=94,SNR=46
U12A Valley of Fire 94.28 54 ⇑P P 08 14 38.2 +0.8
baz=94,SNR=17
M12A Wells 94.37 49 ⇑P P 08 14 37.9 0.0
baz=94,SNR=6.8
PDMCI Parker Dam,Lak 94.43 56 ⇑P P 08 14 38.6 +0.4
baz=95,SNR=19
Y13A Salome 94.65 57 ⇓P P 08 14 39.7 +0.5
baz=95,SNR=7.4
W13A Hualapai Mount 94.70 55 ⇑P P 08 14 40.1 +0.7
baz=95,SNR=18
X13A Yucca 94.71 56 ⇓P P 08 14 39.7 +0.3
baz=95,SNR=22
N13A Wendover, West 94.87 50 ⇓P P 08 14 40.1 -0.1
baz=95,SNR=6.1
HLID Hailey 94.90 47 *e*P P 08 14 39.8 -0.4
comp=Z,7.8nm,0.8s,mb5.2
HLID *e*pP pP 08 15 08.8 +10
BSMT Bassoo Peak 94.93 43 *e*P P 08 14 40.0 -0.5
M13A Montello 94.93 49 ⇓P P 08 14 40.4 -0.1
baz=95,SNR=38
CCUT Cedar City 95.30 53 *e*P P 08 14 43.4 +1.3
CCUT *e* 08 15 25.0
Y14A Wickenburg 95.35 57 ⇓P P 08 14 42.7 +0.3
baz=96,SNR=11
Z14A Wintersburg 95.36 57 ⇑P P 08 14 43.2 +0.8
baz=96
W14A Seligman 95.37 55 ⇓P P 08 14 43.5 +1.1
baz=96,SNR=13
MSO Missoula 95.44 44 *e*P P 08 14 41.7 -1.1
comp=Z,4.8nm,1.2s,mb4.8
X14A Yava 95.48 56 ⇓P P 08 14 44.0 +1.1
baz=96,SNR=16
WALA Waterton Lakes 95.58 41 *e*P P 08 14 43.3 -0.1
comp=Z,32nm,0.9s,mb5.8
BGU Big Grassy Mou 95.76 50 *e*P P 08 14 44.4 +0.2
YKW3 Yellowknife Ar 95.82 28 *e*P P 08 14 43.9 -0.6
YKA Yellowknife Ar 95.82 28 P P 08 14 43.5 -0.9
comp=Z,16nm,0.7s,mb5.6,baz=269,slow=4.6,SNR=36
YKA PP PP 08 18 37.8 +0.8
comp=Z,1.9nm,0.9s,baz=263,slow=7.1,SNR=3.6
YKA PKKPbc PKKPbc 08 31 31.7 -1.6
comp=Z,3.9nm,0.6s,baz=88,slow=2.6,SNR=10
YKA Yellowknife Ar 95.82 28 P P 08 14 43.5 -1.0
YKA 08 18 37.8
YKA Yellowknife Ar 95.82 28 P P 08 14 43.5 -0.9
YKA PP PP 08 18 37.8 +0.8
YKA PKKPbc PKKPbc 08 31 31.7 -1.6
DUG Dugway 95.89 50 *e*P P 08 14 45.0 +0.2
comp=Z,4.8nm,0.8s,mb5.0
115A Sonoran Desert 95.91 58 ⇑P P 08 14 45.6 +0.7
baz=96,SNR=8.8
CHMT Chamberlain Mo 95.92 44 *e*P P 08 14 44.2 -0.7
HVU Hansel Valley 96.00 49 *e*P P 08 14 45.7 +0.4
HVU pmax pmax
comp=Z,17nm,0.9s,mb5.5
HVU Hansel Valley 96.00 49 *e*P P 08 14 45.7 +0.4
comp=Z,17nm,0.9s,mb5.5
X15A Humboldt 96.02 56 ⇓P P 08 14 46.1 +0.7
baz=96,SNR=15
W15A Williams 96.03 55 ⇓P P 08 14 46.3 +0.9
baz=96,SNR=12
MCMT McKenzie Canyo 96.10 46 *e*P P 08 14 45.7 0.0
EDM Edmonton 96.13 37 *e*P P 08 14 45.1 -0.8
MSU Marysvale 96.29 52 *e*P P 08 14 47.8 +1.2
MSU *e*pP pP 08 15 15.7 +11
DLMT Dillon 96.30 45 *e*P P 08 14 45.4 -1.3
comp=Z,13nm,1.1s,mb5.3
116A Eloy 96.35 58 ⇓P P 08 14 47.8 +1.0
baz=96,SNR=5.1
LRM Limekiln Ridge 96.42 45 *e*P P 08 14 46.2 -1.0
NLU North Lily Min 96.44 51 *e*P P 08 14 48.1 +0.8
CTU Camp Tracy 96.72 50 *e*P P 08 14 49.3 +0.7
comp=Z,4.8nm,0.6s,mb5.1
WUAZ Wupatki 96.78 55 *e*P P 08 14 50.2 +1.3
comp=Z,20nm,0.9s,mb5.5
MPU Maple Canyon 96.78 51 *e*P P 08 14 49.4 +0.5
HRY Holter Researc 96.88 44 *e*P P 08 14 48.6 -0.7
HWUT Hardware Ranch 96.90 49 *e*P P 08 14 49.2 -0.2
comp=Z,10nm,0.9s,mb5.2
BOZ Bozeman (W) 96.99 45 *e*P P 08 14 49.5 -0.3
BOZ pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
BOZ Bozeman (W) 96.99 45 *e*P P 08 14 49.5 -0.3
comp=Z,7.0nm,0.8s,mb5.1
TCUT Toone Canyon 97.00 49 *e*P P 08 14 50.1 +0.3
TMUT Trail Mountain 97.08 51 *e*P P 08 14 51.5 +1.3
DAU Daniels Canyon 97.08 50 *e*P P 08 14 50.8 +0.6
QLMT Earthquake Lak 97.11 46 *e*P P 08 14 50.8 +0.5
TUC Tucson 97.11 58 *e*P P 08 14 53.0 +2.6
comp=Z,3.1nm,0.9s,mb4.7
RRI2 Red Ridge 97.14 47 *e*P P 08 14 50.6 +0.2
comp=Z,13nm,0.8s,mb5.4
AHID Auburn Hatcher 97.28 48 *e*P P 08 14 50.4 -0.7
comp=Z,10nm,1.0s,mb5.2
TPAW Teton Pass 97.41 47 *e*P P 08 14 51.8 +0.1
comp=Z,14nm,1.0s,mb5.3
IMW Indian Meadow 97.43 47 *e*P P 08 14 53.6 +1.9
comp=Z,12nm,1.0s,mb5.3
REDW Red Top Meadow 97.48 47 *e*P P 08 14 51.9 -0.2
comp=Z,16nm,1.2s,mb5.3
YFT Old Faithful 97.52 46 *e*P P 08 14 54.3 +2.1
SNOW Snow King Moun 97.55 47 *e*P P 08 14 52.5 +0.2
comp=Z,13nm,1.0s,mb5.4
MOOW Moose Ponds 97.57 47 *e*P P 08 14 51.9 -0.5
comp=Z,9.0nm,1.0s,mb5.2
SRU San Rafael 97.60 51 *e*P P 08 14 53.1 +0.5
SRU pmax pmax
comp=Z,9.0nm,0.7s,mb5.4
SRU San Rafael 97.60 51 *e*P P 08 14 53.1 +0.5
comp=Z,8.7nm,0.7s,mb5.4
FLWY Flagg Ranch 97.61 46 *e*P P 08 14 52.9 +0.3
comp=Z,12nm,0.9s,mb5.4
LOHW Long Hollow 97.67 47 *e*P P 08 14 51.3 -1.6
comp=Z,4.2nm,0.9s,mb5.0
LOHW *e*pP pP 08 15 25.3 +14
AB31 Akbulak array 97.81 319⇑*e*P P 08 14 50.3 -3.2
EGMT Eagleton 98.32 42 *e*P P 08 14 54.4 -1.3
comp=Z,10nm,0.8s,mb5.4
GCMT Greycliff 98.37 45 *e*P P 08 14 56.2 +0.3
BW06 Boulder Array 98.42 48 *e*P P 08 14 55.4 -0.8
comp=Z,13nm,1.1s,mb5.4
PDAR Pinedale Array 98.42 48 P P 08 14 55.2 -1.0
comp=Z,8.3nm,0.9s,mb5.3,baz=242,slow=1.9,SNR=49
PDAR PKKPbc PKKPbc 08 31 26.1 -0.1
comp=Z,0.7nm,0.6s,baz=100,slow=5.1,SNR=7.3
PDAR LR LR 08 55 33.7
comp=Z,604nm,19.6s,baz=292,slow=33
AKTO Aktyubinsk 99.05 320 P P 08 14 55.8 -3.2
RWWY Rawlins 100.16 49 *e*Pdif Pdif 08 15 03.8 -0.2
SMCO Snowmass 100.36 51 *e*Pdif Pdif 08 15 06.0 +1.1
LAO LASA Array 100.74 44 *e*Pdif Pdif 08 15 06.7 +0.1
SNAA Sanae 100.84 187 *e*PKIKP Pdif 08 15 05.6 -1.4
SNAA *e* 08 15 10.8
SNAA *e* 08 19 12.9
SNAA *e* 08 19 18.2
SNAA Sanae 100.84 187 *e*Pdif Pdif 08 15 05.6 -1.4
RSSD Black Hills 102.41 46 *e*P Pdif 08 15 13.7 -0.3
FFC Flin Flon 102.77 35 *e*P Pdif 08 15 17.1 +1.5
JCT Junction City 106.49 60 *e*PKIKP PKiKP 08 19 42.8 +0.1
ULM Lac du Bonnet 107.17 39 PKiKP PKiKP 08 19 41.6 -2.4
comp=Z,2.6nm,0.8s,baz=14,slow=0.5,SNR=4.1
ULM PKKPbc PKKPbc 08 30 58.6 -1.8
comp=Z,1.7nm,0.5s,baz=95,slow=4.3,SNR=5.2
KSU1 Kansas State U 108.41 51 *e*PKPdif PKiKP 08 19 45.5 -0.8
ARCES ARCESS Array B 108.80 343 Pdiff Pdif 08 15 39.9 -2.5
comp=Z,3.9nm,0.9s,baz=62,slow=5.6,SNR=6.3
ARCES PKiKP PKiKP 08 19 45.2 -1.9
comp=Z,3.3nm,0.8s,baz=29,slow=2.1,SNR=8.6
ARCES PKKPbc PKKPbc 08 30 53.0 -2.3
comp=Z,1.6nm,0.6s,baz=259,slow=2.5,SNR=8.5
ARCES ARCESS Array B 108.80 343 Pdif Pdif 08 15 39.9 -2.5
ARCES PKPdf PKiKP 08 19 45.2 -1.9
ARCES PKKPbc PKKPbc 08 30 53.0 -2.3
MOS Moscow 110.19 328 *e*P Pdif 08 15 40.4 -8.2
JOF Joensuu 110.28 336 *e*p Pdif 08 15 44.9 -4.1
comp=Z,12nm,0.7s
OBN Obninsk 110.97 327 *e*P Pdif 08 15 50.1 -1.9
OBN pmax pmax
comp=Z,6.0nm,0.9s
MIAR Mount Ida 111.39 55 *e*PKIKP PKiKP 08 19 51.4 -0.5
UALR University of 112.37 55 *e*PKiKP PKiKP 08 19 53.0 -0.8
JFWS Jewell Farm 112.50 46 *e*PKiKP PKiKP 08 19 52.4 -1.6
KAF Kangasniemi 112.69 336 *e*p Pdif 08 15 56.1 -3.6
comp=Z,2.7nm,0.6s
CCM Cathedral Cave 112.72 51 *e*PKIKP PKiKP 08 19 53.0 -1.5
FINES FINESS Array B 113.15 336 Pdiff Pdif 08 15 58.8 -2.9
comp=Z,2.0nm,0.7s,baz=62,slow=5.2,SNR=8.0
FINES PKKPbc PKKPbc 08 30 39.0 -2.1
comp=Z,1.6nm,0.6s,baz=240,slow=1.2,SNR=11
FINES PKKPab PKKPab 08 30 47.1 -1.9
comp=Z,3.3nm,0.8s,baz=130,slow=3.0,SNR=8.9
SIUC Southern Illin 114.36 51 *e*PKiKP PKiKP 08 19 57.0 -0.6
GLAT Glass 114.58 53 *e*PKiKP PKiKP 08 19 57.4 -0.7
OXF Oxford 114.80 55 *e*PKiKP PKiKP 08 19 55.5 -2.9
PLAL Pickwick Lake 115.79 54 *e*PKiKP PKiKP 08 19 57.8 -2.6
BLO Bloomington 116.11 49 *e*PKiKP PKPdf 08 20 00.0 -1.0
WCI Wyandotte Cave 116.50 50 *e*PKiKP PKPdf 08 20 00.3 -1.4
AKASG Malin Array Be 116.77 325 PKP PKPdf 08 20 00.2 -2.0
comp=Z,2.9nm,0.6s,baz=56,slow=2.3,SNR=10.0
AKASG PP PP 08 21 09.0 -2.1
comp=Z,0.7nm,0.5s,baz=52,slow=6.6,SNR=5.9
AKASG PKKPbc PKKPbc 08 30 27.2 -1.4
comp=Z,1.3nm,0.5s,baz=261,slow=3.8,SNR=5.9
AKASG Malin Array Be 116.77 325 PKiKP PKPdf 08 20 00.2 -2.0
AKASG 08 21 09.0
AKASG Malin Array Be 116.77 325 PKP PKPdf 08 20 00.2 -2.0
AKASG PP PP 08 21 09.0 -2.1
AKASG PKKPbc PKKPbc 08 30 27.2 -1.4
LRAL Lakeview Retre 117.04 56 *e*PKPdf PKPdf 08 20 01.8 -0.9
SWET Sewanee 117.47 54 *e*PKPdf PKPdf 08 20 01.9 -1.7
BR131 Keskin Array S 117.68 312 *e*PKPdf PKPdf 08 20 03.1 -0.9
BRTR Keskin Array B 117.68 312 PKP PKPdf 08 20 02.5 -1.5
comp=Z,2.2nm,0.6s,baz=136,slow=3.8,SNR=11
BRTR PP PP 08 21 19.4 +2.0
comp=Z,1.1nm,0.8s,baz=104,slow=5.2,SNR=3.6
BRTR PKKPbc PKKPbc 08 30 26.2 +0.9
comp=Z,1.4nm,0.7s,baz=235,slow=2.1,SNR=8.2
BRTR Keskin Array B 117.68 312 PKiKP PKPdf 08 20 02.5 -1.5
BRTR 08 21 19.5
ACSO Alum Creek Sta 118.45 47 *e*PKPdf PKPdf 08 20 04.3 -1.2
CPCT Cooper Cave 118.54 53 *e*PKPdf PKPdf 08 20 04.8 -0.8
NB2 NORSAR Subarra 118.91 341 PKKP PKKPbc 08 30 19.3 -1.7
comp=Z,3.5nm,1.1s,baz=222,slow=3.7
NOA NORSAR Array B 118.91 341 PKP PKPdf 08 20 04.5 -1.8
comp=Z,3.9nm,0.8s,baz=46,slow=2.0,SNR=3.3
NOA PKKPbc PKKPbc 08 30 20.4 -0.6
comp=Z,1.3nm,0.7s,baz=42,slow=3.6,SNR=5.5
MYNC Murphy 118.94 53 *e*PKiKP PKPdf 08 20 05.6 -0.8
TZTN Tazewell 119.04 52 *e*PKPdf PKPdf 08 20 06.0 -0.6
SADO Sadowa 119.58 41 PKKPbc PKKPbc 08 30 18.4 -0.1
comp=Z,8.5nm,0.8s,baz=144,slow=2.8,SNR=8.9
BOSA Boshof 120.25 232 PKP PKPdf 08 20 09.3 +0.4
comp=Z,17nm,0.6s,baz=136,slow=1.8,SNR=34
BOSA PKKPbc PKKPbc 08 30 15.4 -0.6
comp=Z,5.1nm,0.6s,baz=276,slow=2.6,SNR=12
BOSA Boshof 120.25 232 *e*PKPdf PKPdf 08 20 09.4 +0.5
KONO Kongsberg 120.48 340 *i* PKiKP PKPdf 08 20 08.0 -1.4
FWV Forest Hill 120.86 50 *e*PKPdf PKPdf 08 20 08.7 -1.4
ELN Prospectdale 121.01 50 *e*PKPdf PKPdf 08 20 09.1 -1.2
SCHQ Schefferville 121.25 27 PKP PKPdf 08 20 08.9 -1.9
comp=Z,1.7nm,0.6s,baz=233,slow=1.7,SNR=4.5
SCHQ PKKPbc PKKPbc 08 30 12.1 -0.2
comp=Z,6.3nm,0.7s,baz=122,slow=5.8,SNR=8.8
BLA Blacksburg 121.26 50 *e*PKiKP PKPdf 08 20 09.9 -1.0
LBTB Lobatse 121.56 236 *e*PKiKP PKPdf 08 20 12.0 +0.6
KOLS Kolonicke sedl 121.58 325 *e*PKP PKPdf 08 20 10.9 -0.6
SSPA Standing Stone 121.99 45 *e*PKPdf PKPdf 08 20 11.1 -1.2
CRVS Cervenica-Dubn 122.05 325 *e*PKP PKPdf 08 20 11.2 -1.2
LONY Lake Ozonia 122.60 40 *e*PKPdf PKPdf 08 20 12.2 -1.2
DWPF Disney 122.69 61 *e*PKPdf PKPdf 08 20 13.3 -0.3
BINY Binghamton 122.71 43 *e*PKPdf PKPdf 08 20 12.7 -0.9
NCB Newcomb 123.12 41 *e*PKPdf PKPdf 08 20 13.6 -0.9
SDMD Soldier's Deli 123.19 46 *e*PKPdf PKPdf 08 20 10.7 -3.8
MVL Millersville 123.32 46 *e*PKPdf PKPdf 08 20 14.2 -0.6
OKC Ostrava-Krasne 123.35 328 AMS AMS 09 19 20.0
comp=Z,200nm,21.5s
MORC Moravsky Berou 123.71 328 *e*PKIKP PKPdf 08 20 14.9 -0.7
VYHS Vyhne 123.74 326 *e*PKP PKPdf 08 20 14.7 -0.9
DPC Dobruska-Polom 124.00 329 *e*PKPdf PKPdf 08 20 16.0 -0.1
DPC AMS AMS 09 13 10.0
comp=Z,500nm,25.3s
UPC Upice 124.06 329 *e*PKPdf PKPdf 08 20 16.0 -0.2
BSEG Bad Segeberg 124.41 335 *e*PKPdf PKPdf 08 20 16.2 -0.7
LBNH Lisbon 124.47 39 *e*PKIKP PKPdf 08 20 16.6 -0.4
HNH Hanover 124.49 40 *e*PKPdf PKPdf 08 20 16.8 -0.3
PAL Palisades 124.62 44 *e*PKIKP PKPdf 08 20 16.7 -0.6
CPNY Central Park 124.68 44 *e*PKPdf PKPdf 08 20 17.1 -0.4
PVCC Panska Ves 124.77 330 AMS AMS 09 17 50.0
SANT Santorini 124.85 310 *e*PKPdf PKPdf 08 20 19.1 +1.4
BRG Berggiesshubel 124.86 331 *e*P PKPdf 08 20 16.6 -1.1
comp=Z,7.4nm,1.0s
CLL Collm 125.03 332 *e*PKPdf PKPdf 08 20 17.0 -1.1
CLL Collm 125.03 332 *e*PKIKP PKPdf 08 20 16.0 -2.1
comp=Z,logA/T=1.1
CLL *e* 08 20 52.0
CLL *e*PP PP 08 22 05.0 -2.5

CLL	Collm	125.03	332	ePKPdf	PKPdf	08 20 16.0	-2.1
	comp=Z,12nm,0.9s						
CLL				ex	x	08 20 52.0	
CLL				ePP	PP	08 22 05.0	-2.5
TREC	Trest	125.07	328	AMS	AMS	09 17 20.0	
	comp=Z,400nm,21.8s						
QUA2	Belchertown	125.11	42	ePKPdf	PKPdf	08 20 17.3	-1.0
FBE	Freiberg	125.11	331	ePKPdf	PKPdf	08 20 17.6	-0.7
PRU	Pruhonice	125.12	330	ePKPdf	PKPdf	08 20 17.3	-1.0
PRU				AMS	AMS	09 05 20.0	
	comp=Z,300nm,32.5s						
NRDL	Niedersach Rie	125.53	334	ePKPdf	PKPdf	08 20 18.2	-0.8
PKME	Peaks-Kenny Pk	125.57	37	ePKPdf	PKPdf	08 20 18.0	-1.1
WES	Weston	125.74	41	ePKIKP	PKPdf	08 20 19.1	-0.4
CLZ	Clausthal	125.87	333	ePKPdf	PKPdf	08 20 19.1	-0.6
TANN	Tannenbergstha	125.87	331	ePKPdf	PKPdf	08 20 18.9	-0.8
WERD	Werda	125.93	331	ePKPdf	PKPdf	08 20 19.0	-0.8
GUNZ	Gunzen	125.97	331	ePKPdf	PKPdf	08 20 19.0	-0.9
NKC	Novy Kostel	126.00	331	ePKPdf	PKPdf	08 20 19.6	-0.4
MOX	Moxa	126.12	332	ePKPdf	PKPdf	08 20 19.1	-1.1
KHC	Kasperske Hory	126.15	329	ePKPdf	PKPdf	08 20 19.7	-0.5
KHC				AMS	AMS	09 15 30.0	
	comp=Z,300nm,16.8s						
KHC	Kasperske Hory	126.15	329	i PKIKP	PKPdf	08 20 19.0	-1.2
KHC	Kasperske Hory	126.15	329	ePKIKP	PKPdf	08 20 19.7	-0.5
KHC				MLR	MLR		
	comp=Z,300nm,16.8s						
GTTG	Gvttingen	126.26	333	ePKPdf	PKPdf	08 20 20.6	+0.2
GEC2	GERESS Array S	126.27	329	ePKPdf	PKPdf	08 20 19.3	-1.2
GERES	GERESS Array B	126.27	329	PKP	PKPdf	08 20 19.7	-0.8
	comp=Z,8.7nm,0.9s,baz=75,slow=1.5,SNR=36						
MANZ	Manzenberg	126.33	331	ePKPdf	PKPdf	08 20 20.1	-0.5
ROTZ	Rotzenmuhle	126.42	331	ePKPdf	PKPdf	08 20 19.9	-0.9
WET	Wettzell	126.50	330	ePKPdf	PKPdf	08 20 20.3	-0.6
OTAV	Otavalo	126.62	94	ePKPdf	PKPdf	08 20 21.8	+0.7
IBBN	Ibbenburen	126.66	335	ePKPdf	PKPdf	08 20 21.3	+0.1
GRA1	Grafenberg Arr	126.95	331	ePKPdf	PKPdf	08 20 20.9	-0.9
GRF	Grafenberg Arr	126.95	331	ePKPdf	PKPdf	08 20 20.9	-0.9
LMGC	Las Mercedes	128.02	69	eP	PKPdf	08 20 24.9	+1.1
STU	Stuttgart	128.55	331	ePKPdf	PKPdf	08 20 24.3	-0.5
BFO	Black Forest	129.27	331	ePKPdf	PKPdf	08 20 25.5	-0.7
WLF	Walferdange	129.30	334	ePKPdf	PKPdf	08 20 26.0	-0.2
GIVF	Givet	129.53	335	ePKP1	PKPdf	08 20 24.1	-2.6
CDF	Champ du Feu	129.71	332	ePKP1	PKPdf	08 20 24.0	-3.0
HINF	Hinteralfeld	130.33	332	ePKP1	PKPdf	08 20 25.2	-3.0
HAU	Haudompre	130.43	332	ePKP1	PKPdf	08 20 25.6	-2.8
ROSC	El Rosal	131.19	89	PKP	PKPdf	08 20 30.7	+0.8
	comp=Z,51nm,0.6s,baz=97,slow=4.5,SNR=46						
CABF	La Chapelle	131.56	331	ePKP1	PKPdf	08 20 28.1	-2.4
LOR	Lormes	132.10	333	ePKP1	PKPdf	08 20 29.3	-2.3
	comp=Z,17nm,1.0s						
SSF	Saint Saulge	132.42	334	ePKP1	PKPdf	08 20 30.0	-2.2
	comp=Z,22nm,1.1s						
SMF	Signal de Mont	132.58	333	ePKP1	PKPdf	08 20 30.1	-2.4
	comp=Z,22nm,0.9s						
AVF	Avril sur Loir	132.69	333	ePKP1	PKPdf	08 20 30.0	-2.7
SBF	Sospel	132.81	328	ePKP1	PKPdf	08 20 30.5	-2.4
	comp=Z,19nm,0.8s						
ORIF	Oris-en-Rattie	132.88	330	ePKP1	PKPdf	08 20 30.9	-2.1
	comp=Z,14nm,0.9s						
BGF	Bois d'Agland	133.09	334	ePKP1	PKPdf	08 20 31.3	-2.1
GRR	Gorron	133.15	338	ePKP1	PKPdf	08 20 30.6	-2.9
FRF	La Foret Royal	133.44	328	ePKP1	PKPdf	08 20 31.7	-2.4
VIVF	Saint-Julien-l	133.52	331	ePKP1	PKPdf	08 20 31.4	-2.8
	comp=Z,17nm,0.9s						
TCF	Toulx Ste Croi	133.58	334	ePKP1	PKPdf	08 20 32.4	-1.9
	comp=Z,24nm,1.0s						
LMR	La Mourre	133.67	328	ePKP1	PKPdf	08 20 32.2	-2.3
	comp=Z,18nm,0.9s						
SMRF	Simiane la Rot	133.70	329	ePKP1	PKPdf	08 20 32.8	-1.8
	comp=Z,30nm,1.2s						
MFF	Saint Martin d	134.33	336	ePKP1	PKPdf	08 20 33.7	-2.1
LASF	Ste Croix	134.49	331	ePKP1	PKPdf	08 20 34.3	-1.7
	comp=Z,31nm,1.0s						
CPUP	Villa Florida	135.12	138	PKP	PKPdf	08 20 36.5	-0.7
	comp=Z,6.0nm,0.7s,baz=226,slow=1.1,SNR=14						
CPUP				PP	PP	08 23 14.3	+1.3
	comp=Z,4.0nm,1.0s,baz=225,slow=9.4,SNR=3.1						
CPUP	Villa Florida	135.12	138	ePKPdf	PKPdf	08 20 36.8	-0.4
KEST	Kesra	136.75	318	PKP	PKPdf	08 20 38.7	-1.6
	comp=Z,3.5nm,1.1s,baz=90,slow=7.1,SNR=4.2						
SJG	San Juan	138.47	70	ePKIKP	PKPdf	08 20 43.6	+0.2
ESDC	Sonseca Array	141.58	333	PKP	PKPdf	08 20 48.5	-0.6
	comp=Z,1.0nm,0.5s,baz=48,slow=2.2,SNR=5.1						
PVIS	Viseu	142.31	338	ePKP	PKPdf	08 20 45.2	-5.2
MTE	Manteigas	142.46	338	ePKP	PKPdf	08 20 49.9	-0.7
PCBR	Castelo Branco	142.92	337	ePKP	PKPdf	08 20 47.6	-3.8
PTOM	Tomar	143.47	338	ePKP	PKPdf	08 20 49.6	-2.8
GRW	Mount Saint Ca	143.65	78	eP	PKPdf	08 20 50.5	-2.3
PESTR	Estremoz	143.80	336	ePKP	PKPdf	08 20 49.8	-3.2
FDF	Fort de France	143.80	74	eP	PKPdf	08 20 51.4	-1.6
TRN	Trinidad (W)	144.04	81	eP	PKPdf	08 20 52.1	-1.3
TBH	Brigand Hill	144.38	81	eP	PKPdf	08 20 54.5	+0.5
TPR	Prospect	144.61	80	eP	PKPdf	08 20 54.5	+0.1
PBEJ	Beja	144.63	336	ePKP	PKPdf	08 20 53.2	-1.2
SFS	San Fernando	145.22	332	ePKIKP	PKPdf	08 20 56.2	+0.7
PTEO	Sao Teotonio	145.39	336	ePKP	PKPdf	08 20 55.5	-0.3
CAM4	Nova Friburgo	146.92	150	eP	PKPbc	08 21 00.9	+0.5
CAM4				i		08 21 02.3	
CAM4				i		08 21 03.3	
CAM4				i		08 21 05.9	
CAM4				i		08 21 07.5	
CAM4				i		08 21 10.4	
BDFB	Brasilia	148.70	134	PKP	PKPdf	08 21 01.8	+0.5
	comp=Z,28nm,0.8s,baz=315,slow=2.6,SNR=20						
BDFB				PKPbc	PKPbc	08 21 04.7	-0.4
	comp=Z,44nm,0.7s,baz=281,slow=2.4,SNR=22						
BAO	Brasilia Array	148.72	134	PKPdf	PKPdf	08 21 02.0	+0.7
TORD	Torodi Ar. Bea	152.55	286	PKP	PKPdf	08 21 06.7	-0.6
	comp=Z,7.8nm,0.9s,baz=39,slow=1.6,SNR=22						
TORD				PKPbc	PKPbc	08 21 13.9	-0.4
	comp=Z,33nm,0.7s,baz=47,slow=2.1,SNR=82						
TORD				PKPab	PKPab	08 21 25.0	+0.1
	comp=Z,8.5nm,0.6s,baz=78,slow=3.6,SNR=8.6						
TORD				PP	PP	08 24 56.0	-1.5
	comp=Z,2.3nm,0.8s,baz=83,slow=4.7,SNR=4.6						
DBIC	Dimbokro	159.69	272	PKP	PKPdf	08 21 16.5	-0.1
	comp=Z,9.6nm,0.9s,baz=183,slow=2.7,SNR=5.0						
DBIC				PKPab	PKPab	08 21 56.2	+0.7
	comp=Z,53nm,0.8s,baz=79,slow=5.7,SNR=24						
DBIC	Dimbokro	159.69	272	PKP	PKPdf	08 21 16.5	-0.1
DBIC				PKPab	PKPab	08 21 56.2	+0.7
LIC	Lamto	159.85	271	ePKP2	PKPab	08 21 56.7	+0.5
	comp=Z,271nm,1.1s						

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*ATH **09** 08:13:21.0, 40.19N×19.54E, h5km±2km, MD3.5/4*
*NEIC **09** 08:13:21.0, 40.19N×19.54E, h5km, MD3.5(ATH), ML3.0(THE), After ATH.*
*ROM **09** 08:13:23.3±0.6, 39.83N×19.85E, h10km, Md3.1/1, Ml3.0/2, Error ellipse: s-maj=10.5km s-min=4.2km az=164.0*
*THE **09** 08:13:24.6, 40.12N×19.69E, h0km, ML3.0*
CSEM 09 08:13:24.1±0.3**, 40.12N×19.66E, h2km, MD3.5, Error ellipse: s-maj=5.6km s-min=4.7km az=67.0, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.32	56	i Pg	Pg	08 13 27.6	-2.7
TPE				i Sg	Sg	08 13 32.4	-2.0
KEK	Kerkira	0.41	165	ePB	Pg	08 13 31.1	-1.0
KEK				eSB	Sg	08 13 38.7	+1.2
LSK	Leskovik	0.72	87	i Pg	Pg	08 13 34.7	-3.2
LSK				i Sg	Sg	08 13 45.9	-1.3
SCTE	Santa Cesarea	0.92	268	Pn	Pg	08 13 43.4	+1.7
SCTE				Sn	Sg	08 13 58.3	+4.7
	292nm,0.4s						
JAN	Janina	1.02	116	ePG	Pg	08 13 42.3	-1.4
JAN				eSB	Sg	08 13 58.7	+1.7
LCI	Lecce	1.21	281	Pn	Pg	08 13 48.9	+1.6
LCI				Sn	Sg	08 14 07.4	+4.5
	72nm,0.5s						
TIR	Tirane	1.24	7	ePg	Pg	08 13 47.8	-0.1
TIR				eSg	Sg	08 14 06.5	+2.5
TIR	Tirane	1.24	7	Pn	Pn	08 13 50.9	+2.5
	190nm,0.8s						
TIR				eSg	Sg	08 14 06.5	+2.5
MEV	Metsovon	1.25	105	ePg	Pg	08 13 46.2	-1.9
MEV				eSg	Sg	08 14 06.5	+2.3
OHR	Ohrid	1.32	41	ePg	Pg	08 13 48.5	-0.9
OHR				eSg	Sg	08 14 09.1	+2.6
OHR	Ohrid	1.32	41	ePn	Pn	08 13 47.7	-1.8
OHR				eSn	Sn	08 14 09.0	+1.4
FNA	Florina	1.47	62	ePg	Pn	08 13 49.5	-2.1
FNA				eSg	Sg	08 14 11.8	+0.5
LKD	Levkas	1.60	151	ePg	Pg	08 13 54.0	-0.8
LKD				eSg	Sg	08 14 16.1	+0.6
EVR	Evrytania	2.05	125	ePN	Pn	08 14 00.8	+1.3
VLS	Valsamata	2.06	159	ePG	Pb	08 14 01.2	-1.1
NOCI	Noci	2.09	290	Pn	Pg	08 14 03.1	-1.1
AGG	Agios Georgios	2.33	117	ePn	Pn	08 14 03.8	+0.3
AGG				eSn	Sn	08 14 32.8	+0.1
VAY	Valandovo	2.52	60	ePn	Pn	08 14 06.7	+0.7
KNT	Kendrikon	2.67	66	ePn	Pn	08 14 08.5	+0.3

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*NAO **09** 08:15:06.5±1.8, 60.71N×3.78E, ML3.0*
*ISCJB **09** 08:15:09.1±1.3, 60.81N±0.03×3.9E±0.1, h6km±6km, Error ellipse: s-maj=9.9km s-min=5.1km az=1.1*
*CSEM **09** 08:15:11.2±0.2, 60.88N×4.01E, h12km, ML2.8, Error ellipse: s-maj=4.8km s-min=2.1km az=94.0*
*NEIC **09** 08:15:13.0, 60.89N×4.03E, h12km, ML2.8(BER), ML3.0(NAO), After BER.*
*BER **09** 08:15:14.3±2.8, 60.84N×4.09E, h15km, MD2.7, ML2.8, ML3.0(NAO)*
ISC 09 08:15:10.8±1.3**, 60.84N**±0.03×**3.9E**±0.1**, h15**km±5km**, n39, σ1.21**/74**, 6C-4D, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUE	Sulen	0.46	61	e	Pg	08 15 21.6	+1.7
SUE				⇓eP		08 15 21.6	
SUE				eS	Sg	08 15 26.6	+0.5
SUE				AML	AML	08 15 27.9	
	comp=Z,374nm,0.1s						
SUE	Sulen	0.46	61	⇓eP	Pg	08 15 21.6	+1.7
SUE				eS	Sg	08 15 26.6	+0.5
ASK	Askoy	0.71	119	⇑iP	Pg	08 15 26.0	+1.3
ASK				eS	Sg	08 15 34.2	+0.1
ASK				AML	AML	08 15 36.3	
	comp=Z,234nm,0.2s						
ASK	Askoy	0.71	119	⇑iP	Pg	08 15 26.0	+1.3
ASK				eS	Sg	08 15 34.2	+0.1
RUND	Rundenannen	0.82	120	⇑iP	Pg	08 15 27.7	+1.0
RUND				eS	Sg	08 15 37.3	-0.3
RUND				AML	AML	08 15 39.2	
	comp=Z,833nm,0.2s						
RUND	Rundenannen	0.82	120	⇑iP	Pg	08 15 27.7	+1.0
RUND				eS	Sg	08 15 37.3	-0.3
BER	Bergen	0.82	123	eP	Pg	08 15 27.7	+0.9
BER				eS	Sg	08 15 37.4	-0.2
BER				AML	AML	08 15 38.6	
	comp=Z,426nm,0.3s						
BER	Bergen	0.82	123	eP	Pg	08 15 27.7	+1.0
BER				eS	Sg	08 15 37.3	-0.3
BER	Bergen	0.82	123	eP	Pg	08 15 27.7	+0.9
	SNR=93						
BER				eS	Sg	08 15 37.3	-0.3
EGD	Espegrend	0.85	131	⇑iP	Pg	08 15 28.4	+1.1
EGD				eS	Sg	08 15 38.4	-0.1
EGD				AML	AML	08 15 40.1	
	comp=Z,254nm,0.2s						
EGD	Espegrend	0.85	131	⇑iP	Pg	08 15 28.4	+1.1
EGD				eS	Sg	08 15 38.4	-0.1
FOO	Floro	0.93	34	⇓iP	Pb	08 15 26.5	-2.1
	comp=Z,788nm,0.1s						
FOO				eS	Sb	08 15 38.6	-2.2
FOO				AML	AML	08 15 40.1	
	comp=Z,788nm,0.1s						
FOO	Floro	0.93	34	⇓iP	Pb	08 15 26.5	-2.1
FOO				eS	Sb	08 15 38.6	-2.2
HYA	Hoyanger	1.14	72	eP	Pb	08 15 33.6	+1.4
HYA				eS	Sb	08 15 47.7	+0.8
HYA				AML	AML	08 15 48.8	
	comp=Z,599nm,0.2s						
HYA	Hoyanger	1.14	72	eP	Pb	08 15 33.6	+1.4
HYA				eS	Sb	08 15 47.7	+0.8
HYA	Hoyanger	1.14	72	eP	Pb	08 15 33.6	+1.4
	SNR=92						
HYA				eS	Sb	08 15 47.7	+0.8
	comp=Z,599nm,0.2s,SNR=92						
ODD1	Odda	1.63	124	eP	Pn	08 15 38.3	-0.5
ODD1				ePg	Pg	08 15 40.4	-1.6
ODD1				eS	Sn	08 16 00.5	+1.0
ODD1				AML	AML	08 16 01.3	
	comp=Z,192nm,0.3s						
ODD1	Odda	1.63	124	eP	Pn	08 15 38.3	-0.5
ODD1				ePg	Pg	08 15 40.4	-1.6
ODD1				eS	Sn	08 16 00.6	+1.1
ODD1	Odda	1.63	124	ePg	Pg	08 15 40.4	-1.6
	SNR=91						
ODD1				eS	Sn	08 16 00.5	+1.0
	comp=Z,192nm,0.3s,SNR=55						
KMY	Karmoy	1.76	158	eP	Pn	08 15 41.1	+0.5
KMY				eSg	Sg	08 16 07.0	-0.4
KMY				AML	AML	08 16 07.9	
	comp=Z,48nm,0.1s						
KMY	Karmoy	1.76	158	eP	Pn	08 15 41.1	+0.5
KMY				eSg	Sg	08 16 07.0	-0.4
KMY	Karmoy	1.76	158	eP	Pn	08 15 41.1	+0.4
	SNR=55						
KMY				eSg	Sg	08 16 07.0	-0.3
	SNR=91						
BLS5	Blasjo	1.90	137	eP	Pn	08 15 44.1	+1.5
BLS5				eSg	Sg	08 16 10.7	-1.1
BLS5				AML	AML	08 16 12.4	
	comp=Z,98nm,0.2s						
BLS5	Blasjo	1.90	137	eP	Pn	08 15 44.1	+1.5
BLS5				eSg	Sg	08 16 10.7	-1.1
BLS5	Blasjo	1.90	137	eP	Pn	08 15 44.1	+1.5
	SNR=55						
BLS5				eSg	Sg	08 16 10.7	-1.1
	SNR=91						
STAV	Stavanger	2.10	154	eSg	Sg	08 16 16.8	-1.6
DOMB	Dombas	2.74	62	eP	Pn	08 15 55.6	+1.4
DOMB				e		08 15 60.0	
DOMB				i		08 16 02.4	
DOMB				eSg	Sg	08 16 34.6	-4.3
DOMB				AML	AML	08 16 41.8	
	comp=Z,120nm,0.2s						
DOMB	Dombas	2.74	62	eP	Pn	08 15 55.6	+1.4
DOMB				e		08 15 60.0	
DOMB				i		08 16 02.4	
DOMB				eSg	Sg	08 16 34.6	-4.3
DOMB	Dombas	2.74	62	eP	Pn	08 15 55.7	+1.5
	SNR=55						
DOMB				eSg	Sg	08 16 34.6	-4.3
	SNR=91						
SNART	Snartemo	3.01	145	eP	Pn	08 15 58.2	+0.3
SNART				eSg	Sg	08 16 42.7	-4.7
SNART				AML	AML	08 16 46.5	
	comp=Z,74nm,0.4s						
KONO	Kongsberg	3.06	110	ePg	Pg	08 16 06.9	-2.5
KONO				eSg	Sg	08 16 42.3	-6.9
NAO01	NORSAR Array S	3.40	87	ePn	Pn	08 16 03.6	+0.4
NAO01	NORSAR Array S	3.40	87	ePn	Pn	08 16 03.6	+0.3
NB2	NORSAR Subarra	3.56	84	Pn	Pn	08 16 05.5	+0.2
	baz=273,slow=12						
NB2				Pg	Pg	08 16 14.6	-4.3
NB2				Lg		08 17 02.6	
	baz=271,slow=37						
HFS	Hagfors	4.88	94	Pn	Pn	08 16 23.3	-0.3
	baz=272,slow=14						
HFS				Sn	Sn	08 17 16.4	-3.4
	baz=294,slow=22						
HFS				Lg		08 17 40.5	
	baz=284,slow=28						
HFS	Hagfors	4.88	94	Pn	Pn	08 16 23.3	-0.2
	SNR=9.3						
HFS				Sn	Sn	08 17 16.4	-3.3
FIA0	FINESS Array S	10.71	77	Sn	Sn	08 19 36.7	-6.4
	baz=281,slow=28						
FIA0				Lg		08 20 37.5	
	baz=273,slow=28						
ARA0	ARCESS Array S	12.49	37	Pn	Pn	08 18 06.5	-1.5
	baz=225,slow=16						
ARA0	ARCESS Array S	12.49	37	Pn	Pn	08 18 06.4	-1.5

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*ISCJB **09** 08:31:47.2±1.3, 0.16S±0.06×123.14E±0.07, h89km±14km, mb4.2/14, Error ellipse: s-maj=13.5km s-min=7.1km az=98.9*
*IDC **09** 08:31:47.4±3.4, 0.20S×123.07E, h78km±29km, mb3.9/7, mb1 3.9/8, mb1mx3.8/16, mbtmp4.2/8, MS4.0/2, Ms1 4.0/2, ms1mx3.1/31, Error ellipse: s-maj=32.0km s-min=15.7km az=75.0*
*BJI **09** 08:31:48.0, 0.20S×123.10E, h93km, mb4.4*
*NEIC **09** 08:31:49.1±0.8, 0.17S×123.15E, h93km±8km, mb4.5/8, Error ellipse: s-maj=8.2km s-min=4.9km az=51.0*
ISC 09 08:31:48.8±1.1**, 0.19S**±0.06×**123.14E**±0.07**, h86**km±11km**, n34, σ0.80**/31**, mb4.2**/14**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	7.61	19	ePn	Pn	08 33 36.9	-0.1
KKM	Kota Kinabalu	9.28	312	ePn	Pn	08 34 00.5	+0.8
KKM				eSn	Sn	08 35 41.6	-0.8
KSM	Kuching	12.94	277	ePn	Pn	08 34 50.0	+0.8
KAKA	Kakadu	15.48	144	eP	Pn	08 35 21.0	-1.1
	11nm,0.6s						
FITZ	Fitzroy Crossi	17.96	172	eP	Pn	08 35 51.7	-1.1
	6.7nm,0.8s						
FITZ	Fitzroy Crossi	17.96	172	P	Pn	08 35 50.8	-2.0
	0.2nm,0.3s,baz=324,slow=19,SNR=6.1						
WB2	Warramunga Arr	22.49	151	eP	P	08 36 41.7	+0.7
PSI	Prapat	24.39	277	P	P	08 36 58.1	-0.8
	13nm,0.9s,mb4.2,baz=108,slow=12,SNR=4.1						
GUMO	Guam	25.51	57	eP	P	08 37 09.3	+0.3
	0.1nm,0.5s						
AS31	Alice Springs	25.57	157	eP	P	08 37 10.7	+1.1
ASPA	Alice Springs	25.57	157	eP	P	08 37 10.7	+1.1
ASAR	Alice Springs	25.57	157	P	P	08 37 10.2	+0.6
	1.0nm,0.6s,mb3.4,baz=341,slow=14,SNR=17						
ASAR				PcP	PcP	08 40 38.5	-0.1
	1.0nm,0.6s,baz=344,slow=2.0,SNR=8.7						
ASAR				ScP	ScP	08 44 11.7	+1.5
	0.4nm,0.8s,baz=329,slow=1.6,SNR=4.3						
ASAR				LR	LR	08 48 06.1	
	comp=Z,180nm,19.8s,baz=10,slow=38						
PMG	Port Moresby	25.60	112	eP	P	08 37 10.9	+1.0
	43nm,1.3s,mb4.7						
CHTO	Chiang Mai	30.35	310	eP	P	08 37 52.3	0.0
	13nm,1.3s,mb4.4						
HNR	Honiara	37.77	105	eP	P	08 38 55.2	-1.1
	160nm,1.0s						
MJAR	Matsushiro Arr	39.13	19	P	P	08 39 06.8	-1.0
	1.9nm,0.8s,mb4.0,baz=200,slow=8.5,SNR=5.1						
MDRS	Chennai	44.51	289	ex	x	08 39 18.9	
MDRS				ex	x	08 41 18.9	
MDRS				ex	x	08 42 55.9	
GTA	Gaotai	44.83	334	eP	P	08 39 55.4	+1.3
GTA				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.3						
JIRN	Jiri	44.98	311	eP	P	08 39 56.0	+0.6
	comp=Z,13nm,0.6s,mb4.8						
GUN	Gumba	45.35	311	eP	P	08 39 58.8	+0.5
PKI	Pulchoki	45.53	310	eP	P	08 39 59.8	+0.1
KKN	Kakani	45.74	311	eP	P	08 40 01.6	+0.2
DMN	Daman	45.78	310	eP	P	08 40 01.0	-0.7
GKN	Gorkha	46.34	310	eP	P	08 40 06.0	-0.1
KOLN	Koldanda	47.02	310	eP	P	08 40 11.6	+0.3
	comp=Z,16nm,0.7s,mb4.8						
ULN	Ulaanbaatar	49.87	346	eP	P	08 40 33.2	0.0
	comp=Z,3.0nm,0.8s,mb4.3						
SONM	Songino Array	50.01	345	P	P	08 40 35.1	+0.9
	comp=Z,4.8nm,0.8s,mb4.5,baz=159,slow=9.3,SNR=26						
MKAR	Makanchi Array	58.85	328	P	P	08 41 37.4	-1.0
	comp=Z,0.9nm,0.3s,mb4.3,baz=119,slow=7.6,SNR=7.8						
KURK	Kurchatov	63.21	330	eP	P	08 42 06.9	-1.0
	comp=Z,1.8nm,0.6s,mb4.2						
KURK				ePP	PP	08 44 26.7	-1.1
RAR	Rarotonga	77.89	112	LR	LR	09 16 05.9	
	comp=Z,153nm,21.3s,baz=105,slow=34						
MAW	Mawson	78.86	200	P	P	08 43 41.9	-0.6
	comp=Z,0.8nm,0.7s,mb3.7,baz=61,slow=11,SNR=3.0						
VNDA	Vanda	80.04	172	P	P	08 43 48.0	-0.8
	comp=Z,1.1nm,0.8s,mb3.8,baz=314,slow=6.5,SNR=9.4						
TORD	Torodi Ar. Bea	120.59	285	PKP	PKPdf	08 50 29.6	-0.8
	comp=Z,0.8nm,0.8s,baz=54,slow=0.9,SNR=5.2						
CPUP	Villa Florida	153.63	179	PKPbc	PKPbc	08 51 38.0	+0.6
	comp=Z,1.6nm,0.6s,baz=211,slow=1.1,SNR=5.0						

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*ISCJB **09** 08:45:17.3±2.0, 24.84S±0.09×179.6E±0.1, h468km±27km, mb4.1/10, Error ellipse: s-maj=17.2km s-min=14.7km az=176.4*
*NEIC **09** 08:45:18.6±1.2, 24.83S×179.68E, h476km±16km, mb4.3/7, Error ellipse: s-maj=14.1km s-min=11.6km az=101.0*
*IDC **09** 08:45:18.9±2.7, 24.85S×179.69E, h475km±31km, mb3.6/7, mb1 3.7/9, mb1mx3.6/13, mbtmp4.5/9, Error ellipse: s-maj=20.8km s-min=15.7km az=71.0*
ISC 09 08:45:18.5±1.4**, 24.89S**±0.09×**179.7E**±0.1**, h468**km±21km**, n24, σ0.66**/23**, mb4.1**/10**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	13.51	189	P	P	08 48 13.5	+0.2
	2.0nm,0.3s,baz=128,slow=12,SNR=8.9						
AFI	Afiamalu	13.57	38	P	P	08 48 13.3	-0.6
	2.9nm,0.3s,baz=85,slow=20,SNR=5.2						
SNZO	South Karori	16.89	193	eP	P	08 48 49.6	+0.5
	43nm,0.9s						
RPZ	Rata Peaks	20.06	198	P	P	08 49 18.8	-0.5
	8.8nm,0.4s,baz=334,slow=3.0,SNR=12						
HNR	Honiara	24.27	306	P	P	08 49 56.9	-0.3
	113nm,0.7s,mb5.4,baz=91,slow=2.8,SNR=3.1						
CTA	Charters Tower	31.20	272	⇓iP	P	08 50 59.2	+1.2
	15nm,0.4s,mb4.8						
CTA	Charters Tower	31.20	272	P	P	08 50 59.3	+1.2
	19nm,0.4s,mb4.9,baz=98,slow=11,SNR=54						
STKA	Stephens Creek	34.09	249	eP	P	08 51 23.3	+0.6
	3.4nm,1.1s,mb3.7						
STKA	Stephens Creek	34.09	249	P	P	08 51 22.9	+0.2
	1.9nm,0.5s,mb3.8,baz=80,slow=21,SNR=4.8						
AS31	Alice Springs	41.59	262	eP	P	08 52 24.3	+0.1
ASAR	Alice Springs	41.59	262	P	P	08 52 24.3	+0.1
	2.0nm,0.4s,mb3.9,baz=90,slow=7.6,SNR=41						
ASAR				S	S	08 58 01.3	-4.3
	0.7nm,0.7s,baz=99,slow=16,SNR=3.7						
ASPA	Alice Springs	41.60	262	eP	P	08 52 24.3	+0.1
WB2	Warramunga Arr	42.05	267	eP	P	08 52 27.3	-0.5
KAKA	Kakadu	46.12	276	eP	P	08 52 58.7	-0.7
	6.2nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	50.47	267	eP	P	08 53 32.1	+0.1
	7.6nm,1.2s,mb3.9						
VNDA	Vanda	53.37	185	P	P	08 53 53.4	+0.3
	1.2nm,0.7s,mb3.3,baz=357,slow=6.5,SNR=14						
CASY	Casey	59.10	206	eP	P	08 54 31.3	-1.4
QSPA	South Pole Qui	65.20	180	eP	P	08 55 12.7	+0.2
	7.1nm,0.8s,mb4.3						
MAW	Mawson	76.72	201	eP	P	08 56 19.9	-0.7
	3.0nm,0.5s,mb4.1						
MAW	Mawson	76.72	201	P	P	08 56 20.1	-0.5
	3.7nm,0.5s,mb4.2,baz=132,slow=6.4,SNR=29						
NVAR	Mina Array Bea	85.66	44	P	P	08 57 08.1	+1.3
	0.8nm,0.7s,mb3.5,baz=231,slow=9.6,SNR=6.4						
NVAR	Mina Array Bea	85.66	44	P	P	08 57 08.1	+1.3
HFS	Hagfors	143.45	348	PKP	PKPdf	09 03 55.3	-3.6
	1.3nm,0.3s,baz=76,slow=6.3,SNR=14						
TORD	Torodi Ar. Bea	168.17	190	PKPab	PKPab	09 05 41.3	-0.6
	1.4nm,0.8s,baz=167,slow=3.7,SNR=7.0						

IDC 09 09:01:06.3±3.1**, 1.54N×97.08E, h0km, mb3.6**/4**, mb1 3.6**/4**, mb1mx3.5**/18**, mbtmp3.6**/4**, Error ellipse: s-maj=137.3km s-min=27.4km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.69	127	P	P	09 09 13.3	+0.4
	0.4nm,0.9s,baz=298,slow=7.7,SNR=2.9						
SONM	Songino Array	46.81	9	P	P	09 09 37.8	0.0
	1.0nm,0.9s,baz=200,slow=9.7,SNR=4.4						
MKAR	Makanchi Array	46.88	346	P	P	09 09 38.6	+0.3
	0.7nm,0.7s,baz=152,slow=6.2,SNR=3.9						
BVAR	Borovoye Array	55.89	341	P	P	09 10 45.6	-0.2
	0.4nm,0.5s,baz=116,slow=6.6,SNR=3.5						

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*ISCJB **09** 09:05:12.0±1.6, 40.11N±0.06×19.6E±0.1, h10km, Error ellipse: s-maj=12.8km s-min=7.5km az=36.1*
*CSEM **09** 09:05:14.1, 39.54N×19.52E, h30km, MD3.5/4, After ATH*
*NEIC **09** 09:05:14.1, 39.54N×19.52E, h30km, MD3.4(ATH), After ATH.*
*ATH **09** 09:05:14.1, 39.54N×19.52E, h30km, MD3.4/4*
ISC 09 09:05:09.4±1.7**, 40.03N**±0.07×**19.5E**±0.1**, h10**km**, n8, σ1.50**/13**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	Kerkira	0.41	141	*e*PB	Pg	09 05 21.3	+3.9
TPE	Tepelena	0.49	58	*i* Pg	Pg	09 05 17.9	-1.0
TPE				*i* Sg	Sg	09 05 22.2	-3.2
LSK	Leskovik	0.88	82	*i* Pg	Pg	09 05 25.7	-0.5
LSK				*i* Sg	Sg	09 05 36.4	-1.2
JAN	Janina	1.13	109	*e*PN	Pn	09 05 33.3	+2.1
JAN				*e*SN	Sn	09 05 47.7	+1.0
OHR	Ohrid	1.48	43	*e*Pn	Pn	09 05 35.3	-0.7
OHR				*e*Sn	Sn	09 05 56.6	+1.2
VLS	Valsamata	2.05	154	*e*PB	Pn	09 05 41.8	-2.0
EVR	Evrytania	2.13	121	*e*PB	Pb	09 05 47.9	-0.1
VAY	Valandovo	2.69	60	*e*Pn	Pn	09 05 57.3	+4.7
VAY				*e*Sn	Sn	09 06 27.5	+2.3

CSEM ***09*** *09:18:17.9±0.1, 3704N×2794E, h5^{km}, MD3.7, Error ellipse: s-maj=1.3km s-min=1.0km az=170.0*
ISK ***09*** *09:18:17.8, 3704N×2794E, h5^{km}, MD3.7, ML3.8*
IDC ***09*** *09:18:17.5±1.0, 3695N×2793E, h0^{km}, mb3.9/5, mb1 3.9/12, mb1mx3.8/25, mbtmp3.8/12, ML3.6/7, Error ellipse: s-maj=16.6km s-min=16.1km az=151.0*
ISCJB ***09*** *09:18:17.8±0.5, 3700N±002×2797E±002, h6^{km}±3^{km}, mb3.8/6, Error ellipse: s-maj=3.0km s-min=2.7km az=13.7*
NEIC ***09*** *09:18:17.7, 3705N×2794E, h4^{km}, mb4.0/1, MD3.7(ISK), MD3.8(ATH), After ISK.*
ATH ***09*** *09:18:19.5, 3700N×2783E, h27^{km}±2^{km}, MD3.8/7*
THE ***09*** *09:18:20.3, 3708N×2795E, h0^{km}*
HLW ***09*** *09:18:20.4, 3705N×2801E, h33^{km}, Mb3.8*
ISC 09 09:18:18.9±0.5**, 3701N**±002×**2794E**±002**, h4**^{km}±3^{km}**, n111, σ1ˢ03**/136**, mb3.8**/6**, 1C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.30	66	*i* PG	Pg	09 18 24.5	-0.3
YER				*i* SG	Sg	09 18 28.5	-0.2
DAT	Datca	0.40	226	*i* PG	Pg	09 18 26.3	-0.4
DAT				*i* SG	Sg	09 18 33.4	+1.5
BODT	Bodrum	0.51	276	*i* PG	Pg	09 18 28.3	-0.3
BODT	Bodrum	0.51	276	Pg	Pg	09 18 28.4	-0.2
DALT	Dalyan (Mudla)	0.61	113	*i* PG	Pg	09 18 29.9	-0.7
DALT	Dalyan (Mudla)	0.61	113	Pg	Pg	09 18 30.0	-0.7
DALT	Dalyan (Mudla)	0.61	113	Pg	Pg	09 18 30.0	-0.6
AYDN	Tasoluk	0.65	356	*i* P	Pg	09 18 31.4	0.0
AYDN				*i* S	Sg	09 18 40.5	+0.6
ARG	Arkhangelos	0.81	169	*e*PB	Pb	09 18 35.0	-0.5
ARG				*e*SN	Sg	09 18 48.0	+3.1
SMG	Samos	1.12	309	*e*PN	Pn	09 18 40.0	-1.3
SMG				*e*SN	Sn	09 18 55.7	-1.4
DENT	Denizli	1.15	49	PN	Pn	09 18 40.0	-1.7
IZM	Izmir	1.48	339	PN	Pn	09 18 45.4	-0.9
IZM	Izmir	1.48	339	Pn	Pn	09 18 45.5	-0.9
IZM	Izmir	1.48	339	Pn	Pn	09 18 45.5	-0.8
KDAG	Bornova	1.49	339	*i* P	Pn	09 18 45.3	-1.1
KDAG				*i* S	Sn	09 19 06.6	+0.4
BLCB	Balcova	1.54	333	PN	Pn	09 18 46.0	-1.2
KSL	Kastellorizon	1.58	122	*e*PN	Pn	09 18 49.0	+1.4
KARP	Karpathos	1.59	203	*e*PB	Pb	09 18 46.9	-1.9
KARP				*e*SN	Sn	09 19 08.2	-0.5
KARP	Karpathos	1.59	203	*e*PB	Pb	09 18 46.5	-2.3
ELL	Elmali	1.60	99	PN	Pn	09 18 48.0	+0.1
URLA	Izmir	1.72	322	*i* P	Pn	09 18 49.1	-0.4
URLA				*i* S	Sn	09 19 13.0	+1.2
AKHS	Akhisar	1.87	357	*i* P	Pn	09 18 50.5	-1.1
AKHS				*i* S	Sn	09 19 16.4	+0.8
AKS	Akhisar	1.87	357	PN	Pn	09 18 50.3	-1.3
AKS	Akhisar	1.87	357	Pn	Pn	09 18 50.4	-1.2
AKS	Akhisar	1.87	357	Pn	Pn	09 18 50.4	-1.2
APE	Apeiranthos	1.93	272	*e*Pb	Pn	09 18 51.3	-1.1
APE	Apeiranthos	1.93	272	*e*Pn	Pn	09 18 51.5	-0.9
CHOS	Chios island	2.03	313	*e*Pn	Pn	09 18 53.6	-0.3
SANT	Santorini	2.09	253	*e*Sn	Sn	09 19 23.3	+2.2
TKTP	Tekketepe	2.15	61	*i* P	Pn	09 18 56.2	+0.7
TKTP				*i* S	Sg	09 19 28.1	0.0
BCK	Bucak	2.16	77	*e*PN	Pn	09 18 55.4	-0.3
BCK	Bucak	2.16	77	Pn	Pn	09 18 55.5	-0.2
ANTB	Antalya	2.18	92	*e*PN	Pn	09 18 55.9	0.0
ISP	Isparta	2.21	67	PN	Pn	09 18 56.4	+0.1
ISP	Isparta	2.21	67	*e*Pn	Pn	09 18 57.1	+0.8
ISP				*e*Sn	Sn	09 19 20.0	-4.0
ISP	Isparta	2.21	67	*e*Pn	Pn	09 18 56.4	+0.1
ISP				*e*Sn	Sn	09 19 20.0	-4.0
ZKR	Zakros	2.35	217	*e*Pn	Pn	09 19 00.6	+2.4
ZKR				*e*Sn	Sn	09 19 30.7	+3.2
ZKR	Zakros	2.35	217	S	Sn	09 19 30.7	+3.2
GDZ	Gediz	2.41	30	*i* P	Pn	09 18 59.1	+0.1
GDZ				*i* S	Sg	09 19 35.5	-0.7
AYVA	Ayvalik	2.50	337	*i* P	Pg	09 19 06.9	+0.1
AYVA				*i* S	Sg	09 19 39.4	+0.3
PRK	Paraskevi	2.59	330	*e*PN	Pn	09 19 00.6	-0.9
DST	Dursunbey	2.65	12	*e*PN	Pn	09 19 02.0	-0.3
DST	Dursunbey	2.65	12	Pn	Pn	09 19 02.1	-0.2
ALT	Altintas	2.67	39	*e*PN	Pn	09 19 02.4	-0.2
ALT	Altintas	2.67	39	Pn	Pn	09 19 02.4	-0.2
LAST	Lasithi	2.71	228	*e*Pn	Pn	09 19 04.5	+1.2
LAST				*e*Sn	Sn	09 19 39.6	+3.1
BTOK	Tokmak	2.75	2	*i* P	Pn	09 19 03.8	+0.1
BTOK				*i* S	Sg	09 19 46.7	-0.5
IDI	Anoyia	3.01	236	Pn	Pn	09 19 06.9	-0.3
	1.4nm,0.3s,baz=18,slow=9.6,SNR=3.6						
IDI				Sn	Sn	09 19 42.2	-1.5
	3.9nm,0.3s,baz=273,slow=11,SNR=4.4						
CANB	Canakkale	3.08	347	*e*PN	Pn	09 19 08.4	+0.1
CANB	Canakkale	3.08	347	Pn	Pn	09 19 08.5	+0.2
CANB	Canakkale	3.08	347	Pn	Pn	09 19 08.5	+0.2
ORLT	Orhaneli	3.12	14	*e*PN	Pn	09 19 09.0	+0.1
BNT	Bandirma	3.34	360	*e*PN	Pn	09 19 11.3	-0.6
BNT	Bandirma	3.34	360	Pn	Pn	09 19 11.2	-0.7
ESKT	Eskisehir	3.40	42	*e*PN	Pn	09 19 12.8	+0.2
GADA	Gvkgeada	3.55	334	*e*PN	Pn	09 19 14.3	-0.5
GADA	Gvkgeada	3.55	334	Pn	Pn	09 19 14.3	-0.5
LIA	Limnos Island	3.60	324	*e*PN	Pn	09 19 15.3	-0.2
KARN	Karanos	3.63	245	*e*Pn	Pn	09 19 17.6	+1.8
KONT	Konya--Tatoy	3.64	74	*e*PN	Pn	09 19 15.9	-0.1
ADVT	Abdulvahap	3.70	22	*e*PN	Pn	09 19 17.3	+0.6
ADVT	Abdulvahap	3.70	22	Pn	Pn	09 19 17.3	+0.6
RKY	Sarkoy-Tekirda	3.72	351	*e*PN	Pn	09 19 17.7	+0.6
RKY	Sarkoy-Tekirda	3.72	351	Pn	Pn	09 19 17.8	+0.7
YLV	Yalova	3.72	17	*e*PN	Pn	09 19 17.3	+0.2
MFT	Murefte	3.81	352	*e*PN	Pn	09 19 18.7	+0.5
ENEZ	Enez	3.97	340	*e*PN	Pn	09 19 21.0	+0.5
ERMK	Ermenek	4.01	94	*i* P	Pn	09 19 23.6	+2.5
ERMK				*i* S	Sn	09 20 14.8	+6.3
MDU	Mudurnu	4.30	36	*e*PN	Pn	09 19 25.7	+0.7
MDU	Mudurnu	4.30	36	Pn	Pn	09 19 25.7	+0.7
RDO	Rodhopi	4.53	336	*e*PN	Pn	09 19 28.0	-0.2
IKL	Isikli	4.69	98	*e*PN	Pn	09 19 31.2	+0.8
IKL	Isikli	4.69	98	Pn	Pn	09 19 31.3	+0.9
IKL	Isikli	4.69	98	Pn	Pn	09 19 31.3	+0.9
ANTO	Ankara	4.76	52	*e*PN	Pn	09 19 32.2	+0.8
ANTO	Ankara	4.76	52	*e*Pn	Pn	09 19 32.9	+1.5
CSS	Prodhromos	4.83	113	*e*Pn	Pn	09 19 32.6	+0.3
EDRB	Edirne	4.92	350	*e*PN	Pn	09 19 34.3	+0.8
BR131	Keskin Array S	5.24	57	*e*Pn	Pn	09 19 39.3	+1.4
	11nm,0.7s						
BR131				*e*Sn	Sn	09 20 37.7	-1.0
BRTR	Keskin Array B	5.24	57	Pn	Pn	09 19 39.3	+1.4
	2.2nm,0.3s,baz=238,slow=15,SNR=46						
BRTR				Sn	Sn	09 20 39.2	+0.6
	0.1nm,0.3s,baz=233,slow=25,SNR=2.4						
BRTR	Keskin Array B	5.24	57	Sn	Sn	09 20 39.2	+0.5
MERS	Mersin	5.28	90	*e*PN	Pn	09 19 40.6	+2.1
KNT	Kendrikon	5.71	318	*e*Pn	Pn	09 19 45.9	+1.5
HMAT	Matruh	5.94	187	⇓P	Pn	09 19 47.3	-0.3
HMAT				S	Sn	09 20 50.1	-6.0
SLUM		5.95	203	⇓P	Pn	09 19 47.5	-0.2
SLUM				S	Sn	09 20 50.9	-5.4
SLUM		5.95	203	P	Pn	09 19 47.5	-0.2
SLUM				S	Sn	09 20 50.8	-5.5
CORM	Corum	6.12	57	*e*PN	Pn	09 19 51.9	+1.8
MMAI	Mount Meron Ar	7.31	121	Pn	Pn	09 20 05.0	-1.3
	5.0nm,0.3s,baz=316,slow=12,SNR=13						
MMAI				Sn	Sn	09 21 27.2	-2.5
	4.5nm,0.3s,baz=300,slow=26,SNR=4.9						
KOT	Kottamia	7.78	154	P	Pn	09 20 12.6	-0.2
HHAG	Hagoal	7.85	153	P	Pn	09 20 12.9	-0.9
SWA1		7.95	194	⇓P	Pn	09 20 14.6	-0.5
SWA1				S	Sn	09 21 39.2	-6.3
HSAF	As Saff	7.97	157	P	Pn	09 20 14.6	-0.8
SWA2		8.02	196	⇑P	Pn	09 20 15.7	-0.4
GLL	Jalalah	8.06	156	P	Pn	09 20 15.8	-0.9
SUZ		8.24	149	⇓P	Pn	09 20 18.5	-0.6
MLR	Muntele Rosu	8.60	351	Pn	Pn	09 20 25.5	+1.3
	0.1nm,0.3s,baz=210,slow=7.3,SNR=7.1						
ASF	Jabal al Asfar	8.82	121	Pn	Pn	09 20 26.9	-0.2
	0.4nm,0.3s,baz=204,slow=11,SNR=4.0						
ASF				Sn	Sn	09 22 08.6	+1.6
	0.2nm,0.3s,baz=45,slow=20,SNR=2.3						
AKASG	Malin Array Be	13.72	3	Pn	Pn	09 21 33.9	-0.2
	0.5nm,0.3s,baz=186,slow=12,SNR=5.4						
AKASG	Malin Array Be	13.72	3	Pn	Pn	09 21 33.9	-0.2
KEST	Kesra	15.04	271	Pn	Pn	09 21 56.9	+4.8
	0.1nm,0.3s,baz=78,slow=9.0,SNR=5.7						
GERES	GERESS Array B	15.73	323	Pn	Pn	09 22 03.5	+2.2
	0.2nm,0.3s,baz=137,slow=11,SNR=8.4						
KHC	Kasperske Hory	15.99	324	*e*P	Pn	09 22 09.5	+4.9
CLL	Collm	17.81	328	*e*PP		09 22 34.0	
CLL	Collm	17.81	328	*e*(PP)		09 22 34.0	
	comp=Z,11nm,0.9s						
FINES	FINESS Array B	24.48	358	P	P	09 23 37.0	-2.0
	comp=Z,2.8nm,0.9s,mb3.7,baz=162,slow=7.6,SNR=8.1						
HFS	Hagfors	24.88	343	P	P	09 23 41.9	-0.6
	comp=Z,4.2nm,0.9s,mb4.0,baz=185,slow=14,SNR=5.3						
KAF	Kangasniemi	25.15	358	*e*p	P	09 23 44.7	-0.3
	comp=Z,0.9nm,0.4s,mb3.6						
JOF	Joensuu	26.02	4	*e*p	P	09 23 48.8	-4.1
TORD	Torodi Ar. Bea	33.40	231	P	P	09 24 57.1	-1.3
	comp=Z,0.8nm,0.4s,mb4.0,baz=34,slow=8.4,SNR=12						
MKAR	Makanchi Array	40.88	59	P	P	09 26 01.7	-0.3
	comp=Z,1.1nm,0.7s,mb3.6,baz=286,slow=6.2,SNR=7.2						
SONM	Songino Array	56.58	52	P	P	09 28 02.0	-0.6
	comp=Z,0.6nm,0.6s,mb3.8,baz=288,slow=7.4,SNR=3.5						

NEIC ***09*** *09:45:51.6, 3828N×1673W, h0^{km}, MN3.7(MDD), After MDD.*
CSEM ***09*** *09:45:53.2±2.5, 3803N×1717W, h10^{km}, ML3.3, Error ellipse: s-maj=19.2km s-min=7.8km az=119.0*
INMG ***09*** *09:45:53.2±2.5, 3803N×1717W, h10^{km}, ML3.3, Error ellipse: s-maj=19.2km s-min=7.8km az=119.0*
MDD 09 09:45:50.3±3.6**, 3823N**×**1685W, h0**^{km}**, mb4.1**/5**, Error ellipse: s-maj=31.5km s-min=26.6km az=132.0, PRXIMO, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAR	Madeira	5.50	181	*e*Sn	Sn	09 48 01.4	-16
PMAFR	Mafra	5.97	81	*e*Sn	Sn	09 48 24.6	-4.3
PLOU	Loures	6.07	81	*e*Sn	Sn	09 48 26.7	-4.6
PLOU							
	42nm,0.5s						
PLOU	Loures	6.07	81	*e*Sn	Sn	09 48 26.7	-4.6
	42nm,0.5s						
PTEO	Sao Teotonio	6.46	94	*e*Pn	Pn	09 47 25.6	-1.0
PTEO				*e*Sn	Sn	09 48 34.3	-6.8
PTEO							
	17nm,0.2s						
PTEO	Sao Teotonio	6.46	94	*e*Pn	Pn	09 47 25.6	-1.0
PTEO				*e*Sn	Sn	09 48 34.3	-6.8
	17nm,0.2s						
PTOM	Tomar	6.72	76	*e*Sn	Sn	09 48 42.6	-4.9
PTOM							
	21nm,0.1s						
PTOM	Tomar	6.72	76	*e*Sn	Sn	09 48 42.6	-4.9
	21nm,0.1s						
PBEJ	Beja	7.08	89	*e*Sn	Sn	09 48 49.6	-6.8
PBEJ							
	14nm,0.2s						
PBEJ	Beja	7.08	89	S	Sn	09 48 49.6	-6.8
	6.8nm,0.2s						
PESTR	Estremoz	7.28	82	*e*Sn	Sn	09 48 55.6	-5.7
PESTR							
	4.7nm,0.2s						
PVIS	Viseu	7.36	68	*e*Sn	Sn	09 48 56.2	-6.9
PVIS							
	12nm,0.1s						
PVIS	Viseu	7.36	68	S	Sn	09 48 56.2	-6.9
	5.8nm,0.1s						
EGRO	El Granado	7.44	93	P	Pn	09 47 38.8	-1.2
	0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	09 48 57.8	-7.3
	3.4nm,0.1s,SNR=7.9						
MTE	Manteigas	7.53	70	*e*Sn	Sn	09 49 02.3	-5.1
MTE							
	7.7nm,0.3s						
MTE	Manteigas	7.53	70	S	Sn	09 49 02.3	-5.1
	3.8nm,0.3s						
PCAB	Cabril	7.61	60	*e*Sn	Sn	09 49 03.3	-6.1
PCAB							
	14nm,0.1s						
PCAB	Cabril	7.61	60	S	Sn	09 49 03.3	-6.1
	7.1nm,0.1s						
EMAZ	Mazaricos	7.62	49	S	Sn	09 49 00.9	-8.6
	4.5nm,0.1s,SNR=7.9						
ELOB	Lobios	7.65	59	P	Pn	09 47 41.2	-1.8
	0.3nm,0.1s,SNR=7.9						
ELOB				S	Sn	09 49 03.3	-7.1
	5.0nm,0.2s,SNR=7.9						
ELOB	Lobios	7.65	59	P	Pn	09 47 41.2	-1.8
ELOB				S	Sn	09 49 02.8	-7.6
EBAD	Badajoz	7.73	83	P	Pn	09 47 43.6	-0.5
	0.9nm,0.1s,SNR=7.9						
EBAD				S	Sn	09 49 05.5	-6.8
	5.7nm,0.1s,SNR=7.9						
EBAD	Badajoz	7.73	83	P	Pn	09 47 43.6	-0.5
EBAD				S	Sn	09 49 05.1	-7.2
EMIN	Mina Concepcio	8.05	90	P	Pn	09 47 47.1	-1.3
	0.4nm,0.1s,SNR=7.9						
EMIN				S	Sn	09 49 12.0	-8.1
	3.2nm,0.1s,SNR=7.9						
PBRG	Braganca	8.53	62	*e*Sn	Sn	09 49 25.4	-6.7
ECAL	Calabor	8.59	61	P	Pn	09 47 55.4	-0.4
	0.3nm,0.1s,SNR=7.9						
ECAL				S	Sn	09 49 25.6	-7.8
	3.4nm,0.2s,SNR=7.9						
ECAL	Calabor	8.59	61	P	Pn	09 47 55.4	-0.4
ECAL				S	Sn	09 49 25.2	-8.1
EPON	Pontenova	8.94	52	S	Sn	09 49 31.5	-11
	2.1nm,0.1s,SNR=7.9						
EADA	Adamuz	9.66	87	P	Pn	09 48 08.4	-2.1
	SNR=7.9						
EADA				S	Sn	09 49 51.7	-8.1
	0.9nm,0.1s,SNR=7.9						
EADA	Adamuz	9.66	87	P	Pn	09 48 08.4	-2.1
EADA				S	Sn	09 49 50.1	-10
EARI	Arriondas	10.17	56	S	Sn	09 50 03.5	-8.9
	0.3nm,0.2s,SNR=7.9						
EBAN	Banos Encina	10.28	86	S	Sn	09 50 06.3	-8.7
	0.7nm,0.1s,SNR=7.9						

CSEM ***09*** *09:58:47.9, 7966N×530E, h15^{km}, ML2.7, After BER*
BER ***09*** *09:58:47.9±1.5, 7966N×530E, h15^{km}±167^{km}, MD2.8, ML2.7*
ISCJB ***09*** *09:58:49.0±1.6, 790N±01×56E±03, h10^{km}, Error ellipse: s-maj=20.4km s-min=8.6km az=161.2*
ISC 09 09:58:50.0±1.8**, 791N**±02×**58E**±03**, h10**^{km}**, n7, σ0ˢ66**/11**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.19	94	*e*P	Pb	09 59 11.8	-0.8
KBS				*e*S	Sb	09 59 28.8	+0.8
KBS				AML	AML	09 59 33.3	
	comp=Z,161nm,0.5s						
KBS	Kingsbay	1.19	94	*e*P	Pb	09 59 11.8	-0.8
	SNR=55						
KBS				*e*S	Sb	09 59 28.8	+0.8
	comp=Z,161nm,0.5s,SNR=55						
HSP	Hornsund	2.90	131	Pn	Pn	09 59 36.0	-0.1
HSP				Sn	Sn	10 00 11.3	+0.4
HOPEN	Hopen	4.80	112	*e*P	Pn	10 00 02.1	-0.1
HOPEN				*e*S	Sn	10 00 57.8	0.0
SCO	Scoresbysund	11.10	234	*i* P	Pn	10 01 29.6	+0.9
HFS	Hagfors	19.18	168	P	Pn	10 03 13.5	-1.1
	baz=359,slow=8.6						
HFS	Hagfors	19.18	168	P	Pn	10 03 13.5	-1.1
	baz=359,slow=8.5,SNR=51						

NNC 09 10:11:07.7±3.4**, 5428N**×**8637E, h0**^{km}**, mb3.9, mpv3.5, 5C-3D, Error ellipse: s-maj=34.5km s-min=13.7km az=87.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	5.93	236	⇓Pn	Pn	10 12 36.9	+0.1
	3.5nm,0.8s						
KURK				⇑Sn	Sn	10 13 45.7	+0.4
	2.5nm,1.0s						
KURK				⇑Lg		10 14 15.3	
	11nm,1.0s						
MK02	Makanchi Array	7.95	201	⇑Pn	Pn	10 13 04.9	+0.3
	1.6nm,0.7s,baz=24,slow=13						
MK02				⇓Sn	Sn	10 14 34.8	-0.5
	3.6nm,0.7s,baz=23,slow=27						
MK02				⇑Lg		10 15 21.7	
	5.6nm,0.8s,baz=27,slow=28						
VOSK	Vostochnaya	9.30	267	⇓Pn	Pn	10 13 23.0	-0.1
	1.0nm,0.3s						
VOSK				⇑Lg		10 15 01.5	
	4.1nm,0.7s						

CASC 09 10:17:35.2±2.1**, 1336N**×**9106W, h0**^{km}±12^{km}**, MD4.0, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TP2	Tecpan 2	1.42	1	*e*P	Pn	10 18 02.2	0.0
TP2				*e*S	Sg	10 18 20.1	-0.8
RTR	El Retiro	1.47	68	*e*P	x	10 18 14.7	
RTR				*e*S	x	10 18 36.8	
RBDL	Robledal	1.53	60	*e*P	x	10 18 16.0	
RBDL				*e*S	x	10 18 39.0	
BOQS	Boqueron	1.77	77	*e*P	x	10 18 18.1	
BOQS				*e*S	x	10 18 44.6	
SNET	Serv Nac Est T	1.80	79	*e*P	x	10 18 06.8	
SNET				*e*S	x	10 18 33.0	
MTO2	Montecristo 2	1.94	58	*e*P	x	10 18 21.3	
MTO2				*e*S	x	10 18 48.5	
LFRS	El Faro	1.96	82	*e*P	x	10 18 21.8	
LFRS				*e*S	x	10 18 47.5	
LCBS	La Ceiba	2.04	81	*e*P	x	10 18 22.7	
LCBS				*e*S	x	10 18 49.6	
SNVI	San Vicente	2.17	83	*e*P	x	10 18 24.7	
SNVI				*e*S	x	10 18 53.7	

JMA 09 11:25:18.2±0.2**, 4126N**×**14841E, h0**^{km}**, M4.4, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.89	318	P	Pn	11 26 07.0	+1.6
NEM2				*e*S	Sn	11 26 43.1	+2.2
JAK	Akkeshi	3.26	303	P	Pn	11 26 12.2	+1.6
JAK				*e*S	Sn	11 26 51.5	+1.4
JRA	Rausu	3.61	319	P	Pn	11 26 17.1	+1.7
JRA				*e*S	Sn	11 27 01.2	+2.5
JAR	Ashorobuto	4.00	302	P	Pn	11 26 22.2	+1.5
JAR				*e*S	Sn	11 27 09.8	+1.5
JCH	Churui	4.00	291	P	Pn	11 26 22.7	+2.0
JCH				*e*S	Sn	11 27 09.7	+1.4
JTKR	Abashiri--Toko	4.29	311	P	Pn	11 26 27.0	+2.3
JTKR				*e*S	Sn	11 27 17.8	+2.4
JNBK	Urakawa-nobuka	4.35	285	P	Pn	11 26 27.4	+1.8
JNBK				*e*S	Sn	11 27 18.6	+1.6
JFR	Furan	4.72	296	P	Pn	11 26 32.4	+1.8
JFR				*e*S	Sn	11 27 27.4	+1.3
JKK2	Kamakawa 2	4.93	304	P	Pn	11 26 36.1	+2.6
JANG	Nango	5.31	263	P	Pn	11 26 37.0	-1.7
JANG				*e*S	Sn	11 27 35.1	-5.4
JEW	Eniwo	5.42	289	P	Pn	11 26 41.9	+1.7
JEW				*e*S	Sn	11 27 44.9	+1.6
JOT	Ohata	5.54	274	P	Pn	11 26 42.0	0.0
JOT				*e*S	Sn	11 27 43.4	-3.0
JKB	Kayabe	5.57	279	*e*S	Sn	11 27 45.3	-1.7
JOM	Ohasama	5.72	254	P	Pn	11 26 42.5	-1.9
JOM				*e*S	Sn	11 27 44.3	-6.5
JMK	Ichinoseki	5.97	250	P	Pn	11 26 44.9	-3.0
JMK				*e*S	Sn	11 27 49.1	-7.9

ISCJB ***09*** *12:04:15.2±1.2, 1946S±008×17788W±008, h378^{km}±13^{km}, mb4.2/22, Error ellipse: s-maj=15.5km s-min=9.8km az=100.3*
NEIC ***09*** *12:04:16.5±0.9, 1947S×17779W, h382^{km}±9^{km}, mb4.3/17, Error ellipse: s-maj=10.4km s-min=6.3km az=135.0*
IDC ***09*** *12:04:16.1±1.7, 1945S×17777W, h376^{km}±17^{km}, mb3.7/8, mb1 3.8/11, mb1mx3.8/15, mbtmp4.5/11, Error ellipse: s-maj=17.6km s-min=12.5km az=123.0*
ISC 09 12:04:16.4±1.2**, 1950S**±008×**17777W**±008**, h379**^{km}±13^{km}**, n59, σ0ˢ79**/46**, mb4.2**/22**, 4C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.99	47	P	Pn	12 06 10.0	-0.8
	8.1nm,0.3s,baz=20,slow=12,SNR=15						
AFI				S	S	12 07 37.4	-7.0
	21nm,0.3s,baz=67,slow=19,SNR=9.6						
FUNA	Funafuti	11.30	345	*e*P	Pn	12 06 49.5	0.0
DZM	Mont Dzumac	14.98	257	P	P	12 07 29.9	+0.4
	0.9nm,0.3s,baz=74,slow=18,SNR=4.4						
URZ	Urewera	19.22	192	P	P	12 08 15.0	+0.4
	2.1nm,0.3s,baz=291,slow=0.8,SNR=9.3						
RPZ	Rata Peaks	25.90	199	P	P	12 09 15.4	-0.1
	12nm,1.1s,mb4.0,baz=14,slow=6.8,SNR=4.8						
RPZ	Rata Peaks	25.90	199	P	P	12 09 15.4	-0.1
ARMA	Armidale	29.71	243	*e*P	P	12 09 50.7	+1.7
CNB	Canberra Magne	32.97	235	*e*P	P	12 10 18.4	+1.1
	23nm,1.0s,mb4.4						
CTA	Charters Tower	33.81	263	*e*P	P	12 10 24.7	+0.2
	14nm,0.9s,mb4.2						
CTA	Charters Tower	33.81	263	P	P	12 10 24.9	+0.4
	15nm,0.7s,mb4.3,baz=97,slow=9.4,SNR=15						
CTAO	Charters Tower	33.81	263	*e*P	P	12 10 24.7	+0.2
	16nm,0.7s,mb4.4						
TOO	Toolangi	36.66	233	*e*P	P	12 10 49.0	+0.5
	15nm,0.7s,mb4.3						
STKA	Stephens Creek	38.42	243	⇑*i*P	P	12 11 03.7	+0.6
	4.9nm,0.4s,mb4.1						
STKA	Stephens Creek	38.42	243	P	P	12 11 03.5	+0.4
	6.5nm,0.5s,mb4.1,baz=92,slow=9.1,SNR=19						
WB2	Warramunga Arr	44.95	261	*e*P	P	12 11 54.6	-0.7
WRAB	Tennant Creek	44.95	261	*e*P	P	12 11 54.3	-1.0
	18nm,0.8s,mb4.2						
AS31	Alice Springs	44.96	256	*e*P	P	12 11 55.2	-0.3
ASAR	Alice Springs	44.97	256	P	P	12 11 55.5	+0.1
	70nm,0.6s,mb5.0,baz=90,slow=8.4,SNR=1047						
ASAR				PcP	PcP	12 13 28.9	-0.3
	2.7nm,0.7s,baz=100,slow=4.6,SNR=5.0						
ASAR				ScP	ScP	12 16 46.2	+1.5
	0.5nm,0.6s,baz=99,slow=3.9,SNR=4.3						
ASAR				S	S	12 18 01.0	-3.6
	0.8nm,1.0s,baz=90,slow=16,SNR=4.0						
ASAR	Alice Springs	44.97	256	P	P	12 11 55.5	+0.1
ASAR				PcP	PcP	12 13 28.9	-0.3
ASAR				ScP	ScP	12 16 46.2	+1.5
ASAR				S	S	12 18 01.0	-3.6
ASPA	Alice Springs	44.97	256	⇑*i*P	P	12 11 55.4	-0.1
KAKA	Kakadu	48.18	270	*e*P	P	12 12 19.4	-0.7
	10nm,0.6s,mb4.2						
FORT	Forrest	49.89	246	⇑*i*P	P	12 12 32.4	-0.5
	43nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	53.38	262	*e*P	P	12 12 58.5	+0.1
	18nm,0.5s,mb4.7						
KLBR	Kellerberrin	58.68	244	⇑*i*P	P	12 13 34.7	-0.8
	14nm,0.7s,mb4.5						
VNDA	Vanda	58.92	185	P	P	12 13 37.9	+0.7
	1.2nm,0.6s,mb3.5,baz=339,slow=8.5,SNR=9.2						
VNDA	Vanda	58.92	185	*e*P	P	12 13 37.7	+0.5
VNDA				*e*PcP	PcP	12 14 24.2	+2.4
MUN	Mundaring	59.95	244	*e*P	P	12 13 44.0	-0.1
CASY	Casey	64.96	205	*e*P	P	12 14 16.3	-0.6
CASY	Casey	64.96	205	*e*P	P	12 14 16.1	-0.7
	4.5nm,0.5s,mb4.3						
MJAR	Matsushiro Arr	69.54	323	P	P	12 14 46.5	+1.2
	2.2nm,0.7s,mb4.0,baz=157,slow=5.4,SNR=5.4						
QSPA	South Pole Qui	70.56	180	*e*P	P	12 14 51.6	+0.1
	11nm,0.8s,mb4.6						
NVAR	Mina Array Bea	80.15	43	P	P	12 15 46.3	+0.8
	1.5nm,0.7s,mb3.9,baz=226,slow=10,SNR=5.0						
TUC	Tucson	82.19	52	*e*P	P	12 15 57.3	+1.3
	1.8nm,1.1s,mb3.8						
WVOR	Wild Horse Val	82.23	40	*e*P	P	12 15 56.8	+0.6
	3.4nm,0.8s,mb4.2						

MAW	Mawson	82.58	200	eP	P	12 15 57.3	-0.7
	1.9nm,0.5s,mb4.2						
MAW	Mawson	82.58	200	P	P	12 15 57.5	-0.5
	2.0nm,0.5s,mb4.2,baz=144,slow=7.2,SNR=28						
MAW	Mawson	82.58	200	eP	P	12 15 57.0	-1.0
	3.0nm,0.7s,mb4.2						
PMR	Palmer	84.00	13	eP	P	12 16 03.3	-1.9
	2.0nm,0.4s,mb4.3						
MCMT	McKenzie Canyo	87.05	40	eP	P	12 16 20.8	+0.7
PDAR	Pinedale Array	88.09	43	P	P	12 16 24.9	0.0
	0.8nm,0.6s,mb3.7,baz=197,slow=1.8,SNR=8.6						
SNAA	Sanae	89.00	178	⇓i	P	12 16 27.6	-1.6
SNAA				e		12 16 29.2	
SNAA				e		12 16 31.3	
SNAA	Sanae	89.00	178	eP	P	12 16 27.6	-1.6
	1.8nm,0.7s,mb4.0						
VNA1	Neumayer--Stat	89.79	177	⇓i	P	12 16 32.7	-0.2
VNA1				e		12 16 34.5	
VNA1				e		12 16 36.1	
ARCES	ARCESS Array B	127.98	350	PKP	PKPdf	12 22 36.2	-1.6
	2.3nm,0.9s,baz=8.7,slow=1.6,SNR=7.8						
BR131	Keskin Array S	146.32	314	ePKPdf	PKPdf	12 23 11.9	+0.6
BRTR	Keskin Array B	146.32	314	PKPbc	PKPbc	12 23 12.2	-0.9
	1.7nm,0.7s,baz=118,slow=3.7,SNR=10						
CLL	Collm	147.14	348	ePKPbc	PKPbc	12 23 15.0	-0.5
	comp=Z,7.0nm,0.5s						
MMAI	Mount Meron Ar	147.50	301	PKPbc	PKPbc	12 23 16.1	-0.3
	comp=Z,2.6nm,0.5s,baz=60,slow=4.9,SNR=3.8						
GERES	GERESS Array B	149.30	345	PKPbc	PKPbc	12 23 20.6	-0.4
	comp=Z,2.5nm,0.8s,baz=46,slow=3.9,SNR=11						
FLN	La Foliniere	150.72	4	ePKP1	PKPbc	12 23 23.5	-0.8
	comp=Z,11nm,0.7s						
CDF	Champ du Feu	150.87	353	ePKP1	PKPbc	12 23 24.0	-0.7
LDF	La Druitiere	150.91	3	ePKP1	PKPbc	12 23 23.7	-1.1
	comp=Z,3.8nm,0.4s						
SGMF	Saint Gilles	151.05	7	ePKP1	PKPbc	12 23 24.1	-1.0
GRR	Gorron	151.07	4	ePKP1	PKPbc	12 23 24.3	-0.8
	comp=Z,7.3nm,0.6s						
HINF	Hinteralfeld	151.50	353	ePKP1	PKPbc	12 23 26.0	-0.1
DAVOX	Davos	152.07	349	PKPbc	PKPbc	12 23 26.7	-0.7
	comp=Z,2.3nm,0.3s,baz=300,slow=8.1,SNR=4.7						
LOR	Lormes	152.27	358	ePKP1	PKPbc	12 23 27.1	-0.7
	comp=Z,5.8nm,0.7s						
SSF	Saint Saulge	152.49	358	ePKP1	PKPbc	12 23 27.8	-0.5
	comp=Z,2.7nm,0.4s						
TORD	Torodi Ar. Bea	173.66	175	PKPab	PKPab	12 25 13.6	+0.5
	comp=Z,0.6nm,0.5s,baz=177,slow=4.3,SNR=4.1						

*ATH **09** 12:12:25.1, 40.17N×19.31E, h14km±1km, MD3.9/7*
*NEIC **09** 12:12:25.1, 40.17N×19.31E, h14km, MD3.6(PDG), MD3.9(ATH), ML3.7(THE), After ATH.*
*IDC **09** 12:12:27.0±1.2, 40.23N×19.59E, h0km, mb3.6/5, mb1 3.7/9, mb1mx3.6/24, mbtmp3.6/9, ML3.7/4, Error ellipse: s-maj=20.2km s-min=15.2km az=71.0*
*ISCJB **09** 12:12:27.9±0.4, 40.10N±0.02×19.66E±0.02, h0km±3km, mb3.7/5, Error ellipse: s-maj=2.9km s-min=2.4km az=89.8*
*CSEM **09** 12:12:30.4±0.1, 40.09N×19.71E, h8km, MD3.9, Error ellipse: s-maj=1.9km s-min=1.1km az=23.0*
*PDG **09** 12:12:30.5±1.5, 40.16N×19.69E, h11km±4km*
*HLW **09** 12:12:30.1, 39.82N×19.55E, h33km, Mb3.8*
*TIR **09** 12:12:30.8, 40.12N×19.94E, h5km, Ml3.4*
*THE **09** 12:12:30.6, 40.10N×19.77E, h4km, ML3.7*
ISC 09 12:12:29.1±0.4, **40.10N**±0.02×**19.67E**±0.02, **h1**km±3km, **n120**, σ1s19/181, **mb3.6**/5, **18C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.33	54	i Pg	Pg	12 12 34.1	-1.2
TPE				i Sg	Sg	12 12 38.8	-0.7
SRN	Sarande	0.34	131	i Pg	Pg	12 12 35.1	-0.5
SRN				i Sg	Sg	12 12 41.8	+1.8
VLO	Vlora	0.39	340	i Pg	Pg	12 12 40.7	+4.2
VLO				i Sg	Sg	12 12 48.6	+7.1
KEK	Kerkira	0.40	165	ePB	Pg	12 12 37.1	+0.3
KEK				eSB	Sg	12 12 44.9	+2.8
LSK	Leskovik	0.72	86	i Pg	Pg	12 12 41.7	-1.1
LSK				i Sg	Sg	12 12 52.9	+0.8
IGT	Igoumenitsa	0.77	138	ePg	Pg	12 12 43.2	-0.6
IGT				eSg	Sg	12 12 54.3	+0.5
IGT	Igoumenitsa	0.77	138	P	Pg	12 12 43.1	-0.7
IGT				S	Sg	12 12 57.0	+3.3
KBN	Korca	1.00	58	i Pn	Pn	12 12 46.7	-3.5
KBN				i Sn	Sn	12 13 04.9	0.0
JAN	Janina	1.01	116	ePG	Pg	12 12 48.9	+0.4
LCI	Lecce	1.21	281	Pn	Pn	12 12 53.3	+0.2
MEV	Metsovon	1.24	104	ePg	Pg	12 12 52.6	-0.3
TIR	Tirane	1.25	7	ePg	Pg	12 12 54.0	+1.0
TIR				eSg	Sg	12 13 11.8	+2.5
TIR	Tirane	1.25	7	P	Pg	12 12 54.0	+1.0
TIR				S	Sg	12 13 14.1	+4.8
OHR	Ohrid	1.32	40	ePg	Pg	12 12 52.7	-1.8
OHR				eSg	Sg	12 13 13.2	+1.6
OHR	Ohrid	1.32	40	ePn	Pn	12 12 52.6	-2.0
OHR				eSn	Sn	12 13 13.0	+0.1
FNA	Florina	1.47	62	ePg	Pg	12 12 55.6	-1.7
FNA				eSg	Sg	12 13 16.4	0.0
LKD	Levkas	1.59	151	ePg	Pn	12 12 58.1	-0.2
LKD				eSg	Sg	12 13 19.6	-0.6
LKD	Levkas	1.59	151	P	Pn	12 12 58.1	-0.2
LKD				S	Sn	12 13 21.5	+2.1
KZN	Kozani	1.62	82	ePN	Pn	12 12 59.0	+0.2
KZN				eSN	Sn	12 13 24.1	+3.8
PE1	Pezze di Greco	1.85	293	ePn	Pn	12 13 02.0	+0.1
ULC	Ulcinj	1.88	351	⇑iPn	Pn	12 13 01.6	-0.7
ULC				eSn	Sn	12 13 28.6	+1.9
EVR	Evrytania	2.04	125	ePN	Pn	12 13 05.9	+1.4
EVR				eSN	Sn	12 13 34.0	+3.5
VLS	Valsamata	2.05	159	ePN	Pn	12 13 03.9	-0.8
LIT	Litokhoron	2.17	89	ePn	Pn	12 13 06.2	0.0
LIT				eSn	Sn	12 13 32.4	-1.3
LIT	Litokhoron	2.17	89	P	Pn	12 13 06.2	0.0
LIT				S	Sn	12 13 33.8	+0.1
LIT	Litokhoron	2.17	89	ePn	Pn	12 13 06.2	0.0
LIT				eSn	Sn	12 13 32.4	-1.3
GRG	Griva	2.25	67	ePn	Pn	12 13 07.8	+0.4
GRG				eSn	Sn	12 13 36.0	+0.2
BUM	Brajici-Budva	2.27	345	⇓iPn	Pn	12 13 07.1	-0.5
BUM				eSn	Sn	12 13 37.5	+1.3
SKO	Skopje	2.30	35	ePn	Pn	12 13 08.6	+0.6
SKO				eSn	Sn	12 13 38.3	+1.4
SKO	Skopje	2.30	35	ePn	Pn	12 13 08.6	+0.6
SKO	Skopje	2.30	35	P	Pn	12 13 08.6	+0.6
SKO				S	Sn	12 13 39.1	+2.2
AGG	Agios Georgios	2.33	117	ePn	Pn	12 13 08.2	-0.2
AGG				eSn	Sn	12 13 36.7	-0.9
AGG	Agios Georgios	2.33	117	P	Pn	12 13 09.7	+1.3
AGG				S	Sn	12 13 38.8	+1.2
TTG	Podgorica	2.34	353	⇑iPn	Pn	12 13 08.4	-0.2
TTG				eSn	Sn	12 13 39.5	+1.5
TTG	Podgorica	2.34	353	⇑iPn	Pn	12 13 08.4	-0.2
BAI	Bari	2.35	296	ePn	Pn	12 13 08.7	0.0
SG1	Sgolgore (BA)	2.39	289	ePn	Pn	12 13 09.5	+0.2
RLS	Riolos of Patr	2.48	145	ePN	Pn	12 13 10.0	-0.5
STIP	Stip	2.48	49	ePn	Pn	12 13 10.6	0.0
STIP	Stip	2.48	49	ePn	Pn	12 13 10.3	-0.3
PVY	Plav	2.50	5	⇓iPn	Pn	12 13 11.0	+0.2
PVY				eSn	Sn	12 13 43.0	+1.2
HCY	Herceg Novi	2.50	340	⇑iPn	Pn	12 13 10.1	-0.7
HCY				eSn	Sn	12 13 42.8	+0.9
VAY	Valandovo	2.52	60	ePn	Pn	12 13 10.7	-0.4
VAY				eSn	Sn	12 13 41.7	-0.7
VAY	Valandovo	2.52	60	ePn	Pn	12 13 11.8	+0.7
VAY				eSn	Sn	12 13 45.3	+2.9
VAY	Valandovo	2.52	60	P	Pn	12 13 11.9	+0.8
VAY				S	Sn	12 13 41.7	-0.7
VAY	Valandovo	2.52	60	P	Pn	12 13 11.9	+0.8
VAY				S	Sn	12 13 41.7	-0.7
VAY				eSn	Sn	12 13 45.3	+2.9
THE	Thessaloniki	2.58	77	ePn	Pn	12 13 11.1	-0.7
HORT	Hortiatis	2.67	78	ePn	Pn	12 13 12.9	-0.2
KNT	Kendrikon	2.68	66	ePn	Pn	12 13 13.0	-0.2
KNT				eSn	Sn	12 13 46.5	+0.3
NKY	Niksic	2.75	350	⇑iPn	Pn	12 13 13.8	-0.5
NKY				eSn	Sn	12 13 48.9	+0.7
NKY	Niksic	2.75	350	⇑iPn	Pn	12 13 13.8	-0.5
NKY				eSn	Sn	12 13 48.8	+0.7
CDT	Castel del Mon	2.76	292	ePn	Pn	12 13 12.6	-1.8
IVA	Berane	2.77	4	⇑iPn	Pn	12 13 14.7	+0.1
IVA				eSn	Sn	12 13 50.1	+1.5
IVA	Berane	2.77	4	⇑iPn	Pn	12 13 14.6	+0.1
TREB	Trebinje	2.79	340	P	Pn	12 13 13.7	-1.1
TREB				S	Sn	12 13 48.1	-1.0
XOR	Xorichti	2.82	104	ePn	Pn	12 13 15.5	+0.3
NEO	Neokhori	2.86	105	ePN	Pn	12 13 16.6	+0.9
SOH	Sokhos	2.90	75	ePn	Pn	12 13 16.2	-0.2
SOH				eSn	Sn	12 13 51.5	-0.3
PLG	Polygyros	2.91	83	ePN	Pn	12 13 17.0	+0.6
BRY	Bratogost	2.92	344	⇓iPn	Pn	12 13 16.4	-0.1
BRY				eSn	Sn	12 13 53.1	+0.9
CUC	Castrocucco	2.96	269	Pn	Pn	12 13 20.0	+2.9
PAIG	Paliouri	3.09	92	ePn	Pn	12 13 18.2	-0.7
PAIG	Paliouri	3.09	92	P	Pn	12 13 18.2	-0.7
PAIG				S	Sn	12 13 54.5	-1.9
PAIG	Paliouri	3.09	92	ePn	Pn	12 13 18.2	-0.7
PAIG				S	Sn	12 13 54.5	-1.9
SLCN	Sala Consilina	3.10	277	Pn	Pn	12 13 20.5	+1.4
UPM	Unac-Piva	3.15	350	⇑iPn	Pn	12 13 20.0	+0.3
UPM				eSn	Sn	12 13 58.1	+0.2
SJES	Sjenica	3.17	4	Pn	Pn	12 13 18.4	-1.6
PLE	Pljevlja	3.23	356	⇑iPn	Pn	12 13 21.6	+0.7
PLE				eSn	Sn	12 14 00.9	+1.0
PLE	Pljevlja	3.23	356	⇑iPn	Pn	12 13 21.5	+0.7
FGMS	Monte Sant'Ang	3.24	301	Pn	Pn	12 13 21.4	+0.5
MRLC	Muro Lucano	3.25	283	Pn	Pn	12 13 22.2	+1.0
OUR	Ouranopolis	3.31	85	ePn	Pn	12 13 22.0	0.0
FG4	Candela	3.32	289	Pn	Pn	12 13 24.9	+2.8
AOS	Alonnisos	3.38	105	ePn	Pn	12 13 22.8	-0.2
MMB	Musomiste	3.42	63	ePn	Pn	12 13 23.8	+0.3
MMB				eSn	Sn	12 14 03.5	-1.1
MMB	Musomiste	3.42	63	P	Pn	12 13 23.8	+0.3
MMB				S	Sn	12 14 03.6	-1.0
CEL	Celeste	3.46	239	Pn	Pn	12 13 23.8	-0.2
RGNG	Rignano Grg	3.47	298	Pn	Pn	12 13 24.3	+0.2
VTS	Vitosha	3.65	46	ePn	Pn	12 13 27.1	+0.5
VTS	Vitosha	3.65	46	⇓iP	Pn	12 13 27.9	+1.4
MTTG	Motta San Giov	3.74	237	Pn	Pn	12 13 28.2	+0.4
GRUS	Gruza	3.86	11	⇑iPn	Pn	12 13 29.4	-0.1
GRUS				Sn	Sn	12 14 17.8	+2.3
CIGN	Sant'Elia a Pi	3.93	295	Pn	Pn	12 13 31.5	+1.1
DIVS	Divcibare	4.00	3	⇑iPn	Pn	12 13 31.1	-0.3
DIVS				Sn	Sn	12 14 15.1	-3.8
DIVS	Divcibare	4.00	3	ePn	Pn	12 13 32.8	+1.4
DIVS	Divcibare	4.00	3	ePn	Pn	12 13 32.8	+1.4
DIVS				Sn	Sn	12 14 15.1	-3.8
VLI	Veliai	4.25	142	ePN	Pn	12 13 35.1	+0.3
KYTH	Kithira	4.65	144	ePN	Pn	12 13 41.0	+0.6
INTR	Introdacqua	4.75	295	Pn	Pn	12 13 42.5	+0.7
TERO	Teramo	5.21	301	Pn	Pn	12 13 49.2	+1.2
APE	Apeiranthos	5.50	122	⇓iP	Pn	12 13 55.4	+3.3
APE	Apeiranthos	5.50	122	⇓P	Pn	12 13 55.4	+3.3
BZS	Buzias	5.69	14	⇑iP	Pn	12 13 53.3	-1.4
BZS	Buzias	5.69	14	⇑P	Pn	12 13 53.3	-1.4
NVLJ	Novalja	5.70	323	i Pn	Pn	12 13 54.1	-0.6
NVLJ				i Sn	Sn	12 14 57.5	-3.3
BOJS	Bojanci	6.30	330	i Pn	Pn	12 14 02.9	-0.1
BOJS				i Sn	Sn	12 15 14.4	-1.1
IDI	Anoyia	6.34	138	Pn	Pn	12 14 01.8	-1.8
	0.8nm,0.3s,baz=326,slow=15,SNR=4.2						
IDI				Sn	Sn	12 15 09.2	-7.5
	3.4nm,0.3s,baz=299,slow=16,SNR=8.3						
VISS	Visnje	6.71	330	ePn	Pn	12 14 07.8	-0.8
VISS				eSn	Sn	12 15 22.7	-2.9
MLR	Muntele Rosu	7.09	39	Pn	Pn	12 14 13.4	-0.5
	0.4nm,0.3s,baz=178,slow=7.2,SNR=3.6						
MLR	Muntele Rosu	7.09	39	⇓iP	Pn	12 14 15.7	+1.8
MLR	Muntele Rosu	7.09	39	⇓P	Pn	12 14 15.7	+1.9
VOY	Vojsko	7.28	326	ePn	Pn	12 14 15.7	-0.7
VOY				eSn	Sn	12 15 35.9	-3.7
OBKA	Obir	7.41	331	⇑iPn	Pn	12 14 17.4	-0.9
OBKA				⇓iSn	Sn	12 15 38.9	-4.0
VRI	Vrincioaia	7.74	40	⇓iP	Pn	12 14 23.5	+0.7
VYHS	Vyhne	8.41	356	ePN	Pn	12 14 26.1	-5.9
VYHS				eSN	Sn	12 16 02.9	-4.6
CRVS	Cervenica-Dubn	8.89	8	e	Pn	12 14 38.1	-0.5
SLUM		9.70	151	⇓P	Pn	12 14 45.9	-3.8
GERES	GERESS Array B	9.72	336	Pn	Pn	12 14 46.1	-3.9
	0.2nm,0.3s,baz=170,slow=12,SNR=2.3						
GERES				Sn	Sn	12 16 34.1	-5.6
	0.7nm,0.3s,baz=158,slow=22,SNR=4.3						
HMAT	Matruh	10.83	144	⇑P	Pn	12 15 01.7	-3.5
HMAT				S	Sn	12 16 52.4	-15
SWA2		11.83	155	⇑P	Pn	12 15 14.7	-4.2
SWA2		11.83	155	P	Pn	12 15 14.6	-4.3
SWA1		11.90	154	P	Pn	12 15 15.7	-4.1
SWA1				S	Sn	12 17 17.4	-16
ESDC	Sonseca Array	18.13	276	P	Pn	12 16 39.5	-2.6
	0.1nm,0.3s,baz=81,slow=12,SNR=2.2						
HFS	Hagfors	20.40	351	P	P	12 17 05.2	-2.1
	1.3nm,0.4s,baz=148,slow=12,SNR=5.6						
NB2	NORSAR Subarra	21.60	349	P	P	12 17 18.9	-1.4
	comp=Z,1.8nm,0.6s,mb3.7,baz=153,slow=10						
NOA	NORSAR Array B	21.60	349	P	P	12 17 18.6	-1.7
	comp=Z,2.4nm,0.9s,mb3.6,baz=160,slow=10,SNR=5.0						
FINES	FINESS Array B	21.73	8	P	P	12 17 18.7	-3.0
	comp=Z,0.7nm,0.5s,mb3.4,baz=184,slow=13,SNR=10						
JOF	Joensuu	23.89	13	ep	P	12 17 46.9	+2.7
	comp=Z,2.1nm,0.5s,mb3.8						
TORD	Torodi Ar. Bea	31.16	216	P	P	12 18 48.9	-0.5
	comp=Z,0.3nm,0.5s,mb3.4,baz=10,slow=8.8,SNR=2.8						
MKAR	Makanchi Array	44.88	60	P	P	12 20 42.5	-2.5
	comp=Z,0.9nm,0.5s,mb3.9,baz=289,slow=7.6,SNR=5.6						

*BJI **09** 12:18:46.8, 54.84N×165.68E, h8km, mB4.7, mb4.7, Ms4.2, Msz4.0*
*IDC **09** 12:18:48.1±0.8, 54.98N×165.86E, h0km, mb4.1/15, mb1 4.3/16, mb1mx4.2/24, mbtmp4.2/16, ML3.7/1, MS3.5/10, Ms1 3.5/10, ms1mx3.2/30, Error ellipse: s-maj=25.1km s-min=13.8km az=160.0*
*ISCJB **09** 12:18:48.2±0.2, 55.00N±0.04×165.70E±0.02, h10km, mb4.3/42, MS3.7/14, Error ellipse: s-maj=5.7km s-min=1.9km az=2.6*
*NEIC **09** 12:18:49.7±4.3, 55.01N×165.69E, h10km±27km, mb4.5/24, Error ellipse: s-maj=13.8km s-min=5.9km az=169.0*
*MOS **09** 12:18:50.6±0.9, 54.98N×165.67E, h29km, mb4.5/12, Error ellipse: s-maj=11.2km s-min=8.7km az=135.3*
*KRSC **09** 12:18:50, 54.94N×165.54E, h31km, ML4.5*
ISC 09 12:18:49.9±0.2, **55.00N**±0.04×**165.67E**±0.02, **h10**km, **(h25**km±6.0km**:pP-P), n207**, σ0s93/237, **mb4.3**/42, **MS3.7**/14, **35C-40D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	2.02	308	P	Pn	12 19 22.1	-1.9
KBTR				S	Sn	12 19 44.6	-4.7
KBTR	Krutoberegovo	2.02	308	eP	Pn	12 19 22.1	-1.9
KBTR				i S	Sn	12 19 44.6	-4.7
MKZ	Mys Kozlova	2.33	261	P	Pn	12 19 27.7	-0.5
MKZ				S	Sn	12 19 54.5	-2.3
MKZ	Mys Kozlova	2.33	261	eP	Pn	12 19 27.7	-0.5
MKZ				i S	Sn	12 19 54.5	-2.3
SMKR	Semkarok	2.85	305	eP	Pn	12 19 35.4	-0.1
SMKR				i S	Sn	12 20 07.9	-2.0
ZLN	Zelenaya	2.95	292	eP	Pn	12 19 37.9	+1.1
ZLN				i S	Sn	12 20 12.3	+0.1
BDR	Baidarnaya	2.97	304	eP	Pn	12 19 37.5	+0.4
CIRR	Tsirk	3.01	294	eP	Pn	12 19 38.8	+1.2
SRKR	Sorokina	3.03	305	eP	Pn	12 19 38.8	+0.9
SRKR				i S	Sn	12 20 13.7	-0.6
KLY	Klyuchi	3.13	297	P	Pn	12 19 38.8	-0.5
KLY				S	Sn	12 20 14.5	-2.3
KLY	Klyuchi	3.13	297	eP	Pn	12 19 38.8	-0.5
KLY				i S	Sn	12 20 14.5	-2.3
KRSR	Krestovskiy	3.14	295	eP	Pn	12 19 40.1	+0.7
KRSR				i S	Sn	12 20 15.8	-1.2
TUMR	Tumrok	3.18	277	P	Pn	12 19 42.2	+2.2
TUMR				i S	Sn	12 20 20.0	+2.0
KMNR	Kamenistaya	3.19	286	eP	Pn	12 19 42.0	+1.9
KMNR				i S	Sn	12 20 19.5	+1.3
KPT	Kopyto	3.25	290	eP	Pn	12 19 42.2	+1.3
KPT				i S	Sn	12 20 20.1	+0.5
KOZR	Kozyr	3.45	290	PN	Pn	12 19 45.3	+1.6
KOZR				S	Sn	12 20 25.0	+0.4
KOZ	Kozyrevsk	3.46	290	P	Pn	12 19 45.3	+1.5
KOZ				S	Sn	12 20 25.0	+0.1
KOZ	Kozyrevsk	3.46	290	eP	Pn	12 19 45.3	+1.5
KOZ				i S	Sn	12 20 25.0	+0.1
SRDR	Sredinnyy	3.62	294	eP	Pn	12 19 47.5	+1.5
SRDR				i S	Sn	12 20 28.8	0.0
KII	Karymskiy	3.75	258	P	Pn	12 19 48.7	+0.9
KII				S	Sn	12 20 30.9	-1.2
KII	Karymskiy	3.75	258	eP	Pn	12 19 48.7	+0.9
KII				i S	Sn	12 20 30.9	-1.2
SPN	Mys Shipunski	3.83	243	P	Pn	12 19 47.9	-1.1
SPN				S	Sn	12 20 29.3	-4.8
SPN	Mys Shipunski	3.83	243	eP	Pn	12 19 47.9	-1.1
SPN				i S	Sn	12 20 29.3	-4.8
NLC	Nalytchevo	4.15	246	P	Pn	12 19 52.7	-0.6
NLC				S	Sn	12 20 38.1	-3.8
NLC	Nalytchevo	4.15	246	eP	Pn	12 19 52.7	-0.6
NLC				i S	Sn	12 20 38.1	-3.8
AVH	Avacha	4.43	250	eP	Pn	12 19 58.0	+0.8
AVH				i S	Sn	12 20 46.9	-1.9
PET	Petropavlovsk	4.59	247	P	Pn	12 19 59.5	+0.2
PET				S	Sn	12 20 49.9	-2.8
PET	Petropavlovsk	4.59	247	ePn	Pn	12 19 59.1	-0.2
PET				eSn	Sn	12 20 48.7	-4.0
PET	Petropavlovsk	4.59	247	eP	Pn	12 19 59.5	+0.2
PET				i S	Sn	12 20 49.9	-2.8
GNL	Ganaly	4.71	257	eP	Pn	12 20 02.2	+1.3
RUS	Russkaya	4.97	242	P	Pn	12 20 04.0	-0.5
RUS				S	Sn	12 20 57.4	-4.6
RUS	Russkaya	4.97	242	eP	Pn	12 20 04.0	-0.5
RUS				i S	Sn	12 20 57.4	-4.6
GRL	Gorelyy	5.13	245	eP	Pn	12 20 07.4	+0.7
GRL				i S	Sn	12 21 02.4	-3.6
MIPR	Malaya Ipel'ka	5.96	246	eP	Pn	12 20 19.6	+1.4
SKR	Severo-Kuril's	7.22	237	ePN	Pn	12 20 31.6	-3.9
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
SKR				MLR	MLR		
	comp=N,1μm,14.0s						
BILL	Bilibino	13.09	1	⇓ePN	Pn	12 22 01.8	+6.0
BILL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS	Yuzh-Sakhalins	16.47	250	P	Pn	12 22 43.7	+2.7
ASAJ	Asahikawa	18.42	243	P	Pn	12 23 05.2	-0.1
	comp=Z,0.4nm,0.3s,baz=43,slow=8.4,SNR=19						
ASAJ				LR	LR	12 30 00.0	
	comp=Z,121nm,18.4s,baz=14,slow=36						
SDPT	Sand Point	19.23	75	eP	Pn	12 23 13.4	-1.8
	comp=Z,63nm,1.2s						
YAK	Yakutsk	19.85	305	i P	Pn	12 23 22.3	-0.2
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HABR	Khabarovsk	19.94	264	eP	Pn	12 23 22.6	-1.0
HABR				eS	Sn	12 27 08.4	+0.6
CHGN	Chignik	20.17	72	eP	P	12 23 24.0	-0.4
TTA	Tatalina	21.00	52	eP	P	12 23 33.5	+0.1
SVW2	Sparrevohn	21.14	57	eP	P	12 23 34.7	-0.3
IMA2	Indian Mountai	22.40	44	eP	P	12 23 48.0	-0.4
KDAK	Kodiak Island	23.01	66	P	P	12 23 52.8	-2.1
	comp=Z,16nm,0.7s,mb4.6,baz=305,slow=8.9,SNR=23						
KDAK	Kodiak Island	23.01	66	eP	P	12 23 52.6	-2.3
	comp=Z,18nm,0.7s,mb4.6						
PMR	Palmer	24.22	56	eP	P	12 24 03.3	-3.4
PMR				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
PMR	Palmer	24.22	56	eP	P	12 24 03.3	-3.4
	comp=Z,5.2nm,0.6s,mb4.1						
COLA	College	24.70	48c	iP	P	12 24 10.4	-0.7
COLA	College	24.70	48	eP	P	12 24 10.2	-1.0
	comp=Z,22nm,0.9s,mb4.7						
MDJ	Mudanjiang	25.22	261	P	P	12 24 15.9	+0.1
MDJ				AP	pP	12 24 18.8	+0.1
MDJ				XP	sP	12 24 20.2	+0.2
MDJ				S	S	12 28 41.0	-0.2
MDJ				XS	sS	12 28 46.6	+0.5
MDJ				SCP	ScP	12 31 28.8	+0.3
MDJ				PCS	PcS	12 31 30.1	+0.5
MDJ				SCS	ScS	12 35 17.2	+0.1
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,33nm,4.0s						
MDJ				LR	LR		
	comp=N,67nm,21.8s						
MDJ				LR	LR		
	comp=E,24nm,16.4s						
MDJ				LR	LR		
	comp=Z,68nm,19.1s,MS3.2						
MJAR	Matsushiro Arr	26.33	237	P	P	12 24 25.6	-0.3
	comp=Z,0.5nm,0.4s,mb3.4,baz=40,slow=9.6,SNR=2.7						
CN2	Changchun	28.08	263	eP	P	12 24 41.1	-0.5
DAWY	Dawson	28.41	49	eP	P	12 24 43.5	-1.0
INK	Inuvik	30.32	40	P	P	12 24 59.7	-1.8
	comp=Z,4.5nm,0.6s,mb4.3,baz=282,slow=4.1,SNR=13						
INK	Inuvik	30.32	40	eP	P	12 25 01.2	-0.3
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	Inuvik	30.32	40	eP	P	12 25 01.2	-0.3
	comp=Z,5.4nm,0.9s,mb4.3						
ULN	Ulaanbaatar	36.26	284	i P	P	12 25 52.4	-0.9
SONM	Songino Array	36.65	284	P	P	12 25 57.8	+1.2
	comp=Z,0.8nm,0.6s,mb3.7,baz=56,slow=7.5,SNR=6.3						
SONM				LR	LR	12 42 28.4	
	comp=Z,61nm,19.0s,MS3.4,baz=256,slow=39						
HHC	Hu-ho-hao-te	37.93	271	eP	P	12 26 07.1	-0.3
HHC				AP	pP	12 26 16.9	+6.5
HHC				XP	sP	12 26 20.8	+9.2
HHC				PP	PP	12 27 36.8	+2.8
HHC				PCP	PcP	12 28 23.7	+0.4
HHC				S	S	12 31 54.1	-5.0
HHC				SCP	ScP	12 32 08.3	-2.7
HHC				XS	sS	12 32 10.7	+6.7
HHC				PCS	PcS	12 32 12.6	+0.5
HHC				SS	SS	12 34 30.1	-15
HHC				SCS	ScS	12 36 15.4	-4.7
HHC				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.7						
HHC				AMB	AMB		
	comp=Z,81nm,4.7s						
HHC				LR	LR		
	comp=N,141nm,13.7s,MS4.2						
HHC				LR	LR		
	comp=E,210nm,13.1s,MS4.2						
HHC				LR	LR		
	comp=Z,66nm,15.2s,MS3.6						
SSE	Sheshan	39.41	251	eP	P	12 26 15.4	-4.4
SSE				AMB	AMB		
	comp=Z,16nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,123nm,3.5s						
YKA	Yellowknife Ar	39.50	46	P	P	12 26 20.0	-0.6
	comp=Z,3.7nm,0.7s,mb4.2,baz=296,slow=7.5,SNR=5.7						
NJ2	Nanjing	39.96	255	eP	P	12 26 25.4	+0.9
NJ2				PP	PP	12 28 02.2	+5.9
NJ2				S	S	12 32 28.0	-1.7
NJ2				XS	sS	12 32 44.0	+9.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,20nm,3.5s						
NJ2				LR	LR		
	comp=N,210nm,20.0s,MS4.1						
NJ2				LR	LR		
	comp=E,120nm,16.1s,MS4.1						
NJ2				LR	LR		
	comp=Z,120nm,21.2s						
B05A	Bryant	43.49	68	⇑P	P	12 26 53.0	-0.3
	baz=43						
C05A	Tolt Reservoir	44.05	68	⇑P	P	12 26 57.5	-0.3
	baz=44						
ZAL	Zalesovo	44.50	304	LR	LR	12 48 42.9	
	comp=Z,40nm,18.2s,MS3.4,baz=221,slow=40						
EDM	Edmonton	44.98	57	eP	P	12 27 05.0	-0.3
H04A	Detroit Lake	45.67	72	⇓P	P	12 27 09.3	-1.4
	baz=46						
J02A	Umpqua	45.76	74	⇑P	P	12 27 11.1	-0.4
	baz=46						
NEW	Newport	46.11	65	eP	P	12 27 13.4	-0.8
NEW				e		12 27 22.9	
NEW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NEW	Newport	46.11	65	eP	P	12 27 13.4	-0.8
	comp=Z,2.4nm,0.8s,mb4.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NEW				e		12 27 22.9	
H05A	**Madras**	**46.22**	**71**	⇑P	**P**	**12 27 14.7**	**-0.4**
	baz=46						
J05A	**Fort Rock**	**47.10**	**73**	⇑P	**P**	**12 27 21.5**	**-0.5**
	baz=47						
I06A	**Prineville**	**47.23**	**71**	⇑P	**P**	**12 27 22.8**	**-0.2**
	baz=47						
WALA	**Waterton Lakes**	**47.26**	**62**	eP	**P**	**12 27 22.7**	**-0.5**
	comp=Z,13nm,1.0s,mb4.8						
WALA				e		12 27 37.3	
YBH	**Yreka Blue Hor**	**47.31**	**75**	⇓P	**P**	**12 27 22.3**	**-1.3**
	baz=47						
M02C	**Callahan**	**47.46**	**76**	⇓P	**P**	**12 27 23.2**	**-1.6**
	baz=47						
H08A	**Prairie City**	**47.69**	**70**	⇓P	**P**	**12 27 26.1**	**-0.4**
	baz=48						
J06A	**Christmas Vall**	**47.72**	**72**	⇑P	**P**	**12 27 26.3**	**-0.5**
	baz=48,SNR=6.8						
M04C	**Macdoel**	**47.76**	**74**	⇓P	**P**	**12 27 26.4**	**-0.7**
	baz=48						
I08A	**Drewsey**	**48.14**	**70**	⇓P	**P**	**12 27 29.7**	**-0.4**
	baz=48						
M05C	**Lookout**	**48.43**	**74**	⇑P	**P**	**12 27 31.4**	**-0.9**
	baz=48						
I09A	**Lost Marbles R**	**48.55**	**70**	⇑P	**P**	**12 27 33.4**	**+0.2**
	baz=48						
K08A	**Mann Creek Ran**	**48.97**	**71**	⇑P	**P**	**12 27 36.4**	**-0.1**
	baz=49						
L07A	**Adell**	**48.99**	**73**	⇓P	**P**	**12 27 36.4**	**-0.2**
	baz=49						
CD2	**Chengdu**	**49.39**	**267**	eP	**P**	**12 27 37.9**	**-1.8**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
WMQ	**Urumqi**	**49.40**	**291**	eP	**P**	**12 27 40.0**	**+0.3**
WMQ				AP	pP	12 27 50.0	+7.2
WMQ				XP	sP	12 27 54.0	+10
WMQ				PP	PP	12 29 34.0	+0.3
WMQ				S	**S**	**12 34 43.0**	**-3.6**
WMQ				SCS	ScS	12 37 26.0	-5.8
WMQ				SS	SS	12 38 11.0	-7.3
WMQ				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,104nm,5.0s						
WMQ				LR	LR		
	comp=N,245nm,12.0s,MS4.5						
WMQ				LR	LR		
	comp=E,175nm,12.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,78nm,10.0s,MS4.0						
L08A	**Fields**	**49.42**	**72**	⇑P	**P**	**12 27 40.0**	**+0.1**
	baz=49						
ORV	**Oroville**	**49.47**	**76**	⇓P	**P**	**12 27 39.3**	**-1.0**
	baz=49						
KURK	**Kurchatov**	**49.48**	**303**	iP	**P**	**12 27 40.7**	**+0.4**
M07A	**Soldier Meadow**	**49.51**	**73**	⇑P	**P**	**12 27 41.0**	**+0.4**
	baz=49,SNR=7.2						
N06A	**Buffalo Meadow**	**49.58**	**74**	⇓P	**P**	**12 27 41.1**	**0.0**
	baz=49						
HRY	**Holter Researc**	**49.85**	**63**	eP	**P**	**12 27 42.8**	**-0.4**
BEKR	**Beckwourth**	**49.89**	**75**	⇓P	**P**	**12 27 42.7**	**-0.8**
	baz=50						
FCC	**Fort Churchill**	**49.90**	**42**	eP	**P**	**12 27 42.5**	**-1.1**
FCC				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
FCC	**Fort Churchill**	**49.90**	**42**	eP	**P**	**12 27 42.5**	**-1.0**
	comp=Z,6.1nm,0.6s,mb4.8						
M08A	**Happy Creek Ra**	**49.90**	**72**	⇓P	**P**	**12 27 43.8**	**+0.2**
	baz=50						
L09A	**Wilkinson Ranc**	**49.90**	**71**	⇓P	**P**	**12 27 44.4**	**+0.8**
	baz=50						
O06A	**Flanigan**	**49.98**	**75**	⇑P	**P**	**12 27 43.7**	**-0.5**
	baz=50						
MKAR	**Makanchi Array**	**50.24**	**297**	P	**P**	**12 27 47.0**	**+0.8**
	comp=Z,0.6nm,0.7s,mb3.8,baz=57,slow=10,SNR=3.2						
P06A	**Stead Airport,**	**50.28**	**75**	⇓P	**P**	**12 27 45.3**	**-1.1**
	baz=50						
M09A	**Marrel Ranch,**	**50.43**	**72**	⇑P	**P**	**12 27 48.4**	**+0.9**
	baz=50						
LAVA	**Lava Cap Winer**	**50.45**	**77**	⇑P	**P**	**12 27 46.9**	**-0.8**
	baz=50,SNR=6.3						
O07A	**Toulon**	**50.51**	**74**	⇑P	**P**	**12 27 48.2**	**0.0**
	baz=50						
MCMT	**McKenzie Canyo**	**50.58**	**66**	eP	**P**	**12 27 47.8**	**-1.0**
HLID	**Hailey**	**50.61**	**68**	eP	**P**	**12 27 48.5**	**-0.4**
	comp=Z,0.9nm,0.5s,mb4.0						
WCN	**Washoe City**	**50.62**	**75**	⇓P	**P**	**12 27 49.4**	**+0.4**
	baz=50						
N09A	**Rock Creek Ran**	**50.78**	**72**	⇓P	**P**	**12 27 50.4**	**+0.1**
	baz=51						
R05C	**Kirkwood Meado**	**50.85**	**76**	⇓P	**P**	**12 27 50.3**	**-0.5**
	baz=51						
M10A	**I.L. Ranch, Tu**	**50.86**	**71**	⇑P	**P**	**12 27 51.7**	**+0.9**
	baz=51						
CMB	**Columbia Colle**	**51.15**	**77**	⇓P	**P**	**12 27 51.8**	**-1.2**
	baz=51						
CHKZ	**Chkalovo**	**51.19**	**310**	eP	**P**	**12 27 51.2**	**-2.1**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CHKZ	**Chkalovo**	**51.19**	**310**	eP	**P**	**12 27 51.2**	**-2.1**
	comp=Z,3.5nm,0.9s,mb4.3						
QLMT	**Earthquake Lak**	**51.32**	**65**	eP	**P**	**12 27 54.2**	**-0.1**
QLMT				e		12 28 21.4	
M11A	**Holland Ranch,**	**51.33**	**71**	⇑P	**P**	**12 27 55.6**	**+1.3**
	baz=51						
R06C	**Coleville**	**51.33**	**76**	⇑P	**P**	**12 27 54.7**	**+0.3**
	baz=51						
O09A	**Fish Creek Ran**	**51.44**	**73**	P	**P**	**12 27 55.8**	**+0.7**
	baz=51,SNR=5.7						
S06C	**San Francisco**	**51.56**	**77**	⇑P	**P**	**12 27 55.7**	**-0.4**
	baz=51,SNR=5.6						
GCMT	**Greycliff**	**51.58**	**63**	eP	**P**	**12 27 56.5**	**+0.2**
GCMT				e		12 28 10.8	
BVAR	**Borovoye Array**	**51.73**	**310**	P	**P**	**12 27 57.6**	**+0.2**
	comp=Z,2.9nm,0.9s,mb4.2,baz=55,slow=6.0,SNR=7.5						
BVAR				LR	LR	12 52 28.8	
	comp=Z,37nm,18.3s,MS3.5,baz=319,slow=39						
BVAR	**Borovoye Array**	**51.73**	**310**	P	**P**	**12 27 57.6**	**+0.2**
BVAR				LR	LR	12 52 28.8	
P09A	**Austin**	**51.89**	**73**	⇑P	**P**	**12 27 59.5**	**+0.9**
	baz=52						
Q08A	**Gabbs**	**51.94**	**75**	P	**P**	**12 27 59.5**	**+0.5**
	baz=52,SNR=12						
NVAR	**Mina Array Bea**	**52.03**	**75**	P	**P**	**12 27 59.5**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.3,baz=291,slow=9.4,SNR=23						
N12A	**Clover Valley,**	**52.14**	**71**	⇑P	**P**	**12 28 00.8**	**+0.4**
	baz=52						
FLWY	**Flagg Ranch**	**52.22**	**65**	eP	**P**	**12 28 01.0**	**0.0**
	comp=Z,8.2nm,0.9s,mb4.7						
IMW	**Indian Meadow**	**52.22**	**65**	eP	**P**	**12 28 03.9**	**+2.9**
	comp=Z,6.9nm,1.0s,mb4.5						
KCC	**Kaiser Creek**	**52.25**	**77**	⇓P	**P**	**12 28 01.7**	**+0.5**
	baz=52						
M13A	**Montello**	**52.26**	**70**	⇓P	**P**	**12 28 01.8**	**+0.5**
	baz=52						
MOOW	**Moose Ponds**	**52.42**	**65**	eP	**P**	**12 28 02.6**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9						
ARCES	**ARCESS Array B**	**52.45**	**343**	P	**P**	**12 28 01.1**	**-1.6**
	comp=Z,1.0nm,0.6s,mb3.9,baz=2.9,slow=9.7,SNR=3.7						
LOHW	**Long Hollow**	**52.59**	**65**	eP	**P**	**12 28 04.0**	**+0.3**
	comp=Z,4.8nm,1.0s,mb4.4						
R09A	**Tonopah**	**52.85**	**74**	P	**P**	**12 28 06.0**	**+0.3**
	baz=53,SNR=7.1						
HELL	**Mitchell Peak,**	**52.87**	**77**	P	**P**	**12 28 06.0**	**+0.2**
	baz=53,SNR=5.2						
TPH	**Tonopah**	**52.89**	**75**	eP	**P**	**12 28 06.6**	**+0.6**
TPH				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
TPH	**Tonopah**	**52.89**	**75**	eP	**P**	**12 28 06.6**	**+0.6**
	comp=Z,5.5nm,0.7s,mb4.6						
S09A	**Goldfield**	**53.13**	**75**	P	**P**	**12 28 08.2**	**+0.4**
	baz=53,SNR=5.2						
R10A	**Warm Springs**	**53.25**	**74**	⇓P	**P**	**12 28 09.1**	**+0.5**
	baz=53						
HWUT	**Hardware Ranch**	**53.48**	**68**	eP	**P**	**12 28 10.5**	**+0.1**
	comp=Z,1.6nm,0.6s,mb4.1						
Q12A	**Willow Creek R**	**53.52**	**72**	⇓P	**P**	**12 28 12.0**	**+1.4**
	baz=53						
GRAC	**Grapevine Rang**	**53.57**	**76**	⇓P	**P**	**12 28 11.4**	**+0.4**
	baz=53						
BW06	**Boulder Array**	**53.73**	**65**	eP	**P**	**12 28 12.2**	**+0.1**
	comp=Z,4.1nm,1.1s,mb4.3						
PDAR	**Pinedale Array**	**53.73**	**65**	P	**P**	**12 28 11.4**	**-0.7**
	comp=Z,3.3nm,0.9s,mb4.3,baz=326,slow=3.2,SNR=24						
ISA	**Isabella**	**53.91**	**78**	⇓P	**P**	**12 28 12.9**	**-0.6**
	baz=54						
ARU	**Arti**	**54.16**	**319**	eP	**P**	**12 28 19.5**	**+4.2**
ARU				e		12 30 18.5	
ARU				ePPP		12 31 34.6	
ARU				eS	**S**	**12 36 00.8**	**+8.5**
MPMC	**Manual Prospec**	**54.18**	**77**	⇑P	**P**	**12 28 15.7**	**+0.3**
	baz=54						
TPNV	**Topopah Spring**	**54.23**	**75**	eP	**P**	**12 28 16.1**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TPNV	**Topopah Spring**	**54.23**	**75**	eP	**P**	**12 28 16.1**	**+0.3**
	comp=Z,4.7nm,0.8s,mb4.5						
FURC	**Furnace Creek,**	**54.24**	**76**	P	**P**	**12 28 16.7**	**+0.9**
	baz=54,SNR=10						
KMI	**Kunming**	**54.35**	**263**	P	**P**	**12 28 17.9**	**+1.2**
KMI				AP	pP	12 28 22.8	+3.0
KMI				XP	sP	12 28 25.1	+4.2
KMI				PP	PP	12 30 23.1	+4.5
KMI				S	**S**	**12 35 53.9**	**-0.9**
KMI				SS	SS	12 39 33.8	-3.1
KMI				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.5						
KMI				AMB	AMB		
	comp=Z,39nm,3.8s						
KMI				LR	LR		
	comp=N,150nm,12.1s,MS4.3						
KMI				LR	LR		
	comp=E,122nm,16.9s,MS4.3						
KMI				LR	LR		
	comp=Z,118nm,16.2s,MS4.0						
LRMC	**Laurel Mountai**	**54.49**	**77**	⇓P	**P**	**12 28 18.1**	**+0.4**
	baz=54						
EDW2	**Edwards Air Fo**	**54.75**	**78**	⇓P	**P**	**12 28 19.7**	**+0.1**
	baz=55						
SHOC	**Shoshone**	**54.97**	**76**	⇓P	**P**	**12 28 21.8**	**+0.6**
	baz=55						
DECC	**Green Verdugo**	**55.02**	**79**	⇓P	**P**	**12 28 21.4**	**-0.1**
	baz=55						
ULM	**Lac du Bonnet**	**55.09**	**51**	P	**P**	**12 28 20.7**	**-1.4**
	comp=Z,5.5nm,0.9s,mb4.6,baz=318,slow=6.9,SNR=6.1						
ULM				LR	LR	12 53 25.0	
	comp=Z,62nm,19.0s,MS3.7,baz=332,slow=38						
ULM	**Lac du Bonnet**	**55.09**	**51**	eP	**P**	**12 28 21.1**	**-1.0**
	comp=Z,10.0nm,1.1s,mb4.8						
ULM				e		12 28 35.7	
GSC	**Goldstone**	**55.11**	**77**	P	**P**	**12 28 22.8**	**+0.6**
	baz=55,SNR=5.1						
TMUT	**Trail Mountain**	**55.31**	**70**	eP	**P**	**12 28 24.2**	**+0.6**
MSU	**Marysvale**	**55.35**	**71**	eP	**P**	**12 28 24.7**	**+0.8**
CCUT	**Cedar City**	**55.40**	**72**	eP	**P**	**12 28 25.0**	**+0.7**
BFSC	**Mount Baldy St**	**55.41**	**78**	⇓P	**P**	**12 28 24.5**	**+0.2**
	baz=55						
V11A	**Goodsprings**	**55.49**	**75**	⇑P	**P**	**12 28 26.0**	**+1.0**
	baz=55						
TUQ	**Turquoise Mtn.**	**55.51**	**76**	⇓P	**P**	**12 28 25.5**	**+0.4**
	baz=55						
U12A	**Valley of Fire**	**55.55**	**74**	⇑P	**P**	**12 28 25.6**	**+0.2**
	baz=55						
CIS	**Catalina Islan**	**55.59**	**80**	⇑P	**P**	**12 28 25.6**	**-0.1**
	baz=55						
RSSD	**Black Hills**	**55.61**	**61**	eP	**P**	**12 28 25.6**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
RSSD	**Black Hills**	**55.61**	**61**	eP	**P**	**12 28 25.6**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.4						
HEC	**Hector,Ludlow**	**55.72**	**77**	⇑P	**P**	**12 28 27.3**	**+0.7**
	baz=56						
BBRC	**Big Bear Sol-O**	**55.80**	**78**	⇑P	**P**	**12 28 27.8**	**+0.7**
	baz=56						
SRU	**San Rafael**	**55.82**	**69**	eP	**P**	**12 28 27.8**	**+0.5**
SRU				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
SRU	**San Rafael**	**55.82**	**69**	eP	**P**	**12 28 27.8**	**+0.5**
	comp=Z,12nm,0.6s,mb5.1						
V12A	**Nelson**	**55.89**	**75**	⇑P	**P**	**12 28 29.1**	**+1.3**
	baz=56						
MURC	**Murrieta**	**56.13**	**79**	⇑P	**P**	**12 28 29.1**	**-0.5**
	baz=56						
BELC	**Belle Mtn.**	**56.51**	**77**	⇓P	**P**	**12 28 32.1**	**-0.2**
	baz=56						
109C	**Camp Elliot, M**	**56.71**	**79**	⇓P	**P**	**12 28 33.2**	**-0.5**
	baz=56						
IRM	**Iron Mountain**	**56.87**	**77**	⇓P	**P**	**12 28 34.9**	**0.0**
	baz=57						
W13A	**Hualapai Mount**	**56.89**	**75**	⇓P	**P**	**12 28 35.8**	**+0.9**
	baz=57						
AAK	**Ala-Archa**	**57.12**	**299**	eP	**P**	**12 28 37.2**	**+0.6**
W14A	**Seligman**	**57.25**	**74**	⇑P	**P**	**12 28 38.4**	**+0.9**
	baz=57						
X13A	**Yucca**	**57.29**	**75**	⇓P	**P**	**12 28 38.2**	**+0.4**
	baz=57						
PDMCI	**Parker Dam,Lak**	**57.34**	**76**	⇓P	**P**	**12 28 38.5**	**+0.4**
	baz=57						
Y12C	**Blythe**	**57.53**	**76**	⇑P	**P**	**12 28 40.0**	**+0.6**
	baz=57						
Y13A	**Salome**	**57.87**	**76**	⇓P	**P**	**12 28 42.4**	**+0.6**
	baz=58						
GLA	**Glamis**	**57.87**	**77**	⇓P	**P**	**12 28 42.4**	**+0.5**
	baz=58						
X14A	**Yava**	**57.91**	**75**	⇓P	**P**	**12 28 42.8**	**+0.7**
	baz=58						
ISCO	**Idaho Springs**	**57.92**	**65**	eP	**P**	**12 28 43.1**	**+0.9**
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
ISCO	**Idaho Springs**	**57.92**	**65**	eP	**P**	**12 28 43.1**	**+0.9**
	comp=Z,4.0nm,1.0s,mb4.4						
Y14A	**Wickenburg**	**58.23**	**75**	⇑P	**P**	**12 28 44.9**	**+0.5**
	baz=58						
X15A	**Humboldt**	**58.26**	**74**	⇑P	**P**	**12 28 45.1**	**+0.5**
	baz=58						
115A	**Sonoran Desert**	**59.59**	**76**	⇓P	**P**	**12 28 54.8**	**+1.0**
	baz=59						
FINES	**FINESS Array B**	**59.60**	**339**	P	**P**	**12 28 53.8**	**-0.1**
	comp=Z,1.1nm,0.8s,mb3.9,baz=19,slow=12,SNR=3.9						
MOS	**Moscow**	**61.76**	**330**	eP	**P**	**12 29 11.3**	**+2.7**
SCHQ	**Schefferville**	**62.37**	**31**	P	**P**	**12 29 10.6**	**-2.1**
	comp=Z,1.3nm,0.8s,mb4.1,baz=15,slow=9.3,SNR=3.6						
NB2	**NORSAR Subarra**	**62.55**	**346**	P	**P**	**12 29 12.7**	**-1.2**
	comp=Z,0.7nm,0.6s,mb4.0,baz=18,slow=6.9						
NOA	**NORSAR Array B**	**62.55**	**346**	P	**P**	**12 29 13.0**	**-0.9**
	comp=Z,1.1nm,0.7s,mb4.1,baz=18,slow=6.8,SNR=3.8						
NOA	**NORSAR Array B**	**62.55**	**346**	P	**P**	**12 29 13.0**	**-0.9**
HFS	**Hagfors**	**63.06**	**345**	LR	LR	12 59 58.5	
	comp=Z,17nm,20.9s,MS3.2,baz=146,slow=39						
MNTX	**Cornudas Mount**	**64.13**	**71**	eP	**P**	**12 29 24.5**	**+0.1**
	comp=Z,2.9nm,0.9s,mb4.3						
WMOK	**Wichita Mounta**	**65.31**	**64**	eP	**P**	**12 29 31.3**	**-0.8**
	comp=Z,1.4nm,0.7s,mb4.1						
GNI	**Garni**	**72.67**	**316**	LR	LR	13 06 27.9	
	comp=Z,61nm,18.2s,MS3.9,baz=205,slow=39						
VRAC	**Vranov**	**72.88**	**339**	LR	LR	13 07 22.3	
	comp=Z,21nm,18.1s,MS3.5,baz=196,slow=40						
MLR	**Muntele Rosu**	**74.23**	**332**	LR	LR	13 07 52.9	
	comp=Z,48nm,18.4s,MS3.8,baz=92,slow=40						
BRTR	**Keskin Array B**	**77.13**	**324**	LR	LR	13 09 42.4	
	comp=Z,20nm,18.2s,MS3.5,baz=262,slow=40						
ASAR	**Alice Springs**	**82.94**	**209**	P	**P**	**12 31 14.6**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.1,baz=14,slow=5.6,SNR=18						
ASAR	**Alice Springs**	**82.94**	**209**	P	**P**	**12 31 14.6**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
QSPA	**South Pole Qui**	**144.75**	**180**	eP	PKPdf	12 38 22.5	-4.5

ATH ***09*** *12:23:35.7, 40.16N×1957E, h4^{km}±2^{km}, MD3.7/4*
NEIC ***09*** *12:23:35.7, 40.16N×1957E, h4^{km}, MD3.7(ATH), ML3.2(THE), After ATH.*
ISCJB ***09*** *12:23:37.4±0.6, 40.10N±002×1970E±004, h2^{km}, Error ellipse: s-maj=4.6km s-min=3.1km az=161.1*
CSEM ***09*** *12:23:39.2±0.1, 40.16N×1983E, h2^{km}, MD3.7, Error ellipse: s-maj=2.6km s-min=1.9km az=79.0*
THE ***09*** *12:23:39.2, 40.11N×1976E, h0^{km}, ML3.2*
ISC 09 12:23:37.9±0.6**, 4011N**±002×**1969E**±004**, h2**^{km}**, n26, σ1§19**/44**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.31**	**53**	iPg	**Pg**	**12 23 42.0**	**-1.9**
TPE				iSg	**Sg**	**12 23 46.6**	**-1.3**
SRN	**Sarande**	**0.33**	**134**	iPg	**Pg**	**12 23 42.7**	**-1.6**
SRN				iSg	**Sg**	**12 23 48.7**	**0.0**
KEK	**Kerkira**	**0.41**	**168**	ePG	**Pg**	**12 23 45.3**	**-0.4**
LSK	**Leskovik**	**0.70**	**86**	iPg	**Pg**	**12 23 49.1**	**-2.3**
LSK				iSg	**Sg**	**12 24 00.9**	**+0.4**
IGT	**Igoumenitsa**	**0.76**	**139**	ePg	**Pg**	**12 23 51.6**	**-0.9**
IGT				eSg	**Sg**	**12 24 03.8**	**+1.4**
JAN	**Janina**	**1.00**	**116**	ePB	**Pg**	**12 23 55.9**	**-1.3**
JAN				eSB	**Sg**	**12 24 11.5**	**+1.3**
MEV	**Metsovon**	**1.23**	**105**	ePg	**Pg**	**12 24 00.3**	**-1.2**
TIR	**Tirane**	**1.24**	**6**	ePg	**Pg**	**12 24 02.0**	**+0.2**
TIR				eSg	**Sg**	**12 24 20.5**	**+2.6**
OHR	**Ohrid**	**1.31**	**40**	ePg	**Pg**	**12 24 02.3**	**-0.7**
OHR				eSg	**Sg**	**12 24 22.6**	**+2.5**
OHR	**Ohrid**	**1.31**	**40**	ePn	**Pn**	**12 24 02.0**	**-1.2**
OHR				eSn	**Sn**	**12 24 21.9**	**+0.6**
OHR	**Ohrid**	**1.31**	**40**	ePn	**Pn**	**12 24 01.9**	**-1.3**
OHR	**Ohrid**	**1.31**	**40**	ePg	**Pg**	**12 24 02.3**	**-0.8**
OHR				eSn	**Sn**	**12 24 21.9**	**+0.6**
OHR				eSg	**Sg**	**12 24 22.6**	**+2.6**
FNA	**Florina**	**1.45**	**62**	ePg	**Pn**	**12 24 03.4**	**-1.8**
FNA				eSg	**Sg**	**12 24 26.1**	**+1.4**
LKD	**Levkas**	**1.59**	**152**	ePg	**Pg**	**12 24 08.8**	**+0.4**
LKD				eSg	**Sg**	**12 24 30.1**	**+1.1**
LKD	**Levkas**	**1.59**	**152**	ePg	**Pg**	**12 24 08.8**	**+0.4**
LKD				eSg	**Sg**	**12 24 30.0**	**+1.0**
KZN	**Kozani**	**1.61**	**82**	ePB	**Pb**	**12 24 07.8**	**-0.5**
PE1	**Pezze di Greco**	**1.86**	**293**	ePn	**Pg**	**12 24 12.4**	**-1.2**
EVR	**Evrytania**	**2.03**	**125**	ePN	**Pn**	**12 24 14.2**	**+1.1**
EVR				eSN	**Sg**	**12 24 42.5**	**-0.6**
VLS	**Valsamata**	**2.05**	**160**	ePN	**Pn**	**12 24 14.3**	**+0.8**
LIT	**Litokhoron**	**2.15**	**89**	ePn	**Pn**	**12 24 16.1**	**+1.4**
LIT				eSn	**Sn**	**12 24 42.3**	**+0.3**
GRG	**Griva**	**2.23**	**67**	ePn	**Pn**	**12 24 16.5**	**+0.6**
AGG	**Agios Georgios**	**2.31**	**117**	ePn	**Pn**	**12 24 17.6**	**+0.5**
AGG				eSn	**Sn**	**12 24 46.4**	**+0.3**
SG1	**Sgolgore (BA)**	**2.41**	**289**	ePn	**Pb**	**12 24 23.3**	**+1.3**
VAY	**Valandovo**	**2.50**	**60**	ePn	**Pn**	**12 24 20.8**	**+1.1**
VAY	**Valandovo**	**2.50**	**60**	ePn	**Pn**	**12 24 20.3**	**+0.6**
VAY				eSn	**Sn**	**12 24 49.6**	**-1.1**
VAY	**Valandovo**	**2.50**	**60**	ePn	**Pn**	**12 24 20.8**	**+1.2**
VAY				eSn	**Sn**	**12 24 49.5**	**-1.2**

IDC ***09*** *12:44:35.4±17.0, 37.11N×7144E, h52^{km}±95^{km}, mb3.6/3, mb1 3.7/7, mb1mx3.4/24, mbtmp3.9/7, ML3.8/4, Error ellipse: s-maj=180.0km s-min=55.4km az=177.0*
NEIC ***09*** *12:44:35.5±2.3, 3700N×7151E, h71^{km}±27^{km}, mb4.1/2, Error ellipse: s-maj=29.3km s-min=7.0km az=62.0*
BJI ***09*** *12:44:36.6, 3698N×7145E, h82^{km}, mb3.9*
ISCJB ***09*** *12:44:39.1±0.5, 37.11N±003×7170E±007, h151^{km}±11^{km}, mb3.7/4, Error ellipse: s-maj=9.8km s-min=4.1km az=163.1*
NNC ***09*** *12:44:44.8±6.5, 3759N×7146E, h150^{km}±103^{km}, mb2.8, mpv3.8, Error ellipse: s-maj=61.9km s-min=34.9km az=15.0*
ISC 09 12:44:39.8±0.5**, 3710N**±003×**7170E**±008**, h140**^{km}±10^{km}**, n52, σ1§32**/64**, mb3.7**/4**, 2C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.27**	**177**	⇑P	**Pn**	**12 45 33.4**	**+3.2**
KSH	**Kashi**	**4.14**	**53**	eP	**Pn**	**12 45 44.8**	**+3.2**
KSH				S	**Sn**	**12 46 31.0**	**+1.4**
KSH				Smax			
	comp=N,207nm,0.3s						
KSH				Smax			
	comp=E,198nm,0.4s						
SBDP	**Sheikh Budin**	**4.84**	**189**	P	**Pn**	**12 45 52.6**	**+1.7**
SARP	**Sargodha**	**5.22**	**171**	P	**Pn**	**12 45 58.0**	**+2.0**
SARP				S	**Sn**	**12 46 54.0**	**-1.4**
AML	**Almayashu**	**5.26**	**16**	P	**Pn**	**12 45 56.9**	**+0.4**
	SNR=114						
DRP	**Derazinda**	**5.48**	**193**	P	**Pn**	**12 46 02.0**	**+2.6**
UCH	**Uchtor**	**5.57**	**22**	P	**Pn**	**12 46 01.0**	**+0.4**
	SNR=37						
KZA	**Kyzart**	**5.68**	**28**	P	**Pn**	**12 46 02.7**	**+0.6**
	SNR=15						
DLH	**Dalhousie**	**5.74**	**141**	eP	**Pn**	**12 46 02.0**	**-0.9**
DLH				eS	**Sn**	**12 47 04.0**	**-3.7**
EKS2	**Erkin-Say**	**5.78**	**15**	P	**Pn**	**12 46 03.8**	**+0.3**
	SNR=19						
AAK	**Ala-Archa**	**5.93**	**20**	P	**Pn**	**12 46 06.1**	**+0.7**
	SNR=24						
AAK	**Ala-Archa**	**5.93**	**20**	ePn	**Pn**	**12 46 04.9**	**-0.6**
	comp=E,39nm,0.5s						
AAK				eSn	**Sn**	**12 47 10.9**	**-1.5**
KK31	**Karatay Array**	**6.07**	**352**	P	**Pn**	**12 46 06.2**	**-1.1**
	comp=E,10nm,0.3s,baz=168,slow=12,SNR=146						
KK31				S	**Sn**	**12 47 08.9**	**-6.8**
	comp=E,8.7nm,0.2s,baz=206,slow=68,SNR=9.2						
KBK	**Karagaybulak**	**6.09**	**23**	P	**Pn**	**12 46 08.4**	**+0.8**
	SNR=7.5						
PONG	**Pong**	**6.21**	**144**	eP	**Pn**	**12 46 11.0**	**+1.8**
PONG				ex	x	12 47 21.0	
ULHL	**Ulahol**	**6.22**	**33**	P	**Pn**	**12 46 09.8**	**+0.4**
	SNR=15						
CHMS	**Chumysh**	**6.34**	**21**	P	**Pn**	**12 46 11.4**	**+0.5**
	SNR=14						
USP	**Ospenovka**	**6.53**	**18**	P	**Pn**	**12 46 13.9**	**+0.5**
	SNR=14						
TKM2	**Tokmak 2**	**6.54**	**26**	P	**Pn**	**12 46 14.2**	**+0.6**
	SNR=35						
TKM2	**Tokmak 2**	**6.54**	**26**	⇑Pn	**Pn**	**12 46 13.5**	**-0.1**
	comp=E,1.3nm,0.5s						
TKM2				⇓Sn	**Sn**	**12 47 25.0**	**-2.0**
	comp=E,0.7nm,0.5s						
SDNR	**Sundarnagar**	**7.08**	**140**	eP	**Pn**	**12 46 22.0**	**+1.1**
SDNR				eS	**Sn**	**12 47 37.4**	**-2.6**
KLP	**Kalpa**	**7.75**	**134**	eP	**Pn**	**12 46 30.1**	**+0.2**
KLP				eS	**Sn**	**12 47 51.9**	**-4.3**
KLP				AML	AML	12 48 00.7	
	comp=E,406nm,0.4s						
KLP				AML	AML	12 48 04.0	
	comp=N,361nm,0.6s						
NDI	**New Delhi**	**9.58**	**150**	eP	**Pn**	**12 46 56.0**	**+1.7**
NDI	**New Delhi**	**9.58**	**150**	ex	**Sn**	**12 48 37.0**	**-3.3**
KHET	**Khetri**	**9.64**	**158**	eS	**Sn**	**12 48 35.0**	**-6.7**
KHET				AML	AML	12 48 39.5	
	comp=E,38nm,0.3s						
KHET				AML	AML	12 48 41.3	
	comp=N,32nm,0.4s						
KHET	**Khetri**	**9.64**	**158**	ex	**Sn**	**12 48 36.0**	**-5.7**
AYAN	**Aya Nagar**	**9.73**	**150**	ex	**Sn**	**12 48 33.4**	**-10**
KUDL	**Kundal**	**9.79**	**154**	eP	**Pn**	**12 46 56.2**	**-0.9**
KUDL				eS	**Sn**	**12 48 37.6**	**-7.9**
KUDL				AML	AML	12 48 43.5	
	comp=N,21nm,0.6s						
KUDL				AML	AML	12 48 44.2	
	comp=E,28nm,0.6s						
KUDL	**Kundal**	**9.79**	**154**	ex	**Sn**	**12 48 38.5**	**-7.0**
SONA	**Sohna**	**9.92**	**151**	eP	**Pn**	**12 46 58.4**	**-0.4**
SONA				eS	**Sn**	**12 48 40.7**	**-7.7**
SONA				AML	AML	12 48 49.5	
	comp=N,100nm,0.5s						
SONA				AML	AML	12 48 51.0	
	comp=E,73nm,0.2s						
SONA	**Sohna**	**9.92**	**151**	ex	**Sn**	**12 48 41.4**	**-7.0**
LGTI	**Lohaghat**	**10.45**	**134**	eP	**Pn**	**12 47 07.0**	**+1.1**
LGTI				ex	x	12 49 01.0	
MKAR	**Makanchi Array**	**12.48**	**36**	P	**Pn**	**12 47 32.4**	**-0.1**
	comp=E,0.2nm,0.3s,baz=224,slow=13,SNR=11						
KOLN	**Koldanda**	**13.68**	**129**	eP	**Pn**	**12 47 47.6**	**-0.3**
	comp=E,26nm,0.3s						
GKN	**Gorkha**	**14.17**	**126**	eP	**Pn**	**12 47 54.3**	**+0.1**
	comp=E,39nm,0.3s						
KKN	**Kakani**	**14.74**	**125**	eP	**Pn**	**12 48 00.1**	**-1.2**
	comp=E,17nm,0.4s						
DMN	**Daman**	**14.75**	**126**	eP	**Pn**	**12 48 02.0**	**+0.6**
	comp=E,15nm,0.2s						
AB31	**Akbulak array**	**14.85**	**329**	P	**Pn**	**12 48 00.6**	**-2.1**
	comp=E,1.3nm,0.3s,baz=164,slow=9.7,SNR=97						
AB31				⇓S	**Sn**	**12 50 27.8**	**-19**
	comp=E,8.9nm,0.9s,baz=154,slow=22,SNR=6.6						
PKI	**Pulchoki**	**14.97**	**125**	eP	**Pn**	**12 48 03.7**	**-0.5**
GUN	**Gumba**	**15.05**	**123**	eP	**Pn**	**12 48 04.8**	**-0.4**
JIRN	**Jiri**	**15.42**	**123**	eP	**Pn**	**12 48 09.9**	**+0.1**
	comp=E,70nm,0.5s						
BVAR	**Borovoye Array**	**15.96**	**357**	P	**Pn**	**12 48 14.9**	**-1.5**
	comp=E,0.2nm,0.3s,baz=161,slow=11,SNR=4.5						
AKTK	**Aktyubinsk**	**16.56**	**328**	P	**Pn**	**12 48 22.6**	**-1.1**
AKTO	**Aktyubinsk**	**16.56**	**328**	⇓P	**Pn**	**12 48 22.0**	**-1.8**
	comp=E,0.1nm,0.6s						
AKTO				⇓S	**S**	**12 51 13.5**	**-15**
	comp=E,0.1nm,0.8s						
AKTO	**Aktyubinsk**	**16.56**	**328**	P	**Pn**	**12 48 22.6**	**-1.1**
	comp=E,0.9nm,0.3s,baz=130,slow=17,SNR=12						
CHKZ	**Chkalovo**	**16.60**	**358**	eP	**Pn**	**12 48 23.2**	**-1.0**
	comp=E,1.6nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAL	Zalesovo	19.13	24	P	P	12 48 54.1	+2.2
	comp=E,0.9nm,0.3s,baz=263,slow=4.6,SNR=4.1						
GTA	Gaotai	22.17	75	eP	P	12 49 30.3	+5.9
GTA				AP		12 49 46.8	
GTA				XP	sP	12 49 55.4	-12
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb3.9						
FINES	FINESS Array B	37.31	325	P	P	12 51 41.1	+2.9
	comp=Z,0.8nm,0.8s,mb3.4,baz=127,slow=8.8,SNR=3.1						
ARCES	ARCESS Array B	40.81	337	P	P	12 52 11.6	+4.2
	comp=Z,2.8nm,1.0s,mb3.8,baz=112,slow=9.3,SNR=4.1						
ARCES	ARCESS Array B	40.81	337	P	P	12 52 11.6	+4.2
HFS	Hagfors	42.95	321	P	P	12 52 26.7	+2.0
	comp=Z,0.8nm,0.4s,mb3.8,baz=110,slow=13,SNR=4.9						

*NEIC **09** 13:01:02.5, 40.21N×19.41E, h14^{km}, MD3.5(ATH), After ATH.*
*ATH **09** 13:01:02.5, 40.21N×19.41E, h14^{km}±3^{km}, MD3.5/4*
*ROM **09** 13:01:04.4±1.0, 39.87N×19.97E, h10^{km}, Md2.9/1, Ml3.1/2, Error ellipse: s-maj=14.2km s-min=4.5km az=155.0*
*CSEM **09** 13:01:05.8±0.2, 40.12N×19.60E, h2^{km}, MD3.5, Error ellipse: s-maj=5.1km s-min=3.3km az=79.0*
*ISCJB **09** 13:01:06.6±0.4, 40.11N±0.02×19.74E±0.03, h2^{km}, Error ellipse: s-maj=3.3km s-min=3.2km az=28.0*
*THE **09** 13:01:06.5, 40.11N×19.67E, h0^{km}, ML3.3*
*SKO **09** 13:01:07.8, 40.01N×19.80E, h0^{km}*
ISC 09 13:01:07.2±0.4, **40.11N**±0.02×**19.72E**±0.03, **h2**^{km}, **n28**, σ1^{s}**23**/48, **Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.29	51	i Pg	Pg	13 01 10.5	-2.2
TPE				i Sg	Sg	13 01 14.9	-1.5
KEK	Kerkira	0.40	171	ePG	Pg	13 01 13.4	-1.5
KEK				eSB	Sg	13 01 22.1	+1.9
LSK	Leskovik	0.68	87	i Pg	Pg	13 01 17.7	-2.4
LSK				i Sg	Sg	13 01 29.4	+0.5
IGT	Igoumenitsa	0.75	141	ePg	Pg	13 01 20.2	-1.3
IGT				eSg	Sg	13 01 32.0	+0.8
KBN	Korca	0.96	58	i Pn	Pg	13 01 24.0	-1.6
KBN				i Sn	Sg	13 01 42.0	+3.9
SCTE	Santa Cesarea	0.96	268	Pn	Pg	13 01 25.8	+0.2
SCTE				Sn	Sn	13 01 42.4	+0.4
	400nm,0.5s						
JAN	Janina	0.98	117	ePG	Pg	13 01 25.5	-0.5
JAN				eSB	Sg	13 01 42.6	+3.9
MEV	Metsovon	1.21	105	ePg	Pg	13 01 29.2	-1.0
MEV				eSg	Sg	13 01 48.3	+2.4
MEV	Metsovon	1.21	105	ePg	Pg	13 01 29.2	-1.1
MEV				eSg	Sg	13 01 48.3	+2.4
TIR	Tirane	1.24	5	ePg	Pg	13 01 29.5	-1.4
TIR				eSg	Sg	13 01 48.3	+1.3
TIR	Tirane	1.24	5	Pn	Pn	13 01 31.3	-0.2
	204nm,0.5s						
TIR				eSg	Sg	13 01 48.3	+1.3
LCI	Lecce	1.25	281	Pn	Pn	13 01 32.1	+0.4
LCI				Sn	Sn	13 01 50.9	+1.8
	38nm,0.2s						
OHR	Ohrid	1.29	39	ePg	Pg	13 01 30.3	-1.7
OHR				eSg	Sg	13 01 50.9	+2.2
OHR	Ohrid	1.29	39	ePg	Pg	13 01 31.4	-0.5
OHR				eSg	Sg	13 01 50.1	+1.5
OHR	Ohrid	1.29	39	ePg	Pg	13 01 31.4	-0.6
OHR				eSg	Sg	13 01 50.9	+2.2
FNA	Florina	1.43	62	ePg	Pg	13 01 32.6	-2.0
FNA				eSg	Sg	13 01 54.4	+1.3
LKD	Levkas	1.58	153	ePg	Pn	13 01 35.6	-0.6
LKD				eSg	Sg	13 01 57.6	-0.2
KZN	Kozani	1.58	82	ePG	Pn	13 01 36.2	0.0
KZN				eSN	Sg	13 01 59.5	+1.5
EVR	Evrytania	2.01	126	ePN	Pn	13 01 42.1	0.0
VLS	Valsamata	2.05	160	ePN	Pn	13 01 41.2	-1.4
LIT	Litokhoron	2.12	89	ePn	Pn	13 01 44.0	+0.3
LIT				eSn	Sn	13 02 11.3	+0.6
GRG	Griva	2.21	67	ePn	Pn	13 01 44.9	0.0
SKO	Skopje	2.27	34	ePn	Pn	13 01 47.5	+1.9
AGG	Agios Georgios	2.29	118	ePn	Pn	13 01 46.2	+0.2
AGG				eSn	Sn	13 02 15.5	+0.7
VAY	Valandovo	2.48	60	ePn	Pn	13 01 48.6	+0.1
VAY	Valandovo	2.48	60	ePn	Pn	13 01 49.7	+1.1
KNT	Kendrikon	2.63	66	ePn	Pn	13 01 49.9	-0.8
XOR	Xorichti	2.78	104	ePn	Pn	13 01 52.6	-0.1

*TRN **09** 13:17:31.6, 19.27N×62.80W, h34^{km}, MD3.9*
*ISCJB **09** 13:17:33.2±1.2, 19.24N±0.07×62.86W±0.06, h41^{km}±34^{km}, Error ellipse: s-maj=13.0km s-min=6.6km az=67.4*
*NEIC **09** 13:17:34.0, 19.26N×62.80W, h77^{km}, MD3.9(TRN), MD4.0(RSPR), After RSPR.*
*RSPR **09** 13:17:34.0, 19.26N×62.80W, h77^{km}±40^{km}, MD4.0/8, MD4.0/8*
ISC 09 13:17:32.9±1.4, **19.13N**±0.06×**62.93W**±0.06, **h5**^{km}±8^{km}, **n19**, σ**0**^{s}**71**/29, **9C-3D**, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STMA	St. Maarten, A	1.09	189	eP	Pg	13 17 53.8	0.0
STMA				eS	Sg	13 18 07.6	-0.3
SABS	Saba	1.52	191	eP	Pn	13 18 01.1	+0.3
SABS				eS	Sn	13 18 21.3	+0.4
SABT	Saba	1.52	191	eP	Pn	13 18 01.1	+0.3
SABT				eS	Sn	13 18 21.3	+0.4
CDVI	St. Croix	2.21	232	⇑eP	Pn	13 18 10.3	+0.2
CULB	Culebra	2.41	251	⇑eP	Pn	13 18 12.1	-0.9
CULB				eS	Sn	13 18 42.1	-0.7
MTP	Monte Pirata	2.69	248	⇑eP	Pn	13 18 16.4	-0.3
MTP				eS	Sn	13 18 47.5	-2.1
CBYP	Canovanas	2.90	253	⇑eP	Pn	13 18 18.8	-0.8
CBYP				eS	Sn	13 18 54.4	-0.4
HUMP	Col San Antoni	2.93	251	⇑eP	Pn	13 18 20.4	+0.3
HUMP				eS	Sn	13 18 55.9	+0.2
CPD	Cerro la Pandu	3.03	250	⇑eP	Pn	13 18 22.4	+1.0
CPD				eS	Sn	13 18 58.4	+0.4
SEG	Port Louis	3.03	153	eP	Pn	13 18 21.0	-0.4
LZG	Guadaloupe-1	3.17	159	eP	Pn	13 18 22.9	-0.4
LZG				eS	Sn	13 19 01.0	-0.4
SJG	San Juan	3.21	252	ePn	Pn	13 18 23.5	-0.4
CELP	Cerrillos	3.61	254	⇓eP	Pn	13 18 29.3	-0.1
ICM	Isla Caja Muer	3.62	251	⇓eP	Pn	13 18 30.1	+0.6
LRS	Lares	3.80	258	⇓eP	Pn	13 18 31.0	-0.9
LSP	Las Mesas	4.05	257	⇑eP	Pn	13 18 36.5	+1.1
LSP				eS	Sn	13 19 24.6	+1.4
MGP	Maguayo	4.09	255	⇑eP	Pn	13 18 36.0	0.0
CRPR	Cabo Rojo, PR	4.11	255	⇑eP	Pn	13 18 36.3	0.0
SDV	Santo Domingo	12.62	217	ePn	Pn	13 20 34.2	+1.2
	4.7nm,0.9s						

MAN 09 13:20:34, 16.44N×122.47E, h22^{km}**, mb3.1, ML4.5, MS2.4, 1C-5D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.62	356	⇓iP	Pb	13 20 46.4	+0.2
PALP				i S	Sb	13 20 57.7	+3.2
PALP	Palanan	0.62	356	eP	Pb	13 20 46.3	+0.1
PALP				eS	Sb	13 20 55.3	+0.8
CAUP	Cauayan	0.80	309	eP	Pb	13 20 48.2	-0.9
CAUP				eS	Sb	13 21 00.3	+0.9
BALP	Baler	1.10	231	eP	Pn	13 20 52.8	-1.3
BALP				eS	Sb	13 21 06.5	-1.8
PCPH	Palayan	1.58	237	⇓eP	Pn	13 21 00.7	0.0
PCPH				eS	Sn	13 21 21.2	+0.8
POLP	Polilio Island	1.77	197	eP	Pn	13 21 03.3	0.0
POLP				eS	Sn	13 21 25.2	-0.1
BCPH	Baguio City Da	1.81	268	⇑iP	Pn	13 21 04.7	+0.9
BCPH				i S	Sn	13 21 28.1	+2.0
APYP	Conner	1.84	321	eP	Pn	13 21 04.2	0.0
SGCP	Mt. Cagua	1.84	347	eP	Pn	13 21 05.2	+0.9
ABRA	Dolores	2.07	306	eP	Pn	13 21 07.3	-0.1
BOLP	Bolinao	2.45	269	eP	Pn	13 21 15.5	+2.8
LQP	Lukban	2.48	201	⇓eP	Sn	13 21 46.6	+3.9
GQP	Guinayangan	2.52	180	⇓eP	Pn	13 21 15.3	+1.8
GQP				eS	Sn	13 21 44.6	+1.0
SCZP	Santa Cruz	2.54	255	eP	Pn	13 21 15.9	+1.9
TGY	Tagaytay City	2.75	213	⇓eP	Pn	13 21 15.3	-1.4
BOAC	Boac	3.02	192	eP	Pn	13 21 17.4	-3.1
PVCP	Virac	3.26	150	eP	Pn	13 21 24.0	+0.2
LUBP	Lubang	3.44	219	eP	Pn	13 21 28.3	+2.0

*KRSC **09** 13:48:52, 60.82N×167.99E, h16^{km}, ML3.8*
*IDC **09** 13:48:53.9±0.8, 60.84N×167.09E, h0^{km}, mb4.0/17, mb1 4.1/17, mb1mx4.1/24, mbtmp4.0/17, MS3.4/2, Ms1 3.4/2, ms1mx2.8/26, Error ellipse: s-maj=24.2km s-min=14.8km az=172.0*
*MOS **09** 13:48:55.2±1.6, 61.04N×167.18E, h10^{km}, mb4.5/5, Error ellipse: s-maj=20.2km s-min=11.2km az=85.8*
*NEIC **09** 13:48:56.0±0.4, 60.83N×167.05E, h10^{km}, mb4.3/10, Error ellipse: s-maj=11.0km s-min=6.3km az=167.0*
*ISCJB **09** 13:48:57.8±1.6, 60.87N±0.05×167.20E±0.09, h32^{km}±12^{km}, mb4.2/30, MS3.4/6, Error ellipse: s-maj=9.6km s-min=5.5km az=93.9*
*BJI **09** 13:49:03.9, 60.80N×167.10E, h70^{km}, mB4.8, mb4.5, Ms4.0, Msz3.6*
ISC 09 13:49:00.1±0.7, **60.90N**±0.05×**167.15E**±0.09, **h38**^{km}±8^{km}, **h66**^{km}±1.7^{km}**:pP-P**, **n65**, σ**1**^{s}**31**/71, **mb4.2**/30, **MS3.4**/6, **1C**, **Eastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	5.22	208	eP	Pn	13 50 14.6	-1.1
KBTR				i S	Sn	13 51 14.5	-0.2
SMKR	Semkarok	5.25	217	eP	Pn	13 50 15.5	-0.5
SRKR	Sorokina	5.27	219	eP	Pn	13 50 16.6	+0.2
KLY	Klyuchi	5.72	219	eP	Pn	13 50 21.3	-1.2
KRSR	Krestovskiy	5.83	219	eP	Pn	13 50 24.9	+0.9
CIRR	Tsirk	5.86	218	eP	Pn	13 50 24.2	-0.2
ZLN	Zelenaya	5.92	217	eP	Pn	13 50 25.8	+0.5
MKZ	Mys Kozlova	6.99	207	eP	Pn	13 50 39.2	-0.8
MKZ				eS	Sn	13 51 55.7	-2.5
BILL	Bilibino	7.18	357	ePN	Pn	13 50 42.5	0.0
BILL				e		13 52 08.9	
BILL				pmax	pmax		
	comp=Z,22nm,0.6s						
BILL	Bilibino	7.18	357	ePn	Pn	13 50 42.5	-0.1
	comp=Z,22nm,0.6s						
BILL				eSn	Sn	13 52 08.9	+6.1
MA2	Magadan	8.26	268	ePN	Pn	13 51 01.2	+3.8
MA2				pmax	pmax		
	comp=Z,20nm,0.9s						
MA2				MLR	MLR		
	comp=Z,200nm,7.4s						
MA2	Magadan	8.26	268	ePn	Pn	13 50 56.1	-1.3
SPN	Mys Shipunski	8.73	210	eP	Pn	13 51 06.1	+2.3
GNL	Ganaly	8.77	219	eP	Pn	13 51 06.4	+2.0
PET	Petropavlovsk	9.15	214	ePN	Pn	13 51 14.2	+4.6
PET				pmax	pmax		
	comp=Z,15nm,0.9s						
PET				MLR	MLR		
	comp=Z,400nm,16.0s						
PET				MLR	MLR		
	comp=Z,300nm,14.0s						
PET	Petropavlovsk	9.15	214	ePn	Pn	13 51 07.1	-2.5
YAK	Yakutsk	17.78	290	eP	Pn	13 53 04.3	-0.2
YAK				pmax	pmax		
	comp=Z,23nm,1.0s						
YAK	Yakutsk	17.78	290	eP	Pn	13 53 04.2	-0.3
	comp=Z,23nm,1.0s						
IMA2	Indian Mountai	17.99	57	eP	Pn	13 53 08.7	+1.5
KDAK	Kodiak Island	20.54	81	P	P	13 53 34.5	-0.6
	comp=Z,4.2nm,0.8s,baz=294,slow=7.9,SNR=4.1						
COLA	College	20.54	59	⇑eP	P	13 53 37.0	+1.8
COLA	College	20.54	59	eP	P	13 53 33.9	-1.3
	comp=Z,6.5nm,1.1s						
HABR	Khabarovsk	22.07	250	eP	P	13 53 53.2	+1.5
HABR				eS	S	13 57 56.4	+3.6
DAWY	Dawson	24.29	59	eP	P	13 54 13.3	-0.4
INK	Inuvik	25.50	48	P	P	13 54 22.7	-2.2
	comp=Z,1.9nm,0.5s,mb3.9,baz=86,slow=1.4,SNR=3.2						
INK	Inuvik	25.50	48	eP	P	13 54 25.4	+0.5
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	Inuvik	25.50	48	eP	P	13 54 25.4	+0.6
	comp=Z,7.1nm,1.0s,mb4.2						
MDJ	Mudanjiang	27.45	251	P	P	13 54 44.2	+1.8
MDJ				AP	pP	13 55 00.6	+7.5
MDJ				XP	sP	13 55 09.1	+11
MDJ				S	S	13 59 20.2	-0.2
MDJ				XS	sS	13 59 49.7	+12
MDJ				SCP	ScP	14 01 35.0	-2.7
MDJ				PCS	PcS	14 01 42.5	+0.5
MDJ				SCS	ScS	14 05 26.8	-2.6
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb3.9						
MDJ				AMB	AMB		
	comp=Z,53nm,4.6s						
MDJ				LR	LR		
	comp=N,25nm,14.5s,MS3.2						
MDJ				LR	LR		
	comp=E,46nm,16.9s,MS3.2						
MDJ				LR	LR		
	comp=Z,27nm,13.3s,MS3.0						
MJAR	Matsushiro Arr	30.50	230	P	P	13 55 08.3	-1.1
	comp=Z,3.0nm,0.9s,mb4.0,baz=26,slow=8.0,SNR=5.8						
MJAR	Matsushiro Arr	30.50	230	P	P	13 55 08.3	-1.1
YKA	Yellowknife Ar	35.03	52	P	P	13 55 48.6	-0.5
	comp=Z,1.3nm,0.8s,mb3.9,baz=296,slow=8.3,SNR=2.7						
ULN	Ulaanbaatar	36.00	277	i P	P	13 55 59.8	+2.4
SONM	Songino Array	36.34	277	P	P	13 55 58.5	-1.7
	comp=Z,0.3nm,0.7s,mb3.3,baz=32,slow=5.8,SNR=2.5						
SONM				PcP	PcP	13 58 23.5	-0.9
	comp=Z,0.8nm,0.8s,baz=40,slow=1.7,SNR=3.6						
HHC	Hu-ho-hao-te	38.92	265	eP	P	13 56 25.0	+2.9
HHC				AP	pP	13 56 40.3	+7.3
HHC				XP	sP	13 56 48.3	+11
HHC				PP	PP	13 58 01.2	+9.5
HHC				PCP	PcP	13 58 32.7	+0.4
HHC				S	S	14 02 14.1	-3.8
HHC				SCP	ScP	14 02 17.5	0.0
HHC				PCS	PcS	14 02 25.9	+4.1
HHC				XS	sS	14 02 43.0	+7.1
HHC				SS	SS	14 05 03.1	-7.3
HHC				SCS	ScS	14 06 28.1	-0.5
HHC				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,84nm,3.5s						
HHC				LR	LR		
	comp=N,124nm,20.2s,MS3.9						
HHC				LR	LR		
	comp=E,121nm,17.8s,MS3.9						
HHC				LR	LR		
	comp=Z,89nm,19.0s,MS3.6						
ZAL	Zalesovo	42.10	299	LR	LR	14 16 44.8	
	comp=Z,77nm,20.9s,MS3.6,baz=266,slow=40						
SSE	Sheshan	42.28	246	eP	P	13 56 50.9	+1.0
SSE				AMB	AMB		
	comp=Z,27nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,145nm,5.8s						
NJ2	Nanjing	42.53	250	eP	P	13 56 54.0	+2.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
WALA	Waterton Lakes	44.05	68	eP	P	13 57 04.8	+0.7
	comp=Z,2.7nm,0.6s,mb4.2						
BMO	Blue Mountains	45.57	75	eP	P	13 57 17.2	+0.9
	comp=Z,2.5nm,1.0s,mb4.1						
LZH	Lanzhou	46.41	268	eP	P	13 57 26.5	+3.6
LZH				AP	pP	13 57 42.1	+8.1
LZH				XP	sP	13 57 49.2	+11
LZH				PP	PP	13 59 13.6	+1.4
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
ARCES	ARCESS Array B	47.01	343	P	P	13 57 26.8	-0.8
	comp=Z,4.9nm,0.8s,mb4.5,baz=31,slow=7.6,SNR=6.6						
ARCES				LR	LR	14 18 33.1	
	comp=Z,27nm,19.9s,MS3.2,baz=260,slow=38						
KURK	Kurchatov	47.05	300	eP	P	13 57 27.4	-0.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KURK	Kurchatov	47.05	300	eP	P	13 57 27.4	-0.4
	comp=Z,3.8nm,0.8s,mb4.4						
CHKZ	Chkalovo	48.08	307	eP	P	13 57 34.8	-1.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
CHKZ	Chkalovo	48.08	307	eP	P	13 57 34.8	-1.0
	comp=Z,2.4nm,0.8s,mb4.3						
WMQ	Urumqi	48.19	287	eP	P	13 57 39.0	+2.3
WMQ				AP	pP	13 57 55.0	+7.2
WMQ				PP	PP	13 59 31.0	+1.8
WMQ				S	S	14 04 32.0	-1.2
WMQ				SCS	ScS	14 07 23.0	-3.6
WMQ				SS	SS	14 07 56.0	-6.7
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,46nm,14.0s,MS3.8						
WMQ				LR	LR		
	comp=E,58nm,13.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,37nm,13.0s,MS3.5						
MKAR	Makanchi Array	48.40	294	P	P	13 57 35.4	-2.9
	comp=Z,0.3nm,0.5s,mb3.6,baz=57,slow=4.0,SNR=3.0						
BVAR	Borovoye Array	48.66	307	P	P	13 57 40.1	-0.2
	comp=Z,4.3nm,0.7s,mb4.6,baz=50,slow=7.2,SNR=17						
NVAR	Mina Array Bea	50.04	81	P	P	13 57 52.2	+1.3
	comp=Z,0.4nm,0.7s,mb3.5,baz=302,slow=5.9,SNR=3.8						
BW06	Boulder Array	50.78	71	eP	P	13 57 57.4	+0.9
	comp=Z,2.1nm,1.0s,mb4.0						
PDAR	Pinedale Array	50.78	71	P	P	13 57 55.0	-1.5
	comp=Z,1.2nm,0.8s,mb3.9,baz=343,slow=4.6,SNR=7.8						
ULM	Lac du Bonnet	50.89	55	P	P	13 57 55.6	-1.7
	comp=Z,1.0nm,0.4s,mb4.1,baz=328,slow=3.3,SNR=4.0						
FINES	FINESS Array B	54.38	338	P	P	13 58 20.8	-2.4
	comp=Z,1.9nm,0.9s,mb4.0,baz=10,slow=12,SNR=5.7						
KMI	Kunming	55.96	261	P	P	13 58 39.8	+5.3
KMI				AP	pP	13 58 57.4	+12
KMI				XP	sP	13 59 05.7	+15
KMI				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.3						
KMI				LR	LR		
	comp=Z,21nm,19.0s,MS3.2						
NB2	NORSAR Subarra	56.98	346	P	P	13 58 41.3	-0.5
	comp=Z,2.0nm,0.6s,mb4.3,baz=15,slow=7.4						
NOA	NORSAR Array B	56.98	346	P	P	13 58 41.4	-0.4
	comp=Z,2.5nm,0.6s,mb4.4,baz=13,slow=7.3,SNR=6.7						
NOA	NORSAR Array B	56.98	346	P	P	13 58 41.4	-0.4
WMOK	Wichita Mounta	62.21	68	eP	P	13 59 18.5	+0.7
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
WMOK	Wichita Mounta	62.21	68	eP	P	13 59 18.5	+0.8
	comp=Z,2.0nm,0.7s,mb4.4						
AKASG	Malin Array Be	63.73	332	P	P	13 59 27.4	-0.4
	comp=Z,4.1nm,0.8s,mb4.5,baz=24,slow=6.2,SNR=6.5						
WVT	Waverly	65.82	59	eP	P	13 59 41.2	-0.3
WVT				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
WVT	Waverly	65.82	59	eP	P	13 59 41.2	-0.3
	comp=Z,3.7nm,0.6s,mb4.6						
GERES	GERESS Array B	68.53	341	P	P	13 59 58.3	-0.4
	comp=Z,0.5nm,0.3s,mb3.9,baz=38,slow=6.8,SNR=4.2						
BRTR	Keskin Array B	72.80	324	P	P	14 00 25.7	+1.1
	comp=Z,0.5nm,0.6s,mb3.6,baz=21,slow=6.2,SNR=2.9						
ASAR	Alice Springs	88.47	210	P	P	14 01 47.0	-1.5
	comp=Z,0.4nm,0.8s,mb3.7,baz=7.2,slow=5.7,SNR=4.9						

IGQ 09 13:54:10.5, 1.75S×80.39W, h12^{km}±10^{km}**, Mb4.5, Ms4.3, 4C-12D, Error ellipse: s-maj=7.0km s-min=6.2km az=160.1, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALI	Salinas	0.74	234	P	Pg	13 54 23.7	-1.1
QIL1	Quilotoa	1.71	58	P	Pn	13 54 40.6	+0.5
QIL1				S	Sn	13 55 00.2	-1.8
IGUA	Igualata	1.77	82	⇑P	Pn	13 54 43.2	+2.3
IGUA				S	Sn	13 55 05.8	+2.5
CUSU	Cusua	1.93	81	P	Pn	13 54 46.3	+3.1
CUSU				S	Sn	13 55 11.7	+4.3
ARRY	Arrayan	1.95	83	⇓P	Pn	13 54 45.6	+2.2
ARRY				S	Sn	13 55 10.3	+2.5
JUIV	Juive	1.95	80	⇓P	Pn	13 54 46.1	+2.7
RETU	Refugio	1.97	81	⇓P	Pn	13 54 46.7	+3.1
RETU				S	Sn	13 55 12.6	+4.4
PATA	Patacocha	1.97	83	⇓P	Pn	13 54 46.3	+2.6
PATA				S	Sn	13 55 11.7	+3.4
RUN5	Runtun	1.99	80	⇓P	Pn	13 54 47.0	+3.0
RUN5				S	Sn	13 55 12.7	+3.8
ULBA	Ulba	2.00	81	P	Pn	13 54 47.2	+3.0
ULBA				S	Sn	13 55 12.7	+3.6
PISA	Pisayambo	2.12	71	⇑P	Pn	13 54 49.3	+3.6
PISA				S	Sn	13 55 16.1	+4.1
NAS1	Nasa	2.21	60	⇓P	Pn	13 54 50.3	+3.3
NAS1				S	Sn	13 55 22.1	+7.8
VC1	Cotopaxi 1	2.27	61	⇓P	Pn	13 54 51.6	+3.8
VC1				S	Sn	13 55 24.4	+8.7
TAMB	Tambo	2.28	63	P	Pn	13 54 51.4	+3.5
JUA2	San Juan 2	2.35	49	⇑P	Pn	13 54 51.7	+2.8
JUA2				S	Sn	13 55 25.8	+8.2
TERV	Terraza Guagua	2.37	49	⇓P	Pn	13 54 51.2	+1.9
TERV				S	Sn	13 55 23.5	+5.2
GGP	Refugio Guagua	2.38	49	⇓P	Pn	13 54 51.1	+1.7
PINO	Pino	2.38	48	⇓P	Pn	13 54 51.2	+1.9
YANA	Yana	2.44	48	P	Pn	13 54 51.8	+1.7
YANA				S	Sn	13 55 20.3	+0.5
ANTI	Antisana	2.58	60	P	Pn	13 54 55.7	+3.6
ANTI				S	Sn	13 55 27.9	+4.6
COTA	Cotacachi	2.92	45	⇓P	Pn	13 55 00.0	+3.3
COTA				S	Sn	13 55 39.2	+7.6
CAYR	Refugio Cayamb	2.96	54	⇓P	Pn	13 55 02.0	+4.8
CAYA	Cayambe	3.00	53	⇑P	Pn	13 55 02.3	+4.3
LAV3	Lava3-Reventad	3.21	59	P	Pn	13 55 06.7	+6.0
CONE	Cono NE Rev Vo	3.21	59	P	Pn	13 55 07.7	+6.9

*LDG **09** 14:37:08.4±0.3, 26.10N×96.24E, h33^{km}, Mb4.7/24, Ms3.3/6, Error ellipse: s-maj=14.9km s-min=9.5km az=165.0*
*MOS **09** 14:37:14.1±0.8, 26.40N×96.39E, h73^{km}, mb4.8/41, Error ellipse: s-maj=10.9km s-min=5.1km az=125.2*
*BJI **09** 14:37:16.4, 26.62N×96.35E, h80^{km}, mB4.7, mb4.5, Ms4.0, Msz3.7*
*ISCJB **09** 14:37:16.0±0.2, 26.47N±0.03×96.34E±0.02, h88^{km}, mb4.5/79, Error ellipse: s-maj=4.1km s-min=2.9km az=170.3*
*IDC **09** 14:37:17.8±0.6, 26.43N×96.36E, h89^{km}±4^{km}, mb4.2/21, mb1 4.3/21, mb1mx4.2/26, mbtmp4.5/21, MS3.4/4, Ms1 3.4/4, ms1mx2.9/30, Error ellipse: s-maj=15.3km s-min=10.4km az=51.0*
*SZGRF **09** 14:37:17.1, 25.08N×95.45E, h91^{km}, mb5.0, Myanmar-India border region*
*NEIC **09** 14:37:18.0±0.2, 26.47N×96.33E, mb4.5/43, Error ellipse: s-maj=7.6km s-min=4.3km az=52.0*
ISC 09 14:37:18.2±0.2, **26.48N**±0.03×**96.35E**±0.02, **h90**^{km}, **h90**^{km}±1.1^{km}**:pP-P**, **n244**, σ**1**^{s}**05**/261, **mb4.5**/79, **10C-6D**, **Myanmar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHL	Shillong	4.12	258	eP	Pn	14 38 22.9	+4.1
SHL				eS	Sn	14 39 07.5	+1.6
KMI	Kunming	5.92	102	P	Pn	14 38 46.0	+2.7
KMI				S	Sn	14 39 54.0	+4.4
KMI				AMB	AMB		
	comp=Z,59nm,1.0s						
KMI				AMB	AMB		
	comp=Z,158nm,3.1s						
KMI				LR	LR		
	comp=N,910nm,5.6s						
KMI				LR	LR		
	comp=E,454nm,5.0s						
KMI				LR	LR		
	comp=Z,385nm,5.0s						
CD2	Chengdu	7.86	54	P	Pn	14 39 09.4	-0.3
CD2				XP		14 39 36.0	
CD2				S	Sn	14 40 36.0	-1.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CD2				AMB	AMB		
	comp=Z,130nm,7.2s						
CD2				LR	LR		
	comp=N,510nm,4.5s						
CD2				LR	LR		
	comp=Z,190nm,6.6s						
SHBG	Sahibganj	7.92	263	eP	Pn	14 39 17.5	+6.9
SHBG				eS	Sn	14 40 41.0	+2.5
CHG	Chiang Mai	8.00	162	⇑P	Pn	14 39 13.9	+2.3
	comp=Z,82nm,1.2s						
CHTO	Chiang Mai	8.00	162	eP	Pn	14 39 13.3	+1.7
CHTO				pmax	pmax		
	comp=Z,102nm,1.2s						
CHTO	Chiang Mai	8.00	162	eP	Pn	14 39 13.3	+1.7
	comp=Z,102nm,1.2s						
CAL	Calcutta	8.29	243	eS	Sn	14 40 38.8	-8.7

NANT Nan 8.63 151 ⇑P Pn 14 39 20.0 -0.3
comp=Z,228nm,0.9s
GYA Guiyang 9.24 88 ⇑*i*P Pn 14 39 28.8 +0.2
GYA XP 14 39 54.8
GYA S **Sn 14 41 11.3 +0.5**
GYA AMB AMB
comp=Z,30nm,0.7s
GYA AMB AMB
comp=Z,90nm,3.9s
GYA LR LR
comp=N,390nm,10.2s
GYA LR LR
comp=E,410nm,10.7s
GYA LR LR
comp=Z,480nm,10.8s
BOK Bokaro 9.85 257 *e*P Pn 14 39 34.3 -2.5
BOK *e*S **Sn 14 41 14.2 -11**
NST Nakhon Sawan 11.32 161 P Pn 14 39 55.2 -1.6
LZH Lanzhou 11.52 32 *e*P Pn 14 39 57.5 -2.0
LZH PP 14 40 09.5
LZH XP 14 40 24.3
LZH *e*S **Sn 14 42 04.4 -1.7**
LZH SS 14 42 20.6
LZH AMB AMB
comp=Z,31nm,1.0s
LZH AMB AMB
comp=Z,154nm,4.7s
LZH LR LR
comp=N,643nm,9.1s
LZH LR LR
comp=Z,782nm,10.4s
KKTK Khon Kaen 11.75 148 ⇓P Pn 14 40 04.4 +1.7
comp=Z,309nm,0.9s
XAN Xi'an 13.21 52 P Pn 14 40 18.7 -3.4
XAN AMB AMB
comp=Z,8.0nm,1.1s
GTA Gaotai 13.22 12 *e*P Pn 14 40 19.7 -2.5
GTA AP 14 40 32.5
GTA XP 14 40 41.8
GTA S **Sn 14 42 40.8 -6.6**
GTA SS 14 42 59.5
GTA PCP PcP 14 45 45.8 +0.2
GTA SCP ScP 14 49 08.9 -1.9
GTA PCS PcS 14 49 23.0 +2.9
GTA SCS ScS 14 52 45.5 -1.9
GTA AMB AMB
comp=Z,2.0nm,1.6s
GTA AMB AMB
comp=Z,45nm,3.8s
GTA LR LR
comp=N,156nm,12.9s
GTA LR LR
comp=E,256nm,11.0s
GTA LR LR
comp=Z,255nm,14.4s
BLSP Bilaspur 13.66 255 *e*P Pn 14 40 24.0 -4.1
QIZ Qiongzhong 14.48 118 P Pn 14 40 40.4 +1.7
QIZ XP sP 14 41 02.5 -8.8
QIZ S **Sn 14 43 18.4 +0.3**
QIZ XS 14 43 35.0
QIZ AMB AMB
comp=Z,9.0nm,1.2s
QIZ AMB AMB
comp=Z,110nm,4.9s
QIZ LR LR
comp=E,180nm,6.2s
QIZ LR LR
comp=Z,176nm,6.5s
QIZ Qiongzhong 14.48 118 P Pn 14 40 41.4 +2.7
comp=Z,22nm,1.2s
LGTI Lohaghat 14.53 285 *e*P Pn 14 40 37.3 -2.0
LGTI *ex* x 14 43 13.7
VIS Vishakhapatnam 14.88 237 *e*P Pn 14 40 42.5 -1.2
VIS AMb AMB 14 40 45.2
comp=Z,52nm,1.0s
VIS *i* x x 14 43 11.5
JBP Jabalpur 15.22 261 ⇑*i*P Pn 14 40 45.7 -2.3
JBP *i* x x 14 43 23.6
WHN Wuhan 16.33 71 P Pn 14 41 00.7 -1.3
KLP Kalpa 16.61 292 *e*P Pn 14 41 01.3 -4.1
KLP *e*S **S 14 44 03.6 -12**
NGP Nagpur 16.69 255 *e*P Pn 14 41 05.1 -1.4
NGP AMb AMB 14 41 07.9
comp=Z,34nm,0.7s
NDI New Delhi 17.10 282 *e*P Pn 14 41 08.1 -3.4
NDI *ex* x 14 44 01.0
AYAN Aya Nagar 17.17 281 *ex* Pn 14 41 05.4 -6.9
AYAN AMb AMB 14 41 09.7
comp=Z,31nm,0.7s
SONA Sohna 17.20 280 *e*P Pn 14 41 09.4 -3.4
SONA *ex* x 14 44 04.5
SMLA Simla 17.43 290 *e*P Pn 14 41 11.4 -4.1
KUDL Kundal 17.73 280 *e*P Pn 14 41 15.7 -3.4
KUDL AMb AMB 14 41 20.1
comp=Z,34nm,0.4s
KUDL *ex* x 14 44 17.7
KHET Khetri 18.33 280 *e*P Pn 14 41 23.2 -3.1
KHET AMb AMB 14 41 26.9
comp=Z,46nm,0.5s
KHET *ex* x 14 44 34.0
PONG Pong 18.61 292 *e*P Pn 14 41 27.0 -2.7
AKL Akola 18.62 256 *e*P Pn 14 41 27.7 -2.1
AKL AMb AMB 14 41 34.2
comp=Z,53nm,1.3s
WMQ Urumqi 18.67 340 P Pn 14 41 30.0 -0.4
WMQ AP pP 14 41 46.0 -0.4
WMQ XP sP 14 42 00.0 +2.3
WMQ S **S 14 44 51.0 -6.0**
WMQ SS 14 45 20.0
WMQ AMB AMB
comp=Z,20nm,0.8s
WMQ AMB AMB
comp=Z,125nm,4.0s
WMQ LR LR
comp=N,78nm,4.0s
WMQ LR LR
comp=E,68nm,4.0s
WMQ LR LR
comp=Z,105nm,5.0s
DLH Dalhousie 18.73 294 *e*P Pn 14 41 26.0 -5.1
HYB Hyderabad 18.79 245 *i* P Pn 14 41 31.0 -0.9
HYB *e*S **S 14 44 51.0 -8.4**
HYB Hyderabad 18.79 245 *e*P Pn 14 41 31.0 -0.9
HYB *e*S **S 14 44 51.0 -8.4**
HHC Hu-ho-hao-te 19.08 38 *e*P Pn 14 41 34.6 -0.7
HHC AP pP 14 41 51.5 +0.6
HHC PP 14 41 55.3
HHC XP sP 14 42 04.9 +2.6
HHC S **S 14 44 59.4 -5.8**
HHC XS sS 14 45 24.9 -8.8
HHC SS 14 45 29.3
HHC PCP PcP 14 45 55.9 +1.4
HHC SCS ScS 14 53 01.6 -2.1
HHC AMB AMB
comp=Z,16nm,1.1s
HHC AMB AMB
comp=Z,123nm,5.4s
HHC LR LR
comp=N,253nm,15.8s
HHC LR LR
comp=E,328nm,13.1s
HHC LR LR
comp=Z,115nm,14.2s
AJM Ajmer 19.43 275 *e*P Pn 14 41 35.2 -4.2
LATR Latur 19.96 250 *e*P Pn 14 41 42.6 -2.9
TIA Tai'an 20.19 56 *e*P P 14 41 46.2 +0.7
NJ2 Nanjing 20.39 69 *e*P P 14 41 47.1 -0.6
NJ2 AP 14 42 06.1
NJ2 PP 14 42 11.7
NJ2 XP sP 14 42 18.8 +2.2
NJ2 S **S 14 45 21.0 -10**
NJ2 XS sS 14 45 52.0 -8.2
NJ2 AMB AMB
comp=Z,10.0nm,0.5s
NJ2 AMB AMB
comp=Z,20nm,3.6s
NJ2 LR LR
comp=N,220nm,20.1s
NJ2 LR LR
comp=E,120nm,16.2s
NJ2 LR LR
comp=Z,110nm,20.1s
BJI Beijing 21.33 46 *e*P P 14 41 56.6 -1.2
BJI S **S 14 45 44.2 -5.4**
BJI AMB AMB
comp=Z,4.0nm,1.1s,mb3.7
BJI LR LR
comp=Z,76nm,21.6s
SSE Sheshan 22.23 72 *e*P P 14 42 04.0 -3.4
SSE AMB AMB
comp=Z,32nm,0.6s,mb4.8
SSE AMB AMB
comp=Z,179nm,5.2s
CEP Cherat 22.33 295 P P 14 42 08.5 +0.1
SONM Songino Array 22.73 18 P P 14 42 12.8 +0.1
comp=Z,1.0nm,0.4s,mb3.5,baz=204,slow=10,SNR=7.4
SONM LR LR 14 52 04.2
comp=Z,94nm,18.7s,baz=205,slow=39
ULN Ulaanbaatar 22.94 19 *e*P P 14 42 14.7 -0.1
ULN Ulaanbaatar 22.94 19 *e*P P 14 42 13.9 -0.9
comp=Z,6.4nm,0.8s,mb4.0
SBDP Sheikh Budin 22.97 291 P P 14 42 14.2 -0.8
MKAR Makanchi Array 23.13 335 P P 14 42 17.4 +0.9
comp=Z,14nm,0.4s,mb4.6,baz=141,slow=9.0,SNR=6.7
MKAR PcP PcP 14 46 01.6 -0.6
comp=Z,0.8nm,0.4s,baz=280,slow=1.1,SNR=5.0
MKAR ScP ScP 14 49 30.6 -1.5
comp=Z,0.6nm,0.7s,baz=127,slow=6.0,SNR=4.7
MKAR Makanchi Array 23.13 335 P P 14 42 17.4 +0.9
MKAR 14 46 01.7
DRP Derazinda 23.41 289 P P 14 42 19.8 +0.7
TKM2 Tokmak 2 23.57 319 P P 14 42 22.3 +1.8
SNR=17
KBK Karagaybulak 23.79 318 P P 14 42 25.4 +2.8
SNR=13
UCH Uchtor 23.81 317 P P 14 42 25.1 +2.4
SNR=15
AAK Ala-Archa 24.05 318 P P 14 42 27.0 +2.1
SNR=5.5
AAK Ala-Archa 24.05 318 *e*P P 14 42 25.6 +0.7
AAK pmax pmax
comp=Z,13nm,0.8s,mb4.3
AAK Ala-Archa 24.05 318 *e*P P 14 42 25.6 +0.7
comp=Z,12nm,0.8s,mb4.3
FRU Bishkek 24.09 318 *e*P P 14 42 27.5 +2.2
FRU *e* 14 42 48.0
FRU pmax pmax
comp=Z,45nm,1.9s,mb4.5
CHMS Chumysh 24.11 319 P P 14 42 27.2 +1.7
SNR=6.2
USP Ospenovka 24.42 319 P P 14 42 29.6 +1.4
SNR=14
EKS2 Erkin-Say 24.50 317 P P 14 42 31.1 +2.1
SNR=27
KURK Kurchatov 27.74 335 *e*P P 14 42 58.8 +0.6
KURK pmax pmax
comp=Z,35nm,1.0s,mb4.8
KURK Kurchatov 27.74 335 *e*P P 14 42 58.8 +0.6
comp=Z,35nm,1.0s,mb4.8
ZAL Zalesovo 28.73 346 P P 14 43 08.5 +1.5
comp=Z,3.2nm,0.4s,mb4.3,baz=302,slow=6.9,SNR=12
ZAL pP pP 14 43 27.9 +0.4
comp=Z,1.3nm,0.7s,baz=267,slow=6.3,SNR=2.1
CN2 Changchun 29.20 46 *e*P P 14 43 13.5 +2.4
NVS Novosibirsk 29.92 345 *e*P P 14 43 17.0 -0.5
NVS pmax pmax
comp=N,6.0nm,1.0s
NVS pmax pmax
comp=E,5.0nm,1.0s
NVS pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
MDJ Mudanjiang 32.24 47 P P 14 43 39.0 +1.0
MDJ AP pP 14 43 57.6 -0.9
MDJ XP sP 14 44 07.3 -1.7
MDJ PCP PcP 14 46 25.9 +1.5
MDJ S **S 14 48 46.9 +2.2**
MDJ SCP ScP 14 50 02.1 +2.2
MDJ PCS PcS 14 50 10.9 +1.6
MDJ AMB AMB
comp=Z,3.0nm,0.8s,mb4.1
MDJ AMB AMB
comp=Z,69nm,4.7s
MDJ LR LR
comp=N,36nm,25.3s
MDJ LR LR
comp=E,10.0nm,17.7s
MDJ LR LR
comp=Z,20nm,21.5s
BVAR Borovoye Array 32.84 331 P P 14 43 43.8 +0.6
comp=Z,3.8nm,0.6s,mb4.4,baz=136,slow=10,SNR=19
BVAR pP pP 14 44 03.9 +0.2
comp=Z,2.1nm,0.7s,baz=132,slow=10,SNR=3.4
BVAR ScP ScP 14 50 00.4 -1.5
comp=Z,1.0nm,0.8s,baz=157,slow=1.1,SNR=4.5
BVAR Borovoye Array 32.84 331 P P 14 43 43.8 +0.7
BVAR *ePP pP 14 44 03.9 +0.1
BRVK Borovoye 32.91 331 *e*P P 14 43 44.6 +0.8
comp=Z,2.7nm,0.6s,mb4.2
CHKZ Chkalovo 33.19 332 *e*P P 14 43 47.4 +1.1
CHKZ *e**PP pP 14 44 07.7 +0.8
CHKZ *e* 14 46 26.1
CHKZ pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
CHKZ Chkalovo 33.19 332 *e*P P 14 43 47.4 +1.1
comp=Z,3.7nm,0.4s,mb4.6
CHKZ *epP pP 14 44 07.7 +0.8
CHKZ *ePcP PcP 14 46 26.1 -0.9
VLA Vladivostok 33.28 51 ⇓*i*P P 14 43 46.3 -0.7
VLA *e* 14 44 13.0
VLA pmax pmax
comp=Z,22nm,1.4s,mb4.8
WSAR Wadi Sarin 34.30 273 P P 14 43 54.0 -1.8
comp=Z,5.4nm,0.7s,mb4.5,baz=99,slow=6.5,SNR=7.0
MJAR Matsushiro Arr 36.82 64 P P 14 44 15.9 -1.5
comp=Z,2.1nm,0.8s,mb4.1,baz=269,slow=10,SNR=5.9
MJAR ScP ScP 14 50 15.1 -1.1
comp=Z,2.0nm,1.0s,baz=283,slow=11,SNR=4.7
MJAR LR LR 15 00 31.8
comp=Z,64nm,19.4s,baz=175,slow=38
HABR Khabarovsk 37.20 43 *e*P P 14 44 20.6 -0.1
HABR *e*S **S 14 50 06.9 +6.0**
AKTK Aktyubinsk 37.76 320 P P 14 44 25.0 -0.3
AKTO Aktyubinsk 37.76 320 P P 14 44 25.0 -0.3
comp=Z,1.1nm,0.4s,mb4.0,baz=109,slow=9.7,SNR=4.6
ARU Arti 40.34 328 *e*P P 14 44 47.3 +0.5
ARU *e**PP pP 14 45 08.2 +0.2
ARU pmax pmax
comp=Z,13nm,0.5s,mb5.0
ARU Arti 40.34 328 *e*P P 14 44 47.3 +0.5
comp=Z,13nm,0.5s,mb5.0
ARU *epP pP 14 45 08.2 +0.3
ARU *esP sP 14 45 23.6 +5.4
ASAJ Asahikawa 41.05 52 P P 14 44 51.5 -1.2
comp=Z,2.6nm,0.5s,mb4.3,baz=278,slow=14,SNR=10
YSS Yuzh-Sakhalins 41.72 48 *e*P P 14 44 58.0 -0.2
YSS *e* pP 14 45 21.9 +2.5
QRN Al-Qurain 42.74 285 *e*P P 14 45 06.2 -0.3
QRN AMb AMB 14 45 06.9
comp=Z,25nm,0.3s,mb5.5
UMR Umm Al-Rimmam 42.80 286 *e*P P 14 45 07.0 +0.1
UMR AMb AMB 14 45 07.8
comp=Z,55nm,0.3s
KBD Kabd 42.87 285 *e*P P 14 45 07.8 +0.2
KBD AMb AMB 14 45 08.5
comp=Z,122nm,0.3s
RDF Al-Radifah 43.03 285 *e*P P 14 45 09.0 +0.2
RDF AMb AMB 14 45 09.8
comp=Z,136nm,0.3s
NAY Al-Naaiem 43.25 285 *e*P P 14 45 10.7 +0.1
NAY AMb AMB 14 45 12.1
comp=Z,74nm,0.7s,mb5.5
RST Umm Al-Ruwaisa 43.43 286 *e*P P 14 45 11.8 -0.2
RST AMb AMB 14 45 12.6
comp=Z,106nm,0.4s
GNI Garni 44.64 301 P P 14 45 21.7 0.0
comp=Z,4.5nm,0.4s,mb4.5,baz=160,slow=8.8,SNR=4.7
GNI Garni 44.64 301 P P 14 45 23.8 +2.1
GNI pmax pmax
comp=Z,16nm,0.9s
GNI Garni 44.64 301 P P 14 45 23.8 +2.1
comp=Z,16nm,0.9s,mb4.7
KIV Kislovodsk 46.34 306 *e*P P 14 45 36.6 +1.4
KIV pmax pmax
comp=Z,14nm,0.9s,mb4.7
KIV Kislovodsk 46.34 306 *e*P P 14 45 36.3 +1.1
OBN Obninsk 51.52 321 *e*P P 14 46 15.8 +1.1
OBN *e**PP pP 14 46 35.6 -1.1
OBN *eS S 14 53 34.9 +6.6**
OBN pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
BR131 Keskin Array S 53.18 301 P P 14 46 25.3 -1.7
comp=Z,2.6nm,0.5s,mb4.5
BRTR Keskin Array B 53.18 301 P P 14 46 26.7 -0.3
comp=Z,3.2nm,0.6s,mb4.6,baz=113,slow=8.5,SNR=19
JOF Joensuu 55.43 330 *ep* P 14 46 43.0 -0.3
AKASG Malin Array Be 55.68 315 P P 14 46 44.2 -0.8
comp=Z,4.6nm,0.3s,mb5.0,baz=79,slow=6.4,SNR=48
AKASG pP pP 14 47 06.2 -1.1
comp=Z,6.7nm,0.7s,baz=78,slow=6.7,SNR=6.4
AKASG Malin Array Be 55.68 315 P P 14 46 44.2 -0.8
AKASG pP pP 14 47 06.2 -1.1
AKBB Malin Array Si 55.68 315 *e*P P 14 46 44.1 -1.0
AKBB *e**PP pP 14 47 07.0 -0.3
KAF Kangasniemi 57.64 328 *ep* P 14 46 58.2 -0.7
comp=Z,1.4nm,0.4s,mb4.3,baz=93,slow=6.7
PLOR Plostina 57.69 309 ⇑*i*P P 14 47 00.3 +1.0
FIA1 FINESS Array S 57.70 328 *e*P P 14 46 59.3 -0.1
FINES FINESS Array B 57.70 328 P P 14 46 59.5 +0.1
comp=Z,1.6nm,0.3s,mb4.5,baz=95,slow=7.0,SNR=33
FINES pP pP 14 47 21.2 -0.5
comp=Z,3.2nm,0.8s,baz=102,slow=8.0,SNR=5.0
MLR Muntele Rosu 58.22 309 ⇓*i*P P 14 47 03.0 0.0
MLR Muntele Rosu 58.22 309 ⇓P P 14 47 03.0 0.0
BILL Bilibino 58.22 25 *e*P P 14 47 02.7 -0.3
BILL *e**PP pP 14 47 25.7 +0.3
BILL *eSS SS 14 58 55.8 +5.0
BILL pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KEV Kevo 58.28 337 *ep* P 14 47 03.1 -0.3
comp=Z,2.2nm,0.4s,mb4.5
KEV Kevo 58.28 337 *e*P P 14 47 03.1 -0.3
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
BURAR Bucovina Array 58.49 311 ⇓*i*P P 14 47 04.8 -0.1
BURAR Bucovina Array 58.49 311 ⇓P P 14 47 04.8 0.0
ARCES ARCESS Array B 58.76 337 P P 14 47 07.1 +0.3
comp=Z,3.0nm,0.6s,mb4.5,baz=82,slow=7.6,SNR=33
ARCES pP pP 14 47 29.0 -0.1
comp=Z,3.6nm,0.8s,baz=90,slow=7.5,SNR=4.2
ARCES ARCESS Array B 58.76 337 P P 14 47 07.1 +0.3
ARCES pP pP 14 47 29.0 -0.2
ARE0 ARCESS Array S 58.76 337 *e*P P 14 47 06.4 -0.4
WRAB Tennant Creek 59.06 138 *e*P P 14 47 08.8 0.0
WRAB Tennant Creek 59.06 138 *e*P P 14 47 08.6 -0.3
comp=Z,14nm,0.8s,mb5.0
WB2 Warramunga Arr 59.07 138 ⇑*i*P P 14 47 08.6 -0.3
SUW Suwalki 59.26 319 *e*P P 14 47 10.4 +0.2
KWP Kalwaria 59.93 314 *e*P P 14 47 15.4 +0.6
KOLS Kolonicke sedl 60.29 313 *e*P P 14 47 17.4 +0.1
VTS Vitosha 60.59 306 ⇑*i*P P 14 47 19.4 +0.1
VTS Vitosha 60.59 306 ⇑P P 14 47 19.4 +0.1
CRVS Cervenica-Dubn 60.83 313 *e*P P 14 47 21.6 +0.7
MUN Mundaring 61.14 161 *e*P P 14 47 23.6 +0.6
KECS Kecovo 61.53 313 *e*P P 14 47 27.4 +1.7
comp=Z,1.3nm,0.7s,mb4.1
ASPA Alice Springs 61.67 141 ⇑*i*P P 14 47 26.5 -0.1
AS31 Alice Springs 61.68 141 ⇑*i*P P 14 47 26.5 -0.1
ASAR Alice Springs 61.68 141 P P 14 47 26.6 -0.1
comp=Z,3.1nm,0.6s,mb4.5,baz=324,slow=6.5,SNR=86
ASAR pP pP 14 47 49.6 +0.4
comp=Z,2.1nm,0.8s,baz=329,slow=6.9,SNR=3.4
ASAR LR LR 15 16 33.1
comp=Z,30nm,20.2s,baz=195,slow=38
ASAR Alice Springs 61.68 141 P P 14 47 26.6 -0.1
ASAR *PP pP 14 47 49.7 +0.5
NWAO Narrogin (SRO) 62.33 160 P P 14 47 30.8 -0.3
comp=Z,2.7nm,0.2s,mb4.8,baz=254,slow=12,SNR=11
VYHS Vyhne 62.61 313 *e*P P 14 47 33.0 +0.1
VYHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
VYHS Vyhne 62.61 313 *e*P P 14 47 33.0 +0.1
comp=Z,2.6nm,1.2s,mb4.0
OKC Ostrava-Krasne 62.83 315 *e*P P 14 47 34.9 +0.6
KMBO Kilima Mbogo 63.16 254 P P 14 47 37.3 +0.8
comp=Z,2.3nm,0.8s,mb4.2,baz=37,slow=11,SNR=6.9
KSP Ksiaz 63.83 316 *e*P P 14 47 41.2 +0.3
DPC Dobruska-Polom 63.90 315 *e*P P 14 47 41.8 +0.4
UPC Upice 64.06 316 *e*P P 14 47 43.2 +0.7
FORT Forrest 64.51 150 *e*P P 14 47 45.6 +0.2
comp=Z,13nm,0.7s,mb4.9
TREC Trest 64.63 314 *e*P P 14 47 44.1 -2.1
NB2 NORSAR Subarra 64.89 328 P P 14 47 47.3 -0.5
comp=Z,3.4nm,0.5s,mb4.4,baz=82,slow=6.5
NOA NORSAR Array B 64.89 328 P P 14 47 47.1 -0.7
comp=Z,3.5nm,0.6s,mb4.4,baz=82,slow=6.5,SNR=18
NOA pP pP 14 48 09.7 -0.9
comp=Z,2.2nm,0.8s,baz=81,slow=6.5,SNR=4.3
PVCC Panska Ves 64.96 316 *e*P P 14 47 49.0 +0.7
PRU Pruhonice 65.09 315 *e*P P 14 47 49.7 +0.5
BRG Berggiesshubel 65.28 316 *e*P P 14 47 50.7 +0.3
comp=Z,6.0nm,0.6s,mb4.5
BRG Berggiesshubel 65.28 316 *i* P P 14 47 50.9 +0.5
BRG pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
BRG Berggiesshubel 65.28 316 *i* P P 14 47 50.9 +0.5
comp=Z,3.5nm,0.6s,mb4.4
FBE Freiberg 65.64 316 *e*P P 14 47 53.1 +0.4
comp=Z,7.0nm,0.8s,mb4.5
CLL Collm 65.77 317 *e*P P 14 47 54.1 +0.6
comp=Z,4.0nm,0.5s,mb4.5
GEC2 GERESS Array S 65.88 314 *e*P P 14 47 54.4 +0.2
comp=Z,7.0nm,0.6s,mb4.7
GEC2 GERESS Array S 65.88 314 *e*P P 14 47 54.4 +0.2
GEC2 pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
GERES GERESS Array B 65.88 314 P P 14 47 54.3 +0.1
comp=Z,3.8nm,0.3s,mb4.7,baz=64,slow=6.1,SNR=30
GERES pP pP 14 48 16.2 -0.8
comp=Z,1.7nm,0.7s,baz=78,slow=6.2,SNR=4.4
GERES LR LR 15 22 47.5
comp=Z,14nm,18.4s,baz=86,slow=41
GERES GERESS Array B 65.88 314 P P 14 47 54.3 +0.1
GERES *PP pP 14 48 16.2 -0.9
KHC Kasperske Hory 65.89 314 *e*P P 14 47 54.7 +0.4
TANN Tannenbergstha 66.30 316 *e*P P 14 47 57.4 +0.4
comp=Z,4.0nm,0.8s,mb4.3
WET Wettzell 66.33 315 *e*P P 14 47 57.7 +0.5
comp=Z,7.0nm,0.5s,mb4.8
WET Wettzell 66.33 315 *e*P P 14 47 57.7 +0.5
WET pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
WERD Werda 66.39 316 *e*P P 14 47 57.9 +0.4
comp=Z,5.0nm,0.6s,mb4.5
GUNZ Gunzen 66.39 316 *e*P P 14 47 58.1 +0.6
comp=Z,9.0nm,1.0s,mb4.5
ROTZ Rotzenmuhle 66.61 315 *e*P P 14 47 59.8 +0.9
comp=Z,12nm,0.9s,mb4.7
ROTZ *epP pP 14 48 22.8 +1.0
BSEG Bad Segeberg 66.78 320 *e*P P 14 48 01.0 +1.0
comp=Z,11nm,0.9s,mb4.7
CLZ Clausthal 67.24 318 *e*P P 14 48 03.4 +0.5
comp=Z,15nm,0.6s,mb5.0
CLZ Clausthal 67.24 318 *e*P P 14 48 03.4 +0.5
CLZ pmax pmax
comp=Z,15nm,0.6s,mb5.0
GRA1 Grafenberg Arr 67.25 315 *e*P P 14 48 03.6 +0.6
comp=Z,3.0nm,0.9s,mb4.1
GRA1 *epP pP 14 48 26.7 +0.8
GRF Grafenberg Arr 67.25 315 *e*P P 14 48 03.6 +0.6
comp=Z,3.0nm,0.9s,mb4.1
GRF *epP pP 14 48 26.7 +0.8
BFO Black Forest 69.45 315 *e*P P 14 48 17.0 +0.3
comp=Z,9.0nm,1.4s,mb4.4
BFO Black Forest 69.45 315 *e*P P 14 48 17.0 +0.3
BFO pmax pmax
comp=Z,9.0nm,1.4s,mb4.4
CDF Champ du Feu 70.10 315 *e*P P 14 48 20.2 -0.5
comp=Z,4.2nm,0.5s,mb4.2
CDF Champ du Feu 70.10 315 *e*P P 14 48 20.2 -0.5
CDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
CDF Champ du Feu 70.10 315 *e*P P 14 48 20.2 -0.5
comp=Z,2.1nm,0.5s,mb4.2
WLF Walferdange 70.42 316 *e*P P 14 48 23.7 +1.1
comp=Z,23nm,0.7s,mb5.1
WLF Walferdange 70.42 316 P P 14 48 23.5 +0.8
HINF Hinteralfeld 70.55 314 *e*P P 14 48 22.6 -0.8
comp=Z,2.7nm,0.5s,mb4.0
HINF Hinteralfeld 70.55 314 *e*P P 14 48 22.6 -0.8
comp=Z,1.4nm,0.5s,mb4.0
BCLA Clavier 70.71 317 P P 14 48 25.6 +1.2
GIVF Givet 71.10 317 *e*P P 14 48 26.5 -0.3
comp=Z,16nm,0.8s,mb4.6
GIVF Givet 71.10 317 *e*P P 14 48 26.5 -0.3
GIVF pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,8.0nm,0.8s,mb4.6						
GIVF	Givet	71.10	317	eP	P	14 48 26.5	-0.3
	comp=Z,7.8nm,0.8s,mb4.6						
LPG	La Plagne	71.36	312	eP	P	14 48 28.5	+0.2
	comp=Z,12nm,0.7s,mb4.5						
LPG	La Plagne	71.36	312	eP	P	14 48 28.5	+0.2
LPG				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
LPG	La Plagne	71.36	312	eP	P	14 48 28.5	+0.2
	comp=Z,6.1nm,0.7s,mb4.5						
LPL	La Plagne	71.36	312	eP	P	14 48 28.5	+0.2
	comp=Z,21nm,0.7s,mb4.7						
LPL	La Plagne	71.36	312	eP	P	14 48 28.5	+0.2
LPL				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
LPL	La Plagne	71.36	312	eP	P	14 48 28.5	+0.2
	comp=Z,10nm,0.7s,mb4.8						
CABF	La Chapelle	71.43	313	eP	P	14 48 28.3	-0.5
	comp=Z,4.2nm,0.5s,mb4.2						
CABF	La Chapelle	71.43	313	eP	P	14 48 28.3	-0.5
CABF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
CABF	La Chapelle	71.43	313	eP	P	14 48 28.3	-0.5
	comp=Z,2.1nm,0.5s,mb4.2						
MEZF	Maizieres J'vi	71.48	315	eP	P	14 48 28.8	-0.2
	comp=Z,22nm,0.6s,mb4.8						
MEZF	Maizieres J'vi	71.48	315	eP	P	14 48 28.8	-0.2
	comp=Z,22nm,0.6s,mb5.2						
BAIF	Baives	71.49	317	eP	P	14 48 28.9	-0.2
MBDF	Montbardon	71.59	311	eP	P	14 48 29.2	-0.5
	comp=Z,6.0nm,0.6s,mb4.3						
MBDF	Montbardon	71.59	311	eP	P	14 48 29.2	-0.5
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
MBDF	Montbardon	71.59	311	eP	P	14 48 29.2	-0.5
	comp=Z,3.0nm,0.6s,mb4.3						
ORIF	Oris-en-Rattie	72.13	312	eP	P	14 48 32.9	0.0
	comp=Z,5.6nm,0.6s,mb4.3						
ORIF				eR			
	comp=Z,38nm,20.8s						
ORIF	Oris-en-Rattie	72.13	312	eP	P	14 48 32.9	0.0
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
ORIF	Oris-en-Rattie	72.13	312	eP	P	14 48 32.9	0.0
	comp=Z,2.8nm,0.6s,mb4.3						
STKA	Stephens Creek	72.31	141	eP	P	14 48 33.3	-0.7
	comp=Z,5.2nm,0.7s,mb4.5						
STKA	Stephens Creek	72.31	141	P	P	14 48 33.7	-0.3
	comp=Z,6.3nm,0.8s,mb4.5,baz=319,slow=6.8,SNR=11						
LOR	Lormes	72.65	315	eP	P	14 48 35.1	-0.9
	comp=Z,4.7nm,0.5s,mb4.3						
LOR				eR			
	comp=Z,36nm,18.5s						
LOR	Lormes	72.65	315	eP	P	14 48 35.1	-0.9
	comp=Z,2.3nm,0.5s,mb4.3						
LOR				LR	LR		
	comp=Z,40nm,18.5s						
SMF	Signal de Mont	72.88	314	eP	P	14 48 36.7	-0.7
	comp=Z,9.1nm,0.5s,mb4.5						
SMF	Signal de Mont	72.88	314	eP	P	14 48 36.7	-0.7
SMF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
SMF	Signal de Mont	72.88	314	eP	P	14 48 36.7	-0.7
	comp=Z,4.6nm,0.5s,mb4.6						
SSF	Saint Saulge	72.95	314	eP	P	14 48 37.2	-0.6
	comp=Z,8.3nm,0.6s,mb4.4						
SSF	Saint Saulge	72.95	314	eP	P	14 48 37.2	-0.6
SSF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
SSF	Saint Saulge	72.95	314	eP	P	14 48 37.2	-0.6
	comp=Z,4.2nm,0.6s,mb4.5						
VIVF	Saint-Julien-l	72.96	312	eP	P	14 48 37.2	-0.6
	comp=Z,12nm,0.9s,mb4.4						
VIVF	Saint-Julien-l	72.96	312	eP	P	14 48 37.2	-0.6
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
VIVF	Saint-Julien-l	72.96	312	eP	P	14 48 37.2	-0.6
	comp=Z,6.0nm,0.9s,mb4.4						
AVF	Avril sur Loir	73.14	314	eP	P	14 48 38.4	-0.5
	comp=Z,8.9nm,0.8s,mb4.4						
AVF	Avril sur Loir	73.14	314	eP	P	14 48 38.4	-0.5
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
AVF	Avril sur Loir	73.14	314	eP	P	14 48 38.4	-0.5
	comp=Z,4.4nm,0.8s,mb4.3						
BGF	Bois d'Agland	73.55	314	eP	P	14 48 40.6	-0.7
IMA2	Indian Mountai	73.73	24	eP	P	14 48 42.0	-0.5
LASF	Ste Croix	73.78	311	eP	P	14 48 42.4	-0.3
TCF	Toulx Ste Croi	74.06	314	eP	P	14 48 44.2	-0.1
	comp=Z,12nm,0.8s,mb4.4						
TCF	Toulx Ste Croi	74.06	314	eP	P	14 48 44.2	-0.1
TCF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
TCF	Toulx Ste Croi	74.06	314	eP	P	14 48 44.2	-0.1
	comp=Z,5.9nm,0.8s,mb4.4						
LDF	La Druitiere	74.66	317	eP	P	14 48 47.3	-0.5
	comp=Z,9.0nm,0.6s,mb4.4						
LDF	La Druitiere	74.66	317	eP	P	14 48 47.3	-0.5
LDF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
LDF	La Druitiere	74.66	317	eP	P	14 48 47.3	-0.5
	comp=Z,4.5nm,0.6s,mb4.4						
CAF	Calviac	74.66	313	eP	P	14 48 47.8	0.0
RJF	Les Rejaudoux	74.88	313	eP	P	14 48 49.3	+0.3
RJF				eR			
	comp=Z,47nm,17.4s						
RJF	Les Rejaudoux	74.88	313	eP	P	14 48 49.3	+0.3
RJF				LR	LR		
	comp=Z,50nm,17.4s						
GRR	Gorron	75.19	317	eP	P	14 48 50.4	-0.4
	comp=Z,13nm,0.6s,mb4.5						
GRR	Gorron	75.19	317	eP	P	14 48 50.4	-0.4
GRR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
GRR	Gorron	75.19	317	eP	P	14 48 50.4	-0.4
	comp=Z,6.6nm,0.6s,mb4.5						
LFF	La Frestale	75.52	313	eP	P	14 48 52.9	+0.1
SGMF	Saint Gilles	76.28	317	eP	P	14 48 57.0	-0.1
	comp=Z,9.8nm,0.5s,mb4.5						
SGMF	Saint Gilles	76.28	317	eP	P	14 48 57.0	-0.1
SGMF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
SGMF	Saint Gilles	76.28	317	eP	P	14 48 57.0	-0.1
	comp=Z,4.9nm,0.5s,mb4.5						
ROSF	Rostrenen	76.68	317	eP	P	14 48 59.3	0.0
	comp=Z,14nm,0.5s,mb4.6						
ROSF	Rostrenen	76.68	317	eP	P	14 48 59.3	0.0
ROSF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.7						
ROSF	Rostrenen	76.68	317	eP	P	14 48 59.3	0.0
	comp=Z,6.8nm,0.5s,mb4.6						
ETSF	Etsaut	77.20	312	eP	P	14 49 02.3	+0.1
	comp=Z,5.8nm,0.5s,mb4.3						
ETSF	Etsaut	77.20	312	eP	P	14 49 02.3	+0.1
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
ETSF	Etsaut	77.20	312	eP	P	14 49 02.3	+0.1
	comp=Z,2.9nm,0.5s,mb4.3						
INK	Inuvik	78.64	17	eP	P	14 49 10.0	-0.2
INK				pmax	pmax		
	comp=Z,11nm,1.3s						
INK	Inuvik	78.64	17	eP	P	14 49 09.9	-0.3
	comp=Z,11nm,1.3s,mb4.5						
BOSA	Boshof	87.47	236	P	P	14 49 55.9	+0.1
	comp=Z,1.1nm,0.5s,mb4.0,baz=285,slow=15,SNR=5.3						
TORD	Torodi Ar. Bea	88.31	284	P	P	14 50 00.1	+0.4
	comp=Z,1.9nm,0.6s,mb4.3,baz=66,slow=4.4,SNR=14						
TORD				pP	pP	14 50 24.0	+0.3
	comp=Z,1.3nm,0.8s,baz=61,slow=4.5,SNR=4.1						
TORD				PP	PP	14 53 26.9	-1.4
	comp=Z,0.8nm,0.8s,baz=57,slow=7.6,SNR=3.9						
DBIC	Dimbokro	97.00	281	P	P	14 50 39.5	-0.2
	comp=Z,1.9nm,0.4s,mb4.9,baz=144,slow=19,SNR=7.9						
BDFB	Brasilia	145.15	281	PKPbc	PKPbc	14 56 45.4	+0.5
	comp=Z,3.8nm,0.4s,baz=25,slow=1.5,SNR=4.1						
ROSC	El Rosal	147.57	342	PKPbc	PKPbc	14 56 53.6	+1.6
	comp=Z,13nm,0.6s,baz=114,slow=19,SNR=6.1						

*NEIC **09** 14:52:42.2, 2769S×7121W, h15km, ML3.7(GUC), After GUC.*

GUC 09 14:52:42.2±0.7**, 2769S×7121W, h15**km±5km**, MD3.9, ML3.7, 1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CDCH	Caldera	0.70	29⇑	iP	Pg	14 52 55.0	-0.9
CDCH				iS	Sg	14 53 04.5	-0.6
CPCH	Copiapo	0.83	67	eP	Pb	14 52 57.3	-1.0
CPCH				iS	Sg	14 53 08.6	-0.5
CPCH				AML	AML	14 53 16.8	
	comp=E,11μm,0.1s						
CPCH	Copiapo	0.83	67	eP	Pb	14 52 57.3	-1.0
CPCH				iS	Sg	14 53 08.6	-0.5
VACH	Vallenar	0.97	156	eP	Pb	14 52 59.5	-1.1
VACH				iS	Sb	14 53 12.3	-1.0
VACH				AML	AML	14 53 14.6	
	comp=N,5μm,0.1s						
VACH	Vallenar	0.97	156	eP	Pb	14 52 59.5	-1.1
VACH				iS	Sb	14 53 12.3	-1.0
LCO	Las Campanas	1.39	161	eP	Pn	14 53 06.6	-0.4
LCO				iS	Sn	14 53 24.8	-0.4
TLL	Tololo Astrono	2.49	172	eP	Pn	14 53 22.3	+0.1
TLL				iS	Sn	14 53 55.6	+3.3
TLL				AML	AML	14 54 08.2	
	comp=N,285nm,0.7s						
TLL	Tololo Astrono	2.49	172	P	Pn	14 53 22.3	+0.1
TLL				iS	Sn	14 53 55.6	+3.3

*CSEM **09** 14:54:55.6±0.9, 3830N×2683W, h2km±3km, ML2.4, Error ellipse: s-maj=4.0km s-min=0.9km az=43.0, After PDA*
*PDA **09** 14:54:55.6±0.9, 3830N×2683W, h2km±3km, MD2.7, ML2.4, Error ellipse: s-maj=4.0km s-min=0.9km az=43.0*

SVSA 09 14:54:55.6±0.9**, 3830N×2683W, h2**km±3km**, MD2.7, ML2.4, Error ellipse: s-maj=4.0km s-min=0.9km az=43.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFAV	Pico das Favas	0.46	334	eP	Pg	14 55 03.7	-0.7
PFAV				eS	Sg	14 55 09.9	-0.5
PFAV							
	87nm,0.2s						
PFAV	Pico das Favas	0.46	334	eP	Pg	14 55 03.7	-0.7
PFAV				eS	Sg	14 55 09.9	-0.5
RIB2	Ribeirinha	0.46	324	eP	Pg	14 55 04.0	-0.5
RIB2				eS	Sg	14 55 10.2	-0.3
RIB2							
	155nm,0.1s						
RIB2	Ribeirinha	0.46	324	eP	Pg	14 55 04.0	-0.5
RIB2				eS	Sg	14 55 10.2	-0.3
ADH	Angra Heroismo	0.48	318	eP	Pg	14 55 03.8	-1.0
ADH				iS	Sg	14 55 10.6	-0.4
PVNV	Vila Nova	0.53	331	eP	Pg	14 55 04.6	-1.2
PVNV				eS	Sg	14 55 11.6	-1.1
PVNV							
	114nm,0.1s						
PVNV	Vila Nova	0.53	331	eP	Pg	14 55 04.6	-1.2
PVNV				eS	Sg	14 55 11.6	-1.1
PPAD	Pico dos Padre	0.54	318	eP	Pg	14 55 05.2	-0.8
PPAD				eS	Sg	14 55 12.6	-0.4
PPAD							
	101nm,0.2s						
PPAD	Pico dos Padre	0.54	318	eP	Pg	14 55 05.2	-0.8
PPAD				eS	Sg	14 55 12.6	-0.4
PBIS	Biscoitos	0.57	324	eP	Pg	14 55 05.8	-0.7
PBIS				eS	Sg	14 55 13.3	-0.7
PBIS							
	43nm,0.2s						
PBIS	Biscoitos	0.57	324	eP	Pg	14 55 05.8	-0.7
PBIS				eS	Sg	14 55 13.3	-0.7
SET4	Mosteiros	0.92	117	eP	Pg	14 55 10.6	-2.5
SET4				eS	Sg	14 55 21.7	-3.3
SET2	Ginetes	0.93	119	eP	Pg	14 55 10.8	-2.5
SET2				eS	Sg	14 55 21.7	-3.6
PFET	Feteiras	0.95	120	iP	Pg	14 55 11.2	-2.6
PSAN	Santo Antonio	0.98	117	eP	Pg	14 55 11.4	-2.9
PMAN	Manadas	1.04	289	eS	Sg	14 55 24.6	-4.6
PMAN							
	26nm,0.1s						
FAC	Faja de Cima	1.07	119	erx		14 55 13.1	
CML	Cha da Macela	1.14	117	eP	Pg	14 55 13.6	-3.9
CML				eS	Sg	14 55 27.3	-5.0
PVER	Pico Vermelho	1.15	115	erx		14 55 25.6	
PGRA	Graciosa	1.16	309	eS	Sg	14 55 34.4	+1.5
PGRA							
	30nm,0.2s						
PMAT	Coroa da Mata	1.17	114	eP	Pg	14 55 14.2	-3.9
PMAT				eS	Sg	14 55 27.9	-5.4
PMAT							
	52nm,0.2s						
PMAT	Coroa da Mata	1.17	114	eP	Pg	14 55 14.2	-3.9
PMAT				eS	Sg	14 55 27.9	-5.4
LFA	Lagoa do Fogo	1.18	116	iP	Pg	14 55 14.3	-4.0
ROSA	Rosais	1.19	291	eP	Pg	14 55 14.0	-4.3
ROSA				eS	Sg	14 55 28.3	-5.4
MESC	Monte Escuro	1.20	114	eP	Pg	14 55 14.4	-4.2
MESC				eS	Sg	14 55 28.9	-5.3
SRBC	Serra Branca	1.20	308	eP	Pg	14 55 14.3	-4.4
SRBC				eS	Sg	14 55 28.8	-5.5
PRCH	Ribeira Ch	1.21	118	eP	Pg	14 55 14.8	-3.9
PRCH				eS	Sg	14 55 28.9	-5.5
PRCH							
	28nm,0.1s						
PRCH	Ribeira Ch	1.21	118	eP	Pg	14 55 14.8	-3.9
PRCH				eS	Sg	14 55 28.9	-5.5
VIF	Vila Franca	1.23	116	eP	Pg	14 55 15.1	-4.0
VIF				eS	Sg	14 55 29.5	-5.5
VIF				erx		14 55 29.8	
VIF							
	14nm,0.2s						
VIF	Vila Franca	1.23	116	eP	Pg	14 55 15.1	-4.0
VIF				eS	Sg	14 55 29.5	-5.5
PICO	Pico	1.27	280	eP	Pg	14 55 15.3	-4.7
PICO				eS	Sg	14 55 30.5	-6.0
PFAD	Fenais da Ajud	1.27	111	iP	Pg	14 55 15.2	-4.8
PFAD				eS	Sg	14 55 29.6	-6.9
FRA1	Furnas	1.29	115	eP	Pg	14 55 15.8	-4.5
FRA1				eS	Sg	14 55 30.4	-6.6
MIRA	Miradouro	1.33	112	eP	Pg	14 55 16.1	-4.9
PSMN	Pico do Norte,	1.90	132	eS	Sn	14 55 45.2	-8.3

*IDC **09** 15:40:45.8±1.8, 5168N×17762E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.6/23, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=46.9km s-min=31.4km az=148.0*
*ISCJB **09** 15:40:52.5±1.0, 518N±02×1776E±0.1, h62km±13km, mb3.8/5, Error ellipse: s-maj=26.8km s-min=12.7km az=23.2*
*NEIC **09** 15:40:53.1±1.3, 5168N×17755E, h55km±14km, ML3.4(AEIC), Error ellipse: s-maj=29.7km s-min=12.9km az=190.0*

ISC 09 15:40:53.3±1.0**, 518N**±02×**1776E**±01**, h58**km±14km**, n9,** σ0s97/10**, mb3.8**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	1.14	109	P	Pn	15 41 11.6	-1.6
AMKA				S	Sn	15 41 28.4	+0.4
SMY	Shemya	2.35	296	P	Pn	15 41 29.3	-0.1
ATKA	Atka Island	5.11	82	P	Pn	15 42 09.3	+2.1
KDAK	Kodiak Island	18.14	59	P	Pn	15 45 00.0	-1.0
	0.4nm,0.3s,baz=280,slow=11,SNR=4.7						
ASAJ	Asahikawa	24.46	266	P	P	15 46 07.0	+0.3
	2.3nm,0.8s,mb3.7,baz=100,slow=10,SNR=5.0						
SONM	Songino Array	44.44	294	P	P	15 48 59.6	+1.1
	1.1nm,0.6s,mb3.8,baz=64,slow=7.9,SNR=8.8						
ARCES	ARCESS Array B	57.30	349	P	P	15 50 35.1	0.0
	2.7nm,1.0s,mb4.2,baz=28,slow=8.6,SNR=5.0						
MKAR	Makanchi Array	58.00	306	P	P	15 50 39.1	-0.9
	0.4nm,0.4s,mb3.8,baz=52,slow=6.3,SNR=3.8						
ASAR	Alice Springs	84.29	220	P	P	15 53 18.7	-0.1
	0.4nm,1.0s,mb3.5,baz=20,slow=4.9,SNR=4.2						

KRSC 09 16:06:48, 5274N×15956E, h42km**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLC	Nalytchevo	0.45	343	eP	Pn	16 06 58.5	+0.3
NLC				iS	Sn	16 07 06.6	+1.3
SPN	Mys Shipunski	0.46	38	iP	Pn	16 06 58.1	-0.1
SPN				iS	Sn	16 07 06.0	+0.6
PET	Petropavlovsk	0.62	298	eP	Pn	16 07 00.3	-0.1
PET				iS	Sn	16 07 10.0	+0.8
RUS	Russkaya	0.71	245	eP	Pn	16 07 00.9	-0.7
RUS				iS	Sn	16 07 11.1	-0.3
AVH	Avacha	0.72	317	eP	Pn	16 07 02.4	+0.6
AVH				iS	Sn	16 07 13.1	+1.4
GRL	Gorelyy	0.93	259	eP	Pn	16 07 04.8	+0.3
GRL				iS	Sn	16 07 16.9	+0.3
GNL	Ganaly	1.36	315	eP	Pn	16 07 11.4	+0.9
GNL				iS	Sn	16 07 28.6	+1.2
MIPR	Malaya Ipel'ka	1.77	256	eP	Pn	16 07 16.9	+0.7
MKZ	Mys Kozlova	2.23	35	eP	Pn	16 07 22.2	-0.2
MKZ				iS	Sn	16 07 46.3	-2.5
KMNR	Kamenistaya	3.05	7	eP	Pn	16 07 36.6	+2.9
KOZ	Kozyrevsk	3.33	3	eP	Pn	16 07 39.1	+1.6
KBTR	Krutoberegovo	3.96	27	eP	Pn	16 07 47.8	+1.6
SMKR	Semkarok	4.01	15	eP	Pn	16 07 50.1	+3.3
SRKR	Sorokina	4.03	13	eP	Pn	16 07 49.5	+2.3

SKHL 09 16:21:03.3±0.6**, 5133N×13550E, h10**km**, mb3.8**/3**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GRNR	Gornyy	0.81	134	ePg	Pg	16 21 17.7	-1.2
GRNR				eSg	Sg	16 21 28.1	-1.3
GRNR				A		16 21 29.4	
	300nm,0.4s						
EKMR	Ekimchan	2.34	319	ePn	Pn	16 21 42.0	+0.1
EKMR				ePg	Pg	16 21 45.9	-2.4
EKMR				AMB	AMB	16 21 46.8	
	40nm,0.5s						
EKMR				eSg	Sg	16 22 16.6	-2.1
EKMR				A		16 22 24.9	
	50nm,0.3s						
EKMR				A		16 22 24.9	
	78nm,0.6s						
HABR	Khabarovsk	2.88	186	ePg	Pg	16 21 54.9	-3.5
HABR				AMB	AMB	16 21 55.0	
	6.0nm,0.2s						
HABR				eSg	Sg	16 22 33.3	-2.4
HABR				A		16 22 37.0	
	37nm,0.4s						
KLR	Kul'dur	3.19	230	ePg	Pg	16 22 01.8	-2.7
KLR				eSg	Sg	16 22 43.5	-2.4
NKL	Nikolayevsk	3.67	58	eSg	Sg	16 22 58.2	-2.9
NKL				A		16 23 08.1	
	67nm,0.9s						
TYV	Tymovskoe	4.54	93	eSg	Sg	16 23 27.0	-1.9
TYV				A		16 23 41.0	
	22nm,1.0s						
TYV				A		16 23 41.0	
	18nm,1.0s						
YASR	Yasnyy	5.01	296	ePn	Pn	16 22 18.3	-0.3
YASR				ePg	Pg	16 22 33.6	-5.7
YASR				AMB	AMB	16 22 37.0	
	4.0nm,0.5s						
YASR				eSg	Sg	16 23 38.3	-6.0
YASR				A		16 23 40.8	
	12nm,0.6s						
YASR				A		16 23 40.8	
	2.0nm,0.6s						
ZEA	Zeya	5.58	299	eSg	Sg	16 23 55.9	-6.6
ZEA				A		16 23 56.4	
	22nm,0.9s						
ZEA				A		16 23 56.4	
	10.0nm,0.8s						
KROS	Kirovskiy	6.03	304	eSg	Sg	16 24 11.6	-5.1
KROS				A		16 24 14.0	
	6.0nm,0.5s						

*ISCJB **09** 16:22:16.9±1.5, 1.1N±0.1×992E±0.1, h112km±12km, mb4.1/12, Error ellipse: s-maj=25.5km s-min=12.3km az=95.6*
*IDC **09** 16:22:18.0±1.8, 1.14N×9941E, h102km±12km, mb3.8/9, mb1 3.9/9, mb1mx3.6/20, mbtmp4.1/9, Error ellipse: s-maj=54.6km s-min=13.2km az=61.0*
*NEIC **09** 16:22:18.7±1.1, 1.11N×9939E, h111km±9km, mb4.3/3, Error ellipse: s-maj=17.6km s-min=9.0km az=53.0*

ISC 09 16:22:19.0±1.5**, 11N**±01×**992E**±01**, h114**km±13km**, n18,** σ1s11/20**, mb4.1**/12**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	1.75	350	P	Pn	16 22 46.7	-2.3
	46nm,0.3s,baz=354,slow=5.8,SNR=93						
PSI				S	Sn	16 23 07.2	-4.6
	24nm,0.3s,baz=180,slow=16,SNR=14						
PSI	Prapat	1.75	350	P	Pn	16 22 46.7	-2.3
PSI				S	Sn	16 23 07.2	-4.6
IPM	Ipoh	3.82	28	P	Pn	16 23 18.0	+2.0
KGM	Kluang	4.18	77	P	Pn	16 23 22.5	+1.7
KULM	Kulim	4.42	19	eP	Pn	16 23 23.8	-0.2
PALK	Pallekele	19.48	289	P	P	16 26 39.1	+2.3
FITZ	Fitzroy Crossi	32.21	128	P	P	16 28 35.3	-0.9
	2.7nm,1.0s,mb3.9,baz=287,slow=17,SNR=4.0						
WRAB	Tennant Creek	40.25	123	eP	P	16 29 44.0	-0.6
	6.6nm,0.7s,mb4.6						
ASAR	Alice Springs	41.70	128	P	P	16 29 55.8	-0.6
	1.5nm,0.7s,mb3.8,baz=302,slow=7.7,SNR=30						
ASAR				PcP	PcP	16 31 52.0	+1.1
	1.2nm,0.7s,baz=302,slow=2.8,SNR=13						
SONM	Songino Array	46.99	7	P	P	16 30 38.8	+0.3
	5.3nm,0.7s,mb4.4,baz=189,slow=9.7,SNR=39						
SONM				PcP	PcP	16 32 09.6	+0.6
	1.3nm,0.4s,baz=192,slow=3.9,SNR=9.5						
ULN	Ulaanbaatar	47.10	7	eP	P	16 30 39.3	0.0
	3.0nm,0.6s,mb4.2						
MKAR	Makanchi Array	47.88	344	P	P	16 30 45.5	+0.1
	1.8nm,0.4s,mb4.3,baz=157,slow=8.0,SNR=26						
STKA	Stephens Creek	51.77	133	P	P	16 31 14.6	-0.3
	2.9nm,1.0s,mb4.3,baz=10.0,slow=15,SNR=4.3						
KURK	Kurchatov	52.46	344	eP	P	16 31 20.0	+0.1
	2.7nm,0.8s,mb4.3						
ZAL	Zalesovo	54.02	349	P	P	16 31 31.6	+0.3
	3.6nm,0.4s,mb4.8,baz=313,slow=3.6,SNR=14						
FINES	FINESS Array B	81.06	332	P	P	16 34 20.7	-0.6
	0.3nm,0.4s,mb3.5,baz=106,slow=6.4,SNR=5.3						
ARCES	ARCESS Array B	83.34	340	P	P	16 34 32.1	-1.1
	1.3nm,0.7s,mb3.9,baz=72,slow=4.0,SNR=7.8						
VNDA	Vanda	85.30	169	P	P	16 34 44.1	+1.0
	0.2nm,0.5s,mb3.3,baz=290,slow=5.7,SNR=3.5						

*IDC **09** 16:30:29.0±1.0, 1034S×10867E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.9/16, mbtmp4.0/7, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/18, Error ellipse: s-maj=50.4km s-min=19.0km az=55.0*
*NEIC **09** 16:30:30.5±0.6, 1034S×10868E, h10km, mb4.3/2, Error ellipse: s-maj=29.3km s-min=9.9km az=51.0*
*ISCJB **09** 16:30:42.5±3.5, 102S±02×109.1E±03, h126km±28km, mb4.0/8, Error ellipse: s-maj=61.5km s-min=15.1km az=113.2*

ISC 09 16:30:42.1±3.7**, 103S**±02×**1090E**±03**, h106**km±30km**, n11,** σ0s45/10**, mb4.0**/8**, 1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	3.02	14⇓	iP	Pn	16 31 28.5	+0.2
PSI	Prapat	16.41	322	LR	LR	16 41 51.2	
	comp=Z,60nm,19.5s,baz=242,slow=42						
FITZ	Fitzroy Crossi	17.91	118	P	Pn	16 34 43.4	-0.9
	0.3nm,0.3s,baz=169,slow=13,SNR=7.8						
ASAR	Alice Springs	27.24	122	P	P	16 36 16.4	+0.3
	0.9nm,0.7s,mb3.4,baz=296,slow=8.1,SNR=15						
ASAR				PcP	PcP	16 39 36.6	+3.2
	0.6nm,0.6s,baz=283,slow=1.9,SNR=8.5						
STKA	Stephens Creek	37.01	130	P	P	16 37 42.4	+1.0
	3.1nm,0.9s,mb4.2,baz=300,slow=8.1,SNR=3.8						
SONM	Songino Array	57.91	358	P	P	16 40 23.1	+0.1
	1.2nm,0.6s,mb4.1,baz=178,slow=8.2,SNR=12						
ULN	Ulaanbaatar	57.92	358	eP	P	16 40 22.9	-0.2
	1.3nm,0.6s,mb4.1						
MKAR	Makanchi Array	61.62	339	P	P	16 40 48.2	-0.3
	1.9nm,0.6s,mb4.3,baz=137,slow=7.3,SNR=8.2						
CHKZ	Chkalovo	71.55	337	eP	P	16 41 51.7	+0.1
	3.4nm,0.8s,mb4.2						
CHKZ				e		16 42 00.9	
VNDA	Vanda	72.40	170	P	P	16 41 56.5	-0.2
	0.3nm,0.5s,mb3.4,baz=300,slow=6.8,SNR=3.4						
BRTR	Keskin Array B	85.46	312	P	P	16 43 07.8	-0.1
	0.7nm,0.6s,mb3.8,baz=145,slow=5.3,SNR=5.8						

ISCJB 09 16:35:20.8±0.5, 36.59N±0.04×71.52E±0.09, h205km±11km, Error ellipse: s-maj=12.4km s-min=5.2km az=141.0
NNC 09 16:35:27.5±0.7, 37.10N×70.29E, h110km±16km, mb3.4, mpv4.0, Error ellipse: s-maj=16.4km s-min=6.3km az=74.0
ISC 09 16:35:21.6±0.5, 36.62N±0.04×71.50E±0.09, h188km±11km, n24, σ1.29/34, 1C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.81	173	⇓P	Pn	16 36 09.8	+1.4
CEP				S	Sn	16 36 47.0	+2.2
SBDP	Sheikh Budin	4.35	188	⇓P	Pn	16 36 27.3	-0.1
SARP	Sargodha	4.79	168	P	Pn	16 36 33.6	+0.6
SARP				S	Sn	16 37 28.0	-1.0
DRP	Derazinda	4.98	193	P	Pn	16 36 36.5	+1.0
DLH	Dalhousie	5.49	137	eP	Pn	16 36 40.0	-2.0
DLH				eS	Sn	16 37 42.0	-3.4
AML	Almayashu	5.76	16	P	Pn	16 36 45.2	-0.4
	SNR=62						
UCH	Uchtor	6.07	22	P	Pn	16 36 50.3	+0.7
	SNR=7.5						
EKS2	Erkin-Say	6.28	16	P	Pn	16 36 53.0	+0.6
	SNR=5.5						
AAK	Ala-Archa	6.43	20	P	Pn	16 36 55.4	+1.0
	SNR=5.8						
KK31	Karatay Array	6.52	354	⇑P	Pn	16 36 53.9	-1.6
	3.8nm,0.2s,baz=173,slow=12,SNR=411						
KK31				S	Sn	16 38 01.8	-7.8
	31nm,0.8s,baz=204,slow=84,SNR=18						
SDNR	Sundarnagar	6.83	137	eP	Pn	16 37 00.0	+0.5
SDNR				eS	Sn	16 38 16.0	-1.0
TKM2	Tokmak 2	7.04	25	P	Pn	16 37 03.2	+1.0
	SNR=6.3						
KLP	Kalpa	7.55	130	eP	Pn	16 37 07.4	-1.7
KLP				eS	Sn	16 38 31.0	-3.1
KLP				AML	AML	16 38 35.5	
	comp=N,90nm,0.5s						
KLP				AML	AML	16 38 38.1	
	comp=E,85nm,0.5s						
KHET	Khetri	9.27	156	eP	Pn	16 37 28.3	-3.1
KHET				eS	Sn	16 39 10.3	-4.6
KHET				AML	AML	16 39 13.8	
	comp=N,10nm,0.3s						
KHET				AML	AML	16 39 13.9	
	comp=E,7.7nm,0.1s						
KUDL	Kundal	9.44	152	eP	Pn	16 37 33.4	-0.3
KUDL				eS	Sn	16 39 13.6	-5.5
KUDL				AML	AML	16 39 15.2	
	comp=E,5.9nm,0.6s						
KUDL				AML	AML	16 39 18.8	
	comp=N,4.1nm,0.5s						
KOLN	Koldanda	13.51	127	eP	Pn	16 38 25.9	0.0
	comp=N,6.1nm,0.3s						
GKN	Gorkha	14.03	124	eP	Pn	16 38 33.1	+0.8
	comp=N,14nm,0.3s						
GKN				eS	Sn	16 41 00.0	-8.8
KKN	Kakani	14.60	123	eP	Pn	16 38 39.6	+0.2
	comp=N,19nm,0.5s						
DMN	Daman	14.60	124	eP	Pn	16 38 40.2	+0.8
	comp=N,11nm,0.3s						
PKI	Pulchoki	14.83	124	eP	Pn	16 38 43.8	+1.6
	comp=N,21nm,0.5s						
GUN	Gumba	14.93	121	eP	Pn	16 38 44.5	+1.1
	comp=N,26nm,0.6s						
AB31	Akbulak array	15.18	330	P	Pn	16 38 44.4	-2.1
	comp=N,1.3nm,0.5s,baz=143,slow=11,SNR=31						
AB31				S	S	16 41 22.6	-13
	comp=N,0.9nm,0.5s,baz=147,slow=23,SNR=2.9						
JIRN	Jiri	15.30	122	eP	Pn	16 38 49.4	+1.4
	comp=N,44nm,0.5s						
AKTO	Aktyubinsk	16.88	329	⇓P	Pn	16 39 05.9	-1.1

IDC 09 16:35:28.0±11.0, 7.85S×10.95W, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/20, mbtmp3.5/3, Error ellipse: s-maj=427.1km s-min=157.5km az=141.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	24.35	31	P	P	16 40 47.9	+0.4
	0.8nm,0.7s,baz=222,slow=9.8,SNR=5.9						
GERES	GERESS Array B	60.46	18	P	P	16 45 39.8	+0.3
	0.5nm,0.6s,baz=185,slow=7.4,SNR=4.9						
AKASG	Malin Array Be	67.87	26	P	P	16 46 28.0	-0.2
	0.8nm,0.6s,baz=228,slow=7.1,SNR=5.5						

IDC 09 16:40:50.7±1.3, 53.03S×140.32E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.7/9, mbtmp3.6/3, Error ellipse: s-maj=115.4km s-min=25.1km az=83.0
NEIC 09 16:40:52.6±0.5, 53.04S×139.49E, h10km, mb3.8/4, Error ellipse: s-maj=53.8km s-min=11.0km az=83.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	21.21	5	P	P	16 45 37.8	-0.6
	2.5nm,0.9s,baz=158,slow=9.2,SNR=2.9						
VNDA	Vanda	25.90	169	P	P	16 46 23.1	-1.6
	0.6nm,0.6s,baz=334,slow=8.2,SNR=6.3						
VNDA	Vanda	25.90	169	eP	P	16 46 22.8	-1.9
	1.7nm,0.9s						
SBA	Scott Base	26.78	168	eP	P	16 46 33.3	+0.7
	1.8nm,0.8s						
ASAR	Alice Springs	29.64	350	P	P	16 46 58.2	+0.1
	0.4nm,0.6s,baz=166,slow=9.9,SNR=12						
WRAB	Tennant Creek	33.29	351	P	P	16 47 30.2	0.0
	3.8nm,0.8s						
QSPA	South Pole Qui	37.07	180	eP	P	16 48 02.2	-0.6
	1.6nm,0.7s						
PLAL	Pickwick Lake	142.14	99	ePKPdf	PKPdf	17 00 25.3	+0.3
FINES	FINESS Array B	144.53	311	PKP	PKPdf	17 00 27.3	-1.9
	0.6nm,0.5s,baz=116,slow=4.4,SNR=4.0						
GERES	GERESS Array B	146.28	285	PKPbc	PKPbc	17 00 33.3	-0.1
	0.5nm,0.9s,baz=222,slow=1.3,SNR=3.1						
ARCES	ARCESS Array B	146.36	325	PKPbc	PKPbc	17 00 31.7	-1.9
	2.1nm,0.9s,baz=29,slow=4.1,SNR=4.1						
ARCES	ARCESS Array B	146.36	325	PKPbc	PKPbc	17 00 31.7	-1.9

ISCJB 09 16:41:17.5±0.7, 53.01S±0.07×140.0E±0.4, h10km, mb4.3/7, Error ellipse: s-maj=36.8km s-min=10.0km az=175.5
IDC 09 16:41:17.3±1.1, 53.11S×139.98E, h0km, mb3.9/3, mb1 4.1/3, mb1mx4.0/9, mbtmp4.0/3, Error ellipse: s-maj=107.5km s-min=23.5km az=83.0
NEIC 09 16:41:19.2±0.6, 53.02S×140.04E, h10km, mb4.6/5, Error ellipse: s-maj=34.6km s-min=9.8km az=87.0
ISC 09 16:41:19.2±0.7, 53.06S±0.07×139.9E±0.4, h10km, n18, σ0.79/14, mb4.3/7, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CASY	Casey	19.63	216	eP	Pn	16 45 49.1	-0.2
STKA	Stephens Creek	21.20	4	eP	P	16 46 05.3	+0.4
	16nm,1.2s,mb4.2						
STKA	Stephens Creek	21.20	4	P	P	16 46 05.1	+0.2
	13nm,1.0s,mb4.2,baz=150,slow=9.9,SNR=5.1						
STKA	Stephens Creek	21.20	4	eP	P	16 46 05.1	+0.2
STKA				eP		16 46 05.3	
FORT	Forrest	23.89	334	eP	P	16 46 34.2	+1.2
	10nm,0.7s,mb4.4						
VNDA	Vanda	25.84	169	P	P	16 46 49.4	-1.3
	2.3nm,0.7s,mb3.8,baz=326,slow=8.4,SNR=14						
VNDA	Vanda	25.84	169	eP	P	16 46 49.8	-0.9
SBA	Scott Base	26.71	168	eP	P	16 47 00.4	+1.8
	11nm,1.0s,mb4.3						
ASAR	Alice Springs	29.70	349	P	P	16 47 25.3	0.0
	1.0nm,0.6s,mb3.8,baz=167,slow=9.7,SNR=12						
ASAR				PcP	PcP	16 50 28.3	-1.0
	0.6nm,0.6s,baz=164,slow=2.9,SNR=9.8						
ASPA	Alice Springs	29.70	349	eP	P	16 47 25.2	-0.1
AS31	Alice Springs	29.70	349	eP	P	16 47 25.2	-0.1
WB2	Warramunga Arr	33.33	350	eP	P	16 47 56.6	-0.7
WRAB	Tennant Creek	33.34	350	eP	P	16 47 56.8	-0.6
	6.7nm,0.6s,mb4.8						
QSPA	South Pole Qui	37.06	180	eP	P	16 48 29.0	-0.4
	32nm,0.8s,mb5.2						
FINES	FINESS Array B	144.74	310	PKP	PKPdf	17 00 54.5	-1.7
	2.2nm,0.6s,baz=108,slow=6.2,SNR=11						
KAF	Kangasniemi	144.83	312	ep	PKPdf	17 00 53.4	-3.0
	10nm,0.8s						
ARCES	ARCESS Array B	146.53	325	PKPbc	PKPbc	17 00 58.9	-1.8
	2.1nm,0.6s,baz=69,slow=4.1,SNR=8.2						
GERES	GERESS Array B	146.54	285	PKPbc	PKPbc	17 00 58.7	-2.0
	1.1nm,0.8s,baz=159,slow=4.0,SNR=6.2						

NIED 09 17:07:00, 43.60N×147.20E, h65km, Mw3.8 Best double couple: Mo6.50000×10^14 NP1:φs60.00000°, δ79.00000°, λ147.00000°. NP2:φs157.00000°, δ58.00000°, λ13.00000°.
MOS 09 17:07:10.1±1.6, 43.74N×147.46E, h57km, mb4.4/1, Error ellipse: s-maj=19.9km s-min=15.1km az=104.1
ISCJB 09 17:07:12.3±1.0, 43.79N±0.06×147.24E±0.09, h67km±8km, mb3.6/6, Error ellipse: s-maj=12.4km s-min=7.3km az=72.0
JMA 09 17:07:13.1±0.2, 43.64N×147.23E, h40km, M3.9
SKHL 09 17:07:13.4±2.1, 43.95N×147.35E, h42km±9km, mb4.9/3
NEIC 09 17:07:14.9±2.3, 43.74N×147.08E, h74km±18km, mb4.2/1, Error ellipse: s-maj=30.6km s-min=13.8km az=96.0
IDC 09 17:07:15.8±4.0, 43.77N×147.11E, h83km±34km, mb3.5/6, mb1 3.6/8, mb1mx3.4/22, mbtmp3.8/8, Error ellipse: s-maj=39.8km s-min=25.7km az=92.0
ISC 09 17:07:13.2±1.0, 43.79N±0.06×147.26E±0.09, h59km±9km, n32, σ1.11/46, mb3.7/6, 1C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.04	284	⇓iP	Pn	17 07 31.1	-0.6
YUK				AMB	AMB	17 07 31.5	
	490nm,0.3s						
YUK				AMB	AMB	17 07 31.5	
	1μm,0.3s						
YUK				AMB	AMB	17 07 31.5	
	3μm,0.3s						
YUK				iS	Sn	17 07 44.4	-1.0
YUK				A		17 07 45.6	
	2μm,0.4s						
YUK				A		17 07 45.6	
	2μm,0.4s						
YUK	Yuzh-Kuril'sk	1.04	284	⇓iPN	Pn	17 07 31.1	-0.6
YUK				iS	Sn	17 07 44.4	-1.0
YUK				pmax	pmax		
	comp=Z,3μm,0.3s						
YUK				pmax	pmax		
	comp=N,490nm,0.4s						
YUK				pmax	pmax		
	comp=E,1μm,0.3s						
YUK				smax			
	comp=N,2μm,0.3s						
YUK				smax			
	comp=E,2μm,0.5s						
NEM2	Nemuro 2	1.18	250	P	Pn	17 07 32.7	-0.8
NEM2				eS	Sn	17 07 47.2	-1.5
KUR	Kuril'sk	1.51	17	iP	Pn	17 07 34.5	-3.5
KUR				AMB	AMB	17 07 36.0	
	comp=E,210nm,0.4s						
KUR				AMB	AMB	17 07 36.0	
	comp=E,190nm,0.4s						
KUR				AMB	AMB	17 07 36.0	
	comp=E,330nm,0.4s						
KUR				iS	Sn	17 07 53.5	-3.2
KUR				A		17 07 55.0	
	comp=E,4μm,1.0s						
KUR				A		17 07 55.0	
	comp=E,5μm,1.0s						
KUR				A		17 07 55.2	
	comp=E,3μm,0.5s						
KUR				A		17 07 55.2	
	comp=E,3μm,0.5s						
KUR	Kuril'sk	1.51	17	⇑iPN	Pn	17 07 34.5	-3.5
KUR				iS	Sn	17 07 53.5	-3.2
KUR				pmax	pmax		
	comp=N,210nm,0.4s						
KUR				pmax	pmax		
	comp=E,190nm,0.4s						
KUR				pmax	pmax		
	comp=Z,330nm,0.4s						
KUR				smax			
	comp=N,4μm,1.0s						
KUR				smax			
	comp=E,4μm,1.0s						
KUR				smax			
	comp=N,3μm,0.5s						
KUR				smax			
	comp=E,3μm,0.5s						
JRA	Rausu	1.55	276	P	Pn	17 07 39.0	+0.5
JRA				eS	Sn	17 07 58.4	+0.8
JNK	Nakash	1.85	265	P	Pn	17 07 42.6	0.0
JNK				eS	Sn	17 08 04.2	-0.7
JAK	Akkeshi	2.03	248	P	Pn	17 07 44.5	-0.5
JAK				eS	Sn	17 08 07.8	-1.4
JTKR	Abashiri--Toko	2.43	275	P	Pn	17 07 51.6	+1.2
JAR	Ashorobuto	2.58	260	P	Pn	17 07 53.3	+0.7
JAR				eS	Sn	17 08 22.7	-0.1
JOB	Onbets	2.65	252	P	Pn	17 07 53.9	+0.5
JOB				eS	Sn	17 08 23.8	-0.6
JMP	Maruseppu	2.83	276	P	Pn	17 07 57.3	+1.4
JCH	Churui	3.08	249	P	Pn	17 07 59.2	-0.1
JCH				eS	Sn	17 08 33.4	-1.5
JKK2	Kamakawa 2	3.26	273	P	Pn	17 08 03.6	+1.7
ASAJ	Asahikawa	3.38	277	P	Pn	17 08 05.8	+2.3
	comp=E,3.0nm,0.3s,baz=85,slow=16,SNR=47						
ASAJ	Asahikawa	3.38	277	P	Pn	17 08 05.7	+2.2
ASAJ	Asahikawa	3.38	277	PN	Pn	17 08 05.8	+2.3
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JFR	Furan	3.45	261	P	Pn	17 08 06.2	+1.8
JFR				eS	Sn	17 08 45.2	+1.1
JEM	Erimo	3.49	241	P	Pn	17 08 06.7	+1.7
JSE	Soyaes	3.55	291	P	Pn	17 08 07.2	+1.4
JNBK	Urakawa-nobuka	3.63	247	P	Pn	17 08 06.8	-0.1
JNBK				eS	Sn	17 08 47.4	-1.0
YSS	Yuzh-Sakhalins	4.48	317	⇓eP	Pn	17 08 19.5	+1.0
YSS				AMB	AMB	17 08 20.8	
	comp=Z,20nm,0.6s						
YSS				eS	Sn	17 09 08.6	-0.8
YSS				A		17 09 14.0	
	comp=Z,30nm,0.8s						
YSS	Yuzh-Sakhalins	4.48	317	eP	Pn	17 08 20.0	+1.4
MJAR	Matsushiro Arr	10.01	227	P	Pn	17 09 33.5	-0.7
	comp=Z,0.4nm,0.3s,baz=31,slow=13,SNR=4.6						
MKAR	Makanchi Array	44.64	298	P	P	17 15 19.9	+0.1
	comp=Z,0.2nm,0.4s,mb3.3,baz=68,slow=10,SNR=5.3						
INK	Inuvik	46.33	30	P	P	17 15 33.7	+0.5
	comp=Z,1.5nm,0.4s,mb4.2,baz=273,slow=4.5,SNR=4.5						
INK	Inuvik	46.33	30	eP	P	17 15 33.8	+0.6
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	Inuvik	46.33	30	eP	P	17 15 33.8	+0.6
	comp=Z,1.3nm,0.4s,mb4.2						
FINES	FINESS Array B	64.88	333	P	P	17 17 45.1	-1.0
	comp=Z,2.2nm,1.0s,mb4.1,baz=38,slow=9.6,SNR=9.0						
ASAR	Alice Springs	68.23	193	P	P	17 18 07.7	+0.2
	comp=Z,0.2nm,0.7s,mb3.3,baz=9.1,slow=6.7,SNR=4.4						
NOA	NORSAR Array B	69.60	339	P	P	17 18 15.1	-0.9
	comp=Z,0.5nm,0.6s,mb3.6,baz=227,slow=5.5,SNR=2.9						
AKASG	Malin Array Be	71.60	324	P	P	17 18 27.1	-1.1
	comp=Z,0.9nm,0.5s,mb3.9,baz=37,slow=6.0,SNR=7.5						

PRE 09 17:13:10.3±1.4, 21.16S×33.25E, h5km, ML3.8, Mozambique

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSNA	Messina	3.22	248	eP	Pn	17 14 03.6	+2.1
MSNA				eS	Sn	17 14 40.6	+0.3
MSNA				AML	AML	17 14 59.7	
	comp=Z,115nm,0.2s						
POGA	Pongola	6.36	193	eP	Pn	17 14 45.3	+0.6
POGA				eS	Sn	17 15 54.1	-3.7
POGA				AML	AML	17 16 41.1	
	comp=Z,20nm,0.6s						
KSR	Koster	7.47	230	eP	Pn	17 15 00.6	+0.7
KSR				eS	Sn	17 16 21.9	-3.1
BOSA	Boshof	10.38	223	eP	Pn	17 15 40.5	+0.8
BOSA				eS	Sn	17 17 32.1	-4.3
BOSA				AML	AML	17 18 51.8	
	comp=Z,3.6nm,0.5s						

NEIC 09 17:20:22.2±0.6, 33.18S×179.30W, h10km, mb4.5/2, Error ellipse: s-maj=16.1km s-min=14.0km az=111.0
ISCJB 09 17:20:24.7±2.9, 33.49S±0.06×179.5W±0.1, h31km±20km, mb4.2/5, Error ellipse: s-maj=20.5km s-min=9.0km az=21.4
IDC 09 17:20:26.6±6.8, 33.47S×179.31W, h40km±58km, mb3.8/3, mb1 4.1/4, mb1mx3.8/11, mbtmp4.1/4, ML4.1/1, Error ellipse: s-maj=39.6km s-min=35.1km az=11.0
ISC 09 17:20:24.6±2.9, 33.47S±0.06×179.3W±0.1, h22km±20km, n28, σ1.12/26, mb4.2/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.38	16	S	Sn	17 22 14.9	-5.2
	123nm,0.3s,baz=116,slow=21,SNR=3.2						
MXZ	Matakaoa Point	4.51	205	ePN	Pn	17 21 32.4	+0.7
MXZ				eSN	Sn	17 22 23.3	-0.3
PUZ	Puketiti	4.99	202	PN	Pn	17 21 38.5	+0.2
PUZ				eSN	Sn	17 22 35.8	+0.5
MWZ	Matawai	5.48	207	ePN	Pn	17 21 44.9	-0.1
MWZ				eSN	Sn	17 22 47.3	-0.1
URZ	Urewera	5.58	210	P	Pn	17 21 48.4	+2.0
	5.8nm,0.3s,baz=28,slow=7.0,SNR=15						
URZ				S	Sn	17 22 49.8	-0.1
	9.9nm,0.3s,baz=117,slow=23,SNR=6.2						
URZ	Urewera	5.58	210	ePN	Pn	17 21 47.1	+0.7
URZ				eSN	Sn	17 22 48.6	-1.3
WCZ	Waipu Caves	5.76	243	ePN	Pn	17 21 50.3	+1.5
OUZ	Omahuta	6.10	251	PN	Pn	17 21 53.7	+0.1
BKZ	Black Stump Fm	6.61	209	PN	Pn	17 21 59.0	-1.5
PXZ	Pawanui	7.22	204	ePN	Pn	17 22 05.6	-3.3
MRZ	Mangatainoka R	8.25	208	ePN	Pn	17 22 18.9	-4.1
KHZ	Kahutara	10.55	210	ePN	Pn	17 22 51.1	-3.5
LTZ	Lake Taylor	11.40	213	ePN	Pn	17 23 00.9	-5.3
RPZ	Rata Peaks	12.69	213	P	Pn	17 23 17.6	-6.1
	0.4nm,0.3s,baz=27,slow=9.0,SNR=3.3						
CTAO	Charters Tower	33.32	285	eP	P	17 27 00.5	-0.4
AS31	Alice Springs	41.92	271	eP	P	17 28 13.6	+0.1
ASAR	Alice Springs	41.92	271	P	P	17 28 14.3	+0.8
	1.6nm,0.5s,mb3.9,baz=111,slow=7.2,SNR=43						
FITZ	Fitzroy Crossi	51.30	273	P	P	17 29 25.9	-1.2
	5.5nm,1.1s,mb4.4,baz=142,slow=12,SNR=6.1						
QSPA	South Pole Qui	56.65	180	eP	P	17 30 08.5	+2.4
	5.2nm,0.5s,mb4.8						
SNAA	Sanae	75.12	179	eP	P	17 32 05.8	+0.7
	1.2nm,0.6s,mb4.0						
NVAR	Mina Array Bea	91.25	43	P	P	17 33 27.3	-1.0
	0.2nm,0.4s,mb3.8,baz=235,slow=6.3,SNR=3.0						
ARCES	ARCESS Array B	141.32	346	PKhKP		17 39 45.6	
	2.1nm,0.9s,baz=16,slow=2.1,SNR=5.2						
JOF	Joensuu	144.80	336	epkp	PKPdf	17 39 54.6	-5.2
KAF	Kangasniemi	147.01	338	epkp	PKPdf	17 40 01.7	-1.9
FINES	FINESS Array B	147.58	337	PKPbc	PKPbc	17 40 04.8	-2.5
	1.3nm,0.4s,baz=49,slow=4.6,SNR=21						
NB2	NORSAR Subarra	151.58	349	PKPa	PKPbc	17 40 15.4	-1.7
	comp=Z,1.7nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.58	349	PKPbc	PKPbc	17 40 15.2	-2.0
	comp=Z,1.5nm,0.6s,baz=17,slow=4.1,SNR=8.0						
TORD	Torodi Ar. Bea	159.75	183	PKP	PKPdf	17 40 21.8	0.0
	comp=Z,0.2nm,0.5s,baz=198,slow=4.2,SNR=3.7						
TORD				PKPab	PKPab	17 41 00.2	-0.4
	comp=Z,0.7nm,0.6s,baz=162,slow=4.8,SNR=7.8						

ISCJB 09 17:21:23.3±0.5, 44.12N±0.04×105.24W±0.06, h0km, Error ellipse: s-maj=6.0km s-min=5.4km az=168.8
IDC 09 17:21:24.8±1.3, 44.30N×105.65W, h0km, mb1 4.1/3, mb1mx3.6/22, mbtmp3.8/3, ML3.5/3, Error ellipse: s-maj=50.0km s-min=8.0km az=145.0
NEIC 09 17:21:25.0±0.3, 44.13N×105.27W, h0km, ML3.4, Error ellipse: s-maj=5.4km s-min=4.2km az=165.0, Suspected Mining explosion.
NEIC 25 km [15 miles] SE of Gillette.
ISC 09 17:21:25.1±0.5, 44.10N±0.04×105.23W±0.05, h0km, n34, σ0.97/43, Wyoming

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.86	88	ePg	Pg	17 21 43.2	+1.7
PHWY	Pilot Hill	2.80	184	ePn	Pn	17 22 10.8	-0.3
PHWY				eSn	Sn	17 22 44.1	-1.4
RWWY	Rawlins	2.81	212	ePn	Pn	17 22 11.6	+0.4
RWWY				eS	Sn	17 22 45.7	-0.1
BW06	Boulder Array	3.42	249	ePn	Pn	17 22 15.6	-4.0
BW06				ePg	Pg	17 22 23.4	-7.3
BW06				eS	Sn	17 23 03.3	+2.4
PDAR	Pinedale Array	3.42	249	Pn	Pn	17 22 19.6	-0.1
	3.3nm,0.3s,baz=66,slow=16,SNR=17						
PDAR				Pg	Pg	17 22 25.4	-5.2
	21nm,0.3s,baz=64,slow=19,SNR=29						
PDAR				Lg		17 23 06.5	
	27nm,0.3s,baz=64,slow=33,SNR=17						
GCMT	Greycliff	3.58	300	ePn	Pn	17 22 21.7	-0.1
FLWY	Flagg Ranch	3.94	272	ePn	Pn	17 22 26.5	-0.3
MOOW	Moose Ponds	4.00	267	ePn	Pn	17 22 27.6	0.0
YFT	Old Faithful	4.04	277	ePn	Pn	17 22 29.7	+1.5
SNOW	Snow King Moun	4.05	263	ePg	Pg	17 22 35.7	-7.0
YMR	Madison River	4.15	280	ePg	Pg	17 22 40.1	-4.6
TPAW	Teton Pass	4.19	264	ePn	Pn	17 22 31.4	+1.2
ISCO	Idaho Springs	4.30	184	ePn	Pn	17 22 32.6	+0.8
ISCO				eSg	Sg	17 23 37.0	-6.3
AHID	Auburn Hatcher	4.48	255	ePn	Pn	17 22 34.9	+0.7
RRI2	Red Ridge	4.48	263	ePn	Pn	17 22 33.5	-0.7
QLMT	Earthquake Lak	4.50	282	Pn	Pn	17 22 34.5	0.0
QLMT				ePg	Pg	17 22 44.7	-6.6
BOZ	Bozeman (W)	4.81	291	ePn	Pn	17 22 37.5	-1.2
BOZ				Sg	Sg	17 23 51.3	-8.2
EGMT	Eagleton	5.04	323	ePn	Pn	17 22 43.0	+1.1
SMCO	Snowmass	5.08	195	Pn	Pn	17 22 44.4	+1.9
	13nm,0.4s						
SMCO				ePg	Pg	17 22 59.3	-3.2
HWUT	Hardware Ranch	5.28	244	ePn	Pn	17 22 44.3	-0.9
HRY	Holter Researc	5.33	302	ePn	Pn	17 22 45.8	-0.2
DLMT	Dillon	5.40	286	ePn	Pn	17 22 47.1	+0.2
	14nm,0.9s						
TCUT	Toone Canyon	5.44	239	ePn	Pn	17 22 47.3	-0.2
MCMT	McKenzie Canyo	5.50	280	ePn	Pn	17 22 48.0	-0.2
DAU	Daniels Canyon	5.79	233	ePn	Pn	17 22 52.6	+0.4
HVU	Hansel Valley	6.00	250	ePn	Pn	17 22 54.3	-0.8
	14nm,0.7s						
ECSD	EROS,Sioux Fal	6.23	90	ePn	Pn	17 22 58.7	+0.4
CHMT	Chamberlain Mo	6.30	299	ePn	Pn	17 22 58.6	-0.7
SRU	San Rafael	6.37	220	ePn	Pn	17 22 59.4	-0.7
	14nm,0.4s						
TMUT	Trail Mountain	6.56	225	ePn	Pn	17 23 02.4	-0.4
DUG	Dugway	6.85	238	ePn	Pn	17 23 06.2	-0.6
	20nm,0.4s						
ULM	Lac du Bonnet	8.86	43	Pn	Pn	17 23 32.8	-1.5
	1.8nm,0.3s,baz=224,slow=12,SNR=12						
ULM				Lg		17 26 02.0	
	0.7nm,0.3s,baz=307,slow=20,SNR=2.3						
FFC	Flin Flon	10.85	10	ePn	Pn	17 24 00.7	-0.9
	5.9nm,0.8s						
NVAR	Mina Array Bea	11.35	245	Pn	Pn	17 24 09.5	+1.1
	0.2nm,0.3s,baz=57,slow=12,SNR=8.3						

HRVD 09 17:21:34.4±0.2, 33.19S×179.41W, h17km, MW5.3/73, Centroid moment Tensor Solution. LP body waves: s59,c98; Mantle waves: s73,c131; Half duration: 1.1 Moment tensor: Scale 10^17Nm; Mrr-0.87±.02; Mθθ-0.03±.02; Mφφ0.90±.02; Mrθ0.37±.05; Mθφ0.29±.02; Mφr0.09±.04; Best double couple: Mo1.00800×10^17 NP1:φs357.00000°, δ43.00000°, λ-120.00000°. NP2: φs215.00000°, δ54.00000°, λ-65.00000°. Principal axes: T 1.0040, Plg6.0000°, Azm288.0000°; N 0.0090, Plg20.0000°, Azm20.0000°; P -1.0130, Plg69.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 09 17:21:34.4±0.3, 33.12S×179.52W, h10km, mb5.2/22, MS4.7/10 Error ellipse: s-maj=14.1km s-min=7.4km az=136.0
CSEM 09 17:21:35.5, 33.20S×179.16W, h33km, mb5.6
ISCJB 09 17:21:36.5±1.4, 33.44S±0.03×179.64W±0.05, h29km±10km, mb5.2/38, MS4.7/25, Error ellipse: s-maj=8.2km s-min=4.5km az=66.1
BJI 09 17:21:36.9, 33.35S×179.18W, h46km, mB5.7, mb5.3, Ms5.1, Msz4.8
MOS 09 17:21:37.2±1.1, 33.19S×179.98W, h33km, mb5.5/16, Error ellipse: s-maj=23.1km s-min=11.4km az=72.8
IDC 09 17:21:39.2±1.5, 33.30S×179.53W, h47km±13km, mb4.5/10, mb1 4.7/12, mb1mx4.6/15, mbtmp4.8/12, ML4.9/3, MS4.7/5, Ms1 4.7/5, ms1mx4.4/8, Error ellipse: s-maj=18.1km

s-min=9.5km az=116.0
ISC 09 17:21:37.4±1.4**,3339S**±003×**17957W**±005**,h24**km±9km**,**
h40km±3.5km**:pP-P,n379,**σ1ˢ**13**/270**,mb5.2**/38**,MS4.7**/25**,**
42C-42D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.36**	**19**	P	**Pn**	**17 22 41.5**	**-0.6**
	267nm,0.3s,baz=250,slow=23,SNR=4.1						
RAO				S	**Sn**	**17 23 30.6**	**-1.6**
	1μm,0.3s,baz=82,slow=23,SNR=6.3						
RAO	**Raoul Island**	**4.36**	**19**	P	**Pn**	**17 22 41.5**	**-0.7**
RAO				S	**Sn**	**17 23 30.6**	**-1.6**
RAO				pmax	pmax		
	comp=Z,267nm,0.3s						
RAO	**Raoul Island**	**4.36**	**19**	Pn	**Pn**	**17 22 41.0**	**-1.1**
MXZ	**Matakaoa Point**	**4.51**	**202**	P	**Pn**	**17 22 44.7**	**+0.6**
MXZ	**Matakaoa Point**	**4.51**	**202**	PN	**Pn**	**17 22 45.0**	**+0.9**
MXZ				*e*SN	**Sn**	**17 23 38.0**	**+2.2**
WIZ	**White Island**	**4.90**	**212**	P	**Pn**	**17 22 51.2**	**+1.7**
WIZ	**White Island**	**4.90**	**212**	PN	**Pn**	**17 22 51.2**	**+1.7**
WIZ				*e*SN	**Sn**	**17 23 45.1**	**-0.4**
PUZ	**Puketiti**	**4.99**	**200**	P	**Pn**	**17 22 51.5**	**+0.7**
PUZ	**Puketiti**	**4.99**	**200**	*e*PN	**Pn**	**17 22 50.6**	**-0.2**
PUZ				*e*SN	**Sn**	**17 23 47.2**	**-0.6**
KUZ	**Kuaotunu**	**5.11**	**228**	*e*P	**Pn**	**17 22 56.8**	**+4.4**
KUZ	**Kuaotunu**	**5.11**	**228**	*e*PN	**Pn**	**17 22 56.4**	**+4.0**
MWZ	**Matawai**	**5.47**	**205**	P	**Pn**	**17 22 56.9**	**-0.4**
MWZ	**Matawai**	**5.47**	**205**	*e*PN	**Pn**	**17 22 57.5**	**+0.2**
MWZ				*e*SN	**Sn**	**17 24 01.0**	**+1.6**
TGRZ	**Tauranga**	**5.50**	**217**	P	**Pn**	**17 23 01.1**	**+3.3**
TGRZ	**Tauranga**	**5.50**	**217**	*e*PN	**Pn**	**17 23 00.9**	**+3.1**
MARZ	**Manawahe**	**5.51**	**213**	P	**Pn**	**17 23 00.4**	**+2.5**
MARZ	**Manawahe**	**5.51**	**213**	*e*PN	**Pn**	**17 22 59.3**	**+1.4**
URZ	**Urewera**	**5.55**	**208**	P	**Pn**	**17 23 00.2**	**+1.6**
	comp=Z,65nm,0.3s,baz=319,slow=3.7,SNR=16						
URZ				S	**Sn**	**17 24 03.4**	**+1.8**
	comp=Z,81nm,0.3s,baz=114,slow=23,SNR=8.7						
URZ				LR	LR	17 25 06.4	
	comp=Z,4μm,18.1s,baz=278,slow=37						
URZ	**Urewera**	**5.55**	**208**	*e*PN	**Pn**	**17 22 58.1**	**-0.4**
WCZ	**Waipu Caves**	**5.62**	**241**	P	**Pn**	**17 23 02.3**	**+2.8**
WCZ	**Waipu Caves**	**5.62**	**241**	PN	**Pn**	**17 23 02.1**	**+2.7**
KARZ	**Kaharoa**	**5.74**	**215**	PN	**Pn**	**17 23 03.4**	**+2.4**
TOZ	**Tahuroa Road**	**5.90**	**221**	*e*P	**Pn**	**17 23 07.8**	**+4.5**
TOZ	**Tahuroa Road**	**5.90**	**221**	PN	**Pn**	**17 23 07.8**	**+4.5**
OUZ	**Omahuta**	**5.94**	**250**	P	**Pn**	**17 23 05.7**	**+1.8**
OUZ	**Omahuta**	**5.94**	**250**	*e*PN	**Pn**	**17 23 05.6**	**+1.7**
OUZ				*e*SN	**Sn**	**17 24 10.5**	**-0.7**
PATZ	**Paeroa**	**6.02**	**213**	PN	**Pn**	**17 23 07.3**	**+2.4**
KNZ	**Kokohu**	**6.04**	**201**	*e*P	**Pn**	**17 23 03.9**	**-1.3**
KNZ				S	**Sn**	**17 24 10.6**	**-3.0**
KNZ	**Kokohu**	**6.04**	**201**	*e*PN	**Pn**	**17 23 03.4**	**-1.9**
KNZ				SN	**Sn**	**17 24 10.6**	**-3.0**
BKZ	**Black Stump Fm**	**6.58**	**208**	P	**Pn**	**17 23 12.8**	**+0.2**
BKZ	**Black Stump Fm**	**6.58**	**208**	*e*PN	**Pn**	**17 23 11.3**	**-1.3**
BKZ				*e*SN	**Sn**	**17 24 25.0**	**-1.9**
HIZ	**Hauiti**	**6.82**	**220**	P	**Pn**	**17 23 19.5**	**+3.6**
HIZ	**Hauiti**	**6.82**	**220**	*e*PN	**Pn**	**17 23 19.1**	**+3.2**
KRVZ	**Karewarewa**	**6.88**	**213**	*e*PN	**Pn**	**17 23 17.8**	**+1.1**
TWVZ	**Taurewa**	**6.96**	**214**	P	**Pn**	**17 23 18.9**	**+1.1**
TWVZ	**Taurewa**	**6.96**	**214**	*e*PN	**Pn**	**17 23 18.6**	**+0.8**
NGZ	**Ngauruhoe**	**6.96**	**213**	P	**Pn**	**17 23 18.9**	**+1.0**
WPVZ	**Whakapapa**	**7.01**	**213**	P	**Pn**	**17 23 19.6**	**+1.0**
WPVZ				S	**Sn**	**17 24 43.8**	**+6.3**
TUVZ	**Tukino**	**7.02**	**212**	P	**Pn**	**17 23 19.7**	**+1.1**
FWVZ	**Far West T-bar**	**7.05**	**213**	P	**Pn**	**17 23 20.6**	**+1.5**
MOVZ	**Moawhango**	**7.09**	**211**	P	**Pn**	**17 23 19.0**	**-0.6**
WNVZ	**Wahianoa**	**7.09**	**212**	P	**Pn**	**17 23 19.8**	**+0.2**
PXZ	**Pawanui**	**7.22**	**202**	*e*PN	**Pn**	**17 23 18.3**	**-3.1**
VRZ	**Vera Road**	**7.33**	**217**	*e*P	**Pn**	**17 23 24.7**	**+1.8**
VRZ	**Vera Road**	**7.33**	**217**	PN	**Pn**	**17 23 24.2**	**+1.4**
TSZ	**Takapari Road**	**7.56**	**207**	*e*P	**Pn**	**17 23 24.0**	**-2.0**
TSZ	**Takapari Road**	**7.56**	**207**	PN	**Pn**	**17 23 24.0**	**-2.0**
WAZ	**Wanganui**	**7.71**	**213**	P	**Pn**	**17 23 27.9**	**-0.3**
WAZ	**Wanganui**	**7.71**	**213**	*e*PN	**Pn**	**17 23 27.8**	**-0.4**
NEZ	**North Egmont**	**7.78**	**219**	P	**Pn**	**17 23 33.2**	**+4.1**
NEZ	**North Egmont**	**7.78**	**219**	*e*PN	**Pn**	**17 23 32.4**	**+3.3**
BFZ	**Birch Farm**	**8.01**	**203**	*e*P	**Pn**	**17 23 28.8**	**-3.4**
BFZ				S	**Sn**	**17 24 56.2**	**-5.8**
BFZ	**Birch Farm**	**8.01**	**203**	*e*PN	**Pn**	**17 23 28.0**	**-4.2**
BFZ				SN	**Sn**	**17 24 56.2**	**-5.7**
TIWZ	**Tintock**	**8.21**	**205**	*e*PN	**Pn**	**17 23 31.9**	**-3.2**
MRZ	**Mangatainoka R**	**8.23**	**207**	P	**Pn**	**17 23 32.0**	**-3.2**
MRZ	**Mangatainoka R**	**8.23**	**207**	PN	**Pn**	**17 23 30.4**	**-4.8**
KIW	**Kapiti Island**	**8.66**	**209**	P	**Pn**	**17 23 38.0**	**-3.1**
KIW	**Kapiti Island**	**8.66**	**209**	*e*PN	**Pn**	**17 23 38.0**	**-3.2**
MTW	**Mount Morrison**	**8.69**	**205**	P	**Pn**	**17 23 37.5**	**-4.0**
PAWZ	**Paruwai Farm**	**8.91**	**205**	P	**Pn**	**17 23 40.3**	**-4.3**
MSWZ	**Moikau Station**	**9.00**	**206**	P	**Pn**	**17 23 42.4**	**-3.5**
MRW	**Makara Radio**	**9.05**	**209**	P	**Pn**	**17 23 42.8**	**-3.8**
MRW	**Makara Radio**	**9.05**	**209**	*e*PN	**Pn**	**17 23 42.2**	**-4.3**
WEL	**Wellington**	**9.07**	**208**	P	**Pn**	**17 23 43.2**	**-3.6**
SNZO	**South Karori**	**9.12**	**208**	*e*P	**Pn**	**17 23 42.8**	**-4.7**
SNZO				*e*S	**Sn**	**17 25 24.8**	**-4.5**
TCW	**Tory Channel**	**9.21**	**210**	P	**Pn**	**17 23 45.3**	**-3.5**
TCW	**Tory Channel**	**9.21**	**210**	*e*PN	**Pn**	**17 23 44.4**	**-4.4**
TUWZ	**Tuamarina**	**9.54**	**211**	*e*PN	**Pn**	**17 23 48.5**	**-4.7**
NNZ	**Nelson**	**9.62**	**214**	*e*SN	**Sn**	**17 25 36.3**	**-5.3**
QRZ	**Quartz Range**	**9.74**	**218**	*e*P	**Pn**	**17 23 52.9**	**-3.0**
QRZ	**Quartz Range**	**9.74**	**218**	*e*PN	**Pn**	**17 23 52.5**	**-3.4**
BSWZ	**Blackbirch Sta**	**9.80**	**210**	P	**Pn**	**17 23 53.1**	**-3.7**
THZ	**Tophouse**	**10.27**	**213**	*e*P	**Pn**	**17 23 59.9**	**-3.3**
THZ	**Tophouse**	**10.27**	**213**	*e*PN	**Pn**	**17 23 57.9**	**-5.2**
THZ				*e*SN	**Sn**	**17 25 53.0**	**-4.5**
KHZ	**Kahutara**	**10.52**	**209**	*e*P	**Pn**	**17 24 02.8**	**-3.9**
KHZ	**Kahutara**	**10.52**	**209**	*e*PN	**Pn**	**17 24 01.7**	**-4.9**
KHZ				*e*SN	**Sn**	**17 25 54.7**	**-9.1**
DSZ	**Denniston Nort**	**10.78**	**217**	*e*P	**Pn**	**17 24 05.9**	**-4.3**
DSZ	**Denniston Nort**	**10.78**	**217**	*e*PN	**Pn**	**17 24 05.2**	**-5.1**
DSZ				*e*SN	**Sn**	**17 26 03.0**	**-7.1**
LTZ	**Lake Taylor**	**11.36**	**212**	*e*PN	**Pn**	**17 24 11.5**	**-6.6**
MQZ	**McQueen's Vall**	**11.96**	**208**	*e*P	**Pn**	**17 24 19.8**	**-6.5**
MQZ	**McQueen's Vall**	**11.96**	**208**	PN	**Pn**	**17 24 19.0**	**-7.3**
MQZ				*e*SN	**Sn**	**17 26 25.9**	**-13**
WVZ	**Waitaha Valley**	**12.30**	**215**	*e*PN	**Pn**	**17 24 26.8**	**-4.2**
RPZ	**Rata Peaks**	**12.64**	**213**	P	**Pn**	**17 24 29.6**	**-6.1**
	comp=Z,3.0nm,0.3s,baz=33,slow=2.2,SNR=12						
RPZ				S	**Sn**	**17 26 46.4**	**-9.2**
	comp=Z,5.7nm,0.3s,baz=2.1,slow=15,SNR=7.8						
RPZ	**Rata Peaks**	**12.64**	**213**	*e*P	**Pn**	**17 24 29.6**	**-6.1**
RPZ	**Rata Peaks**	**12.64**	**213**	PN	**Pn**	**17 24 29.2**	**-6.5**
RPZ				*e*SN	**Sn**	**17 26 44.8**	**-11**
FOZ	**Fox Glacier**	**13.18**	**216**	*e*P	**Pn**	**17 24 37.3**	**-5.7**
FOZ	**Fox Glacier**	**13.18**	**216**	PN	**Pn**	**17 24 36.4**	**-6.5**
LBZ	**Lake Benmore**	**13.56**	**213**	*e*P	**Pn**	**17 24 42.7**	**-5.5**
LBZ	**Lake Benmore**	**13.56**	**213**	*e*PN	**Pn**	**17 24 41.6**	**-6.6**
JCZ	**Jackson Bay**	**14.01**	**217**	*e*P	**Pn**	**17 24 49.4**	**-4.9**
JCZ	**Jackson Bay**	**14.01**	**217**	*e*PN	**Pn**	**17 24 47.3**	**-7.0**
DZM	**Mont Dzumac**	**16.73**	**309**	*e*P	**Pn**	**17 25 30.7**	**+0.6**
DZM	**Mont Dzumac**	**16.73**	**309**	P	**Pn**	**17 25 31.5**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=125,slow=14,SNR=19						
DZM				LR	LR	17 30 49.0	
	comp=Z,5μm,18.9s,baz=161,slow=33						
AFI	**Afiamalu**	**20.65**	**22**	P	**P**	**17 26 13.2**	**-2.1**
	comp=Z,16nm,0.5s,baz=211,slow=12,SNR=2.9						
AFI	**Afiamalu**	**20.65**	**22**	P	**P**	**17 26 14.5**	**-0.8**
RAR	**Rarotonga**	**21.33**	**60**	P	**P**	**17 26 21.9**	**-0.6**
	comp=Z,43nm,1.0s,mb4.7,baz=224,slow=7.5,SNR=4.4						
RAR	**Rarotonga**	**21.33**	**60**	P	**P**	**17 26 21.9**	**-0.6**
HNR	**Honiara**	**30.41**	**317**	LR	LR	17 37 45.3	
	comp=Z,855nm,21.2s,MS4.4,baz=179,slow=32						
PPT	**Papeete**	**31.18**	**67**	*e*S	**S**	**17 32 54.1**	**-5.1**
	comp=Z,280nm,25.8s						
PPT				*e*LQ		17 34 13.7	
	comp=Z,2μm,24.0s						
PPT				*e*LR	LR	17 35 48.6	
	comp=Z,2μm,28.8s,baz=227						
PPT	**Papeete**	**31.18**	**67**	LR	LR	17 38 55.3	
	comp=Z,584nm,18.3s,MS4.3,baz=246,slow=33						
STKA	**Stephens Creek**	**32.61**	**262**	*e*P	**P**	**17 28 07.5**	**+0.4**
	comp=Z,4.9nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**32.61**	**262**	P	**P**	**17 28 06.7**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=95,slow=12,SNR=2.2						
CTA	**Charters Tower**	**33.11**	**285**	*e*P	**P**	**17 28 12.1**	**+0.6**
	comp=Z,8.8nm,0.4s,mb5.0						
CTA	**Charters Tower**	**33.11**	**285**	P	**P**	**17 28 11.7**	**+0.2**
	comp=Z,11nm,0.6s,mb5.0,baz=111,slow=12,SNR=6.0						
CTA	**Charters Tower**	**33.11**	**285**	*e*P	**P**	**17 28 12.1**	**+0.6**
CTA				pmax	pmax		
	comp=Z,9.0nm,0.4s						
CTAO	**Charters Tower**	**33.11**	**285**	*e*P	**P**	**17 28 12.0**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
CTAO				MLR	MLR		
	comp=Z,1μm,21.0s,MS4.6						
CTAO	**Charters Tower**	**33.11**	**285**	*e*P	**P**	**17 28 12.0**	**+0.5**
	comp=Z,24nm,0.8s,mb5.2						
CTAO				LR	LR		
	comp=Z,1μm,21.0s,MS4.6						
PMG	**Port Moresby**	**38.82**	**300**	LR	LR	17 42 56.3	
	comp=Z,2μm,18.3s,MS5.0,baz=125,slow=33						
RKT	**Rikitea**	**40.33**	**87**	*e*LR	LR	17 39 54.9	
	comp=Z,2μm,32.0s						
AS31	**Alice Springs**	**41.72**	**271**	*e*P	**P**	**17 29 25.3**	**+1.0**
ASAR	**Alice Springs**	**41.72**	**271**	P	**P**	**17 29 25.2**	**+0.9**
	comp=Z,20nm,0.7s,mb4.8,baz=110,slow=7.6,SNR=47						
ASPA	**Alice Springs**	**41.72**	**271**	*e*P	**P**	**17 29 25.3**	**+0.9**
WB2	**Warramunga Arr**	**42.97**	**276**	*e*P	**P**	**17 29 34.5**	**-0.1**
WRAB	**Tennant Creek**	**42.98**	**276**	P	**P**	**17 29 37.0**	**+2.4**
	comp=Z,193nm,1.2s,mb5.7,SNR=7.6						
WRAB	**Tennant Creek**	**42.98**	**276**	*e*P	**P**	**17 29 33.8**	**-0.8**
WRAB	**Tennant Creek**	**42.98**	**276**	*e*P	**P**	**17 29 34.6**	**0.0**
	comp=Z,72nm,1.1s,mb5.3						
WRAB				LR	LR		
	comp=Z,1μm,21.0s,MS4.7						
FORT	**Forrest**	**44.06**	**259**	*e*P	**P**	**17 29 43.9**	**+0.5**
	comp=Z,16nm,0.6s,mb4.9						
SBA	**Scott Base**	**44.96**	**184**	*e*P	**P**	**17 29 53.1**	**+2.6**
SBA				*e*		17 31 32.1	
SBA				pmax	pmax		
	comp=Z,200nm,1.9s,mb5.6						
SBA				MLR	MLR		
	comp=Z,493nm,20.0s,MS4.4						
SBA	**Scott Base**	**44.96**	**184**	*e*P	**P**	**17 29 53.1**	**+2.5**
	comp=Z,200nm,1.9s,mb5.6						
SBA				*e*PcP	PcP	17 31 32.1	+0.6
SBA				LR	LR		
	comp=Z,493nm,20.0s,MS4.4						
VNDA	**Vanda**	**44.99**	**186**	P	**P**	**17 29 51.5**	**+0.7**
	comp=Z,9.8nm,1.3s,mb4.5,baz=14,slow=7.9,SNR=12						
VNDA	**Vanda**	**44.99**	**186**	*e*P	**P**	**17 29 52.3**	**+1.5**
	comp=Z,51nm,1.9s,mb5.0						
VNDA				LR	LR		
	comp=Z,352nm,20.0s,MS4.3						
FITZ	**Fitzroy Crossi**	**51.10**	**273**	⇑*i*P	**P**	**17 30 38.8**	**+0.8**
	comp=Z,46nm,0.8s,mb5.5						
FITZ	**Fitzroy Crossi**	**51.10**	**273**	P	**P**	**17 30 38.1**	**+0.1**
	comp=Z,29nm,0.9s,mb5.2,baz=140,slow=7.8,SNR=29						
CASY	**Casey**	**51.88**	**209**	*e*P	**P**	**17 30 41.7**	**-2.1**
KLBR	**Kellerberrin**	**52.17**	**254**	*e*P	**P**	**17 30 45.0**	**-1.0**
	comp=Z,25nm,0.9s,mb5.1						
MUN	**Mundaring**	**53.28**	**253**	*e*P	**P**	**17 30 51.9**	**-2.3**
QSPA	**South Pole Qui**	**56.73**	**180**	*e*P	**P**	**17 31 20.7**	**+1.6**
	comp=Z,110nm,1.0s,mb5.8						
MIR	**Mirnyy**	**58.86**	**208**	*c i*P	**P**	**17 31 34.0**	**-0.1**
MIR				*i*		17 32 21.0	
MIR				pmax	pmax		
	comp=Z,190nm,1.5s,mb5.9						
BUKP	**Musuan**	**66.64**	**297**	*e*P	**P**	**17 32 25.8**	**-0.2**
BUTP	**Butuan**	**66.95**	**299**	*e*P	**P**	**17 32 22.9**	**-5.0**
MAW	**Mawson**	**69.05**	**201**	*e*P	**P**	**17 32 39.7**	**-1.4**
	comp=Z,22nm,1.1s,mb5.0						
MAW	**Mawson**	**69.05**	**201**	P	**P**	**17 32 39.9**	**-1.1**
	comp=Z,23nm,1.0s,mb5.0,baz=124,slow=7.4,SNR=21						
MAW	**Mawson**	**69.05**	**201**	*e*P	**P**	**17 32 39.9**	**-1.2**
SYO	**Syowa Base**	**73.90**	**194**	⇑*e*P	**P**	**17 33 08.0**	**-2.4**
SNAA	**Sanae**	**75.20**	**179**	⇓*i*P	**P**	**17 33 17.1**	**-0.8**
SNAA				*e*	pP	17 33 22.8	-2.8
SNAA				*e*		17 33 28.3	
SNAA				*e*		17 33 29.7	
SNAA				*e*		17 33 33.2	
SNAA				*e*		17 33 50.7	
SNAA				*e*		17 34 08.8	
SNAA				*e*		17 35 34.0	
SNAA				*e*		17 35 42.9	
SNAA				*e*		17 35 45.4	
SNAA	**Sanae**	**75.20**	**179**	*e*P	**P**	**17 33 17.5**	**-0.4**
SNAA				pmax	pmax		
	comp=Z,83nm,1.3s						
SNAA	**Sanae**	**75.20**	**179**	*e*P	**P**	**17 33 17.5**	**-0.5**
	comp=Z,83nm,1.3s,mb5.5						
NVL	**N'lazarevskaya**	**75.81**	**184**	*d i*P	**P**	**17 33 20.1**	**-1.3**
NVL				*e*		17 33 30.0	
NVL				*e*		17 33 34.7	
NVL				*e**SS	sS	17 43 32.2	+17
NVL				pmax	pmax		
	comp=Z,89nm,1.5s,mb5.5						
NVL				pmax	pmax		
	comp=Z,510nm,17.7s						
VNA1	**Neumayer--Stat**	**76.07**	**177**	⇓*i*P	**P**	**17 33 23.4**	**+0.5**
VNA1				*e*	pP	17 33 29.4	-1.2
VNA1				*e*		17 33 35.3	
VNA1				*e*		17 33 36.0	
VNA1				*e*		17 33 39.3	
VNA1				*e*		17 33 51.2	
VNA1				*e*		17 33 58.6	
VNA1				*e*		17 35 40.9	
VNA1				*e*		17 35 50.0	
MJAR	**Matsushiro Arr**	**79.97**	**327**	P	**P**	**17 33 41.5**	**-3.0**
	comp=Z,2.7nm,1.0s,mb4.2,baz=166,slow=5.5,SNR=5.7						
QIZ	**Qiongzhong**	**85.09**	**296**	P	**P**	**17 34 12.5**	**+1.3**
QIZ				PP	PP	17 37 24.8	-3.7
QIZ				S	S	17 44 36.7	-2.6
QIZ				LR	LR		
	comp=N,107nm,24.7s						
QIZ				LR	LR		
	comp=E,123nm,29.8s						
QIZ				LR	LR		
	comp=Z,177nm,28.8s,MS4.3						
SSE	**Sheshan**	**85.09**	**312**	*e*P	**P**	**17 34 10.2**	**-1.1**
SSE				PP	PP	17 37 27.0	-1.5
SSE				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,400nm,4.3s						
SSE				LR	LR		
	comp=N,41nm,20.0s,MS4.2						
SSE				LR	LR		
	comp=E,103nm,20.0s,MS4.2						
SSE				LR	LR		
	comp=Z,98nm,20.0s,MS4.2						
YSS	**Yuzh-Sakhalins**	**86.87**	**335**	⇑*e*P	**P**	**17 34 18.3**	**-1.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.3						
YSS				MLR	MLR		
	comp=N,400nm,18.0s						
YSS				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**86.87**	**335**	*e*P	**P**	**17 34 18.7**	**-1.4**
	comp=Z,14nm,0.9s,mb5.2						
YSS				LR	LR		
	comp=Z,380nm,20.0s,MS4.8						
NJ2	**Nanjing**	**87.20**	**312**	*e*P	**P**	**17 34 20.9**	**-0.7**
NJ2				AP	pP	17 34 34.3	+4.9
NJ2				XP	sP	17 34 39.5	+7.3
NJ2				PP	PP	17 37 46.5	+1.0
NJ2				S	S	17 44 53.0	-6.9
NJ2				XS	sS	17 45 15.0	+2.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,580nm,4.9s						
NJ2				LR	LR		
	comp=N,750nm,12.8s,MS5.3						
NJ2				LR	LR		
	comp=E,520nm,17.6s,MS5.3						
NJ2				LR	LR		
	comp=Z,1μm,19.4s,MS5.2						
PKM	**Peak Mountain**	**88.03**	**45**	⇑P	**P**	**17 34 26.1**	**+0.5**
	baz=88						
PET	**Petropavlovsk**	**88.12**	**347**	*e*P	**P**	**17 34 22.5**	**-3.6**
PET				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.2						
PET	**Petropavlovsk**	**88.12**	**347**	*e*P	**P**	**17 34 22.5**	**-3.6**
	comp=Z,14nm,0.9s,mb5.2						
PKD	**Parkfield**	**88.33**	**44**	⇓P	**P**	**17 34 26.7**	**-0.3**
	baz=88						
U04C	**Hernandez Rese**	**88.48**	**44**	⇓P	**P**	**17 34 28.2**	**+0.5**
	baz=88						
MONP	**Monument Peak**	**88.75**	**49**	⇓P	**P**	**17 34 30.0**	**+1.0**
	baz=89						
BFSC	**Mount Baldy St**	**88.88**	**47**	⇑P	**P**	**17 34 30.1**	**+0.4**
	baz=89						
HOPS	**Hopland**	**89.05**	**41**	⇓P	**P**	**17 34 31.6**	**+1.2**
	baz=89						
EDW2	**Edwards Air Fo**	**89.11**	**46**	⇓P	**P**	**17 34 31.1**	**+0.4**
	baz=89						
SWSC	**Sam W. Stewart**	**89.17**	**49**	⇑P	**P**	**17 34 30.9**	**-0.1**
	baz=89						
PFO	**Pinyon Flat Ob**	**89.20**	**48**	*e*P	**P**	**17 34 31.0**	**-0.1**
PFO				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.3						
PFO	**Pinyon Flat Ob**	**89.20**	**48**	*e*P	**P**	**17 34 31.0**	**-0.1**
	comp=Z,19nm,1.2s,mb5.3						
PFO	**Pinyon Flat Ob**	**89.20**	**48**	⇓P	**P**	**17 34 31.1**	**0.0**
	baz=89						
MNRC	**McLaughlin Nat**	**89.31**	**41**	⇓P	**P**	**17 34 31.2**	**-0.5**
	baz=89						
ISA	**Isabella**	**89.35**	**45**	*e*P	**P**	**17 34 32.3**	**+0.5**
ISA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.8						
ISA	**Isabella**	**89.35**	**45**	*e*P	**P**	**17 34 32.3**	**+0.4**
	comp=Z,2.4nm,0.4s,mb4.9						
ISA	**Isabella**	**89.35**	**45**	⇓P	**P**	**17 34 32.7**	**+0.9**
	baz=89						
LRMC	**Laurel Mountai**	**89.69**	**46**	⇑P	**P**	**17 34 34.1**	**+0.7**
	baz=90						
GASB	**Alder Springs**	**89.71**	**40**	⇑P	**P**	**17 34 34.7**	**+1.2**
	baz=90						
BELC	**Belle Mtn.**	**89.75**	**48**	⇓P	**P**	**17 34 34.6**	**+0.9**
	baz=90						
GLA	**Glamis**	**89.86**	**49**	*e*P	**P**	**17 34 35.4**	**+1.2**
CMB	**Columbia Colle**	**89.87**	**43**	P	**P**	**17 34 33.7**	**-0.6**
CMB				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.2						
CMB				MLR	MLR		
	comp=Z,376nm,19.0s,MS4.8						
CMB	**Columbia Colle**	**89.87**	**43**	P	**P**	**17 34 33.7**	**-0.6**
	comp=Z,15nm,1.1s,mb5.2						
CMB				LR	LR		
	comp=Z,376nm,19.0s,MS4.8						
CMB	**Columbia Colle**	**89.87**	**43**	⇓P	**P**	**17 34 34.0**	**-0.3**
	baz=90						
O02C	**Red Bluff**	**90.05**	**40**	⇓P	**P**	**17 34 35.3**	**+0.2**
	baz=90						
S06C	**San Francisco**	**90.07**	**43**	⇑P	**P**	**17 34 34.9**	**-0.3**
	baz=90						
GSC	**Goldstone**	**90.11**	**47**	⇓P	**P**	**17 34 35.7**	**+0.3**
	baz=90						
MPMC	**Manual Prospec**	**90.21**	**46**	⇓P	**P**	**17 34 36.1**	**+0.2**
	baz=90						
MDJ	**Mudanjiang**	**90.35**	**326**	P	**P**	**17 34 35.2**	**-1.3**
MDJ				AP	pP	17 34 49.9	+5.6
MDJ				XP	sP	17 34 55.5	+8.4
MDJ				PP	PP	17 38 09.1	-1.6
MDJ				S	S	17 45 26.8	-2.8
MDJ				XS	sS	17 45 50.6	+8.1
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,111nm,4.9s						
MDJ				LR	LR		
	comp=N,149nm,21.6s,MS4.5						
MDJ				LR	LR		
	comp=E,101nm,20.0s,MS4.5						
MDJ				LR	LR		
	comp=Z,240nm,21.6s,MS4.6						
IRM	**Iron Mountain**	**90.38**	**48**	⇑P	**P**	**17 34 37.4**	**+0.7**
	baz=90						
MTUM	**Tungsten Hills**	**90.45**	**44**	*e*P	**P**	**17 34 37.2**	**+0.3**
WDC	**Whiskeytown Da**	**90.47**	**40**	*e*P	**P**	**17 34 36.7**	**-0.4**
WDC				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.3						
WDC	**Whiskeytown Da**	**90.47**	**40**	*e*P	**P**	**17 34 36.7**	**-0.3**
	comp=Z,23nm,1.3s,mb5.3						
WDC	**Whiskeytown Da**	**90.47**	**40**	⇓P	**P**	**17 34 36.7**	**-0.4**
	baz=90						
R05C	**Kirkwood Meado**	**90.50**	**42**	⇑P	**P**	**17 34 37.1**	**-0.2**
	baz=90						
R07C	**Lee Vining**	**90.67**	**43**	⇓P	**P**	**17 34 38.3**	**+0.3**
	baz=91						
R06C	**Coleville**	**90.73**	**43**	⇑P	**P**	**17 34 39.1**	**+0.8**
	baz=91						
TUQ	**Turquoise Mtn.**	**90.74**	**47**	⇓P	**P**	**17 34 38.3**	**0.0**
	baz=91						
M02C	**Callahan**	**90.88**	**39**	⇑P	**P**	**17 34 39.3**	**+0.4**
	baz=91						
HABR	**Khabarovsk**	**91.02**	**332**	*e*P	**P**	**17 34 37.8**	**-1.8**
HABR				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.3						
WCN	**Washoe City**	**91.10**	**42**	⇑P	**P**	**17 34 40.3**	**+0.3**
	baz=91						
PDMCI	**Parker Dam,Lak**	**91.11**	**49**	⇓P	**P**	**17 34 41.4**	**+1.3**
	baz=91						
U10A	**Ash Meadows, A**	**91.14**	**46**	⇑P	**P**	**17 34 40.9**	**+0.7**
	baz=91						
KEBM	**Edson Butte**	**91.18**	**37**	*e*P	**P**	**17 34 40.4**	**0.0**
YBH	**Yreka Blue Hor**	**91.20**	**39**	*e*P	**P**	**17 34 40.2**	**-0.3**
YBH				pmax	pmax		
	comp=Z,26nm,1.7s						
YBH				MLR	MLR		
	comp=Z,220nm,19.0s						
YBH	**Yreka Blue Hor**	**91.20**	**39**	*e*P	**P**	**17 34 40.2**	**-0.3**
	comp=Z,26nm,1.7s,mb5.3						
YBH				LR	LR		
	comp=Z,220nm,19.0s,MS4.6						
YBH	**Yreka Blue Hor**	**91.20**	**39**	⇑P	**P**	**17 34 40.5**	**+0.1**
	baz=91						
HATC	**Hat Creek Radi**	**91.22**	**40**	⇓P	**P**	**17 34 40.7**	**+0.1**
	baz=91						
Z14A	**Wintersburg**	**91.26**	**50**	⇑P	**P**	**17 34 41.7**	**+0.9**
	baz=91						
115A	**Sonoran Desert**	**91.31**	**51**	⇑P	**P**	**17 34 42.0**	**+1.0**
	baz=91						
V11A	**Goodsprings**	**91.31**	**47**	⇓P	**P**	**17 34 41.8**	**+0.8**
	baz=91						
NVAR	**Mina Array Bea**	**91.33**	**44**	P	**P**	**17 34 41.0**	**-0.1**
	comp=Z,1.6nm,0.6s,mb4.5,baz=214,slow=5.4,SNR=13						
ELFS	**Eagle Lake Fie**	**91.47**	**41**	⇓P	**P**	**17 34 41.8**	**0.0**
	baz=92						
S09A	**Goldfield**	**91.48**	**45**	⇑P	**P**	**17 34 41.9**	**+0.1**
	baz=92						
X13A	**Yucca**	**91.49**	**49**	⇓P	**P**	**17 34 42.8**	**+1.0**
	baz=92						
TPNV	**Topopah Spring**	**91.54**	**46**	*e*P	**P**	**17 34 42.5**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.1						
TPNV	**Topopah Spring**	**91.54**	**46**	*e*P	**P**	**17 34 42.5**	**+0.4**
	comp=Z,12nm,1.1s,mb5.2						
116A	**Eloy**	**91.56**	**51**	⇓P	**P**	**17 34 43.1**	**+1.0**
	baz=92						
PAHR	**Pah Rah Range**	**91.59**	**42**	*e*P	**P**	**17 34 41.3**	**-1.0**
	comp=Z,15nm,1.4s,mb5.1						
V12A	**Nelson**	**91.59**	**47**	⇑P	**P**	**17 34 42.5**	**+0.2**
	baz=92						
Y14A	**Wickenburg**	**91.59**	**50**	⇓P	**P**	**17 34 43.1**	**+0.8**
	baz=92						
O06A	**Flanigan**	**91.66**	**41**	⇓P	**P**	**17 34 42.1**	**-0.5**
	baz=92						
M04C	**Macdoel**	**91.69**	**39**	⇑P	**P**	**17 34 42.8**	**0.0**
	baz=92						
CN2	**Changchun**	**91.73**	**324**	*e*P	**P**	**17 34 41.5**	**-1.4**
CN2				*e*AP	pP	17 34 53.0	+2.3
CN2				*e*S	S	17 45 36.5	-5.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,21.0s,MS4.8						
CN2				LR	LR		
	comp=E,300nm,21.0s,MS4.8						
CN2				LR	LR		
	comp=Z,400nm,22.0s,MS4.8						
M05C	**Lookout**	**91.77**	**40**	⇑P	**P**	**17 34 42.7**	**-0.4**
	baz=92						
Q08A	**Gabbs**	**91.83**	**43**	⇑P	**P**	**17 34 42.8**	**-0.6**
	baz=92						
R09A	**Tonopah**	**91.92**	**44**	⇑P	**P**	**17 34 43.9**	**+0.1**
	baz=92						
J02A	**Umpqua**	**91.92**	**37**	⇑P	**P**	**17 34 44.1**	**+0.3**
	baz=92						
L04A	**Klamath Falls**	**91.94**	**39**	⇑P	**P**	**17 34 44.4**	**+0.5**
	baz=92						
X14A	**Yava**	**92.00**	**49**	⇓P	**P**	**17 34 45.3**	**+1.1**
	baz=92						
TUC	**Tucson**	**92.01**	**52**	*e*P	**P**	**17 34 44.9**	**+0.7**
TUC				*e*	pP	17 34 51.7	-0.3
TUC				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.2						
TUC	**Tucson**	**92.01**	**52**	*e*P	**P**	**17 34 44.9**	**+0.7**
	comp=Z,20nm,1.4s,mb5.2						
TUC				*e*	pP	17 34 51.7	-0.3

M06C Likely Place G 92.02 40 ⇓P P 17 34 44.1 -0.2
baz=92
N06A Buffalo Meadow 92.05 41 ⇑P P 17 34 43.9 -0.5
baz=92
O07A Toulon 92.18 42 ⇓P P 17 34 44.5 -0.5
baz=92
J03A Ideyld Park 92.24 38 ⇑P P 17 34 44.7 -0.6
baz=92
U12A Valley of Fire 92.24 47 ⇑P P 17 34 45.7 +0.4
baz=92
R10A Warm Springs 92.40 45 ⇓P P 17 34 45.3 -0.7
baz=92
L05A Lakeview 92.41 40 ⇑P P 17 34 46.4 +0.3
baz=92
M07A Soldier Meadow 92.86 41 ⇓P P 17 34 48.1 0.0
baz=93
N08A GE Springer Mi 93.02 42 ⇑P P 17 34 48.9 0.0
baz=93
J05A Fort Rock 93.07 38 ⇓P P 17 34 49.1 0.0
baz=93
O09A Fish Creek Ran 93.14 43 ⇑P P 17 34 49.3 -0.1
baz=93
L07A Adell 93.20 40 ⇓P P 17 34 49.6 -0.1
baz=93
K06A Valley Falls 93.25 39 ⇓P P 17 34 49.8 -0.1
baz=93
M08A Happy Creek Ra 93.33 41 ⇑P P 17 34 50.2 -0.1
baz=93
H04A Detroit Lake 93.57 37 ⇓P P 17 34 50.7 -0.7
baz=94
J06A Christmas Vall 93.61 39 ⇑P P 17 34 50.9 -0.7
baz=94
K07A Rock Creek Ran 93.71 40 ⇓P P 17 34 51.7 -0.3
baz=94
Q12A Willow Creek R 93.76 45 ⇑P P 17 34 52.5 +0.2
baz=94
M09A Marrel Ranch, 93.83 42 ⇑P P 17 34 52.7 +0.1
baz=94
L08A Fields 93.86 41 ⇑P P 17 34 52.8 +0.1
baz=94
WVOR Wild Horse Val 93.86 40 *eP* **P 17 34 51.3 -1.4**
WVOR pmax pmax
comp=Z,33nm,1.8s,mb5.5
WVOR Wild Horse Val 93.86 40 *eP* **P 17 34 51.3 -1.5**
comp=Z,34nm,1.8s,mb5.5
KMI Kunming 93.99 297 P P 17 34 53.4 +0.1
KMI AP pP 17 35 06.4 +5.2
KMI XP sP 17 35 10.8 +6.8
KMI PP PP 17 38 42.9 +3.5
KMI SKS 17 45 22.6
KMI S S 17 45 58.2 -4.0
KMI XS sS 17 46 17.7 +2.5
KMI SS SS 17 52 18.3 -3.7
KMI AMB AMB
comp=Z,5.0nm,0.7s,mb5.0
KMI LR LR
comp=Z,218nm,38.3s,MS4.3
O11A Cowboy Ranch, 93.99 44 ⇓P P 17 34 53.5 +0.2
baz=94
P12A McGill 94.00 45 ⇓P P 17 34 53.5 +0.2
baz=94
I06A Prineville 94.06 39 ⇑P P 17 34 53.7 0.0
baz=94
L09A Wilkinson Ranc 94.11 41 ⇓P P 17 34 53.8 -0.1
baz=94
BJI Beijing 94.13 316 *eP* **P 17 34 58.1 +4.1**
BJI PP PP 17 38 42.3 +1.8
BJI SKS 17 45 23.6
BJI S S 17 45 58.6 -4.8
BJI AMB AMB
comp=Z,3.0nm,1.3s,mb4.6
BJI LR LR
comp=N,153nm,17.1s,MS4.8
BJI LR LR
comp=E,227nm,18.5s,MS4.8
BJI LR LR
comp=Z,237nm,35.3s
K08A Mann Creek Ran 94.14 40 ⇑P P 17 34 52.9 -1.2
baz=94
M10A I.L. Ranch, Tu 94.41 42 ⇑P P 17 34 55.1 -0.1
baz=94
I07A Izee 94.53 39 ⇓P P 17 34 55.2 -0.6
baz=95
K09A Rome 94.54 41 ⇓P P 17 34 55.5 -0.3
baz=95
N12A Clover Valley, 94.82 43 ⇑P P 17 34 57.0 -0.2
baz=95
CD2 Chengdu 96.56 303 *eP* **P 17 35 03.8 -1.3**
CD2 AP pP 17 35 17.3 +4.4
CD2 XP sP 17 35 22.5 +6.8
CD2 PP PP 17 39 00.4 +1.1
CD2 SKS 17 45 35.4
CD2 S S 17 46 17.8 -6.7
CD2 XS sS 17 46 40.1 +2.5
CD2 AMB AMB
comp=Z,20nm,0.9s,mb5.5
CD2 AMB AMB
comp=Z,60nm,9.2s
CD2 LR LR
comp=N,170nm,13.2s
CD2 LR LR
comp=Z,200nm,12.0s,MS4.8
HHC Hu-ho-hao-te 97.36 314 *eP* **P 17 35 09.8 +1.1**
HHC AP pP 17 35 20.4 +3.9
HHC XP sP 17 35 24.3 +5.0
HHC PP PP 17 39 09.4 +3.9
HHC SKS 17 45 43.5
HHC S S 17 46 28.1 -3.3
HHC XS sS 17 46 45.1 +0.7
HHC SS SS 17 53 10.1 +0.4
HHC AMB AMB
comp=Z,10.0nm,1.1s,mb5.2
HHC AMB AMB
comp=Z,97nm,4.3s
HHC LR LR
comp=N,212nm,31.3s,MS4.6
HHC LR LR
comp=E,178nm,27.5s,MS4.6
HHC LR LR
comp=Z,176nm,25.6s,MS4.4
LZH Lanzhou 99.44 307 *eP* **P 17 35 18.9 +0.9**
LZH AP pP 17 35 32.4 +6.5
LZH XP sP 17 35 37.6 +9.0
LZH PP PP 17 39 25.1 +3.7
LZH *e*SKS 17 45 52.3
LZH *e*S S 17 46 44.1 -4.9
LZH XS sS 17 47 07.1 +5.0
LZH *e*SS SS 17 53 38.5 -0.5
LZH AMB AMB
comp=Z,22nm,1.3s,mb5.5
LZH AMB AMB
comp=Z,135nm,6.1s
LZH LR LR
comp=E,856nm,18.9s
LZH LR LR
comp=Z,1µm,19.1s,MS5.5
BILL Bilibino 101.68 355 *eP* Pdif 17 35 23.1 -4.9
BILL pmax pmax
comp=Z,2.0nm,1.1s
BOSA Boshof 113.99 204 PKiKP PKiKP 17 40 12.8 -1.5
comp=Z,1.8nm,0.8s,baz=276,slow=7.3,SNR=3.6
BOSA Boshof 113.99 204 PKPdf PKiKP 17 40 12.8 -1.5
MKAR Makanchi Array 118.65 309 PKP PKPdf 17 40 20.2 -3.1
comp=Z,0.7nm,0.4s,baz=55,slow=0.2,SNR=19
RES Resolute Bay 120.49 18 *e*PKiKP PKPdf 17 40 23.7 -3.2
KURK Kurchatov 122.12 313 *e*PKiKP PKPdf 17 40 26.5 -3.5
KURK MLR MLR
comp=Z,144nm,19.0s,MS4.6
LSZ Lusaka 124.83 213 *e*PKiKP PKPdf 17 40 34.8 -0.4
PKME Peaks-Kenny Pk 126.34 55 *e*PKPdf PKPdf 17 40 36.9 -1.1
CHKZ Chkalovo 127.52 315 *e*PKiKP PKPdf 17 40 36.7 -3.6
SCHQ Schefferville 129.34 44 PKP PKPdf 17 40 41.5 -2.2
comp=Z,2.1nm,0.7s,baz=213,slow=3.2,SNR=3.6
KMBO Kilima Mbogo 131.21 233 PKP PKPdf 17 40 47.4 +0.1
comp=Z,1.2nm,0.7s,baz=33,slow=23,SNR=3.7
KMBO Kilima Mbogo 131.21 233 PKP PKPdf 17 40 47.4 +0.1
ARU Arti 134.50 319 *i* PKiKP PKPdf 17 40 52.2 -1.3
ARU *e* 17 43 23.0
KEV Kevo 140.71 346 *e*pkp PKPdf 17 40 56.0 -9.0
ARCES ARCESS Array B 141.20 346 PKhKP 17 40 58.6
comp=Z,2.1nm,0.7s,baz=17,slow=2.4,SNR=16
ARCES PKP PKPdf 17 41 04.5 -1.4
comp=Z,8.4nm,0.8s,baz=26,slow=2.3,SNR=12
ARCES ARCESS Array B 141.20 346 PKP PKPdf 17 40 58.6 -7.3
ARCES PKP PKPdf 17 41 04.5 -1.4
KLMR Klimovskoe 142.71 329 *i* PKiKP PKPdf 17 41 03.9 -4.6
KLMR pmax pmax
comp=Z,10.0nm,1.8s
BHD Baghdad 143.49 282 *ex* x 17 41 02.0
JOF Joensuu 144.65 336 *e*pkp PKPdf 17 41 07.2 -4.8
HAKT HAKKARI 144.74 289 *i* P PKPdf 17 41 08.3 -3.8
ZEI Tsey 144.86 298 *e*PKiKP PKPdf 17 41 09.1 -3.2
ZEI *e* 17 44 33.7
MSL Mosul 145.07 287 *ex* x 17 41 11.0
TVAN Van 145.07 291 *i* P PKPbc 17 41 10.1 -2.0
KIV Kislovodsk 145.70 300 *e*PKP2 PKPdf 17 41 10.8 -3.0
KIV MLR MLR
comp=Z,120nm,19.0s,MS4.7
KIV Kislovodsk 145.70 300 *e*PKP PKPdf 17 41 10.8 -2.9
KIV LR LR
comp=Z,120nm,19.0s,MS4.7
BORG Borgarnes 145.91 16 *e*PKPbc PKPbc 17 41 13.2 -1.5
MOS Moscow 145.96 322 *e*PKHKP 17 41 07.2
MOS pmax pmax
comp=Z,130nm,1.5s
MOR8 Moi Rana 146.13 350 *e*P PKPdf 17 41 11.2 -3.3
MOR8 AMb AMB 17 41 14.6
comp=Z,60nm,1.8s
ERZM Erzurum 146.74 293 *i* P PKPdf 17 41 15.2 -0.3
OBN Obninsk 146.78 322 *e*PKIKP PKPdf 17 41 13.7 -1.9
OBN *i* 17 41 29.5
OBN pmax pmax
comp=Z,20nm,1.5s
OBN pmax pmax
comp=Z,20nm,1.1s
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.6
OBN Obninsk 146.78 322 *e*PKPdf PKPdf 17 41 13.9 -1.7
BNGL BINGOL 146.87 291 *i* P PKPdf 17 41 15.7 0.0
KAF Kangasniemi 146.87 338 *e*pkp PKPdf 17 41 14.0 -1.7
MARD Mardin 147.03 288 *i* P PKPdf 17 41 15.6 -0.4
PUL Pulkovo 147.09 332 *i* PKIKP PKPdf 17 41 13.2 -2.9
FIA1 FINESS Array S 147.44 337 *e*PKP PKPdf 17 41 15.9 -0.8
FINES FINESS Array B 147.44 337 PKPbc PKPbc 17 41 16.1 -3.1
comp=Z,18nm,0.7s,baz=52,slow=4.3,SNR=27
NSS Namsos 148.04 351 *e*P PKPdf 17 41 17.1 -0.6
KELT Kelkit 148.36 294 *i* P PKPdf 17 41 19.7 +1.4
ELZG Elazig 148.53 290 *i* P PKPdf 17 41 20.1 +1.6
MALT Malatya 148.96 290 *e*PKP2 PKPdf 17 41 21.2 +2.0
GZT Gaziantep 149.59 288 *i* P PKPdf 17 41 22.6 +2.4
EIL Elat 150.42 272 *e*PKPbc PKPbc 17 41 24.7 -2.1
MNK Minsk 151.42 326 *e*PKIKP PKPdf 17 41 23.0 0.0
NB2 NORSAR Subarra151.47 349 PKPa PKPbc 17 41 26.3 -2.9
comp=Z,53nm,1.4s,baz=18,slow=2.6
NB2 NORSAR Subarra151.47 349 PKPa PKPbc 17 41 26.3 -2.9
baz=18,slow=2.6
NOA NORSAR Array B 151.47 349 PKPbc PKPbc 17 41 26.5 -2.7
comp=Z,12nm,0.6s,baz=13,slow=4.1,SNR=30
NOA PKPab PKPab 17 41 35.1 -2.5
comp=Z,7.6nm,0.7s,baz=18,slow=4.2,SNR=12
SIM Simferopol' 151.65 304 *i* PKIKP PKPbc 17 41 27.0 -2.7
SIM *e* 17 41 42.0
SIM pmax pmax
comp=Z,11nm,0.8s
NAO01 NORSAR Array S 151.70 349 *e*PKPbc PKPbc 17 41 27.1 -2.7
CTKT Corum 151.76 295 *i* P PKPbc 17 41 27.1 -2.8
CDAG Cicekdag 152.13 293 *i* P PKPdf 17 41 21.1 -3.0
LIC Lamto 152.50 168 *e*PKIKP PKPdf 17 41 24.6 -0.1
comp=Z,42nm,1.1s
BR131 Keskin Array S 152.69 293 *e*PKPbc PKPbc 17 41 29.3 -2.7
BRTR Keskin Array B 152.69 293 PKPbc PKPbc 17 41 29.4 -2.6
comp=Z,2.6nm,0.5s,baz=150,slow=3.9,SNR=17
BRTR PKPab PKPab 17 41 40.4 -2.3
comp=Z,2.9nm,0.7s,baz=144,slow=4.2,SNR=6.1
AKASG Malin Array Be 152.75 318 PKPbc PKPbc 17 41 29.4 -2.7
comp=Z,2.5nm,0.5s,baz=46,slow=2.7,SNR=12
AKASG PKPab PKPab 17 41 40.1 -2.9
comp=Z,1.5nm,0.5s,baz=53,slow=2.3,SNR=5.3
ELDT Eldivan 152.80 295 *i* P PKPbc 17 41 29.6 -2.6
DBIC Dimbokro 152.96 168 PKP PKPdf 17 41 25.3 0.0
comp=Z,13nm,1.0s,baz=139,slow=0.8,SNR=6.4
DBIC PKPbc PKPbc 17 41 32.2 -0.4
comp=Z,18nm,1.0s,baz=150,slow=2.1,SNR=10
DBIC PKPab PKPab 17 41 42.0 -1.8
comp=Z,19nm,1.0s,baz=168,slow=4.3,SNR=6.1
DBIC Dimbokro 152.96 168 *e*PKPdf PKPdf 17 41 25.6 +0.3
DBIC *e*PKPbc PKPbc 17 41 32.9 +0.3
DBIC LR LR
comp=Z,260nm,21.0s,MS5.0
SGKT Sivrigoynuk 153.84 295 *i* P pPKPdf 17 41 40.4 +5.8
CRVS Cervenica-Dubn 157.95 321 *e*PKP PKPab 17 42 03.3 -1.9
KECS Kecovo 158.72 321 *e*PKP PKPab 17 42 06.5 -2.1
VYHS Vyhne 159.56 323 *e*PKP PKPab 17 42 10.1 -2.1
NRDL Niedersach Rie 159.67 343 *e*PKPab PKPab 17 42 11.0 -1.7
TOA0 Torodi Ar. Sit 159.81 184 *e*PKPdf PKPdf 17 41 34.0 -0.3
TOA0 *e*PKPab PKPab 17 42 12.5 -0.8
TORD Torodi Ar. Bea 159.81 184 PKP PKPdf 17 41 33.2 -1.0
comp=Z,6.3nm,1.0s,baz=71,slow=0.4,SNR=18
TORD PKPab PKPab 17 42 11.7 -1.7
comp=Z,11nm,0.9s,baz=165,slow=3.0,SNR=4.3
CLL Collm 159.88 337 *e*PKIKP PKPdf 17 41 37.0 +2.7
CLL *e*PKP2 PKPab 17 42 11.0 -2.6
CLL *e**PPKP2 17 42 26.0
CLL Collm 159.88 337 *e*(PKPdf) PKPdf 17 41 37.0 +2.7
CLL *e*PKPab PKPab 17 42 11.0 -2.6
comp=Z,18nm,1.1s
CLL *e*(pPKPab) 17 42 26.0
BRG Berggiesshubel 159.92 334 *e*PKPab PKPab 17 42 10.7 -3.1
BRG Berggiesshubel 159.92 334 *e*PKP pPKPdf 17 41 44.5 +2.1
comp=Z,3.6nm,1.3s
BRG *e* 17 42 11.4
comp=Z,4.4nm,0.9s
BRG
comp=N,81nm,15.7s
BRG
comp=E,63nm,15.1s
BRG
comp=Z,147nm,22.2s
BRG Berggiesshubel 159.92 334 *e*PKP pPKPdf 17 41 44.5 +2.1
BRG *e* 17 42 11.4
BRG LR LR
comp=Z,150nm,22.2s,MS4.8
FBE Freiberg 160.09 335 *e*PKPab PKPab 17 42 12.0 -2.5
CLZ Clausthal 160.20 342 *e*PKPab PKPab 17 42 13.1 -1.9
IBBN Ibbenburen 160.37 347 *e*PKPab PKPab 17 42 13.7 -2.0
WERD Werda 160.85 336 *e*PKPab PKPab 17 42 15.5 -2.3
MOX Moxa 160.90 338 *e*PKPab PKPab 17 42 15.5 -2.5
MOX Moxa 160.90 338 *e*PKP PKPab 17 42 16.0 -2.0
comp=Z,19nm,1.6s
MOX
comp=Z,100nm,21.0s
GUNZ Gunzen 160.91 336 *e*PKPab PKPab 17 42 15.8 -2.3
MANZ Manzenberg 161.31 336 *e*PKPab PKPab 17 42 17.5 -2.3
ROTZ Rotzenmuhle 161.46 335 *e*PKPab PKPab 17 42 18.3 -2.2
KHC Kasperske Hory 161.47 332 *e*PKPdf PKPab 17 41 33.5 -2.6
GEC2 GERESS Array S 161.65 331 *e*PKPab PKPab 17 42 19.0 -2.3
GERES GERESS Array B 161.65 331 PKP PKPdf 17 41 33.4 -2.8
comp=Z,0.9nm,1.0s,baz=78,slow=1.9,SNR=4.1
GERES PKPab PKPab 17 42 18.9 -2.5
comp=Z,1.0nm,0.8s,baz=31,slow=3.6,SNR=5.1
WET Wettzell 161.73 333 *e*PKPab PKPab 17 42 19.9 -1.8
GRF Grafenberg Arr 161.85 337 *e*PKPab PKPab 17 42 20.6 -1.6
GRF *e*L 18 59 10.3
comp=Z,147nm,20.1s
HGN Heimansgroeve 162.18 349 *e*PKP PKPab 17 42 21.2 -2.4
comp=Z,17nm,0.8s
GIVF Givet 162.99 350 *e*PKIKP PKPdf 17 41 31.9 -5.7
BAIF Baives 163.11 352 *e*PKIKP PKPdf 17 41 31.8 -5.9
BFO Black Forest 163.94 341 *e*PKPab PKPab 17 42 29.0 -2.4
LOR Lormes 165.90 350 *e*PKIKP PKPdf 17 41 34.6 -5.6
comp=Z,41nm,1.8s
PMPS Porto Santo 165.96 87 *e*PKPdf PKPdf 17 41 37.4 -2.8
EPON Pontenova 168.44 29 PKP PKPdf 17 41 38.8 -3.2
PCAB Cabril 169.33 36 *e*PKPdf PKPdf 17 41 42.7 +0.1
PVRL Vila Real 169.81 37 *e*PKPdf PKPdf 17 41 43.0 +0.1
PVIS Viseu 170.12 40 *e*PKPdf PKPdf 17 41 42.2 -0.9
MTE Manteigas 170.53 40 *e*PKPdf PKPdf 17 41 42.6 -0.7
MTE Manteigas 170.53 40 *e*PKPdf PKPdf 17 41 43.6 +0.3
MTE Manteigas 170.53 40 *e*PKPab PKPab 17 42 59.3 -1.2
MTE Manteigas 170.53 40 *e*PKPab PKPab 17 42 59.5 -1.0
MTE Manteigas 170.53 40 *e*PP PP 17 46 53.9 +3.2
MTE Manteigas 170.53 40 *e*SS SS 18 07 36.3 -15
PCBR Castelo Branco 170.96 42 *e*PKPdf PKPdf 17 41 43.7 +0.2
PTEO Sao Teotonio 171.46 58 *e*PKPdf PKPdf 17 41 44.1 +0.3
PESTR Estremoz 171.52 48 *e*PKPdf PKPdf 17 41 43.3 -0.5
PESTR Estremoz 171.52 48 *e*PKPab PKPab 17 43 03.7 -1.2
PESTR Estremoz 171.52 48 *e*PP PP 17 46 56.8 +1.2
PESTR Estremoz 171.52 48 *e*SS SS 18 08 04.3 +3.4
GUD Guadarrama 171.89 26 PKIKP PKPdf 17 41 43.2 -0.8
EBAD Badajoz 171.94 46 PKP PKPdf 17 41 39.7 -4.3
KEST Kesra 172.28 290 PKP PKPdf 17 41 44.0 -0.2
comp=Z,3.0nm,1.1s,baz=353,slow=8.1,SNR=3.6
EMIN Mina Concepcio 172.75 51 PKP PKPdf 17 41 42.9 -1.5
ESDC Sonseca Array 172.80 28 PKP PKPdf 17 41 44.4 +0.1
comp=Z,1.2nm,0.6s,baz=23,slow=1.5,SNR=14
ESDC PKPab PKPab 17 43 08.3 -2.3
comp=Z,0.5nm,0.5s,baz=344,slow=5.7,SNR=5.3
ESDC Sonseca Array 172.80 28 PKP PKPdf 17 41 43.0 -1.4
EADA Adamuz 173.74 39 PKP PKPdf 17 41 43.7 -1.0
ESPR Espera 173.79 54 PKP PKPdf 17 41 43.8 -0.9
EBAN Banos Encina 174.13 35 PKIKP PKPdf 17 41 44.3 -0.6
EVIA Vianos 174.25 24 PKIKP PKPdf 17 41 44.7 -0.2
EJIF Jimena Fronter 174.27 56 PKIKP PKPdf 17 41 46.4 +1.5
ELUQ Luque 174.35 41 PKIKP PKPdf 17 41 44.5 -0.5
ETOB Tobarra 174.52 16 PKP PKPdf 17 41 43.5 -1.6
EMIJ Mijas 174.69 52 PKP PKPdf 17 41 42.4 -2.7
ELOJ Sierra Loja 174.70 44 PKIKP PKPdf 17 41 44.7 -0.4
EQES Quesada 174.76 32 PKP PKPdf 17 41 43.1 -2.0
ECOG Cogollos-Vega 174.93 39 PKIKP PKPdf 17 41 44.3 -0.8
EHUE Huescar 174.95 28 PKIKP PKPdf 17 41 44.3 -0.8
ERON Agron 174.99 43 PKP PKPdf 17 41 44.2 -1.0
ENIJ Nijar 175.83 30 PKIKP PKPdf 17 41 44.7 -0.7

ISCJB ***09*** *17:23:50.3±0.6,3334S±005×1793W±0.1,h10km,mb4.6/7, Error ellipse: s-maj=14.5km s-min=4.7km az=39.5*
NEIC ***09*** *17:23:51.2±0.7,3328S×17928W,h10km,mb4.8/3, Error ellipse: s-maj=20.3km s-min=12.2km az=123.0*
MOS ***09*** *17:23:55.9±3.3,3302S×17964W,h33km,mb5.0/3, Error ellipse: s-maj=24.0km s-min=18.3km az=63.4*
IDC ***09*** *17:23:56.7±3.5,3343S×17935W,h52km±30km,mb4.3/6, mb1 4.5/7,mb1mx4.2/13,mbtmp4.6/7,MS3.4/1,Ms1 3.4/1, ms1mx3.2/13,Error ellipse: s-maj=30.0km s-min=19.3km az=114.0*

ISC 09 17:23:52.3±0.6,3333S±005×1793W±01,h10km,n42, σ1$20/39,mb4.6/7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.24**	**17**	P		**Pn**	**17 24 54.9**	**-2.0**
	21nm,0.3s,baz=107,slow=20,SNR=2.2						
RAO				S		**Sn**	**17 25 46.1**	**-0.3**
	186nm,0.3s,baz=66,slow=20,SNR=3.3						
RAO				LR	LR		17 26 03.1	
	comp=Z,478nm,20.1s,baz=202,slow=29						
RAO	**Raoul Island**	**4.24**	**17**	P		**Pn**	**17 24 54.9**	**-2.0**
RAO				S		**Sn**	**17 25 46.1**	**-0.3**
RAO	**Raoul Island**	**4.24**	**17**	P		**Pn**	**17 24 54.9**	**-2.0**
RAO				S		**Sn**	**17 25 46.1**	**-0.3**
RAO				LR	LR		17 26 03.1	
MXZ	**Matakaoa Point**	**4.65**	**204**	*e*PN		**Pn**	**17 25 04.8**	**+2.2**
MXZ				*e*SN		**Sn**	**17 25 54.8**	**-1.8**
WIZ	**White Island**	**5.07**	**213**	*e*PN		**Pn**	**17 25 08.4**	**+0.1**
PUZ	**Puketiti**	**5.13**	**202**	*e*PN		**Pn**	**17 25 08.8**	**-0.3**
PUZ				*e*SN		**Sn**	**17 26 07.7**	**-0.7**
KUZ	**Kuaotunu**	**5.31**	**229**	*e*PN		**Pn**	**17 25 15.2**	**+3.6**
MWZ	**Matawai**	**5.61**	**206**	*e*PN		**Pn**	**17 25 18.5**	**+2.7**
MWZ				*e*SN		**Sn**	**17 26 19.2**	**-1.1**
URZ	**Urewera**	**5.71**	**210**	P		**Pn**	**17 25 17.6**	**+0.4**
	baz=162,slow=18,SNR=1.9						
URZ				S		**Sn**	**17 26 20.7**	**-2.1**
	12nm,0.3s,baz=288,slow=20,SNR=3.2						
URZ	**Urewera**	**5.71**	**210**	*e*PN		**Pn**	**17 25 17.5**	**+0.3**
URZ				*e*SN		**Sn**	**17 26 17.7**	**-5.1**
WCZ	**Waipu Caves**	**5.84**	**242**	PN		**Pn**	**17 25 19.9**	**+1.0**
OUZ	**Omahuta**	**6.16**	**250**	PN		**Pn**	**17 25 23.1**	**-0.2**
OUZ				*e*SN		**Sn**	**17 26 26.0**	**-7.9**
KNZ	**Kokohu**	**6.18**	**202**	*e*PN		**Pn**	**17 25 23.8**	**+0.3**
BKZ	**Black Stump Fm**	**6.74**	**209**	*e*PN		**Pn**	**17 25 34.6**	**+3.3**
HIZ	**Hauiti**	**7.01**	**221**	*e*PN		**Pn**	**17 25 38.0**	**+3.1**
RPZ	**Rata Peaks**	**12.81**	**213**	S		**Sn**	**17 29 03.3**	**-14**
	0.8nm,0.3s,baz=32,slow=17,SNR=2.8						
AFI	**Afiamalu**	**20.52**	**21**	P		**P**	**17 28 31.2**	**+0.6**
	19nm,0.6s,baz=73,slow=11,SNR=3.2						
CTA	**Charters Tower**	**33.30**	**285**	P		**P**	**17 30 30.3**	**+0.3**
	5.8nm,0.6s,mb4.7,baz=118,slow=9.8,SNR=5.3						
CTAO	**Charters Tower**	**33.30**	**285**	*e*P		**P**	**17 30 29.1**	**-1.0**
CTAO				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.6						
CTAO	**Charters Tower**	**33.30**	**285**	*e*P		**P**	**17 30 29.1**	**-1.0**
	comp=Z,4.1nm,0.5s,mb4.6						
AS31	**Alice Springs**	**41.93**	**271**	*e*P		**P**	**17 31 43.4**	**+0.4**
ASAR	**Alice Springs**	**41.93**	**271**	P		**P**	**17 31 42.4**	**-0.6**
	comp=Z,5.8nm,0.5s,mb4.4,baz=110,slow=7.8,SNR=5.4						
ASPA	**Alice Springs**	**41.93**	**271**	*e*P		**P**	**17 31 43.4**	**+0.3**
WB2	**Warramunga Arr**	**43.17**	**276**	*e*P		**P**	**17 31 53.6**	**+0.4**
WRAB	**Tennant Creek**	**43.18**	**276**	*e*P		**P**	**17 31 53.0**	**-0.2**
WRAB				pmax	pmax			
	comp=Z,21nm,1.0s,mb4.8						
WRAB	**Tennant Creek**	**43.18**	**276**	*e*P		**P**	**17 31 53.0**	**-0.2**
	comp=Z,21nm,1.0s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.31**	**273**	P		**P**	**17 32 56.2**	**-0.4**
	comp=Z,10.0nm,0.8s,mb4.8,baz=126,slow=6.6,SNR=5.1						
QSPA	**South Pole Qui**	**56.79**	**180**	*e*P		**P**	**17 33 37.9**	**+1.3**
	comp=Z,11nm,0.5s,mb5.1						
MAW	**Mawson**	**69.18**	**201**	P		**P**	**17 34 56.7**	**-2.3**
	comp=Z,3.7nm,0.9s,mb4.3,baz=146,slow=3.6,SNR=3.0						
NVAR	**Mina Array Bea**	**91.14**	**43**	P		**P**	**17 36 57.7**	**+0.3**
	comp=Z,0.6nm,0.7s,mb4.1,baz=212,slow=5.0,SNR=4.0						
PBA	**Port Blair**	**94.60**	**281**	*e*P	x		17 36 07.4	
PBA				*e*S	x		17 36 28.3	
PBA				*ex*	x		17 36 28.5	
	comp=N,185nm,0.7s						
PBA				*ex*	x		17 36 29.1	
	comp=E,356nm,0.6s						
MKAR	**Makanchi Array**	**118.77**	**309**	PKP	PKPdf		17 42 37.2	-3.5
	comp=E,0.5nm,0.5s,baz=267,slow=0.9,SNR=5.8						
ARCES	**ARCESS Array B**	**141.19**	**346**	PKhKP			17 43 13.8	
	comp=E,1.5nm,0.7s,baz=356,slow=0.8,SNR=5.6						
ARCES				PKP	PKPdf		17 43 20.6	-2.5
	comp=E,3.3nm,0.8s,baz=39,slow=2.8,SNR=3.9						
ARCES	**ARCESS Array B**	**141.19**	**346**	PKP	PKPdf		17 43 13.8	-9.2
ARCES				PKP	PKPdf		17 43 20.6	-2.5
JOF	**Joensuu**	**144.68**	**336**	*e*pkp	PKPdf		17 43 24.2	-5.0
KAF	**Kangasniemi**	**146.88**	**338**	*e*pkp	PKPdf		17 43 30.5	-2.5
FINES	**FINESS Array B**	**147.46**	**337**	PKPbc	PKPbc		17 43 33.8	-2.7
	comp=E,7.8nm,0.7s,baz=46,slow=5.0,SNR=7.3						
NB2	**NORSAR Subarra151.44**	**349**		PKPa	PKPdf		17 43 43.2	+2.9
	comp=Z,8.3nm,0.9s,baz=18,slow=2.6						
NOA	**NORSAR Array B 151.44**	**349**		PKPbc	PKPbc		17 43 44.1	-2.2
	comp=Z,5.3nm,0.7s,baz=13,slow=4.1,SNR=6.8						
NOA				PKPab	PKPab		17 43 52.8	-1.8
	comp=Z,2.0nm,0.6s,baz=14,slow=4.1,SNR=4.2						
AKASG	**Malin Array Be**	**152.84**	**318**	PKPbc	PKPbc		17 43 45.8	-3.7
	comp=Z,1.0nm,0.4s,baz=48,slow=2.5,SNR=6.0						
BRTR	**Keskin Array B**	**152.86**	**293**	PKPbc	PKPbc		17 43 47.1	-2.5
	comp=Z,1.0nm,0.4s,baz=149,slow=4.1,SNR=6.5						
TORD	**Torodi Ar. Bea**	**159.89**	**183**	PKPab	PKPab		17 44 30.1	-0.7
	comp=Z,1.5nm,0.4s,baz=165,slow=4.6,SNR=7.3						

MAN 09 17:27:17.6,694N×12429E,h95km,mb2.5,ML4.0,MS5.0, 2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.28**	**351**	⇓*i*	P	Pn	17 27 33.3	+1.9
CTBH				*i*	S	Sn	17 27 40.5	-1.4
BUKP	**Musuan**	**1.21**	**39**	*e*P		Pn	17 27 50.9	+11
PAGZ	**Pagadian**	**1.28**	**315**	*e*P		Pn	17 27 41.5	+0.7
PAGZ				*e*S		Sn	17 27 57.8	-0.5
IPIL	**Ipil**	**1.90**	**296**	⇓*i*	P	Pn	17 27 49.5	+0.9
IPIL				*i*	S	Sn	17 28 08.2	-4.1
IPIL	**Ipil**	**1.90**	**296**	*e*P		Pn	17 27 49.5	+0.9
IPIL				*e*S		Sn	17 28 08.2	-4.1
MATI	**Mati**	**1.95**	**90**	*e*P		Pn	17 27 49.6	+0.3

CSEM ***09*** *17:53:16.9,1208N×4495E,h10km,ML4.2,After DHMR*

DHMR 09 17:53:16.9±1.2,1208N×4495E,h11km±9km,ML4.2,1C-3D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADEN	**Aden**	**0.70**	**3**	⇓*i*	P	Pg	17 53 30.2	-0.2
ADEN				*i*	S	Sg	17 53 39.9	+0.4
ADEN				AML	AML		17 53 47.2	
	comp=E,21µm,0.5s						
ADEN	**Aden**	**0.70**	**3**	⇓*i*	P	Pg	17 53 30.2	-0.2
ADEN				*i*	S	Sg	17 53 39.9	+0.4
	comp=E,11µm,0.5s						
TRBA	**At Turbah**	**1.41**	**325**	⇑*i*	P	Pn	17 53 42.9	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA				i S	Sn	17 54 02.6	+1.6
TRBA				AML	AML	17 54 13.6	
	comp=N,3μm,0.7s						
LBOS		1.81	9	i P	Pn	17 53 48.8	+0.8
LBOS				i S	Sn	17 54 14.7	+3.8
BDHA	Al Bayda'	1.98	18	i P	Pn	17 53 52.6	+2.3
BDHA				i S	Sn	17 54 18.9	+3.7
UDYN	Al 'Udayn	2.11	333	i P	Pn	17 53 53.5	+1.4
UDYN				i S	Sn	17 54 23.1	+4.7
UDYN				AML	AML	17 54 36.2	
	comp=N,2μm,0.6s						
ERIN	Erian - IBB Go	2.25	342	i P	Pn	17 53 56.9	+2.8
DHBB	Dhamar BB	2.54	348	⇓i P	Pn	17 54 00.2	+2.1
DHBB				i S	Sn	17 54 35.0	+6.1
HAJJ	Hajjah	3.83	340	i P	Pn	17 54 18.8	+2.9
HAJJ				i S	Sn	17 55 06.7	+5.8
HAJJ				AML	AML	17 55 28.2	
	comp=E,654nm,0.5s						
HAJJ	Hajjah	3.83	340	i P	Pn	17 54 18.8	+3.0
HAJJ				i S	Sn	17 55 06.7	+5.8
	comp=E,327nm,0.5s						
RDF	Al-Radifah	16.94	8	eP	Pn	17 57 19.1	+5.2
RDF				AMb	AMB	17 57 22.4	
	comp=Z,29nm,0.9s						
NAY	Al-Naaiem	17.22	7	eP	Pn	17 57 22.6	+5.2
NAY				AMb	AMB	17 57 26.8	
	comp=Z,17nm,0.9s						
RST	Umm Al-Ruwaisa	17.44	6	eP	Pn	17 57 25.3	+5.1
RST				AMb	AMB	17 57 29.8	
	comp=Z,22nm,0.9s						

*NEIC **09** 18:12:26.0, 1936N×6289W, h24^{km}, MD3.7(RSPR), After RSPR.*

RSPR 09 18:12:26.0, 1936N×6289W, h24^{km}±16^{km}, MD3.8/3, MD3.8/3, 4C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	1.88	240	eS	Sn	18 13 16.8	-2.7
STVI	Saint Thomas	2.20	243	⇑eP	Pn	18 12 59.1	-1.9
STVI				eS	Sn	18 13 24.9	-2.5
MTP	Monte Pirata	2.82	244	⇑eP	Pn	18 13 07.6	-1.9
MTP				eS	Sn	18 13 39.5	-3.3
CBYP	Canovanas	3.01	249	⇑eP	Pn	18 13 10.3	-1.8
CBYP				eS	Sn	18 13 45.3	-2.1
CRPR	Cabo Rojo, PR	4.22	252	⇑eP	Pn	18 13 27.8	-0.9

*NEIC **09** 18:15:40.5, 1654N×9582W, h61^{km}, MD3.9(MEX), After MEX.*

MEX 09 18:15:40.4±0.9, 1655N×9581W, h61^{km}±24^{km}, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.82	200	i P	Pn	18 15 54.4	-1.8
HUIG				i S	Sn	18 16 06.5	-1.4
OXX	Oaxaca	1.02	302	i P	Pn	18 15 58.0	-0.8
OXX				i S	Sn	18 16 11.5	-0.9
VHO	Vista Hermosa	1.03	301	i P	Pn	18 15 57.2	-1.6
VHO				i S	Sn	18 16 10.1	-2.4
CMIG	Matias Romero	1.04	58	i P	Pn	18 15 58.1	-0.9
CMIG				i S	Sn	18 16 11.1	-1.7
UTMO	Huajuapan	2.29	304	eP	Pn	18 16 16.3	+0.4
UTMO				i S	Sn	18 16 41.8	-1.2

*NEIC **09** 18:17:41.4, 2795S×7102W, h28^{km}, ML3.4(GUC), After GUC.*

GUC 09 18:17:41.4±1.0, 2795S×7102W, h28^{km}±6^{km}, MD3.6, ML3.4, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	Vallenar	0.67	160	eP	Pb	18 17 54.7	+0.2
VACH				i S	Sb	18 18 03.9	+0.5
VACH				AML	AML	18 18 06.2	
	comp=E,3μm,0.1s						
VACH	Vallenar	0.67	160	eP	Pb	18 17 54.7	+0.2
VACH				i S	Sb	18 18 03.9	+0.5
CPCH	Copiapo	0.83	45	⇓i P	Pb	18 17 56.2	-1.0
CPCH				i S	Sb	18 18 08.3	+0.3
CPCH				AML	AML	18 18 12.2	
	comp=E,4μm,0.1s						
CPCH	Copiapo	0.83	45	⇓i P	Pb	18 17 56.2	-1.0
CPCH				i S	Sb	18 18 08.3	+0.3
CDCH	Caldera	0.89	11	eP	Pn	18 17 57.4	-0.7
CDCH				i S	Sb	18 18 09.6	-0.1
LCO	Las Campanas	1.10	165	eP	Pn	18 18 00.9	0.0
LCO				eS	Sn	18 18 16.1	+0.9
TLL	Tololo Astrono	2.22	175	eP	Pn	18 18 18.6	+2.2
TLL				i S	Sn	18 18 46.4	+3.5

JMA 09 18:22:40.6±0.3, 2658N×12641E, h108^{km}±3^{km}, M3.8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.42	127	P	Pn	18 22 56.8	+0.1
JAGN	Aguni-jima	0.74	89	P	Pn	18 22 59.2	+0.1
JAGN				S	Sn	18 23 12.5	-0.6
NAH1	Naha	1.21	108	P	Pn	18 23 04.0	+0.1
NAH1				S	Sn	18 23 20.4	-1.1
JJT2	Tamagusuku 2	1.28	110	P	Pn	18 23 05.3	+0.6
JJT2				S	Sn	18 23 22.8	-0.1
JIH	Iheya	1.46	72	P	Pn	18 23 07.4	+0.6
JIH				S	Sn	18 23 25.7	-1.0
JOW	Kunigami	1.69	81	P	Pn	18 23 09.6	+0.1
JOW				S	Sn	18 23 29.6	-2.0
JMJ	Miyako jima 2	2.03	210	P	Pn	18 23 14.1	+0.3
JMJ				S	Sn	18 23 39.0	-0.2
JOGS	Gusukube	2.03	207	P	Pn	18 23 14.3	+0.5
JOGS				S	Sn	18 23 39.6	+0.4
JTJ	Tarama	2.47	219	P	Pn	18 23 19.6	+0.1
JTJ				S	Sn	18 23 48.0	-1.4
JTK	Tokunoshima	2.56	61	P	Pn	18 23 20.6	-0.1
JTK				S	Sn	18 23 49.9	-1.7
JIJ	Ishigaki jima	3.01	223	P	Pn	18 23 26.0	-0.7
JIJ				S	Sn	18 24 00.1	-2.1
JKRS	Kuro-shima	3.19	223	P	Pn	18 23 28.5	-0.5
IRIF	Iriomote-Funau	3.30	228	P	Pn	18 23 29.9	-0.6
JAM	Amami Oshima	3.37	57	P	Pn	18 23 30.9	-0.6
JAM				S	Sn	18 24 08.5	-2.3
HATJ	Hateruma jima	3.44	224	P	Pn	18 23 32.5	+0.1
YOJ	Yonaguni jima	3.73	236	P	Pn	18 23 37.1	+0.9
YOJ				S	Sn	18 24 20.7	+1.5
JMZ	Minamidaito 2	4.39	99	P	Pn	18 23 43.9	-1.2
JMZ				S	Sn	18 24 28.2	-7.0
JNN	Nakanoshima	4.46	42	P	Pn	18 23 46.5	+0.4

*ISCJB **09** 18:54:09.7±2.9, 180S±0.1×1784W±0.1, h606^{km}±38^{km}, mb3.8/12, Error ellipse: s-maj=22.3km s-min=13.0km az=105.2*
*IDC **09** 18:54:11.8±2.5, 1791S×17840W, h618^{km}±30^{km}, mb3.3/9, mb1 3.5/9, mb1mx3.4/13, mbtmp4.3/9, Error ellipse: s-maj=19.5km s-min=14.3km az=140.0*
*NEIC **09** 18:54:11.1±2.7, 1793S×17835W, h608^{km}±30^{km}, mb4.0/4, Error ellipse: s-maj=19.9km s-min=17.2km az=101.0*

ISC 09 18:54:12.0±3.0, 180S±01×1783W±01, h618^{km}±38^{km}, n64, σ0^{s}76/32, mb3.8/12, 11C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	20.59	190	P	P	18 58 08.7	-1.4
	7.2nm,0.5s,baz=14,slow=11,SNR=7.9						
RPZ	Rata Peaks	27.17	197	P	P	18 59 08.5	+0.3
	6.9nm,0.6s,mb4.5,baz=326,slow=6.9,SNR=11						
STKA	Stephens Creek	38.66	241	P	P	19 00 45.4	+0.9
	0.9nm,0.3s,mb3.8,baz=76,slow=8.3,SNR=3.5						
WRAB	Tennant Creek	44.68	260	eP	P	19 01 31.6	-0.1
ASAR	Alice Springs	44.84	254	P	P	19 01 33.6	+0.7
	2.9nm,0.6s,mb4.0,baz=86,slow=8.4,SNR=67						
ASAR				PcP	PcP	19 03 00.7	-0.1
	0.8nm,0.6s,baz=104,slow=3.8,SNR=9.1						
ASAR				S	S	19 07 26.1	-0.8
	1.6nm,0.8s,baz=86,slow=16,SNR=11						
VNDA	Vanda	60.37	185	P	P	19 03 23.0	0.0
	0.8nm,0.6s,mb3.1,baz=348,slow=7.3,SNR=13						
MJAR	Matsushiro Arr	68.02	323	P	P	19 04 09.5	-1.6
	0.9nm,0.5s,mb3.5,baz=154,slow=5.5,SNR=9.7						
QSPA	South Pole Qui	72.06	180	eP	P	19 04 35.4	+0.4
	5.6nm,0.8s,mb4.2						
EDW2	Edwards Air Fo	77.73	47	⇑P	P	19 05 06.8	+0.2
	baz=78						
ISA	Isabella	77.82	46	⇑P	P	19 05 07.4	+0.4
	baz=78						
KCC	Kaiser Creek	78.15	44	⇓P	P	19 05 08.0	-0.8
	baz=78						
MDJ	Mudanjiang	78.30	325	eP	P	19 05 10.2	+0.6
	7.2nm,1.0s,mb4.1						
M05C	Lookout	79.27	40	⇓P	P	19 05 15.3	+0.6
	baz=79						
NVAR	Mina Array Bea	79.43	44	P	P	19 05 16.2	+0.7
	1.5nm,0.7s,mb3.4,baz=230,slow=11,SNR=14						
M06C	Likely Place G	79.59	41	⇑P	P	19 05 16.7	+0.4
	baz=80						
N06A	Buffalo Meadow	79.73	41	⇑P	P	19 05 14.9	-2.2
	baz=80						
L05A	Lakeview	79.86	40	⇑P	P	19 05 18.9	+1.1
	baz=80						
O07A	Toulon	80.01	42	⇓P	P	19 05 18.2	-0.3
	baz=80						
M07A	Soldier Meadow	80.50	41	⇓P	P	19 05 20.2	-0.9
	baz=81						
K06A	Valley Falls	80.64	39	⇑P	P	19 05 21.1	-0.8
	baz=81,SNR=5.3						
L07A	Adell	80.75	40	⇑P	P	19 05 22.8	+0.4
	baz=81						
J06A	Christmas Vall	80.96	39	⇓P	P	19 05 22.7	-0.8
	baz=81,SNR=5.1						
I06A	Prineville	81.32	38	⇓P	P	19 05 25.6	+0.3
	baz=82,SNR=6.6						
WVOR	Wild Horse Val	81.42	40	eP	P	19 05 26.4	+0.6
	5.4nm,1.1s,mb3.9						
L08A	Fields	81.46	41	⇑P	P	19 05 26.4	+0.3
	baz=82						
K08A	Mann Creek Ran	81.68	40	⇑P	P	19 05 27.8	+0.7
	baz=82						
I07A	Izee	81.82	39	⇑P	P	19 05 27.2	-0.7
	baz=82,SNR=5.2						
K09A	Rome	82.13	40	⇑P	P	19 05 29.5	+0.1
	baz=82						
MAW	Mawson	83.81	200	P	P	19 05 37.7	-0.1
	1.0nm,0.6s,mb3.5,baz=142,slow=7.0,SNR=3.3						
HLID	Hailey	84.64	41	eP	P	19 05 42.5	+0.7
	2.7nm,0.9s,mb3.9						
PDAR	Pinedale Array	87.36	43	P	P	19 05 54.5	-0.2
	1.5nm,0.6s,mb3.9,baz=228,slow=1.8,SNR=13						
MKAR	Makanchi Array	109.25	314	PKiKP	PKiKP	19 11 31.4	-1.5
	0.4nm,0.5s,baz=141,slow=0.4,SNR=7.7						
MKAR	Makanchi Array	109.25	314	PKPdf	PKiKP	19 11 31.4	-1.5
ARCES	ARCESS Array B	126.41	350	PKP	PKPdf	19 12 03.1	-2.7
	2.0nm,0.9s,baz=20,slow=3.9,SNR=5.3						
BOSA	Boshof	128.36	207	PKP	PKPdf	19 12 10.9	+1.4
	1.1nm,0.6s,baz=45,slow=1.4,SNR=2.5						
FINES	FINESS Array B	133.29	344	PKP	PKPdf	19 12 16.3	-2.5
	1.0nm,0.7s,baz=64,slow=4.4,SNR=4.0						
NOA	NORSAR Array B	136.47	353	PKP	PKPdf	19 12 24.2	-0.6
	0.4nm,0.8s,baz=10,slow=3.5,SNR=2.6						
BR131	Keskin Array S	144.89	315	ePKPdf	PKPdf	19 12 40.0	+0.2
BRTR	Keskin Array B	144.89	315	PKP	PKPdf	19 12 40.2	+0.4
	2.2nm,0.7s,baz=90,slow=2.9,SNR=13						
KOLS	Kolonicke sedl	144.91	336	ePKP	PKPdf	19 12 40.0	+0.1
CRVS	Cervenica-Dubn	145.24	337	ePKP	PKPdf	19 12 41.5	+1.1
CLL	Collm	145.56	347	i PKPbc	PKPdf	19 12 41.3	+0.3
	comp=Z,13nm,0.9s						
UPC	Upice	145.59	344	ePKP	PKPbc	19 12 42.5	-0.2
DPC	Dobruska-Polom	145.65	343	ePKP	PKPbc	19 12 42.7	-0.1
BRG	Berggiesshubel	145.76	346	ePKP	PKPbc	19 12 42.5	-0.6
	comp=Z,3.5nm,0.9s						
PVCC	Panska Ves	145.94	345	ePKP	PKPbc	19 12 43.5	-0.2
KECS	Kecovo	145.95	337	ePKP	PKPdf	19 12 41.6	0.0
PRU	Pruhonice	146.44	345	ePKP	PKPdf	19 12 43.3	+0.8
VYHS	Vyhne	146.52	339	ePKP	PKPbc	19 12 45.1	-0.2
NKC	Novy Kostel	146.69	347	ePKP	PKPdf	19 12 44.1	+1.2
KHC	Kasperske Hory	147.47	345	ePKP	PKPbc	19 12 47.3	-0.4
GERES	GERESS Array B	147.71	345	PKPbc	PKPbc	19 12 47.8	-0.5
	comp=Z,2.9nm,0.7s,baz=25,slow=3.3,SNR=27						
GIVF	Givet	147.86	356	ePKP1	PKPbc	19 12 47.9	-0.8
BAIF	Baives	147.94	357	ePKP1	PKPbc	19 12 48.1	-0.8
	comp=Z,9.0nm,0.8s						
FLN	La Foliniere	149.26	3	ePKP1	PKPbc	19 12 50.9	-1.2
CDF	Champ du Feu	149.31	353	ePKP1	PKPbc	19 12 51.5	-0.8
	comp=Z,3.7nm,0.4s						
LDF	La Druitiere	149.44	2	ePKP1	PKPbc	19 12 51.2	-1.4
GRR	Gorron	149.61	3	ePKP1	PKPbc	19 12 51.9	-1.1
	comp=Z,6.2nm,0.5s						
HAU	Haudompre	149.82	354	ePKP1	PKPbc	19 12 52.4	-1.1
HINF	Hinteralfeld	149.95	353	ePKP1	PKPbc	19 12 52.8	-1.0
	comp=Z,4.3nm,0.6s						
LOR	Lormes	150.75	357	ePKP1	PKPbc	19 12 54.8	-0.8
	comp=Z,5.0nm,0.6s						
SSF	Saint Saulge	150.97	357	ePKP1	PKPbc	19 12 55.3	-0.8
	comp=Z,11nm,1.0s						
MFF	Saint Martin d	151.43	3	ePKP1	PKPbc	19 12 57.1	0.0
TCF	Toulx Ste Croi	151.78	359	ePKP1	PKPbc	19 12 57.6	-0.3

IDC 09 19:34:53.5±2.6, 2333N×4492W, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.6/22, mbtmp3.6/5, MS3.3/4, Ms1 3.3/4, ms1mx2.9/26, Error ellipse: s-maj=80.7km s-min=31.2km az=12.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	41.90	107	LR	LR	19 57 58.1	
	comp=Z,53nm,20.8s,baz=302,slow=33						
TORD	Torodi Ar. Bea	45.24	94	P	P	19 43 12.5	0.0
	1.3nm,0.9s,baz=294,slow=8.2,SNR=6.8						
TORD				LR	LR	20 01 26.9	
	comp=Z,39nm,18.1s,baz=200,slow=35						
ULM	Lac du Bonnet	47.66	318	LR	LR	20 00 26.8	
	comp=Z,18nm,19.8s,baz=103,slow=32						
GERES	GERESS Array B	52.28	45	P	P	19 44 07.0	+0.4
	0.3nm,0.8s,baz=245,slow=12,SNR=4.1						
PDAR	Pinedale Array	56.20	307	P	P	19 44 35.5	+0.4
	0.8nm,0.5s,baz=88,slow=8.2,SNR=5.9						
AKASG	Malin Array Be	62.38	44	P	P	19 45 16.8	-1.1
	0.2nm,0.4s,baz=270,slow=5.6,SNR=4.1						
BRTR	Keskin Array B	66.97	55	P	P	19 45 49.6	+1.8
	0.3nm,0.3s,baz=316,slow=4.0,SNR=4.6						
ATD	Arta Tunnel	83.49	80	LR	LR	20 27 34.8	
	comp=Z,22nm,18.8s,baz=15,slow=38						

*IDC **09** 19:51:35.5±0.9, 9.12S×10771E, h0^{km}, mb4.0/7, mb1 4.1/7, mb1mx3.9/16, mbtmp4.0/7, Error ellipse: s-maj=43.8km s-min=18.7km az=66.0*
*NEIC **09** 19:51:36.8±0.4, 923S×10748E, h10^{km}, mb4.8/6, Error ellipse: s-maj=22.3km s-min=7.6km az=63.0*
*ISCJB **09** 19:51:44.0±3.3, 90S±0.1×1079E±02, h82^{km}±30^{km}, mb4.2/14, Error ellipse: s-maj=32.4km s-min=13.2km az=118.0*

ISC 09 19:51:44.1±3.3, 90S±01×1079E±02, h66^{km}±30^{km}, n23, σ0^{s}63/25, mb4.2/14, 1C-2D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJII	Banjamegara	2.48	47	⇑i P	Pn	19 52 23.8	+1.6
BJII				i S	Sn	19 52 45.2	-6.2
BJII	Banjamegara	2.48	47	⇓eP	Pn	19 52 17.9	-4.3
YOGI	Yogyakarta	2.69	64	⇓eP	Pn	19 52 25.2	+0.2
YOGI				eS	Sn	19 52 55.4	-1.0
ASAR	Alice Springs	28.84	123	P	P	19 57 37.1	+0.9
	0.7nm,0.6s,mb3.4,baz=300,slow=9.6,SNR=10						
STKA	Stephens Creek	38.66	131	P	P	19 59 01.1	-0.2
	2.6nm,0.7s,mb4.2,baz=312,slow=8.7,SNR=9.8						
STKA	Stephens Creek	38.66	131	eP	P	19 59 02.3	+1.0
PKI	Pulchoki	42.39	330	eP	P	19 59 31.7	-0.3
GUN	Gumba	42.44	331	eP	P	19 59 32.4	0.0
DMN	Daman	42.57	330	eP	P	19 59 33.6	+0.2
	11nm,0.7s,mb4.7						
KKN	Kakani	42.63	330	eP	P	19 59 34.1	+0.1
	12nm,0.8s,mb4.7						
GKN	Gorkha	43.13	329	eP	P	19 59 37.6	-0.4
	8.6nm,0.4s,mb4.8						
KOLN	Koldanda	43.47	328	eP	P	19 59 40.5	-0.2
	24nm,0.7s,mb5.1						
SONM	Songino Array	56.62	359	P	P	20 01 21.3	+1.0
	1.0nm,0.6s,mb4.0,baz=172,slow=7.7,SNR=10						
MKAR	Makanchi Array	60.07	340	P	P	20 01 44.4	+0.1
	2.4nm,0.5s,mb4.5,baz=151,slow=7.3,SNR=37						
KURK	Kurchatov	64.68	340	eP	P	20 02 14.4	-0.7
	5.2nm,0.8s,mb4.4						
MAW	Mawson	65.69	197	P	P	20 02 21.2	-0.5
	0.9nm,0.7s,mb3.7,baz=60,slow=8.1,SNR=4.6						
MAW	Mawson	65.69	197	P	P	20 02 17.9	-3.7
ZAL	Zalesovo	65.69	345	P	P	20 02 22.1	+0.4
	0.9nm,0.4s,mb4.0,baz=254,slow=4.2,SNR=2.4						
BRVK	Borovoye	69.62	337	eP	P	20 02 46.4	0.0
	1.0nm,0.8s,mb3.7						
CHKZ	Chkalovo	69.97	337	eP	P	20 02 48.5	-0.1
	6.3nm,0.6s,mb4.6						
VNDA	Vanda	73.83	169	P	P	20 03 10.6	-1.0
	0.5nm,0.8s,mb3.3,baz=307,slow=5.7,SNR=3.5						
VNDA	Vanda	73.83	169	eP	P	20 03 10.9	-0.8
	0.6nm,0.8s,mb3.4						
QSPA	South Pole Qui	80.97	180	eP	P	20 03 51.5	-0.1

*ISCJB **09** 20:15:52.1±0.7, 2163S±006×3312E±007, h10^{km}, mb3.9/6, Error ellipse: s-maj=11.5km s-min=6.2km az=74.7*
*IDC **09** 20:15:53.3±0.9, 2145S×3326E, h0^{km}, mb3.8/7, mb1 4.2/13, mb1mx3.9/25, mbtmp4.1/13, ML3.9/6, MS3.1/3, Ms1 3.0/3, ms1mx2.7/25, Error ellipse: s-maj=20.1km s-min=18.8km az=109.0*
*NEIC **09** 20:15:54.4±0.6, 2144S×3328E, h10^{km}, mb4.4/1, Error ellipse: s-maj=12.5km s-min=10.3km az=145.0*
*PRE **09** 20:15:55.7±1.1, 2197S×3336E, h5^{km}, ML4.7*

ISC 09 20:15:54.8±0.6, 2161S±006×3313E±007, h10^{km}, n24, σ1^{s}64/41, mb3.9/6, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	2.98	255	eP	Pn	20 16 45.8	+3.8
MSNA				eS	Sn	20 17 23.7	+5.9
MSNA				AML	AML	20 17 28.0	
	comp=Z,252nm,0.4s						
POGA	Pongola	5.90	193	eP	Pn	20 17 20.2	-2.0
POGA				eS	Sn	20 18 21.8	-8.0
POGA				AML	AML	20 19 16.6	
	comp=Z,131nm,0.5s						
SLR	Silverton	6.05	226	eP	Pn	20 17 25.7	+1.4
SLR				eS	Sn	20 18 31.6	-2.0
SLR				AML	AML	20 19 19.6	
	comp=Z,186nm,0.5s						
KSR	Koster	7.10	232	eP	Pn	20 17 41.1	+2.4
KSR				eS	Sn	20 18 57.9	-1.6
KSR				AML	AML	20 19 56.3	
	comp=Z,100nm,0.6s						
LBTB	Lobatse	7.71	242	Pn	Pn	20 17 50.9	+3.9
	comp=Z,3.5nm,0.3s,baz=64,slow=13,SNR=56						
LBTB				Sn	Sn	20 19 15.8	+1.4
	comp=Z,14nm,0.3s,baz=164,slow=21,SNR=6.8						
LBTB				Lg		20 20 00.3	
	comp=Z,6.3nm,0.3s,baz=153,slow=22,SNR=6.1						
LBTB	Lobatse	7.71	242	Pn	Pn	20 17 50.9	+3.9
LBTB				Sn	Sn	20 19 15.8	+1.4
LBTB				Lg		20 20 00.3	
LSZ	Lusaka	7.85	323	Pn	Pn	20 17 47.9	-1.2
	comp=Z,3.4nm,0.3s,baz=148,slow=13,SNR=30						
LSZ				Sn	Sn	20 19 11.5	-6.5
	comp=Z,6.4nm,0.3s,baz=189,slow=11,SNR=7.1						
LSZ				Lg		20 19 56.8	
	comp=Z,22nm,0.3s,baz=222,slow=22,SNR=13						
LSZ				LR	LR	20 20 15.9	
	comp=Z,78nm,18.6s,baz=201,slow=34						
LSZ	Lusaka	7.85	323	Pn	Pn	20 17 47.9	-1.2
LSZ				Sn	Sn	20 19 11.5	-6.5
LSZ				Lg		20 19 56.8	
LSZ				LR	LR	20 20 15.9	
KSD	Kokstad	9.50	200	eP	Pn	20 18 10.9	-0.7
KSD				eS	Sn	20 19 48.5	-10
KSD				AML	AML	20 21 05.7	
	comp=Z,50nm,0.6s						
BOSA	Boshof	9.97	224	eP	Pn	20 18 19.2	+1.1
BOSA				eS	Sn	20 20 04.5	-5.6
BOSA				AML	AML	20 21 25.8	
	comp=Z,40nm,0.5s						
BOSA	Boshof	9.97	224	Pn	Pn	20 18 19.8	+1.7
	comp=Z,2.0nm,0.3s,baz=50,slow=13,SNR=26						
BOSA				Sn	Sn	20 20 06.7	-3.4
	comp=Z,3.6nm,0.3s,baz=336,slow=22,SNR=4.8						
BOSA				Lg		20 21 11.5	
	comp=Z,2.1nm,0.3s,baz=143,slow=17,SNR=5.2						
BOSA				LR	LR	20 22 34.2	
	comp=Z,102nm,19.8s,baz=243,slow=39						
HVD	Hendrik Verwoe	11.28	216	eP	Pn	20 18 37.2	+1.2
HVD				eS	Sn	20 20 34.1	-7.9
HVD				AML	AML	20 22 01.5	
	comp=Z,23nm,0.9s						
UPI	Upington	12.69	236	eP	Pn	20 18 57.8	+2.5
UPI				eS	Sn	20 21 11.7	-5.0
UPI				AML	AML	20 21 35.4	
	comp=Z,16nm,0.7s						
OPO	Ambohidratompo	13.55	80	Pn	Pn	20 19 03.0	-4.0
	comp=Z,0.8nm,0.3s,baz=254,slow=14,SNR=12						
OPO				Sn	Sn	20 21 24.5	-13
	comp=Z,0.9nm,0.3s,baz=150,slow=20,SNR=4.8						
TSUM	Tsumeb	14.77	277	Pn	Pn	20 19 23.5	-0.2
	comp=Z,1.2nm,0.3s,baz=104,slow=12,SNR=31						
TSUM				Sn	Sn	20 22 02.7	-4.8
	comp=Z,0.5nm,0.3s,baz=286,slow=20,SNR=5.1						
TSUM				Lg		20 23 40.0	
	comp=Z,1.9nm,0.3s,baz=221,slow=17,SNR=4.1						
TSUM				LR	LR	20 25 11.9	
	comp=Z,99nm,18.9s,baz=118,slow=38						
TSUM	Tsumeb	14.77	277	Pn	Pn	20 19 23.5	-0.2
TSUM				Sn	Sn	20 22 02.7	-4.8
TSUM				Lg		20 23 40.0	
TSUM				LR	LR	20 25 11.9	
SUR	Sutherland	15.34	223	Pn	Pn	20 19 33.2	+2.0
	comp=Z,1.9nm,0.3s,baz=66,slow=14,SNR=20						
SUR				Sn	Sn	20 22 19.0	-2.1
	comp=Z,1.5nm,0.3s,baz=137,slow=22,SNR=4.6						
SUR				Lg		20 23 57.2	
	comp=Z,1.1nm,0.3s,baz=134,slow=23,SNR=3.1						
KMBO	Kilima Mbogo	20.75	12	P	P	20 20 34.8	-0.9
	comp=Z,0.6nm,0.6s,baz=196,slow=18,SNR=3.2						
TORD	Torodi Ar. Bea	46.32	315	P	P	20 24 21.5	+0.7
	comp=Z,1.4nm,0.6s,mb4.1,baz=132,slow=7.3,SNR=30						
MAW	Mawson	49.62	166	P	P	20 24 47.5	+1.2
	comp=Z,1.1nm,0.8s,mb3.9,baz=278,slow=14,SNR=3.5						
GERES	GERESS Array B	72.25	347	P	P	20 27 18.5	-1.8
	comp=Z,0.2nm,0.4s,mb3.4,baz=168,slow=6.8,SNR=3.8						
BDFB	Brasilia	76.34	258	P	P	20 27 46.9	+2.8
	comp=Z,2.7nm,0.6s,mb4.4,baz=123,slow=7.5,SNR=4.0						
VNDA	Vanda	76.66	170	P	P	20 27 46.7	+0.9
	comp=Z,0.6nm,0.7s,mb3.6,baz=240,slow=2.3,SNR=3.9						
ASAR	Alice Springs	90.76	116	P	P	20 28 58.3	+0.2
	comp=Z,0.7nm,0.7s,mb4.1,baz=241,slow=3.6,SNR=9.1						

*ISCJB **09** 20:36:19.3±1.3, 170N±0.1×619W±0.1, h112^{km}±11^{km}, Error ellipse: s-maj=23.2km s-min=7.2km az=80.1*
*TRN **09** 20:36:20.1, 1692N×6182W, h102^{km}, MD2.9*
*RSPR **09** 20:36:21.0, 1789N×6181W, h149^{km}±20^{km}, MD4.3/3, MD4.3/3*

ISC 09 20:36:20.0±1.3, 170N±01×619W±01, h109^{km}±11^{km}, n17, σ0^{s}76/20, 5C-4D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPA	Boggy Peak	0.05	355	⇓eP	Pn	20 36 35.7	+0.8
BPA				eS	Sn	20 36 46.4	+0.3
SEG	Port Louis	0.68	151	⇓eP	Pn	20 36 38.3	+0.2
LZG	Guadaloupe-1	0.85	175	⇓eP	Pn	20 36 39.0	-0.6
LZG				eS	Sn	20 36 54.2	-0.1
DOG	Dongo Capester	0.98	167	eP	Pn	20 36 40.9	0.0
PHG	Guadaloupe-2	1.00	168	eP	Pn	20 36 41.7	+0.7
DEG	La Desirade	1.02	132	⇓eP	Pn	20 36 41.5	+0.2
DEG				eS	Sn	20 36 56.7	-0.7
TBG	Guadaloupe-3	1.15	170	eP	Pn	20 36 42.2	-0.5
MGG	Marie-Galante	1.19	154	eP	Pn	20 36 43.2	+0.1
TBVI	Tortola	2.98	299	eS	Sn	20 37 39.0	-1.8
TBVI	Tortola	2.98	299	⇑eP	Pn	20 37 05.8	+0.1
STVI	Saint Thomas	3.26	295	⇑eP	Pn	20 37 09.3	0.0
CULB	Culebra	3.56	292	⇑eP	Pn	20 37 12.4	-1.0
CULB	Culebra	3.56	292	eS	Sn	20 37 53.6	-1.2
MTP	Monte Pirata	3.70	288	⇑eP	Pn	20 37 15.5	+0.3
MTP	Monte Pirata	3.70	288	eS	Sn	20 37 59.5	+1.4
CBYP	Canovanas	4.02	289	⇑eP	Pn	20 37 20.5	+0.9
CBYP	Canovanas	4.02	289	eS	Sn	20 38 06.6	+0.8

*NEIC **09** 20:48:01.7, 3143S×7169W, h22^{km}, ML2.9(GUC), After GUC.*

GUC 09 20:48:01.7±0.7, 3143S×7169W, h22^{km}±3^{km}, MD3.6,

ML2.9,3C-8D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.48**	**160**	⇓iP	Pb	20 48 11.3	-0.2
CHNG				iS	Sb	20 48 18.2	+0.1
CHNG				AML	AML	20 48 18.9	
	comp=N,442nm,0.3s						
CMCH	**Combarbala**	**0.64**	**67**	⇑iP	Pb	20 48 13.4	-0.8
CMCH				iS	Sb	20 48 23.4	+0.7
CMCH				AML	AML	20 48 23.9	
	comp=E,2μm,0.3s						
CMCH	**Combarbala**	**0.64**	**67**	⇑iP	Pb	20 48 13.4	-0.8
CMCH				iS	Sb	20 48 23.4	+0.7
OVCH	**Ovalle**	**0.92**	**27**	⇓iP	Pb	20 48 18.4	-0.5
OVCH				iS	Sb	20 48 30.8	+0.1
OVCH				AML	AML	20 48 33.0	
	comp=E,639nm,0.4s						
OVCH	**Ovalle**	**0.92**	**27**	⇓iP	Pb	20 48 18.4	-0.5
OVCH				iS	Sb	20 48 30.8	+0.1
TLL	**Tololo Astrono**	**1.47**	**31**	⇓iP	Pn	20 48 27.5	+0.6
TLL				iS	Sn	20 48 47.2	+1.7
TLL				AML	AML	20 48 50.9	
	comp=N,393nm,0.3s						
TLL	**Tololo Astrono**	**1.47**	**31**	⇓iP	Pn	20 48 27.5	+0.6
TLL				iS	Sn	20 48 47.2	+1.7
JACH	**Jahuel**	**1.56**	**144**	⇑iP	Pn	20 48 29.0	+0.9
JACH				iS	Sn	20 48 48.6	+0.9
PEL	**Peldehue**	**1.91**	**154**	⇓iP	Pn	20 48 33.8	+0.9
PEL				iS	Sn	20 48 58.6	+2.3
PEL				AML	AML	20 49 01.9	
	comp=E,319nm,0.3s						
PEL	**Peldehue**	**1.91**	**154**	⇓iP	Pn	20 48 33.8	+0.9
PEL				iS	Sn	20 48 58.6	+2.3
CLCH	**Cerro Calan**	**2.19**	**154**	AML	AML	20 49 12.5	
	comp=E,197nm,0.6s						
FCH	**Farellones**	**2.23**	**148**	⇓iP	Pn	20 48 39.4	+2.1
FCH				iS	Sn	20 49 08.2	+3.9
FCH				AML	AML	20 49 18.3	
	comp=E,72nm,0.2s						
LCO	**Las Campanas**	**2.56**	**20**	iS	Sn	20 49 15.3	+3.1

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*TRN **09** 20:48:33.5, 1907N×6271W, h5km*
*ISCJB **09** 20:48:35.4±1.3, 193N±0.1×6258W±0.05, h65km±57km, Error ellipse: s-maj=24.4km s-min=8.5km az=2.3*
*NEIC **09** 20:48:36.9, 1933N×6257W, h50km, MD3.8(RSPR), After RSPR.*
*RSPR **09** 20:48:36.9, 1933N×6257W, h50km±15km, MD3.8/3, MD3.8/3*
ISC 09 20:48:35.6±3.0**, 192N**±04×**627W**±02**, h7**km±57km**, n17, σ0^{s}34**/28**, 15C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.99**	**249**	⇑eP	**Pn**	**20 49 09.2**	**-0.4**
TBVI				eS	**Sn**	**20 49 34.8**	**0.0**
STVI	**Saint Thomas**	**2.32**	**250**	⇑eP	**Pn**	**20 49 13.9**	**-0.3**
STVI				eS	**Sn**	**20 49 42.4**	**-0.6**
CULB	**Culebra**	**2.67**	**252**	⇑eP	**Pn**	**20 49 18.7**	**-0.3**
CULB				eS	**Sn**	**20 49 51.5**	**0.0**
MTP	**Monte Pirata**	**2.94**	**250**	⇑eP	**Pn**	**20 49 22.6**	**-0.2**
MTP				eS	**Sn**	**20 49 58.3**	**0.0**
LZG	**Guadaloupe-1**	**3.11**	**164**	eP	**Pn**	**20 49 25.5**	**+0.5**
CBYP	**Canovanas**	**3.16**	**254**	⇑eP	**Pn**	**20 49 25.6**	**-0.1**
CBYP				eS	**Sn**	**20 50 03.5**	**-0.1**
HUMP	**Col San Antoni**	**3.19**	**252**	⇑eP	**Pn**	**20 49 26.0**	**-0.1**
HUMP				eS	**Sn**	**20 50 04.4**	**0.0**
DEG	**La Desirade**	**3.21**	**151**	eP	**Pn**	**20 49 26.0**	**-0.4**
SJG	**San Juan**	**3.47**	**253**	⇑eP	**Pn**	**20 49 29.7**	**-0.3**
CELP	**Cerrillos**	**3.87**	**255**	⇑eP	**Pn**	**20 49 35.6**	**+0.1**
ICM	**Isla Caja Muer**	**3.87**	**252**	⇑eP	**Pn**	**20 49 36.1**	**+0.6**
ICM				eS	**Sn**	**20 50 21.8**	**+0.5**
OBIP	**Obispado Ponce**	**3.90**	**254**	⇑eP	**Pn**	**20 49 36.1**	**+0.2**
AOPR	**Arecibo Observ**	**3.96**	**259**	⇑eP	**Pn**	**20 49 36.6**	**-0.1**
AOPR				eS	**Sn**	**20 50 23.0**	**-0.4**
AOPR	**Arecibo Observ**	**3.96**	**259**	⇑eP	**Pn**	**20 49 36.6**	**-0.1**
AOPR				eS	**Sn**	**20 50 23.0**	**-0.4**
LSP	**Las Mesas**	**4.31**	**258**	⇑eP	**Pn**	**20 49 42.1**	**+0.6**
LSP				eS	**Sn**	**20 50 31.9**	**-0.1**
MGP	**Maguayo**	**4.36**	**256**	⇑eP	**Pn**	**20 49 42.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**4.37**	**256**	⇑eP	**Pn**	**20 49 42.4**	**0.0**
CRPR				eS	**Sn**	**20 50 34.4**	**+0.7**

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*IPEC **09** 20:57:49.9±0.1, 50.10N×18.43E, h7km±1km, ML2.0/3, Error ellipse: s-maj=1.7km s-min=0.7km az=160.0*
*CSEM **09** 20:57:49.8±0.3, 50.18N×18.39E, h1km±1km, ML3.0/6, Error ellipse: s-maj=6.4km s-min=3.6km az=8.0*
*PRU **09** 20:57:50.6, 50.16N×18.32E, h0km*
*VIE **09** 20:57:51.6±0.6, 49.76N×18.49E, h0km, mb1.9/4, ML2.4/4, Error ellipse: s-maj=3.6km s-min=2.8km az=79.0 19 km ESE of Ostrava Suspected Mining induced.*
WAR 09 20:57:50.4, 5008N×1843E, ML2.5, 1C-3D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.15**	**271**	ePg	Pg	20 57 53.9	+0.5
RAC				eSg	Sg	20 57 57.1	+1.7
OKC	**Ostrava-Krasne**	**0.30**	**217**	ePG	Pg	20 57 56.5	+0.2
OKC				eSG	Sg	20 58 01.4	+1.2
	77nm,0.5s						
OKC	**Ostrava-Krasne**	**0.30**	**217**	ePg	Pg	20 57 56.1	-0.2
OKC				eSg	Sg	20 58 00.3	+0.1
MORC	**Moravsky Berou**	**0.65**	**243**	ePg	Pg	20 58 02.4	-0.5
MORC				eSg	Sg	20 58 10.9	-0.4
	26nm,0.2s						
OJC	**Ojcow**	**0.89**	**80**	ePg	Pg	20 58 06.9	-0.5
OJC				eSg	Sg	20 58 19.1	+0.1
OJC	**Ojcow**	**0.89**	**80**	ePg	Pg	20 58 06.7	-0.7
OJC				eSg	Sg	20 58 18.1	-0.9
JAVC	**Velka Javorina**	**1.32**	**202**	ePg	Pg	20 58 15.7	0.0
DPC	**Dobruska-Polom**	**1.38**	**282**	ePG	Pg	20 58 15.7	-1.2
DPC				eSG	Sg	20 58 33.9	-1.0
	26nm,0.2s						
DPC	**Dobruska-Polom**	**1.38**	**282**	ePg	Pg	20 58 15.6	-1.3
DPC				eSg	Sg	20 58 33.1	-1.8
NIE	**Niedzica**	**1.39**	**118**	ePg	Pg	20 58 16.6	-0.4
NIE				eSg	Sg	20 58 35.8	+0.8
VRAC	**Vranov**	**1.42**	**238**	ePg	Pg	20 58 16.4	-1.3
VRAC				eSg	Sg	20 58 35.0	-1.1
	22nm,0.2s						
KSP	**Ksiaz**	**1.57**	**300**	ePg	Pg	20 58 20.1	-0.3
KSP				eSg	Sg	20 58 39.9	-0.9
VYHS	**Vyhne**	**1.61**	**170**	ePN	Pn	20 58 19.7	-0.4
VYHS				eSN	Sn	20 58 41.5	0.0
VYHS	**Vyhne**	**1.61**	**170**	ePn	Pn	20 58 19.7	-0.4
VYHS				eSn	Sn	20 58 41.6	+0.1
KRUC	**Moravsky**	**1.67**	**233**	ePn	Pn	20 58 19.3	-1.6
KRUC				eSg	Sg	20 58 42.7	-1.5
	11nm,0.2s						
SMOL	**Smolenice**	**1.70**	**203**	ePN	Pn	20 58 20.7	-0.6
SMOL				eSN	Sn	20 58 43.9	+0.1
ZST	**Bratislava**	**2.08**	**205**	ePN	Pn	20 58 25.8	-0.7
KECS	**Kecovo**	**2.09**	**139**	ePN	Pn	20 58 26.7	+0.1
KECS				ePG	Pg	20 58 30.4	0.0
KECS				eSN	Sn	20 58 54.5	+1.2
CRVS	**Cervenica-Dubn**	**2.30**	**120**	ePN	Pg	20 58 33.6	-0.9
CRVS				eSN	Sg	20 59 03.6	-0.7
PRU	**Pruhonice**	**2.51**	**269**	ePG	Pg	20 58 35.1	-3.4
PRU				eSG	Sg	20 59 08.1	-3.0
	5.2nm,0.5s						
CONA	**Conrad Observa**	**2.74**	**219**	⇓iPn	Pn	20 58 34.4	-1.2
CONA				⇑iSg	Sg	20 59 15.4	-3.0
	3.8nm,0.3s						
KOLS	**Kolonicke sedl**	**2.75**	**113**	ePG	Pg	20 58 44.1	+0.9
KOLS				eSN	Sn	20 59 14.6	+4.9
BRG	**Berggiesshubel**	**2.98**	**287**	PG	Pg	20 58 44.5	-2.9
BRG				SG	Sg	20 59 23.4	-2.7
	2.3nm,0.4s						
KHC	**Kasperske Hory**	**3.30**	**255**	ePG	Pg	20 58 49.6	-4.0
KHC				eSN	Sn	20 59 18.5	-4.7
KHC				eSG	Sg	20 59 33.7	-2.7
	7.6nm,0.4s						
MOA	**Molln**	**3.54**	**232**	⇓iPn	Pn	20 58 45.6	-1.0
MOA				⇓iSg	Sg	20 59 43.1	-1.0
	comp=Z,5.0nm,0.6s						
NKC	**Novy Kostel**	**3.85**	**275**	ePG	Pg	20 59 00.3	-3.9
NKC				eSG	Sg	20 59 51.6	-2.6
	4.3nm,0.3s						

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*ISCJB **09** 21:02:19.5±0.5, 4375N±004×10525W±006, h0km, mb3.9/4, Error ellipse: s-maj=6.8km s-min=5.5km az=116.0*
*IDC **09** 21:02:20.1±3.2, 4362N×10539W, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.7/21, mbtmp3.9/6, ML3.8/2, Error ellipse: s-maj=100.1km s-min=7.8km az=153.0*
*NEIC **09** 21:02:21.2±0.3, 4374N×10525W, h0km, ML3.4, Error ellipse: s-maj=5.5km s-min=4.2km az=149.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
ISC 09 21:02:21.1±0.5**, 4375N**±004×**10524W**±006**, h0**km**, n42, σ0^{s}99**/44**, mb3.9**/4**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**66**	eP	**Pg**	**21 02 40.1**	**+0.9**
PHWY	**Pilot Hill**	**2.45**	**184**	eP	**Pn**	**21 03 01.9**	**-0.4**
RWWY	**Rawlins**	**2.52**	**216**	eP	**Pn**	**21 03 03.9**	**+0.6**
LAO	**LASA Array**	**3.02**	**347**	eP	**Pn**	**21 03 10.6**	**+0.4**
BW06	**Boulder Array**	**3.31**	**254**	eP	**Pn**	**21 03 14.2**	**+0.1**
PDAR	**Pinedale Array**	**3.31**	**254**	Pn	**Pn**	**21 03 15.2**	**+1.2**
	8.0nm,0.3s,baz=69,slow=15,SNR=65						
PDAR				Pg	**Pg**	**21 03 19.9**	**-4.5**
	12nm,0.3s,baz=78,slow=20,SNR=51						
PDAR				Lg		21 03 58.8	
	17nm,0.3s,baz=62,slow=32,SNR=17						
GCMT	**Greycliff**	**3.76**	**304**	eP	**Pn**	**21 03 20.6**	**+0.3**
LOHW	**Long Hollow**	**3.90**	**270**	eP	**Pn**	**21 03 22.7**	**+0.5**
ISCO	**Idaho Springs**	**3.95**	**184**	eP	**Pn**	**21 03 23.6**	**+0.7**
FLWY	**Flagg Ranch**	**3.96**	**277**	eP	**Pn**	**21 03 24.1**	**+1.0**
MOOW	**Moose Ponds**	**3.99**	**272**	eP	**Pn**	**21 03 24.3**	**+0.8**
SNOW	**Snow King Moun**	**4.02**	**268**	eP	**Pn**	**21 03 24.6**	**+0.7**
YNR	**Norris Junctio**	**4.03**	**286**	Pn	**Pn**	**21 03 21.8**	**-2.2**
YNR				ePg	**Pg**	**21 03 35.0**	**-3.4**
YFT	**Old Faithful**	**4.09**	**282**	eP	**Pn**	**21 03 24.6**	**-0.3**
REDW	**Red Top Meadow**	**4.10**	**267**	ePg	**Pg**	**21 03 33.0**	**-6.7**
IMW	**Indian Meadow**	**4.13**	**274**	eP	**Pn**	**21 03 29.5**	**+4.1**
TPAW	**Teton Pass**	**4.16**	**268**	eP	**Pn**	**21 03 27.0**	**+1.2**
AHID	**Auburn Hatcher**	**4.39**	**259**	ePg	**Pg**	**21 03 40.8**	**-4.5**
RRI2	**Red Ridge**	**4.44**	**267**	eP	**Pn**	**21 03 30.3**	**+0.6**
SMCO	**Snowmass**	**4.75**	**197**	ePg	**Pg**	**21 03 45.3**	**-6.7**
HWUT	**Hardware Ranch**	**5.13**	**248**	eP	**Pn**	**21 03 38.6**	**-0.6**
	16nm,0.5s						
TCUT	**Toone Canyon**	**5.27**	**242**	ePn	**Pn**	**21 03 40.3**	**-0.8**
EGMT	**Eagleton**	**5.32**	**325**	ePn	**Pn**	**21 03 41.9**	**+0.2**
	26nm,0.5s						
DLMT	**Dillon**	**5.50**	**290**	ePn	**Pn**	**21 03 43.9**	**-0.4**
	6.3nm,0.6s						
HRY	**Holter Researc**	**5.52**	**305**	ePn	**Pn**	**21 03 44.8**	**+0.3**
MCMT	**McKenzie Canyo**	**5.57**	**284**	ePn	**Pn**	**21 03 48.1**	**+2.9**
DAU	**Daniels Canyon**	**5.58**	**235**	Pn	**Pn**	**21 03 43.6**	**-1.7**
HVU	**Hansel Valley**	**5.89**	**253**	ePn	**Pn**	**21 03 48.9**	**-0.6**
	10nm,0.5s						
SRU	**San Rafael**	**6.10**	**222**	ePn	**Pn**	**21 03 51.0**	**-1.5**
	19nm,0.4s						
ECSD	**EROS,Sioux Fal**	**6.25**	**87**	ePn	**Pn**	**21 03 55.4**	**+0.9**
TMUT	**Trail Mountain**	**6.31**	**227**	ePn	**Pn**	**21 03 55.8**	**+0.5**
BGU	**Big Grassy Mou**	**6.43**	**247**	ePn	**Pn**	**21 03 56.1**	**-0.8**
CHMT	**Chamberlain Mo**	**6.48**	**302**	ePn	**Pn**	**21 03 57.3**	**-0.3**
HLID	**Hailey**	**6.66**	**272**	ePn	**Pn**	**21 04 02.0**	**+1.9**
	1.6nm,0.5s						
MSO	**Missoula**	**6.87**	**300**	eP	**Pn**	**21 03 58.1**	**-4.9**
MSU	**Marysvale**	**7.40**	**227**	eP	**Pn**	**21 04 10.4**	**+0.1**
WALA	**Waterton Lakes**	**8.01**	**315**	ePn	**Pn**	**21 04 18.0**	**-0.7**
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**21 04 33.0**	**-0.9**
	2.6nm,0.3s,baz=231,slow=12,SNR=20						
ARCES	**ARCESS Array B**	**61.40**	**18**	P	**P**	**21 12 37.4**	**-1.6**
	0.9nm,0.5s,mb4.2,baz=338,slow=7.0,SNR=15						
FINES	**FINESS Array B**	**68.02**	**23**	P	**P**	**21 13 21.4**	**-0.8**
	0.5nm,0.8s,mb3.8,baz=8.5,slow=3.9,SNR=4.0						
SONM	**Songino Array**	**84.64**	**339**	P	**P**	**21 14 56.5**	**-0.1**
	0.5nm,0.7s,mb3.9,baz=343,slow=3.8,SNR=3.5						
MKAR	**Makanchi Array**	**89.60**	**355**	P	**P**	**21 15 20.6**	**-0.1**
	0.5nm,0.7s,mb3.9,baz=337,slow=5.8,SNR=3.8						

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*ISCJB **09** 21:19:05.7±1.7, 63S±0.1×15480E±005, h103km±15km, mb4.2/13, Error ellipse: s-maj=17.6km s-min=8.7km az=7.9*
*IDC **09** 21:19:06.5±2.4, 628S×15478E, h100km±21km, mb3.9/9, mb1 4.0/12, mb1mx4.0/16, mbtmp4.3/12, MS3.2/3, Ms1 3.2/3, ms1mx3.0/16, Error ellipse: s-maj=19.7km s-min=14.7km az=10.0*
*NEIC **09** 21:19:06.5±1.2, 629S×15489E, h100km±11km, mb4.8/4, Error ellipse: s-maj=12.3km s-min=10.0km az=202.0*
ISC 09 21:19:07.8±1.4**, 63S**±01×**15481E**±005**, h106**km±12km**, n26, σ1^{s}15**/25**, mb4.2**/13**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.95**	**122**	P	**Pn**	**21 20 31.7**	**-1.6**
	7.1nm,0.3s,baz=231,slow=1.0,SNR=3.6						
HNR				S	**Sn**	**21 21 42.0**	**+1.8**
	12nm,0.3s,baz=277,slow=19,SNR=6.7						
PMG	**Port Moresby**	**8.17**	**248**	P	**Pn**	**21 21 03.5**	**0.0**
	11nm,0.3s,baz=49,slow=8.3,SNR=20						
PMG				S	**Sn**	**21 22 33.7**	**-0.4**
	2.1nm,0.3s,baz=338,slow=22,SNR=2.8						
PMG				LR	LR	21 23 41.2	
	comp=Z,140nm,19.7s,baz=60,slow=34						
CTA	**Charters Tower**	**16.00**	**210**	LR	LR	21 28 12.0	
	comp=Z,121nm,20.7s,baz=39,slow=34						
DZM	**Mont Dzumac**	**19.27**	**145**	P	**P**	**21 23 23.3**	**-0.6**
	1.2nm,0.3s,baz=278,slow=17,SNR=6.6						
GUMO	**Guam**	**22.11**	**334**	LR	LR	21 31 14.2	
	comp=Z,57nm,20.2s,baz=2.2,slow=33						
WRAB	**Tennant Creek**	**24.04**	**234**	eP	**P**	**21 24 13.8**	**+1.0**
WB2	**Warramunga Arr**	**24.04**	**234**	eP	**P**	**21 24 13.3**	**+0.5**
ASAR	**Alice Springs**	**26.48**	**227**	P	**P**	**21 24 34.6**	**-0.3**
	2.7nm,0.7s,mb3.8,baz=58,slow=8.6,SNR=43						
ASAR				PcP	PcP	21 27 58.1	+0.9
	1.1nm,0.9s,baz=69,slow=3.7,SNR=5.3						
STKA	**Stephens Creek**	**28.26**	**204**	P	**P**	**21 24 50.6**	**-0.2**
	1.5nm,0.5s,mb3.8,baz=110,slow=22,SNR=5.8						
SONM	**Songino Array**	**68.68**	**327**	P	**P**	**21 29 58.6**	**-1.1**
	0.6nm,0.6s,mb3.6,baz=141,slow=4.0,SNR=6.3						
VNDA	**Vanda**	**71.25**	**178**	P	**P**	**21 30 14.2**	**-1.2**
	0.5nm,0.7s,mb3.5,baz=338,slow=4.2,SNR=4.9						
GUN	**Gumba**	**74.62**	**301**	eP	**P**	**21 30 37.1**	**+1.8**
	15nm,0.6s,mb4.9						
PKI	**Pulchoki**	**74.93**	**301**	eP	**P**	**21 30 38.2**	**+1.2**
KKN	**Kakani**	**75.10**	**301**	eP	**P**	**21 30 38.9**	**+0.9**
DMN	**Daman**	**75.20**	**301**	eP	**P**	**21 30 40.4**	**+1.8**
GKN	**Gorkha**	**75.70**	**301**	eP	**P**	**21 30 42.1**	**+0.6**
	20nm,1.1s,mb4.8						
KOLN	**Koldanda**	**76.53**	**300**	eP	**P**	**21 30 47.3**	**+1.1**
	13nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**82.79**	**319**	P	**P**	**21 31 19.7**	**-0.3**
	2.0nm,0.7s,mb4.1,baz=90,slow=5.1,SNR=12						
ZAL	**Zalesovo**	**83.54**	**326**	P	**P**	**21 31 22.5**	**-1.3**
	1.0nm,0.5s,mb4.0,baz=0.7,slow=6.6,SNR=5.5						
ZAL	**Zalesovo**	**83.54**	**326**	P	**P**	**21 31 22.5**	**-1.3**
QSPA	**South Pole Qui**	**83.64**	**180**	eP	**P**	**21 31 24.7**	**+0.3**
	5.1nm,0.6s,mb4.5						
MAW	**Mawson**	**84.94**	**203**	P	**P**	**21 31 30.0**	**-0.9**
	3.4nm,0.6s,mb4.5,baz=94,slow=6.5,SNR=37						
NVAR	**Mina Array Bea**	**91.46**	**52**	P	**P**	**21 32 02.6**	**+0.6**
	2.1nm,1.0s,mb4.2,baz=264,slow=8.2,SNR=7.1						
CHKZ	**Chkalovo**	**91.62**	**324**	eP	**P**	**21 32 00.5**	**-2.3**
BVAR	**Borovoye Array**	**91.66**	**323**	P	**P**	**21 32 00.7**	**-2.2**
	1.0nm,0.7s,mb4.2,baz=104,slow=4.7,SNR=6.5						
TORD	**Torodi Ar. Bea**	**152.67**	**286**	PKPbc	PKPbc	21 38 54.0	+2.2
	0.8nm,0.7s,baz=66,slow=2.7,SNR=4.9						

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*MDD **09** 22:03:12.6±1.6, 3659N×802W, h30km±38km, mb3.4/5, Error ellipse: s-maj=21.5km s-min=7.1km az=19.0, PRXIMO*
*IGIL **09** 22:03:13.9, 3679N×794W, h2km, ML1.5*
INMG 09 22:03:13.0±1.1**, 3681N×784W, h0**km**, ML1.4, Error ellipse: s-maj=5.4km s-min=3.2km az=0.0, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EGRO	**El Granado**	**0.77**	**21**	P	Pg	22 03 30.1	+2.2
	0.6nm,0.3s,SNR=9.1						
EGRO				S	Sg	22 03 43.0	+5.1
	4.6nm,0.1s,SNR=5.0						
MORF	**Marmelete**	**0.82**	**307**	eP	Pg	22 03 27.6	-1.1
MORF				eS	Sg	22 03 37.8	-1.5
MORF				eS	Sg	22 03 37.8	-1.5
MORF				AML	AML	22 03 43.7	
	comp=N,16nm,0.3s						
MORF	**Marmelete**	**0.82**	**307**	eP	Pg	22 03 27.6	-1.1
MORF				eS	Sg	22 03 37.8	-1.5
PTEO	**Sao Teotonio**	**1.02**	**316**	eP	Pg	22 03 31.2	-1.4
PTEO				eS	Sg	22 03 45.3	-0.5
PTEO							
	comp=N,3.9nm,0.1s						
PBEJ	**Beja**	**1.21**	**359**	eS	Sg	22 03 53.0	+1.0
EMIN	**Mina Concepcio**	**1.33**	**44**	P	Pg	22 03 37.3	-1.2
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN				S	Sg	22 03 56.0	+0.3
	comp=N,1.4nm,0.1s,SNR=7.9						
ESPR	**Espera**	**1.59**	**87**	P	Pn	22 03 40.0	-2.4
	comp=N,5.5nm,0.2s,SNR=17						
ESPR				S	Sn	22 04 00.7	-2.9
	comp=N,4.9nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**2.05**	**18**	P	Pn	22 03 47.2	-1.4
	comp=N,0.4nm,0.2s,SNR=7.9						
EBAD				S	Sn	22 04 13.7	-1.2
	comp=N,1.0nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**2.06**	**5**	eSn	Sn	22 04 14.3	-1.0
PMAFR	**Mafra**	**2.43**	**332**	ePn	Pn	22 03 51.9	-2.0
PMAFR				eSn	Sn	22 04 21.8	-2.5
PTOM	**Tomar**	**2.84**	**351**	ePn	Pn	22 03 57.9	-1.7
PTOM				eSn	Sn	22 04 30.9	-3.5
PTOM							
	comp=N,3.3nm,0.2s						
EADA	**Adamuz**	**2.92**	**61**	P	Pn	22 03 59.0	-1.7
	comp=N,0.3nm,0.2s,SNR=7.9						
EADA				S	Sn	22 04 33.4	-3.1
	comp=N,1.0nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**3.04**	**5**	eSn	Sn	22 04 37.7	-1.6

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*CSEM **09** 22:31:10.5, 7834N×862E, h8km, mb4.8*
*IDC **09** 22:31:11.7±0.7, 7832N×766E, h0km, mb4.4/16, mb1 4.5/20, mb1mx4.4/27, mbtmp4.4/20, ML4.0/5, MS4.3/24, Ms1 4.3/24, ms1mx4.2/38, Error ellipse: s-maj=15.6km s-min=13.2km az=92.0*
*MOS **09** 22:31:11.6±0.9, 7831N×801E, h10km, mb4.9/61, Error ellipse: s-maj=27.3km s-min=3.1km az=91.4*
*ISCJB **09** 22:31:11.8±0.2, 7831N±002×84E±0.1, h10km, mb4.7/158, MS4.3/47, Error ellipse: s-maj=3.4km s-min=2.7km az=59.8*
*NAO **09** 22:31:12.2±3.1, 7832N×854E, h6km±21km, ML3.9*
*BJI **09** 22:31:12.8, 7852N×826E, h24km, mB5.1, mb4.8, Ms5.1, Msz4.7*
*NEIC **09** 22:31:13.5±0.2, 7830N×816E, h10km, mb4.7/98, MS4.2/10, Error ellipse: s-maj=4.2km s-min=3.2km az=68.0*
*HRVD **09** 22:31:13.5±0.2, 7846N×764E, h12km, MW5.1/83, Centroid moment Tensor Solution. LP body waves: s44,c59;Mantle waves: s83,c151; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.28±.13; $M_{\theta\theta}$-2.61±.14; $M_{\phi\phi}$5.88±.10; $M_{r\theta}$0.82±.41; $M_{\theta\phi}$0.65±.10; $M_{\phi r}$-0.79±.29; Best double couple: $M_0$4.96000×10^{16} NP1:ϕ_s215.00000°, δ50.00000°, λ-43.00000°. NP2: ϕ_s336.00000°, δ58.00000°, λ-131.00000°. Principal axes: T 5.9870, Plg5.0000°, Azm94.0000°; N -2.0640, Plg34.0000°, Azm1.0000°; P -3.9330, Plg55.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BER **09** 22:31:14.2±3.1, 7829N×882E, h10km, MD3.8, ML4.0, ML3.9(NAO)*
*SZGRF **09** 22:31:25.1, 7742N×1001E, h33km, mb4.6, MS4.2, Svalbard, Norway, region*
ISC 09 22:31:13.2±0.2**, 7830N**±002×**83E**±01**, h10**km**, (h23**km±2.2km**:pP-P), n506, σ1^{s}07**/567**, mb4.7**/158**, MS4.3**/47**, 17C-26D, Svalbard region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**0.95**	**47**	Pg	**Pg**	**22 31 29.2**	**-2.4**
KBS				Lg		22 31 40.8	
KBS	**Kingsbay**	**0.95**	**47**	eP	**Pg**	**22 31 28.9**	**-2.7**
KBS				eS	**Sg**	**22 31 41.0**	**-3.1**
KBS	**Kingsbay**	**0.95**	**47**	ePg	**Pg**	**22 31 29.1**	**-2.5**
KBS				eSg	**Sg**	**22 31 41.2**	**-2.8**
KBS	**Kingsbay**	**0.95**	**47**	ePg	**Pg**	**22 31 29.1**	**-2.5**
KBS				eSg	**Sg**	**22 31 41.2**	**-2.8**
SPB4	**Spitsbergen Ar**	**1.65**	**90**	ePn	**Pn**	**22 31 41.0**	**-1.2**
SPB4				eSn	**Sn**	**22 32 02.9**	**-0.6**
SPB4	**Spitsbergen Ar**	**1.65**	**90**	ePn	**Pn**	**22 31 41.0**	**-1.2**
SPB4				eSn	**Sn**	**22 32 02.9**	**-0.6**
SPA0	**Spitsbergen Ar**	**1.65**	**90**	Pn	**Pn**	**22 31 41.1**	**-1.2**
	baz=276,slow=12						
SPA0				Lg		22 32 03.1	
	baz=268,slow=37						
HOPEN	**Hopen**	**4.06**	**108**	eP	**Pn**	**22 32 13.1**	**-2.3**
HOPEN				eS	**Sn**	**22 32 58.2**	**-4.7**
HOPEN				AML	AML	22 33 00.2	
	comp=N,6μm,0.4s						
BJO1	**Bjornoya**	**4.57**	**141**	eP	**Pn**	**22 32 21.2**	**-1.1**
BJO1				eS	**Sn**	**22 33 09.3**	**-6.1**
BJO1	**Bjornoya**	**4.57**	**141**	eP	**Pn**	**22 32 21.2**	**-1.1**
BJO1				eS	**Sn**	**22 33 09.3**	**-6.1**
BJO	**Bjornoya**	**4.59**	**141**	eP	**Pn**	**22 32 21.2**	**-1.4**
BJO				eS	**Sn**	**22 33 09.3**	**-6.6**
BJO				AML	AML	22 33 16.0	
	comp=Z,725nm,0.8s						
DAG	**Danmarks Havn**	**6.00**	**269**	⇑iP	**Pn**	**22 32 36.3**	**-5.7**
	comp=Z,40nm,0.8s						
DAG	**Danmarks Havn**	**6.00**	**269**	⇑iP	**Pn**	**22 32 36.3**	**-5.7**
DAG				pmax	pmax		
	comp=Z,40nm,0.8s						
JNW	**Jan Mayen West**	**8.49**	**220**	eP	**Pn**	**22 33 13.7**	**-2.5**
JNW				eS	**Sn**	**22 34 43.5**	**-8.6**
JNW				AML	AML	22 34 46.3	
	comp=Z,51nm,0.6s						
JNW	**Jan Mayen West**	**8.49**	**220**	eP	**Pn**	**22 33 13.7**	**-2.5**
JNW				eS	**Sn**	**22 34 43.5**	**-8.6**
JNW	**Jan Mayen West**	**8.49**	**220**	eP	**Pn**	**22 33 13.7**	**-2.6**
JNW				eS	**Sn**	**22 34 43.5**	**-8.7**
JNE	**Jan Mayen East**	**8.51**	**219**	eP	**Pn**	**22 33 14.5**	**-2.0**
JMIC	**Jan Mayen**	**8.54**	**220**	Pn	**Pn**	**22 33 14.0**	**-3.0**
	comp=Z,52nm,0.3s,baz=350,slow=1.2,SNR=25						
JMIC				Sn	**Sn**	**22 34 44.0**	**-9.4**
	comp=Z,15nm,0.3s,baz=235,slow=24,SNR=18						
JMIC				LR	LR	22 35 32.2	
	comp=Z,3μm,20.3s,baz=23,slow=31						
JMIC	**Jan Mayen**	**8.54**	**220**	Pn	**Pn**	**22 33 14.0**	**-2.9**
JMIC				Sn	**Sn**	**22 34 44.0**	**-9.4**
JMI	**Jan Mayen**	**8.63**	**220**	eP	**Pn**	**22 33 15.6**	**-2.5**
JMI				eS	**Sn**	**22 34 47.1**	**-8.3**
JMI				AML	AML	22 34 52.6	
	comp=Z,82nm,0.5s						
JMI	**Jan Mayen**	**8.63**	**220**	eP	**Pn**	**22 33 15.6**	**-2.5**
JMI				eS	**Sn**	**22 34 47.1**	**-8.3**
JMI	**Jan Mayen**	**8.63**	**220**	eP	**Pn**	**22 33 15.6**	**-2.5**
JMI				eS	**Sn**	**22 34 47.1**	**-8.3**
TRO	**Tromso**	**9.17**	**156**	ePn	**Pn**	**22 33 22.1**	**-3.4**
TRO				eSn	**Sn**	**22 34 58.1**	**-11**
KEV	**Kevo**	**9.93**	**140**	eP	**Pn**	**22 33 36.2**	**+0.3**
KEV				pmax	pmax		
	comp=Z,9.0nm,0.3s						
KEV	**Kevo**	**9.93**	**140**	eP	**Pn**	**22 33 36.2**	**+0.3**
	comp=Z,8.7nm,0.3s						
KEV				eSn	**Sn**	**22 35 15.1**	**-12**
ARA0	**ARCESS Array S**	**9.94**	**143**	Pn	**Pn**	**22 33 33.4**	**-2.7**
	baz=350,slow=12						
ARA0				Sn	**Sn**	**22 35 17.4**	**-10**
	baz=343,slow=22						
ARCES	**ARCESS Array B**	**9.94**	**143**	Pn	**Pn**	**22 33 34.1**	**-2.0**
	comp=Z,2.1nm,0.3s,baz=351,slow=12,SNR=134						
ARCES				Sn	**Sn**	**22 35 16.9**	**-11**
	comp=Z,10nm,0.3s,baz=336,slow=20,SNR=8.4						
ARCES				LR	LR	22 37 18.6	
	comp=Z,861nm,20.5s,baz=341,slow=37						
ARCES	**ARCESS Array B**	**9.94**	**143**	Pn	**Pn**	**22 33 34.1**	**-2.0**
ARCES				Sn	**Sn**	**22 35 16.9**	**-11**
ARE0	**ARCESS Array S**	**9.94**	**143**	ePn	**Pn**	**22 33 34.7**	**-1.4**
ARE0				eSn	**Sn**	**22 35 16.1**	**-12**
ARE0	**ARCESS Array S**	**9.94**	**143**	ePn	**Pn**	**22 33 34.7**	**-1.4**
ARE0				eSn	**Sn**	**22 35 16.1**	**-12**
KTK1	**Kautokeino**	**10.18**	**148**	ePn	**Pn**	**22 33 39.9**	**+0.6**
KTK1				eSn	**Sn**	**22 35 28.1**	**-5.4**
KTK1				AML	AML	22 35 37.1	
	comp=Z,30nm,0.6s						

KTK1 Kautokeino 10.18 148 *e*Pn **Pn** **22 33 39.9 +0.6**
KTK1 *e*Sn **Sn** **22 35 27.5 -6.0**
KTK1 Kautokeino 10.18 148 *e*Pn **Pn** **22 33 39.9 +0.5**
KTK1 *e*Sn **Sn** **22 35 27.5 -6.0**
SCO Scoresbysund 11.11 242 *i* P **Pn** **22 33 48.5 -3.7**
SCO Scoresbysund 11.11 242 *e*P **Pn** **22 33 48.5 -3.7**
STOK Stokkvaagen 12.11 171 *e*Pn **Pn** **22 34 04.4 -1.4**
MOR8 Moi Rana 12.32 168 *e*Pn **Pn** **22 34 07.8 -0.9**
SUMG Summit 12.69 268 *e*Pn **Pn** **22 34 08.4 -5.3**
comp=Z,63nm,0.8s
SUMG *e*Sn **Sn** **22 36 20.9 -14**
SUMG Summit 12.69 268 *e*Pn **Pn** **22 34 08.4 -5.3**
comp=Z,63nm,0.8s
SUMG *e*Sn **Sn** **22 36 20.9 -14**
LVZ Lovozero 12.74 130⇑ *e*P **Pn** **22 34 12.0 -2.4**
LVZ pmax pmax
comp=Z,30nm,1.0s
LVZ pmax pmax
comp=N,16nm,1.1s
LVZ pmax pmax
comp=E,11nm,1.1s
LVZ MLR MLR
comp=E,1μm,12.0s
LVZ MLR MLR
comp=Z,2μm,12.0s
LVZ MLR MLR
comp=N,893nm,11.0s
LVZ Lovozero 12.74 130 *e*P **Pn** **22 34 12.0 -2.4**
comp=N,893nm,11.0s
APA0 Apatity Array 12.76 134 Pn **Pn** **22 34 11.6 -3.1**
baz=338,slow=11
APA Apatity 12.86 133⇑ *i*P **Pn** **22 34 12.0 -4.0**
APA pmax pmax
comp=Z,36nm,1.1s
APA MLR MLR
comp=Z,2μm,7.0s
NSS Namsos 13.89 173 *e*Pn **Pn** **22 34 29.8 -0.3**
BORG Borgarnes 16.18 230 LR LR 22 39 27.4
comp=Z,2μm,19.7s,baz=10,slow=31
BORG Borgarnes 16.18 230 *e*Pn **Pn** **22 35 03.5 +2.9**
comp=Z,2.1nm,0.6s
BORG Borgarnes 16.18 230 *e*Pn **Pn** **22 35 03.5 +2.9**
comp=Z,2.1nm,0.6s
JOF Joensuu 16.98 142 *e*p **Pn** **22 35 05.9 -4.9**
comp=Z,8.4nm,0.5s
KAF Kangasniemi 17.20 151 *e*p **Pn** **22 35 10.2 -3.4**
comp=Z,30nm,0.9s
KAF Kangasniemi 17.20 151 *e*P **Pn** **22 35 10.2 -3.4**
KAF pmax pmax
comp=Z,30nm,0.9s
NB2 NORSAR Subarra 17.37 175 P **Pn** **22 35 15.1 -0.6**
comp=Z,16nm,0.9s,baz=358,slow=11
NB2 NORSAR Subarra 17.37 175 Pn **Pn** **22 35 15.1 -0.6**
baz=351,slow=12
NOA NORSAR Array B 17.37 175 P **Pn** **22 35 15.6 -0.1**
comp=Z,0.4nm,0.3s,baz=352,slow=12,SNR=17
NOA LR LR 22 41 15.7
comp=Z,824nm,18.5s,baz=350,slow=35
NAO01 NORSAR Array S 17.56 176 *e*Pn **Pn** **22 35 17.7 -0.4**
comp=Z,44nm,1.3s
NAO01 NORSAR Array S 17.56 176 *e*Pn **Pn** **22 35 17.7 -0.4**
comp=Z,44nm,1.3s
FIA1 FINESS Array S 17.84 151 *e*Pn **Pn** **22 35 19.8 -1.7**
FIA1 *e*Sn **Sn** **22 38 27.6 -13**
FIA1 FINESS Array S 17.84 151 *e*Pn **Pn** **22 35 19.8 -1.7**
FIA0 FINESS Array S 17.84 151 P **Pn** **22 35 19.0 -2.5**
baz=346,slow=12
FINES FINESS Array B 17.84 151 P **Pn** **22 35 19.9 -1.5**
comp=Z,0.4nm,0.3s,baz=353,slow=14,SNR=23
FINES S **Sn** **22 38 26.9 -13**
comp=Z,0.4nm,0.3s,baz=355,slow=21,SNR=3.9
FINES LR LR 22 42 29.6
comp=Z,736nm,18.2s,baz=348,slow=38
FINES FINESS Array B 17.84 151 P **Pn** **22 35 19.9 -1.6**
FINES S **Sn** **22 38 26.9 -13**
FINES LR LR 22 42 29.6
HFS Hagfors 18.34 171 P **Pn** **22 35 27.6 -0.1**
comp=Z,0.6nm,0.3s,baz=8.9,slow=10,SNR=29
HFS LR LR 22 41 48.5
comp=Z,1μm,18.4s,baz=359,slow=35
HFS Hagfors 18.34 171 Pn **Pn** **22 35 26.5 -1.1**
slow=12
KONO Kongsberg 18.75 178 *e*P **Pn** **22 35 32.8 +0.2**
SFJD Kangerlussuaq 19.69 268 LR LR 22 43 45.3
comp=Z,2μm,18.4s,baz=12,slow=38
SFJD Kangerlussuaq 19.69 268 *i* P **Pn** **22 35 40.3 -3.6**
SFJD *i* S **Sn** **22 39 33.7 +8.7**
SFJD
comp=Z,2μm,18.0s
SFJD Kangerlussuaq 19.69 268 *i* P **Pn** **22 35 40.3 -3.6**
SFJD *i* S **Sn** **22 39 33.7 +8.7**
PUL Pulkovo 19.93 146 *de*P **Pn** **22 35 47.3 +0.5**
PUL *e*S **Sn** **22 39 31.9 +1.1**
PUL smax
comp=N,71nm,0.6s
PUL MLR MLR
comp=Z,876nm,15.0s
PUL MLR MLR
comp=N,420nm,10.0s
PUL Pulkovo 19.93 146 *e*P **Pn** **22 35 47.3 +0.5**
comp=N,71nm,0.6s
KLMR Klimovskoe 20.10 132 *c i*P **P** **22 35 45.7 -1.3**
KLMR *e*S **S** **22 39 31.9 -0.8**
KLMR pmax pmax
comp=Z,40nm,1.0s
KLMR MLR MLR
comp=Z,1μm,21.0s,MS4.2
KLMR Klimovskoe 20.10 132 *i* P **P** **22 35 45.7 -1.3**
comp=Z,40nm,1.0s
VSU Vasula 20.84 152 *i* P **P** **22 35 55.1 +0.1**
RES Resolute Bay 21.36 315 *e*P **P** **22 36 04.2 +3.6**
COP Copenhagen 22.76 174 *i* P **P** **22 36 19.9 +4.3**
comp=Z,52nm,1.4s,mb4.8
COP *i* S **S** **22 40 27.7 +3.0**
COP
comp=Z,370nm,18.0s
COP Copenhagen 22.76 174 *e*P **P** **22 36 19.9 +4.3**
COP *i* S **S** **22 40 27.7 +3.0**
COP pmax pmax
comp=Z,52nm,1.4s,mb4.8
COP MLR MLR
comp=Z,380nm,18.0s,MS3.9
COP Copenhagen 22.76 174 *e*P **P** **22 36 19.9 +4.3**
comp=Z,52nm,1.4s,mb4.8
COP *i* S **S** **22 40 27.7 +3.0**
COP LR LR
comp=Z,380nm,18.0s,MS3.9
BSD Bornholm Skovb 23.40 170⇑ *i*P **P** **22 36 22.2 -0.2**
comp=Z,27nm,0.9s,mb4.7
BSD *i* S **S** **22 40 39.0 +3.8**
BSD
comp=Z,870nm,18.0s
BSD Bornholm Skovb 23.40 170⇑ *i*P **P** **22 36 22.2 -0.2**
comp=Z,27nm,0.9s,mb4.7
BSD *i* S **S** **22 40 39.0 +3.8**
EKA Eskdalemuir Ar 23.41 197 P **P** **22 36 21.4 -1.1**
comp=Z,12nm,0.8s,mb4.4,baz=9.0,slow=8.6,SNR=17
ESK Eskdalemuir 23.43 197 *e*P **P** **22 36 22.4 -0.2**
SOKR Solikamsk 24.29 112 *i* P **P** **22 36 29.2 -1.4**
SOKR S **S** **22 40 42.8 -6.7**
SOKR pmax pmax
comp=Z,80nm,2.2s,mb4.8
SOKR MLR MLR
comp=Z,790nm,17.0s,MS4.3
SOKR Solikamsk 24.29 112 *i* P **P** **22 36 29.2 -1.4**
comp=Z,80nm,2.2s,mb4.8
BSEG Bad Segeberg 24.48 177 *e*P **P** **22 36 32.7 +0.3**
comp=Z,28nm,1.0s,mb4.7
MOS Moscow 24.77 139 *e*P **P** **22 36 39.6 +4.6**
MOS *e* 22 37 13.6
MOS *e*SS 22 41 55.0
MOS pmax pmax
comp=Z,400nm,3.3s
MOS pmax pmax
comp=N,500nm,3.4s
MOS MLR MLR
comp=Z,1μm,17.7s,MS4.4
MOS MLR MLR
comp=N,600nm,13.6s
MNK Minsk 24.86 152 *e*P **P** **22 36 26.0 -10**
SUW Suwalki 24.95 159 *e*P **P** **22 36 35.7 -1.0**
SUW *e*pP 22 36 42.1
SUW *e*S **S** **22 41 09.0 +8.9**
SUW L 22 47 18.0
comp=Z,0.6nm,15.5s
SUW Suwalki 24.95 159 *e*P **P** **22 36 35.7 -1.0**
SUW *e**PP 22 36 42.1
SUW Suwalki 24.95 159 *e*P **P** **22 36 35.7 -1.0**
SUW *e*pP 22 36 42.1
SUW *e*S **S** **22 41 09.0 +8.9**
PECR Pechory 25.15 130 *e*P **P** **22 36 45.0 +6.5**
PECR *e* 22 36 45.0
PECR *e*S **S** **22 41 10.0 +6.6**
PECR pmax pmax
comp=Z,340nm,2.6s,mb5.4
PECR pmax pmax
comp=Z,800nm,6.0s
PECR smax
comp=E,400nm,5.0s
PECR smax
comp=N,500nm,8.0s
PECR MLR MLR
comp=N,500nm,14.0s
PECR MLR MLR
comp=Z,2μm,14.0s,MS4.7
OBN Obninsk 25.24 140 *d i*P **P** **22 36 38.5 -0.8**
OBN *e*S **S** **22 41 05.1 +0.3**
OBN pmax pmax
comp=Z,38nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,800nm,16.0s,MS4.3
OBN Obninsk 25.24 140 *e*P **P** **22 36 38.3 -1.0**
OBN Obninsk 25.24 140 *e*P **P** **22 36 38.3 -1.0**
GKP Gorka Klasztor 25.34 167 *e*P **P** **22 36 39.7 -0.5**
GKP *e*S **S** **22 41 02.5 -3.9**
GKP L 22 45 48.1
comp=Z,1.0nm,20.8s
GKP Gorka Klasztor 25.34 167 *e*P **P** **22 36 39.7 -0.5**
GKP *e*S **S** **22 41 02.5 -3.9**
DLF Lyons Farm 25.66 201 *e*P **P** **22 36 37.0 -6.1**
DCN Croghan 25.67 202 *e*P **P** **22 36 38.0 -5.2**
NRDL Niedersach Rie 25.92 178 *e*P **P** **22 36 45.9 +0.4**
comp=Z,35nm,1.2s,mb4.8
RUE Ruedersdorf 26.00 172 *e*P **P** **22 36 46.3 +0.1**
comp=Z,12nm,1.2s,mb4.3
RUE Ruedersdorf 26.00 172 *e*P **P** **22 36 46.5 +0.2**
RUE Ruedersdorf 26.00 172 *e*P **P** **22 36 46.5 +0.3**
FRB Frobisher Bay 26.18 281 LR LR 22 47 13.7
comp=Z,829nm,19.5s,MS4.3,baz=31,slow=37
WAR Warsaw 26.57 162 *e*P **P** **22 36 52.1 +0.8**
WAR L 22 46 30.9
comp=Z,0.5nm,23.5s
CLZ Clausthal 26.58 177 *e*P **P** **22 36 51.8 +0.4**
comp=Z,30nm,1.8s,mb4.5
CLZ Clausthal 26.58 177 *e*P **P** **22 36 51.8 +0.4**
CLZ pmax pmax
comp=Z,30nm,1.8s,mb4.5
CLL Collm 27.16 174 *e*P **P** **22 36 56.0 -0.7**
comp=Z,23nm,1.6s,mb4.5
CLL Collm 27.16 174 ⇓P **P** **22 36 55.9 -0.8**
comp=Z,logA/T=1.2,mb4.5
CLL *e*S **S** **22 41 38.0 +2.9**
CLL Collm 27.16 174⇓ *i*P **P** **22 36 55.9 -0.8**
comp=Z,23nm,1.6s,mb4.5
CLL *e*S **S** **22 41 38.0 +2.9**
CLL Collm 27.16 174⇓ *i*P **P** **22 36 55.9 -0.8**
CLL *e*S **S** **22 41 38.0 +2.9**
CLL pmax pmax
comp=Z,23nm,1.6s,mb4.5
FBE Freiberg 27.55 173 *e*P **P** **22 37 00.1 -0.1**
comp=Z,17nm,1.1s,mb4.6
ARU Arti 27.56 113⇑ *i*P **P** **22 37 00.4 +0.1**
ARU *e*PPP 22 37 52.4
ARU *e* 22 40 20.4
ARU *e*S **S** **22 41 42.9 +1.4**
ARU *e*SS 22 42 56.2
ARU *e*SSS 22 43 10.6
ARU pmax pmax
comp=Z,22nm,0.7s,mb4.9
ARU MLR MLR
comp=Z,500nm,18.0s,MS4.1
ARU MLR MLR
comp=N,500nm,17.0s,MS4.3
ARU MLR MLR
comp=E,400nm,15.0s,MS4.3
ARU Arti 27.56 113 *e*P **P** **22 37 00.2 -0.1**
ARU Arti 27.56 113 *e*P **P** **22 37 00.2 -0.1**
UBBA Unterbreizbach 27.60 178 *e*P **P** **22 37 01.1 +0.5**
comp=Z,10.0nm,1.5s,mb4.2
BRG Berggiesshubel 27.62 172 *e*P **P** **22 37 00.4 -0.4**
comp=Z,45nm,2.0s,mb4.8
BRG Berggiesshubel 27.62 172 *e*P **P** **22 37 01.0 +0.3**
comp=Z,27nm,2.0s,mb4.5
BRG S **S** **22 41 47.0 +4.6**
BRG
comp=N,320nm,17.7s
BRG
comp=E,182nm,23.1s
BRG
comp=Z,464nm,19.8s
KSP Ksiaz 27.73 169 *e*P **P** **22 37 01.3 -0.4**
KSP *e*pP pP 22 37 04.8 0.0
KSP L 22 46 57.5
comp=Z,0.9nm,23.8s
KSP Ksiaz 27.73 169 *e*P **P** **22 37 01.4 -0.3**
KSP *e*S **S** **22 41 42.0 -2.1**
KSP LR LR
comp=Z,1μm,23.8s,MS4.4
KSP Ksiaz 27.73 169 *e*P **P** **22 37 01.4 -0.3**
KSP *e*S **S** **22 41 42.0 -2.1**
MOX Moxa 27.80 176 *e*P **P** **22 37 02.4 0.0**
comp=Z,18nm,1.0s,mb4.7
MOX Moxa 27.80 176⇑ *i*P **P** **22 37 02.8 +0.4**
comp=Z,20nm,1.0s,mb4.7
MOX
comp=Z,500nm,18.0s
MOX Moxa 27.80 176⇑ *i*P **P** **22 37 02.8 +0.4**
MOX pmax pmax
comp=Z,20nm,1.0s,mb4.7
MOX MLR MLR
comp=Z,500nm,18.0s,MS4.1
PVCC Panska Ves 27.98 171 *e*P **P** **22 37 06.3 +2.3**
PVCC AMS AMS 22 47 50.0
comp=Z,700nm,16.1s
WERD Werda 28.00 175 *e*P **P** **22 37 04.3 +0.1**
comp=Z,16nm,1.4s,mb4.5
TANN Tannenbergstha 28.04 174 *e*P **P** **22 37 04.9 +0.3**
comp=Z,15nm,1.5s,mb4.4
UPC Upice 28.05 170 *e*P **P** **22 37 05.1 +0.5**
GUNZ Gunzen 28.09 175 *e*P **P** **22 37 05.8 +0.8**
comp=Z,10.0nm,1.1s,mb4.4
DPC Dobruska-Polom 28.22 169 *e*P **P** **22 37 06.5 +0.4**
DPC *e*S **S** **22 41 56.1 +4.3**
DPC AMS AMS 22 48 00.0
comp=Z,600nm,16.8s
DPC Dobruska-Polom 28.22 169 *e*P **P** **22 37 06.5 +0.4**
DPC *e*S **S** **22 41 56.1 +4.3**
NKC Novy Kostel 28.22 174 *e*P **P** **22 37 07.1 +0.9**
NKC *e*S **S** **22 41 56.4 +4.5**
NKC AMS AMS 22 48 00.0
comp=Z,800nm,16.3s
NKC Novy Kostel 28.22 174 *e*P **P** **22 37 07.1 +0.9**
NKC *e*S **S** **22 41 56.4 +4.5**
GIVF Givet 28.34 185 *e*P **P** **22 37 06.5 -0.7**
BAIF Baives 28.40 186 *e*P **P** **22 37 07.2 -0.5**
comp=Z,19nm,0.9s,mb4.4
BAIF Baives 28.40 186 *e*P **P** **22 37 07.2 -0.5**
BAIF pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
BAIF Baives 28.40 186 *e*P **P** **22 37 07.2 -0.5**
comp=Z,9.4nm,0.9s,mb4.4
MANZ Manzenberg 28.46 175 *e*P **P** **22 37 08.7 +0.4**
comp=Z,9.0nm,1.4s,mb4.2
OJC Ojcow 28.51 164 *e*P **P** **22 37 08.7 0.0**
OJC *e*S **S** **22 41 52.4 -4.0**
OJC MLR MLR
comp=Z,4μm,19.9s,MS5.0
OJC Ojcow 28.51 164 *e*P **P** **22 37 08.7 0.0**
OJC *e*S **S** **22 41 52.4 -4.0**
PRU Pruhonice 28.52 172 *e*P **P** **22 37 09.4 +0.6**
PRU *e*S S 22 42 28.9 +32
PRU AMS AMS 22 47 20.0
comp=Z,600nm,19.5s
PRU Pruhonice 28.52 172 *e*P **P** **22 37 09.4 +0.6**
PRU *e*S S 22 42 28.9 +32
ROTZ Rotzenmuhle 28.68 175 *e*P **P** **22 37 10.9 +0.6**
comp=Z,9.0nm,1.0s,mb4.5
GRA1 Grafenberg Arr 28.74 176 *e*P **P** **22 37 11.4 +0.6**
comp=Z,9.0nm,1.0s,mb4.5
GRA1 LR LR
comp=Z,500nm,17.1s,MS4.2
GRF Grafenberg Arr 28.74 176 *e*P **P** **22 37 11.4 +0.6**
comp=Z,9.0nm,1.0s,mb4.5
GRF eL 22 48 53.4
comp=Z,517nm,17.1s
GRF Grafenberg Arr 28.74 176 *e*P **P** **22 37 11.4 +0.6**
GRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
GRF MLR MLR
comp=Z,500nm,17.1s,MS4.2
GRF Grafenberg Arr 28.74 176 *e*P **P** **22 37 11.4 +0.6**
GRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
GRF MLR MLR
comp=Z,500nm,17.1s,MS4.2
AKASG Malin Array Be 28.75 152 P **P** **22 37 08.4 -2.4**
comp=Z,1.5nm,0.7s,mb3.9,baz=346,slow=9.3,SNR=18
AKASG LR LR 22 49 02.7
comp=Z,675nm,18.0s,MS4.3,baz=335,slow=37
AKASG Malin Array Be 28.75 152 P **P** **22 37 08.4 -2.4**
AKASG LR LR 22 49 02.7
AKASG Malin Array Be 28.75 152 P **P** **22 37 08.4 -2.4**
AKBB Malin Array Si 28.75 152 *e*P **P** **22 37 10.2 -0.6**
OKC Ostrava-Krasne 28.81 167 *e*P **P** **22 37 12.2 +0.8**
OKC *e*S **S** **22 42 05.6 +4.5**
OKC AMS AMS 22 48 00.0
comp=Z,500nm,20.2s
OKC Ostrava-Krasne 28.81 167 *e*P **P** **22 37 12.2 +0.8**
OKC *e*S **S** **22 42 05.6 +4.5**
MORC Moravsky Berou 28.84 168⇓ *i*P **P** **22 37 11.9 +0.2**
MORC Moravsky Berou 28.84 168 P **P** **22 37 12.8 +1.1**
MORC Moravsky Berou 28.84 168 *e*P **P** **22 37 11.6 -0.1**
MORC Moravsky Berou 28.84 168 *e*P **P** **22 37 11.8 +0.1**
LVV L'vov 29.18 159 *e*P **P** **22 37 14.0 -0.7**
TREC Trest 29.24 170 *e*P **P** **22 37 16.4 +1.1**
TREC *e*S **S** **22 42 13.7 +5.8**
TREC AMS AMS 22 48 10.0
comp=Z,600nm,15.7s
VRAC Vranov 29.27 169 P **P** **22 37 16.3 +0.8**
comp=Z,9.1nm,0.7s,mb4.6,baz=3.7,slow=10,SNR=21
VRAC LR LR 22 48 39.6
comp=Z,530nm,18.6s,MS4.2,baz=356,slow=36
VRAC Vranov 29.27 169 P **P** **22 37 16.4 +0.9**
VRAC Vranov 29.27 169⇓ *i*P **P** **22 37 16.3 +0.8**
KWP Kalwaria 29.27 161 *e*P **P** **22 37 16.1 +0.6**
KWP *e*pP pP 22 37 21.1 +2.5
KWP L 22 48 43.5
comp=Z,0.6nm,19.3s
KWP Kalwaria 29.27 161 *e*P **P** **22 37 16.1 +0.6**
KWP *e*pP pP 22 37 21.1 +2.5
WET Wettzell 29.32 174 *e*P **P** **22 37 16.5 +0.6**
comp=Z,7.0nm,1.1s,mb4.3
WET Wettzell 29.32 174 *e*P **P** **22 37 16.5 +0.6**
WET pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
NIE Niedzica 29.34 164 *e*P **P** **22 37 16.9 +0.8**
KHC Kasperske Hory 29.35 173 *e*P **P** **22 37 17.2 +1.0**
KHC *ex* x 22 39 12.0
KHC *ex* x 22 41 23.5
KHC *e*S **S** **22 42 14.9 +5.3**
KHC AMS AMS 22 48 20.0
comp=Z,700nm,17.8s
VRSR Storozhevoye 29.39 139 *e*P **P** **22 37 16.5 -0.1**
VRSR pmax pmax
comp=E,3.0nm,0.8s
VRSR pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
VRSR pmax pmax
comp=N,8.0nm,0.9s
GEC2 GERESS Array S 29.64 173 *e*P **P** **22 37 19.6 +0.8**
comp=Z,10.0nm,1.1s,mb4.5
GEC2 GERESS Array S 29.64 173 *e*P **P** **22 37 19.6 +0.8**
GEC2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
GERES GERESS Array B 29.64 173 P **P** **22 37 19.6 +0.8**
comp=Z,2.8nm,0.7s,mb4.1,baz=10,slow=8.3,SNR=34
GERES LR LR 22 49 03.7
comp=Z,728nm,18.2s,MS4.3,baz=343,slow=36
STU Stuttgart 29.64 179 *e*P **P** **22 37 19.7 +0.9**
comp=Z,15nm,0.9s,mb4.7
STU Stuttgart 29.64 179 *e*P **P** **22 37 19.6 +0.8**
STU Stuttgart 29.64 179 *e*P **P** **22 37 19.6 +0.8**
FLN La Foliniere 29.84 192 *e*P **P** **22 37 19.7 -0.8**
FLN *e*R
comp=Z,404nm,21.2s
FLN La Foliniere 29.84 192 *e*P **P** **22 37 19.7 -0.8**
FLN LR LR
comp=Z,400nm,21.3s,MS4.0
CRVS Cervenica-Dubn 29.92 163 *e*P **P** **22 37 22.0 +0.7**
MEZF Maizieres J'vi 29.94 184 *e*P **P** **22 37 21.4 0.0**
comp=Z,18nm,0.8s,mb4.5
MEZF Maizieres J'vi 29.94 184 *e*P **P** **22 37 21.4 0.0**
comp=Z,9.0nm,0.8s,mb4.5
KOLS Kolonicke sedl 29.94 161 *e*P **P** **22 37 22.3 +0.9**
LDF La Druitiere 29.99 191 *e*P **P** **22 37 20.6 -1.3**
comp=Z,26nm,1.1s,mb4.6
LDF La Druitiere 29.99 191 *e*P **P** **22 37 20.6 -1.3**
LDF pmax pmax
comp=Z,13nm,1.1s,mb4.6
LDF La Druitiere 29.99 191 *e*P **P** **22 37 20.6 -1.3**
comp=Z,13nm,1.1s,mb4.8
CDF Champ du Feu 30.01 181 *e*P **P** **22 37 21.8 -0.2**
BFO Black Forest 30.09 180 *e*P **P** **22 37 22.5 -0.2**
comp=Z,25nm,1.7s,mb4.7
BFO Black Forest 30.09 180 *e*P **P** **22 37 22.5 -0.2**
BFO pmax pmax
comp=Z,25nm,1.7s,mb4.7
SMOL Smolenice 30.10 168 *e*P **P** **22 37 24.4 +1.6**
VYHS Vyhne 30.18 166 *e*P **P** **22 37 24.2 +0.6**
VYHS pmax pmax
comp=Z,28nm,2.0s,mb4.7
VYHS Vyhne 30.18 166 *e*P **P** **22 37 24.2 +0.6**
comp=Z,28nm,2.0s,mb4.6
GRR Gorron 30.23 192 *e*P **P** **22 37 23.5 -0.5**
comp=Z,30nm,0.9s,mb4.7
GRR Gorron 30.23 192 *e*P **P** **22 37 23.5 -0.5**
GRR pmax pmax
comp=Z,15nm,0.9s,mb4.7
GRR Gorron 30.23 192 *e*P **P** **22 37 23.5 -0.5**
comp=Z,15nm,0.9s,mb4.7
FUR Furstenfeldbru 30.27 176 *e*P **P** **22 37 25.1 +0.7**
comp=Z,9.0nm,0.9s,mb4.5
FUR Furstenfeldbru 30.27 176 *e*P **P** **22 37 25.1 +0.7**
FUR pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
KECS Kecovo 30.28 164 *e*P **P** **22 37 25.1 +0.7**
comp=Z,2.3nm,0.9s,mb3.9
ROSF Rostrenen 30.40 195 *e*P **P** **22 37 24.1 -1.4**
ZST Bratislava 30.40 168 *e*P **P** **22 37 27.1 +1.6**
ZST pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
ZST Bratislava 30.40 168 *e*P **P** **22 37 27.1 +1.6**
comp=Z,9.6nm,0.9s,mb4.5
HAU Haudompre 30.42 183 *e*P **P** **22 37 25.6 -0.1**
HAU *e*R
comp=Z,579nm,18.2s
HAU Haudompre 30.42 183 *e*P **P** **22 37 25.6 -0.1**
HAU LR LR
comp=Z,580nm,18.3s,MS4.3
SGMF Saint Gilles 30.44 194 *e*P **P** **22 37 25.5 -0.4**
HINF Hinteralfeld 30.61 182 *e*P **P** **22 37 27.3 0.0**
CONA Conrad Observa 30.62 170⇓ *i*P **P** **22 37 28.5 +1.0**
comp=Z,14nm,0.9s,mb4.8
MOA Molin 30.65 172⇓ *i*P **P** **22 37 28.3 +0.6**
comp=Z,12nm,1.6s,mb4.5
PSZ Piszkesteto 30.81 165⇓ *i*P **P** **22 37 30.3 +1.2**
PSZ Piszkesteto 30.81 165 P **P** **22 37 31.0 +1.9**
PSZ Piszkesteto 30.81 165 *e*P **P** **22 37 30.5 +1.4**
PSZ Piszkesteto 30.81 165 *e*P **P** **22 37 30.5 +1.4**
MOTA Moosalm 31.09 176⇓ *i*P **P** **22 37 32.4 +0.8**
comp=Z,14nm,1.3s,mb4.6
MOTA Moosalm 31.09 176⇓ *i*P **P** **22 37 32.4 +0.8**
MOTA pmax pmax
comp=Z,14nm,1.3s,mb4.6
DAVA Damuels 31.14 178⇓ *e*P **P** **22 37 31.1 -0.9**
comp=Z,9.5nm,0.9s,mb4.6
LOR Lormes 31.20 186 *e*P **P** **22 37 31.6 -0.9**
comp=Z,12nm,0.8s,mb4.5
LOR *e*R
comp=Z,302nm,22.7s
LOR Lormes 31.20 186 *e*P **P** **22 37 31.6 -0.9**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
LOR MLR MLR
comp=Z,300nm,22.7s,MS3.9
LOR Lormes 31.20 186 *e*P **P** **22 37 31.6 -0.9**

comp=Z,5.9nm,0.8s,mb4.5
LOR LR LR
comp=Z,300nm,22.7s,MS3.9
SQTA Sankt Quirin 31.22 176 ⇓ *i* P **P 22 37 33.8 +1.1**
comp=Z,4.6nm,1.0s,mb4.2
SQTA Sankt Quirin 31.22 176 ⇓ *i* P **P 22 37 33.8 +1.1**
SQTA pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
ARSA Arzberg 31.29 171 ⇓ *i* P **P 22 37 34.2 +0.8**
comp=Z,8.7nm,1.1s,mb4.5
ARSA Arzberg 31.29 171 ⇓ *i* P **P 22 37 34.2 +0.8**
comp=Z,8.7nm,1.1s,mb4.5
SSF Saint Saulge 31.41 186 *e*P **P 22 37 33.5 -0.9**
comp=Z,15nm,1.1s,mb4.5
SSF Saint Saulge 31.41 186 *e*P **P 22 37 33.5 -0.9**
SSF pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
SSF Saint Saulge 31.41 186 *e*P **P 22 37 33.5 -0.9**
comp=Z,7.7nm,1.1s,mb4.5
BURAR Bucovina Array 31.46 158 ⇑ *i* P **P 22 37 35.3 +0.4**
DAVOX Davos 31.64 178 LR LR 22 49 29.0
comp=Z,362nm,22.0s,MS4.0,baz=357,slow=35
AVF Avril sur Loir 31.68 187 *e*P **P 22 37 36.0 -0.8**
comp=Z,18nm,0.9s,mb4.6
AVF Avril sur Loir 31.68 187 *e*P **P 22 37 36.0 -0.8**
AVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
AVF Avril sur Loir 31.68 187 *e*P **P 22 37 36.0 -0.8**
comp=Z,9.2nm,0.9s,mb4.6
CABF La Chapelle 31.82 183 *e*P **P 22 37 37.7 -0.3**
comp=Z,36nm,1.3s,mb4.7
CABF La Chapelle 31.82 183 *e*P **P 22 37 37.7 -0.3**
CABF pmax pmax
comp=Z,18nm,1.3s,mb4.7
CABF La Chapelle 31.82 183 *e*P **P 22 37 37.7 -0.3**
comp=Z,18nm,1.3s,mb4.7
SMF Signal de Mont 31.82 186 *e*P **P 22 37 36.9 -1.1**
BGF Bois d'Agland 31.93 187 *e*P **P 22 37 38.3 -0.7**
comp=Z,44nm,0.8s,mb5.1
BGF Bois d'Agland 31.93 187 *e*P **P 22 37 38.3 -0.7**
BGF pmax pmax
comp=Z,22nm,0.8s,mb5.0
BGF Bois d'Agland 31.93 187 *e*P **P 22 37 38.3 -0.7**
comp=Z,22nm,0.8s,mb5.1
MFF Saint Martin d 31.98 191 *e*P **P 22 37 39.8 +0.4**
comp=Z,18nm,1.0s,mb4.5
MFF Saint Martin d 31.98 191 *e*P **P 22 37 39.8 +0.4**
MFF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
MFF Saint Martin d 31.98 191 *e*P **P 22 37 39.8 +0.4**
comp=Z,8.9nm,1.0s,mb4.5
OBKA Obir 32.00 172 ⇓⇓ *e*P **P 22 37 40.0 +0.4**
comp=Z,16nm,1.0s,mb4.8
TCF Toulx Ste Croi 32.22 188 *e*P **P 22 37 40.7 -0.8**
comp=Z,41nm,1.0s,mb4.9
TCF Toulx Ste Croi 32.22 188 *e*P **P 22 37 40.7 -0.8**
TCF pmax pmax
comp=Z,21nm,1.0s,mb4.9
TCF Toulx Ste Croi 32.22 188 *e*P **P 22 37 40.7 -0.8**
comp=Z,20nm,1.0s,mb4.9
PKSM Moragy 32.45 167 ⇓ *i* P **P 22 37 44.1 +0.5**
PKSM Moragy 32.45 167 P P **22 37 44.4 +0.8**
PKSM Moragy 32.45 167 P P **22 37 44.4 +0.8**
LPL La Plagne 32.91 182 *e*P **P 22 37 48.1 +0.6**
comp=Z,18nm,0.9s,mb4.7
LPL La Plagne 32.91 182 *e*P **P 22 37 48.1 +0.6**
LPL pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LPL La Plagne 32.91 182 *e*P **P 22 37 48.1 +0.6**
comp=Z,9.1nm,0.9s,mb4.7
LPG La Plagne 32.92 182 *e*P **P 22 37 48.5 +0.8**
comp=Z,15nm,0.8s,mb4.7
LPG La Plagne 32.92 182 *e*P **P 22 37 48.5 +0.8**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPG La Plagne 32.92 182 *e*P **P 22 37 48.5 +0.8**
comp=Z,7.6nm,0.8s,mb4.7
BRVK Borovoye 33.03 102 P P **22 37 49.5 +0.9**
SNR=8.0
BRVK Borovoye 33.03 102 *e*P **P 22 37 49.1 +0.6**
BRVK Borovoye 33.03 102 *e*P **P 22 37 49.1 +0.5**
BVA0 Borovoye Array 33.08 102 *i* P **P 22 37 49.4 +0.4**
AKTK Aktyubinsk 33.17 117 P **P 22 37 51.0 +1.1**
AKTK LR LR 22 53 22.0
AKTK Aktyubinsk 33.17 117 P **P 22 37 51.0 +1.1**
AKTO Aktyubinsk 33.17 117 P **P 22 37 51.0 +1.1**
comp=Z,6.2nm,0.8s,mb4.6,baz=346,slow=8.1,SNR=14
AKTO LR LR 22 53 22.0
comp=Z,631nm,18.1s,MS4.4,baz=211,slow=40
BZS Buzias 33.20 163 ⇓ *i* P **P 22 37 51.0 +0.9**
BZS Buzias 33.20 163 P P **22 37 51.3 +1.1**
BZS Buzias 33.20 163 P P **22 37 51.3 +1.2**
RJF Les Rejaudoux 33.22 189 *e*P **P 22 37 49.6 -0.7**
RJF *e*R
comp=Z,435nm,18.0s
RJF Les Rejaudoux 33.22 189 *e*P **P 22 37 49.6 -0.7**
RJF LR LR
comp=Z,440nm,18.0s,MS4.2
BILL Bilibino 33.29 15 *e*P **P 22 37 52.9 +2.0**
BILL pmax pmax
comp=Z,12nm,0.8s,mb4.9
BILL Bilibino 33.29 15 *e*P **P 22 37 52.9 +2.0**
comp=Z,12nm,0.8s,mb4.9
BILL Bilibino 33.29 15 *e*P **P 22 37 52.8 +1.9**
comp=Z,12nm,0.8s,mb4.9
VRI Vrincioaia 33.32 156 ⇑ *i* P **P 22 37 50.4 -0.7**
PLOR Plostina 33.33 156 ⇑ *i* P **P 22 37 52.4 +1.2**
VOSK Vostochnaya 33.48 102 P P **22 37 51.4 -1.2**
VOSK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ORIF Oris-en-Rattie 33.51 183 *e*P **P 22 37 53.4 +0.6**
comp=Z,12nm,0.8s,mb4.6
ORIF *e*R
comp=Z,611nm,21.8s
ORIF Oris-en-Rattie 33.51 183 *e*P **P 22 37 53.4 +0.6**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ORIF Oris-en-Rattie 33.51 183 *e*P **P 22 37 53.4 +0.6**
comp=Z,5.9nm,0.8s,mb4.6
CAF Calviac 33.58 188 *e*P **P 22 37 52.7 -0.7**
comp=Z,9.5nm,0.9s,mb4.4
CAF Calviac 33.58 188 *e*P **P 22 37 52.7 -0.7**
comp=Z,4.8nm,0.9s,mb4.5
VIVF Saint-Julien-l 33.59 185 *e*P **P 22 37 53.2 -0.3**
comp=Z,18nm,1.1s,mb4.6
VIVF Saint-Julien-l 33.59 185 *e*P **P 22 37 53.2 -0.3**
VIVF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
VIVF Saint-Julien-l 33.59 185 *e*P **P 22 37 53.2 -0.3**
comp=Z,9.1nm,1.1s,mb4.6
LFF La Frestale 33.61 190 *e*P **P 22 37 52.4 -1.3**
comp=Z,23nm,1.1s,mb4.7
LFF La Frestale 33.61 190 *e*P **P 22 37 52.4 -1.3**
LFF pmax pmax
comp=Z,11nm,1.1s,mb4.7
LFF La Frestale 33.61 190 *e*P **P 22 37 52.4 -1.3**
comp=Z,11nm,1.1s,mb4.7
MLR Muntele Rosu 33.63 157 P P **22 37 55.4 +1.5**
comp=Z,2.6nm,0.8s,mb4.2,baz=139,slow=7.0,SNR=5.7
MLR Muntele Rosu 33.63 157 ⇓⇓ *i* P **P 22 37 55.0 +1.1**
MBDF Montbardon 33.70 182 *e*P **P 22 37 54.9 +0.5**
comp=Z,9.0nm,0.7s,mb4.5
MBDF Montbardon 33.70 182 *e*P **P 22 37 54.9 +0.5**
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MBDF Montbardon 33.70 182 *e*P **P 22 37 54.9 +0.5**
comp=Z,4.5nm,0.7s,mb4.5
MTUR Matau 33.83 159 ⇓ *i* P **P 22 37 58.3 +2.7**
MTUR Matau 33.83 159 P P **22 37 58.3 +2.7**
NVS Novosibirsk 33.98 88 *e*P **P 22 37 56.5 -0.4**
NVS *e* 22 39 11.3
NVS *e* 22 40 38.4
NVS *e*S **S 22 43 30.2 +8.4**
NVS pmax pmax
comp=N,31nm,1.8s
NVS pmax pmax
comp=Z,31nm,1.8s,mb4.9
NVS pmax pmax
comp=E,8.0nm,1.5s
NVS smax
comp=N,8.0nm,1.8s
NVS smax
comp=E,10.0nm,1.8s
SCHQ Scheffervill e 34.03 272 LR LR 22 51 24.6
comp=E,876nm,21.9s,MS4.5,baz=78,slow=36
LASF Ste Croix 34.39 186 *e*P **P 22 38 00.9 +0.5**
SMRF Simiane la Rot 34.46 184 *e*P **P 22 38 01.1 +0.1**
comp=E,28nm,1.1s,mb4.8
SMRF Simiane la Rot 34.46 184 *e*P **P 22 38 01.1 +0.1**
comp=E,14nm,1.1s,mb4.8
SBF Sospel 34.56 181 *e*P **P 22 38 02.1 +0.2**
comp=E,60nm,1.0s,mb5.2
SBF Sospel 34.56 181 *e*P **P 22 38 02.1 +0.2**
SBF pmax pmax
comp=Z,30nm,1.0s,mb5.2
SBF Sospel 34.56 181 *e*P **P 22 38 02.1 +0.2**
comp=Z,30nm,1.0s,mb5.2
AB31 Akbulak array 34.66 115 *i* P **P 22 38 02.4 -0.4**
TIRR Tirgusor 34.86 155 *e*P **P 22 38 04.4 -0.1**
FRF La Foret Royal 34.86 182 *e*P **P 22 38 04.2 -0.3**
comp=Z,13nm,0.8s,mb4.6
FRF La Foret Royal 34.86 182 *e*P **P 22 38 04.2 -0.3**
FRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
FRF La Foret Royal 34.86 182 *e*P **P 22 38 04.2 -0.3**
comp=Z,6.3nm,0.8s,mb4.6
LMR La Mourre 35.09 182 *e*P **P 22 38 06.1 -0.4**
comp=Z,12nm,0.9s,mb4.5
LMR La Mourre 35.09 182 *e*P **P 22 38 06.1 -0.4**
LMR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LMR La Mourre 35.09 182 *e*P **P 22 38 06.1 -0.4**
comp=Z,5.8nm,0.9s,mb4.5
ZAL Zalesovo 35.14 87 P **P 22 38 07.4 +0.5**
comp=Z,4.7nm,0.8s,mb4.5,baz=139,slow=8.9,SNR=29
ZAL LR LR 22 56 13.2
comp=Z,616nm,18.4s,MS4.4,baz=127,slow=43
MTLF Montolieu 35.16 188 *e*P **P 22 38 07.1 0.0**
comp=Z,27nm,1.3s,mb4.7
MTLF Montolieu 35.16 188 *e*P **P 22 38 07.1 0.0**
MTLF pmax pmax
comp=Z,13nm,1.3s,mb4.7
MTLF Montolieu 35.16 188 *e*P **P 22 38 07.1 0.0**
comp=Z,13nm,1.3s,mb4.7
YKA Yellowknife Ar 35.36 318 LR LR 22 52 17.9
comp=Z,580nm,19.2s,MS4.3,baz=325,slow=36
EALK Alkurruntz 35.41 192 P **P 22 38 09.3 0.0**
comp=Z,80nm,1.3s,mb5.5
EALK Alkurruntz 35.41 192 P **P 22 38 09.3 0.0**
comp=Z,80nm,1.3s,mb5.5
ELIZ Elizondo 35.47 192 P **P 22 38 10.2 +0.4**
ELIZ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ELIZ Elizondo 35.47 192 P **P 22 38 10.2 +0.4**
comp=Z,8.9nm,0.8s,mb4.8
ELIZ Elizondo 35.47 192 P **P 22 38 10.2 +0.4**
comp=Z,8.9nm,0.8s,mb4.8
ELAN Lanestosa 35.49 195 P **P 22 38 10.2 +0.3**
comp=Z,23nm,1.2s,mb5.0
ELAN Lanestosa 35.49 195 P **P 22 38 10.2 +0.2**
comp=Z,23nm,1.2s,mb5.0
SJPF Ste Jean 35.51 192 *e*P **P 22 38 09.4 -0.7**
comp=Z,17nm,1.0s,mb4.6
SJPF Ste Jean 35.51 192 *e*P **P 22 38 09.4 -0.7**
SJPF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
SJPF Ste Jean 35.51 192 *e*P **P 22 38 09.4 -0.7**
comp=Z,8.7nm,1.0s,mb4.6
EARI Arriondas 35.53 197 P **P 22 38 09.9 -0.4**
comp=Z,162nm,2.5s,mb5.5
EARI Arriondas 35.53 197 P **P 22 38 09.9 -0.4**
comp=Z,162nm,2.5s,mb5.5
EPF Esparros 35.53 190 *e*P **P 22 38 09.6 -0.7**
comp=Z,36nm,1.1s,mb4.9
EPF Esparros 35.53 190 *e*P **P 22 38 09.6 -0.7**
EPF pmax pmax
comp=Z,18nm,1.0s,mb5.0
EPF Esparros 35.53 190 *e*P **P 22 38 09.6 -0.7**
comp=Z,18nm,1.0s,mb5.0
YAK Yakutsk 35.59 44 *c i*P **P 22 38 09.6 -1.2**
YAK pmax pmax
comp=Z,30nm,1.2s,mb5.1
YAK MLR MLR
comp=Z,300nm,14.0s,MS4.2
YAK Yakutsk 35.59 44 *e*P **P 22 38 09.1 -1.7**
comp=Z,24nm,0.9s,mb5.1
YAK Yakutsk 35.59 44 *e*P **P 22 38 09.1 -1.7**
comp=Z,24nm,0.9s,mb5.1
EPON Pontenova 35.62 200 P **P 22 38 10.6 -0.5**
comp=Z,30nm,1.0s,mb5.2
EPON Pontenova 35.62 200 P **P 22 38 10.6 -0.5**
comp=Z,30nm,1.0s,mb5.2
FCC Fort Churchill 35.65 299 *e*P **P 22 38 13.7 +2.4**
ETSF Etsaut 35.70 191 *e*P **P 22 38 12.3 +0.6**
comp=Z,31nm,1.0s,mb4.9
ETSF Etsaut 35.70 191 *e*P **P 22 38 12.3 +0.6**
ETSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
ETSF Etsaut 35.70 191 *e*P **P 22 38 12.3 +0.6**
comp=Z,16nm,1.0s,mb4.9
EBIE Bielsa 35.88 190 P **P 22 38 14.6 +1.3**
comp=Z,32nm,0.9s,mb5.2
EBIE Bisa 35.88 190 P **P 22 38 14.6 +1.3**
comp=Z,32nm,0.9s,mb5.2
GOF Gofitskoye 35.95 137 *e*P **P 22 38 09.5 -4.4**
EMAZ Mazaricos 36.13 202 P **P 22 38 15.0 -0.4**
comp=Z,52nm,0.8s,mb5.5
EMAZ Mazaricos 36.13 202 P **P 22 38 15.0 -0.5**
comp=Z,52nm,0.8s,mb5.5
STS Santiago 36.16 201 P **P 22 38 15.4 -0.3**
STS pmax pmax
comp=Z,13nm,0.6s,mb5.0
STS Santiago 36.16 201 P **P 22 38 15.4 -0.3**
comp=Z,12nm,0.6s,mb5.0
STS Santiago 36.16 201 P **P 22 38 15.4 -0.3**
comp=Z,12nm,0.6s,mb5.0
DAWY Dawson 36.55 337 *e*P **P 22 38 20.3 +1.2**
DAWY Dawson 36.55 337 *e*P **P 22 38 20.3 +1.3**
KURK Kurchatov 36.93 95 ⇑ P **P 22 38 22.7 +0.5**
SNR=11
KURK Kurchatov 36.93 95 *e*P **P 22 38 22.3 0.0**
KURK Kurchatov 36.93 95 *e*P **P 22 38 22.3 +0.1**
ECAL Calabor 36.98 199 P **P 22 38 22.6 0.0**
comp=Z,50nm,0.9s,mb5.3
ECAL Calabor 36.98 199 P **P 22 38 22.6 -0.1**
comp=Z,50nm,0.9s,mb5.3
KIV Kislovodsk 36.99 137 *e*P **P 22 38 24.7 +2.0**
KIV *e*S **S 22 44 12.8 +4.7**
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,424nm,18.0s,MS4.3
PBRG Braganca 37.11 199 *e*P **P 22 38 24.8 +1.0**
comp=Z,29nm,1.7s,mb4.8
EPOB Poblet 37.18 189 P **P 22 38 24.6 +0.3**
comp=Z,49nm,1.3s,mb5.2
EPOB Poblet 37.18 189 P **P 22 38 24.6 +0.2**
comp=Z,49nm,1.3s,mb5.2
PCAB Cabril 37.29 200 *e*P **P 22 38 26.0 +0.6**
comp=Z,31nm,1.0s,mb5.1
ERTA Horta de San J 37.60 190 P **P 22 38 29.7 +1.7**
comp=Z,36nm,1.0s,mb5.1
ERTA Horta de San J 37.60 190 P **P 22 38 29.7 +1.8**
comp=Z,36nm,1.0s,mb5.1
PVRL Vila Real 37.70 200 *e*P **P 22 38 29.6 +0.8**
PTO Porto 37.90 201 *e*P **P 22 38 31.8 +1.3**
GUD Guadarrama 38.11 195 P **P 22 38 33.1 +0.8**
GUD pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
GUD Guadarrama 38.11 195 P **P 22 38 33.1 +0.8**
comp=Z,6.5nm,0.7s,mb4.5
GUD Guadarrama 38.11 195 P **P 22 38 33.1 +0.8**
comp=Z,6.5nm,0.7s,mb4.5
PVIS Viseu 38.27 200 *e*P **P 22 38 34.2 +0.6**
comp=Z,32nm,1.3s,mb4.9
ZEI Tsey 38.32 136 *e*P **P 22 38 33.0 -1.0**
ZEI *e**PP pP 22 38 39.4 +2.3
ZEI pmax pmax
comp=Z,13nm,0.5s,mb4.9
MTE Manteigas 38.56 200 *e*P **P 22 38 36.8 +0.7**
comp=Z,26nm,1.2s,mb4.8
MAK Makhachkala 38.66 132 *e*P **P 22 38 39.9 +3.0**
MAK *e*S **S 22 44 36.3 +2.9**
MAK *e*SS SS 22 47 11.7 -12
MAK *e* 22 48 43.1
MAK pmax pmax
comp=Z,106nm,1.7s,mb5.3
MAK MLR MLR
comp=Z,839nm,20.0s,MS4.6
SGKT Sivrigoynuk 39.05 151 *i* P **P 22 38 38.0 -2.2**
ESDC Sonseca Array 39.07 195 P **P 22 38 39.9 -0.4**
comp=Z,6.0nm,0.8s,mb4.4,baz=3.4,slow=8.7,SNR=24
ESDC LR LR 22 54 54.1
comp=Z,132nm,18.4s,MS3.8,baz=345,slow=36
ESDC Sonseca Array 39.07 195 P **P 22 38 40.4 0.0**
comp=Z,5.0nm,0.6s,mb4.4
ESDC Sonseca Array 39.07 195 P **P 22 38 40.3 0.0**
comp=Z,5.0nm,0.6s,mb4.4
ESLA Sonseca Array 39.07 195 *e*P **P 22 38 40.5 +0.2**
ESLA Sonseca Array 39.07 195 *e*P **P 22 38 40.5 +0.2**
PCBR Castelo Branco 39.12 199 *e*P **P 22 38 41.1 +0.4**
comp=Z,22nm,0.9s,mb4.9
PTOM Tomar 39.40 201 *e*P **P 22 38 43.6 +0.5**
comp=Z,46nm,1.0s,mb5.2
CLNS Chul'man 39.85 50 *e*P **P 22 38 41.8 -5.1**
CLNS pmax pmax
comp=N,38nm,0.9s
CLNS pmax pmax
comp=E,17nm,0.9s
CLNS pmax pmax
comp=Z,59nm,0.9s,mb5.3
CLNS MLR MLR
comp=N,800nm,15.0s,MS4.8
CLNS MLR MLR
comp=Z,900nm,15.0s,MS4.7
CLNS MLR MLR
comp=E,500nm,14.0s,MS4.8
ETOB Tobarra 39.98 192 P **P 22 38 47.8 -0.1**
comp=E,67nm,1.8s,mb5.1
ETOB Tobarra 39.98 192 P **P 22 38 47.8 -0.1**
comp=E,67nm,1.8s,mb5.1
ESKT Eskisehir 39.98 153 *i* P **P 22 38 48.5 +0.6**
SEYT Eskypehyr 39.98 153 *i* P **P 22 38 48.5 +0.6**
EVIA Vianos 40.03 193 P **P 22 38 48.4 +0.1**
EVIA pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
EVIA Vianos 40.03 193 P **P 22 38 48.4 +0.1**
comp=Z,7.4nm,0.6s,mb4.6
EVIA Vianos 40.03 193 P **P 22 38 48.4 +0.1**
comp=Z,7.4nm,0.6s,mb4.6
BR131 Keskin Array S 40.05 149 *e*P **P 22 38 50.0 +1.5**
comp=Z,3.0nm,0.8s,mb4.1
BRTR Keskin Array B 40.05 149 P **P 22 38 49.0 +0.5**
comp=Z,1.8nm,0.8s,mb3.9,baz=339,slow=6.7,SNR=9.8
BRTR LR LR 22 58 55.4
comp=Z,195nm,18.1s,MS4.0,baz=360,slow=42
BRTR Keskin Array B 40.05 149 P **P 22 38 49.0 +0.5**
PESTR Estremoz 40.09 199 *e*P **P 22 38 48.6 -0.2**
comp=Z,40nm,1.0s,mb5.1
PMAFR Mafra 40.12 201 *e*P **P 22 38 50.2 +1.1**
EBAD Badajoz 40.16 199 P **P 22 38 48.0 -1.4**
comp=Z,23nm,0.9s,mb4.9
PLOU Loures 40.19 201 *e*P **P 22 38 49.9 +0.3**
comp=Z,52nm,0.7s,mb5.4
CDAG Cicekdag 40.23 148 *i* P **P 22 38 42.0 -8.0**
MOY Mondy 40.54 73 *e*P **P 22 38 53.5 +1.0**
MOY pmax pmax
comp=Z,36nm,2.0s,mb4.7
EADA Adamuz 40.60 196 P **P 22 38 52.9 -0.2**
comp=Z,35nm,1.2s,mb4.9
EADA Adamuz 40.60 196 P **P 22 38 52.9 -0.2**
comp=Z,35nm,1.2s,mb4.9
IRK Irkutsk 40.62 70 *e*P **P 22 38 50.3 -2.9**
IRK pmax pmax
comp=Z,36nm,1.5s,mb4.8
ERZM Erzurum 40.79 140 *i* P **P 22 38 51.7 -2.9**
EHUE Huescar 40.85 193 P **P 22 38 56.0 +0.9**
comp=Z,6.3nm,0.9s,mb4.2
EHUE Huescar 40.85 193 P **P 22 38 56.0 +0.9**
comp=Z,6.3nm,0.9s,mb4.2
EQES Quesada 40.89 194 P **P 22 38 56.6 +1.2**
comp=Z,20nm,0.8s,mb4.8
EQES Quesada 40.89 194 P **P 22 38 56.6 +1.2**
comp=Z,20nm,0.8s,mb4.8
PBEJ Beja 40.95 200 *e*P **P 22 38 56.6 +0.7**
comp=Z,45nm,1.5s,mb4.9
GNI Garni 41.01 136 LR LR 22 56 41.7
comp=Z,305nm,19.9s,MS4.2,baz=349,slow=37
GNI Garni 41.01 136 *e*P **P 22 38 56.2 -0.2**
TLY Talaya 41.04 71 *e*P **P 22 38 56.1 -0.6**
TLY *e* 22 40 29.1
TLY *e*S **S 22 45 11.7 +2.6**
TLY pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
TLY MLR MLR
comp=Z,442nm,14.0s,MS4.5
TLY Talaya 41.04 71 *e*P **P 22 38 56.6 -0.1**
comp=Z,7.0nm,0.6s,mb4.5
KDHN Kadinhani 41.09 151 *i* P **P 22 38 55.2 -1.9**
EMIN Mina Concepcio 41.13 198 P **P 22 38 56.9 -0.5**
comp=Z,28nm,1.0s,mb4.8
EMIN Mina Concepcio 41.13 198 P **P 22 38 56.9 -0.5**
comp=Z,28nm,1.0s,mb4.8
MK31 Makanchi Array 41.41 93 P **P 22 38 59.0 -0.7**
MK31 pmax pmax
comp=Z,14nm,0.8s,mb4.6
MKAR Makanchi Array 41.41 93 P **P 22 38 59.8 +0.1**
comp=Z,18nm,0.8s,mb4.7,baz=352,slow=7.4,SNR=69
BNGL BINGOL 41.70 141 *i* P **P 22 39 05.2 +3.1**
ERON Agron 41.71 195 P **P 22 39 03.3 +1.2**
comp=Z,9.4nm,0.7s,mb4.5
ERON Agron 41.71 195 P **P 22 39 03.3 +1.1**
comp=Z,9.4nm,0.7s,mb4.5
ELZG Elazig 41.87 143 *i* P **P 22 39 10.4 +6.8**
ESPR Espera 41.97 197 P **P 22 39 04.4 +0.1**
comp=Z,16nm,0.9s,mb4.7
ESPR Espera 41.97 197 P **P 22 39 04.4 +0.1**
comp=Z,16nm,0.9s,mb4.7
MALT Malatya 41.99 144 *e*P **P 22 39 05.6 +1.1**
MALT pmax pmax
comp=Z,13nm,0.9s,mb4.6
MALT Malatya 41.99 144 *e*P **P 22 39 05.6 +1.2**
comp=Z,13nm,0.9s,mb4.6
MALT Malatya 41.99 144 *e*P **P 22 39 05.6 +1.1**
comp=Z,13nm,0.9s,mb4.6
ZAK Zakamensk 42.21 72 *e*P **P 22 39 06.1 -0.1**
ZAK *e* 22 40 49.6
EMIJ Mijas 42.21 196 P **P 22 39 06.8 +0.5**
comp=Z,43nm,1.0s,mb5.0
EMIJ Mijas 42.21 196 P **P 22 39 06.8 +0.5**
comp=Z,43nm,1.0s,mb5.0
KEST Kesra 42.68 179 P **P 22 39 10.6 +0.5**
comp=Z,1.4nm,0.7s,mb3.8,baz=170,slow=10.0,SNR=5.1
KEST LR LR 22 57 07.6
comp=Z,107nm,18.2s,MS3.8,baz=353,slow=36
GZT Gaziantep 42.83 145 *i* P **P 22 39 11.7 +0.3**
HAKT HAKKARI 43.41 138 *i* P **P 22 39 15.8 -0.2**
FRU Bishkek 43.66 103 P **P 22 39 18.0 0.0**
FRU *e* 22 39 25.0
FRU *e* 22 41 06.0
FRU pmax pmax
comp=Z,120nm,2.3s,mb5.2
FRU MLR MLR
comp=N,1μm,15.0s
FRU MLR MLR
comp=Z,1μm,15.0s,MS4.8
AAK Ala-Archa 43.82 103 ⇓⇓ P **P 22 39 20.5 +1.2**
SNR=5.8
AAK Ala-Archa 43.82 103 *e*P **P 22 39 19.9 +0.6**
AAK Ala-Archa 43.82 103 *e*P **P 22 39 19.9 +0.6**
ULM Lac du Bonnet 44.07 297 *e*P **P 22 39 19.1 -2.3**
comp=Z,6.9nm,0.9s,mb4.4
ULM Lac du Bonnet 44.07 297 *e*P **P 22 39 19.1 -2.3**
comp=Z,6.9nm,0.9s,mb4.4
EDM Edmonton 44.13 313 *e*P **P 22 39 21.3 -0.5**
SONM Songino Array 45.24 70 P **P 22 39 30.2 -0.5**
comp=Z,4.9nm,0.9s,mb4.3,baz=338,slow=7.0,SNR=20
SONM LR LR 23 01 20.0
comp=Z,727nm,18.2s,MS4.7,baz=258,slow=40
ULN Ulaanbaatar 45.34 69 ⇓⇓ P **P 22 39 32.1 +0.7**
SNR=8.4
ULN Ulaanbaatar 45.34 69 *c i*P **P 22 39 31.6 +0.1**
WMQ Urumqi 45.36 89 P P **22 39 34.0 +2.4**
WMQ XP sP 22 39 41.0 +5.1
WMQ PP PP 22 41 20.0 +2.4
WMQ S **S 22 46 14.0 +1.6**
WMQ XS sS 22 46 22.0 +4.5
WMQ SS SS 22 49 28.0 -7.8
WMQ AMB AMB
comp=Z,21nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,127nm,5.0s
WMQ LR LR
comp=N,654nm,12.0s,MS5.1
WMQ LR LR
comp=E,1μm,12.0s,MS5.1
WMQ LR LR
comp=Z,568nm,12.0s,MS4.7
EYMN Ely 45.47 292 *e*P **P 22 39 32.2 -0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MDT	Midelt	45.93	195	P	P	22 39 35.0	-1.1
	comp=Z,3.4nm,0.8s,mb4.3,baz=13,slow=9.6,SNR=8.7						
MDT				LR	LR	22 59 21.6	
	comp=Z,153nm,18.1s,MS4.0,baz=250,slow=37						
ASF	Jabal al Asfar	47.88	147	LR	LR	23 03 48.0	
	comp=Z,170nm,19.6s,MS4.0,baz=82,slow=41						
WALA	Waterton Lakes	48.26	312	eP	P	22 39 54.5	+0.2
WALA	Waterton Lakes	48.26	312	eP	P	22 39 54.5	+0.2
JFWS	Jewell Farm	50.07	289	eP	P	22 40 08.1	-0.1
EIL	Elat	50.14	149	eP	P	22 40 09.2	+0.5
	comp=Z,237nm,1.6s						
EIL	Elat	50.14	149	eP	P	22 40 09.2	+0.5
	comp=Z,237nm,1.6s						
CHMT	Chamberlain Mo	50.25	311	eP	P	22 40 08.8	-0.7
CHMT				e		22 40 15.8	
CHMT	Chamberlain Mo	50.25	311	eP	P	22 40 08.9	-0.6
MSO	Missoula	50.44	311	eP	P	22 40 10.7	-0.2
	comp=Z,7.6nm,1.0s,mb4.7						
MSO	Missoula	50.44	311	eP	P	22 40 10.7	-0.3
	comp=Z,7.6nm,1.0s,mb4.7						
RSSD	Black Hills	51.45	302	eP	P	22 40 18.6	0.0
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
RSSD	Black Hills	51.45	302	eP	P	22 40 18.6	0.0
	comp=Z,5.7nm,1.0s,mb4.5						
RSSD	Black Hills	51.45	302	eP	P	22 40 18.6	0.0
	comp=Z,5.7nm,1.0s,mb4.5						
DLMT	Dillon	51.66	310	P	P	22 40 21.7	+1.6
	comp=Z,3.0nm,0.8s,mb4.3						
DLMT	Dillon	51.66	310	P	P	22 40 21.7	+1.6
	comp=Z,3.0nm,0.8s,mb4.3						
GTA	Gaotai	52.06	79	eP	P	22 40 23.2	+0.1
GTA				AP	pP	22 40 31.6	+5.3
GTA				XP	sP	22 40 34.6	+7.1
GTA				PP	PP	22 42 20.1	-1.1
GTA				S	S	22 47 39.9	-6.9
GTA				SS	SS	22 51 15.0	-8.9
GTA				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.9						
GTA				AMB	AMB		
	comp=Z,87nm,3.8s						
GTA				LR	LR		
	comp=N,785nm,20.1s						
GTA				LR	LR		
	comp=E,611nm,13.7s						
GTA				LR	LR		
	comp=Z,947nm,19.4s,MS4.8						
LKWY	Lake	52.09	307	eP	P	22 40 19.8	-3.5
LKWY				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0						
LKWY	Lake	52.09	307	eP	P	22 40 19.8	-3.6
	comp=Z,288nm,1.4s						
LKWY	Lake	52.09	307	eP	P	22 40 19.8	-3.5
	comp=Z,288nm,1.4s						
MCMT	McKenzie Canyo	52.22	310	eP	P	22 40 24.9	+0.6
MDJ	Mudanjiang	52.44	50	P	P	22 40 25.6	-0.4
MDJ				AP	pP	22 40 33.5	+4.4
MDJ				XP	sP	22 40 37.9	+7.5
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,147nm,5.4s						
MDJ				LR	LR		
	comp=N,164nm,25.0s						
MDJ				LR	LR		
	comp=E,332nm,17.9s						
MDJ				LR	LR		
	comp=Z,293nm,21.5s,MS4.3						
CN2	Changchun	52.57	54	eP	P	22 40 26.0	-0.9
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
IMW	Indian Meadow	52.82	308	eP	P	22 40 32.8	+4.0
	comp=Z,15nm,0.9s,mb4.9						
IMW	Indian Meadow	52.82	308	eP	P	22 40 32.8	+4.0
	comp=Z,15nm,0.9s,mb4.9						
BMO	Blue Mountains	52.88	314	eP	P	22 40 28.1	-1.1
	comp=Z,2.4nm,0.8s,mb4.2						
BMO	Blue Mountains	52.88	314	eP	P	22 40 28.1	-1.1
	comp=Z,2.4nm,0.8s,mb4.2						
MOOW	Moose Ponds	52.94	307	eP	P	22 40 30.1	+0.5
	comp=Z,6.8nm,1.0s,mb4.5						
MOOW				e		22 40 36.7	
MOOW	Moose Ponds	52.94	307	eP	P	22 40 30.1	+0.5
HHC	Hu-ho-hao-te	52.96	68	eP	P	22 40 31.7	+1.9
HHC				AP	pP	22 40 36.3	+3.3
HHC				XP	sP	22 40 38.7	+4.5
HHC				PCP	PcP	22 41 41.8	+3.2
HHC				PP	PP	22 42 32.4	+3.0
HHC				S	S	22 47 58.3	-0.9
HHC				XS	sS	22 48 06.2	+1.8
HHC				SS	SS	22 51 32.5	-5.6
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,137nm,6.1s						
HHC				LR	LR		
	comp=Z,1μm,16.5s,MS5.0						
BLA	Blacksburg	53.62	278	eP	P	22 40 33.6	-1.1
	comp=Z,1.4nm,1.1s,mb3.8						
BLA	Blacksburg	53.62	278	eP	P	22 40 33.6	-1.1
	comp=Z,1.4nm,1.1s,mb3.8						
HLID	Hailey	53.70	311	eP	P	22 40 35.0	-0.2
	comp=Z,4.4nm,1.1s,mb4.3						
HLID	Hailey	53.70	311	eP	P	22 40 35.0	-0.2
	comp=Z,4.4nm,1.1s,mb4.3						
PDAR	Pinedale Array	53.70	306	P	P	22 40 33.5	-1.7
	comp=Z,1.8nm,1.0s,mb3.9,baz=25,slow=4.9,SNR=8.5						
SNY	Shenyang	54.17	56	⇑P	P	22 40 38.1	-0.6
SNY				AP	pP	22 40 46.8	+4.9
SNY				XP	sP	22 40 52.1	+9.0
SNY				S	S	22 48 19.5	+3.9
SNY				SS	SS	22 51 51.1	-6.2
SNY				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.7						
SNY				AMB	AMB		
	comp=Z,130nm,3.1s						
SNY				LR	LR		
	comp=E,625nm,14.9s						
SNY				LR	LR		
	comp=Z,347nm,16.9s,MS4.5						
RWWY	Rawlins	54.36	304	eP	P	22 40 39.8	-0.2
	comp=Z,18nm,1.1s,mb4.9						
BJI	Beijing	54.60	64	eP	P	22 40 41.5	-0.3
BJI				S	S	22 48 25.5	+4.1
BJI				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
BJI				AMB	AMB		
	comp=Z,58nm,2.7s,mb5.1						
BJI				LR	LR		
	comp=Z,537nm,27.6s,MS4.5						
TZTN	Tazewell	54.90	280	eP	P	22 40 42.6	-1.4
TZTN	Tazewell	54.90	280	eP	P	22 40 42.6	-1.4
CCM	Cathedral Cave	54.96	288	eP	P	22 40 42.6	-1.8
CCM				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
CCM	Cathedral Cave	54.96	288	eP	P	22 40 42.5	-1.9
	comp=Z,6.0nm,0.8s,mb4.7						
CCM	Cathedral Cave	54.96	288	eP	P	22 40 42.5	-1.9
	comp=Z,6.0nm,0.8s,mb4.7						
ISCO	Idaho Springs	55.92	302	eP	P	22 40 51.7	+0.3
	comp=Z,4.1nm,1.1s,mb4.4						
ISCO	Idaho Springs	55.92	302	eP	P	22 40 51.7	+0.4
	comp=Z,4.1nm,1.1s,mb4.4						
LZH	Lanzhou	56.07	76	eP	P	22 40 53.0	+0.6
LZH				AP	pP	22 41 01.5	+5.9
LZH				XP	sP	22 41 05.5	+8.7
LZH				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,95nm,5.4s						
LZH				LR	LR		
	comp=N,463nm,5.0s						
LZH				LR	LR		
	comp=Z,533nm,10.0s,MS4.9						
CPCT	Cooper Cave	56.15	281	eP	P	22 40 49.7	-3.3
CPCT	Cooper Cave	56.15	281	eP	P	22 40 49.7	-3.3
SMCO	Snowmass	56.76	303	eP	P	22 40 57.1	-0.2
	comp=Z,8.8nm,1.0s,mb4.7						
SMCO				e		22 41 04.1	
MSU	Marysvale	58.28	307	eP	P	22 41 08.7	+0.7
MIAR	Mount Ida	58.81	289	eP	P	22 41 09.8	-1.9
	comp=Z,20nm,1.1s,mb5.1						
NVAR	Mina Array Bea	59.31	313	P	P	22 41 15.2	0.0
	comp=Z,2.6nm,0.9s,mb4.2,baz=24,slow=7.1,SNR=5.6						
WMOK	Wichita Mounta	59.61	294	eP	P	22 41 16.0	-1.3
	comp=Z,7.4nm,1.0s,mb4.7						
WMOK				e		22 41 23.2	
GKN	Gorkha	60.01	97	eP	P	22 41 20.7	+0.7
	comp=Z,18nm,0.7s,mb5.2						
KOLN	Koldanda	60.02	98	eP	P	22 41 20.8	+0.7
KKN	Kakani	60.34	97	eP	P	22 41 23.1	+0.8
	comp=Z,49nm,0.7s,mb5.6						
GUN	Gumba	60.35	96	eP	P	22 41 23.5	+1.2
TPNV	Topopah Spring	60.45	311	eP	P	22 41 24.8	+1.7
	comp=Z,6.1nm,0.9s,mb4.6						
DMN	Daman	60.48	97	eP	P	22 41 24.5	+1.3
PKI	Pulchoki	60.58	97	eP	P	22 41 25.0	+1.1
	comp=Z,56nm,1.2s,mb5.6						
CD2	Chengdu	61.07	78	⇓iP	P	22 41 27.7	+0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
WUAZ	Wupatki	61.07	306	P	P	22 41 34.0	+6.7
	comp=Z,6.9nm,1.0s,mb4.7						
MJAR	Matsushiro Arr	61.64	45	P	P	22 41 33.1	+2.0
	comp=Z,1.4nm,0.7s,mb4.2,baz=4.0,slow=8.8,SNR=3.8						
MJAR				LR	LR	23 08 53.2	
	comp=Z,340nm,18.7s,MS4.5,baz=330,slow=37						
NJ2	Nanjing	62.86	63	eP	P	22 41 41.6	+2.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
WHN	Wuhan	63.49	68	⇓P	P	22 41 43.8	+0.4
TUC	Tucson	64.11	305	eP	P	22 41 47.5	-0.1
	comp=Z,7.3nm,1.3s,mb4.5						
SSE	Sheshan	64.21	61	eP	P	22 41 44.8	-3.4
SSE				AP	pP	22 41 51.3	-0.1
SSE				PCP	PcP	22 42 21.4	-1.7
SSE				S	S	22 50 17.8	-7.8
SSE				SCS	ScS	22 51 36.6	-5.7
SSE				AMB	AMB		
	comp=Z,31nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,535nm,6.2s						
SSE				LR	LR		
	comp=E,1μm,21.0s						
SSE				LR	LR		
	comp=Z,378nm,18.2s,MS4.6						
TOA0	Torodi Ar. Sit	65.25	187	eP	P	22 41 54.3	-0.7
TORD	Torodi Ar. Bea	65.25	187	P	P	22 41 54.4	-0.6
	comp=Z,11nm,0.9s,mb4.9,baz=358,slow=6.1,SNR=60						
LIC	Lamto	72.37	194	eP	P	22 42 38.0	-1.3
	comp=Z,25nm,1.0s,mb4.8						
LIC				eR			
	comp=Z,164nm,21.8s						
LIC	Lamto	72.37	194	eP	P	22 42 38.0	-1.3
	comp=Z,12nm,1.0s,mb4.8						
LIC				LR	LR		
	comp=Z,80nm,21.8s,MS4.0						
LIC	Lamto	72.37	194	eP	P	22 42 38.0	-1.3
	comp=Z,12nm,1.0s,mb4.8						
ASAR	Alice Springs	119.97	59	PKP	PKPdf	22 50 01.5	-2.5
	comp=Z,0.6nm,0.8s,baz=357,slow=2.0,SNR=8.0						
VNA1	Neumayer--Stat	149.07	191	ePKPdf	PKPdf	22 50 59.0	+1.5
VNA1				e		22 51 02.4	
VNA1				e		22 51 03.7	
VNA1				e		22 51 07.5	
VNA1				e		22 51 15.9	
MAW	Mawson	149.19	142	eP	PKPdf	22 50 58.1	+0.4
	comp=Z,4.1nm,0.8s						
MAW	Mawson	149.19	142	PKPbc	PKPbc	22 50 59.3	-2.6
	comp=Z,5.7nm,1.1s,baz=357,slow=5.7,SNR=3.6						
SNAA	Sanae	149.92	187	PKPbc	PKPbc	22 51 01.4	-2.3
	comp=Z,1.7nm,0.8s,baz=31,slow=2.3,SNR=4.9						
SNAA	Sanae	149.92	187	ePKPdf	PKPdf	22 51 01.0	+2.2
SNAA				e		22 51 02.2	
SNAA				e		22 51 04.4	
SNAA				e		22 51 06.2	
SNAA				e		22 51 10.4	
SNAA				e		22 51 16.5	
SNAA				e		22 51 21.5	
SNAA				e		22 51 31.6	

*STR **09** 22:32:27.3±1.4, 44.11N×478E, h5km±1km, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG 09 22:32:29.7±0.1**, 4403N**×**485E, h18**km**, Md2.1**/2**, Ml1.8**/2**, Error ellipse: s-maj=4.2km s-min=2.2km az=26.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRAF	Pradon	0.32	135	Pg	Pg	22 32 34.5	-2.1
PRAF				Sg	Sg	22 32 40.6	-0.7
SMRF	Simiane la Rot	0.52	96	ePg	Pg	22 32 39.0	-1.2
SMRF				eSg	Sg	22 32 47.2	-0.1
	5.1nm,0.3s						
TREF	Trevaresse	0.56	137	Pg	Pg	22 32 40.6	-0.3
TREF				Sg	Sg	22 32 49.4	+1.0
LASF	Ste Croix	0.72	274	ePg	Pg	22 32 43.2	-0.6
LASF				eSg	Sg	22 32 54.3	+0.9
	2.1nm,0.2s						
VIVF	Saint-Julien-l	0.83	351	ePg	Pg	22 32 45.7	-0.3
VIVF				eSg	Sg	22 32 56.8	-0.2
	3.5nm,0.3s						
TAVF	Tavernes	0.96	115	Pg	Pg	22 32 47.2	-1.3
TAVF				Sg	Sg	22 33 01.5	+0.3
FRF	La Foret Royal	1.38	109	ePn	Pn	22 32 52.6	-1.5
FRF				eSg	Sg	22 33 13.4	-1.0
	1.3nm,0.2s						
LMR	La Mourre	1.39	120	ePn	Pn	22 32 52.7	-1.5
LMR				eSg	Sg	22 33 14.2	-0.4
	0.9nm,0.2s						

*IDC **09** 22:36:03.3±0.4, 1437S×7073W, h0km, mb5.1/28, mb1 5.1/31, mb1mx5.1/33, mbtmp5.1/31, ML4.2/4, MS4.5/33, Ms1 4.5/33, ms1mx4.4/40, Error ellipse: s-maj=16.1km s-min=10.7km az=74.0*

*LDG **09** 22:36:05.1±0.3, 1389S×7066W, h10km, Mb5.6/41, Ms4.4/9, Error ellipse: s-maj=16.0km s-min=6.6km az=57.0*

*ISCJB **09** 22:36:07.6±0.1, 1442S±003×7078W±002, h33km, mb5.5/191, MS4.6/43, Error ellipse: s-maj=4.7km s-min=2.9km az=57.3*

*MOS **09** 22:36:07.7±1.1, 1431S×7077W, h33km, mb5.8/76, Error ellipse: s-maj=7.3km s-min=5.2km az=83.5*

*CRAAG **09** 22:36:07.8, 1439S×7086W, Mb5.6*

*BJI **09** 22:36:08.2, 1440S×7070W, h28km, mB5.3, Ms5.4, Msz5.1*

*HRVD **09** 22:36:08.2±0.2, 1441S×7091W, h21km, MW5.2/78, Centroid moment Tensor Solution. LP body waves: s61,c93;Mantle waves: s78,c137; Half duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.73±.02; $M_{\theta\theta}$0.79±.02; $M_{\phi\phi}$-0.06±.02; $M_{r\theta}$-0.14±.03; $M_{\theta\phi}$0.08±.02; $M_{\phi r}$-0.04±.04; Best double couple: $M_0$0.77700×10^{17} NP1:ϕ_s267.00000°,δ40.00000°,λ-86.00000°. NP2: ϕ_s82.00000°,δ51.00000°,λ-93.00000°. Principal axes: T 0.8100, Plg5.0000°, Azm174.0000°; N -0.0670, Plg2.0000°, Azm84.0000°; P -0.7430, Plg84.0000°, Azm331.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **09** 22:36:08.2±1.6, 1443S×7074W, h29km±11km, mb5.6/144, MS4.6/10, ML5.2(LIM) Error ellipse: s-maj=5.3km s-min=3.6km az=212.0*

NEIC Felt [IV] at Yauri and [III] at Sicuani.

ISC 09 22:36:09.6±0.2**, 1443S**±004×**7069W**±003**, h35**km**, n780,** σ**0s91**/688**, mb5.5**/191**, MS4.6**/43**, 95C-98D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	2.17	201	iP	Pn	22 36 41.4	-1.8
ARE				eS	Sn	22 37 02.0	-6.8
NNA	Nana	6.47	291	Pn	Pn	22 37 38.4	-3.9
	4.8nm,0.3s,baz=153,slow=11,SNR=12						
NNA				LR	LR	22 40 07.2	
	comp=Z,5μm,18.8s,baz=128,slow=38						
NNA	Nana	6.47	291	ePn	Pn	22 37 38.3	-4.0
LVC	Limon Verde	8.31	169	Pn	Pn	22 38 07.2	-0.4
	2.7nm,0.3s,baz=324,slow=9.6,SNR=39						
LVC				Sn	Sn	22 39 43.5	+3.3
	baz=187,slow=23,SNR=2.3						
LVC				LR	LR	22 41 47.2	
	comp=Z,2μm,21.5s,baz=346,slow=41						
SAML	Samuel	9.14	54	⇓iPn	Pn	22 38 22.2	+3.2
	5.2nm,1.5s						
SAML				iSn	Sn	22 40 24.4	+24
SIV	San Ignacio	9.41	101	Pn	Pn	22 38 24.6	+2.0
	17nm,0.3s,baz=287,slow=12,SNR=215						
SIV				Sn	Sn	22 40 14.4	+7.2
	2.1nm,0.3s,baz=16,slow=22,SNR=3.5						
SIV				Lg		22 41 08.2	
	0.1nm,0.3s,baz=231,slow=20,SNR=2.2						
ATAH	Atahualpa	10.57	313	Pn	Pn	22 38 36.8	-1.8
	0.9nm,0.3s,baz=146,slow=12,SNR=8.1						
ATAH				LR	LR	22 42 40.8	
	comp=Z,3μm,19.6s,baz=137,slow=38						
CPUP	Villa Florida	17.22	136	P	Pn	22 40 07.0	-0.3
	0.3nm,0.3s,baz=301,slow=13,SNR=7.7						
CPUP				LR	LR	22 48 09.7	
	comp=Z,2μm,18.4s,baz=125,slow=42						
CPUP	Villa Florida	17.22	136	P	Pn	22 40 07.5	+0.2
CPUP	Villa Florida	17.22	136	ePn	Pn	22 40 06.7	-0.6
	198nm,1.5s						
CFAA	Coronel Fontan	17.24	173	P	Pn	22 40 06.9	-0.7
	0.1nm,0.3s,baz=350,slow=12,SNR=18						
CFAA				LR	LR	22 47 00.1	
	comp=Z,112nm,20.6s,baz=132,slow=38						
ROSC	El Rosal	19.50	349	P	Pn	22 40 39.7	+4.7
	1.9nm,0.3s,baz=190,slow=3.4,SNR=21						
ROSC				S	S	22 44 07.6	-4.4
	1.9nm,0.3s,baz=85,slow=21,SNR=6.1						
ROSC				Lg		22 46 25.5	
	1.0nm,0.3s,baz=245,slow=24,SNR=2.7						
ROSC				LR	LR	22 48 42.1	
	comp=Z,3μm,19.6s,baz=192,slow=39						
BDFB	Brasilia	21.93	96	P	P	22 41 02.7	+2.8
	16nm,0.9s,baz=268,slow=14,SNR=11						
BDFB				LR	LR	22 49 47.4	
	comp=Z,830nm,18.3s,MS4.2,baz=285,slow=38						
BDFB	Brasilia	21.93	96	eP	P	22 41 03.6	+3.7
	44nm,1.0s,mb4.8						
BAO	Brasilia Array	21.95	96	P	P	22 41 01.5	+1.4
SDV	Santo Domingo	23.16	0	P	P	22 41 11.2	-1.8
	35nm,1.0s,mb4.8,baz=215,slow=9.1,SNR=26						
SDV				S	S	22 45 49.5	+28
	7.4nm,1.0s,baz=75,slow=19,SNR=4.1						
SDV				Lg		22 48 15.5	
	13nm,0.9s,baz=265,slow=20,SNR=3.4						
SDV				LR	LR	22 49 53.3	
	comp=Z,624nm,18.6s,MS4.1,baz=190,slow=36						
SDV	Santo Domingo	23.16	0	eP	P	22 41 11.0	-2.0
LPA	La Plata	23.41	153	deP	P	22 41 15.0	-0.6
LPA				epP		22 45 37.0	
PCRV	Puerto La Cruz	25.17	14	P	P	22 41 31.3	-0.3
	10nm,1.0s,baz=345,slow=15,SNR=2.7						
PCRV				Lg		22 49 10.2	
	17nm,0.9s,baz=153,slow=20,SNR=1.7						
PCRV				LR	LR	22 51 57.1	
	comp=Z,3μm,18.2s,MS4.8,baz=54,slow=38						
PLCA	Paso Flores	26.21	180	P	P	22 41 40.3	-0.7
PLCA	Paso Flores	26.21	180	eP	P	22 41 40.1	-0.9
	67nm,1.1s,mb5.1						
JTS	JuntasAbangare	28.34	329	LR	LR	22 54 12.8	
	comp=Z,1μm,18.1s,MS4.5,baz=156,slow=38						
RCBR	Riachuelo	35.25	80	P	P	22 43 02.0	+1.3
RPN	Rapa Nui	38.12	244	P	P	22 43 23.9	-1.3
	79nm,0.8s,mb5.5,baz=64,slow=6.7,SNR=6.3						
CMIG	Matias Romero	39.39	322	P	P	22 43 34.1	-1.7
	14nm,0.9s,mb4.7,baz=126,slow=6.6,SNR=14						
CMIG				LR	LR	22 58 11.4	
	comp=Z,420nm,21.1s,MS4.2,baz=150,slow=34						
USHA	Ushuaia	40.35	178	P	P	22 43 42.0	-1.9
	19nm,1.1s,mb4.7,baz=305,slow=2.4,SNR=6.2						
KVTX	Kingsville	49.37	328	eP	P	22 44 56.5	+0.9
LRAL	Lakeview Retre	49.70	342	eP	P	22 44 56.0	-2.1
HKT	Hockley	50.34	331	eP	P	22 45 03.5	+0.5
	173nm,1.9s,mb5.8						
PMSA	Palmer Station	50.50	176	P	P	22 45 03.4	-0.8
	baz=354,slow=9.2						
CPCT	Cooper Cave	51.31	346	eP	P	22 45 08.6	-1.6
NATX	Nacogdoches	51.36	334	eP	P	22 45 11.0	+0.4
SWET	Sewanee	51.45	344	eP	P	22 45 08.7	-2.6
OXF	Oxford	51.82	340	eP	P	22 45 12.4	-1.7
	106nm,1.1s,mb5.7						
PLAL	Pickwick Lake	51.84	342	eP	P	22 45 11.3	-2.9
TZTN	Tazewell	52.13	347	eP	P	22 45 10.2	-6.2
TZTN				ePcP	PcP	22 46 26.3	-1.7
TZTN				ePP	PP	22 47 12.5	-2.3
BLA	Blacksburg	52.17	350	eP	P	22 45 14.6	-2.1
	1.1nm,0.6s						
ELN	Prospectdale	52.24	350	eP	P	22 45 16.5	-0.8
JCT	Junction City	52.72	328	eP	P	22 45 20.2	-0.5
	51nm,1.1s,mb5.4						
UALR	University of	53.08	338	eP	P	22 45 21.9	-1.5
	133nm,1.1s,mb5.8						
MIAR	Mount Ida	53.34	336	eP	P	22 45 23.9	-1.4
	89nm,1.3s,mb5.5						
GNAR	Gosnell	53.35	340	P	P	22 45 16.1	-9.3
GLAT	Glass	53.40	341	eP	P	22 45 23.0	-2.8
PARMO	Parma	53.91	341	P	P	22 45 29.2	-0.3
WCI	Wyandotte Cave	54.38	345	eP	P	22 45 30.5	-2.4
	49nm,1.1s,mb5.3						
MVL	Millersville	54.40	355	eP	P	22 45 31.8	-1.2
LPIG	La Paz	54.45	314	P	P	22 45 32.4	-1.0
	17nm,0.3s,mb5.4,baz=329,slow=1.9,SNR=8.4						
USIN	University of	54.50	344	eP	P	22 45 31.5	-2.3
SIUC	Southern Illin	54.71	342	eP	P	22 45 33.5	-1.8
SSPA	Standing Stone	55.19	353	P	P	22 45 36.1	-2.7
	10nm,1.4s,mb4.7						
BLO	Bloomington	55.33	345	eP	P	22 45 37.5	-2.4
	86nm,1.1s,mb5.7						
ACSO	Alum Creek Sta	55.57	349	eP	P	22 45 40.0	-1.5
CCM	Cathedral Cave	55.66	340	eP	P	22 45 39.8	-2.4
	108nm,1.3s,mb5.7						
WMOK	Wichita Mounta	55.70	332	eP	P	22 45 41.2	-1.3
SLM	Saint Louis	55.87	342	eP	P	22 45 41.8	-1.9
ALLY	Alegheny Colle	56.47	352	eP	P	22 45 46.9	-1.1
GDL2	Guadalupe Moun	56.48	326	eP	P	22 45 48.0	0.0
BINY	Binghamton	56.55	355	eP	P	22 45 47.0	-1.6
MNTX	Cornudas Mount	56.66	324	eP	P	22 45 47.9	-1.4
ERPA	Erie	56.91	352	eP	P	22 45 50.0	-1.1
	81nm,1.2s,mb5.6						
AMTX	Amarillo	57.19	330	eP	P	22 45 51.9	-1.2
	33nm,1.3s,mb5.2						
KSU1	Kansas State U	58.50	336	eP	P	22 46 00.9	-1.3
LONY	Lake Ozonia	58.87	357	eP	P	22 46 03.4	-1.4
FRNY	Flat Rock	59.04	358	eP	P	22 46 04.6	-1.4
LPM	Los Pinos Moun	59.31	326	eP	P	22 46 08.0	+0.1
LENM	Lemitar	59.39	325	eP	P	22 46 08.6	+0.1
SADO	Sadowa	59.41	353	P	P	22 46 06.1	-2.5
	13nm,1.1s,mb4.8,baz=197,slow=6.2,SNR=6.3						
SADO	Sadowa	59.41	353	P	P	22 46 06.1	-2.5
PKME	Peaks-Kenny Pk	59.42	1	eP	P	22 46 07.2	-1.5
LAZ	Ladron	59.66	325	eP	P	22 46 10.8	+0.5
ANMO	Albuquerque	59.70	326	P	P	22 46 10.3	-0.3
ANMO	Albuquerque	59.70	326	eP	P	22 46 10.4	-0.2
ANMO				pmax	pmax		
	comp=Z,24nm,0.8s						
ANMO	Albuquerque	59.70	326	eP	P	22 46 10.4	-0.2
	comp=Z,24nm,0.8s,mb5.3						
SCIA	State Center	59.78	341	eP	P	22 46 09.2	-2.0
JFWS	Jewell Farm	59.82	343	eP	P	22 46 08.9	-2.5
TUC	Tucson	60.27	321	eP	P	22 46 14.0	-0.5
TUC				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.5						
TUC	Tucson	60.27	321	eP	P	22 46 14.0	-0.5
	comp=Z,52nm,1.1s,mb5.5						
116A	Eloy	61.01	321	⇑P	P	22 46 19.4	-0.1
	baz=61,SNR=16						
RKT	Rikitea	61.08	251	eLR	LR	23 04 23.0	
	comp=Z,370nm,26.5s						
115A	Sonoran Desert	61.42	320	⇑P	P	22 46 22.4	+0.1
	baz=62,SNR=12						
Z14A	Wintersburg	62.32	321	⇓P	P	22 46 28.4	+0.1
	baz=62,SNR=17						
X15A	Humboldt	62.65	322	⇑P	P	22 46 30.9	+0.3
	baz=63,SNR=37						
Y14A	Wickenburg	62.74	321	⇑P	P	22 46 31.2	0.0
	baz=63,SNR=28						
WUAZ	Wupatki	62.86	323	eP	P	22 46 32.6	+0.6
ISCO	Idaho Springs	62.99	330	eP	P	22 46 33.1	+0.3
ISCO				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.4						
ISCO	Idaho Springs	62.99	330	eP	P	22 46 33.1	+0.2
	comp=Z,36nm,1.2s,mb5.4						
X14A	Yava	63.03	321	⇓P	P	22 46 33.4	+0.3
	baz=63,SNR=17						
W15A	Williams	63.15	322	⇓P	P	22 46 34.5	+0.7
	baz=63,SNR=10						
Y13A	Salome	63.16	320	⇓P	P	22 46 34.0	+0.1
	baz=63,SNR=7.7						
SMCO	Snowmass	63.18	329	eP	P	22 46 34.3	+0.3
	comp=Z,46nm,1.2s,mb5.5						
GLA	Glamis	63.28	319	eP	P	22 46 35.0	+0.2
GLA	Glamis	63.28	319	⇑P	P	22 46 34.8	0.0
	baz=63,SNR=25						

Y12C Blythe 63.55 320 ⇑P P 22 46 36.7 +0.1
baz=64,SNR=14
W14A Seligman 63.66 322 P P 22 46 37.9 +0.7
baz=64,SNR=35
PDMCI Parker Dam,Lak 63.68 321 ⇑P P 22 46 37.1 -0.3
baz=64,SNR=6.5
X13A Yucca 63.69 321 ⇓P P 22 46 37.6 +0.1
baz=64
SWSC Sam W. Stewart 63.83 318 ⇑P P 22 46 38.5 +0.1
baz=64,SNR=8.5
DVTC Desert V Tower 63.85 318 ⇑P P 22 46 38.6 +0.1
baz=64,SNR=15
W13A Hualapai Mount 64.06 321 ⇓P P 22 46 40.4 +0.5
baz=64,SNR=44
PHWY Pilot Hill 64.10 331 *e*P P 22 46 40.3 +0.2
MONP Monument Peak 64.20 318 ⇑P P 22 46 41.3 +0.4
baz=64,SNR=25
IRM Iron Mountain 64.21 320 ⇓P P 22 46 41.0 +0.1
baz=64,SNR=58
BAR Barrett 64.23 318 *e*P P 22 46 41.3 +0.3
NEE2 Needles Airpor 64.29 321 ⇑P P 22 46 41.3 -0.1
baz=64
BELC Belle Mtn. 64.64 319 ⇑P P 22 46 44.0 +0.3
baz=65,SNR=18
109C Camp Elliot, M 64.65 318 ⇓P P 22 46 43.5 -0.3
baz=65,SNR=7.8
PFO Pinyon Flat Ob 64.68 319 *e*P P 22 46 44.3 +0.3
PFO pmax pmax
comp=Z,55nm,1.1s,mb5.5
PFO Pinyon Flat Ob 64.68 319 *e*P P 22 46 44.3 +0.3
comp=Z,56nm,1.1s,mb5.5
PFO Pinyon Flat Ob 64.68 319 P P 22 46 44.4 +0.4
baz=65,SNR=25
W12A Cal Nev Ari 64.79 321 ⇓P P 22 46 44.7 +0.1
baz=65
EYMN Ely 64.81 345 *e*P P 22 46 42.3 -2.5
comp=Z,43nm,1.0s,mb5.4
SRU San Rafael 64.96 327 *e*P P 22 46 46.0 +0.2
V12A Nelson 65.07 321 ⇓P P 22 46 46.7 +0.3
baz=65,SNR=29
MURC Murrieta 65.16 318 ⇓P P 22 46 47.2 +0.1
baz=65,SNR=6.7
RWWY Rawlins 65.22 331 *e*P P 22 46 48.1 +0.6
U12A Valley of Fire 65.35 322 ⇓P P 22 46 48.7 +0.4
baz=66,SNR=30
HEC Hector,Ludlow 65.39 320 ⇓P P 22 46 49.0 +0.5
baz=66,SNR=39
BBRC Big Bear Sol-O 65.40 319 ⇑P P 22 46 49.5 +0.9
baz=66
CCUT Cedar City 65.42 324 *e*P P 22 46 50.0 +1.2
MSU Marysvale 65.43 325 *e*P P 22 46 49.3 +0.5
TMUT Trail Mountain 65.46 326 *e*P P 22 46 49.7 +0.7
TUQ Turquoise Mtn. 65.53 320 ⇑P P 22 46 49.7 +0.2
baz=66,SNR=41
ARUT Antelope Range 65.63 324 *e*P P 22 46 51.0 +0.9
SCI San Clemente I 65.65 317 ⇑P P 22 46 50.6 +0.4
baz=66
RSSD Black Hills 65.72 334 *e*P P 22 46 50.7 0.0
SHPR Sheep Range 65.77 322 *e*P P 22 46 51.5 +0.5
CIS Catalina Islan 65.82 317 ⇑P P 22 46 51.5 +0.2
baz=66
RRX Edison Barstow 65.84 319 ⇑P P 22 46 52.1 +0.6
baz=66
U11A Corn Creek 65.85 322 ⇓P P 22 46 52.2 +0.7
baz=66,SNR=6.8
BFSC Mount Baldy St 65.86 318 ⇓P P 22 46 51.8 +0.3
baz=66,SNR=25
FMP Fort Macarthur 65.94 318 ⇓P P 22 46 52.6 +0.5
baz=66
GSC Goldstone 65.99 320 *e*P P 22 46 53.0 +0.6
GSC Goldstone 65.99 320 ⇓P P 22 46 52.8 +0.4
baz=66,SNR=36
SHOC Shoshone 66.05 321 ⇑P P 22 46 52.7 -0.2
baz=66,SNR=24
MWC Mount Wilson 66.10 318 *e*P P 22 46 53.7 +0.5
MPU Maple Canyon 66.21 327 *e*P P 22 46 54.6 +0.8
DAU Daniels Canyon 66.29 327 *e*P P 22 46 55.0 +0.6
DECC Green Verdugo 66.30 318 ⇑P P 22 46 54.7 +0.3
baz=66,SNR=8.4
NLU North Lily Min 66.40 326 *e*P P 22 46 55.4 +0.4
U10A Ash Meadows, A 66.42 321 ⇑P P 22 46 55.9 +0.8
baz=67,SNR=24
SNCC San Nicolas Is 66.47 317 ⇓P P 22 46 55.5 0.0
baz=67
EDW2 Edwards Air Fo 66.47 319 P P 22 46 55.6 +0.1
baz=67,SNR=48
LRMC Laurel Mountai 66.66 319 ⇑P P 22 46 57.0 +0.3
baz=67,SNR=57
BLG Laguna Peak 66.69 318 ⇓P P 22 46 56.8 -0.1
baz=67,SNR=7.1
TPNV Topopah Spring 66.72 321 *e*P P 22 46 57.8 +0.7
CTU Camp Tracy 66.75 327 *e*P P 22 46 57.1 -0.2
OSI Osito Adit 66.78 318 ⇓P P 22 46 57.4 -0.1
baz=67
FURC Furnace Creek, 66.78 321 ⇓P P 22 46 58.1 +0.6
baz=67,SNR=97
EGOM La Gomera 66.86 50 P P 22 46 59.0 +0.9
comp=Z,82nm,1.2s,mb5.6
TCUT Toone Canyon 66.88 328 *e*P P 22 46 53.3 -4.9
TCUT *e* 22 46 58.3
MPMC Manual Prospec 66.90 320 P P 22 46 58.5 +0.3
baz=67,SNR=57
NOQ North Oquirrh 66.92 327 *e*P P 22 46 58.2 -0.2
DUG Dugway 66.97 326 *e*P P 22 46 59.2 +0.5
BSC Santa Cruz Isl 66.99 317 ⇑P P 22 46 58.8 0.0
baz=67,SNR=5.6
DAC Darwin (Calif) 67.11 320 *e*P P 22 47 00.0 +0.4
DAC pmax pmax
comp=Z,71nm,1.0s,mb5.7
DAC Darwin (Calif) 67.11 320 *e*P P 22 47 00.0 +0.5
comp=Z,71nm,1.0s,mb5.7
ARVC Arvin 67.16 319 ⇑P P 22 47 00.1 +0.2
baz=67,SNR=6.6
PDAR Pinedale Array 67.17 330 P P 22 46 59.5 -0.5
comp=Z,9.0nm,0.8s,mb4.8,baz=148,slow=6.7,SNR=95
PDAR PKPPKP 23 15 21.9
comp=Z,0.2nm,0.6s,baz=211,slow=4.7,SNR=3.2
PDAR LR LR 23 17 34.1
comp=Z,246nm,21.3s,MS4.4,baz=287,slow=37
BW06 Boulder Array 67.17 330 *e*P P 22 47 01.3 +1.4
comp=Z,54nm,1.3s,mb5.4
TRCR Troy Canyon 67.25 323 *e*P P 22 47 01.3 +0.8
ISA Isabella 67.27 319 *e*P P 22 47 01.1 +0.5
ISA pmax pmax
comp=Z,67nm,0.9s,mb5.7
ISA Isabella 67.27 319 *e*P P 22 47 01.1 +0.5
comp=Z,67nm,0.9s,mb5.7
ISA Isabella 67.27 319 P P 22 47 01.3 +0.7
baz=67,SNR=53
Q12A Willow Creek R 67.29 324 ⇓P P 22 47 01.1 +0.4
baz=68,SNR=15
SBC Santa Barbara 67.31 317 ⇓P P 22 47 00.5 -0.4
baz=68
HWUT Hardware Ranch 67.32 328 *e*P P 22 47 00.6 -0.3
comp=Z,50nm,1.0s,mb5.5
GRAC Grapevine Rang 67.43 321 ⇓P P 22 47 02.2 +0.5
baz=68,SNR=12
VNA1 Neumayer--Stat 67.48 161 ⇓*i*P P 22 47 02.2 +0.2
VNA1 *e* 22 47 05.2
VNA1 *e* 22 47 07.3
VNA1 *e* pP 22 47 13.5 +0.8
CWC Cottonwood Cre 67.51 320 ⇓P P 22 47 02.4 +0.2
baz=68
SPUT South Promonto 67.56 327 *e*P P 22 47 02.2 -0.2
BGU Big Grassy Mou 67.60 326 *e*P P 22 47 02.7 0.0
R10A Warm Springs 67.63 323 P P 22 47 04.2 +1.3
baz=68,SNR=69
PKM Peak Mountain 67.66 318 P P 22 47 03.5 +0.4
baz=68,SNR=42
EBAJ Bajamar 67.71 51 P P 22 47 07.3 +3.9
comp=Z,328nm,2.0s,mb6.0
VES Vestal, Richgr 67.77 319 ⇓P P 22 47 04.0 +0.3
baz=68,SNR=25
S09A Goldfield 67.81 322 ⇑P P 22 47 04.3 +0.3
baz=68,SNR=75
SDP Sudden Peak, L 67.91 317 ⇓P P 22 47 04.5 -0.1
baz=68
AHID Auburn Hatcher 67.93 329 *e*P P 22 47 04.8 0.0
comp=Z,48nm,0.9s,mb5.5
TIN Tinemaha 68.00 320 ⇑P P 22 47 05.7 +0.5
baz=68,SNR=6.5
SMMC Simmler 68.03 318 P P 22 47 06.2 +0.8
baz=68,SNR=22
TPH Tonopah 68.04 322 *e*P P 22 47 06.2 +0.7
TPH pmax pmax
comp=Z,80nm,1.1s,mb5.7
TPH Tonopah 68.04 322 *e*P P 22 47 06.2 +0.8
comp=Z,80nm,1.1s,mb5.7
TAOE Nuku Hiva Isla 68.05 266 *e*LR LR 23 07 39.0
comp=Z,1µm,22.9s
R09A Tonopah 68.06 322 ⇑P P 22 47 05.9 +0.3
baz=68,SNR=56
HVU Hansel Valley 68.07 327 *e*P P 22 47 05.4 -0.3
ULM Lac du Bonnet 68.10 343 P P 22 47 03.5 -2.3
comp=Z,23nm,0.8s,mb5.3,baz=153,slow=6.1,SNR=44
ULM LR LR 23 21 17.7
comp=Z,251nm,18.3s,MS4.5,baz=142,slow=40
RCTC Rector, Farmer 68.16 319 ⇓P P 22 47 05.8 -0.4
baz=68
N13A Wendover, West 68.19 326 ⇑P P 22 47 06.2 -0.2
baz=68,SNR=10
REDW Red Top Meadow 68.25 330 *e*P P 22 47 06.9 +0.2
comp=Z,76nm,1.2s,mb5.6
HELL Mitchell Peak, 68.25 320 P P 22 47 06.9 +0.2
baz=68,SNR=56
LIC Lamto 68.26 77 *e*P P 22 47 05.9 -0.9
comp=Z,111nm,1.6s,mb5.3
LIC *e*R
comp=Z,164nm,21.8s
LIC Lamto 68.26 77 *e*P P 22 47 05.9 -0.9
comp=Z,55nm,1.6s,mb5.3
LIC LR LR
comp=Z,80nm,21.8s,MS3.9
SNOW Snow King Moun 68.27 330 *e*P P 22 47 07.0 0.0
comp=Z,48nm,1.0s,mb5.5
V05C Boulder Hill, 68.31 319 ⇓P P 22 47 07.6 +0.5
baz=68
LOHW Long Hollow 68.31 330 *e*P P 22 47 07.2 0.0
comp=Z,45nm,1.0s,mb5.5
TPAW Teton Pass 68.39 330 *e*P P 22 47 08.0 +0.3
comp=Z,46nm,1.0s,mb5.5
MTUM Tungsten Hills 68.39 321 *e*P P 22 47 08.2 +0.6
RRI2 Red Ridge 68.47 329 *e*P P 22 47 08.4 +0.3
MOOW Moose Ponds 68.48 330 *e*P P 22 47 08.2 0.0
comp=Z,49nm,1.1s,mb5.5
O11A Cowboy Ranch, 68.50 324 ⇑P P 22 47 08.8 +0.5
baz=69
Q09A Carvers 68.51 322 ⇓P P 22 47 09.1 +0.7
baz=69,SNR=18
M13A Montello 68.52 326 ⇓P P 22 47 08.0 -0.4
baz=69,SNR=19
DBIC Dimbokro 68.56 77 P P 22 47 07.7 -1.0
comp=Z,10nm,1.0s,mb4.7,baz=184,slow=9.0,SNR=8.9
DBIC Dimbokro 68.56 77 *e*P P 22 47 09.7 +1.0
DBIC pmax pmax
comp=Z,57nm,1.5s
DBIC Dimbokro 68.56 77 *e*P P 22 47 09.7 +0.9
comp=Z,58nm,1.5s,mb5.3
DCID1 Drake Creek 68.58 330 *e*P P 22 47 09.8 +0.9
P10A Eureka 68.61 324 P P 22 47 10.0 +0.9
baz=69,SNR=10
N12A Clover Valley, 68.64 325 ⇑P P 22 47 09.0 -0.2
baz=69,SNR=7.6
IMW Indian Meadow 68.69 330 *e*P P 22 47 12.9 +3.4
FLWY Flagg Ranch 68.71 330 *e*P P 22 47 10.2 +0.6
MLAC Mammoth Lakes 68.73 321 ⇑P P 22 47 10.4 +0.6
baz=69
R08A Mina 68.75 322 ⇓P P 22 47 10.3 +0.5
baz=69,SNR=15
PKD Parkfield 68.77 318 ⇓P P 22 47 10.0 +0.1
baz=69,SNR=17
V04C Ramage Ranch, 68.79 318 ⇓P P 22 47 10.8 +0.7
baz=69,SNR=11
KCC Kaiser Creek 68.84 320 ⇑P P 22 47 10.0 -0.4
baz=69,SNR=18
T06C Millerton Lake 68.89 320 ⇑P P 22 47 09.2 -1.5
baz=69
NVAR Mina Array Bea 68.92 322 P P 22 47 11.0 +0.1
comp=Z,21nm,0.9s,mb5.0,baz=138,slow=7.3,SNR=108
NVAR PKPPKP 23 15 20.3
comp=Z,0.4nm,0.7s,baz=315,slow=2.1,SNR=5.1
LKWY Lake 68.92 331 P P 22 47 13.5 +2.5
LKWY pmax pmax
comp=Z,210nm,1.5s,mb5.8
LKWY Lake 68.92 331 *e*P P 22 47 11.0 0.0
comp=Z,208nm,1.6s,mb5.8
P09A Austin 68.96 323 ⇑P P 22 47 11.4 +0.2
baz=69,SNR=7.5
M12A Wells 68.96 326 ⇓P P 22 47 11.0 -0.2
baz=69,SNR=9.4
Q08A Gabbs 68.97 322 ⇓P P 22 47 11.3 0.0
baz=69
N11A Elko Archery C 69.00 325 ⇓P P 22 47 11.1 -0.4
baz=69
YFT Old Faithful 69.05 330 *e*P P 22 47 13.2 +1.5
SCHQ Schefferville 69.06 2 P P 22 47 09.0 -2.9
comp=Z,18nm,1.2s,mb4.9,baz=177,slow=4.8,SNR=5.9
O10A Cortez Mining, 69.08 324 ⇓P P 22 47 12.4 +0.5
baz=69,SNR=34
R07C Lee Vining 69.15 321 P P 22 47 13.5 +1.1
baz=69,SNR=46
YNR Norris Junctio 69.17 331 *e*P P 22 47 13.8 +1.3
U04C Hernandez Rese 69.17 319 ⇑P P 22 47 12.6 +0.1
baz=69,SNR=30
V03C Hunter Liggett 69.26 318 ⇑P P 22 47 13.7 +0.6
baz=69,SNR=19
YMR Madison River 69.27 330 *e*P P 22 47 14.3 +1.2
comp=Z,155nm,1.2s,mb5.8
LRV Little Rabbit 69.36 318 *e*P P 22 47 13.8 +0.1
N10A Dunphy 69.37 324 ⇑P P 22 47 13.1 -0.7
baz=70
O09A Fish Creek Ran 69.39 324 ⇑P P 22 47 13.8 -0.1
baz=70,SNR=33
T05C Eagle Field, D 69.43 319 ⇓P P 22 47 14.6 +0.5
baz=70
M11A Holland Ranch, 69.45 325 ⇓P P 22 47 14.3 +0.1
baz=70,SNR=15
SNAA Sanae 69.48 162 P P 22 47 14.0 -0.5
comp=Z,20nm,0.9s,mb5.0,baz=294,slow=5.1,SNR=89
SNAA Sanae 69.48 162 ⇓*i*P P 22 47 14.0 -0.4
SNAA *e* 22 47 16.4
SNAA *e* 22 47 18.9
SNAA *e* pP 22 47 25.5 +0.2
SNAA *e* 22 47 35.2
S05C Merced 69.49 320 ⇑P P 22 47 14.9 +0.4
baz=70,SNR=34
GCMT Greycliff 69.51 332 *e*P P 22 47 14.7 +0.1
S06C San Francisco 69.52 320 P P 22 47 15.1 +0.4
baz=70,SNR=70
Q07A Schurz 69.55 322 ⇓P P 22 47 15.4 +0.6
baz=70
BMN Battle Mountai 69.58 324 *e*P P 22 47 15.6 +0.5
P08A Dixie Valley 69.60 323 ⇑P P 22 47 15.7 +0.6
baz=70,SNR=27
QLMT Earthquake Lak 69.61 330 *e*P P 22 47 16.3 +1.0
WAKR Walker 69.65 321 *e*P P 22 47 16.4 +0.9
R06C Coleville 69.67 321 P P 22 47 16.5 +0.9
baz=70,SNR=52
HAST UC Hastings Re 69.69 318 ⇑P P 22 47 16.0 +0.4
baz=70,SNR=15
SAO San Andreas Ge 69.84 319 *e*P P 22 47 17.3 +0.7
PACP Pacheco Peak 69.89 319 P P 22 47 17.6 +0.7
baz=70,SNR=16
M10A I.L. Ranch, Tu 69.93 325 ⇑P P 22 47 17.4 +0.3
baz=70,SNR=18
CMB Columbia Colle 69.94 320 *e*P P 22 47 17.3 0.0
CMB Columbia Colle 69.94 320 P P 22 47 17.3 +0.1
baz=70,SNR=11
P07A Fallon 69.98 322 ⇓P P 22 47 17.8 +0.3
baz=70
O08A Rochester Mine 70.03 323 ⇓P P 22 47 17.2 -0.6
baz=70
N09A Rock Creek Ran 70.04 324 P P 22 47 17.6 -0.2
baz=70,SNR=18
R05C Kirkwood Meado 70.17 321 ⇓P P 22 47 19.5 +0.8
baz=70,SNR=21
HLID Hailey 70.19 328 *e*P P 22 47 19.2 +0.5
comp=Z,43nm,1.0s,mb5.3
S04C Ingram Canyon, 70.21 319 ⇑P P 22 47 19.2 +0.3
baz=70,SNR=8.2
MCMT McKenzie Canyo 70.30 330 *e*P P 22 47 19.9 +0.5
N08A GE Springer Mi 70.34 324 ⇑P P 22 47 19.0 -0.7
baz=70
WCN Washoe City 70.35 322 ⇓P P 22 47 20.5 +0.8
baz=70,SNR=16
M09A Marrel Ranch, 70.37 324 ⇓P P 22 47 19.9 +0.1
baz=70,SNR=23
O07A Toulon 70.37 323 ⇓P P 22 47 19.7 -0.1
baz=70,SNR=30
PAHR Pah Rah Range 70.38 322 *e*P P 22 47 20.8 +0.9
R04C Big Horse Ranc 70.42 320 ⇓P P 22 47 20.5 +0.3
baz=71,SNR=8.1
BNLO Ben Lomond (Sa 70.53 318 ⇓P P 22 47 21.2 +0.3
baz=71
WENL Wente Brothers 70.56 319 ⇑P P 22 47 21.7 +0.7
baz=71
DLMT Dillon 70.56 330 *e*P P 22 47 21.2 +0.2
comp=Z,98nm,1.4s,mb5.5
LAVA Lava Cap Winer 70.61 321 ⇑P P 22 47 21.2 -0.1
baz=71,SNR=14
P06A Stead Airport, 70.67 322 ⇑P P 22 47 22.5 +0.7
baz=71
JRSC Jasper Ridge 70.73 319 ⇑P P 22 47 22.3 +0.3
baz=71
BDM Black Diamond 70.82 319 ⇑P P 22 47 23.5 +0.9
baz=71,SNR=12
LRM Limekiln Ridge 70.83 330 *e*P P 22 47 22.8 +0.1
P05C Yuba Gap, Truc 70.86 321 ⇓P P 22 47 23.6 +0.8
baz=71,SNR=18
L09A Wilkinson Ranc 70.89 325 P P 22 47 23.4 +0.4
baz=71,SNR=28
M08A Happy Creek Ra 70.91 324 ⇓P P 22 47 23.1 -0.1
baz=71,SNR=27
O06A Flanigan 70.93 322 ⇑P P 22 47 23.5 +0.2
baz=71,SNR=20
Q04C Lincoln 71.05 320 ⇓P P 22 47 24.9 +0.9
baz=71,SNR=7.3
BEKR Beckwourth 71.06 322 P P 22 47 24.7 +0.6
baz=71,SNR=39
HRY Holter Researc 71.19 331 *e*P P 22 47 25.6 +0.7
EGMT Eagleton 71.25 333 *e*P P 22 47 24.9 -0.3
N06A Buffalo Meadow 71.31 323 P P 22 47 25.8 +0.3
baz=72,SNR=84
Q03C Winters 71.32 320 ⇑P P 22 47 26.7 +1.0
baz=72,SNR=5.6
M07A Soldier Meadow 71.33 324 P P 22 47 25.7 0.0
baz=72,SNR=19
K09A Rome 71.37 325 P P 22 47 26.2 +0.2
baz=72,SNR=123
L08A Fields 71.38 325 P P 22 47 26.2 +0.2
baz=72,SNR=47
FARB Farallon Islan 71.39 319 ⇑P P 22 47 26.1 0.0
baz=72
OHCM Honcut 71.42 321 *e*P P 22 47 26.5 +0.2
CVS Carmenet Viney 71.43 319 ⇑P P 22 47 26.4 0.0
baz=72,SNR=11
O05C Quincy 71.46 321 ⇓P P 22 47 26.9 +0.4
baz=72,SNR=9.3
SUTB Sutter Butte 71.54 320 ⇓P P 22 47 26.6 -0.4
baz=72
ORV Oroville 71.56 321 P P 22 47 27.7 +0.6
baz=72,SNR=73
MCCM Marconi Confer 71.58 319 *e*P P 22 47 27.8 +0.6
MCCM Marconi Confer 71.58 319 ⇑P P 22 47 27.5 +0.2
baz=72
NSHM Saint Helena R 71.63 319 *e*P P 22 47 28.1 +0.6
NSHM *e*PcP PcP 22 47 43.7 -2.9
WVOR Wild Horse Val 71.70 325 P P 22 47 27.8 -0.2
WVOR pmax pmax
comp=Z,45nm,1.5s,mb5.2
WVOR Wild Horse Val 71.70 325 *e*P P 22 47 27.6 -0.3
comp=Z,45nm,1.5s,mb5.2
MNRC McLaughlin Nat 71.74 320 ⇓P P 22 47 28.4 +0.2
baz=72,SNR=7.2
ELFS Eagle Lake Fie 71.75 322 ⇑P P 22 47 28.7 +0.4
baz=72,SNR=46
O04C Chester 71.78 322 ⇓P P 22 47 28.7 +0.2
baz=72,SNR=12
K08A Mann Creek Ran 71.81 325 ⇑P P 22 47 28.4 -0.2
baz=72,SNR=8.2
L07A Adell 71.83 324 P P 22 47 29.2 +0.5
baz=72,SNR=7.5
M06C Likely Place G 71.97 323 ⇑P P 22 47 29.8 +0.3
baz=72,SNR=13
CHMT Chamberlain Mo 72.00 331 *e*P P 22 47 30.0 +0.2
O03C Acorn Hollow, 72.16 321 ⇓P P 22 47 30.0 -0.7
baz=72
HOPS Hopland 72.20 320 *e*P P 22 47 28.0 -3.0
comp=Z,39nm,1.3s,mb5.2
HOPS Hopland 72.20 320 ⇑P P 22 47 31.3 +0.3
baz=72
K07A Rock Creek Ran 72.21 325 ⇑P P 22 47 30.9 -0.1
baz=72,SNR=14
I09A Lost Marbles R 72.22 326 ⇑P P 22 47 30.9 -0.2
baz=72,SNR=5.8
MSO Missoula 72.27 330 *e*P P 22 47 31.9 +0.6
comp=Z,78nm,1.3s,mb5.5
HATC Hat Creek Radi 72.31 322 ⇑P P 22 47 31.7 +0.1
baz=72,SNR=23
GASB Alder Springs 72.37 320 ⇓P P 22 47 32.3 +0.3
baz=72,SNR=15
M05C Lookout 72.46 322 ⇑P P 22 47 32.7 +0.2
baz=73,SNR=55
BMO Blue Mountains 72.58 327 *e*P P 22 47 33.0 -0.2
I08A Drewsey 72.63 326 ⇓P P 22 47 33.5 0.0
baz=73,SNR=9.8
H09A Durkee 72.65 327 ⇑P P 22 47 33.3 -0.3
baz=73,SNR=6.0
P01C Double 8 Ranch 72.65 320 ⇑P P 22 47 34.1 +0.5
baz=73,SNR=5.5
L05A Lakeview 72.71 323 ⇓P P 22 47 34.7 +0.7
baz=73,SNR=25
O02C Red Bluff 72.73 321 ⇓P P 22 47 33.4 -0.7
baz=73,SNR=8.0
WDC Whiskeytown Da 72.82 321 *e*P P 22 47 32.3 -2.3
WDC Whiskeytown Da 72.82 321 ⇑P P 22 47 32.9 -1.7
baz=73,SNR=9.2
K06A Valley Falls 72.85 324 P P 22 47 35.5 +0.7
baz=73,SNR=134
KIPM Iron Peak 72.94 320 *e*P P 22 47 35.6 +0.3
J06A Christmas Vall 73.08 325 P P 22 47 36.5 +0.3
baz=73,SNR=137
H08A Prairie City 73.09 326 P P 22 47 36.9 +0.7
baz=73,SNR=63
M04C Macdoel 73.13 323 P P 22 47 36.8 +0.3
baz=73,SNR=28
I07A Izee 73.25 325 P P 22 47 37.8 +0.6
baz=73,SNR=38
O01C Eel River Cons 73.34 320 ⇓P P 22 47 38.5 +0.8
baz=74
BSMT Bassoo Peak 73.40 331 *e*P P 22 47 38.5 +0.4
L04A Klamath Falls 73.40 323 ⇓P P 22 47 38.1 +0.1
baz=74,SNR=13
M02C Callahan 73.50 322 ⇓P P 22 47 37.9 -0.7
baz=74,SNR=21
I06A Prineville 73.56 325 P P 22 47 39.9 +0.9
baz=74,SNR=62
K04A Chilquin 73.58 323 ⇑P P 22 47 39.3 +0.2
baz=74
YBH Yreka Blue Hor 73.62 322 *e*P P 22 47 38.3 -1.0
YBH Yreka Blue Hor 73.62 322 P P 22 47 38.4 -1.0
baz=74,SNR=25
J05A Fort Rock 73.71 324 ⇑P P 22 47 40.2 +0.3
baz=74,SNR=49
KHMM Horse Mountain 73.72 321 *e*P P 22 47 40.4 +0.4
FFC Flin Flon 73.82 342 *e*P P 22 47 39.3 -1.2
JCC Jacoby Creek 73.87 321 ⇑P P 22 47 41.2 +0.4
baz=74,SNR=7.5
F08A Pendleton 73.99 327 ⇑P P 22 47 40.8 -0.7
baz=74
NVL N'lazarevskaya 74.01 160 *d* *i*P P 22 47 41.0 -0.7
NVL *e*S S 22 57 38.2 +27
NVL pmax pmax
comp=Z,156nm,1.2s,mb5.8
KRMB Red Mountain 74.21 321 *e*P P 22 47 43.5 +0.7
I05A Bend 74.28 325 ⇓P P 22 47 43.9 +0.7
baz=74
L02A Cave Junction 74.40 322 ⇑P P 22 47 44.1 +0.1
baz=75,SNR=11
M01C Crescent City 74.53 321 ⇓P P 22 47 45.1 +0.4
baz=75
H05A Madras 74.57 325 ⇑P P 22 47 45.5 +0.6
baz=75
K02A Glendale 74.70 323 ⇓P P 22 47 45.8 +0.1
baz=75
J03A Ideyld Park 74.76 323 ⇓P P 22 47 45.3 -0.7
baz=75,SNR=10
HAWA Hanford 74.78 327 *e*P P 22 47 42.0 -4.1
NEW Newport 74.81 330 LR LR 23 24 37.4
comp=Z,213nm,18.2s,MS4.5,baz=350,slow=39
NEW Newport 74.81 330 *e*P P 22 47 46.2 -0.1
G05A Wamic 74.99 326 ⇑P P 22 47 48.2 +0.9
baz=75,SNR=17
BROR Big Rock Looko 75.02 324 P P 22 47 47.2 -0.3
J02A Umpqua 75.11 323 ⇑P P 22 47 48.4 +0.4
baz=75,SNR=27
H04A Detroit Lake 75.12 325 ⇓P P 22 47 47.7 -0.4
baz=75,SNR=11
HOOD Mount Hood Mea 75.22 325 *e*P P 22 47 49.4 +0.7
KEBM Edson Butte 75.27 322 *e*P P 22 47 50.2 +1.3
I03A Eugene 75.31 324 ⇑P P 22 47 49.4 +0.2

baz=76,SNR=17
K01A Sixes 75.31 322 ⇓P P **22 47 49.4 +0.3**
baz=76
PPT Papeete 75.38 255 *e*LR LR 23 11 01.2
comp=Z,304nm,23.8s
FCC Fort Churchill 75.40 348 *e*P P **22 47 48.0 -1.7**
F05A White Salmon 75.47 326 ⇑P P **22 47 50.6 +0.5**
baz=76,SNR=9.9
G04A Mulino 75.61 325 ⇓P P **22 47 50.8 -0.1**
baz=76,SNR=8.9
I02A Mapleton 75.64 323 ⇑P P **22 47 51.4 +0.3**
baz=76,SNR=6.4
COR Corvallis 75.69 324 *e*P P **22 47 52.5 +1.1**
QSPA South Pole Qui 75.72 180 *e*P P **22 47 51.1 -0.4**
comp=Z,32nm,1.1s,mb5.2
MPOR Mary's Peak 75.78 324 P P **22 47 52.9 +1.1**
TBM Table Mountain 75.84 327 P P **22 47 52.9 +0.7**
F04A Amboy 76.03 326 ⇓P P **22 47 53.3 0.0**
baz=76,SNR=17
G03A Yamhill 76.12 325 ⇑P P **22 47 54.3 +0.4**
baz=76,SNR=8.4
H02A Toledo 76.14 324 ⇓P P **22 47 54.2 +0.3**
baz=76
LON Longmire 76.21 327 P P **22 47 54.1 -0.2**
D05A Enumclaw 76.58 327 ⇓P P **22 47 56.3 -0.1**
baz=77,SNR=16
E04A Onalaska 76.60 326 ⇓P P **22 47 56.5 0.0**
baz=77
F03A Seaside 76.65 325 ⇑P P **22 47 57.4 +0.6**
baz=77
EDM Edmonton 76.67 335 *e*P P **22 47 55.8 -1.1**
TOA0 Torodi Ar. Sit 76.72 73 *e*P P **22 47 56.8 -0.4**
TORD Torodi Ar. Bea 76.72 73 P P **22 47 56.6 -0.6**
comp=Z,23nm,0.8s,mb5.1,baz=251,slow=4.7,SNR=51
TORD LR LR 23 22 21.5
comp=Z,544nm,18.0s,MS4.9,baz=275,slow=36
C05A Tolt Reservoir 76.74 327 ⇓P P **22 47 56.2 -1.1**
baz=77
D04A Dobbs Creek Ra 76.97 326 ⇑P P **22 47 59.0 +0.4**
baz=77
E03A Lebam 77.03 326 ⇑P P **22 47 59.5 +0.6**
baz=77,SNR=12
B05A Bryant 77.31 328 ⇓P P **22 47 59.8 -0.7**
baz=78,SNR=12
D03A Wishkah Elem. 77.49 326 ⇓P P **22 48 02.5 +1.0**
baz=78,SNR=6.1
A05A Maple Falls 77.77 328 ⇓P P **22 48 02.8 -0.3**
baz=78,SNR=8.7
PTEO Sao Teotonio 77.78 46 *e*P P **22 48 05.4 +2.3**
comp=Z,342nm,1.1s,mb6.2
A04A Legoe Bay, Lum 77.92 328 ⇓P P **22 48 03.9 0.0**
baz=78
B04A Port Angeles 77.92 327 ⇑P P **22 48 04.6 +0.6**
baz=78
FRB Frobisher Bay 77.94 1 P P **22 48 01.7 -2.3**
comp=Z,9.3nm,0.8s,mb4.8,baz=204,slow=8.6,SNR=3.9
PMAFR Mafra 78.08 44 *e*P P **22 48 06.1 +1.3**
PLOU Loures 78.13 45 *e*P P **22 48 06.9 +1.8**
comp=Z,147nm,1.0s,mb5.9
SNB Saturna Island 78.19 328 P P **22 48 05.8 +0.4**
C03A Quillayute Air 78.42 326 ⇓P P **22 48 07.7 +1.0**
baz=79
PBEJ Beja 78.60 46 *e*P P **22 48 09.3 +1.6**
comp=Z,85nm,1.9s,mb5.3
MDT Midelt 78.62 52 P P **22 48 08.8 +1.0**
comp=Z,36nm,1.0s,mb5.3,baz=255,slow=4.7,SNR=48
MDT LR LR 23 20 25.2
comp=Z,371nm,20.5s,MS4.7,baz=2.1,slow=34
EGRO El Granado 78.64 46 P P **22 48 09.7 +1.9**
comp=Z,129nm,1.2s,mb5.7
PTOM Tomar 78.99 44 *e*P P **22 48 10.9 +1.1**
comp=Z,152nm,1.0s,mb5.9
PESTR Estremoz 79.19 45 *e*P P **22 48 11.8 +0.9**
comp=Z,119nm,1.4s,mb5.6
EMIN Mina Concepcio 79.31 46 P P **22 48 13.4 +1.8**
comp=Z,176nm,1.4s,mb5.8
ESPR Espera 79.48 48 P P **22 48 14.5 +2.0**
comp=Z,113nm,1.1s,mb5.7
EBAD Badajoz 79.54 45 P P **22 48 13.7 +0.9**
comp=Z,132nm,1.2s,mb5.7
EJIF Jimena Fronter 79.57 48 P P **22 48 15.6 +2.6**
EJIF pmax pmax
comp=Z,45nm,1.0s,mb5.3
EJIF Jimena Fronter 79.57 48 P P **22 48 15.6 +2.6**
comp=Z,45nm,1.0s,mb5.3
PTO Porto 79.61 43 *e*P P **22 48 14.4 +1.2**
comp=Z,129nm,1.1s,mb5.8
PCBR Castelo Branco 79.73 44 *e*P P **22 48 14.9 +1.0**
comp=Z,78nm,1.2s,mb5.5
PVIS Viseu 79.87 43 *e*P P **22 48 15.6 +1.0**
comp=Z,85nm,1.5s,mb5.5
MTE Manteigas 79.95 44 *e*P P **22 48 15.5 +0.4**
comp=Z,106nm,1.3s,mb5.6
MTE Manteigas 79.95 44 *e*P P **22 48 16.2 +1.2**
comp=Z,71nm,1.0s,mb5.5
EMIJ Mijas 80.12 48 P P **22 48 16.9 +0.9**
comp=Z,68nm,1.2s,mb5.5
PVRL Vila Real 80.26 43 *e*P P **22 48 17.8 +1.1**
comp=Z,65nm,1.1s,mb5.5
PCAB Cabril 80.27 42 *e*P P **22 48 17.8 +1.0**
comp=Z,106nm,1.1s,mb5.7
ELOB Lobios 80.32 42 P P **22 48 17.8 +0.7**
comp=Z,84nm,1.1s,mb5.6
STS Santiago 80.51 41 P P **22 48 18.7 +0.7**
STS pmax pmax
comp=Z,43nm,1.0s,mb5.3
STS Santiago 80.51 41 P P **22 48 18.7 +0.6**
comp=Z,43nm,1.0s,mb5.3
ELOJ Sierra Loja 80.83 48 P P **22 48 22.1 +2.3**
ELOJ pmax pmax
comp=Z,125nm,1.2s,mb5.7
ELOJ Sierra Loja 80.83 48 P P **22 48 22.1 +2.3**
comp=Z,125nm,1.2s,mb5.7
ELUQ Luque 80.92 48 P P **22 48 22.3 +2.0**
ELUQ pmax pmax
comp=Z,69nm,0.8s,mb5.6
ELUQ Luque 80.92 48 P P **22 48 22.3 +2.0**
comp=Z,69nm,0.8s,mb5.6
EADA Adamuz 80.97 47 P P **22 48 21.1 +0.6**
comp=Z,101nm,1.2s,mb5.6
ERON Agron 81.02 48 P P **22 48 22.3 +1.5**
comp=Z,14nm,0.7s,mb5.0
EALB Alboran 81.12 49 P P **22 48 21.3 0.0**
comp=Z,129nm,0.8s,mb5.9
PBRG Braganca 81.16 43 *e*P P **22 48 22.7 +1.2**
comp=Z,110nm,1.5s,mb5.6
ECAL Calabor 81.22 43 P P **22 48 23.2 +1.3**
comp=Z,179nm,1.2s,mb5.9
ECOG Cogollos-Vega 81.31 48 P P **22 48 23.9 +1.6**
ECOG pmax pmax
comp=Z,20nm,0.8s,mb5.1
ECOG Cogollos-Vega 81.31 48 P P **22 48 23.9 +1.6**
comp=Z,20nm,0.8s,mb5.1
EBAN Banos Encina 81.53 47 P P **22 48 25.1 +1.6**
EBAN pmax pmax
comp=Z,27nm,0.7s,mb5.3
EBAN Banos Encina 81.53 47 P P **22 48 25.1 +1.6**
comp=Z,27nm,0.7s,mb5.3
EPON Pontenova 81.62 41 P P **22 48 24.2 +0.3**
comp=Z,234nm,1.3s,mb6.0
EBER Berja 81.63 49 P P **22 48 25.4 +1.3**
comp=Z,134nm,1.3s,mb5.7
EQES Quesada 81.89 48 P P **22 48 25.9 +0.5**
comp=Z,173nm,1.4s,mb5.8
ESDC Sonseca Array 82.06 46 P P **22 48 27.1 +0.8**
comp=Z,43nm,0.8s,mb5.4,baz=251,slow=5.0,SNR=177
ESDC LR LR 23 24 01.4
comp=Z,313nm,18.6s,MS4.7,baz=260,slow=35
ESDC Sonseca Array 82.06 46 P P **22 48 27.5 +1.2**
comp=Z,36nm,0.8s,mb5.3
ESLA Sonseca Array 82.06 46 *e*P P **22 48 27.7 +1.4**
ENIJ Nijar 82.16 49 P P **22 48 27.0 +0.2**
ENIJ pmax pmax
comp=Z,49nm,0.9s,mb5.4
ENIJ Nijar 82.16 49 P P **22 48 27.0 +0.2**
comp=Z,49nm,0.9s,mb5.4
EHUE Huescar 82.23 48 P P **22 48 27.9 +0.7**
EHUE pmax pmax
comp=Z,145nm,1.3s,mb5.8
EHUE Huescar 82.23 48 P P **22 48 27.9 +0.7**
comp=Z,145nm,1.3s,mb5.8
GUD Guadarrama 82.36 45 P P **22 48 29.4 +1.5**
GUD pmax pmax
comp=Z,52nm,1.0s,mb5.4
GUD Guadarrama 82.36 45 P P **22 48 29.4 +1.5**
comp=Z,52nm,1.0s,mb5.4
SBA Scott Base 82.44 190 P P **22 48 28.1 -0.2**
SBA pmax pmax
comp=Z,21nm,1.1s,mb5.0
SBA Scott Base 82.44 190 *e*P P **22 48 27.8 -0.5**
comp=Z,21nm,1.1s,mb5.0
SFJD Kangerlussuaq 82.53 8 LR LR 23 25 22.7
comp=Z,118nm,19.5s,MS4.3,baz=216,slow=36
EVIA Vianos 82.64 47 P P **22 48 31.0 +1.7**
EVIA pmax pmax
comp=Z,230nm,1.1s,mb6.1
EVIA Vianos 82.64 47 P P **22 48 31.0 +1.7**
comp=Z,230nm,1.1s,mb6.1
BBB Bella Bella 82.76 328 P P **22 48 28.8 -1.2**
comp=Z,35nm,1.1s,mb5.3,baz=132,slow=5.5,SNR=6.6
BBB LR LR 23 32 49.8
comp=Z,160nm,19.6s,MS4.4,baz=285,slow=41
EARI Arriondas 82.85 42 P P **22 48 31.6 +1.1**
comp=Z,207nm,1.3s,mb6.0
EMUR La Murta 83.22 48 P P **22 48 32.5 +0.2**
comp=Z,68nm,1.1s,mb5.6
CART Cartagena 83.29 49 *e*P P **22 48 32.8 +0.1**
comp=Z,54nm,0.9s,mb5.6
ETOB Tobarra 83.33 47 P P **22 48 34.0 +1.2**
comp=Z,218nm,1.0s,mb6.1
VNDA Vanda 83.48 190 P P **22 48 32.5 -1.2**
comp=Z,8.2nm,0.9s,mb4.8,baz=134,slow=4.3,SNR=55
VNDA Vanda 83.48 190 P P **22 48 33.3 -0.4**
SYO Syowa Base 83.69 160 ⇑*i*P P **22 48 30.6 -4.1**
ELAN Lanestosa 83.98 43 P P **22 48 37.0 +0.8**
comp=Z,143nm,1.2s,mb6.0
YKA Yellowknife Ar 83.99 341 P P **22 48 34.8 -1.4**
comp=Z,30nm,0.8s,mb5.5,baz=135,slow=5.2,SNR=58
YKA LR LR 23 29 21.5
comp=Z,434nm,18.5s,MS4.9,baz=185,slow=38
YKW3 Yellowknife Ar 84.04 341 *e*P P **22 48 35.0 -1.5**
ECHE Chera 84.12 47 P P **22 48 38.7 +1.7**
ECHE pmax pmax
comp=Z,38nm,0.8s,mb5.6
ECHE Chera 84.12 47 P P **22 48 38.7 +1.8**
comp=Z,38nm,0.8s,mb5.6
ETRT Tiaret 84.14 51 P P **22 48 39.5 +2.5**
EANR 'Ain N'Sour 84.20 51 P P **22 48 39.0 +1.6**
EBEN Beniarda 84.30 48 P P **22 48 38.8 +1.0**
comp=Z,237nm,1.5s,mb6.1
ECHA Ech Chlef 84.48 51 P P **22 48 40.0 +1.3**
EBNR Beni Rached 84.65 51 P P **22 48 42.0 +2.4**
EMOS Mosqueruela 84.79 46 P P **22 48 41.8 +1.5**
comp=Z,208nm,1.8s,mb6.0
EALK Alkurruntz 85.25 43 P P **22 48 44.3 +1.7**
comp=Z,69nm,1.6s,mb5.5
ESAC Sant Caprasio 85.33 45 P P **22 48 44.1 +1.0**
comp=Z,218nm,2.0s,mb5.9
SJPF Ste Jean 85.39 43 *e*P P **22 48 43.4 +0.1**
comp=Z,30nm,1.0s,mb5.1
SJPF Ste Jean 85.39 43 *e*P P **22 48 43.4 +0.1**
SJPF pmax pmax
comp=Z,15nm,1.0s,mb5.1
SJPF Ste Jean 85.39 43 *e*P P **22 48 43.4 +0.1**
comp=Z,15nm,1.0s,mb5.1
ERTA Horta de San J 85.58 46 P P **22 48 45.3 +1.0**
comp=Z,215nm,1.9s,mb6.0
EMHD Djebel Mahouad 85.69 51 P P **22 48 46.0 +1.2**
ETSF Etsaut 85.75 44 *e*P P **22 48 45.2 +0.1**
comp=Z,63nm,1.1s,mb5.4
ETSF Etsaut 85.75 44 *e*P P **22 48 45.2 +0.1**
ETSF pmax pmax
comp=Z,32nm,1.1s,mb5.5
ETSF Etsaut 85.75 44 *e*P P **22 48 45.2 +0.1**
comp=Z,32nm,1.1s,mb5.5
REYF Montagne du Re 85.93 44 *e*P P **22 48 46.6 +0.6**
VIEF Viey 86.14 44 *e*P P **22 48 47.5 +0.5**
EBIE Bielsa 86.14 44 P P **22 48 48.0 +0.9**
comp=Z,70nm,1.0s,mb5.8
QUIF Quistinic 86.22 39 *e*P P **22 48 46.0 -1.4**
comp=Z,46nm,1.2s,mb5.3
QUIF Quistinic 86.22 39 *e*P P **22 48 46.0 -1.4**
QUIF pmax pmax
comp=Z,23nm,1.2s,mb5.3
QUIF Quistinic 86.22 39 *e*P P **22 48 46.0 -1.4**
comp=Z,23nm,1.2s,mb5.3
LABF Labassere 86.24 44 *e*P P **22 48 47.7 +0.2**
EPOB Poblet 86.26 46 P P **22 48 48.9 +1.2**
comp=Z,108nm,2.0s,mb5.7
RESF Ens 86.32 44 *e*P P **22 48 48.5 +0.6**
ROSF Rostrenen 86.34 38 *e*P P **22 48 46.8 -1.2**
comp=Z,77nm,1.1s,mb5.5
ROSF Rostrenen 86.34 38 *e*P P **22 48 46.8 -1.2**
ROSF pmax pmax
comp=Z,38nm,1.1s,mb5.5
ROSF Rostrenen 86.34 38 *e*P P **22 48 46.8 -1.2**
comp=Z,38nm,1.1s,mb5.5
EPF Esparros 86.41 44 *e*P P **22 48 48.1 -0.3**
comp=Z,87nm,1.4s,mb5.5
EPF Esparros 86.41 44 *e*P P **22 48 48.1 -0.3**
EPF pmax pmax
comp=Z,43nm,1.4s,mb5.5
EPF Esparros 86.41 44 *e*P P **22 48 48.1 -0.3**
comp=Z,44nm,1.4s,mb5.5
MELF Melles 86.63 44 *e*P P **22 48 50.3 +0.9**
SGMF Saint Gilles 86.73 38 *e*P P **22 48 48.3 -1.6**
comp=Z,146nm,1.5s,mb5.7
SGMF Saint Gilles 86.73 38 *e*P P **22 48 48.3 -1.6**
SGMF pmax pmax
comp=Z,73nm,1.5s,mb5.7
SGMF Saint Gilles 86.73 38 *e*P P **22 48 48.3 -1.6**
comp=Z,73nm,1.5s,mb5.7
SALF Salau 86.88 45 *e*P P **22 48 51.6 +0.9**
DLBC Dease Lake 87.17 333 P P **22 48 51.9 -0.3**
comp=Z,35nm,0.9s,mb5.6,baz=130,slow=4.1,SNR=12
BORG Borgarnes 87.30 19 LR LR 23 25 11.4
comp=Z,252nm,20.1s,MS4.6,baz=3.7,slow=34
LFF La Frestale 87.43 42 *e*P P **22 48 52.2 -1.1**
comp=Z,111nm,1.0s,mb5.7
LFF La Frestale 87.43 42 *e*P P **22 48 52.2 -1.1**
LFF pmax pmax
comp=Z,56nm,1.0s,mb5.8
LFF La Frestale 87.43 42 *e*P P **22 48 52.2 -1.1**
comp=Z,56nm,1.0s,mb5.7
CARF Carcanieres 87.48 45 *e*P P **22 48 54.0 +0.4**
MFF Saint Martin d 87.52 41 *e*P P **22 48 53.5 -0.3**
comp=Z,120nm,1.3s,mb5.7
MFF Saint Martin d 87.52 41 *e*P P **22 48 53.5 -0.3**
MFF pmax pmax
comp=Z,60nm,1.3s,mb5.7
MFF Saint Martin d 87.52 41 *e*P P **22 48 53.5 -0.3**
comp=Z,60nm,1.3s,mb5.7
FILF Fillols 87.74 45 *e*P P **22 48 54.8 0.0**
MTLF Montolieu 87.80 44 *e*P P **22 48 54.0 -1.1**
comp=Z,91nm,1.2s,mb5.6
MTLF Montolieu 87.80 44 *e*P P **22 48 54.0 -1.1**
MTLF pmax pmax
comp=Z,46nm,1.2s,mb5.6
MTLF Montolieu 87.80 44 *e*P P **22 48 54.0 -1.1**
comp=Z,46nm,1.2s,mb5.6
GRR Gorron 87.81 39 *e*P P **22 48 53.4 -1.8**
comp=Z,68nm,1.1s,mb5.5
GRR Gorron 87.81 39 *e*P P **22 48 53.4 -1.8**
GRR pmax pmax
comp=Z,34nm,1.1s,mb5.5
GRR Gorron 87.81 39 *e*P P **22 48 53.4 -1.8**
comp=Z,34nm,1.1s,mb5.5
SJAF Saint Jean de 87.93 45 *e*P P **22 48 55.8 +0.1**
RJF Les Rejaudoux 88.08 42 *e*P P **22 48 55.0 -1.4**
comp=Z,98nm,1.1s,mb5.6
RJF *e*R
comp=Z,278nm,19.2s
RJF Les Rejaudoux 88.08 42 *e*P P **22 48 55.0 -1.4**
RJF pmax pmax
comp=Z,49nm,1.1s,mb5.7
RJF MLR MLR
comp=Z,280nm,19.3s,MS4.7
RJF Les Rejaudoux 88.08 42 *e*P P **22 48 55.0 -1.4**
comp=Z,49nm,1.1s,mb5.7
RJF LR LR
comp=Z,280nm,19.3s,MS4.7
FLN La Foliniere 88.20 39 *e*P P **22 48 55.4 -1.6**
comp=Z,161nm,1.3s,mb5.8
FLN *e*R
comp=Z,394nm,19.0s
FLN La Foliniere 88.20 39 *e*P P **22 48 55.4 -1.6**
FLN pmax pmax
comp=Z,80nm,1.3s,mb5.8
FLN MLR MLR
comp=Z,390nm,19.0s,MS4.8
FLN La Foliniere 88.20 39 *e*P P **22 48 55.4 -1.6**
comp=Z,80nm,1.3s,mb5.8
FLN LR LR
comp=Z,390nm,19.0s,MS4.8
CAF Calviac 88.29 43 *e*P P **22 48 56.2 -1.2**
comp=Z,57nm,1.0s,mb5.4
CAF Calviac 88.29 43 *e*P P **22 48 56.2 -1.2**
CAF pmax pmax
comp=Z,28nm,1.0s,mb5.5
CAF Calviac 88.29 43 *e*P P **22 48 56.2 -1.2**
comp=Z,28nm,1.0s,mb5.5
BOSA Boshof 88.29 119 P P **22 48 57.2 -0.3**
comp=Z,4.7nm,1.1s,mb4.7,baz=239,slow=5.9,SNR=3.1
BOSA LR LR 23 28 60.0
comp=Z,214nm,18.1s,MS4.6,baz=258,slow=36
BOSA Boshof 88.29 119 P P **22 48 57.2 -0.3**
BOSA LR LR 23 28 60.0
comp=Z,47nm,1.3s,mb5.6
LDF La Druitiere 88.34 39 *e*P P **22 48 56.0 -1.7**
comp=Z,94nm,1.3s,mb5.6
LDF La Druitiere 88.34 39 *e*P P **22 48 56.0 -1.7**
LDF pmax pmax
comp=Z,47nm,1.3s,mb5.6
LDF La Druitiere 88.34 39 *e*P P **22 48 56.0 -1.7**
comp=Z,47nm,1.3s,mb5.6
TCF Toulx Ste Croi 88.90 42 *e*P P **22 48 58.7 -1.6**
comp=Z,58nm,1.1s,mb5.5
TCF Toulx Ste Croi 88.90 42 *e*P P **22 48 58.7 -1.6**
TCF pmax pmax
comp=Z,29nm,1.1s,mb5.5
TCF Toulx Ste Croi 88.90 42 *e*P P **22 48 58.7 -1.6**
comp=Z,29nm,1.1s,mb5.5
LASF Ste Croix 89.17 44 *e*P P **22 49 00.9 -0.7**
comp=Z,46nm,1.0s,mb5.5
LBL Lubilhac 89.18 43 *e*P P **22 49 01.7 +0.1**
PYM Petit Puy Mans 89.22 42 *e*P P **22 49 01.5 -0.3**
SUMG Summit 89.38 9 *e*P P **22 49 01.3 -1.2**
AGO Saint Agoulin 89.41 42 *e*P P **22 49 02.0 -0.7**
BGF Bois d'Agland 89.41 41 *e*P P **22 49 01.2 -1.5**
comp=Z,152nm,1.1s,mb5.9
BGF Bois d'Agland 89.41 41 *e*P P **22 49 01.2 -1.5**
BGF pmax pmax
comp=Z,76nm,1.1s,mb5.9
BGF Bois d'Agland 89.41 41 *e*P P **22 49 01.2 -1.5**
comp=Z,76nm,1.1s,mb5.9
EKA Eskdalemuir Ar 89.52 32 P P **22 49 01.4 -1.8**
comp=Z,9.7nm,1.0s,mb5.1,baz=235,slow=7.1,SNR=8.2
HYF Humbligny 89.54 41 *e*P P **22 49 01.9 -1.4**
PLDF La Plantade 89.69 42 *e*P P **22 49 03.6 -0.4**
AVF Avril sur Loir 89.82 41 *e*P P **22 49 02.8 -1.8**
comp=Z,74nm,1.2s,mb5.6
AVF Avril sur Loir 89.82 41 *e*P P **22 49 02.8 -1.8**
AVF pmax pmax
comp=Z,37nm,1.2s,mb5.6
AVF Avril sur Loir 89.82 41 *e*P P **22 49 02.8 -1.8**
comp=Z,37nm,1.2s,mb5.6
PRAF Pradon 89.96 45 *e*P P **22 49 05.2 -0.1**
VIVF Saint-Julien-l 89.99 43 *e*P P **22 49 04.8 -0.6**
comp=Z,89nm,1.2s,mb5.7
VIVF Saint-Julien-l 89.99 43 *e*P P **22 49 04.8 -0.6**
VIVF pmax pmax
comp=Z,44nm,1.2s,mb5.7
VIVF Saint-Julien-l 89.99 43 *e*P P **22 49 04.8 -0.6**
comp=Z,44nm,1.2s,mb5.7
GELF Grande-Etoile 90.00 45 *e*P P **22 49 05.4 0.0**
SSF Saint Saulge 90.01 41 *e*P P **22 49 03.6 -1.9**
comp=Z,68nm,1.2s,mb5.5
SSF Saint Saulge 90.01 41 *e*P P **22 49 03.6 -1.9**
SSF pmax pmax
comp=Z,34nm,1.2s,mb5.5
SSF Saint Saulge 90.01 41 *e*P P **22 49 03.6 -1.9**
comp=Z,34nm,1.2s,mb5.6
SKAG Skagway 90.06 333 *e*P P **22 49 05.4 -0.3**
comp=Z,65nm,1.2s,mb5.8
SKAG LR LR
comp=Z,200nm,17.0s,MS4.6
SMF Signal de Mont 90.08 42 *e*P P **22 49 04.3 -1.5**
comp=Z,126nm,1.1s,mb5.9
SMF Signal de Mont 90.08 42 *e*P P **22 49 04.3 -1.5**
SMF pmax pmax
comp=Z,63nm,1.1s,mb5.9
SMF Signal de Mont 90.08 42 *e*P P **22 49 04.3 -1.5**
comp=Z,63nm,1.1s,mb5.9
RES Resolute Bay 90.22 354 *e*P P **22 49 05.6 -0.9**
RES pmax pmax
comp=Z,20nm,0.9s,mb5.5
RES Resolute Bay 90.22 354 *e*P P **22 49 05.6 -0.9**
comp=Z,20nm,0.9s,mb5.5
SMRF Simiane la Rot 90.30 45 *e*P P **22 49 06.6 -0.2**
comp=Z,95nm,1.2s,mb5.7
SMRF Simiane la Rot 90.30 45 *e*P P **22 49 06.6 -0.2**
comp=Z,95nm,1.2s,mb6.0
LOR Lormes 90.31 41 *e*P P **22 49 05.1 -1.8**
comp=Z,62nm,1.2s,mb5.5
LOR *e*R
comp=Z,267nm,21.2s
LOR Lormes 90.31 41 *e*P P **22 49 05.1 -1.8**
LOR pmax pmax
comp=Z,31nm,1.2s,mb5.5
LOR MLR MLR
comp=Z,270nm,21.3s,MS4.7
LOR Lormes 90.31 41 *e*P P **22 49 05.1 -1.8**
comp=Z,31nm,1.2s,mb5.5
LOR LR LR
comp=Z,270nm,21.3s,MS4.7
VILF Villemus 90.35 45 *e*P P **22 49 06.9 -0.2**
KEST Kesra 90.43 53 P P **22 49 07.7 +0.3**
comp=Z,4.9nm,1.0s,mb4.8,baz=218,slow=6.3,SNR=6.9
KEST LR LR 23 32 34.1
comp=Z,114nm,19.0s,MS4.3,baz=201,slow=38
TAVF Tavernes 90.51 45 *e*P P **22 49 07.3 -0.5**
STOF St-Etienne Org 90.53 45 *e*P P **22 49 07.3 -0.6**
LMR La Mourre 90.72 45 *e*P P **22 49 08.0 -0.8**
comp=Z,105nm,1.1s,mb5.8
LMR La Mourre 90.72 45 *e*P P **22 49 08.0 -0.8**
LMR pmax pmax
comp=Z,52nm,1.1s,mb5.8
LMR La Mourre 90.72 45 *e*P P **22 49 08.0 -0.8**
comp=Z,52nm,1.1s,mb5.8
ORIF Oris-en-Rattie 90.82 44 *e*P P **22 49 08.9 -0.4**
comp=Z,106nm,1.1s,mb5.8
ORIF *e*R
comp=Z,563nm,20.2s
ORIF Oris-en-Rattie 90.82 44 *e*P P **22 49 08.9 -0.4**
ORIF pmax pmax
comp=Z,53nm,1.1s,mb5.8
ORIF Oris-en-Rattie 90.82 44 *e*P P **22 49 08.9 -0.4**
comp=Z,53nm,1.1s,mb5.8
FRF La Foret Royal 90.89 45 *e*P P **22 49 08.8 -0.8**
comp=Z,92nm,1.2s,mb5.7
FRF La Foret Royal 90.89 45 *e*P P **22 49 08.8 -0.8**
FRF pmax pmax
comp=Z,46nm,1.2s,mb5.7
FRF La Foret Royal 90.89 45 *e*P P **22 49 08.8 -0.8**
comp=Z,46nm,1.2s,mb5.7
MBDF Montbardon 91.36 44 *e*P P **22 49 11.3 -0.5**
comp=Z,65nm,1.2s,mb5.5
MBDF Montbardon 91.36 44 *e*P P **22 49 11.3 -0.5**
MBDF pmax pmax
comp=Z,32nm,1.2s,mb5.5
MBDF Montbardon 91.36 44 *e*P P **22 49 11.3 -0.5**
comp=Z,32nm,1.2s,mb5.5
REVF Revere 91.44 45 *e*P P **22 49 11.8 -0.4**
TOUF Mont Tournerai 91.45 45 *e*P P **22 49 12.2 0.0**
LUCF Luceram 91.48 45 *e*P P **22 49 12.2 -0.1**
MEZF Maizieres J'vi 91.50 40 *e*P P **22 49 11.0 -1.4**
comp=Z,106nm,1.2s,mb5.7
MEZF Maizieres J'vi 91.50 40 *e*P P **22 49 11.0 -1.4**
comp=Z,106nm,1.2s,mb6.0
CABF La Chapelle 91.52 42 *e*P P **22 49 11.3 -1.2**
comp=Z,57nm,1.1s,mb5.5
CABF La Chapelle 91.52 42 *e*P P **22 49 11.3 -1.2**
CABF pmax pmax
comp=Z,29nm,1.1s,mb5.5
CABF La Chapelle 91.52 42 *e*P P **22 49 11.3 -1.2**
comp=Z,28nm,1.1s,mb5.5
BAIF Baives 91.52 38 *e*P P **22 49 09.8 -2.7**
comp=Z,32nm,1.2s,mb5.2
BAIF Baives 91.52 38 *e*P P **22 49 09.8 -2.7**
BAIF pmax pmax
comp=Z,16nm,1.2s,mb5.2
BAIF Baives 91.52 38 *e*P P **22 49 09.8 -2.7**
comp=Z,16nm,1.2s,mb5.2
SBF Sospel 91.53 45 *e*P P **22 49 11.7 -0.9**
comp=Z,101nm,1.3s,mb5.7
SBF Sospel 91.53 45 *e*P P **22 49 11.7 -0.9**
SBF pmax pmax
comp=Z,50nm,1.3s,mb5.7
SBF Sospel 91.53 45 *e*P P **22 49 11.7 -0.9**
comp=Z,50nm,1.3s,mb5.7
MAW Mawson 91.56 164 ⇓*i*P P **22 49 12.0 -0.7**
comp=Z,12nm,0.9s,mb5.2

MAW Mawson 91.56 164 P **P** 22 49 12.2 -0.5
comp=Z,14nm,0.9s,mb5.3,baz=220,slow=6.3,SNR=36
MAW LR LR 23 30 08.4
comp=Z,190nm,20.0s,MS4.5,baz=342,slow=35
MAW Mawson 91.56 164⇓*i*P **P** 22 49 12.0 -0.7
MAW pmax pmax
comp=Z,12nm,0.9s
VSL Villasalto 91.58 50 *e*P **P** 22 49 13.1 +0.3
comp=Z,34nm,1.1s,mb5.6
LPL La Plagne 91.58 43 *e*P **P** 22 49 12.6 -0.2
comp=Z,73nm,1.1s,mb5.6
LPL La Plagne 91.58 43 *e*P **P** 22 49 12.6 -0.2
LPL pmax pmax
comp=Z,37nm,1.1s,mb5.6
LPL La Plagne 91.58 43 *e*P **P** 22 49 12.6 -0.2
comp=Z,36nm,1.1s,mb5.6
LPG La Plagne 91.59 43 *e*P **P** 22 49 12.8 -0.1
comp=Z,97nm,1.2s,mb5.7
LPG La Plagne 91.59 43 *e*P **P** 22 49 12.8 -0.1
LPG pmax pmax
comp=Z,48nm,1.2s,mb5.7
LPG La Plagne 91.59 43 *e*P **P** 22 49 12.8 -0.1
comp=Z,48nm,1.2s,mb5.7
SAOF Saorge 91.65 45 *e*P **P** 22 49 12.8 -0.3
GIVF Givet 91.91 39 *e*P **P** 22 49 12.8 -1.5
comp=Z,134nm,1.5s,mb5.8
GIVF Givet 91.91 39 *e*P **P** 22 49 12.8 -1.5
GIVF pmax pmax
comp=Z,67nm,1.5s,mb5.8
GIVF Givet 91.91 39 *e*P **P** 22 49 12.8 -1.5
comp=Z,67nm,1.5s,mb5.8
THEF They Montfort 91.99 41 *e*P **P** 22 49 13.9 -0.8
HAU Haudompre 92.15 41 *e*P **P** 22 49 13.8 -1.6
comp=Z,84nm,1.5s,mb5.5
HAU *e*R
comp=Z,285nm,22.0s
HAU Haudompre 92.15 41 *e*P **P** 22 49 13.8 -1.6
HAU pmax pmax
comp=Z,42nm,1.5s,mb5.5
HAU MLR MLR
comp=Z,290nm,22.0s,MS4.7
HAU Haudompre 92.15 41 *e*P **P** 22 49 13.8 -1.6
comp=Z,42nm,1.5s,mb5.5
HAU LR LR
comp=Z,290nm,22.0s,MS4.7
LOMF Lomont 92.24 42 *e*P **P** 22 49 15.2 -0.7
HINF Hinteralfeld 92.41 41 *e*P **P** 22 49 14.9 -1.7
comp=Z,59nm,1.5s,mb5.4
HINF Hinteralfeld 92.41 41 *e*P **P** 22 49 14.9 -1.7
HINF pmax pmax
comp=Z,30nm,1.5s,mb5.4
HINF Hinteralfeld 92.41 41 *e*P **P** 22 49 14.9 -1.7
comp=Z,30nm,1.5s,mb5.4
WLF Walferdange 92.57 39 *e*P **P** 22 49 17.1 -0.3
comp=Z,52nm,1.5s,mb5.7
MOF Molkenrain 92.60 41 *e*P **P** 22 49 16.6 -0.9
BBS Basel-Blauen 92.72 42 *e*P **P** 22 49 17.3 -0.8
ECH Echery 92.73 41 *e*P **P** 22 49 17.4 -0.7
CDF Champ du Feu 92.87 41 *e*P **P** 22 49 17.3 -1.4
comp=Z,89nm,1.5s,mb5.7
CDF Champ du Feu 92.87 41 *e*P **P** 22 49 17.3 -1.4
CDF pmax pmax
comp=Z,45nm,1.5s,mb5.7
CDF Champ du Feu 92.87 41 *e*P **P** 22 49 17.3 -1.4
comp=Z,45nm,1.5s,mb5.7
WLS Welschbruch 92.92 41 *e*P **P** 22 49 18.0 -1.0
FELD Feldberg im Sc 93.16 41 *e*P **P** 22 49 19.3 -0.8
LANF Langenberg 93.38 40 *e*P **P** 22 49 20.5 -0.6
BFO Black Forest 93.51 41 *e*P **P** 22 49 20.0 -1.7
comp=Z,9.0nm,1.2s,mb5.1
BFO Black Forest 93.51 41 *e*P **P** 22 49 20.0 -1.7
BFO pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
INK Inuvik 93.75 341 P **P** 22 49 21.6 -1.2
comp=Z,30nm,0.9s,mb5.7,baz=91,slow=5.6,SNR=39
INK LR LR 23 34 22.2
comp=Z,216nm,18.0s,MS4.7,baz=66,slow=37
INK Inuvik 93.75 341 *e*P **P** 22 49 21.6 -1.3
BUG Bochum--Univer 93.82 38 *e*P **P** 22 49 22.5 -0.6
comp=Z,35nm,1.3s,mb5.6
DAVOS Davos 94.02 43 P **P** 22 49 23.6 -0.4
DAVOX Davos 94.06 43 P **P** 22 49 23.6 -0.6
comp=Z,19nm,0.9s,mb5.5,baz=247,slow=3.9,SNR=22
DAVOX LR LR 23 29 56.8
comp=Z,283nm,19.3s,MS4.7,baz=246,slow=34
DAVOX Davos 94.06 43 P **P** 22 49 23.6 -0.6
DAVOX LR LR 23 29 56.8
STU Stuttgart 94.19 41 *e*P **P** 22 49 24.1 -0.7
comp=Z,27nm,1.0s,mb5.6
DAVA Damuels 94.20 42⇑*i*P **P** 22 49 24.8 -0.1
comp=Z,32nm,1.1s,mb5.7
IBBN Ibbenburen 94.37 37 *e*P **P** 22 49 25.2 -0.5
comp=Z,41nm,1.5s,mb5.6
VAE Valguarnera 94.83 53 LR LR 23 34 23.2
comp=Z,292nm,19.4s,MS4.8,baz=279,slow=37
JMIC Jan Mayen 94.92 17 LR LR 23 28 51.4
comp=Z,178nm,19.5s,MS4.5,baz=251,slow=33
MOTA Moosalm 95.02 43⇓*i*P **P** 22 49 27.8 -0.8
comp=Z,28nm,1.2s,mb5.6
MOTA Moosalm 95.02 43⇓*i*P **P** 22 49 27.8 -0.8
MOTA pmax pmax
comp=Z,29nm,1.2s,mb5.6
SQTA Sankt Quirin 95.05 43⇓*i*P **P** 22 49 28.7 -0.1
comp=Z,42nm,1.1s,mb5.8
SQTA Sankt Quirin 95.05 43⇓*i*P **P** 22 49 28.7 -0.1
SQTA pmax pmax
comp=Z,42nm,1.1s,mb5.8
UBBA Unterbreizbach 95.28 39 *e*P **P** 22 49 29.5 -0.3
comp=Z,29nm,1.6s,mb5.5
WATA Walderalm 95.32 43⇑*i*P **P** 22 49 29.6 -0.4
comp=Z,39nm,1.3s,mb5.7
WATA Walderalm 95.32 43⇑*i*P **P** 22 49 29.6 -0.4
WATA pmax pmax
comp=Z,39nm,1.3s,mb5.7
WTTA Wattenberg 95.34 43⇑*i*P **P** 22 49 30.1 -0.1
comp=Z,56nm,1.1s,mb5.9
WTTA Wattenberg 95.34 43⇑*i*P **P** 22 49 30.1 0.0
WTTA pmax pmax
comp=Z,56nm,1.1s,mb5.9
FUR Furstenfeldbru 95.35 42 *e*P **P** 22 49 29.6 -0.6
comp=Z,56nm,1.1s,mb5.9
FUR Furstenfeldbru 95.35 42 *e*P **P** 22 49 29.6 -0.6
FUR pmax pmax
comp=Z,56nm,1.1s,mb5.9
GTTG Gvttingen 95.46 38 *e*P **P** 22 49 31.3 +0.7
comp=Z,63nm,2.4s,mb5.6
DIV Divide 95.48 332 *e*P **P** 22 49 29.8 -1.0
GRA1 Grafenberg Arr 95.72 40 *e*P **P** 22 49 31.7 -0.1
comp=Z,28nm,1.2s,mb5.6
GRA1 LR LR
comp=Z,200nm,21.3s,MS4.6
GRF Grafenberg Arr 95.72 40 *e*P **P** 22 49 31.7 -0.1
comp=Z,28nm,1.2s,mb5.6
GRF *e*L 23 28 16.2
comp=Z,194nm,21.3s
GRF Grafenberg Arr 95.72 40 *e*P **P** 22 49 31.7 -0.1
GRF pmax pmax
comp=Z,28nm,1.2s,mb5.6
GRF MLR MLR
comp=Z,200nm,21.3s,MS4.6
GRF Grafenberg Arr 95.72 40 *e*P **P** 22 49 31.7 -0.1
GRF pmax pmax
comp=Z,28nm,1.2s,mb5.6
GRF MLR MLR
comp=Z,200nm,21.3s,MS4.6
CLZ Clausthal 95.78 38 *e*P **P** 22 49 31.9 -0.2
comp=Z,40nm,1.3s,mb5.7
CLZ Clausthal 95.78 38 *e*P **P** 22 49 31.9 -0.2
CLZ pmax pmax
comp=Z,40nm,1.3s,mb5.7
NRDL Niedersach Rie 95.81 37 *e*P **P** 22 49 32.3 +0.1
comp=Z,24nm,1.4s,mb5.4
MOX Moxa 96.22 39 *e*P **P** 22 49 33.9 -0.2
comp=Z,33nm,2.0s,mb5.4
BSEG Bad Segeberg 96.32 36 *e*P **P** 22 49 34.0 -0.6
comp=Z,23nm,1.2s,mb5.5
ROBS Robic 96.33 44 *e*P **P** 22 49 34.5 -0.1
MANZ Manzenberg 96.35 40 *e*P **P** 22 49 34.8 +0.1
comp=Z,27nm,1.2s,mb5.5
ROTZ Rotzenmuhle 96.36 40 *e*P **P** 22 49 34.6 -0.1
comp=Z,26nm,1.2s,mb5.5
KBA Koelnbreinsper 96.42 43⇑*i*P **P** 22 49 34.6 -0.4
comp=Z,9.2nm,1.1s,mb5.1
KBA Koelnbreinsper 96.42 43⇑*i*P **P** 22 49 34.6 -0.4
KBA pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
WERD Werda 96.59 40 *e*P **P** 22 49 35.6 -0.2
comp=Z,17nm,1.3s,mb5.3
NKC Novy Kostel 96.63 40 *e*P **P** 22 49 36.2 +0.2
NKC AMS AMS 23 32 50.0
WET Wettzell 96.63 41 *e*P **P** 22 49 35.6 -0.4
comp=Z,20nm,1.2s,mb5.4
WET Wettzell 96.63 41 *e*P **P** 22 49 35.6 -0.4
WET pmax pmax
comp=Z,20nm,1.2s,mb5.4
TANN Tannenbergstha 96.68 40 *e*P **P** 22 49 36.2 0.0
comp=Z,25nm,1.4s,mb5.5
SML Sawmill 96.86 332 *e*P **P** 22 49 38.0 +1.0
KHC Kasperske Hory 97.07 41 *e*P **P** 22 49 37.0 -1.0
KHC AMS AMS 23 33 00.0
comp=Z,200nm,18.4s
GEC2 GERESS Array S 97.08 41 *e*P **P** 22 49 37.5 -0.5
comp=Z,15nm,1.2s,mb5.3
GEC2 GERESS Array S 97.08 41 *e*P **P** 22 49 37.5 -0.5
GEC2 pmax pmax
comp=Z,15nm,1.2s,mb5.3
GERES GERESS Array B 97.08 41 P **P** 22 49 37.0 -1.1
comp=Z,4.8nm,0.9s,mb4.9,baz=251,slow=4.1,SNR=32
GERES LR LR 23 30 50.0
comp=Z,142nm,19.8s,MS4.5,baz=259,slow=34
MOA Molln 97.21 43⇑*i*P **P** 22 49 38.1 -0.5
comp=Z,16nm,1.1s,mb5.4
CLL Collm 97.23 39 *e*P **P** 22 49 38.4 -0.3
comp=Z,16nm,1.2s,mb5.3
CLL Collm 97.23 39 ⇓P **P** 22 49 37.8 -0.9
comp=Z,logA/T=1.1,mb5.3
CLL Collm 97.23 39⇓*i*P **P** 22 49 37.8 -0.9
comp=Z,16nm,1.2s,mb5.3
CLL LmV 23 31 00.0
comp=Z,400nm,19.5s
CLL Collm 97.23 39⇓*i*P **P** 22 49 37.8 -0.9
CLL pmax pmax
comp=Z,16nm,1.2s,mb5.3
CLL MLR MLR
comp=Z,400nm,19.5s,MS4.9
FBE Freiberg 97.35 39 *e*P **P** 22 49 39.2 -0.1
comp=Z,19nm,1.1s,mb5.4
PERS Pernice 97.50 44 *e*P **P** 22 49 39.1 -0.8
COLA College 97.58 335 P **P** 22 49 39.2 -1.1
COLA pmax pmax
comp=Z,18nm,0.9s,mb5.6
COLA College 97.58 335 *e*P **P** 22 49 39.0 -1.3
comp=Z,18nm,0.9s,mb5.6
MCK McKinley 97.70 334 *e*P **P** 22 49 39.7 -1.1
BRG Berggiesshubel 97.71 40 *e*P **P** 22 49 40.6 -0.2
comp=Z,19nm,1.3s,mb5.5
BRG Berggiesshubel 97.71 40 *e*P **P** 22 49 39.9 -0.9
comp=Z,12nm,1.3s,mb5.2
BRG comp=N,86nm,14.9s
BRG comp=E,137nm,19.2s
BRG comp=Z,215nm,16.6s
KDAK Kodiak Island 97.81 328 LR LR 23 33 41.7
comp=Z,187nm,21.6s,MS4.5,baz=109,slow=35
PRU Pruhonice 97.88 40 *e*P **P** 22 49 41.3 -0.3
PRU LR LR
comp=Z,200nm,16.8s,MS4.7
ARSA Arzberg 97.91 43⇑*i*P **P** 22 49 41.1 -0.6
comp=Z,8.8nm,1.2s,mb5.2
PVCC Panska Ves 98.02 40 *e*P **P** 22 49 42.1 -0.1
PVCC AMS AMS 23 31 00.0
comp=Z,300nm,17.2s
CONA Conrad Observa 98.28 43⇑*e*Pdiff **P** 22 49 43.1 -0.3
comp=Z,13nm,1.3s,mb5.3
TREC Trest 98.33 41 *e*P **P** 22 49 43.6 0.0
TREC AMS AMS 23 36 00.0
comp=Z,200nm,15.1s
NOA NORSAR Array B 98.62 29 LR LR 23 32 12.8
comp=Z,238nm,18.4s,MS4.7,baz=250,slow=34
UPC Upice 98.91 40 *e*P **P** 22 49 46.2 0.0
VRAC Vranov 99.04 41 LR LR 23 31 57.8
comp=Z,163nm,19.8s,MS4.5,baz=255,slow=34
DPC Dobruska-Polom 99.07 40 *e*P **P** 22 49 47.1 +0.1
DPC AMS AMS 23 34 10.0
comp=Z,200nm,20.1s
ZST Bratislava 99.15 43 *e*P **P** 22 49 46.8 -0.5
ZST pmax pmax
comp=Z,14nm,1.6s,mb5.2
ZST Bratislava 99.15 43 *e*P **P** 22 49 46.8 -0.5
comp=Z,14nm,1.6s,mb5.2
HFS Hagfors 99.61 30 LR LR 23 33 24.3
comp=Z,278nm,18.6s,MS4.8,baz=248,slow=35
MORC Moravsky Berou 99.73 41 *e*P Pdif 22 49 49.9 0.0
MORC pmax pmax
comp=Z,15nm,1.4s,mb5.2
MORC Moravsky Berou 99.73 41 *e*P Pdif 22 49 49.9 0.0
comp=Z,15nm,1.4s
OKC Ostrava-Krasne 100.13 41 *e*P Pdif 22 49 51.8 +0.1
OKC AMS AMS 23 36 30.0
comp=Z,200nm,14.9s
IMA2 Indian Mountai 100.25 336 *e*Pdif Pdif 22 49 49.8 -2.4
VYHS Vyhne 100.34 43 *e*P Pdif 22 49 52.3 -0.3
VYHS pmax pmax
comp=Z,7.0nm,1.2s
VYHS Vyhne 100.34 43 *e*P Pdif 22 49 52.3 -0.3
comp=Z,6.8nm,1.2s
KECS Kecovo 101.42 43 *e*P Pdif 22 49 57.5 +0.1
KECS pmax pmax
comp=Z,3.0nm,1.0s
KECS Kecovo 101.42 43 *e*P Pdif 22 49 57.5 +0.1
comp=Z,2.7nm,1.0s
CRVS Cervenica-Dubn 102.12 42 *e*P Pdif 22 50 00.8 +0.3
KOLS Kolonicke sedl 102.66 42 *e*P Pdif 22 50 01.5 -1.4
SANT Santorini 103.29 56 *e*Pdif Pdif 22 50 05.5 -0.2
KLMR Klimovskoe 112.31 30 *i* PKIKP PKiKP 22 54 40.7 -1.0
KLMR pmax pmax
comp=Z,10.0nm,1.2s
MALT Malatya 113.73 54 *e*PKIKP PKiKP 22 54 44.9 +0.5
BILL Bilibino 115.35 340 *e*PKIKP PKPdf 22 54 45.0 -2.5
BILL *e* 22 55 44.6
BILL *e*SS SS 23 11 42.5 -1.7
BILL pmax pmax
comp=Z,4.0nm,0.9s
TIXI Tiksi 121.60 353 *i* PKIKP PKPdf 22 54 58.0 -1.5
ARU Arti 123.12 31 *i* PKIKP PKPdf 22 55 01.4 -1.0
ARU *e* 22 56 39.8
ARU *e* 23 01 58.9
ARU *e*SS SS 23 13 20.4 -4.1
ARU MLR MLR
comp=N,100nm,19.0s,MS4.7
ARU MLR MLR
comp=Z,200nm,19.0s,MS4.8
ARU MLR MLR
comp=E,100nm,18.0s,MS4.7
ARU Arti 123.12 31 *e*PKPdf PKPdf 22 55 01.6 -0.8
STKA Stephens Creek 124.53 213 PKP PKPdf 22 55 05.2 +0.1
comp=E,1.4nm,0.6s,baz=260,slow=1.2,SNR=4.5
AKTK Aktyubinsk 125.29 38 PKP PKPdf 22 55 05.6 -1.0
AKTO Aktyubinsk 125.29 38 PKP PKPdf 22 55 05.6 -1.0
comp=Z,79nm,0.8s,baz=299,slow=1.8,SNR=38
PET Petropavlovsk 125.36 326 *i* PKIKP PKPdf 22 55 05.3 -1.4
ZRNK Zerenda 130.10 31 PKHKP 22 54 58.9
ZRNK Zerenda 130.10 31 *e*P 22 54 59.0
YAK Yakutsk 130.28 348 *i* PKIKP PKPdf 22 55 15.4 -0.7
YAK MLR MLR
comp=Z,100nm,24.0s,MS4.4
YAK Yakutsk 130.28 348 *e*PKPdf PKPdf 22 55 14.9 -1.2
BRVK Borovoye 130.67 30 *e*PKIKP PKPdf 22 55 17.6 +0.8
NVS Novosibirsk 134.86 21 *e*PKIKP PKPdf 22 55 24.1 -0.6
ASAR Alice Springs 135.15 213 PKP PKPdf 22 55 24.9 -0.4
comp=Z,2.8nm,0.8s,baz=137,slow=2.0,SNR=18
CLNS Chul'man 136.04 348 *e*PKIKP PKPdf 22 55 23.9 -3.0
CLNS pmax pmax
comp=Z,36nm,0.8s
CLNS pmax pmax
comp=N,8.0nm,0.7s
KURK Kurchatov 136.12 28 *i* PKIKP PKPdf 22 55 26.7 -0.4
KURK Kurchatov 136.12 28 *e*PKPdf PKPdf 22 55 26.8 -0.3
ZAL Zalesovo 136.13 21 PKhKP 22 55 21.8
comp=N,1.9nm,0.9s,baz=18,slow=1.1,SNR=4.7
ZAL PKP PKPdf 22 55 27.2 +0.1
comp=N,27nm,0.8s,baz=167,slow=2.9,SNR=64
ZAL Zalesovo 136.13 21 PKP PKPdf 22 55 21.8 -5.3
ZAL PKP PKPdf 22 55 27.2 +0.1
YSS Yuzh-Sakhalins 137.24 326 *i* PKIKP PKPdf 22 55 29.1 -0.1
WB2 Warramunga Arr 137.89 216 *e*P PKPdf 22 55 29.8 -0.6
WRAB Tennant Creek 137.90 216 *i* PKIKP PKPdf 22 55 30.0 -0.4
AAK Ala-Archa 138.94 40 *e*PKIKP PKPdf 22 55 32.6 +0.3
MKAR Makanchi Array 140.62 29 PKhKP 22 55 28.7
comp=N,2.6nm,0.7s,baz=298,slow=3.1,SNR=5.8
MKAR PKP PKPdf 22 55 35.0 -0.4
comp=N,5.8nm,0.7s,baz=18,slow=2.8,SNR=22
MKAR Makanchi Array 140.62 29 PKP PKPdf 22 55 28.7 -6.7
MKAR PKP PKPdf 22 55 35.0 -0.4
IRK Irkutsk 142.06 5 *e*PKIKP PKPdf 22 55 37.6 -0.3
IRK pmax pmax
comp=Z,63nm,1.4s
TLY Talaya 142.56 6 *e*PKIKP PKPdf 22 55 35.1 -3.7
TLY *e* 22 55 44.4
TLY pmax pmax
comp=Z,10.0nm,1.0s
TLY Talaya 142.56 6 *e*PKPdf PKPdf 22 55 39.9 +1.1
ZAK Zakamensk 143.81 7⇓*i*PKIKP PKPdf 22 55 37.9 -3.1
FITZ Fitzroy Crossi 143.89 207 *e*P PKPdf 22 55 38.5 -2.7
comp=Z,17nm,0.9s
HIA Hailar 144.22 348 *e*PKIKP PKPdf 22 55 39.7 -2.0
KAKA Kakadu 144.62 221 *e*P PKPdf 22 55 39.7 -2.7
comp=Z,36nm,1.1s
MDJ Mudanjiang 145.32 334 PKP PKPdf 22 55 42.6 -1.0
MDJ LR LR
comp=N,78nm,31.6s,MS4.5
MDJ LR LR
comp=E,77nm,28.1s,MS4.5
MDJ LR LR
comp=Z,92nm,32.5s,MS4.3
MDJ Mudanjiang 145.32 334 *e*PKPdf PKPdf 22 55 42.6 -1.0
MDJ *e* 22 55 58.1
WMQ Urumqi 145.37 28 PKP PKPdf 22 55 43.0 -0.7
WMQ PP PP 22 59 06.0 +2.6
WMQ PKS 22 59 17.0
WMQ SKS SKSdf 23 02 47.0 -3.2
WMQ SKKS SKKSac 23 05 51.0 -2.1
WMQ SS SS 23 17 51.0 -1.5
WMQ PP PP
comp=Z,104nm,8.0s
WMQ LR LR
comp=N,156nm,20.0s,MS4.9
WMQ LR LR
comp=E,138nm,20.0s,MS4.9
WMQ LR LR
comp=Z,106nm,18.0s,MS4.7
VLA Vladivostok 145.45 330*c i*PKIKP PKPdf 22 55 43.3 -0.6
VLA pmax pmax
comp=Z,154nm,2.0s
AJM Ajmer 145.49 64 *i* P PKPdf 22 55 44.0 +0.1
MJAR Matsushiro Arr 146.09 316 PKPbc PKPbc 22 55 44.9 -1.0
comp=Z,122nm,0.9s,baz=49,slow=1.9,SNR=261
MAJO Matsushiro 146.09 316 PKP2 PKPab 22 55 45.3 -1.2
MAJO Matsushiro 146.09 316 *e*PKP PKPdf 22 55 45.0 0.0
MAT Matsushiro 146.09 316 PKP PKPdf 22 55 44.9 -0.1
MAT Matsushiro 146.09 316 *e*PKP PKPdf 22 55 45.0 +0.1
SONM Songino Array 146.60 4 PKPbc PKPbc 22 55 46.4 -1.0
comp=Z,36nm,0.7s,baz=332,slow=1.2,SNR=156
ULN Ulaanbaatar 146.61 3 PKPdf PKPdf 22 55 46.4 +0.6
ULN Ulaanbaatar 146.61 3*d i*PKP2 PKPab 22 55 46.6 -1.9
NDI New Delhi 147.07 59 *e*P PKPdf 22 55 45.0 -1.6
CNP Changchun 147.64 338⇓PKP PKPdf 22 55 46.8 -0.7
HYB Hyderabad 150.29 80⇑*i*PKP PKPdf 22 55 53.0 +1.2
comp=Z,100nm,1.0s
HYB *e* 22 55 58.0
HYB *e* 22 56 02.0
HYB Hyderabad 150.29 80⇑*e*P PKPdf 22 55 53.0 +1.2
INCN Inchon 152.35 329 *e*PKPdf PKPdf 22 55 55.3 +0.3
KOLN Koldanda 152.66 57 *e*P PKPdf 22 55 55.6 +0.2
GKN Gorkha 153.39 56 *e*P PKPdf 22 55 57.4 +0.9
comp=Z,130nm,1.2s
HHC Hu-ho-hao-te 153.60 356 *e*PKP PKPdf 22 55 57.1 +0.3
HHC APKP 22 56 07.9
HHC XPKP 22 56 11.5
HHC PKS 22 59 30.1
HHC PP PP 22 59 54.3 +3.1
HHC SKS SKSdf 23 02 58.9 -2.1
HHC SKKS SKKSac 23 06 38.0 -0.7
HHC SS SS 23 19 23.4 -1.1
HHC LR LR
comp=N,241nm,20.9s,MS5.1
HHC LR LR
comp=E,202nm,20.9s,MS5.1
HHC LR LR
comp=Z,294nm,21.8s,MS5.1
GTA Gaotai 153.75 17 PKP PKPdf 22 55 57.8 +0.8
GTA APKP 22 56 09.6
GTA XPKP 22 56 12.3
GTA PKP2 PKPab 22 56 21.9 +4.1
GTA PP PP 22 59 51.9 -0.1
GTA SKS SKSdf 23 02 59.3 -1.9
GTA SKKS SKKSac 23 06 37.2 -2.3
GTA PP PP
comp=Z,199nm,9.1s
GTA LR LR
comp=N,187nm,18.6s,MS5.0
GTA LR LR
comp=E,92nm,17.1s,MS5.0
GTA LR LR
comp=Z,128nm,17.1s,MS4.8
BJI Beijing 153.78 348 PKP PKPdf 22 55 57.9 +0.8
BJI APKP 22 56 04.9
BJT Baijiatuau 153.81 348 *e*PKIKP PKPdf 22 55 57.8 +0.7
BJT *e* 22 56 04.9
BTO Baotou 153.91 359 *e*PKP PKPdf 22 55 56.0 -1.2
DMN Daman 153.94 56 *e*P PKPdf 22 55 58.2 +0.9
KKN Kakani 154.00 55 *e*P PKPdf 22 55 57.7 +0.3
comp=Z,68nm,1.1s
PKI Pulchoki 154.20 56 *e*P PKPdf 22 55 58.3 +0.7
comp=Z,44nm,1.2s
GUN Gumba 154.42 55 *e*P PKPdf 22 55 59.0 +1.1
TIA Tai'an 157.21 344 PKP PKPdf 22 56 02.3 +0.6
LZH Lanzhou 157.88 12 *e*PKP PKPdf 22 56 03.5 +1.0
LZH APKP 22 56 14.5
LZH XPKP 22 56 18.0
LZH PP PP 23 00 19.5 +4.5
LZH *e*SKKS SKKSac 23 07 02.5 +1.0
LZH SS SS 23 20 10.7 +0.1
LZH PP PP
comp=Z,452nm,5.1s
LZH LR LR
comp=E,636nm,19.6s
LZH LR LR
comp=Z,952nm,20.4s,MS5.6
SSE Sheshan 160.15 329 *e*PKP PKPdf 22 56 05.3 +0.1
XAN Xi'an 160.47 1 PKP PKPdf 22 56 06.1 +0.6
XAN APKP 22 56 12.1
CD2 Chengdu 162.82 16 *e*PKP PKPdf 22 56 05.0 -2.9
CD2 APKP 22 56 15.8
CD2 XPKP 22 56 20.0
CD2 PKP2 PKPab 22 56 55.7 -1.3
CD2 PP PP 23 00 41.0 -0.6
CD2 SKS SKSdf 23 03 04.6 -5.3
CD2 SKKS SKKSac 23 07 23.9 -3.2
CD2 SS SS 23 20 58.0 -4.6
CD2 PP PP
comp=Z,110nm,9.2s
WHN Wuhan 163.30 345⇑PKP PKPdf 22 56 09.5 +1.1
KMI Kunming 167.70 29 PKP PKPdf 22 56 13.5 +1.5
KMI APKP 22 56 22.5
KMI XPKP 22 56 26.2
KMI PKP2 PKPab 22 57 21.2 +2.7
KMI PKS 22 59 42.3
KMI PP PP 23 01 07.7 +0.7
KMI SKS SKSdf 23 03 08.1 -5.1
KMI SKKS SKKSac 23 07 50.1 -1.6
KMI SS SS 23 21 49.4 -3.0
KMI PP PP
comp=Z,104nm,4.1s
KMI LR LR
comp=N,106nm,33.8s
GYA Guiyang 167.78 11 *i* PKP PKPdf 22 56 12.4 +0.3
GYA APKP 22 56 23.2
GYA XPKP 22 56 26.8
GYA PP PP
comp=Z,250nm,8.9s
GYA LR LR
comp=N,340nm,20.9s
GYA LR LR
comp=E,320nm,21.4s
GYA LR LR
comp=Z,410nm,21.8s

TIR **09** *22:36:47.8, 4006N×1985E, h20km, Ml3.4*
ISCJB **09** *22:36:47.8± 0.4, 40.1N±002×1964E±002, h3km±3km, mb3.8/6, Error ellipse: s-maj=2.9km s-min=2.0km az=49.8*

*SKO **09** 22:36:48.1, 3989N×1986E, h0km*
*ATH **09** 22:36:48.2, 40.11N×1956E, h22km±1km, MD3.9/11, ML4.4*
*IDC **09** 22:36:48.5±1.3, 4036N×1996E, h0km, mb3.8/7, mb1 3.9/11, mb1mx3.8/25, mbtmp3.8/11, ML3.9/4, Error ellipse: s-maj=21.7km s-min=15.1km az=49.0*
*THE **09** 22:36:49.5, 4007N×1970E, h0km, ML3.8*
*CSEM **09** 22:36:49.7±0.1, 4004N×1969E, h2km, ML4.2/4, Error ellipse: s-maj=1.5km s-min=0.9km az=29.0*
*NEIC **09** 22:36:50.5, 40.16N×1975E, h22km, ML3.8(THE), ML3.8(PDG), ML4.4(ATH), After PDG.*
*PDG **09** 22:36:50.5±3.8, 40.16N×1975E, h22km±17km*
*LDG **09** 22:36:53.0±0.1, 40.16N×1971E, h10km, Ml4.1/8, Error ellipse: s-maj=3.9km s-min=2.9km az=32.0*

ISC 09 22:36:49.4±0.4**, 4013N**±002×**1968E**±002**, h3km**±3km**, n165,** σ**1^{s}19**/232**, mb3.8**/6**, 15C-18D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.30**	**56**	*i* Pg	**Pg**	**22 36 54.1**	**-1.1**
TPE				*i* Sg	**Sg**	**22 36 58.6**	**-0.6**
VLO	**Vlora**	**0.37**	**337**	*i* Pg	**Pg**	**22 36 58.4**	**+1.8**
VLO				*i* Sg	**Sg**	**22 37 06.8**	**+5.4**
KEK	**Kerkira**	**0.42**	**168**	*e*PB	**Pg**	**22 36 57.3**	**-0.2**
LSK	**Leskovik**	**0.70**	**88**	*i* Pg	**Pg**	**22 37 00.1**	**-2.8**
LSK				*i* Sg	**Sg**	**22 37 11.7**	**-0.3**
IGT	**Igoumenitsa**	**0.78**	**140**	*e*Pg	**Pg**	**22 37 03.1**	**-1.2**
KBN	**Korca**	**0.98**	**59**	*i* Pn	**Pn**	**22 37 06.6**	**-3.5**
KBN				*i* Sn	**Sn**	**22 37 24.8**	**+0.4**
JAN	**Janina**	**1.01**	**117**	*e*PN	**Pn**	**22 37 08.7**	**-1.8**
JAN				*e*SN	**Sn**	**22 37 24.1**	**-1.2**
LCI	**Lecce**	**1.22**	**280**	Pn	**Pn**	**22 37 13.8**	**+0.4**
LCI				Sn	**Sn**	**22 37 31.9**	**+1.5**
TIR	**Tirane**	**1.23**	**6**	*e*Pg	**Pg**	**22 37 13.0**	**+0.1**
TIR				*e*Sg	**Sg**	**22 37 35.2**	**+6.3**
MEV	**Metsovon**	**1.23**	**106**	*e*Pg	**Pg**	**22 37 12.2**	**-0.9**
OHR	**Ohrid**	**1.30**	**40**	*e*Pg	**Pg**	**22 37 13.0**	**-1.3**
OHR				*e*Sg	**Sg**	**22 37 33.0**	**+1.8**
OHR	**Ohrid**	**1.30**	**40**	*i* Pg	**Pg**	**22 37 12.9**	**-1.4**
OHR				*e*Sg	**Sg**	**22 37 33.1**	**+1.9**
OHR	**Ohrid**	**1.30**	**40**	*i* Pg	**Pg**	**22 37 12.9**	**-1.4**
OHR				*e*Sg	**Sg**	**22 37 33.0**	**+1.8**
FNA	**Florina**	**1.45**	**63**	*e*Pg	**Pg**	**22 37 15.8**	**-1.4**
FNA				*e*Sg	**Sg**	**22 37 38.6**	**+2.7**
LKD	**Levkas**	**1.60**	**152**	*e*Pg	**Pg**	**22 37 17.9**	**-2.3**
LKD				*e*Sg	**Sg**	**22 37 38.8**	**-2.2**
KZN	**Kozani**	**1.61**	**83**	*e*PN	**Pn**	**22 37 18.7**	**0.0**
PE1	**Pezze di Greco**	**1.85**	**292**	*e*Pn	**Pn**	**22 37 22.2**	**+0.1**
ULC	**Ulcinj**	**1.86**	**350**	⇑*i*Pn	**Pn**	**22 37 21.9**	**-0.4**
ULC				*e*Sn	**Sn**	**22 37 46.8**	**+0.5**
EVR	**Evrytania**	**2.04**	**126**	⇓*i*PN	**Pn**	**22 37 25.9**	**+1.2**
VLS	**Valsamata**	**2.07**	**160**	*e*PB	**Pb**	**22 37 23.8**	**-3.8**
LIT	**Litokhoron**	**2.15**	**90**	*e*Pn	**Pn**	**22 37 26.3**	**+0.1**
LIT				*e*Sn	**Sn**	**22 37 54.6**	**+1.2**
GRG	**Griva**	**2.23**	**67**	*e*Pn	**Pn**	**22 37 27.3**	**0.0**
GRG				*e*Sn	**Sn**	**22 37 57.9**	**+2.5**
BUM	**Brajici-Budva**	**2.25**	**345**	⇓*i*Pn	**Pn**	**22 37 27.4**	**-0.2**
BUM				*e*Sn	**Sn**	**22 37 56.2**	**+0.3**
SKO	**Skopje**	**2.27**	**35**	*e*Pn	**Pn**	**22 37 28.9**	**+1.1**
SKO	**Skopje**	**2.27**	**35**	*e*Pn	**Pn**	**22 37 28.8**	**+0.9**
SKO				*e*Sn	**Sn**	**22 37 59.6**	**+3.2**
SKO	**Skopje**	**2.27**	**35**	*e*Pn	**Pn**	**22 37 28.9**	**+1.0**
SKO				*e*Sn	**Sn**	**22 37 59.5**	**+3.1**
AGG	**Agios Georgios**	**2.32**	**117**	*e*Pn	**Pn**	**22 37 29.5**	**+0.9**
AGG				*e*Sn	**Sn**	**22 37 59.4**	**+1.7**
AGG	**Agios Georgios**	**2.32**	**117**	*e*Pn	**Pn**	**22 37 29.5**	**+0.9**
AGG				S	**Sn**	**22 37 59.3**	**+1.7**
TTG	**Podgorica**	**2.32**	**352**	⇓*i*Pn	**Pn**	**22 37 28.1**	**-0.5**
TTG				*e*Sn	**Sn**	**22 37 57.7**	**+0.1**
BAI	**Bari**	**2.35**	**296**	*e*Pn	**Pn**	**22 37 29.3**	**+0.4**
SG1	**Sgolgore (BA)**	**2.40**	**288**	*e*Pn	**Pn**	**22 37 29.9**	**+0.3**
STIP	**Stip**	**2.46**	**50**	*e*Pn	**Pn**	**22 37 30.7**	**+0.2**
STIP	**Stip**	**2.46**	**50**	*e*Pn	**Pn**	**22 37 30.3**	**-0.1**
PVY	**Plav**	**2.48**	**5**	⇓*i*Pn	**Pn**	**22 37 30.9**	**+0.3**
PVY				*e*Sn	**Sn**	**22 38 01.0**	**-0.4**
HCY	**Herceg Novi**	**2.48**	**339**	⇓*i*Pn	**Pn**	**22 37 30.1**	**-0.7**
HCY				*e*Sn	**Sn**	**22 38 01.8**	**+0.2**
RLS	**Riolos of Patr**	**2.49**	**146**	*e*PB	**Pb**	**22 37 30.8**	**-4.0**
VAY	**Valandovo**	**2.50**	**61**	*e*Pn	**Pn**	**22 37 31.0**	**0.0**
VAY	**Valandovo**	**2.50**	**61**	*e*Pn	**Pn**	**22 37 30.1**	**-0.8**
VAY				*e*Sn	**Sn**	**22 38 01.3**	**-0.6**
THE	**Thessaloniki**	**2.56**	**78**	*e*Pn	**Pn**	**22 37 31.6**	**-0.2**
THE	**Thessaloniki**	**2.56**	**78**	P	**Pn**	**22 37 31.6**	**-0.2**
THE				S	**Sn**	**22 38 05.0**	**+1.6**
THE	**Thessaloniki**	**2.56**	**78**	*e*Pn	**Pn**	**22 37 31.6**	**-0.2**
THE				S	**Sn**	**22 38 05.0**	**+1.6**
HORT	**Hortiatis**	**2.65**	**79**	*e*Pn	**Pn**	**22 37 32.6**	**-0.5**
HORT				*e*Sn	**Sn**	**22 38 05.0**	**-0.8**
KNT	**Kendrikon**	**2.66**	**66**	*e*Pn	**Pn**	**22 37 33.1**	**0.0**
NKY	**Niksic**	**2.73**	**349**	⇑*i*Pn	**Pn**	**22 37 34.0**	**-0.2**
NKY				*e*Sn	**Sn**	**22 38 07.2**	**-0.5**
IVA	**Berane**	**2.75**	**3**	⇓*i*Pn	**Pn**	**22 37 34.6**	**+0.3**
IVA				*e*Sn	**Sn**	**22 38 07.6**	**-0.5**
CDT	**Castel del Mon**	**2.77**	**291**	*e*Pn	**Pn**	**22 37 35.2**	**+0.5**
TREB	**Trebinje**	**2.78**	**339**	P	**Pn**	**22 37 34.1**	**-0.7**
TREB				S	**Sn**	**22 38 08.1**	**-0.7**
XOR	**Xorichti**	**2.81**	**105**	*e*Pn	**Pn**	**22 37 35.4**	**+0.1**
GRI	**Girifalco**	**2.84**	**244**	Pn	**Pn**	**22 37 35.5**	**-0.2**
NEO	**Neokhori**	**2.85**	**106**	*e*PN	**Pn**	**22 37 36.1**	**+0.3**
NEO				*e*SN	**Sn**	**22 38 10.9**	**+0.3**
SOH	**Sokhos**	**2.88**	**75**	*e*Pn	**Pn**	**22 37 36.4**	**+0.1**
PLG	**Polygyros**	**2.89**	**84**	*e*PN	**Pn**	**22 37 36.7**	**+0.4**
PLG				*e*SN	**Sn**	**22 38 11.3**	**-0.3**
BRY	**Bratogost**	**2.90**	**343**	⇓*i*Pn	**Pn**	**22 37 36.0**	**-0.6**
BRY				*e*Sn	**Sn**	**22 38 11.4**	**-0.4**
BRY	**Bratogost**	**2.90**	**343**	⇓*i*Pn	**Pn**	**22 37 36.0**	**-0.5**
BRY				*e*Sn	**Sn**	**22 38 11.4**	**-0.5**
LKR	**Lokris**	**2.96**	**119**	*e*PN	**Pn**	**22 37 37.6**	**+0.3**
CUC	**Castrocucco**	**2.97**	**269**	Pn	**Pn**	**22 37 40.1**	**+2.6**
PAIG	**Paliouri**	**3.07**	**92**	*e*Pn	**Pn**	**22 37 38.4**	**-0.5**
SLCN	**Sala Consilina**	**3.11**	**276**	Pn	**Pn**	**22 37 40.8**	**+1.4**
UPM	**Unac-Piva**	**3.13**	**350**	⇓*i*Pn	**Pn**	**22 37 40.2**	**+0.6**
UPM				*e*Sn	**Sn**	**22 38 16.7**	**-0.8**
SRS	**Serrai**	**3.13**	**70**	*e*Pn	**Pn**	**22 37 39.9**	**+0.2**
SRS				*e*Sn	**Sn**	**22 38 18.8**	**+1.1**
SJES	**Sjenica**	**3.15**	**3**	Pn	**Pn**	**22 37 40.9**	**+1.0**
PLE	**Pljevlja**	**3.21**	**356**	⇑*i*Pn	**Pn**	**22 37 41.4**	**+0.7**
PLE				*e*Sn	**Sn**	**22 38 18.5**	**-0.9**
MRLC	**Muro Lucano**	**3.26**	**282**	Pn	**Pn**	**22 37 43.0**	**+1.5**
FG4	**Candela**	**3.33**	**289**	Pn	**Pn**	**22 37 44.6**	**+2.2**
AOS	**Alonnisos**	**3.38**	**105**	*e*Pn	**Pn**	**22 37 43.5**	**+0.4**
MMB	**Musomiste**	**3.40**	**63**	*e*Pn	**Pn**	**22 37 43.2**	**-0.1**
NVR	**Nevrokopi**	**3.40**	**68**	*e*PN	**Pn**	**22 37 44.0**	**+0.6**
ITM	**Ithomi**	**3.43**	**148**	*e*PN	**Pn**	**22 37 43.8**	**+0.1**
RGNG	**Rignano Grg**	**3.47**	**298**	Pn	**Pn**	**22 37 44.9**	**+0.6**
CEL	**Celeste**	**3.49**	**239**	Pn	**Pn**	**22 37 44.2**	**-0.4**
SOI	**Samo**	**3.49**	**235**	Pn	**Pn**	**22 37 44.2**	**-0.4**
VTS	**Vitosha**	**3.62**	**46**	*e*Pn	**Pn**	**22 37 47.4**	**+1.0**
VTS	**Vitosha**	**3.62**	**46**	⇑*i*P	**Pn**	**22 37 47.0**	**+0.6**
BBLS	**Bajina Basta -**	**3.74**	**357**	*i* Pn	**Pn**	**22 37 50.4**	**+2.3**
ATH	**Athens Observa**	**3.81**	**123**	*e*PN	**Pn**	**22 37 48.8**	**-0.1**
GRUS	**Gruza**	**3.84**	**11**	*i* Pn	**Pn**	**22 37 49.4**	**0.0**
KVR	**Kavouri**	**3.92**	**124**	*e*PN	**Pn**	**22 37 51.0**	**+0.4**
CIGN	**Sant'Elia a Pi**	**3.93**	**294**	Pn	**Pn**	**22 37 52.1**	**+1.4**
DIVS	**Divcibare**	**3.98**	**3**	*i* Pn	**Pn**	**22 37 50.9**	**-0.3**
DIVS	**Divcibare**	**3.98**	**3**	*e*Pn	**Pn**	**22 37 51.0**	**-0.3**
VLI	**Veliai**	**4.25**	**142**	*e*PN	**Pn**	**22 37 55.2**	**+0.1**
PLD	**Plovdiv**	**4.28**	**61**	*e*Pn	**Pn**	**22 37 57.1**	**+1.7**
MIDA	**Miranda**	**4.39**	**292**	Pn	**Pn**	**22 37 59.1**	**+2.2**
RNI2	**Rionero Sannit**	**4.48**	**292**	Pn	**Pn**	**22 38 00.8**	**+2.6**
AGST	**Augusta-Monte**	**4.51**	**232**	Pn	**Pn**	**22 37 56.9**	**-1.8**
RDO	**Rodhopi**	**4.57**	**75**	*e*PN	**Pn**	**22 37 59.8**	**+0.4**
KYTH	**Kithira**	**4.66**	**144**	*e*PN	**Pn**	**22 38 01.5**	**+0.8**
SSY	**Sortino**	**4.67**	**232**	Pn	**Pn**	**22 37 59.0**	**-1.9**
INTR	**Introdacqua**	**4.76**	**295**	Pn	**Pn**	**22 38 02.8**	**+0.8**
HAVL	**Avola**	**4.77**	**230**	Pn	**Pn**	**22 37 59.1**	**-3.1**
VAE	**Valguarnera**	**4.89**	**239**	Pn	**Pn**	**22 38 09.7**	**+5.8**
	1.3nm,0.3s,baz=282,slow=4.4,SNR=3.7						
VAE				Sn	**Sn**	**22 39 09.9**	**+8.8**
	1.5nm,0.3s,baz=60,slow=23,SNR=3.4						
VAE	**Valguarnera**	**4.89**	**239**	Pn	**Pn**	**22 38 09.7**	**+5.8**
VAE				Sn	**Sn**	**22 39 09.9**	**+8.8**
BOZC	**Bozcaada**	**4.90**	**91**	*i* P	**Pn**	**22 38 04.0**	**0.0**
VVLD	**Villa Vallelon**	**4.91**	**293**	Pn	**Pn**	**22 38 05.8**	**+1.7**
ALN	**Alexandroupoli**	**4.91**	**79**	*e*Pn	**Pn**	**22 38 03.6**	**-0.5**
HMDC	**Modica**	**4.98**	**232**	Pn	**Pn**	**22 38 02.6**	**-2.5**
PRK	**Paraskevi**	**5.16**	**98**	*e*PN	**Pn**	**22 38 08.2**	**+0.7**
TERO	**Teramo**	**5.21**	**301**	Pn	**Pn**	**22 38 09.7**	**+1.5**
AQU	**L'Aquila**	**5.23**	**297**	*e*P	**Pn**	**22 38 12.1**	**+3.5**
CHOS	**Chios island**	**5.24**	**107**	*e*Pn	**Pn**	**22 38 09.4**	**+0.8**
CERT	**Cerreto**	**5.38**	**292**	Pn	**Pn**	**22 38 12.0**	**+1.3**
FIAM	**Fiamignano**	**5.40**	**295**	Pn	**Pn**	**22 38 13.7**	**+2.9**
APE	**Apeiranthos**	**5.50**	**122**	*e*Pn	**Pn**	**22 38 12.2**	**0.0**
APE	**Apeiranthos**	**5.50**	**122**	⇑*i*P	**Pn**	**22 38 11.7**	**-0.6**
NVLJ	**Novalja**	**5.69**	**323**	*i* Pn	**Pn**	**22 38 14.6**	**-0.2**
NVLJ				*i* Sn	**Sn**	**22 39 18.0**	**-2.6**
JMB	**Yambol**	**5.70**	**64**	*e*Pn	**Pn**	**22 38 15.9**	**+1.0**
JMB	**Yambol**	**5.70**	**64**	*e*Pn	**Pn**	**22 38 15.9**	**+0.9**
KARN	**Karanos**	**5.79**	**143**	*e*Pn	**Pn**	**22 38 16.3**	**+0.1**
SNTG	**Esanatoglia**	**5.94**	**304**	Pn	**Pn**	**22 38 19.3**	**+1.1**
ASS	**Assisi**	**6.03**	**301**	Pn	**Pn**	**22 38 22.1**	**+2.5**
ARV	**Arcevia**	**6.06**	**306**	Pn	**Pn**	**22 38 20.6**	**+0.7**
MURB	**Monte Urbino**	**6.21**	**303**	Pn	**Pn**	**22 38 24.3**	**+2.3**
FSSB	**Fossombrone**	**6.26**	**307**	Pn	**Pn**	**22 38 23.0**	**+0.3**
BOJS	**Bojanci**	**6.28**	**330**	*i* Pn	**Pn**	**22 38 23.2**	**+0.2**
BOJS				*i* Sn	**Sn**	**22 39 34.0**	**-1.3**
IDI	**Anoyia**	**6.35**	**138**	Pn	**Pn**	**22 38 22.6**	**-1.4**
	1.1nm,0.3s,baz=349,slow=13,SNR=14						
IDI				Sn	**Sn**	**22 39 28.9**	**-8.1**
	4.9nm,0.3s,baz=275,slow=20,SNR=7.5						
IDI	**Anoyia**	**6.35**	**138**	Pn	**Pn**	**22 38 22.5**	**-1.4**
BADI	**Badiali**	**6.50**	**304**	Pn	**Pn**	**22 38 28.5**	**+2.5**
SFI	**Santa Sofia**	**6.95**	**305**	Pn	**Pn**	**22 38 34.4**	**+2.3**
MLR	**Muntele Rosu**	**7.06**	**39**	Pn	**Pn**	**22 38 35.4**	**+1.7**
	0.4nm,0.3s,baz=202,slow=13,SNR=4.6						
ULDT	**Uludag**	**7.24**	**87**	*i* P	**Pn**	**22 38 35.8**	**-0.4**
VOY	**Vojsko**	**7.26**	**326**	*e*Pn	**Pn**	**22 38 35.8**	**-0.7**
VOY				*e*Sn	**Sn**	**22 39 55.3**	**-4.2**
PERS	**Pernice**	**7.31**	**334**	*i* Pn	**Pn**	**22 38 36.4**	**-0.6**
PERS				*e*Sn	**Sn**	**22 39 55.3**	**-5.2**
OBKA	**Obir**	**7.39**	**331**	⇓*i*Pn	**Pn**	**22 38 38.0**	**-0.2**
	8.7nm,0.3s						
OBKA				⇓*i*Sn	**Sn**	**22 40 01.1**	**-1.6**
	26nm,0.8s						
ARSA	**Arzberg**	**7.73**	**338**	⇑*i*Pn	**Pn**	**22 38 42.5**	**-0.3**
	2.0nm,0.3s						
ARSA				⇑*e*Sn	**Sn**	**22 40 06.7**	**-4.2**
	1.1nm,0.3s						
GMNA	**Gemona**	**7.74**	**325**	Pn	**Pn**	**22 38 42.6**	**-0.4**
PTCC	**Patocco-Chiusa**	**7.79**	**326**	Pn	**Pn**	**22 38 42.9**	**-0.8**
FVI	**Forni Avoltri**	**8.19**	**324**	Pn	**Pn**	**22 38 50.3**	**+1.1**
KBA	**Koelnbreinsper**	**8.33**	**329**	⇑*i*Pn	**Pn**	**22 38 48.9**	**-2.2**
	4.2nm,0.3s						
KBA				⇑*i*Sn	**Sn**	**22 40 22.1**	**-3.6**
	3.3nm,0.3s						
CTI	**Castel Tesino**	**8.34**	**318**	Pn	**Pn**	**22 38 50.3**	**-0.9**
MOA	**Molln**	**8.65**	**335**	⇓*i*Pn	**Pn**	**22 38 55.4**	**-0.1**
	2.0nm,0.2s,SNR=11						
MOA				⇑*i*Sn	**Sn**	**22 40 32.9**	**-0.6**
	3.5nm,0.4s						
APPI	**Appiano**	**8.85**	**319**	Pn	**Pn**	**22 38 58.2**	**0.0**
BOB	**Bobbio (Coli)**	**8.87**	**305**	Pn	**Pn**	**22 39 00.4**	**+1.9**
WTTA	**Wattenberg**	**9.21**	**323**	⇓*i*Pn	**Pn**	**22 39 04.0**	**+0.8**
	4.7nm,0.4s						
WTTA				⇓*i*Sn	**Sn**	**22 40 42.3**	**-5.0**
	6.4nm,0.4s						
WATA	**Walderalm**	**9.29**	**324**	*i* Pn	**Pn**	**22 39 04.5**	**+0.3**
	2.5nm,0.2s,SNR=7.7						
WATA				⇓*e*Sn	**Sn**	**22 40 48.4**	**-0.8**
	4.1nm,0.3s						
SQTA	**Sankt Quirin**	**9.38**	**322**	⇓*i*Pn	**Pn**	**22 39 06.6**	**+1.2**
	7.6nm,0.5s,SNR=7.8						
SQTA				⇑*i*Sn	**Sn**	**22 40 48.6**	**-2.7**
	4.0nm,0.3s						
MOTA	**Moosalm**	**9.52**	**322**	⇓*i*Pn	**Pn**	**22 39 07.7**	**+0.3**
	12nm,0.6s,SNR=16						
MOTA				⇑*i*Sn	**Sn**	**22 40 53.3**	**-1.5**
	5.0nm,0.4s						
MOTA	**Moosalm**	**9.52**	**322**	⇓*i*Pn	**Pn**	**22 39 07.7**	**+0.3**
	12nm,0.6s						
MOTA				*i* Sn	**Sn**	**22 40 53.3**	**-1.5**
GEC2	**GERESS Array S**	**9.71**	**336**	*e*Pn	**Pn**	**22 39 08.8**	**-1.1**
GERES	**GERESS Array B**	**9.71**	**336**	Pn	**Pn**	**22 39 08.5**	**-1.4**
	0.6nm,0.3s,baz=160,slow=14,SNR=20						
GERES				Sn	**Sn**	**22 40 54.7**	**-4.8**
	0.5nm,0.3s,baz=148,slow=24,SNR=4.7						
DAVOX	**Davos**	**9.74**	**316**	Pn	**Pn**	**22 39 14.2**	**+3.7**
	0.9nm,0.3s,baz=129,slow=9.2,SNR=6.7						
DAVOX				Sn	**Sn**	**22 40 57.6**	**-2.8**
	0.6nm,0.3s,baz=128,slow=23,SNR=4.6						
DAVA	**Damuels**	**10.07**	**318**	⇑*e*Sn	**Sn**	**22 41 03.8**	**-4.7**
	comp=E,5.5nm,0.4s						
DAVA	**Damuels**	**10.07**	**318**	⇑*i*Pn	**Pn**	**22 39 16.1**	**+1.1**
	1.2nm,0.3s						
DAVA				⇑*e*Sn	**Sn**	**22 41 03.8**	**-4.7**
	5.5nm,0.4s						
MBDF	**Montbardon**	**10.59**	**300**	*e*Sn	**Sn**	**22 41 13.9**	**-7.3**
	8.8nm,0.7s						
LPG	**La Plagne**	**10.91**	**304**	*e*Pn	**Pn**	**22 39 26.3**	**-0.1**
LPG				*e*Sn	**Sn**	**22 41 11.4**	**-18**
	8.3nm,0.5s						
LPL	**La Plagne**	**10.93**	**304**	*e*Pn	**Pn**	**22 39 26.2**	**-0.5**
LPL				*e*Sn	**Sn**	**22 41 13.7**	**-16**
	8.2nm,0.4s						
CABF	**La Chapelle**	**11.82**	**308**	*e*Pn	**Pn**	**22 39 35.7**	**-3.2**
CABF				*e*Sn	**Sn**	**22 41 46.0**	**-5.3**
	35nm,1.0s						
HINF	**Hinteralfeld**	**12.01**	**314**	*e*Pn	**Pn**	**22 39 40.7**	**-0.8**
HINF				*e*Sn	**Sn**	**22 41 46.7**	**-9.3**
	3.5nm,0.3s						
HINF	**Hinteralfeld**	**12.01**	**314**	*e*Pn	**Pn**	**22 39 40.7**	**-0.8**
HINF				*e*Sn	**Sn**	**22 41 46.7**	**-9.3**
	1.8nm,0.3s						
CDF	**Champ du Feu**	**12.14**	**317**	*e*Pn	**Pn**	**22 39 42.8**	**-0.5**
HAU	**Haudompre**	**12.40**	**314**	*e*Pn	**Pn**	**22 39 45.7**	**-1.1**
HAU				*e*Sn	**Sn**	**22 41 55.0**	**-10**
	6.0nm,0.2s						
HAU	**Haudompre**	**12.40**	**314**	*e*Pn	**Pn**	**22 39 45.7**	**-1.1**
HAU				*e*Sn	**Sn**	**22 41 55.0**	**-10**
	3.0nm,0.2s						
SMF	**Signal de Mont**	**13.23**	**305**	*e*Pn	**Pn**	**22 39 57.3**	**-0.8**
SMF				*e*Sn	**Sn**	**22 42 15.8**	**-10**
	5.4nm,0.4s						
SMF	**Signal de Mont**	**13.23**	**305**	*e*Pn	**Pn**	**22 39 57.3**	**-0.8**
SMF				*e*Sn	**Sn**	**22 42 15.8**	**-10**
	2.7nm,0.4s						
LOR	**Lormes**	**13.48**	**307**	*e*Pn	**Pn**	**22 40 01.7**	**+0.1**
LOR				*e*Sn	**Sn**	**22 42 21.2**	**-11**
	4.9nm,0.5s						
LOR	**Lormes**	**13.48**	**307**	*e*Pn	**Pn**	**22 40 01.7**	**+0.1**
LOR				*e*Sn	**Sn**	**22 42 21.2**	**-11**
	2.5nm,0.5s						
ESDC	**Sonseca Array**	**18.14**	**276**	P	**Pn**	**22 41 03.4**	**+1.0**
	0.1nm,0.3s,baz=82,slow=10,SNR=4.7						
HFS	**Hagfors**	**20.38**	**351**	P	**P**	**22 41 25.5**	**-1.7**
	2.1nm,0.5s,baz=171,slow=10,SNR=8.0						
EKA	**Eskdalemuir Ar**	**21.47**	**323**	P	**P**	**22 41 38.1**	**-0.9**
	1.0nm,0.7s,mb3.2,baz=112,slow=9.4,SNR=3.1						
NB2	**NORSAR Subarra**	**21.58**	**349**	P	**P**	**22 41 38.0**	**-2.3**
	comp=Z,5.3nm,0.9s,mb4.0,baz=162,slow=11						
NOA	**NORSAR Array B**	**21.58**	**349**	P	**P**	**22 41 37.8**	**-2.5**
	comp=Z,2.8nm,0.9s,mb3.7,baz=165,slow=10,SNR=6.3						
FINES	**FINESS Array B**	**21.70**	**8**	P	**P**	**22 41 39.2**	**-2.4**
	comp=Z,4.1nm,0.9s,mb3.9,baz=173,slow=7.7,SNR=4.6						
FINES	**FINESS Array B**	**21.70**	**8**	P	**P**	**22 41 39.2**	**-2.4**
ARCES	**ARCESS Array B**	**29.63**	**4**	P	**P**	**22 42 52.8**	**-3.2**
	comp=Z,1.3nm,0.8s,mb3.7,baz=185,slow=12,SNR=5.6						
MKAR	**Makanchi Array**	**44.86**	**60**	P	**P**	**22 45 01.6**	**-3.4**
	comp=Z,2.2nm,0.6s,mb4.2,baz=282,slow=7.7,SNR=16						
ZAL	**Zalesovo**	**44.89**	**49**	P	**P**	**22 45 02.2**	**-3.0**
	comp=Z,1.0nm,0.3s,mb4.1,baz=195,slow=9.3,SNR=4.5						

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*IDC **09** 22:57:21.0±2.2, 4230N×1981E, h0km, mb3.9/1, mb1 3.7/6, mb1mx3.4/22, mbtmp3.5/6, ML3.3/5, Error ellipse: s-maj=33.4km s-min=16.6km az=30.0*
*TIR **09** 22:57:20.8, 4245N×1977E, h14km, Ml3.2*
*ATH **09** 22:57:21.1, 4258N×1923E, h32km, MD3.8/3*
*THE **09** 22:57:21.2, 4251N×1972E, h0km, ML3.7*
*ISCJB **09** 22:57:21.9±0.2, 4249N±001×1980E±002, h5km, mb3.5/1, Error ellipse: s-maj=1.9km s-min=1.6km az=132.4*
*CSEM **09** 22:57:21.8±0.1, 4246N×1982E, h5km, MD3.8, Error ellipse: s-maj=2.3km s-min=1.7km az=90.0*
*SKO **09** 22:57:21.8, 4256N×1993E, h0km*
*PDG **09** 22:57:22.0±0.2, 4242N×1979E, h10km±1km*
*NEIC **09** 22:57:22.0, 4242N×1979E, h10km, MD3.8(ATH), ML3.2(BUC), ML3.4(THE), ML3.4(PDG), After PDG.*
*PRU **09** 22:57:25.8, 4256N×1969E, h0km*
*LDG **09** 22:57:25.6±0.2, 4243N×1988E, h5km, Ml3.8/4, Error ellipse: s-maj=5.8km s-min=4.9km az=10.0*

ISC 09 22:57:23.3±0.2**, 4247N**±001×**1982E**±002**, h5km, n137,** σ**1^{s}31**/207**, mb3.5**/1**, 17C-22D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVY	**Plav**	**0.17**	**41**	⇑*i*Pg	**Pg**	**22 57 25.8**	**-0.9**
PVY				*e*Sg	**Sg**	**22 57 29.5**	**+0.5**
IVA	**Berane**	**0.41**	**8**	⇑*i*Pg	**Pg**	**22 57 30.7**	**-0.6**
IVA				*e*Sg	**Sg**	**22 57 37.6**	**+1.0**
TTG	**Podgorica**	**0.42**	**265**	⇑*i*Pg	**Pg**	**22 57 29.0**	**-2.3**
TTG				*e*Sg	**Sg**	**22 57 35.3**	**-1.5**
SDA	**Shkodra**	**0.48**	**210**	*i* Pg	**Pg**	**22 57 30.1**	**-2.4**
SDA				*i* Sg	**Sg**	**22 57 38.5**	**-0.2**
SDA	**Shkodra**	**0.48**	**210**	*e*Pg	**Pg**	**22 57 30.1**	**-2.4**
SDA				*i* Sg	**Sg**	**22 57 38.5**	**-0.2**
ULC	**Ulcinj**	**0.66**	**221**	⇓*i*Pg	**Pg**	**22 57 33.7**	**-2.3**
ULC				*e*Sg	**Sg**	**22 57 42.9**	**-1.6**
NKY	**Niksic**	**0.70**	**300**	⇑*i*Pg	**Pg**	**22 57 34.6**	**-2.2**
NKY				*e*Sg	**Sg**	**22 57 45.8**	**-0.1**
BUM	**Brajici-Budva**	**0.70**	**257**	⇓*i*Pg	**Pg**	**22 57 34.2**	**-2.6**
BUM				*e*Sg	**Sg**	**22 57 45.0**	**-0.9**
SJES	**Sjenica**	**0.81**	**6**	Pg	**Pg**	**22 57 37.5**	**-1.3**
SJES				Sg	**Sg**	**22 57 48.3**	**-1.0**
PLE	**Pljevlja**	**0.92**	**340**	⇓*i*Pg	**Pg**	**22 57 39.7**	**-1.3**
PLE				*e*Sg	**Sg**	**22 57 54.5**	**+1.6**
HCY	**Herceg Novi**	**0.98**	**269**	⇑*i*Pg	**Pg**	**22 57 39.8**	**-2.4**
HCY				*e*Sg	**Sg**	**22 57 55.0**	**+0.2**
UPM	**Unac-Piva**	**1.00**	**318**	⇑*i*Pg	**Pg**	**22 57 41.2**	**-1.2**
UPM				*e*Sg	**Sg**	**22 57 56.9**	**+1.5**
BRY	**Bratogost**	**1.04**	**295**	⇓*i*Pg	**Pg**	**22 57 40.2**	**-3.1**
BRY				*e*Sg	**Sg**	**22 57 57.5**	**+0.8**
TREB	**Trebinje**	**1.12**	**284**	P	**Pg**	**22 57 42.1**	**-2.6**
TREB				S	**Sg**	**22 57 59.7**	**+0.5**
TIR	**Tirane**	**1.12**	**178**	*e*Pg	**Pg**	**22 57 42.5**	**-2.3**
TIR				*e*Sg	**Sg**	**22 58 00.0**	**+0.8**
TIR	**Tirane**	**1.12**	**178**	*i* Pg	**Pg**	**22 57 42.5**	**-2.2**
TIR	**Tirane**	**1.12**	**178**	P	**Pg**	**22 57 42.5**	**-2.3**
TIR				S	**Sg**	**22 58 00.9**	**+1.7**
SKO	**Skopje**	**1.30**	**112**	*e*Pg	**Pn**	**22 57 46.4**	**-1.7**
SKO	**Skopje**	**1.30**	**112**	*i* Pn	**Pn**	**22 57 46.3**	**-1.8**
SKO				*i* Sn	**Sn**	**22 58 05.5**	**-0.3**
SKO	**Skopje**	**1.30**	**112**	P	**Pn**	**22 57 46.4**	**-1.7**
SKO				S	**Sg**	**22 58 08.1**	**+3.1**
BBLS	**Bajina Basta -**	**1.44**	**348**	*i* Pn	**Pn**	**22 57 49.4**	**-0.5**
BBLS				Sg	**Sg**	**22 58 12.1**	**+2.7**
OHR	**Ohrid**	**1.54**	**151**	*e*Pg	**Pg**	**22 57 50.0**	**-2.8**
OHR				*e*Sg	**Sg**	**22 58 12.2**	**-0.6**
OHR	**Ohrid**	**1.54**	**151**	*i* Pg	**Pg**	**22 57 50.3**	**-2.5**
OHR				*i* Sg	**Sg**	**22 58 11.6**	**-1.1**
OHR	**Ohrid**	**1.54**	**151**	*i* Pg	**Pg**	**22 57 50.2**	**-2.6**
OHR				*i* Sg	**Sg**	**22 58 11.5**	**-1.2**
GRUS	**Gruza**	**1.57**	**24**	*e*Pn	**Pn**	**22 57 50.4**	**-1.4**
GRUS				Sg	**Sg**	**22 58 12.6**	**-1.1**
DIVS	**Divcibare**	**1.64**	**4**	*i* Pn	**Pn**	**22 57 52.3**	**-0.4**
DIVS				Sg	**Sg**	**22 58 14.0**	**-1.9**
DIVS	**Divcibare**	**1.64**	**4**	*e*Pg	**Pg**	**22 57 49.8**	**-4.9**
DIVS				*e*Sg	**Sg**	**22 58 12.0**	**-3.9**
DIVS	**Divcibare**	**1.64**	**4**	Pn	**Pn**	**22 57 52.3**	**-0.5**
DIVS				Sg	**Sg**	**22 58 14.0**	**-1.9**
STIP	**Stip**	**1.92**	**113**	*e*Pn	**Pn**	**22 57 55.0**	**-1.7**
STIP				*e*Sn	**Sn**	**22 58 22.7**	**+1.5**
STIP	**Stip**	**1.92**	**113**	*i* Pn	**Pn**	**22 57 55.0**	**-1.6**
STIP				*e*Sg	**Sg**	**22 58 20.4**	**-4.6**
STIP	**Stip**	**1.92**	**113**	*e*Pn	**Pn**	**22 57 55.0**	**-1.7**
STIP				*e*Sg	**Sg**	**22 58 20.4**	**-4.6**
STIP				*e*Sn	**Sn**	**22 58 22.7**	**+1.5**
FNA	**Florina**	**2.04**	**145**	*e*Pn	**Pn**	**22 57 58.2**	**-0.1**
FNA				*e*Sn	**Sn**	**22 58 26.0**	**+1.8**
FNA	**Florina**	**2.04**	**145**	P	**Pn**	**22 57 58.4**	**+0.1**
FNA				S	**Sn**	**22 58 26.0**	**+1.8**
BOLS	**Boljevac**	**2.08**	**48**	⇑*i*Pn	**Pn**	**22 57 57.4**	**-1.4**
BOLS				Sn	**Sn**	**22 58 24.2**	**-0.8**
SVIS	**Svilajnac**	**2.10**	**29**	⇑*i*Pn	**Pn**	**22 57 58.5**	**-0.6**
VAY	**Valandovo**	**2.35**	**118**	*e*Pn	**Pn**	**22 58 02.2**	**-0.3**
VAY	**Valandovo**	**2.35**	**118**	*i* Pn	**Pn**	**22 58 01.8**	**-0.7**
VAY				*e*Sg	**Sg**	**22 58 36.3**	**-2.5**
VAY	**Valandovo**	**2.35**	**118**	*e*Pn	**Pn**	**22 58 02.2**	**-0.3**
VAY				*e*Sg	**Sg**	**22 58 36.2**	**-2.6**
LSK	**Leskovik**	**2.39**	**166**	*i* Pn	**Pn**	**22 58 05.1**	**+2.0**
BEO	**Belgrade**	**2.40**	**11**	*e*Pn	**Pb**	**22 58 07.7**	**+0.7**
GRG	**Griva**	**2.45**	**127**	*e*Pn	**Pn**	**22 58 03.5**	**-0.5**
VTS	**Vitosha**	**2.51**	**86**	*e*Pn	**Pn**	**22 58 04.3**	**-0.4**
VTS	**Vitosha**	**2.51**	**86**	⇓*i*P	**Pn**	**22 58 04.5**	**-0.2**
KZN	**Kozani**	**2.61**	**145**	*e*PN	**Pn**	**22 58 08.3**	**+2.2**
KZN				*e*SN	**Sb**	**22 58 43.3**	**+0.5**
KNT	**Kendrikon**	**2.64**	**118**	*e*Pn	**Pn**	**22 58 05.8**	**-0.8**
KEK	**Kerkira**	**2.75**	**180**	*e*PN	**Pn**	**22 58 07.3**	**-0.8**
MEV	**Metsovon**	**2.88**	**158**	P	**Pn**	**22 58 12.3**	**+2.5**
JAN	**Janina**	**2.91**	**164**	*e*PN	**Pn**	**22 58 11.4**	**+1.1**
DJES	**Djerdap**	**2.92**	**41**	*e*Pn	**Pb**	**22 58 17.0**	**+1.0**
DJES				Sg	**Sg**	**22 58 57.5**	**+0.2**
IGT	**Igoumenitsa**	**2.96**	**172**	*e*Pn	**Pn**	**22 58 10.4**	**-0.5**
IGT				*e*Sn	**Sn**	**22 58 47.9**	**+1.2**
BLY	**Banja Luka**	**2.98**	**321**	P	**Pn**	**22 58 11.9**	**+0.7**
BLY				S	**Sn**	**22 58 50.1**	**+2.8**
MMB	**Musomiste**	**3.04**	**105**	*e*Pn	**Pn**	**22 58 11.5**	**-0.6**
LIT	**Litokhoron**	**3.10**	**139**	*e*Pn	**Pn**	**22 58 12.3**	**-0.5**
LIT				*e*Sn	**Sn**	**22 58 52.1**	**+1.7**
LIT	**Litokhoron**	**3.10**	**139**	P	**Pn**	**22 58 13.1**	**+0.3**
LIT				S	**Sn**	**22 58 51.0**	**+0.6**
LIT	**Litokhoron**	**3.10**	**139**	*e*Pn	**Pn**	**22 58 12.4**	**-0.5**
LIT				S	**Sn**	**22 58 51.0**	**+0.7**
RGNG	**Rignano Grg**	**3.25**	**257**	Pn	**Pn**	**22 58 13.8**	**-1.2**
BZS	**Buzias**	**3.41**	**22**	⇓*i*P	**Pn**	**22 58 16.3**	**-0.8**
BZS	**Buzias**	**3.41**	**22**	⇓P	**Pn**	**22 58 16.3**	**-0.8**
PLG	**Polygyros**	**3.43**	**126**	*e*PN	**Pn**	**22 58 20.7**	**+3.2**
FG5	**Orsara di Pugl**	**3.60**	**252**	Pn	**Pn**	**22 58 20.8**	**+1.0**
SLCN	**Sala Consilina**	**3.77**	**238**	Pn	**Pn**	**22 58 21.2**	**-0.9**
LKD	**Levkas**	**3.81**	**170**	*e*Pn	**Pn**	**22 58 21.6**	**-1.0**
PKSM	**Moragy**	**3.84**	**348**	⇓*i*P	**Pn**	**22 58 22.1**	**-1.0**
PKSM	**Moragy**	**3.84**	**348**	⇓P	**Pn**	**22 58 22.1**	**-0.9**
PKSM	**Moragy**	**3.84**	**348**	⇓*e*Pn	**Pn**	**22 58 22.2**	**-0.9**
PKSM				*e*Sn	**Sn**	**22 59 06.2**	**-2.4**
EVR	**Evrytania**	**3.85**	**156**	*e*PN	**Pn**	**22 58 25.2**	**+2.0**
CUC	**Castrocucco**	**3.90**	**232**	Pn	**Pn**	**22 58 24.3**	**+0.4**
AGG	**Agios Georgios**	**3.93**	**150**	*e*Pn	**Pn**	**22 58 24.4**	**+0.1**
AGG				*e*Sn	**Sn**	**22 59 12.5**	**+1.7**
AGG	**Agios Georgios**	**3.93**	**150**	P	**Pn**	**22 58 24.9**	**+0.6**
AGG				S	**Sn**	**22 59 12.5**	**+1.7**
NVLJ	**Novalja**	**4.17**	**302**	*i* Pn	**Pn**	**22 58 28.5**	**+1.0**
NVLJ				*i* Sn	**Sn**	**22 59 19.8**	**+3.1**
MIDA	**Miranda**	**4.23**	**261**	Pn	**Pn**	**22 58 28.6**	**+0.2**
BOJS	**Bojanci**	**4.48**	**314**	*i* Pn	**Pn**	**22 58 34.1**	**+2.2**
BOJS				*i* Sn	**Sn**	**22 59 30.8**	**+6.4**
SDI	**San Donato**	**4.54**	**262**	Pn	**Pn**	**22 58 33.3**	**+0.7**
VVLD	**Villa Vallelon**	**4.65**	**265**	Pn	**Pn**	**22 58 33.7**	**-0.4**
AQU	**L'Aquila**	**4.75**	**271**	⇓*i*P	**Pn**	**22 58 36.0**	**+0.4**
AQU	**L'Aquila**	**4.75**	**271**	⇓P	**Pn**	**22 58 36.0**	**+0.4**
DRGR		**4.79**	**24**	⇓*i*P	**Pn**	**22 58 37.0**	**+0.9**
DRGR		**4.79**	**24**	⇓P	**Pn**	**22 58 37.0**	**+0.9**
VISS	**Visnje**	**4.90**	**315**	*e*Pn	**Pn**	**22 58 39.2**	**+1.6**
VISS				*e*Sn	**Sn**	**22 59 40.5**	**+5.8**
FIAM	**Fiamignano**	**4.97**	**270**	Pn	**Pn**	**22 58 39.3**	**+0.7**
BUD	**Budapest**	**5.05**	**354**	⇑*e*Pg	**Pn**	**22 58 41.3**	**+1.6**
CERT	**Cerreto**	**5.11**	**267**	Pn	**Pn**	**22 58 41.2**	**+0.7**
SNTG	**Esanatoglia**	**5.12**	**281**	Pn	**Pn**	**22 58 40.2**	**-0.4**
ARV	**Arcevia**	**5.15**	**284**	Pn	**Pn**	**22 58 41.8**	**+0.7**
FSSB	**Fossombrone**	**5.30**	**286**	Pn	**Pn**	**22 58 43.9**	**+0.7**
MLR	**Muntele Rosu**	**5.35**	**54**	Pn	**Pn**	**22 58 45.3**	**+1.4**
	0.4nm,0.3s,baz=149,slow=19,SNR=3.6						
MLR	**Muntele Rosu**	**5.35**	**54**	⇑*i*P	**Pn**	**22 58 44.9**	**+1.0**
PERS	**Pernice**	**5.36**	**323**	*i* Pn	**Pn**	**22 58 44.1**	**+0.3**
PERS				*e*Sn	**Sn**	**22 59 44.2**	**-1.8**
MURB	**Monte Urbino**	**5.42**	**281**	Pn	**Pn**	**22 58 42.9**	**-1.9**
TRI	**Trieste**	**5.44**	**309**	Pn	**Pn**	**22 58 46.1**	**+1.1**
PSZ	**Piszkesteto**	**5.45**	**1**	⇓*e*Pg	**Pn**	**22 58 46.5**	**+1.3**
PSZ				*e*SB	**Sn**	**22 59 47.1**	**-1.2**
PSZ	**Piszkesteto**	**5.45**	**1**	⇑*i*P	**Pn**	**22 58 44.3**	**-0.9**
PSZ	**Piszkesteto**	**5.45**	**1**	⇑P	**Pn**	**22 58 44.2**	**-1.0**
OBKA	**Obir**	**5.53**	**319**	⇑*i*Pn	**Pn**	**22 58 47.1**	**+0.9**
OBKA				⇓*i*Sn	**Sn**	**22 59 54.1**	**+3.9**
VOY	**Vojsko**	**5.55**	**312**	*e*Pn	**Pn**	**22 58 48.5**	**+1.9**
VOY				*e*Sn	**Sn**	**22 59 55.6**	**+4.8**
ARSA	**Arzberg**	**5.68**	**329**	⇓*i*Pn	**Pn**	**22 58 48.4**	**+0.1**
ARSA				⇓*i*Sn	**Sn**	**22 59 55.6**	**+1.7**
SOP	**Sopron**	**5.71**	**337**	⇑*e*Pg	**Pb**	**22 58 57.7**	**-5.6**
SOP				*e*SB	**Sn**	**22 59 52.7**	**-1.9**
SOP	**Sopron**	**5.71**	**337**	*e*Sn	**Sn**	**22 59 52.7**	**-1.9**
PLOR	**Plostina**	**5.96**	**53**	⇑*i*P	**Pn**	**22 58 52.2**	**0.0**
SFI	**Santa Sofia**	**6.01**	**287**	Pn	**Pn**	**22 58 54.8**	**+2.0**
KECS	**Kecovo**	**6.04**	**4**	*e*PN	**Pn**	**22 58 55.1**	**+1.9**

KECS				e		22 59 02.4	
KECS	Kecovo	6.04	4	eSN	Sn	23 00 03.3	+0.6
KECS	Kecovo	6.04	4	ePn	Pn	22 58 55.1	+1.9
KECS				e		22 59 02.4	
KECS				eSn	Sn	23 00 03.3	+0.6
ZST	Bratislava	6.04	342	eSN	Sn	23 00 02.1	-0.8
VYHS	Vyhne	6.07	354	ePN	Pn	22 58 53.6	-0.1
VYHS				e		22 59 01.8	
VYHS	Vyhne	6.07	354	eSN	Sn	23 00 01.2	-2.3
VYHS	Vyhne	6.07	354	ePn	Pn	22 58 53.6	-0.1
VYHS				e		22 59 01.8	
VYHS				eSn	Sn	23 00 01.2	-2.3
SMOL	Smolenice	6.28	345	eSN	Sn	23 00 06.3	-2.4
KBA	Koelnbreinsper	6.52	317	⇓iPn	Pn	22 59 00.8	+0.9
KBA				⇓iSn	Sn	23 00 18.3	+3.6
CRVS	Cervenica-Dubn	6.54	10	ePN	Pn	22 59 00.2	+0.1
CRVS				eSN	Sn	23 00 13.7	-1.4
MOA	Molln	6.66	326	⇑iPn	Pn	22 59 02.8	+0.9
MOA				⇑iSn	Sn	23 00 18.3	+0.2
KOLS	Kolonicke sedl	6.69	14	ePN	Pn	22 59 04.9	+2.7
KOLS				eSN	Sn	23 00 18.7	-0.2
CTI	Castel Tesino	6.87	304	Pn	Pn	22 59 04.4	-0.3
WTTA	Wattenberg	7.54	312	⇓iPn	Pn	22 59 15.6	+1.7
WTTA				⇓iSn	Sn	23 00 43.2	+3.5
GERES	GERESS Array B	7.69	328	Pn	Pn	22 59 17.2	+1.4
	0.2nm,0.3s,baz=152,slow=15,SNR=7.9						
GERES				Sn	Sn	23 00 43.7	+0.4
	0.3nm,0.3s,baz=152,slow=23,SNR=3.0						
KHC	Kasperske Hory	7.96	329	ePN	Pn	22 59 20.0	+0.3
KHC				ex	x	22 59 35.5	
KHC				eSN	Sn	23 00 48.3	-1.9
KHC				ex	x	23 00 59.0	
IDI	Anoyia	8.18	149	Pn	Pn	22 59 18.4	-4.3
	0.1nm,0.3s,baz=285,slow=6.9,SNR=3.2						
IDI				Sn	Sn	23 00 48.6	-6.9
	0.2nm,0.3s,baz=115,slow=3.8,SNR=2.5						
IDI	Anoyia	8.18	149	Sn	Sn	23 00 48.6	-6.9
DAVOX	Davos	8.30	305	Pn	Pn	22 59 25.9	+1.6
	0.8nm,0.3s,baz=121,slow=22,SNR=8.5						
DAVOX				Sn	Sn	23 01 01.0	+2.6
	0.6nm,0.3s,baz=299,slow=19,SNR=3.0						
DAVOX	Davos	8.30	305	Pn	Pn	22 59 25.9	+1.6
DAVOX				Sn	Sn	23 01 01.0	+2.6
PRU	Pruhonice	8.37	336	eSN	Sn	23 00 54.2	-5.8
SBF	Sospel	9.16	283	ePn	Pn	22 59 35.0	-1.1
FRF	La Foret Royal	9.72	281	ePn	Pn	22 59 43.5	-0.2
FRF				eSn	Sn	23 01 29.2	-4.0
	11nm,0.8s						
MBDF	Montbardon	9.74	288	ePn	Pn	22 59 44.4	+0.4
LPG	La Plagne	9.90	292	ePn	Pn	22 59 47.2	+1.0
LPL	La Plagne	9.91	292	ePn	Pn	22 59 45.9	-0.6
LPL				eSn	Sn	23 01 33.0	-5.1
	7.5nm,0.6s						
ORIF	Oris-en-Rattie	10.39	288	ePn	Pn	22 59 53.4	+0.4
ORIF				eSn	Sn	23 01 45.2	-4.6
	3.0nm,0.5s						
CDF	Champ du Feu	10.63	308	ePn	Pn	22 59 56.9	+0.7
CABF	La Chapelle	10.64	298	ePn	Pn	22 59 57.2	+0.8
VIVF	Saint-Julien-l	11.23	287	ePn	Pn	23 00 04.6	+0.1
SMF	Signal de Mont	12.14	296	ePn	Pn	23 00 16.7	-0.2
LOR	Lormes	12.30	298	ePn	Pn	23 00 18.7	-0.4
LOR				eSn	Sn	23 02 27.8	-8.7
	1.9nm,0.3s						
AVF	Avril sur Loir	12.50	296	ePn	Pn	23 00 22.2	+0.4
NB2	NORSAR Subarra	19.32	347	P	Pn	23 01 49.8	-0.5
	comp=Z,0.5nm,0.6s,baz=164,slow=11						
NOA	NORSAR Array B	19.32	347	P	Pn	23 01 51.2	+0.9
	comp=Z,0.1nm,0.3s,baz=162,slow=8.2,SNR=3.4						
NOA	NORSAR Array B	19.32	347	P	Pn	23 01 51.2	+0.9
ARCES	ARCESS Array B	27.30	4	P	P	23 03 07.9	-0.8
	comp=Z,1.5nm,1.0s,mb3.5,baz=185,slow=8.7,SNR=3.7						

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*ATH **09** 23:12:50.1, 40.17N×19.57E, h10km±6km, MD3.6/4*
*ROM **09** 23:12:51.6±1.0, 39.97N×19.86E, h10km, Ml3.2/2, Error ellipse: s-maj=16.5km s-min=5.9km az=135.0*
*ISCJB **09** 23:12:52.0±0.5, 40.10N±0.02×19.71E±0.03, h0km±4km, Error ellipse: s-maj=3.8km s-min=3.6km az=91.3*
*TIR **09** 23:12:52.7, 40.11N×19.87E, h0km, Ml3.2*
*CSEM **09** 23:12:52.1±0.1, 40.10N×19.69E, h2km, MD3.6, Error ellipse: s-maj=2.4km s-min=2.0km az=11.0*
*THE **09** 23:12:53.5, 40.10N×19.77E, h0km, ML3.2*
*NEIC **09** 23:12:53.5, 40.10N×19.77E, h0km, MD3.6(ATH), ML3.2(THE), After THE.*
*SKO **09** 23:12:57.7, 40.26N×20.01E, h27km*
ISC 09 23:12:52.5±0.5, **40.11N**±0.02×**19.70E**±0.03, **h0**km±4km, **n39**, σ**0s99**/61, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.30	53	i Pg	Pg	23 12 56.6	-1.7
TPE				i Sg	Sg	23 13 01.3	-0.9
SRN	Sarande	0.33	135	i Pg	Pg	23 12 57.6	-1.2
SRN				i Sg	Sg	23 13 03.6	+0.6
VLO	Vlora	0.39	337	i Pg	Pg	23 13 02.0	+2.1
VLO				i Sg	Sg	23 13 10.7	+5.7
KEK	Kerkira	0.41	169	ePB	Pg	23 12 59.8	-0.5
KEK				eSB	Sg	23 13 07.1	+1.6
LSK	Leskovik	0.69	87	i Pg	Pg	23 13 04.1	-1.7
LSK				i Sg	Sg	23 13 14.6	-0.2
LSK	Leskovik	0.69	87	i Pg	Pg	23 13 06.7	+0.9
LSK				i Sg	Sg	23 13 14.4	-0.4
IGT	Igoumenitsa	0.76	140	ePg	Pg	23 13 05.7	-1.3
IGT				eSg	Sg	23 13 17.9	+1.0
SCTE	Santa Cesarea	0.94	268	Pn	Pg	23 13 11.9	+1.3
SCTE				Sn	Sn	23 13 27.3	+0.2
	751nm,0.3s						
JAN	Janina	1.00	117	ePN	Pg	23 13 11.1	-0.5
MEV	Metsovon	1.22	105	ePg	Pg	23 13 14.7	-1.2
LCI	Lecce	1.23	281	Pn	Pn	23 13 16.0	-0.9
	87nm,0.3s						
TIR	Tirane	1.24	6	Pn	Pn	23 13 16.8	-0.2
	420nm,1.2s						
TIR	Tirane	1.24	6	i Pg	Pg	23 13 17.1	+0.8
TIR	Tirane	1.24	6	ePg	Pg	23 13 17.1	+0.8
TIR				eSg	Sg	23 13 36.1	+3.7
OHR	Ohrid	1.30	40	ePg	Pg	23 13 17.2	-0.3
OHR				eSg	Sg	23 13 35.5	+1.1
OHR	Ohrid	1.30	40	ePg	Pg	23 13 17.0	-0.5
OHR				eSg	Sg	23 13 31.2	-3.2
OHR	Ohrid	1.30	40	ePg	Pg	23 13 17.2	-0.3
OHR				eSg	Sg	23 13 31.1	-3.3
OHR				S	Sg	23 13 35.5	+1.1
FNA	Florina	1.45	62	ePg	Pn	23 13 18.1	-1.8
FNA				eSg	Sg	23 13 40.8	+1.9
LKD	Levkas	1.58	152	ePg	Pg	23 13 22.0	-0.9
LKD				eSg	Sg	23 13 43.9	+0.4
KZN	Kozani	1.60	82	ePG	Pn	23 13 21.7	-0.3
KZN				eSB	Sb	23 13 45.3	+1.7
PE1	Pezze di Greco	1.87	292	ePn	Pb	23 13 27.6	+0.1
EVR	Evrytania	2.02	126	ePN	Pn	23 13 28.4	+0.6
VLS	Valsamata	2.05	160	ePN	Pn	23 13 27.8	-0.4
NOCI	Noci	2.12	289	Pn	Pn	23 13 28.4	-0.7
LIT	Litokhoron	2.14	89	ePn	Pn	23 13 30.2	+0.8
LIT				eSn	Sn	23 13 56.9	+0.2
GRG	Griva	2.23	67	ePn	Pn	23 13 31.4	+0.8
AGG	Agios Georgios	2.31	117	ePn	Pn	23 13 31.9	+0.1
AGG				eSn	Sn	23 14 01.5	+0.7
SG1	Sgolgore (BA)	2.42	288	ePn	Pn	23 13 32.4	-0.8
STIP	Stip	2.46	49	ePn	Pn	23 13 32.8	-1.0
STIP				eSn	Sn	23 13 58.5	-6.1
STIP	Stip	2.46	49	ePn	Pn	23 13 32.9	-0.9
STIP				eSn	Sn	23 13 58.4	-6.1
VAY	Valandovo	2.50	60	ePn	Pn	23 13 34.2	-0.1
VAY	Valandovo	2.50	60	ePn	Pn	23 13 33.5	-0.8
VAY				eSn	Sn	23 13 59.1	-6.3
VAY	Valandovo	2.50	60	ePn	Pn	23 13 34.2	-0.1
VAY				eSn	Sn	23 13 59.1	-6.3
KNT	Kendrikon	2.65	66	ePn	Pn	23 13 36.0	-0.5
SOH	Sokhos	2.88	75	ePn	Pn	23 13 39.0	-0.6
PLG	Polygyros	2.88	84	ePN	Pn	23 13 39.7	+0.1
MMB	Musomiste	3.39	63	ePn	Pn	23 13 47.3	+0.7
SOI	Samo	3.49	235	Pn	Pn	23 13 47.2	-0.8
	7.0nm,0.4s						
FG5	Orsara di Pugl	3.56	291	Pn	Pn	23 13 50.4	+1.4
	7.0nm,0.2s						

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*ATH **09** 23:27:53.3, 40.20N×19.55E, h13km±2km, MD3.5/3*
*CSEM **09** 23:27:53.7±0.3, 40.27N×19.48E, h2km, MD3.5, Error ellipse: s-maj=7.4km s-min=3.8km az=101.0*
*ISCJB **09** 23:27:54.7±0.8, 40.17N±0.02×19.64E±0.06, h0km, Error ellipse: s-maj=6.2km s-min=3.5km az=7.4*
*THE **09** 23:27:55.6, 40.12N×19.62E, h0km, ML3.2*
*NEIC **09** 23:27:55.6, 40.12N×19.62E, h0km, MD3.5(ATH), ML3.2(THE), After THE.*
*SKO **09** 23:27:58.0, 40.14N×19.92E, h28km*
ISC 09 23:27:55.3±0.8, **40.15N**±0.03×**19.65E**±0.06, **h0**km, **n28**, σ**1s18**/48, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.31	63	i Pg	Pg	23 28 00.2	-1.1
TPE				i Sg	Sg	23 28 04.8	-0.6
KEK	Kerkira	0.46	165	ePB	Pg	23 28 03.5	-0.5
KEK				eSB	Sg	23 28 11.3	+1.4
LSK	Leskovik	0.73	90	i Pg	Pg	23 28 06.9	-2.4
LSK				i Sg	Sg	23 28 18.2	-0.6
IGT	Igoumenitsa	0.81	139	ePg	Pg	23 28 09.2	-1.7
IGT				eSg	Sg	23 28 22.4	+0.9
IGT	Igoumenitsa	0.81	139	ePg	Pg	23 28 09.2	-1.7
IGT				eSg	Sg	23 28 22.4	+0.9
JAN	Janina	1.05	118	ePN	Pg	23 28 14.8	-0.7
JAN				eSB	Sb	23 28 30.4	-0.3
TIR	Tirane	1.21	8	ePg	Pg	23 28 20.1	+1.7
TIR				eSg	Sg	23 28 36.7	+2.7
MEV	Metsovon	1.27	106	ePg	Pg	23 28 18.3	-1.4
MEV				eSg	Sg	23 28 39.2	+3.0
OHR	Ohrid	1.30	42	ePg	Pg	23 28 20.8	+0.6
OHR	Ohrid	1.30	42	i Pg	Pg	23 28 19.1	-1.1
OHR				eSg	Sg	23 28 36.0	-1.0
OHR	Ohrid	1.30	42	i Pg	Pg	23 28 19.0	-1.2
OHR				eSg	Sg	23 28 36.0	-1.0
FNA	Florina	1.46	64	ePg	Pn	23 28 21.9	-1.0
FNA				eSg	Sg	23 28 44.5	+2.2
KZN	Kozani	1.64	84	ePN	Pn	23 28 25.0	-0.3
LKD	Levkas	1.64	151	ePb	Pb	23 28 25.9	-0.6
LKD				eSb	Sb	23 28 47.5	-0.1
LKD	Levkas	1.64	151	ePb	Pb	23 28 25.9	-0.5
LKD				eSb	Sb	23 28 47.5	-0.1
EVR	Evrytania	2.08	126	ePN	Pn	23 28 32.0	+0.6
VLS	Valsamata	2.11	159	ePN	Pn	23 28 31.8	0.0
LIT	Litokhoron	2.18	90	ePn	Pn	23 28 32.6	-0.2
LIT				eSn	Sn	23 29 02.4	+1.9
GRG	Griva	2.25	68	ePn	Pn	23 28 35.0	+1.3
AGG	Agios Georgios	2.36	118	ePn	Pn	23 28 35.7	+0.4
AGG				eSn	Sn	23 29 06.3	+1.4
AGG	Agios Georgios	2.36	118	ePn	Pn	23 28 35.7	+0.4
AGG				eSn	Sn	23 29 06.3	+1.3
STIP	Stip	2.46	51	ePn	Pn	23 28 36.6	-0.1
STIP	Stip	2.46	51	ePn	Pn	23 28 34.8	-1.9
STIP				eSn	Sn	23 29 01.6	-5.9
STIP	Stip	2.46	51	ePn	Pn	23 28 36.7	0.0
STIP				eSn	Sn	23 29 01.5	-6.0
VAY	Valandovo	2.51	61	ePn	Pn	23 28 37.1	-0.2
VAY	Valandovo	2.51	61	ePn	Pn	23 28 35.4	-1.9
VAY				eSn	Sn	23 29 02.4	-6.3
VAY	Valandovo	2.51	61	ePn	Pn	23 28 37.1	-0.2
VAY				eSn	Sn	23 29 02.3	-6.3
KNT	Kendrikon	2.67	67	ePn	Pn	23 28 40.1	+0.5

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*ISCJB **09** 23:34:17.3±0.4, 40.57N±0.02×23.60E±0.03, h12km, Error ellipse: s-maj=3.4km s-min=3.0km az=101.1*
*NEIC **09** 23:34:18.0, 40.56N×23.59E, h12km, MD3.0(ATH), ML2.2(THE), After THE.*
*THE **09** 23:34:18.0, 40.56N×23.59E, h11km, ML2.2*
*ATH **09** 23:34:17.6, 40.58N×23.44E, h21km±2km, MD3.0/3*
*CSEM **09** 23:34:18.2±0.1, 40.56N×23.59E, h15km, MD3.0, Error ellipse: s-maj=2.4km s-min=1.6km az=59.0*
ISC 09 23:34:17.8±0.5, **40.56N**±0.02×**23.59E**±0.03, **h18**km±5km, **n15**, σ**0s45**/29, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLG	Polygyros	0.22	211	⇑iPB	Pg	23 34 23.0	0.0
PLG				eSB	Sg	23 34 26.0	-0.5
SOH	Sokhos	0.32	325	ePg	Pg	23 34 24.7	0.0
SOH				eSg	Sg	23 34 29.0	-0.3
OUR	Ouranopolis	0.37	127	ePg	Pg	23 34 26.0	+0.4
OUR				eSg	Sg	23 34 30.8	-0.1
HORT	Hortiatis	0.38	276	ePg	Pg	23 34 25.3	-0.4
HORT				eSg	Sg	23 34 30.6	-0.4
THE	Thessaloniki	0.48	279	ePg	Pg	23 34 27.5	-0.1
THE				eSg	Sg	23 34 34.8	+0.6
PAIG	Paliouri	0.64	174	ePg	Pg	23 34 30.1	-0.3
PAIG				eSg	Sg	23 34 38.5	-0.3
PAIG	Paliouri	0.64	174	ePg	Pg	23 34 30.1	-0.3
PAIG				eSg	Sg	23 34 38.5	-0.4
KNT	Kendrikon	0.80	319	ePg	Pg	23 34 33.1	-0.4
KNT				eSg	Sg	23 34 44.2	+0.2
NVR	Nevrokopi	0.82	14	ePN	Pn	23 34 34.2	-0.2
NVR				eSN	Sn	23 34 45.2	-0.8
LIT	Litokhoron	0.96	242	ePg	Pg	23 34 36.6	+0.2
LIT				eSg	Sg	23 34 49.6	+0.5
GRG	Griva	0.99	294	ePg	Pg	23 34 37.2	+0.2
GRG				eSg	Sg	23 34 50.9	+0.9
MMB	Musomiste	1.03	6	ePg	Pg	23 34 37.2	-0.6
MMB				eSg	Sg	23 34 52.0	+0.6
VAY	Valandovo	1.09	315	ePg	Pg	23 34 38.4	-0.4
VAY				eSg	Sg	23 34 53.0	-0.1
NEO	Neokhori	1.28	193	ePN	Pn	23 34 41.4	+0.6
RDO	Rodhopi	1.59	68	ePN	Pg	23 34 48.4	0.0
RDO				eSN	Sg	23 35 10.0	+0.9

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*NEIC **09** 23:35:09.0, 45.10S×167.27E, h97km, ML4.4(WEL), After WEL.*
WEL 09 23:35:09.6±0.2, **45.12S**×**167.32E**, **h95**km±1km, **ML4.3**/11, **3C-9D, Error ellipse: s-maj=1.7km s-min=1.1km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.38	198	P	Pn	23 35 23.6	-0.3
DCZ				S	Sn	23 35 34.3	-0.4
DCZ	Deep Cove	0.38	198	⇑PN	Pn	23 35 23.6	-0.3
DCZ				SN	Sn	23 35 34.3	-0.3
MSZ	Milford Sound	0.62	44	P	Pn	23 35 25.9	+0.1
MSZ				S	Sn	23 35 37.6	-0.3
MSZ	Milford Sound	0.62	44	⇑PN	Pn	23 35 25.9	+0.1
MSZ				SN	Sn	23 35 37.6	-0.3
MLZ	Mavora Lakes	0.64	111	P	Pn	23 35 25.7	-0.3
MLZ	Mavora Lakes	0.64	111	⇑PN	Pn	23 35 25.7	-0.2
MLZ				SN	Sn	23 35 37.7	-0.5
WHZ	Wether Hill Ro	0.89	151	P	Pn	23 35 28.3	-0.1
WHZ	Wether Hill Ro	0.89	151	⇓PN	Pn	23 35 28.3	-0.1
WHZ				SN	Sn	23 35 42.2	-0.3
WKZ	Wanaka	1.24	77	eP	Pn	23 35 32.4	+0.1
WKZ	Wanaka	1.24	77	PN	Pn	23 35 32.4	0.0
WKZ				SN	Sn	23 35 49.2	-0.3
EAZ	Earnscleugh	1.41	95	⇓PN	Pn	23 35 34.3	-0.1
EAZ				SN	Sn	23 35 51.9	-1.3
JCZ	Jackson Bay	1.47	45	P	Pn	23 35 34.6	-0.5
JCZ	Jackson Bay	1.47	45	⇓PN	Pn	23 35 34.6	-0.5
APZ	The Paps	1.77	165	PN	Pn	23 35 38.7	-0.3
TUZ	Tuapeka	1.82	118	P	Pn	23 35 39.3	-0.4
TUZ	Tuapeka	1.82	118	⇓PN	Pn	23 35 39.3	-0.3
SYZ	Scrubby Hill	1.90	139	⇓PN	Pn	23 35 40.2	-0.4
LBZ	Lake Benmore	2.17	71	P	Pn	23 35 42.5	-1.6
LBZ	Lake Benmore	2.17	71	⇓PN	Pn	23 35 42.5	-1.7
FOZ	Fox Glacier	2.30	48	P	Pn	23 35 45.2	-0.7
FOZ	Fox Glacier	2.30	48	PN	Pn	23 35 45.1	-0.8
ODZ	Otahua Downs	2.35	89	P	Pn	23 35 45.4	-1.2
ODZ	Otahua Downs	2.35	89	⇓PN	Pn	23 35 45.4	-1.2
HHSZ	Highcliff Hill	2.43	110	⇓PN	Pn	23 35 47.0	-0.5
RPZ	Rata Peaks	3.02	64	P	Pn	23 35 53.0	-2.4
RPZ	Rata Peaks	3.02	64	⇓PN	Pn	23 35 52.9	-2.5
WVZ	Waitaha Valley	3.20	51	PN	Pn	23 35 55.1	-2.7
MQZ	McQueen's Vall	4.07	72	eP	Pn	23 36 07.1	-2.5
MQZ	McQueen's Vall	4.07	72	PN	Pn	23 36 07.0	-2.6
CRLZ	Canterbury Las	4.10	70	eP	Pn	23 36 07.6	-2.4
CRLZ	Canterbury Las	4.10	70	PN	Pn	23 36 07.5	-2.5
LTZ	Lake Taylor	4.27	59	P	Pn	23 36 08.8	-3.5
LTZ	Lake Taylor	4.27	59	PN	Pn	23 36 08.8	-3.5
DSZ	Denniston Nort	4.69	46	eP	Pn	23 36 15.4	-2.6
DSZ	Denniston Nort	4.69	46	PN	Pn	23 36 15.2	-2.9
KHZ	Kahutara	5.25	61	eP	Pn	23 36 23.1	-2.5
KHZ	Kahutara	5.25	61	ePN	Pn	23 36 22.2	-3.4
THZ	Tophouse	5.27	52	eP	Pn	23 36 22.3	-3.6
THZ	Tophouse	5.27	52	PN	Pn	23 36 21.9	-4.0
QRZ	Quartz Range	5.75	43	eP	Pn	23 36 29.7	-2.6
QRZ	Quartz Range	5.75	43	PN	Pn	23 36 29.4	-2.9
KIW	Kapiti Island	7.00	55	P	Pn	23 36 44.1	-5.3
WCZ	Waipu Caves	10.61	33	eP	Pn	23 37 37.7	-0.8
WCZ	Waipu Caves	10.61	33	PN	Pn	23 37 37.7	-0.8
STKA	Stephens Creek	23.97	295	P	P	23 40 13.9	-1.2
VNDA	Vanda	32.58	182	eP	P	23 41 30.2	-1.6
	0.2nm,0.5s						
WRAB	Tennant Creek	37.05	302	P	P	23 42 09.2	-1.0
SNAA	Sanae	63.30	183	eP	P	23 45 27.1	-1.2
	0.2nm,0.4s						

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*ISCJB **09** 23:36:29.2±0.6, 43.44N±0.03×104.93W±0.05, h0km, mb4.5/1, MS4.0/1, Error ellipse: s-maj=5.5km s-min=4.1km az=140.0*
*IDC **09** 23:36:31.6±2.9, 43.42N×105.32W, h0km, mb4.2/1, mb1 4.0/3, mb1mx3.5/21, mbtmp3.8/3, ML3.3/2, MS3.3/3, Ms1 3.2/3, ms1mx2.7/28, Error ellipse: s-maj=74.2km s-min=9.2km az=154.0*
*NEIC **09** 23:36:33.7±0.8, 43.58N×105.09W, h0km, ML3.2, Error ellipse: s-maj=14.0km s-min=8.5km az=151.0, Suspected Mining explosion.*
NEIC 80 km [50 miles] WSW of Newcastle. ML 3.2 [GS]. 80 km [50 miles] WSW of Newcastle.
ISC 09 23:36:31.9±0.6, **43.46N**±0.03×**104.94W**±0.04, **h0**km, **n30**, σ**1s51**/62, **mb4.5**/1, **MS4.0**/1, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	45	eP	Pg	23 36 53.0	+3.3
RSSD				eS	Sg	23 37 09.8	+7.9
PHWY	Pilot Hill	2.19	190	ePn	Pn	23 37 12.1	+2.5
PHWY				eSg	Sg	23 37 44.5	+2.1
RWWY	Rawlins	2.44	224	ePg	Pg	23 37 15.2	-3.4
RWWY				eSg	Sg	23 37 45.7	-4.6
PDAR	Pinedale Array	3.45	260	Pn	Pn	23 37 26.5	-0.4
	2.2nm,0.3s,baz=72,slow=16,SNR=44						
PDAR				Lg		23 38 10.2	
	2.1nm,0.3s,baz=94,slow=20,SNR=4.4						
BW06	Boulder Array	3.45	260	ePn	Pn	23 37 26.1	-0.8
BW06				ePg	Pg	23 37 33.1	-5.0
BW06				eSn	Sn	23 38 05.2	-3.3
BW06				eSg	Sg	23 38 13.3	-10
ISCO	Idaho Springs	3.69	188	Pn	Pn	23 37 28.4	-1.9
ISCO				ePg	Pg	23 37 36.1	-6.6
ISCO				eSn	Sn	23 38 13.8	-0.7
ISCO				eSg	Sg	23 38 30.0	-0.6
GCMT	Greycliff	4.10	306	ePn	Pn	23 37 34.8	-1.0
GCMT				eSn	Sb	23 38 31.4	-3.6
LOHW	Long Hollow	4.12	274	ePn	Pn	23 37 33.6	-2.5
LOHW				ePg	Pg	23 37 42.5	-8.3
LOHW				eSn	Sn	23 38 24.0	-1.0
FLWY	Flagg Ranch	4.21	280	ePn	Pn	23 37 42.3	+4.9
FLWY				eSn	Sb	23 38 39.8	+1.5
MOOW	Moose Ponds	4.22	276	ePn	Pn	23 37 39.4	+1.9
MOOW				eSn	Sn	23 38 28.6	+1.1
SNOW	Snow King Moun	4.23	272	ePn	Pn	23 37 43.9	+6.3
SNOW				ePg	Pg	23 37 53.2	+0.2
SNOW				eSn	Sn	23 38 33.9	+6.1
REDW	Red Top Meadow	4.31	271	ePn	Pn	23 37 41.5	+2.8
REDW				eSn	Sb	23 38 40.7	-0.3
REDW				eSg	Sg	23 38 51.3	+1.0
YFT	Old Faithful	4.37	285	ePn	Pn	23 37 41.5	+2.0
YFT				eSn	Sn	23 38 36.6	+5.5
IMW	Indian Meadow	4.37	278	ePn	Pn	23 37 42.3	+2.8
IMW				eSn	Sn	23 38 39.1	+7.9
TPAW	Teton Pass	4.37	272	ePn	Pn	23 37 41.0	+1.4
TPAW				ePg	Pg	23 37 50.8	-5.0
TPAW				eSn	Sb	23 38 44.4	+1.5
SMCO	Snowmass	4.54	200	ePn	Pn	23 37 47.4	+5.5
SMCO				ePg	Pg	23 37 59.0	0.0
AHID	Auburn Hatcher	4.56	263	Pn	Pn	23 37 47.7	+5.5
AHID				eSn	Sn	23 38 45.6	+10
AHID				eSg	Sg	23 38 58.1	-0.3
RRI2	Red Ridge	4.65	271	ePn	Pn	23 37 43.0	-0.4
RRI2				eSn	Sn	23 38 43.0	+5.0
HWUT	Hardware Ranch	5.23	252	ePn	Pn	23 37 51.8	+0.4
	7.2nm,0.5s						
HWUT				eSn	Sb	23 39 07.5	-0.2
BOZ	Bozeman (W)	5.25	297	ePn	Pn	23 37 50.3	-1.4
	5.6nm,0.5s						
BOZ				ePg	Pb	23 38 02.6	-2.1
BOZ				eSn	Sn	23 38 59.2	+6.3
BOZ				eSg	Sg	23 39 10.2	-11
DAU	Daniels Canyon	5.61	239	ePn	Pn	23 37 59.8	+3.3
DAU				ePg	Pg	23 38 17.6	-1.8
EGMT	Eagleton	5.67	325	ePn	Pn	23 37 55.8	-1.7
	15nm,0.9s						
EGMT				eSn	Sn	23 39 02.8	-0.4
SPUT	South Promonto	5.96	251	Pn	Pn	23 38 03.4	+2.0
SRU	San Rafael	6.04	226	ePn	Pn	23 38 00.6	-2.0
	8.3nm,0.4s						
SRU				ePg	Pg	23 38 26.7	-1.1
SRU				eSg	Sg	23 39 41.0	-5.1
CHMT	Chamberlain Mo	6.81	303	Pn	Pn	23 38 12.3	-0.8
MSU	Marysvale	7.37	230	Pn	Pn	23 38 25.1	+4.3
ULM	Lac du Bonnet	9.20	39	Pn	Pn	23 38 45.8	0.0
	1.0nm,0.3s,baz=227,slow=12,SNR=14						
ULM				Lg		23 41 22.4	
	0.3nm,0.3s,baz=134,slow=15,SNR=3.5						
ULM				LR	LR	23 41 49.0	
	comp=Z,38nm,20.8s,baz=211,slow=34						
BBB	Bella Bella	17.78	307	LR	LR	23 48 39.7	
	comp=Z,115nm,21.8s,baz=294,slow=41						
ARCES	ARCESS Array B	61.61	18	P	P	23 46 50.7	-0.5
	3.0nm,1.0s,mb4.5,baz=339,slow=9.7,SNR=4.0						
DBIC	Dimbokro	92.73	78	LR	LR	00 28 47.2	
	comp=Z,56nm,18.9s,MS4.0,baz=151,slow=34						

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*ISCJB **09** 23:43:05.7±1.0, 35.71N±0.05×32.40E±0.09, h15km±13km, Error ellipse: s-maj=13.0km s-min=7.1km az=152.4*
*CSEM **09** 23:43:05.1±0.3, 35.65N×32.38E, h20km, Mw2.7, Error ellipse: s-maj=9.5km s-min=4.4km az=94.0*
*ISK **09** 23:43:05.9, 35.79N×32.45E, h11km, MD3.2*
*NIC **09** 23:43:06.5±0.2, 35.70N×32.39E, h25km, ML3.0, MW2.7*
*NEIC **09** 23:43:06.5, 35.70N×32.39E, h25km, ML3.0(NIC), After NIC.*
ISC 09 23:43:06.3±1.1, **35.64N**±0.04×**32.33E**±0.09, **h27**km±11km, **n13**, σ**0s97**/23, **1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALFC	Alevga	0.53	156	P	Pb	23 43 17.2	+0.1
	18nm,0.1s						
ALFC				S	Sb	23 43 25.7	+1.3
PPCY	Paphos	0.76	179	P	Pb	23 43 20.8	-0.1
MAMC	Mammari	0.86	123	⇓iP	Pb	23 43 21.6	-1.1
CSS	Prodhromos	1.06	129	P	Pn	23 43 23.9	-1.5
CSS				S	Sb	23 43 38.1	-1.4
CSS	Prodhromos	1.06	129	ePN	Pn	23 43 26.7	+1.3
CSS				eSN	Sn	23 43 43.6	+4.3
CSS	Prodhromos	1.06	129	ePn	Pn	23 43 26.7	+1.3
CSS				S	Sb	23 43 38.1	-1.4
ERMK	Ermenek	1.10	25	i P	Pn	23 43 25.7	-0.3
ERMK				i S	Sb	23 43 41.9	+1.2
IKL	Isikli	1.25	61	PN	Pn	23 43 27.1	-0.9
IKL				SN	Sn	23 43 43.0	-1.0
HDMB	Hadim	1.32	5	PN	Pn	23 43 28.9	-0.2
HDMB				SN	Sn	23 43 45.5	-0.3
PHNC	Paralimni	1.53	114	P	Pn	23 43 31.8	-0.1
PHNC				S	Sn	23 43 58.9	+8.0
MEST	Erdemli	1.75	57	i P	Pn	23 43 35.1	+0.3
MEST				i S	Sn	23 43 57.8	+1.6
MERS	Mersin	2.15	55	ePN	Pn	23 43 40.4	0.0
KARA	Karaisali	2.73	53	ePN	Pn	23 43 47.9	-0.4
KARA				eSN	Sn	23 44 20.4	0.0

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*NEIC **09** 23:55:58.0, 38.88N×26.31E, h25km, MD3.2(ATH), MD3.2(ISK), ML2.5(THE), After ISK.*
*ATH **09** 23:55:59.0, 38.94N×26.38E, h18km±3km, MD3.2/3*
*ISCJB **09** 23:55:59.1±0.5, 39.00N±0.02×26.47E±0.03, h6km±4km, Error ellipse: s-maj=4.5km s-min=3.1km az=155.0*
*CSEM **09** 23:55:59.4±0.1, 38.99N×26.49E, h12km, MD3.2, Error ellipse: s-maj=1.9km s-min=1.3km az=71.0*

*ISK **09** 23:55:59.7, 3890N×2633E, h33km, MD3.2*
*THE **09** 23:56:00.1, 3894N×2658E, h0km, ML3.1*
ISC 09 23:55:59.8±0.4**, 3900N**±002×**2648E**±003**, h9**km±3km**, n30,** σ**0.96**/45**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.30	327	⇑iPB	Pg	23 56 05.8	+0.1
PRK				SB	Sg	23 56 10.2	+0.5
AYVA	Ayvalik	0.35	28	iP	Pg	23 56 06.9	+0.1
AYVA				iS	Sg	23 56 10.4	-1.0
URLA	Izmir	0.64	172	iP	Pg	23 56 11.2	-1.0
URLA				iS	Sg	23 56 20.4	-0.3
CHOS	Chios island	0.69	209	ePg	Pg	23 56 12.4	-0.9
CHOS				eSg	Sg	23 56 23.9	+1.6
BLCB	Balcova	0.75	144	iPG	Pg	23 56 14.6	+0.3
EZN	Ezine	0.84	352	iPG	Pg	23 56 15.8	-0.1
EZN				iSG	Sg	23 56 29.7	+2.9
KDAG	Bornova	0.85	134	iP	Pg	23 56 15.7	-0.5
KDAG				iS	Sg	23 56 27.2	-0.2
IZM	Izmir	0.85	134	iPG	Pg	23 56 16.4	+0.1
IZM				iSG	Sg	23 56 28.4	+1.0
BOZC	Bozcaada	0.91	339	iP	Pg	23 56 16.7	-0.6
BOZC				iS	Sg	23 56 28.5	-0.6
AKS	Akhisar	1.04	96	iPN	Pn	23 56 20.2	-0.4
AKHS	Akhisar	1.05	96	iP	Pg	23 56 19.6	-0.3
AKHS				iS	Sg	23 56 34.8	+1.3
CANB	Canakkale	1.11	24	iPN	Pn	23 56 20.8	-0.8
GADA	Gvkgeada	1.27	339	iPN	Pn	23 56 22.6	-1.2
GADA				iSN	Sn	23 56 39.8	-1.2
SMG	Samos	1.32	168	ePN	Pn	23 56 23.5	-0.9
LIA	Limnos Island	1.35	312	ePN	Pn	23 56 24.7	-0.1
LIA				eSN	Sn	23 56 42.7	-0.1
LPK	Lapseki	1.39	9	PN	Pn	23 56 24.2	-1.2
BTOK	Tokmak	1.42	57	iP	Pn	23 56 26.2	+0.4
BTOK				iS	Sn	23 56 44.5	-0.1
BNT	Bandirma	1.75	39	PN	Pn	23 56 30.8	+0.4
ENEZ	Enez	1.75	352	PN	Pn	23 56 29.9	-0.5
RKY	Sarkoy-Tekirda	1.77	17	PN	Pn	23 56 31.1	+0.5
MRMT	Marmara Adasi	1.82	28	PN	Pn	23 56 31.7	+0.4
MFT	Murefte	1.89	19	ePN	Pn	23 56 32.6	+0.3
ALN	Alexandroupoli	1.93	350	ePn	Pn	23 56 35.0	+2.2
ALN				eSn	Sn	23 57 00.1	+3.1
BODT	Bodrum	2.04	161	ePN	Pn	23 56 32.4	-1.9
APE	Apeiranthos	2.07	202	ePn	Pn	23 56 33.8	-0.9
APE				eSn	Sn	23 57 02.9	+2.4
ORLT	Orhaneli	2.14	60	ePN	Pn	23 56 35.5	-0.2
RDO	Rodhopi	2.27	342	ePN	Pn	23 56 38.7	+1.3
ULDT	Uludag	2.35	60	iP	Pb	23 56 42.7	+0.4
ULDT				iS	Sg	23 57 14.9	-0.4
YLV	Yalova	2.72	54	ePN	Pn	23 56 44.9	+1.2
EDRB	Edirne	2.85	4	ePN	Pn	23 56 44.9	-0.6

GUC 10 00:45:08.6±0.6**, 2622S×6995W, h23**km±3km**, MD3.7, ML2.9, 1C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDCH	Caldera	1.16	223	⇓iP	Pn	00 45 29.0	-0.5
CDCH				iS	Sb	00 45 44.2	-0.5
CDCH				AML	AML	00 45 45.7	
	comp=N,408nm,0.3s						
CPCH	Copiapo	1.20	198	⇑iP	Pn	00 45 29.1	-0.8
CPCH				iS	Sn	00 45 45.5	+0.1
CPN1	Cerro Paranal	1.64	345	⇓iP	Pn	00 45 36.9	+1.0
CPN1				iS	Sn	00 45 58.5	+2.2
CPN1				AML	AML	00 46 04.5	
	comp=N,273nm,0.3s						
VACH	Vallenar	2.46	197	iP	Pn	00 45 48.5	+1.2
VACH				iS	Sn	00 46 18.8	+2.1
CEN1	Los Morros	2.82	355	eP	Pn	00 45 51.5	-0.9
CEN1				iS	Sn	00 46 23.6	-2.0
CEN1				AML	AML	00 46 37.7	
	comp=E,44nm,0.8s						

*NEIC **10** 00:50:23.4±1.4, 509S×15438E, h65km±12km, mb4.7/15, Error ellipse: s-maj=12.6km s-min=10.3km az=69.0*
*BJI **10** 00:50:23.4, 510S×15440E, h64km, mB4.9, mb4.9, Msz4.1*
*ISCJB **10** 00:50:25.4±0.4, 520S±005×15386E±006, h76km, mb4.6/24, Error ellipse: s-maj=8.4km s-min=7.0km az=97.6*
*IDC **10** 00:50:29.5±4.2, 520S×15379E, h103km±34km, mb4.2/10, mb1 4.3/12, mb1mx4.2/17, mbtmp4.6/12, MS3.2/7, Ms1 3.2/7, ms1mx3.0/22, Error ellipse: s-maj=26.7km s-min=15.9km az=55.0*
ISC 10 00:50:27.1±0.5**, 525S**±006×**15396E**±007**, h78**km**, h78**km±3.4km**:pP-P, n56,** σ**1.22**/53**, mb4.6**/24**, 1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.25	125	S	Sn	00 53 36.4	+5.4
	12nm,0.3s,baz=270,slow=20,SNR=3.4						
HNR				LR	LR	00 54 48.4	
	comp=Z,166nm,20.5s,baz=355,slow=35						
HNR	Honiara	7.25	125	Pn	Pn	00 52 03.0	-7.3
PMG	Port Moresby	7.91	238	P	Pn	00 52 21.2	+1.9
	13nm,0.3s,baz=58,slow=6.4,SNR=17						
PMG				S	Sn	00 53 46.8	-0.4
	39nm,0.3s,baz=109,slow=22,SNR=16						
PMG	Port Moresby	7.91	238	ePn	Pn	00 52 21.3	+2.0
	78nm,0.8s						
PMG				eSn	Sn	00 53 47.2	+0.1
CTA	Charters Tower	16.55	206	eP	Pn	00 54 16.7	+2.5
	7.6nm,0.8s						
CTA				epP	pP	00 54 44.6	+14
CTA	Charters Tower	16.55	206	P	Pn	00 54 15.8	+1.6
	0.3nm,0.3s,baz=30,slow=13,SNR=7.9						
CTA				LR	LR	00 59 31.4	
	comp=Z,117nm,19.5s,baz=45,slow=33						
CTAO	Charters Tower	16.55	206	ePn	Pn	00 54 17.0	+2.8
	6.8nm,0.6s						
DZM	Mont Dzumac	20.63	145	P	P	00 55 01.8	+1.7
	14nm,0.5s,baz=106,slow=22,SNR=13						
GUMO	Guam	20.78	334	LR	LR	01 01 17.7	
	comp=Z,94nm,21.1s,baz=91,slow=31						
KAKA	Kakadu	22.50	249	eP	P	00 55 18.5	-1.6
	42nm,1.2s,mb4.7						
KAKA				epP		00 55 45.3	
WRAB	Tennant Creek	24.02	231	eP	P	00 55 34.9	+0.2
	11nm,0.4s,mb4.5						
WB2	Warramunga Arr	24.03	231	eP	P	00 55 34.0	-0.7
ASAR	Alice Springs	26.62	225	P	P	00 55 58.0	-0.1
	0.8nm,0.4s,mb3.6,baz=57,slow=8.9,SNR=12						
ASAR				pP	pP	00 56 20.6	+4.4
	0.9nm,0.4s,baz=56,slow=9.1,SNR=5.3						
ASAR				PcP	PcP	00 59 20.9	+0.5
	1.3nm,0.6s,baz=65,slow=2.0,SNR=6.9						
ASAR				LR	LR	01 05 10.7	
	comp=Z,86nm,20.4s,baz=201,slow=33						
STKA	Stephens Creek	28.91	202	eP	P	00 56 18.9	+0.3
	1.5nm,0.6s,mb3.8						
STKA	Stephens Creek	28.91	202	P	P	00 56 17.9	-0.7
	1.7nm,0.5s,mb4.0,baz=37,slow=12,SNR=5.2						
STKA				LR	LR	01 06 48.5	
	comp=Z,104nm,20.2s,baz=26,slow=34						
STKA	Stephens Creek	28.91	202	eP	P	00 56 19.3	+0.7
FITZ	Fitzroy Crossi	30.47	243	eP	P	00 56 31.3	-1.1
	8.8nm,0.8s,mb4.4						
FITZ	Fitzroy Crossi	30.47	243	P	P	00 56 31.4	-1.1
	4.4nm,0.5s,mb4.3,baz=79,slow=8.9,SNR=23						
FORT	Forrest	35.19	221	eP	P	00 57 12.2	-1.3
	11nm,0.6s,mb4.8						
TAU	Tasmania Unive	37.96	188	P	P	00 57 34.9	-2.2
TGY	Tagaytay City	37.99	301	LR	LR	01 12 08.3	
	comp=Z,6.8nm,19.0s,baz=182,slow=34						
RPZ	Rata Peaks	41.17	161	P	P	00 58 05.0	+1.2
	36nm,0.8s,mb5.2,baz=343,slow=3.6,SNR=30						
YHNB	Yeheng	43.47	315	P	P	00 58 23.6	+1.1
QIZ	Qiongzhong	49.69	300	P	P	00 59 11.9	+0.8
ASAJ	Asahikawa	50.20	349	LR	LR	01 21 37.2	
	comp=Z,24nm,18.9s,baz=353,slow=37						
COCO	West Island	56.80	259	P	P	01 00 05.5	+2.3
KMI	Kunming	58.19	304	P	P	01 00 16.8	+3.8
KMI				AP	pP	01 00 36.4	+3.6
KMI				XP	sP	01 00 44.0	+2.5
KMI				PP	PP	01 02 26.4	+3.9
KMI				S	S	01 08 13.4	+4.7
KMI				XS	sS	01 08 45.3	+2.9
KMI				SS	SS	01 12 06.6	+5.2
KMI				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.8						
KMI				AMB	AMB		
	comp=Z,150nm,4.4s						
KMI				LR	LR		
	comp=Z,369nm,24.1s						
CD2	Chengdu	59.91	310	eP	P	01 00 26.8	+2.0
CD2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
HHC	Hu-ho-hao-te	60.09	324	eP	P	01 00 29.0	+2.9
HHC				AP	pP	01 00 48.4	+2.4
HHC				PCP	PcP	01 01 12.4	+1.2
HHC				PP	PP	01 02 46.7	+7.4
HHC				SCP	ScP	01 05 06.8	+1.6
HHC				PCS	PcS	01 05 13.4	-0.2
HHC				S	S	01 08 37.0	+3.9
HHC				SCS	ScS	01 10 10.2	+0.8
HHC				SS	SS	01 12 35.3	+4.2
HHC				AMB	AMB		
	comp=Z,13nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,44nm,3.8s						
HHC				LR	LR		
	comp=Z,107nm,26.2s						
LZH	Lanzhou	62.36	315	eP	P	01 00 41.5	+0.1
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb5.0						
GTA	Gaotai	66.77	317	eP	P	01 01 10.8	+0.6
GTA				AP	pP	01 01 29.8	-0.6
GTA				XP	sP	01 01 38.8	-0.2
GTA				AMB	AMB		
	comp=Z,7.0nm,0.4s,mb4.8						
SONM	Songino Array	67.32	327	P	P	01 01 13.1	-0.6
	comp=Z,1.7nm,0.6s,mb4.0,baz=142,slow=4.6,SNR=6.4						
CASY	Casey	67.93	197	eP	P	01 01 16.8	-0.7
	comp=Z,0.8nm,0.5s,mb3.8						
VNDA	Vanda	72.34	178	P	P	01 01 43.9	-0.6
	comp=Z,6.5nm,0.9s,mb4.5,baz=330,slow=6.4,SNR=38						
VNDA	Vanda	72.34	178	eP	P	01 01 44.0	-0.4
	comp=Z,7.0nm,0.9s,mb4.5						
SBA	Scott Base	72.87	177	eP	P	01 01 48.6	+1.1
	comp=Z,4.9nm,1.0s,mb4.3						
JIRN	Jiri	73.01	301	eP	P	01 01 48.9	+0.5
GUN	Gumba	73.34	301	eP	P	01 01 50.8	+0.4
	comp=Z,26nm,0.8s,mb5.1						
PKI	Pulchoki	73.66	301	eP	P	01 01 52.2	0.0
KKN	Kakani	73.82	301	eP	P	01 01 52.8	-0.4
	comp=Z,11nm,0.6s,mb4.8						
DMN	Daman	73.92	301	eP	P	01 01 54.3	+0.5
	comp=Z,17nm,0.6s,mb5.0						
GKN	Gorkha	74.43	301	eP	P	01 01 56.5	-0.2
KOLN	Koldanda	75.26	300	eP	P	01 02 01.1	-0.4
MKAR	Makanchi Array	81.42	319	P	P	01 02 34.5	-1.0
	comp=Z,2.5nm,0.6s,mb4.2,baz=101,slow=5.2,SNR=14						
MKAR	Makanchi Array	81.42	319	P	P	01 02 34.5	-1.0
ZAL	Zalesovo	82.17	326	P	P	01 02 38.1	-1.3
	comp=Z,1.8nm,0.4s,mb4.2,baz=354,slow=4.1,SNR=5.0						
QSPA	South Pole Qui	84.71	180	eP	P	01 02 52.6	+0.2
	comp=Z,10nm,0.4s,mb5.1						
KURK	Kurchatov	84.83	322	eP	P	01 02 51.0	-2.0
	comp=Z,5.9nm,1.0s,mb4.5						
MAW	Mawson	85.60	203	eP	P	01 02 56.2	-0.7
	comp=Z,6.1nm,0.6s,mb4.7						
MAW				epP	pP	01 03 16.8	-1.1
MAW	Mawson	85.60	203	P	P	01 02 56.4	-0.5
	comp=Z,7.3nm,0.6s,mb4.8,baz=97,slow=5.7,SNR=49						
SYO	Syowa Base	93.63	199	⇓eP	P	01 03 33.0	-1.7
ARU	Arti	97.33	326	eP	P	01 03 49.0	-2.6
GERES	GERESS Array B	125.04	329	PKP	PKPdf	01 09 16.9	-1.4
	comp=Z,0.5nm,0.5s,baz=90,slow=1.3,SNR=7.6						
MDT	Midelt	146.06	327	PKPbc	PKPbc	01 09 57.3	-0.8
	comp=Z,0.6nm,0.4s,baz=289,slow=6.1,SNR=4.7						
TORD	Torodi Ar. Bea	151.54	288	PKPbc	PKPbc	01 10 11.2	-0.9
	comp=Z,6.8nm,0.6s,baz=45,slow=2.1,SNR=129						
TORD				PKPab	PKPab	01 10 20.7	-0.2
	comp=Z,0.3nm,0.3s,baz=99,slow=2.8,SNR=4.7						
DBIC	Dimbokro	158.88	275	PKPab	PKPab	01 10 52.4	+0.1
	comp=Z,2.2nm,0.9s,baz=89,slow=8.9,SNR=6.0						

*LDG **10** 01:06:45.8±0.2, 4400N×487E, h4km, Md2.3/3, Ml2.2/12, Error ellipse: s-maj=4.4km s-min=2.6km az=26.0*
STR 10 01:06:39.7±0.5**, 4419N×447E, h5**km±1km**, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LASF	Ste Croix	0.46	256	ePg	Pg	01 06 59.2	+11
LASF				eSg	Sg	01 07 11.1	+17
	9.7nm,0.2s						
PRAF	Pradon	0.64	127	Pg	Pg	01 06 51.0	-0.9
PRAF				Sg	Sg	01 06 58.2	-2.0
VIVF	Saint-Julien-l	0.68	12	ePg	Pg	01 07 01.9	+9.1
VIVF				eSg	Sg	01 07 13.7	+12
	14nm,0.3s						
SMRF	Simiane la Rot	0.82	105	ePg	Pg	01 06 55.9	+0.4
SMRF				eSg	Sg	01 07 04.3	-1.9
	20nm,0.3s						
TREF	Trevaresse	0.87	130	Pg	Pg	01 06 56.8	+0.4
TREF				Sg	Sg	01 07 08.5	+0.8
VILF	Villemus	0.96	110	Pg	Pg	01 06 57.5	-0.6
VILF				Sg	Sg	01 07 10.9	+0.3
STOF	St-Etienne Org	1.05	100	Pg	Pg	01 06 58.2	-1.7
STOF				Sg	Sg	01 07 11.5	-2.1
GELF	Grande-Etoile	1.06	139	Pg	Pg	01 06 59.6	-0.5
PUYF	Puyloubier	1.11	126	Pg	Pg	01 07 00.9	0.0
ORIF	Oris-en-Rattie	1.24	54	ePg	Pg	01 07 08.6	+5.1
ORIF				eSg	Sg	01 07 25.0	+5.3
	9.6nm,0.9s						
TAVF	Tavernes	1.28	116	Pg	Pg	01 07 03.6	-0.7
FRF	La Foret Royal	1.69	111	ePg	Pg	01 07 09.5	-2.7
FRF				eSg	Sg	01 07 28.9	-5.3
	6.1nm,0.4s						
LMR	La Mourre	1.71	119	ePg	Pg	01 07 09.2	-3.2
LMR				eSg	Sg	01 07 27.5	-7.1
	4.1nm,0.2s						
MTLF	Montolieu	1.84	243	ePg	Pg	01 07 23.5	+8.5
MTLF				eSg	Sg	01 07 50.1	+11
	4.6nm,0.5s						
CAF	Calviac	1.87	294	ePg	Pg	01 07 27.4	+12
CAF				eSg	Sg	01 07 54.2	+14
	6.4nm,0.4s						
TOUF	Mont Tournerai	2.01	94	Pg	Pg	01 07 17.6	-0.6
BGF	Bois d'Agland	2.63	335	eSg	Sg	01 08 16.9	+13
	4.6nm,0.4s						
TCF	Toulx Ste Croi	2.64	324	eSg	Sg	01 08 17.1	+13
	1.0nm,0.4s						
AVF	Avril sur Loir	2.72	344	ePg	Pg	01 07 41.1	+9.3
AVF				eSg	Sg	01 08 19.7	+13
	1.8nm,0.4s						
LFF	La Frestale	2.77	287	eSg	Sg	01 08 23.2	+15
	3.2nm,0.5s						
EPF	Esparros	3.21	250	ePg	Pg	01 07 49.4	+8.1
EPF				eSg	Sg	01 08 34.1	+11
	2.0nm,0.4s						

*ISCJB **10** 01:08:48.2±0.3, 1221N±003×12572E±005, h34km, mb4.5/33, MS3.8/9, Error ellipse: s-maj=6.6km s-min=4.2km az=177.4*
*BJI **10** 01:08:49.4, 1223N×12531E, h23km, mB4.7, mb4.6, Ms4.2, Msz3.8*
*NEIC **10** 01:08:50.2±0.3, 1205N×12545E, mb4.9/14, Error ellipse: s-maj=11.6km s-min=5.6km az=66.0*
*MAN **10** 01:08:50.1, 1223N×12550E, h33km, mb4.1, ML5.0, MS2.0*
*IDC **10** 01:08:53.4±2.7, 1203N×12552E, h65km±23km, mb3.8/13, mb1 4.0/14, mb1mx3.9/19, mbtmp4.2/14, MS3.6/9, Ms1 3.6/9, ms1mx3.3/24, Error ellipse: s-maj=35.8km s-min=13.3km az=66.0*
ISC 10 01:08:50.4±0.3**, 1217N**±003×**12565E**±005**, h36**km**, h36**km±.7km**:pP-P, n73,** σ**1.11**/76**, mb4.5**/33**, MS3.8**/9**, 1C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.60	201	eP	Pn	01 09 03.0	+0.6
PLP	Palo	1.19	214	eP	Pn	01 09 10.6	0.0
PLP				eS	Sn	01 09 24.9	-0.7
OCLP	Ormoc	1.51	223	eP	Pn	01 09 16.7	+1.9
MMPH	Masbate	1.99	276	eP	Pn	01 09 21.3	-0.3
PVCP	Virac	2.04	314	⇓iP	Pn	01 09 20.6	-1.6
PVCP				iS	Sn	01 09 48.5	+2.0
PVCP	Virac	2.04	314	eP	Pn	01 09 20.5	-1.7
MSLP	Maasin	2.16	201	eP	Pn	01 09 25.7	+1.8
SCPH	Surigao	2.37	184	eP	Pn	01 09 27.6	+0.8
SCPH				eS	Sn	01 09 57.8	+3.2
LLP	Lapu-Lapu	2.47	222	eP	Pn	01 09 28.5	+0.4
LLP				eS	Sn	01 09 56.9	-0.2
RCP	Roxas	2.91	258	⇓eP	Pn	01 09 33.6	-0.6
TBP	Tagbilaran	3.02	216	eP	Pn	01 09 37.1	+1.4
TGY	Tagaytay City	4.98	293	P	Pn	01 10 05.5	+2.9
	52nm,0.3s,baz=188,slow=7.1,SNR=5.8						
BUSP	Coron	5.34	269	eP	Pn	01 10 07.4	-0.1
PALP	Palanan	5.79	328	eP	Pn	01 10 12.9	-0.7
KKM	Kota Kinabalu	11.13	238	ePn	Pn	01 11 30.8	+3.9
NACB	Ninganchiao	12.55	343	ePn	Pn	01 11 48.4	+2.1
YHNB	Yeheng	13.08	343	Pn	Pn	01 11 54.5	+0.9
JOW	Kunigami	14.80	9	LR	LR	01 16 51.2	
	comp=Z,122nm,21.4s,baz=144,slow=32						
QIZ	Qiongzhong	16.68	296	Pn	Pn	01 12 47.2	+5.9
GUMO	Guam	18.79	84	P	Pn	01 13 09.0	+1.8
	6.2nm,0.3s,baz=180,slow=19,SNR=2.2						
GUMO				LR	LR	01 19 01.3	
	comp=Z,185nm,20.0s,baz=344,slow=32						
GYA	Guiyang	22.83	311	⇑iP	P	01 13 48.6	-1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
KMI	Kunming	25.20	304	P	P	01 14 16.2	+3.7
KMI				S	S	01 18 40.3	+5.0
KMI				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.0						
KMI				AMB	AMB		
	comp=Z,138nm,5.0s						
KMI				LR	LR		
	comp=N,354nm,20.2s,MS4.0						
KMI				LR	LR		
	comp=E,306nm,22.7s,MS4.0						
KMI				LR	LR		
	comp=Z,266nm,18.5s,MS3.8						
KAKA	Kakadu	25.61	165	eP	P	01 14 15.6	-0.7
	comp=Z,15nm,0.6s,mb4.7						
KULM	Kulim	25.62	257	eP	P	01 14 21.9	+5.5
XAN	Xi'an	26.59	328	P	P	01 14 24.1	-0.9
XAN				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
CD2	Chengdu	27.52	316	eP	P	01 14 32.7	-0.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
PSI	Prapat	28.06	253	LR	LR	01 26 25.7	
	comp=Z,293nm,18.4s,MS3.9,baz=348,slow=38						
FITZ	Fitzroy Crossi	30.07	180	eP	P	01 14 54.9	-1.2
	comp=Z,5.5nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	30.07	180	P	P	01 14 55.0	-1.1
	comp=Z,4.2nm,0.9s,mb4.2,baz=32,slow=14,SNR=10						
LZH	Lanzhou	30.89	324	eP	P	01 15 04.5	+1.1
LZH				AP	pP	01 15 14.1	+0.4
LZH				XP	sP	01 15 18.0	-0.1
LZH				PP	PP	01 16 07.8	-5.6
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.8						
HHC	Hu-ho-hao-te	31.14	339	eP	P	01 15 09.7	+4.1
HHC				AP	pP	01 15 19.2	+3.3
HHC				XP	sP	01 15 23.1	+2.8
HHC				PP	PP	01 16 13.5	-2.7
HHC				PCP	PcP	01 18 02.1	+2.0
HHC				S	S	01 20 13.2	+4.4
HHC				SCP	ScP	01 21 42.6	+2.5
HHC				PCS	PcS	01 21 46.2	+2.0
HHC				SS	SS	01 21 58.1	-25
HHC				SCS	ScS	01 25 37.6	+0.3
HHC				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.6						
HHC				AMB	AMB		
	comp=Z,70nm,3.6s						
HHC				LR	LR		
	comp=N,485nm,21.4s,MS4.2						
HHC				LR	LR		
	comp=E,209nm,17.8s,MS4.2						
WRAB	Tennant Creek	33.02	165	eP	P	01 15 21.3	-0.8
	comp=E,5.4nm,0.6s,mb4.7						
WB2	Warramunga Arr	33.03	165	eP	P	01 15 20.8	-1.4
GTA	Gaotai	35.49	324	eP	P	01 15 44.2	+0.7
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.4						
AS31	Alice Springs	36.51	167	eP	P	01 15 52.1	-0.1
ASAR	Alice Springs	36.51	167	P	P	01 15 51.2	-0.9
	comp=Z,6.5nm,0.7s,mb4.6,baz=352,slow=7.2,SNR=47						
ASAR				ScP	ScP	01 21 55.3	-3.8
	comp=Z,1.3nm,1.0s,baz=337,slow=2.1,SNR=4.4						
ASAR				LR	LR	01 31 30.0	
	comp=Z,101nm,19.9s,MS3.6,baz=182,slow=37						
COCO	West Island	37.46	231	P	P	01 16 01.1	+0.9
SONM	Songino Array	39.04	339	P	P	01 16 14.1	+0.5
	comp=Z,0.5nm,0.6s,mb3.4,baz=163,slow=8.2,SNR=3.0						
SONM				LR	LR	01 33 52.9	
	comp=Z,48nm,19.7s,MS3.3,baz=246,slow=38						
JIRN	Jiri	39.98	299	eP	P	01 16 20.7	-0.7
	comp=Z,33nm,0.7s,mb5.2						
GUN	Gumba	40.31	299	eP	P	01 16 23.3	-0.8
	comp=Z,73nm,1.0s,mb5.4						
PKI	Pulchoki	40.63	298	eP	P	01 16 25.4	-1.3
KKN	Kakani	40.79	299	eP	P	01 16 26.8	-1.3
	comp=Z,42nm,1.0s,mb5.0						
DMN	Daman	40.90	298	eP	P	01 16 27.9	-1.1
	comp=Z,44nm,1.0s,mb5.1						
GKN	Gorkha	41.40	299	eP	P	01 16 31.7	-1.3
KOLN	Koldanda	42.23	298	eP	P	01 16 38.7	-1.2
	comp=Z,49nm,1.0s,mb5.1						
FORT	Forrest	42.76	177	eP	P	01 16 43.8	-0.4
	comp=Z,35nm,0.7s,mb5.2						
STKA	Stephens Creek	46.38	161	eP	P	01 17 13.5	+0.5
	comp=Z,5.7nm,0.9s,mb4.5						
STKA	Stephens Creek	46.38	161	P	P	01 17 13.1	+0.1
	comp=Z,3.8nm,0.6s,mb4.5,baz=340,slow=8.2,SNR=12						
STKA				PcP	PcP	01 18 47.5	0.0
	comp=Z,1.4nm,0.7s,baz=264,slow=5.6,SNR=3.7						
STKA	Stephens Creek	46.38	161	eP	P	01 17 13.5	+0.5
STKA				epP	pP	01 17 23.9	+0.2
MKAR	Makanchi Array	50.17	322	P	P	01 17 42.4	+0.1
	comp=Z,8.0nm,0.7s,mb4.9,baz=113,slow=8.3,SNR=50						
ZAL	Zalesovo	52.69	331	P	P	01 18 01.2	+0.1
	comp=Z,0.9nm,0.3s,mb4.1,baz=30,slow=9.7,SNR=3.4						
ZAL				LR	LR	01 41 30.8	
	comp=Z,47nm,21.5s,MS3.5,baz=277,slow=37						
ZAL	Zalesovo	52.69	331	P	P	01 18 01.2	+0.1
ZAL				LR	LR	01 41 30.8	
KURK	Kurchatov	54.17	325	eP	P	01 18 12.0	0.0
	comp=Z,21nm,1.0s,mb5.0						
KURK				epP	pP	01 18 23.2	+0.3
BRVK	Borovoye	59.85	325	eP	P	01 18 52.4	+0.2
	comp=Z,5.2nm,0.9s,mb4.6						
BRVK				epP	pP	01 19 02.8	-0.4
ARU	Arti	67.32	326	eP	P	01 19 40.6	-1.0
	comp=Z,8.1nm,0.9s,mb4.8						
ARU				epP	pP	01 19 51.1	-1.5
PMR	Palmer	77.12	29	P	P	01 20 40.3	+0.3
MCK	McKinley	77.16	27	eP	P	01 20 40.7	+0.5
	comp=Z,5.1nm,1.1s,mb4.4						
CASY	Casey	79.02	186	eP	P	01 20 48.9	-1.7
MALT	Malatya	80.42	307	eP	P	01 20 58.7	+0.5
	comp=Z,4.1nm,1.0s,mb4.3						
MALT				epP	pP	01 21 09.1	-0.3
ARCES	ARCESS Array B	82.22	340	P	P	01 21 07.7	0.0
	comp=Z,3.1nm,0.8s,mb4.3,baz=75,slow=5.6,SNR=12						
ARCES	ARCESS Array B	82.22	340	P	P	01 21 07.7	0.0
BRTR	Keskin Array B	83.87	309	P	P	01 21 16.4	+0.1
	comp=Z,0.4nm,0.7s,mb3.7,baz=154,slow=4.5,SNR=3.5						
FINES	FINESS Array B	83.95	332	P	P	01 21 15.2	-1.4
	comp=Z,1.3nm,0.9s,mb4.1,baz=111,slow=4.3,SNR=3.5						
EIL	Elat	84.68	299	eP	P	01 21 22.5	+2.1
AKASG	Malin Array Be	84.72	321	P	P	01 21 19.8	-0.8
	comp=Z,0.1nm,0.2s,mb3.5,baz=64,slow=4.3,SNR=4.1						
PPT	Papeete	88.73	108	LR	LR	02 01 19.7	
	comp=Z,57nm,18.0s,MS4.0,baz=321,slow=35						
NOA	NORSAR Array B	90.80	334	P	P	01 21 51.2	+1.4
	comp=Z,0.3nm,0.7s,mb3.8,baz=92,slow=0.7,SNR=2.2						
NOA				LR	LR	02 03 56.2	
	comp=Z,24nm,19.1s,MS3.7,baz=60,slow=36						
NOA	NORSAR Array B	90.80	334	P	P	01 21 51.2	+1.4
NOA				LR	LR	02 03 56.2	
MAW	Mawson	91.26	200	eP	P	01 21 50.8	-1.1
VNDA	Vanda	91.87	173	P	P	01 21 53.6	-1.1
	comp=Z,0.7nm,0.7s,mb4.1,baz=298,slow=6.6,SNR=7.4						
VNDA	Vanda	91.87	173	eP	P	01 21 54.4	-0.4
SBA	Scott Base	92.78	172	P	P	01 21 59.6	+0.7
GERES	GERESS Array B	94.84	322	P	P	01 22 09.9	+1.5
	comp=Z,0.1nm,0.3s,mb3.8,baz=353,slow=5.1,SNR=2.3						
GERES				LR	LR	02 09 33.1	
	comp=Z,36nm,18.4s,MS3.9,baz=82,slow=38						

ROM ***10*** *01:57:35.5±1.0, 3983N×1999E, h10km, Md3.0/4, Ml3.2/2, Error ellipse: s-maj=14.6km s-min=4.9km az=151.0*
ATH ***10*** *01:57:36.1, 40.19N×1953E, h11km±5km, MD3.5/4*
ISCJB ***10*** *01:57:38.2±0.3, 4009N±002×1975E±003, h1km, Error ellipse: s-maj=3.0km s-min=2.8km az=23.7*
CSEM ***10*** *01:57:38.6±0.2, 40.12N×1972E, h1km±1km, MD3.5, Error ellipse: s-maj=2.3km s-min=1.8km az=156.0*
NEIC ***10*** *01:57:40.7, 40.13N×1986E, h0km, MD3.5(ATH), ML3.2(THE), After THE.*
THE ***10*** *01:57:40.3, 40.11N×1991E, h0km, ML3.2*
SKO ***10*** *01:57:44.2, 4028N×1997E, h31km*
ISC 10 01:57:38.8±0.3**, 4013N**±002×**1973E**±003**, h1**km**, n54, σ1s04**/93**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.27**	**53**	*i* Pg	**Pg**	**01 57 43.3**	**-0.7**
TPE				*i* Sg	**Sg**	**01 57 48.1**	**+0.7**
KEK	**Kerkira**	**0.42**	**173**	*e*PB	**Pg**	**01 57 46.3**	**-0.6**
KEK				*e*SB	**Sg**	**01 57 53.7**	**+1.3**
LSK	**Leskovik**	**0.67**	**88**	*i* Pg	**Pg**	**01 57 49.5**	**-2.1**
LSK				*i* Sg	**Sg**	**01 58 00.7**	**+0.5**
IGT	**Igoumenitsa**	**0.76**	**142**	*e*Pg	**Pg**	**01 57 51.9**	**-1.4**
IGT				*e*Sg	**Sg**	**01 58 03.1**	**0.0**
IGT	**Igoumenitsa**	**0.76**	**142**	P	**Pg**	**01 57 52.2**	**-1.2**
IGT				S	**Sg**	**01 58 04.9**	**+1.7**
IGT	**Igoumenitsa**	**0.76**	**142**	P	**Pg**	**01 57 52.2**	**-1.1**
IGT				*e*Sg	**Sg**	**01 58 03.1**	**-0.1**
IGT				S	**Sg**	**01 58 04.9**	**+1.7**
SCTE	**Santa Cesarea**	**0.97**	**267**	Pn	**Pn**	**01 57 57.8**	**-1.8**
SCTE				Sn	**Sn**	**01 58 14.1**	**+0.1**
JAN	**Janina**	**0.98**	**119**	*e*PB	**Pg**	**01 57 56.7**	**-1.0**
JAN				*e*SB	**Sb**	**01 58 13.3**	**+1.2**
MEV	**Metsovon**	**1.20**	**106**	*e*Pg	**Pg**	**01 58 00.8**	**-1.1**
MEV	**Metsovon**	**1.20**	**106**	P	**Pg**	**01 58 00.9**	**-1.0**
TIR	**Tirane**	**1.22**	**5**	Pn	**Pn**	**01 58 03.2**	**+0.2**
	188nm,0.4s						
TIR	**Tirane**	**1.22**	**5**	P	**Pg**	**01 58 03.4**	**+1.2**
TIR				S	**Sg**	**01 58 22.4**	**+4.4**
TIR	**Tirane**	**1.22**	**5**	*e*Pg	**Pg**	**01 58 03.4**	**+1.2**
TIR				*e*Sg	**Sg**	**01 58 22.0**	**+4.0**
LCI	**Lecce**	**1.26**	**280**	Pn	**Pn**	**01 58 03.1**	**-0.4**
LCI				Sn	**Sn**	**01 58 22.8**	**+1.8**
OHR	**Ohrid**	**1.27**	**39**	*e*Pg	**Pg**	**01 58 02.5**	**-0.7**
OHR				*e*Sg	**Sg**	**01 58 20.4**	**+0.7**
OHR	**Ohrid**	**1.27**	**39**	*e*Pg	**Pg**	**01 58 03.5**	**+0.3**
OHR				*e*Sg	**Sg**	**01 58 17.7**	**-2.0**
OHR	**Ohrid**	**1.27**	**39**	P	**Pg**	**01 58 02.5**	**-0.7**
OHR				S	**Sg**	**01 58 21.7**	**+2.1**
OHR	**Ohrid**	**1.27**	**39**	*e*Pg	**Pg**	**01 58 03.4**	**+0.2**
OHR				*e*Sg	**Sg**	**01 58 17.6**	**-2.1**
OHR				S	**Sg**	**01 58 21.7**	**+2.0**
FNA	**Florina**	**1.41**	**62**	*e*Pg	**Pn**	**01 58 04.5**	**-1.2**
FNA				*e*Sg	**Sg**	**01 58 24.2**	**0.0**
FNA	**Florina**	**1.41**	**62**	P	**Pn**	**01 58 04.5**	**-1.2**
FNA				S	**Sg**	**01 58 26.5**	**+2.2**
FNA	**Florina**	**1.41**	**62**	*e*Pg	**Pg**	**01 58 04.5**	**-1.4**
FNA				*e*Sg	**Sg**	**01 58 24.2**	**0.0**
FNA				S	**Sg**	**01 58 26.5**	**+2.3**
KZN	**Kozani**	**1.57**	**83**	*e*PN	**Pn**	**01 58 08.6**	**+0.8**
LKD	**Levkas**	**1.59**	**153**	*e*Pg	**Pg**	**01 58 08.6**	**-0.7**
LKD				*e*Sg	**Sg**	**01 58 28.7**	**-1.2**
LKD	**Levkas**	**1.59**	**153**	P	**Pn**	**01 58 09.1**	**+1.0**
LKD				S	**Sn**	**01 58 31.5**	**+2.2**
LKD	**Levkas**	**1.59**	**153**	*e*Pg	**Pg**	**01 58 08.6**	**-0.7**
LKD				*e*Sg	**Sg**	**01 58 28.7**	**-1.3**
LKD				S	**Sn**	**01 58 31.5**	**+2.2**
PE1	**Pezze di Greco**	**1.89**	**292**	*e*Pn	**Pb**	**01 58 13.9**	**-0.1**
EVR	**Evrytania**	**2.01**	**126**	*e*PN	**Pn**	**01 58 14.5**	**+0.6**
VLS	**Valsamata**	**2.06**	**161**	*e*PN	**Pn**	**01 58 14.2**	**-0.4**
LIT	**Litokhoron**	**2.12**	**90**	*e*Pn	**Pn**	**01 58 14.6**	**-0.7**
LIT				*e*Sn	**Sn**	**01 58 40.9**	**-1.4**
LIT	**Litokhoron**	**2.12**	**90**	P	**Pn**	**01 58 15.3**	**0.0**
LIT				S	**Sn**	**01 58 42.6**	**+0.4**
LIT	**Litokhoron**	**2.12**	**90**	P	**Pn**	**01 58 15.3**	**0.0**
LIT				*e*Sn	**Sn**	**01 58 40.9**	**-1.3**
LIT				S	**Sn**	**01 58 42.6**	**+0.4**
NOCI	**Noci**	**2.14**	**289**	Pn	**Pn**	**01 58 14.6**	**-1.0**
	180nm,0.6s						
GRG	**Griva**	**2.19**	**67**	P	**Pn**	**01 58 17.6**	**+1.2**
GRG	**Griva**	**2.19**	**67**	P	**Pn**	**01 58 17.6**	**+1.2**
AGG	**Agios Georgios**	**2.29**	**118**	*e*Pn	**Pn**	**01 58 17.8**	**0.0**
AGG				*e*Sn	**Sn**	**01 58 45.5**	**-1.1**
AGG	**Agios Georgios**	**2.29**	**118**	P	**Pn**	**01 58 18.6**	**+0.8**
AGG				S	**Sn**	**01 58 47.3**	**+0.6**
AGG	**Agios Georgios**	**2.29**	**118**	P	**Pn**	**01 58 18.6**	**+0.8**
AGG				*e*Sn	**Sn**	**01 58 45.5**	**-1.1**
AGG				S	**Sn**	**01 58 47.3**	**+0.7**
STIP	**Stip**	**2.43**	**49**	*e*Pn	**Pn**	**01 58 18.8**	**-0.8**
STIP	**Stip**	**2.43**	**49**	*e*Pn	**Pn**	**01 58 19.2**	**-0.4**
STIP				*e*Sn	**Sn**	**01 58 44.7**	**-5.3**
STIP	**Stip**	**2.43**	**49**	*e*Pn	**Pn**	**01 58 19.2**	**-0.4**
STIP				*e*Sn	**Sn**	**01 58 44.6**	**-5.3**
SG1	**Sgolgore (BA)**	**2.43**	**288**	*e*Pn	**Pn**	**01 58 18.6**	**-1.1**
VAY	**Valandovo**	**2.46**	**60**	*e*Pn	**Pn**	**01 58 19.6**	**-0.4**
VAY				*e*Sn	**Sn**	**01 58 45.5**	**-5.2**
VAY	**Valandovo**	**2.46**	**60**	P	**Pn**	**01 58 20.7**	**+0.6**
VAY	**Valandovo**	**2.46**	**60**	*e*Pn	**Pn**	**01 58 20.0**	**-0.1**
VAY	**Valandovo**	**2.46**	**60**	P	**Pn**	**01 58 20.7**	**+0.6**
VAY				*e*Sn	**Sn**	**01 58 45.5**	**-5.3**
KNT	**Kendrikon**	**2.62**	**66**	*e*Pn	**Pn**	**01 58 22.2**	**0.0**
KNT	**Kendrikon**	**2.62**	**66**	P	**Pn**	**01 58 23.1**	**+0.9**
SOH	**Sokhos**	**2.85**	**75**	*e*Pn	**Pn**	**01 58 24.9**	**-0.5**
SOH	**Sokhos**	**2.85**	**75**	P	**Pn**	**01 58 25.0**	**-0.4**
PLG	**Polygyros**	**2.85**	**84**	*e*PN	**Pn**	**01 58 26.1**	**+0.7**
MMB	**Musomiste**	**3.36**	**63**	P	**Pn**	**01 58 33.6**	**+1.1**
MMB				S	**Sn**	**01 59 12.2**	**-0.8**
MMB	**Musomiste**	**3.36**	**63**	P	**Pn**	**01 58 33.6**	**+1.2**
MMB				S	**Sn**	**01 59 12.2**	**-0.8**
RGNG	**Rignano Grg**	**3.50**	**297**	Pn	**Pn**	**01 58 34.5**	**+0.2**
FG5	**Orsara di Pugl**	**3.58**	**290**	Pn	**Pn**	**01 58 36.6**	**+1.1**

ISCJB ***10*** *02:03:23.6±0.5, 3926N±003×2246E±003, h9km±6km, Error ellipse: s-maj=5.9km s-min=4.2km az=147.2*
ATH ***10*** *02:03:23.2, 3933N×2236E, h4km, MD3.1/4*
NEIC ***10*** *02:03:24.4, 3925N×2247E, h7km, MD3.1(ATH), ML2.5(THE), After THE.*
CSEM ***10*** *02:03:24.9±0.2, 3932N×2247E, h2km, ML2.5, Error ellipse: s-maj=6.4km s-min=4.2km az=2.0*
THE ***10*** *02:03:24.4, 3925N×2247E, h7km, ML2.5*
ISC 10 02:03:23.9±0.5**, 3925N**±004×**2245E**±003**, h15**km±6km**, n18, σ1s31**/27**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGG	**Agios Georgios**	**0.24**	**203**	*e*Pg	**Pg**	**02 03 28.3**	**-0.9**
AGG				*e*Sg	**Sg**	**02 03 33.2**	**+0.3**
XOR	**Xorichti**	**0.59**	**78**	*e*Pg	**Pg**	**02 03 35.7**	**+0.3**
XOR				*e*Sg	**Sg**	**02 03 44.6**	**+1.4**
EVR	**Evrytania**	**0.60**	**237**	*e*PG	**Pg**	**02 03 34.0**	**-1.6**
NEO	**Neokhori**	**0.60**	**84**	*e*PG	**Pg**	**02 03 36.2**	**+0.5**
LIT	**Litokhoron**	**0.85**	**2**	*e*Pg	**Pg**	**02 03 39.0**	**-1.4**
LIT				*e*Sg	**Sg**	**02 03 53.4**	**+1.8**
MEV	**Metsovon**	**1.09**	**300**	*e*Pg	**Pg**	**02 03 45.8**	**+0.9**
MEV				*e*Sg	**Sg**	**02 04 01.0**	**+1.9**
AOS	**Alonnisos**	**1.11**	**94**	*e*Pg	**Pg**	**02 03 45.6**	**+0.2**
AOS				*e*Sg	**Sg**	**02 04 01.3**	**+1.4**
KZN	**Kozani**	**1.18**	**334**	*e*PG	**Pg**	**02 03 44.0**	**-2.6**
JAN	**Janina**	**1.30**	**289**	*e*PG	**Pg**	**02 03 45.8**	**-3.2**
PLG	**Polygyros**	**1.36**	**34**	*e*PB	**Pb**	**02 03 47.7**	**-1.4**
OUR	**Ouranopolis**	**1.60**	**47**	*e*Pg	**Pg**	**02 03 52.0**	**-2.7**
IGT	**Igoumenitsa**	**1.67**	**281**	*e*Pb	**Pb**	**02 03 54.4**	**+0.1**
IGT				*e*Sb	**Sb**	**02 04 16.6**	**+1.6**
IGT	**Igoumenitsa**	**1.67**	**281**	*e*Pb	**Pb**	**02 03 54.3**	**0.0**
IGT				*e*Sb	**Sb**	**02 04 16.6**	**+1.5**
SOH	**Sokhos**	**1.72**	**24**	*e*Pb	**Pb**	**02 03 53.5**	**-1.7**
SOH				*e*Sb	**Sb**	**02 04 16.9**	**+0.3**
FNA	**Florina**	**1.74**	**332**	*e*Pb	**Pb**	**02 03 54.0**	**-1.5**
FNA				*e*Sb	**Sb**	**02 04 18.2**	**+0.9**
VLS	**Valsamata**	**1.81**	**234**	*e*PB	**Pb**	**02 03 57.8**	**+1.2**
SRS	**Serrai**	**2.06**	**25**	*e*Pn	**Pn**	**02 03 58.0**	**0.0**
MMB	**Musomiste**	**2.54**	**22**	*e*Pn	**Pn**	**02 04 04.7**	**+0.2**

MAN ***10*** *03:28:28.1, 1326N×12022E, h5km, mb3.6, ML4.7, MS2.1*
ISCJB ***10*** *03:28:30.4±0.6, 1330N±003×12020E±005, h51km±7km, mb4.4/27, MS4.0/22, Error ellipse: s-maj=8.8km s-min=5.1km az=161.2*
BJI ***10*** *03:28:31.6, 1348N×12045E, h54km, mB4.5, mb4.2, Ms4.4, Msz4.0*
MOS ***10*** *03:28:31.4±0.7, 1346N×12042E, h64km, mb4.6/6, Error ellipse: s-maj=20.1km s-min=10.3km az=115.2*
NEIC ***10*** *03:28:32.5±1.0, 1344N×12041E, h60km±10km, mb4.7/9, Error ellipse: s-maj=13.2km s-min=5.1km az=60.0*
IDC ***10*** *03:28:32.9±1.8, 1342N×12036E, h63km±19km, mb4.0/15, mb1 4.1/15, mb1mx4.0/23, mbtmp4.3/15, MS3.9/20, Ms1 3.9/20, ms1mx3.8/33, Error ellipse: s-maj=31.0km s-min=11.8km az=71.0*
ISC 10 03:28:31.9±0.6**, 1332N**±003×**12025E**±005**, h48**km±7km**, n79, σ1s02**/71**, mb4.4**/27**, MS4.0**/22**, 3C-4D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.71**	**75**	*e*P	**Pn**	**03 28 42.8**	**-2.9**
PGP				*e*S	**Sn**	**03 28 47.2**	**-8.4**
TGY	**Tagaytay City**	**1.03**	**41**⇓	*e*P	**Pn**	**03 28 49.6**	**-0.3**
TGY				*e*S	**Sn**	**03 29 04.3**	**+1.1**
TGY	**Tagaytay City**	**1.03**	**41**	P	**Pn**	**03 28 48.5**	**-1.4**
	3µm,0.3s,baz=231,slow=3.2,SNR=102						
TGY				S	**Sn**	**03 29 03.1**	**-0.1**
	5µm,0.3s,baz=294,slow=20,SNR=25						
LQP	**Lukban**	**1.48**	**58**⇓	*e*P	**Pn**	**03 28 56.5**	**+0.4**
BOAC	**Boac**	**1.56**	**85**	*e*P	**Pn**	**03 28 55.5**	**-1.6**
OTRP	**Odiongan**	**1.97**	**119**	*e*P	**Pn**	**03 29 02.8**	**0.0**
POLP	**Polilio Island**	**2.16**	**49**	*e*P	**Pn**	**03 29 05.3**	**0.0**
GQP	**Guinayangan**	**2.22**	**74**⇓	*e*P	**Pn**	**03 29 06.7**	**+0.5**
GQP				*e*S	**Sn**	**03 29 35.2**	**+2.9**
AUQP	**San Andres**	**2.36**	**90**	*e*P	**Pn**	**03 29 10.6**	**+2.4**
PCPH	**Palayan**	**2.38**	**20**	*e*P	**Pn**	**03 29 06.8**	**-1.5**
PCPH				*e*S	**Sn**	**03 29 36.1**	**-0.2**
SCZP	**Santa Cruz**	**2.47**	**352**	*e*P	**Pn**	**03 29 10.5**	**+0.9**
CUYO	**Cuyo Island**	**2.56**	**163**	*e*P	**Pn**	**03 29 10.1**	**-0.8**
BALP	**Baler**	**2.73**	**28**	*e*P	**Pn**	**03 29 13.2**	**0.0**
RCP	**Roxas**	**3.00**	**125**⇑	*e*P	**Pn**	**03 29 21.8**	**+4.9**
BCPH	**Baguio City Da**	**3.06**	**6**⇑	*i*P	**Pn**	**03 29 16.4**	**-1.3**
BCPH				*i* S	**Sn**	**03 30 00.0**	**+6.9**
BOLP	**Bolinao**	**3.06**	**354**	*e*P	**Pn**	**03 29 19.5**	**+1.7**
GUIM	**Jordan**	**3.52**	**139**	*e*P	**Pn**	**03 29 24.4**	**+0.3**
PPR	**Puerto Princes**	**3.82**	**203**⇑	*i*P	**Sn**	**03 30 10.4**	**-1.3**
CVP	**Callao Caves**	**4.62**	**19**⇓	*e*P	**Pn**	**03 29 40.0**	**+0.9**
CD2	**Chengdu**	**23.18**	**322**	*e*P	**P**	**03 33 34.2**	**-0.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.5						
PSI	**Prapat**	**23.53**	**245**	P	**P**	**03 33 39.5**	**+1.8**
	comp=Z,2.3nm,0.3s,mb4.1,baz=64,slow=1.2,SNR=4.6						
PSI	**Prapat**	**23.53**	**245**	P	**P**	**03 33 39.5**	**+1.8**
GUMO	**Guam**	**23.95**	**86**	LR	LR	03 41 16.7	
	comp=Z,239nm,20.9s,MS3.6,baz=85,slow=32						
KAKA	**Kakadu**	**28.55**	**154**	*e*P	**P**	**03 34 22.8**	**-0.2**
	comp=Z,10nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**31.67**	**170**	P	**P**	**03 34 50.5**	**-0.1**
	comp=Z,2.4nm,0.8s,mb4.1,baz=163,slow=4.2,SNR=5.2						
JIRN	**Jiri**	**34.81**	**300**	*e*P	**P**	**03 35 19.1**	**+1.1**
	comp=Z,22nm,0.7s,mb5.2						
GUN	**Gumba**	**35.15**	**300**	*e*P	**P**	**03 35 22.0**	**+1.1**
	comp=Z,29nm,0.8s,mb5.3						
PKI	**Pulchoki**	**35.45**	**299**	*e*P	**P**	**03 35 24.0**	**+0.5**
KKN	**Kakani**	**35.62**	**299**	*e*P	**P**	**03 35 25.5**	**+0.6**
DMN	**Daman**	**35.72**	**299**	*e*P	**P**	**03 35 26.4**	**+0.6**
WRAB	**Tennant Creek**	**35.84**	**157**	*e*P	**P**	**03 35 26.8**	**0.0**
WRAB				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**35.84**	**157**	*e*P	**P**	**03 35 26.8**	**0.0**
	comp=Z,13nm,0.6s,mb5.0						
WB2	**Warramunga Arr**	**35.85**	**157**	*e*P	**P**	**03 35 26.8**	**-0.1**
ASAJ	**Asahikawa**	**36.17**	**28**	LR	LR	03 52 08.9	
	comp=Z,151nm,18.4s,MS3.8,baz=207,slow=39						
GKN	**Gorkha**	**36.23**	**299**	*e*P	**P**	**03 35 30.2**	**+0.1**
SONM	**Songino Array**	**36.30**	**344**	P	**P**	**03 35 30.1**	**-0.6**
	comp=Z,4.0nm,0.7s,mb4.5,baz=158,slow=9.8,SNR=9.2						
SONM				LR	LR	03 51 32.8	
	comp=Z,269nm,18.2s,MS4.1,baz=216,slow=38						
KOLN	**Koldanda**	**37.05**	**299**	*e*P	**P**	**03 35 37.5**	**+0.4**
	comp=Z,13nm,0.7s,mb4.8						
AS31	**Alice Springs**	**39.11**	**160**	*e*P	**P**	**03 35 55.5**	**+1.0**
ASAR	**Alice Springs**	**39.11**	**160**	P	**P**	**03 35 55.2**	**+0.8**
	comp=Z,17nm,0.7s,mb4.9,baz=340,slow=7.0,SNR=209						
ASPA	**Alice Springs**	**39.11**	**160**	*e*P	**P**	**03 35 55.5**	**+1.0**
ZAK	**Zakamensk**	**39.47**	**343**	*e*P	**P**	**03 35 57.2**	**-0.3**
TLY	**Talaya**	**40.54**	**344**	*e*P	**P**	**03 36 06.4**	**0.0**
TLY				*e*		03 42 10.9	
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
TLY				MLR	MLR		
	comp=Z,156nm,17.0s,MS3.9						
CTA	**Charters Tower**	**41.91**	**142**	P	**P**	**03 36 17.8**	**+0.1**
	comp=Z,3.4nm,0.5s,mb4.2,baz=332,slow=10,SNR=4.3						
CTA	**Charters Tower**	**41.91**	**142**	P	**P**	**03 36 17.8**	**+0.1**
FORT	**Forrest**	**44.48**	**170**	*e*P	**P**	**03 36 39.2**	**+0.8**
	comp=Z,14nm,0.7s,mb4.8						
HNR	**Honiara**	**45.44**	**118**	LR	LR	03 53 18.2	
	comp=Z,207nm,18.9s,MS4.1,baz=358,slow=33						
NWAO	**Narrogin (SRO)**	**46.07**	**184**	P	**P**	**03 36 51.4**	**+0.4**
	comp=Z,13nm,1.1s,mb4.8,baz=13,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**46.08**	**324**	P	**P**	**03 36 51.6**	**+0.6**
	comp=Z,2.1nm,0.8s,mb4.1,baz=128,slow=9.3,SNR=9.7						
MKAR				PcP	PcP	03 38 27.3	+0.6
	comp=Z,2.0nm,0.8s,baz=118,slow=4.4,SNR=4.5						
ZAL	**Zalesovo**	**49.20**	**333**	LR	LR	03 59 40.3	
	comp=Z,221nm,18.4s,MS4.2,baz=91,slow=38						
STKA	**Stephens Creek**	**49.38**	**156**	*e*P	**P**	**03 37 15.0**	**-1.6**
	comp=Z,3.2nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**49.38**	**156**	P	**P**	**03 37 15.9**	**-0.7**
	comp=Z,3.9nm,0.6s,mb4.6,baz=330,slow=5.5,SNR=8.5						
KURK	**Kurchatov**	**50.26**	**327**	*e*P	**P**	**03 37 23.3**	**0.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KURK	**Kurchatov**	**50.26**	**327**	*e*P	**P**	**03 37 23.3**	**-0.1**
	comp=Z,3.3nm,0.6s,mb4.5						
BVAR	**Borovoye Array**	**55.84**	**326**	P	**P**	**03 38 04.6**	**+0.2**
	comp=Z,1.7nm,0.7s,mb4.2,baz=128,slow=9.3,SNR=7.7						
BRVK	**Borovoye**	**55.91**	**326**	*e*P	**P**	**03 38 05.1**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
BRVK	**Borovoye**	**55.91**	**326**	*e*P	**P**	**03 38 05.1**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.4						
AKTO	**Aktyubinsk**	**62.23**	**320**	LR	LR	04 08 00.8	
	comp=Z,234nm,18.1s,MS4.4,baz=107,slow=38						
GNI	**Garni**	**70.50**	**308**	LR	LR	04 15 48.8	
	comp=Z,59nm,18.4s,MS3.9,baz=289,slow=40						
KIV	**Kislovodsk**	**71.96**	**312**	*e*P	**P**	**03 39 54.8**	**+4.5**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
KIV				MLR	MLR		
	comp=Z,126nm,18.0s,MS4.2						
ASF	**Jabal al Asfar**	**77.47**	**300**	LR	LR	04 19 00.5	
	comp=Z,41nm,21.1s,MS3.7,baz=297,slow=39						
JOF	**Joensuu**	**77.77**	**332**	*e*p	**P**	**03 40 22.8**	**-1.1**
	comp=Z,2.0nm,0.5s,mb4.3						
MMAI	**Mount Meron Ar**	**78.60**	**301**	LR	LR	04 19 46.3	
	comp=Z,36nm,19.1s,MS3.7,baz=130,slow=39						
BRTR	**Keskin Array B**	**79.04**	**308**	P	**P**	**03 40 30.4**	**-0.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=85,slow=4.3,SNR=3.4						
BRTR				LR	LR	04 22 13.8	
	comp=Z,28nm,18.1s,MS3.6,baz=342,slow=41						
ARCES	**ARCESS Array B**	**79.28**	**339**	P	**P**	**03 40 29.3**	**-2.9**
	comp=Z,1.9nm,0.7s,mb4.1,baz=72,slow=7.2,SNR=13						
ARCES				LR	LR	04 18 14.2	
	comp=Z,93nm,19.2s,MS4.1,baz=176,slow=38						
KAF	**Kangasniemi**	**80.18**	**332**	*e*p	**P**	**03 40 34.9**	**-2.2**
FINES	**FINESS Array B**	**80.40**	**331**	P	**P**	**03 40 36.8**	**-1.5**
	comp=Z,1.4nm,0.7s,mb4.0,baz=67,slow=6.4,SNR=6.4						
FINES				LR	LR	04 19 24.8	
	comp=Z,98nm,18.4s,MS4.2,baz=200,slow=38						
KMBO	**Kilima Mbogo**	**83.44**	**267**	LR	LR	04 18 15.2	
	comp=Z,50nm,19.7s,MS3.9,baz=101,slow=36						
INK	**Inuvik**	**83.61**	**21**	LR	LR	04 23 32.5	
	comp=Z,52nm,20.9s,MS3.9,baz=314,slow=40						
NB2	**NORSAR Subarra**	**87.40**	**333**	P	**P**	**03 41 12.4**	**-1.5**
	comp=Z,2.3nm,0.8s,mb4.5,baz=67,slow=4.6						
NOA	**NORSAR Array B**	**87.40**	**333**	P	**P**	**03 41 12.3**	**-1.6**
	comp=Z,3.3nm,0.8s,mb4.6,baz=68,slow=4.6,SNR=9.4						
NOA				LR	LR	04 24 21.4	
	comp=Z,80nm,18.0s,MS4.2,baz=55,slow=38						
NOA	**NORSAR Array B**	**87.40**	**333**	P	**P**	**03 41 12.3**	**-1.6**
NOA				LR	LR	04 24 21.4	
JMIC	**Jan Mayen**	**89.06**	**345**	LR	LR	04 24 43.2	
	comp=Z,62nm,20.3s,MS4.0,baz=286,slow=38						
MAW	**Mawson**	**90.59**	**199**	P	**P**	**03 41 29.7**	**+0.7**
	comp=Z,1.2nm,0.9s,mb4.2,baz=92,slow=3.8,SNR=5.4						
GERES	**GERESS Array B**	**90.65**	**321**	LR	LR	04 24 32.9	
	comp=Z,52nm,20.2s,MS4.0,baz=86,slow=37						
VNDA	**Vanda**	**93.73**	**172**	P	**P**	**03 41 42.4**	**-1.1**
	comp=Z,0.8nm,0.7s,mb4.3,baz=316,slow=7.7,SNR=6.8						
VNDA				LR	LR	04 25 38.2	
	comp=Z,33nm,19.0s,MS3.8,baz=230,slow=36						
VNDA	**Vanda**	**93.73**	**172**	*e*P	**P**	**03 41 42.9**	**-0.6**
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**93.73**	**172**	*e*P	**P**	**03 41 42.9**	**-0.6**
	comp=Z,0.9nm,0.8s,mb4.2						
PPT	**Papeete**	**94.10**	**107**	LR	LR	04 18 24.7	
	comp=Z,49nm,21.7s,MS3.9,baz=168,slow=32						
BORG	**Borgarnes**	**96.92**	**344**	LR	LR	04 30 01.8	
	comp=Z,83nm,19.2s,MS4.2,baz=38,slow=38						

IDC ***10*** *03:41:00.4±3.6, 701S×15056E, h33km±26km, mb4.1/6, mb1 4.2/7, mb1mx4.0/14, mbtmp4.3/7, ML3.5/1, MS3.4/1, Ms1 3.3/1, ms1mx2.9/16, Error ellipse: s-maj=31.8km s-min=17.1km az=119.0*
ISCJB ***10*** *03:41:02.7±3.3, 7.11S±009×1505E±02, h66km±26km, mb4.3/13, Error ellipse: s-maj=27.3km s-min=15.2km az=22.6*
NEIC ***10*** *03:41:03.6±2.5, 702S×15049E, h59km±20km, mb4.5/8, Error ellipse: s-maj=21.7km s-min=12.6km az=106.0*
BJI ***10*** *03:41:04.2, 701S×15015E, h59km, mB4.9, mb4.6*
ISC 10 03:41:01.0±2.3**, 710S**±009×**1507E**±01**, h38**km±19km**, h67**km±5.2km**:pP-P, n28, σ0s95**/28**, mb4.5**/13**, MS3.2**/1**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.21**	**237**	Pn	**Pn**	**03 42 02.7**	**+0.1**
	22nm,0.3s,baz=43,slow=6.8,SNR=24						
PMG				Sn	**Sn**	**03 42 51.4**	**+1.0**
	24nm,0.3s,baz=2.9,slow=17,SNR=7.0						
PMG	**Port Moresby**	**4.21**	**237**	*e*Pn	**Pn**	**03 42 03.7**	**+1.1**
PMG				*e*Sn	**Sn**	**03 42 50.6**	**+0.2**
KAKA	**Kakadu**	**18.85**	**251**	*e*P	**Pn**	**03 45 17.8**	**-0.6**
	11nm,0.9s						
WRAB	**Tennant Creek**	**20.37**	**230**	*e*P	**P**	**03 45 33.4**	**-0.9**
	33nm,0.8s						
WB2	**Warramunga Arr**	**20.38**	**230**	*e*P	**P**	**03 45 33.8**	**-0.5**
AS31	**Alice Springs**	**23.07**	**223**	*e*P	**P**	**03 46 02.7**	**-0.4**
ASAR	**Alice Springs**	**23.07**	**223**	P	**P**	**03 46 02.6**	**-0.5**
	11nm,0.7s,mb4.4,baz=60,slow=9.6,SNR=85						
ASAR				S	**S**	**03 50 12.5**	**+1.2**
	3.3nm,1.0s,baz=36,slow=21,SNR=11						
ASPA	**Alice Springs**	**23.07**	**223**	*e*P	**P**	**03 46 02.7**	**-0.4**
STKA	**Stephens Creek**	**26.08**	**198**	P	**P**	**03 46 30.6**	**-0.4**
	3.6nm,0.5s,mb4.2,baz=16,slow=12,SNR=6.5						
STKA				LR	LR	03 56 24.5	
	comp=Z,82nm,21.3s,MS3.2,baz=24,slow=35						
STKA	**Stephens Creek**	**26.08**	**198**	*e*P	**P**	**03 46 31.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**26.77**	**244**	*e*P	**P**	**03 46 38.1**	**+1.0**
	14nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**26.77**	**244**	P	**P**	**03 46 36.1**	**-1.0**
	5.2nm,0.5s,mb4.3,baz=50,slow=3.6,SNR=10						
FORT	**Forrest**	**31.71**	**219**	*e*P	**P**	**03 47 21.2**	**+0.2**
	12nm,0.6s,mb4.9						
MDJ	**Mudanjiang**	**54.88**	**342**	P	**P**	**03 50 29.5**	**+1.9**
MDJ				AP	pP	03 50 45.3	+6.5
MDJ				XP	sP	03 50 52.3	+9.1
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,106nm,5.1s						
KMI	**Kunming**	**56.61**	**306**	P	**P**	**03 50 39.8**	**-0.2**
KMI				AP	pP	03 50 59.7	+8.5
KMI				XP	sP	03 51 06.1	+10
KMI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.6						
CD2	**Chengdu**	**58.71**	**313**	*e*P	**P**	**03 50 54.9**	**+0.2**
LZH	**Lanzhou**	**61.48**	**318**	*e*P	**P**	**03 51 16.6**	**+2.9**
LZH				AP	pP	03 51 32.7	+7.7
LZH				XP	sP	03 51 39.8	+10
LZH				PP	PP	03 53 34.5	+5.3
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb5.1						
SONM	**Songino Array**	**67.19**	**329**	P	**P**	**03 51 49.7**	**-1.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=134,slow=4.3,SNR=4.1						
VNDA	**Vanda**	**70.63**	**177**	P	**P**	**03 52 13.0**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=320,slow=6.7,SNR=8.6						
VNDA	**Vanda**	**70.63**	**177**	*e*P	**P**	**03 52 14.2**	**+1.7**
	comp=Z,1.2nm,0.8s,mb3.9						
MCK	**McKinley**	**83.77**	**23**	*e*P	**P**	**03 53 25.7**	**-0.4**
	comp=Z,4.8nm,1.0s,mb4.6						
KURK	**Kurchatov**	**84.31**	**323**	*e*P	**P**	**03 53 28.6**	**-0.3**
	comp=Z,1.7nm,0.4s,mb4.5						
COLA	**College**	**84.74**	**22**	*e*P	**P**	**03 53 30.3**	**-0.8**
	comp=Z,3.4nm,0.7s,mb4.6						
DAWY	**Dawson**	**87.72**	**24**	*e*P	**P**	**03 53 47.2**	**+1.4**
BVAR	**Borovoye Array**	**89.84**	**323**	P	**P**	**03 53 54.4**	**-1.3**
	comp=Z,0.4nm,0.4s,mb4.1,baz=174,slow=1.5,SNR=4.2						
MDT	**Midelt**	**145.66**	**321**	PKPbc	PKPbc	04 00 35.8	+0.3
	comp=Z,1.5nm,0.8s,baz=55,slow=7.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	**148.94**	**284**	PKPbc	PKPbc	04 00 45.9	+1.2
	comp=Z,3.4nm,0.6s,baz=59,slow=2.7,SNR=39						
BDFB	**Brasilia**	**150.76**	**141**	PKPbc	PKPbc	04 00 50.8	+1.7
	comp=Z,1.4nm,0.7s,baz=302,slow=4.1,SNR=4.3						

ISCJB ***10*** *03:59:43.1±0.3, 4994N±002×1847E±002, h0km, Error ellipse: s-maj=3.5km s-min=1.9km az=34.2*
NEIC ***10*** *03:59:44.7±0.3, 4993N×1850E, h5km, ML3.4(BRG), ML3.4(CLL), Error ellipse: s-maj=5.3km s-min=3.6km az=194.0*
VIE ***10*** *03:59:45.2±0.4, 4965N×1853E, h0km, mb2.4/4, ML3.0/4, Error ellipse: s-maj=2.7km s-min=1.9km az=68.0 29 km SE of Ostrava Suspected Mining induced.*
IDC ***10*** *03:59:45.2±0.7, 4968N×1856E, h0km, mb1 3.3/9, mb1mx3.2/24, mbtmp3.1/9, ML2.8/8, Error ellipse: s-maj=11.8km s-min=7.1km az=158.0*
IPEC ***10*** *03:59:45.3±0.2, 4984N×1853E, h0km, ML3.1/2, Error ellipse: s-maj=2.2km s-min=1.1km az=160.0*
PRU ***10*** *03:59:46.2, 4984N×1847E, h0km*
CSEM ***10*** *03:59:46.3±0.2, 4984N×1843E, h2km, ML3.8/8, Error ellipse: s-maj=3.9km s-min=2.2km az=25.0*
LDG ***10*** *03:59:47.5±0.3, 4983N×1836E, h2km, Ml4.1/3, Error ellipse: s-maj=8.9km s-min=4.2km az=23.0*
ISC 10 03:59:44.8±0.3**, 4988N**±002×**1849E**±002**, h0**km**, n87, σ1s27**/140**, 8C-7D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.22**	**259**	*e*PG	**Pg**	**03 59 51.0**	**+1.9**
OKC				*e*SG	**Sg**	**03 59 55.4**	**+3.4**
	3µm,1.1s						
OKC	**Ostrava-Krasne**	**0.22**	**259**	*e*Pg	**Pg**	**03 59 50.8**	**+1.7**
OKC				*e*Sg	**Sg**	**03 59 55.4**	**+3.4**
	3µm,1.1s						
RAC	**Raciborz**	**0.28**	**317**	*e*Pg	**Pg**	**03 59 52.9**	**+2.8**
RAC				*e*Sg	**Sg**	**03 59 58.4**	**+4.7**
MORC	**Moravsky Berou**	**0.62**	**261**⇓	*i*P	**Pg**	**03 59 57.5**	**+0.8**
MORC	**Moravsky Berou**	**0.62**	**261**	*e*Pg	**Pg**	**03 59 57.4**	**+0.7**
MORC				*e*Sg	**Sg**	**04 00 06.6**	**+1.9**
MORC	**Moravsky Berou**	**0.62**	**261**	*e*Pg	**Pg**	**03 59 57.4**	**+0.7**
MORC				*e*Sg	**Sg**	**04 00 06.6**	**+1.9**
OJC	**Ojcow**	**0.91**	**68**	*e*Pg	**Pg**	**04 00 02.9**	**+0.7**
OJC				*e*Sg	**Sg**	**04 00 15.6**	**+1.6**
OJC	**Ojcow**	**0.91**	**68**	*e*Pg	**Pg**	**04 00 03.0**	**+0.8**
OJC				*e*Sg	**Sg**	**04 00 15.6**	**+1.6**
LIKS	**Likavka**	**0.92**	**154**	*e*PG	**Pg**	**04 00 03.8**	**+1.3**
LIKS				*e*		04 00 05.4	
LIKS	**Likavka**	**0.92**	**154**	*e*Pg	**Pg**	**04 00 03.8**	**+1.3**
LIKS				*e*		04 00 05.4	
LIKS				*e*Sg	**Sg**	**04 00 15.8**	**+1.3**
LIKS	**Likavka**	**0.92**	**154**	*e*Pg	**Pg**	**04 00 03.8**	**+1.3**
LIKS				*e*Sg	**Sg**	**04 00 15.8**	**+1.3**
NIE	**Niedzica**	**1.27**	**111**	*e*Pg	**Pg**	**04 00 09.3**	**+0.1**
NIE				*e*Sg	**Sg**	**04 00 28.4**	**+2.7**
VRAC	**Vranov**	**1.36**	**246**	Pg	**Pg**	**04 00 10.7**	**-0.2**
	25nm,0.3s,baz=68,slow=15,SNR=172						
VRAC				Lg		04 00 29.4	
	19nm,0.3s,baz=176,slow=23,SNR=16						
VRAC	**Vranov**	**1.36**	**246**⇑	*i*P	**Pg**	**04 00 10.9**	**+0.1**
VRAC	**Vranov**	**1.36**	**246**	*e*Pg	**Pg**	**04 00 10.7**	**-0.1**
VRAC				*e*Sg	**Sg**	**04 00 28.5**	**0.0**
	126nm,0.3s						
VYHS	**Vyhne**	**1.41**	**171**	*e*PN	**Pn**	**04 00 10.5**	**-1.1**

VYHS				eSN	Sn	04 00 29.8	-1.1
DPC	Dobruska-Polom	1.47	289	ePG	Pg	04 00 12.9	-0.1
DPC				eSG	Sg	04 00 33.8	+1.7
	116nm,0.8s						
DPC	Dobruska-Polom	1.47	289	ePg	Pg	04 00 12.9	-0.1
DPC				eSg	Sg	04 00 33.0	+0.9
SMOL	Smolenice	1.53	207	ePN	Pn	04 00 13.1	-0.3
SMOL				e		04 00 14.3	
SMOL	Smolenice	1.53	207	ePn	Pn	04 00 13.1	-0.3
SMOL				e		04 00 14.3	
SMOL				eSn	Sn	04 00 34.5	+0.5
SMOL	Smolenice	1.53	207	ePn	Pn	04 00 13.1	-0.3
SMOL				eSn	Sn	04 00 34.5	+0.5
KRUC	Moravsky	1.59	240	ePn	Pn	04 00 14.4	+0.2
KRUC				eSg	Sg	04 00 35.6	-0.3
	217nm,0.9s						
KSP	Ksiaz	1.70	305	ePg	Pg	04 00 16.4	-1.0
KSP				eSg	Sg	04 00 39.4	-0.1
UPC	Upice	1.71	292	ePG	Pg	04 00 16.2	-1.4
KECS	Kecovo	1.92	136	ePN	Pn	04 00 18.3	-0.4
KECS				e		04 00 21.6	
KECS	Kecovo	1.92	136	eSG	Sg	04 00 43.7	-2.7
KECS	Kecovo	1.92	136	ePn	Pn	04 00 18.3	-0.4
KECS				e		04 00 21.6	
KECS				eSg	Sg	04 00 43.7	-2.7
ZST	Bratislava	1.92	209	ePN	Pn	04 00 19.1	+0.4
ZST				eSG	Sg	04 00 42.8	-3.6
PSZ	Piszkesteto	2.17	154	⇓ePKP/D	Pn	04 00 22.3	+0.1
PSZ	Piszkesteto	2.17	154	ePn	Pn	04 00 21.6	-0.6
PSZ	Piszkesteto	2.17	154	ePn	Pn	04 00 21.6	-0.6
CRVS	Cervenica-Dubn	2.18	116	ePN	Pn	04 00 22.6	+0.4
CRVS				e		04 00 26.5	
CRVS	Cervenica-Dubn	2.18	116	ePn	Pn	04 00 22.6	+0.4
CRVS				e		04 00 26.5	
CRVS				eSg	Sg	04 00 56.1	+1.4
CRVS	Cervenica-Dubn	2.18	116	ePn	Pn	04 00 22.6	+0.4
CRVS				eSg	Sg	04 00 56.1	+1.4
BUD	Budapest	2.42	171	ePKP/D	Pg	04 00 30.7	-0.6
SOP	Sopron	2.54	211	⇑ePKP/d	Pn	04 00 27.4	+0.1
PRU	Pruhonice	2.55	274	ePN	Pn	04 00 27.6	+0.2
PRU				ePG	Pg	04 00 32.8	-0.9
PRU				eSG	Sg	04 01 09.3	+2.5
	95nm,0.9s						
CONA	Conrad Observa	2.61	223	⇓ePn	Pn	04 00 27.6	-0.6
	SNR=11						
PRA	Prague	2.62	276	PG	Pg	04 00 36.0	+0.9
PRA				SG	Sg	04 01 14.0	+4.9
KOLS	Kolonicke sedl	2.65	110	ePN	Pn	04 00 30.2	+1.5
KOLS				e		04 00 36.6	
KOLS	Kolonicke sedl	2.65	110	ePn	Pn	04 00 30.2	+1.5
KOLS				e		04 00 36.6	
KOLS				eSg	Sg	04 01 11.7	+1.8
KOLS	Kolonicke sedl	2.65	110	ePn	Pn	04 00 30.2	+1.5
KOLS				eSg	Sg	04 01 11.7	+1.8
KWP	Kalwaria	2.75	94	ePn	Pn	04 00 28.6	-1.5
KWP				ePg	Pg	04 00 35.5	-1.9
KWP	Kalwaria	2.75	94	ePn	Pn	04 00 28.5	-1.6
KWP	Kalwaria	2.75	94	ePg	Pg	04 00 35.5	-2.0
BRG	Berggiesshubel	3.07	291	PG	Pg	04 00 42.0	-1.7
BRG				SG	Sg	04 01 24.3	+0.7
	55nm,1.2s						
BRG	Berggiesshubel	3.07	291	Pg	Pg	04 00 42.0	-1.7
BRG				Sg	Sg	04 01 24.3	+0.7
ARSA	Arzberg	3.29	218	⇑iPn	Pn	04 00 35.9	-1.6
ARSA				⇓iSg	Sg	04 01 28.7	-1.7
	23nm,0.9s						
ARSA	Arzberg	3.29	218	⇑iPn	Pn	04 00 35.8	-1.7
ARSA				Sg	Sg	04 01 28.7	-1.7
	23nm,0.9s						
KHC	Kasperske Hory	3.29	259	ePN	Pn	04 00 37.8	+0.3
KHC				ePG	Pg	04 00 45.7	-2.1
KHC				eSG	Sg	04 01 30.7	+0.3
	54nm,0.7s						
GEC2	GERESS Array S	3.30	253	ePg	Pg	04 00 45.9	-2.0
GEC2				eSg	Sg	04 01 29.0	-1.7
GEC2	GERESS Array S	3.30	253	ePg	Pg	04 00 45.9	-2.1
GEC2				eSg	Sg	04 01 29.0	-1.7
GERES	GERESS Array B	3.30	253	Pn	Pn	04 00 37.0	-0.6
	0.4nm,0.3s,baz=69,slow=14,SNR=9.4						
GERES				Pg	Pg	04 00 45.0	-2.9
	2.5nm,0.3s,baz=69,slow=16,SNR=51						
GERES				Lg		04 01 29.6	
	2.9nm,0.3s,baz=72,slow=25,SNR=16						
GERES	GERESS Array B	3.30	253	Pn	Pn	04 00 37.0	-0.6
GERES				Pg	Pg	04 00 45.0	-2.9
GERES				Lg		04 01 29.6	
GERES	GERESS Array B	3.30	253	Pg	Pg	04 00 45.0	-3.0
MOA	Molln	3.45	235	⇓iPn	Pn	04 00 39.4	-0.4
MOA				⇑iSg	Sg	04 01 35.3	-0.3
	33nm,0.9s						
PKSM	Moragy	3.67	178	⇑iP	Pn	04 00 42.3	-0.5
PKSM	Moragy	3.67	178	⇓eP	Pn	04 00 43.1	+0.3
CLL	Collm	3.77	294	ePn	Pn	04 00 45.0	+0.8
CLL				i Pg	Pg	04 00 57.6	+0.5
CLL				i Sg	Sg	04 01 46.0	-0.1
	comp=Z,55nm,0.9s						
CLL				i x	x	04 01 54.5	
CLL	Collm	3.77	294	ePn	Pn	04 00 37.0	-7.2
CLL				ePg	Pg	04 00 53.0	-4.1
CLL				ePg	Pg	04 00 57.0	-0.1
CLL				eSn	Sn	04 01 24.0	-5.3
CLL				eSg	Sg	04 01 46.0	-0.1
CLL	Collm	3.77	294	ePg	Pg	04 00 53.0	-4.1
CLL				eSg	Sg	04 01 46.0	-0.1
NKC	Novy Kostel	3.91	277	ePN	Pn	04 00 47.4	+1.4
NKC				ePG	Pg	04 00 56.7	-3.0
NKC				eSG	Sg	04 01 52.0	+1.7
	comp=Z,105nm,1.2s						
RUE	Ruedersdorf	3.94	313	ePg	Pg	04 01 01.2	+0.9
RUE	Ruedersdorf	3.94	313	ePg	Pg	04 01 01.2	+0.9
PERS	Pernice	3.95	216	i Pn	Pn	04 00 47.5	+0.9
GROS	Grobnik	3.96	211	i Pn	Pn	04 00 47.0	+0.2
DRGR		4.18	136	⇓iP	Pn	04 00 49.5	-0.3
DOBS	Dobrina	4.25	210	i Pn	Pn	04 00 52.7	+1.9
MOX	Moxa	4.47	282	ePG	Pg	04 01 10.8	+0.3
MOX				eSG	Sg	04 02 12.0	+3.5
BZS	Buzias	4.76	152	⇑iP	Pn	04 00 58.2	+0.5
VISS	Visnje	4.76	212	i Pn	Pn	04 00 58.7	+0.9
BURAR	Bucovina Array	5.00	114	⇑iP	Pn	04 01 02.0	+1.0
DAVOX	Davos	6.52	245	Pn	Pn	04 01 23.0	+1.1
	comp=Z,0.3nm,0.3s,baz=37,slow=14,SNR=3.6						
DAVOX				Lg		04 03 12.3	
	comp=Z,0.3nm,0.3s,baz=319,slow=18,SNR=3.8						
MLR	Muntele Rosu	6.68	128	Pn	Pn	04 01 23.6	-0.5
	comp=Z,0.1nm,0.3s,baz=331,slow=10,SNR=2.2						
AKASG	Malin Array Be	6.93	79	Pn	Pn	04 01 25.0	-2.6
	comp=Z,0.6nm,0.3s,baz=262,slow=12,SNR=4.4						
AKASG				Lg		04 03 27.4	
	comp=Z,0.4nm,0.3s,baz=275,slow=27,SNR=5.8						
CDF	Champ du Feu	7.50	263	ePg	Pg	04 02 04.0	-4.5
CDF				eSg	Sg	04 03 40.3	-5.3
	comp=Z,54nm,1.1s						
CDF	Champ du Feu	7.50	263	ePg	Pg	04 02 04.0	-4.5
CDF				eSg	Sg	04 03 40.3	-5.3
	comp=Z,27nm,1.1s						
HINF	Hinteralfeld	7.95	259	eSg	Sg	04 03 53.9	-6.1
	comp=Z,45nm,1.2s						
HINF	Hinteralfeld	7.95	259	eSg	Sg	04 03 53.9	-6.1
	comp=Z,22nm,1.2s						
CABF	La Chapelle	8.90	253	eSg	Sg	04 04 22.8	-7.6
	comp=Z,88nm,1.4s						
CABF	La Chapelle	8.90	253	eSg	Sg	04 04 22.8	-7.6
	comp=Z,44nm,1.4s						
HFS	Hagfors	10.63	347	Pn	Pn	04 02 16.2	-2.1
	comp=Z,0.1nm,0.3s,baz=157,slow=15,SNR=2.8						
NOA	NORSAR Array B	11.91	343	Pn	Pn	04 02 34.3	-1.6
	comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=3.5						
FINES	FINESS Array B	12.34	17	Pn	Pn	04 02 39.4	-2.3
	comp=Z,0.1nm,0.3s,baz=180,slow=15,SNR=5.9						
FINES				Sn	Sn	04 04 51.0	-9.1
	comp=Z,0.1nm,0.3s,baz=190,slow=24,SNR=2.7						
FINES	FINESS Array B	12.34	17	Pn	Pn	04 02 39.4	-2.3
FINES				Sn	Sn	04 04 51.0	-9.0
BRTR	Keskin Array B	14.76	128	Pn	Pn	04 03 10.9	-3.8
	comp=Z,0.0nm,0.3s,baz=281,slow=7.7,SNR=3.0						
ARCES	ARCESS Array B	20.00	7	Pn	P	04 04 18.0	-0.9
	comp=Z,0.8nm,0.8s,baz=192,slow=12,SNR=4.7						

NNC 10 04:39:36.2±8.3, 3791N×7407E, h0^{km}, mb3.4, mpv2.9, 4C-2D, Error ellipse: s-maj=85.3km s-min=49.1km az=145.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	Tokmak 2	5.14	13	⇓Pn	Pn	04 40 54.3	-0.1
	0.2nm,0.5s						
TKM2				⇓Sn	Sn	04 41 57.1	+2.8
	0.3nm,0.7s						
KK31	Karatay Array	5.85	334	⇑Pn	Pn	04 41 05.0	+0.8
	1.6nm,0.4s,baz=147,slow=13,SNR=29						
KK31				⇑Sn	Sn	04 42 17.8	+5.8
	0.9nm,0.3s						
AB31	Akbulak array	15.25	323	⇑P	Pn	04 43 15.1	+2.3
	1.3nm,0.8s,baz=130,slow=11,SNR=7.5						
AKTO	Aktyubinsk	16.96	323	⇑P	Pn	04 43 34.6	-0.3

CSEM 10 04:47:26.2±0.7, 4055N×2927W, h0^{km}, ML2.8, Error ellipse: s-maj=10.6km s-min=3.3km az=87.0, After PDA
PDA 10 04:47:26.2±0.7, 4055N×2927W, h0^{km}, MD3.3, ML2.8, Error ellipse: s-maj=10.6km s-min=3.3km az=87.0
SVSA 10 04:47:26.2±0.7, 4055N×2927W, h0^{km}, MD3.3, ML2.8, Error ellipse: s-maj=10.6km s-min=3.3km az=87.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLUZ	Luz	1.55	171	eP	Pn	04 47 53.7	-1.3
PVIA	Vitoria	1.75	147	eP	Pn	04 47 53.0	-4.9
STGR	Santa Cruz	1.76	146	eP	Pn	04 47 53.0	-5.0
STGR				eS	Sn	04 48 13.5	-7.6
STGR							
	18nm,0.3s						
STGR	Santa Cruz	1.76	146	eP	Pn	04 47 53.0	-5.0
STGR				eS	Sn	04 48 13.5	-7.6
SRBC	Serra Branca	1.79	147	eP	Pn	04 47 53.1	-5.2
SRBC				eS	Sn	04 48 13.8	-7.9
ROSA	Rosais	1.99	156	eP	Pn	04 47 56.2	-5.0
ROSA				eS	Sn	04 48 18.4	-8.4
PAMA	Santo Amaro	2.05	155	erx		04 48 14.8	
HOR	Horta	2.08	166	eS	Sn	04 48 21.0	-8.0
PICO	Pico	2.15	162	eP	Pn	04 47 58.8	-4.5
PICO				eS	Sn	04 48 23.1	-7.5
PCND	Candelaria	2.17	163	eS	Sn	04 48 23.1	-8.1
PCND							
	15nm,0.2s						
PID	Ribeirinha	2.29	157	eP	Pn	04 48 00.3	-4.9
PID				eS	Sn	04 48 26.4	-7.6
ASBA	Santa Barbara	2.37	140	eP	Pn	04 48 01.6	-4.7
PBIS	Biscoitos	2.37	138	eP	Pn	04 48 01.9	-4.4
PPAD	Pico dos Padre	2.40	140	eP	Pn	04 48 02.4	-4.3
PVNV	Vila Nova	2.42	137	eP	Pn	04 48 02.3	-4.7
RIB2	Ribeirinha	2.48	138	eP	Pn	04 48 03.0	-4.8
PFAV	Pico das Favas	2.50	137	eP	Pn	04 48 03.2	-4.8

IDC 10 04:47:51.5±3.2, 2869S×17772W, h0^{km}, mb4.0/2, mb1 4.1/2, mb1mx3.8/8, mbtmp4.0/2, Error ellipse: s-maj=117.5km s-min=48.1km az=14.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.13	255	P	P	04 54 46.8	+0.2
	1.0nm,0.4s,baz=110,slow=8.0,SNR=5.0						
ASAR	Alice Springs	43.47	265	P	P	04 55 56.5	+0.2
	1.4nm,0.6s,baz=100,slow=7.8,SNR=14						
FINES	FINESS Array B	143.62	341	PKP	PKPdf	05 07 27.0	-1.3
	2.0nm,0.5s,baz=61,slow=4.8,SNR=22						
NB2	NORSAR Subarra	147.10	352	PKPb	PKPbc	05 07 36.9	+0.6
	comp=Z,1.3nm,0.9s,baz=19,slow=4.6						
TORD	Torodi Ar. Bea	164.52	178	PKPab	PKPab	05 08 52.0	+0.1
	comp=Z,0.3nm,0.5s,baz=172,slow=4.6,SNR=6.3						

NIED 10 05:41:00, 3850N×14230E, h62^{km}, Mw3.6 Best double couple: M0 2.91000×10^{14} NP1:φs200.00000°, δ52.00000°, λ112.00000°. NP2:φs346.00000°, δ43.00000°, λ64.00000°.
JMA 10 05:41:13.0±0.1, 3849N×14228E, h47^{km}±1^{km}, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.73	267	P	Pn	05 41 27.1	+0.1
JIO				eS	Sn	05 41 36.9	-0.3
OFUJ	Ofunato	0.76	321	P	Pn	05 41 27.5	+0.1
OFUJ				S	Sn	05 41 38.0	+0.2
JMK	Ichinoseki	0.95	299	P	Pn	05 41 30.2	+0.3
JMK				S	Sn	05 41 42.7	+0.3
JOM	Ohasama	1.25	322	P	Pn	05 41 34.5	+0.5
JOM				eS	Sn	05 41 50.0	+0.4
JOU	Okura	1.27	265	P	Pn	05 41 34.8	+0.4
JOU				S	Sn	05 41 51.1	+0.8
JMM	Marumori	1.33	242	P	Pn	05 41 34.9	-0.2
JMM				eS	Sn	05 41 51.5	-0.1
JYK	Kaneyama	1.56	286	P	Pn	05 41 39.0	+0.7
JFK	Kawauchi	1.58	225	P	Pn	05 41 38.3	-0.2
JYS	Shirataka	1.76	262	P	Pn	05 41 41.7	+0.7
JFT	Otama	1.82	238	P	Pn	05 41 42.5	+0.7
JFT				S	Sn	05 42 04.0	+0.4
MAT	Matsushiro	3.78	240	P	Pn	05 42 10.9	+2.2
MAT				S	Sn	05 42 54.8	+3.0

CSEM 10 05:45:17.4±0.1, 3840N×3933E, h10^{km}, MD3.9, Error ellipse: s-maj=1.5km s-min=1.1km az=167.0
NEIC 10 05:45:17.0, 3841N×3936E, h10^{km}, mb4.0/2, MD3.9(ISK), After ISK.
ISK 10 05:45:17.8, 3841N×3935E, h12^{km}, MD3.9, ML3.9
ISCJB 10 05:45:18.5±0.5, 3839N±002×3932E±002, h9^{km}±3^{km}, mb3.5/11, MS2.7/3, Error ellipse: s-maj=3.4km s-min=2.9km az=80.2
IDC 10 05:45:21.5±2.2, 3837N×3929E, h20^{km}±17^{km}, mb3.5/9, mb1 3.6/13, mb1mx3.5/25, mbtmp3.6/13, ML3.5/3, MS2.9/4, Ms1 2.9/4, ms1mx2.5/29, Error ellipse: s-maj=17.6km s-min=11.5km az=153.0
SZGRF 10 05:45:25.6, 3885N×3975E, h33^{km}, mb4.1, Turkey
ISC 10 05:45:18.7±0.5, 3839N±002×3936E±002, h3^{km}±3^{km}, n71, σ0^{s}95/92, mb3.5/11, MS2.7/3, 10D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.32	290	i P	Pg	05 45 24.4	-0.4
ELZG				i S	Sg	05 45 31.1	+2.2
MALT	Malatya	0.74	264	ePg	Pg	05 45 31.8	-1.1
MALT				eSg	Sg	05 45 42.3	-0.2
MALT	Malatya	0.74	264	ePg	Pg	05 45 31.8	-1.1
MALT				eSg	Sg	05 45 42.3	-0.2
MYA	Malataya	0.74	265	i PG	Pg	05 45 32.4	-0.5
DIY	Diyarbakir	0.84	126	i PG	Pg	05 45 34.7	-0.1
BINT	Bingol	1.01	61	i PG	Pg	05 45 36.9	-1.1
URFA	Urfa	1.04	204	PG	Pg	05 45 38.9	+0.2
URFA				SG	Sg	05 45 53.9	+1.7
EZC	Erzincan	1.40	14	PN	Pn	05 45 43.5	-1.6
BNGL	BINGOL	1.51	68	i P	Pn	05 45 48.1	+1.6
BNGL				i S	Sn	05 46 08.5	+1.9
KBSD	Kabsdagh	1.67	146	⇓iP	Pn	05 45 48.3	-0.6
KBSD				⇓iS	Sn	05 46 10.4	-0.4
BTMT	Batman	1.68	96	PN	Pn	05 45 46.1	-2.9
KELT	Kelkit	1.76	357	i P	Pn	05 45 50.2	+0.2
KELT				i S	Sn	05 46 13.5	+0.6
GZT	Gaziantep	1.76	235	i P	Pn	05 45 49.5	-0.6
GZT				i S	Sn	05 46 14.3	+1.4
SFNV	Sufian	2.06	163	⇑iP	Pn	05 45 55.2	+1.1
SFNV				⇑iS	Sn	05 46 20.6	+0.3
GAZ	Gaziantep	2.10	235	PN	Pn	05 45 53.5	-1.1
EZM	Erzurum	2.17	45	PN	Pn	05 45 54.8	-0.9
ERZM	Erzurum	2.17	45	i P	Pn	05 45 56.7	+1.0
ERZM				i S	Sg	05 46 33.9	+5.5
SVSK	Karacayir	2.39	310	PN	Pn	05 45 58.3	-0.4
SLMH	Al Salmeh	2.46	208	⇓iP	Pn	05 46 00.4	+0.8
SLMH				⇓iS	Sn	05 46 30.4	+0.3
GRSN	GIRESUNGRSN	2.67	342	i P	Pn	05 46 03.0	+0.5
GRSN				i S	Sb	05 46 40.5	+0.3
MZRK	Al-Mazaregh	2.76	158	⇓iP	Pn	05 46 04.6	+0.8
MZRK				⇓iS	Sn	05 46 36.7	-0.9
DRWC	Darouich	2.78	231	⇑iP	Pn	05 46 03.5	-0.6
DRWC				⇑iS	Sn	05 46 37.2	-0.9
BNN	Bunyan	2.79	281	PN	Pn	05 46 04.1	-0.2
JHLN	Al Jahlan	2.81	195	⇑iP	Pn	05 46 05.3	+0.8
JHLN				⇑iS	Sn	05 46 39.5	+0.6
TOKT	Tokat	2.91	312	PN	Pn	05 46 04.8	-1.1
KOZT	Kozan	2.94	253	PN	Pn	05 46 05.5	-0.8
VANB	Van	3.17	85	ePN	Pn	05 46 09.2	-0.2
CEYT	Ceyhan	3.18	245	ePN	Pn	05 46 08.8	-0.8
BTCH	Batrach	3.30	226	⇓iP	Pn	05 46 11.3	+0.1
BTCH				⇓iS	Sn	05 46 50.6	-0.4
YOZ	Yozgat	3.39	293	ePN	Pn	05 46 12.0	-0.4
HTY	Hatay	3.43	230	ePN	Pn	05 46 12.2	-0.8
BCA	Borcka	3.51	29	ePN	Pn	05 46 14.2	+0.1
HAKT	HAKKARI	3.53	102	i P	Pb	05 46 22.9	+1.1
HAKT				i S	Sg	05 47 10.9	-1.2
CUKT	Cukurca	3.55	107	ePN	Pn	05 46 15.1	+0.4
KARA	Karaisali	3.59	253	ePN	Pn	05 46 14.7	-0.6
MSL	Mosul	3.64	124	ex	x	05 46 25.0	
MSL				ex	x	05 47 12.0	
MSL				i x	x	05 47 22.0	
MSL				i x	x	05 47 32.0	
CLDR	Caldiran	3.64	77	ePN	Pn	05 46 16.0	+0.1
WRDH	Warideh	3.72	220	⇑iP	Pn	05 46 17.6	+0.5
WRDH				⇑iS	Sn	05 47 00.6	-0.8
SLNF	Slenfeh	3.76	223	⇓iP	Pn	05 46 18.9	+1.4
SLNF				⇓iS	Sn	05 47 01.3	-0.9
CORM	Corum	4.08	297	ePN	Pn	05 46 21.5	-0.5
MERS	Mersin	4.13	250	ePN	Pn	05 46 22.0	-0.7
BIDA	Albida	4.16	217	⇑iP	Pn	05 46 22.6	-0.5
BIDA				⇑iS	Sn	05 47 11.0	-1.2
KAMT	Kaman	4.52	284	ePN	Pn	05 46 27.5	-0.4
GNI	Garni	4.53	66	ePN	Pn	05 46 28.4	+0.3
GNI	Garni	4.53	66	Pn	Pn	05 46 34.1	+6.0
	1.8nm,0.3s,baz=14,slow=12,SNR=2.7						
GNI				Pg	Pg	05 46 44.7	-0.8
	2.0nm,0.3s,baz=64,slow=10,SNR=4.5						
GNI	Garni	4.53	66	Pn	Pn	05 46 34.1	+6.0
GNI				Pg	Pg	05 46 44.7	-0.8
GNI				ePg	Pg	05 46 45.3	-0.2
GNI	Garni	4.53	66	Pg	Pg	05 46 44.7	-0.8
DIKM	Dikmen	4.53	317	ePN	Pn	05 46 28.0	-0.1
BR131	Keskin Array S	4.65	288	ePn	Pn	05 46 30.8	+1.1
BR131				eSg	Sg	05 47 51.8	+3.7
BR131	Keskin Array S	4.65	288	ePn	Pn	05 46 30.8	+1.0
BR131				eSg	Sg	05 47 51.8	+3.7
BRTR	Keskin Array B	4.65	288	Pn	Pn	05 46 31.4	+1.6
	1.8nm,0.3s,baz=117,slow=13,SNR=48						
BRTR				Lg		05 47 49.9	
	baz=98,slow=8.9,SNR=3.4						
TOS	Tosya	4.89	304	ePN	Pn	05 46 32.6	-0.5
ANTO	Ankara	5.32	288	ePN	Pn	05 46 40.0	+1.1
MMAI	Mount Meron Ar	6.26	212	Pn	Pn	05 46 54.0	+2.2
	3.3nm,0.3s,baz=66,slow=16,SNR=9.6						
MMAI				Lg		05 48 36.2	
	1.6nm,0.3s,baz=75,slow=22,SNR=2.6						
ASF	Jabal al Asfar	6.52	199	Pn	Pn	05 46 57.4	+1.8
	0.4nm,0.3s,baz=252,slow=16,SNR=3.3						
ASF				Lg		05 48 47.7	
	0.9nm,0.3s,baz=264,slow=22,SNR=4.0						
BHD	Baghdad	6.54	140	ex	x	05 47 07.0	
BHD				ex	x	05 47 24.0	
BHD				ex	x	05 47 44.0	
BHD				ex	x	05 48 34.0	
BHD				i x	x	05 49 02.0	
BHD				ex	x	05 49 23.0	
MLR	Muntele Rosu	12.24	310	LR	LR	05 54 16.8	
	comp=Z,51nm,18.5s,baz=308,slow=44						
GERES	GERESS Array B	21.22	308	P	P	05 50 06.3	+0.8
	0.5nm,0.5s,mb3.1,baz=120,slow=9.5,SNR=10.0						
GERES				LR	LR	05 59 16.7	
	comp=Z,14nm,19.2s,MS2.4,baz=112,slow=39						
WSAR	Wadi Sarin	22.34	127	LR	LR	05 59 56.4	
	comp=Z,22nm,18.3s,MS2.6,baz=140,slow=39						
GRA1	Grafenberg Arr	23.03	308	eP	P	05 50 27.3	+2.4
	5.0nm,0.9s,mb3.9						
GRF	Grafenberg Arr	23.03	308	eP	P	05 50 27.3	+2.4
	comp=Z,5.0nm,0.9s,mb3.9						
DAVOX	Davos	23.16	301	P	P	05 50 27.0	+0.7
	comp=Z,1.5nm,0.4s,mb3.8,baz=178,slow=22,SNR=3.2						
FINES	FINESS Array B	24.51	345	P	P	05 50 39.5	+0.2
	comp=Z,1.1nm,0.6s,mb3.6,baz=147,slow=9.7,SNR=7.8						
JOF	Joensuu	25.04	351	ep	P	05 50 39.7	-4.3
KAF	Kangasniemi	25.07	345	ep	P	05 50 43.4	-0.9
	comp=Z,1.0nm,0.4s,mb3.7						
BVAR	Borovoye Array	25.89	45	P	P	05 50 51.2	-0.5
	comp=Z,1.8nm,0.7s,mb3.7,baz=195,slow=38,SNR=3.7						
HFS	Hagfors	27.14	332	P	P	05 51 03.4	+0.4
	comp=Z,1.8nm,0.8s,mb3.6,baz=159,slow=12,SNR=2.8						
HFS				LR	LR	06 03 27.8	
	comp=Z,43nm,18.4s,MS3.0,baz=12,slow=40						
NOA	NORSAR Array B	28.66	331	P	P	05 51 15.3	-1.3
	comp=Z,0.3nm,0.6s,mb3.2,baz=173,slow=10,SNR=2.4						
ARCES	ARCESS Array B	32.08	351	P	P	05 51 46.6	-0.3
	comp=Z,1.1nm,0.9s,mb3.7,baz=147,slow=7.3,SNR=5.5						
MKAR	Makanchi Array	32.36	61	P	P	05 51 49.8	+0.5
	comp=Z,0.4nm,0.6s,mb3.5,baz=264,slow=3.7,SNR=4.2						
TORD	Torodi Ar. Bea	41.78	243	P	P	05 53 07.8	-1.5
	comp=Z,0.5nm,0.7s,mb3.2,baz=45,slow=10,SNR=4.2						

ISCJB 10 06:12:34.4±1.7, 203S±02×1774W±02, h463^{km}±29^{km}, mb3.8/6, Error ellipse: s-maj=43.8km s-min=20.4km az=94.5
IDC 10 06:12:35.1±2.0, 2029S×17736W, h459^{km}±26^{km}, mb3.4/6, mb1 3.5/7, mb1mx3.3/14, mbtmp4.2/7, Error ellipse: s-maj=33.0km s-min=15.4km az=140.0
ISC 10 06:12:35.3±1.8, 203S±02×1773W±02, h461^{km}±30^{km}, n8, σ1^{s}30/8, mb3.8/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.27	41	P	P	06 14 36.0	+2.3
	2.2nm,0.3s,baz=177,slow=17,SNR=3.7						
AFI				S	S	06 16 09.4	-1.4
	5.9nm,0.3s,baz=185,slow=20,SNR=4.3						
RPZ	Rata Peaks	25.30	200	P	P	06 17 23.2	-0.5
	7.1nm,1.0s,mb4.0,baz=7.6,slow=15,SNR=2.6						
CTA	Charters Tower	34.14	264	P	P	06 18 40.4	0.0
	3.8nm,0.7s,mb4.0,baz=90,slow=14,SNR=5.8						
STKA	Stephens Creek	38.45	244	P	P	06 19 16.1	-0.1
	1.3nm,0.6s,mb3.6,baz=117,slow=6.7,SNR=3.8						
ASAR	Alice Springs	45.18	256	P	P	06 20 09.5	-0.1
	4.1nm,0.8s,mb3.9,baz=98,slow=7.8,SNR=41						
ASAR				PcP	PcP	06 21 40.7	+0.2
	0.9nm,0.8s,baz=93,slow=4.4,SNR=5.5						
FITZ	Fitzroy Crossi	53.68	262	P	P	06 21 12.5	-0.1
	2.0nm,0.6s,mb3.6,baz=90,slow=7.9,SNR=9.7						
PDAR	Pinedale Array	88.37	43	P	P	06 24 37.5	+0.5
	0.7nm,0.7s,mb3.5,baz=178,slow=3.9,SNR=5.9						
GERES	GERESS Array B	150.16	345	PKPbc	PKPbc	06 31 33.2	0.0
	1.6nm,0.7s,baz=40,slow=2.3,SNR=8.2						

ISCJB 10 06:16:32.9±0.5, 238S±003×10227E±004, h196^{km}±4^{km}, mb4.5/80, Error ellipse: s-maj=7.1km s-min=4.3km az=115.9
NEIC 10 06:16:33.9±0.2, 230S×10238E, mb4.6/38, Error ellipse: s-maj=7.1km s-min=3.9km az=59.0
NEIC Felt at Bengkulu.
BJI 10 06:16:33.9, 230S×10240E, h190^{km}, mB4.8, mb4.7
MOS 10 06:16:33.8±1.0, 226S×10233E, h203^{km}, mb4.4/20, Error ellipse: s-maj=13.4km s-min=7.5km az=108.0
IDC 10 06:16:34.6±0.5, 230S×10238E, h195^{km}±4^{km}, mb4.2/23, mb1 4.2/24, mb1mx4.2/25, mbtmp4.7/24, Error ellipse: s-maj=12.6km s-min=7.3km az=60.0
ISC 10 06:16:34.3±0.5, 238S±003×10231E±004, h191^{km}±4^{km}, h194^{km}±.9^{km}:pP-P, n179, σ0^{s}98/161, mb4.6/80, 6C-3D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	1.29	167	P	Pn	06 17 05.4	0.0
	2µm,0.7s						
PPI	Padang Panjang	2.70	315	P	Pn	06 17 19.4	-0.5
	358nm,1.1s						
KGM	Kluang	4.48	13	P	Pn	06 17 42.8	+1.0
PSI	Prapat	6.16	327	P	Pn	06 18 02.2	-1.2
	8.4nm,0.3s,baz=151,slow=10,SNR=106						
PSI				S	Sn	06 19 10.2	-3.6
	3.0nm,0.3s,baz=270,slow=20,SNR=3.9						
PSI	Prapat	6.16	327	P	Pn	06 18 02.2	-1.2
PSI				S	Sn	06 19 10.2	-3.6
LEM	Lembang	6.89	130	P	Pn	06 18 12.6	-0.5
	229nm,1.2s						
IPM	Ipoh	6.93	349	P	Pn	06 18 15.0	+1.4
KULM	Kulim	7.80	348	eP	Pn	06 18 24.4	-0.5
BJII	Banjamegara	8.87	124	P	Pn	06 18 38.8	0.0
	172nm,1.0s						

BJII Banjamegara 8.87 124 *e*P **Pn** **06 18 30.0 -8.8**
BJII *e*S **Sn** **06 20 16.0 -2.1**
BSI Banda Aceh 10.50 318 P **Pn** **06 18 56.8 -3.3**
172nm,1.0s
TSM Tawau 16.91 67 P **Pn** **06 20 21.0 +1.1**
PCI Palu 17.58 86 P **Pn** **06 20 30.3 +2.5**
153nm,1.1s
KKTK Khon Kaen 18.60 2 P **P** **06 20 39.0 +1.8**
370nm,0.6s
NANT Nan 21.11 356 P **P** **06 21 04.0 +0.1**
QIZ Qiongzhong 22.53 19 P **P** **06 21 19.5 +1.5**
QIZ S **S** **06 25 06.7 -3.8**
QIZ AMB AMB
comp=Z,28nm,2.0s,mb4.3
QIZ AMB AMB
comp=Z,196nm,5.1s
QIZ Qiongzhong 22.53 19 *e*P **P** **06 21 16.7 -1.3**
QIZ *e*P 06 21 17.4
PALK Pallekele 23.59 294 *e*P **P** **06 21 27.8 +0.1**
comp=Z,132nm,1.9s,mb5.1
MBWA Marble Bar 25.23 139 *e*P **P** **06 21 42.8 +0.3**
comp=Z,3.6nm,0.5s,mb4.2
MBWA *e*PcP PcP 06 25 10.9 +0.2
MDRS Chennai 26.74 306 *e*P **P** **06 21 56.6 +0.5**
KMI Kunming 27.34 1 P **P** **06 22 03.6 +2.2**
KMI AP pP 06 22 43.4 +3.1
KMI XP sP 06 23 04.1 +1.6
KMI AMB AMB
comp=Z,6.0nm,1.2s,mb4.1
KMI AMB AMB
comp=Z,132nm,5.3s
VIS Vishakhapatnam 27.37 318 *e*P **P** **06 22 01.7 +0.1**
VIS AMb AMB 06 22 09.0
comp=Z,34nm,1.3s,mb4.8
TRD Trivandrum 27.49 293 *e*P **P** **06 22 01.6 -1.2**
TRD AMb AMB 06 22 02.8
comp=Z,44nm,1.2s,mb5.0
FITZ Fitzroy Crossi 27.71 126 *e*P **P** **06 22 04.2 -0.5**
comp=Z,12nm,0.8s,mb4.7
FITZ Fitzroy Crossi 27.71 126 P **P** **06 22 04.3 -0.4**
comp=Z,6.6nm,0.7s,mb4.5,baz=284,slow=6.4,SNR=14
FITZ PcP PcP 06 25 16.1 -0.3
comp=Z,3.5nm,0.6s,baz=264,slow=2.6,SNR=5.6
GYA Guiyang 28.98 8⇑*iP* **P** **06 22 17.2 +1.3**
GYA AP pP 06 22 58.7 +3.7
GYA XP sP 06 23 23.5 +6.4
GYA PCP PcP 06 25 20.4 +0.8
GYA S **S** **06 26 51.8 -0.8**
GYA SCP ScP 06 28 41.2 -1.7
GYA SCS ScS 06 32 33.9 -3.2
GYA AMB AMB
comp=Z,30nm,0.8s,mb5.1
GYA AMB AMB
comp=Z,80nm,3.8s
SWI Sorong 28.98 87 P **P** **06 22 16.0 0.0**
comp=Z,213nm,1.0s
BOK Bokaro 30.53 329 *e*P **P** **06 22 29.7 +0.1**
BOK AMb AMB 06 22 31.7
comp=Z,28nm,0.8s,mb5.1
KAKA Kakadu 31.54 111 *e*P **P** **06 22 36.4 -2.1**
comp=Z,22nm,0.6s,mb5.1
MUN Mundaring 32.22 157 *e*P **P** **06 22 45.7 +1.3**
KLBR Kellerberrin 32.50 155 *e*P **P** **06 22 47.8 +0.9**
comp=Z,5.6nm,0.5s,mb4.5
CD2 Chengdu 33.13 2 *e*P **P** **06 22 52.7 +0.4**
CD2 AP pP 06 23 32.4 +0.5
CD2 XP sP 06 23 54.3 +0.4
CD2 PP PP 06 24 11.4 +0.1
CD2 S **S** **06 27 57.4 +0.1**
CD2 XS sS 06 29 07.3 -0.1
CD2 SS SS 06 30 14.1 -8.0
CD2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
CD2 AMB AMB
comp=Z,60nm,6.2s
NWAO Narrogin (SRO) 33.46 157 P **P** **06 22 55.9 +0.7**
comp=Z,9.6nm,0.6s,mb4.7,baz=304,slow=7.1,SNR=11
NWAO ScP ScP 06 28 57.0 -1.0
comp=Z,8.2nm,0.8s,baz=342,slow=5.1,SNR=4.2
NWAO Narrogin (SRO) 33.46 157 *e*P **P** **06 22 56.0 +0.8**
NWAO pmax pmax
comp=Z,7.0nm,0.6s
NWAO Narrogin (SRO) 33.46 157 *e*P **P** **06 22 56.0 +0.8**
comp=Z,6.9nm,0.6s,mb4.6
JIRN Jiri 33.66 334 *e*P **P** **06 22 57.4 +0.5**
comp=Z,42nm,0.7s,mb5.3
AKL Akola 33.77 314 *e*P **P** **06 22 59.2 +1.4**
AKL AMb AMB 06 23 00.4
comp=Z,39nm,0.8s,mb5.2
PKI Pulchoki 33.94 332 *e*P **P** **06 22 58.0 -1.3**
comp=Z,15nm,0.6s,mb4.9
PKI Pulchoki 33.94 332 *e*P **P** **06 22 58.0 -1.3**
PKI pmax pmax
comp=Z,15nm,0.6s,mb4.9
GUN Gumba 34.01 333 *e*P **P** **06 23 00.2 +0.3**
DMN Daman 34.11 332 *e*P **P** **06 23 01.0 +0.2**
KKN Kakani 34.18 332 *e*P **P** **06 23 01.1 -0.3**
comp=Z,38nm,0.7s,mb5.2
KKN Kakani 34.18 332 *e*P **P** **06 23 01.1 -0.3**
KKN pmax pmax
comp=Z,38nm,0.7s,mb5.2
GKN Gorkha 34.66 332 *e*P **P** **06 23 05.5 0.0**
KOLN Koldanda 34.97 330 *e*P **P** **06 23 08.2 +0.1**
comp=Z,49nm,0.7s,mb5.2
WRAB Tennant Creek 35.83 121 *e*PcP PcP 06 25 38.7 +0.2
WB2 Warramunga Arr 35.83 121 *e*P **P** **06 23 14.5 -1.0**
WB2 *i* 06 25 38.3
WB2 *e*S **S** **06 28 30.0 -8.7**
XAN Xi'an 36.76 9 P **P** **06 23 23.5 +0.2**
XAN AMB AMB
comp=Z,21nm,1.1s,mb4.7
ASAR Alice Springs 37.18 127 P **P** **06 23 25.7 -1.2**
comp=Z,28nm,0.6s,mb5.0,baz=300,slow=7.3,SNR=149
ASAR PP PP 06 24 52.9 -2.9
comp=Z,1.7nm,0.7s,baz=302,slow=11,SNR=5.2
ASAR PcP PcP 06 25 42.8 +0.2
comp=Z,9.8nm,0.5s,baz=310,slow=2.6,SNR=25
ASAR S **S** **06 28 52.6 -6.5**
comp=Z,1.9nm,0.7s,baz=297,slow=16,SNR=9.8
FORT Forrest 37.30 142 *e*P **P** **06 23 28.3 +0.4**
comp=Z,19nm,0.5s,mb5.0
FORT *e* 06 23 31.7
NJ2 Nanjing 37.67 23 *e*P **P** **06 23 31.6 +0.6**
NJ2 AP pP 06 24 12.1 +0.8
NJ2 XP sP 06 24 33.7 +0.6
NJ2 PP PP 06 25 06.0 +4.9
NJ2 S **S** **06 29 06.0 -0.5**
NJ2 XS sS 06 30 15.0 -2.6
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
NJ2 AMB AMB
comp=Z,10.0nm,3.8s
NJ2 LR LR
comp=N,2μm,14.5s
NJ2 LR LR
comp=E,2μm,16.6s
NJ2 LR LR
comp=Z,330nm,13.9s
SSE Sheshan 37.83 27 *e*P **P** **06 23 32.4 0.0**
SSE AMB AMB
comp=Z,29nm,0.8s,mb5.0
SSE AMB AMB
comp=Z,299nm,5.4s
LZH Lanzhou 38.29 2 *e*P **P** **06 23 37.5 +1.3**
LZH AP pP 06 24 19.0 +2.4
LZH XP sP 06 24 40.0 +1.6
LZH PP PP 06 25 14.1 +6.2
LZH *e*S **S** **06 29 17.7 +1.8**
LZH XS sS 06 30 29.1 +2.0
LZH AMB AMB
comp=Z,20nm,1.2s,mb4.6
LZH AMB AMB
comp=Z,112nm,5.1s
JOW Kunigami 38.36 39 P **P** **06 23 37.0 +0.2**
comp=Z,16nm,0.6s,mb4.8,baz=229,slow=9.9,SNR=8.8
NDI New Delhi 39.16 324 *e*P **P** **06 23 42.0 -1.4**
NDI AMb AMB 06 23 43.6
comp=Z,43nm,0.5s,mb5.3
AJM Ajmer 39.21 319 *e*P **P** **06 23 44.1 +0.3**
AJM AMb AMB 06 23 44.8
comp=Z,12nm,1.6s,mb4.3
SMLA Simla 41.02 326 *e*P **P** **06 23 58.0 -0.7**
SMLA AMb AMB 06 23 59.7
comp=Z,19nm,1.3s,mb4.6
GTA Gaotai 41.65 357 P **P** **06 24 05.1 +1.3**
GTA AP pP 06 24 46.2 +1.4
GTA XP sP 06 25 11.2 +4.8
GTA PCP PcP 06 25 57.3 +0.4
GTA SCP ScP 06 29 26.4 -2.4
GTA PCS PcS 06 29 49.7 +1.1
GTA SCS ScS 06 33 42.9 -3.2
GTA AMB AMB
comp=Z,8.0nm,1.0s,mb4.3
HHC Hu-ho-hao-te 43.84 10 *e*P **P** **06 24 22.0 +0.5**
HHC AP pP 06 25 03.2 +0.4
HHC XP sP 06 25 24.8 +0.5
HHC PCP PcP 06 26 04.7 +0.4
HHC PP PP 06 26 08.0 +0.5
HHC SCP ScP 06 29 36.9 -0.7
HHC PCS PcS 06 29 56.3 -1.2
HHC S **S** **06 30 38.8 +1.0**
HHC SS SS 06 33 53.2 -7.8
HHC SCS ScS 06 33 58.1 -1.6
HHC AMB AMB
comp=Z,13nm,0.9s,mb4.6
HHC AMB AMB
comp=Z,160nm,5.4s
HHC LR LR
comp=N,133nm,18.0s
HHC LR LR
comp=E,141nm,18.0s
HHC LR LR
comp=Z,62nm,19.0s
BJI Beijing 44.09 15 *e*P **P** **06 24 24.1 +0.7**
BJI S **S** **06 30 45.8 +4.5**
BJI AMB AMB
comp=Z,15nm,1.2s,mb4.5
CTA Charters Tower 46.35 116 *e*P **P** **06 24 41.7 +0.5**
comp=Z,7.1nm,0.6s,mb4.5
CTA Charters Tower 46.35 116 P **P** **06 24 40.5 -0.7**
comp=Z,9.1nm,0.7s,mb4.5,baz=297,slow=7.0,SNR=8.5
CTA Charters Tower 46.35 116 *e*P **P** **06 24 41.7 +0.5**
CTA pmax pmax
comp=Z,7.0nm,0.6s
CTAO Charters Tower 46.35 116 *e*P **P** **06 24 41.5 +0.3**
CTAO pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
CTAO Charters Tower 46.35 116 *e*P **P** **06 24 41.5 +0.3**
comp=Z,8.7nm,0.7s,mb4.5
STKA Stephens Creek 47.19 133⇑*iP* **P** **06 24 46.9 -0.8**
comp=Z,10nm,0.5s,mb4.7
STKA Stephens Creek 47.19 133 P **P** **06 24 47.7 0.0**
comp=Z,16nm,0.6s,mb4.8,baz=308,slow=7.3,SNR=29
STKA pP pP 06 25 29.9 +0.3
comp=Z,6.3nm,0.8s,baz=329,slow=5.1,SNR=2.3
STKA PcP PcP 06 26 15.5 -0.5
comp=Z,4.7nm,0.5s,baz=331,slow=6.1,SNR=3.3
STKA S **S** **06 31 23.4 -2.3**
comp=Z,1.5nm,0.6s,baz=116,slow=20,SNR=3.8
WMQ Urumqi 47.83 346 *e*P **P** **06 24 53.0 +0.4**
WMQ AP pP 06 25 35.0 +0.4
WMQ XP sP 06 25 56.0 +0.1
WMQ PP PP 06 26 46.0 -0.1
WMQ S **S** **06 31 33.0 -1.6**
WMQ XS sS 06 32 47.0 -1.2
WMQ SCS ScS 06 34 23.0 -2.6
WMQ SS SS 06 35 00.0 -5.6
WMQ AMB AMB
comp=Z,21nm,1.0s,mb4.7
WMQ AMB AMB
comp=Z,102nm,5.0s
WMQ LR LR
comp=N,127nm,16.0s
WMQ LR LR
comp=E,204nm,18.0s
SONM Songino Array 50.13 4 P **P** **06 25 11.3 +1.3**
comp=E,23nm,0.8s,mb4.9,baz=183,slow=9.1,SNR=71
SONM sP sP 06 26 14.7 +0.9
comp=E,4.7nm,0.8s,baz=186,slow=8.7,SNR=4.1
SONM PcP PcP 06 26 26.3 -0.3
comp=E,2.9nm,0.5s,baz=176,slow=3.7,SNR=6.1
SONM ScP ScP 06 30 01.2 -2.8
comp=E,1.9nm,0.9s,baz=199,slow=8.8,SNR=3.7
SONM Songino Array 50.13 4 P **P** **06 25 11.3 +1.2**
SONM *SP sP 06 26 14.7 +1.0
SONM 06 26 26.3
CN2 Changchun 50.45 22 *e*P **P** **06 25 12.3 -0.1**
CN2 *e*XP sP 06 26 15.8 -0.3
CN2 PCP PcP 06 26 28.0 +0.2
CN2 *e*S **S** **06 32 10.1 -1.0**
CN2 AMB AMB
comp=Z,30nm,1.0s,mb4.9
MAJO Matsushiro 51.15 37 *e*P **P** **06 25 17.3 -0.3**
MAJO pmax pmax
comp=Z,20nm,1.1s,mb4.7
MAJO Matsushiro 51.15 37 *e*P **P** **06 25 17.3 -0.3**
comp=Z,20nm,1.1s,mb4.7
MAT Matsushiro 51.15 37 P **P** **06 25 17.2 -0.4**
MAT Matsushiro 51.15 37 *e*P **P** **06 25 17.0 -0.6**
MAT pmax pmax
comp=Z,19nm,1.2s,mb4.6
MAT Matsushiro 51.15 37 *e*P **P** **06 25 17.0 -0.6**
comp=Z,19nm,1.2s,mb4.6
MJAR Matsushiro Arr 51.15 37 P **P** **06 25 17.6 0.0**
comp=Z,10nm,0.8s,mb4.5,baz=216,slow=7.6,SNR=24
AAK Ala-Archa 51.37 334 *e*P **P** **06 25 18.5 -0.8**
MKAR Makanchi Array 52.04 343 P **P** **06 25 23.8 -0.5**
comp=Z,4.8nm,0.7s,mb4.3,baz=147,slow=7.1,SNR=24
ZAK Zakamensk 52.56 1⇑*eP* **P** **06 25 28.7 +0.6**
ZAK *e* 06 26 33.1
MDJ Mudanjiang 52.75 24 P **P** **06 25 30.0 +0.5**
MDJ AP pP 06 26 12.5 +0.2
MDJ XP sP 06 26 33.5 +0.1
MDJ PP PP 06 27 32.5 +1.8
MDJ SCP ScP 06 30 15.2 -0.2
MDJ PCS PcS 06 30 35.0 -0.3
MDJ S **S** **06 32 43.9 +1.4**
MDJ SCS ScS 06 34 59.5 +0.1
MDJ AMB AMB
comp=Z,9.0nm,0.9s,mb4.5
MDJ AMB AMB
comp=Z,62nm,4.2s
MDJ LR LR
comp=N,15nm,27.1s
MDJ LR LR
comp=E,27nm,21.3s
MDJ LR LR
comp=Z,21nm,19.4s
MDJ Mudanjiang 52.75 24 *e*P **P** **06 25 28.7 -0.8**
comp=Z,7.2nm,0.7s,mb4.5
HIA Hailar 53.61 14*d iP* **P** **06 25 35.8 0.0**
HIA Hailar 53.61 14 *e*P **P** **06 25 34.9 -0.9**
comp=Z,7.9nm,0.5s,mb4.7
TLY Talaya 53.87 1 *e*P **P** **06 25 38.5 +0.9**
TLY *e*S **S** **06 32 53.2 -4.4**
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
TLY MLR MLR
comp=Z,33nm,19.0s
TLY Talaya 53.87 1 *e*P **P** **06 25 36.8 -0.8**
comp=Z,8.9nm,0.7s,mb4.6
KURK Kurchatov 56.64 342 *e*P **P** **06 25 56.7 -0.7**
KURK pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
KURK Kurchatov 56.64 342 *e*P **P** **06 25 56.6 -0.8**
comp=Z,9.0nm,0.9s,mb4.6
ZAL Zalesovo 57.99 348 P **P** **06 26 06.9 +0.1**
comp=Z,4.7nm,0.7s,mb4.4,baz=288,slow=6.2,SNR=21
HABR Khabarovsk 58.10 25 *e*P **P** **06 26 05.0 -2.6**
HABR *e*S **S** **06 33 52.5 -0.9**
YSS Yuzh-Sakhalins 60.61 31 *e*P **P** **06 26 24.8 0.0**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 60.61 31 *e*P **P** **06 26 24.1 -0.7**
comp=Z,53nm,1.1s,mb5.3
RDF Al-Radifah 60.95 305 *e*P **P** **06 26 27.5 +0.4**
RDF AMb AMB 06 26 28.5
comp=Z,32nm,0.8s,mb5.2
UMR Umm Al-Rimmam 61.04 306 *e*P **P** **06 26 27.6 -0.1**
UMR AMb AMB 06 26 29.4
comp=Z,58nm,0.6s,mb5.6
NAY Al-Naaiem 61.32 305 *e*P **P** **06 26 29.5 -0.1**
NAY AMb AMB 06 26 31.0
comp=Z,32nm,0.7s,mb5.2
BRVK Borovoye 61.42 339 *e*P **P** **06 26 29.4 -0.8**
MIB Mutribah 61.44 306 *e*P **P** **06 26 30.9 +0.6**
MIB AMb AMB 06 26 32.3
comp=Z,35nm,0.9s,mb5.2
RST Umm Al-Ruwaisa 61.61 305 *e*P **P** **06 26 31.5 +0.1**
RST AMb AMB 06 26 32.5
comp=Z,52nm,0.6s,mb5.5
CHKZ Chkalovo 61.79 339 *e*P **P** **06 26 31.7 -1.0**
CHKZ pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
CHKZ Chkalovo 61.79 339 *e*P **P** **06 26 31.7 -1.1**
comp=Z,5.7nm,0.6s,mb4.6
CASY Casey 64.04 176 *e*P **P** **06 26 48.0 +0.5**
KMBO Kilima Mbogo 65.03 270 P **P** **06 26 56.5 +2.5**
comp=Z,1.8nm,0.7s,mb4.0,baz=68,slow=15,SNR=5.2
DZM Mont Dzumac 65.19 113 P **P** **06 26 56.7 +1.8**
comp=Z,6.4nm,0.7s,mb4.5,baz=306,slow=19,SNR=4.1
GNI Garni 67.40 316 *e*P **P** **06 27 08.7 -0.3**
GNI pmax pmax
comp=Z,9.0nm,0.5s
GNI Garni 67.40 316 *e*P **P** **06 27 08.7 -0.4**
comp=Z,9.3nm,0.5s,mb4.9
YAK Yakutsk 67.55 14 *e*P **P** **06 27 09.9 0.0**
YAK pmax pmax
comp=Z,21nm,0.8s,mb4.9
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK Yakutsk 67.55 14 *e*P **P** **06 27 08.8 -1.1**
comp=E,45nm,0.6s,mb5.4
ARU Arti 68.49 336⇓*iP* **P** **06 27 14.2 -1.6**
ARU *e* 06 27 35.4
ARU *e* 06 29 45.8
ARU *e*PPP 06 31 29.2
ARU *e*S S 06 36 00.1 -2.0
ARU *e*SS SS 06 40 28.6 -1.1
ARU pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
ARU Arti 68.49 336 *e*P **P** **06 27 14.9 -0.9**
comp=Z,6.4nm,0.9s,mb4.3
ARU *e* pP 06 28 00.7 -0.2
SKR Severo-Kuril's 69.91 33 *e*P **P** **06 27 20.0 -4.5**
KIV Kislovodsk 70.34 319 *e*P **P** **06 27 26.5 -0.7**
KIV pmax pmax
comp=Z,11nm,0.5s,mb4.8
KIV Kislovodsk 70.34 319 *e*P **P** **06 27 26.5 -0.6**
comp=Z,11nm,0.5s,mb4.8
MAW Mawson 70.50 195 *e*P **P** **06 27 29.3 +1.2**
comp=Z,3.7nm,0.8s,mb4.2
MAW Mawson 70.50 195 P **P** **06 27 29.5 +1.4**
comp=Z,4.9nm,0.8s,mb4.3,baz=35,slow=5.7,SNR=18
MAW pP pP 06 28 14.8 +1.4
comp=Z,1.9nm,0.8s,baz=21,slow=7.6,SNR=3.3
MALT Malatya 71.30 312 *e*P **P** **06 27 32.9 -0.1**
comp=Z,1.8nm,0.5s,mb4.1
MALT *e*pP pP 06 28 18.6 +0.2
EIL Elat 71.67 302 *e*P **P** **06 27 35.3 +0.2**
comp=Z,88nm,0.7s,mb5.6
EIL *e*pP pP 06 28 21.4 +0.8
MA2 Magadan 72.44 24*ce*P **P** **06 27 40.1 +0.4**
MA2 *e* 06 37 32.2
MA2 pmax pmax
comp=Z,100nm,0.5s
MA2 Magadan 72.44 24 *e*P **P** **06 27 39.2 -0.5**
comp=Z,18nm,0.6s,mb5.0
RPZ Rata Peaks 73.08 135 P **P** **06 27 43.4 -0.1**
comp=Z,36nm,0.7s,mb5.2,baz=259,slow=2.6,SNR=60
BR131 Keskin Array S 75.28 312 *e*P **P** **06 27 55.7 -0.5**
BR131 *e* pP 06 28 40.6 -1.5
BRTR Keskin Array B 75.28 312 P **P** **06 27 55.1 -1.1**
comp=Z,2.7nm,0.8s,mb4.0,baz=132,slow=7.1,SNR=12
BRTR pP pP 06 28 40.6 -1.5
comp=Z,2.4nm,0.8s,baz=129,slow=7.3,SNR=3.6
URZ Urewera 76.61 129 P **P** **06 28 03.0 -0.7**
comp=Z,6.6nm,0.7s,mb4.4,baz=137,slow=5.1,SNR=4.9
LBTB Lobatse 76.95 245 *e*P **P** **06 28 06.5 +0.9**
comp=Z,0.8nm,0.4s,mb3.7
BOSA Boshof 77.50 241 P **P** **06 28 09.8 +1.2**
comp=Z,3.3nm,0.7s,mb4.1,baz=150,slow=5.1,SNR=6.5
BOSA Boshof 77.50 241 *e*P **P** **06 28 09.2 +0.5**
comp=Z,1.1nm,0.4s,mb3.8
SYO Syowa Base 78.26 199⇓*eP* **P** **06 28 13.0 +0.2**
OBN Obninsk 78.34 328⇑*iP* **P** **06 28 11.0 -2.3**
OBN *e**PP pP 06 28 57.6 -1.9
OBN *e* 06 31 07.7
OBN pmax pmax
comp=Z,5.0nm,0.4s,mb4.5
AKASG Malin Array Be 81.20 322 P **P** **06 28 27.2 -1.4**
comp=Z,0.6nm,0.4s,mb3.6,baz=84,slow=4.8,SNR=6.7
VNDA Vanda 81.35 169 P **P** **06 28 29.4 0.0**
comp=Z,6.4nm,0.7s,mb4.4,baz=308,slow=5.7,SNR=71
VNDA Vanda 81.35 169 *e*P **P** **06 28 29.4 0.0**
VNDA pmax pmax
comp=Z,7.0nm,0.7s
VNDA Vanda 81.35 169 *e*P **P** **06 28 29.4 0.0**
comp=Z,6.8nm,0.7s,mb4.4
SBA Scott Base 82.44 169 *e*P **P** **06 28 35.6 +0.5**
SBA pmax pmax
comp=Z,12nm,0.7s,mb4.6
SBA Scott Base 82.44 169 *e*P **P** **06 28 35.5 +0.4**
comp=Z,12nm,0.7s,mb4.6
BILL Bilibino 82.72 20 *e*P **P** **06 28 35.9 -0.7**
BILL pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
TSUM Tsumeb 84.24 251 *e*P **P** **06 28 45.4 +1.0**
comp=Z,0.6nm,0.4s,mb3.7
TSUM *e* pP 06 29 33.6 +2.4
KOLS Kolonicke sedl 85.24 319 *e*P **P** **06 28 49.7 +0.4**
comp=Z,2.3nm,0.8s,mb4.0
FINES FINESS Array B 85.52 332 P **P** **06 28 49.8 -0.9**
comp=Z,1.1nm,0.6s,mb3.8,baz=90,slow=7.6,SNR=5.6
CRVS Cervenica-Dubn 85.76 319 *e*P **P** **06 28 54.3 +2.4**
comp=Z,2.3nm,1.1s,mb3.8
QSPA South Pole Qui 87.58 180⇑*iP* **P** **06 29 01.1 +0.4**
comp=Z,20nm,0.5s,mb5.2
ARCES ARCESS Array B 87.61 340 P **P** **06 28 59.9 -1.0**
comp=Z,3.7nm,0.7s,mb4.3,baz=99,slow=5.5,SNR=16
GERES GERESS Array B 90.85 319 P **P** **06 29 14.9 -1.1**
comp=Z,0.3nm,0.2s,mb3.9,baz=57,slow=4.9,SNR=4.5
GERES pP pP 06 30 02.4 -1.0
comp=Z,0.3nm,0.4s,baz=104,slow=4.1,SNR=2.2
NB2 NORSAR Subarra 92.60 331 P **P** **06 29 22.3 -1.7**
comp=Z,0.8nm,0.7s,mb4.0,baz=96,slow=4.6
NOA NORSAR Array B 92.60 331 P **P** **06 29 22.9 -1.1**
comp=Z,1.3nm,0.8s,mb4.1,baz=93,slow=4.5,SNR=4.2
NOA NORSAR Array B 92.60 331 P **P** **06 29 22.9 -1.1**
MSO Missoula 125.68 30 *e*PKPdf PKPdf 06 35 12.8 -0.1
DLMT Dillon 127.37 31 *e*PKPdf PKPdf 06 35 16.5 +0.4
MCMT McKenzie Canyo 127.61 31 *e*PKPdf PKPdf 06 35 16.6 0.0
BOZ Bozeman (W) 127.66 30 *e*PKIKP PKPdf 06 35 16.6 -0.1
NVAR Mina Array Bea 128.41 41 PKP PKPdf 06 35 18.8 +0.7
comp=Z,0.6nm,0.6s,baz=1.5,slow=3.1,SNR=6.6
REDW Red Top Meadow 129.66 31 *e*PKPdf PKPdf 06 35 20.1 -0.4
ULM Lac du Bonnet 129.87 15 PKP PKPdf 06 35 19.9 -0.9
comp=Z,2.1nm,0.7s,baz=318,slow=8.2,SNR=4.9
ULM SKPbc 06 38 23.5
comp=Z,1.4nm,0.5s,baz=311,slow=3.1,SNR=4.8
DUG Dugway 130.73 36 *e*SKPbc SKPbc 06 38 28.1 -0.3
BW06 Boulder Array 130.75 31 *e*SKPbc SKPbc 06 38 26.6 -1.9
PDAR Pinedale Array 130.75 31 PKP PKPdf 06 35 22.7 +0.1
comp=Z,0.5nm,0.6s,baz=89,slow=1.2,SNR=7.0
PDAR SKPbc SKPbc 06 38 25.9 -2.6
comp=Z,1.6nm,0.9s,baz=360,slow=1.8,SNR=11
GSC Goldstone 131.14 43 *e*SKPbc SKPbc 06 38 29.2 -0.7
RSSD Black Hills 132.34 26 *e*PKPdf PKPdf 06 35 25.2 -0.3
RSSD *e*SKPbc SKPbc 06 38 32.5 -1.8
MIV Mineville/With 138.32 355 *e*SKPab 06 39 00.4
MNTX Cornudas Mount 140.87 39 *e*PKPdf PKPdf 06 35 37.5 -3.8
WMOK Wichita Mounta 142.29 29 *e*PKHKP 06 35 39.0
WCI Wyandotte Cave 143.46 11 *e*PKIKP PKPdf 06 35 42.5 -3.4
CBN Corbin 144.35 360 *e*PKPdf PKPdf 06 35 46.0 -1.5
MIAR Mount Ida 144.74 23 *e*PKIKP PKPdf 06 35 47.5 -0.7
FWV Forest Hill 144.85 4 *e*PKPbc PKPdf 06 35 46.9 -1.5
HBAR Harrisburg 144.87 19 *e*PKPbc PKPdf 06 35 48.1 -0.3
HALT Halls 144.94 17 *e*PKPbc PKPdf 06 35 47.9 -0.6
UALR University of 145.00 21 *e*PKPdf PKPdf 06 35 48.0 -0.6
JCT Junction City 145.08 35 *e*PKIKP PKPdf 06 35 49.0 +0.2
WVT Waverly 145.13 14 *e*PKIKP PKPdf 06 35 48.3 -0.5
ELN Prospectdale 145.21 4 *e*PKPbc PKPbc 06 35 47.9 -1.1
BLA Blacksburg 145.25 4 *e*PKP2 PKPab 06 35 48.7 -0.8
CPUP Villa Florida 145.33 213 PKPbc PKPbc 06 35 50.6 +1.2
comp=Z,3.6nm,0.5s,baz=155,slow=2.1,SNR=18
CPUP pPKPbc 06 36 39.4
comp=Z,5.5nm,0.7s,baz=98,slow=4.6,SNR=5.1
CPUP SKPbc SKPbc 06 39 09.8 -0.9
comp=Z,0.2nm,0.3s,baz=45,slow=4.3,SNR=3.2
CPUP Villa Florida 145.33 213 *e*PKPdf PKPdf 06 35 49.6 +0.4
TZTN Tazewell 145.58 8 *e*PKPdf PKPdf 06 35 49.7 +0.1
BDFB Brasilia 145.62 238 PKPbc PKPbc 06 35 52.0 +1.7
comp=Z,9.3nm,0.6s,baz=124,slow=1.6,SNR=17

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BDFB				pPKPbc	pPKPbc	06 36 40.7	+1.4
	comp=Z,5.6nm,0.6s,baz=157,slow=2.9,SNR=3.1						
PLAL	Pickwick Lake	146.16	15	ePKPdf	PKPdf	06 35 50.6	+0.1
SWET	Sewanee	146.44	12	ePKPdf	PKPdf	06 35 51.7	+0.6
CPCT	Cooper Cave	146.49	10	ePKPdf	PKPdf	06 35 52.2	+1.0
HKT	Hockley	147.63	30	ePKIKP	PKPdf	06 35 54.1	+1.1
HKT				e		06 35 56.8	
LRAL	Lakeview Retre	148.28	15	ePKPdf	PKPdf	06 35 54.4	+0.3
LRAL				ePKPbc	PKPbc	06 35 56.9	-0.8
LRAL				ePKPab	PKPab	06 36 01.3	-0.1

*ISCJB **10** 06:31:27.3±0.6, 208S±0.1×786E±0.1, h10km, mb4.2/13, Error ellipse: s-maj=24.4km s-min=15.1km az=88.9*

*IDC **10** 06:31:27.6±0.8, 2076S×7857E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.1/21, mbtmp4.2/11, Error ellipse: s-maj=34.3km s-min=18.8km az=45.0*

*NEIC **10** 06:31:29.0±0.4, 2080S×7853E, h10km, mb4.6/2, Error ellipse: s-maj=15.2km s-min=9.4km az=45.0*

ISC 10 06:31:29.2±0.6, 208S±01×785E±02, h10km, n17, σ0s59/14, mb4.2/13, South Indian Ocean

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	44.40	95	P	P	06 39 40.5	+0.6
	3.3nm,0.9s,mb4.1,baz=206,slow=16,SNR=3.5						
ASAR	Alice Springs	51.09	104	P	P	06 40 32.0	+0.3
	3.5nm,0.7s,mb4.4,baz=267,slow=7.3,SNR=49						
WRAB	Tennant Creek	52.12	100	eP	P	06 40 40.1	+0.6
	8.7nm,0.6s,mb4.9						
STKA	Stephens Creek	56.91	115	P	P	06 41 14.2	-0.2
	3.6nm,0.7s,mb4.5,baz=287,slow=5.6,SNR=8.0						
MKAR	Makanchi Array	67.36	3	P	P	06 42 23.7	-0.7
	2.1nm,0.6s,mb4.3,baz=182,slow=6.5,SNR=10						
VNDA	Vanda	68.40	167	P	P	06 42 30.5	-0.5
	0.7nm,0.8s,mb3.7,baz=279,slow=9.2,SNR=5.9						
QSPA	South Pole Qui	69.30	180	eP	P	06 42 36.0	-0.7
	2.4nm,0.8s,mb4.2						
SONM	Songino Array	72.76	19	P	P	06 42 57.1	-0.6
	0.9nm,0.5s,mb4.0,baz=204,slow=5.3,SNR=3.4						
BRTR	Keskin Array B	73.34	325	P	P	06 43 01.9	+0.8
	1.3nm,0.7s,mb4.0,baz=142,slow=5.7,SNR=8.8						
ZAL	Zalesovo	74.62	4	P	P	06 43 07.9	-0.6
	2.9nm,0.5s,mb4.5,baz=286,slow=5.4,SNR=7.7						
TORD	Torodi Ar. Bea	82.64	287	P	P	06 43 53.7	+1.0
	0.5nm,0.6s,mb3.7,baz=144,slow=4.3,SNR=4.3						
TORD	Torodi Ar. Bea	82.64	287	P	P	06 43 53.7	+1.0
AKASG	Malin Array Be	83.36	331	P	P	06 43 56.3	-0.1
	2.3nm,0.7s,mb4.3,baz=135,slow=4.5,SNR=12						
GERES	GERESS Array B	90.11	323	P	P	06 44 29.5	+0.1
	0.3nm,0.3s,mb4.2,baz=136,slow=8.5,SNR=3.7						
EDM	Edmonton	146.37	13	ePKPdf	PKPdf	06 51 08.5	-0.4
EDM				ePKPbc	PKPbc	06 51 09.8	-0.4
NEW	Newport	149.84	21	ePKPdf	PKPdf	06 51 14.6	0.0
NEW				ePKPbc	PKPbc	06 51 19.6	+0.2
NEW				ePKPab	PKPab	06 51 24.8	-0.1
NVAR	Mina Array Bea	157.21	36	PKPab	PKPab	06 51 56.6	+0.6
	0.5nm,0.6s,baz=288,slow=5.9,SNR=5.6						

WEL 10 06:40:31.7±0.1, 3894S×17750E, h57km±2km, ML3.6/7, Error ellipse: s-maj=1.5km s-min=1.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KNZ	Kokohu	0.16	123	PN	Pn	06 40 40.6	0.0
KNZ				SN	Sn	06 40 47.2	+0.3
MWZ	Matawai	0.60	2	PN	Pn	06 40 43.9	-0.6
MWZ				SN	Sn	06 40 53.0	-0.8
URZ	Urewera	0.74	335	PN	Pn	06 40 45.6	-0.7
URZ				SN	Sn	06 40 56.0	-0.9
BKZ	Black Stump Fm	0.82	253	PN	Pn	06 40 47.2	-0.1
BKZ				SN	Sn	06 40 58.7	0.0
PUZ	Puketiti	1.04	35	PN	Pn	06 40 49.9	-0.3
PUZ				SN	Sn	06 41 04.2	+0.3
TAZ	Tarawera	1.05	312	PN	Pn	06 40 49.7	-0.5
PXZ	Pawanui	1.20	204	PN	Pn	06 40 51.5	-0.7
RITZ	Rihia Road	1.28	268	PN	Pn	06 40 53.3	-0.1
MOVZ	Moawhango	1.44	250	PN	Pn	06 40 55.3	-0.2
TUVZ	Tukino	1.48	256	PN	Pn	06 40 56.0	0.0
NGZ	Ngauruhoe	1.50	260	PN	Pn	06 40 56.2	0.0
WTVZ	West Tongariro	1.50	262	PN	Pn	06 40 56.2	0.0
MXZ	Matakaoa Point	1.51	25	PN	Pn	06 40 56.4	+0.1
DRZ	Dome Shelter	1.55	257	PN	Pn	06 40 57.0	+0.1
WPVZ	Whakapapa	1.55	259	PN	Pn	06 40 56.9	0.0
FWVZ	Far West T-bar	1.55	257	PN	Pn	06 40 56.8	-0.2
TWVZ	Taurewa	1.61	265	PN	Pn	06 40 57.8	0.0
MTVZ	Mangateitei	1.64	253	PN	Pn	06 40 58.0	-0.2
BFZ	Birch Farm	1.99	209	PN	Pn	06 41 01.6	-1.4
WAZ	Wanganui	2.12	246	PN	Pn	06 41 04.9	+0.3
TIWZ	Tintock	2.22	214	PN	Pn	06 41 04.9	-1.2
MTW	Mount Morrison	2.70	214	PN	Pn	06 41 10.3	-2.3
CAW	Cannon Point	2.86	220	PN	Pn	06 41 12.3	-2.6

KRSC 10 06:44:50, 5334N×16052E, h43km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.39	231	iP	Pn	06 44 59.5	+0.1
SPN				iS	Sn	06 45 06.0	-0.1
NLC	Nalytchevo	0.73	257	iP	Pn	06 45 04.1	+0.3
NLC				iS	Sn	06 45 14.3	+0.5
KII	Karymskiy	0.94	318	eP	Pn	06 45 07.4	+0.6
KII				eS	Sn	06 45 19.6	+0.5
AVH	Avacha	1.07	267	iP	Pn	06 45 09.6	+1.1
AVH				eS	Sn	06 45 23.5	+1.3
PET	Petropavlovsk	1.17	255	iP	Pn	06 45 10.4	+0.5
PET				eS	Sn	06 45 25.1	+0.5
MKZ	Mys Kozlova	1.41	30	eP	Pn	06 45 12.1	-1.1
MKZ				eS	Sn	06 45 28.2	-2.4
RUS	Russkaya	1.52	234	iP	Pn	06 45 14.8	+0.1
RUS				eS	Sn	06 45 32.9	-0.3
GNL	Ganaly	1.58	284	iP	Pn	06 45 17.0	+1.5
GNL				eS	Sn	06 45 36.4	+1.7
GRL	Gorelyy	1.68	243	iP	Pn	06 45 18.1	+1.2
GRL				S	Sn	06 45 38.4	+1.3
TUMR	Tumrok	1.96	354	S	Sn	06 45 45.0	+0.9
KMNR	Kamenistaya	2.43	356	P	Pn	06 45 29.0	+1.9
KMNR				S	Sn	06 45 57.0	+1.4
MIPR	Malaya Ipel'ka	2.52	246	eP	Pn	06 45 30.5	+2.1
KPT	Kopyto	2.64	356	S	Sn	06 46 02.1	+1.3
ZLN	Zelenaya	2.69	3	P	Pn	06 45 32.3	+1.6
ZLN				S	Sn	06 46 02.8	+0.8
KOZ	Kozyrevsk	2.75	352	S	Sn	06 46 05.2	+1.7
KLY	Klyuchi	2.98	1	S	Sn	06 46 10.9	+1.7
SRDR	Sredinnyy	3.02	351	P	Pn	06 45 36.6	+1.3
KBTR	Krutoberegovo	3.17	24	P	Pn	06 45 39.2	+1.9
KBTR				S	Sn	06 46 14.2	+0.4
SRKR	Sorokina	3.34	6	P	Pn	06 45 41.4	+1.7
SRKR				S	Sn	06 46 18.2	+0.1

*IDC **10** 07:02:54.0±0.5, 1371N×9039W, h0km, mb5.0/25, mb1 5.1/25, mb1mx5.1/27, mbtmp5.0/25, MS4.6/21, Ms1 4.5/21, ms1mx4.4/24, Error ellipse: s-maj=20.3km s-min=10.6km az=51.0*

*SZGRF **10** 07:02:57.4, 1316N×9055W, h100km, mb5.0, Near coast of Guatemala*

*CASC **10** 07:03:00.2±2.3, 1350N×9082W, h27km±6km, MD4.6, ML5.1, mb5.2(NEIC)*

*MOS **10** 07:03:01.5±1.0, 1373N×9044W, h67km, mb5.2/65, Error ellipse: s-maj=7.2km s-min=4.2km az=106.2*

*ISCJB **10** 07:03:02.2±0.3, 1368N±003×9051W±002, h74km±2km, mb5.0/150, Error ellipse: s-maj=6.2km s-min=2.5km az=66.2*

*BJI **10** 07:03:02.1, 1360N×9050W, h61km, mB5.3, Ms5.2, Msz4.9*

*HRVD **10** 07:03:02.2±0.2, 1334N×9114W, h31km, MW5.4/86, Centroid moment Tensor Solution. LP body waves: s86,c148;Mantle waves: s84,c142; Half duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.11±.03; $M_{\theta\theta}$-0.94±.02; $M_{\phi\phi}$-0.17±.02; $M_{r\theta}$0.62±.03; $M_{\theta\phi}$0.47±.01; $M_{\phi r}$-0.53±.04; Best double couple: $M_0$1.39800×10^{17} NP1:ϕ_s286.00000°,δ28.00000°,λ74.00000°. NP2: ϕ_s124.00000°,δ63.00000°,λ98.00000°. Principal axes: T 1.3870, Plg71.0000°, Azm52.0000°; N 0.0210, Plg7.0000°, Azm300.0000°; P -1.4090, Plg18.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 07:03:02.2±0.2, 1364N×9052W, mb5.1/127, MD5.0(SNET) Error ellipse: s-maj=5.1km s-min=2.8km az=218.0*

NEIC Felt [IV] at San Lucas Sacatepequez and [II] at Antigua Guatemala. Felt [II] at San Salvador, El Salvador.

ISC 10 07:03:04.2±0.3, 1374N±003×9046W±002, h73km±5.6km:pP-P, n746, σ0s89/669, mb5.0/150, 121C-106D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TER	Terranova	0.60	339	⇑iP	Pn	07 03 15.7	-2.4
PCG	Pacaya	0.66	347	⇑iP	Pn	07 03 17.7	-1.1
FUG	Fuego 3	0.79	332	⇓iP	Pn	07 03 17.7	-2.6
RTR	El Retiro	0.80	79	⇓iP	x	07 03 26.2	
RTR				eS	x	07 03 41.3	
SBLS	San Blas	0.82	83	⇓iP	x	07 03 26.0	
SBLS				eS	x	07 03 42.7	
SNJE	San Jose	0.84	81	⇓iP	x	07 03 26.4	
SNJE				eS	x	07 03 41.9	
GCG	Guatemala City	0.84	355	eP	Pn	07 03 21.1	+0.3
GCG				⇓iP		07 03 21.2	
GCG				eS	Sn	07 03 37.5	+4.3
BOQS	Boqueron	1.15	90	⇑iP	x	07 03 30.4	
BOQS				eS	x	07 03 51.2	
TP2	Tecpan 2	1.17	332	⇓eP	Pn	07 03 22.2	-2.7
TP2				eS	Sn	07 03 39.3	-1.1
SNET	Serv Nac Est T	1.19	93	⇓eP	x	07 03 25.7	
SNET				eS	x	07 03 47.8	
MTO2	Montecristo 2	1.25	58	⇓iP	x	07 03 33.7	
MTO2				eS	x	07 03 54.1	
JAT	Jato	1.28	297	eP	Pn	07 03 19.3	-7.0
LFRS	El Faro	1.36	95	⇓eP	x	07 03 32.5	
LFRS				eS	x	07 03 53.8	
LBRS	Las Brisas	1.38	90	⇓iP	x	07 03 33.8	
LBRS				eS	x	07 03 56.8	
LCBS	La Ceiba	1.44	93	⇓eP	x	07 03 34.0	
LCBS				eS	x	07 03 57.1	
SNVI	San Vicente	1.58	94	⇑eP	x	07 03 36.3	
SNVI				eS	x	07 04 00.5	
VSM	San Miguel	2.15	98	⇑eP	x	07 03 44.2	
VSM				eS	x	07 04 14.6	
BLLM	Bellamira	2.18	98	⇑eP	x	07 03 44.3	
BLLM				eS	x	07 04 15.9	
CNCH	Conchagua	2.59	100	⇑eP	x	07 03 49.8	
CNCH				eS	x	07 04 25.0	
CCIG	Comitan	3.00	327	iP	Pn	07 03 47.3	-2.1
CCIG				iS	Sn	07 04 31.7	+7.5
CRIN	San Cristobal	3.48	107	⇑eP	Pn	07 03 57.7	+1.9
SCX	San Cristobal	3.64	325	iP	Pn	07 03 56.0	-2.1
SCX				iS	Sn	07 04 36.0	-3.9
LEON	Leon	3.72	110	eP	Pn	07 03 58.9	-0.2
CNGN	Cerro Negro	3.87	108	⇓eP	Pn	07 04 01.5	+0.4
MIRN	Miramar	3.87	109	⇑eP	Pn	07 04 01.7	+0.5
MOMJ	Momotombo	4.04	109	⇑eP	Pn	07 04 04.2	+0.7
COPN	Copaltepe	4.08	112	⇑eP	Pn	07 04 03.6	-0.4
APYN	Apoyeque	4.28	110	⇑eP	Pn	07 04 06.8	+0.1
XAVN	Gruta Xavier	4.33	111	⇑eP	Pn	07 04 07.8	+0.4
TISN	Laguna Tiscapa	4.38	111	⇑eP	Pn	07 04 08.2	0.0
MGAN	Managua	4.40	111	⇓eP	Pn	07 04 08.3	-0.1
MGAN				i		07 05 25.1	
	comp=E,4µm,0.6s						
TICN	Ticuantepe	4.46	112	⇑eP	Pn	07 04 09.5	+0.3
CONN	Concepcion	5.19	114	⇑eP	Pn	07 04 18.9	-0.3
LIM1	Limonal	5.92	120	iP	Pn	07 04 30.0	+0.8
VCR	Vista de Mar	5.94	127	eP	Pn	07 04 29.3	-0.1
VCR	Vista de Mar	5.94	127	eP	Pn	07 04 29.0	-0.4
JTS	JuntasAbangare	6.38	122	Pn	Pn	07 04 34.6	-1.0
	comp=E,9.0nm,0.3s,baz=334,slow=9.8,SNR=65						
JTS				Sn	Sn	07 05 45.4	-1.6
	baz=302,slow=19,SNR=1.4						
JTS				Lg		07 06 12.2	
	comp=E,13nm,0.3s,baz=253,slow=22,SNR=6.8						
JTS				LR	LR	07 07 22.3	
	comp=E,5µm,18.6s,baz=288,slow=42						
JTS	JuntasAbangare	6.38	122	P	Pn	07 04 34.6	-1.0
JTS						07 05 45.4	
JCR	Jicaral	6.51	126	⇑eP	Pn	07 04 37.1	-0.2
JCR	Jicaral	6.51	126	eP	Pn	07 04 37.2	0.0
OXX	Oaxaca	6.89	300	iP	Pn	07 04 38.5	-4.0
OXX				iS	Sn	07 05 38.0	-21
VHO	Vista Hermosa	6.90	299	iP	Pn	07 04 37.0	-5.6
VHO				iS	Sn	07 05 49.2	-10
CGA2	Cerro Gallo 2	6.94	122	⇓eP	Pn	07 04 44.9	+1.8
CGA2	Cerro Gallo 2	6.94	122	⇓eP	Pn	07 04 45.0	+1.9
PRS1	Puriscal	7.08	121	eP	Pn	07 04 47.2	+2.1
PRS1	Puriscal	7.08	121	eP	Pn	07 04 47.0	+2.0
LCR2	La Lucha 2	7.47	121	⇑eP	Pn	07 04 51.3	+1.0
LCR2	La Lucha 2	7.47	121	eP	Pn	07 04 51.2	+0.9
ICR	Volcan Irazu	7.49	119	eP	Pn	07 04 52.6	+2.0
ICR	Volcan Irazu	7.49	119	eP	Pn	07 04 52.8	+2.2
QCR	Quepos	7.51	124	eP	Pn	07 04 51.9	+1.0
BUS	Buena Vista	7.77	122	⇑eP	Pn	07 04 56.1	+1.6
BUS	Buena Vista	7.77	122	⇑eP	Pn	07 04 56.0	+1.5
LVIG	Laguna Verde	8.24	317	iP	Pn	07 04 51.1	-10
LVIG				iS	Sn	07 06 13.2	-19
LVIG				iS	Sn	07 06 19.6	-13
PPM	Popocatepetl	9.46	305	eP	Pn	07 05 17.5	0.0
PPM				iS	Sn	07 06 34.8	-27
PPM				iS	Sn	07 06 45.0	-17
ACX	Acapulco	9.64	290	iP	Pn	07 05 13.0	-7.0
YAIG	Yautepec	9.71	303	iP	Pn	07 05 17.6	-3.3
YAIG				iS	Sn	07 06 42.1	-26
YAIG				iS	Sn	07 07 02.6	-5.7
PLIG	Platanillo	9.85	299	iP	Pn	07 05 19.1	-3.7
PLIG				iS	Sn	07 06 54.5	-17
PLIG				iS	Sn	07 07 08.4	-3.3
CAIG	El Cayaco	10.01	290	iP	Pn	07 05 17.7	-7.4
CAIG				iS	Sn	07 06 50.7	-25
CAIG				iS	Sn	07 07 04.1	-12
ZIIG	Zihuatanejo	11.27	291	iP	Pn	07 05 35.8	-6.4
ZIIG				iS	Sn	07 07 23.2	-23
MOIG	Morelia	11.85	301	iP	Pn	07 05 47.5	-2.7
MOIG				iS	Sn	07 08 09.1	+8.5
MRX	Morelia	11.87	301	eP	Pn	07 05 45.0	-5.3
MGV	Manicaragua	12.98	49	eP	Pn	07 06 10.9	+5.4
BBJ	Bamboo Saint A	13.49	68	⇑eP	Pn	07 06 16.2	+3.9
SFJM	Santa Fe	13.77	301	iP	Pn	07 06 13.0	-2.9
STH	Stony Hill	13.82	70	⇑eP	Pn	07 06 22.9	+6.4
HOJ	Hope	13.85	70	⇑eP	Pn	07 06 26.5	+9.5
GWJ	Greenwich	13.89	70	⇑eP	Pn	07 06 24.1	+6.6
LMGC	Las Mercedes	14.32	62	eP	Pn	07 06 32.5	+9.3
	baz=237						
LMGC				eS	Sn	07 09 24.1	+23
	comp=N,2µm,19.2s						
LMGC				e			
	comp=E,1µm,20.3s						
CJM	Chamela	15.10	294	iP	Pn	07 06 28.4	-4.8
KVTX	Kingsville	15.39	334	ePn	Pn	07 06 36.9	0.0
RCC	Rio Carpintero	15.43	64	eP	Pn	07 06 43.4	+5.9
HLGC	Holguin	15.47	61	eP	Pn	07 06 43.7	+5.8
DWPF	Disney	16.58	29	eP	Pn	07 06 53.6	+1.6
	comp=E,326nm,1.0s						
HKT	Hockley	16.88	344	eP	Pn	07 06 55.1	-0.5
HKT				pmax	pmax		
	comp=Z,310nm,1.8s						
HKT	Hockley	16.88	344	ePn	Pn	07 06 55.1	-0.5
	comp=Z,310nm,1.8s						
OTAV	Otavalo	17.93	137	ePn	Pn	07 07 09.4	+0.9
OTAV				ePcP	PcP	07 11 43.0	+2.4
ROSC	El Rosal	18.19	118	P	Pn	07 07 15.4	+3.8
	comp=Z,2.0nm,0.3s,baz=115,slow=3.4,SNR=69						
ROSC				S	S	07 10 47.9	+13
	comp=Z,0.4nm,0.3s,baz=290,slow=13,SNR=2.4						
ROSC				PcP	PcP	07 11 43.4	+2.3
	comp=Z,0.5nm,0.3s,baz=90,slow=10,SNR=4.5						
ROSC				ScP	ScP	07 15 20.7	+11
	comp=Z,0.2nm,0.3s,baz=284,slow=18,SNR=4.1						
ROSC	El Rosal	18.19	118	eP	Pn	07 07 15.7	+4.0
ROSC				ePcP	PcP	07 11 45.2	+4.2
NATX	Nacogdoches	18.34	349	ePn	Pn	07 07 13.4	-0.1
	comp=Z,105nm,0.7s						
JCT	Junction City	18.75	334	eP	Pn	07 07 17.4	-1.0
JCT				eS	S	07 10 45.3	-1.5
JCT				pmax	pmax		
	comp=Z,58nm,0.7s						
JCT	Junction City	18.75	334	eP	Pn	07 07 17.4	-1.1
	comp=Z,58nm,0.7s						
JCT				eS	S	07 10 45.2	-1.6
JCT				ePcP	PcP	07 11 42.6	+0.6
LRAL	Lakeview Retre	19.46	9	eP	Pn	07 07 28.2	+1.3
	comp=Z,178nm,1.0s						
SDV	Santo Domingo	20.02	102	P	P	07 07 31.9	+0.8
	comp=Z,2.7nm,0.3s,baz=301,slow=5.1,SNR=53						
SDV				PcP	PcP	07 11 46.4	+2.1
	comp=Z,0.6nm,0.3s,baz=345,slow=1.5,SNR=5.3						
SDV				ScP	ScP	07 15 23.8	+10
	comp=Z,0.4nm,0.3s,baz=17,slow=19,SNR=5.5						
SDV	Santo Domingo	20.02	102	eP	P	07 07 31.0	0.0
	comp=Z,71nm,0.7s						
SDV				ePcP	PcP	07 11 46.0	+1.8
OXF	Oxford	20.70	2	eP	P	07 07 39.0	+0.6
OXF				e		07 11 46.6	
MIAR	Mount Ida	20.90	353	eP	P	07 07 40.7	+0.2
MIAR				eS	S	07 11 23.7	-5.8
MIAR				pmax	pmax		
	comp=Z,186nm,1.0s						
MIAR	Mount Ida	20.90	353	eP	P	07 07 40.7	+0.1
	comp=Z,186nm,1.0s						
MIAR				eS	S	07 11 23.7	-5.8
UALR	University of	21.01	356	eP	P	07 07 42.1	+0.4
	comp=Z,62nm,0.7s,mb5.0						
PLAL	Pickwick Lake	21.26	5	eP	P	07 07 45.4	+1.0
	comp=Z,124nm,0.8s,mb5.3						
PLAL				ePcP	PcP	07 11 47.2	+0.6
LPIG	La Paz	21.39	302	P	P	07 07 44.2	-1.6
	comp=Z,52nm,0.8s,mb4.9,baz=169,slow=1.4,SNR=7.9						
LPIG				LR	LR	07 16 40.7	
	comp=Z,2µm,18.3s,baz=129,slow=38						
HBAR	Harrisburg	21.72	360	eP	P	07 07 50.2	+0.9
SWET	Sewanee	21.77	10	eP	P	07 07 51.8	+2.1
HALT	Halls	22.10	2	eP	P	07 07 54.1	+0.8
WMOK	Wichita Mounta	22.22	342	eP	P	07 07 51.9	-2.7
CPCT	Cooper Cave	22.27	13	eP	P	07 07 57.5	+2.4
CPCT				ePcP	PcP	07 11 50.3	+1.7
GDL2	Guadalupe Moun	22.35	328	eP	P	07 07 55.5	-0.4
WVT	Waverly	22.42	6	eP	P	07 07 56.7	0.0
WVT				e		07 11 49.2	
WVT				pmax	pmax		
	comp=Z,48nm,0.6s,mb5.0						
WVT	Waverly	22.42	6	eP	P	07 07 56.7	0.0
	comp=Z,48nm,0.6s,mb5.0						
WVT				ePcP	PcP	07 11 49.2	+0.3
GLAT	Glass	22.46	2	eP	P	07 07 57.0	0.0
MNTX	Cornudas Mount	22.51	325	eP	P	07 07 56.5	-1.2
	comp=Z,304nm,0.8s,mb5.7						
MNTX				ePcP	PcP	07 11 49.9	+0.8
UTMT	University of	22.55	3	eP	P	07 07 58.4	+0.3
	comp=Z,197nm,0.9s,mb5.4						
PARMO	Parma	22.83	1	eP	P	07 08 01.6	+0.6
AMTX	Amarillo	23.36	336	eP	P	07 08 04.6	-1.6
	comp=Z,138nm,0.8s,mb5.3						
TZTN	Tazewell	23.54	14	eP	P	07 08 08.8	+1.1
TZTN				ePcP	PcP	07 11 53.0	+1.8
SJG	San Juan	23.77	76	P	P	07 08 08.4	-1.5
	comp=Z,25nm,0.7s,mb4.7,baz=295,slow=5.1,SNR=5.3						
SJG				PcP	PcP	07 11 52.9	+1.2
	comp=Z,30nm,0.6s,baz=4.7,slow=2.3,SNR=6.6						
SJG	San Juan	23.77	76	eP	P	07 08 09.3	-0.5
	comp=Z,13nm,0.6s,mb4.4						
SJG				epP		07 08 22.8	
SJG				PcP	PcP	07 11 52.9	+1.2
ATAH	Atahualpa	23.84	149	P	P	07 08 11.8	+1.3
	comp=Z,26nm,0.7s,mb4.7,baz=342,slow=7.7,SNR=19						
ATAH				PcP	PcP	07 11 54.6	+2.8
	comp=Z,9.9nm,0.8s,baz=302,slow=3.1,SNR=3.8						
ATAH				LR	LR	07 16 21.8	
	comp=Z,2µm,18.1s,baz=172,slow=34						
SIUC	Southern Illin	23.90	2	eP	P	07 08 11.5	+0.4
	comp=Z,70nm,0.7s,mb5.1						
SIUC				ePcP	PcP	07 11 53.2	+1.3
CNNC	Cliffs of the	24.22	26	eP	P	07 08 14.3	+0.3
CCM	Cathedral Cave	24.23	358	eP	P	07 08 13.8	-0.2
CCM				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.2						
CCM	Cathedral Cave	24.23	358	eP	P	07 08 13.8	-0.3
	comp=Z,90nm,0.8s,mb5.2						
USIN	University of	24.25	5	eP	P	07 08 14.6	+0.3
	comp=Z,144nm,1.0s,mb5.3						
WCI	Wyandotte Cave	24.67	8	eP	P	07 08 18.8	+0.7
WCI				e		07 11 54.6	
WCI				pmax	pmax		
	comp=Z,112nm,0.6s,mb5.5						
WCI	Wyandotte Cave	24.67	8	eP	P	07 08 18.8	+0.7
	comp=Z,112nm,0.6s,mb5.5						
WCI				ePcP	PcP	07 11 54.5	+0.9
SLM	Saint Louis	24.80	0	eP	P	07 08 19.6	+0.4
SLM				pmax	pmax		
	comp=Z,33nm,0.5s,mb5.0						
SLM	Saint Louis	24.80	0	eP	P	07 08 19.6	+0.3
	comp=Z,33nm,0.5s,mb5.0						
ELN	Prospectdale	24.94	19	eP	P	07 08 22.2	+1.6
BLA	Blacksburg	25.03	19	eP	P	07 08 22.8	+1.4
BLA				e		07 11 56.2	
BLA				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.0						
BLA	Blacksburg	25.03	19	eP	P	07 08 22.8	+1.4
	comp=Z,5.7nm,0.9s,mb4.0						
BLA				ePcP	PcP	07 11 56.2	+1.7
Y22C	IRIS PASSCAL I	25.15	326	⇓P	P	07 08 23.3	+0.8
	baz=25,SNR=16						
LPM	Los Pinos Moun	25.18	327	⇓eP	P	07 08 23.2	+0.5
LPM				ePcP	PcP	07 11 55.9	+1.1
FWV	Forest Hill	25.25	18	eP	P	07 08 24.2	+0.8
LENM	Lemitar	25.25	326	eP	P	07 08 24.2	+0.9
LENM				ePcP	PcP	07 11 57.0	+2.1
PCRV	Puerto La Cruz	25.50	95	P	P	07 08 27.0	+1.4
	comp=Z,13nm,0.6s,mb4.6,baz=159,slow=0.9,SNR=9.4						
PCRV				LR	LR	07 20 19.9	
	comp=Z,895nm,18.8s,baz=284,slow=41						
LAZ	Ladron	25.52	327	eP	P	07 08 26.9	+1.1
BLO	Bloomington	25.57	7	eP	P	07 08 26.8	+0.6
BLO				e		07 11 56.6	
BLO				pmax	pmax		
	comp=Z,32nm,0.8s,mb4.8						
BLO	Bloomington	25.57	7	eP	P	07 08 26.8	+0.6
	comp=Z,32nm,0.8s,mb4.8						
BLO				ePcP	PcP	07 11 56.6	+0.9
ANMO	Albuquerque	25.59	328	P	P	07 08 26.9	+0.4
	comp=Z,25nm,0.7s,mb4.8,baz=146,slow=11,SNR=132						
ANMO				PcP	PcP	07 11 57.1	+1.4
	comp=Z,15nm,0.8s,baz=160,slow=4.3,SNR=7.9						
ANMO				LR	LR	07 20 08.6	
	comp=Z,839nm,20.0s,baz=142,slow=40						
ANMO	Albuquerque	25.59	328	P	P	07 08 26.9	+0.5
ANMO						07 11 57.1	
ANMO				pmax	pmax		
	comp=Z,25nm,0.7s						
ANMO				MLR	MLR		
	comp=Z,839nm,20.0s						
ANMO	Albuquerque	25.59	328	eP	P	07 08 26.8	+0.4
	comp=Z,22nm,0.7s,mb4.7						
ANMO				ePcP	PcP	07 11 56.9	+1.2
KSU1	Kansas State U	25.84	349	eP	P	07 08 28.0	-0.6
TUC	Tucson	26.21	318	eP	P	07 08 31.8	-0.2
TUC				e		07 11 58.2	
TUC				pmax	pmax		
	comp=Z,56nm,0.9s,mb5.0						
TUC	Tucson	26.21	318	eP	P	07 08 31.8	-0.2
	comp=Z,56nm,0.9s,mb5.0						
TUC				ePcP	PcP	07 11 58.2	+1.0
116A	Eloy	26.97	318	⇑P	P	07 08 38.6	-0.3
	baz=27,SNR=58						
CBN	Corbin	26.99	23	eP	P	07 08 41.1	+2.0
	comp=Z,52nm,0.7s,mb5.2						
ACSO	Alum Creek Sta	27.19	13	eP	P	07 08 42.0	+1.2
	comp=Z,41nm,0.8s,mb5.0						
ACSO				ePcP	PcP	07 12 00.3	+0.8
115A	Sonoran Desert	27.40	317	⇑P	P	07 08 42.6	-0.1
	baz=28,SNR=63						
SDMD	Soldier's Deli	28.25	23	eP	P	07 08 48.8	-1.5
SDMD				ePcP	PcP	07 12 00.5	-1.5
Z14A	Wintersburg	28.28	318	⇓P	P	07 08 50.6	0.0
	baz=28,SNR=21						
MVCO	Mesa Verde	28.38	329	eP	P	07 08 51.7	+0.2
MVCO				ePcP	PcP	07 12 03.8	+1.5
X15A	Humboldt	28.55	320	⇑P	P	07 08 53.1	+0.2
	baz=29,SNR=83						
Y14A	Wickenburg	28.68	318	⇓P	P	07 08 54.0	-0.1
	baz=29						
WUAZ	Wupatki	28.71	323	eP	P	07 08 54.9	+0.5
	comp=Z,110nm,0.7s,mb5.6						
WUAZ				epP	pP	07 09 08.7	-2.9
WUAZ				ePcP	PcP	07 12 04.7	+1.5

NNA **Nana** 28.91 152 PcP PcP 07 12 02.9 -0.8
comp=Z,10nm,0.7s,baz=300,slow=6.0,SNR=5.1
NNA LR LR 07 18 19.4
comp=Z,1µm,20.9s,baz=115,slow=32
X14A Yava 28.94 319 ⇓P **P** **07 08 56.8 +0.3**
baz=29,SNR=55
MVL Millersville 28.95 23 *eP* **P** **07 08 57.9 +1.4**
MVL *e*PcP PcP 07 12 04.2 +0.5
SSPA Standing Stone 28.96 20 *eP* **P** **07 08 57.2 +0.5**
comp=Z,16nm,0.9s,mb4.7
SSPA *e*PcP PcP 07 12 03.0 -0.8
W15A Williams 29.02 321 ⇓P **P** **07 08 58.0 +0.8**
baz=29,SNR=49
AAM Ann Arbor 29.06 10 *eP* **P** **07 08 57.5 0.0**
AAM pmax pmax
comp=Z,36nm,0.6s,mb5.2
AAM Ann Arbor 29.06 10 *eP* **P** **07 08 57.5 0.0**
comp=Z,36nm,0.6s,mb5.2
JFWS Jewell Farm 29.07 0 *eP* **P** **07 08 57.3 -0.3**
JFWS *e* 07 12 04.6
ISCO Idaho Springs 29.18 336 *eP* **P** **07 09 00.3 +1.7**
ISCO *e* 07 12 06.2
ISCO pmax pmax
comp=Z,11nm,0.8s,mb4.5
ISCO Idaho Springs 29.18 336 *eP* **P** **07 09 00.3 +1.7**
comp=Z,11nm,0.8s,mb4.5
ISCO *e*PcP PcP 07 12 06.2 +1.8
SMCO Snowmass 29.23 333 *eP* **P** **07 08 59.0 0.0**
comp=Z,26nm,1.1s,mb4.8
SMCO *e*PcP PcP 07 12 06.4 +1.9
GLA Glamis 29.36 315 *eP* **P** **07 09 00.4 +0.2**
GLA *e* 07 12 06.0
GLA Glamis 29.36 315 ⇓P **P** **07 09 00.3 +0.1**
baz=29,SNR=24
W14A Seligman 29.55 320 ⇓P **P** **07 09 02.3 +0.5**
baz=30,SNR=59
Y12C Blythe 29.56 316 ⇓P **P** **07 09 02.0 0.0**
baz=30,SNR=12
X13A Yucca 29.62 319 ⇓P **P** **07 09 02.6 +0.1**
baz=30
PDMCI Parker Dam,Lak 29.64 318 ⇑P **P** **07 09 02.6 0.0**
baz=30,SNR=49
ERPA Erie 29.70 16 *eP* **P** **07 09 03.6 +0.5**
comp=Z,41nm,0.9s,mb5.1
BBSR BB Station 29.96 47 *eP* **P** **07 09 07.7 +2.2**
comp=Z,71nm,0.7s,mb5.4
BBSR *e*pP pP 07 09 24.0 +1.3
SWSC Sam W. Stewart 29.97 314 ⇓P **P** **07 09 05.5 -0.1**
baz=30,SNR=6.5
W13A Hualapai Mount 29.98 319 ⇑P **P** **07 09 06.1 +0.5**
baz=30,SNR=76
DVTC Desert V Tower 30.03 313 P **P** **07 09 06.4 +0.3**
baz=30,SNR=12
IRM Iron Mountain 30.23 317 ⇓P **P** **07 09 08.1 +0.2**
baz=30,SNR=23
NEE2 Needles Airpor 30.24 318 ⇓P **P** **07 09 08.1 +0.2**
baz=30,SNR=6.6
MONP Monument Peak 30.38 313 ⇓P **P** **07 09 09.5 +0.2**
baz=30,SNR=17
PHWY Pilot Hill 30.41 337 *eP* **P** **07 09 10.4 +0.9**
PHWY *e*PcP PcP 07 12 08.6 +1.1
BAR Barrett 30.45 313 *eP* **P** **07 09 09.7 -0.1**
BAR *e*PcP PcP 07 12 10.1 +2.5
BELC Belle Mtn. 30.71 315 ⇓P **P** **07 09 12.3 +0.3**
baz=31,SNR=22
W12A Cal Nev Ari 30.73 319 ⇓P **P** **07 09 12.5 +0.3**
baz=31,SNR=17
PAL Palisades 30.77 25 *eP* **P** **07 09 13.5 +0.9**
PAL pmax pmax
comp=Z,19nm,0.8s,mb4.9
PAL Palisades 30.77 25 *eP* **P** **07 09 13.5 +0.9**
comp=Z,19nm,0.8s,mb4.9
PFO Pinyon Flat Ob 30.80 314 *eP* **P** **07 09 12.9 0.0**
PFO *e* 07 12 11.3
PFO pmax pmax
comp=Z,16nm,0.9s,mb4.8
PFO Pinyon Flat Ob 30.80 314 *eP* **P** **07 09 12.9 0.0**
comp=Z,16nm,0.9s,mb4.7
PFO *e*PcP PcP 07 12 11.3 +2.8
PFO Pinyon Flat Ob 30.80 314 P **P** **07 09 13.3 +0.4**
baz=31,SNR=10
SRU San Rafael 30.86 329 *eP* **P** **07 09 13.8 +0.4**
SRU *e* 07 12 09.4
SRU pmax pmax
comp=Z,22nm,0.9s,mb4.9
SRU San Rafael 30.86 329 *eP* **P** **07 09 13.8 +0.4**
comp=Z,22nm,0.9s,mb4.9
SRU *e*PcP PcP 07 12 09.4 +0.7
109C Camp Elliot, M 30.87 313 ⇓P **P** **07 09 13.2 -0.3**
baz=31
V12A Nelson 30.98 319 ⇑P **P** **07 09 15.0 +0.5**
baz=31,SNR=114
BINY Binghamton 31.00 21 *eP* **P** **07 09 15.1 +0.4**
comp=Z,33nm,0.9s,mb5.1
BINY *e*PcP PcP 07 12 09.5 +0.4
U12A Valley of Fire 31.23 321 ⇓P **P** **07 09 17.3 +0.5**
baz=31,SNR=46
CCUT Cedar City 31.27 323 *eP* **P** **07 09 18.3 +1.2**
CCUT *e*pP pP 07 09 34.7 +0.4
CCUT *e*PcP PcP 07 12 11.7 +1.9
MSU Marysvale 31.28 326 *eP* **P** **07 09 18.2 +1.1**
MSU *e* 07 12 11.3
MURC Murrieta 31.32 314 ⇑P **P** **07 09 17.4 0.0**
baz=31,SNR=10
TMUT Trail Mountain 31.35 328 *eP* **P** **07 09 18.6 +0.8**
TMUT *e*PcP PcP 07 12 11.2 +1.2
HEC Hector,Ludlow 31.41 316 ⇑P **P** **07 09 18.7 +0.4**
baz=32,SNR=12
RWWY Rawlins 31.42 336 *eP* **P** **07 09 18.7 +0.3**
comp=Z,45nm,0.9s,mb5.2
RWWY *e*PcP PcP 07 12 11.1 +0.9
ARUT Antelope Range 31.48 324 *eP* **P** **07 09 19.6 +0.7**
ARUT *e* 07 12 11.0
BBRC Big Bear Sol-O 31.48 315 ⇑P **P** **07 09 19.7 +0.8**
baz=32
TUQ Turquoise Mtn. 31.50 318 ⇑P **P** **07 09 19.3 +0.3**
baz=32,SNR=12
SHPR Sheep Range 31.67 320 *eP* **P** **07 09 21.1 +0.6**
SHPR *e*PcP PcP 07 12 12.4 +1.5
RRX Edison Barstow 31.89 316 ⇑P **P** **07 09 22.8 +0.4**
baz=32
SCI San Clemente I 31.95 312 ⇑P **P** **07 09 22.8 -0.3**
baz=32
BFSC Mount Baldy St 31.98 314 ⇑P **P** **07 09 23.4 +0.1**
baz=32,SNR=18
GSC Goldstone 32.00 317 *eP* **P** **07 09 23.8 +0.4**
GSC *e* 07 12 13.2
GSC Goldstone 32.00 317 ⇑P **P** **07 09 23.7 +0.3**
baz=32,SNR=18
CIS Catalina Islan 32.07 312 ⇓P **P** **07 09 24.1 +0.1**
baz=32
MPU Maple Canyon 32.10 329 *eP* **P** **07 09 25.1 +0.8**
MPU *e*PcP PcP 07 12 13.8 +1.8
FMP Fort Macarthur 32.14 313 ⇑P **P** **07 09 24.7 0.0**
baz=32
DAU Daniels Canyon 32.22 329 *eP* **P** **07 09 26.4 +1.1**
DAU *e* 07 12 13.3
MWC Mount Wilson 32.25 314 *eP* **P** **07 09 26.0 +0.4**
NLU North Lily Min 32.28 328 *eP* **P** **07 09 26.4 +0.5**
NLU *e*PcP PcP 07 12 12.6 0.0
U10A Ash Meadows, A 32.35 319 ⇓P **P** **07 09 27.4 +0.9**
baz=32,SNR=22
SADO Sadowa 32.39 15 P **P** **07 09 26.0 -0.9**
comp=Z,20nm,0.4s,mb5.2,baz=215,slow=9.0,SNR=37
SADO PcP PcP 07 12 12.6 -0.2
comp=Z,12nm,0.9s,baz=243,slow=6.8,SNR=2.8
RSSD Black Hills 32.43 342 *eP* **P** **07 09 26.2 -1.0**
RSSD *e* 07 12 13.4
RSSD pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
RSSD Black Hills 32.43 342 *eP* **P** **07 09 26.2 -0.9**
comp=Z,7.7nm,0.7s,mb4.5
RSSD *e*PcP PcP 07 12 13.4 +0.5
DECC Green Verdugo 32.46 314 ⇓P **P** **07 09 27.7 +0.3**
baz=32
QUA2 Belchertown 32.47 25 *eP* **P** **07 09 29.7 +2.1**
comp=Z,20nm,0.8s,mb4.9
EDW2 Edwards Air Fo 32.56 315 ⇓P **P** **07 09 28.3 -0.1**
baz=33,SNR=17
TPNV Topopah Spring 32.63 320 *eP* **P** **07 09 29.9 +1.0**
TPNV *e* 07 12 14.6
TPNV pmax pmax
comp=Z,42nm,0.9s,mb5.3
TPNV Topopah Spring 32.63 320 *eP* **P** **07 09 29.9 +1.0**
comp=Z,42nm,0.9s,mb5.3
TPNV *e*PcP PcP 07 12 14.6 +1.1
CTU Camp Tracy 32.67 329 *eP* **P** **07 09 30.1 +0.8**
comp=Z,7.1nm,0.8s,mb4.5
CTU *e*PcP PcP 07 12 14.5 +0.9
LRMC Laurel Mountai 32.69 316 ⇓P **P** **07 09 29.8 +0.3**
baz=33,SNR=28
FURC Furnace Creek, 32.72 318 ⇑P **P** **07 09 30.2 +0.5**
baz=33,SNR=42
NOQ North Oquirrh 32.83 329 *eP* **P** **07 09 31.4 +0.7**
comp=Z,122nm,0.8s,mb5.8
TCUT Toone Canyon 32.83 330 *eP* **P** **07 09 31.9 +1.2**
DUG Dugway 32.84 328 *eP* **P** **07 09 31.8 +1.0**
DUG *e* 07 12 14.8
DUG pmax pmax
comp=Z,25nm,0.9s,mb5.0
DUG Dugway 32.84 328 *eP* **P** **07 09 31.8 +0.9**
comp=Z,25nm,0.9s,mb5.0
DUG *e*PcP PcP 07 12 14.8 +0.7
ACCN Adirondack Com 32.88 23 *eP* **P** **07 09 32.0 +0.9**
MPMC Manual Prospec 32.89 317 ⇑P **P** **07 09 31.5 +0.2**
baz=33,SNR=81
BLG Laguna Peak 32.90 313 ⇑P **P** **07 09 31.5 +0.1**
baz=33
OSI Osito Adit 32.92 314 ⇓P **P** **07 09 31.6 0.0**
baz=33
DAC Darwin (Calif) 33.09 318 *eP* **P** **07 09 32.9 0.0**
DAC *e* 07 12 15.8
DAC pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
DAC Darwin (Calif) 33.09 318 *eP* **P** **07 09 32.9 0.0**
comp=Z,8.0nm,0.7s,mb4.7
DAC *e*PcP PcP 07 12 15.8 +1.0
Q12A Willow Creek R 33.13 324 ⇑P **P** **07 09 34.1 +0.8**
baz=33,SNR=52
NCB Newcomb 33.18 22 *eP* **P** **07 09 34.5 +0.8**
comp=Z,20nm,0.8s,mb5.0
NCB *e*PcP PcP 07 12 15.9 +0.8
BSC Santa Cruz Isl 33.25 312 ⇓P **P** **07 09 34.0 -0.4**
baz=33
ARVC Arvin 33.27 315 ⇓P **P** **07 09 34.9 +0.3**
baz=33,SNR=18
HWUT Hardware Ranch 33.28 331 *eP* **P** **07 09 35.0 +0.4**
HWUT *e*PcP PcP 07 12 15.9 +0.6
PDAR Pinedale Array 33.29 334 P **P** **07 09 33.8 -1.0**
comp=Z,5.9nm,0.8s,mb4.5,baz=127,slow=10,SNR=39
PDAR PcP PcP 07 12 15.5 +0.2
comp=Z,14nm,1.0s,baz=134,slow=4.3,SNR=15
PDAR ScP ScP 07 16 01.3 +8.0
comp=Z,1.0nm,0.6s,baz=129,slow=5.3,SNR=4.5
PDAR PKiKP PKiKP 07 19 41.5 +0.7
comp=Z,1.0nm,0.8s,baz=100,slow=3.3,SNR=7.3
PDAR LR LR 07 25 44.3
comp=Z,875nm,21.0s,baz=152,slow=41
PDAR Pinedale Array 33.29 334 P **P** **07 09 33.8 -1.0**
PDAR PcP PcP 07 12 15.5 +0.2
PDAR ScP ScP 07 16 01.3 +8.0
BW06 Boulder Array 33.29 334 *eP* **P** **07 09 34.1 -0.6**
ISA Isabella 33.32 316 *eP* **P** **07 09 35.6 +0.6**
ISA *e* 07 12 16.4
ISA pmax pmax
comp=Z,25nm,1.0s,mb5.0
ISA Isabella 33.32 316 *eP* **P** **07 09 35.6 +0.6**
comp=Z,25nm,1.0s,mb5.0
ISA *e*PcP PcP 07 12 16.4 +0.9
ISA Isabella 33.32 316 ⇑P **P** **07 09 35.4 +0.4**
baz=33,SNR=14
GRAC Grapevine Rang 33.37 319 ⇓P **P** **07 09 36.2 +0.8**
baz=33,SNR=67
P12A McGill 33.47 324 ⇓P **P** **07 09 37.4 +1.1**
baz=34,SNR=128
SPUT South Promonto 33.48 329 *eP* **P** **07 09 36.4 0.0**
SPUT *e*PcP PcP 07 12 16.5 +0.6
BGU Big Grassy Mou 33.49 328 *eP* **P** **07 09 37.0 +0.6**
BGU *e*PcP PcP 07 12 16.7 +0.8
CWC Cottonwood Cre 33.50 317 ⇓P **P** **07 09 36.9 +0.3**
baz=34,SNR=5.5
R10A Warm Springs 33.50 322 ⇑P **P** **07 09 38.0 +1.4**
baz=34,SNR=71
SBC Santa Barbara 33.53 313 ⇑P **P** **07 09 37.0 +0.2**
baz=34
LONY Lake Ozonia 33.62 21 *eP* **P** **07 09 38.1 +0.5**
LONY *e*PcP PcP 07 12 16.7 +0.4
S09A Goldfield 33.72 320 ⇓P **P** **07 09 38.8 +0.4**
baz=34,SNR=56
VES Veal, Richgr 33.83 316 ⇓P **P** **07 09 39.9 +0.5**
baz=34,SNR=72
PKM Peak Mountain 33.84 314 ⇓P **P** **07 09 39.7 +0.2**
baz=34,SNR=11
TPH Tonopah 33.93 320 *eP* **P** **07 09 40.9 +0.6**
TPH pmax pmax
comp=Z,29nm,0.8s,mb5.2
TPH Tonopah 33.93 320 *eP* **P** **07 09 40.9 +0.6**
comp=Z,29nm,0.8s,mb5.2
R09A Tonopah 33.94 321 P **P** **07 09 41.2 +0.9**
baz=34,SNR=89
TIN Tinemaha 33.95 318 ⇑P **P** **07 09 41.3 +0.8**
baz=34
AHID Auburn Hatcher 33.97 322 *eP* **P** **07 09 40.6 +0.1**
comp=Z,26nm,0.7s,mb5.2
AHID *e*PcP PcP 07 12 18.0 +0.7
HVU Hansel Valley 34.00 329 *eP* **P** **07 09 41.4 +0.5**
HVU *e* 07 12 18.2
HVU pmax pmax
comp=Z,60nm,1.0s,mb5.4
HVU Hansel Valley 34.00 329 *eP* **P** **07 09 41.4 +0.5**
comp=Z,60nm,1.0s,mb5.4
HVU *e*PcP PcP 07 12 18.2 +0.8
N13A Wendover, West 34.05 327 ⇑P **P** **07 09 42.1 +0.8**
baz=34,SNR=44
EYMN Ely 34.11 359 *eP* **P** **07 09 40.5 -1.4**
comp=Z,13nm,0.4s,mb5.1
EYMN *e*PcP PcP 07 12 17.5 -0.2
FRNY Flat Rock 34.16 22 *eP* **P** **07 09 42.4 +0.2**
FRNY *e*PcP PcP 07 12 17.5 -0.3
SDP Sudden Peak, L 34.16 313 ⇑P **P** **07 09 42.3 0.0**
baz=34
SMMC Simmler 34.18 314 ⇓P **P** **07 09 43.0 +0.5**
baz=34,SNR=12
RCTC Rector, Farmer 34.20 316 ⇑P **P** **07 09 42.9 +0.3**
baz=34,SNR=6.1
HELL Mitchell Peak, 34.26 317 ⇑P **P** **07 09 43.7 +0.6**
baz=34,SNR=57
REDW Red Top Meadow 34.33 333 *eP* **P** **07 09 43.5 -0.3**
comp=Z,82nm,0.9s,mb5.6
REDW *e*PcP PcP 07 12 19.8 +1.5
O11A Cowboy Ranch, 34.34 325 ⇑P **P** **07 09 44.6 +0.7**
baz=34,SNR=84
MTUM Tungsten Hills 34.34 318 *eP* **P** **07 09 44.6 +0.8**
MTUM *e*PcP PcP 07 12 19.8 +1.5
SNOW Snow King Moun 34.37 333 *eP* **P** **07 09 44.1 0.0**
comp=Z,76nm,0.6s,mb5.7
SNOW *e*PcP PcP 07 12 20.4 +2.0
Q09A Carvers 34.38 322 ⇓P **P** **07 09 45.4 +1.2**
baz=34,SNR=37
M13A Montello 34.40 328 P **P** **07 09 44.9 +0.6**
baz=34,SNR=88
V05C Boulder Hill, 34.41 315 ⇓P **P** **07 09 45.0 +0.6**
baz=34
LOHW Long Hollow 34.42 334 *eP* **P** **07 09 44.0 -0.5**
comp=Z,29nm,0.7s,mb5.2
LOHW *e*PcP PcP 07 12 19.6 +1.0
TPAW Teton Pass 34.48 333 *eP* **P** **07 09 45.2 +0.2**
comp=Z,42nm,0.8s,mb5.3
TPAW *e*PcP PcP 07 12 20.1 +1.3
N12A Clover Valley, 34.50 326 ⇑P **P** **07 09 45.8 +0.6**
baz=35,SNR=33
RRI2 Red Ridge 34.53 333 *eP* **P** **07 09 45.9 +0.5**
comp=Z,18nm,0.8s,mb4.9
RRI2 *e*PcP PcP 07 12 19.8 +1.0
MOOW Moose Ponds 34.59 334 *eP* **P** **07 09 45.4 -0.6**
comp=Z,9.3nm,0.8s,mb4.7
MOOW *e*PcP PcP 07 12 19.4 +0.4
R08A Mina 34.65 320 ⇑P **P** **07 09 47.5 +1.0**
baz=35,SNR=64
DCID1 Drake Creek 34.66 333 *eP* **P** **07 09 46.8 +0.2**
DCID1 *e*PcP PcP 07 12 20.3 +1.1
MLAC Mammoth Lakes 34.68 318 ⇓P **P** **07 09 47.6 +0.8**
baz=35,SNR=13
IMW Indian Meadow 34.80 334 *eP* **P** **07 09 50.6 +2.9**
comp=Z,14nm,0.6s,mb5.0
IMW *e*PcP PcP 07 12 23.7 +4.1
U05C Westside ANR, 34.81 316 ⇑P **P** **07 09 48.7 +0.9**
baz=35
P09A Austin 34.81 323 ⇑P **P** **07 09 48.7 +0.8**
baz=35,SNR=11
KCC Kaiser Creek 34.82 318 P **P** **07 09 48.5 +0.5**
baz=35,SNR=40
NVAR Mina Array Bea 34.82 320 P **P** **07 09 49.2 +1.3**
comp=Z,126nm,0.7s,mb5.8,baz=136,slow=7.4,SNR=529
NVAR PcP PcP 07 12 21.2 +1.5
comp=Z,35nm,0.8s,baz=123,slow=4.3,SNR=20
NVAR ScP ScP 07 16 07.9 +9.2
comp=Z,1.3nm,0.7s,baz=126,slow=5.3,SNR=5.6
NVAR PKiKP PKiKP 07 19 43.1 +1.2
comp=Z,0.3nm,0.6s,baz=225,slow=4.9,SNR=4.3
NVAR Mina Array Bea 34.82 320 P **P** **07 09 49.2 +1.3**
NVAR PcP PcP 07 12 21.2 +1.5
NVAR ScP ScP 07 16 07.9 +9.2
M12A Wells 34.83 327 P **P** **07 09 48.6 +0.6**
baz=35,SNR=85
FLWY Flagg Ranch 34.84 334 *eP* **P** **07 09 48.2 0.0**
comp=Z,7.6nm,0.6s,mb4.7
FLWY *e*PcP PcP 07 12 20.5 +0.7
N11A Elko Archery C 34.85 325 ⇑P **P** **07 09 49.0 +0.8**
baz=35,SNR=11
Q08A Gabbs 34.85 321 ⇑P **P** **07 09 49.0 +0.8**
baz=35,SNR=110
PKD Parkfield 34.89 315 P **P** **07 09 48.7 +0.2**
baz=35,SNR=17
T06C Millerton Lake 34.90 317 ⇑P **P** **07 09 47.8 -0.8**
baz=35,SNR=16
O10A Cortez Mining, 34.93 324 ⇑P **P** **07 09 49.7 +0.8**
baz=35,SNR=19
V04C Ramage Ranch, 34.96 314 ⇑P **P** **07 09 49.5 +0.4**
baz=35,SNR=14
R07C Lee Vining 35.09 319 ⇑P **P** **07 09 51.3 +1.0**
baz=35,SNR=31
YFT Old Faithful 35.20 334 *eP* **P** **07 09 52.5 +1.3**
YFT *e*PcP PcP 07 12 23.1 +2.3
N10A Dunphy 35.22 325 ⇓P **P** **07 09 52.0 +0.6**
baz=35,SNR=19
SAML Samuel 35.23 128 *eP* **P** **07 09 50.5 -1.0**
comp=Z,29nm,0.8s,mb5.2
SAML *e*PcP PcP 07 12 21.8 +0.9
O09A Fish Creek Ran 35.24 323 ⇑P **P** **07 09 52.3 +0.7**
baz=35,SNR=68
U04C Hernandez Rese 35.27 315 ⇓P **P** **07 09 51.5 -0.4**
baz=35,SNR=30
M11A Holland Ranch, 35.31 326 ⇓P **P** **07 09 52.6 +0.4**
baz=35,SNR=94
YNR Norris Junctio 35.35 335 *eP* **P** **07 09 56.6 +4.1**
V03C Hunter Liggett 35.41 314 ⇑P **P** **07 09 53.3 +0.3**
baz=36,SNR=9.9
YMR Madison River 35.43 334 *eP* **P** **07 09 53.9 +0.7**
comp=Z,23nm,1.0s,mb5.0
YMR *e*PcP PcP 07 12 22.8 +1.2
BMN Battle Mountai 35.43 324 *eP* **P** **07 09 54.2 +1.0**
BMN *e* 07 12 22.4
BMN pmax pmax
comp=Z,44nm,0.8s,mb5.3
BMN Battle Mountai 35.43 324 *eP* **P** **07 09 54.2 +1.0**
comp=Z,44nm,0.8s,mb5.3
BMN *e*PcP PcP 07 12 22.4 +0.8
Q07A Schurz 35.44 320 ⇑P **P** **07 09 54.1 +0.8**
baz=36
P08A Dixie Valley 35.46 322 ⇓P **P** **07 09 54.2 +0.7**
baz=36,SNR=8.9
LRV Little Rabbit 35.47 315 *eP* **P** **07 09 54.1 +0.6**
S06C San Francisco 35.48 318 ⇑P **P** **07 09 53.7 0.0**
baz=36,SNR=71
T05C Eagle Field, D 35.48 316 ⇑P **P** **07 09 53.3 -0.4**
baz=36,SNR=6.3
S05C Merced 35.50 317 ⇓P **P** **07 09 53.4 -0.4**
baz=36,SNR=39
WAKR Walker 35.58 319 *eP* **P** **07 09 55.5 +1.1**
R06C Coleville 35.60 319 ⇓P **P** **07 09 55.5 +0.8**
baz=36,SNR=39
QLMT Earthquake Lak 35.76 334 *eP* **P** **07 09 57.1 +1.1**
QLMT *e*PcP PcP 07 12 23.5 +1.0
M10A I.L. Ranch, Tu 35.78 326 ⇑P **P** **07 09 56.8 +0.7**
baz=36,SNR=98
HAST UC Hastings Re 35.82 315 ⇓P **P** **07 09 56.3 -0.2**
baz=36,SNR=17
GCMT Greycliff 35.84 337 *eP* **P** **07 09 55.8 -0.9**
GCMT *e*PcP PcP 07 12 23.7 +1.0
P07A Fallon 35.86 321 ⇑P **P** **07 09 57.6 +0.8**
baz=36
N09A Rock Creek Ran 35.88 324 ⇓P **P** **07 09 57.6 +0.6**
baz=36,SNR=59
O08A Rochester Mine 35.89 323 ⇑P **P** **07 09 57.1 0.0**
baz=36
CMB Columbia Colle 35.92 318 *eP* **P** **07 09 56.9 -0.5**
CMB *e* 07 12 23.3
CMB pmax pmax
comp=Z,27nm,0.8s,mb5.2
CMB Columbia Colle 35.92 318 *eP* **P** **07 09 56.9 -0.5**
comp=Z,27nm,0.8s,mb5.2
CMB *e*PcP PcP 07 12 23.3 +0.4
CMB Columbia Colle 35.92 318 ⇑P **P** **07 09 57.2 -0.2**
baz=36,SNR=28
SAO San Andreas Ge 35.94 315 *eP* **P** **07 09 57.5 -0.1**
SAO pmax pmax
comp=Z,27nm,0.8s,mb5.2
SAO San Andreas Ge 35.94 315 *eP* **P** **07 09 57.5 -0.1**
comp=Z,27nm,0.8s,mb5.2
PACP Pacheco Peak 35.96 316 ⇓P **P** **07 09 57.6 -0.2**
baz=36,SNR=17
R05C Kirkwood Meado 36.10 319 ⇓P **P** **07 09 59.8 +0.9**
baz=36,SNR=31
HLID Hailey 36.13 330 *eP* **P** **07 09 59.3 +0.1**
comp=Z,27nm,0.9s,mb5.2
HLID *e*PcP PcP 07 12 25.4 +1.8
HLID *e*ScP ScP 07 16 13.2 +10
N08A GE Springer Mi 36.19 323 ⇓P **P** **07 09 59.7 0.0**
baz=36,SNR=42
M09A Marrel Ranch, 36.22 325 ⇑P **P** **07 10 00.4 +0.4**
baz=36,SNR=48
O07A Toulon 36.23 322 P **P** **07 10 00.4 +0.3**
baz=36,SNR=47
WCN Washoe City 36.25 320 ⇓P **P** **07 10 01.1 +0.9**
baz=36,SNR=26
S04C Ingram Canyon, 36.25 316 ⇑P **P** **07 10 00.1 -0.1**
baz=36,SNR=13
PAHR Pah Rah Range 36.26 321 *eP* **P** **07 10 01.2 +0.9**
comp=Z,50nm,0.8s,mb5.5
PAHR *e*PcP PcP 07 12 25.3 +1.4
MCMT McKenzie Canyo 36.37 333 *eP* **P** **07 10 02.0 +0.8**
MCMT *e*PcP PcP 07 12 25.9 +1.6
R04C Big Horse Ranc 36.40 318 ⇓P **P** **07 10 02.5 +0.9**
baz=36,SNR=25
BOZ Bozeman (W) 36.50 335 *eP* **P** **07 10 02.4 +0.1**
BOZ *e* 07 12 25.3
BOZ pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
BOZ Bozeman (W) 36.50 335 *eP* **P** **07 10 02.4 +0.1**
comp=Z,9.2nm,0.5s,mb5.0
BOZ *e*PcP PcP 07 12 25.3 +0.7
LAVA Lava Cap Winer 36.55 319 ⇑P **P** **07 10 03.1 +0.3**
baz=37,SNR=30
P06A Stead Airport, 36.56 320 ⇓P **P** **07 10 03.8 +0.9**
baz=37,SNR=18
WENL Wente Brothers 36.60 316 ⇓P **P** **07 10 03.2 0.0**
baz=37,SNR=14
BNLO Ben Lomond (Sa 36.63 315 ⇓P **P** **07 10 03.3 -0.1**
baz=37
ULM Lac du Bonnet 36.67 354 P **P** **07 10 02.2 -1.6**
comp=Z,55nm,0.9s,mb5.5,baz=174,slow=8.9,SNR=53
ULM PcP PcP 07 12 24.9 -0.3
comp=Z,12nm,0.8s,baz=156,slow=3.2,SNR=4.6
ULM LR LR 07 28 31.9
comp=Z,492nm,18.9s,baz=331,slow=42
ULM Lac du Bonnet 36.67 354 *eP* **P** **07 10 02.2 -1.6**
comp=Z,57nm,0.8s,mb5.6
ULM *e*PcP PcP 07 12 24.8 -0.4
DLMT Dillon 36.68 334 *eP* **P** **07 10 03.8 0.0**
comp=Z,36nm,1.2s,mb5.2
DLMT *e*PcP PcP 07 12 27.0 +1.7
L09A Wilkinson Ranc 36.74 325 ⇓P **P** **07 10 04.4 0.0**
baz=37,SNR=75
M08A Happy Creek Ra 36.76 324 ⇓P **P** **07 10 04.7 +0.1**
baz=37,SNR=61
P05C Yuba Gap, Truc 36.78 319 ⇓P **P** **07 10 05.4 +0.6**
baz=37,SNR=21
O06A Flanigan 36.81 321 P **P** **07 10 05.6 +0.6**
baz=37,SNR=197
JRSC Jasper Ridge 36.81 316 ⇑P **P** **07 10 05.3 +0.3**
baz=37
BDM Black Diamond 36.85 317 ⇑P **P** **07 10 06.2 +0.9**
baz=37,SNR=10
BEKR Beckwourth 36.96 320 ⇓P **P** **07 10 07.0 +0.7**
baz=37,SNR=132
LRM Limekiln Ridge 36.98 334 *eP* **P** **07 10 06.6 +0.2**
Q04C Lincoln 37.01 318 ⇓P **P** **07 10 07.7 +0.9**

baz=37,SNR=9.2
SAC San Andreas 37.03 316 *e*P P **07 10 06.6 -0.2**
N06A Buffalo Meadow 37.17 322 ⇑P P **07 10 08.4 +0.3**
baz=37,SNR=103
M07A Soldier Meadow 37.18 323 ⇓P P **07 10 07.7 -0.4**
baz=37,SNR=31
K09A Rome 37.23 326 P P **07 10 08.7 +0.2**
baz=37,SNR=283
L08A Fields 37.23 325 ⇑P P **07 10 08.4 -0.1**
baz=37,SNR=161
Q03C Winters 37.32 317 ⇓P P **07 10 09.8 +0.6**
baz=37
OHCM Honcut 37.36 319 *e*P P **07 10 09.5 -0.2**
OHCM *e*PcP PcP 07 12 28.4 +1.1
O05C Quincy 37.36 320 ⇑P P **07 10 10.4 +0.8**
baz=37,SNR=42
HRY Holter Researc 37.44 336 *e*P P **07 10 10.2 -0.1**
HRY *e*PcP PcP 07 12 28.8 +1.3
CVS Carmenet Viney 37.45 317 ⇑P P **07 10 10.5 +0.1**
baz=38,SNR=8.5
FARB Farallon Islan 37.48 315 ⇓P P **07 10 10.7 0.0**
baz=38
ORV Oroville 37.50 319 ⇑P P **07 10 11.2 +0.4**
baz=38,SNR=9.2
SUTB Sutter Butte 37.50 318 ⇓P P **07 10 11.0 +0.2**
baz=38,SNR=43
WVOR Wild Horse Val 37.55 325 *e*P P **07 10 11.2 0.0**
comp=Z,109nm,0.8s,mb5.7
WVOR *e*PcP PcP 07 12 29.5 +1.6
MCCM Marconi Confer 37.63 316 *e*P P **07 10 12.5 +0.5**
MCCM Marconi Confer 37.63 316 ⇓P P **07 10 12.2 +0.3**
baz=38
ELFS Eagle Lake Fie 37.63 321 ⇓P P **07 10 12.8 +0.8**
baz=38,SNR=87
NSHM Saint Helena R 37.65 317 *e*P P **07 10 11.9 -0.1**
NSHM *e*PcP PcP 07 12 28.8 +0.6
K08A Mann Creek Ran 37.66 325 ⇑P P **07 10 12.7 +0.5**
baz=38,SNR=319
O04C Chester 37.68 320 ⇑P P **07 10 13.1 +0.7**
baz=38,SNR=49
L07A Adell 37.68 324 ⇑P P **07 10 12.6 +0.3**
baz=38,SNR=205
MNRC McLaughlin Nat 37.73 317 ⇑P P **07 10 13.1 +0.3**
baz=38,SNR=11
EGMT Eagleton 37.75 339 *e*P P **07 10 12.8 -0.2**
comp=Z,1.2nm,0.7s
M06C Likely Place G 37.84 322 ⇑P P **07 10 13.9 +0.3**
baz=38,SNR=46
O03C Acorn Hollow, 38.08 319 ⇓P P **07 10 15.3 -0.5**
baz=38,SNR=6.2
I09A Lost Marbles R 38.11 328 ⇑P P **07 10 15.8 -0.2**
baz=38,SNR=120
LBCM Butte Creek Ri 38.14 321 P P **07 10 16.4 +0.2**
CHMT Chamberlain Mo 38.19 335 *e*P P **07 10 16.2 -0.4**
CHMT *e*PcP PcP 07 12 31.1 +1.2
HATC Hat Creek Radi 38.20 321 ⇑P P **07 10 16.9 +0.2**
baz=38,SNR=18
HOPS Hopland 38.21 317 *e*P P **07 10 17.8 +1.0**
comp=Z,15nm,0.7s,mb4.9
HOPS *e*PcP PcP 07 12 31.1 +1.2
HOPS Hopland 38.21 317 ⇑P P **07 10 17.1 +0.4**
baz=38
M05C Lookout 38.33 322 ⇓P P **07 10 17.9 +0.1**
baz=38,SNR=61
GASB Alder Springs 38.33 318 ⇑P P **07 10 18.6 +0.8**
baz=38,SNR=25
MSO Missoula 38.41 334 *e*P P **07 10 18.0 -0.5**
comp=Z,26nm,1.4s,mb4.9
MSO *e*PcP PcP 07 12 31.4 +0.8
LTIM Timbered Crate 38.43 321 P P **07 10 18.8 +0.2**
I08A Drewsey 38.50 327 ⇑P P **07 10 18.7 -0.5**
baz=39,SNR=43
BMO Blue Mountains 38.50 329 *e*P P **07 10 18.5 -0.8**
comp=Z,19nm,0.9s,mb4.9
BMO *e*PcP PcP 07 12 31.6 +0.8
H09A Durkee 38.55 328 ⇓P P **07 10 18.7 -1.0**
baz=39,SNR=9.8
L05A Lakeview 38.56 323 ⇑P P **07 10 19.8 +0.1**
baz=39,SNR=26
P01C Double 8 Ranch 38.63 318 ⇑P P **07 10 19.3 -1.1**
baz=39,SNR=6.2
O02C Red Bluff 38.66 319 ⇑P P **07 10 19.1 -1.5**
baz=39,SNR=29
K06A Valley Falls 38.70 324 ⇓P P **07 10 20.4 -0.5**
baz=39,SNR=33
LASM Arnica Sink 38.73 322 P P **07 10 21.5 +0.3**
WDC Whiskeytown Da 38.73 320 *e*P P **07 10 19.2 -2.0**
WDC *e* 07 12 31.2
WDC pmax pmax
comp=Z,24nm,1.0s,mb5.0
WDC Whiskeytown Da 38.73 320 *e*P P **07 10 19.2 -2.0**
comp=Z,24nm,1.0s,mb5.0
WDC *e*PcP PcP 07 12 31.2 -0.4
WDC Whiskeytown Da 38.73 320 ⇑P P **07 10 19.0 -2.2**
baz=39,SNR=14
KIPM Iron Peak 38.91 318 *e*P P **07 10 23.5 +0.8**
KIPM *e*PcP PcP 07 12 34.1 +2.0
J06A Christmas Vall 38.93 325 P P **07 10 22.1 -0.7**
baz=39,SNR=62
H08A Prairie City 38.97 327 ⇓P P **07 10 22.6 -0.5**
baz=39,SNR=44
M04C Macdoel 39.00 322 P P **07 10 23.5 +0.1**
baz=39,SNR=38
I07A Izee 39.12 326 P P **07 10 23.9 -0.4**
baz=39,SNR=131
L04A Klamath Falls 39.26 322 P P **07 10 25.4 -0.2**
baz=39,SNR=25
O01C Eel River Cons 39.31 318 ⇓P P **07 10 26.2 +0.2**
baz=39,SNR=14
M02C Callahan 39.39 321 ⇑P P **07 10 25.1 -1.6**
baz=40,SNR=11
I06A Prineville 39.41 326 ⇓P P **07 10 26.4 -0.5**
baz=40,SNR=63
K04A Chilquin 39.43 323 ⇓P P **07 10 26.3 -0.7**
baz=40,SNR=7.2
YBH Yreka Blue Hor 39.50 321 P P **07 10 25.9 -1.7**
comp=Z,25nm,0.7s,mb5.2,baz=128,slow=4.9,SNR=31
YBH PcP PcP 07 12 33.9 0.0
comp=Z,9.4nm,0.7s,baz=66,slow=6.0,SNR=6.3
YBH Yreka Blue Hor 39.50 321 *e*P P **07 10 26.1 -1.5**
YBH *e* 07 12 34.2
YBH pmax pmax
comp=Z,25nm,0.8s
YBH Yreka Blue Hor 39.50 321 *e*P P **07 10 26.1 -1.5**
comp=Z,26nm,0.8s,mb5.1
YBH *e*PcP PcP 07 12 34.2 +0.3
YBH Yreka Blue Hor 39.50 321 ⇓P P **07 10 25.8 -1.7**
baz=40,SNR=18
J05A Fort Rock 39.56 324 ⇑P P **07 10 27.3 -0.8**
baz=40,SNR=36
BSMT Bassoo Peak 39.57 334 *e*P P **07 10 27.9 -0.3**
KHMM Horse Mountain 39.65 319 *e*P P **07 10 29.1 +0.3**
KHMM *e*PcP PcP 07 12 35.7 +1.2
JCC Jacoby Creek 39.81 319 ⇓P P **07 10 29.7 -0.4**
baz=40,SNR=17
F08A Pendleton 39.90 329 ⇑P P **07 10 29.1 -1.8**
baz=40,SNR=7.1
KRMB Red Mountain 40.12 320 *e*P P **07 10 33.0 +0.3**
I05A Bend 40.13 325 ⇑P P **07 10 32.6 -0.2**
baz=40,SNR=11
WALA Waterton Lakes 40.16 336 *e*P P **07 10 33.3 +0.2**
comp=Z,14nm,0.8s,mb4.8
WALA *e*PcP PcP 07 12 36.7 +0.7
L02A Cave Junction 40.28 321 ⇓P P **07 10 33.1 -1.0**
baz=40
H05A Madras 40.42 326 ⇑P P **07 10 34.4 -0.8**
baz=40
M01C Crescent City 40.43 320 ⇓P P **07 10 35.2 -0.1**
baz=40,SNR=5.3
K02A Glendale 40.57 322 ⇓P P **07 10 35.4 -1.1**
baz=41,SNR=9.9
J03A Ideyld Park 40.61 323 ⇓P P **07 10 35.5 -1.3**
baz=41,SNR=12
HAWA Hanford 40.69 329 *e*P P **07 10 36.7 -0.7**
comp=Z,0.9nm,0.7s
HAWA *e*PcP PcP 07 12 38.8 +1.0
KBO Bosley Butte 40.70 321 *e*P P **07 10 37.7 +0.1**
G05A Wamic 40.85 326 ⇑P P **07 10 39.2 +0.5**
baz=41,SNR=51
BROR Big Rock Looko 40.86 324 P P **07 10 38.2 -0.7**
NEW Newport 40.90 333 P P **07 10 38.6 -0.6**
comp=Z,9.4nm,0.7s,mb4.7,baz=131,slow=8.3,SNR=16
NEW PcP PcP 07 12 38.0 -0.5
comp=Z,24nm,0.7s,baz=118,slow=4.3,SNR=16
NEW Newport 40.90 333 P P **07 10 38.6 -0.5**
NEW 07 12 38.0
NEW pmax pmax
comp=Z,9.0nm,0.7s
NEW pmax pmax
comp=Z,24nm,0.7s
NEW Newport 40.90 333 *e*P P **07 10 37.8 -1.3**
comp=Z,13nm,0.8s,mb4.8
NEW *e*PcP PcP 07 12 38.2 -0.3
J02A Umpqua 40.97 323 ⇓P P **07 10 39.4 -0.3**
baz=41,SNR=24
H04A Detroit Lake 40.97 325 ⇓P P **07 10 39.3 -0.4**
baz=41,SNR=124
VFP Flag Point 40.98 326 P P **07 10 40.6 +0.8**
EUO Eugene 41.07 324 P P **07 10 39.0 -1.5**
HOOD Mount Hood Mea 41.08 326 *e*P P **07 10 41.3 +0.6**
KEBM Edson Butte 41.14 321 *e*P P **07 10 42.3 +1.2**
I03A Eugene 41.16 324 ⇓P P **07 10 40.3 -0.9**
baz=41,SNR=45
K01A Sixes 41.18 321 ⇓P P **07 10 42.3 +0.8**
baz=41,SNR=7.5
SSOR Sweet Springs 41.23 325 P P **07 10 41.6 -0.3**
F05A White Salmon 41.34 327 ⇑P P **07 10 43.2 +0.4**
baz=41,SNR=35
G04A Mulino 41.46 326 ⇑P P **07 10 43.2 -0.5**
baz=42,SNR=26
I02A Mapleton 41.49 323 ⇓P P **07 10 43.9 -0.1**
baz=42,SNR=10
COR Corvallis 41.54 324 *e*P P **07 10 44.7 +0.3**
COR *e* 07 12 41.7
COR pmax pmax
comp=Z,16nm,1.0s,mb4.7
COR Corvallis 41.54 324 *e*P P **07 10 44.7 +0.3**
comp=Z,157nm,1.0s,mb5.7
COR *e*PcP PcP 07 12 41.7 +1.1
EBG Ellensburg 41.57 329 P P **07 10 44.8 +0.2**
MPOR Mary's Peak 41.63 324 P P **07 10 45.7 +0.6**
LVC Limon Verde 41.85 149 *e*P P **07 10 46.7 -0.2**
comp=Z,16nm,1.0s,mb4.7
LVC *e*PcP PcP 07 12 42.7 +1.1
FFC Flin Flon 41.87 350 P P **07 10 46.7 -0.4**
comp=Z,290nm,0.9s,mb6.0,SNR=16
FFC Flin Flon 41.87 350 *e*P P **07 10 46.5 -0.6**
FFC pmax pmax
comp=Z,30nm,0.8s,mb5.1
FFC Flin Flon 41.87 350 *e*P P **07 10 46.5 -0.6**
comp=Z,30nm,0.8s,mb5.1
F04A Amboy 41.89 326 ⇑P P **07 10 46.5 -0.8**
baz=42,SNR=15
G03A Yamhill 41.97 325 P P **07 10 48.1 +0.1**
baz=42,SNR=34
H02A Toledo 41.99 324 ⇑P P **07 10 48.3 +0.2**
baz=42
LON Longmire 42.10 328 P P **07 10 48.7 -0.2**
FMW Mount Fremont 42.15 328 P P **07 10 49.5 +0.2**
E04A Onalaska 42.47 327 ⇓P P **07 10 51.9 -0.1**
baz=43,SNR=22
D05A Enumclaw 42.48 328 ⇓P P **07 10 51.8 -0.3**
baz=43,SNR=23
F03A Seaside 42.51 326 ⇑P P **07 10 52.7 +0.4**
baz=43,SNR=22
C05A Tolt Reservoir 42.66 329 ⇓P P **07 10 52.5 -1.0**
baz=43,SNR=18
D04A Dobbs Creek Ra 42.85 327 ⇓P P **07 10 54.5 -0.6**
baz=43
E03A Lebam 42.89 326 ⇓P P **07 10 55.2 -0.1**
baz=43,SNR=38
GNW Green Mountain 43.15 328 *e*P P **07 10 56.4 -1.1**
B05A Bryant 43.24 329 ⇓P P **07 10 56.8 -1.4**
baz=43,SNR=10
D03A Wishkah Elem. 43.36 327 ⇑P P **07 10 59.4 +0.2**
baz=44,SNR=18
EDM Edmonton 43.37 340 *e*P P **07 10 58.3 -1.0**
EDM *e* 07 12 46.0
A05A Maple Falls 43.73 330 ⇑P P **07 11 01.2 -1.0**
baz=44,SNR=16
B04A Port Angeles 43.82 328 ⇑P P **07 11 02.7 -0.1**
baz=44,SNR=7.7
A04A Legoe Bay, Lum 43.85 329 ⇑P P **07 11 02.2 -0.9**
baz=44,SNR=18
SCHQ Schefferville 44.96 19 P P **07 11 11.6 -0.3**
comp=Z,32nm,0.7s,mb5.2,baz=228,slow=5.4,SNR=46
SCHQ PcP PcP 07 12 51.6 -0.4
comp=Z,11nm,0.7s,baz=224,slow=4.9,SNR=4.3
SCHQ LR LR 07 31 14.1
comp=Z,872nm,19.1s,baz=198,slow=38
SCHQ Schefferville 44.96 19 *e*P P **07 11 11.7 -0.3**
comp=Z,118nm,1.0s,mb5.6
SCHQ *e* pP 07 11 28.0 -1.8
SCHQ *e*PcP PcP 07 12 51.8 -0.3
FCC Fort Churchill 45.02 357 *e*P P **07 11 11.8 -0.6**
FCC *e* 07 12 51.1
FCC *e* 07 12 57.5
FCC pmax pmax
comp=Z,35nm,0.9s,mb5.1
FCC Fort Churchill 45.02 357 *e*P P **07 11 11.8 -0.7**
comp=Z,35nm,0.9s,mb5.1
FCC *e*PcP PcP 07 12 51.1 -1.2
FCC *e*PP PP 07 12 57.5 -1.3
BBB Bella Bella 48.72 330 P P **07 11 41.2 -0.1**
comp=Z,30nm,0.8s,mb5.3,baz=138,slow=7.7,SNR=9.7
BBB PcP PcP 07 13 05.7 +0.3
comp=Z,16nm,0.8s,baz=212,slow=9.5,SNR=2.8
BBB Bella Bella 48.72 330 P P **07 11 41.2 -0.1**
BBB PcP PcP 07 13 05.7 +0.3
BDFB Brasilia 51.12 123 P P **07 11 59.7 +0.2**
comp=Z,22nm,0.8s,mb5.3,baz=286,slow=7.4,SNR=33
BDFB PcP PcP 07 13 14.9 +0.7
comp=Z,12nm,0.8s,baz=257,slow=1.8,SNR=4.8
BDFB LR LR 07 35 14.4
comp=Z,588nm,18.0s,baz=213,slow=38
BDFB Brasilia 51.12 123 P P **07 11 59.7 +0.2**
BDFB 07 13 14.9
CPUP Villa Florida 51.23 141 P P **07 11 58.5 -1.8**
comp=Z,5.8nm,0.8s,mb4.7,baz=317,slow=8.8,SNR=13
CPUP PcP PcP 07 13 14.2 -0.4
comp=Z,4.8nm,0.6s,baz=330,slow=3.2,SNR=8.8
CPUP LR LR 07 35 02.7
comp=Z,692nm,18.5s,baz=306,slow=38
CPUP Villa Florida 51.23 141 *e*P P **07 11 58.2 -2.1**
comp=Z,30nm,0.9s,mb5.3
CPUP *e*PcP PcP 07 13 14.6 0.0
YKA Yellowknife Ar 51.63 346 P P **07 12 01.2 -2.0**
comp=Z,14nm,0.8s,mb5.0,baz=150,slow=7.5,SNR=20
YKA PcP PcP 07 13 15.2 -0.8
comp=Z,7.0nm,0.6s,baz=147,slow=3.9,SNR=11
YKA LR LR 07 38 27.6
comp=Z,280nm,19.4s,baz=175,slow=41
YKA Yellowknife Ar 51.63 346 P P **07 12 01.3 -2.0**
YKA 07 13 15.2
YKA Yellowknife Ar 51.63 346 P P **07 12 01.2 -2.0**
YKA PcP PcP 07 13 15.2 -0.8
YKA LR LR 07 38 27.6
CRAG Craig 53.06 331 *e*P P **07 12 14.7 +0.8**
DLBC Dease Lake 53.50 335 P P **07 12 17.7 +0.6**
comp=Z,35nm,1.0s,mb5.3,baz=137,slow=5.2,SNR=10
TAOE Nuku Hiva Isla 54.19 248 *e*S S **07 19 59.3 +5.6**
comp=Z,5μm,19.8s
TAOE *e*LR LR 07 27 48.0
comp=Z,3μm,24.3s,baz=72
RKT Rikitea 56.92 230 *e*S S **07 20 35.7 +5.6**
comp=Z,935nm,28.0s
RKT *e*LQ 07 27 05.0
comp=Z,563nm,33.5s
RKT *e*LR LR 07 29 24.0
comp=Z,1μm,24.5s,baz=49
PLCA Paso Flores 57.26 162 *e*P P **07 12 42.6 -1.5**
PLCA pmax pmax
comp=Z,12nm,1.1s
PLCA Paso Flores 57.26 162 *e*P P **07 12 42.6 -1.5**
comp=Z,12nm,1.1s,mb4.8
RCBR Riachuelo 57.53 106 *e*P P **07 12 48.3 +2.3**
comp=Z,87nm,0.8s,mb5.8
CAM4 Nova Friburgo 59.08 127 ⇑*i*P P **07 12 57.1 +0.3**
CAM4 *i* 07 13 00.6
CAM4 *i* 07 13 06.8
CAM4 *i* pP 07 13 14.7 -0.7
CAM4 *i* 07 13 25.3
CAM4 *i* 07 13 59.0
DAWY Dawson 60.48 338 *e*P P **07 13 04.9 -1.5**
DAWY *e*PcP PcP 07 13 49.6 -0.8
RES Resolute Bay 60.98 359 *e*P P **07 13 08.6 -1.2**
RES pmax pmax
comp=Z,40nm,0.7s,mb5.6
RES Resolute Bay 60.98 359 *e*P P **07 13 08.6 -1.2**
comp=Z,40nm,0.7s,mb5.6
INK Inuvik 61.11 343 P P **07 13 09.4 -1.3**
comp=Z,23nm,0.7s,mb5.3,baz=128,slow=7.8,SNR=56
INK Inuvik 61.11 343 *e*P P **07 13 09.4 -1.3**
INK pmax pmax
comp=Z,25nm,0.7s
INK Inuvik 61.11 343 *e*P P **07 13 09.4 -1.3**
comp=Z,25nm,0.7s,mb5.3
EYAK Cordova Ski Ar 61.40 332 *e*P P **07 13 12.7 0.0**
EYAK *e*PcP PcP 07 13 54.2 0.0
PMR Palmer 63.33 333 *e*P P **07 13 24.8 -0.7**
PMR pmax pmax
comp=Z,14nm,0.5s,mb5.2
PMR Palmer 63.33 333 *e*P P **07 13 24.8 -0.6**
comp=Z,14nm,0.5s,mb5.2
SLKM Skilak Lake 63.43 331 *e*P P **07 13 25.3 -0.9**
KDAK Kodiak Island 63.72 328 P P **07 13 28.0 -0.1**
comp=Z,440nm,0.8s,SNR=22
KDAK Kodiak Island 63.72 328 P P **07 13 27.9 -0.3**
comp=Z,62nm,0.8s,mb5.5,baz=110,slow=3.7,SNR=61
KDAK Kodiak Island 63.72 328 *e*P P **07 13 27.6 -0.5**
comp=Z,50nm,0.7s,mb5.5
KDAK *e* pP 07 13 46.6 -0.4
MCK McKinley 64.06 335 *e*P P **07 13 29.5 -0.8**
MCK pmax pmax
comp=Z,19nm,1.2s,mb4.8
MCK McKinley 64.06 335 *e*P P **07 13 29.5 -0.8**
comp=Z,19nm,1.2s,mb4.8
COLA College 64.08 336 *e*P P **07 13 29.0 -1.5**
COLA *e* 07 14 04.9
COLA pmax pmax
comp=Z,27nm,0.8s,mb5.1
COLA College 64.08 336 *e*P P **07 13 29.0 -1.5**
comp=Z,27nm,0.8s,mb5.1
COLA *e*PcP PcP 07 14 04.9 -0.2
SUMG Summit 66.09 15 *e*P P **07 13 43.2 -0.3**
comp=Z,26nm,0.8s,mb5.1
PPT Papeete 66.11 244 *e*S S 07 22 32.7 +6.3
comp=Z,965nm,32.0s
PPT *e*LR LR 07 33 24.9
comp=Z,1μm,24.0s,baz=56
PPT Papeete 66.11 244 LR LR 07 35 11.7
comp=Z,709nm,18.9s,baz=38,slow=29
IMA2 Indian Mountai 66.79 337 *e*P P **07 13 46.5 -1.4**
SDPT Sand Point 67.45 324 *e*P P **07 13 51.6 -0.5**
TBI Tubuai 68.47 238 *e*S S 07 23 01.3 +6.5
comp=Z,280nm,25.2s
TBI *e*LR LR 07 34 29.8
comp=Z,924nm,27.5s,baz=61
FALS False Pass 69.07 324 *e*P P **07 14 01.6 -0.6**
ALE Alert 69.72 4 P P **07 14 04.0 -2.3**
comp=Z,212nm,0.8s,mb6.0,SNR=9.9
EFI East Falkland 70.96 159 *e*P P **07 14 11.7 -2.1**
EFI pmax pmax
comp=Z,78nm,1.1s,mb5.5
EFI East Falkland 70.96 159 *e*P P **07 14 11.7 -2.1**
comp=Z,78nm,1.1s,mb5.5
DAG Danmarks Havn 72.57 13 ⇑*i*P P **07 14 22.6 -0.8**
comp=Z,9.7nm,0.8s,mb4.7
DAG Danmarks Havn 72.57 13 ⇑*i*P P **07 14 22.6 -0.8**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SPIA Saint Paul Isl 73.03 326 *e*P P **07 14 26.6 +0.4**
JMIC Jan Mayen 74.47 20 *e*P P **07 14 30.7 -3.9**
JMIC *i* 07 24 46.3
PTEO Sao Teotonio 75.27 54 *e*P P **07 14 39.7 +0.5**
PVIS Viseu 75.58 51 *e*P P **07 14 40.9 -0.1**
MTE Manteigas 75.88 51 *e*P P **07 14 42.0 -0.7**
MTE *e*S S 07 23 58.7 -21
MTE *e*SS SS 07 28 42.2 -31
MTE Manteigas 75.88 51 *e*LR LR 07 38 45.4
comp=Z,412nm,19.2s
PCBR Castelo Branco 75.99 52 *e*P P **07 14 42.5 -0.8**
ESK Eskdalemuir 77.27 36 *e*P P **07 14 48.9 -1.7**
ESK pmax pmax
comp=Z,15nm,0.7s,mb4.8
ESK Eskdalemuir 77.27 36 *e*P P **07 14 48.9 -1.7**
comp=Z,14nm,0.7s,mb4.8
QUIF Quistinic 78.14 43 *e*P P **07 14 53.7 -1.7**
ESDC Sonseca Array 78.70 52 P P **07 14 57.4 -1.1**
comp=Z,5.8nm,0.7s,mb4.5,baz=289,slow=5.7,SNR=24
ESDC LR LR 07 48 42.5
comp=Z,240nm,19.0s,baz=265,slow=35
ESDC Sonseca Array 78.70 52 P P **07 14 57.4 -1.1**
ESDC LR LR 07 48 42.5
ESLA Sonseca Array 78.70 52 *e*P P **07 14 57.2 -1.2**
comp=Z,2.9nm,0.9s,mb4.1
KBS Kingsbay 78.97 11 *e*P P **07 15 01.7 +1.8**
KBS *e*SS SS 07 30 10.3 +11
KBS AMS AMS 07 53 31.0
comp=Z,326nm,18.1s
AMKA Amchitka 79.55 320 *e*P P **07 15 02.6 -0.5**
AMKA *e*PcP PcP 07 15 08.8 -2.0
GRR Gorron 79.60 43 *e*P P **07 15 01.8 -1.6**
comp=Z,33nm,0.9s,mb4.9
GRR Gorron 79.60 43 *e*P P **07 15 01.8 -1.6**
GRR pmax pmax
comp=Z,16nm,0.9s,mb4.8
GRR Gorron 79.60 43 *e*P P **07 15 01.8 -1.6**
comp=Z,16nm,0.9s,mb4.9
FLN La Foliniere 79.79 42 *e*P P **07 15 02.9 -1.5**
comp=Z,22nm,0.8s,mb4.7
FLN *e*R
comp=Z,632nm,22.5s
FLN La Foliniere 79.79 42 *e*P P **07 15 02.9 -1.5**
FLN pmax pmax
comp=Z,11nm,0.8s,mb4.7
FLN MLR MLR
comp=Z,630nm,22.5s
FLN La Foliniere 79.79 42 *e*P P **07 15 02.9 -1.5**
comp=Z,11nm,0.8s,mb4.7
FLN LR LR
comp=Z,630nm,22.5s
LDF La Druitiere 80.05 42 *e*P P **07 15 04.1 -1.7**
comp=Z,14nm,0.7s,mb4.6
LDF La Druitiere 80.05 42 *e*P P **07 15 04.1 -1.7**
LDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
LDF La Druitiere 80.05 42 *e*P P **07 15 04.1 -1.7**
comp=Z,6.9nm,0.7s,mb4.8
SJPF Ste Jean 80.20 48 *e*P P **07 15 05.4 -1.2**
comp=Z,29nm,1.1s,mb4.7
SJPF Ste Jean 80.20 48 *e*P P **07 15 05.4 -1.2**
SJPF pmax pmax
comp=Z,14nm,1.1s,mb4.7
SJPF Ste Jean 80.20 48 *e*P P **07 15 05.4 -1.2**
comp=Z,14nm,1.1s,mb4.7
MFF Saint Martin d 80.37 44 *e*P P **07 15 06.9 -0.6**
ETSF Etsaut 80.71 48 *e*P P **07 15 08.2 -1.2**
comp=Z,24nm,1.1s,mb4.6
ETSF Etsaut 80.71 48 *e*P P **07 15 08.2 -1.2**
ETSF pmax pmax
comp=Z,12nm,1.1s,mb4.6
ETSF Etsaut 80.71 48 *e*P P **07 15 08.2 -1.2**
comp=Z,12nm,1.1s,mb4.7
EPF Esparros 81.34 48 *e*P P **07 15 11.4 -1.3**
RJF Les Rejaudoux 81.74 45 *e*P P **07 15 13.2 -1.6**
RJF *e*R
comp=Z,490nm,21.0s
RJF Les Rejaudoux 81.74 45 *e*P P **07 15 13.2 -1.6**
RJF LR LR
comp=Z,490nm,21.0s
TCF Toulx Ste Croi 82.03 44 *e*P P **07 15 15.2 -1.1**
comp=Z,5.9nm,0.6s,mb4.3
TCF Toulx Ste Croi 82.03 44 *e*P P **07 15 15.2 -1.1**
TCF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
TCF Toulx Ste Croi 82.03 44 *e*P P **07 15 15.2 -1.1**
comp=Z,3.0nm,0.6s,mb4.3
BILL Bilibino 82.25 338 ⇑*i*P P **07 15 16.7 -0.8**
BILL pmax pmax
comp=Z,4.0nm,0.3s,mb4.7
BGF Bois d'Agland 82.40 44 *e*P P **07 15 17.2 -1.1**
comp=Z,16nm,0.7s,mb4.6
BGF Bois d'Agland 82.40 44 *e*P P **07 15 17.2 -1.1**
BGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
BGF Bois d'Agland 82.40 44 *e*P P **07 15 17.2 -1.1**
comp=Z,7.9nm,0.7s,mb4.7
BAIF Baives 82.56 40 *e*P P **07 15 18.3 -0.8**
MTLF Montolieu 82.63 47 *e*P P **07 15 18.6 -0.9**
AVF Avril sur Loir 82.70 44 *e*P P **07 15 18.3 -1.5**
comp=Z,22nm,1.2s,mb4.6
AVF Avril sur Loir 82.70 44 *e*P P **07 15 18.3 -1.5**
AVF pmax pmax
comp=Z,11nm,1.2s,mb4.6
AVF Avril sur Loir 82.70 44 *e*P P **07 15 18.3 -1.5**
comp=Z,11nm,1.2s,mb4.6
SSF Saint Saulge 82.74 43 *e*P P **07 15 18.7 -1.4**

LOR Lormes 82.93 43 *e*P **P** 07 15 20.1 -0.9
comp=Z,24nm,1.1s,mb4.7
LOR *e*R
comp=Z,543nm,19.2s
LOR Lormes 82.93 43 *e*P **P** 07 15 20.1 -0.9
LOR pmax pmax
comp=Z,12nm,1.1s,mb4.6
LOR MLR MLR
comp=Z,540nm,19.3s
LOR Lormes 82.93 43 *e*P **P** 07 15 20.1 -0.9
comp=Z,12nm,1.1s,mb4.6
LOR LR LR
comp=Z,540nm,19.3s
GIVF Givet 82.94 40 *e*P **P** 07 15 20.2 -0.9
NSS Namsos 82.97 25 *e*P **P** 07 15 21.1 -0.1
SMF Signal de Mont 83.06 44 *e*P **P** 07 15 20.3 -1.4
comp=Z,8.6nm,0.7s,mb4.4
SMF Signal de Mont 83.06 44 *e*P **P** 07 15 20.3 -1.4
SMF pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
SMF Signal de Mont 83.06 44 *e*P **P** 07 15 20.3 -1.4
comp=Z,4.3nm,0.7s,mb4.4
MEZF Maizieres J'vi 83.44 42 *e*P **P** 07 15 22.9 -0.8
LASF Ste Croix 83.63 46 *e*P **P** 07 15 23.2 -1.4
NB2 NORSAR Subarra 83.66 29 P **P** 07 15 25.7 +0.9
comp=Z,0.6nm,0.7s,baz=293,slow=5.1
NOA NORSAR Array B 83.66 29 P **P** 07 15 24.9 +0.2
comp=Z,6.1nm,0.8s,mb4.5,baz=289,slow=4.8,SNR=13
NOA LR LR 07 51 22.3
comp=Z,155nm,20.8s,baz=275,slow=35
NOA NORSAR Array B 83.66 29 P **P** 07 15 24.9 +0.2
NOA LR LR 07 51 22.3
TRO Tromso 83.79 19 *e*P **P** 07 15 25.2 -0.2
TRO AMb AMB 07 15 26.6
comp=Z,23nm,0.9s,mb5.0
TRO *e*SKSa 07 25 39.2
TRO AMS AMS 07 52 40.9
comp=Z,208nm,22.5s
TRO Tromso 83.79 19 *e*P **P** 07 15 23.5 -1.9
TRO pmax pmax
comp=Z,23nm,0.9s,mb5.0
TRO MLR MLR
comp=Z,210nm,22.5s
TRO Tromso 83.79 19 *e*P **P** 07 15 23.5 -1.9
comp=Z,23nm,0.9s,mb5.0
TRO LR LR
comp=Z,210nm,22.5s
WLF Walferdange 83.87 40 *e*P **P** 07 15 25.4 -0.5
comp=Z,13nm,0.8s,mb4.8
VIVF Saint-Julien-l 84.02 45 *e*P **P** 07 15 25.9 -0.7
comp=Z,15nm,1.0s,mb4.5
VIVF Saint-Julien-l 84.02 45 *e*P **P** 07 15 25.9 -0.7
VIVF pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
VIVF Saint-Julien-l 84.02 45 *e*P **P** 07 15 25.9 -0.7
comp=Z,7.7nm,1.0s,mb4.5
LIC Lamto 84.12 85 *e*P **P** 07 15 27.1 0.0
comp=Z,215nm,0.7s,mb5.8
LIC *e*R
comp=Z,40nm,20.0s
LIC Lamto 84.12 85 *e*P **P** 07 15 27.1 0.0
comp=Z,107nm,0.7s,mb5.8
LIC LR LR
comp=Z,20nm,20.0s
DBIC Dimbokro 84.19 85 P **P** 07 15 28.1 +0.7
comp=Z,79nm,0.7s,mb5.7,baz=266,slow=4.8,SNR=130
DBIC LR LR 07 48 50.1
comp=Z,455nm,21.9s,baz=259,slow=33
DBIC Dimbokro 84.19 85 *e*P **P** 07 15 27.6 +0.1
comp=Z,68nm,0.6s,mb5.7
HAU Haudompre 84.40 42 *e*P **P** 07 15 27.1 -1.4
comp=Z,14nm,0.7s,mb4.6
HAU *e*R
comp=Z,412nm,19.8s
HAU Haudompre 84.40 42 *e*P **P** 07 15 27.1 -1.4
HAU pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
HAU MLR MLR
comp=Z,410nm,19.8s
HAU Haudompre 84.40 42 *e*P **P** 07 15 27.1 -1.4
comp=Z,7.1nm,0.7s,mb4.6
HAU LR LR
comp=Z,410nm,19.8s
CABF La Chapelle 84.57 43 *e*P **P** 07 15 28.5 -0.9
HINF Hinteralfeld 84.78 42 *e*P **P** 07 15 28.8 -1.6
comp=Z,4.5nm,0.5s,mb4.3
HINF Hinteralfeld 84.78 42 *e*P **P** 07 15 28.8 -1.6
HINF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
HINF Hinteralfeld 84.78 42 *e*P **P** 07 15 28.8 -1.6
comp=Z,2.3nm,0.5s,mb4.4
ORIF Oris-en-Rattie 84.84 45 *e*P **P** 07 15 28.8 -2.0
comp=Z,14nm,1.0s,mb4.5
ORIF *e*R
comp=Z,403nm,22.0s
ORIF Oris-en-Rattie 84.84 45 *e*P **P** 07 15 28.8 -2.0
ORIF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
ORIF Oris-en-Rattie 84.84 45 *e*P **P** 07 15 28.8 -2.0
comp=Z,6.8nm,1.0s,mb4.5
SMRF Simiane la Rot 84.86 46 *e*P **P** 07 15 30.2 -0.7
comp=Z,50nm,1.3s,mb5.0
SMRF Simiane la Rot 84.86 46 *e*P **P** 07 15 30.2 -0.7
comp=Z,50nm,1.3s,mb5.3
CDF Champ du Feu 84.90 42 *e*P **P** 07 15 30.4 -0.7
comp=Z,18nm,0.9s,mb4.7
CDF Champ du Feu 84.90 42 *e*P **P** 07 15 30.4 -0.7
CDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CDF Champ du Feu 84.90 42 *e*P **P** 07 15 30.4 -0.7
comp=Z,9.3nm,0.9s,mb4.7
BSEG Bad Segeberg 85.24 36 *e*P **P** 07 15 32.4 -0.4
comp=Z,20nm,0.9s,mb5.0
LPL La Plagne 85.28 44 *e*P **P** 07 15 32.2 -0.7
comp=Z,19nm,1.1s,mb4.7
LPL La Plagne 85.28 44 *e*P **P** 07 15 32.2 -0.7
LPL pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
LPL La Plagne 85.28 44 *e*P **P** 07 15 32.2 -0.7
comp=Z,9.7nm,1.1s,mb4.7
LPG La Plagne 85.30 44 *e*P **P** 07 15 32.5 -0.5
comp=Z,14nm,0.9s,mb4.6
LPG La Plagne 85.30 44 *e*P **P** 07 15 32.5 -0.5
LPG pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
LPG La Plagne 85.30 44 *e*P **P** 07 15 32.5 -0.5
comp=Z,7.2nm,0.9s,mb4.6
MBDF Montbardon 85.50 45 *e*P **P** 07 15 33.1 -1.0
comp=Z,20nm,1.1s,mb4.7
MBDF Montbardon 85.50 45 *e*P **P** 07 15 33.1 -1.0
MBDF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
MBDF Montbardon 85.50 45 *e*P **P** 07 15 33.1 -1.0
comp=Z,10nm,1.1s,mb4.7
NRDL Niedersach Rie 85.53 37 *e*P **P** 07 15 34.6 +0.4
comp=Z,11nm,0.9s,mb4.8
BFO Black Forest 85.60 41 *e*P **P** 07 15 34.5 0.0
comp=Z,6.0nm,1.0s,mb4.5
BFO Black Forest 85.60 41 *e*P **P** 07 15 34.5 0.0
BFO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
FRF La Foret Royal 85.72 46 *e*P **P** 07 15 34.0 -1.1
CLZ Clausthal 85.88 38 *e*P **P** 07 15 35.4 -0.5
comp=Z,22nm,0.9s,mb5.1
CLZ Clausthal 85.88 38 *e*P **P** 07 15 35.4 -0.5
CLZ pmax pmax
comp=Z,22nm,0.9s,mb5.1
ARCES ARCESS Array B 85.91 18 P **P** 07 15 35.7 -0.4
comp=Z,6.5nm,0.7s,mb4.7,baz=280,slow=4.3,SNR=36
ARCES PP PP 07 19 07.4 +11
comp=Z,3.2nm,0.8s,baz=283,slow=6.1,SNR=4.2
ARCES LR LR 07 54 39.9
comp=Z,214nm,20.1s,baz=300,slow=36
ARCES ARCESS Array B 85.91 18 P **P** 07 15 35.7 -0.4
ARCES PP PP 07 19 07.4 +11
ARCES LR LR 07 54 39.9
ARE0 ARCESS Array S 85.91 18 *e*P **P** 07 15 35.8 -0.3
UBBA Unterbreizbach 85.95 39 *e*P **P** 07 15 37.8 +1.5
comp=Z,4.0nm,0.8s,mb4.4
KEV Kevo 86.26 18 *e*p **P** 07 15 36.9 -0.9
comp=Z,3.1nm,0.6s,mb4.4
KEV Kevo 86.26 18 *e*P **P** 07 15 36.9 -0.9
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MOX Moxa 86.98 39 *e*P **P** 07 15 40.3 -1.0
comp=Z,9.0nm,0.9s,mb4.7
MOX Moxa 86.98 39 *e*(P) **P** 07 15 41.4 +0.1
MOX
comp=Z,200nm,19.0s
GRA1 Grafenberg Arr 87.03 40 *e*P **P** 07 15 39.8 -1.8
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 87.03 40 *e*P **P** 07 15 39.8 -1.8
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 87.03 40 *e*P **P** 07 15 39.8 -1.8
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 87.03 40 *e*P **P** 07 15 39.8 -1.8
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.0
WERD Werda 87.47 39 *e*P **P** 07 15 43.2 -0.5
comp=Z,9.0nm,0.9s,mb4.7
MANZ Manzenberg 87.49 39 *e*P **P** 07 15 44.7 +0.9
comp=Z,11nm,0.9s,mb4.8
GUNZ Gunzen 87.51 39 *e*P **P** 07 15 44.6 +0.7
comp=Z,12nm,0.9s,mb4.9
GUNZ *e*pP pP 07 16 09.2 +5.5
TANN Tannenbergstha 87.57 39 *e*P **P** 07 15 43.8 -0.4
comp=Z,11nm,0.9s,mb4.9
CLL Collm 87.61 38 *e*P **P** 07 15 44.8 +0.5
comp=Z,15nm,0.9s,mb5.0
CLL *e*pP pP 07 16 09.5 +5.3
CLL Collm 87.61 38 ⇑P **P** 07 15 44.4 +0.1
comp=Z,logA/T=1.2,mb5.0
CLL *e**SP sP 07 16 09.0 -3.0
CLL *e*S S 07 26 20.0 -0.1
CLL *e*SS SS 07 32 24.0 +17
CLL Collm 87.61 38 ⇑*i*P **P** 07 15 44.4 +0.1
comp=Z,15nm,0.9s,mb5.0
CLL *es*P sP 07 16 09.0 -3.0
CLL *e*S S 07 26 20.0 -0.1
CLL *e*SS SS 07 32 24.0 +17
CLL Collm 87.61 38 ⇑*i*P **P** 07 15 44.4 +0.1
CLL *e**PP pP 07 16 09.0 +4.8
CLL pmax pmax
comp=Z,15nm,0.9s,mb5.0
CLL Collm 87.61 38 ⇑*i*P **P** 07 15 44.4 +0.1
comp=Z,15nm,0.9s,mb5.0
CLL *e*pP pP 07 16 09.0 +4.8
NKC Novy Kostel 87.62 39 *e*P **P** 07 15 45.1 +0.7
NKC AMS AMS 07 56 10.0
comp=Z,300nm,18.0s
ROTZ Rotzenmuhle 87.62 39 *e*P **P** 07 15 44.0 -0.4
comp=Z,8.0nm,1.0s,mb4.7
FBE Freiberg 87.94 38 *e*P **P** 07 15 45.2 -0.7
comp=Z,8.0nm,0.8s,mb4.8
WET Wettzell 88.23 40 *e*P **P** 07 15 47.0 -0.3
comp=Z,10.0nm,1.0s,mb4.8
WET Wettzell 88.23 40 *e*P **P** 07 15 47.0 -0.3
WET pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BRG Berggiesshubel 88.31 38 *e*P **P** 07 15 47.1 -0.6
comp=Z,5.0nm,0.8s,mb4.6
BRG *e*pP pP 07 16 16.8 +9.3
BRG Berggiesshubel 88.31 38 *e*P **P** 07 15 49.0 +1.3
comp=Z,3.0nm,0.8s,mb4.4
BRG Berggiesshubel 88.31 38 *e*P **P** 07 15 49.0 +1.3
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KHC Kasperske Hory 88.67 40 *e*P **P** 07 15 50.2 +0.8
KHC AMS AMS 07 55 40.0
comp=Z,400nm,18.6s
PVCC Panska Ves 88.80 38 AMS AMS 07 54 40.0
comp=Z,300nm,17.7s
GEC2 GERESS Array S 88.84 40 *e*P **P** 07 15 50.3 +0.1
comp=Z,4.0nm,0.9s,mb4.5
GEC2 GERESS Array S 88.84 40 *e*P **P** 07 15 50.3 +0.1
GEC2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
GERES GERESS Array B 88.84 40 P **P** 07 15 49.9 -0.3
comp=Z,3.5nm,0.7s,mb4.5,baz=298,slow=2.9,SNR=25
GERES LR LR 07 51 28.3
comp=Z,439nm,21.9s,baz=269,slow=33
PRU Pruhonice 88.97 39 AMS AMS 07 55 50.0
comp=Z,400nm,21.5s
TOA0 Torodi Ar. Sit 88.98 77 *e*P **P** 07 15 50.2 -0.6
TORD Torodi Ar. Bea 88.98 77 P **P** 07 15 49.4 -1.5
comp=Z,7.1nm,0.7s,mb4.8,baz=293,slow=4.3,SNR=60
TORD LR LR 07 54 04.8
comp=Z,421nm,19.9s,baz=280,slow=34
UPC Upice 89.67 38 *e*P **P** 07 15 54.5 +0.4
TREC Trest 89.79 39 AMS AMS 07 59 30.0
comp=Z,400nm,17.7s
KEST Kesra 89.85 53 P **P** 07 15 54.9 0.0
comp=Z,2.4nm,0.9s,mb4.3,baz=148,slow=6.6,SNR=4.0
KAF Kangasniemi 89.85 25 *e*p **P** 07 15 52.2 -2.7
DPC Dobruska-Polom 89.91 38 *e*P **P** 07 15 55.9 +0.7
DPC AMS AMS 07 55 30.0
comp=Z,400nm,19.4s
FINES FINESS Array B 90.09 25 P **P** 07 15 56.6 +0.6
comp=Z,2.2nm,0.7s,mb4.4,baz=325,slow=3.0,SNR=9.9
FINES LR LR 07 56 36.8
comp=Z,194nm,19.5s,baz=173,slow=36
OKC Ostrava-Krasne 91.19 38 AMS AMS 07 57 20.0
comp=Z,400nm,20.1s
PET Petropavlovsk 91.21 326 *e*P **P** 07 16 02.0 +0.8
PET pmax pmax
comp=Z,37nm,0.8s,mb5.6
PET pmax pmax
comp=Z,100nm,14.7s
PET MLR MLR
comp=Z,100nm,22.0s
JOF Joensuu 91.39 23 *e*p **P** 07 15 57.6 -4.5
MA2 Magadan 92.00 333 *e*P **P** 07 16 05.2 +0.3
MA2 *e* 07 19 54.2
MA2 *e* 07 26 50.5
MA2 *e* 07 36 49.2
MA2 pmax pmax
comp=Z,20nm,0.8s,mb5.4
MA2 Magadan 92.00 333 *e*P **P** 07 16 05.1 +0.2
comp=Z,13nm,0.8s,mb5.2
AKASG Malin Array Be 97.11 34 LR LR 07 59 41.2
comp=Z,149nm,18.5s,baz=5.0,slow=35
OBN Obninsk 98.22 28⇑*e*P **P** 07 16 26.7 -6.6
OBN *e* 07 20 30.2
OBN pmax pmax
comp=Z,9.0nm,0.6s,mb5.5
OBN MLR MLR
comp=Z,200nm,19.0s
YSS Yuzh-Sakhalins 103.10 326 P Pdif 07 16 55.0 0.0
QSPA South Pole Qui 103.69 180 *e*P Pdif 07 16 57.7 +0.1
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 105.66 42 PKiKP PKiKP 07 21 19.6 +0.5
comp=Z,1.3nm,0.7s,baz=82,slow=1.2,SNR=7.9
BRTR PKKPbc PKKPbc 07 32 41.7 -1.3
comp=Z,0.7nm,0.7s,baz=123,slow=4.6,SNR=5.1
TSUM Tsumeb 111.20 105 *e*PKP PKiKP 07 21 30.5 +1.1
MDJ Mudanjiang 111.47 330 PDIF Pdif 07 17 31.3 -0.9
MDJ PP PP 07 22 10.0 -1.6
MDJ PKS 07 25 06.4
MDJ SKS SKSdf 07 28 36.3 +0.7
MDJ SS SS 07 37 39.9 -0.5
MDJ LR LR
comp=N,95nm,41.3s
MDJ LR LR
comp=E,88nm,44.4s
MDJ LR LR
comp=Z,77nm,31.8s
MJAR Matsushiro Arr 112.14 319 PKiKP PKiKP 07 21 31.1 -0.2
comp=Z,1.7nm,0.7s,baz=94,slow=1.2,SNR=5.1
ZAL Zalesovo 112.47 3 PKiKP PKiKP 07 21 32.0 +0.1
comp=Z,2.9nm,0.5s,baz=147,slow=2.4,SNR=12
TLY Talaya 113.71 350 *i* PKiKP PKiKP 07 21 35.6 +1.4
TLY *e*PPS 07 32 09.4
TLY *e* 07 33 23.4
TLY *e*SS SS 07 38 26.1 +16
TLY pmax pmax
comp=Z,2.0nm,0.9s
CN2 Changchun 114.02 332 *e*PKP PKiKP 07 21 31.7 -3.1
CN2 PP PP 07 22 32.0 +2.2
CN2 PP PP
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,20.0s
CN2 LR LR
comp=E,300nm,20.0s
CN2 LR LR
comp=Z,300nm,21.0s
ZAK Zakamensk 115.02 350 *e*PKiKP PKiKP 07 21 37.1 +0.3
ZAK pmax pmax
comp=Z,2.0nm,1.0s
SYO Syowa Base 116.45 162⇑*e*PP PP 07 22 44.5 -2.4
SONM Songino Array 116.88 347 PKP PKPdf 07 21 40.1 -0.3
comp=Z,4.5nm,0.7s,baz=349,slow=1.9,SNR=11
BOSA Boshof 118.89 115 PKP PKPdf 07 21 45.1 +0.9
comp=Z,27nm,0.8s,baz=227,slow=1.4,SNR=30
BOSA Boshof 118.89 115 *e*PKPdf PKPdf 07 21 45.1 +0.9
LBTB Lobatse 119.11 111 *e*PKIKP PKPdf 07 21 45.6 +1.0
MKAR Makanchi Array 119.39 6 PKP PKPdf 07 21 45.0 -0.1
comp=Z,8.8nm,0.8s,baz=360,slow=2.3,SNR=59
MKAR PKKPbc PKKPbc 07 31 55.8 -1.4
comp=Z,0.1nm,0.3s,baz=182,slow=4.6,SNR=3.9
RST Umm Al-Ruwaisa 120.56 43 *e*P PKPdf 07 21 47.9 +0.5
RST AMb AMB 07 21 49.3
comp=Z,29nm,0.7s
MIB Mutribah 120.59 43 *e*P PKPdf 07 21 48.1 +0.6
MIB AMb AMB 07 21 49.9
comp=Z,54nm,0.7s
LSZ Lusaka 120.76 100 *e*PKIKP PKPdf 07 21 50.0 +2.2
NAY Al-Naaiem 120.89 43 *e*P PKPdf 07 21 48.5 +0.5
NAY AMb AMB 07 21 49.7
comp=Z,19nm,0.8s
BJI Beijing 121.04 336 *e*PKP PKPdf 07 21 47.8 -0.5
BJI LR LR
comp=Z,82nm,38.5s
BJT Baijiatuau 121.06 336 *e*PKIKP PKPdf 07 21 48.6 +0.2
RDF Al-Radifah 121.30 43 *e*P PKPdf 07 21 49.4 +0.6
RDF AMb AMB 07 21 50.4
comp=Z,44nm,0.6s
USP Ospenovka 121.62 13 P PKPdf 07 21 50.7 +1.3
SNR=15
QRN Al-Qurain 121.67 43 *e*P PKPdf 07 21 50.3 +0.8
QRN AMb AMB 07 21 51.3
comp=Z,45nm,0.6s
HHC Hu-ho-hao-te 121.98 340 *e*PKP PKPdf 07 21 46.9 -3.2
HHC PP PP 07 23 25.7 +0.7
HHC PKS 07 25 22.3
HHC PP PP
comp=Z,103nm,9.0s
HHC LR LR
comp=N,219nm,22.8s
HHC LR LR
comp=E,179nm,19.9s
HHC LR LR
comp=Z,272nm,21.8s
EKS2 Erkin-Say 122.04 14 P PKPdf 07 21 52.2 +2.0
SNR=13
TKM2 Tokmak 2 122.18 12 P PKPdf 07 21 52.0 +1.5
SNR=9.9
AAK Ala-Archa 122.22 13 *e*PKIKP PKPdf 07 21 50.8 +0.2
AML Almayashu 122.52 14 P PKPdf 07 21 53.4 +2.2
SNR=19
WMQ Urumqi 122.69 2 *e*PKP PKPdf 07 21 48.0 -3.5
ULHL Ulahol 122.96 12 P PKPdf 07 21 54.2 +2.1
SNR=7.1
MAW Mawson 123.42 168 *e*PKP PKPdf 07 21 51.2 -1.7
comp=Z,3.2nm,0.6s
MAW Mawson 123.42 168 PKP PKPdf 07 21 51.5 -1.4
comp=Z,4.0nm,0.7s,baz=245,slow=3.6,SNR=28
MAW Mawson 123.42 168 PKIKP PKPdf 07 21 51.5 -1.4
MAW pmax pmax
comp=Z,4.0nm,0.7s
TOO Toolangi 125.14 234 *e*PKP PKPdf 07 21 55.9 -0.3
comp=Z,6.5nm,0.9s
CTA Charters Tower 125.58 255 *e*PKP PKPdf 07 21 56.8 -0.2
comp=Z,4.0nm,0.6s
SSE Sheshan 126.04 326 *e*PKP PKPdf 07 21 55.1 -2.8
SSE PP PP 07 23 53.0 +0.8
SSE PP PP
comp=Z,111nm,4.7s
SSE LR LR
comp=N,98nm,21.3s
SSE LR LR
comp=E,42nm,21.3s
SSE LR LR
comp=Z,139nm,20.6s
GTA Gaotai 126.26 350 PKP PKPdf 07 21 59.3 +0.9
GTA PP PP 07 24 02.7 +9.0
GTA PKS 07 25 34.7
GTA SKS SKSdf 07 28 59.6 -4.1
GTA SKKS SKKSac 07 30 46.8 +1.8
GTA PP PP
comp=Z,92nm,10.3s
GTA LR LR
comp=N,221nm,19.0s
GTA LR LR
comp=E,191nm,19.8s
GTA LR LR
comp=Z,264nm,19.8s
NJ2 Nanjing 126.50 329 *e*PKP PKPdf 07 21 59.6 +0.8
NJ2 PP PP 07 24 00.0 +4.7
NJ2 PKS 07 25 34.0
NJ2 SKS SKSdf 07 29 06.0 +1.8
NJ2 SKKS SKKSac 07 30 47.0 +0.5
NJ2 PP PP
comp=Z,670nm,6.9s
NJ2 LR LR
comp=Z,620nm,28.0s
KMBO Kilima Mbogo 126.79 81 PKP PKPdf 07 21 59.1 -0.3
comp=Z,3.0nm,0.9s,baz=57,slow=3.7,SNR=6.4
KMBO Kilima Mbogo 126.79 81 PKP PKPdf 07 21 59.1 -0.3
KMBO *e*PKPdf PKPdf 07 22 02.8 +3.4
LZH Lanzhou 128.63 345 *e*PKP PKPdf 07 22 04.6 +1.7
LZH PP PP 07 24 13.8 +4.5
LZH *e*SKS SKSdf 07 29 11.2 +3.1
LZH SKKS SKKSac 07 31 01.5 +1.6
LZH *e*SS SS 07 41 24.3 +3.5
LZH PP PP
comp=Z,83nm,5.6s
LZH LR LR
comp=E,236nm,19.6s
LZH LR LR
comp=Z,452nm,20.3s
XAN Xi'an 129.03 339 PKP PKPdf 07 22 04.1 +0.5
STKA Stephens Creek 129.23 240 *e*PKP PKPdf 07 22 03.4 -0.6
comp=Z,8.3nm,0.6s
STKA Stephens Creek 129.23 240 PKP PKPdf 07 22 03.9 -0.1
comp=Z,11nm,0.7s,baz=72,slow=2.4,SNR=27
CD2 Chengdu 133.55 343 *e*PKP PKPdf 07 22 10.0 -2.2
CD2 XPKP 07 22 35.0
CD2 PP PP 07 24 42.4 +1.4
CD2 PKS 07 25 44.9
CD2 SKS SKSdf 07 29 12.5 -4.5
CD2 PP PP
comp=Z,120nm,6.8s
CD2 LR LR
comp=E,180nm,24.4s
CD2 LR LR
comp=Z,120nm,26.0s
GYA Guiyang 136.71 337⇑*i*PKP PKPdf 07 22 17.9 -0.2
GYA PP PP 07 25 01.2 +0.2
GYA PKS 07 25 52.8
GYA SKS SKSdf 07 29 24.4 +1.9
GYA SKKS SKKSac 07 31 48.0 -1.2
GYA SS SS 07 42 55.6 -3.2
GYA PP PP
comp=Z,140nm,7.8s
GYA LR LR
comp=N,240nm,20.7s
GYA LR LR
comp=E,190nm,21.0s
GYA LR LR
comp=Z,230nm,20.4s
WB2 Warramunga Arr 136.77 255 *e*PKP PKPdf 07 22 18.0 -0.2
ASAR Alice Springs 136.99 250 PKhKP 07 22 08.5
comp=Z,0.6nm,0.7s,baz=111,slow=3.8,SNR=9.4
ASAR PKP PKPdf 07 22 17.3 -1.3
comp=Z,5.2nm,0.7s,baz=103,slow=2.4,SNR=22
ASAR PKKP 07 31 54.6
comp=Z,0.5nm,0.4s,baz=294,slow=1.7,SNR=12
ASAR Alice Springs 136.99 250 PKP PKPdf 07 22 17.3 -1.3
ASAR PKKP 07 31 54.6
GKN Gorkha 138.23 7 *e*P PKPdf 07 22 15.2 -5.7
comp=Z,96nm,0.7s
KAKA Kakadu 138.27 266 *e*PKP PKPdf 07 22 20.7 -0.2
comp=Z,47nm,1.5s
KOLN Koldanda 138.34 8 *e*P PKPdf 07 22 17.0 -4.1
GUN Gumba 138.44 5 *e*P PKPdf 07 22 15.4 -5.9
comp=Z,73nm,0.7s
KKN Kakani 138.51 6 *e*P PKPdf 07 22 14.9 -6.5
comp=Z,91nm,0.7s
DMN Daman 138.67 6 *e*P PKPdf 07 22 13.9 -7.8
JIRN Jiri 138.72 5 *e*P PKPdf 07 22 14.0 -7.8
PKI Pulchoki 138.74 6 *e*P PKPdf 07 22 15.5 -6.3
comp=Z,76nm,0.6s
KMI Kunming 139.28 342 PKP PKPdf 07 22 23.5 +0.7
KMI PP PP 07 25 17.9 +0.9
KMI LR LR
comp=Z,45nm,27.2s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FORT	**Forrest**	**140.76**	**238**	*e*PKP	PKPdf	07 22 24.7	-0.8
	comp=Z,16nm,0.7s						
FITZ	**Fitzroy Crossi**	**145.06**	**258**	*e*PKP	PKPdf	07 22 31.6	-1.5
	comp=Z,29nm,0.8s						
CHG	**Chiang Mai**	**146.35**	**344**	⇓P	PKPdf	07 22 36.9	+1.6
	comp=Z,72nm,0.7s						
HYB	**Hyderabad**	**147.19**	**20**	⇓*i*PKP	PKPdf	07 22 38.0	+1.3
HYB	**Hyderabad**	**147.19**	**20**	⇓*e*P	PKPdf	07 22 38.0	+1.3
KKTK	**Khon Kaen**	**147.36**	**336**	PG	PKPdf	07 22 39.0	+2.0
KKTK				SG	PKPab	07 22 42.0	+0.5
NWAO	**Narrogin (SRO)**	**148.36**	**228**	*e*PKPbc	PKPbc	07 22 40.9	-1.2
NWAO				*e*PKPab	PKPab	07 22 43.6	-1.9
KLBR	**Kellerberrin**	**148.63**	**231**	*e*PKP	PKPdf	07 22 41.4	+2.3
	comp=Z,28nm,1.5s						
NST	**Nakhon Sawan**	**148.95**	**340**	P	PKPdf	07 22 41.5	+1.9
	comp=Z,158nm,0.8s						
MUN	**Mundaring**	**149.59**	**229**	*e*PKP	PKPbc	07 22 44.2	-1.0
MBWA	**Marble Bar**	**150.31**	**251**	*e*PKPbc	PKPbc	07 22 46.1	-0.9
NNT	**Nongplab**	**151.96**	**338**	P	PKPbc	07 22 53.0	+2.2
KSM	**Kuching**	**154.46**	**305**	*e*PKPbc	PKPbc	07 22 59.0	+2.7
KSM				*e*PKPab	PKPab	07 23 12.1	+1.2

*ISCJB **10** 07:05:22.4±1.1, 3773N±005×4345E±008, h67^{km}±10^{km}, Error ellipse: s-maj=11.1km s-min=8.5km az=37.5*
*CSEM **10** 07:05:22.0±0.1, 3780N×4333E, h40^{km}, MD3.5, Error ellipse: s-maj=3.0km s-min=2.0km az=28.0*
*ISK **10** 07:05:22.8, 3778N×4326E, h30^{km}, MD3.5*
ISC 10 07:05:23.1±1.1**, 3774N**±005×**4352E**±008**, h65**^{km}±10^{km}**, n17, σ1^{s}31**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.24**	**141**	*i* P	**Pn**	**07 05 33.0**	**-0.3**
HAKT				*i* S	**Sn**	**07 05 41.3**	**+0.7**
HKR	**Hakkari**	**0.24**	**133**	PG	**Pn**	**07 05 32.7**	**-0.6**
HKR				SG	**Sn**	**07 05 40.3**	**-0.4**
CUKT	**Cukurca**	**0.50**	**172**	PG	**Pn**	**07 05 35.7**	**+0.3**
TVAN	**Van**	**0.79**	**354**	*i* P	**Pn**	**07 05 38.3**	**-0.3**
TVAN				*i* S	**Sn**	**07 05 51.8**	**+1.7**
VANB	**Van**	**0.86**	**353**	PG	**Pn**	**07 05 37.7**	**-1.8**
VANB				SG	**Sn**	**07 05 50.4**	**-1.2**
CLDR	**Caldiran**	**1.43**	**12**	PN	**Pn**	**07 05 47.2**	**+0.3**
MSL	**Mosul**	**1.49**	**193**	*e*x	x	07 05 51.5	
MSL				*i* x	x	07 05 53.5	
MSL				*e*x	x	07 06 12.5	
MSL				*i* x	x	07 06 14.5	
BTMT	**Batman**	**1.67**	**286**	PN	**Pn**	**07 05 49.7**	**-0.4**
BTMT				SN	**Sn**	**07 06 08.0**	**-2.5**
BEST	**Besiri**	**1.79**	**275**	*i* P	**Pn**	**07 05 52.1**	**+0.4**
BEST				*i* S	**Sn**	**07 06 14.3**	**+0.9**
BNGL	**BINGOL**	**2.22**	**304**	*i* P	**Pn**	**07 06 00.2**	**+2.7**
BNGL				*i* S	**Sn**	**07 06 27.5**	**+3.6**
MARD	**Mardin**	**2.22**	**260**	*i* P	**Pn**	**07 06 00.9**	**+3.3**
MARD				*i* S	**Sn**	**07 06 26.8**	**+2.9**
GNI	**Garni**	**2.59**	**21**	*e*PN	**Pn**	**07 06 04.8**	**+2.3**
DIY	**Diyarbakir**	**2.61**	**274**	PN	**Pn**	**07 06 01.8**	**-1.1**
BINT	**Bingol**	**2.64**	**296**	*e*PN	**Pn**	**07 06 02.0**	**-1.2**
URFA	**Urfa**	**3.74**	**267**	*e*PN	**Pn**	**07 06 17.5**	**-0.8**
MYA	**Malataya**	**4.06**	**280**	*e*PN	**Pn**	**07 06 21.6**	**-1.1**
GAZ	**Gaziantep**	**5.05**	**265**	*e*PN	**Pn**	**07 06 36.1**	**-0.1**

*NEIC **10** 07:19:09.8, 4540N×23.13E, h0^{km}, ML3.4(BUC), After BUC.*
*CSEM **10** 07:19:09.8±0.1, 4528N×23.13E, h10^{km}, MD3.3/2, Error ellipse: s-maj=3.2km s-min=2.6km az=132.0*
*ISCJB **10** 07:19:10.0±0.4, 4534N±002×23.12E±003, h10^{km}, Error ellipse: s-maj=3.7km s-min=3.0km az=96.2*
*BUC **10** 07:19:10.3±0.5, 4534N×23.14E, h15^{km}, MD3.3/2, Error ellipse: s-maj=7.3km s-min=4.9km az=80.0*
*BEO **10** 07:19:11.8±0.1, 4526N×2308E, h9^{km}*
ISC 10 07:19:10.0±0.6**, 4533N**±002×**2314E**±003**, h2**^{km}±4^{km}**, n26, σ0^{s}87**/48**, 5C-6D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJES	**Djerdap**	**0.82**	**212**	*i* Pg	**Pg**	**07 19 24.9**	**-0.9**
DJES				Sg	**Sg**	**07 19 36.2**	**-0.4**
BZS	**Buzias**	**1.11**	**285**	⇓*i*P	**Pg**	**07 19 31.3**	**0.0**
BZS				*i* S	**Sg**	**07 19 46.8**	**+1.1**
BZS	**Buzias**	**1.11**	**285**	P	**Pg**	**07 19 31.3**	**0.0**
VOIR		**1.35**	**85**	⇓*i*P	**Pn**	**07 19 32.2**	**-3.6**
MTUR	**Matau**	**1.36**	**94**	*i* S	**Sg**	**07 19 53.3**	**-0.4**
DRGR		**1.49**	**348**	⇑*i*P	**Pn**	**07 19 37.0**	**-0.7**
DRGR				*i* S	**Sb**	**07 19 57.3**	**-0.4**
DRGR		**1.49**	**348**	P	**Pn**	**07 19 36.9**	**-0.8**
DRGR				P		07 19 38.5	
DRGR		**1.49**	**348**	P	**Pn**	**07 19 38.5**	**+0.8**
DRGR				*i* S	**Sb**	**07 19 57.3**	**-0.4**
SVIS	**Svilajnac**	**1.72**	**234**	⇑*i*Pn	**Pn**	**07 19 40.8**	**0.0**
SVIS				Sg	**Sg**	**07 20 04.5**	**-0.7**
MLR	**Muntele Rosu**	**1.98**	**84**	⇓*i*P	**Pn**	**07 19 44.4**	**-0.1**
MLR				*i* S	**Sn**	**07 20 10.4**	**+0.6**
MLR	**Muntele Rosu**	**1.98**	**84**	P	**Pn**	**07 19 44.9**	**+0.4**
MLR				P		07 19 45.2	
MLR				S	**Sn**	**07 20 10.7**	**+0.9**
GRUS	**Gruza**	**2.26**	**231**	⇓*i*Pn	**Pn**	**07 19 48.0**	**-0.3**
GRUS				Sg	**Sn**	**07 20 17.6**	**+0.9**
PLOR	**Plostina**	**2.52**	**77**	⇓*i*P	**Pn**	**07 19 51.9**	**+0.1**
DIVS	**Divcibare**	**2.56**	**242**	*i* Pn	**Pn**	**07 19 52.2**	**-0.3**
DIVS				Sg	**Sn**	**07 20 25.2**	**+1.0**
VRI	**Vrincioaia**	**2.57**	**77**	*i* S	**Sn**	**07 20 23.4**	**-1.0**
BURAR	**Bucovina Array**	**2.69**	**31**	⇑*i*P	**Pn**	**07 19 54.6**	**+0.3**
BURAR				*i* S	**Sn**	**07 20 28.5**	**+1.0**
VTS	**Vitosha**	**2.74**	**179**	⇑*i*P	**Pn**	**07 19 54.8**	**-0.1**
BBLS	**Bajina Basta -**	**3.04**	**243**	*i* Pn	**Pn**	**07 19 59.8**	**+0.7**
BBLS				Sg	**Sn**	**07 20 36.6**	**+0.5**
PKSM	**Moragy**	**3.27**	**287**	⇓*i*P	**Pn**	**07 20 01.8**	**-0.4**
PKSM				*i* S	**Sn**	**07 20 41.0**	**-0.7**
PKSM	**Moragy**	**3.27**	**287**	P	**Pn**	**07 20 01.8**	**-0.4**
PSZ	**Piszkesteto**	**3.42**	**320**	⇑*i*P	**Pn**	**07 20 04.6**	**+0.3**
PSZ				*i* S	**Sn**	**07 20 42.9**	**-2.5**
KECS	**Kecovo**	**3.64**	**331**	*e*PN	**Pn**	**07 20 07.8**	**+0.5**
KECS				*e*SN	**Sn**	**07 20 48.2**	**-2.6**
KECS				*e*SG	**Sg**	**07 21 07.2**	**+0.2**
KOLS	**Kolonicke sedl**	**3.65**	**351**	*e*PN	**Pn**	**07 20 08.5**	**+1.0**
KOLS				*e*PG	**Pg**	**07 20 21.4**	**+1.4**
KOLS				*e*SN	**Sn**	**07 20 52.7**	**+1.6**
KOLS				*e*SG	**Sg**	**07 21 07.4**	**+0.1**
CRVS	**Cervenica-Dubn**	**3.75**	**343**	*e*PN	**Pn**	**07 20 08.9**	**+0.1**
CRVS				*e*SN	**Sn**	**07 20 52.1**	**-1.4**
CRVS				*e*SG	**Sg**	**07 21 10.1**	**-0.4**
VYHS	**Vyhne**	**4.33**	**319**	*e*PN	**Pn**	**07 20 16.5**	**-0.2**
VYHS				*e*SN	**Sn**	**07 21 08.0**	**+0.3**
VYHS				*e*		07 21 54.4	
VYHS	**Vyhne**	**4.33**	**319**	*e*Pn	**Pn**	**07 20 16.5**	**-0.2**
VYHS				*e*Sn	**Sn**	**07 21 08.0**	**+0.3**

*IDC **10** 07:45:45.5±13.0, 3799S×17752E, h0^{km}, mb4.0/2, mb1 4.1/2, mb1mx3.8/8, mbtmp4.0/2, Error ellipse: s-maj=585.2km s-min=59.0km az=163.0*
*ISCJB **10** 07:46:12.0±0.8, 3765S±005×17648E±008, h229^{km}±5^{km}, mb3.7/2, Error ellipse: s-maj=11.1km s-min=8.1km az=150.0*
*NEIC **10** 07:46:13.4, 3751S×17658E, h214^{km}, MG4.8(WEL), After WEL.*
*WEL **10** 07:46:14.2±0.3, 3750S×17658E, h207^{km}±2^{km}, ML4.8/25, Error ellipse: s-maj=2.2km s-min=2.1km az=90.0*
ISC 10 07:46:12.6±0.8**, 3765S**±005×**17650E**±008**, h225**^{km}±5^{km}**, n97, σ1^{s}23**/103**, mb3.7**/2**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.20**	**245**	P	**Pn**	**07 46 40.0**	**-1.9**
TGRZ				S	**S**	**07 47 03.7**	**-1.1**
TGRZ	**Tauranga**	**0.20**	**245**	PN	**Pn**	**07 46 41.5**	**-0.5**
TGRZ				SN	**S**	**07 47 03.2**	**-1.7**
KARZ	**Kaharoa**	**0.43**	**208**	PN	**Pn**	**07 46 42.4**	**0.0**
KARZ				SN	**S**	**07 47 04.0**	**-1.7**
WIZ	**White Island**	**0.56**	**78**	P	**Pn**	**07 46 40.9**	**-1.9**
WIZ	**White Island**	**0.56**	**78**	PN	**Pn**	**07 46 42.4**	**-0.5**
TAZ	**Tarawera**	**0.59**	**179**	P	**Pn**	**07 46 43.7**	**+0.8**
TAZ	**Tarawera**	**0.59**	**179**	PN	**Pn**	**07 46 43.6**	**+0.7**
PATZ	**Paeroa**	**0.76**	**194**	P	**Pn**	**07 46 44.7**	**+1.0**
PATZ	**Paeroa**	**0.76**	**194**	PN	**Pn**	**07 46 44.7**	**+1.0**
URZ	**Urewera**	**0.78**	**142**	P	**Pn**	**07 46 43.5**	**-0.3**
URZ	**Urewera**	**0.78**	**142**	PN	**Pn**	**07 46 43.5**	**-0.3**
URZ				SN	**S**	**07 47 05.5**	**-2.7**
TOZ	**Tahuroa Road**	**0.79**	**264**	P	**Pn**	**07 46 43.9**	**+0.1**
TOZ	**Tahuroa Road**	**0.79**	**264**	PN	**Pn**	**07 46 43.9**	**+0.1**
TOZ				SN	**S**	**07 47 06.4**	**-1.9**
MWZ	**Matawai**	**1.07**	**131**	P	**Pn**	**07 46 45.2**	**-0.2**
MWZ				S	**S**	**07 47 09.7**	**-1.4**
MWZ	**Matawai**	**1.07**	**131**	PN	**Pn**	**07 46 45.2**	**-0.2**
MWZ				SN	**S**	**07 47 09.7**	**-1.4**
KUZ	**Kuaotunu**	**1.09**	**325**	P	**Pn**	**07 46 44.4**	**-1.2**
KUZ	**Kuaotunu**	**1.09**	**325**	PN	**Pn**	**07 46 44.4**	**-1.2**
WHTZ	**Whakaora**	**1.10**	**202**	P	**Pn**	**07 46 47.3**	**+1.6**
WHTZ	**Whakaora**	**1.10**	**202**	PN	**Pn**	**07 46 47.3**	**+1.6**
MKAZ	**Moumakai**	**1.19**	**296**	PN	**Pn**	**07 46 45.9**	**-0.3**
WATZ	**Wairara**	**1.22**	**209**	P	**Pn**	**07 46 47.7**	**+1.3**
WATZ	**Wairara**	**1.22**	**209**	PN	**Pn**	**07 46 47.7**	**+1.2**
HATZ	**Hinemaiaia**	**1.28**	**194**	P	**Pn**	**07 46 47.4**	**+0.5**
HATZ	**Hinemaiaia**	**1.28**	**194**	PN	**Pn**	**07 46 47.4**	**+0.5**
RATZ	**Rangitukua**	**1.35**	**205**	P	**Pn**	**07 46 48.5**	**+1.1**
RATZ	**Rangitukua**	**1.35**	**205**	PN	**Pn**	**07 46 48.5**	**+1.1**
RITZ	**Rihia Road**	**1.42**	**200**	P	**Pn**	**07 46 49.5**	**+1.5**
RITZ	**Rihia Road**	**1.42**	**200**	PN	**Pn**	**07 46 49.5**	**+1.6**
OTAZ	**Otara**	**1.43**	**298**	PN	**Pn**	**07 46 47.9**	**-0.1**
MXZ	**Matakaoa Point**	**1.44**	**87**	P	**Pn**	**07 46 47.7**	**-0.4**
MXZ	**Matakaoa Point**	**1.44**	**87**	PN	**Pn**	**07 46 47.7**	**-0.4**
PUZ	**Puketiti**	**1.46**	**108**	PN	**Pn**	**07 46 48.1**	**-0.1**
KATZ	**Kakaramea**	**1.47**	**205**	P	**Pn**	**07 46 49.7**	**+1.4**
KATZ	**Kakaramea**	**1.47**	**205**	PN	**Pn**	**07 46 50.2**	**+1.9**
BKZ	**Black Stump Fm**	**1.52**	**180**	P	**Pn**	**07 46 49.5**	**+0.8**
BKZ	**Black Stump Fm**	**1.52**	**180**	PN	**Pn**	**07 46 49.5**	**+0.7**
MTAZ	**Motutapu**	**1.53**	**304**	P	**Pn**	**07 46 48.5**	**-0.3**
MTAZ	**Motutapu**	**1.53**	**304**	PN	**Pn**	**07 46 48.5**	**-0.3**
HIZ	**Hauiti**	**1.56**	**236**	PN	**Pn**	**07 46 50.2**	**+1.2**
WTVZ	**West Tongariro**	**1.63**	**206**	P	**Pn**	**07 46 50.9**	**+1.2**
TWVZ	**Taurewa**	**1.65**	**210**	P	**Pn**	**07 46 51.2**	**+1.4**
KNZ	**Kokohu**	**1.66**	**146**	P	**Pn**	**07 46 51.0**	**+1.1**
NGZ	**Ngauruhoe**	**1.68**	**204**	P	**Pn**	**07 46 51.8**	**+1.7**
WTAZ	**Waiatarua**	**1.69**	**294**	P	**Pn**	**07 46 48.3**	**-1.9**
WPVZ	**Whakapapa**	**1.73**	**205**	P	**Pn**	**07 46 52.0**	**+1.5**
WPVZ	**Whakapapa**	**1.73**	**205**	PN	**Pn**	**07 46 51.9**	**+1.4**
TUVZ	**Tukino**	**1.75**	**202**	P	**Pn**	**07 46 52.1**	**+1.4**
FWVZ	**Far West T-bar**	**1.77**	**204**	P	**Pn**	**07 46 52.2**	**+1.3**
FWVZ	**Far West T-bar**	**1.77**	**204**	PN	**Pn**	**07 46 52.0**	**+1.1**
DRZ	**Dome Shelter**	**1.79**	**204**	P	**Pn**	**07 46 52.8**	**+1.8**
DRZ				P		07 46 53.0	
MOVZ	**Moawhango**	**1.85**	**198**	P	**Pn**	**07 46 52.4**	**+0.7**
MOVZ	**Moawhango**	**1.85**	**198**	PN	**Pn**	**07 46 52.5**	**+0.8**
VRZ	**Vera Road**	**2.01**	**222**	PN	**Pn**	**07 46 55.0**	**+1.9**
RAEZ	**Rainy Point**	**2.33**	**225**	P	**Pn**	**07 46 59.0**	**+2.7**
WAZ	**Wanganui**	**2.42**	**209**	P	**Pn**	**07 46 58.6**	**+1.4**
WCZ	**Waipu Caves**	**2.42**	**314**	P	**Pn**	**07 46 56.9**	**-0.4**
TSZ	**Takapari Road**	**2.45**	**190**	P	**Pn**	**07 46 58.4**	**+0.9**
NEZ	**North Egmont**	**2.49**	**229**	P	**Pn**	**07 47 00.7**	**+2.7**
NRZ	**Ngariki Road**	**2.63**	**229**	P	**Pn**	**07 47 01.7**	**+2.2**
NWEZ	**Newall Road**	**2.63**	**231**	P	**Pn**	**07 47 02.0**	**+2.5**
BFZ	**Birch Farm**	**3.04**	**184**	P	**Pn**	**07 47 04.5**	**+0.5**
MRZ	**Mangatainoka R**	**3.10**	**193**	P	**Pn**	**07 47 04.9**	**+0.2**
KIW	**Kapiti Island**	**3.44**	**200**	P	**Pn**	**07 47 08.6**	**-0.1**
MTW	**Mount Morrison**	**3.59**	**192**	P	**Pn**	**07 47 10.1**	**-0.3**
CAW	**Cannon Point**	**3.63**	**197**	P	**Pn**	**07 47 10.7**	**-0.2**
PAWZ	**Paruwai Farm**	**3.82**	**192**	P	**Pn**	**07 47 12.9**	**-0.3**
MRW	**Makara Radio**	**3.84**	**201**	P	**Pn**	**07 47 13.1**	**-0.3**
WEL	**Wellington**	**3.87**	**200**	P	**Pn**	**07 47 13.6**	**-0.2**
MSWZ	**Moikau Station**	**3.89**	**194**	P	**Pn**	**07 47 13.6**	**-0.4**
SNZO	**South Karori**	**3.91**	**200**	P	**Pn**	**07 47 13.7**	**-0.6**
TCW	**Tory Channel**	**3.96**	**205**	P	**Pn**	**07 47 14.4**	**-0.4**
BHW	**Baring Head**	**3.96**	**198**	P	**Pn**	**07 47 14.5**	**-0.4**
NNZ	**Nelson**	**4.31**	**213**	P	**Pn**	**07 47 18.2**	**-0.9**
QRZ	**Quartz Range**	**4.42**	**223**	P	**Pn**	**07 47 19.6**	**-0.9**
CMWZ	**Cape Campbell**	**4.46**	**203**	P	**Pn**	**07 47 21.3**	**+0.4**
BSWZ	**Blackbirch Sta**	**4.54**	**206**	P	**Pn**	**07 47 21.6**	**-0.3**
THZ	**Tophouse**	**4.96**	**213**	*e*P	**Pn**	**07 47 26.6**	**-0.5**
KHZ	**Kahutara**	**5.28**	**205**	P	**Pn**	**07 47 30.7**	**-0.4**
DSZ	**Denniston Nort**	**5.46**	**220**	*e*P	**Pn**	**07 47 32.2**	**-1.3**
LTZ	**Lake Taylor**	**6.07**	**211**	*e*P	**Pn**	**07 47 40.0**	**-1.1**
CRLZ	**Canterbury Las**	**6.62**	**205**	*e*P	**Pn**	**07 47 47.3**	**-0.8**
MQZ	**McQueen's Vall**	**6.72**	**205**	*e*P	**Pn**	**07 47 47.5**	**-1.9**
RPZ	**Rata Peaks**	**7.34**	**213**	*e*P	**Pn**	**07 47 56.6**	**-0.7**
FOZ	**Fox Glacier**	**7.86**	**219**	*e*P	**Pn**	**07 48 01.3**	**-2.7**
LBZ	**Lake Benmore**	**8.25**	**213**	*e*P	**Pn**	**07 48 08.1**	**-0.9**
ODZ	**Otahua Downs**	**8.60**	**209**	*e*P	**Pn**	**07 48 13.0**	**-0.5**
JCZ	**Jackson Bay**	**8.69**	**220**	*e*P	**Pn**	**07 48 12.5**	**-2.2**
WKZ	**Wanaka**	**9.12**	**216**	*e*P	**Pn**	**07 48 18.4**	**-1.8**
EAZ	**Earnscleugh**	**9.30**	**213**	*e*P	**Pn**	**07 48 21.3**	**-1.2**
MSZ	**Milford Sound**	**9.54**	**220**	*e*P	**Pn**	**07 48 24.9**	**-0.6**
TUZ	**Tuapeka**	**9.75**	**209**	*e*P	**Pn**	**07 48 28.5**	**+0.2**
WHZ	**Wether Hill Ro**	**10.42**	**215**	*e*P	**Pn**	**07 48 35.0**	**-1.8**
DCZ	**Deep Cove**	**10.49**	**219**	*e*P	**Pn**	**07 48 36.5**	**-1.2**
STKA	**Stephens Creek**	**29.13**	**271**	P	**P**	**07 51 55.9**	**+3.3**
	1.3nm,0.6s,mb3.8,baz=130,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**38.87**	**279**	P	**P**	**07 53 19.4**	**+3.3**
	1.1nm,0.6s,mb3.6,baz=122,slow=8.4,SNR=22						
QSPA	**South Pole Qui**	**52.48**	**180**	*e*P	**P**	**07 55 07.4**	**+5.0**
QSPA				*e*P		07 55 08.3	
ARCES	**ARCESS Array B**	**144.44**	**343**	PKPbc	PKPdf	08 05 22.2	+0.3
	0.8nm,0.7s,baz=38,slow=2.2,SNR=4.3						

*SZGRF **10** 07:53:04.2, 1371N×9681W, h33^{km}, mb4.6, Off coast of Oaxaca, Mexico*
*BJI **10** 07:53:08.4, 1460N×9500W, h16^{km}, mB5.3, Ms5.1, Msz4.7*
*HRVD **10** 07:53:08.4±0.3, 1485N×9464W, h12^{km}, MW5.1/81, Centroid moment Tensor Solution. LP body waves: s46,c67;Mantle waves: s81,c132; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.96±.11; $M_{\theta\theta}$-2.92±.09; $M_{\phi\phi}$-2.04±.13; $M_{r\theta}$3.84±.28; $M_{\theta\phi}$1.67±.08; $M_{\phi r}$-1.50±.32; Best double couple: $M_0$6.15200×10^{16} NP1:ϕ_s314.00000°,δ25.00000°,λ105.00000°. NP2: ϕ_s117.00000°,δ66.00000°,λ83.00000°. Principal axes: T 6.5920, Plg68.0000°, Azm14.0000°; N -0.8800, Plg6.0000°, Azm120.0000°; P -5.7120, Plg21.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **10** 07:53:08.8±1.1, 1508N×9443W, h0^{km}, mb4.5/17, mb1 4.6/19, mb1mx4.5/23, mbtmp4.5/19, ML3.9/2, MS4.4/16, Ms1 4.4/16, ms1mx4.2/23 Error ellipse: s-maj=36.7km s-min=13.3km az=50.0*
*MEX **10** 07:53:08.7±1.0, 1460N×9497W, h16^{km}±32^{km}, MD5.0*
*ISCJB **10** 07:53:08.7±0.2, 1505N±003×9451W±002, h10^{km}, mb4.7/93, MS4.5/25, Error ellipse: s-maj=4.6km s-min=2.5km az=50.7*
*NEIC **10** 07:53:08.4, 1456N×9497W, h16^{km}, mb4.8/86, MS4.6/4, MD5.0(MEX), After MEX.*
*MOS **10** 07:53:12.5±1.0, 15.11N×9453W, h33^{km}, mb5.0/36, Error ellipse: s-maj=10.8km s-min=5.2km az=103.2*
*CASC **10** 07:53:14.5±1.6, 1463N×9421W, h0^{km}±59^{km}, MD4.6*
ISC 10 07:53:10.8±0.2**, 1508N**±003×**9447W**±002**, h10**^{km}**, n419, σ0^{s}90**/496**, mb4.7**/93**, MS4.5**/25**, 107C-101D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.72**	**294**	*i* P	**Pn**	**07 53 32.2**	**-8.5**
HUIG				*i* S	**Sn**	**07 53 50.9**	**-12**
SCX	**San Cristobal**	**2.42**	**47**	*i* P	**Pg**	**07 53 54.0**	**-3.2**
SCX				*i* S	**Sg**	**07 54 30.0**	**+1.5**
SCX	**San Cristobal**	**2.42**	**47**	*i* P	**Pg**	**07 53 54.0**	**-3.2**
SCX				*i* S	**Sg**	**07 54 32.0**	**+3.5**
CCIG	**Comitan**	**2.55**	**62**	*i* P	**Pg**	**07 53 55.8**	**-3.9**
CCIG				*i* S	**Sg**	**07 54 32.1**	**-0.6**
CCIG	**Comitan**	**2.55**	**62**	*i* P	**Pg**	**07 53 55.8**	**-3.9**
CCIG				*i* S	**Sg**	**07 54 38.2**	**+5.5**
JAT	**Jato**	**2.85**	**105**	*e*P	**Pn**	**07 53 57.7**	**+1.4**
OXX	**Oaxaca**	**2.94**	**313**	*i* P	**Pn**	**07 53 55.0**	**-2.6**
OXX				*i* S	**Sn**	**07 54 28.5**	**-4.4**
OXX	**Oaxaca**	**2.94**	**313**	*i* P	**Pn**	**07 53 55.5**	**-2.1**
OXX				*i* S	**Sn**	**07 54 28.5**	**-4.4**
TUIG	**Tuzandepetl**	**2.94**	**1**	*i* P	**Pb**	**07 53 58.7**	**-4.6**
TUIG				*i* S	**Sb**	**07 54 39.3**	**0.0**
VHO	**Vista Hermosa**	**2.94**	**313**	*i* P	**Pn**	**07 53 54.4**	**-3.2**
VHO				*i* S	**Sn**	**07 54 28.0**	**-4.9**
VHO	**Vista Hermosa**	**2.94**	**313**	*i* P	**Pn**	**07 53 54.6**	**-2.9**
VHO				*i* S	**Sn**	**07 54 28.0**	**-4.9**
TP2	**Tecpan 2**	**3.35**	**95**	⇓*e*P	**Pn**	**07 54 05.2**	**+2.0**
TP2				*e*S	**Sn**	**07 54 44.5**	**+1.5**
FUG	**Fuego 3**	**3.57**	**100**	*e*P	**Pn**	**07 54 07.0**	**+0.8**
TER	**Terranova**	**3.75**	**101**	*e*P	**Pn**	**07 54 09.9**	**+1.2**
TER				*e*S	**Sn**	**07 54 52.2**	**-0.6**
UTMO	**Huajuapan**	**4.21**	**311**	*i* P	**Pn**	**07 54 10.4**	**-4.5**
UTMO				*i* S	**Sn**	**07 54 58.0**	**-6.2**
ACX	**Acapulco**	**5.53**	**290**	*e*P	**Pn**	**07 54 27.0**	**-6.1**
PPM	**Popocatepetl**	**5.61**	**316**	*i* P	**Pn**	**07 54 29.8**	**-4.5**
PPM				*e*P		07 54 32.0	
PPM				*i* S	**Sn**	**07 55 34.5**	**-4.3**
PPM	**Popocatepetl**	**5.61**	**316**	*i* P	**Pn**	**07 54 29.8**	**-4.5**
PPM				*e*P		07 54 32.0	
MEIG	**Mezcala**	**5.69**	**301**	*e*P	**Pn**	**07 54 29.3**	**-6.1**
MEIG				*i* S	**Sn**	**07 55 31.6**	**-9.2**
PLIG	**Platanillo**	**5.84**	**305**	*e*P	**Pn**	**07 54 34.1**	**-3.3**
PLIG				*i* S	**Sn**	**07 55 36.2**	**-8.2**
CAIG	**El Cayaco**	**5.91**	**290**	*i* P	**Pn**	**07 54 30.2**	**-8.1**
CAIG				*i* S	**Sn**	**07 55 30.5**	**-16**
CAIG	**El Cayaco**	**5.91**	**290**	*i* P	**Pn**	**07 54 32.8**	**-5.5**
CAIG				*i* S	**Sn**	**07 55 30.9**	**-15**
IIZ	**Mezontepec**	**6.12**	**313**	*i* P	**Pn**	**07 54 40.5**	**-0.8**
IIZ				*i* S	**Sn**	**07 55 41.4**	**-10**
UNM	**Universidad Na**	**6.17**	**314**	*e*P	**Pn**	**07 54 37.8**	**-4.2**
UNM				*i* P		07 54 41.0	
UNM				*i* S	**Sn**	**07 55 45.1**	**-7.5**
UNM				*i* S	**Sn**	**07 55 48.0**	**-4.5**
UNM	**Universidad Na**	**6.17**	**314**	*e*P	**Pn**	**07 54 40.8**	**-1.2**
UNM				*i* P		07 54 43.8	
UNM				*i* S	**Sb**	**07 56 06.0**	**-6.2**
MOIG	**Morelia**	**7.88**	**306**	*i* P	**Pn**	**07 55 00.4**	**-5.0**
MOIG				*e*S	**Sn**	**07 56 27.2**	**-7.3**
MOIG	**Morelia**	**7.88**	**306**	*i* P	**Pn**	**07 55 04.4**	**-1.0**
MOIG				*e*S	**Sb**	**07 56 52.2**	**-9.0**
MRX	**Morelia**	**7.89**	**307**	*e*P	**Pn**	**07 55 00.0**	**-5.6**
SFJM	**Santa Fe**	**9.77**	**305**	*i* P	**Pn**	**07 55 31.0**	**-0.3**
JTS	**JuntasAbangare**	**10.44**	**116**	Pn	**Pn**	**07 55 40.7**	**+0.3**
	0.5nm,0.3s,baz=306,slow=9.9,SNR=7.1						
JCR	**Jicaral**	**10.51**	**119**	*e*P	**Pn**	**07 55 42.7**	**+1.2**
ZAIG	**Zacatecas**	**10.82**	**316**	*e*P	**Pn**	**07 55 43.9**	**-1.8**
ZAIG				*e*S	**Sn**	**07 57 44.9**	**-2.0**
ZAIG	**Zacatecas**	**10.82**	**316**	*e*P	**Pn**	**07 55 45.3**	**-0.5**
LNIG	**Linares**	**10.84**	**335**	*e*P	**Pn**	**07 55 45.0**	**-0.9**
LNIG				*i* S	**Sn**	**07 57 47.6**	**+0.3**
LCR2	**La Lucha 2**	**11.52**	**116**	*e*P	**Pn**	**07 55 57.9**	**+2.7**
BUS	**Buena Vista**	**11.82**	**116**	*e*P	**Pn**	**07 55 59.2**	**-0.1**
HKT	**Hockley**	**14.86**	**355**	*e*P	**Pn**	**07 56 42.8**	**+2.0**
JCT	**Junction City**	**16.09**	**343**	*e*P	**Pn**	**07 56 56.8**	**-0.3**
JCT				pmax	pmax		
	comp=Z,36nm,0.9s						
JCT	**Junction City**	**16.09**	**343**	*e*Pn	**Pn**	**07 56 56.8**	**-0.3**
	comp=Z,36nm,0.9s						
NATX	**Nacogdoches**	**16.61**	**359**	*e*P	**Pn**	**07 57 05.8**	**+2.1**
	comp=Z,28nm,0.8s						
LMGC	**Las Mercedes**	**17.37**	**71**	*e*P	**Pn**	**07 57 16.0**	**+2.7**
	baz=223						
LMGC				*e*S	**Sn**	**08 00 39.8**	**+13**
	comp=N,1μm,18.0s						
LMGC				*e*			
	comp=E,2μm,16.6s						
LPIG	**La Paz**	**17.40**	**303**	P	**Pn**	**07 57 12.6**	**-0.9**
	comp=E,0.9nm,0.3s,baz=118,slow=3.3,SNR=3.1						
RCC	**Rio Carpintero**	**18.56**	**72**	*e*P	**Pn**	**07 57 26.5**	**-1.4**
	baz=260						
RCC				*e*S	**Sn**	**08 00 50.2**	**-5.1**
	comp=N,2μm,13.0s						
RCC				*e*			
	comp=E,976nm,16.2s						
LRAL	**Lakeview Retre**	**19.12**	**19**	*e*Pn	**Pn**	**07 57 34.3**	**-0.4**
	comp=E,18nm,0.8s						
LRAL				*e*		07 57 43.9	
GDL2	**Guadalupe Moun**	**19.28**	**334**	*e*P	**Pn**	**07 57 36.5**	**-0.2**
MNTX	**Cornudas Mount**	**19.32**	**331**	*e*P	**Pn**	**07 57 36.8**	**-0.2**
	comp=E,54nm,1.7s						
MIAR	**Mount Ida**	**19.40**	**2**	*e*Pn	**Pn**	**07 57 37.1**	**-1.0**
MIAR				*e*pP	pP	07 57 43.9	+4.2
UALR	**University of**	**19.71**	**5**	*e*P	**Pn**	**07 57 39.5**	**-2.2**
	comp=E,26nm,0.8s						
WMOK	**Wichita Mounta**	**19.96**	**350**	*e*P	**Pn**	**07 57 42.8**	**-1.9**
WMOK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMOK	**Wichita Mounta**	**19.96**	**350**	*e*P	**Pn**	**07 57 42.8**	**-1.9**
	comp=Z,10nm,0.7s						
PLAL	**Pickwick Lake**	**20.64**	**15**	*e*P	**P**	**07 57 48.6**	**-1.9**
AMTX	**Amarillo**	**20.76**	**343**	*e*P	**P**	**07 57 51.8**	**+0.1**
	comp=Z,49nm,0.8s						
SWET	**Sewanee**	**21.47**	**19**	*e*P	**P**	**07 57 58.9**	**-0.5**
OTAV	**Otavalo**	**21.64**	**132**	*e*P	**P**	**07 58 01.1**	**-0.1**
	comp=Z,17nm,1.2s,mb4.3						
WVT	**Waverly**	**21.79**	**15**	*e*P	**P**	**07 58 02.1**	**-0.7**
WVT				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.6						
WVT	**Waverly**	**21.79**	**15**	*e*P	**P**	**07 58 02.1**	**-0.8**
	comp=Z,19nm,0.8s,mb4.6						
Y22C	**IRIS PASSCAL I**	**22.01**	**331**	⇑P	**P**	**07 58 05.7**	**+0.6**
	baz=22						
Y22C				⇓S	**S**	**08 02 15.7**	**+7.8**
	baz=22						
LPM	**Los Pinos Moun**	**22.07**	**332**	*e*P	**P**	**07 58 06.5**	**+0.7**
LENM	**Lemitar**	**22.11**	**332**	*e*P	**P**	**07 58 07.3**	**+1.2**
CPCT	**Cooper Cave**	**22.17**	**22**	*e*P	**P**	**07 58 06.1**	**-0.7**
ROSC	**El Rosal**	**22.26**	**115**	P	**P**	**07 58 10.1**	**+2.2**
	comp=Z,14nm,0.9s,mb4.4,baz=95,slow=20,SNR=18						
ROSC				S	**S**	**08 02 16.2**	**+3.3**
	comp=Z,1.9nm,0.7s,baz=230,slow=18,SNR=2.3						
ROSC	**El Rosal**	**22.26**	**115**	*e*P	**P**	**07 58 11.1**	**+3.2**
LAZ	**Ladron**	**22.38**	**332**	*e*P	**P**	**07 58 10.3**	**+1.2**
ANMO	**Albuquerque**	**22.54**	**334**	P	**P**	**07 58 12.2**	**+1.4**
	comp=Z,6.5nm,0.9s,mb4.1,baz=154,slow=11,SNR=28						
ANMO				S	**S**	**08 02 16.7**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=186,slow=15,SNR=2.2						
ANMO				LR	LR	08 07 30.3	
	comp=Z,645nm,18.7s,MS4.1,baz=32,slow=38						
ANMO	**Albuquerque**	**22.54**	**334**	*e*P	**P**	**07 58 11.3**	**+0.6**
	comp=Z,7.0nm,0.8s,mb4.1						
TUC	**Tucson**	**22.69**	**322**	*e*P	**P**	**07 58 12.8**	**+0.4**
TUC				pmax	pmax		
	comp=Z,36nm,1.5s,mb4.6						
TUC	**Tucson**	**22.69**	**322**	*e*P	**P**	**07 58 12.8**	**+0.4**
	comp=Z,36nm,1.5s,mb4.6						
SIUC	**Southern Illin**	**23.02**	**11**	*e*P	**P**	**07 58 14.7**	**-1.2**
	comp=Z,27nm,0.8s,mb4.7						
SIUC				*e*		07 58 23.9	
CCM	**Cathedral Cave**	**23.07**	**7**	*e*P	**P**	**07 58 14.9**	**-1.5**
CCM				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.5						
CCM	**Cathedral Cave**	**23.07**	**7**	*e*P	**P**	**07 58 14.9**	**-1.5**
	comp=Z,19nm,1.0s,mb4.5						
116A	**Eloy**	**23.42**	**321**	⇓P	**P**	**07 58 19.5**	**-0.7**
	baz=24,SNR=8.1						
116A				⇓S	**S**	**08 02 38.3**	**+5.2**
	baz=24						
TZTN	**Tazewell**	**23.50**	**23**	*e*P	**P**	**07 58 19.5**	**-1.4**
115A	**Sonoran Desert**	**23.84**	**320**	⇑P	**P**	**07 58 23.8**	**-0.3**
	baz=24,SNR=12						
115A				⇓S	**S**	**08 02 47.9**	**+8.0**
	baz=24						
KSU1	**Kansas State U**	**24.01**	**356**	*e*P	**P**	**07 58 24.8**	**-0.9**
SDV	**Santo Domingo**	**24.11**	**102**	P	**P**	**07 58 27.0**	**+0.4**
	comp=Z,7.4nm,0.7s,mb4.2,baz=302,slow=5.2,SNR=9.7						
SDV	**Santo Domingo**	**24.11**	**102**	P	**P**	**07 58 26.1**	**-0.4**
	comp=Z,14nm,1.0s,mb4.3						
WCI	**Wyandotte Cave**	**24.17**	**16**	*e*P	**P**	**07 58 25.8**	**-1.3**
WCI				pmax	pmax		
	comp=Z,34nm,0.8s,mb4.8						
WCI	**Wyandotte Cave**	**24.17**	**16**	*e*P	**P**	**07 58 25.8**	**-1.4**
	comp=Z,34nm,0.8s,mb4.8						
Z14A	**Wintersburg**	**24.73**	**321**	⇓P	**P**	**07 58 31.8**	**-0.5**
	baz=25						
Z14A				⇑S	**S**	**08 03 01.0**	**+6.8**
	baz=25						
BLO	**Bloomington**	**25.00**	**15**	*e*P	**P**	**07 58 33.8**	**-0.9**
BLO				*e*		07 58 42.7	
BLO				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.1						
BLO	**Bloomington**	**25.00**	**15**	*e*P	**P**	**07 58 33.8**	**-0.9**
	comp=Z,41nm,0.7s,mb5.1						
BLO				*e*		07 58 42.7	
X15A	**Humboldt**	**25.10**	**324**	⇓P	**P**	**07 58 35.3**	**-0.2**
	baz=25,SNR=20						
X15A				⇓S	**S**	**08 03 10.1**	**+10**
	baz=25						
Y14A	**Wickenburg**	**25.16**	**322**	⇑P	**P**	**07 58 35.8**	**-0.3**
	baz=25,SNR=19						
Y14A				⇑S	**S**	**08 03 08.8**	**+7.6**
	baz=25						
ELN	**Prospectdale**	**25.21**	**26**	*e*P	**P**	**07 58 34.8**	**-1.8**
ELN				*e*pP	pP	07 58 42.6	+3.0
WUAZ	**Wupatki**	**25.38**	**326**	*e*P	**P**	**07 58 38.7**	**+0.6**
	comp=Z,40nm,0.9s,mb5.0						

X14A **Yava** 25.46 323 ⇑P P 07 58 38.6 -0.3
baz=26
X14A ⇓S S 08 03 10.7 +4.8
baz=26
W15A **Williams** 25.61 325 ⇑P P 07 58 40.3 0.0
baz=26
W15A ⇑S S 08 03 17.8 +10
baz=26
GLA **Glamis** 25.71 318 eP P 07 58 41.1 -0.1
GLA **Glamis** 25.71 318 ⇑P P 07 58 40.6 -0.6
baz=26,SNR=16
GLA ⇑S S 08 03 17.3 +7.4
baz=26
Y12C **Blythe** 25.97 319 ⇑P P 07 58 43.0 -0.5
baz=26
Y12C ⇑S S 08 03 20.7 +6.8
baz=26
PDMCI **Parker Dam,Lak** 26.09 321 ⇑P P 07 58 44.2 -0.4
baz=26
PDMCI ⇓S S 08 03 23.8 +7.9
baz=26
W14A **Seligman** 26.10 324 ⇓P P 07 58 44.4 -0.2
baz=26,SNR=5.6
W14A ⇓S S 08 03 25.3 +9.3
baz=26
X13A **Yucca** 26.11 322 ⇑P P 07 58 44.0 -0.7
baz=26,SNR=8.5
X13A ⇑S S 08 03 23.5 +7.4
baz=26
SWSC **Sam W. Stewart** 26.29 316 ⇓P P 07 58 45.9 -0.5
baz=26
DVTC **Desert V Tower** 26.32 315 ⇓P P 07 58 46.9 +0.3
baz=26
SMCO **Snowmass** 26.40 338 eP P 07 58 48.2 +0.8
comp=Z,22nm,1.3s,mb4.5
W13A **Hualapai Mount** 26.49 322 ⇑P P 07 58 48.4 +0.3
baz=27
W13A ⇓S S 08 03 29.6 +7.5
baz=27
ISCO **Idaho Springs** 26.49 341 eP P 07 58 48.8 +0.6
ISCO pmax pmax
comp=Z,12nm,1.0s,mb4.4
ISCO **Idaho Springs** 26.49 341 eP P 07 58 48.8 +0.6
comp=Z,12nm,1.0s,mb4.4
IRM **Iron Mountain** 26.63 319 ⇑P P 07 58 49.1 -0.4
baz=27
IRM ⇑S S 08 03 31.6 +7.3
baz=27
MONP **Monument Peak** 26.67 316 ⇓P P 07 58 49.4 -0.4
baz=27
MONP ⇑S S 08 03 33.3 +8.2
baz=27
NEE2 **Needles Airpor** 26.70 321 ⇓P P 07 58 49.9 -0.2
baz=27
SCIA **State Center** 26.76 2 eP P 07 58 49.2 -1.4
ACSO **Alum Creek Sta** 27.00 20 eP P 07 58 51.6 -1.1
comp=Z,7.6nm,0.8s,mb4.3
BELC **Belle Mtn.** 27.07 318 ⇓P P 07 58 52.6 -0.8
baz=27
BELC ⇑S S 08 03 35.3 +3.9
baz=27
ATAH **Atahualpa** 27.11 143 P P 07 58 55.7 +1.9
comp=Z,3.0nm,0.8s,mb3.9,baz=354,slow=8.1,SNR=3.6
ATAH LR LR 08 06 46.6
comp=Z,773nm,19.3s,MS4.3,baz=142,slow=30
PFO **Pinyon Flat Ob** 27.13 317 ⇑P P 07 58 53.2 -0.8
baz=27
PFO ⇑S S 08 03 36.2 +4.0
baz=27
109C **Camp Elliot, M** 27.14 315 ⇓P P 07 58 53.1 -1.0
baz=27
109C ⇓S S 08 03 34.7 +2.3
baz=27
W12A **Cal Nev Ari** 27.21 321 ⇑P P 07 58 54.2 -0.5
baz=27
W12A ⇓S S 08 03 37.3 +3.7
baz=27
V12A **Nelson** 27.49 322 ⇓P P 07 58 57.1 -0.1
baz=28,SNR=12
V12A ⇑S S 08 03 40.5 +2.6
baz=28
MURC **Murrieta** 27.62 316 ⇑P P 07 58 58.3 0.0
baz=28
SRU **San Rafael** 27.79 333 eP P 07 59 01.1 +1.2
U12A **Valley of Fire** 27.80 324 ⇑P P 07 58 59.7 -0.3
baz=28,SNR=5.2
U12A ⇑S S 08 03 46.7 +4.0
baz=28
HEC **Hector,Ludlow** 27.81 319 ⇓P P 07 58 59.9 -0.1
baz=28,SNR=5.1
HEC ⇓S S 08 03 48.8 +5.9
baz=28
PHWY **Pilot Hill** 27.82 342 eP P 07 59 00.4 +0.3
BBRC **Big Bear Sol-O** 27.83 317 ⇑P P 07 59 00.2 -0.1
baz=28
TUQ **Turquoise Mtn.** 27.94 320 ⇓P P 07 59 00.8 -0.5
baz=28
TUQ ⇓S S 08 03 50.0 +4.9
baz=28
CCUT **Cedar City** 27.96 327 eP P 07 59 02.5 +1.1
CCUT ePcP PcP 08 02 17.2 +0.7
JFWS **Jewell Farm** 27.98 7 eP P 07 59 00.3 -1.3
JFWS pmax pmax
comp=Z,15nm,0.6s,mb4.8
JFWS **Jewell Farm** 27.98 7 eP P 07 59 00.3 -1.3
comp=Z,14nm,0.6s,mb4.8
MSU **Marysvale** 28.09 330 eP P 07 59 04.5 +2.0
MSU e 07 59 12.1
ARUT **Antelope Range** 28.18 327 eP P 07 59 03.8 +0.5
SCI **San Clemente I** 28.19 313 ⇓P P 07 59 02.9 -0.6
baz=28
TMUT **Trail Mountain** 28.25 332 eP P 07 59 04.8 +0.8
TMUT ePcP PcP 08 02 18.1 +0.9
BFSC **Mount Baldy St** 28.31 317 ⇑P P 07 59 03.9 -0.6
baz=28
CIS **Catalina Islan** 28.33 314 ⇑P P 07 59 04.1 -0.6
baz=28
CIS ⇑S S 08 03 54.6 +3.5
baz=28
GSC **Goldstone** 28.41 319 ⇓S S 08 03 52.6 +0.2
baz=28
RWWY **Rawlins** 28.72 340 eP P 07 59 08.8 +0.7
comp=Z,25nm,1.0s,mb4.9
U10A **Ash Meadows, A** 28.84 322 ⇑P P 07 59 09.5 +0.2
baz=29
EDW2 **Edwards Air Fo** 28.91 317 ⇓P P 07 59 09.4 -0.5
baz=29
MPU **Maple Canyon** 29.02 332 eP P 07 59 10.9 0.0
LRMC **Laurel Mountai** 29.08 319 ⇑S S 08 04 07.0 +4.0
baz=29
TPNV **Topopah Spring** 29.15 322 eP P 07 59 13.0 +1.0
TPNV pmax pmax
comp=Z,75nm,2.3s,mb5.0
TPNV **Topopah Spring** 29.15 322 eP P 07 59 12.9 +1.0
comp=Z,75nm,2.3s,mb5.0
DAU **Daniels Canyon** 29.18 333 eP P 07 59 12.8 +0.5
FURC **Furnace Creek,** 29.20 321 ⇓P P 07 59 12.0 -0.4
baz=29,SNR=5.4
MPMC **Manual Prospec** 29.32 320 ⇓P P 07 59 13.5 0.0
baz=30,SNR=9.5
MVL **Millersville** 29.45 29 eP P 07 59 15.0 +0.3
PCRV **Puerto La Cruz** 29.50 96 LR LR 08 12 43.8
comp=Z,2µm,18.5s,MS4.7,baz=98,slow=40
BSC **Santa Cruz Isl** 29.51 314 ⇑P P 07 59 15.3 +0.1
baz=30
DAC **Darwin (Calif)** 29.52 320 eP P 07 59 15.5 +0.2
ARVC **Arvin** 29.61 317 ⇑P P 07 59 16.3 +0.2
baz=30
ISA **Isabella** 29.70 318 eP P 07 59 18.5 +1.7
ISA e 07 59 26.5
ISA pmax pmax
comp=Z,23nm,1.8s,mb4.6
ISA **Isabella** 29.70 318 eP P 07 59 18.5 +1.7
comp=Z,23nm,1.8s,mb4.6
ISA e 07 59 26.5
ISA **Isabella** 29.70 318 ⇑P P 07 59 16.8 0.0
baz=30
ERPA **Erie** 29.70 22 eP P 07 59 16.0 -0.9
comp=Z,15nm,0.9s,mb4.7
DUG **Dugway** 29.71 331 eP P 07 59 18.2 +1.2
DUG pmax pmax
comp=Z,12nm,1.4s,mb4.4
DUG **Dugway** 29.71 331 eP P 07 59 18.2 +1.3
comp=Z,12nm,1.4s,mb4.4
TCUT **Toone Canyon** 29.82 334 eP P 07 59 18.5 +0.5
Q12A **Willow Creek R** 29.83 327 ⇑P P 07 59 18.4 +0.3
baz=30

GRAC **Grapevine Rang** 29.85 321 ⇑P P 07 59 18.7 +0.5
baz=30
CWC **Cottonwood Cre** 29.93 320 ⇓P P 07 59 18.6 -0.3
baz=30
RSSD **Black Hills** 30.07 346 eP P 07 59 20.9 +0.7
RSSD pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
RSSD **Black Hills** 30.07 346 eP P 07 59 20.9 +0.7
comp=Z,3.6nm,0.9s,mb4.1
R10A **Warm Springs** 30.10 324 P P 07 59 21.1 +0.8
baz=30,SNR=7.7
PKM **Peak Mountain** 30.14 316 ⇑P P 07 59 20.4 -0.3
baz=30
P12A **McGill** 30.20 328 ⇑P P 07 59 21.9 +0.7
baz=30
P12A ⇑S S 08 04 26.4 +6.0
baz=30
VES **Vestal, Richgr** 30.20 318 ⇑P P 07 59 21.1 -0.1
baz=30,SNR=6.2
S09A **Goldfield** 30.24 322 ⇓P P 07 59 21.9 +0.2
baz=30,SNR=6.3
HWUT **Hardware Ranch** 30.30 334 eP P 07 59 22.5 +0.4
comp=Z,8.3nm,0.9s,mb4.5
HWUT e 07 59 30.9
HWUT ePcP PcP 08 02 21.5 -0.9
BGU **Big Grassy Mou** 30.39 332 eP P 07 59 23.4 +0.5
BW06 **Boulder Array** 30.49 338 eP P 07 59 23.7 -0.1
comp=Z,7.2nm,1.0s,mb4.4
PDAR **Pinedale Array** 30.49 338 P P 07 59 23.7 -0.1
comp=Z,4.8nm,0.9s,mb4.2,baz=135,slow=7.7,SNR=32
PDAR LR LR 08 12 54.7
comp=Z,709nm,19.5s,MS4.3,baz=43,slow=39
PDAR **Pinedale Array** 30.49 338 P P 07 59 23.7 -0.1
PDAR LR LR 08 12 54.7
R09A **Tonopah** 30.50 323 ⇓P P 07 59 24.2 +0.2
baz=31
RCTC **Rector, Farmer** 30.58 318 ⇑P P 07 59 24.6 0.0
baz=31
HELL **Mihell Peak,** 30.67 319 P P 07 59 26.0 +0.5
baz=31,SNR=16
HELL ⇑S S 08 04 31.1 +3.2
baz=31
N13A **Wendover, West** 30.89 330 ⇓P P 07 59 27.9 +0.5
baz=31
N13A ⇓S S 08 04 31.2 -0.2
baz=31
HVU **Hansel Valley** 30.96 333 eP P 07 59 28.8 +0.8
HVU pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
HVU **Hansel Valley** 30.96 333 eP P 07 59 28.8 +0.8
comp=Z,10nm,0.7s,mb4.8
Q09A **Carvers** 30.97 324 ⇓P P 07 59 28.4 +0.3
baz=31
Q09A ⇑S S 08 04 36.1 +3.5
baz=31
O11A **Cowboy Ranch,** 31.07 328 ⇑P P 07 59 29.4 +0.4
baz=31,SNR=6.7
O11A ⇓S S 08 04 34.0 -0.2
baz=31
AHID **Auburn Hatcher** 31.07 336 eP P 07 59 30.6 +1.5
comp=Z,13nm,0.9s,mb4.8
MLAC **Mammoth Lakes** 31.15 321 ⇓P P 07 59 30.1 +0.4
baz=31
R08A **Mina** 31.18 322 ⇑P P 07 59 30.6 +0.7
baz=31
PKD **Parkfield** 31.22 317 ⇑P P 07 59 29.5 -0.8
baz=31
KCC **Kaiser Creek** 31.25 320 ⇑P P 07 59 30.4 -0.2
baz=31,SNR=5.9
M13A **Montello** 31.26 331 ⇓P P 07 59 30.9 +0.3
baz=32,SNR=11
M13A ⇑S S 08 04 41.6 +4.5
baz=32
N12A **Clover Valley,** 31.29 329 ⇑P P 07 59 31.0 0.0
baz=32,SNR=7.1
N12A ⇑S S 08 04 42.5 +4.9
baz=32
NVAR **Mina Array Bea** 31.35 322 P P 07 59 32.0 +0.6
comp=Z,5.8nm,0.9s,mb4.4,baz=131,slow=8.9,SNR=36
NVAR PcP PcP 08 02 24.8 -0.4
comp=Z,1.6nm,0.9s,baz=117,slow=3.5,SNR=5.2
BINY **Binghamton** 31.38 27 eP P 07 59 30.3 -1.4
comp=Z,12nm,1.1s,mb4.6
Q08A **Gabbs** 31.42 323 ⇓P P 07 59 32.1 0.0
baz=32
Q08A ⇓S S 08 04 41.9 +2.2
baz=32
P09A **Austin** 31.45 325 ⇑P P 07 59 32.5 +0.2
baz=32
REDW **Red Top Meadow** 31.48 337 eP P 07 59 32.5 -0.1
comp=Z,30nm,1.1s,mb5.0
SNOW **Snow King Moun** 31.53 337 eP P 07 59 33.4 +0.3
comp=Z,42nm,0.8s,mb5.3
R07C **Lee Vining** 31.57 321 ⇓P P 07 59 33.9 +0.5
baz=32
LOHW **Long Hollow** 31.60 337 eP P 07 59 33.8 +0.1
comp=Z,21nm,0.8s,mb5.0
LOHW e 07 59 43.6
N11A **Elko Archery C** 31.62 328 ⇓P P 07 59 34.2 +0.4
baz=32
U04C **Hernandez Rese** 31.62 317 ⇓P P 07 59 33.0 -0.8
baz=32
O10A **Cortez Mining,** 31.63 327 ⇑P P 07 59 34.8 +0.9
baz=32
TPAW **Teton Pass** 31.63 337 eP P 07 59 34.1 +0.2
comp=Z,24nm,1.0s,mb5.0
TPAW e 07 59 44.6
RRI2 **Red Ridge** 31.65 336 eP P 07 59 35.0 +0.9
comp=Z,15nm,0.8s,mb4.9
RRI2 e 07 59 44.7
M12A **Wells** 31.66 330 ⇑P P 07 59 34.6 +0.4
baz=32,SNR=9.6
M12A ⇓S S 08 04 48.2 +4.7
baz=32
V03C **Hunter Liggett** 31.73 316 ⇑P P 07 59 34.3 -0.4
baz=32
MOOW **Moose Ponds** 31.77 337 eP P 07 59 35.2 +0.1
comp=Z,8.9nm,0.8s,mb4.7
MOOW e 07 59 44.5
DCID1 **Drake Creek** 31.81 337 eP P 07 59 35.3 -0.1
S05C **Merced** 31.91 319 ⇑P P 07 59 36.4 0.0
baz=32,SNR=8.6
O09A **Fish Creek Ran** 31.91 326 ⇑P P 07 59 36.5 +0.1
baz=32,SNR=5.8
S06C **San Francisco** 31.93 320 ⇓P P 07 59 36.7 +0.2
baz=32
N10A **Dunphy** 31.94 327 ⇓P P 07 59 36.7 0.0
baz=32
IMW **Indian Meadow** 31.97 337 eP P 07 59 40.4 +3.5
comp=Z,11nm,1.0s,mb4.6
IMW ePcP PcP 08 02 29.9 +3.1
Q07A **Schurz** 31.98 323 ⇓P P 07 59 36.9 -0.1
baz=32
FLWY **Flagg Ranch** 32.04 338 eP P 07 59 38.4 +0.9
comp=Z,14nm,0.9s,mb4.8
P08A **Dixie Valley** 32.07 324 ⇓P P 07 59 38.0 +0.3
baz=32
R06C **Coleville** 32.09 321 ⇑P P 07 59 38.0 0.0
baz=32
R06C ⇑S S 08 04 55.0 +4.8
baz=32
M11A **Holland Ranch,** 32.10 329 P P 07 59 38.3 +0.3
baz=32,SNR=6.3
M11A ⇑S S 08 04 54.4 +4.1
baz=32
SADO **Sadowa** 32.33 21 P P 07 59 38.6 -1.4
comp=Z,13nm,0.9s,mb4.8,baz=231,slow=6.9,SNR=10
LKWY **Lake** 32.35 338 eP P 07 59 41.1 +0.8
LKWY pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
LKWY **Lake** 32.35 338 eP P 07 59 41.1 +0.8
comp=Z,9.3nm,0.8s,mb4.7
CMB **Columbia Colle** 32.36 320 eP P 07 59 39.5 -0.8
CMB pmax pmax
comp=Z,10.0nm,1.3s,mb4.5
CMB **Columbia Colle** 32.36 320 eP P 07 59 39.5 -0.8
comp=Z,10.0nm,1.3s,mb4.5
CMB **Columbia Colle** 32.36 320 ⇑P P 07 59 39.6 -0.7
baz=32
YFT **Old Faithful** 32.41 338 eP P 07 59 42.4 +1.6
P07A **Fallon** 32.43 323 ⇑P P 07 59 40.9 0.0
baz=33
O08A **Rochester Mine** 32.52 325 ⇑P P 07 59 42.4 +0.6
baz=33
M10A **I.L. Ranch, Tu** 32.55 328 ⇓P P 07 59 42.4 +0.5
baz=33
M10A ⇓S S 08 04 58.9 +1.7
baz=33

N09A **Rock Creek Ran** 32.57 327 ⇓P P 07 59 42.6 +0.4
baz=33
N09A ⇑S S 08 04 59.2 +1.5
baz=33
R05C **Kirkwood Meado** 32.58 321 ⇓P P 07 59 42.9 +0.6
baz=33
R05C ⇑S S 08 05 00.5 +2.7
baz=33
S04C **Ingram Canyon,** 32.64 318 ⇑P P 07 59 41.8 -1.0
baz=33
YMR **Madison River** 32.65 338 eP P 07 59 43.5 +0.7
comp=Z,16nm,0.9s,mb5.0
WCN **Washoe City** 32.77 322 ⇑P P 07 59 43.7 -0.2
baz=33
O07A **Toulon** 32.84 324 ⇓P P 07 59 44.2 -0.3
baz=33
R04C **Big Horse Ranc** 32.84 320 ⇑P P 07 59 44.6 +0.1
baz=33
R04C ⇓S S 08 05 02.7 +0.9
baz=33
N08A **GE Springer Mi** 32.85 326 ⇓P P 07 59 44.5 -0.1
baz=33
N08A ⇓S S 08 05 04.0 +2.0
baz=33
EYMN **Ely** 32.87 4 eP P 07 59 43.6 -1.1
comp=Z,13nm,1.0s,mb4.8
M09A **Marrel Ranch,** 32.94 327 ⇑P P 07 59 45.4 0.0
baz=33,SNR=5.7
M09A ⇓S S 08 05 07.2 +3.8
baz=33
QLMT **Earthquake Lak** 32.95 338 eP P 07 59 46.8 +1.3
QLMT e 07 59 55.0
WENL **Wente Brothers** 32.98 318 ⇑P P 07 59 45.8 0.0
baz=33
LAO **LASA Array** 33.01 345 eP P 07 59 43.0 -3.0
comp=Z,12nm,0.9s,mb4.8
LAVA **Lava Cap Winer** 33.02 321 ⇑P P 07 59 46.4 +0.2
baz=33
P06A **Stead Airport,** 33.10 323 ⇓P P 07 59 47.2 +0.4
baz=33
HLID **Hailey** 33.11 333 eP P 07 59 47.3 +0.4
comp=Z,9.2nm,0.8s,mb4.8
HLID e 07 59 57.2
GCMT **Greycliff** 33.18 340 eP P 07 59 47.6 +0.1
GCMT e 07 59 56.5
BDM **Black Diamond** 33.25 318 ⇑P P 07 59 48.4 +0.4
baz=33
P05C **Yuba Gap, Truc** 33.28 321 ⇓P P 07 59 49.1 +0.7
baz=33
O06A **Flanigan** 33.38 323 ⇑P P 07 59 49.6 +0.3
baz=34,SNR=6.6
O06A ⇓S S 08 05 12.2 +2.0
baz=34
M08A **Happy Creek Ra** 33.45 326 ⇓P P 07 59 49.8 0.0
baz=34
Q04C **Lincoln** 33.47 320 ⇑P P 07 59 50.1 +0.1
baz=34
L09A **Wilkinson Ranc** 33.48 328 ⇓P P 07 59 50.2 +0.1
baz=34
L09A ⇓S S 08 05 11.9 +0.1
baz=34
MCMT **McKenzie Canyo** 33.49 336 eP P 07 59 51.3 +1.1
MCMT e 08 00 01.1
BEKR **Beckwourth** 33.49 322 ⇓P P 07 59 50.1 -0.2
baz=34
BOZ **Bozeman (W)** 33.73 338 eP P 07 59 52.4 +0.1
BOZ pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
BOZ **Bozeman (W)** 33.73 338 eP P 07 59 52.4 +0.2
comp=Z,9.4nm,1.5s,mb4.5
N06A **Buffalo Meadow** 33.77 324 ⇑P P 07 59 52.2 -0.4
baz=34
N06A ⇑S S 08 05 18.0 +1.8
baz=34
M07A **Soldier Meadow** 33.84 326 ⇓P P 07 59 52.7 -0.5
baz=34
M07A ⇓S S 08 05 19.8 +2.5
baz=34
DLMT **Dillon** 33.84 337 eP P 07 59 53.8 +0.5
comp=Z,24nm,0.9s,mb5.1
CVS **Carmenet Viney** 33.85 319 ⇑P P 07 59 53.2 -0.2
baz=34
O05C **Quincy** 33.89 322 ⇓P P 07 59 54.2 +0.6
baz=34
SUTB **Sutter Butte** 33.96 320 ⇓P P 07 59 54.0 -0.3
baz=34
SUTB ⇓S S 08 05 22.6 +3.5
baz=34
L08A **Fields** 33.96 327 ⇑P P 07 59 54.7 +0.4
baz=34,SNR=15
L08A ⇑S S 08 05 20.2 +1.1
baz=34
ORV **Oroville** 33.98 321 ⇑P P 07 59 54.5 +0.1
baz=34
ORV ⇑S S 08 05 20.4 +0.9
baz=34
K09A **Rome** 34.01 329 P P 07 59 55.2 +0.5
baz=34,SNR=24
K09A ⇑S S 08 05 20.6 +0.7
baz=34
LRM **Limekiln Ridge** 34.18 337 eP P 07 59 56.6 +0.4
ELFS **Eagle Lake Fie** 34.20 323 ⇑P P 07 59 56.7 +0.3
baz=34
ELFS ⇑S S 08 05 25.9 +3.1
baz=34
O04C **Chester** 34.21 322 ⇓P P 07 59 56.8 +0.3
baz=34
O04C ⇑S S 08 05 25.4 +2.4
baz=34
WVOR **Wild Horse Val** 34.28 327 eP P 07 59 57.0 -0.1
WVOR pmax pmax
comp=Z,33nm,1.4s,mb5.1
WVOR **Wild Horse Val** 34.28 327 eP P 07 59 57.0 -0.1
comp=Z,33nm,1.4s,mb5.1
L07A **Adell** 34.36 326 ⇑P P 07 59 58.0 +0.2
baz=35
L07A ⇓S S 08 05 30.3 +4.9
baz=35
K08A **Mann Creek Ran** 34.42 328 ⇓P P 07 59 58.3 0.0
baz=35,SNR=9.6
K08A ⇓S S 08 05 27.8 +1.5
baz=35
M06C **Likely Place G** 34.44 324 ⇓P P 07 59 58.4 -0.1
baz=35,SNR=8.2
M06C ⇓S S 08 05 29.2 +2.6
baz=35
HRY **Holter Researc** 34.71 339 eP P 08 00 01.0 +0.1
GASB **Alder Springs** 34.79 320 ⇓P P 08 00 01.4 -0.1
baz=35
M05C **Lookout** 34.92 324 ⇓P P 08 00 02.4 -0.2
baz=35
I09A **Lost Marbles R** 34.96 330 P P 08 00 02.6 -0.3
baz=35,SNR=30
I09A ⇑S S 08 05 36.6 +2.1
baz=35
ULM **Lac du Bonnet** 35.10 358 P P 08 00 02.8 -1.4
comp=Z,3.7nm,0.4s,mb4.6,baz=178,slow=8.6,SNR=8.5
ULM LR LR 08 16 02.2
comp=Z,221nm,19.7s,MS3.9,baz=337,slow=39
ULM **Lac du Bonnet** 35.10 358 eP P 08 00 02.6 -1.5
comp=Z,11nm,0.8s,mb4.8
L05A **Lakeview** 35.20 325 ⇓P P 08 00 04.9 -0.1
baz=35,SNR=7.3
EGMT **Eagleton** 35.20 342 eP P 08 00 04.8 -0.2
comp=Z,15nm,1.0s,mb4.9
I08A **Drewsey** 35.31 329 ⇓P P 08 00 05.9 -0.1
baz=36,SNR=5.4
K06A **Valley Falls** 35.39 326 ⇑P P 08 00 06.3 -0.4
baz=36
CHMT **Chamberlain Mo** 35.40 338 eP P 08 00 06.6 -0.1
BMO **Blue Mountains** 35.42 332 eP P 08 00 05.6 -1.3
comp=Z,11nm,1.4s,mb4.6
BMO ePcP PcP 08 02 35.7 -0.9
H09A **Durkee** 35.44 331 ⇓P P 08 00 06.3 -0.8
baz=36,SNR=9.0
H09A ⇑S S 08 05 40.8 -1.2
baz=36
MSO **Missoula** 35.58 337 eP P 08 00 08.5 +0.2
comp=Z,8.0nm,1.0s,mb4.6
MSO e 08 00 17.2
M04C **Macdoel** 35.59 324 ⇓P P 08 00 07.8 -0.6
baz=36
M04C ⇓S S 08 05 48.7 +4.4
baz=36
J06A **Christmas Vall** 35.65 327 ⇓P P 08 00 08.3 -0.6
baz=36
H08A **Prairie City** 35.81 330 ⇑P P 08 00 09.9 -0.4
baz=36,SNR=7.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H08A				⇑S	S	08 05 47.5	-0.1
	baz=36						
L04A	Klamath Falls	35.87	324	⇓P	P	08 00 10.9	+0.1
	baz=36						
I07A	Izee	35.90	329	P	P	08 00 11.3	+0.2
	baz=36,SNR=5.2						
YBH	Yreka Blue Hor	36.06	323	⇓P	P	08 00 12.5	+0.1
	baz=36						
KHMM	Horse Mountain	36.14	321	*e*P	P	08 00 13.5	+0.4
I06A	Prineville	36.16	328	⇓P	P	08 00 13.0	-0.3
	baz=36						
J05A	Fort Rock	36.25	326	⇑P	P	08 00 14.0	0.0
	baz=36						
JCC	Jacoby Creek	36.29	321	⇓P	P	08 00 14.1	-0.3
	baz=36						
JCC				⇑S	S	08 05 57.6	+2.7
	baz=36						
BSMT	Bassoo Peak	36.75	337	*e*P	P	08 00 17.8	-0.5
I05A	Bend	36.87	327	⇓P	P	08 00 18.9	-0.4
	baz=37						
I05A				⇓S	S	08 06 09.1	+5.4
	baz=37						
WALA	Waterton Lakes	37.45	339	*e*P	P	08 00 24.4	+0.2
	comp=Z,7.2nm,1.0s,mb4.5						
J02A	Umpqua	37.59	324	⇓P	P	08 00 25.5	+0.1
	baz=38						
HAWA	Hanford	37.60	331	*e*P	P	08 00 26.3	+0.8
G05A	Wamic	37.64	329	⇓P	P	08 00 26.0	+0.2
	baz=38						
G05A				⇓S	S	08 06 20.5	+4.9
	baz=38						
H04A	Detroit Lake	37.70	327	⇑P	P	08 00 25.4	-0.9
	baz=38,SNR=9.1						
I03A	Eugene	37.81	325	⇑P	P	08 00 26.5	-0.8
	baz=38						
HOOD	Mount Hood Mea	37.86	328	*e*P	P	08 00 28.5	+0.7
NEW	Newport	38.00	335	*e*P	P	08 00 29.2	+0.3
NEW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEW	Newport	38.00	335	*e*P	P	08 00 29.2	+0.3
	comp=Z,6.9nm,0.9s,mb4.4						
F05A	White Salmon	38.16	329	⇓P	P	08 00 30.0	-0.2
	baz=38,SNR=9.4						
F05A				⇓S	S	08 06 26.7	+3.2
	baz=38						
G04A	Mulino	38.21	328	⇑P	P	08 00 30.6	-0.1
	baz=38						
F04A	Amboy	38.67	328	⇑P	P	08 00 34.6	0.0
	baz=39						
G03A	Yamhill	38.70	327	⇓P	P	08 00 35.1	+0.3
	baz=39						
SAML	Samuel	39.14	126	*e*P	P	08 00 35.4	-3.1
	comp=Z,2.1nm,0.8s,mb3.9						
F03A	Seaside	39.26	328	⇓P	P	08 00 39.7	+0.2
	baz=40						
D05A	Enumclaw	39.34	330	⇑P	P	08 00 40.0	-0.2
	baz=40,SNR=8.8						
C05A	Tolt Reservoir	39.56	331	⇑P	P	08 00 41.7	-0.3
	baz=40						
E03A	Lebam	39.67	328	⇑P	P	08 00 42.5	-0.4
	baz=40						
E03A				⇓S	S	08 06 47.1	+0.9
	baz=40						
FFC	Flin Flon	39.99	353	*e*P	P	08 00 45.3	-0.3
FFC				*e*		08 00 52.6	
FFC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
FFC	Flin Flon	39.99	353	*e*P	P	08 00 45.3	-0.3
	comp=Z,10nm,1.0s,mb4.5						
FFC				*e*		08 00 52.6	
GNW	Green Mountain	40.01	330	*e*P	P	08 00 45.3	-0.4
B04A	Port Angeles	40.68	330	⇑P	P	08 00 51.1	-0.2
	baz=41						
A05A	Maple Falls	40.69	332	⇓P	P	08 00 50.9	-0.5
	baz=41						
A04A	Legoe Bay, Lum	40.77	331	⇑P	P	08 00 52.1	0.0
	baz=41,SNR=7.4						
EDM	Edmonton	40.87	343	*e*P	P	08 00 51.7	-1.2
C03A	Quillayute Air	41.13	329	⇓P	P	08 00 55.5	+0.5
	baz=41						
SCHQ	Schefferville	45.09	22	LR	LR	08 22 11.6	
	comp=Z,789nm,20.1s,MS4.6,baz=206,slow=39						
SIV	San Ignacio	45.18	132	P	P	08 01 26.4	-1.3
	comp=Z,4.7nm,1.0s,mb4.3,baz=309,slow=8.2,SNR=14						
YKA	Yellowknife Ar	49.45	348	P	P	08 02 00.5	-0.5
	comp=Z,7.9nm,0.9s,mb4.8,baz=154,slow=7.3,SNR=9.9						
YKA				LR	LR	08 26 28.2	
	comp=Z,445nm,20.0s,MS4.5,baz=150,slow=40						
TAOE	Nuku Hiva Isla	51.13	245	*e*LR	LR	08 16 18.6	
	comp=Z,2µm,26.1s,baz=62						
CPUP	Villa Florida	54.76	138	P	P	08 02 37.7	-2.8
	comp=Z,0.4nm,0.4s,mb3.8,baz=295,slow=7.3,SNR=3.0						
RKT	Rikitea	54.88	227	*e*S	S	08 10 21.8	-0.8
	comp=Z,372nm,25.5s						
RKT				*e*LR	LR	08 18 30.7	
	comp=Z,967nm,27.8s,baz=50						
BDFB	Brasilia	55.12	122	P	P	08 02 42.7	-0.4
	comp=Z,6.4nm,0.9s,mb4.7,baz=279,slow=8.7,SNR=8.1						
DAWY	Dawson	57.80	338	*e*P	P	08 03 01.8	-0.4
INK	Inuvik	58.74	344	*e*P	P	08 03 07.7	-1.1
INK				*e*		08 03 16.9	
INK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
INK	Inuvik	58.74	344	*e*P	P	08 03 07.7	-1.1
	comp=Z,7.7nm,0.9s,mb4.7						
INK				*e*		08 03 16.9	
SFJD	Kangerlussuaq	59.24	18	*i* P	P	08 03 14.8	+2.5
SFJD							
	comp=Z,420nm,18.0s						
PLCA	Paso Flores	59.80	159	*e*P	P	08 03 16.2	+0.1
SML	Sawmill	60.13	334	*e*P	P	08 03 19.2	+0.8
PMR	Palmer	60.38	333	*e*P	P	08 03 18.4	-1.7
PMR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
PMR	Palmer	60.38	333	*e*P	P	08 03 18.4	-1.7
	comp=Z,3.5nm,0.7s,mb4.5						
MCK	McKinley	61.23	336	*e*P	P	08 03 25.2	-0.7
MCK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
MCK	McKinley	61.23	336	*e*P	P	08 03 25.2	-0.7
	comp=Z,3.9nm,0.9s,mb4.5						
COLA	College	61.33	337	*e*P	P	08 03 25.9	-0.7
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
COLA	College	61.33	337	*e*P	P	08 03 25.9	-0.6
	comp=Z,7.7nm,0.8s,mb4.9						
PPT	Papeete	63.28	241	*e*S	S	08 12 11.4	-0.2
	comp=Z,635nm,31.2s						
PPT				*e*LR	LR	08 21 57.0	
	comp=Z,619nm,26.5s,baz=66						
PPT	Papeete	63.28	241	LR	LR	08 22 51.6	
	comp=Z,319nm,20.3s,MS4.5,baz=80,slow=28						
SUMG	Summit	65.85	16	*e*P	P	08 03 56.0	-0.4
	comp=Z,11nm,0.8s,mb5.0						
TBI	Tubuai	65.95	236	*e*S	S	08 12 42.5	-2.0
	comp=Z,252nm,35.5s						
TBI				*e*LR	LR	08 23 24.7	
	comp=Z,467nm,28.0s,baz=62						
DAG	Danmarks Havn	72.18	14	⇑*i*P	P	08 04 34.7	-1.1
	comp=Z,5.2nm,0.8s,mb4.5						
DAG	Danmarks Havn	72.18	14	⇑*e*P	P	08 04 34.7	-1.1
DAG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
DAG	Danmarks Havn	72.18	14	⇑*e*P	P	08 04 34.7	-1.1
	comp=Z,5.2nm,0.8s,mb4.5						
DCN	Croghan	76.40	38	*e*P	P	08 04 59.0	-1.4
DLF	Lyons Farm	76.85	38	*e*P	P	08 04 59.0	-3.9
ELOB	Lobios	77.47	50	P	P	08 05 06.2	-0.2
	comp=Z,39nm,1.2s,mb5.2						
EGRO	El Granado	78.63	54	P	P	08 05 13.4	+0.6
	comp=Z,46nm,1.6s,mb5.2						
EMIN	Mina Concepcio	79.22	54	P	P	08 05 16.6	+0.5
	comp=Z,17nm,1.2s,mb4.9						
BILL	Bilibino	79.57	338	⇑*i*P	P	08 05 17.1	-0.9
BILL				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
BILL	Bilibino	79.57	338	*e*P	P	08 05 16.8	-1.2
	comp=Z,9.7nm,0.4s,mb5.1						
GUD	Guadarrama	80.58	50	P	P	08 05 23.9	+0.4
GUD				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
GUD	Guadarrama	80.58	50	P	P	08 05 23.9	+0.5
	comp=Z,18nm,1.0s,mb5.0						
EADA	Adamuz	80.77	53	P	P	08 05 23.4	-1.0
	comp=Z,50nm,2.3s,mb5.0						
ESDC	Sonseca Array	80.93	51	P	P	08 05 25.5	+0.2
	comp=Z,7.0nm,0.9s,mb4.6,baz=296,slow=5.5,SNR=16						
ESDC	Sonseca Array	80.93	51	P	P	08 05 24.8	-0.5
	comp=Z,10nm,1.1s,mb4.7						
EMIJ	Mijas	80.95	55	P	P	08 05 24.8	-0.6
	comp=Z,16nm,1.9s,mb4.6						
FLN	La Foliniere	81.41	42	*e*P	P	08 05 27.8	-0.1
FLN				*e*R			
	comp=Z,449nm,19.0s						
FLN	La Foliniere	81.41	42	*e*P	P	08 05 27.8	-0.1
FLN				LR	LR		
	comp=Z,450nm,19.0s,MS4.8						
ERON	Agron	81.61	54	P	P	08 05 30.0	+1.1
	comp=Z,7.9nm,0.8s,mb4.7						
ECOG	Cogollos-Vega	81.74	54	P	P	08 05 30.3	+0.7
ECOG				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
ECOG	Cogollos-Vega	81.74	54	P	P	08 05 30.3	+0.7
	comp=Z,15nm,0.9s,mb4.9						
EQES	Quesada	82.01	53	P	P	08 05 32.0	+1.0
	comp=Z,17nm,1.0s,mb4.9						
SJPF	Ste Jean	82.19	48	*e*P	P	08 05 31.8	-0.2
EVIA	Vianos	82.26	52	P	P	08 05 33.1	+0.8
EVIA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
EVIA	Vianos	82.26	52	P	P	08 05 33.1	+0.7
	comp=Z,7.2nm,0.8s,mb4.7						
EHUE	Huescar	82.38	53	P	P	08 05 33.5	+0.6
EHUE				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
EHUE	Huescar	82.38	53	P	P	08 05 33.5	+0.5
	comp=Z,7.8nm,1.0s,mb4.6						
LFF	La Frestale	83.13	45	*e*P	P	08 05 36.9	0.0
TCF	Toulx Ste Croi	83.78	44	*e*P	P	08 05 39.9	-0.3
BGF	Bois d'Agland	84.14	43	*e*P	P	08 05 41.7	-0.3
	comp=Z,44nm,1.1s,mb5.2						
BGF	Bois d'Agland	84.14	43	*e*P	P	08 05 41.7	-0.3
BGF				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.2						
BGF	Bois d'Agland	84.14	43	*e*P	P	08 05 41.7	-0.3
	comp=Z,22nm,1.1s,mb5.2						
NB2	NORSAR Subarra	84.34	28	P	P	08 05 43.2	+0.1
	comp=Z,2.3nm,0.8s,mb4.4,baz=291,slow=5.3						
NOA	NORSAR Array B	84.34	28	P	P	08 05 43.0	0.0
	comp=Z,4.3nm,0.8s,mb4.6,baz=296,slow=5.1,SNR=9.6						
NOA				LR	LR	08 46 10.8	
	comp=Z,138nm,18.0s,MS4.4,baz=280,slow=38						
AVF	Avril sur Loir	84.41	43	*e*P	P	08 05 42.8	-0.6
	comp=Z,17nm,0.9s,mb4.8						
AVF	Avril sur Loir	84.41	43	*e*P	P	08 05 42.8	-0.6
AVF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
AVF	Avril sur Loir	84.41	43	*e*P	P	08 05 42.8	-0.6
	comp=Z,8.3nm,0.9s,mb4.9						
GIVF	Givet	84.42	40	*e*P	P	08 05 43.1	-0.4
SSF	Saint Saulge	84.44	43	*e*P	P	08 05 43.1	-0.5
	comp=Z,17nm,0.8s,mb4.9						
SSF	Saint Saulge	84.44	43	*e*P	P	08 05 43.1	-0.5
SSF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
SSF	Saint Saulge	84.44	43	*e*P	P	08 05 43.1	-0.5
	comp=Z,8.4nm,0.8s,mb4.9						
LOR	Lormes	84.61	43	*e*P	P	08 05 44.3	-0.1
LOR				*e*R			
	comp=Z,242nm,17.2s						
LOR	Lormes	84.61	43	*e*P	P	08 05 44.3	-0.1
LOR				LR	LR		
	comp=Z,240nm,17.3s,MS4.6						
SMF	Signal de Mont	84.77	43	*e*P	P	08 05 43.8	-1.5
	comp=Z,11nm,0.8s,mb4.7						
SMF	Signal de Mont	84.77	43	*e*P	P	08 05 43.8	-1.5
SMF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
SMF	Signal de Mont	84.77	43	*e*P	P	08 05 43.8	-1.5
	comp=Z,5.3nm,0.8s,mb4.7						
HOPE	Hope Point	84.78	150	*e*P	P	08 05 43.0	-2.3
ARCES	ARCESS Array B	85.86	18	P	P	08 05 49.8	-0.9
	comp=Z,3.8nm,0.8s,mb4.7,baz=308,slow=6.0,SNR=13						
ARCES				LR	LR	08 45 11.9	
	comp=Z,262nm,19.0s,MS4.7,baz=295,slow=36						
HAU	Haudompre	86.00	41	*e*P	P	08 05 50.6	-0.8
	comp=Z,22nm,1.0s,mb5.0						
HAU				*e*R			
	comp=Z,270nm,19.5s						
HAU	Haudompre	86.00	41	*e*P	P	08 05 50.6	-0.8
HAU				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.0						
HAU				MLR	MLR		
	comp=Z,270nm,19.5s,MS4.7						
HAU	Haudompre	86.00	41	*e*P	P	08 05 50.6	-0.8
	comp=Z,11nm,1.0s,mb5.0						
HAU				LR	LR		
	comp=Z,270nm,19.5s,MS4.7						
CABF	La Chapelle	86.26	43	*e*P	P	08 05 52.9	+0.2
	comp=Z,17nm,1.1s,mb4.9						
CABF	La Chapelle	86.26	43	*e*P	P	08 05 52.9	+0.2
CABF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.9						
CABF	La Chapelle	86.26	43	*e*P	P	08 05 52.9	+0.2
	comp=Z,8.7nm,1.1s,mb4.9						
HINF	Hinteralfeld	86.38	41	*e*P	P	08 05 52.3	-1.0
CDF	Champ du Feu	86.46	41	*e*P	P	08 05 53.0	-0.7
LMR	La Mourre	87.57	46	*e*P	P	08 05 59.1	+0.1
	comp=Z,67nm,1.3s,mb5.4						
LMR	La Mourre	87.57	46	*e*P	P	08 05 59.1	+0.1
LMR				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.4						
LMR	La Mourre	87.57	46	*e*P	P	08 05 59.1	+0.1
	comp=Z,33nm,1.3s,mb5.4						
LIC	Lamto	87.87	84	*e*P	P	08 05 58.4	-2.1
	comp=Z,43nm,1.1s,mb5.3						
LIC				*e*R			
	comp=Z,89nm,21.8s						
LIC	Lamto	87.87	84	*e*P	P	08 05 58.4	-2.1
	comp=Z,22nm,1.1s,mb5.3						
LIC				LR	LR		
	comp=Z,40nm,21.8s,MS3.8						
PET	Petropavlovsk	87.90	325	*e*P	P	08 06 03.9	+3.3
PET				*e*		08 09 31.2	
PET				*e*S	S	08 16 34.2	-10
PET				pmax	pmax		
	comp=Z,200nm,21.0s						
PET				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.3						
DBIC	Dimbokro	87.92	84	P	P	08 06 01.5	+0.8
	comp=Z,5.0nm,0.8s,mb4.8,baz=256,slow=5.8,SNR=4.9						
DBIC				LR	LR	08 42 15.9	
	comp=Z,161nm,19.8s,MS4.4,baz=276,slow=34						
DBIC	Dimbokro	87.92	84	P	P	08 06 01.5	+0.8
DBIC				LR	LR	08 42 15.9	
GRA1	Grafenberg Arr	88.46	39	*e*P	P	08 06 04.4	+1.1
	comp=Z,4.0nm,0.8s,mb4.7						
GRF	Grafenberg Arr	88.46	39	*e*P	P	08 06 04.3	+1.0
	comp=Z,4.0nm,0.8s,mb4.7						
GRF	Grafenberg Arr	88.46	39	*e*P	P	08 06 04.4	+1.1
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
GRF	Grafenberg Arr	88.46	39	*e*P	P	08 06 04.4	+1.1
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
GRF	Grafenberg Arr	88.46	39	*e*P	P	08 06 04.4	+1.1
	comp=Z,4.0nm,0.8s,mb4.7						
GERES	GERESS Array B	90.29	39	P	P	08 06 11.6	-0.3
	comp=Z,1.8nm,0.8s,mb4.5,baz=297,slow=4.1,SNR=8.9						
GERES				LR	LR	08 43 47.2	
	comp=Z,411nm,21.5s,MS4.8,baz=280,slow=34						
FINES	FINESS Array B	90.53	24	P	P	08 06 14.3	+1.3
	comp=Z,1.2nm,0.7s,mb4.3,baz=143,slow=14,SNR=3.5						
FINES				LR	LR	08 48 45.6	
	comp=Z,166nm,19.5s,MS4.5,baz=343,slow=37						
KEST	Kesra	92.15	52	LR	LR	08 43 13.8	
	comp=Z,72nm,20.9s,MS4.1,baz=209,slow=33						
TORD	Torodi Ar. Bea	92.45	76	P	P	08 06 21.0	-0.9
	comp=Z,1.0nm,0.9s,mb4.1,baz=278,slow=4.0,SNR=4.7						
TORD				LR	LR	08 46 12.2	
	comp=Z,253nm,18.4s,MS4.7,baz=270,slow=34						
AKASG	Malin Array Be	98.13	32	LR	LR	08 49 59.6	
	comp=Z,153nm,20.8s,MS4.5,baz=305,slow=35						
SANT	Santorini	103.68	46	*e*Pdif	Pdif	08 07 15.1	+2.6
CN2	Changchun	110.99	330	*e*PKP	PKiKP	08 11 42.8	-1.5
CN2				PP	PP	08 12 26.0	+3.5
CN2				PP	PP		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,20.0s,MS4.8						
CN2				LR	LR		
	comp=E,200nm,20.0s,MS4.8						
GNI	Garni	113.24	33	*e*PKIKP	PKiKP	08 11 55.1	+6.5
HHC	Hu-ho-hao-te	119.34	338	*e*PKP	PKPdf	08 11 57.9	-2.4
HHC				PP	PP	08 13 23.3	+2.0
HHC				PKS		08 15 33.3	
HHC				SKS	SKSdf	08 19 05.0	-7.4
HHC				SKKS	SKKSac	08 20 11.5	-10
HHC				SS	SS	08 29 38.7	-4.8
HHC				LR	LR		
	comp=N,133nm,19.9s,MS4.9						
HHC				LR	LR		
	comp=E,271nm,20.9s,MS4.9						
HHC				LR	LR		
	comp=Z,165nm,19.9s,MS4.7						
WMQ	Urumqi	121.36	358	*e*PKP	PKPdf	08 12 02.0	-2.2
SSE	Sheshan	122.72	324	*e*PKP	PKPdf	08 12 05.0	-1.8
NJ2	Nanjing	123.29	326	*e*PKP	PKPdf	08 12 07.1	-0.8
LZH	Lanzhou	126.25	342	*e*PKP	PKPdf	08 12 11.9	-1.7
LZH				LR	LR		
	comp=E,212nm,19.6s						
LZH				LR	LR		
	comp=Z,321nm,20.4s,MS5.0						
CD2	Chengdu	131.03	339	*e*PKP	PKPdf	08 12 18.4	-4.3
KMI	Kunming	136.66	337	PKP	PKPdf	08 12 31.5	-1.8
KMI				PP	PP	08 15 18.0	+2.7
KMI				PP	PP		
	comp=Z,189nm,6.2s						
KMI				LR	LR		
	comp=N,267nm,23.9s,MS5.0						
KMI				LR	LR		
	comp=E,222nm,22.9s,MS5.0						
KMI				LR	LR		
	comp=Z,204nm,28.8s						

*NEIC **10** 08:15:17.8, 40.17N×19.50E, h16km, MD3.8(ATH), After ATH.*
*ATH **10** 08:15:17.8, 40.17N×19.50E, h16km±1km, MD3.8/10*
*ISCJB **10** 08:15:18.2±0.3, 40.20N±0.02×19.57E±0.03, h2km, Error ellipse: s-maj=3.3km s-min=2.2km az=119.5*
*ROM **10** 08:15:18.7±0.8, 39.94N×19.91E, h10km, Md3.0/3, Ml3.2/3, Error ellipse: s-maj=11.4km s-min=5.7km az=146.0*
*THE **10** 08:15:19.0, 40.03N×19.50E, h1km, ML3.5*
*PDG **10** 08:15:19.2±0.4, 40.04N×19.39E, h10km±1km*
*CSEM **10** 08:15:19.8±0.1, 40.16N×19.66E, h2km, MD3.8, Error ellipse: s-maj=2.3km s-min=1.9km az=4.0*
*SKO **10** 08:15:20.1, 39.99N×19.85E, h3km*
*TIR **10** 08:15:21.4, 40.20N×19.93E, h15km, Ml3.1*
*HLW **10** 08:15:25.0, 39.85N×20.31E, h33km, Mb3.6*
ISC 10 08:15:19.4±0.3, **40.18N**±0.02×**19.61E**±0.03, **h2km, n65, σ1§34**/101, **10C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.33	69	*i* Pg	Pg	08 15 24.8	-0.9
TPE				*i* Sg	Sg	08 15 29.7	-0.3
SRN	Sarande	0.42	135	*i* Pg	Pg	08 15 28.6	+1.1
SRN				*i* Sg	Sg	08 15 31.2	-1.8
KEK	Kerkira	0.49	163	*e*PN	Pg	08 15 28.1	-0.6
KEK				*e*SN	Sg	08 15 35.2	+0.1
LSK	Leskovik	0.76	92	*i* Pg	Pg	08 15 31.5	-2.5
LSK				*i* Sg	Sg	08 15 42.4	-1.4
IGT	Igoumenitsa	0.85	139	*e*Pg	Pg	08 15 34.2	-1.5
IGT				*e*Sg	Sg	08 15 47.2	+0.5
SCTE	Santa Cesarea	0.88	264	Pn	Pg	08 15 39.8	+3.4
SCTE				Sn	Sg	08 15 55.0	+7.2
	355nm,0.5s						
KBN	Korca	1.00	63	*i* Pg	Pg	08 15 38.2	-0.4
KBN				*i* Sg	Sg	08 15 55.2	+3.6
JAN	Janina	1.09	118	*e*PN	Pg	08 15 39.3	-0.9
LCI	Lecce	1.16	278	Pn	Pn	08 15 44.0	+1.4
LCI				Sn	Sg	08 16 03.4	+6.8
	113nm,0.3s						
TIR	Tirane	1.18	9	*e*Pg	Pg	08 15 44.5	+2.4
TIR				*e*Sg	Sg	08 16 04.5	+7.1
TIR	Tirane	1.18	9	*e*Pg	Pg	08 15 44.5	+2.4
TIR				*e*Sg	Sg	08 16 04.6	+7.1
OHR	Ohrid	1.30	44	*e*Pg	Pg	08 15 44.9	+0.6
OHR				*e*Sg	Sg	08 16 06.7	+5.5
OHR	Ohrid	1.30	44	*i* Pg	Pn	08 15 43.7	-0.9
OHR				*i* Sg	Sg	08 16 02.8	+1.7
MEV	Metsovon	1.30	107	*e*Pg	Pg	08 15 43.0	-1.4
MEV				*e*Sg	Sg	08 16 04.0	+2.7
FNA	Florina	1.48	65	*e*Pg	Pn	08 15 46.0	-0.9
FNA				*e*Sg	Sg	08 16 09.1	+2.2
FNA	Florina	1.48	65	*e*Pg	Pn	08 15 46.0	-1.0
FNA				*e*Sg	Sg	08 16 09.1	+2.3
KZN	Kozani	1.66	85	*e*PN	Pn	08 15 49.4	-0.1
KZN				*e*SN	Sn	08 16 13.3	+1.9
PE1	Pezze di Greco	1.78	291	*e*Pn	Pg	08 15 54.9	+1.3
ULC	Ulcinj	1.81	351	⇓*i*Pn	Pg	08 15 54.0	-0.1
ULC				*e*Sn	Sg	08 16 22.1	+4.7
NOCI	Noci	2.04	288	Pn	Pn	08 15 55.9	+1.2
	424nm,0.5s						
EVR	Evrytania	2.12	126	*e*PN	Pn	08 15 56.5	+0.7
VLS	Valsamata	2.14	159	*e*PN	Pn	08 15 55.7	-0.4
VLS				*e*SN	Sn	08 16 23.2	0.0
BUM	Brajici-Budva	2.19	346	⇑*i*Pn	Pg	08 15 58.8	-2.5
BUM				*e*Sn	Sg	08 16 31.4	+1.7
LIT	Litokhoron	2.21	91	*e*Pn	Pn	08 15 57.5	+0.5
LIT				*e*Sn	Sn	08 16 26.9	+1.9
LIT	Litokhoron	2.21	91	S	Sn	08 16 26.9	+2.0
GRG	Griva	2.26	69	*e*Pn	Pn	08 15 59.0	+1.2
GRG	Griva	2.26	69	*e*Pn	Pn	08 15 59.0	+1.2
SKO	Skopje	2.26	37	*e*Pn	Pn	08 15 59.5	+1.7
TTG	Podgorica	2.27	353	⇑*i*Pn	Pg	08 16 01.2	-1.7
TTG				*e*Sn	Sg	08 16 33.4	+1.2
AGG	Agios Georgios	2.40	118	*e*Pn	Pn	08 15 59.1	-0.6
AGG				*e*Sn	Sn	08 16 29.9	+0.3
HCY	Herceg Novi	2.42	340	⇑*i*Pn	Pg	08 16 02.5	-3.3
HCY				*e*Sn	Sg	08 16 36.2	-0.9
PVY	Plav	2.43	6	⇓*i*Pn	Pg	08 16 02.6	-3.4
PVY				*e*Sn	Sg	08 16 37.8	+0.2
STIP	Stip	2.47	51	*e*Pn	Pn	08 16 01.1	+0.4
STIP				*e*Sn	Sn	08 16 35.6	+4.2
STIP	Stip	2.47	51	*e*Pn	Pn	08 16 01.2	+0.5
VAY	Valandovo	2.52	62	*e*Pn	Pn	08 16 03.2	+1.9
VAY	Valandovo	2.52	62	*e*Pn	Pn	08 16 01.5	+0.2
VAY				*e*Sn	Sn	08 16 31.6	-1.1
VAY	Valandovo	2.52	62	*e*Pn	Pn	08 16 03.2	+1.8
VAY				*e*Sn	Sn	08 16 31.5	-1.2
RLS	Riolos of Patr	2.56	145	*e*PN	Pn	08 16 01.4	-0.5
NKY	Niksic	2.67	350	⇑*i*Pn	Pg	08 16 05.9	-4.8
NKY				*e*Sn	Sg	08 16 43.0	-2.3
KNT	Kendrikon	2.69	67	*e*Pn	Pn	08 16 03.9	+0.2
HORT	Hortiatis	2.70	80	*e*Pn	Pn	08 16 04.7	+0.9
IVA	Berane	2.70	4	⇓*i*Pn	Pg	08 16 06.2	-5.0
IVA				*e*Sn	Sg	08 16 44.6	-1.6
BRY	Bratogost	2.84	344	⇑*i*Pn	Pg	08 16 08.1	-5.7
BRY				*e*Sn	Sg	08 16 46.2	-4.3
XOR	Xorichti	2.88	105	*e*Pn	Pn	08 16 05.5	-0.8
NEO	Neokhori	2.92	106	*e*PN	Pn	08 16 07.2	+0.4
PLG	Polygyros	2.94	85	*e*PN	Pn	08 16 07.5	+0.4
PLAC	Placanica	3.01	236	Pn	Pn	08 16 07.8	-0.2
	16nm,0.4s						
UPM	Unac-Piva	3.07	350	⇑*i*Pn	Pg	08 16 11.8	-6.4
UPM				*e*Sn	Sg	08 16 52.4	-5.6
SJES	Sjenica	3.10	4	Pn	Pn	08 16 08.1	-1.2
PLE	Pljevlja	3.15	357	⇑*i*Pn	Pg	08 16 12.4	-7.5
PLE				*e*Sn	Sg	08 16 54.5	-6.2
MMB	Musomiste	3.42	64	*e*Pn	Pn	08 16 14.6	+0.8
SOI	Samo	3.47	234	Pn	Pn	08 16 14.7	+0.2
	15nm,0.4s						
ITM	Ithomi	3.50	148	*e*PN	Pn	08 16 15.3	+0.5
BBLS	Bajina Basta -	3.69	358	*i* Pn	Pn	08 16 15.1	-2.3
GRUS	Gruza	3.80	12	*i* Pn	Pn	08 16 17.5	-1.5
DIVS	Divcibare	3.93	4	*i* Pn	Pn	08 16 24.5	+3.8
VLI	Veliai	4.33	142	*e*PN	Pn	08 16 26.6	+0.4
KYTH	Kithira	4.73	144	*e*PN	Pn	08 16 33.0	+1.2
BOJS	Bojanci	6.21	330	*e*Pn	Pn	08 16 54.0	+1.8
BOJS				*e*Sn	Sn	08 18 02.1	-1.6
VISS	Visnje	6.62	330	*e*Pn	Pn	08 17 00.4	+2.7
VISS				*e*Sn	Sn	08 18 13.6	-0.2
SLUM		9.78	151	P	Pn	08 17 37.1	-4.0
HMAT	Matruh	10.91	144	⇑P	Pn	08 17 52.2	-4.4
HMAT				S	Sn	08 19 39.9	-19
SWA2		11.92	154	⇑P	Pn	08 18 07.2	-3.1
SWA2				S	Sn	08 20 05.1	-19
SWA1		11.98	153	⇑P	Pn	08 18 07.5	-3.7
HFRF	Wahat Farafira	14.87	148	⇓P	Pn	08 18 46.9	-3.7

NEIC ***10*** *08:51:06.1,3866S×17576E,h160km,MG3.7(WEL),After WEL.*

WEL 10 08:51:06.0±0.3**,3864S×17576E,h160**km±2km**,ML3.7**/15**, Error ellipse: s-maj=2.3km s-min=2.3km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.50	211	P	Pn	08 51 28.7	+0.3
TWVZ	Taurewa	0.50	211	PN	Pn	08 51 28.7	+0.2
TWVZ				SN	Sn	08 51 45.6	+0.1
NGZ	Ngauruhoe	0.55	193	P	Pn	08 51 29.2	+0.5
NGZ	Ngauruhoe	0.55	193	PN	Pn	08 51 29.2	+0.5
NGZ				SN	Sn	08 51 46.4	+0.4
WPVZ	Whakapapa	0.59	197	P	Pn	08 51 29.3	+0.4
WPVZ	Whakapapa	0.59	197	PN	Pn	08 51 29.3	+0.4
TUVZ	Tukino	0.63	188	P	Pn	08 51 29.6	+0.5
TUVZ	Tukino	0.63	188	PN	Pn	08 51 29.6	+0.5
TUVZ				SN	Sn	08 51 47.3	+0.5
FWVZ	Far West T-bar	0.63	195	P	Pn	08 51 29.5	+0.4
FWVZ	Far West T-bar	0.63	195	PN	Pn	08 51 29.5	+0.3
FWVZ				SN	Sn	08 51 47.7	+0.9
DRZ	Dome Shelter	0.65	194	PN	Pn	08 51 29.9	+0.7
HIZ	Hauiti	0.72	280	eP	Pn	08 51 29.5	-0.2
HIZ	Hauiti	0.72	280	PN	Pn	08 51 29.5	-0.2
PKVZ	Pokaka	0.72	207	PN	Pn	08 51 29.8	+0.1
MOVZ	Moawhango	0.76	181	P	Pn	08 51 30.0	0.0
MOVZ	Moawhango	0.76	181	PN	Pn	08 51 30.0	0.0
MOVZ				SN	Sn	08 51 47.5	-0.7
BKZ	Black Stump Fm	0.77	133	P	Pn	08 51 30.4	+0.4
BKZ				S	Sn	08 51 48.4	+0.1
BKZ	Black Stump Fm	0.77	133	PN	Pn	08 51 30.4	+0.4
BKZ				SN	Sn	08 51 48.4	+0.1
MTVZ	Mangateitei	0.78	197	PN	Pn	08 51 30.2	+0.2
VRZ	Vera Road	0.92	238	P	Pn	08 51 30.8	-0.3
VRZ	Vera Road	0.92	238	PN	Pn	08 51 30.8	-0.2
URZ	Urewera	1.12	71	eP	Pn	08 51 32.6	-0.1
URZ	Urewera	1.12	71	PN	Pn	08 51 32.6	-0.1
URZ				SN	Sn	08 51 52.3	-0.9
WAZ	Wanganui	1.27	208	P	Pn	08 51 33.6	-0.4
WAZ	Wanganui	1.27	208	PN	Pn	08 51 33.6	-0.4
MWZ	Matawai	1.42	78	P	Pn	08 51 36.3	+0.8
MWZ	Matawai	1.42	78	PN	Pn	08 51 35.8	+0.4
TSZ	Takapari Road	1.42	174	P	Pn	08 51 35.3	-0.2
TSZ	Takapari Road	1.42	174	PN	Pn	08 51 35.3	-0.2
PXZ	Pawanui	1.63	149	PN	Pn	08 51 37.7	+0.1
MRZ	Mangatainoka R	2.02	184	P	Pn	08 51 40.5	-1.5
MRZ				S	Sn	08 52 06.9	-2.7
MRZ	Mangatainoka R	2.02	184	SN	Sn	08 52 06.9	-2.7
BFZ	Birch Farm	2.07	170	eP	Pn	08 51 41.4	-1.1
KIW	Kapiti Island	2.31	196	P	Pn	08 51 43.3	-2.0
CAW	Cannon Point	2.52	192	P	Pn	08 51 45.8	-2.0
MTW	Mount Morrison	2.52	184	P	Pn	08 51 45.6	-2.3
MRW	Makara Radio	2.71	197	P	Pn	08 51 47.7	-2.5
PAWZ	Paruwai Farm	2.75	185	P	Pn	08 51 48.1	-2.5
SNZO	South Karori	2.79	197	P	Pn	08 51 48.4	-2.7
MSWZ	Moikau Station	2.80	188	P	Pn	08 51 48.7	-2.5
TCW	Tory Channel	2.81	204	P	Pn	08 51 48.8	-2.6
NNZ	Nelson	3.16	215	eP	Pn	08 51 52.4	-3.3
QRZ	Quartz Range	3.31	228	PN	Pn	08 51 53.5	-4.2
BSWZ	Blackbirch Sta	3.39	205	P	Pn	08 51 55.5	-3.2
THZ	Tophouse	3.81	214	PN	Pn	08 52 00.9	-3.2
ODZ	Otahua Downs	7.45	209	eP	Pn	08 52 47.0	-5.0

ISCJB ***10*** *08:52:25.0±1.3,6091N±003×14736W±005,h10km±9km, mb4.0/21,MS3.5/5,Error ellipse: s-maj=5.8km s-min=3.8km az=49.5*

BJI ***10*** *08:52:24.0,6090N×14730W,h15km,mB4.7,mb4.3,Ms4.3, Msz4.1*

NEIC ***10*** *08:52:27.0,6090N×14732W,h15km,mb4.0/10, ML3.6(PMR),ML3.9(AEIC),After AEIC.*

NEIC Felt at Chugiak, Fairbanks and Valdez.

IDC ***10*** *08:52:27.9±0.9,6055N×14707W,h0km,mb4.0/9, mb1 4.2/12,mb1mx4.0/21,mbtmp4.0/12,ML3.7/1,MS3.3/5, Ms1 3.3/5,ms1mx2.9/40,Error ellipse: s-maj=20.3km s-min=13.3km az=20.0*

ISC 10 08:52:25.5±0.6**,6087N**±003×**14743W**±005**,h7**km±4km**,n62,** σ**1s13**/66**,mb4.0**/21**,MS3.5**/5**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNK	Knik Glacier	0.73	318	P	Pg	08 52 40.1	+0.5
EYAK	Cordova Ski Ar	0.89	111	P	Pg	08 52 42.5	0.0
EYAK				S	Sg	08 52 54.6	+0.5
PMR	Palmer	1.09	312	P	Pg	08 52 45.6	-0.8
PMR				S	Sg	08 53 00.4	-0.2
RC01	Rabbit Creek A	1.14	282	P	Pg	08 52 47.4	-0.1
RC01				S	Sg	08 53 02.7	+0.4
GHO	Glory Hole Cre	1.16	322	P	Pg	08 52 46.9	-0.7
SEW	Seward	1.26	233	P	Pn	08 52 49.2	-0.3
SEW				S	Sg	08 53 06.3	+0.3
FIB	Fire Island	1.37	284	P	Pn	08 52 51.8	+0.8
SLKM	Skilak Lake	1.42	256	P	Pn	08 52 52.0	+0.3
RAGM	Ragged Mountai	1.44	108	P	Pn	08 52 51.0	-1.0
MID	Middleton Isla	1.55	159	P	Pn	08 52 53.3	-0.1
MENT	Mentasta	2.72	39	P	Pn	08 53 09.8	+0.2
TRF	Thorofare Moun	2.91	334	P	Pn	08 53 12.7	+0.4
MCK	McKinley	2.96	347	P	Pn	08 53 13.2	+0.4
MCK				S	Sn	08 53 47.7	-0.8
KTH	Kantishna Hill	3.15	330	P	Pn	08 53 15.9	+0.5
SVW2	Sparrevohn	3.98	277	P	Pn	08 53 25.8	-1.1
COLA	College	4.02	357	P	Pn	08 53 26.6	-0.8
KDAK	Kodiak Island	4.07	223	Pn	Pn	08 53 27.8	-0.3
	12nm,0.3s,baz=38,slow=13,SNR=145						
KDAK				Sn	Sn	08 54 12.0	-4.0
	3.3nm,0.3s,baz=137,slow=23,SNR=10.0						
KDAK	Kodiak Island	4.07	223	P	Pn	08 53 27.9	-0.3
TTA	Tatalina	4.55	301	ePn	Pn	08 53 33.5	-1.3
DAWY	Dawson	4.92	46	P	Pn	08 53 39.7	-0.1
GCSA	Galena City Sc	5.82	316	P	Pn	08 53 52.1	0.0
IMA2	Indian Mountai	5.92	334	eP	Pn	08 53 52.5	-1.0
WHY	Whitehorse	6.16	86	P	Pn	08 53 54.9	-1.9
SKAG	Skagway	6.21	98	eP	Pn	08 54 00.5	+3.0
COLD	Coldfoot	6.50	350	P	Pn	08 54 00.8	-0.7
SIT	Sitka	7.33	116	P	Pn	08 54 10.6	-2.3
DLBC	Dease Lake	9.14	98	Pn	Pn	08 54 39.0	+1.3
	1.9nm,0.3s,baz=288,slow=7.8,SNR=13						
DLBC				Sn	Sn	08 56 09.4	-11
	baz=179,slow=1.8,SNR=2.7						
DLBC				Lg		08 57 12.4	
	0.1nm,0.3s,baz=95,slow=16,SNR=3.2						
INK	Inuvik	9.54	33	Pn	Pn	08 54 45.3	+2.2
	0.5nm,0.3s,baz=230,slow=16,SNR=10						
INK				Lg		08 57 15.3	
	0.1nm,0.3s,baz=102,slow=14,SNR=2.4						
INK	Inuvik	9.54	33	ePn	Pn	08 54 45.2	+2.0
	10.0nm,0.7s						
BBB	Bella Bella	13.71	121	LR	LR	08 59 38.1	
	comp=Z,75nm,20.3s,baz=327,slow=32						
YKA	Yellowknife Ar	15.57	70	Pn	Pn	08 56 08.3	+3.0
	baz=275,slow=9.2,SNR=5.2						
NEW	Newport	21.39	112	P	P	08 57 17.1	+3.5
	1.4nm,0.8s,mb3.4,baz=335,slow=8.7,SNR=4.0						
NEW				LR	LR	09 06 27.3	
	comp=Z,82nm,18.2s,MS3.2,baz=0.5,slow=40						
NEW	Newport	21.39	112	eP	P	08 57 14.3	+0.6
	5.4nm,1.0s,mb3.8						
WALA	Waterton Lakes	22.30	107	eP	P	08 57 24.5	+1.1
	9.5nm,1.3s,mb4.1						
BMO	Blue Mountains	23.93	118	eP	P	08 57 40.1	0.0
	4.9nm,1.1s,mb3.9						
YBH	Yreka Blue Hor	24.36	131	LR	LR	09 04 43.0	
	comp=Z,78nm,19.0s,MS3.2,baz=347,slow=31						
EGMT	Eagleton	24.99	104	eP	P	08 57 49.0	-0.7
	9.7nm,1.2s,mb4.2						
WVOR	Wild Horse Val	25.35	124	eP	P	08 57 52.8	-0.3
	5.2nm,1.0s,mb4.0						
DLMT	Dillon	25.63	111	eP	P	08 57 54.0	-1.5
	4.4nm,0.8s,mb4.0						
IMW	Indian Meadow	27.51	111	eP	P	08 58 14.1	+1.6
	1.1nm,0.6s,mb3.7						
TPAW	Teton Pass	27.82	112	eP	P	08 58 13.6	-1.7
	2.3nm,0.8s,mb3.9						
NVAR	Mina Array Bea	28.89	128	P	P	08 58 25.6	+0.7
	0.2nm,0.5s,mb3.1,baz=305,slow=9.5,SNR=3.7						
PDAR	Pinedale Array	29.02	111	P	P	08 58 25.2	-0.8
	0.2nm,0.5s,mb3.1,baz=332,slow=7.5,SNR=3.5						
ULM	Lac du Bonnet	30.24	87	LR	LR	09 11 21.3	
	comp=Z,74nm,18.3s,MS3.4,baz=312,slow=38						
MSU	Marysvale	31.32	119	eP	P	08 58 45.7	-0.7
WMOK	Wichita Mounta	40.46	108	eP	P	09 00 03.0	-1.6
	1.0nm,0.5s,mb3.8						
BORG	Borgarnes	48.38	28	LR	LR	09 22 25.2	
	comp=Z,47nm,19.8s,MS3.5,baz=2.1,slow=37						
MDJ	Mudanjiang	49.22	291	P	P	09 01 14.1	-0.3
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.4s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,56nm,5.2s						
ARCES	ARCESS Array B	49.79	3	P	P	09 01 23.2	+4.5
	comp=Z,3.3nm,0.7s,mb4.5,baz=10,slow=7.4,SNR=16						
CN2	Changchun	51.73	293	eP	P	09 01 34.9	+1.5
SONM	Songino Array	56.45	309	P	P	09 02 14.2	+6.3
	comp=Z,0.7nm,0.5s,mb3.9,baz=35,slow=7.8,SNR=3.3						
NB2	NORSAR Subarra	57.31	12	P	P	09 02 18.4	+4.4
	comp=Z,3.7nm,0.9s,mb4.4,baz=348,slow=6.9						
NOA	NORSAR Array B	57.31	12	P	P	09 02 18.0	+4.0
	comp=Z,2.1nm,0.8s,mb4.2,baz=348,slow=7.1,SNR=5.3						
FINES	FINESS Array B	57.91	4	P	P	09 02 22.5	+4.3
	comp=Z,2.8nm,0.7s,mb4.4,baz=35,slow=7.0,SNR=9.8						
HHC	Hu-ho-hao-te	60.17	301	eP	P	09 02 35.4	+1.5
HHC				AP	pP	09 02 40.1	+4.0
HHC				XP	sP	09 02 42.5	+5.6
HHC				PCP	PcP	09 03 21.3	+1.8
HHC				PP	PP	09 04 49.5	+3.0
HHC				SCP	ScP	09 07 20.3	-0.7
HHC				S	S	09 10 45.9	-1.9
HHC				XS	sS	09 10 53.5	+2.1
HHC				SCS	ScS	09 12 21.7	-3.3
HHC				SS	SS	09 14 43.3	-1.4
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,127nm,5.7s						
HHC				LR	LR		
	comp=N,135nm,19.9s,MS4.2						
HHC				LR	LR		
	comp=E,104nm,19.0s,MS4.2						
HHC				LR	LR		
	comp=Z,89nm,19.0s,MS3.9						
ZRNK	Zerenda	62.86	336	eP	P	09 02 46.0	-6.0
	comp=Z,1.2nm,0.5s,mb4.3						
NJ2	Nanjing	64.30	290	eP	P	09 03 04.8	+3.3
WMQ	Urumqi	66.47	320	eP	P	09 03 18.0	+2.4
LZH	Lanzhou	67.41	304	eP	P	09 03 22.7	+1.1
LZH				AP	pP	09 03 27.5	+3.7
LZH				XP	sP	09 03 29.7	+5.1
LZH				PP	PP	09 05 52.5	+2.5
AKASG	Malin Array Be	68.75	2	P	P	09 03 34.6	+4.6
	comp=Z,2.0nm,0.6s,mb4.2,baz=357,slow=6.1,SNR=9.4						
ESDC	Sonseca Array	75.45	28	P	P	09 04 15.4	+5.2
	comp=Z,0.5nm,0.3s,mb3.9,baz=341,slow=6.0,SNR=7.7						
BRTR	Keskin Array B	79.75	359	P	P	09 04 40.0	+5.8
	comp=Z,0.6nm,0.6s,mb3.7,baz=10,slow=1.4,SNR=4.5						

IDC 10 09:02:38.8±1.6**,170N×9744E,h0**km**,mb3.8**/4**,mb1 3.8**/4**, mb1mx3.6**/20**,mbtmp3.8**/4**,Error ellipse: s-maj=34.9km s-min=26.9km az=17.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	1.85	54	Pn	Pn	09 03 11.4	-0.4
	8.1nm,0.3s,baz=264,slow=10,SNR=20						
PSI				Sn	Sn	09 03 34.6	-1.2
	28nm,0.3s,baz=307,slow=23,SNR=10						
ASAR	Alice Springs	43.51	128	P	P	09 10 44.4	+0.4
	0.2nm,0.4s,baz=293,slow=7.6,SNR=3.8						
MKAR	Makanchi Array	46.82	346	P	P	09 11 10.8	+0.5
	0.6nm,0.4s,baz=159,slow=8.0,SNR=7.9						
BVAR	Borovoye Array	55.86	341	P	P	09 12 17.8	-0.3
	0.9nm,0.5s,baz=137,slow=9.8,SNR=4.7						
ARCES	ARCESS Array B	82.15	340	P	P	09 15 01.0	-0.5
	1.1nm,0.8s,baz=107,slow=6.1,SNR=5.2						

IDC 10 09:08:33.7±3.5**,759S×11602E,h263**km±31km**,mb3.4**/3**, mb1 3.5**/4**,mb1mx3.2**/16**,mbtmp4.0**/4**,Error ellipse: s-maj=86.7km s-min=19.9km az=54.0,Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.03	139	P	Pn	09 11 41.0	-0.7
	0.2nm,0.3s,baz=313,slow=12,SNR=5.5						
ASAR	Alice Springs	23.45	135	P	P	09 13 19.8	+0.1
	1.3nm,0.3s,baz=305,slow=8.3,SNR=36						
ASAR				ScP	ScP	09 20 10.2	-0.1
	0.2nm,0.6s,baz=327,slow=1.8,SNR=4.2						
STKA	Stephens Creek	33.93	139	P	P	09 14 52.6	+0.4
	2.5nm,0.5s,baz=310,slow=9.1,SNR=13						
MKAR	Makanchi Array	61.89	334	P	P	09 18 25.4	0.0
	0.5nm,0.4s,baz=144,slow=6.5,SNR=5.6						
CPUP	Villa Florida	145.67	191	PKPbc	PKPbc	09 27 41.6	+0.1
	0.7nm,0.6s,baz=180,slow=3.0,SNR=3.0						

CSEM ***10*** *09:16:02.5,3544N×1002W,h35km,mb4.6*

SFS ***10*** *09:16:05.0,3540N×990W,h42km,ML5.2*

LDG ***10*** *09:16:06.5±0.2,3544N×995W,h58km,Ml4.8/24,Error ellipse: s-maj=4.7km s-min=3.1km az=106.0*

ISCJB ***10*** *09:16:06.4±0.4,3555N±002×968W±003,h54km±4km, mb4.1/17,MS3.3/4,Error ellipse: s-maj=4.0km s-min=3.0km az=163.2*

MDD ***10*** *09:16:06.7±0.5,3548N×996W,h54km±27km,mb5.4/57, Error ellipse: s-maj=5.6km s-min=4.1km az=102.0, PRXIMO*

IDC ***10*** *09:16:07.7±3.1,3544N×958W,h48km±29km,mb3.8/13, mb1 3.9/13,mb1mx3.7/24,mbtmp4.1/13,ML5.5/2,MS3.2/6, Ms1 3.2/6,ms1mx2.9/33,Error ellipse: s-maj=26.3km s-min=11.5km az=92.0*

NEIC ***10*** *09:16:07.3,3551N×991W,h70km,mb4.4/4,After MDD.*

CRAAG ***10*** *09:16:07.2,3550N×991W,Mb5.2*

IGIL ***10*** *09:16:08.2,3551N×979W,h30km,ML5.0*

INMG ***10*** *09:16:08.8±1.6,3566N×978W,h10km,MD3.6,ML4.4, Error ellipse: s-maj=4.7km s-min=2.8km az=56.0*

CNRM ***10*** *09:16:14.6,3504N×929W,h30km,MD4.3*

ISC 10 09:16:07.5±0.3**,3554N**±002×**978W**±003**,h49**km±4km**,n334,** σ**1s38**/531**,mb4.1**/17**,MS3.3**/4**,11C-7D,West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	Marmelete	1.98	27	eP	Pn	09 16 39.6	+1.1
MORF				eS	Sn	09 17 00.9	-1.2
MORF				eS	Sn	09 17 00.9	-1.1
MORF				AML	AML	09 17 03.6	
	comp=N,7µm,0.2s						
MORF	Marmelete	1.98	27	eP	Pn	09 16 39.6	+1.1
MORF				eS	Sn	09 17 00.9	-1.2
PTEO	Sao Teotonio	2.17	23	ePn	Pn	09 16 42.0	+0.9
PTEO				eSn	Sn	09 17 06.2	-0.6
PTEO							
	comp=N,6µm,0.4s						
EGRO	El Granado	2.71	42	P	Pn	09 16 49.8	+1.3
	comp=N,546nm,0.2s,SNR=7.9						
EGRO				S	Sn	09 17 19.8	-0.3
	comp=N,1µm,0.2s,SNR=7.9						
EGRO	El Granado	2.71	42	P	Pn	09 16 50.0	+1.4
EGRO				S	Sn	09 17 20.1	0.0
EGRO	El Granado	2.71	42	P	Pn	09 16 50.0	+1.5
EGRO				S	Sn	09 17 20.1	0.0
ERIP	Rio Piedras	2.73	47	P	Pn	09 16 50.1	+1.3
	comp=N,390nm,0.1s,SNR=7.9						
ERIP				S	Sn	09 17 20.4	-0.2
	comp=N,1µm,0.2s,SNR=7.9						
RTC	Rabat Centre	2.86	122	P	Pn	09 16 50.5	-0.1
RTC				S	Sn	09 17 13.0	-11
RTC	Rabat Centre	2.86	122	i P	Pn	09 16 50.5	-0.1
PBEJ	Beja	2.91	31	ePn	Pn	09 16 52.1	+0.8
PBEJ				eSn	Sn	09 17 24.4	-0.7
PBEJ							
	comp=N,1µm,0.3s						
SFS	San Fernando	3.04	71	⇓P	Pn	09 16 54.5	+1.4
SFS	San Fernando	3.04	71	ePn	Pn	09 16 54.2	+1.2
SFS	San Fernando	3.04	71	ePn	Pn	09 16 54.2	+1.2
SFS	San Fernando	3.04	71	i P	Pn	09 16 54.5	+1.5
PLML	Palmela	3.08	13	ePn	Pn	09 16 54.4	+0.7
PLML				eSn	Sn	09 17 26.3	-3.0
PLML	Palmela	3.08	13	P	Pn	09 16 54.5	+0.8
PLML				S	Sn	09 17 26.2	-3.1
TSY	Tnine Yamani	3.11	92	i P	Pn	09 16 56.5	+2.5
TSY				i S	Sn	09 17 27.0	-2.9
CNIL	Conil	3.13	74	⇑P	Pn	09 16 56.5	+2.3
CNIL	Conil	3.13	74	i P	Pn	09 16 56.5	+2.2
CNIL				eS	Sn	09 17 33.0	+2.6
LIS	Lisbon	3.21	9	eP	Pn	09 16 55.6	+0.3
LIS				eS	Sn	09 17 30.2	-2.0
LIS				eS	Sn	09 17 30.2	-2.0
LIS				AML	AML	09 17 31.0	
	comp=E,4µm,0.8s						
LIS	Lisbon	3.21	9	eP	Pn	09 16 55.6	+0.3
LIS				eS	Sn	09 17 30.2	-2.1
INMG	Instituto de M	3.27	9	ePn	Pn	09 16 57.1	+1.0
INMG				eSn	Sn	09 17 33.1	-0.6
INMG	Instituto de M	3.27	9	P	Pn	09 16 57.0	+0.9
INMG				S	Sn	09 17 28.9	-4.8
RSA	Sarsar	3.30	100	i P	Pn	09 16 57.5	+0.9
RSA				i S	Sn	09 17 29.0	-5.6
GIBL	Gibalbin	3.34	66	⇑P	Pn	09 16 58.9	+1.8
GIBL				S	Sn	09 17 35.7	+0.2
GIBL	Gibalbin	3.34	66	i P	Pn	09 16 58.9	+1.8
GIBL				eS	Sn	09 17 35.7	+0.2
EMIN	Mina Concepcio	3.34	47	P	Pn	09 16 58.0	+0.9
	comp=E,731nm,0.2s,SNR=7.9						
EMIN				S	Sn	09 17 34.5	-1.0
	comp=E,585nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.34	47	P	Pn	09 16 58.0	+0.8
	comp=E,731nm,0.2s,SNR=7.9						
EMIN				S	Sn	09 17 34.5	-1.1
	comp=E,585nm,0.2s,SNR=7.9						
PLOU	Loures	3.37	8	ePn	Pn	09 16 57.7	+0.1
PLOU				eSn	Sn	09 17 34.6	-1.8
PLOU							
	comp=E,3µm,0.3s						
PLOU	Loures	3.37	8	P	Pn	09 16 57.6	0.0
PLOU				S	Sn	09 17 34.4	-2.0
PLOU	Loures	3.37	8	ePn	Pn	09 16 57.7	+0.1
PLOU				eSn	Sn	09 17 34.6	-1.8
	comp=E,3µm,0.3s						
MOMI	Momias	3.38	75	⇑P	Pn	09 16 60.0	+2.2
MOMI				S	Sn	09 17 39.4	+2.8
MOMI	Momias	3.38	75	i P	Pn	09 17 00.0	+2.2
MOMI				eS	Sn	09 17 39.4	+2.8
PMAFR	Mafra	3.43	6	ePn	Pn	09 16 58.2	-0.2
PMAFR				eSn	Sn	09 17 36.3	-1.4
ESPR	Espera	3.43	66	P	Pn	09 16 59.3	+0.9
	comp=E,1µm,0.3s,SNR=7.9						
ESPR				S	Sn	09 17 37.5	-0.4
	comp=E,2µm,0.4s,SNR=7.9						
ESPR	Espera	3.43	66	P	Pn	09 16 59.3	+0.8
	comp=E,1µm,0.3s,SNR=7.9						
ESPR				S	Sn	09 17 37.5	-0.4
	comp=E,2µm,0.4s,SNR=7.9						
MDAL	Dalia	3.51	83	i P	Pn	09 17 01.5	+2.0
MDAL				i S	Sn	09 17 37.0	-2.8
EJIF	Jimena Fronter	3.61	74	P	Pn	09 17 02.5	+1.7
	comp=E,130nm,0.2s,SNR=146						
EJIF				S	Sn	09 17 42.4	+0.2
	comp=E,228nm,0.5s,SNR=7.6						
EJIF	Jimena Fronter	3.61	74	P	Pn	09 17 02.5	+1.7
EJIF				S	Sn	09 17 43.4	+1.3
EJIF				S	Sn	09 17 44.6	+2.4
EJIF	Jimena Fronter	3.61	74	P	Pn	09 17 02.5	+1.7
	comp=E,130nm,0.2s,SNR=146						
EJIF				S	Sn	09 17 43.4	+1.2
	comp=E,228nm,0.5s,SNR=7.6						
ALMR	Almeirim	3.73	14	eP	Pn	09 17 03.1	+0.6
ALMR				eS	Sn	09 17 42.9	-2.3
ALMR				eS	Sn	09 17 42.9	-2.2
ALMR				AML	AML	09 17 46.6	
	comp=N,5µm,0.4s						
ALMR	Almeirim	3.73	14	eP	Pn	09 17 03.1	+0.6
ALMR				eS	Sn	09 17 42.9	-2.3
PESTR	Estremoz	3.75	27	ePn	Pn	09 17 03.2	+0.4
PESTR				eSn	Sn	09 17 44.0	-1.6
PESTR							
	comp=N,548nm,0.5s						
PESTR	Estremoz	3.75	27	ePn	Pn	09 17 03.2	+0.4
PESTR				eSn	Sn	09 17 44.0	-1.6
	comp=N,548nm,0.5s						
LIJA	Lijar	3.79	68	⇓P	Pn	09 17 04.9	+1.6
LIJA				S	Sn	09 17 43.5	-3.1
LIJA	Lijar	3.79	68	i P	Pn	09 17 04.9	+1.6
LIJA				eS	Sn	09 17 43.5	-3.1
REAL	Reales	3.82	74	⇓P	Pn	09 17 05.6	+1.8
REAL				S	Sn	09 17 45.6	-1.8
REAL	Reales	3.82	74	i P	Pn	09 17 05.6	+1.8
REAL				eS	Sn	09 17 45.6	-1.8
EBAD	Badajoz	3.89	34	P	Pn	09 17 05.3	+0.6
	comp=N,80nm,0.2s,SNR=7.9						
EBAD				S	Sn	09 17 48.0	-1.2
	comp=N,1µm,0.3s,SNR=7.9						
EBAD	Badajoz	3.89	34	P	Pn	09 17 05.3	+0.6
	comp=N,80nm,0.2s,SNR=7.9						
EBAD				S	Sn	09 17 48.0	-1.1
	comp=N,1µm,0.3s,SNR=7.9						
CIA	Chichaoua	4.06	168	P	Pn	09 17 05.0	-2.0
CIA				S	Sn	09 17 45.0	-8.3
CIA	Chichaoua	4.06	168	i P	Pn	09 17 05.0	-2.0
TGT	Taghat	4.15	109	P	Pn	09 17 09.0	+0.7
TGT				S	Sn	09 17 47.0	-8.6
TGT	Taghat	4.15	109	i P	Pn	09 17 09.0	+0.7
EMIJ	Mijas	4.18	74	P	Pn	09 17 08.8	+0.1
	comp=N,206nm,0.4s,SNR=7.9						
EMIJ				S	Sn	09 17 54.9	-1.3
	comp=N,401nm,0.4s,SNR=7.9						
PTOM	Tomar	4.21	15	ePn	Pn	09 17 09.5	+0.4
PTOM				eSn	Sn	09 17 54.3	-2.7
PTOM							
	comp=N,2µm,0.6s						
PTOM	Tomar	4.21	15	P	Pn	09 17 09.6	+0.6
PTOM				S	Sn	09 17 54.1	-2.9
PTOM	Tomar	4.21	15	ePn	Pn	09 17 09.5	+0.4
PTOM				eSn	Sn	09 17 54.3	-2.7
	comp=N,2µm,0.6s						
KIB	El Ksiba	4.29	133	P	Pn	09 17 09.0	-1.2
KIB				S	Sn	09 17 47.0	-12
KIB	El Ksiba	4.29	133	i P	Pn	09 17 09.0	-1.2
MIF	Mishlifen	4.32	118	P	Pn	09 17 11.5	+0.9
MIF				S	Sn	09 17 50.5	-9.1
MIF	Mishlifen	4.32	118	i P	Pn	09 17 11.5	+0.9
TZC	Tazercounte	4.35	140	P	Pn	09 17 10.0	-1.1
TZC				S	Sn	09 17 48.0	-13
TZC	Tazercounte	4.35	140	eP	Pn	09 17 10.0	-1.1
MAL	Malaga	4.50	73	i P	Pn	09 17 13.8	+0.7
OUK	Oukaimeden	4.61	159	P	Pn	09 17 13.0	-1.6
OUK				S	Sn	09 17 56.5	-10
OUK	Oukaimeden	4.61	159	i P	Pn	09 17 13.0	-1.6
CZD	Col de Zad	4.65	121	P	Pn	09 17 15.0	-0.1
CZD				S	Sn	09 17 57.0	-11
CZD	Col de Zad	4.65	121	i P	Pn	09 17 15.0	-0.1
PCBR	Castelo Branco	4.66	22	ePn	Pn	09 17 15.9	+0.6
PCBR				eSn	Sn	09 18 05.6	-2.5
PCBR							
	comp=N,2µm,0.5s						
PCBR	Castelo Branco	4.66	22	ePn	Pn	09 17 15.9	+0.6
PCBR				eSn	Sn	09 18 05.6	-2.5
	comp=N,2µm,0.5s						
MPAL	Palemas	4.78	92	i P	Pn	09 17 17.5	+0.6
MPAL				i S	Sn	09 18 04.0	-6.9
ELOJ	Sierra Loja	4.81	69	P	Pn	09 17 18.7	+1.3
	comp=N,60nm,0.2s,SNR=7.9						
ELOJ				S	Sn	09 18 09.8	-2.1
	comp=N,104nm,0.3s,SNR=7.9						
ELOJ	Sierra Loja	4.81	69	P	Pn	09 17 18.7	+1.3
ELOJ				S	Sn	09 18 08.6	-3.2
ELOJ				S	Sn	09 18 09.8	-2.1
TZK	Tazeka	4.82	106	P	Pn	09 17 17.0	-0.5
TZK				S	Sn	09 18 03.0	-9.1
TZK	Tazeka	4.82	106	i P	Pn	09 17 17.0	-0.5
ELUQ	Luque	4.87	64	P	Pn	09 17 19.2	+1.1
	comp=N,250nm,0.4s,SNR=7.9						
ELUQ				S	Sn	09 18 11.9	-1.3
	comp=N,108nm,0.2s,SNR=7.9						
EADA	Adamuz	4.92	56	P	Pn	09 17 19.8	+0.9
	comp=N,167nm,0.2s,SNR=7.9						
EADA				S	Sn	09 18 12.8	-1.7
	comp=N,196nm,0.1s,SNR=7.9						
EADA	Adamuz	4.92	56	P	Pn	09 17 19.8	+0.9
	comp=N,167nm,0.2s,SNR=7.9						
EADA				S	Sn	09 18 12.8	-1.7
	comp=N,196nm,0.1s,SNR=7.9						
TOU	Touzarine	4.96	95	i P	Pn	09 17 20.0	+0.6
TOU				i S	Sn	09 18 11.0	-4.5
ERON	Agron	5.04	71	P	Pn	09 17 21.9	+1.4
	comp=N,179nm,0.4s,SNR=7.9						

ERON S Sn 09 18 16.2 -1.3
comp=N,123nm,0.5s,SNR=7.9
MDT Midelt 5.07 121 P Pn 09 17 20.4 -0.5
comp=N,59nm,0.3s,baz=295,slow=8.0,SNR=1261
MDT S Sn 09 18 14.0 -4.1
comp=N,170nm,0.3s,baz=208,slow=21,SNR=36
AOF Agadir Oufela 5.09 178 *i* P Pn 09 17 20.5 -0.7
AFS Agadir Fac de 5.12 177 P Pn 09 17 20.0 -1.5
AFS S Sn 09 18 12.0 -7.3
AFS Agadir Fac de 5.12 177 *i* P Pn 09 17 20.0 -1.5
MTE Manteigas 5.16 19 *e*Pn Pn 09 17 22.7 +0.6
MTE *e*Sn Sn 09 18 16.9 -3.4
MTE Manteigas 5.16 19 *e*Pn Pn 09 17 22.4 +0.2
comp=N,1µm,4.5s
MTE *e*Sn Sn 09 18 18.6 -1.7
MTE Manteigas 5.16 19 *e*Pn Pn 09 17 22.4 +0.3
comp=N,1µm,4.5s
MTE *e*Sn Sn 09 18 16.9 -3.4
EGUA Guajares 5.18 74 P Pn 09 17 22.8 +0.3
comp=N,19nm,0.3s,SNR=7.9
EGUA S Sn 09 18 18.9 -2.1
comp=N,18nm,0.2s,SNR=7.9
ECOG Cogollos-Vega 5.30 69 P Pn 09 17 25.4 +1.3
comp=N,325nm,0.4s,SNR=7.9
ECOG S Sn 09 18 22.2 -1.6
comp=N,155nm,0.3s,SNR=7.9
PVIS Viseu 5.37 15 *e*Pn Pn 09 17 24.9 -0.1
PVIS *e*Sn Sn 09 18 22.5 -3.1
PVIS
comp=N,192nm,0.1s
PVIS Viseu 5.37 15 P Pn 09 17 24.9 -0.1
PVIS S Sn 09 18 22.0 -3.6
PVIS Viseu 5.37 15 *e*Pn Pn 09 17 24.9 -0.1
PVIS *e*Sn Sn 09 18 22.5 -3.1
comp=N,192nm,0.1s
EQUE Quentar 5.37 70 P Pn 09 17 26.0 +0.9
comp=N,174nm,0.5s,SNR=7.9
EQUE S Sn 09 18 23.4 -2.2
comp=N,84nm,0.2s,SNR=7.9
EQUE Quentar 5.37 70 P Pn 09 17 26.0 +0.9
comp=N,174nm,0.5s,SNR=7.9
EQUE S Sn 09 18 25.1 -0.5
comp=N,84nm,0.2s,SNR=7.9
EBAN Banos Encina 5.47 60 P Pn 09 17 27.0 +0.7
comp=N,64nm,0.1s,SNR=7.9
EBAN S Sn 09 18 25.4 -2.6
comp=N,99nm,0.2s,SNR=7.9
EALB Alboran 5.50 84 P Pn 09 17 26.5 -0.3
comp=N,41nm,0.4s,SNR=7.9
EALB S Sn 09 18 24.2 -4.4
comp=N,339nm,0.4s,SNR=7.9
EALB Alboran 5.50 84 P Pn 09 17 26.5 -0.3
EALB S Sn 09 18 24.1 -4.5
EALB Alboran 5.50 84 P Pn 09 17 26.5 -0.3
comp=N,41nm,0.4s,SNR=7.9
EALB S Sn 09 18 24.1 -4.6
comp=N,339nm,0.4s,SNR=7.9
PTO Porto 5.66 9 *e*Sn Sn 09 18 28.1 -4.6
PTO
comp=N,382nm,0.1s
PTO Porto 5.66 9 P Pn 09 17 28.5 -0.5
PTO S Sn 09 18 27.6 -5.0
PTO Porto 5.66 9 *e*Sn Sn 09 18 28.1 -4.6
comp=N,382nm,0.1s
YBT Youssef Ben Ta 5.68 179 P Pn 09 17 28.0 -1.3
YBT S Sn 09 18 24.0 -9.2
ZFT Errachidia 5.71 126 P Pn 09 17 28.5 -1.2
ZFT S Sn 09 18 24.0 -10
ZFT Errachidia 5.71 126 *i* P Pn 09 17 28.5 -1.2
EBER Berja 5.73 74 P Pn 09 17 29.8 -0.2
comp=N,77nm,0.5s,SNR=7.9
EBER S Sn 09 18 33.4 -1.0
comp=N,149nm,0.4s,SNR=7.9
EBER Berja 5.73 74 P Pn 09 17 29.8 -0.1
comp=N,77nm,0.5s,SNR=7.9
EBER S Sn 09 18 33.4 -0.9
comp=N,149nm,0.4s,SNR=7.9
ZAI Zaio 5.78 94 P Pn 09 17 31.0 +0.3
ZAI S Sn 09 18 30.0 -5.6
ZAI Zaio 5.78 94 *i* P Pn 09 17 31.0 +0.3
EQES Quesada 5.84 65 P Pn 09 17 31.9 +0.4
comp=N,363nm,0.4s,SNR=7.9
EQES S Sn 09 18 35.5 -1.7
comp=N,46nm,0.1s,SNR=7.9
EQES Quesada 5.84 65 P Pn 09 17 31.9 +0.4
comp=N,363nm,0.4s,SNR=7.9
EQES S Sn 09 18 35.5 -1.6
comp=N,46nm,0.1s,SNR=7.9
PVRL Vila Real 5.95 15 *e*Pn Pn 09 17 33.0 +0.1
PVRL *e*Sn Sn 09 18 36.1 -3.6
PVRL
comp=N,845nm,0.5s
PVRL Vila Real 5.95 15 *e*Pn Pn 09 17 33.0 +0.1
PVRL *e*Sn Sn 09 18 36.1 -3.6
comp=N,845nm,0.5s
PMPS Porto Santo 5.97 247 *e*Pn Pn 09 17 28.4 -4.8
PMPS *e*Sn Sn 09 18 30.1 -10
PMPS
comp=N,90nm,0.1s
ESDC Sonseca Array 6.19 46 P Pn 09 17 36.6 +0.3
comp=N,64nm,0.3s,baz=233,slow=14,SNR=152
ESDC S Sn 09 18 43.9 -1.7
comp=N,154nm,0.3s,baz=233,slow=24,SNR=21
ESDC LR LR 09 20 12.3
comp=N,87nm,20.0s,baz=210,slow=40
ESDC Sonseca Array 6.19 46 P Pn 09 17 36.5 +0.3
comp=N,196nm,0.1s,SNR=7.9
ESDC S Sn 09 18 43.0 -2.6
SNR=7.9
ESDC Sonseca Array 6.19 46 P Pn 09 17 36.5 +0.3
comp=N,196nm,0.1s,SNR=7.9
ESLA Sonseca Array 6.19 46 *e*Pn Pn 09 17 36.2 0.0
comp=N,46nm,0.8s
ESLA *e*Sn Sn 09 18 43.4 -2.2
ESLA Sonseca Array 6.19 46 *e*Pn Pn 09 17 36.2 0.0
comp=N,46nm,0.8s
ESLA *e*Sn Sn 09 18 43.4 -2.2
EHUE Huescar 6.20 66 P Pn 09 17 37.2 +0.7
comp=N,74nm,0.3s,SNR=7.9
EHUE S Sn 09 18 43.2 -2.8
comp=N,41nm,0.2s,SNR=7.9
EHUE Huescar 6.20 66 P Pn 09 17 36.8 +0.4
EHUE S Sn 09 18 42.6 -3.3
ENIJ Nijar 6.28 75 P Pn 09 17 38.0 +0.5
comp=N,137nm,0.6s,SNR=7.9
ENIJ S Sn 09 18 44.6 -3.3
comp=N,63nm,0.5s,SNR=7.9
ENIJ Nijar 6.28 75 P Pn 09 17 38.0 +0.5
ENIJ S Sn 09 18 44.2 -3.7
PCAB Cabril 6.31 12 *e*Pn Pn 09 17 37.4 -0.5
PCAB *e*Sn Sn 09 18 43.4 -5.2
PCAB
comp=N,198nm,0.5s
ELOB Lobios 6.45 11 P Pn 09 17 39.5 -0.4
comp=N,16nm,0.2s,SNR=7.9
ELOB S Sn 09 18 47.7 -4.5
comp=N,365nm,0.3s,SNR=7.9
PMAR Madeira 6.55 247 *e*Pn Pn 09 17 37.4 -3.8
PMAR *e*Sn Sn 09 18 44.9 -10
PMAR
comp=N,167nm,0.1s
EVIA Vianos 6.58 60 P Pn 09 17 41.5 -0.1
comp=N,145nm,0.4s,SNR=7.9
EVIA S Sn 09 18 51.4 -3.9
comp=N,25nm,0.1s,SNR=7.9
EZAM Zamans 6.65 7 P Pn 09 17 42.1 -0.5
comp=N,278nm,0.4s,SNR=7.9
EZAM S Sn 09 18 53.3 -3.7
comp=N,147nm,0.1s,SNR=7.9
PBRG Braganca 6.69 20 *e*Pn Pn 09 17 43.5 +0.4
PBRG *e*Sn Sn 09 18 53.6 -4.3
PBRG
comp=N,271nm,0.4s
PBRG Braganca 6.69 20 P Pn 09 17 43.4 +0.4
PBRG S Sn 09 18 53.5 -4.4
GUD Guadarrama 6.75 39 P Pn 09 17 44.2 +0.3
comp=N,121nm,0.4s,SNR=7.9
GUD S Sn 09 18 56.2 -3.2
comp=N,142nm,0.4s,SNR=7.9
ECAL Calabor 6.81 19 P Pn 09 17 44.6 -0.3
comp=N,115nm,0.5s,SNR=7.9
ECAL S Sn 09 18 57.6 -3.4
comp=N,629nm,0.5s,SNR=7.9
ECAL Calabor 6.81 19 P Pn 09 17 44.6 -0.3
ECAL S Sn 09 18 58.1 -2.9
ODZI Dziouia 6.98 90 P 09 18 00.0

EFAM Famara 7.14 207 P Pn 09 17 43.2 -6.1
comp=N,15nm,0.2s,SNR=7.9
EFAM S Sn 09 18 56.9 -12
comp=N,186nm,0.3s,SNR=7.9
EFAM Famara 7.14 207 P Pn 09 17 43.2 -6.1
EFAM S Sn 09 18 58.8 -10
EMUR La Murta 7.23 69 P Pn 09 17 50.8 +0.3
comp=N,56nm,0.3s,SNR=7.9
EMUR S Sn 09 19 07.1 -4.2
comp=N,71nm,0.4s,SNR=7.9
EMUR La Murta 7.23 69 P Pn 09 17 50.2 -0.3
EMUR S Sn 09 19 07.9 -3.4
EMUR La Murta 7.23 69 P Pn 09 17 50.2 -0.3
comp=N,56nm,0.3s,SNR=7.9
EMUR S Sn 09 19 07.9 -3.4
ETOB Tobarra 7.27 62 P Pn 09 17 51.0 -0.1
comp=N,249nm,0.6s,SNR=7.9
ETOB S Sn 09 19 08.0 -4.2
comp=N,92nm,0.3s,SNR=7.9
ETOB Tobarra 7.27 62 P Pn 09 17 50.8 -0.3
ETOB S Sn 09 19 08.1 -4.0
ETOB Tobarra 7.27 62 P Pn 09 17 50.8 -0.2
comp=N,249nm,0.6s,SNR=7.9
CART Cartagena 7.35 71 ǁP Pn 09 17 51.6 -0.6
CART S Sn 09 19 08.4 -5.8
CART Cartagena 7.35 71 *e*Pn Pn 09 17 50.9 -1.2
comp=N,194nm,0.5s
CART *e*Sn Sn 09 19 06.4 -7.8
CART Cartagena 7.35 71 *e*Pn Pn 09 17 50.9 -1.3
comp=N,194nm,0.5s
CART Cartagena 7.35 71 *i* P Pn 09 17 51.6 -0.6
CART *e*Sn Sn 09 19 06.4 -7.8
STS Santiago 7.39 7 P Pn 09 17 51.7 -1.0
comp=N,46nm,0.4s,SNR=7.9
STS S Sn 09 19 10.3 -5.0
comp=N,55nm,0.3s,SNR=7.9
STS Santiago 7.39 7 P Pn 09 17 51.9 -0.8
STS S Sn 09 19 10.3 -5.0
EMAZ Mazaricos 7.42 5 P Pn 09 17 51.6 -1.5
comp=N,151nm,0.4s,SNR=7.9
EMAZ S Sn 09 19 09.4 -6.5
comp=N,274nm,0.2s,SNR=7.9
EMAZ Mazaricos 7.42 5 P Pn 09 17 52.1 -1.0
EMAZ S Sn 09 19 10.0 -5.9
USTO Oran 7.51 86 P 09 18 13.0
CFUE Fuerteventura 7.73 208 P Pn 09 17 51.2 -6.2
comp=N,3.4nm,0.3s,SNR=7.9
CFUE S Sn 09 19 11.2 -12
comp=N,225nm,0.3s,SNR=7.9
CFTV Fuerteventura 7.99 208 P Pn 09 17 54.5 -6.5
comp=N,5.7nm,0.2s,SNR=7.9
CFTV S Sn 09 19 17.3 -13
comp=N,27nm,0.2s,SNR=7.9
EPON Pontenova 8.03 14 P Pn 09 18 01.5 -0.1
comp=N,7.8nm,0.2s,SNR=7.9
EPON S Sn 09 19 25.4 -5.6
comp=N,86nm,0.3s,SNR=7.9
ECHE Chera 8.07 57 P Pn 09 18 02.6 +0.5
comp=N,30nm,0.4s,SNR=7.9
EBEN Beniarda 8.25 65 P Pn 09 18 04.0 -0.6
comp=N,46nm,0.4s,SNR=7.9
EBEN S Sn 09 19 31.4 -5.0
comp=N,96nm,0.4s,SNR=7.9
EBEN Beniarda 8.25 65 P Pn 09 18 03.0 -1.6
EBEN P 09 18 05.1
EBEN S Sn 09 19 32.2 -4.2
EBEN Beniarda 8.25 65 P Pn 09 18 05.1 +0.5
EARI Arriondas 8.51 23 P Pn 09 18 09.0 +0.9
comp=N,4.2nm,0.3s,SNR=7.9
EARI S Sn 09 19 38.4 -4.4
comp=N,60nm,0.4s,SNR=7.9
EARI Arriondas 8.51 23 P Pn 09 18 09.3 +1.2
EARI S Sn 09 19 38.4 -4.4
EARI Arriondas 8.51 23 P Pn 09 18 09.3 +1.2
EMOS Mosqueruela 8.78 54 P Pn 09 18 13.4 +1.6
comp=N,114nm,0.6s,SNR=7.9
EMOS S Sn 09 19 46.0 -3.3
comp=N,42nm,0.3s,SNR=7.9
EANR 'Ain N'Sour 8.85 84 P Pn 09 18 13.0 +0.3
EOSO Osorio 8.92 215 P Pn 09 18 07.9 -5.8
comp=N,1.4nm,0.3s,SNR=7.9
EOSO S Sn 09 19 38.2 -15
comp=N,24nm,0.2s,SNR=7.9
EOSO Osorio 8.92 215 P Pn 09 18 07.9 -5.8
EOSO S Sn 09 19 38.2 -15
EBAJ Bajamar 8.93 220 P Pn 09 18 05.6 -8.2
comp=N,12nm,0.3s,SNR=7.9
EBAJ S Sn 09 19 38.2 -15
comp=N,28nm,0.2s,SNR=7.9
EBAJ Bajamar 8.93 220 P Pn 09 18 05.6 -8.2
EBAJ P 09 18 09.5
EBAJ S Sn 09 19 38.2 -15
ETRT Tiaret 9.04 88 P Pn 09 18 17.0 +1.7
ELAN Lanestosa 9.11 31 P Pn 09 18 16.5 +0.2
comp=N,11nm,0.5s,SNR=7.9
ELAN S Sn 09 19 51.3 -6.1
comp=N,72nm,0.4s,SNR=7.9
ELAN Lanestosa 9.11 31 P Pn 09 18 16.1 -0.2
ELAN S Sn 09 19 53.1 -4.3
ELAN Lanestosa 9.11 31 P Pn 09 18 16.5 +0.2
comp=N,11nm,0.5s,SNR=7.9
EBNR Beni Rached 9.20 82 P Pn 09 18 18.0 +0.5
CRAJ Montana Rajada 9.29 220 S Sn 09 19 50.3 -11
comp=N,192nm,0.3s,SNR=7.9
CICO Icod de los Vi 9.29 221 P Pn 09 18 11.3 -7.4
comp=N,1.0nm,0.2s,SNR=7.9
CICO S Sn 09 19 48.8 -13
comp=N,2.4nm,0.2s,SNR=7.9
CCAN Las Canadas 9.32 220 P Pn 09 18 11.3 -7.9
comp=N,0.7nm,0.4s,SNR=7.9
CCAN S Sn 09 19 49.9 -13
comp=N,6.5nm,0.2s,SNR=7.9
CCAN Las Canadas 9.32 220 P Pn 09 18 11.3 -7.9
CCAN S Sn 09 19 49.1 -14
CHIO Chio 9.42 221 P Pn 09 18 12.4 -8.2
comp=N,18nm,0.2s,SNR=7.9
CHIO S Sn 09 19 50.3 -15
comp=N,74nm,0.2s,SNR=7.9
EIBI Ibiza 9.52 65 P Pn 09 18 21.1 -0.8
comp=N,27nm,0.4s,SNR=7.9
EIBI S Sn 09 20 01.3 -6.1
comp=N,12nm,0.2s,SNR=7.9
EIBI Ibiza 9.52 65 P Pn 09 18 21.4 -0.5
EIBI S Sn 09 20 01.9 -5.5
EIBI Ibiza 9.52 65 P Pn 09 18 21.4 -0.5
ESAC San Caprasio 9.54 47 P Pn 09 18 23.0 +0.8
comp=N,102nm,0.3s,SNR=7.9
ESAC S Sn 09 20 02.8 -5.1
comp=N,156nm,0.4s,SNR=7.9
ESAC San Caprasio 9.54 47 P Pn 09 18 23.0 +0.8
ESAC S Sn 09 20 05.1 -2.8
ESAC San Caprasio 9.54 47 P Pn 09 18 23.0 +0.9
ERTA Horta de San J 9.61 53 P Pn 09 18 24.6 +1.5
comp=N,63nm,0.4s,SNR=7.9
ERTA S Sn 09 20 04.3 -5.4
comp=N,40nm,0.4s,SNR=7.9
ERTA Horta de San J 9.61 53 P Pn 09 18 24.6 +1.5
EARA Aranguren 9.62 39 P Pn 09 18 24.4 +1.2
comp=N,64nm,0.5s,SNR=7.9
EARA S Sn 09 20 05.5 -4.3
comp=N,72nm,0.4s,SNR=7.9
EGOM La Gomera 9.70 223 P Pn 09 18 15.4 -9.0
comp=N,18nm,0.4s,SNR=7.9
EGOM S Sn 09 19 56.7 -15
comp=N,87nm,0.3s,SNR=7.9
EHIG Higuera 9.74 227 S Sn 09 19 59.0 -14
comp=N,68nm,0.2s,SNR=7.9
IPRE Itoiz 9.76 39 P Pn 09 18 26.2 +1.0
comp=N,18nm,0.4s,SNR=7.9
IPRE S Sn 09 20 08.5 -4.8
comp=N,26nm,0.6s,SNR=7.9
IUSE Utxeti 9.76 38 P Pn 09 18 26.8 +1.6
comp=N,26nm,0.3s,SNR=7.9
IUSE S Sn 09 20 07.9 -5.4
comp=N,29nm,0.4s,SNR=7.9
ELIZ Elizondo 9.93 37 P Pn 09 18 28.3 +0.8
comp=N,120nm,0.4s,SNR=7.9
ELIZ S Sn 09 20 12.4 -5.1
comp=N,71nm,0.4s,SNR=7.9
ELIZ Elizondo 9.93 37 P Pn 09 18 28.4 +0.9
comp=N,120nm,0.4s
ELIZ S Sn 09 20 12.4 -5.1
ELIZ Elizondo 9.93 37 P Pn 09 18 28.4 +0.9
comp=N,120nm,0.4s
EALK Alkurruntz 9.98 37 P Pn 09 18 28.7 +0.5
comp=N,99nm,0.4s,SNR=7.9

EALK S Sn 09 20 14.0 -4.7
comp=N,206nm,0.4s,SNR=7.9
SJPF Ste Jean 10.04 39 *e*Pn Pn 09 18 30.4 +1.3
SJPF *e*Sn Sn 09 20 14.7 -5.6
comp=N,153nm,0.5s
SJPF Ste Jean 10.04 39 P Pn 09 18 30.4 +1.3
SJPF S Sn 09 20 14.7 -5.6
comp=N,76nm,0.5s
LARF Larrau 10.11 40 P Pn 09 18 30.9 +0.9
OSSF Osses 10.13 38 P Pn 09 18 31.3 +1.1
ETSF Etsaut 10.24 41 *e*Pn Pn 09 18 32.3 +0.5
ETSF *e*Sn Sn 09 20 20.7 -4.5
comp=N,73nm,0.5s
ETSF Etsaut 10.24 41 P Pn 09 18 32.3 +0.5
ETSF S Sn 09 20 20.7 -4.5
comp=N,36nm,0.5s
ORDF Ordiarp 10.26 39 P Pn 09 18 33.0 +0.9
EPOB Poblet 10.30 52 P Pn 09 18 33.1 +0.6
comp=N,22nm,0.4s,SNR=7.9
EPOB S Sn 09 20 21.4 -5.1
comp=N,23nm,0.5s,SNR=7.9
EPOB Poblet 10.30 52 P Pn 09 18 33.1 +0.6
comp=N,21nm,0.4s
EPOB S Sn 09 20 22.6 -3.9
EPOB Poblet 10.30 52 P Pn 09 18 33.1 +0.6
comp=N,21nm,0.4s
ATE Arette 10.30 40 P Pn 09 18 34.1 +1.6
EMHD Djebel Mahouad 10.35 83 P Pn 09 18 30.0 -3.3
REYF Montagne du Re 10.45 41 P Pn 09 18 35.1 +0.5
CHIE El Hierro 10.45 224 P Pn 09 18 29.5 -5.2
comp=N,2.1nm,0.3s,SNR=7.9
CHIE S Sn 09 20 16.3 -14
comp=N,3.8nm,0.3s,SNR=7.9
CHIE El Hierro 10.45 224 P Pn 09 18 29.5 -5.2
comp=N,2.1nm,0.3s
CHIE S Sn 09 20 15.2 -15
EBIE Bielsa 10.49 44 P Pn 09 18 36.2 +1.0
comp=N,65nm,0.4s,SNR=7.9
EBIE S Sn 09 20 25.4 -5.9
comp=N,43nm,0.5s,SNR=7.9
EBIE Bielsa 10.49 44 P Pn 09 18 36.2 +1.0
comp=N,35nm,0.4s
VIEF Viey 10.55 43 P Pn 09 18 36.9 +0.9
RESF Ens 10.68 44 P Pn 09 18 39.1 +1.3
LABF Labassere 10.69 43 P Pn 09 18 39.3 +1.4
EPF Esparros 10.83 43 *e*Pn Pn 09 18 41.3 +1.5
EPF *e*Sn Sn 09 20 31.8 -7.6
comp=N,118nm,0.5s
EPF Esparros 10.83 43 P Pn 09 18 41.3 +1.5
EPF S Sn 09 20 31.8 -7.6
comp=N,59nm,0.5s
ETOS Mallorca 10.83 63 P Pn 09 18 39.7 -0.2
comp=N,8.1nm,0.4s,SNR=7.9
ETOS S Sn 09 20 34.0 -5.6
comp=N,1.5nm,0.4s,SNR=7.9
ETOS Mallorca 10.83 63 P Pn 09 18 40.4 +0.6
comp=N,67nm,1.1s
ETOS S Sn 09 20 34.0 -5.6
ETOS Mallorca 10.83 63 P Pn 09 18 40.4 +0.6
comp=N,67nm,1.1s
MELF Melles 10.96 45 P Pn 09 18 42.6 +1.0
SALF Salau 11.15 46 P Pn 09 18 44.9 +0.8
VALF Valcebollere 11.45 50 P Pn 09 18 49.0 +0.8
CARF Carcanieres 11.67 49 P Pn 09 18 53.1 +1.8
FILF Fillols 11.87 50 P Pn 09 18 53.8 -0.2
EJON La Jonquera 12.02 51 P Pn 09 18 56.7 +0.6
comp=N,31nm,0.5s,SNR=7.9
EJON La Jonquera 12.02 51 P Pn 09 18 56.7 +0.7
comp=N,31nm,0.5s
SJAF Saint Jean de 12.03 51 P Pn 09 18 56.6 +0.4
LRDF Laroque-de-Fa 12.06 49 P Pn 09 18 57.5 +0.9
MTLF Montolieu 12.10 46 *e*Pn Pn 09 18 58.3 +1.2
MTLF *e*Sn Sn 09 21 05.8 -4.7
comp=N,20nm,0.6s
MTLF Montolieu 12.10 46 P Pn 09 18 58.3 +1.2
MTLF S Sn 09 21 05.8 -4.7
comp=N,9.9nm,0.6s
LFF La Frestale 12.34 37 *e*Pn Pn 09 19 00.0 -0.5
LFF *e*Sn Sn 09 21 11.9 -4.6
comp=N,32nm,0.4s
LFF La Frestale 12.34 37 P Pn 09 19 00.0 -0.5
LFF S Sn 09 21 11.9 -4.6
comp=N,16nm,0.4s
RJF Les Rejaudoux 12.99 38 *e*Pn Pn 09 19 08.4 -0.9
RJF *e*Sn Sn 09 21 24.3 -8.0
comp=N,47nm,0.6s
RJF Les Rejaudoux 12.99 38 P Pn 09 19 08.4 -0.9
RJF S Sn 09 21 24.3 -8.0
comp=N,24nm,0.6s
CAF Calviac 13.01 40 *e*Pn Pn 09 19 09.4 -0.2
CAF *e*Sn Sn 09 21 24.8 -8.0
comp=N,143nm,1.0s
CAF Calviac 13.01 40 P Pn 09 19 09.4 -0.2
CAF S Sn 09 21 24.8 -8.0
comp=N,71nm,1.0s
MFF Saint Martin d 13.21 30 *e*Pn Pn 09 19 13.2 +0.9
MFF *e*Sn Sn 09 21 31.7 -5.9
comp=N,42nm,0.7s
MFF Saint Martin d 13.21 30 P Pn 09 19 13.2 +0.9
MFF S Sn 09 21 31.7 -5.9
comp=N,21nm,0.7s
QUIF Quistinic 13.30 20 *e*Pn Pn 09 19 14.3 +0.7
QUIF *e*Sn Sn 09 21 31.7 -8.2
comp=N,61nm,0.9s
QUIF Quistinic 13.30 20 *e*Pn Pn 09 19 14.3 +0.7
QUIF *e*Sn Sn 09 21 31.7 -8.2
comp=N,30nm,0.9s
LASF Ste Croix 13.49 47 *e*Pn Pn 09 19 16.5 +0.3
LASF *e*Sn Sn 09 21 34.6 -10
comp=N,26nm,0.6s
LASF Ste Croix 13.49 47 *e*Pn Pn 09 19 16.5 +0.3
LASF *e*Sn Sn 09 21 34.6 -10
comp=N,13nm,0.6s
FRNF Fournols 13.58 40 P Pn 09 19 17.5 +0.1
ROSF Rostrenen 13.66 19 *e*Pn Pn 09 19 18.9 +0.5
ROSF *e*Sn Sn 09 21 39.9 -8.7
comp=N,43nm,0.9s
ROSF Rostrenen 13.66 19 *e*Pn Pn 09 19 18.9 +0.5
ROSF *e*Sn Sn 09 21 39.9 -8.7
comp=N,21nm,0.9s
SGMF Saint Gilles 13.78 21 *e*Pn Pn 09 19 19.7 -0.4
SGMF *e*Sn Sn 09 21 43.3 -8.3
comp=N,36nm,0.7s
SGMF Saint Gilles 13.78 21 *e*Pn Pn 09 19 19.7 -0.4
SGMF *e*Sn Sn 09 21 43.3 -8.3
comp=N,18nm,0.7s
TCF Toulx Ste Croi 14.03 36 *e*Pn Pn 09 19 22.3 -1.2
TCF *e*Sn Sn 09 21 46.9 -11
comp=N,32nm,0.5s
TCF Toulx Ste Croi 14.03 36 *e*Pn Pn 09 19 22.3 -1.2
TCF *e*Sn Sn 09 21 46.9 -11
comp=N,16nm,0.5s
PRAF Pradon 14.14 50 P Pn 09 19 26.4 +1.4
COLF Collangettes 14.27 42 P Pn 09 19 26.3 -0.4
VIVF Saint-Julien-l 14.42 45 *e*Pn Pn 09 19 28.7 0.0
VIVF *e*Sn Sn 09 22 01.9 -5.2
comp=N,22nm,0.8s
VIVF Saint-Julien-l 14.42 45 P Pn 09 19 28.7 0.0
VIVF S Sn 09 22 01.9 -5.2
comp=N,11nm,0.8s
GRR Gorron 14.43 24 *e*Sn Sn 09 21 59.2 -8.2
comp=N,42nm,0.6s
GRR Gorron 14.43 24 *e*Sn Sn 09 21 59.2 -8.2
comp=N,21nm,0.6s
SMRF Simiane la Rot 14.48 50 *e*Pn Pn 09 19 30.3 +0.8
BGF Bois d'Agland 14.53 37 *e*Pn Pn 09 19 29.2 -0.9
BGF *e*Sn Sn 09 22 01.3 -8.5
comp=N,141nm,0.7s
BGF Bois d'Agland 14.53 37 P Pn 09 19 29.2 -0.9
BGF S Sn 09 22 01.3 -8.5
comp=N,71nm,0.7s
LDF La Druitiere 14.86 26 *e*Pn Pn 09 19 35.0 +0.5
LDF *e*Sn Sn 09 22 08.8 -9.1
comp=N,75nm,1.1s
FLN La Foliniere 14.88 25 *e*Pn Pn 09 19 34.8 0.0
FLN *e*Sn Sn 09 22 09.5 -8.9
comp=N,32nm,0.7s
FLN La Foliniere 14.88 25 *e*Pn Pn 09 19 34.8 0.0
FLN *e*Sn Sn 09 22 09.5 -8.9
comp=N,16nm,0.7s
AVF Avril sur Loir 14.94 37 *e*Pn Pn 09 19 34.5 -1.0
AVF *e*Sn Sn 09 22 09.7 -10
comp=N,18nm,0.6s
AVF Avril sur Loir 14.94 37 *e*Pn Pn 09 19 34.5 -1.0
AVF *e*Sn Sn 09 22 09.7 -10

	comp=N,8.8nm,0.6s						
HYF	Humbligny	14.94	35	ePn	Pn	09 19 35.2	-0.3
HYF				eSn	Sn	09 22 14.0	-5.8
FRF	La Foret Royal	14.97	53	ePn	Pn	09 19 37.6	+1.7
SMF	Signal de Mont	15.09	39	ePn	Pn	09 19 36.9	-0.5
SMF				eSn	Sn	09 22 13.1	-10
	comp=N,32nm,0.9s						
SMF	Signal de Mont	15.09	39	ePn	Pn	09 19 36.9	-0.5
SMF				eSn	Sn	09 22 13.1	-10
	comp=N,16nm,0.9s						
ORIF	Oris-en-Rattie	15.16	47	ePn	Pn	09 19 40.1	+1.7
ORIF				eSn	Sn	09 22 19.0	-6.2
	comp=N,7.9nm,0.7s						
ORIF	Oris-en-Rattie	15.16	47	P	Pn	09 19 40.1	+1.7
ORIF				S	Sn	09 22 19.0	-6.2
	comp=N,4.0nm,0.7s						
SSF	Saint Saulge	15.21	37	ePn	Pn	09 19 37.7	-1.3
SSF				eSn	Sn	09 22 15.4	-11
	comp=N,27nm,0.7s						
SSF	Saint Saulge	15.21	37	ePn	Pn	09 19 37.7	-1.3
SSF				eSn	Sn	09 22 15.4	-11
	comp=N,14nm,0.7s						
LOR	Lormes	15.52	37	ePn	Pn	09 19 42.9	-0.2
LOR				eSn	Sn	09 22 21.9	-12
	comp=N,20nm,0.7s						
LOR	Lormes	15.52	37	ePn	Pn	09 19 42.9	-0.2
LOR				eSn	Sn	09 22 21.9	-12
	comp=N,10nm,0.7s						
KEST	Kesra	15.55	84	P	Pn	09 19 45.4	+1.9
	comp=N,0.3nm,0.3s,baz=200,slow=6.5,SNR=13						
MBDF	Montbardon	15.61	49	ePn	Pn	09 19 46.8	+2.7
SBF	Sospel	15.62	53	ePn	Pn	09 19 48.3	+4.0
LPL	La Plagne	15.99	46	ePn	Pn	09 19 51.8	+2.7
LPG	La Plagne	16.00	47	ePn	Pn	09 19 52.6	+3.5
BAIF	Baives	17.72	31	ePn	Pn	09 20 14.1	+3.4
DOU	Dourbes	17.91	31	P	Pn	09 20 14.1	+1.1
CDF	Champ du Feu	18.00	39	ePn	Pn	09 20 14.9	+0.8
GIVF	Givet	18.02	32	ePn	Pn	09 20 16.1	+1.9
WLF	Walferdange	18.29	35	P	Pn	09 20 19.9	+2.3
BCLA	Clavier	18.46	32	P	Pn	09 20 23.5	+3.9
DAVOX	Davos	18.52	47	P	Pn	09 20 23.2	+2.8
	comp=N,0.3nm,0.3s,baz=207,slow=20,SNR=4.3						
DAVOX				LR	LR	09 27 37.6	
	comp=N,83nm,21.2s,baz=258,slow=37						
DAVA	Damuels	18.78	45	⇓iP	Pn	09 20 22.8	-0.7
	comp=N,4.4nm,0.5s						
MEM	Membach	18.90	32	P	Pn	09 20 28.2	+3.2
MOTA	Moosalm	19.53	46	⇑eP	Pn	09 20 28.1	-4.3
	comp=N,2.7nm,0.6s						
WTTA	Wattenberg	19.80	47	⇑iP	Pn	09 20 34.4	-1.3
	comp=N,6.9nm,0.8s						
EKA	Eskdalemuir Ar	20.31	11	P	P	09 20 41.1	+1.8
	comp=N,2.9nm,0.9s,baz=234,slow=11,SNR=3.3						
KBA	Koelnbreinsper	20.76	49	⇑eP	P	09 20 44.1	0.0
	comp=N,6.1nm,0.7s						
GRA1	Grafenberg Arr	20.85	41	eP	P	09 20 46.6	+1.5
	comp=N,9.0nm,1.2s						
GRA1				epP		09 21 02.5	
GRF	Grafenberg Arr	20.85	41	eP	P	09 20 46.6	+1.5
	comp=Z,9.0nm,1.2s						
GRF				epP		09 21 02.5	
OBKA	Obir	21.29	52	⇑e	pP	09 21 03.4	+2.2
	comp=Z,25nm,1.4s						
OBKA	Obir	21.29	52		pP	09 21 03.4	+2.2
	comp=Z,25nm,1.4s						
OBKA	Obir	21.29	52	⇑eP	P	09 20 51.4	+1.6
	comp=Z,6.4nm,0.9s,mb4.0						
OBKA				e		09 21 03.4	
OBKA	Obir	21.29	52	⇑eP	P	09 20 51.4	+1.6
MOA	Molln	21.66	48	⇑e	pP	09 21 10.8	+5.6
	comp=Z,9.8nm,1.1s						
MOA	Molln	21.66	48		pP	09 21 10.8	+5.6
	comp=Z,9.8nm,1.1s						
MOA	Molln	21.66	48	⇓iP	P	09 20 52.8	-1.0
MOA				e		09 21 10.8	
MOA	Molln	21.66	48	⇓iP	P	09 20 52.8	-1.0
GERES	GERESS Array B	21.78	45	P	P	09 20 55.9	+0.7
	comp=Z,1.5nm,0.6s,mb3.6,baz=238,slow=7.7,SNR=8.6						
CONA	Conrad Observa	22.66	49	⇑eP	P	09 21 04.1	-0.5
	comp=Z,9.1nm,0.9s,mb4.2						
CLL	Collm	22.71	39	e*PP	pP	09 21 22.0	+5.5
CLL	Collm	22.71	39	epP	pP	09 21 22.0	+5.5
	comp=Z,15nm,1.3s						
BRG	Berggiesshubel	22.95	41	eP	pP	09 21 25.5	+6.4
	comp=Z,12nm,1.6s						
ZST	Bratislava	23.54	49	e	pP	09 21 27.7	+2.4
VRAC	Vranov	23.68	46	P	P	09 21 14.5	-0.2
	comp=Z,2.9nm,0.4s,mb4.0,baz=196,slow=5.4,SNR=5.5						
TOA0	Torodi Ar. Sit	24.59	152	eP	P	09 21 21.5	-1.4
TORD	Torodi Ar. Bea	24.59	152	P	P	09 21 21.6	-1.3
	comp=Z,7.7nm,0.7s,mb4.3,baz=334,slow=9.9,SNR=54						
VYHS	Vyhne	24.72	50	e	P	09 21 24.3	+0.2
KECS	Kecovo	25.75	51	e	P	09 21 33.2	-0.3
CRVS	Cervenica-Dubn	26.50	50	e	P	09 21 32.0	-8.2
NOA	NORSAR Array B	28.82	21	LR	LR	09 33 29.8	
	comp=Z,32nm,19.1s,MS3.0,baz=90,slow=36						
HFS	Hagfors	28.90	24	P	P	09 22 01.6	-0.1
	comp=Z,2.0nm,0.5s,mb4.1,baz=196,slow=10,SNR=8.8						
HFS				LR	LR	09 33 37.4	
	comp=Z,74nm,18.6s,MS3.3,baz=223,slow=36						
DBIC	Dimbokro	29.09	170	P	P	09 22 02.2	-1.1
	comp=Z,4.9nm,0.5s,mb4.5,baz=342,slow=9.4,SNR=18						
DBIC	Dimbokro	29.09	170	P	P	09 22 02.2	-1.2
LIC	Lamto	29.50	170	eP	P	09 22 05.8	-1.3
	comp=Z,11nm,0.6s,mb4.5						
LIC	Lamto	29.50	170	eP	P	09 22 05.8	-1.3
	comp=Z,5.4nm,0.6s,mb4.5						
FINES	FINESS Array B	34.40	30	P	P	09 22 50.1	+0.1
	comp=Z,2.9nm,0.5s,mb4.4,baz=236,slow=7.3,SNR=21						
ARCES	ARCESS Array B	39.11	19	P	P	09 23 29.6	-0.5
	comp=Z,0.5nm,0.6s,mb3.4,baz=214,slow=10,SNR=5.5						
ARCES	ARCESS Array B	39.11	19	P	P	09 23 29.5	-0.6
SCHQ	Schefferville	43.23	315	LR	LR	09 38 46.5	
	comp=Z,35nm,20.0s,MS3.3,baz=38,slow=31						
ULM	Lac du Bonnet	61.36	313	LR	LR	09 50 01.1	
	comp=Z,54nm,18.9s,MS3.7,baz=356,slow=33						
PLAL	Pickwick Lake	62.22	295	eP	P	09 26 21.5	-2.5
	comp=Z,5.0nm,0.8s,mb4.7						
BDFB	Brasilia	62.48	222	P	P	09 26 27.5	+1.7
	comp=Z,1.7nm,0.8s,mb4.2,baz=37,slow=10,SNR=3.0						
MKAR	Makanchi Array	66.40	49	P	P	09 26 51.6	+0.2
	comp=Z,0.5nm,0.5s,mb3.8,baz=300,slow=5.3,SNR=4.8						
BOSA	Boshof	71.86	148	P	P	09 27 24.6	-0.6
	comp=Z,3.1nm,1.0s,mb4.2,baz=342,slow=6.4,SNR=4.3						
PDAR	Pinedale Array	73.17	311	P	P	09 27 34.2	+1.2
	comp=Z,0.4nm,0.7s,mb3.5,baz=67,slow=9.2,SNR=3.1						
PDAR	Pinedale Array	73.17	311	P	P	09 27 34.2	+1.1
DLMT	Dillon	73.57	314	eP	P	09 27 39.7	+4.3
	comp=Z,5.6nm,1.1s,mb4.4						
CPUP	Villa Florida	76.19	223	P	P	09 27 50.0	-0.5
	comp=Z,0.7nm,0.5s,mb3.8,baz=34,slow=3.6,SNR=3.1						
CPUP	Villa Florida	76.19	223	P	P	09 27 50.0	-0.5
ASAR	Alice Springs	146.46	79	PKPbc	PKPbc	09 35 43.3	+0.1
	comp=Z,1.3nm,0.8s,baz=316,slow=2.8,SNR=8.2						

*NIED **10** 09:20:00, 4350N×14730E, h32km, Mw3.9 Best double couple: M0 6.98000×10^14 NP1:φs 59.00000°, δ88.00000°, λ134.00000°. NP2:φs 151.00000°, δ44.00000°, λ4.00000°.*
*ISCJB **10** 09:20:29.6±1.7, 436N±0.1×1474E±0.1, h61km±13km, mb4.0/8, Error ellipse: s-maj=21.3km s-min=16.3km az=110.7*
*JMA **10** 09:20:29.2±0.3, 4352N×14733E, h22km, M3.9*
*IDC **10** 09:20:31.2±7.4, 4303N×14761E, h94km±37km, mb3.6/7, mb1 3.7/8, mb1mx3.4/22, mbtmp3.9/8, MS3.0/1, Ms1 3.0/1, ms1mx2.5/25, Error ellipse: s-maj=109.7km s-min=30.6km az=173.0*
*MOS **10** 09:20:31.4±1.6, 4455N×14727E, h33km, mb4.5/6, Error ellipse: s-maj=23.9km s-min=21.4km az=84.2*
ISC 10 09:20:30.4±1.7, 437N±01×1474E±02, h54km±14km, n26, σ0.87/33, mb4.0/8, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.17	289	⇓iPN	Pn	09 20 49.9	-0.5
YUK				i S	Sn	09 21 05.0	-0.3
YUK				pmax	pmax		
	comp=N,350nm,0.4s						
YUK				pmax	pmax		
	comp=E,1µm,0.4s						
YUK				pmax	pmax		
	comp=Z,3µm,0.4s						
YUK				pmax	pmax		
	comp=Z,2µm,1.0s						
YUK				pmax	pmax		
	comp=N,2µm,0.8s						
YUK				pmax	pmax		
	comp=E,2µm,0.6s						
YUK				smax			
	comp=N,11µm,0.8s						
YUK				smax			
	comp=E,6µm,0.8s						
YUK				smax			
	comp=N,9µm,0.5s						
YUK				smax			
	comp=E,8µm,0.5s						
NEM2	Nemuro 2	1.23	257	P	Pn	09 20 50.2	-1.1
NEM2				eS	Sn	09 21 05.4	-1.5
JRA	Rausu	1.66	280	P	Pn	09 20 57.5	+0.3
JRA				eS	Sn	09 21 17.5	+0.1
JNK	Nakash	1.94	269	P	Pn	09 21 00.5	-0.4
JNK				eS	Sn	09 21 23.7	-0.4
JAK	Akkeshi	2.07	252	P	Pn	09 21 02.7	0.0
JTKR	Abashiri--Toko	2.54	278	P	Pn	09 21 10.4	+1.3
JAR	Ashorobuto	2.66	263	P	Pn	09 21 10.4	-0.3
JOB	Onbets	2.70	255	P	Pn	09 21 11.7	+0.4
JOB				eS	Sn	09 21 44.0	+1.2
JMP	Maruseppu	2.94	278	P	Pn	09 21 16.0	+1.5
ASAJ	Asahikawa	3.49	279	P	Pn	09 21 25.6	+3.4
	comp=E,3.4nm,0.3s,baz=91,slow=14,SNR=18						
ASAJ				S	Sn	09 22 12.3	+10
	comp=E,1.8nm,0.3s,baz=34,slow=29,SNR=2.9						
ASAJ				LR	LR	09 22 57.0	
	comp=E,179nm,19.0s,baz=24,slow=38						
ASAJ	Asahikawa	3.49	279	PN	Pn	09 21 25.6	+3.4
ASAJ				S	Sn	09 22 12.4	+10
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
MKAR	Makanchi Array	44.78	298	P	P	09 28 39.9	+1.3
	comp=N,0.4nm,0.5s,mb3.5,baz=83,slow=7.5,SNR=4.8						
INK	Inuvik	46.40	30	P	P	09 28 52.2	+0.9
	comp=N,2.7nm,0.6s,mb4.4,baz=283,slow=5.4,SNR=12						
INK	Inuvik	46.40	30	P	P	09 28 52.3	+0.9
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES	ARCESS Array B	59.39	340	P	P	09 30 26.6	-0.5
	comp=Z,0.4nm,0.5s,mb3.7,baz=64,slow=8.2,SNR=5.8						
JOF	Joensuu	62.25	332	ep	P	09 30 45.5	-1.1
	comp=Z,1.7nm,0.4s,mb4.5						
JOF	Joensuu	62.25	332	eP	P	09 30 45.5	-1.1
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6						
FINES	FINESS Array B	65.03	333	P	P	09 31 04.4	-0.5
	comp=Z,1.1nm,0.5s,mb4.2,baz=43,slow=7.2,SNR=16						
FINES	FINESS Array B	65.03	333	P	P	09 31 04.4	-0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	NORSAR Subarra	69.75	339	P	P	09 31 34.1	-0.6
	comp=Z,0.8nm,0.4s,mb4.0,baz=31,slow=6.5						
NOA	NORSAR Array B	69.75	339	P	P	09 31 34.0	-0.7
	comp=Z,0.7nm,0.5s,mb3.8,baz=31,slow=6.2,SNR=3.5						
NOA	NORSAR Array B	69.75	339	P	P	09 31 34.1	-0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	69.84	337	P	P	09 31 34.7	-0.5
	comp=Z,1.2nm,0.4s,mb4.1,baz=63,slow=6.8,SNR=9.6						
HFS	Hagfors	69.84	337	P	P	09 31 34.7	-0.6
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	71.76	324	P	P	09 31 47.2	+0.3
	comp=Z,0.6nm,0.5s,mb3.8,baz=35,slow=6.2,SNR=7.2						
AKASG	Malin Array Be	71.76	324	P	P	09 31 47.2	+0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*BJI **10** 10:02:36.0, 44.10N×12930W, h10km, mB4.3, mb4.3, Ms4.2, Msz4.0*
*ISCJB **10** 10:02:42.7±0.7, 44.13N±003×12898W±006, h10km, mb4.2/1, MS4.0/1, Error ellipse: s-maj=6.4km s-min=4.3km az=171.4*
*NEIC **10** 10:02:43.0±2.6, 44.14N×12927W, h10km, mb3.9/5, Error ellipse: s-maj=29.7km s-min=8.5km az=80.0*
ISC 10 10:02:44.5±0.7, 4410N±003×12900W±006, h10km, n97, σ1.04/115, mb4.2/1, MS4.0/1, 27C-23D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K01A	Sixes	3.54	110	⇑P	Pn	10 03 35.9	-3.5
	baz=3.7						
KEBM	Edson Butte	3.61	108	P	Pn	10 03 37.2	-3.2
H02A	Toledo	3.63	79	⇑P	Pn	10 03 39.9	-0.8
	baz=3.8						
I02A	Mapleton	3.73	90	⇓P	Pn	10 03 41.1	-1.0
	baz=3.9						
I02A				⇑S	Sn	10 04 25.0	-0.9
	baz=3.9						
RNO	Roman Nose	3.79	91	P	Pn	10 03 42.8	-0.2
MPOR	Mary's Peak	3.93	82	P	Pn	10 03 44.0	-0.8
J02A	Umpqua	4.00	99	⇓P	Pn	10 03 44.4	-1.4
	baz=4.2,SNR=167						
J02A				⇓S	Sn	10 04 32.3	-0.4
	baz=4.2						
COR	Corvallis	4.11	81	ePn	Pn	10 03 48.5	+1.1
COR				eSn	Sn	10 04 36.6	+1.1
I03A	Eugene	4.12	90	⇑P	Pn	10 03 46.2	-1.4
	baz=4.3						
I03A				⇑S	Sn	10 04 35.5	-0.3
	baz=4.3						
KMOR	Kings Mountain	4.20	67	P	Pn	10 03 47.8	-0.8
K02A	Glendale	4.22	106	⇓P	Pn	10 03 46.4	-2.5
	baz=4.4						
K02A				⇑S	Sn	10 04 36.0	-2.3
	baz=4.4						
G03A	Yamhill	4.25	71	⇓P	Pn	10 03 48.5	-0.8
	baz=4.4,SNR=13						
G03A				⇑S	Sn	10 04 39.6	+0.7
	baz=4.4						
F03A	Seaside	4.27	63	⇓P	Pn	10 03 48.9	-0.6
	baz=4.4,SNR=21						
F03A				⇑S	Sn	10 04 40.5	+1.1
	baz=4.4						
EUO	Eugene	4.27	89	P	Pn	10 03 50.5	+1.0
DBO	Dodson Butte	4.29	101	P	Pn	10 03 48.5	-1.3
HSO	Harness Mounta	4.31	96	P	Pn	10 03 49.5	-0.6
L02A	Cave Junction	4.40	114	⇓P	Pn	10 03 49.2	-2.1
	baz=4.6,SNR=14						
NLO	Nicolai Mounta	4.40	61	P	Pn	10 03 51.6	+0.3
J03A	Ideyld Park	4.43	97	⇓P	Pn	10 03 50.7	-1.0
	baz=4.6,SNR=157						
J03A				⇓S	Sn	10 04 43.0	-0.3
	baz=4.6						
KRMB	Red Mountain	4.54	123	ePn	Pn	10 03 53.0	-0.3
E03A	Lebam	4.54	56	⇑P	Pn	10 03 52.4	-0.9
	baz=4.7,SNR=8.4						
E03A				⇓S	Sn	10 04 45.8	-0.3
	baz=4.7						
BROR	Big Rock Looko	4.71	86	P	Pn	10 03 56.1	+0.5
SSOR	Sweet Springs	4.74	79	P	Pn	10 03 56.4	+0.5
D03A	Wishkah Elem.	4.75	49	⇑P	Pn	10 03 55.9	-0.2
	baz=4.9,SNR=15						
D03A				⇑S	Sn	10 04 50.7	-0.5
	baz=4.9						
BBOR	Butler Butte	4.75	103	P	Pn	10 03 55.3	-0.8
G04A	Mulino	4.78	74	⇓P	Pn	10 03 55.8	-0.7
	baz=4.9,SNR=9.8						
HBO	Huckleberry Mo	4.83	91	P	Pn	10 03 58.3	+1.1
IRO	Indian Ridge	4.86	89	P	Pn	10 03 58.7	+1.1
H04A	Detroit Lake	4.92	81	⇑P	Pn	10 03 57.6	-0.8
	baz=5.1,SNR=56						
H04A				⇑S	Sn	10 04 55.5	+0.2
	baz=5.1						
C03A	Quillayute Air	4.93	37	⇑P	Pn	10 03 57.7	-0.9
	baz=5.0,SNR=62						
C03A				⇓S	Sn	10 04 54.1	-1.6
	baz=5.0						
FRIS	Frissel Point	4.96	86	P	Pn	10 03 59.8	+0.8
F04A	Amboy	5.01	66	⇑P	Pn	10 03 59.5	-0.2
	baz=5.2,SNR=23						
F04A				⇑S	Sn	10 04 58.6	+0.9
	baz=5.2						
KHMM	Horse Mountain	5.05	128	ePn	Pn	10 04 00.3	+0.1
E04A	Onalaska	5.08	58	⇓P	Pn	10 04 00.3	-0.4
	baz=5.2,SNR=6.5						
OTR	Olympics--Tyee	5.13	37	P	Pn	10 04 00.7	-0.7
MTMW	Mount Mitchell	5.18	66	P	Pn	10 04 02.2	+0.2
YBH	Yreka Blue Hor	5.19	115	ePn	Pn	10 04 03.8	+1.6
YBH	Yreka Blue Hor	5.19	115	⇑P	Pn	10 04 01.0	-1.1
	baz=5.4,SNR=17						
TDH	Tom, Dick, Har	5.27	74	P	Pn	10 04 04.1	+0.8
D04A	Dobbs Creek Ra	5.29	53	⇓P	Pn	10 04 03.5	+0.1
	baz=5.4						
HDW	Hoodsport	5.46	47	P	Pn	10 04 06.0	+0.1
B04A	Port Angeles	5.50	42	⇓P	Pn	10 04 05.9	-0.5
	baz=5.6,SNR=22						
B04A				⇓S	Sn	10 05 07.7	-2.0
	baz=5.6						
K04A	Chilquin	5.50	103	⇓P	Pn	10 04 06.1	-0.4
	baz=5.7						
I05A	Bend	5.56	87	⇑P	Pn	10 04 06.9	-0.4
	baz=5.7						
G05A	Wamic	5.59	76	⇓P	Pn	10 04 08.7	+1.0
	baz=5.8,SNR=17						
F05A	White Salmon	5.63	69	⇑P	Pn	10 04 08.2	-0.1
	baz=5.8,SNR=8.2						
F05A				⇓S	Sn	10 05 14.4	+1.4
	baz=5.8						
J05A	Fort Rock	5.69	96	P	Pn	10 04 08.9	-0.1
	baz=5.9,SNR=16						
D05A	Enumclaw	5.80	55	⇑P	Pn	10 04 11.2	+0.6
	baz=5.9						
VGZ	Gonzales	5.84	40	P	Pn	10 04 10.2	-0.9
MCW	Mount Constitu	6.26	41	P	Pn	10 04 16.5	-0.4
L05A	Lakeview	6.32	106	⇑P	Pn	10 04 17.0	-0.7
	baz=6.5						
I06A	Prineville	6.34	88	⇑P	Pn	10 04 17.8	-0.1
	baz=6.5						
A04A	Legoe Bay, Lum	6.34	41	⇑P	Pn	10 04 18.0	0.0
	baz=6.4,SNR=37						
A04A				⇓S	Sn	10 05 28.0	-2.5
	baz=6.4						
B05A	Bryant	6.35	47	⇑P	Pn	10 04 18.2	+0.1
	baz=6.4,SNR=40						
B05A				⇑S	Sn	10 05 31.2	+0.6
	baz=6.4						
ATES	Arlington Traf	6.35	47	P	Pn	10 04 18.7	+0.6
JCW	Jim Creek	6.39	48	P	Pn	10 04 19.1	+0.4
CMW	Cultus Mountai	6.43	45	P	Pn	10 04 20.0	+0.7
J06A	Christmas Vall	6.47	94	⇑P	Pn	10 04 19.1	-0.6
	baz=6.6						
TBM	Table Mountain	6.64	60	P	Pn	10 04 23.2	+1.2
RPW	Rockport	6.77	47	P	Pn	10 04 24.4	+0.6
MBW	Mount Baker	6.78	44	P	Pn	10 04 24.8	+0.8
A05A	Maple Falls	6.83	42	⇑P	Pn	10 04 25.2	+0.4
	baz=6.9,SNR=44						
A05A				⇓S	Sn	10 05 42.0	-0.5
	baz=6.9						
VDB	Vedder Mountai	6.84	42	P	Pn	10 04 25.1	+0.2
HAWA	Hanford	7.06	68	ePn	Pn	10 04 28.3	+0.4
	0.4nm,0.6s						
ORV	Oroville	7.21	126	⇓P	Pn	10 04 31.0	+1.1
	baz=7.4						
EPH	Ephrata	7.34	60	P	Pn	10 04 32.4	+0.7
L07A	Adell	7.37	103	⇓P	Pn	10 04 31.3	-0.8
	baz=7.6,SNR=7.3						
WVOR	Wild Horse Val	7.74	99	ePn	Pn	10 04 38.2	+1.0
	3.2nm,1.0s						
BMO	Blue Mountains	8.39	81	ePn	Pn	10 04 46.7	+0.5
NEW	Newport	9.23	59	ePn	Pn	10 04 57.2	-0.4
	5.1nm,1.1s						
HLID	Hailey	10.55	88	ePn	Pn	10 05 19.3	+3.5
	4.8nm,0.9s						
MSO	Missoula	10.92	70	ePn	Pn	10 05 21.6	+0.8
	1.8nm,0.9s						
WALA	Waterton Lakes	11.50	59	ePn	Pn	10 05 28.8	+0.1
MCMT	McKenzie Canyo	11.56	81	ePn	Pn	10 05 31.4	+1.8
DLMT	Dillon	11.74	78	ePn	Pn	10 05 34.0	+2.0
	5.2nm,1.1s						
TPNV	Topopah Spring	12.04	122	ePn	Pn	10 05 40.3	+4.2
	4.5nm,1.0s						
BOZ	Bozeman (W)	12.42	77	ePn	Pn	10 05 43.6	+2.4
IMW	Indian Meadow	13.01	85	ePn	Pn	10 05 54.9	+5.6
	8.4nm,0.2s						
TPAW	Teton Pass	13.05	86	ePn	Pn	10 05 53.6	+3.6
	4.3nm,1.0s						
REDW	Red Top Meadow	13.15	87	ePn	Pn	10 05 54.4	+3.1
	8.3nm,1.3s						
FLWY	Flagg Ranch	13.16	84	ePn	Pn	10 05 55.0	+3.7
	16nm,1.1s						
LOHW	Long Hollow	13.29	86	ePn	Pn	10 05 57.0	+3.9
	4.6nm,1.1s						
GCMT	Greycliff	13.79	76	ePn	Pn	10 06 03.5	+3.4
MSU	Marysvale	13.81	108	eP	Pn	10 06 09.6	+9.3
EGMT	Eagleton	13.92	67	ePn	Pn	10 06 01.9	+0.2
	9.1nm,1.1s						
SRU	San Rafael	14.68	103	eP	Pn	10 06 21.1	+8.9
	10.0nm,0.8s						
LAO	LASA Array	16.20	73	eP	Pn	10 06 36.4	+4.3
	12nm,1.0s						
MVCO	Mesa Verde	16.98	107	eP	Pn	10 06 44.9	+2.7
ISCO	Idaho Springs	17.90	96	eP	Pn	10 06 56.6	+3.1
	1.6nm,0.7s						
ANMO	Albuquerque	19.59	110	eP	Pn	10 07 14.5	+0.5
	2.4nm,0.9s						
FFC	Flin Flon	20.41	49	eP	P	10 07 21.4	-0.2
	14nm,1.2s						
WMOK	Wichita Mounta	25.03	102	eP	P	10 08 08.1	-0.5
	10nm,1.3s,mb4.2						
MDJ	Mudanjiang	67.44	311	P	P	10 13 31.5	-8.8
CN2	Changchun	70.22	312	eP	P	10 13 50.6	-7.0
HHC	Hu-ho-hao-te	79.44	318	eP	P	10 14 44.0	-7.0
HHC				AP	pP	10 14 48.7	-5.6
HHC				XP	sP	10 14 51.0	-4.5
HHC				PCP	PcP	10 14 53.1	-5.9
HHC				PP	PP	10 17 44.1	-7.1
HHC				S	S	10 24 40.1	-12
HHC				SKS		10 24 53.7	
HHC				SCS	ScS	10 25 01.8	-13
HHC				SS	SS	10 29 47.5	-12
HHC				LR	LR		
	comp=Z,65nm,18.0s,MS4.0						
NJ2	Nanjing	82.21	307	eP	P	10 14 59.8	-6.0
WMQ	Urumqi	86.54	334	eP	P	10 15 23.0	-4.8

KRSC 10 10:14:56, 5347N×15923E, h117km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	Nalytchevo	0.31	167	eP	Pn	10 15 13.7	+1.1
NLC				i S	Sn	10 15 26.3	+1.2
AVH	Avacha	0.36	235	eP	Pn	10 15 14.5	+1.7
AVH				i S	Sn	10 15 27.7	+2.2
PET	Petropavlovsk	0.57	218	eP	Pn	10 15 15.1	+1.1
PET				i S	Sn	10 15 28.6	+1.0
SPN	Mys Shipunski	0.60	128	eP	Pn	10 15 15.4	+1.1
SPN				i S	Sn	10 15 29.1	+1.0
GNL	Ganaly	0.80	287	eP	Pn	10 15 16.6	+0.7
GNL				i S	Sn	10 15 31.3	+0.4
RUS	Russkaya	1.13	203	eP	Pn	10 15 19.6	+0.6
RUS				i S	Sn	10 15 36.8	+0.3
GRL	Gorelyy	1.16	218	P	Pn	10 15 20.5	+1.2
MKZ	Mys Kozlova	1.83	53	eP	Pn	10 15 28.2	+1.0
MKZ				i S	Sn	10 15 51.2	+0.2
MIPR	Malaya Ipel'ka	1.92	232	eP	Pn	10 15 29.3	+1.1
KMNR	Kamenistaya	2.37	14	P	Pn	10 15 35.3	+1.4
ZLN	Zelenaya	2.71	19	P	Pn	10 15 41.1	+2.7
ZLN				i S	Sn	10 16 13.6	+2.6
SRKR	Sorokina	3.38	18	P	Pn	10 15 49.8	+2.6
SRKR				i S	Sn	10 16 28.4	+1.7
KBTR	Krutoberegovo	3.44	36	eP	Pn	10 15 49.3	+1.3

*NEIC **10** 10:16:24.1, 4257N×155W, h2km, ML2.5(STR), After STR.*
*STR **10** 10:16:24.1±0.6, 4257N×155W, h2km±1km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **10** 10:16:25.5±0.1, 4270N×160W, h2km, mb2.8/3, Error ellipse: s-maj=2.6km s-min=2.2km az=64.0, Suspected Mining explosion.*
MDD 10 10:16:25.1±0.7, 4269N×166W, h0km, mbLg1.1/8, Error ellipse: s-maj=4.8km s-min=4.1km az=43.0, ARTIFICIAL POSIBLE, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EARA	Aranguren	0.11	34	Pg	Pg	10 16 26.2	-0.9
	75nm,0.1s,SNR=7.9						
EARA				Lg		10 16 28.6	
	34nm,0.1s,SNR=7.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EARA	Aranguren	0.11	34	Pg	Pg	10 16 26.2	-0.9
	75nm,0.1s,SNR=7.9						
EARA				Lg		10 16 29.7	
	34nm,0.1s,SNR=7.9						
IPRE	Itoiz	0.25	61	Pg	Pg	10 16 29.1	-0.9
	2.2nm,0.1s,SNR=7.9						
IPRE				Lg		10 16 33.5	
	5.0nm,0.2s,SNR=7.9						
IPRE	Itoiz	0.25	61	Pg	Pg	10 16 28.9	-1.1
	2.2nm,0.1s,SNR=7.9						
IUSE	Utxeti	0.28	17	Pg	Pg	10 16 30.2	-0.2
	1.3nm,0.1s,SNR=7.9						
IUSE				Lg		10 16 34.3	
	4.1nm,0.1s,SNR=7.9						
IUSE	Utxeti	0.28	17	Pg	Pg	10 16 30.2	-0.2
	1.3nm,0.1s,SNR=7.9						
ELIZ	Elizondo	0.49	11	Pg	Pg	10 16 34.2	-0.3
	3.3nm,0.2s,SNR=7.9						
ELIZ				Lg		10 16 40.1	
	1.1nm,0.3s,SNR=7.9						
ELIZ	Elizondo	0.49	11	Pg	Pg	10 16 34.2	-0.3
ELIZ				Lg		10 16 43.9	
EALK	Alkurruntz	0.55	12	Pg	Pg	10 16 35.4	-0.2
	1.2nm,0.2s,SNR=7.9						
EALK				Lg		10 16 42.9	
	4.0nm,0.2s,SNR=7.9						
EALK	Alkurruntz	0.55	12	Pg	Pg	10 16 35.7	+0.1
EALK				Lg		10 16 45.2	
EALK	Alkurruntz	0.55	12	Pg	Pg	10 16 35.7	+0.1
	1.2nm,0.2s,SNR=7.9						
LARF	Larrau	0.61	54	Pg	Pg	10 16 36.1	-0.7
LARF				Sg	Sg	10 16 44.5	-0.1
OSSF	Osses	0.64	27	Pg	Pg	10 16 37.5	+0.1
OSSF				Sg	Sg	10 16 47.8	+2.1
ATE	Arette	0.81	60	Lg		10 16 51.4	
VIEF	Viey	1.25	80	Lg		10 17 06.9	
ESAC	San Caprasio	1.31	137	Pg	Pg	10 16 49.0	-1.1
	11nm,0.2s,SNR=8.1						
ESAC				Lg		10 17 06.8	
	8.2nm,0.2s,SNR=5.0						
ESAC	San Caprasio	1.31	137	Pn	Pn	10 16 49.0	-1.6
ESAC				Lg		10 17 08.1	
ESAC	San Caprasio	1.31	137	Pn	Pn	10 16 49.0	-1.6
	11nm,0.2s,SNR=8.1						
LABF	Labassere	1.32	74	Lg		10 17 08.4	
EBIE	Bielsa	1.33	89	Pg	Pg	10 16 50.0	-0.6
	0.6nm,0.1s,SNR=14						
EBIE				Lg		10 17 07.9	
	0.4nm,0.1s,SNR=7.9						
EBIE	Bielsa	1.33	89	Pn	Pn	10 16 50.6	-0.3
EBIE				Lg		10 17 07.9	
EBIE	Bielsa	1.33	89	Pn	Pn	10 16 50.6	-0.3
	0.6nm,0.1s,SNR=14						
ELAN	Lanestosa	1.41	293	Pg	Pg	10 16 51.2	-1.0
	1.3nm,0.1s,SNR=7.9						
ELAN				Lg		10 17 11.4	
	0.9nm,0.1s,SNR=7.9						
ELAN	Lanestosa	1.41	293	Pn	Pn	10 16 51.5	-0.5
ELAN				Lg		10 17 11.4	
ELAN	Lanestosa	1.41	293	Pn	Pn	10 16 51.5	-0.6
	1.3nm,0.1s,SNR=7.9						

MEX 10 10:23:06.1±0.6, 1670N×9970W, h5km±3km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.26	309	*i* P	Pg	10 23 11.0	-0.2
ACX				*i* S	Sg	10 23 15.0	+0.3
CAIG	El Cayaco	0.64	303	*i* P	Pg	10 23 17.8	-0.6
CAIG				*i* S	Sg	10 23 26.8	0.0
MEIG	Mezcala	1.22	4	*i* P	Pg	10 23 25.9	-3.7
MEIG				*i* S	Sg	10 23 41.8	-3.6
UTMO	Huajuapan	2.14	58	*i* P	Pn	10 23 40.7	-1.7
UTMO				*i* S	Sn	10 24 06.7	-2.6

*CSEM **10** 10:41:42.5, 3770N×2092E, h15km, MD3.6/8, After ATH*
*NEIC **10** 10:41:42.5, 3770N×2092E, h15km, MD3.6(ATH), After ATH.*
ATH 10 10:41:42.5, 3770N×2092E, h15km±1km, MD3.6/8, 1D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.54	331	*e*PN	Pg	10 41 53.0	-0.2
VLS				*e*SN	Sg	10 42 01.8	+1.3
RLS	Riolos of Patr	0.56	50	⇓*i*PN	Pg	10 41 53.4	-0.2
RLS				*e*SN	Sg	10 42 01.8	+0.8
ITM	Ithomi	0.95	123	*e*PN	Pn	10 42 00.3	-1.1
ITM				*e*SN	Sn	10 42 14.1	-0.6
EVR	Evrytania	1.40	30	*e*PN	Pn	10 42 08.7	+1.2
VLI	Veliai	1.89	121	*e*PN	Pn	10 42 16.5	+2.4
LKR	Lokris	1.89	59	*e*PN	Pn	10 42 16.9	+2.6
LKR				*e*SN	Sn	10 42 40.7	+2.8
KYTH	Kithira	2.21	129	*e*PN	Pn	10 42 21.0	+2.4
NEO	Neokhori	2.42	48	*e*PN	Pn	10 42 24.0	+2.5

*IDC **10** 10:49:48.2±2.3, 1078N×9160E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.5/20, mbtmp3.8/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/22, Error ellipse: s-maj=98.2km s-min=26.1km az=63.0*
ISC 10 10:49:52.3±1.6, 107N±03×911E±02, h35km, n8, σ1^{s}71/6, mb3.7/4, MS3.1/1, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	1.92	59	*e*P	x	10 49 53.5	
PBA				*e*S	x	10 50 08.9	
PBA				*e*x	x	10 50 11.6	
	comp=N,4μm,0.8s						
PBA				*e*x	x	10 50 12.6	
	comp=E,7μm,0.7s						
PBA	Port Blair	1.92	59	*e*P	x	10 49 53.5	
PBA				*e*S	x	10 50 08.9	
VIS	Vishakhapatnam	10.27	314	*e*P	Pn	10 52 20.9	+3.9
VIS				*e*S	Sn	10 54 10.0	-0.9
VIS				AML	AML	10 54 15.4	
	comp=E,34nm,0.5s						
VIS				AML	AML	10 54 16.0	
	comp=N,27nm,0.6s						
MKAR	Makanchi Array	36.77	350	P	P	10 56 57.8	+1.3
	comp=N,0.9nm,0.6s,mb3.8,baz=168,slow=8.8,SNR=9.8						
SONM	Songino Array	39.24	16	P	P	10 57 16.0	-1.3
	comp=N,0.6nm,0.5s,mb3.5,baz=201,slow=6.2,SNR=5.6						
ZAL	Zalesovo	43.45	355	LR	LR	11 17 31.8	
	comp=N,25nm,21.8s,MS3.1,baz=95,slow=38						
ASAR	Alice Springs	54.02	130	P	P	10 59 12.2	-0.7
	comp=N,0.7nm,0.6s,mb3.8,baz=303,slow=7.1,SNR=17						
ARCES	ARCESS Array B	71.63	340	P	P	11 01 11.3	+1.2
	comp=N,0.7nm,0.8s,mb3.6,baz=90,slow=5.4,SNR=4.0						

*ISCJB **10** 11:01:47.4±0.3, 3620N±002×27.12E±003, h10km, Error ellipse: s-maj=3.4km s-min=2.5km az=18.5*
*ATH **10** 11:01:48.3, 3634N×2708E, h25km±1km, MD4.0/17, ML4.3*
*NEIC **10** 11:01:48.3, 3634N×2708E, h25km, MD4.0(ATH), After ATH.*
*CSEM **10** 11:01:49.3±0.1, 3635N×27.14E, h10km, ML4.3, Error ellipse: s-maj=1.7km s-min=1.4km az=171.0*
*ISK **10** 11:01:49.8, 3635N×27.15E, h14km, MD3.6, ML3.7*
*HLW **10** 11:01:50.0, 3633N×2731E, h33km, Mb3.9*
ISC 10 11:01:48.8±0.3, 3626N±002×2710E±003, h10km, n53, σ1^{s}18/70, 9C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NISR	Nisiros	0.35	4	*e*PB	Pg	11 01 55.0	-0.7
DAT	Datca	0.60	40	PG	Pg	11 01 59.9	-0.6
DAT				SG	Sg	11 02 08.6	+0.2
KARP	Karpathos	0.72	176	*e*PN	Pg	11 02 04.2	+1.5
KARP				*e*SN	Sg	11 02 14.9	+2.9
BODT	Bodrum	0.81	12	PG	Pg	11 02 04.2	-0.3
BODT				SG	Sg	11 02 14.6	-0.6
ARG	Arkhangelos	0.83	93	*e*PN	Pg	11 02 04.8	-0.1
ARG				*e*SN	Sg	11 02 17.4	+1.7
BDRM	Kayabasi	0.85	19	*i* P	Pg	11 02 04.9	-0.2
BDRM				*i* S	Sg	11 02 16.1	-0.1
YER	Yerkesik	1.29	47	PN	Pn	11 02 12.5	-0.4
SANT	Santorini	1.33	275	*e*Pn	Pn	11 02 13.4	0.0
SANT				*e*Sn	Sg	11 02 35.4	+3.8
SANT	Santorini	1.33	275	*e*Pn	Pn	11 02 13.4	0.0
DALT	Dalyan (Mudla)	1.34	67	PN	Pn	11 02 13.7	+0.2
SMG	Samos	1.46	352	*e*PN	Pn	11 02 13.6	-1.6
SMG				*e*SN	Sn	11 02 32.4	-1.9
APE	Apeiranthos	1.50	303	*e*PN	Pn	11 02 15.2	-0.5
AYDN	Tasoluk	1.53	24	*i* P	Pn	11 02 17.5	+1.4
AYDN				*i* S	Sg	11 02 40.1	+2.1
NPS	Neapolis	1.57	231	*e*PB	Pb	11 02 16.3	-1.6
XRY	Khrisi	1.80	220	*e*PB	Pb	11 02 20.0	-1.8
KSL	Kastellorizon	2.01	93	*e*PB	Pb	11 02 23.5	-2.0
BLCB	Balcova	2.12	359	*e*PN	Pn	11 02 25.6	+1.3
URLA	Izmir	2.13	349	*i* P	Pn	11 02 25.3	+0.8
URLA				*i* S	Sg	11 03 01.4	+4.1
IZM	Izmir	2.13	3	*e*PN	Pn	11 02 25.8	+1.3
KDAG	Bornova	2.14	4	*i* P	Pb	11 02 28.4	+0.7
KDAG				*i* S	Sg	11 03 00.2	+2.6
DENT	Denizli	2.15	46	*e*PN	Pn	11 02 24.9	+0.2
ELL	Elmali	2.31	77	*e*PN	Pn	11 02 28.4	+1.4
AKS	Akhisar	2.67	12	*e*PN	Pn	11 02 32.0	+0.1
ANTB	Antalya	2.93	76	*e*PN	Pn	11 02 36.6	+1.2
PRK	Paraskevi	3.05	348	*e*PN	Pn	11 02 36.0	-1.1
PRK				*e*SN	Sn	11 03 11.7	-1.9
KVR	Kavouri	3.09	301	*e*PN	Pn	11 02 38.0	+0.4
TKTP	Tekketepe	3.12	54	*i* P	Pn	11 02 41.5	+3.4
TKTP				*i* S	Sg	11 03 27.3	-1.9
PTL	Penteli	3.14	306	*e*PN	Pn	11 02 37.0	-1.3
ISP	Isparta	3.15	59	*e*PN	Pn	11 02 39.7	+1.2
ATH	Athens Observa	3.20	303	*e*PN	Pn	11 02 38.5	-0.6
NAIG	Nisos Aigina	3.25	298	*e*PN	Pn	11 02 40.5	+0.6
KYTH	Kithira	3.28	271	*e*PN	Pn	11 02 41.5	+1.2
VLI	Veliai	3.38	279	*e*PN	Pn	11 02 42.4	+0.7
GDZ	Gediz	3.40	33	*i* P	Pg	11 02 55.5	+1.6
GDZ				*i* S	Sg	11 03 35.5	-2.4
ITM	Ithomi	4.25	284	*e*PN	Pn	11 02 54.6	+1.0
NEO	Neokhori	4.32	316	*e*PN	Pn	11 02 54.5	0.0
KDHN	Kadinhani	4.59	59	*i* P	Pn	11 03 02.2	+4.0
KDHN				*i* S	Sb	11 04 04.7	0.0
SLUM		5.01	199	P	Pn	11 03 05.2	+1.2
SLUM				S	Sn	11 03 59.1	-2.9
HMAT	Matruh	5.16	180	⇓P	Pn	11 03 06.2	+0.2
HBRG	Burj al ‘Arab	6.12	157	⇑P	Pn	11 03 18.7	-0.5
SWA1		7.08	190	⇑P	Pn	11 03 33.2	+0.8
SWA1				S	Sn	11 04 48.4	-4.6
SWA2		7.14	192	⇑P	Pn	11 03 33.8	+0.6
HHAG	Hagoal	7.56	145	⇑P	Pn	11 03 38.2	-0.8
HHAG	Hagoal	7.56	145	P	Pn	11 03 38.2	-0.9
AMAG	Maghara	7.58	136	⇑P	Pn	11 03 37.8	-1.5
HSAF	As Saff	7.61	149	⇑P	Pn	11 03 39.0	-0.7
GLL	Jalalah	7.71	149	⇑P	Pn	11 03 40.6	-0.6
SUZ		8.01	141	⇓P	Pn	11 03 44.3	-0.9
HNKL	Nakhl	8.55	136	P	Pn	11 03 51.7	-1.0
HNKL				S	Sn	11 05 20.3	-8.9
HFRF	Wahat Farafira	9.15	173	P	Pn	11 04 01.2	+0.4
TR2		9.65	143	⇑P	Pn	11 04 07.2	-0.5
HDHB	Dhahab	9.84	138	⇑P	Pn	11 04 09.6	-0.7
HDK1	Dakhla	10.87	169	P	Pn	11 04 24.8	+0.4

*NNC **10** 12:05:52.5±9.2, 3702N×7047E, h0km, mb3.8, mpv3.8, Error ellipse: s-maj=101.6km s-min=81.9km az=61.0*
*MOS **10** 12:05:54.7±0.7, 3664N×7122E, h234km, mb4.4/1, Error ellipse: s-maj=18.3km s-min=9.2km az=102.9*
*IDC **10** 12:05:54.1±6.8, 3643N×7132E, h225km±66km, mb3.5/7, mb1 3.6/11, mb1mx3.4/23, mbtmp4.2/11, Error ellipse: s-maj=33.2km s-min=22.2km az=12.0*
*ISCJB **10** 12:05:55.2±0.4, 3663N±003×7129E±006, h241km±6km, mb4.0/10, Error ellipse: s-maj=8.5km s-min=4.5km az=151.5*
*BJI **10** 12:05:55.2, 3651N×7139E, h219km, mB4.7, mb4.6*
*NEIC **10** 12:05:56.0±1.6, 3663N×7127E, h233km±19km, mb4.8/7, Error ellipse: s-maj=18.0km s-min=6.4km az=59.0*
ISC 10 12:05:55.9±0.4, 3665N±003×7123E±006, h232km±6km, n65, σ1^{s}03/76, mb4.0/10, 8C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.87	169	⇓P	Pn	12 06 47.2	+1.3
CEP				S	S	12 07 20.0	-5.2
CHCP	Chirah Chowk	3.42	150	P	Pn	12 06 53.5	+1.5
CHCP				S	S	12 07 33.0	-3.3
SBDP	Sheikh Budin	4.35	185	P	Pn	12 07 03.3	+0.1
KSH	Kashi	4.71	51	*e*P	Pn	12 07 09.0	+1.4
KSH				S	S	12 08 03.2	-1.2
KSH				Smax			
	comp=N,685nm,0.4s						
KSH				Smax			
	comp=E,616nm,0.5s						
SARP	Sargodha	4.87	165	P	Pn	12 07 09.7	+0.3
DRP	Derazinda	4.97	190	P	Pn	12 07 11.4	+0.7
DLH	Dalhousie	5.66	135	*e*P	Pn	12 07 17.0	-2.4
DLH				*e*S	S	12 08 20.0	-5.8
AML	Almayashu	5.80	18	P	Pn	12 07 21.3	+0.2
	SNR=73						
PONG	Pong	6.10	139	*e*P	Pn	12 07 25.0	+0.1
PONG				*e*x	x	12 08 35.0	
UCH	Uchtor	6.12	24	P	Pn	12 07 26.3	+1.1
	SNR=7.6						
KZA	Kyzart	6.25	29	P	Pn	12 07 26.9	0.0
	SNR=5.8						
EKS2	Erkin-Say	6.32	17	P	Pn	12 07 28.2	+0.5
	SNR=6.2						
KK31	Karatay Array	6.47	355	⇓Pn	Pn	12 07 29.3	-0.3
	comp=E,10nm,0.4s,baz=177,slow=13,SNR=152						
KK31				⇑Sn	S	12 08 39.7	-4.7
	comp=E,7.7nm,0.3s,baz=190,slow=34,SNR=17						
AAK	Ala-Archa	6.49	22	P	Pn	12 07 29.9	+0.1
	SNR=6.1						
AAK	Ala-Archa	6.49	22	*e*PN	Pn	12 07 28.7	-1.1
AAK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
AAK	Ala-Archa	6.49	22	*e*Pn	Pn	12 07 28.7	-1.2
	comp=Z,7.5nm,0.4s						
ULHL	Ulahol	6.80	33	P	Pn	12 07 33.8	0.0
	SNR=9.3						
SDNR	Sundarnagar	7.00	136	*e*P	Pn	12 07 36.0	-0.4
SDNR				*e*x	x	12 08 54.4	
TKM2	Tokmak 2	7.11	27	P	Pn	12 07 38.1	+0.4
	SNR=7.0						
TKM2	Tokmak 2	7.11	27	⇑Pn	Pn	12 07 37.7	0.0
	comp=Z,1.2nm,0.7s						
TKM2				⇑Sn	S	12 08 52.2	-7.0
	comp=Z,2.7nm,0.8s						
KLP	Kalpa	7.74	129	*e*P	Pn	12 07 46.6	+0.8
KLP				*e*S	S	12 09 09.1	-4.9
RTK	Rohtak	8.76	149	*e*x	Pn	12 08 04.6	+5.8
RTK				AMb	AMB	12 08 05.8	
	comp=Z,54nm,0.5s						
BHGR	Bahadurgarh	9.28	147	*e*P	Pn	12 08 04.8	-0.7
BHGR				AMb	AMB	12 08 08.0	
	comp=Z,130nm,0.3s						
NDI	New Delhi	9.41	146	*e*P	Pn	12 08 06.0	-1.1
NDI				*e*x	x	12 09 43.0	
KUDL	Kundal	9.57	151	*e*P	Pn	12 08 08.1	-1.1
KUDL				*e*S	S	12 09 48.1	-8.8
SONA	Sohna	9.72	148	*e*P	Pn	12 08 11.1	-0.1
SONA				AMb	AMB	12 08 11.5	
	comp=Z,31nm,0.5s						
SONA				*e*S	S	12 09 52.8	-7.7
MKAR	Makanchi Array	13.06	36	P	Pn	12 08 51.9	-1.2
	comp=Z,0.5nm,0.3s,baz=212,slow=11,SNR=13						
MK05	Makanchi Array	13.06	36	⇓P	Pn	12 08 51.0	-2.1
	comp=Z,2.6nm,0.8s						
KOLN	Koldanda	13.70	127	*e*P	Pn	12 09 01.0	0.0
	comp=Z,10nm,0.2s						
GKN	Gorkha	14.23	123	*e*P	Pn	12 09 07.7	+0.3
	comp=Z,36nm,0.4s						
DMN	Daman	14.80	124	*e*P	Pn	12 09 14.5	+0.1
	comp=Z,28nm,0.6s						
KKN	Kakani	14.80	123	*e*P	Pn	12 09 14.4	0.0
	comp=Z,42nm,0.6s						
KKN	Kakani	14.80	123	*e*P	Pn	12 09 14.4	0.0
KKN				pmax	pmax		
	comp=Z,42nm,0.6s						
PKI	Pulchoki	15.03	123	*e*P	Pn	12 09 17.3	+0.2
AB31	Akbulak array	15.04	330	⇑Pn	Pn	12 09 15.9	-1.4
	comp=Z,2.9nm,0.7s,baz=136,slow=13,SNR=29						
AB31				⇓Sn	S	12 12 01.8	-1.8
	comp=Z,2.1nm,0.8s,baz=156,slow=21,SNR=4.5						
GUN	Gumba	15.13	121	*e*P	Pn	12 09 18.9	+0.5
	comp=Z,24nm,0.4s						
JIRN	Jiri	15.51	121	*e*P	Pn	12 09 23.6	+0.8
	comp=Z,41nm,0.4s						
VOSK	Vostochnaya	16.07	359	⇑P	P	12 09 29.4	+0.8
	comp=Z,1.1nm,0.5s						
BVA0	Borovoye Array	16.39	358	⇑P	P	12 09 34.2	+2.2
	comp=Z,0.6nm,0.8s,baz=162,slow=11,SNR=14						
BVAR	Borovoye Array	16.39	358	P	P	12 09 33.1	+1.1
	comp=Z,1.6nm,0.3s,baz=160,slow=12,SNR=17						
BRVK	Borovoye	16.42	358	*e*P	P	12 09 33.8	+1.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BRVK	Borovoye	16.42	358	*e*P	P	12 09 33.8	+1.4
	comp=Z,3.3nm,1.3s						
AKTK	Aktyubinsk	16.74	330	P	P	12 09 36.9	+0.9
AKTO	Aktyubinsk	16.74	330	⇑Pn	Pn	12 09 36.9	-0.7
	comp=Z,0.1nm,0.7s						
AKTO				⇓Sn	S	12 12 36.8	-2.0
	comp=Z,0.1nm,1.1s						
AKTO	Aktyubinsk	16.74	330	P	P	12 09 36.9	+0.9
	comp=Z,1.4nm,0.3s,baz=137,slow=9.9,SNR=16						
CHKZ	Chkalovo	17.03	359	⇑P	P	12 09 41.2	+2.1
	comp=Z,2.2nm,0.5s						
CHKZ	Chkalovo	17.03	359	*e*P	P	12 09 39.5	+0.4
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CHKZ	Chkalovo	17.03	359	*e*P	P	12 09 39.5	+0.4
	comp=Z,5.2nm,0.6s						
ZAL	Zalesovo	19.69	24	P	P	12 10 08.0	+0.3
	comp=Z,1.5nm,0.3s,baz=265,slow=5.5,SNR=4.1						
KIV	Kislovodsk	22.88	297	*e*P	P	12 10 38.6	-0.8
KIV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.3						
BRTR	Keskin Array B	29.56	288	P	P	12 11 40.8	+1.6
	comp=Z,1.0nm,0.6s,mb3.6,baz=101,slow=10.0,SNR=5.7						
JOF	Joensuu	35.83	330	*e*p	P	12 12 33.3	-0.2
FINES	FINESS Array B	37.46	326	P	P	12 12 47.4	+0.2
	comp=Z,1.5nm,0.4s,mb3.9,baz=123,slow=9.6,SNR=22						
NJ2	Nanjing	39.27	82	*e*P	P	12 13 05.8	+3.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
KEV	Kevo	40.73	338	*e*p	P	12 13 13.2	-1.0
ARCES	ARCESS Array B	41.08	337	P	P	12 13 17.4	+0.4
	comp=Z,1.9nm,0.4s,mb3.9,baz=116,slow=8.1,SNR=57						
SSE	Sheshan	41.47	83	*e*P	P	12 13 20.4	+0.2
SSE				AMB	AMB		
	comp=Z,45nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,193nm,3.8s						
SSE				LR	LR		
	comp=N,80nm,24.2s						
SSE				LR	LR		
	comp=E,33nm,24.3s						
SSE				LR	LR		
	comp=Z,104nm,21.5s						
NB2	NORSAR Subarra	44.37	323	P	P	12 13 42.8	-0.6
	comp=Z,2.5nm,0.5s,mb3.8,baz=98,slow=7.9						
NOA	NORSAR Array B	44.37	323	P	P	12 13 43.2	-0.3
	comp=Z,2.1nm,0.5s,mb3.7,baz=96,slow=7.7,SNR=9.3						
NOA	NORSAR Array B	44.37	323	P	P	12 13 43.2	-0.3
KBS	Kingsbay	48.51	347	*e*P	P	12 14 15.9	+0.4
ESDC	Sonseca Array	57.55	298	P	P	12 15 21.8	+0.5
	comp=Z,1.2nm,0.6s,mb3.7,baz=48,slow=8.3,SNR=6.0						
TORD	Torodi Ar. Bea	65.91	269	P	P	12 16 15.8	-1.2
	comp=Z,2.0nm,0.5s,mb4.0,baz=50,slow=5.9,SNR=24						
TORD	Torodi Ar. Bea	65.91	269	P	P	12 16 15.8	-1.2
ASAR	Alice Springs	84.19	125	P	P	12 18 00.1	-1.1
	comp=Z,0.4nm,0.7s,mb3.3,baz=307,slow=5.4,SNR=5.7						

*TRN **10** 12:23:04.9, 1866N×6170W, h35km, MD3.9*
*ISCJB **10** 12:23:06.3±1.2, 1867N±007×6180W±006, h33km, Error ellipse: s-maj=12.1km s-min=4.1km az=69.1*
*NEIC **10** 12:23:08.3, 1889N×6183W, h49km, MD3.9(TRN), MD3.9(RSPR), After RSPR.*
*RSPR **10** 12:23:08.3, 1889N×6183W, h49km±11km, MD3.9/4, MD3.9/4*
ISC 10 12:23:07.3±1.2, 1865N±007×6174W±006, h35km, n22, σ0^{s}61/37, 8C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPB	Codrington	1.01	184	*e*P	Pn	12 23 24.1	-0.8
CPB				*e*S	Sn	12 23 38.3	+0.4
STMA	St. Maarten, A	1.43	245	*e*P	Pn	12 23 31.2	+0.4
STMA				*e*S	Sn	12 23 49.5	+1.1
BPA	Boggy Peak	1.60	184	*e*P	Pn	12 23 32.6	-0.5
BPA				*e*S	Sn	12 23 51.9	-0.6
SABS	Saba	1.76	235	*e*P	Pn	12 23 35.8	+0.6
SABS				*e*S	Sn	12 24 01.3	+4.9
SABT	Saba	1.76	235	*e*P	Pn	12 23 35.8	+0.6
SABT				*e*S	Sn	12 24 01.3	+4.9
SEG	Port Louis	2.25	174	*e*P	Pn	12 23 41.9	-0.1
DEG	La Desirade	2.42	164	*e*P	Pn	12 23 42.9	-1.4
LZG	Guadaloupe-1	2.50	181	*e*P	Pn	12 23 44.8	-0.6
LZG				*e*S	Sn	12 24 14.9	+0.2
PHG	Guadaloupe-2	2.62	178	*e*P	Pn	12 23 48.4	+1.2
TBVI	Tortola	2.74	266	⇑*e*P	Pn	12 23 48.7	0.0
TBVI				*e*S	Sn	12 24 19.4	-1.1
TBVI	Tortola	2.74	266	⇑*e*P	Pn	12 23 48.7	0.0
TBVI				*e*S	Sn	12 24 19.4	-1.1
TBG	Guadaloupe-3	2.79	178	*e*P	Pn	12 23 50.1	+0.7
STVI	Saint Thomas	3.06	265	⇑*e*P	Pn	12 23 52.8	-0.4
STVI				*e*S	Sn	12 24 27.8	-0.8
CULB	Culebra	3.40	264	⇑*e*P	Pn	12 23 57.6	-0.2
CULB				*e*S	Sn	12 24 36.3	-0.6
MTP	Monte Pirata	3.66	262	⇑*e*P	Pn	12 24 01.4	-0.1
MTP				*e*S	Sn	12 24 43.4	+0.1
CBYP	Canovanas	3.92	265	*e*P	Pn	12 24 05.2	+0.1
CBYP				*e*S	Sn	12 24 49.6	-0.2
HUMP	Col San Antoni	3.93	263	⇑*e*P	Pn	12 24 05.4	+0.2
HUMP				*e*S	Sn	12 24 49.9	-0.2
CELP	Cerrillos	4.63	264	⇑*e*P	Pn	12 24 15.1	+0.4
AOPR	Arecibo Observ	4.76	267	*e*S	Sn	12 25 10.1	-0.4
AOPR	Arecibo Observ	4.76	267	*e*S	Sn	12 25 10.1	-0.4
LSP	Las Mesas	5.09	266	⇑*e*P	Pn	12 24 21.9	+0.7
LSP				*e*S	Sn	12 25 18.7	0.0
CRPR	Cabo Rojo, PR	5.14	264	*e*P	Pn	12 24 22.3	+0.6
CRPR				*e*S	Sn	12 25 20.2	+0.5

*ISCJB **10** 12:24:01.8±0.6, 3631N±003×27.18E±005, h10km, Error ellipse: s-maj=5.4km s-min=4.3km az=3.2*
*ATH **10** 12:24:01.6, 3633N×27.13E, h17km±3km, MD3.2/6*
*NEIC **10** 12:24:01.6, 3633N×27.13E, h17km, MD3.2(ATH), After ATH.*
*CSEM **10** 12:24:02.2±0.2, 3633N×2720E, h12km, MD3.2, Error ellipse: s-maj=4.4km s-min=3.0km az=98.0*
*ISK **10** 12:24:02.2, 3633N×2724E, h32km, MD2.9*
ISC 10 12:24:02.3±0.6, 3632N±003×2717E±005, h10km, n10, σ0^{s}92/16, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NISR	Nisiros	0.30	354	*e*PB	Pg	12 24 07.3	-0.9
DAT	Datca	0.53	39	PG	Pg	12 24 12.3	-0.3
DAT				SG	Sg	12 24 20.6	+1.1
BODT	Bodrum	0.76	9	PG	Pg	12 24 16.5	-0.3
BODT				SG	Sg	12 24 27.4	+0.7
KARP	Karpathos	0.77	180	*e*PN	Pg	12 24 16.9	-0.1
KARP				*e*SN	Sg	12 24 27.6	+0.6
ARG	Arkhangelos	0.78	97	*e*PN	Pg	12 24 17.0	-0.3
ARG				*e*SN	Sg	12 24 29.2	+1.6
YER	Yerkesik	1.21	47	*e*PN	Pn	12 24 23.2	-2.1
DALT	Dalyan (Mudla)	1.27	69	*e*PN	Pn	12 24 24.3	-1.7
SMG	Samos	1.42	349	*e*PN	Pn	12 24 28.2	+0.2
SMG				*e*SN	Sn	12 24 46.8	+0.1
APE	Apeiranthos	1.52	300	*e*PN	Pn	12 24 29.9	+0.5
APE				*e*SN	Sn	12 24 50.2	+1.0
NPS	Neapolis	1.64	231	*e*PN	Pn	12 24 30.9	-0.3

*NIED **10** 12:25:00, 2320N×12170E, h44km, Mw4.2 Best double couple: $M_0$2.18000×10^{15} NP1:ϕ_s214.00000°, δ88.00000°, λ121.00000°. NP2:ϕ_s307.00000°, δ31.00000°, λ3.00000°.*
*ISCJB **10** 12:25:20.9±0.7, 23.13N±005×12161E±003, h53km±7km, mb4.2/17, MS3.6/4, Error ellipse: s-maj=7.8km s-min=4.6km az=20.3*
*IDC **10** 12:25:23.0±6.5, 2326N×12175E, h54km±63km, mb3.8/9, mb1 3.9/11, mb1mx3.7/22, mbtmp4.1/11, ML3.8/2, MS3.5/5, Ms1 3.6/5, ms1mx3.0/24, Error ellipse: s-maj=41.1km*

s-min=15.8km az=63.0
*NEIC **10** 12:25:22.3±0.7, 23.19N×12170E, h51km±7km, mb4.4/7, Error ellipse: s-maj=9.3km s-min=7.3km az=77.0*
NEIC Recorded [3 TAP] in T'ai-tung; [2 TAP] in Hua-lien, Nan-t'ou and T'ai-chung; [1 TAP] in Chang-hua, Chia-i, Kao-hsiung and Yun-lin Counties.
*JMA **10** 12:25:22.7±0.2, 2324N×12166E, h93km, M4.2*
*BJI **10** 12:25:24.4, 2347N×12130E, h14km, mB4.4, mb4.3, ML4.0, Ms3.9, Msz3.6*
ISC 10 12:25:23.0±0.6**, 2324N**±005×**12160E**±003**, h54**km±6km**, n50,** σ1**s**05/66**, mb4.2**/17**, MS3.6**/4**, 1D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.93**	**360**	*e*Pn	**Pn**	**12 25 38.7**	**-1.2**
NACB				*e*Sn	**Sn**	**12 25 50.5**	**-1.9**
YHNB	**Yeheng**	**1.44**	**352**	*e*Pn	**Pn**	**12 25 47.1**	**+0.4**
YHNB				*e*Sn	**Sn**	**12 26 05.0**	**+0.5**
TATO	**Taipei**	**1.73**	**357**	*e*Pn	**Pn**	**12 25 51.1**	**+0.4**
TATO				*e*Sn	**Sn**	**12 26 09.6**	**-2.0**
YOJ	**Yonaguni jima**	**1.78**	**47**	P	**Pn**	**12 25 52.0**	**+0.7**
YOJ				S	**Sn**	**12 26 14.0**	**+1.2**
HATJ	**Hateruma jima**	**2.18**	**68**	P	**Pn**	**12 25 57.1**	**+0.2**
HATJ				*e*S	**Sn**	**12 26 23.1**	**+0.4**
IRIF	**Iriomote-Funau**	**2.24**	**60**	P	**Pn**	**12 25 58.2**	**+0.6**
IRIF				*e*S	**Sn**	**12 26 25.7**	**+1.6**
JKRS	**Kuro-shima**	**2.43**	**65**	P	**Pn**	**12 26 00.8**	**+0.6**
JKRS				S	**Sn**	**12 26 29.6**	**+1.0**
JIJ	**Ishigaki jima**	**2.59**	**64**	P	**Pn**	**12 26 02.4**	**0.0**
JIJ				S	**Sn**	**12 26 32.2**	**-0.4**
JTJ	**Tarama**	**3.17**	**63**	P	**Pn**	**12 26 10.5**	**+0.2**
JTJ				*e*S	**Sn**	**12 26 47.2**	**+0.3**
QZH	**Quanzhou**	**3.23**	**302**	⇓*i*P	**Pn**	**12 26 09.8**	**-1.3**
QZH				S	**Sn**	**12 26 44.9**	**-3.4**
QZH				Smax			
	comp=N,810nm,0.8s						
QZH				Smax			
	comp=E,550nm,0.7s						
JMJ	**Miyako jima 2**	**3.73**	**64**	P	**Pn**	**12 26 18.3**	**+0.3**
JMJ				*e*S	**Sn**	**12 27 01.1**	**+0.5**
JOGS	**Gusukube**	**3.80**	**66**	P	**Pn**	**12 26 19.7**	**+0.7**
JOGS				*e*S	**Sn**	**12 27 03.2**	**+0.8**
JAGN	**Aguni-jima**	**6.12**	**56**	P	**Pn**	**12 26 51.0**	**+0.2**
JAGN				*e*S	**Sn**	**12 27 58.4**	**-1.0**
JIH	**Iheya**	**6.90**	**55**	P	**Pn**	**12 27 00.8**	**-0.7**
JOW	**Kunigami**	**7.04**	**58**	P	**Pn**	**12 27 02.0**	**-1.3**
	comp=E,7.9nm,0.3s,baz=147,slow=15,SNR=42						
JOW				S	**Sn**	**12 28 18.8**	**-3.1**
	comp=E,1.9nm,0.3s,baz=121,slow=22,SNR=1.7						
JOW	**Kunigami**	**7.04**	**58**	P	**Pn**	**12 27 02.2**	**-1.1**
JTK	**Tokunoshima**	**8.04**	**54**	P	**Pn**	**12 27 15.0**	**-2.1**
JAM	**Amami Oshima**	**8.87**	**53**	P	**Pn**	**12 27 26.5**	**-1.9**
NJ2	**Nanjing**	**9.11**	**345**	*e*P	**Pn**	**12 27 34.4**	**+2.7**
NJ2				AP		12 27 41.4	
NJ2				XP		12 27 46.3	
NJ2				S	**Sn**	**12 29 17.9**	**+5.1**
NJ2				XS		12 29 29.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,10.0nm,3.6s						
NJ2				Smax			
	comp=N,190nm,0.9s						
NJ2				Smax			
	comp=E,220nm,1.3s						
NJ2				LR	LR		
	comp=N,860nm,13.9s						
NJ2				LR	LR		
	comp=E,1μm,14.0s						
NJ2				LR	LR		
	comp=Z,670nm,14.6s						
WHN	**Wuhan**	**9.73**	**320**	*e*P	**Pn**	**12 27 40.7**	**+0.4**
QIZ	**Qiongzhong**	**11.74**	**251**	*e*Pn	**Pn**	**12 28 08.7**	**+1.1**
	comp=Z,32nm,1.4s						
GYA	**Guiyang**	**13.93**	**286**	*e*P	**Pn**	**12 28 37.5**	**0.0**
GYA				LR	LR		
	comp=N,370nm,16.7s						
GYA				LR	LR		
	comp=E,340nm,16.2s						
GYA				LR	LR		
	comp=Z,270nm,15.8s						
KMI	**Kunming**	**17.31**	**280**	P	**Pn**	**12 29 25.2**	**+4.4**
KMI				AP	pP	12 29 34.3	+0.9
KMI				S	**S**	**12 32 32.6**	**-6.2**
KMI				XS	sS	12 32 45.5	-12
KMI				SS		12 32 56.7	
KMI				AMB	AMB		
	comp=Z,5.0nm,1.2s						
KMI				AMB	AMB		
	comp=Z,75nm,3.7s						
KMI				LR	LR		
	comp=N,176nm,10.4s						
KMI				LR	LR		
	comp=E,189nm,10.8s						
KMI				LR	LR		
	comp=Z,204nm,12.9s						
CD2	**Chengdu**	**17.61**	**300**	*e*P	**Pn**	**12 29 25.5**	**+0.9**
CD2				AP	pP	12 29 35.8	-1.0
CD2				PP		12 29 43.1	
CD2				S	**S**	**12 32 39.5**	**-5.5**
CD2				SS		12 33 03.5	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=E,150nm,14.4s						
CD2				LR	LR		
	comp=Z,230nm,14.4s						
HHC	**Hu-ho-hao-te**	**19.48**	**337**	*e*P	**Pn**	**12 29 49.1**	**+2.0**
HHC				AP	pP	12 29 59.3	+1.8
HHC				PP		12 30 08.2	
HHC				S	**S**	**12 33 22.6**	**-0.1**
HHC				SS		12 33 50.2	
HHC				AMB	AMB		
	comp=Z,13nm,1.1s						
HHC				AMB	AMB		
	comp=Z,73nm,4.5s						
HHC				LR	LR		
	comp=N,138nm,11.9s						
HHC				LR	LR		
	comp=E,127nm,13.9s						
HHC				LR	LR		
	comp=Z,160nm,16.7s						
MJAR	**Matsushiro Arr**	**19.54**	**44**	P	**Pn**	**12 29 46.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=220,slow=7.6,SNR=4.2						
MJAR				LR	LR	12 37 39.7	
	comp=Z,58nm,18.6s,baz=315,slow=38						
MJAR	**Matsushiro Arr**	**19.54**	**44**	P	**Pn**	**12 29 46.4**	**-1.4**
MJAR				LR	LR	12 37 39.7	
LZH	**Lanzhou**	**20.01**	**314**	*e*P	**P**	**12 29 59.1**	**+8.0**
LZH				AMB	AMB		
	comp=Z,21nm,1.4s						
GUMO	**Guam**	**24.05**	**109**	LR	LR	12 39 14.0	
	comp=Z,132nm,21.9s,MS3.4,baz=272,slow=35						
SONM	**Songino Array**	**27.38**	**337**	P	**P**	**12 31 03.5**	**+0.3**
	comp=Z,0.8nm,0.6s,mb3.4,baz=132,slow=11,SNR=4.8						
SONM				LR	LR	12 43 09.7	
	comp=Z,115nm,19.4s,MS3.5,baz=266,slow=39						
MKAR	**Makanchi Array**	**39.28**	**317**	P	**P**	**12 32 47.7**	**+1.2**
	comp=Z,0.7nm,0.5s,mb3.7,baz=98,slow=8.8,SNR=10						
ZAL	**Zalesovo**	**41.24**	**328**	P	**P**	**12 33 03.5**	**+0.7**
	comp=Z,2.5nm,0.5s,mb4.1,baz=354,slow=4.3,SNR=5.9						
ZAL				LR	LR	12 52 02.6	
	comp=Z,72nm,18.3s,MS3.6,baz=169,slow=39						
KURK	**Kurchatov**	**43.06**	**321**	*e*P	**P**	**12 33 18.4**	**+0.9**
	comp=Z,3.2nm,0.4s,mb4.4						
MBWA	**Marble Bar**	**44.16**	**182**	*e*P	**P**	**12 33 24.6**	**-1.8**
	comp=Z,3.7nm,0.7s,mb4.2						
AS31	**Alice Springs**	**48.13**	**165**	*e*P	**P**	**12 33 56.8**	**-0.7**
ASAR	**Alice Springs**	**48.13**	**165**	P	**P**	**12 33 57.0**	**-0.6**
	comp=Z,0.8nm,0.4s,mb4.1,baz=337,slow=7.1,SNR=23						
BVAR	**Borovoye Array**	**48.64**	**321**	P	**P**	**12 34 00.6**	**-0.8**
	comp=Z,1.4nm,0.3s,mb4.4,baz=101,slow=8.1,SNR=14						
CHKZ	**Chkalovo**	**48.71**	**322**	*e*P	**P**	**12 34 02.6**	**+0.6**
	comp=Z,4.3nm,0.4s,mb4.8						
BRVK	**Borovoye**	**48.71**	**321**	*e*P	**P**	**12 34 03.2**	**+1.2**
	comp=Z,2.2nm,0.3s,mb4.7						
ARU	**Arti**	**56.09**	**323**	*e*P	**P**	**12 34 56.6**	**0.0**
	comp=Z,4.0nm,0.3s,mb4.9						
STKA	**Stephens Creek**	**58.05**	**160**	P	**P**	**12 35 10.7**	**+0.2**
	comp=Z,3.6nm,0.5s,mb4.7,baz=333,slow=7.3,SNR=9.7						
STKA	**Stephens Creek**	**58.05**	**160**	*e*P	**P**	**12 35 10.4**	**-0.1**
JOF	**Joensuu**	**69.71**	**331**	*e*p	**P**	**12 36 26.2**	**-1.0**
	comp=Z,1.6nm,0.4s,mb4.3						
KEV	**Kevo**	**69.99**	**338**	*e*p	**P**	**12 36 28.2**	**-0.7**
	comp=Z,0.8nm,0.3s,mb4.1						
ARCES	**ARCESS Array B**	**70.55**	**338**	P	**P**	**12 36 31.9**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.6,baz=64,slow=8.4,SNR=4.1						
KAF	**Kangasniemi**	**72.16**	**331**	*e*p	**P**	**12 36 40.9**	**-1.1**
	comp=Z,1.2nm,0.4s,mb4.2,baz=73,slow=5.6						
FINES	**FINESS Array B**	**72.45**	**330**	P	**P**	**12 36 43.4**	**-0.3**
	comp=Z,1.2nm,0.5s,mb4.1,baz=66,slow=5.6,SNR=12						
FINES	**FINESS Array B**	**72.45**	**330**	P	**P**	**12 36 43.4**	**-0.3**
BRTR	**Keskin Array B**	**74.04**	**307**	P	**P**	**12 36 54.4**	**+1.3**
	comp=Z,0.5nm,0.6s,mb3.7,baz=95,slow=6.5,SNR=2.9						
NOA	**NORSAR Array B**	**79.23**	**332**	LR	LR	13 15 57.6	
	comp=Z,50nm,18.2s,MS3.9,baz=45,slow=38						

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*NEIC **10** 12:26:59.2, 1897N×6284W, h149km, MD4.0(RSPR), After RSPR.*
RSPR 10 12:26:59.2, 1897N×6284W, h149km±4km**, 5C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.76**	**252**	*e*S	Sn	12 27 56.9	+0.5
STVI	**Saint Thomas**	**2.10**	**253**	⇑*e*P	Pn	12 27 35.2	-0.2
STVI				*e*S	Sn	12 28 03.4	+0.1
MTP	**Monte Pirata**	**2.72**	**252**	⇑*e*P	Pn	12 27 43.1	+0.2
MTP				*e*S	Sn	12 28 17.8	+1.1
CBYP	**Canovanas**	**2.94**	**257**	⇑*e*P	Pn	12 27 45.8	+0.1
HUMP	**Col San Antoni**	**2.97**	**254**	⇑*e*P	Pn	12 27 46.7	+0.6
HUMP				*e*S	Sn	12 28 22.8	+0.5
LZG	**Guadaloupe-1**	**2.99**	**160**	*e*P	Pn	12 27 43.8	-2.6
LZG				*e*S	Sn	12 28 18.4	-4.5
CRPR	**Cabo Rojo, PR**	**4.16**	**257**	⇑*e*P	Pn	12 28 02.4	+0.9

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*ISCJB **10** 12:32:10.7±2.3, 44.1N±0.1×88.0E±0.2, h1km±25km, mb3.5/2, Error ellipse: s-maj=25.8km s-min=14.0km az=101.9*
*IDC **10** 12:32:11.5±3.7, 4395N×8799E, h0km, mb3.7/2, mb1 3.8/5, mb1mx3.5/23, mbtmp3.7/5, ML3.5/3, MS2.6/1, Ms1 2.6/1, ms1mx2.2/23, Error ellipse: s-maj=46.9km s-min=36.9km az=107.0*
*BJI **10** 12:32:11.9, 4369N×8793E, h16km, ML3.2*
ISC 10 12:32:12.8±1.8**, 440N**±02×**880E**±01**, h10**km±19km**, n8,** σ**0**s**93**/13**, mb3.6**/2**, 3C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.31**	**230**	⇑*i*PG	**Pg**	**12 32 18.3**	**-0.7**
WMQ				SG	**Sg**	**12 32 23.7**	**+0.5**
WMQ				Smax			
	comp=N,5μm,0.3s						
WMQ				Smax			
	comp=E,5μm,0.3s						
MK05	**Makanchi Array**	**4.90**	**307**	⇓Pn	**Pn**	**12 33 26.9**	**+0.5**
	comp=E,2.3nm,0.3s,baz=123,slow=15						
MK05				⇑Sn	**Sn**	**12 34 23.2**	**+0.1**
	comp=E,16nm,0.5s,baz=123,slow=24						
MKAR	**Makanchi Array**	**4.90**	**307**	Pn	**Pn**	**12 33 26.9**	**+0.5**
	comp=E,2.2nm,0.3s,baz=127,slow=14,SNR=51						
MKAR				Sn	**Sn**	**12 34 23.8**	**+0.7**
	comp=E,5.8nm,0.3s,baz=131,slow=24,SNR=11						
KURK	**Kurchatov**	**9.24**	**320**	⇑Pn	**Pn**	**12 34 24.6**	**-1.5**
	comp=E,0.8nm,0.4s						
KURK				⇓Sn	**Sn**	**12 36 06.9**	**-3.2**
	comp=E,1.5nm,0.5s						
ZAL	**Zalesovo**	**10.15**	**349**	Pn	**Pn**	**12 34 40.2**	**+1.7**
	comp=E,0.8nm,0.3s,baz=290,slow=9.0,SNR=5.4						
ZAL				Sn	**Sn**	**12 36 32.3**	**0.0**
	comp=E,1.8nm,0.3s,baz=91,slow=14,SNR=8.2						
BVAR	**Borovoye Array**	**14.72**	**314**	Pn	**Pn**	**12 35 39.9**	**-1.1**
	comp=E,0.2nm,0.3s,baz=121,slow=14,SNR=3.8						
BVAR				LR	LR	12 42 00.2	
	comp=E,22nm,19.4s,baz=324,slow=40						
FINES	**FINESS Array B**	**39.62**	**318**	P	**P**	**12 39 43.9**	**-0.5**
	comp=E,0.4nm,0.3s,mb3.6,baz=100,slow=9.9,SNR=4.0						
ARCES	**ARCESS Array B**	**40.06**	**331**	P	**P**	**12 39 48.6**	**+0.4**
	comp=E,0.9nm,0.8s,mb3.6,baz=96,slow=8.2,SNR=3.5						

IDC 10 12:32:55.6±1.0**, 695N**×**7631W, h0**km**, mb3.8**/7**, mb1 4.1**/8**, mb1mx3.9**/19**, mbtmp3.8**/8**, ML3.8**/1**, MS3.2**/3**, Ms1 3.2**/3**, ms1mx2.6**/24**, Error ellipse: s-maj=23.7km s-min=15.9km az=44.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.86**	**136**	Pg	Pg	12 33 48.1	-2.4
	49nm,0.3s,baz=352,slow=5.6,SNR=22						
ROSC				Lg		12 34 28.0	
	36nm,0.3s,baz=249,slow=21,SNR=7.5						
SDV	**Santo Domingo**	**5.94**	**71**	Pn	Pn	12 34 26.8	+2.0
	2.7nm,0.3s,baz=286,slow=9.1,SNR=13						
SDV				Sn	Sn	12 35 35.8	+2.2
	10nm,0.3s,baz=354,slow=11,SNR=3.3						
SDV				Lg		12 36 03.5	
	12nm,0.3s,baz=8.5,slow=15,SNR=7.0						
JTS	**JuntasAbangare**	**9.17**	**292**	LR	LR	12 38 57.1	
	comp=Z,107nm,19.7s,baz=124,slow=39						
SIV	**San Ignacio**	**27.34**	**147**	P	P	12 38 43.1	+1.0
	0.6nm,0.6s,baz=336,slow=12,SNR=3.2						
CPUP	**Villa Florida**	**37.87**	**152**	LR	LR	12 57 04.0	
	comp=Z,58nm,18.7s,baz=143,slow=38						
ULM	**Lac du Bonnet**	**46.16**	**343**	LR	LR	13 01 15.5	
	comp=Z,23nm,19.0s,baz=57,slow=37						
NVAR	**Mina Array Bea**	**49.16**	**316**	P	P	12 41 47.0	+1.8
	0.2nm,0.4s,baz=82,slow=8.3,SNR=2.8						
ESDC	**Sonseca Array**	**72.01**	**51**	P	P	12 44 21.8	+0.6
	0.2nm,0.2s,baz=228,slow=3.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**76.81**	**78**	P	P	12 44 49.1	0.0
	0.7nm,0.8s,baz=277,slow=5.9,SNR=6.5						
NB2	**NORSAR Subarra**	**82.77**	**29**	P	P	12 45 21.9	+0.5
	comp=Z,1.8nm,0.8s,baz=273,slow=5.1						
NOA	**NORSAR Array B**	**82.77**	**29**	P	P	12 45 21.5	0.0
	comp=Z,0.8nm,0.7s,baz=278,slow=5.1,SNR=4.2						
GERES	**GERESS Array B**	**84.83**	**42**	P	P	12 45 32.8	+0.8
	comp=Z,0.7nm,0.6s,baz=270,slow=5.3,SNR=6.5						
ARCES	**ARCESS Array B**	**87.65**	**20**	P	P	12 45 45.0	-0.9
	comp=Z,1.6nm,0.8s,baz=270,slow=3.4,SNR=9.7						
ASAR	**Alice Springs**	**146.57**	**237**	PKPbc	PKPbc	12 52 38.4	-0.5
	comp=Z,0.4nm,0.6s,baz=113,slow=3.5,SNR=6.5						

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*ISCJB **10** 12:34:54.8±4.1, 03S±05×977E±06, h33km, mb4.1/5, Error ellipse: s-maj=107.4km s-min=15.7km az=72.6*
*IDC **10** 12:34:54.5±9.3, 004S×9735E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.6/22, mbtmp3.9/6, ML3.3/1, Error ellipse: s-maj=202.1km s-min=40.7km az=144.0*
ISC 10 12:34:56.6±3.9**, 04S**±04×**978E**±06**, h35**km**, n7,** σ**0**s**92**/8**, mb4.1**/5**, 1D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.34**	**20**	Pn	**Pn**	**12 35 44.7**	**-1.7**
	3.3nm,0.3s,baz=254,slow=7.0,SNR=11						
PSI				Sn	**Sn**	**12 36 25.3**	**+0.5**
	5.5nm,0.3s,baz=115,slow=21,SNR=6.6						
TSI	**Tuntungan**	**3.92**	**11**	⇓*e*P	**Pn**	**12 35 49.6**	**-4.7**
SONM	**Songino Array**	**48.59**	**8**	P	**P**	**12 43 38.0**	**+1.4**
	1.5nm,0.8s,mb4.1,baz=203,slow=9.7,SNR=7.2						
MKAR	**Makanchi Array**	**48.90**	**346**	P	**P**	**12 43 38.9**	**-0.1**
	1.4nm,0.7s,mb4.1,baz=153,slow=8.2,SNR=9.7						
ZAL	**Zalesovo**	**55.18**	**351**	P	**P**	**12 44 26.4**	**+0.7**
	1.4nm,0.7s,mb4.1,baz=324,slow=8.6,SNR=6.9						
BVAR	**Borovoye Array**	**57.91**	**341**	P	**P**	**12 44 45.0**	**-0.1**
	0.4nm,0.4s,mb3.8,baz=134,slow=6.4,SNR=6.1						
AKTO	**Aktyubinsk**	**60.88**	**332**	P	**P**	**12 45 05.0**	**-0.6**
	0.5nm,0.2s,mb4.2,baz=171,slow=6.0,SNR=3.6						

MAN 10 12:37:52.8, 612N×12627E, h73km**, mb2.6, ML4.1, MS4.1, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**1.47**	**307**	*e*P	Pn	12 38 18.0	+0.6
KCP				*i* S	Sn	12 38 37.5	+1.5
BUKP	**Musuan**	**2.12**	**326**	*e*P	Pn	12 38 27.1	+1.1
CGP	**Cagayan de Oro**	**2.80**	**326**	*i* S	Sn	12 39 10.0	+2.1
BUTP	**Butuan**	**2.90**	**347**	*e*P	Pn	12 38 37.9	+1.3
PAGZ	**Pagadian**	**3.34**	**301**	*e*P	Pn	12 38 44.2	+1.6

WEL 10 13:07:48.8±0.3**, 3856S**×**17542E, h255**km±3km**, ML3.5**/13**, Error ellipse: s-maj=6.5km s-min=6.1km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVZ	**Karewarewa**	**0.57**	**162**	PN	Pn	13 08 22.6	+0.1
NGZ	**Ngauruhoe**	**0.64**	**167**	PN	Pn	13 08 23.0	+0.3
WPVZ	**Whakapapa**	**0.66**	**172**	PN	Pn	13 08 22.9	+0.1
PKVZ	**Pokaka**	**0.74**	**185**	PN	Pn	13 08 23.0	-0.1
MTVZ	**Mangateitei**	**0.83**	**177**	PN	Pn	13 08 23.5	-0.1
MTVZ				SN	S	13 08 50.2	-0.6
MOVZ	**Moawhango**	**0.89**	**163**	PN	Pn	13 08 23.6	-0.2
MOVZ				SN	S	13 08 50.2	-1.2
BKZ	**Black Stump Fm**	**1.04**	**126**	PN	Pn	13 08 24.8	+0.3
BKZ				SN	S	13 08 52.9	+0.1
WAZ	**Wanganui**	**1.25**	**196**	PN	Pn	13 08 25.4	-0.4
WAZ				SN	S	13 08 54.7	-0.3
URZ	**Urewera**	**1.36**	**78**	PN	Pn	13 08 26.4	-0.2
URZ				SN	S	13 08 55.6	-0.8
TSZ	**Takapari Road**	**1.56**	**165**	PN	Pn	13 08 27.3	-0.7
MWZ	**Matawai**	**1.67**	**83**	PN	Pn	13 08 29.2	+0.4
MWZ				SN	S	13 09 00.0	-0.5
PXZ	**Pawanui**	**1.85**	**143**	PN	Pn	13 08 30.3	-0.1
MRZ	**Mangatainoka R**	**2.11**	**177**	PN	Pn	13 08 30.8	-1.8
BFZ	**Birch Farm**	**2.22**	**164**	PN	Pn	13 08 32.4	-1.3
KIW	**Kapiti Island**	**2.34**	**190**	PN	Pn	13 08 32.5	-2.3
CAW	**Cannon Point**	**2.56**	**186**	PN	Pn	13 08 34.6	-2.5

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*ISCJB **10** 13:40:41.9±0.7, 1488N±007×9485W±005, h10km, mb4.0/13, MS3.0/4, Error ellipse: s-maj=10.9km s-min=4.8km az=55.5*
*MEX **10** 13:40:44.6±1.2, 1473N×9490W, h16km±97km, MD4.4*
*NEIC **10** 13:40:46.7, 1469N×9517W, h10km, mb4.0/12, MD4.5(MEX), After MEX.*
*IDC **10** 13:40:52.6±4.4, 1500N×9446W, h90km±42km, mb3.6/7, mb1 3.7/8, mb1mx3.6/22, mbtmp3.9/8, MS3.1/4, Ms1 3.1/4, ms1mx2.7/25, Error ellipse: s-maj=70.4km s-min=15.8km az=44.0*
ISC 10 13:40:44.2±0.7**, 1493N**±007×**9482W**±005**, h10**km**, n34,** σ1**s**47/37**, mb4.0**/13**, MS3.0**/4**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.50**	**304**	*i* P	**Pn**	**13 41 07.8**	**-3.3**
HUIG				*i* S	**Sn**	**13 41 25.9**	**-4.8**
SCX	**San Cristobal**	**2.76**	**49**	*e*P	**Pn**	**13 41 27.0**	**-1.5**
SCX				*i* S	**Sn**	**13 42 03.0**	**+1.1**
OXX	**Oaxaca**	**2.82**	**320**	*i* P	**Pn**	**13 41 30.0**	**+0.8**
OXX				*i* S	**Sn**	**13 42 02.0**	**-1.3**
VHO	**Vista Hermosa**	**2.82**	**319**	*i* P	**Pn**	**13 41 29.3**	**+0.1**
VHO				*i* S	**Sn**	**13 42 02.1**	**-1.1**
UTMO	**Huajuapan**	**4.07**	**316**	*i* P	**Pn**	**13 41 46.0**	**-0.4**
UTMO				*i* S	**Sn**	**13 42 32.9**	**-1.1**
ACX	**Acapulco**	**5.27**	**292**	*e*P	**Pn**	**13 42 01.0**	**-2.0**
ACX	**Acapulco**	**5.27**	**292**	*e*P	**Pn**	**13 42 02.0**	**-1.0**
PPM	**Popocatepetl**	**5.50**	**319**	*i* P	**Pn**	**13 42 07.7**	**+1.6**
PPM				*i* S	**Sn**	**13 43 09.3**	**0.0**
PPM	**Popocatepetl**	**5.50**	**319**	*i* P	**Pn**	**13 42 07.7**	**+1.6**
PPM				*i* S	**Sn**	**13 43 09.4**	**+0.1**
JTS	**JuntasAbangare**	**10.67**	**114**	P	**Pn**	**13 43 18.9**	**+1.8**
	0.7nm,0.3s,baz=281,slow=16,SNR=3.2						
JCT	**Junction City**	**16.14**	**344**	*e*P	**Pn**	**13 44 31.4**	**+0.3**
	4.7nm,0.8s						
MNTX	**Cornudas Mount**	**19.29**	**332**	*e*P	**Pn**	**13 45 11.4**	**+1.4**
	4.3nm,1.2s						
LRAL	**Lakeview Retre**	**19.37**	**20**	*e*P	**Pn**	**13 45 08.0**	**-3.1**
	6.4nm,1.0s						
MIAR	**Mount Ida**	**19.56**	**3**	*e*P	**Pn**	**13 45 10.2**	**-3.1**
	5.7nm,0.8s						
WMOK	**Wichita Mounta**	**20.05**	**350**	*e*P	**P**	**13 45 16.2**	**-1.2**
	3.6nm,0.8s						
WVT	**Waverly**	**22.02**	**15**	*e*P	**P**	**13 45 37.4**	**-1.2**
	5.2nm,0.8s,mb4.0						
ROSC	**El Rosal**	**22.50**	**114**	P	**P**	**13 45 43.3**	**-0.5**
	4.5nm,0.4s,mb4.2,baz=103,slow=23,SNR=3.6						
ANMO	**Albuquerque**	**22.52**	**334**	P	**P**	**13 45 45.3**	**+1.3**
	1.1nm,0.7s,mb3.4,baz=135,slow=10.0,SNR=3.5						
ANMO	**Albuquerque**	**22.52**	**334**	*e*P	**P**	**13 45 45.6**	**+1.6**
	1.0nm,0.7s,mb3.4						
SDV	**Santo Domingo**	**24.40**	**102**	P	**P**	**13 46 00.2**	**-2.5**
	3.1nm,0.5s,mb4.0,baz=354,slow=9.3,SNR=4.1						
WUAZ	**Wupatki**	**25.32**	**327**	*e*P	**P**	**13 46 12.9**	**+1.9**
	11nm,1.2s,mb4.3						
WUAZ				*e*		13 46 23.8	
ATAH	**Atahualpa**	**27.20**	**142**	LR	LR	13 54 00.1	
	comp=Z,22nm,20.6s,MS2.7,baz=93,slow=29						
PDAR	**Pinedale Array**	**30.50**	**338**	P	**P**	**13 46 57.3**	**0.0**
	0.6nm,0.6s,mb3.5,baz=128,slow=9.6,SNR=5.8						
NVAR	**Mina Array Bea**	**31.26**	**323**	P	**P**	**13 47 06.6**	**+2.5**
	0.8nm,0.6s,mb3.7,baz=129,slow=9.0,SNR=9.5						
REDW	**Red Top Meadow**	**31.49**	**337**	*e*P	**P**	**13 47 07.3**	**+1.2**
	3.8nm,0.8s,mb4.3						
REDW				*e*		13 47 26.0	
LOHW	**Long Hollow**	**31.61**	**338**	*e*P	**P**	**13 47 07.9**	**+0.7**
	7.6nm,1.2s,mb4.4						
SADO	**Sadowa**	**32.58**	**21**	LR	LR	14 02 49.8	
	comp=Z,23nm,18.1s,MS2.9,baz=43,slow=41						
HLID	**Hailey**	**33.09**	**333**	*e*P	**P**	**13 47 21.4**	**+1.3**
	1.4nm,0.8s,mb3.9						
MCMT	**McKenzie Canyo**	**33.49**	**336**	*e*P	**P**	**13 47 25.1**	**+1.5**
MCMT				*e*		13 47 34.1	
DLMT	**Dillon**	**33.85**	**337**	*e*P	**P**	**13 47 27.8**	**+1.1**
	6.8nm,1.1s,mb4.5						
ULM	**Lac du Bonnet**	**35.24**	**359**	LR	LR	14 04 33.0	
	comp=Z,35nm,19.1s,MS3.1,baz=267,slow=40						
SIV	**San Ignacio**	**45.33**	**131**	P	**P**	**13 48 59.6**	**-2.8**
	1.1nm,0.6s,mb3.9,baz=306,slow=8.9,SNR=7.9						
SCHQ	**Schefferville**	**45.35**	**22**	LR	LR	14 09 53.7	
	comp=Z,50nm,21.3s,MS3.4,baz=124,slow=38						
ESDC	**Sonseca Array**	**81.28**	**51**	P	**P**	**13 52 57.9**	**-2.6**
	0.3nm,0.2s,mb3.8,baz=304,slow=3.6,SNR=4.6						

MAN 10 14:12:33.5, 1863N×12093E, h10km**, mb2.5, ML4.0, MS3.7, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.42**	**224**	⇑*i*P	Pg	14 12 42.1	+0.3
PIP				*i* S	Sg	14 12 49.8	+2.3
APYP	**Conner**	**0.82**	**159**	*e*P	Pg	14 12 49.3	0.0
APYP				*e*S	Sg	14 13 02.9	+2.9
ABRA	**Dolores**	**1.00**	**192**	*e*P	Pg	14 12 52.8	+0.1
SGCP	**Mt. Cagua**	**1.13**	**110**	*e*P	Pb	14 12 53.8	-1.3
CAUP	**Cauayan**	**1.88**	**153**	*e*P	Pn	14 13 07.5	+1.7

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*NIED **10** 14:21:00, 2690N×12700E, h95km, Mw4.2 Best double couple: $M_0$2.45000×10^{15} NP1:ϕ_s213.00000°, δ70.00000°, λ76.00000°. NP2:ϕ_s70.00000°, δ24.00000°, λ125.00000°.*
*BJI **10** 14:21:41.7, 2650N×12743E, h118km, mB4.3, mb4.4*
*MOS **10** 14:21:43.0±1.0, 2694N×12698E, h89km, mb4.5/20, Error ellipse: s-maj=19.6km s-min=9.5km az=108.5*
*ISCJB **10** 14:21:45.9±0.2, 2687N±003×12705E±003, h116km±3km, mb4.4/35, Error ellipse: s-maj=6.5km s-min=3.9km az=104.3*
*IDC **10** 14:21:46.1±1.3, 2696N×12696E, h97km±12km, mb4.1/13, mb1 4.2/13, mb1mx4.1/21, mbtmp4.4/13, MS3.0/2, Ms1 3.0/2, ms1mx2.3/30, Error ellipse: s-maj=22.2km s-min=13.4km az=63.0*
*JMA **10** 14:21:47.5±0.2, 2695N×12698E, h100km±2km, M4.2*
*NEIC **10** 14:21:47.9±0.2, 2693N×12703E, mb4.5/19, MW4.2(NIED), Error ellipse: s-maj=7.5km s-min=5.3km az=77.0*
ISC 10 14:21:47.0±0.2**, 2688N**±004×**12704E**±004**, h109**km±3km**, h123**km±2.7km**: pP-P, n98,** σ**0**s**96**/113**, mb4.4**/35**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.34**	**149**	P	**Pn**	**14 22 02.9**	**+0.1**
JAGN				S	**Sn**	**14 22 14.4**	**-0.3**
JKE	**Kume jima 2**	**0.60**	**202**	P	**Pn**	**14 22 04.3**	**-0.2**
JKE				S	**Sn**	**14 22 17.0**	**-0.6**
JIH	**Iheya**	**0.84**	**80**	P	**Pn**	**14 22 07.0**	**+0.5**
JIH				S	**Sn**	**14 22 21.0**	**-0.2**
NAH1	**Naha**	**0.89**	**139**	P	**Pn**	**14 22 07.7**	**+0.7**
NAH1				*e*S	**Sn**	**14 22 22.4**	**+5.9**
JJT2	**Tamagusuku 2**	**0.98**	**139**	P	**Pn**	**14 22 08.9**	**+1.0**
JOW	**Kunigami**	**1.10**	**92**	P	**Pn**	**14 22 09.8**	**+0.6**
	1μm,0.3s,baz=120,slow=24,SNR=3187						
JOW				S	**Sn**	**14 22 25.4**	**+3.9**
	1μm,0.3s,baz=148,slow=27,SNR=64						
JOW	**Kunigami**	**1.10**	**92**	P	**Pn**	**14 22 09.7**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JOW				S	Sn	14 22 25.6	+4.0
JTK	**Tokunoshima**	**1.92**	**62**	P	**Pn**	**14 22 19.0**	**+0.1**
JTK				S	**Sn**	**14 22 42.1**	**+0.6**
JOGS	**Gusukube**	**2.58**	**215**	P	**Pn**	**14 22 28.1**	**+0.7**
JMJ	**Miyako jima 2**	**2.59**	**218**	*e*S	**Sn**	**14 22 58.2**	**+0.4**
JAM	**Amami Oshima**	**2.74**	**56**	P	**Pn**	**14 22 29.6**	**+0.2**
JAM				*e*S	**Sn**	**14 23 00.8**	**-0.5**
JZK	**Kikaishima**	**2.97**	**61**	P	**Pn**	**14 22 33.1**	**+0.6**
JZK				*e*S	**Sn**	**14 23 08.1**	**+1.3**
JTJ	**Tarama**	**3.07**	**224**	P	**Pn**	**14 22 33.9**	**0.0**
JIJ	**Ishigaki jima**	**3.63**	**227**	P	**Pn**	**14 22 40.1**	**-1.2**
JIJ				*e*S	**Sn**	**14 23 19.4**	**-3.5**
JKRS	**Kuro-shima**	**3.80**	**227**	P	**Pn**	**14 22 43.2**	**-0.4**
JNN	**Nakanoshima**	**3.86**	**40**	P	**Pn**	**14 22 45.3**	**+0.9**
JMZ	**Minamidaito 2**	**3.90**	**105**	P	**Pn**	**14 22 43.5**	**-1.4**
JMZ				*e*S	**Sn**	**14 23 25.4**	**-4.1**
IRIF	**Iriomote-Funau**	**3.92**	**230**	P	**Pn**	**14 22 44.3**	**-0.9**
IRIF				*e*S	**Sn**	**14 23 28.3**	**-1.8**
YOJ	**Yonaguni jima**	**4.36**	**237**	P	**Pn**	**14 22 51.1**	**-0.1**
YHNB	**Yeheng**	**5.56**	**248**	*e*Pn	**Pn**	**14 23 08.6**	**+1.2**
YHNB				*e*Sn	**Sn**	**14 24 12.9**	**+3.0**
MAJO	**Matsushiro**	**13.52**	**42**	*e*P	**Pn**	**14 25 02.5**	**+8.3**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAJO	**Matsushiro**	**13.52**	**42**	*e*P	**Pn**	**14 25 02.5**	**+8.3**
	comp=Z,4.4nm,0.6s						
MJAR	**Matsushiro Arr**	**13.52**	**42**	P	**Pn**	**14 24 58.9**	**+4.7**
	comp=Z,0.3nm,0.3s,baz=226,slow=10.0,SNR=5.0						
BJT	**Baijiatuau**	**15.92**	**328**	*e*P	**Pn**	**14 25 25.4**	**+0.8**
BJT				pmax	pmax		
	comp=Z,13nm,0.6s						
BJT	**Baijiatuau**	**15.92**	**328**	*e*P	**Pn**	**14 25 25.4**	**+0.7**
	comp=Z,13nm,0.6s						
BJI	**Beijing**	**15.93**	**328**	*e*P	**Pn**	**14 25 26.4**	**+1.6**
BJI				AMB	AMB		
	comp=Z,12nm,1.1s						
CN2	**Changchun**	**16.93**	**356**	*e*P	**Pn**	**14 25 39.3**	**+2.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
XAN	**Xi'an**	**17.16**	**299**	P	**Pn**	**14 25 41.4**	**+1.5**
XAN				AMB	AMB		
	comp=Z,6.0nm,0.7s						
MDJ	**Mudanjiang**	**17.81**	**6**	P	**Pn**	**14 25 48.3**	**+0.5**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.6s						
MDJ				AMB	AMB		
	comp=Z,65nm,4.0s						
HHC	**Hu-ho-hao-te**	**18.91**	**321**	*e*P	**P**	**14 26 00.9**	**+1.9**
HHC				XP	sP	14 26 38.4	+5.4
HHC				S	**S**	**14 29 22.5**	**-5.6**
HHC				PCP	PcP	14 30 21.7	+1.2
HHC				SCS	ScS	14 37 25.4	-2.3
HHC				AMB	AMB		
	comp=Z,14nm,0.9s						
HHC				AMB	AMB		
	comp=Z,51nm,2.6s						
HHC				LR	LR		
	comp=N,71nm,9.9s						
HHC				LR	LR		
	comp=E,108nm,9.9s						
HHC				LR	LR		
	comp=Z,88nm,10.9s						
CD2	**Chengdu**	**20.77**	**287**	*e*P	**P**	**14 26 18.4**	**-0.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
ASAJ	**Asahikawa**	**21.29**	**32**	P	**P**	**14 26 24.8**	**+0.1**
	comp=Z,1.0nm,0.4s,mb3.5,baz=220,slow=15,SNR=5.0						
LZH	**Lanzhou**	**21.76**	**301**	*e*P	**P**	**14 26 30.1**	**+0.4**
LZH				AP		14 26 55.1	
LZH				XP	sP	14 27 10.5	+6.4
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.3						
KMI	**Kunming**	**21.91**	**271**	P	**P**	**14 26 32.0**	**+0.8**
KMI				AP		14 26 56.9	
KMI				XP	sP	14 27 14.3	+8.7
KMI				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb3.8						
YSS	**Yuzh-Sakhalins**	**23.56**	**28**	P	**P**	**14 26 49.4**	**+2.0**
GTA	**Gaotai**	**25.89**	**306**	*e*P	**P**	**14 27 07.7**	**-0.8**
GTA				AMB	AMB		
	comp=Z,13nm,0.4s,mb4.7						
ULN	**Ulaanbaatar**	**26.14**	**329**	*e*P	**P**	**14 27 10.4**	**-0.4**
ULN				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**26.14**	**329**	*e*P	**P**	**14 27 10.4**	**-0.4**
	comp=Z,10nm,0.6s,mb4.4						
SONM	**Songino Array**	**26.43**	**328**	P	**P**	**14 27 13.8**	**+0.4**
	comp=Z,9.5nm,0.4s,mb4.6,baz=142,slow=11,SNR=25						
SONM				pP	pP	14 27 39.6	+2.3
	comp=Z,4.2nm,0.8s,baz=134,slow=8.5,SNR=5.4						
SONM				LR	LR	14 38 13.8	
	comp=Z,14nm,21.7s,baz=264,slow=38						
KSM	**Kuching**	**29.94**	**215**	P	**P**	**14 27 45.8**	**+1.1**
PET	**Petropavlovsk**	**35.12**	**33**	P	**P**	**14 28 27.8**	**-2.0**
PET				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
PET	**Petropavlovsk**	**35.12**	**33**	P	**P**	**14 28 27.8**	**-2.0**
	comp=Z,6.9nm,0.8s,mb4.5						
WMQ	**Urumqi**	**35.88**	**308**	*e*P	**P**	**14 28 37.0**	**+0.7**
WMQ				AP	pP	14 29 05.0	+4.2
WMQ				XP	sP	14 29 20.0	+6.6
WMQ				PP	PP	14 30 02.0	+2.1
WMQ				S	**S**	**14 34 04.0**	**-2.1**
WMQ				XS	sS	14 34 53.0	+4.3
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,101nm,4.0s						
WMQ				LR	LR		
	comp=N,54nm,8.0s						
WMQ				LR	LR		
	comp=E,48nm,8.0s						
WMQ				LR	LR		
	comp=Z,37nm,8.0s						
MKAR	**Makanchi Array**	**40.31**	**312**	P	**P**	**14 29 12.6**	**-0.8**
	comp=Z,6.8nm,0.5s,mb4.7,baz=94,slow=11,SNR=89						
MKAR				PcP	PcP	14 31 15.6	+0.6
	comp=Z,1.1nm,0.6s,baz=88,slow=3.0,SNR=4.9						
MKAR				ScP	ScP	14 34 56.2	+2.1
	comp=Z,0.6nm,0.7s,baz=104,slow=5.1,SNR=4.3						
MKAR	**Makanchi Array**	**40.31**	**312**	P	**P**	**14 29 12.6**	**-0.8**
MKAR				PcP	PcP	14 31 15.6	+0.6
MKAR				ScP	ScP	14 34 56.2	+2.1
ZAL	**Zalesovo**	**41.09**	**323**	P	**P**	**14 29 19.8**	**-0.1**
	comp=Z,6.7nm,0.6s,mb4.7,baz=4.1,slow=7.3,SNR=17						
ZAL				pP	pP	14 29 46.5	+1.6
	comp=Z,2.6nm,0.7s,baz=2.5,slow=9.2,SNR=8.1						
ZAL	**Zalesovo**	**41.09**	**323**	P	**P**	**14 29 19.8**	**-0.1**
ZAL				*PP	pP	14 29 46.5	+1.6
ZAL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KURK	**Kurchatov**	**43.61**	**316**	*e*P	**P**	**14 29 39.1**	**-1.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
KURK	**Kurchatov**	**43.61**	**316**	*e*P	**P**	**14 29 39.1**	**-1.2**
	comp=Z,3.2nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**44.74**	**182**	*e*P	**P**	**14 29 49.9**	**+0.6**
	comp=Z,5.5nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**47.08**	**171**	*e*P	**P**	**14 30 08.6**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	**47.08**	**171**	*e*P	**P**	**14 30 08.6**	**+1.0**
	comp=Z,11nm,0.7s,mb4.7						
MBWA	**Marble Bar**	**48.28**	**189**	P	**P**	**14 30 15.9**	**-1.1**
	comp=Z,4.1nm,0.9s,mb4.3						
BRVK	**Borovoye**	**49.15**	**318**	*e*P	**P**	**14 30 22.8**	**-0.8**
CTAO	**Charters Tower**	**50.27**	**156**	P	**P**	**14 30 32.4**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
CTAO	**Charters Tower**	**50.27**	**156**	P	**P**	**14 30 32.4**	**+0.3**
	comp=Z,19nm,1.3s,mb4.9						
AS31	**Alice Springs**	**50.69**	**172**	*e*P	**P**	**14 30 36.3**	**+1.1**
ASAR	**Alice Springs**	**50.69**	**172**	P	**P**	**14 30 36.5**	**+1.3**
	comp=Z,3.3nm,0.6s,mb4.6,baz=357,slow=13,SNR=52						
ASAR				PcP	PcP	14 31 52.0	+1.0
	comp=Z,1.2nm,0.7s,baz=352,slow=3.9,SNR=6.4						
ASAR	**Alice Springs**	**50.69**	**172**	P	**P**	**14 30 36.5**	**+1.3**
ASAR						14 31 52.1	
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARU	**Arti**	**56.22**	**322**	P	**P**	**14 31 13.2**	**-2.4**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
ARU	**Arti**	**56.22**	**322**	P	**P**	**14 31 13.2**	**-2.4**
	comp=Z,4.1nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**60.06**	**166**	P	**P**	**14 31 43.4**	**+1.0**
	comp=Z,4.1nm,0.6s,mb4.6,baz=336,slow=6.9,SNR=10.0						
STKA	**Stephens Creek**	**60.06**	**166**	*e*P	**P**	**14 31 42.7**	**+0.4**
NWAO	**Narrogin (SRO)**	**60.21**	**190**	P	**P**	**14 31 43.8**	**+0.4**
KDAK	**Kodiak Island**	**62.63**	**36**	P	**P**	**14 32 00.1**	**+0.4**
	comp=Z,7.9nm,0.7s,mb4.8,baz=301,slow=5.4,SNR=11						
MCK	**McKinley**	**63.63**	**30**	*e*P	**P**	**14 32 06.2**	**-0.1**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
MCK	**McKinley**	**63.63**	**30**	*e*P	**P**	**14 32 06.2**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.2						
COLA	**College**	**63.95**	**28**	P	**P**	**14 32 08.1**	**-0.3**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
COLA	**College**	**63.95**	**28**	P	**P**	**14 32 08.1**	**-0.3**
	comp=Z,3.5nm,0.6s,mb4.4						
DAWY	**Dawson**	**67.70**	**28**	*e*P	**P**	**14 32 32.4**	**0.0**
KIV	**Kislovodsk**	**68.00**	**309**	*e*P	**P**	**14 32 34.2**	**-0.1**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**68.00**	**309**	*e*P	**P**	**14 32 33.9**	**-0.4**
	comp=Z,19nm,1.2s,mb4.8						
KEV	**Kevo**	**68.44**	**338**	*e*p	**P**	**14 32 35.7**	**-1.4**
INK	**Inuvik**	**68.71**	**23**	*e*P	**P**	**14 32 38.5**	**-0.3**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	**Inuvik**	**68.71**	**23**	*e*P	**P**	**14 32 38.5**	**-0.2**
	comp=Z,4.6nm,0.8s,mb4.4						
JOF	**Joensuu**	**68.96**	**331**	*e*p	**P**	**14 32 39.1**	**-1.2**
	comp=Z,0.8nm,0.4s,mb3.9						
ARCES	**ARCESS Array B**	**69.01**	**338**	P	**P**	**14 32 39.3**	**-1.3**
	comp=Z,0.6nm,0.6s,mb3.6,baz=62,slow=7.2,SNR=6.0						
ARCES				PcP	PcP	14 33 03.7	-0.3
	comp=Z,1.6nm,0.6s,baz=74,slow=4.4,SNR=9.6						
ARCES	**ARCESS Array B**	**69.01**	**338**	P	**P**	**14 32 39.3**	**-1.3**
ARCES				PcP	PcP	14 33 03.7	-0.3
FINES	**FINESS Array B**	**71.77**	**330**	P	**P**	**14 32 56.5**	**-0.9**
	comp=Z,0.9nm,0.3s,mb4.1,baz=64,slow=5.9,SNR=20						
MALT	**Malatya**	**72.86**	**305**	*e*P	**P**	**14 33 05.1**	**+1.2**
MALT				*e*		14 33 17.6	
MALT				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
MALT	**Malatya**	**72.86**	**305**	*e*P	**P**	**14 33 05.1**	**+1.2**
	comp=Z,2.9nm,0.7s,mb4.2						
MALT				*e*		14 33 17.6	
AKASG	**Malin Array Be**	**74.34**	**319**	P	**P**	**14 33 11.6**	**-1.0**
	comp=Z,1.0nm,0.5s,mb3.8,baz=57,slow=6.6,SNR=7.8						
RES	**Resolute Bay**	**75.11**	**11**	*e*P	**P**	**14 33 16.2**	**-0.8**
RES				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
RES	**Resolute Bay**	**75.11**	**11**	*e*P	**P**	**14 33 16.2**	**-0.7**
	comp=Z,9.4nm,0.8s,mb4.6						
BR131	**Keskin Array S**	**75.79**	**307**	*e*P	**P**	**14 33 20.7**	**-0.2**
	comp=Z,4.1nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**75.79**	**307**	P	**P**	**14 33 21.2**	**+0.3**
	comp=Z,3.5nm,0.7s,mb4.2,baz=95,slow=5.4,SNR=21						
BRTR	**Keskin Array B**	**75.79**	**307**	P	**P**	**14 33 21.2**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NB2	**NORSAR Subarra**	**78.26**	**333**	P	**P**	**14 33 33.6**	**-1.1**
	comp=Z,2.2nm,0.8s,mb3.9,baz=54,slow=6.2						
NOA	**NORSAR Array B**	**78.26**	**333**	P	**P**	**14 33 33.9**	**-0.7**
	comp=Z,1.9nm,0.7s,mb3.9,baz=53,slow=5.7,SNR=7.1						
NOA	**NORSAR Array B**	**78.26**	**333**	P	**P**	**14 33 33.9**	**-0.8**
YKA	**Yellowknife Ar**	**78.38**	**25**	P	**P**	**14 33 35.6**	**+0.3**
	comp=Z,1.3nm,0.5s,mb4.0,baz=308,slow=5.7,SNR=7.6						
SUMG	**Summit**	**80.31**	**356**	*e*P	**P**	**14 33 45.9**	**0.0**
	comp=Z,8.6nm,0.8s,mb4.6						
GERES	**GERESS Array B**	**84.04**	**322**	P	**P**	**14 34 05.3**	**0.0**
	comp=Z,1.7nm,0.7s,mb4.0,baz=55,slow=5.1,SNR=12						
GERES				LR	LR	15 15 21.7	
	comp=Z,22nm,19.3s,baz=68,slow=38						
GERES	**GERESS Array B**	**84.04**	**322**	P	**P**	**14 34 05.3**	**0.0**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,22nm,19.3s						
GRA1	**Grafenberg Arr**	**84.87**	**324**	*e*PKP	**P**	**14 34 09.8**	**+0.3**
GRF	**Grafenberg Arr**	**84.87**	**324**	*e*P	**P**	**14 34 09.8**	**+0.3**
FFC	**Flin Flon**	**88.48**	**26**	*e*P	**P**	**14 34 26.8**	**-0.2**
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
FFC	**Flin Flon**	**88.48**	**26**	*e*P	**P**	**14 34 26.8**	**-0.2**
	comp=Z,6.7nm,0.9s,mb4.7						

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*IDC **10** 14:51:17.2±1.4, 3726N×7471E, h0km, mb3.7/5, mb1 3.8/8, mb1mx3.7/22, mbtmp3.7/8, ML3.6/2, Error ellipse: s-maj=31.9km s-min=28.2km az=65.0*

*ISCJB **10** 14:51:19.4±1.1, 3728N±005×7460E±0.10, h34km±12km, mb4.0/10, Error ellipse: s-maj=14.8km s-min=5.2km az=115.7*

*NEIC **10** 14:51:23.5±1.0, 3730N×7483E, h50km±11km, mb4.0/5, Error ellipse: s-maj=18.0km s-min=6.4km az=65.0*

*NNC **10** 14:51:26.1±5.2, 3782N×7387E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=46.1km s-min=38.6km az=23.0*

ISC 10 14:51:22.4±0.8**, 3728N**±005×**746E**±01**, h41**km±10km**, n30, σ1§12**/37**, mb4.0**/10**, 4C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.35**	**359**	*e*Pn	**Pn**	**14 52 40.8**	**+1.1**
	9.3nm,0.6s						
AAK				*e*Pb	**Pn**	**14 52 53.5**	**+14**
TKM2	**Tokmak 2**	**5.68**	**7**	⇑Pn	**Pn**	**14 52 45.2**	**+1.0**
	0.4nm,0.3s						
TKM2				⇓Sn	**Sn**	**14 53 49.6**	**+1.4**
	1.5nm,0.6s						
KK31	**Karatay Array**	**6.62**	**333**	⇑Pn	**Pn**	**14 52 56.6**	**-0.6**
	8.3nm,0.7s,baz=147,slow=13,SNR=44						
KK31				⇑Sn	**Sn**	**14 54 10.0**	**-1.3**
	10nm,0.6s,baz=141,slow=23,SNR=6.2						
MKAR	**Makanchi Array**	**11.07**	**28**	Pn	**Pn**	**14 53 58.3**	**+0.2**
	baz=220,slow=13,SNR=2.7						
KOLN	**Koldanda**	**12.12**	**139**	*e*P	**Pn**	**14 54 13.2**	**+0.8**
KOLN				*e*S	**Sn**	**14 56 22.3**	**-3.8**
GKN	**Gorkha**	**12.50**	**135**	*e*P	**Pn**	**14 54 17.3**	**-0.3**
	10nm,0.4s						
KKN	**Kakani**	**13.03**	**134**	*e*P	**Pn**	**14 54 24.5**	**-0.3**
	10nm,0.6s						
DMN	**Daman**	**13.07**	**135**	*e*P	**Pn**	**14 54 25.1**	**-0.2**
	10nm,0.6s						
PKI	**Pulchoki**	**13.27**	**134**	*e*P	**Pn**	**14 54 28.3**	**+0.2**
GUN	**Gumba**	**13.29**	**131**	*e*P	**Pn**	**14 54 29.0**	**+0.6**
JIRN	**Jiri**	**13.66**	**131**	*e*P	**Pn**	**14 54 33.2**	**-0.2**
KURK	**Kurchatov**	**13.73**	**11**	P	**Pn**	**14 54 33.6**	**-0.9**
	4.5nm,1.0s						
BVAR	**Borovoye Array**	**16.03**	**351**	Pn	**Pn**	**14 55 06.1**	**+1.4**
	0.6nm,0.3s,baz=168,slow=10,SNR=9.4						
AB31	**Akbulak array**	**16.03**	**323**	⇓Pn	**Pn**	**14 55 01.3**	**-3.4**
	3.4nm,0.8s,baz=128,slow=12,SNR=16						
AB31				⇑Sn	**Sn**	**14 57 49.3**	**-12**
	2.7nm,1.1s						
BRVK	**Borovoye**	**16.07**	**350**	*e*P	**Pn**	**14 55 08.8**	**+3.5**
	5.3nm,1.0s						
AKTK	**Aktyubinsk**	**17.74**	**323**	P	**Pn**	**14 55 25.4**	**-0.8**
AKTK				S	**S**	**14 58 37.2**	**-11**
AKTO	**Aktyubinsk**	**17.74**	**323**	⇓Pn	**Pn**	**14 55 26.4**	**+0.2**
	0.1nm,0.8s						
AKTO	**Aktyubinsk**	**17.74**	**323**	P	**Pn**	**14 55 25.4**	**-0.8**
	0.3nm,0.3s,baz=114,slow=11,SNR=14						
AKTO				S	**S**	**14 58 37.2**	**-11**
	0.2nm,0.3s,baz=70,slow=12,SNR=2.8						
ZAL	**Zalesovo**	**18.08**	**20**	P	**Pn**	**14 55 27.7**	**-2.6**
	0.5nm,0.3s,baz=264,slow=10.0,SNR=6.1						
ARU	**Arti**	**21.99**	**336**	P	**P**	**14 56 17.3**	**+4.5**
	3.1nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**25.93**	**56**	*e*P	**P**	**14 56 50.4**	**-0.3**
	7.7nm,1.8s,mb3.9						
FINES	**FINESS Array B**	**38.51**	**325**	P	**P**	**14 58 41.5**	**+0.9**
	0.7nm,0.6s,mb3.5,baz=101,slow=9.9,SNR=5.2						
FINES	**FINESS Array B**	**38.51**	**325**	P	**P**	**14 58 41.5**	**+0.9**
TATO	**Taipei**	**41.55**	**93**	P	**P**	**14 59 04.7**	**-1.1**
	163nm,1.4s,mb5.5						
ARCES	**ARCESS Array B**	**41.57**	**336**	P	**P**	**14 59 07.5**	**+1.4**
	1.4nm,0.5s,mb3.8,baz=99,slow=7.5,SNR=7.5						
NOA	**NORSAR Array B**	**45.53**	**322**	P	**P**	**14 59 38.7**	**+0.8**
	0.4nm,0.6s,mb3.5,baz=92,slow=7.6,SNR=3.0						
TORD	**Torodi Ar. Bea**	**68.64**	**270**	P	**P**	**15 02 22.3**	**+1.0**
	0.4nm,0.6s,mb3.5,baz=44,slow=6.1,SNR=5.2						
INK	**Inuvik**	**72.64**	**11**	P	**P**	**15 02 43.3**	**-2.3**
	2.8nm,0.7s,mb4.3						
NWAO	**Narrogin (SRO)**	**80.35**	**145**	P	**P**	**15 03 28.5**	**-0.7**
	6.5nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**82.35**	**127**	P	**P**	**15 03 41.0**	**+1.2**
	0.6nm,1.0s,mb3.5,baz=297,slow=5.2,SNR=4.7						

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*ISCJB **10** 15:33:38.7±0.7, 3114S±004×17859W±007, h56km±7km, mb5.0/34, MS4.1/7, Error ellipse: s-maj=11.3km s-min=5.2km az=47.7*

*BJI **10** 15:33:38.2, 3127S×17828W, h65km, mB5.5, mb5.1, Ms4.8, Msz4.4*

*NEIC **10** 15:33:39.7±0.8, 3141S×17830W, h69km±7km, mb4.9/23, Error ellipse: s-maj=13.5km s-min=7.3km az=121.0*

*MOS **10** 15:33:41.7±1.2, 3104S×17850W, h83km, mb5.0/14, Error ellipse: s-maj=17.3km s-min=10.8km az=48.5*

*IDC **10** 15:33:43.2±1.2, 3104S×17836W, h92km±9km, mb4.8/5, mb1 5.0/7, mb1mx4.7/11, mbtmp5.2/7, MS3.7/5, Ms1 3.7/5, ms1mx3.3/16, Error ellipse: s-maj=19.5km s-min=10.2km az=115.0*

ISC 10 15:33:40.4±0.6**, 3110S**±004×**17849W**±007**, h57**km±5km**, n178, σ1§52**/154**, mb5.0**/34**, MS4.1**/7**, 3C-4D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.91**	**15**	P	**Pn**	**15 34 13.6**	**+3.1**
	708nm,0.3s,baz=109,slow=13,SNR=25						
RAO				S	**Sn**	**15 34 35.9**	**+2.5**
	2µm,0.3s,baz=104,slow=22,SNR=5.6						
RAO	**Raoul Island**	**1.91**	**15**	*e*Pn	**Pn**	**15 34 13.1**	**+2.5**
RAO				*e*Sn	**Sn**	**15 34 33.8**	**+0.4**
MXZ	**Matakaoa Point**	**6.97**	**201**	P	**Pn**	**15 35 22.2**	**+2.3**
MXZ				S	**Sn**	**15 36 39.9**	**+2.1**
MXZ	**Matakaoa Point**	**6.97**	**201**	PN	**Pn**	**15 35 22.2**	**+2.4**
MXZ				SN	**Sn**	**15 36 39.9**	**+2.1**
KUZ	**Kuaotunu**	**7.41**	**219**	P	**Pn**	**15 35 33.3**	**+7.4**
KUZ	**Kuaotunu**	**7.41**	**219**	PN	**Pn**	**15 35 33.3**	**+7.4**
PUZ	**Puketiti**	**7.46**	**200**	P	**Pn**	**15 35 28.1**	**+1.6**
PUZ	**Puketiti**	**7.46**	**200**	PN	**Pn**	**15 35 28.1**	**+1.6**
PUZ				SN	**Sn**	**15 36 51.8**	**+2.2**
MWZ	**Matawai**	**7.93**	**203**	*e*P	**Pn**	**15 35 34.6**	**+1.6**
MWZ	**Matawai**	**7.93**	**203**	PN	**Pn**	**15 35 34.6**	**+1.6**
MWZ				SN	**Sn**	**15 37 05.7**	**+4.5**
URZ	**Urewera**	**8.01**	**206**	P	**Pn**	**15 35 36.5**	**+2.4**
	15nm,0.3s,baz=324,slow=1.9,SNR=219						
URZ				S	**Sn**	**15 37 06.0**	**+2.7**
	72nm,0.3s,baz=136,slow=23,SNR=26						
URZ	**Urewera**	**8.01**	**206**	*e*P	**Pn**	**15 35 35.8**	**+1.7**
URZ	**Urewera**	**8.01**	**206**	PN	**Pn**	**15 35 35.6**	**+1.5**
URZ				SN	**Sn**	**15 37 06.6**	**+3.4**
TAZ	**Tarawera**	**8.22**	**209**	P	**Pn**	**15 35 41.6**	**+4.6**
PATZ	**Paeroa**	**8.45**	**209**	P	**Pn**	**15 35 44.7**	**+4.6**
KNZ	**Kokohu**	**8.51**	**201**	P	**Pn**	**15 35 40.7**	**-0.2**
KNZ				S	**Sn**	**15 37 17.3**	**+1.9**
KNZ	**Kokohu**	**8.51**	**201**	PN	**Pn**	**15 35 40.7**	**-0.2**
KNZ				SN	**Sn**	**15 37 17.3**	**+1.9**
BKZ	**Black Stump Fm**	**9.04**	**206**	*e*P	**Pn**	**15 35 47.7**	**-0.4**
BKZ	**Black Stump Fm**	**9.04**	**206**	PN	**Pn**	**15 35 47.7**	**-0.4**
HIZ	**Hauiti**	**9.20**	**215**	P	**Pn**	**15 35 55.0**	**+4.6**
TUVZ	**Tukino**	**9.45**	**209**	P	**Pn**	**15 35 55.5**	**+1.7**
TUVZ	**Tukino**	**9.45**	**209**	PN	**Pn**	**15 35 58.3**	**+4.5**
FWVZ	**Far West T-bar**	**9.49**	**209**	*e*P	**Pn**	**15 35 55.3**	**+1.0**
FWVZ	**Far West T-bar**	**9.49**	**209**	PN	**Pn**	**15 35 55.4**	**+1.1**
MOVZ	**Moawhango**	**9.53**	**208**	P	**Pn**	**15 35 54.7**	**-0.2**
MOVZ				S	**Sn**	**15 37 41.4**	**+0.9**
MOVZ	**Moawhango**	**9.53**	**208**	SN	**Sn**	**15 37 41.4**	**+0.9**
MTVZ	**Mangateitei**	**9.63**	**209**	*e*PN	**Pn**	**15 35 55.8**	**-0.4**
PXZ	**Pawanui**	**9.68**	**202**	PN	**Pn**	**15 35 55.4**	**-1.6**
VRZ	**Vera Road**	**9.73**	**213**	*e*P	**Pn**	**15 35 59.5**	**+1.9**
VRZ	**Vera Road**	**9.73**	**213**	PN	**Pn**	**15 36 01.3**	**+3.7**
TSZ	**Takapari Road**	**10.02**	**205**	*e*P	**Pn**	**15 35 59.7**	**-1.8**
WAZ	**Wanganui**	**10.14**	**210**	P	**Pn**	**15 36 03.7**	**+0.4**
NEZ	**North Egmont**	**10.16**	**215**	P	**Pn**	**15 36 07.6**	**+4.1**
BFZ	**Birch Farm**	**10.47**	**203**	*e*P	**Pn**	**15 36 05.0**	**-2.7**
BFZ	**Birch Farm**	**10.47**	**203**	PN	**Pn**	**15 36 05.0**	**-2.8**
MRZ	**Mangatainoka R**	**10.68**	**205**	*e*P	**Pn**	**15 36 07.6**	**-3.0**
MRZ	**Mangatainoka R**	**10.68**	**205**	*e*PN	**Pn**	**15 36 07.2**	**-3.5**
KIW	**Kapiti Island**	**11.11**	**207**	P	**Pn**	**15 36 13.8**	**-2.7**
MTW	**Mount Morrison**	**11.15**	**204**	P	**Pn**	**15 36 12.9**	**-4.1**
CAW	**Cannon Point**	**11.26**	**206**	P	**Pn**	**15 36 14.6**	**-3.9**
PAWZ	**Paruwai Farm**	**11.37**	**204**	P	**Pn**	**15 36 17.0**	**-3.1**
MSWZ	**Moikau Station**	**11.46**	**204**	P	**Pn**	**15 36 17.7**	**-3.6**
MRW	**Makara Radio**	**11.51**	**207**	P	**Pn**	**15 36 19.1**	**-2.8**
WEL	**Wellington**	**11.53**	**206**	P	**Pn**	**15 36 19.1**	**-3.1**
SNZO	**South Karori**	**11.57**	**206**	*e*P	**Pn**	**15 36 18.3**	**-4.5**
TCW	**Tory Channel**	**11.66**	**208**	P	**Pn**	**15 36 20.4**	**-3.6**
NNZ	**Nelson**	**12.04**	**211**	*e*P	**Pn**	**15 36 25.4**	**-3.8**
NNZ	**Nelson**	**12.04**	**211**	*e*PN	**Pn**	**15 36 25.0**	**-4.2**
QRZ	**Quartz Range**	**12.12**	**214**	*e*P	**Pn**	**15 36 28.2**	**-2.1**
BSWZ	**Blackbirch Sta**	**12.24**	**208**	P	**Pn**	**15 36 28.2**	**-3.7**
THZ	**Tophouse**	**12.69**	**211**	*e*P	**Pn**	**15 36 33.9**	**-4.2**
THZ	**Tophouse**	**12.69**	**211**	*e*PN	**Pn**	**15 36 33.4**	**-4.6**
KHZ	**Kahutara**	**12.97**	**207**	PN	**Pn**	**15 36 37.2**	**-4.7**
DSZ	**Denniston Nort**	**13.18**	**214**	*e*P	**Pn**	**15 36 41.7**	**-3.0**
LTZ	**Lake Taylor**	**13.79**	**210**	*e*P	**Pn**	**15 36 47.2**	**-5.9**
CRLZ	**Canterbury Las**	**14.31**	**207**	*e*P	**Pn**	**15 36 54.4**	**-5.5**
MQZ	**McQueen's Vall**	**14.41**	**207**	*e*P	**Pn**	**15 36 55.6**	**-5.6**
MQZ	**McQueen's Vall**	**14.41**	**207**	*e*PN	**Pn**	**15 36 54.8**	**-6.4**
MQZ				SN	**Sn**	**15 39 26.7**	**-13**
RPZ	**Rata Peaks**	**15.07**	**210**	P	**Pn**	**15 37 11.3**	**+1.5**
	2.9nm,0.3s,baz=89,slow=2.8,SNR=12						
RPZ				S	S	15 39 44.2	-26
	3.6nm,0.3s,baz=121,slow=22,SNR=13						
RPZ	**Rata Peaks**	**15.07**	**210**	*e*P	**Pn**	**15 37 05.0**	**-4.8**
FOZ	**Fox Glacier**	**15.58**	**214**	*e*P	**Pn**	**15 37 12.7**	**-3.6**
LBZ	**Lake Benmore**	**15.98**	**211**	*e*P	**Pn**	**15 37 18.2**	**-3.3**
LBZ	**Lake Benmore**	**15.98**	**211**	*e*PN	**Pn**	**15 37 15.7**	**-5.8**
DZM	**Mont Dzumac**	**16.19**	**300**	*e*P	**Pn**	**15 37 30.0**	**+5.9**
DZM	**Mont Dzumac**	**16.19**	**300**	P	**Pn**	**15 37 30.3**	**+6.2**
	0.8nm,0.3s,baz=82,slow=17,SNR=15						
DZM				LR	LR	15 41 45.5	
	comp=Z,336nm,20.6s,baz=164,slow=30						
ODZ	**Otahua Downs**	**16.32**	**208**	*e*P	**Pn**	**15 37 21.5**	**-4.2**
WKZ	**Wanaka**	**16.85**	**212**	*e*P	**Pn**	**15 37 27.7**	**-4.7**
WKZ	**Wanaka**	**16.85**	**212**	*e*PN	**Pn**	**15 37 28.5**	**-3.9**
EAZ	**Earnscleugh**	**17.04**	**211**	*e*P	**Pn**	**15 37 31.8**	**-2.8**
MSZ	**Milford Sound**	**17.25**	**214**	*e*P	**Pn**	**15 37 37.1**	**-0.2**
TUZ	**Tuapeka**	**17.48**	**209**	*e*P	**Pn**	**15 37 39.6**	**-0.5**
MLZ	**Mavora Lakes**	**17.63**	**212**	*e*P	**Pn**	**15 37 38.6**	**-3.4**
WHZ	**Wether Hill Ro**	**18.15**	**212**	*e*P	**Pn**	**15 37 46.2**	**-2.2**
WHZ	**Wether Hill Ro**	**18.15**	**212**	*e*PN	**Pn**	**15 37 44.9**	**-3.5**
AFI	**Afiamalu**	**18.19**	**21**	Pn	**Pn**	**15 37 36.1**	**-13**
RAR	**Rarotonga**	**19.45**	**64**	P	**Pn**	**15 38 03.7**	**-0.1**
	0.9nm,0.3s,baz=230,slow=1.5,SNR=3.7						
RAR	**Rarotonga**	**19.45**	**64**	P	**Pn**	**15 38 03.7**	**-0.2**
RAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RAR	**Rarotonga**	**19.45**	**64**	P	**Pn**	**15 38 03.7**	**-0.1**
ARMA	**Armidale**	**25.66**	**264**	*e*P	**P**	**15 39 09.2**	**+4.5**
TBI	**Tubuai**	**26.89**	**80**	*e*LR	LR	15 45 25.9	
	comp=Z,288nm,35.8s						
CNB	**Canberra Magne**	**27.16**	**252**	*e*P	**P**	**15 39 21.9**	**+3.6**
	comp=Z,13nm,0.5s,mb4.7						
PPT	**Papeete**	**29.48**	**70**	*e*LR	LR	15 46 41.0	
	comp=Z,296nm,33.0s						
PPT	**Papeete**	**29.48**	**70**	LR	LR	15 47 58.7	
	comp=Z,152nm,19.0s,MS3.6,baz=141,slow=29						
TAU	**Tasmania Unive**	**29.55**	**237**	*e*P	**P**	**15 39 42.2**	**+2.7**
TAU				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.0						
TAU	**Tasmania Unive**	**29.55**	**237**	*e*P	**P**	**15 39 42.2**	**+2.6**
	comp=Z,28nm,0.9s,mb5.0						
TOO	**Toolangi**	**30.31**	**248**	⇑*i*P	**P**	**15 39 49.1**	**+2.8**
	comp=Z,14nm,1.1s,mb4.6						
TOO	**Toolangi**	**30.31**	**248**	⇑*i*P	**P**	**15 39 49.1**	**+2.8**
TOO				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
CTA	**Charters Tower**	**33.50**	**281**	⇑*i*P	**P**	**15 40 16.3**	**+2.0**
	comp=Z,44nm,0.8s,mb5.4						
CTA	**Charters Tower**	**33.50**	**281**	P	**P**	**15 40 16.7**	**+2.4**
	comp=Z,47nm,0.7s,mb5.5,baz=106,slow=10,SNR=62						
CTA	**Charters Tower**	**33.50**	**281**	P	**P**	**15 40 16.7**	**+2.4**
CTA				pmax	pmax		
	comp=Z,47nm,0.7s						
CTAO	**Charters Tower**	**33.50**	**281**	*e*P	**P**	**15 40 16.7**	**+2.4**
CTAO				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.4						
CTAO	**Charters Tower**	**33.50**	**281**	*e*P	**P**	**15 40 16.7**	**+2.4**
	comp=Z,40nm,0.8s,mb5.4						
STKA	**Stephens Creek**	**33.92**	**258**	P	**P**	**15 40 20.4**	**+2.5**
	comp=Z,126nm,0.8s,mb5.9,baz=99,slow=10,SNR=349						
STKA	**Stephens Creek**	**33.92**	**258**	*e*P	**P**	**15 40 20.5**	**+2.6**
RKT	**Rikitea**	**39.34**	**89**	*e*LR	LR	15 51 13.3	

comp=Z,247nm,35.2s
TAOE Nuku Hiva Isla 41.97 66 *e*LR LR 15 52 26.2
comp=Z,292nm,27.3s
AS31 Alice Springs 42.66 268 *e*P **P** **15 41 31.8 +0.5**
ASAR Alice Springs 42.66 268 P **P** **15 41 31.8 +0.5**
comp=Z,20nm,0.6s,mb5.0,baz=104,slow=7.2,SNR=313
ASAR ScP ScP 15 47 02.3 -6.0
comp=Z,2.8nm,0.9s,baz=109,slow=4.5,SNR=11
ASAR S **S** **15 47 47.9 -2.5**
comp=Z,0.4nm,0.6s,baz=107,slow=15,SNR=3.5
ASAR LR LR 15 57 40.0
comp=Z,68nm,18.4s,MS3.6,baz=356,slow=34
WRAB Tennant Creek 43.70 273 *e*P **P** **15 41 39.4 -0.4**
WRAB pmax pmax
comp=Z,39nm,0.6s,mb5.3
WRAB Tennant Creek 43.70 273 *e*P **P** **15 41 39.4 -0.4**
comp=Z,39nm,0.6s,mb5.3
FORT Forrest 45.47 256 *e*P **P** **15 41 53.4 -0.4**
comp=Z,36nm,0.5s,mb5.5
SBA Scott Base 47.31 184 *e*P **P** **15 42 12.4 +4.1**
SBA pmax pmax
comp=Z,17nm,0.7s,mb5.1
SBA Scott Base 47.31 184 *e*P **P** **15 42 12.4 +4.2**
comp=Z,17nm,0.7s,mb5.1
VNDA Vanda 47.36 186 P **P** **15 42 11.4 +2.8**
comp=Z,2.8nm,0.6s,mb4.4,baz=357,slow=7.2,SNR=30
VNDA ScP ScP 15 47 23.9 -3.9
comp=Z,1.0nm,1.0s,baz=358,slow=3.1,SNR=3.7
VNDA Vanda 47.36 186 *e*P **P** **15 42 10.7 +2.0**
comp=Z,2.6nm,0.6s,mb4.3
VNDA *e*ScP ScP 15 47 28.4 +0.6
KAKA Kakadu 48.64 281 *e*P **P** **15 42 18.7 +0.1**
comp=Z,6.9nm,0.6s,mb4.9
FITZ Fitzroy Crossi 51.94 271 *e*P **P** **15 42 43.2 -0.3**
comp=Z,15nm,0.7s,mb5.0
KLBR Kellerberrin 53.73 252 *e*P **P** **15 42 55.7 -0.9**
comp=Z,6.7nm,0.6s,mb4.8
NWAO Narrogin (SRO) 53.76 250 *e*P **P** **15 42 56.5 -0.4**
NWAO pmax pmax
comp=Z,7.0nm,0.7s
NWAO Narrogin (SRO) 53.76 250 *e*P **P** **15 42 56.5 -0.4**
comp=Z,6.8nm,0.7s,mb4.7
CASY Casey 54.33 208 *e*P **P** **15 43 00.5 -0.5**
MUN Mundaring 54.87 251 *e*P **P** **15 43 05.1 +0.2**
MBWA Marble Bar 55.73 264 *e*P **P** **15 43 11.0 -0.1**
comp=Z,13nm,1.0s,mb4.9
MBWA *e* 15 43 39.8
QSPA South Pole Qui 59.01 180 *e*P **P** **15 43 36.2 +1.9**
comp=Z,74nm,0.8s,mb5.8
QSPA *e* 15 43 41.3
MIR Mirnyy 61.31 207 *d i*P **P** **15 43 51.5 +1.5**
MIR pmax pmax
comp=Z,110nm,1.0s,mb5.9
DAV Davao City (W) 65.54 295 P **P** **15 44 17.7 -0.2**
comp=Z,368nm,0.8s,mb6.5
MAW Mawson 71.51 201 P **P** **15 44 54.8 -0.4**
comp=Z,3.7nm,0.7s,mb4.4,baz=123,slow=8.3,SNR=17
MAW Mawson 71.51 201 *e*P **P** **15 44 54.6 -0.5**
comp=Z,4.0nm,0.8s,mb4.4
PMSA Palmer Station 71.80 156 P **P** **15 44 56.7 -0.2**
comp=Z,7.8nm,0.7s,mb4.8
KSM Kuching 74.74 281 *e*P **P** **15 45 12.9 -1.2**
USHA Ushuaia 75.58 146 LR LR 16 10 24.4
comp=Z,70nm,18.9s,MS4.0,baz=65,slow=29
SYO Syowa Base 76.34 193 ‖ *e*P **P** **15 45 22.7 -0.6**
SNAA Sanae 77.47 179 ‖ *i* **P** **15 45 29.7 0.0**
SNAA *e* 15 45 34.7
SNAA *e* 15 45 36.5
SNAA *e* pP 15 45 41.1 -4.6
SNAA *e* pP 15 45 44.5 -1.2
SNAA *e* 15 45 52.3
SNAA Sanae 77.47 179 *e*P **P** **15 45 29.4 -0.3**
SNAA pmax pmax
comp=Z,27nm,1.2s
SNAA Sanae 77.47 179 *e*P **P** **15 45 29.4 -0.3**
comp=Z,27nm,1.2s,mb5.1
MAIT Maitri 78.15 183 *e*P **P** **15 45 37.1 +3.6**
VNA1 Neumayer--Stat 78.30 177 ‖ *i* **P** **15 45 35.0 +0.7**
VNA1 *e* 15 45 40.0
VNA1 *e* 15 45 41.6
VNA1 *e* pP 15 45 46.5 -3.8
VNA1 *e* pP 15 45 49.8 -0.5
PLCA Paso Flores 82.34 133 *e*P **P** **15 45 56.9 +0.9**
PLCA pmax pmax
comp=Z,6.0nm,0.7s
PLCA Paso Flores 82.34 133 *e*P **P** **15 45 56.9 +0.9**
comp=Z,5.6nm,0.7s,mb4.6
YSS Yuzh-Sakhalins 85.19 335 *e*P **P** **15 46 08.1 -2.5**
NJ2 Nanjing 86.38 311 *e*P **P** **15 46 15.6 -0.8**
NJ2 PP PP 15 49 39.1 +0.9
NJ2 S S 15 56 41.0 -6.7
NJ2 XS sS 15 57 24.0 +8.9
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.2
NJ2 AMB AMB
comp=Z,240nm,10.3s
NJ2 LR LR
comp=N,260nm,30.0s
NJ2 LR LR
comp=Z,170nm,20.0s
ISA Isabella 87.09 45 *e*P **P** **15 46 19.5 -0.4**
CMB Columbia Colle 87.56 42 *e*P **P** **15 46 21.0 -1.2**
comp=Z,4.2nm,0.8s,mb4.7
MDJ Mudanjiang 88.96 326 P **P** **15 46 30.0 +1.2**
MDJ AMB AMB
comp=Z,2.0nm,0.8s,mb4.5
MDJ AMB AMB
comp=Z,43nm,5.6s
NVAR Mina Array Bea 89.03 43 P **P** **15 46 28.9 -0.3**
comp=Z,3.1nm,0.8s,mb4.7,baz=212,slow=6.6,SNR=18
TPNV Topopah Spring 89.28 45 *e*P **P** **15 46 29.8 -0.5**
TPNV pmax pmax
comp=Z,11nm,1.5s,mb5.0
TPNV Topopah Spring 89.28 45 *e*P **P** **15 46 29.8 -0.6**
comp=Z,10nm,1.5s,mb5.0
TPH Tonopah 89.44 44 P **P** **15 46 30.6 -0.4**
TUC Tucson 89.87 52 *e*P **P** **15 46 33.5 +0.4**
TUC pmax pmax
comp=Z,15nm,1.3s,mb5.2
TUC Tucson 89.87 52 *e*P **P** **15 46 33.5 +0.4**
comp=Z,15nm,1.3s,mb5.2
CN2 Changchun 90.44 323 *e*P **P** **15 46 36.7 +1.0**
CN2 *e*S S 15 57 20.8 -5.4
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.2
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,21.0s,MS4.7
CN2 LR LR
comp=E,200nm,21.0s,MS4.7
KMI Kunming 93.76 297 P **P** **15 46 51.2 +0.1**
KMI PP PP 15 50 39.6 +2.8
KMI S S 15 57 53.0 -2.9
KMI SS SS 16 04 12.2 -3.0
KMI AMB AMB
comp=Z,4.0nm,1.0s,mb4.8
KMI AMB AMB
comp=Z,163nm,4.2s
CD2 Chengdu 96.10 302 *e*P **P** **15 47 00.2 -1.6**
CD2 PP PP 15 50 56.6 +1.5
CD2 SKS 15 57 26.4
CD2 S S 15 58 07.9 -8.4
CD2 SS SS 16 04 45.9 -2.6
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CD2 LR LR
comp=E,70nm,9.5s
CD2 LR LR
comp=Z,50nm,7.2s
HHC Hu-ho-hao-te 96.42 314 *e*P **P** **15 47 03.2 0.0**
HHC PP PP 15 51 00.7 +3.2
HHC SKS 15 57 29.3
HHC S S 15 58 12.5 -6.5
HHC SS SS 16 04 50.6 -2.3
HHC AMB AMB
comp=Z,8.0nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,98nm,5.1s
HHC LR LR
comp=N,91nm,22.8s,MS4.3
HHC LR LR
comp=E,65nm,18.0s,MS4.3
HHC LR LR
comp=Z,53nm,20.9s,MS4.0

PDAR Pinedale Array 96.93 44 LR LR 16 28 44.4
comp=Z,22nm,18.2s,MS3.7,baz=75,slow=34
MCK McKinley 97.37 13 P **P** **15 47 06.8 -0.7**
MCK pmax pmax
comp=Z,5.0nm,1.2s,mb4.8
MCK McKinley 97.37 13 P **P** **15 47 06.8 -0.7**
comp=Z,4.5nm,1.2s,mb4.8
LZH Lanzhou 98.80 307 *e*P **P** **15 47 15.4 +1.5**
LZH PP PP 15 51 20.4 +4.6
LZH *e*SKS 15 57 43.5
LZH *e*S S 15 58 33.7 -5.6
LZH *e*SS SS 16 05 26.5 0.0
LZH AMB AMB
comp=Z,11nm,1.4s,mb5.2
LZH AMB AMB
comp=Z,76nm,6.2s
LZH LR LR
comp=N,236nm,18.6s
LZH LR LR
comp=Z,452nm,19.3s,MS5.0
ZAK Zakamensk 106.43 319 *e*P Pdif 15 47 53.5 +5.6
ZAK pmax pmax
comp=Z,2.0nm,1.3s
WMQ Urumqi 113.33 308 *e*PKP PKiKP 15 52 10.0 -1.7
MKAR Makanchi Array 117.90 310 PKP PKPdf 15 52 17.2 -3.2
comp=Z,0.4nm,0.4s,baz=188,slow=0.8,SNR=9.0
BVAR Borovoye Array 126.61 315 PKP PKPdf 15 52 34.0 -3.2
comp=Z,1.0nm,0.4s,baz=138,slow=1.7,SNR=8.8
BVAR Borovoye Array 126.61 315 PKIKP PKPdf 15 52 34.0 -3.2
BVAR pmax pmax
comp=Z,1.0nm,0.4s
KMBO Kilima Mbogo 133.32 233 SKPbc SKPbc 15 56 08.6 -4.7
comp=Z,1.4nm,0.5s,baz=39,slow=13,SNR=4.6
ARCES ARCESS Array B 139.18 347 PKhKP
comp=Z,0.9nm,0.6s,baz=10,slow=2.7,SNR=3.8
ARCES PKP PKPdf 15 52 59.0 -1.8
comp=Z,1.3nm,0.7s,baz=48,slow=1.8,SNR=5.5
ARCES SKPbc SKPbc 15 56 24.3 -6.8
comp=Z,1.9nm,0.8s,baz=338,slow=1.3,SNR=5.5
ARCES ARCESS Array B 139.18 347 PKIKP PKPdf 15 52 59.0 -1.8
ARCES pmax pmax
comp=Z,1.0nm,0.7s
ARCES pmax pmax
comp=N,2.0nm,0.8s
JOF Joensuu 142.91 338 *ep* PKPdf 15 53 00.3 -7.2
KAF Kangasniemi 145.06 340 *ep* PKPbc 15 53 06.3 -4.5
comp=N,4.5nm,0.4s
FIA1 FINESS Array S 145.65 339 *e*PKPdf PKPdf 15 53 08.9 -3.4
FIA1 *e* 15 53 19.6
FINES FINESS Array B 145.65 339 PKPbc PKPbc 15 53 09.2 -3.4
comp=N,9.4nm,0.6s,baz=56,slow=4.1,SNR=65
FINES FINESS Array B 145.65 339 PKIKP PKPdf 15 53 09.2 -3.1
FINES pmax pmax
comp=Z,9.0nm,0.6s
NB2 NORSAR Subarra1 149.37 351 PKPa PKPbc 15 53 19.8 -3.1
comp=Z,1.3nm,0.5s,baz=10,slow=2.6
NOA NORSAR Array B 149.37 351 PKPbc PKPbc 15 53 20.1 -2.8
comp=Z,1.8nm,0.5s,baz=15,slow=4.2,SNR=14
NOA NORSAR Array B 149.37 351 PKHKP PKPbc 15 53 20.1 -2.8
NOA pmax pmax
comp=Z,2.0nm,0.5s
HFS Hagfors 149.84 348 PKPbc PKPbc 15 53 20.7 -3.3
comp=Z,2.6nm,0.5s,baz=108,slow=4.8,SNR=22
HFS Hagfors 149.84 348 PKHKP PKPbc 15 53 20.7 -3.3
HFS pmax pmax
comp=Z,3.0nm,0.5s
ASF Jabal al Asfar 149.93 281 PKPbc PKPbc 15 53 23.4 -0.9
comp=Z,0.9nm,0.3s,baz=16,slow=1.7,SNR=4.1
ASF Jabal al Asfar 149.93 281 PKP2 PKPbc 15 53 23.4 -0.8
ASF pmax pmax
comp=Z,1.0nm,0.3s
MMAI Mount Meron Ar 151.28 283 PKPbc PKPbc 15 53 25.4 -2.0
comp=Z,2.2nm,0.5s,baz=72,slow=6.4,SNR=3.9
AKASG Malin Array Be 151.59 322 PKPbc PKPbc 15 53 25.4 -2.7
comp=Z,1.3nm,0.4s,baz=48,slow=2.3,SNR=10
AKASG Malin Array Be 151.59 322 PKIKP PKPbc 15 53 25.4 -2.8
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 151.59 322 PKPbc PKPbc 15 53 25.4 -2.7
AKBB Malin Array Si 151.59 322 *e*PKIKP PKPdf 15 53 20.3 -1.6
AKBB *e* 15 53 25.0
BRTR Keskin Array B 152.55 297 PKPbc PKPbc 15 53 28.1 -2.2
comp=Z,1.5nm,0.9s,baz=101,slow=2.6,SNR=6.9
BRTR Keskin Array B 152.55 297 PKIKP PKPbc 15 53 28.1 -2.2
BRTR pmax pmax
comp=Z,2.0nm,0.9s
DBIC Dimbokro 154.98 165 PKPbc PKPbc 15 53 36.0 +0.5
comp=Z,1.7nm,0.5s,baz=324,slow=2.4,SNR=3.1
DBIC Dimbokro 154.98 165 PKIKP PKPbc 15 53 36.0 +0.4
DBIC pmax pmax
comp=Z,2.0nm,0.5s
TORD Torodi Ar. Bea 162.13 181 PKP PKPdf 15 53 35.1 -0.2
comp=Z,0.6nm,0.7s,baz=304,slow=1.6,SNR=4.2
TORD PKPab PKPab 15 54 22.3 +0.1
comp=Z,3.4nm,0.7s,baz=176,slow=3.6,SNR=18

*NEIC **10** 16:21:42.6$_{\pm}$0.7,2589N$_{\times}$95.10E,h10^{km}, Error ellipse: s-maj=13.9km s-min=8.8km az=206.0*
*ISCJB **10** 16:21:47.9$_{\pm}$1.2,266N$_{\pm}$0.1$_{\times}$9463E$_{\pm}$007,h10^{km},mb3.5/3, Error ellipse: s-maj=15.0km s-min=8.2km az=148.1*
*IDC **10** 16:21:58.9$_{\pm}$9.1,2770N$_{\times}$9519E,h0^{km},mb3.4/3,mb1 3.5/3, mb1mx3.4/21,mbtmp3.5/3,Error ellipse: s-maj=155.7km s-min=64.5km az=160.0*
ISC 10 16:21:48.3$_{\pm}$1.2,264N$_{\pm}$01$_{\times}$9476E$_{\pm}$007,h10^{km},n15, σ1§19/25,mb3.5/3,Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**2.73**	**252**	*e*P	**Pn**	**16 22 31.0**	**-1.2**
SHL				*e*P		16 22 31.5	
SHL				*e*S	**Sn**	**16 23 04.3**	**-1.0**
SHL				AML	AML	16 23 09.6	
	comp=E,18μm,0.2s						
SHL				AML	AML	16 23 10.2	
	comp=N,21μm,0.2s						
TURI	**Tura**	**4.08**	**258**	*e*P	**Pn**	**16 22 52.5**	**+1.7**
TURI				*e*S	**Sn**	**16 23 39.5**	**+0.9**
JIRN	**Jiri**	**7.74**	**281**	*e*Pn	**Pn**	**16 23 42.3**	**+1.3**
JIRN				*e*Sn	**Sn**	**16 25 10.2**	**+1.5**
	comp=N,81nm,0.3s						
GUN	**Gumba**	**8.05**	**283**	*e*Pn	**Pn**	**16 23 46.2**	**+1.0**
GUN				*e*Sn	**Sn**	**16 25 18.3**	**+2.1**
	comp=N,83nm,0.4s						
PKI	**Pulchoki**	**8.42**	**280**	*e*Pn	**Pn**	**16 23 50.4**	**+0.1**
PKI				*e*Sn	**Sn**	**16 25 25.0**	**-0.4**
	comp=N,59nm,0.4s						
BOK	**Bokaro**	**8.46**	**254**	*e*P	**Pn**	**16 23 46.3**	**-4.7**
BOK				*e*S	**Sn**	**16 25 16.6**	**-10**
BOK				AML	AML	16 25 20.2	
	comp=N,84nm,0.4s						
BOK				AML	AML	16 25 21.0	
	comp=E,39nm,0.4s						
KKN	**Kakani**	**8.56**	**281**	*e*Pn	**Pn**	**16 23 52.2**	**0.0**
KKN				*e*Sn	**Sn**	**16 25 28.5**	**-0.3**
	comp=E,24nm,0.2s						
DMN	**Daman**	**8.69**	**280**	*e*Pn	**Pn**	**16 23 54.0**	**0.0**
DMN				*e*Sn	**Sn**	**16 25 30.5**	**-1.6**
	comp=E,59nm,0.5s						
GKN	**Gorkha**	**9.15**	**282**	*e*Pn	**Pn**	**16 24 00.5**	**+0.2**
GKN				*e*Sn	**Sn**	**16 25 42.4**	**-0.9**
	comp=E,64nm,0.3s						
KOLN	**Koldanda**	**10.03**	**280**	*e*Pn	**Pn**	**16 24 11.6**	**-0.9**
KOLN				*e*Sn	**Sn**	**16 26 02.5**	**-2.6**
	comp=E,54nm,0.7s						
BHPL	**Bhopal**	**16.06**	**262**	*e*P	**Pn**	**16 25 29.4**	**-4.7**
BHPL				*ex*	x	16 28 17.2	
MKAR	**Makanchi Array**	**22.59**	**337**	P	**P**	**16 26 50.2**	**+1.3**
	comp=E,0.6nm,0.4s,mb3.4,baz=140,slow=10,SNR=6.6						
MKAR	**Makanchi Array**	**22.59**	**337**	P	**P**	**16 26 50.2**	**+1.3**
SONM	**Songino Array**	**23.23**	**20**	P	**P**	**16 26 53.9**	**-1.7**
	comp=E,0.7nm,0.6s,mb3.2,baz=196,slow=10,SNR=5.4						
FINES	**FINESS Array B**	**56.98**	**328**	P	**P**	**16 31 39.7**	**+5.7**
	comp=E,1.4nm,1.0s,mb3.9,baz=108,slow=6.2,SNR=4.0						

*BJI **10** 16:21:54.8,476S$_{\times}$13699E,h11^{km},mB5.0,mb4.7,Ms4.0, Msz3.7*
*ISCJB **10** 16:21:58.7$_{\pm}$2.2,447S$_{\pm}$004$_{\times}$13658E$_{\pm}$008,h15$^{km}_{\pm}$16^{km}, mb4.5/33,MS3.7/9,Error ellipse: s-maj=14.2km s-min=7.0km az=178.0*
*IDC **10** 16:21:58.9$_{\pm}$0.8,442S$_{\times}$13650E,h0^{km},mb4.2/8, mb1 4.5/12,mb1mx4.5/14,mbtmp4.4/12,ML4.6/4,MS3.7/7,*

Ms1 3.7/7,ms1mx3.4/14,Error ellipse: s-maj=36.5km s-min=15.3km az=80.0
*NEIC **10** 16:22:00.1$_{\pm}$0.3,442S$_{\times}$13657E,h10^{km},mb4.8/22,Error ellipse: s-maj=10.9km s-min=6.0km az=78.0*
NEIC Felt [III] at Jayapura and Timuka; [II] at Nabire.
*MOS **10** 16:22:00.9$_{\pm}$1.0,449S$_{\times}$13654E,h33^{km},mb4.7/11,Error ellipse: s-maj=18.7km s-min=9.0km az=110.7*
ISC 10 16:22:03.4$_{\pm}$2.7,448S$_{\pm}$005$_{\times}$13659E$_{\pm}$008,h32$^{km}_{\pm}$20^{km}, h16$^{km}_{\pm}$3.2^{km}:pP-P,n74,σ1§24/80,mb4.5/33,MS3.7/9,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**9.15**	**206**	*e*P	**Pn**	**16 24 13.7**	**+0.5**
	136nm,0.4s						
PMG	**Port Moresby**	**11.57**	**116**	Pn	**Pn**	**16 24 47.4**	**+1.1**
	5.4nm,0.3s,baz=323,slow=6.0,SNR=15						
PMG	**Port Moresby**	**11.57**	**116**	*e*Pn	**Pn**	**16 24 47.2**	**+0.9**
WRAB	**Tennant Creek**	**15.52**	**188**	*e*P	**Pn**	**16 25 36.0**	**-3.8**
WRAB				pmax	pmax		
	comp=Z,64nm,0.6s						
WRAB	**Tennant Creek**	**15.52**	**188**	*e*Pn	**Pn**	**16 25 36.0**	**-3.8**
	comp=Z,64nm,0.6s						
WRAB				*e*Sn	**Sn**	**16 28 10.3**	**-20**
FITZ	**Fitzroy Crossi**	**17.27**	**218**	*e*P	**Pn**	**16 26 00.4**	**-1.6**
	comp=Z,39nm,0.3s						
FITZ				*e*S	**Sn**	**16 29 03.1**	**-10**
FITZ	**Fitzroy Crossi**	**17.27**	**218**	Pn	**Pn**	**16 26 00.5**	**-1.6**
	comp=Z,3.5nm,0.3s,baz=40,slow=12,SNR=110						
FITZ				Sn	**Sn**	**16 29 03.4**	**-10**
	comp=Z,4.2nm,0.3s,baz=185,slow=16,SNR=3.9						
CTA	**Charters Tower**	**18.15**	**150**	*e*P	**Pn**	**16 26 13.5**	**+0.6**
	comp=Z,25nm,0.6s						
CTA				*e*S	**Sn**	**16 29 34.4**	**0.0**
CTA	**Charters Tower**	**18.15**	**150**	Pn	**Pn**	**16 26 13.6**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=313,slow=5.3,SNR=7.4						
CTA				Lg		16 31 31.9	
	comp=Z,1.6nm,0.3s,baz=60,slow=22,SNR=3.5						
CTA				LR	LR	16 33 33.3	
	comp=Z,222nm,18.5s,baz=106,slow=38						
CTAO	**Charters Tower**	**18.15**	**150**	*e*P	**Pn**	**16 26 12.9**	**0.0**
CTAO				*e*S	**Sn**	**16 29 39.6**	**+5.2**
CTAO				pmax	pmax		
	comp=Z,32nm,0.6s						
CTAO	**Charters Tower**	**18.15**	**150**	*e*P	**Pn**	**16 26 12.8**	**0.0**
	comp=Z,32nm,0.6s						
CTAO				*e*S	**Sn**	**16 29 39.6**	**+5.2**
AS31	**Alice Springs**	**19.25**	**187**	*e*P	**Pn**	**16 26 24.9**	**-1.4**
ASAR	**Alice Springs**	**19.25**	**187**	P	**Pn**	**16 26 25.0**	**-1.3**
	comp=Z,6.8nm,0.3s,baz=9.8,slow=11,SNR=439						
ASAR				S	**Sn**	**16 29 53.9**	**-7.3**
	comp=Z,1.6nm,0.3s,baz=11,slow=14,SNR=5.5						
ASAR				Lg		16 32 02.8	
	baz=14,slow=30,SNR=3.1						
ASAR				LR	LR	16 34 09.9	
	comp=Z,374nm,18.8s,baz=13,slow=38						
ASAR	**Alice Springs**	**19.25**	**187**	P	**Pn**	**16 26 25.0**	**-1.3**
ASAR				S	**Sn**	**16 29 53.9**	**-7.2**
ASAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAR				smax			
	comp=N,2.0nm,0.3s						
ASAR				MLR	MLR		
	comp=Z,374nm,18.8s						
GUMO	**Guam**	**19.74**	**24**	LR	LR	16 33 06.8	
	comp=Z,135nm,19.1s,baz=193,slow=34						
MBWA	**Marble Bar**	**23.31**	**223**	*e*P	**P**	**16 27 09.2**	**+0.5**
	comp=Z,12nm,0.6s,mb4.5						
MBWA				*e*S	**S**	**16 31 15.3**	**-3.5**
FORT	**Forrest**	**27.37**	**196**	*e*P	**P**	**16 27 51.3**	**+5.6**
	comp=Z,31nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**27.66**	**171**	P	**P**	**16 27 47.9**	**-0.4**
	comp=Z,2.1nm,0.5s,mb4.0,baz=352,slow=11,SNR=13						
STKA				LR	LR	16 39 09.7	
	comp=Z,118nm,18.8s,MS3.5,baz=192,slow=37						
STKA	**Stephens Creek**	**27.66**	**171**	*e*P	**P**	**16 27 47.9**	**-0.3**
KLBR	**Kellerberrin**	**32.26**	**211**	*e*P	**P**	**16 28 28.5**	**-0.5**
	comp=Z,3.0nm,0.4s,mb4.5						
NWAO	**Narrogin (SRO)**	**33.59**	**210**	*e*P	**P**	**16 28 41.2**	**+0.6**
MJAR	**Matsushiro Arr**	**40.83**	**2**	P	**P**	**16 29 41.2**	**-0.8**
	comp=Z,1.3nm,0.7s,mb3.7,baz=188,slow=6.3,SNR=5.5						
ENH	**Enshi**	**43.21**	**325**	*e*P	**P**	**16 29 53.2**	**-8.2**
	comp=Z,0.8nm,0.7s,mb3.6						
KMI	**Kunming**	**44.13**	**314**	P	**P**	**16 30 10.1**	**+1.3**
KMI				AP	pP	16 30 13.1	-5.1
KMI				XP	sP	16 30 14.7	-7.3
KMI				PP	PP	16 31 54.8	+2.9
KMI				S	**S**	**16 36 42.6**	**+3.1**
KMI				SS	SS	16 39 52.6	-5.0
KMI				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.3						
KMI				AMB	AMB		
	comp=Z,110nm,4.6s						
KMI				LR	LR		
	comp=N,134nm,20.6s						
KMI				LR	LR		
	comp=E,88nm,13.9s						
KMI				LR	LR		
	comp=Z,43nm,23.8s,MS3.3						
XAN	**Xi'an**	**46.37**	**328**	P	**P**	**16 30 25.7**	**-0.9**
XAN				AP	pP	16 30 33.4	-2.7
XAN				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.6						
CD2	**Chengdu**	**47.13**	**321**	*e*P	**P**	**16 30 30.9**	**-1.6**
CD2				XP	sP	16 30 38.2	-7.6
CD2				PP	PP	16 32 21.3	-2.2
CD2				S	**S**	**16 37 21.7**	**-1.1**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CD2				LR	LR		
	comp=E,70nm,10.8s						
CD2				LR	LR		
	comp=Z,90nm,10.8s,MS4.0						
BJT	**Baijiatuau**	**48.10**	**339**	*e*P	**P**	**16 30 37.6**	**-2.5**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJT	**Baijiatuau**	**48.10**	**339**	*e*P	**P**	**16 30 37.6**	**-2.4**
	comp=Z,6.4nm,0.8s,mb4.7						
BJI	**Beijing**	**48.12**	**339**	*e*P	**P**	**16 30 39.2**	**-1.0**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.7						
BJI				LR	LR		
	comp=Z,122nm,20.6s,MS3.9						
ASAJ	**Asahikawa**	**48.67**	**6**	P	**P**	**16 30 44.5**	**0.0**
	comp=Z,1.9nm,0.5s,mb4.4,baz=217,slow=5.1,SNR=7.1						
ASAJ	**Asahikawa**	**48.67**	**6**	P	**P**	**16 30 44.5**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MDJ	**Mudanjiang**	**49.27**	**353**	P	**P**	**16 30 49.1**	**0.0**
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,46nm,5.2s						
MDJ				LR	LR		
	comp=N,24nm,19.4s,MS3.2						
MDJ				LR	LR		
	comp=E,8.0nm,21.4s,MS3.2						
MDJ				LR	LR		
	comp=Z,24nm,21.4s,MS3.2						
MDJ	**Mudanjiang**	**49.27**	**353**	*e*P	**P**	**16 30 48.9**	**-0.2**
	comp=Z,4.9nm,0.7s,mb4.7						
LZH	**Lanzhou**	**50.67**	**325**	*e*P	**P**	**16 31 01.0**	**+1.3**
LZH				AP	pP	16 31 05.5	-3.8
LZH				XP	sP	16 31 08.1	-5.0
LZH				PP	PP	16 32 58.4	+2.6
LZH				AMB	AMB		
	comp=Z,26nm,1.0s,mb5.1						
YSS	**Yuzh-Sakhalins**	**51.50**	**5**	P	**P**	**16 31 05.4**	**-0.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
YSS	**Yuzh-Sakhalins**	**51.50**	**5**	P	**P**	**16 31 05.4**	**-0.5**
	comp=Z,10nm,1.5s,mb4.5						
GTA	**Gaotai**	**55.28**	**326**	*e*P	**P**	**16 31 35.0**	**+1.3**
GTA				AP	pP	16 31 39.0	-4.3
GTA				XP	sP	16 31 41.8	-5.3
GTA				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.7						
JIRN	**Jiri**	**58.14**	**306**	*e*P	**P**	**16 31 55.4**	**+1.4**
	comp=Z,15nm,0.7s,mb5.2						
ULN	**Ulaanbaatar**	**58.21**	**337**	*e*P	**P**	**16 31 52.8**	**-1.7**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.3						
ULN	**Ulaanbaatar**	**58.21**	**337**	*e*P	**P**	**16 31 52.8**	**-1.7**
	comp=Z,4.6nm,1.5s,mb4.3						
SONM	**Songino Array**	**58.45**	**337**	P	**P**	**16 31 56.4**	**+0.3**

	comp=Z,0.8nm,0.7s,mb3.9,baz=156,slow=6.6,SNR=4.7						
SONM				LR	LR	16 57 54.5	
	comp=Z,59nm,18.9s,MS3.7,baz=257,slow=37						
GUN	Gumba	58.49	307	eP	P	16 31 57.7	+1.2
	comp=Z,22nm,0.7s,mb5.3						
PKI	Pulchoki	58.73	306	eP	P	16 31 59.3	+1.2
KKN	Kakani	58.92	306	eP	P	16 32 00.7	+1.2
DMN	Daman	58.99	306	eP	P	16 32 01.5	+1.6
	comp=Z,12nm,0.6s,mb5.1						
GKN	Gorkha	59.53	306	eP	P	16 32 05.1	+1.5
	comp=Z,23nm,0.7s,mb5.3						
KOLN	Koldanda	60.28	305	eP	P	16 32 10.1	+1.3
	comp=Z,14nm,0.7s,mb5.1						
WMQ	Urumqi	65.11	323	eP	P	16 32 41.0	0.0
WMQ				XP	sP	16 32 48.0	-6.5
WMQ				PP	PP	16 35 06.0	+1.7
WMQ				S	S	16 41 21.0	-0.4
WMQ				SCS	ScS	16 42 32.0	-1.7
WMQ				SS	SS	16 45 35.0	+1.1
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,107nm,5.0s						
WMQ				LR	LR		
	comp=N,38nm,15.0s,MS3.8						
WMQ				LR	LR		
	comp=E,32nm,15.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,28nm,15.0s,MS3.6						
MKAR	Makanchi Array	69.92	324	P	P	16 33 12.0	+0.7
	comp=Z,8.7nm,0.6s,mb4.8,baz=114,slow=7.9,SNR=70						
MKAR	Makanchi Array	69.92	324	P	P	16 33 12.0	+0.6
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MKAR	Makanchi Array	69.92	324	P	P	16 33 12.0	+0.7
ZAL	Zalesovo	72.42	331	P	P	16 33 25.3	-1.2
	comp=Z,1.8nm,0.6s,mb4.2,baz=3.3,slow=9.2,SNR=8.8						
ZAL	Zalesovo	72.42	331	P	P	16 33 25.3	-1.2
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	Ala-Archa	73.02	317	P	P	16 33 29.4	-0.7
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
AAK	Ala-Archa	73.02	317	P	P	16 33 29.4	-0.7
	comp=Z,6.5nm,1.2s,mb4.4						
NVS	Novosibirsk	73.68	331	eP	P	16 33 32.4	-1.6
KURK	Kurchatov	73.96	326	eP	P	16 33 34.9	-0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
KURK	Kurchatov	73.96	326	eP	P	16 33 34.9	-0.7
	comp=Z,3.0nm,0.4s,mb4.6						
VNDA	Vanda	74.23	174	P	P	16 33 39.2	+2.1
	comp=Z,0.4nm,0.7s,mb3.5,baz=333,slow=6.8,SNR=2.2						
VNDA				LR	LR	17 04 30.4	
	comp=Z,67nm,19.4s,MS3.9,baz=342,slow=34						
VNDA	Vanda	74.23	174	P	P	16 33 39.2	+2.1
VNDA				LR	LR	17 04 30.4	
SBA	Scott Base	75.03	174	P	P	16 33 44.6	+2.8
SBA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
SBA	Scott Base	75.03	174	P	P	16 33 44.6	+2.9
	comp=Z,2.6nm,0.9s,mb4.2						
BRVK	Borovoye	79.63	326	eP	P	16 34 07.2	-0.4
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
BRVK	Borovoye	79.63	326	eP	P	16 34 07.2	-0.3
	comp=Z,7.7nm,0.9s,mb4.6						
MAW	Mawson	79.71	202	P	P	16 34 09.3	+1.3
	comp=Z,0.9nm,0.6s,mb3.9,baz=98,slow=7.1,SNR=3.8						
MAW				LR	LR	17 07 02.1	
	comp=Z,47nm,19.9s,MS3.8,baz=241,slow=34						
MAW	Mawson	79.71	202	P	P	16 34 06.9	-1.1
MAW				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MAW	Mawson	79.71	202	P	P	16 34 06.9	-1.1
	comp=Z,5.8nm,1.3s,mb4.3						
QSPA	South Pole Qui	85.48	180	P	P	16 34 41.4	+3.4
ARU	Arti	87.11	327	P	P	16 34 44.1	-2.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
ARU	Arti	87.11	327	P	P	16 34 44.1	-1.9
	comp=Z,3.3nm,0.7s,mb4.7						
ARCES	ARCESS Array B	101.46	340	P	Pdif	16 35 50.7	-1.1
	comp=Z,1.0nm,0.6s,baz=68,slow=8.0,SNR=8.8						
ARCES	ARCESS Array B	101.46	340	P	Pdif	16 35 50.7	-1.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	101.46	340	P	Pdif	16 35 50.7	-1.1
TORD	Torodi Ar. Bea	134.67	284	PKP	PKPdf	16 41 20.0	+1.3
	comp=Z,0.5nm,0.6s,baz=45,slow=1.3,SNR=4.0						

NNC 10 16:43:12.6±7.4, 5009N×8523E, h8^{km}±33^{km}, mb3.6, mpv3.4, 8C-4D, Error ellipse: s-maj=49.8km s-min=28.5km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK02	Makanchi Array	3.85	211	⇑Pn	Pn	16 44 14.8	+2.8
	9.7nm,0.6s,baz=62,slow=14						
MK02				⇑Pg	Pg	16 44 22.8	-3.6
	baz=21,slow=14						
MK02				⇓Lg		16 45 15.3	
	54nm,0.6s,baz=30,slow=30						
KURK	Kurchatov	4.28	281	⇑Pn	Pn	16 44 20.5	+2.7
	1.4nm,0.4s						
KURK				⇑Sn	Sn	16 45 11.1	+3.2
	3.3nm,0.4s						
KURK				⇓Lg		16 45 29.0	
	39nm,0.9s						
VOSK	Vostochnaya	9.29	292	⇑Pn	Pn	16 45 25.3	-1.5
	1.6nm,1.2s						
VOSK				⇑Sn	Sn	16 47 10.6	-0.8
	2.3nm,0.7s						
BVA0	Borovoye Array	9.70	293	⇑Sn	Sn	16 47 21.1	-0.4
	0.4nm,0.7s,baz=109,slow=23,SNR=4.5						
CHKZ	Chkalovo	9.72	297	⇓Sn	Sn	16 47 19.3	-2.8
	3.9nm,1.0s						
TKM2	Tokmak 2	9.77	226	⇑Lg		16 48 23.1	
	1.4nm,1.1s						
KK31	Karatay Array	12.29	241	⇓Pn	Pn	16 46 05.8	-2.0
	0.3nm,0.5s,baz=47,slow=16,SNR=6.9						

CASC 10 17:37:03.9±1.8, 1149N×8712W, h24^{km}±11^{km}, MD4.1, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.86	37	eP	Pb	17 37 20.4	+0.3
COPN				eS	Sb	17 37 31.8	+0.6
CRUN	El Crucero	0.94	58	eP	Pb	17 37 20.9	-0.6
CRUN				eS	Sb	17 37 34.1	+0.6
LEON	Leon	0.95	13	eP	Pb	17 37 21.5	-0.2
XAVN	Gruta Xavier	1.01	50	eP	Pn	17 37 21.7	-0.9
TICN	Ticuantepe	1.02	58	eP	Pn	17 37 21.9	-0.8
MIRN	Miramar	1.03	23	eP	Pn	17 37 22.2	-0.6
APYN	Apoyeque	1.05	45	eP	Pn	17 37 22.9	-0.3
TISN	Laguna Tiscapa	1.05	52	eP	Pn	17 37 22.9	-0.3
MGAN	Managua	1.07	52	eP	Pn	17 37 23.1	-0.3
MGAN				eS	Sb	17 37 38.6	+1.2
MOMJ	Momotombo	1.07	32	eP	Pn	17 37 23.2	-0.3
TELN	Telica	1.14	14	eP	Pn	17 37 24.9	+0.6
CRIN	San Cristobal	1.21	3	eP	Pn	17 37 25.0	-0.2
CONN	Concepcion	1.46	87	eP	Pn	17 37 28.1	-0.6
JCR	Jicaral	2.55	129	eP	Pn	17 37 44.4	+0.6
JCR				eS	Sn	17 38 17.6	+3.6
PRS1	Puriscal	3.13	118	eP	Pn	17 37 52.3	+0.5
LCR2	La Lucha 2	3.52	119	eP	Pn	17 37 57.6	+0.6
LCR2				eS	Sn	17 38 38.3	+0.5
BUS	Buena Vista	3.82	120	eP	Pn	17 38 01.1	0.0

*BJI **10** 17:51:59.8, 3745N×7429E, h10^{km}, mB4.9, mb4.6, ML4.2, Ms4.0, Msz3.7*

*IDC **10** 17:52:02.7±0.8, 3735N×7473E, h0^{km}, mb4.2/12, mb1 4.3/17, mb1mx4.2/25, mbtmp4.2/17, ML4.0/5, MS3.1/8, Ms1 3.1/8, ms1mx2.9/29, Error ellipse: s-maj=18.2km s-min=14.8km az=173.0*

*NEIC **10** 17:52:03.4±2.7, 3741N×7484E, h4^{km}±18^{km}, mb4.5/29, Error ellipse: s-maj=7.8km s-min=5.0km az=56.0*

*ISCJB **10** 17:52:05.5±1.2, 3739N±003×7480E±004, h29^{km}±9^{km}, mb4.4/45, MS3.2/8, Error ellipse: s-maj=5.5km s-min=3.8km az=120.2*

*MOS **10** 17:52:06.0±1.2, 3746N×7490E, h33^{km}, mb4.6/31, Error ellipse: s-maj=9.4km s-min=5.2km az=118.1*

*NNC **10** 17:52:09.6±9.4, 3762N×7384E, h0^{km}, mb4.3, mpv4.5, Error ellipse: s-maj=126.3km s-min=80.8km az=38.0*

*SZGRF **10** 17:52:13.0, 38.18N×75.10E, h33^{km}, mb4.4, Southern Xinjiang, China*

ISC 10 17:52:08.9±0.4, 3741N±003×7479E±004, h42^{km}±5^{km}, n165, σ1§28/175, mb4.4/45, MS3.2/8, 15C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	Kyzart	4.67	4	P	Pn	17 53 18.2	+1.3
	SNR=46						
AML	Almayashu	4.79	350	P	Pn	17 53 19.6	+1.1
	SNR=6.9						
UCH	Uchtor	4.82	358	P	Pn	17 53 20.9	+2.0
	SNR=18						
DLH	Dalhousie	4.95	168	eP	Pn	17 53 23.0	+2.2
DLH				eS	Sn	17 54 18.0	+1.2
AAK	Ala-Archa	5.22	358	P	Pn	17 53 26.8	+2.3
	SNR=7.6						
AAK	Ala-Archa	5.22	358	⇑P	Pn	17 53 25.9	+1.4
	SNR=19						
AAK	Ala-Archa	5.22	358c	iPN	Pn	17 53 25.7	+1.2
AAK	Ala-Archa	5.22	358	ePn	Pn	17 53 25.5	+1.0
	84nm,0.8s						
AAK				e		17 53 39.2	
KBK	Karagaybulak	5.24	1	P	Pn	17 53 26.2	+1.5
	SNR=26						
EKS2	Erkin-Say	5.30	352	P	Pn	17 53 26.7	+1.1
	SNR=49						
PONG	Pong	5.53	170	ex	x	17 53 37.0	
TKM2	Tokmak 2	5.54	6	P	Pn	17 53 30.2	+1.4
	SNR=114						
CHMS	Chumysh	5.58	360	P	Pn	17 53 30.9	+1.4
	SNR=32						
BHK	Bhakra	6.13	167	ex	x	17 54 01.6	
SDNR	Sundarnagar	6.17	162	eP	Pn	17 53 39.4	+2.0
SDNR				ex	x	17 54 55.0	
KLP	Kalpa	6.52	153	eP	Pn	17 53 44.3	+1.9
KLP				eS	Sn	17 54 55.7	+0.3
KK31	Karatay Array	6.56	331	⇑P	Pn	17 53 41.8	-1.0
	27nm,0.6s,baz=138,slow=12,SNR=315						
KK31				⇓S	Sn	17 54 54.1	-2.1
	26nm,0.4s,baz=200,slow=64,SNR=13						
NDI	New Delhi	8.94	166	eP	Pn	17 54 17.0	+1.6
NDI				eS	Sn	17 55 51.0	-3.8
LGTI	Lohaghat	9.15	149	ex	x	17 54 23.5	
KHET	Khetri	9.35	174	eP	Pn	17 54 22.0	+0.9
KHET				AMb	AMB	17 54 25.1	
	comp=Z,8.5nm,0.5s						
KHET				eS	Sn	17 55 59.2	-5.6
KUDL	Kundal	9.35	171	eP	Pn	17 54 19.9	-1.2
KUDL				AMb	AMB	17 54 23.7	
	comp=Z,12nm,0.7s						
KUDL				eS	Sn	17 55 59.2	-5.7
MK05	Makanchi Array	10.90	28	⇑P	Pn	17 54 42.9	+0.5
	comp=Z,8.2nm,1.1s						
MKAR	Makanchi Array	10.90	28	Pn	Pn	17 54 42.5	+0.2
	comp=Z,0.3nm,0.3s,baz=205,slow=12,SNR=18						
WMQ	Urumqi	11.71	53	P	Pn	17 54 53.0	-0.3
WMQ				PP		17 55 02.0	
WMQ				S	Sn	17 57 05.0	+2.4
WMQ				SS		17 57 21.0	
WMQ				AMB	AMB		
	comp=Z,17nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,103nm,3.0s						
WMQ				LR	LR		
	comp=N,218nm,5.0s						
WMQ				LR	LR		
	comp=E,204nm,5.0s						
WMQ				LR	LR		
	comp=Z,107nm,5.0s						
KOLN	Koldanda	12.14	140	eP	Pn	17 54 58.0	-1.3
	comp=Z,65nm,0.6s						
GKN	Gorkha	12.51	136	eP	Pn	17 55 01.8	-2.5
	comp=Z,48nm,0.6s						
KKN	Kakani	13.04	134	eP	Pn	17 55 09.4	-2.1
	comp=Z,36nm,0.6s						
KKN	Kakani	13.04	134	eP	Pn	17 55 09.4	-2.1
KKN				pmax	pmax		
	comp=Z,36nm,0.6s						
DMN	Daman	13.08	135	eP	Pn	17 55 09.8	-2.3
	comp=Z,38nm,0.7s						
PKI	Pulchoki	13.28	135	eP	Pn	17 55 13.0	-1.8
	comp=Z,61nm,1.0s						
PKI	Pulchoki	13.28	135	eP	Pn	17 55 13.0	-1.8
PKI				pmax	pmax		
	comp=Z,61nm,1.0s						
GUN	Gumba	13.30	132	eP	Pn	17 55 12.5	-2.5
	comp=Z,57nm,0.8s						
KURK	Kurchatov	13.58	10	⇑P	Pn	17 55 15.2	-3.7
	comp=Z,10nm,1.0s						
KURK	Kurchatov	13.58	10	⇑P	Pn	17 55 16.3	-2.6
	SNR=8.8						
KURK	Kurchatov	13.58	10	eP	Pn	17 55 15.3	-3.6
KURK				pmax	pmax		
	comp=Z,23nm,1.0s						
KURK	Kurchatov	13.58	10	ePn	Pn	17 55 15.3	-3.6
	comp=Z,23nm,1.0s						
JIRN	Jiri	13.66	132	eP	Pn	17 55 17.5	-2.6
	comp=Z,42nm,0.5s						
VOSK	Vostochnaya	15.54	351	⇑P	Pn	17 55 41.2	-3.9
	comp=Z,9.9nm,1.7s						
BVA0	Borovoye Array	15.91	350	⇑P	Pn	17 55 49.0	-0.8
	comp=Z,3.5nm,1.2s,baz=257,slow=40,SNR=78						
BVAR	Borovoye Array	15.91	350	Pn	Pn	17 55 47.9	-2.0
	comp=Z,0.9nm,0.3s,baz=158,slow=12,SNR=20						
BVAR				LR	LR	18 02 37.0	
	comp=Z,25nm,21.0s,baz=326,slow=40						
BVAR	Borovoye Array	15.91	350	P	Pn	17 55 47.9	-1.9
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,25nm,21.0s						
BRVK	Borovoye	15.96	350	⇓P	Pn	17 55 47.1	-3.4
	SNR=17						
BRVK	Borovoye	15.96	350	eP	Pn	17 55 46.9	-3.5
BRVK				pmax	pmax		
	comp=Z,18nm,0.9s						
BRVK	Borovoye	15.96	350	ePn	Pn	17 55 46.9	-3.5
	comp=Z,18nm,0.9s						
AB31	Akbulak array	15.99	322	⇑P	Pn	17 55 45.4	-5.4
	comp=Z,15nm,0.7s,baz=131,slow=13,SNR=105						
AB31				⇑S	S	17 58 30.7	-29
	comp=Z,24nm,1.2s,baz=147,slow=19,SNR=14						
CHKZ	Chkalovo	16.52	351	⇑P	Pn	17 55 56.5	-1.1
	comp=Z,5.3nm,0.8s						
CHKZ	Chkalovo	16.52	351	eP	Pn	17 55 54.5	-3.0
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHKZ	Chkalovo	16.52	351	ePn	Pn	17 55 54.5	-3.0
	comp=Z,6.6nm,0.9s						
AKTK	Aktyubinsk	17.70	323	P	Pn	17 56 09.3	-2.9
AKTK				S	S	17 59 18.9	-15
AKTK				LR	LR	18 03 56.8	
AKTO	Aktyubinsk	17.70	323	⇑P	Pn	17 56 09.4	-2.9
	comp=Z,0.2nm,0.7s						
AKTO				⇑S	S	17 59 13.0	-21
	comp=Z,0.6nm,1.2s						
AKTO	Aktyubinsk	17.70	323	P	Pn	17 56 09.3	-2.9
	comp=Z,1.2nm,0.3s,baz=128,slow=11,SNR=30						
AKTO				S	S	17 59 18.9	-15
	comp=Z,0.2nm,0.3s,baz=63,slow=15,SNR=3.7						
AKTO				LR	LR	18 03 56.8	
	comp=Z,56nm,20.8s,baz=132,slow=40						
ZAL	Zalesovo	17.92	20	P	Pn	17 56 12.1	-2.7
	comp=Z,1.1nm,0.3s,baz=267,slow=12,SNR=35						
ZAL	Zalesovo	17.92	20	P	Pn	17 56 12.1	-2.7
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVS	Novosibirsk	18.37	16	eP	Pn	17 56 18.8	-1.5
NVS				pmax	pmax		
	comp=N,13nm,1.1s						
NVS				pmax	pmax		
	comp=Z,19nm,1.1s						
GTA	Gaotai	19.70	76	⇓P	Pn	17 56 36.9	+0.6
GTA				AP	pP	17 56 39.2	-5.7
GTA				XP	sP	17 56 41.8	-8.5
GTA				PP		17 57 00.0	
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s						
GTA				AMB	AMB		
	comp=Z,126nm,3.8s						
GTA				LR	LR		
	comp=N,243nm,13.7s						
GTA				LR	LR		
	comp=E,152nm,11.8s						
GTA				LR	LR		
	comp=Z,172nm,11.4s						
WSAR	Wadi Sarin	19.81	229	P	Pn	17 56 36.0	-1.5
	comp=Z,0.6nm,0.3s,baz=38,slow=8.8,SNR=7.9						
WSAR				LR	LR	18 05 43.5	
	comp=Z,56nm,20.6s,baz=72,slow=42						
ARU	Arti	21.91	335	⇑iP	P	17 56 58.4	-0.1
ARU				e		17 57 11.4	
ARU				eS	S	18 00 50.6	-7.5
ARU				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
ARU	Arti	21.91	335	eP	P	17 56 57.2	-1.3
	comp=Z,11nm,0.8s,mb4.3						
GNI	Garni	23.53	286	P	P	17 57 17.5	+2.2
	comp=Z,7.2nm,0.6s,mb4.3,baz=272,slow=9.4,SNR=4.0						
GNI				LR	LR	18 06 45.6	
	comp=Z,38nm,21.4s,MS2.8,baz=147,slow=38						
GNI	Garni	23.53	286	eP	P	17 57 16.5	+1.2
GNI				pmax	pmax		
	comp=Z,47nm,1.3s						
GNI	Garni	23.53	286	eP	P	17 57 16.5	+1.2
	comp=Z,47nm,1.3s,mb4.8						
ZAK	Zakamensk	24.11	48	eP	P	17 57 21.6	+1.0
ZEI	Tsey	24.15	292	eP	P	17 57 20.3	-0.7
ZEI				pmax	pmax		
	comp=Z,11nm,0.4s,mb4.6						
CD2	Chengdu	24.78	97	eP	P	17 57 23.4	-3.3
CD2				PP		17 57 59.6	
CD2				S	S	18 01 43.4	-2.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
CD2				LR	LR		
	comp=E,100nm,10.8s						
CD2				LR	LR		
	comp=Z,90nm,8.4s						
KIV	Kislovodsk	25.10	295	eP	P	17 57 28.9	-0.7
KIV				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
KIV	Kislovodsk	25.10	295	eP	P	17 57 28.9	-0.7
	comp=Z,13nm,0.9s,mb4.5						
SONM	Songino Array	25.32	56	P	P	17 57 32.4	+0.8
	comp=Z,7.6nm,0.8s,mb4.3,baz=258,slow=10.0,SNR=16						
SONM	Songino Array	25.32	56	P	P	17 57 32.4	+0.8
SONM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ULN	Ulaanbaatar	25.76	56	eP	P	17 57 34.9	-0.7
ULN				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.3						
ULN	Ulaanbaatar	25.76	56	eP	P	17 57 34.9	-0.7
	comp=Z,12nm,1.2s,mb4.3						
KMI	Kunming	26.75	109	P	P	17 57 46.0	+1.5
KMI				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.4						
HHC	Hu-ho-hao-te	28.60	72	eP	P	17 58 01.6	+0.5
HHC				PP	PP	17 58 53.1	-13
HHC				PCP	PcP	18 01 13.9	+2.5
HHC				S	S	18 02 49.1	+2.5
HHC				SS	SS	18 04 14.1	-35
HHC				PCS	PcS	18 04 55.4	+1.5
HHC				SCS	ScS	18 08 46.9	+4.4
HHC				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.5						
HHC				AMB	AMB		
	comp=Z,142nm,4.2s						
HHC				LR	LR		
	comp=N,135nm,15.2s,MS3.8						
HHC				LR	LR		
	comp=E,138nm,15.2s,MS3.8						
HHC				LR	LR		
	comp=Z,128nm,17.1s,MS3.6						
MALT	Malatya	28.61	283	P	P	17 58 02.1	+1.0
MALT				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.2						
MALT	Malatya	28.61	283	P	P	17 58 02.0	+0.9
	comp=Z,6.3nm,1.2s,mb4.2						
ANN	Anapa	28.90	297	eP	P	17 58 05.6	+1.8
OBN	Obninsk	31.29	317	⇑eP	P	17 58 25.4	+0.5
OBN				e		17 59 24.8	
OBN				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.8						
OBN	Obninsk	31.29	317	P	P	17 58 24.4	-0.5
	comp=Z,15nm,0.8s,mb4.9						
BR131	Keskin Array S	32.06	287	eP	P	17 58 31.6	0.0
	comp=Z,1.5nm,0.5s,mb4.1						
BRTR	Keskin Array B	32.06	287	P	P	17 58 31.1	-0.6
	comp=Z,3.6nm,0.8s,mb4.2,baz=96,slow=8.0,SNR=17						
BRTR	Keskin Array B	32.06	287	P	P	17 58 31.1	-0.5
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	34.78	307	P	P	17 58 54.4	-0.9
	comp=Z,0.4nm,0.3s,mb3.8,baz=79,slow=7.1,SNR=8.0						
JOF	Joensuu	36.65	328	ep	P	17 59 10.4	-0.9
	comp=Z,7.0nm,0.6s,mb4.7						
FIA1	FINESS Array S	38.46	325	eP	P	17 59 27.3	+0.6
FINES	FINESS Array B	38.46	325	P	P	17 59 26.3	-0.4
	comp=Z,2.8nm,0.5s,mb4.2,baz=114,slow=8.5,SNR=26						
FINES				LR	LR	18 16 16.9	
	comp=Z,44nm,19.2s,MS3.3,baz=314,slow=38						
FINES	FINESS Array B	38.46	325	P	P	17 59 26.3	-0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,44nm,19.2s						
CN2	Changchun	38.49	64	eP	P	17 59 27.8	+0.9
CN2				eS	S	18 05 23.4	+3.9
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
KAF	Kangasniemi	38.55	326	ep	P	17 59 25.1	-2.3
	comp=Z,0.8nm,0.4s,mb3.8						
SSE	Sheshan	38.56	85	eP	P	17 59 28.2	+0.7
SSE				AMB	AMB		
	comp=Z,32nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,214nm,3.9s						
SSE				LR	LR		
	comp=N,22nm,18.6s,MS3.3						
SSE				LR	LR		
	comp=E,35nm,18.6s,MS3.3						
SSE				LR	LR		
	comp=Z,56nm,19.4s,MS3.4						
NIE	Niedzica	40.51	305	eP	P	17 59 45.6	+1.9
GVD	Gavdhos	40.63	282	P	P	17 59 43.8	-1.0
	comp=Z,29nm,1.1s,mb4.8						
OJC	Ojcow	40.79	306	eP	P	17 59 46.6	+0.5
KEV	Kevo	41.12	337	ep	P	17 59 48.4	-0.3
	comp=Z,3.8nm,0.6s,mb4.2						
KEV	Kevo	41.12	337	eP	P	17 59 48.4	-0.3
KEV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
MDJ	Mudanjiang	41.31	62	P	P	17 59 49.0	-1.3
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,67nm,5.4s						
YAK	Yakutsk	41.46	36	eP	P	17 59 50.5	-1.1
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
YAK	Yakutsk	41.46	36	P	P	17 59 50.3	-1.3
	comp=Z,11nm,0.7s,mb4.6						
ARCES	ARCESS Array B	41.50	336	P	P	17 59 50.9	-0.9
	comp=Z,9.8nm,0.6s,mb4.6,baz=109,slow=8.1,SNR=49						
ARCES				LR	LR	18 18 33.9	
	comp=Z,21nm,21.2s,MS3.0,baz=74,slow=38						
ARCES	ARCESS Array B	41.50	336	P	P	17 59 50.9	-1.0
ARCES				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ARCES				MLR	MLR		
	comp=Z,21nm,21.2s						
ARCES	ARCESS Array B	41.50	336	P	P	17 59 50.9	-0.9
ARCES				LR	LR	18 18 33.9	
ARE0	ARCESS Array S	41.50	336	eP	P	17 59 50.9	-1.0
KLR	Kul'dur	42.15	55	eP	P	18 00 06.3	+9.1
MORC	Moravsky Berou	42.28	306	P	P	17 59 57.8	-0.4
	comp=Z,2.7nm,1.0s,mb3.8						
BRG	Berggiesshubel	44.45	308	eP	P	18 00 17.5	+1.8
	comp=Z,2.6nm,0.9s,mb4.0						
GERES	GERESS Array B	44.89	305	P	P	18 00 20.5	+1.2
	comp=Z,0.2nm,0.6s,mb3.1,baz=71,slow=6.3,SNR=5.4						
GERES				LR	LR	18 21 04.2	
	comp=Z,28nm,19.9s,MS3.2,baz=93,slow=39						
KHC	Kasperske Hory	44.92	305	eP	P	18 00 18.5	-1.0
CLL	Collm	44.99	309	P	P	18 00 20.0	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,logA/T=0.8,mb4.4						
CLL				*e*PPP		18 02 47.0	
CLL	**Collm**	**44.99**	**309**	*e*P	**P**	**18 00 20.0**	**0.0**
	comp=Z,4.0nm,0.7s,mb4.4						
CLL				*e*PPP		18 02 47.0	
CLL	**Collm**	**44.99**	**309**	*e*P	**P**	**18 00 20.0**	**0.0**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
NB2	**NORSAR Subarra**	**45.50**	**322**	P	**P**	**18 00 23.1**	**-1.0**
	comp=Z,1.7nm,0.6s,mb4.0,baz=91,slow=8.6						
NOA	**NORSAR Array B**	**45.50**	**322**	P	**P**	**18 00 23.4**	**-0.6**
	comp=Z,2.4nm,0.7s,mb4.1,baz=90,slow=7.8,SNR=12						
NOA				LR	LR	18 20 15.4	
	comp=Z,31nm,18.7s,MS3.3,baz=105,slow=37						
NOA	**NORSAR Array B**	**45.50**	**322**	P	**P**	**18 00 23.4**	**-0.7**
NOA				LR	LR	18 20 15.3	
NAO01	**NORSAR Array S**	**45.65**	**322**	P	**P**	**18 00 26.6**	**+1.2**
	comp=Z,6.2nm,0.9s,mb4.5						
GRA1	**Grafenberg Arr**	**46.35**	**307**	*e*P	**P**	**18 00 33.1**	**+2.3**
	comp=Z,4.0nm,1.1s,mb4.3						
GRF	**Grafenberg Arr**	**46.35**	**307**	*e*P	**P**	**18 00 33.1**	**+2.3**
	comp=Z,4.0nm,1.1s,mb4.3						
GRF	**Grafenberg Arr**	**46.35**	**307**	*e*P	**P**	**18 00 33.1**	**+2.3**
GRF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
GRF	**Grafenberg Arr**	**46.35**	**307**	*e*P	**P**	**18 00 33.1**	**+2.3**
GRF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
CDF	**Champ du Feu**	**49.15**	**306**	*e*P	**P**	**18 00 52.9**	**+0.4**
HINF	**Hinteralfeld**	**49.57**	**305**	*e*P	**P**	**18 00 56.0**	**+0.3**
MAJO	**Matsushiro**	**49.79**	**71**	*e*P	**P**	**18 00 55.7**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
MAJO	**Matsushiro**	**49.79**	**71**	*e*P	**P**	**18 00 55.7**	**-1.7**
	comp=Z,6.1nm,0.8s,mb4.7						
MJAR	**Matsushiro Arr**	**49.80**	**71**	P	**P**	**18 00 57.7**	**+0.3**
	comp=Z,3.4nm,0.8s,mb4.4,baz=295,slow=9.5,SNR=11						
MJAR	**Matsushiro Arr**	**49.80**	**71**	P	**P**	**18 00 57.7**	**+0.3**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HAU	**Haudompre**	**49.85**	**305**	*e*P	**P**	**18 00 58.2**	**+0.4**
HAU				*e*R			
	comp=Z,32nm,19.0s						
HAU	**Haudompre**	**49.85**	**305**	*e*P	**P**	**18 00 58.2**	**+0.4**
HAU				LR	LR		
	comp=Z,30nm,19.0s,MS3.3						
LPG	**La Plagne**	**50.24**	**302**	*e*P	**P**	**18 01 02.1**	**+1.3**
	comp=Z,10nm,0.8s,mb4.6						
LPG	**La Plagne**	**50.24**	**302**	*e*P	**P**	**18 01 02.1**	**+1.3**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
LPG	**La Plagne**	**50.24**	**302**	*e*P	**P**	**18 01 02.1**	**+1.3**
	comp=Z,5.1nm,0.8s,mb4.6						
SBF	**Sospel**	**50.24**	**300**	*e*P	**P**	**18 01 01.8**	**+1.0**
	comp=Z,44nm,1.1s,mb5.1						
SBF	**Sospel**	**50.24**	**300**	*e*P	**P**	**18 01 01.8**	**+1.0**
SBF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
SBF	**Sospel**	**50.24**	**300**	*e*P	**P**	**18 01 01.8**	**+1.0**
	comp=Z,22nm,1.0s,mb5.2						
LPL	**La Plagne**	**50.25**	**302**	*e*P	**P**	**18 01 02.1**	**+1.2**
	comp=Z,9.8nm,0.8s,mb4.6						
LPL	**La Plagne**	**50.25**	**302**	*e*P	**P**	**18 01 02.1**	**+1.2**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
LPL	**La Plagne**	**50.25**	**302**	*e*P	**P**	**18 01 02.1**	**+1.2**
	comp=Z,4.9nm,0.8s,mb4.6						
GIVF	**Givet**	**50.32**	**308**	*e*P	**P**	**18 01 01.7**	**+0.3**
MBDF	**Montbardon**	**50.45**	**301**	*e*P	**P**	**18 01 02.6**	**+0.2**
	comp=Z,40nm,1.5s,mb4.9						
MBDF	**Montbardon**	**50.45**	**301**	*e*P	**P**	**18 01 02.6**	**+0.2**
MBDF				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.9						
MBDF	**Montbardon**	**50.45**	**301**	*e*P	**P**	**18 01 02.6**	**+0.2**
	comp=Z,20nm,1.5s,mb4.9						
ASAJ	**Asahikawa**	**50.49**	**60**	P	**P**	**18 01 02.5**	**-0.1**
	comp=Z,1.4nm,0.6s,mb4.2,baz=320,slow=7.9,SNR=3.4						
MEZF	**Maizieres J'vi**	**50.57**	**306**	*e*P	**P**	**18 01 03.3**	**+0.1**
BAIF	**Baives**	**50.72**	**308**	*e*P	**P**	**18 01 04.6**	**+0.2**
FRF	**La Foret Royal**	**50.88**	**300**	*e*P	**P**	**18 01 06.1**	**+0.5**
	comp=Z,32nm,1.1s,mb4.9						
FRF	**La Foret Royal**	**50.88**	**300**	*e*P	**P**	**18 01 06.1**	**+0.5**
FRF				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
FRF	**La Foret Royal**	**50.88**	**300**	*e*P	**P**	**18 01 06.1**	**+0.5**
	comp=Z,16nm,1.1s,mb4.9						
SMF	**Signal de Mont**	**51.86**	**304**	*e*P	**P**	**18 01 13.2**	**+0.3**
AVF	**Avril sur Loir**	**52.14**	**304**	*e*P	**P**	**18 01 15.3**	**+0.3**
	comp=Z,10.0nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**52.14**	**304**	*e*P	**P**	**18 01 15.3**	**+0.3**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**52.14**	**304**	*e*P	**P**	**18 01 15.3**	**+0.3**
	comp=Z,5.0nm,0.8s,mb4.5						
TCF	**Toulx Ste Croi**	**53.04**	**304**	*e*P	**P**	**18 01 22.3**	**+0.6**
	comp=Z,11nm,0.9s,mb4.5						
TCF	**Toulx Ste Croi**	**53.04**	**304**	*e*P	**P**	**18 01 22.3**	**+0.6**
TCF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
TCF	**Toulx Ste Croi**	**53.04**	**304**	*e*P	**P**	**18 01 22.3**	**+0.6**
	comp=Z,5.7nm,0.9s,mb4.5						
CAF	**Calviac**	**53.58**	**303**	*e*P	**P**	**18 01 25.8**	**+0.2**
LDF	**La Druitiere**	**53.84**	**307**	*e*P	**P**	**18 01 27.9**	**+0.3**
GRR	**Gorron**	**54.37**	**307**	*e*P	**P**	**18 01 31.4**	**0.0**
MFF	**Saint Martin d**	**54.49**	**305**	*e*P	**P**	**18 01 32.4**	**+0.1**
SUMG	**Summit**	**61.17**	**342**	P	**P**	**18 02 18.0**	**-1.2**
	comp=Z,6.7nm,0.9s,mb4.8						
TOA0	**Torodi Ar. Sit**	**68.76**	**271**	*e*P	**P**	**18 03 07.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**68.76**	**271**	P	**P**	**18 03 07.4**	**-1.0**
	comp=Z,2.3nm,0.5s,mb4.3,baz=47,slow=5.0,SNR=26						
DAWY	**Dawson**	**75.31**	**15**	P	**P**	**18 03 48.3**	**+0.7**
WRAB	**Tennant Creek**	**79.95**	**125**	*e*P	**P**	**18 04 13.3**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
WRAB	**Tennant Creek**	**79.95**	**125**	*e*P	**P**	**18 04 13.3**	**-0.2**
	comp=Z,15nm,1.1s,mb4.8						
BOSA	**Boshof**	**80.43**	**223**	P	**P**	**18 04 16.0**	**-0.1**
	comp=Z,3.7nm,0.8s,mb4.3,baz=340,slow=1.3,SNR=4.2						
BOSA	**Boshof**	**80.43**	**223**	P	**P**	**18 04 16.0**	**-0.1**
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BOSA	**Boshof**	**80.43**	**223**	P	**P**	**18 04 16.0**	**-0.1**
ASAR	**Alice Springs**	**82.34**	**127**	P	**P**	**18 04 26.6**	**+0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=312,slow=5.3,SNR=24						
ASAR	**Alice Springs**	**82.34**	**127**	P	**P**	**18 04 26.7**	**+0.5**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

ISCJB ***10*** *17:59:23.4±0.4, 43.12N±002×1355E±005, h49km±6km, Error ellipse: s-maj=6.4km s-min=3.5km az=0.3*
ROM ***10*** *17:59:23.7±0.1, 4307N×1349E, h34km±1km, Md2.9/19, Ml2.8/17, Error ellipse: s-maj=2.3km s-min=1.7km az=31.0*
CSEM ***10*** *17:59:23.2±0.1, 43.10N×1349E, h40km, ML3.8/4, Error ellipse: s-maj=2.5km s-min=1.6km az=91.0*
ISC 10 17:59:24.2±0.4**, 4310N**±002×**1353E**±005**, h40**km±9km**, n32,** σ**0ˢ74**/49**, 5C-7D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFFI	**Offida**	**0.20**	**145**	⇑Pg	**Pn**	**17 59 31.3**	**-0.2**
	3µm,0.4s						
CING	**Cingoli**	**0.37**	**319**	Pg	**Pn**	**17 59 32.5**	**-0.8**
CING				Sg	**Sn**	**17 59 39.7**	**+0.1**
	1µm,0.5s						
AOI	**Ancona**	**0.45**	**7**	⇓Pg	**Pn**	**17 59 34.4**	**0.0**
AOI				Sg	**Sn**	**17 59 43.0**	**+1.5**
	355nm,0.3s						
SNTG	**Esanatoglia**	**0.46**	**290**	Pg	**Pn**	**17 59 33.3**	**-1.1**
SNTG				Sg	**Sn**	**17 59 41.1**	**-0.5**
	183nm,0.2s						
TERO	**Teramo**	**0.48**	**174**	⇑Pg	**Pn**	**17 59 33.8**	**-0.9**
TERO				Sg	**Sn**	**17 59 41.8**	**-0.2**
	767nm,0.4s						
ARV	**Arcevia**	**0.59**	**313**	Pg	**Pn**	**17 59 35.6**	**-0.5**
ARV				Sg	**Sn**	**17 59 44.2**	**-0.4**
	71nm,0.2s						
LNSS	**Leonessa**	**0.61**	**216**	⇓Pg	**Pn**	**17 59 35.5**	**-1.0**
LNSS				Sg	**Sn**	**17 59 45.4**	**+0.2**
	1µm,0.4s						
ASS	**Assisi**	**0.65**	**267**	⇓Pg	**Pn**	**17 59 35.9**	**-1.0**
ASS				Sg	**Sn**	**17 59 46.3**	**+0.3**
	12nm,0.4s						
MURB	**Monte Urbino**	**0.75**	**283**	Pg	**Pn**	**17 59 38.1**	**-0.3**
MURB				Sg	**Sn**	**17 59 49.2**	**+0.6**
	537nm,0.3s						
FSSB	**Fossombrone**	**0.81**	**317**	Pg	**Pn**	**17 59 39.5**	**+0.4**
FSSB				Sg	**Sn**	**17 59 50.8**	**+0.9**
	111nm,0.3s						
FAGN	**Fagnano**	**0.83**	**177**	Pg	**Pn**	**17 59 39.0**	**-0.5**
FAGN				Sg	**Sn**	**17 59 52.1**	**+1.5**
	447nm,0.5s						
FIAM	**Fiamignano**	**0.89**	**200**	⇓Pg	**Pn**	**17 59 39.7**	**-0.5**
FIAM				Sg	**Sn**	**17 59 52.8**	**+1.0**
	391nm,0.6s						
MNS	**Montasola**	**0.95**	**222**	⇓Pg	**Pn**	**17 59 40.9**	**-0.2**
	350nm,0.5s						
PESA	**Pesaro**	**0.98**	**329**	Pg	**Pn**	**17 59 42.0**	**+0.5**
	145nm,0.2s						
BADI	**Badiali**	**1.02**	**294**	Pg	**Pn**	**17 59 43.1**	**+1.0**
	88nm,0.5s						
INTR	**Introdacqua**	**1.12**	**166**	Pg	**Pn**	**17 59 42.7**	**-0.7**
	155nm,0.5s						
CERT	**Cerreto**	**1.22**	**200**	Pg	**Pn**	**17 59 44.9**	**+0.1**
	119nm,0.5s						
MTCE	**Montecelio**	**1.22**	**209**	Pn	**Pn**	**17 59 44.5**	**-0.3**
	85nm,0.6s						
VVLD	**Villa Vallelon**	**1.23**	**177**	Pn	**Pn**	**17 59 45.7**	**+0.8**
	99nm,0.5s						
CRE	**Caprese Michel**	**1.26**	**295**	Pn	**Pn**	**17 59 46.6**	**+1.2**
	13nm,0.3s						
LATE	**Laterza**	**1.36**	**250**	Pn	**Pn**	**17 59 46.4**	**-0.3**
	13nm,0.4s						
SDI	**San Donato**	**1.41**	**171**	Pn	**Pn**	**17 59 48.5**	**+1.2**
	18nm,0.2s						
GIUL	**Giuliano Di Ro**	**1.55**	**188**	Pn	**Pn**	**17 59 48.9**	**-0.5**
	39nm,0.6s						
NVLJ	**Novalja**	**1.76**	**33**	*i* Pn	**Pn**	**17 59 52.3**	**+0.1**
NVLJ				*i* Sg	**Sn**	**18 00 13.2**	**0.0**
NVLJ	**Novalja**	**1.76**	**33**	*i* Pn	**Pn**	**17 59 52.2**	**+0.1**
NVLJ				*i* Sg	**Sn**	**18 00 13.2**	**-0.1**
VOY	**Vojsko**	**2.94**	**5**	*e*Pn	**Pn**	**18 00 08.4**	**-0.1**
VOY				*e*Sn	**Sn**	**18 00 41.7**	**-0.8**
CADS	**Cadrg**	**3.13**	**3**	*e*Pn	**Pn**	**18 00 10.3**	**-0.7**
CTI	**Castel Tesino**	**3.24**	**336**	Pn	**Pn**	**18 00 12.2**	**-0.3**
OBKA	**Obir**	**3.49**	**12**	⇓*i*Pn	**Pn**	**18 00 16.6**	**+0.7**
OBKA				⇑*i*Sn	**Sn**	**18 00 57.0**	**+1.1**
OBKA	**Obir**	**3.49**	**12**	Pn	**Pn**	**18 00 16.6**	**+0.7**
OBKA				Sn	**Sn**	**18 00 57.0**	**+1.1**
MOA	**Molln**	**4.78**	**6**	⇓*i*Pn	**Pn**	**18 00 34.1**	**+0.5**
MOA	**Molln**	**4.78**	**6**	⇑*i*Pn	**Pn**	**18 00 31.2**	**-2.5**
MOA				⇑*i*Sn	**Sn**	**18 01 27.1**	**-0.7**

IDC 10 18:41:19.5±4.2**, 714S**×**12925E, h130**km±32km**, mb3.5**/2**, mb1 3.6**/4**, mb1mx3.3**/13**, mbtmp3.9**/4**, Error ellipse: s-maj=83.8km s-min=23.3km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.45**	**198**	P	Pn	18 43 59.3	+0.3
	0.6nm,0.3s,baz=28,slow=12,SNR=34						
FITZ				S	Sn	18 46 00.1	-5.1
	1.7nm,0.3s,baz=294,slow=23,SNR=12						
ASAR	**Alice Springs**	**17.03**	**165**	P	Pn	18 45 08.9	-0.8
	0.6nm,0.3s,baz=337,slow=9.9,SNR=43						
ASAR				S	S	18 48 10.5	-8.9
	0.5nm,0.3s,baz=346,slow=25,SNR=8.2						
ASAR				ScP	ScP	18 53 10.4	+0.3
	0.1nm,0.3s,baz=349,slow=1.9,SNR=7.9						
STKA	**Stephens Creek**	**27.18**	**157**	P	P	18 46 51.0	+0.3
	0.9nm,0.5s,baz=326,slow=7.2,SNR=6.7						
MKAR	**Makanchi Array**	**67.93**	**327**	P	P	18 52 04.3	+0.1
	0.3nm,0.5s,baz=110,slow=8.5,SNR=8.5						

ISCJB ***10*** *18:53:22.7±0.5, 3851N±002×2676E±003, h6km±5km, Error ellipse: s-maj=4.7km s-min=3.5km az=136.6*
ATH ***10*** *18:53:22.5, 3850N×2675E, h23km, MD3.3/3*
CSEM ***10*** *18:53:22.3±0.1, 3853N×2682E, h10km, MD2.8, Error ellipse: s-maj=2.1km s-min=1.8km az=77.0*
ISK ***10*** *18:53:23.8, 3848N×2690E, h16km, MD2.8*
ISC 10 18:53:23.2±0.4**, 3851N**±002×**2676E**±004**, h9**km±4km**, n18,** σ**0ˢ98**/29**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.20**	**222**	*i* P	**Pg**	**18 53 26.9**	**-0.4**
URLA				*i* S	**Sg**	**18 53 30.7**	**+0.6**
BLCB	**Balcova**	**0.25**	**119**	*i* PG	**Pg**	**18 53 27.9**	**-0.4**
BLCB				*i* SG	**Sg**	**18 53 31.9**	**+0.2**
IZM	**Izmir**	**0.41**	**105**	*i* PG	**Pg**	**18 53 30.2**	**-1.0**
KDAG	**Bornova**	**0.41**	**105**	*i* P	**Pg**	**18 53 31.0**	**-0.2**
KDAG				*i* S	**Sg**	**18 53 38.0**	**+1.3**
SMG	**Samos**	**0.80**	**176**	*e*PN	**Pg**	**18 53 37.9**	**-0.7**
SMG				*e*SN	**Sg**	**18 53 49.1**	**+0.1**
AYVA	**Ayvalik**	**0.80**	**356**	*i* P	**Pg**	**18 53 37.7**	**-0.9**
AYVA				*i* S	**Sg**	**18 53 49.2**	**+0.1**
PRK	**Paraskevi**	**0.83**	**333**	*e*PN	**Pg**	**18 53 38.8**	**-0.4**
PRK				*e*SN	**Sg**	**18 53 50.5**	**+0.5**
AKS	**Akhisar**	**0.90**	**65**	PG	**Pg**	**18 53 39.8**	**-0.8**
AKS				SG	**Sg**	**18 53 52.2**	**-0.1**
AKHS	**Akhisar**	**0.90**	**65**	*i* P	**Pg**	**18 53 39.6**	**-0.9**
AKHS				*i* S	**Sg**	**18 53 53.1**	**+0.7**
AYDN	**Tasoluk**	**1.22**	**133**	*i* P	**Pn**	**18 53 44.1**	**-2.3**
AYDN				*i* S	**Sb**	**18 54 02.0**	**-0.3**
BOZC	**Bozcaada**	**1.44**	**338**	*i* P	**Pn**	**18 53 48.5**	**-1.0**
BOZC				*i* S	**Sn**	**18 54 06.5**	**-1.9**
BODT	**Bodrum**	**1.51**	**163**	PN	**Pn**	**18 53 49.9**	**-0.4**
CANB	**Canakkale**	**1.52**	**9**	PN	**Pn**	**18 53 51.3**	**+0.7**
BDRM	**Kayabasi**	**1.54**	**159**	*i* P	**Pn**	**18 53 51.7**	**+1.0**
BDRM				*i* S	**Sg**	**18 54 13.7**	**+1.0**
APE	**Apeiranthos**	**1.74**	**215**	*e*PN	**Pn**	**18 53 53.4**	**-0.1**
GADA	**Gvkgeada**	**1.81**	**339**	*e*PN	**Pn**	**18 53 56.3**	**+1.8**
RKY	**Sarkoy-Tekirda**	**2.20**	**8**	*e*PN	**Pn**	**18 54 01.7**	**+1.9**
ENEZ	**Enez**	**2.27**	**348**	*e*PN	**Pn**	**18 54 02.7**	**+1.8**

STR ***10*** *19:47:06.7±0.7, 4402N×1007E, h10km±1km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
CSEM ***10*** *19:47:06.4±0.0, 4420N×1005E, h2km, ML3.3/9, Error ellipse: s-maj=1.4km s-min=0.8km az=173.0*
MOS ***10*** *19:47:06.5±1.0, 4421N×1007E, h10km, mb4.0/1, Error ellipse: s-maj=5.2km s-min=3.9km az=111.8*
NEIC ***10*** *19:47:06.5±0.5, 4404N×10.18E, h10km, ML3.3(LDG), ML3.4(SZGRF), ML3.4(STR), Error ellipse: s-maj=7.0km s-min=3.1km az=149.0*
ROM ***10*** *19:47:07.0±0.1, 4423N×1006E, h5km, Md3.2/18, Ml3.1/16, Error ellipse: s-maj=1.6km s-min=1.3km az=26.0*
ISCJB ***10*** *19:47:07.2±0.2, 4422N±002×1003E±002, h12km±2km, mb3.3/1, Error ellipse: s-maj=2.9km s-min=1.8km az=158.4*
GEN ***10*** *19:47:07.5, 4427N×1007E, h1km, ML3.0*
IDC ***10*** *19:47:07.3±1.8, 44.19N×1030E, h0km, mb3.2/1, mb1 3.4/4, mb1mx3.3/20, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=36.1km s-min=15.2km az=104.0*
PRU ***10*** *19:47:07.0, 4426N×1009E, h0km*
SZGRF ***10*** *19:47:09.6, 4430N×1002E, h10km, mb3.4, Northern Italy*
LDG ***10*** *19:47:09.1±0.1, 44.15N×1009E, h2km, Ml3.3/27, Error ellipse: s-maj=2.7km s-min=1.7km az=10.0*
ISC 10 19:47:07.8±0.3**, 4421N**±002×**1002E**±001**, h8**km±2km**, n170,** σ**1ˢ07**/261**, mb3.3**/1**, 15C-16D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VINC	**Vinca**	**0.12**	**124**	P	**Pg**	**19 47 10.7**	**+0.2**
VALM		**0.22**	**49**	P	**Pg**	**19 47 11.1**	**-1.1**
CODM		**0.22**	**327**	P	**Pg**	**19 47 11.6**	**-0.7**
VLC	**Villacollemand**	**0.27**	**100**	⇑Pg	**Pg**	**19 47 12.8**	**-0.4**
VLC				Sg	**Sg**	**19 47 16.9**	**+0.1**
	1µm,0.6s						
VLC	**Villacollemand**	**0.27**	**100**	*e*P	**Pg**	**19 47 12.6**	**-0.5**
VLC				⇑Pg	**Pg**	**19 47 12.8**	**-0.4**
VLC				Sg	**Sg**	**19 47 16.9**	**+0.1**
SARO	**Sassorosso**	**0.28**	**94**	P	**Pg**	**19 47 12.8**	**-0.5**
GRAM		**0.29**	**7**	P	**Pg**	**19 47 12.4**	**-1.1**
ERBM	**Eremo**	**0.35**	**53**	Pg	**Pg**	**19 47 13.9**	**-0.9**
ERBM				Sg	**Sg**	**19 47 19.2**	**-0.3**
	5µm,0.6s						
SC2M	**Scurtabr**	**0.40**	**300**	P	**Pg**	**19 47 15.5**	**-0.1**
GSCL	**Gusciola**	**0.43**	**70**	⇑Pg	**Pg**	**19 47 15.5**	**-0.8**
BDI	**Bagni Di Lucca**	**0.44**	**109**	Pg	**Pg**	**19 47 15.9**	**-0.5**
BDI				Sg	**Sg**	**19 47 22.3**	**+0.1**
	870nm,0.3s						
MAIM		**0.45**	**130**	P	**Pg**	**19 47 16.4**	**-0.1**
PII	**Pisa**	**0.61**	**143**	⇑Pg	**Pg**	**19 47 19.8**	**+0.3**
PZZT	**Monte Pizzetto**	**0.61**	**97**	Pg	**Pg**	**19 47 18.9**	**-0.7**
PZZT				Sg	**Sg**	**19 47 28.1**	**+0.5**
	748nm,0.4s						
BOB	**Bobbio (Coli)**	**0.69**	**324**	Pg	**Pg**	**19 47 20.8**	**-0.4**
ZCCA	**Zocca**	**0.70**	**78**	Pg	**Pg**	**19 47 21.7**	**+0.3**
	288nm,0.5s						
GENL	**Genova Univers**	**0.78**	**285**	P	**Pg**	**19 47 23.0**	**+0.2**
GROG	**Isola di Gorgo**	**0.78**	**187**	⇑Pg	**Pg**	**19 47 23.5**	**+0.6**
GROG				Sg	**Sg**	**19 47 34.7**	**+1.6**
	537nm,0.4s						
FNVD	**Fontana Vidola**	**0.80**	**92**	Pg	**Pg**	**19 47 22.4**	**-0.7**
FNVD				Sg	**Sg**	**19 47 33.8**	**+0.3**
	575nm,0.7s						
SEI	**Scarperia**	**0.97**	**98**	Pg	**Pg**	**19 47 25.7**	**-0.9**
	501nm,0.3s						
PCP	**Pian Castagno**	**1.11**	**288**	P	**Pg**	**19 47 28.5**	**-0.6**
CSNT	**Castellina Chi**	**1.18**	**128**	Pg	**Pg**	**19 47 29.5**	**-0.9**
	247nm,0.5s						
GRFL	**Gerfalco**	**1.27**	**146**	Pg	**Pg**	**19 47 31.7**	**-0.4**
	35nm,0.5s						
FIN	**Finale Ligure**	**1.30**	**271**	⇓Pg	**Pg**	**19 47 31.2**	**-1.6**
	167nm,0.2s						
SFI	**Santa Sofia**	**1.35**	**102**	Pg	**Pg**	**19 47 32.1**	**-1.7**
	107nm,0.6s						
RORO		**1.41**	**267**	P	**Pn**	**19 47 33.2**	**-0.5**
SALO	**Salr**	**1.46**	**14**	⇓Pn	**Pn**	**19 47 34.5**	**+0.1**
	4µm,0.6s						
CRE	**Caprese Michel**	**1.51**	**112**	Pn	**Pn**	**19 47 34.6**	**-0.6**
	43nm,0.3s						
ROB	**Roburent**	**1.55**	**274**	P	**Pn**	**19 47 34.7**	**-0.9**
IMI	**Imperia**	**1.56**	**260**	Pn	**Pn**	**19 47 34.9**	**-1.0**
	75nm,0.2s						
MDI	**Monti di Nese**	**1.59**	**352**	Pn	**Pn**	**19 47 36.1**	**-0.1**
	282nm,0.3s						
MONE	**Monesi**	**1.64**	**266**	P	**Pn**	**19 47 36.2**	**-0.6**
NEGI	**Negi**	**1.71**	**259**	P	**Pn**	**19 47 36.9**	**-1.0**
ARCI	**Arcidosso**	**1.72**	**141**	Pn	**Pn**	**19 47 37.7**	**-0.3**
BADI	**Badiali**	**1.75**	**113**	Pn	**Pn**	**19 47 37.7**	**-0.8**
	63nm,0.4s						
SAOF	**Saorge**	**1.79**	**264**	Pn	**Pn**	**19 47 38.7**	**-0.3**
SAOF				Sg	**Sg**	**19 48 00.6**	**-4.7**
MUGIO	**Muggio**	**1.85**	**338**	Pn	**Pn**	**19 47 39.9**	**+0.1**
ENR	**Entracque**	**1.87**	**272**	P	**Pn**	**19 47 39.7**	**-0.4**
AUTN	**L'Aution**	**1.88**	**264**	Pn	**Pn**	**19 47 40.2**	**0.0**
AUTN				Sg	**Sg**	**19 48 03.6**	**-4.6**
MABI	**Malga Bissina**	**1.88**	**11**	⇓Pn	**Pn**	**19 47 40.0**	**-0.3**
	35nm,0.5s						
VAI	**Varese**	**1.88**	**332**	Pn	**Pn**	**19 47 40.2**	**-0.1**
	57nm,0.3s						
SBF	**Sospel**	**1.89**	**260**	*e*Pg	**Pg**	**19 47 44.9**	**+0.7**
SBF				*e*Sn	**Sn**	**19 48 04.8**	**+0.3**
	83nm,0.2s						
SBF	**Sospel**	**1.89**	**260**	*e*Pn	**Pn**	**19 47 39.8**	**-0.6**
SBF				*e*Pg	**Pg**	**19 47 44.9**	**+0.7**
SBF				*e*Sn	**Sn**	**19 48 04.8**	**+0.3**
SBF	**Sospel**	**1.89**	**260**	*e*Pg	**Pg**	**19 47 44.9**	**+0.7**
SBF				*e*Sn	**Sn**	**19 48 04.8**	**+0.3**
	41nm,0.2s						
STV	**Sta Anna Valdi**	**1.94**	**272**	P	**Pn**	**19 47 40.7**	**-0.3**
LUCF	**Luceram**	**1.95**	**262**	Pn	**Pn**	**19 47 40.9**	**-0.3**
REVF	**Revere**	**1.97**	**257**	Pn	**Pn**	**19 47 40.9**	**-0.6**
TOUF	**Mont Tournerai**	**2.00**	**265**	Pn	**Pn**	**19 47 41.9**	**0.0**
DOI	**San Damiano**	**2.01**	**280**	Pn	**Pn**	**19 47 41.2**	**-0.8**
	33nm,0.3s						
ORX	**Oropa**	**2.03**	**315**	P	**Pn**	**19 47 42.6**	**+0.3**
MURB	**Monte Urbino**	**2.05**	**117**	Pn	**Pn**	**19 47 41.5**	**-1.0**
	136nm,0.4s						
FSSB	**Fossombrone**	**2.06**	**103**	Pn	**Pn**	**19 47 43.9**	**+1.2**
	30nm,0.3s						
MVIF	**Mont Vial**	**2.09**	**262**	Pn	**Pn**	**19 47 43.3**	**+0.2**
PZZ	**Prazzo**	**2.11**	**279**	P	**Pn**	**19 47 42.6**	**-0.8**
CTI	**Castel Tesino**	**2.17**	**32**	Pn	**Pn**	**19 47 43.7**	**-0.6**
	40nm,0.2s						
RSP	**Reno Superiore**	**2.19**	**297**	Pn	**Pn**	**19 47 45.6**	**+1.2**
ARV	**Arcevia**	**2.23**	**107**	Pn	**Pn**	**19 47 46.4**	**+1.4**
	44nm,0.9s						
MCGN	**Macugnaga**	**2.27**	**321**	Pn	**Pn**	**19 47 46.2**	**+0.7**
	35nm,0.4s						
BRMO	**Bormio**	**2.28**	**6**	Pn	**Pn**	**19 47 46.6**	**+0.8**
	18nm,0.4s						
TUE	**Stuetta**	**2.32**	**348**	⇓Pn	**Pn**	**19 47 47.2**	**+1.0**
	57nm,0.3s						
SNTG	**Esanatoglia**	**2.32**	**113**	Pn	**Pn**	**19 47 46.7**	**+0.4**
	49nm,0.7s						
MMK	**Mattmark**	**2.35**	**323**	Pn	**Pn**	**19 47 47.3**	**+0.6**
MBDF	**Montbardon**	**2.38**	**284**	*e*Pg	**Pg**	**19 47 54.5**	**+1.0**
MBDF				*e*Sn	**Sn**	**19 48 16.7**	**+0.2**
	34nm,0.4s						
MBDF	**Montbardon**	**2.38**	**284**	*e*Pn	**Pn**	**19 47 47.1**	**0.0**
MBDF				*e*Pg	**Pg**	**19 47 54.5**	**+1.0**
MBDF				*e*Sn	**Sn**	**19 48 16.7**	**+0.2**
MBDF	**Montbardon**	**2.38**	**284**	*e*Pg	**Pg**	**19 47 54.5**	**+1.0**
MBDF				*e*Sn	**Sn**	**19 48 16.7**	**+0.2**
	17nm,0.4s						
LSD	**Ceresole Reale**	**2.39**	**303**	P	**Pn**	**19 47 48.3**	**+1.1**
RRL	**Cesana Torines**	**2.42**	**288**	P	**Pn**	**19 47 48.5**	**+0.9**
APPI	**Appiano**	**2.43**	**20**	Pn	**Pn**	**19 47 48.3**	**+0.5**
	144nm,0.4s						
FRF	**La Foret Royal**	**2.52**	**256**	*e*Pg	**Pg**	**19 47 56.9**	**+0.7**
FRF				*e*Sn	**Sn**	**19 48 18.7**	**-1.2**
	34nm,0.2s						
FRF	**La Foret Royal**	**2.52**	**256**	*e*Pn	**Pn**	**19 47 48.5**	**-0.5**
FRF				*e*Pg	**Pg**	**19 47 56.9**	**+0.7**
FRF				*e*Sn	**Sn**	**19 48 18.7**	**-1.2**
FRF	**La Foret Royal**	**2.52**	**256**	*e*Pg	**Pg**	**19 47 56.9**	**+0.7**
FRF				*e*Sn	**Sn**	**19 48 18.7**	**-1.2**
	17nm,0.2s						
BNI	**Bardonecchia**	**2.53**	**291**	*e*P	**Pn**	**19 47 51.4**	**+2.2**
BNI	**Bardonecchia**	**2.53**	**291**	*e*P	**Pn**	**19 47 51.3**	**+2.1**
DAVOX	**Davos**	**2.58**	**358**	Pn	**Pn**	**19 47 51.6**	**+1.8**
	6.2nm,0.3s,baz=161,slow=14,SNR=40						
DAVOX				Sn	**Sn**	**19 48 20.8**	**-0.5**
	10nm,0.3s,baz=154,slow=22,SNR=8.2						
DAVOX				Lg		19 48 29.9	
	6.6nm,0.3s,baz=336,slow=20,SNR=6.8						
DAVOX	**Davos**	**2.58**	**358**	Pn	**Pn**	**19 47 51.2**	**+1.4**
DAVOX				Sn	**Sn**	**19 48 20.8**	**-0.5**
OSPF	**L'Ospedale**	**2.61**	**194**	Pn	**Pn**	**19 47 44.9**	**-5.4**
MRGE	**Morge**	**2.62**	**308**	Pn	**Pn**	**19 47 51.9**	**+1.5**
	43nm,0.6s						
DIX	**Grande Dixence**	**2.63**	**316**	Pn	**Pn**	**19 47 52.4**	**+1.9**
DAVOS	**Davos**	**2.64**	**357**	P	**Pn**	**19 47 51.6**	**+0.9**
DAVOS				S	**Sn**	**19 48 20.8**	**-2.0**
LPG	**La Plagne**	**2.66**	**300**	*e*Pn	**Pn**	**19 47 52.7**	**+1.8**
LPG				*e*Sn	**Sn**	**19 48 25.1**	**+1.8**
	19nm,0.3s						
LPG	**La Plagne**	**2.66**	**300**	*e*Pn	**Pn**	**19 47 52.7**	**+1.8**
LPG				*e*Sn	**Sn**	**19 48 25.1**	**+1.8**
	9.6nm,0.3s						
LPL	**La Plagne**	**2.68**	**300**	*e*Pn	**Pn**	**19 47 53.1**	**+1.9**
LPL				*e*Sn	**Sn**	**19 48 24.8**	**+1.0**
	47nm,0.5s						
LPL	**La Plagne**	**2.68**	**300**	*e*Pn	**Pn**	**19 47 53.1**	**+1.9**
LPL				*e*Sn	**Sn**	**19 48 24.8**	**+1.0**
	23nm,0.5s						
LMR	**La Mourre**	**2.69**	**252**	*e*Pn	**Pn**	**19 47 50.7**	**-0.6**
LMR				*e*Sn	**Sn**	**19 48 20.3**	**-3.7**
	23nm,0.2s						
LMR	**La Mourre**	**2.69**	**252**	*e*Pn	**Pn**	**19 47 50.7**	**-0.6**
LMR				*e*Sn	**Sn**	**19 48 20.3**	**-3.7**
	12nm,0.2s						
RSL	**Roselend**	**2.83**	**303**	Pn	**Pn**	**19 47 56.1**	**+2.8**
SEST	**Monte Rota**	**2.98**	**31**	Pn	**Pn**	**19 47 56.2**	**+0.9**
	79µm,28.0s						
ORIF	**Oris-en-Rattie**	**3.04**	**285**	*e*Pn	**Pn**	**19 47 58.1**	**+1.9**
ORIF				*e*Sn	**Sn**	**19 48 33.6**	**+0.8**
	15nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.04**	**285**	*e*Pn	**Pn**	**19 47 58.1**	**+1.9**
ORIF				*e*Sn	**Sn**	**19 48 33.6**	**+0.8**
	7.3nm,0.2s						
TRI	**Trieste**	**3.05**	**59**	Pn	**Pn**	**19 47 55.2**	**-1.2**
	27nm,0.5s						
FVI	**Forni Avoltri**	**3.08**	**38**	Pn	**Pn**	**19 47 57.1**	**+0.3**
	17nm,0.4s						
DAVA	**Damuels**	**3.08**	**358**	*i* Pn	**Pn**	**19 47 58.7**	**+2.0**
	SNR=29						
DAVA				⇑*i*Sn	**Sn**	**19 48 37.0**	**+3.2**
DAVA	**Damuels**	**3.08**	**358**	*e*Pn	**Pn**	**19 47 58.7**	**+1.9**
SQTA	**Sankt Quirin**	**3.13**	**15**	⇓*i*Pn	**Pn**	**19 47 58.7**	**+1.3**
	SNR=23						
SQTA				⇓*i*Sn	**Sn**	**19 48 37.1**	**+2.2**
SQTA	**Sankt Quirin**	**3.13**	**15**	⇓*e*Pn	**Pn**	**19 47 58.7**	**+1.3**
SQTA				*i* Sn	**Sn**	**19 48 37.1**	**+2.2**
SQTA	**Sankt Quirin**	**3.13**	**15**	⇓*e*Pn	**Pn**	**19 47 58.7**	**+1.3**

SQTA				iSn	Sn	19 48 37.1	+2.2
ROBS	**Robic**	**3.20**	**49**	iPn	**Pn**	**19 47 57.6**	**-0.8**
ROBS				iSn	**Sn**	**19 48 36.9**	**+0.3**
SMRF	**Simiane la Rot**	**3.21**	**267**	ePn	**Pn**	**19 47 59.6**	**+1.1**
SMRF				eSn	**Sn**	**19 48 36.7**	**-0.2**
	19nm,0.4s						
SMRF	**Simiane la Rot**	**3.21**	**267**	ePn	**Pn**	**19 47 59.6**	**+1.1**
SMRF				eSn	**Sn**	**19 48 36.7**	**-0.2**
	9.4nm,0.4s						
PTCC	**Patocco-Chiusa**	**3.22**	**46**	Pn	**Pn**	**19 47 58.2**	**-0.5**
	17nm,0.4s						
MOTA	**Moosalm**	**3.23**	**13**	⇑iPn	**Pn**	**19 48 00.0**	**+1.2**
	SNR=45						
MOTA				⇑iSn	**Sn**	**19 48 39.7**	**+2.3**
WTTA	**Wattenberg**	**3.26**	**20**	⇑iPn	**Pn**	**19 48 00.3**	**+1.1**
	SNR=12						
WTTA				⇓iSn	**Sn**	**19 48 40.3**	**+2.1**
WTTA	**Wattenberg**	**3.26**	**20**	ePn	**Pn**	**19 48 00.3**	**+1.1**
WTTA	**Wattenberg**	**3.26**	**20**	⇑iPn	**Pn**	**19 48 00.3**	**+1.1**
WTTA				iSn	**Sn**	**19 48 40.2**	**+2.0**
VOY	**Vojsko**	**3.29**	**55**	ePn	**Pn**	**19 47 58.6**	**-1.1**
VOY				eSn	**Sn**	**19 48 38.2**	**-0.8**
WATA	**Walderalm**	**3.31**	**19**	⇓iPn	**Pn**	**19 48 00.7**	**+0.7**
WATA				⇓iSn	**Sn**	**19 48 41.5**	**+1.9**
CADS	**Cadrg**	**3.32**	**51**	ePn	**Pn**	**19 47 59.2**	**-0.8**
JAVS	**Javornik**	**3.33**	**58**	iPn	**Pn**	**19 47 59.1**	**-1.0**
JAVS				eSn	**Sn**	**19 48 39.6**	**-0.3**
NVLJ	**Novalja**	**3.50**	**82**	iPn	**Pn**	**19 48 03.1**	**+0.7**
NVLJ				iSn	**Sn**	**19 48 43.8**	**-0.2**
CABF	**La Chapelle**	**3.67**	**312**	ePn	**Pn**	**19 48 06.5**	**+1.7**
CABF				eSn	**Sn**	**19 48 46.0**	**-2.2**
	13nm,0.4s						
CABF	**La Chapelle**	**3.67**	**312**	ePn	**Pn**	**19 48 06.5**	**+1.7**
CABF				eSn	**Sn**	**19 48 46.0**	**-2.2**
	6.3nm,0.4s						
BBS	**Basel-Blauen**	**3.70**	**333**	Pn	**Pn**	**19 48 05.9**	**+0.6**
KBA	**Koelnbreinsper**	**3.70**	**38**	⇓iPn	**Pn**	**19 48 05.7**	**+0.4**
KBA				⇓iSn	**Sn**	**19 48 49.3**	**+0.2**
KBA	**Koelnbreinsper**	**3.70**	**38**	ePn	**Pn**	**19 48 06.3**	**+1.0**
LOMF	**Lomont**	**3.86**	**326**	Pn	**Pn**	**19 48 09.3**	**+1.9**
VIVF	**Saint-Julien-l**	**3.88**	**282**	ePn	**Pn**	**19 48 08.1**	**+0.4**
VIVF				eSn	**Sn**	**19 48 51.8**	**-1.6**
	4.2nm,0.2s						
VIVF	**Saint-Julien-l**	**3.88**	**282**	ePn	**Pn**	**19 48 08.1**	**+0.4**
VIVF				eSn	**Sn**	**19 48 51.8**	**-1.6**
	2.1nm,0.2s						
FELD	**Feldberg im Sc**	**3.93**	**340**	Pn	**Pn**	**19 48 08.7**	**+0.3**
OBKA	**Obir**	**3.94**	**53**	⇓iPn	**Pn**	**19 48 08.2**	**-0.3**
OBKA				⇑iSn	**Sn**	**19 48 55.0**	**+0.1**
OBKA	**Obir**	**3.94**	**53**	ePn	**Pn**	**19 48 08.4**	**-0.1**
BOJS	**Bojanci**	**3.94**	**69**	iPn	**Pn**	**19 48 08.3**	**-0.2**
BOJS				iSn	**Sn**	**19 48 55.1**	**+0.1**
MOF	**Molkenrain**	**4.16**	**332**	Pn	**Pn**	**19 48 12.5**	**+0.9**
HINF	**Hinteralfeld**	**4.23**	**330**	ePn	**Pn**	**19 48 13.4**	**+0.8**
HINF				eSn	**Sn**	**19 49 01.7**	**-0.4**
	38nm,0.4s						
HINF	**Hinteralfeld**	**4.23**	**330**	ePn	**Pn**	**19 48 13.4**	**+0.8**
HINF				eSn	**Sn**	**19 49 01.7**	**-0.4**
	19nm,0.4s						
BFO	**Black Forest**	**4.29**	**345**	ePn	**Pn**	**19 48 13.2**	**-0.1**
BFO				eSn	**Sn**	**19 49 01.4**	**-2.1**
DOBS	**Dobrina**	**4.32**	**61**	ePn	**Pn**	**19 48 13.8**	**+0.1**
DOBS				eSn	**Sn**	**19 49 05.6**	**+1.3**
PERS	**Pernice**	**4.33**	**54**	iPn	**Pn**	**19 48 13.9**	**-0.1**
PERS				eSn	**Sn**	**19 49 04.6**	**0.0**
LASF	**Ste Croix**	**4.44**	**270**	ePn	**Pn**	**19 48 15.2**	**-0.2**
LASF				eSn	**Sn**	**19 49 04.6**	**-2.6**
	3.3nm,0.3s						
LASF	**Ste Croix**	**4.44**	**270**	ePn	**Pn**	**19 48 15.2**	**-0.2**
LASF				eSn	**Sn**	**19 49 04.6**	**-2.6**
	1.6nm,0.3s						
ECH	**Echery**	**4.47**	**335**	Pn	**Pn**	**19 48 16.1**	**+0.2**
HAU	**Haudompre**	**4.58**	**327**	ePn	**Pn**	**19 48 18.3**	**+1.0**
HAU				eSn	**Sn**	**19 49 09.5**	**-1.2**
	28nm,0.2s						
HAU	**Haudompre**	**4.58**	**327**	ePn	**Pn**	**19 48 18.3**	**+1.0**
HAU				eSn	**Sn**	**19 49 09.5**	**-1.2**
	14nm,0.2s						
WLS	**Welschbruch**	**4.60**	**337**	Pn	**Pn**	**19 48 17.5**	**-0.1**
CDF	**Champ du Feu**	**4.62**	**337**	ePn	**Pn**	**19 48 17.4**	**-0.5**
CDF				eSn	**Sn**	**19 49 09.7**	**-1.9**
	11nm,0.3s						
CDF	**Champ du Feu**	**4.62**	**337**	ePn	**Pn**	**19 48 17.4**	**-0.5**
CDF				eSn	**Sn**	**19 49 09.7**	**-1.9**
	5.3nm,0.3s						
MOA	**Molln**	**4.69**	**38**	⇑iPn	**Pn**	**19 48 19.0**	**+0.1**
	SNR=12						
MOA				⇑iSn	**Sn**	**19 49 14.5**	**+1.0**
MOA	**Molln**	**4.69**	**38**	ePn	**Pn**	**19 48 19.2**	**+0.3**
THEF	**They Montfort**	**4.90**	**327**	Pn	**Pn**	**19 48 22.7**	**+1.0**
ARSA	**Arzberg**	**4.91**	**50**	⇓iPn	**Pn**	**19 48 21.5**	**-0.4**
	SNR=9.8						
ARSA				⇑iSn	**Sn**	**19 49 18.3**	**-0.5**
ARSA	**Arzberg**	**4.91**	**50**	ePn	**Pn**	**19 48 22.2**	**+0.3**
SMF	**Signal de Mont**	**4.99**	**301**	ePn	**Pn**	**19 48 24.2**	**+1.3**
SMF				eSn	**Sn**	**19 49 18.3**	**-2.4**
	6.8nm,0.2s						
SMF	**Signal de Mont**	**4.99**	**301**	ePn	**Pn**	**19 48 24.2**	**+1.3**
SMF				eSn	**Sn**	**19 49 18.3**	**-2.4**
	3.4nm,0.2s						
LOR	**Lormes**	**5.29**	**308**	ePn	**Pn**	**19 48 28.3**	**+1.2**
LOR				eSn	**Sn**	**19 49 27.0**	**-1.2**
	12nm,0.3s						
LOR	**Lormes**	**5.29**	**308**	ePn	**Pn**	**19 48 28.3**	**+1.2**
LOR				eSn	**Sn**	**19 49 27.0**	**-1.2**
	6.2nm,0.3s						
GEC2	**GERESS Array S**	**5.29**	**27**	ePn	**Pn**	**19 48 26.1**	**-1.0**
GEC2				eSn	**Sn**	**19 49 26.0**	**-2.2**
GERES	**GERESS Array B**	**5.29**	**27**	Pn	**Pn**	**19 48 26.1**	**-1.0**
	0.9nm,0.3s,baz=204,slow=13,SNR=30						
GERES				Sn	**Sn**	**19 49 26.0**	**-2.3**
	1.9nm,0.3s,baz=205,slow=25,SNR=8.3						
GERES				Lg		19 49 54.6	
	0.4nm,0.3s,baz=212,slow=29,SNR=3.3						
GERES	**GERESS Array B**	**5.29**	**27**	Pn	**Pn**	**19 48 26.1**	**-1.0**
GERES				Sn	**Sn**	**19 49 26.0**	**-2.2**
WET	**Wettzell**	**5.32**	**21**	ePn	**Pn**	**19 48 26.6**	**-0.9**
WET				eSn	**Sn**	**19 49 25.4**	**-3.5**
AVF	**Avril sur Loir**	**5.35**	**301**	ePn	**Pn**	**19 48 29.0**	**+1.1**
AVF				eSn	**Sn**	**19 49 28.6**	**-1.1**
	5.4nm,0.4s						
AVF	**Avril sur Loir**	**5.35**	**301**	ePn	**Pn**	**19 48 29.0**	**+1.1**
AVF				eSn	**Sn**	**19 49 28.6**	**-1.1**
	2.7nm,0.4s						
SSF	**Saint Saulge**	**5.39**	**304**	ePn	**Pn**	**19 48 29.7**	**+1.3**
SSF				eSn	**Sn**	**19 49 29.3**	**-1.3**
	4.2nm,0.3s						
KHC	**Kasperske Hory**	**5.50**	**25**	ePN	**Pn**	**19 48 29.2**	**-0.8**
KHC				eSN	**Sn**	**19 49 30.8**	**-2.6**
	13nm,0.8s						
MEZF	**Maizieres J'vi**	**5.50**	**323**	ePn	**Pn**	**19 48 30.9**	**+0.9**
MEZF				eSn	**Sn**	**19 49 32.4**	**-1.1**
	17nm,0.4s						
CONA	**Conrad Observa**	**5.51**	**45**	⇑iPn	**Pn**	**19 48 30.2**	**+0.1**
	SNR=11						
CONA				⇓iSn	**Sn**	**19 49 34.5**	**+0.8**
GRF	**Grafenberg Arr**	**5.55**	**8**	eSn	**Sn**	**19 49 31.4**	**-3.2**
BGF	**Bois d'Agland**	**5.57**	**297**	ePn	**Pn**	**19 48 32.0**	**+1.0**
BGF				eSn	**Sn**	**19 49 32.5**	**-2.7**
	17nm,0.4s						
MTLF	**Montolieu**	**5.71**	**264**	ePn	**Pn**	**19 48 33.1**	**+0.2**
MTLF				eSn	**Sn**	**19 49 36.2**	**-2.5**
	1.7nm,0.2s						
CAF	**Calviac**	**5.73**	**280**	ePn	**Pn**	**19 48 33.7**	**+0.6**
CAF				eSn	**Sn**	**19 49 37.0**	**-2.0**
	0.9nm,0.2s						
TCF	**Toulx Ste Croi**	**5.89**	**293**	ePn	**Pn**	**19 48 37.9**	**+2.5**
TCF				eSn	**Sn**	**19 49 41.5**	**-1.6**
	2.3nm,0.2s						
TNS	**Taunus Mts**	**6.11**	**350**	ePn	**Pn**	**19 48 38.0**	**-0.4**
TNS				eSn	**Sn**	**19 49 43.6**	**-4.9**
NKC	**Novy Kostel**	**6.25**	**14**	ePN	**Pn**	**19 48 39.0**	**-1.3**
NKC				eSN	**Sn**	**19 49 47.1**	**-4.8**
	5.2nm,0.4s						
MOX	**Moxa**	**6.53**	**9**	eSn	**Sn**	**19 49 55.0**	**-3.8**
PRU	**Pruhonice**	**6.56**	**26**	ePN	**Pn**	**19 48 44.1**	**-0.4**
PRU				eSN	**Sn**	**19 49 55.3**	**-4.1**
BRG	**Berggiesshubel**	**7.18**	**20**	SG	**Sg**	**19 51 06.2**	**+8.0**
	3.3nm,1.2s						
DPC	**Dobruska-Polom**	**7.49**	**33**	ePN	**Pn**	**19 48 56.5**	**-0.8**
DPC				eSN	**Sn**	**19 50 18.6**	**-3.9**
	2.7nm,0.8s						
ETSF	**Etsaut**	**7.79**	**264**	ePn	**Pn**	**19 49 02.3**	**+0.8**
ETSF				eSn	**Sn**	**19 50 26.2**	**-3.7**
	1.9nm,0.3s						
ETSF	**Etsaut**	**7.79**	**264**	ePn	**Pn**	**19 49 02.3**	**+0.8**
ETSF				eSn	**Sn**	**19 50 26.2**	**-3.7**
	0.9nm,0.3s						
KEST	**Kesra**	**8.48**	**184**	Pn	**Pn**	**19 49 15.9**	**+5.1**
	0.1nm,0.3s,baz=55,slow=12,SNR=5.1						
FINES	**FINESS Array B**	**19.70**	**23**	P	**Pn**	**19 51 38.0**	**-1.0**
	0.1nm,0.3s,baz=232,slow=10,SNR=3.7						
TORD	**Torodi Ar. Bea**	**31.76**	**196**	P	**P**	**19 53 33.5**	**+1.1**
	0.3nm,0.7s,mb3.3,baz=11,slow=9.1,SNR=2.7						

*IDC **10** 19:54:52.7±0.7, 953S×10806E, h0^{km}, mb4.2/9, mb1 4.3/10, mb1mx4.1/17, mbtmp4.2/10, ML3.7/1, MS3.5/4, Ms1 3.5/4, ms1mx3.1/20, Error ellipse: s-maj=34.8km s-min=16.5km az=61.0*

*ISCJB **10** 19:54:53.3±4.9, 949S±007×108.16E±008, h15^{km}±31^{km}, mb4.4/17, MS3.5/4, Error ellipse: s-maj=12.7km s-min=11.1km az=158.5*

*NEIC **10** 19:54:54.3±0.3, 953S×10806E, h10^{km}, mb4.8/9, Error ellipse: s-maj=18.6km s-min=6.5km az=52.0*

ISC 10 19:54:55.5±5.9**, 947S**±007×**10819E**±008**, h16**^{km}±37^{km}**, n26,** σ0^{s}65/26**, mb4.4**/17**, MS3.5**/4**, 1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.60**	**35**	⇑iP	**Pn**	**19 55 35.6**	**-1.3**
BJII				iS	**Sn**	**19 56 08.3**	**+0.1**
MBWA	**Marble Bar**	**16.08**	**138**	eP	**Pn**	**19 58 35.8**	**-5.1**
MBWA				eS	Sn	20 01 15.1	-24
FITZ	**Fitzroy Crossi**	**18.98**	**119**	eP	**Pn**	**19 59 18.7**	**+1.8**
	9.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.98**	**119**	P	**Pn**	**19 59 16.9**	**-0.1**
	0.2nm,0.3s,baz=264,slow=5.9,SNR=10						
FITZ				S	**Sn**	**20 02 31.2**	**-18**
	0.2nm,0.3s,baz=149,slow=21,SNR=6.0						
NWAO	**Narrogin (SRO)**	**24.79**	**162**	LR	LR	20 08 03.0	
	comp=Z,98nm,20.6s,MS3.3,baz=170,slow=32						
WRAB	**Tennant Creek**	**27.32**	**115**	eP	**P**	**20 00 39.8**	**+0.4**
ASAR	**Alice Springs**	**28.33**	**123**	P	**P**	**20 00 49.2**	**+0.7**
	2.4nm,0.7s,mb3.9,baz=300,slow=9.3,SNR=23						
ASAR				PcP	PcP	20 04 02.0	+0.9
	0.7nm,0.6s,baz=298,slow=1.8,SNR=9.7						
ASAR				Sn	S	20 06 21.8	+47
	0.7nm,0.7s,baz=304,slow=24,SNR=4.5						
ASAR				LR	LR	20 12 18.9	
	comp=Z,82nm,19.3s,MS3.3,baz=160,slow=37						
STKA	**Stephens Creek**	**38.13**	**131**	P	**P**	**20 02 14.2**	**+0.3**
	4.2nm,0.7s,mb4.3,baz=293,slow=8.9,SNR=11						
STKA	**Stephens Creek**	**38.13**	**131**	eP	**P**	**20 02 13.8**	**0.0**
JIRN	**Jiri**	**42.62**	**331**	eP	**P**	**20 02 52.0**	**+1.0**
	38nm,1.1s,mb5.0						
GUN	**Gumba**	**42.98**	**330**	eP	**P**	**20 02 54.8**	**+0.9**
DMN	**Daman**	**43.11**	**329**	eP	**P**	**20 02 55.4**	**+0.4**
	26nm,0.9s,mb5.0						
KKN	**Kakani**	**43.17**	**330**	eP	**P**	**20 02 55.6**	**+0.1**
	21nm,0.9s,mb4.9						
GKN	**Gorkha**	**43.67**	**329**	eP	**P**	**20 02 59.8**	**+0.3**
	25nm,1.0s,mb4.9						
KOLN	**Koldanda**	**44.02**	**328**	eP	**P**	**20 03 02.7**	**+0.4**
	26nm,0.8s,mb5.0						
SONM	**Songino Array**	**57.07**	**359**	P	**P**	**20 04 41.3**	**+0.4**
	1.0nm,0.8s,mb3.9,baz=176,slow=7.7,SNR=6.9						
ULN	**Ulaanbaatar**	**57.09**	**359**	eP	**P**	**20 04 40.6**	**-0.4**
	2.8nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**60.60**	**340**	P	**P**	**20 05 05.0**	**-0.4**
	2.3nm,0.6s,mb4.5,baz=147,slow=8.1,SNR=38						
KURK	**Kurchatov**	**65.21**	**340**	eP	**P**	**20 05 35.7**	**-0.4**
	6.6nm,1.5s,mb4.4						
MAW	**Mawson**	**65.36**	**197**	P	**P**	**20 05 36.1**	**-1.0**
	1.3nm,0.5s,mb4.2,baz=56,slow=5.5,SNR=11						
ZAL	**Zalesovo**	**66.20**	**345**	P	**P**	**20 05 42.1**	**-0.3**
	0.8nm,0.3s,mb4.2,baz=328,slow=8.1,SNR=4.7						
CHKZ	**Chkalovo**	**70.50**	**337**	eP	**P**	**20 06 09.0**	**-0.4**
	2.4nm,0.7s,mb4.2						
VNDA	**Vanda**	**73.34**	**169**	P	**P**	**20 06 25.4**	**-1.0**
	0.8nm,0.9s,mb3.7,baz=308,slow=4.1,SNR=4.7						
BRTR	**Keskin Array B**	**84.34**	**312**	P	**P**	**20 07 26.9**	**+0.1**
	0.4nm,0.5s,mb3.8,baz=187,slow=5.8,SNR=3.1						
BRTR				LR	LR	20 48 36.6	
	comp=Z,22nm,18.2s,MS3.6,baz=264,slow=38						
ARCES	**ARCESS Array B**	**96.25**	**339**	P	**P**	**20 08 22.6**	**-0.5**
	1.3nm,0.8s,mb4.4,baz=96,slow=6.2,SNR=4.8						
ARCES				LR	LR	20 57 24.4	
	comp=Z,27nm,21.8s,MS3.7,baz=272,slow=39						
WMOK	**Wichita Mounta**	**144.77**	**40**	ePKPdf	PKPdf	20 14 30.9	-0.7

*INMG **10** 20:04:48.6±0.9, 4240N×857W, h0^{km}, ML1.8, Error ellipse: s-maj=2.8km s-min=1.3km az=88.0*

MDD 10 20:04:48.0±0.6**, 4238N**×**861W, h19**^{km}±7^{km}**, mbLg2.0**/11**, Error ellipse: s-maj=6.6km s-min=3.0km az=76.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZAM	**Zamans**	**0.24**	**196**	Pg	Pg	20 04 53.4	-0.3
	96nm,0.1s,SNR=7.9						
EZAM				Lg		20 04 56.8	
	161nm,0.2s,SNR=7.9						
STS	**Santiago**	**0.50**	**5**	Pg	Pg	20 04 57.5	-0.7
	24nm,0.1s,SNR=16						
STS				Lg		20 05 04.6	
	66nm,0.2s,SNR=32						
EMAZ	**Mazaricos**	**0.63**	**334**	Pg	Pg	20 04 59.9	-0.6
	9.2nm,0.8s,SNR=9.3						
EMAZ				Lg		20 05 08.5	
	12nm,0.1s,SNR=26						
PCAB	**Cabril**	**0.80**	**147**	eP	Pb	20 05 02.9	-0.4
PCAB				eS	Sb	20 05 14.0	+0.2
PCAB							
	33nm,0.1s						
PVRL	**Vila Real**	**1.29**	**149**	eP	Pn	20 05 12.0	+0.9
PVRL				eS	Sn	20 05 28.4	+0.6
PVRL							
	15nm,0.1s						
EPON	**Pontenova**	**1.43**	**48**	Pn	Pn	20 05 11.0	-2.0
	3.7nm,0.3s,SNR=8.9						
EPON				Pg	Pg	20 05 13.8	-1.7
	3.7nm,0.3s,SNR=6.0						
EPON				Sn	Sn	20 05 29.1	-2.0
	0.1nm,0.2s,SNR=7.9						
EPON				Lg		20 05 32.8	
	5.6nm,0.2s,SNR=8.2						
ECAL	**Calabor**	**1.46**	**107**	Pg	Pg	20 05 13.2	-2.9
	2.3nm,0.3s,SNR=7.0						
ECAL				Lg		20 05 33.3	
	8.0nm,0.2s,SNR=16						
PBRG	**Braganca**	**1.50**	**112**	eP	Pn	20 05 15.2	+1.2
PBRG				eS	Sn	20 05 34.8	+1.7
PBRG							
	4.4nm,0.2s						
PVIS	**Viseu**	**1.75**	**162**	ePn	Pn	20 05 19.2	+1.8
PVIS				eSn	Sn	20 05 42.0	+2.9
PVIS							
	11nm,0.1s						
MTE	**Manteigas**	**2.14**	**158**	eSg	Sg	20 05 55.0	-1.8
MTE							
	5.8nm,0.5s						
MTE	**Manteigas**	**2.14**	**158**	Lg		20 05 55.0	
	2.9nm,0.5s						
EARI	**Arriondas**	**2.66**	**69**	Pn	Pn	20 05 29.3	-0.6
	0.3nm,0.2s,SNR=7.9						
EARI				Sn	Sn	20 05 59.1	-2.6
	0.4nm,0.2s,SNR=7.9						
EARI				Lg		20 06 10.0	
	0.3nm,0.2s,SNR=7.9						

*NEIC **10** 20:17:41.4, 1629N×9847W, h12^{km}, MD3.9(MEX), After MEX.*

MEX 10 20:17:40.2±1.2**, 1637N**×**9844W, h5**^{km}±20^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**1.50**	**290**	iP	Pn	20 18 03.5	-4.3
ACX				iS	Sn	20 18 23.5	-4.2
ACX	**Acapulco**	**1.50**	**290**	iP	Pn	20 18 03.5	-4.3
ACX				iS	Sn	20 18 24.0	-3.7
UTMO	**Huajuapan**	**1.58**	**23**	iP	Pn	20 18 05.2	-3.6
UTMO				iS	Sn	20 18 25.2	-4.3
VHO	**Vista Hermosa**	**1.78**	**67**	iP	Pn	20 18 09.4	-2.2
VHO				iS	Sn	20 18 29.1	-5.5
VHO	**Vista Hermosa**	**1.78**	**67**	iP	Pn	20 18 09.6	-1.9
VHO				iS	Sn	20 18 30.2	-4.4
OXX	**Oaxaca**	**1.79**	**66**	iP	Pn	20 18 10.0	-1.8
OXX				iS	Sn	20 18 32.0	-2.9
MEIG	**Mezcala**	**1.92**	**324**	iP	Pn	20 18 10.3	-3.2
MEIG				iS	Sn	20 18 33.2	-4.8
PLIG	**Platanillo**	**2.25**	**333**	eP	Pn	20 18 15.2	-2.9
PLIG				iS	Sn	20 18 41.4	-4.9
PLIG	**Platanillo**	**2.25**	**333**	iP	Pn	20 18 17.5	-0.6
PLIG				iS	Sn	20 18 44.1	-2.2
PPM	**Popocatepetl**	**2.69**	**356**	eP	Pn	20 18 21.0	-3.1
PPM				eP		20 18 22.0	
PPM				iS	Sn	20 18 55.1	-1.9
PPM	**Popocatepetl**	**2.69**	**356**	eP	Pn	20 18 21.0	-3.1
PPM				iS	Sn	20 18 57.7	+0.7
CMIG	**Matias Romero**	**3.48**	**78**	eP	Pn	20 18 32.7	-2.4
CMIG				iS	Sn	20 19 14.1	-2.5
CMIG	**Matias Romero**	**3.48**	**78**	iP	Pn	20 18 40.2	+5.2
CMIG				iS	Sn	20 19 15.7	-0.9

JMA 10 20:30:50.6±0.4**, 3218N**×**14278E, h1**^{km}**, M3.6, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**4.78**	**338**	P	Pn	20 32 05.6	+1.8
JHO				S	Sn	20 33 02.3	+2.5
JRY	**Ryogami san**	**5.00**	**321**	P	Pn	20 32 09.2	+2.5
JAG	**Ashikaga**	**5.05**	**328**	P	Pn	20 32 09.8	+2.4
JAG				eS	Sn	20 33 09.5	+3.1
JFK	**Kawauchi**	**5.41**	**344**	P	Pn	20 32 14.5	+2.2
JFK				eS	Sn	20 33 15.8	+0.6

*CSEM **10** 20:42:59.1±0.3, 4562N×2649E, h147^{km}±3^{km}, MD3.6/5, Error ellipse: s-maj=3.2km s-min=2.3km az=50.0, After BUC*

BUC 10 20:42:59.0±0.3**, 4562N**×**2648E, h148**^{km}±3^{km}**, MD3.7**/7**, 14C-2D, Error ellipse: s-maj=2.7km s-min=1.9km az=32.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.26**	**26**	⇑iP	Pn	20 43 19.2	+0.1
PLOR				iS	Sn	20 43 34.9	+0.4
VRI	**Vrincioaia**	**0.30**	**34**	⇑iP	Pn	20 43 19.4	+0.1
VRI				iS	Sn	20 43 34.8	+0.1
VRI	**Vrincioaia**	**0.30**	**34**	⇑iP	Pn	20 43 19.4	+0.1
VRI				iS	Sn	20 43 34.7	0.0
MLR	**Muntele Rosu**	**0.40**	**252**	⇑iP	Pn	20 43 19.8	+0.2
MLR				iS	Sn	20 43 35.6	+0.3
SNX	**Sinaia**	**0.73**	**249**	⇑iP	Pn	20 43 22.0	+0.6
SNX				iS	Sn	20 43 38.8	+0.3
GHRR		**0.79**	**55**	⇑iP	Pn	20 43 22.3	+0.5
GHRR				iS	Sn	20 43 39.8	+0.6
VARR		**1.00**	**74**	⇑iP	Pn	20 43 23.9	+0.4
VARR				iS	Sn	20 43 41.8	-0.4
VOIR		**1.02**	**261**	⇑iP	Pn	20 43 23.5	-0.2
VOIR				iS	Sn	20 43 41.8	-0.8
MTUR	**Matau**	**1.07**	**249**	⇑iP	Pn	20 43 25.9	+1.7
MTUR				iS	Sn	20 43 46.7	+3.3
CFR	**Carcaliu**	**1.24**	**110**	⇑iP	Pn	20 43 26.1	+0.3
CFR				iS	Sn	20 43 45.5	-0.7
CFR				iS	Sn	20 43 45.8	-0.4
CFR	**Carcaliu**	**1.24**	**110**	⇑iP	Pn	20 43 26.1	+0.3
CFR				iS	Sn	20 43 45.8	-0.4
BUC1	**Bucharest**	**1.31**	**194**	⇑iP	Pn	20 43 26.8	+0.4
BUC1				iS	Sn	20 43 47.4	+0.1
HARR	**Harsova**	**1.38**	**132**	⇑iP	Pn	20 43 27.6	+0.5
HARR				iS	Sn	20 43 48.0	-0.6
TIRR	**Tirgusor**	**1.79**	**130**	⇑iP	Pn	20 43 32.0	+0.4
TIRR				iS	Sn	20 43 55.5	-1.0
BURAR	**Bucovina Array**	**2.18**	**337**	⇓iP	Pn	20 43 36.9	+0.8
BURAR				iS	Sn	20 44 06.3	+1.6
DRGR		**2.87**	**296**	⇓iP	Pn	20 43 43.5	-1.1

*MOS **10** 20:45:17.9±1.3, 585S×15441E, h33^{km}, mb4.9/3, Error ellipse: s-maj=14.8km s-min=13.7km az=48.4*

*ISCJB **10** 20:45:21.4±1.6, 6.10S±007×15442E±005, h68^{km}±15^{km}, mb4.5/29, Error ellipse: s-maj=12.4km s-min=7.9km az=19.1*

*BJI **10** 20:45:21.4, 6.10S×15450E, h74^{km}, mB5.1, mb4.8*

*IDC **10** 20:45:23.6±2.2, 6.12S×15439E, h75^{km}±20^{km}, mb4.0/14, mb1 4.2/17, mb1mx4.2/19, mbtmp4.4/17, MS3.7/4, Ms1 3.7/4, ms1mx3.3/18, Error ellipse: s-maj=15.9km s-min=12.4km az=40.0*

*NEIC **10** 20:45:23.4±1.3, 607S×15447E, h74^{km}±12^{km}, mb5.0/11, Error ellipse: s-maj=10.7km s-min=9.0km az=211.0*

ISC 10 20:45:23.5±1.4**, 614S**±007×**15449E**±006**, h72**^{km}±13^{km}**, n50,** σ1^{s}00/47**, mb4.5**/29**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.32**	**121**	P	**Pn**	**20 46 55.2**	**+1.2**
	15nm,0.3s,baz=259,slow=3.4,SNR=4.2						
HNR				S	**Sn**	**20 48 09.0**	**+4.3**
	8.9nm,0.3s,baz=277,slow=22,SNR=2.6						
PMG	**Port Moresby**	**7.95**	**245**	P	**Pn**	**20 47 14.8**	**-1.6**
	35nm,0.3s,baz=49,slow=9.3,SNR=86						
PMG				S	**Sn**	**20 48 45.1**	**+0.3**
	13nm,0.3s,baz=151,slow=20,SNR=7.8						
PMG				LR	LR	20 50 12.7	
	comp=Z,530nm,19.8s,baz=32,slow=37						
PMG	**Port Moresby**	**7.95**	**245**	P	**Pn**	**20 47 14.8**	**-1.6**
PMG				S	**Sn**	**20 48 45.1**	**+0.3**
CTA	**Charters Tower**	**16.00**	**209**	eP	**Pn**	**20 49 07.7**	**+3.5**
	15nm,0.9s						
CTA	**Charters Tower**	**16.00**	**209**	P	**Pn**	**20 49 03.2**	**-1.0**
	0.6nm,0.3s,baz=40,slow=12,SNR=13						
CTA	**Charters Tower**	**16.00**	**209**	eP	**Pn**	**20 49 07.7**	**+3.5**
CTA				pmax	pmax		
	comp=Z,15nm,0.9s						
DZM	**Mont Dzumac**	**19.60**	**145**	P	**Pn**	**20 49 46.4**	**-1.5**
	comp=Z,1.6nm,0.3s,baz=249,slow=14,SNR=12						
DZM				LR	LR	20 56 11.5	
	comp=Z,188nm,19.9s,baz=332,slow=33						
KAKA	**Kakadu**	**22.70**	**252**	eP	**P**	**20 50 18.9**	**-0.2**
	comp=Z,18nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**23.89**	**233**	eP	**P**	**20 50 30.8**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**23.89**	**233**	eP	**P**	**20 50 30.8**	**+0.3**
	comp=Z,20nm,0.8s,mb4.5						
ASAR	**Alice Springs**	**26.38**	**227**	P	**P**	**20 50 52.5**	**-0.5**
	comp=Z,1.7nm,0.6s,mb3.6,baz=58,slow=8.8,SNR=20						
ASAR				PcP	PcP	20 54 17.9	+0.8
	comp=Z,5.0nm,0.7s,baz=59,slow=2.5,SNR=24						
ASAR				LR	LR	21 00 41.9	
	comp=Z,176nm,20.2s,baz=340,slow=35						
ASAR	**Alice Springs**	**26.38**	**227**	P	**P**	**20 50 52.6**	**-0.4**
ASAR						20 54 17.9	
STKA	**Stephens Creek**	**28.30**	**204**	P	**P**	**20 51 09.4**	**-0.8**
	comp=Z,2.1nm,0.6s,mb3.8,baz=53,slow=4.8,SNR=7.2						
STKA				PcP	PcP	20 54 21.4	-0.2
	comp=Z,3.6nm,0.7s,baz=4.3,slow=5.2,SNR=6.0						
STKA				LR	LR	21 01 43.0	
	comp=Z,190nm,19.2s,baz=206,slow=35						
FITZ	**Fitzroy Crossi**	**30.55**	**245**	eP	**P**	**20 51 31.4**	**+1.2**
	comp=Z,11nm,0.7s,mb4.7						
URZ	**Urewera**	**37.99**	**151**	P	**P**	**20 52 34.5**	**0.0**
	comp=Z,3.6nm,0.4s,mb4.5,baz=31,slow=15,SNR=2.6						
RPZ	**Rata Peaks**	**40.16**	**161**	P	**P**	**20 52 52.5**	**0.0**
	comp=Z,12nm,0.8s,mb4.8,baz=3.0,slow=8.8,SNR=4.3						
JOW	**Kunigami**	**41.46**	**323**	P	**P**	**20 53 03.8**	**+0.5**
	comp=Z,10nm,0.5s,mb4.9,baz=138,slow=14,SNR=6.1						
MJAR	**Matsushiro Arr**	**45.12**	**341**	P	**P**	**20 53 30.9**	**-1.8**
	comp=Z,0.9nm,0.5s,mb3.8,baz=155,slow=0.8,SNR=4.2						
CN2	**Changchun**	**56.21**	**335**	eP	**P**	**20 54 55.3**	**-0.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
XAN	**Xi'an**	**58.75**	**316**	P	**P**	**20 55 13.0**	**-1.0**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.6						
KMI	**Kunming**	**59.13**	**304**	P	**P**	**20 55 18.4**	**+1.8**
KMI				AMB	AMB		
	comp=Z,17nm,0.9s,mb5.1						
CD2	**Chengdu**	**60.88**	**310**	eP	**P**	**20 55 29.6**	**+1.0**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KPC	**Khapcheranga**	**66.54**	**332**	*e*	PP	20 58 29.3	-3.8
GTA	**Gaotai**	**67.78**	**317**	*e*P	**P**	**20 56 14.4**	**+0.7**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.1						
SONM	**Songino Array**	**68.35**	**327**	P	**P**	**20 56 17.3**	**0.0**
	comp=Z,1.6nm,0.8s,mb3.9,baz=136,slow=5.3,SNR=12						
VNDA	**Vanda**	**71.44**	**178**	P	**P**	**20 56 36.2**	**0.0**
	comp=Z,1.4nm,0.9s,mb3.8,baz=333,slow=8.1,SNR=9.7						
ZAK	**Zakamensk**	**71.51**	**328**	*e*P	**P**	**20 56 36.4**	**-0.2**
GUN	**Gumba**	**74.25**	**301**	*e*P	**P**	**20 56 54.1**	**+1.3**
	comp=Z,46nm,0.8s,mb5.3						
PKI	**Pulchoki**	**74.56**	**301**	*e*P	**P**	**20 56 55.5**	**+0.9**
KKN	**Kakani**	**74.73**	**301**	*e*P	**P**	**20 56 56.3**	**+0.7**
	comp=Z,29nm,0.9s,mb5.0						
KKN	**Kakani**	**74.73**	**301**	*e*P	**P**	**20 56 56.3**	**+0.7**
KKN				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
DMN	**Daman**	**74.83**	**301**	*e*P	**P**	**20 56 57.3**	**+1.1**
	comp=Z,81nm,0.9s,mb5.4						
GKN	**Gorkha**	**75.33**	**301**	*e*P	**P**	**20 56 59.6**	**+0.5**
	comp=Z,68nm,0.9s,mb5.4						
KOLN	**Koldanda**	**76.16**	**300**	*e*P	**P**	**20 57 04.2**	**+0.4**
	comp=Z,36nm,0.7s,mb5.2						
MCK	**McKinley**	**81.46**	**22**	*e*P	**P**	**20 57 31.8**	**-1.0**
MCK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
MCK	**McKinley**	**81.46**	**22**	*e*P	**P**	**20 57 31.8**	**-1.0**
	comp=Z,1.9nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**82.44**	**319**	P	**P**	**20 57 36.7**	**-1.2**
	comp=Z,1.2nm,0.8s,mb3.8,baz=90,slow=6.5,SNR=5.5						
MKAR	**Makanchi Array**	**82.44**	**319**	P	**P**	**20 57 36.7**	**-1.2**
ZAL	**Zalesovo**	**83.20**	**326**	P	**P**	**20 57 41.5**	**-0.4**
	comp=Z,0.6nm,0.4s,mb3.8,baz=360,slow=9.2,SNR=3.2						
QSPA	**South Pole Qui**	**83.83**	**180**	*e*P	**P**	**20 57 45.1**	**0.0**
	comp=Z,9.8nm,0.6s,mb4.8						
MAW	**Mawson**	**84.98**	**203**	P	**P**	**20 57 50.4**	**-0.5**
	comp=Z,2.8nm,0.7s,mb4.3,baz=57,slow=1.9,SNR=17						
BVAR	**Borovoye Array**	**91.32**	**323**	P	**P**	**20 58 18.8**	**-2.4**
	comp=Z,0.7nm,0.5s,mb4.0,baz=49,slow=6.6,SNR=2.6						
NVAR	**Mina Array Bea**	**91.59**	**52**	P	**P**	**20 58 23.5**	**+1.1**
	comp=Z,2.1nm,0.8s,mb4.4,baz=254,slow=4.3,SNR=7.8						
NVAR	**Mina Array Bea**	**91.59**	**52**	P	**P**	**20 58 23.5**	**+1.0**
PDAR	**Pinedale Array**	**98.50**	**48**	P	**P**	**20 58 53.5**	**-0.5**
	comp=Z,0.5nm,0.6s,mb4.2,baz=318,slow=1.2,SNR=4.4						
BOSA	**Boshof**	**120.15**	**232**	PKP	PKPdf	21 04 06.8	+0.7
	comp=Z,1.7nm,0.8s,baz=56,slow=2.6,SNR=3.7						
BOSA	**Boshof**	**120.15**	**232**	PKP	PKPdf	21 04 06.8	+0.7
TORD	**Torodi Ar. Bea**	**152.31**	**287**	PKPbc	PKPbc	21 05 10.5	-0.6
	comp=Z,1.8nm,0.5s,baz=47,slow=2.2,SNR=26						
TORD				PKPab	PKPab	21 05 21.4	+0.1
	comp=Z,3.2nm,0.8s,baz=32,slow=2.7,SNR=7.5						
TORD	**Torodi Ar. Bea**	**152.31**	**287**	PKPbc	PKPbc	21 05 10.5	-0.6
TORD				PKPab	PKPab	21 05 21.4	+0.1
DBIC	**Dimbokro**	**159.47**	**273**	PKPab	PKPab	21 05 53.1	+1.2
	comp=Z,6.3nm,0.9s,baz=144,slow=1.8,SNR=5.4						

*MOS **10** 20:54:21.2±2.4, 54.93N×122.32E, h8km, mb4.2/1, Error ellipse: s-maj=26.6km s-min=24.6km az=135.5*

SKHL 10 20:54:20.8±0.5**, 54.88N×122.41E, h10**km±2km**, mb4.0**/6**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
TUP	**Tupik**	**1.50**	**253**	*e*Pg	Pg	20 54 48.0	-1.6
TUP				AMB	AMB	20 54 49.3	
	165nm,0.3s						
TUP				*e*Sg	Sg	20 55 07.0	-2.0
TUP				A		20 55 07.8	
	313nm,0.6s						
TUP	**Tupik**	**1.50**	**253**	*e*P	Pn	20 54 48.0	+0.3
TUP				*e*		20 55 07.0	
TUP				pmax	pmax		
	comp=Z,165nm,0.3s						
TUP				smax			
	comp=E,313nm,0.6s						
CLNS	**Chul'man**	**2.41**	**34**	*e*Pg	Pg	20 55 05.4	-1.6
CLNS				AMB	AMB	20 55 08.4	
	comp=E,15nm,0.3s						
CLNS				AMB	AMB	20 55 08.4	
	comp=E,18nm,0.3s						
CLNS				*e*Sg	Sg	20 55 37.4	-0.8
CLNS				A		20 55 39.4	
	comp=E,109nm,0.3s						
CLNS				A		20 55 39.4	
	comp=E,92nm,0.3s						
CLNS				A		20 55 39.4	
	comp=E,20nm,0.3s						
CLNS	**Chul'man**	**2.41**	**34**	*e*P	Pn	20 55 05.4	+5.1
CLNS				*e*		20 55 37.4	
CLNS				pmax	pmax		
	comp=E,15nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,18nm,0.2s						
CLNS				pmax	pmax		
	comp=N,18nm,0.3s						
CLNS				smax			
	comp=E,92nm,0.2s						
CLNS				smax			
	comp=Z,20nm,0.2s						
CLNS				smax			
	comp=N,109nm,0.3s						
KROS	**Kirovskiy**	**2.69**	**98**	*e*Pn	Pn	20 55 03.5	-0.6
KROS				*e*Pg	Pg	20 55 09.7	-2.6
KROS				AMB	AMB	20 55 12.6	
	comp=N,25nm,0.4s						
KROS				AMB	AMB	20 55 12.6	
	comp=N,16nm,0.4s						
KROS				pPg		20 55 14.5	
KROS				*e*Sg	Sg	20 55 45.0	-2.1
KROS				A		20 55 49.0	
	comp=N,230nm,0.5s						
KROS				A		20 55 49.0	
	comp=N,120nm,0.5s						
KROS				A		20 55 49.0	
	comp=N,64nm,0.5s						
ZEA	**Zeya**	**3.06**	**110**	*e*Pn	Pn	20 55 09.8	+0.6
ZEA				*e*Pg	Pg	20 55 16.8	-2.6
ZEA				AMB	AMB	20 55 18.7	
	comp=N,35nm,0.3s						
ZEA				*e*Sg	Sg	20 55 58.0	-1.0
ZEA				A		20 55 59.4	
	comp=N,90nm,0.7s						
CRS	**Chara**	**3.09**	**313**	*e*P	Pn	20 55 11.7	+2.1
CRS				*e*		20 55 54.6	
CRS				pmax	pmax		
	comp=Z,20nm,0.9s						
CRS				smax			
	comp=E,129nm,1.1s						
YASR	**Yasnyy**	**3.65**	**114**	*e*Pn	Pn	20 55 17.4	+0.1
YASR				AMB	AMB	20 55 18.1	
	comp=E,6.0nm,0.5s						
YASR				pPn		20 55 20.7	
YASR				*e*Sg	Sg	20 56 14.1	-3.8
YASR				A		20 56 20.2	
	comp=E,22nm,0.5s						
YASR				A		20 56 20.2	
	comp=E,30nm,0.5s						
NLYR	**Nelyaty**	**4.12**	**296**	*e*P	Pn	20 55 25.1	+1.3
NLYR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
UKT	**Uakit**	**5.07**	**280**	*e*P	Pb	20 55 52.2	+2.6
UKT				pmax	pmax		
	comp=Z,3.0nm,0.3s						
EKMR	**Ekimchan**	**6.48**	**102**	*e*Pn	Pn	20 55 55.6	-0.6
EKMR				AMB	AMB	20 55 56.3	
	comp=Z,6.0nm,0.4s						
EKMR				pPn		20 55 58.6	
EKMR				*e*Sg	Sg	20 57 45.0	-3.7
EKMR				A		20 57 52.7	
	comp=Z,14nm,0.6s						
EKMR				A		20 57 52.7	
	comp=Z,5.0nm,0.6s						
EKMR				A		20 57 52.7	
	comp=Z,7.0nm,0.6s						
YLYR	**Ulyunkhan**	**6.49**	**275**	*e*P	Pn	20 55 55.1	-1.3
YLYR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KPC	**Khapcheranga**	**8.04**	**234**	*e*P	Pn	20 56 17.6	0.0
KPC				pmax	pmax		
	comp=Z,5.0nm,0.9s						

*ISCJB **10** 21:01:42.4±0.6, 1.34N±0.1×45.21W±0.08, h10km, mb4.4/27, MS3.7/18, Error ellipse: s-maj=15.1km s-min=11.2km az=156.4*

*IDC **10** 21:01:42.7±0.8, 1.348N×45.24W, h0km, mb4.2/12, mb1 4.2/12, mb1mx4.0/24, mbtmp4.2/12, MS3.6/18, Ms1 3.6/18, ms1mx3.5/26, Error ellipse: s-maj=25.2km s-min=16.3km az=144.0*

*NEIC **10** 21:01:44.3±0.6, 1.336N×45.23W, h10km, mb4.8/15, Error ellipse: s-maj=14.7km s-min=10.8km az=172.0*

ISC 10 21:01:44.7±0.6**, 1.34N**±0.1×**45.17W**±0.08**, h10**km**, n53,** σ**1.17**/39**, mb4.4**/27**, MS3.7**/18**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
SJG	**San Juan**	**20.72**	**286**	P	**P**	**21 06 25.6**	**+0.5**
	5.7nm,0.3s,baz=347,slow=20,SNR=2.4						
SDV	**Santo Domingo**	**25.38**	**262**	P	**P**	**21 07 11.4**	**-0.6**
	6.3nm,0.8s,mb4.2,baz=101,slow=2.7,SNR=7.5						
BDFB	**Brasilia**	**29.01**	**186**	LR	LR	21 19 05.2	
	comp=Z,96nm,18.1s,MS3.5,baz=21,slow=36						
ROSC	**El Rosal**	**29.99**	**256**	LR	LR	21 19 14.3	
	comp=Z,108nm,18.3s,MS3.5,baz=37,slow=35						
SIV	**San Ignacio**	**33.18**	**209**	P	**P**	**21 08 21.1**	**-0.3**
	1.3nm,0.8s,mb3.9,baz=48,slow=7.6,SNR=7.4						
ATAH	**Atahualpa**	**38.73**	**240**	P	**P**	**21 09 11.5**	**+2.5**
	14nm,0.9s,mb4.7,baz=85,slow=5.7,SNR=6.3						
DBIC	**Dimbokro**	**40.22**	**96**	LR	LR	21 21 58.2	
	comp=Z,130nm,21.4s,MS3.8,baz=225,slow=30						
CPUP	**Villa Florida**	**41.24**	**197**	LR	LR	21 25 48.5	
	comp=Z,49nm,21.3s,MS3.3,baz=207,slow=35						
PLAL	**Pickwick Lake**	**44.20**	**307**	*e*P	**P**	**21 09 54.3**	**+0.5**
	21nm,1.2s,mb4.7						
WVT	**Waverly**	**44.38**	**308**	*e*P	**P**	**21 09 55.8**	**+0.5**
	5.5nm,0.9s,mb4.3						
ESDC	**Sonseca Array**	**44.63**	**46**	LR	LR	21 26 09.8	
	comp=Z,73nm,18.9s,MS3.6,baz=275,slow=33						
SCHQ	**Schefferville**	**44.66**	**342**	P	**P**	**21 09 55.2**	**-2.3**
	6.5nm,0.9s,mb4.5,baz=160,slow=8.5,SNR=4.8						
SCHQ				LR	LR	21 25 04.5	
	comp=Z,59nm,21.6s,MS3.5,baz=99,slow=31						
TORD	**Torodi Ar. Bea**	**45.56**	**85**	P	**P**	**21 10 05.2**	**+0.6**
	2.8nm,1.0s,mb4.2,baz=277,slow=7.4,SNR=9.4						
TORD				LR	LR	21 26 48.5	
	comp=Z,198nm,20.0s,MS4.0,baz=275,slow=33						
FVM	**French Village**	**46.95**	**310**	*e*P	**P**	**21 10 13.5**	**-2.1**
	17nm,1.0s,mb4.9						
MIAR	**Mount Ida**	**48.44**	**304**	*e*P	**P**	**21 10 28.6**	**+1.5**
	5.2nm,0.9s,mb4.6						
CFAA	**Coronel Fontan**	**49.94**	**206**	P	**P**	**21 10 36.8**	**-1.8**
	0.4nm,0.9s,mb3.4,baz=18,slow=7.1,SNR=4.0						
WMOK	**Wichita Mounta**	**52.68**	**304**	*e*P	**P**	**21 10 58.5**	**-0.7**
	9.1nm,1.2s,mb4.6						
KEST	**Kesra**	**53.58**	**55**	LR	LR	21 31 30.8	
	comp=Z,25nm,18.4s,MS3.3,baz=259,slow=33						
DAVOX	**Davos**	**56.59**	**42**	LR	LR	21 30 38.5	
	comp=Z,57nm,20.1s,MS3.7,baz=82,slow=31						
MNTX	**Cornudas Mount**	**57.82**	**299**	*e*P	**P**	**21 11 35.7**	**-0.5**
	5.1nm,1.2s,mb4.4						
ISCO	**Idaho Springs**	**58.88**	**308**	*e*P	**P**	**21 11 45.0**	**+1.3**
	23nm,1.1s,mb5.1						
LAZ	**Ladron**	**59.48**	**302**	*e*P	**P**	**21 11 49.1**	**+1.3**
SMCO	**Snowmass**	**59.84**	**308**	*e*P	**P**	**21 11 52.0**	**+1.7**
	6.4nm,1.0s,mb4.6						
CLL	**Collm**	**59.89**	**38**	*e*P	**P**	**21 11 48.0**	**-2.7**
VRAC	**Vranov**	**61.60**	**41**	LR	LR	21 35 26.0	
	comp=Z,45nm,19.5s,MS3.6,baz=258,slow=33						
PDAR	**Pinedale Array**	**62.24**	**311**	P	**P**	**21 12 05.7**	**-0.9**
	3.5nm,1.1s,mb4.4,baz=73,slow=5.0,SNR=15						
NOA	**NORSAR Array B**	**62.38**	**27**	P	**P**	**21 12 09.6**	**+2.0**
	1.0nm,0.8s,mb4.0,baz=246,slow=6.7,SNR=3.6						
NOA				LR	LR	21 33 10.4	
	comp=Z,42nm,20.9s,MS3.6,baz=235,slow=30						
NOA	**NORSAR Array B**	**62.38**	**27**	P	**P**	**21 12 09.6**	**+2.0**
NOA				LR	LR	21 33 10.4	
GCMT	**Greycliff**	**62.75**	**315**	*e*P	**P**	**21 12 10.2**	**+0.2**
HFS	**Hagfors**	**63.16**	**29**	LR	LR	21 35 17.5	
	comp=Z,33nm,18.8s,MS3.5,baz=244,slow=32						
EGMT	**Eagleton**	**63.17**	**317**	*e*P	**P**	**21 12 11.7**	**-1.2**
	8.4nm,1.1s,mb4.8						
MOOW	**Moose Ponds**	**63.22**	**312**	*e*P	**P**	**21 12 13.3**	**+0.2**
	5.5nm,1.3s,mb4.5						
DAU	**Daniels Canyon**	**63.25**	**309**	*e*P	**P**	**21 12 14.1**	**+0.8**
TPAW	**Teton Pass**	**63.34**	**312**	*e*P	**P**	**21 12 14.5**	**+0.5**
	9.9nm,1.1s,mb4.8						
HWUT	**Hardware Ranch**	**63.59**	**310**	*e*P	**P**	**21 12 15.0**	**-0.6**
	15nm,1.0s,mb5.0						
SPUT	**South Promonto**	**64.23**	**309**	*e*P	**P**	**21 12 19.8**	**0.0**
BGU	**Big Grassy Mou**	**64.64**	**309**	*e*P	**P**	**21 12 22.3**	**-0.1**
DLMT	**Dillon**	**64.73**	**314**	*e*P	**P**	**21 12 23.3**	**+0.2**
	12nm,1.1s,mb4.8						
CHMT	**Chamberlain Mo**	**65.36**	**316**	P	**P**	**21 12 27.1**	**-0.1**
HLID	**Hailey**	**65.86**	**312**	*e*P	**P**	**21 12 29.9**	**-0.5**
	4.3nm,1.1s,mb4.4						
NEW	**Newport**	**68.10**	**317**	*e*P	**P**	**21 12 43.2**	**-1.4**
	13nm,1.0s,mb4.9						
YKA	**Yellowknife Ar**	**68.72**	**332**	LR	LR	21 39 43.4	
	comp=Z,46nm,18.3s,MS3.8,baz=90,slow=33						
FINES	**FINESS Array B**	**69.36**	**29**	P	**P**	**21 12 50.5**	**-2.0**
	1.0nm,0.8s,mb3.8,baz=191,slow=4.3,SNR=4.6						
FINES				LR	LR	21 37 04.2	
	comp=Z,28nm,20.5s,MS3.5,baz=326,slow=31						
AKASG	**Malin Array Be**	**69.85**	**41**	P	**P**	**21 12 55.7**	**+0.1**
	0.8nm,0.6s,mb3.8,baz=268,slow=6.5,SNR=6.6						
AKASG	**Malin Array Be**	**69.85**	**41**	P	**P**	**21 12 55.7**	**+0.1**
ARCES	**ARCESS Array B**	**70.78**	**21**	P	**P**	**21 13 01.0**	**-0.3**
	1.4nm,0.8s,mb3.9,baz=260,slow=5.1,SNR=5.8						
KEV	**Kevo**	**71.34**	**20**	*e*p	**P**	**21 13 00.5**	**-4.2**
JOF	**Joensuu**	**71.99**	**28**	*e*p	**P**	**21 13 09.6**	**+1.0**
BRTR	**Keskin Array B**	**73.00**	**52**	P	**P**	**21 13 16.4**	**+1.9**
	0.5nm,0.7s,mb3.6,baz=314,slow=4.3,SNR=3.6						
BOSA	**Boshof**	**79.82**	**123**	LR	LR	21 40 58.1	
	comp=Z,115nm,19.0s,MS4.2,baz=193,slow=30						
KMBO	**Kilima Mbogo**	**82.89**	**93**	LR	LR	21 47 40.6	
	comp=Z,73nm,20.3s,MS4.0,baz=92,slow=33						
AKTO	**Aktyubinsk**	**87.97**	**39**	LR	LR	21 49 59.5	
	comp=Z,31nm,20.6s,MS3.7,baz=142,slow=33						
BVAR	**Borovoye Array**	**94.00**	**33**	LR	LR	21 53 19.2	
	comp=Z,52nm,21.5s,MS4.0,baz=40,slow=33						

*NIED **10** 21:20:00, 24.60N×123.70E, h5km, Mw3.8 Best double couple: M0 6.68000×10^14 NP1:φs265.00000°, δ69.00000°, λ-86.00000°. NP2:φs75.00000°, δ21.00000°, λ-99.00000°.*

*IDC **10** 21:20:36.7±1.4, 24.56N×123.49E, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.5/20, mbtmp3.8/4, ML2.6/1, MS3.0/1, Ms1 3.0/1, ms1mx1.9/29, Error ellipse: s-maj=42.7km s-min=29.2km az=63.0*

*NEIC **10** 21:20:38.9±0.8, 24.52N×123.63E, h10km, mb4.4/1, MW3.8(NIED), Error ellipse: s-maj=18.1km s-min=11.2km az=7.0*

*ISCJB **10** 21:20:39.3±0.9, 24.54N±0.04×123.63E±0.03, h15km±6km, mb4.0/4, Error ellipse: s-maj=7.2km s-min=4.4km az=177.9*

*JMA **10** 21:20:39.4±0.1, 24.56N×123.65E, h12km±1km, M4.1*

JMA Felt II J1.

ISC 10 21:20:39.8±0.7**, 24.53N**±0.06×**123.63E**±0.03**, h13**km±6km**, n17,** σ**0.71**/27**, mb4.0**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
IRIF	**Iriomote-Funau**	**0.21**	**155**	P	**Pg**	**21 20 44.1**	**-0.3**
IRIF				S	**Sg**	**21 20 47.8**	**+0.2**
JKRS	**Kuro-shima**	**0.45**	**130**	P	**Pg**	**21 20 48.4**	**-0.2**
JKRS				*e*S	**Sg**	**21 20 54.6**	**0.0**
JIJ	**Ishigaki jima**	**0.49**	**109**	P	**Pg**	**21 20 48.7**	**-0.7**
JIJ				S	**Sg**	**21 20 55.5**	**-0.5**
HATJ	**Hateruma jima**	**0.49**	**162**	P	**Pg**	**21 20 49.5**	**0.0**
HATJ				S	**Sg**	**21 20 57.0**	**+0.9**
YOJ	**Yonaguni jima**	**0.57**	**264**	P	**Pg**	**21 20 50.9**	**0.0**
YOJ				*e*S	**Sg**	**21 20 59.5**	**+1.0**
JTJ	**Tarama**	**0.98**	**83**	P	**Pb**	**21 20 57.7**	**-0.9**
JTJ				*e*S	**Sb**	**21 21 11.2**	**-0.2**
JMJ	**Miyako jima 2**	**1.54**	**79**	P	**Pn**	**21 21 06.8**	**0.0**
JMJ				S	**Sn**	**21 21 26.9**	**+0.3**
JOGS	**Gusukube**	**1.63**	**81**	P	**Pn**	**21 21 08.5**	**+0.4**
JOGS				*e*S	**Sn**	**21 21 30.1**	**+1.2**
NACB	**Ninganchiao**	**1.89**	**260**	*e*P	**Pn**	**21 21 11.0**	**-0.7**
TATO	**Taipei**	**2.00**	**283**	*e*P	**Pn**	**21 21 14.4**	**+1.2**
YHNB	**Yeheng**	**2.06**	**274**	*e*P	**Pn**	**21 21 13.6**	**-0.4**
JKE	**Kume jima 2**	**3.37**	**57**	P	**Pn**	**21 21 32.3**	**+0.3**
JKE				*e*S	**Sn**	**21 22 12.9**	**+1.1**
JOW	**Kunigami**	**4.78**	**60**	Pn	**Pn**	**21 21 51.6**	**+0.2**
	0.5nm,0.3s,baz=131,slow=25,SNR=4.9						
JOW				Sn	**Sn**	**21 22 46.3**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	1.0nm,0.3s,baz=215,slow=27,SNR=1.8						
MKAR	**Makanchi Array**	**39.67**	**315**	P	**P**	**21 28 09.4**	**-2.0**
	0.9nm,0.8s,mb3.6,baz=97,slow=10.0,SNR=5.2						
WRAB	**Tennant Creek**	**45.41**	**166**	*e*P	**P**	**21 28 58.0**	**0.0**
	3.8nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**48.93**	**167**	P	**P**	**21 29 25.9**	**+0.4**
	0.5nm,0.5s,mb3.8,baz=345,slow=6.3,SNR=5.1						
STKA	**Stephens Creek**	**58.66**	**162**	P	**P**	**21 30 35.4**	**-1.3**
	2.1nm,0.8s,mb4.2,baz=340,slow=5.8,SNR=3.7						

NEIC 10 21:40:19.0, 53.31N×150.56W, h12km**, mb3.8**/1**, ML4.0**(AEIC)**, After AEIC., South of Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
KDAK	**Kodiak Island**	**4.63**	**346**	P	Pn	21 41 23.6	-5.1
KDAK				S	Sn	21 42 12.1	-10
CHGN	**Chignik**	**5.44**	**307**	P	Pn	21 41 34.2	-5.7
SDPT	**Sand Point**	**6.15**	**293**	P	Pn	21 41 42.9	-6.8
SDPT				S	Sn	21 42 48.5	-11
SDPT				*e*S	Sn	21 42 49.2	-11
SLKM	**Skilak Lake**	**7.22**	**1**	P	Pn	21 41 58.7	-5.7
EYAK	**Cordova Ski Ar**	**7.72**	**18**	P	Pn	21 42 06.1	-5.1
SVW2	**Sparrevohn**	**8.27**	**343**	P	Pn	21 42 13.7	-5.0
BMRM	**Bremner River**	**8.33**	**20**	P	Pn	21 42 14.6	-5.0
DAWY	**Dawson**	**12.22**	**24**	*e*P	Pn	21 43 09.0	-3.9
INK	**Inuvik**	**17.08**	**22**	*e*P	Pn	21 44 12.7	-4.9
	9.2nm,1.0s						

*ISCJB **10** 21:42:46.8±0.5, 48.30N±0.04×6.61E±0.03, h10km, Error ellipse: s-maj=5.1km s-min=2.8km az=161.5*

*STR **10** 21:42:47.4±0.5, 48.37N×6.67E, h10km±1km, Ml1.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*LDG **10** 21:42:47.8±0.1, 48.33N×6.66E, h10km, Md2.2/3, Ml1.8/7, Error ellipse: s-maj=2.0km s-min=1.2km az=163.0*

ISC 10 21:42:47.5±0.5**, 48.32N**±0.04×**6.63E**±0.03**, h10**km**, n15,** σ**0.74**/23**, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
HAU	**Haudompre**	**0.36**	**211**	*e*Pg	**Pg**	**21 42 55.6**	**+0.9**
HAU				*e*Sg	**Sg**	**21 43 00.5**	**+0.9**
	8.2nm,0.2s						
ECH	**Echery**	**0.37**	**106**	Pg	**Pg**	**21 42 54.8**	**+0.1**
ECH				Sg	**Sg**	**21 42 59.3**	**-0.4**
THEF	**They Montfort**	**0.44**	**258**	Pg	**Pg**	**21 42 56.8**	**+0.7**
THEF				Sg	**Sg**	**21 43 02.9**	**+1.0**
CDF	**Champ du Feu**	**0.44**	**77**	*e*Pg	**Pg**	**21 42 55.9**	**-0.2**
CDF				*e*Sg	**Sg**	**21 43 01.5**	**-0.5**
	7.4nm,0.3s						
WLS	**Welschbruch**	**0.49**	**79**	Pg	**Pg**	**21 42 56.9**	**-0.2**
WLS				Sg	**Sg**	**21 43 03.2**	**-0.4**
HINF	**Hinteralfeld**	**0.52**	**163**	*e*Pg	**Pg**	**21 42 58.1**	**+0.4**
HINF				*e*Sg	**Sg**	**21 43 04.9**	**+0.3**
	4.9nm,0.2s						
MOF	**Molkenrain**	**0.58**	**144**	Pg	**Pg**	**21 43 00.2**	**+1.5**
RFYF	**Reffroy**	**0.83**	**292**	*e*Sg	**Sg**	**21 43 15.1**	**+0.8**
	7.3nm,0.2s						
SFTF	**Sexfontaines**	**1.07**	**265**	*e*Pg	**Pg**	**21 43 08.0**	**0.0**
SFTF				*e*Sg	**Sg**	**21 43 22.0**	**+0.1**
	2.4nm,0.2s						
CABF	**La Chapelle**	**1.75**	**192**	*e*Sg	**Sg**	**21 43 43.4**	**-0.3**
	0.7nm,0.4s						
LOR	**Lormes**	**2.14**	**242**	*e*Pn	**Pn**	**21 43 22.2**	**-1.1**
LOR	**Lormes**	**2.14**	**242**	*e*Pg	**Pg**	**21 43 28.7**	**+0.1**
LOR				*e*Sg	**Sg**	**21 43 55.6**	**-0.8**
	1.2nm,0.2s						
SSF	**Saint Saulge**	**2.46**	**240**	*e*Sg	**Sg**	**21 44 05.2**	**-1.2**
	0.6nm,0.3s						
SMF	**Signal de Mont**	**2.52**	**230**	*e*Sg	**Sg**	**21 44 07.1**	**-1.5**
	1.4nm,0.3s						
AVF	**Avril sur Loir**	**2.69**	**237**	*e*Sg	**Sg**	**21 44 13.5**	**-0.5**
	0.4nm,0.2s						

IGQ 10 21:50:06.4, 0.43S×81.80W, h25km±25km**, Mb4.2, Ms4.0, 2C-5D, Error ellipse: s-maj=22.2km s-min=9.4km az=8.8, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
MAG1	**Magdalena**	**2.06**	**80**	⇓P	Pn	21 50 42.9	+3.6
MAG1				S	Sn	21 51 03.5	-0.7
JUA2	**San Juan 2**	**3.20**	**86**	P	Pn	21 50 58.0	+2.9
PINO	**Pino**	**3.20**	**85**	⇓P	Pn	21 50 57.5	+2.4
PINO				S	Sn	21 51 35.0	+2.5
TERV	**Terraza Guagua**	**3.21**	**85**	⇓P	Pn	21 50 57.6	+2.4
GGP	**Refugio Guagua**	**3.21**	**85**	⇓P	Pn	21 50 57.7	+2.4
GGP				S	Sn	21 51 37.3	+4.5
YANA	**Yana**	**3.24**	**85**	P	Pn	21 50 58.0	+2.3
NAS1	**Nasa**	**3.33**	**93**	⇑P	Pn	21 50 59.9	+3.1
IGUA	**Igualata**	**3.33**	**108**	P	Pn	21 50 59.1	+2.3
VC1	**Cotopaxi 1**	**3.40**	**94**	P	Pn	21 51 01.0	+3.1
TAMB	**Tambo**	**3.44**	**94**	⇑P	Pn	21 51 01.9	+3.5
ARRY	**Arrayan**	**3.51**	**108**	P	Pn	21 51 01.3	+2.0
RUN5	**Runtun**	**3.51**	**106**	P	Pn	21 51 02.4	+3.0
PATA	**Patacocha**	**3.53**	**108**	⇓P	Pn	21 51 02.3	+2.7
ULBA	**Ulba**	**3.54**	**107**	P	Pn	21 51 02.6	+2.9
COTA	**Cotacachi**	**3.54**	**78**	P	Pn	21 51 04.0	+4.1
ANTI	**Antisana**	**3.64**	**90**	P	Pn	21 51 04.9	+3.8
CAYR	**Refugio Cayamb**	**3.82**	**83**	P	Pn	21 51 08.6	+5.0
CAYA	**Cayambe**	**3.84**	**83**	P	Pn	21 51 08.7	+4.8
CONE	**Cono NE Rev Vo**	**4.17**	**85**	P	Pn	21 51 15.6	+7.2

KRSC 10 22:13:25, 54.98N×162.28E, h42km**, ML3.6, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
MKZ	**Mys Kozlova**	**0.53**	**217**	*e*P	Pn	22 13 38.1	+1.9
MKZ				*e*S	Sn	22 13 45.9	+1.8
TUMR	**Tumrok**	**1.26**	**285**	P	Pn	22 13 49.4	+3.3
TUMR				S	Sn	22 14 05.8	+3.9
KBTR	**Krutoberegovo**	**1.27**	**14**	*e*P	Pn	22 13 47.5	+1.3
KBTR				*e*S	Sn	22 14 04.1	+2.1
ZLN	**Zelenaya**	**1.34**	**322**	*i* P	Pn	22 13 49.6	+2.4
ZLN				*e*S	Sn	22 14 06.4	+2.7
KPT	**Kopyto**	**1.53**	**311**	P	Pn	22 13 52.4	+2.5
KRSR	**Krestovskiy**	**1.58**	**323**	P	Pn	22 13 52.4	+1.9
KRSR				S	Sn	22 14 11.4	+1.8
KLY	**Klyuchi**	**1.62**	**326**	S	Sn	22 14 13.9	+3.1
SRKR	**Sorokina**	**1.79**	**340**	*e*P	Pn	22 13 55.9	+2.5
SRKR				S	Sn	22 14 18.6	+3.7
SRDR	**Sredinnyy**	**1.98**	**314**	P	Pn	22 13 58.5	+2.6
SRDR				S	Sn	22 14 23.1	+3.6
SPN	**Mys Shipunski**	**2.31**	**216**	*e*P	Pn	22 14 02.5	+2.0
SPN				*e*S	Sn	22 14 28.8	+1.1
NLC	**Nalytchevo**	**2.50**	**225**	P	Pn	22 14 05.5	+2.3
NLC				*e*S	Sn	22 14 34.5	+2.0
AVH	**Avacha**	**2.70**	**232**	P	Pn	22 14 10.5	+4.6
GNL	**Ganaly**	**2.85**	**245**	P	Pn	22 14 12.3	+4.4
RUS	**Russkaya**	**3.39**	**223**	*e*P	Pn	22 14 19.1	+3.7
RUS				S	Sn	22 14 58.5	+4.1

*ISCJB **10** 22:46:06.3±0.9, 40.12N±0.02×19.67E±0.06, h3km±3km, Error ellipse: s-maj=7.3km s-min=3.9km az=20.2*

*ATH **10** 22:46:07.7, 40.08N×19.70E, h23km±2km, MD3.6/6*

*CSEM **10** 22:46:07.3±0.2, 40.13N×19.77E, h5km, MD3.6, Error ellipse: s-maj=4.4km s-min=2.1km az=103.0*

*NEIC **10** 22:46:09.0, 40.13N×19.78E, h2km, MD3.6(ATH), ML3.2(THE), After THE.*

*THE **10** 22:46:09.0, 40.13N×19.78E, h1km, ML3.2*

*SKO **10** 22:46:09.2, 40.14N×19.76E, h10km*

ISC 10 22:46:07.0±0.9**, 40.13N**±0.02×**19.66E**±0.06**, h2**km±4km**, n30,** σ**0.97**/53**, Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
TPE	**Tepelena**	**0.32**	**59**	*i* Pg	**Pg**	**22 46 11.8**	**-1.3**
TPE				*i* Sg	**Sg**	**22 46 16.6**	**-0.6**
VLO	**Vlora**	**0.36**	**340**	*i* Pg	**Sg**	**22 46 24.2**	**+5.7**
SRN	**Sarande**	**0.36**	**134**	*i* Pg	**Pg**	**22 46 13.2**	**-0.8**
SRN				*i* Sg	**Sg**	**22 46 18.3**	**-0.4**
KEK	**Kerkira**	**0.43**	**166**	*e*PB	**Pg**	**22 46 15.4**	**+0.1**
KEK				*e*SB	**Sg**	**22 46 22.2**	**+1.3**
LSK	**Leskovik**	**0.72**	**88**	*i* Pg	**Pg**	**22 46 19.2**	**-1.7**
LSK				*i* Sg	**Sg**	**22 46 30.4**	**+0.2**
IGT	**Igoumenitsa**	**0.79**	**139**	*e*Pg	**Pg**	**22 46 21.3**	**-0.9**

IGT				eSg	Sg	22 46 33.0	+0.5
JAN	Janina	1.03	117	ePN	Pn	22 46 26.2	-2.3
JAN				eSN	Sn	22 46 39.7	-3.8
TIR	Tirane	1.22	7	ePg	Pg	22 46 32.6	+2.2
MEV	Metsovon	1.26	106	ePg	Pg	22 46 30.5	-0.6
MEV				eSg	Sg	22 46 48.7	+1.3
OHR	Ohrid	1.31	41	ePg	Pg	22 46 32.3	+0.2
OHR				eSg	Sg	22 46 51.3	+2.2
OHR	Ohrid	1.31	41	ePg	Pg	22 46 31.5	-0.6
OHR				i Sg	Sg	22 46 49.0	-0.1
OHR	Ohrid	1.31	41	ePg	Pg	22 46 31.5	-0.6
OHR				eSg	Sg	22 46 51.3	+2.3
FNA	Florina	1.46	63	ePg	Pg	22 46 33.8	-1.3
FNA				eSg	Sg	22 46 55.0	+1.0
LKD	Levkas	1.62	151	ePg	Pg	22 46 36.5	-1.6
LKD				eSg	Sg	22 47 00.5	+1.5
LKD	Levkas	1.62	151	ePg	Pg	22 46 36.5	-1.5
LKD				eSg	Sg	22 47 00.4	+1.4
KZN	Kozani	1.63	83	ePN	Pn	22 46 37.2	+0.5
KZN				eSN	Sn	22 46 58.2	0.0
EVR	Evrytania	2.06	125	ePN	Pn	22 46 42.2	-0.4
VLS	Valsamata	2.08	159	ePB	Pn	22 46 42.1	-0.8
LIT	Litokhoron	2.17	90	ePn	Pn	22 46 44.6	+0.5
LIT				eSn	Sn	22 47 12.1	+0.5
GRG	Griva	2.25	68	ePn	Pn	22 46 46.0	+0.8
AGG	Agios Georgios	2.34	117	ePn	Pn	22 46 47.1	+0.6
AGG				eSn	Sn	22 47 17.0	+1.1
STIP	Stip	2.47	50	ePn	Pn	22 46 48.6	+0.3
STIP				eSn	Sn	22 47 19.1	+0.1
STIP	Stip	2.47	50	ePn	Pn	22 46 48.6	+0.4
STIP				eSn	Sn	22 47 18.6	-0.5
STIP	Stip	2.47	50	ePn	Pn	22 46 48.6	+0.3
STIP				eSn	Sn	22 47 18.5	-0.5
RLS	Riolos of Patr	2.50	145	ePB	Pn	22 46 49.0	+0.3
VAY	Valandovo	2.51	61	ePn	Pn	22 46 49.4	+0.6
VAY				eSn	Sn	22 47 18.7	-1.3
VAY	Valandovo	2.51	61	ePn	Pn	22 46 49.4	+0.6
VAY				eSn	Sn	22 47 18.6	-1.4
PLG	Polygyros	2.91	84	ePN	Pn	22 46 54.5	+0.2
SRS	Serrai	3.15	71	ePn	Pn	22 46 57.7	0.0
SRS				eSn	Sn	22 47 35.4	-0.4
MMB	Musomiste	3.41	63	ePn	Pn	22 47 02.1	+0.9
MMB				eSn	Sn	22 47 41.8	-0.4

*NEIC **10** 22:46:24.5, 3663N×8.12W, h0^{km}, MN2.6(MDD), After MDD.*
*CSEM **10** 22:46:25.9±0.3, 3669N×784W, h10^{km}, ML2.3, Error ellipse: s-maj=6.8km s-min=3.3km az=33.0*
*IGIL **10** 22:46:25.1, 3650N×820W, h24^{km}, ML2.5*
*INMG **10** 22:46:26.0±0.9, 3659N×8.14W, h10^{km}, ML2.3, Error ellipse: s-maj=4.3km s-min=1.6km az=46.0*
MDD 10 22:46:25.5±0.9**, 3656N×817W, h17**^{km}±9^{km}**, mb3.7**/23**, Error ellipse: s-maj=12.0km s-min=4.8km az=50.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	Marmelete	0.84	333	eP	Pb	22 46 40.7	-1.0
MORF				eS	Sb	22 46 51.7	-1.0
MORF				eS	Sb	22 46 51.7	-1.0
MORF				AML	AML	22 46 54.6	
	comp=E,104nm,0.1s						
MORF	Marmelete	0.84	333	eP	Pb	22 46 40.7	-1.0
MORF				eS	Sb	22 46 51.7	-1.0
PTEO	Sao Teotonio	1.08	336	eP	Pb	22 46 44.8	-1.0
PTEO				eS	Sb	22 46 59.6	0.0
PTEO							
	comp=E,44nm,0.2s						
EGRO	El Granado	1.12	29	P	Pn	22 46 45.3	-1.1
	comp=E,2.1nm,0.3s,SNR=14						
EGRO				S	Sb	22 46 59.3	-1.4
	comp=E,22nm,0.1s,SNR=13						
EGRO	El Granado	1.12	29	P	Pn	22 46 45.4	-0.9
EGRO				S	Sb	22 46 58.6	-2.0
EGRO	El Granado	1.12	29	P	Pn	22 46 45.4	-1.0
	comp=E,2.1nm,0.3s,SNR=14						
EGRO				S	Sb	22 46 58.6	-2.1
	comp=E,22nm,0.1s,SNR=13						
PBEJ	Beja	1.49	9	eP	Pn	22 46 51.2	-0.2
PBEJ				S	Sn	22 47 09.6	-0.9
EMIN	Mina Concepcio	1.70	44	P	Pn	22 46 53.1	-1.3
	comp=E,1.7nm,0.8s,SNR=21						
EMIN				S	Sn	22 47 13.2	-2.6
	comp=E,7.2nm,0.1s,SNR=9.8						
EMIN	Mina Concepcio	1.70	44	P	Pn	22 46 53.1	-1.3
	comp=E,1.7nm,0.8s,SNR=21						
EMIN				S	Sn	22 47 13.2	-2.5
	comp=E,7.2nm,0.1s,SNR=9.8						
ESPR	Espera	1.89	80	P	Pn	22 46 56.0	-0.9
	comp=E,42nm,0.3s,SNR=168						
ESPR				S	Sn	22 47 18.6	-1.7
	comp=E,182nm,0.2s,SNR=16						
ESPR	Espera	1.89	80	P	Pn	22 46 56.0	-0.9
	comp=E,42nm,0.3s,SNR=168						
ESPR				S	Sn	22 47 18.6	-1.7
	comp=E,182nm,0.2s,SNR=16						
EJIF	Jimena Fronter	2.18	92	P	Pn	22 47 00.6	-0.4
	comp=E,2.0nm,0.2s,SNR=14						
EJIF				S	Sn	22 47 26.0	-1.5
	comp=E,1.8nm,0.2s						
EJIF	Jimena Fronter	2.18	92	P	Pn	22 47 00.6	-0.3
EJIF				S	Sn	22 47 26.0	-1.5
PESTR	Estremoz	2.35	11	ePn	Pn	22 47 02.9	-0.4
PESTR							
	comp=E,7.7nm,0.5s						
PESTR	Estremoz	2.35	11	ePn	Pn	22 47 02.9	-0.4
	comp=E,7.7nm,0.5s						
EBAD	Badajoz	2.38	22	P	Pn	22 47 02.4	-1.3
	comp=E,1.0nm,0.3s,SNR=17						
EBAD				S	Sn	22 47 29.9	-2.6
	comp=E,2.6nm,0.1s						
EBAD	Badajoz	2.38	22	P	Pn	22 47 02.4	-1.3
	comp=E,1.0nm,0.3s,SNR=17						
EBAD				S	Sn	22 47 29.9	-2.6
	comp=E,2.6nm,0.1s						
PMAFR	Mafra	2.55	340	ePn	Pn	22 47 05.6	-0.5
PMAFR				eSn	Sn	22 47 34.0	-2.7
EMIJ	Mijas	2.73	89	P	Pn	22 47 07.2	-1.4
	comp=E,2.4nm,0.3s,SNR=12						
EMIJ				S	Sn	22 47 39.3	-2.0
	comp=E,2.9nm,0.1s						
PTOM	Tomar	3.06	357	ePn	Pn	22 47 12.4	-0.7
PTOM				eSn	Sn	22 47 46.7	-2.6
ELOJ	Sierra Loja	3.28	78	P	Pn	22 47 15.7	-0.3
	comp=E,1.7nm,0.2s,SNR=7.9						
ELOJ				S	Sn	22 47 51.7	-2.9
	comp=E,0.6nm,0.1s,SNR=7.9						
ELOJ	Sierra Loja	3.28	78	P	Pn	22 47 14.9	-1.1
ELOJ				S	Sn	22 47 51.7	-2.9
ELOJ	Sierra Loja	3.28	78	P	Pn	22 47 14.9	-1.1
	SNR=7.9						
ELOJ				S	Sn	22 47 51.7	-2.9
	comp=E,0.6nm,0.1s,SNR=7.9						
ELUQ	Luque	3.28	71	P	Pn	22 47 16.0	-0.1
	comp=E,4.3nm,0.3s,SNR=7.9						
ELUQ				S	Sn	22 47 52.4	-2.2
	comp=E,3.3nm,0.2s,SNR=7.9						
ELUQ	Luque	3.28	71	P	Pn	22 47 14.3	-1.8
ELUQ				S	Sn	22 47 52.4	-2.2
ELUQ	Luque	3.28	71	P	Pn	22 47 14.3	-1.8
	SNR=7.9						
ELUQ				S	Sn	22 47 52.4	-2.3
	comp=E,3.3nm,0.2s,SNR=7.9						
EADA	Adamuz	3.28	60	P	Pn	22 47 15.2	-0.9
	comp=E,7.2nm,0.2s,SNR=61						
EADA				S	Sn	22 47 51.6	-3.2
	comp=E,15nm,0.1s						
EADA	Adamuz	3.28	60	P	Pn	22 47 15.2	-0.9
	comp=E,7.2nm,0.2s,SNR=61						
EADA				S	Sn	22 47 51.6	-3.2
	comp=E,15nm,0.1s						
PCBR	Castelo Branco	3.33	9	ePn	Pn	22 47 15.3	-1.4
PCBR				eSn	Sn	22 47 52.7	-3.1
PCBR							
	comp=E,3.4nm,0.6s						
EGUA	Guajares	3.71	84	P	Pn	22 47 21.1	-0.9
	comp=E,0.7nm,0.2s,SNR=7.9						
EGUA				S	Sn	22 48 01.6	-3.7
	comp=E,0.2nm,0.1s,SNR=7.9						
EGUA	Guajares	3.71	84	P	Pn	22 47 20.3	-1.7
EGUA				S	Sn	22 48 01.2	-4.1
EGUA	Guajares	3.71	84	P	Pn	22 47 20.3	-1.7
	SNR=7.9						
EGUA				S	Sn	22 48 01.2	-4.1
	comp=E,0.2nm,0.1s,SNR=7.9						
ECOG	Cogollos-Vega	3.76	78	P	Pn	22 47 22.8	+0.1
	comp=E,2.2nm,0.1s,SNR=7.9						
ECOG				S	Sn	22 48 04.1	-2.4
	comp=E,2.9nm,0.1s,SNR=7.9						
EBAN	Banos Encina	3.84	64	P	Pn	22 47 22.5	-1.3
	comp=E,2.6nm,0.2s,SNR=10						
EBAN				S	Sn	22 48 03.6	-5.0
	comp=E,2.5nm,0.1s						
EBAN	Banos Encina	3.84	64	P	Pn	22 47 22.6	-1.2
	comp=E,2.6nm,0.2s,SNR=10						
EBAN				S	Sn	22 48 03.6	-5.0
	comp=E,2.5nm,0.1s						
EQUE	Quentar	3.85	79	P	Pn	22 47 23.9	0.0
	comp=E,3.5nm,0.3s,SNR=28						
EQUE				S	Sn	22 48 05.6	-3.1
	comp=E,0.7nm,0.1s,SNR=4.6						
EQUE	Quentar	3.85	79	P	Pn	22 47 23.9	0.0
	comp=E,3.5nm,0.3s,SNR=28						
EQUE				S	Sn	22 48 06.7	-2.0
	comp=E,0.7nm,0.1s,SNR=4.6						
MTE	Manteigas	3.87	7	eSn	Sn	22 48 05.7	-3.5
MTE							
	comp=E,7.4nm,0.8s						
MTE	Manteigas	3.87	7	S	Sn	22 48 05.7	-3.5
	comp=E,3.7nm,0.8s						
MIF	Mishlifen	3.96	142	i P	Pn	22 47 24.0	-1.4
MIF				i S	Sn	22 48 07.0	-4.5
EBER	Berja	4.26	84	P	Pn	22 47 28.8	-0.7
	comp=E,3.8nm,0.5s,SNR=6.4						
EBER				S	Sn	22 48 15.3	-3.5
	comp=E,1.4nm,0.2s						
EBER	Berja	4.26	84	P	Pn	22 47 28.8	-0.7
EBER				S	Sn	22 48 16.7	-2.1
EBER	Berja	4.26	84	P	Pn	22 47 28.8	-0.7
	comp=E,3.8nm,0.5s,SNR=6.4						
EBER				S	Sn	22 48 16.7	-2.0
	comp=E,1.4nm,0.2s						
EQES	Quesada	4.26	71	P	Pn	22 47 28.7	-0.8
	comp=E,2.0nm,0.4s,SNR=26						
EQES				S	Sn	22 48 15.5	-3.3
	comp=E,3.5nm,0.2s						
EQES	Quesada	4.26	71	P	Pn	22 47 28.7	-0.8
	comp=E,2.0nm,0.4s,SNR=26						
EQES				S	Sn	22 48 15.5	-3.3
	comp=E,3.5nm,0.2s						
CZD	Col de Zad	4.36	143	P	Pn	22 47 09.0	-22
CZD				S	Sn	22 48 16.0	-5.2
ESDC	Sonseca Array	4.55	46	P	Pn	22 47 32.5	-1.0
	comp=E,0.8nm,0.3s,baz=230,slow=13,SNR=10.0						
ESDC	Sonseca Array	4.55	46	P	Pn	22 47 32.5	-1.0
	comp=E,0.8nm,0.3s,SNR=10.0						
EHUE	Huescar	4.63	73	P	Pn	22 47 33.3	-1.3
	comp=E,2.6nm,0.2s,SNR=29						
EHUE				S	Sn	22 48 24.2	-3.7
	comp=E,1.4nm,0.2s,SNR=6.6						
EHUE	Huescar	4.63	73	P	Pn	22 47 33.3	-1.3
EHUE				S	Sn	22 48 24.8	-3.1
EHUE	Huescar	4.63	73	P	Pn	22 47 33.3	-1.3
	comp=E,2.6nm,0.2s,SNR=29						
EHUE				S	Sn	22 48 24.8	-3.1
	comp=E,1.4nm,0.2s,SNR=6.6						
PVRL	Vila Real	4.73	4	eSn	Sn	22 48 26.4	-4.0
PVRL							
	comp=E,26nm,0.3s						
PVRL	Vila Real	4.73	4	S	Sn	22 48 26.4	-4.0
	comp=E,13nm,0.3s						
EVIA	Vianos	4.96	64	P	Pn	22 47 37.5	-1.7
	comp=E,2.0nm,0.4s,SNR=7.6						
EVIA				S	Sn	22 48 31.3	-4.7
	comp=E,1.3nm,0.1s						
PCAB	Cabril	5.15	1	ePn	Pn	22 47 40.6	-1.2
PCAB				eSn	Sn	22 48 35.9	-4.9
GUD	Guadarrama	5.15	36	P	Pn	22 47 41.3	-0.5
	comp=E,0.6nm,0.2s,SNR=7.9						
GUD				S	Sn	22 48 36.9	-4.0
	comp=E,0.8nm,0.2s,SNR=5.8						
GUD	Guadarrama	5.15	36	P	Pn	22 47 41.3	-0.5
GUD				S	Sn	22 48 37.8	-3.0
GUD	Guadarrama	5.15	36	P	Pn	22 47 41.3	-0.5
	SNR=7.9						
GUD				S	Sn	22 48 37.8	-3.1
	comp=E,1.0nm,0.2s,SNR=5.8						
ECAL	Calabor	5.49	11	P	Pn	22 47 45.2	-1.3
	comp=E,0.5nm,0.2s,SNR=7.9						
ECAL				S	Sn	22 48 44.2	-5.0
	comp=E,0.6nm,0.2s,SNR=7.9						
ECAL	Calabor	5.49	11	P	Pn	22 47 45.2	-1.3
	SNR=7.9						
ECAL				S	Sn	22 48 44.2	-5.0
	SNR=7.9						
ETOB	Tobarra	5.66	66	P	Pn	22 47 46.8	-2.0
	comp=E,1.6nm,0.4s,SNR=22						
ETOB				S	Sn	22 48 47.1	-6.2
	comp=E,5.3nm,0.3s,SNR=7.9						
ETOB	Tobarra	5.66	66	P	Pn	22 47 46.8	-2.0
ETOB				S	Sn	22 48 48.8	-4.5
ETOB	Tobarra	5.66	66	P	Pn	22 47 46.8	-1.9
	comp=E,1.6nm,0.4s,SNR=22						
ETOB				S	Sn	22 48 48.8	-4.5
	comp=E,1.3nm,0.1s,SNR=7.9						
EMUR	La Murta	5.68	75	P	Pn	22 47 47.8	-1.2
	comp=E,0.5nm,0.2s,SNR=7.9						
EMUR				S	Sn	22 48 49.0	-4.9
	comp=E,0.5nm,0.2s,SNR=7.9						
EMUR	La Murta	5.68	75	P	Pn	22 47 47.1	-1.9
EMUR				S	Sn	22 48 48.6	-5.2
EMUR	La Murta	5.68	75	P	Pn	22 47 47.1	-1.9
	SNR=7.9						
EMUR				S	Sn	22 48 48.6	-5.2
	SNR=7.9						
EBEN	Beniarda	6.66	69	P	Pn	22 48 01.7	-0.8
	comp=E,0.2nm,0.1s,SNR=7.9						
EBEN				S	Sn	22 49 12.6	-5.4
	comp=E,0.7nm,0.2s,SNR=7.9						
EBEN	Beniarda	6.66	69	P	Pn	22 48 01.7	-0.8
	SNR=7.9						
EMOS	Mosqueruela	7.14	55	P	Pn	22 48 09.1	0.0
	comp=E,0.2nm,0.1s,SNR=7.9						
EMOS				S	Sn	22 49 22.4	-7.3
	comp=E,2.2nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	7.14	55	P	Pn	22 48 09.1	0.0
	SNR=7.9						

IGQ 10 22:48:02.8, 102S×7831W, h15^{km}±1^{km}**, Mb4.0, Ms3.8, 3C-7D, Error ellipse: s-maj=1.4km s-min=0.5km az=12.8, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PISA	Pisayambo	0.09	243	⇑P	Pg	22 48 06.5	+0.6
TAMB	Tambo	0.33	350	⇑P	Pg	22 48 10.1	+0.5
VC1	Cotopaxi 1	0.39	346	P	Pg	22 48 11.3	+0.7
RUN5	Runtun	0.41	196	P	Pg	22 48 11.5	+0.5
NAS1	Nasa	0.42	336	⇓P	Pg	22 48 12.1	+0.9
JUIV	Juive	0.43	201	P	Pg	22 48 11.5	+0.1
JUIV				S	Sg	22 48 17.4	+0.2
ULBA	Ulba	0.44	193	P	Pg	22 48 11.8	+0.2
CUSU	Cusua	0.45	202	P	Pg	22 48 12.2	+0.4
CUSU				S	Sg	22 48 18.4	+0.5
PATA	Patacocha	0.50	194	P	Pg	22 48 13.2	+0.6
PATA				S	Sg	22 48 20.2	+0.9
ARRY	Arrayan	0.50	197	P	Pg	22 48 12.6	-0.2
IGUA	Igualata	0.57	215	⇑P	Pg	22 48 14.7	+0.7
IGUA				S	Sg	22 48 23.1	+1.5
ANTI	Antisana	0.59	15	⇓P	Pg	22 48 14.3	0.0
JUA2	San Juan 2	0.85	340	⇓P	Pb	22 48 20.0	+0.7
JUA2				S	Sg	22 48 31.4	+0.9
GGP	Refugio Guagua	0.89	341	P	Pb	22 48 20.1	+0.2
TERV	Terraza Guagua	0.89	341	P	Pb	22 48 20.4	+0.5
TERV				S	Sb	22 48 33.2	+1.6
PINO	Pino	0.91	341	P	Pb	22 48 21.1	+0.9
YANA	Yana	0.93	344	⇓P	Pb	22 48 21.1	+0.4
YANA				S	Sb	22 48 32.8	0.0
CAYR	Refugio Cayamb	1.07	16	⇓P	Pb	22 48 23.6	+0.6
CAYR				S	Sb	22 48 37.9	+1.0
CAYA	Cayambe	1.13	16	P	Pb	22 48 24.6	+0.6
CAYA				S	Sb	22 48 41.0	+2.4
LAV3	Lava3-Reventad	1.14	36	⇓P	Pb	22 48 24.9	+0.7
LAV3				S	Sb	22 48 40.1	+1.3
CONE	Cono NE Rev Vo	1.16	35	⇓P	Pn	22 48 25.1	+0.7
CONE				S	Sb	22 48 40.6	+1.3
MAG1	Magdalena	1.74	303	P	Pn	22 48 35.5	+3.0

*TRN **10** 22:54:06.2, 19.19N×6293W, h35^{km}*
*NEIC **10** 22:54:08.3, 1924N×6290W, h25^{km}, MD3.7(RSPR), After RSPR.*
RSPR 10 22:54:08.3, 1924N×6290W, h25^{km}±26^{km}**, MD3.7**/6**,** MD3.7/6**, 7C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	1.82	244	eS	Sn	22 54 57.1	-3.0
TBVI	Tortola	1.82	244	eS	Sn	22 54 57.1	-3.0
STVI	Saint Thomas	2.13	246	⇑eP	Pn	22 54 40.3	-2.0
CDVI	St. Croix	2.30	230	⇑eP	Pn	22 54 43.3	-1.3
CDVI				eS	Sn	22 55 09.5	-2.6
MTP	Monte Pirata	2.76	246	⇑eP	Pn	22 54 49.0	-1.8
MTP				eS	Sn	22 55 21.5	-1.8
CBYP	Canovanas	2.96	252	⇑eP	Pn	22 54 52.0	-1.6
CBYP				eS	Sn	22 55 25.9	-2.4
HUMP	Col San Antoni	3.00	249	⇑eP	Pn	22 54 52.7	-1.5
HUMP				eS	Sn	22 55 28.8	-0.5
AOPR	Arecibo Observ	3.75	257	⇑eP	Pn	22 55 05.4	+0.9
CRPR	Cabo Rojo, PR	4.17	254	⇑eP	Pn	22 55 08.9	-1.4

*ISCJB **10** 23:29:14.8±1.1, 213S±02×1790W±02, h600^{km}, mb3.6/8, Error ellipse: s-maj=28.2km s-min=18.8km az=43.0*
*IDC **10** 23:29:14.2±7.2, 2127S×17886W, h582^{km}±78^{km}, mb3.0/4, mb1 3.2/4, mb1mx3.0/11, mbtmp4.0/4, Error ellipse: s-maj=44.2km s-min=28.8km az=53.0*
*NEIC **10** 23:29:16.0±5.3, 2120S×17898W, h602^{km}±57^{km}, mb3.7/5, Error ellipse: s-maj=35.9km s-min=17.7km az=57.0*
ISC 10 23:29:16.0±1.1**, 213S**±02×**1789W**±02**, h600**^{km}**, n16,** σ**0**^{s}**50**/11**, mb3.6**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	32.55	266	P	P	23 34 59.2	0.0
	1.7nm,0.4s,mb4.0,baz=95,slow=15,SNR=4.1						
CTAO	Charters Tower	32.55	266	eP	P	23 34 59.7	+0.4
	1.8nm,0.3s,mb4.2						
ASAR	Alice Springs	43.49	258	P	P	23 36 27.9	+0.2
	2.1nm,0.6s,mb3.9,baz=96,slow=7.8,SNR=26						
ASAR				PcP	PcP	23 38 02.4	+0.5
	0.5nm,0.6s,baz=102,slow=4.2,SNR=4.8						
WB2	Warramunga Arr	43.62	263	eP	P	23 36 28.4	-0.3
WRAB	Tennant Creek	43.62	263	eP	P	23 36 28.5	-0.2
	5.4nm,0.8s,mb4.1						
MBWA	Marble Bar	56.83	258	eP	P	23 38 04.7	0.0
	2.1nm,0.6s,mb3.5						
SBA	Scott Base	57.03	184	eP	P	23 38 06.6	+0.5
	0.7nm,0.4s,mb3.2						
VNDA	Vanda	57.05	185	P	P	23 38 05.3	-0.9
	0.4nm,0.5s,mb2.9,baz=8.7,slow=7.6,SNR=7.6						
QSPA	South Pole Qui	68.78	180	P	P	23 39 20.8	-0.5
SNAA	Sanae	87.25	179	eP	P	23 41 00.8	+1.0
	0.6nm,0.5s,mb3.6						
PDAR	Pinedale Array	90.13	44	P	P	23 41 13.1	-0.1
	0.6nm,0.8s,mb3.5,baz=171,slow=2.9,SNR=4.5						
ARCES	ARCESS Array B	129.53	349	PKP	PKPdf	23 47 16.3	-1.2
	0.5nm,0.4s,baz=11,slow=1.4,SNR=8.9						
FINES	FINESS Array B	136.27	343	PKP	PKPdf	23 47 30.9	+0.6
	0.1nm,0.3s,baz=70,slow=4.6,SNR=4.5						
AKASG	Malin Array Be	143.26	330	PKP	PKPdf	23 47 40.4	-2.5
	2.1nm,0.4s,baz=42,slow=4.2,SNR=16						
BRTR	Keskin Array B	146.70	311	PKPbc	PKPbc	23 47 51.9	+0.4
	0.8nm,0.7s,baz=72,slow=4.0,SNR=5.0						
GERES	GERESS Array B	150.71	343	PKPbc	PKPbc	23 48 01.1	-0.2
	0.6nm,0.7s,baz=50,slow=2.1,SNR=5.5						

*IDC **10** 23:56:36.6±0.7, 9.15S×107.16E, h0^{km}, mb4.4/11, mb1 4.5/11, mb1mx4.4/16, mbtmp4.4/11, MS4.0/6, Ms1 4.0/6, ms1mx3.7/17, Error ellipse: s-maj=30.1km s-min=16.8km az=71.0*
*ISCJB **10** 23:56:38.7±2.4, 925S±006×107.17E±007, h27^{km}±17^{km}, mb4.6/29, MS4.0/5, Error ellipse: s-maj=14.6km s-min=7.6km az=102.5*
*NEIC **10** 23:56:38.1±0.2, 9.19S×107.19E, h10^{km}, mb4.8/24, Error ellipse: s-maj=12.4km s-min=5.7km az=57.0*
*MOS **10** 23:56:41.1±1.1, 899S×10706E, h33^{km}, mb4.9/11, Error ellipse: s-maj=26.9km s-min=11.0km az=102.6*
ISC 10 23:56:39.5±3.1**, 928S**±006×**10711E**±006**, h19**^{km}±19^{km}**, n80,** σ**1**^{s}**09**/64**, mb4.6**/29**, MS4.0**/5**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	2.49	12	P	Pn	23 57 19.2	+0.2
	989nm,1.3s						
CBJI	Citeko	2.86	355	P	Pn	23 57 20.5	-3.5
	1μm,0.9s						
JCJI	Jatiwangi	3.00	23	P	Pn	23 57 21.8	-4.2
	829nm,1.3s						
BJII	Banjamegara	3.22	53	P	Pn	23 57 28.5	-0.5
	172nm,1.3s						
SBJI	Serang	3.29	343	P	Pn	23 57 30.4	+0.4
	1μm,1.4s						
KRKI	Karangkates	5.40	78	P	Pn	23 58 00.6	+1.7
	453nm,0.6s						
KSI	Kapahiang	7.17	321	P	Pn	23 58 24.8	+1.4
	195nm,0.9s						
COCO	West Island	10.50	253	Pn	Pn	23 59 07.3	-1.7
COCO				eSn	Sn	00 01 01.8	-4.3
PSI	Prapat	14.52	325	LR	LR	00 06 48.6	
	comp=Z,714nm,18.4s,baz=145,slow=43						
KULM	Kulim	15.85	336	Pn	Pn	00 00 18.7	-2.8
MBWA	Marble Bar	16.94	136	ePn	Pn	00 00 34.2	-1.3
	11nm,0.8s						
BSI	Banda Aceh	18.82	321	P	Pn	00 01 00.6	+2.0
	67nm,1.1s						
FITZ	Fitzroy Crossi	20.00	118	eP	P	00 01 10.9	-0.1
	18nm,1.0s						
FITZ	Fitzroy Crossi	20.00	118	P	P	00 01 10.9	-0.1
	16nm,1.0s,baz=282,slow=6.5,SNR=10						
WRAB	Tennant Creek	28.36	115	P	P	00 02 33.2	+0.9
	1.2nm,0.4s,mb3.9						
AS31	Alice Springs	29.33	122	eP	P	00 02 41.1	+0.2
STKA	Stephens Creek	39.06	130	eP	P	00 04 05.2	0.0
	20nm,0.8s,mb4.9						
STKA	Stephens Creek	39.06	130	P	P	00 04 05.0	-0.2
	22nm,0.9s,mb4.9,baz=298,slow=7.9,SNR=18						
CTAO	Charters Tower	39.26	110	eP	P	00 04 15.0	+8.2
CTAO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
CTAO	Charters Tower	39.26	110	eP	P	00 04 15.0	+8.2
	comp=Z,9.2nm,0.8s,mb4.6						
PKI	Pulchoki	42.24	331	eP	P	00 04 31.9	+0.5
GUN	Gumba	42.30	332	eP	P	00 04 33.1	+1.2
	comp=Z,205nm,1.3s,mb5.6						
DMN	Daman	42.42	330	eP	P	00 04 33.7	+0.8
	comp=Z,54nm,1.0s,mb5.1						
KKN	Kakani	42.48	331	eP	P	00 04 34.1	+0.7
	comp=Z,119nm,1.3s,mb5.4						
KKN	Kakani	42.48	331	eP	P	00 04 34.1	+0.7
KKN				pmax	pmax		
	comp=Z,119nm,1.3s,mb5.4						
GKN	Gorkha	42.98	330	eP	P	00 04 38.8	+1.4
	comp=Z,40nm,0.9s,mb5.2						
KOLN	Koldanda	43.30	329	eP	P	00 04 41.5	+1.5
	comp=Z,66nm,0.9s,mb5.3						
BJT	Baijiatuau	49.76	9	eP	P	00 05 29.9	-0.8
BJT				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BJT	Baijiatuau	49.76	9	eP	P	00 05 29.9	-0.8
	comp=Z,6.5nm,0.4s,mb5.0						
MJAR	Matsushiro Arr	54.15	31	P	P	00 06 03.8	+0.4
	comp=Z,0.9nm,0.6s,mb3.9,baz=213,slow=7.9,SNR=3.5						
SONM	Songino Array	56.87	359	P	P	00 06 22.9	0.0
	comp=Z,2.3nm,0.8s,mb4.2,baz=177,slow=8.3,SNR=14						
ULN	Ulaanbaatar	56.90	360	eP	P	00 06 23.0	-0.1
ULN				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
ULN	Ulaanbaatar	56.90	360	eP	P	00 06 23.0	-0.2
	comp=Z,19nm,1.3s,mb5.0						
CASY	Casey	56.96	178	eP	P	00 06 23.4	-0.2
	comp=Z,2.8nm,0.8s,mb4.3						
AAK	Ala-Archa	59.64	333	eP	P	00 06 41.5	-0.8
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
AAK	Ala-Archa	59.64	333	eP	P	00 06 41.5	-0.8
	comp=Z,2.4nm,0.4s,mb4.6						
MKAR	Makanchi Array	60.06	341	P	P	00 06 45.1	-0.1
	comp=Z,9.3nm,0.9s,mb4.8,baz=143,slow=7.9,SNR=21						
KURK	Kurchatov	64.67	340	eP	P	00 07 15.3	-0.8
KURK				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,15nm,1.0s,mb5.0						
KURK	Kurchatov	64.67	340	eP	P	00 07 15.3	-0.8
	comp=Z,15nm,1.0s,mb5.0						
MAW	Mawson	65.23	197	P	P	00 07 20.1	+0.4
	comp=Z,3.4nm,0.8s,mb4.4,baz=51,slow=8.4,SNR=11						
MAW	Mawson	65.23	197	eP	P	00 07 20.5	+0.8
	comp=Z,3.1nm,0.9s,mb4.3						
MAW				eP		00 07 21.1	
ZAL	Zalesovo	65.75	346	P	P	00 07 21.1	-2.0
	comp=Z,1.1nm,0.6s,mb4.0,baz=274,slow=6.4,SNR=8.2						
ZAL				LR	LR	00 39 29.7	
	comp=Z,128nm,18.6s,MS4.2,baz=53,slow=39						
BRVK	Borovoye	69.57	337	eP	P	00 07 46.2	-1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BRVK	Borovoye	69.57	337	eP	P	00 07 46.1	-1.0
	comp=Z,3.4nm,0.8s,mb4.3						
CHKZ	Chkalovo	69.92	338	eP	P	00 07 48.8	-0.6
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
CHKZ	Chkalovo	69.92	338	eP	P	00 07 48.8	-0.5
	comp=Z,6.3nm,0.7s,mb4.7						
KMBO	Kilima Mbogo	69.94	272	LR	LR	00 35 07.6	
	comp=Z,54nm,19.3s,MS3.8,baz=101,slow=33						
YAK	Yakutsk	73.24	11	P	P	00 08 08.2	-1.1
VNDA	Vanda	73.72	169	P	P	00 08 14.3	+2.2
	comp=Z,2.4nm,1.0s,mb4.1,baz=287,slow=5.5,SNR=3.3						
SBA	Scott Base	74.79	169	P	P	00 08 23.1	+4.7
GNI	Garni	75.64	315	P	P	00 08 24.4	+1.1
MA2	Magadan	76.97	21	eP	P	00 08 29.4	-1.4
MA2				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
MA2	Magadan	76.97	21	eP	P	00 08 29.4	-1.4
	comp=Z,2.7nm,0.4s,mb4.5						
BOSA	Boshof	78.50	243	LR	LR	00 35 58.6	
	comp=Z,113nm,19.2s,MS4.2,baz=122,slow=30						
KIV	Kislovodsk	78.65	318	eP	P	00 08 41.9	+1.7
KIV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KIV	Kislovodsk	78.65	318	eP	P	00 08 41.9	+1.7
	comp=Z,2.8nm,0.8s,mb4.2						
EIL	Elat	79.38	303	eP	P	00 08 43.4	-0.9
MALT	Malatya	79.44	312	P	P	00 08 44.6	+0.1
QSPA	South Pole Qui	80.72	180	eP	P	00 08 51.3	-0.2
	comp=Z,6.8nm,0.9s,mb4.6						
QSPA				ePcP	PcP	00 08 59.5	+1.3
BR131	Keskin Array S	83.42	312	eP	P	00 09 06.2	+0.6
	comp=Z,0.9nm,0.7s,mb3.9						
BRTR	Keskin Array B	83.42	312	P	P	00 09 06.0	+0.4
	comp=Z,1.7nm,0.9s,mb4.0,baz=134,slow=6.9,SNR=8.0						
OBN	Obninsk	86.69	327	eP	P	00 09 22.1	+0.1
	comp=Z,22nm,1.0s,mb5.3						
SNAA	Sanae	87.39	197	eP	P	00 09 25.3	-0.1
SNAA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SNAA	Sanae	87.39	197	eP	P	00 09 25.3	-0.2
	comp=Z,4.0nm,1.0s,mb4.6						
AKASG	Malin Array Be	89.54	322	P	P	00 09 34.6	-0.9
	comp=Z,0.2nm,0.4s,mb3.8,baz=84,slow=5.9,SNR=4.4						
AKASG				LR	LR	00 57 49.1	
	comp=Z,30nm,19.5s,MS3.7,baz=110,slow=41						
ARCES	ARCESS Array B	95.70	340	P	P	00 10 03.0	-1.0
	comp=Z,2.3nm,1.0s,mb4.6,baz=65,slow=4.3,SNR=3.2						
ARCES				LR	LR	00 58 38.4	
	comp=Z,80nm,18.9s,MS4.2,baz=90,slow=39						
LONY	Lake Ozonia	144.76	2	ePKPdf	PKPdf	00 16 14.8	-0.2
BDFB	Brasilia	145.07	225	PKPbc	PKPbc	00 16 17.6	+2.6
	comp=Z,8.5nm,0.9s,baz=148,slow=6.9,SNR=7.7						
WMOK	Wichita Mounta	145.31	39	ePKIKP	PKPdf	00 16 16.0	0.0
NCB	Newcomb	145.43	2	ePKP	PKPdf	00 16 16.1	-0.1
CCM	Cathedral Cave	146.92	27	ePKIKP	PKPdf	00 16 18.8	+0.1
BINY	Binghamton	147.10	4	ePKPdf	PKPdf	00 16 19.4	+0.4
JCT	Junction City	147.22	46	ePKIKP	PKPdf	00 16 20.6	+1.4
MIAR	Mount Ida	148.51	34	ePKP2	PKPab	00 16 24.5	-3.8
GNAR	Gosnell	149.20	28	ePKPdf	PKPdf	00 16 23.2	+0.8
GNAR				ePKPbc	PKPbc	00 16 26.6	-0.1
WVT	Waverly	150.02	25	ePKPdf	PKPdf	00 16 25.5	+1.8
WVT				ePKPbc	PKPbc	00 16 29.3	+0.6
HKT	Hockley	150.29	43	ePKIKP	PKPdf	00 16 24.9	+0.7
PLAL	Pickwick Lake	150.89	26	ePKPbc	PKPbc	00 16 30.9	+0.1
PLAL				ePKPab	PKPab	00 16 38.3	+0.2
SWET	Sewanee	151.57	23	ePKPab	PKPab	00 16 40.6	-0.3
CPCT	Cooper Cave	151.87	20	ePKPdf	PKPdf	00 16 27.9	+1.3
CPCT				ePKPbc	PKPbc	00 16 33.9	+0.9

*NEIC **11** 00:09:02.9, 4706S×16574E, h105^{km}, MG3.7(WEL), After WEL.*

WEL 11 00:09:02.3±0.6**, 4677S×16543E, h33**^{km}**, ML3.7**/13**, Error ellipse: s-maj=6.2km s-min=4.3km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ	The Paps	1.76	93	PN	Pn	00 09 29.8	-0.7
APZ				SN	Sn	00 09 49.1	-2.7
APZ				SN	Sn	00 09 50.4	-1.4
DCZ	Deep Cove	1.76	44	PN	Pn	00 09 29.2	-1.3
WHZ	Wether Hill Ro	1.95	64	PN	Pn	00 09 32.9	-0.2
WHZ				SN	Sn	00 09 54.6	-1.9
WHZ				SN	Sn	00 09 55.7	-0.8
MLZ	Mavora Lakes	2.38	54	ePN	Pn	00 09 39.4	+0.4
MLZ				SN	Sn	00 10 05.5	-1.5
SYZ	Scrubby Hill	2.57	86	PN	Pn	00 09 42.1	+0.6
SYZ				SN	Sn	00 10 09.4	-2.3
TUZ	Tuapeka	3.02	76	P	Pn	00 09 48.0	+0.1
TUZ				S	Sn	00 10 21.6	-1.3
TUZ	Tuapeka	3.02	76	PN	Pn	00 09 47.5	-0.3
TUZ				SN	Sn	00 10 20.9	-2.0
EAZ	Earnscleugh	3.11	62	eP	Pn	00 09 49.4	+0.3
EAZ	Earnscleugh	3.11	62	PN	Pn	00 09 49.1	+0.1
WKZ	Wanaka	3.17	54	eP	Pn	00 09 51.5	+1.6
WKZ	Wanaka	3.17	54	ePN	Pn	00 09 51.2	+1.3
JCZ	Jackson Bay	3.57	42	eP	Pn	00 09 57.3	+1.9
JCZ	Jackson Bay	3.57	42	ePN	Pn	00 09 56.5	+1.1
ODZ	Otahua Downs	4.03	67	eP	Pn	00 10 00.2	-1.5
ODZ	Otahua Downs	4.03	67	PN	Pn	00 10 00.2	-1.4
FOZ	Fox Glacier	4.40	45	eP	Pn	00 10 09.7	+3.0
FOZ	Fox Glacier	4.40	45	ePN	Pn	00 10 08.8	+2.0
RPZ	Rata Peaks	5.01	55	P	Pn	00 10 19.7	+4.5
RPZ	Rata Peaks	5.01	55	ePN	Pn	00 10 19.1	+3.9
WVZ	Waitaha Valley	5.28	48	ePN	Pn	00 10 19.0	+0.2
LTZ	Lake Taylor	6.29	53	eP	Pn	00 10 32.9	+0.1
LTZ	Lake Taylor	6.29	53	ePN	Pn	00 10 33.1	+0.3
THZ	Tophouse	7.34	50	ePN	Pn	00 10 45.6	-1.5

*NEIC **11** 00:38:25.8, 3446N×2580E, h30^{km}, MD3.3(ATH), After ATH.*
*ATH **11** 00:38:25.8, 3446N×2580E, h30^{km}±4^{km}, MD3.3/4*
*ISCJB **11** 00:38:26.7±1.0, 3449N±006×259E±01, h30^{km}±9^{km}, Error ellipse: s-maj=19.1km s-min=8.1km az=147.5*
*CSEM **11** 00:38:26.0±0.1, 3447N×2586E, h20^{km}, MD3.3, Error ellipse: s-maj=6.8km s-min=3.4km az=67.0*
*HLW **11** 00:38:29.4, 3444N×2582E, h33^{km}, Mb3.1*

ISC 11 00:38:28.0±0.9**, 3452N**±005×**258E**±01**, h29**^{km}±9^{km}**, n8, σ0^{s}78**/12**, 3C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	Khrisi	0.36	351	ePB	Pb	00 38 35.0	-1.2
XRY				eSB	Sb	00 38 42.5	+0.7
NPS	Neapolis	0.75	350	ePN	Pn	00 38 41.8	-0.8
NPS				eSN	Sn	00 38 52.8	-0.2
GVD	Gavdhos	1.42	283	ePN	Pn	00 38 52.0	+0.2
VAM	Vamos	1.56	305	ePN	Pn	00 38 54.4	+0.7
SLUM		3.06	189	⇑P	Pn	00 39 14.4	+0.1
SWA1		5.24	181	⇑P	Pn	00 39 44.5	+0.1
SWA1				S	Sn	00 40 39.2	-4.6
SWA2		5.27	183	⇑P	Pn	00 39 44.7	0.0
SWA2				S	Sn	00 40 40.5	-4.0
AMAG	Maghara	7.38	120	P	Pn	00 40 14.3	+0.7

IDC 11 00:42:32.6±1.1**, 1344N×14435E, h98**^{km}±12^{km}**, mb3.6**/6**, mb1 3.8**/6**, mb1mx3.6**/18**, mbtmp3.9**/6**, Error ellipse: s-maj=39.0km s-min=22.1km az=82.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.53	73	P	Pn	00 42 49.6	+1.2
	251nm,0.3s,baz=179,slow=21,SNR=150						
GUMO				S	Sn	00 43 01.8	+1.7
	1µm,0.3s,baz=17,slow=19,SNR=181						
MJAR	Matsushiro Arr	23.66	348	P	P	00 47 35.8	+0.8
	5.1nm,0.8s,baz=164,slow=8.5,SNR=11						
ASAR	Alice Springs	38.27	196	P	P	00 49 43.6	+0.4
	0.4nm,0.7s,baz=358,slow=12,SNR=4.7						
SONM	Songino Array	46.56	325	P	P	00 50 50.0	-0.4
	0.8nm,0.7s,baz=134,slow=8.5,SNR=3.6						
MKAR	Makanchi Array	61.25	316	P	P	00 52 37.0	-0.3
	0.9nm,0.5s,baz=96,slow=8.7,SNR=5.9						
NVAR	Mina Array Bea	87.41	51	P	P	00 55 09.4	+0.6
	1.1nm,0.7s,baz=264,slow=7.4,SNR=9.7						
VNDA	Vanda	91.35	176	P	P	00 55 26.5	-0.8
	0.2nm,0.8s,baz=313,slow=6.6,SNR=3.7						

*ISCJB **11** 00:53:16.3±0.3, 4829N±001×880E±002, h12^{km}±2^{km}, Error ellipse: s-maj=2.5km s-min=2.4km az=62.5*
*LEDBW **11** 00:53:16.9±0.1, 48268N±0005×8866E±0008, h17^{km}±2^{km}, ML2.0, Error ellipse: s-maj=2.6km s-min=1.8km az=102.0*
*BGR **11** 00:53:16.4±0.3, 4828N×891E, h10^{km}, ML1.5/2, Error ellipse: s-maj=4.4km s-min=2.2km az=154.0*
*LDG **11** 00:53:17.4±0.6, 4827N×881E, h18^{km}, Ml2.1/9, Error ellipse: s-maj=10.3km s-min=6.0km az=123.0*
*ZUR **11** 00:53:17.0, 4825N×883E, h11^{km}±1^{km}, ML2.1/9*
*STR **11** 00:53:17.4±0.5, 4828N×876E, h10^{km}±1^{km}, Ml1.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 11 00:53:16.1±0.2**, 4829N**±001×**885E**±002**, h20**^{km}±2^{km}**, n68, σ1^{s}11**/102**, 7C-10D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHBD	Braunhartsberg	0.11	112	⇑iPg	Pg	00 53 20.6	+0.4
BHBD				i Sg	Sg	00 53 23.2	+0.3
MSS	Messtetten	0.14	146	⇓iPg	Pg	00 53 20.7	+0.3
MSS				i Sg	Sg	00 53 23.4	+0.1
SPAK	Spaichingen-Ko	0.19	192	⇑P*	Pg	00 53 21.5	+0.4
SPAK				S*	Sg	00 53 24.4	-0.1
SPAK	Spaichingen-Ko	0.19	192	⇑Pg	Pg	00 53 21.5	+0.4
SPAK				Sg	Sg	00 53 24.4	-0.1
TUBL	Tuebingen-Lenn	0.28	34	⇑iP*	Pg	00 53 24.0	+1.6
TUBL				PmP		00 53 25.3	
TUBL				i S*	Sg	00 53 28.2	+1.5
TUBL	Tuebingen-Lenn	0.28	34	⇑iPg	Pg	00 53 24.0	+1.6
TUBL	Tuebingen-Lenn	0.28	34	Px	Px	00 53 25.3	
TUBL				i Sg	Sg	00 53 28.2	+1.5
GUT	Gutenstein	0.28	141	⇓iP*	Pg	00 53 22.7	+0.2
GUT				PmP		00 53 25.9	
GUT				i S*	Sg	00 53 26.6	-0.2
GUT	Gutenstein	0.28	141	Px	Px	00 53 25.9	
GUT				i Sg	Sg	00 53 26.6	-0.2
BFO	Black Forest	0.35	277	ePg	Pg	00 53 24.3	+0.8
	SNR=21						
BFO				eSg	Sg	00 53 29.3	+0.6
	SNR=26						
BUCH	Bad Urach	0.37	65	⇑iP*	Pb	00 53 24.7	+0.7
BUCH				i S*	Sb	00 53 30.1	+0.7
BUCH	Bad Urach	0.37	65	⇑iPg	Pb	00 53 24.7	+0.7
BUCH				i Sg	Sb	00 53 30.1	+0.7
LBG	Lerchenberg	0.38	355	⇓iP*	Pb	00 53 25.0	+0.9
LBG				PmP		00 53 26.0	
LBG				i S*	Sb	00 53 30.7	+1.3
LBG				SmS		00 53 32.7	
LBG	Lerchenberg	0.38	355	⇓iPg	Pb	00 53 25.0	+0.9
LBG				i Sg	Sb	00 53 30.7	+1.3
LBG	Lerchenberg	0.38	355	P	Pg	00 53 26.0	+2.0
LBG				S	Sg	00 53 32.7	+3.3
STU	Stuttgart	0.54	26	ePg	Pg	00 53 26.9	0.0
	SNR=2.7						
STU				eSg	Sg	00 53 34.9	+0.8
	SNR=5.8						
SLE	Schleitheim	0.58	204	⇓iPg	Pg	00 53 27.7	+0.1
	174nm,0.4s						
SLE				i Sg	Sg	00 53 35.2	-0.2
	174nm,0.4s						
SISB	Singen-Schiene	0.61	173	⇓P*	Pb	00 53 28.4	+0.4
SISB				PmP		00 53 29.0	
SISB				S*	Sg	00 53 36.8	+0.4
SISB				SmS		00 53 37.8	
SISB	Singen-Schiene	0.61	173	P	Pb	00 53 29.0	+0.9
SISB				Sg	Sg	00 53 36.8	+0.4
SISB				S	Sb	00 53 37.8	+1.6
STEIN	Stein am Rhein	0.62	179	i Sg	Pb	00 53 28.7	+0.5
	37nm,0.2s						
STEIN	Stein am Rhein	0.62	179	⇓iPg	Sb	00 53 36.9	+0.4
	37nm,0.2s						
TRULL	Truellikon	0.65	190	i Sg	Pb	00 53 29.2	+0.4
	135nm,0.2s						
TRULL	Truellikon	0.65	190	⇓iPg	Sb	00 53 37.7	+0.3
	135nm,0.2s						
FELD	Feldberg im Sc	0.70	234	Pn	Pn	00 53 30.0	-0.8
FELD				Pg	Pg	00 53 30.6	+0.7
FELD	Feldberg im Sc	0.70	234	P	Pg	00 53 30.6	+0.7
KIZ	Kirchzarten	0.71	242	⇑Pn	Pn	00 53 30.0	-0.9
KIZ				P*	Pb	00 53 30.4	+0.7
KIZ				Pg	Pg	00 53 30.5	+0.5
KIZ				PmP		00 53 30.6	
KIZ				Sg	Sg	00 53 39.6	+0.1
KIZ	Kirchzarten	0.71	242	P	Pb	00 53 30.4	+0.7
KIZ				S	Sg	00 53 39.6	+0.1
KIZ	Kirchzarten	0.71	242	⇑Pn	Pn	00 53 30.0	-0.9
KIZ	Kirchzarten	0.71	242	P	Pg	00 53 30.5	+0.5
KIZ	Kirchzarten	0.71	242	P	Pb	00 53 30.6	+0.9
WEIN	Weingarten	0.77	173	⇓iPg	Pg	00 53 31.3	+0.1
	33nm,0.2s						
WILA	Wila	0.88	177	eSg	Pb	00 53 33.2	+0.6
	134nm,0.3s						
WILA	Wila	0.88	177	⇑iPg	Sb	00 53 44.8	+0.9
	134nm,0.3s						
SULZ	Sulz-Cheisache	0.91	213	eSg	Pb	00 53 34.3	+1.2
	182nm,0.4s						
ZUR	Zurich	0.94	191	i Sg	Pb	00 53 37.0	+3.3
	117nm,0.2s						
ZUR	Zurich	0.94	191	ePg	Sb	00 53 46.6	+0.9
	117nm,0.2s						
HDH	Heidenheim-Cha	0.95	72	Pg	Pg	00 53 34.6	-0.1
HDH				Sg	Sg	00 53 47.6	+0.4
HDH	Heidenheim-Cha	0.95	72	Px	Px	00 53 34.6	
HDH				S	Sg	00 53 47.6	+0.4
LANF	Langenberg	0.98	315	Sg	Sg	00 53 48.8	+0.8
LANF	Langenberg	0.98	315	Pg	Pg	00 53 35.6	+0.5
WLS	Welschbruch	1.00	278	Sg	Sg	00 53 49.2	+0.4
WLS	Welschbruch	1.00	278	Pg	Pg	00 53 35.8	+0.2
WLS				Sg	Sg	00 53 49.0	+0.2
UBR	Ueberruh	1.04	125	Pg	Pg	00 53 36.3	-0.1
UBR				S	Sn	00 53 50.1	+0.6
UBR	Ueberruh	1.04	125	Px	Px	00 53 36.3	
UBR				Sn	Sn	00 53 50.1	+0.6
CDF	Champ du Feu	1.05	277	ePg	Pg	00 53 36.3	-0.3
CDF				eSg	Sg	00 53 50.3	-0.2
	7.9nm,0.3s						
LIENZ	Alp Oberkamor	1.09	156	⇑iPg	Pg	00 53 45.6	+8.4
	28nm,2.0s						
LIENZ				eSg	Sg	00 53 51.8	+0.3
	28nm,2.0s						
ECH	Echery	1.13	267	ePg	Pg	00 53 38.3	+0.3
	SNR=1.5						
ECH	Echery	1.13	267	Pg	Pg	00 53 37.3	-0.7
ECH				Sg	Sg	00 53 52.4	-0.5
SIND	Sindeldorf	1.17	25	Pn	Pn	00 53 36.3	-1.0
SIND				Pg	Pg	00 53 39.6	+0.8
SIND				Sg	Sg	00 53 54.7	+0.6
SIND	Sindeldorf	1.17	25	P	Pg	00 53 39.6	+0.8
SIND				S	Sg	00 53 54.7	+0.6
SIND	Sindeldorf	1.17	25	Px	Px	00 53 36.3	
DAVA	Damuels	1.22	145	⇓iPg	Pg	00 53 39.2	-0.5
DAVA				⇑iSg	Sg	00 53 54.5	-1.3
	comp=Z,2.4nm,0.2s						
MOF	Molkenrain	1.23	250	Pg	Pg	00 53 39.0	-0.9
HINF	Hinteralfeld	1.42	251	ePn	Pn	00 53 38.8	-1.9
HINF	Hinteralfeld	1.42	251	ePg	Pg	00 53 44.1	+0.6
HINF				eSg	Sg	00 54 01.6	-0.4
	2.7nm,0.2s						
FUR	Furstenfeldbru	1.63	93	eSg	Sg	00 54 06.4	-2.4
	SNR=1.8						
GRF	Grafenberg Arr	2.10	47	eSg	Sg	00 54 23.0	-0.8
	SNR=3.2						
CABF	La Chapelle	2.52	229	eSg	Sg	00 54 34.3	-2.7
	1.0nm,0.2s						
WET	Wettzell	2.80	71	eSg	Sg	00 54 44.4	-1.8
	SNR=3.0						
MOX	Moxa	2.97	36	eSg	Sg	00 54 48.8	-2.7
	SNR=1.9						
GUNZ	Gunzen	3.08	46	eSg	Sg	00 54 52.6	-2.5
	SNR=3.3						
WERD	Werda	3.13	45	eSg	Sg	00 54 53.9	-2.6
	SNR=2.7						
TANN	Tannenbergstha	3.18	47	eSg	Sg	00 54 55.6	-2.7
	SNR=1.9						
GEC2	GERESS Array S	3.27	78	ePn	Pn	00 54 09.8	+3.6
GEC2				eSg	Sg	00 54 59.0	-2.2
	SNR=1.9						
LOR	Lormes	3.52	255	ePn	Pn	00 54 09.2	-0.3
LOR				eSg	Sg	00 55 06.3	-2.7
	0.8nm,0.2s						
SMF	Signal de Mont	3.77	246	eSg	Sg	00 55 15.0	-2.2
	1.1nm,0.3s						
SSF	Saint Saulge	3.81	253	eSg	Sg	00 55 16.9	-1.6
	0.8nm,0.3s						
AVF	Avril sur Loir	4.01	250	eSg	Sg	00 55 22.0	-2.9
	0.4nm,0.3s						

*ISCJB **11** 01:17:47.6±0.8, 1075N±004×6258W±003, h82^{km}±9^{km}, Error ellipse: s-maj=7.9km s-min=4.6km az=125.5*
*NEIC **11** 01:17:47.6, 1072N×6263W, h66^{km}, MD3.3(TRN), After TRN.*
*TRN **11** 01:17:47.6, 1072N×6263W, h66^{km}, MD3.3*
*FUNV **11** 01:17:49.0, 1080N×6253W, h75^{km}, MW2.9*

ISC 11 01:17:48.3±0.8**, 1076N**±004×**6258W**±003**, h79**^{km}±9^{km}**, n13, σ0^{s}72**/26**, 2C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.36	108	⇑eP	Pn	01 18 00.7	-0.1
GUIV				eS	Sn	01 18 09.5	-0.7
GUNV	Guanoco	0.69	211	⇓eP	Pn	01 18 04.8	+1.0
GUNV				eS	Sn	01 18 16.8	+1.5
ITEV	Isla Los Testi	0.81	317	⇑eP	Pn	01 18 05.4	+0.3
ITEV				eS	Sn	01 18 17.2	-0.3
TRN	Trinidad (W)	1.16	95	eP	Pn	01 18 09.2	0.0
TRN				eS	Sn	01 18 23.2	-1.6
TBH	Brigand Hill	1.51	100	⇓iP	Pn	01 18 13.8	+0.1
TBH				eS	Sn	01 18 33.3	+0.5
GRW	Mount Saint Ca	1.66	33	eP	Pn	01 18 16.4	+0.9
GRW				eS	Sn	01 18 36.9	+0.6
GRHS	Sauteurs	1.72	32	eP	Pn	01 18 15.8	-0.6
GRHS				eS	Sn	01 18 37.3	-0.5
GRSS	Sisters	1.80	32	eP	Pn	01 18 17.7	+0.3
GRSS				eS	Sn	01 18 40.5	+0.8
GRIC	Isle de Caille	1.80	32	eP	Pn	01 18 17.7	+0.2
GRIC				eS	Sn	01 18 40.2	+0.5
TPR	Prospect	1.82	76	eP	Pn	01 18 17.5	-0.2
TPR				eS	Sn	01 18 39.9	-0.2
GRCU	Cariacou	2.03	33	eP	Pn	01 18 20.3	-0.2
GRCU				eS	Sn	01 18 44.3	-0.8
PCRV	Puerto La Cruz	2.11	254	eP	Pn	01 18 22.0	+0.4
PCRV				eS	Sn	01 18 45.5	-1.4
CUPV	Cœpira	3.24	258	eP	Pn	01 18 37.3	+0.5
CUPV				eS	Sn	01 19 13.2	-1.0

OTT 11 01:28:58.2±0.4**, 6124N×7115W, h18**^{km}**, MN2.9**/2**, 58km southeast from Kangiqsujuaq, Qc Boothia Ungava Seismic Zone., Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRB	Frobisher Bay	2.79	24	PN	Pn	01 29 41.6	-0.3
FRB				SN	Sn	01 30 14.7	-0.4
FRB				SG	Sg	01 30 19.1	-8.8
FRB				Trac		01 30 23.1	
	comp=Z,12nm,0.2s						
KUQ	Kuujjuuaa	3.43	155	PN	Pn	01 29 50.1	-0.7
KUQ				PG	Pg	01 29 55.5	-8.5
KUQ				SN	Sn	01 30 26.4	-4.6
KUQ				SG	Sg	01 30 40.1	-8.4
KUQ				Trac		01 30 42.2	
	comp=Z,7.5nm,0.1s						
SCHQ	Schefferville	6.82	159	PN	Pn	01 30 36.9	-0.4
SCHQ				SN	Sn	01 31 49.9	-4.6
SCHQ				LG		01 32 22.7	
SCHQ				Trac		01 32 33.5	
	comp=Z,2.5nm,0.5s						
YOSQ	Ashton Mining	8.41	184	PN	Pn	01 30 56.1	-3.1
YOSQ				SN	Sn	01 32 25.0	-8.7
YOSQ				LG		01 33 12.8	
YOSQ				Trac		01 33 17.0	
	comp=Z,4.5nm,0.3s						
WEMQ	Wemindji, Queb	9.00	207	PN	Pn	01 31 05.9	-1.3
WEMQ				SN	Sn	01 32 42.2	-5.9
WEMQ				Trac		01 33 37.7	
	comp=Z,2.9nm,0.3s						
ILON	Igloolik, Nuna	9.29	336	SN	Sn	01 32 46.3	-8.9
GIFN	Gifford Fjord,	9.78	338	PN	Pn	01 31 15.0	-2.9
GIFN				SN	Sn	01 32 58.5	-8.8
AP3N	Apex site 3 Nu	9.92	332	PN	Pn	01 31 18.1	-1.8
AP3N				SN	Sn	01 33 01.5	-9.2
AP3N				LG		01 33 58.7	
SILO	Sutton Inlier	9.97	233	PN	Pn	01 31 17.2	-3.3
SILO				SN	Sn	01 33 03.8	-8.2
VIMO	Victor Mine	10.86	225	PN	Pn	01 31 30.4	-2.3
VIMO				SN	Sn	01 33 23.0	-11
SMQ	Clarke City	11.32	165	PN	Pn	01 31 36.0	-2.9
SMQ				SN	Sn	01 33 31.8	-13

*LJU **11** 01:35:55.9, 4632N×13.15E, h15^{km}, ML2.3*
*ISCJB **11** 01:35:55.9±0.2, 4631N±001×13.13E±002, h13^{km}±1^{km}, Error ellipse: s-maj=2.4km s-min=1.8km az=49.7*
*NEIC **11** 01:35:56.0, 4628N×1322E, h6^{km}, ML2.3(LJU), ML2.4(ROM), ML2.7(SZGRF), ML3.0(LDG), ML3.1(FUR), After ROM.*
*LDG **11** 01:35:56.4±0.1, 4630N×1323E, h5^{km}, Ml3.0/5, Error ellipse: s-maj=4.2km s-min=2.9km az=11.0*
*ROM **11** 01:35:56.1±0.2, 4634N×13.17E, h10^{km}, Md3.3/11, Ml2.3/3, Error ellipse: s-maj=3.0km s-min=2.6km az=6.0*
*CSEM **11** 01:35:56.1±0.1, 4631N×13.11E, h12^{km}, ML3.1/10, Error ellipse: s-maj=1.1km s-min=0.8km az=9.0*
*PRU **11** 01:35:56.7, 4633N×1329E, h0^{km}*

ISC 11 01:35:56.7±0.2**, 4631N**±001×**1314E**±002**, h10**^{km}±1^{km}**, n108, σ0^{s}90**/188**, 23C-27D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOO	Bordano	0.03	289	⇑iPg	Pg	01 35 58.5	0.0
BOO				i Sg	Sg	01 35 59.8	0.0
GMNA	Gemona	0.08	117	⇑iPg	Pg	01 35 58.7	-0.3
BUA	Buia	0.09	186	⇑iPg	Pg	01 35 59.3	+0.1
BUA				i Sg	Sg	01 36 01.5	+0.5
BAD	Bernadia	0.10	135	⇑iPg	Pg	01 35 59.4	+0.1
BAD				i Sg	Sg	01 36 01.6	+0.4
BAD	Bernadia	0.10	135	i Pg	Pg	01 35 59.1	-0.2
BAD				Sg	Sg	01 36 01.5	+0.3
BAD	Bernadia	0.10	135	i Pg	Pg	01 35 59.2	-0.1
BAD				Sg	Sg	01 36 01.5	+0.3
MPRI	Monte Prat	0.12	236	⇑iPg	Pg	01 35 59.7	0.0
MPRI				i Sg	Sg	01 36 02.2	+0.5
MPRI	Monte Prat	0.12	236	i Pg	Pg	01 35 59.7	0.0
MPRI				Sg	Sg	01 36 02.0	+0.3
MPRI	Monte Prat	0.12	236	i Pg	Pg	01 35 59.7	+0.1
MPRI				Sg	Sg	01 36 02.0	+0.3
PTCC	Patocco-Chiusa	0.18	58	⇓Pg	Pg	01 36 00.3	-0.2
PTCC				Sg	Sg	01 36 03.2	+0.1
PLRO	Paularo	0.24	2	⇓iPg	Pg	01 36 01.4	-0.2
PLRO				i Sg	Sg	01 36 05.4	+0.6
COLI	Coloredo	0.24	137	⇓iPg	Pg	01 36 01.8	+0.1
COLI				i Sg	Sg	01 36 06.1	+1.1
COLI	Coloredo	0.24	137	i Pg	Pg	01 36 01.7	0.0
COLI				Sg	Sg	01 36 05.8	+0.8
COLI	Coloredo	0.24	137	i Pg	Pg	01 36 01.7	0.0
COLI				Sg	Sg	01 36 05.8	+0.8
ROBS	Robic	0.27	104	i Pg	Pg	01 36 01.6	-0.4
ROBS				i Sg	Sg	01 36 05.4	-0.3
ROBS							
	comp=Z,177nm,0.1s						
ROBS	Robic	0.27	104	i Pg	Pg	01 36 01.6	-0.4
ROBS				i Sg	Sg	01 36 05.4	-0.3
ROBS	Robic	0.27	104	i Pg	Pg	01 36 01.6	-0.5
ROBS				i Sg	Sg	01 36 05.4	-0.3
ZOU	Zoufplan	0.27	335	⇓iPg	Pg	01 36 02.0	-0.2
ZOU				i Sg	Sg	01 36 06.3	+0.5
DRE	Drenchia	0.38	111	⇓ePg	Pg	01 36 03.5	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRE				eSg	Sg	01 36 09.7	+0.6
DRE	Drenchia	0.38	111	i Pg	Pg	01 36 03.5	-0.6
DRE				Sg	Sg	01 36 10.0	+0.8
DRE	Drenchia	0.38	111	i Pg	Pg	01 36 03.5	-0.6
DRE				Sg	Sg	01 36 10.0	+0.8
FVI	Forni Avoltri	0.38	319	⇓Pg	Pg	01 36 03.6	-0.5
FVI				Sg	Sg	01 36 09.3	+0.1
TLI	Talmassons	0.39	184	⇑iPg	Pg	01 36 04.1	-0.3
TLI	Talmassons	0.39	184	i Pg	Pg	01 36 04.1	-0.2
CSMI	Casera Mimoias	0.39	301	⇑iPg	Pg	01 36 04.0	-0.4
CSMI				i Sg	Sg	01 36 09.7	+0.1
MLNI	Malnisio	0.40	246	⇓iPg	Pg	01 36 04.4	-0.2
MLNI				i Sg	Sg	01 36 11.1	+1.3
CADS	Cadrg	0.42	101	i Pg	Pg	01 36 04.3	-0.7
CADS				i Sg	Sg	01 36 11.0	+0.4
CADS							
	comp=Z,96nm,0.1s						
CADS	Cadrg	0.42	101	i Pg	Pg	01 36 04.3	-0.7
CADS				i Sg	Sg	01 36 11.0	+0.4
	comp=Z,96nm,0.1s						
CSO	Casso	0.56	266	⇓iPg	Pg	01 36 06.8	-0.8
CSO				i Sg	Sg	01 36 15.1	0.0
VOJS	Vojsko	0.59	118	i Pg	Pg	01 36 07.2	-0.9
GORS	Gorjuse	0.59	89	ePg	Pg	01 36 07.4	-0.8
GORS				i Sg	Sg	01 36 16.5	+0.5
GORS							
	comp=Z,69nm,0.2s						
GORS	Gorjuse	0.59	89	ePg	Pg	01 36 07.4	-0.8
GORS				i Sg	Sg	01 36 16.5	+0.5
	comp=Z,69nm,0.2s						
VOY	Vojsko	0.59	118	eSg	Sg	01 36 16.5	+0.5
TRI	Trieste	0.74	144	Pg	Pg	01 36 09.8	-1.2
TRI				Sg	Sg	01 36 21.3	+0.5
	comp=Z,136nm,0.6s						
JAVS	Javornik	0.77	123	i Pg	Pg	01 36 10.2	-1.3
JAVS				i Sg	Sg	01 36 22.7	+1.2
JAVS							
	comp=Z,44nm,0.2s						
JAVS	Javornik	0.77	123	i Pg	Pg	01 36 10.2	-1.3
JAVS				i Sg	Sg	01 36 22.7	+1.2
	comp=Z,44nm,0.2s						
KBA	Koelnbreinsper	0.78	10	⇑iSg	Sg	01 36 21.9	0.0
	comp=Z,136nm,0.4s						
KBA	Koelnbreinsper	0.78	10	ePg	Pg	01 36 11.5	-0.2
	SNR=20						
KBA				⇑iSg	Sg	01 36 21.9	0.0
	comp=Z,136nm,0.4s						
MTLO	Montello	0.88	236	⇑iPg	Pg	01 36 14.1	+0.5
IESO	Jesolo	0.89	208	⇑ePg	Pg	01 36 15.2	+1.3
OBKA	Obir	1.00	78	⇓iSg	Sg	01 36 29.4	+0.6
	comp=Z,58nm,0.3s						
OBKA	Obir	1.00	78	⇑ePn	Pn	01 36 15.5	-1.2
	SNR=14						
OBKA				⇓iSg	Sg	01 36 29.4	+0.6
	comp=Z,58nm,0.3s						
LJU	Ljubljana	1.00	105	ePg	Pg	01 36 16.0	0.0
LJU				eSg	Sg	01 36 30.5	+1.5
CGRP	Cima Grappa	1.03	246	⇓ePg	Pg	01 36 17.4	+1.0
CTI	Castel Tesino	1.07	256	Pg	Pg	01 36 17.6	+0.4
	comp=Z,79nm,0.3s						
KNDS	Knezji Dol	1.17	132	i Pg	Pg	01 36 19.0	-0.1
VISS	Visnje	1.29	113	i Pg	Pg	01 36 20.9	-0.5
VISS				eSg	Sg	01 36 39.0	+0.8
VISS							
	comp=Z,88nm,0.2s						
VISS	Visnje	1.29	113	i Pg	Pg	01 36 20.9	-0.5
VISS				eSg	Sg	01 36 39.0	+0.8
	comp=Z,88nm,0.2s						
PDKS	Podkum	1.32	100	ePn	Pn	01 36 20.8	-0.3
PDKS				eSg	Sg	01 36 39.2	+0.1
PDKS							
	comp=Z,21nm,0.1s						
PDKS	Podkum	1.32	100	ePn	Pn	01 36 20.8	-0.3
PDKS				eSg	Sg	01 36 39.2	+0.1
PDKS	Podkum	1.32	100	ePn	Pn	01 36 20.8	-0.3
PDKS				eSg	Sg	01 36 39.2	+0.1
APPI	Appiano	1.33	278	Pn	Pn	01 36 21.8	+0.5
	comp=Z,71nm,0.3s						
TEOL	Teolo	1.40	228	⇓iPg	Pg	01 36 22.1	-1.4
TEOL				i Sg	Sg	01 36 41.2	-0.5
WTTA	Wattenberg	1.40	313	⇓iSg	Sg	01 36 42.0	+0.1
	comp=Z,46nm,0.4s						
WTTA	Wattenberg	1.40	313	⇓ePn	Pn	01 36 23.1	+0.8
	SNR=7.7						
WTTA				⇓iSn	Sg	01 36 42.0	+0.1
	comp=Z,46nm,0.4s						
WTTA	Wattenberg	1.40	313	⇓ePg	Pg	01 36 23.1	-0.6
WTTA				i Sg	Sg	01 36 42.0	+0.1
WATA	Walderalm	1.48	314	⇓iSg	Sg	01 36 45.7	+1.3
	comp=Z,12nm,0.2s						
WATA	Walderalm	1.48	314	⇑ePg	Pg	01 36 25.1	-0.1
	SNR=9.8						
WATA				⇓iSn	Sg	01 36 45.7	+1.3
	comp=Z,12nm,0.2s						
SQTA	Sankt Quirin	1.61	305	⇑iSg	Sg	01 36 50.2	+1.8
	comp=Z,26nm,0.3s						
SQTA	Sankt Quirin	1.61	305	⇓ePg	Pg	01 36 26.8	-0.7
	SNR=20						
SQTA				⇑iSg	Sg	01 36 50.2	+1.8
	comp=Z,26nm,0.3s						
MOA	Molln	1.72	26	⇓iSg	Sg	01 36 52.3	+0.3
	comp=Z,25nm,0.3s						
MOA	Molln	1.72	26	ePg	Pg	01 36 28.4	-1.3
	SNR=29						
MOA				⇓iSg	Sg	01 36 52.3	+0.3
	comp=Z,25nm,0.3s						
MOA	Molln	1.72	26	ePg	Pg	01 36 28.4	-1.3
MOA				i Sg	Sg	01 36 52.3	+0.3
MOTA	Moosalm	1.74	307	⇓iSg	Sg	01 36 54.2	+1.6
	comp=Z,34nm,0.4s						
MOTA	Moosalm	1.74	307	⇑ePg	Pg	01 36 29.6	-0.4
	SNR=9.8						
MOTA				⇓iSg	Sg	01 36 54.2	+1.6
	comp=Z,34nm,0.4s						
MABI	Malga Bissina	1.84	263	Pn	Pn	01 36 30.1	+1.8
	comp=Z,13nm,0.5s						
ARSA	Arzberg	1.89	59	⇑iPg	Pg	01 36 32.2	-0.7
ARSA	Arzberg	1.89	59	⇓iSg	Sg	01 36 57.7	+0.3
	comp=Z,6.6nm,0.4s						
ARSA	Arzberg	1.89	59	⇑iPn	Pn	01 36 28.7	-0.3
ARSA				⇑iPg	Pg	01 36 32.2	-0.7
ARSA				⇓iSg	Sg	01 36 57.7	+0.3
	comp=Z,6.6nm,0.4s						
ARSA	Arzberg	1.89	59	⇑iPg	Pg	01 36 32.2	-0.7
ARSA				Sg	Sg	01 36 57.7	+0.3
	comp=Z,6.6nm,0.4s						
NVLJ	Novalja	2.13	144	i Pn	Pn	01 36 32.3	0.0
NVLJ				i Sn	Sn	01 36 59.5	+0.7
NVLJ				i Sg	Sg	01 37 04.1	-1.1
NVLJ	Novalja	2.13	144	i Sn	Sn	01 36 59.5	+0.7
NVLJ				i Sg	Sg	01 37 04.1	-1.1
FUR	Furstenfeldbru	2.25	326	ePn	Pn	01 36 35.1	+1.2
FUR				eSg	Sg	01 37 09.3	+0.4
FUR	Furstenfeldbru	2.25	326	eSg	Sg	01 37 09.3	+0.4
DAVA	Damuels	2.44	295	⇓iSn	Sn	01 37 08.2	+1.8
DAVA	Damuels	2.44	295	⇑iPn	Pn	01 36 36.3	-0.2
DAVA				⇓iSn	Sn	01 37 08.2	+1.8
DAVA	Damuels	2.44	295	⇑iPn	Pn	01 36 36.3	-0.3
DAVA				i Sn	Sn	01 37 08.2	+1.8
CONA	Conrad Observa	2.46	48	ePn	Pn	01 36 38.1	+1.2
	SNR=5.9						
CONA				⇑iSn	Sn	01 37 07.9	+0.9
GEC2	GERESS Array S	2.56	8	ePn	Pn	01 36 39.3	+1.1
GEC2				eSn	Sn	01 37 10.2	+0.7
SFI	Santa Sofia	2.57	201	Pn	Pn	01 36 38.0	-0.4
	comp=Z,12nm,0.5s						
FSSB	Fossombrone	2.63	186	Pn	Pn	01 36 39.1	-0.1
	comp=Z,9.0nm,0.3s						
ARV	Arcevia	2.82	183	Pn	Pn	01 36 41.8	+0.1
	comp=Z,6.0nm,0.5s						
KHC	Kasperske Hory	2.84	6	ePN	Pn	01 36 42.9	+0.9
KHC				ePG	Pg	01 36 47.8	-3.3
KHC				eSN	Sn	01 37 16.8	+0.6
KHC				eSG	Sg	01 37 26.0	-1.8
	comp=Z,11nm,0.6s						
KHC	Kasperske Hory	2.84	6	ePg	Pg	01 36 47.8	-3.3
KHC				eSn	Sn	01 37 16.8	+0.6
KHC				eSg	Sg	01 37 26.0	-1.8
	comp=Z,11nm,0.6s						
WET	Wettzell	2.84	357	ePn	Pn	01 36 42.7	+0.7
WET				eSn	Sn	01 37 17.3	+1.0
SNTG	Esanatoglia	3.06	183	Pn	Pn	01 36 44.6	-0.4
	comp=Z,17nm,0.6s						
PII	Pisa	3.18	217	Pn	Pn	01 36 46.6	-0.2
	comp=Z,7.0nm,0.2s						
PRU	Pruhonice	3.80	14	ePN	Pn	01 36 55.9	+0.7
PRU				ePG	Pg	01 37 05.5	-3.9
PRU				eSG	Sg	01 37 55.8	-2.9
	comp=Z,12nm,0.6s						
PRU	Pruhonice	3.80	14	ePg	Pg	01 37 05.5	-3.9
PRU				eSg	Sg	01 37 55.8	-2.9
	comp=Z,12nm,0.6s						
BFO	Black Forest	3.84	303	ePn	Pn	01 36 56.8	+1.0
BFO				eSn	Sn	01 37 41.6	+0.6
NKC	Novy Kostel	3.95	354	eSG	Sg	01 38 03.5	-0.1
	comp=Z,5.2nm,0.5s						
CDF	Champ du Feu	4.50	300	ePn	Pn	01 37 05.5	+0.6
CDF				eSn	Sn	01 37 56.0	-1.3
LPG	La Plagne	4.53	262	ePn	Pn	01 37 05.2	-0.1
LPL	La Plagne	4.54	262	ePn	Pn	01 37 04.9	-0.5
HINF	Hinteralfeld	4.55	292	ePn	Pn	01 37 05.4	-0.2
HINF				eSn	Sn	01 37 56.4	-2.1
	comp=Z,2.4nm,0.2s						
HINF	Hinteralfeld	4.55	292	ePn	Pn	01 37 05.4	-0.2
HINF				eSn	Sn	01 37 56.4	-2.1
	comp=Z,1.2nm,0.2s						
DPC	Dobruska-Polom	4.57	27	eSG	Sg	01 38 20.5	-2.8
	comp=Z,8.7nm,0.6s						
BRG	Berggiesshubel	4.60	6	SG	Sg	01 38 22.0	-2.3
	comp=Z,4.2nm,0.6s						
SBF	Sospel	4.72	241	ePn	Pn	01 37 07.3	-0.6
SBF				eSn	Sn	01 37 59.3	-3.4
	comp=Z,8.0nm,0.4s						
SBF	Sospel	4.72	241	ePn	Pn	01 37 07.3	-0.6
SBF				eSn	Sn	01 37 59.3	-3.4
	comp=Z,4.0nm,0.4s						
MBDF	Montbardon	4.75	253	ePn	Pn	01 37 08.1	-0.1
CABF	La Chapelle	4.88	276	ePn	Pn	01 37 10.0	-0.1
CABF				eSn	Sn	01 38 03.8	-2.8
	comp=Z,2.6nm,0.4s						
CABF	La Chapelle	4.88	276	ePn	Pn	01 37 10.0	-0.1
CABF				eSn	Sn	01 38 03.8	-2.8
	comp=Z,1.3nm,0.4s						
CLL	Collm	5.00	359	i Pn	Pn	01 37 13.0	+1.2
CLL				eSg	Sg	01 38 37.0	-0.3
	comp=Z,10.0nm,1.2s						
FRF	La Foret Royal	5.37	241	ePn	Pn	01 37 15.8	-1.0
FRF				eSn	Sn	01 38 15.3	-3.3
	comp=Z,14nm,0.6s						
FRF	La Foret Royal	5.37	241	ePn	Pn	01 37 15.8	-1.0
FRF				eSn	Sn	01 38 15.3	-3.3
	comp=Z,7.1nm,0.6s						
LMR	La Mourre	5.58	240	ePn	Pn	01 37 18.6	-1.0
LMR				eSn	Sn	01 38 19.4	-4.3
	comp=Z,2.5nm,0.3s						
LMR	La Mourre	5.58	240	ePn	Pn	01 37 18.6	-1.0
LMR				eSn	Sn	01 38 19.4	-4.3
	comp=Z,1.2nm,0.3s						

*CSEM **11** 01:46:25.7±0.1, 4252N×4351E, h2km, ML3.6/3, Error ellipse: s-maj=1.4km s-min=1.3km az=169.0*
*TIF **11** 01:46:25.4, 4256N×4355E, h11km±1km*
*ISCJB **11** 01:46:26.4±0.3, 4260N±002×4354E±003, h11km, Error ellipse: s-maj=2.7km s-min=2.3km az=169.5*
*MOS **11** 01:46:26.8±0.7, 4259N×4365E, h9km, mb3.9/1, Error ellipse: s-maj=12.4km s-min=6.2km az=79.4*

ISC 11 01:46:26.8±0.3, 4258N±002×4354E±003, h11km, n31, σ0s99/58, Western Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONI	Oni	0.07	274	P	Pg	01 46 28.3	-0.7
ONI				S	Sg	01 46 29.9	-0.8
DIGR	Digorskoe uzhe	0.33	5	i Pg	Pg	01 46 33.0	-0.3
DIGR				i Sg	Sg	01 46 38.3	+0.6
ZEI	Tsey	0.33	54	i PG	Pg	01 46 33.3	0.0
ZEI				e		01 46 38.8	
ZEI				pmax	pmax		
	comp=Z,501nm,0.2s						
ZEI				smax			
	comp=N,997nm,0.3s						
ZEI	Tsey	0.33	54	i Pg	Pg	01 46 33.3	0.0
	comp=N,501nm,0.2s						
ZEI				eSg	Sg	01 46 38.8	+1.0
	comp=N,997nm,0.3s						
LACR	Lac	0.61	66	i Pg	Pg	01 46 38.0	-0.6
LACR				i Sg	Sg	01 46 46.9	+0.2
KORR	Kora	0.64	37	i Pg	Pg	01 46 38.8	-0.4
KORR				i Sg	Sg	01 46 48.2	+0.6
GOR	Gori	0.73	144	P	Pg	01 46 40.0	-0.8
GOR				S	Sg	01 46 51.0	+0.7
ARNR	Ardon	0.82	41	i Pg	Pg	01 46 42.0	-0.6
ARNR				i Sg	Sg	01 46 53.8	+0.5
VLKR	Vladikavkaz	0.96	60	ePg	Pg	01 46 44.6	-0.7
VLKR				i Sg	Sg	01 46 58.2	+0.4
KMSR	Komsomolskaya	0.97	35	ePg	Pg	01 46 44.8	-0.6
KMSR				eSg	Sg	01 46 58.7	+0.7
SNJR	Sundja	1.06	62	ePg	Pg	01 46 46.3	-0.8
SNJR				eSg	Sg	01 47 01.3	+0.4
CHVG	Ch'k'valeri	1.08	278	P	Pb	01 46 47.5	0.0
CHVG				S	Sb	01 47 02.0	+0.4
BTKR	Batakoyurt	1.08	42	i Pg	Pg	01 46 46.9	-0.7
BTKR				i Sg	Sg	01 47 02.4	+0.7
KUBR	Kubataba	1.23	356	PG	Pg	01 46 51.1	+0.7
KUBR				S	Sg	01 47 08.5	+2.2
KUBR				pmax	pmax		
	comp=Z,54nm,0.3s						
KUBR				smax			
	comp=N,432nm,0.5s						
KUBR	Kubataba	1.23	356	Pg	Pg	01 46 51.1	+0.7
	comp=N,54nm,0.3s						
KUBR				Sg	Sg	01 47 08.5	+2.2
	comp=N,432nm,0.5s						
TBLG	Delisi	1.23	133	P	Pn	01 46 48.8	-1.0
TBLG				S	Sb	01 47 06.2	+0.4
TBLG	Delisi	1.23	133	ePg	Pg	01 46 48.8	-1.6
TBLG				eSg	Sg	01 47 06.1	-0.2
MTA	Mtatsminda	1.28	133	P	Pn	01 46 49.8	-0.8
MTA				S	Sb	01 47 07.3	-0.1
PRTR	Priterechnaya	1.29	25	ePg	Pg	01 46 50.5	-1.1
PRTR				eSg	Sg	01 47 08.6	+0.1
KZR	Kazreti	1.36	151	P	Pn	01 46 50.8	-0.9
KZR				S	Sb	01 47 08.9	-0.7
PYA	Pyatigorsk	1.50	347	PG	Pg	01 46 53.9	-1.6
PYA				S	Sn	01 47 15.2	+2.1
KIV0	Kislovodsk Arr	1.51	336	Pg	Pg	01 46 54.8	-1.0
KIV0				Sg	Sg	01 47 15.1	-0.3
KIV	Kislovodsk	1.51	336	PG	Pg	01 46 54.7	-1.1
KIV				S	Sg	01 47 15.3	-0.2
KIV				pmax	pmax		
	comp=Z,28nm,0.4s						
KIV				smax			
	comp=N,122nm,0.9s						
KIV	Kislovodsk	1.51	336	Pg	Pg	01 46 54.7	-1.1
	comp=N,28nm,0.4s						
KIV				Sg	Sg	01 47 15.3	-0.2
	comp=N,122nm,0.9s						
BEYR	Belyy Ugol+	1.53	340	PG	Pg	01 46 55.2	-0.9
BEYR				S	Sg	01 47 15.3	-0.7
BEYR				pmax	pmax		
	comp=Z,11nm,0.3s						
BEYR				smax			
	comp=N,20nm,0.3s						
BEYR	Belyy Ugol+	1.53	340	Pg	Pg	01 46 55.2	-0.9
	comp=N,11nm,0.3s						
BEYR				Sg	Sg	01 47 15.3	-0.7
	comp=N,20nm,0.3s						
DGRG	David-gareji	1.77	129	P	Pn	01 46 59.1	+1.8
DGRG				S	Sn	01 47 24.6	+4.8
BCA	Borcka	1.82	232	i PN	Pn	01 46 58.3	+0.3
BCA				i SN	Sn	01 47 22.9	+1.8
KARS	Kars	1.99	190	ePN	Pn	01 47 02.6	+2.3
GNI	Garni	2.59	159	PN	Pn	01 47 11.4	+2.8
EZM	Erzurum	3.13	212	eP	Pn	01 47 19.1	+3.0

*VIE **11** 01:50:54.6±0.6, 4487N×1475E, h8km, mb2.4/1, ML3.0/1, Error ellipse: s-maj=3.2km s-min=2.3km az=176.0 59 km SSE of Rijeka*
*CSEM **11** 01:50:55.8±0.1, 4491N×1480E, h30km, MD2.8/3, Error ellipse: s-maj=3.9km s-min=1.7km az=76.0*
*ROM **11** 01:50:56.5±0.3, 4492N×1482E, h10km, Md2.8/3, Ml2.4/2, Error ellipse: s-maj=5.8km s-min=1.9km az=106.0*
*ISCJB **11** 01:50:57.3±0.5, 4494N±003×1468E±005, h10km, Error ellipse: s-maj=5.1km s-min=3.4km az=129.9*

ISC 11 01:50:57.4±0.6, 4491N±003×1469E±005, h5km±5km, n23, σ0s72/37, 7C-4D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVLJ	Novalja	0.37	159	i Pg	Pg	01 51 04.2	-0.3
NVLJ				i Sg	Sg	01 51 10.6	+1.3
NVLJ	Novalja	0.37	159	i Pg	Pg	01 51 04.1	-0.4
NVLJ				i Sg	Sg	01 51 10.6	+1.3
BOJS	Bojanci	0.72	34	i Pg	Pg	01 51 09.5	-1.7
BOJS				i Sg	Sg	01 51 19.6	-1.0
BOJS							
	comp=Z,16nm,0.1s						
BOJS	Bojanci	0.72	34	i Sg	Sg	01 51 19.6	-1.0
	comp=Z,16nm,0.1s						
TRI	Trieste	1.03	321	Pg	Pg	01 51 16.8	-0.5
TRI				Sg	Sg	01 51 31.2	+0.5
	comp=Z,63nm,0.3s						
LJU	Ljubljana	1.14	354	ePg	Pg	01 51 20.0	+0.6
LJU				eSg	Sg	01 51 36.8	+2.6
VOY	Vojsko	1.26	334	eSg	Sg	01 51 37.8	0.0
VOJS	Vojsko	1.26	334	i Pg	Pg	01 51 20.6	-1.0
GOLS	Golise	1.29	31	i Pg	Pg	01 51 21.6	-0.5
GOLS				eSg	Sg	01 51 39.6	+0.8
DRE	Drenchia	1.46	330	⇑iPg	Pn	01 51 24.1	-0.4
DRE				i Sg	Sg	01 51 44.6	+0.1
CADS	Cadrg	1.48	334	i Pn	Pn	01 51 24.5	-0.2
CADS				i Sg	Sg	01 51 45.9	+0.9
COLI	Coloredo	1.53	324	⇑iPg	Pn	01 51 25.3	-0.1
COLI				i Sg	Sg	01 51 47.2	+0.4
OBKA	Obir	1.61	357	⇓iSg	Sg	01 51 49.3	+0.2
	comp=Z,41nm,0.3s						
OBKA	Obir	1.61	357	⇑ePg	Pn	01 51 26.6	+0.2
	SNR=27						
OBKA				⇓iSg	Sg	01 51 49.3	+0.2
	comp=Z,41nm,0.3s						
BAD	Bernadia	1.67	323	⇑iPg	Pn	01 51 27.1	-0.2
BAD				i Sg	Sg	01 51 50.4	-0.8
GMNA	Gemona	1.71	324	Pg	Pn	01 51 27.9	+0.1
	comp=Z,111nm,0.6s						
BUA	Buia	1.71	321	⇓iPg	Pn	01 51 28.1	+0.2
BUA				i Sg	Sg	01 51 52.3	-0.2
PTCC	Patocco-Chiusa	1.77	329	Pg	Pn	01 51 28.2	-0.5
	comp=Z,20nm,0.4s						
MPRI	Monte Prat	1.79	319	⇑iPg	Pn	01 51 28.9	-0.1
MPRI				i Sg	Sg	01 51 54.2	-0.7
SNTG	Esanatoglia	2.08	218	Pg	Pn	01 51 32.9	0.0
	comp=Z,6.0nm,0.4s						
FVI	Forni Avoltri	2.15	322	Pg	Pn	01 51 33.8	-0.2
	comp=Z,21nm,0.5s						
MOA	Molln	2.96	355	⇑iSn	Sn	01 52 21.4	+0.5
MOA	Molln	2.96	355	⇓iPn	Pn	01 51 45.7	+0.7
MOA				⇑iSn	Sn	01 52 21.4	+0.5

*ISCJB **11** 01:51:32.9±1.0, 2002S±009×1782W±0.1, h533km±15km, mb3.7/7, Error ellipse: s-maj=21.8km s-min=10.6km az=60.2*
*IDC **11** 01:51:33.8±1.8, 2008S×17807W, h536km±21km, mb3.1/5, mb1 3.5/7, mb1mx3.3/12, mbtmp4.2/7, Error ellipse: s-maj=33.3km s-min=15.4km az=136.0*
*NEIC **11** 01:51:33.9±0.9, 2001S×178.15W, h535km±11km, mb4.0/2, Error ellipse: s-maj=16.5km s-min=9.3km az=116.0*

ISC 11 01:51:33.8±0.9, 2002S±009×1781W±01, h533km±13km, n32, σ0s90/22, mb3.7/7, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.60	46	P	P	01 53 38.0	+1.0
	6.8nm,0.3s,baz=4.7,slow=4.2,SNR=8.8						
AFI				S	S	01 55 17.5	-0.7
	1.4nm,0.3s,baz=94,slow=20,SNR=2.5						
AFI	Afiamalu	8.60	46	P	P	01 53 38.0	+1.0
AFI				e		01 54 34.5	
AFI				S	S	01 55 17.5	-0.7
RAO	Raoul Island	9.19	179	P	P	01 53 42.6	-0.5
URZ	Urewera	18.64	192	P	P	01 55 16.9	-1.2
	4.6nm,0.3s,baz=322,slow=3.1,SNR=14						
STKA	Stephens Creek	37.88	244	P	P	01 58 05.3	+0.1
	2.1nm,0.7s,mb3.8,baz=73,slow=10,SNR=4.5						
ASAR	Alice Springs	44.50	256	P	P	01 58 58.8	+1.1
	0.4nm,0.3s,mb3.4,baz=91,slow=8.7,SNR=8.0						
ASAR				PcP	PcP	02 00 29.2	-0.2
	0.7nm,0.4s,baz=102,slow=4.2,SNR=5.9						
ASAR				S	S	02 04 52.0	-2.1
	0.5nm,0.7s,baz=93,slow=15,SNR=4.6						
WRAB	Tennant Creek	44.53	262	eP	P	01 58 58.9	+1.0
	2.3nm,0.3s,mb4.2						
SBA	Scott Base	58.34	184	P	P	02 00 36.7	-1.0
CASY	Casey	64.34	205	eP	P	02 01 17.8	+0.9
MJAR	Matsushiro Arr	69.75	324	P	P	02 01 50.0	-0.3
	1.7nm,0.5s,mb3.8,baz=159,slow=5.5,SNR=5.5						
QSPA	South Pole Qui	70.04	180	P	P	02 01 53.5	+1.5
MDJ	Mudanjiang	80.05	325	eP	P	02 02 47.1	-0.8
	2.6nm,0.6s,mb3.7						
NVAR	Mina Array Bea	80.77	43	P	P	02 02 52.9	+1.3
	1.0nm,1.0s,mb3.2,baz=213,slow=8.0,SNR=4.3						
NVAR	Mina Array Bea	80.77	43	P	P	02 02 52.9	+1.3
MAW	Mawson	81.97	200	P	P	02 02 57.7	-0.1
BJT	Baijiatuau	85.45	315	P	P	02 03 15.0	-0.1
MCK	McKinley	86.53	13	P	P	02 03 20.0	-0.2
COLA	College	87.77	12	P	P	02 03 24.8	-1.1
PDAR	Pinedale Array	88.70	43	P	P	02 03 30.4	0.0
	0.5nm,0.6s,mb3.6,baz=180,slow=3.0,SNR=5.9						
ARCES	ARCESS Array B	128.43	350	PKP	PKPdf	02 09 38.6	-1.3
	0.5nm,0.4s,baz=56,slow=1.0,SNR=10.0						
FINES	FINESS Array B	135.28	344	PKP	PKPdf	02 09 51.8	-0.9
	0.7nm,0.6s,baz=3.8,slow=4.2,SNR=6.1						
AKASG	Malin Array Be	142.53	331	PKhKP		02 10 01.0	
	1.1nm,0.3s,baz=42,slow=4.5,SNR=22						
BRTR	Keskin Array B	146.42	313	PKPbc	PKPbc	02 10 14.4	-0.5
	1.6nm,0.6s,baz=140,slow=4.6,SNR=9.0						
CLL	Collm	147.57	347	⇓iPKPbc	PKPbc	02 10 17.4	-0.6
	comp=Z,7.0nm,0.9s						
CLL				i PKPab	PKPab	02 10 21.3	-0.8
UPC	Upice	147.58	343	ePKPbc	PKPbc	02 10 17.6	-0.5
DPC	Dobruska-Polom	147.63	343	ePKPbc	PKPbc	02 10 18.0	-0.2
BRG	Berggiesshubel	147.77	346	i P	PKPdf	02 10 18.2	+3.3
	comp=Z,2.8nm,0.6s						
PRU	Pruhonice	148.44	344	ePKPbc	PKPbc	02 10 20.0	-0.2
GRA1	Grafenberg Arr	149.47	348	ePKP	PKPdf	02 10 23.4	+5.8
GRF	Grafenberg Arr	149.47	348	ePKP	PKPdf	02 10 23.4	+5.8
KHC	Kasperske Hory	149.47	345	ePKPbc	PKPbc	02 10 22.4	-0.3
GERES	GERESS Array B	149.71	344	PKPbc	PKPbc	02 10 22.8	-0.5
	comp=Z,1.1nm,0.6s,baz=25,slow=3.5,SNR=13						

IGQ 11 02:04:11.5, 441S×8012W, h25km±6km, Mb4.7, Ms4.6, 5C-4D, Error ellipse: s-maj=21.1km s-min=6.1km az=27.1, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGUA	Igualata	3.26	27	P	Pn	02 05 04.1	+3.2
ARRY	Arrayan	3.33	30	⇓P	Pn	02 05 03.1	+1.2
ARRY				S	Sn	02 05 41.4	+0.7
PATA	Patacocha	3.34	30	P	Pn	02 05 04.9	+2.7
PATA				S	Sn	02 05 43.4	+2.3
CUSU	Cusua	3.37	29	⇑P	Pn	02 05 06.7	+4.1
RETU	Refugio	3.38	30	P	Pn	02 05 05.9	+3.2
RETU				S	Sn	02 05 44.7	+2.7
JUIV	Juive	3.40	29	⇓P	Pn	02 05 06.6	+3.7
ULBA	Ulba	3.40	30	P	Pn	02 05 05.1	+2.1
ULBA				S	Sn	02 05 45.5	+3.0
RUN5	Runtun	3.42	30	⇓P	Pn	02 05 06.6	+3.3
RUN5				S	Sn	02 05 44.6	+1.6
PISA	Pisayambo	3.75	28	P	Pn	02 05 11.4	+3.6
TAMB	Tambo	4.08	25	⇑P	Pn	02 05 17.8	+5.4
NAS1	Nasa	4.09	24	⇑P	Pn	02 05 18.0	+5.5
VC1	Cotopaxi 1	4.12	25	P	Pn	02 05 15.1	+2.3
ANTI	Antisana	4.39	26	P	Pn	02 05 18.3	+1.7
JUA2	San Juan 2	4.43	20	P	Pn	02 05 19.8	+2.6
TERV	Terraza Guagua	4.47	20	P	Pn	02 05 20.5	+2.8
GGP	Refugio Guagua	4.47	20	P	Pn	02 05 20.0	+2.2
GGP				S	Sn	02 06 09.2	+0.2
PINO	Pino	4.49	20	⇑P	Pn	02 05 20.6	+2.7
YANA	Yana	4.54	20	⇓P	Pn	02 05 22.2	+3.7
YANA				S	Sn	02 06 12.3	+1.8
CAYR	Refugio Cayamb	4.88	26	⇑P	Pn	02 05 30.0	+6.8
CAYA	Cayambe	4.93	26	P	Pn	02 05 26.8	+2.7
CONE	Cono NE Rev Vo	4.97	30	P	Pn	02 05 35.6	+11

*ISCJB **11** 02:11:27.7±1.3, 245S±0.1×1795E±02, h552^{km}±26^{km}, mb4.2/7, Error ellipse: s-maj=23.9km s-min=17.8km az=61.6*
*NEIC **11** 02:11:27.3±1.0, 2447S×17948E, h521^{km}±12^{km}, mb4.5/5, Error ellipse: s-maj=15.6km s-min=11.7km az=139.0*
*IDC **11** 02:11:27.4±2.5, 2443S×17946E, h513^{km}±27^{km}, mb3.5/5, mb1 3.6/8, mb1mx3.4/14, mbtmp4.5/8, Error ellipse: s-maj=24.5km s-min=20.4km az=103.0*
ISC 11 02:11:27.6±1.2**, 245S**±01×**1796E**±02**, h531**^{km}±22^{km}**, n29, σ0^{s}78**/18**, mb4.2**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.29**	**279**	P	**P**	**02 14 09.8**	**+0.7**
	1.3nm,0.3s,baz=89,slow=19,SNR=12						
AFI	**Afiamalu**	**13.33**	**39**	P	**P**	**02 14 19.6**	**-0.3**
	4.1nm,0.3s,baz=233,slow=5.1,SNR=5.4						
URZ	**Urewera**	**13.88**	**188**	P	**P**	**02 14 24.7**	**-1.0**
	2.3nm,0.3s,baz=350,slow=5.0,SNR=11						
RPZ	**Rata Peaks**	**20.41**	**198**	P	**P**	**02 15 29.9**	**+1.6**
	3.1nm,0.3s,baz=355,slow=14,SNR=6.2						
CTA	**Charters Tower**	**31.07**	**271**	eP	**P**	**02 17 02.7**	**+0.4**
	6.5nm,0.5s,mb4.4						
CTA	**Charters Tower**	**31.07**	**271**	P	**P**	**02 17 02.9**	**+0.6**
	6.3nm,0.3s,mb4.6,baz=87,slow=11,SNR=17						
CTAO	**Charters Tower**	**31.07**	**271**	eP	**P**	**02 17 02.4**	**+0.1**
	7.5nm,0.3s,mb4.7						
STKA	**Stephens Creek**	**34.13**	**249**	eP	**P**	**02 17 28.7**	**+0.5**
	3.2nm,1.5s,mb3.6						
STKA	**Stephens Creek**	**34.13**	**249**	P	**P**	**02 17 28.6**	**+0.4**
	1.0nm,0.4s,mb3.7,baz=114,slow=10,SNR=3.9						
STKA	**Stephens Creek**	**34.13**	**249**	eP	**P**	**02 17 28.1**	**0.0**
AS31	**Alice Springs**	**41.54**	**261**	eP	**P**	**02 18 28.2**	**-0.4**
ASAR	**Alice Springs**	**41.54**	**261**	P	**P**	**02 18 28.6**	**0.0**
	5.3nm,0.9s,mb4.1,baz=93,slow=8.3,SNR=29						
ASAR				S	**S**	**02 24 02.2**	**-3.7**
	0.9nm,0.8s,baz=98,slow=15,SNR=5.7						
WB2	**Warramunga Arr**	**41.95**	**267**	eP	**P**	**02 18 30.9**	**-0.9**
WRAB	**Tennant Creek**	**41.95**	**267**	eP	**P**	**02 18 31.1**	**-0.8**
	13nm,0.9s,mb4.5						
KAKA	**Kakadu**	**45.96**	**276**	eP	**P**	**02 19 02.3**	**-0.6**
	25nm,1.4s,mb4.5						
FITZ	**Fitzroy Crossi**	**50.38**	**266**	eP	**P**	**02 19 36.4**	**+0.6**
	8.4nm,1.1s,mb4.1						
MJAR	**Matsushiro Arr**	**72.15**	**326**	P	**P**	**02 21 59.1**	**+0.7**
	1.0nm,0.3s,mb3.7,baz=154,slow=6.0,SNR=8.1						
ARCES	**ARCESS Array B**	**132.38**	**348**	PKhKP		02 29 33.2	
	0.7nm,0.7s,baz=117,slow=1.4,SNR=5.1						
ARCES				PKP	PKPdf	02 29 41.5	+0.1
	0.7nm,0.6s,baz=95,slow=2.8,SNR=6.9						
ARCES	**ARCESS Array B**	**132.38**	**348**	PKP		02 29 33.2	
ARCES				PKP	PKPdf	02 29 41.5	+0.1
FINES	**FINESS Array B**	**138.87**	**341**	PKhKP		02 29 46.0	
	0.6nm,0.7s,baz=42,slow=3.1,SNR=4.1						
NB2	**NORSAR Subarra**	**142.60**	**351**	PKPa		02 29 57.9	
	comp=Z,0.5nm,0.5s,baz=16,slow=3.0						
NOA	**NORSAR Array B**	**142.60**	**351**	PKhKP		02 29 55.6	
	comp=Z,0.9nm,0.6s,baz=16,slow=4.7,SNR=5.0						
MALT	**Malatya**	**144.34**	**302**	ePKPdf	PKPdf	02 30 04.9	+1.7
AKASG	**Malin Array Be**	**145.24**	**326**	PKPbc	PKPbc	02 30 06.0	+0.2
	comp=Z,0.9nm,0.4s,baz=43,slow=4.2,SNR=11						
BR131	**Keskin Array S**	**147.60**	**306**	ePKPbc	PKPbc	02 30 12.7	+0.4
BRTR	**Keskin Array B**	**147.60**	**306**	PKPbc	PKPbc	02 30 13.4	+1.2
	comp=Z,1.2nm,0.6s,baz=116,slow=2.9,SNR=7.6						
CLL	**Collm**	**151.29**	**342**	ePKP1	PKPbc	02 30 22.0	+0.9
GERES	**GERESS Array B**	**153.26**	**339**	PKPab	PKPab	02 30 41.2	+1.2
	comp=Z,0.2nm,0.4s,baz=148,slow=5.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**168.54**	**191**	PKPab	PKPab	02 31 48.4	+1.6
	comp=Z,0.3nm,0.6s,baz=174,slow=2.3,SNR=4.4						

MEX 11 02:17:16.4±0.8**, 1788N**×**9986W, h57**^{km}±8^{km}**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.23**	**77**	i P	Pn	02 17 24.2	-1.5
MEIG				i S	Sn	02 17 30.9	-1.5
PLIG	**Platanillo**	**0.61**	**33**	i P	Pn	02 17 28.3	-1.1
PLIG				i S	Sn	02 17 37.6	-1.3
CAIG	**El Cayaco**	**0.91**	**206**	i P	Pn	02 17 31.1	-2.0
CAIG				i S	Sn	02 17 44.8	-0.7
ACX	**Acapulco**	**1.00**	**183**	i P	Pn	02 17 33.0	-1.4
ACX				i S	Sn	02 17 46.0	-1.7
UTMO	**Huajuapan**	**1.95**	**91**	i P	Pn	02 17 46.8	-0.4
UTMO				i S	Sn	02 18 08.0	-2.6

IGQ 11 02:21:39.6, 452S×**7961W, h25**^{km}±8^{km}**, Mb4.7, Ms4.6, 6C-2D, Error ellipse: s-maj=47.3km s-min=7.5km az=20.9, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARRY	**Arrayan**	**3.21**	**21**	⇑P	Pn	02 22 29.6	+1.2
ARRY				S	Sn	02 23 04.6	-1.2
PATA	**Patacocha**	**3.22**	**21**	⇓P	Pn	02 22 31.6	+3.1
PATA				S	Sn	02 23 05.7	-0.3
CUSU	**Cusua**	**3.26**	**20**	⇑P	Pn	02 22 33.3	+4.2
CUSU				S	Sn	02 23 10.1	+3.0
RETU	**Refugio**	**3.26**	**21**	P	Pn	02 22 33.0	+3.8
RETU				S	Sn	02 23 10.1	+2.9
ULBA	**Ulba**	**3.28**	**22**	P	Pn	02 22 32.5	+3.1
ULBA				S	Sn	02 23 08.5	+0.9
JUIV	**Juive**	**3.28**	**20**	⇑P	Pn	02 22 32.9	+3.4
JUIV				S	Sn	02 23 10.2	+2.5
RUN5	**Runtun**	**3.30**	**21**	P	Pn	02 22 32.8	+3.0
PISA	**Pisayambo**	**3.65**	**20**	P	Pn	02 22 36.4	+1.9
TAMB	**Tambo**	**4.00**	**18**	⇓P	Pn	02 22 45.3	+6.0
TAMB				S	Sn	02 23 35.1	+10
NAS1	**Nasa**	**4.02**	**16**	P	Pn	02 22 43.9	+4.3
VC1	**Cotopaxi 1**	**4.04**	**17**	⇑P	Pn	02 22 43.4	+3.6
VC1				S	Sn	02 23 33.6	+7.3
ANTI	**Antisana**	**4.29**	**20**	P	Pn	02 22 47.4	+4.0
JUA2	**San Juan 2**	**4.39**	**13**	P	Pn	02 22 47.6	+2.9
TERV	**Terraza Guagua**	**4.43**	**13**	P	Pn	02 22 47.6	+2.4
TERV				S	Sn	02 23 41.8	+5.8
GGP	**Refugio Guagua**	**4.43**	**13**	⇑P	Pn	02 22 46.9	+1.6
PINO	**Pino**	**4.45**	**13**	P	Pn	02 22 46.5	+1.1
CAYR	**Refugio Cayamb**	**4.78**	**20**	P	Pn	02 22 56.5	+6.4
CONE	**Cono NE Rev Vo**	**4.84**	**24**	⇑P	Pn	02 22 56.9	+6.1
CONE				S	Sn	02 24 00.0	+14
CAYA	**Cayambe**	**4.84**	**20**	P	Pn	02 22 56.7	+5.9
COTA	**Cotacachi**	**4.99**	**15**	P	Pn	02 22 56.3	+3.4

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*SZGRF **11** 02:37:35.7, 1733S×17730W, h33^{km}, Fiji Islands region*
*IDC **11** 02:37:35.3±0.6, 15.17S×173.77W, h0^{km}, mb4.4/8, mb1 4.6/10, mb1mx4.4/15, mbtmp4.4/10, ML3.7/2, MS3.6/11, Ms1 3.6/11, ms1mx3.5/16, Error ellipse: s-maj=30.4km s-min=16.5km az=132.0*
*NEIC **11** 02:37:36.6±0.2, 15.18S×173.75W, h10^{km}, mb4.2/16, Error ellipse: s-maj=10.4km s-min=6.5km az=140.0*
*BJI **11** 02:37:36.5, 1520S×17380W, h10^{km}, mB4.9, mb4.6, Ms4.5, Msz4.0*
*ISCJB **11** 02:37:38.6±0.3, 1526S±009×17372W±008, h33^{km}, mb4.3/24, MS3.7/11, Error ellipse: s-maj=14.2km s-min=8.4km az=108.1*
ISC 11 02:37:40.7±0.3**, 1526S**±009×**17368W**±008**, h35**^{km}**, n104, σ0^{s}87**/38**, mb4.3**/24**, MS3.7**/11**, 11C-3D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.28**	**54**	Pn	**Pn**	**02 38 14.2**	**-1.6**
	183nm,0.3s,baz=42,slow=3.2,SNR=66						
AFI				Sn	**Sn**	**02 38 35.8**	**-6.9**
	345nm,0.3s,baz=153,slow=21,SNR=21						
AFI	**Afiamalu**	**2.28**	**54**	ePn	**Pn**	**02 38 13.9**	**-1.9**
AFI				eSn	**Sn**	**02 38 36.4**	**-6.3**
RAO	**Raoul Island**	**14.46**	**195**	LR	LR	02 45 35.5	
	comp=Z,310nm,21.9s,baz=280,slow=33						
RAR	**Rarotonga**	**14.48**	**116**	Pn	**Pn**	**02 41 02.3**	**-0.6**
	2.0nm,0.3s,baz=219,slow=14,SNR=3.0						
DZM	**Mont Dzumac**	**20.00**	**247**	LR	LR	02 48 13.9	
	comp=Z,106nm,18.9s,baz=185,slow=32						
PPT	**Papeete**	**23.24**	**99**	eLR	LR	02 48 10.9	
	163nm,29.2s						
PPT	**Papeete**	**23.24**	**99**	LR	LR	02 50 01.4	
	comp=Z,105nm,20.6s,MS3.3,baz=146,slow=32						
TBI	**Tubuai**	**24.21**	**113**	eLR	LR	02 48 41.9	
	249nm,30.5s						
URZ	**Urewera**	**24.31**	**198**	P	**P**	**02 42 53.5**	**-1.4**
	3.6nm,0.4s,mb4.1,baz=151,slow=19,SNR=2.7						
URZ				LR	LR	02 50 54.9	
	comp=Z,195nm,21.9s,MS3.5,baz=38,slow=33						
RKT	**Rikitea**	**37.30**	**108**	eLR	LR	02 54 41.2	
	102nm,31.5s						
STKA	**Stephens Creek**	**43.87**	**240**	eP	**P**	**02 45 43.8**	**+0.2**
	1.5nm,1.0s,mb3.7						
STKA	**Stephens Creek**	**43.87**	**240**	P	**P**	**02 45 43.3**	**-0.3**
	1.1nm,0.4s,mb4.0,baz=86,slow=11,SNR=8.1						
STKA				LR	LR	03 01 11.1	
	comp=Z,69nm,18.6s,MS3.6,baz=27,slow=32						
WB2	**Warramunga Arr**	**49.60**	**257**	eP	**P**	**02 46 28.2**	**-0.2**
AS31	**Alice Springs**	**49.89**	**252**	eP	**P**	**02 46 30.3**	**-0.3**
ASAR	**Alice Springs**	**49.89**	**252**	P	**P**	**02 46 29.9**	**-0.8**
	24nm,0.7s,mb5.3,baz=85,slow=8.4,SNR=170						
ASAR				LR	LR	03 05 30.5	
	comp=Z,73nm,19.6s,MS3.7,baz=182,slow=34						
ASPA	**Alice Springs**	**49.90**	**252**	eP	**P**	**02 46 30.3**	**-0.4**
FORT	**Forrest**	**55.24**	**243**	eP	**P**	**02 47 09.0**	**-1.2**
	12nm,0.9s,mb4.9						
VNDA	**Vanda**	**63.49**	**186**	P	**P**	**02 48 08.6**	**+1.4**
	2.6nm,0.6s,mb4.5,baz=5.7,slow=7.4,SNR=39						
VNDA				LR	LR	03 10 11.5	
	comp=Z,41nm,19.7s,MS3.6,baz=208,slow=31						
VNDA	**Vanda**	**63.49**	**186**	eP	**P**	**02 48 08.2**	**+1.0**
	1.3nm,0.6s,mb4.2						
MJAR	**Matsushiro Arr**	**68.65**	**320**	LR	LR	03 12 11.3	
	comp=Z,44nm,20.7s,MS3.7,baz=80,slow=30						
CASY	**Casey**	**70.42**	**205**	eP	**P**	**02 48 53.9**	**+2.6**
NVAR	**Mina Array Bea**	**74.41**	**42**	P	**P**	**02 49 16.2**	**+1.2**
	1.5nm,0.8s,mb4.0,baz=217,slow=8.5,SNR=7.6						
QSPA	**South Pole Qui**	**74.78**	**180**	eP	**P**	**02 49 17.7**	**+0.5**
	7.9nm,1.0s,mb4.6						
TUC	**Tucson**	**76.51**	**51**	eP	**P**	**02 49 27.9**	**+0.8**
	0.8nm,0.6s,mb3.8						
MDJ	**Mudanjiang**	**78.75**	**322**	P	**P**	**02 49 39.6**	**+0.1**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,76nm,4.6s						
MDJ				LR	LR		
	comp=N,30nm,28.1s,MS3.7						
MDJ				LR	LR		
	comp=E,33nm,25.7s,MS3.7						
MDJ				LR	LR		
	comp=Z,48nm,30.4s,MS3.6						
DUG	**Dugway**	**78.94**	**43**	eP	**P**	**02 49 41.0**	**+0.3**
	comp=Z,1.1nm,0.7s,mb3.9						
HLID	**Hailey**	**79.69**	**39**	eP	**P**	**02 49 45.7**	**+1.0**
	comp=Z,1.2nm,0.8s,mb3.9						
NJ2	**Nanjing**	**79.86**	**307**	eP	**P**	**02 49 46.0**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
TCUT	**Toone Canyon**	**80.33**	**43**	eP	**P**	**02 49 48.3**	**+0.1**
MNTX	**Cornudas Mount**	**80.36**	**53**	eP	**P**	**02 49 47.9**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0						
ANMO	**Albuquerque**	**80.92**	**50**	P	**P**	**02 49 51.3**	**0.0**
	comp=Z,1.2nm,0.6s,mb4.0,baz=216,slow=5.8,SNR=5.0						
ANMO	**Albuquerque**	**80.92**	**50**	eP	**P**	**02 49 51.8**	**+0.5**
	comp=Z,1.2nm,0.7s,mb3.9						
MCK	**McKinley**	**81.03**	**11**	eP	**P**	**02 49 50.8**	**-1.2**
	comp=Z,1.6nm,0.7s,mb4.1						
TPAW	**Teton Pass**	**81.81**	**41**	eP	**P**	**02 49 56.6**	**+0.6**
	comp=Z,4.1nm,1.0s,mb4.3						
LOHW	**Long Hollow**	**82.09**	**41**	eP	**P**	**02 49 57.0**	**-0.5**
	comp=Z,1.7nm,0.9s,mb4.0						
COLA	**College**	**82.27**	**11**	eP	**P**	**02 49 57.3**	**-1.2**
	comp=Z,4.1nm,0.9s,mb4.4						
BW06	**Boulder Array**	**82.34**	**42**	eP	**P**	**02 49 58.9**	**+0.1**
	comp=Z,1.6nm,0.6s,mb4.1						
PDAR	**Pinedale Array**	**82.34**	**42**	P	**P**	**02 49 58.9**	**0.0**
	comp=Z,1.5nm,0.8s,mb4.0,baz=224,slow=2.8,SNR=13						
PDAR				LR	LR	03 23 32.7	
	comp=Z,31nm,19.1s,MS3.7,baz=76,slow=34						
SMCO	**Snowmass**	**82.41**	**46**	eP	**P**	**02 49 59.8**	**+0.6**
	comp=Z,2.0nm,0.6s,mb4.2						
MAW	**Mawson**	**87.84**	**199**	eP	**P**	**02 50 26.2**	**-0.2**
	comp=Z,3.3nm,0.7s,mb4.7						
MAW	**Mawson**	**87.84**	**199**	P	**P**	**02 50 26.3**	**0.0**
	comp=Z,3.3nm,0.6s,mb4.7,baz=130,slow=6.5,SNR=26						
MAW				LR	LR	03 29 19.7	
	comp=Z,36nm,19.1s,MS3.8,baz=240,slow=35						
HHC	**Hu-ho-hao-te**	**88.73**	**313**	eP	**P**	**02 50 36.6**	**+6.0**
HHC				PP	PP	02 54 06.5	+6.9
HHC				S	S	03 01 21.9	+6.9
HHC				SS	SS	03 07 14.6	+7.7
HHC				AMB	AMB		
	comp=Z,12nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,68nm,7.1s						
HHC				LR	LR		
	comp=N,82nm,28.5s,MS4.3						
HHC				LR	LR		
	comp=E,142nm,26.6s,MS4.3						
HHC				LR	LR		
	comp=Z,86nm,26.6s,MS4.0						
YKA	**Yellowknife Ar**	**90.08**	**23**	LR	LR	03 24 45.2	
	comp=Z,26nm,20.1s,MS3.7,baz=250,slow=31						
LZH	**Lanzhou**	**92.92**	**306**	eP	**P**	**02 50 51.2**	**+1.1**
LZH				AP	pP	02 50 56.1	-5.1
LZH				XP	sP	02 50 58.2	-7.0
LZH				AMB	AMB		
	comp=Z,21nm,1.2s,mb5.4						
ARCES	**ARCESS Array B**	**124.43**	**352**	PKP	PKPdf	02 56 34.7	-1.3
	comp=Z,3.7nm,0.8s,baz=29,slow=2.8,SNR=9.5						
JOF	**Joensuu**	**129.27**	**346**	ep	PKPdf	02 56 43.5	-1.7
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**131.75**	**347**	PKP	PKPdf	02 56 48.4	-1.5
	comp=Z,0.4nm,0.5s,baz=54,slow=4.9,SNR=8.1						
FINES	**FINESS Array B**	**131.75**	**347**	PKP	PKPdf	02 56 48.4	-1.5
NB2	**NORSAR Subarra**	**134.15**	**357**	PKPa	PKPdf	02 56 55.0	+0.5
	comp=Z,1.5nm,1.0s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**134.15**	**357**	PKP	PKPdf	02 56 53.7	-0.8
	comp=Z,0.6nm,0.7s,baz=18,slow=4.2,SNR=4.0						
HFS	**Hagfors**	**134.87**	**355**	PKP	PKPdf	02 56 54.9	-0.9
	comp=Z,2.2nm,1.0s,baz=113,slow=3.4,SNR=3.6						
CLZ	**Clausthal**	**143.36**	**356**	ePKPbc	PKPdf	02 57 07.5	-3.8
CLL	**Collm**	**143.64**	**353**	i PKPpre		02 57 08.6	
CLL				i PKPdf	PKPdf	02 57 11.2	-0.6
	comp=Z,6.0nm,1.1s						
TSUM	**Tsumeb**	**144.01**	**198**	ePKPdf	PKPdf	02 57 12.6	+0.2
DPC	**Dobruska-Polom**	**144.07**	**349**	eP	PKPdf	02 57 10.5	-2.0
BURAR	**Bucovina Array**	**144.14**	**338**	⇑iP	PKPdf	02 57 12.7	+0.1
UBBA	**Unterbreizbach**	**144.41**	**356**	ePKPbc	PKPdf	02 57 11.7	-1.4
WERN	**Wernitzgruen**	**144.72**	**353**	ePKPbc	PKPdf	02 57 11.1	-2.6
PRU	**Pruhonice**	**144.72**	**351**	ePKP	PKPdf	02 57 13.3	-0.4
KECS	**Kecovo**	**144.87**	**344**	ePKP	PKPdf	02 57 13.4	-0.5
KECS				e		02 57 16.7	
TNS	**Taunus Mts**	**145.09**	**358**	ePKPbc	PKPbc	02 57 13.9	+0.1
BAIF	**Baives**	**145.25**	**2**	ePKP1	PKPbc	02 57 14.1	-0.2
	comp=Z,10nm,0.7s						
VYHS	**Vyhne**	**145.29**	**345**	ePKP	PKPdf	02 57 14.8	+0.2
VYHS				e		02 57 16.9	
VYHS	**Vyhne**	**145.29**	**345**	ePKP	PKPdf	02 57 14.9	+0.3
VYHS				e		02 57 16.9	
GRA1	**Grafenberg Arr**	**145.43**	**354**	ePKPbc	PKPbc	02 57 15.0	+0.1
GRF	**Grafenberg Arr**	**145.43**	**354**	ePKPbc	PKPbc	02 57 15.0	+0.1
PSZ	**Piszkesteto**	**145.55**	**344**	⇑iP	PKiKP	02 57 21.9	+2.8
PSZ	**Piszkesteto**	**145.55**	**344**	ePKPbc	PKPbc	02 57 15.5	+0.2
MLR	**Muntele Rosu**	**145.63**	**335**	PKPbc	PKPbc	02 57 15.9	+0.4
	comp=Z,5.3nm,0.7s,baz=158,slow=3.6,SNR=5.4						
WLF	**Walferdange**	**145.69**	**0**	ePKPbc	PKPbc	02 57 16.7	+1.0
WLF	**Walferdange**	**145.69**	**0**	ePKPbc	PKPbc	02 57 15.8	+0.1
KHC	**Kasperske Hory**	**145.70**	**352**	ePKP	PKPdf	02 57 15.6	+0.3
DRGR		**145.71**	**340**	⇑iP	PKPdf	02 57 15.4	0.0
BR131	**Keskin Array S**	**145.88**	**321**	ePKPbc	PKPbc	02 57 16.2	-0.1
BRTR	**Keskin Array B**	**145.88**	**321**	PKPbc	PKPbc	02 57 16.6	+0.4
	comp=Z,3.7nm,0.7s,baz=100,slow=2.4,SNR=24						
GEC2	**GERESS Array S**	**145.96**	**351**	ePKPbc	PKPbc	02 57 16.3	-0.2
GERES	**GERESS Array B**	**145.96**	**351**	PKPbc	PKPbc	02 57 16.0	-0.5
	comp=Z,2.5nm,0.6s,baz=23,slow=3.4,SNR=31						
VOIR		**146.03**	**336**	⇓iP	PKPdf	02 57 17.6	+1.7
GRR	**Gorron**	**146.44**	**9**	ePKP1	PKPbc	02 57 18.1	+0.1
	comp=Z,13nm,0.8s						
CDF	**Champ du Feu**	**146.93**	**359**	ePKP1	PKPbc	02 57 19.2	-0.2
	comp=Z,16nm,1.0s						
BFO	**Black Forest**	**146.98**	**358**	ePKPbc	PKPbc	02 57 19.5	0.0
BZS	**Buzias**	**147.11**	**340**	⇓iP	PKPdf	02 57 19.8	+2.1
HAU	**Haudompre**	**147.35**	**360**	ePKP1	PKPbc	02 57 20.4	-0.2
	comp=Z,24nm,0.9s						
PKSM	**Moragy**	**147.46**	**344**	⇓iP	PKPdf	02 57 20.4	+2.1
HINF	**Hinteralfeld**	**147.53**	**359**	ePKP1	PKPbc	02 57 20.6	-0.5
LOR	**Lormes**	**148.02**	**3**	⇑iPKP1	PKPbc	02 57 22.2	-0.2
	comp=Z,12nm,0.7s						
SSF	**Saint Saulge**	**148.21**	**4**	⇑iPKP1	PKPbc	02 57 22.8	-0.1
	comp=Z,14nm,0.8s						
DAVOX	**Davos**	**148.43**	**355**	PKPbc	PKPbc	02 57 24.2	+0.7
	comp=Z,7.4nm,0.6s,baz=300,slow=1.2,SNR=24						
AVF	**Avril sur Loir**	**148.47**	**4**	ePKP1	PKPbc	02 57 23.1	-0.4
	comp=Z,15nm,0.8s						
SMF	**Signal de Mont**	**148.64**	**3**	ePKP1	PKPbc	02 57 23.1	-0.9
	comp=Z,8.1nm,1.0s						
BGF	**Bois d'Agland**	**148.66**	**5**	ePKP1	PKPbc	02 57 23.9	-0.2
	comp=Z,20nm,0.8s						
CABF	**La Chapelle**	**148.74**	**0**	⇑iPKP1	PKPbc	02 57 24.8	+0.5
	comp=Z,18nm,0.6s						
TCF	**Toulx Ste Croi**	**148.88**	**6**	ePKP1	PKPbc	02 57 24.2	-0.4
	comp=Z,3.1nm,0.6s						
LPL	**La Plagne**	**149.84**	**359**	⇑iPKP1	PKPbc	02 57 28.0	+1.0
	comp=Z,12nm,0.7s						
LPG	**La Plagne**	**149.85**	**359**	ePKP1	PKPbc	02 57 28.1	+1.1
	comp=Z,15nm,0.6s						
CAF	**Calviac**	**150.21**	**6**	⇑iPKP1	PKPbc	02 57 27.9	0.0
	comp=Z,10nm,0.9s						
BNI	**Bardonecchia**	**150.30**	**359**	ePKPbc	PKPbc	02 57 29.0	+0.9
ORIF	**Oris-en-Rattie**	**150.43**	**1**	ePKP1	PKPbc	02 57 28.9	+0.5
	comp=Z,32nm,1.3s						
VIVF	**Saint-Julien-l**	**150.47**	**2**	ePKP1	PKPbc	02 57 28.9	+0.4
	comp=Z,21nm,1.0s						
MBDF	**Montbardon**	**150.62**	**359**	⇑iPKP1	PKPbc	02 57 29.3	+0.4
	comp=Z,9.3nm,0.7s						
LASF	**Ste Croix**	**151.20**	**4**	⇑iPKP1	PKPbc	02 57 30.9	+0.7
	comp=Z,24nm,1.0s						
SMRF	**Simiane la Rot**	**151.37**	**1**	ePKP1	PKPbc	02 57 31.5	+0.9
	comp=Z,8.5nm,0.7s						
FRF	**La Foret Royal**	**151.79**	**359**	ePKP1	PKPbc	02 57 31.4	-0.2
ETSF	**Etsaut**	**151.83**	**11**	⇑iPKP1	PKPbc	02 57 32.1	+0.4
	comp=Z,19nm,1.0s						

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*MOS **11** 02:42:11.2±1.9, 5251N×9896E, h10^{km}, mb4.3/1, Error ellipse: s-maj=46.0km s-min=16.3km az=25.0*
BYKL 11 02:42:08.0±0.6**, 5274N**×**9920E, h11**^{km}±8^{km}**, 3D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**0.42**	**118**	⇓iPg	Pg	02 42 16.2	-0.1
ORL				eSg	Sg	02 42 22.5	+0.5
ORL				Pmax			
	117nm,0.4s						
ORL				Smax			
	11μm,0.3s						
ORL	**Orlik**	**0.42**	**118**	ePG	Pg	02 42 16.2	-0.1
ORL				pmax	pmax		
	comp=Z,115nm,0.2s						
MOY	**Mondy**	**1.54**	**134**	⇓iPg	Pg	02 42 36.6	-1.0
MOY				e		02 42 39.0	
MOY				eSg	Sg	02 42 57.1	-0.5
MOY				e		02 43 01.8	
MOY				max			
	comp=Z,537nm,0.8s						
MOY				max			
	comp=Z,671nm,0.8s						
MOY	**Mondy**	**1.54**	**134**	ePG	Pg	02 42 36.6	-1.0
MOY				e		02 42 57.1	
MOY				pmax	pmax		
	comp=Z,450nm,0.4s						
MOY				smax			
	comp=E,651nm,0.2s						
TDJR	**Todzha**	**1.92**	**261**	⇓iPn	Pn	02 42 41.3	+0.7
TDJR				ePg	Pg	02 42 41.8	-3.1
TDJR				eSg	Sg	02 43 06.7	-3.1
ARS	**Arshan**	**2.14**	**111**	ePg	Pg	02 42 46.7	-2.4
ARS				e		02 42 47.6	
ARS				eSg	Sg	02 43 14.8	-2.0
ARS				max			
	comp=E,262nm,0.4s						
ARS				Smax			
	comp=E,1μm,0.6s						
ARS	**Arshan**	**2.14**	**111**	ePN	Pn	02 42 47.0	+3.3
ARS				e		02 43 14.3	
ARS				pmax	pmax		
	comp=Z,256nm,0.3s						
ARS				smax			
	comp=E,1μm,0.4s						
TLY	**Talaya**	**2.93**	**109**	ePg	Pg	02 42 59.8	-4.4
TLY				e		02 43 04.3	
TLY				eSg	Sg	02 43 38.4	-3.8
TLY				max			
	comp=E,39nm,0.3s						
TLY				Smax			
	comp=E,100nm,0.3s						
TLY	**Talaya**	**2.93**	**109**	ePN	Pn	02 42 59.8	+5.3
TLY				e		02 43 38.6	
TLY				pmax	pmax		
	comp=Z,47nm,0.3s						
TLY				smax			
	comp=N,132nm,0.4s						
IRK	**Irkutsk**	**3.14**	**97**	e	Pn	02 43 00.5	+3.1
IRK				e		02 43 39.4	
IRK				eSg	Sg	02 43 44.0	-4.9
IRK				Smax			
	comp=N,1μm,0.9s						
IRK	**Irkutsk**	**3.14**	**97**	ePN	Pn	02 43 02.7	+5.3
IRK				e		02 43 42.0	
IRK				pmax	pmax		
	comp=Z,128nm,0.3s						
IRK				smax			
	comp=N,1μm,0.5s						
ZAK	**Zakamensk**	**3.47**	**131**	ePn	Pn	02 43 01.6	-0.4
ZAK				ePg	Pg	02 43 10.3	-4.2
ZAK				e		02 43 14.0	
ZAK				eSg	Sg	02 43 55.8	-3.7
ZAK				e		02 44 06.9	
ZAK				max			
	comp=N,27nm,0.8s						
ZAK				max			
	comp=N,182nm,1.3s						
ZAK	**Zakamensk**	**3.47**	**131**	ePN	Pn	02 43 10.1	+8.1
ZAK				e		02 43 56.6	
ZAK				pmax	pmax		
	comp=Z,22nm,0.4s						
ZAK				smax			
	comp=N,179nm,0.8s						
LSTR	**Listvyanka**	**3.57**	**102**	e	Pn	02 43 06.1	+2.9
LSTR				ePg	Pg	02 43 10.4	-5.9
LSTR				e		02 43 51.5	
LSTR				eSg	Sg	02 43 56.6	-5.9
LSTR				Pmax			
	comp=N,35nm,0.5s						
LSTR				Smax			
	comp=N,243nm,0.7s						
LSTR	**Listvyanka**	**3.57**	**102**	ePN	Pn	02 43 10.3	+7.1
LSTR				e		02 43 57.3	
LSTR				pmax	pmax		
	comp=Z,24nm,0.5s						
LSTR				smax			
	comp=N,154nm,1.2s						
BTMB	**Babushkin**	**4.21**	**102**	e	Pn	02 44 06.9	+55
BTMB				eSg	Sg	02 44 18.8	-4.4
BTMB				Smax			
	comp=N,349nm,0.7s						
TRG	**Tyrgan**	**4.34**	**87**	ePn	Pn	02 43 15.1	+1.2
TRG				ePg	Pg	02 43 25.3	-5.9
TRG				e		02 44 07.8	
TRG				eSg	Sg	02 44 21.0	-6.5
TRG				Pmax			
	comp=N,23nm,0.2s						
TRG				Smax			
	comp=N,219nm,0.8s						
TRG	**Tyrgan**	**4.34**	**87**	ePN	Pn	02 43 23.8	+10
TRG				e		02 44 23.1	
TRG				pmax	pmax		
	comp=Z,29nm,0.3s						
TRG				smax			
	comp=N,218nm,0.6s						
TRTB	**Turuntaevo**	**5.18**	**92**	e	Pn	02 43 42.5	+17
TRTB				e		02 44 28.4	
TRTB				eSg	Sg	02 44 47.0	-7.2
TRTB				Smax			
	comp=N,178nm,1.0s						
MXMB	**Maximikha**	**5.79**	**81**	e	Pb	02 44 45.6	+57
MXMB				eSg	Sg	02 45 09.5	-4.3
MXMB				Smax			
	comp=N,1μm,0.7s						
SYVR	**Suvo**	**6.55**	**78**	e	Pn	02 44 17.3	+33
SYVR				eSg	Sg	02 45 29.1	-9.3
SYVR				Smax			
	comp=N,135nm,1.7s						
NIZ	**Nizh Angarsk**	**6.78**	**59**	ePn	Pn	02 43 48.2	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NIZ				ePg	Pg	02 44 09.8	-8.0
NIZ				eSn	Sn	02 45 04.0	-0.5
NIZ				eSg	Sg	02 45 37.8	-7.7
NIZ				Pmax			
	comp=N,20nm,1.4s						
NIZ				Smax			
	comp=N,168nm,1.0s						
NIZ	Nizh Angarsk	6.78	59	ePN	Pn	02 44 08.7	+21
ULN	Ulaanbaatar	7.00	131	ePg	Pg	02 44 15.0	-7.1
ULN				eSg	Sg	02 45 46.6	-6.2
YLYR	Ulyunkhan	7.40	68	e	Pn	02 43 57.2	+1.3
YLYR				eSg	Sg	02 45 56.0	-9.5
YLYR				max			
	comp=N,11nm,1.5s						
YLYR				Smax			
	comp=N,145nm,1.4s						
KMO	Kumora	7.69	61	ePn	Pn	02 44 01.2	+1.3
KMO				eSn	Sn	02 45 26.4	-0.7
KMO				eSg	Sn	02 46 07.9	+41
KMO				max			
	comp=N,26nm,0.4s						
KMO				Smax			
	comp=N,108nm,1.6s						
UKT	Uakit	8.91	66	ePn	Pn	02 44 17.5	+0.9
UKT				ePg	Pn	02 44 47.8	+31
UKT				e		02 45 56.3	
UKT				eSg	Sn	02 46 42.6	+46
UKT				Pmax			
	comp=N,3.0nm,0.6s						
UKT				Smax			
	comp=N,43nm,2.2s						
BOD	Bodaibo	9.85	53	e		02 46 17.9	
BOD				eSg	Sn	02 47 14.9	+55
BOD				Smax			
	comp=N,38nm,1.7s						
BOD	Bodaibo	9.85	53	eP	Pn	02 44 29.6	+0.1
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s						

ISCJB ***11*** *02:46:07.6±2.3, 372N±0.1×742E±0.1, h33^{km}, Error ellipse: s-maj=20.8km s-min=12.6km az=138.4*
NNC ***11*** *02:46:11.5±3.8, 3733N×7446E, h89^{km}±53^{km}, mb2.9, mpv3.3, Error ellipse: s-maj=30.9km s-min=27.5km az=2.0*
BJI ***11*** *02:46:12.6, 3737N×7522E, h15^{km}, ML3.3*
ISC 11 02:46:07.8±2.4**, 371N**±01×**743E**±01**, h35**^{km}**, n5,** σ**1^{s}02**/8**,**
2C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.73	28	P	Pn	02 46 49.2	+0.1
KSH				S	Sn	02 47 21.1	+0.2
KSH				Smax			
	comp=N,208nm,0.7s						
KSH				Smax			
	comp=E,300nm,0.6s						
TKM2	Tokmak 2	5.88	9	⇑P	Pn	02 47 33.3	+0.9
	comp=E,0.4nm,0.5s						
TKM2				⇑S	Sn	02 48 37.4	-1.2
	comp=E,1.3nm,0.7s						
KK31	Karatay Array	6.65	335	P	Pn	02 47 44.5	+1.5
	comp=E,6.8nm,0.7s,baz=142,slow=12,SNR=42						
KK31				⇓S	Sn	02 48 58.2	+0.7
	comp=E,6.1nm,0.6s						
AB31	Akbulak array	15.99	324	⇓P	Pn	02 49 48.2	-1.9
	comp=E,1.5nm,0.6s,baz=129,slow=12,SNR=10.0						
AKTO	Aktyubinsk	17.71	324	⇓P	Pn	02 50 11.2	-0.4
	comp=E,0.2nm,1.1s						

NEIC ***11*** *02:54:11.2, 1921N×6455W, h35^{km}, MD3.3(RSPR), After RSPR.*
RSPR 11 02:54:11.2, 1921N×6455W, h35^{km}±26^{km}**, MD3.3**/6**,**
MD3.3/6**, 19C-1D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.79	184	⇑eP	Pn	02 54 24.4	-1.4
TBVI	Tortola	0.79	184	eS	Sn	02 54 34.9	-1.5
TBVI	Tortola	0.79	184	⇑eP	Pn	02 54 24.3	-1.5
TBVI	Tortola	0.79	184	eS	Sn	02 54 34.9	-1.4
TBVI	Tortola	0.79	184	⇑eP	Pn	02 54 24.3	-1.5
TBVI				eS	Sn	02 54 34.9	-1.4
STVI	Saint Thomas	0.93	204	⇑eP	Pn	02 54 26.4	-1.4
STVI	Saint Thomas	0.93	204	eS	Sn	02 54 39.2	-0.8
STVI	Saint Thomas	0.93	204	⇑eP	Pn	02 54 26.4	-1.4
STVI	Saint Thomas	0.93	204	eS	Sn	02 54 39.2	-0.8
STVI	Saint Thomas	0.93	204	⇑eP	Pn	02 54 26.4	-1.4
STVI				eS	Sn	02 54 39.2	-0.8
CULB	Culebra	1.17	218	⇑eP	Pn	02 54 29.6	-1.5
CULB				eS	Sn	02 54 44.0	-1.8
CULB	Culebra	1.17	218	⇓eP	Pn	02 54 29.5	-1.5
CULB				eS	Sn	02 54 44.0	-1.8
MTP	Monte Pirata	1.46	221	⇑eP	Pn	02 54 34.1	-0.9
MTP	Monte Pirata	1.46	221	eS	Sn	02 54 51.9	-0.9
MTP	Monte Pirata	1.46	221	⇑eP	Pn	02 54 34.1	-0.9
MTP	Monte Pirata	1.46	221	eS	Sn	02 54 51.8	-1.1
MTP	Monte Pirata	1.46	221	⇑eP	Pn	02 54 34.1	-0.9
MTP				eS	Sn	02 54 51.8	-1.1
CBYP	Canovanas	1.55	233	⇑eP	Pn	02 54 34.6	-1.6
CBYP	Canovanas	1.55	233	eS	Sn	02 54 53.5	-1.7
CBYP	Canovanas	1.55	233	⇑eP	Pn	02 54 34.6	-1.7
CBYP	Canovanas	1.55	233	eS	Sn	02 54 53.7	-1.5
CBYP	Canovanas	1.55	233	⇑eP	Pn	02 54 34.6	-1.7
CBYP				eS	Sn	02 54 53.7	-1.5
HUMP	Col San Antoni	1.62	229	⇑eP	Pn	02 54 36.8	-0.5
HUMP	Col San Antoni	1.62	229	eS	Sn	02 54 55.5	-1.5
HUMP	Col San Antoni	1.62	229	⇑eP	Pn	02 54 36.1	-1.2
HUMP	Col San Antoni	1.62	229	eS	Sn	02 54 55.5	-1.5
HUMP	Col San Antoni	1.62	229	⇑eP	Pn	02 54 36.1	-1.2
HUMP				eS	Sn	02 54 55.5	-1.5
CPD	Cerro la Pandu	1.74	228	⇑eP	Pn	02 54 38.5	-0.5
CPD	Cerro la Pandu	1.74	228	eS	Sn	02 54 59.0	-0.8
CPD	Cerro la Pandu	1.74	228	⇑eP	Pn	02 54 38.4	-0.5
CPD	Cerro la Pandu	1.74	228	eS	Sn	02 54 58.6	-1.3
CPD	Cerro la Pandu	1.74	228	⇑eP	Pn	02 54 38.4	-0.5
CPD				eS	Sn	02 54 58.6	-1.3

NEIC ***11*** *02:58:48.4, 1709N×101.16W, h16^{km}, MD3.9(MEX), After MEX.*
MEX 11 02:58:48.4±1.6**, 1709N**×**10116W, h16**^{km}±24^{km}**, MD3.9,**
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.59	330	i P	Pg	02 58 57.7	-2.3
ZIIG				i S	Sg	02 59 05.7	-2.1
CAIG	El Cayaco	0.85	93	i P	Pb	02 59 00.8	-3.9
CAIG				i S	Sb	02 59 11.3	-4.7
ACX	Acapulco	1.21	101	i P	Pn	02 59 09.0	-1.6
ACX				i S	Sb	02 59 21.5	-4.7
MEIG	Mezcala	1.68	60	i P	Pn	02 59 13.9	-3.2
MEIG				i S	Sn	02 59 34.3	-4.0
PPM	Popocatepetl	3.10	50	i P	Pn	02 59 34.4	-2.3
PPM				i S	Sn	03 00 10.8	-2.7
UTMO	Huajuapan	3.28	77	eP	Pn	02 59 37.1	-2.0
UTMO				i S	Sn	03 00 14.4	-3.4

ISCJB ***11*** *03:00:05.6±4.9, 290S±05×1777W±06, h93^{km}±8^{km}, mb3.7/4, Error ellipse: s-maj=118.3km s-min=38.5km az=85.0*
NEIC ***11*** *03:00:06.9±1.4, 2897S×17773W, h86^{km}±10^{km}, mb3.7/2, Error ellipse: s-maj=33.2km s-min=27.7km az=169.0*
IDC ***11*** *03:00:07.2±1.3, 29.11S×17779W, h83^{km}±7^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.5/8, mbtmp3.8/3, Error ellipse: s-maj=40.2km s-min=31.6km az=144.0*
ISC 11 03:00:05.6±5.1**, 289S**±05×**1775W**±05**, h86**^{km}±15^{km}**, n15,**
σ**0^{s}75**/11**, mb3.7**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.48	226	P	Pn	03 00 20.1	+0.4
	726nm,0.3s,baz=73,slow=3.9,SNR=52						
RAO				S	Sn	03 00 29.9	-0.3
	1μm,0.3s,baz=72,slow=20,SNR=15						
RAO	Raoul Island	0.48	226	P	Pn	03 00 20.1	+0.4
RAO				S	Sn	03 00 29.9	-0.3
STKA	Stephens Creek	35.24	255	eP	P	03 06 53.6	+1.8
	2.2nm,0.6s,mb4.2						
STKA	Stephens Creek	35.24	255	P	P	03 06 52.3	+0.6
	1.0nm,0.4s,mb4.0,baz=97,slow=10,SNR=9.5						
STKA	Stephens Creek	35.24	255	eP	P	03 06 53.1	+1.4
ASAR	Alice Springs	43.62	265	P	P	03 08 00.3	-1.1
	0.4nm,0.5s,mb3.5,baz=100,slow=8.0,SNR=6.1						
ASAR				PcP	PcP	03 09 49.9	+2.5
	0.3nm,0.5s,baz=118,slow=3.8,SNR=5.2						
WRAB	Tennant Creek	44.47	270	eP	P	03 08 08.2	0.0
	0.9nm,0.3s,mb4.0						
VNDA	Vanda	49.60	186	P	P	03 08 47.7	-0.5
	0.3nm,0.6s,mb3.4,baz=7.2,slow=8.0,SNR=5.2						
VNDA	Vanda	49.60	186	eP	P	03 08 48.3	+0.2
	0.2nm,0.5s,mb3.3						
FINES	FINESS Array B	143.89	341	PKP	PKPdf	03 19 30.4	-0.5
	1.0nm,0.4s,baz=122,slow=2.5,SNR=12						
NB2	NORSAR Subarra	147.35	352	PKPa	PKPbc	03 19 41.3	+2.0
	comp=Z,0.7nm,0.6s,baz=12,slow=2.9						
NOA	NORSAR Array B	147.35	352	PKPbc	PKPbc	03 19 41.0	+1.7
	comp=Z,1.1nm,0.7s,baz=14,slow=4.5,SNR=5.3						
AKASG	Malin Array Be	150.36	325	PKPbc	PKPbc	03 19 48.2	+1.2
	comp=Z,1.3nm,0.4s,baz=45,slow=2.7,SNR=9.3						
AKASG	Malin Array Be	150.36	325	PKPbc	PKPbc	03 19 48.2	+1.2
BRTR	Keskin Array B	152.22	301	PKPbc	PKPbc	03 19 52.5	+1.2
	comp=Z,0.6nm,0.7s,baz=165,slow=4.0,SNR=3.6						

MOS ***11*** *03:17:58.3±0.8, 628S×12791E, h302^{km}, mb4.4/16, Error ellipse: s-maj=15.7km s-min=7.8km az=112.1*
BJI ***11*** *03:18:00.7, 665S×12832E, h364^{km}, mB4.6, mb4.6*
ISCJB ***11*** *03:18:01.9±0.7, 635S±003×12802E±006, h343^{km}±8^{km}, mb4.4/52, Error ellipse: s-maj=9.9km s-min=4.2km az=143.4*
NEIC ***11*** *03:18:02.9±0.7, 634S×12803E, h340^{km}±7^{km}, mb4.6/29, Error ellipse: s-maj=7.7km s-min=4.1km az=59.0*
IDC ***11*** *03:18:03.1±1.8, 635S×12800E, h341^{km}±19^{km}, mb4.1/11, mb1 4.3/14, mb1mx4.2/18, mbtmp5.0/14, Error ellipse: s-maj=14.8km s-min=8.8km az=71.0*
ISC 11 03:18:04.2±0.7**, 642S**±003×**12806E**±006**, h354**^{km}±7^{km}**,**
h348^{km}±2.6^{km}**: pP-P, n128,** σ**0^{s}95**/118**, mb4.4**/52**, 13C-14D,**
Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	7.60	146	eP	Pn	03 19 52.9	-0.7
	383nm,0.6s						
KAKA				eS	S	03 21 13.0	-10
BAKI	Biak	9.57	57	P	Pn	03 20 16.9	0.0
	829nm,0.9s						
PCI	Palu	9.86	303	P	Pn	03 20 21.7	+1.3
	520nm,1.1s						
FITZ	Fitzroy Crossi	11.84	191	eP	Pn	03 20 43.3	-0.7
	95nm,0.6s						
FITZ				eS	S	03 22 51.6	-4.1
FITZ	Fitzroy Crossi	11.84	191	P	Pn	03 20 43.4	-0.6
	6.3nm,0.3s,baz=23,slow=11,SNR=137						
FITZ				S	S	03 22 54.1	-1.7
	1.9nm,0.3s,baz=110,slow=21,SNR=4.2						
WRAB	Tennant Creek	14.76	156	⇑iP	P	03 21 16.5	+0.6
WRAB				e		03 23 52.8	
WRAB				pmax	pmax		
	comp=Z,142nm,0.6s						
WRAB	Tennant Creek	14.76	156	⇑iPn	Pn	03 21 16.5	-1.5
	comp=Z,142nm,0.6s						
WRAB				eSn	S	03 23 52.8	-2.0
WB2	Warramunga Arr	14.76	156	⇑iP	P	03 21 16.6	+0.6
WB2				eS	S	03 23 53.0	-2.0
MBWA	Marble Bar	16.72	208	eP	P	03 21 37.1	0.0
	comp=Z,38nm,0.8s						
MBWA				eS	S	03 24 26.4	-7.4
KKM	Kota Kinabalu	17.12	316	eP	P	03 21 41.0	-0.4
AS31	Alice Springs	18.04	162	eP	P	03 21 52.3	+1.0
AS31				eS	S	03 24 59.2	-0.3
ASPA	Alice Springs	18.04	162	eP	P	03 21 52.3	+1.0
ASPA				eS	S	03 24 59.2	-0.3
ASAR	Alice Springs	18.04	162	P	P	03 21 52.4	+1.1
	comp=Z,15nm,0.3s,baz=337,slow=8.9,SNR=1194						
ASAR				S	S	03 24 59.2	-0.3
	comp=Z,5.6nm,0.3s,baz=345,slow=22,SNR=41						
PMG	Port Moresby	19.15	100	P	P	03 22 04.1	+1.1
	comp=Z,8.4nm,0.3s,baz=289,slow=3.8,SNR=23						
PMG	Port Moresby	19.15	100	eP	P	03 22 03.9	+0.9
	comp=Z,115nm,0.8s						
KSM	Kuching	19.38	293	eP	P	03 22 05.1	-0.3
TGY	Tagaytay City	21.58	341	P	P	03 22 26.1	0.0
	comp=Z,311nm,0.7s,baz=138,slow=3.2,SNR=8.8						
CTA	Charters Tower	22.29	129	⇑iP	P	03 22 34.3	+1.7
	comp=Z,36nm,0.7s,mb4.7						
CTA	Charters Tower	22.29	129	P	P	03 22 34.5	+2.0
	comp=Z,47nm,0.7s,mb4.8,baz=308,slow=11,SNR=40						
CTA	Charters Tower	22.29	129	⇑iP	P	03 22 34.3	+1.7
CTA				pmax	pmax		
	comp=Z,36nm,0.7s						
CTAO	Charters Tower	22.29	129	⇑iP	P	03 22 34.2	+1.6
CTAO				pmax	pmax		
	comp=Z,156nm,1.3s,mb5.1						
CTAO	Charters Tower	22.29	129	⇑iP	P	03 22 34.2	+1.6
	comp=Z,156nm,1.3s,mb5.1						
FORT	Forrest	24.23	180	⇓iP	P	03 22 50.9	+0.7
	comp=Z,33nm,0.7s,mb4.7						
FORT				epP		03 23 47.1	
KLBR	Kellerberrin	26.83	200	eP	P	03 23 14.0	+0.7
	comp=Z,4.0nm,0.4s,mb4.0						
KLBR				epP		03 24 09.5	
NWAO	Narrogin (SRO)	28.23	200	P	P	03 23 25.1	-0.6
	comp=Z,8.2nm,0.7s,mb4.1,baz=55,slow=7.1,SNR=5.5						
STKA	Stephens Creek	28.31	155	⇑iP	P	03 23 27.2	+0.8
	comp=Z,32nm,0.6s,mb4.7						
STKA				epP		03 24 28.2	
STKA				eS	S	03 27 46.1	-0.1
STKA	Stephens Creek	28.31	155	P	P	03 23 27.2	+0.9
	comp=Z,39nm,0.6s,mb4.8,baz=326,slow=8.6,SNR=112						
PSI	Prapat	30.50	287	P	P	03 23 43.7	-1.8
	comp=Z,2.8nm,0.4s,mb3.9,baz=264,slow=2.4,SNR=4.2						
PSI	Prapat	30.50	287	P	P	03 23 43.7	-1.9
ARMA	Armidale	32.56	140	⇑iP	P	03 24 05.1	+1.6
CNB	Canberra Magne	34.80	149	eP	P	03 24 24.2	+1.6
	comp=Z,20nm,0.9s,mb4.3						
TOO	Toolangi	34.83	155	⇑iP	P	03 24 25.2	+2.4
	comp=Z,10.0nm,1.0s,mb4.0						
TOO	Toolangi	34.83	155	⇑iP	P	03 24 25.2	+2.4
TOO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.0						
SSE	Sheshan	37.88	350	P	P	03 24 49.7	+1.3
SSE				AMB	AMB		
	comp=Z,28nm,0.7s,mb4.6						
SSE				AMB	AMB		
	comp=Z,75nm,3.5s						
GYA	Guiyang	38.72	328	⇓iP	P	03 24 55.0	-0.3
GYA				AP	pP	03 26 04.2	+0.2
GYA				S	S	03 30 23.9	-1.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.0						
GYA				AMB	AMB		
	comp=Z,70nm,5.4s						
GYA				LR	LR		
	comp=N,80nm,16.8s						
GYA				LR	LR		
	comp=E,110nm,16.3s						
GYA				LR	LR		
	comp=Z,150nm,16.0s						
NJ2	Nanjing	39.25	348	eP	P	03 24 59.6	-0.1
NJ2				AP	pP	03 26 08.6	0.0
NJ2				PP	PP	03 26 41.0	+2.4
NJ2				XP	sP	03 26 47.8	-1.2
NJ2				S	S	03 30 34.0	+0.7
NJ2				XS	sS	03 32 36.0	-1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.3						
NJ2				AMB	AMB		
	comp=Z,120nm,9.6s						
NJ2				LR	LR		
	comp=N,540nm,14.3s						
NJ2				LR	LR		
	comp=E,440nm,18.4s						
NJ2				LR	LR		
	comp=Z,130nm,14.8s						
KMI	Kunming	39.88	323	P	P	03 25 05.7	+0.9
KMI				AP	pP	03 26 13.8	-0.1
KMI				S	S	03 30 47.3	+4.8
KMI				SS	SS	03 33 53.3	-2.3
KMI				AMB	AMB		
	comp=Z,18nm,0.9s,mb4.3						
KMI				LR	LR		
	comp=Z,41nm,18.9s						
DZM	Mont Dzumac	40.17	117	P	P	03 25 06.7	-0.5
	comp=Z,9.4nm,0.8s,mb4.0,baz=339,slow=22,SNR=7.1						
MAJO	Matsushiro	43.79	12	eP	P	03 25 34.2	-1.9
MAJO				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.2						
MAJO	Matsushiro	43.79	12	eP	P	03 25 34.2	-1.9
	comp=Z,19nm,0.9s,mb4.2						
MAT	Matsushiro	43.79	12	P	P	03 25 33.9	-2.2
MAT	Matsushiro	43.79	12	eP	P	03 25 34.0	-2.1
MAT				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.1						
MAT	Matsushiro	43.79	12	eP	P	03 25 34.0	-2.1
	comp=Z,16nm,1.0s,mb4.1						
MJAR	Matsushiro Arr	43.79	12	P	P	03 25 34.2	-1.9
	comp=Z,18nm,0.9s,mb4.2,baz=190,slow=8.8,SNR=39						
MJAR				ScP	ScP	03 30 33.3	+0.6
	comp=Z,0.7nm,0.5s,baz=208,slow=4.8,SNR=5.8						
MJAR	Matsushiro Arr	43.79	12	P	P	03 25 34.2	-1.9
MJAR				ScP	ScP	03 30 33.3	+0.6
CD2	Chengdu	43.80	329	eP	P	03 25 35.5	-0.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.0						
XAN	Xi'an	44.13	337	P	P	03 25 37.6	-1.2
XAN				AMB	AMB		
	comp=Z,38nm,0.8s,mb4.6						
BJT	Baijiatuau	47.49	348	eP	P	03 26 03.9	-0.9
BJT				pmax	pmax		
	comp=Z,28nm,0.8s						
BJT	Baijiatuau	47.49	348	eP	P	03 26 03.9	-0.9
	comp=Z,28nm,0.8s,mb4.5						
BJI	Beijing	47.51	348	eP	P	03 26 04.0	-0.9
BJI				AMB	AMB		
	comp=Z,44nm,0.8s,mb4.7						
LZH	Lanzhou	48.01	333	⇓P	P	03 26 09.0	+0.3
LZH				AP	pP	03 27 20.0	-0.7
LZH				PCP	PcP	03 27 27.5	-3.0
LZH				XP	sP	03 28 02.0	+1.7
LZH				SCP	ScP	03 30 52.5	+2.2
LZH				PCS	PcS	03 31 27.0	+0.2
LZH				SCS	ScS	03 35 22.0	-1.1
LZH				AMB	AMB		
	comp=Z,58nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,311nm,5.1s						
SNY	Shenyang	48.19	356	⇓P	P	03 26 09.5	-0.6
SNY				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.2						
HHC	Hu-ho-hao-te	49.42	344	eP	P	03 26 19.1	-0.2
HHC				AP	pP	03 27 31.3	-0.5
HHC				PCP	PcP	03 27 35.8	+0.2
HHC				XP	sP	03 28 09.7	-1.5
HHC				PP	PP	03 28 19.0	+1.6
HHC				SCP	ScP	03 30 58.1	+1.8
HHC				PCS	PcS	03 31 31.1	-1.7
HHC				S	S	03 33 00.6	+1.9
HHC				XS	sS	03 35 08.1	-0.2
HHC				SCS	ScS	03 35 30.3	-2.4
HHC				SS	SS	03 36 40.1	+4.6
HHC				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.1						
HHC				AMB	AMB		
	comp=Z,85nm,5.1s						
HHC				LR	LR		
	comp=N,115nm,22.8s						
HHC				LR	LR		
	comp=E,175nm,21.8s						
HHC				LR	LR		
	comp=Z,48nm,20.9s						
VLA	Vladivostok	49.43	4d	iP	P	03 26 19.1	-0.3
VLA				pmax	pmax		
	comp=Z,41nm,0.8s,mb4.7						
CN2	Changchun	50.05	358	eP	P	03 26 26.1	+2.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.2						
LSA	Lhasa	50.46	317	eP	P	03 26 28.6	+1.5
LSA				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.2						
LSA	Lhasa	50.46	317	eP	P	03 26 28.6	+1.6
	comp=Z,6.1nm,0.4s,mb4.2						
MDJ	Mudanjiang	50.82	1	P	P	03 26 29.9	+0.2
MDJ				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.2						
MDJ				LR	LR		
	comp=N,24nm,25.2s						
MDJ				LR	LR		
	comp=E,12nm,21.0s						
MDJ				LR	LR		
	comp=Z,17nm,14.7s						
MDJ	Mudanjiang	50.82	1	eP	P	03 26 29.4	-0.3
	comp=Z,15nm,0.9s,mb4.2						
GTA	Gaotai	52.56	333	⇓iP	P	03 26 42.9	+0.5
GTA				AP	pP	03 27 53.5	-2.4
GTA				PP	PP	03 28 47.1	+1.5
GTA				SCP	ScP	03 31 11.1	+1.2
GTA				PCS	PcS	03 31 47.5	+1.1
GTA				S	S	03 33 42.6	+1.2
GTA				SCS	ScS	03 35 52.9	-1.5
GTA				SS	SS	03 37 24.8	-0.2
GTA				AMB	AMB		
	comp=Z,29nm,0.6s,mb4.8						
GTA				AMB	AMB		
	comp=Z,75nm,7.3s						
GTA				LR	LR		
	comp=N,48nm,13.4s						
GTA				LR	LR		
	comp=E,61nm,14.9s						
GTA				LR	LR		
	comp=Z,41nm,11.5s						
JIRN	Jiri	52.76	312	eP	P	03 26 44.3	+0.4
GUN	Gumba	53.13	312	eP	P	03 26 46.5	-0.1
	comp=Z,30nm,0.7s,mb4.8						
PKI	Pulchoki	53.29	311	eP	P	03 26 47.8	+0.1
KKN	Kakani	53.51	312	eP	P	03 26 48.9	-0.4
	comp=Z,18nm,0.7s,mb4.5						
KKN	Kakani	53.51	312	eP	P	03 26 48.9	-0.4
KKN				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.5						
DMN	Daman	53.54	311	eP	P	03 26 50.0	+0.5
GKN	Gorkha	54.10	311	eP	P	03 26 53.9	+0.4
	comp=Z,14nm,0.4s,mb4.7						
YSS	Yuzh-Sakhalins	54.72	12c	iP	P	03 26 57.2	-0.8
YSS				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.2						
KOLN	Koldanda	54.76	311	eP	P	03 26 58.5	+0.3
	comp=Z,19nm,0.7s,mb4.5						
KLR	Kul'dur	55.51	3	eP	P	03 27 00.0	-3.6
ULN	Ulaanbaatar	57.14	343	eP	P	03 27 15.3	+0.3
ULN				pmax	pmax		
	comp=Z,28nm,0.9s,mb4.6						
ULN	Ulaanbaatar	57.14	343	eP	P	03 27 15.3	+0.4
	comp=Z,28nm,0.9s,mb4.6						
SONM	Songino Array	57.30	343	P	P	03 27 16.5	+0.4
	comp=Z,19nm,0.8s,mb4.5,baz=164,slow=7.3,SNR=89						
ZAK	Zakamensk	60.51	342	eP	P	03 27 38.0	+0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.7						
TLY	Talaya	61.55	343d	iP	P	03 27 45.5	+0.7
TLY				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
WMQ	Urumqi	61.87	328	eP	P	03 27 47.0	+0.1
WMQ				AP	pP	03 29 04.0	+0.7
WMQ				PP	PP	03 30 11.0	+3.0
WMQ				S	S	03 35 42.0	+0.1
WMQ				SCS	ScS	03 37 00.0	-2.8
WMQ				SS	SS	03 39 52.0	+0.9
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,98nm,5.0s						
WMQ				LR	LR		
	comp=N,106nm,18.0s						
WMQ				LR	LR		
	comp=E,104nm,18.0s						
WMQ				LR	LR		
	comp=Z,89nm,17.0s						
MKAR	Makanchi Array	66.70	328	P	P	03 28 18.4	+0.4
	comp=Z,12nm,0.5s,mb4.8,baz=124,slow=7.9,SNR=89						
YAK	Yakutsk	68.26	1	eP	P	03 28 27.2	-0.5
YAK				e*PP	PcP	03 28 49.4	-1.2
YAK				eS	S	03 36 58.5	-0.6
YAK				e*SS	SKSac	03 37 43.4	-7.8
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
YAK				pmax	pmax		

comp=E,2.0nm,1.2s
YAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
YAK pmax pmax
comp=N,2.0nm,0.8s
YAK pmax pmax
comp=E,1.0nm,0.9s
YAK smax
comp=N,11nm,1.4s
YAK smax
comp=E,9.0nm,1.2s
AAK Ala-Archa 68.86 320 *d i*P **P 03 28 31.5 +0.2**
AAK pmax pmax
comp=Z,9.0nm,1.3s,mb4.3
AAK Ala-Archa 68.86 320 *e*P **P 03 28 31.4 0.0**
comp=Z,5.4nm,0.8s,mb4.3
ZAL Zalesovo 70.23 334 P **P 03 28 39.1 -0.5**
comp=Z,7.0nm,0.8s,mb4.4,baz=335,slow=5.7,SNR=24
KURK Kurchatov 71.03 329 *d i*P **P 03 28 44.6 +0.2**
KURK Kurchatov 71.03 329 ⇓*i*P **P 03 28 44.5 0.0**
comp=Z,18nm,0.8s,mb4.9
NVS Novosibirsk 71.51 335 *e*P **P 03 28 43.8 -3.5**
KK31 Karatay Array 71.64 319 ⇓P **P 03 28 47.9 -0.1**
comp=Z,0.8nm,0.5s,mb3.8,baz=134,slow=12,SNR=8.1
KK31 ⇓S pP 03 29 59.6 -7.3
comp=Z,1.7nm,0.6s,baz=148,slow=44,SNR=6.3
VNDA Vanda 73.25 173 P **P 03 28 57.0 -0.4**
comp=Z,3.5nm,0.8s,mb4.2,baz=318,slow=6.2,SNR=23
VNDA Vanda 73.25 173 *e*P **P 03 28 57.0 -0.5**
VNDA pmax pmax
comp=Z,2.0nm,0.8s
VNDA Vanda 73.25 173 *e*P **P 03 28 57.0 -0.4**
comp=Z,2.5nm,0.8s,mb4.0
MAW Mawson 74.78 201 *e*P **P 03 29 06.8 +0.6**
comp=Z,5.4nm,1.1s,mb4.2
MAW Mawson 74.78 201 P **P 03 29 07.0 +0.8**
comp=Z,6.4nm,1.0s,mb4.3,baz=54,slow=7.5,SNR=17
MAW Mawson 74.78 201 *e*P **P 03 29 06.8 +0.6**
MAW pmax pmax
comp=Z,5.0nm,1.1s
BRVK Borovoye 76.63 328 *e*P **P 03 29 16.3 -0.3**
BRVK pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
BRVK Borovoye 76.63 328 *e*P **P 03 29 16.3 -0.3**
comp=Z,0.7nm,0.6s,mb3.6
CHKZ Chkalovo 76.77 329 *e*P **P 03 29 16.8 -0.6**
CHKZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
CHKZ Chkalovo 76.77 329 *e*P **P 03 29 16.8 -0.6**
comp=Z,4.6nm,0.9s,mb4.2
SYO Syowa Base 83.50 201⇓*e*P **P 03 29 52.8 -0.2**
QSPA South Pole Qui 83.55 180 *e*P **P 03 29 53.0 -0.2**
comp=Z,9.5nm,0.6s,mb4.8
ARU Arti 84.20 328⇓*i*P **P 03 29 55.9 -0.6**
ARU *e* 03 33 14.7
ARU *e*S S 03 39 45.7 -5.4
ARU *e*SS SS 03 45 24.8 -4.6
ARU pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
SNAA Sanae 95.76 194 *e*P **P 03 30 51.2 +0.6**
SNAA *e* 03 30 51.8
SNAA Sanae 95.76 194⇑*e*P **P 03 30 52.2 +1.6**
SNAA Sanae 95.76 194 *e*P **P 03 30 50.7 +0.1**
comp=Z,4.0nm,1.1s,mb4.5
OBN Obninsk 96.07 325 *e*P **P 03 30 52.1 +0.1**
OBN pmax pmax
comp=Z,6.0nm,0.5s,mb5.0
BRG Berggiesshubel 110.07 322 *e*(P) PKiKP 03 35 53.0 -1.0
comp=Z,0.5nm,0.3s
CLL Collm 110.53 323 *e* PKiKP 03 35 57.0 +2.2
HLID Hailey 114.22 45 *e*PKP PKiKP 03 36 03.1 +1.2
DUG Dugway 116.23 48 *e*PKIKP PKPdf 03 36 07.0 +1.2
TPAW Teton Pass 116.66 44 *e*PKPdf PKPdf 03 36 07.7 +1.1
MOOW Moose Ponds 116.72 44 *e*PKPdf PKPdf 03 36 08.1 +1.4
LOHW Long Hollow 116.86 44 *e*PKPdf PKPdf 03 36 08.0 +1.0
BW06 Boulder Array 117.85 45 *e*PKPdf PKPdf 03 36 09.2 +0.3
PDAR Pinedale Array 117.85 45 PKP PKPdf 03 36 09.7 +0.8
comp=Z,0.7nm,0.7s,baz=288,slow=0.9,SNR=8.1
TUC Tucson 119.64 56 *e*PKIKP PKPdf 03 36 13.1 +0.8
SMCO Snowmass 120.84 48 *e*PKPdf PKPdf 03 36 15.8 +1.2
RSSD Black Hills 121.12 42 *e*PKIKP PKPdf 03 36 15.4 +0.2
ANMO Albuquerque 122.50 52 *e*PKIKP PKPdf 03 36 19.1 +1.3
ULM Lac du Bonnet 123.00 32 PKP PKPdf 03 36 18.1 -0.6
comp=Z,1.5nm,0.8s,baz=178,slow=23,SNR=4.0
MNTX Cornudas Mount 124.25 56 *e*PKPdf PKPdf 03 36 22.5 +1.4
AMTX Amarillo 126.25 51 *e*PKPdf PKPdf 03 36 25.9 +0.9
TORD Torodi Ar. Bea 126.80 282 PKP PKPdf 03 36 27.9 +1.9
comp=Z,1.9nm,0.8s,baz=89,slow=1.6,SNR=10
WMOK Wichita Mounta 128.53 50 *e*PKIKP PKPdf 03 36 29.9 +0.6
JCT Junction City 129.18 56 *e*PKIKP PKPdf 03 36 31.7 +1.1
WVT Waverly 135.81 43 *e*PKIKP PKPdf 03 36 44.2 +1.2
LVC Limon Verde 146.71 151 *e*PKPbc PKPbc 03 37 06.8 +2.1
CPUP Villa Florida 147.03 171 PKPbc PKPbc 03 37 07.1 +1.5
comp=Z,17nm,0.8s,baz=168,slow=2.2,SNR=31
CPUP Villa Florida 147.03 171 *e*PKPdf PKPdf 03 37 04.3 +1.4
CPUP *e*PKPbc PKPbc 03 37 06.9 +1.3
NNA Nana 149.22 126 *e*PKPbc PKPbc 03 37 11.0 -0.2
SAML Samuel 161.06 144 *e*PKPdf PKPdf 03 37 23.9 +1.5
SAML *e*PKPab PKPab 03 38 08.4 +0.7
SDV Santo Domingo 161.32 81 *e*PKPdf PKPdf 03 37 24.2 +1.5

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*ATH **11** 04:39:37.9, 40.13N×19.59E, h27km, MD3.3/5*
*NEIC **11** 04:39:37.9, 40.13N×19.59E, h27km, MD3.3(ATH), ML2.9(THE), After ATH.*
*ISCJB **11** 04:39:37.8±1.1, 40.12N±0.03×19.61E±0.07, h4km±6km, Error ellipse: s-maj=9.0km s-min=5.6km az=7.5*
*CSEM **11** 04:39:38.9±0.5, 40.09N×19.55E, h27km±2km, MD3.3, Error ellipse: s-maj=11.9km s-min=3.0km az=91.0*
*THE **11** 04:39:40.8, 40.08N×19.70E, h0km, ML2.9*
*SKO **11** 04:39:43.5, 40.08N×20.02E, h0km*
ISC 11 04:39:39.1±1.1, **40.12N**±0.03×**19.64E**±0.07, **h8**km±5km, **n15**, σ**1.47**/27, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.34**	**58**	*i* Pg	**Pg**	**04 39 43.6**	**-2.1**
TPE				*i* Sg	**Sg**	**04 39 48.6**	**-1.6**
SRN	**Sarande**	**0.37**	**131**	*i* Pg	**Pg**	**04 39 44.9**	**-1.4**
SRN				*i* Sg	**Sg**	**04 39 50.3**	**-0.9**
KEK	**Kerkira**	**0.42**	**163**	*e*PB	**Pg**	**04 39 47.5**	**+0.1**
KEK				*e*SB	**Sg**	**04 39 54.6**	**+1.6**
LSK	**Leskovik**	**0.74**	**87**	*i* Pg	**Pg**	**04 39 51.1**	**-2.3**
LSK				*i* Sg	**Sg**	**04 40 02.9**	**-0.1**
IGT	**Igoumenitsa**	**0.79**	**137**	*e*Pg	**Pg**	**04 39 53.7**	**-0.7**
IGT				*e*Sg	**Sg**	**04 40 06.8**	**+2.0**
JAN	**Janina**	**1.04**	**116**	*e*PN	**Pn**	**04 39 58.6**	**-1.4**
JAN				*e*SN	**Sn**	**04 40 13.6**	**-1.1**
TIR	**Tirane**	**1.24**	**8**	*e*Pg	**Pg**	**04 40 05.5**	**+2.6**
TIR				*e*Sg	**Sg**	**04 40 24.0**	**+5.0**
MEV	**Metsovon**	**1.27**	**105**	*e*Pg	**Pg**	**04 40 03.0**	**-0.5**
MEV				*e*Sg	**Sg**	**04 40 22.1**	**+2.2**
OHR	**Ohrid**	**1.33**	**41**	*e*Pg	**Pg**	**04 40 05.9**	**+1.3**
OHR				*e*Sg	**Sg**	**04 40 24.4**	**+2.5**
OHR	**Ohrid**	**1.33**	**41**	*e*Pg	**Pg**	**04 40 05.7**	**+1.1**
OHR				*e*Sg	**Sg**	**04 40 21.7**	**-0.2**
FNA	**Florina**	**1.48**	**63**	*e*Pg	**Pg**	**04 40 06.3**	**-1.3**
FNA				*e*Sg	**Sg**	**04 40 28.5**	**+1.7**
KZN	**Kozani**	**1.64**	**83**	*e*PN	**Pn**	**04 40 07.7**	**-0.6**
EVR	**Evrytania**	**2.06**	**125**	*e*PN	**Pn**	**04 40 13.1**	**-1.0**
VLS	**Valsamata**	**2.08**	**159**	*e*PN	**Pn**	**04 40 13.8**	**-0.4**
AGG	**Agios Georgios**	**2.35**	**117**	*e*Pn	**Pn**	**04 40 19.9**	**+1.9**
AGG				*e*Sn	**Sn**	**04 40 49.2**	**+2.1**

IGQ 11 05:19:43.5, 1.82S×76.47W, h25km±25km, Mb4.9, Ms4.8, 8C-15D, Error ellipse: s-maj=21.5km s-min=3.7km az=30.1, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULBA	**Ulba**	**1.97**	**281**	⇓P	Pn	05 20 17.8	+2.5
PATA	**Patacocha**	**1.99**	**279**	⇓P	Pn	05 20 18.3	+2.8
RUN5	**Runtun**	**1.99**	**282**	⇓P	Pn	05 20 18.1	+2.5
ARRY	**Arrayan**	**2.01**	**279**	⇓P	Pn	05 20 18.3	+2.5
RETU	**Refugio**	**2.01**	**280**	⇑P	Pn	05 20 18.4	+2.7
JUIV	**Juive**	**2.03**	**281**	⇓P	Pn	05 20 18.6	+2.5
JUIV				S	Sn	05 20 41.8	+1.1
CUSU	**Cusua**	**2.04**	**281**	⇓P	Pn	05 20 18.9	+2.6
PISA	**Pisayambo**	**2.06**	**292**	P	Pn	05 20 18.6	+2.1
LAV3	**Lava3-Reventad**	**2.07**	**326**	⇓P	Pn	05 20 18.5	+1.9
CONE	**Cono NE Rev Vo**	**2.10**	**326**	⇓P	Pn	05 20 19.1	+2.0
ANTI	**Antisana**	**2.17**	**309**	⇓P	Pn	05 20 20.2	+2.2
IGUA	**Igualata**	**2.19**	**279**	⇓P	Pn	05 20 22.0	+3.7
TAMB	**Tambo**	**2.20**	**300**	⇓P	Pn	05 20 21.0	+2.5
VC1	**Cotopaxi 1**	**2.26**	**301**	⇓P	Pn	05 20 22.0	+2.8
NAS1	**Nasa**	**2.33**	**300**	⇑P	Pn	05 20 23.3	+3.1
CAYR	**Refugio Cayamb**	**2.38**	**320**	⇓P	Pn	05 20 23.6	+2.7
ANGU	**Angureal**	**2.41**	**320**	⇑P	Pn	05 20 25.2	+3.9
ANGU				S	Sn	05 20 51.1	+1.1
CAYA	**Cayambe**	**2.42**	**321**	⇑P	Pn	05 20 24.0	+2.6
JUA2	**San Juan 2**	**2.67**	**307**	⇑P	Pn	05 20 28.7	+3.8
JUA2				S	Sn	05 21 00.1	+3.8
GGP	**Refugio Guagua**	**2.68**	**308**	⇓P	Pn	05 20 28.6	+3.5
TERV	**Terraza Guagua**	**2.69**	**307**	⇑P	Pn	05 20 29.3	+4.1
YANA	**Yana**	**2.70**	**309**	⇑P	Pn	05 20 29.1	+3.8
PINO	**Pino**	**2.70**	**308**	⇓P	Pn	05 20 29.3	+4.0
COTA	**Cotacachi**	**2.84**	**319**	⇑P	Pn	05 20 33.1	+5.9
COTA				S	Sn	05 21 03.1	+2.5

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*SZGRF **11** 05:40:31.5, 37.39N×73.43E, h194km, mb4.8, Tajikistan*
*NEIC **11** 05:40:32.7±0.6, 37.63N×72.57E, h152km±6km, mb4.7/107, Error ellipse: s-maj=4.7km s-min=3.1km az=206.0*
*ISCJB **11** 05:40:34.6±0.1, 37.64N±0.02×72.59E±0.02, h188km, mb4.6/166, Error ellipse: s-maj=2.9km s-min=2.5km az=73.8*
*BJI **11** 05:40:34.2, 37.88N×72.41E, h171km, mB4.7, mb4.7*
*MOS **11** 05:40:35.5±0.9, 37.85N×72.50E, h184km, mb4.6/92, Error ellipse: s-maj=6.3km s-min=3.6km az=124.9*
*NNC **11** 05:40:35.9±8.5, 38.36N×72.07E, h0km, mb5.1, mpv4.9, Error ellipse: s-maj=92.3km s-min=43.9km az=24.0*
*IDC **11** 05:40:36.2±0.6, 37.53N×72.48E, h187km±5km, mb4.2/26, mb1 4.3/27, mb1mx4.2/29, mbtmp4.7/27, MS3.4/5, Ms1 3.4/5, ms1mx2.9/34, Error ellipse: s-maj=13.1km s-min=8.2km az=16.0*
ISC 11 05:40:36.1±0.1, **37.65N**±0.02×**72.66E**±0.03, **h190**km±2.4km**:pP-P, n474,** σ**1.03**/497, **mb4.6**/165, **120C-36D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.20**	**53**	⇑*i*P	**Pn**	**05 41 28.4**	**+0.8**
KSH				S	**Sn**	**05 42 08.2**	**+0.4**
KSH				Smax			
	comp=N,7μm,0.5s						
KSH				Smax			
	comp=E,5μm,0.3s						
CEP	**Cherat**	**3.87**	**189**	⇓P	**Pn**	**05 41 34.5**	**-1.3**
SRNI	**Srinagar**	**3.96**	**153**	*e*x	x	05 41 27.0	
SRNI				*e*x	x	05 42 32.0	
CHCP	**Chirah Chowk**	**4.01**	**173**	⇓P	**Pn**	**05 41 37.5**	**-0.1**
CHCP				S	**Sn**	**05 42 21.0**	**-4.9**
TAS	**Tashkent**	**4.50**	**326**	*e*PN	**Pn**	**05 41 41.0**	**-2.8**
TAS				*e*S	**Sn**	**05 42 30.0**	**-6.9**
TAS				pmax	pmax		
	comp=Z,5500μm,1.0s						
AML	**Almayashu**	**4.55**	**10**	P	**Pn**	**05 41 42.8**	**-1.6**
	SNR=1140						
UCH	**Uchtor**	**4.79**	**17**	P	**Pn**	**05 41 46.5**	**-1.0**
	SNR=184						
KZA	**Kyzart**	**4.85**	**23**	P	**Pn**	**05 41 46.9**	**-1.4**
	SNR=238						
EKS2	**Erkin-Say**	**5.08**	**9**	P	**Pn**	**05 41 49.6**	**-1.7**
	SNR=601						
AAK	**Ala-Archa**	**5.17**	**15**	P	**Pn**	**05 41 51.6**	**-0.9**
	SNR=113						
AAK	**Ala-Archa**	**5.17**	**15**	P	**Pn**	**05 41 50.7**	**-1.7**
	SNR=188						
AAK	**Ala-Archa**	**5.17**	**15**	⇓*i*PN	**Pn**	**05 41 50.5**	**-1.9**
AAK				pmax	pmax		
	comp=Z,1μm,0.5s						
AAK	**Ala-Archa**	**5.17**	**15**	⇓*i*Pn	**Pn**	**05 41 50.5**	**-1.9**
	comp=Z,1μm,0.5s						
AAK				*e*Sn	**Sn**	**05 42 38.1**	**-14**
KBK	**Karagaybulak**	**5.30**	**19**	P	**Pn**	**05 41 53.1**	**-0.9**
	SNR=59						
ULHL	**Ulahol**	**5.35**	**30**	P	**Pn**	**05 41 53.7**	**-1.0**
	SNR=179						
FRU	**Bishkek**	**5.39**	**16**	⇓*i*PN	**Pn**	**05 41 54.5**	**-0.7**
FRU				*i*		05 42 55.0	
FRU				pmax	pmax		
	comp=Z,620nm,1.8s						
CHMS	**Chumysh**	**5.58**	**16**	P	**Pn**	**05 41 56.4**	**-1.3**
	SNR=125						
KK31	**Karatay Array**	**5.69**	**344**	⇓Pn	**Pn**	**05 41 56.1**	**-3.0**
	comp=Z,519nm,0.4s,baz=151,slow=12,SNR=6497						
KK31				⇓Sn	**Sn**	**05 42 55.5**	**-9.1**
	comp=Z,2μm,0.4s,baz=179,slow=24,SNR=39						
SARP	**Sargodha**	**5.71**	**180**	⇓P	**Pn**	**05 41 57.3**	**-2.1**
TKM2	**Tokmak 2**	**5.73**	**22**	P	**Pn**	**05 41 58.4**	**-1.2**
	SNR=225						
TKM2	**Tokmak 2**	**5.73**	**22**	⇓Pn	**Pn**	**05 41 58.6**	**-1.0**
	comp=Z,12nm,0.6s						
USP	**Ospenovka**	**5.79**	**13**	P	**Pn**	**05 41 58.4**	**-2.0**
	SNR=103						
KNDC	**Almaty**	**6.46**	**29**	Pn	**Pn**	**05 42 08.9**	**-0.3**
AAA	**Alma-Ata**	**6.50**	**29**	*i* PN	**Pn**	**05 42 08.2**	**-1.4**
SDNR	**Sundarnagar**	**7.09**	**149**	*e*P	**Pn**	**05 42 15.6**	**-1.7**
SDNR				*e*S	**Sn**	**05 43 30.8**	**-6.8**
SMLA	**Simla**	**7.50**	**149**	*e*P	**Pn**	**05 42 21.5**	**-1.1**
SMLA				*e*S	**Sn**	**05 43 40.1**	**-7.1**
SMLA				AML	AML	05 43 45.3	
	comp=E,1μm,0.3s						
SMLA				AML	AML	05 43 46.0	
	comp=N,1μm,0.5s						
KLP	**Kalpa**	**7.65**	**141**	*e*P	**Pn**	**05 42 23.6**	**-1.1**
KLP				*e*S	**Sn**	**05 43 42.7**	**-8.1**
KLP				AML	AML	05 43 55.3	
	comp=E,2μm,0.6s						
KLP				AML	AML	05 43 57.8	
	comp=N,988nm,0.2s						
NDI	**New Delhi**	**9.72**	**156**	*e*P	**Pn**	**05 42 49.5**	**-2.3**
NDI				*e*S	**Sn**	**05 44 29.5**	**-11**
ASOR	**Ausora**	**9.85**	**153**	*e*x	x	05 42 53.5	
AYAN	**Aya Nagar**	**9.88**	**156**	*e*x	x	05 42 47.4	
AYAN				*e*S	**Sn**	**05 44 31.8**	**-12**
AYAN				AML	AML	05 44 35.6	
	comp=Z,104nm,0.5s						
BISR	**Bishrakh**	**9.90**	**155**	*e*P	**Pn**	**05 42 53.3**	**-0.7**
KHET	**Khetri**	**9.91**	**164**	*e*P	**Pn**	**05 42 49.6**	**-4.6**
KHET				*e*S	**Sn**	**05 44 33.4**	**-11**
KHET				AML	AML	05 44 39.1	
	comp=N,68nm,0.4s						
KHET				AML	AML	05 44 40.0	
	comp=E,127nm,0.8s						
KUDL	**Kundal**	**10.01**	**160**	*e*P	**Pn**	**05 42 51.4**	**-4.1**
KUDL				*e*S	**Sn**	**05 44 35.9**	**-11**
KUDL				AML	AML	05 44 43.2	
	comp=E,130nm,0.4s						
KUDL				AML	AML	05 44 49.0	
	comp=N,74nm,0.4s						
PTH	**Pithoragarh**	**10.24**	**140**	*e*P	**Pn**	**05 42 57.2**	**-1.3**
PTH				*e*x	x	05 44 49.1	
LGTI	**Lohaghat**	**10.34**	**140**	*i* P	**Pn**	**05 42 59.5**	**-0.2**
LGTI				*e*x	x	05 44 49.7	
JASL	**Jaisalmer**	**10.79**	**188**	*e*P	**Pn**	**05 42 59.3**	**-6.4**
AJM	**Ajmer**	**11.26**	**171**	*e*P	**Pn**	**05 43 08.9**	**-2.8**
AGRA	**Agra**	**11.30**	**155**	*e*P	**Pn**	**05 43 10.1**	**-2.1**
AGRA				*e*S	**Sn**	**05 45 05.1**	**-13**
VAN	**Vannovskaya**	**11.52**	**276**	*e*P	**Pn**	**05 43 08.1**	**-6.8**
MK02	**Makanchi Array**	**11.58**	**35**	⇓Pn	**Pn**	**05 43 14.5**	**-1.2**
	comp=N,24nm,1.1s						
MKAR	**Makanchi Array**	**11.59**	**35**	P	**Pn**	**05 43 14.4**	**-1.5**
	comp=N,1.3nm,0.3s,baz=231,slow=11,SNR=65						
MKAR	**Makanchi Array**	**11.59**	**35**	P	**Pn**	**05 43 14.4**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMQ	**Urumqi**	**12.96**	**57**	P	**Pn**	**05 43 34.0**	**+0.7**
WMQ				XP		05 44 18.0	
WMQ				S	**Sn**	**05 45 54.0**	**-3.5**
WMQ				PCP	PcP	05 48 56.0	+5.1
WMQ				AMB	AMB		
	comp=Z,16nm,0.8s						
WMQ				LR	LR		
	comp=N,58nm,4.0s						
WMQ				LR	LR		
	comp=E,75nm,4.0s						
WMQ				LR	LR		
	comp=Z,46nm,3.0s						
KOLN	**Koldanda**	**13.48**	**134**	*e*P	**Pn**	**05 43 38.2**	**-1.6**
	comp=Z,128nm,0.3s						
KOLN				*e*S	**Sn**	**05 46 00.6**	**-9.3**
KURK	**Kurchatov**	**13.74**	**16**	⇑Pn	**Pn**	**05 43 39.2**	**-3.9**
	comp=Z,20nm,0.7s						
KURK	**Kurchatov**	**13.74**	**16**	⇓P	**Pn**	**05 43 39.5**	**-3.5**
	SNR=21						
KURK	**Kurchatov**	**13.74**	**16**	*e*Pn	**Pn**	**05 43 39.5**	**-3.6**
GKN	**Gorkha**	**13.92**	**130**	*e*P	**Pn**	**05 43 43.7**	**-1.5**
	comp=Z,720nm,0.6s						
GKN				*e*S	**Sn**	**05 46 10.3**	**-10**
KKN	**Kakani**	**14.46**	**129**	*e*P	**Pn**	**05 43 50.6**	**-1.4**
	comp=Z,285nm,0.6s						
KKN	**Kakani**	**14.46**	**129**	*e*P	**Pn**	**05 43 50.6**	**-1.4**
KKN				pmax	pmax		
	comp=Z,285nm,0.6s						
DMN	**Daman**	**14.49**	**130**	*e*P	**Pn**	**05 43 50.9**	**-1.4**
	comp=Z,635nm,0.9s						
DMN				*e*S	**Sn**	**05 46 23.5**	**-11**
PKI	**Pulchoki**	**14.70**	**129**	*e*P	**Pn**	**05 43 54.0**	**-0.9**
	comp=Z,339nm,0.6s						
PKI	**Pulchoki**	**14.70**	**129**	*e*P	**Pn**	**05 43 54.0**	**-0.9**
PKI				pmax	pmax		
	comp=Z,339nm,0.6s						
GUN	**Gumba**	**14.75**	**127**	*e*P	**Pn**	**05 43 54.3**	**-1.2**
	comp=Z,1μm,0.9s						
AB31	**Akbulak array**	**14.80**	**326**	⇓Pn	**Pn**	**05 43 51.1**	**-5.1**
	comp=Z,49nm,0.4s,baz=136,slow=12,SNR=1844						
AB31				⇑Sn	**Sn**	**05 46 26.3**	**-15**
	comp=Z,38nm,0.6s,baz=155,slow=23,SNR=8.2						
AB31	**Akbulak array**	**14.80**	**326**	*i* P	**Pn**	**05 43 51.5**	**-4.7**
AB31				pmax	pmax		
	comp=Z,49nm,0.4s						
VOSK	**Vostochnaya**	**15.12**	**356**	⇓Pn	**Pn**	**05 43 57.0**	**-3.1**
	comp=Z,39nm,0.6s						
VOSK				⇑Sn	**Sn**	**05 46 38.5**	**-11**
	comp=Z,63nm,1.4s						
VOSK	**Vostochnaya**	**15.12**	**356**	*i* P	**Pn**	**05 43 57.0**	**-3.1**
VOSK				pmax	pmax		
	comp=Z,39nm,0.6s						
JIRN	**Jiri**	**15.12**	**127**	*e*P	**Pn**	**05 43 59.4**	**-0.7**
	comp=Z,990nm,0.5s						
JIRN				*e*S	**S**	**05 46 39.6**	**-8.5**
BVA0	**Borovoye Array**	**15.46**	**355**	⇑Pn	**Pn**	**05 44 01.3**	**-2.9**
	comp=Z,18nm,0.9s,baz=166,slow=12,SNR=445						
BVA0				⇑Sn	**Sn**	**05 46 49.4**	**-7.7**
	comp=Z,4.3nm,0.7s,baz=173,slow=22,SNR=7.0						
BVAR	**Borovoye Array**	**15.46**	**355**	P	**Pn**	**05 44 01.3**	**-2.9**
	comp=Z,7.3nm,0.3s,baz=164,slow=12,SNR=215						
BVAR				S	**S**	**05 46 48.2**	**-7.6**
	comp=Z,4.6nm,0.3s,baz=173,slow=25,SNR=7.6						
BVAR				LR	LR	05 50 38.4	
	comp=Z,89nm,19.6s,baz=136,slow=39						
BVAR	**Borovoye Array**	**15.46**	**355**	P	**Pn**	**05 44 01.3**	**-2.9**
BVAR				S	**S**	**05 46 48.2**	**-7.6**
BVAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
BVAR				smax			
	comp=N,5.0nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,89nm,19.6s						
BRVK	**Borovoye**	**15.50**	**355**	⇓P	**Pn**	**05 44 02.0**	**-2.7**
	SNR=59						
BRVK	**Borovoye**	**15.50**	**355**	*e*Pn	**Pn**	**05 44 01.0**	**-3.7**
JBP	**Jabalpur**	**15.75**	**154**	⇓*e*P	**Pn**	**05 44 07.5**	**-0.2**
JBP				*i* x	x	05 46 52.5	
CHKZ	**Chkalovo**	**16.09**	**356**	⇓Pn	**Pn**	**05 44 08.9**	**-3.0**
	comp=Z,31nm,0.7s						
CHKZ				⇑Sn	**Sn**	**05 47 01.8**	**-10**
	comp=Z,31nm,0.8s						
CHKZ	**Chkalovo**	**16.09**	**356**	*i* P	**Pn**	**05 44 08.8**	**-3.1**
CHKZ				pmax	pmax		
	comp=Z,31nm,0.7s						
CHKZ	**Chkalovo**	**16.09**	**356**	*e*Pn	**Pn**	**05 44 08.2**	**-3.7**
	comp=Z,52nm,0.8s						
AKTK	**Aktyubinsk**	**16.52**	**325**	P	**Pn**	**05 44 13.7**	**-3.3**
AKTO	**Aktyubinsk**	**16.52**	**325**	⇓Pn	**Pn**	**05 44 14.1**	**-2.9**
	comp=Z,2.5nm,0.7s						
AKTO				⇓Sn	**S**	**05 47 08.8**	**-10**
	comp=Z,0.7nm,0.6s						
AKTO	**Aktyubinsk**	**16.52**	**325**	P	**Pn**	**05 44 13.7**	**-3.3**
	comp=Z,23nm,0.3s,baz=134,slow=9.8,SNR=271						
AKTO	**Aktyubinsk**	**16.52**	**325**	P	**Pn**	**05 44 13.7**	**-3.3**
AKTO				pmax	pmax		
	comp=Z,23nm,0.3s						
LSA	**Lhasa**	**17.30**	**112**	P	**Pn**	**05 44 29.8**	**+3.6**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
LSA	**Lhasa**	**17.30**	**112**	*e*P	**Pn**	**05 44 29.8**	**+3.6**
LSA				pmax	pmax		
	comp=Z,52nm,0.8s						
LSA	**Lhasa**	**17.30**	**112**	*e*P	**Pn**	**05 44 29.8**	**+3.5**
	comp=Z,52nm,0.8s						
NGP	**Nagpur**	**17.35**	**160**	*e*x	x	05 44 24.3	
NGP				*e*x	x	05 47 29.8	
BOK	**Bokaro**	**17.86**	**137**	*e*P	**Pn**	**05 44 33.7**	**+0.8**
BOK				*i* x	x	05 47 36.8	
NVS	**Novosibirsk**	**18.65**	**19**	*e*P	**P**	**05 44 39.3**	**-0.2**
NVS				*e*S	**S**	**05 47 58.4**	**-3.4**
NVS				pmax	pmax		
	comp=Z,36nm,0.9s						
NVS				pmax	pmax		
	comp=N,22nm,0.8s						
NVS				pmax	pmax		
	comp=E,17nm,0.8s						
NVS				smax			
	comp=N,125nm,2.5s						
WSAR	**Wadi Sarin**	**18.74**	**224**	P	**P**	**05 44 40.2**	**-0.3**
	comp=N,0.7nm,0.3s,baz=39,slow=9.4,SNR=12						
WSAR	**Wadi Sarin**	**18.74**	**224**	P	**P**	**05 44 40.2**	**-0.3**
POO	**Poona**	**19.08**	**177**	⇓*i*P	**P**	**05 44 45.0**	**+0.9**
POO				*i* PP		05 45 03.5	
POO				*e*x	x	05 45 12.5	
POO				*i* x	x	05 48 24.0	
ASHO	**Ashiyiah**	**19.16**	**232**	⇓P	**P**	**05 44 44.1**	**-0.9**
	SNR=11						
KAD	**Karad**	**20.31**	**176**	*e*P	**P**	**05 44 58.0**	**+0.7**
HYB	**Hyderabad**	**20.81**	**164**	*i* P	**P**	**05 45 06.0**	**+3.3**
HYB				*e*S	**S**	**05 48 49.5**	**+5.5**
HYB	**Hyderabad**	**20.81**	**164**	*e*P	**P**	**05 45 06.0**	**+3.3**
ARU	**Arti**	**21.02**	**338**	⇓*i*P	**P**	**05 45 04.0**	**-0.9**
ARU				*e*PPP		05 45 37.6	
ARU				*e*S	**S**	**05 48 46.8**	**-1.1**
ARU				*e*SSS		05 49 24.7	
ARU				pmax	pmax		
	comp=Z,64nm,0.7s,mb5.1						
GTA	**Gaotai**	**21.29**	**77**	⇑P	**P**	**05 45 10.5**	**+2.8**
GTA				XP	sP	05 46 05.4	+1.3
GTA				S	**S**	**05 48 56.0**	**+3.6**
GTA				PCP	PcP	05 49 05.0	+0.8
GTA				SCP	ScP	05 52 25.8	+2.8
GTA				PCS	PcS	05 52 42.5	0.0
GTA				SCS	ScS	05 56 08.3	+1.2
GTA				AMB	AMB		
	comp=Z,69nm,0.8s,mb5.0						
GTA				AMB	AMB		
	comp=Z,68nm,7.6s						
GTA				LR	LR		
	comp=N,105nm,7.6s						
GTA				LR	LR		
	comp=E,117nm,9.6s						
GTA				LR	LR		
	comp=Z,70nm,7.7s						
DGRG	**David-gareji**	**21.34**	**289**	P	**P**	**05 45 09.5**	**+1.3**
GNI	**Garni**	**21.84**	**285**	P	**P**	**05 45 14.2**	**+0.8**
	comp=Z,15nm,0.6s,mb4.6,baz=138,slow=0.9,SNR=10						
GNI	**Garni**	**21.84**	**285**	⇑P	**P**	**05 45 14.5**	**+1.0**
	SNR=10						
GNI	**Garni**	**21.84**	**285**	*c i*P	**P**	**05 45 14.0**	**+0.6**
GNI				pmax	pmax		
	comp=Z,54nm,1.3s						
GNI	**Garni**	**21.84**	**285**	*e*P	**P**	**05 45 14.8**	**+1.4**
	comp=Z,39nm,0.9s,mb4.8						
VIS	**Vishakhapatnam**	**21.95**	**152**	*e*P	**P**	**05 45 17.3**	**+2.7**
RDF	**Al-Radifah**	**22.67**	**255**	*e*P	**P**	**05 45 20.2**	**-0.9**
RDF				AMb	AMB	05 45 23.2	
	comp=Z,34nm,0.6s,mb4.9						
NAY	**Al-Naaiem**	**22.75**	**256**	*e*P	**P**	**05 45 20.7**	**-1.1**
NAY				AMb	AMB	05 45 23.8	
	comp=Z,25nm,0.8s,mb4.7						
ONI	**Oni**	**22.81**	**292**	P	**P**	**05 45 23.9**	**+1.5**
RST	**Umm Al-Ruwaisa**	**22.82**	**257**	*e*P	**P**	**05 45 21.2**	**-1.2**
RST				AMb	AMB	05 45 23.4	
	comp=Z,48nm,0.9s,mb4.9						
KRAR	**Krasnoyarsk**	**22.84**	**30**	*e*P	**P**	**05 45 22.3**	**-0.4**
KRAR				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.2						
GOF	**Gofitskoye**	**23.34**	**298**	*e*P	**P**	**05 45 27.7**	**+0.4**
GOF				pmax	pmax		
	comp=Z,54nm,0.7s,mb5.1						

KIV Kislovodsk 23.46 295⇑ *eP* **P** 05 45 27.7 -0.7
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.2
KIV Kislovodsk 23.46 295 *eP* **P** **05 45 28.6 +0.2**
comp=Z,12nm,0.6s,mb4.5
LZH Lanzhou 24.95 84 *eP* **P** **05 45 45.6 +3.8**
LZH AP 05 46 23.1
LZH XP sP 05 46 36.6 -5.6
LZH *eS* **S** **05 49 54.1 +3.0**
LZH XS sS 05 50 56.0 -3.4
LZH *eSS* 05 51 10.8
LZH AMB AMB
comp=Z,21nm,1.2s,mb4.5
LZH AMB AMB
comp=Z,89nm,4.2s
ZAK Zakamensk 25.24 50 *eP* **P** **05 45 47.2 +2.8**
ZAK *e* pP 05 46 23.2 +0.5
ZAK pmax pmax
comp=Z,7.0nm,1.2s,mb4.1
ZAK pmax pmax
comp=Z,6.0nm,1.1s,mb4.0
MDRS Chennai 25.40 163 *ex* x 05 42 30.0
MDRS *ex* x 05 45 15.0
TLY Talaya 25.89 47 *eP* **P** **05 45 52.1 +1.8**
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.5
TLY Talaya 25.89 47 *eP* **P** **05 45 53.5 +3.2**
CD2 Chengdu 26.48 95 *eP* **P** **05 45 58.8 +3.2**
CD2 AP pP 05 46 34.3 +0.1
CD2 PP PP 05 46 52.0 -7.4
CD2 XP sP 05 46 55.1 -1.1
CD2 S **S** **05 50 18.8 +3.5**
CD2 XS sS 05 51 21.7 -2.6
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CD2 LR LR
comp=E,80nm,8.4s
CD2 LR LR
comp=Z,90nm,10.8s
SONM Songino Array 26.60 57 P **P** **05 45 59.6 +3.0**
comp=Z,3.7nm,0.7s,mb4.1,baz=256,slow=9.6,SNR=8.8
SONM pP pP 05 46 37.2 +2.0
comp=Z,8.8nm,0.8s,baz=262,slow=9.8,SNR=9.3
SONM PcP PcP 05 49 17.0 +1.4
comp=Z,0.6nm,0.4s,baz=260,slow=4.5,SNR=3.8
SONM Songino Array 26.60 57 P **P** **05 45 59.6 +3.0**
SONM *PP pP 05 46 37.2 +2.0
SONM 05 49 17.0
SONM pmax pmax
comp=Z,4.0nm,0.7s
SONM pmax pmax
comp=Z,9.0nm,0.8s
SONM pmax pmax
comp=Z,1.0nm,0.4s
MALT Malatya 26.90 282 *eP* **P** **05 46 00.5 +1.2**
MALT pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
MALT Malatya 26.90 282 *eP* **P** **05 46 00.5 +1.2**
comp=Z,10nm,1.1s,mb4.4
ULN Ulaanbaatar 27.04 57 *eP* **P** **05 46 02.1 +1.5**
ULN *e*PP pP 05 46 41.1 +1.9
ULN pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
ULN Ulaanbaatar 27.04 57 *eP* **P** **05 46 02.1 +1.5**
comp=Z,2.5nm,0.6s,mb4.0
ULN *ep*P pP 05 46 41.0 +1.9
VRSR Storozhevoye 27.21 311 *eP* **P** **05 46 01.1 -1.0**
VRSR *e*PP pP 05 46 37.1 -3.6
VRSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
VRSR pmax pmax
comp=N,5.0nm,0.9s
VRSR pmax pmax
comp=E,10.0nm,1.2s
KMI Kunming 28.43 107 P **P** **05 46 20.1 +7.2**
KMI AP pP 05 46 50.7 -1.0
KMI S **S** **05 50 53.4 +7.5**
KMI XS sS 05 51 58.2 +3.1
KMI AMB AMB
comp=Z,11nm,0.5s,mb4.8
XAN Xi'an 29.50 86 P **P** **05 46 25.2 +2.8**
XAN AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
OBN Obninsk 29.96 317⇑ *eP* **P** **05 46 25.1 -1.3**
OBN *i* pP 05 47 07.0 +1.5
OBN *i* 05 47 21.7
OBN pmax pmax
comp=Z,21nm,0.9s,mb4.9
HHC Hu-ho-hao-te 30.13 72 *eP* **P** **05 46 30.8 +2.8**
HHC AP pP 05 47 07.0 0.0
HHC XP sP 05 47 27.5 -1.4
HHC PP PP 05 47 36.0 -3.9
HHC PCP PcP 05 49 28.6 +4.1
HHC S **S** **05 51 14.4 +1.8**
HHC XS sS 05 52 18.8 -3.1
HHC SCP ScP 05 52 52.9 +4.3
HHC SS SS 05 53 06.8 -23
HHC PCS PcS 05 53 10.9 +2.8
HHC SCS ScS 05 56 47.1 +2.5
HHC AMB AMB
comp=Z,12nm,0.9s,mb4.6
HHC AMB AMB
comp=Z,54nm,3.5s
HHC LR LR
comp=N,121nm,12.1s
HHC LR LR
comp=E,123nm,11.4s
HHC LR LR
comp=Z,56nm,12.8s
BR131 Keskin Array S 30.37 286 *eP* **P** **05 46 30.7 +0.7**
comp=Z,4.0nm,0.7s,mb4.3
BRTR Keskin Array B 30.37 286 P **P** **05 46 30.1 +0.1**
comp=Z,5.8nm,0.9s,mb4.3,baz=99,slow=7.8,SNR=26
BRTR pP pP 05 47 11.6 +2.5
comp=Z,2.9nm,0.9s,baz=93,slow=7.2,SNR=3.0
BRTR Keskin Array B 30.37 286 P **P** **05 46 30.1 +0.1**
BRTR *PP pP 05 47 11.6 +2.5
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR pmax pmax
comp=Z,3.0nm,0.9s
MMAI Mount Meron Ar 30.61 273 PcP PcP 05 49 27.6 +1.8
comp=Z,3.2nm,0.6s,baz=117,slow=5.0,SNR=5.2
GYA Guiyang 30.75 101⇑ *iP* **P** **05 46 36.8 +3.4**
GYA AP pP 05 47 17.4 +4.9
GYA XP sP 05 47 30.5 -3.9
GYA PP PP 05 47 50.3 +3.6
GYA PCP PcP 05 49 28.5 +2.4
GYA S **S** **05 51 34.0 +12**
GYA SCS ScS 05 56 45.5 -2.1
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
GYA AMB AMB
comp=Z,180nm,5.4s
GYA LR LR
comp=N,270nm,17.0s
GYA LR LR
comp=E,190nm,17.2s
GYA LR LR
comp=Z,240nm,17.8s
EIL Elat 32.21 267 *eP* **P** **05 46 47.4 +1.2**
AKASG Malin Array Be 33.28 307 P **P** **05 46 54.7 -0.8**
comp=Z,4.0nm,0.6s,mb4.3,baz=80,slow=7.5,SNR=27
AKASG pP pP 05 47 35.4 +0.6
comp=Z,2.0nm,0.6s,baz=80,slow=7.5,SNR=2.6
AKASG Malin Array Be 33.28 307 P **P** **05 46 54.7 -0.8**
AKASG *PP pP 05 47 35.4 +0.5
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 33.28 307 P **P** **05 46 54.7 -0.8**
AKASG pP pP 05 47 35.4 +0.6
AKBB Malin Array Si 33.28 307 *eP* **P** **05 46 54.1 -1.4**
AKBB *e*PP pP 05 47 35.2 +0.3
BJI Beijing 33.73 72 *eP* **P** **05 46 58.5 -0.9**
BJI S S **05 52 20.2 +12**
BJI AMB AMB
comp=Z,12nm,0.8s,mb4.7
VRI Vrincioaia 34.83 298⇓ *iP* **P** **05 47 09.8 +1.1**
VRI Vrincioaia 34.83 298 ⇓P **P** **05 47 09.8 +1.0**
PLOR Plostina 34.88 298⇑ *iP* **P** **05 47 10.8 +1.6**
MLR Muntele Rosu 35.40 298 P **P** **05 47 15.3 +1.7**
comp=Z,19nm,0.8s,mb4.8,baz=141,slow=13,SNR=3.0
MLR Muntele Rosu 35.40 298⇓ *iP* **P** **05 47 15.5 +1.9**
MLR Muntele Rosu 35.40 298 P **P** **05 47 15.3 +1.7**
MLR pmax pmax
comp=Z,19nm,0.8s
MLR Muntele Rosu 35.40 298 ⇓P **P** **05 47 15.5 +1.9**
JOF Joensuu 35.56 329 *ep* **P** **05 47 14.2 -0.8**
comp=Z,5.5nm,0.3s,mb4.7
BURAR Bucovina Array 35.79 302⇓ *iP* **P** **05 47 17.6 +0.6**
BURAR Bucovina Array 35.79 302 ⇓P **P** **05 47 17.6 +0.6**
VOIR 36.03 298⇓ *iP* **P** **05 47 19.7 +0.7**
VOIR 36.03 298 ⇓P **P** **05 47 19.7 +0.7**
APA Apatity 37.10 336⇑ *eP* **P** **05 47 29.0 +0.9**
APA pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
APE Apeiranthos 37.15 284⇑ *iP* **P** **05 47 28.3 -0.2**
APE Apeiranthos 37.15 284 ⇑P **P** **05 47 28.3 -0.2**
FIA1 FINESS Array S 37.29 325 *eP* **P** **05 47 28.6 -1.0**
FINES FINESS Array B 37.29 325 P **P** **05 47 29.5 -0.2**
comp=Z,2.1nm,0.4s,mb4.1,baz=120,slow=9.9,SNR=30
FINES LR LR 06 03 50.8
comp=Z,49nm,18.2s,baz=63,slow=37
FINES FINESS Array B 37.29 325 P **P** **05 47 29.5 -0.2**
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES MLR MLR
comp=Z,49nm,18.2s
KAF Kangasniemi 37.40 326 *ep* **P** **05 47 29.5 -1.1**
comp=Z,1.4nm,0.3s,mb4.1,baz=106,slow=8.4
KAF Kangasniemi 37.40 326 *eP* **P** **05 47 29.5 -1.1**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb3.9
DRGR 37.54 300⇑ *iP* **P** **05 47 32.6 +0.8**
DRGR 37.54 300 ⇑P **P** **05 47 32.6 +0.8**
VTS Vitosha 37.70 293⇑ *iP* **P** **05 47 34.0 +0.9**
VTS Vitosha 37.70 293 ⇑P **P** **05 47 34.0 +0.9**
KOLS Kolonicke sedl 37.72 304 *eP* **P** **05 47 33.8 +0.5**
KOLS pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
KOLS Kolonicke sedl 37.72 304 *eP* **P** **05 47 33.8 +0.5**
comp=Z,3.4nm,0.9s,mb4.0
KOLS *e*PP PP 05 49 01.5 -2.0
NJ2 Nanjing 38.02 84 *eP* **P** **05 47 39.4 +3.6**
NJ2 AP pP 05 48 17.1 +1.2
NJ2 XP sP 05 48 37.2 -0.4
NJ2 PP PP 05 49 15.0 +8.2
NJ2 S **S** **05 53 18.0 +4.2**
NJ2 XS sS 05 54 24.0 -0.5
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
NJ2 AMB AMB
comp=Z,100nm,8.0s
NJ2 LR LR
comp=N,900nm,27.9s
NJ2 LR LR
comp=E,160nm,15.2s
NJ2 LR LR
comp=Z,170nm,23.2s
IDI Anoyia 38.16 281 P **P** **05 47 36.9 -0.1**
comp=Z,6.7nm,0.8s,mb4.3,baz=49,slow=8.8,SNR=4.4
CRVS Cervenica-Dubn 38.26 304 *e*PP PP 05 49 05.7 -3.6
STHS Stebnicka Huta 38.38 305 *eP* **P** **05 47 38.6 -0.2**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
STHS Stebnicka Huta 38.38 305 *eP* **P** **05 47 38.6 -0.2**
comp=Z,3.4nm,0.7s,mb4.1
BZS Buzias 38.41 299⇑ *iP* **P** **05 47 40.1 +1.1**
BZS Buzias 38.41 299 ⇑P **P** **05 47 40.1 +1.0**
KECS Kecovo 38.92 303 *e*PP PP 05 49 16.5 -0.1
OJC Ojcow 39.28 306 *eP* **P** **05 47 46.3 0.0**
PSZ Piszkesteto 39.36 302⇑ *iP* **P** **05 47 48.2 +1.3**
PSZ Piszkesteto 39.36 302 ⇑P **P** **05 47 48.2 +1.3**
CN2 Changchun 39.91 64 *eP* **P** **05 47 55.4 +4.0**
VYHS Vyhne 40.02 303 *eP* **P** **05 47 53.0 +0.7**
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.0
VYHS Vyhne 40.02 303 *eP* **P** **05 47 53.0 +0.7**
comp=Z,4.5nm,1.2s,mb4.0
SSE Sheshan 40.23 84 P **P** **05 47 56.8 +2.8**
SSE AMB AMB
comp=Z,16nm,0.9s,mb4.7
SSE AMB AMB
comp=Z,66nm,3.7s
KEV Kevo 40.24 337 *ep* **P** **05 47 53.1 -1.1**
comp=Z,6.8nm,0.5s,mb4.5
KEV Kevo 40.24 337 *eP* **P** **05 47 53.1 -1.1**
KEV pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
PKSM Moragy 40.40 300⇓ *iP* **P** **05 47 56.2 +0.7**
PKSM Moragy 40.40 300 ⇓P **P** **05 47 56.2 +0.7**
ARCES ARCESS Array B 40.60 337 P **P** **05 47 57.5 +0.4**
comp=Z,22nm,0.7s,mb4.9,baz=111,slow=7.9,SNR=157
ARCES LR LR 06 05 16.5
comp=Z,60nm,18.6s,baz=112,slow=36
ARCES ARCESS Array B 40.60 337 P **P** **05 47 57.5 +0.4**
ARCES pmax pmax
comp=Z,22nm,0.7s
ARCES MLR MLR
comp=Z,60nm,18.6s
ARE0 ARCESS Array S 40.60 337 *eP* **P** **05 47 57.2 +0.1**
MORC Moravsky Berou 40.76 305⇑ *iP* **P** **05 47 59.2 +0.8**
MORC Moravsky Berou 40.76 305 ⇑P **P** **05 47 59.1 +0.7**
KTK1 Kautokeino 41.11 335 *eP* **P** **05 48 01.5 +0.3**
KTK1 Kautokeino 41.11 335 *eP* **P** **05 48 02.0 +0.7**
VRAC Vranov 41.42 305 P **P** **05 48 04.4 +0.7**
comp=Z,34nm,1.1s,mb4.9,baz=98,slow=8.7,SNR=13
VRAC Vranov 41.42 305⇑ *iP* **P** **05 48 04.6 +0.8**
VRAC Vranov 41.42 305 P **P** **05 48 04.4 +0.6**
VRAC pmax pmax
comp=Z,34nm,1.2s
VRAC Vranov 41.42 305 ⇑P **P** **05 48 04.6 +0.8**
KSP Ksiaz 41.48 307 *eP* **P** **05 48 04.3 0.0**
DPC Dobruska-Polom 41.50 306 *eP* **P** **05 48 05.2 +0.7**
UPC Upice 41.69 307 *eP* **P** **05 48 06.5 +0.5**
CONA Conrad Observa 42.06 303⇓ *iP* **P** **05 48 09.5 +0.5**
comp=Z,21nm,1.0s,mb4.7
PSI Prapat 42.23 139 P **P** **05 48 11.4 +1.1**
comp=Z,3.7nm,0.6s,mb4.2,baz=321,slow=14,SNR=3.9
PSI Prapat 42.23 139 P **P** **05 48 11.5 +1.2**
PSI pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
YAK Yakutsk 42.26 36 *eP* **P** **05 48 11.8 +1.2**
YAK pmax pmax
comp=Z,38nm,0.7s,mb5.1
YAK Yakutsk 42.26 36 *eP* **P** **05 48 11.8 +1.1**
comp=Z,38nm,0.7s,mb5.1
ARSA Arzberg 42.38 302⇑ *iP* **P** **05 48 11.8 +0.3**
comp=Z,5.7nm,0.9s,mb4.2
PRU Pruhonice 42.68 306 *eP* **P** **05 48 13.8 -0.1**
MDJ Mudanjiang 42.69 62 P **P** **05 48 14.7 +0.6**
MDJ AMB AMB
comp=Z,6.0nm,0.8s,mb4.3
MDJ AMB AMB
comp=Z,57nm,4.8s
TRO Tromso 42.76 335 *eP* **P** **05 48 13.8 -0.9**
BRG Berggiesshubel 42.97 307 *eP* **P** **05 48 16.6 +0.3**
comp=Z,18nm,1.0s,mb4.7
BRG *ep*P pP 05 48 59.2 +1.9
BRG Berggiesshubel 42.97 307 *eP* **P** **05 48 15.6 -0.7**
comp=Z,1.5nm,0.6s,mb3.8
BRG *i* 05 48 16.7
comp=Z,11nm,1.0s
BRG *e* pP 05 48 58.3 +1.0
comp=Z,1.3nm,0.5s
BRG Berggiesshubel 42.97 307 *eP* **P** **05 48 15.6 -0.7**
BRG *e* pP 05 48 58.3 +1.0
BRG pmax pmax
comp=Z,1.0nm,0.6s,mb3.6
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb3.7
BRG pmax pmax
comp=Z,11nm,0.5s,mb4.7
HFS Hagfors 42.99 321 P **P** **05 48 16.0 -0.5**
comp=Z,13nm,0.6s,mb4.7,baz=97,slow=11,SNR=44
HFS pP pP 05 48 57.2 -0.3
comp=Z,6.9nm,0.5s,baz=98,slow=10,SNR=4.6
MOA Molln 43.13 303⇑ *iP* **P** **05 48 17.6 0.0**
comp=Z,7.9nm,0.8s,mb4.4
FBE Freiberg 43.33 308 *eP* **P** **05 48 19.7 +0.5**
comp=Z,20nm,1.0s,mb4.7
FBE *ep*P pP 05 49 01.1 +0.8
GEC2 GERESS Array S 43.36 304 *eP* **P** **05 48 19.7 +0.3**
comp=Z,10.0nm,1.3s,mb4.3
GEC2 pmax pmax
comp=Z,10.0nm,1.3s,mb4.3
GERES GERESS Array B 43.36 304 P **P** **05 48 19.3 -0.1**
comp=Z,0.5nm,0.3s,mb3.7,baz=76,slow=5.6,SNR=10
GERES GERESS Array B 43.36 304 P **P** **05 48 19.3 -0.1**
GERES pmax pmax
comp=Z,1.0nm,0.3s
KLR Kul'dur 43.40 55 *eP* **P** **05 48 19.5 -0.2**
KHC Kasperske Hory 43.40 305 *eP* **P** **05 48 19.9 +0.1**
KHC *ex* x 05 49 25.5
MOR8 Moi Rana 43.48 330 *eP* **P** **05 48 19.7 -0.6**
MOR8 AMb AMB 05 48 20.3
comp=Z,38nm,0.7s,mb5.2
MOR8 Moi Rana 43.48 330 *eP* **P** **05 48 19.7 -0.7**
comp=Z,38nm,0.7s,mb5.2,SNR=36
CLL Collm 43.51 308 *eP* **P** **05 48 20.6 -0.1**
comp=Z,10.0nm,0.9s,mb4.5
CLL *ep*P pP 05 49 03.1 +1.4
CLL Collm 43.51 308 P **P** **05 48 20.6 -0.1**
comp=Z,logA/T=1.0,mb4.4
CLL *e* pP 05 49 03.0 +1.3
CLL Collm 43.51 308 *iP* **P** **05 48 20.6 -0.1**
comp=Z,10.0nm,0.9s,mb4.5
CLL *ex* x 05 49 03.0
CLL Collm 43.51 308 *iP* **P** **05 48 20.6 -0.1**
CLL pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
WET Wettzell 43.86 305 *eP* **P** **05 48 23.8 +0.4**
comp=Z,9.0nm,1.2s,mb4.3
WET Wettzell 43.86 305 *eP* **P** **05 48 23.8 +0.4**
WET pmax pmax
comp=Z,9.0nm,1.2s,mb4.3
TANN Tannenbergstha 43.95 307 *eP* **P** **05 48 24.3 +0.1**
comp=Z,5.0nm,0.9s,mb4.1
NKC Novy Kostel 43.99 307 *eP* **P** **05 48 25.1 +0.7**
WERN Wernitzgruen 44.02 307 *eP* **P** **05 48 24.6 -0.1**
comp=Z,14nm,1.7s,mb4.3
WERN *ep*P pP 05 49 06.2 +0.3
WERD Werda 44.05 307 *eP* **P** **05 48 24.8 -0.1**
comp=Z,8.0nm,1.1s,mb4.3
ROTZ Rotzenmuhle 44.20 306 *eP* **P** **05 48 27.2 +1.1**
comp=Z,13nm,1.1s,mb4.5
TIXI Tiksi 44.21 22 *eP* **P** **05 48 27.1 +0.9**
MANZ Manzenberg 44.24 306 *eP* **P** **05 48 27.2 +0.8**
comp=Z,6.0nm,1.0s,mb4.2
NB2 NORSAR Subarra 44.27 322 P **P** **05 48 26.0 -0.7**
comp=Z,18nm,1.0s,mb4.7,baz=91,slow=7.9
NB2 NORSAR Subarra 44.27 322 P **P** **05 48 26.0 -0.7**
baz=91,slow=7.8,SNR=36
NOA NORSAR Array B 44.27 322 P **P** **05 48 26.0 -0.7**
comp=Z,9.1nm,0.7s,mb4.5,baz=93,slow=7.7,SNR=41
NOA pP pP 05 49 06.8 -1.1
comp=Z,3.4nm,0.7s,baz=93,slow=8.0,SNR=3.4
NOA NORSAR Array B 44.27 322 P **P** **05 48 26.0 -0.7**
NOA *PP pP 05 49 06.8 -1.1
NOA pmax pmax
comp=Z,9.0nm,0.7s
NOA pmax pmax
comp=Z,3.0nm,0.7s
NOA NORSAR Array B 44.27 322 P **P** **05 48 26.0 -0.7**
NOA pP pP 05 49 06.8 -1.1
NAO01 NORSAR Array S 44.42 322 *eP* **P** **05 48 27.0 -0.9**
comp=Z,21nm,1.3s,mb4.6
MOX Moxa 44.46 307 *eP* **P** **05 48 28.7 +0.5**
comp=Z,11nm,1.1s,mb4.4
GRA1 Grafenberg Arr 44.85 306 *eP* **P** **05 48 32.3 +1.1**
comp=Z,27nm,1.2s,mb4.8
GRF Grafenberg Arr 44.85 306 *eP* **P** **05 48 32.3 +1.1**
comp=Z,27nm,1.2s,mb4.8
GRF Grafenberg Arr 44.85 306 *eP* **P** **05 48 32.3 +1.1**
GRF pmax pmax
comp=Z,27nm,1.2s,mb4.8
GRF Grafenberg Arr 44.85 306 *eP* **P** **05 48 32.3 +1.1**
GRF pmax pmax
comp=Z,27nm,1.2s,mb4.8
BSEG Bad Segeberg 44.90 312 *eP* **P** **05 48 31.9 +0.3**
comp=Z,18nm,1.0s,mb4.7
BSEG Bad Segeberg 44.90 312 *eP* **P** **05 48 31.9 +0.3**
BSEG pmax pmax
comp=Z,18nm,1.0s,mb4.7
WTTA Wattenberg 44.98 303⇑ *iP* **P** **05 48 32.0 -0.3**
comp=Z,14nm,0.8s,mb4.6
WTTA Wattenberg 44.98 303⇑ *iP* **P** **05 48 32.0 -0.3**
WTTA pmax pmax
comp=Z,14nm,0.8s,mb4.6
FUR Furstenfeldbru 45.06 304 *eP* **P** **05 48 33.6 +0.7**
comp=Z,28nm,0.8s,mb4.9
FUR Furstenfeldbru 45.06 304 *eP* **P** **05 48 33.6 +0.7**
FUR pmax pmax
comp=Z,28nm,0.8s,mb4.9
CLZ Clausthal 45.08 309 *eP* **P** **05 48 33.2 +0.1**
comp=Z,8.0nm,0.8s,mb4.4
CLZ Clausthal 45.08 309 *eP* **P** **05 48 33.2 +0.1**
CLZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
NRDL Niedersach Rie 45.17 310 *eP* **P** **05 48 34.2 +0.4**
comp=Z,25nm,1.3s,mb4.7
UBBA Unterbreizbach 45.45 308 *eP* **P** **05 48 35.9 -0.1**
HABR Khabarovsk 45.67 56 *eP* **P** **05 48 39.9 +2.2**
DAVA Damuels 46.15 303⇑ *iP* **P** **05 48 41.3 -0.2**
comp=Z,41nm,1.0s,mb5.0
DAVOX Davos 46.26 302 P **P** **05 48 41.9 -0.4**
comp=Z,16nm,0.7s,mb4.7,baz=100,slow=8.8,SNR=24
DAVOS Davos 46.30 302 P **P** **05 48 41.9 -0.8**
VLC Vilcollemand 46.52 299 *eP* **P** **05 48 45.6 +1.3**
comp=Z,28nm,1.0s,mb4.8
TNS Taunus Mts 46.53 307 *eP* **P** **05 48 45.1 +0.7**
comp=Z,6.0nm,0.7s,mb4.3
TNS Taunus Mts 46.53 307 *eP* **P** **05 48 45.1 +0.7**
TNS pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
BFO Black Forest 46.96 305 *eP* **P** **05 48 47.5 -0.3**
comp=Z,4.0nm,0.8s,mb4.1
BFO Black Forest 46.96 305 *eP* **P** **05 48 47.5 -0.3**
BFO pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
BUG Bochum--Univer 47.06 309 *eP* **P** **05 48 49.2 +0.7**
comp=Z,15nm,0.6s,mb4.8
LANF Langenberg 47.17 306 *eP* **P** **05 48 49.5 +0.1**
FELD Feldberg im Sc 47.27 304 *eP* **P** **05 48 49.5 -0.6**
CDF Champ du Feu 47.63 305⇑ *iP* **P** **05 48 52.7 -0.2**
comp=Z,15nm,0.9s,mb4.3
CDF Champ du Feu 47.63 305⇑ *iP* **P** **05 48 52.7 -0.2**
CDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
CDF Champ du Feu 47.63 305⇑ *iP* **P** **05 48 52.7 -0.2**
comp=Z,7.7nm,0.9s,mb4.3
JOW Kunigami 47.66 86 P **P** **05 48 55.6 +2.5**
comp=Z,15nm,0.6s,mb4.8,baz=309,slow=0.3,SNR=5.2
HINF Hinteralfeld 48.04 304⇑ *iP* **P** **05 48 55.8 -0.3**
comp=Z,21nm,0.9s,mb4.5
HINF Hinteralfeld 48.04 304⇑ *iP* **P** **05 48 55.8 -0.3**
HINF pmax pmax
comp=Z,11nm,0.9s,mb4.5
HINF Hinteralfeld 48.04 304⇑ *iP* **P** **05 48 55.8 -0.3**
comp=Z,11nm,0.9s,mb4.5
WLF Walferdange 48.09 307 *eP* **P** **05 48 56.7 +0.3**
WLF pmax pmax
comp=Z,14nm,1.1s,mb4.5
WLF Walferdange 48.09 307 *eP* **P** **05 48 56.6 +0.2**
comp=Z,14nm,1.1s,mb4.5
HAU Haudompre 48.33 305⇑ *iP* **P** **05 48 58.1 -0.2**
comp=Z,25nm,0.9s,mb4.5
HAU *eR* 05 48 58.1
comp=Z,25nm,17.2s
HAU Haudompre 48.33 305⇑ *iP* **P** **05 48 58.1 -0.2**
HAU pmax pmax
comp=Z,13nm,0.9s,mb4.6
HAU MLR MLR
comp=Z,20nm,17.3s
HAU Haudompre 48.33 305⇑ *iP* **P** **05 48 58.1 -0.2**
comp=Z,13nm,0.9s,mb4.5
HAU LR LR
comp=Z,20nm,17.3s
THEF They Montfort 48.51 305 *eP* **P** **05 48 59.2 -0.5**
SAOF Saorge 48.53 299 *eP* **P** **05 49 00.1 +0.3**
AUTN L'Aution 48.62 299 *eP* **P** **05 49 01.0 +0.5**
SBF Sospel 48.65 299 *eP* **P** **05 49 01.1 +0.4**
comp=Z,127nm,1.1s,mb5.2
SBF Sospel 48.65 299 *eP* **P** **05 49 01.1 +0.4**
SBF pmax pmax
comp=Z,63nm,1.1s,mb5.2
SBF Sospel 48.65 299 *eP* **P** **05 49 01.1 +0.4**
comp=Z,63nm,1.1s,mb5.2
LPG La Plagne 48.68 301⇑ *iP* **P** **05 49 01.4 +0.5**
comp=Z,19nm,0.7s,mb4.5
LPG La Plagne 48.68 301⇑ *iP* **P** **05 49 01.4 +0.5**
LPG pmax pmax

comp=Z,10.0nm,0.7s,mb4.5
LPG La Plagne 48.68 301⇑*iP* **P** **05 49 01.4 +0.5**
comp=Z,9.6nm,0.7s,mb4.5
LPL La Plagne 48.69 301⇑*iP* **P** **05 49 01.4 +0.4**
comp=Z,34nm,0.8s,mb4.7
LPL La Plagne 48.69 301⇑*iP* **P** **05 49 01.4 +0.4**
LPL pmax pmax
comp=Z,17nm,0.8s,mb4.7
LPL La Plagne 48.69 301⇑*iP* **P** **05 49 01.4 +0.4**
comp=Z,17nm,0.8s,mb4.7
RSL Roselend 48.71 302 *eP* **P** **05 49 01.2 0.0**
TOUF Mont Tournerai 48.74 299 *eP* **P** **05 49 01.6 +0.2**
CABF La Chapelle 48.84 303⇑*iP* **P** **05 49 02.1 0.0**
comp=Z,20nm,0.8s,mb4.5
CABF La Chapelle 48.84 303⇑*iP* **P** **05 49 02.1 0.0**
CABF pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
CABF La Chapelle 48.84 303⇑*iP* **P** **05 49 02.1 0.0**
comp=Z,10nm,0.8s,mb4.5
GIVF Givet 48.84 308 *eP* **P** **05 49 02.6 +0.5**
comp=Z,50nm,1.1s,mb4.8
GIVF Givet 48.84 308 *eP* **P** **05 49 02.6 +0.5**
GIVF pmax pmax
comp=Z,25nm,1.1s,mb4.8
GIVF Givet 48.84 308 *eP* **P** **05 49 02.6 +0.5**
comp=Z,25nm,1.1s,mb4.8
BNI Bardonecchia 48.85 301 *eP* **P** **05 49 02.0 -0.2**
BNI pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
BNI Bardonecchia 48.85 301 *eP* **P** **05 49 02.0 -0.2**
comp=Z,7.5nm,0.8s,mb4.4
MBDF Montbardon 48.87 300⇑*iP* **P** **05 49 02.1 -0.3**
comp=Z,18nm,0.7s,mb4.5
MBDF Montbardon 48.87 300⇑*iP* **P** **05 49 02.1 -0.3**
MBDF pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
MBDF Montbardon 48.87 300⇑*iP* **P** **05 49 02.1 -0.3**
comp=Z,8.9nm,0.7s,mb4.5
MEZF Maizieres J'vi 49.05 305⇑*iP* **P** **05 49 04.2 +0.4**
BAIF Baives 49.23 308⇑*iP* **P** **05 49 05.2 +0.1**
comp=Z,55nm,1.1s,mb4.8
BAIF Baives 49.23 308⇑*iP* **P** **05 49 05.2 +0.1**
BAIF pmax pmax
comp=Z,27nm,1.1s,mb4.8
BAIF Baives 49.23 308⇑*iP* **P** **05 49 05.2 +0.1**
comp=Z,27nm,1.1s,mb4.8
FRF La Foret Royal 49.29 299⇑*iP* **P** **05 49 05.3 -0.2**
comp=Z,45nm,0.8s,mb4.8
FRF La Foret Royal 49.29 299⇑*iP* **P** **05 49 05.3 -0.2**
FRF pmax pmax
comp=Z,22nm,0.8s,mb4.8
FRF La Foret Royal 49.29 299⇑*iP* **P** **05 49 05.3 -0.2**
comp=Z,22nm,0.8s,mb4.8
ORIF Oris-en-Rattie 49.43 301⇑*iP* **P** **05 49 07.1 +0.5**
comp=Z,20nm,1.1s,mb4.4
ORIF *eR*
comp=Z,19nm,22.5s
ORIF Oris-en-Rattie 49.43 301⇑*iP* **P** **05 49 07.1 +0.5**
ORIF pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
ORIF Oris-en-Rattie 49.43 301⇑*iP* **P** **05 49 07.1 +0.5**
comp=Z,9.9nm,1.1s,mb4.3
LMR La Mourre 49.45 299 *eP* **P** **05 49 06.3 -0.5**
SMRF Simiane la Rot 49.91 300 *eP* **P** **05 49 10.4 +0.2**
comp=Z,37nm,0.9s,mb4.7
SMRF Simiane la Rot 49.91 300 *eP* **P** **05 49 10.4 +0.2**
comp=Z,37nm,0.9s,mb5.0
KEST Kesra 49.93 288 P **P** **05 49 10.9 +0.5**
comp=Z,3.6nm,0.7s,mb4.1,baz=97,slow=1.7,SNR=9.3
LOR Lormes 50.14 304⇑*iP* **P** **05 49 11.3 -0.7**
comp=Z,12nm,0.8s,mb4.3
LOR *eR*
comp=Z,35nm,17.8s
LOR Lormes 50.14 304⇑*iP* **P** **05 49 11.3 -0.7**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
LOR MLR MLR
comp=Z,40nm,17.8s
LOR Lormes 50.14 304⇑*iP* **P** **05 49 11.3 -0.7**
comp=Z,6.2nm,0.8s,mb4.3
LOR LR LR
comp=Z,40nm,17.8s
VIVF Saint-Julien-l 50.27 301⇑*iP* **P** **05 49 13.0 +0.1**
comp=Z,12nm,0.7s,mb4.3
VIVF Saint-Julien-l 50.27 301⇑*iP* **P** **05 49 13.0 +0.1**
VIVF pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
VIVF Saint-Julien-l 50.27 301⇑*iP* **P** **05 49 13.0 +0.1**
comp=Z,6.1nm,0.7s,mb4.3
SMF Signal de Mont 50.32 303⇑*iP* **P** **05 49 13.0 -0.3**
comp=Z,38nm,0.9s,mb4.7
SMF Signal de Mont 50.32 303⇑*iP* **P** **05 49 13.0 -0.3**
SMF pmax pmax
comp=Z,19nm,0.9s,mb4.7
SMF Signal de Mont 50.32 303⇑*iP* **P** **05 49 13.0 -0.3**
comp=Z,19nm,0.9s,mb4.7
SSF Saint Saulge 50.43 304⇑*iP* **P** **05 49 13.7 -0.4**
comp=Z,26nm,1.0s,mb4.5
SSF Saint Saulge 50.43 304⇑*iP* **P** **05 49 13.7 -0.4**
SSF pmax pmax
comp=Z,13nm,1.0s,mb4.5
SSF Saint Saulge 50.43 304⇑*iP* **P** **05 49 13.7 -0.4**
comp=Z,13nm,1.0s,mb4.5
KMBO Kilima Mbogo 50.58 229 P **P** **05 49 15.0 -0.3**
comp=Z,1.3nm,0.6s,mb3.8,baz=47,slow=19,SNR=3.9
KMBO Kilima Mbogo 50.58 229 P **P** **05 49 15.0 -0.3**
KMBO pmax pmax
comp=Z,1.0nm,0.6s
AVF Avril sur Loir 50.60 304⇑*iP* **P** **05 49 15.1 -0.4**
comp=Z,32nm,0.7s,mb4.8
AVF Avril sur Loir 50.60 304⇑*iP* **P** **05 49 15.1 -0.4**
AVF pmax pmax
comp=Z,16nm,0.7s,mb4.8
AVF Avril sur Loir 50.60 304⇑*iP* **P** **05 49 15.1 -0.4**
comp=Z,16nm,0.7s,mb4.8
PLDF La Plantade 50.66 303 *eP* **P** **05 49 15.7 -0.1**
HYF Humbligny 50.94 304 *eP* **P** **05 49 18.1 +0.1**
AGO Saint Agoulin 50.96 303 *eP* **P** **05 49 18.0 -0.1**
BGF Bois d'Agland 51.00 304⇑*iP* **P** **05 49 18.1 -0.3**
comp=Z,12nm,0.7s,mb4.3
BGF Bois d'Agland 51.00 304⇑*iP* **P** **05 49 18.1 -0.3**
BGF pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
BGF Bois d'Agland 51.00 304⇑*iP* **P** **05 49 18.1 -0.3**
comp=Z,6.3nm,0.7s,mb4.3
LASF Ste Croix 51.06 300 *eP* **P** **05 49 19.2 +0.4**
comp=Z,35nm,0.9s,mb4.7
YSS Yuzh-Sakhalins 51.08 56⇑*eP* **P** **05 49 21.4 +2.4**
YSS pmax pmax
comp=Z,31nm,1.1s,mb4.8
YSS Yuzh-Sakhalins 51.08 56 *eP* **P** **05 49 21.3 +2.3**
comp=Z,13nm,0.5s,mb4.8
LBL Lubilhac 51.12 302 *eP* **P** **05 49 19.9 +0.6**
MAJO Matsushiro 51.31 70 *eP* **P** **05 49 22.7 +2.0**
MAJO pmax pmax
comp=Z,12nm,0.8s,mb4.6
MAJO Matsushiro 51.31 70 *eP* **P** **05 49 22.7 +2.0**
comp=Z,12nm,0.8s,mb4.6
MAT Matsushiro 51.31 70 P **P** **05 49 22.2 +1.5**
MAT Matsushiro 51.31 70 *eP* **P** **05 49 22.0 +1.3**
MAT pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
MAT Matsushiro 51.31 70 *eP* **P** **05 49 22.0 +1.3**
comp=Z,7.3nm,0.6s,mb4.5
MJAR Matsushiro Arr 51.31 70 P **P** **05 49 23.2 +2.5**
comp=Z,8.8nm,0.8s,mb4.4,baz=293,slow=10,SNR=24
MJAR pP pP 05 50 03.5 +0.4
comp=Z,4.2nm,0.7s,baz=294,slow=9.9,SNR=5.2
MJAR Matsushiro Arr 51.31 70 P **P** **05 49 23.2 +2.5**
MJAR *PP pP 05 50 03.5 +0.4
MJAR pmax pmax
comp=Z,9.0nm,0.8s
MJAR pmax pmax
comp=Z,4.0nm,0.7s
MJAR Matsushiro Arr 51.31 70 P **P** **05 49 23.2 +2.5**
MJAR pP pP 05 50 03.5 +0.4
TCF Toulx Ste Croi 51.50 303⇑*iP* **P** **05 49 22.3 +0.1**
comp=Z,44nm,1.0s,mb4.7
TCF Toulx Ste Croi 51.50 303⇑*iP* **P** **05 49 22.3 +0.1**
TCF pmax pmax
comp=Z,22nm,1.0s,mb4.7
TCF Toulx Ste Croi 51.50 303⇑*iP* **P** **05 49 22.3 +0.1**
comp=Z,22nm,1.0s,mb4.7
CAF Calviac 52.02 302 *eP* **P** **05 49 25.6 -0.3**
comp=Z,27nm,0.9s,mb4.5
CAF Calviac 52.02 302 *eP* **P** **05 49 25.6 -0.3**
CAF pmax pmax
comp=Z,13nm,0.9s,mb4.6
CAF Calviac 52.02 302 *eP* **P** **05 49 25.6 -0.3**
comp=Z,13nm,0.9s,mb4.6
RJF Les Rejaudoux 52.27 302⇑*iP* **P** **05 49 28.1 +0.3**
comp=Z,18nm,0.8s,mb4.4
RJF *eR*
comp=Z,28nm,19.5s
RJF Les Rejaudoux 52.27 302⇑*iP* **P** **05 49 28.1 +0.3**
RJF pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
RJF MLR MLR
comp=Z,30nm,19.5s
RJF Les Rejaudoux 52.27 302⇑*iP* **P** **05 49 28.1 +0.3**
comp=Z,8.9nm,0.8s,mb4.5
RJF LR LR
comp=Z,30nm,19.5s
LDF La Druitiere 52.35 307⇑*iP* **P** **05 49 28.0 -0.4**
comp=Z,17nm,0.7s,mb4.5
LDF La Druitiere 52.35 307⇑*iP* **P** **05 49 28.0 -0.4**
LDF pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
LDF La Druitiere 52.35 307⇑*iP* **P** **05 49 28.0 -0.4**
comp=Z,8.5nm,0.6s,mb4.5
MTLF Montolieu 52.42 300⇑*iP* **P** **05 49 29.0 +0.1**
comp=Z,23nm,0.9s,mb4.5
MTLF Montolieu 52.42 300⇑*iP* **P** **05 49 29.0 +0.1**
MTLF pmax pmax
comp=Z,12nm,0.9s,mb4.5
MTLF Montolieu 52.42 300⇑*iP* **P** **05 49 29.0 +0.1**
comp=Z,12nm,0.9s,mb4.5
FLN La Foliniere 52.53 307⇑*iP* **P** **05 49 29.1 -0.6**
FLN *eR*
comp=Z,34nm,22.5s
FLN La Foliniere 52.53 307⇑*iP* **P** **05 49 29.1 -0.6**
FLN LR LR
comp=Z,30nm,22.5s
GRR Gorron 52.88 307⇑*iP* **P** **05 49 31.7 -0.6**
comp=Z,46nm,0.9s,mb4.9
GRR Gorron 52.88 307⇑*iP* **P** **05 49 31.7 -0.6**
GRR pmax pmax
comp=Z,23nm,0.9s,mb4.9
GRR Gorron 52.88 307⇑*iP* **P** **05 49 31.7 -0.6**
comp=Z,23nm,0.9s,mb4.9
LFF La Frestale 52.90 302⇑*iP* **P** **05 49 32.7 +0.3**
comp=Z,23nm,0.7s,mb4.7
LFF La Frestale 52.90 302⇑*iP* **P** **05 49 32.7 +0.3**
LFF pmax pmax
comp=Z,11nm,0.7s,mb4.7
LFF La Frestale 52.90 302⇑*iP* **P** **05 49 32.7 +0.3**
comp=Z,11nm,0.7s,mb4.7
MFF Saint Martin d 52.96 304⇑*iP* **P** **05 49 33.3 +0.4**
comp=Z,13nm,0.7s,mb4.5
MFF Saint Martin d 52.96 304⇑*iP* **P** **05 49 33.3 +0.4**
MFF pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
MFF Saint Martin d 52.96 304⇑*iP* **P** **05 49 33.3 +0.4**
comp=Z,6.6nm,0.7s,mb4.5
ETOS Mallorca 53.25 295 ⇑P **P** **05 49 35.0 0.0**
comp=Z,33nm,0.8s,mb5.1
EPF Esparros 53.82 300⇑*iP* **P** **05 49 37.6 -1.5**
EPOB Poblet 53.90 298 P **P** **05 49 38.8 -0.9**
comp=Z,71nm,1.4s,mb5.2
SGMF Saint Gilles 54.00 307⇑*iP* **P** **05 49 40.2 -0.2**
comp=Z,38nm,0.8s,mb4.9
SGMF Saint Gilles 54.00 307⇑*iP* **P** **05 49 40.2 -0.2**
SGMF pmax pmax
comp=Z,19nm,0.8s,mb4.9
SGMF Saint Gilles 54.00 307⇑*iP* **P** **05 49 40.2 -0.2**
comp=Z,19nm,0.8s,mb4.9
DAG Danmarks Havn 54.01 343⇓*iP* **P** **05 49 40.9 +0.4**
comp=Z,10.0nm,0.6s,mb4.7
DAG Danmarks Havn 54.01 343⇓*eP* **P** **05 49 40.9 +0.4**
DAG pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
DAG Danmarks Havn 54.01 343⇓*eP* **P** **05 49 40.9 +0.4**
comp=Z,10.0nm,0.6s,mb4.7
EBIE Bielsa 54.07 300 P **P** **05 49 40.2 -0.8**
comp=Z,34nm,1.1s,mb5.0
ROSF Rostrenen 54.42 307⇑*iP* **P** **05 49 43.1 -0.4**
comp=Z,37nm,0.9s,mb4.8
ROSF Rostrenen 54.42 307⇑*iP* **P** **05 49 43.1 -0.4**
ROSF pmax pmax
comp=Z,19nm,0.9s,mb4.8
ROSF Rostrenen 54.42 307⇑*iP* **P** **05 49 43.1 -0.4**
comp=Z,19nm,0.9s,mb4.8
ETSF Etsaut 54.48 300⇑*iP* **P** **05 49 44.3 +0.4**
comp=Z,13nm,0.6s,mb4.6
ETSF Etsaut 54.48 300⇑*iP* **P** **05 49 44.3 +0.4**
ETSF pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
ETSF Etsaut 54.48 300⇑*iP* **P** **05 49 44.3 +0.4**
comp=Z,6.7nm,0.6s,mb4.5
QUIF Quistinic 54.49 307 *eP* **P** **05 49 42.9 -1.1**
comp=Z,38nm,0.8s,mb4.8
QUIF Quistinic 54.49 307 *eP* **P** **05 49 42.9 -1.1**
QUIF pmax pmax
comp=Z,19nm,0.8s,mb4.9
QUIF Quistinic 54.49 307 *eP* **P** **05 49 42.9 -1.1**
comp=Z,19nm,0.8s,mb4.9
ERTA Horta de San J 54.57 298 P **P** **05 49 44.8 +0.2**
comp=Z,106nm,1.3s,mb5.4
EIBI Ibiza 54.58 295 P **P** **05 49 45.2 +0.6**
comp=Z,30nm,0.8s,mb5.1
EALK Alkurruntz 55.01 301 P **P** **05 49 46.1 -1.6**
comp=Z,8.4nm,1.0s,mb4.4
ELIZ Elizondo 55.05 301 P **P** **05 49 46.5 -1.5**
ELIZ pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
ELIZ Elizondo 55.05 301 P **P** **05 49 46.5 -1.5**
comp=Z,8.3nm,1.1s,mb4.4
CART Cartagena 56.85 294 *eP* **P** **05 50 00.6 -0.1**
comp=Z,38nm,0.8s,mb5.3
BILL Bilibino 56.99 27⇓*iP* **P** **05 50 03.4 +1.6**
BILL pmax pmax
comp=Z,7.0nm,0.4s,mb4.8
EVIA Vianos 57.49 296 P **P** **05 50 05.3 +0.1**
EVIA pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
EVIA Vianos 57.49 296 P **P** **05 50 05.3 +0.1**
comp=Z,1.9nm,0.7s,mb4.0
GUD Guadarrama 57.83 299 P **P** **05 50 07.5 -0.1**
GUD pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
GUD Guadarrama 57.83 299 P **P** **05 50 07.5 -0.1**
comp=Z,4.7nm,0.8s,mb4.4
EHUE Huescar 57.90 295 P **P** **05 50 08.7 +0.6**
EHUE pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
EHUE Huescar 57.90 295 P **P** **05 50 08.7 +0.6**
comp=Z,2.2nm,0.7s,mb4.1
ENIJ Nijar 57.98 294 P **P** **05 50 08.9 +0.3**
ENIJ pmax pmax
comp=Z,14nm,0.8s,mb4.8
ENIJ Nijar 57.98 294 P **P** **05 50 08.9 +0.3**
comp=Z,14nm,0.8s,mb4.8
ESDC Sonseca Array 58.09 298 P **P** **05 50 09.4 0.0**
comp=Z,6.9nm,0.7s,mb4.6,baz=58,slow=7.3,SNR=20
ESDC pP pP 05 50 52.4 -0.4
comp=Z,2.1nm,0.7s,baz=61,slow=7.4,SNR=2.7
ESDC Sonseca Array 58.09 298 P **P** **05 50 08.3 -1.1**
comp=Z,16nm,0.8s,mb4.9
ESLA Sonseca Array 58.09 298 *eP* **P** **05 50 09.4 0.0**
EQES Quesada 58.25 295 P **P** **05 50 10.7 +0.2**
comp=Z,10.0nm,0.6s,mb4.8
EBER Berja 58.50 294 P **P** **05 50 12.2 -0.1**
comp=Z,46nm,1.3s,mb5.2
EBAN Banos Encina 58.60 296 P **P** **05 50 13.1 +0.1**
EBAN pmax pmax
comp=Z,20nm,0.8s,mb5.0
EBAN Banos Encina 58.60 296 P **P** **05 50 13.1 +0.1**
comp=Z,20nm,0.8s,mb5.0
ECOG Cogollos-Vega 58.83 295 P **P** **05 50 14.4 -0.1**
ECOG pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
ECOG Cogollos-Vega 58.83 295 P **P** **05 50 14.4 -0.1**
comp=Z,4.9nm,1.2s,mb4.2
ERON Agron 59.11 295 P **P** **05 50 16.0 -0.5**
comp=Z,20nm,1.2s,mb4.8
EADA Adamuz 59.16 296 P **P** **05 50 15.8 -1.0**
comp=Z,8.2nm,0.5s,mb4.8
ELUQ Luque 59.21 296 P **P** **05 50 17.0 -0.1**
ELUQ pmax pmax
comp=Z,9.0nm,0.5s,mb4.9
ELUQ Luque 59.21 296 P **P** **05 50 17.0 -0.1**
comp=Z,8.8nm,0.5s,mb4.8
PVRL Vila Real 60.02 301 *eP* **P** **05 50 22.5 -0.1**
comp=Z,19nm,1.2s,mb4.8
PCAB Cabril 60.04 301 *eP* **P** **05 50 23.6 +0.8**
comp=Z,52nm,2.0s,mb5.0
MTE Manteigas 60.27 300 *eP* **P** **05 50 25.4 +1.0**
comp=Z,22nm,1.3s,mb4.8
PVIS Viseu 60.38 300 *eP* **P** **05 50 25.7 +0.6**
SUMG Summit 60.41 341 *eP* **P** **05 50 26.2 +0.9**
comp=Z,24nm,0.9s,mb5.0
EBAD Badajoz 60.63 298 P **P** **05 50 25.9 -0.9**
comp=Z,15nm,0.6s,mb5.0
ESPR Espera 60.65 296 P **P** **05 50 26.6 -0.3**
comp=Z,7.5nm,0.4s,mb4.9
EMIN Mina Concepcio 60.83 297 P **P** **05 50 28.1 -0.1**
comp=Z,21nm,0.9s,mb5.0
PTOM Tomar 61.22 299 *eP* **P** **05 50 31.4 +0.7**
comp=Z,29nm,1.0s,mb5.1
EGRO El Granado 61.51 297 P **P** **05 50 32.9 +0.2**
comp=Z,40nm,0.9s,mb5.2
PBEJ Beja 61.55 298 *eP* **P** **05 50 33.6 +0.6**
comp=Z,24nm,1.3s,mb4.9
PTEO Sao Teotonio 62.38 298 *eP* **P** **05 50 39.4 +0.9**
comp=Z,36nm,1.4s,mb5.0
TOA0 Torodi Ar. Sit 67.06 269 *eP* **P** **05 51 07.6 -1.2**
TORD Torodi Ar. Bea 67.06 269 P **P** **05 51 07.8 -1.0**
comp=Z,21nm,0.7s,mb5.1,baz=47,slow=5.8,SNR=299
RES Resolute Bay 67.64 356 *eP* **P** **05 51 12.1 -0.3**
RES pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
RES Resolute Bay 67.64 356 *eP* **P** **05 51 12.1 -0.3**
comp=Z,2.8nm,0.5s,mb4.2
IMA2 Indian Mountai 70.62 18 *eP* **P** **05 51 31.2 +0.5**
INK Inuvik 72.56 10 *eP* **P** **05 51 43.2 +0.9**
INK pmax pmax
comp=Z,26nm,0.9s
INK Inuvik 72.56 10 *eP* **P** **05 51 43.2 +0.9**
comp=Z,26nm,0.9s,mb5.0
COLA College 73.00 17 *eP* **P** **05 51 45.7 +0.8**
COLA pmax pmax
comp=Z,28nm,0.9s,mb5.0
COLA College 73.00 17 *eP* **P** **05 51 45.7 +0.8**
comp=Z,28nm,0.9s,mb5.0
MCK McKinley 73.71 18 *eP* **P** **05 51 48.7 -0.3**
MCK pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
MCK McKinley 73.71 18 *eP* **P** **05 51 48.7 -0.3**
comp=Z,3.0nm,0.8s,mb4.1
FITZ Fitzroy Crossi 74.53 128 P **P** **05 51 54.7 +0.9**
comp=Z,2.2nm,0.8s,mb3.9,baz=274,slow=13,SNR=4.3
PMR Palmer 75.46 19 *eP* **P** **05 51 58.9 -0.2**
PMR pmax pmax
comp=Z,17nm,1.1s,mb4.6
PMR Palmer 75.46 19 *eP* **P** **05 51 58.9 -0.1**
comp=Z,17nm,1.1s,mb4.6
DAWY Dawson 75.50 14 *eP* **P** **05 51 59.7 +0.4**
DBIC Dimbokro 76.07 268 P **P** **05 52 01.8 -0.8**
comp=Z,18nm,0.9s,mb4.7,baz=41,slow=2.4,SNR=11
DBIC Dimbokro 76.07 268 *eP* **P** **05 52 02.4 -0.2**
DBIC pmax pmax
comp=Z,25nm,1.0s
DBIC Dimbokro 76.07 268 *eP* **P** **05 52 02.4 -0.2**
comp=Z,25nm,1.0s,mb4.8
LIC Lamto 76.48 267⇑*iP* **P** **05 52 04.6 -0.2**
comp=Z,53nm,0.9s,mb4.8
LIC Lamto 76.48 267⇑*iP* **P** **05 52 04.6 -0.2**
comp=Z,27nm,0.9s,mb4.9
YKA Yellowknife Ar 80.03 3 P **P** **05 52 25.0 +0.7**
comp=Z,15nm,0.7s,mb4.7,baz=350,slow=5.5,SNR=66
YKA pP pP 05 53 10.8 +0.4
comp=Z,2.5nm,0.8s,baz=348,slow=5.5,SNR=2.5
YKA LR LR 06 31 35.4
comp=Z,16nm,18.9s,baz=270,slow=38
YKA Yellowknife Ar 80.03 3 P **P** **05 52 25.0 +0.7**
YKA *PP pP 05 53 10.8 +0.3
YKA pmax pmax
comp=Z,15nm,0.7s
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA MLR MLR
comp=Z,16nm,18.9s
WRAB Tennant Creek 81.49 123 *eP* **P** **05 52 32.9 +0.9**
WRAB pmax pmax
comp=Z,14nm,0.8s,mb4.6
WRAB Tennant Creek 81.49 123 *eP* **P** **05 52 32.9 +0.9**
comp=Z,14nm,0.8s,mb4.6
SCHQ Schefferville 81.55 338 P **P** **05 52 32.6 +0.3**
comp=Z,6.0nm,0.8s,mb4.3,baz=9.3,slow=5.5,SNR=6.3
SCHQ LR LR 06 27 54.0
comp=Z,28nm,18.2s,baz=56,slow=35
AS31 Alice Springs 83.84 126 *eP* **P** **05 52 45.2 +1.0**
ASAR Alice Springs 83.84 126 P **P** **05 52 44.6 +0.5**
comp=Z,2.9nm,0.9s,mb4.0,baz=320,slow=5.4,SNR=22
ASAR pP pP 05 53 29.8 -1.0
comp=Z,2.0nm,0.7s,baz=319,slow=5.4,SNR=5.2
ASAR Alice Springs 83.84 126 P **P** **05 52 44.7 +0.5**
ASAR *PP pP 05 53 29.8 -0.9
ASAR pmax pmax
comp=Z,3.0nm,0.9s
ASAR pmax pmax
comp=Z,2.0nm,0.7s
FFC Flin Flon 87.88 357 *eP* **P** **05 53 04.3 +0.3**
FFC pmax pmax
comp=Z,19nm,1.0s,mb4.9
FFC Flin Flon 87.88 357 *eP* **P** **05 53 04.3 +0.3**
comp=Z,20nm,1.0s,mb4.9
EDM Edmonton 89.35 4 *eP* **P** **05 53 12.0 +1.1**
CTAO Charters Tower 89.83 116 *eP* **P** **05 53 14.7 +1.6**
CTAO pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CTAO Charters Tower 89.83 116 *eP* **P** **05 53 14.7 +1.6**
comp=Z,6.6nm,0.9s,mb4.6
ULM Lac du Bonnet 91.89 353 P **P** **05 53 22.8 +0.1**
comp=Z,4.8nm,1.0s,mb4.5,baz=346,slow=4.4,SNR=5.2
ULM Lac du Bonnet 91.89 353 *eP* **P** **05 53 22.7 0.0**
comp=Z,7.9nm,1.1s,mb4.7
NEW Newport 94.02 7 *eP* **P** **05 53 33.6 +1.1**
NEW pmax pmax
comp=Z,4.0nm,0.9s
NEW Newport 94.02 7 *eP* **P** **05 53 33.6 +1.1**
comp=Z,4.3nm,0.9s,mb4.6
BOZ Bozeman (W) 97.00 3 *eP* **P** **05 53 47.5 +1.5**
BOZ pmax pmax
comp=Z,4.0nm,1.2s,mb4.6
BOZ Bozeman (W) 97.00 3 *eP* **P** **05 53 47.5 +1.5**
comp=Z,4.0nm,1.2s,mb4.6
RSSD Black Hills 98.56 358 *eP* **P** **05 53 54.5 +1.5**
RSSD pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
RSSD Black Hills 98.56 358 *eP* **P** **05 53 54.5 +1.5**
comp=Z,2.5nm,0.9s,mb4.6
TPAW Teton Pass 99.17 3 *eP* Pdif 05 53 58.1 +2.4
comp=Z,2.4nm,1.1s
CPUP Villa Florida 136.56 270 PKP PKPdf 05 59 35.7 +0.4
comp=Z,6.0nm,0.9s,baz=1.0,slow=2.0,SNR=13
CPUP Villa Florida 136.56 270 PKIKP PKPdf 05 59 35.7 +0.4
CPUP pmax pmax
comp=Z,6.0nm,0.9s
CPUP Villa Florida 136.56 270 *e*PKPdf PKPdf 05 59 35.6 +0.3
PLCA Paso Flores 151.45 252 *e*PKIKP PKPdf 06 00 08.4 +7.4

ISCJB **11** *05:46:50.6±0.6, 36°63'N±005"×088E±007", h10km, Error ellipse: s-maj=8.9km s-min=4.9km az=103.2*
MDD **11** *05:46:53.2±1.2, 36°58'N×099E, h22km±16km, mb3.0/4, Error ellipse: s-maj=15.9km s-min=10.4km az=83.0, PRXIMO*
CSEM **11** *05:47:00.3, 36°30'N×152E, h0km, ML2.6, After ALG*
CRAAG **11** *05:47:00.3, 36°30'N×152E, Ml2.6*
ISC 11 05:46:51.7±1.3, 36°61'N±007"×093E±009", h15km±14km, n10, σ0°90/14, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHF	**Ech Chlef**	**0.56**	**144**	P	**Pg**	**05 47 03.0**	**+0.3**
ECHA	**Ech Chlef**	**0.58**	**142**	P	**Pg**	**05 47 03.0**	**-0.1**
EBNR	**Beni Rached**	**0.58**	**123**	P	**Pg**	**05 47 02.0**	**-1.1**
EANR	**'Ain N'Sour**	**0.68**	**168**	P	**Pg**	**05 47 10.0**	**+5.2**
ETRT	**Tiaret**	**1.26**	**166**	P	**Pn**	**05 47 14.0**	**-0.7**
EMHD	**Djebel Mahouad**	**1.68**	**104**	P	**Pn**	**05 47 23.0**	**+2.5**
EBEN	**Beniarda** 0.5nm,0.1s,SNR=7.9	**2.28**	**337**	P	**Pn**	**05 47 29.4**	**+0.6**
EBEN	0.4nm,0.2s,SNR=7.9			S	**Sn**	**05 47 56.7**	**+0.1**
EIBI	**Ibiza** 0.6nm,0.1s,SNR=7.9	**2.43**	**8**	P	**Pn**	**05 47 30.7**	**-0.1**
EIBI	2.7nm,0.1s,SNR=7.9			S	**Sn**	**05 47 58.9**	**-1.4**
ETOB	**Tobarra**	**2.83**	**317**	P	**Pn**	**05 47 37.5**	**+1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.5nm,0.1s,SNR=7.9						
ETOB				S	Sn	05 48 10.3	+0.2
	0.7nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.08**	**276**	P	**Pn**	**05 47 39.9**	**+0.2**
	0.4nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**05 48 15.4**	**-0.9**
	1.0nm,0.4s,SNR=7.9						

*NEIC **11** 06:17:07.9, 3294N×1705W, h0^{km}, MG3.8(MDD), After MDD.*
*MDD **11** 06:17:11.7±1.6, 3298N×1704W, h48^{km}±9^{km}, mb3.9/5, Error ellipse: s-maj=22.6km s-min=7.6km az=126.0, PRXIMO*
*INMG **11** 06:17:12.4±0.9, 33.15N×1722W, h5^{km}, ML2.8, Error ellipse: s-maj=8.7km s-min=4.3km az=117.0*
CSEM 11 06:17:04.3±0.2**, 3310N×1725W, h10**^{km}**, mb3.8**/5**, Error ellipse: s-maj=5.5km s-min=2.4km az=107.0, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAR	**Madeira**	**0.47**	**143**	*i* P	Pg	06 17 20.1	+6.6
PMAR				*e*S	Sg	06 17 26.0	+6.3
PMAR							
	601nm,0.2s						
PMAR	**Madeira**	**0.47**	**143**	*e*S	Sg	06 17 26.0	+6.3
	601nm,0.2s						
FUL	**Funchal**	**0.55**	**147**	*e*P	Pg	06 17 21.4	+6.4
FUL				*e*S	Sg	06 17 28.2	+5.9
PMPS	**Porto Santo**	**0.77**	**93**	*i* P	Pg	06 17 23.7	+4.5
PMPS				*e*S	Sg	06 17 32.0	+2.7
PMPS							
	203nm,0.3s						
EBAJ	**Bajamar**	**4.61**	**170**	P	Pn	06 18 16.0	+2.0
	1.0nm,0.2s,SNR=7.9						
EBAJ				S	Sn	06 19 03.6	-4.1
	0.0nm,0.1s,SNR=7.9						
EBAJ	**Bajamar**	**4.61**	**170**	P	Pn	06 18 14.1	0.0
EBAJ				S	Sn	06 19 03.6	-4.1
EBAJ	**Bajamar**	**4.61**	**170**	P	Pn	06 18 14.1	+0.1
	1.0nm,0.2s,SNR=7.9						
EBAJ				S	Sn	06 19 03.6	-4.0
	SNR=7.9						
CRAJ	**Montana Rajada**	**4.85**	**173**	P	Pn	06 18 19.6	+2.3
	2.7nm,0.2s,SNR=7.9						
CRAJ				S	Sn	06 19 11.3	-2.3
	1.7nm,0.3s,SNR=7.9						
CRAJ	**Montana Rajada**	**4.85**	**173**	P	Pn	06 18 19.6	+2.3
	2.7nm,0.2s,SNR=7.9						
CRAJ				S	Sn	06 19 11.8	-1.8
	1.7nm,0.3s,SNR=7.9						
CCAN	**Las Canadas**	**4.89**	**173**	P	Pn	06 18 20.0	+2.1
	0.4nm,0.1s,SNR=7.9						
CCAN				S	Sn	06 19 11.6	-3.0
	1.0nm,0.4s,SNR=7.9						
CCAN	**Las Canadas**	**4.89**	**173**	P	Pn	06 18 20.3	+2.4
CCAN				S	Sn	06 19 12.4	-2.2
CCAN	**Las Canadas**	**4.89**	**173**	P	Pn	06 18 20.3	+2.4
	SNR=7.9						
CCAN				S	Sn	06 19 12.4	-2.2
	1.0nm,0.4s,SNR=7.9						
EGOM	**La Gomera**	**4.92**	**180**	P	Pn	06 18 19.6	+1.3
	1.3nm,0.1s,SNR=7.9						
EGOM				S	Sn	06 19 11.4	-3.9
	13nm,0.3s,SNR=5.8						
EGOM	**La Gomera**	**4.92**	**180**	P	Pn	06 18 19.6	+1.3
EGOM				S	Sn	06 19 11.0	-4.4
EGOM	**La Gomera**	**4.92**	**180**	P	Pn	06 18 19.6	+1.3
	1.3nm,0.1s,SNR=7.9						
EGOM				S	Sn	06 19 11.0	-4.3
	13nm,0.3s,SNR=5.8						
EFAM	**Famara**	**5.09**	**140**	P	Pn	06 18 21.0	+0.4
EFAM				S	Sn	06 19 15.5	-3.8
EFAM	**Famara**	**5.09**	**140**	P	Pn	06 18 21.0	+0.4
	0.5nm,0.2s,SNR=7.9						
EFAM				S	Sn	06 19 15.5	-3.8
	2.3nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**9.81**	**59**	P	Pn	06 19 28.6	+3.3
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	06 21 08.1	-7.4
	0.8nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**9.81**	**59**	P	Pn	06 19 28.6	+3.3
EMIN				S	Sn	06 21 09.9	-5.6
EMIN	**Mina Concepcio**	**9.81**	**59**	P	Pn	06 19 28.6	+3.3
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	06 21 09.9	-5.6
	0.8nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**10.04**	**53**	S	Sn	06 21 15.4	-5.8
	0.1nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**10.04**	**53**	S	Sn	06 21 16.0	-5.1
	0.1nm,0.2s,SNR=7.9						

*ISCJB **11** 06:26:27.3±0.6, 22.11S±0.06×6750W±0.05, h148^{km}±5^{km}, mb4.1/21, Error ellipse: s-maj=9.5km s-min=8.1km az=143.8*
*IDC **11** 06:26:28.5±0.8, 2209S×6754W, h146^{km}±9^{km}, mb3.9/8, mb1 4.0/11, mb1mx3.9/17, mbtmp4.4/11, Error ellipse: s-maj=20.7km s-min=14.2km az=178.0*
*NEIC **11** 06:26:28.4±0.5, 22.18S×6755W, h144^{km}±5^{km}, mb4.2/14, Error ellipse: s-maj=7.5km s-min=6.9km az=214.0*
*BJI **11** 06:26:30.3, 2220S×6750W, h143^{km}, mB4.7*
ISC 11 06:26:28.6±0.6**, 2210S**±006×**6751W**±005**, h142**^{km}±5^{km}**, n56,** σ0§**83**/53**, mb4.1**/21**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.40**	**248**	P	**Pn**	**06 26 57.4**	**+1.0**
	242nm,0.3s,baz=61,slow=6.4,SNR=4435						
LVC				S	**Sn**	**06 27 18.1**	**+0.4**
	239nm,0.3s,baz=286,slow=20,SNR=36						
LVC	**Limon Verde**	**1.40**	**248**	*e*Pn	**Pn**	**06 26 57.5**	**+1.1**
ARE	**Arequipa**	**6.75**	**325**	*e*P	**Pn**	**06 28 05.0**	**-0.2**
ARE				*i* S	**Sn**	**06 29 18.4**	**-2.4**
SIV	**San Ignacio**	**8.60**	**46**	P	**Pn**	**06 28 30.4**	**+0.5**
	11nm,0.3s,baz=252,slow=10,SNR=113						
SIV				S	**Sn**	**06 30 03.5**	**-1.8**
	7.1nm,0.3s,baz=146,slow=23,SNR=13						
CFAA	**Coronel Fontan**	**9.49**	**184**	P	**Pn**	**06 28 38.6**	**-3.3**
	0.1nm,0.3s,baz=3.1,slow=14,SNR=8.4						
CFAA				S	**Sn**	**06 30 15.6**	**-11**
	0.1nm,0.3s,baz=257,slow=18,SNR=5.3						
CPUP	**Villa Florida**	**10.20**	**116**	P	**Pn**	**06 28 52.0**	**+0.6**
	0.4nm,0.3s,baz=279,slow=11,SNR=6.8						
CPUP	**Villa Florida**	**10.20**	**116**	*e*Pn	**Pn**	**06 28 52.3**	**+1.0**
NNA	**Nana**	**13.44**	**317**	P	**Pn**	**06 29 38.1**	**+4.6**
	1.2nm,0.3s,baz=151,slow=11,SNR=12						
SAML	**Samuel**	**13.72**	**18**	*e*Pn	**Pn**	**06 29 37.8**	**+0.6**
PLCA	**Paso Flores**	**18.76**	**187**	*e*P	**P**	**06 30 35.2**	**-1.4**
	20nm,1.5s						
BDFB	**Brasilia**	**19.52**	**74**	P	**P**	**06 30 46.1**	**+1.2**
	1.2nm,0.3s,baz=258,slow=11,SNR=17						
BAO	**Brasilia Array**	**19.55**	**74**	P	**P**	**06 30 46.0**	**+0.9**
SWET	**Sewanee**	**59.62**	**343**	*e*P	**P**	**06 36 16.4**	**-1.2**
ELN	**Prospectdale**	**60.31**	**348**	*e*P	**P**	**06 36 22.5**	**+0.3**
JCT	**Junction City**	**60.79**	**328**	*e*P	**P**	**06 36 24.9**	**-0.5**
	3.7nm,0.6s,mb4.4						
MIAR	**Mount Ida**	**61.54**	**336**	*e*P	**P**	**06 36 29.4**	**-1.1**
	4.7nm,0.8s,mb4.4						
MNTX	**Cornudas Mount**	**64.63**	**325**	*e*P	**P**	**06 36 49.7**	**-1.2**
	4.2nm,1.2s,mb4.1						
DBIC	**Dimbokro**	**67.66**	**73**	P	**P**	**06 37 10.2**	**0.0**
	10nm,0.8s,mb4.6,baz=213,slow=6.6,SNR=9.3						
ANMO	**Albuquerque**	**67.72**	**326**	*e*P	**P**	**06 37 10.7**	**+0.1**
	1.4nm,0.7s,mb3.8						
TUC	**Tucson**	**68.11**	**321**	*e*P	**P**	**06 37 13.3**	**+0.3**
	5.4nm,1.4s,mb4.1						
MVCO	**Mesa Verde**	**70.51**	**326**	*e*P	**P**	**06 37 27.4**	**-0.4**
WUAZ	**Wupatki**	**70.78**	**323**	*e*P	**P**	**06 37 30.3**	**+0.8**
ISCO	**Idaho Springs**	**71.11**	**330**	*e*P	**P**	**06 37 32.2**	**+0.8**
	4.6nm,1.1s,mb4.1						
SRU	**San Rafael**	**72.99**	**326**	*e*P	**P**	**06 37 42.8**	**+0.2**
CCUT	**Cedar City**	**73.36**	**323**	*e*P	**P**	**06 37 45.2**	**+0.5**
ARUT	**Antelope Range**	**73.57**	**324**	*e*P	**P**	**06 37 46.1**	**+0.1**
RSSD	**Black Hills**	**73.90**	**334**	*e*P	**P**	**06 37 47.9**	**0.0**
	4.6nm,0.9s,mb4.2						
TPNV	**Topopah Spring**	**74.57**	**321**	*e*P	**P**	**06 37 52.6**	**+0.8**
ISA	**Isabella**	**75.02**	**319**	*e*P	**P**	**06 37 54.9**	**+0.5**
PDAR	**Pinedale Array**	**75.28**	**329**	P	**P**	**06 37 55.4**	**-0.5**
	0.9nm,0.7s,mb3.5,baz=125,slow=8.0,SNR=9.1						
HWUT	**Hardware Ranch**	**75.38**	**327**	*e*P	**P**	**06 37 56.5**	**0.0**
	3.5nm,0.8s,mb4.0						
ULM	**Lac du Bonnet**	**76.28**	**342**	P	**P**	**06 38 00.5**	**-1.1**
	3.5nm,0.7s,mb4.1,baz=160,slow=6.0,SNR=8.4						
TOA0	**Torodi Ar. Sit**	**76.33**	**70**	*e*P	**P**	**06 38 01.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**76.33**	**70**	P	**P**	**06 38 01.7**	**-0.2**
	7.3nm,0.5s,mb4.6,baz=255,slow=5.7,SNR=164						
REDW	**Red Top Meadow**	**76.35**	**329**	*e*P	**P**	**06 38 02.4**	**+0.5**
	4.6nm,0.8s,mb4.2						
SNOW	**Snow King Moun**	**76.38**	**329**	*e*P	**P**	**06 38 02.8**	**+0.6**
	3.3nm,0.3s,mb4.4						
LOHW	**Long Hollow**	**76.42**	**329**	*e*P	**P**	**06 38 02.8**	**+0.4**
	3.6nm,0.8s,mb4.0						
VNDA	**Vanda**	**76.49**	**190**	P	**P**	**06 38 02.4**	**-0.4**
	0.5nm,0.7s,mb3.2,baz=265,slow=1.5,SNR=5.1						
RRI2	**Red Ridge**	**76.56**	**329**	*e*P	**P**	**06 38 03.6**	**+0.5**
MOOW	**Moose Ponds**	**76.59**	**329**	*e*P	**P**	**06 38 03.8**	**+0.5**
NVAR	**Mina Array Bea**	**76.77**	**321**	P	**P**	**06 38 05.0**	**+0.6**
	1.3nm,0.8s,mb3.6,baz=144,slow=7.6,SNR=8.9						
IMW	**Indian Meadow**	**76.79**	**329**	*e*P	**P**	**06 38 04.8**	**+0.4**
	5.0nm,0.8s,mb4.2						
FLWY	**Flagg Ranch**	**76.82**	**330**	*e*P	**P**	**06 38 04.9**	**+0.3**
HLID	**Hailey**	**78.24**	**327**	*e*P	**P**	**06 38 13.4**	**+0.8**
	5.8nm,0.9s,mb4.2						
PAHR	**Pah Rah Range**	**78.25**	**322**	*e*P	**P**	**06 38 13.6**	**+1.0**
BMO	**Blue Mountains**	**80.62**	**327**	*e*P	**P**	**06 38 25.7**	**+0.3**
WALA	**Waterton Lakes**	**82.01**	**331**	*e*P	**P**	**06 38 31.8**	**-1.0**
MAW	**Mawson**	**83.38**	**163**	P	**P**	**06 38 38.8**	**-1.0**
	1.1nm,0.9s,mb3.6,baz=185,slow=9.5,SNR=3.9						
YKA	**Yellowknife Ar**	**92.18**	**340**	P	**P**	**06 39 21.0**	**-1.1**
	1.9nm,0.7s,mb4.3,baz=135,slow=4.3,SNR=9.7						
CHKZ	**Chkalovo**	**135.35**	**34**	*e*PKPdf	PKPdf	06 45 31.2	-0.3
MKAR	**Makanchi Array**	**145.33**	**37**	PKPbc	PKPbc	06 45 49.2	-0.3
	1.0nm,0.7s,baz=316,slow=3.3,SNR=3.7						
WMQ	**Urumqi**	**150.16**	**38**	*e*PKP	PKPdf	06 45 55.0	-2.4
MDJ	**Mudanjiang**	**153.49**	**332**	PKP	PKPdf	06 46 02.2	-0.2
MDJ				PP	PP		
	comp=Z,40nm,6.0s						
CN2	**Changchun**	**155.84**	**337**	*e*PKP	PKPdf	06 46 03.2	-2.4
HHC	**Hu-ho-hao-te**	**161.29**	**2**	*e*PKP	PKPdf	06 46 09.6	-2.5
HHC				APKP		06 46 51.2	
HHC				PKS		06 49 42.0	
HHC				PP	PP	06 50 43.2	+3.0
HHC				SKS	SKSdf	06 52 57.0	-6.9
HHC				LR	LR		
	comp=N,112nm,38.9s						
HHC				LR	LR		
	comp=E,97nm,40.8s						
HHC				LR	LR		
	comp=Z,82nm,42.7s						
NJ2	**Nanjing**	**168.58**	**332**	*e*PKP	PKPdf	06 46 24.0	+5.7

*CSEM **11** 06:30:52.4, 1160S×16650E, h33^{km}, mb5.5*
*MOS **11** 06:30:56.7±0.9, 1142S×16633E, h57^{km}, mb5.0/15, Error ellipse: s-maj=14.5km s-min=12.4km az=32.8*
*BJI **11** 06:30:57.4, 1089S×16623E, h40^{km}, mB5.0, mb4.9, Ms5.0, Msz4.7*
*IDC **11** 06:30:58.4±2.6, 1149S×16630E, h55^{km}±21^{km}, mb4.4/12, mb1 4.5/14, mb1mx4.5/16, mbtmp4.7/14, ML4.8/2, MS4.1/13, Ms1 4.1/13, ms1mx4.0/17, Error ellipse: s-maj=20.2km s-min=14.9km az=74.0*
*NEIC **11** 06:31:00.4±1.4, 1150S×16625E, h73^{km}±11^{km}, mb5.1/20, Error ellipse: s-maj=10.2km s-min=8.5km az=81.0*
*HRVD **11** 06:31:00.4±0.3, 1155S×16608E, h53^{km}, MW5.1/55, Centroid moment Tensor Solution. LP body waves: s55,c72;Mantle waves: s54,c80; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.82±.18; $M_{\theta\theta}$-0.47±.12; $M_{\phi\phi}$-5.34±.12; $M_{r\theta}$-0.71±.11; $M_{\theta\phi}$-0.12±.12; $M_{\phi r}$0.52±.12; Best double couple: $M_0$5.64500×10^{16} NP1:ϕ_s188.00000°, δ43.00000°, λ99.00000°. NP2: ϕ_s355.00000°, δ48.00000°, λ81.00000°. Principal axes: T 5.9240, Plg83.0000°, Azm203.0000°; N -0.5530, Plg6.0000°, Azm1.0000°; P -5.3660, Plg3.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **11** 06:31:00.7±1.7, 1160S±006×16606E±005, h82^{km}±15^{km}, mb4.8/44 Error ellipse: s-maj=9.5km s-min=7.8km az=156.5*
ISC 11 06:31:02.5±1.4**, 1157S**±006×**16611E**±005**, h83**^{km}±12^{km}**, h35**^{km}±6.8^{km}**:pP-P, n180,** σ0§**84**/160**, mb4.8**/44**, 36C-43D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.42**	**289**	P	**Pn**	**06 32 33.6**	**-0.7**
	69nm,0.3s,baz=174,slow=0.7,SNR=22						
HNR				S	**Sn**	**06 33 47.4**	**+1.3**
	15nm,0.3s,baz=90,slow=20,SNR=2.8						
HNR	**Honiara**	**6.42**	**289**	P	**Pn**	**06 32 33.6**	**-0.7**
HNR				S	**Sn**	**06 33 47.4**	**+1.3**
HNR				pmax	pmax		
	comp=Z,69nm,0.3s						
HNR				smax			
	comp=N,15nm,0.3s						
HNR	**Honiara**	**6.42**	**289**	*e*Pn	**Pn**	**06 32 33.5**	**-0.9**
	comp=N,1µm,1.0s						
DZM	**Mont Dzumac**	**10.45**	**178**	*e*P	**Pn**	**06 33 23.0**	**-6.4**
DZM				*e*S	**Sn**	**06 35 18.6**	**-5.9**
DZM	**Mont Dzumac**	**10.45**	**178**	*e*P	**Pn**	**06 33 27.3**	**-2.0**
DZM	**Mont Dzumac**	**10.45**	**178**	P	**Pn**	**06 33 27.9**	**-1.4**
	comp=N,2.4nm,0.3s,baz=354,slow=23,SNR=20						
DZM				S	**Sn**	**06 35 18.0**	**-6.5**
	comp=N,0.4nm,0.3s,baz=231,slow=13,SNR=1.9						
DZM				LR	LR	06 36 15.7	
	comp=N,256nm,21.4s,baz=21,slow=30						
CTA	**Charters Tower**	**20.88**	**244**	*e*P	**P**	**06 35 40.4**	**+2.6**
	comp=N,14nm,0.8s						
CTA	**Charters Tower**	**20.88**	**244**	P	**P**	**06 35 38.7**	**+0.9**
	comp=N,20nm,0.9s,baz=77,slow=16,SNR=3.9						
CTA				LR	LR	06 42 50.2	
	comp=N,782nm,20.1s,baz=68,slow=34						
CTA	**Charters Tower**	**20.88**	**244**	*e*P	**P**	**06 35 40.4**	**+2.6**
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
AFI	**Afiamalu**	**21.70**	**99**	LR	LR	06 42 41.3	
	comp=Z,316nm,18.5s,baz=284,slow=33						
RAO	**Raoul Island**	**23.05**	**142**	LR	LR	06 42 48.7	
	comp=Z,620nm,21.5s,baz=280,slow=31						
ARMA	**Armidale**	**23.07**	**213**	⇓*i*P	**P**	**06 36 03.3**	**+2.4**
URZ	**Urewera**	**28.34**	**162**	LR	LR	06 46 00.9	
	comp=Z,595nm,21.2s,baz=33,slow=32						
STKA	**Stephens Creek**	**30.31**	**224**	⇓*i*P	**P**	**06 37 07.5**	**+1.5**
	comp=Z,8.0nm,0.9s,mb4.3						
STKA				*e*PCP	PcP	06 40 04.1	-0.3
STKA	**Stephens Creek**	**30.31**	**224**	P	**P**	**06 37 07.4**	**+1.5**
	comp=Z,7.9nm,0.8s,mb4.4,baz=40,slow=8.0,SNR=20						
STKA				PcP	PcP	06 40 04.1	-0.3
	comp=Z,4.9nm,1.0s,baz=60,slow=4.5,SNR=6.5						
STKA				LR	LR	06 48 30.5	
	comp=Z,672nm,21.0s,baz=38,slow=34						
WRAB	**Tennant Creek**	**31.63**	**251**	*e*P	**P**	**06 37 18.3**	**+0.7**
WRAB				*e*		06 40 08.6	
WRAB				pmax	pmax		
	comp=Z,34nm,1.4s,mb4.9						
WRAB	**Tennant Creek**	**31.63**	**251**	*e*P	**P**	**06 37 18.3**	**+0.8**
	comp=Z,34nm,1.4s,mb4.9						
WRAB				*e*PcP	PcP	06 40 08.6	+0.7
WB2	**Warramunga Arr**	**31.63**	**251**	*e*P	**P**	**06 37 17.1**	**-0.5**
WB2				*e*PCP	PcP	06 40 08.6	+0.7
RPZ	**Rata Peaks**	**32.32**	**173**	P	**P**	**06 37 22.1**	**-1.5**
	comp=Z,13nm,0.8s,mb4.7,baz=337,slow=2.4,SNR=7.3						
AS31	**Alice Springs**	**32.88**	**244**	*e*P	**P**	**06 37 28.7**	**+0.2**
ASAR	**Alice Springs**	**32.88**	**244**	P	**P**	**06 37 28.5**	**0.0**
	comp=Z,10nm,0.8s,mb4.7,baz=74,slow=9.5,SNR=86						
ASAR				PcP	PcP	06 40 11.4	+0.1
	comp=Z,3.5nm,0.8s,baz=74,slow=2.6,SNR=13						
ASAR				ScP	ScP	06 43 53.7	+5.7
	comp=Z,0.8nm,1.0s,baz=117,slow=3.5,SNR=3.2						
ASAR				LR	LR	06 49 44.5	
	comp=Z,491nm,20.7s,baz=75,slow=34						
ASAR	**Alice Springs**	**32.88**	**244**	P	**P**	**06 37 28.5**	**0.0**
ASAR						06 40 11.4	
ASAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAR				pmax	pmax		
	comp=N,1.0nm,1.0s						
ASAR				MLR	MLR		
	comp=Z,491nm,20.7s						
ASPA	**Alice Springs**	**32.88**	**244**	*e*P	**P**	**06 37 28.7**	**+0.2**
KAKA	**Kakadu**	**32.92**	**264**	*e*P	**P**	**06 37 29.2**	**+0.3**
	comp=Z,14nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**39.59**	**256**	*e*P	**P**	**06 38 25.9**	**+0.2**
	comp=Z,19nm,0.8s,mb5.0						
FITZ				*e*PCP	PcP	06 40 32.3	+0.9
PPT	**Papeete**	**43.23**	**103**	*e*LQ		06 49 09.9	
	comp=Z,471nm,30.8s						
PPT				*e*LR	LR	06 50 57.8	
	comp=Z,990nm,29.0s,baz=275						
PPT	**Papeete**	**43.23**	**103**	LR	LR	06 53 19.9	
	comp=Z,168nm,18.9s,baz=285,slow=31						
TBI	**Tubuai**	**43.81**	**112**	*e*LQ		06 49 27.0	
	comp=Z,516nm,29.5s						
TBI				*e*LR	LR	06 51 21.8	
	comp=Z,1µm,29.0s,baz=285						
KLBR	**Kellerberrin**	**48.73**	**238**	*e*P	**P**	**06 39 38.9**	**+0.2**
	comp=Z,29nm,0.9s,mb5.2						
MUN	**Mundaring**	**50.10**	**238**	⇓*i*P	**P**	**06 39 50.2**	**+1.1**
TAOE	**Nuku Hiva Isla**	**52.90**	**92**	*e*S	**S**	**06 47 39.6**	**+6.8**
	comp=Z,570nm,33.8s						
TAOE				*e*LR	LR	06 55 18.0	
	comp=Z,945nm,24.8s,baz=278						
MJAR	**Matsushiro Arr**	**54.59**	**332**	P	**P**	**06 40 20.4**	**-1.9**
	comp=Z,7.8nm,0.9s,mb4.7,baz=163,slow=7.6,SNR=14						
MJAR				LR	LR	07 01 26.1	
	comp=Z,190nm,20.3s,baz=35,slow=34						
MJAR	**Matsushiro Arr**	**54.59**	**332**	P	**P**	**06 40 20.4**	**-1.9**
MJAR				LR	LR	07 01 26.1	
RKT	**Rikitea**	**57.08**	**110**	*e*LR	LR	06 57 25.2	
	comp=Z,889nm,28.5s,baz=280						
ASAJ	**Asahikawa**	**59.40**	**341**	LR	LR	07 04 34.6	
	comp=Z,190nm,19.9s,baz=301,slow=34						
SSE	**Sheshan**	**60.47**	**316**	P	**P**	**06 41 02.1**	**-1.5**
SSE				PP	PP	06 43 15.3	-2.4
SSE				S	**S**	**06 49 07.6**	**-5.0**
SSE				SS	SS	06 53 08.3	-3.4
SSE				AMB	AMB		
	comp=Z,39nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,68nm,5.0s						
SSE				LR	LR		
	comp=N,66nm,21.1s						
SSE				LR	LR		
	comp=E,77nm,21.2s						
SSE				LR	LR		
	comp=Z,118nm,21.3s						
YSS	**Yuzh-Sakhalins**	**61.89**	**342**	⇑*e*P	**P**	**06 41 11.6**	**-1.6**
YSS				*e*		06 41 23.0	
NJ2	**Nanjing**	**62.64**	**315**	*e*P	**P**	**06 41 18.6**	**+0.4**
NJ2				AP	pP	06 41 28.8	-10
NJ2				XP	sP	06 41 32.7	-16
NJ2				PP	PP	06 43 38.3	+1.5
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,130nm,8.3s						
NJ2				LR	LR		
	comp=N,570nm,23.8s						
NJ2				LR	LR		
	comp=E,610nm,30.0s						
NJ2				LR	LR		
	comp=Z,350nm,29.7s						
MDJ	**Mudanjiang**	**64.97**	**332**	P	**P**	**06 41 32.4**	**-1.1**
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,76nm,4.9s						
HABR	**Khabarovsk**	**65.80**	**338**	*e*P	**P**	**06 41 35.8**	**-3.0**
HABR				*e*S	S	06 50 13.5	-5.5
SNY	**Shenyang**	**65.96**	**326**	⇑P	**P**	**06 41 42.5**	**+2.6**
SNY				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb4.9						
VNDA	**Vanda**	**65.98**	**181**	P	**P**	**06 41 38.8**	**-1.2**
	comp=Z,5.2nm,1.0s,mb4.3,baz=349,slow=7.7,SNR=8.5						
VNDA	**Vanda**	**65.98**	**181**	P	**P**	**06 41 38.8**	**-1.2**
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VNDA	**Vanda**	**65.98**	**181**	*e*P	**P**	**06 41 38.7**	**-1.3**
	comp=Z,5.4nm,1.0s,mb4.3						
CASY	**Casey**	**66.02**	**201**	*e*P	**P**	**06 41 38.5**	**-1.8**
SBA	**Scott Base**	**66.28**	**180**	*e*P	**P**	**06 41 41.4**	**-0.5**
SBA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
SBA	**Scott Base**	**66.28**	**180**	*e*P	**P**	**06 41 41.4**	**-0.5**
	comp=Z,7.8nm,1.0s,mb4.5						
CN2	**Changchun**	**66.37**	**329**	*e*P	**P**	**06 41 41.2**	**-1.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
KLR	**Kul'dur**	**67.67**	**336**	*e*P	**P**	**06 41 46.6**	**-4.2**
GYA	**Guiyang**	**69.00**	**304**	P	**P**	**06 41 59.6**	**+0.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
BJI	**Beijing**	**69.11**	**321**	*e*P	**P**	**06 41 58.5**	**-1.2**
BJI				PP	PP	06 44 31.6	-1.6
BJI				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.6						
BJI				LR	LR		
	comp=N,108nm,15.1s						
BJI				LR	LR		
	comp=E,203nm,16.9s						
BJI				LR	LR		
	comp=Z,223nm,27.2s						
XAN	**Xi'an**	**70.73**	**312**	P	**P**	**06 42 09.5**	**-0.1**
XAN				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.8						
CHTO	**Chiang Mai**	**72.76**	**294**	*e*P	**P**	**06 42 23.3**	**+1.5**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**72.76**	**294**	*e*P	**P**	**06 42 23.3**	**+1.5**
	comp=Z,5.2nm,0.8s,mb4.4						
CD2	**Chengdu**	**73.20**	**307**	*e*P	**P**	**06 42 25.0**	**+0.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
LZH	**Lanzhou**	**75.37**	**312**	P	**P**	**06 42 37.5**	**+0.5**
LZH				AP	pP	06 42 51.0	-7.6
LZH				XP	sP	06 42 56.5	-11
LZH				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,170nm,4.2s						
LZH				LR	LR		
	comp=N,940nm,15.6s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
KDAK	**Kodiak Island**	**76.93**	**21**	LR	LR	07 08 22.6	
	comp=Z,204nm,21.2s,baz=21,slow=29						
QSPA	**South Pole Qui**	**78.44**	**180**	*e*P	**P**	**06 42 52.9**	**-1.3**
	comp=Z,33nm,1.0s,mb5.0						
YAK	**Yakutsk**	**78.69**	**343**	*e*P	**P**	**06 42 52.8**	**-2.8**
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**78.93**	**324**	*e*P	**P**	**06 42 57.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	**78.93**	**324**	*e*P	**P**	**06 42 57.1**	**+0.2**
	comp=Z,19nm,1.0s,mb4.9						
SONM	**Songino Array**	**79.29**	**324**	P	**P**	**06 42 58.9**	**-0.1**
	comp=Z,7.0nm,1.0s,mb4.5,baz=123,slow=5.5,SNR=12						
SONM	**Songino Array**	**79.29**	**324**	P	**P**	**06 42 58.9**	**0.0**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BILL	**Bilibino**	**79.40**	**0**	*e*P	**P**	**06 42 56.8**	**-2.7**
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
GTA	**Gaotai**	**79.67**	**314**	⇑P	**P**	**06 43 01.7**	**+0.7**
GTA				AP	pP	06 43 09.2	-14
GTA				XP	sP	06 43 12.6	-19
GTA				AMB	AMB		
	comp=Z,23nm,1.0s,mb5.0						
GTA				AMB	AMB		
	comp=Z,121nm,8.0s						
GTA				LR	LR		
	comp=N,224nm,13.8s						
GTA				LR	LR		
	comp=E,330nm,17.6s						
GTA				LR	LR		
	comp=Z,312nm,17.1s						
TLY	**Talaya**	**82.75**	**326**	*e*P	**P**	**06 43 16.4**	**-0.9**
TLY				*e*		06 43 30.9	
TLY				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
COLA	**College**	**83.67**	**18**	*e*P	**P**	**06 43 18.9**	**-3.1**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
COLA	**College**	**83.67**	**18**	*e*P	**P**	**06 43 18.9**	**-3.1**
	comp=Z,6.0nm,0.8s,mb4.5						
SUTB	**Sutter Butte**	**83.78**	**48**	⇓P	**P**	**06 43 23.1**	**+0.5**
	baz=84						
M02C	**Callahan**	**83.78**	**46**	⇓P	**P**	**06 43 23.7**	**+1.1**

baz=84
ORV Oroville 84.10 48 ⇓P P 06 43 24.5 +0.3
baz=84
S05C Merced 84.23 50 ⇓P P 06 43 25.6 +0.8
baz=84
MAW Mawson 84.37 202 *e*P P 06 43 24.6 -1.0
comp=Z,3.1nm,1.1s,mb4.0
MAW Mawson 84.37 202 P P 06 43 24.6 -1.0
comp=Z,4.6nm,1.1s,mb4.2,baz=119,slow=8.0,SNR=7.3
MAW LR LR 07 15 09.2
comp=Z,120nm,21.3s,baz=74,slow=31
CMB Columbia Colle 84.41 50 ⇓P P 06 43 25.6 -0.2
baz=84
HATC Hat Creek Radi 84.56 47 ⇑P P 06 43 26.9 +0.3
baz=84
T06C Millerton Lake 84.58 51 ⇑P P 06 43 26.9 +0.3
baz=84
O04C Chester 84.66 47 ⇑P P 06 43 27.2 +0.1
baz=85
O05C Quincy 84.66 48 ⇓P P 06 43 27.3 +0.3
baz=85
P05C Yuba Gap, Truc 84.67 48 ⇑P P 06 43 27.4 +0.4
baz=85
M05C Lookout 84.97 46 ⇓P P 06 43 28.2 -0.4
baz=85
HELL Mitchell Peak, 85.00 51 ⇓P P 06 43 28.3 -0.4
baz=85
BEKR Beckwourth 85.03 48 ⇑P P 06 43 29.4 +0.5
baz=85
EDW2 Edwards Air Fo 85.25 53 ⇓P P 06 43 29.9 -0.1
baz=85
R06C Coleville 85.26 49 ⇓P P 06 43 30.2 +0.2
baz=85
BFSC Mount Baldy St 85.32 54 ⇓P P 06 43 30.4 0.0
baz=85
O06A Flanigan 85.52 48 ⇓P P 06 43 30.5 -0.8
baz=86
J05A Fort Rock 85.57 44 ⇑P P 06 43 30.6 -1.0
baz=86
N06A Buffalo Meadow 85.70 47 ⇓P P 06 43 32.5 +0.3
baz=86
DAWY Dawson 85.91 21 *e*P P 06 43 31.0 -2.3
MONP Monument Peak 85.92 55 ⇓P P 06 43 33.6 +0.3
baz=86
K06A Valley Falls 86.09 45 ⇓P P 06 43 34.0 -0.1
baz=86
NVAR Mina Array Bea 86.09 50 P P 06 43 34.1 0.0
comp=Z,1.9nm,0.7s,mb4.1,baz=240,slow=10,SNR=12
G05A Wamic 86.20 42 ⇑P P 06 43 34.9 +0.2
baz=86
O07A Toulon 86.21 48 ⇓P P 06 43 34.8 +0.1
baz=86
R08A Mina 86.21 50 ⇑P P 06 43 34.8 +0.1
baz=86
GSC Goldstone 86.30 53 ⇓P P 06 43 35.5 +0.3
baz=86
N07B Gerlach 86.33 47 ⇑P P 06 43 35.3 -0.1
baz=86
GRAC Grapevine Rang 86.36 51 ⇓P P 06 43 35.8 +0.3
baz=86
M07A Soldier Meadow 86.39 47 ⇓P P 06 43 35.8 +0.2
baz=86
D05A Enumclaw 86.45 41 ⇓P P 06 43 35.9 0.0
baz=86
L07A Adell 86.47 46 ⇓P P 06 43 36.3 +0.3
baz=86
I06A Prineville 86.50 44 ⇓P P 06 43 36.5 +0.3
baz=86
Q08A Gabbs 86.50 49 ⇑P P 06 43 36.2 +0.1
baz=86
JIRN Jiri 86.55 299 *e*P P 06 43 37.0 +0.6
comp=Z,73nm,1.3s,mb5.5
BELC Belle Mtn. 86.57 54 ⇑P P 06 43 36.6 +0.1
baz=86
FURC Furnace Creek, 86.60 52 ⇑P P 06 43 37.2 +0.5
baz=86
TIXI Tiksi 86.67 349 *e*P P 06 43 37.6 +0.6
TIXI pmax pmax
comp=Z,12nm,1.3s,mb4.7
S09A Goldfield 86.69 51 ⇓P P 06 43 37.1 0.0
baz=87
B05A Bryant 86.77 39 ⇑P P 06 43 37.9 +0.4
baz=87
GUN Gumba 86.88 299 *e*P P 06 43 38.5 +0.5
comp=Z,32nm,0.9s,mb5.3
SHOC Shoshone 86.89 53 ⇑P P 06 43 38.6 +0.6
baz=87
R09A Tonopah 86.96 50 ⇑P P 06 43 38.3 -0.1
baz=87
U10A Ash Meadows, A 86.99 52 ⇑P P 06 43 38.5 -0.1
baz=87
I07A Izee 87.03 44 ⇓P P 06 43 38.8 +0.1
baz=87
GMRC Granite Mounta 87.06 54 ⇑P P 06 43 38.8 -0.1
baz=87
PKI Pulchoki 87.20 299 *e*P P 06 43 39.9 +0.4
comp=Z,66nm,1.1s,mb5.5
PKI Pulchoki 87.20 299 *e*P P 06 43 39.9 +0.4
PKI pmax pmax
comp=Z,66nm,1.1s,mb5.5
L08A Fields 87.22 46 ⇑P P 06 43 39.9 +0.2
baz=87
GLA Glamis 87.25 56 ⇓P P 06 43 40.3 +0.5
baz=87
IRM Iron Mountain 87.29 55 ⇓P P 06 43 40.4 +0.4
baz=87
K08A Mann Creek Ran 87.30 46 ⇑P P 06 43 40.5 +0.5
baz=87
KKN Kakani 87.36 299 *e*P P 06 43 40.5 +0.2
comp=Z,39nm,1.0s,mb5.3
KKN Kakani 87.36 299 *e*P P 06 43 40.5 +0.2
KKN pmax pmax
comp=Z,39nm,1.0s,mb5.3
O09A Fish Creek Ran 87.44 48 ⇓P P 06 43 41.0 +0.2
baz=87
DMN Daman 87.47 299 *e*P P 06 43 41.3 +0.5
comp=Z,85nm,1.0s,mb5.6
V11A Goodsprings 87.53 53 ⇓P P 06 43 41.4 +0.3
baz=88
L09A Wilkinson Ranc 87.65 46 ⇑P P 06 43 42.5 +0.8
baz=88
Y12C Blythe 87.68 55 ⇑P P 06 43 42.1 +0.2
baz=88
K09A Rome 87.82 46 ⇑P P 06 43 42.6 +0.1
baz=88
GKN Gorkha 87.97 299 *e*P P 06 43 43.1 -0.1
comp=Z,53nm,0.9s,mb5.6
PDMCI Parker Dam,Lak 88.14 55 ⇓P P 06 43 44.4 +0.4
baz=88
I09A Lost Marbles R 88.20 45 ⇑P P 06 43 44.8 +0.5
baz=88
Y13A Salome 88.26 55 ⇓P P 06 43 44.8 +0.2
baz=88
P11A Circle Ranch, 88.32 49 ⇑P P 06 43 45.5 +0.6
baz=88
U12A Valley of Fire 88.39 52 ⇑P P 06 43 46.0 +0.8
baz=88
X13A Yucca 88.46 54 ⇓P P 06 43 45.6 +0.1
baz=88
W13A Hualapai Mount 88.55 54 ⇓P P 06 43 45.9 -0.1
baz=88
O11A Cowboy Ranch, 88.55 49 ⇑P P 06 43 45.9 -0.1
baz=88
N11A Elko Archery C 88.69 48 ⇓P P 06 43 46.6 0.0
baz=89
KOLN Koldanda 88.80 299 *e*P P 06 43 46.9 -0.3
comp=Z,26nm,0.9s,mb5.3
M11A Holland Ranch, 88.82 47 ⇓P P 06 43 48.0 +0.8
baz=89
Z14A Wintersburg 88.86 56 ⇑P P 06 43 47.9 +0.5
baz=89
Q12A Willow Creek R 88.87 50 ⇑P P 06 43 47.7 +0.2
baz=89
P12A McGill 88.93 49 ⇓P P 06 43 48.2 +0.5
baz=89
Y14A Wickenburg 88.95 55 ⇑P P 06 43 48.1 +0.2
baz=89
X14A Yava 89.18 55 ⇓P P 06 43 48.1 -0.8
baz=89
N12A Clover Valley, 89.21 48 ⇓P P 06 43 49.5 +0.4
baz=89
W14A Seligman 89.21 54 ⇑P P 06 43 48.7 -0.4
baz=89
O12A Currie 89.26 49 ⇑P P 06 43 49.9 +0.6
baz=89
M12A Wells 89.45 48 ⇓P P 06 43 50.9 +0.7
baz=89
116A Eloy 89.67 57 ⇑P P 06 43 51.0 -0.2
baz=90
X15A Humboldt 89.70 55 ⇓P P 06 43 51.7 +0.3
baz=90
WMQ Urumqi 89.71 315 *e*P P 06 43 51.0 -0.4
WMQ AMB AMB
comp=Z,18nm,1.0s,mb5.2
M13A Montello 89.98 48 ⇑P P 06 43 52.9 +0.2
baz=90
MSU Marysvale 90.73 51 *e*P P 06 43 55.4 -0.8
MCMT McKenzie Canyo 91.80 45 *e*P P 06 44 01.8 +0.7
PDAR Pinedale Array 93.65 47 P P 06 44 09.8 +0.1
comp=Z,0.5nm,0.6s,mb4.0,baz=274,slow=2.2,SNR=5.1
PDAR PKKP PKKPbc 07 01 13.7 -0.3
comp=Z,0.3nm,0.6s,baz=90,slow=5.6,SNR=4.0
MKAR Makanchi Array 94.14 317 P P 06 44 11.4 -0.5
comp=Z,14nm,0.8s,mb5.3,baz=100,slow=5.9,SNR=92
MKAR Makanchi Array 94.14 317 P P 06 44 11.4 -0.5
MKAR pmax pmax
comp=Z,14nm,0.8s
ZAL Zalesovo 94.19 324 P P 06 44 11.0 -1.2
comp=Z,2.6nm,0.8s,mb4.6,baz=18,slow=5.1,SNR=13
ZAL Zalesovo 94.19 324 P P 06 44 11.0 -1.1
ZAL pmax pmax
comp=Z,3.0nm,0.8s
YKA Yellowknife Ar 95.27 27 LR LR 07 24 30.7
comp=Z,46nm,18.4s,baz=250,slow=34
KURK Kurchatov 97.27 320 ⇓*i*P P 06 44 24.1 -2.0
AAK Ala-Archa 98.90 312 *e*P P 06 44 31.4 -2.1
AAK pmax pmax
comp=Z,1.0nm,0.8s,mb4.4
ARCES ARCESS Array B 116.93 346 PKP PKPdf 06 49 34.4 -3.2
comp=Z,1.5nm,0.8s,baz=32,slow=4.7,SNR=4.4
ARCES ARCESS Array B 116.93 346 PKIKP PKPdf 06 49 34.4 -3.1
ARCES pmax pmax
comp=Z,2.0nm,0.8s
BOSA Boshof 124.98 223 PKP PKPdf 06 49 52.9 -0.1
comp=Z,5.1nm,0.9s,baz=148,slow=2.4,SNR=3.8
BOSA Boshof 124.98 223 PKIKP PKPdf 06 49 52.9 -0.1
BOSA pmax pmax
comp=Z,5.0nm,0.9s
NOA NORSAR Array B 127.30 345 PKP PKPdf 06 49 55.6 -1.8
comp=Z,1.0nm,0.9s,baz=25,slow=2.4,SNR=3.1
NOA NORSAR Array B 127.30 345 PKIKP PKPdf 06 49 55.6 -1.8
NOA pmax pmax
comp=Z,1.0nm,0.9s
CLL Collm 134.72 336 *e*PKPdf PKPdf 06 50 12.0 +0.5
CLL L 06 49 00.0
comp=Z,100nm,21.8s
CLL *e*PP PP 06 52 54.0 +8.3
CLL Collm 134.72 336 *e*PKP 06 50 06.0
GERES GERESS Array B 136.33 334 PKP PKPdf 06 50 15.0 +0.5
comp=Z,0.5nm,0.2s,baz=132,slow=4.0,SNR=4.2
GERES GERESS Array B 136.33 334 PKIKP PKPdf 06 50 15.0 +0.5
GERES pmax pmax
comp=Z,1.0nm,0.2s
KEST Kesra 148.04 323 PKPbc PKPbc 06 50 38.4 0.0
comp=Z,3.2nm,0.8s,baz=258,slow=9.8,SNR=5.8
ESDC Sonseca Array 150.65 344 PKPbc PKPbc 06 50 43.7 -1.2
comp=Z,1.3nm,0.7s,baz=15,slow=3.2,SNR=7.8
TORD Torodi Ar. Bea 164.69 278 PKP PKPdf 06 50 56.1 -0.5
comp=Z,1.1nm,1.0s,baz=292,slow=2.9,SNR=3.9
TORD PKPab PKPab 06 51 53.1 +0.6
comp=Z,2.7nm,0.9s,baz=75,slow=2.5,SNR=10
DBIC Dimbokro 169.84 242 PKPab PKPab 06 52 16.6 +1.3
comp=Z,4.0nm,0.9s,baz=152,slow=6.7,SNR=4.2
DBIC Dimbokro 169.84 242 PKP2 PKPab 06 52 16.6 +1.3
DBIC pmax pmax
comp=Z,4.0nm,0.9s

*ISCJB **11** 06:40:32.4±9.0,241S±06×1798E±07,h532km±65km, mb3.9/11, Error ellipse: s-maj=129.3km s-min=18.2km az=89.2*
*IDC **11** 06:40:37.4±10.0,2452S×17951E,h544km±73km, mb3.3/6, mb1 3.3/7, mb1mx3.3/12, mbtmp4.3/7, Error ellipse: s-maj=137.8km s-min=21.4km az=46.0*
*NEIC **11** 06:40:38.3±2.0,2454S×17933E,h550km±26km, mb4.1/10, Error ellipse: s-maj=20.5km s-min=12.6km az=208.0*
ISC 11 06:40:33.8±7.7,242S±06×1798E±06,h529km±52km,n17, σ0°65/17,mb3.9/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.17**	**189**	P	**P**	**06 43 35.0**	**+0.1**
	1.8nm,0.3s,baz=299,slow=4.1,SNR=11						
RPZ	**Rata Peaks**	**20.71**	**198**	P	**P**	**06 44 36.5**	**-0.8**
	10nm,0.7s,baz=48,slow=18,SNR=6.2						
CTA	**Charters Tower**	**31.27**	**271**	*e*P	**P**	**06 46 11.1**	**+0.9**
	6.3nm,0.4s,mb4.5						
CTA	**Charters Tower**	**31.27**	**271**	P	**P**	**06 46 11.2**	**+1.0**
	7.4nm,0.4s,mb4.5,baz=92,slow=13,SNR=13						
CTAO	**Charters Tower**	**31.27**	**271**	*e*P	**P**	**06 46 10.8**	**+0.6**
	8.1nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**34.40**	**249**	*e*P	**P**	**06 46 37.0**	**+0.2**
	1.9nm,1.3s,mb3.5						
STKA	**Stephens Creek**	**34.40**	**249**	P	**P**	**06 46 37.1**	**+0.3**
	1.1nm,0.4s,mb3.7,baz=90,slow=9.5,SNR=4.8						
ASAR	**Alice Springs**	**41.77**	**261**	P	**P**	**06 47 37.1**	**+0.4**
	2.2nm,0.5s,mb4.0,baz=98,slow=6.8,SNR=22						
WB2	**Warramunga Arr**	**42.16**	**267**	*e*P	**P**	**06 47 39.5**	**-0.3**
WRAB	**Tennant Creek**	**42.16**	**267**	*e*P	**P**	**06 47 39.4**	**-0.4**
	5.6nm,0.4s,mb4.5						
FORT	**Forrest**	**46.00**	**250**	*e*P	**P**	**06 48 09.3**	**-0.2**
	16nm,0.6s,mb4.7						
KAKA	**Kakadu**	**46.13**	**276**	*e*P	**P**	**06 48 09.2**	**-1.3**
	11nm,1.1s,mb4.3						
FITZ	**Fitzroy Crossi**	**50.59**	**266**	*e*P	**P**	**06 48 44.6**	**+0.9**
	5.7nm,0.8s,mb4.0						
VNDA	**Vanda**	**54.04**	**185**	P	**P**	**06 49 08.4**	**0.0**
	0.3nm,0.7s,mb2.8,baz=2.4,slow=5.9,SNR=3.6						
SBA	**Scott Base**	**54.04**	**183**	*e*P	**P**	**06 49 09.7**	**+1.2**
	3.0nm,1.1s,mb3.5						
QSPA	**South Pole Qui**	**65.86**	**180**	*e*P	**P**	**06 50 26.5**	**-0.4**
	1.0nm,0.6s,mb3.5						
MAW	**Mawson**	**77.37**	**201**	P	**P**	**06 51 33.8**	**-0.3**
	0.9nm,0.5s,mb3.4,baz=142,slow=4.1,SNR=7.5						

*BJI **11** 06:45:40.5,6140N×16750E,h10km, mB5.0, mb4.6, Ms4.7, Msz4.5*
*MOS **11** 06:45:41.7±1.0,6137N×16759E,h11km,mb4.7/30, MS4.0/7, Error ellipse: s-maj=13.2km s-min=6.6km az=88.6*
*IDC **11** 06:45:41.8±0.8,6143N×16751E,h0km,mb4.1/17, mb1 4.3/17,mb1mx4.2/23,mbtmp4.1/17,MS4.0/4, Ms1 4.0/4,ms1mx3.4/21,Error ellipse: s-maj=25.3km s-min=14.2km az=176.0*
*KRSC **11** 06:45:42,6137N×16737E,h6km,ML4.3*
*ISCJB **11** 06:45:42.7±0.1,6139N±004×16756E±004,h16km, mb4.5/63,MS4.1/12,Error ellipse: s-maj=5.2km s-min=2.8km az=156.3*
*HRVD **11** 06:45:43.6±0.4,6115N×16740E,h22km±1km,MW4.9/57, Centroid moment Tensor Solution. LP body waves: s15,c18;Mantle waves: s57,c73; Half duration: 0 Moment tensor: Scale 1016Nm; Mrr2.28±.18; Mθθ-0.71±.13; Mφφ-1.57±.11; Mrθ0.55±.21; Mθφ-0.73±.07; Mφr-1.08±.13; Best double couple: Mw2.41100×1016 NP1:φs44.00000°,δ38.00000°,λ119.00000°. NP2: φs190.00000°,δ57.00000°,λ69.00000°. Principal axes: T 2.7160, Plg70.0000°, Azm52.0000°; N -0.6110, Plg17.0000°, Azm201.0000°; P -2.1060, Plg10.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **11** 06:45:43.6±0.3,6141N×16752E,h10km,mb4.7/37 Error ellipse: s-maj=8.6km s-min=3.9km az=185.0*
*SZGRF **11** 06:45:46.8,6090N×16699E,h33km, mb4.8, Eastern Siberia, Russia*
ISC 11 06:45:44.6±0.1,6143N±004×16756E±004,h17km, h17km±1.9km:pP-P,n256,σ0°72/266,mb4.5/63,MS4.1/12, 51C-55D,Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**5.79**	**207**	P	**Pn**	**06 47 09.0**	**-0.7**
KBTR				S	**Sn**	**06 48 10.0**	**-5.7**
KBTR	**Krutoberegovo**	**5.79**	**207**	*e*P	**Pn**	**06 47 09.0**	**-0.7**
KBTR				*i* S	**Sn**	**06 48 10.0**	**-5.7**
SMKR	**Semkarok**	**5.79**	**216**	*e*P	**Pn**	**06 47 09.9**	**+0.2**
SRKR	**Sorokina**	**5.81**	**217**	P	**Pn**	**06 47 10.5**	**+0.5**
ZLN	**Zelenaya**	**6.47**	**216**	P	**Pn**	**06 47 20.5**	**+1.5**
BILL	**Bilibino**	**6.66**	**356**	ǁ *i*PN	**Pn**	**06 47 22.8**	**+1.2**
BILL *e* 06 48 42.7
BILL pmax pmax
comp=Z,29nm,0.7s
BILL Bilibino 6.66 356 *e*Pn **Pn 06 47 22.9 +1.3**
comp=Z,58nm,0.9s
KMNR Kamenistaya 6.86 217 P **Pn 06 47 23.4 -0.9**
MKZ Mys Kozlova 7.55 207 P **Pn 06 47 35.1 +1.2**
MA2 Magadan 8.49 265 *e*PN **Pn 06 47 48.2 +1.4**
MA2 Magadan 8.49 265 *e*Pn **Pn 06 47 47.1 +0.3**
comp=Z,27nm,0.5s
SPN Mys Shipunski 9.29 209 P **Pn 06 47 57.2 -0.6**
SPN Mys Shipunski 9.29 209 *e*P **Pn 06 47 57.2 -0.6**
GNL Ganaly 9.31 218 P **Pn 06 47 58.3 +0.3**
PET Petropavlovsk 9.70 214 *e*PN **Pn 06 48 02.0 -1.4**
PET *e*S **Sn 06 49 57.0 +5.0**
PET pmax pmax
comp=Z,18nm,0.5s
PET pmax pmax
comp=Z,100nm,8.1s
PET smax
comp=N,200nm,15.6s
PET MLR MLR
comp=Z,2μm,16.0s
PET MLR MLR
comp=Z,2μm,16.0s
IMA2 Indian Mountai 17.54 58 *e*P **Pn 06 49 49.6 +1.4**
YAK Yakutsk 17.79 289 *e*P **Pn 06 49 53.5 +2.2**
YAK pmax pmax
comp=Z,10.0nm,0.8s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK MLR MLR
comp=E,800nm,14.0s
YAK MLR MLR
comp=Z,1μm,14.0s
YAK MLR MLR
comp=N,200nm,11.0s
TIXI Tiksi 18.09 320 *e*P **Pn 06 49 56.8 +1.8**
TIXI pmax pmax
comp=Z,13nm,1.1s
MCK McKinley 19.88 64 *e*P **Pn 06 50 16.2 -0.4**
MCK pmax pmax
comp=Z,25nm,1.4s
MCK McKinley 19.88 64 *e*P **Pn 06 50 16.2 -0.4**
comp=Z,26nm,1.4s
COLA College 20.10 61 P **P 06 50 17.5 +0.1**
COLA pmax pmax
comp=Z,31nm,1.2s
COLA College 20.10 61 P **P 06 50 17.5 +0.1**
comp=Z,31nm,1.2s
KDAK Kodiak Island 20.26 82 P **P 06 50 18.2 -1.0**
comp=Z,6.5nm,0.6s,baz=292,slow=3.8,SNR=6.9
KDAK LR LR 06 58 54.0
comp=Z,354nm,18.6s,MS3.8,baz=306,slow=39
KDAK Kodiak Island 20.26 82 P **P 06 50 18.2 -1.0**
KDAK LR LR 06 58 54.0
YSS Yuzh-Sakhalins 20.32 236 ǁ *e*P **P 06 50 24.0 +4.2**
YSS *e*S **S 06 54 04.0 -3.1**
YSS *e* 06 54 26.0
YSS pmax pmax
comp=Z,20nm,0.6s
YSS MLR MLR
comp=E,500nm,13.0s
YSS MLR MLR
comp=Z,400nm,13.0s,MS4.0
YSS Yuzh-Sakhalins 20.32 236 *e*P **P 06 50 19.7 -0.2**
comp=Z,17nm,0.5s
KLR Kul'dur 23.40 255 *e*P **P 06 50 47.2 -5.5**
KLR *e*S **S 06 55 08.0 +3.1**
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,2μm,13.0s,MS4.7
DAWY Dawson 23.85 60 *e*P **P 06 50 55.9 -1.1**
INK Inuvik 25.00 49 P **P 06 51 07.3 -0.2**
comp=Z,25nm,1.0s,mb4.7,baz=295,slow=11,SNR=43
INK Inuvik 25.00 49 P **P 06 51 07.3 -0.2**
INK pmax pmax
comp=Z,25nm,1.0s
INK Inuvik 25.00 49 *e*P **P 06 51 06.9 -0.6**
comp=Z,38nm,1.1s,mb4.8
MDJ Mudanjiang 27.82 250 P **P 06 51 32.3 -0.6**
MDJ AMB AMB
comp=Z,2.0nm,0.6s,mb3.9
MDJ AMB AMB
comp=Z,79nm,5.2s
VLA Vladivostok 27.97 246 *e*P **P 06 51 35.0 +0.7**
VLA pmax pmax
comp=Z,20nm,0.8s,mb4.8
CN2 Changchun 30.34 254 *e*P **P 06 51 55.2 -0.1**
CN2 *e*XP sP 06 52 02.2 -0.2
CN2 *e*S **S 06 56 52.8 -2.1**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.1
CN2 LR LR
comp=E,200nm,15.0s,MS4.1
CN2 LR LR
comp=Z,300nm,16.0s,MS4.0
MJAR Matsushiro Arr 30.99 230 P **P 06 52 00.4 -0.7**
comp=Z,2.0nm,0.9s,mb4.0,baz=12,slow=7.5,SNR=5.4
MJAR Matsushiro Ar 30.99 230 P **P 06 52 00.4 -0.6**
MJAR pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 34.55 53 P **P 06 52 31.8 -0.3**
comp=Z,0.4nm,0.5s,mb3.6,baz=306,slow=8.5,SNR=3.6
YKA Yellowknife Ar 34.55 53 P **P 06 52 31.8 -0.3**
TLY Talaya 35.13 284 *e*P **P 06 52 37.7 +0.5**
TLY *e* 06 54 00.3
TLY *e*S **S 06 58 18.3 +8.9**
TLY pmax pmax
comp=Z,18nm,1.7s,mb4.7
TLY MLR MLR
comp=Z,236nm,14.0s,MS4.1
SONM Songino Array 36.47 277 P **P 06 52 48.9 +0.2**
comp=Z,1.6nm,0.8s,mb4.0,baz=39,slow=5.5,SNR=4.3
SONM PcP PcP 06 55 12.2 -0.2
comp=Z,1.2nm,0.5s,baz=109,slow=1.2,SNR=4.6
SONM LR LR 07 08 51.6
comp=Z,222nm,19.7s,MS3.9,baz=304,slow=38
SONM Songino Array 36.47 277 P **P 06 52 48.9 +0.2**
SONM 06 55 12.2
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM MLR MLR
comp=Z,222nm,19.7s
BJI Beijing 37.61 259 *e*P **P 06 52 58.8 +0.5**
BJI AMB AMB
comp=Z,4.0nm,0.8s,mb4.2
HHC Hu-ho-hao-te 39.17 265 *e*P **P 06 53 05.8 -5.7**
HHC PP PP 06 54 39.4 -1.9
HHC PCP PcP 06 55 16.5 -4.2
HHC S **S 06 59 03.8 -7.0**
HHC PCS PcS 06 59 05.1 -5.3
HHC SCS ScS 07 03 13.3 -6.7
HHC AMB AMB
comp=Z,14nm,0.9s,mb4.7
HHC AMB AMB
comp=Z,68nm,5.4s
HHC LR LR
comp=N,306nm,8.7s
HHC LR LR
comp=E,275nm,9.6s
HHC LR LR
comp=Z,420nm,8.9s
EDM Edmonton 40.95 64 *e*P **P 06 53 25.9 -0.3**
C05A Tolt Reservoir 41.10 76 ⇓P **P 06 53 27.3 -0.2**
baz=41
D05A Enumclaw 41.33 77 ⇓P **P 06 53 29.4 +0.1**
baz=41
ZAL Zalesovo 42.01 299 P **P 06 53 34.1 -0.8**
comp=Z,1.0nm,0.4s,mb3.8,baz=180,slow=2.0,SNR=3.3
ZAL LR LR 07 12 30.9
comp=Z,175nm,21.7s,MS3.9,baz=67,slow=38
ZAL Zalesovo 42.01 299 P **P 06 53 34.2 -0.8**
ZAL pmax pmax
comp=Z,1.0nm,0.4s
ZAL MLR MLR
comp=Z,175nm,21.7s
NVS Novosibirsk 42.03 301 *e*P **P 06 53 34.6 -0.5**
NVS *e* 06 55 24.0

SSE	Sheshan	42.68	246	P	P	06 53 38.8	-1.6
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
SSE				AMB	AMB		
	comp=Z,84nm,5.1s						
NJ2	Nanjing	42.91	250	*e*P	P	06 53 42.9	+0.7
NJ2				AP	pP	06 53 47.4	0.0
NJ2				XP	sP	06 53 49.9	+0.5
NJ2				PP	PP	06 55 24.9	+3.0
NJ2				S	S	07 00 06.0	-0.3
NJ2				XS	sS	07 00 13.0	-1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,180nm,3.7s						
NJ2				LR	LR		
	comp=N,350nm,17.1s						
NJ2				LR	LR		
	comp=E,1μm,22.2s						
NJ2				LR	LR		
	comp=Z,370nm,13.4s,MS4.5						
H04A	Detroit Lake	43.08	79	⇑P	P	06 53 43.8	+0.1
	baz=43						
I03A	Eugene	43.10	81	⇑P	P	06 53 43.9	+0.1
	baz=43						
K01A	Sixes	43.41	83	⇑P	P	06 53 46.6	+0.3
	baz=43						
H05A	Madras	43.56	79	⇑P	P	06 53 47.4	-0.2
	baz=43						
WALA	Waterton Lakes	43.67	69	*e*P	P	06 53 48.2	-0.2
	comp=Z,11nm,1.1s,mb4.5						
J03A	Ideyld Park	43.70	81	⇑P	P	06 53 48.7	0.0
	baz=44						
F08A	Pendleton	43.85	76	⇓P	P	06 53 49.4	-0.5
	baz=44						
I05A	Bend	43.91	79	⇑P	P	06 53 49.8	-0.6
	baz=44						
I06A	Prineville	44.57	79	⇑P	P	06 53 55.6	-0.1
	baz=44						
J05A	Fort Rock	44.59	80	⇑P	P	06 53 55.9	+0.1
	baz=44,SNR=6.1						
I07A	Izee	44.80	78	⇑P	P	06 53 57.7	+0.2
	baz=45						
H08A	Prairie City	44.86	77	⇓P	P	06 53 57.9	-0.1
	baz=45,SNR=11						
YBH	Yreka Blue Hor	45.08	83	⇓P	P	06 53 59.6	-0.1
	baz=45						
J06A	Christmas Vall	45.13	79	⇓P	P	06 54 00.0	0.0
	baz=45,SNR=8.2						
BMO	Blue Mountains	45.25	75	*e*P	P	06 54 01.1	0.0
	comp=Z,17nm,1.4s,mb4.7						
I08A	Drewsey	45.37	77	⇑P	P	06 54 02.1	+0.1
	baz=45						
K06A	Valley Falls	45.43	80	⇓P	P	06 54 02.7	+0.2
	baz=45						
CHMT	Chamberlain Mo	45.56	71	*e*P	P	06 54 04.2	+0.7
L05A	Lakeview	45.73	81	⇓P	P	06 54 05.5	+0.6
	baz=46,SNR=5.1						
GTA	Gaotai	45.93	274	*e*P	P	06 54 10.2	+3.8
GTA				AP	pP	06 54 14.6	+3.0
GTA				XP	sP	06 54 17.0	+3.3
GTA				PCP	PcP	06 55 45.1	+1.9
GTA				PP	PP	06 55 58.1	+4.0
GTA				PPP		06 56 41.8	
GTA				S	S	07 00 53.6	+3.3
GTA				XS	sS	07 01 01.8	+2.9
GTA				SS	SS	07 04 10.8	-4.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
GTA				AMB	AMB		
	comp=Z,65nm,4.6s						
GTA				LR	LR		
	comp=N,268nm,14.5s,MS4.5						
GTA				LR	LR		
	comp=E,325nm,17.6s,MS4.5						
GTA				LR	LR		
	comp=Z,312nm,17.6s,MS4.3						
M05C	Lookout	46.11	82	⇓P	P	06 54 07.6	-0.2
	baz=46						
EGMT	Eagleton	46.29	67	*e*P	P	06 54 08.9	-0.4
	comp=Z,3.5nm,0.6s,mb4.5						
K08A	Mann Creek Ran	46.31	78	⇑P	P	06 54 09.6	+0.2
	baz=46,SNR=8.4						
L07A	Adell	46.46	80	⇓P	P	06 54 10.7	+0.1
	baz=46						
WVOR	Wild Horse Val	46.47	79	*e*P	P	06 54 10.8	+0.1
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
WVOR	Wild Horse Val	46.47	79	*e*P	P	06 54 10.8	+0.1
	comp=Z,10nm,1.2s,mb4.6						
M06C	Likely Place G	46.55	81	⇓P	P	06 54 11.2	-0.1
	baz=46						
ARCES	ARCESS Array B	46.56	343	P	P	06 54 10.5	-0.9
	comp=Z,1.4nm,0.7s,mb4.0,baz=21,slow=10,SNR=5.8						
ARCES	ARCESS Array B	46.56	343	P	P	06 54 10.5	-0.9
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	46.56	343	P	P	06 54 10.5	-0.9
LZH	Lanzhou	46.63	267	*e*P	P	06 54 13.5	+1.5
LZH				AP	pP	06 54 18.1	+0.9
LZH				XP	sP	06 54 20.5	+1.3
LZH				PP	PP	06 56 02.5	+1.0
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
K09A	Rome	46.69	78	⇑P	P	06 54 12.4	0.0
	baz=46,SNR=6.8						
L08A	Fields	46.80	79	⇑P	P	06 54 12.9	-0.3
	baz=47,SNR=14						
O04C	Chester	46.95	82	⇑P	P	06 54 14.6	+0.2
	baz=47						
KURK	Kurchatov	46.96	300	*e*P	P	06 54 14.0	-0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
KURK	Kurchatov	46.96	300	*e*P	P	06 54 14.0	-0.5
	comp=Z,6.9nm,0.8s,mb4.6						
M07A	Soldier Meadow	47.03	80	⇓P	P	06 54 15.1	+0.1
	baz=47,SNR=7.5						
N06A	Buffalo Meadow	47.21	81	⇑P	P	06 54 16.1	-0.4
	baz=47						
L09A	Wilkinson Ranc	47.25	78	⇑P	P	06 54 16.8	+0.1
	baz=47						
BOZ	Bozeman (W)	47.25	71	*e*P	P	06 54 17.1	+0.3
BOZ				pmax	pmax		
	comp=Z,23nm,1.8s,mb4.8						
BOZ	Bozeman (W)	47.25	71	*e*P	P	06 54 17.1	+0.3
	comp=Z,23nm,1.8s,mb4.8						
O05C	Quincy	47.31	83	⇓P	P	06 54 16.9	-0.3
	baz=47						
M08A	Happy Creek Ra	47.35	79	⇓P	P	06 54 17.8	+0.2
	baz=47						
SUTB	Sutter Butte	47.47	84	⇓P	P	06 54 17.5	-1.0
	baz=47						
HLID	Hailey	47.57	74	*e*P	P	06 54 19.3	0.0
	comp=Z,2.2nm,0.8s,mb4.2						
O06A	Flanigan	47.67	82	⇑P	P	06 54 19.6	-0.5
	baz=48						
M09A	Marrel Ranch,	47.81	79	⇓P	P	06 54 20.9	-0.3
	baz=48						
CHKZ	Chkalovo	47.91	307	*e*P	P	06 54 21.4	-0.5
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
CHKZ	Chkalovo	47.91	307	*e*P	P	06 54 21.4	-0.6
	comp=Z,7.3nm,1.0s,mb4.7						
QLMT	Earthquake Lak	47.97	71	*e*P	P	06 54 20.9	-1.5
P05C	Yuba Gap, Truc	47.97	83	⇑P	P	06 54 22.5	0.0
	baz=48						
N08A	GE Springer Mi	47.99	80	⇑P	P	06 54 22.1	-0.4
	baz=48						
GCMT	Greycliff	48.03	69	*e*P	P	06 54 23.5	+0.7
O07A	Toulon	48.12	81	⇓P	P	06 54 23.8	+0.3
	baz=48						
M10A	I.L. Ranch, Tu	48.16	78	⇓P	P	06 54 24.0	+0.1
	baz=48						
WMQ	Urumqi	48.22	287	*e*P	P	06 54 25.0	+0.7
WMQ				XP	sP	06 54 32.0	+0.5
WMQ				PP	PP	06 56 17.0	+0.3
WMQ				S	S	07 01 23.0	0.0
WMQ				SCS	ScS	07 04 15.0	-1.7
WMQ				SS	SS	07 04 47.0	-5.3
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,101nm,4.0s						
WMQ				LR	LR		
	comp=N,98nm,15.0s,MS4.1						
WMQ				LR	LR		
	comp=E,107nm,15.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,102nm,14.0s,MS4.0						
N09A	Rock Creek Ran	48.22	79	⇓P	P	06 54 24.4	+0.1
	baz=48						
LAVA	Lava Cap Winer	48.34	84	⇑P	P	06 54 24.8	-0.4
	baz=48						
MKAR	Makanchi Array	48.37	294	P	P	06 54 24.1	-1.3
	comp=Z,1.1nm,0.5s,mb4.2,baz=38,slow=6.3,SNR=17						
MKAR	Makanchi Array	48.37	294	P	P	06 54 24.1	-1.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	Borovoye	48.52	307	*e*P	P	06 54 26.5	-0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
BRVK	Borovoye	48.52	307	*e*P	P	06 54 26.5	-0.1
	comp=Z,5.0nm,0.9s,mb4.5						
M11A	Holland Ranch,	48.59	77	⇑P	P	06 54 27.6	+0.5
	baz=48						
R05C	Kirkwood Meado	48.70	83	⇑P	P	06 54 27.7	-0.3
	baz=49						
FLWY	Flagg Ranch	48.88	71	*e*P	P	06 54 30.1	+0.8
	comp=Z,29nm,1.4s,mb5.1						
IMW	Indian Meadow	48.91	72	*e*P	P	06 54 30.3	+0.6
	comp=Z,22nm,1.5s,mb5.0						
O09A	Fish Creek Ran	48.91	79	P	P	06 54 30.0	+0.4
	baz=49,SNR=8.7						
M12A	Wells	49.01	77	⇓P	P	06 54 29.2	-1.1
	baz=49						
S04C	Ingram Canyon,	49.05	85	⇓P	P	06 54 30.8	+0.1
	baz=49						
CMB	Columbia Colle	49.08	84	⇓P	P	06 54 30.5	-0.5
	baz=49						
N11A	Elko Archery C	49.09	78	⇓P	P	06 54 31.0	-0.1
	baz=49						
R06C	Coleville	49.14	83	⇓P	P	06 54 31.4	0.0
	baz=49						
O10A	Cortez Mining,	49.15	79	⇓P	P	06 54 31.6	+0.2
	baz=49						
RRI2	Red Ridge	49.16	72	*e*P	P	06 54 32.0	+0.5
	comp=Z,12nm,1.3s,mb4.8						
TPAW	Teton Pass	49.22	72	*e*P	P	06 54 32.5	+0.5
	comp=Z,19nm,1.4s,mb4.9						
LOHW	Long Hollow	49.29	72	*e*P	P	06 54 32.8	+0.3
	comp=Z,16nm,1.5s,mb4.8						
SNOW	Snow King Moun	49.33	72	*e*P	P	06 54 33.4	+0.5
	comp=Z,6.2nm,1.0s,mb4.6						
REDW	Red Top Meadow	49.37	72	*e*P	P	06 54 33.8	+0.7
	comp=Z,16nm,1.5s,mb4.8						
N12A	Clover Valley,	49.39	77	⇑P	P	06 54 33.2	-0.1
	baz=49						
S06C	San Francisco	49.46	83	⇓P	P	06 54 33.3	-0.5
	baz=49						
Q08A	Gabbs	49.60	81	⇓P	P	06 54 35.0	+0.1
	baz=49,SNR=7.0						
O11A	Cowboy Ranch,	49.67	78	⇓P	P	06 54 34.6	-0.8
	baz=50						
NVAR	Mina Array Bea	49.76	82	P	P	06 54 36.1	0.0
	comp=Z,1.2nm,0.7s,mb4.0,baz=319,slow=6.1,SNR=11						
Q09A	Carvers	49.97	81	⇓P	P	06 54 38.0	+0.2
	baz=50						
O12A	Currie	49.99	77	⇑P	P	06 54 38.0	+0.2
	baz=50						
ARU	Arti	50.04	317	⇑*i*P	P	06 54 38.0	-0.3
ARU				*e*		06 55 55.0	
ARU				*e*		06 56 32.2	
ARU				*e*S	S	07 01 50.7	+2.1
ARU				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.7						
MLAC	Mammoth Lakes	50.15	83	⇓P	P	06 54 38.0	-1.0
	baz=50						
T06C	Millerton Lake	50.23	84	⇑P	P	06 54 39.3	-0.4
	baz=50						
U04C	Hernandez Rese	50.23	85	⇓P	P	06 54 39.4	-0.3
	baz=50						
HWUT	Hardware Ranch	50.41	74	*e*P	P	06 54 41.4	+0.3
	comp=Z,13nm,1.4s,mb4.8						
PDAR	Pinedale Array	50.42	71	P	P	06 54 41.0	-0.1
	comp=Z,2.2nm,0.8s,mb4.3,baz=315,slow=4.2,SNR=21						
ULM	Lac du Bonnet	50.43	56	P	P	06 54 39.9	-1.3
	comp=Z,2.2nm,0.7s,mb4.3,baz=318,slow=9.6,SNR=3.7						
ULM	Lac du Bonnet	50.43	56	P	P	06 54 39.9	-1.3
R09A	Tonopah	50.50	81	P	P	06 54 41.8	+0.1
	baz=50,SNR=5.7						
P12A	McGill	50.54	78	⇑P	P	06 54 42.2	+0.2
	baz=50						
V04C	Ramage Ranch,	50.77	86	⇑P	P	06 54 43.9	+0.1
	baz=51						
HELL	Mitchell Peak,	50.82	84	P	P	06 54 43.9	-0.2
	baz=51,SNR=6.6						
R10A	Warm Springs	50.83	80	⇑P	P	06 54 44.3	+0.1
	baz=51,SNR=5.5						
S09A	Goldfield	50.84	81	⇑P	P	06 54 43.9	-0.4
	baz=51						
CD2	Chengdu	50.90	264	*e*P	P	06 54 43.5	-1.3
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
Q12A	Willow Creek R	50.92	78	⇓P	P	06 54 45.0	+0.1
	baz=51						
RCTC	Rector, Farmer	51.01	84	⇑P	P	06 54 45.3	-0.3
	baz=51						
GRAC	Grapevine Rang	51.35	82	⇓P	P	06 54 48.5	+0.4
	baz=51						
VES	Vestal, Richgr	51.47	84	⇓P	P	06 54 48.6	-0.3
	baz=51						
NLU	North Lily Min	51.48	76	*e*P	P	06 54 49.0	-0.2
JOF	Joensuu	51.63	336	*e*p	P	06 54 47.4	-2.8
RSSD	Black Hills	51.83	66	*e*P	P	06 54 51.6	-0.1
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
RSSD	Black Hills	51.83	66	*e*P	P	06 54 51.6	-0.1
	comp=Z,4.8nm,1.0s,mb4.4						
PKM	Peak Mountain	51.88	86	⇑P	P	06 54 52.5	+0.4
	baz=52						
TPNV	Topopah Spring	51.92	81	*e*P	P	06 54 52.4	0.0
TPNV				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.7						
TPNV	Topopah Spring	51.92	81	*e*P	P	06 54 52.4	0.0
	comp=Z,17nm,1.6s,mb4.7						
FURC	Furnace Creek,	52.02	82	⇑P	P	06 54 52.9	-0.2
	baz=52,SNR=5.6						
MPMC	Manual Prospec	52.05	83	⇑P	P	06 54 53.2	-0.1
	baz=52,SNR=5.2						
ARUT	Antelope Range	52.58	78	*e*P	P	06 54 57.7	+0.4
MSU	Marysvale	52.59	77	*e*P	P	06 54 58.3	+0.9
SHOC	Shoshone	52.75	82	⇓P	P	06 54 57.7	-0.9
	baz=53						
EDW2	Edwards Air Fo	52.76	84	⇓P	P	06 54 58.5	-0.1
	baz=53						
CCUT	Cedar City	52.80	78	*e*P	P	06 54 59.5	+0.5
SRU	San Rafael	52.88	75	*e*P	P	06 54 59.9	+0.4
GSC	Goldstone	52.99	83	⇓P	P	06 55 00.4	+0.1
	baz=53,SNR=5.7						
U12A	Valley of Fire	53.15	80	⇓P	P	06 55 01.8	+0.3
	baz=53						
V11A	Goodsprings	53.21	81	⇓P	P	06 55 02.6	+0.6
	baz=53						
TUQ	Turquoise Mtn.	53.30	82	⇑P	P	06 55 02.8	+0.2
	baz=53						
KAF	Kangasniemi	53.30	338	*e*p	P	06 55 00.9	-1.7
	baz=20,slow=7.0						
SNCC	San Nicolas Is	53.36	87	⇓P	P	06 55 02.4	-0.7
	baz=53						
BFSC	Mount Baldy St	53.44	84	⇓P	P	06 55 03.8	+0.2
	baz=53,SNR=5.2						
V12A	Nelson	53.57	81	⇑P	P	06 55 05.2	+0.6
	baz=53						
HEC	Hector,Ludlow	53.60	83	⇓P	P	06 55 05.1	+0.3
	baz=53						
BBRC	Big Bear Sol-O	53.78	84	⇓P	P	06 55 06.1	+0.1
	baz=54						
W12A	Cal Nev Ari	53.91	81	⇓P	P	06 55 07.6	+0.5
	baz=54						
GMRC	Granite Mounta	53.96	82	⇑P	P	06 55 07.7	+0.3
	baz=54,SNR=5.6						
FINES	FINESS Array B	53.96	338	P	P	06 55 06.4	-1.1
	comp=Z,1.7nm,0.7s,mb4.1,baz=52,slow=9.6,SNR=5.1						
FINES	FINESS Array B	53.96	338	P	P	06 55 06.4	-1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MURC	Murrieta	54.18	84	⇑P	P	06 55 08.9	-0.1
	baz=54						
BELC	Belle Mtn.	54.43	83	⇑P	P	06 55 10.5	-0.4
	baz=54						
SMCO	Snowmass	54.46	72	*e*P	P	06 55 11.8	+0.7
	comp=Z,7.7nm,1.1s,mb4.5						
PFO	Pinyon Flat Ob	54.53	84	⇑P	P	06 55 11.3	-0.3
	baz=54						
W13A	Hualapai Mount	54.54	81	⇓P	P	06 55 12.1	+0.4
	baz=54						
IRM	Iron Mountain	54.70	82	⇓P	P	06 55 13.4	+0.5
	baz=55,SNR=11						
W14A	Seligman	54.83	80	⇓P	P	06 55 14.7	+1.0
	baz=55,SNR=11						
X13A	Yucca	54.98	81	⇓P	P	06 55 15.1	+0.2
	baz=55,SNR=5.7						
AAK	Ala-Archa	55.05	296	⇑*e*P	P	06 55 14.9	-0.5
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.6						
PDMCI	Parker Dam,Lak	55.07	81	⇑P	P	06 55 15.4	-0.1
	baz=55						
MONP	Monument Peak	55.14	84	⇓P	P	06 55 16.2	+0.2
	baz=55						
W15A	Williams	55.24	79	⇓P	P	06 55 17.7	+1.0
	baz=55						
Y12C	Blythe	55.34	82	⇑P	P	06 55 17.5	+0.1
	baz=55,SNR=5.9						
MVCO	Mesa Verde	55.35	75	*e*P	P	06 55 17.8	+0.2
WUAZ	Wupatki	55.39	78	*e*P	P	06 55 17.9	+0.1
	comp=Z,24nm,1.4s,mb5.0						
SWSC	Sam W. Stewart	55.40	84	⇓P	P	06 55 17.6	-0.2
	baz=55						
X14A	Yava	55.53	80	⇓P	P	06 55 19.4	+0.6
	baz=55,SNR=7.3						
Y13A	Salome	55.62	81	⇓P	P	06 55 19.9	+0.5
	baz=56						
GLA	Glamis	55.77	83	⇑P	P	06 55 20.8	+0.3
	baz=56,SNR=5.4						
X15A	Humboldt	55.82	80	⇑P	P	06 55 21.8	+0.9
	baz=56,SNR=13						
Y14A	Wickenburg	55.91	81	⇓P	P	06 55 21.8	+0.3
	baz=56,SNR=6.8						
KMI	Kunming	56.24	261	P	P	06 55 26.1	+2.2
KMI				AP	pP	06 55 29.1	-0.1
KMI				XP	sP	06 55 30.3	-0.9
KMI				PP	PP	06 57 32.8	+3.6
KMI				PPP		06 58 48.3	
KMI				S	S	07 03 13.0	0.0
KMI				XS	sS	07 03 18.0	-3.7
KMI				PS		07 03 25.1	
KMI				SS	SS	07 06 59.5	-0.1
KMI				LR	LR		
	comp=N,79nm,14.3s						
KMI				LR	LR		
	comp=E,151nm,20.4s						
KMI				LR	LR		
	comp=Z,180nm,26.8s						
Z14A	Wintersburg	56.41	81	⇓P	P	06 55 25.3	+0.2
	baz=56,SNR=5.3						
NB2	NORSAR Subarra	56.51	346	P	P	06 55 25.1	-0.8
	comp=Z,4.2nm,0.8s,mb4.5,baz=14,slow=7.4						
NOA	NORSAR Array B	56.51	346	P	P	06 55 25.4	-0.4
	comp=Z,1.9nm,0.7s,mb4.2,baz=13,slow=7.3,SNR=5.3						
NOA	NORSAR Array B	56.51	346	P	P	06 55 25.5	-0.4
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
115A	Sonoran Desert	57.29	81	⇑P	P	06 55 32.2	+0.9
	baz=57,SNR=6.9						
OBN	Obninsk	57.55	329	⇑*e*P	P	06 55 31.7	-1.5
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.9						
116A	Eloy	57.66	81	⇑P	P	06 55 35.1	+1.2
	baz=58						
ANMO	Albuquerque	58.15	75	*e*P	P	06 55 37.7	+0.3
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ANMO	Albuquerque	58.15	75	*e*P	P	06 55 37.7	+0.3
	comp=Z,6.1nm,1.3s,mb4.5						
KSU1	Kansas State U	59.15	64	*e*P	P	06 55 43.5	-0.8
AMTX	Amarillo	60.40	71	*e*P	P	06 55 52.0	-1.0
	comp=Z,5.6nm,0.7s,mb4.7						
MNTX	Cornudas Mount	61.35	76	*e*P	P	06 55 60.0	+0.6
	comp=Z,14nm,1.3s,mb4.9						
WMOK	Wichita Mounta	61.83	69	*e*P	P	06 56 02.2	-0.5
WMOK				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
WMOK	Wichita Mounta	61.83	69	*e*P	P	06 56 02.2	-0.4
	comp=Z,19nm,1.4s,mb5.0						
AKASG	Malin Array Be	63.36	332	P	P	06 56 11.9	-0.9
	comp=Z,2.3nm,0.7s,mb4.4,baz=21,slow=6.6,SNR=12						
AKASG	Malin Array Be	63.36	332	P	P	06 56 12.0	-0.9
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKBB	Malin Array Si	63.36	332	*e*P	P	06 56 11.6	-1.3
GOF	Gofitskoye	64.82	320	*e*P	P	06 56 24.3	+1.8
JCT	Junction City	64.95	72	*e*P	P	06 56 23.0	-0.3
JCT				pmax	pmax		
	comp=Z,31nm,1.6s,mb5.1						
JCT	Junction City	64.95	72	*e*P	P	06 56 22.9	-0.4
	comp=Z,31nm,1.6s,mb5.1						
WVT	Waverly	65.38	60	*e*P	P	06 56 25.0	-1.1
WVT				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
WVT	Waverly	65.38	60	*e*P	P	06 56 25.0	-1.2
	comp=Z,6.3nm,0.8s,mb4.7						
OJC	Ojcow	65.74	338	*e*P	P	06 56 28.5	0.0
CLL	Collm	65.79	343	*e*P	P	06 56 29.0	+0.3
DPC	Dobruska-Polom	66.21	340	*e*P	P	06 56 31.6	+0.1
STHS	Stebnicka Huta	66.24	337	*e*P	P	06 56 32.4	+0.7
STHS				*e*	pP	06 56 37.9	+0.9
STHS				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
STHS	Stebnicka Huta	66.24	337	*e*P	P	06 56 32.4	+0.7
	comp=Z,5.4nm,1.1s,mb4.5						
STHS				*e*	pP	06 56 37.9	+0.9
PLAL	Pickwick Lake	66.26	60	*e*P	P	06 56 30.2	-1.6
	comp=Z,2.5nm,0.6s,mb4.4						
KOLS	Kolonicke sedl	66.51	336	*e*P	P	06 56 35.2	+1.8
CRVS	Cervenica-Dubn	66.69	336	*e*P	P	06 56 34.3	-0.3
CRVS				*e*sP	sP	06 56 39.9	-2.0
PRU	Pruhonice	66.84	341	*e*P	P	06 56 39.7	+4.2
NKC	Novy Kostel	66.91	343	*e*P	P	06 56 36.2	+0.2
KECS	Kecovo	67.28	337	*e*P	P	06 56 38.5	+0.2
KECS				*e*	pP	06 56 45.0	+1.3
KECS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
KECS	Kecovo	67.28	337	*e*P	P	06 56 38.5	+0.2
	comp=Z,2.9nm,0.9s,mb4.3						
KECS				*e*	pP	06 56 45.0	+1.3
VYHS	Vyhne	67.58	338	*e*P	P	06 56 40.2	0.0
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
VYHS	Vyhne	67.58	338	*e*P	P	06 56 40.2	0.0
	comp=Z,4.6nm,1.3s,mb4.3						
GRA1	Grafenberg Arr	67.61	344	*e*P	P	06 56 41.2	+0.8
	comp=Z,6.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	67.61	344	*e*P	P	06 56 41.2	+0.8
	comp=Z,6.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	67.61	344	*e*P	P	06 56 41.2	+0.8
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	67.61	344	*e*P	P	06 56 41.2	+0.8
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
KHC	Kasperske Hory	67.82	342	*e*P	P	06 56 38.8	-2.9
GERES	GERESS Array B	68.08	342	P	P	06 56 42.9	-0.4
	comp=Z,0.7nm,0.5s,mb3.9,baz=19,slow=6.2,SNR=7.2						
GERES	GERESS Array B	68.08	342	P	P	06 56 42.9	-0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GNI	Garni	68.69	316	*e*P	P	06 56 46.5	-0.6
GNI				pmax	pmax		
	comp=Z,17nm,1.7s						
BRTR	Keskin Array B	72.48	324	P	P	06 57 09.8	-0.5
	comp=Z,1.2nm,0.8s,mb3.9,baz=52,slow=4.8,SNR=6.5						
BRTR	Keskin Array B	72.48	324	⇑*e*P	P	06 57 11.8	+1.5
ESDC	Sonseca Array	79.01	353	P	P	06 57 47.1	-0.5
	comp=Z,0.3nm,0.3s,mb3.7,baz=48,slow=2.3,SNR=7.1						
PPT	Papeete	85.81	139	LR	LR	07 30 39.4	
	comp=Z,70nm,18.7s,MS4.1,baz=282,slow=31						
MAW	Mawson	148.94	226	PKPbc	PKPbc	07 05 28.6	-2.9
	comp=Z,2.5nm,0.8s,baz=90,slow=7.1,SNR=3.6						
MAW	Mawson	148.94	226	PKP2	PKPbc	07 05 28.6	-2.9
MAW				pmax	pmax		
	comp=Z,3.0nm,0.8s						

*NEIC **11** 07:01:32.4, 3141S×6967W, h142^{km}, MG3.5(GUC), After GUC.*

GUC 11 07:01:32.4±0.5**, 3141S×6967W, h142^{km}±4^{km}, MD3.6, ML3.5, 9C-7D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	1.50	211	⇓iP	Pn	07 02 02.0	+0.7
JACH				iS	Sn	07 02 24.4	+1.0
TLL	Tololo Astrono	1.57	321	⇑iP	Pn	07 02 03.1	+1.0
TLL				iS	Sn	07 02 26.2	+1.3
TLL				AML	AML	07 02 27.1	
	comp=N,301nm,0.4s						
TLL	Tololo Astrono	1.57	321	⇑iP	Pn	07 02 03.1	+1.0
TLL				iS	Sn	07 02 26.2	+1.3
CHNG	Los Chungos	1.64	253	eP	Pn	07 02 03.4	+0.6
CHNG				iS	Sn	07 02 26.4	+0.3
ROCH	El Roble	1.93	216	⇑iP	Pn	07 02 07.1	+0.8
ROCH				iS	Sn	07 02 33.3	+1.2
PEL	Peldehue	1.94	206	⇓iP	Pn	07 02 06.8	+0.6
PEL				iS	Sn	07 02 32.9	+0.7
PEL				AML	AML	07 02 34.7	
	comp=E,214nm,0.7s						
PEL	Peldehue	1.94	206	⇓iP	Pn	07 02 06.8	+0.6
PEL				iS	Sn	07 02 32.9	+0.7
FCH	Farellones	1.99	195	⇑eP	Pn	07 02 08.1	+1.3
FCH				iS	Sn	07 02 35.0	+1.7
FCH				AML	AML	07 02 41.3	
	comp=N,131nm,0.3s						
CLCH	Cerro Calan	2.12	200	⇑iP	Pn	07 02 09.2	+0.8
CLCH				iS	Sn	07 02 36.9	+0.9
CLCH				AML	AML	07 02 39.2	
	comp=E,255nm,0.5s						
DSCH	Colegio Aleman	2.13	201	⇓iP	Pn	07 02 08.7	+0.2
DSCH				iS	Sn	07 02 36.5	+0.2
LACH	Colegio Las Am	2.17	199	iP	Pn	07 02 09.2	+0.2
LACH				iS	Sn	07 02 37.4	+0.3
PCH	Pirque	2.32	198	iP	Pn	07 02 11.7	+0.8
PCH				eS	Sn	07 02 41.5	+1.0
TACH	Talagante	2.49	205	⇑iP	Pn	07 02 13.2	+0.2
TACH				iS	Sn	07 02 44.8	+0.7
LCCH	Las Cruces	2.62	217	⇑iP	Pn	07 02 15.1	+0.6
LCCH				iS	Sn	07 02 47.3	+0.2
CHCH	Chadas Angostu	2.66	198	⇓iP	Pn	07 02 15.5	+0.5
CHCH				iS	Sn	07 02 48.5	+0.6
CACH	El Canelo	2.82	196	⇓iP	Pn	07 02 18.1	+1.0
CACH				iS	Sn	07 02 53.2	+1.7
CICH	Cipreses	2.98	192	⇓iP	Pn	07 02 20.1	+1.0
CICH				iS	Sn	07 02 56.0	+0.9
VACH	Vallenar	2.98	341	⇑iP	Pn	07 02 19.8	+0.7
VACH				iS	Sn	07 02 55.6	+0.5
VACH				AML	AML	07 02 56.1	
	comp=N,532nm,0.1s						
VACH	Vallenar	2.98	341	⇑iP	Pn	07 02 19.8	+0.7
VACH				iS	Sn	07 02 55.6	+0.5

WEL 11 07:37:04.0±0.1**, 4018S×17485E, h12km, ML3.5**/39**, 2C-2D, Error ellipse: s-maj=1.1km s-min=0.5km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	Wanganui	0.43	14	P*	Pg	07 37 13.5	+1.0
WAZ				eS*	Sg	07 37 18.3	0.0
WAZ				eS*	Sg	07 37 19.6	+1.3
KIW	Kapiti Island	0.69	176	⇓P*	Pb	07 37 16.8	-1.0
KIW				S*	Sb	07 37 25.3	-2.0
KIW				S*	Sb	07 37 25.6	-1.7
MRZ	Mangatainoka R	0.74	131	⇑P*	Pb	07 37 18.0	-0.8
MRZ				S*	Sb	07 37 27.6	-1.3
TSZ	Takapari Road	0.86	83	P*	Pb	07 37 19.9	-1.0
MTVZ	Mangateitei	0.93	31	P*	Pb	07 37 20.9	-1.0
DUWZ	D'Urville Isla	0.94	228	P*	Pb	07 37 21.3	-0.9
CAW	Cannon Point	0.94	170	P*	Pb	07 37 21.3	-0.9
PKVZ	Pokaka	0.96	24	P*	Pb	07 37 21.4	-1.2
TIWZ	Tintock	0.99	127	⇑P*	Pb	07 37 22.6	-0.5
TRVZ	Turoa	1.03	32	P*	Pb	07 37 22.8	-0.9
MOVZ	Moawhango	1.04	43	P*	Pb	07 37 22.0	-1.8
VRZ	Vera Road	1.05	356	P*	Pb	07 37 23.8	-0.3
DRZ	Dome Shelter	1.06	32	P*	Pb	07 37 23.1	-1.1
MRW	Makara Radio	1.06	186	P*	Pb	07 37 23.1	-1.1
FWVZ	Far West T-bar	1.07	31	P*	Pb	07 37 23.1	-1.3
NEZ	North Egmont	1.07	327	eP*	Pb	07 37 25.0	+0.6
MTW	Mount Morrison	1.10	153	P*	Pb	07 37 24.0	-0.9
TUVZ	Tukino	1.10	35	P*	Pb	07 37 23.8	-1.1
WEL	Wellington	1.11	183	P*	Pb	07 37 24.1	-0.9
WPVZ	Whakapapa	1.11	29	P*	Pb	07 37 23.6	-1.5
TCW	Tory Channel	1.12	203	⇓P*	Pb	07 37 24.0	-1.3
SNZO	South Karori	1.14	185	P*	Pb	07 37 24.3	-1.2
NGZ	Ngauruhoe	1.16	30	P*	Pb	07 37 24.2	-1.7
NWEZ	Newall Road	1.18	320	P*	Pb	07 37 26.7	+0.5
BFZ	Birch Farm	1.18	116	P*	Pb	07 37 25.1	-1.2
OTVZ	Oturere	1.19	32	P*	Pb	07 37 24.9	-1.5
TWVZ	Taurewa	1.19	23	P*	Pb	07 37 24.7	-1.8
WTVZ	West Tongariro	1.20	29	P*	Pb	07 37 24.9	-1.8
BHW	Baring Head	1.23	179	P*	Pb	07 37 26.1	-1.0
KRVZ	Karewarewa	1.24	30	P*	Pb	07 37 25.6	-1.7
MSWZ	Moikau Station	1.27	166	PN	Pn	07 37 27.1	-0.5
PAWZ	Paruwai Farm	1.28	160	PN	Pn	07 37 26.8	-0.8
KATZ	Kakaramea	1.37	29	PN	Pn	07 37 27.3	-1.6
TRWZ	Traveller	1.38	153	ePN	Pn	07 37 28.5	-0.5
TUWZ	Tuamarina	1.43	208	PN	Pn	07 37 28.7	-1.0
RATZ	Rangitukua	1.49	29	ePN	Pn	07 37 29.5	-1.0
NNZ	Nelson	1.53	227	PN	Pn	07 37 30.6	-0.4
WATZ	Wairara	1.62	25	ePN	Pn	07 37 32.2	-0.1
BKZ	Black Stump Fm	1.62	52	ePN	Pn	07 37 31.5	-0.8
HIZ	Hauiti	1.66	0	PN	Pn	07 37 32.4	-0.5
HIZ				SN	Sn	07 37 53.9	-0.2
BSWZ	Blackbirch Sta	1.70	205	PN	Pn	07 37 33.8	+0.3
QRZ	Quartz Range	1.88	249	PN	Pn	07 37 35.5	-0.4
THZ	Tophouse	2.16	222	PN	Pn	07 37 40.1	+0.3
KHZ	Kahutara	2.45	203	PN	Pn	07 37 42.9	-0.7
URZ	Urewera	2.60	43	PN	Pn	07 37 44.7	-1.1

*IDC **11** 07:38:43.9±13.0, 3724N×7225E, h183km±99km, mb3.2/2, mb1 3.6/5, mb1mx3.2/22, mbtmp4.0/5, Error ellipse: s-maj=112.1km s-min=32.1km az=147.0*
*ISCJB **11** 07:38:44.5±1.1, 3745N±009×722E±0.1, h190km±14km, mb3.7/3, Error ellipse: s-maj=23.0km s-min=6.6km az=107.3*
*NEIC **11** 07:38:44.9±1.3, 3739N×72.12E, h182km±15km, mb4.8/8, Error ellipse: s-maj=18.2km s-min=6.4km az=62.0*
*NNC **11** 07:38:50.9±4.7, 3764N×7098E, h128km±111km, mb3.5, mpv3.9, Error ellipse: s-maj=95.7km s-min=32.2km az=66.0*
ISC 11 07:38:45.0±1.2**, 3745N**±009×**721E**±01**, h180**km±14km**, n22, σ0ˢ80**/21**, mb3.7**/3**, 1C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.48	19	ePn	Pn	07 40 05.5	+0.3
KK31	Karatay Array	5.78	348	P	Pn	07 40 10.3	+1.2
	6.3nm,0.4s,baz=341,slow=33,SNR=5.3						
KK31				⇑S	Sn	07 41 12.7	-2.6
	17nm,0.3s						
SMLA	Simla	7.55	145	ex	x	07 40 02.4	
SMLA				ex	x	07 40 31.6	
KLP	Kalpa	7.76	138	ex	x	07 40 34.4	
KHET	Khetri	9.85	161	ex	x	07 40 43.7	
KUDL	Kundal	9.98	157	ex	x	07 40 47.9	
KOLN	Koldanda	13.64	132	eP	Pn	07 41 50.5	-0.7
	8.2nm,0.4s						
GKN	Gorkha	14.11	128	eP	Pn	07 41 57.0	0.0
	15nm,0.3s						
KKN	Kakani	14.66	127	eP	Pn	07 42 04.4	+0.5
	24nm,0.6s						
DMN	Daman	14.68	128	eP	Pn	07 42 04.0	-0.1
	14nm,0.4s						
AB31	Akbulak array	14.74	327	P	Pn	07 42 04.3	-0.4
	5.7nm,0.7s,baz=135,slow=12,SNR=36						
AB31				⇓S	Sn	07 44 39.3	-10
	1.1nm,0.5s,baz=146,slow=23,SNR=5.4						
PKI	Pulchoki	14.90	128	eP	Pn	07 42 07.3	+0.5
	17nm,0.5s						
GUN	Gumba	14.96	126	eP	Pn	07 42 07.6	0.0
	23nm,0.4s						
JIRN	Jiri	15.34	125	eP	Pn	07 42 11.2	-0.9
	45nm,0.6s						
BVAR	Borovoye Array	15.62	356	P	Pn	07 42 15.7	+0.1
	0.3nm,0.3s,baz=161,slow=11,SNR=8.2						
AKTK	Aktyubinsk	16.45	327	P	Pn	07 42 26.6	+0.9
AKTO	Aktyubinsk	16.45	327	⇓P	Pn	07 42 26.4	+0.8
AKTO				S	S	07 45 23.7	-4.3
AKTO	Aktyubinsk	16.45	327	P	Pn	07 42 26.6	+0.9
	1.4nm,0.3s,baz=132,slow=9.0,SNR=19						
ZAL	Zalesovo	18.66	24	P	P	07 42 49.8	+0.5
	1.3nm,0.3s,baz=246,slow=10,SNR=11						
ULN	Ulaanbaatar	27.49	57	eP	P	07 44 14.6	+0.2
	1.5nm,0.3s,mb4.1						
TORD	Torodi Ar. Bea	66.65	269	P	P	07 49 15.7	-0.5
	0.3nm,0.4s,mb3.5,baz=44,slow=5.8,SNR=6.6						
YKA	Yellowknife Ar	80.25	3	P	P	07 50 34.9	-0.7
	0.5nm,0.5s,mb3.5,baz=350,slow=5.5,SNR=7.8						

*NEIC **11** 08:00:31.1, 3830N×2685E, h16km, MD2.7(ISK), MD3.2(ATH), After ATH.*
ATH 11 08:00:31.1, 3830N×2685E, h16km, MD3.2/3**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.21	287	iP	Pg	08 00 34.2	-1.7
URLA				iS	Sg	08 00 36.6	-2.7
KDAG	Bornova	0.34	72	iP	Pg	08 00 42.2	+4.0
KDAG				iS	Sg	08 00 50.4	+7.4
SMG	Samos	0.59	181	ePN	Pg	08 00 42.6	-0.1
SMG				eSN	Sg	08 00 51.1	+0.5
AYDN	Tasoluk	1.03	128	iP	Pb	08 00 54.3	+3.7
AYDN				iS	Sb	08 01 09.2	+5.3
PRK	Paraskevi	1.05	335	ePN	Pn	08 00 50.9	-0.2
PRK				eSN	Sn	08 01 05.4	0.0
APE	Apeiranthos	1.61	221	ePN	Pn	08 01 01.1	+2.2
GVD	Gavdhos	4.11	214	ePn	Pn	08 01 31.4	-1.8

*CSEM **11** 08:00:31.9±0.2, 3989N×2887E, h20km, MD2.7, Error ellipse: s-maj=4.3km s-min=2.4km az=125.0*
*ISK **11** 08:00:32.0, 3988N×2887E, h20km, MD2.7*
*ISCJB **11** 08:00:33.4±0.5, 3995N±004×2880E±004, h4km±8km, Error ellipse: s-maj=6.9km s-min=3.7km az=120.1*
ISC 11 08:00:34.0±0.4**, 3996N**±003×**2881E**±003**, h8**km±6km**, n16, σ1ˢ04**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORLT	Orhaneli	0.11	36	PG	Pg	08 00 36.3	-0.2
ULDT	Uludag	0.31	53	iP	Pg	08 00 39.6	-0.4
ULDT				iS	Sg	08 00 45.9	+1.6
DST	Dursunbey	0.38	202	PG	Pg	08 00 39.8	-1.6
DST				SG	Sg	08 00 45.3	-1.1
KCT	Karacabey	0.47	312	ePG	Pg	08 00 43.1	+0.1
ARMT	Armutlu	0.61	4	ePG	Pg	08 00 45.5	-0.2
BTOK	Tokmak	0.63	252	iP	Pg	08 00 46.0	-0.1
BTOK				iS	Sg	08 00 54.9	+0.5
YLV	Yalova	0.74	35	PG	Pg	08 00 47.8	-0.5
BNT	Bandirma	0.79	301	PG	Pg	08 00 49.8	+0.6
EDC	Edincik	0.82	298	PG	Pg	08 00 50.4	+0.6
ADVT	Abdulvahap	0.85	56	PG	Pg	08 00 49.6	-0.8
ADVT				SG	Sg	08 01 01.7	+0.2
GDZ	Gediz	1.01	149	iP	Pg	08 00 52.7	-0.7
GDZ				iS	Sg	08 01 09.3	+2.8
MRMT	Marmara Adasi	1.13	305	ePN	Pn	08 00 54.0	-2.1
AKHS	Akhisar	1.32	216	iP	Pn	08 00 58.0	-0.8
AKHS				iS	Sb	08 01 10.3	-5.9
ESKT	Eskisehir	1.63	105	iP	Pn	08 01 03.1	+0.2
ESKT				iS	Sn	08 01 25.8	+1.6
AYVA	Ayvalik	1.76	249	iP	Pg	08 01 08.9	+1.2
AYVA				iS	Sg	08 01 32.2	+1.6
SGKT	Sivrigoynuk	2.56	75	iP	Pg	08 01 22.1	-1.0
SGKT				iS	Sg	08 02 05.3	+9.2

*NEIC **11** 08:25:24.3, 3963N×3977E, h5km, ML3.7(CSEM), ML3.7(ISK), After ISK.*
*ISCJB **11** 08:25:24.9±0.7, 3964N±002×3976E±003, h1km±5km, mb3.8/12, MS3.0/4, Error ellipse: s-maj=3.8km s-min=3.5km az=16.6*
*CSEM **11** 08:25:24.6±0.1, 3964N×3977E, h2km, mb4.0/7, Error ellipse: s-maj=1.5km s-min=1.3km az=7.0*
*ISK **11** 08:25:24.4, 3962N×3976E, h5km, MD3.9, ML3.8*
*MOS **11** 08:25:26.4±1.6, 3965N×3979E, h24km, mb4.0/8, Error ellipse: s-maj=10.8km s-min=6.5km az=75.8*
*IDC **11** 08:25:27.1±2.1, 3954N×3982E, h17km±15km, mb3.6/10, mb1 3.7/14, mb1mx3.6/27, mbtmp3.7/14, ML3.3/3, MS3.0/6, Ms1 3.0/6, ms1mx2.7/30, Error ellipse: s-maj=21.9km s-min=11.2km az=180.0*
ISC 11 08:25:26.1±0.5**, 3963N**±002×**3978E**±003**, h4**km±4km**, n104, σ1ˢ19**/124**, mb3.8**/12**, MS3.0**/4**, 1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZC	Erzincan	0.12	14	iPG	Pg	08 25 31.8	+3.4
EZC	Erzincan	0.12	14	Pg	Pg	08 25 31.8	+3.4
KELT	Kelkit	0.65	322	iP	Pg	08 25 37.1	-1.5
KELT				iS	Sg	08 25 46.1	-0.9
PTK	Pertek	0.80	202	iPG	Pg	08 25 39.9	-1.5
PTK				iSG	Sg	08 25 52.5	+0.7
PTK	Pertek	0.80	202	Pg	Pg	08 25 40.0	-1.5
PTK				Sg	Sg	08 25 53.0	+1.2
PTK	Pertek	0.80	202	Pg	Pg	08 25 40.0	-1.4
PTK				Sg	Sg	08 25 53.0	+1.2
BINT	Bingol	0.94	144	iPG	Pg	08 25 43.7	-0.3
BINT				iSG	Sg	08 25 57.7	+1.5
EZM	Erzurum	1.25	77	iPN	Pn	08 25 49.4	-0.9
EZM	Erzurum	1.25	77	Pn	Pn	08 25 48.5	-1.8
ERZM	Erzurum	1.25	77	iP	Pn	08 25 49.2	-1.1
ERZM				iS	Sb	08 26 12.2	+5.5
BNGL	BINGOL	1.26	122	iP	Pn	08 25 49.7	-0.8
BNGL				iS	Sb	08 26 11.8	+4.8
ELZG	Elazig	1.29	209	iP	Pn	08 25 48.7	-2.2
ELZG				iS	Sb	08 26 07.5	-0.4
MACK	Trabzon	1.31	360	iP	Pn	08 25 49.6	-1.5
MACK				iS	Sb	08 26 07.3	-1.0
MACK	Trabzon	1.31	360	iP	Pn	08 25 49.7	-1.4
MACK				iS	Sb	08 26 07.3	-1.0
MYA	Malataya	1.68	219	iPN	Pn	08 25 55.3	-0.9
MYA	Malataya	1.68	219	Pn	Pn	08 25 55.4	-0.9
MYA	Malataya	1.68	219	Pn	Pn	08 25 55.4	-0.8
MALT	Malatya	1.69	219	ePg	Pn	08 25 54.9	-1.4
MALT				eSg	Sn	08 26 18.5	+0.1
MALT	Malatya	1.69	219	ePg	Pn	08 25 54.9	-1.4
MALT				eSg	Sn	08 26 18.5	+0.1
DIY	Diyarbakir	1.77	168	ePN	Pn	08 25 57.7	+0.2
DIY	Diyarbakir	1.77	168	Pn	Pn	08 25 57.8	+0.3
BTMT	Batman	1.96	137	ePN	Pn	08 26 00.1	0.0
SVSK	Karacayir	2.16	278	iPN	Pn	08 26 02.8	-0.1
SVSK	Karacayir	2.16	278	Pn	Pn	08 26 02.9	0.0
BCA	Borcka	2.29	37	ePN	Pn	08 26 04.8	+0.2
BCA	Borcka	2.29	37	Pn	Pn	08 26 04.8	+0.2
URFA	Urfa	2.32	199	ePN	Pn	08 26 05.6	+0.6
URFA	Urfa	2.32	199	Pn	Pn	08 26 05.7	+0.7
MARD	Mardin	2.45	161	iP	Pb	08 26 09.9	-0.7
MARD				iS	Sg	08 26 43.5	-1.2
ATAB	Bozova	2.46	209	iP	Pg	08 26 11.9	-1.3
ATAB				iS	Sg	08 26 45.3	+0.3
TOKT	Tokat	2.58	286	ePN	Pn	08 26 09.5	+0.9
TOKT	Tokat	2.58	286	Pn	Pn	08 26 09.6	+1.0
KARS	Kars	2.72	68	PN	Pn	08 26 10.8	+0.3
VANB	Van	2.99	109	ePN	Pn	08 26 15.4	+1.1
VANB	Van	2.99	109	Pn	Pn	08 26 15.5	+1.2
BNN	Bunyan	3.15	257	PN	Pn	08 26 17.7	+1.2
BNN	Bunyan	3.15	257	Pn	Pn	08 26 17.8	+1.3
GAZ	Gaziantep	3.18	220	ePN	Pn	08 26 17.3	+0.4
GAZ	Gaziantep	3.18	220	Pn	Pn	08 26 17.3	+0.5
CLDR	Caldiran	3.24	97	ePN	Pn	08 26 19.1	+1.4
CLDR	Caldiran	3.24	97	Pn	Pn	08 26 19.2	+1.5
KOZT	Kozan	3.77	236	ePN	Pn	08 26 26.1	+1.1
CUKT	Cukurca	3.83	127	ePN	Pn	08 26 27.1	+1.2
GNI	Garni	3.85	81	Pn	Pn	08 26 27.7	+1.6
	0.7nm,0.3s,baz=354,slow=21,SNR=2.6						
GNI				Pg	Pg	08 26 37.4	-2.4
	1.8nm,0.3s,baz=306,slow=4.7,SNR=10.0						
GNI	Garni	3.85	81	Pg	Pg	08 26 37.4	-2.5
CTKT	Corum	3.95	286	iP	Pn	08 26 28.6	+1.2
CTKT	Corum	3.95	286	iP	Pn	08 26 28.6	+1.1
DIKM	Dikmen	3.99	302	ePN	Pn	08 26 28.9	+1.0
CORM	Corum	4.00	279	ePN	Pn	08 26 28.9	+0.8
ONI	Oni	4.04	42	P	Pn	08 26 30.2	+1.5
ONI				S	Sg	08 27 35.4	-0.5
BOYT	Boyabat	4.12	297	iP	Pn	08 26 30.7	+0.9
BOYT				iS	Sb	08 27 32.9	+3.6
CDAG	Cicekdag	4.18	272	iP	Pb	08 26 39.1	-1.0
CDAG				iS	Sg	08 27 39.6	-0.6
MSL	Mosul	4.24	141	ex	x	08 26 41.0	
MSL				ex	x	08 27 47.0	
MTA	Mtatsminda	4.33	60	P	Pb	08 26 46.5	+3.8
MTA				S	Sg	08 27 54.5	+9.3
KARA	Karaisali	4.40	239	ePN	Pn	08 26 35.0	+1.3
ZEI	Tsey	4.41	43	eP	Pn	08 26 31.0	-2.8
TOS	Tosya	4.62	289	ePN	Pn	08 26 38.2	+1.6
TOS	Tosya	4.62	289	Pn	Pn	08 26 38.3	+1.7
DGRG	David-gareji	4.63	65	P	Pb	08 26 50.3	+2.5
DGRG				S	Sg	08 28 12.5	+18
SHAR	Shatzhatmas	4.64	27	eP	Pn	08 26 32.5	-4.4
SHAR				eS	Sn	08 27 23.9	-7.3
KAMT	Kaman	4.70	269	ePN	Pn	08 26 39.1	+1.3
BR131	Keskin Array S	4.74	273	ePn	Pn	08 26 38.7	+0.5
BR131	Keskin Array S	4.74	273	ePn	Pn	08 26 38.7	+0.4
BRTR	Keskin Array B	4.74	273	Pn	Pn	08 26 38.9	+0.6
	1.3nm,0.3s,baz=99,slow=14,SNR=22						
BRTR				Lg		08 28 00.5	
	1.2nm,0.3s,baz=104,slow=26,SNR=4.2						
BRTR	Keskin Array B	4.74	273	Pn	Pn	08 26 38.8	+0.5
KIV	Kislovodsk	4.83	26	eP	Pn	08 26 35.4	-4.2
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV	Kislovodsk	4.83	26	eP	Pn	08 26 35.4	-4.2
	comp=Z,13nm,1.1s						
ANTO	Ankara	5.39	275	ePn	Pb	08 27 01.7	+0.9
ANN	Anapa	5.45	342	eP	Pn	08 26 51.7	+3.7
ANN				eS	Sn	08 28 00.8	+10
ANN				pmax	pmax		
	comp=Z,21nm,1.1s						
SUDU	Sudak	6.34	328	eP	Pn	08 26 54.2	-6.0
SUDU				eS	Sn	08 28 08.0	-5.0
SUDU				pmax	pmax		
	comp=Z,30nm,0.7s						
SUDU				smax			
	comp=N,40nm,0.9s						
SUDU				smax			
	comp=E,30nm,0.6s						
MMAI	Mount Meron Ar	7.49	209	LR	LR	08 30 35.7	
	comp=E,93nm,20.9s,baz=10.0,slow=42						
ASF	Jabal al Asfar	7.80	198	Pn	Pn	08 27 19.1	-1.3
	comp=E,0.1nm,0.3s,baz=31,slow=5.2,SNR=2.1						
ASF				LR	LR	08 30 46.4	
	comp=E,86nm,20.0s,baz=187,slow=41						
AKASG	Malin Array Be	13.32	330	Pn	Pn	08 28 35.3	-0.6
	comp=E,0.7nm,0.3s,baz=134,slow=13,SNR=8.0						
AKASG	Malin Array Be	13.32	330	P	Pn	08 28 35.3	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LVV	L'vov	15.10	318	eP	Pn	08 29 04.1	+3.9
AKTK	Aktyubinsk	16.77	44	Pn	Pn	08 29 22.1	+0.4
AKTK	Aktyubinsk	16.77	44	P	Pn	08 29 22.1	+0.3
AKTO	Aktyubinsk	16.77	44	Pn	Pn	08 29 22.1	+0.4
	comp=Z,0.1nm,0.3s,baz=224,slow=11,SNR=8.0						
GERES	GERESS Array B	20.74	305	P	P	08 30 07.1	-0.6
	comp=Z,0.4nm,0.2s,baz=107,slow=12,SNR=6.3						
GERES				LR	LR	08 39 49.0	
	comp=Z,16nm,19.8s,MS2.4,baz=280,slow=41						
ARU	Arti	20.86	30	⇓iP	P	08 29 58.7	-10
ARU				eS	S	08 33 46.3	-16
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SVE	Sverdlovsk	21.96	32	eP	P	08 30 16.0	-4.8
DAVOX	Davos	22.84	298	P	P	08 30 30.0	-0.1
	comp=Z,2.4nm,0.8s,mb3.7,baz=91,slow=8.1,SNR=4.4						
WSAR	Wadi Sarin	22.86	130	LR	LR	08 40 31.6	
	comp=Z,40nm,20.1s,MS2.9,baz=155,slow=40						
DAVOS	Davos	22.91	298	P	P	08 30 30.0	-0.8
FINES	FINESS Array B	23.41	343	P	P	08 30 35.9	-0.3
	comp=Z,1.7nm,0.6s,mb3.6,baz=145,slow=14,SNR=8.5						
FINES	FINESS Array B	23.41	343	P	P	08 30 35.9	-0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
JOF	Joensuu	23.87	350	ep	P	08 30 38.9	-1.7
	comp=Z,6.7nm,0.7s,mb4.2						
KAF	Kangasniemi	23.96	344	ep	P	08 30 41.6	+0.2
	comp=Z,1.3nm,0.3s,mb3.8						
KAF	Kangasniemi	23.96	344	eP	P	08 30 41.6	+0.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7						
BVAR	Borovoye Array	24.80	47	P	P	08 30 49.5	+0.4
	comp=Z,1.4nm,0.7s,mb3.6,baz=261,slow=5.6,SNR=8.3						
BVAR	Borovoye Array	24.80	47	P	P	08 30 49.5	+0.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CHKZ	Chkalovo	25.16	46	eP	P	08 30 52.8	+0.5
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
CHKZ	Chkalovo	25.16	46	eP	P	08 30 52.8	+0.5
	comp=Z,3.1nm,0.9s,mb3.8						
CHKZ	Chkalovo	25.16	46	eP	P	08 30 52.8	+0.5
	comp=Z,3.1nm,0.9s,mb3.8						
HFS	Hagfors	26.21	330	P	P	08 31 02.5	+0.6
	comp=Z,2.6nm,0.8s,mb3.8,baz=116,slow=10,SNR=4.7						
HFS	Hagfors	26.21	330	P	P	08 31 02.5	+0.6
HFS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	30.91	350	P	P	08 31 42.4	-1.5
	comp=Z,2.5nm,1.1s,mb4.0,baz=129,slow=9.6,SNR=4.3						
ARCES	ARCESS Array B	30.91	350	P	P	08 31 42.4	-1.4
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MKAR	Makanchi Array	31.49	63	P	P	08 31 47.8	-1.1
	comp=Z,0.2nm,0.3s,mb3.4,baz=267,slow=8.3,SNR=4.4						
ESDC	Sonseca Array	33.43	284	P	P	08 32 05.2	-0.7
	comp=Z,0.2nm,0.3s,mb3.5,baz=61,slow=9.2,SNR=6.1						
KMBO	Kilima Mbogo	40.63	184	LR	LR	08 49 15.8	
	comp=Z,39nm,20.6s,MS3.2,baz=88,slow=35						
TORD	Torodi Ar. Bea	42.63	243	P	P	08 33 22.4	-1.2
	comp=Z,0.7nm,0.8s,mb3.5,baz=35,slow=6.4,SNR=4.3						
SONM	Songino Array	47.47	57	P	P	08 34 00.7	-1.3
	comp=Z,1.2nm,0.5s,mb4.1,baz=298,slow=13,SNR=3.9						
SONM				LR	LR	08 56 19.9	
	comp=Z,61nm,19.1s,MS3.6,baz=303,slow=39						
SONM	Songino Array	47.47	57	P	P	08 34 00.7	-1.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,61nm,19.1s						

*NEIC **11** 08:32:12.0, 1930N×6275W, h35km, MD3.8(RSPR), After RSPR.*
RSPR 11 08:32:12.0, 1930N×6275W, h35km±40km**, MD3.8**/9**, MD3.8**/9**, 7C-3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	1.97	244	eS	Sn	08 33 05.3	-1.0
TBVI	Tortola	1.97	244	⇑eP	Pn	08 32 41.5	-1.3
TBVI				eS	Sn	08 33 05.3	-1.0
STVI	Saint Thomas	2.29	246	eS	Sn	08 33 12.2	-2.1
STVI	Saint Thomas	2.29	246	⇑eP	Pn	08 32 46.1	-1.2
STVI				eS	Sn	08 33 12.2	-2.1
CDVI	St. Croix	2.45	231	eS	Sn	08 33 17.1	-1.1
CDVI	St. Croix	2.45	231	⇓eP	Pn	08 32 49.3	-0.2
CDVI				eS	Sn	08 33 17.1	-1.1
CULB	Culebra	2.63	248	⇑eP	Pn	08 32 51.3	-0.6
CULB				eS	Sn	08 33 21.5	-1.1
MTP	Monte Pirata	2.92	246	eS	Sn	08 33 27.8	-1.9
MTP	Monte Pirata	2.92	246	⇑eP	Pn	08 32 55.0	-0.8
MTP				eS	Sn	08 33 27.8	-1.9
CBYP	Canovanas	3.11	251	eS	Sn	08 33 34.3	-0.2
CBYP	Canovanas	3.11	251	⇑eP	Pn	08 32 58.2	-0.3
CBYP				eS	Sn	08 33 34.3	-0.2
HUMP	Col San Antoni	3.15	249	eS	Sn	08 33 35.5	0.0
HUMP	Col San Antoni	3.15	249	⇑eP	Pn	08 32 58.1	-1.0
HUMP				eS	Sn	08 33 35.5	0.0
CPD	Cerro la Pandu	3.25	248	eS	Sn	08 33 38.4	+0.5
CPD	Cerro la Pandu	3.25	248	⇑eP	Pn	08 33 00.6	+0.2
CPD				eS	Sn	08 33 38.4	+0.5
LZG	Guadaloupe-1	3.28	163	eP	Pn	08 32 58.1	-2.7
AOPR	Arecibo Observ	3.90	257	eS	Sn	08 33 55.7	+1.7
AOPR	Arecibo Observ	3.90	257	⇓eP	Pn	08 33 08.8	-0.6
AOPR				eS	Sn	08 33 55.7	+1.7
CRPR	Cabo Rojo, PR	4.33	253	⇓eP	Pn	08 33 14.6	-0.6

IDC 11 08:56:19.6±3.5**, 967S×10778E, h0km, mb3.9**/4**, mb1 3.9**/4**, mb1mx3.7**/16**, mbtmp3.9**/4**, Error ellipse: s-maj=175.7km s-min=22.4km az=55.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**28.56**	**122**	P	P	09 02 18.8	+1.7
	0.2nm,0.5s,baz=304,slow=10,SNR=4.1						
STKA	**Stephens Creek**	**38.31**	**130**	P	P	09 03 41.0	-0.9
	1.9nm,0.7s,baz=302,slow=9.2,SNR=7.9						
SONM	**Songino Array**	**57.26**	**359**	P	P	09 06 08.4	-0.4
	1.3nm,0.5s,baz=174,slow=9.4,SNR=6.4						
MKAR	**Makanchi Array**	**60.65**	**340**	P	P	09 06 32.8	+0.4
	1.5nm,0.5s,baz=144,slow=7.8,SNR=18						

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*NEIC **11** 09:02:02.6, 4480N×6536W, h5km, MN3.2(OTT), After OTT.*
NEIC Felt in the Bridgetown area.
OTT 11 09:02:02.6±0.1**, 4480N×6536W, h5km, MN3.2**/6**, Nova Scotia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GGN	**Saint George**	**1.10**	**287**	PG	Pg	09 02 22.2	-1.6
GGN				SG	Sg	09 02 36.5	-1.6
GGN				Trac		09 02 39.6	
	comp=Z,139nm,0.1s						
GGN	**Saint George**	**1.10**	**287**	Pg	Pg	09 02 22.2	-1.6
GGN				Sg	Sg	09 02 36.5	-1.6
LMN	**Caledonia Moun**	**1.12**	**20**	PG	Pg	09 02 22.6	-1.5
LMN				SG	Sg	09 02 37.8	-0.9
LMN				Trac		09 02 42.8	
	comp=Z,99nm,0.2s						
LMN	**Caledonia Moun**	**1.12**	**20**	Pg	Pg	09 02 22.6	-1.5
LMN				Sg	Sg	09 02 37.8	-0.9
HAL	**Halifax**	**1.27**	**97**	PG	Pg	09 02 25.2	-1.7
HAL				SG	Sg	09 02 42.2	-1.2
HAL				Trac		09 02 44.5	
	comp=Z,151nm,0.2s						
HAL	**Halifax**	**1.27**	**97**	Pg	Pg	09 02 25.2	-1.7
HAL				Sg	Sg	09 02 42.2	-1.2
MALG	**Malagash, Nova**	**1.74**	**55**	PN	Pn	09 02 33.6	+0.1
MALG				SN	Sn	09 02 57.4	+1.4
MALG				Trac		09 03 00.3	
	comp=Z,113nm,0.2s						
MALG	**Malagash, Nova**	**1.74**	**55**	Pn	Pn	09 02 33.6	+0.1
MALG				Sn	Sn	09 02 57.4	+1.4
BATG	**Bathurst New B**	**2.52**	**349**	PN	Pn	09 02 43.6	-0.7
BATG				SN	Sn	09 03 14.1	-1.3
BATG				SG	Sg	09 03 20.0	-3.7
BATG				Trac		09 03 28.4	
	comp=Z,21nm,0.2s						
BATG	**Bathurst New B**	**2.52**	**349**	Pn	Pn	09 02 43.6	-0.7
BATG				Sn	Sn	09 03 14.1	-1.3
BATG				Sg	Sg	09 03 20.0	-3.7
TIGG	**Tignish, PEI**	**2.74**	**36**	PN	Pn	09 02 42.0	-5.3
TIGG				SN	Sn	09 03 11.4	-9.4
TIGG				SG	Sg	09 03 16.8	-14
TIGG				Trac		09 03 19.2	
	comp=Z,11nm,0.2s						
TIGG	**Tignish, PEI**	**2.74**	**36**	Pn	Pn	09 02 42.0	-5.3
TIGG				Sg	Sg	09 03 16.8	-14
GBN	**Guysborough**	**2.79**	**76**	PN	Pn	09 02 47.2	-0.6
GBN				PG	Pg	09 02 53.1	-2.9
GBN				SN	Sn	09 03 20.8	-1.1
GBN				SG	Sg	09 03 26.9	-5.3
GBN				Trac		09 03 34.2	
	comp=Z,31nm,0.3s						
GBN	**Guysborough**	**2.79**	**76**	Pn	Pn	09 02 47.2	-0.6
GBN				Pg	Pg	09 02 53.1	-2.9
GBN				Sn	Sn	09 03 20.8	-1.1
GBN				Sg	Sg	09 03 26.9	-5.3
PKME	**Peaks-Kenny Pk**	**2.83**	**281**	*e*Pn	Pn	09 02 47.0	-1.5
PKME				*e*Pg	Pg	09 02 53.8	-3.0
PKME				*e*Sg	Sg	09 03 29.4	-4.1
MADG	**Magdalen Islan**	**3.56**	**45**	PN	Pn	09 02 58.2	-0.2
MADG				PG	Pg	09 03 07.4	-3.3
MADG				SN	Sn	09 03 40.6	-0.2
MADG				SG	Sg	09 03 54.3	-2.5
MADG				Trac		09 04 04.0	
	comp=Z,24nm,0.4s						
MADG	**Magdalen Islan**	**3.56**	**45**	Pn	Pn	09 02 58.2	-0.2
MADG				Pg	Pg	09 03 07.4	-3.3
MADG				Sn	Sn	09 03 40.6	-0.2
MADG				Sg	Sg	09 03 54.3	-2.5
CHEG	**Cheticamp, Nov**	**3.84**	**57**	PN	Pn	09 03 02.0	-0.4
CHEG				SN	Sn	09 03 46.6	-1.2
CHEG				SG	Sg	09 04 03.4	-2.5
CHEG				Trac		09 04 07.7	
	comp=Z,7.5nm,0.3s						
CHEG	**Cheticamp, Nov**	**3.84**	**57**	Pn	Pn	09 03 02.0	-0.4
CHEG				Sn	Sn	09 03 46.6	-1.2
CHEG				Sg	Sg	09 04 03.4	-2.5
A11	**Saint Roch-des**	**4.16**	**308**	PN	Pn	09 03 05.6	-1.2
A11				SN	Sn	09 03 52.7	-3.1
A11				SG	Sg	09 04 07.8	-8.6
A11				Trac		09 04 20.9	
	comp=Z,5.8nm,0.2s						
A11	**Saint Roch-des**	**4.16**	**308**	Pn	Pn	09 03 05.6	-1.2
A11				Sn	Sn	09 03 52.7	-3.1
A11				Sg	Sg	09 04 07.8	-8.6
A21	**Saint Andre**	**4.18**	**316**	PN	Pn	09 03 06.2	-0.8
A21				SN	Sn	09 03 53.1	-3.1
A21				SG	Sg	09 04 14.1	-2.7
A21				Trac		09 04 26.8	
	comp=Z,8.1nm,0.4s						
A21	**Saint Andre**	**4.18**	**316**	Pn	Pn	09 03 06.2	-0.8
A21				Sn	Sn	09 03 53.1	-3.1
A21				Sg	Sg	09 04 14.1	-2.7
A16	**Riviere Ouelle**	**4.19**	**311**	PN	Pn	09 03 06.2	-1.0
A16				SN	Sn	09 03 54.5	-2.0
A16				SG	Sg	09 04 16.2	-1.1
A16				Trac		09 04 21.2	
	comp=Z,22nm,0.4s						
A16	**Riviere Ouelle**	**4.19**	**311**	Pn	Pn	09 03 06.2	-1.0
A16				Sn	Sn	09 03 54.5	-2.0
A16				Sg	Sg	09 04 16.2	-1.1
GSQ	**Grosses Roches**	**4.28**	**344**	PN	Pn	09 03 07.7	-0.7
GSQ				SN	Sn	09 03 55.1	-3.7
GSQ				SG	Sg	09 04 16.5	-3.7
GSQ				Trac		09 04 24.7	
	comp=Z,6.7nm,0.1s						
GSQ	**Grosses Roches**	**4.28**	**344**	Pn	Pn	09 03 07.7	-0.7
GSQ				Sn	Sn	09 03 55.1	-3.7
GSQ				Sg	Sg	09 04 16.5	-3.7
A64	**Saint Simeon**	**4.36**	**316**	PN	Pn	09 03 08.0	-1.5
A64				SN	Sn	09 03 59.1	-1.6
A61	**Sainte Mathild**	**4.38**	**313**	PN	Pn	09 03 09.3	-0.4
A61				SN	Sn	09 03 57.5	-3.6
A61				SG	Sg	09 04 19.4	-3.8
LMQ	**La Malbaie**	**4.41**	**310**	PN	Pn	09 03 09.0	-1.2
LMQ				SN	Sn	09 03 58.0	-4.0
LMQ				SG	Sg	09 04 23.1	-1.3
LMQ				Trac		09 04 27.8	
	comp=Z,30nm,0.6s						
LMQ	**La Malbaie**	**4.41**	**310**	Pn	Pn	09 03 09.0	-1.2
LMQ				Sn	Sn	09 03 58.0	-4.0
LMQ				Sg	Sg	09 04 23.1	-1.3
FFD	**Franklin Falls**	**4.72**	**256**	*e*Pn	Pn	09 03 13.3	-1.2
FFD				*e*Sn	Sn	09 04 07.3	-2.3
LBNH	**Lisbon**	**4.73**	**266**	PN	Pn	09 03 13.3	-1.3
LBNH				SN	Sn	09 04 06.0	-3.9
LBNH				SG	Sg	09 04 27.8	-6.8
LBNH				Trac		09 04 34.9	
	comp=Z,52nm,0.5s						
LBNH	**Lisbon**	**4.73**	**266**	Pn	Pn	09 03 13.7	-1.0
LBNH				*e*Sn	Sn	09 04 06.9	-3.0
CNQ	**Baie Comeau**	**4.87**	**339**	PN	Pn	09 03 15.4	-1.1
CNQ				SN	Sn	09 04 09.5	-3.8
CNQ				Trac		09 04 15.1	
	comp=Z,2.7nm,0.1s						
CNQ				SG	Sg	09 04 33.2	-5.9
CNQ	**Baie Comeau**	**4.87**	**339**	Pn	Pn	09 03 15.4	-1.1
CNQ				Sn	Sn	09 04 09.5	-3.8
CNQ				Sg	Sg	09 04 33.2	-5.9
MOQ	**Mont Orford**	**4.92**	**278**	PN	Pn	09 03 15.2	-1.9
MOQ				SN	Sn	09 04 11.3	-3.0
MOQ				SG	Sg	09 04 32.7	-7.8
HRV	**Harvard--Oak R**	**5.05**	**245**	*e*Pn	Pn	09 03 17.8	-1.2
HRV				*e*Sn	Sn	09 04 14.6	-3.2
DAQ	**Lac Daran**	**5.16**	**310**	PN	Pn	09 03 16.4	-4.0
DAQ				SN	Sn	09 04 18.1	-2.2
DAQ				SG	Sg	09 04 43.2	-5.0
DAQ				Trac		09 04 48.2	
	comp=Z,8.9nm,0.5s						
DAQ	**Lac Daran**	**5.16**	**310**	Pn	Pn	09 03 16.4	-4.0
DAQ				Sn	Sn	09 04 18.1	-2.2
DAQ				Sg	Sg	09 04 43.2	-5.0
SMQ	**Clarke City**	**5.50**	**351**	PN	Pn	09 03 23.5	-1.7
SMQ				SN	Sn	09 04 24.6	-4.2
SMQ				SG	Sg	09 04 56.3	-3.0
SMQ				Trac		09 05 08.3	
	comp=Z,2.7nm,0.2s						
SMQ	**Clarke City**	**5.50**	**351**	Pn	Pn	09 03 23.5	-1.7
SMQ				Sn	Sn	09 04 24.6	-4.2
SMQ				Sg	Sg	09 04 56.3	-3.0
MNQ	**Manicouagan**	**6.18**	**339**	PN	Pn	09 03 32.5	-2.1
MNQ				SN	Sn	09 04 40.7	-4.8
MNQ				Trac		09 05 18.4	
	comp=Z,3.9nm,0.3s						
MNQ	**Manicouagan**	**6.18**	**339**	Pn	Pn	09 03 32.5	-2.1
MNQ				Sn	Sn	09 04 40.7	-4.8
NCB	**Newcomb**	**6.41**	**266**	*e*Pn	Pn	09 03 36.3	-1.3
DRLN	**Deer Lake**	**6.97**	**47**	PN	Pn	09 03 43.5	-1.9
DRLN				SN	Sn	09 04 58.8	-6.2
DRLN				Trac		09 05 02.6	
	comp=Z,9.5nm,0.6s						
DRLN	**Deer Lake**	**6.97**	**47**	Pn	Pn	09 03 43.5	-1.9
DRLN				Sn	Sn	09 04 58.8	-6.2
YOSQ	**Ashton Mining**	**9.24**	**333**	PN	Pn	09 04 12.8	-3.7
YOSQ				SN	Sn	09 05 51.4	-10
SCHQ	**Schefferville**	**10.09**	**355**	PN	Pn	09 04 24.1	-3.9
SCHQ				SN	Sn	09 06 10.7	-11
SCHQ				LG		09 07 12.7	
SCHQ	**Schefferville**	**10.09**	**355**	Pn	Pn	09 04 24.1	-3.9
SCHQ				Sn	Sn	09 06 10.7	-11
SCHQ				Lg		09 07 12.7	
MALO	**McAlpine Lake**	**11.07**	**303**	PN	Pn	09 04 36.1	-5.4
MALO				SN	Sn	09 06 35.8	-10
MALO				LG		09 07 46.5	
WEMQ	**Wemindji, Queb**	**11.69**	**319**	PN	Pn	09 04 44.3	-5.8
WEMQ				SN	Sn	09 06 47.7	-13
WEMQ				LG		09 08 06.5	

CASC 11 09:46:32.3±2.2**, 1287N×8900W, h35**km±999km**, MD3.7, ML2.9, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.76**	**355**	*e*P	x	09 47 02.2	
LCBS	**La Ceiba**	**0.78**	**1**	*e*P	x	09 47 02.5	
LCBS				*e*S	x	09 47 14.0	
SNET	**Serv Nac Est T**	**0.85**	**344**	*e*P	x	09 46 47.9	
SNET				*e*S	x	09 46 59.7	
LBRS	**Las Brisas**	**0.87**	**357**	*e*P	x	09 47 04.3	
LFU	**La Fuente**	**0.89**	**353**	*e*P	x	09 47 04.4	
VSM	**San Miguel**	**0.90**	**51**	*e*P	x	09 47 05.0	
VSM				*e*S	x	09 47 18.0	
BOQS	**Boqueron**	**0.91**	**342**	*e*P	x	09 47 04.6	
BOQS				*e*S	x	09 47 17.4	
BLLM	**Bellamira**	**0.94**	**52**	*e*P	x	09 47 05.2	
SBLS	**San Blas**	**1.14**	**328**	*e*P	x	09 47 07.7	
SBLS				*e*S	x	09 47 23.6	
SNJE	**San Jose**	**1.16**	**329**	*e*P	x	09 47 08.0	
SNJE				*e*S	x	09 47 23.4	
CNCH	**Conchagua**	**1.20**	**70**	*e*P	x	09 47 08.7	
CNCH				*e*S	x	09 47 26.1	
RTR	**El Retiro**	**1.20**	**328**	*e*P	x	09 47 08.7	
RTR				*e*S	x	09 47 25.3	
RBDL	**Robledal**	**1.41**	**332**	*e*P	x	09 47 11.9	
CRIN	**San Cristobal**	**1.91**	**95**	*e*P	Pn	09 47 02.1	-0.1
CRIN				*e*S	Sn	09 47 24.9	-0.1
TELN	**Telica**	**2.13**	**97**	*e*P	Pn	09 47 06.2	+0.8
CNGN	**Cerro Negro**	**2.27**	**99**	*e*P	Pn	09 47 08.2	+0.9
COPN	**Copaltepe**	**2.44**	**106**	*e*P	Pn	09 47 10.2	+0.5
APYN	**Apoyeque**	**2.66**	**103**	*e*P	Pn	09 47 13.8	+1.1
MGAN	**Managua**	**2.78**	**105**	*e*S	Sn	09 47 46.5	-0.1
MGAN				*i*		09 47 47.8	
	comp=N,66nm,0.2s						

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*ISCJB **11** 10:02:53.1±0.9, 2884S±006×673W±02, h116km±24km, mb4.0/1, Error ellipse: s-maj=30.8km s-min=10.3km az=173.8*
*NEIC **11** 10:02:53.9±1.0, 2895S×6697W, h116km±12km, Error ellipse: s-maj=21.4km s-min=13.8km az=111.0*
*IDC **11** 10:02:54.5±1.4, 2893S×6731W, h122km±16km, mb3.9/1, mb1 3.3/5, mb1mx3.2/19, mbtmp3.7/5, Error ellipse: s-maj=36.3km s-min=15.2km az=107.0*
ISC 11 10:02:54.4±0.9**, 2885S**±006×**672W**±02**, h108**km±21km**, n8,** σ**1§27**/8**, mb4.0**/1**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**2.88**	**197**	P	**Pn**	**10 03 38.9**	**+0.2**
	4.3nm,0.3s,baz=6.5,slow=13,SNR=589						
CFAA				S	**Sn**	**10 04 12.3**	**-0.4**
	9.7nm,0.3s,baz=110,slow=21,SNR=44						
LVC	**Limon Verde**	**6.39**	**346**	P	**Pn**	**10 04 27.7**	**+1.8**
	1.2nm,0.3s,baz=165,slow=8.1,SNR=19						
LVC				S	**Sn**	**10 05 36.3**	**-1.2**
	2.1nm,0.3s,baz=302,slow=20,SNR=9.0						
CPUP	**Villa Florida**	**9.15**	**76**	P	**Pn**	**10 05 03.3**	**-0.1**
	0.4nm,0.3s,baz=235,slow=10,SNR=3.7						
CPUP	**Villa Florida**	**9.15**	**76**	*e*P	**Pn**	**10 04 59.4**	**-4.0**
SIV	**San Ignacio**	**14.01**	**25**	P	**Pn**	**10 06 08.0**	**0.0**
	0.1nm,0.3s,baz=228,slow=14,SNR=5.1						
TORD	**Torodi Ar. Bea**	**78.55**	**68**	P	**P**	**10 14 43.6**	**-0.1**
	1.7nm,0.6s,mb4.0,baz=258,slow=3.1,SNR=15						
ASAR	**Alice Springs**	**123.95**	**204**	PKP	PKPdf	10 21 37.6	-2.1
	0.3nm,0.6s,baz=135,slow=2.0,SNR=4.1						
MKAR	**Makanchi Array**	**150.26**	**45**	PKPbc	PKPbc	10 22 31.1	-1.6
	0.6nm,0.7s,baz=322,slow=4.4,SNR=4.0						

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*MDD **11** 10:04:40.6±1.7, 3680N×296E, h12km±18km, mb2.9/1, Error ellipse: s-maj=76.5km s-min=8.8km az=64.0, PRXIMO SIN SOLUCIN*
CRAAG 11 10:04:39.7, 3670N×310E, Ml2.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.11**	**334**	P	Pg	10 04 42.9	+1.1
ADJB	**Djebel Djouab**	**0.61**	**153**	P	Pg	10 04 54.2	+2.8
AKET	**Djebel Ketaf**	**0.91**	**136**	P	Pg	10 04 59.8	+2.6
EIBI	**Ibiza**	**2.70**	**330**	P	Pn	10 05 21.1	-3.3
	0.7nm,0.2s,SNR=7.9						
EIBI				S	Sn	10 05 49.8	-8.0
	1.4nm,0.2s,SNR=7.9						

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*MDD **11** 10:33:30.5±2.0, 3659N×965W, h30km±39km, mb4.0/8, Error ellipse: s-maj=31.2km s-min=11.4km az=49.0, PRXIMO*
*NEIC **11** 10:33:30.5, 3673N×943W, h0km, MN2.7(MDD), After MDD.*
*CSEM **11** 10:33:30.9±0.8, 3668N×922W, h10km, ML2.4, Error ellipse: s-maj=16.1km s-min=8.2km az=33.0*
*IGIL **11** 10:33:31.2, 3660N×960W, h25km, ML2.6*
INMG 11 10:33:30.9±1.0**, 3665N×956W, h13**km±4km**, ML2.4, Error ellipse: s-maj=5.0km s-min=2.7km az=52.0, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	**Marmelete**	**0.98**	**48**	*e*P	Pb	10 33 48.8	-0.9
MORF				*e*S	Sb	10 34 01.4	-1.1
MORF				*e*S	Sb	10 34 01.4	-1.1
MORF				AML	AML	10 34 04.0	
	comp=N,108nm,0.1s						
MORF	**Marmelete**	**0.98**	**48**	*e*P	Pb	10 33 48.8	-0.9
MORF				*e*S	Sb	10 34 01.4	-1.1
PTEO	**Sao Teotonio**	**1.11**	**37**	*i* P	Pb	10 33 50.6	-1.4
PTEO				*e*S	Sb	10 34 05.6	-0.8
PTEO							
	comp=N,30nm,0.1s						
EGRO	**El Granado**	**1.88**	**61**	P	Pn	10 34 01.1	-1.6
	comp=N,1.2nm,0.1s,SNR=9.1						
EGRO				S	Sn	10 34 23.8	-2.5
	comp=N,10nm,0.1s,SNR=8.5						
EGRO	**El Granado**	**1.88**	**61**	P	Pn	10 34 01.1	-1.6
	comp=N,1.2nm,0.1s,SNR=9.1						
EGRO				S	Sn	10 34 23.8	-2.4
	comp=N,10nm,0.1s,SNR=8.5						
PBEJ	**Beja**	**1.92**	**44**	*e*Pn	Pn	10 34 01.7	-1.6
PBEJ				*e*Sn	Sn	10 34 24.7	-2.6
PLOU	**Loures**	**2.25**	**8**	*e*Pn	Pn	10 34 05.6	-2.2
PLOU				*e*Sn	Sn	10 34 32.3	-3.1
PLOU							
	comp=N,24nm,0.1s						
PLOU	**Loures**	**2.25**	**8**	*e*Pn	Pn	10 34 05.6	-2.2
PLOU				*e*Sn	Sn	10 34 32.3	-3.1
PMAFR	**Mafra**	**2.31**	**5**	*e*Pn	Pn	10 34 06.4	-2.2
PMAFR				*e*Sn	Sn	10 34 33.9	-2.9
EMIN	**Mina Concepcio**	**2.56**	**63**	P	Pn	10 34 10.1	-1.9
	comp=N,1.5nm,0.1s,SNR=14						
EMIN				S	Sn	10 34 39.8	-3.3
	comp=N,7.2nm,0.2s,SNR=8.4						
EMIN	**Mina Concepcio**	**2.56**	**63**	P	Pn	10 34 10.1	-1.9
	comp=N,1.5nm,0.1s,SNR=14						
EMIN				S	Sn	10 34 39.8	-3.2
	comp=N,7.2nm,0.2s,SNR=8.4						
PESTR	**Estremoz**	**2.71**	**35**	*e*Pn	Pn	10 34 11.8	-2.3
PESTR				*e*Sn	Sn	10 34 43.8	-2.8
PESTR							
	comp=N,4.7nm,0.2s						
EBAD	**Badajoz**	**2.91**	**43**	P	Pn	10 34 15.0	-1.9
	comp=N,2.9nm,0.1s,SNR=11						
EBAD				S	Sn	10 34 47.9	-3.9
	comp=N,17nm,0.2s,SNR=9.5						
EBAD	**Badajoz**	**2.91**	**43**	P	Pn	10 34 15.0	-1.9
	comp=N,2.9nm,0.1s,SNR=11						
EBAD				S	Sn	10 34 47.9	-3.8
	comp=N,17nm,0.2s,SNR=9.5						
ESPR	**Espera**	**2.98**	**85**	P	Pn	10 34 16.3	-1.5
	comp=N,3.2nm,0.1s,SNR=7.9						
ESPR				S	Sn	10 34 49.6	-3.9
	comp=N,64nm,0.3s,SNR=6.0						
ESPR	**Espera**	**2.98**	**85**	P	Pn	10 34 16.3	-1.5
	comp=N,3.2nm,0.1s,SNR=7.9						
ESPR				S	Sn	10 34 49.6	-3.8
	comp=N,64nm,0.3s,SNR=6.0						
PTOM	**Tomar**	**3.10**	**17**	*e*Sn	Sn	10 34 52.2	-4.1
PTOM							
	comp=N,11nm,0.1s						
PTOM	**Tomar**	**3.10**	**17**	S	Sn	10 34 52.2	-4.1
	comp=N,5.6nm,0.1s						
PCBR	**Castelo Branco**	**3.58**	**27**	*e*Sn	Sn	10 35 04.4	-3.8
PCBR							
	comp=N,2.8nm,0.2s						
PCBR	**Castelo Branco**	**3.58**	**27**	S	Sn	10 35 04.4	-3.8
	comp=N,1.4nm,0.2s						
EMIJ	**Mijas**	**3.85**	**90**	S	Sn	10 35 10.2	-4.7
	comp=N,7.5nm,0.5s,SNR=7.9						
EMIJ	**Mijas**	**3.85**	**90**	S	Sn	10 35 08.0	-6.9
	comp=N,7.5nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**4.25**	**68**	P	Pn	10 34 33.4	-1.8
	comp=N,0.4nm,0.1s,SNR=8.1						
EADA				S	Sn	10 35 19.4	-5.2
	comp=N,4.0nm,0.1s,SNR=4.6						
EADA	**Adamuz**	**4.25**	**68**	P	Pn	10 34 33.4	-1.8
	comp=N,0.4nm,0.1s,SNR=8.1						
EADA				S	Sn	10 35 19.4	-5.2
	comp=N,4.0nm,0.1s,SNR=4.6						
PVIS	**Viseu**	**4.26**	**17**	*e*Sn	Sn	10 35 20.6	-4.4
PVIS							
	comp=N,7.6nm,0.1s						
PVIS	**Viseu**	**4.26**	**17**	S	Sn	10 35 20.6	-4.4
	comp=N,3.8nm,0.1s						
PVRL	**Vila Real**	**4.83**	**17**	*e*Sn	Sn	10 35 34.4	-4.7
PVRL							
	comp=N,10nm,0.1s						
EBAN	**Banos Encina**	**4.84**	**70**	P	Pn	10 34 41.5	-1.8
	comp=N,1.3nm,0.1s,SNR=7.9						
EBAN				S	Sn	10 35 33.7	-5.5
	comp=N,3.0nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.93**	**82**	S	Sn	10 35 36.7	-4.9
	comp=N,1.7nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**4.93**	**82**	S	Sn	10 35 37.5	-4.1
	comp=N,1.7nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**5.34**	**54**	P	Pn	10 34 48.5	-1.8
	comp=N,3.1nm,0.1s,baz=240,slow=13,SNR=9.5						
ESDC				S	Sn	10 35 42.8	-8.8
	comp=N,2.9nm,0.2s,baz=236,slow=26,SNR=11						
ESDC	**Sonseca Array**	**5.34**	**54**	P	Pn	10 34 48.5	-1.8
	comp=N,3.1nm,0.1s,SNR=9.5						
ESDC				S	Sn	10 35 42.8	-8.9
	comp=N,2.9nm,0.2s,SNR=11						
PBRG	**Braganca**	**5.59**	**22**	*e*Sn	Sn	10 35 52.3	-5.5
PBRG							
	comp=N,3.4nm,0.1s						
PBRG	**Braganca**	**5.59**	**22**	S	Sn	10 35 52.3	-5.5
	comp=N,1.7nm,0.1s						
ECAL	**Calabor**	**5.72**	**22**	P	Pn	10 34 53.3	-2.1
	comp=N,1.1nm,0.2s,SNR=7.9						
ECAL				S	Sn	10 35 55.2	-5.7
	comp=N,3.3nm,0.3s,SNR=4.6						
ECAL	**Calabor**	**5.72**	**22**	P	Pn	10 34 53.4	-2.1
ECAL				S	Sn	10 35 55.5	-5.4
ECAL	**Calabor**	**5.72**	**22**	P	Pn	10 34 53.3	-2.1
	comp=N,1.1nm,0.2s,SNR=7.9						
ECAL				S	Sn	10 35 55.5	-5.4
GUD	**Guadarrama**	**5.81**	**45**	S	Sn	10 35 58.4	-4.8
	comp=N,0.9nm,0.2s,SNR=7.9						

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*ISCJB **11** 10:39:11.7±0.5, 2268S±009×128W±0.1, h10km, mb4.0/14, MS3.7/6, Error ellipse: s-maj=15.6km s-min=12.9km az=58.0*
*IDC **11** 10:39:11.8±0.7, 2270S×1282W, h0km, mb4.0/12, mb1 4.0/12, mb1mx3.9/22, mbtmp4.0/12, MS3.7/6, Ms1 3.7/6, ms1mx3.3/20, Error ellipse: s-maj=22.6km s-min=17.9km az=110.0*
*NEIC **11** 10:39:13.4±0.4, 2269S×1278W, h10km, mb4.7/2, Error ellipse: s-maj=13.6km s-min=11.2km az=119.0*
ISC 11 10:39:13.6±0.5**, 2272S**±009×**128W**±01**, h10**km**, n19,** σ**0§85**/16**, mb4.0**/14**, MS3.7**/6**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**28.54**	**89**	LR	LR	10 54 34.5	
	comp=Z,154nm,18.4s,MS3.6,baz=141,slow=32						
DBIC	**Dimbokro**	**30.22**	**16**	P	**P**	**10 45 25.9**	**+1.7**
	5.2nm,1.0s,mb4.2,baz=188,slow=10,SNR=2.9						
DBIC	**Dimbokro**	**30.22**	**16**	P	**P**	**10 45 25.9**	**+1.7**
BDFB	**Brasilia**	**33.96**	**276**	LR	LR	10 57 16.2	
	comp=Z,143nm,18.1s,MS3.7,baz=290,slow=32						
BOSA	**Boshof**	**34.67**	**108**	P	**P**	**10 46 02.9**	**-0.4**
	4.3nm,0.9s,mb4.4,baz=285,slow=4.9,SNR=3.8						
BOSA				LR	LR	10 58 10.6	
	comp=Z,90nm,18.3s,MS3.5,baz=258,slow=33						
TOA0	**Torodi Ar. Sit**	**38.36**	**23**	*e*P	**P**	**10 46 34.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**38.36**	**23**	P	**P**	**10 46 34.4**	**-0.3**
	4.8nm,1.0s,mb4.2,baz=201,slow=8.1,SNR=12						
TORD				LR	LR	10 59 15.5	
	comp=Z,90nm,18.7s,MS3.6,baz=235,slow=31						
LSZ	**Lusaka**	**39.33**	**87**	P	**P**	**10 46 43.7**	**+0.8**
	0.8nm,0.3s,mb3.9,baz=229,slow=7.5,SNR=3.1						
CPUP	**Villa Florida**	**40.55**	**256**	P	**P**	**10 46 52.9**	**-0.1**
	0.6nm,0.5s,mb3.5,baz=78,slow=3.9,SNR=3.7						
CPUP				LR	LR	11 01 10.0	
	comp=Z,114nm,18.1s,MS3.8,baz=95,slow=32						
SIV	**San Ignacio**	**45.90**	**269**	P	**P**	**10 47 35.7**	**-0.6**
	1.2nm,0.8s,mb3.9,baz=113,slow=12,SNR=8.2						
SNAA	**Sanae**	**49.30**	**176**	P	**P**	**10 48 01.6**	**-1.1**
	0.3nm,0.5s,mb3.6,baz=13,slow=10,SNR=3.7						
SAML	**Samuel**	**50.16**	**277**	*e*P	**P**	**10 48 10.2**	**+1.0**
	11nm,1.5s,mb4.7						
KMBO	**Kilima Mbogo**	**53.09**	**73**	LR	LR	11 08 21.5	
	comp=Z,86nm,18.6s,MS3.8,baz=310,slow=33						
ESDC	**Sonseca Array**	**62.61**	**8**	P	**P**	**10 49 37.4**	**-0.6**
	0.2nm,0.3s,mb3.7,baz=170,slow=5.4,SNR=4.9						
MAW	**Mawson**	**63.74**	**156**	P	**P**	**10 49 45.9**	**+0.4**
	2.5nm,0.9s,mb4.2,baz=276,slow=11,SNR=6.7						
QSPA	**South Pole Qui**	**67.48**	**180**	*e*P	**P**	**10 50 10.4**	**+0.8**
	7.7nm,1.0s,mb4.7						
BRTR	**Keskin Array B**	**75.73**	**35**	P	**P**	**10 51 00.1**	**+0.7**
	1.2nm,1.0s,mb3.8,baz=209,slow=2.3,SNR=5.1						
VNDA	**Vanda**	**79.93**	**179**	P	**P**	**10 51 22.8**	**+0.1**
	0.7nm,0.9s,mb3.6,baz=181,slow=4.5,SNR=3.9						
AKASG	**Malin Array Be**	**81.95**	**25**	P	**P**	**10 51 31.8**	**-1.7**
	3.3nm,0.8s,mb4.3,baz=217,slow=4.6,SNR=8.0						

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*BJI **11** 12:10:22.4, 2940N×6780E, h10km, mb4.4, Ms4.0, Msz3.7*
*IDC **11** 12:10:25.0±1.1, 2945N×6781E, h0km, mb3.5/9, mb1 3.7/10, mb1mx3.6/25, mbtmp3.6/10, ML4.0/1, MS3.2/8, Ms1 3.2/8, ms1mx3.0/21, Error ellipse: s-maj=25.0km s-min=22.8km az=159.0*

*ISCJB **11** 12:10:25.3±2.3,2944N±006×6781E±006,h14km±17km, mb3.7/12,MS3.2/8,Error ellipse: s-maj=10.8km s-min=7.8km az=143.8*
*NEIC **11** 12:10:26.4±0.8,2944N×6782E,h10km,mb4.2/2,Error ellipse: s-maj=18.1km s-min=10.8km az=132.0*
*MOS **11** 12:10:28.1±0.9,2941N×6776E,h33km,mb3.9/5,Error ellipse: s-maj=30.4km s-min=13.1km az=89.3*
*NNC **11** 12:10:33.1±3.0,30.18N×6773E,h0km,mb3.6,Error ellipse: s-maj=57.2km s-min=26.6km az=113.0*
ISC 11 12:10:28.6±2.4,2951N±005×6777E±006,h21km±20km, n49,σ0^{s}94/52,mb3.7/12,MS3.2/8,4C-4D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARP	Sargodha	4.86	59	P	Pn	12 11 41.1	+0.6
CEP	Cherat	5.56	38	⇓P	Pn	12 11 51.2	+1.1
CEP				S	Sn	12 12 54.0	+0.6
CHCP	Chirah Chowk	6.25	47	P	Pn	12 12 00.1	+0.5
AJM	Ajmer	6.79	115	eP	Pn	12 12 06.0	-0.9
KHET	Khetri	7.20	100	eP	Pn	12 12 12.6	0.0
KHET				eS	Sn	12 13 27.9	-5.8
DLH	Dalhousie	7.66	65	ex	x	12 13 36.0	
BHK	Bhakra	7.71	74	ex	x	12 13 46.5	
KUDL	Kundal	7.77	98	eP	Pn	12 12 21.3	+0.8
KUDL				eS	Sn	12 13 42.2	-5.6
SDNR	Sundarnagar	8.19	74	eP	Pn	12 12 25.6	-0.5
SDNR				ex	x	12 13 25.6	
AYAN	Aya Nagar	8.26	95	eP	Pn	12 12 26.2	-0.9
AYAN				ex	x	12 13 27.8	
NDI	New Delhi	8.31	93	eP	Pn	12 12 29.2	+1.4
NDI				eS	Sn	12 13 53.9	-7.1
KLP	Kalpa	9.27	75	eP	Pn	12 12 41.0	+0.1
KLP				eS	Sn	12 14 18.4	-6.1
KLP				AML	AML	12 14 41.2	
	comp=N,134nm,0.5s						
KLP				AML	AML	12 14 42.0	
	comp=E,241nm,0.8s						
WSAR	Wadi Sarin	10.30	235	Pn	Pn	12 12 54.4	-0.6
	comp=E,1.1nm,0.3s,baz=44,slow=13,SNR=18						
WSAR				Sn	Sn	12 14 44.1	-5.7
	comp=E,2.3nm,0.3s,baz=271,slow=13,SNR=6.1						
WSAR	Wadi Sarin	10.30	235	Pn	Pn	12 12 54.4	-0.6
WSAR				Sn	Sn	12 14 44.1	-5.7
LGTI	Lohaghat	10.88	87	eP	Pn	12 13 02.5	-0.5
KK31	Karatay Array	13.74	8	⇑Pn	Pn	12 13 41.7	-0.5
	comp=E,4.9nm,0.8s,baz=199,slow=15,SNR=8.3						
KK31				⇑Sn	Sn	12 16 12.2	-1.9
	comp=E,8.1nm,0.9s						
FRU	Bishkek	14.39	21	eP	pP	12 14 03.5	-0.2
FRU				eS	Sn	12 16 34.0	+4.0
FRU				smax			
	comp=E,57nm,1.8s						
TKM2	Tokmak 2	14.79	23	⇑Pn	Pn	12 13 55.0	-1.4
	comp=E,1.8nm,1.1s						
TKM2				⇓Sn	Sn	12 16 39.7	+0.1
	comp=E,3.2nm,1.6s						
AB31	Akbulak array	20.60	345	P	P	12 15 06.7	+0.4
	comp=E,8.4nm,0.9s,baz=152,slow=13,SNR=10						
MK04	Makanchi Array	20.62	29	⇓P	P	12 15 06.3	-0.2
	comp=E,6.1nm,1.2s						
MKAR	Makanchi Array	20.64	29	P	P	12 15 05.4	-1.2
	comp=E,0.3nm,0.3s,baz=224,slow=12,SNR=4.8						
WMQ	Urumqi	21.36	43	eP	P	12 15 09.0	-5.5
GNI	Garni	21.62	306	LR	LR	12 24 28.8	
	comp=E,50nm,19.8s,MS2.9,baz=152,slow=39						
AKTK	Aktyubinsk	22.16	343	P	P	12 15 25.1	+2.1
AKTO	Aktyubinsk	22.16	343	⇑P	P	12 15 24.2	+1.2
	comp=E,0.1nm,0.8s						
AKTO	Aktyubinsk	22.16	343	P	P	12 15 25.1	+2.1
	comp=E,2.0nm,0.8s,mb3.6,baz=170,slow=8.0,SNR=7.5						
AKTO	Aktyubinsk	22.16	343	P	P	12 15 25.1	+2.1
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
KURK	Kurchatov	22.70	18	eP	P	12 15 28.5	-0.3
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
KURK	Kurchatov	22.70	18	eP	P	12 15 28.5	-0.3
	comp=Z,6.6nm,0.8s,mb4.1						
VOSK	Vostochnaya	23.31	5	⇓P	P	12 15 34.7	-0.6
	comp=Z,3.7nm,0.9s,mb3.8						
BVAR	Borovoye Array	23.57	4	P	P	12 15 36.6	-1.3
	comp=Z,0.7nm,0.5s,mb3.4,baz=193,slow=12,SNR=5.8						
BVAR				LR	LR	12 26 10.2	
	comp=Z,101nm,18.8s,MS3.3,baz=51,slow=40						
BVAR	Borovoye Array	23.57	4	P	P	12 15 36.6	-1.2
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				MLR	MLR		
	comp=Z,101nm,18.8s						
BRVK	Borovoye	23.60	4	eP	P	12 15 38.7	+0.6
CHKZ	Chkalovo	24.24	4	P	P	12 15 46.3	+2.4
CHKZ	Chkalovo	24.24	4	P	P	12 15 44.4	+0.5
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb3.9						
CHKZ	Chkalovo	24.24	4	P	P	12 15 44.4	+0.5
	comp=Z,6.0nm,1.1s,mb3.9						
ATD	Arta Tunnel	29.29	238	LR	LR	12 28 56.7	
	comp=Z,43nm,21.5s,MS3.0,baz=274,slow=38						
SONM	Songino Array	34.82	47	P	P	12 17 18.6	+0.8
	comp=Z,0.1nm,0.3s,mb3.2,baz=249,slow=4.0,SNR=2.0						
SONM				LR	LR	12 33 36.4	
	comp=Z,48nm,18.8s,MS3.3,baz=77,slow=40						
AKASG	Malin Array Be	35.73	317	P	P	12 17 26.0	+0.3
	comp=Z,0.2nm,0.3s,mb3.5,baz=109,slow=6.9,SNR=4.5						
FINES	FINESS Array B	42.05	332	LR	LR	12 38 31.0	
	comp=Z,51nm,20.6s,MS3.4,baz=309,slow=40						
GERES	GERESS Array B	45.10	311	P	P	12 18 42.1	-1.1
	comp=Z,0.2nm,0.2s,mb3.5,baz=125,slow=8.5,SNR=2.2						
GERES				LR	LR	12 39 14.1	
	comp=Z,20nm,18.8s,MS3.1,baz=50,slow=38						
ARCES	ARCESS Array B	46.71	341	P	P	12 18 55.7	-0.2
	comp=Z,0.7nm,0.5s,mb3.8,baz=128,slow=8.3,SNR=8.1						
ARCES				LR	LR	12 39 56.3	
	comp=Z,26nm,20.1s,MS3.2,baz=208,slow=38						
ARCES	ARCESS Array B	46.71	341	P	P	12 18 55.7	-0.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES				MLR	MLR		
	comp=Z,26nm,20.1s						
ARCES	ARCESS Array B	46.71	341	P	P	12 18 55.7	-0.3
ARCES				LR	LR	12 39 56.3	
NB2	NORSAR Subarra	48.55	327	P	P	12 19 17.1	+6.9
	comp=Z,1.6nm,1.0s,mb4.0,baz=106,slow=7.9						
NOA	NORSAR Array B	48.55	327	LR	LR	12 42 35.5	
	comp=Z,20nm,19.5s,MS3.1,baz=120,slow=40						
TORD	Torodi Ar. Bea	62.92	270	P	P	12 20 54.4	+1.0
	comp=Z,0.9nm,0.9s,mb3.9,baz=181,slow=0.6,SNR=3.5						
INK	Inuvik	81.20	8	P	P	12 22 42.0	-0.7
ASAR	Alice Springs	82.66	122	P	P	12 22 50.1	-0.3
	comp=Z,0.3nm,0.6s,mb3.5,baz=309,slow=5.5,SNR=9.5						

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*NNC **11** 12:24:58.5±1.2,3755N×7439E,h0km,mb2.8,mpv2.4, Error ellipse: s-maj=9.5km s-min=5.9km az=146.0*
BJI 11 12:24:58.3,3730N×7490E,h15km,ML3.1,3C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	2.37	21	P	Pn	12 25 37.7	+1.1
KSH				S	Sn	12 26 08.4	+3.0
KSH				Smax			
	comp=N,185nm,0.6s						
KSH				Smax			
	comp=E,166nm,0.7s						
TKM2	Tokmak 2	5.64	5	⇑P	Pn	12 26 20.9	-0.6
	comp=E,0.2nm,0.4s						
TKM2				⇓S	Sn	12 27 25.8	-0.2
	comp=E,0.5nm,0.6s						
KK31	Karatay Array	6.70	331	⇑P	Pn	12 26 32.9	-3.2
	comp=E,0.1nm,0.2s,baz=138,slow=12,SNR=24						
KK31				⇑S	Sn	12 27 46.2	-5.9
	comp=E,4.0nm,0.6s,baz=195,slow=57,SNR=6.4						
AKTO	Aktyubinsk	17.85	323	P	Pn	12 29 02.8	-3.2

NNC 11 12:26:39.4±3.9,3762N×7428E,h95km±51km,mb2.6, mpv3.1,3C-1D,Error ellipse: s-maj=31.3km s-min=21.3km az=153.0,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	Tokmak 2	5.39	10	⇑P	Pn	12 27 56.8	-0.5
	1.7nm,1.1s						
TKM2				⇑S	Sn	12 28 59.0	+1.0
	0.6nm,0.6s						
KK31	Karatay Array	6.19	333	⇓P	Pn	12 28 08.9	+0.8
	0.8nm,0.3s,baz=141,slow=13,SNR=4.3						
KK31				⇑S	Sn	12 29 17.7	+0.3
	5.2nm,0.8s,baz=162,slow=24,SNR=4.3						
AB31	Akbulak array	15.58	323	P	Pn	12 30 14.0	+0.5
AKTO	Aktyubinsk	17.30	323	P	Pn	12 30 34.1	-0.7

CSEM 11 12:30:13.9±0.5,4297N×633W,h0km,mb3.6/1,Error ellipse: s-maj=5.8km s-min=3.9km az=13.0,After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPON	Pontenova	0.69	301	Pg	Pg	12 30 26.6	-0.6
	12nm,0.3s,SNR=26						
EPON				Lg		12 30 36.9	
	12nm,0.4s,SNR=8.5						
EARI	Arriondas	0.89	68	Pg	Pg	12 30 28.8	-2.1
	7.0nm,0.3s,SNR=23						
EARI				Lg		12 30 43.6	
	7.5nm,0.4s						
ECAL	Calabor	1.07	196	Pg	Pg	12 30 31.9	-2.6
	20nm,0.4s,SNR=37						
ECAL				Lg		12 30 48.3	
	27nm,0.3s,SNR=10						
EMAZ	Mazaricos	1.94	270	Lg		12 31 15.2	
	SNR=7.9						
ELAN	Lanestosa	2.14	82	Pn	Pn	12 30 48.0	-2.8
	6.7nm,0.5s,SNR=10						
ELAN				Sn	Sn	12 31 18.2	+0.1
	12nm,0.5s,SNR=6.8						
GUD	Guadarrama	2.84	144	Pn	Pn	12 31 03.9	+3.4
	SNR=7.9						
GUD				Sn	Sn	12 31 36.7	+1.3
	SNR=7.9						

CASC 11 12:32:16.6±2.4,1584N×8876W,h20km±99km,MD4.2, ML4.2,6C-4D,Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO2	Montecristo 2	1.55	202	⇑eP	x	12 32 55.6	
MTO2				eS	x	12 33 16.9	
LBRS	Las Brisas	2.11	187	⇓eP	x	12 33 03.1	
LBRS				eS	x	12 33 28.4	
RTR	El Retiro	2.12	204	⇑eP	x	12 33 05.3	
RTR				eS	x	12 33 31.2	
GCG	Guatemala City	2.12	234	eP	Pn	12 32 53.4	+2.5
GCG				eS	Sn	12 33 24.5	+7.9
GCG				AML	AML	12 33 36.7	
	comp=E,5µm,0.5s						
SNJE	San Jose	2.13	203	⇓eP	x	12 33 05.0	
SNJE				eS	x	12 33 32.1	
BOQS	Boqueron	2.15	194	⇑eP	x	12 33 04.4	
BOQS				eS	x	12 33 31.6	
SBLS	San Blas	2.16	203	⇓eP	x	12 33 05.7	
SBLS				eS	x	12 33 31.1	
LCBS	La Ceiba	2.19	186	⇓iP	x	12 33 04.0	
LCBS				eS	x	12 33 30.9	
SNET	Serv Nac Est T	2.19	192	eP	x	12 32 47.7	
SNET				eS	x	12 33 14.7	
SNVI	San Vicente	2.22	182	⇑iP	x	12 33 04.5	
SNVI				eS	x	12 33 31.3	
TP2	Tecpan 2	2.42	245	eP	Pn	12 32 54.7	-0.3
TP2				eS	Sn	12 33 30.3	+6.2
BLLM	Bellamira	2.44	168	⇑eP	x	12 33 06.9	
BLLM				eS	x	12 33 35.1	
VSM	San Miguel	2.45	169	⇑eP	x	12 33 07.0	
VSM				eS	x	12 33 36.2	
CRIN	San Cristobal	3.54	152	eP	Pn	12 33 10.1	-0.3
CRIN				eS	Sn	12 33 53.3	+1.7
LEON	Leon	3.86	152	eP	Pn	12 33 14.4	-0.4
CNGN	Cerro Negro	3.88	149	eP	Pn	12 33 14.8	-0.3
CNGN				i		12 34 02.5	
	comp=E,298nm,0.3s						
MIRN	Miramar	3.92	149	eP	Pn	12 33 14.7	-1.0
BOA	Boaco	4.46	138	eP	Pn	12 33 25.5	+2.5

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*MOS **11** 12:39:41.9±1.5,2527S×17725W,h105km,mb4.7/7,Error ellipse: s-maj=21.8km s-min=15.2km az=61.7*
*ISCJB **11** 12:39:43.0±1.7,2527S±0.10×17725W±0.09,h113km±16km, mb4.5/15,Error ellipse: s-maj=17.6km s-min=10.8km az=113.6*
*IDC **11** 12:39:43.5±2.8,2523S×177.15W,h109km±24km,mb4.0/7, mb1 4.2/10,mb1mx4.2/13,mbtmp4.5/10,MS3.3/6, Ms1 3.3/6,ms1mx3.1/23,Error ellipse: s-maj=20.4km s-min=18.0km az=145.0*
*NEIC **11** 12:39:44.0±1.7,2526S×17722W,h112km±15km,mb4.6/11, Error ellipse: s-maj=16.8km s-min=9.5km az=150.0*
ISC 11 12:39:44.8±1.7,2531S±010×17718W±009,h116km±15km, n77,σ0^{s}99/43,mb4.5/15,2C-2D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.98	189	P	Pn	12 40 42.0	-2.0
	55nm,0.3s,baz=247,slow=23,SNR=4.0						
RAO				S	Sn	12 41 30.7	+0.9
	193nm,0.3s,baz=79,slow=23,SNR=9.4						
AFI	Afiamalu	12.43	25	P	Pn	12 42 28.8	-8.9
	12nm,0.3s,baz=328,slow=4.8,SNR=32						
AFI				LR	LR	12 46 00.6	
	comp=Z,81nm,19.8s,baz=137,slow=31						
PUZ	Puketiti	13.30	196	SN	Sx	12 44 57.1	
MWZ	Matawai	13.73	198	SN	Sx	12 45 10.0	
URZ	Urewera	13.79	199	P	Pn	12 42 56.4	+1.1
	4.6nm,0.3s,baz=314,slow=2.2,SNR=20						
KNZ	Kokohu	14.34	196	SN	Sx	12 45 23.6	
DZM	Mont Dzumac	15.34	279	LR	LR	12 47 19.3	
	comp=Z,66nm,21.1s,baz=14,slow=30						
BFZ	Birch Farm	16.28	198	SN	Sx	12 46 06.1	
MRZ	Mangatainoka R	16.46	200	SN	Sx	12 46 08.3	
TIWZ	Tintock	16.47	199	SN	Sx	12 46 10.9	
RAR	Rarotonga	16.51	79	P	Pn	12 43 29.4	-0.1
	0.9nm,0.3s,baz=152,slow=4.1,SNR=7.0						
KIW	Kapiti Island	16.85	201	SN	Sx	12 46 18.0	
TCW	Tory Channel	17.38	202	SN	Sx	12 46 30.6	
TUWZ	Tuamarina	17.68	202	SN	Sx	12 46 38.7	
NNZ	Nelson	17.70	204	SN	Sx	12 46 39.7	
THZ	Tophouse	18.35	204	ePN	Pn	12 43 44.2	-7.4
THZ				SN	Sx	12 46 55.6	
DSZ	Denniston Nort	18.76	206	SN	Sx	12 47 05.7	
MQZ	McQueen's Vall	20.14	202	SN	Sx	12 47 30.9	
RPZ	Rata Peaks	20.72	205	LR	LR	12 51 27.4	
	comp=Z,190nm,19.1s,baz=226,slow=34						
PPT	Papeete	26.79	79	LR	LR	12 54 05.9	
	comp=Z,84nm,18.7s,baz=155,slow=32						
HNR	Honiara	26.87	302	LR	LR	12 54 48.0	
	comp=Z,89nm,18.9s,baz=178,slow=34						
CTA	Charters Tower	34.06	271	eP	P	12 46 20.0	+2.2
	15nm,1.5s,mb4.6						
CTA	Charters Tower	34.06	271	P	P	12 46 19.4	+1.5
	1.9nm,0.3s,mb4.3,baz=99,slow=19,SNR=5.4						
CTA	Charters Tower	34.06	271	eP	P	12 46 20.0	+2.2
CTA				pmax	pmax		
	comp=Z,15nm,1.5s						
STKA	Stephens Creek	36.62	250	eP	P	12 46 40.6	+0.9
	comp=Z,2.3nm,1.0s,mb4.1						
STKA	Stephens Creek	36.62	250	P	P	12 46 40.4	+0.6
	comp=Z,1.3nm,0.5s,mb4.1,baz=283,slow=15,SNR=8.1						
AS31	Alice Springs	44.35	261	eP	P	12 47 42.0	-1.3
AS31				eP		12 47 44.4	
ASAR	Alice Springs	44.35	261	P	P	12 47 42.8	-0.6
	comp=Z,1.4nm,0.5s,mb4.0,baz=90,slow=6.7,SNR=30						
ASPA	Alice Springs	44.35	261	eP	P	12 47 44.4	+1.1
WB2	Warramunga Arr	44.87	267	eP	P	12 47 47.0	-0.4
FORT	Forrest	48.24	250	eP	P	12 48 13.3	-0.5
	comp=Z,12nm,0.6s,mb4.9						
SBA	Scott Base	53.14	184	eP	P	12 48 51.8	+1.2
SBA				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.1						
SBA	Scott Base	53.14	184	eP	P	12 48 51.8	+1.2
	comp=Z,26nm,1.2s,mb5.1						
VNDA	Vanda	53.21	186	P	P	12 48 51.4	+0.4
	comp=Z,1.8nm,0.6s,mb4.3,baz=1.6,slow=6.2,SNR=20						
QSPA	South Pole Qui	64.78	180	eP	P	12 50 10.3	-0.6
	comp=Z,20nm,0.8s,mb5.0						
QSPA				eP		12 50 10.7	
MJAR	Matsushiro Arr	74.52	324	LR	LR	13 22 02.3	
	comp=Z,17nm,18.1s,baz=50,slow=34						
MAW	Mawson	77.31	200	eP	P	12 51 26.0	-0.5
	comp=Z,6.7nm,0.9s,mb4.4						
MAW	Mawson	77.31	200	P	P	12 51 26.1	-0.4
	comp=Z,9.4nm,0.9s,mb4.5,baz=139,slow=6.2,SNR=59						
MAW	Mawson	77.31	200	eP	P	12 51 26.0	-0.5
MAW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SYO	Syowa Base	82.22	193	⇓eP	P	12 51 51.0	-2.0
SYO	Syowa Base	82.22	193	⇓eP	P	12 51 54.4	+1.4
SNAA	Sanae	83.20	178	⇑i	P	12 51 56.5	-1.5
SNAA				e		12 51 57.7	
SNAA	Sanae	83.20	178	eP	P	12 51 56.5	-1.5
SNAA				pmax	pmax		
	comp=Z,26nm,1.3s						
SNAA	Sanae	83.20	178	eP	P	12 51 56.5	-1.5
	comp=Z,26nm,1.3s,mb4.9						
VNA1	Neumayer--Stat	83.98	176	⇑i	P	12 52 01.2	-0.8
VNA1				e		12 52 02.7	
VNA1				e		12 52 05.8	
NVAR	Mina Array Bea	84.02	43	P	P	12 52 02.1	-0.1
	comp=Z,2.4nm,0.6s,mb4.2,baz=230,slow=9.6,SNR=23						
TPNV	Topopah Spring	84.39	45	eP	P	12 52 04.0	-0.1
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
TPNV	Topopah Spring	84.39	45	eP	P	12 52 04.0	-0.1
	comp=Z,3.2nm,0.9s,mb4.2						
TUC	Tucson	85.37	51	eP	P	12 52 10.2	+1.2
TUC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TUC	Tucson	85.37	51	eP	P	12 52 10.2	+1.2
	comp=Z,3.2nm,0.8s,mb4.3						
KLR	Kul'dur	87.03	329	eP	P	12 52 14.0	-3.2
MSU	Marysvale	87.92	45	eP	P	12 52 22.0	+0.6
MNTX	Cornudas Mount	88.93	54	eP	P	12 52 26.5	+0.3
	comp=Z,1.2nm,0.6s,mb4.1						
MCMT	McKenzie Canyo	91.13	40	eP	P	12 52 36.6	+0.2
TPAW	Teton Pass	91.50	42	eP	P	12 52 38.3	+0.2
PDAR	Pinedale Array	91.95	43	P	P	12 52 39.7	-0.5
	comp=Z,2.2nm,0.7s,mb4.5,baz=212,slow=3.0,SNR=22						
QLMT	Earthquake Lak	91.97	40	eP	P	12 52 41.0	+0.7
BOZ	Bozeman (W)	92.31	40	eP	P	12 52 41.7	-0.2
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.5						
BOZ	Bozeman (W)	92.31	40	eP	P	12 52 41.7	-0.2
	comp=Z,3.7nm,1.2s,mb4.5						
MKAR	Makanchi Array	115.00	312	PKP	PKiKP	12 58 09.6	-2.4
	comp=Z,0.2nm,0.3s,baz=35,slow=4.4,SNR=6.0						
ARCES	ARCESS Array B	133.77	349	PKP	PKPdf	12 58 45.6	-2.2
	comp=Z,2.0nm,0.7s,baz=48,slow=1.8,SNR=5.5						
FINES	FINESS Array B	140.57	343	PKhKP		12 58 51.8	
	comp=Z,0.9nm,0.7s,baz=356,slow=2.9,SNR=4.5						
NB2	NORSAR Subarra	143.83	353	PKPa		12 59 01.8	
	comp=Z,4.8nm,0.8s,baz=12,slow=3.3						
NOA	NORSAR Array B	143.83	353	PKhKP		12 59 01.7	
	comp=Z,3.9nm,0.8s,baz=12,slow=2.3,SNR=16						
AKASG	Malin Array Be	147.53	328	PKPbc	PKPbc	12 59 13.2	-2.1
	comp=Z,3.3nm,0.5s,baz=42,slow=4.2,SNR=12						
BR131	Keskin Array S	150.47	307	ePKPbc	PKPbc	12 59 21.9	-0.8
BRTR	Keskin Array B	150.47	307	PKPbc	PKPbc	12 59 21.9	-0.7
	comp=Z,1.6nm,0.7s,baz=120,slow=2.0,SNR=8.9						
BRTR				PKPab	PKPab	12 59 29.1	-0.6
	comp=Z,4.4nm,0.6s,baz=86,slow=3.6,SNR=15						
CRVS	Cervenica-Dubn	152.30	333	ePKP	PKPbc	12 59 36.3	+9.4
CLL	Collm	152.90	346	i PKPbc	PKPbc	12 59 27.6	-0.6
	comp=Z,10.0nm,1.2s						
CLL				i PKPab	PKPab	12 59 38.3	-1.5
	comp=Z,8.0nm,0.7s						
CLL				epPKPab	pPKPab	13 00 05.0	-5.2
KECS	Kecovo	153.03	334	e	PKPbc	12 59 37.0	+8.5
BRG	Berggiesshubel	153.08	344	e(P)	PKPbc	12 59 28.0	-0.6
	comp=Z,3.1nm,1.1s						
BRG				e		12 59 36.7	
	comp=Z,1.5nm,0.6s						
BRG	Berggiesshubel	153.08	344	ePKIKP	PKPbc	12 59 28.0	-0.6
BRG				e		12 59 36.7	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VYHS	Vyhne	153.66	336	ePKP	PKPab	12 59 42.3	-0.7
KHC	Kasperske Hory	154.78	343	eP	PKPab	12 59 46.5	-1.3
GERES	GERESS Array B	155.01	343	PKPab	PKPab	12 59 47.8	-1.0
	comp=Z,1.1nm,0.7s,baz=45,slow=4.0,SNR=8.0						
DBIC	Dimbokro	160.06	157	PKPab	PKPab	13 00 10.5	-0.1
	comp=Z,2.3nm,0.5s,baz=183,slow=4.2,SNR=4.3						
TORD	Torodi Ar. Bea	167.85	175	PKP	PKPdf	12 59 36.6	-0.6
	comp=Z,0.9nm,0.7s,baz=329,slow=1.0,SNR=5.3						
TORD				PKPab	PKPab	13 00 44.9	0.0
	comp=Z,3.5nm,0.9s,baz=183,slow=3.6,SNR=13						

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*IDC **11** 12:48:02.9±2.8,3121S×17693W,h0km,mb3.9/2, mb1 4.1/3,mb1mx3.8/11,mbtmp4.0/3,ML4.0/1,Error ellipse: s-maj=58.3km s-min=32.6km az=98.0*
*NEIC **11** 12:48:02.5±2.2,3141S×17680W,h10km,mb4.4/1,Error ellipse: s-maj=44.7km s-min=15.5km az=100.0*
*ISCJB **11** 12:48:06.5±4.1,3141S±009×1772W±06,h33km,mb4.0/3, Error ellipse: s-maj=71.5km s-min=8.4km az=16.4*
ISC 11 12:48:07.9±3.6,3138S±008×1771W±05,h35km,n12, σ1^{s}46/14,mb4.0/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.23	341	Pn	Pn	12 48 40.0	-2.4
	50nm,0.3s,baz=77,slow=23,SNR=3.8						
RAO				Sn	Sn	12 49 07.8	-1.0
	274nm,0.3s,baz=115,slow=21,SNR=5.9						
RAO	Raoul Island	2.23	341	Pn	Pn	12 48 40.0	-2.4
RAO				Sn	Sn	12 49 07.8	-1.0
URZ	Urewera	8.35	213	Pn	Pn	12 50 03.8	-2.6
	0.7nm,0.3s,baz=158,slow=13,SNR=4.0						
URZ				Sn	Sn	12 51 38.1	-1.4
	2.1nm,0.3s,baz=160,slow=21,SNR=9.0						
RPZ	Rata Peaks	15.47	214	Pn	Pn	12 51 38.4	-4.9
	1.0nm,0.3s,baz=189,slow=6.5,SNR=5.6						
STKA	Stephens Creek	35.02	258	P	P	12 54 59.4	+2.3
	1.5nm,0.8s,mb4.0,baz=90,slow=11,SNR=5.5						
STKA	Stephens Creek	35.02	258	eP	P	12 54 58.8	+1.7
AS31	Alice Springs	43.83	268	eP	P	12 56 11.6	+1.1
ASAR	Alice Springs	43.83	268	P	P	12 56 11.5	+1.0
	1.1nm,0.6s,mb3.8,baz=104,slow=7.4,SNR=24						
ASPA	Alice Springs	43.84	268	eP	P	12 56 11.6	+1.1
WB2	Warramunga Arr	44.90	273	eP	P	12 56 19.7	+0.7
WRAB	Tennant Creek	44.91	273	eP	P	12 56 19.7	+0.6
	3.9nm,0.8s,mb4.3						
FINES	FINESS Array B	146.33	340	PKPbc	PKPbc	13 07 43.6	-1.3
	0.7nm,0.5s,baz=59,slow=3.2,SNR=8.7						

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*IDC **11** 13:28:54.4±0.8,3165S×17937E,h479km±9km,mb3.5/6, mb1 3.7/10,mb1mx3.6/14,mbtmp4.5/10,Error ellipse: s-maj=19.3km s-min=13.3km az=152.0*
*NEIC **11** 13:28:55.0±0.6,3173S×17937E,h487km±7km,mb4.4/7, Error ellipse: s-maj=13.4km s-min=9.9km az=99.0*
*ISCJB **11** 13:28:55.3±0.7,3190S±005×179.1E±0.1,h488km±7km, mb4.1/10,Error ellipse: s-maj=14.3km s-min=8.2km az=17.7*
ISC 11 13:28:59.6±0.8,3220S±007×1790E±01,h507km±8km,n81, σ0^{s}90/89,mb4.1/10,3C-1D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.96	43	P	P	13 30 07.8	-10
	133nm,0.3s,baz=240,slow=20,SNR=7.0						
RAO				S	S	13 31 03.6	-18
	132nm,0.3s,baz=242,slow=23,SNR=3.3						
KUZ	Kuaotunu	5.28	210	P	P	13 30 32.8	+3.4
KUZ	Kuaotunu	5.28	210	⇓PN	P	13 30 32.8	+3.4
MXZ	Matakaoa Point	5.38	186	eP	P	13 30 29.8	-0.6
MXZ	Matakaoa Point	5.38	186	PN	P	13 30 29.6	-0.7
MTAZ	Motutapu	5.69	215	P	P	13 30 37.4	+4.3
MTAZ	Motutapu	5.69	215	PN	P	13 30 37.3	+4.1
OTAZ	Otara	5.81	214	PN	P	13 30 38.7	+4.4
PUZ	Puketiti	5.89	186	eP	P	13 30 35.3	+0.2
PUZ	Puketiti	5.89	186	PN	P	13 30 34.6	-0.6
PUZ				SN	S	13 31 52.6	-0.6
WTAZ	Waiatarua	5.97	216	P	P	13 30 37.1	+1.3
MWZ	Matawai	6.24	191	eP	P	13 30 38.6	+0.1
MWZ				S	S	13 31 59.4	0.0
MWZ	Matawai	6.24	191	PN	P	13 30 38.5	0.0
MWZ				SN	S	13 31 57.8	-1.5
URZ	Urewera	6.24	194	P	P	13 30 38.1	-0.4
	29nm,0.3s,baz=34,slow=1.8,SNR=127						

URZ				S	**S**	**13 31 58.7**	**-0.7**
	14nm,0.3s,baz=225,slow=21,SNR=19						
URZ	**Urewera**	**6.24**	**194**	*e*P	**P**	**13 30 38.2**	**-0.3**
URZ	**Urewera**	**6.24**	**194**	PN	**P**	**13 30 37.6**	**-0.8**
URZ				SN	**S**	**13 31 58.4**	**-1.0**
TAZ	**Tarawera**	**6.36**	**198**	P	**P**	**13 30 41.9**	**+2.3**
PATZ	**Paeroa**	**6.56**	**199**	P	**P**	**13 30 44.0**	**+2.4**
PATZ	**Paeroa**	**6.56**	**199**	PN	**P**	**13 30 43.6**	**+2.0**
BKZ	**Black Stump Fm**	**7.25**	**196**	*e*P	**P**	**13 30 48.3**	**-0.1**
BKZ	**Black Stump Fm**	**7.25**	**196**	PN	**P**	**13 30 48.1**	**-0.3**
BKZ				SN	**S**	**13 32 15.9**	**-1.7**
PXZ	**Pawanui**	**8.01**	**192**	PN	**P**	**13 30 56.2**	**+0.1**
PXZ				SN	**S**	**13 32 30.8**	**-1.0**
TSZ	**Takapari Road**	**8.22**	**196**	*e*P	**P**	**13 30 58.5**	**+0.2**
TSZ	**Takapari Road**	**8.22**	**196**	*e*PN	**P**	**13 30 57.8**	**-0.6**
BFZ	**Birch Farm**	**8.75**	**194**	*e*P	**P**	**13 31 04.3**	**+0.4**
BFZ	**Birch Farm**	**8.75**	**194**	*e*PN	**P**	**13 31 04.3**	**+0.4**
BFZ				SN	**S**	**13 32 46.2**	**+0.2**
MRZ	**Mangatainoka R**	**8.88**	**197**	*e*P	**P**	**13 31 05.1**	**-0.1**
MRZ	**Mangatainoka R**	**8.88**	**197**	*e*PN	**P**	**13 31 04.5**	**-0.8**
MRZ				SN	**S**	**13 32 47.1**	**-1.3**
TIWZ	**Tintock**	**8.92**	**195**	*e*PN	**P**	**13 31 05.7**	**+0.1**
KIW	**Kapiti Island**	**9.25**	**200**	P	**P**	**13 31 08.9**	**-0.1**
KIW	**Kapiti Island**	**9.25**	**200**	*e*PN	**P**	**13 31 08.6**	**-0.4**
MTW	**Mount Morrison**	**9.37**	**196**	P	**P**	**13 31 10.6**	**+0.3**
MTW	**Mount Morrison**	**9.37**	**196**	*e*PN	**P**	**13 31 10.5**	**+0.2**
CAW	**Cannon Point**	**9.44**	**198**	P	**P**	**13 31 11.2**	**+0.2**
CAW	**Cannon Point**	**9.44**	**198**	*e*PN	**P**	**13 31 10.8**	**-0.2**
MRW	**Makara Radio**	**9.65**	**200**	P	**P**	**13 31 13.7**	**+0.5**
MRW	**Makara Radio**	**9.65**	**200**	*e*PN	**P**	**13 31 13.4**	**+0.1**
TCW	**Tory Channel**	**9.76**	**201**	P	**P**	**13 31 14.7**	**+0.3**
TCW	**Tory Channel**	**9.76**	**201**	PN	**P**	**13 31 14.5**	**+0.1**
QRZ	**Quartz Range**	**10.06**	**209**	*e*P	**P**	**13 31 18.5**	**+1.0**
QRZ	**Quartz Range**	**10.06**	**209**	*e*PN	**P**	**13 31 19.0**	**+1.5**
TUWZ	**Tuamarina**	**10.06**	**202**	PN	**P**	**13 31 17.9**	**+0.3**
NNZ	**Nelson**	**10.07**	**205**	*e*P	**P**	**13 31 17.6**	**0.0**
NNZ	**Nelson**	**10.07**	**205**	PN	**P**	**13 31 17.9**	**+0.3**
NNZ				SN	**S**	**13 33 11.6**	**+0.4**
THZ	**Tophouse**	**10.71**	**205**	*e*PN	**P**	**13 31 24.5**	**+0.1**
THZ				SN	**S**	**13 33 23.8**	**0.0**
KHZ	**Kahutara**	**11.09**	**201**	*e*P	**P**	**13 31 29.7**	**+1.3**
KHZ	**Kahutara**	**11.09**	**201**	*e*PN	**P**	**13 31 28.9**	**+0.5**
KHZ				SN	**S**	**13 33 31.4**	**+0.5**
DSZ	**Denniston Nort**	**11.13**	**209**	*e*PN	**P**	**13 31 29.1**	**+0.3**
LTZ	**Lake Taylor**	**11.83**	**205**	*e*P	**P**	**13 31 36.0**	**-0.3**
LTZ	**Lake Taylor**	**11.83**	**205**	*e*PN	**P**	**13 31 36.0**	**-0.3**
WVZ	**Waitaha Valley**	**12.67**	**209**	*e*PN	**P**	**13 31 45.1**	**0.0**
RPZ	**Rata Peaks**	**13.09**	**206**	P	**P**	**13 31 49.4**	**-0.1**
	2.1nm,0.3s,baz=299,slow=1.7,SNR=15						
RPZ				S	**S**	**13 34 10.5**	**-7.0**
	0.4nm,0.3s,baz=78,slow=24,SNR=3.0						
FOZ	**Fox Glacier**	**13.51**	**210**	*e*PN	**P**	**13 31 53.1**	**-0.8**
DZM	**Mont Dzumac**	**15.03**	**309**	P	**P**	**13 32 04.8**	**-5.2**
	0.3nm,0.3s,baz=120,slow=20,SNR=3.4						
CNB	**Canberra Magne**	**24.79**	**255**	*e*P	**P**	**13 33 43.7**	**+3.0**
	43nm,1.8s,mb4.6						
STKA	**Stephens Creek**	**31.60**	**260**	*e*P	**P**	**13 34 41.8**	**+1.6**
	4.4nm,0.3s,mb4.4						
STKA	**Stephens Creek**	**31.60**	**260**	P	**P**	**13 34 41.5**	**+1.3**
	9.1nm,0.5s,mb4.5,baz=98,slow=11,SNR=28						
CTA	**Charters Tower**	**31.64**	**284**	*e*P	**P**	**13 34 40.2**	**-0.3**
	2.0nm,0.3s,mb4.0						
CTA	**Charters Tower**	**31.64**	**284**	P	**P**	**13 34 39.9**	**-0.7**
	2.8nm,0.3s,mb4.2,baz=107,slow=11,SNR=8.3						
AS31	**Alice Springs**	**40.49**	**270**	⇑*i*P	**P**	**13 35 53.2**	**-0.6**
ASAR	**Alice Springs**	**40.49**	**270**	P	**P**	**13 35 53.2**	**-0.6**
	4.7nm,0.8s,mb4.0,baz=105,slow=7.3,SNR=72						
ASAR				ScP	ScP	13 40 44.5	-0.7
	0.7nm,0.9s,baz=114,slow=3.7,SNR=4.6						
ASAR				S	**S**	**13 41 26.9**	**+1.1**
	0.7nm,1.1s,baz=108,slow=15,SNR=4.0						
ASPA	**Alice Springs**	**40.49**	**270**	⇑*i*P	**P**	**13 35 53.2**	**-0.6**
WB2	**Warramunga Arr**	**41.64**	**276**	⇑*i*P	**P**	**13 36 01.8**	**-1.2**
WB2				*e*S	**S**	**13 41 41.8**	**-0.6**
WRAB	**Tennant Creek**	**41.65**	**276**	*e*P	**P**	**13 36 01.8**	**-1.2**
FORT	**Forrest**	**43.12**	**258**	*e*P	**P**	**13 36 14.3**	**-0.3**
	20nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**49.83**	**273**	*e*P	**P**	**13 37 05.4**	**-0.1**
	3.3nm,0.7s,mb3.8						
FITZ	**Fitzroy Crossi**	**49.83**	**273**	P	**P**	**13 37 05.0**	**-0.5**
	1.4nm,0.6s,mb3.5,baz=215,slow=6.0,SNR=8.6						
KLBR	**Kellerberrin**	**51.35**	**253**	*e*P	**P**	**13 37 16.2**	**-0.4**
	51nm,1.5s,mb4.6						
QSPA	**South Pole Qui**	**57.92**	**180**	*e*P	**P**	**13 38 04.9**	**+2.1**
	7.5nm,0.8s,mb4.1						
MAW	**Mawson**	**69.71**	**202**	P	**P**	**13 39 18.7**	**+0.6**
	0.7nm,0.6s,mb3.4,baz=140,slow=11,SNR=8.0						
SNAA	**Sanae**	**76.42**	**179**	*e*	**P**	**13 39 55.8**	**-0.8**
SNAA				*e*		13 39 56.7	
SNAA				*e*		13 40 01.8	
SNAA				*e*		14 49 28.2	
SNAA				*e*		14 49 37.2	
SNAA				*e*		14 49 59.2	
SNAA				*e*		14 57 29.9	
SNAA				*e*		14 57 36.6	
VNA1	**Neumayer--Stat**	**77.32**	**178**	*e*	**P**	**13 40 01.2**	**-0.3**
VNA1				*e*		13 40 02.4	
VNA1				*e*		13 40 09.3	
VNA1				*e*		14 49 24.7	
VNA1				*e*		14 49 44.2	
VNA1				*e*		14 50 22.8	
NVAR	**Mina Array Bea**	**91.31**	**44**	P	**P**	**13 41 06.3**	**-4.4**
	1.1nm,0.8s,mb3.9,baz=229,slow=10,SNR=7.9						
ARCES	**ARCESS Array B**	**139.75**	**346**	PKhKP		13 47 18.6	
	1.2nm,0.7s,baz=60,slow=2.1,SNR=7.7						
JOF	**Joensuu**	**143.07**	**336**	*e*pkp	PKPdf	13 47 27.7	-7.7
KAF	**Kangasniemi**	**145.30**	**338**	*e*pkp	PKPdf	13 47 34.7	-4.6
FINES	**FINESS Array B**	**145.87**	**337**	PKPbc	PKPbc	13 47 37.4	-4.5
	6.2nm,0.5s,baz=52,slow=4.8,SNR=92						
NB2	**NORSAR Subarra**	**150.05**	**348**	PKPa	PKPbc	13 47 47.8	-4.8
	comp=Z,1.5nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.05**	**348**	PKPbc	PKPbc	13 47 47.8	-4.8
	comp=Z,2.2nm,0.6s,baz=17,slow=4.2,SNR=12						
AKASG	**Malin Array Be**	**151.05**	**319**	PKPbc	PKPbc	13 47 50.8	-4.2
	comp=Z,0.7nm,0.4s,baz=49,slow=2.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**160.88**	**188**	PKPab	PKPab	13 48 46.8	-0.5
	comp=Z,0.7nm,0.6s,baz=163,slow=4.3,SNR=6.4						

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*CASC **11** 14:30:24.7±2.7, 1863N×10262W, h20^{km}±999^{km}, mb6.1, mb6.0(NEIC)*

*SZGRF **11** 14:30:35.5, 1835N×10149W, h56^{km}, mb5.9, MS5.3, Guerrero, Mexico*

*BJI **11** 14:30:39.6, 1860N×101.10W, h60^{km}, mB5.7, mb5.5, Ms6.0, Msz5.7*

*ISCJB **11** 14:30:39.0±0.1, 1847N±002×101.14W±001, h58^{km}, mb6.0/323, MS5.4/190, Error ellipse: s-maj=2.8km s-min=1.3km az=66.2*

*IDC **11** 14:30:40.3±0.5, 1863N×101.12W, h57^{km}±3^{km}, mb5.4/32, mb1 5.4/34, mb1mx5.4/35, mbtmp5.6/34, MS5.3/32, Ms1 5.3/32, ms1mx5.2/36, Error ellipse: s-maj=14.9km s-min=10.4km az=56.0*

*NEIC **11** 14:30:40.1±0.1, 1854N×10105W, h56^{km}, mb6.0/249, ME5.9, MW6.1, MD5.9(MEX), Error ellipse: s-maj=3.5km s-min=2.5km az=36.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{18}Nm; M_{rr}-1.01; $M_{\theta\theta}$1.44; $M_{\phi\phi}$-0.43; $M_{r\theta}$0.75; $M_{\theta\phi}$-0.15; $M_{\phi r}$-0.13; Best double couple: $M_0$1.50000×10^{18} NP1:ϕ_s279.00000°, δ61.00000°, λ-85.00000°. NP2:ϕ_s88.00000°, δ29.00000°, λ-99.00000°. Principal axes: T 1.6700, Plg16.0000°, Azm5.0000°; N -0.4400, Plg5.0000°, Azm96.0000°; P -1.2300, Plg74.0000°, Azm202.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s110.00000°, δ20.00000°, λ-90.00000°. NP2:ϕ_s290.00000°, δ70.00000°, λ-90.00000°. Principal axes: T Plg25.0000°, Azm20.0000°; N Plg0.0000°, Azm0.0000°; P Plg65.0000°, Azm200.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Ixtapa, Mexico City and Zihuatanejo. Also felt at Acapulco, Acatlan, Arcelia, Chiautla, Cuautla, Cuernavaca, El Grullo, Guadalajara, Iztapaluca, Jiutepec, Lerma, Manzanillo, Metepec, Morelia, Patzcuaro, Pedernales, Puebla, Puerto Vallarta, Puruandiro, Queretaro, Santa Fe de la Laguna, Tenancingo, Toluca, Uruapan, Valle de Bravo, Villa Guerrero, Zacapu, Zacualpan, Zihuatanejo and Zinacantepec.

*HRVD **11** 14:30:40.7±0.1, 1850N×10106W, h58^{km}, MW6.0/107, Centroid moment Tensor Solution. LP body waves: s107,c254;Mantle waves: s94,c316; Half duration: 2.4s Moment tensor: Scale 10^{18}Nm; M_{rr}-1.06±.01; $M_{\theta\theta}$1.18±.01; $M_{\phi\phi}$-0.11±.01; $M_{r\theta}$0.51±.01; $M_{\theta\phi}$-0.24±.01; $M_{\phi r}$-0.14±.01; Best double couple: $M_0$1.25600×10^{18} NP1:ϕ_s97.00000°, δ33.00000°, λ-94.00000°. NP2: ϕ_s283.00000°, δ57.00000°, λ-87.00000°. Principal axes: T 1.3360, Plg12.0000°, Azm10.0000°; N -0.1570, Plg2.0000°, Azm101.0000°; P -1.1760, Plg77.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IGIL **11** 14:30:40.1, 1849N×10093W, h60^{km}, mb5.3, MS5.2*

*BGS **11** 14:30:40.3±1.3, 1856N×10106W, h60^{km}, mb5.9*

*MOS **11** 14:30:41.3±1.0, 1866N×10108W, h73^{km}, mb6.2/122, MS5.5/51, Error ellipse: s-maj=5.6km s-min=3.5km az=75.6*

*MEX **11** 14:30:41.0±0.9, 1836N×10125W, h73^{km}±11^{km}, MD5.2*

*CRAAG **11** 14:30:42.6, 1873N×10099W, Mb6.0*

ISC 11 14:30:41.2±0.1**, 1854N**±002×**10107W**±001**, h60**^{km}±.6^{km}**:pP-P, n1473,** σ**1.11**/1530**, mb6.0**/321**, 562C-206D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**1.00**	**202**	⇑*i*P	**Pn**	**14 30 55.3**	**-3.9**
ZIIG				*i* S	**Sn**	**14 31 07.8**	**-4.9**
ZIIG	**Zihuatanejo**	**1.00**	**202**	*i* P	**Pn**	**14 30 55.4**	**-3.9**
ZIIG				*i* S	**Sn**	**14 31 08.6**	**-4.1**
MOIG	**Morelia**	**1.14**	**354**	*i* P	**Pn**	**14 31 02.1**	**+1.1**
MOIG				*i* S	**Sn**	**14 31 19.4**	**+3.6**
MOIG	**Morelia**	**1.14**	**354**	*i* P	**Pn**	**14 31 02.3**	**+1.2**
MOIG				*i* S	**Sn**	**14 31 19.4**	**+3.6**
MRX	**Morelia**	**1.17**	**354**	*i* P	**Pn**	**14 31 02.5**	**+1.1**
MRX	**Morelia**	**1.17**	**354**	*i* P	**Sn**	**14 31 21.0**	**+4.5**
PLIG	**Platanillo**	**1.50**	**95**	*i* P	**Pn**	**14 31 07.5**	**+1.6**
PLIG				*i* S	**Sn**	**14 31 26.2**	**+1.9**
MEIG	**Mezcala**	**1.51**	**114**	⇑*e*P	**Pn**	**14 31 06.8**	**+0.8**
MEIG				*e*S	**Sn**	**14 31 25.5**	**+0.9**
CAIG	**El Cayaco**	**1.67**	**153**	*i* P	**Pn**	**14 31 06.0**	**-2.1**
CAIG				*i* S	**Sn**	**14 31 26.0**	**-2.5**
CAIG	**El Cayaco**	**1.67**	**153**	*i* P	**Pn**	**14 31 05.9**	**-2.2**
CAIG				*i* S	**Sn**	**14 31 24.9**	**-3.6**
IIZ	**Mezontepec**	**1.85**	**69**	*i* P	**Pn**	**14 31 15.0**	**+4.4**
IIZ				*i* S	**Sn**	**14 31 49.5**	**+17**
YAIG	**Yautepec**	**1.93**	**80**	*i* P	**Pn**	**14 31 14.0**	**+2.4**
YAIG				*i* S	**Sn**	**14 31 38.9**	**+4.2**
UNM	**Universidad Na**	**1.96**	**66**	*i* P	**Pn**	**14 31 14.6**	**+2.6**
UNM				*i* P		14 31 15.1	
UNM				*i* P		14 31 19.5	
UNM				*i* S	**Sn**	**14 31 39.9**	**+4.4**
UNM				*i* S	**Sn**	**14 31 40.0**	**+4.5**
UNM				*i* S	**Sn**	**14 31 44.7**	**+9.2**
UNM	**Universidad Na**	**1.96**	**66**	*i* P	**Pn**	**14 31 14.6**	**+2.6**
UNM				*i* S	**Sn**	**14 31 40.0**	**+4.5**
UNM	**Universidad Na**	**1.96**	**66**	*i* P	**Pn**	**14 31 14.6**	**+2.6**
UNM				*i* P		14 31 15.6	
UNM				*i* P		14 31 19.5	
UNM				*i* S	**Sn**	**14 31 40.0**	**+4.5**
UNM				*i* S	**Sn**	**14 31 44.7**	**+9.2**
UNM				*i* S	**Sn**	**14 31 50.5**	**+15**
ACX	**Acapulco**	**1.99**	**146**	*i* P	**Pn**	**14 31 09.9**	**-2.6**
ACX				*i* S	**Sn**	**14 31 34.2**	**-2.2**
ACX	**Acapulco**	**1.99**	**146**	*i* P	**Pn**	**14 31 10.8**	**-1.8**
CIVM	**Cilcuayo**	**2.05**	**74**	*i* P	**Pn**	**14 31 14.5**	**+1.2**
CIVM				*i* S	**Sn**	**14 31 43.7**	**+5.9**
PBVM	**Pinon**	**2.08**	**64**	*i* P	**Pn**	**14 31 15.7**	**+2.0**
PBVM				*i* S	**Sn**	**14 31 42.7**	**+4.1**
PBVM	**Pinon**	**2.08**	**64**	*i* P	**Pn**	**14 31 16.7**	**+3.0**
PBVM				*i* S	**Sn**	**14 31 49.7**	**+11**
PTVM	**Pico Tres Padr**	**2.13**	**60**	*i* P	**Pn**	**14 31 16.4**	**+2.0**
PTVM				*i* S	**Sn**	**14 31 44.5**	**+4.8**
PTVM	**Pico Tres Padr**	**2.13**	**60**	*i* P	**Pn**	**14 31 15.3**	**+1.0**
MMIG	**Aquila**	**2.17**	**264**	*i* P	**Pn**	**14 31 11.3**	**-3.7**
MMIG				*i* S	**Sn**	**14 31 35.3**	**-5.5**
RFVM	**Rio Frio**	**2.32**	**70**	*i* P	**Pn**	**14 31 18.6**	**+1.6**
RFVM				*i* S	**Sn**	**14 31 48.9**	**+4.4**
PPM	**Popocatepetl**	**2.37**	**77**	*i* P	**Pn**	**14 31 19.1**	**+1.4**
PPM				*i* P		14 31 21.1	
PPM				*i* S	**Sn**	**14 31 46.3**	**+0.7**
PPM	**Popocatepetl**	**2.37**	**77**	*i* P	**Pn**	**14 31 19.1**	**+1.4**
PPM				*i* P		14 31 21.1	
PPM				*i* S	**Sn**	**14 31 49.0**	**+3.4**
SFJM	**Santa Fe**	**2.68**	**317**	*i* P	**Pn**	**14 31 21.6**	**-0.4**
SFJM				*i* S	**Sn**	**14 31 52.9**	**-0.4**
SFJM	**Santa Fe**	**2.68**	**317**	*i* P	**Pn**	**14 31 21.3**	**-0.7**
UTMO	**Huajuapan**	**3.18**	**102**	*i* P	**Pn**	**14 31 31.3**	**+2.5**
UTMO				*i* S	**Sn**	**14 32 05.5**	**0.0**
CJM	**Chamela**	**3.88**	**285**	*i* P	**Pn**	**14 31 36.9**	**-1.4**
CJM				*i* S	**Sn**	**14 32 17.9**	**-4.7**
VHO	**Vista Hermosa**	**4.38**	**109**	*i* P	**Pn**	**14 31 48.0**	**+2.8**
VHO				*i* S	**Sn**	**14 32 36.6**	**+1.7**
OXX	**Oaxaca**	**4.39**	**109**	*e*P	**Pn**	**14 31 46.3**	**+1.1**
OXX				*i* S	**Sn**	**14 32 36.9**	**+1.8**
OXX	**Oaxaca**	**4.39**	**109**	*i* P	**Pn**	**14 31 48.3**	**+3.1**
ZAIG	**Zacatecas**	**4.44**	**342**	*i* P	**Pn**	**14 31 47.1**	**+1.1**
ZAIG				*i* S	**Sn**	**14 32 39.7**	**+3.5**
LVIG	**Laguna Verde**	**4.55**	**74**	*i* P	**Pn**	**14 31 49.8**	**+2.3**
LVIG				*i* S	**Sn**	**14 32 46.1**	**+7.0**
HUIG	**Huatulco**	**5.49**	**119**	*i* P	**Pn**	**14 32 01.8**	**+1.5**
HUIG				*i* S	**Sn**	**14 33 04.4**	**+2.4**
CMIG	**Matias Romero**	**6.07**	**103**	P	**Pn**	**14 32 10.3**	**+2.1**
	122nm,0.3s,baz=267,slow=11,SNR=787						
CMIG				S	**Sn**	**14 33 14.7**	**-1.6**
	146nm,0.3s,baz=28,slow=14,SNR=4.7						
CMIG	**Matias Romero**	**6.07**	**103**	*i* P	**Pn**	**14 32 10.6**	**+2.3**
CMIG				*i* S	**Sn**	**14 33 20.0**	**+3.8**
CMIG	**Matias Romero**	**6.07**	**103**	P	**Pn**	**14 32 10.3**	**+2.1**
CMIG				*i* P		14 32 10.6	
CMIG				S	**Sn**	**14 33 14.7**	**-1.6**
CMIG				*i* S	**Sn**	**14 33 20.0**	**+3.8**
LNIG	**Linares**	**6.50**	**13**	*i* P	**Pn**	**14 32 15.8**	**+1.6**
LNIG				*i* S	**Sn**	**14 33 28.8**	**+1.8**
MAIG	**Mazatlaan**	**6.82**	**314**	⇑*i*P	**Pn**	**14 32 19.3**	**+0.8**
MAIG				*i* S	**Sn**	**14 33 34.7**	**+0.1**
SCIG		**9.38**	**86**	*i* P	**Pn**	**14 32 53.2**	**-0.3**
SCIG				*i* S	**Sn**	**14 34 41.6**	**+4.2**
KVTX	**Kingsville**	**9.43**	**17**	⇑*e*Pn	**Pn**	**14 32 57.3**	**+3.0**
	765nm,0.9s						
LPIG	**La Paz**	**10.23**	**304**	P	**Pn**	**14 33 06.7**	**+1.4**
	3.4nm,0.3s,baz=292,slow=2.5,SNR=13						
LPIG	**La Paz**	**10.23**	**304**	⇑*i*P	**Pn**	**14 33 06.7**	**+1.4**
JCT	**Junction City**	**11.94**	**5**	⇑*i*P	**Pn**	**14 33 31.1**	**+2.5**
HKT	**Hockley**	**12.32**	**22**	⇑*e*P	**Pn**	**14 33 34.0**	**+0.3**
HKT				pmax	pmax		
	comp=Z,3μm,1.7s						
HKT	**Hockley**	**12.32**	**22**	⇑*e*Pn	**Pn**	**14 33 34.0**	**+0.2**
	comp=Z,3μm,1.7s						
MNTX	**Cornudas Mount**	**13.67**	**344**	⇑*i*Pn	**Pn**	**14 33 53.5**	**+1.4**
GDL2	**Guadalupe Moun**	**13.92**	**348**	*e*Pn	**Pn**	**14 33 58.2**	**+2.7**
NATX	**Nacogdoches**	**14.38**	**23**	⇑*i*Pn	**Pn**	**14 34 01.5**	**0.0**
LEON	**Leon**	**14.95**	**112**	*e*P	**Pn**	**14 34 11.7**	**+2.8**
CNGN	**Cerro Negro**	**15.09**	**111**	*e*P	**Pn**	**14 34 14.8**	**+4.1**
MIRN	**Miramar**	**15.10**	**112**	*e*P	**Pn**	**14 34 15.4**	**+4.5**
COPN	**Copaltepe**	**15.32**	**112**	*e*P	**Pn**	**14 34 16.4**	**+2.7**
APYN	**Apoyeque**	**15.51**	**112**	*e*P	**Pn**	**14 34 20.3**	**+4.2**
XAVN	**Gruta Xavier**	**15.57**	**112**	*e*P	**Pn**	**14 34 20.7**	**+3.8**
XAVN				*i*		14 34 39.6	
	comp=Z,354nm,0.6s						
TISN	**Laguna Tiscapa**	**15.62**	**112**	*e*P	**Pn**	**14 34 21.7**	**+4.2**
TUC	**Tucson**	**16.27**	**329**	Pn	**Pn**	**14 34 26.8**	**+1.1**
TUC	**Tucson**	**16.27**	**329**	⇑*i*Pn	**Pn**	**14 34 26.6**	**+0.9**
AMTX	**Amarillo**	**16.29**	**358**	⇑*i*Pn	**Pn**	**14 34 26.4**	**+0.5**
AMTX				*e*Sn	**Sn**	**14 37 36.8**	**+11**
Y22C	**IRIS PASSCAL I**	**16.33**	**342**	⇑P	**Pn**	**14 34 29.2**	**+2.7**
	baz=16,SNR=17						
LENM	**Lemitar**	**16.43**	**342**	*e*Pn	**Pn**	**14 34 29.7**	**+1.9**
CONN	**Concepcion**	**16.44**	**113**	*e*P	**Pn**	**14 34 31.6**	**+3.7**
LPM	**Los Pinos Moun**	**16.47**	**344**	*e*Pn	**Pn**	**14 34 30.2**	**+1.9**
LAZ	**Ladron**	**16.70**	**342**	*e*Pn	**Pn**	**14 34 33.2**	**+2.1**
LAZ				*e*pP	pP	14 34 49.2	+3.8
116A	**Eloy**	**16.93**	**328**	⇑P	**Pn**	**14 34 35.2**	**+1.3**
	baz=17,SNR=144						
116A				⇓S	**S**	**14 37 46.8**	**-1.5**
	baz=17						
RIN3	**Volcan Rincon**	**17.01**	**115**	⇑*e*P	**Pn**	**14 34 38.9**	**+3.9**
ANMO	**Albuquerque**	**17.03**	**345**	Pn	**Pn**	**14 34 37.8**	**+2.6**
ANMO	**Albuquerque**	**17.03**	**345**	P	**Pn**	**14 34 36.5**	**+1.3**
	comp=Z,2.3nm,0.3s,baz=158,slow=12,SNR=253						
ANMO				S	**S**	**14 37 53.0**	**+2.4**
	comp=Z,0.2nm,0.3s,baz=292,slow=22,SNR=1.6						
ANMO	**Albuquerque**	**17.03**	**345**	⇑*i*Pn	**Pn**	**14 34 37.5**	**+2.2**
	comp=Z,1μm,1.6s						
ANMO				*e*pP	pP	14 34 52.9	+3.8
MIAR	**Mount Ida**	**17.28**	**21**	*e*P	**Pn**	**14 34 37.3**	**-1.0**
MIAR				pmax	pmax		
	comp=Z,2μm,1.2s						
MIAR	**Mount Ida**	**17.28**	**21**	⇑*e*Pn	**Pn**	**14 34 37.0**	**-1.3**
	comp=Z,2μm,1.3s						
115A	**Sonoran Desert**	**17.30**	**327**	P	**Pn**	**14 34 40.1**	**+1.5**
	baz=17,SNR=82						
115A				⇓S	**S**	**14 37 57.5**	**+1.5**
	baz=17						
JTS	**JuntasAbangare**	**17.62**	**116**	P	**Pn**	**14 34 44.6**	**+2.1**
	comp=Z,0.9nm,0.3s,baz=321,slow=8.4,SNR=41						
JTS				S	**S**	**14 38 10.7**	**+8.2**
	baz=329,slow=19,SNR=2.0						
JTS				LR	LR	14 41 22.5	
	comp=Z,8μm,21.3s,baz=310,slow=36						
JTS	**JuntasAbangare**	**17.62**	**116**	⇓*i*P	**Pn**	**14 34 43.5**	**+1.0**
JTS	**JuntasAbangare**	**17.62**	**116**	P	**Pn**	**14 34 44.6**	**+2.1**
JTS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JTS				MLR	MLR		
	comp=Z,8μm,21.3s						
JCR	**Jicaral**	**17.71**	**117**	*e*P	**Pn**	**14 34 47.4**	**+3.8**
VACR	**Volcan Arenal**	**17.77**	**115**	*e*P	**Pn**	**14 34 46.1**	**+1.8**
CAO	**Cobano**	**17.79**	**117**	⇓*e*P	**Pn**	**14 34 47.1**	**+2.5**
UALR	**University of**	**17.94**	**24**	⇑*i*P	**Pn**	**14 34 45.5**	**-0.9**
	comp=Z,1μm,1.3s						
UALR				*e*pP	pP	14 35 01.3	+2.2
UALR				*e*S	**S**	**14 38 07.6**	**-1.3**
EPA	**Esparza**	**18.07**	**116**	*e*P	**Pn**	**14 34 51.3**	**+3.3**
CGA2	**Cerro Gallo 2**	**18.17**	**116**	*e*P	**Pn**	**14 34 53.5**	**+4.3**
Z14A	**Wintersburg**	**18.20**	**327**	⇑P	**Pn**	**14 34 50.4**	**+0.9**
	baz=18,SNR=37						
Z14A				⇑S	**S**	**14 38 15.1**	**+2.2**
	baz=18						
POA2	**Poas 2**	**18.28**	**115**	⇑*e*P	**Pn**	**14 34 53.4**	**+2.9**
PRS1	**Puriscal**	**18.32**	**115**	*e*P	**Pn**	**14 34 55.5**	**+4.5**
OCM	**Ochomogo**	**18.66**	**115**	⇓*e*P	**Pn**	**14 34 55.6**	**+0.5**
OCM				*e*P		14 34 57.5	
IRZ2	**Volcan Irazu 2**	**18.68**	**115**	*e*P	**Pn**	**14 34 58.0**	**+2.6**
LCR2	**La Lucha 2**	**18.70**	**116**	*e*P	**Pn**	**14 34 57.6**	**+2.0**
X15A	**Humboldt**	**18.74**	**330**	P	**Pn**	**14 34 56.5**	**+0.5**
	baz=19,SNR=150						
X15A				⇓S	**S**	**14 38 27.7**	**+2.6**
	baz=19						
GLA	**Glamis**	**19.00**	**322**	⇑*i*P	**Pn**	**14 34 58.7**	**-0.5**
GLA				*e*pP	pP	14 35 16.8	+6.0
GLA	**Glamis**	**19.00**	**322**	⇑P	**Pn**	**14 34 59.0**	**-0.2**
	baz=19,SNR=187						
GLA				⇑S	**S**	**14 38 31.3**	**+0.8**
	baz=19						
BUS	**Buena Vista**	**19.00**	**116**	*e*P	**Pn**	**14 35 00.5**	**+1.3**
Y13A	**Salome**	**19.01**	**326**	⇑P	**Pn**	**14 34 59.2**	**-0.1**
	baz=19,SNR=71						
Y13A				⇓S	**S**	**14 38 30.8**	**+0.2**
	baz=19						
X14A	**Yava**	**19.04**	**329**	⇑P	**Pn**	**14 34 59.9**	**+0.3**
	baz=19,SNR=166						
X14A				⇓S	**S**	**14 38 32.1**	**+1.0**
	baz=19						
LRAL	**Lakeview Retre**	**19.18**	**38**	⇑*i*P	**Pn**	**14 34 59.2**	**-2.1**
	comp=Z,771nm,1.2s						
LRAL				*e*pP	pP	14 35 14.7	+1.9
LRAL				*e*S	**S**	**14 38 31.7**	**-2.2**
WUAZ	**Wupatki**	**19.22**	**334**	⇑*i*P	**Pn**	**14 35 02.0**	**+0.3**
	comp=Z,1μm,1.1s						
WUAZ				*e*pP	pP	14 35 16.8	+3.6
WUAZ				*e*ScP	ScP	14 42 58.4	+6.4
MET	**Memphis--Engin**	**19.25**	**29**	⇑*i*P	**Pn**	**14 35 00.8**	**-1.3**
MET				*e*pP	pP	14 35 16.8	+3.2
HBAR	**Harrisburg**	**19.30**	**26**	⇑*i*P	**Pn**	**14 35 00.9**	**-1.8**
HBAR				*e*pP	pP	14 35 17.8	+3.7
W15A	**Williams**	**19.32**	**331**	⇑P	**Pn**	**14 35 03.6**	**+0.6**
	baz=19,SNR=148						
W15A				⇑S	**S**	**14 38 38.5**	**+1.7**
	baz=19						
Y12C	**Blythe**	**19.34**	**324**	P	**Pn**	**14 35 02.8**	**-0.4**
	baz=19,SNR=90						
Y12C				⇑S	**S**	**14 38 38.8**	**+1.6**
	baz=19						
DVTC	**Desert V Tower**	**19.50**	**319**	⇓P	**Pn**	**14 35 04.4**	**-0.6**
	baz=20,SNR=42						
DVTC				⇓S	**S**	**14 38 43.4**	**+3.1**
	baz=20						
SWSC	**Sam W. Stewart**	**19.50**	**320**	⇑P	**Pn**	**14 35 04.0**	**-1.1**
	baz=20,SNR=33						
SWSC				⇓S	**S**	**14 38 45.2**	**+4.8**
	baz=20						
SDCO	**Great Sand Dun**	**19.52**	**349**	⇑*i*P	**Pn**	**14 35 05.0**	**-0.4**
SDCO				*e*pP	pP	14 35 19.6	+3.0
PDMCI	**Parker Dam,Lak**	**19.55**	**326**	P	**Pn**	**14 35 05.0**	**-0.6**
	baz=20,SNR=154						
PDMCI				⇓S	**S**	**14 38 44.4**	**+3.1**
	baz=20						
X13A	**Yucca**	**19.61**	**327**	⇓P	**Pn**	**14 35 05.9**	**-0.6**
	baz=20,SNR=300						
X13A				⇓S	**S**	**14 38 45.6**	**+3.0**
	baz=20						
MVCO	**Mesa Verde**	**19.71**	**342**	⇑*i*P	**Pn**	**14 35 06.5**	**-1.0**
	comp=Z,65nm,0.5s						
W14A	**Seligman**	**19.73**	**330**	P	**Pn**	**14 35 07.7**	**-0.2**
	baz=20,SNR=326						
W14A				⇑S	**S**	**14 38 48.3**	**+3.3**
	baz=20						
MONP	**Monument Peak**	**19.85**	**319**	P	**Pn**	**14 35 08.2**	**-1.0**
	baz=20,SNR=114						
MONP				⇑S	**S**	**14 38 52.3**	**+4.9**
	baz=20						
BAR	**Barrett**	**19.87**	**318**	*e*P	**Pn**	**14 35 07.9**	**-1.5**
IRM	**Iron Mountain**	**20.00**	**324**	⇓P	**Pn**	**14 35 09.9**	**-1.0**
	baz=20,SNR=380						
IRM				⇑S	**S**	**14 38 53.7**	**+3.5**
	baz=20						
PLAL	**Pickwick Lake**	**20.04**	**33**	⇑*i*P	**P**	**14 35 07.8**	**-1.3**
	comp=Z,1μm,1.1s						
PLAL				*e*S	**S**	**14 38 50.5**	**-0.5**
W13A	**Hualapai Mount**	**20.04**	**328**	⇑P	**P**	**14 35 10.7**	**+1.5**
	baz=20,SNR=208						
W13A				⇑S	**S**	**14 38 54.6**	**+3.6**
	baz=20						
MGV	**Manicaragua**	**20.09**	**76**	*e*P	**P**	**14 35 11.2**	**+1.4**
MGV				*e*S	**S**	**14 38 51.2**	**-0.9**
	comp=N,92nm,1.6s						
MGV				*e*			
	comp=E,134nm,1.9s						
NEE2	**Needles Airpor**	**20.16**	**326**	⇑P	**P**	**14 35 11.6**	**+1.1**
	baz=20,SNR=45						
NEE2				⇑S	**S**	**14 38 56.5**	**+3.0**
	baz=20						
HALT	**Halls**	**20.17**	**29**	⇑*i*P	**P**	**14 35 10.1**	**-0.5**
CTCR	**Cotoan**	**20.19**	**116**	*e*P	**P**	**14 35 12.2**	**+1.4**
109C	**Camp Elliot, M**	**20.28**	**318**	⇓P	**P**	**14 35 12.1**	**+0.3**
	baz=20,SNR=8.5						
109C				⇑S	**S**	**14 39 00.2**	**+4.3**
	baz=20						
PFO	**Pinyon Flat Ob**	**20.36**	**320**	Pn	**P**	**14 35 13.0**	**+0.3**
	comp=E,1μm,1.5s,SNR=51						
PFO	**Pinyon Flat Ob**	**20.36**	**320**	P	**P**	**14 35 13.9**	**+1.2**
PFO				*e**PP		14 35 35.7	
PFO				pmax	pmax		
	comp=Z,780nm,1.3s						
PFO	**Pinyon Flat Ob**	**20.36**	**320**	⇑*i*P	**P**	**14 35 13.7**	**+1.0**
	comp=Z,766nm,1.3s						
PFO				*e*pP		14 35 29.5	
PFO				LR	LR		
	comp=Z,6μm,19.0s						
PFO	**Pinyon Flat Ob**	**20.36**	**320**	P	**P**	**14 35 14.0**	**+1.3**
	baz=20,SNR=93						
PFO				⇑S	**S**	**14 39 01.9**	**+4.4**
	baz=20						
BELC	**Belle Mtn.**	**20.36**	**322**	P	**P**	**14 35 13.7**	**+1.0**
	baz=20,SNR=123						
BELC				⇓S	**S**	**14 39 01.2**	**+3.6**
	baz=20						
DWPF	**Disney**	**20.37**	**59**	⇑*i*P	**P**	**14 35 11.5**	**-1.3**
	comp=Z,361nm,1.0s						
DWPF				LR	LR		
	comp=Z,6μm,22.0s						
PVMO	**Portageville**	**20.43**	**27**	⇑*i*P	**P**	**14 35 13.0**	**-0.4**
	comp=Z,3μm,1.4s						
GLAT	**Glass**	**20.49**	**28**	⇑*i*P	**P**	**14 35 13.4**	**-0.7**
PV01	**Paradox Valley**	**20.59**	**343**	⇑*e*P	**P**	**14 35 16.3**	**+1.1**

PV01 epP 14 35 32.0
PARMO Parma 20.62 27⇑iP P 14 35 14.8 -0.7
PARMO epP 14 35 29.5
W12A Cal Nev Ari 20.70 326 ⇓P P 14 35 17.6 +1.2
baz=21,SNR=30
W12A ⇓S S 14 39 06.1 +1.9
baz=21
UTMT University of 20.75 29 eP P 14 35 16.4 -0.4
comp=Z,3µm,1.4s
UTMT epP 14 35 36.2
MURC Murrieta 20.81 319 ⇑P P 14 35 18.5 +0.9
baz=21,SNR=41
MURC ⇓S S 14 39 09.4 +3.0
baz=21
KSU1 Kansas State U 20.85 10 eP P 14 35 16.5 -1.5
comp=Z,1µm,1.4s
KSU1 epP 14 35 33.2
PV10 Paradox Valley 20.95 342 eP P 14 35 18.5 -0.6
V12A Nelson 21.02 327 P P 14 35 20.7 +0.9
baz=21,SNR=98
V12A ⇓S S 14 39 13.6 +3.1
baz=21
WVT Waverly 21.06 31⇑iP P 14 35 18.5 -1.8
WVT eS S 14 39 11.9 +0.6
WVT pmax pmax
comp=Z,27nm,1.7s
WVT MLR MLR
comp=Z,16µm,20.0s
WVT Waverly 21.06 31⇑iP P 14 35 18.5 -1.7
comp=Z,27nm,1.7s
WVT eS S 14 39 11.9 +0.5
WVT LR LR
comp=Z,16µm,20.0s
BBRC Big Bear Sol-O 21.09 321 ⇑P P 14 35 21.5 +1.0
baz=21,SNR=13
BBRC ⇑S S 14 39 17.9 +6.0
baz=21
HEC Hector,Ludlow 21.15 323 ⇓P P 14 35 22.0 +0.8
baz=21,SNR=44
HEC ⇓S S 14 39 17.0 +4.1
baz=21
SMCO Snowmass 21.19 347⇑iP P 14 35 22.7 +1.1
SMCO epP 14 35 37.6
CCM Cathedral Cave 21.25 22⇑iP P 14 35 20.8 -1.5
CCM pmax pmax
comp=Z,722nm,1.3s,mb5.8
CCM MLR MLR
comp=Z,12µm,22.0s
CCM Cathedral Cave 21.25 22⇑iP P 14 35 20.8 -1.5
comp=Z,722nm,1.3s,mb5.8
CCM epP 14 35 37.5
CCM LR LR
comp=Z,12µm,22.0s
SCI San Clemente I 21.27 316 ⇑P P 14 35 22.8 +0.2
baz=21,SNR=33
SCI ⇓S S 14 39 19.2 +3.8
baz=21
SWET Sewanee 21.36 36⇑iP P 14 35 21.8 -1.6
SWET eS S 14 39 17.7 +0.6
TUQ Turquoise Mtn. 21.37 325 ⇑P P 14 35 24.8 +1.3
baz=21,SNR=142
TUQ ⇑S S 14 39 22.8 +5.6
baz=21
U12A Valley of Fire 21.42 329 ⇑P P 14 35 25.0 +1.0
baz=21,SNR=119
U12A ⇑S S 14 39 23.3 +5.1
baz=21
CIS Catalina Islan 21.45 317 ⇑P P 14 35 24.4 0.0
baz=22,SNR=57
CIS ⇓S S 14 39 22.1 +3.3
baz=22
FVM French Village 21.49 23⇑iP P 14 35 23.2 -1.6
FVM pmax pmax
comp=Z,574nm,1.0s,mb5.9
FVM French Village 21.49 23⇑iP P 14 35 23.2 -1.6
comp=Z,629nm,1.0s,mb5.9
FVM epP 14 35 39.1
BFSC Mount Baldy St 21.52 320 ⇑P P 14 35 25.6 +0.4
baz=22,SNR=74
BFSC ⇑S S 14 39 24.5 +4.2
baz=22
ISCO Idaho Springs 21.55 350⇑iP P 14 35 25.6 +0.2
ISCO pmax pmax
comp=Z,384nm,1.0s,mb5.8
ISCO MLR MLR
comp=Z,44µm,20.0s
ISCO Idaho Springs 21.55 350⇑iP P 14 35 25.6 +0.2
comp=Z,357nm,1.0s,mb5.8
ISCO epP 14 35 40.6
ISCO LR LR
comp=Z,34µm,20.0s
FMP Fort Macarthur 21.57 318 ⇑P P 14 35 25.7 0.0
baz=22
FMP ⇑S S 14 39 24.4 +3.2
baz=22
RRX Edison Barstow 21.57 322 ⇑P P 14 35 26.3 +0.7
baz=22,SNR=8.2
RRX ⇑S S 14 39 24.3 +3.1
baz=22
SIUC Southern Illin 21.74 26⇑eP P 14 35 26.1 -1.3
SIUC epP 14 35 42.5
MWC Mount Wilson 21.76 319 eP P 14 35 28.1 +0.4
GSC Goldstone 21.76 323⇓iP P 14 35 28.2 +0.5
GSC epP 14 35 42.4
GSC Goldstone 21.76 323 P P 14 35 28.5 +0.8
baz=22,SNR=185
GSC ⇓S S 14 39 29.0 +4.2
baz=22
SHPR Sheep Range 21.78 328 eP P 14 35 28.5 +0.6
CCUT Cedar City 21.79 333⇑iP P 14 35 29.1 +1.0
CCUT epP 14 35 43.2
U11A Corn Creek 21.83 328 ⇑P P 14 35 29.1 +0.7
baz=22,SNR=8.5
U11A ⇑S S 14 39 28.1 +1.8
baz=22
SHOC Shoshone 21.90 325 ⇓P P 14 35 29.6 +0.3
baz=22,SNR=14
SHOC ⇑S S 14 39 28.5 +0.8
baz=22
DECC Green Verdugo 21.94 319 ⇓P P 14 35 29.9 +0.3
baz=22,SNR=13
DECC ⇑S S 14 39 30.4 +2.0
baz=22
MBJ Montego Bay 22.01 87⇑eP P 14 35 33.7 +3.4
ARUT Antelope Range 22.02 333⇑eP P 14 35 31.5 +1.0
ARUT epP 14 35 46.9
CCCC Cccc 22.07 79 eP sP 14 35 59.0 +7.1
SRU San Rafael 22.08 340⇑iP P 14 35 31.2 +0.1
SRU epP 14 35 45.6
SNCC San Nicolas Is 22.09 315⇑eP P 14 35 30.7 -0.5
comp=Z,0.8nm,1.2s
SNCC epP 14 35 44.8
SNCC LR LR
comp=Z,12µm,20.0s
SNCC San Nicolas Is 22.09 315 ⇓P P 14 35 30.9 -0.3
baz=22,SNR=20
SNCC ⇑S S 14 39 29.9 -1.3
baz=22
MSU Marysvale 22.13 336 eP P 14 35 32.3 +0.7
MSU e*PP 14 35 47.4
MVU Marysvale 22.14 336 PFAKE 14 35 40.0 +8.3
MVU LR LR
comp=Z,42µm,19.0s
SLM Saint Louis 22.14 23⇑iP P 14 35 30.3 -1.4
SLM e*PP 14 35 46.7
SLM pmax pmax
comp=Z,496nm,1.0s,mb5.9
SLM Saint Louis 22.14 23⇑iP P 14 35 30.3 -1.4
comp=Z,494nm,1.0s,mb5.9
SLM epP 14 35 46.7
EDW2 Edwards Air Fo 22.16 321 P P 14 35 31.8 -0.2
baz=22,SNR=134
EDW2 ⇓S S 14 39 32.6 +0.1
baz=22
MCJ Malvern 22.22 88⇑eP P 14 35 36.2 +3.6
MYNC Murphy 22.30 39⇑iP P 14 35 31.3 -2.2
MYNC e*PP 14 35 47.8
MYNC pmax pmax
comp=Z,1µm,1.5s,mb6.1
MYNC MLR MLR
comp=Z,13µm,20.0s
MYNC Murphy 22.30 39⇑iP P 14 35 31.3 -2.1
comp=Z,1µm,1.5s,mb6.0
MYNC epP 14 35 47.8
MYNC LR LR
comp=Z,12µm,20.0s

BLG Laguna Peak 22.32 318 ⇓P P 14 35 33.8 +0.2
baz=22,SNR=29
BLG ⇓S S 14 39 35.0 -0.5
baz=22
U10A Ash Meadows, A 22.32 326 ⇓P P 14 35 34.2 +0.5
baz=22,SNR=220
U10A ⇑S S 14 39 37.7 +2.1
baz=22
CPCT Cooper Cave 22.33 38 eP P 14 35 31.6 -2.2
CPCT epP 14 35 47.3
LRMC Laurel Mountai 22.39 322 P P 14 35 34.6 +0.2
baz=22,SNR=202
LRMC ⇓S S 14 39 37.1 +0.4
baz=22
OSI Osito Adit 22.43 319 ⇓P P 14 35 34.8 0.0
baz=22,SNR=17
OSI ⇑S S 14 39 37.5 +0.2
baz=22
TMUT Trail Mountain 22.48 339⇑iP P 14 35 35.9 +0.5
TMUT epP 14 35 50.4
BBJ Bamboo Saint A 22.58 87⇑eP P 14 35 39.9 +3.5
BSC Santa Cruz Isl 22.61 317 ⇑P P 14 35 36.4 -0.4
baz=23,SNR=24
BSC ⇓S S 14 39 37.5 -2.9
baz=23
USIN University of 22.62 28⇑iP P 14 35 35.4 -1.5
comp=Z,2µm,1.2s,mb6.5
USIN epP 14 35 50.6
ACLA Agua Clara, Si 22.63 111⇑iP P 14 35 37.4 +0.5
FURC Furnace Creek, 22.64 325 ⇑P P 14 35 37.0 0.0
baz=23,SNR=50
FURC ⇑S S 14 39 41.1 +0.2
baz=23
ZANG Zanguenga, Cho 22.67 112⇑iP P 14 35 40.6 +3.3
TPNV Topopah Spring 22.68 327⇑iP P 14 35 37.8 +0.4
TPNV e*PP 14 35 52.2
TPNV pmax pmax
comp=Z,1µm,1.7s,mb6.0
TPNV MLR MLR
comp=Z,11µm,19.0s
TPNV Topopah Spring 22.68 327⇑iP P 14 35 37.8 +0.3
comp=Z,1µm,1.7s,mb6.0
TPNV epP 14 35 52.1
TPNV LR LR
comp=Z,9µm,19.0s
MPMC Manual Prospec 22.69 324 P P 14 35 37.8 +0.2
baz=23,SNR=151
MPMC ⇓S S 14 39 42.9 +1.3
baz=23
ARVC Arvin 22.83 320 ⇑P P 14 35 39.0 -0.1
baz=23,SNR=46
ARVC ⇑S S 14 39 44.4 +0.5
baz=23
DAC Darwin (Calif) 22.90 324⇑iP P 14 35 39.6 -0.2
DAC e*PP 14 35 53.9
DAC pmax pmax
comp=Z,744nm,1.7s,mb5.8
DAC MLR MLR
comp=Z,13µm,19.0s
DAC Darwin (Calif) 22.90 324⇑iP P 14 35 39.6 -0.2
comp=Z,744nm,1.7s,mb5.8
DAC epP 14 35 53.9
DAC LR LR
comp=Z,13µm,19.0s
SBC Santa Barbara 22.94 317 ⇓P P 14 35 40.1 -0.2
baz=23
SBC ⇓S S 14 39 43.4 -2.3
baz=23
ISA Isabella 22.98 321⇑iP P 14 35 40.6 0.0
ISA e*PP 14 35 55.3
ISA pmax pmax
comp=Z,870nm,1.5s,mb6.0
ISA MLR MLR
comp=Z,1µm,19.0s
ISA Isabella 22.98 321⇑iP P 14 35 40.6 0.0
comp=Z,1.9nm,1.5s
ISA epP 14 35 55.3
ISA LR LR
comp=Z,1µm,19.0s
ISA Isabella 22.98 321 ⇓P P 14 35 40.8 +0.1
baz=23,SNR=224
ISA ⇓S S 14 39 43.5 -2.8
baz=23
PHWY Pilot Hill 23.00 352⇑iP P 14 35 40.1 -0.6
PHWY epP 14 35 55.2
STH Stony Hill 23.04 87⇑eP P 14 35 44.2 +3.0
GWJ Greenwich 23.11 87⇑eP P 14 35 45.1 +3.1
MPU Maple Canyon 23.26 339⇑iP P 14 35 43.5 0.0
MPU LR LR
comp=Z,14µm,20.0s
CWC Cottonwood Cre 23.29 323 P P 14 35 44.0 +0.2
baz=23,SNR=95
CWC ⇑S S 14 39 54.1 +2.6
baz=23
PKM Peak Mountain 23.30 318 P P 14 35 43.7 -0.1
baz=23,SNR=35
PKM ⇓S S 14 39 52.7 +1.2
baz=23
GRAC Grapevine Rang 23.31 325 ⇓P P 14 35 44.3 +0.5
baz=23,SNR=94
GRAC ⇑S S 14 39 53.4 +1.8
baz=23
NLU North Lily Min 23.36 338⇑iP P 14 35 44.3 -0.1
NLU epP 14 35 59.5
CMJ Castle Mountain 23.44 87⇑eP P 14 35 48.9 +3.8
TRCR Troy Canyon 23.45 330⇑iP P 14 35 45.5 +0.4
TRCR epP 14 36 00.2
VES Vestal, Richgr 23.46 321 P P 14 35 45.8 +0.5
baz=24,SNR=97
VES ⇓S S 14 39 57.0 +2.9
baz=24
WCI Wyandotte Cave 23.47 30⇑iP P 14 35 43.6 -1.8
WCI e*PP 14 35 58.7
WCI pmax pmax
comp=Z,4µm,1.8s,mb6.5
WCI MLR MLR
comp=Z,9µm,19.0s
WCI Wyandotte Cave 23.47 30⇑iP P 14 35 43.6 -1.8
comp=Z,4µm,1.8s,mb6.5
WCI epP 14 35 58.7
WCI LR LR
comp=Z,9µm,19.0s
DAU Daniels Canyon 23.50 340 eP P 14 35 45.6 0.0
DAU Daniels Canyon 23.50 340⇑eP P 14 35 45.7 +0.1
SDP Sudden Peak, L 23.53 317 ⇓P P 14 35 45.7 -0.2
baz=24,SNR=7.1
SDP ⇓S S 14 39 54.9 -0.4
baz=24
TZTN Tazewell 23.66 37⇑iP P 14 35 44.8 -2.2
TZTN epP 14 35 59.7
RWWY Rawlins 23.66 348⇑eP P 14 35 46.9 -0.2
comp=Z,4µm,1.6s,mb6.6
RWWY epP 14 36 02.5
Q12A Willow Creek R 23.66 333 P P 14 35 47.4 +0.3
baz=24,SNR=40
Q12A ⇑S S 14 39 56.4 -1.1
baz=24
SMMC Simmler 23.68 319 P P 14 35 47.8 +0.6
baz=24,SNR=32
SMMC ⇑S S 14 39 58.5 +0.9
baz=24
R10A Warm Springs 23.74 329 ⇓P P 14 35 48.6 +0.8
baz=24,SNR=21
R10A ⇓S S 14 40 02.8 +4.1
baz=24
S09A Goldfield 23.77 327 P P 14 35 48.3 +0.2
baz=24,SNR=115
S09A ⇓S S 14 40 03.3 +4.1
baz=24
TIN Tinemaha 23.82 324 ⇑P P 14 35 49.8 +1.3
baz=24,SNR=15
TIN ⇑S S 14 40 01.6 +1.7
baz=24
DUG Dugway 23.84 337 eP P 14 35 49.0 +0.3
DUG MLR MLR
comp=Z,23µm,19.0s
RCTC Rector, Farmer 23.88 322 ⇑P P 14 35 49.2 +0.2
baz=24,SNR=11
CTU Camp Tracy 23.91 340⇑eP P 14 35 49.2 -0.2
CTU epP 14 36 04.0
V05C Boulder Hill, 23.98 320 ⇑P P 14 35 50.8 +0.9
baz=24
V05C ⇑S S 14 40 06.0 +3.5
baz=24
RCC Rio Carpintero 23.99 82 eP P 14 35 52.1 +2.0
RCC eS S 14 40 00.8 -1.9
comp=N,5µm,20.3s
RCC e
comp=N,9µm,18.7s
NOQ North Oquirrh 24.00 339⇑iP P 14 35 49.9 -0.3
NOQ epP 14 36 04.8
HELL Mitchell Peak, 24.00 322 P P 14 35 50.9 +0.7
baz=24,SNR=325
HELL ⇑S S 14 40 03.3 +0.4
baz=24
PTRM Twissleman Ran 24.03 319 eP P 14 35 50.9 +0.5
TPH Tonopah 24.04 327⇑iP P 14 35 50.5 0.0
TPH e*PP 14 36 05.1
TPH e*SP sP 14 36 12.5 +0.2
TPH pmax pmax
comp=Z,695nm,1.9s,mb5.8
TPH MLR MLR
comp=Z,9µm,21.0s
TPH Tonopah 24.04 327⇑iP P 14 35 50.5 -0.1
comp=Z,695nm,1.9s,mb5.8
TPH epP 14 36 05.1
TPH esP sP 14 36 12.5 +0.2
TPH LR LR
comp=Z,9µm,21.0s
P12A McGill 24.06 333 P P 14 35 51.0 +0.3
baz=24,SNR=103
P12A ⇑S S 14 40 01.8 -2.0
baz=24
R09A Tonopah 24.09 328 P P 14 35 51.2 +0.3
baz=24,SNR=146
R09A ⇓S S 14 40 04.0 -0.2
baz=24
BLO Bloomington 24.12 29⇑eP P 14 35 49.6 -1.7
BLO e*PP 14 36 04.2
BLO pmax pmax
comp=Z,762nm,1.1s,mb6.0
BLO Bloomington 24.12 29⇑eP P 14 35 49.6 -1.7
comp=Z,768nm,1.1s,mb6.0
BLO epP 14 36 04.2
TCUT Toone Canyon 24.19 341⇑iP P 14 35 52.0 +0.1
TCUT epP 14 36 07.2
MTUM Tungsten Hills 24.22 324 eP P 14 35 52.8 +0.6
MTUM epP 14 36 06.7
SCIA State Center 24.24 14⇑iP P 14 35 50.6 -1.8
comp=Z,2µm,1.3s,mb6.4
SCIA epP 14 36 05.7
U05C Westside ANR, 24.42 320 ⇑P P 14 35 54.2 +0.2
baz=24
U05C ⇓S S 14 40 10.9 +1.3
baz=24
PKD Parkfield 24.42 319 ⇓P P 14 35 54.1 +0.1
baz=24,SNR=32
PKD ⇑S S 14 40 12.8 +3.2
baz=24
V04C Ramage Ranch, 24.43 318 ⇓P P 14 35 54.4 +0.2
baz=24,SNR=17
V04C ⇓S S 14 40 10.1 +0.3
baz=24
P11A Circle Ranch, 24.50 332 ⇑P P 14 35 55.1 +0.4
baz=24,SNR=63
P11A ⇓S S 14 40 13.4 +2.5
baz=24
BGU Big Grassy Mou 24.56 338⇑iP P 14 35 55.0 -0.3
MLAC Mammoth Lakes 24.57 324 ⇓P P 14 35 56.1 +0.8
baz=25,SNR=23
MLAC ⇓S S 14 40 13.2 +1.2
baz=25
Q09A Carvers 24.60 329 ⇓P P 14 35 56.3 +0.6
baz=25
Q09A ⇓S S 14 40 12.5 0.0
baz=25
KCC Kaiser Creek 24.62 323 P P 14 35 56.1 +0.3
baz=25,SNR=270
KCC ⇑S S 14 40 14.6 +1.8
baz=25
T06C Millerton Lake 24.63 322 ⇑P P 14 35 55.5 -0.4
baz=25,SNR=55
T06C ⇑S S 14 40 10.0 -3.0
baz=25
O12A Currie 24.65 334 ⇑P P 14 35 56.4 +0.2
baz=25,SNR=35
O12A ⇓S S 14 40 12.9 -0.5
baz=25
HWUT Hardware Ranch 24.68 341⇑iP P 14 35 56.0 -0.4
HWUT LR LR
comp=Z,12µm,19.0s
MOAC Moa 24.68 81 eP P 14 35 59.2 +2.8
MOAC eS S 14 40 17.9 +4.1
comp=N,28nm,6.9s
MOAC e
comp=E,187nm,4.8s
SPUT South Promonto 24.70 339⇑iP P 14 35 55.7 -0.8
SPUT epP 14 36 12.5
SPUT ePcP PcP 14 39 32.2 -0.1
R08A Mina 24.70 327 ⇓P P 14 35 57.3 +0.8
baz=25,SNR=123
R08A ⇓S S 14 40 12.5 -1.7
baz=25
U04C Hernandez Rese 24.84 320 ⇑P P 14 35 57.9 +0.1
baz=25,SNR=37
U04C ⇓S S 14 40 17.6 +1.2
baz=25
NVAR Mina Array Bea 24.86 326 P P 14 35 58.3 +0.3
comp=E,203nm,0.8s,mb5.7,baz=139,slow=9.6,SNR=684
NVAR PcP PcP 14 39 32.5 -0.1
comp=E,9.0nm,1.0s,baz=151,slow=2.1,SNR=4.9
NVAR pPcP 14 39 50.1
comp=E,18nm,1.0s,baz=128,slow=4.1,SNR=4.4
NVAR S S 14 40 23.8 +7.0
comp=E,1.5nm,0.7s,baz=67,slow=42,SNR=2.4
NVAR ScP ScP 14 43 05.7 -0.7
comp=E,0.5nm,0.7s,baz=111,slow=4.9,SNR=3.0
NVAR P3KPbc 15 09 03.8
comp=E,2.5nm,1.0s,baz=326,slow=3.2,SNR=13
NVAR Mina Array Bea 24.86 326 P P 14 35 58.3 +0.3
NVAR PcP PcP 14 39 32.5 -0.1
NVAR pPcP 14 39 50.1
NVAR S S 14 40 23.8 +7.0
NVAR ScP ScP 14 43 05.7 -0.7
P10A Eureka 24.87 331 ⇓P P 14 35 58.9 +0.8
baz=25
P10A ⇑S S 14 40 20.6 +3.7
baz=25
V03C Hunter Liggett 24.90 318 ⇑P P 14 35 59.0 +0.6
baz=25,SNR=48
V03C ⇓S S 14 40 19.1 +1.7
baz=25
O11A Cowboy Ranch, 24.93 333 P P 14 35 58.9 +0.3
baz=25,SNR=119
O11A ⇓S S 14 40 17.3 -0.5
baz=25
N13A Wendover, West 24.94 336 ⇑P P 14 35 58.7 0.0
baz=25,SNR=14
N13A ⇑S S 14 40 18.3 +0.4
baz=25
Q08A Gabbs 24.99 328 ⇓P P 14 36 00.0 +0.8
baz=25,SNR=171
Q08A ⇑S S 14 40 18.9 +0.1
baz=25
R07C Lee Vining 25.01 325 ⇑P P 14 36 00.1 +0.7
baz=25,SNR=71
R07C ⇑S S 14 40 20.0 +0.9
baz=25
LRV Little Rabbit 25.02 319 eP P 14 36 00.2 +0.7
T05C Eagle Field, D 25.12 321 ⇓P P 14 36 00.4 0.0
baz=25
P09A Austin 25.14 330 ⇓P P 14 36 01.0 +0.4
baz=25,SNR=11
P09A ⇑S S 14 40 22.9 +1.8
baz=25
BW06 Boulder Array 25.20 345⇑iP P 14 36 00.5 -0.7
BW06 epP pP 14 36 16.2 +0.4
BW06 LR LR
comp=Z,32µm,22.0s
PDAR Pinedale Array 25.20 345 P P 14 36 00.4 -0.7
comp=Z,365nm,0.9s,mb5.9,baz=145,slow=11,SNR=341
PDAR PcP PcP 14 39 32.8 -0.6
comp=Z,12nm,0.9s,baz=126,slow=4.6,SNR=10
PDAR pPcP 14 39 50.1
comp=Z,22nm,1.0s,baz=143,slow=4.2,SNR=4.2
PDAR S S 14 40 24.2 +2.1
comp=Z,2.4nm,0.9s,baz=146,slow=13,SNR=1.9
PDAR LR LR 14 47 03.0
comp=Z,29µm,18.6s,baz=180,slow=39
PDAR P3KPbc 15 09 00.1
comp=Z,0.7nm,0.9s,baz=343,slow=4.6,SNR=5.0
PDAR Pinedale Array 25.20 345 P P 14 36 00.4 -0.7
PDAR PcP PcP 14 39 32.8 -0.6

PDAR pPcP 14 39 50.1
PDAR S **S** **14 40 24.2 +2.1**
PDAR LR LR 14 47 03.0
PDAR *e* 15 09 00.1
S05C **Merced** **25.22 322** ⇑P **P** **14 36 00.7 -0.6**
baz=25,SNR=25
S05C ⇑S **S** **14 40 22.1 -0.3**
baz=25
HVU **Hansel Valley** **25.23 339**⇑*i*P **P** **14 36 01.1 -0.3**
N12A **Clover Valley,** **25.27 335** P **P** **14 36 02.0 +0.3**
baz=25,SNR=33
N12A ⇑S **S** **14 40 25.4 +2.3**
baz=25
S06C **San Francisco** **25.31 323** ⇓P **P** **14 36 02.1 0.0**
baz=25,SNR=93
S06C ⇓S **S** **14 40 26.7 +2.9**
baz=25
HAST **UC Hastings Re** **25.33 319** ⇑P **P** **14 36 02.4 +0.1**
baz=25,SNR=34
HAST ⇓S **S** **14 40 24.4 +0.2**
baz=25
M13A **Montello** **25.36 337** P **P** **14 36 02.6 +0.1**
baz=25,SNR=179
M13A ⇑S **S** **14 40 23.3 -1.2**
baz=25
MASC **Masc** **25.37 82** *e*P **P** **14 36 04.8 +2.2**
O10A **Cortez Mining,** **25.43 332** ⇓P **P** **14 36 03.3 +0.1**
baz=26,SNR=61
O10A ⇑S **S** **14 40 29.9 +4.2**
baz=26
Q07A **Schurz** **25.50 327** ⇑P **P** **14 36 04.3 +0.4**
baz=26,SNR=6.8
Q07A ⇓S **S** **14 40 26.2 -0.7**
baz=26
SAO **San Andreas Ge** **25.51 320**⇑*i*P **P** **14 36 03.4 -0.5**
SAO *e**PP pP 14 36 18.9 +0.3
SAO MLR MLR
comp=Z,6μm,20.0s
WAKR **Walker** **25.52 325** *e*P **P** **14 36 04.9 +0.9**
N11A **Elko Archery C** **25.53 334** ⇑P **P** **14 36 04.3 +0.2**
baz=26
N11A ⇑S **S** **14 40 26.3 -0.9**
baz=26
R06C **Coleville** **25.55 325** P **P** **14 36 05.3 +1.1**
baz=26,SNR=54
R06C ⇑S **S** **14 40 27.6 0.0**
baz=26
PACP **Pacheco Peak** **25.57 320** ⇑P **P** **14 36 04.1 -0.3**
baz=26,SNR=32
PACP ⇑S **S** **14 40 27.3 -0.6**
baz=26
AHID **Auburn Hatcher** **25.61 343**⇑*i*P **P** **14 36 04.0 -0.8**
comp=Z,730nm,1.8s,mb5.9
AHID *e*pP pP 14 36 19.8 +0.3
AHID LR LR
comp=Z,20μm,22.0s
RSSD **Black Hills** **25.63 355**⇑*i*P **P** **14 36 04.3 -0.7**
RSSD *e**PP pP 14 36 21.7 +2.0
O09A **Fish Creek Ran** **25.65 331** P **P** **14 36 05.5 +0.4**
baz=26,SNR=153
O09A ⇑S **S** **14 40 30.0 +0.9**
baz=26
M12A **Wells** **25.69 335** P **P** **14 36 05.6 0.0**
baz=26,SNR=46
M12A ⇑S **S** **14 40 30.4 +0.5**
baz=26
P08A **Dixie Valley** **25.70 329** ⇑P **P** **14 36 06.1 +0.4**
baz=26,SNR=13
CMB **Columbia Colle** **25.72 323**⇑*i*P **P** **14 36 05.2 -0.6**
CMB *e**PP pP 14 36 20.1 -0.5
CMB pmax pmax
comp=Z,87nm,0.9s,mb5.3
CMB MLR MLR
comp=Z,6μm,20.0s
CMB **Columbia Colle** **25.72 323**⇑*i*P **P** **14 36 05.2 -0.6**
comp=Z,87nm,0.9s,mb5.3
CMB *e*pP pP 14 36 20.1 -0.4
CMB LR LR
comp=Z,6μm,20.0s
CMB **Columbia Colle** **25.72 323** P **P** **14 36 05.6 -0.2**
baz=26,SNR=44
CMB ⇓S **S** **14 40 33.0 +2.6**
baz=26
ELN **Prospectdale** **25.77 40** *e*P **P** **14 36 04.5 -1.8**
N10A **Dunphy** **25.78 332** ⇓P **P** **14 36 06.4 +0.1**
baz=26
N10A ⇓S **S** **14 40 32.3 +1.1**
baz=26
BMN **Battle Mountai** **25.87 331**⇑*i*P **P** **14 36 07.2 0.0**
BMN *e**PP pP 14 36 21.5 -0.4
BMN MLR MLR
comp=Z,16μm,20.0s
S04C **Ingram Canyon,** **25.92 321** ⇓P **P** **14 36 07.4 -0.2**
baz=26,SNR=24
S04C ⇓S **S** **14 40 35.3 +1.9**
baz=26
BLA **Blacksburg** **25.96 40**⇑*i*P **P** **14 36 06.0 -2.0**
BLA *e**PP pP 14 36 21.0 -1.7
BLA pmax pmax
comp=Z,17nm,0.7s
BLA MLR MLR
comp=Z,255nm,22.0s
BLA **Blacksburg** **25.96 40**⇑*i*P **P** **14 36 06.0 -2.0**
comp=Z,234nm,0.7s,mb5.8
BLA *e*pP pP 14 36 21.0 -1.7
BLA LR LR
comp=Z,4μm,22.0s
FWV **Forest Hill** **25.97 39** *e*P **P** **14 36 06.3 -1.8**
JFWS **Jewell Farm** **25.97 18**⇑*e*P **P** **14 36 05.1 -3.0**
JFWS MLR MLR
comp=Z,10μm,20.0s
P07A **Fallon** **25.99 327** ⇓P **P** **14 36 09.0 +0.7**
baz=26,SNR=7.3
R05C **Kirkwood Meado** **26.02 324** ⇑P **P** **14 36 09.3 +0.8**
baz=26,SNR=81
R05C ⇓S **S** **14 40 35.6 +0.6**
baz=26
M11A **Holland Ranch,** **26.06 334** P **P** **14 36 09.3 +0.5**
baz=26,SNR=90
M11A ⇑S **S** **14 40 37.0 +1.3**
baz=26
REDW **Red Top Meadow** **26.09 344**⇑*i*P **P** **14 36 08.6 -0.5**
comp=Z,2μm,1.7s,mb6.4
SNOW **Snow King Moun** **26.16 344**⇑*e*P **P** **14 36 09.5 -0.3**
comp=Z,885nm,1.1s,mb6.2
BNLO **Ben Lomond (Sa** **26.19 319** P **P** **14 36 10.2 +0.2**
baz=26,SNR=16
BNLO ⇓S **S** **14 40 38.3 +0.6**
baz=26
R04C **Big Horse Ranc** **26.19 323** ⇓P **P** **14 36 10.9 +0.8**
baz=26,SNR=37
R04C ⇑S **S** **14 40 39.3 +1.6**
baz=26
O08A **Rochester Mine** **26.20 329** ⇓P **P** **14 36 10.4 +0.3**
baz=26
O08A ⇑S **S** **14 40 39.4 +1.5**
baz=26
RRI2 **Red Ridge** **26.20 343**⇑*i*P **P** **14 36 09.8 -0.4**
comp=Z,592nm,1.0s,mb6.1
TPAW **Teton Pass** **26.23 344**⇑*i*P **P** **14 36 10.1 -0.4**
comp=Z,685nm,0.9s,mb6.2
WENL **Wente Brothers** **26.25 321** ⇑P **P** **14 36 11.4 +0.8**
baz=26,SNR=18
WENL ⇓S **S** **14 40 38.8 +0.1**
baz=26
LOHW **Long Hollow** **26.26 344**⇑*e*P **P** **14 36 09.9 -0.8**
comp=Z,385nm,0.8s,mb6.0
WCN **Washoe City** **26.27 326** ⇓P **P** **14 36 11.7 +0.9**
baz=26,SNR=47
WCN ⇓S **S** **14 40 40.0 +1.0**
baz=26
N09A **Rock Creek Ran** **26.34 331** P **P** **14 36 11.6 +0.2**
baz=26,SNR=70
N09A ⇓S **S** **14 40 41.2 +1.0**
baz=26
PAHR **Pah Rah Range** **26.37 327**⇑*i*P **P** **14 36 12.1 +0.3**
PAHR *e*pP pP 14 36 26.6 +0.1
DCID1 **Drake Creek** **26.39 343**⇑*i*P **P** **14 36 11.5 -0.4**
JRSC **Jasper Ridge** **26.40 320** ⇓P **P** **14 36 12.3 +0.4**
baz=26,SNR=10.0
JRSC ⇑S **S** **14 40 42.9 +1.8**
baz=26
LAVA **Lava Cap Winer** **26.42 324** ⇑P **P** **14 36 12.5 +0.4**
baz=26,SNR=48
LAVA ⇓S **S** **14 40 40.9 -0.5**
baz=26
MOOW **Moose Ponds** **26.42 344**⇑*i*P **P** **14 36 11.4 -0.8**
comp=Z,297nm,0.9s,mb5.8
MOOW *e*PcP PcP 14 39 36.0 -0.2
MOOW *e*pPcP 14 39 53.7
CNNC **Cliffs of the** **26.43 46**⇑*e*P **P** **14 36 09.7 -2.5**
comp=Z,85nm,0.4s,mb5.6
M10A **I.L. Ranch, Tu** **26.45 333** ⇑P **P** **14 36 12.7 +0.3**
baz=26,SNR=21
M10A ⇑S **S** **14 40 42.6 +0.8**
baz=26
O07A **Toulon** **26.46 328** P **P** **14 36 12.6 +0.2**
baz=26,SNR=132
O07A ⇑S **S** **14 40 43.8 +1.9**
baz=26
BDM **Black Diamond** **26.53 321** ⇑P **P** **14 36 14.1 +1.0**
baz=27,SNR=9.6
BDM ⇑S **S** **14 40 44.0 +0.9**
baz=27
N08A **GE Springer Mi** **26.57 330** ⇑P **P** **14 36 13.5 0.0**
baz=27,SNR=80
N08A ⇑S **S** **14 40 44.8 +1.1**
baz=27
IMW **Indian Meadow** **26.61 344**⇑*i*P **P** **14 36 16.3 +2.4**
comp=Z,335nm,1.1s,mb5.8
IMW *e*pP pP 14 36 31.8 +3.1
IMW *e*PcP PcP 14 39 35.8 -0.8
P06A **Stead Airport,** **26.62 326** ⇓P **P** **14 36 14.7 +0.7**
baz=27,SNR=5.6
P06A ⇓S **S** **14 40 44.8 +0.3**
baz=27
ACSO **Alum Creek Sta** **26.65 32**⇑*i*P **P** **14 36 11.4 -2.8**
ACSO *e*pP pP 14 36 25.5 -3.4
ACSO LR LR
comp=Z,9μm,20.0s
FLWY **Flagg Ranch** **26.72 344**⇑*i*P **P** **14 36 14.5 -0.4**
comp=Z,913nm,1.4s,mb6.1
FLWY *e*PcP PcP 14 39 38.2 +1.4
P05C **Yuba Gap, Truc** **26.73 325** P **P** **14 36 15.9 +1.0**
baz=27,SNR=62
P05C ⇑S **S** **14 40 46.9 +0.6**
baz=27
M09A **Marrel Ranch,** **26.77 332** ⇑P **P** **14 36 15.7 +0.4**
baz=27,SNR=34
M09A ⇑S **S** **14 40 46.0 -0.8**
baz=27
Q04C **Lincoln** **26.84 323** ⇓P **P** **14 36 16.8 +0.9**
baz=27,SNR=8.8
Q04C ⇑S **S** **14 40 48.9 +1.0**
baz=27
O06A **Flanigan** **26.94 327** ⇑P **P** **14 36 17.3 +0.5**
baz=27,SNR=182
O06A ⇑S **S** **14 40 51.4 +1.8**
baz=27
N07B **Gerlach** **26.97 329** ⇑P **P** **14 36 17.3 +0.2**
baz=27
N07B ⇓S **S** **14 40 53.3 +3.2**
baz=27
BEKR **Beckwourth** **27.00 326** P **P** **14 36 18.1 +0.7**
baz=27,SNR=157
FARB **Farallon Islan** **27.06 319** ⇓P **P** **14 36 17.5 -0.4**
baz=27
FARB ⇓S **S** **14 40 52.5 +1.1**
baz=27
Q03C **Winters** **27.07 322** ⇓P **P** **14 36 19.3 +1.4**
baz=27
Q03C ⇑S **S** **14 40 54.2 +2.6**
baz=27
LKWY **Lake** **27.10 345** P **P** **14 36 21.6 +3.3**
LKWY pmax pmax
comp=Z,240nm,1.3s,mb5.6
LKWY **Lake** **27.10 345**⇑*e*P **P** **14 36 18.6 +0.3**
comp=Z,179nm,1.4s,mb5.4
LKWY LR LR
comp=Z,29μm,21.0s
YFT **Old Faithful** **27.10 345**⇑*i*P **P** **14 36 18.9 +0.7**
YFT *e*PcP PcP 14 39 39.4 +1.6
YFT *e*pPcP 14 39 56.0
CVS **Carmenet Viney** **27.14 321** ⇓P **P** **14 36 18.8 +0.1**
baz=27,SNR=8.4
CVS ⇓S **S** **14 40 55.4 +2.7**
baz=27
M08A **Happy Creek Ra** **27.21 331** ⇑P **P** **14 36 19.0 -0.2**
baz=27,SNR=28
OHCM **Honcut** **27.24 324** *e*P **P** **14 36 19.9 +0.3**
OHCM *e*PcP PcP 14 39 39.0 +0.9
OHCM *e*pPcP 14 39 56.7
MCCM **Marconi Confer** **27.27 320**⇑*i*P **P** **14 36 19.9 +0.1**
comp=Z,527nm,1.8s,mb5.8
MCCM *e*pP pP 14 36 33.8 -0.7
MCCM **Marconi Confer** **27.27 320** ⇓P **P** **14 36 19.8 +0.1**
baz=27,SNR=6.5
MCCM ⇓S **S** **14 40 54.4 -0.3**
baz=27
YNR **Norris Junctio** **27.31 345**⇑*i*P **P** **14 36 20.1 0.0**
YMR **Madison River** **27.34 345**⇑*i*P **P** **14 36 20.5 +0.1**
comp=Z,514nm,1.5s,mb5.8
YMR LR LR
comp=Z,14μm,20.0s
SUTB **Sutter Butte** **27.34 323** ⇓P **P** **14 36 20.6 +0.2**
baz=27,SNR=13
SUTB ⇓S **S** **14 40 56.1 +0.2**
baz=27
L09A **Wilkinson Ranc** **27.34 332** ⇓P **P** **14 36 20.2 -0.2**
baz=27,SNR=31
L09A ⇑S **S** **14 40 56.6 +0.7**
baz=27
NSHM **Saint Helena R** **27.34 321**⇑*e*P **P** **14 36 20.6 +0.1**
NSHM *e*PcP PcP 14 39 39.0 +0.7
NSHM *e*pPcP 14 39 55.8
HLID **Hailey** **27.37 339** PFAKE 14 36 30.0 +9.4
HLID LR LR
comp=Z,12μm,22.0s
O05C **Quincy** **27.37 325** ⇓P **P** **14 36 21.5 +0.9**
baz=27,SNR=21
O05C ⇓S **S** **14 40 56.9 +0.6**
baz=27
N06A **Buffalo Meadow** **27.38 328** ⇓P **P** **14 36 21.2 +0.5**
baz=27,SNR=301
N06A ⇓S **S** **14 40 56.9 +0.5**
baz=27
ORV **Oroville** **27.40 324** ⇑P **P** **14 36 21.5 +0.5**
baz=27,SNR=47
ORV ⇓S **S** **14 40 58.2 +1.4**
baz=27
MNRC **McLaughlin Nat** **27.48 322** ⇓P **P** **14 36 22.5 +0.9**
baz=28,SNR=29
MNRC ⇓S **S** **14 40 58.4 +0.4**
baz=28
M07A **Soldier Meadow** **27.54 330** ⇑P **P** **14 36 22.0 -0.2**
baz=28,SNR=81
M07A ⇓S **S** **14 40 58.9 -0.1**
baz=28
QLMT **Earthquake Lak** **27.61 344** *e*P **P** **14 36 23.0 +0.2**
QLMT *e*pP pP 14 36 41.1 +3.5
QLMT *e*PcP PcP 14 39 36.5 -2.5
QLMT *e*pPcP 14 39 56.6
O04C **Chester** **27.71 326** ⇑P **P** **14 36 24.5 +0.7**
baz=28,SNR=35
O04C ⇓S **S** **14 41 02.1 +0.3**
baz=28
ELFS **Eagle Lake Fie** **27.74 327** ⇓P **P** **14 36 24.8 +0.8**
baz=28,SNR=76
ELFS ⇓S **S** **14 41 01.2 -0.9**
baz=28
L08A **Fields** **27.78 332** P **P** **14 36 23.8 -0.5**
baz=28,SNR=45
L08A ⇑S **S** **14 41 01.0 -1.8**
baz=28
MCWV **Mont Chateau** **27.92 37**⇑*e*P **P** **14 36 22.6 -3.0**
comp=Z,409nm,1.4s,mb5.9
MCWV *e*pP pP 14 36 39.8 -0.5
MCWV LR LR
comp=Z,7μm,19.0s
HOPS **Hopland** **27.93 321**⇑*i*P **P** **14 36 25.9 +0.2**
comp=Z,324nm,1.4s,mb5.8
HOPS *e*pP pP 14 36 41.5 +1.0
HOPS LR LR
comp=Z,8μm,19.0s
HOPS **Hopland** **27.93 321** ⇑P **P** **14 36 26.3 +0.6**
baz=28,SNR=9.0
HOPS ⇓S **S** **14 41 02.4 -2.7**
baz=28
MCMT **McKenzie Canyo** **28.00 342** *e*P **P** **14 36 26.5 +0.2**
O03C **Acorn Hollow,** **28.00 324** ⇑P **P** **14 36 26.6 +0.3**
baz=28
O03C ⇑S **S** **14 41 05.2 -1.1**
baz=28
M06C **Likely Place G** **28.04 328** ⇓P **P** **14 36 27.2 +0.5**
baz=28,SNR=132
M06C ⇑S **S** **14 41 08.2 +1.3**
baz=28
GCMT **Greycliff** **28.10 347** *e*P **P** **14 36 26.0 -1.1**
L07A **Adell** **28.11 330** P **P** **14 36 27.4 +0.2**
baz=28,SNR=79
L07A ⇑S **S** **14 41 06.6 -1.3**
baz=28
WVOR **Wild Horse Val** **28.11 332**⇑*i*P **P** **14 36 26.6 -0.6**
WVOR *e**PP pP 14 36 41.3 -0.8
WVOR *e* 14 39 39.4
WVOR pmax pmax
comp=Z,253nm,1.6s,mb5.6
WVOR MLR MLR
comp=Z,19μm,20.0s
WVOR **Wild Horse Val** **28.11 332**⇑*i*P **P** **14 36 26.6 -0.6**
comp=Z,234nm,1.6s,mb5.6
WVOR *e*pP pP 14 36 41.3 -0.8
WVOR *e*PcP PcP 14 39 39.4 -0.8
WVOR *e*pPcP 14 39 57.0
WVOR LR LR
comp=Z,15μm,20.0s
GASB **Alder Springs** **28.16 323** ⇑P **P** **14 36 28.5 +0.8**
baz=28,SNR=34
GASB ⇑S **S** **14 41 08.2 -0.5**
baz=28
HATC **Hat Creek Radi** **28.27 326** ⇑P **P** **14 36 29.1 +0.4**
baz=28,SNR=20
K08A **Mann Creek Ran** **28.28 332** P **P** **14 36 28.9 +0.1**
baz=28,SNR=135
K08A ⇓S **S** **14 41 04.9 -5.7**
baz=28
LAO **LASA Array** **28.39 353**⇑*i*P **P** **14 36 28.4 -1.4**
comp=Z,346nm,1.4s,mb5.8
LAO *e*pP pP 14 36 42.6 -2.0
LAO LR LR
comp=Z,33μm,21.0s
P01C **Double 8 Ranch** **28.39 322** ⇑P **P** **14 36 30.6 +0.8**
baz=28,SNR=9.4
P01C ⇑S **S** **14 41 09.2 -3.2**
baz=28
DLMT **Dillon** **28.42 343**⇑*i*P **P** **14 36 30.0 0.0**
comp=Z,1μm,1.4s,mb6.3
DLMT *e*pP pP 14 36 45.0 +0.1
BOZ **Bozeman (W)** **28.42 344**⇑*i*P **P** **14 36 29.3 -0.7**
BOZ *e**PP pP 14 36 44.4 -0.5
BOZ *e* 14 39 41.4
BOZ pmax pmax
comp=Z,956nm,2.3s,mb6.0
BOZ MLR MLR
comp=Z,13μm,19.0s
BOZ **Bozeman (W)** **28.42 344**⇑*i*P **P** **14 36 29.3 -0.7**
comp=Z,956nm,2.3s,mb6.0
BOZ *e*pP pP 14 36 44.4 -0.5
BOZ *e*PcP PcP 14 39 41.4 +0.4
BOZ *e*pPcP 14 39 58.3
BOZ LR LR
comp=Z,14μm,19.0s
CBN **Corbin** **28.47 42**⇑*e*P **P** **14 36 28.6 -1.8**
comp=Z,246nm,1.2s,mb5.7
CBN LR LR
comp=Z,3μm,20.0s
M05C **Lookout** **28.50 327** P **P** **14 36 31.0 +0.3**
baz=28,SNR=68
M05C ⇓S **S** **14 41 13.3 -0.7**
baz=28
O02C **Red Bluff** **28.55 324** ⇑P **P** **14 36 30.2 -1.0**
baz=29,SNR=5.6
O02C ⇑S **S** **14 41 14.9 0.0**
baz=29
WDC **Whiskeytown Da** **28.69 324**⇑*i*P **P** **14 36 29.7 -2.7**
WDC *e**PP pP 14 36 44.3 -3.0
WDC pmax pmax
comp=Z,21nm,1.0s
WDC MLR MLR
comp=Z,4μm,19.0s
WDC **Whiskeytown Da** **28.69 324**⇑*i*P **P** **14 36 29.6 -2.8**
comp=Z,22nm,1.0s
WDC *e*pP pP 14 36 44.3 -3.0
WDC LR LR
comp=Z,4μm,19.0s
WDC **Whiskeytown Da** **28.69 324** ⇓P **P** **14 36 30.2 -2.2**
baz=29,SNR=8.7
WDC ⇓S **S** **14 41 14.0 -3.1**
baz=29
KIPM **Iron Peak** **28.70 322** *e*P **P** **14 36 33.2 +0.7**
KIPM *e*pP pP 14 36 48.3 +0.9
KIPM *e*PcP PcP 14 39 42.8 +1.1
KIPM *e*pPcP 14 39 58.9
LRM **Limekiln Ridge** **28.80 343** *e*P **P** **14 36 33.3 -0.1**
L05A **Lakeview** **28.85 329** ⇓P **P** **14 36 34.1 +0.3**
baz=29,SNR=64
L05A ⇑S **S** **14 41 19.1 -0.5**
baz=29
I09A **Lost Marbles R** **28.97 335** ⇑P **P** **14 36 34.4 -0.5**
baz=29,SNR=36
I09A ⇓S **S** **14 41 19.6 -1.9**
baz=29
O01C **Eel River Cons** **29.11 322** ⇑P **P** **14 36 37.1 +0.9**
baz=29
O01C ⇓S **S** **14 41 25.8 +2.1**
baz=29
K06A **Valley Falls** **29.14 330** ⇓P **P** **14 36 36.0 -0.4**
baz=29,SNR=39
K06A ⇑S **S** **14 41 24.4 +0.2**
baz=29
ALLY **Alegheny Colle** **29.15 33**⇑*e*P **P** **14 36 33.6 -2.9**
ALLY *e*pP pP 14 36 48.6 -2.7
M04C **Macdoel** **29.16 327** P **P** **14 36 36.5 -0.1**
baz=29,SNR=35
M04C ⇓S **S** **14 41 27.3 +2.8**
baz=29
I08A **Drewsey** **29.26 334** ⇑P **P** **14 36 37.0 -0.5**
baz=29,SNR=41
I08A ⇑S **S** **14 41 26.0 -0.1**
baz=29
M02C **Callahan** **29.42 325** ⇑P **P** **14 36 37.5 -1.4**
baz=29,SNR=8.4
M02C ⇑S **S** **14 41 30.2 +1.6**
baz=29
J06A **Christmas Vall** **29.44 331** P **P** **14 36 38.2 -0.8**
baz=30,SNR=18
J06A ⇓S **S** **14 41 28.6 -0.2**
baz=30
ROSC **El Rosal** **29.44 114** P **P** **14 36 43.7 +4.6**
comp=Z,95nm,1.3s,mb5.4,baz=102,slow=20,SNR=49
ROSC S **S** **14 41 40.0 +11**
comp=Z,3.1nm,0.3s,baz=98,slow=22,SNR=2.0
ROSC LR LR 14 50 34.7
comp=Z,2μm,18.3s,baz=1.5,slow=40
ROSC **El Rosal** **29.44 114**⇓*i*P **P** **14 36 43.3 +4.2**
HRY **Holter Researc** **29.46 345** *e*P **P** **14 36 38.7 -0.5**
HRY *e*pP pP 14 36 54.9 +0.7
L04A **Klamath Falls** **29.47 328** ⇑P **P** **14 36 39.2 -0.2**
baz=30,SNR=12
L04A ⇑S **S** **14 41 29.5 +0.1**
baz=30
H09A **Durkee** **29.52 336** P **P** **14 36 39.2 -0.6**
baz=30,SNR=160
H09A ⇑S **S** **14 41 29.3 -0.8**
baz=30
SDMD **Soldier's Deli** **29.53 40**⇑*i*P **P** **14 36 35.3 -4.6**
SDMD *e*pP pP 14 36 50.3 -4.5
BMO **Blue Mountains** **29.53 336**⇑*i*P **P** **14 36 38.7 -1.3**
BMO *e*pP pP 14 36 53.5 -1.3
BMO *e*PcP PcP 14 39 42.4 -1.4
BMO *e*pPcP 14 39 59.8
BMO *e*sPcP 14 40 07.8
KHMM **Horse Mountain** **29.55 324**⇑*i*P **P** **14 36 39.9 -0.2**
KHMM *e*PcP PcP 14 39 44.9 +1.0
KHMM *e*pPcP 14 40 01.4
ERPA **Erie** **29.56 33**⇑*i*P **P** **14 36 37.0 -3.2**
comp=Z,199nm,1.1s,mb5.8
ERPA *e*pP pP 14 36 53.3 -1.8
ERPA LR LR
comp=Z,8μm,21.0s
YBH **Yreka Blue Hor** **29.58 326** P **P** **14 36 38.8 -1.5**
comp=Z,28nm,0.7s,mb5.1,baz=124,slow=4.3,SNR=26
YBH S **S** **14 41 36.1 +4.9**
comp=Z,2.0nm,0.6s,baz=231,slow=7.3,SNR=2.1
YBH LR LR 14 50 54.5
comp=Z,3μm,18.4s,baz=134,slow=41
YBH **Yreka Blue Hor** **29.58 326** P **P** **14 36 38.8 -1.5**
YBH S **S** **14 41 36.1 +5.0**
YBH pmax pmax
comp=Z,28nm,0.7s

YBH smax
comp=N,2.0nm,0.6s
YBH MLR MLR
comp=Z,3µm,18.4s
YBH Yreka Blue Hor 29.58 326⇑*iP* P 14 36 38.6 -1.8
comp=Z,99nm,1.2s,mb5.4
YBH *e*pP pP 14 36 52.6 -2.6
YBH LR LR
comp=Z,3µm,19.0s
YBH Yreka Blue Hor 29.58 326 ⇓P P 14 36 38.8 -1.6
baz=30,SNR=20
YBH ⇑S S **14 41 31.0 -0.1**
baz=30
VSP Spence Mountai 29.62 328 P P 14 36 40.7 0.0
JCC Jacoby Creek 29.68 323 ⇓P P 14 36 41.3 +0.1
baz=30,SNR=6.2
JCC ⇑S S **14 41 32.5 -0.2**
baz=30
SSPA Standing Stone 29.69 37⇑*e*P P 14 36 39.0 -2.3
comp=Z,165nm,1.2s,mb5.6
SSPA *e*pP pP 14 36 53.9 -2.3
SSPA LR LR
comp=Z,5µm,19.0s
K04A Chilquin 29.71 328 ⇓P P 14 36 41.2 -0.3
baz=30,SNR=7.1
K04A ⇓S S **14 41 33.2 +0.1**
baz=30
H08A Prairie City 29.80 334 ⇓P P 14 36 41.7 -0.6
baz=30,SNR=75
H08A ⇓S S **14 41 35.6 +1.0**
baz=30
I07A Izee 29.80 333 ⇑P P 14 36 41.5 -0.8
baz=30,SNR=33
I07A ⇑S S **14 41 36.1 +1.6**
baz=30
J05A Fort Rock 29.97 330 ⇑P P 14 36 43.3 -0.5
baz=30,SNR=28
J05A ⇑S S **14 41 37.7 +0.4**
baz=30
I06A Prineville 30.00 332 ⇓P P 14 36 43.2 -0.9
baz=30,SNR=18
I06A ⇓S S **14 41 37.9 +0.2**
baz=30
CHMT Chamberlain Mo 30.02 343 *e*P P 14 36 43.5 -0.8
KRMB Red Mountain 30.09 324⇑*e*P P 14 36 45.0 +0.3
MSO Missoula 30.14 342⇑*i*P P 14 36 44.3 -1.0
comp=Z,305nm,1.6s,mb5.8
MSO *e*pP pP 14 36 59.6 -0.5
MSO *e*PcP PcP 14 39 45.8 +0.5
MSO LR LR
comp=Z,20µm,22.0s
MVL Millersville 30.19 40 *e*P P 14 36 44.0 -1.8
EGMT Eagleton 30.25 348⇑*i*P P 14 36 45.5 -0.8
comp=Z,725nm,1.8s,mb6.1
EGMT *e*pP pP 14 37 00.3 -0.8
EGMT LR LR
comp=Z,20µm,21.0s
EYMN Ely 30.35 13⇑*i*P P 14 36 44.4 -2.7
comp=Z,3µm,1.3s,mb6.8
EYMN *e*pP pP 14 37 00.0 -2.0
L02A Cave Junction 30.35 326 ⇑P P 14 36 46.2 -1.0
baz=30
L02A ⇓S S **14 41 44.8 +1.6**
baz=30
M01C Crescent City 30.42 325 ⇓P P 14 36 47.7 -0.1
baz=30,SNR=9.2
M01C ⇓S S **14 41 46.0 +1.7**
baz=30
I05A Bend 30.66 331 ⇑P P 14 36 49.5 -0.4
baz=31,SNR=6.0
I05A ⇑S S **14 41 49.6 +1.6**
baz=31
K02A Glendale 30.72 327 ⇓P P 14 36 49.2 -1.2
baz=31
K02A ⇑S S **14 41 48.6 -0.4**
baz=31
KBO Bosley Butte 30.73 325⇑*i*P P 14 36 51.0 +0.5
J03A Ideyld Park 30.89 328 ⇓P P 14 36 50.2 -1.6
baz=31,SNR=9.2
J03A ⇓S S **14 41 49.0 -2.6**
baz=31
F08A Pendleton 30.89 336 P P 14 36 50.4 -1.5
baz=31,SNR=10
F08A ⇑S S **14 41 51.1 -0.6**
baz=31
HBO Huckleberry Mo 30.91 329 P P 14 36 51.5 -0.6
IRO Indian Ridge 31.00 330 P P 14 36 52.4 -0.5
H05A Madras 31.01 331 ⇓P P 14 36 52.1 -0.8
baz=31,SNR=5.6
H05A ⇓S S **14 41 53.8 +0.3**
baz=31
SDV Santo Domingo 31.04 104 S S 14 41 52.1 -1.9
comp=Z,1.9nm,0.3s,baz=281,slow=14,SNR=2.0
SDV LR LR 14 51 32.0
comp=Z,5µm,19.2s,baz=166,slow=40
SDV Santo Domingo 31.04 104⇓*i*P P 14 36 54.5 +1.3
comp=Z,157nm,1.2s,mb5.7
SDV LR LR
comp=Z,3µm,19.0s
J02A Umpqua 31.19 327 ⇑P P 14 36 54.1 -0.4
baz=31,SNR=16
J02A ⇓S S **14 41 57.6 +1.2**
baz=31
KEBM Edson Butte 31.24 326⇑*i*P P 14 36 55.4 +0.4
KEBM *e*pP pP 14 37 10.1 +0.2
K01A Sixes 31.27 326 ⇑P P 14 36 55.8 +0.6
baz=31,SNR=17
K01A ⇓S S **14 41 59.9 +2.3**
baz=31
BSMT Bassoo Peak 31.31 342 P P 14 36 54.4 -1.2
I03A Eugene 31.48 328 P P 14 36 56.8 -0.3
baz=32,SNR=61
I03A ⇓S S **14 42 01.7 +0.9**
baz=32
H04A Detroit Lake 31.48 331 P P 14 36 56.2 -0.9
baz=32,SNR=69
H04A ⇓S S **14 42 00.6 -0.2**
baz=32
G05A Wamic 31.51 332 ⇑P P 14 36 56.7 -0.6
baz=32,SNR=13
G05A ⇑S S **14 42 01.9 +0.6**
baz=32
VFP Flag Point 31.64 332 P P 14 36 58.7 +0.2
RNO Roman Nose 31.66 328 P P 14 36 59.1 +0.3
HAWA Hanford 31.68 335⇑*i*P P 14 36 56.7 -2.1
HAWA LR LR
comp=Z,22µm,19.0s
BRNJ Basking Ridge 31.69 40 *e*P P 14 36 59.0 +0.1
HOOD Mount Hood Mea 31.72 332 *e*P P 14 36 54.8 -4.4
I02A Mapleton 31.78 328 ⇑P P 14 36 59.7 +0.1
baz=32,SNR=21
I02A ⇑S S **14 42 08.6 +3.1**
baz=32
BINY Binghamton 31.79 37⇑*i*P P 14 36 57.7 -2.1
comp=Z,217nm,1.0s,mb5.9
BINY *e*pP pP 14 37 12.4 -2.3
BINY LR LR
comp=Z,7µm,19.0s
ULM Lac du Bonnet 31.91 6 P P 14 36 58.3 -2.5
comp=Z,343nm,1.2s,mb6.1,baz=192,slow=9.2,SNR=129
ULM PcP PcP 14 39 49.5 -0.5
comp=Z,71nm,1.2s,baz=194,slow=4.5,SNR=4.5
ULM S S **14 42 00.5 -7.1**
comp=Z,1.9nm,0.3s,baz=313,slow=22,SNR=2.3
ULM LR LR 14 51 03.6
comp=Z,12µm,19.2s,baz=190,slow=38
ULM Lac du Bonnet 31.91 6⇑*i*P P 14 36 58.1 -2.8
comp=Z,330nm,1.7s,mb5.9
ULM *e*pP pP 14 37 13.2 -2.5
ULM *e*PcP PcP 14 39 49.0 -1.1
ULM *e*pPcP 14 40 06.2
ULM LR LR
comp=Z,14µm,21.0s
SADO Sadowa 31.93 30 P P 14 36 58.2 -2.8
comp=Z,82nm,1.0s,mb5.5,baz=243,slow=8.0,SNR=23
SADO S S **14 42 00.6 -7.3**
comp=Z,13nm,1.0s,baz=104,slow=15,SNR=2.0
SADO LR LR 14 51 33.2
comp=Z,6µm,21.8s,baz=232,slow=39
COR Corvallis 31.94 329⇑*i*P P 14 37 00.5 -0.6
COR *e*PP pP 14 37 14.5 -1.5
COR pmax pmax
comp=Z,299nm,1.4s,mb5.9
COR MLR MLR
comp=Z,8µm,20.0s
COR Corvallis 31.94 329⇑*i*P P 14 37 00.5 -0.6
comp=Z,299nm,1.4s,mb5.9
COR *e*pP pP 14 37 14.5 -1.6
COR LR LR
comp=Z,8µm,20.0s
G04A Mulino 32.01 331 ⇓P P 14 37 01.1 -0.7
baz=32,SNR=5.4
F05A White Salmon 32.08 333 ⇑P P 14 37 02.4 +0.1
baz=32,SNR=70
F05A ⇓S S **14 42 11.2 +1.0**
baz=32
CPNY Central Park 32.13 41⇑*i*P P 14 37 00.4 -2.4
WALA Waterton Lakes 32.17 344 *e*P P 14 37 02.5 -0.6
OD2 Odessa Site #2 32.20 337 P P 14 37 02.1 -1.3
PAL Palisades 32.28 40⇑*i*P P 14 37 01.9 -2.2
PAL *e**PP pP 14 37 15.9 -3.2
PAL pmax pmax
comp=Z,313nm,1.5s,mb5.9
PAL Palisades 32.28 40⇑*i*P P 14 37 01.9 -2.2
comp=Z,313nm,1.5s,mb5.9
PAL *e*pP pP 14 37 15.9 -3.2
H02A Toledo 32.34 329 ⇓P P 14 37 05.2 +0.5
baz=32,SNR=6.4
NEW Newport 32.40 340 P P 14 37 03.6 -1.6
comp=Z,50nm,0.9s,mb5.3,baz=146,slow=9.3,SNR=30
NEW PcP PcP 14 39 50.9 -0.5
comp=Z,16nm,0.9s,baz=180,slow=7.1,SNR=3.3
NEW LR LR 14 51 31.1
comp=Z,14µm,18.4s,baz=160,slow=39
NEW Newport 32.40 340⇑*i*P P 14 37 03.4 -1.7
NEW *e**PP pP 14 37 19.2 -0.9
NEW pmax pmax
comp=Z,82nm,1.1s
NEW MLR MLR
comp=Z,14µm,22.0s
NEW Newport 32.40 340⇑*i*P P 14 37 03.4 -1.8
comp=Z,80nm,1.1s,mb5.5
NEW *e*pP pP 14 37 19.2 -0.8
NEW LR LR
comp=Z,11µm,22.0s
G03A Yamhill 32.47 330 ⇑P P 14 37 05.4 -0.4
baz=32,SNR=23
G03A ⇑S S **14 42 15.7 -0.5**
baz=32
F04A Amboy 32.54 332 ⇑P P 14 37 05.4 -0.9
baz=33,SNR=16
F04A ⇓S S **14 42 15.2 -2.1**
baz=33
TBM Table Mountain 32.74 335 P P 14 37 08.3 +0.2
F03A Seaside 33.06 331 ⇑P P 14 37 09.8 -1.0
baz=33,SNR=6.5
F03A ⇑S S **14 42 27.3 +1.9**
baz=33
SJG San Juan 33.12 85 P P 14 37 12.7 +1.2
comp=Z,844nm,1.0s,mb6.6,baz=273,slow=6.7,SNR=99
SJG S S **14 42 28.8 +2.4**
comp=Z,7.7nm,0.3s,baz=345,slow=22,SNR=5.2
SJG San Juan 33.12 85 P P 14 37 12.7 +1.2
SJG S S **14 42 28.8 +2.4**
SJG pmax pmax
comp=Z,844nm,1.0s
SJG smax
comp=N,8.0nm,0.3s
SJG San Juan 33.12 85 *e*P P 14 37 12.6 +1.1
comp=N,1µm,1.1s,mb6.7
SJG *e*pP pP 14 37 26.0 -0.5
SJG *e*sP sP 14 37 33.4 -0.1
SJG LR LR
comp=Z,2µm,22.0s
E04A Onalaska 33.18 332 ⇑P P 14 37 11.9 -0.1
baz=33,SNR=6.2
D05A Enumclaw 33.33 334 ⇓P P 14 37 12.8 -0.4
baz=33,SNR=15
D05A ⇓S S **14 42 29.0 -0.5**
baz=33
E03A Lebam 33.52 331 ⇓P P 14 37 15.1 +0.2
baz=34,SNR=26
E03A ⇓S S **14 42 31.3 -1.3**
baz=34
C05A Tolt Reservoir 33.60 335 ⇑P P 14 37 14.8 -0.8
baz=34,SNR=43
C05A ⇑S S **14 42 33.0 -0.8**
baz=34
D04A Dobbs Creek Ra 33.61 333 ⇓P P 14 37 15.3 -0.4
baz=34
ACCN Adirondack Com 33.86 37⇑*i*P P 14 37 15.2 -2.6
ACCN *e*pP pP 14 37 30.2 -2.6
ACCN *e*PP PP 14 38 31.9 -3.5
NCB Newcomb 33.92 36⇑*i*P P 14 37 15.6 -2.8
comp=Z,29nm,0.6s,mb5.4
NCB LR LR
comp=Z,6µm,22.0s
QUA2 Belchertown 33.97 40⇑*i*P P 14 37 16.6 -2.2
comp=Z,288nm,1.4s,mb6.0
QUA2 *e*pP pP 14 37 31.1 -2.8
GNW Green Mountain 33.98 333 *e*P P 14 37 17.8 -1.1
D03A Wishkah Elem. 34.04 332 ⇑P P 14 37 19.7 +0.2
baz=34,SNR=13
D03A ⇓S S **14 42 39.5 -1.1**
baz=34
B05A Bryant 34.22 335 ⇑P P 14 37 19.6 -1.4
baz=34,SNR=38
B05A ⇓S S **14 42 40.5 -2.9**
baz=34
CMW Cultus Mountai 34.36 335 P P 14 37 21.3 -0.9
HRV Harvard--Oak R 34.58 40 *e*P P 14 37 20.9 -3.3
HRV *e**PP pP 14 37 36.5 -2.7
HRV pmax pmax
comp=Z,190nm,1.5s,mb5.8
HRV MLR MLR
comp=Z,4µm,20.0s
HRV Harvard--Oak R 34.58 40 *e*P P 14 37 20.9 -3.2
comp=Z,190nm,1.5s,mb5.8
HRV *e*pP pP 14 37 36.5 -2.7
HRV LR LR
comp=Z,4µm,20.0s
B04A Port Angeles 34.65 333 ⇓P P 14 37 24.6 -0.1
baz=35,SNR=22
B04A ⇓S S **14 42 47.9 -2.0**
baz=35
WES Weston 34.66 40 *e*P P 14 37 23.3 -1.5
WES pmax pmax
comp=Z,150nm,1.2s,mb5.8
WES Weston 34.66 40⇑*i*P P 14 37 22.8 -2.0
comp=Z,148nm,1.3s,mb5.8
WES LR LR
comp=Z,2µm,22.0s
A05A Maple Falls 34.81 336 ⇑P P 14 37 24.9 -1.1
baz=35,SNR=22
A05A ⇑S S **14 42 50.4 -2.0**
baz=35
FRNY Flat Rock 34.82 35⇑*i*P P 14 37 23.1 -3.1
A04A Legoe Bay, Lum 34.83 335 ⇓P P 14 37 25.6 -0.7
baz=35,SNR=29
A04A ⇑S S **14 42 52.2 -0.6**
baz=35
VDB Vedder Mountai 34.84 336 P P 14 37 25.2 -1.1
HNH Hanover 34.85 38⇑*i*P P 14 37 24.8 -1.6
HNH *e*pP pP 14 37 39.3 -2.2
HNH *e*PP PP 14 38 45.0 -1.4
LBNH Lisbon 35.38 37 *e*P P 14 37 29.4 -1.6
LBNH pmax pmax
comp=Z,340nm,1.8s,mb6.0
LBNH Lisbon 35.38 37⇑*e*P P 14 37 29.1 -2.0
comp=Z,339nm,1.8s,mb6.0
LBNH LR LR
comp=Z,7µm,19.0s
BBSR BB Station 35.43 60 *e*P P 14 37 30.5 -0.9
comp=Z,107nm,1.2s,mb5.7
BBSR LR LR
comp=Z,2µm,22.0s
EDM Edmonton 35.91 347⇑*i*P P 14 37 34.0 -1.5
EDM *e**PP pP 14 37 49.0 -1.6
EDM *e* 14 39 00.4
FFC Flin Flon 36.13 359 P P 14 37 35.1 -2.3
comp=Z,784nm,1.1s,mb6.5,SNR=57
FFC Flin Flon 36.13 359 P P 14 37 35.4 -2.0
PCRV Puerto La Cruz 36.20 98 S S 14 43 15.2 +1.3
comp=Z,3.2nm,0.4s,baz=338,slow=16,SNR=2.2
PCRV LR LR 14 55 18.2
comp=Z,2µm,18.9s,baz=72,slow=41
WVL Waterville 36.89 38 *e*P P 14 37 42.8 -1.1
comp=Z,233nm,1.6s,mb5.8
CPB Codrington 37.27 85 *e*P P 14 37 47.6 +0.5
BPA Boggy Peak 37.32 86 *e*P P 14 37 44.8 -2.8
BPA *e* 14 43 23.7
PKME Peaks-Kenny Pk 37.50 38⇑*i*P P 14 37 47.2 -1.8
comp=Z,122nm,1.4s,mb5.4
PKME *e*pP pP 14 38 01.7 -2.5
PKME *e*PP PP 14 39 15.9 +0.3
LZG Guadaloupe-1 37.54 87 *e*P P 14 37 49.6 +0.2
DOG Dongo Capester 37.70 88 *e*P P 14 37 51.5 +0.7
TBG Guadaloupe-3 37.71 88 *e*P P 14 37 51.0 +0.2
SEG Port Louis 37.75 87 *e*P P 14 37 50.9 -0.3
BBL Barber's Block 37.93 88 *e*P P 14 37 54.0 +1.3
NNA Nana 38.62 140 *e*P P 14 37 57.5 -0.9
comp=Z,234nm,1.3s,mb5.8
NNA *e*pP pP 14 38 13.0 -0.6
NNA *e*sP sP 14 38 19.5 -1.2
NNA *e*PP PP 14 39 26.2 -1.6
NNA *e*PcP PcP 14 40 08.5 -1.2
NNA *e*pPcP 14 40 25.8
NNA LR LR
comp=Z,6µm,19.0s
BBB Bella Bella 39.71 334 P P 14 38 06.0 -1.5
comp=Z,64nm,0.9s,mb5.3,baz=138,slow=6.9,SNR=26
BBB PcP PcP 14 40 12.2 -0.9
comp=Z,27nm,1.1s,baz=213,slow=9.8,SNR=3.1
BBB S S **14 43 57.0 -10**
comp=Z,8.4nm,1.1s,baz=320,slow=23,SNR=1.8
BBB LR LR 14 55 12.7
comp=Z,4µm,21.0s,baz=147,slow=37
FCC Fort Churchill 40.49 6⇑*i*P P 14 38 11.8 -2.3
FCC *e**PP pP 14 38 27.2 -2.2
FCC pmax pmax
comp=Z,104nm,1.1s,mb5.5
FCC Fort Churchill 40.49 6⇑*i*P P 14 38 11.8 -2.2
comp=Z,104nm,1.1s,mb5.5
FCC *e*pP pP 14 38 27.2 -2.2
CRAG Craig 44.14 334⇑*i*P P 14 38 43.7 +0.1
comp=Z,286nm,1.2s,mb5.9
CRAG *e*pP pP 14 38 58.5 -0.7
SCHQ Schefferville 44.64 28 P P 14 38 45.2 -2.4
comp=Z,46nm,0.9s,mb5.3,baz=227,slow=6.4,SNR=20
SCHQ PcP PcP 14 40 29.4 -0.1
comp=Z,108nm,1.1s,baz=222,slow=3.5,SNR=9.1
SCHQ S S **14 45 11.0 -8.5**
comp=Z,5.3nm,1.0s,baz=160,slow=10.0,SNR=1.6
SCHQ LR LR 14 59 20.8
comp=Z,3µm,18.2s,baz=235,slow=39
SCHQ Schefferville 44.64 28⇑*i*P P 14 38 45.0 -2.7
comp=Z,187nm,1.3s,mb5.8
SCHQ *e*PcP PcP 14 40 28.7 -0.8
SCHQ LR LR
comp=Z,4µm,20.0s
YKA Yellowknife Ar 44.91 351 P P 14 38 46.7 -3.1
comp=Z,38nm,1.0s,mb5.2,baz=161,slow=7.6,SNR=69
YKA PcP PcP 14 40 29.6 -0.8
comp=Z,18nm,0.7s,baz=154,slow=3.6,SNR=16
YKA pPcP 14 40 46.0
comp=Z,6.8nm,0.7s,baz=153,slow=4.2,SNR=3.6
YKA LR LR 14 59 04.0
comp=Z,26µm,18.4s,baz=165,slow=38
YKA Yellowknife Ar 44.91 351 P P 14 38 46.7 -3.2
YKA 14 40 29.6
YKA pmax pmax
comp=Z,38nm,1.0s
YKA pmax pmax
comp=Z,18nm,0.7s
YKA pmax pmax
comp=Z,7.0nm,0.7s
YKA MLR MLR
comp=Z,26µm,18.4s
YKA Yellowknife Ar 44.91 351 P P 14 38 46.7 -3.1
YKA PcP PcP 14 40 29.6 -0.9
YKA pPcP 14 40 46.0
YKA LR LR 14 59 04.0
YKW3 Yellowknife Ar 44.98 351 *e*P P 14 38 47.8 -2.6
ARE Arequipa 45.35 138 *e*P P 14 38 54.0 +0.6
RPN Rapa Nui 46.09 190 P P 14 38 59.1 -0.1
comp=Z,60nm,0.9s,mb5.5,baz=337,slow=2.6,SNR=3.7
RPN S S **14 45 46.4 +5.9**
comp=Z,12nm,0.4s,baz=140,slow=3.3,SNR=2.2
RPN Rapa Nui 46.09 190 *e*P P 14 38 57.9 -1.3
comp=Z,1µm,1.8s,mb6.5
RPN *e*pP pP 14 39 15.1 +0.3
SIT Sitka 46.12 335⇑*i*P P 14 38 58.8 -0.6
SIT *e**PP pP 14 39 12.9 -2.1
SIT pmax pmax
comp=Z,45nm,0.8s,mb5.5
SIT MLR MLR
comp=Z,13µm,19.0s
SIT Sitka 46.12 335⇑*i*P P 14 38 58.8 -0.6
comp=Z,45nm,0.8s,mb5.5
SIT *e*pP pP 14 39 12.9 -2.1
SIT LR LR
comp=Z,13µm,19.0s
SAML Samuel 46.30 123⇑*i*P P 14 38 59.1 -1.6
comp=Z,546nm,1.5s,mb6.3
SAML *e*pP pP 14 39 14.9 -1.4
SAML *e*sP sP 14 39 21.9 -1.3
SAML *e*PcP PcP 14 40 35.1 -0.1
SAML *e*PP PP 14 40 52.4 +2.1
SAML LR LR
comp=Z,3µm,22.0s
TAOE Nuku Hiva Isla 47.20 238 *e*S S 14 45 53.9 -2.3
comp=Z,6µm,28.2s
TAOE *e*LR LR 14 52 26.4
comp=Z,34µm,25.9s,baz=58
TAOE Nuku Hiva Isla 47.20 238 *e*P P 14 39 07.5 -0.3
comp=Z,4µm,2.4s,mb6.9
TAOE *e*S S **14 45 53.9 -2.3**
SKAG Skagway 47.77 337⇑*i*P P 14 39 11.7 -0.5
comp=Z,108nm,1.2s,mb5.8
SKAG *e*pP pP 14 39 26.7 -1.2
FRB Frobisher Bay 50.30 18 P P 14 39 29.6 -2.0
comp=Z,25nm,0.6s,mb5.5,baz=225,slow=9.6,SNR=24
FRB PcP PcP 14 40 48.8 -0.8
comp=Z,67nm,0.8s,baz=199,slow=5.1,SNR=9.2
FRB S S **14 46 34.1 -5.7**
comp=Z,39nm,1.1s,baz=88,slow=18,SNR=7.5
FRB LR LR 15 01 34.9
comp=Z,6µm,21.6s,baz=220,slow=37
FRB Frobisher Bay 50.30 18 P P 14 39 29.6 -2.0
FRB 14 40 48.8
FRB S S **14 46 34.1 -5.7**
FRB pmax pmax
comp=Z,25nm,0.6s
FRB pmax pmax
comp=Z,67nm,0.8s
FRB smax
comp=N,39nm,1.2s
FRB MLR MLR
comp=Z,6µm,21.7s
POHA Pohakuloa 51.28 281 PFAKE 14 39 50.0 +11
POHA LR LR
comp=Z,2µm,21.0s
LVC Limon Verde 51.58 141 P P 14 39 42.5 +1.3
LVC sP sP 14 40 05.4 +1.5
LVC Limon Verde 51.58 141⇓*i*P P 14 39 42.0 +0.7
comp=Z,467nm,1.5s,mb6.2
LVC *e*pP pP 14 39 57.9 +0.9
LVC *e*sP sP 14 40 05.0 +1.1
LVC LR LR
comp=Z,2µm,21.0s
PTCN Pitcairn Islan 51.74 214 PFAKE 14 39 50.0 +7.5
PTCN LR LR
comp=Z,7µm,20.0s
DAWY Dawson 52.33 340⇑*i*P P 14 39 45.5 -1.3
DAWY *e*pP pP 14 40 00.7 -1.9
EYAK Cordova Ski Ar 52.55 334⇑*i*P P 14 39 48.2 -0.2
DIV Divide 52.87 335⇑*i*P P 14 39 50.7 -0.1
comp=Z,350nm,0.8s,mb6.3
DIV *e*pP pP 14 40 06.3 -0.3
DIV LR LR
comp=Z,17µm,22.0s
RKT Rikitea 53.02 220 *e*S S 14 47 15.0 -2.2
comp=Z,2µm,28.5s
RKT *e*SS SS 14 50 58.3 +1.4
comp=Z,2µm,37.8s
RKT *e*LR LR 14 55 08.8
comp=Z,13µm,26.8s,baz=38
RKT Rikitea 53.02 220 *e*P P 14 39 51.9 0.0
RKT *e*S S **14 47 15.0 -2.2**
RKT *e*SS SS 14 50 58.3 +1.4
RKT pmax pmax
comp=Z,939nm,1.8s,mb6.4
RKT Rikitea 53.02 220 *e*P P 14 39 51.9 0.0
comp=Z,939nm,1.8s,mb6.4
RKT *e*S S **14 47 15.0 -2.2**
RKT *e*SS SS 14 50 58.3 +1.4
KIP Kipapa 53.35 283⇓*i*P P 14 39 54.5 +0.2
KIP *e**PP pP 14 40 11.1 +0.9

KIP pmax pmax
comp=Z,202nm,1.0s,mb6.0
KIP MLR MLR
comp=Z,2µm,20.0s
KIP Kipapa 53.35 283⇓ iP P 14 39 54.5 +0.2
comp=Z,203nm,1.0s,mb6.0
KIP epP pP 14 40 11.1 +0.9
KIP LR LR
comp=Z,2µm,20.0s
HON Honolulu 53.35 283⇓ iP P 14 39 55.0 +0.7
HON e*PP pP 14 40 11.5 +1.3
INK Inuvik 53.77 346 P P 14 39 55.9 -1.5
comp=Z,217nm,1.0s,mb6.0,baz=140,slow=8.6,SNR=160
INK S S **14 47 19.9 -7.4**
comp=Z,2.5nm,1.1s,baz=68,slow=15,SNR=2.0
INK LR LR 15 04 43.0
comp=Z,11µm,21.1s,baz=148,slow=38
INK Inuvik 53.77 346 P P 14 39 55.9 -1.5
INK S S **14 47 20.0 -7.4**
INK pmax pmax
comp=Z,217nm,1.0s
INK smax
comp=N,3.0nm,1.1s
INK MLR MLR
comp=Z,11µm,21.1s
INK Inuvik 53.77 346⇑ iP P 14 39 55.5 -1.9
comp=Z,9µm,1.0s
INK epP pP 14 40 11.5 -1.8
KDAK Kodiak Island 54.33 329 P P 14 40 01.6 +0.1
comp=Z,832nm,1.0s,mb6.6,SNR=9.6
KDAK Kodiak Island 54.33 329 P P 14 40 01.0 -0.5
comp=Z,95nm,0.9s,mb5.7,baz=111,slow=3.9,SNR=28
KDAK S S **14 47 37.1 +2.2**
comp=Z,3.0nm,0.6s,baz=27,slow=17,SNR=2.0
KDAK LR LR 15 03 20.8
comp=Z,5µm,20.1s,baz=138,slow=36
KDAK Kodiak Island 54.33 329⇑ iP P 14 40 00.8 -0.6
comp=Z,263nm,1.2s,mb6.0
KDAK epP pP 14 40 15.7 -1.6
KDAK LR LR
comp=Z,1µm,20.0s
SLKM Skilak Lake 54.43 333 eP P 14 40 01.5 -0.7
SLKM e 14 41 06.1
PMR Palmer 54.49 334⇑ iP P 14 40 01.9 -0.8
PMR e*PP pP 14 40 17.1 -1.5
PMR pmax pmax
comp=Z,167nm,0.7s,mb6.1
PMR MLR MLR
comp=Z,4µm,22.0s
PMR Palmer 54.49 334⇑ iP P 14 40 01.9 -0.8
comp=Z,167nm,0.7s,mb6.1
PMR epP pP 14 40 17.1 -1.5
PMR LR LR
comp=Z,4µm,22.0s
MCK McKinley 55.51 336⇑ iP P 14 40 09.1 -0.9
MCK e*PP pP 14 40 24.4 -1.6
MCK pmax pmax
comp=Z,133nm,1.0s,mb5.9
MCK MLR MLR
comp=Z,2µm,20.0s
MCK McKinley 55.51 336⇑ iP P 14 40 09.1 -0.9
comp=Z,133nm,1.0s,mb5.9
MCK epP pP 14 40 24.4 -1.6
MCK LR LR
comp=Z,2µm,20.0s
COLA College 55.73 338 P P 14 40 10.4 -1.1
COLA pmax pmax
comp=Z,230nm,1.2s,mb6.1
COLA College 55.73 338⇑ iP P 14 40 10.1 -1.4
comp=Z,231nm,1.2s,mb6.1
COLA epP pP 14 40 25.1 -2.4
COLA ePcP PcP 14 41 08.1 -2.1
COLA ePP PP 14 42 16.2 -0.2
COLA eScP ScP 14 45 02.2 -1.7
COLA LR LR
comp=Z,5µm,22.0s
RES Resolute Bay 56.27 2⇑ iP P 14 40 12.4 -3.0
RES e*PP pP 14 40 27.8 -3.6
RES e 14 41 11.1
VAH Vaihoa 56.82 237 eP P 14 40 19.8 +0.4
comp=Z,213nm,1.3s,mb6.0
PMOR Pomariorio Ree 56.91 237 eP P 14 40 20.4 +0.5
SDPT Sand Point 57.64 324 eP P 14 40 23.6 -1.6
comp=Z,416nm,1.7s,mb6.2
TTA Tatalina 57.97 334 eP P 14 40 25.9 -1.5
TTA e*PP pP 14 40 41.0 -2.5
TTA pmax pmax
comp=Z,344nm,1.2s,mb6.3
TTA Tatalina 57.97 334 eP P 14 40 25.9 -1.6
comp=Z,344nm,1.2s,mb6.3
TTA epP pP 14 40 41.0 -2.5
SFJD Kangerlussuaq 58.13 21 P P 14 40 26.4 -2.1
comp=Z,44nm,1.1s,mb5.4,baz=208,slow=8.3,SNR=18
SFJD Kangerlussuaq 58.13 21⇑ iP P 14 40 26.3 -2.2
comp=Z,150nm,1.5s,mb5.8
SFJD i 14 43 49.7
SFJD i S S **14 48 24.1 -1.1**
SFJD i 14 54 57.0
SFJD e 14 58 55.1
SFJD
comp=Z,3µm,24.0s
SFJD Kangerlussuaq 58.13 21⇑ iP P 14 40 26.3 -2.2
SFJD i S S **14 48 24.1 -1.1**
SFJD pmax pmax
comp=Z,150nm,1.5s,mb5.8
SFJD MLR MLR
comp=Z,3µm,24.0s
IMA2 Indian Mountai 58.43 338 eP P 14 40 28.7 -2.0
IMA2 epP pP 14 40 43.5 -3.3
TVO Taravao 59.55 235 eP P 14 40 39.3 +0.9
comp=Z,250nm,1.3s,mb6.1
TVO Taravao 59.55 235 eP P 14 40 39.3 +0.9
TVO pmax pmax
comp=Z,250nm,1.3s,mb6.1
PPT Papeete 59.68 236 eS S 14 48 43.3 -2.1
comp=Z,3µm,25.2s
PPT eSS SS 14 52 41.6 -0.2
comp=Z,2µm,33.5s
PPT eLQ 14 55 50.3
comp=Z,4µm,25.8s
PPT eLR LR 14 58 14.4
comp=Z,12µm,26.5s,baz=49
PPT Papeete 59.68 236 LR LR 14 59 27.7
comp=Z,3µm,19.0s,baz=50,slow=29
MDZ Mendoza 59.69 149 eP P 14 40 40.6 +1.2
PAE Paea 59.74 236 eP P 14 40 40.5 +0.8
comp=Z,437nm,1.7s,mb6.2
PAE Paea 59.74 236 eP P 14 40 40.5 +0.8
PAE pmax pmax
comp=Z,437nm,1.7s,mb6.2
UNV Unalaska Valle 60.77 322 PFAKE 14 41 00.0 +13
UNV LR LR
comp=Z,3µm,20.0s
CPUP Villa Florida 61.59 135 P P 14 40 51.4 -0.9
CPUP pP pP 14 41 14.6 +6.1
CPUP Villa Florida 61.59 135 P P 14 40 51.5 -0.8
comp=Z,83nm,0.9s,mb5.9,baz=308,slow=7.2,SNR=99
CPUP LR LR 15 07 21.8
comp=Z,2µm,19.9s,baz=202,slow=36
CPUP Villa Florida 61.59 135⇓ iP P 14 40 51.2 -1.1
CPUP e*PP pP 14 41 07.0 -1.5
CPUP e*SP sP 14 41 14.5 -0.8
CPUP pmax pmax
comp=Z,470nm,1.0s
CPUP MLR MLR
comp=Z,474nm,20.0s
CPUP Villa Florida 61.59 135⇓ iP P 14 40 51.2 -1.1
comp=Z,470nm,1.0s,mb6.6
CPUP epP pP 14 41 07.0 -1.5
CPUP esP sP 14 41 14.5 -0.8
CPUP LR LR
comp=Z,474nm,20.0s
NIKO Nikolski 62.05 321⇑ eP P 14 40 53.4 -2.0
NIKO epP pP 14 41 07.4 -4.2
BDFB Brasilia 62.31 120 P P 14 40 57.9 +0.8
comp=Z,75nm,0.9s,mb5.8,baz=300,slow=8.4,SNR=63
BDFB LR LR 15 08 39.1
comp=Z,3µm,21.6s,baz=139,slow=36
BDFB Brasilia 62.31 120 P P 14 40 57.9 +0.8
BDFB pmax pmax
comp=Z,75nm,0.9s
BDFB MLR MLR
comp=Z,3µm,21.7s
TBI Tubuai 62.97 230 eS S 14 49 25.8 -1.3
comp=Z,2µm,24.0s
TBI eSS SS 14 53 36.2 +2.9
comp=Z,2µm,34.8s
TBI eLR LR 14 59 44.1
comp=Z,12µm,27.5s,baz=50
TNA Tin City 63.73 335⇑ iP P 14 41 05.7 -0.9
comp=Z,179nm,1.3s,mb5.9
TNA epP pP 14 41 20.8 -2.0
TNA LR LR
comp=Z,3µm,20.0s
SUMG Summit 64.35 17⇑ iP P 14 41 08.9 -1.7
comp=Z,235nm,1.1s,mb6.1
PLUZ Luz 64.82 55 eP P 14 41 19.6 +5.9
comp=Z,252nm,1.1s,mb6.2
PCND Candelaria 65.27 56 eP P 14 41 17.0 +0.4
comp=Z,318nm,1.1s,mb6.3
PICO Pico 65.29 56 eP P 14 41 16.9 +0.2
PBOI Pico dos Bois 65.34 56 eP P 14 41 18.0 +1.0
comp=Z,218nm,1.1s,mb6.1
PTEI Pico do Teixo 65.35 56 eP P 14 41 18.1 +1.0
comp=Z,252nm,1.2s,mb6.1
ROSA Rosais 65.42 55 eP P 14 41 17.8 +0.3
PLCA Paso Flores 65.44 155⇓ eP P 14 41 17.3 -0.4
PLCA e*PP pP 14 41 33.5 -0.5
PLCA e*SP sP 14 41 40.5 -0.2
PLCA pmax pmax
comp=Z,384nm,1.3s
PLCA MLR MLR
comp=Z,4µm,21.0s
PLCA Paso Flores 65.44 155⇓ eP P 14 41 17.3 -0.4
comp=Z,384nm,1.3s,mb6.3
PLCA epP pP 14 41 33.5 -0.4
PLCA esP sP 14 41 40.5 -0.3
PLCA LR LR
comp=Z,4µm,21.0s
PAMA Santo Amaro 65.47 55 eP P 14 41 19.9 +2.0
PVIA Vitoria 65.54 55 eP P 14 41 19.4 +1.1
comp=Z,266nm,1.1s,mb6.2
PMAN Manadas 65.55 55 eP P 14 41 18.6 +0.2
comp=Z,296nm,1.1s,mb6.2
SRBC Serra Branca 65.55 55 eP P 14 41 18.6 +0.2
STGR Santa Cruz 65.58 55 eP P 14 41 19.5 +1.0
comp=Z,451nm,1.1s,mb6.4
ASBA Santa Barbara 66.13 55 eP P 14 41 23.7 +1.6
comp=Z,273nm,0.9s,mb6.3
PPAD Pico dos Padre 66.16 55 eP P 14 41 23.6 +1.3
comp=Z,228nm,1.1s,mb6.1
PBIS Biscoitos 66.19 55 eP P 14 41 24.0 +1.5
comp=Z,282nm,1.1s,mb6.2
ADH Angra Heroismo 66.21 55 eP P 14 41 23.1 +0.5
RIB2 Ribeirinha 66.26 55 eP P 14 41 24.3 +1.4
comp=Z,180nm,1.1s,mb6.0
PVNV Vila Nova 66.26 55 eP P 14 41 24.2 +1.2
comp=Z,242nm,1.1s,mb6.1
PFAV Pico das Favas 66.32 55 eP P 14 41 24.4 +1.1
comp=Z,180nm,0.9s,mb6.1
LPA La Plata 67.11 142 *de*P P 14 41 27.0 -1.4
LPA ePCP PcP 14 41 53.0 -3.1
LPA eS S 14 50 17.0 -0.9
LPA
comp=Z,3µm,20.0s
SET4 Mosteiros 67.41 56 eP P 14 41 31.9 +1.6
PSAN Santo Antonio 67.47 56 e 14 41 34.4
PDA Ponta Delgada 67.53 56 eP P 14 41 32.7 +1.7
PDA eS S 14 50 34.0 +11
PDA eScS ScS 14 51 29.0 +4.9
PDA Ponta Delgada 67.53 56 eLR LR 15 02 50.0
CML Cha da Macela 67.62 56 eP P 14 41 33.8 +2.2
PVER Pico Vermelho 67.64 56 eP P 14 41 34.1 +2.4
LFA Lagoa do Fogo 67.67 56 eP P 14 41 34.1 +2.2
PMAT Coroa da Mata 67.68 56 eP P 14 41 34.6 +2.7
PRCH Ribeira Ch 67.68 56 eP P 14 41 33.7 +1.7
comp=Z,310nm,1.1s,mb6.2
MESC Monte Escuro 67.70 56 eP P 14 41 34.6 +2.5
VIF Vila Franca 67.71 56 eP P 14 41 34.2 +2.1
comp=Z,223nm,1.4s,mb6.0
PCNG Congro 67.74 56 eP P 14 41 34.2 +1.9
comp=Z,521nm,1.1s,mb6.5
FRA1 Furnas 67.78 56 eP P 14 41 34.3 +1.7
PFAD Fenais da Ajud 67.79 56 eP P 14 41 34.0 +1.3
MIRA Miradouro 67.83 56 eP P 14 41 33.9 +1.0
PSMN Pico do Norte, 68.09 57 eP P 14 41 35.7 +1.1
BORG Borgarnes 69.03 27 P P 14 41 40.0 -0.4
comp=Z,953nm,1.1s,mb6.6,SNR=7.0
BORG Borgarnes 69.03 27 P P 14 41 40.6 +0.2
comp=Z,141nm,1.0s,mb5.8,baz=273,slow=3.0,SNR=17
BORG Borgarnes 69.03 27⇑ eP P 14 41 39.3 -1.1
comp=Z,342nm,1.3s,mb6.1
BORG LR LR
comp=Z,2µm,21.0s
SCO Scoresbysund 69.03 21 *i* P P **14 41 37.8 -2.6**
comp=Z,14nm,1.0s
SCO Scoresbysund 69.03 21 *i* P P **14 41 37.8 -2.6**
SCO pmax pmax
comp=Z,14nm,1.0s
AMKA Amchitka 69.31 319 eP P 14 41 40.3 -1.8
MIDW Midway 69.70 294 PFAKE 14 41 50.0 +5.5
MIDW LR LR
comp=Z,863nm,19.0s
RAR Rarotonga 69.75 238 LR LR 15 03 53.9
comp=Z,2µm,20.0s,baz=106,slow=29
RAR Rarotonga 69.75 238 PFAKE 14 41 50.0 +5.2
RAR LR LR
comp=Z,2.0nm,21.0s
CAM4 Nova Friburgo 70.16 123 eP P 14 41 47.8 +0.5
CAM4 *i* 14 41 50.8
CAM4 *i* 14 42 11.7
DAG Danmarks Havn 70.34 14⇓ iP P 14 41 46.0 -2.5
comp=Z,298nm,1.2s,mb6.1
DAG Danmarks Havn 70.34 14⇓ iP P 14 41 46.0 -2.5
DAG pmax pmax
comp=Z,298nm,1.2s,mb6.1
SMY Shemya 72.37 321 PFAKE 14 42 10.0 +9.3
SMY LR LR
comp=Z,1µm,21.0s
JMIC Jan Mayen 73.46 20⇑ iP P 14 42 06.2 -0.9
JMIC eS S 14 51 31.0 -0.9
BILL Bilibino 73.96 337 *c* iP P **14 42 09.0 -1.1**
BILL *i* pP 14 42 24.5 -2.2
BILL *e* 14 44 55.8
BILL *i* S S 14 51 38.1 +0.5
BILL *i* PS 14 52 12.9
BILL *i* PPS 14 52 28.3
BILL *i* SS SS 14 56 23.0 0.0
BILL pmax pmax
comp=Z,258nm,1.6s,mb5.9
BILL MLR MLR
comp=Z,9µm,19.0s
BILL Bilibino 73.96 337⇑ iP P 14 42 09.0 -1.1
comp=Z,258nm,1.6s,mb5.9
BILL *i* pP 14 42 24.5 -2.2
BILL *e* 14 44 55.8
BILL *i* S S 14 51 38.1 +0.5
BILL *i* PS 14 52 12.9
BILL *i* PPS 14 52 28.3
BILL *i* SS SS 14 56 23.0 0.0
BILL LR LR
comp=Z,9µm,19.0s
PMAR Madeira 75.44 60 eP P 14 42 21.4 +2.8
PMPS Porto Santo 75.84 60 eP P 14 42 22.7 +1.8
comp=Z,370nm,1.4s,mb6.1
VAL Valentia 76.13 40⇑ iP P 14 42 21.4 -1.2
KBS Kingsbay 76.21 11⇑ iP P 14 42 21.9 -1.1
KBS AMb AMB 14 42 25.4
comp=Z,166nm,1.6s,mb5.7
KBS ePP PP 14 45 11.7 -3.0
KBS eS S 14 52 01.4 -1.2
KBS eSS SS 14 56 57.4 +0.3
KBS AMS AMS 15 17 46.6
comp=Z,2µm,21.2s
KBS Kingsbay 76.21 11⇑ iP P 14 42 22.6 -0.4
KBS pmax pmax
comp=Z,298nm,1.4s,mb6.0
KBS MLR MLR
comp=Z,4µm,20.0s
KBS Kingsbay 76.21 11⇑ iP P 14 42 22.6 -0.5
comp=Z,298nm,1.4s,mb6.0
KBS LR LR
comp=Z,4µm,20.0s
EGOM La Gomera 76.23 65 P P 14 42 24.5 +1.3
comp=Z,90nm,1.1s,mb5.6
CCAN Las Canadas 76.74 64 P P 14 42 27.4 +1.4
comp=Z,135nm,1.6s,mb5.6
AFI Afiamalu 76.77 250 LR LR 15 07 51.1
comp=Z,2µm,19.3s,baz=86,slow=29
AFI Afiamalu 76.77 250 PFAKE 14 42 40.0 +14
AFI LR LR
comp=Z,3µm,20.0s
EBAJ Bajamar 76.88 64 P P 14 42 27.9 +1.1
comp=Z,132nm,1.2s,mb5.7
KSK Scoval 76.89 34⇑ eP P 14 42 25.7 -1.1
KSK Scoval 76.89 34⇑ eP P 14 42 25.7 -1.1
SPB4 Spitsbergen Ar 77.34 11 eP P 14 42 27.7 -1.7
KPL Plockton 77.47 34⇑ eP P 14 42 28.9 -1.2
KPL Plockton 77.47 34⇑ eP P 14 42 28.9 -1.2
KAR1 Arisaig 77.48 34⇑ eP P 14 42 28.6 -1.6
KAR1 Arisaig 77.48 34⇑ eP P 14 42 28.6 -1.6
DCN Croghan 77.57 38⇑ iP P 14 42 29.3 -1.4
KAC Achnashellach 77.61 33⇑ eP P 14 42 29.5 -1.4
KAC Achnashellach 77.61 33⇑ eP P 14 42 29.5 -1.4
KSB Sheil Bridge 77.62 34⇑ eP P 14 42 29.6 -1.4
KSB Sheil Bridge 77.62 34⇑ eP P 14 42 29.6 -1.4
EOSO Osorio 77.67 64 P P 14 42 32.5 +1.3
comp=Z,100nm,1.3s,mb5.6
DLF Lyons Farm 78.01 38⇑ iP P 14 42 31.7 -1.4
GMK Mull of Kintyr 78.01 36⇑ eP P 14 42 32.1 -1.0
GMK Mull of Kintyr 78.01 36⇑ eP P 14 42 32.1 -1.0
MVH1 Achvaich 78.08 33⇑ eP P 14 42 32.3 -1.2
MVH1 Achvaich 78.08 33⇑ eP P 14 42 32.3 -1.2
GMM Mts of Mourne 78.10 37⇑ eP P 14 42 32.7 -1.0
GMM Mts of Mourne 78.10 37⇑ eP P 14 42 32.7 -1.0
ORE Reay 78.12 32 eP P 14 42 33.3 -0.5
ORE Reay 78.12 32 eP P 14 42 33.3 -0.5
MLA1 Latheron 78.39 32 eP P 14 42 33.8 -1.4
MLA1 Latheron 78.39 32 eP P 14 42 33.8 -1.4
OBR Brabster 78.41 32 eP P 14 42 34.1 -1.2
OBR Brabster 78.41 32 eP P 14 42 34.1 -1.2
EAB Aberfoyle 78.47 35⇑ eP P 14 42 33.9 -1.8
EAB Aberfoyle 78.47 35⇑ eP P 14 42 33.9 -1.8
PGBU Glenifferbraes 78.50 35 eP P 14 42 34.6 -1.2
PGBU Glenifferbraes 78.50 35 eP P 14 42 34.6 -1.2
POB1 Observatory 78.52 35⇑ eP P 14 42 34.9 -1.0
POB1 Observatory 78.52 35⇑ eP P 14 42 34.9 -1.0
GAL1 Galloway 78.63 36⇑ eP P 14 42 35.2 -1.3
GAL1 Galloway 78.63 36⇑ eP P 14 42 35.2 -1.3
MCD Coleburn Disti 78.65 33⇑ eP P 14 42 36.0 -0.7
MCD AMb AMB 14 42 37.7
comp=Z,376nm,1.2s,mb6.2
MCD Coleburn Disti 78.65 33⇑ eP P 14 42 36.0 -0.7
MCD AMb AMB 14 42 37.7
comp=Z,376nm,1.2s,mb6.2
WAL1 Walls 78.68 30⇑ eP P 14 42 36.1 -0.7
WAL1 Walls 78.68 30⇑ eP P 14 42 36.1 -0.7
CFTV Fuerteventura 78.84 64 P P 14 42 39.0 +1.3
comp=Z,15nm,0.5s,mb5.2
WIM Isle of Man 78.85 37⇑ eP P 14 42 37.1 -0.6
WIM AMb AMB 14 42 38.8
comp=Z,240nm,1.3s,mb6.0
WIM Isle of Man 78.85 37⇑ eP P 14 42 37.1 -0.6
WIM AMb AMB 14 42 38.8
comp=Z,240nm,1.3s,mb6.0
MME1 Meikle Cairn 78.88 33 eP P 14 42 36.9 -1.1
MME1 Meikle Cairn 78.88 33 eP P 14 42 36.9 -1.1
LRW Lerwick 78.93 30⇑ eP P 14 42 36.3 -1.9
LRW Lerwick 78.93 30⇑ eP P 14 42 36.3 -1.9
EAU Auchinoon 79.05 35⇑ eP P 14 42 37.8 -1.0
EAU Auchinoon 79.05 35⇑ eP P 14 42 37.8 -1.0
EMAZ Mazaricos 79.10 48 P P 14 42 39.0 -0.1
comp=Z,221nm,1.0s,mb6.0
EFAM Famara 79.12 63 P P 14 42 40.7 +1.5
comp=Z,129nm,1.6s,mb5.6
BWH Wardlaw 79.13 35⇑ eP P 14 42 38.3 -0.9
BWH Wardlaw 79.13 35⇑ eP P 14 42 38.3 -0.9
WCB1 Church Bay 79.14 37⇑ eP P 14 42 38.1 -1.3
WCB1 AMb AMB 14 42 40.6
comp=Z,228nm,1.7s,mb5.8
WCB1 Church Bay 79.14 37⇑ eP P 14 42 38.1 -1.3
WCB1 AMb AMB 14 42 40.6
comp=Z,228nm,1.7s,mb5.8
YRC Rhoscolyn 79.16 37⇑ eP P 14 42 38.1 -1.3
YRC AMb AMB 14 42 40.1
comp=Z,220nm,1.3s,mb5.9
YRC Rhoscolyn 79.16 37⇑ eP P 14 42 38.1 -1.3
YRC AMb AMB 14 42 40.1
comp=Z,220nm,1.3s,mb5.9
EDI Edinburgh 79.17 35⇑ eP P 14 42 39.2 -0.3
EDI Edinburgh 79.17 35⇑ eP P 14 42 39.2 -0.3
EBL Broad Law 79.29 35⇑ eP P 14 42 39.3 -0.9
EBL Broad Law 79.29 35⇑ eP P 14 42 39.3 -0.9
YRE Yr Eifl 79.32 38⇑ eP P 14 42 39.3 -1.0
YRE AMb AMB 14 42 43.8
comp=Z,262nm,1.4s,mb6.0
YRE Yr Eifl 79.32 38⇑ eP P 14 42 39.3 -1.0
YRE AMb AMB 14 42 43.8
comp=Z,262nm,1.4s,mb6.0
ESK Eskdalemuir 79.33 35 P P 14 42 39.0 -1.4
comp=Z,772nm,1.0s,mb6.6,SNR=14
ESK Eskdalemuir 79.33 35⇑ eP P 14 42 39.3 -1.1
ESK Eskdalemuir 79.33 35⇑ eP P 14 42 39.3 -1.1
ESK Eskdalemuir 79.33 35⇑ iP P 14 42 39.3 -1.1
ESK pmax pmax
comp=Z,204nm,1.3s,mb5.9
ESK MLR MLR
comp=Z,2µm,20.0s
ESK Eskdalemuir 79.33 35⇑ iP P 14 42 39.3 -1.1
comp=Z,204nm,1.3s,mb5.9
ESK LR LR
comp=Z,2µm,20.0s
EFI East Falkland 79.35 154 PFAKE 14 42 50.0 +10
EFI LR LR
comp=Z,3µm,19.0s
EKA Eskdalemuir Ar 79.35 35 P P 14 42 39.6 -0.9
comp=Z,64nm,1.0s,mb5.5,baz=288,slow=5.9,SNR=58
EKA Eskdalemuir Ar 79.35 35 P P 14 42 39.6 -0.9
EKA pmax pmax
comp=Z,64nm,1.0s
BHH Howats Hill 79.39 35⇑ eP P 14 42 39.9 -0.8
BHH Howats Hill 79.39 35⇑ eP P 14 42 39.9 -0.8
ECK Cauldkaine Hil 79.42 35⇑ eP P 14 42 39.9 -1.0
ECK AMb AMB 14 42 41.6
comp=Z,207nm,1.3s,mb5.9
ECK Cauldkaine Hil 79.42 35⇑ eP P 14 42 39.9 -1.0
ECK AMb AMB 14 42 41.6
comp=Z,207nm,1.3s,mb5.9
STS Santiago 79.42 48 P P 14 42 41.0 +0.2
STS pmax pmax
comp=Z,199nm,0.9s,mb6.0
STS Santiago 79.42 48 P P 14 42 41.0 +0.2
comp=Z,199nm,0.9s,mb6.0
ESY Stoneypath 79.48 34⇑ eP P 14 42 40.3 -0.9
ESY Stoneypath 79.48 34⇑ eP P 14 42 40.3 -0.9
BBO1 Bothel 79.48 36⇑ eP P 14 42 40.1 -1.1
BBO1 Bothel 79.48 36⇑ eP P 14 42 40.1 -1.1
WPM1 Penmaenmawr 79.54 37⇑ eP P 14 42 40.5 -1.0
WPM1 Penmaenmawr 79.54 37⇑ eP P 14 42 40.5 -1.0
CCA1 Carnmenellis 79.63 41⇑ eP P 14 42 41.4 -0.6
CCA1 Carnmenellis 79.63 41⇑ eP P 14 42 41.4 -0.6
CGW Gweek 79.66 41⇑ eP P 14 42 41.7 -0.4
CGW Gweek 79.66 41⇑ eP P 14 42 41.7 -0.4
CRQ2 Rosemanowes 2 79.67 41⇑ eP P 14 42 41.8 -0.5
CRQ2 AMb AMB 14 42 44.1
comp=Z,225nm,1.7s,mb5.8
CRQ2 Rosemanowes 2 79.67 41⇑ eP P 14 42 41.8 -0.5
CRQ2 AMb AMB 14 42 44.1
comp=Z,225nm,1.7s,mb5.8
CGH1 Goonhilly 79.71 41⇑ eP P 14 42 41.5 -1.0
CGH1 Goonhilly 79.71 41⇑ eP P 14 42 41.5 -1.0
CMA1 Manaccan 79.72 41⇑ eP P 14 42 42.0 -0.4
CMA1 Manaccan 79.72 41⇑ eP P 14 42 42.0 -0.4
CSA1 St Austell 79.79 40⇑ eP P 14 42 42.1 -0.8
CSA1 St Austell 79.79 40⇑ eP P 14 42 42.1 -0.8
HSA Swansea 79.83 39 eP P 14 42 42.5 -0.5
HSA Swansea 79.83 39 eP P 14 42 42.5 -0.5
HTL Hartland 79.85 40⇑ eP P 14 42 41.9 -1.3
HTL Hartland 79.85 40⇑ eP P 14 42 41.9 -1.3
BJO Bjornoya 79.87 14 eP P 14 42 42.2 -1.1
BJO AMS AMS 15 19 16.1
comp=Z,4µm,15.3s
PMAFR Mafra 79.93 52 *i* P P **14 42 44.2 +0.6**
PMAFR eS S 14 52 42.7 +0.1
XAL Allendale 80.01 35⇑ eP P 14 42 44.0 -0.1
XAL Allendale 80.01 35⇑ eP P 14 42 44.0 -0.1
SBD1 Bryn Du 80.02 38⇑ eP P 14 42 43.4 -0.7
SBD1 Bryn Du 80.02 38⇑ eP P 14 42 43.4 -0.7
PLOU Loures 80.05 52 *i* P P **14 42 44.8 +0.5**
comp=Z,395nm,1.3s,mb6.2
LIS Lisbon 80.10 53 *eP* P **14 42 43.9 -0.6**
LIS eS S 14 52 42.9 -1.4
LIS eS S 14 52 42.9 -1.4
LIS AMP 15 04 01.8

LIS				AMS	AMS	15 15 02.3	
	comp=Z,2µm,21.5s						
LIS	**Lisbon**	**80.10**	**53**	eP	**P**	**14 42 43.9**	**-0.6**
LIS				eS	S	14 52 42.9	-1.4
LIS	**Lisbon**	**80.10**	**53**	eP	**P**	**14 42 43.9**	**-0.6**
LIS				eS	S	14 52 42.9	-1.4
LIS				pmax	pmax		
	comp=Z,600nm,1.0s,mb6.5						
LIS				smax			
	comp=E,500nm,1.0s						
PCAB	**Cabril**	**80.11**	**49**	i P	**P**	**14 42 44.8**	**+0.2**
	comp=E,376nm,1.5s,mb6.1						
PCAB	**Cabril**	**80.11**	**49**	eS	S	14 52 46.3	+1.9
HEX	**Exmoor**	**80.24**	**39⇑**	eP	**P**	**14 42 44.8**	**-0.5**
HEX	**Exmoor**	**80.24**	**39⇑**	eP	**P**	**14 42 44.8**	**-0.5**
HTR	**Trewern Hill**	**80.26**	**38⇑**	eP	**P**	**14 42 44.8**	**-0.6**
HTR				AMb	AMB	14 42 47.2	
	comp=Z,245nm,1.6s,mb5.9						
HTR	**Trewern Hill**	**80.26**	**38⇑**	eP	**P**	**14 42 44.8**	**-0.6**
HTR				AMb	AMB	14 42 47.2	
	comp=Z,245nm,1.6s,mb5.9						
EPON	**Pontenova**	**80.29**	**48**	P	**P**	**14 42 45.7**	**+0.1**
	comp=Z,248nm,1.0s,mb6.1						
PLML	**Palmela**	**80.33**	**53**	eP	**P**	**14 42 47.1**	**+1.3**
HLM1	**Long Mynd**	**80.35**	**38⇑**	eP	**P**	**14 42 45.4**	**-0.5**
HLM1				AMb	AMB	14 42 47.0	
	comp=Z,305nm,1.2s,mb6.1						
HLM1	**Long Mynd**	**80.35**	**38⇑**	eP	**P**	**14 42 45.4**	**-0.5**
HLM1				AMb	AMB	14 42 47.0	
	comp=Z,305nm,1.2s,mb6.1						
DYA	**Yadsworthy**	**80.35**	**40⇑**	eP	**P**	**14 42 45.3**	**-0.6**
DYA	**Yadsworthy**	**80.35**	**40⇑**	eP	**P**	**14 42 45.3**	**-0.6**
PTOM	**Tomar**	**80.40**	**51**	i P	**P**	**14 42 46.8**	**+0.6**
	comp=Z,477nm,1.2s,mb6.3						
PTOM	**Tomar**	**80.40**	**51**	eS	S	14 52 49.5	+2.0
ALMR	**Almeirim**	**80.41**	**52**	eP	**P**	**14 42 45.6**	**-0.6**
ALMR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MCH1	**Michaelchurch**	**80.44**	**38⇑**	eP	**P**	**14 42 45.8**	**-0.6**
MCH1	**Michaelchurch**	**80.44**	**38⇑**	eP	**P**	**14 42 45.8**	**-0.6**
PVRL	**Vila Real**	**80.45**	**50**	i P	**P**	**14 42 46.7**	**+0.3**
	comp=Z,365nm,1.4s,mb6.1						
PVRL	**Vila Real**	**80.45**	**50**	eS	S	14 52 51.4	+3.4
PVIS	**Viseu**	**80.48**	**50**	i P	**P**	**14 42 46.9**	**+0.3**
	comp=Z,307nm,1.2s,mb6.1						
PVIS	**Viseu**	**80.48**	**50**	eS	S	14 52 49.9	+1.6
LHO	**Holmfirth**	**80.62**	**37⇑**	eP	**P**	**14 42 46.9**	**-0.4**
LHO	**Holmfirth**	**80.62**	**37⇑**	eP	**P**	**14 42 46.9**	**-0.4**
HGH	**Gray Hill**	**80.67**	**39⇑**	eP	**P**	**14 42 47.4**	**-0.2**
HGH				AMb	AMB	14 42 48.8	
	comp=Z,381nm,1.3s,mb6.2						
HGH	**Gray Hill**	**80.67**	**39⇑**	eP	**P**	**14 42 47.4**	**-0.2**
HGH				AMb	AMB	14 42 48.8	
	comp=Z,381nm,1.3s,mb6.2						
HAE	**Alders End**	**80.70**	**38⇑**	eP	**P**	**14 42 46.9**	**-0.9**
HAE				AMb	AMB	14 42 48.9	
	comp=Z,282nm,1.2s,mb6.1						
HAE	**Alders End**	**80.70**	**38⇑**	eP	**P**	**14 42 46.9**	**-0.9**
HAE				AMb	AMB	14 42 48.9	
	comp=Z,282nm,1.2s,mb6.1						
PTEO	**Sao Teotonio**	**80.74**	**54**	i P	**P**	**14 42 48.8**	**+0.8**
	comp=Z,433nm,1.1s,mb6.3						
PTEO	**Sao Teotonio**	**80.74**	**54**	eS	S	14 52 52.9	+1.9
KWE	**Weaver Farm**	**80.80**	**37⇑**	eP	**P**	**14 42 47.6**	**-0.7**
KWE	**Weaver Farm**	**80.80**	**37⇑**	eP	**P**	**14 42 47.6**	**-0.7**
MTE	**Manteigas**	**80.82**	**51**	i P	**P**	**14 42 48.6**	**+0.2**
	comp=Z,410nm,1.2s,mb6.2						
MTE	**Manteigas**	**80.82**	**51**	eS	S	14 52 51.9	0.0
MTE	**Manteigas**	**80.82**	**51**	eLQ		15 04 33.4	
MTE				eLR	LR	15 08 48.5	
	comp=Z,1µm,20.6s						
MTE	**Manteigas**	**80.82**	**51⇑**	iP	**P**	**14 42 48.4**	**-0.1**
	comp=Z,339nm,1.1s,mb6.2						
MTE				epP	pP	14 43 03.2	-2.0
MORF	**Marmelete**	**80.86**	**54**	eP	**P**	**14 42 47.5**	**-1.1**
MORF				AMb	AMB	14 42 54.4	
	comp=Z,140nm,2.4s,mb5.5						
MORF				eS	S	14 52 50.8	-1.5
MORF				eS	S	14 52 50.8	-1.5
MORF				AMS	AMS	15 21 24.9	
	comp=Z,758nm,20.5s						
MORF	**Marmelete**	**80.86**	**54**	eP	**P**	**14 42 47.5**	**-1.1**
	comp=Z,140nm,2.4s,mb5.5						
MORF	**Marmelete**	**80.86**	**54**	eS	S	14 52 50.8	-1.5
MORF	**Marmelete**	**80.86**	**54**	eP	**P**	**14 42 47.5**	**-1.1**
MORF				eS	S	14 52 50.8	-1.5
MORF				smax			
	comp=N,700nm,1.0s						
MORF				MLR	MLR		
	comp=Z,76µm,20.5s						
KBI1	**Birley Grange**	**80.90**	**37⇑**	eP	**P**	**14 42 47.6**	**-1.2**
KBI1	**Birley Grange**	**80.90**	**37⇑**	eP	**P**	**14 42 47.6**	**-1.2**
ECAL	**Calabor**	**80.97**	**49**	P	**P**	**14 42 49.3**	**+0.1**
	comp=Z,100nm,1.0s,mb5.7						
PBRG	**Braganca**	**81.01**	**49**	i P	**P**	**14 42 49.6**	**+0.2**
	comp=Z,265nm,1.4s,mb6.0						
PBRG	**Braganca**	**81.01**	**49**	eS	S	14 52 54.0	+0.2
PCBR	**Castelo Branco**	**81.03**	**51**	i P	**P**	**14 42 49.7**	**+0.2**
	comp=Z,368nm,1.3s,mb6.2						
PCBR	**Castelo Branco**	**81.03**	**51**	eS	S	14 52 55.2	+1.1
SWK	**Warminster**	**81.15**	**39⇑**	eP	**P**	**14 42 49.8**	**-0.3**
SWK	**Warminster**	**81.15**	**39⇑**	eP	**P**	**14 42 49.8**	**-0.3**
PESTR	**Estremoz**	**81.22**	**52**	i P	**P**	**14 42 50.9**	**+0.3**
	comp=Z,229nm,1.6s,mb5.9						
PESTR	**Estremoz**	**81.22**	**52**	eS	S	14 52 57.4	+1.3
PBEJ	**Beja**	**81.26**	**53**	i P	**P**	**14 42 51.4**	**+0.7**
	comp=Z,228nm,1.2s,mb6.0						
PBEJ	**Beja**	**81.26**	**53**	eS	S	14 52 58.3	+1.9
FOO	**Floro**	**81.28**	**28⇑**	iP	**P**	**14 42 46.2**	**-4.6**
FOO				AMb	AMB	14 42 48.4	
	comp=Z,304nm,1.3s,mb6.1						
FOO	**Floro**	**81.28**	**28⇑**	iP	**P**	**14 42 46.2**	**-4.6**
	comp=Z,304nm,1.3s,mb6.1						
SWN1	**Swindon**	**81.30**	**39⇑**	eP	**P**	**14 42 50.9**	**-0.1**
SWN1	**Swindon**	**81.30**	**39⇑**	eP	**P**	**14 42 50.9**	**-0.1**
SUE	**Sulen**	**81.36**	**28⇑**	iP	**P**	**14 42 51.2**	**0.0**
SUE				AMb	AMB	14 42 53.7	
	comp=Z,437nm,1.3s,mb6.2						
SUE	**Sulen**	**81.36**	**28⇑**	iP	**P**	**14 42 51.2**	**0.0**
	comp=Z,437nm,1.3s,mb6.2						
PET	**Petropavlovsk**	**81.40**	**323⇑**	eP	**P**	**14 42 51.1**	**-0.4**
PET				e*PP	pP	14 43 06.9	-1.4
PET				e		14 45 56.9	
PET				eS	S	14 52 56.3	-1.6
PET				ePS		14 53 51.2	
PET				ePPS		14 54 07.7	
PET				eSS	SS	14 58 17.7	+2.7
PET				pmax	pmax		
	comp=Z,41nm,0.6s,mb5.5						
PET				pmax	pmax		
	comp=Z,600nm,11.0s						
PET				pmax	pmax		
	comp=Z,400nm,15.6s						
PET				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.5						
PET				pmax	pmax		
	comp=Z,1µm,4.5s						
PET				pmax	pmax		
	comp=Z,1µm,18.9s						
PET				pmax	pmax		
	comp=Z,37nm,1.4s,mb5.1						
PET				pmax	pmax		
	comp=Z,100nm,11.6s						
PET				smax			
	comp=N,2µm,11.1s						
PET				smax			
	comp=E,2µm,11.1s						
PET				smax			
	comp=N,2µm,15.0s						
PET				smax			
	comp=E,2µm,11.3s						
PET				MLR	MLR		
	comp=Z,2µm,20.0s						
PET				MLR	MLR		
	comp=Z,1µm,21.0s						
PET	**Petropavlovsk**	**81.40**	**323⇑**	eP	**P**	**14 42 51.1**	**-0.4**
	comp=Z,41nm,0.6s,mb5.5						
PET				epP	pP	14 43 06.9	-1.4
PET				e		14 45 56.9	
PET				eS	S	14 52 56.3	-1.6
PET				ePS		14 53 51.2	
PET				ePPS		14 54 07.7	
PET				eSS	SS	14 58 17.7	+2.7
PET				LR	LR		
	comp=Z,2µm,20.0s						
ROSF	**Rostrenen**	**81.40**	**42**	eP	**P**	**14 42 50.5**	**-1.0**
	comp=Z,383nm,1.3s,mb5.9						
ROSF	**Rostrenen**	**81.40**	**42**	eP	**P**	**14 42 50.5**	**-1.0**
ROSF				pmax	pmax		
	comp=Z,192nm,1.3s,mb5.9						
ROSF	**Rostrenen**	**81.40**	**42**	eP	**P**	**14 42 50.5**	**-1.0**
	comp=Z,192nm,1.3s,mb5.9						
QUIF	**Quistinic**	**81.60**	**42**	eP	**P**	**14 42 51.7**	**-0.8**
	comp=Z,511nm,1.5s,mb5.9						
QUIF	**Quistinic**	**81.60**	**42**	eP	**P**	**14 42 51.7**	**-0.8**
QUIF				pmax	pmax		
	comp=Z,256nm,1.5s,mb5.9						
QUIF	**Quistinic**	**81.60**	**42**	eP	**P**	**14 42 51.7**	**-0.8**
	comp=Z,256nm,1.5s,mb5.9						
EARI	**Arriondas**	**81.65**	**47**	P	**P**	**14 42 52.5**	**-0.3**
	comp=Z,191nm,1.1s,mb5.9						
EBAD	**Badajoz**	**81.69**	**52**	P	**P**	**14 42 53.2**	**+0.2**
	comp=Z,56nm,0.9s,mb5.5						
EGRO	**El Granado**	**81.69**	**53**	P	**P**	**14 42 53.6**	**+0.6**
	comp=Z,121nm,1.0s,mb5.8						
ASK	**Askoy**	**81.78**	**29**	eP	**P**	**14 42 53.7**	**+0.2**
ASK				AMb	AMB	14 42 56.0	
	comp=Z,242nm,1.3s,mb6.0						
ASK	**Askoy**	**81.78**	**29**	eP	**P**	**14 42 53.7**	**+0.2**
	comp=Z,242nm,1.3s,mb6.0						
SKP1	**Kophill**	**81.82**	**38⇑**	eP	**P**	**14 42 53.1**	**-0.5**
SKP1	**Kophill**	**81.82**	**38⇑**	eP	**P**	**14 42 53.1**	**-0.5**
EGD	**Espegrend**	**81.88**	**29**	eP	**P**	**14 42 54.3**	**+0.3**
EGD				AMb	AMB	14 42 56.5	
	comp=Z,371nm,1.4s,mb6.1						
EGD	**Espegrend**	**81.88**	**29**	eP	**P**	**14 42 54.3**	**+0.3**
	comp=Z,371nm,1.4s,mb6.1						
SGMF	**Saint Gilles**	**81.88**	**42**	eP	**P**	**14 42 53.0**	**-1.0**
	comp=Z,429nm,1.3s,mb5.9						
SGMF	**Saint Gilles**	**81.88**	**42**	eP	**P**	**14 42 53.0**	**-1.0**
SGMF				pmax	pmax		
	comp=Z,215nm,1.3s,mb5.9						
SGMF	**Saint Gilles**	**81.88**	**42**	eP	**P**	**14 42 53.0**	**-1.0**
	comp=Z,214nm,1.3s,mb5.9						
BER	**Bergen**	**81.88**	**29⇑**	iP	**P**	**14 42 54.1**	**0.0**
BER				eP		14 42 54.5	
BER				AMb	AMB	14 42 55.7	
	comp=Z,212nm,1.2s,mb6.0						
BER				ePP	PP	14 45 59.7	-2.2
BER				eS	S	14 53 03.0	+0.1
BER				AMS	AMS	15 16 34.8	
	comp=Z,860nm,22.5s						
BER	**Bergen**	**81.88**	**29⇑**	iP	**P**	**14 42 54.1**	**0.0**
BER				eP		14 42 54.5	
BER				LR	LR		
	comp=Z,860nm,22.5s						
HYA	**Hoyanger**	**81.95**	**28⇑**	iP	**P**	**14 42 54.5**	**+0.1**
HYA				AMb	AMB	14 42 57.2	
	comp=Z,241nm,1.1s,mb6.0						
HYA	**Hoyanger**	**81.95**	**28⇑**	iP	**P**	**14 42 54.5**	**+0.1**
	comp=Z,241nm,1.1s,mb6.0						
EMIN	**Mina Concepcio**	**82.24**	**53**	P	**P**	**14 42 56.6**	**+0.7**
	comp=Z,144nm,1.1s,mb5.8						
KMY	**Karmoy**	**82.31**	**30⇑**	iP	**P**	**14 42 55.9**	**-0.4**
KMY				AMb	AMB	14 42 58.0	
	comp=Z,329nm,1.1s,mb6.2						
KMY				epP	pP	14 43 13.5	+0.4
KMY	**Karmoy**	**82.31**	**30⇑**	iP	**P**	**14 42 55.9**	**-0.4**
	comp=Z,329nm,1.1s,mb6.2						
TRO	**Tromso**	**82.53**	**18⇑**	iP	**P**	**14 42 56.0**	**-1.4**
TRO				AMb	AMB	14 42 59.0	
	comp=Z,373nm,0.6s,mb6.6						
TRO				eS	S	14 53 07.3	-2.2
TRO				eSS	SS	14 58 30.0	-1.8
TRO				AMS	AMS	15 18 57.3	
	comp=Z,1µm,21.6s						
TRO	**Tromso**	**82.53**	**18⇑**	iP	**P**	**14 42 56.0**	**-1.4**
	comp=Z,373nm,0.6s,mb6.6						
TRO				LR	LR		
	comp=Z,1µm,21.6s						
TSA1	**Sevenoaks**	**82.55**	**38⇑**	eP	**P**	**14 42 56.8**	**-0.7**
TSA1	**Sevenoaks**	**82.55**	**38⇑**	eP	**P**	**14 42 56.8**	**-0.7**
STAV	**Stavanger**	**82.63**	**30**	eP	**P**	**14 42 58.2**	**+0.3**
STAV				AMb	AMB	14 43 00.1	
	comp=Z,178nm,1.5s,mb5.9						
STAV	**Stavanger**	**82.63**	**30**	eP	**P**	**14 42 58.2**	**+0.3**
	comp=Z,178nm,1.5s,mb5.9						
ODD1	**Odda**	**82.67**	**29⇑**	iP	**P**	**14 42 57.6**	**-0.5**
ODD1				AMb	AMB	14 43 01.8	
	comp=Z,329nm,1.5s,mb6.2						
ODD1	**Odda**	**82.67**	**29⇑**	iP	**P**	**14 42 57.6**	**-0.5**
	comp=Z,329nm,1.5s,mb6.1						
AEU	**East Anglia Un**	**82.69**	**37**	eP	**P**	**14 42 58.4**	**+0.1**
AEU	**East Anglia Un**	**82.69**	**37**	eP	**P**	**14 42 58.4**	**+0.1**
BLS5	**Blasjo**	**82.79**	**29⇑**	iP	**P**	**14 43 00.1**	**+1.3**
BLS5				AMb	AMB	14 43 02.6	
	comp=Z,363nm,1.6s,mb6.2						
BLS5				epP	pP	14 43 15.0	-0.6
BLS5	**Blasjo**	**82.79**	**29⇑**	iP	**P**	**14 43 00.1**	**+1.3**
	comp=Z,363nm,1.6s,mb6.2						
DOMB	**Dombas**	**82.83**	**26⇑**	iP	**P**	**14 42 59.1**	**+0.2**
DOMB				AMb	AMB	14 43 01.6	
	comp=Z,562nm,1.3s,mb6.4						
DOMB	**Dombas**	**82.83**	**26⇑**	iP	**P**	**14 42 59.1**	**+0.2**
	comp=Z,562nm,1.3s,mb6.4						
NSS	**Namsos**	**82.85**	**24⇑**	iP	**P**	**14 42 57.8**	**-1.3**
NSS				AMb	AMB	14 43 00.5	
	comp=Z,362nm,2.2s,mb6.0						
NSS				eS	S	14 53 13.0	+0.2
NSS				AMS	AMS	15 20 08.2	
	comp=Z,2µm,19.2s						
NSS	**Namsos**	**82.85**	**24⇑**	iP	**P**	**14 42 57.8**	**-1.3**
	comp=Z,362nm,2.2s,mb6.0						
NSS				LR	LR		
	comp=Z,2µm,19.2s						
ELAN	**Lanestosa**	**82.90**	**47**	P	**P**	**14 42 59.6**	**+0.2**
	comp=Z,118nm,1.0s,mb5.9						
GRR	**Gorron**	**82.91**	**41**	eP	**P**	**14 42 58.9**	**-0.5**
	comp=Z,609nm,1.2s,mb6.2						
GRR	**Gorron**	**82.91**	**41**	eP	**P**	**14 42 58.9**	**-0.5**
GRR				pmax	pmax		
	comp=Z,304nm,1.2s,mb6.2						
GRR	**Gorron**	**82.91**	**41**	eP	**P**	**14 42 58.9**	**-0.5**
	comp=Z,304nm,1.2s,mb6.2						
MOR8	**Moi Rana**	**82.95**	**22⇑**	iP	**P**	**14 42 59.4**	**-0.2**
MOR8				AMb	AMB	14 43 01.8	
	comp=Z,341nm,1.3s,mb6.2						
MOR8	**Moi Rana**	**82.95**	**22⇑**	iP	**P**	**14 42 59.4**	**-0.2**
	comp=Z,341nm,1.3s,mb6.2						
FLN	**La Foliniere**	**83.02**	**41**	eP	**P**	**14 42 59.6**	**-0.3**
	comp=Z,713nm,1.0s,mb6.3						
FLN				eR			
	comp=Z,2µm,20.2s						
FLN	**La Foliniere**	**83.02**	**41**	eP	**P**	**14 42 59.6**	**-0.3**
FLN				pmax	pmax		
	comp=Z,357nm,1.0s,mb6.3						
FLN				MLR	MLR		
	comp=Z,2µm,20.3s						
FLN	**La Foliniere**	**83.02**	**41**	eP	**P**	**14 42 59.6**	**-0.3**
	comp=Z,357nm,1.0s,mb6.3						
FLN				LR	LR		
	comp=Z,2µm,20.3s						
MA2	**Magadan**	**83.02**	**331**	d iP	**P**	**14 43 00.5**	**+0.6**
MA2				e		14 46 12.5	
MA2				i S	S	14 53 16.9	+2.4
MA2				pmax	pmax		
	comp=Z,140nm,1.5s,mb5.8						
MA2				MLR	MLR		
	comp=Z,4µm,20.4s						
MA2	**Magadan**	**83.02**	**331**	i Pr	**P**	**14 43 00.5**	**+0.6**
MA2				e		14 46 12.5	
MA2				i S	S	14 53 16.9	+2.4
MA2				LR	LR		
	comp=Z,4µm,20.4s						
FUNA	**Funafuti**	**83.07**	**259**	PFAKE		14 43 10.0	+10
FUNA				LR	LR		
	comp=Z,5µm,21.0s						
LRYF	**La Roche-sur-Y**	**83.08**	**43**	eP	**P**	**14 43 00.3**	**+0.1**
ESPR	**Espera**	**83.13**	**54**	P	**P**	**14 43 01.8**	**+1.3**
	comp=Z,185nm,1.1s,mb6.0						
GUD	**Guadarrama**	**83.22**	**50**	P	**P**	**14 43 02.1**	**+1.1**
GUD				pmax	pmax		
	comp=Z,136nm,0.8s,mb6.0						
GUD	**Guadarrama**	**83.22**	**50**	P	**P**	**14 43 02.1**	**+1.1**
	comp=Z,136nm,0.8s,mb6.0						
LDF	**La Druitiere**	**83.30**	**41**	eP	**P**	**14 43 00.9**	**-0.5**
	comp=Z,315nm,1.0s,mb6.0						
LDF	**La Druitiere**	**83.30**	**41**	eP	**P**	**14 43 00.9**	**-0.5**
LDF				pmax	pmax		
	comp=Z,157nm,1.0s,mb6.0						
LDF	**La Druitiere**	**83.30**	**41**	eP	**P**	**14 43 00.9**	**-0.5**
	comp=Z,157nm,1.0s,mb6.0						
OLEF	**Ile d'Oleron**	**83.42**	**44**	eP	**P**	**14 43 01.9**	**-0.1**
EJIF	**Jimena Fronter**	**83.55**	**54**	P	**P**	**14 43 04.2**	**+1.5**
EJIF				pmax	pmax		
	comp=Z,268nm,1.4s,mb6.2						
EJIF	**Jimena Fronter**	**83.55**	**54**	P	**P**	**14 43 04.2**	**+1.5**
	comp=Z,268nm,1.4s,mb6.2						
LCHF	**La Chataignera**	**83.57**	**43**	eP	**P**	**14 43 03.1**	**+0.3**
SNART	**Snartemo**	**83.60**	**30**	eP	**P**	**14 43 03.5**	**+0.6**
SNART				AMb	AMB	14 43 05.8	
	comp=Z,432nm,1.4s,mb6.4						
ESDC	**Sonseca Array**	**83.66**	**50**	P	**P**	**14 43 03.7**	**+0.4**
	comp=Z,36nm,0.8s,mb5.5,baz=303,slow=5.2,SNR=128						
ESDC				LR	LR	15 24 08.7	
	comp=Z,1µm,18.8s,baz=305,slow=38						
ESLA	**Sonseca Array**	**83.66**	**50⇑**	iP	**P**	**14 43 03.5**	**+0.3**
	comp=Z,205nm,1.9s,mb5.9						
ESLA				epP	pP	14 43 18.8	-1.4
ESLA				LR	LR		
	comp=Z,7µm,20.0s						
SKR	**Severo-Kuril's**	**83.69**	**321**	P	**P**	**14 42 59.0**	**-4.4**
SKR				e	pP	14 43 14.0	-6.3
SKR				e		14 46 18.0	
SKR				e		14 48 12.0	
SKR				i S	S	14 53 16.0	-5.2
SKR				ePS		14 54 20.0	
SKR				pmax	pmax		
	comp=N,600nm,2.0s						
SKR				pmax	pmax		
	comp=Z,800nm,2.0s,mb6.5						
SKR				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.8						
SKR				smax			
	comp=N,3µm,8.0s						
SKR				smax			
	comp=E,3µm,8.0s						
SKR				MLR	MLR		
	comp=N,1µm,20.0s						
SKR				MLR	MLR		
	comp=E,1µm,20.0s						
SKR				MLR	MLR		
	comp=Z,1µm,20.0s						
EADA	**Adamuz**	**83.69**	**52**	P	**P**	**14 43 04.2**	**+0.8**
	comp=Z,98nm,1.0s,mb5.9						
MENF	**Mencas**	**83.98**	**39**	eP	**P**	**14 43 05.0**	**+0.2**
MFF	**Saint Martin d**	**83.98**	**43**	eP	**P**	**14 43 05.3**	**+0.4**
	comp=Z,1µm,1.6s,mb6.4						
MFF	**Saint Martin d**	**83.98**	**43**	eP	**P**	**14 43 05.3**	**+0.4**
MFF				pmax	pmax		
	comp=Z,511nm,1.6s,mb6.4						
MFF	**Saint Martin d**	**83.98**	**43**	eP	**P**	**14 43 05.3**	**+0.4**
	comp=Z,511nm,1.6s,mb6.4						
EMIJ	**Mijas**	**84.05**	**54**	P	**P**	**14 43 06.0**	**+0.8**
	comp=Z,102nm,1.1s,mb5.9						
ELUQ	**Luque**	**84.12**	**52**	P	**P**	**14 43 06.0**	**+0.4**
ELUQ				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.6						
ELUQ	**Luque**	**84.12**	**52**	P	**P**	**14 43 06.0**	**+0.4**
	comp=Z,53nm,1.1s,mb5.6						
KONO	**Kongsberg**	**84.14**	**29⇑**	iP	**P**	**14 43 04.8**	**-0.9**
KONO				ePP	PP	14 46 15.6	-4.8
KONO				eS	S	14 53 19.4	-6.3
KONO	**Kongsberg**	**84.14**	**29⇑**	eP	**P**	**14 43 05.5**	**-0.2**
KONO				e*PP	pP	14 43 21.3	-1.3
KONO				pmax	pmax		
	comp=Z,701nm,1.2s,mb6.7						
KONO				MLR	MLR		
	comp=Z,1µm,22.0s						
KONO	**Kongsberg**	**84.14**	**29⇑**	eP	**P**	**14 43 05.5**	**-0.2**
	comp=Z,701nm,1.2s,mb6.7						
KONO				epP	pP	14 43 21.3	-1.3
KONO				LR	LR		
	comp=Z,1µm,22.0s						
KTK1	**Kautokeino**	**84.14**	**17⇑**	iP	**P**	**14 43 05.0**	**-0.7**
KTK1				AMb	AMB	14 43 08.1	
	comp=Z,478nm,1.4s,mb6.4						
KTK1	**Kautokeino**	**84.14**	**17⇑**	iP	**P**	**14 43 05.0**	**-0.7**
	comp=Z,478nm,1.4s,mb6.4						
NAO01	**NORSAR Array S**	**84.16**	**27⇑**	eP	**P**	**14 43 05.7**	**-0.1**
	comp=Z,275nm,1.5s,mb6.2						
NAO01				LR	LR		
	comp=Z,2µm,21.0s						
NB2	**NORSAR Subarra**	**84.20**	**27**	P	**P**	**14 43 05.9**	**-0.1**
	comp=Z,232nm,1.1s,mb6.2,baz=298,slow=4.8						
NOA	**NORSAR Array B**	**84.20**	**27**	P	**P**	**14 43 06.0**	**-0.1**
	comp=Z,69nm,0.9s,mb5.8,baz=302,slow=5.0,SNR=138						
NOA				LR	LR	15 22 26.6	
	comp=Z,780nm,21.3s,baz=300,slow=37						
NOA	**NORSAR Array B**	**84.20**	**27**	P	**P**	**14 43 06.0**	**0.0**
NOA				pmax	pmax		
	comp=Z,69nm,0.9s						
NOA				MLR	MLR		
	comp=Z,780nm,21.3s						
EALK	**Alkurruntz**	**84.24**	**46**	P	**P**	**14 43 06.2**	**0.0**
	comp=Z,71nm,1.0s,mb5.8						
ELIZ	**Elizondo**	**84.24**	**46**	P	**P**	**14 43 06.4**	**+0.2**
ELIZ				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.3						
ELIZ	**Elizondo**	**84.24**	**46**	P	**P**	**14 43 06.4**	**+0.2**
	comp=Z,19nm,0.8s,mb5.3						
EBAN	**Banos Encina**	**84.28**	**52**	P	**P**	**14 43 07.0**	**+0.6**
EBAN				pmax	pmax		
	comp=Z,208nm,1.4s,mb6.1						
EBAN	**Banos Encina**	**84.28**	**52**	P	**P**	**14 43 07.0**	**+0.6**
	comp=Z,208nm,1.4s,mb6.1						
ELOJ	**Sierra Loja**	**84.33**	**53**	P	**P**	**14 43 08.7**	**+2.0**
ELOJ				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.7						
ELOJ	**Sierra Loja**	**84.33**	**53**	P	**P**	**14 43 08.7**	**+2.0**
	comp=Z,38nm,0.6s,mb5.7						
OSSF	**Osses**	**84.39**	**46**	eP	**P**	**14 43 06.3**	**-0.7**
ARCES	**ARCESS Array B**	**84.43**	**16**	P	**P**	**14 43 06.0**	**-1.2**
	comp=Z,158nm,0.9s,mb6.2,baz=312,slow=4.2,SNR=195						
ARCES	**ARCESS Array B**	**84.43**	**16**	P	**P**	**14 43 06.0**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,158nm,0.9s						
SJPF	**Ste Jean**	**84.47**	**46**	eP	**P**	**14 43 07.1**	**-0.2**
	comp=Z,823nm,1.8s,mb6.2						
SJPF	**Ste Jean**	**84.47**	**46**	eP	**P**	**14 43 07.1**	**-0.2**
SJPF				pmax	pmax		
	comp=Z,411nm,1.8s,mb6.3						
SJPF	**Ste Jean**	**84.47**	**46**	eP	**P**	**14 43 07.1**	**-0.2**
	comp=Z,412nm,1.8s,mb6.3						
ERON	**Agron**	**84.64**	**53**	P	**P**	**14 43 09.7**	**+1.5**
	comp=Z,88nm,0.9s,mb5.9						
LARF	**Larrau**	**84.66**	**46**	eP	**P**	**14 43 08.8**	**+0.5**
KEV	**Kevo**	**84.69**	**16**	ep	**P**	**14 43 06.2**	**-2.2**
	comp=Z,77nm,0.7s,mb5.9						
KEV	**Kevo**	**84.69**	**16**	eP	**P**	**14 43 06.2**	**-2.2**
KEV				pmax	pmax		
	comp=Z,77nm,0.7s,mb5.9						
ECOG	**Cogollos-Vega**	**84.73**	**53**	P	**P**	**14 43 10.1**	**+1.4**
ECOG				pmax	pmax		
	comp=Z,331nm,1.3s,mb6.3						
ECOG	**Cogollos-Vega**	**84.73**	**53**	P	**P**	**14 43 10.1**	**+1.5**
	comp=Z,331nm,1.3s,mb6.3						
ATE	**Arette**	**84.84**	**46**	eP	**P**	**14 43 09.3**	**+0.1**
EGUA	**Guajares**	**84.88**	**53**	P	**P**	**14 43 11.0**	**+1.6**
EQES	**Quesada**	**84.93**	**52**	P	**P**	**14 43 11.1**	**+1.4**
	comp=Z,78nm,0.9s,mb5.8						
ETSF	**Etsaut**	**85.00**	**46**	eP	**P**	**14 43 10.0**	**0.0**
REYF	**Montagne du Re**	**85.05**	**46**	eP	**P**	**14 43 10.4**	**+0.1**
EVIA	**Vianos**	**85.08**	**51**	P	**P**	**14 43 11.9**	**+1.5**
EVIA				pmax	pmax		
	comp=Z,139nm,0.6s,mb6.3						
EVIA	**Vianos**	**85.08**	**51**	P	**P**	**14 43 11.9**	**+1.5**
	comp=Z,139nm,0.6s,mb6.3						
LFF	**La Frestale**	**85.15**	**44**	eP	**P**	**14 43 10.5**	**-0.3**
	comp=Z,1µm,1.3s,mb6.6						
LFF	**La Frestale**	**85.15**	**44**	eP	**P**	**14 43 10.5**	**-0.3**
LFF				pmax	pmax		
	comp=Z,644nm,1.3s,mb6.6						
LFF	**La Frestale**	**85.15**	**44**	eP	**P**	**14 43 10.5**	**-0.3**
	comp=Z,644nm,1.3s,mb6.6						
UCC	**Uccle**	**85.18**	**38**	P	**P**	**14 43 10.7**	**-0.2**
SNF	**Seneffe**	**85.25**	**38**	P	**P**	**14 43 11.2**	**-0.1**
EHUE	**Huescar**	**85.29**	**52**	P	**P**	**14 43 13.3**	**+1.9**
EHUE				pmax	pmax		
	comp=Z,116nm,1.0s,mb6.0						
EHUE	**Huescar**	**85.29**	**52**	P	**P**	**14 43 13.3**	**+1.8**
	comp=Z,116nm,1.0s,mb6.0						
EBER	**Berja**	**85.37**	**53**	P	**P**	**14 43 13.3**	**+1.4**
	comp=Z,91nm,0.6s,mb6.1						
MDT	**Midelt**	**85.38**	**57**	P	**P**	**14 43 13.1**	**+1.2**
	comp=Z,336nm,1.0s,mb6.4,baz=289,slow=4.9,SNR=286						
MDT				pP	pP	14 43 28.9	+0.1

comp=Z,134nm,1.1s,baz=263,slow=5.5,SNR=5.5
MUD Monsted U'grnd 85.38 32⇑ *i*P P 14 43 12.0 +0.1
comp=Z,147nm,1.4s,mb5.9
MUD *i* pP 14 43 27.5 -1.4
MUD Monsted U'grnd 85.38 32 *i* S S 14 53 33.8 -4.2
MUD
comp=Z,1µm,25.0s
MUD Monsted U'grnd 85.38 32⇑ *i*P P **14 43 12.0 +0.1**
MUD *i* pP 14 43 27.5 -1.4
MUD *i* S S 14 53 33.8 -4.2
MUD pmax pmax
comp=Z,148nm,1.4s,mb5.9
MUD Monsted U'grnd 85.38 32⇑ *i*P P **14 43 12.0 +0.1**
comp=Z,148nm,1.4s,mb5.9
MUD *i* pP 14 43 27.5 -1.4
MUD *i* S S 14 53 33.8 -4.2
LABF Labassere 85.38 46 *e*P P **14 43 11.9 0.0**
BAIF Baives 85.38 39 *e*P P **14 43 11.6 -0.3**
comp=Z,789nm,1.2s,mb6.4
BAIF Baives 85.38 39 *e*P P **14 43 11.6 -0.3**
BAIF pmax pmax
comp=Z,394nm,1.2s,mb6.4
BAIF Baives 85.38 39 *e*P P 14 43 11.6 -0.3
comp=Z,394nm,1.2s,mb6.4
VIEF Viey 85.41 46 *e*P P **14 43 12.8 +0.8**
ESAC San Caprasio 85.48 48 P P **14 43 13.3 +0.9**
comp=Z,175nm,1.0s,mb6.1
HYF Humbligny 85.51 42 *e*P P **14 43 12.3 -0.3**
RJF Les Rejaudoux 85.53 44 *e*P P 14 43 12.2 -0.4
comp=Z,1µm,1.1s,mb6.7
RJF *e*R
comp=Z,869nm,19.8s
RJF Les Rejaudoux 85.53 44 *e*P P 14 43 12.2 -0.4
RJF pmax pmax
comp=Z,595nm,1.1s,mb6.7
RJF MLR MLR
comp=Z,870nm,19.8s
RJF Les Rejaudoux 85.53 44 *e*P P **14 43 12.2 -0.4**
comp=Z,595nm,1.1s,mb6.7
RJF LR LR
comp=Z,870nm,19.8s
EBIE Bielsa 85.56 47 P P **14 43 13.7 +0.9**
comp=Z,147nm,1.0s,mb6.2
EPF Esparros 85.57 46 *e*P P **14 43 12.8 -0.1**
comp=Z,1µm,1.4s,mb6.6
EPF Esparros 85.57 46 *e*P P **14 43 12.8 -0.1**
EPF pmax pmax
comp=Z,536nm,1.4s,mb6.6
EPF Esparros 85.57 46 *e*P P **14 43 12.8 -0.1**
comp=Z,536nm,1.4s,mb6.6
DOU Dourbes 85.60 38 P P **14 43 12.8 -0.2**
TCF Toulx Ste Croi 85.61 43 *e*P P **14 43 12.5 -0.6**
comp=Z,1µm,1.2s,mb6.7
TCF Toulx Ste Croi 85.61 43 *e*P P **14 43 12.5 -0.6**
TCF pmax pmax
comp=Z,580nm,1.2s,mb6.7
TCF Toulx Ste Croi 85.61 43 *e*P P **14 43 12.5 -0.6**
comp=Z,580nm,1.2s,mb6.7
RESF Ens 85.65 46 *e*P P **14 43 14.2 +0.9**
HFS Hagfors 85.72 27 P P **14 43 11.8 -1.8**
comp=Z,47nm,1.0s,mb5.7,baz=281,slow=2.3,SNR=61
HFS Hagfors 85.72 27 P P **14 43 11.8 -1.8**
HFS pmax pmax
comp=Z,47nm,1.0s
GIVF Givet 85.73 38 *e*P P **14 43 13.4 -0.2**
comp=Z,818nm,1.4s,mb6.5
GIVF Givet 85.73 38 *e*P P **14 43 13.4 -0.2**
GIVF pmax pmax
comp=Z,409nm,1.4s,mb6.5
GIVF Givet 85.73 38 *e*P P **14 43 13.4 -0.2**
comp=Z,409nm,1.4s,mb6.5
ETOB Tobarra 85.78 51 P P **14 43 15.2 +1.3**
comp=Z,78nm,0.9s,mb5.9
ENIJ Nijar 85.86 53 P P **14 43 14.6 +0.3**
ENIJ pmax pmax
comp=Z,25nm,0.6s,mb5.6
ENIJ Nijar 85.86 53 P P **14 43 14.6 +0.3**
comp=Z,25nm,0.6s,mb5.6
ECHE Chera 85.87 50 P P **14 43 15.5 +1.2**
ECHE pmax pmax
comp=Z,75nm,0.9s,mb5.9
ECHE Chera 85.87 50 P P **14 43 15.5 +1.2**
comp=Z,75nm,0.9s,mb5.9
BCLA Clavier 85.88 38 P P **14 43 15.1 +0.7**
BGF Bois d'Agland 85.91 42 *e*P P **14 43 13.9 -0.7**
comp=Z,891nm,1.3s,mb6.5
BGF Bois d'Agland 85.91 42 *e*P P **14 43 13.9 -0.7**
BGF pmax pmax
comp=Z,446nm,1.3s,mb6.5
BGF Bois d'Agland 85.91 42 *e*P P **14 43 13.9 -0.7**
comp=Z,446nm,1.3s,mb6.5
BEBN Eben Emael 85.94 38 P P **14 43 14.5 -0.2**
EMOS Mosqueruela 85.95 49 P P **14 43 16.3 +1.5**
comp=Z,240nm,1.0s,mb6.4
VERF Verneugheol 85.99 43 *e*P P **14 43 14.6 -0.3**
CAF Calviac 86.03 44 *e*P P **14 43 14.5 -0.6**
comp=Z,626nm,1.5s,mb6.3
CAF Calviac 86.03 44 *e*P P **14 43 14.5 -0.6**
CAF pmax pmax
comp=Z,313nm,1.5s,mb6.3
CAF Calviac 86.03 44 *e*P P **14 43 14.5 -0.6**
comp=Z,313nm,1.5s,mb6.3
WTSB Winterswijk 86.09 36⇑ *e*P P **14 43 15.3 -0.1**
WTSB *e*P 14 51 12.1
comp=Z,23nm,0.9s
WAKE Wake Island 86.09 289 PFAKE 14 43 30.0 +15
WAKE LR LR
comp=Z,3µm,20.0s
HGN Heimansgroeve 86.10 37⇑ *e*P P **14 43 15.0 -0.5**
comp=Z,87nm,1.5s,mb5.8
HGN *e*P 14 51 11.8
comp=Z,22nm,0.8s
HGN *e*SKS 14 53 34.9
HGN *e*S S 14 53 47.2 +2.1
MLS Moulis 86.11 46 *e*P P **14 43 15.8 +0.3**
SSF Saint Saulge 86.14 42 *e*P P **14 43 15.1 -0.6**
comp=Z,707nm,1.1s,mb6.5
SSF Saint Saulge 86.14 42 *e*P P **14 43 15.1 -0.6**
SSF pmax pmax
comp=Z,354nm,1.1s,mb6.5
SSF Saint Saulge 86.14 42 *e*P P **14 43 15.1 -0.6**
comp=Z,354nm,1.1s,mb6.5
AVF Avril sur Loir 86.14 42 *e*P P **14 43 14.8 -0.9**
comp=Z,401nm,1.0s,mb6.3
AVF Avril sur Loir 86.14 42 *e*P P **14 43 14.8 -0.9**
AVF pmax pmax
comp=Z,201nm,1.0s,mb6.3
AVF Avril sur Loir 86.14 42 *e*P P **14 43 14.8 -0.9**
comp=Z,201nm,1.0s,mb6.3
FRNF Fournols 86.18 43 *e*P P **14 43 16.4 +0.5**
MEM Membach 86.21 38 AP P **14 43 14.7 -1.3**
SALF Salau 86.25 46 *e*P P **14 43 16.9 +0.7**
LOR Lormes 86.28 41 *e*P P **14 43 16.0 -0.3**
comp=Z,1µm,0.9s,mb6.8
LOR *e*R
comp=Z,2µm,20.5s
LOR Lormes 86.28 41 *e*P P **14 43 16.0 -0.3**
LOR pmax pmax
comp=Z,539nm,0.9s,mb6.8
LOR MLR MLR
comp=Z,2µm,20.5s
LOR Lormes 86.28 41 *e*P P **14 43 16.0 -0.3**
comp=Z,538nm,0.9s,mb6.8
LOR LR LR
comp=Z,2µm,20.5s
EMUR La Murta 86.28 51 P P **14 43 17.4 +1.0**
comp=Z,152nm,1.1s,mb6.1
AGO Saint Agoulin 86.29 43⇑ *e*P P **14 43 16.2 -0.2**
ERTA Horta de San J 86.31 48 P P **14 43 17.5 +0.9**
comp=Z,52nm,0.6s,mb5.9
PYM Petit Puy Mans 86.33 43⇑ *e*P P **14 43 17.6 +1.0**
IBBN Ibbenburen 86.48 36 *e*P P **14 43 17.4 +0.1**
comp=Z,152nm,1.0s,mb6.2
IBBN *e*pP pP 14 43 33.3 -1.0
SMF Signal de Mont 86.51 42 *e*P P **14 43 16.6 -0.9**
comp=Z,385nm,1.1s,mb6.2
SMF Signal de Mont 86.51 42 *e*P P **14 43 16.6 -0.9**
SMF pmax pmax
comp=Z,193nm,1.1s,mb6.2
SMF Signal de Mont 86.51 42 *e*P P **14 43 16.6 -0.9**
comp=Z,193nm,1.1s,mb6.2
MEZF Maizieres J'vi 86.52 40 *e*P P **14 43 17.3 -0.2**
comp=Z,489nm,1.2s,mb6.3
MEZF Maizieres J'vi 86.52 40 *e*P P **14 43 17.3 -0.2**
comp=Z,489nm,1.2s,mb6.6
PLDF La Plantade 86.64 43 *e*P P **14 43 18.3 +0.2**

LBL Lubilhac 86.68 43 *e*P P **14 43 19.4 +1.1**
EPOB Poblet 86.69 47 P P **14 43 18.9 +0.6**
comp=Z,101nm,1.0s,mb6.0
WLF Walferdange 86.69 38 P P **14 43 16.9 -1.5**
WLF Walferdange 86.69 38⇑ *e*P P **14 43 18.3 -0.1**
WLF *e**PP pP 14 43 34.0 -1.4
WLF pmax pmax
comp=Z,178nm,0.9s,mb6.3
WLF Walferdange 86.69 38⇑ *e*P P **14 43 18.3 -0.1**
comp=Z,178nm,0.9s,mb6.3
WLF *e*pP pP 14 43 34.0 -1.4
EBEN Beniarda 86.72 50 P P **14 43 19.3 +0.8**
comp=Z,229nm,1.2s,mb6.3
MTLF Montolieu 86.73 45 *e*P P **14 43 18.3 -0.3**
comp=Z,473nm,1.2s,mb6.3
MTLF Montolieu 86.73 45 *e*P P **14 43 18.3 -0.3**
MTLF pmax pmax
comp=Z,236nm,1.2s,mb6.3
MTLF Montolieu 86.73 45 *e*P P **14 43 18.3 -0.3**
comp=Z,236nm,1.2s,mb6.3
COLF Collangettes 86.86 43 *e*P P **14 43 18.8 -0.4**
CARF Carcanieres 86.89 46 *e*P P **14 43 19.3 -0.1**
LRDF Laroque-de-Fa 87.10 46 *e*P P **14 43 20.7 +0.3**
BSEG Bad Segeberg 87.12 33 *e*P P **14 43 20.4 -0.1**
comp=Z,143nm,1.1s,mb6.1
BSEG Bad Segeberg 87.12 33 *e*P P **14 43 20.4 -0.1**
BSEG pmax pmax
comp=Z,143nm,1.1s,mb6.1
THEF They Montfort 87.20 40 *e*P P **14 43 20.8 0.0**
RUP Ruppelstein 87.21 38 *e*P P **14 43 21.1 +0.2**
FILF Fillols 87.26 46 *e*P P **14 43 20.9 -0.3**
COP Copenhagen 87.35 31 *i*S SKSac 14 53 44.0 0.0
COP
comp=Z,510nm,26.0s
COP Copenhagen 87.35 31 *i*P P **14 43 21.4 -0.2**
COP *i*S SKSac 14 53 44.0 0.0
COP pmax pmax
comp=Z,51nm,1.0s,mb5.7
COP MLR MLR
comp=Z,520nm,26.0s
COP Copenhagen 87.35 31 *i*P P **14 43 21.4 -0.2**
comp=Z,51nm,1.0s,mb5.7
COP *i*S SKSac 14 53 44.0 0.0
COP LR LR
comp=Z,520nm,26.0s
HAU Haudompre 87.51 40 *e*P P **14 43 21.2 -1.1**
comp=Z,247nm,1.0s,mb6.1
HAU *e*R
comp=Z,3µm,21.0s
HAU Haudompre 87.51 40 *e*P P **14 43 21.2 -1.1**
HAU pmax pmax
comp=Z,124nm,1.0s,mb6.1
HAU MLR MLR
comp=Z,3µm,21.0s
HAU Haudompre 87.51 40 *e*P P **14 43 21.2 -1.1**
comp=Z,124nm,1.0s,mb6.1
HAU LR LR
comp=Z,3µm,21.0s
SJAF Saint Jean de 87.51 46 *e*P P **14 43 22.7 +0.4**
LASF Ste Croix 87.54 44 *e*P P **14 43 22.2 -0.3**
comp=Z,429nm,1.2s,mb6.3
NRDL Niedersach Rie 87.68 35 *e*P P **14 43 23.1 -0.1**
comp=Z,137nm,1.1s,mb6.1
NRDL *e*pP pP 14 43 39.0 -1.2
EIBI Ibiza 87.75 50 P P **14 43 23.9 +0.4**
comp=Z,40nm,0.7s,mb5.8
PMSA Palmer Station 87.76 165 LR LR 15 13 38.5
comp=Z,2µm,20.9s,baz=323,slow=29
PMSA Palmer Station 87.76 165 PFAKE 14 43 30.0 +6.5
PMSA LR LR
comp=Z,2µm,21.0s
VIVF Saint-Julien-l 87.76 43 *e*P P **14 43 23.9 +0.4**
comp=Z,246nm,1.1s,mb6.0
VIVF Saint-Julien-l 87.76 43 *e*P P **14 43 23.9 +0.4**
VIVF pmax pmax
comp=Z,123nm,1.1s,mb6.0
VIVF Saint-Julien-l 87.76 43 *e*P P **14 43 23.9 +0.4**
comp=Z,123nm,1.1s,mb6.0
OG05 Jujurieux 87.78 42 *e*P P **14 43 22.7 -0.9**
TNS Taunus Mts 87.79 37 *e*P P **14 43 23.6 -0.1**
comp=Z,176nm,1.1s,mb6.2
TNS Taunus Mts 87.79 37 *e*P P **14 43 23.6 -0.1**
TNS pmax pmax
comp=Z,176nm,1.1s,mb6.2
APA Apatity 87.89 16⇑ *i*P P **14 43 22.8 -1.4**
APA *i* pP 14 43 39.0 -2.2
APA *i* 14 46 45.0
APA *i*S SKSac 14 53 46.0 -1.3
APA *e*PS 14 55 15.0
APA *e*SS SS 14 59 44.0 -6.7
APA pmax pmax
comp=Z,64nm,1.3s,mb5.7
CDF Champ du Feu 87.90 39 *e*P P **14 43 22.0 -2.2**
comp=Z,170nm,1.1s,mb5.9
CDF Champ du Feu 87.90 39 *e*P P **14 43 22.0 -2.2**
CDF pmax pmax
comp=Z,85nm,1.1s,mb5.9
CDF Champ du Feu 87.90 39 *e*P P **14 43 22.0 -2.2**
comp=Z,85nm,1.1s,mb5.9
HINF Hinteralfeld 87.90 40 *e*P P **14 43 22.8 -1.4**
comp=Z,155nm,1.1s,mb5.8
HINF Hinteralfeld 87.90 40 *e*P P **14 43 22.8 -1.4**
HINF pmax pmax
comp=Z,77nm,1.1s,mb5.8
HINF Hinteralfeld 87.90 40 *e*P P **14 43 22.8 -1.4**
comp=Z,77nm,1.1s,mb5.8
ECH Echery 87.91 39 *e*P P **14 43 23.4 -0.9**
CABF La Chapelle 87.94 41 *e*P P **14 43 23.4 -1.0**
comp=Z,137nm,1.1s,mb5.8
CABF La Chapelle 87.94 41 *e*P P **14 43 23.4 -1.0**
CABF pmax pmax
comp=Z,68nm,1.1s,mb5.8
CABF La Chapelle 87.94 41 *e*P P **14 43 23.4 -1.0**
comp=Z,68nm,1.1s,mb5.8
WLS Welschbruch 87.94 39 *e*P P **14 43 23.4 -1.0**
LANF Langenberg 87.96 39 *e*P P **14 43 23.9 -0.6**
LVZ Lovozero 87.97 15 P P **14 43 23.5 -1.0**
comp=Z,353nm,1.0s,mb6.5,SNR=6.4
LVZ Lovozero 87.97 15 *e*P P **14 43 22.4 -2.1**
LVZ *e*S SKSac 14 53 44.3 -3.4
LVZ pmax pmax
comp=Z,64nm,1.0s,mb5.8
LVZ pmax pmax
comp=N,20nm,1.4s
LVZ pmax pmax
comp=E,16nm,1.0s
LVZ pmax pmax
comp=Z,196nm,1.5s,mb6.1
LVZ pmax pmax
comp=N,82nm,1.6s
LVZ pmax pmax
comp=E,43nm,1.5s
LVZ smax
comp=Z,265nm,2.9s
LVZ smax
comp=N,781nm,3.8s
LVZ smax
comp=E,899nm,3.9s
LVZ MLR MLR
comp=Z,3µm,24.0s
LVZ MLR MLR
comp=N,2µm,25.0s
LVZ MLR MLR
comp=E,1µm,21.0s
LVZ Lovozero 87.97 15 *e*P P **14 43 22.4 -2.1**
LVZ *e*S SKSac 14 53 44.3 -3.4
RAO Raoul Island 87.99 238 LR LR 15 12 44.4
comp=E,1µm,21.6s,baz=333,slow=29
MOF Molkenrain 88.05 40 *e*P P **14 43 24.1 -0.8**
LOMF Lomont 88.08 40 *e*P P **14 43 24.3 -0.8**
CLZ Clausthal 88.13 35 *e*P P **14 43 25.2 -0.1**
comp=Z,221nm,1.2s,mb6.3
CLZ Clausthal 88.13 35 *e*P P **14 43 25.2 -0.1**
CLZ pmax pmax
comp=Z,221nm,1.2s,mb6.3
LIBD Limburg 88.21 39 *e*P P **14 43 25.0 -0.7**
TOD Tromm 88.27 38 *e*P P **14 43 25.6 -0.4**
RGN Rugen 88.36 32 *e*P P **14 43 25.9 -0.5**
comp=Z,171nm,1.4s,mb6.1
RGN Rugen 88.36 32 *e*P P **14 43 25.6 -0.8**
comp=Z,201nm,1.5s,mb6.1
UBBA Unterbreizbach 88.40 36 *e*P P **14 43 26.2 -0.4**
comp=Z,78nm,1.5s,mb5.7
OG01 Vacheresse 88.43 41 *e*P P **14 43 26.6 -0.1**
BBS Basel-Blauen 88.45 40 *e*P P **14 43 26.3 -0.5**
ETOS Mallorca 88.52 48 P P **14 43 27.5 +0.3**

comp=Z,30nm,0.9s,mb5.6
ORIF Oris-en-Rattie 88.52 43 *e*P P **14 43 26.4 -0.7**
comp=Z,225nm,1.3s,mb6.0
ORIF *e*R
comp=Z,2µm,20.5s
ORIF Oris-en-Rattie 88.52 43 *e*P P **14 43 26.4 -0.7**
ORIF pmax pmax
comp=Z,112nm,1.3s,mb6.0
ORIF Oris-en-Rattie 88.52 43 *e*P P **14 43 26.4 -0.7**
comp=Z,112nm,1.3s,mb6.0
PRAF Pradon 88.52 44 *e*P P **14 43 28.9 +1.8**
BFO Black Forest 88.56 39 P P **14 43 27.0 -0.3**
comp=Z,239nm,1.2s,mb6.4,SNR=16
BFO Black Forest 88.56 39 *e*P P **14 43 26.3 -1.0**
comp=Z,69nm,1.2s,mb5.9
BFO Black Forest 88.56 39 *e*P P **14 43 26.3 -1.0**
BFO pmax pmax
comp=Z,69nm,1.2s,mb5.9
FELD Feldberg im Sc 88.57 40 *e*P P **14 43 27.0 -0.4**
RSL Roselend 88.67 42 *e*P P **14 43 27.8 0.0**
SMRF Simiane la Rot 88.71 44 *e*P P **14 43 28.0 0.0**
comp=Z,139nm,1.2s,mb5.8
SMRF Simiane la Rot 88.71 44 *e*P P **14 43 28.0 0.0**
comp=Z,139nm,1.2s,mb6.2
EANR 'Ain N'Sour 88.72 53 P P **14 43 29.0 +0.9**
TREF Trevaresse 88.73 44 *e*P P **14 43 29.7 +1.6**
LPL La Plagne 88.81 42 *e*P P **14 43 28.2 -0.3**
comp=Z,133nm,1.1s,mb5.9
LPL La Plagne 88.81 42 *e*P P **14 43 28.2 -0.3**
LPL pmax pmax
comp=Z,67nm,1.1s,mb5.9
LPL La Plagne 88.81 42 *e*P P **14 43 28.2 -0.3**
comp=Z,67nm,1.1s,mb5.9
LPG La Plagne 88.83 42 *e*P P **14 43 28.5 -0.1**
comp=Z,368nm,1.4s,mb6.2
LPG La Plagne 88.83 42 *e*P P **14 43 28.5 -0.1**
LPG pmax pmax
comp=Z,184nm,1.4s,mb6.2
LPG La Plagne 88.83 42 *e*P P **14 43 28.5 -0.1**
comp=Z,184nm,1.4s,mb6.2
ECHA Ech Chlef 88.84 52 P P **14 43 30.0 +1.4**
VILF Villemus 88.86 44 *e*P P **14 43 30.4 +1.7**
GELF Grande-Etoile 88.86 44 *e*P P **14 43 30.1 +1.4**
OG25 Le Caire 88.87 43 *e*P P **14 43 22.9 -5.9**
STU Stuttgart 88.88 38 *e*P P **14 43 28.2 -0.6**
comp=Z,85nm,1.1s,mb6.0
STU Stuttgart 88.88 38 *e*P P **14 43 27.9 -0.9**
STU pmax pmax
comp=Z,90nm,1.1s,mb6.0
STU Stuttgart 88.88 38 *e*P P **14 43 27.9 -0.9**
comp=Z,90nm,1.1s,mb6.0
EBNR Beni Rached 88.91 52 P P **14 43 32.0 +3.0**
STOF St-Etienne Org 88.92 44 *e*P P **14 43 30.4 +1.4**
SPAK Spaichingen-Ko 88.94 39 *e*P P **14 43 28.7 -0.4**
BNI Bardonecchia 88.97 42 *e*P P **14 43 29.7 +0.4**
BNI pmax pmax
comp=Z,114nm,1.2s,mb6.1
BNI Bardonecchia 88.97 42 *e*P P **14 43 29.6 +0.4**
comp=Z,114nm,1.2s,mb6.1
PUYF Puyloubier 88.98 44 *e*P P **14 43 30.8 +1.5**
BERF Bertagne 89.06 44 *e*P P **14 43 31.2 +1.5**
ETRT Tiaret 89.08 53 P P **14 43 31.0 +1.3**
MBDF Montbardon 89.17 43 *e*P P **14 43 29.7 -0.5**
comp=Z,220nm,1.3s,mb6.0
MBDF Montbardon 89.17 43 *e*P P **14 43 29.7 -0.5**
MBDF pmax pmax
comp=Z,110nm,1.3s,mb6.0
MBDF Montbardon 89.17 43 *e*P P **14 43 29.7 -0.5**
comp=Z,110nm,1.3s,mb6.0
TAVF Tavernes 89.18 44 *e*P P **14 43 31.4 +1.2**
MOX Moxa 89.39 36 *e*P P **14 43 30.9 -0.3**
comp=Z,115nm,1.5s,mb6.0
MOX Moxa 89.39 36⇓ *i*P P **14 43 31.1 -0.1**
comp=Z,117nm,1.6s,mb6.0
MOX *e* 14 47 00.0
MOX
comp=Z,2µm,22.0s
MOX Moxa 89.39 36⇓ *i*P P **14 43 31.1 -0.1**
MOX *e* 14 47 00.0
MOX pmax pmax
comp=Z,117nm,1.6s,mb6.0
MOX MLR MLR
comp=Z,2µm,22.0s
MOX Moxa 89.39 36⇓ *i*P P **14 43 31.1 -0.1**
comp=Z,117nm,1.6s,mb6.0
MOX *e*PP PP 14 47 00.0 -2.8
MOX *e*S SKSac 14 53 57.0 +0.9
MOX *e*PS PS 14 55 27.0 -1.9
MOX *e*SS PKKPdf 15 00 51.0 -10
MOX LR LR
comp=Z,2µm,22.0s
KAF Kangasniemi 89.53 22 *e*p P **14 43 28.6 -3.3**
comp=Z,86nm,0.9s,mb6.1,baz=308,slow=4.5
KAF Kangasniemi 89.53 22 *e*P P **14 43 28.6 -3.3**
KAF pmax pmax
comp=Z,86nm,0.9s,mb6.1
FRF La Foret Royal 89.59 44 *e*P P **14 43 31.2 -1.0**
comp=Z,208nm,1.4s,mb6.0
FRF La Foret Royal 89.59 44 *e*P P **14 43 31.2 -1.0**
FRF pmax pmax
comp=Z,104nm,1.4s,mb6.0
FRF La Foret Royal 89.59 44 *e*P P **14 43 31.2 -1.0**
comp=Z,104nm,1.4s,mb6.0
LMR La Mourre 89.60 44 *e*P P **14 43 31.2 -1.0**
comp=Z,290nm,1.2s,mb6.2
LMR La Mourre 89.60 44 *e*P P **14 43 31.2 -1.0**
LMR pmax pmax
comp=Z,145nm,1.2s,mb6.2
LMR La Mourre 89.60 44 *e*P P **14 43 31.2 -1.0**
comp=Z,145nm,1.2s,mb6.2
GRA1 Grafenberg Arr 89.62 37 *e*P P **14 43 32.5 +0.2**
comp=Z,176nm,1.4s,mb6.2
GRA1 *e*pP pP 14 43 48.5 -0.9
GRA1 *e*PP PP 14 47 05.6 +0.9
GRA1 *e*S S 14 54 20.7 +2.0
GRA1 *e*PKKP PKKPbc 15 01 05.2 -0.5
GRA1 *e*pPKKP 15 01 23.4
GRA1 LR LR
comp=Z,1µm,21.6s
GRF Grafenberg Arr 89.62 37 *e*P P **14 43 32.5 +0.2**
comp=Z,176nm,1.4s,mb6.2
GRF *e*pP pP 14 43 48.5 -0.9
GRF *e*PP PP 14 47 05.6 +0.9
GRF *e*S S 14 54 20.7 +2.0
GRF *e*PKKP PKKPbc 15 01 05.2 -0.5
GRF *e*pPKKP 15 01 23.4
GRF *e*L 15 24 20.2
comp=Z,1µm,21.6s
GRF Grafenberg Arr 89.62 37 *e*P P **14 43 32.5 +0.2**
GRF *e**PP pP 14 43 48.5 -0.9
GRF *e* 14 47 05.6
GRF *e*S S 14 54 20.7 +2.0
GRF pmax pmax
comp=Z,176nm,1.4s,mb6.2
GRF MLR MLR
comp=Z,1µm,21.6s
GRF Grafenberg Arr 89.62 37 *e*P P **14 43 32.5 +0.2**
GRF *e**PP pP 14 43 48.5 -0.9
GRF *e* 14 47 05.6
GRF *e*S S 14 54 20.7 +2.0
GRF pmax pmax
comp=Z,176nm,1.4s,mb6.2
GRF MLR MLR
comp=Z,1µm,21.6s
RUE Ruedersdorf 89.65 34 *e*P P **14 43 31.8 -0.6**
comp=Z,47nm,1.0s,mb5.8
RUE Ruedersdorf 89.65 34 P P **14 43 31.9 -0.5**
comp=Z,110nm,1.3s,mb6.0
RUE *e*pP pP 14 43 49.0 -0.5
MVIF Mont Vial 89.78 43 *e*P P **14 43 34.2 +1.2**
TOUF Mont Tournerai 89.79 43 *e*P P **14 43 33.1 0.0**
CLL Collm 89.82 35 P P **14 43 33.0 -0.2**
CLL *e* 14 53 54.0
CLL *e*S S 14 54 19.0 -1.5
CLL *e*SP SP 14 55 22.0 -4.1
CLL *e*SS SS 15 00 08.0 -11
CLL *e* 15 01 27.0
CLL Collm 89.82 35 *e*P P **14 43 33.0 -0.2**
CLL *e*SKSac SKSac 14 53 54.0 -4.7
CLL *e*S S 14 54 19.0 -1.5
CLL *e*S S 14 54 19.0 -1.5
comp=E,900nm,12.1s
CLL *e*SP SP 14 55 22.0 -4.1
CLL *e*SS SS 15 00 08.0 -11
CLL *ex* x 15 01 27.0

CLL LmV 15 22 00.0
comp=Z,2µm,21.9s
CLL Collm 89.82 35 *e*P **P** **14 43 33.0 -0.2**
CLL *e*SKS 14 53 54.0
CLL *e*S S 14 54 19.0 -1.5
CLL LR LR
comp=Z,7µm,37.0s
ABA Alger-Bouzarea 89.83 51 P **P** **14 43 35.0 +1.7**
WERD Werda 89.87 36 *e*P **P** **14 43 33.1 -0.3**
comp=Z,105nm,1.5s,mb6.0
FINES FINESS Array B 89.89 23 P **P** **14 43 31.9 -1.7**
comp=Z,20nm,0.9s,mb5.5,baz=336,slow=4.2,SNR=54
FINES PKKPbc PKKPbc 15 01 04.5 -0.5
comp=Z,2.8nm,1.1s,baz=103,slow=4.1,SNR=4.2
FINES LR LR 15 24 05.4
comp=Z,2µm,21.2s,baz=312,slow=36
FINES FINESS Array B 89.89 23 P **P** **14 43 31.9 -1.7**
FINES pmax pmax
comp=Z,20nm,0.9s
FINES pmax pmax
comp=Z,3.0nm,1.1s
FINES MLR MLR
comp=Z,2µm,21.2s
FIA1 FINESS Array S 89.89 23 *e*P **P** **14 43 31.8 -1.8**
LUCF Luceram 89.91 43 *e*P **P** **14 43 33.7 +0.1**
AUTN L'Aution 89.91 43 *e*P **P** **14 43 34.4 +0.7**
GUNZ Gunzen 89.92 36 *e*P **P** **14 43 33.5 -0.2**
comp=Z,113nm,1.4s,mb6.0
DAVA Damuels 89.97 39⇑*i*P **P** **14 43 34.0 0.0**
comp=Z,119nm,1.4s,mb6.0,SNR=24
TANN Tannenbergstha 89.97 36 *e*P **P** **14 43 33.6 -0.3**
comp=Z,93nm,1.3s,mb6.0
SBF Sospel 89.98 43 *e*P **P** **14 43 32.8 -1.2**
comp=Z,284nm,1.2s,mb6.2
SBF Sospel 89.98 43 *e*P **P** **14 43 32.8 -1.2**
SBF pmax pmax
comp=Z,142nm,1.2s,mb6.2
SBF Sospel 89.98 43 *e*P **P** **14 43 32.8 -1.2**
comp=Z,142nm,1.2s,mb6.2
MANZ Manzenberg 89.98 36 *e*P **P** **14 43 33.9 -0.1**
comp=Z,74nm,1.4s,mb5.8
WERN Wernitzgruen 89.98 36 *e*P **P** **14 43 33.9 -0.1**
comp=Z,132nm,1.4s,mb6.1
REVF Revere 89.99 43 *e*P **P** **14 43 33.4 -0.6**
SAOF Saorge 90.00 43 *e*P **P** **14 43 33.6 -0.5**
EMHD Djebel Mahouad 90.01 52 P **P** **14 43 35.0 +0.9**
NKC Novy Kostel 90.05 36 *e*P **P** **14 43 34.1 -0.2**
NKC *e*SKS 14 54 00.7
NKC *ex* x 14 54 28.9
NKC *e*PKKP PKKPbc 15 01 04.4 -0.2
NKC AMS AMS 15 19 30.0
comp=Z,3µm,26.4s
NKC Novy Kostel 90.05 36⇑*e*P **P** **14 43 34.1 -0.2**
NKC *e* 14 54 00.7
NKC Novy Kostel 90.05 36⇑*e*P **P** **14 43 34.1 -0.2**
NKC *e*SKS 14 54 00.7
NKC *e* 14 54 28.9
NKC *e*PKKP PKKPbc 15 01 04.4 -0.2
DAVOS Davos 90.12 40 P **P** **14 43 35.4 +0.7**
ROTZ Rotzenmuhle 90.14 37 *e*P **P** **14 43 34.9 +0.1**
comp=Z,87nm,1.4s,mb5.9
DAVOX Davos 90.20 40 P **P** **14 43 35.4 +0.4**
comp=Z,6.0nm,0.5s,mb5.2,baz=286,slow=6.2,SNR=20
FBE Freiberg 90.21 35 *e*P **P** **14 43 34.6 -0.4**
comp=Z,118nm,1.2s,mb6.1
YAK Yakutsk 90.25 339 *i*P **P** **14 43 35.2 0.0**
YAK *e*PP PP 14 47 16.0 +6.4
YAK *e*S SKSac 14 53 58.0 -3.2
YAK *e*SS SS 15 00 30.0 +5.1
YAK pmax pmax
comp=Z,115nm,1.0s,mb6.2
YAK Yakutsk 90.25 339 *i*P **P** **14 43 35.2 0.0**
comp=Z,115nm,1.0s,mb6.2
YAK *e*PP PP 14 47 16.0 +6.4
YAK *e*S SKSac 14 53 58.0 -3.2
YAK *e*SS SS 15 00 30.0 +5.1
FIN Finale Ligure 90.33 43 P **P** **14 43 35.4 -0.2**
comp=Z,219nm,1.6s,mb6.2
ADJB Djebel Djouab 90.38 52 P **P** **14 43 36.7 +0.8**
FUR Furstenfeldbru 90.39 38 *e*P **P** **14 43 36.4 +0.5**
comp=Z,56nm,1.2s,mb5.8
FUR Furstenfeldbru 90.39 38 *e*P **P** **14 43 36.4 +0.5**
FUR pmax pmax
comp=Z,56nm,1.2s,mb5.8
BRG Berggiesshubel 90.55 35 *e*P **P** **14 43 36.4 -0.3**
comp=Z,108nm,1.3s,mb6.0
BRG Berggiesshubel 90.55 35⇑*i*P **P** **14 43 36.4 -0.2**
comp=Z,64nm,1.3s,mb5.8
BRG *e* 14 45 02.7
comp=Z,4.5nm,1.1s
BRG *e* 14 46 46.7
comp=Z,3.5nm,1.1s
BRG PP PP 14 46 58.0 -14
BRG SKS 14 54 03.0
BRG S S 14 54 29.0 +1.7
BRG PS PS 14 55 25.0 -17
BRG SS SS 15 00 05.0 -24
BRG *e*PKKP PKKPbc 15 01 03.1 -0.2
comp=Z,4.2nm,1.1s
BRG
comp=N,2µm,37.9s
BRG
comp=E,2µm,32.2s
BRG
comp=Z,4µm,36.6s
BRG Berggiesshubel 90.55 35⇑*i*P **P** **14 43 36.4 -0.3**
BRG 14 54 03.0
BRG S S 14 54 29.0 +1.7
BRG pmax pmax
comp=Z,2.0nm,1.3s
BRG pmax pmax
comp=Z,65nm,1.1s
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG MLR MLR
comp=N,4µm,37.9s
BRG MLR MLR
comp=E,2µm,32.2s
BRG MLR MLR
comp=Z,2µm,36.6s
BRG Berggiesshubel 90.55 35⇑*i*P **P** **14 43 36.4 -0.2**
comp=Z,64nm,1.3s,mb5.8
BRG *e* 14 45 02.7
BRG *e* 14 46 46.7
BRG PP PP 14 46 58.0 -14
BRG SKS 14 54 03.0
BRG S S 14 54 29.0 +1.7
BRG PS PS 14 55 25.0 -17
BRG SS SS 15 00 05.0 -24
BRG *e*PKKP PKKPbc 15 01 03.1 -0.2
BRG LR LR
comp=Z,4µm,36.6s
JOF Joensuu 90.67 20 *ep* **P** **14 43 33.8 -3.4**
comp=Z,2.8nm,0.5s
MOTA Moosalm 90.68 39⇑*i*P **P** **14 43 37.5 +0.3**
comp=Z,63nm,1.2s,mb5.8,SNR=17
MOTA Moosalm 90.68 39⇑*i*P **P** **14 43 37.6 +0.4**
MOTA pmax pmax
comp=Z,63nm,1.2s,mb5.8
AKET Djebel Ketaf 90.76 52 P **P** **14 43 38.8 +1.2**
SQTA Sankt Quirin 90.80 39⇑*i*P **P** **14 43 38.2 +0.4**
comp=Z,64nm,1.3s,mb5.8,SNR=10
SQTA Sankt Quirin 90.80 39⇑*i*P **P** **14 43 38.2 +0.4**
SQTA pmax pmax
comp=Z,65nm,1.3s,mb5.8
MABI Malga Bissina 90.93 40 P **P** **14 43 36.5 -1.9**
comp=Z,14nm,1.5s,mb5.1
WATA Walderalm 90.96 39⇑*i*P **P** **14 43 38.7 +0.2**
comp=Z,52nm,1.3s,mb5.7,SNR=5,7
WATA Walderalm 90.96 39⇑*i*P **P** **14 43 38.7 +0.1**
WATA pmax pmax
comp=Z,52nm,1.3s,mb5.7
HOPE Hope Point 90.99 148 P **P** **14 43 38.9 +0.2**
comp=Z,876nm,1.3s,mb6.9,SNR=7.2
HOPE Hope Point 90.99 148⇓*i*P **P** **14 43 37.7 -0.9**
comp=Z,273nm,1.3s,mb6.4
HOPE *ep*P pP 14 43 55.0 -0.8
HOPE LR LR
comp=Z,1µm,19.0s
AKF Akfadou 91.03 51 P **P** **14 43 40.4 +1.5**
WTTA Wattenberg 91.03 39⇑*i*P **P** **14 43 38.9 +0.1**
comp=Z,108nm,1.6s,mb5.9,SNR=16
WTTA Wattenberg 91.03 39⇑*i*P **P** **14 43 38.9 0.0**
WTTA pmax pmax
comp=Z,108nm,1.6s,mb5.9
PVCC Panska Ves 91.07 35 *e*P **P** **14 43 38.8 -0.3**
PVCC *e*SKS 14 54 05.8
PVCC *e*S S 14 54 33.4 +1.4
PVCC *e*PKKP PKKPbc 15 01 01.6 -0.4
PVCC *ex* x 15 01 19.7
PVCC AMS AMS 15 16 20.0
comp=Z,2µm,38.5s
PVCC Panska Ves 91.07 35⇑*e*P **P** **14 43 38.8 -0.3**
PVCC *e* 14 54 05.8
PVCC *e* 14 54 33.4
PVCC MLR MLR
comp=Z,2µm,38.5s
ATAF Djebel Tarf 91.12 52 P **P** **14 43 40.2 +0.9**
APPI Appiano 91.17 40 P **P** **14 43 38.3 -1.2**
KHC Kasperske Hory 91.24 37 *e*P **P** **14 43 39.5 -0.3**
KHC *e*PP PP 14 47 16.1 -1.4
KHC *e*SKS 14 54 07.1
KHC *e*S S 14 54 36.3 +2.8
KHC *e*PKKP PKKPbc 15 01 00.2 -1.4
KHC *ex* x 15 01 17.7
KHC AMS AMS 15 19 50.0
comp=Z,3µm,30.3s
KHC Kasperske Hory 91.24 37⇑*e*P **P** **14 43 39.5 -0.3**
KHC *e* 14 47 16.1
KHC *e* 14 54 07.1
KHC *e* 14 54 36.3
KHC MLR MLR
comp=Z,3µm,30.3s
PRU Pruhonice 91.34 36 *e*P **P** **14 43 40.0 -0.3**
PRU *e*PP PP 14 47 13.3 -5.0
PRU *e*SKS 14 54 07.0
PRU *e*S S 14 54 35.8 +1.4
PRU *e*PKKP PKKPbc 15 01 00.1 -1.3
PRU *ex* x 15 01 18.3
PRU AMS AMS 15 20 30.0
comp=Z,3µm,29.8s
PRU Pruhonice 91.34 36⇑*e*P **P** **14 43 40.0 -0.3**
PRU *e* 14 47 13.3
PRU *e* 14 54 07.0
PRU *e* 14 54 35.8
PRU MLR MLR
comp=Z,3µm,29.8s
GEC2 GERESS Array S 91.45 37 *e*P **P** **14 43 40.5 -0.3**
comp=Z,84nm,1.5s,mb5.8
GEC2 GERESS Array S 91.45 37 *e*P **P** **14 43 40.5 -0.3**
GEC2 pmax pmax
comp=Z,84nm,1.5s,mb5.8
GERES GERESS Array B 91.45 37 P **P** **14 43 40.3 -0.6**
comp=Z,15nm,1.0s,mb5.3,baz=316,slow=3.7,SNR=81
GERES PKKPbc PKKPbc 15 00 59.3 -1.8
comp=Z,3.5nm,1.0s,baz=149,slow=2.8,SNR=15
GERES LR LR 15 26 41.2
comp=Z,1µm,21.2s,baz=304,slow=37
GERES GERESS Array B 91.45 37 P **P** **14 43 40.3 -0.5**
GERES pmax pmax
comp=Z,15nm,1.0s
GERES pmax pmax
comp=Z,4.0nm,1.0s
GERES MLR MLR
comp=Z,1µm,21.2s
PGF Pioggiola 91.58 44 *e*P **P** **14 43 40.4 -1.0**
comp=Z,193nm,1.2s,mb6.0
PGF Pioggiola 91.58 44 *e*P **P** **14 43 40.4 -1.0**
PGF pmax pmax
comp=Z,96nm,1.2s,mb6.0
PGF Pioggiola 91.58 44 *e*P **P** **14 43 40.4 -1.0**
comp=Z,96nm,1.2s,mb6.0
SEST Monte Rota 91.63 39 P **P** **14 43 42.1 +0.5**
GSCL Gusciola 91.78 42 P **P** **14 43 42.2 -0.1**
comp=Z,49nm,1.3s,mb5.7
SET Setif 91.82 51 P **P** **14 43 45.0 +2.5**
KSP Ksiaz 91.84 34 *e*P **P** **14 43 42.3 -0.3**
KSP *e*SKS 14 54 11.6
KSP *e*S S 14 54 41.1 +2.2
KSP L 15 17 24.0
comp=Z,12nm,34.5s
KSP Ksiaz 91.84 34 *e*P **P** **14 43 42.0 -0.6**
KSP *e*PP PP 14 47 15.6 -6.6
KSP *e*SKSac SKSac 14 54 12.1 +1.9
KSP *e*SP SP 14 55 45.8 -2.7
KSP *e*SS SS 15 00 44.9 -2.9
UPC Upice 91.87 35 *e*P **P** **14 43 42.7 0.0**
UPC *e*SKS 14 54 12.9
UPC *e*PKKP PKKPbc 15 00 59.7 -0.3
UPC *ex* x 15 01 18.0
UPC AMS AMS 15 28 20.0
UPC Upice 91.87 35⇑*e*P **P** **14 43 42.7 0.0**
UPC *e* 14 54 12.9
UPC *e* 15 00 59.7
UPC Upice 91.87 35⇑*e*P **P** **14 43 42.7 0.0**
UPC *e*SKS 14 54 12.9
UPC *e*PKKP PKKPbc 15 00 59.7 -0.3
UPC *e* 15 01 18.0
BDI Bagni Di Lucca 91.92 42 P **P** **14 43 41.5 -1.5**
comp=Z,56nm,1.5s,mb5.7
DFRA Djebel Bou Aff 92.03 50 P **P** **14 43 45.6 +2.1**
ZCCA Zocca 92.03 42 P **P** **14 43 43.9 +0.4**
comp=Z,77nm,0.7s,mb6.1
FVI Forni Avoltri 92.04 39 P **P** **14 43 43.7 +0.1**
VSU Vasula 92.11 25⇑*i*P **P** **14 43 41.7 -2.2**
DPC Dobruska-Polom 92.12 35 *e*P **P** **14 43 43.9 0.0**
DPC *e*PP PP 14 47 18.3 -6.1
DPC *e*SKS 14 54 12.0
DPC *e*S S 14 54 42.3 +0.8
DPC *e*PKKP PKKPbc 15 00 58.9 -0.5
DPC *ex* x 15 01 17.1
DPC AMS AMS 15 17 00.0
comp=Z,7µm,35.0s
DPC Dobruska-Polom 92.12 35⇑*e*P **P** **14 43 43.9 0.0**
DPC *e* 14 54 12.0
DPC *e* 14 54 42.3
DPC *e* 15 00 58.9
DPC MLR MLR
comp=Z,7µm,35.0s
KBA Koelnbreinsper 92.14 39⇑*i*P **P** **14 43 43.9 -0.1**
comp=Z,106nm,1.6s,mb5.9,SNR=16
KBA Koelnbreinsper 92.14 39⇑*i*P **P** **14 43 43.9 -0.1**
KBA pmax pmax
comp=Z,106nm,1.6s,mb5.9
FNVD Fontana Vidola 92.20 42 P **P** **14 43 44.1 -0.2**
comp=Z,189nm,1.5s,mb6.2
TREC Trest 92.22 36 *e*P **P** **14 43 44.1 -0.3**
TREC *e*PP PP 14 47 18.6 -6.7
TREC *e*PKKP PKKPbc 15 00 58.8 -0.3
TREC AMS AMS 15 19 20.0
comp=Z,3µm,30.1s
MOA Molln 92.28 38 *i*P **P** **14 43 44.6 -0.1**
comp=Z,134nm,1.7s,mb6.0,SNR=26
CMER Merouana 92.43 51 P **P** **14 43 49.0 +3.7**
PUL Pulkovo 92.57 22 *e*P **P** **14 43 44.7 -1.3**
PUL S SKSac 14 54 06.8 -7.5
PUL pmax pmax
comp=Z,113nm,0.6s,mb6.5
PUL MLR MLR
comp=Z,5µm,24.0s
PUL MLR MLR
comp=N,3µm,25.0s
PUL MLR MLR
comp=E,4µm,27.0s
PUL Pulkovo 92.57 22 *e*P **P** **14 43 44.7 -1.3**
comp=E,113nm,0.6s,mb6.5
PUL S SKSac 14 54 06.8 -7.5
PUL LR LR
comp=Z,5µm,24.0s
CASM Ain Smara 92.59 50 P **P** **14 43 48.0 +1.9**
CTEI Djebel Teioual 92.62 51 P **P** **14 43 47.8 +1.6**
CSNT Castellina Chi 92.64 42 P **P** **14 43 43.3 -3.0**
CKFL Kef-Lekhel 92.70 50 P **P** **14 43 48.0 +1.4**
SFI Santa Sofia 92.79 42 P **P** **14 43 47.6 +0.6**
VRAC Vranov 92.83 35 P **P** **14 43 47.2 0.0**
comp=Z,32nm,1.0s,mb5.7,baz=294,slow=5.9,SNR=40
VRAC Vranov 92.83 35⇓*i*P **P** **14 43 47.6 +0.4**
VRAC Vranov 92.83 35 P **P** **14 43 47.2 0.0**
VRAC pmax pmax
comp=Z,32nm,1.0s
VRAC Vranov 92.83 35 ⇓P **P** **14 43 47.6 +0.4**
VOY Vojsko 93.00 39 *e*P **P** **14 43 48.0 +0.1**
VOY *e* 14 43 56.0
MORC Moravsky Berou 93.09 35⇑*i*P **P** **14 43 48.1 -0.3**
MORC Moravsky Berou 93.09 35⇑*i*P **P** **14 43 48.0 -0.4**
MORC *e**PP pP 14 44 03.6 -1.9
MORC pmax pmax
comp=Z,109nm,1.4s,mb6.1
MORC Moravsky Berou 93.09 35⇑*i*P **P** **14 43 48.0 -0.4**
comp=Z,109nm,1.4s,mb6.1
MORC *ep*P pP 14 44 03.6 -1.9
OBKA Obir 93.14 39⇑*i*P **P** **14 43 48.1 -0.5**
comp=Z,91nm,1.5s,mb6.0,SNR=7.4
OBKA Obir 93.14 39⇑*i*P **P** **14 43 48.1 -0.5**
comp=Z,91nm,1.5s,mb6.0
CONA Conrad Observa 93.16 37⇑*i*P **P** **14 43 48.6 -0.1**
comp=Z,167nm,1.8s,mb6.2,SNR=30
VSL Villasalto 93.23 47 *e*P **P** **14 43 49.2 +0.2**
comp=Z,78nm,1.1s,mb6.0
YSS Yuzh-Sakhalins 93.24 322⇓*e*P **P** **14 43 47.3 -1.8**
YSS *e**PP pP 14 44 06.0 -0.2
YSS *i* *SP sP 14 44 10.7 -2.0
YSS *e* 14 47 28.0
YSS *e* 14 54 16.0
YSS *e*S S 14 54 46.0 -5.4
YSS *e*PS PS 14 56 10.0 -1.6
YSS *e*PPS 14 56 44.0
YSS *e*SS SS 15 01 10.0 +2.1
YSS pmax pmax
comp=Z,80nm,1.0s,mb6.1
YSS pmax pmax
comp=E,70nm,1.1s
YSS pmax pmax
comp=N,700nm,9.0s
YSS pmax pmax
comp=E,900nm,10.0s
YSS smax
comp=N,2µm,8.0s
YSS smax
comp=E,900nm,8.0s
YSS Yuzh-Sakhalins 93.24 322⇓*e*P **P** **14 43 47.3 -1.8**
comp=E,80nm,1.0s,mb6.1
YSS *ep*P pP 14 44 06.0 -0.2
YSS *i* sP sP 14 44 10.7 -2.0
YSS *e* 14 47 28.0
YSS *e* 14 54 16.0
YSS *e*S S 14 54 46.0 -5.4
YSS *e*PS PS 14 56 10.0 -1.6
YSS *e*PPS 14 56 44.0
YSS *e*SS SS 15 01 10.0 +2.1
RAC Raciborz 93.27 34 *e*P **P** **14 43 49.5 +0.3**
RAC *e*S S 14 54 49.0 -2.7
RAC MLR MLR
comp=Z,2µm,21.1s
ARSA Arzberg 93.32 38⇑*i*P **P** **14 43 49.0 -0.5**
comp=Z,72nm,1.9s,mb5.8,SNR=7.7
LJU Ljubljana 93.37 39 *e*P **P** **14 43 49.3 -0.4**
LJU *e* pP 14 44 04.8 -2.0
LJU *i* PP PP 14 47 30.0 -4.2
LJU *e*S SKSac 14 54 19.5 +0.8
OKC Ostrava-Krasne 93.38 34 *e*P **P** **14 43 49.4 -0.3**
OKC *e*SKS 14 54 19.3
OKC *e*S S 14 54 49.2 -3.5
OKC AMS AMS 15 17 40.0
comp=Z,4µm,37.3s
OKC Ostrava-Krasne 93.38 34⇑*e*P **P** **14 43 49.4 -0.3**
OKC *e*SKS 14 54 19.3
OKC *e* 14 54 49.2
PERS Pernice 93.41 38 *e*P **P** **14 43 49.0 -0.8**
SUW Suwalki 93.44 29 *e*P **P** **14 43 48.9 -1.1**
SUW *e*SKS 14 54 17.9
SUW L 15 21 34.3
comp=Z,3.6nm,28.8s
SUW Suwalki 93.44 29 *e*P **P** **14 43 48.9 -1.1**
SUW *e*SKS 14 54 17.9
WAR Warsaw 93.48 31 *e*P pP 14 44 05.4 -1.9
WAR *e*SKS 14 54 20.8
WAR *e*S S 14 54 53.2 -0.3
WAR L 15 21 01.0
comp=Z,5.1nm,28.7s
WAR Warsaw 93.48 31 PFAKE 14 44 00.0 +10
WAR LR LR
comp=Z,5µm,28.7s
SOP Sopron 93.69 37 *e*P **P** **14 43 51.1 0.0**
ZST Bratislava 93.72 36 *i*P **P** **14 43 51.9 +0.6**
ZST *e*PP PP 14 47 32.1 -4.9
ZST Bratislava 93.72 36 *i*P **P** **14 43 51.9 +0.6**
comp=Z,73nm,1.3s,mb6.0
ZST *e*PP PP 14 47 32.1 -4.9
ZST *e*S SKSac 14 54 20.4 -0.3
ZST LR LR
comp=Z,800nm,22.8s
SMOL Smolenice 93.72 36 *e*P **P** **14 43 52.4 +1.1**
LIC Lamto 93.74 82 *e*P **P** **14 43 51.1 -0.3**
comp=Z,605nm,1.8s,mb6.4
LIC *e*R
comp=Z,301nm,22.2s
LIC Lamto 93.74 82 *e*P **P** **14 43 51.1 -0.3**
comp=Z,302nm,1.8s,mb6.4
LIC LR LR
comp=Z,150nm,22.3s
DBIC Dimbokro 93.76 82 P **P** **14 43 51.1 -0.4**
DBIC pP pP 14 44 07.4 -1.1
DBIC SKSac SKSac 14 54 22.7 +1.8
DBIC Dimbokro 93.76 82 P **P** **14 43 51.3 -0.1**
comp=Z,27nm,1.1s,mb5.6,baz=280,slow=4.3,SNR=15
DBIC pP pP 14 44 07.5 -1.0
comp=Z,17nm,1.0s,baz=277,slow=8.7,SNR=4.4
DBIC LR LR 15 21 41.1
comp=Z,1µm,21.0s,baz=275,slow=33
DBIC Dimbokro 93.76 82 P **P** **14 43 51.3 -0.2**
DBIC *PP pP 14 44 07.6 -1.0
DBIC pmax pmax
comp=Z,27nm,1.1s
DBIC pmax pmax
comp=Z,17nm,1.0s
DBIC Dimbokro 93.76 82⇓*e*P **P** **14 43 50.8 -0.6**
comp=Z,211nm,1.7s,mb6.3
DBIC *ep*P pP 14 44 07.2 -1.3
DBIC LR LR
comp=Z,2µm,22.0s
SNTG Esanatoglia 93.80 42 P **P** **14 43 51.3 -0.4**
OJC Ojcow 94.04 34⇑*i*P **P** **14 43 52.0 -0.8**
OJC *e* 14 47 36.7
OJC *e* 14 54 22.0
OJC *e*S S 14 54 51.1 -7.3
OJC MLR MLR
comp=Z,5µm,23.3s
MNS Montasola 94.06 43 P **P** **14 43 52.5 -0.4**
BOJS Bojanci 94.08 39 *i*P **P** **14 43 52.5 -0.4**
BOJS *e* pP 14 44 08.4 -1.6
BOJS *e*PP PP 14 47 35.4 -4.4
BOJS *e*S SKSac 14 54 24.3 +1.6
BOJS *e* 14 54 58.0
LIKS Likavka 94.34 35 *e*P **P** **14 43 55.9 +1.7**
LIKS pmax pmax
comp=Z,57nm,1.0s,mb6.0
LIKS Likavka 94.34 35 *e*P **P** **14 43 55.9 +1.7**
comp=Z,57nm,1.0s,mb6.0
FIAM Fiamignano 94.40 43 P **P** **14 43 53.9 -0.5**
CERT Cerreto 94.47 43 P **P** **14 43 54.4 -0.3**
VYHS Vyhne 94.51 35 *i*P **P** **14 43 54.9 0.0**
VYHS *e*PP PP 14 47 38.8 -4.4
VYHS Vyhne 94.51 35 *i*P **P** **14 43 54.9 0.0**
comp=Z,58nm,1.3s,mb5.8
VYHS *e*PP PP 14 47 38.8 -4.4
VYHS *e*S SKSac 14 54 26.2 +1.2
VYHS *e*PS PS 14 56 18.2 -7.5
VYHS LR LR
comp=Z,2µm,35.8s
KLMR Klimovskoe 94.78 18*c*i*P* **P** **14 43 54.1 -2.0**
KLMR *e* 14 47 44.1
KLMR *e*S SKSac 14 54 25.0 -1.4
KLMR *e*PS PS 14 56 30.5 +1.9
KLMR pmax pmax
comp=Z,160nm,1.5s,mb6.2
KLMR pmax pmax
comp=Z,170nm,11.4s
KLMR MLR MLR
comp=Z,2µm,24.0s
NIE Niedzica 94.78 34 *e*P **P** **14 43 56.9 +0.8**
ASAJ Asahikawa 94.81 320 LR LR 15 23 43.9
comp=Z,268nm,18.6s,baz=52,slow=34
KEST Kesra 94.91 50 P **P** **14 43 57.3 +0.6**
comp=Z,21nm,1.0s,mb5.5,baz=268,slow=3.1,SNR=30
KEST LR LR 15 29 56.9
comp=Z,407nm,19.8s,baz=82,slow=38
VVLD Villa Vallelon 94.93 43 P **P** **14 43 56.3 -0.5**
URZ Urewera 95.08 231 LR LR 15 17 50.1
comp=Z,2µm,21.1s,baz=277,slow=30

BUD Budapest 95.19 36⇓ *i*P P 14 43 59.1 +1.1
MNK Minsk 95.21 27 *e*P P 14 43 55.0 -3.1
MNK *e* 14 54 22.0
MNK *e*S S 14 55 00.0 -8.6
MNK pmax pmax
comp=Z,190nm,1.5s,mb6.3
STHS Stebnicka Huta 95.27 34 *i* P P 14 43 58.7 +0.3
STHS pmax pmax
comp=Z,41nm,1.2s,mb5.7
STHS Stebnicka Huta 95.27 34 *i* P P 14 43 58.7 +0.3
comp=Z,41nm,1.2s,mb5.7
KECS Kecovo 95.42 35 *e*P P 14 43 59.2 +0.1
KECS pmax pmax
comp=Z,41nm,1.2s,mb5.7
KECS Kecovo 95.42 35 *e*P P 14 43 59.2 +0.1
comp=Z,41nm,1.2s,mb5.7
PSZ Piszkesteto 95.42 35⇑ *i*P P 14 43 59.7 +0.6
PSZ Piszkesteto 95.42 35⇓ *i*P P 14 44 00.2 +1.1
PSZ Piszkesteto 95.42 35 *i*P P 14 43 59.5 +0.4
PSZ pmax pmax
comp=Z,148nm,1.3s,mb6.3
ERM Erimo 95.55 318 PFAKE 14 44 10.0 +10
ERM LR LR
comp=Z,23nm,19.0s
PKSM Moragy 95.69 37⇓ *i*P P 14 44 00.0 -0.3
PKSM Moragy 95.69 37⇑ *e*P P 14 43 59.7 -0.6
CRVS Cervenica-Dubn 95.69 34 *e*P P 14 44 01.0 +0.7
CRVS *e*S SKSac 14 54 31.8 +0.5
KWP Kalwaria 95.91 33 *e*P P 14 44 01.3 0.0
KWP L 15 20 02.5
comp=Z,4.5nm,32.5s
KOLS Kolonicke sedl 96.10 34 *e*P P 14 44 02.3 +0.1
KOLS *e*PP PP 14 47 47.0 -8.5
KOLS Kolonicke sedl 96.10 34 *e*P P 14 44 02.3 +0.1
KOLS *e*PP PP 14 47 47.0 -8.5
KOLS *e*S SKSac 14 54 33.9 +0.5
LVV L'vov 96.47 32*c* *i*P P 14 44 03.1 -0.7
LVV *e**PP pP 14 44 19.0 -1.9
LVV *e* 14 47 56.0
LVV *e*PPP 14 50 05.0
LVV *e* 14 54 32.0
LVV *e*S S 14 55 18.0 -1.5
LVV *i* PS PS 14 56 39.0 -8.1
HABR Khabarovsk 96.67 326⇓ *i*P P 14 44 04.4 -0.3
HABR *e*S SKSac 14 54 32.7 -3.6
HABR *e* 14 55 21.8
HABR pmax pmax
comp=Z,39nm,1.8s,mb5.5
BEO Belgrade 97.53 38 *e*P P 14 44 06.3 -2.4
TOA0 Torodi Ar. Sit 97.63 73⇓ *i*P P 14 44 07.8 -1.3
TOA0 *e*pP pP 14 44 23.8 -2.4
TORD Torodi Ar. Bea 97.63 73 P P 14 44 08.1 -1.0
comp=Z,7.9nm,1.0s,mb5.2,baz=285,slow=4.7,SNR=28
TORD pP pP 14 44 24.6 -1.6
comp=Z,14nm,1.1s,baz=297,slow=3.1,SNR=9.3
TORD PP PP 14 48 02.6 -4.7
comp=Z,14nm,1.2s,baz=292,slow=6.8,SNR=10.0
TORD PKKPbc PKKPbc 15 00 44.4 -0.4
comp=Z,7.0nm,1.1s,baz=95,slow=2.9,SNR=15
TORD LR LR 15 26 34.9
comp=Z,1μm,21.7s,baz=280,slow=34
TORD Torodi Ar. Bea 97.63 73 P P 14 44 08.1 -1.0
TORD pP pP 14 44 24.6 -1.6
TORD PP PP 14 48 02.6 -4.7
TORD PKKPbc PKKPbc 15 00 44.4 -0.4
TORD LR LR 15 26 34.9
DRGR 97.63 35⇓ *i*P P 14 44 09.4 +0.3
DRGR 97.63 35 ⇓P P 14 44 09.4 +0.3
DIVS Divcibare 97.67 39⇑ *i*P P 14 44 08.8 -0.5
BZS Buzias 97.73 37⇓ *i*P P 14 44 09.7 +0.2
BZS Buzias 97.73 37 ⇓P P 14 44 09.7 +0.1
SNZO South Karori 97.81 229 PFAKE 14 44 20.0 +10
SNZO LR LR
comp=Z,3μm,22.0s
KLR Kul'dur 97.89 328 *e*P P 14 44 07.8 -2.4
KLR *e*S SKSac 14 54 38.0 -4.6
KLR *e* 14 56 54.0
MOS Moscow 98.19 22 *e*P P 14 44 07.8 -3.8
MOS *e* 14 44 37.4
MOS *i* 14 54 43.1
MOS pmax pmax
comp=Z,101nm,1.3s,mb6.2
MOS pmax pmax
comp=Z,300nm,1.8s,mb6.5
MOS MLR MLR
comp=Z,6μm,24.0s
GRUS Gruza 98.22 38 *e*P P 14 44 11.3 -0.5
OBN Obninsk 98.29 23 P P 14 44 10.1 -1.9
comp=Z,322nm,1.5s,mb6.6,SNR=5.2
OBN Obninsk 98.29 23*c* *i*P P 14 44 10.2 -1.8
OBN *i* pP 14 44 27.5 -1.7
OBN *i* 14 48 06.9
OBN *i* 14 54 45.1
OBN *i*S S 14 55 31.0 -4.0
OBN *i*PPS 14 57 36.5
OBN *e*SS SS 15 02 16.4 -3.0
OBN pmax pmax
comp=Z,136nm,1.6s,mb6.2
OBN MLR MLR
comp=Z,2μm,21.0s
OBN Obninsk 98.29 23⇑ *i*P P 14 44 10.2 -1.8
comp=Z,136nm,1.6s,mb6.2
OBN *i* pP 14 44 27.5 -1.7
OBN *i* 14 48 06.9
OBN *i* 14 54 45.1
OBN *i*S S 14 55 31.0 -4.0
OBN *i*PPS 14 57 36.5
OBN *e*SS SS 15 02 16.4 -3.0
OBN LR LR
comp=Z,2μm,21.0s
AKASG Malin Array Be 98.41 29 P P 14 44 10.6 -2.0
comp=Z,18nm,1.0s,mb5.6,baz=297,slow=3.8,SNR=65
AKASG PP PP 14 48 08.9 -4.3
comp=Z,1.4nm,0.8s,baz=307,slow=7.3,SNR=4.5
AKASG PKKPbc PKKPbc 15 00 40.9 -1.7
comp=Z,0.5nm,0.4s,baz=103,slow=1.8,SNR=11
AKASG LR LR 15 31 16.5
comp=Z,1μm,21.8s,baz=300,slow=37
AKASG Malin Array Be 98.41 29 P P 14 44 10.6 -2.0
AKASG 14 48 09.0
AKASG pmax pmax
comp=Z,18nm,1.0s
AKASG pmax pmax
comp=Z,1.0nm,0.8s
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG MLR MLR
comp=Z,1μm,21.8s
AKASG Malin Array Be 98.41 29 P P 14 44 10.6 -2.0
comp=Z,18nm,1.0s,mb5.6
AKASG *e* 14 48 09.0
AKASG LR LR
comp=Z,1μm,21.8s
AKBB Malin Array Si 98.41 29⇑ *i*P P 14 44 10.5 -2.1
AKBB *e* 14 48 08.7
BURAR Bucovina Array 98.46 33⇓ *i*P P 14 44 12.9 +0.1
BURAR Bucovina Array 98.46 33 ⇓P P 14 44 12.9 +0.1
GZR Gura Zlata 98.52 36⇑ *i*P P 14 44 11.5 -1.6
GZR Gura Zlata 98.52 36 ⇑P P 14 44 11.5 -1.6
BOD Bodaibo 98.55 342 *e*P P 14 44 11.3 -1.9
BOD pmax pmax
comp=Z,10.0nm,2.3s
SKO Skopje 99.77 40 *e*P Pdif 14 44 15.7 -3.0
comp=Z,9.4nm,0.4s
PECR Pechory 99.87 19 *e*P Pdif 14 44 18.0 -1.1
PECR *e* 14 48 20.0
PECR *i* 14 54 52.0
PECR pmax pmax
comp=Z,800nm,1.6s,mb6.9
PECR pmax pmax
comp=Z,400nm,2.0s,mb6.5
PECR smax
comp=N,2μm,7.0s
PECR smax
comp=E,2μm,7.0s
OHR Ohrid 99.88 41 *i* P Pdif 14 44 16.2 -2.9
comp=Z,85nm,1.4s
MLR Muntele Rosu 100.20 35 P Pdif 14 44 21.0 +0.4
comp=Z,29nm,1.2s,baz=102,slow=0.7,SNR=14
MLR Muntele Rosu 100.20 35⇓ *i*P Pdif 14 44 20.3 -0.3
MLR Muntele Rosu 100.20 35 ⇓P Pdif 14 44 21.0 +0.4
MLR pmax pmax
comp=Z,29nm,1.2s
MLR Muntele Rosu 100.20 35 ⇓P Pdif 14 44 20.3 -0.3

BIA Bitola 100.25 40 *e*P Pdif 14 44 17.9 -2.9
comp=Z,2.0nm,0.5s
STIP Stip 100.38 40 *e*P Pdif 14 44 18.4 -3.0
comp=Z,2.3nm,0.2s
VAY Valandovo 100.84 40 *e*P Pdif 14 44 20.4 -3.0
comp=Z,3.1nm,0.2s
HNR Honiara 101.40 264 PFAKE 14 44 40.0 +14
HNR LR LR
comp=Z,1μm,22.0s
MAJO Matsushiro 101.71 315 PFAKE 14 44 40.0 +13
MAJO LR LR
comp=Z,617nm,19.0s
MAT Matsushiro 101.71 315 PDIF Pdif 14 44 26.5 -0.8
MJAR Matsushiro Arr 101.71 315 P Pdif 14 44 26.8 -0.5
comp=Z,4.9nm,1.1s,baz=48,slow=3.7,SNR=10
MJAR PP PP 14 48 36.0 -2.2
comp=Z,1.8nm,0.8s,baz=54,slow=6.4,SNR=5.1
MJAR Matsushiro Arr 101.71 315 P Pdif 14 44 26.8 -0.5
MJAR 14 48 36.1
MJAR pmax pmax
comp=Z,5.0nm,1.1s
MJAR pmax pmax
comp=Z,2.0nm,0.8s
VOR Voronezh 101.91 24 *e*P Pdif 14 44 26.3 -1.9
VOR pmax pmax
comp=N,80nm,1.3s
VOR pmax pmax
comp=Z,110nm,1.3s
MDJ Mudanjiang 102.02 326 P Pdif 14 44 26.7 -2.0
MDJ PP PP 14 48 38.2 -2.4
MDJ AMB AMB
comp=Z,3.0nm,1.3s
MDJ AMB AMB
comp=Z,87nm,6.1s
MDJ LR LR
comp=N,997nm,31.4s
MDJ LR LR
comp=E,1μm,28.2s
MDJ LR LR
comp=Z,2μm,31.4s
MDJ Mudanjiang 102.02 326 PFAKE 14 44 40.0 +11
MDJ LR LR
comp=Z,2μm,19.0s
VRSR Storozhevoye 102.31 24*c* *i*P Pdif 14 44 28.5 -1.4
VRSR pmax pmax
comp=Z,60nm,1.0s
VRSR pmax pmax
comp=N,70nm,0.9s
VRSR pmax pmax
comp=E,10.0nm,1.3s
VRSR MLR MLR
comp=Z,3μm,26.0s
VRSR MLR MLR
comp=N,2μm,25.0s
VRSR MLR MLR
comp=E,3μm,25.0s
VRHR Novokhopersk 103.33 23 *e*P Pdif 14 44 34.1 -0.4
VRHR pmax pmax
comp=Z,30nm,0.9s
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.6s
VRHR MLR MLR
comp=Z,2μm,22.0s
VRHR MLR MLR
comp=N,990nm,24.0s
VRHR MLR MLR
comp=E,1μm,26.0s
SVE Sverdlovsk 103.37 10 *e*P Pdif 14 44 32.0 -2.7
SVE *e* 14 51 12.0
SVE *i*S SKSac 14 55 07.0 -2.3
SVE *e* 14 55 52.0
SVE *e*PS Sdif 14 56 07.0 -11
SVE *e* 14 58 06.0
SVE smax
comp=N,1μm,9.0s
SVE smax
comp=E,600nm,9.0s
SVE MLR MLR
comp=N,900nm,26.0s
SVE MLR MLR
comp=E,400nm,26.0s
SVE MLR MLR
comp=Z,1μm,26.0s
ARU Arti 103.38 11⇑ *i*P Pdif 14 44 33.2 -1.5
ARU *e* 14 48 47.2
ARU *e*S SKSac 14 55 04.3 -5.0
ARU *e*SP SP 14 57 46.9 -6.7
ARU *e*PS PS 14 57 57.1 -4.0
ARU pmax pmax
comp=Z,17nm,1.0s
ARU MLR MLR
comp=N,2μm,22.0s
ARU MLR MLR
comp=Z,2μm,22.0s
ARU MLR MLR
comp=E,200nm,21.0s
HIA Hailar 103.39 334 PFAKE 14 44 40.0 +5.2
HIA LR LR
comp=Z,5μm,19.0s
SIM Simferopol' 104.80 31 *e*P Pdif 14 44 49.7 +8.7
SIM *e* 14 48 58.0
SIM *e* 14 55 17.0
SIM *e*PS PS 14 58 12.0 -4.0
SIM *e*SS SS 15 03 47.0 -2.7
SIM pmax pmax
comp=Z,180nm,16.9s
TLY Talaya 106.82 344 PFAKE 14 49 10.0 +10
TLY LR LR
comp=Z,2μm,20.0s
NVS Novosibirsk 106.83 357 *e*P Pdif 14 44 40.7 -9.3
SNY Shenyang 107.13 327 PDIF Pdif 14 44 53.6 +2.2
SNY SKS SKSac 14 55 28.2 +2.1
SNY SS SS 15 04 19.9 -1.5
SNY LR LR
comp=N,1μm,19.2s
SNY LR LR
comp=E,1μm,19.0s
SNY LR LR
comp=Z,2μm,16.7s
GUMO Guam 107.60 291 PFAKE 14 49 10.0 +8.7
GUMO LR LR
comp=Z,1.0nm,20.0s
ZAL Zalesovo 107.65 356 Pdiff Pdif 14 44 53.5 -0.2
comp=Z,1.0nm,0.8s,baz=109,slow=6.4,SNR=6.1
ZAL Zalesovo 107.65 356 P Pdif 14 44 53.5 -0.2
ZAL pmax pmax
comp=Z,1.0nm,0.8s
ANTO Ankara 107.71 36 PFAKE 14 49 10.0 +8.5
ANTO LR LR
comp=Z,965nm,21.0s
CHKZ Chkalovo 107.73 5 *e*P Pdif 14 44 52.3 -1.7
CHKZ pmax pmax
comp=Z,7.0nm,1.3s
BR131 Keskin Array S 108.28 35 PFAKE 14 49 10.0 +7.5
BR131 LR LR
comp=Z,640nm,21.0s
BRTR Keskin Array B 108.28 35 Pdiff Pdif 14 44 54.9 -1.6
comp=Z,1.1nm,0.9s,baz=291,slow=3.4,SNR=5.0
BRTR PP PP 14 49 24.9 -1.9
comp=Z,2.0nm,1.0s,baz=272,slow=4.8,SNR=3.8
BRTR PKKPbc PKKPbc 15 00 12.8 -0.6
comp=Z,2.7nm,1.0s,baz=162,slow=5.2,SNR=10.0
BRTR PKKPab PKKPab 15 00 26.6 -0.3
comp=Z,2.1nm,1.1s,baz=156,slow=9.5,SNR=5.3
BRTR Keskin Array B 108.28 35 P Pdif 14 44 54.9 -1.6
BRTR 14 49 25.0
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR pmax pmax
comp=Z,3.0nm,1.0s
BRTR pmax pmax
comp=Z,2.0nm,1.1s
BRVK Borovoye 108.31 5 PFAKE 14 49 10.0 +7.4
BRVK LR LR
comp=Z,4μm,21.0s
BVAR Borovoye Array 108.35 5 Pdiff Pdif 14 44 56.4 -0.4
comp=Z,0.7nm,0.5s,baz=251,slow=41,SNR=3.9
BVAR PP PP 14 49 20.8 -6.7
comp=Z,3.4nm,1.0s,baz=304,slow=3.4,SNR=4.6
BVAR PKKPbc PKKPbc 15 00 12.2 -1.0
comp=Z,3.0nm,1.1s,baz=160,slow=4.7,SNR=7.5
BVAR PKKPab PKKPab 15 00 24.6 -2.0
comp=Z,3.8nm,1.1s,baz=156,slow=7.8,SNR=7.8
BVAR PKPPKP 15 08 35.3
comp=Z,2.3nm,1.1s,baz=180,slow=0.9,SNR=10
BVAR Borovoye Array 108.35 5 P Pdif 14 44 56.4 -0.4
BVAR 15 08 35.3
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR pmax pmax
comp=Z,3.0nm,1.0s
BVAR pmax pmax
comp=Z,3.0nm,1.1s
BVAR pmax pmax
comp=Z,4.0nm,1.1s
BVAR pmax pmax
comp=Z,2.0nm,1.1s
BVAR Borovoye Array 108.35 5 P Pdif 14 44 56.4 -0.4
comp=Z,1.0nm,0.5s
BVAR *e* 15 08 35.3
INCN Inchon 108.45 322 PFAKE 14 49 10.0 +7.2
INCN LR LR
comp=Z,3μm,20.0s
SBA Scott Base 108.45 193 P Pdif 14 44 52.6 -4.7
SBA pmax pmax
comp=Z,22nm,2.1s
SBA MLR MLR
comp=Z,969nm,19.0s
SBA Scott Base 108.45 193 Pdif Pdif 14 44 52.6 -4.7
comp=Z,22nm,2.1s
SBA LR LR
comp=Z,969nm,19.0s
QSPA South Pole Qui 108.45 180 *e*P PKiKP 14 49 02.1 -0.7
AKTK Aktyubinsk 108.89 14 Pdif Pdif 14 44 58.2 -1.0
AKTK PKKPbc PKKPbc 15 00 09.2 -2.3
AKTK PKKPab PKKPab 15 00 22.6 -1.7
AKTO Aktyubinsk 108.89 14 Pdiff Pdif 14 44 58.2 -1.0
comp=Z,1.1nm,0.8s,baz=338,slow=3.8,SNR=5.8
AKTO PKKPbc PKKPbc 15 00 09.2 -2.3
comp=Z,1.8nm,0.9s,baz=163,slow=6.2,SNR=4.9
AKTO PKKPab PKKPab 15 00 22.6 -1.7
comp=Z,6.4nm,1.1s,baz=156,slow=5.3,SNR=10
AKTO Aktyubinsk 108.89 14 P Pdif 14 44 58.2 -1.0
AKTO pmax pmax
comp=Z,1.0nm,0.8s
AKTO pmax pmax
comp=Z,2.0nm,0.9s
AKTO pmax pmax
comp=Z,6.0nm,1.1s
ULN Ulaanbaatar 109.26 340 PFAKE 14 49 10.0 +5.6
ULN LR LR
comp=Z,3μm,20.0s
SONM Songino Array 109.49 341 PP PP 14 49 35.5 -0.2
comp=Z,2.5nm,1.1s,baz=21,slow=5.2,SNR=5.2
SONM PKKPbc PKKPbc 15 00 08.5 -1.0
comp=Z,5.6nm,1.1s,baz=194,slow=5.2,SNR=11
VNDA Vanda 109.50 193 PKiKP PKiKP 14 49 04.2 -0.6
comp=Z,3.0nm,1.1s,baz=181,slow=0.6,SNR=7.2
VNDA PKKPbc PKKPbc 15 00 08.6 -0.8
comp=Z,1.6nm,0.9s,baz=297,slow=7.9,SNR=6.2
VNDA Vanda 109.50 193 PKiKP PKiKP 14 49 04.2 -0.6
VNDA PKKPbc PKKPbc 15 00 08.6 -0.8
VNDA LR LR
comp=Z,1μm,20.0s
KIV Kislovodsk 109.51 27 *e*P Pdif 14 45 21.9 +20
KIV *i* 14 49 37.5
KIV *i* 14 55 39.5
KIV *i* PS PS 14 59 02.6 -1.7
KIV pmax pmax
comp=Z,100nm,17.3s
KIV Kislovodsk 109.51 27 PFAKE 14 49 10.0 +5.2
KIV LR LR
comp=Z,1μm,21.0s
SNAA Sanae 110.05 161 *e*PKIKP PKiKP 14 49 04.3 -1.5
DL2 Dalian 110.27 326 *e*PDIF Pdif 14 45 01.4 -3.9
DL2 PP PP 14 49 40.2 -1.1
DL2 SS SS 15 05 05.6 +1.9
DL2 PP PP
comp=Z,120nm,6.2s
DL2 LR LR
comp=N,390nm,20.1s
DL2 LR LR
comp=E,760nm,20.3s
DL2 LR LR
comp=Z,830nm,21.1s
KURK Kurchatov 111.05 0 *e*P Pdif 14 45 08.8 0.0
KURK MLR MLR
comp=Z,2μm,20.0s
BJT Baijiatuau 112.19 330 PFAKE 14 49 20.0 +10
BJT LR LR
comp=Z,4μm,20.0s
PMG Port Moresby 113.49 268 PFAKE 14 49 20.0 +7.6
PMG LR LR
comp=Z,788nm,21.0s
GNI Garni 113.49 28 PFAKE 14 49 20.0 +7.6
GNI LR LR
comp=Z,1μm,22.0s
BTO Baotou 114.44 334 *e*PKP PKiKP 14 49 12.1 -2.1
MKAR Makanchi Array 114.91 357 PKP PKiKP 14 49 13.4 -1.7
comp=Z,2.1nm,1.0s,baz=318,slow=1.6,SNR=6.5
MKAR PKKPbc PKKPbc 14 59 48.0 -3.5
comp=Z,4.3nm,1.0s,baz=151,slow=2.8,SNR=14
MKAR Makanchi Array 114.91 357 PKIKP PKiKP 14 49 13.4 -1.7
MKAR 14 59 48.0
MKAR pmax pmax
comp=Z,2.0nm,1.0s
MKAR pmax pmax
comp=Z,4.0nm,1.0s
MKAR Makanchi Array 114.91 357 PKPdf PKiKP 14 49 13.4 -1.7
MKAR *e* 14 59 48.0
ASF Jabal al Asfar 115.48 39 PKP PKPdf 14 49 16.7 +0.5
comp=Z,1.9nm,0.6s,baz=315,slow=1.4,SNR=3.0
ASF PKKPbc PKKPbc 14 59 49.7 +0.1
comp=Z,3.1nm,0.9s,baz=54,slow=4.0,SNR=3.7
ASF Jabal al Asfar 115.48 39 PKIKP PKPdf 14 49 16.7 +0.5
ASF 14 59 49.7
ASF pmax pmax
comp=Z,2.0nm,0.6s
ASF pmax pmax
comp=Z,3.0nm,0.9s
SSE Sheshan 116.10 320 PKP PKPdf 14 49 10.3 -7.1
SSE PP PP 14 50 20.8 -2.0
SSE PP PP
comp=Z,117nm,6.4s
SSE LR LR
comp=N,518nm,20.5s
SSE LR LR
comp=E,976nm,20.4s
SSE LR LR
comp=Z,996nm,18.5s
NJ2 Nanjing 116.81 322 *e*PKP PKPdf 14 49 13.2 -5.5
NJ2 PP PP 14 50 29.0 +1.3
NJ2 PKS 14 52 48.0
NJ2 PP PP
comp=Z,420nm,9.5s
NJ2 LR LR
comp=N,4μm,26.9s
NJ2 LR LR
comp=E,4μm,22.4s
NJ2 LR LR
comp=Z,2μm,27.8s
CTAO Charters Tower 116.85 256 PFAKE 14 49 30.0 +11
CTAO LR LR
comp=Z,764nm,21.0s
WMQ Urumqi 117.43 353 PKP PKPdf 14 49 19.0 -0.9
WMQ PP PP 14 50 37.0 +4.9
WMQ PKS 14 52 55.0
WMQ SKS SKSdf 14 56 19.0 -7.8
WMQ PP PP
comp=Z,176nm,5.0s
WMQ LR LR
comp=N,4μm,18.0s
WMQ LR LR
comp=E,3μm,18.0s
WMQ LR LR
comp=Z,5μm,19.0s
TAU Tasmania Unive 118.11 231 PFAKE 14 49 30.0 +8.8
TAU LR LR
comp=Z,1μm,20.0s
DRV Dumont d'Urvil 118.21 203 PP PP 14 50 36.0 -1.5
DRV SP SP 15 00 16.0 -0.8
DRV SS SS 15 06 52.0 +3.8
FRU Bishkek 118.81 4 *e*PKIKP PKPdf 14 49 22.0 -0.6
BHD Baghdad 118.82 33 *ex* x 14 49 36.0
AAK Ala-Archa 119.00 4⇑ *e*PKIKP PKPdf 14 49 22.7 -0.3
AAK MLR MLR
comp=Z,2μm,19.0s
GTA Gaotai 119.14 342 PKP PKPdf 14 49 22.5 -0.7

GTA PP PP 14 50 45.4 +1.5
GTA PKS 14 52 57.6
GTA SKKS SKKSac 14 57 26.6 -12
GTA SS SS 15 06 58.8 -1.5
GTA PP PP
comp=Z,229nm,5.7s
GTA LR LR
comp=N,1μm,19.0s
GTA LR LR
comp=E,1μm,21.3s
GTA LR LR
comp=Z,2μm,22.0s
TATO Taipei 120.10 315 PFAKE 14 49 40.0 +15
TATO LR LR
comp=Z,1μm,19.0s
XAN Xi'an 120.42 331 PKP PKPdf 14 49 25.0 -0.7
XAN LR LR
comp=N,2μm,19.1s
XAN LR LR
comp=E,759nm,21.3s
XAN LR LR
comp=Z,3μm,18.8s
VAN Vannovskaya 120.50 19 *i* PKIKP PKPdf 14 49 25.9 0.0
LZH Lanzhou 120.78 337 PKP PKPdf 14 49 26.6 +0.2
LZH XPKP 14 49 49.2
LZH PP PP 14 50 54.0 -1.1
LZH PP PP
comp=Z,510nm,6.9s
LZH LR LR
comp=E,3μm,19.2s
LZH LR LR
comp=Z,4μm,20.0s
QZH Quanzhou 122.04 317 *e*PKP PKPdf 14 49 27.2 -1.6
QZH PP PP 14 51 09.8 +6.1
QZH LR LR
comp=N,2μm,15.7s
QZH LR LR
comp=E,1μm,18.5s
QZH LR LR
comp=Z,3μm,23.0s
TSUM Tsumeb 122.23 101 PKP PKPdf 14 49 28.7 -0.5
comp=Z,5.7nm,0.8s,baz=248,slow=3.9,SNR=7.2
TSUM pPKP pPKPdf 14 49 46.6 -0.3
comp=Z,7.7nm,0.9s,baz=269,slow=2.3,SNR=4.2
TSUM Tsumeb 122.23 101 PKP PKPdf 14 49 28.7 -0.5
TSUM pPKP pPKPdf 14 49 46.6 -0.3
TSUM LR LR
comp=Z,1μm,21.0s
STKA Stephens Creek 122.46 244 *e*PKIKP PKPdf 14 49 29.0 -0.6
comp=Z,33nm,1.1s
STKA *e*pPKIKP 14 49 46.5
STKA Stephens Creek 122.46 244 PKP PKPdf 14 49 29.1 -0.6
comp=Z,49nm,1.1s,baz=59,slow=2.2,SNR=51
STKA pPKP pPKPdf 14 49 46.6 -0.7
comp=Z,44nm,0.9s,baz=41,slow=2.9,SNR=11
STKA PKKPbc PKKPbc 14 59 24.9 +0.7
comp=Z,2.8nm,0.6s,baz=269,slow=6.2,SNR=7.4
MIB Mutribah 123.10 33 *e*P PKPdf 14 49 29.7 -1.2
MIB AMb AMB 14 49 32.6
comp=Z,39nm,1.1s
RST Umm Al-Ruwaisa 123.17 33 *e*P PKPdf 14 49 29.9 -1.1
RST AMb AMB 14 49 32.7
comp=Z,54nm,1.2s
NAY Al-Naaiem 123.50 33 *e*P PKPdf 14 49 30.8 -0.8
NAY AMb AMB 14 49 33.3
comp=Z,25nm,1.0s
UMR Umm Al-Rimmam 123.50 33 *e*P PKPdf 14 49 31.0 -0.6
UMR AMb AMB 14 49 33.0
comp=Z,45nm,1.1s
KBD Kabd 123.79 33 *e*P PKPdf 14 49 31.5 -0.7
KBD AMb AMB 14 49 34.2
comp=Z,159nm,1.2s
RDF Al-Radifah 123.92 33 *e*P PKPdf 14 49 31.2 -1.2
RDF AMb AMB 14 49 34.8
comp=Z,42nm,1.3s
SYO Syowa Base 124.00 164⇑*e*PKPdf PKPdf 14 49 30.6 -2.0
SYO Syowa Base 124.00 164⇑*e*pPKPdf pPKPdf 14 49 48.4 -1.9
SYO Syowa Base 124.00 164⇑*e*PP PP 14 51 14.5 -2.5
CD2 Chengdu 125.35 334 *e*PKP PKPdf 14 49 32.8 -2.4
CD2 PP PP 14 51 27.6 +1.6
CD2 PKS 14 53 08.1
CD2 SKS SKSdf 14 56 33.3 -8.5
CD2 PP PP
comp=Z,170nm,8.5s
CD2 LR LR
comp=N,920nm,21.6s
CD2 LR LR
comp=Z,1μm,20.4s
SUR Sutherland 126.33 117 PFAKE 14 49 50.0 +13
SUR LR LR
comp=Z,2μm,20.0s
DAV Davao City (W) 127.43 295 PFAKE 14 49 50.0 +11
DAV LR LR
comp=Z,2μm,21.0s
GYA Guiyang 127.79 328⇓*i*PKP PKPdf 14 49 39.3 -0.5
GYA PKS 14 53 14.6
GYA PP PP
comp=Z,220nm,4.2s
GYA LR LR
comp=N,2μm,25.8s
GYA LR LR
comp=E,1μm,23.1s
GYA LR LR
comp=Z,2μm,24.0s
WRAB Tennant Creek 127.86 259 *e*PKIKP PKPdf 14 49 38.7 -1.2
WRAB *e* 14 49 56.5
WRAB MLR MLR
comp=Z,1μm,22.0s
WB2 Warramunga Arr 127.86 259 *e*PKIKP PKPdf 14 49 39.4 -0.5
WB2 *e*pPKIKP 14 49 57.5
CASY Casey 128.02 196 *e*PKPdf PKPdf 14 49 37.9 -2.4
CASY LR LR
comp=Z,1μm,20.0s
KAKA Kakadu 128.29 268 *e*PKIKP PKPdf 14 49 40.7 -0.1
comp=Z,64nm,1.3s
KAKA *e*pPKIKP 14 49 59.2
AS31 Alice Springs 128.71 254 *e*PKPdf PKPdf 14 49 40.8 -0.8
ASAR Alice Springs 128.71 254 PKhKP 14 49 24.4
comp=Z,1.5nm,0.8s,baz=93,slow=3.8,SNR=10
ASAR PKP PKPdf 14 49 40.9 -0.7
comp=Z,27nm,1.0s,baz=96,slow=1.9,SNR=68
ASAR pPKP pPKPdf 14 49 58.7 -0.6
comp=Z,24nm,1.0s,baz=74,slow=2.0,SNR=8.4
ASAR PP PP 14 51 46.6 -1.6
comp=Z,8.0nm,1.3s,baz=92,slow=5.6,SNR=3.7
ASAR SKKPbc 15 02 49.5
comp=Z,5.0nm,1.0s,baz=270,slow=3.1,SNR=7.9
ASAR Alice Springs 128.71 254 PKHKP 14 49 24.4
ASAR 14 49 40.9
ASAR 14 49 58.7
ASAR 14 51 46.6
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ASAR pmax pmax
comp=Z,27nm,1.0s
ASAR pmax pmax
comp=Z,24nm,1.0s
ASAR pmax pmax
comp=Z,8.0nm,1.3s
ASAR pmax pmax
comp=N,5.0nm,1.0s
ASPA Alice Springs 128.72 254 *e*PKIKP PKPdf 14 49 40.8 -0.8
ASPA *e*pPKIKP 14 49 58.3
MAW Mawson 129.89 172⇓*i*PKIKP PKPdf 14 49 42.9 -0.9
comp=N,56nm,1.1s
MAW *e*pPKIKP 14 50 01.8
MAW *e*PKS 14 53 04.5
MAW Mawson 129.89 172 PKP PKPdf 14 49 42.6 -1.2
comp=N,70nm,1.0s,baz=212,slow=2.3,SNR=90
MAW pPKP pPKPdf 14 50 00.2 -1.3
comp=N,74nm,0.9s,baz=223,slow=3.5,SNR=13
MAW Mawson 129.89 172 PKIKP PKPdf 14 49 42.6 -1.2
MAW 14 50 00.2
MAW pmax pmax
comp=Z,70nm,1.0s
MAW pmax pmax
comp=Z,74nm,0.9s
BOSA Boshof 130.14 112 PKP PKPdf 14 49 44.2 -0.1
comp=Z,48nm,1.2s,baz=299,slow=2.4,SNR=15
BOSA pPKP pPKPdf 14 50 02.0 0.0
comp=Z,29nm,1.1s,baz=253,slow=1.6,SNR=6.8
BOSA Boshof 130.14 112 PKIKP PKPdf 14 49 44.2 -0.1
BOSA 14 50 02.0
BOSA pmax pmax
comp=Z,48nm,1.2s
BOSA pmax pmax
comp=Z,29nm,1.1s
BOSA Boshof 130.14 112 PKP PKPdf 14 49 44.2 -0.1
BOSA pPKP pPKPdf 14 50 02.0 0.0
LBTB Lobatse 130.31 107 PKPdf PKPdf 14 49 45.2 +0.6
LBTB pPKPdf pPKPdf 14 50 02.5 +0.2
LBTB Lobatse 130.31 107 *e*PKPdf PKPdf 14 49 44.7 +0.1
LBTB *e*pPKPdf pPKPdf 14 50 02.0 -0.3
LBTB LR LR
comp=Z,1μm,20.0s
LSA Lhasa 130.62 346 PKP PKPdf 14 49 45.4 +0.2
LSA Lhasa 130.62 346 *e*PKIKP PKPdf 14 49 46.5 +1.3
LSA *e* 14 50 04.0
LSA MLR MLR
comp=Z,4μm,22.0s
LSA Lhasa 130.62 346 *e*PKPdf PKPdf 14 49 46.5 +1.3
LSA *e*pPKPdf pPKPdf 14 50 04.0 +1.1
LSA *e*SKP 14 53 06.5
LSA LR LR
comp=Z,4μm,22.0s
KMI Kunming 130.80 331 PKP PKPdf 14 49 45.4 -0.1
KMI XPKP 14 50 08.7
KMI PP PP 14 52 02.9 +1.1
KMI PKS 14 53 20.5
KMI PPP 14 54 51.9
KMI SKS SKSdf 14 56 49.3 -2.5
KMI PP PP
comp=Z,419nm,10.2s
KMI LR LR
comp=N,1μm,22.7s
KMI LR LR
comp=E,918nm,21.7s
KMI LR LR
comp=Z,2μm,25.5s
MIR Mirnyy 131.14 187*d i*PKIKP PKPdf 14 49 46.0 -0.2
MIR pmax pmax
comp=Z,320nm,2.0s
MIR pmax pmax
comp=Z,300nm,4.0s
LSZ Lusaka 131.47 94 PKhKP 14 49 41.8
comp=Z,3.0nm,0.9s,baz=344,slow=2.0,SNR=4.3
LSZ PKP PKPdf 14 49 47.4 +0.6
comp=Z,7.8nm,1.0s,baz=337,slow=1.3,SNR=11
LSZ pPKP pPKPdf 14 50 04.4 -0.1
comp=Z,6.6nm,0.7s,baz=64,slow=2.2,SNR=3.3
LSZ Lusaka 131.47 94 PKIKP PKPdf 14 49 41.8 -5.0
LSZ 14 50 04.4
LSZ pmax pmax
comp=Z,3.0nm,0.9s
LSZ pmax pmax
comp=Z,8.0nm,1.0s
LSZ pmax pmax
comp=Z,7.0nm,0.7s
LSZ Lusaka 131.47 94 *e*PKPpre 14 49 41.2
LSZ *e*PKPdf PKPdf 14 49 47.2 +0.4
LSZ PKP PKPdf 14 49 47.4 +0.6
LSZ pPKP pPKPdf 14 50 04.4 -0.1
LSZ *e*PP PP 14 52 02.6 -3.4
LSZ *e*SKP 14 53 09.7
LSZ LR LR
comp=Z,803nm,19.0s
ASHO Ashiyiah 131.60 28 P PKPdf 14 49 46.8 -0.2
SNR=12
ASHO ⇑S 14 53 14.3
QIZ Qiongzhong 131.88 319 PKP PKPdf 14 49 49.6 +2.0
QIZ XPKP 14 50 07.0
QIZ PP PP 14 52 16.1 +7.3
QIZ SS SS 15 09 44.5 +4.4
QIZ PP PP
comp=Z,304nm,9.0s
QIZ LR LR
comp=N,990nm,19.0s
QIZ LR LR
comp=Z,2μm,19.0s
QIZ Qiongzhong 131.88 319 PFAKE 14 50 00.0 +12
QIZ LR LR
comp=Z,2μm,20.0s
GUN Gumba 133.34 352 *e*P PKPdf 14 49 50.3 0.0
comp=Z,780nm,1.8s
GKN Gorkha 133.41 353 *e*P PKPdf 14 49 49.9 -0.6
comp=Z,648nm,1.9s
BIDO Bidbid 133.53 27 ⇓P PKPdf 14 49 50.9 +0.2
SNR=7.2
ATD Arta Tunnel 133.53 53 PKP PKPdf 14 49 52.0 +1.3
comp=Z,6.2nm,0.7s,baz=279,slow=23,SNR=4.1
KKN Kakani 133.54 352 *e*P PKPdf 14 49 50.4 -0.3
comp=Z,146nm,1.2s
JIRN Jiri 133.54 351 *e*P PKPdf 14 49 50.2 -0.5
comp=Z,334nm,1.8s
PKI Pulchoki 133.74 352 *e*P PKPdf 14 49 50.5 -0.6
comp=Z,110nm,1.3s
DMN Daman 133.74 352 *e*P PKPdf 14 49 49.5 -1.6
comp=Z,120nm,1.2s
KOLN Koldanda 133.74 354 *e*P PKPdf 14 49 50.6 -0.5
comp=Z,770nm,2.2s
SMDO Samad 133.90 27 ⇓P PKPdf 14 49 51.5 +0.1
SNR=8.3
WSAR Wadi Sarin 133.99 26 PKP PKPdf 14 49 50.6 -0.9
comp=Z,12nm,0.8s,baz=172,slow=3.1,SNR=7.8
WSAR pPKP pPKPdf 14 50 09.6 +0.3
comp=Z,21nm,0.7s,baz=268,slow=1.5,SNR=7.9
FORT Forrest 134.05 245 *e*PKIKP PKPdf 14 49 51.2 -0.5
comp=Z,35nm,1.2s
FORT *e*pPKIKP 14 50 09.5
FORT *e*PKS 14 53 18.5
KMBO Kilima Mbogo 135.62 72 PKP PKPdf 14 49 53.8 -0.8
comp=Z,1.2nm,0.4s,baz=234,slow=1.5,SNR=5.2
KMBO Kilima Mbogo 135.62 72 *e*PKPdf PKPdf 14 49 53.4 -1.2
KMBO *e*PP PP 14 52 29.4 -3.2
KMBO LR LR
comp=Z,2μm,22.0s
FITZ Fitzroy Crossi 135.75 263 *e*PKIKP PKPdf 14 49 54.8 -0.1
comp=Z,26nm,0.9s
FITZ *e*pPKIKP 14 50 13.3
NANT Nan 137.18 329 P PKPdf 14 49 58.0 +0.5
CHG Chiang Mai 138.00 331 ⇓P PKPdf 14 49 57.2 -1.8
comp=Z,50nm,1.0s
CHTO Chiang Mai 138.00 331 *e*PKPdf PKPdf 14 49 59.2 +0.2
CHTO *e*pPKPdf pPKPdf 14 50 14.5 -2.2
CHTO LR LR
comp=Z,2μm,19.0s
KKTK Khon Kaen 138.12 324 P PKPdf 14 50 03.5 +4.3
CM31 Chiang Mai Arr 138.31 331 PFAKE 14 50 10.0 +10
CM31 LR LR
comp=Z,2μm,20.0s
NST Nakhon Sawan 140.10 327 P PKPdf 14 50 02.0 -0.9
comp=Z,38nm,1.1s
MBWA Marble Bar 141.61 259 *e*PKPpre 14 49 58.5
MBWA *e*PKPdf PKPdf 14 50 05.2 -0.4
MBWA LR LR
comp=Z,907nm,20.0s
KLBR Kellerberrin 142.70 242 *e*PKIKP PKPdf 14 50 02.3 -5.2
comp=Z,73nm,1.2s
NWAO Narrogin (SRO) 142.86 240 *e*PKHKP 14 50 02.2
NWAO *e* 14 50 07.8
NWAO *e* 14 50 25.9
NWAO MLR MLR
comp=Z,1μm,21.0s
NNT Nongplab 142.88 325 P PKPdf 14 50 05.0 -2.8
KSM Kuching 143.29 299 *e*PKPpre 14 50 04.8
KSM *e*pPKPdf pPKPdf 14 50 23.3 -2.9
MUN Mundaring 143.91 241 *e*PKIKP PKPdf 14 50 06.6 -3.0
MUN *e*pPKIKP 14 50 24.7
HYB Hyderabad 144.27 1⇓*i*PKP PKPdf 14 50 08.5 -1.8
comp=Z,160nm,1.0s
HYB *e* 14 50 27.0
HYB *e* 14 54 08.0
HYB *e* 15 00 12.0
HYB Hyderabad 144.27 1⇓*e*P PKPdf 14 50 08.5 -1.8
PBA Port Blair 147.05 335⇑*e*P x 14 49 58.0
PBA *e*S x 14 50 02.3
PBA *e*x x 14 50 08.7
comp=N,376nm,0.9s
PBA *e*x x 14 50 08.8
comp=E,197nm,0.6s
KULM Kulim 148.08 316 *e*PKPdf PKPdf 14 50 17.1 +0.4
KULM *e*PKPbc PKPbc 14 50 20.5 +0.5
KULM *e*pPKPbc pPKPbc 14 50 37.3 -0.3
IPM Ipoh 148.42 314 P PKPdf 14 50 21.1 +3.8
KGM Kluang 148.49 308 P PKPbc 14 50 22.3 +1.2
PSI Prapat 151.07 315 PKP PKPdf 14 50 21.4 -0.1
comp=E,33nm,1.1s,baz=229,slow=2.0,SNR=28
PSI PKPbc PKPbc 14 50 27.4 +0.1
comp=E,20nm,0.4s,baz=47,slow=6.5,SNR=14
PSI pPKPbc pPKPbc 14 50 44.0 -1.0
comp=E,177nm,0.9s,baz=329,slow=2.6,SNR=17
PSI Prapat 151.07 315 PKIKP PKPdf 14 50 21.4 -0.1
PSI 14 50 44.0
PSI pmax pmax
comp=Z,33nm,1.1s
PSI pmax pmax
comp=Z,20nm,0.4s
PSI pmax pmax
comp=Z,177nm,0.9s
PALK Pallekele 154.29 356 *e*PKPab PKPab 14 50 48.2 -0.4
PALK LR LR
comp=Z,1μm,22.0s
COCO West Island 161.62 288 PFAKE 14 50 50.0 +15
COCO LR LR
comp=Z,1μm,20.0s
DGAR Diego Garcia 167.27 31 PFAKE 14 50 50.0 +10
DGAR LR LR
comp=Z,2μm,21.0s

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*CSEM **11** 14:35:56.1, 67.85N×20.17E, h2km, ML2.9, Suspected Mining explosion. After UPP*
*UPP **11** 14:35:56.1, 67.85N×20.17E, h2km, ML2.9, Suspected Mining explosion.*
HEL 11 14:35:56.9±0.4**, 67.86N×20.19E, h0km, ML2.9**(UPP)**, Explosion, Sweden**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
KUA Kurravaara 0.11 30 *i* P Pg 14 35 58.6 -0.4
KUA *i* S Sg 14 36 00.4 0.0
LANU Lannavaara 0.70 73 *i* P Pg 14 36 09.5 -0.9
KIF Kilpisjarvi 1.17 11 *e*P Pg 14 36 18.9 -0.4
KIF *e*S Sg 14 36 34.1 -0.5
SGF Sodankyl 2.46 97 *e*P Pn 14 36 38.4 +0.2
SGF *e*S Sn 14 37 06.9 -2.0
KEV Kevo 3.12 49 *e*S Sn 14 37 25.1 -0.3

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*SZGRF **11** 14:38:32.5, 18.26N×101.58W, h33km, mb5.3, Guerrero, Mexico*
*CSEM **11** 14:38:32.8, 18.68N×101.41W, h33km, mb5.5*
*ISCJB **11** 14:38:36.1±0.2, 18.45N±0.02×101.19W±0.02, h63km, mb5.3/178, Error ellipse: s-maj=3.8km s-min=2.0km az=50.4*
*BGS **11** 14:38:36.5±1.8, 18.51N×101.17W, h60km, mb5.2*
*IDC **11** 14:38:37.4±0.7, 18.61N×101.05W, h62km±4km, mb4.7/29, mb1 4.8/29, mb1mx4.8/32, mbtmp5.0/29, MS4.5/2, Ms1 4.5/2, ms1mx3.8/29, Error ellipse: s-maj=19.9km s-min=11.7km az=52.0*
*BJI **11** 14:38:37.2, 18.50N×101.20W, h64km, mB5.6, mb5.2, Ms5.9, Msz5.6*
*NEIC **11** 14:38:37.3±0.2, 18.51N×101.17W, mb5.4/126, MD4.8(MEX), Error ellipse: s-maj=5.7km s-min=3.6km az=213.0*
*MEX **11** 14:38:38.3±0.9, 18.45N×101.28W, h51km±21km, MD4.8*
*MOS **11** 14:38:39.1±1.0, 18.76N×101.10W, h80km, mb5.3/84, Error ellipse: s-maj=8.0km s-min=4.9km az=68.7*
ISC 11 14:38:37.7±0.2**, 18.43N**±0.03×**101.15W**±0.02**, h65**km**, h65**km±1.4km**:pP-P, n665, σ0.95**/659**, mb5.2**/178**, 87C-79D, Guerrero**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
ZIIG Zihuatanejo 0.87 200 *i* P **Pn 14 38 51.9 -2.4**
ZIIG *i* S **Sn 14 39 04.2 -2.3**
MOIG Morelia 1.24 358 *i* P **Pn 14 38 58.0 -1.0**
MOIG *i* S **Sn 14 39 12.4 -2.6**
MEIG Mezcala 1.54 109 *i* P **Pn 14 39 03.5 +0.5**
MEIG *i* S **Sn 14 39 23.0 +0.9**
PLIG Platanillo 1.57 91 *i* P **Pn 14 39 04.0 +0.7**
PLIG *i* S **Sn 14 39 24.1 +1.4**
CAIG El Cayaco 1.61 148 *i* P **Pn 14 39 03.7 -0.2**
CAIG *i* S **Sn 14 39 24.6 +0.8**
ACX Acapulco 1.95 143 *i* P **Pn 14 39 08.7 +0.2**
ACX *i* S **Sn 14 39 32.3 +0.3**
YAIG Yautepec 2.02 77 *i* P **Pn 14 39 10.5 +1.0**
YAIG *i* S **Sn 14 39 35.2 +1.5**
UNM Universidad Na 2.07 64 *i* P **Pn 14 39 11.7 +1.6**
UNM *e*P 14 39 14.2
UNM *i* S **Sn 14 39 40.1 +5.2**
UNM *i* S **Sn 14 39 40.7 +5.8**
UNM Universidad Na 2.07 64 *i* P **Pn 14 39 11.7 +1.6**
UNM *e*P 14 39 14.2
UNM *i* S **Sn 14 39 40.1 +5.2**
UNM *i* S **Sn 14 39 40.7 +5.8**
MMIG Aquila 2.09 266 *i* P **Pn 14 39 08.9 -1.5**
MMIG *i* S **Sn 14 39 32.1 -3.2**
CIVM Cilcuayo 2.16 72 *i* P **Pn 14 39 12.0 +0.7**
CIVM *i* S **Sn 14 39 39.7 +2.7**
PBVM Pinon 2.20 62 *i* P **Pn 14 39 12.9 +1.0**
PBVM *i* S **Sn 14 39 39.6 +1.5**
PTVM Pico Tres Padr 2.25 59 *i* P **Pn 14 39 12.6 0.0**
PTVM *i* S **Sn 14 39 39.5 +0.3**
RFVM Rio Frio 2.43 68 *i* P **Pn 14 39 15.4 +0.4**
RFVM *i* S **Sn 14 39 45.4 +1.7**
PPM Popocatepetl 2.47 75 *i* P **Pn 14 39 16.3 +0.6**
PPM *e*P 14 39 16.7
PPM *i* S **Sn 14 39 47.2 +2.5**
PPM *i* S **Sn 14 39 47.7 +3.0**
CJM Chamela 3.83 287 *i* P **Pn 14 39 32.6 -1.5**
CJM *i* S **Sn 14 40 14.1 -3.9**
ZAIG Zacatecas 4.52 343 *i* P **Pn 14 39 42.9 -0.6**
ZAIG *i* S **Sn 14 40 34.8 +0.1**
CMIG Matias Romero 6.12 102 P **Pn 14 40 07.0 +1.5**
26nm,0.3s,baz=277,slow=10,SNR=61
CMIG S **Sn 14 41 13.1 -0.9**
50nm,0.3s,baz=68,slow=18,SNR=6.1
CMIG Matias Romero 6.12 102 P **Pn 14 40 07.0 +1.5**
CMIG S **Sn 14 41 13.1 -0.9**
JCT Junction City 12.06 6 *e*P **Pn 14 41 28.2 +1.6**
JCT pmax pmax
comp=Z,120nm,1.0s
JCT Junction City 12.06 6 *e*Pn **Pn 14 41 28.2 +1.6**
comp=Z,120nm,1.0s
HKT Hockley 12.45 22 *e*P **Pn 14 41 32.1 +0.2**
HKT pmax pmax
comp=Z,294nm,1.6s
HKT Hockley 12.45 22 *e*Pn **Pn 14 41 32.1 +0.2**
comp=Z,294nm,1.6s
NATX Nacogdoches 14.51 23 *e*Pn **Pn 14 41 58.4 -1.1**
comp=Z,864nm,1.1s
116A Eloy 16.98 328 ⇓P **Pn 14 42 33.1 +2.4**
baz=17
ANMO Albuquerque 17.12 345 P **Pn 14 42 34.8 +2.3**
comp=Z,0.5nm,0.3s,baz=156,slow=4.5,SNR=5.4
ANMO Albuquerque 17.12 345 P **Pn 14 42 34.8 +2.3**
ANMO pmax pmax
comp=Z,1.0nm,0.3s
115A Sonoran Desert 17.35 327 ⇑P **Pn 14 42 37.5 +2.1**
baz=17
MIAR Mount Ida 17.41 21 *e*P **Pn 14 42 33.6 -2.5**
MIAR pmax pmax
comp=Z,175nm,1.0s
MIAR Mount Ida 17.41 21 *e*Pn **Pn 14 42 33.6 -2.5**
comp=Z,175nm,1.0s
UALR University of 18.07 24 *e*P **Pn 14 42 42.7 -1.5**
comp=Z,119nm,1.0s
Z14A Wintersburg 18.24 327 ⇓P **Pn 14 42 47.4 +1.1**
baz=18
Y14A Wickenburg 18.73 328 ⇓P **Pn 14 42 52.6 +0.5**
baz=19
X15A Humboldt 18.80 330 ⇓P **Pn 14 42 53.1 +0.2**
baz=19
Y13A Salome 19.06 326 ⇑P **Pn 14 42 55.9 -0.1**
baz=19
X14A Yava 19.09 329 ⇑P **Pn 14 42 56.4 -0.1**
baz=19
LRAL Lakeview Retre 19.31 38 *e*P **Pn 14 42 54.9 -4.1**
comp=Z,160nm,1.1s
W15A Williams 19.38 332 ⇓P **Pn 14 43 00.4 +0.5**
baz=19
Y12C Blythe 19.39 325 ⇓P **Pn 14 42 59.9 0.0**
baz=19
HBAR Harrisburg 19.43 27 *e*P **Pn 14 42 55.4 -5.0**
DVTC Desert V Tower 19.53 319 ⇓P **Pn 14 43 01.3 -0.3**
baz=20
SWSC Sam W. Stewart 19.54 321 ⇓P **Pn 14 43 01.2 -0.5**
baz=20
PDMCI Parker Dam,Lak 19.60 326 ⇑P **Pn 14 43 01.0 -1.4**
baz=20

X13A Yucca 19.66 327 ⇑P Pn 14 43 02.4 -0.8
baz=20
W14A Seligman 19.79 330 ⇓P Pn 14 43 03.6 -1.1
baz=20
MONP Monument Peak 19.88 319 ⇑P Pn 14 43 05.0 -0.8
baz=20
IRM Iron Mountain 20.04 324 ⇓P P 14 43 06.3 +1.0
baz=20
W13A Hualapai Mount 20.09 328 ⇓P P 14 43 06.8 +0.9
baz=20
PLAL Pickwick Lake 20.17 33 eP P 14 43 05.1 -1.7
comp=Z,194nm,0.9s
NEE2 Needles Airpor 20.21 326 ⇑P P 14 43 08.3 +1.1
baz=20
HALT Halls 20.30 29 P P 14 43 07.1 -1.1
109C Camp Elliot, M 20.31 318 ⇓P P 14 43 09.0 +0.8
baz=20
PFO Pinyon Flat Ob 20.40 321 eP P 14 43 09.8 +0.6
PFO pmax pmax
comp=Z,110nm,1.3s
PFO Pinyon Flat Ob 20.40 321 eP P 14 43 09.8 +0.6
comp=Z,110nm,1.3s
PFO Pinyon Flat Ob 20.40 321 ⇓P P 14 43 10.3 +1.1
baz=20
BELC Belle Mtn. 20.40 322 ⇑P P 14 43 10.2 +1.0
baz=20
DWPF Disney 20.49 58 P P 14 43 08.0 -2.3
comp=Z,68nm,1.0s
W12A Cal Nev Ari 20.75 327 ⇑P P 14 43 14.2 +1.3
baz=21
PARMO Parma 20.75 27 eP P 14 43 11.6 -1.5
MURC Murrieta 20.84 320 ⇓P P 14 43 15.1 +1.1
baz=21
V12A Nelson 21.07 328 ⇓P P 14 43 17.3 +0.8
baz=21
HEC Hector,Ludlow 21.19 323 ⇑P P 14 43 18.9 +1.2
baz=21
SCI San Clemente I 21.30 316 ⇑P P 14 43 20.0 +1.1
baz=21
TUQ Turquoise Mtn. 21.41 325 ⇓P P 14 43 21.2 +1.1
baz=21
U12A Valley of Fire 21.47 329 ⇑P P 14 43 21.3 +0.6
baz=21
CIS Catalina Islan 21.47 317 ⇑P P 14 43 21.3 +0.5
baz=21
BFSC Mount Baldy St 21.55 320 ⇓P P 14 43 21.9 +0.2
baz=22
RRX Edison Barstow 21.61 322 ⇓P P 14 43 23.7 +1.5
baz=22
FVM French Village 21.62 24 eP P 14 43 17.7 -4.6
FVM pmax pmax
comp=Z,87nm,1.0s,mb5.0
FVM French Village 21.62 24 eP P 14 43 17.7 -4.6
comp=Z,88nm,1.0s,mb5.0
GSC Goldstone 21.80 324 ⇓P P 14 43 25.6 +1.3
baz=22
U11A Corn Creek 21.88 328 ⇑P P 14 43 26.8 +1.7
baz=22
SHOC Shoshone 21.95 325 ⇑P P 14 43 26.9 +1.0
baz=22
DECC Green Verdugo 21.98 319 ⇑P P 14 43 27.4 +1.3
baz=22
ARUT Antelope Range 22.08 333 eP P 14 43 27.7 +0.4
SNCC San Nicolas Is 22.11 315 ⇓P P 14 43 28.9 +1.4
baz=22
SRU San Rafael 22.16 340 eP P 14 43 27.7 -0.4
SRU pmax pmax
comp=Z,146nm,1.4s,mb5.1
SRU San Rafael 22.16 340 eP P 14 43 27.7 -0.4
comp=Z,146nm,1.4s,mb5.1
SRU epP 14 43 42.8
EDW2 Edwards Air Fo 22.19 321 ⇑P P 14 43 28.9 +0.4
baz=22
SLM Saint Louis 22.26 23 eP P 14 43 25.5 -3.7
SLM pmax pmax
comp=Z,151nm,1.2s,mb5.2
SLM Saint Louis 22.26 23 eP P 14 43 25.5 -3.7
comp=Z,151nm,1.2s,mb5.2
BLG Laguna Peak 22.35 318 ⇓P P 14 43 31.3 +1.2
baz=22
U10A Ash Meadows, A 22.37 326 ⇑P P 14 43 31.3 +1.1
baz=22
LRMC Laurel Mountai 22.43 322 ⇓P P 14 43 31.8 +0.8
baz=22
OSI Osito Adit 22.46 319 ⇓P P 14 43 32.4 +1.1
baz=22
CPCT Cooper Cave 22.46 38 eP P 14 43 27.4 -3.9
BSC Santa Cruz Isl 22.64 317 ⇓P P 14 43 33.6 +0.4
baz=23
MPMC Manual Prospec 22.73 324 ⇓P P 14 43 34.1 -0.1
baz=23
USIN University of 22.75 28 eP P 14 43 32.7 -1.6
comp=Z,295nm,1.2s,mb5.5
USIN epP 14 43 48.0
ARVC Arvin 22.86 320 ⇑P P 14 43 36.1 +0.6
baz=23
DAC Darwin (Calif) 22.95 324 eP P 14 43 35.2 -1.2
DAC pmax pmax
comp=Z,271nm,2.0s,mb5.2
DAC Darwin (Calif) 22.95 324 eP P 14 43 35.1 -1.2
comp=Z,271nm,2.0s,mb5.2
ISA Isabella 23.02 322 ⇓P P 14 43 37.3 +0.1
baz=23
PHWY Pilot Hill 23.09 352 eP P 14 43 36.9 -1.0
PHWY epP 14 43 51.5
PKM Peak Mountain 23.33 318 ⇓P P 14 43 40.3 +0.2
baz=23
CWC Cottonwood Cre 23.34 324 ⇑P P 14 43 40.4 +0.3
baz=23
GRAC Grapevine Rang 23.35 326 ⇓P P 14 43 40.6 +0.3
baz=23
NLU North Lily Min 23.43 339 eP P 14 43 40.5 -0.6
VES Vestal, Richgr 23.50 321 ⇓P P 14 43 42.3 +0.6
baz=24
TRCR Troy Canyon 23.50 331 eP P 14 43 42.0 +0.3
DAU Daniels Canyon 23.57 340 P P 14 43 42.0 -0.3
WCI Wyandotte Cave 23.61 30 eP P 14 43 39.2 -3.4
WCI e*PP 14 43 56.3
WCI pmax pmax
comp=Z,142nm,1.1s,mb5.2
WCI Wyandotte Cave 23.61 30 eP P 14 43 39.2 -3.4
comp=Z,142nm,1.1s,mb5.2
WCI epP 14 43 56.3
SMMC Simmler 23.71 319 ⇑P P 14 43 44.4 +0.8
baz=24
RWWY Rawlins 23.75 349 eP P 14 43 43.7 -0.3
comp=Z,565nm,1.7s,mb5.6
RWWY epP 14 43 58.8
TZTN Tazewell 23.79 37 eP P 14 43 40.2 -4.1
TZTN epP 14 43 57.9
R10A Warm Springs 23.80 329 ⇑P P 14 43 45.0 +0.6
baz=24
S09A Goldfield 23.82 327 ⇓P P 14 43 45.2 +0.6
baz=24
TIN Tinemaha 23.86 324 ⇑P P 14 43 45.8 +0.8
baz=24
DUG Dugway 23.91 338 eP P 14 43 44.9 -0.5
DUG pmax pmax
comp=Z,32nm,0.9s,mb4.7
DUG Dugway 23.91 338 eP P 14 43 44.9 -0.5
comp=Z,32nm,0.9s,mb4.7
RCTC Rector, Farmer 23.91 322 ⇑P P 14 43 46.5 +1.0
baz=24
CTU Camp Tracy 23.99 340 eP P 14 43 45.6 -0.6
comp=Z,41nm,1.1s,mb4.7
V05C Boulder Hill, 24.01 320 ⇑P P 14 43 47.1 +0.8
baz=24
HELL Mitchell Peak, 24.04 323 ⇑P P 14 43 47.4 +0.8
baz=24
PTRM Twissleman Ran 24.06 319 eP P 14 43 47.2 +0.4
TPH Tonopah 24.09 328 eP P 14 43 47.2 +0.2
TPH pmax pmax
comp=Z,48nm,1.0s,mb4.8
TPH Tonopah 24.09 328 eP P 14 43 47.2 +0.1
comp=Z,48nm,1.0s,mb4.8
P12A McGill 24.12 333 ⇓P P 14 43 47.4 +0.1
baz=24
R09A Tonopah 24.14 328 ⇑P P 14 43 47.4 -0.1
baz=24
BLO Bloomington 24.26 29 eP P 14 43 46.1 -2.5
BLO pmax pmax
comp=Z,109nm,1.0s,mb5.1
BLO Bloomington 24.26 29 eP P 14 43 46.1 -2.5
comp=Z,109nm,1.0s,mb5.1
TCUT Toone Canyon 24.26 341 eP P 14 43 48.7 0.0
SCIA State Center 24.36 14 eP P 14 43 47.6 -2.0
SCIA epP 14 43 59.6

PKD Parkfield 24.45 319 ⇑P P 14 43 51.2 +0.8
baz=24
V04C Ramage Ranch, 24.46 318 ⇓P P 14 43 51.5 +1.1
baz=24
P11A Circle Ranch, 24.55 332 ⇑P P 14 43 51.7 +0.4
baz=24
MLAC Mammoth Lakes 24.61 325 ⇑P P 14 43 52.5 +0.7
baz=25
BGU Big Grassy Mou 24.63 338 eP P 14 43 51.2 -0.8
BGU epP 14 44 07.0
Q09A Carvers 24.65 329 ⇑P P 14 43 53.1 +0.9
baz=25
KCC Kaiser Creek 24.66 323 ⇓P P 14 43 52.7 +0.4
baz=25
T06C Millerton Lake 24.66 322 ⇑P P 14 43 52.6 +0.3
baz=25
O12A Currie 24.72 335 ⇓P P 14 43 53.3 +0.5
baz=25
R08A Mina 24.75 327 ⇓P P 14 43 53.6 +0.6
baz=25
U04C Hernandez Rese 24.87 320 ⇑P P 14 43 54.7 +0.5
baz=25
NVAR Mina Array Bea 24.91 327 P P 14 43 54.9 +0.4
comp=Z,344nm,0.7s,mb4.9,baz=155,slow=8.0,SNR=44
NVAR pP 14 44 10.2
comp=Z,38nm,1.1s,baz=138,slow=10,SNR=7.3
NVAR PcP PcP 14 47 29.9 +1.2
comp=Z,0.9nm,0.6s,baz=138,slow=5.5,SNR=4.7
NVAR pPcP 14 47 47.0
comp=Z,1.9nm,0.8s,baz=213,slow=5.0,SNR=5.3
NVAR Mina Array Bea 24.91 327 P P 14 43 54.9 +0.4
NVAR pP 14 44 10.2
NVAR PcP PcP 14 47 29.9 +1.2
NVAR pPcP 14 47 47.0
P10A Eureka 24.93 331 ⇑P P 14 43 55.4 +0.7
baz=25
V03C Hunter Liggett 24.93 319 ⇓P P 14 43 55.2 +0.4
baz=25
O11A Cowboy Ranch, 24.99 333 ⇓P P 14 43 55.7 +0.5
baz=25
N13A Wendover, West 25.00 336 ⇓P P 14 43 56.0 +0.6
baz=25
Q08A Gabbs 25.04 328 ⇑P P 14 43 56.5 +0.8
baz=25
R07C Lee Vining 25.06 325 ⇓P P 14 43 56.6 +0.7
baz=25
LRV Little Rabbit 25.06 320 eP P 14 43 56.2 +0.4
T05C Eagle Field, D 25.16 321 ⇑P P 14 43 57.5 +0.8
baz=25
P09A Austin 25.19 330 ⇑P P 14 43 57.8 +0.7
baz=25
S05C Merced 25.26 322 ⇑P P 14 43 57.9 +0.2
baz=25
PDAR Pinedale Array 25.29 345 P P 14 43 56.7 -1.2
comp=Z,84nm,0.9s,mb5.2,baz=149,slow=11,SNR=61
PDAR pP pP 14 44 13.9 +0.4
comp=Z,56nm,0.9s,baz=155,slow=9.2,SNR=12
PDAR PcP PcP 14 47 29.6 +0.1
comp=Z,1.5nm,0.7s,baz=134,slow=6.4,SNR=3.8
PDAR pPcP 14 47 46.7
comp=Z,2.6nm,0.8s,baz=165,slow=7.5,SNR=5.3
HVU Hansel Valley 25.30 339 eP P 14 43 57.2 -0.9
HVU e*PP pP 14 44 13.4 -0.2
HVU pmax pmax
comp=Z,38nm,1.1s,mb4.7
HVU Hansel Valley 25.30 339 eP P 14 43 57.1 -0.9
comp=Z,38nm,1.1s,mb4.7
HVU epP pP 14 44 13.4 -0.2
N12A Clover Valley, 25.33 335 ⇓P P 14 43 59.1 +0.7
baz=25
S06C San Francisco 25.35 324 ⇑P P 14 43 59.0 +0.4
baz=25
HAST UC Hastings Re 25.36 319 ⇓P P 14 43 59.1 +0.4
baz=25
M13A Montello 25.43 337 ⇑P P 14 43 59.4 +0.2
baz=25
O10A Cortez Mining, 25.49 332 ⇓P P 14 44 00.5 +0.8
baz=26
Q07A Schurz 25.55 327 ⇑P P 14 44 01.3 +1.0
baz=26
N11A Elko Archery C 25.59 334 ⇓P P 14 44 01.7 +1.0
baz=26
R06C Coleville 25.59 325 ⇑P P 14 44 01.6 +0.9
baz=26
PACP Pacheco Peak 25.60 320 ⇑P P 14 44 00.6 -0.2
baz=26
O09A Fish Creek Ran 25.70 331 ⇑P P 14 44 02.3 +0.6
baz=26
P08A Dixie Valley 25.76 329 ⇑P P 14 44 02.4 +0.2
baz=26
M12A Wells 25.76 336 ⇓P P 14 44 01.8 -0.4
baz=26
CMB Columbia Colle 25.76 323 eP P 14 44 00.4 -1.9
CMB pmax pmax
comp=Z,20nm,1.3s,mb4.4
CMB Columbia Colle 25.76 323 eP P 14 44 00.4 -1.8
comp=Z,20nm,1.3s,mb4.4
CMB Columbia Colle 25.76 323 ⇑P P 14 44 01.9 -0.3
baz=26
BMN Battle Mountai 25.93 331 eP P 14 44 03.6 -0.1
BMN e*PP pP 14 44 19.6 +0.3
BMN pmax pmax
comp=Z,25nm,1.0s,mb4.6
BMN Battle Mountai 25.93 331 eP P 14 44 03.6 -0.1
comp=Z,25nm,1.0s,mb4.6
BMN epP pP 14 44 19.6 +0.3
S04C Ingram Canyon, 25.95 321 ⇑P P 14 44 04.2 +0.3
baz=26
R05C Kirkwood Meado 26.06 325 ⇑P P 14 44 05.7 +0.8
baz=26
JFWS Jewell Farm 26.10 18 eP P 14 44 01.3 -4.0
JFWS e*PP pP 14 44 17.4 -3.4
JFWS pmax pmax
comp=Z,42nm,0.8s,mb4.9
JFWS Jewell Farm 26.10 18 eP P 14 44 01.2 -4.0
comp=Z,42nm,0.8s,mb4.9
JFWS epP pP 14 44 17.4 -3.5
FWV Forest Hill 26.10 39 eP P 14 44 03.2 -2.1
M11A Holland Ranch, 26.12 334 ⇑P P 14 44 05.5 0.0
baz=26
REDW Red Top Meadow 26.17 344 eP P 14 44 04.5 -1.5
comp=Z,139nm,1.4s,mb5.2
R04C Big Horse Ranc 26.23 323 ⇑P P 14 44 07.1 +0.6
baz=26
SNOW Snow King Moun 26.24 344 eP P 14 44 06.4 -0.1
comp=Z,119nm,1.0s,mb5.3
SNOW epP pP 14 44 23.4 +1.3
RRI2 Red Ridge 26.28 343 eP P 14 44 06.4 -0.6
comp=Z,116nm,0.9s,mb5.3
RRI2 epP pP 14 44 23.2 +0.7
WENL Wente Brothers 26.29 321 ⇓P P 14 44 07.4 +0.5
baz=26
TPAW Teton Pass 26.32 344 eP P 14 44 09.1 +1.8
comp=Z,122nm,0.8s,mb5.4
TPAW epP pP 14 44 24.2 +1.4
WCN Washoe City 26.32 326 ⇓P P 14 44 07.8 +0.5
baz=26
LOHW Long Hollow 26.34 344 eP P 14 44 06.6 -0.9
comp=Z,78nm,0.8s,mb5.2
LOHW epP pP 14 44 22.8 -0.2
N09A Rock Creek Ran 26.40 331 ⇑P P 14 44 08.3 +0.3
baz=26
PAHR Pah Rah Range 26.42 327 eP P 14 44 08.2 0.0
comp=Z,20nm,1.2s,mb4.4
PAHR epP pP 14 44 23.2 -0.6
LAVA Lava Cap Winer 26.46 324 ⇓P P 14 44 08.8 +0.2
baz=26
DCID1 Little Creek 26.48 344 eP P 14 44 08.9 +0.2
O07A Toulon 26.51 328 ⇓P P 14 44 09.3 +0.3
baz=26
M10A I.L. Ranch, Tu 26.51 333 ⇑P P 14 44 09.4 +0.3
baz=26
N08A GE Springer Mi 26.63 330 ⇑P P 14 44 10.8 +0.7
baz=27
P06A Stead Airport, 26.67 326 ⇑P P 14 44 11.0 +0.6
baz=27
IMW Indian Meadow 26.69 344 eP P 14 44 12.0 +1.3
comp=Z,25nm,0.6s,mb4.9
P05C Yuba Gap, Truc 26.78 325 ⇓P P 14 44 12.2 +0.8
baz=27
FLWY Flagg Ranch 26.80 345 eP P 14 44 11.0 -0.7
comp=Z,59nm,1.0s,mb5.1
M09A Marrel Ranch, 26.83 332 ⇓P P 14 44 12.6 +0.8
baz=27
O06A Flanigan 26.99 327 ⇓P P 14 44 14.3 +0.9
baz=27
N07B Gerlach 27.03 329 ⇑P P 14 44 13.8 +0.1
baz=27
BEKR Beckwourth 27.05 326 ⇓P P 14 44 14.4 +0.6
baz=27
YFT Old Faithful 27.18 345 eP P 14 44 14.7 -0.4
OHCM Honcut 27.28 324 eP P 14 44 16.2 +0.3
OHCM epP pP 14 44 29.9 -1.7
SUTB Sutter Butte 27.38 323 ⇑P P 14 44 17.2 +0.4
baz=27
L09A Wilkinson Ranc 27.40 333 ⇓P P 14 44 17.3 +0.3
baz=27
O05C Quincy 27.41 326 ⇓P P 14 44 18.0 +0.9
baz=27
YMR Madison River 27.42 345 eP P 14 44 16.6 -0.6
comp=Z,34nm,1.0s,mb4.8
N06A Buffalo Meadow 27.43 328 ⇑P P 14 44 17.6 +0.3
baz=27
ORV Oroville 27.44 324 ⇑P P 14 44 18.5 +1.1
baz=27
MNRC McLaughlin Nat 27.52 322 ⇑P P 14 44 19.1 +1.0
baz=28
M07A Soldier Meadow 27.59 330 ⇓P P 14 44 19.0 +0.3
baz=28
QLMT Earthquake Lak 27.69 344 eP P 14 44 19.4 -0.2
O04C Chester 27.76 326 ⇓P P 14 44 21.0 +0.8
baz=28
ELFS Eagle Lake Fie 27.79 327 ⇑P P 14 44 21.4 +0.9
baz=28
HOPS Hopland 27.96 322 ⇑P P 14 44 22.9 +0.9
baz=28
AAM Ann Arbor 28.06 28 eP P 14 44 21.2 -1.7
MCMT McKenzie Canyo 28.08 342 eP P 14 44 22.6 -0.5
MCMT epP pP 14 44 37.8 -0.9
M06C Likely Place G 28.09 328 ⇓P P 14 44 23.8 +0.6
baz=28
L07A Adell 28.16 330 ⇓P P 14 44 24.3 +0.5
baz=28
GASB Alder Springs 28.20 323 ⇑P P 14 44 25.4 +1.3
baz=28
K08A Mann Creek Ran 28.34 332 ⇑P P 14 44 25.4 +0.1
baz=28
P01C Double 8 Ranch 28.43 322 ⇑P P 14 44 27.2 +1.0
baz=28
DLMT Dillon 28.50 343 eP P 14 44 26.7 -0.1
DLMT epP pP 14 44 40.7 -1.7
M05C Lookout 28.55 327 ⇑P P 14 44 27.5 +0.3
baz=28
L05A Lakeview 28.90 329 ⇑P P 14 44 30.8 +0.4
baz=29
I09A Lost Marbles R 29.04 335 ⇓P P 14 44 30.8 -0.8
baz=29
K06A Valley Falls 29.19 330 ⇓P P 14 44 32.9 0.0
baz=29
M04C Macdoel 29.21 327 ⇑P P 14 44 33.2 +0.1
baz=29
I08A Drewsey 29.32 334 ⇓P P 14 44 33.9 -0.3
baz=29
M02C Callahan 29.47 326 ⇓P P 14 44 34.8 -0.6
baz=29
L04A Klamath Falls 29.52 328 ⇑P P 14 44 35.6 -0.3
baz=30
HRY Holter Researc 29.55 345 eP P 14 44 35.2 -0.9
HRY epP pP 14 44 51.6 -0.2
H09A Durkee 29.58 336 ⇑P P 14 44 35.9 -0.5
baz=30
BMO Blue Mountains 29.60 336 eP P 14 44 35.0 -1.6
comp=Z,16nm,1.1s,mb4.6
BMO epP pP 14 44 50.0 -2.3
YBH Yreka Blue Hor 29.63 326 P P 14 44 34.6 -2.2
comp=Z,5.9nm,0.7s,mb4.3,baz=119,slow=1.6,SNR=5.0
YBH Yreka Blue Hor 29.63 326 P P 14 44 34.6 -2.2
YBH pmax pmax
comp=Z,6.0nm,0.7s
YBH Yreka Blue Hor 29.63 326 ⇓P P 14 44 35.6 -1.2
baz=30
I07A Izee 29.86 333 ⇓P P 14 44 38.5 -0.3
baz=30
H08A Prairie City 29.86 334 ⇓P P 14 44 38.1 -0.8
baz=30
J05A Fort Rock 30.03 330 ⇓P P 14 44 41.7 +1.4
baz=30
I06A Prineville 30.06 332 ⇓P P 14 44 40.7 0.0
baz=30
MSO Missoula 30.22 342 eP P 14 44 37.3 -4.7
comp=Z,15nm,1.5s,mb4.4
SDV Santo Domingo 31.09 104 eP P 14 44 52.2 +2.5
comp=Z,16nm,0.9s,mb4.8
J02A Umpqua 31.24 328 ⇑P P 14 44 50.7 -0.3
baz=31
KEBM Edson Butte 31.29 326 eP P 14 44 52.0 +0.6
KEBM epP pP 14 45 06.5 -0.7
K01A Sixes 31.31 326 ⇓P P 14 44 51.0 -0.6
baz=31
I03A Eugene 31.53 329 ⇑P P 14 44 53.2 -0.4
baz=32
H04A Detroit Lake 31.54 331 ⇓P P 14 44 53.1 -0.5
baz=32
G05A Wamic 31.57 332 ⇑P P 14 44 54.5 +0.6
baz=32
RNO Roman Nose 31.72 328 P P 14 44 55.4 +0.2
I02A Mapleton 31.83 328 ⇑P P 14 44 56.7 +0.5
baz=32
ULM Lac du Bonnet 32.02 6 P P 14 44 54.5 -3.4
comp=Z,34nm,0.8s,mb5.1,baz=197,slow=9.9,SNR=14
SADO Sadowa 32.06 30 P P 14 44 55.1 -3.1
comp=Z,31nm,0.9s,mb5.0,baz=235,slow=8.0,SNR=9.7
G04A Mulino 32.07 331 ⇓P P 14 44 58.2 -0.1
baz=32
F05A White Salmon 32.14 333 ⇑P P 14 44 59.2 +0.4
baz=32
OD2 Odessa Site #2 32.27 337 P P 14 44 59.3 -0.7
NEW Newport 32.47 340 P P 14 45 00.6 -1.3
comp=Z,6.4nm,0.6s,mb4.5,baz=155,slow=5.6,SNR=4.4
NEW Newport 32.47 340 P P 14 45 00.6 -1.2
NEW pmax pmax
comp=Z,6.0nm,0.6s
NEW Newport 32.47 340 P P 14 45 00.6 -1.3
G03A Yamhill 32.52 330 ⇑P P 14 45 02.0 -0.3
baz=32
EBG Ellensburg 32.58 335 P P 14 45 02.8 0.0
F04A Amboy 32.60 332 ⇓P P 14 45 01.9 -1.0
baz=33
TBM Table Mountain 32.81 335 P P 14 45 05.4 +0.6
ETW Entiat 33.06 336 P P 14 45 07.1 +0.1
F03A Seaside 33.11 331 ⇓P P 14 45 06.8 -0.6
baz=33
SJG San Juan 33.21 85 P P 14 45 08.5 +0.3
comp=Z,158nm,0.8s,mb5.9,baz=267,slow=6.9,SNR=31
SJG San Juan 33.21 85 eP P 14 45 08.6 +0.3
SJG pmax pmax
comp=Z,198nm,0.9s
SJG San Juan 33.21 85 eP P 14 45 08.6 +0.3
comp=Z,198nm,0.9s,mb5.9
E03A Lebam 33.58 332 ⇓P P 14 45 12.4 +0.9
baz=34
C05A Tolt Reservoir 33.67 335 ⇓P P 14 45 11.9 -0.4
baz=34
RPW Rockport 34.20 336 P P 14 45 16.4 -0.5
B05A Bryant 34.29 335 ⇓P P 14 45 16.5 -1.1
baz=34
B04A Port Angeles 34.71 333 ⇓P P 14 45 20.7 -0.6
baz=35
A05A Maple Falls 34.87 336 ⇑P P 14 45 21.9 -0.8
baz=35
A04A Legoe Bay, Lum 34.90 335 ⇓P P 14 45 22.4 -0.5
baz=35
EDM Edmonton 36.00 348 eP P 14 45 29.9 -2.4
BBB Bella Bella 39.77 334 P P 14 46 03.1 -1.0
comp=Z,6.6nm,0.8s,mb4.5,baz=176,slow=12,SNR=4.8
CRAG Craig 44.20 334 eP P 14 46 39.5 -0.7
CRAG epP pP 14 46 55.1 -1.5
SCHQ Schefferville 44.77 28 P P 14 46 43.0 -1.7
comp=Z,14nm,0.9s,mb4.7,baz=254,slow=8.4,SNR=7.4
SCHQ PcP PcP 14 48 25.6 -0.3
comp=Z,12nm,0.7s,baz=241,slow=5.2,SNR=6.8
YKA Yellowknife Ar 45.01 351 P P 14 46 43.4 -3.3
comp=Z,5.0nm,0.8s,mb4.3,baz=158,slow=7.5,SNR=8.0
YKA pP pP 14 47 00.6 -2.4
comp=Z,4.5nm,0.9s,baz=160,slow=7.8,SNR=4.3
YKA PcP PcP 14 48 26.6 -0.1
comp=Z,5.6nm,0.8s,baz=160,slow=3.6,SNR=11
YKA pPcP 14 48 42.6
comp=Z,1.4nm,0.7s,baz=155,slow=3.1,SNR=3.4
YKA Yellowknife Ar 45.01 351 P P 14 46 43.4 -3.2
YKA *PP pP 14 47 00.6 -2.4
YKA 14 48 26.6
YKA pmax pmax
comp=Z,5.0nm,0.8s

YKA pmax pmax
comp=Z,5.0nm,0.9s
YKA pmax pmax
comp=Z,6.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.7s
DLBC Dease Lake 45.21 339 P P **14 46 48.6 +0.4**
comp=Z,29nm,0.8s,mb5.1,baz=155,slow=6.9,SNR=12
RPN Rapa Nui 45.98 190 LR LR 15 01 58.6
comp=Z,450nm,18.1s,baz=211,slow=30
SKAG Skagway 47.84 337 *e*P P **14 47 06.3 -2.5**
FRB Frobisher Bay 50.42 18 P P **14 47 27.0 -1.5**
comp=Z,14nm,0.7s,mb5.0,baz=228,slow=7.7,SNR=6.0
FRB PcP PcP 14 48 45.0 -1.0
comp=Z,24nm,0.6s,baz=209,slow=5.9,SNR=8.9
FRB Frobisher Bay 50.42 18 P P **14 47 27.0 -1.5**
FRB 14 48 45.0
FRB pmax pmax
comp=Z,14nm,0.7s
FRB pmax pmax
comp=Z,24nm,0.6s
DAWY Dawson 52.40 340 *e*P P **14 47 41.8 -1.5**
DIV Divide 52.94 335 *e*P P **14 47 46.2 -1.1**
comp=Z,52nm,0.6s,mb5.7
INK Inuvik 53.85 346 P P **14 47 52.2 -1.8**
comp=Z,34nm,0.9s,mb5.4,baz=136,slow=8.8,SNR=30
INK pP pP 14 48 07.8 -3.0
comp=Z,8.9nm,0.9s,baz=170,slow=9.5,SNR=4.4
INK Inuvik 53.85 346 P P **14 47 52.2 -1.8**
INK *PP pP 14 48 07.8 -3.0
INK pmax pmax
comp=Z,34nm,0.9s
INK pmax pmax
comp=Z,9.0nm,0.9s
INK Inuvik 53.85 346 *e*P P **14 47 51.7 -2.3**
comp=Z,76nm,1.2s,mb5.6
INK *epP pP 14 48 07.6 -3.3
KDAK Kodiak Island 54.38 329 P P **14 47 57.0 -0.8**
comp=Z,11nm,0.8s,mb4.9,baz=72,slow=7.6,SNR=6.0
PMR Palmer 54.56 334 *e*P P **14 47 57.7 -1.4**
PMR pmax pmax
comp=Z,33nm,0.6s,mb5.5
PMR Palmer 54.56 334 *e*P P **14 47 57.7 -1.4**
comp=Z,33nm,0.6s,mb5.5
MCK McKinley 55.58 336 *e*P P **14 48 04.6 -1.9**
MCK *e*PP pP 14 48 20.8 -2.6
MCK pmax pmax
comp=Z,20nm,0.9s,mb5.2
MCK McKinley 55.58 336 *e*P P **14 48 04.6 -1.9**
comp=Z,20nm,0.9s,mb5.1
MCK *epP pP 14 48 20.8 -2.6
COLA College 55.80 338 *e*P P **14 48 04.6 -3.4**
COLA *e*PP pP 14 48 21.9 -3.0
COLA *e* 14 49 06.1
COLA pmax pmax
comp=Z,29nm,1.1s,mb5.2
COLA College 55.80 338 *e*P P **14 48 04.6 -3.5**
comp=Z,29nm,1.1s,mb5.2
COLA *epP pP 14 48 21.9 -3.1
COLA *ePcP PcP 14 49 06.1 -0.3
TTA Tatalina 58.03 334 *e*P P **14 48 20.9 -3.0**
TTA *e*PP pP 14 48 37.1 -3.8
TTA pmax pmax
comp=Z,31nm,0.8s,mb5.4
TTA Tatalina 58.03 334 *e*P P **14 48 20.9 -2.9**
comp=Z,31nm,0.8s,mb5.4
TTA *epP pP 14 48 37.1 -3.7
IMA2 Indian Mountai 58.50 338 *e*P P **14 48 24.5 -2.7**
PPT Papeete 59.56 236 LR LR 15 09 50.8
comp=Z,408nm,18.5s,baz=218,slow=31
CPUP Villa Florida 61.57 135 P P **14 48 47.7 -0.4**
comp=Z,11nm,0.8s,mb5.0,baz=303,slow=7.1,SNR=20
CPUP Villa Florida 61.57 135 P P **14 48 47.7 -0.4**
CPUP pmax pmax
comp=Z,11nm,0.8s
CPUP Villa Florida 61.57 135 *e*P P **14 48 47.7 -0.4**
comp=Z,78nm,0.9s,mb5.7
CPUP *epP pP 14 49 04.3 -0.9
NIKO Nikolski 62.09 321 P P **14 48 49.5 -2.2**
BDFB Brasilia 62.32 119 P P **14 48 54.6 +1.4**
comp=Z,8.0nm,0.8s,mb4.8,baz=311,slow=8.9,SNR=5.9
BDFB Brasilia 62.32 119 P P **14 48 54.6 +1.4**
BDFB pmax pmax
comp=Z,8.0nm,0.8s
SUMG Summit 64.48 17 *e*P P **14 49 05.4 -2.0**
comp=Z,35nm,1.1s,mb5.1
DAG Danmarks Havn 70.47 14 *i* P P **14 49 42.0 -3.2**
DAG Danmarks Havn 70.47 14 *e*P P **14 49 42.0 -3.2**
BILL Bilibino 74.03 337 *d i*P P **14 50 05.9 -0.6**
BILL *i* pP 14 50 22.6 -1.5
BILL pmax pmax
comp=Z,37nm,1.6s,mb4.9
KBS Kingsbay 76.33 11⇑ *e*P P **14 50 20.3 +0.6**
KPL Plockton 77.60 34 *e*P P **14 50 25.3 -1.5**
KPL Plockton 77.60 34 *e*P P **14 50 25.3 -1.5**
KAC Achnashellach 77.75 33 *e*P P **14 50 27.2 -0.4**
KAC Achnashellach 77.75 33 *e*P P **14 50 27.2 -0.4**
KSB Sheil Bridge 77.75 34 *e*P P **14 50 26.4 -1.3**
KSB Sheil Bridge 77.75 34 *e*P P **14 50 26.4 -1.3**
EAB Aberfoyle 78.60 34 *e*P P **14 50 31.3 -1.1**
EAB Aberfoyle 78.60 34 *e*P P **14 50 31.3 -1.1**
MCD Coleburn Disti 78.78 33 *e*P P **14 50 32.9 -0.5**
MCD Coleburn Disti 78.78 33 *e*P P **14 50 32.9 -0.5**
EAU Auchinoon 79.18 35 *e*P P **14 50 34.9 -0.6**
EAU Auchinoon 79.18 35 *e*P P **14 50 34.9 -0.6**
EMAZ Mazaricos 79.23 48 P P **14 50 36.3 +0.5**
comp=Z,54nm,1.0s,mb5.3
EDI Edinburgh 79.30 35 *e*P P **14 50 35.8 -0.4**
EDI Edinburgh 79.30 35 *e*P P **14 50 35.8 -0.4**
EBL Broad Law 79.42 35 *e*P P **14 50 36.0 -0.9**
EBL Broad Law 79.42 35 *e*P P **14 50 36.0 -0.9**
ESK Eskdalemuir 79.47 35 *e*P P **14 50 35.6 -1.5**
ESK Eskdalemuir 79.47 35 *e*P P **14 50 35.6 -1.5**
EKA Eskdalemuir Ar 79.49 35 P P **14 50 35.9 -1.3**
comp=Z,9.2nm,0.8s,mb4.7,baz=304,slow=5.7,SNR=15
EKA Eskdalemuir Ar 79.49 35 P P **14 50 35.9 -1.3**
EKA pmax pmax
comp=Z,9.0nm,0.8s
BHH Howats Hill 79.52 35 *e*P P **14 50 36.6 -0.8**
BHH Howats Hill 79.52 35 *e*P P **14 50 36.6 -0.8**
STS Santiago 79.55 48 P P **14 50 37.8 +0.3**
STS pmax pmax
comp=Z,52nm,0.8s,mb5.4
STS Santiago 79.55 48 P P **14 50 37.8 +0.3**
comp=Z,52nm,0.8s,mb5.4
ECK Cauldkaine Hil 79.55 35 *e*P P **14 50 36.5 -1.0**
ECK AMb AMB 14 50 47.6
comp=Z,57nm,1.7s,mb5.1
ECK Cauldkaine Hil 79.55 35 *e*P P **14 50 36.5 -1.0**
ECK AMb AMB 14 50 47.6
comp=Z,57nm,1.7s,mb5.1
ESY Stoneypath 79.61 34 *e*P P **14 50 37.5 -0.3**
ESY Stoneypath 79.61 34 *e*P P **14 50 37.5 -0.3**
BBO1 Bothel 79.61 36 *e*P P **14 50 37.9 0.0**
BBO1 Bothel 79.61 36 *e*P P **14 50 37.9 0.0**
PMAFR Mafra 80.06 52 *e*P P **14 50 40.9 +0.6**
XAL Allendale 80.15 35 *e*P P **14 50 39.7 -1.1**
XAL AMb AMB 14 50 41.0
comp=Z,8.2nm,0.4s,mb5.0
XAL Allendale 80.15 35 *e*P P **14 50 39.7 -1.1**
XAL AMb AMB 14 50 41.0
comp=Z,8.2nm,0.4s,mb5.0
SBD1 Bryn Du 80.15 38 *e*P P **14 50 40.8 0.0**
SBD1 Bryn Du 80.15 38 *e*P P **14 50 40.8 0.0**
HTR Trewern Hill 80.39 38 *e*P P **14 50 41.5 -0.6**
HTR AMb AMB 14 50 45.9
comp=Z,60nm,1.6s,mb5.2
HTR Trewern Hill 80.39 38 *e*P P **14 50 41.5 -0.6**
HTR AMb AMB 14 50 45.9
comp=Z,60nm,1.6s,mb5.2
EPON Pontenova 80.42 48 P P **14 50 42.4 +0.2**
comp=Z,90nm,1.0s,mb5.5
PLML Palmela 80.45 53 *e*P P **14 50 43.7 +1.3**
DYA Yadsworthy 80.49 40 *e*P P **14 50 42.0 -0.5**
DYA Yadsworthy 80.49 40 *e*P P **14 50 42.0 -0.5**
HLM1 Long Mynd 80.49 38 *e*P P **14 50 41.9 -0.7**
HLM1 AMb AMB 14 50 45.9
comp=Z,51nm,1.2s,mb5.2
HLM1 Long Mynd 80.49 38 *e*P P **14 50 41.9 -0.7**
HLM1 AMb AMB 14 50 45.9
comp=Z,51nm,1.2s,mb5.2
PTOM Tomar 80.53 51 *e*P P **14 50 43.7 +0.9**
comp=Z,89nm,1.1s,mb5.5
PVRL Vila Real 80.58 50 *e*P P **14 50 43.7 +0.6**
comp=Z,53nm,1.2s,mb5.2
PVIS Viseu 80.61 50 *e*P P **14 50 43.3 +0.1**
comp=Z,65nm,1.2s,mb5.3
LHO Holmfirth 80.76 37 *e*P P **14 50 43.4 -0.6**
LHO Holmfirth 80.76 37 *e*P P **14 50 43.4 -0.6**
HGH Gray Hill 80.80 39 *e*P P **14 50 43.7 -0.5**
HGH AMb AMB 14 50 49.4
comp=Z,78nm,1.7s,mb5.2
HGH Gray Hill 80.80 39 *e*P P **14 50 43.7 -0.5**
HGH AMb AMB 14 50 49.4
comp=Z,78nm,1.7s,mb5.2
HAE Alders End 80.83 38 *e*P P **14 50 43.7 -0.7**
HAE AMb AMB 14 50 52.1
comp=Z,85nm,1.6s,mb5.3
HAE Alders End 80.83 38 *e*P P **14 50 43.7 -0.7**
HAE AMb AMB 14 50 52.1
comp=Z,85nm,1.6s,mb5.3
PTEO Sao Teotonio 80.87 54 *e*P P **14 50 45.5 +0.9**
comp=Z,102nm,0.9s,mb5.7
KWE Weaver Farm 80.93 37 *e*P P **14 50 43.4 -1.5**
KWE Weaver Farm 80.93 37 *e*P P **14 50 43.4 -1.5**
MTE Manteigas 80.95 51 *e*P P **14 50 45.5 +0.4**
comp=Z,81nm,1.4s,mb5.4
MTE Manteigas 80.95 51 *e*P P **14 50 43.7 -1.4**
comp=Z,71nm,1.0s,mb5.5
MTE *epP pP 14 51 00.1 -2.8
ECAL Calabor 81.10 49 P P **14 50 46.6 +0.7**
comp=Z,31nm,1.1s,mb5.0
PBRG Braganca 81.14 49 *e*P P **14 50 46.2 +0.2**
comp=Z,45nm,1.3s,mb5.1
PCBR Castelo Branco 81.16 51 *e*P P **14 50 46.3 +0.1**
comp=Z,49nm,1.8s,mb5.0
PESTR Estremoz 81.35 52 *e*P P **14 50 47.4 +0.2**
comp=Z,39nm,1.5s,mb5.0
PBEJ Beja 81.38 53 *e*P P **14 50 47.7 +0.3**
comp=Z,40nm,1.0s,mb5.2
PET Petropavlovsk 81.44 323⇑ *e*P P **14 50 49.0 +1.4**
PET pmax pmax
comp=Z,20nm,1.2s,mb4.8
ROSF Rostrenen 81.53 42 *e*P P **14 50 46.8 -1.3**
comp=Z,79nm,1.3s,mb5.1
ROSF Rostrenen 81.53 42 *e*P P **14 50 46.8 -1.3**
ROSF pmax pmax
comp=Z,40nm,1.3s,mb5.1
ROSF Rostrenen 81.53 42 *e*P P **14 50 46.8 -1.3**
comp=Z,40nm,1.3s,mb5.1
QUIF Quistinic 81.73 42 *e*P P **14 50 48.1 -1.1**
comp=Z,51nm,1.2s,mb4.9
QUIF Quistinic 81.73 42 *e*P P **14 50 48.1 -1.1**
QUIF pmax pmax
comp=Z,25nm,1.2s,mb4.9
QUIF Quistinic 81.73 42 *e*P P **14 50 48.1 -1.1**
comp=Z,25nm,1.2s,mb4.9
EARI Arriondas 81.78 47 P P **14 50 49.3 -0.1**
comp=Z,59nm,1.2s,mb5.3
EBAD Badajoz 81.82 52 P P **14 50 49.6 0.0**
comp=Z,5.8nm,0.9s,mb4.4
EGRO El Granado 81.82 53 P P **14 50 50.3 +0.7**
comp=Z,58nm,1.2s,mb5.3
SGMF Saint Gilles 82.01 42 *e*P P **14 50 49.4 -1.3**
comp=Z,33nm,1.0s,mb4.8
SGMF Saint Gilles 82.01 42 *e*P P **14 50 49.4 -1.3**
SGMF pmax pmax
comp=Z,16nm,1.0s,mb4.8
SGMF Saint Gilles 82.01 42 *e*P P **14 50 49.4 -1.3**
comp=Z,16nm,1.0s,mb4.8
EMIN Mina Concepcio 82.36 53 P P **14 50 53.1 +0.6**
comp=Z,42nm,0.9s,mb5.3
ELAN Lanoesa 83.03 47 P P **14 50 56.1 +0.1**
comp=Z,53nm,1.0s,mb5.3
GRR Gorron 83.04 41 *e*P P **14 50 55.2 -0.8**
comp=Z,102nm,1.0s,mb5.3
GRR Gorron 83.04 41 *e*P P **14 50 55.2 -0.8**
GRR pmax pmax
comp=Z,51nm,1.0s,mb5.3
GRR Gorron 83.04 41 *e*P P **14 50 55.2 -0.8**
comp=Z,51nm,1.0s,mb5.3
MA2 Magadan 83.08 331 *e*P P **14 50 56.8 +0.6**
MA2 pmax pmax
comp=Z,57nm,2.5s,mb5.0
FLN La Foliniere 83.15 41 *e*P P **14 50 55.9 -0.7**
comp=Z,127nm,0.9s,mb5.5
FLN La Foliniere 83.15 41 *e*P P **14 50 55.9 -0.7**
FLN pmax pmax
comp=Z,63nm,0.9s,mb5.5
FLN La Foliniere 83.15 41 *e*P P **14 50 55.9 -0.7**
comp=Z,63nm,0.9s,mb5.5
ESPR Espera 83.25 54 P P **14 50 58.3 +1.2**
comp=Z,70nm,1.1s,mb5.4
GUD Guadarrama 83.34 50 P P **14 50 58.1 +0.5**
GUD pmax pmax
comp=Z,34nm,0.8s,mb5.2
GUD Guadarrama 83.34 50 P P **14 50 58.1 +0.5**
comp=Z,34nm,0.8s,mb5.2
LDF La Druitiere 83.43 41 *e*P P **14 50 57.3 -0.7**
comp=Z,52nm,0.9s,mb5.1
LDF La Druitiere 83.43 41 *e*P P **14 50 57.3 -0.7**
LDF pmax pmax
comp=Z,26nm,0.9s,mb5.1
LDF La Druitiere 83.43 41 *e*P P **14 50 57.3 -0.7**
comp=Z,26nm,0.9s,mb5.1
EJIF Jimena Fronter 83.68 54 P P **14 51 00.9 +1.6**
EJIF pmax pmax
comp=Z,28nm,1.1s,mb5.0
EJIF Jimena Fronter 83.68 54 P P **14 51 00.9 +1.6**
comp=Z,28nm,1.1s,mb5.0
LCHF La Chataignera 83.70 43 *e*P P **14 50 59.3 -0.1**
ESDC Sonseca Array 83.79 50 P P **14 50 59.5 -0.3**
comp=Z,8.1nm,0.7s,mb4.7,baz=302,slow=5.2,SNR=33
EADA Adanuz 83.82 52 P P **14 51 00.6 +0.6**
comp=Z,51nm,1.1s,mb5.3
MENF Mencas 84.11 39 *e*P P **14 51 01.7 +0.2**
MFF Saint Martin d 84.11 43 *e*P P **14 51 01.7 +0.2**
comp=Z,150nm,1.4s,mb5.3
MFF Saint Martin d 84.11 43 *e*P P **14 51 01.7 +0.2**
MFF pmax pmax
comp=Z,75nm,1.4s,mb5.3
MFF Saint Martin d 84.11 43 *e*P P **14 51 01.7 +0.2**
comp=Z,75nm,1.4s,mb5.3
EMIJ Mijas 84.18 54 P P **14 51 02.4 +0.6**
comp=Z,64nm,1.2s,mb5.3
KONO Kongsberg 84.27 29 *i* P P **14 51 02.1 -0.2**
NB2 NORSAR Subarra 84.34 27 P P **14 51 01.7 -0.9**
comp=Z,22nm,0.9s,mb5.0,baz=298,slow=4.8
NOA NORSAR Array B 84.34 27 P P **14 51 02.1 -0.6**
comp=Z,12nm,0.9s,mb4.7,baz=301,slow=4.9,SNR=25
NOA NORSAR Array B 84.34 27 P P **14 51 02.1 -0.5**
NOA pmax pmax
comp=Z,12nm,0.9s
EALK Alkurruntz 84.37 46 P P **14 51 04.6 +1.8**
comp=Z,22nm,0.8s,mb5.0
EBAN Banos Encina 84.41 52 P P **14 51 03.8 +0.8**
EBAN pmax pmax
comp=Z,16nm,0.9s,mb4.8
EBAN Banos Encina 84.41 52 P P **14 51 03.8 +0.8**
comp=Z,16nm,0.9s,mb4.9
ELOJ Sierra Loja 84.46 53 P P **14 51 05.7 +2.4**
ELOJ pmax pmax
comp=Z,37nm,1.0s,mb5.2
ELOJ Sierra Loja 84.46 53 P P **14 51 05.7 +2.5**
comp=Z,37nm,1.0s,mb5.2
ARCES ARCESS Array B 84.56 16 P P **14 51 02.9 -0.8**
comp=Z,27nm,0.8s,mb5.2,baz=316,slow=5.1,SNR=35
ARCES ARCESS Array B 84.56 16 P P **14 51 02.9 -0.9**
ARCES pmax pmax
comp=Z,27nm,0.8s
ARCES ARCESS Array B 84.56 16 P P **14 51 02.9 -0.8**
SJPF Ste Jean 84.60 46 *e*P P **14 51 03.7 -0.3**
ERON Agron 84.77 53 P P **14 51 06.7 +1.9**
comp=Z,26nm,0.8s,mb5.2
LARF Larrau 84.79 46 *e*P P **14 51 05.6 +0.7**
KEV Kevo 84.81 16 *e*p P **14 51 00.7 -4.3**
comp=Z,17nm,0.8s,mb5.0
KEV Kevo 84.81 16 *e*P P **14 51 03.3 -1.7**
KEV pmax pmax
comp=Z,34nm,1.0s,mb5.2
KEV Kevo 84.81 16 *e*P P **14 51 03.3 -1.8**
comp=Z,34nm,1.0s,mb5.2
ECOG Cogollos-Vega 84.86 53 P P **14 51 07.1 +1.8**
ECOG pmax pmax
comp=Z,50nm,1.0s,mb5.4
ECOG Cogollos-Vega 84.86 53 P P **14 51 07.1 +1.8**
comp=Z,50nm,1.0s,mb5.4
EQES Quesada 85.06 52 P P **14 51 07.4 +1.1**
comp=Z,57nm,1.2s,mb5.4
ETSF Etsaut 85.13 46 *e*P P **14 51 06.5 -0.1**
comp=Z,118nm,1.3s,mb5.4
ETSF Etsaut 85.13 46 *e*P P **14 51 06.5 -0.1**
ETSF pmax pmax
comp=Z,59nm,1.3s,mb5.4
ETSF Etsaut 85.13 46 *e*P P **14 51 06.5 -0.1**
comp=Z,59nm,1.3s,mb5.4
EVIA Vianos 85.20 51 P P **14 51 08.5 +1.5**
EVIA pmax pmax
comp=Z,47nm,0.8s,mb5.5
EVIA Vianos 85.20 51 P P **14 51 08.5 +1.5**
comp=Z,47nm,0.8s,mb5.5
LFF La Frestale 85.28 44 *e*P P **14 51 06.9 -0.5**
comp=Z,217nm,1.1s,mb5.7
LFF La Frestale 85.28 44 *e*P P **14 51 06.9 -0.5**
LFF pmax pmax
comp=Z,108nm,1.1s,mb5.7
LFF La Frestale 85.28 44 *e*P P **14 51 06.9 -0.5**
comp=Z,108nm,1.1s,mb5.7
UCC Uccle 85.31 38 P P **14 51 07.9 +0.4**
SNF Seneffe 85.38 38 P P **14 51 08.6 +0.7**
EHUE Huescar 85.41 52 P P **14 51 09.3 +1.3**
EHUE pmax pmax
comp=Z,43nm,1.0s,mb5.3
EHUE Huescar 85.41 52 P P **14 51 09.3 +1.3**
comp=Z,43nm,1.0s,mb5.3
EBER Berja 85.50 53 P P **14 51 09.4 +1.0**
comp=Z,68nm,0.9s,mb5.6
MDT Midelt 85.50 57 P P **14 51 09.2 +0.8**
comp=Z,42nm,0.9s,mb5.4,baz=292,slow=5.4,SNR=52
MDT pP pP 14 51 25.7 -0.7
comp=Z,19nm,1.0s,baz=297,slow=5.8,SNR=4.5
LABF Labassere 85.51 46 *e*P P **14 51 08.9 +0.4**
BAIF Baives 85.52 39 *e*P P **14 51 08.0 -0.5**
comp=Z,99nm,1.0s,mb5.4
BAIF Baives 85.52 39 *e*P P **14 51 08.0 -0.5**
BAIF pmax pmax
comp=Z,49nm,1.0s,mb5.4
BAIF Baives 85.52 39 *e*P P **14 51 08.0 -0.5**
comp=Z,49nm,1.0s,mb5.4
VIEF Viey 85.54 46 *e*P P **14 51 09.5 +0.9**
ESAC San Caprasio 85.61 48 P P **14 51 09.6 +0.6**
comp=Z,137nm,1.3s,mb5.7
HYF Humbligny 85.64 42 *e*P P **14 51 08.7 -0.5**
RJF Les Rejaudoux 85.66 44 *e*P P **14 51 08.5 -0.8**
comp=Z,257nm,1.0s,mb5.8
RJF Les Rejaudoux 85.66 44 *e*P P **14 51 08.5 -0.8**
RJF pmax pmax
comp=Z,129nm,1.0s,mb5.8
RJF Les Rejaudoux 85.66 44 *e*P P **14 51 08.5 -0.8**
comp=Z,129nm,1.0s,mb5.8
EBIE Bielsa 85.69 46 P P **14 51 10.3 +0.9**
comp=Z,74nm,1.0s,mb5.6
EPF Esparros 85.70 46 *e*P P **14 51 09.1 -0.4**
comp=Z,229nm,1.2s,mb5.7
EPF Esparros 85.70 46 *e*P P **14 51 09.1 -0.4**
EPF pmax pmax
comp=Z,115nm,1.2s,mb5.7
EPF Esparros 85.70 46 *e*P P **14 51 09.1 -0.4**
comp=Z,115nm,1.2s,mb5.7
DOU Dourbes 85.73 38 P P **14 51 10.1 +0.5**
TCF Toulx Ste Croi 85.74 43 *e*P P **14 51 08.9 -0.8**
comp=Z,166nm,0.9s,mb5.7
TCF Toulx Ste Croi 85.74 43 *e*P P **14 51 08.9 -0.8**
TCF pmax pmax
comp=Z,83nm,0.9s,mb5.7
TCF Toulx Ste Croi 85.74 43 *e*P P **14 51 08.9 -0.8**
comp=Z,83nm,0.9s,mb5.7
RESF Ens 85.78 46 *e*P P **14 51 11.0 +1.1**
HFS Hagfors 85.85 27 P P **14 51 08.5 -1.7**
comp=Z,12nm,0.9s,mb4.8,baz=260,slow=2.7,SNR=15
HFS Hagfors 85.85 27 P P **14 51 08.5 -1.7**
HFS pmax pmax
comp=Z,12nm,0.9s
GIVF Givet 85.86 38 *e*P P **14 51 09.8 -0.5**
comp=Z,69nm,1.0s,mb5.2
GIVF Givet 85.86 38 *e*P P **14 51 09.8 -0.5**
GIVF pmax pmax
comp=Z,35nm,1.0s,mb5.2
GIVF Givet 85.86 38 *e*P P **14 51 09.8 -0.5**
comp=Z,35nm,1.0s,mb5.2
ETOB Tobarra 85.91 51 P P **14 51 11.8 +1.3**
comp=Z,56nm,1.0s,mb5.5
ECHE Chera 86.00 50 P P **14 51 12.3 +1.4**
ECHE pmax pmax
comp=Z,32nm,0.9s,mb5.2
ECHE Chera 86.00 50 P P **14 51 12.3 +1.4**
comp=Z,32nm,0.9s,mb5.2
BCLA Clavier 86.01 38 P P **14 51 10.3 -0.7**
BGF Bois d'Agland 86.05 42 *e*P P **14 51 10.4 -0.8**
comp=Z,206nm,1.3s,mb5.6
BGF Bois d'Agland 86.05 42 *e*P P **14 51 10.4 -0.8**
BGF pmax pmax
comp=Z,103nm,1.3s,mb5.6
BGF Bois d'Agland 86.05 42 *e*P P **14 51 10.4 -0.8**
comp=Z,103nm,1.3s,mb5.6
EMOS Mosqueruela 86.08 49 P P **14 51 12.8 +1.5**
comp=Z,93nm,0.9s,mb5.7
VERF Verneugheol 86.12 43 *e*P P **14 51 11.7 +0.2**
CAF Calviac 86.16 44 *e*P P **14 51 11.0 -0.7**
comp=Z,78nm,1.2s,mb5.2
CAF Calviac 86.16 44 *e*P P **14 51 11.0 -0.7**
CAF pmax pmax
comp=Z,39nm,1.2s,mb5.2
CAF Calviac 86.16 44 *e*P P **14 51 11.0 -0.7**
comp=Z,39nm,1.2s,mb5.2
MLS Moulis 86.24 46 *e*P P **14 51 12.6 +0.5**
SSF Saint Saulge 86.27 42 *e*P P **14 51 11.4 -0.9**
comp=Z,95nm,0.8s,mb5.5
SSF Saint Saulge 86.27 42 *e*P P **14 51 11.4 -0.9**
SSF pmax pmax
comp=Z,48nm,0.8s,mb5.5
SSF Saint Saulge 86.27 42 *e*P P **14 51 11.4 -0.9**
comp=Z,48nm,0.8s,mb5.5
AVF Avril sur Loir 86.28 42 *e*P P **14 51 11.2 -1.1**
comp=Z,69nm,0.9s,mb5.3
AVF Avril sur Loir 86.28 42 *e*P P **14 51 11.2 -1.1**
AVF pmax pmax
comp=Z,34nm,0.9s,mb5.3
AVF Avril sur Loir 86.28 42 *e*P P **14 51 11.2 -1.1**
comp=Z,34nm,0.9s,mb5.3
FRNF Fournols 86.31 43 *e*P P **14 51 13.0 +0.5**
MEM Membach 86.34 38 P P **14 51 13.2 +0.6**
SALF Salau 86.38 46 *e*P P **14 51 13.9 +1.1**
LOR Lormes 86.41 41 *e*P P **14 51 12.4 -0.6**
comp=Z,198nm,0.8s,mb5.8
LOR Lormes 86.41 41 *e*P P **14 51 12.4 -0.6**
LOR pmax pmax
comp=Z,99nm,0.8s,mb5.8
LOR Lormes 86.41 41 *e*P P **14 51 12.4 -0.6**
comp=Z,99nm,0.8s,mb5.8
EMUR La Murta 86.41 51 P P **14 51 13.6 +0.6**
comp=Z,61nm,1.1s,mb5.4
AGO Saint Agoulin 86.42 43 *e*P P **14 51 12.9 -0.1**
ERTA Horta de San J 86.44 48 P P **14 51 13.6 +0.4**
comp=Z,54nm,1.1s,mb5.4
PYM Petit Puy Mans 86.46 43 *e*P P **14 51 13.2 0.0**
IBBN Ibbenburen 86.61 36 *e*P P **14 51 13.9 0.0**
comp=Z,27nm,1.0s,mb5.1
SMF Signal de Mont 86.64 42 *e*P P **14 51 13.0 -1.1**
comp=Z,68nm,0.9s,mb5.3
SMF Signal de Mont 86.64 42 *e*P P **14 51 13.0 -1.1**
SMF pmax pmax
comp=Z,34nm,0.9s,mb5.3
SMF Signal de Mont 86.64 42 *e*P P **14 51 13.0 -1.1**
comp=Z,34nm,0.9s,mb5.3
MEZF Maizieres J'vi 86.65 40 *e*P P **14 51 13.7 -0.4**
comp=Z,64nm,0.9s,mb5.3
MEZF Maizieres J'vi 86.65 40 *e*P P **14 51 13.7 -0.4**
comp=Z,64nm,0.9s,mb5.5
PLDF La Plantade 86.77 42 *e*P P **14 51 14.8 +0.1**
LBL Lubilhac 86.82 43 *e*P P **14 51 15.1 +0.2**
EPOB Poblet 86.82 47 P P **14 51 15.2 +0.2**
comp=Z,71nm,1.3s,mb5.4
WLF Walferdange 86.83 38 *e*P P **14 51 15.1 +0.1**
comp=Z,46nm,1.0s,mb5.4
WLF Walferdange 86.83 38 P P **14 51 15.4 +0.4**
WLF Walferdange 86.83 38 *e*P P **14 51 14.1 -0.9**
WLF pmax pmax
comp=Z,43nm,0.9s,mb5.4
WLF Walferdange 86.83 38 *e*P P **14 51 14.1 -0.9**
comp=Z,43nm,0.9s,mb5.4
MTLF Montolieu 86.86 45 *e*P P **14 51 14.6 -0.6**
comp=Z,84nm,1.0s,mb5.3
MTLF Montolieu 86.86 45 *e*P P **14 51 14.6 -0.6**
MTLF pmax pmax
comp=Z,42nm,1.0s,mb5.3
MTLF Montolieu 86.86 45 *e*P P **14 51 14.6 -0.6**

comp=Z,42nm,1.0s,mb5.3
COLF Collangettes 86.99 43 *e*P **P** **14 51 15.4 -0.4**
LRDF Laroque-de-Fa 87.23 46 *e*P **P** **14 51 17.5 +0.5**
BSEG Bad Segeberg 87.25 33 *e*P **P** **14 51 16.9 -0.2**
comp=Z,35nm,1.0s,mb5.2
BSEG Bad Segeberg 87.25 33 *e*P **P** **14 51 16.9 -0.2**
BSEG pmax pmax
comp=Z,35nm,1.0s,mb5.2
THEF They Montfort 87.33 40 *e*P **P** **14 51 17.0 -0.4**
HAU Haudompre 87.64 40 *e*P **P** **14 51 18.5 -0.4**
comp=Z,59nm,1.0s,mb5.3
HAU Haudompre 87.64 40 *e*P **P** **14 51 18.5 -0.4**
HAU pmax pmax
comp=Z,29nm,1.0s,mb5.3
HAU Haudompre 87.64 40 *e*P **P** **14 51 18.5 -0.4**
comp=Z,29nm,1.0s,mb5.3
EJON La Jonquera 87.66 46 P **P** **14 51 20.1 +1.1**
comp=Z,29nm,0.9s,mb5.3
LASF Ste Croix 87.67 44 *e*P **P** **14 51 18.4 -0.7**
comp=Z,67nm,0.8s,mb5.4
NRDL Niedersach Rie 87.81 35 *e*P **P** **14 51 19.7 0.0**
comp=Z,32nm,1.0s,mb5.3
VIVF Saint-Julien-I 87.89 43 *e*P **P** **14 51 20.3 +0.2**
comp=Z,63nm,1.2s,mb5.2
VIVF Saint-Julien-I 87.89 43 *e*P **P** **14 51 20.3 +0.2**
VIVF pmax pmax
comp=Z,32nm,1.2s,mb5.2
VIVF Saint-Julien-I 87.89 43 *e*P **P** **14 51 20.3 +0.2**
comp=Z,32nm,1.2s,mb5.2
TNS Taunus Mts 87.92 37 *e*P **P** **14 51 20.1 -0.2**
comp=Z,32nm,1.1s,mb5.3
TNS Taunus Mts 87.92 37 *e*P **P** **14 51 20.1 -0.2**
TNS pmax pmax
comp=Z,32nm,1.1s,mb5.3
CDF Champ du Feu 88.03 39 *e*P **P** **14 51 19.2 -1.6**
comp=Z,34nm,1.1s,mb5.0
CDF Champ du Feu 88.03 39 *e*P **P** **14 51 19.2 -1.6**
CDF pmax pmax
comp=Z,17nm,1.1s,mb5.0
CDF Champ du Feu 88.03 39 *e*P **P** **14 51 19.2 -1.6**
comp=Z,17nm,1.1s,mb5.0
HINF Hinteralfeld 88.03 40 *e*P **P** **14 51 19.2 -1.6**
comp=Z,33nm,1.1s,mb5.0
HINF Hinteralfeld 88.03 40 *e*P **P** **14 51 19.2 -1.6**
HINF pmax pmax
comp=Z,16nm,1.1s,mb5.0
HINF Hinteralfeld 88.03 40 *e*P **P** **14 51 19.2 -1.6**
comp=Z,16nm,1.1s,mb5.0
CABF La Chapelle 88.07 41 *e*P **P** **14 51 19.7 -1.3**
comp=Z,15nm,1.0s,mb4.7
CABF La Chapelle 88.07 41 *e*P **P** **14 51 19.7 -1.3**
CABF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CABF La Chapelle 88.07 41 *e*P **P** **14 51 19.7 -1.3**
comp=Z,7.5nm,1.0s,mb4.7
WLS Welschbruch 88.08 39 *e*P **P** **14 51 21.3 +0.3**
MOF Molkenrain 88.19 40 *e*P **P** **14 51 20.7 -0.8**
LOMF Lomont 88.21 40 *e*P **P** **14 51 22.0 +0.4**
CLZ Clausthal 88.26 35 *e*P **P** **14 51 22.1 +0.2**
comp=Z,40nm,1.0s,mb5.4
CLZ Clausthal 88.26 35 *e*P **P** **14 51 22.1 +0.2**
CLZ pmax pmax
comp=Z,40nm,1.0s,mb5.4
UBBA Unterbreizbach 88.53 36 *e*P **P** **14 51 23.4 +0.3**
comp=Z,15nm,1.4s,mb4.8
ORIF Oris-en-Rattie 88.65 43 *e*P **P** **14 51 22.7 -1.0**
comp=Z,30nm,1.1s,mb4.9
ORIF Oris-en-Rattie 88.65 43 *e*P **P** **14 51 22.7 -1.0**
ORIF pmax pmax
comp=Z,15nm,1.1s,mb4.9
ORIF Oris-en-Rattie 88.65 43 *e*P **P** **14 51 22.7 -1.0**
comp=Z,15nm,1.1s,mb4.9
BFO Black Forest 88.70 39 *e*P **P** **14 51 23.9 0.0**
comp=Z,15nm,1.3s,mb4.9
BFO Black Forest 88.70 39 *e*P **P** **14 51 23.9 0.0**
BFO pmax pmax
comp=Z,15nm,1.3s,mb4.9
BFO Black Forest 88.70 39 *e*P **P** **14 51 22.4 -1.5**
FELD Feldberg im Sc 88.70 40 *e*P **P** **14 51 23.5 -0.4**
RSL Roselend 88.80 42 *e*P **P** **14 51 24.4 0.0**
SMRF Simiane la Rot 88.84 44 *e*P **P** **14 51 24.0 -0.6**
LPL La Plagne 88.94 42 *e*P **P** **14 51 24.6 -0.5**
comp=Z,51nm,1.3s,mb5.1
LPL La Plagne 88.94 42 *e*P **P** **14 51 24.6 -0.5**
LPL pmax pmax
comp=Z,25nm,1.3s,mb5.1
LPL La Plagne 88.94 42 *e*P **P** **14 51 24.6 -0.5**
comp=Z,25nm,1.3s,mb5.1
LPG La Plagne 88.96 42 *e*P **P** **14 51 24.8 -0.4**
comp=Z,72nm,1.5s,mb5.2
LPG La Plagne 88.96 42 *e*P **P** **14 51 24.8 -0.4**
LPG pmax pmax
comp=Z,36nm,1.5s,mb5.2
LPG La Plagne 88.96 42 *e*P **P** **14 51 24.8 -0.4**
comp=Z,36nm,1.5s,mb5.2
MBDF Montbardon 89.30 43 *e*P **P** **14 51 26.0 -0.8**
comp=Z,23nm,0.9s,mb4.9
MBDF Montbardon 89.30 43 *e*P **P** **14 51 26.0 -0.8**
MBDF pmax pmax
comp=Z,11nm,0.9s,mb4.9
MBDF Montbardon 89.30 43 *e*P **P** **14 51 26.0 -0.8**
comp=Z,11nm,0.9s,mb4.9
MOX Moxa 89.52 36 *e*P **P** **14 51 27.6 -0.2**
comp=Z,13nm,1.1s,mb5.0
KAF Kangasniemi 89.66 22 *e*p **P** **14 51 24.3 -4.2**
comp=Z,9.7nm,0.8s,mb5.0,baz=309,slow=4.5
KAF Kangasniemi 89.66 22 *e*P **P** **14 51 24.3 -4.2**
KAF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
FRF La Foret Royal 89.72 44 *e*P **P** **14 51 28.6 -0.1**
comp=Z,124nm,1.4s,mb5.5
FRF La Foret Royal 89.72 44 *e*P **P** **14 51 28.6 -0.1**
FRF pmax pmax
comp=Z,62nm,1.4s,mb5.5
FRF La Foret Royal 89.72 44 *e*P **P** **14 51 28.6 -0.1**
comp=Z,62nm,1.4s,mb5.5
LMR La Mourre 89.73 44 *e*P **P** **14 51 27.5 -1.3**
comp=Z,30nm,1.0s,mb5.1
LMR La Mourre 89.73 44 *e*P **P** **14 51 27.5 -1.3**
LMR pmax pmax
comp=Z,15nm,1.0s,mb5.1
LMR La Mourre 89.73 44 *e*P **P** **14 51 27.5 -1.3**
comp=Z,15nm,1.0s,mb5.1
GRA1 Grafenberg Arr 89.75 37 *e*P **P** **14 51 28.9 0.0**
comp=Z,41nm,1.3s,mb5.4
GRF Grafenberg Arr 89.75 37 *e*P **P** **14 51 28.9 0.0**
comp=Z,41nm,1.3s,mb5.4
GRF Grafenberg Arr 89.75 37 *e*P **P** **14 51 28.9 0.0**
GRF pmax pmax
comp=Z,41nm,1.3s,mb5.4
GRF Grafenberg Arr 89.75 37 *e*P **P** **14 51 28.9 0.0**
GRF pmax pmax
comp=Z,41nm,1.3s,mb5.4
CLL Collm 89.95 35 *e*P **P** **14 51 29.3 -0.5**
comp=Z,16nm,1.1s,mb5.1
CLL Collm 89.95 35 ⇑P **P** **14 51 29.4 -0.4**
comp=Z,logA/T=1.2,mb5.1
CLL *e**SP sP 14 51 53.0 -1.9
CLL Collm 89.95 35 ⇑ *i*P **P** **14 51 29.4 -0.4**
comp=Z,16nm,1.1s,mb5.1
CLL *es*P sP 14 51 53.0 -1.9
CLL Collm 89.95 35 ⇑ *i*P **P** **14 51 29.4 -0.4**
CLL pmax pmax
comp=Z,16nm,1.1s,mb5.1
WERD Werda 90.00 36 *e*P **P** **14 51 30.6 +0.6**
comp=Z,16nm,1.4s,mb5.0
FINES FINESS Array B 90.02 22 P **P** **14 51 28.1 -2.1**
comp=Z,3.5nm,0.7s,mb4.6,baz=341,slow=4.0,SNR=12
FINES FINESS Array B 90.02 22 P **P** **14 51 28.1 -2.0**
FINES pmax pmax
comp=Z,4.0nm,0.7s
GUNZ Gunzen 90.05 36 *e*P **P** **14 51 30.3 0.0**
comp=Z,22nm,1.3s,mb5.1
TANN Tannenbergstha 90.10 36 *e*P **P** **14 51 30.4 -0.1**
comp=Z,15nm,1.2s,mb5.0
SBF Sospel 90.11 43 *e*P **P** **14 51 29.0 -1.5**
comp=Z,151nm,1.3s,mb5.7
SBF Sospel 90.11 43 *e*P **P** **14 51 29.0 -1.5**
SBF pmax pmax
comp=Z,75nm,1.3s,mb5.7
SBF Sospel 90.11 43 *e*P **P** **14 51 29.0 -1.5**
comp=Z,75nm,1.3s,mb5.7
MANZ Manzenberg 90.11 36 *e*P **P** **14 51 30.9 +0.3**
comp=Z,12nm,1.1s,mb4.9
WERN Wernitzgruen 90.12 36 *e*P **P** **14 51 30.6 0.0**
comp=Z,19nm,1.2s,mb5.1
NKC Novy Kostel 90.18 36 *e*P **P** **14 51 30.8 -0.1**

DAVOS Davos 90.26 40 P **P** **14 51 31.7 +0.5**
ROTZ Rotzenmuhle 90.28 37 *e*P **P** **14 51 31.5 +0.2**
comp=Z,9.0nm,1.1s,mb4.8
YAK Yakutsk 90.32 339 ⇑ *e*P **P** **14 51 30.9 -0.6**
YAK pmax pmax
comp=Z,99nm,1.4s,mb5.8
YAK Yakutsk 90.32 339 *e*P **P** **14 51 28.5 -3.0**
comp=Z,77nm,0.8s,mb5.9
DAVOX Davos 90.34 40 P **P** **14 51 31.7 +0.1**
comp=Z,3.9nm,0.8s,mb4.6,baz=270,slow=7.0,SNR=10
FBE Freiberg 90.34 35 *e*P **P** **14 51 31.6 0.0**
comp=Z,20nm,1.1s,mb5.2
BRG Berggiesshubel 90.69 35 *e*P **P** **14 51 32.9 -0.3**
comp=Z,19nm,1.0s,mb5.2
JOF Joensuu 90.80 20 *e*p **P** **14 51 28.4 -5.3**
comp=Z,0.4nm,0.3s
WET Wettzell 90.97 37 *e*P **P** **14 51 34.4 -0.1**
comp=Z,18nm,1.2s,mb5.1
WET Wettzell 90.97 37 *e*P **P** **14 51 34.4 -0.1**
WET pmax pmax
comp=Z,18nm,1.2s,mb5.1
PVCC Panska Ves 91.21 35 *e*P **P** **14 51 34.9 -0.7**
KHC Kasperske Hory 91.37 37 ⇑ *e*P **P** **14 51 35.8 -0.6**
KHC Kasperske Hory 91.37 37 *e*P **P** **14 51 36.8 +0.4**
PRU Pruhonice 91.47 36 *e*P **P** **14 51 36.3 -0.6**
GEC2 GERESS Array S 91.59 37 *e*P **P** **14 51 37.3 -0.1**
comp=Z,10.0nm,1.0s,mb5.0
GEC2 GERESS Array S 91.59 37 *e*P **P** **14 51 37.3 -0.1**
GEC2 pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
GERES GERESS Array B 91.59 37 P **P** **14 51 37.6 +0.2**
comp=Z,5.0nm,0.8s,mb4.8,baz=324,slow=4.1,SNR=21
GERES GERESS Array B 91.59 37 P **P** **14 51 37.6 +0.2**
GERES pmax pmax
comp=Z,5.0nm,0.8s
PGF Pioggiola 91.72 44 *e*P **P** **14 51 36.6 -1.4**
comp=Z,55nm,1.2s,mb5.4
PGF Pioggiola 91.72 44 *e*P **P** **14 51 36.6 -1.4**
PGF pmax pmax
comp=Z,27nm,1.2s,mb5.3
PGF Pioggiola 91.72 44 *e*P **P** **14 51 36.6 -1.4**
comp=Z,27nm,1.2s,mb5.4
UPC Upice 92.00 35 *e*P **P** **14 51 38.5 -0.8**
VSU Vasula 92.24 25 *d i*P **P** **14 51 41.2 +0.8**
DPC Dobruska-Polom 92.25 35 *e*P **P** **14 51 40.3 -0.2**
VRAC Vranov 92.96 35 P **P** **14 51 43.2 -0.5**
comp=Z,5.5nm,0.7s,mb5.0,baz=272,slow=3.8,SNR=5.4
VRAC Vranov 92.96 35 P **P** **14 51 43.2 -0.6**
VRAC pmax pmax
comp=Z,6.0nm,0.7s
MORC Moravsky Berou 93.22 35 *e*P **P** **14 51 41.4 -3.6**
MORC pmax pmax
comp=Z,17nm,1.1s,mb5.3
MORC Moravsky Berou 93.22 35 *e*P **P** **14 51 41.4 -3.6**
comp=Z,17nm,1.1s,mb5.3
YSS Yuzh-Sakhalins 93.28 322 ⇑ *e*P **P** **14 51 45.2 0.0**
YSS pmax pmax
comp=Z,12nm,1.4s,mb5.0
OKC Ostrava-Krasne 93.52 34 *e*P **P** **14 51 46.5 +0.2**
VISS Visnje 93.81 39 *e*P **P** **14 51 47.8 +0.2**
ZST Bratislava 93.85 36 *e*P **P** **14 51 48.6 +0.8**
ZST pmax pmax
comp=Z,20nm,1.4s,mb5.2
ZST Bratislava 93.85 36 *e*P **P** **14 51 48.6 +0.8**
comp=Z,20nm,1.4s,mb5.3
VYHS Vyhne 94.65 35 *e*P **P** **14 51 51.6 +0.1**
VYHS pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
VYHS Vyhne 94.65 35 *e*P **P** **14 51 51.6 +0.1**
comp=Z,10.0nm,1.2s,mb5.1
VYHS *e* 15 00 52.5
KEST Kesra 95.03 50 P **P** **14 51 54.3 +1.0**
comp=Z,5.5nm,0.9s,mb5.0,baz=228,slow=1.4,SNR=10
STHS Stebnicka Huta 95.41 34 *e*P **P** **14 51 55.0 0.0**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
STHS Stebnicka Huta 95.41 34 *e*P **P** **14 51 55.0 0.0**
comp=Z,7.4nm,0.9s,mb5.1
KECS Kecovo 95.55 35 *e*P **P** **14 51 54.7 -0.9**
KECS pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
KECS Kecovo 95.55 35 *e*P **P** **14 51 54.7 -0.9**
comp=Z,7.5nm,0.9s,mb5.1
KECS *e* 15 00 50.1
PSZ Piszkesteto 95.56 35 *e*P **P** **14 51 55.9 +0.3**
CRVS Cervenica-Dubn 95.83 34 *e*P **P** **14 51 56.3 -0.6**
CRVS *e* 15 00 49.1
KOLS Kolonicke sedl 96.24 34 *e*P **P** **14 51 59.2 +0.5**
KOLS *e* 15 00 47.6
TORD Torodi Ar. Bea 97.73 73 P **P** **14 52 06.1 +0.6**
comp=Z,2.3nm,0.9s,mb4.7,baz=289,slow=4.2,SNR=4.4
TORD pP pP 14 52 21.5 -2.1
comp=Z,6.0nm,1.3s,baz=292,slow=5.2,SNR=4.1
TORD Torodi Ar. Bea 97.73 73 P **P** **14 52 06.1 +0.6**
TORD pP pP 14 52 21.5 -2.1
OBN Obninsk 98.42 23 ⇑ *e*P **P** **14 52 06.7 -1.9**
OBN pmax pmax
comp=Z,10.0nm,0.8s,mb5.4
AKASG Malin Array Be 98.54 29 P **P** **14 52 06.7 -2.4**
comp=Z,4.2nm,0.9s,mb5.0,baz=290,slow=3.7,SNR=9.1
AKASG Malin Array Be 98.54 29 P **P** **14 52 06.7 -2.4**
AKASG pmax pmax
comp=Z,4.0nm,0.9s
AKASG Malin Array Be 98.54 29 P **P** **14 52 06.7 -2.4**
MDJ Mudanjiang 102.07 326 P Pdif 14 52 22.7 -2.1
MDJ AMB AMB
comp=Z,3.0nm,1.1s
MDJ AMB AMB
comp=Z,44nm,3.7s
MDJ LR LR
comp=N,789nm,20.8s
MDJ LR LR
comp=E,1μm,26.7s
MDJ LR LR
comp=Z,2μm,29.7s
BRTR Keskin Array B 108.41 35 PKKPbc PKKPbc 15 08 08.7 -0.2
comp=Z,0.7nm,0.8s,baz=152,slow=5.5,SNR=3.5
HHC Hu-ho-hao-te 113.65 333 *e*PKP PKiKP 14 57 02.0 -6.6
HHC SKS SKSdf 15 04 10.2 -4.9
HHC SKKS SKKSac 15 04 47.1 -11
HHC SS SS 15 13 38.9 -5.4
HHC PP PP
comp=Z,163nm,7.7s
HHC LR LR
comp=N,2μm,20.6s
HHC LR LR
comp=E,1μm,18.2s
HHC LR LR
comp=Z,3μm,24.7s
MKAR Makanchi Array 115.01 357 PKKPbc PKKPbc 15 07 46.8 -0.4
comp=Z,0.8nm,0.8s,baz=152,slow=3.9,SNR=4.9
SSE Sheshan 116.14 320 PKP PKPdf 14 57 09.5 -3.9
SSE PP PP 14 58 20.2 +1.2
SSE LR LR
comp=N,518nm,20.5s
SSE LR LR
comp=E,976nm,20.5s
SSE LR LR
comp=Z,996nm,18.5s
NJ2 Nanjing 116.84 322 *e*PKP PKPdf 14 57 09.3 -5.4
NJ2 PP PP 14 58 24.0 0.0
NJ2 PKS 15 00 44.0
NJ2 PP PP
comp=Z,340nm,8.7s
NJ2 LR LR
comp=N,2μm,17.9s
NJ2 LR LR
comp=E,1μm,18.0s
NJ2 LR LR
comp=Z,1μm,14.0s
WMQ Urumqi 117.53 353 PKP PKPdf 14 57 14.0 -2.1
WMQ PP PP 14 58 32.0 +3.2
WMQ SKS SKSdf 15 04 15.0 -7.5
WMQ SKKS SKKSac 15 05 15.0 -8.6
WMQ SS SS 15 14 30.0 -5.1
WMQ PP PP
comp=Z,156nm,6.0s
WMQ LR LR
comp=N,1μm,18.0s
WMQ LR LR
comp=E,989nm,18.0s
WMQ LR LR
comp=Z,1μm,18.0s
LZH Lanzhou 120.84 337 *e*PKP PKPdf 14 57 24.7 +2.3
LZH XPKP 14 57 46.8
LZH PP PP 14 58 53.0 +1.4
LZH SKS SKSdf 15 04 25.0 -3.8
LZH SKKS SKKSac 15 05 36.0 -9.4
LZH PP PP
comp=Z,310nm,5.5s
LZH LR LR
comp=N,1μm,19.6s
LZH LR LR
comp=Z,3μm,20.0s
STKA Stephens Creek 122.34 244 *e*P PKPdf 14 57 25.7 +0.4
comp=Z,7.8nm,0.9s
STKA Stephens Creek 122.34 244 PKP PKPdf 14 57 25.2 -0.1
comp=Z,9.3nm,0.8s,baz=28,slow=2.9,SNR=18
STKA Stephens Creek 122.34 244 *e*PKPdf PKPdf 14 57 25.0 -0.3
SYO Syowa Base 123.92 164 ⇑ *ep*PKPdf pPKPdf 14 57 45.0 -2.1
CD2 Chengdu 125.41 334 *e*PKP PKPdf 14 57 28.5 -2.7
WB2 Warramunga Arr 127.76 259 *e*P PKPdf 14 57 36.1 +0.4
GYA Guiyang 127.84 328 ⇑ *i*PKP PKPdf 14 57 36.6 +0.8
GYA PKS 15 01 11.7
GYA SKKS SKKSac 15 06 31.0 +0.8
GYA PP PP
comp=Z,180nm,6.8s
GYA LR LR
comp=N,180nm,21.4s
GYA LR LR
comp=E,240nm,21.8s
GYA LR LR
comp=Z,190nm,21.6s
AS31 Alice Springs 128.61 254 *e*P PKPdf 14 57 37.4 +0.1
ASAR Alice Springs 128.61 254 PKP PKPdf 14 57 37.2 -0.1
comp=Z,5.4nm,0.8s,baz=88,slow=1.7,SNR=25
ASAR pPKP pPKPdf 14 57 55.8 -0.3
comp=Z,1.6nm,0.8s,baz=92,slow=1.5,SNR=3.4
ASAR Alice Springs 128.61 254 PKIKP PKPdf 14 57 37.2 -0.1
ASAR 14 57 55.8
ASAR pmax pmax
comp=Z,5.0nm,0.8s
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ASPA Alice Springs 128.61 254 *e*P PKPdf 14 57 37.4 +0.1
MAW Mawson 129.79 172 PKP PKPdf 14 57 39.7 +0.2
comp=Z,12nm,0.9s,baz=254,slow=4.0,SNR=26
MAW pPKP pPKPdf 14 57 57.2 -1.1
comp=Z,10nm,0.8s,baz=229,slow=2.1,SNR=8.5
MAW Mawson 129.79 172 PKIKP PKPdf 14 57 39.7 +0.1
MAW 14 57 57.2
MAW pmax pmax
comp=Z,12nm,0.9s
MAW pmax pmax
comp=Z,10.0nm,0.8s
MAW Mawson 129.79 172 *e*PKPdf PKPdf 14 57 39.0 -0.6
MAW *ep*PKPdf pPKPdf 14 57 57.2 -1.2
KMI Kunming 130.86 331 PKP PKPdf 14 57 41.5 -0.1
KMI PP PP 15 00 01.0 +2.9
KMI LR LR
comp=Z,1μm,20.2s
HYB Hyderabad 144.38 0 *i*PKP PKPdf 14 58 05.0 -1.4
HYB Hyderabad 144.38 0 *e*P PKPdf 14 58 05.0 -1.4
KULM Kulim 148.10 316 *e*PKPbc PKPbc 14 58 16.2 +0.3
KULM *ep*PKPdf pPKPdf 14 58 33.5 +2.0

*IDC **11** 15:14:48.9±1.1,3725N×7481E,h0km,mb3.9/8, mb1 4.0/12,mb1mx3.9/22,mbtmp3.9/12,ML3.8/4, Error ellipse: s-maj=24.3km s-min=19.1km az=8.0*
*MOS **11** 15:14:51.6±1.2,3731N×7475E,h33km,mb4.2/8, Error ellipse: s-maj=15.5km s-min=6.9km az=100.1*
*ISCJB **11** 15:14:52.8±0.3,3742N±003×7480E±006,h33km, mb4.0/14, Error ellipse: s-maj=7.2km s-min=4.2km az=154.1*
*NEIC **11** 15:14:53.3±2.4,3736N×7473E,h30km±19km, mb4.0/4, Error ellipse: s-maj=11.5km s-min=5.6km az=61.0*
*BJI **11** 15:14:53.2,3742N×7504E,h8km,mB4.3,mb4.0,ML3.8, Ms4.0*
*NNC **11** 15:14:56.9±5.2,3747N×7446E,h96km±59km, mb3.4, mpv3.6, Error ellipse: s-maj=42.8km s-min=29.5km az=14.0*

ISC 11 15:14:54.9±0.3,3743N±003×7477E±006,h35km,n76, σ1§43/81,mb4.0/14,10C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.29**	**24**	P	**Pn**	**15 15 32.6**	**+2.5**
KSH				S	**Sn**	**15 16 03.6**	**+6.5**
KSH				Smax			
	comp=N,691nm,0.7s						
KSH				Smax			
	comp=E,863nm,0.8s						
CEP	**Cherat**	**4.29**	**214**	P	**Pn**	**15 15 59.1**	**+1.5**
CEP				S	**Sn**	**15 16 55.0**	**+8.7**
KZA	**Kyzart**	**4.66**	**4**	P	**Pn**	**15 16 03.8**	**+1.1**
	SNR=15						
AML	**Almayashu**	**4.77**	**350**	P	**Pn**	**15 16 05.4**	**+1.2**
	SNR=28						
UCH	**Uchtor**	**4.80**	**358**	P	**Pn**	**15 16 09.1**	**+4.5**
	SNR=6.8						
DLH	**Dalhousie**	**4.97**	**168**	*e*P	**Pn**	**15 16 13.0**	**+5.9**
DLH				*e*S	**Sn**	**15 17 07.0**	**+3.7**
AAK	**Ala-Archa**	**5.20**	**358**	⇑ *e*PN	**Pn**	**15 16 13.0**	**+2.8**
AAK	**Ala-Archa**	**5.20**	**358**	*e*Pn	**Pn**	**15 16 10.9**	**+0.7**
	comp=E,28nm,0.7s						
EKS2	**Erkin-Say**	**5.28**	**352**	P	**Pn**	**15 16 15.2**	**+4.0**
	SNR=16						
TKM2	**Tokmak 2**	**5.52**	**6**	P	**Pn**	**15 16 18.8**	**+4.2**
	SNR=15						
TKM2	**Tokmak 2**	**5.52**	**6**	⇓P	**Pn**	**15 16 17.2**	**+2.6**
	comp=E,0.8nm,0.3s						
TKM2				⇑S	**Sn**	**15 17 20.0**	**+3.2**
	comp=E,14nm,1.2s						
TKM2	**Tokmak 2**	**5.52**	**6**	*i* PN	**Pn**	**15 16 17.1**	**+2.5**
TKM2				pmax	pmax		
	comp=Z,15nm,0.3s						
CHMS	**Chumysh**	**5.56**	**360**	P	**Pn**	**15 16 17.4**	**+2.2**
	SNR=7.9						
SARP	**Sargodha**	**5.76**	**198**	P	**Pn**	**15 16 18.9**	**+1.1**
SBDP	**Sheikh Budin**	**6.06**	**214**	P	**Pn**	**15 16 24.9**	**+2.9**
KK31	**Karatay Array**	**6.53**	**331**	⇓P	**Pn**	**15 16 28.2**	**-0.3**
	comp=Z,6.2nm,0.3s,baz=140,slow=12,SNR=100						
KK31				⇑S	**Sn**	**15 17 40.8**	**-1.0**
	comp=Z,22nm,0.6s,baz=162,slow=23,SNR=8.6						
DRP	**Derazinda**	**6.81**	**215**	P	**Pn**	**15 16 37.3**	**+5.1**
MK02	**Makanchi Array**	**10.88**	**29**	⇑P	**Pn**	**15 17 29.7**	**+1.7**
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**10.89**	**28**	Pn	**Pn**	**15 17 29.2**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=212,slow=11,SNR=8.9						
MKAR	**Makanchi Array**	**10.89**	**28**	⇑ *e*P	**Pn**	**15 17 29.7**	**+1.5**
MKAR	**Makanchi Array**	**10.89**	**28**	Pn	**Pn**	**15 17 29.2**	**+0.9**
WMQ	**Urumqi**	**11.71**	**53**	*e*P	**Pn**	**15 17 41.0**	**+1.6**
KOLN	**Koldanda**	**12.17**	**140**	*e*P	**Pn**	**15 17 44.8**	**-0.9**
	comp=Z,18nm,0.5s						
GKN	**Gorkha**	**12.54**	**136**	*e*P	**Pn**	**15 17 49.3**	**-1.4**
	comp=Z,21nm,0.5s						
KKN	**Kakani**	**13.06**	**134**	*e*P	**Pn**	**15 17 56.8**	**-1.1**
	comp=Z,13nm,0.5s						
KKN	**Kakani**	**13.06**	**134**	*e*P	**Pn**	**15 17 56.8**	**-1.1**
KKN				pmax	pmax		
	comp=Z,13nm,0.5s						
PKI	**Pulchoki**	**13.30**	**135**	*e*P	**Pn**	**15 17 59.7**	**-1.5**
KURK	**Kurchatov**	**13.56**	**10**	⇓P	**Pn**	**15 18 01.5**	**-3.2**
	comp=Z,5.1nm,1.1s						
KURK	**Kurchatov**	**13.56**	**10**	*e*P	**Pn**	**15 18 01.8**	**-3.0**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	**Kurchatov**	**13.56**	**10**	*e*Pn	**Pn**	**15 18 01.8**	**-2.9**
	comp=Z,8.4nm,0.9s						
JIRN	**Jiri**	**13.69**	**132**	*e*P	**Pn**	**15 18 05.4**	**-1.1**
	comp=Z,21nm,0.4s						
VOSK	**Vostochnaya**	**15.52**	**351**	⇓P	**Pn**	**15 18 29.0**	**-2.1**
	comp=Z,3.5nm,1.1s						
VOSK	**Vostochnaya**	**15.52**	**351**	*i* P	**Pn**	**15 18 29.7**	**-1.3**
VOSK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
LSA	**Lhasa**	**15.67**	**115**	P	**Pn**	**15 18 31.0**	**-1.9**
LSA	**Lhasa**	**15.67**	**115**	*e*P	**Pn**	**15 18 29.8**	**-3.1**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LSA	**Lhasa**	**15.67**	**115**	*e*Pn	**Pn**	**15 18 29.8**	**-3.2**
	comp=Z,7.9nm,0.9s						
BVA0	**Borovoye Array**	**15.89**	**350**	⇑P	**Pn**	**15 18 35.4**	**-0.4**
	comp=Z,1.4nm,1.1s,baz=161,slow=14,SNR=31						
BVAR	**Borovoye Array**	**15.89**	**350**	Pn	**Pn**	**15 18 35.2**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=165,slow=12,SNR=6.4						

BVAR	**Borovoye Array**	**15.89**	**350**	P	**Pn**	**15 18 35.2**	**-0.6**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**15.94**	**350**	*e*P	**Pn**	**15 18 34.8**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	**Borovoye**	**15.94**	**350**	*e*Pn	**Pn**	**15 18 34.8**	**-1.6**
	comp=Z,14nm,1.0s						
AB31	**Akbulak array**	**15.96**	**322**	⇑P	**Pn**	**15 18 32.0**	**-4.8**
	comp=Z,7.1nm,0.8s,baz=132,slow=13,SNR=48						
AB31				⇓S	S	15 21 23.1	-23
	comp=Z,2.3nm,0.6s						
CHKZ	**Chkalovo**	**16.50**	**351**	⇑P	**Pn**	**15 18 42.9**	**-0.7**
	comp=Z,2.2nm,0.8s						
CHKZ	**Chkalovo**	**16.50**	**351**	*i* P	**Pn**	**15 18 43.3**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
AKTK	**Aktyubinsk**	**17.68**	**323**	P	**Pn**	**15 18 57.4**	**-0.9**
AKTO	**Aktyubinsk**	**17.68**	**323**	⇓P	**Pn**	**15 18 57.0**	**-1.3**
	comp=Z,1.2nm,0.8s						
AKTO	**Aktyubinsk**	**17.68**	**323**	P	**Pn**	**15 18 57.4**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=122,slow=21,SNR=27						
AKTO	**Aktyubinsk**	**17.68**	**323**	*i* P	**Pn**	**15 18 57.6**	**-0.7**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAL	**Zalesovo**	**17.90**	**20**	P	**Pn**	**15 18 59.4**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=267,slow=12,SNR=8.2						
ZAL	**Zalesovo**	**17.90**	**20**	P	**Pn**	**15 18 59.4**	**-1.6**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVS	**Novosibirsk**	**18.35**	**16**	*e*P	**Pn**	**15 19 05.2**	**-1.3**
NVS				*e*SS		15 22 30.7	
GTA	**Gaotai**	**19.71**	**77**	*e*P	**Pn**	**15 19 23.4**	**+0.5**
GTA				AP	pP	15 19 28.0	-2.4
GTA				XP	sP	15 19 30.4	-4.5
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s						
GTA				AMB	AMB		
	comp=Z,130nm,8.4s						
GTA				LR	LR		
	comp=N,1μm,19.1s						
GTA				LR	LR		
	comp=E,1μm,19.9s						
ARU	**Arti**	**21.89**	**335**	⇑*i*P	**P**	**15 19 45.0**	**+0.2**
ARU				*e*		15 20 04.4	
ARU				*e*SS		15 24 41.5	
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
SONM	**Songino Array**	**25.32**	**56**	P	**P**	**15 20 17.9**	**-0.4**
	comp=Z,2.8nm,0.9s,mb3.8,baz=251,slow=7.7,SNR=8.5						
SONM	**Songino Array**	**25.32**	**56**	P	**P**	**15 20 17.9**	**-0.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	**Ulaanbaatar**	**25.76**	**56**	⇑*e*P	**P**	**15 20 28.3**	**+6.0**
ULN	**Ulaanbaatar**	**25.76**	**56**	*e*P	**P**	**15 20 28.5**	**+6.2**
	comp=Z,4.3nm,1.1s,mb3.9						
BR131	**Keskin Array S**	**32.04**	**287**	*e*P	**P**	**15 21 16.4**	**-1.7**
	comp=Z,10nm,1.6s,mb4.4						
BRTR	**Keskin Array B**	**32.04**	**287**	P	**P**	**15 21 17.9**	**-0.2**
	comp=Z,2.0nm,1.0s,mb3.9,baz=106,slow=7.9,SNR=5.7						
BRTR	**Keskin Array B**	**32.04**	**287**	P	**P**	**15 21 17.9**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
JOF	**Joensuu**	**36.62**	**328**	*e*p	**P**	**15 21 55.5**	**-2.3**
	comp=Z,2.3nm,0.5s,mb4.3						
SNY	**Shenyang**	**37.45**	**68**	*e*P	**P**	**15 22 11.4**	**+6.6**
SNY				AMB	AMB		
	comp=Z,13nm,2.5s,mb4.3						
FINES	**FINESS Array B**	**38.44**	**325**	P	**P**	**15 22 13.5**	**+0.4**
	comp=Z,1.5nm,0.6s,mb3.9,baz=112,slow=9.6,SNR=14						
FINES	**FINESS Array B**	**38.44**	**325**	P	**P**	**15 22 13.5**	**+0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**38.44**	**325**	P	**P**	**15 22 13.5**	**+0.4**
YAK	**Yakutsk**	**41.46**	**36**	*e*P	**P**	**15 22 41.0**	**+2.8**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
ARCES	**ARCESS Array B**	**41.47**	**336**	P	**P**	**15 22 38.7**	**+0.3**
	comp=Z,3.7nm,0.6s,mb4.2,baz=104,slow=7.5,SNR=21						
ARCES	**ARCESS Array B**	**41.47**	**336**	P	**P**	**15 22 38.7**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NB2	**NORSAR Subarra**	**45.47**	**322**	P	**P**	**15 23 10.6**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.8,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**45.47**	**322**	P	**P**	**15 23 10.2**	**-0.3**
	comp=Z,0.9nm,0.7s,mb3.7,baz=93,slow=7.6,SNR=6.7						
NOA	**NORSAR Array B**	**45.47**	**322**	P	**P**	**15 23 10.2**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**49.80**	**71**	P	**P**	**15 23 43.8**	**-0.4**
	comp=Z,1.3nm,0.9s,mb4.0,baz=295,slow=8.4,SNR=4.1						
MJAR	**Matsushiro Arr**	**49.80**	**71**	P	**P**	**15 23 43.8**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MA2	**Magadan**	**51.76**	**39**	*e*P	**P**	**15 24 03.2**	**+4.3**
MA2				pmax	pmax		
	comp=Z,31nm,1.7s,mb5.0						
TORD	**Torodi Ar. Bea**	**68.74**	**271**	P	**P**	**15 25 55.0**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=50,slow=5.4,SNR=7.2						
ASAR	**Alice Springs**	**82.36**	**127**	P	**P**	**15 27 12.4**	**-0.8**
	comp=Z,0.3nm,0.7s,mb3.4,baz=321,slow=4.8,SNR=7.2						

*NEIC **11** 15:37:26.6±1.4, 6.83S×154.61E, h68km±13km, mb4.6/19, Error ellipse: s-maj=12.1km s-min=10.4km az=196.0*
*IDC **11** 15:37:27.4±2.8, 6.70S×154.51E, h75km±25km, mb3.8/9, mb1 4.1/13, mb1mx4.0/17, mbtmp4.3/13, MS3.4/2, Ms1 3.4/2, ms1mx3.1/18, Error ellipse: s-maj=21.1km s-min=17.7km az=178.0*
*ISCJB **11** 15:37:28.2±1.7, 7.02S±0.07×154.51E±0.06, h85km±15km, mb4.5/30, Error ellipse: s-maj=12.3km s-min=10.6km az=23.1*
*BJI **11** 15:37:29.5, 6.82S×153.90E, h67km, mB5.0, mb4.9, Ms4.7, Msz4.3*
ISC 11 15:37:32.1±1.6**, 7.14S**±0.07×**154.54E**±0.07**, h104**km±14km**, h59**km±2.6km**:pP-P, n54,** σ**1.33**/55**, mb4.5**/30**, 2C, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.82**	**113**	P	**Pn**	**15 38 54.1**	**-1.8**
	14nm,0.3s,baz=269,slow=6.2,SNR=6.3						
HNR				LR	LR	15 40 15.1	
	comp=Z,206nm,19.1s,baz=180,slow=28						
HNR	**Honiara**	**5.82**	**113**	*e*Pn	**Pn**	**15 38 50.7**	**-5.2**
HNR				LR	LR	15 40 15.1	
PMG	**Port Moresby**	**7.64**	**252**	P	**Pn**	**15 39 17.1**	**-3.6**
	2.8nm,0.3s,baz=35,slow=6.3,SNR=9.6						
PMG				S	**Sn**	**15 40 46.3**	**+0.7**
	1.9nm,0.3s,baz=96,slow=15,SNR=3.6						
PMG				LR	LR	15 42 12.3	
	comp=Z,437nm,20.7s,baz=60,slow=37						
PMG	**Port Moresby**	**7.64**	**252**	*e*Pn	**Pn**	**15 39 16.4**	**-4.3**
	32nm,0.8s						
PMG				*e*Sn	**Sn**	**15 40 45.0**	**-0.5**
CTA	**Charters Tower**	**15.17**	**211**	*e*P	**Pn**	**15 41 03.4**	**+2.7**
	13nm,0.9s						
CTA	**Charters Tower**	**15.17**	**211**	P	**Pn**	**15 41 03.4**	**+2.7**
	0.4nm,0.3s,baz=42,slow=12,SNR=11						
CTAO	**Charters Tower**	**15.17**	**211**	*e*P	**Pn**	**15 41 03.1**	**+2.4**
	19nm,0.8s						
DZM	**Mont Dzumac**	**18.77**	**143**	P	**Pn**	**15 41 44.9**	**+0.2**
	0.3nm,0.3s,baz=167,slow=20,SNR=3.9						
KAKA	**Kakadu**	**22.45**	**254**	*e*P	**P**	**15 42 23.5**	**+1.0**
	12nm,0.7s,mb4.3						
ARMA	**Armidale**	**23.31**	**186**	*e*P	**P**	**15 42 31.2**	**+0.4**
WRAB	**Tennant Creek**	**23.34**	**235**	*e*P	**P**	**15 42 27.1**	**-4.0**
	29nm,1.1s,mb4.5						
WB2	**Warramunga Arr**	**23.35**	**235**	*e*P	**P**	**15 42 30.7**	**-0.5**
AS31	**Alice Springs**	**25.73**	**228**	⇑*i*P	**P**	**15 42 52.5**	**-0.3**
ASAR	**Alice Springs**	**25.73**	**228**	P	**P**	**15 42 52.4**	**-0.5**
	3.6nm,0.8s,mb3.9,baz=62,slow=8.5,SNR=41						
ASPA	**Alice Springs**	**25.74**	**228**	⇑*i*P	**P**	**15 42 52.5**	**-0.4**
STKA	**Stephens Creek**	**27.41**	**204**	*e*P	**P**	**15 43 06.6**	**-1.3**
	2.6nm,0.8s,mb3.8						
STKA	**Stephens Creek**	**27.41**	**204**	P	**P**	**15 43 09.9**	**+2.1**
	2.0nm,0.7s,mb3.7,baz=37,slow=12,SNR=8.4						
FITZ	**Fitzroy Crossi**	**30.18**	**246**	*e*P	**P**	**15 43 31.8**	**-0.6**
	6.7nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**30.18**	**246**	P	**P**	**15 43 31.7**	**-0.7**
	2.0nm,0.5s,mb4.0,baz=84,slow=7.1,SNR=9.3						
MBWA	**Marble Bar**	**36.40**	**244**	P	**P**	**15 44 22.7**	**-3.7**
NJ2	**Nanjing**	**51.74**	**321**	*e*P	**P**	**15 46 30.9**	**+2.1**
NJ2				AP	pP	15 46 46.6	-7.1
NJ2				XP	sP	15 46 53.6	-12
NJ2				PP	PP	15 48 30.0	+2.6
NJ2				S	**S**	**15 53 47.0**	**+4.3**
NJ2				XS	sS	15 54 14.0	-11
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,760nm,8.0s						
NJ2				LR	LR		
	comp=N,460nm,16.6s						
NJ2				LR	LR		
	comp=E,820nm,20.5s						
NJ2				LR	LR		
	comp=Z,250nm,14.3s						
YSS	**Yuzh-Sakhalins**	**54.87**	**350**	P	**P**	**15 46 53.6**	**+1.9**
	comp=Z,4.0nm,0.6s,mb4.6						
MDJ	**Mudanjiang**	**56.21**	**339**	P	**P**	**15 47 02.5**	**+1.2**
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,127nm,6.0s						
CN2	**Changchun**	**57.13**	**335**	*e*P	**P**	**15 47 11.7**	**+3.8**
GYA	**Guiyang**	**57.18**	**308**	P	**P**	**15 47 07.5**	**-0.7**
GYA				AP	pP	15 47 23.6	-10
GYA				XP	sP	15 47 30.4	-15
GYA				PP	PP	15 49 15.9	-0.3
GYA				S	**S**	**15 54 54.4**	**-1.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,70nm,4.2s						
KMI	**Kunming**	**59.72**	**304**	P	**P**	**15 47 26.3**	**+0.4**
KMI				AP	pP	15 47 38.9	-12
KMI				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.6						
CD2	**Chengdu**	**61.56**	**311**	*e*P	**P**	**15 47 37.3**	**-1.1**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
HHC	**Hu-ho-hao-te**	**61.95**	**324**	*e*P	**P**	**15 47 43.5**	**+2.6**
HHC				AP	pP	15 47 59.8	-6.7
HHC				XP	sP	15 48 06.7	-11
HHC				PCP	PcP	15 48 22.5	+1.8
HHC				PP	PP	15 50 03.2	+4.9
HHC				SCP	ScP	15 52 18.0	+5.1
HHC				PCS	PcS	15 52 24.9	+1.0
HHC				S	**S**	**15 56 02.8**	**+5.9**
HHC				XS	sS	15 56 30.1	-11
HHC				AMB	AMB		
	comp=Z,17nm,0.8s,mb5.1						
HHC				AMB	AMB		
	comp=Z,205nm,6.0s						
HHC				LR	LR		
	comp=N,148nm,19.9s						
HHC				LR	LR		
	comp=E,206nm,21.2s						
HHC				LR	LR		
	comp=Z,173nm,21.8s						
LZH	**Lanzhou**	**64.10**	**316**	*e*P	**P**	**15 47 57.7**	**+2.5**
LZH				AP	pP	15 48 14.1	-6.8
LZH				XP	sP	15 48 20.9	-11
LZH				PP	PP	15 50 21.2	+3.9
LZH				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.8						
MA2	**Magadan**	**66.57**	**358**	P	**P**	**15 48 11.9**	**+0.8**
	comp=Z,10nm,0.9s,mb4.7						
ULN	**Ulaanbaatar**	**68.89**	**328**	P	**P**	**15 48 22.4**	**-3.2**
	comp=Z,2.5nm,1.0s,mb4.0						
SONM	**Songino Array**	**69.22**	**328**	P	**P**	**15 48 24.2**	**-3.5**
	comp=Z,0.8nm,0.6s,mb3.7,baz=90,slow=1.5,SNR=4.3						
VNDA	**Vanda**	**70.44**	**178**	P	**P**	**15 48 36.7**	**+1.5**
	comp=Z,1.2nm,1.0s,mb3.7,baz=300,slow=4.3,SNR=5.1						
VNDA	**Vanda**	**70.44**	**178**	*e*P	**P**	**15 48 35.5**	**+0.3**
	comp=Z,1.4nm,1.0s,mb3.8						
LSA	**Lhasa**	**70.98**	**305**	P	**P**	**15 48 38.8**	**+0.3**
LSA	**Lhasa**	**70.98**	**305**	*e*P	**P**	**15 48 38.1**	**-0.3**
	comp=Z,4.5nm,0.6s,mb4.5						
JIRN	**Jiri**	**74.47**	**301**	*e*P	**P**	**15 48 58.7**	**-0.4**
	comp=Z,11nm,0.6s,mb4.8						
GUN	**Gumba**	**74.81**	**301**	*e*P	**P**	**15 49 01.0**	**0.0**
	comp=Z,31nm,0.7s,mb5.2						
PKI	**Pulchoki**	**75.11**	**301**	*e*P	**P**	**15 49 02.4**	**-0.4**
KKN	**Kakani**	**75.28**	**301**	*e*P	**P**	**15 49 03.0**	**-0.8**
	comp=Z,22nm,0.8s,mb4.9						
DMN	**Daman**	**75.38**	**301**	*e*P	**P**	**15 49 04.3**	**0.0**
	comp=Z,29nm,0.7s,mb5.1						
GKN	**Gorkha**	**75.89**	**301**	*e*P	**P**	**15 49 06.8**	**-0.4**
	comp=Z,28nm,0.8s,mb5.0						
KOLN	**Koldanda**	**76.71**	**301**	*e*P	**P**	**15 49 11.4**	**-0.5**
	comp=Z,24nm,0.8s,mb5.0						
WMQ	**Urumqi**	**78.62**	**317**	*e*P	**P**	**15 49 24.0**	**+1.5**
WMQ				AP	pP	15 49 41.0	-8.1
WMQ				XP	sP	15 49 48.0	-12
WMQ				PP	PP	15 52 24.0	+2.4
WMQ				S	S	15 59 15.0	+4.1
WMQ				SCS	ScS	15 59 37.0	+2.6
WMQ				AMB	AMB		
	comp=Z,19nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,106nm,5.0s						
WMQ				LR	LR		
	comp=N,205nm,15.0s						
WMQ				LR	LR		
	comp=E,128nm,15.0s						
WMQ				LR	LR		
	comp=Z,210nm,15.0s						
QSPA	**South Pole Qui**	**82.83**	**180**	*e*P	**P**	**15 49 45.9**	**+1.0**
	comp=Z,2.8nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**83.22**	**319**	P	**P**	**15 49 44.1**	**-2.7**
	comp=Z,1.3nm,0.6s,mb3.9,baz=96,slow=5.4,SNR=8.4						
ZAL	**Zalesovo**	**84.06**	**326**	P	**P**	**15 49 48.1**	**-3.0**
	comp=Z,0.8nm,0.3s,mb4.0,baz=6.8,slow=5.4,SNR=3.3						
MAW	**Mawson**	**84.08**	**203**	P	**P**	**15 49 51.3**	**0.0**
	comp=Z,1.4nm,0.6s,mb4.0,baz=111,slow=5.9,SNR=6.8						
MAW	**Mawson**	**84.08**	**203**	*e*P	**P**	**15 49 51.2**	**-0.1**
	comp=Z,2.6nm,0.8s,mb4.1						
NVAR	**Mina Array Bea**	**92.17**	**52**	P	**P**	**15 50 27.4**	**-2.6**
	comp=Z,1.4nm,0.8s,mb4.2,baz=259,slow=9.7,SNR=7.9						
AKASG	**Malin Array Be**	**117.39**	**324**	PKP	PKPdf	15 56 02.5	-3.0
	comp=Z,0.3nm,0.4s,baz=55,slow=2.4,SNR=6.0						
GERES	**GERESS Array B**	**126.94**	**329**	PKP	PKPdf	15 56 22.6	-1.2
	comp=Z,1.4nm,0.7s,baz=76,slow=1.7,SNR=11						
TORD	**Torodi Ar. Bea**	**152.62**	**285**	PKPbc	PKPbc	15 57 16.2	-0.3
	comp=Z,5.0nm,0.8s,baz=64,slow=2.2,SNR=27						
TORD	**Torodi Ar. Bea**	**152.62**	**285**	PKPbc	PKPbc	15 57 16.2	-0.3

*ISCJB **11** 16:35:05.0±0.4, 37.45N±0.03×47.07E±0.04, h10km, Error ellipse: s-maj=5.5km s-min=3.4km az=91.7*
*CSEM **11** 16:35:04.7±0.1, 37.43N×47.08E, h10km, ML3.4, Error ellipse: s-maj=1.5km s-min=0.9km az=46.0*
*THR **11** 16:35:05.5±0.3, 37.39N×47.09E, h15km, ML3.4*
*TEH **11** 16:35:05.5, 37.37N×47.06E, h2km, Mn3.6*
ISC 11 16:35:06.2±0.4**, 37.44N**±0.03×**47.05E**±0.04**, h10**km**, n27,** σ**0.99**/32**, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IAZR	**Azarshahr**	**0.88**	**286**	*e*Pg	**Pg**	**16 35 21.4**	**-1.7**
IAZR				*e*Sg	**Sg**	**16 35 33.6**	**-1.0**
ITBZ	**Tabriz**	**1.06**	**318**	*e*Pg	**Pg**	**16 35 25.4**	**-1.2**
ITBZ				*e*Sg	**Sg**	**16 35 40.0**	**-0.5**
GRMI	**Germi**	**1.52**	**26**	*e*PG	**Pg**	**16 35 34.0**	**-1.4**
GRMI				*e*Sg	**Sg**	**16 35 55.0**	**-0.1**
GRMI				AML	AML	16 35 57.0	
	comp=E,272nm,0.3s						
GRMI	**Germi**	**1.52**	**26**	*e*Pg	**Pg**	**16 35 34.0**	**-1.4**
	SNR=90						
GRMI				*e*Sg	**Sg**	**16 35 55.0**	**-0.2**
	SNR=90						
IMRD	**Marand**	**1.65**	**321**	*e*Pn	**Pn**	**16 35 36.2**	**+0.9**
IMRD				*e*Sn	**Sn**	**16 35 58.7**	**+2.1**
SNGE	**Sanandaj**	**2.36**	**174**	*e*PN	**Pn**	**16 35 45.1**	**+0.2**
SNGE				AML	AML	16 36 19.7	
	comp=N,178nm,0.6s						
ILIN	**Laeen**	**2.52**	**182**	*e*Pn	**Pn**	**16 35 47.9**	**+0.8**
IGZV	**Gazvin**	**2.75**	**112**	*e*Pn	**Pn**	**16 35 50.6**	**+0.2**
IDHR	**Dehrash**	**2.79**	**191**	*e*Pn	**Pn**	**16 35 51.5**	**+0.7**
IVIS	**Veys**	**2.91**	**183**	*e*Pn	**Pn**	**16 35 50.6**	**-2.0**
IRAZ	**Razeghan**	**3.09**	**130**	*e*Pn	**Pn**	**16 35 54.7**	**-0.3**
IGHG	**Ghaleghazi**	**3.13**	**187**	*e*Pn	**Pn**	**16 35 56.1**	**+0.6**
MSL	**Mosul**	**3.37**	**251**	*e*x	x	16 36 01.5	
MSL				*e*x	x	16 36 47.0	
IMHD	**Mahdasht**	**3.40**	**120**	*e*Pn	**Pn**	**16 35 58.5**	**-0.8**
CHTH	**Charan**	**3.62**	**114**	*e*PN	**Pn**	**16 36 02.6**	**+0.3**
ASAO	**Ashtian**	**3.76**	**139**	*e*PN	**Pn**	**16 36 04.7**	**+0.4**
IAFJ	**Afjeh**	**4.07**	**111**	*e*Pn	**Pn**	**16 36 08.7**	**+0.2**
IAFJ				*e*Sn	**Sn**	**16 36 53.9**	**-2.3**
DGRG	**David-gareji**	**4.21**	**343**	P	**Pb**	**16 36 20.7**	**+0.4**
DAMV	**Damavand**	**4.36**	**113**	*e*PN	**Pn**	**16 36 12.8**	**+0.4**
DAMV				AML	AML	16 37 24.4	
	comp=E,56nm,0.6s						
DAMV				AML	AML	16 37 26.0	
	comp=N,58nm,0.5s						
IDMV	**Damavand**	**4.43**	**113**	*e*Pn	**Pn**	**16 36 13.6**	**+0.2**
IVRN	**Varamin**	**4.50**	**121**	*e*Pn	**Pn**	**16 36 14.5**	**+0.1**
MTA	**Mtatsminda**	**4.59**	**338**	P	**Pb**	**16 36 30.3**	**+3.5**
TBLG	**Delisi**	**4.64**	**338**	P	**Pn**	**16 36 18.0**	**+1.6**
ISFB	**Sefidab**	**5.22**	**125**	*e*Pn	**Pn**	**16 36 24.0**	**-0.3**
IKIA	**Kiasar**	**5.47**	**101**	*e*Pn	**Pn**	**16 36 28.0**	**+0.3**
IKLH	**Kalahroud**	**5.53**	**137**	*e*Pn	**Pn**	**16 36 29.6**	**+1.0**
IPIR	**Pirpir**	**5.70**	**145**	*e*Pn	**Pn**	**16 36 30.9**	**+0.1**

KRSC 11 16:43:26, 49.56N×155.94E, h5km**, ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.33**	**349**	P	Pn	16 43 52.1	+0.8
ALID				S	Sb	16 44 10.8	+1.9
GRL	**Gorelyy**	**3.28**	**23**	P	Pn	16 44 21.6	+3.5
GRL				S	Sn	16 45 01.5	+4.0
RUS	**Russkaya**	**3.30**	**28**	*e*P	Pn	16 44 21.1	+2.7
RUS				*e*S	Sn	16 45 00.8	+2.8
PET	**Petropavlovsk**	**3.86**	**25**	P	Pn	16 44 29.3	+3.2
PET				*e*S	Sn	16 45 15.6	+3.8
GNL	**Ganaly**	**4.33**	**16**	P	Pn	16 44 35.8	+3.4
SPN	**Mys Shipunski**	**4.37**	**34**	S	Sn	16 45 28.2	+3.9
MKZ	**Mys Kozlova**	**6.15**	**33**	P	Pn	16 45 01.3	+3.9
KBTR	**Krutoberegovo**	**7.85**	**29**	P	Pn	16 45 24.3	+3.5

*ISCJB **11** 16:46:23.9±0.2, 18.42N±0.03×101.21W±0.02, h64km, mb4.9/101, Error ellipse: s-maj=4.1km s-min=2.1km az=49.4*
*MOS **11** 16:46:24.5±1.1, 18.53N×101.19W, h67km, mb5.2/50, Error ellipse: s-maj=8.5km s-min=5.3km az=78.5*
*BJI **11** 16:46:24.2, 18.50N×101.20W, h64km, mB5.4, mb5.4, Ms5.3, Msz4.8*
*IDC **11** 16:46:25.4±0.8, 18.55N×101.17W, h65km±6km, mb4.3/16, mb1 4.5/17, mb1mx4.4/22, mbtmp4.6/17, MS3.7/9, Ms1 3.7/9, ms1mx3.3/37, Error ellipse: s-maj=19.7km s-min=12.2km az=44.0*
*NEIC **11** 16:46:25.2±0.3, 18.48N×101.18W, mb4.9/94, MD4.5(MEX), Error ellipse: s-maj=7.2km s-min=4.3km az=46.0*
*SZGRF **11** 16:46:26.4, 17.28N×98.01W, h33km, mb4.8, Guerrero, Mexico*
*MEX **11** 16:46:26.3±0.9, 18.38N×101.26W, h64km±14km, MD4.5*
ISC 11 16:46:25.5±0.2**, 18.41N**±0.03×**101.20W**±0.02**, h66**km**, h66**km±3.2km**:pP-P, n409,** σ**0.98**/416**, mb4.7**/101**, 67C-51D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.84**	**198**	⇑*i*P	**Pn**	**16 46 40.2**	**-1.7**
ZIIG				*i* S	**Sn**	**16 46 52.2**	**-1.6**
MOIG	**Morelia**	**1.26**	**0**	*i* P	**Pn**	**16 46 46.7**	**-0.5**
MOIG				*i* S	**Sn**	**16 47 03.3**	**-0.1**
MEIG	**Mezcala**	**1.58**	**108**	*e*P	**Pn**	**16 46 51.6**	**+0.2**
MEIG				*i* S	**Sn**	**16 47 11.3**	**+0.4**
PLIG	**Platanillo**	**1.61**	**90**	*e*P	**Pn**	**16 46 52.0**	**+0.2**
PLIG				*i* S	**Sn**	**16 47 12.6**	**+0.9**
CAIG	**El Cayaco**	**1.62**	**147**	⇑*i*P	**Pn**	**16 46 50.8**	**-1.2**
CAIG				*i* S	**Sn**	**16 47 11.3**	**-0.6**
IIZ	**Mezontepec**	**2.01**	**67**	*i* P	**Pn**	**16 46 58.9**	**+1.7**
IIZ				*i* S	**Sn**	**16 47 23.0**	**+1.8**
MMIG	**Aquila**	**2.04**	**267**	*e*P	**Pn**	**16 46 57.1**	**-0.6**
MMIG				*i* S	**Sn**	**16 47 19.3**	**-2.8**
YAIG	**Yautepec**	**2.07**	**77**	⇑*i*P	**Pn**	**16 46 58.7**	**+0.6**
YAIG				*i* S	**Sn**	**16 47 22.4**	**-0.4**
UNM	**Universidad Na**	**2.12**	**64**	*i* P	**Pn**	**16 46 59.7**	**+1.0**
UNM				*e*P		16 46 60.0	
UNM				*e*P		16 47 01.5	
UNM				*i* S	**Sn**	**16 47 24.8**	**+0.9**
UNM				*i* S	**Sn**	**16 47 25.1**	**+1.2**
UNM				*i* S	**Sn**	**16 47 25.3**	**+1.3**
UNM	**Universidad Na**	**2.12**	**64**	*i* P	**Pn**	**16 46 59.7**	**+1.0**
UNM				*i* S	**Sn**	**16 47 24.8**	**+0.8**
UNM	**Universidad Na**	**2.12**	**64**	*i* P	**Pn**	**16 46 59.7**	**+1.0**
UNM				*e*P		16 47 01.5	
UNM				*i* S	**Sn**	**16 47 24.8**	**+0.9**
UNM				*i* S	**Sn**	**16 47 25.1**	**+1.2**
PPM	**Popocatepetl**	**2.52**	**75**	⇑*i*P	**Pn**	**16 47 05.8**	**+1.6**
PPM				*i* S	**Sn**	**16 47 33.2**	**-0.5**
UTMO	**Huajuapan**	**3.28**	**100**	⇑*i*P	**Pn**	**16 47 16.1**	**+1.6**
UTMO				*i* S	**Sn**	**16 47 51.8**	**-0.5**
TPIG	**Tehuac#an**	**3.64**	**89**	*i* P	**Pn**	**16 47 21.1**	**+1.6**
TPIG				*i* S	**Sn**	**16 47 59.8**	**-1.3**
CJM	**Chamela**	**3.80**	**287**	*e*P	**Pn**	**16 47 25.3**	**+3.8**
CJM				*i* S	**Sn**	**16 48 06.2**	**+1.2**
VHO	**Vista Hermosa**	**4.46**	**107**	*i* P	**Pn**	**16 47 32.8**	**+2.2**
VHO				*i* S	**Sn**	**16 48 21.2**	**0.0**
ZAIG	**Zacatecas**	**4.52**	**344**	*i* P	**Pn**	**16 47 31.3**	**-0.1**
ZAIG				*i* S	**Sn**	**16 48 26.0**	**+3.3**
ZAIG	**Zacatecas**	**4.52**	**344**	*i* P	**Pn**	**16 47 31.3**	**-0.1**
ZAIG				*i* S	**Sn**	**16 48 36.0**	**+13**
LVIG	**Laguna Verde**	**4.71**	**73**	*i* P	**Pn**	**16 47 34.6**	**+0.6**
HUIG	**Huatulco**	**5.53**	**118**	*i* S	**Sn**	**16 48 48.6**	**+1.1**
CMIG	**Matias Romero**	**6.16**	**101**	P	**Pn**	**16 47 55.4**	**+1.6**
	11nm,0.3s,baz=267,slow=12,SNR=59						
CMIG				S	**Sn**	**16 49 03.5**	**+0.6**
	23nm,0.3s,baz=184,slow=22,SNR=5.8						
CMIG				LR	LR	16 50 34.9	
	comp=Z,411nm,20.8s,baz=108,slow=40						
CMIG	**Matias Romero**	**6.16**	**101**	*i* P	**Pn**	**16 47 55.1**	**+1.3**
CMIG	**Matias Romero**	**6.16**	**101**	P	**Pn**	**16 47 55.4**	**+1.6**
CMIG				S	**Sn**	**16 49 03.5**	**+0.6**
CMIG				LR	LR	16 50 34.9	
LNIG	**Linares**	**6.65**	**14**	*i* P	**Pn**	**16 48 00.4**	**-0.2**
JCT	**Junction City**	**12.08**	**6**	*e*P	**Pn**	**16 49 15.7**	**+1.0**
JCT				pmax	pmax		
	comp=Z,37nm,1.0s						
JCT	**Junction City**	**12.08**	**6**	*e*Pn	**Pn**	**16 49 15.7**	**+1.0**
	comp=Z,37nm,1.0s						
JCT				*e*pP		16 49 31.4	
HKT	**Hockley**	**12.48**	**22**	*e*P	**Pn**	**16 49 19.1**	**-1.1**
HKT				pmax	pmax		
	comp=Z,37nm,1.4s						
HKT	**Hockley**	**12.48**	**22**	*e*Pn	**Pn**	**16 49 19.1**	**-1.1**
	comp=Z,37nm,1.4s						
HKT				*e*pP		16 49 30.4	
MNTX	**Cornudas Mount**	**13.76**	**345**	*e*Pn	**Pn**	**16 49 38.1**	**+0.6**
	comp=Z,20nm,1.1s						
NATX	**Nacogdoches**	**14.54**	**23**	*e*P	**Pn**	**16 49 46.6**	**-1.1**
	comp=Z,174nm,1.0s						
TUC	**Tucson**	**16.31**	**330**	*e*P	**Pn**	**16 50 11.0**	**+0.7**
TUC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TUC	**Tucson**	**16.31**	**330**	*e*Pn	**Pn**	**16 50 11.0**	**+0.7**
	comp=Z,7.7nm,1.0s						
TUC				*e*pP	pP	16 50 26.2	+0.4
WMOK	**Wichita Mounta**	**16.40**	**7**	*e*P	**Pn**	**16 50 09.1**	**-2.3**
WMOK				pmax	pmax		
	comp=Z,18nm,1.1s						
WMOK	**Wichita Mounta**	**16.40**	**7**	*e*P	**Pn**	**16 50 09.1**	**-2.3**
	comp=Z,18nm,1.1s						
AMTX	**Amarillo**	**16.41**	**359**	*e*Pn	**Pn**	**16 50 10.8**	**-0.8**
	comp=Z,84nm,0.9s						
AMTX				*e*pP	pP	16 50 26.5	-0.5
LENM	**Lemitar**	**16.52**	**343**	*e*P	**Pn**	**16 50 15.1**	**+2.2**
LENM				*e*pP	pP	16 50 28.6	+0.5
LPM	**Los Pinos Moun**	**16.56**	**344**	*e*Pn	**Pn**	**16 50 14.5**	**+1.1**
LAZ	**Ladron**	**16.78**	**343**	*e*Pn	**Pn**	**16 50 16.9**	**+0.8**
LAZ				*e*pP	pP	16 50 32.6	+1.6
116A	**Eloy**	**16.97**	**328**	⇓P	**Pn**	**16 50 19.5**	**+1.0**
	baz=17						
ANMO	**Albuquerque**	**17.12**	**345**	P	**Pn**	**16 50 22.1**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=156,slow=11,SNR=14						
ANMO				LR	LR	16 57 33.4	
	comp=Z,506nm,19.2s,baz=79,slow=39						
ANMO	**Albuquerque**	**17.12**	**345**	⇑*e*P	**Pn**	**16 50 21.8**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ANMO	**Albuquerque**	**17.12**	**345**	⇑*e*P	**Pn**	**16 50 21.8**	**+1.4**
	comp=Z,9.4nm,0.9s						
ANMO				*e*pP	pP	16 50 36.4	+1.5

115A Sonoran Desert 17.34 327 ⇓P Pn 16 50 24.2 +1.1
baz=17
MIAR Mount Ida 17.45 21 eP Pn 16 50 21.7 -2.7
MIAR pmax pmax
comp=Z,39nm,1.0s
MIAR Mount Ida 17.45 21 eP Pn 16 50 21.7 -2.7
comp=Z,40nm,1.0s
MIAR epP pP 16 50 30.9 -7.5
UALR University of 18.10 24⇑ eP Pn 16 50 28.7 -3.7
comp=Z,28nm,1.0s
Z14A Wintersburg 18.23 327 ⇓P Pn 16 50 34.5 +0.5
baz=18
Y14A Wickenburg 18.72 328 ⇓P Pn 16 50 39.7 -0.1
baz=19
X15A Humboldt 18.79 331 ⇓P Pn 16 50 40.5 -0.1
baz=19,SNR=5.0
GLA Glamis 19.03 323 ⇑P Pn 16 50 43.5 0.0
baz=19,SNR=5.2
Y13A Salome 19.05 326 ⇑P Pn 16 50 43.6 -0.1
baz=19
X14A Yava 19.09 329 ⇓P Pn 16 50 44.2 0.0
baz=19,SNR=9.9
OXF Oxford 19.17 31⇑ eP Pn 16 50 41.5 -3.7
OXF pmax pmax
comp=Z,45nm,0.9s
OXF Oxford 19.17 31⇑ eP Pn 16 50 41.5 -3.7
comp=Z,45nm,0.9s
WUAZ Wupatki 19.28 334⇑ iP Pn 16 50 46.4 0.0
comp=Z,48nm,0.8s
WUAZ epP pP 16 51 01.9 +3.3
LRAL Lakeview Retre 19.35 38 eP Pn 16 50 43.7 -3.6
comp=Z,26nm,1.1s
LRAL epP pP 16 50 60.0 +0.5
Y12C Blythe 19.37 325 ⇑P Pn 16 50 47.2 -0.4
baz=19
W15A Williams 19.38 332 ⇑P Pn 16 50 47.4 -0.2
baz=19
HBAR Harrisburg 19.46 27 P Pn 16 50 45.4 -3.3
DVTC Desert V Tower 19.51 319 ⇑P Pn 16 50 48.8 -0.5
baz=20
SWSC Sam W. Stewart 19.52 321 ⇑P Pn 16 50 48.7 -0.6
baz=20
PDMCI Parker Dam,Lak 19.59 326 ⇓P Pn 16 50 49.2 -0.9
baz=20
X13A Yucca 19.65 328 ⇑P Pn 16 50 49.9 -1.0
baz=20,SNR=13
W14A Seligman 19.78 330 ⇑P Pn 16 50 51.5 -0.9
baz=20,SNR=17
MVCO Mesa Verde 19.80 343 eP Pn 16 50 50.8 -1.7
MVCO epP pP 16 51 07.4 +3.1
MONP Monument Peak 19.87 319 ⇓P Pn 16 50 52.7 -0.7
baz=20
IRM Iron Mountain 20.02 324 ⇓P P 16 50 54.3 +1.3
baz=20,SNR=10
W13A Hualapai Mount 20.08 328 ⇑P P 16 50 55.0 +1.4
baz=20,SNR=12
NEE2 Needles Airpor 20.20 326 ⇑P P 16 50 55.5 +0.7
baz=20
MGV Manicaragua 20.24 76 eP P 16 50 58.6 +3.3
109C Camp Elliot, M 20.29 318 ⇓P P 16 50 57.1 +1.2
baz=20
HALT Halls 20.34 29 P P 16 50 57.6 +1.2
HALT epP 16 51 11.5
PFO Pinyon Flat Ob 20.38 321 eP P 16 50 57.9 +1.1
PFO e*PP 16 51 14.9
PFO pmax pmax
comp=Z,10.0nm,0.9s
PFO Pinyon Flat Ob 20.38 321 eP P 16 50 57.9 +1.1
comp=Z,10nm,0.9s
PFO epP 16 51 14.9
PFO Pinyon Flat Ob 20.38 321 ⇑P P 16 50 58.1 +1.3
baz=20
BELC Belle Mtn. 20.39 322 ⇓P P 16 50 57.8 +0.9
baz=20
PV01 Paradox Valley 20.68 343 eP P 16 51 00.8 +0.8
PV01 epP 16 51 16.5
W12A Cal Nev Ari 20.74 327 ⇑P P 16 51 01.7 +1.0
baz=21
PARMO Parma 20.79 27 eP P 16 50 59.3 -2.0
MURC Murrieta 20.83 320 ⇓P P 16 51 02.8 +1.1
baz=21
KSU1 Kansas State U 21.00 10 eP P 16 51 01.4 -2.0
PV10 Paradox Valley 21.04 343 eP P 16 51 01.2 -2.7
V12A Nelson 21.06 328 ⇓P P 16 51 05.1 +1.0
baz=21
HEC Hector,Ludlow 21.18 324 ⇑P P 16 51 06.2 +0.8
baz=21,SNR=8.4
SMCO Snowmass 21.29 348 eP P 16 51 07.0 +0.4
comp=Z,63nm,1.3s,mb4.8
TUQ Turquoise Mtn. 21.40 325 ⇑P P 16 51 08.7 +1.0
baz=21,SNR=7.3
CCM Cathedral Cave 21.42 22 eP P 16 51 04.0 -4.0
CCM pmax pmax
comp=Z,16nm,0.7s,mb4.5
CCM Cathedral Cave 21.42 22 eP P 16 51 04.0 -4.0
comp=Z,16nm,0.7s,mb4.5
U12A Valley of Fire 21.46 329 ⇓P P 16 51 09.7 +1.2
baz=22
ISCO Idaho Springs 21.65 351 eP P 16 51 09.8 -0.7
ISCO pmax pmax
comp=Z,15nm,0.6s,mb4.5
ISCO Idaho Springs 21.65 351 eP P 16 51 09.8 -0.7
comp=Z,15nm,0.6s,mb4.5
FVM French Village 21.66 24⇑ eP P 16 51 07.1 -3.4
FVM pmax pmax
comp=Z,23nm,0.9s,mb4.5
FVM French Village 21.66 24⇑ eP P 16 51 07.1 -3.4
comp=Z,23nm,0.9s,mb4.5
FVM epP 16 51 21.6
GSC Goldstone 21.79 324 ⇓P P 16 51 12.9 +1.0
baz=22
CCUT Cedar City 21.84 333 eP P 16 51 13.0 +0.5
CCUT epP 16 51 27.7
ARUT Antelope Range 22.08 333 eP P 16 51 15.9 +0.9
ARUT epP 16 51 30.0
SRU San Rafael 22.16 340 eP P 16 51 15.7 -0.2
SRU pmax pmax
comp=Z,24nm,1.1s,mb4.4
SRU San Rafael 22.16 340 eP P 16 51 15.7 -0.1
comp=Z,24nm,1.1s,mb4.4
EDW2 Edwards Air Fo 22.18 321 ⇑P P 16 51 17.1 +1.0
baz=22,SNR=6.7
MSU Marysvale 22.20 337 eP P 16 51 16.7 +0.4
MSU e*PP 16 51 31.2
U10A Ash Meadows, A 22.36 326 ⇑P P 16 51 18.6 +0.7
baz=22,SNR=6.5
LRMC Laurel Mountai 22.42 323 ⇑P P 16 51 19.0 +0.4
baz=22,SNR=11
TMUT Trail Mountain 22.55 339 eP P 16 51 20.1 +0.1
BSC Santa Cruz Isl 22.62 317 ⇓P P 16 51 21.4 +0.7
baz=23
FURC Furnace Creek, 22.68 326 ⇑P P 16 51 21.8 +0.5
baz=23
TPNV Topopah Spring 22.72 327 eP P 16 51 22.3 +0.5
TPNV pmax pmax
comp=Z,17nm,1.1s,mb4.3
TPNV Topopah Spring 22.72 327 eP P 16 51 22.3 +0.5
comp=Z,16nm,1.1s,mb4.3
MPMC Manual Prospec 22.72 324 ⇓P P 16 51 22.2 +0.4
baz=23,SNR=11
USIN University of 22.79 29 eP P 16 51 20.5 -2.0
comp=Z,41nm,0.8s,mb4.8
ARVC Arvin 22.85 320 ⇑P P 16 51 23.7 +0.5
baz=23
DAC Darwin (Calif) 22.93 324 eP P 16 51 22.8 -1.2
DAC e*PP 16 51 39.2
DAC pmax pmax
comp=Z,9.0nm,1.2s,mb4.0
DAC Darwin (Calif) 22.93 324 eP P 16 51 22.8 -1.2
comp=Z,9.3nm,1.2s,mb4.0
DAC epP 16 51 39.2
ISA Isabella 23.00 322 ⇑P P 16 51 25.0 +0.3
baz=23,SNR=12
PHWY Pilot Hill 23.10 352 eP P 16 51 24.8 -1.1
GRAC Grapevine Rang 23.34 326 ⇑P P 16 51 27.8 -0.2
baz=23,SNR=5.2
VES Vestal, Richgr 23.48 321 ⇓P P 16 51 29.2 -0.1
baz=24
TRCR Troy Canyon 23.50 331 eP P 16 51 29.4 0.0
TRCR epP 16 51 43.2
DAU Daniels Canyon 23.58 341 eP P 16 51 29.6 -0.5
WCI Wyandotte Cave 23.64 30 eP P 16 51 28.5 -2.3
WCI e*PP 16 51 42.5
WCI pmax pmax
comp=Z,23nm,0.8s,mb4.6
WCI Wyandotte Cave 23.64 30 eP P 16 51 28.5 -2.2
comp=Z,24nm,0.8s,mb4.6
WCI epP 16 51 42.5
SMMC Simmler 23.69 319 ⇑P P 16 51 31.9 +0.7
baz=24
Q12A Willow Creek R 23.72 333 ⇓P P 16 51 31.4 -0.1
baz=24
RWWY Rawlins 23.76 349 eP P 16 51 31.8 0.0
comp=Z,58nm,1.3s,mb4.8
RWWY epP 16 51 46.4
R10A Warm Springs 23.79 329 ⇑P P 16 51 32.2 +0.1
baz=24
S09A Goldfield 23.81 327 ⇑P P 16 51 31.9 -0.4
baz=24,SNR=6.7
CTU Camp Tracy 23.99 340 eP P 16 51 33.1 -0.8
comp=Z,5.2nm,0.5s,mb4.1
HELL Mitchell Peak, 24.03 323 ⇑P P 16 51 34.7 +0.4
baz=24,SNR=11
R09A Tonopah 24.13 328 ⇑P P 16 51 35.4 +0.3
baz=24,SNR=9.2
RCC Rio Carpintero 24.13 82 eP P 16 51 36.4 +1.2
MTUM Tungsten Hills 24.25 325 P P 16 51 33.9 -2.4
TCUT Toone Canyon 24.27 341 eP P 16 51 36.5 +0.1
TCUT epP 16 51 53.1
SCIA State Center 24.39 15 eP P 16 51 36.1 -1.4
SCIA epP 16 51 47.1
PKD Parkfield 24.44 319 ⇑P P 16 51 38.5 +0.5
baz=24
P11A Circle Ranch, 24.55 332 ⇓P P 16 51 39.1 +0.1
baz=25
MLAC Mammoth Lakes 24.60 325 ⇑P P 16 51 39.7 +0.2
baz=25
Q09A Carvers 24.64 329 ⇑P P 16 51 39.9 +0.1
baz=25
KCC Kaiser Creek 24.65 324 ⇓P P 16 51 40.2 +0.2
baz=25,SNR=12
T06C Millerton Lake 24.65 322 ⇓P P 16 51 40.4 +0.4
baz=25
O12A Currie 24.71 335 ⇓P P 16 51 40.5 0.0
baz=25
R08A Mina 24.74 327 ⇑P P 16 51 41.5 +0.8
baz=25,SNR=15
HWUT Hardware Ranch 24.76 341 eP P 16 51 40.5 -0.4
comp=Z,34nm,0.8s,mb4.8
HWUT pP 16 51 57.1
U04C Hernandez Rese 24.86 320 ⇓P P 16 51 42.9 +1.1
baz=25
NVAR Mina Array Bea 24.90 327 P P 16 51 43.4 +1.2
comp=Z,9.2nm,0.7s,mb4.3,baz=145,slow=10,SNR=54
NVAR pP 16 51 57.9
comp=Z,7.0nm,0.9s,baz=150,slow=11,SNR=6.4
NVAR Mina Array Bea 24.90 327 P P 16 51 43.4 +1.2
NVAR pP 16 51 57.9
P10A Eureka 24.92 331 ⇓P P 16 51 42.9 +0.5
baz=25
O11A Cowboy Ranch, 24.98 333 ⇓P P 16 51 43.2 +0.3
baz=25
Q08A Gabbs 25.04 328 ⇑P P 16 51 44.1 +0.7
baz=25,SNR=11
R07C Lee Vining 25.05 325 ⇑P P 16 51 44.5 +1.0
baz=25
P09A Austin 25.18 330 ⇑P P 16 51 45.6 +0.8
baz=25
PDAR Pinedale Array 25.29 345 P P 16 51 45.0 -0.8
comp=Z,26nm,0.9s,mb4.7,baz=141,slow=9.6,SNR=88
PDAR pP pP 16 52 02.0 +0.5
comp=Z,12nm,1.0s,baz=153,slow=10.0,SNR=7.1
PDAR LR LR 17 02 45.3
comp=Z,230nm,18.4s,baz=157,slow=39
HVU Hansel Valley 25.30 339 eP P 16 51 45.3 -0.6
HVU pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
HVU Hansel Valley 25.30 339 eP P 16 51 45.3 -0.6
comp=Z,6.3nm,0.8s,mb4.1
N12A Clover Valley, 25.33 335 ⇓P P 16 51 46.0 0.0
baz=25
S06C San Francisco 25.34 324 ⇑P P 16 51 46.4 +0.2
baz=25
M13A Mcintello 25.43 337 ⇓P P 16 51 46.5 -0.4
baz=25,SNR=5.8
O10A Cortez Mining, 25.48 332 ⇓P P 16 51 47.5 0.0
baz=26
R06C Coleville 25.58 325 ⇑P P 16 51 49.2 +0.8
baz=26
PACP Pacheco Peak 25.59 320 ⇑P P 16 51 48.9 +0.5
baz=26
AHID Auburn Hatcher 25.69 343 P P 16 51 48.2 -1.2
comp=Z,7.6nm,0.7s,mb4.2
O09A Fish Creek Ran 25.70 331 ⇓P P 16 51 49.7 +0.2
baz=26,SNR=11
RSSD Black Hills 25.74 355 eP P 16 51 49.2 -0.6
RSSD pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
RSSD Black Hills 25.74 355 eP P 16 51 49.2 -0.6
comp=Z,3.6nm,0.7s,mb3.9
P08A Dixie Valley 25.75 329 ⇑P P 16 51 50.0 +0.1
baz=26
CMB Columbia Colle 25.75 323 ⇓P P 16 51 50.3 +0.4
baz=26
M12A Wells 25.76 336 ⇓P P 16 51 50.2 +0.2
baz=26
ELN Prospectdale 25.95 40 eP P 16 51 48.9 -2.8
R05C Kirkwood Meado 26.05 325 ⇓P P 16 51 53.4 +0.8
baz=26
M11A Holland Ranch, 26.12 335 ⇑P P 16 51 53.7 +0.4
baz=26
FWV Forest Hill 26.14 39 eP P 16 51 50.5 -3.0
REDW Red Top Meadow 26.18 344 eP P 16 51 52.2 -1.6
comp=Z,11nm,0.8s,mb4.3
SNOW Snow King Moun 26.25 344 eP P 16 51 54.4 +0.1
comp=Z,48nm,1.1s,mb4.8
SNOW epP pP 16 52 10.8 +0.7
RRI2 Red Ridge 26.29 343 eP P 16 51 54.7 -0.1
comp=Z,29nm,0.9s,mb4.7
TPAW Teton Pass 26.32 344 eP P 16 51 55.2 +0.2
comp=Z,35nm,0.8s,mb4.8
TPAW epP pP 16 52 12.7 +1.8
LOHW Long Hollow 26.35 344 eP P 16 51 54.8 -0.5
comp=Z,26nm,0.7s,mb4.8
LOHW epP pP 16 52 12.5 +1.5
N09A Rock Creek Ran 26.40 331 ⇓P P 16 51 55.9 +0.1
baz=26
LAVA Lava Cap Winer 26.45 324 ⇓P P 16 51 56.6 +0.4
baz=26
O07A Toulon 26.50 329 ⇑P P 16 51 57.1 +0.4
baz=26,SNR=7.1
M10A I.L. Ranch, Tu 26.51 334 ⇓P P 16 51 57.0 +0.2
baz=26
MOOW Moose Ponds 26.51 344 eP P 16 51 55.1 -1.7
comp=Z,16nm,0.8s,mb4.6
MOOW epP pP 16 52 14.2 +1.6
N08A GE Springer Mi 26.62 330 ⇓P P 16 51 58.1 +0.3
baz=27
IMW Indian Meadow 26.70 344 eP P 16 52 00.9 +2.4
comp=Z,9.6nm,0.6s,mb4.5
P05C Yuba Gap, Truc 26.77 325 ⇑P P 16 52 00.1 +1.1
baz=27
FLWY Flagg Ranch 26.81 345 P P 16 51 58.3 -1.2
comp=Z,22nm,1.0s,mb4.7
M09A Marrel Ranch, 26.82 332 ⇑P P 16 52 00.2 +0.6
baz=27
O06A Flanigan 26.98 327 ⇓P P 16 52 01.6 +0.6
baz=27
N07B Gerlach 27.02 329 ⇓P P 16 52 01.5 +0.1
baz=27
BEKR Beckwourth 27.04 326 ⇑P P 16 52 01.8 +0.3
baz=27,SNR=7.4
CVS Carmenet Viney 27.16 321 ⇑P P 16 52 03.4 +0.7
baz=27
O05C Quincy 27.40 326 ⇓P P 16 52 05.6 +0.8
baz=27
N06A Buffalo Meadow 27.42 328 P P 16 52 05.7 +0.8
baz=27,SNR=14
ORV Oroville 27.43 324 ⇓P P 16 52 05.7 +0.7
baz=27
HLID Hailey 27.44 339 eP P 16 52 05.0 -0.1
comp=Z,2.0nm,0.6s,mb3.8
M07A Soldier Meadow 27.59 330 ⇑P P 16 52 06.9 +0.5
baz=28
O04C Chester 27.75 326 ⇑P P 16 52 08.4 +0.5
baz=28
ELFS Eagle Lake Fie 27.78 327 ⇑P P 16 52 08.9 +0.7
baz=28
M06C Likely Place G 28.09 328 ⇓P P 16 52 11.4 +0.5
baz=28
L07A Adell 28.15 331 ⇓P P 16 52 11.8 +0.3
baz=28
K08A Mann Creek Ran 28.33 333 P P 16 52 13.3 +0.3
baz=28,SNR=13
P01C Double 8 Ranch 28.42 322 ⇓P P 16 52 14.6 +0.8
baz=28
DLMT Dillon 28.50 343 eP P 16 52 12.3 -2.3
comp=Z,19nm,1.1s,mb4.6
DLMT epP pP 16 52 29.5 -1.0
M05C Lookout 28.54 327 ⇓P P 16 52 15.5 +0.6
baz=28
L05A Lakeview 28.89 329 ⇑P P 16 52 18.5 +0.4
baz=29
I09A Lost Marbles R 29.03 335 ⇑P P 16 52 19.0 -0.3
baz=29
K06A Valley Falls 29.18 330 ⇓P P 16 52 20.6 0.0
baz=29
M04C Macdoel 29.20 327 ⇑P P 16 52 20.8 0.0
baz=29
I08A Drewsey 29.32 334 ⇓P P 16 52 21.5 -0.3
baz=29
HRY Holter Researc 29.55 345 eP P 16 52 23.6 -0.3
HRY epP pP 16 52 38.7 -1.1
H09A Durkee 29.58 336 P P 16 52 23.9 -0.2
baz=30,SNR=5.6
I07A Izee 29.86 333 ⇑P P 16 52 26.4 -0.2
baz=30
I03A Eugene 31.52 329 ⇑P P 16 52 40.7 -0.6
baz=32
H04A Detroit Lake 31.53 331 ⇓P P 16 52 40.3 -1.0
baz=32
ULM Lac du Bonnet 32.05 6 P P 16 52 43.1 -2.8
comp=Z,12nm,0.8s,mb4.7,baz=191,slow=9.9,SNR=13
ULM LR LR 17 06 45.3
comp=Z,104nm,18.8s,baz=53,slow=38
ULM Lac du Bonnet 32.05 6 eP P 16 52 42.4 -3.5
comp=Z,18nm,1.0s,mb4.8
ULM epP pP 16 52 57.1 -4.8
SADO Sadowa 32.10 30 P P 16 52 45.7 -0.6
comp=Z,6.3nm,0.6s,mb4.5,baz=226,slow=9.4,SNR=5.1
SADO pP pP 16 53 00.4 -1.9
comp=Z,5.3nm,0.6s,baz=254,slow=8.9,SNR=2.5
SADO Sadowa 32.10 30 P P 16 52 45.7 -0.7
SADO pP pP 16 53 00.4 -1.9
F05A White Salmon 32.13 333 ⇑P P 16 52 46.3 -0.3
baz=32
SJG San Juan 33.25 85 P P 16 52 58.0 +1.6
comp=Z,26nm,0.4s,mb5.4,baz=264,slow=9.2,SNR=9.7
SJG San Juan 33.25 85 eP P 16 52 56.6 +0.2
SJG e*PP pP 16 53 13.1 +0.7
SJG pmax pmax
comp=Z,13nm,0.4s
SJG San Juan 33.25 85 eP P 16 52 56.6 +0.2
comp=Z,13nm,0.4s,mb5.1
SJG epP pP 16 53 13.1 +0.6
E03A Lebam 33.57 332 ⇑P P 16 52 59.7 +0.5
baz=34
B04A Port Angeles 34.70 333 ⇓P P 16 53 09.0 0.0
baz=35
A04A Legoe Bay, Lum 34.89 335 ⇑P P 16 53 11.0 +0.3
baz=35
C03A Quillayute Air 35.08 332 ⇓P P 16 53 12.8 +0.6
baz=35
EDM Edmonton 36.01 348 eP P 16 53 17.9 -2.3
EDM e*PP pP 16 53 30.9 -5.4
CRAG Craig 44.20 334 eP P 16 54 27.8 -0.2
SCHQ Schefferville 44.80 28 P P 16 54 31.2 -1.5
comp=Z,3.6nm,0.8s,mb4.2,baz=245,slow=6.4,SNR=5.7
SCHQ PcP PcP 16 56 13.3 -0.4
comp=Z,5.4nm,0.8s,baz=241,slow=5.0,SNR=5.3
YKA Yellowknife Ar 45.02 351 P P 16 54 31.8 -2.7
comp=Z,1.4nm,1.0s,mb3.6,baz=157,slow=8.1,SNR=5.7
YKA PcP PcP 16 56 14.1 -0.3
comp=Z,0.3nm,0.4s,baz=147,slow=3.9,SNR=5.0
YKA LR LR 17 14 47.0
comp=Z,240nm,18.1s,baz=80,slow=38
YKA Yellowknife Ar 45.02 351 P P 16 54 31.8 -2.7
YKA 16 56 14.1
INK Inuvik 53.86 346 eP P 16 55 40.1 -1.7
INK pmax pmax
comp=Z,13nm,1.0s
INK Inuvik 53.86 346 eP P 16 55 40.1 -1.7
comp=Z,13nm,1.0s,mb4.9
MCK McKinley 55.58 336 eP P 16 55 53.4 -0.8
MCK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MCK McKinley 55.58 336 eP P 16 55 53.4 -0.8
comp=Z,6.5nm,0.9s,mb4.7
COLA College 55.80 338 eP P 16 55 55.1 -0.7
SVW2 Sparrevohn 57.11 332 eP P 16 56 03.6 -1.5
SVW2 epP pP 16 56 18.6 -3.7
TTA Tatalina 58.03 334 eP P 16 56 09.6 -2.0
TTA e*PP pP 16 56 24.6 -4.2
TTA pmax pmax
comp=Z,31nm,1.3s,mb5.2
TTA Tatalina 58.03 334 eP P 16 56 09.6 -2.0
comp=Z,31nm,1.3s,mb5.2
TTA epP pP 16 56 24.6 -4.2
CFAA Coronel Fontan 58.94 147 LR LR 17 17 36.5
comp=Z,17nm,18.2s,baz=150,slow=32
CPUP Villa Florida 61.59 135 P P 16 56 36.2 +0.2
comp=Z,4.0nm,0.7s,mb4.5,baz=305,slow=6.7,SNR=12
CPUP Villa Florida 61.59 135 eP P 16 56 35.5 -0.5
CPUP e*PP pP 16 56 49.8 -3.6
CPUP pmax pmax
comp=Z,8.0nm,0.7s
CPUP Villa Florida 61.59 135 eP P 16 56 35.5 -0.6
comp=Z,8.3nm,0.7s,mb4.9
CPUP epP pP 16 56 49.8 -3.5
BDFB Brasilia 62.35 119 P P 16 56 42.2 +1.1
comp=Z,4.8nm,0.8s,mb4.6,baz=305,slow=3.5,SNR=5.0
SUMG Summit 64.51 17 eP P 16 56 53.6 -1.8
comp=Z,6.2nm,0.7s,mb4.5
BILL Bilibino 74.03 337⇓ iP P 16 57 52.8 -1.4
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
STS Santiago 79.59 48 P P 16 58 25.5 0.0
STS pmax pmax
comp=Z,14nm,0.6s,mb5.0
STS Santiago 79.59 48 P P 16 58 25.5 0.0
comp=Z,14nm,0.6s,mb5.0
PVRL Vila Real 80.63 50 eP P 16 58 31.6 +0.5
PVIS Viseu 80.65 50 eP P 16 58 31.5 +0.3
MTE Manteigas 81.00 51 eP P 16 58 33.3 +0.2
comp=Z,31nm,1.2s,mb5.0
PCBR Castelo Branco 81.21 51 eP P 16 58 34.8 +0.6
comp=Z,26nm,1.4s,mb4.9
PESTR Estremoz 81.40 52 eP P 16 58 35.3 +0.1
PBEJ Beja 81.43 53 eP P 16 58 36.3 +0.9
ROSF Rostrenen 81.58 42 eP P 16 58 35.2 -0.9
QUIF Quistinic 81.78 42 eP P 16 58 36.5 -0.7
comp=Z,12nm,0.7s,mb4.5
QUIF Quistinic 81.78 42 eP P 16 58 36.5 -0.7
QUIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
QUIF Quistinic 81.78 42 eP P 16 58 36.5 -0.7
comp=Z,6.1nm,0.7s,mb4.5
EGRO El Granado 81.86 53 P P 16 58 37.2 -0.4
comp=Z,14nm,1.0s,mb4.7
SGMF Saint Gilles 82.06 42 eP P 16 58 37.8 -0.8
EMIN Mina Concepcio 82.41 53 P P 16 58 39.6 -0.8
comp=Z,10nm,0.7s,mb4.8
ELAN Lanestosa 83.08 47 P P 16 58 42.4 -1.5
comp=Z,8.7nm,0.7s,mb4.7
GRR Gorron 83.08 41 eP P 16 58 43.7 -0.3
comp=Z,28nm,0.7s,mb4.9
GRR Gorron 83.08 41 eP P 16 58 43.7 -0.3
GRR pmax pmax
comp=Z,14nm,0.7s,mb4.9
GRR Gorron 83.08 41 eP P 16 58 43.7 -0.3
comp=Z,14nm,0.7s,mb4.9
FLN La Foliniere 83.19 41 eP P 16 58 44.4 -0.1
comp=Z,38nm,0.9s,mb4.9
FLN La Foliniere 83.19 41 eP P 16 58 44.4 -0.1
FLN pmax pmax
comp=Z,19nm,0.9s,mb4.9
FLN La Foliniere 83.19 41 eP P 16 58 44.4 -0.1
comp=Z,19nm,0.9s,mb4.9
GUD Guadarrama 83.39 49 P P 16 58 46.2 +0.6
GUD pmax pmax
comp=Z,11nm,0.8s,mb4.7
GUD Guadarrama 83.39 49 P P 16 58 46.2 +0.6
comp=Z,11nm,0.8s,mb4.7
LDF La Druitiere 83.47 41 eP P 16 58 45.7 -0.3
comp=Z,34nm,0.9s,mb4.9
LDF La Druitiere 83.47 41 eP P 16 58 45.7 -0.3
LDF pmax pmax
comp=Z,17nm,0.9s,mb4.9
LDF La Druitiere 83.47 41 eP P 16 58 45.7 -0.3

comp=Z,17nm,0.9s,mb4.9
ESDC Sonseca Array 83.84 50 P **P 16 58 46.9 -1.0**
comp=Z,2.4nm,0.7s,mb4.2,baz=301,slow=5.4,SNR=16
ESDC Sonseca Array 83.84 50 P **P 16 58 47.7 -0.1**
comp=Z,4.2nm,0.6s,mb4.5
MFF Saint Martin d 84.15 43 *e*P **P 16 58 50.1 +0.6**
comp=Z,29nm,1.1s,mb4.8
MFF Saint Martin d 84.15 43 *e*P **P 16 58 50.1 +0.6**
MFF pmax pmax
comp=Z,15nm,1.0s,mb4.8
MFF Saint Martin d 84.15 43 *e*P **P 16 58 50.1 +0.6**
comp=Z,15nm,1.0s,mb4.8
KONO Kongsberg 84.30 28 *e*P **P 16 58 50.3 +0.1**
KONO pmax pmax
comp=Z,29nm,0.9s,mb5.1
KONO Kongsberg 84.30 28 *e*P **P 16 58 50.3 +0.1**
comp=Z,29nm,0.9s,mb5.1
NB2 NORSAR Subarra 84.37 27 P **P 16 58 50.3 -0.3**
comp=Z,0.6nm,0.7s,mb3.5,baz=304,slow=5.1
NOA NORSAR Array B 84.37 27 P **P 16 58 50.1 -0.4**
comp=Z,5.7nm,0.9s,mb4.4,baz=302,slow=5.1,SNR=22
ELOJ Sierra Loja 84.51 53 P **P 16 58 52.8 +1.6**
ELOJ pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
ELOJ Sierra Loja 84.51 53 P **P 16 58 52.8 +1.5**
comp=Z,4.2nm,0.5s,mb4.6
ARCES ARCESS Array B 84.59 16 P **P 16 58 50.3 -1.3**
comp=Z,14nm,0.7s,mb5.0,baz=310,slow=5.9,SNR=33
SJPF Ste Jean 84.64 46 *e*P **P 16 58 52.1 +0.2**
ERON Agron 84.81 53 P **P 16 58 56.1 +3.3**
comp=Z,1.4nm,0.3s,mb4.4
KEV Kevo 84.84 16 *e*p **P 16 58 50.8 -2.1**
comp=Z,11nm,0.7s,mb4.9
KEV Kevo 84.84 16 *e*P **P 16 58 50.8 -2.1**
KEV pmax pmax
comp=Z,11nm,0.7s,mb4.9
ECOG Cogollos-Vega 84.91 53 P **P 16 58 54.7 +1.4**
ECOG pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
ECOG Cogollos-Vega 84.91 53 P **P 16 58 54.7 +1.4**
comp=Z,9.9nm,0.7s,mb4.8
EQES Quesada 85.11 52 P **P 16 58 52.8 -1.5**
comp=Z,9.7nm,0.9s,mb4.7
ETSF Etsaut 85.17 46 *e*P **P 16 58 54.9 +0.3**
comp=Z,28nm,0.8s,mb4.9
ETSF Etsaut 85.17 46 *e*P **P 16 58 54.9 +0.3**
ETSF pmax pmax
comp=Z,14nm,0.8s,mb4.9
ETSF Etsaut 85.17 46 *e*P **P 16 58 54.9 +0.3**
comp=Z,14nm,0.8s,mb5.0
EVIA Vianos 85.25 51 P **P 16 58 56.3 +1.3**
EVIA pmax pmax
comp=Z,18nm,0.6s,mb5.2
EVIA Vianos 85.25 51 P **P 16 58 56.3 +1.3**
comp=Z,18nm,0.6s,mb5.2
LFF La Frestale 85.32 44 *e*P **P 16 58 55.4 +0.1**
comp=Z,53nm,1.0s,mb5.1
LFF La Frestale 85.32 44 *e*P **P 16 58 55.4 +0.1**
LFF pmax pmax
comp=Z,27nm,1.0s,mb5.1
LFF La Frestale 85.32 44 *e*P **P 16 58 55.4 +0.1**
comp=Z,27nm,1.0s,mb5.1
EHUE Huescar 85.46 52 P **P 16 58 58.1 +2.1**
EHUE pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
EHUE Huescar 85.46 52 P **P 16 58 58.1 +2.1**
comp=Z,5.5nm,0.6s,mb4.7
EBER Berja 85.54 53 P **P 16 58 57.9 +1.4**
comp=Z,16nm,0.6s,mb5.1
BAIF Baives 85.56 39 *e*P **P 16 58 56.5 0.0**
comp=Z,29nm,1.0s,mb4.9
BAIF Baives 85.56 39 *e*P **P 16 58 56.5 0.0**
BAIF pmax pmax
comp=Z,15nm,1.0s,mb4.9
BAIF Baives 85.56 39 *e*P **P 16 58 56.5 0.0**
comp=Z,15nm,1.0s,mb4.9
HYF Humbligny 85.69 42 *e*P **P 16 58 57.2 +0.1**
RJF Les Rejaudoux 85.70 44 *e*P **P 16 58 57.0 -0.2**
comp=Z,60nm,1.0s,mb5.2
RJF Les Rejaudoux 85.70 44 *e*P **P 16 58 57.0 -0.2**
RJF pmax pmax
comp=Z,30nm,1.0s,mb5.2
RJF Les Rejaudoux 85.70 44 *e*P **P 16 58 57.0 -0.2**
comp=Z,30nm,1.0s,mb5.2
EBIE Bielsa 85.73 46 P **P 16 59 02.5 +5.2**
comp=Z,20nm,1.1s,mb5.0
EPF Esparros 85.75 46 *e*P **P 16 58 57.5 +0.1**
comp=Z,92nm,1.4s,mb5.2
EPF Esparros 85.75 46 *e*P **P 16 58 57.5 +0.1**
EPF pmax pmax
comp=Z,46nm,1.4s,mb5.2
EPF Esparros 85.75 46 *e*P **P 16 58 57.5 +0.1**
comp=Z,46nm,1.4s,mb5.2
TCF Toulx Ste Croi 85.78 43 *e*P **P 16 58 57.4 -0.2**
comp=Z,63nm,0.9s,mb5.2
TCF Toulx Ste Croi 85.78 43 *e*P **P 16 58 57.4 -0.2**
TCF pmax pmax
comp=Z,31nm,0.9s,mb5.2
TCF Toulx Ste Croi 85.78 43 *e*P **P 16 58 57.4 -0.2**
comp=Z,31nm,0.9s,mb5.2
HFS Hagfors 85.89 27 LR LR 17 41 54.3
comp=Z,48nm,19.1s,baz=114,slow=39
GIVF Givet 85.90 38 *e*P **P 16 58 58.3 +0.1**
comp=Z,34nm,0.9s,mb5.0
GIVF Givet 85.90 38 *e*P **P 16 58 58.3 +0.1**
GIVF pmax pmax
comp=Z,17nm,0.9s,mb5.0
GIVF Givet 85.90 38 *e*P **P 16 58 58.3 +0.1**
comp=Z,17nm,0.9s,mb5.0
EGRA Graus 86.03 47 P **P 16 59 00.8 +2.0**
comp=Z,7.3nm,0.3s,mb5.1
ECHE Chera 86.05 50 P **P 16 59 00.4 +1.5**
ECHE pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ECHE Chera 86.05 50 P **P 16 59 00.4 +1.5**
comp=Z,6.1nm,0.8s,mb4.6
BGF Bois d'Agland 86.09 42 *e*P **P 16 58 58.8 -0.3**
comp=Z,51nm,1.0s,mb5.1
BGF Bois d'Agland 86.09 42 *e*P **P 16 58 58.8 -0.3**
BGF pmax pmax
comp=Z,26nm,1.0s,mb5.1
BGF Bois d'Agland 86.09 42 *e*P **P 16 58 58.8 -0.3**
comp=Z,26nm,1.0s,mb5.1
EMOS Mosqueruela 86.13 49 P **P 16 59 00.7 +1.4**
comp=Z,29nm,0.7s,mb5.3
CAF Calviac 86.20 44 *e*P **P 16 58 59.4 -0.3**
comp=Z,21nm,1.0s,mb4.7
CAF Calviac 86.20 44 *e*P **P 16 58 59.4 -0.3**
CAF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CAF Calviac 86.20 44 *e*P **P 16 58 59.4 -0.3**
comp=Z,10nm,1.0s,mb4.7
SSF Saint Saulge 86.31 42 *e*P **P 16 59 00.0 -0.2**
comp=Z,40nm,0.7s,mb5.2
SSF Saint Saulge 86.31 42 *e*P **P 16 59 00.0 -0.2**
SSF pmax pmax
comp=Z,20nm,0.7s,mb5.2
SSF Saint Saulge 86.31 42 *e*P **P 16 59 00.0 -0.2**
comp=Z,20nm,0.7s,mb5.2
AVF Avril sur Loir 86.32 42 *e*P **P 16 58 59.7 -0.6**
comp=Z,25nm,0.7s,mb5.0
AVF Avril sur Loir 86.32 42 *e*P **P 16 58 59.7 -0.6**
AVF pmax pmax
comp=Z,13nm,0.7s,mb5.0
AVF Avril sur Loir 86.32 42 *e*P **P 16 58 59.7 -0.6**
comp=Z,13nm,0.7s,mb5.0
LOR Lormes 86.45 41 *e*P **P 16 59 00.9 0.0**
comp=Z,78nm,0.7s,mb5.5
LOR Lormes 86.45 41 *e*P **P 16 59 00.9 0.0**
LOR pmax pmax
comp=Z,39nm,0.7s,mb5.5
LOR Lormes 86.45 41 *e*P **P 16 59 00.9 0.0**
comp=Z,39nm,0.7s,mb5.5
SMF Signal de Mont 86.69 42 *e*P **P 16 59 01.5 -0.6**
comp=Z,21nm,0.8s,mb4.8
SMF Signal de Mont 86.69 42 *e*P **P 16 59 01.5 -0.6**
SMF pmax pmax
comp=Z,11nm,0.8s,mb4.8
SMF Signal de Mont 86.69 42 *e*P **P 16 59 01.5 -0.6**
comp=Z,11nm,0.8s,mb4.8
MEZF Maizieres J'vi 86.69 40 *e*P **P 16 59 02.2 +0.1**
comp=Z,23nm,0.8s,mb4.9
MEZF Maizieres J'vi 86.69 40 *e*P **P 16 59 02.2 +0.1**
comp=Z,23nm,0.8s,mb5.2
MTLF Montolieu 86.91 45 *e*P **P 16 59 03.2 +0.1**
comp=Z,17nm,0.8s,mb4.7
MTLF Montolieu 86.91 45 *e*P **P 16 59 03.2 +0.1**
MTLF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
MTLF Montolieu 86.91 45 *e*P **P 16 59 03.2 +0.1**
comp=Z,8.4nm,0.8s,mb4.7
HAU Haudompre 87.69 40 *e*P **P 16 59 06.1 -0.8**
comp=Z,12nm,0.7s,mb4.7
HAU Haudompre 87.69 40 *e*P **P 16 59 06.1 -0.8**
HAU pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
HAU Haudompre 87.69 40 *e*P **P 16 59 06.1 -0.8**
comp=Z,5.8nm,0.7s,mb4.7
LASF Ste Croix 87.72 44 *e*P **P 16 59 07.1 +0.1**
comp=Z,32nm,0.9s,mb5.1
VIVF Saint-Julien-l 87.94 43 *e*P **P 16 59 08.6 +0.5**
comp=Z,15nm,1.0s,mb4.7
VIVF Saint-Julien-l 87.94 43 *e*P **P 16 59 08.6 +0.5**
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
VIVF Saint-Julien-l 87.94 43 *e*P **P 16 59 08.6 +0.5**
comp=Z,7.4nm,1.0s,mb4.7
CDF Champ du Feu 88.07 39 *e*P **P 16 59 07.7 -1.0**
comp=Z,7.8nm,1.0s,mb4.4
CDF Champ du Feu 88.07 39 *e*P **P 16 59 07.7 -1.0**
CDF pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
CDF Champ du Feu 88.07 39 *e*P **P 16 59 07.7 -1.0**
comp=Z,3.9nm,1.0s,mb4.4
HINF Hinteralfeld 88.07 40 *e*P **P 16 59 07.5 -1.2**
CABF La Chapelle 88.11 41 *e*P **P 16 59 08.8 -0.1**
comp=Z,13nm,0.8s,mb4.7
CABF La Chapelle 88.11 41 *e*P **P 16 59 08.8 -0.1**
CABF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
CABF La Chapelle 88.11 41 *e*P **P 16 59 08.8 -0.1**
comp=Z,6.3nm,0.8s,mb4.7
ORIF Oris-en-Rattie 88.69 43 *e*P **P 16 59 11.3 -0.4**
comp=Z,6.2nm,0.8s,mb4.4
ORIF Oris-en-Rattie 88.69 43 *e*P **P 16 59 11.3 -0.4**
ORIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
ORIF Oris-en-Rattie 88.69 43 *e*P **P 16 59 11.3 -0.4**
comp=Z,3.1nm,0.8s,mb4.4
SMRF Simiane la Rot 88.89 44 *e*P **P 16 59 12.5 -0.1**
LPL La Plagne 88.98 42 *e*P **P 16 59 13.1 +0.1**
comp=Z,5.3nm,0.8s,mb4.3
LPL La Plagne 88.98 42 *e*P **P 16 59 13.1 +0.1**
LPL pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
LPL La Plagne 88.98 42 *e*P **P 16 59 13.1 +0.1**
comp=Z,2.7nm,0.8s,mb4.3
LPG La Plagne 89.00 42 *e*P **P 16 59 13.4 +0.3**
MBDF Montbardon 89.35 43 *e*P **P 16 59 14.5 -0.2**
comp=Z,13nm,0.9s,mb4.6
MBDF Montbardon 89.35 43 *e*P **P 16 59 14.5 -0.2**
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MBDF Montbardon 89.35 43 *e*P **P 16 59 14.5 -0.2**
comp=Z,6.3nm,0.9s,mb4.7
KAF Kangasniemi 89.70 22 *e*p **P 16 59 13.2 -3.2**
baz=308,slow=4.5
FRF La Foret Royal 89.77 44 *e*P **P 16 59 16.3 -0.4**
comp=Z,28nm,1.0s,mb5.0
FRF La Foret Royal 89.77 44 *e*P **P 16 59 16.3 -0.4**
FRF pmax pmax
comp=Z,14nm,1.0s,mb5.0
FRF La Foret Royal 89.77 44 *e*P **P 16 59 16.3 -0.4**
comp=Z,14nm,1.0s,mb5.0
LMR La Mourre 89.77 44 *e*P **P 16 59 16.3 -0.4**
GRA1 Grafenberg Arr 89.80 37 *e*P **P 16 59 16.7 -0.1**
comp=Z,8.0nm,1.4s,mb4.7
GRF Grafenberg Arr 89.80 37 *e*P **P 16 59 16.7 -0.1**
comp=Z,8.0nm,1.4s,mb4.7
GRF Grafenberg Arr 89.80 37 *e*P **P 16 59 16.7 -0.1**
GRF pmax pmax
comp=Z,8.0nm,1.4s,mb4.7
GRF Grafenberg Arr 89.80 37 *e*P **P 16 59 16.7 -0.1**
GRF pmax pmax
comp=Z,8.0nm,1.4s,mb4.7
FINES FINESS Array B 90.06 22 P **P 16 59 16.3 -1.7**
comp=Z,1.9nm,0.7s,mb4.3,baz=248,slow=2.1,SNR=9.4
FINES LR LR 17 40 18.5
comp=Z,24nm,19.9s,baz=190,slow=36
SBF Sospel 90.15 43 *e*P **P 16 59 17.7 -0.8**
comp=Z,92nm,1.2s,mb5.5
SBF Sospel 90.15 43 *e*P **P 16 59 17.7 -0.8**
SBF pmax pmax
comp=Z,46nm,1.2s,mb5.5
SBF Sospel 90.15 43 *e*P **P 16 59 17.7 -0.8**
comp=Z,46nm,1.2s,mb5.5
YAK Yakutsk 90.32 339 *e*P **P 16 59 18.2 -1.1**
YAK pmax pmax
comp=Z,19nm,0.8s,mb5.3
YAK Yakutsk 90.32 339 *e*P **P 16 59 19.6 +0.3**
comp=Z,30nm,0.9s,mb5.4
BRG Berggiesshubel 90.73 35 *e*P **P 16 59 20.7 -0.4**
comp=Z,3.5nm,1.0s,mb4.4
BRG Berggiesshubel 90.73 35 *e*P **P 16 59 20.7 -0.5**
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
JOF Joensuu 90.83 20 *e*p **P 16 59 18.7 -2.9**
GERES GERESS Array B 91.63 37 P **P 16 59 24.8 -0.5**
comp=Z,1.5nm,0.9s,mb4.2,baz=329,slow=5.0,SNR=11
PGF Pioggiola 91.76 44 *e*P **P 16 59 25.3 -0.7**
comp=Z,30nm,1.0s,mb5.2
PGF Pioggiola 91.76 44 *e*P **P 16 59 25.3 -0.7**
PGF pmax pmax
comp=Z,15nm,1.0s,mb5.2
PGF Pioggiola 91.76 44 *e*P **P 16 59 25.3 -0.7**
comp=Z,15nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 93.26 322 *e*P **P 16 59 31.4 -1.5**
YSS pmax pmax
comp=Z,8.0nm,1.7s,mb4.8
KEST Kesra 95.08 50 P **P 16 59 41.7 +0.5**
comp=Z,1.4nm,0.8s,mb4.5,baz=323,slow=5.1,SNR=4.1
TORD Torodi Ar. Bea 97.78 73 P **P 16 59 54.1 +0.6**
comp=Z,0.7nm,0.9s,mb4.2,baz=298,slow=5.5,SNR=3.7
AKASG Malin Array Be 98.58 29 LR LR 17 44 37.9
comp=Z,21nm,18.1s,baz=320,slow=36
MDJ Mudanjiang 102.06 326 P Pdif 17 00 09.7 -2.8
MDJ AMB AMB
comp=Z,2.0nm,0.9s
MDJ AMB AMB
comp=Z,47nm,8.3s
HHC Hu-ho-hao-te 113.65 333 *e*PKP PKiKP 17 04 56.2 -0.1
HHC PP PP 17 05 54.3 +5.0
HHC PKS 17 08 31.4
HHC SKS SKSdf 17 12 03.4 +0.7
HHC PP PP
comp=Z,74nm,4.8s
HHC LR LR
comp=N,95nm,34.2s
HHC LR LR
comp=E,143nm,29.4s
HHC LR LR
comp=Z,169nm,28.4s
SSE Sheshan 116.12 320 PKP PKPdf 17 04 56.7 -4.4
NJ2 Nanjing 116.83 322 *e*PKP PKPdf 17 04 55.3 -7.2
NJ2 XPKP 17 05 32.6
NJ2 PP PP 17 06 10.0 -1.7
NJ2 PP PP
comp=Z,440nm,8.8s
NJ2 LR LR
comp=N,2μm,17.9s
NJ2 LR LR
comp=E,1μm,18.1s
NJ2 LR LR
comp=Z,1μm,14.2s
WMQ Urumqi 117.54 353 PKP PKPdf 17 05 04.0 +0.2
WMQ PP PP 17 06 22.0 +5.4
WMQ SKS SKSdf 17 12 05.0 -5.2
WMQ SKKS SKKSac 17 13 04.0 -7.3
WMQ SS SS 17 22 21.0 -1.9
WMQ PP PP
comp=Z,105nm,7.0s
WMQ LR LR
comp=N,867nm,18.0s
WMQ LR LR
comp=E,798nm,18.0s
WMQ LR LR
comp=Z,897nm,18.0s
LZH Lanzhou 120.84 336 *e*PKP PKPdf 17 05 11.1 +0.9
LZH LR LR
comp=N,168nm,19.6s
LZH LR LR
comp=Z,245nm,20.4s
STKA Stephens Creek 122.30 244 PKP PKPdf 17 05 13.3 +0.3
comp=Z,2.6nm,0.8s,baz=331,slow=1.9,SNR=4.8
STKA pPKP pPKPdf 17 05 31.3 -0.7
comp=Z,1.7nm,0.7s,baz=96,slow=7.8,SNR=3.2
STKA Stephens Creek 122.30 244 PKP PKPdf 17 05 13.3 +0.3
STKA pPKP pPKPdf 17 05 31.3 -0.7
CD2 Chengdu 125.41 334 *e*PKP PKPdf 17 05 16.4 -2.5
ASAR Alice Springs 128.56 254 PKP PKPdf 17 05 25.2 +0.3
comp=Z,1.7nm,0.9s,baz=75,slow=1.8,SNR=13
ASAR pPKP pPKPdf 17 05 43.2 -0.8
comp=Z,0.9nm,0.8s,baz=110,slow=2.0,SNR=4.1
MAW Mawson 129.78 172 PKP PKPdf 17 05 27.4 +0.1
comp=Z,3.0nm,0.8s,baz=251,slow=3.2,SNR=11
MAW pPKP pPKPdf 17 05 45.0 -1.3
comp=Z,1.3nm,0.7s,baz=226,slow=5.3,SNR=4.0
KMI Kunming 130.85 331 PKP PKPdf 17 05 26.2 -3.1
KMI XPKP 17 05 50.9
KMI LR LR
comp=Z,47nm,24.9s
OPO Ambohidratompo 150.04 95 PKPbc PKPbc 17 06 10.3 +1.7
comp=Z,3.9nm,0.9s,baz=129,slow=6.5,SNR=3.3

IDC ***11*** *16:49:20.7±0.8, 9.41S×10.829E, h0km, mb4.0/9, mb1 4.1/10, mb1mx4.0/15, mbtmp4.0/10, Error ellipse: s-maj=32.6km s-min=16.9km az=65.0*
NEIC ***11*** *16:49:22.2±0.4, 9.41S×10.843E, h10km, mb4.7/17, Error ellipse: s-maj=15.6km s-min=7.6km az=58.0*
BJI ***11*** *16:49:22.2, 9.40S×10.840E, h10km, mB4.6, mb4.3, Ms4.5, Msz4.2*
ISCJB ***11*** *16:49:25.2±1.5, 9.43S±007×10.835E±008, h44km±12km, mb4.4/26, Error ellipse: s-maj=14.6km s-min=9.2km az=101.2*
ISC 11 16:49:27.3±1.3, 9.42S±007×10.837E±008, h45km±11km, h32km±7.4km:pP-P,n39,σ1$11/40,mb4.4/26,2C,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BJI	**Banjamegara**	**2.46**	**33**	*i*P		**Pn**	**16 50 10.1**	**+5.1**
BJI				*i*	S	**Sn**	**16 50 33.0**	**-0.8**
LEM	**Lembang** 0.0nm,0.0s	**2.68**	**344**	P		**Pn**	**16 50 09.2**	**+1.3**
JCJI	**Jatiwangi** 0.0nm,0.0s	**2.91**	**358**	P		**Pn**	**16 50 09.5**	**-1.6**
CBJI	**Citeko** 0.0nm,0.0s	**3.34**	**333**	P		**Pn**	**16 50 12.9**	**-4.1**
KRKI	**Karangkates** 0.0nm,0.0s	**4.23**	**73**	P		**Pn**	**16 50 31.3**	**+2.1**
KSI	**Kapahiang** 0.0nm,0.0s	**8.11**	**315**	P		**Pn**	**16 51 20.1**	**-2.3**
MBWA	**Marble Bar**	**16.00**	**138**	*e*Pn		**Pn**	**16 53 00.6**	**-8.6**
MBWA				*e*Sn		**Sn**	**16 55 44.3**	**-21**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=308,slow=10,SNR=4.3	**18.85**	**119**	P		**Pn**	**16 53 45.1**	**+0.7**
WRAB	**Tennant Creek** 3.5nm,0.8s,mb3.9	**27.18**	**116**	*e*P		**P**	**16 55 06.8**	**+0.3**
ASAR	**Alice Springs** 0.7nm,0.7s,mb3.4,baz=298,slow=8.2,SNR=5.6	**28.21**	**123**	P		**P**	**16 55 16.1**	**+0.4**
ASAR				PcP		PcP	16 58 29.6	+1.1
STKA	**Stephens Creek** 0.6nm,0.6s,baz=305,slow=2.1,SNR=9.2 2.7nm,0.9s,mb4.0	**38.03**	**131**	*i*P		**P**	**16 56 41.6**	**+0.4**
STKA	**Stephens Creek** 3.4nm,0.8s,mb4.1,baz=305,slow=8.5,SNR=6.3	**38.03**	**131**	P		**P**	**16 56 41.5**	**+0.2**
LSA	**Lhasa**	**42.28**	**337**	P		**P**	**16 57 18.6**	**+2.2**
LSA	**Lhasa** 5.0nm,0.7s,mb4.2	**42.28**	**337**	*e*P		**P**	**16 57 18.0**	**+1.6**
JIRN	**Jiri** 23nm,0.6s,mb5.1	**42.66**	**330**	*e*P		**P**	**16 57 20.4**	**+0.9**
PKI	**Pulchoki**	**42.97**	**329**	*e*P		**P**	**16 57 22.4**	**+0.4**
GUN	**Gumba** 36nm,0.7s,mb5.2	**43.02**	**330**	*e*P		**P**	**16 57 23.4**	**+1.0**
DMN	**Daman** 21nm,0.7s,mb5.0	**43.16**	**329**	*e*P		**P**	**16 57 24.1**	**+0.6**
KKN	**Kakani** 18nm,0.8s,mb4.8	**43.22**	**330**	*e*P		**P**	**16 57 24.5**	**+0.5**
XAN	**Xi'an**	**43.22**	**1**	P		**P**	**16 57 24.6**	**+0.6**
XAN					AMB	AMB		
GKN	**Gorkha** comp=Z,10.0nm,1.0s,mb4.5	**43.72**	**329**	*e*P		**P**	**16 57 28.6**	**+0.6**
KOLN	**Koldanda** comp=Z,24nm,0.8s,mb5.0	**44.06**	**328**	*e*P		**P**	**16 57 31.6**	**+0.8**
GTA	**Gaotai** comp=Z,26nm,0.8s,mb5.0	**49.23**	**351**	*e*P		**P**	**16 58 13.7**	**+2.5**
GTA					AP	pP	16 58 18.5	-5.2
GTA					XP	sP	16 58 21.4	-7.5
GTA					AMB	AMB		
MAJO	**Matsushiro** comp=Z,3.0nm,1.0s,mb4.3 comp=Z,3.0nm,0.7s,mb4.3	**53.64**	**30**	*e*P		**P**	**16 58 42.1**	**-2.1**
MJAR	**Matsushiro Arr** comp=Z,1.1nm,0.9s,mb3.8,baz=204,slow=7.9,SNR=5.7	**53.64**	**30**	P		**P**	**16 58 42.4**	**-1.8**
SONM	**Songino Array** comp=Z,1.2nm,0.7s,mb4.1,baz=171,slow=7.5,SNR=7.3	**57.03**	**359**	P		**P**	**16 59 08.9**	**+0.3**
ULN	**Ulaanbaatar** comp=Z,2.1nm,0.7s,mb4.3	**57.04**	**359**	*e*P		**P**	**16 59 07.6**	**-1.1**
MKAR	**Makanchi Array** comp=Z,6.0nm,0.6s,mb4.9,baz=142,slow=7.8,SNR=84	**60.61**	**340**	P		**P**	**16 59 34.0**	**+0.5**
YSS	**Yuzh-Sakhalins** comp=Z,5.9nm,0.8s,mb4.7	**63.94**	**26**	*e*P		**P**	**16 59 54.8**	**-0.9**
KURK	**Kurchatov** comp=Z,5.0nm,0.9s,mb4.5	**65.22**	**340**	*e*P		**P**	**17 00 04.2**	**+0.1**
KURK				*e*		pP	17 00 14.8	-2.2
MAW	**Mawson** comp=Z,3.1nm,1.2s,mb4.2,baz=68,slow=5.4,SNR=6.6	**65.47**	**197**	P		**P**	**17 00 04.7**	**-1.0**
MAW	**Mawson** comp=Z,4.5nm,1.3s,mb4.3	**65.47**	**197**	*e*P		**P**	**17 00 04.1**	**-1.6**
BVAR	**Borovoye Array** comp=Z,1.2nm,0.6s,mb4.0,baz=131,slow=8.1,SNR=6.7	**70.11**	**337**	P		**P**	**17 00 34.0**	**-0.8**
CHKZ	**Chkalovo** comp=Z,1.3nm,0.5s,mb4.1	**70.52**	**337**	*e*P		**P**	**17 00 36.5**	**-0.8**
CHKZ				*e*		pP	17 00 47.8	-2.6
YAK	**Yakutsk** comp=Z,13nm,0.8s,mb4.9	**73.14**	**10**	*e*P		**P**	**17 00 52.4**	**-0.7**
VNDA	**Vanda** comp=Z,0.7nm,1.0s,mb3.5,baz=318,slow=6.8,SNR=4.8	**73.36**	**169**	P		**P**	**17 00 53.6**	**-0.8**
QSPA	**South Pole Qui** comp=Z,2.2nm,1.0s,mb4.0	**80.58**	**180**	*e*P		**P**	**17 01 34.1**	**-1.0**
BRTR	**Keskin Array B** comp=Z,0.7nm,0.7s,mb3.9,baz=102,slow=5.7,SNR=4.0	**84.44**	**312**	P		**P**	**17 01 55.5**	**+0.4**
WMOK	**Wichita Mounta**	**144.62**	**40**	*e*PKPdf		PKPdf	17 08 59.5	+0.6

MOS ***11*** *17:00:44.6±1.2, 3834N×7306E, h83km, mb3.8/6, Error ellipse: s-maj=15.3km s-min=8.3km az=97.9*
IDC ***11*** *17:00:44.3±5.9, 3821N×7311E, h64km±47km, mb3.6/9, mb1 3.7/12, mb1mx3.6/22, mbtmp3.9/12, ML3.7/3, Error ellipse: s-maj=45.3km s-min=19.1km az=2.0*
NEIC ***11*** *17:00:45.2±1.1, 3829N×7306E, h76km±12km, mb3.8/4, Error ellipse: s-maj=14.5km s-min=6.0km az=59.0*
BJI ***11*** *17:00:45.2, 3830N×7310E, h75km, Ms3.6*
ISCJB ***11*** *17:00:46.1±0.6, 3832N±003×7309E±007, h104km±8km, mb3.7/12, Error ellipse: s-maj=10.0km s-min=4.7km az=136.1*
NNC ***11*** *17:00:55.8±7.5, 3906N×7292E, h184km±62km, mb2.8, mpv3.0, Error ellipse: s-maj=83.2km s-min=34.6km az=17.0*
ISC 11 17:00:47.0±0.6, 3829N±003×7306E±007, h98km±7km, n75, σ1$23/85, mb3.7/12, 4C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.58**	**61**	P		**Pn**	**17 01 28.5**	**+1.5**
KSH				S		**Sn**	**17 01 58.4**	**+0.6**
KSH	comp=N,1μm,0.5s			Smax				
KSH	comp=E,1μm,0.5s			Smax				
AML	**Almayashu** SNR=87	**3.86**	**7**	P		**Pn**	**17 01 44.7**	**+0.4**
UCH	**Uchtor** SNR=19	**4.08**	**15**	P		**Pn**	**17 01 48.3**	**+1.1**
KZA	**Kyzart** SNR=31	**4.13**	**23**	P		**Pn**	**17 01 48.3**	**+0.4**
EKS2	**Erkin-Say** SNR=68	**4.40**	**7**	P		**Pn**	**17 01 52.3**	**+0.9**
AAK	**Ala-Archa** SNR=25	**4.47**	**14**	P		**Pn**	**17 01 53.6**	**+1.2**
AAK	**Ala-Archa**	**4.47**	**14**	*e*Pn		**Pn**	**17 01 52.2**	**-0.2**
AAK				*e*Sn		**Sn**	**17 02 32.3**	**-11**
CEP	**Cherat**	**4.56**	**192**	P		**Pn**	**17 01 59.7**	**+6.1**
KBK	**Karagaybulak**	**4.59**	**18**	P		**Pn**	**17 01 54.8**	**+0.7**

SNR=24
CHCP Chirah Chowk 4.63 178 P Pn 17 02 01.1 +6.5
ULHL Ulahol 4.64 31 P Pn 17 01 55.0 +0.4
SNR=58
CHMS Chumysh 4.87 15 P Pn 17 01 58.4 +0.5
SNR=14
TKM2 Tokmak 2 5.01 22 P Pn 17 02 00.2 +0.5
SNR=14
TKM2 Tokmak 2 5.01 22 ⇓P Pn 17 02 00.3 +0.6
comp=E,0.6nm,0.5s
TKM2 ⇑S Sn 17 02 54.7 -1.7
comp=E,2.9nm,0.6s
USP Ospenovka 5.09 12 P Pn 17 02 01.2 +0.4
SNR=9.1
KK31 Karatay Array 5.18 339 P Pn 17 02 02.2 +0.2
comp=E,2.7nm,0.3s,baz=28,slow=3.9,SNR=162
KK31 ⇑S Sn 17 02 55.9 -4.6
comp=E,22nm,0.3s
DLH Dalhousie 6.21 157 eP Pn 17 02 17.0 +1.0
DLH ex x 17 03 18.0
SBDP Sheikh Budin 6.26 198 P Pn 17 02 22.2 +5.5
SARP Sargodha 6.37 183 P Pn 17 02 22.5 +4.4
DRP Derazinda 6.94 201 P Pn 17 02 31.2 +5.2
SDNR Sundarnagar 7.50 154 eP Pn 17 02 36.2 +2.6
SDNR eS Sn 17 03 54.0 -2.9
KLP Kalpa 7.97 146 eP Pn 17 02 40.2 +0.2
KLP eS Sn 17 04 07.9 -0.6
KLP AML AML 17 04 14.3
comp=E,213nm,0.5s
KLP AML AML 17 04 17.0
comp=N,146nm,0.9s
NDI New Delhi 10.19 159 eS Sn 17 04 54.5 -8.0
KHET Khetri 10.45 167 eS Sn 17 05 01.1 -7.7
KHET AML AML 17 05 09.6
comp=N,20nm,0.3s
KHET AML AML 17 05 11.5
comp=E,19nm,0.2s
KUDL Kundal 10.52 163 eS Sn 17 05 01.9 -8.6
KUDL AML AML 17 05 13.7
comp=E,29nm,0.4s
KUDL AML AML 17 05 17.4
comp=N,24nm,0.6s
LGTI Lohaghat 10.65 144 eS Sn 17 05 08.0 -5.6
MKAR Makanchi Array 10.88 36 P Pn 17 03 18.2 -1.3
comp=N,0.1nm,0.3s,baz=225,slow=11,SNR=3.7
KURK Kurchatov 13.03 16 eP Pn 17 03 53.5 +5.2
KOLN Koldanda 13.71 137 eP Pn 17 03 55.5 -1.6
comp=N,14nm,0.5s
KOLN eS Sn 17 06 17.4 -10
GKN Gorkha 14.11 133 eP Pn 17 04 01.4 -0.8
comp=N,34nm,0.4s
AB31 Akbulak array 14.46 323 P Pn 17 04 04.5 -2.3
comp=N,1.7nm,0.5s,baz=354,slow=15,SNR=27
AB31 ⇓S Sn 17 06 29.6 -17
VOSK Vostochnaya 14.50 355 ⇑P Pn 17 04 04.5 -2.8
comp=N,5.8nm,0.8s
KKN Kakani 14.64 132 eP Pn 17 04 08.3 -0.8
comp=N,22nm,0.5s
KKN Kakani 14.64 132 eP Pn 17 04 08.3 -0.8
KKN pmax pmax
comp=Z,23nm,0.5s
DMN Daman 14.67 133 eP Pn 17 04 08.4 -1.1
DMN eS Sn 17 06 40.4 -11
BVA0 Borovoye Array 14.85 354 P Pn 17 04 04.3 -7.5
comp=Z,2.2nm,0.6s,baz=206,slow=39,SNR=9.6
BVAR Borovoye Array 14.85 354 P Pn 17 04 09.7 -2.1
comp=Z,0.3nm,0.3s,baz=159,slow=13,SNR=11
PKI Pulchoki 14.88 132 eP Pn 17 04 12.0 -0.1
comp=Z,9.9nm,0.3s
PKI Pulchoki 14.88 132 eP Pn 17 04 12.0 -0.1
PKI pmax pmax
comp=Z,10.0nm,0.3s
BRVK Borovoye 14.89 353 eP Pn 17 04 16.2 +3.9
BRVK pmax pmax
comp=Z,16nm,0.8s
BRVK Borovoye 14.89 353 ePn Pn 17 04 16.2 +3.9
comp=Z,16nm,0.8s
GUN Gumba 14.90 130 eP Pn 17 04 13.8 +1.3
JIRN Jiri 15.27 130 eP Pn 17 04 16.8 -0.3
comp=Z,12nm,0.3s
CHKZ Chkalovo 15.48 355 ⇑P Pn 17 04 17.5 -2.3
comp=Z,4.1nm,0.9s
CHKZ Chkalovo 15.48 355 eP Pn 17 04 17.5 -2.2
CHKZ pmax pmax
comp=Z,5.0nm,0.9s
CHKZ Chkalovo 15.48 355 ePn Pn 17 04 17.5 -2.2
comp=Z,5.2nm,0.9s
AKTK Aktyubinsk 16.18 323 P Pn 17 04 27.6 -0.8
AKTO Aktyubinsk 16.18 323 ⇓P Pn 17 04 28.9 +0.4
comp=Z,0.1nm,0.7s
AKTO S S 17 07 14.5 -20
AKTO Aktyubinsk 16.18 323 P Pn 17 04 27.6 -0.8
comp=Z,1.0nm,0.3s,baz=122,slow=12,SNR=11
AKTO Aktyubinsk 16.18 323 P Pn 17 04 27.7 -0.8
AKTO pmax pmax
comp=Z,1.0nm,0.3s
LSA Lhasa 17.25 114 eP Pn 17 04 47.3 +5.6
LSA pmax pmax
comp=Z,5.0nm,0.6s
LSA Lhasa 17.25 114 eP Pn 17 04 47.3 +5.6
comp=Z,5.0nm,0.6s
NVS Novosibirsk 17.94 19 i P Pn 17 04 48.4 -1.5
NVS pmax pmax
comp=N,4.0nm,0.5s
NVS pmax pmax
comp=Z,4.0nm,0.5s
ARU Arti 20.55 337 eP P 17 05 16.5 -1.2
ZAK Zakamensk 24.58 51 eP P 17 05 58.7 +0.9
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.4
SONM Songino Array 25.98 58 P P 17 06 11.7 +1.3
comp=Z,0.9nm,0.7s,mb3.3,baz=261,slow=10,SNR=6.2
SONM Songino Array 25.98 58 P P 17 06 11.7 +1.3
SONM pmax pmax
comp=Z,1.0nm,0.7s
ULN Ulaanbaatar 26.42 58 P P 17 06 13.5 -0.9
ULN e 17 06 54.3
ULN pmax pmax
comp=Z,1.0nm,0.7s,mb3.4
ULN Ulaanbaatar 26.42 58 P P 17 06 13.5 -0.9
comp=Z,1.0nm,0.7s,mb3.4
ULN e 17 06 54.3
AKASG Malin Array Be 33.16 306 P P 17 07 15.2 +1.3
comp=Z,0.4nm,0.4s,mb3.6,baz=79,slow=7.6,SNR=3.5
JOF Joensuu 35.18 328 ep P 17 07 29.6 -1.8
comp=Z,0.9nm,0.3s,mb4.1
FINES FINESS Array B 36.95 324 P P 17 07 47.6 +1.1
comp=Z,1.0nm,0.4s,mb4.1,baz=112,slow=11,SNR=25
FINES FINESS Array B 36.95 324 P P 17 07 47.6 +1.1
FINES pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 40.14 336 P P 17 08 14.2 +1.0
comp=Z,2.0nm,0.6s,mb4.1,baz=111,slow=8.0,SNR=25
ARCES ARCESS Array B 40.14 336 P P 17 08 14.2 +1.0
ARCES pmax pmax
comp=Z,2.0nm,0.6s
GERES GERESS Array B 43.26 304 P P 17 08 41.4 +2.8
comp=Z,0.3nm,0.5s,mb3.3,baz=51,slow=7.8,SNR=1.9
NB2 NORSAR Subarra 43.96 322 P P 17 08 44.9 +0.6
comp=Z,0.6nm,0.4s,mb3.7,baz=92,slow=7.9
NOA NORSAR Array B 43.96 322 P P 17 08 44.7 +0.5
comp=Z,0.9nm,0.5s,mb3.7,baz=92,slow=7.7,SNR=5.9
NOA NORSAR Array B 43.96 322 P P 17 08 44.7 +0.4
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 43.96 322 P P 17 08 44.7 +0.5
MJAR Matsushiro Arr 50.79 71 P P 17 09 38.0 +0.9
comp=Z,0.4nm,0.3s,mb3.9,baz=293,slow=8.6,SNR=4.1
TORD Torodi Ar. Bea 67.39 269 P P 17 11 32.9 +1.1
comp=Z,0.5nm,0.5s,mb3.6,baz=47,slow=5.5,SNR=8.1
YKA Yellowknife Ar 79.37 4 P P 17 12 42.9 +0.9
comp=Z,2.6nm,0.5s,mb4.3,baz=349,slow=5.4,SNR=17
YKA Yellowknife Ar 79.37 4 P P 17 12 42.9 +0.8
YKA pmax pmax
comp=Z,3.0nm,0.5s
YKA Yellowknife Ar 79.37 4 P P 17 12 42.9 +0.9

*ISCJB **11** 17:04:42.0±1.1, 207S±0.1×675W±0.1, h177km±12km, mb3.6/2, Error ellipse: s-maj=30.2km s-min=10.8km az=89.3*
*IDC **11** 17:04:43.2±3.5, 2071S×6742W, h175km±30km, mb3.5/2, mb1 3.7/5, mb1mx3.4/17, mbtmp4.1/5, Error ellipse: s-maj=40.3km s-min=22.1km az=117.0*
ISC 11 17:04:42.7±1.2**, 207S**±01×**675W**±01**, h170**km±12km**, n8, σ0s99**/9**, mb3.6**/2**, Southern Bolivia**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
LVC Limon Verde 2.35 214 S Sn 17 05 54.7 +0.4
8.7nm,0.3s,baz=289,slow=23,SNR=6.4
SIV San Ignacio 7.67 54 P Pn 17 06 31.9 +0.3
14nm,0.3s,baz=242,slow=12,SNR=281
SIV S Sn 17 07 56.6 -0.9
baz=310,slow=22,SNR=3.3
CPUP Villa Florida 10.91 123 P Pn 17 07 15.2 +1.0
1.8nm,0.3s,baz=291,slow=12,SNR=15
CFAA Coronel Fontan 10.93 183 P Pn 17 07 12.7 -1.8
0.1nm,0.3s,baz=23,slow=15,SNR=4.4
CFAA S Sn 17 09 05.5 -10
0.1nm,0.3s,baz=292,slow=23,SNR=4.8
BDFB Brasilia 19.18 78 P P 17 08 54.5 +1.3
0.4nm,0.3s,baz=252,slow=13,SNR=3.0
TORD Torodi Ar. Bea 75.84 70 P P 17 16 09.1 -1.0
0.3nm,0.5s,mb3.2,baz=259,slow=5.4,SNR=5.6
YKA Yellowknife Ar 90.83 340 P P 17 17 27.2 +0.5
0.6nm,0.4s,mb4.0,baz=133,slow=5.0,SNR=7.4
MKAR Makanchi Array 144.18 36 PKP PKPdf 17 23 58.2 0.0
0.3nm,0.7s,baz=318,slow=1.9,SNR=3.9

*ISCJB **11** 17:16:08.8±1.3, 303S±003×14183E±006, h6km±8km, mb4.8/61, MS4.1/25, Error ellipse: s-maj=9.5km s-min=5.5km az=3.8*
*IDC **11** 17:16:09.6±0.5, 298S×14189E, h0km, mb4.5/13, mb1 4.7/14, mb1mx4.7/15, mbtmp4.6/14, ML5.7/1, MS4.1/17, Ms1 4.1/17, ms1mx3.8/31, Error ellipse: s-maj=19.8km s-min=11.8km az=85.0*
*BJI **11** 17:16:12.5, 325S×142.16E, h48km, mB5.0, mb4.8, Ms4.3, Msz4.1*
*NEIC **11** 17:16:13.0±2.5, 303S×14182E, h23km±17km, mb5.0/36, Error ellipse: s-maj=6.8km s-min=5.5km az=71.0*
*MOS **11** 17:16:13.1±1.1, 293S×14181E, h33km, mb4.8/24, MS4.0/6, Error ellipse: s-maj=13.9km s-min=6.8km az=108.3*
*HRVD **11** 17:16:13.0±0.4, 293S×14176E, h16km±1km, MW4.9/50, Centroid moment Tensor Solution. LP body waves: s9,c12;Mantle waves: s50,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.22±.26; $M_{\theta\theta}$2.41±.16; $M_{\phi\phi}$-0.19±.15; $M_{r\theta}$0.51±.35; $M_{\theta\phi}$-0.06±.10; $M_{\phi r}$0.02±.60; Best double couple: $M_0$2.37200×10^{16} NP1:ϕ_s92.00000°, δ39.00000°, λ-89.00000°. NP2:ϕ_s270.00000°, δ51.00000°, λ-91.00000°. Principal axes: T 2.4670, Plg6.0000°, Azm1.0000°; N -0.1930, Plg1.0000°, Azm271.0000°; P -2.2760, Plg84.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 11 17:16:13.5±1.6**, 309S**±004×**14188E**±006**, h25**km±11km**, h44**km±2.4km**:pP-P, n162, σ1s01**/142**, mb4.8**/60**, MS4.1**/25**, 4C-3D, New Guinea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PMG Port Moresby 8.18 140 Pn Pn 17 18 14.0 +3.5
2.3nm,0.3s,baz=271,slow=9.2,SNR=12
PMG Port Moresby 8.18 140 eP Pn 17 18 14.1 +3.6
PMG pmax pmax
comp=Z,49nm,0.8s
PMG Port Moresby 8.18 140 ePn Pn 17 18 14.1 +3.6
comp=Z,49nm,0.8s
KAKA Kakadu 13.37 224 eP Pn 17 19 20.4 -1.2
comp=Z,97nm,0.5s
KAKA eS Sn 17 21 44.2 -5.1
GUMO Guam 16.83 10 LR LR 17 26 06.2
comp=Z,347nm,20.4s,baz=240,slow=36
CTA Charters Tower 17.43 166 eP Pn 17 20 20.3 +5.5
comp=Z,8.0nm,0.8s
CTA Charters Tower 17.43 166 P Pn 17 20 19.5 +4.7
comp=Z,0.2nm,0.3s,baz=326,slow=8.0,SNR=4.2
CTA LR LR 17 27 14.3
comp=Z,516nm,20.0s,baz=357,slow=38
CTAO Charters Tower 17.43 166 eP Pn 17 20 19.1 +4.3
CTAO pmax pmax
comp=Z,12nm,0.8s
CTAO Charters Tower 17.43 166 eP Pn 17 20 19.1 +4.3
comp=Z,12nm,0.8s
WRAB Tennant Creek 18.29 203 eP Pn 17 20 24.9 -0.5
WRAB pmax pmax
comp=Z,84nm,0.6s
WRAB Tennant Creek 18.29 203 eP Pn 17 20 24.9 -0.5
comp=Z,84nm,0.6s
WB2 Warramunga Arr 18.29 203 eP Pn 17 20 25.4 -0.1
WB2 eS Sn 17 23 47.3 -1.7
HNR Honiara 19.02 110 P Pn 17 20 34.5 +0.2
comp=Z,26nm,0.3s,baz=258,slow=1.9,SNR=16
HNR Honiara 19.02 110 P Pn 17 20 34.5 +0.2
HNR pmax pmax
comp=Z,26nm,0.3s
HNR Honiara 19.02 110 eP Pn 17 20 34.4 +0.1
comp=Z,256nm,0.8s
FITZ Fitzroy Crossi 21.82 226 eP P 17 21 03.1 -0.7
comp=Z,30nm,0.6s,mb4.9
FITZ eS S 17 25 02.1 -1.6
FITZ Fitzroy Crossi 21.82 226 P P 17 21 03.4 -0.4
comp=Z,16nm,0.6s,mb4.6,baz=48,slow=12,SNR=31
FITZ S S 17 25 02.7 -1.0
comp=Z,9.8nm,0.7s,baz=239,slow=22,SNR=2.7
FITZ LR LR 17 30 02.4
comp=Z,427nm,22.0s,MS3.8,baz=49,slow=38
AS31 Alice Springs 21.86 200 eP P 17 21 04.1 -0.2
ASAR Alice Springs 21.86 200 P P 17 21 04.5 +0.3
comp=Z,13nm,0.8s,mb4.4,baz=30,slow=10,SNR=156
ASAR S S 17 25 10.5 +5.9
comp=Z,3.9nm,1.0s,baz=27,slow=23,SNR=4.1
ASAR LR LR 17 29 59.2
comp=Z,810nm,21.3s,MS4.1,baz=27,slow=38
ASAR Alice Springs 21.86 200 P P 17 21 04.6 +0.3
ASAR S S 17 25 10.5 +6.0
ASAR pmax pmax
comp=Z,13nm,0.8s
ASAR smax
comp=N,4.0nm,1.0s
ASAR MLR MLR
comp=Z,810nm,21.3s
ASPA Alice Springs 21.86 200 eP P 17 21 04.3 0.0
ASPA eS S 17 25 09.7 +5.1
TGY Tagaytay City 26.89 310 P P 17 21 52.3 0.0
comp=Z,50nm,0.5s,baz=173,slow=8.1,SNR=2.8
TGY Tagaytay City 26.89 310 P P 17 21 52.3 0.0
TGY pmax pmax
comp=Z,50nm,0.5s
KKM Kota Kinabalu 27.19 289 P P 17 21 50.7 -4.3
MBWA Marble Bar 28.06 228 eP P 17 22 01.9 -0.9
comp=Z,11nm,0.8s,mb4.5
STKA Stephens Creek 28.64 181 eP P 17 22 08.9 +0.9
comp=Z,4.4nm,0.7s,mb4.3
STKA Stephens Creek 28.64 181 P P 17 22 09.0 +1.0
comp=Z,5.1nm,0.6s,mb4.4,baz=352,slow=7.7,SNR=19
STKA LR LR 17 35 36.5
comp=Z,380nm,20.0s,MS4.0,baz=18,slow=41
STKA Stephens Creek 28.64 181 eP P 17 22 08.7 +0.7
ARMA Armidale 28.70 162 eP P 17 22 14.4 +5.9
CBIJ Chichi jima 30.01 1 LR LR 17 31 34.4
comp=Z,258nm,21.7s,MS3.8,baz=180,slow=31
DZM Mont Dzumac 30.41 130 P P 17 22 23.6 -0.1
comp=Z,4.8nm,0.4s,mb4.5,baz=262,slow=14,SNR=11
FORT Forrest 30.48 204 eP P 17 22 25.4 +1.1
comp=Z,84nm,0.5s,mb5.7
KSM Kuching 31.89 278 eP P 17 22 35.9 -0.8
TOO Toolangi 34.48 175 eP P 17 23 02.8 +3.5
comp=Z,9.2nm,0.8s,mb4.8
TOO Toolangi 34.48 175 eP P 17 23 02.8 +3.5
TOO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KLBR Kellerberrin 36.33 216 eP P 17 23 14.9 -0.3
comp=Z,56nm,1.6s,mb5.2
NWAO Narrogin (SRO) 37.60 215 P P 17 23 27.2 +1.2
NWAO pmax pmax
comp=Z,47nm,1.4s
NWAO Narrogin (SRO) 37.60 215 P P 17 23 27.1 +1.1
comp=Z,47nm,1.4s,mb5.0
QIZ Qiongzhong 38.42 306 P P 17 23 32.1 -0.9
QIZ AP pP 17 23 42.7 +2.1
QIZ S S 17 29 27.0 +0.5
QIZ SS SS 17 32 16.0 +0.2
QIZ AMB AMB
comp=Z,16nm,1.9s,mb4.4
QIZ LR LR
comp=Z,196nm,14.2s,MS4.1
SSE Sheshan 39.30 331 P P 17 23 41.5 +1.2
SSE PP PP 17 25 14.3 +3.7
SSE S S 17 29 39.6 -0.1
SSE AMB AMB
comp=Z,24nm,0.8s,mb5.0
SSE AMB AMB
comp=Z,118nm,4.8s
SSE LR LR
comp=N,85nm,22.1s,MS3.7
SSE LR LR
comp=E,96nm,22.1s,MS3.7
SSE LR LR
comp=Z,160nm,20.7s,MS3.8
MJAR Matsushiro Arr 39.57 355 P P 17 23 40.6 -2.0
comp=Z,1.0nm,0.7s,mb3.7,baz=211,slow=1.3,SNR=5.9
MJAR LR LR 17 39 26.0
comp=Z,134nm,18.5s,MS3.8,baz=175,slow=35
MJAR Matsushiro Arr 39.57 355 P P 17 23 40.6 -2.0
MJAR pmax pmax
comp=Z,1.0nm,0.7s
MJAR MLR MLR
comp=Z,134nm,18.5s
MAJO Matsushiro 39.58 355 P P 17 23 40.7 -1.9
MAJO pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
MAJO Matsushiro 39.58 355 P P 17 23 40.7 -1.9
comp=Z,3.1nm,0.6s,mb4.2
NJ2 Nanjing 41.23 330 eP P 17 23 57.1 +0.8
NJ2 AP pP 17 24 09.4 +5.4
NJ2 XP sP 17 24 14.8 +7.8
NJ2 S S 17 30 08.0 -0.4
NJ2 XS sS 17 30 30.0 +8.9
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
NJ2 AMB AMB
comp=Z,90nm,10.0s
NJ2 LR LR
comp=N,300nm,32.4s
NJ2 LR LR
comp=E,580nm,18.3s
NJ2 LR LR
comp=Z,160nm,16.8s
KULM Kulim 42.02 281 P P 17 24 02.8 0.0
GYA Guiyang 44.96 313 P P 17 24 27.5 +1.0
GYA AMB AMB
comp=Z,10.0nm,1.4s,mb4.5
KMI Kunming 47.20 309 P P 17 24 45.5 +1.4
KMI AP pP 17 24 57.5 +5.6
KMI XP sP 17 25 02.2 +7.2
KMI PP PP 17 26 37.3 +2.2
KMI PPP 17 27 23.3
KMI S S 17 31 36.6 +1.2
KMI XS sS 17 31 56.3 +8.1
KMI SS SS 17 34 57.6 -5.1
KMI SSS 17 36 05.2
KMI AMB AMB
comp=Z,7.0nm,0.8s,mb4.6
KMI LR LR
comp=N,133nm,26.5s,MS4.0
KMI LR LR
comp=E,161nm,24.5s,MS4.0
KMI LR LR
comp=Z,189nm,25.5s,MS4.0
URZ Urewera 47.53 142 P P 17 24 47.8 +1.1
comp=Z,9.3nm,0.7s,mb5.0,baz=290,slow=4.7,SNR=7.4
SNY Shenyang 47.70 341 eP P 17 24 45.5 -2.5
SNY AMB AMB
comp=Z,11nm,2.5s,mb4.4
SNY AMB AMB
comp=Z,131nm,4.9s
SNY LR LR
comp=E,175nm,20.1s
SNY LR LR
comp=Z,152nm,23.5s,MS3.9
XAN Xi'an 48.25 323 P P 17 24 52.1 -0.1
XAN AMB AMB
comp=Z,9.0nm,2.1s,mb4.4
MDJ Mudanjiang 48.75 348 P P 17 24 57.4 +1.3
MDJ PCP PcP 17 26 21.3 +0.5
MDJ PP PP 17 26 51.0 +1.7
MDJ SCP ScP 17 30 12.9 -1.1
MDJ PCS PcS 17 30 17.8 +0.8
MDJ S S 17 31 58.6 +1.3
MDJ AMB AMB
comp=Z,4.0nm,0.7s,mb4.6
MDJ AMB AMB
comp=Z,61nm,4.8s
MDJ LR LR
comp=N,115nm,24.4s,MS3.9
MDJ LR LR
comp=E,113nm,24.4s,MS3.9
MDJ LR LR
comp=Z,202nm,22.9s,MS4.0
BJT Baijiatuau 48.96 334 eP P 17 24 57.5 -0.2
BJT pmax pmax
comp=Z,36nm,1.8s
BJT Baijiatuau 48.96 334 eP P 17 24 57.5 -0.2
comp=Z,36nm,1.8s,mb5.1
CN2 Changchun 48.96 344 eP P 17 25 00.1 +2.4
CN2 eS S 17 32 00.1 -0.2
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CN2 LR LR
comp=N,200nm,20.0s,MS4.3
CN2 LR LR
comp=E,200nm,20.0s,MS4.3
CN2 LR LR
comp=Z,200nm,21.0s,MS4.1
BJI Beijing 48.97 334 eP P 17 24 56.9 -0.9
BJI AMB AMB
comp=Z,10.0nm,1.3s,mb4.7
BJI LR LR
comp=N,167nm,22.2s,MS4.1
BJI LR LR
comp=E,129nm,23.4s,MS4.1
BJI LR LR
comp=Z,162nm,23.7s,MS3.9
CD2 Chengdu 49.62 316 eP P 17 25 01.8 -1.0
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
YSS Yuzh-Sakhalins 49.84 1 ⇑eP P 17 25 03.6 -0.8
YSS e*PP pP 17 25 21.0 +8.8
YSS pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
YSS Yuzh-Sakhalins 49.84 1 eP P 17 25 03.4 -1.0
comp=Z,11nm,0.8s,mb4.9
HABR Khabarovsk 51.70 354 P P 17 25 17.5 -0.9
HABR eS S 17 32 35.9 -2.4
HHC Hu-ho-hao-te 51.76 331 eP P 17 25 22.2 +3.4
HHC AP pP 17 25 34.7 +8.0
HHC XP sP 17 25 39.9 +10
HHC PCP PcP 17 26 35.0 +3.1
HHC PP PP 17 27 20.2 +3.6
HHC SCP ScP 17 30 26.2 -0.7
HHC PCS PcS 17 30 31.2 +1.3
HHC S S 17 32 39.2 +0.1
HHC PS 17 32 55.4
HHC XS sS 17 33 00.9 +8.8
HHC SCS ScS 17 35 05.6 -1.8
HHC SS SS 17 36 14.5 -1.2
HHC AMB AMB
comp=Z,11nm,1.0s,mb4.7
HHC AMB AMB
comp=Z,120nm,4.5s
HHC LR LR
comp=N,70nm,21.8s,MS3.9
HHC LR LR
comp=E,101nm,19.9s,MS3.9
HHC LR LR
comp=Z,68nm,21.8s,MS3.6
LZH Lanzhou 52.73 321 eP P 17 25 27.5 +1.5
LZH AP pP 17 25 40.8 +6.9
LZH XP sP 17 25 46.1 +9.1
LZH PP PP 17 27 29.5 +4.1
LZH AMB AMB
comp=Z,22nm,1.3s,mb4.9
KLR Kul'dur 52.84 352 eP P 17 25 23.2 -3.7
HIA Hailar 55.57 343 P P 17 25 46.6 -0.2
GTA Gaotai 57.29 322 ⇓P P 17 25 59.9 +0.9
GTA AMB AMB
comp=Z,9.0nm,0.6s,mb5.0
GTA AMB AMB
comp=Z,71nm,5.3s
GTA LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,67nm,16.7s,MS4.0						
GTA				LR	LR		
	comp=E,107nm,20.1s,MS4.0						
GTA				LR	LR		
	comp=Z,89nm,17.1s,MS3.9						
LSA	**Lhasa**	**58.43**	**308**	P	**P**	**17 26 09.2**	**+2.2**
LSA	**Lhasa**	**58.43**	**308**	*e*P	**P**	**17 26 08.8**	**+1.8**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
LSA	**Lhasa**	**58.43**	**308**	*e*P	**P**	**17 26 08.8**	**+1.8**
	comp=Z,6.8nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**59.18**	**333**	⇑*e*P	**P**	**17 26 11.5**	**-0.7**
ULN	**Ulaanbaatar**	**59.18**	**333**	*e*P	**P**	**17 26 12.0**	**-0.2**
	comp=Z,3.9nm,0.6s,mb4.6						
RAR	**Rarotonga**	**59.45**	**113**	LR	LR	17 48 08.7	
	comp=Z,323nm,18.5s,MS4.5,baz=293,slow=32						
SONM	**Songino Array**	**59.45**	**333**	P	**P**	**17 26 14.0**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=154,slow=8.1,SNR=12						
SONM				LR	LR	17 50 54.1	
	comp=Z,177nm,21.9s,MS4.2,baz=340,slow=35						
SONM	**Songino Array**	**59.45**	**333**	P	**P**	**17 26 14.0**	**-0.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,177nm,21.9s						
JIRN	**Jiri**	**61.67**	**304**	*e*P	**P**	**17 26 30.3**	**+1.0**
	comp=Z,14nm,0.6s,mb5.3						
GUN	**Gumba**	**62.02**	**304**	*e*P	**P**	**17 26 32.8**	**+1.2**
	comp=Z,32nm,0.8s,mb5.5						
PKI	**Pulchoki**	**62.29**	**303**	*e*P	**P**	**17 26 34.0**	**+0.6**
	comp=Z,13nm,0.6s,mb5.3						
PKI	**Pulchoki**	**62.29**	**303**	*e*P	**P**	**17 26 34.0**	**+0.6**
PKI				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.2						
KKN	**Kakani**	**62.48**	**303**	*e*P	**P**	**17 26 35.2**	**+0.5**
	comp=Z,30nm,0.7s,mb5.5						
KKN	**Kakani**	**62.48**	**303**	*e*P	**P**	**17 26 35.2**	**+0.5**
KKN				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.5						
DMN	**Daman**	**62.56**	**303**	*e*P	**P**	**17 26 36.0**	**+0.8**
	comp=Z,27nm,0.7s,mb5.5						
ZAK	**Zakamensk**	**62.71**	**333**	⇓*i*P	**P**	**17 26 36.5**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.9s,mb4.2						
MA2	**Magadan**	**62.87**	**5**	*e*P	**P**	**17 26 36.2**	**-1.1**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
MA2	**Magadan**	**62.87**	**5**	*e*P	**P**	**17 26 36.2**	**-1.0**
	comp=Z,6.1nm,0.6s,mb4.9						
GKN	**Gorkha**	**63.08**	**303**	*e*P	**P**	**17 26 39.3**	**+0.6**
	comp=Z,43nm,0.6s,mb5.8						
TLY	**Talaya**	**63.48**	**334**	*e*P	**P**	**17 26 41.6**	**+0.2**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
TLY	**Talaya**	**63.48**	**334**	*e*P	**P**	**17 26 41.5**	**+0.2**
	comp=Z,2.8nm,0.6s,mb4.6						
KOLN	**Koldanda**	**63.87**	**303**	*e*P	**P**	**17 26 44.7**	**+0.8**
	comp=Z,23nm,0.8s,mb5.3						
MOY	**Mondy**	**64.64**	**333**	*e*P	**P**	**17 26 50.3**	**+1.3**
YAK	**Yakutsk**	**65.61**	**354**	⇑*e*P	**P**	**17 26 53.6**	**-1.7**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
YAK	**Yakutsk**	**65.61**	**354**	*e*P	**P**	**17 26 54.7**	**-0.5**
	comp=Z,11nm,0.6s,mb5.0						
CASY	**Casey**	**66.80**	**193**	*e*P	**P**	**17 27 03.1**	**+0.3**
	comp=Z,15nm,1.0s,mb5.0						
WMQ	**Urumqi**	**67.30**	**320**	*e*P	**P**	**17 27 07.0**	**+1.0**
WMQ				AP	pP	17 27 20.0	+5.9
WMQ				XP	sP	17 27 25.0	+7.9
WMQ				PP	PP	17 29 37.0	+2.6
WMQ				S	S	17 35 57.0	-2.6
WMQ				SS	SS	17 40 18.0	-1.4
WMQ				AMB	AMB		
	comp=Z,21nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,105nm,5.0s						
WMQ				LR	LR		
	comp=N,87nm,16.0s,MS4.2						
WMQ				LR	LR		
	comp=E,67nm,15.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,78nm,16.0s,MS4.0						
DGAR	**Diego Garcia**	**69.22**	**263**	P	**P**	**17 27 18.0**	**-0.1**
DGAR				pmax	pmax		
	comp=Z,142nm,1.0s,mb5.8						
DGAR	**Diego Garcia**	**69.22**	**263**	P	**P**	**17 27 18.0**	**-0.1**
	comp=Z,142nm,1.0s,mb5.8						
MKAR	**Makanchi Array**	**72.04**	**321**	P	**P**	**17 27 35.5**	**+0.3**
	comp=Z,2.5nm,0.7s,mb4.3,baz=103,slow=7.6,SNR=21						
MKAR	**Makanchi Array**	**72.04**	**321**	P	**P**	**17 27 35.6**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAL	**Zalesovo**	**73.88**	**329**	P	**P**	**17 27 45.4**	**-0.8**
	comp=Z,1.7nm,0.6s,mb4.2,baz=3.6,slow=6.0,SNR=7.4						
ZAL				LR	LR	18 02 59.4	
	comp=Z,102nm,19.5s,MS4.1,baz=329,slow=38						
ZAL	**Zalesovo**	**73.88**	**329**	P	**P**	**17 27 45.4**	**-0.8**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAL				MLR	MLR		
	comp=Z,102nm,19.5s						
NVS	**Novosibirsk**	**75.12**	**329**	*i*P	**P**	**17 27 52.8**	**-0.6**
NVS				pmax	pmax		
	comp=Z,21nm,2.0s,mb4.7						
NVS				pmax	pmax		
	comp=N,8.0nm,1.8s						
NVS				pmax	pmax		
	comp=E,15nm,1.9s						
VNDA	**Vanda**	**75.14**	**176**	P	**P**	**17 27 53.6**	**+0.1**
	comp=E,3.4nm,0.8s,mb4.3,baz=322,slow=6.8,SNR=19						
VNDA				LR	LR	18 01 01.9	
	comp=E,158nm,18.8s,MS4.3,baz=353,slow=36						
VNDA	**Vanda**	**75.14**	**176**	*e*P	**P**	**17 27 53.4**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**75.14**	**176**	*e*P	**P**	**17 27 53.4**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**75.69**	**315**	*e*P	**P**	**17 27 54.7**	**-1.9**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
AAK	**Ala-Archa**	**75.69**	**315**	*e*P	**P**	**17 27 54.7**	**-1.9**
	comp=Z,8.1nm,1.4s,mb4.5						
KURK	**Kurchatov**	**75.86**	**324**	*e*P	**P**	**17 27 57.0**	**-0.6**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
KURK	**Kurchatov**	**75.86**	**324**	*e*P	**P**	**17 27 57.0**	**-0.6**
	comp=Z,8.8nm,1.3s,mb4.5						
SBA	**Scott Base**	**75.86**	**175**	*e*P	**P**	**17 27 58.7**	**+1.1**
SBA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
SBA	**Scott Base**	**75.86**	**175**	*e*P	**P**	**17 27 58.7**	**+1.0**
	comp=Z,3.6nm,0.8s,mb4.3						
KDAK	**Kodiak Island**	**79.84**	**30**	LR	LR	17 56 57.8	
	comp=Z,157nm,22.0s,MS4.3,baz=345,slow=31						
TTA	**Tatalina**	**80.44**	**24**	*e*P	**P**	**17 28 22.9**	**-0.1**
TTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TTA	**Tatalina**	**80.44**	**24**	*e*P	**P**	**17 28 22.9**	**-0.1**
	comp=Z,5.4nm,0.8s,mb4.5						
CHKZ	**Chkalovo**	**81.50**	**325**	*e*P	**P**	**17 28 28.3**	**-0.4**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
CHKZ	**Chkalovo**	**81.50**	**325**	*e*P	**P**	**17 28 28.3**	**-0.4**
	comp=Z,3.2nm,0.6s,mb4.4						
BRVK	**Borovoye**	**81.51**	**325**	*e*P	**P**	**17 28 28.0**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BRVK	**Borovoye**	**81.51**	**325**	*e*P	**P**	**17 28 28.0**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.2						
IMA2	**Indian Mountai**	**82.71**	**22**	*e*P	**P**	**17 28 35.2**	**+0.3**
MAW	**Mawson**	**82.97**	**202**	⇓*i*P	**P**	**17 28 36.8**	**+0.5**
	comp=Z,5.4nm,0.6s,mb4.8						
MAW	**Mawson**	**82.97**	**202**	P	**P**	**17 28 36.9**	**+0.5**
	comp=Z,6.4nm,0.7s,mb4.8,baz=78,slow=7.0,SNR=37						
MAW				LR	LR	18 03 24.7	
	comp=Z,112nm,18.4s,MS4.3,baz=251,slow=34						
MAW	**Mawson**	**82.97**	**202**	*e*P	**P**	**17 28 36.6**	**+0.3**
MAW				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MAW	**Mawson**	**82.97**	**202**	*e*P	**P**	**17 28 36.6**	**+0.3**
	comp=Z,6.7nm,0.7s,mb4.8						
MCK	**McKinley**	**83.69**	**25**	*e*P	**P**	**17 28 38.2**	**-1.8**
MCK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
MCK	**McKinley**	**83.69**	**25**	*e*P	**P**	**17 28 38.2**	**-1.8**
	comp=Z,5.3nm,1.0s,mb4.6						
DIV	**Divide**	**84.25**	**28**	*e*P	**P**	**17 28 42.2**	**-0.8**
	comp=Z,39nm,0.6s,mb5.7						
QSPA	**South Pole Qui**	**86.86**	**180**	*e*P	**P**	**17 28 56.1**	**+0.2**
	comp=Z,12nm,0.6s,mb5.3						
ABKT	**Ailbek**	**86.96**	**308**	P	**P**	**17 28 57.1**	**+0.7**
	comp=Z,72nm,0.6s,SNR=5.9						
DAWY	**Dawson**	**87.83**	**26**	*e*P	**P**	**17 29 00.9**	**+0.3**
INK	**Inuvik**	**90.84**	**22**	LR	LR	18 04 05.4	
	comp=Z,82nm,21.3s,MS4.1,baz=164,slow=32						
SYO	**Syowa Base**	**91.53**	**201**	⇑*e*P	**P**	**17 29 17.6**	**-0.3**
BBB	**Bella Bella**	**92.42**	**38**	LR	LR	18 05 17.0	
	comp=Z,110nm,21.3s,MS4.3,baz=265,slow=32						
YBH	**Yreka Blue Hor**	**96.08**	**49**	LR	LR	18 06 24.7	
	comp=Z,126nm,19.5s,MS4.4,baz=263,slow=31						
GNI	**Garni**	**97.44**	**310**	*e*P	**P**	**17 29 42.9**	**-2.1**
GNI				pmax	pmax		
	comp=Z,20nm,1.3s						
YKA	**Yellowknife Ar**	**98.96**	**27**	P	**P**	**17 29 51.2**	**-0.5**
	comp=Z,1.2nm,0.6s,mb4.6,baz=284,slow=4.6,SNR=6.6						
YKA				LR	LR	18 10 35.8	
	comp=Z,76nm,22.0s,MS4.2,baz=265,slow=33						
YKA	**Yellowknife Ar**	**98.96**	**27**	P	**P**	**17 29 51.2**	**-0.6**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA				MLR	MLR		
	comp=Z,76nm,22.0s						
YKA	**Yellowknife Ar**	**98.96**	**27**	P	**P**	**17 29 51.2**	**-0.5**
YKA				LR	LR	18 10 35.8	
NVAR	**Mina Array Bea**	**99.60**	**52**	P	Pdif	17 29 54.5	-0.2
	comp=Z,0.2nm,0.5s,baz=254,slow=6.5,SNR=2.2						
NVAR	**Mina Array Bea**	**99.60**	**52**	P	Pdif	17 29 54.5	-0.2
JOF	**Joensuu**	**102.02**	**334**	*e*p	Pdif	17 29 59.6	-5.8
FINES	**FINESS Array B**	**104.82**	**333**	Pdiff	Pdif	17 30 16.0	-1.8
	comp=Z,0.9nm,0.8s,baz=80,slow=2.1,SNR=3.9						
FINES	**FINESS Array B**	**104.82**	**333**	P	Pdif	17 30 16.0	-1.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**104.82**	**333**	Pdif	Pdif	17 30 16.0	-1.8
EKA	**Eskdalemuir Ar**	**120.77**	**338**	PKP	PKPdf	17 35 04.2	+0.9
	comp=Z,1.2nm,0.6s,baz=32,slow=3.3,SNR=5.5						
EKA	**Eskdalemuir Ar**	**120.77**	**338**	PKIKP	PKPdf	17 35 04.2	+0.9
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HINF	**Hinteralfeld**	**121.04**	**326**	*e*PKP1	PKPdf	17 35 03.5	-0.3
HAU	**Haudompre**	**121.22**	**327**	*e*PKP1	PKPdf	17 35 04.0	-0.1
LOR	**Lormes**	**123.01**	**327**	*e*PKP1	PKPdf	17 35 07.7	+0.1
SSF	**Saint Saulge**	**123.33**	**327**	*e*PKP1	PKPdf	17 35 08.6	+0.4
SCHQ	**Schefferville**	**123.39**	**19**	PKP	PKPdf	17 35 08.2	-0.1
	comp=Z,1.1nm,0.5s,baz=225,slow=5.7,SNR=2.8						
SMF	**Signal de Mont**	**123.39**	**327**	*e*PKP1	PKPdf	17 35 07.8	-0.5
	comp=Z,3.8nm,0.6s						
AVF	**Avril sur Loir**	**123.58**	**327**	*e*PKP1	PKPdf	17 35 08.5	-0.2
	comp=Z,3.6nm,0.8s						
BGF	**Bois d'Agland**	**123.99**	**327**	*e*PKP1	PKPdf	17 35 09.3	-0.2
	comp=Z,21nm,0.9s						
TCF	**Toulx Ste Croi**	**124.51**	**327**	*e*PKP1	PKPdf	17 35 10.9	+0.4
	comp=Z,8.7nm,0.8s						
ROSC	**El Rosal**	**143.83**	**86**	PKP	PKPdf	17 35 46.9	+0.4
	comp=Z,37nm,0.7s,baz=166,slow=4.2,SNR=16						
CPUP	**Villa Florida**	**145.35**	**149**	PKPbc	PKPbc	17 35 50.4	+1.5
	comp=Z,3.8nm,0.6s,baz=219,slow=2.7,SNR=15						
CPUP	**Villa Florida**	**145.35**	**149**	PKP2	PKPab	17 35 50.4	+1.3
CPUP				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CPUP	**Villa Florida**	**145.35**	**149**	*e*PKPdf	PKPdf	17 35 50.2	+1.1
DBIC	**Dimbokro**	**146.68**	**277**	PKPbc	PKPbc	17 35 54.2	+1.3
	comp=Z,13nm,0.6s,baz=75,slow=4.1,SNR=23						
DBIC	**Dimbokro**	**146.68**	**277**	*e*PKPbc	PKPbc	17 35 54.3	+1.3
LIC	**Lamto**	**146.88**	**277**	*e*PKIKP	PKPdf	17 35 54.0	+2.3
	comp=Z,22nm,0.6s						
SDV	**Santo Domingo**	**147.17**	**78**	*e*PKPdf	PKPdf	17 35 53.1	+0.9
SDV				*e*PKPbc	PKPbc	17 35 55.9	+1.5
SAML	**Samuel**	**152.30**	**116**	*e*PKPbc	PKPbc	17 36 07.8	+0.7
BDFB	**Brasilia**	**158.97**	**153**	PKPab	PKPab	17 36 47.1	+1.6
	comp=Z,3.7nm,0.8s,baz=222,slow=6.3,SNR=4.8						
BDFB	**Brasilia**	**158.97**	**153**	PKP2	PKPab	17 36 47.1	+1.5
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.8s						

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*IDC **11** 17:58:33.1±1.1, 936S×10837E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.7/16, mbtmp3.8/7, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/25, Error ellipse: s-maj=57.9km s-min=18.6km az=57.0*

*NEIC **11** 17:58:34.5±0.9, 938S×10836E, h10^{km}, Error ellipse: s-maj=42.5km s-min=13.0km az=53.0*

*ISCJB **11** 17:58:46.5±4.3, 92S±03×1088E±04, h127^{km}±34^{km}, mb3.7/6, Error ellipse: s-maj=78.5km s-min=17.5km az=115.9*

ISC 11 17:58:45.4±5.0**, 94S**±03×**1086E**±04**, h100**^{km}±40^{km}**, n10,** σ**0^{s}81**/9**, mb3.7**/6**, 1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.27**	**28**	⇑*e*P	**Pn**	**17 59 21.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**18.67**	**120**	P	**Pn**	**18 02 55.7**	**-1.3**
	0.1nm,0.3s,baz=321,slow=13,SNR=3.6						
ASAR	**Alice Springs**	**28.04**	**124**	P	**P**	**18 04 27.4**	**+0.2**
	0.6nm,0.6s,mb3.3,baz=297,slow=8.4,SNR=10						
ASAR				PcP	PcP	18 07 42.4	+3.0
	0.3nm,0.9s,baz=310,slow=2.0,SNR=5.1						
STKA	**Stephens Creek**	**37.89**	**131**	P	**P**	**18 05 53.7**	**+1.0**
	3.3nm,0.7s,mb4.3,baz=301,slow=8.0,SNR=11						
STKA	**Stephens Creek**	**37.89**	**131**	*e*P	**P**	**18 05 53.5**	**+0.8**
STKA				P		18 05 53.7	
SONM	**Songino Array**	**56.96**	**358**	P	**P**	**18 08 21.1**	**+0.8**
	0.6nm,0.6s,mb3.8,baz=174,slow=8.2,SNR=5.2						
WSAR	**Wadi Sarin**	**58.65**	**304**	LR	LR	18 34 35.7	
	comp=Z,34nm,18.7s,baz=172,slow=37						
MKAR	**Makanchi Array**	**60.63**	**340**	P	**P**	**18 08 44.3**	**-1.4**
	0.6nm,0.5s,mb3.9,baz=134,slow=6.5,SNR=4.0						
BVAR	**Borovoye Array**	**70.14**	**337**	P	**P**	**18 09 46.9**	**-0.1**
	0.4nm,0.6s,mb3.4,baz=116,slow=5.6,SNR=3.4						
VNDA	**Vanda**	**73.38**	**170**	P	**P**	**18 10 06.8**	**+0.4**
	0.9nm,1.0s,mb3.5,baz=308,slow=4.5,SNR=3.3						

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*ISCJB **11** 17:59:19.3±0.7, 2924N±006×6798E±005, h10^{km}, mb3.6/4, MS2.8/1, Error ellipse: s-maj=8.9km s-min=6.7km az=1.0*

*IDC **11** 17:59:20.0±1.2, 2943N×6790E, h0^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.4/24, mbtmp3.6/6, ML3.2/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/26, Error ellipse: s-maj=32.8km s-min=26.4km az=110.0*

*NEIC **11** 17:59:21.1±0.6, 2945N×6792E, h10^{km}, Error ellipse: s-maj=12.4km s-min=9.4km az=178.0*

ISC 11 17:59:21.5±0.7**, 2931N**±006×**6797E**±005**, h10**^{km}**, n24,** σ**1^{s}30**/31**, mb3.6**/4**, MS2.8**/1**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRP	**Derazinda**	**3.10**	**38**	P	**Pn**	**18 00 12.4**	**+1.9**
SBDP	**Sheikh Budin**	**3.85**	**39**	P	**Pn**	**18 00 21.5**	**+0.7**
SBDP				S	**Sn**	**18 01 08.0**	**+1.8**
THW	**Thamme Wali**	**4.75**	**42**	P	**Pn**	**18 00 33.4**	**+0.2**
CEP	**Cherat**	**5.62**	**36**	P	**Pn**	**18 00 45.3**	**+0.2**
CEP				S	**Sn**	**18 01 48.0**	**-1.7**
CHCP	**Chirah Chowk**	**6.26**	**45**	P	**Pn**	**18 00 53.2**	**-0.8**
KHET	**Khetri**	**6.99**	**98**	*e*P	**Pn**	**18 01 10.3**	**+6.3**
KHET				*e*S	**Sn**	**18 02 22.9**	**-0.7**
KHET				AML	AML	18 02 25.1	
	comp=E,41nm,0.3s						
KHET				AML	AML	18 02 25.1	
	comp=N,62nm,0.3s						
KUDL	**Kundal**	**7.57**	**97**	*e*S	**Sn**	**18 02 34.7**	**-3.1**
KUDL				AML	AML	18 02 53.0	
	comp=N,20nm,0.7s						
KUDL				AML	AML	18 02 53.4	
	comp=E,16nm,0.5s						
DLH	**Dalhousie**	**7.59**	**63**	*e*S	**Sn**	**18 02 33.0**	**-5.2**
SDNR	**Sundarnagar**	**8.07**	**72**	*e*P	**Pn**	**18 01 21.4**	**+2.6**
SDNR				*e*x	x	18 02 49.0	
NDI	**New Delhi**	**8.12**	**92**	*e*P	**Pn**	**18 01 25.5**	**+6.0**
NDI				*e*S	**Sn**	**18 02 50.0**	**-1.4**
KLP	**Kalpa**	**9.15**	**73**	*e*P	**Pn**	**18 01 35.9**	**+2.3**
KLP				*e*S	**Sn**	**18 03 09.8**	**-6.8**
KLP				AML	AML	18 03 43.2	
	comp=E,89nm,0.8s						
KLP				AML	AML	18 03 44.0	
	comp=N,66nm,0.5s						
WSAR	**Wadi Sarin**	**10.33**	**236**	Pn	**Pn**	**18 01 49.1**	**-0.6**
	comp=N,0.2nm,0.3s,baz=346,slow=12,SNR=9.4						
WSAR				Sn	**Sn**	**18 03 35.5**	**-10**
	comp=N,0.2nm,0.3s,baz=118,slow=17,SNR=7.3						
KOLN	**Koldanda**	**13.83**	**93**	*e*P	**Pn**	**18 02 38.1**	**+0.5**
KOLN				*e*S	**Sn**	**18 05 05.8**	**-5.4**
AAK	**Ala-Archa**	**14.30**	**20**	Pn	**Pn**	**18 02 40.6**	**-3.4**
GKN	**Gorkha**	**14.70**	**91**	*e*P	**Pn**	**18 02 50.3**	**+0.9**
GKN				*e*S	**Sn**	**18 05 25.9**	**-6.4**
GUN	**Gumba**	**15.79**	**91**	*e*P	**Pn**	**18 03 03.9**	**-0.1**
JIRN	**Jiri**	**16.11**	**91**	*e*P	**Pn**	**18 03 08.5**	**+0.5**
MKAR	**Makanchi Array**	**20.72**	**29**	P	**P**	**18 04 00.8**	**-1.3**
	comp=N,0.5nm,0.6s,baz=223,slow=12,SNR=4.8						
AKTK	**Aktyubinsk**	**22.40**	**343**	P	**P**	**18 04 19.8**	**-0.2**
AKTO	**Aktyubinsk**	**22.40**	**343**	P	**P**	**18 04 19.8**	**-0.2**
	comp=N,2.2nm,0.7s,mb3.7,baz=166,slow=12,SNR=2.3						
BVAR	**Borovoye Array**	**23.76**	**4**	P	**P**	**18 04 32.1**	**-2.0**
	comp=N,0.8nm,0.7s,mb3.3,baz=166,slow=13,SNR=4.9						
ZAL	**Zalesovo**	**27.49**	**22**	LR	LR	18 17 20.9	
	comp=N,28nm,21.1s,MS2.8,baz=93,slow=39						
TORD	**Torodi Ar. Bea**	**63.10**	**270**	P	**P**	**18 09 49.3**	**+0.1**
	comp=N,0.8nm,1.2s,mb3.7,baz=53,slow=7.4,SNR=3.0						
ASAR	**Alice Springs**	**82.41**	**122**	P	**P**	**18 11 45.2**	**+1.4**
	comp=N,0.4nm,0.5s,mb3.6,baz=307,slow=5.4,SNR=14						

IDC 11 18:08:15.1±1.7**, 1440N**×**5642E, h0**^{km}**, mb3.7**/5**, mb1 3.9**/6**, mb1mx3.5**/20**, mbtmp3.8**/6**, ML3.0**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.5**/23**, Error ellipse: s-maj=54.6km s-min=32.2km az=68.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**9.04**	**13**	Pn	Pn	18 10 28.4	+1.6
	0.1nm,0.3s,baz=197,slow=14,SNR=2.7						
WSAR				LR	LR	18 13 42.9	
	comp=Z,180nm,19.7s,baz=306,slow=36						
ZAL	**Zalesovo**	**45.31**	**23**	P	P	18 16 33.4	-1.2
	0.9nm,0.6s,baz=240,slow=7.5,SNR=4.4						
FINES	**FINESS Array B**	**51.79**	**342**	P	P	18 17 24.6	+0.1
	0.6nm,0.6s,baz=131,slow=10,SNR=4.5						
SONM	**Songino Array**	**52.96**	**40**	P	P	18 17 33.8	+0.6
	0.5nm,0.6s,baz=244,slow=7.8,SNR=6.4						
ARCES	**ARCESS Array B**	**58.42**	**348**	P	P	18 18 11.6	-0.9
	0.8nm,0.8s,baz=152,slow=7.9,SNR=3.7						
ASAR	**Alice Springs**	**84.61**	**116**	P	P	18 20 51.0	+0.7
	0.6nm,0.6s,baz=294,slow=5.3,SNR=12						
PDAR	**Pinedale Array**	**121.68**	**348**	PKP	PKPdf	18 27 11.8	+0.9
	0.5nm,0.5s,baz=101,slow=3.2,SNR=4.7						

WEL 11 18:37:07.6±0.1**, 4146S**×**17421E, h22**^{km}±1^{km}**, ML3.7**/34**, 7C-1D, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUWZ	**Tuamarina**	**0.20**	**279**	⇓P*	Pb	18 37 12.6	-0.3
TUWZ				S*	Sb	18 37 15.9	-0.6
TCW	**Tory Channel**	**0.26**	**11**	⇑P*	Pb	18 37 13.6	-0.1
CMWZ	**Cape Campbell**	**0.29**	**179**	⇑P*	Pb	18 37 14.5	+0.4
CMWZ				S*	Sb	18 37 20.1	+1.5
BSWZ	**Blackbirch Sta**	**0.35**	**225**	⇑P*	Pb	18 37 15.1	-0.1
BSWZ				S*	Sb	18 37 20.6	+0.2
SNZO	**South Karori**	**0.40**	**68**	⇑P*	Pb	18 37 15.9	-0.1
MRW	**Makara Radio**	**0.44**	**58**	⇑P*	Pb	18 37 16.4	-0.2
WEL	**Wellington**	**0.46**	**67**	P*	Pb	18 37 16.9	-0.1
BHW	**Baring Head**	**0.50**	**84**	P*	Pb	18 37 17.7	0.0
NNZ	**Nelson**	**0.67**	**291**	P*	Pb	18 37 20.7	+0.1
DUWZ	**D'Urville Isla**	**0.69**	**342**	⇑P*	Pb	18 37 21.1	+0.2
CAW	**Cannon Point**	**0.74**	**62**	P*	Pb	18 37 21.4	-0.3
MSWZ	**Moikau Station**	**0.78**	**87**	P*	Pb	18 37 22.8	+0.3
KIW	**Kapiti Island**	**0.80**	**42**	P*	Pb	18 37 22.3	-0.5
PAWZ	**Paruwai Farm**	**0.92**	**85**	P*	Pb	18 37 24.8	0.0
MTW	**Mount Morrison**	**1.02**	**73**	⇑P*	Pb	18 37 26.3	-0.2
THZ	**Tophouse**	**1.02**	**252**	P*	Pb	18 37 25.5	-1.1
KHZ	**Kahutara**	**1.08**	**207**	P*	Pb	18 37 27.5	0.0
MRZ	**Mangatainoka R**	**1.31**	**53**	P*	Pb	18 37 30.7	-0.8
QRZ	**Quartz Range**	**1.42**	**296**	PN	Pn	18 37 32.9	+0.8
TIWZ	**Tintock**	**1.44**	**62**	PN	Pn	18 37 31.8	-0.6
WAZ	**Wanganui**	**1.80**	**19**	*e*PN	Pn	18 37 38.4	+1.0
DSZ	**Denniston Nort**	**1.83**	**260**	PN	Pn	18 37 38.3	+0.6
TSZ	**Takapari Road**	**1.93**	**44**	PN	Pn	18 37 39.1	0.0
LTZ	**Lake Taylor**	**1.96**	**227**	PN	Pn	18 37 39.5	+0.1
PKE	**Pukeiti**	**2.27**	**356**	*e*PN	Pn	18 37 45.1	+1.3
VRZ	**Vera Road**	**2.37**	**10**	PN	Pn	18 37 46.6	+1.4
TUVZ	**Tukino**	**2.45**	**27**	PN	Pn	18 37 47.8	+1.5
PXZ	**Pawanui**	**2.47**	**56**	PN	Pn	18 37 45.1	-1.4
OTVZ	**Oturere**	**2.55**	**26**	PN	Pn	18 37 49.1	+1.5
BKZ	**Black Stump Fm**	**2.88**	**38**	PN	Pn	18 37 51.4	-0.8

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*IDC **11** 18:41:43.0±1.1, 1925S×176.18W, h0^{km}, mb4.1/5, mb1 4.4/5, mb1mx4.2/11, mbtmp4.1/5, MS4.6/14, Ms1 4.6/14, ms1mx4.4/17, Error ellipse: s-maj=42.0km s-min=26.8km az=133.0*

*NEIC **11** 18:41:45.4±0.5, 1925S×176.10W, h15^{km}, mb4.7/4, Error ellipse: s-maj=21.2km s-min=11.9km az=143.0*

*HRVD **11** 18:41:45.4±0.2, 1938S×17583W, h17^{km}±1^{km}, MW5.3/85, Centroid moment Tensor Solution. LP body waves: s56,c90;Mantle waves: s85,c161; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.02±.02; $M_{\theta\theta}$-0.90±.02; $M_{\phi\phi}$0.87±.02; $M_{r\theta}$-0.25±.05; $M_{\theta\phi}$-0.36±.02; $M_{\phi r}$0.14±.05; Best double couple: $M_0$0.99500×10^{17} NP1:ϕ_s34.00000°, δ74.00000°, λ-1.00000°. NP2: ϕ_s124.00000°, δ89.00000°, λ-164.00000°. Principal axes: T 0.9790, Plg11.0000°, Azm258.0000°; N 0.0330, Plg74.0000°, Azm126.0000°; P -1.0120, Plg12.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **11** 18:41:50.5±3.0, 1924S×17631W, h33^{km}, MS4.7/5 Error ellipse: s-maj=20.9km s-min=19.3km az=96.3*

*ISCJB **11** 18:41:55.9±7.7, 194S±0.1×1762W±02, h113^{km}±66^{km}, mb4.3/10, Error ellipse: s-maj=27.4km s-min=18.7km az=45.6*

ISC 11 18:42:00.8±7.1**, 193S**±01×**1762W**±02**, h143**^{km}±62^{km}**, n67,** σ**1^{s}20**/28**, mb4.2**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**9.99**	**189**	LR	LR	18 47 34.5	
	comp=Z,10μm,19.2s,baz=6.6,slow=35						
RAR	**Rarotonga**	**15.54**	**100**	LR	LR	18 49 37.7	
	comp=Z,2μm,21.8s,baz=286,slow=31						
URZ	**Urewera**	**19.73**	**196**	LR	LR	18 51 36.3	
	comp=Z,897nm,20.3s,baz=19,slow=30						
HNR	**Honiara**	**25.08**	**290**	LR	LR	18 55 56.8	
	comp=Z,714nm,18.9s,baz=176,slow=34						
TBI	**Tubuai**	**25.21**	**104**	*e*LQ		18 52 06.3	
	6μm,27.8s						
TBI				*e*LR	LR	18 53 13.4	
	2μm,27.8s,baz=276						
PPT	**Papeete**	**25.32**	**90**	*e*LQ		18 52 04.2	
	5μm,26.2s						
PPT				*e*LR	LR	18 53 12.3	
	6μm,26.5s,baz=259						
PPT	**Papeete**	**25.32**	**90**	LR	LR	18 54 07.5	
	comp=Z,3μm,21.5s,baz=263,slow=29						
TAOE	**Nuku Hiva Isla**	**36.42**	**78**	*e*S	**S**	**18 54 17.7**	**-4.7**
	484nm,26.3s						
TAOE				*e*LR	LR	18 58 16.2	
	7μm,27.7s,baz=256						
PMG	**Port Moresby**	**36.76**	**280**	*e*P	**P**	**18 48 59.1**	**+4.7**
RKT	**Rikitea**	**38.53**	**103**	*e*S	**S**	**18 54 54.9**	**+0.6**
	162nm,29.8s						
RKT				*e*LQ		18 57 31.5	
	1μm,32.8s						
RKT				*e*LR	LR	18 59 22.9	
	2μm,28.2s,baz=271						
STKA	**Stephens Creek**	**39.81**	**243**	*e*P	**P**	**18 49 21.7**	**+1.8**
	6.7nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**39.81**	**243**	P	**P**	**18 49 19.1**	**-0.8**
	9.6nm,1.0s,mb4.4,baz=80,slow=7.1,SNR=5.7						
STKA				LR	LR	19 04 44.4	
	comp=Z,2μm,18.5s,baz=67,slow=35						
STKA	**Stephens Creek**	**39.81**	**243**	*e*P	**P**	**18 49 19.0**	**-0.9**
AS31	**Alice Springs**	**46.43**	**255**	*e*P	**P**	**18 50 15.0**	**+1.9**
ASAR	**Alice Springs**	**46.43**	**255**	P	**P**	**18 50 11.5**	**-1.5**
	9.8nm,1.1s,mb4.4,baz=90,slow=7.6,SNR=23						
ASAR				LR	LR	19 08 59.3	
	comp=Z,1μm,19.9s,baz=96,slow=35						
WRAB	**Tennant Creek**	**46.43**	**261**	P	**P**	**18 50 13.4**	**+0.3**
ASPA	**Alice Springs**	**46.43**	**255**	*e*P	**P**	**18 50 15.0**	**+1.9**
FITZ	**Fitzroy Crossi**	**54.86**	**261**	*e*P	**P**	**18 51 20.6**	**+4.4**
	13nm,1.7s,mb4.4						
VNDA	**Vanda**	**59.21**	**185**	P	**P**	**18 51 46.0**	**-0.9**
	1.2nm,0.8s,mb3.8,baz=358,slow=7.7,SNR=4.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VNDA				LR	LR	19 13 48.5	
	comp=Z,296nm,18.8s,baz=26,slow=32						
MBWA	**Marble Bar**	**59.76**	**256**	P	**P**	**18 51 50.6**	**0.0**
MJAR	**Matsushiro Arr**	**70.30**	**322**	P	**P**	**18 52 57.9**	**-0.8**
	2.2nm,0.8s,mb3.9,baz=155,slow=6.4,SNR=4.0						
MJAR				LR	LR	19 19 34.5	
	comp=Z,265nm,21.0s,baz=115,slow=32						
QSPA	**South Pole Qui**	**70.72**	**180**	*e*P	**P**	**18 53 01.1**	**-0.1**
	6.1nm,0.9s,mb4.3						
KSM	**Kuching**	**74.93**	**277**	P	**P**	**18 53 23.8**	**-2.2**
YSS	**Yuzh-Sakhalins**	**75.64**	**332**	P	**P**	**18 53 35.1**	**+5.1**
YSS				*e*		19 03 14.0	
YSS				MLR	MLR		
	comp=E,300nm,17.0s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
NVAR	**Mina Array Bea**	**79.03**	**43**	P	**P**	**18 53 48.8**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.4,baz=234,slow=13,SNR=6.4						
TPNV	**Topopah Spring**	**79.53**	**45**	*e*P	**P**	**18 53 52.0**	**+0.3**
KLR	**Kul'dur**	**82.41**	**329**	*e*P	**P**	**18 54 05.2**	**-1.7**
MAW	**Mawson**	**83.22**	**199**	LR	LR	19 31 44.9	
	comp=Z,384nm,18.1s,baz=112,slow=36						
MNTX	**Cornudas Mount**	**84.71**	**54**	*e*P	**P**	**18 54 18.1**	**-0.5**
	comp=Z,16nm,1.5s,mb4.5						
ANMO	**Albuquerque**	**85.37**	**51**	*e*P	**P**	**18 54 22.2**	**+0.3**
MCK	**McKinley**	**85.49**	**12**	P	**P**	**18 54 20.9**	**-1.6**
MCK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
MCK	**McKinley**	**85.49**	**12**	P	**P**	**18 54 20.9**	**-1.7**
	comp=Z,5.8nm,1.1s,mb4.2						
COLA	**College**	**86.73**	**12**	*e*P	**P**	**18 54 29.3**	**+0.7**
IMA2	**Indian Mountai**	**86.83**	**9**	P	**P**	**18 54 30.9**	**+1.8**
CHMT	**Chamberlain Mo**	**86.87**	**38**	*e*P	**P**	**18 54 29.1**	**-0.2**
PDAR	**Pinedale Array**	**86.97**	**43**	LR	LR	19 26 00.4	
	comp=Z,207nm,21.6s,baz=247,slow=31						
BILL	**Bilibino**	**88.07**	**353**	*e*P	**P**	**18 54 36.7**	**+1.7**
BILL				pmax	pmax		
	comp=Z,17nm,2.5s,mb4.4						
YKA	**Yellowknife Ar**	**94.77**	**24**	LR	LR	19 33 35.7	
	comp=Z,141nm,18.4s,baz=235,slow=33						
SONM	**Songino Array**	**96.00**	**319**	LR	LR	19 35 16.6	
	comp=Z,208nm,21.6s,baz=111,slow=34						
ULM	**Lac du Bonnet**	**98.66**	**40**	LR	LR	19 37 01.0	
	comp=Z,208nm,18.3s,baz=278,slow=34						
MVL	**Millersville**	**109.57**	**53**	P	Pdif	18 56 10.8	-1.4
AKASG	**Malin Array Be**	**142.78**	**333**	*i* PKIKP	PKPdf	19 01 26.2	+9.1
STHS	**Stebnicka Huta**	**146.89**	**339**	*e*PKP	PKPdf	19 01 27.5	+3.3
KOLS	**Kolonicke sedl**	**146.94**	**337**	*e*PKP	PKPdf	19 01 26.6	+2.3
KOLS				*e*		19 01 30.7	
KOLS				*e*		19 01 36.2	
KSP	**Ksiaz**	**147.04**	**345**	*e*PKP2	PKPab	19 01 32.0	+3.5
CRVS	**Cervenica-Dubn**	**147.25**	**338**	*e*PKP	PKPab	19 01 31.8	+2.4
CRVS				*e*		19 24 48.9	
CRVS	**Cervenica-Dubn**	**147.25**	**338**	*e*PKP	PKPab	19 01 31.9	+2.5
CRVS				*e*SS		19 24 48.9	
BRTR	**Keskin Array B**	**147.27**	**315**	PKPbc	PKPbc	19 01 28.9	+1.5
	comp=Z,1.2nm,0.9s,baz=102,slow=1.3,SNR=2.8						
CLL	**Collm**	**147.28**	**349**	*e*PKPbc	PKPbc	19 01 29.0	+1.6
	comp=Z,44nm,1.7s						
CLL				*e*PKPab	PKPab	19 01 31.0	+1.5
CLL				*i* sPKPab		19 01 37.4	
UPC	**Upice**	**147.42**	**345**	*e*PKP	PKPbc	19 01 29.5	+1.8
OKC	**Ostrava-Krasne**	**147.48**	**343**	AMS	AMS	20 04 30.0	
	comp=Z,400nm,22.3s						
DPC	**Dobruska-Polom**	**147.49**	**345**	*e*PKP	PKPbc	19 01 29.1	+1.2
BRG	**Berggiesshubel**	**147.52**	**348**	*e*P	PKPbc	19 01 28.9	+0.9
	comp=Z,2.7nm,1.0s						
BRG							
	comp=N,228nm,34.6s						
BRG							
	comp=E,76nm,27.8s						
BRG							
	comp=Z,212nm,27.7s						
PVCC	**Panska Ves**	**147.72**	**347**	*e*PKP	PKPbc	19 01 29.7	+1.1
KECS	**Kecovo**	**147.94**	**339**	*e*PKP	PKPbc	19 01 30.7	+1.5
KECS				*e*		19 01 42.0	
KECS	**Kecovo**	**147.94**	**339**	*e*PKP	PKPab	19 01 32.0	-0.1
KECS				*e*		19 01 42.0	
MOX	**Moxa**	**148.15**	**351**	*e*(P)	PKPab	19 01 34.0	+1.0
MOX							
	comp=Z,200nm,22.0s						
PRU	**Pruhonice**	**148.24**	**347**	*e*PKP	PKPbc	19 01 31.6	+1.7
PRU				AMS	AMS	20 06 20.0	
	comp=Z,300nm,23.4s						
VYHS	**Vyhne**	**148.47**	**341**	*e*PKP	PKPbc	19 01 32.5	+2.0
VYHS				*e*		19 01 41.3	
VYHS				*e*		19 25 05.3	
VYHS	**Vyhne**	**148.47**	**341**	*e*PKIKP	PKPbc	19 01 32.5	+2.0
VYHS				*e*		19 01 41.3	
TREC	**Trest**	**148.67**	**345**	AMS	AMS	20 06 00.0	
	comp=Z,300nm,24.1s						
GRA1	**Grafenberg Arr**	**149.14**	**351**	*e*PKP	PKPbc	19 01 31.9	-0.3
GRF	**Grafenberg Arr**	**149.14**	**351**	*e*PKIKP	PKPbc	19 01 31.9	-0.3
KHC	**Kasperske Hory**	**149.25**	**347**	*e*PKP	PKPbc	19 01 33.9	+1.4
KHC				*e*pPKP	PKPab	19 01 41.5	+4.0
KHC				AMS	AMS	20 09 10.0	
	comp=Z,300nm,20.8s						
ZST	**Bratislava**	**149.26**	**342**	*e*PKP	PKPab	19 01 38.5	+1.0
ZST	**Bratislava**	**149.26**	**342**	*e*PKP	PKPab	19 01 38.8	+1.3
ZST				LR	LR		
	comp=Z,4μm,20.6s						
GERES	**GERESS Array B**	**149.50**	**347**	PKPbc	PKPbc	19 01 33.5	+0.4
	comp=Z,1.5nm,1.0s,baz=5.7,slow=1.0,SNR=8.0						

NEIC ***11*** *18:48:08.8, 39.83S×174.18E, h129km, MG3.8(WEL), After WEL.*

WEL 11 18:48:08.3±0.3**, 3981S×17417E, h134**km±3km**, ML3.8**/13**, 3C, Error ellipse: s-maj=1.4km s-min=0.9km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRZ	**Ngariki Road**	**0.51**	**339**	P	Pn	18 48 27.8	-0.1
NRZ	**Ngariki Road**	**0.51**	**339**	PN	Pn	18 48 27.8	-0.1
NEZ	**North Egmont**	**0.55**	**354**	P	Pn	18 48 27.9	-0.2
NEZ	**North Egmont**	**0.55**	**354**	PN	Pn	18 48 27.7	-0.3
RAEZ	**Rainy Point**	**0.55**	**18**	P	Pn	18 48 28.0	-0.1
RAEZ	**Rainy Point**	**0.55**	**18**	PN	Pn	18 48 27.9	-0.2
NWEZ	**Newall Road**	**0.59**	**336**	P	Pn	18 48 28.4	+0.1
NWEZ	**Newall Road**	**0.59**	**336**	PN	Pn	18 48 28.3	0.0
WAZ	**Wanganui**	**0.63**	**85**	P	Pn	18 48 28.9	+0.3
WAZ	**Wanganui**	**0.63**	**85**	PN	Pn	18 48 28.9	+0.3
PKE	**Pukeiti**	**0.64**	**347**	P	Pn	18 48 28.7	+0.1
PKE				S	Sn	18 48 42.2	-1.8
PKE	**Pukeiti**	**0.64**	**347**	PN	Pn	18 48 28.5	-0.1
PKE				SN	Sn	18 48 42.2	-1.8
VRZ	**Vera Road**	**0.82**	**34**	P	Pn	18 48 29.8	-0.2
VRZ				S	Sn	18 48 45.4	-1.1
VRZ	**Vera Road**	**0.82**	**34**	PN	Pn	18 48 29.8	-0.3
VRZ				SN	Sn	18 48 45.3	-1.2
DUWZ	**D'Urville Isla**	**1.01**	**191**	PN	Pn	18 48 31.5	-0.1
PKVZ	**Pokaka**	**1.05**	**60**	PN	Pn	18 48 32.0	0.0
MTVZ	**Mangateitei**	**1.09**	**67**	PN	Pn	18 48 32.2	-0.1
KIW	**Kapiti Island**	**1.19**	**152**	P	Pn	18 48 33.3	-0.1
KIW	**Kapiti Island**	**1.19**	**152**	PN	Pn	18 48 33.1	-0.3
DRZ	**Dome Shelter**	**1.20**	**64**	P	Pn	18 48 34.5	+1.0
DRZ				P		18 48 34.7	
DRZ	**Dome Shelter**	**1.20**	**64**	PN	Pn	18 48 34.2	+0.7
FWVZ	**Far West T-bar**	**1.20**	**63**	P	Pn	18 48 33.6	+0.1
WPVZ	**Whakapapa**	**1.22**	**61**	P	Pn	18 48 33.8	+0.1
TWVZ	**Taurewa**	**1.23**	**53**	P	Pn	18 48 33.6	-0.2
TWVZ	**Taurewa**	**1.23**	**53**	PN	Pn	18 48 33.5	-0.3
TUVZ	**Tukino**	**1.27**	**65**	P	Pn	18 48 34.3	+0.1
TUVZ	**Tukino**	**1.27**	**65**	PN	Pn	18 48 34.2	0.0
NGZ	**Ngauruhoe**	**1.27**	**61**	P	Pn	18 48 34.2	-0.1
NGZ	**Ngauruhoe**	**1.27**	**61**	PN	Pn	18 48 34.1	-0.1
MOVZ	**Moawhango**	**1.29**	**72**	P	Pn	18 48 33.9	-0.5
MOVZ	**Moawhango**	**1.29**	**72**	PN	Pn	18 48 33.8	-0.5
WTVZ	**West Tongariro**	**1.30**	**58**	P	Pn	18 48 34.6	+0.1
WTVZ	**West Tongariro**	**1.30**	**58**	PN	Pn	18 48 34.2	-0.3
OTVZ	**Oturere**	**1.32**	**61**	PN	Pn	18 48 34.7	-0.1
MRZ	**Mangatainoka R**	**1.37**	**129**	P	Pn	18 48 35.1	-0.2
MRZ	**Mangatainoka R**	**1.37**	**129**	PN	Pn	18 48 35.0	-0.3
TSZ	**Takapari Road**	**1.40**	**101**	P	Pn	18 48 35.1	-0.4
TCW	**Tory Channel**	**1.40**	**177**	P	Pn	18 48 35.8	+0.2
TCW	**Tory Channel**	**1.40**	**177**	PN	Pn	18 48 35.6	0.0
HIZ	**Hauiti**	**1.40**	**22**	P	Pn	18 48 35.4	-0.2
HIZ	**Hauiti**	**1.40**	**22**	⇑PN	Pn	18 48 35.4	-0.2
CAW	**Cannon Point**	**1.46**	**152**	P	Pn	18 48 36.4	+0.1
CAW	**Cannon Point**	**1.46**	**152**	PN	Pn	18 48 36.3	+0.1
MRW	**Makara Radio**	**1.47**	**164**	P	Pn	18 48 36.5	+0.2
MRW	**Makara Radio**	**1.47**	**164**	PN	Pn	18 48 36.5	+0.1
NNZ	**Nelson**	**1.53**	**203**	P	Pn	18 48 37.0	0.0
NNZ	**Nelson**	**1.53**	**203**	⇑PN	Pn	18 48 36.9	0.0
WEL	**Wellington**	**1.54**	**163**	P	Pn	18 48 37.0	-0.1
SNZO	**South Karori**	**1.55**	**165**	P	Pn	18 48 37.2	0.0
SNZO	**South Karori**	**1.55**	**165**	PN	Pn	18 48 37.1	-0.1
QRZ	**Quartz Range**	**1.61**	**231**	P	Pn	18 48 37.4	-0.5
QRZ	**Quartz Range**	**1.61**	**231**	PN	Pn	18 48 37.3	-0.6
TIWZ	**Tintock**	**1.62**	**127**	PN	Pn	18 48 37.9	-0.1
MTW	**Mount Morrison**	**1.68**	**143**	P	Pn	18 48 38.5	-0.2
MTW	**Mount Morrison**	**1.68**	**143**	PN	Pn	18 48 38.4	-0.3
MSWZ	**Moikau Station**	**1.80**	**153**	P	Pn	18 48 40.0	-0.1
MSWZ	**Moikau Station**	**1.80**	**153**	PN	Pn	18 48 39.9	-0.2
BFZ	**Birch Farm**	**1.81**	**119**	P	Pn	18 48 39.9	-0.3
BFZ	**Birch Farm**	**1.81**	**119**	PN	Pn	18 48 39.9	-0.3
PAWZ	**Paruwai Farm**	**1.83**	**149**	P	Pn	18 48 40.4	-0.1
PAWZ	**Paruwai Farm**	**1.83**	**149**	PN	Pn	18 48 40.3	-0.2
BKZ	**Black Stump Fm**	**1.91**	**71**	P	Pn	18 48 40.9	-0.5
BKZ	**Black Stump Fm**	**1.91**	**71**	PN	Pn	18 48 40.5	-0.9
BSWZ	**Blackbirch Sta**	**1.91**	**187**	P	Pn	18 48 41.6	+0.2
PXZ	**Pawanui**	**2.08**	**97**	PN	Pn	18 48 43.0	-0.5
THZ	**Tophouse**	**2.17**	**206**	P	Pn	18 48 44.4	-0.2
THZ	**Tophouse**	**2.17**	**206**	PN	Pn	18 48 44.3	-0.3
DSZ	**Denniston Nort**	**2.64**	**222**	P	Pn	18 48 50.0	-0.4
DSZ	**Denniston Nort**	**2.64**	**222**	⇑PN	Pn	18 48 49.9	-0.5
KHZ	**Kahutara**	**2.65**	**190**	P	Pn	18 48 50.2	-0.3
KHZ	**Kahutara**	**2.65**	**190**	PN	Pn	18 48 50.2	-0.3
MWZ	**Matawai**	**3.00**	**62**	*e*P	Pn	18 48 54.6	-0.5
LTZ	**Lake Taylor**	**3.29**	**205**	*e*P	Pn	18 48 57.7	-1.2
PUZ	**Puketiti**	**3.63**	**63**	*e*P	Pn	18 49 01.8	-1.4
MQZ	**McQueen's Vall**	**4.05**	**196**	*e*P	Pn	18 49 06.0	-2.9
ODZ	**Otahua Downs**	**5.84**	**205**	*e*P	Pn	18 49 30.7	-2.1

THR ***11*** *19:30:36.8±1.0, 34.28N×48.79E, h14km±12km, ML4.1*
CSEM ***11*** *19:30:37.6±0.1, 34.14N×48.81E, h14km, mb4.7/8, Error ellipse: s-maj=1.7km s-min=1.2km az=3.0*
ISCJB ***11*** *19:30:38.8±0.9, 34.11N±0.03×48.76E±0.02, h15km±6km, mb4.2/15, Error ellipse: s-maj=4.4km s-min=3.0km az=9.0*
NEIC ***11*** *19:30:40.5, 34.07N×48.76E, h19km, mb4.5/8, ML4.1(THR), MN4.1(TEH), After TEH.*
IDC ***11*** *19:30:40.6±4.8, 34.03N×48.75E, h32km±39km, mb3.5/6, mb1 3.6/9, mb1mx3.4/22, mbtmp3.8/9, ML3.4/2, MS3.7/1, Ms1 3.7/1, ms1mx2.5/30, Error ellipse: s-maj=27.9km s-min=22.0km az=162.0*
TEH ***11*** *19:30:40.5, 34.07N×48.76E, h19km, Mn4.1*

ISC 11 19:30:37.8±0.8**, 3418N**±002×**4877E**±002**, h1**km±5km**, n125,** σ**1§34**/208**, mb4.2**/15**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAO	**Ashtian**	**1.10**	**70**	*e*PG	**Pg**	**19 30 56.7**	**-2.2**
ASAO				*e*SG	**Sg**	**19 31 11.1**	**-2.0**
ASAO				AML	AML	19 31 12.5	
	comp=N,4μm,0.6s						
ASAO				AML	AML	19 31 16.1	
	comp=E,3μm,0.6s						
ASAO	**Ashtian**	**1.10**	**70**	*e*Pg	**Pg**	**19 30 56.7**	**-2.2**
	SNR=90						
ASAO				*e*Sg	**Sg**	**19 31 11.1**	**-2.0**
	SNR=90						
SNGE	**Sanandaj**	**1.49**	**308**	*e*PG	**Pn**	**19 31 03.4**	**-2.2**
SNGE				*e*SG	**Sn**	**19 31 23.0**	**-2.7**
SNGE				AML	AML	19 31 30.4	
	comp=N,3μm,0.4s						
SNGE	**Sanandaj**	**1.49**	**308**	*e*Pg	**Pn**	**19 31 03.4**	**-2.2**
	SNR=90						
SNGE				*e*Sg	**Sn**	**19 31 23.0**	**-2.7**
	comp=N,3μm,0.4s,SNR=90						
IRAZ	**Razeghan**	**1.55**	**37**	*e*Pn	**Pn**	**19 31 08.2**	**+1.7**
IRAZ				*e*Sn	**Sn**	**19 31 28.7**	**+1.5**
IRAZ				*e*Sn	**Sn**	**19 31 29.5**	**+2.3**
IRAZ	**Razeghan**	**1.55**	**37**	Pn	**Pn**	**19 31 08.2**	**+1.7**
IRAZ				Sn	**Sn**	**19 31 29.4**	**+2.2**
IRAZ	**Razeghan**	**1.55**	**37**	*e*Pn	**Pn**	**19 31 08.2**	**+1.7**
IRAZ				*e*Sn	**Sn**	**19 31 28.7**	**+1.5**
IVIS	**Veys**	**1.63**	**283**	*e*Pn	**Pn**	**19 31 05.9**	**-1.6**
IVIS				*e*Sn	**Sn**	**19 31 29.5**	**+0.4**
IVIS				*e*Sn	**Sn**	**19 31 29.8**	**+0.7**
IVIS	**Veys**	**1.63**	**283**	Pn	**Pn**	**19 31 05.9**	**-1.6**
IVIS				Sn	**Sn**	**19 31 29.4**	**+0.3**
IVIS	**Veys**	**1.63**	**283**	*e*Sn	**Sn**	**19 31 29.8**	**+0.7**
ILIN	**Laeen**	**1.67**	**297**	*e*Pn	**Pn**	**19 31 07.1**	**-1.0**
ILIN				*e*Lg		19 31 35.1	
ILIN	**Laeen**	**1.67**	**297**	Pn	**Pn**	**19 31 07.1**	**-1.0**
ILIN				Lg		19 31 35.1	
ILIN	**Laeen**	**1.67**	**297**	*e*Pn	**Pn**	**19 31 07.1**	**-1.0**
IGHG	**Ghaleghazi**	**1.83**	**275**	*e*Pn	**Pn**	**19 31 11.1**	**+0.8**
IGHG				*e*Lg		19 31 37.9	
IGHG	**Ghaleghazi**	**1.83**	**275**	Pn	**Pn**	**19 31 11.1**	**+0.8**
IGHG				Lg		19 31 37.8	
IGHG	**Ghaleghazi**	**1.83**	**275**	*e*Pn	**Pn**	**19 31 11.1**	**+0.8**
IDHR	**Dehrash**	**2.04**	**286**	*e*Pn	**Pn**	**19 31 14.1**	**+0.9**
SHGR	**Shooshtar-Gavs**	**2.06**	**179**	*e*PG	**Pg**	**19 31 15.6**	**-1.7**
SHGR				*e*SG	**Sg**	**19 31 44.9**	**+0.9**
SHGR				AML	AML	19 31 53.5	
	comp=N,1μm,0.5s						
SHGR	**Shooshtar-Gavs**	**2.06**	**179**	*e*Pg	**Pg**	**19 31 15.6**	**-1.7**
	SNR=90						
SHGR				*e*Sg	**Sg**	**19 31 44.9**	**+0.9**
	SNR=90						
IMHD	**Mahdasht**	**2.17**	**45**	*e*Pn	**Pn**	**19 31 15.1**	**+0.2**
IMHD				*e*Sn	**Sn**	**19 31 42.9**	**+0.5**
IMHD				*e*Sn	**Sn**	**19 31 44.1**	**+1.7**
IMHD	**Mahdasht**	**2.17**	**45**	Pn	**Pn**	**19 31 15.0**	**+0.1**
IMHD				Sn	**Sn**	**19 31 44.1**	**+1.7**
IMHD	**Mahdasht**	**2.17**	**45**	*e*Pn	**Pn**	**19 31 15.1**	**+0.2**
IMHD				*e*Sn	**Sn**	**19 31 42.9**	**+0.5**
IPIR	**Pirpir**	**2.31**	**129**	*e*Pn	**Pn**	**19 31 17.6**	**+0.7**
IPIR				*e*Lg		19 31 51.0	
IPIR	**Pirpir**	**2.31**	**129**	Pn	**Pn**	**19 31 17.5**	**+0.6**
IPIR				Lg		19 31 51.0	
IPIR	**Pirpir**	**2.31**	**129**	*e*Pn	**Pn**	**19 31 17.6**	**+0.7**
THKV	**Tehran--Karaj**	**2.45**	**44**	*e*Pg	**Pn**	**19 31 20.0**	**+1.2**
IKLH	**Kalahroud**	**2.49**	**109**	*e*Pn	**Pn**	**19 31 19.9**	**+0.5**
IKLH				*e*Sn	**Sn**	**19 31 47.9**	**-2.4**
IKLH				*e*Sn	**Sn**	**19 31 48.7**	**-1.6**
IKLH	**Kalahroud**	**2.49**	**109**	Pn	**Pn**	**19 31 19.8**	**+0.4**
IKLH				Sn	**Sn**	**19 31 47.8**	**-2.5**
IKLH				Sn	**Sn**	**19 31 48.6**	**-1.7**
IKLH	**Kalahroud**	**2.49**	**109**	*e*Pn	**Pn**	**19 31 19.9**	**+0.5**
IKLH				*e*Sn	**Sn**	**19 31 48.7**	**-1.6**
IGZV	**Gazvin**	**2.50**	**28**	*e*Pn	**Pn**	**19 31 19.4**	**-0.1**
IGZV				*e*Sn	**Sn**	**19 31 51.6**	**+0.9**
IGZV				*e*Sn	**Sn**	**19 31 52.1**	**+1.4**
IGZV	**Gazvin**	**2.50**	**28**	Pn	**Pn**	**19 31 19.3**	**-0.2**
IGZV				Sn	**Sn**	**19 31 51.5**	**+0.8**
IGZV				Sn	**Sn**	**19 31 52.0**	**+1.3**
IGZV	**Gazvin**	**2.50**	**28**	*e*Pn	**Pn**	**19 31 19.4**	**-0.1**
IGZV				*e*Sn	**Sn**	**19 31 51.6**	**+0.9**
IVRN	**Varamin**	**2.57**	**71**	*e*Pn	**Pn**	**19 31 20.4**	**-0.1**
IVRN				*e*Pn	**Pn**	**19 31 21.8**	**+1.3**
IVRN				*e*Sn	**Sn**	**19 31 51.9**	**-0.5**
IVRN				*e*Sn	**Sn**	**19 31 52.5**	**+0.1**
IVRN	**Varamin**	**2.57**	**71**	Pn	**Pn**	**19 31 21.8**	**+1.3**
IVRN				Sn	**Sn**	**19 31 52.4**	**0.0**
IVRN	**Varamin**	**2.57**	**71**	*e*Pn	**Pn**	**19 31 20.4**	**-0.1**
IVRN				*e*Sn	**Sn**	**19 31 51.9**	**-0.5**
CHTH	**Charan**	**2.59**	**47**	*e*PG	**Pn**	**19 31 22.0**	**+1.2**
ISFB	**Sefidab**	**2.87**	**85**	*e*Pn	**Pn**	**19 31 24.1**	**-0.5**
ISFB				*e*Pn	**Pn**	**19 31 25.1**	**+0.5**
ISFB				*e*Sn	**Sn**	**19 31 58.7**	**-1.1**
ISFB				*e*Sn	**Sn**	**19 31 58.9**	**-0.9**
ISFB	**Sefidab**	**2.87**	**85**	Pn	**Pn**	**19 31 25.1**	**+0.5**
ISFB				Sn	**Sn**	**19 31 58.8**	**-1.0**
IAFJ	**Afjeh**	**2.94**	**54**	*e*Pn	**Pn**	**19 31 26.5**	**+1.0**
IAFJ				*e*Pn	**Pn**	**19 31 30.4**	**+4.9**
IAFJ				*e*Sn	**Sn**	**19 32 01.6**	**+0.2**
IAFJ	**Afjeh**	**2.94**	**54**	Pn	**Pn**	**19 31 26.5**	**+1.0**
IAFJ				Sn	**Sn**	**19 32 01.5**	**+0.1**
IDMV	**Damavand**	**3.02**	**62**	*e*Pn	**Pn**	**19 31 24.1**	**-2.6**
IDMV				*e*Pn	**Pn**	**19 31 27.5**	**+0.8**
IDMV				*e*Sn	**Sn**	**19 32 02.8**	**-0.7**
IDMV				*e*Sn	**Sn**	**19 32 03.6**	**+0.1**
IDMV	**Damavand**	**3.02**	**62**	Pn	**Pn**	**19 31 27.4**	**+0.7**
IDMV				Sn	**Sn**	**19 32 03.5**	**0.0**
IDMV	**Damavand**	**3.02**	**62**	*e*Pn	**Pn**	**19 31 27.5**	**+0.8**
IDMV				*e*Sn	**Sn**	**19 32 02.8**	**-0.7**
IZEF	**Zefreh**	**3.23**	**112**	*e*Pn	**Pn**	**19 31 30.6**	**+1.0**
IZEF				*e*Sn	**Sn**	**19 32 05.8**	**-2.9**
IZEF				*e*Sn	**Sn**	**19 32 06.1**	**-2.6**
IZEF	**Zefreh**	**3.23**	**112**	Pn	**Pn**	**19 31 30.6**	**+1.0**
IZEF				Sn	**Sn**	**19 32 05.7**	**-3.0**
IZEF				Sn	**Sn**	**19 32 06.0**	**-2.7**
IPRN	**Paran-Amol**	**3.51**	**53**	*e*Pn	**Pn**	**19 31 33.0**	**-0.4**
IPRN				*e*Pn	**Pn**	**19 31 35.8**	**+2.4**
IPRN				*e*Sn	**Sn**	**19 32 15.0**	**-0.5**
IPRN				*e*Sn	**Sn**	**19 32 15.5**	**0.0**
IPRN	**Paran-Amol**	**3.51**	**53**	Sn	**Sn**	**19 32 15.0**	**-0.5**
IPRN				Sn	**Sn**	**19 32 15.5**	**0.0**
IFIR	**Firoozkooh**	**3.58**	**65**	*e*Pn	**Pn**	**19 31 35.5**	**+1.1**
IFIR				*e*Pn	**Pn**	**19 31 35.7**	**+1.3**
IFIR				*e*Sn	**Sn**	**19 32 16.3**	**-1.0**
IFIR				*e*Sn	**Sn**	**19 32 16.3**	**-1.0**
IFIR	**Firoozkooh**	**3.58**	**65**	Pn	**Pn**	**19 31 35.6**	**+1.2**
IFIR				Sn	**Sn**	**19 32 16.3**	**-1.0**
NASN	**Na'in**	**3.64**	**111**	*e*Pn	**Pn**	**19 31 36.1**	**+0.9**
ILAS	**Lasjerd**	**3.65**	**70**	*e*Pn	**Pn**	**19 31 35.6**	**+0.3**
ILAS				*e*Sn	**Sn**	**19 32 17.7**	**-1.3**
ILAS				*e*Sn	**Sn**	**19 32 17.8**	**-1.2**
ILAS	**Lasjerd**	**3.65**	**70**	Pn	**Pn**	**19 31 35.5**	**+0.2**
ILAS				Sn	**Sn**	**19 32 17.6**	**-1.4**
ILAS				Sn	**Sn**	**19 32 17.8**	**-1.2**
BHD	**Baghdad**	**3.77**	**257**	*e*x	x	19 31 34.0	
BHD				*e*x	x	19 32 19.0	
BHD				*e*x	x	19 32 31.0	
BHD				*e*x	x	19 32 41.0	
BHD	**Baghdad**	**3.77**	**257**	*e*Pn	**Pn**	**19 31 34.0**	**-3.0**
BHD				*e*Sn	**Sn**	**19 32 19.0**	**-3.0**
IBST	**Bostanabad**	**3.83**	**337**	*e*Pn	**Pn**	**19 31 39.3**	**+1.4**
IAZR	**Azarshahr**	**4.17**	**328**	*e*Pn	**Pn**	**19 31 40.5**	**-1.9**
IAZR				*e*Pn	**Pn**	**19 31 43.4**	**+1.0**
IAZR				*e*Pn	**Pn**	**19 31 46.8**	**+4.4**
IAZR				*e*Sn	**Sn**	**19 32 30.0**	**-1.7**
IAZR				*e*Sn	**Sn**	**19 32 30.2**	**-1.5**
IAZR	**Azarshahr**	**4.17**	**328**	Pn	**Pn**	**19 31 43.3**	**+0.9**
IAZR				Sn	**Sn**	**19 32 30.0**	**-1.7**
IAZR	**Azarshahr**	**4.17**	**328**	*e*Pn	**Pn**	**19 31 43.4**	**+1.0**
IAZR				*e*Sn	**Sn**	**19 32 30.2**	**-1.5**
IGLO	**Galoogah**	**4.41**	**60**	*e*Pn	**Pn**	**19 31 51.6**	**+5.8**
IGLO	**Galoogah**	**4.41**	**60**	Pn	**Pn**	**19 31 51.5**	**+5.7**
IANJ	**Anjiloo**	**4.42**	**72**	*e*Pn	**Pn**	**19 31 46.7**	**+0.8**
IANJ				*e*Pn	**Pn**	**19 31 50.6**	**+4.7**
IANJ				*e*Sn	**Sn**	**19 32 36.2**	**-1.8**
IANJ	**Anjiloo**	**4.42**	**72**	Pn	**Pn**	**19 31 46.7**	**+0.8**
IANJ				Sn	**Sn**	**19 32 36.1**	**-1.9**
IKIA	**Kiasar**	**4.50**	**62**	*e*Pn	**Pn**	**19 31 49.1**	**+2.1**
MIB	**Mutribah**	**4.53**	**196**	*e*P	**Pn**	**19 31 48.2**	**+0.8**
MIB				AML	AML	19 32 36.6	
	comp=Z,64nm,0.6s						
UMR	**Umm Al-Rimmam**	**4.70**	**191**	*e*P	**Pn**	**19 31 50.2**	**+0.5**
UMR				AML	AML	19 32 41.0	
	comp=Z,35nm,0.4s						
ISAD	**Sadrabad**	**4.70**	**117**	*e*Pn	**Pn**	**19 31 51.1**	**+1.3**
ISAD	**Sadrabad**	**4.70**	**117**	Pn	**Pn**	**19 31 51.0**	**+1.2**
ISHB	**Shabestar**	**4.83**	**329**	*e*Pn	**Pn**	**19 31 51.5**	**0.0**
ISHB				*e*Sn	**Sn**	**19 32 45.2**	**-2.8**
ISHB				*e*Sn	**Sn**	**19 32 45.7**	**-2.3**
ISHB	**Shabestar**	**4.83**	**329**	Pn	**Pn**	**19 31 51.4**	**-0.1**
ISHB				Sn	**Sn**	**19 32 45.1**	**-2.9**
ISHB				Sn	**Sn**	**19 32 45.6**	**-2.4**
KBD	**Kabd**	**5.07**	**191**	*e*P	**Pn**	**19 31 55.2**	**+0.4**
KBD				AML	AML	19 32 48.7	
	comp=Z,72nm,0.4s						
NAY	**Al-Naaiem**	**5.08**	**195**	*e*P	**Pn**	**19 31 55.9**	**+0.9**
NAY				AML	AML	19 32 48.7	
	comp=Z,14nm,0.5s						
ICHK	**Chekchek**	**5.10**	**111**	*e*Pn	**Pn**	**19 31 54.4**	**-0.9**
MSL	**Mosul**	**5.11**	**296**	*e*x	x	19 31 52.0	
MSL				*e*x	x	19 32 05.0	
MSL				*e*x	x	19 32 14.0	
MSL				*e*x	x	19 32 51.0	
MSL	**Mosul**	**5.11**	**296**	*e*Pg	**Pg**	**19 32 14.0**	**-1.7**
MSL				*e*Sn	**Sn**	**19 32 51.0**	**-3.9**
IMRD	**Marand**	**5.16**	**332**	*e*Pn	**Pn**	**19 31 54.4**	**-1.7**
IMRD				*e*Pn	**Pn**	**19 31 57.5**	**+1.4**
IMRD				*e*Sn	**Sn**	**19 32 54.9**	**-1.3**
IMRD				*e*Sn	**Sn**	**19 32 54.9**	**-1.3**
IMRD	**Marand**	**5.16**	**332**	Pn	**Pn**	**19 31 57.4**	**+1.3**
IMRD				Sn	**Sn**	**19 32 54.8**	**-1.4**
IMRD	**Marand**	**5.16**	**332**	*e*Pn	**Pn**	**19 31 57.5**	**+1.4**
IMRD				*e*Sn	**Sn**	**19 32 54.9**	**-1.3**
RDF	**Al-Radifah**	**5.34**	**192**	*e*P	**Pn**	**19 31 59.4**	**+0.9**
RDF				AML	AML	19 32 53.4	
	comp=Z,36nm,0.5s						
QRN	**Al-Qurain**	**5.46**	**188**	*e*P	**Pn**	**19 32 00.6**	**+0.3**
QRN				AML	AML	19 32 55.5	
	comp=Z,26nm,0.3s						
IMEH	**Mehriz**	**5.65**	**118**	*e*Pn	**Pn**	**19 32 02.3**	**-0.5**
IMEH	**Mehriz**	**5.65**	**118**	Pn	**Pn**	**19 32 02.2**	**-0.6**
ISRV	**Sarvestan**	**6.04**	**141**	*e*Pn	**Pn**	**19 32 06.6**	**-1.6**
IMOK	**Mook**	**6.12**	**146**	*e*Pn	**Pn**	**19 32 07.6**	**-1.7**
IMOK				*e*Pn	**Pn**	**19 32 09.5**	**+0.2**
IMOK				*e*Sn	**Sn**	**19 33 13.0**	**-6.9**
IMOK				*e*Sn	**Sn**	**19 33 13.6**	**-6.3**
IMOK	**Mook**	**6.12**	**146**	Pn	**Pn**	**19 32 09.5**	**+0.2**
IMOK				Sn	**Sn**	**19 33 13.5**	**-6.4**
IMOK	**Mook**	**6.12**	**146**	*e*Pn	**Pn**	**19 32 09.5**	**+0.2**
IMOK				*e*Sn	**Sn**	**19 33 13.6**	**-6.3**
IBAF	**Bafgh**	**6.27**	**112**	*e*Pn	**Pn**	**19 32 08.3**	**-3.0**
IBAF				*e*Pn	**Pn**	**19 32 10.1**	**-1.2**
IBAF				*e*Lg		19 33 55.0	
IBAF	**Bafgh**	**6.27**	**112**	Pn	**Pn**	**19 32 10.1**	**-1.2**
IBAF				Lg		19 33 54.9	
IBAF	**Bafgh**	**6.27**	**112**	*e*Pn	**Pn**	**19 32 10.1**	**-1.2**
GNI	**Garni**	**6.78**	**333**	Pg	**Pg**	**19 32 43.6**	**-4.0**
	comp=Z,1.2nm,0.3s,baz=255,slow=3.4,SNR=6.3						
ASF	**Jabal al Asfar**	**10.15**	**262**	Pn	**Pn**	**19 33 03.9**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=321,slow=6.5,SNR=4.2						
ASF				Lg		19 36 16.4	
	baz=163,slow=23,SNR=3.7						
BRTR	**Keskin Array B**	**13.31**	**299**	Pn	**Pn**	**19 33 49.5**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=118,slow=14,SNR=5.4						
BR131	**Keskin Array S**	**13.31**	**299**	*e*P	**Pn**	**19 33 53.1**	**+5.4**
	comp=Z,1.9nm,0.8s						
WSAR	**Wadi Sarin**	**13.90**	**139**	Pn	**Pn**	**19 33 52.6**	**-3.3**
	comp=Z,0.6nm,0.3s,baz=321,slow=11,SNR=11						
AKASG	**Malin Array Be**	**21.82**	**325**	P	**P**	**19 35 30.7**	**-0.6**
	comp=Z,2.3nm,0.6s,mb3.8,baz=133,slow=12,SNR=9.0						
BVAR	**Borovoye Array**	**24.33**	**33**	P	**P**	**19 35 56.1**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.4,baz=224,slow=6.0,SNR=3.2						
BVAR	**Borovoye Array**	**24.33**	**33**	P	**P**	**19 35 56.0**	**-0.9**
MKAR	**Makanchi Array**	**28.21**	**53**	P	**P**	**19 36 32.1**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.5,baz=251,slow=7.3,SNR=6.6						
JOF	**Joensuu**	**30.78**	**344**	*e*p	**P**	**19 36 57.4**	**+2.6**
FINES	**FINESS Array B**	**30.92**	**339**	P	**P**	**19 36 54.5**	**-1.5**
	comp=Z,1.4nm,1.0s,mb3.8,baz=146,slow=11,SNR=2.9						
FINES	**FINESS Array B**	**30.92**	**339**	P	**P**	**19 36 54.5**	**-1.5**
CLL	**Collm**	**30.96**	**315**	P	**P**	**19 36 56.0**	**-0.3**
	comp=Z,logA/T=0.8,mb4.4						
CLL	**Collm**	**30.96**	**315**	*e*P	**P**	**19 36 56.0**	**-0.3**
	comp=Z,11nm,1.6s,mb4.4						
SBF	**Sospel**	**33.24**	**299**	*e*P	**P**	**19 37 17.3**	**+0.9**
	comp=Z,50nm,1.2s,mb5.0						
SBF	**Sospel**	**33.24**	**299**	*e*P	**P**	**19 37 17.3**	**+0.9**
	comp=Z,49nm,1.2s,mb5.3						
MBDF	**Montbardon**	**33.77**	**301**	*e*P	**P**	**19 37 22.1**	**+1.2**
	comp=Z,12nm,1.0s,mb4.5						
MBDF	**Montbardon**	**33.77**	**301**	*e*P	**P**	**19 37 22.1**	**+1.2**
	comp=Z,11nm,1.0s,mb4.8						
FRF	**La Foret Royal**	**33.80**	**299**	*e*P	**P**	**19 37 21.9**	**+0.6**
LPG	**La Plagne**	**33.83**	**302**	*e*P	**P**	**19 37 23.3**	**+1.8**
	comp=Z,5.9nm,0.6s,mb4.4						
LPG	**La Plagne**	**33.83**	**302**	*e*P	**P**	**19 37 23.3**	**+1.8**
	comp=Z,5.0nm,0.6s,mb4.6						
LPL	**La Plagne**	**33.85**	**302**	*e*P	**P**	**19 37 23.9**	**+2.3**
	comp=Z,3.1nm,0.6s,mb4.1						
LPL	**La Plagne**	**33.85**	**302**	*e*P	**P**	**19 37 23.9**	**+2.3**
	comp=Z,3.0nm,0.6s,mb4.4						
BNI	**Bardonecchia**	**33.85**	**301**	P	**P**	**19 37 20.1**	**-1.6**
	comp=Z,5.5nm,0.6s,mb4.7						
BNI	**Bardonecchia**	**33.85**	**301**	P	**P**	**19 37 20.1**	**-1.6**
	comp=Z,5.4nm,0.6s,mb4.7						
CABF	**La Chapelle**	**34.39**	**304**	*e*P	**P**	**19 37 28.4**	**+2.0**
	comp=Z,26nm,1.1s,mb4.8						
CABF	**La Chapelle**	**34.39**	**304**	*e*P	**P**	**19 37 28.4**	**+2.0**
	comp=Z,26nm,1.1s,mb5.1						
ORIF	**Oris-en-Rattie**	**34.41**	**301**	*e*P	**P**	**19 37 27.1**	**+0.6**
	comp=Z,7.4nm,0.8s,mb4.3						
ORIF	**Oris-en-Rattie**	**34.41**	**301**	*e*P	**P**	**19 37 27.1**	**+0.6**
	comp=Z,7.0nm,0.8s,mb4.6						
SMF	**Signal de Mont**	**35.94**	**304**	*e*P	**P**	**19 37 41.0**	**+1.3**
	comp=Z,4.2nm,0.6s,mb4.2						

SMF	Signal de Mont	35.94	304	eP	P	19 37 41.0	+1.3
	comp=Z,4.0nm,0.6s,mb4.5						
NOA	NORSAR Array B	36.07	330	P	P	19 37 39.7	-1.1
	comp=Z,0.3nm,0.6s,mb3.4,baz=123,slow=8.3,SNR=2.4						
AVF	Avril sur Loir	36.28	304	eP	P	19 37 44.0	+1.3
BGF	Bois d'Agland	36.62	304	eP	P	19 37 47.4	+1.9
SONM	Songino Array	44.58	54	LR	LR	19 59 03.9	
	comp=Z,79nm,18.5s,baz=329,slow=38						
TORD	Torodi Ar. Bea	47.44	256	P	P	19 39 11.8	-2.0
	comp=Z,0.7nm,0.5s,mb3.8,baz=54,slow=6.8,SNR=13						
TORD	Torodi Ar. Bea	47.44	256	P	P	19 39 11.8	-2.1

MAN 11 19:34:40.5, 17.65N×121.13E, h1km, mb1.7, ML3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.23	27	eP	Pg	19 34 45.6	+0.6
APYP				eS	Sg	19 35 03.1	+15
ABRA	Dolores	0.40	269	eP	Pg	19 34 48.2	0.0
CVP	Callao Caves	0.66	86	eP	Pg	19 34 51.0	-2.1
CAUP	Cauayan	0.96	137	eP	Pg	19 35 01.1	+2.1

IDC 11 19:36:39.9±1.7**, 7.12S×105.57E, h0km, mb3.7**/5**, mb1 3.7**/5**, mb1mx3.5**/17**, mbtmp3.7**/5**, Error ellipse: s-maj=128.7km s-min=22.7km az=48.0, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	31.79	124	P	P	19 43 06.3	+0.4
	0.4nm,0.6s,baz=300,slow=8.0,SNR=3.8						
STKA	Stephens Creek	41.62	131	P	P	19 44 29.9	+0.1
	0.7nm,0.5s,baz=322,slow=12,SNR=2.9						
MKAR	Makanchi Array	57.52	341	P	P	19 46 30.8	-0.2
	0.4nm,0.6s,baz=150,slow=8.2,SNR=4.7						
BVAR	Borovoye Array	66.93	338	P	P	19 47 34.2	+0.2
	0.9nm,0.5s,baz=149,slow=9.3,SNR=9.1						
BRTR	Keskin Array B	80.85	312	P	P	19 48 56.1	+0.5
	0.7nm,0.7s,baz=97,slow=4.1,SNR=4.6						

*ISCJB **11** 19:49:30.3±0.4, 51.54N±0.03×7.05E±0.04, h0km, Error ellipse: s-maj=4.0km s-min=3.7km az=32.4*
*BNS **11** 19:49:31.3±0.6, 51.68N×7.00E, h1km, ML1.8*
*BUG **11** 19:49:31.7, 51.62N×7.00E, h1km, ML1.4*
*CSEM **11** 19:49:32.3±0.1, 51.67N×6.77E, h1km, ML1.9/3, Error ellipse: s-maj=3.5km s-min=2.0km az=110.0*
*BGR **11** 19:49:33.0±0.6, 51.56N×7.08E, h1km, ML1.9/3, Error ellipse: s-maj=6.7km s-min=3.3km az=104.0*
*NEIC **11** 19:49:34.7, 51.47N×6.85E, h1km, ML2.7(LDG), After LDG.*
*LDG **11** 19:49:34.7±0.3, 51.47N×6.85E, h1km, Ml2.7/2, Error ellipse: s-maj=6.9km s-min=3.5km az=173.0, Suspected Mining induced.*
ISC 11 19:49:31.5±0.4**, 51.57N**±0.03×**7.00E**±0.04**, h0km, n24, σ1.18**/32**, 1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	Hlnxe	0.10	305	Pg	Pg	19 49 33.9	+0.5
BZER				Sg	Sg	19 49 36.0	+1.4
BUG	Bochum--Univer	0.21	126	⇓iPg	Pg	19 49 37.4	+1.8
BUG				Sg	Sg	19 49 41.5	+3.2
LAUG	Laupendahl	0.22	189	ePg	Pg	19 49 37.4	+1.7
WTSB	Winterswijk	0.42	343	ePg	Pg	19 49 38.9	-0.7
	41nm,0.3s						
HOBG	Hohbusch	0.62	160	ePg	Pg	19 49 45.1	+1.7
IBBN	Ibbenburen	0.88	32	ePg	Pg	19 49 49.2	+0.8
	SNR=6.6						
IBBN				eSg	Sg	19 49 59.9	+0.1
	SNR=3.9						
STB	Steinbach	0.98	186	ePg	Pg	19 49 52.0	+1.7
STB				eSg	Sg	19 50 06.8	+3.8
	29nm,0.4s						
HGN	Heimansgroeve	1.05	220	ePg	Pg	19 49 52.7	+1.1
	9.5nm,0.1s						
HGN				eSg	Sg	19 50 07.1	+1.9
TNS	Taunus Mts	1.63	145	ePg	Pg	19 50 02.8	+0.1
	SNR=2.5						
TNS				eSg	Sg	19 50 23.7	-0.2
	SNR=2.6						
WLF	Walferdange	1.98	196	eSg	Sg	19 50 35.6	+0.5
	SNR=2.5						
GIVF	Givet	2.01	224	ePg	Pg	19 50 09.3	-0.8
GIVF				eSg	Sg	19 50 33.8	-2.4
	11nm,0.3s						
UBBA	Unterbreizbach	2.03	110	eSg	Sg	19 50 35.8	-1.1
	SNR=1.8						
CLZ	Clausthal	2.12	81	ePg	Pg	19 50 11.7	-0.5
	SNR=1.6						
BAIF	Baives	2.33	231	ePn	Pn	19 50 11.2	+0.2
BAIF				eSg	Sg	19 50 44.1	-2.1
	7.1nm,0.3s						
MOX	Moxa	3.05	106	eSg	Sg	19 51 07.9	-1.8
	SNR=1.8						
CDF	Champ du Feu	3.16	177	ePn	Pn	19 50 22.4	-0.1
BFO	Black Forest	3.35	165	ePn	Pn	19 50 25.3	+0.2
	SNR=1.5						
LOR	Lormes	4.76	207	ePn	Pn	19 50 43.9	-0.7
CABF	La Chapelle	5.00	187	ePn	Pn	19 50 47.5	-0.2
SSF	Saint Saulge	5.05	208	ePn	Pn	19 50 47.6	-0.9
AVF	Avril sur Loir	5.34	208	ePn	Pn	19 50 51.1	-1.4
SMF	Signal de Mont	5.34	204	ePn	Pn	19 50 51.8	-0.7
FLN	La Foliniere	5.56	243	ePn	Pn	19 50 54.7	-0.9
BGF	Bois d'Agland	5.71	210	ePn	Pn	19 50 56.6	-0.9

*SZGRF **11** 19:53:56.3, 26.12S×179.76W, h33km, South of Fiji Islands*
*CSEM **11** 19:54:00.7, 25.08S×179.48W, h33km, mb5.5*
*ISCJB **11** 19:54:43.9±0.7, 25.95S±0.04×179.88W±0.04, h455km±7km, mb4.5/35, Error ellipse: s-maj=7.7km s-min=4.9km az=98.9*
*NEIC **11** 19:54:44.0±0.9, 25.93S×179.75W, h449km±10km, mb4.6/19, Error ellipse: s-maj=10.2km s-min=8.6km az=166.0*
*BJI **11** 19:54:44.0, 25.90S×179.70W, h449km, mB4.6, mb4.7*
*IDC **11** 19:54:44.1±0.9, 25.82S×179.79W, h445km±10km, mb4.2/17, mb1 4.2/19, mb1mx4.2/20, mbtmp5.0/19, Error ellipse: s-maj=12.5km s-min=10.4km az=160.0*
*BGS **11** 19:54:49.2±5.2, 25.93S×179.75W, h450km, mb4.6(NEIC)*
ISC 11 19:54:44.7±0.6**, 25.97S**±0.05×**179.81W**±0.04**, h453km**±7km**, n351, σ0.76**/238**, mb4.6**/34**, 80C-84D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.67	153	P	P	19 55 56.6	-0.6
	1µm,0.3s,baz=117,slow=6.4,SNR=62						
RAO				S	S	19 56 57.5	+1.3
	1µm,0.3s,baz=87,slow=22,SNR=17						
RAO	Raoul Island	3.67	153	P	P	19 55 56.6	-0.6
RAO				S	S	19 56 57.5	+1.3
KUZ	Kuaotunu	11.40	198	eP	P	19 57 19.2	+2.2
KUZ	Kuaotunu	11.40	198	PN	P	19 57 19.3	+2.3
MXZ	Matakaoa Point	11.67	187	P	P	19 57 19.6	-0.3
MXZ				S	S	19 59 27.9	0.0
MXZ	Matakaoa Point	11.67	187	PN	P	19 57 19.1	-0.8
MXZ				SN	S	19 59 27.2	-0.7
PUZ	Puketiti	12.18	187	eP	P	19 57 23.5	-1.9
PUZ	Puketiti	12.18	187	PN	P	19 57 23.0	-2.4
PUZ				SN	S	19 59 34.1	-3.8
URZ	Urewera	12.53	191	P	P	19 57 29.0	-0.1
	45nm,0.3s,baz=30,slow=2.4,SNR=90						
URZ				S	S	19 59 44.4	-0.5
	7.6nm,0.3s,baz=350,slow=12,SNR=7.1						
URZ	Urewera	12.53	191	P	P	19 57 27.4	-1.8
URZ	Urewera	12.53	191	ePN	P	19 57 26.8	-2.4
URZ				SN	S	19 59 44.0	-0.9
MWZ	Matawai	12.53	190	eP	P	19 57 28.6	-0.6
MWZ	Matawai	12.53	190	ePN	P	19 57 27.7	-1.5
MWZ				SN	S	19 59 46.8	+1.8
TAZ	Tarawera	12.62	193	P	P	19 57 32.5	+2.4
TAZ	Tarawera	12.62	193	ePN	P	19 57 32.3	+2.1
PATZ	Paeroa	12.81	194	P	P	19 57 33.6	+1.3
PATZ	Paeroa	12.81	194	ePN	P	19 57 33.1	+0.8
DZM	Mont Dzumac	13.15	284	eP	P	19 57 37.7	+1.8
DZM	Mont Dzumac	13.15	284	P	P	19 57 37.7	+1.8
	7.8nm,0.3s,baz=95,slow=14,SNR=126						
KNZ	Kokohu	13.18	189	eP	P	19 57 35.8	-0.5
KNZ	Kokohu	13.18	189	ePN	P	19 57 36.4	+0.2
HIZ	Hauiti	13.29	199	eP	P	19 57 39.9	+2.5
HIZ	Hauiti	13.29	199	PN	P	19 57 39.5	+2.0
BKZ	Black Stump Fm	13.52	192	eP	P	19 57 37.8	-2.1
BKZ	Black Stump Fm	13.52	192	ePN	P	19 57 37.8	-2.1
TUVZ	Tukino	13.80	195	P	P	19 57 41.6	-1.3
TUVZ	Tukino	13.80	195	ePN	P	19 57 41.7	-1.1
AFI	Afiamalu	14.17	34	P	P	19 57 39.6	-7.3
	32nm,0.3s,baz=256,slow=12,SNR=15						
AFI				S	S	20 00 05.2	-12
	9.6nm,0.3s,baz=44,slow=20,SNR=4.2						
PXZ	Pawanui	14.29	190	ePN	P	19 57 45.3	-2.9
PXZ				SN	S	20 00 16.4	-3.4
TSZ	Takapari Road	14.49	193	P	P	19 57 47.7	-2.6
BFZ	Birch Farm	15.03	192	eP	P	19 57 54.8	-1.3
BFZ	Birch Farm	15.03	192	ePN	P	19 57 54.7	-1.4
BFZ				SN	S	20 00 34.7	+0.5
CAW	Cannon Point	15.68	194	P	P	19 58 01.8	-1.2
SNZO	South Karori	15.96	195	P	P	19 58 09.3	+3.4
NNZ	Nelson	16.22	199	eP	P	19 58 06.8	-1.9
NNZ	Nelson	16.22	199	ePN	P	19 58 06.7	-1.9
THZ	Tophouse	16.86	199	P	P	19 58 14.9	-0.5
THZ	Tophouse	16.86	199	ePN	P	19 58 14.8	-0.6
THZ				SN	S	20 01 09.8	+0.4
RPZ	Rata Peaks	19.20	200	P	P	19 58 38.5	0.0
	1.4nm,0.3s,baz=356,slow=3.5,SNR=8.0						
ARMA	Armidale	25.53	253	eP	P	19 59 38.2	+2.6
CNB	Canberra Magne	28.02	243	eP	P	20 00 01.0	+3.5
	21nm,0.8s,mb4.6						
TOO	Toolangi	31.52	240	⇓iP	P	20 00 29.9	+1.9
	12nm,0.6s,mb4.5						
CTA	Charters Tower	31.72	274	⇓iP	P	20 00 30.5	+0.8
	48nm,0.8s,mb5.0						
CTA	Charters Tower	31.72	274	P	P	20 00 31.0	+1.3
	76nm,0.8s,mb5.2,baz=100,slow=10,SNR=72						
STKA	Stephens Creek	34.16	251	⇓iP	P	20 00 51.8	+1.3
	18nm,0.5s,mb4.8						
STKA	Stephens Creek	34.16	251	P	P	20 00 51.8	+1.3
	20nm,0.5s,mb4.8,baz=96,slow=10,SNR=135						
PMG	Port Moresby	35.38	292	P	P	20 01 00.6	-0.1
	23nm,0.8s,mb4.6,baz=80,slow=6.9,SNR=5.5						
AS31	Alice Springs	41.91	263	⇓iP	P	20 01 54.6	+0.6
AS31				eS	S	20 07 36.5	-1.9
ASAR	Alice Springs	41.91	263	P	P	20 01 54.6	+0.6
	30nm,0.5s,mb5.0,baz=90,slow=7.4,SNR=404						
ASAR				S	S	20 07 39.6	+1.2
	2.5nm,0.8s,baz=97,slow=16,SNR=9.2						
ASPA	Alice Springs	41.91	263	⇓iP	P	20 01 54.6	+0.6
ASPA				eS	S	20 07 36.5	-1.9
WB2	Warramunga Arr	42.47	268	⇓iP	P	20 01 58.5	0.0
WB2				eS	S	20 07 45.2	-1.3
WRAB	Tennant Creek	42.47	268	eP	P	20 01 58.4	-0.1
	64nm,0.8s,mb5.1						
FORT	Forrest	45.79	251	⇓iP	P	20 02 24.0	-0.3
	59nm,0.6s,mb5.2						
KAKA	Kakadu	46.70	277	⇑iP	P	20 02 30.9	-0.4
	12nm,0.4s,mb4.7						
FITZ	Fitzroy Crossi	50.87	267	⇑iP	P	20 03 03.1	+0.7
	20nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	50.87	267	P	P	20 03 02.9	+0.5
	9.6nm,0.5s,mb4.4,baz=106,slow=8.6,SNR=64						
VNDA	Vanda	52.34	185	P	P	20 03 14.3	+1.2
	0.9nm,0.8s,baz=1.4,slow=5.6,SNR=9.0						
VNDA	Vanda	52.34	185	P	P	20 03 14.3	+1.2
KLBR	Kellerberrin	54.37	249	⇓iP	P	20 03 27.5	-0.1
	42nm,0.6s,mb5.0						
NWAO	Narrogin (SRO)	54.56	247	P	P	20 03 28.4	-0.5
	12nm,0.8s,mb4.3,baz=107,slow=4.7,SNR=6.7						
MUN	Mundaring	55.59	248	⇓iP	P	20 03 36.4	+0.2
QSPA	South Pole Qui	64.12	180	eP	P	20 04 35.3	+2.1
	3.6nm,0.8s,mb4.0						
CBIJ	Chichi jima	64.22	322	P	P	20 04 32.6	-1.2
	65nm,0.8s,mb5.2,baz=175,slow=11,SNR=4.1						
JOW	Kunigami	72.51	312	P	P	20 05 24.1	-0.2
	18nm,0.6s,mb4.8,baz=144,slow=7.8,SNR=13						
MJAR	Matsushiro Arr	73.70	326	P	P	20 05 29.9	-1.4
	11nm,0.7s,mb4.5,baz=156,slow=5.3,SNR=36						
MAJO	Matsushiro	73.70	326	eP	P	20 05 30.0	-1.3
	12nm,0.8s,mb4.5						
MAT	Matsushiro	73.70	326	P	P	20 05 29.7	-1.6
MAT	Matsushiro	73.70	326	eP	P	20 05 30.0	-1.3
MAW	Mawson	75.88	201	eP	P	20 05 44.9	+1.4
	4.6nm,0.8s,mb4.1						
MAW	Mawson	75.88	201	P	P	20 05 44.4	+0.9
	5.3nm,0.7s,mb4.2,baz=136,slow=6.5,SNR=16						
ASAJ	Asahikawa	77.78	333	P	P	20 05 54.4	+0.4
	15nm,0.8s,mb4.5,baz=221,slow=8.8,SNR=13						
YSS	Yuzh-Sakhalins	80.08	335	eP	P	20 06 05.0	-1.3
	19nm,0.8s,mb4.7						
HAST	UC Hastings Re	82.83	44	⇑P	P	20 06 20.6	+0.2
	baz=83						
PKM	Peak Mountain	82.99	46	⇓P	P	20 06 21.6	+0.3
	baz=83						
JRSC	Jasper Ridge	83.05	43	⇑P	P	20 06 21.7	+0.1
	baz=83						
PKD	Parkfield	83.18	45	⇓P	P	20 06 22.3	0.0
	baz=83						
U04C	Hernandez Rese	83.29	44	⇑P	P	20 06 23.4	+0.6
	baz=83,SNR=5.1						
PACP	Pacheco Peak	83.38	43	⇓P	P	20 06 23.4	+0.2
	baz=84						
CVS	Carmenet Viney	83.53	42	⇑P	P	20 06 23.8	-0.2
	baz=84						
109C	Camp Elliot, M	83.57	49	⇓P	P	20 06 24.9	+0.7
	baz=84						
S04C	Ingram Canyon,	83.67	43	⇑P	P	20 06 24.8	+0.1
	baz=84						
ARVC	Arvin	83.77	46	⇑P	P	20 06 25.0	-0.2
	baz=84						
MNRC	McLaughlin Nat	83.88	41	⇓P	P	20 06 25.8	+0.1
	baz=84						
O01C	Eel River Cons	83.90	40	⇓P	P	20 06 25.9	+0.1
	baz=84						
BFSC	Mount Baldy St	84.00	47	⇓P	P	20 06 26.1	-0.2
	baz=84,SNR=5.5						
MONP	Monument Peak	84.04	49	⇓P	P	20 06 27.0	+0.5
	baz=84,SNR=8.2						
VES	Vestal, Richgr	84.05	45	⇑P	P	20 06 26.1	-0.5
	baz=84						
MDJ	Mudanjiang	84.08	326	P	P	20 06 26.4	-0.3
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,38nm,4.0s						
DVTC	Desert V Tower	84.12	49	⇓P	P	20 06 27.4	+0.4
	baz=84						
EDW2	Edwards Air Fo	84.17	47	⇑P	P	20 06 27.1	0.0
	baz=84,SNR=9.8						
S05C	Merced	84.19	44	⇑P	P	20 06 27.0	-0.2
	baz=84						
GASB	Alder Springs	84.22	41	⇑P	P	20 06 28.4	+1.0
	baz=84,SNR=6.1						
ISA	Isabella	84.33	46	⇑P	P	20 06 28.0	0.0
	baz=84,SNR=9.6						
T06C	Millerton Lake	84.37	44	⇑P	P	20 06 27.6	-0.5
	baz=84,SNR=6.5						
PFO	Pinyon Flat Ob	84.44	49	⇑P	P	20 06 28.8	+0.3
	baz=85						
SWSC	Sam W. Stewart	84.49	49	⇓P	P	20 06 28.9	+0.2
	baz=85						
O02C	Red Bluff	84.52	40	⇓P	P	20 06 29.6	+0.7
	baz=85,SNR=7.8						
CMB	Columbia Colle	84.59	43	eP	P	20 06 28.7	-0.5
	comp=Z,16nm,1.0s,mb4.6						
CMB	Columbia Colle	84.59	43	P	P	20 06 29.1	-0.1
	baz=85,SNR=8.1						
HELL	Mitchell Peak,	84.60	45	⇓P	P	20 06 28.7	-0.6
	baz=85,SNR=8.0						
LRMC	Laurel Mountai	84.73	46	⇑P	P	20 06 30.0	+0.1
	baz=85						
KCC	Kaiser Creek	84.81	44	⇑P	P	20 06 29.7	-0.6
	baz=85						
S06C	San Francisco	84.82	43	P	P	20 06 30.4	0.0
	baz=85,SNR=6.9						
LAVA	Lava Cap Winer	84.82	42	⇑P	P	20 06 30.0	-0.3
	baz=85						
RRX	Edison Barstow	84.82	47	⇑P	P	20 06 30.2	-0.1
	baz=85						
ORV	Oroville	84.87	41	⇓P	P	20 06 30.3	-0.3
	baz=85,SNR=5.2						
WDC	Whiskeytown Da	84.92	40	⇑P	P	20 06 30.6	-0.2
	baz=85,SNR=5.5						
BELC	Belle Mtn.	84.97	48	⇓P	P	20 06 31.7	+0.6
	baz=85,SNR=17						
CWC	Cottonwood Cre	85.05	45	⇑P	P	20 06 31.3	-0.1
	baz=85						
R05C	Kirkwood Meado	85.19	43	⇓P	P	20 06 32.3	+0.1
	baz=85,SNR=5.6						
GSC	Goldstone	85.20	47	⇓P	P	20 06 32.3	+0.1
	baz=85,SNR=12						
MPMC	Manual Prospec	85.20	46	⇓P	P	20 06 32.3	+0.1
	baz=85,SNR=11						
GLA	Glamis	85.22	50	⇑P	P	20 06 33.1	+0.8
	baz=85,SNR=8.1						
HEC	Hector,Ludlow	85.24	48	⇓P	P	20 06 32.4	0.0
	baz=85,SNR=11						
P05C	Yuba Gap, Truc	85.25	42	⇑P	P	20 06 32.5	0.0
	baz=85						
M02C	Callahan	85.27	39	⇑P	P	20 06 33.1	+0.6
	baz=85						
MTUM	Tungsten Hills	85.30	45	eP	P	20 06 32.8	+0.1
R07C	Lee Vining	85.45	44	⇑P	P	20 06 33.6	+0.2
	baz=86						
R06C	Coleville	85.47	43	⇑P	P	20 06 33.7	+0.2
	baz=86						
YBH	Yreka Blue Hor	85.58	39	P	P	20 06 34.3	+0.3
	comp=Z,3.4nm,0.8s,mb4.1,baz=162,slow=1.3,SNR=4.8						
YBH	Yreka Blue Hor	85.58	39	⇑P	P	20 06 34.2	+0.2
	baz=86						
IRM	Iron Mountain	85.64	49	⇑P	P	20 06 34.9	+0.5
	baz=86,SNR=12						
CN2	Changchun	85.65	324	eP	P	20 06 34.1	-0.3
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
GMRC	Granite Mounta	85.66	48	⇓P	P	20 06 34.8	+0.3
	baz=86,SNR=6.5						
HATC	Hat Creek Radi	85.70	40	⇓P	P	20 06 34.5	-0.2
	baz=86						
BEKR	Beckwourth	85.75	42	⇑P	P	20 06 34.4	-0.5
	baz=86						
K02A	Glendale	85.82	38	⇑P	P	20 06 35.0	-0.2
	baz=86						
Y12C	Blythe	85.83	49	⇑P	P	20 06 35.8	+0.6
	baz=86						
GRAC	Grapevine Rang	85.84	45	⇑P	P	20 06 35.6	+0.2
	baz=86						
FURC	Furnace Creek,	85.86	46	⇓P	P	20 06 35.3	-0.1
	baz=86						
TUQ	Turquoise Mtn.	85.86	47	⇓P	P	20 06 35.4	-0.1
	baz=86						
SHOC	Shoshone	85.90	47	⇑P	P	20 06 35.7	+0.1
	baz=86						
M04C	Macdoel	86.10	39	⇓P	P	20 06 36.0	-0.6
	baz=86						
NVAR	Mina Array Bea	86.12	44	P	P	20 06 36.6	0.0
	comp=Z,5.5nm,0.7s,mb4.3,baz=228,slow=10,SNR=34						
J02A	Umpqua	86.17	37	⇓P	P	20 06 36.4	-0.4
	baz=86						
U10A	Ash Meadows, A	86.17	46	⇑P	P	20 06 37.1	+0.2
	baz=86						
R08A	Mina	86.19	44	⇑P	P	20 06 36.7	-0.3
	baz=86						
M05C	Lookout	86.23	40	P	P	20 06 37.0	-0.1
	baz=86,SNR=5.4						
O06A	Flanigan	86.26	42	P	P	20 06 37.3	0.0
	baz=86,SNR=11						
L04A	Klamath Falls	86.33	39	⇓P	P	20 06 37.3	-0.3
	baz=86						
Y13A	Salome	86.34	50	⇓P	P	20 06 38.4	+0.7
	baz=86,SNR=5.0						
S09A	Goldfield	86.37	45	⇑P	P	20 06 37.5	-0.3
	baz=86						
I02A	Mapleton	86.45	37	⇓P	P	20 06 37.4	-0.8
	baz=87						
J03A	Ideyld Park	86.50	38	⇓P	P	20 06 38.6	+0.1
	baz=87						
M06C	Likely Place G	86.52	41	⇓P	P	20 06 38.3	-0.3
	baz=87						
TPNV	Topopah Spring	86.54	46	eP	P	20 06 38.0	-0.6
	comp=Z,11nm,1.0s,mb4.5						
TPH	Tonopah	86.58	45	eP	P	20 06 38.6	-0.2
	comp=Z,13nm,1.1s,mb4.6						
Q08A	Gabbs	86.61	44	⇓P	P	20 06 38.6	-0.4
	baz=87						
N06A	Buffalo Meadow	86.62	41	⇓P	P	20 06 38.7	-0.3
	baz=87						
Z14A	Wintersburg	86.70	50	⇓P	P	20 06 40.1	+0.7
	baz=87,SNR=5.1						
I03A	Eugene	86.73	37	⇓P	P	20 06 39.4	-0.1
	baz=87						
V12A	Nelson	86.74	48	⇓P	P	20 06 39.8	+0.2
	baz=87						
R09A	Tonopah	86.78	45	⇑P	P	20 06 39.7	-0.1
	baz=87,SNR=7.2						
X13A	Yucca	86.78	49	⇑P	P	20 06 40.3	+0.5
	baz=87,SNR=5.3						
O07A	Toulon	86.83	42	⇓P	P	20 06 39.6	-0.4
	baz=87,SNR=13						
115A	Sonoran Desert	86.83	51	⇓P	P	20 06 40.7	+0.7
	baz=87						
L05A	Lakeview	86.85	40	⇓P	P	20 06 40.4	+0.3
	baz=87,SNR=5.1						
MPOR	Mary's Peak	86.93	37	P	P	20 06 41.0	+0.5
Y14A	Wickenburg	86.98	50	⇑P	P	20 06 41.2	+0.4
	baz=87						
W13A	Hualapai Mount	87.03	49	⇓P	P	20 06 41.4	+0.4
	baz=87,SNR=5.6						
Q09A	Carvers	87.06	44	⇑P	P	20 06 41.0	-0.1
	baz=87						
116A	Eloy	87.12	52	⇑P	P	20 06 41.9	+0.4
	baz=87						
N07B	Gerlach	87.15	42	⇑P	P	20 06 41.4	-0.1
	baz=87						
R10A	Warm Springs	87.29	45	⇓P	P	20 06 42.3	+0.1
	baz=87						
X14A	Yava	87.35	50	⇑P	P	20 06 43.2	+0.8
	baz=88,SNR=5.6						
U12A	Valley of Fire	87.35	47	⇓P	P	20 06 43.0	+0.5
	baz=88						
M07A	Soldier Meadow	87.41	41	⇓P	P	20 06 42.6	-0.2
	baz=88,SNR=6.1						
J05A	Fort Rock	87.41	39	P	P	20 06 43.2	+0.5
	baz=88,SNR=10						
W14A	Seligman	87.64	49	⇑P	P	20 06 44.8	+1.0
	baz=88						
N08A	GE Springer Mi	87.65	42	⇓P	P	20 06 43.7	-0.2
	baz=88,SNR=11						
K06A	Valley Falls	87.66	39	⇑P	P	20 06 43.9	-0.1
	baz=88,SNR=10						
L07A	Adell	87.70	40	⇓P	P	20 06 44.3	+0.2
	baz=88						
H04A	Detroit Lake	87.79	37	⇑P	P	20 06 44.1	-0.4
	baz=88						
X15A	Humboldt	87.81	50	⇑P	P	20 06 45.6	+0.9
	baz=88						
O09A	Fish Creek Ran	87.86	43	⇑P	P	20 06 44.8	-0.1
	baz=88						
F03A	Seaside	87.87	36	⇓P	P	20 06 45.0	+0.1
	baz=88						
M08A	Happy Creek Ra	87.91	41	⇑P	P	20 06 45.2	+0.1
	baz=88						
I05A	Bend	87.95	38	⇑P	P	20 06 45.0	-0.3
	baz=88						
P10A	Eureka	87.98	44	⇑P	P	20 06 46.2	+0.8
	baz=88						
J06A	Christmas Vall	88.00	39	⇓P	P	20 06 45.2	-0.4
	baz=88,SNR=11						
N09A	Rock Creek Ran	88.06	42	⇓P	P	20 06 45.9	+0.1
	baz=88						
E03A	Lebam	88.28	35	⇓P	P	20 06 46.6	-0.3
	baz=88						
H05A	Madras	88.29	38	⇓P	P	20 06 46.9	0.0
	baz=88						
O10A	Cortez Mining,	88.35	43	⇓P	P	20 06 47.1	-0.1
	baz=88						
WVOR	Wild Horse Val	88.36	40	eP	P	20 06 46.9	-0.4
	comp=Z,24nm,1.4s,mb4.7						
P11A	Circle Ranch,	88.38	44	⇓P	P	20 06 47.2	-0.1
	baz=88						
L08A	Fields	88.39	41	⇓P	P	20 06 47.2	-0.1
	baz=89,SNR=12						
I06A	Prineville	88.40	39	⇓P	P	20 06 47.6	+0.2
	baz=89,SNR=12						
M09A	Marrel Ranch,	88.45	42	⇓P	P	20 06 47.7	0.0
	baz=89						
F04A	Amboy	88.47	36	⇓P	P	20 06 47.0	-0.7
	baz=89						
VIPM	Ingram Point	88.53	38	P	P	20 06 48.2	+0.2
LVP	Lakeview Peak	88.57	36	P	P	20 06 48.2	0.0
G05A	Wamic	88.62	37	⇑P	P	20 06 48.3	-0.1
	baz=89						
K08A	Mann Creek Ran	88.64	40	⇑P	P	20 06 48.6	+0.1
	baz=89,SNR=16						
Q12A	Willow Creek R	88.67	45	⇑P	P	20 06 48.6	0.0
	baz=89						
L09A	Wilkinson Ranc	88.68	41	⇑P	P	20 06 48.7	0.0
	baz=89,SNR=5.4						
CCUT	Cedar City	88.76	47	eP	P	20 06 49.5	+0.5
I07A	Izee	88.89	39	⇑P	P	20 06 49.7	+0.1
	baz=89,SNR=25						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time	Res
F05A	White Salmon	88.95	36	⇑P	P	20 06 49.5	-0.5
	baz=89						
M10A	I.L. Ranch, Tu	89.06	42	⇓P	P	20 06 50.6	+0.2
	baz=89,SNR=8.0						
HDW	Hoodsport	89.27	34	P	P	20 06 51.7	+0.3
I08A	Drewsey	89.31	39	⇑P	P	20 06 51.6	0.0
	baz=90,SNR=8.1						
M11A	Holland Ranch,	89.46	43	⇓P	P	20 06 52.8	+0.4
	baz=90						
D05A	Enumclaw	89.52	35	⇑P	P	20 06 52.8	+0.2
	baz=90						
N12A	Clover Valley,	89.58	43	⇑P	P	20 06 53.0	+0.1
	baz=90						
H08A	Prairie City	89.63	39	⇑P	P	20 06 52.7	-0.4
	baz=90						
I09A	Lost Marbles R	89.82	40	⇓P	P	20 06 53.7	-0.3
	baz=90						
BBB	Bella Bella	89.98	29	P	P	20 06 54.2	-0.5
	comp=Z,18nm,1.0s,mb4.8,baz=296,slow=1.1,SNR=5.0						
M12A	Wells	89.99	43	⇑P	P	20 06 54.8	0.0
	baz=90						
C05A	Tolt Reservoir	90.00	35	⇑P	P	20 06 54.1	-0.7
	baz=90,SNR=5.6						
MSU	Marysvale	90.08	47	eP	P	20 06 55.8	+0.6
N13A	Wendover, West	90.10	44	⇓P	P	20 06 55.2	-0.1
	baz=90						
A04A	Legoe Bay, Lum	90.15	34	⇓P	P	20 06 55.2	-0.3
	baz=90						
XAN	Xi'an	90.15	308	P	P	20 06 56.1	+0.6
XAN				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.5						
B05A	Bryant	90.16	34	⇓P	P	20 06 54.9	-0.6
	baz=90						
H09A	Durkee	90.29	39	⇑P	P	20 06 55.7	-0.4
	baz=90						
F08A	Pendleton	90.36	38	⇓P	P	20 06 55.8	-0.7
	baz=90						
M13A	Montello	90.42	43	⇓P	P	20 06 56.8	+0.1
	baz=91,SNR=7.7						
TTA	Tatalina	90.60	11	eP	P	20 06 55.4	-2.2
	comp=Z,5.4nm,1.0s,mb4.4						
MNTX	Cornudas Mount	91.25	55	eP	P	20 07 00.6	0.0
	comp=Z,3.9nm,0.8s,mb4.4						
ANMO	Albuquerque	92.09	52	P	P	20 07 04.8	+0.3
	comp=Z,2.4nm,0.7s,mb4.2,baz=194,slow=5.7,SNR=5.5						
PDAR	Pinedale Array	94.05	44	P	P	20 07 13.0	-0.5
	comp=Z,1.6nm,0.8s,mb4.1,baz=243,slow=4.0,SNR=5.3						
SONM	Songino Array	98.78	319	P	Pdif	20 07 35.8	+1.1
	comp=Z,0.2nm,0.6s,baz=98,slow=1.4,SNR=3.0						
MKAR	Makanchi Array	113.67	312	PKiKP	PKiKP	20 12 29.1	-1.6
	comp=Z,0.4nm,0.3s,baz=73,slow=4.2,SNR=5.0						
BVAR	Borovoye Array	122.09	318	PKP	PKPdf	20 12 45.1	-1.8
	comp=Z,2.6nm,0.4s,baz=155,slow=1.4,SNR=28						
FRB	Frobisher Bay	122.36	29	PKP	PKPdf	20 12 45.6	-1.8
	comp=Z,5.6nm,0.5s,baz=314,slow=4.7,SNR=4.8						
SCHQ	Schefferville	123.95	40	PKP	PKPdf	20 12 48.5	-2.0
	comp=Z,3.1nm,0.8s,baz=254,slow=6.9,SNR=3.3						
AKTK	Aktyubinsk	129.90	315	PKP	PKPdf	20 13 01.1	-0.7
AKTK				SKPbc	SKPbc	20 15 42.0	+0.5
AKTO	Aktyubinsk	129.90	315	PKP	PKPdf	20 13 01.1	-0.7
	comp=Z,2.2nm,0.7s,baz=75,slow=2.8,SNR=11						
AKTO				SKPbc	SKPbc	20 15 42.0	+0.5
	comp=Z,0.8nm,0.7s,baz=105,slow=3.6,SNR=3.9						
KEV	Kevo	133.47	348	epkp	PKPdf	20 13 00.5	-8.0
ARCES	ARCESS Array B	133.94	348	PKhKP		20 12 58.9	
	comp=Z,1.3nm,0.5s,baz=46,slow=3.5,SNR=14						
ARCES				PKP	PKPdf	20 13 07.6	-1.8
	comp=Z,2.9nm,0.6s,baz=100,slow=0.5,SNR=12						
ARCES				SKPbc	SKPbc	20 15 55.9	+0.4
	comp=Z,4.2nm,0.8s,baz=35,slow=6.6,SNR=6.8						
KMBO	Kilima Mbogo	135.21	239	SKPbc	SKPbc	20 16 04.0	+4.4
	comp=Z,2.5nm,1.0s,baz=10.0,slow=2.9,SNR=5.0						
JOF	Joensuu	137.73	339	epkp	PKPdf	20 13 07.4	-9.1
KAF	Kangasniemi	139.86	341	epkp	PKPdf	20 13 10.7	-10
FINES	FINESS Array B	140.46	341	PKhKP		20 13 12.5	
	comp=Z,1.5nm,0.4s,baz=53,slow=4.4,SNR=24						
FINES				SKPbc	SKPbc	20 16 15.6	+1.1
	comp=Z,3.9nm,0.8s,baz=90,slow=1.9,SNR=12						
FINES	FINESS Array B	140.46	341	PKP	PKPdf	20 13 12.5	-9.0
FINES				SKPbc	SKPbc	20 16 15.6	+1.1
NB2	NORSAR Subarra	144.15	351	PKPa	PKPdf	20 13 25.1	-2.8
	comp=Z,7.3nm,0.6s,baz=16,slow=3.2						
NOA	NORSAR Array B	144.15	351	PKP	PKPdf	20 13 25.3	-2.7
	comp=Z,26nm,0.8s,baz=16,slow=5.0,SNR=135						
NOA				SKPbc	SKPbc	20 16 24.6	+1.1
	comp=Z,0.5nm,0.8s,baz=21,slow=4.8,SNR=4.7						
NOA	NORSAR Array B	144.15	351	PKP	PKPdf	20 13 25.3	-2.7
NOA				SKPbc	SKPbc	20 16 24.6	+1.1
NAO01	NORSAR Array S	144.38	351	ePKPdf	PKPdf	20 13 26.0	-2.3
MALT	Malatya	145.60	300	⇓iP	PKPbc	20 13 32.9	+1.2
MALT	Malatya	145.60	300	⇓P	PKPbc	20 13 32.9	+1.2
WAL1	Walls	145.71	2	eP	PKPdf	20 13 30.0	-0.6
WAL1	Walls	145.71	2	eP	PKPdf	20 13 30.0	-0.6
KONO	Kongsberg	145.71	352	ePKPdf	PKPdf	20 13 30.2	-0.5
LRW	Lerwick	145.84	1	eP	PKPdf	20 13 30.4	-0.5
LRW	Lerwick	145.84	1	eP	PKPdf	20 13 30.4	-0.5
AKASG	Malin Array Be	146.79	326	PKPbc	PKPbc	20 13 33.5	-1.5
	comp=Z,3.8nm,0.4s,baz=44,slow=4.2,SNR=36						
AKBB	Malin Array Si	146.79	326	ePKPdf	PKPdf	20 13 33.1	+0.7
SUW	Suwalki	147.21	335	ePKPbc	PKPbc	20 13 34.8	-1.4
ORE	Reay	147.33	4	eP	PKPbc	20 13 35.0	-1.4
ORE	Reay	147.33	4	eP	PKPbc	20 13 35.0	-1.4
KAC	Achnashellach	148.25	6	⇑eP	PKPbc	20 13 37.4	-1.4
KAC	Achnashellach	148.25	6	⇑eP	PKPbc	20 13 37.4	-1.4
MCD	Coleburn Disti	148.32	4	eP	PKPbc	20 13 37.1	-1.9
MCD	Coleburn Disti	148.32	4	eP	PKPbc	20 13 37.1	-1.9
KPL	Plockton	148.38	6	⇑eP	PKPbc	20 13 37.8	-1.4
KPL	Plockton	148.38	6	⇑eP	PKPbc	20 13 37.8	-1.4
BR131	Keskin Array S	148.93	305	ePKPbc	PKPbc	20 13 39.9	-0.7
BRTR	Keskin Array B	148.93	305	PKPbc	PKPbc	20 13 40.2	-0.3
	comp=Z,2.9nm,0.6s,baz=137,slow=3.4,SNR=18						
BRTR				PKPab	PKPab	20 13 46.2	-0.1
	comp=Z,4.2nm,0.7s,baz=113,slow=3.7,SNR=16						
EAB	Aberfoyle	149.63	5	⇑eP	PKPbc	20 13 40.7	-1.5
EAB	Aberfoyle	149.63	5	⇑eP	PKPbc	20 13 40.7	-1.5
EDI	Edinburgh	149.98	4	eP	PKPbc	20 13 42.8	-0.2
EDI	Edinburgh	149.98	4	eP	PKPbc	20 13 42.8	-0.2
ESY	Stoneypath	150.01	3	⇑eP	PKPbc	20 13 41.7	-1.4
ESY	Stoneypath	150.01	3	⇑eP	PKPbc	20 13 41.7	-1.4
EAU	Auchinoon	150.04	4	⇑eP	PKPbc	20 13 42.1	-1.1
EAU	Auchinoon	150.04	4	⇑eP	PKPbc	20 13 42.1	-1.1
EBL	Broad Law	150.13	4	⇑eP	PKPbc	20 13 42.2	-1.2
EBL	Broad Law	150.13	4	⇑eP	PKPbc	20 13 42.2	-1.2
CFR	Carcaliu	150.50	318	⇓iP	PKPbc	20 13 44.2	-0.1
CFR	Carcaliu	150.50	318	⇓P	PKPbc	20 13 44.2	0.0
ESK	Eskdalemuir	150.58	4	⇑eP	PKPbc	20 13 42.8	-1.6
ESK	Eskdalemuir	150.58	4	⇑eP	PKPbc	20 13 42.8	-1.6
KWP	Kalwaria	150.65	329	ePKPbc	PKPbc	20 13 44.3	-0.3
TIRR	Tirgusor	150.69	316	⇓iP	PKPbc	20 13 44.5	-0.2
TIRR	Tirgusor	150.69	316	⇓P	PKPbc	20 13 44.5	-0.2
ECK	Cauldkaine Hil	150.72	4	eP	PKPbc	20 13 43.2	-1.6
ECK	Cauldkaine Hil	150.72	4	eP	PKPbc	20 13 43.2	-1.6
BURAR	Bucovina Array	150.76	324	⇓iP	PKPbc	20 13 45.3	+0.4
BURAR	Bucovina Array	150.76	324	⇓P	PKPbc	20 13 45.3	+0.4
BSEG	Bad Segeberg	151.07	348	ePKPbc	PKPbc	20 13 44.9	-0.7
BSEG				ePKPab	PKPab	20 13 53.6	-1.6
XAL	Allendale	151.09	3	eP	PKPbc	20 13 44.1	-1.5
XAL	Allendale	151.09	3	eP	PKPbc	20 13 44.1	-1.5
KOLS	Kolonicke sedl	151.34	329	ePKP	PKPbc	20 13 46.3	+0.1
KOLS				e		20 13 51.7	
STHS	Stebnicka Huta	151.46	331	ePKP	PKPbc	20 13 46.5	0.0
STHS				e		20 13 52.3	
STHS	Stebnicka Huta	151.46	331	ePKP	PKPbc	20 13 46.5	0.0
STHS				e		20 13 52.3	
LHO	Holmfirth	152.42	3	eP	PKPbc	20 13 46.9	-1.7
LHO	Holmfirth	152.42	3	eP	PKPbc	20 13 46.9	-1.7
NRDL	Niedersach Rie	152.48	347	ePKPbc	PKPbc	20 13 48.2	-0.5
DRGR		152.60	325	⇓iP	PKPbc	20 13 48.7	-0.3
DRGR		152.60	325	⇓P	PKPbc	20 13 48.7	-0.3
UPC	Upice	152.65	338	ePKPbc	PKPbc	20 13 48.7	-0.4
DPC	Dobruska-Polom	152.68	337	ePKPbc	PKPbc	20 13 48.5	-0.6
DPC				ex	x	20 14 01.3	
MORC	Moravsky Berou	152.70	335	⇓iP	PKPbc	20 13 49.1	-0.1
CLL	Collm	152.88	342	ePKPbc	PKPbc	20 13 48.7	-0.9
CLL				ePKPab	PKPab	20 14 01.4	-1.5
CLL	Collm	152.88	342	⇑iPKPbc	PKPbc	20 13 48.8	-0.8
	comp=Z,15nm,0.8s						
CLL				i PKPab	PKPab	20 14 01.2	-1.7
	comp=Z,10.0nm,1.1s						
SBD1	Bryn Du	152.98	5	eP	PKPbc	20 13 48.5	-1.2
SBD1	Bryn Du	152.98	5	eP	PKPbc	20 13 48.5	-1.2
BRG	Berggiesshubel	153.00	341	ePKPbc	PKPbc	20 13 49.2	-0.6
BRG				ePKPab	PKPab	20 14 02.1	-1.3
BRG	Berggiesshubel	153.00	341	i P	PKPbc	20 13 49.5	-0.4
	comp=Z,4.5nm,0.6s						
BRG				e		20 14 02.2	
	comp=Z,5.3nm,0.9s						
CLZ	Clausthal	153.03	346	ePKPbc	PKPbc	20 13 49.5	-0.4
IBBN	Ibbenburen	153.09	350	ePKPab	PKPab	20 14 02.2	-1.5
PVCC	Panska Ves	153.11	339	ePKPbc	PKPbc	20 13 49.6	-0.5
PVCC				ex	x	20 14 02.8	
FBE	Freiberg	153.12	341	ePKPbc	PKPbc	20 13 49.7	-0.4
FBE				ePKPab	PKPab	20 14 02.8	-1.1
VYHS	Vyhne	153.20	332	ePKP	PKPbc	20 13 49.7	-0.6
VYHS				e		20 14 03.1	
VYHS	Vyhne	153.20	332	ePKP	PKPbc	20 13 49.7	-0.6
VYHS				e		20 14 03.1	
VYHS				LR	LR		
	comp=Z,3µm,22.1s						
HLM1	Long Mynd	153.39	4	eP	PKPbc	20 13 48.9	-1.8
HLM1	Long Mynd	153.39	4	eP	PKPbc	20 13 48.9	-1.8
PRU	Pruhonice	153.58	339	ePKPbc	PKPbc	20 13 50.0	-1.1
PRU				ex	x	20 14 04.4	
HTR	Trewern Hill	153.80	5	eP	PKPbc	20 13 49.8	-1.8
HTR	Trewern Hill	153.80	5	eP	PKPbc	20 13 49.8	-1.8
WERD	Werda	153.84	342	ePKPab	PKPab	20 14 05.5	-1.5
MCH1	Michaelchurch	153.90	4	eP	PKPbc	20 13 50.6	-1.2
MCH1	Michaelchurch	153.90	4	eP	PKPbc	20 13 50.6	-1.2
GUNZ	Gunzen	153.91	342	ePKPab	PKPab	20 14 06.4	-0.9
BZS	Buzias	153.95	324	⇓iP	PKPbc	20 13 51.4	-0.5
BZS	Buzias	153.95	324	⇓P	PKPbc	20 13 51.4	-0.5
WERN	Wernitzgruen	153.97	342	ePKPab	PKPab	20 14 06.5	-1.0
HGH	Gray Hill	154.27	4	eP	PKPbc	20 13 48.7	-3.9
HGH	Gray Hill	154.27	4	eP	PKPbc	20 13 48.7	-3.9
MANZ	Manzenberg	154.32	342	ePKPab	PKPab	20 14 08.4	-0.6
ROTZ	Rotzenmuhle	154.49	342	ePKPab	PKPab	20 14 09.3	-0.4
KHC	Kasperske Hory	154.64	339	ePKPbc	PKPbc	20 13 53.0	-0.3
KHC				ex	x	20 14 08.2	
GRA1	Grafenberg Arr	154.82	343	ePKPab	PKPab	20 14 10.4	-0.8
GRF	Grafenberg Arr	154.82	343	ePKPab	PKPab	20 14 10.4	-0.8
WET	Wettzell	154.85	340	ePKPbc	PKPdf	20 13 54.1	+9.4
WET				ePKPab	PKPab	20 14 10.5	-0.8
GEC2	GERESS Array S	154.85	339	ePKPbc	PKPdf	20 13 53.1	+8.4
GEC2				ePKPab	PKPab	20 14 09.7	-1.6
GERES	GERESS Array B	154.85	339	PKP	PKPdf	20 13 43.8	-0.9
	comp=Z,0.3nm,0.6s,baz=98,slow=2.7,SNR=4.7						
GERES				PKPbc	PKPdf	20 13 53.2	+8.5
	comp=Z,0.9nm,0.7s,baz=36,slow=2.5,SNR=8.1						
GERES				PKPab	PKPab	20 14 10.2	-1.1
	comp=Z,1.3nm,0.7s,baz=64,slow=3.1,SNR=10						
TNS	Taunus Mts	154.97	347	ePKPab	PKPab	20 14 10.2	-1.6
PKSM	Moragy	155.01	329	⇑iP	PKPdf	20 13 53.6	+8.7
BAIF	Baives	155.75	354	ePKP2	PKPab	20 14 13.3	-1.9
FUR	Furstenfeldbru	156.20	341	ePKPab	PKPab	20 14 16.4	-0.7
BFO	Black Forest	156.79	346	ePKPab	PKPab	20 14 18.2	-1.4
CDF	Champ du Feu	156.92	348	ePKP2	PKPab	20 14 18.5	-1.7
	comp=Z,11nm,1.0s						
BOJS	Bojanci	157.07	332	i PKPbc	PKPab	20 14 19.6	-1.2
ROBS	Robic	157.15	336	ePKPbc	PKPab	20 14 15.1	-6.2
MEZF	Maizieres J'vi	157.19	352	ePKP2	PKPab	20 14 19.8	-1.6
	comp=Z,8.1nm,0.7s						
HAU	Haudompre	157.48	349	ePKP2	PKPab	20 14 20.9	-1.8
	comp=Z,16nm,0.8s						
HINF	Hinteralfeld	157.57	348	ePKP2	PKPab	20 14 21.1	-2.0
	comp=Z,3.3nm,0.6s						
LOR	Lormes	158.55	353	ePKP2	PKPab	20 14 25.7	-1.6
SSF	Saint Saulge	158.79	354	ePKP2	PKPab	20 14 26.7	-1.6
	comp=Z,13nm,0.8s						
CABF	La Chapelle	158.88	349	ePKP2	PKPab	20 14 27.4	-1.3
AVF	Avril sur Loir	159.07	354	ePKP2	PKPab	20 14 27.8	-1.8
	comp=Z,13nm,0.9s						
SMF	Signal de Mont	159.16	353	ePKP2	PKPab	20 14 28.2	-1.8
	comp=Z,16nm,0.8s						
TCF	Toulx Ste Croi	159.66	356	ePKP2	PKPab	20 14 30.2	-2.0
LPL	La Plagne	159.80	347	ePKP2	PKPab	20 14 32.2	-0.6
LPG	La Plagne	159.82	347	ePKP2	PKPab	20 14 32.4	-0.4
	comp=Z,5.8nm,0.7s						
ORIF	Oris-en-Rattie	160.55	348	ePKP2	PKPab	20 14 35.1	-0.9
	comp=Z,8.2nm,0.7s						
ESDC	Sonseca Array	165.90	13	PKPab	PKPab	20 14 59.0	-0.6
	comp=Z,1.1nm,0.6s,baz=347,slow=5.4,SNR=7.8						
TORD	Torodi Ar. Bea	167.16	187	PKP	PKPdf	20 13 58.0	+0.3
	comp=Z,1.5nm,0.8s,baz=52,slow=0.6,SNR=8.7						

*NIED **11** 20:17:00,2900N×13840E,h540km,Mw4.6 Best double couple: M0 7.76000×10^15 NP1:φs115.00000°,δ87.00000°,λ38.00000°. NP2:φs22.00000°,δ52.00000°,λ176.00000°.*

*ISCJB **11** 20:17:47.0±0.3,2903N±003×13828E±006,h519km±4km, mb4.0/31,Error ellipse: s-maj=7.9km s-min=5.2km az=165.5*

*MOS **11** 20:17:46.9±1.1,2906N×13803E,h512km,mb3.9/14,Error ellipse: s-maj=20.7km s-min=8.7km az=98.4*

*JMA **11** 20:17:46.7±0.1,2901N×13839E,h532km,M4.1*

*IDC **11** 20:17:47.5±0.7,2903N×138.14E,h507km±7km,mb3.4/16, mb1 3.5/21,mb1mx3.5/27,mbtmp4.3/21,Error ellipse: s-maj=14.2km s-min=7.7km az=76.0*

*NEIC **11** 20:17:48.3±0.6,2907N×138.10E,h515km±7km,mb4.3/12, Error ellipse: s-maj=10.4km s-min=6.4km az=99.0*

*BJI **11** 20:17:48.0,2898N×13822E,h544km,mB4.8,mb4.7*

ISC 11 20:17:47.9±0.3,**2906N**±003×**13830E**±006,**h514**km±4km, **n94**,σ1.07/113,**mb4.0**/31,**2C-3D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.95	119	P	P	20 19 06.8	-0.1
	17nm,0.3s,baz=286,slow=19,SNR=8.5						
CBIJ				S	S	20 20 08.9	-2.2
	49nm,0.3s,baz=292,slow=23,SNR=14						
CBIJ	Chichi jima	3.95	119	P	P	20 19 06.5	-0.3
JHHJ	Haha-jima-NKT	4.20	124	P	P	20 19 09.1	+0.3
JHHJ				S	S	20 20 13.4	-1.4
JHJ	Hachijo jima 2	4.24	17	P	P	20 19 09.8	+0.6
	19nm,0.3s,baz=69,slow=22,SNR=12						
JHJ				S	S	20 20 15.2	-0.3
	36nm,0.3s,baz=256,slow=23,SNR=7.3						
JHJ2	Mitsune	4.25	17	P	P	20 19 10.2	+1.0
JWZ	Kozaga	4.98	334	P	P	20 19 16.9	+1.5
JIE	Ise	5.49	346	P	P	20 19 22.1	+2.1
JWY	Kouya	5.64	337	P	P	20 19 23.3	+1.9
JWY				eS	S	20 20 38.8	+1.0
JIM2	Oshima 3	5.72	9	eS	S	20 20 39.7	+0.4
BSO1	Boso 1	6.03	22	P	P	20 19 25.0	0.0
BSO1				S	S	20 20 42.7	-1.8
JTO	Tosashimizu	6.05	310	P	P	20 19 26.5	+1.2
JOD2	Odawara 2	6.22	6	P	P	20 19 27.1	+0.2
JOD2				eS	S	20 20 46.4	-1.5
JRY	Ryogami san	6.96	4	P	P	20 19 33.9	-0.2
JRY				eS	S	20 20 57.2	-3.9
JMZ	Minamidaito 2	7.07	245	P	P	20 19 35.2	0.0
JHS	Saijyo	7.38	325	P	P	20 19 39.4	+1.1
MJAR	Matsushiro Arr	7.46	359	P	P	20 19 38.5	-0.7
	1.2nm,0.3s,baz=175,slow=9.7,SNR=51						
MJAR				S	S	20 21 06.6	-3.7
	1.2nm,0.3s,baz=126,slow=17,SNR=5.2						
MJAR	Matsushiro Arr	7.46	359	P	P	20 19 38.5	-0.6
MJAR				S	S	20 21 06.6	-3.7
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MAJO	Matsushiro	7.46	359	eP	P	20 19 38.6	-0.5
MAJO				pmax	pmax		
	comp=Z,28nm,0.8s						
MAJO	Matsushiro	7.46	359	eP	P	20 19 38.6	-0.6
	comp=Z,28nm,0.8s						
MAT	Matsushiro	7.46	359	P	P	20 19 38.5	-0.6
MAT				S	S	20 21 07.6	-2.8
MAT	Matsushiro	7.46	359	eP	P	20 19 39.0	-0.1
MAT				eS	S	20 21 08.0	-2.4
MAT				pmax	pmax		
	comp=Z,36nm,1.0s						
MAT	Matsushiro	7.46	359	eP	P	20 19 39.0	-0.1
	comp=Z,36nm,1.0s						
MAT				eS	S	20 21 08.0	-2.4
JSJ	Shimokoshiki	7.86	292	P	P	20 19 43.5	+0.3
JOW	Kunigami	9.14	258	P	P	20 19 56.1	-0.2
	comp=Z,1.3nm,0.3s,baz=97,slow=10,SNR=4.5						
JMK	Ichinoseki	10.16	13	P	P	20 20 08.1	+1.1
JMK				eS	S	20 21 58.5	-2.9
JOT	Ohata	12.50	10	P	P	20 20 32.7	+1.1
JKB	Kayabe	12.99	9	P	P	20 20 37.5	+0.7
JOSM	Okushiri--Mats	13.03	4	P	P	20 20 38.0	+0.8
ASAJ	Asahikawa	15.42	12	P	P	20 21 03.1	+1.0
	comp=Z,0.5nm,0.3s,baz=222,slow=15,SNR=10						
ASAJ				S	S	20 23 45.5	+3.3
	comp=Z,0.2nm,0.3s,baz=330,slow=27,SNR=2.8						
ASAJ	Asahikawa	15.42	12	P	P	20 21 03.1	+1.0
ASAJ				S	S	20 23 45.5	+3.3
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MDJ	Mudanjiang	17.00	338	eP	P	20 21 18.0	-0.3
	comp=Z,5.5nm,0.6s						
SNY	Shenyang	17.47	321	⇑P	P	20 21 21.7	-0.9
SNY				AMB	AMB		
	comp=Z,50nm,0.5s						
CN2	Changchun	17.95	328	eP	P	20 21 27.0	0.0
CN2				AMB	AMB		
	comp=Z,40nm,0.9s						
YSS	Yuzh-Sakhalins	18.20	10	⇓iP	P	20 21 30.8	+1.5
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS	Yuzh-Sakhalins	18.20	10	eP	P	20 21 30.4	+1.1
	comp=Z,23nm,0.8s						
KLR	Kul'dur	20.76	348	eP	P	20 21 50.2	-2.4
WHN	Wuhan	20.83	280	P	P	20 21 53.3	+0.1
BJI	Beijing	21.21	307	eP	P	20 21 56.8	+0.2
BJI				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.4						
XAN	Xi'an	25.48	289	P	P	20 22 34.1	-0.6
XAN				AMB	AMB		
	comp=Z,22nm,0.6s,mb5.0						
GYA	Guiyang	28.07	272	⇓iP	P	20 22 57.0	-0.5
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.7						
SONM	Songino Array	30.93	316	P	P	20 23 22.4	+0.1
	comp=Z,4.5nm,0.4s,mb4.3,baz=126,slow=8.2,SNR=98						
SONM				S	S	20 27 50.4	+0.4
	comp=Z,0.2nm,0.4s,baz=98,slow=6.1,SNR=3.5						
SONM				ScP	ScP	20 28 56.7	-0.1
	comp=Z,1.5nm,0.8s,baz=139,slow=3.8,SNR=7.7						
SONM	Songino Array	30.93	316	P	P	20 23 22.4	+0.1
SONM				S	S	20 27 50.4	+0.4
SONM				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SONM				pmax	pmax		
	comp=N,2.0nm,0.8s						
MA2	Magadan	31.68	12	eP	P	20 23 30.0	+1.3
MA2				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.9						
KMI	Kunming	31.83	271	P	P	20 23 30.0	0.0
KMI				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.3						
GTA	Gaotai	33.23	298	P	P	20 23 41.5	-0.4
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.3						
BOD	Bodaibo	33.36	336	eP	P	20 23 42.3	-0.7
BOD				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
YAK	Yakutsk	33.46	353	eP	P	20 23 43.1	-0.8
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
CHTO	Chiang Mai	37.24	263	eP	P	20 24 14.3	-1.0
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.3						
CHTO	Chiang Mai	37.24	263	eP	P	20 24 14.3	-1.0
	comp=Z,4.7nm,0.5s,mb4.3						
LSA	Lhasa	40.87	283	eP	P	20 24 45.6	+1.0
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
LSA	Lhasa	40.87	283	eP	P	20 24 45.6	+0.9
	comp=Z,3.4nm,0.6s,mb4.0						
ZAL	Zalesovo	45.77	318	P	P	20 25 22.4	-0.5
	comp=Z,0.7nm,0.4s,mb3.5,baz=328,slow=8.5,SNR=3.3						
ZAL				PcP	PcP	20 26 49.6	-0.3
	comp=Z,0.7nm,0.5s,baz=315,slow=3.8,SNR=3.7						
ZAL				ScP	ScP	20 29 53.0	-0.6
	comp=Z,0.6nm,0.5s,baz=10,slow=7.5,SNR=4.1						
ZAL				S	S	20 31 25.1	-3.3
	comp=Z,0.4nm,0.4s,baz=113,slow=17,SNR=3.6						
ZAL	Zalesovo	45.77	318	P	P	20 25 22.4	-0.5
ZAL						20 26 49.6	
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL				pmax	pmax		
	comp=N,1.0nm,0.5s						
MKAR	Makanchi Array	46.58	308	P	P	20 25 28.6	-0.4
	comp=N,3.3nm,0.6s,mb4.1,baz=93,slow=8.7,SNR=34						
MKAR				PcP	PcP	20 26 52.4	-0.3
	comp=N,1.7nm,0.8s,baz=90,slow=4.1,SNR=7.4						
MKAR				ScP	ScP	20 29 55.5	-1.5
	comp=N,1.3nm,0.7s,baz=94,slow=4.5,SNR=7.7						
MKAR	Makanchi Array	46.58	308	P	P	20 25 28.6	-0.4
MKAR						20 26 52.4	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.7s						
MKAR	Makanchi Array	46.58	308	P	P	20 25 28.6	-0.4
MKAR				PcP	PcP	20 26 52.4	-0.3
MKAR				ScP	ScP	20 29 55.5	-1.5
FITZ	Fitzroy Crossi	48.45	196	⇑iP	P	20 25 43.5	+0.4
	comp=N,6.5nm,0.8s,mb4.2						
FITZ	Fitzroy Crossi	48.45	196	P	P	20 25 43.4	+0.3
	comp=N,2.9nm,0.7s,mb3.9,baz=288,slow=22,SNR=7.6						
WB2	Warramunga Arr	48.86	185	⇓iP	P	20 25 46.2	+0.1
KURK	Kurchatov	49.16	313	eP	P	20 25 47.6	-0.7
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
KURK	Kurchatov	49.16	313	eP	P	20 25 47.6	-0.7
	comp=Z,6.6nm,0.8s,mb4.2						
AS31	Alice Springs	52.59	185	eP	P	20 26 13.9	+0.6
ASAR	Alice Springs	52.59	185	P	P	20 26 13.7	+0.3
	comp=Z,0.9nm,0.6s,mb3.2,baz=16,slow=10,SNR=14						
ASAR				PcP	PcP	20 27 16.4	+1.4
	comp=Z,1.2nm,0.7s,baz=358,slow=3.3,SNR=9.0						
ASAR				S	S	20 33 00.0	-1.5
	comp=Z,0.5nm,0.9s,baz=11,slow=10,SNR=3.3						
ASAR	Alice Springs	52.59	185	P	P	20 26 13.7	+0.4
ASAR						20 27 16.4	
ASAR				S	S	20 33 00.0	-1.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR				smax			
	comp=N,1.0nm,1.0s						
ASPA	Alice Springs	52.59	185	eP	P	20 26 13.9	+0.6
MBWA	Marble Bar	53.04	202	eP	P	20 26 16.4	-0.2
BRVK	Borovoye	54.34	316	eP	P	20 26 25.5	-0.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.2						
BRVK	Borovoye	54.34	316	eP	P	20 26 25.5	-0.2
	comp=Z,1.2nm,0.8s,mb3.3						
KDAK	Kodiak Island	54.89	38	P	P	20 26 30.6	+1.0
	comp=Z,8.8nm,0.8s,mb4.1,baz=243,slow=6.3,SNR=4.7						
MCK	McKinley	56.76	31	eP	P	20 26 44.4	+1.8
MCK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.4						
MCK	McKinley	56.76	31	eP	P	20 26 44.4	+1.8
	comp=Z,1.9nm,0.8s,mb3.4						
FORT	Forrest	60.30	190	eP	P	20 27 06.7	+0.2
	comp=Z,14nm,0.7s,mb4.4						
STKA	Stephens Creek	60.68	177	P	P	20 27 09.7	+0.7
	comp=Z,2.4nm,0.7s,mb3.7,baz=329,slow=5.9,SNR=5.9						
INK	Inuvik	62.68	25	P	P	20 27 22.9	+0.9
	comp=Z,0.8nm,0.6s,mb3.3,baz=298,slow=5.1,SNR=3.1						
INK	Inuvik	62.68	25	P	P	20 27 23.0	+0.9
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NWAO	Narrogin (SRO)	64.80	200	P	P	20 27 35.7	+0.1
	comp=Z,15nm,0.9s,mb4.4,baz=25,slow=5.9,SNR=7.6						
NWAO	Narrogin (SRO)	64.80	200	P	P	20 27 35.7	+0.1
NWAO				pmax	pmax		
	comp=Z,15nm,0.9s						
JOF	Joensuu	71.79	333	ep	P	20 28 15.6	-2.4
	comp=Z,1.1nm,0.4s,mb3.6						
YKA	Yellowknife Ar	72.03	28	P	P	20 28 20.3	+0.8
	comp=Z,1.6nm,0.6s,mb3.6,baz=298,slow=6.1,SNR=7.1						
YKA	Yellowknife Ar	72.03	28	P	P	20 28 20.3	+0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KAF	Kangasniemi	74.20	333	ep	P	20 28 30.0	-1.9
	baz=56,slow=5.3						
FINES	FINESS Array B	74.66	333	P	P	20 28 33.6	-0.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.9nm,0.3s,mb3.7,baz=67,slow=5.3,SNR=21						
FINES	**FINESS Array B**	**74.66**	**333**	P	**P**	**20 28 33.6**	**-0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**78.99**	**322**	P	**P**	**20 28 57.4**	**-0.8**
	comp=Z,1.6nm,0.6s,mb3.6,baz=50,slow=5.5,SNR=13						
AKASG	**Malin Array Be**	**78.99**	**322**	P	**P**	**20 28 57.4**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**80.50**	**337**	P	**P**	**20 29 04.9**	**-1.2**
	comp=Z,0.8nm,0.6s,mb3.2,baz=46,slow=5.1						
NOA	**NORSAR Array B**	**80.50**	**337**	P	**P**	**20 29 04.8**	**-1.2**
	comp=Z,1.0nm,0.6s,mb3.3,baz=47,slow=4.9,SNR=5.6						
NOA	**NORSAR Array B**	**80.50**	**337**	P	**P**	**20 29 04.9**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**81.97**	**50**	P	**P**	**20 29 16.4**	**+2.8**
	comp=Z,1.1nm,0.6s,mb3.5,baz=295,slow=6.4,SNR=10						
BR131	**Keskin Array S**	**82.14**	**311**	*e*P	**P**	**20 29 14.4**	**-0.1**
	comp=Z,4.7nm,0.7s,mb4.0						
BRTR	**Keskin Array B**	**82.14**	**311**	P	**P**	**20 29 14.8**	**+0.3**
	comp=Z,6.1nm,0.7s,mb4.1,baz=99,slow=4.0,SNR=36						
BRTR	**Keskin Array B**	**82.14**	**311**	P	**P**	**20 29 14.9**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GERES	**GERESS Array B**	**88.03**	**327**	P	**P**	**20 29 42.2**	**-0.9**
	comp=Z,0.3nm,0.6s,mb3.2,baz=33,slow=5.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**120.70**	**309**	PKP	PKPdf	20 35 41.3	+0.2
	comp=Z,1.1nm,0.7s,baz=47,slow=1.1,SNR=13						

*IDC **11** 20:20:24.2±0.7, 19.44S×176.04W, h0km, mb4.4/11, mb1 4.5/12, mb1mx4.5/16, mbtmp4.4/12, ML3.9/1, MS4.6/8, Ms1 4.6/8, ms1mx4.4/21, Error ellipse: s-maj=23.6km s-min=18.3km az=128.0*
*ISCJB **11** 20:20:27.9±0.3, 19.52S±0.09×176.13W±0.09, h33km, mb4.6/21, MS4.6/5, Error ellipse: s-maj=15.9km s-min=8.5km az=97.7*
*HRVD **11** 20:20:29.9±0.2, 19.42S×175.90W, h14km±1km, MW5.3/67, Centroid moment Tensor Solution. LP body waves: s55,c97;Mantle waves: s67,c112; Half duration: 1.0s Moment tensor: Scale 10^17Nm; Mrr-0.10±.02; Mθθ-0.69±.02; Mφφ0.78±.03; Mrθ-0.07±.04; Mθφ-0.64±.02; Mφr0.08±.04; Best double couple: M0 0.97800×10^17 NP1:φs25.00000°,δ84.00000°,λ2.00000°. NP2: φs295.00000°,δ88.00000°,λ174.00000°. Principal axes: T 1.0320, Plg5.0000°, Azm249.0000°; N -0.1070, Plg84.0000°, Azm99.0000°; P -0.9250, Plg3.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **11** 20:20:29.9±3.7, 19.47S×176.08W, h36km±33km, mb4.9/13 Error ellipse: s-maj=11.2km s-min=8.7km az=159.0*
*SZGRF **11** 20:20:39.1, 18.26S×175.07E, h33km, Fiji Islands region*
ISC 11 20:20:29.8±0.3**, 19.53S**±0.09×**176.06W**±0.09**, h35**km**, n99, σ0.62**/35**, mb4.6**/21**, MS4.6**/5**, 4C-8D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.93**	**37**	Pn	**Pn**	**20 22 02.0**	**-6.7**
	2.8nm,0.3s,baz=73,slow=20,SNR=4.0						
RAO	**Raoul Island**	**9.83**	**190**	LR	LR	20 26 13.7	
	comp=Z,6µm,18.9s,baz=204,slow=35						
RAR	**Rarotonga**	**15.36**	**99**	LR	LR	20 28 41.6	
	comp=Z,2µm,18.8s,baz=288,slow=32						
URZ	**Urewera**	**19.59**	**196**	P	**Pn**	**20 24 55.7**	**-0.6**
	0.4nm,0.3s,baz=310,slow=8.5,SNR=5.1						
URZ				LR	LR	20 30 56.2	
	comp=Z,1µm,19.5s,baz=198,slow=32						
TBI	**Tubuai**	**25.03**	**103**	*e*LQ		20 30 49.3	
	7µm,27.5s						
TBI				*e*LR	LR	20 31 56.4	
	2µm,27.5s,baz=277						
PPT	**Papeete**	**25.17**	**90**	*e*LQ		20 30 49.3	
	8µm,26.5s						
PPT				*e*LR	LR	20 31 57.5	
	6µm,26.2s,baz=260						
PPT	**Papeete**	**25.17**	**90**	LR	LR	20 33 22.2	
	comp=Z,1µm,21.2s,MS4.3,baz=264,slow=31						
HNR	**Honiara**	**25.28**	**290**	LR	LR	20 33 25.0	
	comp=Z,591nm,18.6s,MS4.1,baz=176,slow=31						
RPZ	**Rata Peaks**	**26.43**	**201**	P	**P**	**20 26 03.5**	**+0.3**
	6.7nm,0.7s,mb4.3,baz=46,slow=19,SNR=3.7						
CTA	**Charters Tower**	**35.42**	**263**	*e*P	**P**	**20 27 22.5**	**+0.1**
	8.7nm,0.8s,mb4.7						
CTA	**Charters Tower**	**35.42**	**263**	P	**P**	**20 27 22.6**	**+0.3**
	11nm,0.9s,mb4.8,baz=66,slow=12,SNR=6.4						
TAOE	**Nuku Hiva Isla**	**36.31**	**78**	*e*LR	LR	20 37 02.6	
	7µm,25.1s,baz=252						
PMG	**Port Moresby**	**36.94**	**280**	P	**P**	**20 27 35.7**	**+0.4**
	36nm,0.9s,mb5.2,baz=126,slow=12,SNR=5.2						
RKT	**Rikitea**	**38.35**	**103**	*e*LR	LR	20 37 55.2	
	1µm,28.8s						
STKA	**Stephens Creek**	**39.86**	**243**	*e*P	**P**	**20 28 00.5**	**+0.6**
	4.4nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**39.86**	**243**	P	**P**	**20 27 58.8**	**-1.1**
	4.0nm,0.8s,mb4.2,baz=93,slow=8.8,SNR=8.1						
STKA				LR	LR	20 42 57.4	
	comp=Z,2µm,18.5s,MS4.9,baz=53,slow=34						
AS31	**Alice Springs**	**46.53**	**256**	*e*P	**P**	**20 28 53.9**	**+0.1**
ASAR	**Alice Springs**	**46.53**	**256**	P	**P**	**20 28 53.5**	**-0.3**
	10nm,0.9s,mb4.8,baz=86,slow=8.3,SNR=49						
ASAR				LR	LR	20 46 56.2	
	comp=Z,1µm,20.8s,MS4.8,baz=96,slow=34						
ASPA	**Alice Springs**	**46.53**	**256**	*e*P	**P**	**20 28 53.9**	**+0.1**
WB2	**Warramunga Arr**	**46.54**	**261**	*e*P	**P**	**20 28 54.3**	**+0.4**
FORT	**Forrest**	**51.36**	**246**	*e*P	**P**	**20 29 29.9**	**-0.9**
	14nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**54.98**	**261**	*e*P	**P**	**20 29 58.1**	**+0.7**
	15nm,1.2s,mb4.9						
FITZ	**Fitzroy Crossi**	**54.98**	**261**	P	**P**	**20 29 58.1**	**+0.7**
	12nm,1.2s,mb4.8,baz=142,slow=5.4,SNR=4.1						
VNDA	**Vanda**	**59.04**	**185**	P	**P**	**20 30 26.7**	**+0.5**
	1.0nm,0.8s,mb3.9,baz=295,slow=5.2,SNR=5.5						
MJAR	**Matsushiro Arr**	**70.54**	**322**	P	**P**	**20 31 41.5**	**+0.5**
	0.7nm,0.6s,mb3.8,baz=151,slow=5.8,SNR=3.2						
QSPA	**South Pole Qui**	**70.54**	**180**	*e*P	**P**	**20 31 41.2**	**+0.1**
	12nm,0.9s,mb4.8						
NVAR	**Mina Array Bea**	**79.07**	**43**	P	**P**	**20 32 30.5**	**+0.1**
	1.8nm,0.7s,mb4.1,baz=233,slow=12,SNR=11						
WVOR	**Wild Horse Val**	**81.22**	**39**	*e*P	**P**	**20 32 41.4**	**-0.6**
	7.4nm,1.2s,mb4.5						
PMSA	**Palmer Station**	**81.45**	**156**	LR	LR	21 00 43.5	
	comp=Z,367nm,20.0s,MS4.7,baz=240,slow=30						
HAWA	**Hanford**	**83.09**	**36**	*e*P	**P**	**20 32 52.4**	**+0.6**
	2.6nm,1.4s,mb4.1						
MAW	**Mawson**	**83.09**	**199**	P	**P**	**20 32 51.3**	**-0.5**
	1.8nm,0.6s,mb4.3,baz=107,slow=3.2,SNR=5.0						
TMUT	**Trail Mountain**	**84.17**	**45**	*e*P	**P**	**20 32 58.2**	**+0.8**
HLID	**Hailey**	**84.40**	**40**	*e*P	**P**	**20 32 59.0**	**+0.4**
	22nm,1.6s,mb5.0						
HVU	**Hansel Valley**	**84.45**	**42**	*e*P	**P**	**20 32 58.9**	**+0.2**
	19nm,1.4s,mb5.0						
SRU	**San Rafael**	**84.54**	**45**	*e*P	**P**	**20 32 59.3**	**+0.1**
	18nm,1.2s,mb5.1						
MNTX	**Cornudas Mount**	**84.70**	**54**	*e*P	**P**	**20 33 00.9**	**+0.9**
	42nm,1.6s,mb5.3						
LPM	**Los Pinos Moun**	**84.95**	**51**	*e*P	**P**	**20 33 01.7**	**+0.4**
TCUT	**Toone Canyon**	**84.98**	**43**	P	**P**	**20 33 01.8**	**+0.4**
ANMO	**Albuquerque**	**85.37**	**51**	*e*P	**P**	**20 33 03.8**	**+0.4**
	19nm,1.8s,mb4.9						
MCK	**McKinley**	**85.64**	**12**	*e*P	**P**	**20 33 03.9**	**-0.9**
	7.7nm,1.1s,mb4.8						
CHMT	**Chamberlain Mo**	**86.92**	**38**	*e*P	**P**	**20 33 10.2**	**-0.8**
IMA2	**Indian Mountai**	**86.99**	**9**	P	**P**	**20 33 09.7**	**-1.7**
PDAR	**Pinedale Array**	**87.01**	**43**	P	**P**	**20 33 10.3**	**-1.1**
	0.3nm,0.4s,mb3.9,baz=145,slow=2.2,SNR=4.6						
DAWY	**Dawson**	**88.03**	**15**	*e*P	**P**	**20 33 16.2**	**-0.2**
AKASG	**Malin Array Be**	**143.01**	**333**	PKP	PKPdf	20 40 01.0	+1.2
	0.1nm,0.3s,baz=39,slow=3.2,SNR=3.3						
MALT	**Malatya**	**144.76**	**309**	PKPbc	PKPdf	20 40 07.9	+5.0
NRDL	**Niedersach Rie**	**146.75**	**353**	*e*PKPbc	PKPbc	20 40 08.3	+0.3
OJC	**Ojcow**	**146.87**	**341**	*e*PX	PKPab	20 40 13.2	+3.5
BURAR	**Bucovina Array**	**147.07**	**333**	⇓*i*P	PKPbc	20 40 11.7	+2.8
BURAR	**Bucovina Array**	**147.07**	**333**	⇓P	PKPbc	20 40 11.7	+2.8
KOLS	**Kolonicke sedl**	**147.16**	**338**	*e*PKP	PKPbc	20 40 11.1	+2.0
KOLS				*e*		20 40 16.9	
KSP	**Ksiaz**	**147.25**	**345**	*e*PKP	PKPab	20 40 13.9	+2.7
CLZ	**Clausthal**	**147.36**	**353**	*e*PKPbc	PKPbc	20 40 11.9	+2.2
CRVS	**Cervenica-Dubn**	**147.47**	**338**	*e*PKP	PKPab	20 40 12.5	+0.4
CRVS				*e*		20 40 17.4	
CLL	**Collm**	**147.49**	**349**	*e*PKPbc	PKPbc	20 40 09.8	-0.2
CLL	**Collm**	**147.49**	**349**	*i* PKPbc	PKPbc	20 40 09.8	-0.2
	comp=Z,13nm,1.3s						
CLL				*i* PKPab	PKPab	20 40 12.2	+0.1
CLL				*i* (pPKPbc)		20 40 15.1	
	comp=Z,30nm,1.3s						
CLL				*i* (sPKPbc)		20 40 19.0	
	comp=Z,33nm,1.3s						
CLL	**Collm**	**147.49**	**349**	P	PKPdf	20 40 09.0	+1.5
BRTR	**Keskin Array B**	**147.50**	**315**	PKPbc	PKPbc	20 40 10.7	+0.6
	comp=Z,0.9nm,0.6s,baz=129,slow=2.0,SNR=5.7						
BRG	**Berggiesshubel**	**147.73**	**348**	*e*PKPbc	PKPbc	20 40 11.1	+0.4
BRG	**Berggiesshubel**	**147.73**	**348**	*e*P	PKPdf	20 40 10.3	+2.4
	comp=Z,3.9nm,1.2s						
BRG				*i*		20 40 20.1	
	comp=Z,15nm,1.2s						
FBE	**Freiberg**	**147.80**	**349**	*e*PKPbc	PKPbc	20 40 11.5	+0.6
MORC	**Moravsky Berou**	**147.92**	**343**	⇓*i*P	PKPdf	20 40 08.1	-0.1
MORC	**Moravsky Berou**	**147.92**	**343**	⇓P	PKPdf	20 40 08.1	-0.1
MORC				*e*PKPbc	PKPbc	20 40 13.5	+2.3
KECS	**Kecovo**	**148.17**	**339**	*e*PKP	PKPbc	20 40 14.4	+2.5
MOX	**Moxa**	**148.36**	**351**	*e*PKPbc	PKPbc	20 40 14.4	+2.0
MOX	**Moxa**	**148.36**	**351**	*e*(P)	PKPab	20 40 18.0	+2.4
WERD	**Werda**	**148.44**	**350**	*e*PKPbc	PKPbc	20 40 12.2	-0.4
GUNZ	**Gunzen**	**148.51**	**350**	*e*PKPbc	PKPbc	20 40 14.7	+1.9
VYHS	**Vyhne**	**148.69**	**341**	*e*PKP	PKPbc	20 40 13.9	+0.7
VYHS				*e*		20 40 18.9	
VYHS				*e*		20 40 23.2	
DRGR		**148.76**	**335**	⇓*i*P	PKPbc	20 40 13.4	0.0
DRGR		**148.76**	**335**	⇓P	PKPbc	20 40 13.4	0.0
SMOL	**Smolenice**	**149.10**	**342**	*e*	PKPab	20 40 20.2	+1.6
ROTZ	**Rotzenmuhle**	**149.11**	**350**	*e*PKPbc	PKPbc	20 40 15.7	+1.4
TNS	**Taunus Mts**	**149.16**	**354**	*e*PKPbc	PKPbc	20 40 18.7	+4.3
GRA1	**Grafenberg Arr**	**149.34**	**351**	*e*PKPbc	PKPbc	20 40 15.0	+0.1
GRF	**Grafenberg Arr**	**149.34**	**351**	*e*PKPbc	PKPbc	20 40 15.0	+0.1
KHC	**Kasperske Hory**	**149.47**	**348**	*e*PKPbc	PKPbc	20 40 15.0	-0.2
KHC				*e*PKPab	PKPab	20 40 24.0	+3.9
ZST	**Bratislava**	**149.48**	**343**	*e*PKP	PKPbc	20 40 21.4	+6.2
GIVF	**Givet**	**149.48**	**359**	*e*PKP1	PKPbc	20 40 19.3	+4.1
BAIF	**Baives**	**149.53**	**360**	*e*PKP1	PKPbc	20 40 20.3	+5.0
GEC2	**GERESS Array S**	**149.71**	**347**	*e*PKPbc	PKPbc	20 40 15.9	+0.1
GEC2	**GERESS Array S**	**149.71**	**347**	*e*PKPbc	PKPbc	20 40 16.0	+0.2
GERES	**GERESS Array B**	**149.71**	**347**	PKPbc	PKPbc	20 40 14.6	-1.2
	comp=Z,1.6nm,0.7s,baz=77,slow=2.9,SNR=9.8						
BZS	**Buzias**	**150.16**	**335**	⇓*i*P	PKPbc	20 40 16.7	-0.2
BZS	**Buzias**	**150.16**	**335**	⇓P	PKPbc	20 40 16.7	-0.1
STU	**Stuttgart**	**150.52**	**353**	*e*PKPbc	PKPbc	20 40 20.5	+2.8
FLN	**La Foliniere**	**150.62**	**6**	*e*PKP1	PKPbc	20 40 22.2	+4.3
	comp=Z,105nm,1.4s						
PKSM	**Moragy**	**150.76**	**339**	⇑*i*P	PKPbc	20 40 18.5	+0.2
PKSM	**Moragy**	**150.76**	**339**	⇑P	PKPbc	20 40 18.6	+0.2
CDF	**Champ du Feu**	**151.06**	**355**	*e*PKP1	PKPbc	20 40 21.1	+2.1
	comp=Z,25nm,1.3s						
MEZF	**Maizieres J'vi**	**151.08**	**358**	*e*PKP1	PKPbc	20 40 21.4	+2.4
HAU	**Haudompre**	**151.52**	**357**	*e*PKP1	PKPbc	20 40 22.1	+2.0
HINF	**Hinteralfeld**	**151.68**	**356**	*e*PKP1	PKPbc	20 40 22.2	+1.8
VTS	**Vitosha**	**151.83**	**329**	⇑*i*P	PKPbc	20 40 22.2	+1.4
VTS	**Vitosha**	**151.83**	**329**	⇑P	PKPbc	20 40 22.2	+1.4
LOR	**Lormes**	**152.33**	**0**	*e*PKP1	PKPbc	20 40 25.9	+4.0
	comp=Z,34nm,1.4s						
SSF	**Saint Saulge**	**152.53**	**1**	*e*PKP1	PKPbc	20 40 27.2	+4.8
	comp=Z,58nm,1.5s						
CABF	**La Chapelle**	**152.93**	**357**	*e*PKP1	PKPbc	20 40 27.7	+4.5
	comp=Z,91nm,1.7s						
TORD	**Torodi Ar. Bea**	**173.30**	**161**	PKPab	PKPab	20 42 05.1	+1.6
	comp=Z,0.4nm,0.8s,baz=174,slow=4.6,SNR=2.7						

CASC 11 20:35:30.1±2.2**, 11.91N**×**86.78W, h127**km±41km**, MD4.2, 5C-6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.33**	**35**	⇓*e*P	Pn	20 35 46.9	-1.0
XAVN	**Gruta Xavier**	**0.50**	**62**	*e*P	Pn	20 35 49.0	+0.2
LEON	**Leon**	**0.51**	**348**	⇑*i*P	Pn	20 35 48.1	-0.8
APYN	**Apoyeque**	**0.53**	**53**	⇓*e*P	Pn	20 35 49.4	+0.4
MIRN	**Miramar**	**0.53**	**7**	⇓*e*P	Pn	20 35 49.0	0.0
TICN	**Ticuantepe**	**0.55**	**77**	⇑*e*P	Pn	20 35 49.3	+0.2
TISN	**Laguna Tiscapa**	**0.55**	**65**	⇑*e*P	Pn	20 35 49.6	+0.4
MGAN	**Managua**	**0.57**	**66**	⇓*e*P	Pn	20 35 49.8	+0.5
CNGN	**Cerro Negro**	**0.59**	**8**	⇑*e*P	Pn	20 35 49.7	+0.4
CRIN	**San Cristobal**	**0.83**	**341**	⇑*e*P	Pn	20 35 51.4	+0.3
CONN	**Concepcion**	**1.18**	**107**	⇓*e*P	Pn	20 35 53.8	-0.8
MADN	**Villa Maderas**	**1.32**	**112**	⇓*e*P	Pn	20 35 55.0	-1.0
VCR	**Vista de Mar**	**2.10**	**147**	*e*P	Pn	20 36 06.3	+1.2
JCR	**Jicaral**	**2.62**	**141**	*e*P	Pn	20 36 14.1	+2.4
PRS1	**Puriscal**	**3.09**	**128**	*e*P	Pn	20 36 18.2	+0.4
BUS	**Buena Vista**	**3.78**	**128**	*e*P	Pn	20 36 27.6	+0.7

*IDC **11** 20:45:25.9±1.2, 33.51S×178.89W, h0km, mb4.1/3, mb1 4.2/4, mb1mx4.0/10, mbtmp4.2/4, ML4.5/1, Error ellipse: s-maj=37.0km s-min=31.7km az=105.0*
*ISCJB **11** 20:45:26.6±2.1, 33.72S±0.08×179.1W±0.3, h12km±18km, mb4.0/3, Error ellipse: s-maj=42.3km s-min=12.8km az=14.4*
*NEIC **11** 20:45:26.6±1.1, 33.64S×178.73W, h10km, mb4.5/1, Error ellipse: s-maj=25.0km s-min=11.7km az=104.0*
ISC 11 20:45:35.3±1.6**, 33.98S**±0.10×**179.2W**±0.2**, h66**km±16km**, n39, σ1.56**/42**, mb4.0**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.13**	**209**	*e*P	**Pn**	**20 46 37.0**	**+1.1**
MXZ				S	**Sn**	**20 47 28.6**	**+5.7**
MXZ	**Matakaoa Point**	**4.13**	**209**	*e*PN	**Pn**	**20 46 36.0**	**+0.1**
MXZ				SN	**Sn**	**20 47 28.0**	**+5.1**
PUZ	**Puketiti**	**4.59**	**206**	*e*P	**Pn**	**20 46 43.4**	**+1.2**
PUZ	**Puketiti**	**4.59**	**206**	*e*PN	**Pn**	**20 46 42.9**	**+0.7**
PUZ				SN	**Sn**	**20 47 37.4**	**+3.2**
MWZ	**Matawai**	**5.11**	**211**	*e*P	**Pn**	**20 46 50.7**	**+1.4**
MWZ	**Matawai**	**5.11**	**211**	*e*PN	**Pn**	**20 46 49.4**	**+0.1**
URZ	**Urewera**	**5.23**	**214**	Pn	**Pn**	**20 46 52.3**	**+1.4**
	12nm,0.3s,baz=339,slow=1.4,SNR=61						
URZ				Sn	**Sn**	**20 47 52.7**	**+2.8**
	3.3nm,0.3s,baz=322,slow=23,SNR=2.4						
URZ	**Urewera**	**5.23**	**214**	*e*P	**Pn**	**20 46 51.3**	**+0.3**
URZ	**Urewera**	**5.23**	**214**	*e*PN	**Pn**	**20 46 51.1**	**+0.2**
URZ				SN	**Sn**	**20 47 54.7**	**+4.8**
MARZ	**Manawahe**	**5.24**	**219**	P	**Pn**	**20 46 53.5**	**+2.5**
MARZ	**Manawahe**	**5.24**	**219**	*e*PN	**Pn**	**20 46 53.6**	**+2.6**
KNZ	**Kokohu**	**5.64**	**206**	*e*PN	**Pn**	**20 46 56.9**	**+0.3**
KNZ				SN	**Sn**	**20 48 04.6**	**+4.6**
OUZ	**Omahuta**	**6.10**	**256**	*e*P	**Pn**	**20 47 03.9**	**+1.1**
OUZ	**Omahuta**	**6.10**	**256**	PN	**Pn**	**20 47 03.9**	**+1.1**
BKZ	**Black Stump Fm**	**6.25**	**213**	*e*P	**Pn**	**20 47 06.1**	**+1.2**
PXZ	**Pawanui**	**6.83**	**207**	SN	**Sn**	**20 48 29.5**	**+0.4**
BFZ	**Birch Farm**	**7.63**	**207**	*e*P	**Pn**	**20 47 22.6**	**-1.1**
MRZ	**Mangatainoka R**	**7.88**	**211**	P	**Pn**	**20 47 26.5**	**-0.7**
MRZ	**Mangatainoka R**	**7.88**	**211**	*e*PN	**Pn**	**20 47 26.4**	**-0.7**
MRZ				SN	**Sn**	**20 48 54.4**	**-0.4**
KIW	**Kapiti Island**	**8.33**	**213**	*e*PN	**Pn**	**20 47 31.0**	**-2.4**
CAW	**Cannon Point**	**8.46**	**211**	P	**Pn**	**20 47 33.1**	**-2.1**
CAW	**Cannon Point**	**8.46**	**211**	*e*PN	**Pn**	**20 47 33.0**	**-2.2**
TCW	**Tory Channel**	**8.90**	**214**	P	**Pn**	**20 47 37.9**	**-3.3**
TCW	**Tory Channel**	**8.90**	**214**	*e*PN	**Pn**	**20 47 37.8**	**-3.4**
NNZ	**Nelson**	**9.34**	**217**	*e*P	**Pn**	**20 47 42.1**	**-5.0**
NNZ	**Nelson**	**9.34**	**217**	*e*PN	**Pn**	**20 47 44.3**	**-2.9**
NNZ				SN	**Sn**	**20 49 30.0**	**-0.6**
THZ	**Tophouse**	**9.98**	**217**	*e*P	**Pn**	**20 47 52.4**	**-3.5**
THZ	**Tophouse**	**9.98**	**217**	*e*PN	**Pn**	**20 47 52.2**	**-3.7**
THZ				SN	**Sn**	**20 49 44.2**	**-2.1**
KHZ	**Kahutara**	**10.19**	**212**	*e*PN	**Pn**	**20 47 56.7**	**-2.1**
CTA	**Charters Tower**	**33.59**	**285**	P	**P**	**20 52 10.5**	**+1.3**
	3.7nm,0.7s,mb4.4,baz=104,slow=12,SNR=5.3						
CTAO	**Charters Tower**	**33.59**	**285**	P	**P**	**20 52 08.2**	**-1.0**
	4.9nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**42.07**	**271**	P	**P**	**20 53 20.1**	**-0.5**
	1.1nm,0.6s,mb3.8,baz=112,slow=7.5,SNR=22						
MAW	**Mawson**	**68.63**	**201**	P	**P**	**20 56 33.4**	**+2.0**
	1.2nm,0.7s,mb3.8,baz=123,slow=8.5,SNR=5.2						
FINES	**FINESS Array B**	**148.10**	**337**	PKPbc	PKPbc	21 05 11.1	-2.4
	1.6nm,0.8s,baz=47,slow=2.0,SNR=11						
FINES	**FINESS Array B**	**148.10**	**337**	PKPbc	PKPbc	21 05 11.1	-2.4
NB2	**NORSAR Subarra**	**152.10**	**349**	PKPa		21 05 21.1	
	comp=Z,0.6nm,0.5s,baz=19,slow=2.6						
NOA	**NORSAR Array B**	**152.10**	**349**	PKPbc	PKPbc	21 05 21.4	-1.7
	comp=Z,1.0nm,0.7s,baz=13,slow=4.1,SNR=5.8						
HFS	**Hagfors**	**152.51**	**346**	PKPbc	PKPbc	21 05 21.9	-2.1
	comp=Z,1.1nm,0.7s,baz=95,slow=15,SNR=3.1						
TORD	**Torodi Ar. Bea**	**159.25**	**182**	PKPab	PKPab	21 06 06.1	+2.6
	comp=Z,0.8nm,0.8s,baz=179,slow=3.3,SNR=5.6						

*IDC **11** 20:51:03.1±2.4, 14.79S×166.03E, h0km, mb4.3/6, mb1 4.4/8, mb1mx4.3/16, mbtmp4.4/8, ML3.8/2, MS2.8/1, Ms1 2.8/1, ms1mx2.6/21, Error ellipse: s-maj=54.4km s-min=23.2km az=40.0*
*ISCJB **11** 20:51:04.6±1.3, 14.76S±0.09×166.2E±0.1, h33km, mb4.2/6, Error ellipse: s-maj=21.9km s-min=8.9km az=119.2*
*NEIC **11** 20:51:05.0±2.5, 14.84S×166.07E, h10km, mb4.4/1, Error ellipse: s-maj=49.0km s-min=16.5km az=219.0*
ISC 11 20:51:06.5±1.4**, 14.7S**±0.1×**166.2E**±0.1**, h35**km**, n13, σ1.31**/14**, mb4.2**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKM	**Butte a Klehm**	**3.54**	**147**	*i* P	**Pn**	**20 51 57.2**	**-1.8**
DZM	**Mont Dzumac**	**7.35**	**178**	*e*P	**Pn**	**20 52 49.3**	**-2.1**
DZM				*e*S	**Sn**	**20 54 13.1**	**-0.4**
DZM	**Mont Dzumac**	**7.35**	**178**	Pn	**Pn**	**20 52 50.3**	**-1.0**
	3.3nm,0.3s,baz=0.7,slow=16,SNR=29						
DZM				Sn	**Sn**	**20 54 15.8**	**+2.3**
	baz=303,slow=24,SNR=2.2						
HNR	**Honiara**	**8.06**	**310**	LR	LR	20 54 46.5	
	comp=Z,67nm,21.3s,baz=176,slow=28						
PMG	**Port Moresby**	**19.37**	**284**	P	**Pn**	**20 55 30.4**	**0.0**
	0.6nm,0.3s,baz=127,slow=9.8,SNR=2.9						
CTA	**Charters Tower**	**19.80**	**251**	P	**Pn**	**20 55 36.0**	**+0.4**
	0.2nm,0.3s,baz=72,slow=15,SNR=5.2						
CTAO	**Charters Tower**	**19.80**	**251**	*e*P	**Pn**	**20 55 32.4**	**-3.1**
	29nm,1.2s						
URZ	**Urewera**	**25.38**	**160**	P	**P**	**20 56 31.7**	**+1.3**
	3.6nm,0.4s,mb4.2,baz=356,slow=8.5,SNR=4.6						
STKA	**Stephens Creek**	**28.27**	**228**	P	**P**	**20 56 57.4**	**+1.0**
	6.2nm,0.7s,mb4.4,baz=45,slow=9.0,SNR=32						
STKA				PcP	PcP	21 00 10.7	+1.7
	0.9nm,0.7s,baz=27,slow=4.5,SNR=3.0						
ASAR	**Alice Springs**	**31.75**	**249**	P	**P**	**20 57 26.1**	**-1.2**
	2.2nm,0.8s,mb4.1,baz=76,slow=9.2,SNR=25						
FITZ	**Fitzroy Crossi**	**39.04**	**259**	P	**P**	**20 58 29.3**	**-0.5**
	3.7nm,0.7s,mb4.2,baz=102,slow=11						
VNDA	**Vanda**	**62.89**	**181**	P	**P**	**21 01 29.4**	**+0.4**
	1.7nm,0.7s,mb4.3,baz=358,slow=5.9,SNR=18						
MAW	**Mawson**	**81.55**	**202**	P	**P**	**21 03 22.6**	**+2.1**
	1.2nm,0.7s,mb4.0,baz=131,slow=7.6,SNR=7.5						

*BJI **11** 20:54:09.2, 2.23N×96.36E, h10km, mB6.4, mb5.8, Ms6.6, Msz6.5*
*CRAAG **11** 20:54:10.2, 2.46N×96.39E, Mw6.2*
*ISCJB **11** 20:54:13.4±0.1, 2.37N±0.02×96.40E±0.02, h28km, mb5.8/223, MS6.2/231, Error ellipse: s-maj=3.3km s-min=2.3km az=47.2*
*MOS **11** 20:54:14.3±0.9, 2.46N×96.42E, h33km, mb6.0/109, MS6.1/77, Error ellipse: s-maj=7.3km s-min=3.4km az=122.6*
*HRVD **11** 20:54:14.4±0.1, 2.10N×96.18E, h21km, MW6.2/106, Centroid moment Tensor Solution. LP body waves: s106,c240;Mantle waves: s93,c269; Half duration: 3.2s Moment tensor: Scale 10^18Nm; Mrr0.86±.01; Mθθ-0.56±.01; Mφφ-0.29±.01; Mrθ1.46±.05; Mθφ0.54±.01; Mφr-1.42±.05; Best double couple: M0 2.23500×10^18 NP1:φs301.00000°,δ12.00000°,λ77.00000°. NP2: φs134.00000°,δ78.00000°,λ93.00000°. Principal axes: T 2.1770, Plg57.0000°, Azm47.0000°; N 0.1160, Plg3.0000°, Azm313.0000°; P -2.2930, Plg33.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **11** 20:54:14.4±0.1, 2.40N×96.35E, h22km, mb5.8/111, ME5.9, MS6.2/167, MW6.1 Error ellipse: s-maj=4.3km s-min=2.8km az=215.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^18Nm; Mrr0.90; Mθθ-0.80; Mφφ-0.10; Mrθ1.23; Mθφ0.41; Mφr-0.83; Best double couple: M0 1.80000×10^18 NP1:φs123.00000°,δ74.00000°, λ95.00000°. NP2:φs285.00000°,δ17.00000°,λ73.00000°. Principal axes: T 1.7300, Plg61.0000°, Azm40.0000°; N 0.0700, Plg5.0000°, Azm301.0000°; P -1.7900, Plg29.0000°, Azm209.0000°; Broadband fault plane solution: P waves. NP1:φs315.00000°,δ10.00000°, λ90.00000°. NP2:φs135.00000°,δ80.00000°,λ90.00000°. Principal axes: T Plg55.0000°, Azm45.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm225.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Sinabang. Felt [III] at Gunungsitoli, Nias. Felt [II] at Banda Aceh, Medan and Tapatuan, Sumatra.
*IDC **11** 20:54:16.5±2.8, 2.37N×96.37E, h38km±23km, mb5.2/38, mb1 5.2/38, mb1mx5.2/38, mbtmp5.4/38, MS6.0/28, Ms1 6.0/28, ms1mx5.9/34 Error ellipse: s-maj=16.1km s-min=8.3km az=45.0*
*SZGRF **11** 20:54:17.9, 2.69N×96.07E, h33km, mb5.5, MS6.0, Northern Sumatera, Indonesia*
ISC 11 20:54:15.7±0.1**, 2.38N**±0.02×**96.37E**±0.02**, h30**km**, h30**km±1.5km**:pP-P, n1094, σ1.02**/917**, mb5.8**/222**, MS6.2**/231**, 186C-95D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**3.27**	**341**	P	**Pn**	**20 55 00.2**	**-4.7**
	3µm,0.6s						
PPI	**Padang Panjang**	**4.92**	**125**	P	**Pn**	**20 55 27.5**	**0.0**
	941nm,1.3s						
IPM	**Ipoh**	**5.10**	**66**	P	**Pn**	**20 55 32.1**	**+2.2**
KULM	**Kulim**	**5.16**	**56**	*e*P	**Pn**	**20 55 32.5**	**+1.7**
PKT	**Phuket**	**5.94**	**18**	P	**Pn**	**20 55 43.0**	**+1.4**
SNG	**Songkhla**	**6.37**	**42**	PG	**Pn**	**20 55 49.0**	**+1.5**
SNG				SG		20 55 52.0	
KSI	**Kapahiang**	**8.64**	**134**	P	**Pn**	**20 56 17.3**	**-1.3**
	1µm,1.1s						
PBA	**Port Blair**	**9.89**	**339**	⇓*e*P	**Pn**	**20 56 32.3**	**-3.4**
PBA				*e*x	x	21 00 29.4	
NNT	**Nongplab**	**10.68**	**18**	P	**Pn**	**20 56 49.3**	**+2.8**
KLI	**Kotabumi**	**11.12**	**130**	P	**Pn**	**20 56 52.8**	**+0.2**
	435nm,0.7s						
NST	**Nakhon Sawan**	**13.72**	**15**	P	**Pn**	**20 57 27.0**	**-1.0**
	210nm,1.3s						
KSM	**Kuching**	**13.96**	**93**	*e*P	**Pn**	**20 57 33.0**	**+1.7**
COCO	**West Island**	**14.48**	**178**	*e*P	**Pn**	**20 57 32.1**	**-6.4**
	407nm,1.1s						
LEM	**Lembang**	**14.48**	**129**	P	**Pn**	**20 57 37.2**	**-1.3**
	150nm,1.2s						
JCJI	**Jatiwangi**	**14.80**	**127**	P	**Pn**	**20 57 43.1**	**+0.4**
	470nm,1.1s						
KKTK	**Khon Kaen**	**15.25**	**24**	⇑P	**Pn**	**20 57 48.0**	**-0.8**
	7µm,0.4s						
PALK	**Pallekele**	**16.34**	**288**	P	**Pn**	**20 58 03.8**	**+1.0**
	1µm,1.2s,SNR=7.1						
PALK	**Pallekele**	**16.34**	**288**	⇑P	**Pn**	**20 58 03.3**	**+0.5**
	SNR=9.7						
PALK	**Pallekele**	**16.34**	**288**	*e*Pn	**Pn**	**20 58 02.8**	**0.0**
BJII	**Banjamegara**	**16.45**	**126**	P	**Pn**	**20 58 02.2**	**-1.9**
	110nm,1.1s						
CHG	**Chiang Mai**	**16.52**	**9**	⇑P	**Pn**	**20 58 02.6**	**-2.5**
	48nm,1.4s						
CHTO	**Chiang Mai**	**16.52**	**9**	P	**Pn**	**20 58 04.7**	**-0.4**
	SNR=54						
CHTO	**Chiang Mai**	**16.52**	**9**	P	**Pn**	**20 58 04.0**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,150nm,0.9s						
CHTO	**Chiang Mai**	**16.52**	**9**	*e*P	**Pn**	**20 58 03.8**	**-1.4**
	comp=Z,153nm,0.9s						
MDRS	**Chennai**	**19.16**	**304**	*e*P	**Pn**	**20 58 36.5**	**-1.1**
MDRS				*e*x	x	21 02 05.4	
VIS	**Vishakhapatnam**	**19.90**	**321**	*i* P	**Pn**	**20 58 42.7**	**-3.7**
VIS				*e*P		20 58 43.8	
VIS				AMb	AMB	20 58 51.3	
	comp=Z,167nm,0.7s						
VIS				*e*x	x	21 02 19.9	
KMMI	**Kalianget**	**19.91**	**118**	P	**Pn**	**20 58 43.4**	**-3.1**
	comp=Z,534nm,1.2s						
KKM	**Kota Kinabalu**	**20.12**	**79**	P	**P**	**20 58 48.9**	**+1.8**
KKM	**Kota Kinabalu**	**20.12**	**79**	*e*P	**P**	**20 58 48.0**	**+0.9**
TRD	**Trivandrum**	**20.25**	**288**	*e*P	**P**	**20 58 48.8**	**+0.4**
TRD				AMb	AMB	20 58 57.4	
	comp=Z,156nm,1.0s						
TRD				*e*S	**S**	**21 02 32.2**	**-1.7**
QIZ	**Qiongzhong**	**21.16**	**38**	⇑P	**P**	**20 58 58.5**	**+0.2**
QIZ				XP	sP	20 59 04.8	-5.4
QIZ				PP		20 59 19.6	
QIZ				S	**S**	**21 02 53.3**	**+1.3**
QIZ				XS	sS	21 02 59.6	-5.4

QIZ AMB AMB
comp=Z,142nm,1.0s,mb5.2
QIZ LR LR
comp=N,188μm,13.6s
QIZ LR LR
comp=Z,251μm,12.8s,MS6.8
QIZ Qiongzhong 21.16 38 PFAKE 20 59 10.0 +12
QIZ LR LR
comp=Z,114μm,19.0s,MS6.3
CAL Calcutta 21.50 339 *e*P **P 20 59 00.1 -1.9**
CAL *ex* x 21 03 01.7
TSM Tawau 21.55 84 P **P 20 59 02.6 +0.1**
BATP Bataraza 22.25 73 *e*P **P 20 59 09.5 -0.5**
BATP *e*S 20 59 32.8
BATP Bataraza 22.25 73 *e*P **P 20 59 09.1 -0.9**
HYB Hyderabad 23.01 312⇑*i*P **P 20 59 21.0 +3.0**
comp=Z,380nm,1.0s,mb5.8
HYB *e*sP sP 20 59 26.5 -3.5
HYB *e*S **S 21 03 22.5 -4.0**
HYB LR LR 21 07 44.0
comp=Z,86nm,22.0s
HYB Hyderabad 23.01 312⇑*e*P **P 20 59 21.0 +3.0**
HYB *e*S **S 21 03 28.0 +1.5**
HYB pmax pmax
comp=Z,380nm,1.0s,mb5.8
HYB Hyderabad 23.01 312⇑*e*P **P 20 59 21.0 +3.0**
comp=Z,380nm,1.0s,mb5.8
HYB *e*S **S 21 03 28.0 +1.5**
HYB *e*LR LR 21 07 44.0
PPR Puerto Princes 23.41 71⇓*i*P **P 20 59 23.3 +1.1**
KMI Kunming 23.43 15⇑P **P 20 59 23.2 +0.8**
KMI AP 20 59 26.0
KMI XP sP 20 59 27.2 -7.2
KMI PP 20 59 55.5
KMI PPP 21 00 05.8
KMI PCP PcP 21 03 09.6 +1.8
KMI S **S 21 03 34.3 +0.9**
KMI XS sS 21 03 39.1 -8.6
KMI SS 21 04 22.6
KMI SCP ScP 21 06 46.4 +2.7
KMI PCS PcS 21 06 47.6 +0.5
KMI AMB AMB
comp=Z,361nm,1.0s,mb5.8
KMI AMB AMB
comp=Z,13μm,8.1s
KMI LR LR
comp=N,65μm,13.4s,MS6.3
KMI LR LR
comp=E,37μm,14.6s,MS6.3
KMI LR LR
comp=Z,85μm,14.0s,MS6.4
SHL Shillong 23.45 350 *e*P **P 20 59 22.1 -0.4**
SHL AMb AMB 20 59 32.8
comp=Z,12μm,0.7s
SHL *e*S **S 21 03 36.2 +2.5**
BOK Bokaro 23.58 335 *e*P **P 20 59 22.4 -1.3**
BOK AMb AMB 20 59 28.9
comp=Z,2μm,1.1s,mb6.4
BOK *ex* x 21 03 37.6
PCI Palu 23.69 98 P **P 20 59 23.8 -1.0**
comp=Z,477nm,1.5s,mb5.7
MNGI Mangalore 23.76 297 *e*P **P 20 59 24.4 -1.0**
MNGI *ex* x 20 59 48.8
comp=Z,319nm,1.5s
MNGI *i* x x 21 03 43.8
ENPP El Nido 24.50 68 *e*P **P 20 59 32.0 -0.2**
ENPP El Nido 24.50 68 *e*P **P 20 59 32.1 0.0**
LKP Lekhapani 24.81 359 *ex* x 20 59 35.0
LATR Latur 25.11 311 *e*P **P 20 59 37.5 -0.3**
LATR *ex* x 21 04 18.5
NGP Nagpur 25.15 319 *e*P **P 20 59 37.7 -0.4**
NGP *ex* x 20 59 53.7
comp=Z,395nm,1.3s
NGP *e*S **S 21 03 60.0 -1.1**
SLGI Shiliguri 25.35 343 *e*P **P 20 59 40.2 +0.3**
BUSP Coron 25.48 67 *e*P **P 20 59 40.8 -0.3**
BUSP Coron 25.48 67 *e*P **P 20 59 40.3 -0.7**
DGAR Diego Garcia 25.77 248 *e*P **P 20 59 44.0 +0.3**
DGAR MLR MLR
comp=Z,40μm,20.0s,MS5.9
CUYO Cuyo Island 25.87 70 *e*P **P 20 59 44.6 -0.1**
CUYO Cuyo Island 25.87 70 *e*P **P 20 59 45.0 +0.4**
GYA Guiyang 25.90 22⇑*i*P **P 20 59 43.8 -1.1**
GYA AP pP 20 59 47.9 -5.7
GYA XP sP 20 59 51.2 -6.1
GYA PP 21 00 23.4
GYA S **S 21 04 11.6 -1.4**
GYA AMB AMB
comp=Z,710nm,1.1s,mb6.1
GYA AMB AMB
comp=Z,7μm,12.0s
GYA LR LR
comp=N,49μm,18.3s,MS6.4
GYA LR LR
comp=E,76μm,14.7s,MS6.4
GYA LR LR
comp=Z,53μm,18.9s,MS6.1
JBP Jabalpur 26.06 324⇑*i*P **P 20 59 48.0 +1.6**
comp=Z,221nm,1.9s,mb5.4
JBP *ex* x 21 00 02.0
comp=Z,202nm,1.9s
JBP *ex* x 21 04 18.4
LUBP Lubang 26.16 63 *e*P **P 20 59 45.7 -1.5**
LUBP Lubang 26.16 63 *e*P **P 20 59 46.3 -0.9**
AKL Akola 26.22 315 *ex* x 20 59 52.5
AKL AMb AMB 21 00 11.3
comp=Z,505nm,1.0s,mb6.0
AKL *i* S **S 21 04 18.3 +0.2**
HKC Hong Kong 26.29 40⇑*i*P **P 20 59 50.0 +1.6**
HKC *i* S **S 21 04 26.0 +6.8**
KAD Karad 26.36 306 *e*P **P 20 59 51.4 +2.4**
KAD AMb AMB 21 00 04.1
comp=Z,171nm,1.2s,mb5.5
KAD *e*S **S 21 04 20.5 +0.3**
IPIL Ipil 26.64 77 *e*P **P 20 59 51.4 -0.1**
IPIL Ipil 26.64 77 *e*P **P 20 59 51.0 -0.6**
ALBI Allahabad 26.76 330 *e*P **P 20 59 52.0 -0.7**
TGY Tagaytay City 26.92 63 P **P 20 59 54.0 -0.1**
comp=Z,235nm,0.6s,baz=342,slow=1.9,SNR=9.3
TGY S **S 21 04 30.2 +1.1**
comp=Z,74nm,0.3s,baz=163,slow=15,SNR=2.0
TGY Tagaytay City 26.92 63 P **P 20 59 54.0 -0.1**
TGY S **S 21 04 30.2 +1.1**
TGY pmax pmax
comp=Z,235nm,0.6s
TGY smax
comp=N,74nm,0.4s
JIRN Jiri 26.95 340 *e*P **P 20 59 55.9 +1.5**
comp=N,2μm,1.2s,mb6.5
BOLP Bolinao 27.02 58 *e*P **P 20 59 54.4 -0.6**
BOLP Bolinao 27.02 58 *e*P **P 20 59 55.0 0.0**
PKI Pulchoki 27.15 338 *e*P **P 20 59 57.3 +1.1**
comp=N,1μm,1.1s,mb6.3
PKI Pulchoki 27.15 338 *e*P **P 20 59 57.3 +1.1**
PKI pmax pmax
comp=Z,1μm,1.1s,mb6.3
OTRP Odiongan 27.27 67 *e*P **P 20 59 57.0 -0.3**
OTRP *e*S 21 00 12.6
OTRP Odiongan 27.27 67 *e*P **P 20 59 56.5 -0.8**
POO Poona 27.28 308 *ex* x 20 59 58.0
POO *ex* x 21 00 48.7
POO *ex* x 21 01 14.0
POO *ex* x 21 05 29.8
POO *i* x x 21 07 00.0
GUIM Jordan 27.29 71 *e*P **P 20 59 57.8 +0.4**
GUN Gumba 27.29 339 *e*P **P 20 59 58.9 +1.5**
comp=Z,968nm,0.9s,mb6.3
DMN Daman 27.30 338 *e*P **P 20 59 58.5 +1.0**
comp=Z,363nm,0.8s,mb6.0
KKN Kakani 27.40 338 *e*P **P 20 59 59.4 +1.0**
comp=Z,2μm,1.4s,mb6.4
KKN Kakani 27.40 338 *e*P **P 20 59 59.4 +1.0**
KKN pmax pmax
comp=Z,2μm,1.4s,mb6.4
PAGZ Pagadian 27.44 78 *e*P **P 20 59 59.0 +0.2**
PAGZ Pagadian 27.44 78 *e*P **P 20 59 58.2 -0.6**
BOAC Boac 27.49 65 *e*P **P 20 59 57.2 -2.1**
BOAC Boac 27.49 65 *e*P **P 20 59 56.6 -2.6**
BCPH Baguio City Da 27.59 58⇑*e*P **P 21 00 00.2 +0.1**
SNPH Sibulan 27.59 74 *e*P pP 21 00 15.0 +6.1
LSA Lhasa 27.62 350 P **P 21 00 01.3 +1.0**
LSA AP pP 21 00 08.5 -0.6
LSA XP sP 21 00 13.7 +0.9
LSA PCP PcP 21 03 13.7 -3.6
LSA S **S 21 04 39.5 -0.5**
LSA SCP ScP 21 06 52.3 -3.4
LSA PCS PcS 21 06 57.4 -1.7
LSA SCS ScS 21 10 46.3 -1.3
LSA AMB AMB
comp=Z,690nm,1.2s,mb6.2
LSA LR LR
comp=N,19μm,25.7s,MS5.9
LSA LR LR
comp=E,36μm,24.5s,MS5.9
LSA LR LR
comp=Z,38μm,25.7s,MS5.9
LSA Lhasa 27.62 350 PFAKE 21 00 10.0 +10
LSA LR LR
comp=Z,29μm,22.0s,MS5.8
BHPL Bhopal 27.69 320 *e*P **P 21 00 02.1 +1.1**
BHPL AMb AMB 21 00 12.2
comp=Z,130nm,1.8s,mb5.3
BHPL *ex* x 21 04 39.0
GKN Gorkha 27.83 337 *e*P **P 21 00 03.3 +1.0**
comp=Z,818nm,1.0s,mb6.3
KOLN Koldanda 28.04 335 *e*P **P 21 00 05.4 +1.3**
comp=Z,2μm,1.3s,mb6.5
POLP Polillo Island 28.06 63 *e*P **P 21 00 03.0 -1.3**
BALP Baler 28.16 60 *e*P **P 21 00 04.7 -0.5**
BALP Baler 28.16 60 *e*P **P 21 00 04.1 -1.1**
AUQP San Andres 28.20 66 *e*P **P 21 00 06.0 +0.5**
AUQP San Andres 28.20 66 *e*P **P 21 00 07.1 +1.6**
TBP Tagbilaran 28.27 74 *e*P **P 21 00 07.0 +0.8**
ABRA Dolores 28.31 56 *e*P **P 21 00 06.3 -0.2**
ABRA Dolores 28.31 56 *e*P **P 21 00 05.5 -1.0**
LLP Lapu-Lapu 28.52 73⇑*e*P **P 21 00 09.2 +0.8**
CGP Cagayan de Oro 28.83 77⇓*i*P **P 21 00 01.8 -9.3**
APYP Conner 28.85 56 *e*P **P 21 00 10.7 -0.7**
APYP Conner 28.85 56 *e*P **P 21 00 09.9 -1.4**
CAUP Cauayan 28.91 58 *e*P **P 21 00 11.0 -0.9**
CAUP *e*S 21 00 44.9
CAUP Cauayan 28.91 58 *e*P **P 21 00 10.4 -1.4**
BUKP Musuan 29.09 78 *e*P **P 21 00 13.9 +0.4**
BUKP Musuan 29.09 78 *e*P **P 21 00 13.1 -0.3**
CD2 Chengdu 29.22 13⇑*i*P **P 21 00 14.3 -0.3**
CD2 XP sP 21 00 21.4 -5.7
CD2 PP PP 21 01 09.2 -12
CD2 PPP 21 01 22.1
CD2 S **S 21 05 05.1 -0.2**
CD2 XS sS 21 05 13.6 -6.2
CD2 AMB AMB
comp=Z,270nm,1.0s,mb5.9
CD2 AMB AMB
comp=Z,3μm,5.8s
CD2 LR LR
comp=E,46μm,15.6s
CD2 LR LR
comp=Z,47μm,15.6s,MS6.2
CVP Callao Caves 29.26 57⇓*e*P **P 21 00 14.0 -1.0**
comp=Z,20μm,1.0s
DAV Davao City (W) 29.48 80 PFAKE 21 00 30.0 +13
DAV LR LR
comp=Z,27μm,21.0s,MS5.8
PVCP Virac 29.64 66 *e*P **P 21 00 17.2 -1.2**
PVCP Virac 29.64 66 *e*P **P 21 00 19.9 +1.5**
LGTI Lohaghat 30.98 332 *i* P **P 21 00 33.0 +2.9**
QZH Quanzhou 31.02 42⇑*i*P **P 21 00 31.7 +1.1**
QZH PP PP 21 01 33.0 -7.8
QZH S **S 21 05 35.5 +1.9**
QZH AMB AMB
comp=Z,580nm,1.2s,mb6.3
QZH AMB AMB
comp=Z,7μm,5.0s
QZH LR LR
comp=N,170μm,16.4s,MS6.9
QZH LR LR
comp=E,40μm,12.3s,MS6.9
QZH LR LR
comp=Z,190μm,16.5s,MS6.8
PTH Pithoragarh 31.07 332 *e*P **P 21 00 33.1 +2.1**
AJM Ajmer 31.76 321 *i* P **P 21 00 38.0 +0.9**
NDI New Delhi 31.89 327⇑*i*P **P 21 00 37.5 -0.7**
NDI *e*P 21 00 37.9
NDI AMb AMB 21 00 42.0
comp=Z,272nm,1.8s,mb5.8
NDI *ex* x 21 05 43.0
AAI Ambon 32.38 101 P **P 21 00 45.1 +2.6**
comp=Z,269nm,1.4s,mb5.9
NACB Ninganchiao 32.61 46 *e*P **P 21 00 44.9 +0.4**
MBWA Marble Bar 32.72 137 P **P 21 00 46.3 +0.8**
SNR=5.3
MBWA Marble Bar 32.72 137 *e*P **P 21 00 46.3 +0.8**
comp=Z,94nm,1.0s,mb5.7
MBWA LR LR
comp=Z,25μm,20.0s,MS5.9
YHNB Yeheng 32.76 45 *e*P **P 21 00 46.5 +0.6**
WHN Wuhan 32.78 29 P **P 21 00 46.2 +0.2**
WHN S **S 21 06 08.0 +7.0**
WHN LR LR
comp=Z,128μm,13.8s,MS6.8
TATO Taipei 33.03 45 *e*P **P 21 00 49.2 +1.0**
TATO LR LR
comp=Z,31μm,20.0s,MS6.0
XAN Xi'an 33.61 19 P **P 21 00 52.7 -0.5**
XAN S **S 21 06 12.5 -1.3**
XAN AMB AMB
comp=Z,529nm,1.3s,mb6.3
XAN LR LR
comp=N,15μm,18.0s,MS6.2
XAN LR LR
comp=E,38μm,16.3s,MS6.2
XAN LR LR
comp=Z,55μm,18.6s,MS6.3
SMLA Simla 33.86 330 *e*P **P 21 00 55.8 +0.4**
SMLA AMb AMB 21 00 59.6
comp=Z,258nm,0.9s,mb6.2
SMLA *ex* x 21 06 15.5
LZH Lanzhou 34.24 11⇑P **P 21 00 58.9 +0.2**
LZH AP pP 21 01 07.6 0.0
LZH XP sP 21 01 12.8 +1.5
LZH PP PP 21 02 18.2 +1.7
LZH S **S 21 06 22.0 -1.7**
LZH XS sS 21 06 37.0 -1.3
LZH SS SS 21 08 32.0 -20
LZH AMB AMB
comp=Z,2μm,1.5s,mb6.8
LZH AMB AMB
comp=Z,7μm,4.6s
LZH LR LR
comp=E,109μm,14.8s
LZH LR LR
comp=Z,112μm,15.3s,MS6.7
SDNR Sundarnagar 34.26 330 *e*P **P 21 01 00.6 +1.7**
SDNR *ex* x 21 06 30.6
BHK Bhakra 34.47 329 *e*P **P 21 01 02.2 +1.5**
SWI Sorong 35.03 95 P **P 21 01 04.4 -1.2**
comp=Z,258nm,1.2s,mb6.0
PONG Pong 35.14 329 *ex* x 21 01 05.0
FITZ Fitzroy Crossi 35.29 126⇑*i*P **P 21 01 06.9 -0.9**
comp=Z,109nm,0.9s,mb5.8
FITZ *e*S **S 21 06 36.0 -3.8**
FITZ Fitzroy Crossi 35.29 126 P **P 21 01 07.0 -0.8**
comp=Z,39nm,0.8s,mb5.4,baz=298,slow=5.1,SNR=49
FITZ S **S 21 06 34.1 -5.7**
comp=Z,5.6nm,1.0s,baz=8.1,slow=20,SNR=1.8
FITZ LR LR 21 15 43.7
comp=Z,14μm,19.9s,MS5.7,baz=165,slow=36
DLH Dalhousie 35.60 330 *e*P **P 21 01 09.0 -1.4**
NJ2 Nanjing 36.32 33 *e*P **P 21 01 17.0 +0.4**
NJ2 AP pP 21 01 21.4 -4.1
NJ2 XP sP 21 01 24.0 -5.1
NJ2 PP PP 21 02 40.3 +0.8
NJ2 S **S 21 06 55.0 -0.5**
NJ2 XS sS 21 07 05.0 -5.2
NJ2 AMB AMB
comp=Z,60nm,1.0s,mb5.5
NJ2 AMB AMB
comp=Z,4μm,7.7s
NJ2 LR LR
comp=N,119μm,13.6s,MS7.0
NJ2 LR LR
comp=E,93μm,12.2s,MS7.0
NJ2 LR LR
comp=Z,51μm,12.3s,MS6.5
SSE Sheshan 36.95 37 P **P 21 01 22.5 +0.5**
SSE AP pP 21 01 25.6 -5.3
SSE XP sP 21 01 27.0 -7.5
SSE PP PP 21 02 46.6 +0.2
SSE S **S 21 07 07.9 +2.7**
SSE XS sS 21 07 13.1 -6.7
SSE SCS ScS 21 11 38.5 +3.7
SSE AMB AMB
comp=Z,114nm,1.2s,mb5.6
SSE AMB AMB
comp=Z,3μm,10.2s
SSE LR LR
comp=N,48μm,15.7s,MS6.5
SSE LR LR
comp=E,43μm,15.7s,MS6.5
SSE LR LR
comp=Z,82μm,13.9s,MS6.7
GTA Gaotai 36.99 4 P **P 21 01 22.4 +0.1**
GTA AP pP 21 01 26.9 -4.3
GTA XP sP 21 01 29.4 -5.5
GTA PP PP 21 02 46.9 +0.1
GTA PPP 21 03 07.1
GTA PCP PcP 21 03 45.6 +2.7
GTA S **S 21 07 03.9 -1.8**
GTA SCP ScP 21 07 30.7 +3.1
GTA PCS PcS 21 07 32.8 +1.7
GTA SCS ScS 21 11 35.4 +0.4
GTA AMB AMB
comp=Z,279nm,1.0s,mb6.0
GTA AMB AMB
comp=Z,5μm,5.3s
GTA LR LR
comp=N,29μm,17.1s,MS6.3
GTA LR LR
comp=E,31μm,14.4s,MS6.3
GTA LR LR
comp=Z,36μm,16.0s,MS6.3
NIL Nilore 37.88 328 P **P 21 01 30.3 +0.5**
comp=Z,240nm,0.8s,mb6.0,SNR=11
TIA Tai'an 38.75 27⇑P **P 21 01 36.9 -0.3**
TIA AP pP 21 01 48.0 +1.9
TIA S **S 21 07 28.9 -3.5**
TIA AMB AMB
comp=Z,164nm,1.0s,mb5.7
TIA AMB AMB
comp=Z,2μm,8.0s
TIA LR LR
comp=N,6μm,13.0s,MS5.6
TIA LR LR
comp=E,3μm,13.0s,MS5.6
KAKA Kakadu 38.83 114⇑*i*P **P 21 01 36.7 -1.1**
comp=E,313nm,0.8s,mb6.1
MUN Mundaring 39.02 153 *e*P **P 21 01 40.7 +1.3**
KLBR Kellerberrin 39.43 151 *e*P **P 21 01 43.4 +0.5**
comp=E,57nm,0.8s,mb5.3
BAKI Biak 39.89 95 P **P 21 01 43.5 -3.2**
comp=E,252nm,1.7s,mb5.7
BTO Baotou 40.01 16 *e*P **P 21 01 48.0 +0.4**
BTO AMB AMB
comp=Z,145nm,1.1s,mb5.6
BTO LR LR
comp=N,12μm,16.7s,MS6.2
BTO LR LR
comp=E,24μm,18.6s,MS6.2
NWAO Narrogin (SRO) 40.28 152 P **P 21 01 50.7 +0.8**
comp=E,48nm,0.9s,mb5.2,baz=315,slow=7.0,SNR=13
NWAO S **S 21 07 56.3 +0.8**
comp=E,24nm,1.1s,baz=146,slow=3.6,SNR=2.5
NWAO SS SS 21 10 57.0 +2.6
comp=E,9.8nm,1.1s,baz=99,slow=17,SNR=2.7
NWAO LR LR 21 18 56.4
comp=E,47μm,20.2s,MS6.3,baz=326,slow=37
NWAO Narrogin (SRO) 40.28 152 P **P 21 01 50.7 +0.7**
NWAO S **S 21 07 56.3 +0.8**
NWAO pmax pmax
comp=Z,48nm,0.9s
NWAO smax
comp=N,24nm,1.1s
NWAO pmax pmax
comp=N,10.0nm,1.1s
NWAO MLR MLR
comp=Z,47μm,20.2s
NWAO Narrogin (SRO) 40.28 152 *e*P **P 21 01 51.0 +1.0**
comp=Z,171nm,1.2s,mb5.7
NWAO LR LR
comp=Z,36μm,20.0s,MS6.2
HHC Hu-ho-hao-te 40.68 18 *e*P **P 21 01 54.6 +1.4**
HHC AP pP 21 01 59.1 -3.1
HHC XP sP 21 02 01.6 -4.2
HHC PP PP 21 03 32.0 +4.8
HHC PCP PcP 21 03 55.6 +1.1
HHC SCP ScP 21 07 40.2 -1.6
HHC PCS PcS 21 07 46.9 +1.6
HHC S **S 21 08 04.9 +3.5**
HHC XS sS 21 08 12.5 -3.6
HHC SS SS 21 11 00.9 -1.4
HHC SCS ScS 21 11 57.2 +0.8
HHC AMB AMB
comp=Z,338nm,1.0s,mb5.9
HHC LR LR
comp=N,44μm,17.9s,MS6.6
HHC LR LR
comp=E,54μm,15.9s,MS6.6
HHC LR LR
comp=Z,42μm,18.2s,MS6.3
KSH Kashi 41.36 336 P **P 21 01 59.5 +0.7**
KSH AP pP 21 02 04.6 -3.2
KSH XP sP 21 02 07.1 -4.3
KSH PP PP 21 03 38.7 +4.2
KSH PCP PcP 21 03 58.1 +1.4
KSH PPP 21 04 09.3
KSH SCP ScP 21 07 46.0 +1.5
KSH PCS PcS 21 07 48.4 +0.5
KSH S **S 21 08 14.8 +3.4**
KSH XS sS 21 08 24.0 -2.2
KSH SS SS 21 11 13.9 -1.9
KSH SCS ScS 21 12 01.5 +1.0
KSH AMB AMB
comp=Z,237nm,1.0s,mb5.8
KSH AMB AMB
comp=Z,8μm,6.0s
KSH LR LR
comp=N,26μm,14.7s,MS6.5
KSH LR LR
comp=E,48μm,16.1s,MS6.5
KSH LR LR
comp=Z,40μm,19.1s,MS6.3
WBK Wadi Bani Khal 41.47 302⇑P **P 21 02 02.8 +3.1**
SNR=5.6
BJT Baijiatuau 41.55 23 *e*P **P 21 02 01.3 +0.9**
BJT pmax pmax
comp=Z,827nm,1.0s
BJT MLR MLR
comp=Z,28μm,19.0s
BJT Baijiatuau 41.55 23 *e*P **P 21 02 01.3 +0.9**
comp=Z,828nm,1.0s,mb6.3
BJT LR LR
comp=Z,28μm,19.0s,MS6.2
BJI Beijing 41.57 23 *e*P **P 21 02 01.8 +1.2**
BJI PP PP 21 03 40.0 +3.1
BJI S **S 21 08 14.8 +0.2**
BJI XS sS 21 08 31.3 +1.9
BJI AMB AMB
comp=Z,547nm,1.2s,mb6.1
BJI AMB AMB
comp=Z,9μm,4.5s
BJI LR LR
comp=N,30μm,18.1s,MS6.4
BJI LR LR
comp=E,31μm,16.2s,MS6.4
BJI LR LR
comp=Z,23μm,19.1s,MS6.1
WMQ Urumqi 41.98 351⇑*i*P **P 21 02 04.0 +0.1**
WMQ XP sP 21 02 11.0 -5.5
WMQ PP PP 21 03 44.0 +2.8
WMQ SCP ScP 21 07 48.0 +1.1
WMQ S **S 21 08 22.0 +1.4**
WMQ SS SS 21 11 24.0 -4.0
WMQ AMB AMB
comp=Z,215nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,4μm,5.0s
WMQ LR LR
comp=N,24μm,11.0s,MS6.5
WMQ LR LR
comp=E,27μm,12.0s,MS6.5
WMQ LR LR
comp=Z,28μm,12.0s,MS6.4

WSAR Wadi Sarin 42.01 303 S **S** **21 08 24.2 +3.1**
comp=Z,2.8nm,0.9s,baz=69,slow=6.1,SNR=1.9
WSAR LR LR 21 20 25.7
comp=Z,17µm,18.8s,MS6.0,baz=101,slow=37
SMDO Samad 42.43 302 P **P** **21 02 10.4 +2.9**
SNR=6.5
BIDO Bidbid 42.55 303 P **P** **21 02 11.1 +2.5**
SNR=14
BSY Bisya 43.03 301 P **P** **21 02 14.7 +2.3**
SNR=9.8
DL2 Dalian 43.04 29⇑*i*P **P** **21 02 13.2 +0.7**
DL2 XP sP 21 02 23.0 -2.2
DL2 S **S** **21 08 40.1 +3.8**
DL2 XS sS 21 08 52.2 +1.1
DL2 SCS ScS 21 12 14.0 +3.2
DL2 AMB AMB
comp=Z,160nm,1.0s,mb5.7
DL2 AMB AMB
comp=Z,2µm,6.3s
DL2 LR LR
comp=N,21µm,14.1s,MS6.3
DL2 LR LR
comp=E,20µm,16.2s,MS6.3
DL2 LR LR
comp=Z,24µm,15.3s,MS6.2
HOQ Hoqain 43.26 302 ⇓P **P** **21 02 17.3 +3.0**
SNR=7.5
WRAB Tennant Creek 43.37 123 P **P** **21 02 15.0 -0.2**
comp=Z,1µm,1.4s,mb6.4,SNR=44
WRAB Tennant Creek 43.37 123 *e*P **P** **21 02 15.1 -0.1**
WRAB LR LR
comp=Z,37µm,21.0s,MS6.3
WB2 Warramunga Arr 43.38 123⇑*i*P **P** **21 02 14.8 -0.4**
WB2 *e*S **S** **21 08 35.3 -5.9**
ULHL Ulahol 43.59 338 P **P** **21 02 18.1 +1.2**
SNR=27
KZA Kyzart 43.82 337 P **P** **21 02 20.4 +1.6**
SNR=48
ARQ Araqi 43.83 302 ⇑P **P** **21 02 21.8 +2.9**
SNR=6.7
AAA Alma-Ata 44.24 340*c i*P **P** **21 02 23.3 +1.2**
AAA *i* S **S** **21 08 56.8 +3.1**
AAA MLR MLR
comp=Z,19µm,16.7s,MS6.1
UCH Uchtor 44.24 337 P **P** **21 02 23.9 +1.7**
SNR=34
TKM2 Tokmak 2 44.42 338 P **P** **21 02 24.5 +1.0**
SNR=137
KBK Karagaybulak 44.44 337 P **P** **21 02 25.5 +1.7**
SNR=130
AML Almayashu 44.49 336 P **P** **21 02 25.8 +1.7**
SNR=154
WHFO Wadi Hawf 44.53 293 P **P** **21 02 26.7 +2.2**
SNR=8.8
AAK Ala-Archa 44.59 337 P **P** **21 02 25.8 +0.9**
SNR=26
AAK Ala-Archa 44.59 337 P **P** **21 02 25.6 +0.6**
comp=Z,672nm,0.9s,mb6.5,SNR=34
AAK Ala-Archa 44.59 337 P **P** **21 02 25.6 +0.6**
SNR=82
AAK Ala-Archa 44.59 337*ce*P **P** **21 02 25.3 +0.3**
AAK pmax pmax
comp=Z,137nm,1.5s,mb5.6
AAK MLR MLR
comp=Z,38µm,24.0s,MS6.2
AAK Ala-Archa 44.59 337 *e*P **P** **21 02 24.8 -0.2**
AAK LR LR
comp=Z,33µm,21.0s,MS6.2
JAY Jayapura 44.59 96 P **P** **21 02 23.2 -1.8**
comp=Z,116nm,1.1s,mb5.6
INCN Inchon 44.64 35 ⇑P **P** **21 02 24.6 -0.8**
SNR=20
INCN Inchon 44.64 35 *e*P **P** **21 02 24.8 -0.6**
comp=Z,245nm,1.4s,mb5.8
INCN LR LR
comp=Z,79µm,19.0s,MS6.7
FORT Forrest 44.71 140 *e*P **P** **21 02 26.8 +0.9**
comp=Z,202nm,0.7s,mb6.1
FORT *e*S **S** **21 09 01.4 +0.8**
FRU Bishkek 44.71 337⇑*i*P **P** **21 02 27.0 +1.1**
FRU *i* 21 02 33.0
FRU *e*S **S** **21 09 06.0 +5.3**
FRU *i* 21 09 21.0
FRU pmax pmax
comp=Z,670nm,2.5s,mb6.0
FRU pmax pmax
comp=Z,6µm,8.0s
FRU smax
comp=N,6µm,10.0s
FRU MLR MLR
comp=Z,32µm,21.0s,MS6.2
ASPA Alice Springs 44.77 128⇑*i*P **P** **21 02 26.3 -0.1**
ASPA *e*S **S** **21 09 04.2 +2.8**
AS31 Alice Springs 44.77 128⇑*i*P **P** **21 02 26.3 -0.1**
AS31 *e*S **S** **21 09 04.2 +2.7**
ASAR Alice Springs 44.77 128 P **P** **21 02 26.2 -0.2**
comp=Z,14nm,0.6s,mb5.0,baz=296,slow=7.5,SNR=132
ASAR S **S** **21 08 57.8 -3.7**
comp=Z,3.5nm,1.0s,baz=298,slow=6.2,SNR=4.3
ASAR ScS ScS 21 12 14.7 -7.0
comp=Z,0.5nm,0.8s,baz=270,slow=32,SNR=2.6
ASAR LR LR 21 22 18.4
comp=Z,27µm,21.9s,MS6.1,baz=310,slow=38
ASAR Alice Springs 44.77 128 P **P** **21 02 26.2 -0.2**
ASAR S **S** **21 08 57.8 -3.7**
ASAR 21 12 14.7
ASAR pmax pmax
comp=Z,14nm,0.6s
ASAR smax
comp=N,4.0nm,1.0s
ASAR pmax pmax
comp=N,1.0nm,0.8s
ASAR MLR MLR
comp=Z,27µm,21.9s
CHMS Chumysh 44.80 337 P **P** **21 02 27.4 +0.8**
SNR=58
EKS2 Erkin-Say 44.90 336 P **P** **21 02 28.9 +1.5**
SNR=81
USP Ospenovka 45.13 337 P **P** **21 02 29.9 +0.7**
SNR=149
MKAR Makanchi Array 45.90 347 P **P** **21 02 35.6 +0.2**
comp=Z,271nm,0.8s,mb6.2,baz=160,slow=6.9,SNR=704
MKAR S **S** **21 09 19.5 +1.6**
comp=Z,0.5nm,0.3s,baz=40,slow=36,SNR=2.5
MKAR ScS ScS 21 12 26.9 -2.1
comp=Z,0.5nm,0.7s,baz=137,slow=6.3,SNR=1.7
MKAR PKPPKP 21 34 04.2
comp=Z,0.7nm,0.8s,baz=277,slow=4.8,SNR=3.8
MKAR Makanchi Array 45.90 347 P **P** **21 02 35.6 +0.2**
MKAR S **S** **21 09 19.5 +1.7**
MKAR 21 12 26.9
MKAR pmax pmax
comp=Z,271nm,0.8s
MKAR smax
comp=N,1.0nm,0.3s
MKAR pmax pmax
comp=N,1.0nm,0.7s
SONM Songino Array 46.10 9 P **P** **21 02 37.4 +0.4**
comp=N,187nm,0.8s,mb6.0,baz=189,slow=8.7,SNR=376
SONM PcP PcP 21 04 13.4 +0.6
comp=N,52nm,0.8s,baz=180,slow=3.1,SNR=5.7
SONM PP PP 21 04 25.5 +0.2
comp=N,29nm,1.1s,baz=166,slow=2.5,SNR=3.0
SONM S **S** **21 09 21.5 +0.9**
comp=N,2.1nm,1.0s,baz=220,slow=2.6,SNR=3.4
SONM ScS ScS 21 12 28.7 -1.5
comp=N,0.8nm,1.0s,baz=228,slow=4.2,SNR=2.2
SONM LR LR 21 24 25.3
comp=N,61µm,18.1s,MS6.6,baz=190,slow=39
SONM PKPPKP 21 34 03.4
comp=N,0.6nm,0.9s,baz=80,slow=1.7,SNR=3.6
SONM Songino Array 46.10 9 P **P** **21 02 37.4 +0.5**
SONM 21 04 13.4
SONM 21 04 25.5
SONM S **S** **21 09 21.5 +0.8**
SONM 21 12 28.7
SONM pmax pmax
comp=Z,187nm,0.8s
SONM pmax pmax
comp=Z,52nm,0.8s
SONM pmax pmax
comp=Z,29nm,1.1s
SONM smax
comp=N,2.0nm,1.0s
SONM pmax pmax
comp=N,1.0nm,1.0s
SONM MLR MLR
comp=Z,61µm,18.1s
ULN Ulaanbaatar 46.24 10 ⇑P **P** **21 02 38.5 +0.4**
SNR=123
ULN Ulaanbaatar 46.24 10*c i*P **P** **21 02 36.6 -1.4**
ULN Ulaanbaatar 46.24 10⇑*i*P **P** **21 02 36.7 -1.3**
ULN LR LR
comp=Z,27µm,21.0s,MS6.2
SNY Shenyang 46.25 28 ⇑P **P** **21 02 37.8 -0.3**
SNY AP pP 21 02 42.5 -4.7
SNY XP sP 21 02 46.3 -4.5
SNY PP PP 21 04 28.7 +1.8
SNY S **S** **21 09 27.9 +5.1**
SNY XS sS 21 09 34.7 -3.0
SNY AMB AMB
comp=Z,145nm,2.1s,mb5.5
SNY AMB AMB
comp=Z,5µm,12.0s
SNY LR LR
comp=E,53µm,15.2s
SNY LR LR
comp=Z,41µm,14.7s,MS6.5
ZAK Zakamensk 48.18 6⇓*i*P **P** **21 02 53.4 +0.2**
ZAK pmax pmax
comp=Z,100nm,1.5s,mb5.6
CN2 Changchun 48.65 28 *e*P **P** **21 02 56.0 -0.7**
CN2 *e*XP sP 21 03 03.0 -6.5
CN2 PP PP 21 04 49.2 -0.6
CN2 *e*S **S** **21 09 57.6 +0.7**
CN2 SS SS 21 13 23.4 -3.8
CN2 AMB AMB
comp=Z,20nm,1.1s,mb5.1
CN2 LR LR
comp=N,37µm,14.0s,MS6.6
CN2 LR LR
comp=E,19µm,14.0s,MS6.6
CN2 LR LR
comp=Z,44µm,16.0s,MS6.5
MOY Mondy 49.27 4 *e*P **P** **21 03 01.4 -0.1**
MOY pmax pmax
comp=Z,578nm,4.4s
TLY Talaya 49.51 6 P **P** **21 03 04.7 +1.4**
comp=Z,1µm,1.0s,mb6.8,SNR=39
TLY Talaya 49.51 6 P **P** **21 03 04.4 +1.1**
SNR=65
TLY Talaya 49.51 6*c i*P **P** **21 03 03.9 +0.6**
TLY *e*S **S** **21 10 06.3 -2.6**
TLY pmax pmax
comp=Z,196nm,1.0s,mb6.1
TLY MLR MLR
comp=Z,39µm,18.0s,MS6.5
TLY Talaya 49.51 6 *e*P **P** **21 03 04.2 +0.9**
comp=Z,170nm,0.9s,mb6.1
TLY LR LR
comp=Z,44µm,20.0s,MS6.5
ABKT Ailbek 49.78 320 P **P** **21 03 05.6 +0.2**
comp=Z,773nm,0.8s,mb6.8,SNR=67
VAN Vannovskaya 49.79 320 P **P** **21 03 06.2 +0.7**
VAN S **S** **21 10 13.4 +0.4**
IRK Irkutsk 50.13 6 *i* P **P** **21 03 08.3 +0.3**
IRK *e*S **S** **21 10 17.9 +0.3**
IRK pmax pmax
comp=Z,491nm,2.3s,mb6.1
KURK Kurchatov 50.44 345 P **P** **21 03 10.4 0.0**
comp=Z,1µm,1.1s
KURK Kurchatov 50.44 345 ⇑P **P** **21 03 10.9 +0.4**
SNR=173
KURK Kurchatov 50.44 345 *e*P **P** **21 03 10.3 -0.1**
KURK LR LR
comp=Z,31µm,22.0s,MS6.3
HIA Hailar 50.80 20 *e*P **P** **21 03 13.4 +0.2**
HIA pmax pmax
comp=Z,362nm,1.1s
HIA MLR MLR
comp=Z,52µm,19.0s
HIA Hailar 50.80 20 *e*P **P** **21 03 13.4 +0.2**
comp=Z,362nm,1.1s,mb6.2
HIA LR LR
comp=Z,52µm,19.0s,MS6.6
MDJ Mudanjiang 51.26 30 P **P** **21 03 16.7 +0.1**
MDJ PCP PcP 21 04 31.2 -0.2
MDJ PP PP 21 05 13.3 -0.3
MDJ SCP ScP 21 08 27.7 +2.0
MDJ PCS PcS 21 08 29.0 -0.1
MDJ S **S** **21 10 37.0 +3.7**
MDJ SCS ScS 21 13 07.3 +2.5
MDJ AMB AMB
comp=Z,114nm,1.1s,mb5.7
MDJ AMB AMB
comp=Z,5µm,8.6s
MDJ LR LR
comp=N,15µm,17.3s,MS6.3
MDJ LR LR
comp=E,18µm,15.2s,MS6.3
MDJ LR LR
comp=Z,16µm,17.3s,MS6.1
MDJ Mudanjiang 51.26 30 *e*P **P** **21 03 16.8 +0.2**
comp=Z,131nm,1.0s,mb5.8
MDJ LR LR
comp=Z,19µm,22.0s,MS6.1
MAJO Matsushiro 51.40 43 *e*P **P** **21 03 17.1 -0.5**
MAJO MLR MLR
comp=Z,20µm,19.0s,MS6.2
MAT Matsushiro 51.40 43 P **P** **21 03 17.1 -0.5**
MAT S **S** **21 10 37.0 +1.8**
MAT Matsushiro 51.40 43 *e*P **P** **21 03 17.0 -0.6**
MAT *e*S **S** **21 10 37.0 +1.8**
MAT pmax pmax
comp=Z,217nm,1.5s,mb5.9
MAT MLR MLR
comp=Z,21µm,20.0s,MS6.2
MAT Matsushiro 51.40 43 *e*P **P** **21 03 17.0 -0.6**
comp=Z,217nm,1.5s,mb5.9
MAT *e*S **S** **21 10 37.0 +1.8**
MAT LR LR
comp=Z,21µm,20.0s,MS6.2
MJAR Matsushiro Arr 51.40 43 P **P** **21 03 17.3 -0.3**
comp=Z,50nm,1.0s,mb5.4,baz=206,slow=5.4,SNR=72
MJAR PcP PcP 21 04 33.0 +1.0
comp=Z,21nm,0.9s,baz=257,slow=4.0,SNR=5.4
MJAR PP PP 21 05 17.6 +2.7
comp=Z,4.9nm,0.8s,baz=230,slow=5.7,SNR=2.1
MJAR S **S** **21 10 34.3 -0.9**
comp=Z,0.3nm,0.4s,baz=145,slow=15,SNR=2.3
MJAR SS SS 21 14 15.5 +4.4
comp=Z,0.3nm,0.4s,baz=266,slow=17,SNR=3.0
MJAR LR LR 21 26 42.8
comp=Z,19µm,18.9s,MS6.1,baz=250,slow=38
MJAR Matsushiro Arr 51.40 43 P **P** **21 03 17.3 -0.3**
MJAR 21 04 33.0
MJAR 21 05 17.6
MJAR S **S** **21 10 34.3 -0.9**
MJAR pmax pmax
comp=Z,50nm,1.0s
MJAR pmax pmax
comp=Z,21nm,0.9s
MJAR pmax pmax
comp=Z,5.0nm,0.8s
MJAR MLR MLR
comp=Z,19µm,18.9s
MJAR Matsushiro Arr 51.40 43 P **P** **21 03 17.3 -0.3**
MJAR PcP PcP 21 04 33.0 +1.0
MJAR PP PP 21 05 17.6 +2.7
MJAR S **S** **21 10 34.3 -0.9**
MJAR SS SS 21 14 15.5 +4.4
MJAR LR LR 21 26 42.8
VLA Vladivostok 51.43 33*d i*P **P** **21 03 18.2 +0.4**
VLA *e**PP pP 21 03 27.6 +0.6
VLA *e* 21 04 31.4
VLA *e* 21 05 14.6
VLA *e*S **S** **21 10 35.0 -0.6**
VLA *i* *SS sS 21 10 52.0 +1.3
VLA *e* 21 13 05.7
VLA pmax pmax
comp=Z,384nm,1.5s,mb6.1
VLA MLR MLR
comp=Z,34µm,16.3s,MS6.5
VLA Vladivostok 51.43 33 *i* Pr 21 03 18.1
PMG Port Moresby 51.94 104 P **P** **21 03 22.0 +0.4**
comp=Z,145nm,0.8s,mb6.0,baz=272,slow=4.1,SNR=23
PMG PP PP 21 05 21.6 +1.8
comp=Z,21nm,0.9s,baz=297,slow=13,SNR=1.7
PMG S **S** **21 10 41.3 -1.4**
comp=Z,14nm,0.8s,baz=296,slow=8.4,SNR=2.4
PMG Port Moresby 51.94 104 P **P** **21 03 22.0 +0.3**
PMG 21 05 21.6
PMG S **S** **21 10 41.3 -1.4**
PMG pmax pmax
comp=Z,145nm,0.8s
PMG pmax pmax
comp=Z,21nm,0.9s
PMG smax
comp=N,14nm,0.8s
PMG Port Moresby 51.94 104 *e*P **P** **21 03 22.0 +0.3**
comp=N,161nm,0.8s,mb6.0
PMG LR LR
comp=Z,10µm,19.0s,MS5.9
ZAL Zalesovo 52.26 351 P **P** **21 03 24.4 +0.4**
comp=Z,211nm,0.9s,mb6.1,baz=304,slow=6.4,SNR=355
ZAL S **S** **21 10 46.8 -0.4**
comp=Z,1.6nm,0.7s,baz=185,slow=21,SNR=3.5
ZAL LR LR 21 30 42.3
comp=Z,23µm,20.3s,MS6.2,baz=293,slow=42
ZAL Zalesovo 52.26 351 P **P** **21 03 24.5 +0.4**
ZAL S **S** **21 10 46.8 -0.3**
ZAL pmax pmax
comp=Z,211nm,0.9s
ZAL smax
comp=N,2.0nm,0.7s
ZAL MLR MLR
comp=Z,23µm,20.3s
KBD Kabd 53.34 305 *e*P **P** **21 03 32.1 +0.1**
KBD AMb AMB 21 03 36.3
comp=Z,208nm,1.1s,mb6.0
NVS Novosibirsk 53.38 351⇑*i*P **P** **21 03 32.0 -0.3**
NVS *e* 21 05 31.5
NVS *i* S **S** **21 10 55.8 -6.6**
NVS *e* 21 13 13.0
NVS pmax pmax
comp=N,204nm,1.1s
NVS pmax pmax
comp=Z,345nm,1.1s,mb6.2
NVS pmax pmax
comp=E,200nm,1.2s
NVS pmax pmax
comp=Z,73nm,1.5s,mb5.4
NVS pmax pmax
comp=N,109nm,1.7s
NVS pmax pmax
comp=E,38nm,1.1s
NVS smax
comp=N,66nm,1.9s
NVS smax
comp=E,670nm,3.3s
UMR Umm Al-Rimmam 53.46 305 *e*P **P** **21 03 33.3 +0.4**
UMR AMb AMB 21 03 34.6
comp=Z,54nm,0.7s,mb5.6
KRAR Krasnoyarsk 53.54 358*c i*P **P** **21 03 33.7 +0.2**
KRAR pmax pmax
comp=Z,673nm,1.0s,mb6.5
CTA Charters Tower 53.78 117⇑*i*P **P** **21 03 35.7 +0.5**
comp=Z,89nm,0.9s,mb5.7
CTA *e*S **S** **21 11 09.2 +1.5**
CTA Charters Tower 53.78 117 P **P** **21 03 35.8 +0.6**
comp=Z,170nm,1.1s,mb5.9,baz=296,slow=8.4,SNR=22
CTA S **S** **21 11 07.3 -0.5**
comp=Z,7.5nm,1.1s,baz=88,slow=18,SNR=2.0
CTA Charters Tower 53.78 117 P **P** **21 03 35.8 +0.6**
CTA S **S** **21 11 07.3 -0.4**
CTA pmax pmax
comp=Z,170nm,1.1s
CTA smax
comp=N,8.0nm,1.1s
CTAO Charters Tower 53.78 117 P **P** **21 03 35.7 +0.5**
CTAO S **S** **21 11 07.9 +0.2**
CTAO Charters Tower 53.78 117 *e*P **P** **21 03 34.9 -0.3**
CTAO LR LR
comp=Z,23µm,22.0s,MS6.2
ATD Arta Tunnel 53.81 282 S **S** **21 11 09.9 +1.6**
comp=Z,2.2nm,0.6s,baz=275,slow=23,SNR=1.8
ATD LR LR 21 22 14.9
comp=Z,4µm,21.5s,MS5.4,baz=236,slow=31
MIB Mutribah 53.85 306 *e*P **P** **21 03 36.4 +0.6**
MIB AMb AMB 21 03 40.4
comp=Z,195nm,0.8s,mb6.1
ADE Adelaide 54.34 137 *e*P **P** **21 03 40.6 +1.3**
STKA Stephens Creek 54.76 132 *e*P **P** **21 03 42.5 +0.1**
comp=Z,66nm,0.9s,mb5.7
STKA *e*S **S** **21 11 19.4 -1.6**
STKA Stephens Creek 54.76 132 P **P** **21 03 42.6 +0.2**
comp=Z,38nm,0.8s,mb5.5,baz=311,slow=7.6,SNR=75
STKA S **S** **21 11 20.1 -1.0**
comp=Z,7.6nm,1.2s,baz=174,slow=20,SNR=2.0
STKA LR LR 21 29 09.9
comp=Z,26µm,20.6s,MS6.3,baz=293,slow=38
BVAR Borovoye Array 54.87 341 P **P** **21 03 42.4 -0.8**
comp=Z,69nm,0.7s,mb5.8,baz=141,slow=7.4,SNR=5.0
BVAR S **S** **21 11 21.1 -1.3**
comp=Z,0.3nm,0.4s,baz=216,slow=44,SNR=2.3
BVAR Borovoye Array 54.87 341 P **P** **21 03 42.4 -0.8**
BVAR S **S** **21 11 21.2 -1.3**
BVAR pmax pmax
comp=Z,69nm,0.7s
BRVK Borovoye 54.93 341 P **P** **21 03 43.5 -0.1**
comp=Z,755nm,0.7s,mb6.8,SNR=57
BRVK Borovoye 54.93 341 P **P** **21 03 43.4 -0.2**
SNR=89
BRVK Borovoye 54.93 341 *e*P **P** **21 03 43.1 -0.5**
BRVK LR LR
comp=Z,17µm,22.0s,MS6.1
CHKZ Chkalovo 55.35 342 *e*P **P** **21 03 46.5 -0.1**
CHKZ pmax pmax
comp=Z,194nm,0.8s,mb6.2
CHKZ Chkalovo 55.35 342 *e*P **P** **21 03 46.5 -0.1**
comp=Z,194nm,0.8s,mb6.2
KLR Kul'dur 55.59 27*d i*P **P** **21 03 46.5 -1.8**
KLR *e*S **S** **21 11 33.0 +0.9**
KLR pmax pmax
comp=E,350nm,2.0s
KLR pmax pmax
comp=Z,730nm,2.0s,mb6.4
KLR pmax pmax
comp=E,2µm,8.0s
KLR pmax pmax
comp=Z,8µm,8.0s
HABR Khabarovsk 56.64 30⇑*i*P **P** **21 03 55.8 -0.1**
HABR *e* 21 04 51.6
HABR *e* 21 06 01.5
HABR *e*S **S** **21 11 46.7 +0.6**
HABR *e* 21 13 41.0
HABR *e* 21 15 36.0
HABR pmax pmax
comp=Z,180nm,1.0s,mb6.1
HABR pmax pmax
comp=Z,7µm,12.7s
HABR MLR MLR
comp=Z,30µm,15.0s,MS6.5
DESE Dese 56.92 282 *e*P **P** **21 04 01.2 +3.3**
DESE *e*S **S** **21 12 02.1 +12**
BOD Bodaibo 57.01 11 *i* P **P** **21 03 58.2 -0.3**
BOD pmax pmax
comp=Z,252nm,1.0s,mb6.2
ERM Erimo 57.50 40 P **P** **21 04 03.9 +1.9**
comp=Z,652nm,0.8s,mb6.7,SNR=5.5
AKTK Aktyubinsk 57.80 332 P **P** **21 04 03.4 -0.7**
AKTK S **S** **21 11 59.3 -2.1**
AKTO Aktyubinsk 57.80 332 P **P** **21 04 03.4 -0.7**
comp=Z,69nm,1.0s,mb5.6,baz=129,slow=7.1,SNR=63
AKTO S **S** **21 11 59.3 -2.1**
comp=Z,1.5nm,0.8s,baz=325,slow=21,SNR=4.0
AKTO Aktyubinsk 57.80 332 P **P** **21 04 03.4 -0.7**
AKTO S **S** **21 11 59.3 -2.1**
AKTO pmax pmax
comp=Z,69nm,1.0s,mb5.6
AKTO smax
comp=N,2.0nm,0.8s
CLNS Chul'man 58.87 18 *e*P **P** **21 04 12.2 +0.7**
CLNS *e* 21 04 59.9
CLNS *e* 21 06 20.2
CLNS *e*PPP 21 07 40.7
CLNS *e*S **S** **21 12 19.8 +4.5**
CLNS *e*SS SS 21 16 09.5 +0.6
CLNS pmax pmax
comp=Z,192nm,0.8s,mb6.2
CLNS pmax pmax
comp=N,119nm,0.9s
CLNS pmax pmax
comp=E,85nm,0.9s
CLNS pmax pmax
comp=Z,50nm,1.1s,mb5.5
CLNS pmax pmax
comp=N,53nm,0.9s

CLNS pmax pmax
comp=E,40nm,1.0s
CLNS smax
comp=N,3μm,11.6s
CLNS smax
comp=Z,2μm,13.3s
CLNS smax
comp=E,2μm,14.4s
CLNS MLR MLR
comp=N,40μm,14.0s,MS6.8
CLNS MLR MLR
comp=Z,55μm,14.0s,MS6.8
CLNS MLR MLR
comp=E,37μm,15.0s,MS6.8
KMBO Kilima Mbogo 59.20 267 P **P** **21 04 13.8 0.0**
comp=E,8.6nm,0.8s,mb4.8,baz=46,slow=9.9,SNR=22
KMBO S **S** **21 12 20.3 +0.7**
comp=E,1.6nm,1.2s,baz=236,slow=14,SNR=1.8
KMBO LR LR 21 27 02.4
comp=E,23μm,18.9s,MS6.3,baz=83,slow=33
KMBO Kilima Mbogo 59.20 267 P **P** **21 04 15.5 +1.7**
SNR=15
KMBO Kilima Mbogo 59.20 267 P **P** **21 04 13.9 0.0**
KMBO S **S** **21 12 20.3 +0.7**
KMBO pmax pmax
comp=Z,9.0nm,0.8s
KMBO smax
comp=N,2.0nm,1.2s
KMBO MLR MLR
comp=Z,23μm,18.9s
KMBO Kilima Mbogo 59.20 267 *e*P **P** **21 04 15.3 +1.5**
comp=Z,44nm,1.0s,mb5.4
KMBO LR LR
comp=Z,23μm,20.0s,MS6.3
MAK Makhachkala 59.30 320*c* *i*P **P** **21 04 14.0 -0.5**
MAK *i* 21 05 02.9
MAK *i* 21 06 23.0
MAK *i* PPP 21 07 52.2
MAK *i* S **S** **21 12 18.3 -2.5**
MAK *i* 21 14 02.6
MAK *i* SS SS 21 16 14.0 -1.6
MAK pmax pmax
comp=Z,213nm,1.7s,mb5.9
MAK MLR MLR
comp=Z,10μm,21.0s,MS5.9
MAK Makhachkala 59.30 320 *e*P **P** **21 04 13.2 -1.3**
HAKT HAKKARI 59.56 313 *i*P **P** **21 04 12.1 -4.2**
YSS Yuzh-Sakhalins 59.85 35α *i*P **P** **21 04 18.3 0.0**
YSS *i* pP 21 04 28.0 +0.3
YSS *i* 21 05 05.0
YSS *e* 21 06 33.0
YSS *e*PPP 21 07 52.0
YSS *e*S **S** **21 12 25.0 -3.0**
YSS *i*PS 21 12 42.0
YSS *e*SS SS 21 16 30.0 +5.6
YSS *e*SSS 21 18 50.0
YSS pmax pmax
comp=Z,350nm,1.1s,mb6.3
YSS pmax pmax
comp=N,100nm,1.2s
YSS pmax pmax
comp=Z,4μm,7.0s
YSS pmax pmax
comp=N,2μm,5.0s
YSS pmax pmax
comp=E,2μm,7.0s
YSS MLR MLR
comp=Z,10μm,14.0s,MS6.1
YSS MLR MLR
comp=N,14μm,15.0s
YSS Yuzh-Sakhalins 59.85 35⇑ *i*P **P** **21 04 18.6 +0.2**
comp=N,370nm,1.1s,mb6.3
GNI Garni 59.87 316 P **P** **21 04 18.9 +0.5**
comp=N,33nm,0.9s,mb5.3,baz=307,slow=4.4,SNR=10
GNI S **S** **21 12 27.4 -0.8**
comp=N,1.2nm,0.4s,baz=333,slow=18,SNR=2.6
GNI Garni 59.87 316 P **P** **21 04 18.9 +0.5**
GNI S **S** **21 12 27.4 -0.8**
GNI pmax pmax
comp=Z,33nm,1.0s
GNI smax
comp=N,1.0nm,0.4s
GNI Garni 59.87 316 *e*P **P** **21 04 18.4 0.0**
comp=N,73nm,0.8s,mb5.8
GNI LR LR
comp=Z,10μm,21.0s,MS5.9
DGRG David-gareji 60.00 318 P **P** **21 04 19.3 -0.1**
DGRG David-gareji 60.00 318 P **P** **21 04 26.7 +7.3**
TVAN Van 60.15 314 *i*P **P** **21 04 18.8 -1.6**
YUK Yuzh-Kuril'sk 60.22 39⇑ *i*P **P** **21 04 21.0 +0.1**
YUK *e* 21 05 13.0
YUK *e* 21 06 36.0
YUK *i* S **S** **21 12 37.0 +4.3**
YUK *i* *PP sS 21 12 52.0 +4.0
YUK *i* 21 14 09.0
YUK *e*SS SS 21 16 27.0 -3.1
YUK pmax pmax
comp=N,4μm,4.5s
YUK pmax pmax
comp=E,3μm,4.5s
YUK pmax pmax
comp=Z,6μm,4.5s
YUK pmax pmax
comp=Z,180nm,0.5s,mb6.4
YUK smax
comp=N,3μm,5.0s
YUK smax
comp=E,4μm,5.0s
YUK MLR MLR
comp=N,16μm,15.0s,MS6.5
YUK MLR MLR
comp=E,23μm,15.0s,MS6.5
YUK MLR MLR
comp=Z,31μm,15.0s,MS6.6
TOO Toolangi 60.37 136 *e*P **P** **21 04 23.7 +1.9**
comp=Z,34nm,0.8s,mb5.4
MTA Mtatsminda 60.50 318 P **P** **21 04 23.1 +0.4**
TBLG Delisi 60.55 318 *e*P **P** **21 04 23.1 0.0**
TBLG Delisi 60.55 318 P **P** **21 04 23.1 0.0**
DIGO Kars 60.93 316 *i*P **P** **21 04 20.7 -5.0**
SVE Sverdlovsk 61.29 339α *i*P **P** **21 04 27.2 -0.9**
SVE *e* 21 04 45.3
SVE *e* 21 05 08.0
SVE *e* 21 06 47.0
SVE *e*PPP 21 08 16.0
SVE *i* S **S** **21 12 46.0 -0.3**
SVE *e* 21 14 10.0
SVE *e*SS SS 21 16 44.0 -2.9
SVE pmax pmax
comp=Z,440nm,2.0s,mb6.2
SVE pmax pmax
comp=N,1μm,10.0s
SVE pmax pmax
comp=E,1μm,10.0s
SVE pmax pmax
comp=Z,4μm,10.0s
SVE MLR MLR
comp=N,10μm,16.0s,MS6.1
SVE MLR MLR
comp=E,6μm,16.0s,MS6.1
SVE MLR MLR
comp=Z,14μm,16.0s,MS6.2
BEST Besiri 61.47 312 *i*P **P** **21 04 24.5 -4.8**
ZEI Tsey 61.56 318 *e*P **P** **21 04 29.8 -0.2**
ZEI pmax pmax
comp=Z,41nm,0.9s,mb5.6
MARD Mardin 61.63 312 *i*P **P** **21 04 24.5 -5.9**
ARU Arti 61.78 337 P **P** **21 04 30.9 -0.5**
comp=Z,763nm,1.0s,mb6.8,SNR=67
ARU Arti 61.78 337⇑ *i*P **P** **21 04 30.8 -0.6**
ARU *e* 21 05 08.9
ARU *e* 21 06 45.4
ARU *e*PPP 21 08 14.6
ARU *e*S **S** **21 12 52.2 -0.3**
ARU *e* 21 14 18.3
ARU *e*SS SS 21 16 52.3 -2.2
ARU *e*SSS 21 19 36.5
ARU pmax pmax
comp=Z,159nm,1.1s,mb6.1
ARU MLR MLR
comp=Z,21μm,22.0s,MS6.3
ARU MLR MLR
comp=N,9μm,19.0s,MS6.2
ARU MLR MLR
comp=E,15μm,21.0s,MS6.2

ARMA Armidale 61.90 126 *e*P **P** **21 04 34.0 +1.7**
BNGL BINGOL 61.95 313 *i*P **P** **21 04 29.3 -3.2**
CNB Canberra Magne 62.09 132 *e*P **P** **21 04 34.2 +0.7**
comp=E,82nm,1.4s,mb5.7
ERZM Erzurum 62.15 315 *i*P **P** **21 04 33.2 -0.7**
CHVG Ch'k'valeri 62.76 318 P **P** **21 04 39.4 +1.5**
KIV Kislovodsk 62.87 319 P **P** **21 04 38.6 -0.2**
comp=E,578nm,1.0s,mb6.7,SNR=13
KIV Kislovodsk 62.87 319⇑P **P** **21 04 38.6 -0.1**
SNR=20
KIV Kislovodsk 62.87 319*c* *i*P **P** **21 04 38.4 -0.4**
KIV *i* 21 04 56.5
KIV *e* 21 05 15.3
KIV *e* 21 06 53.0
KIV *i* S **S** **21 13 05.5 -0.8**
KIV *i* 21 14 29.0
KIV pmax pmax
comp=Z,84nm,1.0s,mb5.8
KIV MLR MLR
comp=Z,6μm,22.0s,MS5.7
KIV Kislovodsk 62.87 319⇑ *i*P **P** **21 04 38.4 -0.4**
comp=Z,121nm,1.0s,mb6.0
KIV LR LR
comp=Z,6μm,22.0s,MS5.7
ASF Jabal al Asfar 63.11 305 P **P** **21 04 41.6 +1.3**
comp=Z,7.8nm,0.8s,mb4.9,baz=342,slow=6.5,SNR=16
ASF S **S** **21 13 09.6 +0.3**
comp=Z,0.4nm,0.3s,baz=354,slow=16,SNR=1.7
ASF LR LR 21 34 36.9
comp=Z,12μm,18.1s,MS6.1,baz=196,slow=38
ASF Jabal al Asfar 63.11 305 P **P** **21 04 41.6 +1.3**
ASF S **S** **21 13 09.6 +0.3**
ASF pmax pmax
comp=Z,8.0nm,0.8s
ASF MLR MLR
comp=Z,12μm,18.1s
GOF Gofitskoye 63.13 320⇑ *i*P **P** **21 04 42.0 +1.6**
GOF *i* 21 05 18.6
GOF pmax pmax
comp=Z,58nm,1.0s,mb5.7
ELZG Elazig 63.37 312 *i*P **P** **21 04 40.8 -1.2**
ATAB Bozova 63.55 311 *i*P **P** **21 04 40.8 -2.4**
MACK Trabzon 63.66 315 *i*P **P** **21 04 40.8 -3.2**
MALT Malatya 63.72 312⇓ *i*P **P** **21 04 45.5 +1.1**
MALT Malatya 63.72 312 P **P** **21 04 45.0 +0.6**
MALT pmax pmax
comp=Z,74nm,1.1s,mb5.6
MALT Malatya 63.72 312⇑ *i*P **P** **21 04 44.6 +0.3**
comp=Z,74nm,1.1s,mb5.6
KELT Kelkit 63.74 314 *i*P **P** **21 04 38.0 -6.6**
EIL Elat 64.12 302 *e*P **P** **21 04 47.8 +0.8**
comp=Z,910nm,0.9s,mb6.8
TAU Tasmania Unive 64.25 141 PFAKE 21 05 00.0 +12
TAU LR LR
comp=Z,13μm,22.0s,MS6.1
HNR Honiara 64.41 102 P **P** **21 04 47.9 -1.0**
comp=Z,204nm,0.8s,mb6.2,baz=269,slow=4.1,SNR=7.0
HNR S **S** **21 13 24.0 -1.5**
comp=Z,41nm,0.5s,baz=273,slow=5.0,SNR=2.0
HNR Honiara 64.41 102 P **P** **21 04 47.9 -1.0**
HNR S **S** **21 13 24.0 -1.5**
HNR pmax pmax
comp=Z,204nm,0.8s,mb6.2
HNR smax
comp=N,41nm,0.5s
HNR Honiara 64.41 102 *e*P **P** **21 04 47.4 -1.5**
comp=N,268nm,0.9s,mb6.3
HNR LR LR
comp=Z,6μm,22.0s,MS5.8
YAK Yakutsk 64.53 17 *i*P **P** **21 04 49.0 -0.7**
YAK *e*PP PP 21 07 11.0 -0.7
YAK *i* S **S** **21 13 26.0 -0.9**
YAK *e*SS SS 21 17 40.0 +2.5
YAK pmax pmax
comp=Z,482nm,1.0s,mb6.5
YAK Yakutsk 64.53 17⇑ *i*P **P** **21 04 48.9 -0.8**
comp=Z,807nm,0.9s,mb6.8
YAK LR LR
comp=Z,34μm,20.0s,MS6.5
MMAI Mount Meron Ar 64.54 306 P **P** **21 04 50.5 +0.8**
comp=Z,16nm,0.8s,mb5.1,baz=96,slow=8.5,SNR=18
MMAI S **S** **21 13 27.6 +0.5**
comp=Z,0.2nm,0.3s,baz=144,slow=32,SNR=2.2
BHL Bhannes 64.57 307 *e*P **P** **21 04 49.8 -0.1**
SOKR Solikamsk 64.69 339*c* *i*P **P** **21 04 50.3 -0.4**
SOKR *i* 21 07 11.4
SOKR S **S** **21 13 25.8 -3.1**
SOKR pmax pmax
comp=Z,240nm,1.1s,mb6.1
SOKR MLR MLR
comp=Z,19μm,21.0s,MS6.3
GRSN GIRESUNGRSN 64.72 315 *i*P **P** **21 04 49.5 -1.4**
MEST Erdemli 66.47 309 *i*P **P** **21 04 58.1 -4.1**
ANN Anapa 66.67 318*c* *i*P **P** **21 05 01.7 -1.8**
ANN *i* 21 05 30.4
ANN *i* 21 07 30.3
ANN *i* PPP 21 09 17.2
ANN *i* S 21 13 48.6 -4.4
ANN pmax pmax
comp=Z,2μm,9.0s
ANN MLR MLR
comp=Z,6μm,19.0s,MS5.8
VRHR Novokhopersk 66.69 326 *e*P **P** **21 05 02.2 -1.4**
VRHR *e*S S 21 13 47.9 -5.4
VRHR *e*SPP 21 14 17.9
VRHR *e*SS SS 21 18 16.5 +5.4
VRHR pmax pmax
comp=Z,90nm,0.7s,mb5.9
VRHR pmax pmax
comp=N,20nm,1.3s
VRHR pmax pmax
comp=E,20nm,0.5s
VRHR smax
comp=N,1μm,7.1s
VRHR smax
comp=Z,150nm,7.0s
VRHR smax
comp=E,560nm,5.8s
VRHR MLR MLR
comp=Z,3μm,25.0s,MS5.4
VRHR MLR MLR
comp=N,4μm,23.0s,MS5.9
VRHR MLR MLR
comp=E,7μm,25.0s,MS5.9
CSS Prodhromos 66.69 307 P **P** **21 05 04.0 +0.4**
comp=E,0.9nm,0.8s
MAMC Mammari 66.83 307 P **P** **21 05 04.5 0.0**
CTKT Corum 67.12 313 *i*P **P** **21 05 01.0 -5.4**
CDAG Cicekdag 67.13 312 *i*P **P** **21 05 01.9 -4.5**
BOYT Boyabat 67.28 314 *i*P **P** **21 05 04.8 -2.6**
ALFC Alevga 67.32 307 P **P** **21 05 08.0 +0.4**
ERMK Ermenek 67.44 309 *i*P **P** **21 05 04.8 -3.6**
PPCY Paphos 67.46 307 P **P** **21 05 05.1 -3.4**
BR131 Keskin Array S 67.70 312 *e*P **P** **21 05 09.3 -0.7**
comp=E,24nm,0.8s,mb5.3
BR131 LR LR
comp=Z,7μm,22.0s,MS5.8
BRTR Keskin Array B 67.70 312 P **P** **21 05 09.1 -1.0**
comp=Z,17nm,0.8s,mb5.1,baz=120,slow=7.3,SNR=36
BRTR S S 21 14 03.6 -1.9
comp=Z,0.5nm,0.8s,baz=22,slow=4.0,SNR=2.3
BRTR PKP2ab 21 33 34.1
comp=Z,0.4nm,0.8s,baz=293,slow=13,SNR=3.8
BRTR LR LR 21 37 25.2
comp=Z,4μm,18.6s,MS5.7,baz=243,slow=38
BRTR Keskin Array B 67.70 312 P **P** **21 05 09.1 -1.0**
BRTR S S 21 14 03.6 -1.9
BRTR pmax pmax
comp=Z,17nm,0.8s
BRTR smax
comp=N,1.0nm,0.9s
BRTR MLR MLR
comp=Z,4μm,18.6s
PECR Pechory 67.98 332κ *i*P **P** **21 05 10.4 -1.4**
PECR *e**PP pP 21 05 32.6 +11
PECR *e* 21 07 41.0
PECR *i* S S 21 14 04.7 -4.2
PECR *e**SS sS 21 14 49.0 +25
PECR *e* 21 15 08.6
PECR *i* SS SS 21 18 23.0 -8.2
PECR pmax pmax
comp=Z,2μm,1.6s,mb6.8
PECR pmax pmax
comp=N,700nm,12.0s
PECR pmax pmax
comp=Z,3μm,12.0s
PECR pmax pmax
comp=E,1μm,9.0s
PECR smax
comp=N,4μm,18.0s
PECR smax
comp=E,2μm,9.0s
ELDT Eldivan 68.08 313 *i*P **P** **21 05 10.5 -1.8**
VRSR Storozhevoye 68.11 325 *e*P **P** **21 05 11.1 -1.5**
VRSR *e**PP pP 21 05 19.9 -2.2
VRSR *e*S S 21 14 04.0 -6.4
VRSR *e*SS SS 21 18 25.8 -7.4
VRSR pmax pmax
comp=Z,80nm,0.9s,mb5.8
VRSR pmax pmax
comp=N,30nm,0.8s
VRSR pmax pmax
comp=E,90nm,0.8s
VRSR smax
comp=N,1μm,5.6s
VRSR smax
comp=Z,170nm,4.7s
VRSR smax
comp=E,440nm,4.5s
VRSR MLR MLR
comp=Z,7μm,20.0s,MS5.9
VRSR MLR MLR
comp=N,4μm,23.0s,MS5.8
VRSR MLR MLR
comp=E,5μm,20.0s,MS5.8
VOR Voronezh 68.33 326 *e*P **P** **21 05 12.0 -2.0**
VOR *e* pP 21 05 20.0 -3.4
VOR *e* 21 14 33.0
VOR pmax pmax
comp=Z,170nm,1.4s,mb5.9
VOR pmax pmax
comp=E,130nm,2.0s
VOR pmax pmax
comp=Z,180nm,2.0s,mb5.8
ANTO Ankara 68.37 312⇑ *i*P **P** **21 05 13.6 -0.6**
ANTO Ankara 68.37 312 ⇑P **P** **21 05 14.0 -0.3**
SNR=11
ANTO Ankara 68.37 312 *e*P **P** **21 05 13.7 -0.5**
ANTO pmax pmax
comp=Z,101nm,1.3s,mb5.7
ANTO MLR MLR
comp=Z,8μm,22.0s,MS5.9
ANTO Ankara 68.37 312 *e*P **P** **21 05 13.7 -0.5**
comp=Z,101nm,1.3s,mb5.7
ANTO LR LR
comp=Z,8μm,22.0s,MS5.9
BALT Daday 68.40 314 *i*P **P** **21 05 09.6 -4.9**
KDHN Kadinhani 68.52 311 *i*P **P** **21 05 10.5 -4.7**
MIR Mirnyy 68.82 181*c* *i*P **P** **21 05 18.0 +1.0**
MIR *e* 21 15 06.0
MIR pmax pmax
comp=Z,250nm,1.5s,mb5.9
MIR pmax pmax
comp=Z,2μm,8.0s
MIR MLR MLR
comp=N,4μm,18.0s,MS5.8
MIR MLR MLR
comp=E,2μm,18.0s,MS5.8
MIR MLR MLR
comp=Z,9μm,18.0s,MS6.0
SIM Simferopol' **68.94 318***c* *i*P **P** **21 05 17.5 -0.3**
SIM *e* 21 05 46.0
SIM *e* 21 07 53.0
SIM *e*PPP 21 09 38.0
SIM *e*S S 21 14 18.0 -2.2
SIM pmax pmax
comp=Z,68nm,0.9s,mb5.6
SIM pmax pmax
comp=Z,970nm,11.8s
SGKT Sivrigoynuk 69.10 313 *i*P **P** **21 05 17.2 -1.5**
CASY Casey 69.26 174 *e*P **P** **21 05 27.5 +7.7**
CASY Casey 69.26 174 P **P** **21 05 20.4 +0.6**
comp=Z,118nm,1.4s,mb5.6
CASY LR LR
comp=Z,18μm,20.0s,MS6.3
SKR Severo-Kuril's 69.39 36⇑ *i*P **P** **21 05 17.2 -3.4**
SKR *e* pP 21 05 27.5 -2.5
SKR *e* pP 21 05 28.0 -2.0
SKR *e* 21 05 37.7
SKR *e*PPP 21 09 31.0
SKR *e*S S 21 14 26.0 +0.5
SKR *e* 21 15 04.0
SKR *e*SS SS 21 18 54.0 +1.2
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=E,220nm,1.0s
SKR pmax pmax
comp=Z,650nm,1.0s,mb6.5
SKR pmax pmax
comp=N,1μm,2.0s
SKR pmax pmax
comp=E,4μm,2.0s
SKR pmax pmax
comp=Z,7μm,2.0s
SKR smax
comp=N,5μm,10.0s
SKR smax
comp=E,12μm,10.0s
SKR MLR MLR
comp=N,16μm,18.0s,MS6.3
SKR MLR MLR
comp=E,5μm,18.0s,MS6.3
SKR MLR MLR
comp=Z,18μm,18.0s,MS6.3
ISP Isparta 69.59 310⇑ *i*P **P** **21 05 20.8 -1.0**
LSZ Lusaka 69.66 253 S S 21 14 30.4 +1.7
LSZ Lusaka 69.66 253 P **P** **21 05 22.9 +0.7**
SNR=8.5
LSZ Lusaka 69.66 253 P **P** **21 05 22.7 +0.5**
LSZ pmax pmax
comp=Z,27nm,1.0s,mb5.1
LSZ Lusaka 69.66 253 *e*P **P** **21 05 22.4 +0.2**
comp=Z,27nm,1.0s,mb5.1
LSZ LR LR
comp=Z,16μm,20.0s,MS6.3
ESKT Eskisehir 69.73 311 *i*P **P** **21 05 19.2 -3.5**
TKTP Tekketepe 69.78 310 *i*P **P** **21 05 20.1 -2.8**
HENT Hendek 70.02 313 *i*P **P** **21 05 15.3 -9.1**
WAKE Wake Island 70.62 71 PFAKE 21 05 40.0 +12
WAKE LR LR
comp=Z,8μm,21.0s,MS5.9
MA2 Magadan 70.64 26*c* *i*P **P** **21 05 28.2 0.0**
MA2 *e*PP PP 21 08 04.1 -0.7
MA2 *e* 21 09 48.5
MA2 *e*S S 21 14 40.2 0.0
MA2 pmax pmax
comp=Z,200nm,0.9s,mb6.0
MA2 Magadan 70.64 26 *e*P **P** **21 05 28.2 0.0**
comp=Z,144nm,0.9s,mb5.9
MA2 LR LR
comp=Z,34μm,19.0s,MS6.6
MOS Moscow 70.90 329*c* *i*P **P** **21 05 29.4 -0.4**
MOS *e* 21 05 41.2
MOS *e* 21 05 50.7
MOS *e* 21 08 07.4
MOS *e*PPP 21 09 49.2
MOS *i* S S 21 14 39.6 -3.6
MOS *e* 21 15 25.9
MOS *e*SS SS 21 19 14.9 -1.2
MOS *e*SSS 21 22 28.7
MOS pmax pmax
comp=Z,1μm,2.6s,mb6.3
MOS pmax pmax
comp=Z,273nm,1.2s,mb6.1
MOS smax
comp=N,5μm,5.3s
MOS smax
comp=E,1μm,5.8s
MOS MLR MLR
comp=N,10μm,21.5s,MS6.1
MOS MLR MLR
comp=E,7μm,21.5s,MS6.1
MOS MLR MLR
comp=Z,24μm,21.5s,MS6.4
ARG Arkhangelos 71.11 307 *e*P **P** **21 05 30.8 -0.3**
ULDT Uludag 71.16 312 *i*P **P** **21 05 24.9 -6.5**
OBN Obninsk 71.18 328 P **P** **21 05 30.7 -0.8**
comp=Z,971nm,0.9s,mb6.7,SNR=19
OBN Obninsk 71.18 328*c* *i*P **P** **21 05 30.8 -0.7**

OBN *i* pP 21 05 39.2 -1.8
OBN *i* 21 05 48.5
OBN *e* 21 08 06.3
OBN *i* S S 21 14 42.6 -3.9
OBN *i* PS 21 15 32.0
OBN *i* SS SS 21 19 21.1 +0.7
OBN pmax pmax
comp=Z,184nm,1.0s,mb6.0
OBN MLR MLR
comp=Z,9μm,18.0s,MS6.1
OBN Obninsk 71.18 328 *e*P **P 21 05 30.5 -1.1**
comp=Z,184nm,1.0s,mb6.0
OBN LR LR
comp=Z,10μm,20.0s,MS6.1
AYDN Tasoluk 71.58 309 *i* P **P 21 05 34.5 +0.5**
PET Petropavlovsk 71.72 34α *i*P **P 21 05 34.6 -0.2**
PET *i* S S 21 14 53.0 +0.2
PET *e* 21 15 20.0
PET pmax pmax
comp=Z,4μm,6.6s
PET pmax pmax
comp=Z,203nm,1.2s,mb5.9
PET Petropavlovsk 71.72 34⇑ *i*P **P 21 05 34.5 -0.3**
comp=Z,240nm,1.1s,mb6.0
PET LR LR
comp=Z,15μm,20.0s,MS6.3
KARP Karpathos 71.75 307 *e*P **P 21 05 36.0 +1.0**
BDRM Kayabasi 71.81 308 *i* P **P 21 05 26.8 -8.5**
BTOK Tokmak 71.90 311 *i* P **P 21 05 30.7 -5.2**
ELBA Catalca 71.91 313 *i* P **P 21 05 28.8 -7.2**
KDAG Bornova 72.20 310 *i* P **P 21 05 35.5 -2.2**
KLMR Klimovskoe 72.33 335*c i*P **P 21 05 37.6 -0.9**
KLMR *e* 21 08 17.1
KLMR *e*S S 21 14 54.5 -5.2
KLMR pmax pmax
comp=Z,250nm,1.5s,mb5.9
KLMR pmax pmax
comp=Z,1μm,9.8s
KLMR MLR MLR
comp=Z,16μm,25.0s,MS6.2
SMG Samos 72.40 309 *e*P **P 21 05 39.9 +1.0**
DZM Mont Dzumac 72.52 114 *e*P **P 21 05 40.7 +1.1**
DZM Mont Dzumac 72.52 114 P **P 21 05 40.2 +0.6**
comp=Z,47nm,1.0s,mb5.4,baz=294,slow=5.9,SNR=10
DZM LR LR 21 38 31.9
comp=Z,10μm,21.7s,MS6.0,baz=283,slow=37
PSN Preselentsi 72.67 315 *i* P **P 21 05 40.1 -0.4**
TIRR Tirgusor 72.70 316⇑ *i*P **P 21 05 40.4 -0.2**
TIRR Tirgusor 72.70 316 *e*P **P 21 05 39.8 -0.8**
URLA Izmir 72.72 309 *i* P **P 21 05 38.3 -2.4**
SART Tekirdag 72.73 312 *i* P **P 21 05 36.4 -4.4**
AYVA Ayvalik 72.82 310 *i* P **P 21 05 37.4 -4.0**
NPS Neapolis 72.95 306 *e*P **P 21 05 42.4 +0.3**
HARR Harsova 73.09 316⇓ *i*P **P 21 05 42.9 0.0**
HARR Harsova 73.09 316 ⇓P **P 21 05 42.9 0.0**
PRD Provadia 73.12 314 *i* P **P 21 05 42.2 -0.9**
PRK Paraskevi 73.13 310 *e*P **P 21 05 43.5 +0.3**
CHOS Chios island 73.14 309 *e*P **P 21 05 43.3 +0.1**
APE Apeiranthos 73.31 308 *e*P **P 21 05 34.9 -9.4**
APE Apeiranthos 73.31 308⇑ *i*P **P 21 05 43.4 -0.9**
BOZC Bozcaada 73.41 311 *i* P **P 21 05 40.3 -4.6**
IDI Anoyia 73.53 306 S S 21 15 10.6 -2.8
comp=Z,6.2nm,0.8s,baz=137,slow=4.6,SNR=1.8
JMB Yambol 73.55 314 *i* P **P 21 05 45.3 -0.3**
ALN Alexandroupoli 73.62 312 *e*P **P 21 05 47.7 +1.7**
LBTB Lobatse 73.67 243 P **P 21 05 46.9 +0.5**
LBTB S S 21 15 15.6 +0.7
LBTB Lobatse 73.67 243 *e*P **P 21 05 46.6 +0.3**
LBTB pmax pmax
comp=Z,72nm,1.0s,mb5.6
LBTB MLR MLR
comp=Z,17μm,20.0s,MS6.3
LBTB Lobatse 73.67 243 *e*P **P 21 05 46.6 +0.3**
comp=Z,72nm,1.0s,mb5.6
LBTB LR LR
comp=Z,17μm,20.0s,MS6.3
MAW Mawson 73.67 193 P **P 21 05 45.4 -1.0**
comp=Z,5.8nm,0.8s,baz=31,slow=7.1,SNR=17
MAW S S 21 15 12.3 -2.6
comp=Z,1.0nm,1.0s,baz=86,slow=18,SNR=1.7
MAW LR LR 21 35 38.0
comp=Z,6μm,18.0s,MS5.9,baz=37,slow=34
MAW Mawson 73.67 193 P **P 21 05 45.4 -1.0**
MAW S S 21 15 12.3 -2.7
MAW pmax pmax
comp=Z,6.0nm,0.8s
MAW smax
comp=N,1.0nm,1.0s
MAW MLR MLR
comp=Z,6μm,18.0s
MAW Mawson 73.67 193⇓ *i*P **P 21 05 46.4 0.0**
comp=Z,14nm,0.9s,mb4.9
MAW LR LR
comp=Z,10μm,19.0s,MS6.1
AKASG Malin Array Be 73.82 322 P **P 21 05 46.1 -1.1**
comp=Z,50nm,0.8s,mb5.5,baz=91,slow=4.7,SNR=58
AKASG Malin Array Be 73.82 322 P **P 21 05 46.1 -1.1**
AKASG pmax pmax
comp=Z,50nm,0.8s
AKBB Malin Array Si 73.82 322 *e*P **P 21 05 45.9 -1.3**
LIA Limnos Island 74.08 311 *e*P **P 21 05 46.3 -2.5**
VAM Vamos 74.11 306 *e*P **P 21 05 49.0 +0.1**
SZH Strazhica 74.18 314 *i* P **P 21 05 48.9 -0.4**
VRI Vrincioaia 74.19 317⇓ *i*P **P 21 05 50.2 +0.8**
VRI Vrincioaia 74.19 317 ⇓P **P 21 05 50.2 +0.8**
DIM Dimitrovgrad 74.22 313 *i* P **P 21 05 48.8 -0.8**
KDZ Kurdzhali 74.23 313 *i* P **P 21 05 48.8 -0.9**
PLOR Plostina 74.24 317⇑ *i*P **P 21 05 51.0 +1.3**
PVL Pavlikeni 74.60 314 *i* P **P 21 05 51.8 0.0**
MLR Muntele Rosu 74.64 317 P **P 21 05 52.4 +0.4**
comp=Z,42nm,1.0s,mb5.3,baz=44,slow=3.4,SNR=18
MLR PP PP 21 08 43.0 +3.9
comp=Z,12nm,0.8s,baz=99,slow=3.7,SNR=2.3
MLR LR LR 21 45 31.2
comp=Z,6μm,20.4s,MS5.9,baz=294,slow=41
MLR Muntele Rosu 74.64 317⇓ *i*P **P 21 05 52.8 +0.8**
MLR Muntele Rosu 74.64 317 P **P 21 05 52.4 +0.4**
MLR 21 08 43.0
MLR pmax pmax
comp=Z,42nm,1.0s
MLR pmax pmax
comp=Z,12nm,0.8s
MLR MLR MLR
comp=Z,6μm,20.4s
ZIMR 74.66 315⇓ *i*P **P 21 05 52.4 +0.2**
ZIMR 74.66 315 ⇓P **P 21 05 52.4 +0.3**
RZN Rozhen 74.75 313 *i* P **P 21 05 52.4 -0.3**
PLD Plovdiv 74.84 313 *i* P **P 21 05 52.6 -0.6**
ATH Athens Observa 74.88 309 *e*P **P 21 05 52.3 -1.1**
MTUR Matau 75.19 316⇑ *i*P **P 21 05 58.0 +2.8**
MTUR Matau 75.19 316 ⇑P **P 21 05 58.0 +2.8**
PAIG Paliouri 75.22 311 *e*P **P 21 05 54.4 -1.0**
VOIR 75.25 316⇓ *i*P **P 21 05 56.6 +1.1**
VOIR 75.25 316 ⇓P **P 21 05 56.6 +1.0**
PGB Panagyurishte 75.31 313 *i* P **P 21 05 55.3 -0.6**
NVR Nevrokopi 75.33 312 *e*P **P 21 05 54.2 -1.8**
MMB Musomiste 75.47 312 *i* P **P 21 05 56.5 -0.3**
NEO Neokhori 75.47 310 *e*P **P 21 05 54.6 -2.2**
PLG Polygyros 75.47 311 *e*P **P 21 05 56.2 -0.6**
DRV Dumont d'Urvil 75.51 164 P **P 21 05 57.0 -0.1**
DRV Dumont d'Urvil 75.51 164 PP PP 21 08 43.0 -3.4
DRV S S 21 15 38.0 +2.4
DRV SS SS 21 20 30.0 +3.5
DRV L 21 25 00.0
LKR Lokris 75.54 309 *e*P **P 21 05 55.0 -2.2**
BURAR Bucovina Array 75.59 319⇑ *i*P **P 21 05 58.3 +0.8**
BURAR Bucovina Array 75.59 319 ⇑P **P 21 05 58.2 +0.7**
SOH Sokhos 75.61 311 *e*P **P 21 05 56.5 -1.2**
MNK Minsk 75.71 326 *e*P **P 21 05 55.0 -3.2**
MNK *e*S S 21 15 31.0 -6.7
HORT Hortiatis 75.77 311 *e*P **P 21 05 57.2 -1.3**
THE Thessaloniki 75.88 311 *e*P **P 21 05 57.5 -1.6**
KKB Krupnik 75.99 312 *i* P **P 21 05 58.5 -1.3**
VTS Vitosha 76.02 313 *i* P **P 21 05 59.4 -0.5**
VTS Vitosha 76.02 313⇑ *i*P **P 21 05 59.8 -0.1**
VTS Vitosha 76.02 313 ⇑P **P 21 05 59.8 -0.1**
PUL Pulkovo 76.06 332 *e*P **P 21 06 00.1 -0.1**
PUL S S 21 15 36.7 -4.9
PUL pmax pmax
comp=Z,200nm,0.9s,mb6.0
PUL pmax pmax
comp=N,35nm,0.6s
PUL pmax pmax
comp=E,209nm,1.0s
PUL smax
comp=N,2μm,4.2s
PUL smax
comp=E,1μm,4.0s
PUL MLR MLR
comp=Z,15μm,20.0s,MS6.3
PUL MLR MLR
comp=N,2μm,14.0s
PUL MLR MLR
comp=E,15μm,20.0s
PUL Pulkovo 76.06 332⇑ *e*P **P 21 06 01.0 +0.8**
LIT Litokhoron 76.15 311 *e*P **P 21 05 59.1 -1.6**
ITM Ithomi 76.18 308 *e*P **P 21 06 01.9 +1.1**
GRG Griva 76.35 311 *e*P **P 21 06 00.5 -1.4**
EVR Evrytania 76.50 309 *e*P **P 21 06 00.9 -1.8**
RLS Riolos of Patr 76.65 308 *e*P **P 21 06 02.5 -1.1**
JOF Joensuu 76.73 335 *e*p **P 21 06 02.8 -1.2**
comp=E,66nm,0.8s,mb5.6
KZN Kozani 76.73 311 *e*P **P 21 06 02.4 -1.6**
GZR Gura Zlata 76.81 316⇓ *i*P **P 21 06 07.0 +2.6**
GZR Gura Zlata 76.81 316 ⇓P **P 21 06 07.0 +2.6**
LVV L'vov 76.83 321 *e*P **P 21 06 04.5 0.0**
LVV *e*S S 21 15 48.0 -2.0
LVV MLR MLR
comp=Z,5μm,22.0s,MS5.8
DRGR 77.10 317⇓ *i*P **P 21 06 06.6 +0.5**
DRGR 77.10 317 ⇓P **P 21 06 06.6 +0.5**
BOLS Boljevac 77.12 314⇓ *i*P **P 21 06 06.5 +0.3**
SKO Skopje 77.22 312⇑ *i*P **P 21 06 05.4 -1.3**
JAN Janina 77.34 310 *e*P **P 21 06 06.5 -0.9**
VLS Valsamata 77.36 308 *e*P **P 21 06 06.8 -0.7**
LKD Levkas 77.37 309 *e*P **P 21 06 06.8 -0.8**
VSU Vasula 77.41 330⇑ *i*P **P 21 06 07.0 -0.8**
LVZ Lovozero 77.44 340 P **P 21 06 07.9 -0.1**
comp=Z,692nm,0.7s,mb6.7,SNR=17
LVZ Lovozero 77.44 340 *e*P **P 21 06 06.0 -2.0**
LVZ *e*S S 21 15 51.8 -4.9
LVZ pmax pmax
comp=Z,72nm,0.9s,mb5.6
LVZ pmax pmax
comp=E,9.0nm,0.8s
LVZ pmax pmax
comp=Z,2μm,5.8s
LVZ pmax pmax
comp=N,232nm,3.8s
LVZ pmax pmax
comp=E,561nm,3.9s
LVZ smax
comp=Z,736nm,3.5s
LVZ smax
comp=N,3μm,5.9s
LVZ smax
comp=E,2μm,7.8s
LVZ Lovozero 77.44 340 PFAKE 21 06 20.0 +12
LVZ LR LR
comp=Z,17μm,20.0s,MS6.4
OHR Ohrid 77.57 311⇑ *i*P **P 21 06 07.7 -1.0**
KWP Kalwaria 77.63 320 *e*P **P 21 06 09.3 +0.3**
KWP *e*pP pP 21 06 19.0 +0.4
KWP *e*S S 21 15 57.5 -1.3
KWP L 21 43 19.1
comp=Z,6.3nm,22.8s
KWP Kalwaria 77.63 320 *e*P **P 21 06 09.3 +0.3**
KWP *e*pP pP 21 06 19.0 +0.4
KWP *e*S S 21 15 57.5 -1.3
BZS Buzias 77.65 316⇓ *i*P **P 21 06 08.7 -0.4**
BZS Buzias 77.65 316 ⇓P **P 21 06 08.7 -0.5**
UZH Uzhgorod 77.71 319 *e*P **P 21 06 09.0 -0.5**
UZH *e*S S 21 15 58.0 -1.6
UZH MLR MLR
comp=Z,2μm,18.0s,MS5.4
IGT Igoumenitsa 77.72 310 *e*P **P 21 06 08.0 -1.5**
APA Apatity 77.73 340⇓ *i*P **P 21 06 09.0 -0.6**
APA *i* 21 06 14.0
APA *i* 21 06 26.0
APA *i* 21 09 08.0
APA *i* PPP 21 10 56.0
APA *i* S S 21 15 58.0 -1.8
APA *i* SS SS 21 21 06.0 +5.9
APA pmax pmax
comp=Z,130nm,1.1s,mb5.8
APA pmax pmax
comp=Z,3μm,11.0s
APA MLR MLR
comp=Z,15μm,19.0s,MS6.3
APA MLR MLR
comp=Z,800nm,17.0s
KOLS Kolonicke sedl 77.78 320 *e*P **P 21 06 10.6 +0.7**
KOLS *e*S S 21 15 58.8 -1.6
GRUS Gruza 78.02 314⇑ *i*P **P 21 06 09.9 -1.3**
KEK Kerkira 78.15 310 *e*P **P 21 06 10.4 -1.5**
SUW Suwalki 78.23 325 *e*P **P 21 06 11.7 -0.7**
SUW *e*S S 21 16 02.1 -3.1
SUW L 21 50 14.2
comp=Z,5.9nm,21.1s
SUW Suwalki 78.23 325 *e*P **P 21 06 11.7 -0.7**
SUW *e*S S 21 16 02.1 -3.1
CRVS Cervenica-Dubn 78.30 319 *e*P **P 21 06 13.0 +0.2**
CRVS *e*S S 21 16 03.1 -2.9
CRVS Cervenica-Dubn 78.30 319 *e*P **P 21 06 13.1 +0.3**
CRVS *e*S S 21 16 03.1 -2.9
BEO Belgrade 78.34 315⇑ *i*P **P 21 06 13.0 +0.1**
PVY Plav 78.38 313⇓ *i*P **P 21 06 12.9 -0.3**
IVA Berane 78.47 313⇓ *i*P **P 21 06 13.9 +0.3**
STHS Stebnicka Huta 78.53 320 *e*P **P 21 06 14.6 +0.6**
STHS pmax pmax
comp=Z,76nm,1.1s,mb5.5
STHS Stebnicka Huta 78.53 320 *e*P **P 21 06 14.6 +0.6**
comp=Z,76nm,1.1s,mb5.5
STHS *e*S S 21 16 08.1 -0.3
DIVS Divcibare 78.57 314⇑ *i*P **P 21 06 13.9 -0.3**
FIA1 FINESS Array S 78.57 333 *e*P **P 21 06 13.5 -0.8**
FINES FINESS Array B 78.57 333 P **P 21 06 13.5 -0.7**
comp=Z,59nm,0.7s,mb5.6,baz=108,slow=5.8,SNR=96
FINES PP PP 21 09 15.4 +3.3
comp=Z,11nm,0.9s,baz=104,slow=16,SNR=3.5
FINES LR LR 21 46 28.6
comp=Z,16μm,20.4s,MS6.3,baz=109,slow=40
FINES FINESS Array B 78.57 333 P **P 21 06 13.5 -0.8**
FINES 21 09 15.4
FINES pmax pmax
comp=Z,59nm,0.7s
FINES pmax pmax
comp=Z,11nm,0.9s
FINES MLR MLR
comp=Z,16μm,20.4s
FINES FINESS Array B 78.57 333 P **P 21 06 13.5 -0.7**
FINES PP PP 21 09 15.4 +3.3
FINES LR LR 21 46 28.6
KAF Kangasniemi 78.66 333 *ep* **P 21 06 13.2 -1.5**
comp=Z,147nm,0.8s,mb6.0,baz=103,slow=5.1
KAF Kangasniemi 78.66 333 *e*P **P 21 06 13.2 -1.5**
KAF pmax pmax
comp=Z,147nm,0.8s,mb6.0
ULC Ulcinj 78.83 312⇓ *i*P **P 21 06 15.8 +0.1**
KECS Kecovo 78.87 319 *e*P **P 21 06 16.0 +0.1**
KECS *e*S S 21 16 10.3 -1.8
KECS Kecovo 78.87 319 *e*P **P 21 06 16.1 +0.2**
KECS pmax pmax
comp=Z,26nm,1.1s,mb5.1
KECS Kecovo 78.87 319 *e*P **P 21 06 16.1 +0.2**
comp=Z,26nm,1.1s,mb5.1
KECS *e*S S 21 16 10.3 -1.8
TTG Podgorica 78.88 313⇓ *i*P **P 21 06 16.1 +0.1**
PLE Pljevlja 78.90 314⇓ *i*P **P 21 06 14.8 -1.2**
SUR Sutherland 79.11 237 PFAKE 21 06 30.0 +13
SUR LR LR
comp=Z,14μm,19.0s,MS6.3
NKY Niksic 79.12 313⇓ *i*P **P 21 06 17.2 -0.1**
NIE Niedzica 79.13 320 *i* Pc 21 06 18.0
BUM Brajici-Budva 79.13 312⇓ *i*P **P 21 06 16.7 -0.6**
WAR Warsaw 79.16 323 *e*P **P 21 06 17.3 -0.2**
WAR *e*S S 21 16 13.2 -1.9
WAR L 21 45 45.1
comp=Z,7.5nm,21.2s
PSZ Piszkesteto 79.18 318⇑ *e*P **P 21 06 17.9 +0.3**
PSZ Piszkesteto 79.18 318⇑ *i*P **P 21 06 18.1 +0.5**
PSZ Piszkesteto 79.18 318 P **P 21 06 17.8 +0.2**
PSZ pmax pmax
comp=Z,130nm,1.2s,mb5.7
PSZ Piszkesteto 79.18 318⇑ *e*P **P 21 06 17.2 -0.4**
comp=Z,133nm,1.2s,mb5.7
UPM Unac-Piva 79.23 313⇓ *i*P **P 21 06 17.1 -0.7**
HCY Herceg Novi 79.44 313⇓ *i*P **P 21 06 19.6 +0.5**
BRY Bratogost 79.46 313⇓ *i*P **P 21 06 18.3 -0.8**
OJC Ojcow 79.59 321⇑ *i*P **P 21 06 19.7 -0.1**
OJC *e*S S 21 16 17.4 -2.2
OJC *e*SS SS 21 21 25.7 -2.2
OJC MLR MLR
comp=Z,26μm,21.8s,MS6.5
BUD Budapest 79.70 318⇑ *e*P **P 21 06 20.5 +0.1**
PKSM Moragy 79.79 316⇑ *i*P **P 21 06 20.9 0.0**
PKSM Moragy 79.79 316 ⇑P **P 21 06 20.9 0.0**
VYHS Vyhne 79.96 319 *i* P **P 21 06 21.8 0.0**
VYHS *e*S S 21 16 21.3 -2.3
VYHS Vyhne 79.96 319 *i* P **P 21 06 21.8 0.0**
comp=Z,93nm,1.7s,mb5.4
VYHS *e*S S 21 16 21.3 -2.3
VYHS LR LR
comp=Z,3μm,22.1s,MS5.7
TSUM Tsumeb 80.20 250 *e*P **P 21 06 24.3 +1.1**
comp=Z,30nm,1.1s,mb5.1
TSUM LR LR
comp=Z,7μm,20.0s,MS6.0
BILL Bilibino 80.36 21*c i*P **P 21 06 23.1 -0.9**
BILL *e* 21 09 20.4
BILL *i* S S 21 16 25.1 -2.7
BILL *i* SS SS 21 21 43.8 +4.2
BILL pmax pmax
comp=Z,74nm,1.6s,mb5.4
BILL MLR MLR
comp=Z,52μm,18.0s,MS6.9
BILL Bilibino 80.36 21 *e*P **P 21 06 22.7 -1.3**
comp=Z,77nm,1.2s,mb5.5
BILL LR LR
comp=Z,51μm,19.0s,MS6.9
OKC Ostrava-Krasne 80.59 320 *e*P **P 21 06 25.5 +0.3**
OKC *e*pP pP 21 06 35.0 +0.2
OKC *e*S S 21 16 29.1 -1.1
OKC *e*SKS 21 16 42.3
OKC AMS AMS 21 47 00.0
comp=Z,4μm,20.5s
OKC Ostrava-Krasne 80.59 320 *e*P **P 21 06 25.5 +0.3**
OKC *e* pP 21 06 35.0 +0.2
OKC *e*S S 21 16 29.1 -1.1
OKC *e* 21 16 42.3
RAC Raciborz 80.59 320 *e*P **P 21 06 26.0 +0.8**
RAC *e*S S 21 16 29.8 -0.4
RAC MLR MLR
comp=E,5μm,24.1s
RAC MLR MLR
comp=N,2μm,19.0s
RAC MLR MLR
comp=Z,5μm,19.4s,MS5.9
RAC Raciborz 80.59 320 *e*P **P 21 06 26.0 +0.8**
RAC *e*S S 21 16 29.8 -0.4
RAC LR LR
comp=Z,5μm,19.4s,MS5.9
RPZ Rata Peaks 80.63 135 P **P 21 06 25.8 +0.4**
comp=Z,23nm,0.9s,mb5.1,baz=40,slow=11,SNR=6.6
RPZ S S 21 16 29.4 -1.2
comp=Z,14nm,1.0s,baz=167,slow=20,SNR=2.1
RPZ LR LR 21 43 38.1
comp=Z,19μm,19.2s,MS6.5,baz=286,slow=37
SMY Shemya 80.68 37 *e*P **P 21 06 25.7 0.0**
SMY pmax pmax
comp=Z,227nm,0.9s,mb6.1
SMY MLR MLR
comp=Z,10μm,22.0s,MS6.1
SMY Shemya 80.68 37 *e*P **P 21 06 25.7 0.0**
comp=Z,227nm,0.9s,mb6.1
SMY LR LR
comp=Z,10μm,22.0s,MS6.1
KEV Kevo 80.72 341 *e*P **P 21 06 24.1 -1.8**
KEV pmax pmax
comp=Z,62nm,0.8s,mb5.6
KEV MLR MLR
comp=Z,12μm,21.0s,MS6.2
KEV Kevo 80.72 341 *e*P **P 21 06 24.1 -1.8**
comp=Z,62nm,0.8s,mb5.6
KEV LR LR
comp=Z,12μm,21.0s,MS6.2
SYO Syowa Base 80.86 198⇑ *e*P **P 21 06 26.4 -0.3**
SMOL Smolenice 80.89 319 *e*P **P 21 06 26.9 +0.1**
MORC Moravsky Berou 80.97 320⇓ *i*P **P 21 06 28.0 +0.8**
MORC Moravsky Berou 80.97 320 P **P 21 06 27.6 +0.4**
MORC pmax pmax
comp=Z,74nm,1.2s,mb5.5
MORC Moravsky Berou 80.97 320⇑ *i*P **P 21 06 27.4 +0.1**
comp=Z,74nm,1.2s,mb5.5
ZST Bratislava 81.07 318 *e*P **P 21 06 28.2 +0.4**
ZST *e* 21 06 43.4
ZST *e* 21 09 49.0
ZST *e*S S 21 16 31.6 -3.6
ZST Bratislava 81.07 318 *e*P **P 21 06 28.2 +0.4**
ZST *e* 21 06 43.4
ZST *e*S S 21 16 31.6 -3.6
ZST pmax pmax
comp=Z,149nm,1.4s,mb5.7
ZST Bratislava 81.07 318 *e*P **P 21 06 28.2 +0.4**
comp=Z,149nm,1.4s,mb5.7
ZST *e* 21 06 43.4
ZST *e*PP PP 21 09 49.0 +16
ZST *e*S S 21 16 31.6 -3.6
ZST LR LR
comp=Z,4μm,20.6s,MS5.7
ARCES ARCESS Array B 81.15 340 P **P 21 06 28.2 0.0**
comp=Z,35nm,0.5s,mb5.6,baz=96,slow=4.9,SNR=239
ARCES S S 21 16 34.7 -1.4
comp=Z,2.6nm,0.9s,baz=15,slow=19,SNR=2.2
ARCES LR LR 21 48 28.3
comp=Z,16μm,20.1s,MS6.4,baz=117,slow=40
ARCES ARCESS Array B 81.15 340 P **P 21 06 28.2 0.0**
ARCES S S 21 16 34.7 -1.3
ARCES pmax pmax
comp=Z,35nm,0.5s
ARCES smax
comp=N,3.0nm,1.0s
ARCES MLR MLR
comp=Z,16μm,20.1s
ARE0 ARCESS Array S 81.15 340⇑ *i*P **P 21 06 28.1 -0.1**
SOP Sopron 81.38 318⇑ *e*P **P 21 06 29.8 +0.4**
KOGS Kog 81.46 316 *e*P **P 21 06 29.8 -0.1**
VRAC Vranov 81.53 319 P **P 21 06 30.4 +0.2**
comp=Z,2.6nm,0.4s,baz=18,slow=1.1,SNR=12
VRAC S S 21 16 40.1 +0.2
comp=Z,1.7nm,0.3s,baz=313,slow=20,SNR=2.3
VRAC Vranov 81.53 319⇑ *i*P **P 21 06 30.6 +0.4**
VRAC Vranov 81.53 319 P **P 21 06 30.4 +0.2**
VRAC S S 21 16 40.1 +0.1
VRAC pmax pmax
comp=Z,3.0nm,0.4s
VRAC smax
comp=N,2.0nm,0.4s
VRAC Vranov 81.53 319 ⇑P **P 21 06 30.6 +0.4**
FG4 Candela 81.54 311 P **P 21 06 30.7 +0.4**
GKP Gorka Klasztor 81.59 323 *e*P **P 21 06 30.0 -0.6**
GKP *e*pP pP 21 06 39.6 -0.6
GKP *e*S S 21 16 37.4 -3.2
GKP L 21 47 52.5
comp=Z,5.8nm,23.3s
KTK1 Kautokeino 81.78 340⇑ *i*P **P 21 06 32.1 +0.6**
DPC Dobruska-Polom 81.81 320 *e*P **P 21 06 32.4 +0.7**
DPC *e* pP 21 06 42.9 +1.6
DPC *e*S S 21 16 42.0 -0.9
DPC *e*x x 21 16 55.5
DPC AMS AMS 21 52 20.0
comp=Z,6μm,17.7s
DPC Dobruska-Polom 81.81 320 *e*P **P 21 06 32.4 +0.7**
DPC *e* pP 21 06 42.9 +1.6
DPC *e*S S 21 16 42.0 -0.9
DPC MLR MLR
comp=Z,6μm,17.7s,MS6.0
CONA Conrad Observa 81.87 318 *i* P **P 21 06 32.1 +0.1**
comp=Z,1μm,7.0s,SNR=12
KSP Ksiaz 81.89 321 *e*P **P 21 06 32.4 +0.3**
KSP *e*pP pP 21 06 42.8 +1.1
KSP *e*S S 21 16 42.2 -1.5
KSP L 21 52 13.8
comp=Z,12nm,21.6s
KSP Ksiaz 81.89 321⇑ *e*P **P 21 06 32.1 0.0**
KSP *e*S S 21 16 41.8 -1.9
KSP LR LR
comp=Z,14μm,20.7s,MS6.3
DOBS Dobrina 81.98 316 *e*P **P 21 06 32.6 0.0**
UPC Upice 82.03 321 *e*P **P 21 06 33.2 +0.3**
UPC *e*pP pP 21 06 43.8 +1.3

UPC eS S 21 16 45.0 -0.1
ARSA Arzberg 82.04 317 *i* P **P 21 06 33.3 +0.4**
comp=Z,773nm,4.2s,SNR=23
BOJS Bojanci 82.07 315 *e*P **P 21 06 33.2 +0.1**
BOJS eS S 21 16 42.2 -3.4
VAE Valguarnera 82.17 307 P **P 21 06 34.7 +1.1**
comp=Z,27nm,1.1s,mb5.1,baz=346,slow=6.0,SNR=3.7
VAE S S 21 16 48.2 +1.6
comp=Z,3.7nm,0.7s,baz=307,slow=5.7,SNR=3.2
TREC Trest 82.25 319 *e*P **P 21 06 34.0 0.0**
TREC *ex* x 21 06 44.7
TREC eS S 21 16 46.8 -0.6
TREC AMS AMS 21 52 40.0
comp=Z,4µm,16.0s
PERS Pernice 82.26 317 *e*P **P 21 06 34.4 +0.3**
NVLJ Novalja 82.27 314 *i* P **P 21 06 32.6 -1.5**
LJU Ljubljana 82.62 316 *e*P **P 21 06 36.2 +0.3**
LJU eS S 21 16 48.4 -2.8
OBKA Obir 82.64 316⇑ *i*P **P 21 06 36.4 +0.4**
comp=Z,834nm,4.5s,SNR=9.7
SNZO South Karori 82.82 132 PFAKE 21 06 50.0 +13
SNZO LR LR
comp=Z,21µm,21.0s,MS6.5
PRU Pruhonice 82.92 320 *e*P **P 21 06 37.5 0.0**
PRU *ex* x 21 06 48.1
PRU eS S 21 16 53.9 -0.3
PRU *e*XS sS 21 17 06.1 -4.1
PRU AMS AMS 21 51 40.0
comp=Z,5µm,19.2s
PRU Pruhonice 82.92 320 *e*P **P 21 06 37.5 0.0**
PRU *e* pP 21 06 48.1 +1.0
PRU eS S 21 16 53.9 -0.3
PRU MLR MLR
comp=Z,5µm,19.2s,MS5.9
MOA Moln 82.93 318 *i* P **P 21 06 37.5 -0.1**
comp=Z,1µm,7.2s,SNR=8.4
PVCC Panska Ves 82.95 320 *e*P **P 21 06 37.9 +0.3**
PVCC *ex* x 21 06 48.0
PVCC eS S 21 16 54.1 -0.4
PVCC AMS AMS 21 52 30.0
comp=Z,9µm,19.2s
VOJS Vojsko 83.07 316 *e*P **P 21 06 38.1 -0.2**
AQU L'Aquila 83.20 312 P **P 21 06 39.3 +0.4**
FUNA Funafuti 83.27 99 PFAKE 21 06 50.0 +11
FUNA LR LR
comp=Z,7µm,21.0s,MS6.0
BRG Berggiesshubel 83.37 321 *e*P **P 21 06 39.9 +0.1**
comp=Z,22nm,0.9s,mb5.2
BRG Berggiesshubel 83.37 321 *e*P **P 21 06 40.1 +0.3**
comp=Z,16nm,1.3s,mb4.9
BRG *i* pP 21 06 50.9 +1.4
comp=Z,62nm,1.8s
BRG *i* 21 06 57.4
comp=Z,66nm,1.5s
BRG PP PP 21 09 45.0 -6.8
BRG S S 21 16 57.0 -1.8
BRG SS SS 21 21 52.0 -32
BRG *e*PKKP PKKPbc 21 24 58.4 -0.5
comp=Z,6.4nm,1.9s
BRG
comp=N,4µm,23.1s
BRG
comp=E,3µm,20.9s
BRG
comp=Z,3µm,19.4s
BRG Berggiesshubel 83.37 321 *e*P **P 21 06 40.1 +0.3**
BRG *i* pP 21 06 50.8 +1.3
BRG *i* 21 06 57.4
BRG S S 21 16 57.0 -1.8
BRG pmax pmax
comp=Z,15nm,1.3s,mb4.9
BRG pmax pmax
comp=Z,16nm,1.8s,mb4.8
BRG pmax pmax
comp=Z,62nm,1.5s,mb5.4
BRG pmax pmax
comp=Z,66nm,1.9s,mb5.3
BRG MLR MLR
comp=N,6µm,23.1s,MS6.0
BRG MLR MLR
comp=E,4µm,20.9s,MS6.0
BRG MLR MLR
comp=Z,3µm,19.5s,MS5.7
BRG Berggiesshubel 83.37 321 *e*P **P 21 06 40.1 +0.3**
comp=Z,16nm,1.3s,mb4.9
BRG *i* pP 21 06 50.9 +1.4
BRG *i* 21 06 57.4
BRG PP PP 21 09 45.0 -6.8
BRG S S 21 16 57.0 -1.8
BRG SS SS 21 21 52.0 -32
BRG *e*PKKP PKKPbc 21 24 58.4 -0.5
BRG LR LR
comp=Z,3µm,19.4s,MS5.7
GEC2 GERESS Array S 83.38 319 *e*P **P 21 06 40.1 +0.2**
comp=Z,69nm,1.1s,mb5.6
GEC2 eS S 21 16 59.2 +0.3
GEC2 GERESS Array S 83.38 319 *e*P **P 21 06 40.1 +0.2**
GEC2 eS S 21 16 59.2 +0.3
GEC2 pmax pmax
comp=Z,69nm,1.1s,mb5.6
GERES GERESS Array B 83.38 319 P **P 21 06 40.1 +0.2**
comp=Z,30nm,0.9s,mb5.3,baz=97,slow=5.4,SNR=112
GERES S S 21 16 57.8 -1.1
comp=Z,0.2nm,0.6s,baz=278,slow=38,SNR=2.1
GERES LR LR 21 50 11.5
comp=Z,5µm,20.6s,MS5.9,baz=277,slow=40
GERES GERESS Array B 83.38 319 P **P 21 06 40.1 +0.2**
GERES S S 21 16 57.8 -1.1
GERES pmax pmax
comp=Z,30nm,0.9s
GERES MLR MLR
comp=Z,5µm,20.6s
TRO Tromso 83.41 340⇑ *i*P **P 21 06 38.0 -2.0**
TRO AMb AMB 21 06 41.7
comp=Z,145nm,1.6s,mb5.8
TRO eS S 21 16 58.6 -0.6
TRO AMS AMS 21 50 00.9
comp=Z,14µm,20.5s,MS6.3
TRO Tromso 83.41 340⇑ *i*P **P 21 06 38.0 -2.0**
TRO pmax pmax
comp=Z,145nm,1.6s,mb5.8
TRO MLR MLR
comp=Z,14µm,20.5s,MS6.3
TRO Tromso 83.41 340⇑ *i*P **P 21 06 38.0 -2.0**
comp=Z,145nm,1.6s,mb5.8
TRO LR LR
comp=Z,14µm,20.5s,MS6.3
KHC Kasperske Hory 83.48 319 *e*P **P 21 06 40.3 -0.1**
KHC *e*pP pP 21 06 50.7 +0.7
KHC eS S 21 16 59.5 -0.4
KHC *e*XS sS 21 17 13.6 -2.3
KHC AMS AMS 21 46 50.0
comp=Z,5µm,20.7s
KHC Kasperske Hory 83.48 319 *e*P **P 21 06 40.3 -0.1**
KHC *e* pP 21 06 50.7 +0.7
KHC eS S 21 16 59.5 -0.4
KHC MLR MLR
comp=Z,5µm,20.7s,MS5.9
KBA Koelnbreinsper 83.50 317 *i* P **P 21 06 40.1 -0.4**
comp=Z,923nm,8.1s,SNR=11
KBA Koelnbreinsper 83.50 317 *i* P **P 21 06 40.1 -0.4**
KBA pmax pmax
comp=Z,923nm,8.1s
GMNA Gemona 83.53 316 P **P 21 06 40.6 -0.1**
RUE Ruedersdorf 83.60 322 *e*P **P 21 06 40.9 -0.1**
comp=Z,54nm,1.0s,mb5.6
RUE eS S 21 16 58.6 -2.5
AMKA Amchitka 83.73 39 *e*P **P 21 06 40.9 -0.8**
FBE Freiberg 83.75 321 *e*P **P 21 06 41.9 +0.1**
comp=Z,27nm,0.9s,mb5.4
ASS Assisi 83.78 313 P **P 21 06 43.2 +1.2**
WET Wettzell 83.94 319 *e*P **P 21 06 42.8 0.0**
comp=Z,32nm,0.9s,mb5.5
WET Wettzell 83.94 319 *e*P **P 21 06 42.8 0.0**
WET pmax pmax
comp=Z,32nm,0.9s,mb5.5
CLL Collm 83.99 321 *e*P **P 21 06 42.5 -0.5**
comp=Z,42nm,1.4s,mb5.4
CLL *e* pP 21 06 53.4 +0.7
CLL *e*PP PP 21 09 59.5 +2.6
CLL *e*PPP 21 11 55.2
CLL eS S 21 17 03.4 -1.7
CLL *e*SS SS 21 22 39.2 +5.7
CLL *e*SSS 21 26 04.6
CLL *e*L 21 47 12.0
comp=Z,6µm,22.0s
CLL Collm 83.99 321⇑ P **P 21 06 42.6 -0.4**
comp=Z,logA/T=1.5,mb5.4
CLL *e**SP sP 21 06 54.0 -2.2
CLL *e*PP PP 21 10 03.0 +6.1
CLL *e*PPP 21 11 48.0
CLL eS S 21 17 03.0 -2.1
CLL *e*SS SS 21 22 39.0 +5.5
CLL *e*SSS 21 25 59.0
CLL Collm 83.99 321⇑ *i*P **P 21 06 42.6 -0.4**
comp=Z,42nm,1.4s,mb5.4
CLL *e*(sP) sP 21 06 54.0 -2.2
CLL *e*PP PP 21 10 03.0 +6.1
CLL *e*PPP 21 11 48.0
CLL eS S 21 17 03.0 -2.1
comp=N,2µm,11.7s
CLL eS S 21 17 03.0 -2.1
CLL *e*SS SS 21 22 39.0 +5.5
CLL *e*SSS 21 25 59.0
CLL LmV 21 51 00.0
comp=Z,6µm,18.1s
CLL Collm 83.99 321⇑ *i*P **P 21 06 42.6 -0.4**
CLL eS S 21 17 03.0 -2.1
CLL pmax pmax
comp=Z,42nm,1.4s,mb5.4
CLL MLR MLR
comp=Z,6µm,18.1s,MS6.0
CLL Collm 83.99 321⇑ *i*P **P 21 06 42.6 -0.4**
comp=Z,42nm,1.4s,mb5.4
CLL eS S 21 17 03.0 -2.1
CLL LR LR
comp=Z,6µm,18.1s,MS6.0
RGN Rugen 84.03 324 eS S 21 17 04.5 -0.9
BADI Badiali 84.10 313 P **P 21 06 43.9 +0.3**
URZ Urewera 84.20 129 P **P 21 06 43.5 -0.6**
comp=Z,9.7nm,0.8s,mb5.0,baz=338,slow=5.2,SNR=3.7
URZ PP PP 21 10 00.3 +1.7
comp=Z,1.8nm,0.4s,baz=311,slow=19,SNR=1.6
URZ S S 21 17 02.9 -4.3
comp=Z,2.2nm,0.4s,baz=347,slow=17,SNR=2.0
URZ LR LR 21 45 14.8
comp=Z,11µm,19.8s,MS6.2,baz=92,slow=36
NKC Novy Kostel 84.28 320 *e*P **P 21 06 44.7 +0.2**
NKC eS S 21 17 06.6 -1.4
NKC AMS AMS 21 53 10.0
comp=Z,5µm,17.9s
NKC Novy Kostel 84.28 320 *e*P **P 21 06 44.7 +0.2**
NKC eS S 21 17 06.6 -1.4
TANN Tannenbergstha 84.28 320 *e*P **P 21 06 44.5 0.0**
comp=Z,14nm,1.0s,mb5.0
HFS Hagfors 84.29 330 P **P 21 06 44.2 -0.3**
comp=Z,67nm,1.1s,mb5.7,baz=108,slow=4.8,SNR=33
HFS PP PP 21 10 01.3 +2.0
comp=Z,8.0nm,0.8s,baz=87,slow=10,SNR=3.5
HFS S S 21 17 04.3 -3.7
comp=Z,1.5nm,1.0s,baz=146,slow=14,SNR=2.2
HFS LR LR 21 49 35.9
comp=Z,9µm,19.8s,MS6.2,baz=96,slow=39
HFS Hagfors 84.29 330 P **P 21 06 44.2 -0.3**
HFS 21 10 01.3
HFS S S 21 17 04.3 -3.7
HFS pmax pmax
comp=Z,67nm,1.1s
HFS pmax pmax
comp=Z,8.0nm,0.8s
HFS smax
comp=N,2.0nm,1.0s
HFS MLR MLR
comp=Z,9µm,19.8s
BJO Bjornoya 84.30 345⇑ *i*P **P 21 06 44.0 -0.6**
BJO AMS AMS 21 51 19.6
comp=Z,12µm,19.6s,MS6.3
WERN Wernitzgruen 84.33 320 *e*P **P 21 06 44.8 +0.1**
comp=Z,14nm,0.9s,mb5.1
BJO1 Bjornoya 84.35 345⇑ *i*P **P 21 06 44.0 -0.9**
BJO1 LR LR
comp=Z,12µm,19.6s,MS6.3
GUNZ Gunzen 84.36 320 *e*P **P 21 06 45.0 +0.1**
comp=Z,19nm,0.9s,mb5.2
WERD Werda 84.38 320 *e*P **P 21 06 44.9 -0.1**
comp=Z,18nm,0.9s,mb5.2
ROTZ Rotzenmuhle 84.41 320 *e*P **P 21 06 45.6 +0.5**
comp=Z,24nm,0.8s,mb5.4
MANZ Manzenberg 84.49 320 *e*P **P 21 06 46.1 +0.6**
comp=Z,48nm,1.1s,mb5.5
MANZ eS S 21 17 11.5 +1.5
MOR8 Moi Rana 84.56 336⇑ *i*P **P 21 06 45.0 -0.9**
MOR8 AMb AMB 21 06 57.0
comp=Z,135nm,1.5s,mb5.9
MOR8 Moi Rana 84.56 336⇑ *i*P **P 21 06 45.0 -0.9**
comp=Z,135nm,1.5s,mb5.8
COP Copenhagen 84.62 326 *i* P **P 21 06 44.3 -1.9**
comp=Z,17nm,0.9s,mb5.2
COP *i* 21 11 57.3
COP *i* S S 21 17 10.6 -0.7
COP
comp=Z,3µm,20.0s
COP Copenhagen 84.62 326 *i* P **P 21 06 44.3 -1.9**
COP *i* 21 11 57.3
COP *i* S S 21 17 10.6 -0.7
COP pmax pmax
comp=Z,17nm,0.9s,mb5.2
COP MLR MLR
comp=Z,3µm,20.0s,MS5.7
WTTA Wattenberg 84.68 317 *i* P **P 21 06 46.1 -0.4**
comp=Z,291nm,3.0s,SNR=20
WTTA Wattenberg 84.68 317 *i* P **P 21 06 46.1 -0.4**
WTTA pmax pmax
comp=Z,291nm,3.0s
WATA Walderalm 84.72 317⇑ *i*P **P 21 06 46.2 -0.5**
comp=Z,29nm,1.0s,mb5.4
WATA Walderalm 84.72 317⇑ *i*P **P 21 06 46.2 -0.5**
WATA pmax pmax
comp=Z,29nm,1.0s,mb5.4
SEI Scarperia 84.76 314 P **P 21 06 47.8 +0.9**
MOX Moxa 84.83 320 *ce*P **P 21 06 47.2 -0.1**
MOX *e* 21 07 05.3
comp=Z,116nm,1.9s
MOX *e* 21 07 17.7
MOX
comp=Z,3µm,18.0s
MOX Moxa 84.83 320 *ce*P **P 21 06 47.2 -0.1**
MOX *e* 21 07 05.3
MOX pmax pmax
comp=Z,116nm,1.9s,mb5.7
MOX MLR MLR
comp=Z,3µm,18.0s,MS5.7
MOX Moxa 84.83 320⇑ *e*P **P 21 06 47.2 -0.1**
comp=Z,116nm,1.9s,mb5.7
MOX *e* 21 07 05.3
MOX *e* 21 07 17.7
MOX LR LR
comp=Z,3µm,18.0s,MS5.7
FUR Furstenfeldbru 84.95 318 *e*P **P 21 06 47.4 -0.5**
comp=Z,36nm,1.0s,mb5.5
FUR Furstenfeldbru 84.95 318 *e*P **P 21 06 47.4 -0.5**
FUR pmax pmax
comp=Z,36nm,1.0s,mb5.5
SQTA Sankt Quirin 84.97 317 *i* P **P 21 06 47.7 -0.3**
comp=Z,172nm,2.0s,mb5.8,SNR=33
SQTA Sankt Quirin 84.97 317 *i* P **P 21 06 47.7 -0.2**
SQTA pmax pmax
comp=Z,173nm,2.0s,mb5.8
GRFL Gerfalco 85.01 313 P **P 21 06 47.7 -0.5**
MOTA Moosalm 85.04 317 *i* P **P 21 06 48.0 -0.3**
comp=Z,37nm,1.1s,mb5.4,SNR=24
MOTA Moosalm 85.04 317 *i* P **P 21 06 48.0 -0.3**
MOTA pmax pmax
comp=Z,37nm,1.1s,mb5.4
GRA1 Grafenberg Arr 85.05 319 *e*P **P 21 06 48.7 +0.4**
comp=Z,40nm,0.9s,mb5.5
GRA1 *e*PP PP 21 10 08.3 +2.8
GRA1 *e*S S 21 17 15.2 -0.4
GRA1 LR LR
comp=Z,6µm,19.3s,MS6.0
GRF Grafenberg Arr 85.05 319 *e*P **P 21 06 48.7 +0.4**
comp=Z,40nm,0.9s,mb5.5
GRF *e*PP PP 21 10 08.3 +2.8
GRF *e*S S 21 17 15.2 -0.4
GRF *e*L 21 54 13.9
comp=Z,6µm,19.3s
GRF Grafenberg Arr 85.05 319 *e*P **P 21 06 48.7 +0.4**
GRF *e* 21 10 08.3
GRF *e*S S 21 17 15.2 -0.4
GRF pmax pmax
comp=Z,40nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,6µm,19.3s,MS6.0
GSCL Gusciola 85.32 314 P **P 21 06 48.9 -0.8**
NSS Namsos 85.45 334⇑ *i*P **P 21 06 48.4 -2.0**
NSS AMb AMB 21 07 10.4
comp=Z,216nm,0.8s,mb6.3
NSS AMS AMS 21 49 10.1
comp=Z,12µm,23.1s,MS6.2
NSS Namsos 85.45 334⇑ *i*P **P 21 06 48.4 -2.0**
comp=Z,216nm,0.8s,mb6.3
NSS LR LR
comp=Z,12µm,23.1s,MS6.2
NB2 NORSAR Subarra 85.57 331 P **P 21 06 50.1 -0.9**
comp=Z,102nm,1.4s,mb5.9,baz=96,slow=5.1
NOA NORSAR Array B 85.57 331 P **P 21 06 50.4 -0.6**
comp=Z,35nm,0.9s,mb5.6,baz=93,slow=5.1,SNR=60
NOA PP PP 21 10 12.6 +2.9
comp=Z,9.3nm,1.1s,baz=86,slow=7.9,SNR=3.4
NOA S S 21 17 15.4 -5.4
comp=Z,0.8nm,0.9s,baz=48,slow=21,SNR=2.0
NOA LR LR 21 49 23.8
comp=Z,9µm,21.2s,MS6.1,baz=100,slow=39
NOA NORSAR Array B 85.57 331 P **P 21 06 50.4 -0.6**
NOA 21 10 12.6
NOA S S 21 17 15.4 -5.4
NOA pmax pmax
comp=Z,35nm,0.9s
NOA pmax pmax
comp=Z,9.0nm,1.1s
NOA smax
comp=N,1.0nm,0.9s
NOA MLR MLR
comp=Z,9µm,21.3s
MIDW Midway 85.59 62 PFAKE 21 07 00.0 +8.9
MIDW LR LR
comp=Z,6µm,20.0s,MS6.0
SPB4 Spitsbergen Ar 85.64 348 *e*P **P 21 06 50.4 -0.9**
CLZ Clausthal 85.66 322 *e*P **P 21 06 51.4 0.0**
comp=Z,26nm,0.9s,mb5.5
CLZ Clausthal 85.66 322 *e*P **P 21 06 51.4 0.0**
CLZ pmax pmax
comp=Z,26nm,0.9s,mb5.5
NAO01 NORSAR Array S 85.72 331 *e*P **P 21 06 51.1 -0.6**
comp=Z,35nm,0.9s,mb5.6
NAO01 LR LR
comp=Z,9µm,20.0s,MS6.2
BSEG Bad Segeberg 85.76 324 *e*P **P 21 06 52.0 +0.1**
comp=Z,36nm,0.9s,mb5.6
BSEG Bad Segeberg 85.76 324 *e*P **P 21 06 52.0 +0.1**
BSEG pmax pmax
comp=Z,36nm,0.9s,mb5.6
NRDL Niedersach Rie 85.84 322 *e*P **P 21 06 52.6 +0.3**
comp=Z,84nm,1.6s,mb5.7
NRDL *e*S S 21 17 21.8 -1.6
UBBA Unterbreizbach 85.86 321 *e*P **P 21 06 52.3 -0.1**
DAVA Damuels 85.87 317 *i* P **P 21 06 52.7 +0.3**
comp=Z,589nm,3.8s,SNR=18
VSL Villasalto 86.17 309 *e*P **P 21 06 54.8 +0.8**
comp=Z,66nm,1.0s,mb5.8
KEST Kesra 86.20 305 P **P 21 06 54.2 +0.1**
comp=Z,7.6nm,1.0s,mb4.9,baz=319,slow=5.5,SNR=14
KEST PP PP 21 10 16.6 +1.7
comp=Z,2.3nm,1.0s,baz=37,slow=10,SNR=1.9
KEST S S 21 17 16.4 -11
comp=Z,0.8nm,1.0s,baz=58,slow=16,SNR=1.9
KEST LR LR 21 46 40.5
comp=Z,3µm,20.2s,MS5.6,baz=39,slow=36
KONO Kongsberg 86.32 329⇑ *i*P **P 21 06 54.6 -0.1**
KONO eS S 21 17 26.5 -1.6
KONO Kongsberg 86.32 329 P **P 21 06 54.6 -0.1**
KONO pmax pmax
comp=Z,320nm,1.6s,mb6.3
KONO Kongsberg 86.32 329 *e*P **P 21 06 54.4 -0.3**
comp=Z,316nm,1.6s,mb6.3
KONO LR LR
comp=Z,8µm,20.0s,MS6.1
STU Stuttgart 86.35 319 *e*P **P 21 06 54.5 -0.3**
comp=Z,25nm,0.8s,mb5.5
STU eS S 21 17 28.0 -0.4
STU Stuttgart 86.35 319 P **P 21 06 55.1 +0.3**
STU *e* 21 07 08.5
STU pmax pmax
comp=Z,41nm,1.0s,mb5.6
STU Stuttgart 86.35 319 *e*P **P 21 06 54.5 -0.3**
comp=Z,24nm,0.8s,mb5.5
MUD Monsted U'grnd 86.47 326⇑ *i*P **P 21 06 56.0 +0.6**
MUD *i* S S 21 17 29.1 -0.5
MUD pmax pmax
comp=Z,29nm,1.0s,mb5.5
MUD Monsted U'grnd 86.47 326⇑ *i*P **P 21 06 56.0 +0.6**
comp=Z,29nm,1.0s,mb5.5
MUD *i* S S 21 17 29.1 -0.5
KBS Kingsbay 86.60 349⇑ *i*P **P 21 06 55.0 -1.0**
KBS *e*PP PP 21 10 19.0 +0.9
KBS *e*S S 21 17 21.5 -9.4
KBS AMS AMS 21 51 28.9
comp=Z,9µm,18.4s,MS6.2
KBS Kingsbay 86.60 349 *e*P **P 21 06 55.0 -1.0**
KBS pmax pmax
comp=Z,86nm,1.1s,mb5.9
KBS MLR MLR
comp=Z,16µm,21.0s,MS6.4
KBS Kingsbay 86.60 349 *e*P **P 21 06 55.0 -1.1**
comp=Z,86nm,1.1s,mb5.9
KBS LR LR
comp=Z,16µm,21.0s,MS6.4
TOD Tromm 86.62 319 *e*P **P 21 06 56.2 +0.1**
SPAK Spaichingen-Ko 86.62 318 *e*P **P 21 06 55.7 -0.4**
DOMB Dombas 86.64 332 *e*P **P 21 06 56.3 0.0**
DOMB AMb AMB 21 06 59.4
comp=Z,69nm,1.0s,mb5.8
DOMB Dombas 86.64 332 *e*P **P 21 06 56.3 0.0**
comp=Z,69nm,1.0s,mb5.8
TNS Taunus Mts 86.85 320 *e*P **P 21 06 57.4 +0.1**
comp=Z,32nm,0.8s,mb5.6
TNS Taunus Mts 86.85 320 *e*P **P 21 06 57.4 +0.1**
TNS pmax pmax
comp=Z,32nm,0.8s,mb5.6
BFO Black Forest 86.93 318 P **P 21 06 56.6 -1.0**
comp=Z,157nm,0.7s,mb6.3,SNR=10
BFO Black Forest 86.93 318 *e*P **P 21 06 57.1 -0.5**
comp=Z,23nm,0.8s,mb5.5
BFO eS S 21 17 29.0 -5.0
BFO Black Forest 86.93 318 *e*P **P 21 06 57.1 -0.5**
BFO eS S 21 17 29.0 -5.0
BFO pmax pmax
comp=Z,23nm,0.8s,mb5.5
VNDA Vanda 87.14 169 P **P 21 06 58.3 -0.4**
comp=Z,1.8nm,0.8s,baz=318,slow=6.4,SNR=12
VNDA S SKSac 21 17 19.9 -3.9
comp=Z,0.6nm,1.0s,baz=242,slow=7.5,SNR=2.8
VNDA PKKPbc PKKPbc 21 24 50.0 0.0
comp=Z,1.5nm,0.9s,baz=321,slow=2.3,SNR=6.2
VNDA LR LR 21 44 46.7
comp=Z,10µm,18.1s,MS6.3,baz=310,slow=35
VNDA Vanda 87.14 169 P **P 21 06 58.3 -0.4**
VNDA S S 21 17 20.0 -16
VNDA pmax pmax
comp=Z,2.0nm,0.8s
VNDA smax
comp=N,1.0nm,1.0s
VNDA pmax pmax
comp=Z,2.0nm,0.9s
VNDA MLR MLR
comp=Z,10µm,18.1s
VNDA Vanda 87.14 169 *e*P **P 21 06 58.6 -0.1**
comp=Z,29nm,1.2s,mb5.4
VNDA LR LR
comp=Z,9µm,20.0s,MS6.2
FELD Feldberg im Sc 87.15 318 *e*P **P 21 06 58.1 -0.6**
LANF Langenberg 87.27 319 *e*P **P 21 06 59.2 -0.1**
IBBN Ibbenburen 87.28 322 *e*P **P 21 06 59.5 +0.2**
comp=Z,40nm,0.8s,mb5.7
RAO Raoul Island 87.41 119 PP PP 21 10 21.9 -2.7
comp=Z,122nm,0.4s,baz=254,slow=22,SNR=2.0
RAO Raoul Island 87.41 119 PFAKE 21 07 10.0 +10
RAO LR LR
comp=Z,8µm,20.0s,MS6.1
LIBD Limburg 87.41 318 *e*P **P 21 07 00.1 +0.1**
BBS Basel-Blauen 87.49 317 *e*P **P 21 06 59.4 -0.9**
SAOF Saorge 87.50 314 *e*P **P 21 07 00.3 -0.1**
WLS Welschbruch 87.58 318 *e*P **P 21 07 00.3 -0.5**
BUG Bochum-Univer 87.59 321 *e*P **P 21 07 00.9 +0.1**
comp=Z,34nm,0.8s,mb5.6
BUG eS S 21 17 37.2 -3.2

CDF Champ du Feu 87.63 318 *e*P **P 21 07 00.7 -0.3**
comp=Z,28nm,0.9s,mb5.2
CDF Champ du Feu 87.63 318 *e*P **P 21 07 00.7 -0.3**
CDF pmax pmax
comp=Z,14nm,0.9s,mb5.2
CDF Champ du Feu 87.63 318 *e*P **P 21 07 00.7 -0.3**
comp=Z,14nm,0.9s,mb5.2
ECH Echery 87.71 318 *e*P **P 21 07 00.9 -0.5**
TOUF Mont Tournerai 87.72 314 *e*P **P 21 07 02.0 +0.5**
MOF Molkenrain 87.73 318 *e*P **P 21 06 59.2 -2.3**
ODD1 Odda 87.82 330 *e*P **P 21 07 02.0 +0.1**
WTSB Winterswijk 87.87 322 *e*P **P 21 07 02.5 +0.3**
comp=Z,88nm,1.8s,mb5.7
WTSB *ex* x 21 07 19.8
BLS5 Blasjo 87.92 329⇑ *i*P **P 21 07 03.5 +1.1**
HINF Hinteralfeld 87.92 318 *e*P **P 21 07 02.6 +0.2**
comp=Z,19nm,0.9s,mb5.0
HINF Hinteralfeld 87.92 318 *e*P **P 21 07 02.6 +0.2**
HINF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
HINF Hinteralfeld 87.92 318 *e*P **P 21 07 02.6 +0.2**
comp=Z,9.5nm,0.9s,mb5.0
LOMF Lomont 87.95 317 *e*P **P 21 07 02.2 -0.4**
HYA Hoyanger 88.02 331⇑ *i*P **P 21 07 03.7 +0.8**
LPG La Plagne 88.05 315 *e*P **P 21 07 03.5 +0.5**
comp=Z,49nm,0.7s,mb5.5
LPG La Plagne 88.05 315 *e*P **P 21 07 03.5 +0.5**
LPG pmax pmax
comp=Z,25nm,0.7s,mb5.5
LPG La Plagne 88.05 315 *e*P **P 21 07 03.5 +0.5**
comp=Z,25nm,0.7s,mb5.5
MBDF Montbardon 88.05 315 *e*P **P 21 07 04.8 +1.8**
comp=Z,57nm,1.1s,mb5.4
MBDF Montbardon 88.05 315 *e*P **P 21 07 04.8 +1.8**
MBDF pmax pmax
comp=Z,28nm,1.1s,mb5.4
MBDF Montbardon 88.05 315 *e*P **P 21 07 04.8 +1.8**
comp=Z,28nm,1.1s,mb5.4
LPL La Plagne 88.06 315 *e*P **P 21 07 03.5 +0.4**
comp=Z,49nm,0.7s,mb5.5
LPL La Plagne 88.06 315 *e*P **P 21 07 03.5 +0.4**
LPL pmax pmax
comp=Z,25nm,0.7s,mb5.5
LPL La Plagne 88.06 315 *e*P **P 21 07 03.5 +0.4**
comp=Z,25nm,0.7s,mb5.5
BNI Bardonecchia 88.11 315 P **P 21 07 03.3 0.0**
BNI pmax pmax
comp=Z,22nm,0.9s,mb5.4
BNI Bardonecchia 88.11 315 *e*P **P 21 07 02.6 -0.7**
comp=Z,22nm,0.8s,mb5.4
RSL Roselend 88.13 315 *e*P **P 21 07 03.3 -0.1**
FRF La Foret Royal 88.17 313 *e*P **P 21 07 04.3 +0.7**
comp=Z,90nm,1.1s,mb5.6
FRF La Foret Royal 88.17 313 *e*P **P 21 07 04.3 +0.7**
FRF pmax pmax
comp=Z,45nm,1.1s,mb5.6
FRF La Foret Royal 88.17 313 *e*P **P 21 07 04.3 +0.7**
comp=Z,45nm,1.1s,mb5.6
SBA Scott Base 88.24 168 *e*P **P 21 07 04.2 +0.3**
SBA pmax pmax
comp=Z,98nm,1.6s,mb5.8
SBA MLR MLR
comp=Z,6μm,19.0s,MS6.0
SBA Scott Base 88.24 168 *e*P **P 21 07 04.2 +0.2**
comp=Z,98nm,1.6s,mb5.8
SBA LR LR
comp=Z,6μm,19.0s,MS6.0
HAU Haudompre 88.26 318 *e*P **P 21 07 03.8 -0.2**
comp=Z,87nm,1.0s,mb5.7
HAU *eR*
comp=Z,5μm,21.5s
HAU Haudompre 88.26 318 *e*P **P 21 07 03.8 -0.2**
HAU pmax pmax
comp=Z,44nm,1.0s,mb5.6
HAU MLR MLR
comp=Z,5μm,21.5s,MS5.9
HAU Haudompre 88.26 318 *e*P **P 21 07 03.8 -0.2**
comp=Z,44nm,1.0s,mb5.6
HAU LR LR
comp=Z,5μm,21.5s,MS5.9
LMR La Mourre 88.28 313 *e*P **P 21 07 04.5 +0.4**
CKFL Kef-Lekhel 88.32 306 P sP 21 07 19.0 +1.5
WLF Walferdange 88.34 319 *e*P **P 21 07 05.0 +0.6**
comp=Z,24nm,1.0s,mb5.4
WLF Walferdange 88.34 319 P **P 21 07 04.0 -0.4**
WLF Walferdange 88.34 319 *e*P **P 21 07 04.9 +0.5**
WLF pmax pmax
comp=Z,33nm,1.2s,mb5.4
WLF Walferdange 88.34 319 *e*P **P 21 07 04.9 +0.5**
comp=Z,33nm,1.2s,mb5.4
MEM Membach 88.41 320 P **P 21 07 04.8 +0.1**
RUND Rundenannen 88.44 330 *e*P **P 21 07 07.9 +3.0**
HGN Heimansgroeve 88.45 321 *e*P **P 21 07 04.9 0.0**
comp=Z,51nm,2.8s,mb5.3
HGN *ex* x 21 07 22.2
HGN *e*PP PP 21 10 37.3 +4.4
HGN *e*S S 21 17 50.5 +2.0
BER Bergen 88.46 330 *e*P **P 21 07 05.1 +0.2**
BER *e*PP PP 21 10 31.7 -1.3
BER *e*S S 21 17 48.9 +0.3
BER *e*SS SS 21 23 39.5 +0.5
BER AMS AMS 21 52 58.5
comp=Z,10μm,17.9s,MS6.3
CABF La Chapelle 88.48 316 *e*P **P 21 07 05.6 +0.5**
comp=Z,55nm,0.9s,mb5.5
CABF La Chapelle 88.48 316 *e*P **P 21 07 05.6 +0.5**
CABF pmax pmax
comp=Z,27nm,0.9s,mb5.5
CABF La Chapelle 88.48 316 *e*P **P 21 07 05.6 +0.5**
comp=Z,28nm,0.9s,mb5.5
THEF They Montfort 88.49 318 *e*P **P 21 07 04.4 -0.7**
CASM Ain Smara 88.51 306 P sP 21 07 20.0 +1.6
KMY Karmoy 88.55 329 *e*P **P 21 07 06.1 +0.7**
OG25 Le Caire 88.56 314 *e*P **P 21 07 09.8 +4.3**
BEBN Eben Emael 88.61 321 P **P 21 07 05.8 +0.1**
ORIF Oris-en-Rattie 88.68 315 *e*P **P 21 07 06.6 +0.6**
comp=Z,103nm,1.3s,mb5.7
ORIF *eR*
comp=Z,7μm,21.0s
ORIF Oris-en-Rattie 88.68 315 *e*P **P 21 07 06.6 +0.6**
ORIF pmax pmax
comp=Z,51nm,1.3s,mb5.7
ORIF Oris-en-Rattie 88.68 315 *e*P **P 21 07 06.6 +0.6**
comp=Z,51nm,1.3s,mb5.7
BCLA Clavier 88.86 320 P **P 21 07 06.9 +0.1**
SMRF Simiane la Rot 88.93 314 *e*P **P 21 07 08.1 +0.9**
OG05 Jujurieux 88.93 316 *e*P **P 21 07 07.5 +0.3**
DFRA Djebel Bou Aff 88.99 306 P sP 21 07 21.0 +0.3
MEZF Maizieres J'vi 89.11 318 *e*P **P 21 07 08.2 +0.2**
comp=Z,74nm,1.1s,mb5.6
MEZF Maizieres J'vi 89.11 318 *e*P **P 21 07 08.2 +0.2**
comp=Z,74nm,1.1s,mb5.9
GIVF Givet 89.18 320 *e*P **P 21 07 08.7 +0.3**
comp=Z,97nm,1.3s,mb5.7
GIVF Givet 89.18 320 *e*P **P 21 07 08.7 +0.3**
GIVF pmax pmax
comp=Z,49nm,1.3s,mb5.7
GIVF Givet 89.18 320 *e*P **P 21 07 08.7 +0.3**
comp=Z,48nm,1.3s,mb5.7
DOU Dourbes 89.33 320 P **P 21 07 09.3 +0.2**
SET Setif 89.39 306 P **P 21 07 12.0 +2.7**
UCC Uccle 89.44 321 P **P 21 07 09.6 0.0**
SNF Seneffe 89.51 320 P **P 21 07 10.3 +0.4**
VIVF Saint-Julien-l 89.54 315 *e*P **P 21 07 10.3 +0.2**
BAIF Baives 89.58 320 *e*P **P 21 07 10.8 +0.6**
comp=Z,215nm,1.3s,mb6.0
BAIF Baives 89.58 320 *e*P **P 21 07 10.8 +0.6**
BAIF pmax pmax
comp=Z,108nm,1.3s,mb6.0
BAIF Baives 89.58 320 *e*P **P 21 07 10.8 +0.6**
comp=Z,108nm,1.3s,mb6.0
SMF Signal de Mont 90.02 317 *e*P **P 21 07 12.4 +0.1**
comp=Z,192nm,1.4s,mb5.9
SMF Signal de Mont 90.02 317 *e*P **P 21 07 12.4 +0.1**
SMF pmax pmax
comp=Z,96nm,1.4s,mb5.9
SMF Signal de Mont 90.02 317 *e*P **P 21 07 12.4 +0.1**
comp=Z,96nm,1.4s,mb5.9
AKF Akfadou 90.04 306 P **P 21 07 16.0 +3.6**
LASF Ste Croix 90.17 314 *e*P **P 21 07 13.6 +0.6**
comp=Z,233nm,1.8s,mb5.9
COLF Collangettes 90.19 315 *e*P **P 21 07 13.4 +0.3**
PLDF La Plantade 90.22 316 *e*P **P 21 07 13.7 +0.5**
TNA Tin City 90.22 24 PFAKE 21 07 20.0 +6.8
TNA LR LR
comp=Z,8μm,20.0s,MS6.2
SSF Saint Saulge 90.23 317 *e*P **P 21 07 13.7 +0.4**
comp=Z,363nm,1.9s,mb6.1
SSF Saint Saulge 90.23 317 *e*P **P 21 07 13.7 +0.4**
SSF pmax pmax
comp=Z,182nm,1.9s,mb6.1
SSF Saint Saulge 90.23 317 *e*P **P 21 07 13.7 +0.4**
comp=Z,182nm,1.9s,mb6.1
AVF Avril sur Loir 90.35 317 *e*P **P 21 07 14.1 +0.3**
comp=Z,244nm,1.6s,mb6.0
AVF Avril sur Loir 90.35 317 *e*P **P 21 07 14.1 +0.3**
AVF pmax pmax
comp=Z,122nm,1.6s,mb6.0
AVF Avril sur Loir 90.35 317 *e*P **P 21 07 14.1 +0.3**
comp=Z,122nm,1.6s,mb6.0
NVL N'lazarevskaya 90.42 199 *c i*P **P 21 07 22.9 +8.7**
NVL *e*PPP 21 12 54.4
NVL *i* 21 17 38.8
NVL *i* *SS sS 21 18 12.9 -10
NVL *i* PS PS 21 19 25.5 +8.1
NVL *e*SS SS 21 24 21.8 +14
NVL pmax pmax
comp=Z,96nm,1.2s,mb6.0
NVL pmax pmax
comp=Z,8μm,17.6s
MAIT Maitri 90.46 199 *e*P **P 21 07 17.5 +3.2**
LBL Lubilhac 90.53 315 *e*P **P 21 07 14.8 +0.1**
AGO Saint Agoulin 90.55 316 *e*P **P 21 07 15.5 +0.7**
AKET Djebel Ketaf 90.62 306 P **P 21 07 17.9 +2.8**
PYM Petit Puy Mans 90.66 316 *e*P **P 21 07 13.0 -2.3**
BGF Bois d'Agland 90.71 316 *e*P **P 21 07 16.3 +0.8**
comp=Z,178nm,1.3s,mb5.9
BGF Bois d'Agland 90.71 316 *e*P **P 21 07 16.3 +0.8**
BGF pmax pmax
comp=Z,89nm,1.3s,mb5.9
BGF Bois d'Agland 90.71 316 *e*P **P 21 07 16.3 +0.8**
comp=Z,89nm,1.3s,mb5.9
HYF Humbligny 90.80 317 *e*P **P 21 07 16.9 +1.0**
MENF Mencas 90.86 320 *e*P **P 21 07 14.6 -1.6**
NIKO Nikolski 91.00 37 *e*P **P 21 07 15.0 -1.9**
TCF Toulx Ste Croi 91.17 316 *e*P **P 21 07 18.3 +0.6**
comp=Z,207nm,1.7s,mb5.9
TCF Toulx Ste Croi 91.17 316 *e*P **P 21 07 18.3 +0.6**
TCF pmax pmax
comp=Z,104nm,1.7s,mb5.9
TCF Toulx Ste Croi 91.17 316 *e*P **P 21 07 18.3 +0.6**
comp=Z,104nm,1.7s,mb5.9
FILF Fillols 91.21 312 *e*P **P 21 07 14.5 -3.3**
ABA Alger-Bouzarea 91.26 307 P **P 21 07 17.0 -1.1**
EMHD Djebel Mahouad 91.36 306 P **P 21 07 21.0 +2.4**
CAF Calviac 91.39 315 *e*P **P 21 07 19.6 +1.0**
comp=Z,108nm,1.4s,mb5.7
CAF Calviac 91.39 315 *e*P **P 21 07 19.6 +1.0**
CAF pmax pmax
comp=Z,54nm,1.4s,mb5.7
CAF Calviac 91.39 315 *e*P **P 21 07 19.6 +1.0**
comp=Z,54nm,1.4s,mb5.7
MTLF Montolieu 91.40 313 *e*P **P 21 07 19.3 +0.6**
comp=Z,92nm,1.4s,mb5.6
MTLF Montolieu 91.40 313 *e*P **P 21 07 19.3 +0.6**
MTLF pmax pmax
comp=Z,46nm,1.4s,mb5.6
MTLF Montolieu 91.40 313 *e*P **P 21 07 19.3 +0.6**
comp=Z,46nm,1.4s,mb5.6
RJF Les Rejaudoux 91.74 315 *e*P **P 21 07 21.2 +0.9**
RJF *eR*
comp=Z,5μm,21.2s
RJF Les Rejaudoux 91.74 315 *e*P **P 21 07 21.2 +0.9**
RJF LR LR
comp=Z,5μm,21.3s,MS5.9
UNV Unalaska Valle 92.31 36 PFAKE 21 07 30.0 +7.1
UNV LR LR
comp=Z,19μm,20.0s,MS6.5
QSPA South Pole Qui 92.32 180 *e*P **P 21 07 23.6 +0.7**
comp=Z,0.5nm,0.3s
QSPA LR LR
comp=Z,18μm,19.0s
LFF La Frestale 92.32 315 *e*P **P 21 07 24.0 +1.0**
comp=Z,226nm,1.5s,mb6.0
LFF La Frestale 92.32 315 *e*P **P 21 07 24.0 +1.0**
LFF pmax pmax
comp=Z,113nm,1.5s,mb6.0
LFF La Frestale 92.32 315 *e*P **P 21 07 24.0 +1.0**
comp=Z,113nm,1.5s,mb6.0
AFI Afiamalu 92.37 104 PP PP 21 11 01.1 -2.9
comp=Z,14nm,0.8s,baz=210,slow=22,SNR=2.2
AFI Afiamalu 92.37 104 PFAKE 21 07 40.0 +17
AFI LR LR
comp=Z,4μm,21.0s,MS5.8
EBNR Beni Rached 92.50 306 P **P 21 07 26.0 +2.2**
LDF La Druitiere 92.53 319 *e*P **P 21 07 24.3 +0.4**
comp=Z,182nm,1.2s,mb6.1
LDF La Druitiere 92.53 319 *e*P **P 21 07 24.3 +0.4**
LDF pmax pmax
comp=Z,91nm,1.2s,mb6.1
LDF La Druitiere 92.53 319 *e*P **P 21 07 24.3 +0.4**
comp=Z,91nm,1.2s,mb6.1
JMIC Jan Mayen 92.58 342 P **P 21 07 24.9 +0.7**
comp=Z,27nm,0.7s,mb5.8,baz=124,slow=7.4,SNR=2.1
JMIC PP PP 21 11 04.3 -1.4
comp=Z,22nm,0.7s,baz=152,slow=19,SNR=2.3
JMIC S SKSac 21 17 56.2 +0.6
comp=Z,14nm,0.4s,baz=169,slow=5.1,SNR=2.4
JMIC LR LR 21 54 51.3
comp=Z,8μm,20.7s,MS6.1,baz=70,slow=39
JMIC Jan Mayen 92.58 342⇑ *i*P **P 21 07 24.9 +0.8**
JMIC *e*PP PP 21 10 54.2 -12
JMIC *e*SS SS 21 24 40.9 +2.2
JMIC AMS AMS 21 55 06.7
comp=Z,7μm,21.2s,MS6.1
JMIC Jan Mayen 92.58 342 P **P 21 07 24.9 +0.7**
JMIC PP PP 21 11 04.3 -1.4
JMIC S SKSac 21 17 56.2 +0.6
JMIC LR LR 21 54 51.3
ECHA Ech Chlef 92.65 306 P **P 21 07 28.0 +3.5**
FLN La Foliniere 92.74 319 *e*P **P 21 07 25.3 +0.4**
comp=Z,105nm,1.1s,mb5.9
FLN *eR*
comp=Z,5μm,22.0s
FLN La Foliniere 92.74 319 *e*P **P 21 07 25.3 +0.4**
FLN pmax pmax
comp=Z,53nm,1.0s,mb5.9
FLN MLR MLR
comp=Z,5μm,22.0s,MS5.9
FLN La Foliniere 92.74 319 *e*P **P 21 07 25.3 +0.4**
comp=Z,52nm,1.0s,mb5.9
FLN LR LR
comp=Z,5μm,22.0s,MS5.9
MFF Saint Martin d 92.76 317 *e*P **P 21 07 26.5 +1.5**
comp=Z,112nm,1.2s,mb5.9
MFF Saint Martin d 92.76 317 *e*P **P 21 07 26.5 +1.5**
MFF pmax pmax
comp=Z,56nm,1.2s,mb5.9
MFF Saint Martin d 92.76 317 *e*P **P 21 07 26.5 +1.5**
comp=Z,56nm,1.2s,mb5.9
ETRT Tiaret 92.77 305 P **P 21 07 33.0 +8.0**
EPF Esparros 92.80 313 *e*P **P 21 07 25.2 0.0**
comp=Z,18nm,0.9s,mb5.2
EPF Esparros 92.80 313 *e*P **P 21 07 25.2 0.0**
EPF pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
EPF Esparros 92.80 313 *e*P **P 21 07 25.2 0.0**
comp=Z,9.2nm,0.9s,mb5.2
EANR 'Ain N'Sour 92.88 306 P **P 21 07 29.0 +3.4**
GRR Gorron 93.04 319 *e*P **P 21 07 26.6 +0.3**
comp=Z,120nm,1.2s,mb5.9
GRR Gorron 93.04 319 *e*P **P 21 07 26.6 +0.3**
GRR pmax pmax
comp=Z,60nm,1.2s,mb5.9
GRR Gorron 93.04 319 *e*P **P 21 07 26.6 +0.3**
comp=Z,60nm,1.2s,mb5.9
DAG Danmarks Havn 93.28 348⇓ *i*P **P 21 07 26.2 -1.2**
comp=Z,16nm,0.8s,mb5.5
DAG *i* 21 11 10.0
DAG
comp=Z,16μm,22.0s
DAG Danmarks Havn 93.28 348⇓ *i*P **P 21 07 26.2 -1.2**
DAG *i* 21 11 10.0
DAG pmax pmax
comp=Z,16nm,0.8s,mb5.5
DAG MLR MLR
comp=Z,16μm,22.0s,MS6.4
EKA Eskdalemuir Ar 93.47 326 P **P 21 07 28.2 0.0**
comp=Z,11nm,0.7s,mb5.4,baz=94,slow=4.5,SNR=27
EKA Eskdalemuir Ar 93.47 326 P **P 21 07 28.3 0.0**
EKA pmax pmax
comp=Z,11nm,0.7s
ESK Eskdalemuir 93.50 326 PFAKE 21 07 40.0 +12
ESK LR LR
comp=Z,6μm,19.0s,MS6.0
SJPF Ste Jean 93.93 313 *e*P **P 21 07 31.4 +1.0**
TOA0 Torodi Ar. Sit 94.01 283 *e*P **P 21 07 31.8 +1.0**
TORD Torodi Ar. Bea 94.01 283 P **P 21 07 32.2 +1.4**
comp=Z,4.0nm,0.9s,mb4.9,baz=90,slow=4.8,SNR=11
TORD PP PP 21 11 17.1 +0.2
comp=Z,1.7nm,1.1s,baz=100,slow=5.1,SNR=2.8
TORD S SKSac 21 18 00.8 -2.6
comp=Z,1.4nm,1.1s,baz=318,slow=2.0,SNR=2.6
TORD PKKPbc PKKPbc 21 24 33.8 +1.1
comp=Z,0.7nm,0.7s,baz=306,slow=2.1,SNR=9.2
TORD LR LR 21 50 06.4
comp=Z,12μm,18.8s,MS6.4,baz=100,slow=36
TORD Torodi Ar. Bea 94.01 283 P **P 21 07 32.2 +1.4**
TORD PP PP 21 11 17.1 +0.2
TORD S SKSac 21 18 00.8 -2.6
TORD PKKPbc PKKPbc 21 24 33.8 +1.1
TORD LR LR 21 50 06.4
QUIF Quistinic 94.63 318 *e*P **P 21 07 34.4 +0.8**
ROSF Rostrenen 94.64 319 *e*P **P 21 07 33.6 0.0**
comp=Z,127nm,1.5s,mb5.8
ROSF Rostrenen 94.64 319 *e*P **P 21 07 33.6 0.0**
ROSF pmax pmax
comp=Z,63nm,1.5s,mb5.8
ROSF Rostrenen 94.64 319 *e*P **P 21 07 33.6 0.0**
comp=Z,63nm,1.5s,mb5.8
ALE Alert 94.67 357 P **P 21 07 33.0 -0.8**
comp=Z,252nm,1.1s,mb6.6,SNR=10.0
SNAA Sanae 95.15 198 *e*P **P 21 07 42.5 +6.5**
SNAA *e* 21 07 46.4
SNAA *e* 21 07 48.3
SNAA *e* pP 21 07 53.2 +7.5
SNAA Sanae 95.15 198⇑ *e*P **P 21 07 35.8 -0.2**
SDPT Sand Point 95.51 34 *e*P **P 21 07 36.6 -1.1**
ESDC Sonseca Array 96.43 310 P **P 21 07 42.3 +0.5**
comp=Z,0.7nm,0.5s,baz=68,slow=4.0,SNR=8.2
ESDC PP PP 21 11 38.2 +2.4
comp=Z,1.2nm,0.8s,baz=79,slow=9.2,SNR=3.1
ESDC LR LR 21 58 14.1
comp=Z,3μm,19.6s,MS5.8,baz=85,slow=40
ESLA Sonseca Array 96.43 310 PFAKE 21 07 50.0 +8.2
ESLA LR LR
comp=Z,21μm,20.0s,MS6.6
SCO Scoresbysund 96.92 343 *i*P **P 21 07 44.6 +0.6**
comp=Z,5.2nm,0.8s,mb5.0
SCO *i* 21 11 42.8
SCO *i* S SKSac 21 18 26.5 +7.7
SCO Scoresbysund 96.92 343 *i*P **P 21 07 44.6 +0.6**
SCO *i* 21 11 42.8
SCO pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
VNA1 Neumayer--Stat 97.07 199 *e*P **P 21 07 53.8 +9.1**
VNA1 *e* 21 07 57.0
VNA1 *e* 21 07 58.4
VNA1 *e* pP 21 08 02.5 +8.1
COLA College 98.52 23⇑ *i*P **P 21 07 50.5 -0.8**
COLA LR LR
comp=Z,7μm,20.0s,MS6.2
MCK McKinley 98.56 24 *e*P **P 21 07 50.5 -0.9**
MCK pmax pmax
comp=Z,9μm,1.2s
MCK MLR MLR
comp=Z,5μm,20.0s,MS6.0
MCK McKinley 98.56 24 *e*P **P 21 07 50.5 -0.9**
comp=Z,9μm,1.2s
MCK LR LR
comp=Z,5μm,20.0s,MS6.0
KDAK Kodiak Island 99.06 30 P **P 21 07 53.4 -0.2**
comp=Z,12nm,0.8s,mb5.5,baz=285,slow=12,SNR=4.0
KDAK PP PP 21 11 56.5 +0.6
comp=Z,7.9nm,0.9s,baz=140,slow=14,SNR=2.4
KDAK Kodiak Island 99.06 30 P **P 21 07 53.4 -0.2**
KDAK PP PP 21 11 56.5 +0.6
KDAK LR LR
comp=Z,2μm,21.0s,MS5.6
BORG Borgarnes 99.32 337 PP PP 21 11 54.8 -3.1
comp=Z,3.2nm,0.5s,baz=82,slow=18,SNR=1.8
BORG LR LR 21 57 48.0
comp=Z,10μm,20.9s,MS6.3,baz=75,slow=38
BORG Borgarnes 99.32 337 PFAKE 21 08 10.0 +15
BORG LR LR
comp=Z,9μm,20.0s,MS6.3
PMR Palmer 99.32 26 PFAKE 21 08 10.0 +15
PMR LR LR
comp=Z,11μm,19.0s,MS6.4
SUMG Summit 99.95 347 *e*P Pdif 21 07 57.7 +0.1
comp=Z,32nm,1.1s
DBIC Dimbokro 100.86 277 PP PP 21 12 14.5 +4.9
comp=Z,6.7nm,1.1s,baz=146,slow=7.4,SNR=1.8
DBIC S SKSac 21 18 37.7 -0.9
comp=Z,2.7nm,1.0s,baz=193,slow=6.9,SNR=2.1
DBIC Dimbokro 100.86 277 PFAKE 21 08 10.0 +8.4
DBIC LR LR
comp=Z,5μm,20.0s,MS6.0
DIV Divide 100.98 26 PFAKE 21 08 10.0 +7.8
DIV LR LR
comp=Z,30μm,21.0s,MS6.8
INK Inuvik 101.60 17 PP PP 21 12 15.7 +0.5
comp=Z,14nm,1.1s,baz=333,slow=8.1,SNR=5.2
INK S SKSac 21 18 38.0 -4.2
comp=Z,1.6nm,0.8s,baz=4.1,slow=6.4,SNR=3.0
INK Inuvik 101.60 17 *e*P Pdif 21 08 03.5 -1.4
INK pmax pmax
comp=Z,13nm,1.0s
INK Inuvik 101.60 17 *e*Pdif Pdif 21 08 03.5 -1.4
comp=Z,13nm,1.0s
DAWY Dawson 102.13 22 *e*Pdif Pdif 21 08 07.2 -0.1
KIP Kipapa 103.63 67 PFAKE 21 08 30.0 +16
KIP LR LR
comp=Z,5μm,20.0s,MS6.0
POHA Pohakuloa 106.17 69 PFAKE 21 12 50.0 +13
POHA LR LR
comp=Z,4μm,22.0s,MS5.9
TRIS Tristan da Cun 106.31 232 PFAKE 21 12 50.0 +13
TRIS LR LR
comp=Z,7μm,19.0s,MS6.2
SFJD Kangerlussuaq 106.94 347 PP PP 21 12 48.3 -6.6
comp=Z,6.0nm,0.6s,baz=248,slow=5.9,SNR=3.9
SFJD Kangerlussuaq 106.94 347 *i*P Pdif 21 08 26.9 -1.8
SFJD *i* 21 12 54.4
SFJD *i* 21 19 08.6
SFJD *i* 21 20 31.2
SFJD *e* 21 22 26.9
SFJD *e* 21 28 02.8
SFJD
comp=Z,8μm,22.0s
SFJD Kangerlussuaq 106.94 347 *i*P Pdif 21 08 26.9 -1.8
SFJD *i* 21 12 54.4
SFJD *i* 21 19 08.6
SFJD *e* 21 28 02.8
SFJD MLR MLR
comp=Z,8μm,22.0s,MS6.2
SIT Sitka 107.69 27 PFAKE 21 12 50.0 +10
SIT LR LR
comp=Z,13μm,19.0s,MS6.5
ASCN Ascension 110.85 262 PFAKE 21 13 00.0 +14
ASCN LR LR
comp=Z,6μm,19.0s,MS6.2
YKA Yellowknife Ar 111.17 15 PP PP 21 13 25.9 +0.2
comp=Z,5.6nm,0.9s,baz=332,slow=7.1,SNR=4.5
YKA PKKPbc PKKPbc 21 23 42.9 +0.7
comp=Z,2.1nm,1.0s,baz=134,slow=3.1,SNR=5.2
FRB Frobisher Bay 113.08 353 PP PP 21 13 36.6 -2.7
comp=Z,14nm,0.9s,baz=306,slow=4.1,SNR=4.3
TBI Tubuai 113.10 114 *e*PP PP 21 13 33.9 -5.5
comp=Z,592nm,26.5s
TBI Tubuai 113.10 114 *e*PS PS 21 23 27.9 +13
comp=Z,1μm,29.8s
TBI Tubuai 113.10 114 *e*SS SS 21 29 19.5 -2.2
comp=Z,5μm,26.5s
TBI *e*LR LR 21 46 47.0
comp=Z,10μm,23.5s
PPT Papeete 113.64 108 *e*PP PP 21 13 35.6 -7.7
comp=Z,740nm,24.8s
PPT Papeete 113.64 108 *e*PS PS 21 23 18.4 -1.4
comp=Z,3μm,25.5s
PPT Papeete 113.64 108 *e*LR LR 21 46 58.5
comp=Z,6μm,22.5s
HOPE Hope Point 115.59 208 PFAKE 21 13 10.0 +15
HOPE LR LR
comp=Z,6μm,20.0s,MS6.2
PMSA Palmer Station 116.15 189 PFAKE 21 13 10.0 +14

PMSA LR LR
comp=Z,6µm,22.0s,MS6.2
B05A Bryant 119.47 29 ⇑P PKPdf 21 13 02.6 +0.4
baz=119
E03A Lebam 119.93 31 ⇓P PKPdf 21 13 03.1 0.0
baz=120
C05A Tolt Reservoir 120.07 29 ⇓P PKPdf 21 13 03.5 +0.2
baz=120
F04A Amboy 120.93 31 ⇑P PKPdf 21 13 05.3 +0.3
baz=121
SCHQ Schefferville 121.31 349 PKP PKPdf 21 13 05.4 -0.3
comp=Z,4.9nm,0.6s,baz=38,slow=6.5,SNR=9.4
SCHQ PP PP 21 14 39.5 +2.8
comp=Z,28nm,1.0s,baz=20,slow=10.0,SNR=7.5
SCHQ Schefferville 121.31 349 PKP PKPdf 21 13 05.4 -0.3
SCHQ PP PP 21 14 39.5 +2.8
SCHQ LR LR
comp=Z,12µm,22.0s,MS6.5
COR Corvallis 121.38 32 PFAKE 21 13 20.0 +14
COR LR LR
comp=Z,5µm,21.0s,MS6.2
I02A Mapleton 121.48 33 ⇑P PKPdf 21 13 06.7 +0.6
baz=121
NEW Newport 121.74 26 PFAKE 21 13 20.0 +13
NEW LR LR
comp=Z,6µm,19.0s,MS6.3
I03A Eugene 121.80 33 ⇑P PKPdf 21 13 07.3 +0.6
baz=122
K01A Sixes 121.89 35 ⇑P PKPdf 21 13 07.6 +0.7
baz=122
H04A Detroit Lake 121.90 32 ⇑P PKPdf 21 13 07.1 +0.2
baz=122
G05A Wamic 121.97 31 ⇑P PKPdf 21 13 07.7 +0.7
baz=122
HAWA Hanford 122.03 29 PFAKE 21 13 20.0 +13
HAWA LR LR
comp=Z,364nm,21.0s
J02A Umpqua 122.03 34 ⇑P PKPdf 21 13 08.1 +1.0
baz=122
J03A Ideyld Park 122.37 33 ⇓P PKPdf 21 13 08.5 +0.8
baz=122
K02A Glendale 122.47 34 ⇑P PKPdf 21 13 08.4 +0.4
baz=122
L02A Cave Junction 122.81 35 ⇓P PKPdf 21 13 09.2 +0.6
baz=123
F08A Pendleton 122.83 29 ⇓P PKPdf 21 13 09.4 +0.8
baz=123
J05A Fort Rock 123.36 32 ⇑P PKPdf 21 13 10.4 +0.8
baz=123
I06A Prineville 123.44 31 ⇓P PKPdf 21 13 11.0 +1.2
baz=123
TAOE Nuku Hiva Isla 123.44 99 *e*PP PP 21 14 41.6 -9.5
comp=Z,2µm,25.6s
TAOE Nuku Hiva Isla 123.44 99 *e*PS PS 21 25 03.4 +15
comp=Z,7µm,25.6s
TAOE Nuku Hiva Isla 123.44 99 *e*PS PS 21 24 46.3 -1.8
comp=Z,3µm,27.7s
TAOE Nuku Hiva Isla 123.44 99 *e*SS SS 21 31 35.2 -0.5
comp=Z,12µm,28.4s
TAOE *e*LR LR 21 51 40.3
comp=Z,15µm,25.1s
YBH Yreka Blue Hor 123.59 34 PFAKE 21 13 20.0 +10
YBH LR LR
comp=Z,4µm,21.0s,MS6.1
YBH Yreka Blue Hor 123.59 34 ⇑P PKPdf 21 13 10.8 +0.7
baz=123
I07A Izee 123.70 31 ⇓P PKPdf 21 13 11.1 +0.8
baz=124
M02C Callahan 123.73 35 ⇑P PKPdf 21 13 11.2 +0.9
baz=124
L04A Klamath Falls 123.75 34 ⇑P PKPdf 21 13 11.1 +0.7
baz=124
H08A Prairie City 123.81 30 ⇓P PKPdf 21 13 11.2 +0.7
baz=124
J06A Christmas Vall 123.95 32 ⇑P PKPdf 21 13 11.5 +0.8
baz=124
M04C Macdoel 124.04 34 ⇓P PKPdf 21 13 11.7 +0.8
baz=124
MSO Missoula 124.21 25 PFAKE 21 13 20.0 +8.7
MSO LR LR
comp=Z,5µm,20.0s,MS6.2
K06A Valley Falls 124.22 32 ⇑P PKPdf 21 13 12.1 +0.8
baz=124
BMO Blue Mountains 124.22 28 PFAKE 21 13 20.0 +8.7
BMO LR LR
comp=Z,5µm,21.0s,MS6.2
I08A Drewsey 124.30 30 ⇓P PKPdf 21 13 12.7 +1.3
baz=124
L05A Lakeview 124.42 33 ⇓P PKPdf 21 13 12.9 +1.2
baz=124
WDC Whiskeytown Da 124.43 35 PFAKE 21 13 20.0 +8.3
WDC LR LR
comp=Z,4µm,20.0s,MS6.1
WDC Whiskeytown Da 124.43 35 ⇑P PKPdf 21 13 12.4 +0.7
baz=124
O02C Red Bluff 124.55 36 ⇑P PKPdf 21 13 12.5 +0.6
baz=124
I09A Lost Marbles R 124.66 29 ⇑P PKPdf 21 13 13.0 +0.8
baz=124
P01C Double 8 Ranch 124.67 37 ⇓P PKPdf 21 13 13.9 +1.7
baz=124
M05C Lookout 124.71 34 ⇓P PKPdf 21 13 13.4 +1.1
baz=125
EGMT Eagleton 124.86 21 PFAKE 21 13 20.0 +7.5
EGMT LR LR
comp=Z,8µm,20.0s,MS6.4
HATC Hat Creek Radi 124.90 35 ⇓P PKPdf 21 13 14.0 +1.4
baz=125
GASB Alder Springs 124.93 36 ⇑P PKPdf 21 13 14.6 +2.0
baz=125
HOPS Hopland 125.13 37 PFAKE 21 13 30.0 +17
HOPS LR LR
comp=Z,4µm,20.0s,MS6.1
HOPS Hopland 125.13 37 ⇓P PKPdf 21 13 14.4 +1.3
baz=125
K08A Mann Creek Ran 125.19 31 ⇓P PKPdf 21 13 14.7 +1.6
baz=125
M06C Likely Place G 125.19 34 ⇓P PKPdf 21 13 14.5 +1.4
baz=125
L07A Adell 125.24 32 ⇑P PKPdf 21 13 14.9 +1.7
baz=125
WVOR Wild Horse Val 125.32 31 PFAKE 21 13 30.0 +17
WVOR LR LR
comp=Z,6µm,19.0s,MS6.3
O04C Chester 125.44 35 ⇑P PKPdf 21 13 14.6 +0.9
baz=125
MNRC McLaughlin Nat 125.58 37 ⇓P PKPdf 21 13 14.3 +0.4
baz=125
L08A Fields 125.65 31 ⇓P PKPdf 21 13 14.9 +0.9
baz=126
ORV Oroville 125.71 36 ⇑P PKPdf 21 13 14.8 +0.7
baz=126
M07A Soldier Meadow 125.77 33 ⇑P PKPdf 21 13 15.5 +1.2
baz=126
O05C Quincy 125.78 35 ⇓P PKPdf 21 13 15.3 +1.0
baz=126
MCCM Marconi Confer 125.78 38 ⇓P PKPdf 21 13 14.9 +0.6
baz=126
N06A Buffalo Meadow 125.85 34 ⇑P PKPdf 21 13 15.5 +1.1
baz=126
CVS Carmenet Viney 125.91 37 ⇑P PKPdf 21 13 15.6 +1.0
baz=126
L09A Wilkinson Ranc 126.12 31 ⇑P PKPdf 21 13 16.9 +2.0
baz=126
M08A Happy Creek Ra 126.16 32 ⇑P PKPdf 21 13 16.2 +1.2
baz=126
BEKR Beckwourth 126.16 35 ⇓P PKPdf 21 13 16.6 +1.6
baz=126
RKT Rikitea 126.21 117 *e*PP PP 21 15 05.3 -4.3
comp=Z,548nm,26.2s
RKT Rikitea 126.21 117 *e*PS PS 21 25 13.0 +0.6
comp=Z,1µm,26.8s
RKT Rikitea 126.21 117 *e*SS SS 21 32 08.2 -2.3
comp=Z,5µm,28.0s
RKT *e*LR LR 21 52 16.8
comp=Z,9µm,23.2s
O06A Flanigan 126.26 34 ⇓P PKPdf 21 13 16.3 +1.1
baz=126
N07B Gerlach 126.31 33 ⇑P PKPdf 21 13 16.5 +1.2
baz=126
P05C Yuba Gap, Truc 126.39 35 ⇑P PKPdf 21 13 16.7 +1.2
baz=126
EFI East Falkland 126.41 200 PFAKE 21 13 30.0 +15
EFI LR LR
comp=Z,7µm,19.0s,MS6.4
ULM Lac du Bonnet 126.53 10 PKP PKPdf 21 13 15.0 -0.7
comp=Z,24nm,0.8s,baz=348,slow=3.5,SNR=26
ULM PP PP 21 15 10.4 -1.3
comp=Z,10nm,1.0s,baz=47,slow=7.2,SNR=3.9
ULM Lac du Bonnet 126.53 10 PKP PKPdf 21 13 15.0 -0.7
ULM PP PP 21 15 10.4 -1.3
ULM LR LR
comp=Z,19µm,20.0s,MS6.8
HLID Hailey 126.56 28 PFAKE 21 13 30.0 +14
HLID LR LR
comp=Z,8µm,20.0s,MS6.4
JRSC Jasper Ridge 126.64 38 ⇓P PKPdf 21 13 16.8 +0.9
baz=126
M09A Marrel Ranch, 126.66 31 ⇑P PKPdf 21 13 17.7 +1.7
baz=126
LAVA Lava Cap Winer 126.68 36 ⇑P PKPdf 21 13 17.1 +1.1
baz=126
N08A GE Springer Mi 126.76 32 ⇑P PKPdf 21 13 17.7 +1.5
baz=127
O07A Toulon 126.79 34 ⇑P PKPdf 21 13 17.9 +1.6
baz=127
N09A Rock Creek Ran 127.03 32 ⇑P PKPdf 21 13 18.4 +1.7
baz=127
R05C Kirkwood Meado 127.10 36 ⇑P PKPdf 21 13 17.9 +1.1
baz=127
YMR Madison River 127.19 24 PFAKE 21 13 30.0 +13
YMR LR LR
comp=Z,8µm,20.0s,MS6.4
LAO LASA Array 127.24 19 PFAKE 21 13 30.0 +13
LAO LR LR
comp=Z,7µm,21.0s,MS6.3
CMB Columbia Colle 127.36 36 PFAKE 21 13 30.0 +13
CMB LR LR
comp=Z,6µm,22.0s,MS6.2
CMB Columbia Colle 127.36 36 ⇓P PKPdf 21 13 18.0 +0.7
baz=127
PACP Pacheco Peak 127.48 38 ⇓P PKPdf 21 13 19.8 +2.3
baz=127
BMN Battle Mountai 127.49 32 PFAKE 21 13 30.0 +12
BMN LR LR
comp=Z,4µm,21.0s,MS6.1
LKWY Lake 127.50 24 PFAKE 21 13 30.0 +12
LKWY LR LR
comp=Z,11µm,20.0s,MS6.5
M11A Holland Ranch, 127.51 30 ⇓P PKPdf 21 13 19.6 +2.1
baz=127
SAO San Andreas Ge 127.54 38 PFAKE 21 13 30.0 +12
SAO LR LR
comp=Z,3µm,21.0s,MS6.0
R06C Coleville 127.58 35 ⇑P PKPdf 21 13 19.5 +1.7
baz=127
O09A Fish Creek Ran 127.70 32 ⇓P PKPdf 21 13 19.4 +1.4
baz=128
HAST UC Hastings Re 127.71 39 ⇓P PKPdf 21 13 19.5 +1.5
baz=128
S06C San Francisco 127.78 36 ⇓P PKPdf 21 13 19.2 +1.1
baz=128
S05C Merced 127.84 37 ⇑P PKPdf 21 13 19.9 +1.6
baz=128
M12A Wells 127.95 30 ⇑P PKPdf 21 13 20.6 +2.1
baz=128
O10A Cortez Mining, 127.98 32 ⇓P PKPdf 21 13 20.3 +1.8
baz=128
R07C Lee Vining 128.11 36 ⇓P PKPdf 21 13 20.8 +2.1
baz=128
U04C Hernandez Rese 128.20 38 ⇑P PKPdf 21 13 19.7 +0.8
baz=128
NVAR Mina Array Bea 128.31 35 PKP PKPdf 21 13 20.0 +0.9
comp=Z,8.1nm,0.9s,baz=258,slow=1.5,SNR=25
NVAR PP PP 21 15 23.9 +0.4
comp=Z,4.5nm,1.1s,baz=274,slow=2.8,SNR=2.5
N12A Clover Valley, 128.32 30 ⇓P PKPdf 21 13 21.4 +2.2
baz=128
M13A Montello 128.37 29 ⇓P PKPdf 21 13 20.9 +1.7
baz=128
T06C Millerton Lake 128.44 37 ⇑P PKPdf 21 13 20.7 +1.4
baz=128
R08A Mina 128.47 35 ⇓P PKPdf 21 13 21.1 +1.6
baz=128
P10A Eureka 128.48 32 ⇑P PKPdf 21 13 21.2 +1.8
baz=128
O11A Cowboy Ranch, 128.53 31 ⇓P PKPdf 21 13 21.1 +1.5
baz=128
PKD Parkfield 128.62 39 ⇑P PKPdf 21 13 21.0 +1.3
baz=128
AHID Auburn Hatcher 128.68 26 PFAKE 21 13 30.0 +10
AHID LR LR
comp=Z,7µm,19.0s,MS6.4
N13A Wendover, West 128.73 30 ⇑P PKPdf 21 13 21.4 +1.5
baz=129
O12A Currie 128.90 31 ⇓P PKPdf 21 13 22.4 +2.1
baz=129
HELL Mitchell Peak, 129.07 37 ⇓P PKPdf 21 13 22.0 +1.4
baz=129
R09A Tonopah 129.13 34 ⇓P PKPdf 21 13 22.3 +1.6
baz=129
TPH Tonopah 129.16 34 PFAKE 21 13 30.0 +9.3
TPH LR LR
comp=Z,4µm,19.0s,MS6.1
BW06 Boulder Array 129.33 25 PFAKE 21 13 30.0 +8.9
BW06 LR LR
comp=Z,8µm,22.0s,MS6.3
PDAR Pinedale Array 129.33 25 PKP PKPdf 21 13 20.9 -0.2
comp=Z,4.8nm,0.9s,baz=307,slow=0.7,SNR=16
PDAR PP PP 21 15 26.3 -3.9
comp=Z,1.0nm,0.5s,baz=0.0,slow=3.0,SNR=2.1
HWUT Hardware Ranch 129.40 27 PFAKE 21 13 30.0 +8.8
HWUT LR LR
comp=Z,6µm,19.0s,MS6.3
S09A Goldfield 129.41 35 ⇓P PKPdf 21 13 22.9 +1.7
baz=129
EYMN Ely 129.41 7 PFAKE 21 13 30.0 +8.8
EYMN LR LR
comp=Z,11µm,19.0s,MS6.6
PKM Peak Mountain 129.75 39 ⇓P PKPdf 21 13 23.2 +1.4
baz=130
CWC Cottonwood Cre 129.79 36 ⇑P PKPdf 21 13 23.9 +2.0
baz=130
PTCN Pitcairn Islan 129.91 121 PFAKE 21 13 30.0 +7.8
PTCN LR LR
comp=Z,6µm,21.0s,MS6.3
DUG Dugway 129.92 29 PFAKE 21 13 30.0 +7.8
DUG LR LR
comp=Z,3µm,20.0s,MS6.0
ISA Isabella 130.08 37 PFAKE 21 13 30.0 +7.5
ISA LR LR
comp=Z,1µm,20.0s,MS5.5
DAC Darwin (Calif) 130.19 36 PFAKE 21 13 40.0 +17
DAC LR LR
comp=Z,5µm,21.0s,MS6.2
RSSD Black Hills 130.23 19 PFAKE 21 13 40.0 +17
RSSD LR LR
comp=Z,7µm,19.0s,MS6.4
MPMC Manual Prospec 130.40 36 ⇓P PKPdf 21 13 24.7 +1.6
baz=130
FURC Furnace Creek, 130.49 36 ⇓P PKPdf 21 13 24.7 +1.4
baz=130
TPNV Topopah Spring 130.50 35 PFAKE 21 13 40.0 +17
TPNV LR LR
comp=Z,5µm,20.0s,MS6.2
MPU Maple Canyon 130.62 28 PFAKE 21 13 40.0 +16
MPU LR LR
comp=Z,8µm,20.0s,MS6.4
SNCC San Nicolas Is 130.98 41 PFAKE 21 13 40.0 +16
SNCC LR LR
comp=Z,4µm,22.0s,MS6.1
MVU Marysvale 131.52 30 PFAKE 21 13 40.0 +15
MVU LR LR
comp=Z,6µm,21.0s,MS6.3
CIS Catalina Islan 131.60 40 ⇓P PKPdf 21 13 27.3 +2.0
baz=132
V12A Nelson 132.16 35 ⇑P PKPdf 21 13 28.1 +1.7
baz=132
RCBR Riachuelo 132.28 264 PFAKE 21 13 40.0 +13
RCBR LR LR
comp=Z,5µm,19.0s,MS6.2
GMRC Granite Mounta 132.36 36 ⇓P PKPdf 21 13 28.8 +2.0
baz=132
LBNH Lisbon 132.42 349 PFAKE 21 13 40.0 +13
LBNH LR LR
comp=Z,11µm,21.0s,MS6.5
PFO Pinyon Flat Ob 132.69 38 PFAKE 21 13 40.0 +13
PFO LR LR
comp=Z,4µm,20.0s,MS6.1
BELC Belle Mtn. 132.70 37 ⇓P PKPdf 21 13 29.4 +1.9
baz=133
NCB Newcomb 133.09 351 PFAKE 21 13 40.0 +12
NCB LR LR
comp=Z,5µm,19.0s,MS6.3
IRM Iron Mountain 133.10 36 ⇓P PKPdf 21 13 29.7 +1.5
baz=133
W13A Hualapai Mount 133.16 34 ⇓P PKPdf 21 13 30.0 +1.7
baz=133
MONP Monument Peak 133.19 39 ⇑P PKPdf 21 13 30.6 +2.2
baz=133
ISCO Idaho Springs 133.43 23 PFAKE 21 13 40.0 +11
ISCO LR LR
comp=Z,9µm,19.0s,MS6.5
W14A Seligman 133.53 34 ⇓P PKPdf 21 13 30.3 +1.3
baz=133
SWSC Sam W. Stewart 133.54 38 ⇓P PKPdf 21 13 30.8 +1.8
baz=133
DVTC Desert V Tower 133.54 39 ⇑P PKPdf 21 13 30.5 +1.5
baz=133
X13A Yucca 133.56 35 ⇑P PKPdf 21 13 30.3 +1.3
baz=133
Y12C Blythe 133.75 36 ⇓P PKPdf 21 13 30.9 +1.5
baz=134
HRV Harvard--Oak R 134.00 348 PFAKE 21 13 40.0 +10
HRV LR LR
comp=Z,7µm,19.0s,MS6.4
GLA Glamis 134.06 37 ⇓P PKPdf 21 13 31.6 +1.6
baz=134
WES Weston 134.07 347 PFAKE 21 13 40.0 +10
WES LR LR
comp=Z,4µm,21.0s,MS6.1
X14A Yava 134.18 34 ⇓P PKPdf 21 13 31.9 +1.7
baz=134
WUAZ Wupatki 134.23 32 PFAKE 21 13 40.0 +10
WUAZ LR LR
comp=Z,6µm,20.0s,MS6.3
Y14A Wickenburg 134.50 35 ⇑P PKPdf 21 13 32.3 +1.4
baz=134
JFWS Jewell Farm 134.52 7 PFAKE 21 13 40.0 +9.1
JFWS LR LR
comp=Z,9µm,22.0s,MS6.5
X15A Humboldt 134.53 34 ⇑P PKPdf 21 13 32.5 +1.6
baz=134
Z14A Wintersburg 134.95 35 ⇑P PKPdf 21 13 33.5 +1.8
baz=135
BINY Binghamton 135.09 352 PFAKE 21 13 40.0 +8.1
BINY LR LR
comp=Z,12µm,21.0s,MS6.6
SDCO Great Sand Dun 135.23 25 PFAKE 21 13 40.0 +7.8
SDCO LR LR
comp=Z,10µm,20.0s,MS6.5
AAM Ann Arbor 135.53 0 PFAKE 21 13 40.0 +7.3
AAM LR LR
comp=Z,12µm,22.0s,MS6.6
ERPA Erie 135.59 356 PFAKE 21 13 40.0 +7.2
ERPA LR LR
comp=Z,12µm,20.0s,MS6.6
115A Sonoran Desert 135.85 35 ⇑P PKPdf 21 13 35.5 +2.2
baz=136
SSPA Standing Stone 136.87 354 PFAKE 21 13 50.0 +15
SSPA LR LR
comp=Z,8µm,21.0s,MS6.4
TUC Tucson 136.96 34 PFAKE 21 13 50.0 +15
TUC LR LR
comp=Z,4µm,19.0s,MS6.1
ANMO Albuquerque 137.13 28 ⇑*i*PKIKP PKPdf 21 13 34.1 -1.6
ANMO Albuquerque 137.13 28 PFAKE 21 13 50.0 +14
ANMO LR LR
comp=Z,6µm,20.0s,MS6.3
ACSO Alum Creek Sta 137.59 359 PFAKE 21 13 50.0 +13
ACSO LR LR
comp=Z,5µm,21.0s,MS6.3
MCWV Mont Chateau 138.02 356 PFAKE 21 13 50.0 +13
MCWV LR LR
comp=Z,10µm,20.0s,MS6.5
CCM Cathedral Cave 139.15 9 PFAKE 21 13 50.0 +11
CCM LR LR
comp=Z,6µm,20.0s,MS6.3
CBN Corbin 139.20 352 PFAKE 21 13 50.0 +10
CBN LR LR
comp=Z,12µm,21.0s,MS6.6
AMTX Amarillo 139.24 23 PFAKE 21 13 50.0 +10
AMTX LR LR
comp=Z,7µm,20.0s,MS6.4
PLCA Paso Flores 140.03 196 PFAKE 21 13 50.0 +9.0
PLCA LR LR
comp=Z,9µm,19.0s,MS6.5
MNTX Cornudas Mount 140.31 30 PFAKE 21 13 50.0 +8.5
MNTX LR LR
comp=Z,6µm,20.0s,MS6.4
WMOK Wichita Mounta 140.43 20 PFAKE 21 13 50.0 +8.2
WMOK LR LR
comp=Z,8µm,19.0s,MS6.5
BLA Blacksburg 140.50 356 PFAKE 21 13 50.0 +8.1
BLA LR LR
comp=Z,822nm,20.0s,MS5.5
BBSR BB Station 141.05 334 PFAKE 21 14 00.0 +17
BBSR LR LR
comp=Z,4µm,22.0s,MS6.1
WVT Waverly 141.49 5 PFAKE 21 14 00.0 +16
WVT LR LR
comp=Z,9µm,22.0s,MS6.5
MIAR Mount Ida 142.10 13 PFAKE 21 14 00.0 +15
MIAR LR LR
comp=Z,11µm,20.0s,MS6.6
BDFB Brasilia 142.52 247 PKP PKPdf 21 13 47.6 +2.1
comp=Z,3.3nm,0.8s,baz=93,slow=4.0,SNR=2.6
BDFB PP PP 21 16 57.1 +4.0
comp=Z,4.5nm,1.0s,baz=139,slow=12,SNR=1.6
BDFB Brasilia 142.52 247 PKIKP PKPdf 21 13 47.6 +2.1
BDFB 21 16 57.1
BDFB pmax pmax
comp=Z,3.0nm,0.8s
BDFB pmax pmax
comp=Z,5.0nm,1.0s
BDFB Brasilia 142.52 247 PKP PKPdf 21 13 47.6 +2.1
BDFB PP PP 21 16 57.1 +4.0
BDFB LR LR
comp=Z,12µm,20.0s,MS6.6
PLAL Pickwick Lake 142.60 6 PFAKE 21 14 00.0 +14
PLAL LR LR
comp=Z,8µm,22.0s,MS6.5
MYNC Murphy 142.74 1 PFAKE 21 14 00.0 +14
MYNC LR LR
comp=Z,12µm,22.0s,MS6.6
OXF Oxford 142.90 8 PFAKE 21 14 00.0 +14
OXF LR LR
comp=Z,10µm,20.0s,MS6.5
JCT Junction City 143.86 24 PFAKE 21 14 00.0 +12
JCT LR LR
comp=Z,8µm,21.0s,MS6.4
NATX Nacogdoches 144.47 16 PFAKE 21 14 00.0 +11
NATX LR LR
comp=Z,7µm,19.0s,MS6.4
RPN Rapa Nui 145.20 137 PKPbc PKPbc 21 13 51.3 +1.5
comp=Z,86nm,0.9s,baz=286,slow=7.4,SNR=5.3
RPN PP PP 21 17 11.9 +2.7
comp=Z,13nm,0.3s,baz=198,slow=10,SNR=3.6
RPN Rapa Nui 145.20 137 PFAKE 21 14 00.0 +10
RPN LR LR
comp=Z,4µm,20.0s,MS6.2
CPUP Villa Florida 145.29 224 PKPbc PKPbc 21 13 50.8 +0.7
comp=Z,17nm,0.8s,baz=104,slow=2.7,SNR=26
CPUP PP PP 21 17 11.6 +1.9
comp=Z,3.4nm,0.9s,baz=146,slow=12,SNR=1.9
CPUP Villa Florida 145.29 224 PKIKP PKPdf 21 13 50.8 +0.5
CPUP 21 17 11.6
CPUP pmax pmax
comp=Z,17nm,0.8s
CPUP pmax pmax
comp=Z,3.0nm,0.9s
CPUP Villa Florida 145.29 224 PFAKE 21 14 00.0 +10
CPUP LR LR
comp=Z,1µm,20.0s,MS5.6
HKT Hockley 145.80 19 PFAKE 21 14 00.0 +8.8
HKT LR LR
comp=Z,9µm,22.0s,MS6.5
MAIG Mazatlaan 146.25 40 ⇑*i*P PKPdf 21 13 54.0 +2.0
FCH Farellones 146.77 201 *e*P PKPdf 21 13 56.1 +3.2
ZAIG Zacatecas 148.92 35 ⇑*i*P PKPdf 21 13 59.4 +3.0
DWPF Disney 149.61 356 PFAKE 21 14 10.0 +12
DWPF LR LR
comp=Z,8µm,21.0s,MS6.5
CJM Chamela 149.75 43 *i* P PKPdf 21 14 03.5 +5.8
TLL Tololo Astrono 149.81 202 *e*P PKPdf 21 13 59.4 +1.5
SFJM Santa Fe 150.36 39 *i* P PKPdf 21 14 01.0 +2.3
LCO Las Campanas 150.79 204 *e*P PKPdf 21 14 01.1 +1.7
LZG Guadaloupe-1 151.62 311 *e*P PKPdf 21 14 08.0 +7.3
SJG San Juan 153.33 320 PFAKE 21 14 20.0 +17
SJG LR LR
comp=Z,6µm,20.0s,MS6.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PPM	**Popocatepetl**	**154.08**	**34**⇑	*i*PKIKP	PKPdf	21 14 06.6	+2.4
PLIG	**Platanillo**	**154.11**	**36**⇑	*i*P	PKPdf	21 14 06.2	+1.9
LVIG	**Laguna Verde**	**154.70**	**29**	*e*P	PKPdf	21 14 01.8	-3.3
LVC	**Limon Verde**	**155.33**	**214**	PFAKE		21 14 20.0	+14
LVC				LR	LR		
	comp=Z,5μm,21.0s,MS6.3						
SAML	**Samuel**	**158.64**	**251**	PFAKE		21 14 20.0	+10
SAML				LR	LR		
	comp=Z,5μm,19.0s,MS6.4						
SDV	**Santo Domingo**	**162.88**	**311**	PFAKE		21 14 30.0	+15
SDV				LR	LR		
	comp=Z,4μm,19.0s						
ROSC	**El Rosal**	**168.25**	**308**	PKP	PKPdf	21 14 20.0	+0.8
	comp=Z,11nm,0.5s,baz=102,slow=19,SNR=4.2						
ROSC				PP	PP	21 19 21.5	+5.0
	comp=Z,4.9nm,0.3s,baz=96,slow=21,SNR=1.7						
NNA	**Nana**	**168.32**	**215**	PFAKE		21 14 30.0	+11
NNA				LR	LR		
	comp=Z,10μm,19.0s						

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*IDC **11** 21:08:23.9±35.0, 2.20N×96.41E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.8/4, Error ellipse: s-maj=684.6km s-min=139.3km az=170.0*
*ISCJB **11** 21:08:26.2±0.9, 2.1N±0.1×96.2E±0.2, h33km, mb3.9/5, Error ellipse: s-maj=25.1km s-min=15.6km az=8.4*
*NEIC **11** 21:08:27.9±0.7, 2.12N×96.22E, h30km, mb4.3/1, Error ellipse: s-maj=19.8km s-min=11.9km az=93.0*
ISC 11 21:08:28.6±0.9, **2.1N**±0.1×**96.2E**±0.2, **h35**km, **n7**, σ**0.37**/7, **mb3.9**/5, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.42**	**54**	*e*P	**Pn**	**21 09 47.0**	**+0.1**
COCO	**West Island**	**14.23**	**178**	*e*P	**Pn**	**21 11 47.5**	**0.0**
	448nm,0.6s						
MKAR	**Makanchi Array**	**46.13**	**347**	P	**P**	**21 16 49.5**	**+0.1**
	1.7nm,0.7s,mb4.1,baz=163,slow=8.5,SNR=8.6						
SONM	**Songino Array**	**46.38**	**9**	P	**P**	**21 16 51.0**	**-0.5**
	0.5nm,0.7s,mb3.5,baz=188,slow=9.7,SNR=2.8						
ZAL	**Zalesovo**	**52.50**	**352**	P	**P**	**21 17 38.9**	**+0.8**
	0.6nm,0.3s,mb4.0,baz=338,slow=8.0,SNR=3.0						
BVAR	**Borovoye Array**	**55.07**	**341**	P	**P**	**21 17 56.9**	**0.0**
	0.5nm,0.6s,mb3.7,baz=128,slow=11,SNR=2.6						
CHKZ	**Chkalovo**	**55.55**	**342**	*e*P	**P**	**21 18 00.0**	**-0.4**
	2.4nm,0.8s,mb4.3						
CHKZ				*e*	pP	21 18 08.2	-2.7

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*ISCJB **11** 21:24:22.9±1.7, 17.3S±0.2×178.9W±0.3, h450km, mb3.9/9, Error ellipse: s-maj=35.9km s-min=18.5km az=117.6*
*NEIC **11** 21:24:22.8±6.2, 17.28S×178.82W, h438km±64km, mb4.0/3, Error ellipse: s-maj=38.0km s-min=17.0km az=50.0*
*IDC **11** 21:24:31.9±3.1, 17.55S×179.24W, h528km±37km, mb3.3/7, mb1 3.4/7, mb1mx3.3/13, mbtmp4.2/7, Error ellipse: s-maj=23.7km s-min=20.1km az=90.0*
ISC 11 21:24:24.0±1.7, **17.4S**±0.2×**178.8W**±0.3, **h450**km, **n15**, σ**0.50**/16, **mb3.9**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**21.13**	**189**	P	**P**	**21 28 35.1**	**-0.5**
	6.2nm,0.3s,mb4.7,baz=221,slow=8.9,SNR=11						
RPZ	**Rata Peaks**	**27.64**	**196**	P	**P**	**21 29 33.8**	**+0.1**
	5.6nm,0.7s,mb4.1,baz=204,slow=15,SNR=3.4						
STKA	**Stephens Creek**	**38.57**	**240**	*e*P	**P**	**21 31 07.7**	**+1.1**
	2.2nm,0.9s,mb3.6						
STKA	**Stephens Creek**	**38.57**	**240**	P	**P**	**21 31 06.2**	**-0.4**
	1.2nm,0.4s,mb3.6,baz=88,slow=11,SNR=10						
WB2	**Warramunga Arr**	**44.35**	**259**	*e*P	**P**	**21 31 52.0**	**-0.7**
AS31	**Alice Springs**	**44.58**	**254**	*e*P	**P**	**21 31 54.5**	**0.0**
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**	**21 31 54.4**	**-0.1**
	1.7nm,0.6s,mb3.6,baz=86,slow=8.2,SNR=29						
ASAR				S	**S**	**21 37 47.2**	**-9.2**
	0.5nm,0.8s,baz=88,slow=13,SNR=4.4						
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**	**21 31 54.4**	**-0.1**
ASAR				S	**S**	**21 37 47.2**	**-9.2**
ASPA	**Alice Springs**	**44.58**	**254**	*e*P	**P**	**21 31 54.5**	**0.0**
KAKA	**Kakadu**	**47.22**	**269**	*e*P	**P**	**21 32 15.0**	**+0.3**
	8.1nm,0.4s,mb4.5						
FITZ	**Fitzroy Crossi**	**52.75**	**260**	*e*P	**P**	**21 32 56.0**	**+0.5**
	9.6nm,1.3s,mb4.0						
VNDA	**Vanda**	**60.96**	**185**	P	**P**	**21 33 53.1**	**+0.9**
	0.6nm,0.8s,mb3.1,baz=7.0,slow=6.8,SNR=5.2						
MJAR	**Matsushiro Arr**	**67.24**	**323**	P	**P**	**21 34 32.4**	**0.0**
	2.6nm,0.7s,mb4.0,baz=165,slow=6.2,SNR=7.1						
MAW	**Mawson**	**84.25**	**200**	P	**P**	**21 36 06.4**	**-0.7**
	1.3nm,0.5s,mb3.7,baz=124,slow=6.6,SNR=12						
GERES	**GERESS Array B**	**146.99**	**345**	PKPbc	PKPbc	21 43 14.7	-0.5
	0.4nm,0.5s,baz=30,slow=3.5,SNR=5.2						

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*IDC **11** 21:33:11.7±2.0, 2.75N×96.21E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.7/20, mbtmp4.0/7, ML3.1/1, Error ellipse: s-maj=63.2km s-min=23.7km az=46.0*
*ISCJB **11** 21:33:14.6±1.3, 2.8N±0.2×96.2E±0.1, h33km, mb4.0/7, Error ellipse: s-maj=29.0km s-min=14.3km az=50.9*
*NEIC **11** 21:33:15.9±1.1, 2.71N×96.24E, h30km, mb4.0/1, Error ellipse: s-maj=26.0km s-min=12.8km az=207.0*
ISC 11 21:33:16.9±1.3, **2.8N**±0.2×**96.3E**±0.1, **h35**km, **n11**, σ**0.86**/10, **mb4.0**/7, **1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.67**	**89**	Pn	**Pn**	**21 33 55.8**	**-1.6**
	3.4nm,0.3s,baz=287,slow=7.6,SNR=8.5						
KULM	**Kulim**	**5.06**	**60**	*e*P	**Pn**	**21 34 31.1**	**+0.9**
PBA	**Port Blair**	**9.51**	**339**⇓	*e*P	x	21 50 04.1	
PBA				*e*S	x	21 50 22.3	
PBA				*e*x	x	21 50 23.5	
	comp=E,178nm,0.3s						
PBA				*e*x	x	21 50 23.7	
	comp=N,244nm,0.2s						
ASAR	**Alice Springs**	**45.08**	**128**	P	**P**	**21 41 30.6**	**+1.1**
	comp=N,0.5nm,0.8s,mb3.4,baz=305,slow=8.0,SNR=4.7						
ASAR	**Alice Springs**	**45.08**	**128**	P	**P**	**21 41 30.6**	**+1.1**
MKAR	**Makanchi Array**	**45.52**	**347**	P	**P**	**21 41 33.4**	**+0.5**
	comp=N,3.2nm,0.8s,mb4.3,baz=157,slow=8.4,SNR=22						
SONM	**Songino Array**	**45.76**	**10**	P	**P**	**21 41 35.2**	**+0.4**
	comp=N,1.0nm,0.6s,mb4.0,baz=191,slow=9.2,SNR=10						
ZAL	**Zalesovo**	**51.88**	**351**	P	**P**	**21 42 22.3**	**+0.5**
	comp=N,1.6nm,0.5s,mb4.2,baz=294,slow=7.0,SNR=6.2						
BVAR	**Borovoye Array**	**54.48**	**341**	P	**P**	**21 42 40.6**	**-0.3**
	comp=N,0.9nm,0.7s,mb3.8,baz=163,slow=6.2,SNR=7.0						
CHKZ	**Chkalovo**	**54.96**	**342**	*e*P	**P**	**21 42 44.2**	**-0.3**
	comp=N,1.3nm,0.8s,mb4.0						
ARCES	**ARCESS Array B**	**80.77**	**340**	P	**P**	**21 45 25.4**	**-1.3**
	comp=N,3.6nm,1.0s,mb4.3,baz=96,slow=7.3,SNR=3.9						

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*ISCJB **11** 21:36:11.0±0.5, 40.60N±0.02×23.42E±0.05, h12km±7km, Error ellipse: s-maj=6.3km s-min=3.9km az=146.5*
*ATH **11** 21:36:11.8, 40.63N×23.44E, h11km±2km, MD2.9/3*
*NEIC **11** 21:36:11.8, 40.63N×23.44E, h11km, MD2.9(ATH), ML2.0(THE), After ATH.*
*CSEM **11** 21:36:11.4±0.1, 40.61N×23.39E, h15km, ML2.0, Error ellipse: s-maj=2.0km s-min=1.4km az=80.0*
*THE **11** 21:36:11.3, 40.61N×23.43E, h11km, ML2.0*
ISC 11 21:36:11.2±0.6, **40.61N**±0.03×**23.41E**±0.05, **h16**km±7km, **n11**, σ**0.51**/21, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOH	**Sokhos**	**0.22**	**349**	*e*Pg	**Pg**	**21 36 16.2**	**0.0**
SOH				*e*Sg	**Sg**	**21 36 19.7**	**+0.1**
PLG	**Polygyros**	**0.23**	**174**	*e*PG	**Pg**	**21 36 16.5**	**0.0**
PLG				*e*SG	**Sg**	**21 36 20.1**	**0.0**
HORT	**Hortiatis**	**0.24**	**268**	*e*Pg	**Pg**	**21 36 16.5**	**0.0**
HORT				*e*Sg	**Sg**	**21 36 19.7**	**-0.4**
THE	**Thessaloniki**	**0.34**	**274**	*e*Pg	**Pg**	**21 36 18.2**	**-0.1**
THE				*e*Sg	**Sg**	**21 36 24.2**	**+1.2**
THE	**Thessaloniki**	**0.34**	**274**	*e*Pg	**Pg**	**21 36 18.2**	**-0.1**
THE				*e*Sg	**Sg**	**21 36 24.2**	**+1.1**
OUR	**Ouranopolis**	**0.51**	**122**	*e*Pg	**Pg**	**21 36 21.7**	**+0.3**
OUR				*e*Sg	**Sg**	**21 36 28.5**	**+0.1**
PAIG	**Paliouri**	**0.71**	**163**	*e*Pg	**Pg**	**21 36 24.4**	**-0.7**
PAIG				*e*Sg	**Sg**	**21 36 34.8**	**+0.3**
NVR	**Nevrokopi**	**0.82**	**25**	*e*PB	**Pb**	**21 36 27.0**	**-0.1**
NVR				*e*SB	**Sb**	**21 36 37.8**	**-0.1**
MMB	**Musomiste**	**1.01**	**14**	*e*Pg	**Pg**	**21 36 29.6**	**-1.2**
MMB				*e*Sg	**Sg**	**21 36 44.2**	**+0.1**
XOR	**Xorichti**	**1.25**	**188**	*e*Pg	**Pg**	**21 36 34.9**	**-0.5**
XOR				*e*Sg	**Sg**	**21 36 51.6**	**-0.1**
RDO	**Rodhopi**	**1.70**	**71**	*e*PB	**Pb**	**21 36 43.2**	**+1.1**

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*NEIC **11** 21:37:45.2, 35.31S×70.59W, h3km, ML3.6(GUC), After GUC.*
GUC 11 21:37:45.2±0.7, **35.31S×70.59W**, **h3**km±2km, **MD3.8**, **ML3.6**, **2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.61**	**300**⇑	*i*P	Pg	21 37 57.2	+0.4
NICH				*i* S	Sg	21 38 06.8	+2.1
TALC	**Talca**	**0.86**	**264**	*i* P	Pg	21 38 01.6	-0.1
TALC				*i* S	Sg	21 38 14.7	+2.0
TACH	**Talagante**	**1.68**	**350**	*i* P	Pn	21 38 15.1	-0.4
TACH				*i* S	Sn	21 38 37.4	-0.1
PCH	**Pirque**	**1.69**	**2**	*i* P	Pn	21 38 15.7	+0.1
PCH				*i* S	Sn	21 38 38.0	+0.3
CCHI	**Chillan**	**1.77**	**223**	AML	AML	21 38 49.4	
	comp=E,599nm,0.3s						
SAN	**Santiago**	**1.85**	**358**	AML	AML	21 38 47.1	
	comp=E,479nm,0.3s						
CLCH	**Cerro Calan**	**1.91**	**1**	*i* P	Pn	21 38 19.8	+1.1
CLCH				*i* S	Sn	21 38 45.5	+2.3
CLCH				AML	AML	21 38 57.3	
	comp=E,633nm,0.7s						
CLCH				AML	AML	21 38 57.9	
	comp=E,783nm,0.4s						
FCH	**Farellones**	**1.99**	**7**⇑	*i*P	Pn	21 38 21.5	+1.7
FCH				*i* S	Sn	21 38 48.6	+3.4
FCH				AML	AML	21 38 56.9	
	comp=E,576nm,0.7s						
LCCH	**Las Cruces**	**2.00**	**336**⇓	*i*P	Pn	21 38 20.1	+0.2
LCCH				*i* S	Sn	21 38 46.6	+1.1
PEL	**Peldehue**	**2.16**	**358**	AML	AML	21 39 01.7	
	comp=E,1μm,0.4s						
ROCH	**El Roble**	**2.36**	**351**	*e*P	Pn	21 38 26.3	+1.5
ROCH				*i* S	Sn	21 38 57.6	+3.3
JACH	**Jahuel**	**2.62**	**360**	*i* P	Pn	21 38 30.6	+2.2
JACH				*i* S	Sn	21 39 04.4	+3.6
CHNG	**Los Chungos**	**3.50**	**347**	AML	AML	21 39 37.0	
	comp=E,201nm,0.6s						

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*IDC **11** 22:07:18.5±1.5, 6.91S×154.69E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.8/12, mbtmp3.8/5, Error ellipse: s-maj=57.2km s-min=28.4km az=109.0*
*ISCJB **11** 22:07:22.2±1.2, 7.0S±0.2×154.6E±0.3, h33km, mb3.7/6, Error ellipse: s-maj=42.8km s-min=17.0km az=48.3*
*NEIC **11** 22:07:23.9±0.8, 6.93S×154.60E, h35km, mb4.3/2, Error ellipse: s-maj=33.6km s-min=13.0km az=114.0*
ISC 11 22:07:24.4±1.2, **6.9S**±0.2×**154.6E**±0.3, **h35**km, **n9**, σ**0.42**/8, **mb3.7**/6, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**15.36**	**211**	Pn	**Pn**	**22 10 58.6**	**+0.1**
	32nm,1.4s						
WRAB	**Tennant Creek**	**23.48**	**235**	*e*P	**P**	**22 12 30.2**	**-0.9**
	8.5nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**25.89**	**228**	P	**P**	**22 12 53.0**	**+0.1**
	0.9nm,0.8s,mb3.4,baz=55,slow=10,SNR=5.6						
STKA	**Stephens Creek**	**27.61**	**204**	P	**P**	**22 13 08.9**	**+0.5**
	0.6nm,0.5s,mb3.5,baz=29,slow=10,SNR=3.2						
STKA	**Stephens Creek**	**27.61**	**204**	*e*P	**P**	**22 13 08.9**	**+0.5**
SONM	**Songino Array**	**69.04**	**327**	P	**P**	**22 18 26.8**	**+0.3**
	0.2nm,0.3s,mb3.5,baz=146,slow=5.1,SNR=4.0						
MKAR	**Makanchi Array**	**83.07**	**319**	P	**P**	**22 19 46.5**	**+0.2**
	0.3nm,0.3s,mb3.8,baz=103,slow=6.6,SNR=6.2						
NVAR	**Mina Array Bea**	**92.02**	**52**	P	**P**	**22 20 29.2**	**-0.4**
	0.2nm,0.3s,mb4.0,baz=256,slow=7.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**152.59**	**285**	PKPbc	PKPbc	22 27 18.0	+0.9
	0.4nm,0.8s,baz=78,slow=2.0,SNR=2.5						

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*IDC **11** 22:12:43.3±0.7, 6.89S×154.47E, h0km, mb4.4/10, mb1 4.5/11, mb1mx4.5/13, mbtmp4.3/11, ML4.3/1, Error ellipse: s-maj=30.0km s-min=19.0km az=94.0*
*BJI **11** 22:12:48.8, 6.10S×154.81E, h30km, mB5.3, mb4.7, Ms5.0, Msz4.7*
*NEIC **11** 22:12:54.1±1.7, 6.99S×154.37E, h81km±16km, mb4.6/13, Error ellipse: s-maj=15.5km s-min=11.9km az=171.0*
*ISCJB **11** 22:12:56.3±1.6, 7.03S±0.10×154.37E±0.05, h113km±16km, mb4.4/24, Error ellipse: s-maj=16.5km s-min=8.2km az=166.5*
ISC 11 22:12:57.4±1.5, **7.11S**±0.09×**154.47E**±0.06, **h111**km±14km, **n43**, σ**1.24**/39, **mb4.4**/24, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.89**	**113**	*e*Pn	**Pn**	**22 14 23.0**	**+0.8**
	212nm,1.1s						
HNR				*e*Sn	**Sn**	**22 15 33.6**	**+5.3**
PMG	**Port Moresby**	**7.59**	**252**	Pn	**Pn**	**22 14 40.6**	**-4.7**
	1.1nm,0.3s,baz=102,slow=9.3,SNR=3.9						
PMG				Sn	**Sn**	**22 16 09.0**	**-0.6**
	2.5nm,0.3s,baz=79,slow=17,SNR=8.4						
PMG	**Port Moresby**	**7.59**	**252**	*e*Pn	**Pn**	**22 14 38.4**	**-6.9**
	148nm,1.1s						
PMG				*e*Sn	**Sn**	**22 16 08.6**	**-1.0**
CTA	**Charters Tower**	**15.16**	**211**	*e*P	**Pn**	**22 16 28.5**	**+2.9**
	12nm,0.9s						
CTAO	**Charters Tower**	**15.16**	**211**	*e*P	**Pn**	**22 16 27.3**	**+1.7**
	16nm,0.9s						
DZM	**Mont Dzumac**	**18.83**	**143**	P	**P**	**22 17 07.5**	**-0.9**
	1.0nm,0.3s,baz=266,slow=21,SNR=9.4						
WRAB	**Tennant Creek**	**23.31**	**235**	*e*P	**P**	**22 17 54.5**	**-0.9**
	24nm,1.0s,mb4.5						
WB2	**Warramunga Arr**	**23.32**	**235**	*e*P	**P**	**22 17 55.1**	**-0.4**
AS31	**Alice Springs**	**25.71**	**228**	*e*P	**P**	**22 18 16.5**	**-0.7**
ASAR	**Alice Springs**	**25.71**	**228**	P	**P**	**22 18 16.1**	**-1.2**
	3.4nm,0.9s,mb3.8,baz=64,slow=8.8,SNR=15						
ASAR				ScP	ScP	22 25 27.6	+14
	0.6nm,0.7s,baz=54,slow=3.2,SNR=4.8						
STKA	**Stephens Creek**	**27.41**	**204**	P	**P**	**22 18 31.9**	**-0.6**
	2.9nm,0.6s,mb4.0,baz=24,slow=13,SNR=7.7						
STKA	**Stephens Creek**	**27.41**	**204**	*e*P	**P**	**22 18 31.2**	**-1.3**
FITZ	**Fitzroy Crossi**	**30.13**	**246**	*e*P	**P**	**22 18 55.8**	**-0.8**
	8.7nm,1.2s,mb4.3						
KSM	**Kuching**	**44.88**	**279**	*e*P	**P**	**22 21 00.7**	**0.0**
XAN	**Xi'an**	**59.43**	**316**	P	**P**	**22 22 47.4**	**-0.9**
XAN				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.9						
KMI	**Kunming**	**59.65**	**304**	P	**P**	**22 22 52.0**	**+2.1**
KMI				AP	pP	22 23 02.5	-14
KMI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.7						
GTA	**Gaotai**	**68.47**	**317**	*e*P	**P**	**22 23 47.1**	**-0.4**
GTA				AP	pP	22 23 54.5	-21
GTA				XP	sP	22 23 59.2	-28
GTA				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.1						
GTA				AMB	AMB		
	comp=Z,271nm,7.2s						
GTA				LR	LR		
	comp=N,406nm,20.5s						
GTA				LR	LR		
	comp=E,506nm,22.8s						
GTA				LR	LR		
	comp=Z,482nm,20.5s						
ULN	**Ulaanbaatar**	**68.82**	**328**	*e*P	**P**	**22 23 48.9**	**-0.8**
	comp=Z,4.4nm,1.1s,mb4.2						
SONM	**Songino Array**	**69.15**	**328**	P	**P**	**22 23 51.1**	**-0.6**
	comp=Z,2.3nm,0.8s,mb4.0,baz=141,slow=6.3,SNR=14						
VNDA	**Vanda**	**70.48**	**178**	P	**P**	**22 24 01.6**	**+1.7**
	comp=Z,0.9nm,0.9s,mb3.6,baz=299,slow=3.4,SNR=5.0						
LSA	**Lhasa**	**70.91**	**305**	*e*P	**P**	**22 24 04.0**	**+1.6**
	comp=Z,6.0nm,0.8s,mb4.5						
GUN	**Gumba**	**74.73**	**301**	*e*P	**P**	**22 24 26.7**	**+1.6**
	comp=Z,32nm,0.7s,mb5.1						
PKI	**Pulchoki**	**75.04**	**301**	*e*P	**P**	**22 24 28.5**	**+1.7**
KKN	**Kakani**	**75.21**	**301**	*e*P	**P**	**22 24 29.1**	**+1.3**
	comp=Z,21nm,0.8s,mb4.9						
DMN	**Daman**	**75.31**	**301**	*e*P	**P**	**22 24 30.4**	**+2.1**
	comp=Z,51nm,1.1s,mb5.2						
GKN	**Gorkha**	**75.81**	**301**	*e*P	**P**	**22 24 31.8**	**+0.6**
	comp=Z,29nm,0.9s,mb5.0						
KOLN	**Koldanda**	**76.63**	**301**	*e*P	**P**	**22 24 36.7**	**+0.8**
	comp=Z,67nm,1.3s,mb5.2						
MKAR	**Makanchi Array**	**83.15**	**319**	P	**P**	**22 25 11.0**	**0.0**
	comp=Z,5.2nm,0.7s,mb4.5,baz=104,slow=5.3,SNR=49						
ZAL	**Zalesovo**	**83.99**	**326**	P	**P**	**22 25 15.0**	**-0.3**
	comp=Z,1.2nm,0.4s,mb4.1,baz=345,slow=4.1,SNR=5.7						
MAW	**Mawson**	**84.09**	**203**	P	**P**	**22 25 17.6**	**+1.8**
	comp=Z,1.5nm,0.5s,mb4.0,baz=59,slow=8.0,SNR=7.7						
KURK	**Kurchatov**	**86.60**	**322**	*e*P	**P**	**22 25 26.9**	**-1.4**
	comp=Z,1.5nm,0.8s,mb4.0						
CHKZ	**Chkalovo**	**92.04**	**324**	*e*P	**P**	**22 25 51.5**	**-2.3**
	comp=Z,1.0nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	**92.20**	**52**	P	**P**	**22 25 55.2**	**+0.7**
	comp=Z,2.8nm,0.8s,mb4.5,baz=254,slow=4.2,SNR=17						
YKA	**Yellowknife Ar**	**96.68**	**28**	P	**P**	**22 26 13.2**	**-1.8**
	comp=Z,0.9nm,0.8s,mb4.3,baz=271,slow=5.3,SNR=5.2						
MCMT	**McKenzie Canyo**	**96.86**	**46**	*e*P	**P**	**22 26 14.5**	**-1.4**
PDAR	**Pinedale Array**	**99.16**	**48**	P	**P**	**22 26 24.9**	**-1.2**
	comp=Z,0.5nm,0.9s,mb4.1,baz=284,slow=1.2,SNR=4.3						
MIAR	**Mount Ida**	**112.07**	**56**	*e*PKPdf	PKiKP	22 31 21.0	+1.4
AKASG	**Malin Array Be**	**117.33**	**324**	PKP	PKPdf	22 31 29.9	+0.1
	comp=Z,1.5nm,0.6s,baz=60,slow=2.1,SNR=10.0						
NB2	**NORSAR Subarra**	**119.63**	**340**	PKPd	PKPdf	22 31 33.2	-1.0
	comp=Z,0.8nm,0.8s,baz=39,slow=1.9						
NOA	**NORSAR Array B**	**119.63**	**340**	PKP	PKPdf	22 31 33.4	-0.8
	comp=Z,0.8nm,0.7s,baz=44,slow=2.0,SNR=4.9						
KHC	**Kasperske Hory**	**126.77**	**329**	*e*PKP	PKPdf	22 31 48.5	+0.7
GERES	**GERESS Array B**	**126.88**	**329**	PKP	PKPdf	22 31 49.2	+1.1
	comp=Z,2.0nm,0.8s,baz=90,slow=1.5,SNR=17						
TORD	**Torodi Ar. Bea**	**152.55**	**285**	PKPbc	PKPbc	22 32 42.5	+1.8
	comp=Z,2.5nm,0.7s,baz=61,slow=2.3,SNR=18						

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*NEIC **11** 22:17:23.2, 35.30S×70.74W, h39km, MG3.3(GUC), After GUC.*
GUC 11 22:17:23.1±0.8, **35.30S×70.73W**, **h39**km±12km, **MD3.8**, **ML3.3, 7C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.50**	**306**	*e*P	Pn	22 17 33.4	-0.4
NICH				*i* S	Sn	22 17 41.7	+0.3
SFDO	**San Fernando**	**0.72**	**341**⇓	*i*P	Pn	22 17 37.2	+0.4
SFDO				*i* S	Sn	22 17 48.1	+1.4
SFDO	**San Fernando**	**0.72**	**341**⇓	*i*P	Pn	22 17 37.2	+0.4
SFDO				*i* S	Sn	22 17 48.1	+1.4
TACH	**Talagante**	**1.65**	**354**⇑	*i*P	Pn	22 17 52.8	+3.2
TACH				*i* S	Sn	22 18 15.0	+5.5
TACH	**Talagante**	**1.65**	**354**⇑	*i*P	Pn	22 17 52.8	+3.2
TACH				*i* S	Sn	22 18 14.9	+5.4
PCH	**Pirque**	**1.69**	**6**⇑	*i*P	Pn	22 17 53.4	+3.4
PCH				*i* S	Sn	22 18 15.6	+5.2
PCH	**Pirque**	**1.69**	**6**⇑	*i*P	Pn	22 17 53.4	+3.4
PCH				*i* S	Sn	22 18 16.3	+5.9
SAN	**Santiago**	**1.84**	**2**	AML	AML	22 18 29.5	
	comp=E,258nm,0.4s						
CLCH	**Cerro Calan**	**1.91**	**5**	*e*P	Pn	22 17 57.2	+4.1
CLCH				AML	AML	22 18 34.4	
	comp=E,275nm,0.2s						
LCCH	**Las Cruces**	**1.95**	**339**⇑	*i*P	Pn	22 17 57.5	+3.9
LCCH				*i* S	Sn	22 18 23.0	+6.2
LCCH	**Las Cruces**	**1.95**	**339**⇓	*i*P	Pn	22 17 57.7	+4.0
LCCH				*i* S	Sn	22 18 23.4	+6.5
FCH	**Farellones**	**2.00**	**11**	*e*P	Pn	22 17 58.8	+4.4
FCH				*i* S	Sn	22 18 24.8	+6.6
FCH				AML	AML	22 18 34.4	
	comp=N,251nm,0.2s						
PEL	**Peldehue**	**2.15**	**1**	*e*P	Pn	22 18 01.0	+4.6
PEL				*i* S	Sn	22 18 30.4	+8.6
PEL				AML	AML	22 18 39.3	
	comp=E,579nm,0.6s						
ROCH	**El Roble**	**2.33**	**354**⇑	*e*P	Pn	22 18 04.2	+5.2
JACH	**Jahuel**	**2.61**	**3**⇑	*i*P	Pn	22 18 08.4	+5.6
JACH				*i* S	Sn	22 18 43.7	+10

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*MOS **11** 22:32:23.5±0.6, 41.22N×43.65E, h6km, mb3.8/1, Error ellipse: s-maj=38.4km s-min=9.0km az=77.3*
*ISCJB **11** 22:32:25.2±1.3, 41.21N±0.07×43.88E±0.05, h10km, Error ellipse: s-maj=10.2km s-min=4.9km az=40.8*
*TIF **11** 22:32:28.0, 41.46N×44.01E, h7km±3km*
ISC 11 22:32:26.2±1.3, **41.28N**±0.07×**43.90E**±0.05, **h2**km±5km, **n15**, σ**0.83**/25, **4C-1D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZR	**Kazreti**	**0.40**	**75**	P	**Pg**	**22 32 35.4**	**+1.5**
KZR				S	**Sg**	**22 32 40.0**	**+0.8**
TBLG	**Delisi**	**0.78**	**54**	*e*PG	**Pg**	**22 32 41.1**	**0.0**
TBLG	**Delisi**	**0.78**	**54**	P	**Pg**	**22 32 41.1**	**+0.1**
TBLG				S	**Sg**	**22 32 50.2**	**-0.9**
MTA	**Mtatsminda**	**0.79**	**58**	P	**Pg**	**22 32 41.2**	**-0.2**
MTA				S	**Sg**	**22 32 50.5**	**-1.1**
DGRG	**David-gareji**	**1.12**	**81**	P	**Pg**	**22 32 48.7**	**+1.0**
ONI	**Oni**	**1.34**	**346**	P	**Pn**	**22 32 51.4**	**-0.6**
ONI				S	**Sg**	**22 33 08.4**	**-0.9**
ZEI	**Tsey**	**1.49**	**0**⇑	*i*PG	**Pn**	**22 32 53.3**	**-0.7**
ZEI				*i* S	**Sn**	**22 33 15.2**	**+1.2**
DIGR	**Digorskoe uzhe**	**1.64**	**352**⇓	*i*PN	**Pn**	**22 32 54.6**	**-1.4**
DIGR				*i* S	**Sn**	**22 33 17.7**	**+0.1**
KORR	**Kora**	**1.81**	**4**⇑	*i*PN	**Pn**	**22 32 57.7**	**-0.7**
KORR				*e*S	**Sn**	**22 33 22.8**	**+0.9**
VLKR	**Vladikavkaz**	**1.86**	**18**⇑	*i*PN	**Pn**	**22 32 58.8**	**-0.3**
SNJR	**Sundja**	**1.91**	**21**⇑	*i*PN	**Pn**	**22 32 59.7**	**-0.1**
ARNR	**Ardon**	**1.93**	**8**	*e*PN	**Pn**	**22 32 59.4**	**-0.6**
CHVG	**Ch'k'valeri**	**1.97**	**317**	P	**Pg**	**22 33 04.9**	**+0.9**
CHVG				S	**Sg**	**22 33 30.4**	**+0.8**
KMSR	**Komsomolskaya**	**2.11**	**8**	*e*PN	**Pn**	**22 33 01.8**	**-0.7**
KMSR				*e*S	**Sn**	**22 33 30.0**	**+0.7**
BTKR	**Batakoyurt**	**2.15**	**13**	*e*PN	**Pn**	**22 33 02.4**	**-0.6**
BTKR				*e*S	**Sn**	**22 33 31.2**	**+1.0**

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*IDC **11** 22:44:54.7±1.2, 6.89S×154.48E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/12, mbtmp4.0/6, MS5.0/1, Ms1 5.0/1, ms1mx3.5/19, Error ellipse: s-maj=53.5km s-min=26.7km az=108.0*
*ISCJB **11** 22:45:01.4±2.0, 6.9S±0.2×154.61E±0.07, h65km±18km, mb3.9/9, Error ellipse: s-maj=26.3km s-min=11.8km az=162.4*
*NEIC **11** 22:45:03.5±1.7, 6.93S×154.60E, h69km±15km, mb4.1/4, Error ellipse: s-maj=22.5km s-min=12.5km az=164.0*
ISC 11 22:45:03.9±1.7, **7.0S**±0.2×**154.64E**±0.08, **h74**km±15km, **n16**, σ**0.90**/14, **mb3.9**/9, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.80**	**115**	*e*Pn	**Pn**	**22 46 26.9**	**-0.5**
	40nm,0.4s						
PMG	**Port Moresby**	**7.79**	**251**	Pn	**Pn**	**22 46 54.0**	**-0.5**
	1.3nm,0.3s,baz=344,slow=15,SNR=3.7						
PMG				Sn	**Sn**	**22 48 21.8**	**+0.6**
	1.2nm,0.3s,baz=270,slow=20,SNR=3.9						
CTAO	**Charters Tower**	**15.38**	**211**	*e*Pn	**Pn**	**22 48 39.3**	**+2.7**
	9.6nm,1.0s						
GUMO	**Guam**	**22.60**	**335**	LR	LR	22 56 56.2	
	comp=Z,4μm,21.0s,baz=282,slow=32						
WRAB	**Tennant Creek**	**23.54**	**235**	*e*P	**P**	**22 50 07.0**	**-0.4**
	3.2nm,0.6s,mb3.8						
WB2	**Warramunga Arr**	**23.54**	**235**	*e*P	**P**	**22 50 07.2**	**-0.3**
ASAR	**Alice Springs**	**25.93**	**228**	P	**P**	**22 50 28.9**	**-0.3**
	1.0nm,0.6s,mb3.4,baz=61,slow=8.8,SNR=8.2						
STKA	**Stephens Creek**	**27.62**	**204**	P	**P**	**22 50 43.5**	**-0.8**
	3.0nm,1.0s,mb3.8,baz=18,slow=12,SNR=2.8						
FITZ	**Fitzroy Crossi**	**30.35**	**246**	*e*P	**P**	**22 51 08.5**	**0.0**
	7.7nm,1.5s,mb4.1						
MBWA	**Marble Bar**	**36.58**	**244**	*e*P	**P**	**22 52 01.9**	**-0.8**
	19nm,1.3s,mb4.9						
SONM	**Songino Array**	**69.11**	**327**	P	**P**	**22 56 01.5**	**-0.6**
	0.4nm,0.6s,mb3.4,baz=132,slow=6.4,SNR=2.7						
MKAR	**Makanchi Array**	**83.14**	**319**	P	**P**	**22 57 21.9**	**+0.2**
	1.2nm,0.6s,mb3.9,baz=96,slow=6.6,SNR=14						
MAW	**Mawson**	**84.30**	**203**	P	**P**	**22 57 27.7**	**+0.1**
	0.9nm,0.8s,mb3.7,baz=69,slow=8.6,SNR=4.5						
NVAR	**Mina Array Bea**	**91.97**	**52**	P	**P**	**22 58 06.5**	**+2.1**
	1.2nm,0.9s,mb4.1,baz=251,slow=11,SNR=4.8						
GERES	**GERESS Array B**	**126.83**	**329**	PKP	PKPdf	23 04 00.7	+1.6
	0.5nm,0.7s,baz=90,slow=2.0,SNR=4.5						
TORD	**Torodi Ar. Bea**	**152.67**	**285**	PKPbc	PKPbc	23 04 54.1	+2.1
	0.7nm,0.6s,baz=62,slow=2.2,SNR=4.6						

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*IDC **11** 22:48:49.1±2.1, 32.40N×141.83E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.5/20, mbtmp3.5/4, ML3.1/1, Error*

ellipse: s-maj=59.8km s-min=23.4km az=57.0
*ISCJB **11** 22:48:51.6±1.5, 3257N±007×14204E±0.10, h38km±15km, mb3.6/3, Error ellipse: s-maj=13.6km s-min=11.7km az=35.1*
*JMA **11** 22:48:51.1±0.4, 3245N×14197E, h60km, M3.5*
*NEIC **11** 22:48:54.1±6.1, 3242N×14186E, h35km, MG3.5(JMA), Error ellipse: s-maj=243.0km s-min=16.5km az=70.0*
ISC 11 22:48:51.8±2.5**, 3251N**±007×**14197E**±009**, h22**km±22km**, n15,** σ**0§88**/22**, mb3.6**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.91	289	P	Pn	22 49 22.2	-0.8
JHJ2				eS	Sn	22 49 45.9	-0.5
JHJ	Hachijo jima 2	1.94	289	Pn	Pn	22 49 22.4	-1.1
	22nm,0.3s,baz=254,slow=3.2,SNR=21						
JHJ				Sn	Sn	22 49 46.6	-0.4
	35nm,0.3s,baz=56,slow=23,SNR=7.8						
BSO1	Boso 1	2.29	339	P	Pn	22 49 28.1	-0.1
BSO3	Boso 3	2.59	332	P	Pn	22 49 32.4	+0.1
JIM2	Oshima 3	3.06	317	P	Pn	22 49 39.0	+0.3
JAG	Ashikaga	4.42	333	P	Pn	22 49 57.9	+0.4
JAG				eS	Sn	22 50 47.6	-0.7
MJAR	Matsushiro Arr	5.08	323	Pn	Pn	22 50 07.1	+0.5
	0.7nm,0.3s,baz=147,slow=11,SNR=11						
MJAR				Sn	Sn	22 51 05.8	+1.3
	0.5nm,0.3s,baz=218,slow=32,SNR=4.1						
MAJO	Matsushiro	5.08	323	ePn	Pn	22 50 07.2	+0.6
	8.9nm,0.8s						
MAT	Matsushiro	5.08	323	P	Pn	22 50 09.6	+3.0
MAT				S	Sn	22 51 05.9	+1.3
MAT	Matsushiro	5.08	323	eS	Sn	22 51 05.5	+0.9
MAT	Matsushiro	5.08	323	eP	Pn	22 50 10.0	+3.4
MAT				eS	Sn	22 51 06.0	+1.4
JMM	Marumori	5.43	350	P	Pn	22 50 10.6	-0.8
JMM				eS	Sn	22 51 11.2	-1.9
SONM	Songino Array	30.88	310	P	P	22 55 07.1	+0.6
	1.0nm,0.6s,mb3.9,baz=113,slow=9.4,SNR=8.8						
BVAR	Borovoye Array	54.02	315	P	P	22 58 14.6	+0.4
	0.4nm,0.5s,mb3.6,baz=76,slow=6.1,SNR=2.9						
ASAR	Alice Springs	56.39	189	P	P	22 58 31.3	-0.1
	0.3nm,0.6s,mb3.5,baz=9.0,slow=8.9,SNR=4.5						

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*ISCJB **11** 22:51:55.9±0.7, 2135S±007×6678W±007, h216km±8km, mb3.5/5, Error ellipse: s-maj=12.3km s-min=9.2km az=86.2*
*IDC **11** 22:51:56.7±1.1, 2146S×6671W, h211km±11km, mb3.5/5, mb1 3.7/9, mb1mx3.5/18, mbtmp4.1/9, MS3.4/1, Ms1 3.4/1, ms1mx3.0/18, Error ellipse: s-maj=22.6km s-min=15.9km az=154.0*
*NEIC **11** 22:51:56.7±0.8, 2142S×6686W, h232km±27km, mb3.9/1, Error ellipse: s-maj=23.4km s-min=13.6km az=100.0*
ISC 11 22:51:56.8±0.7**, 2132S**±007×**6678W**±007**, h209**km±7km**, n15,** σ**1§16**/14**, mb3.5**/5**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.36	237	P	Pn	22 52 41.2	+1.5
	61nm,0.3s,baz=56,slow=7.3,SNR=653						
LVC				S	Sn	22 53 13.5	+0.2
	17nm,0.3s,baz=221,slow=20,SNR=3.6						
LVC				LR	LR	22 53 46.8	
	comp=Z,782nm,19.2s,baz=158,slow=47						
ARE	Arequipa	6.58	316	eP	Pn	22 53 32.0	+0.4
ARE				eS	Sn	22 54 45.0	-2.0
SIV	San Ignacio	7.57	46	P	Pn	22 53 45.3	+0.9
	9.5nm,0.3s,baz=226,slow=13,SNR=213						
SIV				S	Sn	22 55 09.0	-1.2
	2.8nm,0.3s,baz=152,slow=22,SNR=3.3						
CFAA	Coronel Fontan	10.32	187	P	Pn	22 54 17.4	-2.5
	0.2nm,0.3s,baz=2.1,slow=14,SNR=16						
SAML	Samuel	12.78	16	ePn	Pn	22 54 52.4	+1.2
	3.6nm,0.6s						
BDFB	Brasilia	18.66	76	P	P	22 55 59.9	+0.7
	1.1nm,0.3s,baz=263,slow=14,SNR=8.3						
PDAR	Pinedale Array	74.97	329	P	P	23 03 15.8	+0.8
	0.3nm,0.5s,mb3.2,baz=128,slow=6.9,SNR=4.3						
TORD	Torodi Ar. Bea	75.43	69	P	P	23 03 17.1	-0.4
	2.8nm,0.5s,mb4.1,baz=254,slow=5.6,SNR=74						
NVAR	Mina Array Bea	76.60	321	P	P	23 03 25.4	+1.2
	0.3nm,0.6s,mb3.1,baz=191,slow=12,SNR=3.7						
MAW	Mawson	83.92	163	P	P	23 04 02.5	-0.7
	2.3nm,0.6s,mb4.1,baz=211,slow=6.0,SNR=15						
YKA	Yellowknife Ar	91.69	340	P	P	23 04 39.4	-1.0
	0.1nm,0.5s,mb3.0,baz=129,slow=5.8,SNR=4.6						
ASAR	Alice Springs	130.96	205	PKP	PKPdf	23 10 43.0	-0.3
	0.6nm,0.5s,baz=137,slow=1.6,SNR=9.4						
ZAL	Zalesovo	140.93	27	PKP	PKPdf	23 11 01.9	+0.1
	0.8nm,0.7s,baz=195,slow=2.2,SNR=3.0						
MKAR	Makanchi Array	144.31	37	PKP	PKPdf	23 11 06.9	-0.8
	2.8nm,0.7s,baz=318,slow=3.4,SNR=18						
SONM	Songino Array	152.98	10	PKP	PKPdf	23 11 22.5	+0.8
	0.2nm,0.3s,baz=11,slow=1.4,SNR=3.8						
SONM				PKPbc	PKPbc	23 11 29.7	+0.5
	0.9nm,0.4s,baz=276,slow=1.3,SNR=8.4						

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*ISCJB **11** 22:57:22.8±0.8, 3826N±003×2261E±005, h21km±8km, Error ellipse: s-maj=6.5km s-min=5.0km az=104.8*
*NEIC **11** 22:57:22.1, 3830N×2262E, h29km, ML2.6(THE), ML3.2(ATH), After ATH.*
*ATH **11** 22:57:22.1, 3830N×2262E, h29km±1km, MD3.4/12, ML3.2*
*CSEM **11** 22:57:22.7±0.1, 3827N×2261E, h20km, ML3.2, Error ellipse: s-maj=3.0km s-min=2.2km az=91.0*
*THE **11** 22:57:25.6, 3841N×2273E, h8km, ML2.6*
ISC 11 22:57:22.2±0.7**, 3827N**±003×**2262E**±004**, h14**km±5km**, n19,** σ**0§86**/27**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	Lokris	0.48	37	ePB	Pg	22 57 32.3	+0.5
LKR				eSB	Sg	22 57 39.5	+1.2
MGER	Gerania Oros	0.57	119	ePN	Pg	22 57 34.0	+0.5
AGG	Agios Georgios	0.79	343	ePg	Pg	22 57 36.8	-0.7
AGG				eSg	Sg	22 57 48.0	+0.1
NAIG	Nisos Aigina	0.85	126	ePN	Pn	22 57 39.0	-0.8
EVR	Evrytania	0.91	316	ePN	Pn	22 57 39.3	-1.3
EVR				eSN	Sn	22 57 51.7	-1.8
ATH	Athens Observa	0.91	108	ePN	Pn	22 57 40.8	+0.2
ATH				eSN	Sn	22 57 53.5	0.0
RLS	Riolos of Patr	0.94	257	ePN	Pn	22 57 40.9	0.0
PTL	Penteli	1.00	102	ePN	Pn	22 57 42.0	+0.1
KVR	Kavouri	1.00	115	ePN	Pn	22 57 41.5	-0.4
NEO	Neokhori	1.14	24	ePN	Pn	22 57 43.6	-0.1
NEO				eSN	Sn	22 57 58.3	-0.8
XOR	Xorichti	1.18	22	ePg	Pg	22 57 44.5	-0.5
XOR				eSg	Sg	22 58 01.0	+0.6
ITM	Ithomi	1.22	207	ePN	Pn	22 57 45.0	+0.2
AOS	Alonnisos	1.33	47	ePg	Pg	22 57 46.4	-1.5
AOS				eSg	Sg	22 58 04.7	-0.6
VLI	Veliai	1.57	171	ePB	Pn	22 57 50.0	+0.4
VLS	Valsamata	1.60	267	ePN	Pn	22 57 51.0	+0.9
LIT	Litokhoron	1.83	357	ePb	Pn	22 57 54.0	+0.7
JAN	Janina	1.96	316	ePB	Pn	22 57 55.4	+0.4
IGT	Igoumenitsa	2.19	306	ePn	Pg	22 58 03.7	-0.5
FNA	Florina	2.69	339	ePn	Pn	22 58 06.7	+1.6
FNA				eSn	Sn	22 58 39.9	+2.4

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*ISCJB **11** 22:57:33.6±0.5, 4173N±003×2362E±004, h11km±5km, Error ellipse: s-maj=4.9km s-min=4.7km az=145.0*
*CSEM **11** 22:57:33.9±0.1, 4178N×2368E, h12km, ML3.3, Error ellipse: s-maj=2.3km s-min=1.8km az=99.0*
*THE **11** 22:57:34.6, 4175N×2365E, h15km, ML3.3*
*SKO **11** 22:57:36.4, 4176N×2357E, h0km*
*ATH **11** 22:57:36.6, 4154N×2366E, h27km±1km, MD3.4/3*
*NEIC **11** 22:57:36.6, 4154N×2366E, h27km, MD3.4(ATH), ML2.5(THE), After ATH.*
ISC 11 22:57:34.4±0.5**, 4173N**±003×**2363E**±004**, h11**km±6km**, n15,** σ**0§76**/28**, 1D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	Musomiste	0.16	154	ePg	Pg	22 57 38.6	+0.5
MMB				eSg	Sg	22 57 41.8	+1.3
NVR	Nevrokopi	0.42	156	⇓iPB	Pg	22 57 42.7	0.0
NVR				eSB	Sg	22 57 48.0	-0.2
PLD	Plovdiv	0.88	65	ePg	Pg	22 57 50.9	-0.5
PLD				eSg	Sg	22 58 02.5	-0.4
VAY	Valandovo	0.90	243	ePg	Pg	22 57 52.4	+0.7
VAY				eSg	Sg	22 58 03.7	+0.2
VAY	Valandovo	0.90	243	ePg	Pg	22 57 52.3	+0.6
VAY				eSg	Sg	22 58 03.5	0.0
VTS	Vitosha	0.92	340	ePg	Pg	22 57 51.7	-0.4
VTS				eSg	Sg	22 58 04.0	0.0
SOH	Sokhos	0.93	193	ePg	Pg	22 57 52.0	-0.4
SOH				eSg	Sg	22 58 05.1	+0.5
SOH	Sokhos	0.93	193	ePg	Pg	22 57 52.0	-0.4
SOH				eSg	Sg	22 58 05.1	+0.5
STIP	Stip	1.08	269	ePg	Pg	22 57 55.4	+0.1
STIP				eSg	Sg	22 58 09.8	+0.4
STIP	Stip	1.08	269	ePg	Pg	22 57 55.3	0.0
STIP				eSg	Sg	22 58 09.6	+0.1
STIP	Stip	1.08	269	ePg	Pg	22 57 55.4	+0.1
STIP				eSg	Sg	22 58 09.5	+0.1
THE	Thessaloniki	1.21	205	ePg	Pg	22 57 57.5	-0.1
PLG	Polygyros	1.36	186	ePN	Pn	22 57 58.4	-1.0
OUR	Ouranopolis	1.42	169	ePg	Pg	22 58 00.1	-1.6
OUR				eSg	Sg	22 58 19.0	-1.1
RDO	Rodhopi	1.55	112	ePN	Pn	22 58 03.6	+1.7
RDO				eSN	Sn	22 58 22.7	+0.8

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*IDC **11** 22:59:07.1±1.2, 3880N×7184E, h0km, mb3.8/10, mb1 4.0/14, mb1mx3.9/23, mbtmp3.9/14, ML3.9/4, MS3.8/1, Ms1 3.8/1, ms1mx3.3/34, Error ellipse: s-maj=20.4km s-min=15.3km az=153.0*
*NEIC **11** 22:59:10.0±0.4, 39.11N×71.87E, h10km, mb4.3/12, Error ellipse: s-maj=9.7km s-min=5.9km az=223.0*
*MOS **11** 22:59:10.4±1.3, 39.10N×71.87E, h26km, mb4.2/16, Error ellipse: s-maj=11.8km s-min=6.6km az=111.8*
*BJI **11** 22:59:11.9, 39.10N×71.90E, h10km, mB4.6, mb4.1, ML3.6, Ms3.9, Msz3.7*
*NNC **11** 22:59:12.7±5.5, 3895N×7158E, h143km±55km, mb3.1, mpv3.9, Error ellipse: s-maj=53.3km s-min=22.5km az=15.0*
*ISCJB **11** 22:59:13.8±0.9, 3909N±004×7175E±006, h53km±10km, mb4.0/18, MS3.7/2, Error ellipse: s-maj=9.0km s-min=6.5km az=119.0*
ISC 11 22:59:12.9±1.7**, 3907N**±004×**7163E**±005**, h25**km±13km**, n102,** σ**1§36**/112**, mb4.0**/18**, MS3.7**/2**, 6C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	3.40	81	eP	Pn	23 00 03.6	-0.7
KSH				SG	Sb	23 00 52.6	-0.7
KSH				Smax			
	comp=N,218nm,0.8s						
KSH				Smax			
	comp=E,357nm,0.7s						
AML	Almayashu	3.44	27	P	Pn	23 00 07.0	+2.1
	SNR=44						
UCH	Uchtor	3.84	34	P	Pn	23 00 12.8	+2.4
	SNR=14						
EKS2	Erkin-Say	3.94	24	P	Pn	23 00 13.8	+2.0
	SNR=58						
KZA	Kyzart	4.08	41	P	Pn	23 00 14.7	+1.1
	SNR=35						
KK31	Karatay Array	4.12	349	⇓P	Pn	23 00 14.9	+0.7
	comp=E,38nm,0.4s,baz=201,slow=40,SNR=1435						
KK31				⇑S	Sn	23 01 06.1	+4.6
	comp=E,39nm,0.4s,baz=167,slow=23,SNR=12						
AAK	Ala-Archa	4.17	31	P	Pn	23 00 17.1	+2.2
	SNR=25						
AAK	Ala-Archa	4.17	31	ePn	Pn	23 00 15.2	+0.3
AAK				eSn	Sn	23 01 02.0	-0.9
KBK	Karagaybulak	4.38	34	P	Pn	23 00 20.5	+2.7
	SNR=43						
CHMS	Chumysh	4.58	30	P	Pn	23 00 22.2	+1.7
	SNR=120						
USP	Ospenovka	4.72	26	P	Pn	23 00 23.8	+1.3
	SNR=16						
ULHL	Ulahol	4.73	46	P	Pn	23 00 23.3	+0.7
	SNR=32						
TKM2	Tokmak 2	4.88	37	P	Pn	23 00 26.1	+1.4
	SNR=23						
TKM2	Tokmak 2	4.88	37	⇓P	Pn	23 00 25.7	+1.1
	comp=E,3.2nm,0.8s						
TKM2				⇑S	Sn	23 01 23.3	+3.0
	comp=E,6.5nm,0.8s						
MK07	Makanchi Array	10.96	42	⇑P	Pn	23 01 49.6	+1.4
	comp=E,3.1nm,0.8s						
MKAR	Makanchi Array	10.98	42	Pn	Pn	23 01 48.5	+0.2
	comp=E,0.2nm,0.3s,baz=233,slow=13,SNR=17						
MKAR				Lg		23 04 46.6	
	comp=E,0.1nm,0.3s,baz=223,slow=25,SNR=4.4						
MKAR	Makanchi Array	10.98	42	Pn	Pn	23 01 48.5	+0.2
MKAR				Lg		23 04 46.5	
KURK	Kurchatov	12.65	21	P	Pn	23 02 06.4	-4.7
KURK	Kurchatov	12.65	21	eP	Pn	23 02 08.5	-2.6
KURK				e		23 04 30.9	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	12.65	21	ePn	Pn	23 02 08.5	-2.7
	comp=Z,1.9nm,0.8s						
KURK				eSn	Sn	23 04 30.9	-0.2
AB31	Akbulak array	13.17	324	P	Pn	23 02 15.8	-2.6
	comp=Z,5.1nm,0.5s,baz=140,slow=13,SNR=219						
AB31				⇑S	Sn	23 04 36.9	-7.1
	comp=Z,4.0nm,0.5s,baz=143,slow=23,SNR=13						
VOSK	Vostochnaya	13.66	358	P	Pn	23 02 20.5	-4.5
BVAR	Borovoye Array	13.98	357	Pn	Pn	23 02 26.7	-2.6
	comp=Z,0.2nm,0.3s,baz=165,slow=12,SNR=8.9						
BVAR				Sn	Sn	23 05 01.2	-2.6
	comp=Z,0.2nm,0.3s,baz=168,slow=23,SNR=3.8						
BVAR				Lg		23 06 32.4	
	comp=Z,0.1nm,0.3s,baz=151,slow=24,SNR=3.6						
BVAR	Borovoye Array	13.98	357	P	Pn	23 02 26.7	-2.7
BVAR						23 05 01.2	
BRVK	Borovoye	14.02	357	eP	Pn	23 02 25.8	-4.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	Borovoye	14.02	357	ePn	Pn	23 02 25.8	-4.1
	comp=Z,2.4nm,0.8s						
CHKZ	Chkalovo	14.63	358	⇑P	Pn	23 02 34.1	-4.0
CHKZ	Chkalovo	14.63	358	eP	Pn	23 02 34.3	-3.8
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHKZ	Chkalovo	14.63	358	ePn	Pn	23 02 34.3	-3.8
	comp=Z,3.1nm,0.9s						
AKTK	Aktyubinsk	14.89	324	Pn	Pn	23 02 40.4	-1.3
AKTK				Sn	Sn	23 05 24.2	-1.6
AKTO	Aktyubinsk	14.89	324	⇓P	Pn	23 02 40.1	-1.7
	comp=Z,0.4nm,1.0s						
AKTO				⇑S	Sn	23 05 22.8	-3.0
	comp=Z,0.1nm,0.7s						
AKTO	Aktyubinsk	14.89	324	Pn	Pn	23 02 40.4	-1.3
	comp=Z,0.7nm,0.3s,baz=117,slow=15,SNR=11						
AKTO				Sn	Sn	23 05 24.2	-1.6
	comp=Z,0.7nm,0.3s,baz=203,slow=11,SNR=11						
AKTO	Aktyubinsk	14.89	324	P	Pn	23 02 40.4	-1.3
AKTO						23 05 24.3	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
KOLN	Koldanda	15.05	135	eP	Pn	23 02 40.0	-3.8
	comp=N,14nm,0.9s						
GKN	Gorkha	15.46	132	eP	Pn	23 02 48.5	-0.7
	comp=N,9.2nm,0.4s						
KKN	Kakani	15.99	131	eP	Pn	23 02 54.0	-2.1
	comp=N,12nm,0.5s						
KKN	Kakani	15.99	131	eP	Pn	23 02 54.0	-2.1
KKN				pmax	pmax		
	comp=Z,12nm,0.5s						
DMN	Daman	16.03	131	eP	Pn	23 02 52.4	-4.1
PKI	Pulchoki	16.23	131	eP	Pn	23 02 54.4	-4.8
	comp=Z,15nm,0.6s						
PKI	Pulchoki	16.23	131	eP	Pn	23 02 54.4	-4.8
PKI				pmax	pmax		
	comp=Z,15nm,0.6s						
GUN	Gumba	16.26	129	eP	Pn	23 02 59.5	-0.1
	comp=Z,27nm,0.9s						
ZAL	Zalesovo	17.37	27	P	Pn	23 03 11.2	-2.4
	comp=Z,2.1nm,0.3s,baz=259,slow=5.7,SNR=16						
ZAL	Zalesovo	17.37	27	P	Pn	23 03 11.2	-2.3
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NVS	Novosibirsk	17.61	23	iP	Pn	23 03 17.0	+0.5
NVS				pmax	pmax		
	comp=N,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LSA	Lhasa	18.60	114	eP	Pn	23 03 25.7	-2.9
LSA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
LSA	Lhasa	18.60	114	eP	Pn	23 03 25.7	-2.9
	comp=Z,1.3nm,0.4s						
SVE	Sverdlovsk	19.19	341	eP	Pn	23 03 35.8	+0.1
ARU	Arti	19.40	338	eP	Pn	23 03 36.7	-1.6
ARU				eS	Sn	23 07 09.7	-5.5
GNI	Garni	20.72	282	P	P	23 03 54.0	+2.7
	comp=Z,4.1nm,0.6s,baz=148,slow=3.8,SNR=3.7						
GNI	Garni	20.72	282	P	P	23 03 54.0	+2.6
GNI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GTA	Gaotai	21.80	80	eP	P	23 04 02.7	-0.3
GTA				AP		23 04 08.2	
GTA				XP	sP	23 04 11.4	-1.8
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb3.9						
GTA				AMB	AMB		
	comp=Z,140nm,5.7s						
GTA				LR	LR		
	comp=N,187nm,16.3s,MS3.8						
GTA				LR	LR		
	comp=E,245nm,19.8s,MS3.8						
GTA				LR	LR		
	comp=Z,253nm,19.4s,MS3.6						
SONM	Songino Array	26.53	59	P	P	23 04 47.2	-1.3
	comp=Z,1.6nm,0.8s,mb3.6,baz=270,slow=9.1,SNR=7.8						
SONM	Songino Array	26.53	59	P	P	23 04 47.2	-1.3
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASF	Jabal al Asfar	28.93	267	LR	LR	23 18 38.6	
	comp=Z,179nm,18.1s,MS3.7,baz=49,slow=40						
BRTR	Keskin Array B	29.22	284	P	P	23 05 12.8	+0.3
	comp=Z,0.9nm,0.9s,mb3.5,baz=25,slow=10,SNR=4.4						
BRTR	Keskin Array B	29.22	284	P	P	23 05 12.9	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	31.79	306	P	P	23 05 35.0	-0.2
	comp=Z,0.8nm,0.4s,mb3.9,baz=77,slow=7.9,SNR=4.6						
AKASG	Malin Array Be	31.79	306	P	P	23 05 35.0	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOF	Joensuu	33.92	328	ep	P	23 05 53.3	-0.6
FINES	FINESS Array B	35.66	324	P	P	23 06 08.8	-0.1
	comp=Z,0.6nm,0.4s,mb3.9,baz=113,slow=9.1,SNR=19						
FINES	FINESS Array B	35.66	324	P	P	23 06 08.8	-0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	35.66	324	P	P	23 06 08.8	-0.1
ARCES	ARCESS Array B	38.98	336	P	P	23 06 36.9	-0.2
	comp=Z,4.1nm,1.0s,mb4.1,baz=106,slow=8.9,SNR=9.2						
ARCES	ARCESS Array B	38.98	336	P	P	23 06 36.9	-0.1
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	41.90	303	P	P	23 07 02.2	+1.0
	comp=Z,0.7nm,0.5s,mb3.5,baz=59,slow=8.1,SNR=9.2						
GERES	GERESS Array B	41.90	303	P	P	23 07 02.2	+1.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KHC	Kasperske Hory	41.94	303	eP	P	23 07 02.0	+0.5
NB2	NORSAR Subarra	42.66	321	P	P	23 07 06.5	-0.8
	comp=Z,0.7nm,0.5s,mb3.6,baz=93,slow=8.6						
NOA	NORSAR Array B	42.66	321	P	P	23 07 06.8	-0.5
	comp=Z,0.7nm,0.5s,mb3.6,baz=93,slow=7.9,SNR=4.9						
NOA	NORSAR Array B	42.66	321	P	P	23 07 06.9	-0.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CDF	Champ du Feu	46.16	304	eP	P	23 07 36.8	+1.4
	comp=Z,2.6nm,0.6s,mb4.0						
CDF	Champ du Feu	46.16	304	eP	P	23 07 36.8	+1.4
CDF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
CDF	Champ du Feu	46.16	304	eP	P	23 07 36.8	+1.4
	comp=Z,1.3nm,0.6s,mb4.0						
HINF	Hinteralfeld	46.58	303	eP	P	23 07 38.8	+0.1
	comp=Z,3.9nm,0.6s,mb4.2						
HINF	Hinteralfeld	46.58	303	eP	P	23 07 38.8	+0.1
HINF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
HINF	Hinteralfeld	46.58	303	eP	P	23 07 38.8	+0.1
	comp=Z,2.0nm,0.6s,mb4.2						
LPG	La Plagne	47.26	300	eP	P	23 07 45.8	+1.8
LPL	La Plagne	47.27	300	eP	P	23 07 45.1	+1.1
	comp=Z,7.3nm,0.8s,mb4.3						
LPL	La Plagne	47.27	300	eP	P	23 07 45.1	+1.1
LPL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LPL	La Plagne	47.27	300	eP	P	23 07 45.1	+1.1
	comp=Z,3.7nm,0.8s,mb4.4						
MBDF	Montbardon	47.47	299	eP	P	23 07 46.2	+0.6
SMF	Signal de Mont	48.87	302	eP	P	23 07 56.5	+0.1
	comp=Z,4.0nm,0.5s,mb4.4						
SMF	Signal de Mont	48.87	302	eP	P	23 07 56.5	+0.1
SMF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
SMF	Signal de Mont	48.87	302	eP	P	23 07 56.5	+0.1
	comp=Z,2.0nm,0.5s,mb4.4						
SSF	Saint Saulge	48.97	303	eP	P	23 07 58.8	+1.6
AVF	Avril sur Loir	49.15	302	eP	P	23 07 58.8	+0.2
	comp=Z,3.7nm,0.6s,mb4.3						
AVF	Avril sur Loir	49.15	302	eP	P	23 07 58.8	+0.2
AVF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
AVF	Avril sur Loir	49.15	302	eP	P	23 07 58.8	+0.2
	comp=Z,1.9nm,0.6s,mb4.3						
TCF	Toulx Ste Croi	50.06	302	eP	P	23 08 06.0	+0.5
	comp=Z,3.3nm,0.6s,mb4.2						
TCF	Toulx Ste Croi	50.06	302	eP	P	23 08 06.0	+0.5
TCF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
TCF	Toulx Ste Croi	50.06	302	eP	P	23 08 06.0	+0.5
	comp=Z,1.6nm,0.6s,mb4.2						
LDF	La Druitiere	50.86	306	eP	P	23 08 11.4	-0.1
MTLF	Montolieu	51.02	299	eP	P	23 08 14.0	+1.2
LFF	La Frestale	51.47	301	eP	P	23 08 16.8	+0.7
ESDC	Sonseca Array	56.73	297	P	P	23 08 54.9	+0.4
	comp=Z,0.5nm,0.5s,mb3.8,baz=56,slow=6.8,SNR=5.3						
TORD	Torodi Ar. Bea	66.29	268	P	P	23 09 58.7	-0.4
	comp=Z,0.7nm,0.5s,mb4.0,baz=52,slow=5.7,SNR=21						
TORD	Torodi Ar. Bea	66.29	268	P	P	23 09 58.7	-0.4
INK	Inuvik	71.29	10	eP	P	23 10 28.2	-2.0
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	Inuvik	71.29	10	eP	P	23 10 28.2	-2.0
	comp=Z,1.3nm,0.5s,mb4.1						
YKA	Yellowknife Ar	78.66	3	P	P	23 11 11.7	-1.0
	comp=Z,1.1nm,0.7s,mb3.9,baz=351,slow=5.4,SNR=7.2						
YKA	Yellowknife Ar	78.66	3	P	P	23 11 11.7	-1.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	78.66	3	P	P	23 11 11.7	-1.0

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*ISCJB **11** 23:08:53.9±0.4, 3494N±002×440W±004, h10km, Error ellipse: s-maj=4.5km s-min=3.1km az=17.6*
*MDD **11** 23:08:53.1±0.4, 3498N×441W, h0km, mb2.7/12, Error ellipse: s-maj=3.9km s-min=2.7km az=85.0, PRXIMO*
*CSEM **11** 23:08:54.8±0.2, 3488N×429W, h20km, MD2.9, Error ellipse: s-maj=6.9km s-min=3.4km az=103.0*
*CNRM **11** 23:08:57.4, 3491N×427W, h16km, MD2.9*
ISC 11 23:08:54.8±0.8**, 3491N**±003×**436W**±005**, h12**km±6km**, n30,** σ**1§00**/56**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAL	Palemas	0.46	47	iP	Pg	23 09 05.0	+1.1
MPAL				iS	Sg	23 09 10.5	+0.4
TOU	Touzarine	0.50	84	P	Pg	23 09 04.0	-0.6
TOU				S	Sg	23 09 09.5	-1.7
TOU	Touzarine	0.50	84	iP	Pg	23 09 04.0	-0.6
TZK	Tazeka	0.83	170	iP	Pg	23 09 10.5	-0.4
TZK				iS	Sg	23 09 21.5	-0.3
EALB	Alboran	1.49	46	P	Pn	23 09 20.4	-0.9
	2.0nm,0.2s,SNR=7.9						
EALB				S	Sn	23 09 39.4	-1.3
	3.3nm,0.2s,SNR=7.9						
EALB	Alboran	1.49	46	P	Pn	23 09 20.4	-1.0
	2.0nm,0.2s,SNR=7.9						
EALB				S	Sn	23 09 41.0	+0.3
	3.3nm,0.2s,SNR=7.9						
MIF	Mishlifen	1.66	206	iP	Pn	23 09 24.5	+0.8
MIF				iS	Sn	23 09 46.0	+1.0
EMIJ	Mijas	1.69	349	P	Pn	23 09 22.1	-1.9
	0.8nm,0.1s,SNR=4.6						

EMIJ				S	Sn	23 09 42.3	-3.3
	1.9nm,0.3s,SNR=7.2						
EMIJ	Mijas	1.69	349	P	Pn	23 09 22.1	-1.9
	0.8nm,0.1s,SNR=4.6						
EMIJ				S	Sn	23 09 42.0	-3.5
	1.9nm,0.3s,SNR=7.2						
CZD	Col de Zad	1.96	197	*i* P	Pn	23 09 29.0	+1.2
CZD				*i* S	Sn	23 09 50.5	-1.8
EGUA	Guajares	2.02	18	P	Pn	23 09 28.3	-0.4
	0.2nm,0.1s,SNR=7.9						
EGUA				S	Sn	23 09 53.3	-0.6
	0.5nm,0.2s,SNR=7.9						
EGUA	Guajares	2.02	18	P	Pn	23 09 28.3	-0.4
	0.2nm,0.1s,SNR=7.9						
EGUA				S	Sn	23 09 54.0	+0.1
	0.5nm,0.2s,SNR=7.9						
ESPR	Espera	2.30	328	P	Pn	23 09 34.1	+1.6
	0.8nm,0.3s,SNR=7.9						
ESPR				S	Sn	23 09 59.9	-0.9
	0.7nm,0.3s,SNR=7.9						
ESPR	Espera	2.30	328	P	Pn	23 09 34.1	+1.6
	0.8nm,0.3s,SNR=7.9						
ESPR				S	Sn	23 10 01.0	+0.2
	0.7nm,0.3s,SNR=7.9						
EBER	Berja	2.31	31	P	Pn	23 09 33.5	+0.9
	0.8nm,0.3s,SNR=5.5						
EBER				S	Sn	23 10 01.3	+0.3
	1.0nm,0.4s,SNR=4.7						
EBER	Berja	2.31	31	P	Pn	23 09 33.5	+0.8
	0.8nm,0.3s,SNR=5.5						
EBER				S	Sn	23 10 01.3	+0.3
	1.0nm,0.4s,SNR=4.7						
EQUE	Quentar	2.41	18	P	Pn	23 09 34.1	+0.2
	SNR=7.3						
EQUE				S	Sn	23 10 03.1	-0.3
	0.4nm,0.3s,SNR=7.9						
EQUE	Quentar	2.41	18	P	Pn	23 09 34.3	+0.3
	SNR=7.3						
EQUE				S	Sn	23 10 03.9	+0.5
	0.4nm,0.3s,SNR=7.9						
ELUQ	Luque	2.65	2	P	Pn	23 09 37.0	-0.2
	0.1nm,0.4s,SNR=7.9						
ELUQ				S	Sn	23 10 08.7	-0.5
	0.8nm,0.2s,SNR=7.9						
ELUQ	Luque	2.65	2	P	Pn	23 09 38.4	+1.1
	0.1nm,0.4s,SNR=7.9						
ELUQ				S	Sn	23 10 09.5	+0.3
	0.8nm,0.2s,SNR=7.9						
EQES	Quesada	3.07	19	P	Pn	23 09 43.9	+0.9
	1.1nm,0.3s,SNR=10						
EQES				S	Sn	23 10 20.7	+1.0
	0.8nm,0.3s,SNR=5.1						
EQES	Quesada	3.07	19	P	Pn	23 09 44.4	+1.3
	1.1nm,0.3s,SNR=10						
EQES				S	Sn	23 10 21.6	+2.0
	0.8nm,0.3s,SNR=5.1						
EADA	Adamuz	3.25	357	P	Pn	23 09 45.5	-0.2
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	23 10 24.2	0.0
	0.6nm,0.1s,SNR=7.9						
EADA	Adamuz	3.25	357	P	Pn	23 09 46.5	+0.9
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	23 10 24.4	+0.1
	0.6nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.41	327	P	Pn	23 09 47.2	-0.6
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	23 10 26.5	-1.6
	0.3nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.41	327	P	Pn	23 09 48.6	+0.8
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	23 10 26.5	-1.6
	0.3nm,0.2s,SNR=7.9						
EGRO	El Granado	3.64	317	P	Pn	23 09 51.0	+0.1
	0.5nm,0.1s,SNR=7.9						
ETOB	Tobarra	4.36	30	P	Pn	23 10 02.0	+1.3
	0.3nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.36	30	P	Pn	23 10 02.0	+1.2
	0.3nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.39	332	P	Pn	23 10 01.4	+0.2
	0.0nm,0.1s,SNR=7.9						
EBAD				S	Sn	23 10 51.1	-1.2
	0.8nm,0.2s,SNR=7.9						

*STR **11** 23:25:22.5±0.3, 4234N×241E, h5^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **11** 23:25:22.7±0.1, 4232N×241E, h2^{km}, Ml2.3/4, Error ellipse: s-maj=2.5km s-min=1.4km az=179.0*
MDD 11 23:25:22.6±0.6**, 4232N**×**241E, h3**^{km}±6^{km}**, mbLg1.6**/15**, Error ellipse: s-maj=4.6km s-min=2.7km az=157.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBRU	Bruguera	0.17	257	Pg	Pg	23 25 26.4	+0.5
CBRU				Lg		23 25 28.7	
	54nm,0.1s						
FILF	Fillols	0.26	26	Pg	Pg	23 25 27.5	-0.1
FILF				Sg	Sg	23 25 30.8	-0.3
FILF	Fillols	0.26	26	Pg	Pg	23 25 27.5	-0.1
FILF				Lg		23 25 30.9	
VALF	Valcebollere	0.30	285	Pg	Pg	23 25 28.5	+0.2
VALF				Lg		23 25 32.5	
CLLI	Llivia	0.36	296	Pg	Pg	23 25 29.6	+0.2
CLLI				Lg		23 25 34.9	
	5.8nm,0.1s						
EJON	La Jonquera	0.38	71	Pg	Pg	23 25 29.8	-0.1
	3.0nm,0.1s,SNR=7.9						
EJON				Lg		23 25 35.1	
	39nm,0.2s,SNR=7.9						
SJAF	Saint Jean de	0.39	65	Pg	Pg	23 25 30.0	0.0
SJAF				Sg	Sg	23 25 35.1	0.0
SJAF	Saint Jean de	0.39	65	Pg	Pg	23 25 30.0	0.0
SJAF				Lg		23 25 35.2	
CARF	Carcanieres	0.45	331	Pg	Pg	23 25 31.5	+0.3
CARF				Sg	Sg	23 25 37.3	+0.2
CARF	Carcanieres	0.45	331	Pg	Pg	23 25 31.6	+0.4
CARF				Lg		23 25 37.9	
CORG	Organya	0.81	264	Pg	Pg	23 25 38.2	0.0
CORG				Lg		23 25 49.5	
	1.4nm,0.1s						
GRBF	Gourbit	0.82	309	Pg	Pg	23 25 38.5	+0.1
GRBF				Lg		23 25 48.9	
CSOR	Sort	0.94	274	Pg	Pg	23 25 40.2	-0.5
CSOR				Lg		23 25 54.0	
	1.8nm,0.2s						
SALF	Salau	1.00	296	Pg	Pg	23 25 41.6	-0.1
SALF				Sg	Sg	23 25 54.5	-0.2
SALF	Salau	1.00	296	Pg	Pg	23 25 41.7	0.0
SALF				Lg		23 25 54.6	
MTLF	Montolieu	1.03	352	*e*Pg	Pg	23 25 42.0	-0.3
MTLF				*e*Sg	Sg	23 25 55.2	-0.4
	4.5nm,0.2s						
MTLF	Montolieu	1.03	352	Pg	Pg	23 25 42.0	-0.3
MTLF				Lg		23 25 55.2	
	2.2nm,0.2s						
CAVN	Les Avellanes	1.31	251	Pg	Pg	23 25 47.1	-0.5
CAVN				Lg		23 26 04.4	
	10nm,0.2s						
EPOB	Poblet	1.39	226	Pg	Pg	23 25 48.6	-0.6
	3.4nm,0.8s,SNR=11						
EPOB				Lg		23 26 06.6	
	3.4nm,0.2s,SNR=22						
EPF	Esparros	1.68	296	*e*Pg	Pg	23 25 53.7	-1.1
EPF				*e*Sg	Sg	23 26 15.9	-0.6
	2.6nm,0.3s						
EPF	Esparros	1.68	296	Pg	Pg	23 25 53.7	-1.1
EPF				Lg		23 26 15.9	
	1.3nm,0.3s						
EBIE	Bielsa	1.71	283	Pg	Pg	23 25 55.0	-0.4
	1.7nm,0.3s,SNR=13						
EBIE				Lg		23 26 18.1	
	1.5nm,0.3s,SNR=7.7						
ERTA	Horta de San J	2.07	229	Pg	Pg	23 26 00.6	-1.6
	0.3nm,0.1s,SNR=7.9						
ERTA				Lg		23 26 27.6	
	4.0nm,0.4s,SNR=12						
ESAC	San Caprasio	2.23	255	Pg	Pg	23 26 02.6	-2.6
	2.4nm,0.1s,SNR=7.9						
ESAC				Lg		23 26 33.3	
	5.5nm,0.1s,SNR=7.9						
CAF	Calviac	2.61	355	*e*Pg	Pg	23 26 11.1	-1.6
CAF				*e*Sg	Sg	23 26 44.8	-1.7
	2.1nm,0.2s						
CAF	Calviac	2.61	355	Pg	Pg	23 26 11.1	-1.6
CAF				Lg		23 26 44.8	
	1.1nm,0.2s						
LFF	La Frestale	2.88	336	*e*Sg	Sg	23 26 52.3	-2.8
	5.5nm,0.3s						
LFF	La Frestale	2.88	336	Lg		23 26 52.3	
	2.8nm,0.3s						
EMOS	Mosqueruela	2.92	229	Lg		23 26 54.4	
	0.4nm,0.2s,SNR=7.9						

*CSEM **11** 23:27:23.8±0.1, 3832N×2264E, h8^{km}, ML3.8, Error ellipse: s-maj=2.2km s-min=1.5km az=71.0*
*ATH **11** 23:27:23.1, 3831N×2259E, h21^{km}±1^{km}, MD4.0/21, ML3.8*
*NEIC **11** 23:27:23.1, 3831N×2259E, h21^{km}, ML3.4(THE), ML3.8(ATH), After ATH.*
*ISCJB **11** 23:27:24.3±0.5, 3830N±002×2264E±003, h22^{km}±4^{km}, mb3.6/4, Error ellipse: s-maj=4.1km s-min=3.1km az=119.4*
*THE **11** 23:27:25.4, 3841N×2277E, h7^{km}, ML3.6*
*IDC **11** 23:27:27.3±3.0, 3822N×2268E, h36^{km}±30^{km}, mb3.5/5, mb1 3.6/9, mb1mx3.4/24, mbtmp3.5/9, ML3.4/4, Error ellipse: s-maj=21.0km s-min=20.0km az=158.0*
ISC 11 23:27:23.8±0.5**, 3831N**±002×**2265E**±003**, h10**^{km}±3^{km}**, n62,** σ1^{s}**05**/85**, mb3.6**/4**, 1C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	Lokris	0.44	39	*e*PB	Pg	23 27 32.3	0.0
LKR				*e*SB	Sg	23 27 40.0	+1.9
MGER	Gerania Oros	0.58	124	*e*PB	Pg	23 27 35.0	0.0
AGG	Agios Georgios	0.76	341	*e*Pg	Pg	23 27 37.6	-0.7
AGG				*e*Sg	Sg	23 27 49.1	+0.9
NAIG	Nisos Aigina	0.86	129	*e*PN	Pn	23 27 41.0	-1.0
EVR	Evrytania	0.90	313	*e*PN	Pg	23 27 40.3	-0.7
EVR				*e*SN	Sg	23 27 51.3	-1.4
ATH	Athens Observa	0.91	111	⇓*i*PN	Pn	23 27 41.8	-0.8
ATH				*e*SN	Sn	23 27 54.6	-1.1
RLS	Riolos of Patr	0.97	255	*e*PB	Pg	23 27 40.3	-2.1
RLS				*e*SN	Sn	23 27 54.0	-3.2
PTL	Penteli	0.99	105	*e*PN	Pn	23 27 43.0	-0.8
KVR	Kavouri	1.01	118	*e*PN	Pn	23 27 43.0	-1.0
NEO	Neokhori	1.09	24	*e*PN	Pn	23 27 44.7	-0.5
NEO				*e*SN	Sn	23 27 59.0	-1.3
XOR	Xorichti	1.14	22	*e*Pg	Pg	23 27 45.0	-0.6
ITM	Ithomi	1.27	207	⇓*i*PN	Pn	23 27 46.1	-1.5
AOS	Alonnisos	1.29	48	*e*Pg	Pg	23 27 47.4	-1.2
AOS				*e*Sg	Sg	23 28 04.9	-0.4
AOS	Alonnisos	1.29	48	*e*Pg	Pg	23 27 47.3	-1.2
AOS				*e*Sg	Sg	23 28 04.9	-0.4
VLI	Veliai	1.60	172	*e*PN	Pn	23 27 52.6	+0.4
LKD	Levkas	1.62	285	*e*Pb	Pb	23 27 54.0	+0.3
LKD				*e*Sb	Sg	23 28 17.2	+1.4
VLS	Valsamata	1.63	266	*e*PN	Pn	23 27 52.5	0.0
LIT	Litokhoron	1.79	356	*e*Pb	Pn	23 27 54.6	-0.2
LIT				*e*Sb	Sn	23 28 17.1	-0.6
LIT	Litokhoron	1.79	356	*e*Pb	Pn	23 27 54.6	-0.2
LIT				*e*Sb	Sn	23 28 17.0	-0.7
PAIG	Paliouri	1.80	26	*e*Pb	Pn	23 27 54.3	-0.7
PAIG				*e*Sb	Sn	23 28 16.9	-1.0
MEV	Metsovon	1.84	324	*e*Pb	Pb	23 27 58.0	+0.4
MEV				*e*Sb	Sb	23 28 20.4	-0.3
JAN	Janina	1.94	314	*e*PN	Pn	23 27 56.7	-0.2
KYTH	Kithira	2.05	171	*e*PN	Pn	23 27 59.0	+0.7
KZN	Kozani	2.11	341	*e*PN	Pn	23 28 00.0	+0.9
PLG	Polygyros	2.15	16	⇑*i*PN	Pn	23 27 59.2	-0.5
IGT	Igoumenitsa	2.18	305	*e*Pn	Pb	23 28 02.5	-0.9
IGT				*e*Sn	Sb	23 28 32.1	+1.7
OUR	Ouranopolis	2.27	27	*e*Pn	Pn	23 28 01.1	-0.3
HORT	Hortiatis	2.31	9	*e*Pn	Pn	23 28 01.5	-0.5
SOH	Sokhos	2.57	12	*e*Pn	Pn	23 28 05.0	-0.5
SOH				*e*Sn	Sn	23 28 36.3	-0.5
SOH	Sokhos	2.57	12	*e*Pn	Pn	23 28 04.9	-0.6
SOH				*e*Sn	Sn	23 28 36.3	-0.5
APE	Apeiranthos	2.60	118	*e*Pn	Pn	23 28 06.0	+0.1
APE	Apeiranthos	2.60	118	*e*PN	Pn	23 28 06.4	+0.5
KEK	Kerkira	2.63	303	*e*PN	Pn	23 28 06.5	+0.2
FNA	Florina	2.66	339	*e*Pn	Pn	23 28 07.5	+0.7
FNA				*e*Sn	Sn	23 28 40.5	+1.4
CHOS	Chios island	2.68	87	*e*Pn	Pn	23 28 07.5	+0.6
BIA	Bitola	2.89	340	*e*Pn	Pn	23 28 07.4	-2.5
BIA				*e*Sn	Sn	23 28 45.3	+0.5
BIA	Bitola	2.89	340	*e*Pn	Pn	23 28 07.2	-2.7
BIA				*e*Sn	Sn	23 28 43.6	-1.3
BIA	Bitola	2.89	340	*e*Pn	Pn	23 28 07.2	-2.8
BIA				*e*Sn	Sn	23 28 45.3	+0.5
PRK	Paraskevi	2.98	71	*e*PN	Pn	23 28 12.3	+1.2
VAY	Valandovo	3.01	359	*e*Pn	Pn	23 28 12.6	+1.0
VAY	Valandovo	3.01	359	*e*Pn	Pn	23 28 10.7	-0.9
OHR	Ohrid	3.14	334	*e*Pn	Pb	23 28 21.7	+2.0
OHR				*e*Sn	Sn	23 28 50.1	-0.8
OHR	Ohrid	3.14	334	*e*Sn	Sn	23 28 50.1	-0.8
VAM	Vamos	3.15	156	*e*PN	Pn	23 28 14.4	+0.9
NVR	Nevrokopi	3.18	17	*e*PN	Pn	23 28 13.9	+0.1
SMG	Samos	3.36	99	*e*PN	Pn	23 28 17.4	+1.0
MMB	Musomiste	3.38	14	*e*Pn	Pn	23 28 16.3	-0.3
MMB				*e*Sn	Sn	23 28 56.5	-0.3
STIP	Stip	3.40	354	*e*Pn	Pn	23 28 17.6	+0.7
STIP	Stip	3.40	354	*e*Pn	Pn	23 28 17.5	+0.6
IDI	Anoyia	3.51	149	Pn	Pn	23 28 18.4	0.0
	1.1nm,0.3s,baz=299,slow=19,SNR=17						
IDI				Sn	Sn	23 29 01.3	+1.2
	1.9nm,0.3s,baz=270,slow=20,SNR=3.0						
RDO	Rodhopi	3.60	37	*e*PN	Pn	23 28 20.6	+0.9
NPS	Neapolis	3.86	141	*e*PN	Pn	23 28 24.3	+1.1
GRUS	Gruza	5.76	346	*e*Pn	Pn	23 28 52.0	+2.6
DIVS	Divcibare	6.12	342	*e*Pn	Pn	23 28 58.3	+4.0
MLR	Muntele Rosu	7.58	18	Pn	Pn	23 29 16.4	+2.0
	0.5nm,0.3s,baz=168,slow=12,SNR=6.2						
BRTR	Keskin Array B	8.67	77	Pn	Pn	23 29 31.7	+2.4
	0.1nm,0.3s,baz=255,slow=13,SNR=3.5						
GERES	GERESS Array B	12.36	331	Pn	Pn	23 30 23.4	+3.6
	0.1nm,0.3s,baz=178,slow=9.8,SNR=2.9						
ESDC	Sonseca Array	20.71	282	P	P	23 32 03.1	-1.1
	0.7nm,0.6s,baz=74,slow=10,SNR=4.4						
EKA	Eskdalemuir Ar	24.31	323	P	P	23 32 43.6	+2.1
	2.4nm,0.8s,mb3.6,baz=107,slow=9.9,SNR=4.1						
TORD	Torodi Ar. Bea	31.22	222	P	P	23 33 43.0	-0.3
	0.2nm,0.6s,mb3.1,baz=28,slow=9.4,SNR=5.8						
MKAR	Makanchi Array	43.80	59	P	P	23 35 29.0	-0.8
	0.9nm,0.7s,mb3.6,baz=285,slow=6.1,SNR=6.1						
ZAL	Zalesovo	44.34	48	P	P	23 35 33.8	-0.4
	0.7nm,0.4s,mb3.8,baz=221,slow=7.0,SNR=4.4						

IDC 11 23:30:17.1±3.2**, 709S**×**15490E, h0**^{km}**, mb3.7**/2**, mb1 3.8**/2**, mb1mx3.6**/12**, mbtmp3.7**/2**, Error ellipse: s-maj=133.0km s-min=45.1km az=115.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.04	228	P	P	23 35 52.4	+0.4
	0.3nm,0.4s,baz=65,slow=8.5,SNR=4.9						
MKAR	Makanchi Array	83.41	319	P	P	23 42 46.5	+0.1
	0.8nm,0.6s,baz=93,slow=4.5,SNR=8.6						
GERES	GERESS Array B	127.08	329	PKP	PKPdf	23 49 23.6	+0.4
	0.2nm,0.5s,baz=18,slow=0.3,SNR=4.0						
TORD	Torodi Ar. Bea	152.96	285	PKPbc	PKPbc	23 50 17.3	+0.9
	0.5nm,0.6s,baz=66,slow=1.9,SNR=6.9						
TORD				PKPab	PKPab	23 50 28.4	+0.9
	0.6nm,0.7s,baz=53,slow=1.8,SNR=3.5						

SKHL 11 23:42:03.2±1.1**, 5288N**×**14135E, h10**^{km}**, mb4.1**/4**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKL	Nikolayevsk	0.49	304	*e*Pg	Pg	23 42 13.2	+0.5
NKL				*e*Sg	Sg	23 42 20.2	+1.1
NKL				A		23 42 21.0	
	1μm,1.5s						
NKL				A		23 42 21.0	
	2μm,1.5s						
NKL				A		23 42 21.0	
	2μm,0.3s						
NKL				A		23 42 21.0	
	2μm,0.3s						
OKH	Okha	1.17	54	*e*Pg	Pg	23 42 26.5	+0.9
OKH				AMB	AMB	23 42 26.9	
	300nm,0.5s						
OKH				*e*Sg	Sg	23 42 42.3	+1.6
OKH				A		23 42 43.0	
	600nm,0.5s						
TYV	Tymovskoe	2.18	158	*e*Pg	Pg	23 42 46.5	+1.6
TYV				AMB	AMB	23 42 47.0	
	13nm,0.5s						
TYV				AMB	AMB	23 42 47.0	
	7.0nm,0.5s						
TYV				AMB	AMB	23 42 47.0	
	32nm,0.5s						
TYV				*e*Sg	Sg	23 43 17.0	+3.9
TYV				A		23 43 20.5	
	40nm,0.7s						
TYV				A		23 43 20.5	
	58nm,0.7s						
GRNR	Gornyy	3.72	237	*e*Sb	Sb	23 43 51.1	-2.9
GRNR				*e*Sg	Sg	23 44 05.5	+2.9
EKMR	Ekimchan	5.08	275	*e*P	Pn	23 43 22.5	+3.1
EKMR				*e*Pg	Pg	23 43 41.8	+1.3
EKMR				AMB	AMB	23 43 42.5	
	4.0nm,0.5s						
EKMR				*e*S	Sn	23 44 20.9	+2.8
EKMR				*e*Sg	Sg	23 44 52.5	+6.2
EKMR				A		23 44 54.0	
	29nm,0.6s						
EKMR				A		23 44 54.0	
	14nm,0.6s						
EKMR				A		23 44 54.0	
	11nm,0.6s						
KLR	Kul'dur	7.07	243	*e*rx	rx	23 44 40.8	
KLR				*e*rx	rx	23 45 54.8	
YASR	Yasnyy	8.06	278	*e*rx	rx	23 44 36.8	
YASR				*e*Sg	Sn	23 46 20.8	+49
YASR				A		23 46 36.8	
	7.0nm,0.6s						
ZEA	Zeya	8.49	281	*e*Pg		23 46 31.6	
ZEA				AMB	AMB	23 46 32.7	
	14nm,1.2s						

WEL 11 23:46:02.3±0.4**, 3796S**×**17616E, h182**^{km}±3^{km}**, ML3.5**/9**, Error ellipse: s-maj=4.3km s-min=3.1km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.81	112	PN	Pn	23 46 28.7	-0.2
URZ				SN	Sn	23 46 49.0	-0.3
MWZ	Matawai	1.14	110	PN	Pn	23 46 31.4	+0.2
MWZ				SN	Sn	23 46 53.0	-0.6
BKZ	Black Stump Fm	1.23	168	PN	Pn	23 46 32.4	+0.4
BKZ				SN	Sn	23 46 55.3	+0.4
MOVZ	Moawhango	1.48	192	PN	Pn	23 46 34.4	+0.2
KNZ	Kokohu	1.59	132	PN	Pn	23 46 35.6	+0.3
TSZ	Takapari Road	2.10	184	PN	Pn	23 46 40.3	-0.2
TSZ				SN	Sn	23 47 09.3	-0.9
PXZ	Pawanui	2.14	165	PN	Pn	23 46 40.8	-0.2
PXZ				SN	Sn	23 47 09.8	-1.2
MRZ	Mangatainoka R	2.73	189	PN	Pn	23 46 46.5	-1.3
MRZ				SN	Sn	23 47 22.3	-0.9
KIW	Kapiti Island	3.06	198	PN	Pn	23 46 49.8	-1.9
MTW	Mount Morrison	3.23	189	PN	Pn	23 46 51.6	-2.3
TRWZ	Traveller	3.45	186	PN	Pn	23 46 54.3	-2.2
MSWZ	Moikau Station	3.52	191	PN	Pn	23 46 54.9	-2.5
TCW	Tory Channel	3.56	204	*e*PN	Pn	23 46 55.9	-2.0
TCW				SN	Sn	23 47 38.5	-2.8
TUWZ	Tuamarina	3.87	206	*e*PN	Pn	23 46 59.5	-2.2
NNZ	Nelson	3.90	213	*e*PN	Pn	23 46 59.1	-3.1
NNZ				SN	Sn	23 47 46.0	-2.9
THZ	Tophouse	4.55	212	*e*PN	Pn	23 47 07.4	-3.0
KHZ	Kahutara	4.88	203	*e*PN	Pn	23 47 11.7	-3.1
LTZ	Lake Taylor	5.66	210	PN	Pn	23 47 21.2	-3.7

*NIED **11** 23:51:00, 2260N×12160E, h53^{km}, Mw5.4 Best double couple: M$_0$1.62000×10^{17} NP1:φ$_s$43.00000°, δ82.00000°, λ92.00000°. NP2:φ$_s$208.00000°, δ8.00000°, λ75.00000°.*
*MOS **11** 23:51:03.6±1.0, 2245N×12151E, h22^{km}, mb5.5/72, MS4.7/34, Error ellipse: s-maj=8.1km s-min=4.3km az=115.2*
*SZGRF **11** 23:51:03.2, 2162N×12140E, h33^{km}, mb5.5, MS5.1, Taiwan region*
*BJI **11** 23:51:04.6, 2260N×12145E, h12^{km}, mB5.2, mb5.0, ML5.1, Ms5.0, Msz4.7*
*CSEM **11** 23:51:05.6, 2236N×12161E, h33^{km}, mb5.6*
*ISCJB **11** 23:51:05.0±0.1, 2247N±002×12151E±002, h32^{km}, mb5.3/171, MS4.7/57, Error ellipse: s-maj=2.7km s-min=2.1km az=62.0*
*HRVD **11** 23:51:07.6±0.2, 2250N×12139E, h29^{km}, MW5.2/78, Centroid moment Tensor Solution. LP body waves: s35,c49;Mantle waves: s78,c147; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.68±.22; M$_{\theta\theta}$2.13±.13; M$_{\phi\phi}$-5.81±.16; M$_{r\theta}$-3.78±.22; M$_{\theta\phi}$-3.75±.09; M$_{\phi r}$-0.16±.21; Best double couple: M$_0$7.36200×10^{16} NP1:φ$_s$346.00000°, δ52.00000°, λ30.00000°. NP2:φ$_s$237.00000°, δ66.00000°, λ138.00000°. Principal axes: T 7.1880, Plg46.0000°, Azm195.0000°; N 0.3490, Plg43.0000°, Azm33.0000°; P -7.5370, Plg9.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **11** 23:51:07.6±0.6, 2245N×12153E, h42^{km}±5^{km}, mb5.4/99, MS5.1/9 Error ellipse: s-maj=5.0km s-min=3.7km az=78.0*
NEIC Recorded [3 TAP] in T'ai-tung; [2 TAP] in Kao-hsiung, P'ing-tung, T'ai-nan and Yun-lin; [1 TAP] in Chang-hua, Chia-i, Hua-lien and Nan-t'ou Counties.
*JMA **11** 23:51:07.4±0.2, 2256N×12156E, h85^{km}, M5.2*
*IDC **11** 23:51:08.2±1.5, 2242N×12146E, h46^{km}±13^{km}, mb4.9/27, mb1 5.0/28, mb1mx5.0/29, mbtmp5.2/28, ML4.8/1, MS4.5/22, Ms1 4.5/22, ms1mx4.3/35, Error ellipse: s-maj=15.4km s-min=9.0km az=65.0*
ISC 11 23:51:07.1±0.1**, 2251N**±002×**12149E**±002**, h33**^{km}**, h33**^{km}±.9^{km}**:pP-P, n630,** σ1^{s}**10**/634**, mb5.3**/170**, MS4.7**/57**, 52C-43D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	1.66	3	⇑*i*Pn	Pn	23 51 32.3	-1.6
NACB				*e*Sn	Sn	23 51 55.5	+1.4
YHNB	Yeheng	2.16	357	*e*Pn	Pn	23 51 40.5	-0.1
YOJ	Yonaguni jima	2.39	35	P	Pn	23 51 44.2	+0.3
YOJ				S	Sn	23 52 12.7	+0.6
TATO	Taipei	2.46	360	⇓P	Pn	23 51 45.4	+0.5
	SNR=16						
TATO	Taipei	2.46	360	*e*Pn	Pn	23 51 45.1	+0.3
HATJ	Hateruma jima	2.63	54	P	Pn	23 51 47.5	+0.4
HATJ				S	Sn	23 52 17.5	-0.3
IRIF	Iriomote-Funau	2.74	48	P	Pn	23 51 49.1	+0.3
IRIF				S	Sn	23 52 20.8	0.0
JKRS	Kuro-shima	2.88	53	P	Pn	23 51 51.2	+0.5
JKRS				S	Sn	23 52 24.5	+0.3
JIJ	Ishigaki jima	3.06	52	P	Pn	23 51 52.9	-0.1
JIJ				S	Sn	23 52 27.4	-1.0
QZH	Quanzhou	3.60	313	⇓*i*P	Pn	23 51 59.2	-1.3
QZH				S	Sn	23 52 38.4	-3.5
QZH				Smax			
	comp=N,6μm,0.7s						
QZH				Smax			
	comp=E,7μm,0.7s						
JTJ	Tarama	3.63	54	P	Pn	23 52 01.7	+0.8
JTJ				S	Sn	23 52 42.5	-0.1
JMJ	Miyako jima 2	4.17	56	P	Pn	23 52 08.8	+0.4
JMJ				S	Sn	23 52 55.9	-0.1
JOGS	Gusukube	4.23	57	P	Pn	23 52 10.0	+0.8
JOGS				S	Sn	23 52 57.0	-0.4
SGCP	Mt. Cagua	4.28	173	*e*P	Pn	23 52 09.8	0.0
APYP	Conner	4.63	183	*e*P	Pn	23 52 13.8	-0.9
CVP	Callao Caves	4.79	176	*e*P	Pn	23 52 17.0	+0.1
ABRA	Dolores	4.89	189	*e*P	Pn	23 52 18.3	+0.1
PALP	Palanan	5.49	171	*e*P	Pn	23 52 27.5	+1.0
CAUP	Cauayan	5.54	177	*e*P	Pn	23 52 30.3	+3.0
JKE	Kume jima 2	6.14	51	P	Pn	23 52 34.4	-1.0
JKE				S	Sn	23 53 41.7	-2.8
BCPH	Baguio City Da	6.15	188	⇓*e*P	Pn	23 52 36.6	+0.9
BOLP	Bolinao	6.27	194	*e*P	Pn	23 52 38.3	+1.0
JAGN	Aguni-jima	6.62	51	P	Pn	23 52 41.1	-1.0
JAGN				S	Sn	23 53 55.8	-0.6
BALP	Baler	6.73	179	*e*P	Pn	23 52 44.2	+0.6
NAH1	Naha	6.74	56	S	Sn	23 53 57.4	-1.9
SCZP	Santa Cruz	6.86	193	*e*P	Pn	23 52 46.2	+0.9
JIH	Iheya	7.41	51	P	Pn	23 52 51.6	-1.3

JIH S **Sn** **23 54 12.3 -3.5**
JOW Kunigami 7.52 54 P **Pn** **23 52 52.4 -2.0**
comp=E,35nm,0.3s,baz=256,slow=9.1,SNR=59
JOW S **Sn** **23 54 13.5 -5.0**
comp=E,19nm,0.3s,baz=323,slow=29,SNR=8.6
JOW LR LR 23 56 04.9
comp=E,6μm,20.9s,baz=118,slow=39
JOW Kunigami 7.52 54 P **Pn** **23 52 52.3 -2.1**
JOW S **Sn** **23 54 15.2 -3.3**
POLP Polilio Island 7.75 177 *e*P **Pn** **23 52 58.7 +1.2**
TGY Tagaytay City 8.38 184 P **Pn** **23 53 08.3 +2.1**
comp=E,29nm,0.3s,baz=159,slow=6.8,SNR=7.7
TGY Tagaytay City 8.38 184 P **Pn** **23 53 08.3 +2.2**
TGY pmax pmax
comp=Z,29nm,0.3s
JTK Tokunoshima 8.56 51 P **Pn** **23 53 05.7 -2.9**
JTK S **Sn** **23 54 38.4 -5.6**
SSE Sheshan 8.56 358 P **Pn** **23 53 08.9 +0.3**
SSE AP 23 53 16.0
SSE S **Sn** **23 54 49.0 +5.0**
SSE AMB AMB
comp=Z,50nm,0.8s
SSE AMB AMB
comp=Z,78nm,4.9s
SSE LR LR
comp=N,3μm,12.9s
SSE LR LR
comp=E,3μm,12.8s
SSE LR LR
comp=Z,5μm,12.5s
GQP Guinayangan 8.60 174⇑ *e*P **Pn** **23 53 11.8 +2.5**
GQP *e*S **Sn** **23 54 44.4 -0.8**
LUBP Lubang 8.81 188 *e*P **Pn** **23 53 13.0 +0.9**
PVCP Virac 9.22 164 *e*P **Pn** **23 53 17.6 0.0**
JAM Amami Oshima 9.39 50 P **Pn** **23 53 17.9 -2.2**
JAM S **Sn** **23 54 59.1 -5.4**
JMZ Minamidaito 2 9.47 68 P **Pn** **23 53 19.8 -1.4**
JMZ S **Sn** **23 54 56.7 -10**
NJ2 Nanjing 9.79 347 *e*P **Pn** **23 53 24.8 -0.7**
NJ2 AP 23 53 31.9
NJ2 XP 23 53 36.7
NJ2 S **Sn** **23 55 16.4 +2.1**
NJ2 XS 23 55 26.0
NJ2 AMB AMB
comp=Z,20nm,0.7s
NJ2 LR LR
comp=N,12μm,14.0s
NJ2 LR LR
comp=E,9μm,24.0s
NJ2 LR LR
comp=Z,6μm,12.0s
WHN Wuhan 10.24 323 *e*P **Pn** **23 53 30.4 -1.3**
WHN LR LR
comp=Z,9μm,14.5s
BUSP Coron 10.52 187 *e*P **Pn** **23 53 35.6 +0.1**
ENPP El Nido 11.41 190 *e*P **Pn** **23 53 47.3 -0.4**
QIZ Qiongzhong 11.44 255 P **Pn** **23 53 47.6 -0.4**
QIZ XP 23 54 00.8
QIZ S **Sn** **23 55 52.9 -1.7**
QIZ LR LR
comp=N,4μm,13.6s
QIZ LR LR
comp=E,5μm,13.5s
QIZ LR LR
comp=Z,8μm,13.3s
QIZ Qiongzhong 11.44 255 *e*Pn **Pn** **23 53 47.0 -1.0**
comp=Z,4.5nm,0.7s
QIZ *e*Sn **Sn** **23 55 42.1 -13**
JFU Fukue jima 2 11.98 31 P **Pn** **23 53 57.3 +1.9**
JNU Nakatsue 13.44 36 P **Pn** **23 54 12.5 -2.9**
JTU Tsushima 13.84 28 P **Pn** **23 54 22.4 +1.6**
GYA Guiyang 14.06 289⇓ *i*P **Pn** **23 54 22.6 -1.3**
GYA AP 23 54 30.2
GYA XP 23 54 34.8
GYA S **Sn** **23 56 57.1 -1.7**
GYA XS 23 57 07.2
GYA AMB AMB
comp=Z,40nm,1.1s
GYA AMB AMB
comp=Z,170nm,6.4s
GYA LR LR
comp=N,2μm,11.7s
GYA LR LR
comp=E,5μm,12.2s
GYA LR LR
comp=Z,5μm,11.6s
TIA Tai'an 14.18 345 *e*P **Pn** **23 54 27.4 +2.0**
TIA LR LR
comp=N,4μm,15.0s
CGP Cagayan de Oro 14.31 167⇓ *e*P **Pn** **23 54 33.7 +6.5**
CTBH Cotabato--PC H 15.43 170⇓ *i*P **Pn** **23 54 46.7 +4.5**
INCN Inchon 15.57 15 P **Pn** **23 54 48.6 +4.5**
SNR=14
INCN Inchon 15.57 15 *e*Pn **Pn** **23 54 47.4 +3.3**
XAN Xi'an 15.94 319 P **Pn** **23 54 49.0 +0.2**
XAN AMB AMB
comp=Z,89nm,1.3s
XAN LR LR
comp=N,2μm,18.7s
XAN LR LR
comp=E,2μm,22.5s
XAN LR LR
comp=Z,1μm,34.3s
DL2 Dalian 16.35 0 P **Pn** **23 54 59.8 +5.8**
DL2 AMB AMB
comp=Z,30nm,1.0s
DL2 AMB AMB
comp=Z,170nm,6.7s
DL2 LR LR
comp=N,1μm,16.4s
DL2 LR LR
comp=E,920nm,12.9s
DL2 LR LR
comp=Z,2μm,13.4s
KKM Kota Kinabalu 17.14 198 *e*Pn **Pn** **23 55 05.3 +1.3**
KMI Kunming 17.36 282 P **Pn** **23 55 09.1 +2.4**
KMI AP pP 23 55 14.2 -2.3
KMI XP sP 23 55 17.4 -3.3
KMI PP 23 55 23.3
KMI PPP 23 55 31.5
KMI S **Sn** **23 58 17.5 -1.3**
KMI XS sS 23 58 25.4 -15
KMI SS 23 58 38.5
KMI SSS 23 58 51.1
KMI AMB AMB
comp=Z,31nm,1.2s
KMI AMB AMB
comp=Z,645nm,5.8s
KMI LR LR
comp=N,2μm,20.7s
KMI LR LR
comp=E,2μm,18.5s
KMI LR LR
comp=Z,3μm,18.7s
JWT Wachi 17.59 41 P **Pn** **23 55 11.6 +2.0**
CD2 Chengdu 17.90 302 P **Pn** **23 55 13.0 -0.5**
CD2 AP pP 23 55 19.8 -2.7
CD2 XP sP 23 55 25.9 -0.8
CD2 PP 23 55 27.4
CD2 S **Sn** **23 58 26.1 -6.0**
CD2 XS sS 23 58 38.2 -13
CD2 AMB AMB
comp=Z,10.0nm,0.5s
CD2 AMB AMB
comp=Z,150nm,4.2s
CD2 LR LR
comp=N,2μm,12.0s
CD2 LR LR
comp=Z,2μm,16.8s
BJT Baijiatuau 18.03 347 *e*P **Pn** **23 55 16.3 +1.3**
BJT pmax pmax
comp=Z,111nm,0.9s
BJT Baijiatuau 18.03 347 *e*P **Pn** **23 55 16.3 +1.2**
comp=Z,110nm,0.9s
BJI Beijing 18.05 347 *e*P **Pn** **23 55 16.6 +1.3**
BJI AMB AMB
comp=Z,120nm,0.9s
BJI LR LR
comp=N,4μm,14.7s
BJI LR LR
comp=E,5μm,14.7s
BJI LR LR
comp=Z,2μm,24.6s
TSM Tawau 18.44 191 P **Pn** **23 55 22.0 +2.0**
KKTK Khon Kaen 18.64 254 P **Pn** **23 55 14.0 -8.4**

JGF Kuroka 19.01 43 P **Pn** **23 55 28.8 +2.0**
JHJ Hachijo jima 2 19.30 53 P **Pn** **23 55 35.2 +4.9**
comp=Z,18nm,0.3s,baz=179,slow=5.1,SNR=19
JHJ LR LR 00 03 21.3
comp=Z,601nm,19.3s,baz=292,slow=38
JHJ2 Mitsune 19.32 53 P **Pn** **23 55 35.1 +4.5**
CBIJ Chichi jima 19.33 72 P **Pn** **23 55 30.9 +0.2**
comp=Z,11nm,0.3s,baz=239,slow=5.9,SNR=5.3
CBIJ LR LR 00 01 57.1
comp=Z,726nm,21.0s,baz=256,slow=34
SNY Shenyang 19.34 5⇑ P **Pn** **23 55 30.6 -0.3**
SNY AP pP 23 55 39.7 +1.3
SNY PP 23 55 49.8
SNY S **Sn** **23 59 09.1 +2.3**
SNY SS 23 59 29.2
SNY AMB AMB
comp=Z,20nm,0.9s
SNY AMB AMB
comp=Z,249nm,12.0s
SNY LR LR
comp=N,2μm,13.5s
SNY LR LR
comp=Z,3μm,13.2s
NANT Nan 19.80 263⇓ P **Pn** **23 55 37.0 +0.6**
comp=Z,300nm,0.4s
JOD2 Odawara 2 19.93 47 P **Pn** **23 55 39.9 +2.0**
HHC Hu-ho-hao-te 20.12 338 *e*P **P** **23 55 39.9 +1.8**
HHC AP 23 55 48.5
HHC XP sP 23 55 53.2 +2.2
HHC PP 23 56 00.1
HHC S **S** **23 59 16.1 -6.2**
HHC XS sS 23 59 32.9 -3.3
HHC SS 23 59 49.2
HHC PCP PcP 23 59 53.3 +1.0
HHC AMB AMB
comp=Z,107nm,1.1s
HHC LR LR
comp=N,5μm,14.1s,MS5.1
HHC LR LR
comp=E,4μm,16.0s,MS5.1
HHC LR LR
comp=Z,5μm,16.5s,MS4.9
MAJO Matsushiro 20.13 42 *e*P **P** **23 55 40.4 +2.1**
MAJO pmax pmax
comp=Z,137nm,1.0s
MAJO Matsushiro 20.13 42 *e*P **P** **23 55 40.4 +2.1**
comp=Z,138nm,1.0s
MAT Matsushiro 20.13 42 P **P** **23 55 40.9 +2.6**
MAT S **S** **23 59 26.0 +3.4**
MAT Matsushiro 20.13 42 *e*P **P** **23 55 41.0 +2.7**
MAT *e*S **S** **23 59 26.0 +3.4**
MAT pmax pmax
comp=Z,100nm,1.0s
MAT Matsushiro 20.13 42 *e*P **P** **23 55 41.0 +2.7**
comp=Z,100nm,1.0s
MAT *e*S **S** **23 59 26.0 +3.4**
MJAR Matsushiro Arr 20.13 42 P **P** **23 55 40.3 +2.0**
comp=Z,78nm,0.9s,baz=230,slow=8.1,SNR=55
MJAR S **S** **23 59 29.5 +6.9**
comp=Z,0.9nm,0.6s,baz=230,slow=8.5,SNR=2.2
MJAR PcP PcP 23 59 51.9 -0.4
comp=Z,3.2nm,0.8s,baz=206,slow=3.0,SNR=5.0
MJAR ScP ScP 00 03 24.8 -1.3
comp=Z,1.8nm,0.8s,baz=239,slow=1.4,SNR=6.2
MJAR LR LR 00 03 47.3
comp=Z,1μm,21.0s,MS4.2,baz=230,slow=38
MJAR Matsushiro Arr 20.13 42 P **P** **23 55 40.3 +2.0**
MJAR S **S** **23 59 29.5 +6.9**
MJAR 23 59 51.9
MJAR pmax pmax
comp=Z,78nm,0.9s
MJAR smax
comp=N,1.0nm,0.6s
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MJAR pmax pmax
comp=N,2.0nm,0.8s
MJAR MLR MLR
comp=Z,1μm,21.0s
JRY Ryogami san 20.25 44 P **P** **23 55 42.1 +2.6**
LZH Lanzhou 20.45 315⇓ P **P** **23 55 43.8 +2.1**
LZH PP 23 56 09.0
LZH S **S** **23 59 34.3 +5.4**
LZH AMB AMB
comp=Z,250nm,1.3s
LZH AMB AMB
comp=Z,910nm,4.7s
LZH LR LR
comp=N,3μm,10.0s
LZH LR LR
comp=Z,6μm,12.0s,MS5.2
BTO Baotou 20.49 334 *e*P **P** **23 55 41.9 -0.2**
BTO S **S** **23 59 27.4 -2.2**
BTO AMB AMB
comp=Z,36nm,0.7s
BTO LR LR
comp=N,3μm,13.5s,MS4.8
BTO LR LR
comp=E,1μm,17.8s,MS4.8
NST Nakhon Sawan 21.29 255 P **P** **23 55 50.5 -0.2**
comp=E,53nm,1.1s,mb4.8
CHG Chiang Mai 21.41 264⇓ P **P** **23 55 53.2 +1.1**
comp=E,58nm,0.9s,mb4.9
CHTO Chiang Mai 21.41 264⇑ P **P** **23 55 53.2 +1.1**
SNR=21
CHTO Chiang Mai 21.41 264 *e*P **P** **23 55 53.2 +1.1**
CHTO pmax pmax
comp=Z,70nm,1.1s,mb4.9
CHTO Chiang Mai 21.41 264 *e*P **P** **23 55 53.2 +1.1**
comp=Z,70nm,1.1s,mb4.9
CN2 Changchun 21.49 8 *e*P **P** **23 55 52.8 -0.1**
CN2 *e*XP sP 23 56 06.1 +0.2
CN2 *e*S **S** **23 59 45.1 -4.2**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.2
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,3μm,17.0s,MS4.7
CN2 LR LR
comp=E,1μm,17.0s,MS4.7
CN2 LR LR
comp=Z,3μm,16.0s,MS4.8
VLA Vladivostok 22.30 20 *d i*P **P** **23 56 01.8 +0.2**
VLA *e*'PP 23 56 09.8
VLA *e*PPP 23 56 31.4
VLA *e*S **S** **00 00 05.2 +0.1**
VLA pmax pmax
comp=Z,163nm,1.5s,mb5.2
VLA MLR MLR
comp=Z,800nm,12.6s,MS4.3
JMM Marumori 22.57 43 P **P** **23 56 04.3 -0.2**
NNT Nongplab 22.94 248 P **P** **23 56 11.0 +2.6**
MDJ Mudanjiang 23.04 15 P **P** **23 56 09.5 +0.1**
MDJ AMB AMB
comp=Z,67nm,0.9s,mb5.1
MDJ AMB AMB
comp=Z,246nm,6.5s
MDJ LR LR
comp=Z,187nm,15.5s,MS3.6
MDJ Mudanjiang 23.04 15 *e*P **P** **23 56 08.5 -0.8**
comp=Z,62nm,0.9s,mb5.0
KSM Kuching 23.57 209 *e*P **P** **23 56 13.6 -1.1**
JOM Ohasama 23.87 40 P **P** **23 56 17.9 +0.4**
JTM Tenmabayashi 24.60 38 P **P** **23 56 24.4 +0.3**
JOT Ohata 24.99 37 P **P** **23 56 28.4 +0.7**
GTA Gaotai 24.99 317 *e*P **P** **23 56 27.5 -0.2**
GTA AP 23 56 37.7
GTA XP sP 23 56 41.8 +0.7
GTA PP 23 57 03.4
GTA PPP 23 57 16.4
GTA AMB AMB
comp=Z,7.0nm,0.9s,mb4.2
GTA AMB AMB
comp=Z,827nm,6.8s
GTA LR LR
comp=N,1μm,17.5s,MS4.7
GTA LR LR
comp=E,2μm,15.6s,MS4.7
GTA LR LR
comp=Z,2μm,17.1s,MS4.6
SNG Songkhla 25.23 236 P **P** **23 56 31.0 +1.1**
comp=Z,140nm,1.0s,mb5.5
JEW Eniwo 26.21 35 P **P** **23 56 39.9 +1.2**
KULM Kulim 26.43 233 *e*P **P** **23 56 41.6 +0.8**

JEM Erimo 26.59 38 P **P** **23 56 44.5 +2.3**
IPM Ipoh 26.71 231 P **P** **23 56 43.7 +0.4**
HIA Hailar 26.74 357 *e*P **P** **23 56 42.7 -0.8**
HIA pmax pmax
comp=Z,8.0nm,0.4s
HIA Hailar 26.74 357 *e*P **P** **23 56 42.7 -0.8**
comp=Z,8.1nm,0.4s,mb4.6
KGM Kluang 26.95 223 P **P** **23 56 46.7 +1.3**
ASAJ Asahikawa 27.70 34 P **P** **23 56 53.5 +1.3**
comp=Z,44nm,0.5s,mb5.3,baz=230,slow=7.5,SNR=22
ASAJ LR LR 00 07 25.2
comp=Z,1μm,21.7s,MS4.4,baz=60,slow=35
ASAJ Asahikawa 27.70 34 P **P** **23 56 53.5 +1.4**
ASAJ pmax pmax
comp=Z,44nm,0.5s
ASAJ MLR MLR
comp=Z,1μm,21.7s
ULN Ulaanbaatar 27.82 339 P **P** **23 56 53.2 -0.1**
SNR=46
ULN Ulaanbaatar 27.82 339 *e*P **P** **23 56 53.0 -0.3**
ULN pmax pmax
comp=Z,31nm,0.6s,mb5.1
ULN Ulaanbaatar 27.82 339 *e*P **P** **23 56 53.0 -0.2**
comp=Z,31nm,0.6s,mb5.1
KLR Kul'dur 27.88 14 *e*P **P** **23 56 51.7 -2.1**
KLR *e*S **S** **00 01 32.0 -3.0**
KLR *e*SSS 00 03 00.0
KLR MLR MLR
comp=Z,8μm,13.5s,MS5.5
SONM Songino Array 28.02 338 P **P** **23 56 54.6 -0.4**
comp=Z,18nm,0.5s,mb4.9,baz=161,slow=9.6,SNR=115
SONM PcP PcP 00 00 08.7 -0.5
comp=Z,2.4nm,0.6s,baz=161,slow=3.9,SNR=4.8
SONM ScP ScP 00 03 45.5 -2.2
comp=Z,2.3nm,0.8s,baz=157,slow=3.3,SNR=8.4
SONM LR LR 00 09 39.5
comp=Z,3μm,18.6s,MS5.0,baz=148,slow=40
SONM Songino Array 28.02 338 P **P** **23 56 54.6 -0.4**
SONM 00 00 08.7
SONM pmax pmax
comp=Z,18nm,0.5s
SONM pmax pmax
comp=Z,2.0nm,0.6s
SONM pmax pmax
comp=N,2.0nm,0.8s
SONM MLR MLR
comp=Z,3μm,18.6s
JMP Maruseppu 28.02 35 P **P** **23 56 56.6 +1.6**
HABR Khabarovsk 28.07 19 *e*P **P** **23 56 56.0 +0.5**
HABR *e*S **S** **00 01 41.6 +3.5**
HABR pmax pmax
comp=Z,29nm,0.7s,mb5.0
HABR MLR MLR
comp=Z,1μm,18.6s,MS4.4
LSA Lhasa 28.12 291 P **P** **23 56 58.0 +2.1**
LSA Lhasa 28.12 291 *e*P **P** **23 56 58.1 +2.2**
LSA pmax pmax
comp=Z,50nm,0.7s,mb5.2
LSA Lhasa 28.12 291 *e*P **P** **23 56 58.0 +2.2**
comp=Z,50nm,0.7s,mb5.2
JWK2 Keihoku 28.21 31 P **P** **23 56 59.2 +2.5**
PSI Prapat 29.38 231 P **P** **23 57 07.6 +0.5**
comp=Z,28nm,0.9s,mb5.0,baz=359,slow=3.6,SNR=9.1
PSI PcP PcP 00 00 12.6 -0.1
comp=Z,20nm,0.7s,baz=41,slow=3.7,SNR=9.4
PSI ScP ScP 00 03 49.5 -2.4
comp=Z,6.2nm,0.8s,baz=285,slow=0.7,SNR=3.9
PSI LR LR 00 08 30.8
comp=Z,1μm,21.2s,MS4.4,baz=216,slow=36
PSI Prapat 29.38 231 P **P** **23 57 07.6 +0.5**
PSI 00 00 12.6
PSI 00 03 49.5
PSI pmax pmax
comp=Z,28nm,0.9s,mb5.0
PSI pmax pmax
comp=Z,20nm,0.7s,mb5.0
PSI pmax pmax
comp=N,6.0nm,0.8s
PSI MLR MLR
comp=Z,1μm,21.2s,MS4.4
PSI Prapat 29.38 231 P **P** **23 57 07.6 +0.5**
PSI PcP PcP 00 00 12.6 -0.1
PSI ScP ScP 00 03 49.5 -2.4
PSI LR LR 00 08 30.8
YSS Yuzh-Sakhalins 29.82 30 *c i*P **P** **23 57 12.0 +1.0**
YSS pmax pmax
comp=Z,180nm,1.7s,mb5.5
YSS MLR MLR
comp=Z,800nm,20.0s,MS4.3
YSS Yuzh-Sakhalins 29.82 30 *e*P **P** **23 57 12.5 +1.6**
ZAK Zakamensk 31.27 337⇓ *i*P **P** **23 57 22.4 -1.4**
ZAK *e* 23 58 41.2
ZAK pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
TLY Talaya 32.23 339 *d i*P **P** **23 57 32.2 -0.1**
TLY pmax pmax
comp=Z,14nm,0.8s,mb4.8
TLY Talaya 32.23 339 *e*P **P** **23 57 31.9 -0.3**
IRK Irkutsk 32.51 340 *e*P **P** **23 57 33.7 -1.0**
IRK pmax pmax
comp=Z,62nm,0.9s,mb5.5
GUN Gumba 32.59 287 *e*P **P** **23 57 36.2 +0.8**
comp=Z,139nm,1.1s,mb5.8
PKI Pulchoki 33.00 286 *e*P **P** **23 57 39.4 +0.4**
comp=Z,67nm,1.1s,mb5.5
PKI Pulchoki 33.00 286 *e*P **P** **23 57 39.4 +0.4**
PKI pmax pmax
comp=Z,67nm,1.1s,mb5.5
KKN Kakani 33.12 287 *e*P **P** **23 57 41.3 +1.3**
comp=Z,69nm,1.0s,mb5.5
KKN Kakani 33.12 287 *e*P **P** **23 57 41.3 +1.3**
KKN pmax pmax
comp=Z,69nm,1.0s,mb5.5
DMN Daman 33.27 286 *e*P **P** **23 57 42.5 +1.1**
comp=Z,172nm,1.2s,mb5.9
GKN Gorkha 33.69 287 *e*P **P** **23 57 45.2 +0.2**
comp=Z,139nm,1.2s,mb5.8
KOLN Koldanda 34.61 287 *e*P **P** **23 57 51.3 -1.7**
comp=Z,96nm,0.9s,mb5.7
WMQ Urumqi 35.03 315 P **P** **23 57 58.0 +1.4**
WMQ AP pP 23 58 08.0 +1.8
WMQ XP sP 23 58 12.0 +1.8
WMQ PP PP 23 59 17.0 +0.6
WMQ AMB AMB
comp=Z,32nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,201nm,4.0s
WMQ LR LR
comp=N,878nm,11.0s,MS4.9
WMQ LR LR
comp=E,546nm,10.0s,MS4.9
WMQ LR LR
comp=Z,676nm,10.0s,MS4.7
KAKA Kakadu 36.61 162 *e*P **P** **23 58 06.6 -3.5**
comp=Z,19nm,0.6s,mb5.1
LGTI Lohaghat 37.57 289 *i*P **P** **23 58 25.5 +7.2**
SKR Severo-Kuril's 38.94 35 *e*P **P** **23 58 33.5 +3.6**
SKR *e* 00 04 27.0
SKR pmax pmax
comp=Z,110nm,0.9s,mb5.6
SKR pmax pmax
comp=N,90nm,1.0s
SKR pmax pmax
comp=E,110nm,1.0s
SKR pmax pmax
comp=Z,1μm,2.0s,mb6.2
KRAR Krasnoyarsk 39.57 335 *e*P **P** **23 58 34.8 -0.3**
KRAR pmax pmax
comp=Z,105nm,1.7s,mb5.3
KRAR MLR MLR
comp=Z,4μm,20.0s,MS5.2
MKAR Makanchi Array 39.75 317 P **P** **23 58 37.1 +0.6**
comp=Z,72nm,0.7s,mb5.5,baz=108,slow=7.8,SNR=290
MKAR PcP PcP 00 00 41.9 -0.7
comp=Z,3.2nm,0.6s,baz=129,slow=2.3,SNR=4.6
MKAR ScP ScP 00 04 27.7 -1.1
comp=Z,14nm,1.2s,baz=91,slow=5.0,SNR=11
MKAR Makanchi Array 39.75 317 P **P** **23 58 37.2 +0.7**
MKAR 00 00 41.9
MKAR pmax pmax
comp=Z,72nm,0.7s
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR pmax pmax

comp=N,14nm,1.2s
YAK Yakutsk 39.90 6 *e*P P **23 58 38.2 +0.4**
YAK *e**PP pP 23 58 47.3 -0.2
YAK *e* 00 00 41.8
YAK *e*S **S** **00 04 41.9 +1.4**
YAK *e**SS sS 00 04 54.2 -2.3
YAK *e* 00 08 35.2
YAK pmax pmax
comp=Z,46nm,1.2s,mb5.1
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.4s
YAK smax
comp=N,11nm,1.4s
YAK smax
comp=Z,3.0nm,1.0s
YAK smax
comp=E,4.0nm,1.2s
YAK MLR MLR
comp=N,800nm,19.0s,MS4.7
YAK MLR MLR
comp=Z,1µm,19.0s,MS4.7
YAK MLR MLR
comp=E,500nm,17.0s,MS4.7
YAK Yakutsk 39.90 6 *e*P P **23 58 38.6 +0.8**
comp=E,52nm,0.8s,mb5.3
PMG Port Moresby 40.48 139 P P **23 58 42.6 0.0**
comp=E,33nm,0.9s,mb5.1,baz=3.0,slow=9.5,SNR=4.6
PMG LR LR 00 15 00.4
comp=E,424nm,18.2s,MS4.3,baz=76,slow=35
PMG Port Moresby 40.48 139 P P **23 58 42.6 0.0**
PMG pmax pmax
comp=Z,33nm,0.9s
PMG MLR MLR
comp=Z,424nm,18.2s
PMG Port Moresby 40.48 139 *e*P P **23 58 42.5 -0.2**
comp=E,34nm,0.8s,mb5.1
FITZ Fitzroy Crossi 40.56 174⇑ *i*P P **23 58 40.6 -2.7**
comp=E,69nm,1.2s,mb5.2
FITZ Fitzroy Crossi 40.56 174 P P **23 58 40.9 -2.4**
comp=Z,24nm,0.8s,mb4.9,baz=2.9,slow=12
PET Petropavlovsk 41.54 33⇑ *i*P P **23 58 51.4 +0.1**
PET *e*S **S** **00 05 03.7 -1.2**
PET *e*SS SS 00 08 06.2 -4.1
PET pmax pmax
comp=Z,126nm,1.1s,mb5.5
PET pmax pmax
comp=Z,400nm,3.5s
PET smax
comp=E,400nm,18.1s
PET smax
comp=E,700nm,21.4s
PET MLR MLR
comp=Z,500nm,20.0s,MS4.4
PET Petropavlovsk 41.54 33 *e*P P **23 58 51.3 0.0**
ZAL Zalesovo 41.81 328 P P **23 58 53.8 +0.2**
comp=Z,45nm,0.7s,mb5.2,baz=356,slow=7.6,SNR=241
ZAL ScP ScP 00 04 34.4 -2.6
comp=Z,1.3nm,0.9s,baz=18,slow=7.1,SNR=4.0
ZAL LR LR 00 18 14.9
comp=Z,1µm,18.0s,MS4.8,baz=343,slow=39
ZAL Zalesovo 41.81 328 P P **23 58 53.8 +0.2**
ZAL pmax pmax
comp=Z,45nm,0.7s
ZAL pmax pmax
comp=N,1.0nm,0.9s
ZAL MLR MLR
comp=Z,1µm,18.0s
PALK Pallekele 42.06 255 *e*P P **23 58 56.6 +1.0**
comp=Z,48nm,1.1s,mb5.0
KSH Kashi 42.06 305 *e*P P **23 58 59.2 +3.6**
KSH AP pP 23 59 08.9 +3.5
KSH XP sP 23 59 12.6 +3.3
KSH AMB AMB
comp=Z,138nm,1.2s,mb5.5
KSH AMB AMB
comp=Z,480nm,6.6s
KSH LR LR
comp=N,779nm,10.2s,MS5.1
KSH LR LR
comp=E,1µm,10.8s,MS5.1
KSH LR LR
comp=Z,245nm,10.3s,MS4.4
WAKE Wake Island 42.19 86 *e*P P **23 58 58.9 +2.2**
MA2 Magadan 42.42 22 *e*P P **23 58 59.5 +0.9**
MA2 pmax pmax
comp=Z,38nm,1.3s,mb4.9
MA2 MLR MLR
comp=Z,600nm,20.0s,MS4.5
MA2 Magadan 42.42 22 *e*P P **23 58 58.2 -0.4**
TKM2 Tokmak 2 43.03 309 P P **23 59 05.3 +1.8**
SNR=39
NVS Novosibirsk 43.07 328⇓ *i*P P **23 59 03.6 -0.2**
NVS *e* 00 00 39.8
NVS *i*S **S** **00 05 26.0 -1.5**
NVS pmax pmax
comp=Z,97nm,1.7s,mb5.3
NVS pmax pmax
comp=N,65nm,1.9s
NVS pmax pmax
comp=E,68nm,1.9s
NVS smax
comp=N,32nm,1.9s
NVS smax
comp=E,75nm,2.0s
KZA Kyzart 43.09 308 P P **23 59 06.4 +2.4**
SNR=19
MBWA Marble Bar 43.43 182 *e*P P **23 59 05.9 -0.8**
KBK Karagaybulak 43.44 309 P P **23 59 08.7 +1.9**
SNR=22
KURK Kurchatov 43.56 321⇑P P **23 59 08.0 +0.2**
SNR=33
KURK Kurchatov 43.56 321 *e*P P **23 59 07.8 0.0**
KURK *e* 00 00 53.6
KURK pmax pmax
comp=Z,57nm,0.8s,mb5.3
KURK Kurchatov 43.56 321 *e*P P **23 59 07.8 0.0**
comp=Z,58nm,0.8s,mb5.4
KURK *e*PcP PcP 00 00 53.6 -1.5
CHMS Chumysh 43.65 309 P P **23 59 09.6 +1.1**
SNR=31
UCH Uchtor 43.66 308 P P **23 59 11.8 +3.2**
SNR=12
FRU Bishkek 43.71 309 *e*P P **23 59 11.5 +2.5**
FRU pmax pmax
comp=Z,63nm,1.2s,mb5.2
AAK Ala-Archa 43.76 309 P P **23 59 13.1 +3.7**
SNR=7.7
AAK Ala-Archa 43.76 309⇓P P **23 59 10.0 +0.6**
SNR=15
AAK Ala-Archa 43.76 309⇑ *e*P P **23 59 10.1 +0.7**
AAK pmax pmax
comp=Z,30nm,1.3s,mb4.9
AAK MLR MLR
comp=Z,800nm,20.0s,MS4.6
AAK Ala-Archa 43.76 309 *e*P P **23 59 12.7 +3.3**
USP Ospenovka 43.89 310 P P **23 59 11.3 +0.9**
SNR=14
WRAB Tennant Creek 44.01 162 *e*P P **23 59 09.2 -2.2**
WRAB pmax pmax
comp=Z,45nm,0.8s,mb5.2
WRAB Tennant Creek 44.01 162 *e*P P **23 59 09.2 -2.2**
comp=Z,45nm,0.8s,mb5.2
WB2 Warramunga Arr 44.02 162 *e*P P **23 59 08.9 -2.5**
AML Almayashu 44.24 308 P P **23 59 15.6 +2.4**
SNR=39
EKS2 Erkin-Say 44.28 309 P P **23 59 15.1 +1.6**
SNR=19
AS31 Alice Springs 47.45 164 *e*P P **23 59 37.5 -1.1**
ASPA Alice Springs 47.45 164 *e*P P **23 59 37.5 -1.1**
ASAR Alice Springs 47.46 164 P P **23 59 37.1 -1.5**
comp=Z,14nm,0.5s,mb5.1,baz=351,slow=10,SNR=121
ASAR PcP PcP 00 01 07.2 -1.3
comp=Z,7.8nm,0.7s,baz=350,slow=3.7,SNR=6.8
ASAR ScP ScP 00 04 57.8 -2.4
comp=Z,3.1nm,0.8s,baz=351,slow=5.1,SNR=8.2
ASAR ScS ScS 00 09 27.9 -2.0
comp=Z,0.5nm,0.8s,baz=341,slow=6.6,SNR=4.7
ASAR Alice Springs 47.46 164 P P **23 59 37.1 -1.5**
ASAR 00 01 07.3

ASAR 00 09 27.9
ASAR pmax pmax
comp=Z,14nm,0.5s
ASAR pmax pmax
comp=Z,8.0nm,0.7s
ASAR pmax pmax
comp=N,3.0nm,0.8s
ASAR pmax pmax
comp=N,1.0nm,0.8s
CTA Charters Tower 48.75 148 *e*P P **23 59 48.6 0.0**
comp=N,20nm,0.6s,mb5.3
CTA *e*PCP PcP 00 01 13.9 +0.7
CTA *e*PCP PcP 00 01 13.9 +0.7
CTA Charters Tower 48.75 148 P P **23 59 48.0 -0.7**
comp=N,30nm,0.8s,mb5.4,baz=326,slow=10,SNR=33
CTA PcP PcP 00 01 13.7 +0.5
comp=N,17nm,0.8s,baz=321,slow=3.3,SNR=6.9
CTA LR LR 00 17 14.7
comp=N,748nm,21.3s,MS4.7,baz=129,slow=32
CTA Charters Tower 48.75 148 *e*P P **23 59 48.6 0.0**
CTA *e* 00 01 13.9
CTA pmax pmax
comp=Z,20nm,0.6s
CTAO Charters Tower 48.75 148 *e*P P **23 59 48.2 -0.4**
BVAR Borovoye Array 49.15 322 LR LR 00 23 18.8
comp=Z,374nm,18.6s,MS4.4,baz=319,slow=39
BRVK Borovoye 49.22 322⇓P P **23 59 52.3 +0.1**
SNR=29
BRVK Borovoye 49.22 322 *e*P P **23 59 52.4 +0.2**
CHKZ Chkalovo 49.23 322 *e*P P **23 59 52.1 -0.2**
CHKZ pmax pmax
comp=Z,73nm,0.7s,mb5.8
CHKZ Chkalovo 49.23 322 *e*P P **23 59 52.0 -0.2**
comp=Z,72nm,0.7s,mb5.8
HNR Honiara 49.27 126 LR LR 00 16 22.7
comp=Z,328nm,19.6s,MS4.3,baz=358,slow=31
BILL Bilibino 53.16 19 P P **00 00 22.0 +0.2**
BILL *e* 00 00 26.4
BILL *e* pP 00 00 30.7 -1.0
BILL 00 01 35.0
BILL pmax pmax
comp=Z,17nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,700nm,18.0s,MS4.8
FORT Forrest 53.35 173 *e*P P **00 00 22.0 -1.2**
KLBR Kellerberrin 53.91 184 *e*P P **00 00 25.3 -1.9**
MUN Mundaring 54.41 186 *e*P P **00 00 29.5 -1.4**
NWAO Narrogin (SRO) 55.27 184 P P **00 00 35.8 -1.3**
comp=Z,28nm,0.8s,mb5.3,baz=9.2,slow=6.3,SNR=14
NWAO Narrogin (SRO) 55.27 184 P P **00 00 35.8 -1.3**
NWAO pmax pmax
comp=Z,28nm,0.8s
NWAO Narrogin (SRO) 55.27 184 *e*P P **00 00 35.5 -1.6**
SVE Sverdlovsk 55.56 324 *e*P P **00 00 39.0 -0.2**
SVE *e* 00 01 37.8
SVE *e*S **S** **00 08 20.0 -2.6**
SVE pmax pmax
comp=Z,120nm,1.1s,mb5.8
SVE MLR MLR
comp=N,400nm,14.0s,MS4.8
SVE MLR MLR
comp=E,400nm,14.0s,MS4.8
SVE MLR MLR
comp=Z,900nm,14.0s,MS5.0
ABKT Ailbek 55.90 301 P P **00 00 42.7 +1.1**
comp=Z,237nm,0.8s,mb6.3,SNR=16
AKTO Aktyubinsk 56.17 316 LR LR 00 26 17.5
comp=Z,751nm,20.2s,MS4.8,baz=101,slow=38
ARU Arti 56.62 324 P P **00 00 46.6 -0.1**
comp=Z,714nm,0.6s,SNR=55
ARU Arti 56.62 324⇑ *i*P P **00 00 46.1 -0.6**
ARU *e* 00 01 40.2
ARU *e* 00 02 48.5
ARU *e*S **S** **00 08 35.7 -0.9**
ARU *e* 00 10 28.4
ARU *e*SS SS 00 12 22.1 -2.2
ARU pmax pmax
comp=Z,51nm,0.6s,mb5.7
ARU pmax pmax
comp=N,400nm,19.0s
ARU pmax pmax
comp=N,100nm,15.0s
ARU pmax pmax
comp=E,300nm,21.0s
STKA Stephens Creek 57.40 160 *e*P P **00 00 50.9 -1.4**
STKA *e*PCP PcP 00 01 46.9 +1.0
STKA Stephens Creek 57.40 160 P P **00 00 51.1 -1.1**
comp=E,10nm,0.5s,mb5.1,baz=330,slow=6.5,SNR=38
SOKR Solikamsk 58.08 327*c* *i*P P **00 00 56.0 -1.1**
SOKR pmax pmax
comp=Z,50nm,1.5s,mb5.3
SOKR MLR MLR
comp=Z,740nm,12.0s,MS5.0
ARMA Armidale 60.06 150 *e*P P **00 01 11.1 +0.3**
ARMA *e*PCP PcP 00 01 57.8 +1.3
DZM Mont Dzumac 62.30 132 P P **00 01 26.5 +0.6**
comp=Z,23nm,1.1s,mb5.2,baz=285,slow=12,SNR=5.0
DZM LR LR 00 25 08.0
comp=Z,408nm,19.9s,MS4.6,baz=204,slow=33
CNB Canberra Magne 63.29 155⇓ *i*P P **00 01 32.9 +0.4**
TOO Toolangi 63.88 159 *e*P P **00 01 36.3 -0.2**
DGRG David-gareji 65.31 307 P P **00 01 45.1 -0.7**
MTA Mtatsminda 65.70 307 P P **00 01 49.1 +0.8**
TBLG Delisi 65.73 307 *e*P P **00 01 48.3 -0.2**
TBLG Delisi 65.73 307 P P **00 01 48.3 -0.2**
KBD Kabd 65.78 293 *e*P P **00 01 47.1 -1.8**
KBD AMb AMb 00 01 51.6
comp=Z,86nm,1.1s,mb5.7
MIB Mutribah 65.94 294 *e*P P **00 01 48.9 -1.0**
MIB AMb AMb 00 01 51.6
comp=Z,30nm,0.6s,mb5.5
GNI Garni 65.99 305*d* *i*P P **00 01 51.4 +1.2**
GNI pmax pmax
comp=Z,27nm,2.5s
GNI MLR MLR
comp=Z,200nm,16.0s
NAY Al-Naaiem 66.15 293 *e*P P **00 01 50.4 -0.8**
NAY AMb AMb 00 01 52.8
comp=Z,15nm,0.6s,mb5.2
GOR Gori 66.16 307 P P **00 01 52.9 +1.7**
ZEI Tsey 66.19 308 *e*P P **00 01 50.8 -0.6**
ZEI *e**PP pP 00 01 59.8 -1.8
ZEI pmax pmax
comp=Z,15nm,0.5s,mb5.3
RST Umm Al-Ruwaisa 66.30 293 *e*P P **00 01 50.7 -1.4**
RST AMb AMb 00 01 55.3
comp=Z,10nm,0.8s,mb4.9
ONI Oni 66.54 308 P P **00 01 54.4 +0.7**
VRHR Novokhopersk 66.55 317 *e*P P **00 01 54.0 +0.2**
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.6
VRHR pmax pmax
comp=N,6.0nm,0.5s
VRHR pmax pmax
comp=E,30nm,1.0s
KLMR Klimovskoe 66.73 328*c* *i*P P **00 01 53.7 -1.2**
KLMR pmax pmax
comp=Z,150nm,1.4s,mb5.8
KLMR pmax pmax
comp=Z,120nm,11.4s
KLMR MLR MLR
comp=Z,2µm,22.0s,MS5.2
TTA Tatalina 66.81 30 *e*P P **00 01 55.9 +0.5**
KIV Kislovodsk 66.87 310 P P **00 01 56.5 +0.7**
comp=Z,192nm,0.8s,mb6.2,SNR=6.8
KIV Kislovodsk 66.87 310⇑P P **00 01 56.5 +0.7**
SNR=12
KIV Kislovodsk 66.87 310⇑ *e*P P **00 01 56.2 +0.4**
KIV pmax pmax
comp=Z,23nm,0.8s,mb5.3
KIV Kislovodsk 66.87 310 *e*P P **00 01 56.4 +0.6**
comp=Z,50nm,1.0s,mb5.5
SVW2 Sparrevohn 67.17 32 *e*P P **00 01 57.9 +0.2**
HAKT HAKKARI 67.26 303 *i*P P **00 01 55.0 -3.3**
IMA2 Indian Mountai 67.57 26 *e*P P **00 01 60.0 -0.3**
VOR Voronezh 67.97 318 *e*P P **00 02 02.0 -0.7**
VOR pmax pmax
comp=Z,100nm,1.2s,mb5.7
VRSR Storozhevoye 68.05 318 *e*P P **00 02 02.9 -0.4**
VRSR pmax pmax
comp=Z,30nm,0.8s,mb5.4
VRSR pmax pmax
comp=N,10.0nm,0.9s
VRSR pmax pmax
comp=E,50nm,0.8s

MOS Moscow 68.30 323^K *i*P P **00 02 05.1 +0.3**
MOS *e* pP 00 02 15.4 +0.3
MOS *e* 00 02 25.7
MOS pmax pmax
comp=Z,100nm,0.8s,mb5.9
MOS pmax pmax
comp=Z,96nm,0.8s,mb5.9
ERZM Erzurum 68.58 306 *i*P P **00 02 03.6 -3.0**
OBN Obninsk 68.99 322⇑ *e*P P **00 02 09.2 +0.1**
OBN *e* 00 02 11.1
OBN 00 04 45.0
OBN S S 00 11 13.0 +1.4
OBN pmax pmax
comp=Z,31nm,0.7s,mb5.3
OBN MLR MLR
comp=N,300nm,17.0s
OBN Obninsk 68.99 322 *e*P P **00 02 07.8 -1.3**
comp=N,32nm,0.6s,mb5.4
KDAK Kodiak Island 69.11 35 P P **00 02 10.0 +0.1**
comp=N,180nm,0.7s,mb6.1,SNR=7.5
TAU Tasmania Unive 69.31 160 *e*P P **00 02 11.1 0.0**
TAU pmax pmax
comp=Z,104nm,1.4s,mb5.6
TAU Tasmania Unive 69.31 160 *e*P P **00 02 11.1 0.0**
comp=Z,104nm,1.4s,mb5.6
MARD Mardin 69.59 303 *i*P P **00 02 09.4 -3.5**
MCK McKinley 69.88 28 *e*P P **00 02 15.0 +0.4**
MCK pmax pmax
comp=Z,11nm,1.1s,mb4.7
MCK McKinley 69.88 28 *e*P P **00 02 15.0 +0.3**
comp=Z,11nm,1.1s,mb4.7
COLA College 70.14 27 *e*P P **00 02 16.3 +0.1**
COLA College 70.14 27 *e*P P **00 02 15.6 -0.7**
comp=Z,7.1nm,0.6s,mb4.8
JOF Joensuu 70.30 331 *e*p P **00 02 15.6 -1.6**
comp=Z,29nm,0.4s,mb5.6
ANN Anapa 70.40 311 *e*P P **00 02 14.9 -2.9**
ANN *e*S S 00 11 24.9 -3.3
ANN pmax pmax
comp=Z,43nm,1.1s,mb5.3
ANN MLR MLR
comp=N,246nm,18.0s,MS4.6
ANN MLR MLR
comp=E,195nm,18.0s,MS4.6
ANN MLR MLR
comp=Z,432nm,18.0s,MS4.8
KEV Kevo 70.63 338 *e*p P **00 02 17.5 -1.7**
comp=Z,14nm,0.5s,mb5.1
KEV Kevo 70.63 338 *e*P P **00 02 17.5 -1.7**
KEV pmax pmax
comp=Z,14nm,0.5s,mb5.2
ELZG Elazig 70.70 304 *i*P P **00 02 19.9 +0.3**
MALT Malatya 71.17 304⇑ *i*P P **00 02 24.0 +1.5**
MALT Malatya 71.17 304⇑P P **00 02 24.0 +1.5**
ARCES ARCESS Array B 71.19 338 P P **00 02 22.0 -0.7**
comp=Z,11nm,0.7s,mb4.9,baz=69,slow=9.8,SNR=34
ARCES LR LR 00 38 23.0
comp=Z,507nm,18.5s,MS4.8,baz=43,slow=40
ARCES ARCESS Array B 71.19 338 P P **00 02 22.0 -0.6**
ARCES pmax pmax
comp=Z,11nm,0.7s
ARCES MLR MLR
comp=Z,507nm,18.5s
ARE0 ARCESS Array S 71.19 338 *e*P P **00 02 22.1 -0.6**
KBS Kingsbay 71.72 349 *e*P P **00 02 25.1 -0.7**
KBS AMS AMS 00 38 18.9
comp=Z,974nm,16.5s,MS5.2
KTK1 Kautokeino 72.11 338 *e*P P **00 02 28.4 +0.2**
SIM Simferopol' 72.66 312⇓ *e*P P **00 02 33.7 +2.3**
SIM pmax pmax
comp=Z,30nm,1.0s,mb5.2
SIM MLR MLR
comp=Z,390nm,21.7s,MS4.6
KAF Kangasniemi 72.75 331 *e*p P **00 02 30.1 -1.8**
comp=Z,16nm,0.5s,mb5.2,baz=73,slow=5.5
KAF Kangasniemi 72.75 331 *e*P P **00 02 30.1 -1.8**
KAF pmax pmax
comp=Z,16nm,0.5s,mb5.2
BOYT Boyabat 73.01 308 *i*P P **00 02 28.6 -4.9**
FINES FINESS Array B 73.03 330 P P **00 02 32.8 -0.9**
comp=Z,33nm,0.9s,mb5.3,baz=55,slow=6.0,SNR=173
FINES FINESS Array B 73.03 330 P P **00 02 32.8 -0.8**
FINES pmax pmax
comp=Z,33nm,0.9s
CTKT Corum 73.30 307 *i*P P **00 02 30.5 -4.8**
TRO Tromso 73.38 339 *e*P P **00 02 33.8 -1.9**
TRO AMS AMS 00 40 00.7
comp=Z,389nm,20.7s,MS4.7
VSU Vasula 73.53 327*d* *i*P P **00 02 36.4 -0.2**
DAWY Dawson 73.89 27 *e*P P **00 02 38.5 -0.2**
ASF Jabal al Asfar 74.01 299 P P **00 02 40.3 +1.0**
comp=Z,8.5nm,0.8s,mb4.8,baz=238,slow=2.1,SNR=18
ASF Jabal al Asfar 74.01 299 P P **00 02 40.3 +0.9**
ASF pmax pmax
comp=Z,9.0nm,0.8s
BALT Daday 74.08 309 *i*P P **00 02 40.1 +0.3**
AKASG Malin Array Be 74.31 319 P P **00 02 40.5 -0.6**
comp=Z,18nm,0.8s,mb5.1,baz=60,slow=6.3,SNR=24
AKASG LR LR 00 37 30.3
comp=Z,244nm,21.4s,MS4.5,baz=65,slow=37
AKASG Malin Array Be 74.31 319 P P **00 02 40.5 -0.6**
AKASG pmax pmax
comp=Z,19nm,0.8s
AKASG MLR MLR
comp=Z,244nm,21.4s
AKBB Malin Array Si 74.31 319 *e*P P **00 02 40.5 -0.6**
ELDT Eldivan 74.34 308 *i*P P **00 02 38.1 -3.2**
BRTR Keskin Array B 74.40 307 P P **00 02 41.9 +0.2**
comp=Z,7.3nm,0.6s,mb4.8,baz=123,slow=4.1,SNR=34
BRTR LR LR 00 40 21.6
comp=Z,160nm,20.4s,MS4.3,baz=277,slow=40
BRTR Keskin Array B 74.40 307 *i*P P **00 02 42.2 +0.6**
BRTR pmax pmax
comp=Z,7.0nm,0.6s
INK Inuvik 74.67 22 *e*P P **00 02 42.0 -1.2**
INK *e* 00 05 37.1
INK pmax pmax
comp=Z,12nm,0.8s
INK Inuvik 74.67 22 *e*P P **00 02 42.0 -1.2**
comp=Z,12nm,0.8s,mb4.9
INK *e*PP PP 00 05 37.1 +6.8
ANTO Ankara 74.98 307⇓ *i*P P **00 02 45.3 +0.3**
SGKT Sivrigoynuk 75.32 308 *i*P P **00 02 38.1 -8.8**
LOF Lofoten 75.75 338 *e*P P **00 02 50.3 +0.8**
LOF AMb AMb 00 02 53.5
comp=Z,47nm,1.3s,mb5.3
LOF Lofoten 75.75 338 *e*P P **00 02 50.3 +0.8**
comp=Z,47nm,1.3s,mb5.3
ERMK Ermenek 75.84 304 *i*P P **00 02 41.0 -9.0**
KDHN Kadinhani 75.88 306 *i*P P **00 02 43.9 -6.3**
HENT Hendek 76.08 309 *i*P P **00 02 43.9 -7.4**
MOR8 Moi Rana 76.26 336 *e*P P **00 02 49.9 -2.4**
MOR8 AMb AMb 00 02 55.3
comp=Z,38nm,1.0s,mb5.3
MOR8 Moi Rana 76.26 336 *e*P P **00 02 49.9 -2.4**
comp=Z,38nm,1.0s,mb5.3
ESKT Eskisehir 76.52 307 *i*P P **00 02 48.7 -5.1**
CFR Carcaliu 76.66 313⇑ *i*P P **00 02 55.9 +1.3**
CFR Carcaliu 76.66 313⇑P P **00 02 55.9 +1.3**
TIRR Tirgusor 76.70 313⇑ *i*P P **00 02 57.3 +2.5**
TIRR Tirgusor 76.70 313⇑P P **00 02 57.3 +2.4**
PSN Preselentsi 77.10 312 *i*P P **00 02 52.1 -5.0**
ISP Isparta 77.30 306 P P **00 02 59.0 +0.8**
TKTP Tekketepe 77.37 306 *i*P P **00 02 51.6 -7.1**
VRI Vrincioaia 77.38 314⇑ *i*P P **00 03 00.1 +1.5**
VRI Vrincioaia 77.38 314⇑P P **00 03 00.1 +1.5**
PLOR Plostina 77.43 314⇑P P **00 03 00.1 +1.2**
ULDT Uludag 77.57 308 *i*P P **00 02 58.3 -1.5**
BURAR Bucovina Array 77.77 317⇑ *i*P P **00 03 01.7 +0.9**
BURAR Bucovina Array 77.77 317⇑P P **00 03 01.7 +0.8**
PRD Provadia 77.80 312 *i*P P **00 03 01.8 +0.8**
NSS Namsos 77.91 335 *e*P P **00 02 58.8 -2.7**
NSS AMS AMS 00 41 44.4
comp=Z,721nm,17.8s,MS5.0
MLR Muntele Rosu 78.02 314⇓ *i*P P **00 03 03.3 +1.1**
MLR Muntele Rosu 78.02 314⇓P P **00 03 03.3 +1.1**
DAG Danmarks Havn 78.06 351⇑ *i*P P **00 03 00.9 -1.6**
comp=Z,9.0nm,0.8s,mb4.8
DAG Danmarks Havn 78.06 351⇑ *i*P P **00 03 00.9 -1.6**
DAG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
JMB Yambol 78.61 311 *i*P P **00 03 06.5 +1.0**
VOIR 78.63 314⇑ *i*P P **00 03 06.7 +1.1**
VOIR 78.63 314⇑P P **00 03 06.7 +1.1**

SZH Strazhica 78.79 312 *i* P P 00 03 07.6 +1.1
ZIMR 79.04 313 ⇓*i* P P 00 03 09.5 +1.7
ZIMR 79.04 313 ⇓ P P 00 03 09.5 +1.7
DIM Dimitrovgrad 79.49 311 *i* P P 00 03 10.9 +0.6
KDAG Bornova 79.52 307 *i* P P 00 03 06.9 -3.6
DRGR 79.66 316 ⇓*i* P P 00 03 12.3 +1.1
DRGR 79.66 316 ⇓ P P 00 03 12.3 +1.1
KDZ Kurdzhali 79.71 311 *i* P P 00 03 11.5 0.0
RDO Rodhopi 79.81 310 *eP* P 00 03 09.7 -2.3
NB2 NORSAR Subarra 79.83 332 P P 00 03 10.7 -1.5
comp=Z,28nm,0.9s,mb5.2,baz=58,slow=5.9
NOA NORSAR Array B 79.83 332 P P 00 03 10.7 -1.5
comp=Z,14nm,0.8s,mb4.9,baz=61,slow=5.6,SNR=51
NOA PP PP 00 06 12.7 -1.1
comp=Z,2.1nm,0.9s,baz=64,slow=8.2,SNR=3.7
NOA LR LR 00 41 27.0
comp=Z,608nm,19.3s,MS5.0,baz=65,slow=38
NOA NORSAR Array B 79.83 332 P P 00 03 10.7 -1.5
NOA 00 06 12.7
NOA pmax pmax
comp=Z,14nm,0.9s
NOA pmax pmax
comp=Z,2.0nm,0.9s
NOA MLR MLR
comp=Z,608nm,19.3s
URZ Urewera 79.84 139 P P 00 03 10.8 -1.4
comp=Z,15nm,0.8s,mb5.0,baz=314,slow=0.7,SNR=7.5
PRK Paraskevi 79.95 308 *eP* P 00 03 11.5 -1.3
URLA Izmir 80.03 307 *i* P P 00 03 04.0 -9.2
PLD Plovdiv 80.05 311 *i* P P 00 03 12.6 -0.7
RPZ Rata Peaks 80.05 146 P P 00 03 12.8 -0.5
comp=Z,85nm,0.9s,mb5.7,baz=120,slow=1.3,SNR=18
NAO01 NORSAR Array S 80.07 332 *eP* P 00 03 12.2 -1.3
comp=Z,5.8nm,0.6s,mb4.7
NAO01 *e*PP PP 00 06 16.2 +0.5
SMG Samos 80.08 307 *eP* P 00 03 12.3 -1.2
OJC Ojcow 80.14 320 *eP* P 00 03 14.0 +0.2
NIE Niedzica 80.15 319 *eP* P 00 03 14.8 +0.9
RZN Rozhen 80.19 311 *i* P P 00 03 13.8 -0.3
DOMB Dombas 80.25 334 *eP* P 00 03 13.6 -0.8
DOMB AMb AMB 00 03 18.5
comp=Z,55nm,1.5s,mb5.2
DOMB Dombas 80.25 334 *eP* P 00 03 13.6 -0.8
comp=Z,55nm,1.5s,mb5.3
PGB Panagyurishte 80.25 312 *i* P P 00 03 15.6 +1.2
JMIC Jan Mayen 80.52 345 AMS AMS 00 41 27.5
comp=Z,404nm,21.9s,MS4.7
BZS Buzias 80.81 316 ⇓*i* P P 00 03 17.3 -0.1
BZS Buzias 80.81 316 ⇓ P P 00 03 17.3 -0.1
VTS Vitosha 80.90 312 *i* P P 00 03 18.2 +0.3
VTS Vitosha 80.90 312 ⇓ P P 00 03 19.1 +1.3
MMB Musomiste 80.91 311 *i* P P 00 03 17.1 -0.9
PSZ Piszkesteto 80.99 318 ⇓*i* P P 00 03 22.1 +3.7
PSZ Piszkesteto 80.99 318 ⇓ P P 00 03 22.1 +3.7
RAC Raciborz 81.14 321 *eP* P 00 03 19.5 +0.3
RAC MLR MLR
comp=Z,500nm,22.6s,MS4.8
KKB Krupnik 81.26 312 *i* P P 00 03 17.1 -2.7
OKC Ostrava-Krasne 81.27 320 *eP* P 00 03 19.9 0.0
OKC *ex* x 00 03 40.9
OKC AMS AMS 00 45 20.0
comp=Z,300nm,14.2s
OKC Ostrava-Krasne 81.27 320 *eP* P 00 03 19.9 0.0
OKC *e* 00 03 40.9
APE Apeiranthos 81.28 306 ⇑*i* P P 00 03 19.0 -0.9
APE Apeiranthos 81.28 306 *d i* P P 00 03 19.1 -0.8
APE Apeiranthos 81.28 306 ⇑ P P 00 03 19.0 -0.9
PLG Polygyros 81.57 310 *eP* P 00 03 20.7 -0.7
PAIG Paliouri 81.57 310 *eP* P 00 03 21.2 -0.3
MORC Moravsky Berou 81.65 321 ⇓*i* P P 00 03 22.5 +0.6
MORC Moravsky Berou 81.65 321 ⇓ P P 00 03 22.4 +0.6
BUD Budapest 81.71 318 ⇑*eP* P 00 03 24.0 +1.8
VAY Valandovo 81.82 311 *eP* P 00 03 20.9 -1.8
NPS Neapolis 81.88 305 *eP* P 00 03 22.0 -1.1
KSP Ksiaz 81.92 322 *eP* P 00 03 23.0 -0.3
KSP *e* 00 03 27.7
STIP Stip 81.94 312 *eP* P 00 03 22.5 -0.9
GRUS Gruza 82.08 314 ⇑*i* P P 00 03 23.7 -0.4
GRG Griva 82.08 311 *eP* P 00 03 23.7 -0.4
DPC Dobruska-Polom 82.11 321 *eP* P 00 03 24.9 +0.6
DPC AMS AMS 00 44 40.0
comp=Z,600nm,16.7s
UPC Upice 82.22 322 *eP* P 00 03 24.8 -0.1
UPC *ex* x 00 03 45.6
SKO Skopje 82.35 312 *eP* P 00 03 25.7 +0.1
LIT Litokhoron 82.35 310 *eP* P 00 03 25.3 -0.2
VRAC Vranov 82.41 320 ⇓*i* P P 00 03 27.0 +1.1
VRAC Vranov 82.41 320 ⇓ P P 00 03 27.1 +1.2
DIVS Divcibare 82.47 315 ⇑*i* P P 00 03 25.9 -0.3
PKSM Moragy 82.47 317 ⇑*i* P P 00 03 26.5 +0.3
PKSM Moragy 82.47 317 ⇑ P P 00 03 26.5 +0.3
LKR Lokris 82.54 309 *eP* P 00 03 24.4 -2.2
BER Bergen 82.66 333 AMS AMS 00 44 19.4
comp=Z,634nm,18.1s,MS5.0
KZN Kozani 82.77 311 *eP* P 00 03 26.8 -1.0
FNA Florina 82.86 311 *eP* P 00 03 27.5 -0.7
AGG Agios Georgios 82.88 309 *eP* P 00 03 27.3 -1.0
VAM Vamos 82.90 305 *eP* P 00 03 27.7 -0.7
MUD Monsted U'grnd 83.02 329 *i* P P 00 03 29.1 +0.1
comp=Z,32nm,1.0s,mb5.3
MUD
comp=Z,840nm,18.0s
PVCC Panska Ves 83.04 322 *eP* P 00 03 29.7 +0.6
TREC Trest 83.06 321 *eP* P 00 03 29.8 +0.5
TREC AMS AMS 00 41 40.0
comp=Z,500nm,21.7s
OHR Ohrid 83.13 312 *eP* P 00 03 24.1 -5.5
SOP Sopron 83.14 319 ⇓*eP* P 00 03 30.2 +0.6
BRG Berggiesshubel 83.24 323 *eP* P 00 03 29.9 -0.3
comp=Z,52nm,1.5s,mb5.3
BRG Berggiesshubel 83.24 323 *eP* P 00 03 30.1 -0.1
comp=Z,17nm,1.8s,mb4.8
BRG *i* 00 03 33.3
comp=Z,31nm,1.5s
BRG
comp=N,322nm,15.8s
BRG
comp=E,382nm,13.9s
BRG
comp=Z,717nm,15.1s
BRG Berggiesshubel 83.24 323 *eP* P 00 03 30.1 -0.1
BRG *i* 00 03 33.3
BRG pmax pmax
comp=Z,3.0nm,1.8s
BRG pmax pmax
comp=Z,17nm,1.5s
BRG MLR MLR
comp=N,31μm,15.8s
BRG MLR MLR
comp=E,322nm,13.9s
BRG MLR MLR
comp=Z,382nm,15.1s
BRG Berggiesshubel 83.24 323 *eP* P 00 03 30.1 -0.1
comp=Z,17nm,1.8s,mb4.8
BRG *i*
BRG LR LR 00 03 33.3
comp=Z,720nm,15.1s,MS5.2
PRU Pruhonice 83.30 322 *eP* P 00 03 30.8 +0.3
PRU AMS AMS 00 45 20.0
comp=Z,700nm,17.8s
CONA Conrad Observa 83.45 319 ⇑*i* P P 00 03 31.4 +0.2
comp=Z,100nm,1.5s,mb5.6,SNR=28
FBE Freiberg 83.55 323 *eP* P 00 03 31.9 +0.2
comp=Z,107nm,1.5s,mb5.8
CLL Collm 83.56 323 *eP* P 00 03 31.2 -0.6
comp=Z,57nm,1.3s,mb5.5
CLL Collm 83.56 323 P P 00 03 31.4 -0.4
comp=Z,logA/T=1.6,mb5.5
CLL *e*PP PP 00 06 45.0 +0.6
CLL *e*S S 00 13 54.0 +2.5
CLL *e*SS SS 00 19 18.0 +0.1
CLL Collm 83.56 323 *i* P P 00 03 31.4 -0.4
comp=Z,57nm,1.3s,mb5.5
CLL *e*PP PP 00 06 45.0 +0.6
CLL *e*S S 00 13 54.0 +2.5
CLL *e*SS SS 00 19 18.0 +0.1
CLL Collm 83.56 323 *i* P P 00 03 31.4 -0.4
CLL *e*S S 00 13 54.0 +2.5
CLL pmax pmax
comp=Z,57nm,1.3s,mb5.5
CLL MLR MLR
comp=Z,2μm,17.8s,MS5.4
CLL Collm 83.56 323 *i* P P 00 03 31.4 -0.4
comp=Z,57nm,1.3s,mb5.5
CLL *e*S S 00 13 54.0 +2.5
CLL LR LR
comp=Z,2μm,17.8s,MS5.4
BSEG Bad Segeberg 83.72 326 *eP* P 00 03 32.6 0.0
comp=Z,42nm,1.4s,mb5.4
BSEG Bad Segeberg 83.72 326 *eP* P 00 03 32.6 0.0
BSEG pmax pmax
comp=Z,42nm,1.4s,mb5.4
SCO Scoresbysund 83.75 348 *i* P P 00 03 32.4 -0.4
comp=Z,10nm,0.9s,mb5.0
SCO Scoresbysund 83.75 348 *i* P P 00 03 32.4 -0.4
SCO pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
ITM Ithomi 83.90 308 *eP* P 00 03 32.4 -1.2
ARSA Arzberg 83.96 319 ⇑*i* P P 00 03 33.8 0.0
comp=Z,50nm,1.6s,mb5.4,SNR=13
IGT Igoumenitsa 84.10 310 *eP* P 00 03 33.7 -0.8
LKD Levkas 84.21 309 *eP* P 00 03 35.3 +0.2
KHC Kasperske Hory 84.25 321 *eP* P 00 03 35.6 +0.2
KHC *ex* x 00 03 54.4
KHC AMS AMS 00 45 50.0
comp=Z,600nm,18.9s
TANN Tannenbergstha 84.28 323 *eP* P 00 03 35.3 -0.2
comp=Z,39nm,1.5s,mb5.3
GEC2 GERESS Array S 84.31 321 *eP* P 00 03 35.5 -0.2
comp=Z,33nm,0.9s,mb5.5
GEC2 GERESS Array S 84.31 321 *eP* P 00 03 35.5 -0.2
GEC2 pmax pmax
comp=Z,33nm,0.9s,mb5.5
GEC2 GERESS Array S 84.31 321 *eP* P 00 03 35.5 -0.2
comp=Z,33nm,0.9s,mb5.5
GERES GERESS Array B 84.31 321 P P 00 03 35.4 -0.3
comp=Z,20nm,0.8s,mb5.3,baz=64,slow=4.6,SNR=65
GERES LR LR 00 45 22.9
comp=Z,324nm,18.0s,MS4.8,baz=60,slow=39
GERES GERESS Array B 84.31 321 P P 00 03 35.4 -0.3
GERES pmax pmax
comp=Z,20nm,0.8s
GERES MLR MLR
comp=Z,324nm,18.0s
WERD Werda 84.36 323 *eP* P 00 03 35.6 -0.3
comp=Z,26nm,1.2s,mb5.2
NKC Novy Kostel 84.38 322 *eP* P 00 03 36.4 +0.4
NKC AMS AMS 00 46 10.0
comp=Z,800nm,14.1s
GUNZ Gunzen 84.38 323 *eP* P 00 03 36.1 +0.1
comp=Z,82nm,1.7s,mb5.6
KEK Kerkira 84.40 311 *eP* P 00 03 35.9 -0.2
YKA Yellowknife Ar 84.40 23 P P 00 03 34.7 -1.4
comp=Z,2.5nm,0.5s,mb4.6,baz=310,slow=4.8,SNR=18
YKA PKiKP PKiKP 00 08 47.7 -2.3
comp=Z,0.8nm,0.6s,baz=319,slow=1.9,SNR=6.2
YKA PKKP PKKPbc 00 21 44.3 -3.2
comp=Z,1.7nm,0.5s,baz=130,slow=2.3,SNR=19
YKA LR LR 00 48 05.2
comp=Z,145nm,18.4s,MS4.4,baz=270,slow=40
YKA Yellowknife Ar 84.40 23 P P 00 03 34.7 -1.4
MOA Molln 84.44 320 ⇑*i* P P 00 03 36.3 0.0
comp=Z,122nm,1.9s,mb5.7,SNR=32
VLS Valsamata 84.47 309 *eP* P 00 03 35.2 -1.2
PERS Pernice 84.48 318 *eP* P 00 03 37.1 +0.5
NRDL Niedersach Rie 84.55 325 *eP* P 00 03 37.0 +0.1
comp=Z,87nm,1.6s,mb5.6
MOX Moxa 84.65 323 *eP* P 00 03 37.0 -0.4
comp=Z,51nm,1.5s,mb5.4
MOX Moxa 84.65 323 *eP* P 00 03 37.6 +0.2
comp=Z,52nm,1.6s,mb5.4
MOX
comp=Z,1μm,18.0s
MOX Moxa 84.65 323 *eP* P 00 03 37.6 +0.2
MOX pmax pmax
comp=Z,52nm,1.6s,mb5.4
MOX MLR MLR
comp=Z,1μm,18.0s,MS5.4
WET Wettzell 84.65 321 *eP* P 00 03 37.2 -0.2
comp=Z,51nm,1.7s,mb5.4
WET Wettzell 84.65 321 *eP* P 00 03 37.2 -0.2
WET pmax pmax
comp=Z,51nm,1.7s,mb5.4
WET Wettzell 84.65 321 *eP* P 00 03 37.2 -0.2
comp=Z,51nm,1.7s,mb5.4
MANZ Manzenberg 84.69 322 *eP* P 00 03 37.5 -0.1
comp=Z,22nm,1.1s,mb5.2
CLZ Clausthal 84.74 324 *eP* P 00 03 37.7 -0.1
comp=Z,37nm,0.9s,mb5.5
CLZ Clausthal 84.74 324 *eP* P 00 03 37.7 -0.1
CLZ pmax pmax
comp=Z,37nm,0.9s,mb5.5
CLZ Clausthal 84.74 324 *eP* P 00 03 37.7 -0.1
comp=Z,37nm,0.9s,mb5.5
ROTZ Rotzenmuhle 84.74 322 *eP* P 00 03 37.9 +0.1
comp=Z,65nm,1.6s,mb5.5
OBKA Obir 84.89 318 ⇑*i* P P 00 03 38.4 -0.2
comp=Z,72nm,1.7s,mb5.5,SNR=11
BOJS Bojanci 84.91 317 *eP* P 00 03 38.6 -0.1
KMBO Kilima Mbogo 85.11 267 P P 00 03 41.7 +2.1
comp=Z,25nm,0.8s,mb5.4,baz=53,slow=6.7,SNR=54
KMBO LR LR 00 41 41.1
comp=Z,288nm,20.9s,MS4.6,baz=88,slow=36
KMBO Kilima Mbogo 85.11 267 P P 00 03 42.3 +2.6
SNR=11
KMBO Kilima Mbogo 85.11 267 P P 00 03 41.7 +2.0
KMBO pmax pmax
comp=Z,25nm,0.9s
KMBO MLR MLR
comp=Z,289nm,20.9s
KMBO Kilima Mbogo 85.11 267 P P 00 03 41.7 +2.1
KMBO LR LR 00 41 41.1
GRA1 Grafenberg Arr 85.33 322 *eP* P 00 03 41.0 +0.2
comp=Z,37nm,1.1s,mb5.4
GRA1 LR LR
comp=Z,700nm,18.2s,MS5.1
GRF Grafenberg Arr 85.33 322 *eP* P 00 03 41.0 +0.2
comp=Z,37nm,1.1s,mb5.4
GRF *e*L 00 46 50.0
comp=Z,742nm,18.2s
GRF Grafenberg Arr 85.33 322 *eP* P 00 03 41.0 +0.2
comp=Z,37nm,1.1s,mb5.4
GRF LR LR
comp=Z,700nm,18.2s,MS5.1
KBA Koelnbreinsper 85.36 319 ⇑*i* P P 00 03 40.7 -0.2
comp=Z,30nm,1.4s,mb5.2,SNR=5.7
UBBA Unterbreizbach 85.45 324 *eP* P 00 03 40.9 -0.5
VOY Vojsko 85.51 318 *eP* P 00 03 40.9 -0.8
VOY *e* 00 03 44.0
ROBS Robic 85.65 319 *i* P P 00 03 40.8 -1.6
ROBS *e* 00 03 44.2
IBBN Ibbenburen 85.88 326 *eP* P 00 03 43.5 0.0
comp=Z,138nm,1.5s,mb6.0
FVI Forni Avoltri 85.93 319 P P 00 03 43.0 -0.7
comp=Z,22nm,1.0s,mb5.3
WATA Walderalm 86.29 320 ⇑*i* P P 00 03 45.3 -0.2
comp=Z,40nm,1.6s,mb5.4,SNR=7.1
WTTA Wattenberg 86.29 320 ⇑*i* P P 00 03 45.1 -0.4
comp=Z,76nm,1.9s,mb5.6,SNR=9.8
RGNG Rignano Grg 86.43 314 P P 00 03 46.8 +0.6
MOTA Moosalm 86.56 320 ⇓*i* P P 00 03 46.5 -0.4
comp=Z,14nm,1.2s,mb5.1,SNR=8.1
SQTA Sankt Quirin 86.56 320 ⇓*i* P P 00 03 46.7 -0.1
comp=Z,21nm,1.2s,mb5.2,SNR=9.5
BUG Bochum-Univer 86.60 325 *eP* P 00 03 46.9 -0.1
comp=Z,52nm,1.3s,mb5.6
TNS Taunus Mts 86.61 324 *eP* P 00 03 46.8 -0.3
comp=Z,40nm,1.6s,mb5.4
TNS Taunus Mts 86.61 324 *eP* P 00 03 46.8 -0.3
TNS pmax pmax
comp=Z,40nm,1.6s,mb5.4
TNS Taunus Mts 86.61 324 *eP* P 00 03 46.8 -0.3
comp=Z,40nm,1.6s,mb5.4
CTI Castel Tesino 86.88 319 P P 00 03 49.2 +0.8
comp=Z,13nm,0.9s,mb5.2
STU Stuttgart 86.95 322 *eP* P 00 03 48.2 -0.6
comp=Z,40nm,1.8s,mb5.3
GRI Girifalco 87.15 311 P P 00 03 50.9 +1.2
CING Cingoli 87.21 316 P P 00 03 50.2 +0.2
TERO Teramo 87.30 315 P P 00 03 50.7 +0.2
DAVA Damuels 87.31 321 ⇑*i* P P 00 03 50.0 -0.5
comp=Z,143nm,3.9s,SNR=6.2
FSSB Fossombrone 87.32 317 P P 00 03 51.1 +0.5
comp=Z,37nm,0.9s,mb5.6
RSM Repubblica di 87.42 317 P P 00 03 52.4 +1.4
comp=Z,116nm,1.2s,mb6.0
BRMO Bormio 87.43 320 P P 00 03 51.3 +0.2
comp=Z,13nm,1.1s,mb5.1
AQU L'Aquila 87.56 315 P P 00 03 52.7 +1.0
comp=Z,116nm,1.2s,mb6.0
SDI San Donato 87.60 314 P P 00 03 51.8 -0.1
comp=Z,34nm,1.2s,mb5.5
LANF Langenberg 87.62 323 *eP* P 00 03 51.0 -1.0
LANF Langenberg 87.62 323 *eP* P 00 03 51.0 -1.0
VVLD Villa Vallelon 87.64 315 P P 00 03 53.0 +0.9
BFO Black Forest 87.67 322 *eP* P 00 03 51.3 -0.9
comp=Z,22nm,1.7s,mb5.1
BFO Black Forest 87.67 322 *eP* P 00 03 51.3 -0.9
BFO pmax pmax
comp=Z,22nm,1.7s,mb5.1
BFO Black Forest 87.67 322 *eP* P 00 03 51.3 -0.9
comp=Z,22nm,1.7s,mb5.1
MURB Monte Urbino 87.69 316 P P 00 03 54.2 +1.9
MEM Membach 87.72 325 P P 00 03 51.8 -0.7
BADI Badiali 87.75 317 P P 00 03 53.9 +1.3
SEI Scarperia 88.04 317 P P 00 03 55.1 +1.1
comp=Z,130nm,0.7s,mb6.3
TUE Stuetta 88.05 320 P P 00 03 54.6 +0.6
FELD Feldberg im Sc 88.09 322 *eP* P 00 03 53.4 -0.9
ZCCA Zocca 88.13 318 P P 00 03 56.3 +1.9
comp=Z,24nm,0.6s,mb5.6
WLF Walferdange 88.16 324 *eP* P 00 03 54.7 +0.1
comp=Z,138nm,1.8s,mb5.9
WLF Walferdange 88.16 324 P P 00 03 54.3 -0.2
WLS Welschbruch 88.17 323 *eP* P 00 03 54.2 -0.4
WLS Welschbruch 88.17 323 *eP* P 00 03 54.2 -0.4
BCLA Clavier 88.20 325 P P 00 03 57.2 +2.4
CDF Champ du Feu 88.22 323 *eP* P 00 03 54.1 -0.8
comp=Z,37nm,0.9s,mb5.3
CDF Champ du Feu 88.22 323 *eP* P 00 03 54.1 -0.8
comp=Z,18nm,0.9s,mb5.3
GSCL Gusciola 88.37 318 P P 00 03 56.9 +1.3
comp=Z,27nm,0.8s,mb5.5
ERBM Eremo 88.45 318 P P 00 03 57.5 +1.6
comp=Z,59nm,1.0s,mb5.8
BBS Basel-Blauen 88.59 322 *eP* P 00 03 55.7 -0.9
MOF Molkenrain 88.60 322 *eP* P 00 03 55.7 -1.0
MOF Molkenrain 88.60 322 *eP* P 00 03 55.7 -1.0
GIVF Givet 88.63 325 *eP* P 00 03 55.9 -0.9
GRFL Gerfalco 88.73 317 P P 00 03 57.4 +0.1
comp=Z,18nm,0.8s,mb5.5
DOU Dourbes 88.76 325 P P 00 03 56.6 -0.8
HINF Hinteralfeld 88.78 322 *eP* P 00 03 56.3 -1.2
comp=Z,12nm,0.8s,mb5.0
HINF Hinteralfeld 88.78 322 *eP* P 00 03 56.3 -1.2
comp=Z,6.0nm,0.8s,mb5.0
HAU Haudompre 88.96 323 *eP* P 00 03 57.2 -1.2
comp=Z,38nm,1.0s,mb5.4
HAU *eR*
comp=Z,618nm,18.0s
HAU Haudompre 88.96 323 *eP* P 00 03 57.2 -1.2
comp=Z,19nm,1.0s,mb5.4
HAU LR LR
comp=Z,620nm,18.0s,MS5.1
BAIF Baives 88.98 325 *eP* P 00 03 57.5 -1.0
comp=Z,33nm,1.2s,mb5.2
BAIF Baives 88.98 325 *eP* P 00 03 57.5 -1.0
comp=Z,16nm,1.2s,mb5.2
THEF They Montfort 89.04 323 *eP* P 00 03 57.9 -0.8
THEF They Montfort 89.04 323 *eP* P 00 03 57.9 -0.8
HVZN Vizzini 89.10 310 P P 00 03 59.8 +0.8
MEZF Maizieres J'vi 89.41 323 *eP* P 00 03 59.9 -0.5
comp=Z,54nm,1.0s,mb5.5
MEZF Maizieres J'vi 89.41 323 *eP* P 00 03 59.9 -0.5
comp=Z,54nm,1.0s,mb5.8
CABF La Chapelle 89.88 321 *eP* P 00 04 01.8 -0.8
comp=Z,8.7nm,0.7s,mb4.9
CABF La Chapelle 89.88 321 *eP* P 00 04 01.8 -0.8
comp=Z,4.3nm,0.7s,mb4.9
FIN Finale Ligure 89.91 319 P P 00 04 02.8 0.0
comp=Z,161nm,1.9s,mb6.0
C05A Tolt Reservoir 90.07 37 ⇑P P 00 04 04.2 +0.6
baz=90
LPG La Plagne 90.10 320 *eP* P 00 04 03.6 -0.1
comp=Z,36nm,0.7s,mb5.5
LPG La Plagne 90.10 320 *eP* P 00 04 03.6 -0.1
comp=Z,18nm,0.7s,mb5.5
LPL La Plagne 90.10 320 *eP* P 00 04 03.5 -0.2
comp=Z,30nm,0.6s,mb5.5
LPL La Plagne 90.10 320 *eP* P 00 04 03.5 -0.2
comp=Z,15nm,0.6s,mb5.5
PGF Pioggiola 90.29 317 *eP* P 00 04 04.4 -0.2
comp=Z,98nm,0.8s,mb5.9
PGF Pioggiola 90.29 317 *eP* P 00 04 04.4 -0.2
comp=Z,49nm,0.8s,mb5.9
SAOF Saorge 90.43 319 *eP* P 00 04 05.9 +0.7
SAOF Saorge 90.43 319 *eP* P 00 04 05.9 +0.7
G03A Yamhill 90.48 40 ⇑P P 00 04 05.8 +0.4
baz=90
AUTN L'Aution 90.50 319 *eP* P 00 04 05.1 -0.4
AUTN L'Aution 90.50 319 *eP* P 00 04 05.1 -0.4
MBDF Montbardon 90.50 320 *eP* P 00 04 05.2 -0.4
comp=Z,21nm,0.8s,mb5.2
MBDF Montbardon 90.50 320 *eP* P 00 04 05.2 -0.4
comp=Z,11nm,0.8s,mb5.2
SBF Sospel 90.57 319 *eP* P 00 04 05.0 -0.9
comp=Z,52nm,0.9s,mb5.5
SBF Sospel 90.57 319 *eP* P 00 04 05.0 -0.9
comp=Z,26nm,0.9s,mb5.6
TOUF Mont Tournerai 90.60 319 *eP* P 00 04 07.2 +1.2
TOUF Mont Tournerai 90.60 319 *eP* P 00 04 07.2 +1.2
LOR Lormes 90.77 323 *eP* P 00 04 05.7 -1.1
comp=Z,50nm,1.1s,mb5.5
LOR *eR*
comp=Z,551nm,21.5s
LOR Lormes 90.77 323 *eP* P 00 04 05.7 -1.1
comp=Z,25nm,1.0s,mb5.5
LOR LR LR
comp=Z,550nm,21.5s,MS5.0
EDM Edmonton 90.92 29 *eP* P 00 04 07.7 +0.2
ORIF Oris-en-Rattie 90.93 320 *eP* P 00 04 07.0 -0.5
comp=Z,34nm,1.1s,mb5.3
ORIF *eR*
comp=Z,764nm,17.2s
ORIF Oris-en-Rattie 90.93 320 *eP* P 00 04 07.0 -0.5
comp=Z,17nm,1.1s,mb5.3
SSF Saint Saulge 91.08 323 *eP* P 00 04 07.3 -1.0
comp=Z,64nm,1.2s,mb5.5
SSF Saint Saulge 91.08 323 *eP* P 00 04 07.3 -1.0
comp=Z,32nm,1.2s,mb5.5
SMF Signal de Mont 91.14 322 *eP* P 00 04 07.6 -0.9
comp=Z,70nm,0.8s,mb5.7
SMF Signal de Mont 91.14 322 *eP* P 00 04 07.6 -0.9
comp=Z,35nm,0.8s,mb5.7
FRF La Foret Royal 91.21 319 *eP* P 00 04 08.1 -0.8
AVF Avril sur Loir 91.33 323 *eP* P 00 04 08.5 -0.9
comp=Z,60nm,0.8s,mb5.7
AVF Avril sur Loir 91.33 323 *eP* P 00 04 08.5 -0.9
comp=Z,30nm,0.8s,mb5.7
MIR Mirnyy 91.35 191 *eP* P 00 04 03.0 -6.5
MIR pmax pmax
comp=Z,110nm,1.2s,mb6.1
LMR La Mourre 91.42 319 *eP* P 00 04 09.3 -0.5
comp=Z,95nm,1.3s,mb5.7
LMR La Mourre 91.42 319 *eP* P 00 04 09.3 -0.5
comp=Z,47nm,1.3s,mb5.7
HYF Humbligny 91.45 323 *eP* P 00 04 09.6 -0.3
SMRF Simiane la Rot 91.63 319 *eP* P 00 04 10.4 -0.4
comp=Z,87nm,1.6s,mb5.5
SMRF Simiane la Rot 91.63 319 *eP* P 00 04 10.4 -0.4
comp=Z,87nm,1.6s,mb5.8
PLDF La Plantade 91.65 322 *eP* P 00 04 11.1 +0.2
PLDF La Plantade 91.65 322 *eP* P 00 04 11.1 +0.2
VIVF Saint-Julien-l 91.68 321 *eP* P 00 04 10.3 -0.7
comp=Z,19nm,0.9s,mb5.2
VIVF Saint-Julien-l 91.68 321 *eP* P 00 04 10.3 -0.7
comp=Z,9.6nm,0.9s,mb5.1
BGF Bois d'Agland 91.75 323 *eP* P 00 04 10.4 -0.9
comp=Z,26nm,0.9s,mb5.2
BGF Bois d'Agland 91.75 323 *eP* P 00 04 10.4 -0.9
comp=Z,13nm,0.9s,mb5.3
AGO Saint Agoulin 91.88 322 *eP* P 00 04 12.5 +0.5
AGO Saint Agoulin 91.88 322 *eP* P 00 04 12.5 +0.5
PYM Petit Puy Mans 92.13 322 *eP* P 00 04 13.4 +0.3
PYM Petit Puy Mans 92.13 322 *eP* P 00 04 13.4 +0.3
FLN La Foliniere 92.22 326 *eP* P 00 04 12.7 -0.8
comp=Z,133nm,1.6s,mb5.7
FLN *eR*
comp=Z,814nm,18.0s
FLN La Foliniere 92.22 326 *eP* P 00 04 12.7 -0.8
comp=Z,67nm,1.6s,mb5.7
FLN LR LR
comp=Z,810nm,18.0s,MS5.2
TCF Toulx Ste Croi 92.26 323 *eP* P 00 04 13.1 -0.6
comp=Z,46nm,1.0s,mb5.5
TCF Toulx Ste Croi 92.26 323 *eP* P 00 04 13.1 -0.6
comp=Z,23nm,1.0s,mb5.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LBL	Lubilhac	92.29	321	eP	P	00 04 14.3	+0.5
LBL	Lubilhac	92.29	321	eP	P	00 04 14.3	+0.5
LASF	Ste Croix	92.60	320	eP	P	00 04 14.7	-0.6
	comp=Z,29nm,1.2s,mb5.3						
YBH	Yreka Blue Hor	92.80	42	⇑P	P	00 04 17.4	+1.2
	baz=93						
J05A	Fort Rock	92.83	41	⇑P	P	00 04 17.0	+0.6
	baz=93						
M02C	Callahan	92.89	43	⇑P	P	00 04 18.8	+2.2
	baz=93						
CAF	Calviac	93.15	322	eP	P	00 04 17.7	-0.1
	comp=Z,63nm,1.3s,mb5.6						
CAF	Calviac	93.15	322	eP	P	00 04 17.7	-0.1
	comp=Z,32nm,1.3s,mb5.6						
RJF	Les Rejaudoux	93.24	322	eP	P	00 04 18.1	-0.1
	comp=Z,85nm,0.8s,mb5.9						
RJF				eR			
	comp=Z,486nm,18.0s						
RJF	Les Rejaudoux	93.24	322	eP	P	00 04 18.1	-0.1
	comp=Z,43nm,0.8s,mb5.9						
RJF				LR	LR		
	comp=Z,490nm,18.0s,MS5.0						
WALA	Waterton Lakes	93.36	33	eP	P	00 04 16.1	-2.7
	comp=Z,6.3nm,1.1s,mb5.0						
MFF	Saint Martin d	93.37	324	eP	P	00 04 17.6	-1.2
	comp=Z,42nm,1.3s,mb5.4						
MFF	Saint Martin d	93.37	324	eP	P	00 04 17.6	-1.2
	comp=Z,21nm,1.3s,mb5.4						
I07A	Izee	93.40	39	⇓P	P	00 04 20.0	+1.0
	baz=93						
J06A	Christmas Vall	93.50	40	⇑P	P	00 04 20.0	+0.6
	baz=93						
KEST	Kesra	93.58	311	P	P	00 04 20.8	+1.0
	comp=Z,6.1nm,1.0s,mb5.0,baz=298,slow=4.5,SNR=12						
SGMF	Saint Gilles	93.61	326	eP	P	00 04 18.4	-1.5
K06A	Valley Falls	93.70	41	⇓P	P	00 04 21.4	+1.0
	baz=94						
LFF	La Frestale	93.89	322	eP	P	00 04 21.0	-0.2
	comp=Z,49nm,1.2s,mb5.5						
LFF	La Frestale	93.89	322	eP	P	00 04 21.0	-0.2
	comp=Z,24nm,1.2s,mb5.5						
ROSF	Rostrenen	93.92	327	eP	P	00 04 19.7	-1.7
	comp=Z,49nm,1.1s,mb5.6						
ROSF	Rostrenen	93.92	327	eP	P	00 04 19.7	-1.7
	comp=Z,24nm,1.1s,mb5.5						
GASB	Alder Springs	93.94	44	⇑P	P	00 04 23.1	+1.6
	baz=94						
MTLF	Montolieu	93.99	320	eP	P	00 04 21.1	-0.6
	comp=Z,13nm,0.9s,mb5.0						
MTLF	Montolieu	93.99	320	eP	P	00 04 21.1	-0.6
	comp=Z,6.4nm,0.9s,mb5.0						
QUIF	Quistinic	94.14	326	eP	P	00 04 21.2	-1.2
K09A	Rome	95.26	39	P	P	00 04 26.5	-1.0
	baz=95						
EPF	Esparros	95.28	321	eP	P	00 04 26.9	-0.7
	comp=Z,11nm,1.1s,mb4.9						
EPF	Esparros	95.28	321	eP	P	00 04 26.9	-0.7
	comp=Z,5.5nm,1.1s,mb4.9						
PPT	Papeete	95.61	107	LR	LR	00 42 49.2	
	comp=Z,163nm,21.1s,MS4.5,baz=316,slow=32						
SJPF	Ste Jean	96.13	322	eP	P	00 04 31.6	+0.1
	comp=Z,26nm,1.2s,mb5.2						
SJPF	Ste Jean	96.13	322	eP	P	00 04 31.6	+0.1
	comp=Z,13nm,1.2s,mb5.2						
NVAR	Mina Array Bea	97.46	43	P	P	00 04 38.4	+1.0
	comp=Z,0.9nm,0.8s,mb4.3,baz=280,slow=5.4,SNR=3.6						
NVAR	Mina Array Bea	97.46	43	P	P	00 04 38.4	+0.9
MAW	Mawson	99.62	199	eP	Pdif	00 04 45.1	-2.0
MAW	Mawson	99.62	199	P	Pdif	00 04 45.0	-2.1
	comp=Z,2.8nm,1.0s,baz=53,slow=6.2,SNR=7.8						
MAW	Mawson	99.62	199	P	Pdif	00 04 45.0	-2.1
MAW				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PDAR	Pinedale Array	99.82	36	PP	PP	00 08 45.8	-7.0
	comp=Z,0.6nm,1.0s,baz=316,slow=8.4,SNR=3.7						
ESDC	Sonseca Array	99.91	320	PP	PP	00 08 53.1	-0.3
	comp=Z,1.6nm,0.8s,baz=5.5,slow=8.2,SNR=4.3						
VNDA	Vanda	102.60	172	P	Pdif	00 04 58.1	-2.3
	comp=Z,0.9nm,1.1s,baz=304,slow=7.3,SNR=3.7						
VNDA				PP	PP	00 09 10.1	-3.7
	comp=Z,2.3nm,1.1s,baz=296,slow=7.9,SNR=4.0						
VNDA	Vanda	102.60	172	P	Pdif	00 04 58.1	-2.3
VNDA						00 09 10.1	
VNDA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MNTX	Cornudas Mount	109.87	41	ePKPdf	PKiKP	00 09 34.8	0.0
MNTX				ePP	PP	00 10 05.5	-1.8
TOA0	Torodi Ar. Sit	111.20	295	ePKPdf	PKiKP	00 09 36.6	-0.8
TORD	Torodi Ar. Bea	111.20	295	PKiKP	PKiKP	00 09 37.0	-0.3
	comp=Z,3.8nm,0.8s,baz=64,slow=1.7,SNR=26						
WMOK	Wichita Mounta	111.42	35	ePKPdf	PKiKP	00 09 36.8	-1.0
QSPA	South Pole Qui	112.30	180	eP	PKiKP	00 09 37.7	-1.7
JCT	Junction City	114.06	39	ePKPdf	PKiKP	00 09 42.0	-0.8
MIAR	Mount Ida	114.20	31	ePKPdf	PKiKP	00 09 40.9	-2.1
WVT	Waverly	115.42	26	ePKPdf	PKPdf	00 09 43.9	-1.5
TZTN	Tazewell	116.68	22	ePKPdf	PKPdf	00 09 46.5	-1.3
MYNC	Murphy	117.79	24	ePKPdf	PKPdf	00 09 49.2	-0.7
DBIC	Dimbokro	120.04	292	PKP	PKPdf	00 09 53.7	-0.5
	comp=Z,12nm,0.8s,baz=50,slow=2.5,SNR=15						
DBIC	Dimbokro	120.04	292	PKIKP	PKPdf	00 09 53.7	-0.6
DBIC				pmax	pmax		
	comp=Z,12nm,0.8s						
DBIC	Dimbokro	120.04	292	PKP	PKPdf	00 09 53.7	-0.5
LIC	Lamto	120.41	292	ePKIKP	PKPdf	00 09 54.6	-0.4
	comp=Z,36nm,0.8s						
LIC				eR			
	comp=Z,86nm,23.0s						
LIC	Lamto	120.41	292	ePKPdf	PKPdf	00 09 54.6	-0.4
LIC				LR	LR		
	comp=Z,40nm,23.0s,MS4.0						
HOPE	Hope Point	144.19	202	ePKPdf	PKPdf	00 10 36.3	-3.2
SDV	Santo Domingo	146.62	22	ePKPdf	PKPdf	00 10 44.1	+0.5
USHA	Ushuaia	146.87	169	PKPbc	PKPbc	00 10 45.1	-0.8
	comp=Z,70nm,1.0s,baz=212,slow=3.6,SNR=16						
ROSC	El Rosal	148.71	32	PKP	PKPdf	00 10 48.2	+1.2
	comp=Z,23nm,0.7s,baz=260,slow=23,SNR=6.7						
ROSC				PKPbc	PKPbc	00 10 51.8	+0.9
	comp=Z,23nm,0.7s,baz=92,slow=12,SNR=6.7						
ROSC	El Rosal	148.71	32	ePKPdf	PKPdf	00 10 48.4	+1.4
ROSC				ePKPbc	PKPbc	00 10 52.2	+1.3
EFI	East Falkland	150.88	181	ePKPbc	PKPbc	00 10 55.0	-1.2
EFI				ePKPab	PKPab	00 11 02.7	-0.8
SAML	Samuel	165.79	19	ePKPdf	PKPdf	00 11 08.2	-0.2
CFAA	Coronel Fontan	167.47	138	PKP	PKPdf	00 11 09.6	-0.1
	comp=Z,0.2nm,0.4s,baz=262,slow=3.7,SNR=5.9						
CFAA				PKPab	PKPab	00 12 15.2	0.0
	comp=Z,0.7nm,0.9s,baz=217,slow=7.3,SNR=5.6						
BDFB	Brasilia	167.96	303	PKP	PKPdf	00 11 10.1	+0.1
	comp=Z,9.4nm,0.8s,baz=249,slow=2.2,SNR=12						
BDFB				PKPab	PKPab	00 12 19.2	+1.7
	comp=Z,9.4nm,1.0s,baz=58,slow=4.4,SNR=5.0						
SIV	San Ignacio	173.08	21	PKP	PKPdf	00 11 13.0	+0.2
	comp=Z,4.8nm,0.7s,baz=184,slow=1.1,SNR=26						
SIV				PKPab	PKPab	00 12 40.2	+0.1
	comp=Z,1.1nm,0.7s,baz=22,slow=5.4,SNR=3.7						
CPUP	Villa Florida	176.04	195	PKP	PKPdf	00 11 12.9	-0.8
	comp=Z,4.0nm,0.8s,baz=268,slow=0.2,SNR=9.1						
CPUP				PKPab	PKPab	00 12 51.9	-1.4
	comp=Z,5.7nm,0.8s,baz=109,slow=5.1,SNR=8.0						
CPUP	Villa Florida	176.04	195	PKP	PKPdf	00 11 12.9	-0.8
CPUP				PKPab	PKPab	00 12 51.9	-1.4

*SKO **11** 23:55:42.2, 3995N×1984E, h4^{km}*
*ATH **11** 23:55:42.3, 4007N×1969E, h27^{km}±2^{km}, MD3.5/6*
*ISCJB **11** 23:55:42.2±0.7, 4009N±002×1977E±006, h3^{km}±4^{km}, Error ellipse: s-maj=7.2km s-min=3.8km az=15.9*
*NEIC **11** 23:55:42.3, 4007N×1969E, h27^{km}, MD3.5(ATH), ML2.9(THE), After ATH.*
*CSEM **11** 23:55:43.7±0.1, 40.11N×1990E, h10^{km}, MD3.5, Error ellipse: s-maj=3.2km s-min=1.9km az=90.0*
*THE **11** 23:55:44.2, 40.12N×1984E, h0^{km}, ML2.9*
ISC 11 23:55:43.5±0.7**, 4009N**±002×**1979E**±006**, h7**^{km}±4^{km}**, n25, σ1§21**/40**, Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.26	40	i Pg	Pg	23 55 47.2	-1.5
TPE				i Sg	Sg	23 55 51.8	-0.5
KEK	Kerkira	0.38	179	ePB	Pg	23 55 50.2	-0.7
KEK				eSB	Sg	23 55 57.0	+1.1
VLO	Vlora	0.44	329	i Pg	Pg	23 55 55.8	+3.8
IGT	Igoumenitsa	0.70	143	ePg	Pg	23 55 56.2	-0.8
IGT				eSg	Sg	23 56 08.2	+2.1
JAN	Janina	0.93	118	ePN	Pn	23 56 01.2	-1.8
JAN				eSN	Sn	23 56 14.6	-1.9
MEV	Metsovon	1.15	105	ePg	Pg	23 56 05.1	-0.5
TIR	Tirane	1.25	3	ePg	Pg	23 56 07.2	-0.4
TIR				eSg	Sg	23 56 26.1	+2.3
OHR	Ohrid	1.27	37	i Pg	Pg	23 56 07.2	-0.8
OHR				i Sg	Sg	23 56 25.9	+1.4
FNA	Florina	1.40	60	ePg	Pg	23 56 08.3	-2.0
FNA				eSg	Sg	23 56 28.5	+0.1
BIA	Bitola	1.49	51	ePg	Pn	23 56 09.6	-1.2
BIA				eSg	Sg	23 56 32.0	+0.6
BIA	Bitola	1.49	51	i Pn	Pn	23 56 09.6	-1.2
BIA	Bitola	1.49	51	i Pn	Pn	23 56 09.5	-1.2
BIA				eSg	Sg	23 56 32.0	+0.5
KZN	Kozani	1.53	81	ePN	Pn	23 56 11.1	-0.2
LKD	Levkas	1.54	154	ePg	Pg	23 56 11.7	-1.3
LKD				eSg	Sg	23 56 34.9	+2.0
EVR	Evrytania	1.96	126	ePN	Pn	23 56 16.4	-0.7
VLS	Valsamata	2.01	162	ePB	Pb	23 56 16.9	-3.5
LIT	Litokhoron	2.07	89	ePn	Pn	23 56 19.2	+0.4
AGG	Agios Georgios	2.24	118	ePn	Pn	23 56 22.5	+1.5
AGG				eSn	Sn	23 56 51.4	+2.5
STIP	Stip	2.42	48	ePn	Pn	23 56 23.1	-0.5
STIP				eSn	Sn	23 56 53.9	+0.5
STIP	Stip	2.42	48	ePn	Pn	23 56 23.0	-0.5
STIP				eSn	Sn	23 56 53.9	+0.5
VAY	Valandovo	2.44	59	ePn	Pn	23 56 24.3	+0.4
VAY				eSn	Sn	23 56 54.8	+0.8
VAY	Valandovo	2.44	59	ePn	Pn	23 56 24.2	+0.4
VAY				eSn	Sn	23 56 54.7	+0.7
SG1	Sgolgore (BA)	2.48	288	ePn	Pn	23 56 24.9	+0.5
NEO	Neokhori	2.77	105	ePN	Pn	23 56 28.2	0.0
PLG	Polygyros	2.81	83	ePN	Pn	23 56 29.3	+0.4

*ISCJB **11** 23:59:39.3±0.8, 2521S±004×708W±02, h63^{km}±6^{km}, mb4.7/5, Error ellipse: s-maj=22.9km s-min=5.5km az=13.6*
*IDC **11** 23:59:39.7±5.0, 2534S×7071W, h35^{km}±33^{km}, mb4.6/5, mb1 4.5/7, mb1mx4.0/17, mbtmp4.6/7, ML4.6/2, MS3.3/3, Ms1 3.3/3, ms1mx3.1/23, Error ellipse: s-maj=47.7km s-min=23.4km az=100.0*
*NEIC **11** 23:59:39.0, 2524S×7067W, h67^{km}, mb4.4/2, After GUC.*
*GUC **11** 23:59:39.0±0.7, 2524S×7067W, h67^{km}±15^{km}, MD3.9, ML4.2*
ISC 11 23:59:39.7±0.8**, 2521S**±004×**709W**±01**, h49**^{km}±7^{km}**, n31, σ1§26**/38**, mb4.7**/5**, MS3.5**/1**, 2C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	0.75	40	eP	Pn	23 59 54.5	+0.4
CPN1				i S	Sn	00 00 05.4	+0.9
CPN1				AML	AML	00 00 06.6	
	comp=E,40µm,0.5s						
ANCH	Antofagasta	1.59	17	⇓eP	Pn	00 00 05.5	+0.1
ANCH				i S	Sn	00 00 25.2	+0.3
ANCH				AML	AML	00 00 26.9	
	comp=N,8µm,0.5s						
ANCH	Antofagasta	1.59	17	⇓eP	Pn	00 00 05.5	+0.1
ANCH				i S	Sn	00 00 25.2	+0.3
CDCH	Caldera	1.86	177	⇓iP	Pn	00 00 08.9	-0.2
CDCH				eS	Sn	00 00 31.7	+0.3
CDCH				AML	AML	00 00 37.1	
	comp=E,2µm,0.2s						
CDCH	Caldera	1.86	177	⇓iP	Pn	00 00 08.9	-0.2
CDCH				eS	Sn	00 00 31.7	+0.3
CEN1	Los Morros	1.93	20	⇑iP	Pn	00 00 07.2	-2.9
CEN1				i S	Sn	00 00 28.0	-5.1
CEN1				AML	AML	00 00 28.5	
	comp=E,2µm,0.7s						
CPCH	Copiapo	2.20	167	⇓iP	Pn	00 00 13.8	0.0
CPCH				i S	Sn	00 00 39.7	-0.1
LVC	Limon Verde	3.18	36	Pn	Pn	00 00 29.5	+2.3
	comp=E,26nm,0.3s,baz=223,slow=10,SNR=459						
LVC				Pg	Pn	00 00 38.7	+12
	comp=E,166nm,0.3s,baz=221,slow=12,SNR=50						
LVC				Sn	Sn	00 01 06.0	+2.2
	comp=E,154nm,0.3s,baz=32,slow=17,SNR=15						
LVC				Lg		00 01 20.4	
	comp=E,161nm,0.3s,baz=5.8,slow=16,SNR=10						
LVC	Limon Verde	3.18	36	ePn	Pn	00 00 29.3	+2.2
LVC				eSn	Sn	00 01 06.4	+2.6
LVC				Lg		00 01 20.4	
CFAA	Coronel Fontan	6.80	160	Pn	Pn	00 01 17.4	+0.6
	comp=E,0.3nm,0.3s,baz=340,slow=14,SNR=16						
CFAA				Sn	Sn	00 02 28.9	-4.0
	comp=E,0.9nm,0.3s,baz=123,slow=22,SNR=3.6						
CFAA				LR	LR	00 04 04.5	
	comp=E,49nm,20.8s,baz=345,slow=40						
MDZ	Mendoza	7.86	167	eP		00 01 47.6	
MDZ				e		00 03 26.9	
ARE	Arequipa	8.72	356	eP	Pn	00 01 43.0	-0.2
ARE				eS	Sn	00 03 16.0	-4.0
CPUP	Villa Florida	12.31	98	Pn	Pn	00 02 30.7	-1.6
	comp=E,0.3nm,0.3s,baz=266,slow=9.0,SNR=6.6						
CPUP	Villa Florida	12.31	98	ePn	Pn	00 02 25.9	-6.3
CPUP				Pn	Pn	00 02 30.7	-1.6
SIV	San Ignacio	13.00	47	Pn	Pn	00 02 38.3	-3.4
	comp=E,2.0nm,0.3s,baz=241,slow=11,SNR=88						
SIV				Sn	Sn	00 04 58.2	-6.7
	comp=E,0.7nm,0.3s,baz=148,slow=20,SNR=3.1						
PLCA	Paso Flores	15.48	179	LR	LR	00 09 21.5	
	comp=E,281nm,18.2s,baz=8.3,slow=38						
SAML	Samuel	17.77	26	ePn	Pn	00 03 40.9	-2.6
	comp=E,13nm,0.9s						
BDFB	Brasilia	23.46	70	P	P	00 04 43.9	-0.9
	comp=E,17nm,0.6s,mb4.7,baz=252,slow=11,SNR=29						
BDFB				LR	LR	00 14 51.8	
	comp=E,190nm,20.0s,MS3.5,baz=194,slow=39						
BDFB	Brasilia	23.46	70	eP	P	00 04 41.8	-3.0
	comp=E,29nm,1.1s,mb4.6						
BDFB				LR	LR	00 14 51.8	
BAO	Brasilia Array	23.48	70	P	P	00 04 40.0	-5.0
SNAA	Sanae	59.42	160	P	P	00 09 37.5	+0.3
	comp=E,2.2nm,0.5s,mb4.5,baz=250,slow=6.3,SNR=9.5						
DBIC	Dimbokro	71.58	73	P	P	00 10 56.9	+1.2
	comp=E,19nm,0.8s,mb5.1,baz=207,slow=7.0,SNR=10						
SYO	Syowa Base	73.70	159	⇓eP	P	00 11 08.3	0.0
SYO	Syowa Base	73.70	159	⇑eP	PcP	00 11 23.8	-0.1
TORD	Torodi Ar. Bea	80.34	71	P	P	00 11 46.7	+1.1
	comp=E,24nm,0.8s,mb5.2,baz=265,slow=5.2,SNR=100						
TORD	Torodi Ar. Bea	80.34	71	P	P	00 11 46.7	+1.1
MAW	Mawson	81.32	164	P	P	00 11 51.6	+0.8
	comp=E,2.5nm,0.9s,mb4.2,baz=242,slow=6.1,SNR=7.2						
BVAR	Borovoye Array	139.88	36	PKP	PKPdf	00 19 03.4	+1.0
	comp=E,1.1nm,0.8s,baz=80,slow=1.7,SNR=5.5						
ZAL	Zalesovo	146.09	26	PKPbc	PKPbc	00 19 14.9	+0.6
	comp=E,4.7nm,0.7s,baz=174,slow=3.1,SNR=26						
MKAR	Makanchi Array	149.70	38	PKPbc	PKPbc	00 19 24.8	+0.8
	comp=E,5.8nm,0.7s,baz=337,slow=2.8,SNR=42						
MKAR	Makanchi Array	149.70	38	PKPbc	PKPbc	00 19 24.8	+0.8

*ISCJB **12** 00:07:34.4±1.3, 3940N±0.10×7421E±007, h16^{km}, mb3.7/2, Error ellipse: s-maj=14.5km s-min=7.0km az=37.9*
*BJI **12** 00:07:38.2, 3965N×7443E, h16^{km}, ML3.2*
*IDC **12** 00:07:44.5±20.0, 3906N×7336E, h92^{km}±117^{km}, mb3.5/2, mb1 3.4/5, mb1mx3.1/22, mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=224.7km s-min=70.2km az=7.0*
ISC 12 00:07:34.6±1.4**, 393N**±01×**7433E**±007**, h16**^{km}**, n18, σ1§03**/21**, mb3.7**/2**, 3C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.29	81	ePG	Pg	00 07 58.4	-1.0
KSH				SG	Sg	00 08 15.7	-0.5
KSH				Smax			
	comp=N,229nm,0.2s						
KSH				Smax			
	comp=E,324nm,0.3s						
KZA	Kyzart	2.83	14	P	Pn	00 08 18.8	-0.3
	SNR=46						
AML	Almayashu	2.84	350	P	Pn	00 08 18.4	-0.8
	SNR=171						
UCH	Uchtor	2.90	3	P	Pn	00 08 20.1	0.0
	SNR=29						
ULHL	Ulahol	3.26	26	P	Pn	00 08 27.8	+2.8
	SNR=53						
AAK	Ala-Archa	3.31	2	P	Pn	00 08 28.2	+2.6
	SNR=12						
EKS2	Erkin-Say	3.36	353	P	Pn	00 08 27.4	+1.1
	SNR=16						
KBK	Karagaybulak	3.36	8	P	Pn	00 08 26.7	+0.4
	SNR=37						
CHMS	Chumysh	3.68	5	P	Pn	00 08 31.1	+0.4
	SNR=11						
TKM2	Tokmak 2	3.72	15	P	Pn	00 08 31.5	+0.2
	SNR=21						
TKM2	Tokmak 2	3.72	15	⇓Pn	Pn	00 08 31.2	-0.1
	comp=E,1.4nm,0.5s						
TKM2				⇓Sn	Sn	00 09 14.3	-0.3
	comp=E,3.5nm,0.5s						
USP	Ospenovka	3.94	2	P	Pn	00 08 39.2	+4.9
	SNR=25						
KK31	Karatay Array	4.74	324	⇑Pn	Pn	00 08 44.9	-0.5
	comp=E,0.6nm,0.2s,baz=133,slow=12,SNR=71						
KK31				⇑Pg	Pg	00 08 54.6	-11
	comp=E,3.2nm,0.3s,baz=140,slow=16,SNR=17						
KK31				⇑Sn	Sn	00 09 37.7	-2.4
	comp=E,6.8nm,0.3s,baz=135,slow=23,SNR=4.7						
KK31				⇓Lg		00 09 55.7	
	comp=E,24nm,0.6s,baz=146,slow=29,SNR=5.2						
MKAR	Makanchi Array	9.46	35	P		00 10 07.0	
	comp=E,0.2nm,0.3s,baz=220,slow=15,SNR=4.2						
BVAR	Borovoye Array	13.97	350	P	Pn	00 11 00.7	+9.0
	comp=E,0.2nm,0.3s,baz=165,slow=13,SNR=5.7						
AKTO	Aktyubinsk	15.99	319	P	Pn	00 11 19.2	+0.4
	comp=E,0.1nm,0.3s,baz=90,slow=14,SNR=3.8						
FINES	FINESS Array B	36.70	323	P	P	00 14 40.9	+0.1
	comp=E,0.4nm,0.4s,mb3.6,baz=109,slow=10,SNR=9.2						
ARCES	ARCESS Array B	39.60	335	P	P	00 15 04.9	-0.3
	comp=E,2.1nm,0.9s,mb3.9,baz=111,slow=8.9,SNR=4.1						

*ISCJB **12** 00:17:29.3±0.5, 3536S±003×7052W±005, h2^{km}, mb4.2/11, MS3.6/2, Error ellipse: s-maj=5.7km s-min=3.7km az=17.0*
*NEIC **12** 00:17:30.6, 3529S×7064W, h2^{km}, mb4.6/4, ML4.3(GUC), After GUC.*
*GUC **12** 00:17:30.6±0.7, 3529S×7064W, h2^{km}±2^{km}, MD4.1, ML4.3*
*IDC **12** 00:17:36.4±4.4, 3528S×7034W, h35^{km}±34^{km}, mb3.9/8, mb1 4.1/11, mb1mx4.0/17, mbtmp4.1/11, ML4.1/3, MS3.7/5, Ms1 3.7/5, ms1mx3.3/19, Error ellipse: s-maj=35.4km s-min=19.4km az=95.0*
ISC 12 00:17:30.6±0.5**, 3534S**±003×**7056W**±005**, h2**^{km}**, n45, σ1§19**/62**, mb4.2**/11**, MS3.6**/2**, 3C-9D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NICH	Los Niches	0.65	301	i P	Pg	00 17 42.1	-0.9
TALC	Talca	0.88	266	eP	Pg	00 17 46.7	-0.8
TALC				i S	Sg	00 17 59.0	-0.1
TALC				AML	AML	00 18 01.9	
	comp=E,10µm,0.4s						
TALC	Talca	0.88	266	eP	Pg	00 17 46.7	-0.8
TALC				i S	Sg	00 17 59.0	-0.1
CACH	El Canelo	1.22	358	⇓iP	Pg	00 17 52.0	-2.0
CACH				i S	Sg	00 18 09.5	-0.2
CHCH	Chadas Angostu	1.40	357	i P	Pn	00 17 55.2	-2.1
CHCH				i S	Sg	00 18 14.1	-1.6
TACH	Talagante	1.71	349	⇓iP	Pn	00 18 00.0	-1.5
TACH				i S	Sn	00 18 22.5	-1.4
PCH	Pirque	1.71	1	⇓iP	Pn	00 18 00.6	-0.9
PCH				i S	Sn	00 18 23.2	-0.8
CCHI	Chillan	1.77	224	⇓iP	Pn	00 18 02.0	-0.3
CCHI				AML	AML	00 18 43.6	
	comp=E,3µm,0.6s						
SAN	Santiago	1.88	357	eP	Pn	00 18 03.1	-0.7
SAN				i S	Sn	00 18 27.9	-0.2
DSCH	Colegio Aleman	1.93	360	eP	Pn	00 18 03.9	-0.6
DSCH				i S	Sn	00 18 29.5	0.0
CLCH	Cerro Calan	1.94	0	⇑iP	Pn	00 18 04.3	-0.3
CLCH				i S	Sn	00 18 29.9	+0.4
CLCH				AML	AML	00 18 40.7	
	comp=N,4µm,0.5s						
FCH	Farellones	2.02	6	⇑iP	Pn	00 18 06.1	+0.4
FCH				i S	Sn	00 18 33.0	+1.5
FCH				AML	AML	00 18 41.4	
	comp=N,2µm,0.4s						
LCCH	Las Cruces	2.04	335	⇓iP	Pn	00 18 05.0	-1.0
LCCH				i S	Sn	00 18 31.4	-0.6
PEL	Peldehue	2.19	357	⇓iP	Pn	00 18 08.3	+0.2
PEL				i S	Sn	00 18 36.8	+1.0
PEL				AML	AML	00 18 47.5	
	comp=E,8µm,0.5s						
PEL	Peldehue	2.19	357	⇓iP	Pn	00 18 08.3	+0.2
PEL				i S	Sn	00 18 36.8	+1.0
ROCH	El Roble	2.39	351	⇓iP	Pn	00 18 11.4	+0.5
ROCH				i S	Sn	00 18 42.8	+2.1
IHA	Instituto Hidr	2.48	338	⇓iP	Pn	00 18 12.2	+0.2
IHA				i S	Sn	00 18 43.4	+0.6
JACH	Jahuel	2.65	359	eP	Pn	00 18 15.4	+1.0
JACH				i S	Sn	00 18 48.7	+1.6
MDZ	Mendoza	2.83	31	eP	Pn	00 18 22.9	+6.0
MDZ				e		00 19 12.9	
CHNG	Los Chungos	3.53	347	eP	Pn	00 18 27.9	+1.3
CHNG				i S	Sn	00 19 10.6	+1.7
CHNG				AML	AML	00 19 22.1	
	comp=E,1µm,0.6s						
CFAA	Coronel Fontan	4.20	28	Pn	Pn	00 18 38.0	+2.3
	comp=E,0.9nm,0.3s,baz=215,slow=14,SNR=76						
CFAA				Pg	Pg	00 18 50.1	-0.9
	comp=E,2.0nm,0.3s,baz=205,slow=15,SNR=38						
CFAA				Sn	Sn	00 19 23.5	-1.8
	comp=E,1.0nm,0.3s,baz=285,slow=22,SNR=2.1						
CFAA				Lg		00 19 46.4	
	comp=E,1.5nm,0.3s,baz=251,slow=3.9,SNR=2.5						
CFAA	Coronel Fontan	4.20	28	Pn	Pn	00 18 38.0	+2.3
CFAA				Pg	Pg	00 18 50.1	-0.9
CFAA				Sn	Sn	00 19 23.5	-1.8
CFAA				Lg		00 19 46.4	
TLL	Tololo Astrono	5.16	358	⇑iP	Pn	00 18 51.0	+2.1
TLL				i S	Sn	00 19 51.4	+2.3
PLCA	Paso Flores	5.39	180	ePn	Pn	00 18 57.2	+5.2
	comp=E,25nm,0.8s						
LVC	Limon Verde	12.76	7	Pn	Pn	00 20 35.7	+2.6
	comp=E,0.2nm,0.3s,baz=272,slow=10,SNR=2.4						
LVC				Lg		00 24 13.5	
	comp=E,0.3nm,0.3s,baz=142,slow=17,SNR=4.2						
LVC				LR	LR	00 26 12.9	
	comp=E,291nm,18.1s,baz=310,slow=41						
CPUP	Villa Florida	14.47	55	Pn	Pn	00 20 55.6	-0.9
	comp=E,0.8nm,0.3s,baz=215,slow=12,SNR=7.8						
CPUP				Lg		00 25 14.9	
	comp=E,0.1nm,0.3s,baz=120,slow=20,SNR=2.4						
CPUP				LR	LR	00 26 59.6	
	comp=E,409nm,19.2s,baz=209,slow=39						
CPUP	Villa Florida	14.47	55	ePn	Pn	00 20 55.5	-0.9
	comp=E,19nm,0.8s						
CPUP				Lg		00 25 14.9	
CPUP				LR	LR	00 26 59.6	
USHA	Ushuaia	19.55	176	LR	LR	00 30 37.6	
	comp=E,173nm,18.7s,baz=137,slow=40						
SIV	San Ignacio	21.05	26	P	P	00 22 15.4	-0.6
	comp=E,8.3nm,0.9s,mb4.0						
NNA	Nana	23.93	345	LR	LR	00 30 53.9	
	comp=E,110nm,18.2s,MS3.4,baz=130,slow=33						
SAML	Samuel	27.12	16	eP	P	00 23 13.5	-1.5
	comp=E,7.4nm,1.3s,mb4.1						
BDFB	Brasilia	28.14	52	P	P	00 23 23.9	-0.2
	comp=E,6.2nm,0.8s,mb4.3,baz=245,slow=4.5,SNR=6.1						
BDFB				LR	LR	00 36 03.6	
	comp=E,249nm,19.3s,MS3.8,baz=204,slow=40						
BDFB	Brasilia	28.14	52	eP	P	00 23 23.7	-0.4
	comp=E,9.6nm,0.8s,mb4.5						
BDFB				LR	LR	00 36 03.6	
SNAA	Sanae	49.89	157	P	P	00 26 27.2	+1.7
	comp=E,2.6nm,0.9s,mb4.2,baz=308,slow=10,SNR=6.3						
QSPA	South Pole Qui	54.90	180	eP	P	00 27 04.1	+1.3
	comp=E,5.2nm,0.8s,mb4.6						
RKT	Rikitea	56.65	264	eLR	LR	00 27 01.3	
	comp=E,212nm,30.8s						
VNDA	Vanda	63.03	191	P	P	00 28 00.3	+1.1
	comp=E,0.7nm,0.9s,mb3.8,baz=333,slow=2.2,SNR=3.7						
MAW	Mawson	71.55	163	P	P	00 28 52.3	-0.9
	comp=E,2.1nm,0.9s,mb4.1,baz=213,slow=10,SNR=6.1						
WVT	Waverly	72.90	345	eP	P	00 28 59.8	-1.5
	comp=E,6.9nm,0.9s,mb4.6						
TORD	Torodi Ar. Bea	83.53	69	P	P	00 29 59.5	-0.6
	comp=E,1.7nm,0.9s,mb4.2,baz=262,slow=4.4,SNR=7.9						
PDAR	Pinedale Array	85.51	332	P	P	00 30 10.4	+0.3
	comp=E,0.9nm,0.7s,mb4.1,baz=140,slow=4.1,SNR=4.9						
NVAR	Mina Array Bea	85.68	324	P	P	00 30 12.1	+1.0
	comp=E,0.9nm,0.8s,mb4.0,baz=146,slow=5.5,SNR=5.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	85.68	324	P	P	00 30 12.1	+1.0
CHKZ	Chkalovo	147.32	44	ePKPbc	PKPbc	00 37 15.8	-0.1
BVAR	Borovoye Array	147.39	45	PKPbc	PKPbc	00 37 15.4	-0.7
	comp=E,1.5nm,0.7s,baz=285,slow=2.3,SNR=8.7						

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*NEIC **12** 00:25:15.7, 3525S×7077W, h0km, ML3.4(GUC), After GUC.*

GUC 12 00:25:15.7±0.6**, 3525S×7077W, h0**km±2km**, MD3.5, ML3.4, 4C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFDO	San Fernando	0.67	342	i P	Pg	00 25 29.0	+0.5
SFDO				i S	Sg	00 25 39.4	+2.2
TACH	Talagante	1.60	355	⇑iP	Pn	00 25 44.5	-0.7
TACH				i S	Sn	00 26 06.9	+0.3
PCH	Pirque	1.64	7	⇑iP	Pn	00 25 45.2	-0.6
PCH				i S	Sn	00 26 08.2	+0.6
LCCH	Las Cruces	1.89	339	⇑iP	Pn	00 25 49.4	+0.1
LCCH				i S	Sn	00 26 14.9	+1.1
FCH	Farellones	1.96	12	⇓eP	Pn	00 25 51.0	+0.8
FCH				i S	Sn	00 26 17.6	+2.2
PEL	Peldehue	2.10	2	eP	Pn	00 25 52.9	+0.7
PEL				eS	Sn	00 26 20.9	+1.9
PEL				AML	AML	00 26 27.4	
	comp=N,359nm,0.3s						
PEL	Peldehue	2.10	2	eP	Pn	00 25 52.9	+0.7
PEL				eS	Sn	00 26 20.9	+1.9
JACH	Jahuel	2.57	3	⇑iP	Pn	00 25 60.0	+1.4
JACH				i S	Sn	00 26 33.7	+3.2

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*IDC **12** 00:28:26.9±8.6, 069S×9724E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.7/18, mbtmp3.9/6, ML3.2/1, Error ellipse: s-maj=212.3km s-min=42.6km az=141.0*
*ISCJB **12** 00:28:29.4±4.7, 01S±05×971E±05, h4km±41km, mb4.1/8, Error ellipse: s-maj=115.8km s-min=14.6km az=97.4*
*NEIC **12** 00:28:33.3±4.4, 043S×9741E, h35km, mb4.2/2, Error ellipse: s-maj=109.0km s-min=17.9km az=145.0*

ISC 12 00:28:31.5±5.9**, 02S**±05×**972E**±05**, h11**km±52km**, n11, σ0s80**/12**, mb4.1**/8**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.44	30	Pn	Pn	00 29 25.3	+0.3
	1.6nm,0.3s,baz=174,slow=15,SNR=12						
PSI				Sn	Sn	00 30 05.4	-0.3
	2.6nm,0.3s,baz=208,slow=22,SNR=4.4						
KULM	Kulim	6.45	32	ePn	Pn	00 30 05.0	-1.3
QIZ	Qiongzhong	22.78	32	eP	P	00 33 34.7	+0.8
	14nm,1.4s,mb4.2						
SONM	Songino Array	48.51	8	P	P	00 37 15.6	+1.2
	0.9nm,0.7s,mb3.9,baz=192,slow=8.8,SNR=6.1						
MKAR	Makanchi Array	48.61	346	P	P	00 37 15.9	+0.8
	1.8nm,0.5s,mb4.3,baz=164,slow=7.8,SNR=10						
ZAL	Zalesovo	54.94	351	P	P	00 38 03.2	+0.9
	7.2nm,0.4s,mb5.1,baz=315,slow=3.8,SNR=17						
BRTR	Keskin Array B	70.08	313	P	P	00 39 43.1	-0.4
	0.5nm,0.6s,mb3.6,baz=132,slow=7.4,SNR=4.3						
AKASG	Malin Array Be	76.39	323	P	P	00 40 20.0	-0.8
	0.3nm,0.5s,mb3.5,baz=95,slow=4.3,SNR=7.2						
AKASG	Malin Array Be	76.39	323	P	P	00 40 20.0	-0.8
FINES	FINESS Array B	81.25	333	P	P	00 40 47.1	-0.4
	1.0nm,0.8s,mb3.8,baz=97,slow=7.5,SNR=10						
KAF	Kangasniemi	81.34	333	ep	P	00 40 47.2	-0.8
	1.4nm,0.5s,mb4.2						

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*STR **12** 00:30:04.1±0.3, 4924N×044W, h5km±1km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **12** 00:30:04.7±0.1, 4929N×020W, h5km, ML3.3/21, Error ellipse: s-maj=1.6km s-min=1.1km az=167.0*
*NEIC **12** 00:30:05.2, 4927N×020W, h8km, ML3.2(STR), ML3.2(LDG), After LDG.*
*MDD **12** 00:30:06.2±4.5, 4906N×065W, h0km, mb3.4/5, Error ellipse: s-maj=48.3km s-min=39.2km az=97.0*

LDG 12 00:30:05.2±0.2**, 4927N×020W, h8**km**, Md3.2**/3**, Ml3.2**/25**, Error ellipse: s-maj=3.4km s-min=2.1km az=167.0, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FLN	La Foliniere	0.54	200	ePn	Pg	00 30 17.9	+2.3
FLN				eSg	Sg	00 30 23.1	+0.5
	307nm,0.2s						
FLN	La Foliniere	0.54	200	ePg	Pg	00 30 16.4	+0.8
FLN				ePn	Pg	00 30 17.9	+2.3
FLN				eSg	Sg	00 30 23.1	+0.5
FLN	La Foliniere	0.54	200	ePn	Pg	00 30 17.9	+2.3
FLN				eSg	Sg	00 30 23.1	+0.5
	154nm,0.2s						
LDF	La Druitiere	0.68	175	ePn	Pn	00 30 19.9	-1.2
LDF				eSg	Sg	00 30 27.6	+0.6
	173nm,0.2s						
LDF				eSn	Sg	00 30 30.2	+3.2
LDF	La Druitiere	0.68	175	ePg	Pg	00 30 18.9	+0.7
LDF				ePn	Pn	00 30 19.9	-1.2
LDF				eSg	Sg	00 30 27.6	+0.6
LDF				eSn	Sg	00 30 30.2	+3.2
LDF	La Druitiere	0.68	175	ePn	Pn	00 30 19.9	-1.2
LDF				eSg	Sg	00 30 27.6	+0.6
	86nm,0.2s						
LDF				eSn	Sg	00 30 30.2	+3.2
GRR	Gorron	0.98	206	ePg	Pg	00 30 23.6	-0.4
GRR				eSg	Sg	00 30 36.6	-0.2
	346nm,0.2s						
GRR				eSn	Sn	00 30 38.0	-1.3
GRR	Gorron	0.98	206	ePg	Pg	00 30 23.6	-0.4
GRR				eSg	Sg	00 30 36.6	-0.2
	173nm,0.2s						
GRR				eSn	Sn	00 30 38.0	-1.3
SGMF	Saint Gilles	1.86	238	ePg	Pg	00 30 40.3	-0.5
SGMF				eSg	Sg	00 31 02.7	-2.2
	27nm,0.2s						
SGMF	Saint Gilles	1.86	238	ePn	Pn	00 30 35.5	-1.8
SGMF				ePg	Pg	00 30 40.3	-0.5
SGMF				eSg	Sg	00 31 02.7	-2.2
SGMF	Saint Gilles	1.86	238	ePg	Pg	00 30 40.3	-0.5
SGMF				eSg	Sg	00 31 02.7	-2.2
	14nm,0.2s						
ROSF	Rostrenen	2.23	247	ePg	Pg	00 30 45.4	-2.6
ROSF				eSg	Sg	00 31 15.3	-1.6
	20nm,0.2s						
ROSF	Rostrenen	2.23	247	ePn	Pn	00 30 40.5	-2.0
ROSF				ePg	Pg	00 30 45.4	-2.6
ROSF				eSg	Sg	00 31 15.3	-1.6
ROSF	Rostrenen	2.23	247	ePg	Pg	00 30 45.4	-2.6
ROSF				eSg	Sg	00 31 15.3	-1.6
	9.8nm,0.2s						
QUIF	Quistinic	2.39	237	ePg	Pg	00 30 50.7	-0.2
QUIF				eSg	Sg	00 31 18.6	-3.2
	21nm,0.3s						
QUIF	Quistinic	2.39	237	ePn	Pn	00 30 42.5	-2.1
QUIF				ePg	Pg	00 30 50.7	-0.2
QUIF				eSg	Sg	00 31 18.6	-3.2
QUIF	Quistinic	2.39	237	ePg	Pg	00 30 50.7	-0.2
QUIF				eSg	Sg	00 31 18.6	-3.2
	10nm,0.3s						
MFF	Saint Martin d	2.67	179	ePg	Pg	00 30 54.0	-2.3
MFF				eSn	Sn	00 31 17.9	-3.0
MFF				eSg	Sg	00 31 28.7	-2.2
	19nm,0.3s						
MFF	Saint Martin d	2.67	179	ePn	Pn	00 30 47.1	-1.3
MFF				ePg	Pg	00 30 54.0	-2.3
MFF				eSn	Sn	00 31 17.9	-3.0
MFF				eSg	Sg	00 31 28.7	-2.2
MFF	Saint Martin d	2.67	179	ePg	Pg	00 30 54.0	-2.3
MFF				eSn	Sn	00 31 17.9	-3.0
MFF				eSg	Sg	00 31 28.7	-2.2
	9.4nm,0.3s						
HYF	Humbligny	2.76	135	eSn	Sn	00 31 20.1	-3.1
HYF				eSg	Sg	00 31 32.3	-1.5
BAIF	Baives	2.97	73	ePg	Pg	00 31 00.0	-2.2
BAIF				eSg	Sg	00 31 38.1	-2.6
	12nm,0.2s						
BAIF	Baives	2.97	73	ePn	Pn	00 30 51.6	-1.1
BAIF				ePg	Pg	00 31 00.0	-2.2
BAIF				eSg	Sg	00 31 38.1	-2.6
BAIF	Baives	2.97	73	ePg	Pg	00 31 00.0	-2.2
BAIF				eSg	Sg	00 31 38.1	-2.6
	6.0nm,0.2s						
CHIF	Chize	3.14	183	Pn	Pn	00 30 51.7	-3.2
CHIF				Sg	Sg	00 31 45.8	-0.2
SSF	Saint Saulge	3.32	130	ePn	Pn	00 30 56.2	-1.2
SSF				eSn	Sn	00 31 33.3	-3.8
SSF				eSg	Sg	00 31 49.2	-2.7
	14nm,0.2s						
SSF	Saint Saulge	3.32	130	ePn	Pn	00 30 56.2	-1.2
SSF				eSn	Sn	00 31 33.3	-3.8
SSF				eSg	Sg	00 31 49.2	-2.7
	7.2nm,0.2s						
GIVF	Givet	3.37	74	eSg	Sg	00 31 50.0	-3.4
	15nm,0.4s						
GIVF	Givet	3.37	74	eSg	Sg	00 31 50.0	-3.4
	7.7nm,0.4s						
LOR	Lormes	3.37	125	ePg	Pg	00 31 11.5	+1.7
LOR				eSn	Sn	00 31 34.1	-4.2
LOR				eSg	Sg	00 31 50.6	-2.9
	23nm,0.2s						
LOR	Lormes	3.37	125	ePn	Pn	00 30 56.8	-1.3
LOR				ePg	Pg	00 31 11.5	+1.7
LOR				eSn	Sn	00 31 34.1	-4.2
LOR				eSg	Sg	00 31 50.6	-2.9
LOR	Lormes	3.37	125	ePn	Pn	00 30 56.8	-1.3
LOR				eSn	Sn	00 31 34.1	-4.2
LOR				eSg	Sg	00 31 50.6	-2.9
	11nm,0.2s						
TCF	Toulx Ste Croi	3.40	150	ePn	Pn	00 30 56.4	-2.1
TCF				eSn	Sn	00 31 35.2	-3.7
TCF				eSg	Sg	00 31 51.3	-3.0
	8.0nm,0.2s						
TCF	Toulx Ste Croi	3.40	150	ePn	Pn	00 30 56.4	-2.1
TCF				eSn	Sn	00 31 35.2	-3.7
TCF				eSg	Sg	00 31 51.3	-3.0
	4.0nm,0.2s						
BGF	Bois d'Agland	3.40	142	ePg	Pg	00 31 05.1	-5.2
BGF				eSg	Sg	00 31 52.4	-2.0
	46nm,0.3s						
BGF	Bois d'Agland	3.40	142	ePn	Pn	00 30 56.8	-1.7
BGF				ePg	Pg	00 31 05.1	-5.2
BGF				eSg	Sg	00 31 52.4	-2.0
BGF	Bois d'Agland	3.40	142	ePn	Pn	00 30 56.8	-1.7
BGF				eSg	Sg	00 31 52.4	-2.0
	23nm,0.3s						
AVF	Avril sur Loir	3.44	135	ePg	Pg	00 31 08.6	-2.5
AVF				eSn	Sn	00 31 35.9	-4.1
AVF				eSg	Sg	00 31 53.5	-2.2
	7.9nm,0.2s						
AVF	Avril sur Loir	3.44	135	ePn	Pn	00 30 57.1	-2.0
AVF				ePg	Pg	00 31 08.6	-2.5
AVF				eSn	Sn	00 31 35.9	-4.1
AVF				eSg	Sg	00 31 53.5	-2.2
AVF	Avril sur Loir	3.44	135	ePg	Pg	00 31 08.6	-2.5
AVF				eSn	Sn	00 31 35.9	-4.1
AVF				eSg	Sg	00 31 53.5	-2.2
	4.0nm,0.2s						
MEZF	Maizieres J'vi	3.55	100	ePg	Pg	00 31 10.4	-2.9
MEZF				eSg	Sg	00 31 55.8	-3.5
	11nm,0.3s						
MEZF	Maizieres J'vi	3.55	100	ePn	Pn	00 30 59.4	-1.2
MEZF				ePg	Pg	00 31 10.4	-2.9
MEZF				eSg	Sg	00 31 55.8	-3.5
MEZF	Maizieres J'vi	3.55	100	ePg	Pg	00 31 10.4	-2.9
MEZF				eSg	Sg	00 31 55.8	-3.5
	5.7nm,0.3s						
SMF	Signal de Mont	3.78	132	ePg	Pg	00 31 16.3	-1.3
SMF				eSn	Sn	00 31 44.0	-4.3
SMF				eSg	Sg	00 32 03.0	-3.5
	6.7nm,0.2s						
SMF	Signal de Mont	3.78	132	ePn	Pn	00 31 01.8	-1.9
SMF				ePg	Pg	00 31 16.3	-1.3
SMF				eSn	Sn	00 31 44.0	-4.3
SMF				eSg	Sg	00 32 03.0	-3.5
SMF	Signal de Mont	3.78	132	ePg	Pg	00 31 16.3	-1.3
SMF				eSn	Sn	00 31 44.0	-4.3
SMF				eSg	Sg	00 32 03.0	-3.5
	3.3nm,0.2s						
AGO	Saint Agoulin	3.93	144	Pn	Pn	00 31 04.3	-1.5
AGO				Sg	Sg	00 32 14.6	+3.3
RJF	Les Rejaudoux	4.13	163	ePg	Pg	00 31 21.3	-3.1
RJF				eSn	Sn	00 31 50.4	-6.7
RJF				eSg	Sg	00 32 14.8	-3.2
	9.2nm,0.3s						
RJF	Les Rejaudoux	4.13	163	ePn	Pn	00 31 06.0	-2.6
RJF				ePg	Pg	00 31 21.3	-3.1
RJF				eSn	Sn	00 31 50.4	-6.7
RJF				eSg	Sg	00 32 14.8	-3.2
RJF	Les Rejaudoux	4.13	163	ePg	Pg	00 31 21.3	-3.1
RJF				eSn	Sn	00 31 50.4	-6.7
RJF				eSg	Sg	00 32 14.8	-3.2
	4.6nm,0.3s						
PYM	Petit Puy Mans	4.14	147	Pn	Pn	00 31 07.0	-1.6
PLDF	La Plantade	4.19	140	Pn	Pn	00 31 08.0	-1.4
LFF	La Frestale	4.38	171	eSn	Sn	00 31 58.4	-4.7
LFF				eSg	Sg	00 32 21.9	-3.9
	8.2nm,0.2s						
LFF	La Frestale	4.38	171	eSn	Sn	00 31 58.4	-4.7
LFF				eSg	Sg	00 32 21.9	-3.9
	4.1nm,0.2s						
HAU	Haudompre	4.52	104	eSg	Sg	00 32 24.8	-5.7
	13nm,0.3s						
HAU	Haudompre	4.52	104	eSg	Sg	00 32 24.8	-5.7
	6.4nm,0.3s						
CAF	Calviac	4.61	160	ePn	Pn	00 31 12.8	-2.4
CAF				eSn	Sn	00 32 05.5	-3.4
CAF				eSg	Sg	00 32 29.8	-3.5
	6.5nm,0.3s						
CAF	Calviac	4.61	160	ePn	Pn	00 31 12.8	-2.4
CAF				eSn	Sn	00 32 05.5	-3.4
CAF				eSg	Sg	00 32 29.8	-3.5
	3.2nm,0.3s						
LBL	Lubilhac	4.67	149	Pn	Pn	00 31 14.7	-1.3
HINF	Hinteralfeld	4.91	105	ePn	Pn	00 31 17.9	-1.3
HINF				eSg	Sg	00 32 40.8	-2.0
	7.3nm,0.3s						
HINF	Hinteralfeld	4.91	105	ePn	Pn	00 31 17.9	-1.3
HINF				eSg	Sg	00 32 40.8	-2.0
	3.7nm,0.3s						
CABF	La Chapelle	4.99	120	ePg	Pg	00 31 37.8	-3.1
CABF				eSn	Sn	00 32 12.2	-6.1
CABF				eSg	Sg	00 32 40.5	-5.0
	3.9nm,0.3s						
CABF	La Chapelle	4.99	120	ePn	Pn	00 31 18.2	-2.2
CABF				ePg	Pg	00 31 37.8	-3.1
CABF				eSn	Sn	00 32 12.2	-6.1
CABF				eSg	Sg	00 32 40.5	-5.0
CABF	La Chapelle	4.99	120	ePg	Pg	00 31 37.8	-3.1
CABF				eSn	Sn	00 32 12.2	-6.1
CABF				eSg	Sg	00 32 40.5	-5.0
	2.0nm,0.3s						
CDF	Champ du Feu	5.01	97	ePn	Pn	00 31 18.0	-2.7
CDF				eSg	Sg	00 32 41.5	-4.7
	11nm,0.6s						
CDF	Champ du Feu	5.01	97	ePn	Pn	00 31 18.0	-2.7
CDF				eSg	Sg	00 32 41.5	-4.7
	5.6nm,0.6s						
ORIF	Oris-en-Rattie	6.01	134	ePn	Pn	00 31 33.6	-0.8
LPL	La Plagne	6.02	126	ePn	Pn	00 31 34.9	+0.4
EALK	Alkurruntz	6.12	189	P	Pn	00 31 32.8	-3.0
	0.3nm,0.2s,SNR=4.0						
EALK				S	Sn	00 32 36.5	-10
	13nm,5.4s,SNR=7.9						
EALK	Alkurruntz	6.12	189	P	Pn	00 31 32.8	-3.1
EALK				S	Sn	00 32 36.5	-10
MTLF	Montolieu	6.16	163	ePn	Pn	00 31 33.7	-2.7
MTLF				eSn	Sn	00 32 38.1	-9.0
	1.4nm,0.2s						
ELIZ	Elizondo	6.17	189	P	Pn	00 31 34.0	-2.6
	0.3nm,0.2s,SNR=6.7						
ELIZ				S	Sn	00 32 37.4	-10
	1.5nm,0.2s,SNR=7.9						
ELIZ	Elizondo	6.17	189	P	Pn	00 31 34.0	-2.7
ELIZ				S	Sn	00 32 37.4	-10
EPF	Esparros	6.25	176	ePn	Pn	00 31 34.3	-3.4
EPF				eSn	Sn	00 32 40.3	-9.0
	1.5nm,0.2s						
ELAN	Lanestosa	6.44	202	P	Pn	00 31 37.1	-3.2
	0.2nm,0.1s,SNR=5.7						
ELAN				S	Sn	00 32 44.5	-9.4
	0.4nm,0.2s,SNR=7.9						
ELAN	Lanestosa	6.44	202	P	Pn	00 31 37.1	-3.2
ELAN				S	Sn	00 32 44.5	-9.4
EBIE	Bielsa	6.59	178	P	Pn	00 31 40.9	-1.4
	0.3nm,0.2s,SNR=7.9						
EBIE				S	Sn	00 32 51.4	-6.2
	0.1nm,0.2s,SNR=7.9						
EBIE	Bielsa	6.59	178	P	Pn	00 31 40.9	-1.4
EBIE				S	Sn	00 32 51.4	-6.2
EARI	Arriondas	6.90	212	P	Pn	00 31 42.9	-3.7
	0.1nm,0.2s,SNR=7.9						
EARI				S	Sn	00 32 54.0	-11
	0.2nm,0.1s,SNR=7.9						

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*IDC **12** 00:48:36.5±1.3, 531N×9444E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/21, mbtmp4.0/9, Error ellipse: s-maj=59.2km s-min=24.8km az=56.0*
*ISCJB **12** 00:48:39.8±0.6, 54N±01×9444E±007, h33km, mb4.2/13, Error ellipse: s-maj=17.6km s-min=7.6km az=53.4*
*NEIC **12** 00:48:41.2±0.5, 535N×9442E, h30km, mb4.6/4, Error ellipse: s-maj=15.6km s-min=7.3km az=206.0*

ISC 12 00:48:42.3±0.6**, 54N**±01×**9442E**±007**, h35**km**, n20, σ0s90**/21**, mb4.2**/13**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.17	120	Pn	Pn	00 49 59.8	+2.6
	2.6nm,0.3s,baz=297,slow=13,SNR=11						
PSI				Sn	Sn	00 50 59.3	+3.7
	2.3nm,0.3s,baz=212,slow=24,SNR=8.9						
KULM	Kulim	6.20	91	ePn	Pn	00 50 11.2	-0.1
KULM				eSn	Sn	00 51 19.5	-1.4
PALK	Pallekele	13.76	279	ePn	Pn	00 51 53.3	-1.5
	43nm,1.3s						
MBWA	Marble Bar	36.23	138	P	P	00 55 41.6	-0.1
	38nm,1.5s,mb5.1						
MKAR	Makanchi Array	42.56	348	P	P	00 56 35.0	+0.4
	3.3nm,0.6s,mb4.3,baz=168,slow=7.4,SNR=23						
SONM	Songino Array	43.52	12	P	P	00 56 42.0	-0.4
	1.5nm,0.7s,mb3.8,baz=192,slow=7.9,SNR=12						
WRAB	Tennant Creek	46.63	124	eP	P	00 57 05.9	-1.1
	6.7nm,0.8s,mb4.6						
KURK	Kurchatov	47.08	346	eP	P	00 57 11.1	+0.6
	6.1nm,1.0s,mb4.5						
ASAR	Alice Springs	48.14	128	P	P	00 57 18.6	-0.1
	0.8nm,0.5s,mb4.0,baz=300,slow=8.0,SNR=7.9						
ZAL	Zalesovo	49.03	352	P	P	00 57 26.0	+0.4
	1.6nm,0.3s,mb4.5,baz=289,slow=6.5,SNR=8.7						
ZAL	Zalesovo	49.03	352	P	P	00 57 26.0	+0.4
BVAR	Borovoye Array	51.42	342	P	P	00 57 44.1	+0.3
	0.6nm,0.3s,mb4.0,baz=134,slow=8.5,SNR=12						
CHKZ	Chkalovo	51.91	342	eP	P	00 57 47.8	+0.4
	4.6nm,0.8s,mb4.5						
AKTK	Aktyubinsk	54.26	332	P	P	00 58 05.0	+0.3
AKTO	Aktyubinsk	54.26	332	P	P	00 58 05.0	+0.3
	0.5nm,0.4s,mb3.8,baz=118,slow=12,SNR=3.9						
FINES	FINESS Array B	75.03	332	P	P	01 00 19.8	-0.4
	0.5nm,0.6s,mb3.6,baz=122,slow=6.9,SNR=5.8						
FINES	FINESS Array B	75.03	332	P	P	01 00 19.8	-0.4
ARCES	ARCESS Array B	77.69	340	P	P	01 00 34.5	-0.7
	1.6nm,0.8s,mb4.0,baz=92,slow=8.5,SNR=5.6						
GERES	GERESS Array B	79.86	319	P	P	01 00 48.0	+0.8
	0.7nm,0.7s,mb3.7,baz=111,slow=6.0,SNR=7.7						
ULM	Lac du Bonnet	123.88	8	PKP	PKPdf	01 07 35.1	-1.4
	0.7nm,0.5s,baz=173,slow=8.1,SNR=3.0						

NNC 12 01:01:20.0±17.0**, 3788N×7159E, h222**km±205km**, mb1.9, mpv2.9, 2C-3D, Error ellipse: s-maj=215.1km s-min=101.8km az=31.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.28	351	⇓P	Pn	01 02 39.3	+0.8
	2.4nm,0.5s,baz=174,slow=13,SNR=27						
KK31				⇓S	S	01 03 41.5	+0.8
	13nm,0.6s,baz=175,slow=24,SNR=5.1						
TKM2	Tokmak 2	5.89	30	⇑P	Pn	01 02 44.1	-2.1
	0.4nm,0.8s						
AB31	Akbulak array	14.14	327	⇑P	Pn	01 04 35.3	+4.6
	0.2nm,0.4s,baz=144,slow=12,SNR=9.5						
AB31				⇓S	S	01 07 03.7	-4.0
	0.5nm,0.6s,baz=154,slow=23,SNR=5.4						

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*ISCJB **12** 01:14:03.5±0.6, 6348S±009×1593W±02, h10km, mb4.6/6, MS4.4/12, Error ellipse: s-maj=15.8km s-min=12.3km az=62.8*
*IDC **12** 01:14:05.0±1.0, 6363S×15927W, h0km, mb4.4/3, mb1 4.3/4, mb1mx4.1/8, mbtmp4.1/4, ML3.4/1, MS4.4/13, Ms1 4.4/13, ms1mx4.3/15, Error ellipse: s-maj=51.3km s-min=25.6km az=18.0*
*HRVD **12** 01:14:05.9±0.3, 6267S×15909W, h16km±1km, MW5.2/69, Centroid moment Tensor Solution. LP body waves: s37,c44;Mantle waves: s69,c99; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.42±.22; $M_{\theta\theta}$5.19±.23; $M_{\phi\phi}$-3.77±.16; $M_{r\theta}$-3.74±.75; $M_{\theta\phi}$3.75±.18; $M_{\phi r}$1.33±.55; Best double couple: $M_0$7.10900×10^{16} NP1:ϕ_s206.00000°, δ54.00000°, λ-172.00000°. NP2: ϕ_s111.00000°, δ84.00000°, λ-36.00000°. Principal axes: T 7.6460, Plg20.0000°, Azm164.0000°; N -1.0750, Plg53.0000°, Azm283.0000°; P -6.5710, Plg29.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **12** 01:14:05.9±0.5, 6357S×15926W, h10km, mb4.8/5 Error ellipse: s-maj=19.8km s-min=15.5km az=178.0*

ISC 12 01:14:05.2±0.6**, 635S**±01×**1592W**±02**, h10**km**, n32, σ1s27**/13**, mb4.6**/6**, MS4.4**/12**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBA	Scott Base	17.77	203	eP	Pn	01 18 12.5	0.0
	30nm,1.3s						
VNDA	Vanda	18.50	206	P	Pn	01 18 19.7	-1.8
	0.1nm,0.3s,baz=72,slow=16,SNR=17						
VNDA				LR	LR	01 24 22.4	
	comp=Z,901nm,18.3s,baz=63,slow=34						
RPZ	Rata Peaks	26.14	305	LR	LR	01 27 21.2	
	comp=Z,653nm,18.6s,MS4.2,baz=141,slow=30						
URZ	Urewera	29.04	319	LR	LR	01 28 43.8	
	comp=Z,917nm,21.6s,MS4.4,baz=179,slow=30						
TBI	Tubuai	40.69	14	eS	S	01 27 53.6	-2.2
	134nm,31.8s						
TBI				eLQ		01 30 53.6	
	368nm,34.6s						
TBI				eLR	LR	01 32 19.3	
	1μm,27.8s,baz=186						
RKT	Rikitea	43.51	33	eLQ		01 31 49.8	
	2μm,29.2s						
RKT				eLR	LR	01 33 53.5	
	424nm,27.5s,baz=190						
MAW	Mawson	45.72	201	LR	LR	01 39 57.3	
	comp=Z,275nm,21.6s,MS4.2,baz=334,slow=34						
PPT	Papeete	46.39	13	eS	S	01 29 16.2	-3.1
	168nm,25.8s						
PPT				eLQ		01 32 44.4	
	2μm,30.8s						
PPT				eLR	LR	01 35 07.9	
	1μm,25.0s,baz=192						
PPT	Papeete	46.39	13	LR	LR	01 36 30.8	
	comp=Z,374nm,19.0s,MS4.4,baz=187,slow=29						
DZM	Mont Dzumac	47.38	315	LR	LR	01 38 34.9	
	comp=Z,605nm,21.4s,MS4.5,baz=199,slow=31						
STKA	Stephens Creek	48.32	282	P	P	01 22 48.1	+1.4
	5.3nm,1.0s,mb4.5,baz=120,slow=7.7,SNR=5.5						
STKA				LR	LR	01 41 23.0	
	comp=Z,354nm,19.4s,MS4.4,baz=172,slow=34						
TAOE	Nuku Hiva Isla	56.26	23	eLR	LR	01 39 34.5	
	4μm,33.2s						
NWAO	Narrogin (SRO)	58.28	259	LR	LR	01 42 55.9	
	comp=Z,542nm,20.6s,MS4.7,baz=33,slow=30						
ASAR	Alice Springs	58.80	280	P	P	01 24 04.8	+1.2
	3.8nm,0.9s,mb4.4,baz=154,slow=7.6,SNR=4.6						
ASAR				LR	LR	01 45 39.7	
	comp=Z,445nm,19.9s,MS4.6,baz=158,slow=32						
AS31	Alice Springs	58.80	280	eP	P	01 24 04.0	+0.3
WRAB	Tennant Creek	61.88	282	eP	P	01 24 23.6	-1.1
	4.8nm,0.8s,mb4.7						
LVC	Limon Verde	70.14	101	eP	P	01 25 18.6	+0.8
CPUP	Villa Florida	71.84	112	P	P	01 25 29.1	+1.0
	3.3nm,0.9s,mb4.3,baz=219,slow=6.5,SNR=5.5						
CPUP				LR	LR	01 53 00.6	
	comp=Z,240nm,19.0s,MS4.5,baz=190,slow=32						
CPUP	Villa Florida	71.84	112	eP	P	01 25 28.6	+0.5
	36nm,1.3s,mb5.2						
CPUP				LR	LR	01 53 00.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	75.94	89	P	P	01 25 53.6	+1.4
	14nm,0.6s,mb5.1						
SAML	Samuel	84.73	99	eP	P	01 26 37.8	-1.6
	3.1nm,1.1s,mb4.3						
BDFB	Brasilia	85.21	116	LR	LR	02 01 51.6	
	comp=Z,373nm,19.4s,MS4.8,baz=202,slow=34						
ROSC	El Rosal	92.02	83	LR	LR	02 01 01.4	
	comp=Z,126nm,19.4s,MS4.4,baz=225,slow=31						
CMIG	Matias Romero	94.32	60	LR	LR	02 00 60.0	
	comp=Z,110nm,18.4s,MS4.3,baz=197,slow=30						
MKAR	Makanchi Array	142.80	273	PKP	PKPdf	01 33 38.4	-0.4
	0.6nm,0.9s,baz=110,slow=6.6,SNR=3.6						
MDT	Midelt	145.39	140	PKPbc	PKPbc	01 33 45.4	+2.2
	1.3nm,0.9s,baz=279,slow=10.0,SNR=3.3						
KURK	Kurchatov	147.33	275	ePKPdf	PKPdf	01 33 45.8	-0.8
ESDC	Sonseca Array	151.95	137	PKPbc	PKPbc	01 34 01.2	+0.8
	0.8nm,0.8s,baz=215,slow=2.4,SNR=4.5						
ESDC				PKPab	PKPab	01 34 08.2	-1.5
	1.2nm,0.8s,baz=231,slow=1.6,SNR=6.2						
BVAR	Borovoye Array	152.62	271	PKPbc	PKPbc	01 34 00.2	-1.7
	1.0nm,0.8s,baz=24,slow=4.0,SNR=5.1						
BVAR				PKPab	PKPab	01 34 12.1	-0.3
	2.3nm,1.0s,baz=142,slow=7.4,SNR=7.8						
CHKZ	Chkalovo	152.95	272	ePKPbc	PKPbc	01 34 00.3	-2.4
ZRNK	Zerenda	153.19	270	ePKPdf	PKPdf	01 33 55.4	-0.3
BRTR	Keskin Array B	154.97	204	PKPab	PKPab	01 34 23.9	+1.5
	0.8nm,1.0s,baz=205,slow=3.0,SNR=2.8						

*ISCJB **12** 01:37:34.0±0.4, 63.15N±0.04×143.28W±0.06, h5km, mb3.7/2, MS3.8/2, Error ellipse: s-maj=6.0km s-min=3.4km az=155.6*
*NEIC **12** 01:37:35.9, 63.11N×143.55W, h5km, ML3.9(PGC), ML3.6(AEIC), ML4.1(PMR), After AEIC.*
NEIC Felt at Tok.
*IDC **12** 01:37:35.9±2.0, 63.10N×143.39W, h0km, mb3.8/2, mb1 4.1/5, mb1mx3.7/22, mbtmp3.8/5, ML3.5/3, MS3.7/2, Ms1 3.7/2, ms1mx2.7/36, Error ellipse: s-maj=30.6km s-min=18.3km az=73.0*
*PGC **12** 01:37:38.1, 63.09N×143.24W, h5km, ML3.9/3, 217km southwest of Dawson, Yt Eastern Alaska.*
ISC 12 01:37:35.5±0.3, 63.07N±0.03×143.26W±0.05, h5km, n35, σ1s25/55, mb3.7/2, MS3.8/2, Central Alaska

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MENT	Mentasta	0.25	239	P	Pg	01 37 40.1	-0.3
MENT				S	Sg	01 37 42.7	-1.0
DAWY	Dawson	2.00	58	Pn	Pn	01 38 11.3	+1.4
DAWY				Pg	Pg	01 38 13.5	-0.4
DAWY				Sg	Sg	01 38 39.9	+0.1
DAWY				Trac		01 38 41.3	
	comp=Z,429nm,0.1s						
MCK	McKinley	2.64	287	P	Pn	01 38 18.2	-0.6
COLA	College	2.72	314	P	Pn	01 38 17.8	-2.0
EYAK	Cordova Ski Ar	2.79	206	P	Pn	01 38 22.1	+1.2
GHO	Glory Hole Cre	2.94	246	P	Pn	01 38 23.5	+0.6
PMR	Palmer	3.12	244	P	Pn	01 38 24.5	-0.8
PMR				eP		01 38 29.8	
TRF	Thorofare Moun	3.20	280	P	Pn	01 38 25.9	-0.6
KTH	Kantishna Hill	3.49	281	P	Pn	01 38 29.8	-0.7
HYT	Haines Junctio	3.53	127	Pn	Pn	01 38 31.9	+0.9
HYT				Pg	Pg	01 38 40.7	-2.4
HYT				Sg	Sg	01 39 27.6	-1.3
HYT				Trac		01 39 33.9	
	comp=Z,89nm,0.4s						
HYT	Haines Junctio	3.53	127	ePn	Pn	01 38 31.9	+0.9
HYT				Pg	Pg	01 38 40.7	-2.4
HYT				eSg	Sg	01 39 27.6	-1.3
RC01	Rabbit Creek A	3.64	240	P	Pn	01 38 32.4	-0.1
SLKM	Skilak Lake	4.19	235	ePn	Pn	01 38 44.7	+4.7
WHY	Whitehorse	4.64	118	Pn	Pn	01 38 47.8	+1.5
WHY				Pg	Pg	01 39 03.7	-0.8
WHY				Sn	Sn	01 39 42.5	+1.9
WHY				Sg	Sg	01 40 02.5	-2.2
WHY				Trac		01 40 10.6	
	comp=Z,78nm,0.6s						
WHY	Whitehorse	4.64	118	Pn	Pn	01 38 47.8	+1.5
WHY				ePg	Pg	01 39 03.7	-0.8
WHY				eSn	Sn	01 39 42.5	+1.9
WHY				eSg	Sg	01 40 02.5	-2.2
PLBC	Pleasant Camp	4.92	134	ePn	Pn	01 38 52.3	+2.2
PLBC				ePg	Pg	01 39 07.7	-2.1
PLBC				eSg	Sg	01 40 13.0	-0.4
SKAG	Skagway	5.26	130	ePn	Pn	01 39 00.8	+5.9
IMA2	Indian Mountai	5.41	308	ePn	Pn	01 38 55.9	-1.0
IMA2				eSn	Sn	01 39 50.3	-9.1
TTA	Tatalina	5.81	274	ePn	Pn	01 39 03.8	+1.4
	48nm,0.9s						
TTA				eSn	Sn	01 40 09.5	0.0
SVW2	Sparrevohn	6.12	257	eP	Pn	01 39 08.3	+1.7
INK	Inuvik	6.61	33	Pn	Pn	01 39 13.8	+0.4
	0.5nm,0.3s,baz=236,slow=15,SNR=18						
INK				Sn	Sn	01 40 28.7	-0.4
	2.6nm,0.3s,baz=224,slow=13,SNR=8.2						
INK				Lg		01 41 06.2	
	2.5nm,0.3s,baz=136,slow=31,SNR=4.2						
INK	Inuvik	6.61	33	Pn	Pn	01 39 13.6	+0.2
INK				Sn	Sn	01 40 25.9	-3.2
INK				Sg	Sg	01 41 02.3	-5.6
INK				Trac		01 41 16.3	
	comp=Z,76nm,0.9s						
INK	Inuvik	6.61	33	ePn	Pn	01 39 12.9	-0.5
	129nm,1.0s						
INK				eSn	Sn	01 40 25.9	-3.2
INK				eSg	Sg	01 41 02.3	-5.6
DLBC	Dease Lake	7.96	120	Pn	Pn	01 39 34.0	+2.1
	0.5nm,0.3s,baz=248,slow=1.5,SNR=4.3						
DLBC				Lg		01 41 46.8	
	1.0nm,0.3s,baz=42,slow=24,SNR=15						
DLBC	Dease Lake	7.96	120	Trac		01 42 07.9	
	comp=Z,33nm,0.8s						
DLBC	Dease Lake	7.96	120	ePn	Pn	01 39 33.6	+1.7
DLBC				eSg	Sg	01 41 46.3	-4.9
FNBB	Fort Nelson	10.67	104	Pn	Pn	01 40 09.3	+0.3
FNBB				Sg	Sn	01 43 12.1	+63
FNBB				Trac		01 43 27.9	
	comp=Z,18nm,1.1s						
FNBB	Fort Nelson	10.67	104	ePn	Pn	01 40 09.3	+0.3
FNBB				eSg	Sn	01 43 12.1	+63
YKW3	Yellowknife Ar	13.06	79	ePn	Pn	01 40 41.0	-0.6
YKA	Yellowknife Ar	13.08	80	Pn	Pn	01 40 42.3	+0.4
	baz=285,slow=13,SNR=5.2						
PDAR	Pinedale Array	28.20	120	P	P	01 43 31.8	+2.7
	0.7nm,0.8s,mb3.3,baz=325,slow=7.2,SNR=6.2						
JHJ	Hachijo jima 2	55.22	276	LR	LR	02 09 21.3	
	comp=Z,40nm,18.5s,MS3.5,baz=118,slow=35						
AKASG	Malin Array Be	66.42	5	P	P	01 48 26.0	+0.3
	1.0nm,0.5s,mb4.1,baz=354,slow=6.3,SNR=9.9						
AKASG	Malin Array Be	66.42	5	P	P	01 48 26.0	+0.3
PMG	Port Moresby	89.30	248	LR	LR	02 24 47.3	
	comp=Z,71nm,21.8s,MS4.0,baz=144,slow=32						

*IDC **12** 01:46:24.7±1.2, 14.24S×166.50E, h0km, mb3.9/7, mb1 4.1/9, mb1mx4.0/15, mbtmp4.1/9, ML4.5/2, MS3.5/4, Ms1 3.5/4, ms1mx3.2/22, Error ellipse: s-maj=36.5km s-min=21.4km az=85.0*
*ISCJB **12** 01:46:28.5±0.8, 14.35S±0.08×166.3E±0.1, h33km, mb4.2/10, MS3.5/2, Error ellipse: s-maj=20.2km s-min=10.6km az=146.3*
*NEIC **12** 01:46:30.4±0.6, 14.28S×166.39E, h35km, mb4.7/4, Error ellipse: s-maj=14.5km s-min=8.6km az=74.0*
ISC 12 01:46:30.3±0.8, 14.28S±0.09×166.4E±0.1, h35km, n24, σ0s43/17, mb4.2/10, MS3.5/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.75	180	eP	Pn	01 48 19.7	-0.8
DZM				eS	Sn	01 49 37.4	-10
DZM	Mont Dzumac	7.75	180	Pn	Pn	01 48 19.6	-0.9
	3.0nm,0.3s,baz=5.7,slow=20,SNR=23						
DZM				LR	LR	01 50 37.7	
	comp=Z,144nm,19.7s,baz=208,slow=32						
HNR	Honiara	7.97	307	Pn	Pn	01 48 23.0	-0.5
	12nm,0.3s,baz=124,slow=1.5,SNR=2.3						
CTA	Charters Tower	20.12	251	P	P	01 51 01.6	+0.5
	3.4nm,0.7s,baz=90,slow=10,SNR=2.6						
CTA				LR	LR	01 56 54.0	
	comp=Z,171nm,19.9s,MS3.4,baz=48,slow=31						
STKA	Stephens Creek	28.68	228	P	P	01 52 23.6	-0.2
	1.0nm,0.6s,mb3.8,baz=84,slow=10,SNR=3.1						
STKA				LR	LR	02 04 19.8	
	comp=Z,146nm,19.0s,MS3.6,baz=27,slow=37						
STKA	Stephens Creek	28.68	228	eP	P	01 52 23.7	-0.1
STKA				LR	LR	02 04 19.8	
ASAR	Alice Springs	32.08	248	P	P	01 52 54.0	+0.2
	1.3nm,0.7s,mb3.9,baz=74,slow=9.4,SNR=5.5						
ASAR				LR	LR	02 05 29.1	
	comp=Z,66nm,19.1s,MS3.3,baz=180,slow=36						
NWAO	Narrogin (SRO)	48.29	239	eP	P	01 55 07.5	-0.5
	35nm,1.3s,mb5.2						
MJAR	Matsushiro Arr	57.14	333	P	P	01 56 13.3	-0.1
	1.6nm,0.9s,mb4.1,baz=164,slow=8.1,SNR=3.6						
VNDA	Vanda	63.29	181	P	P	01 56 55.7	+0.2
	1.0nm,0.6s,mb4.1,baz=6.4,slow=6.9,SNR=10.0						
SBA	Scott Base	63.58	180	eP	P	01 56 57.9	+0.5
	12nm,1.3s,mb4.8						
QSPA	South Pole Qui	75.74	180	eP	P	01 58 12.6	+0.3
	4.6nm,0.9s,mb4.4						
SONM	Songino Array	81.66	324	P	P	01 58 45.1	+0.2
	0.6nm,0.8s,mb3.6,baz=134,slow=6.2,SNR=3.5						
MAW	Mawson	81.99	202	eP	P	01 58 46.8	+0.2
	4.0nm,1.1s,mb4.3						
IMA2	Indian Mountai	85.43	15	eP	P	01 59 03.7	-0.5
MKAR	Makanchi Array	96.32	317	P	P	01 59 55.7	+0.5
	0.2nm,0.5s,mb3.8,baz=123,slow=10,SNR=3.4						
ARCES	ARCESS Array B	119.62	345	PKP	PKPdf	02 05 14.6	-1.8
	3.8nm,1.0s,baz=51,slow=3.7,SNR=5.4						
LDF	La Druitiere	144.03	345	ePKP1	PKPdf	02 06 07.6	+5.5
LPL	La Plagne	144.45	335	ePKP1	PKPdf	02 06 07.3	+4.5
	11nm,1.0s						
LPG	La Plagne	144.46	335	ePKP1	PKPdf	02 06 07.6	+4.8
MBDF	Montbardon	145.08	334	ePKP1	PKPbc	02 06 09.6	+6.2
	10nm,1.0s						
ORIF	Oris-en-Rattie	145.29	335	ePKP1	PKPbc	02 06 11.2	+7.1
	9.6nm,0.7s						
MFF	Saint Martin d	145.87	343	ePKP1	PKPbc	02 06 12.3	+6.4
	4.1nm,0.7s						
TORD	Torodi Ar. Bea	165.13	267	PKPab	PKPab	02 07 35.9	+8.1
	0.7nm,0.8s,baz=118,slow=3.6,SNR=3.9						

*STR **12** 02:10:18.7±0.2, 42.35N×2.39E, h5km±1km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **12** 02:10:18.7±0.3, 42.33N×2.42E, h2km, Ml1.8/3, Error ellipse: s-maj=4.8km s-min=1.8km az=141.0*
MDD 12 02:10:18.5±0.7, 4233N×242E, h3km±6km, mbLg1.3/10, Error ellipse: s-maj=5.6km s-min=3.1km az=152.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBRU	Bruguera	0.18	258	Pg	Pg	02 10 22.3	+0.3
CBRU				Lg		02 10 25.1	
	17nm,0.1s						
FILF	Fillols	0.26	24	Pg	Pg	02 10 23.4	0.0
FILF				Sg	Sg	02 10 26.7	-0.1
FILF	Fillols	0.26	24	Pg	Pg	02 10 23.4	0.0
FILF				Lg		02 10 26.8	
VALF	Valcebollere	0.31	285	Pg	Pg	02 10 24.4	0.0
VALF				Sg	Sg	02 10 28.7	+0.3
VALF	Valcebollere	0.31	285	Pg	Pg	02 10 24.4	0.0
VALF				Lg		02 10 28.7	
CLLI	Llivia	0.36	295	Pg	Pg	02 10 25.5	0.0
CLLI				Lg		02 10 31.0	
	2.7nm,0.1s						
EJON	La Jonquera	0.37	70	Pg	Pg	02 10 25.9	+0.3
	1.3nm,0.1s,SNR=7.3						
EJON				Lg		02 10 30.4	
	10nm,0.1s,SNR=11						
CORG	Organya	0.82	264	Pg	Pg	02 10 34.4	+0.1
CORG				Lg		02 10 46.1	
CSOR	Sort	0.95	273	Pg	Pg	02 10 36.4	-0.4
CSOR				Lg		02 10 50.9	
SALF	Salau	1.01	296	Pg	Pg	02 10 38.1	+0.3
SALF				Lg		02 10 50.2	
MTLF	Montolieu	1.03	352	ePg	Pg	02 10 37.8	-0.4
MTLF				eSg	Sg	02 10 50.7	-0.8
	1.1nm,0.2s						
MTLF	Montolieu	1.03	352	Pg	Pg	02 10 37.8	-0.4
MTLF				Lg		02 10 50.7	
	0.6nm,0.2s						
CAVN	Les Avellanes	1.32	251	Pg	Pg	02 10 43.2	-0.5
CAVN				Lg		02 11 01.1	
	4.0nm,0.2s						
EPOB	Poblet	1.40	226	Pg	Pg	02 10 44.5	-0.7
	2.6nm,0.4s,SNR=7.9						
EPOB				Lg		02 11 02.5	
	4.1nm,0.3s,SNR=12						
EPF	Esparros	1.69	295	ePg	Pg	02 10 50.2	-0.6
EPF				eSg	Sg	02 11 11.6	-1.1
	1.7nm,0.3s						
EPF	Esparros	1.69	295	Pg	Pg	02 10 50.2	-0.6
EPF				Lg		02 11 11.6	
	0.9nm,0.3s						
EBIE	Bielsa	1.72	283	Pg	Pg	02 10 51.0	-0.5
	0.5nm,0.2s,SNR=7.9						
EBIE				Lg		02 11 13.5	
	3.1nm,0.8s,SNR=7.9						
ERTA	Horta de San J	2.08	230	Pg	Pg	02 10 55.2	-3.1
	0.4nm,0.3s,SNR=7.9						
ERTA				Lg		02 11 24.2	
	2.3nm,0.5s,SNR=7.0						
CAF	Calviac	2.61	354	ePg	Pg	02 11 07.1	-1.5
CAF				eSg	Sg	02 11 40.9	-1.5
	0.6nm,0.2s						
CAF	Calviac	2.61	354	Pg	Pg	02 11 07.1	-1.5
CAF				Lg		02 11 40.9	
	0.3nm,0.2s						

*NEIC **12** 02:20:03.0, 32.82S×138.08E, h9km, ML3.5(AUST), After AUST.*
AUST 12 02:20:03.4, 3282S×13808E, h9km, ML3.5, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBOO	Buckleboo	1.70	270	eP	Pn	02 20 33.0	-0.1
BBOO				eS	Sn	02 20 55.3	+0.4
	125nm,0.3s						
STKA	Stephens Creek	3.12	73	eP	Pn	02 20 52.8	+0.1
STKA				eS	Sn	02 21 29.1	-1.0
	27nm,0.3s						
ARPS	Mount Arapiles	5.01	143	eP	Pn	02 21 17.1	-1.5
ARPS				eS	Sn	02 22 14.1	-2.5
	13nm,0.2s						
ARPS	Mount Arapiles	5.01	143	eP	Pn	02 21 17.1	-1.5
	13nm,0.2s						
ARPS				eS	Sn	02 22 14.1	-2.5
CMSA	Cobar Meteorol	6.58	81	eP	Pn	02 21 40.2	0.0
CMSA				eS	Sn	02 22 51.9	-3.5
	4.1nm,0.2s						
CMSA	Cobar Meteorol	6.58	81	eP	Pn	02 21 40.2	0.0
	4.1nm,0.2s						
CMSA				eS	Sn	02 22 51.9	-3.5
YNG	Young	8.74	103	eP	Pn	02 22 07.0	-2.8
YNG				eS	Sn	02 23 37.2	-11
	2.3nm,0.5s						
YNG	Young	8.74	103	eP	Pn	02 22 07.0	-2.8
	2.3nm,0.5s						
YNG				eS	Sn	02 23 37.2	-11
FORT	Forrest	8.76	281	eP	Pn	02 22 08.6	-1.6
FORT				eS	Sn	02 23 42.3	-6.7
	9.8nm,0.5s						
FORT	Forrest	8.76	281	eP	Pn	02 22 08.6	-1.6
	9.8nm,0.5s						
FORT				eS	Sn	02 23 42.3	-6.7
AS31	Alice Springs	9.83	337	eP	Pn	02 22 23.7	-1.1
AS31				eS	Sn	02 24 08.6	-6.7
ASPA	Alice Springs	9.83	337	eP	Pn	02 22 23.7	-1.1
ASPA				eS	Sn	02 24 08.6	-6.7
WB2	Warramunga Arr	13.25	345	eP	Pn	02 23 07.3	-4.3
WB2				eS	Sn	02 25 25.6	-13

*ISCJB **12** 02:25:23.9±0.5, 50.30N±0.04×18.86E±0.03, h0km, Error ellipse: s-maj=5.4km s-min=2.3km az=35.8*
*NEIC **12** 02:25:24.6±0.5, 50.34N×18.92E, h5km, ML2.7(BRA), Error ellipse: s-maj=7.4km s-min=4.0km az=192.0*
*IPEC **12** 02:25:25.4±0.2, 50.28N×18.85E, h0km±1km, ML2.3/3, Error ellipse: s-maj=2.4km s-min=0.8km az=173.0*
*WAR **12** 02:25:25.7, 50.26N×18.90E, ML2.8, Mining Induced*
*CSEM **12** 02:25:25.9±0.1, 50.28N×18.85E, h2km, ML2.3/3, Error ellipse: s-maj=3.5km s-min=1.8km az=14.0*
*PRU **12** 02:25:26.2, 50.25N×18.81E, h0km*
*IDC **12** 02:25:28.6±0.9, 50.42N×18.43E, h0km, mb1 3.0/3, mb1mx2.9/17, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=22.8km s-min=7.8km az=149.0*
ISC 12 02:25:25.2±0.4, 50.26N±0.03×18.86E±0.03, h0km, n38, σ1s09/65, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAC	Raciborz	0.47	248	ePg	Pg	02 25 35.5	+1.4
RAC				eSg	Sg	02 25 43.0	+2.8
OJC	Ojcow	0.60	93	i Pgd	Pg	02 25 37.0	+0.3
OJC				eSg	Sg	02 25 45.6	+1.1
OJC	Ojcow	0.60	93	i Pg	Pg	02 25 37.0	+0.3
OJC				eSg	Sg	02 25 44.9	+0.4
OKC	Ostrava-Krasne	0.63	228	ePG	Pg	02 25 38.0	+0.8
OKC	Ostrava-Krasne	0.63	228	ePg	Pg	02 25 37.9	+0.7
MORC	Moravsky Berou	0.98	241	ePg	Pg	02 25 43.8	-0.2
MORC				eSg	Sg	02 25 57.4	+0.7
MORC	Moravsky Berou	0.98	241	ePg	Pg	02 25 43.9	-0.1
MORC				eSg	Sg	02 25 57.4	+0.7
LIKS	Likavka	1.22	172	ePN	Pn	02 25 49.0	-0.5
LIKS				eSN	Sn	02 26 06.1	-0.6
NIE	Niedzica	1.26	131	ePg	Pg	02 25 49.1	-0.3
NIE				eSg	Sg	02 26 06.8	+1.1
JAVC	Velka Javorina	1.60	209	ePg	Pg	02 25 55.6	-0.3
DPC	Dobruska-Polom	1.63	274	ePG	Pn	02 25 55.0	-0.2
DPC				eSG	Sn	02 26 17.0	+0.1
	31nm,0.3s						
KSP	Ksiaz	1.74	291	ePn	Pn	02 25 56.3	-0.4
KSP				i Pg	Pg	02 25 58.4	-0.2
KSP				eSg	Sg	02 26 21.3	+0.1
VRAC	Vranov	1.75	238	Pn	Pn	02 25 57.6	+0.8
	2.7nm,0.3s,baz=62,slow=15,SNR=12						
VRAC				Lg		02 26 20.4	
	7.6nm,0.3s,baz=137,slow=22,SNR=13						
VRAC	Vranov	1.75	238	ePn	Pn	02 25 56.9	+0.1
VRAC				eSg	Sg	02 26 20.1	-1.4
STHS	Stebnicka Huta	1.76	118	ePN	Pn	02 25 58.6	+1.7
STHS				eSN	Sn	02 26 22.2	+2.2
VYHS	Vyhne	1.77	181	ePN	Pn	02 25 56.6	-0.4
VYHS				eSN	Sn	02 26 19.8	-0.4
UPC	Upice	1.84	279	eSG	Sg	02 26 23.7	-0.7
KRUC	Moravsky	2.00	234	ePn	Pn	02 26 00.8	+0.5
KRUC				eSn	Sn	02 26 27.3	+1.3
	17nm,0.3s						
KECS	Kecovo	2.07	149	ePN	Pn	02 26 00.5	-0.7
KECS				ePG	Pg	02 26 04.0	-0.9
KECS				eSN	Sn	02 26 27.7	0.0
CRVS	Cervenica-Dubn	2.17	128	ePG	Pg	02 26 05.8	-1.0
CRVS				eSN	Sg	02 26 33.5	-1.4
PSZ	Piszkesteto	2.44	163	ePn	Pn	02 26 06.8	+0.5
PSZ				ePg	Pg	02 26 12.2	+0.2
PSZ	Piszkesteto	2.44	163	ePn	Pn	02 26 06.8	+0.5
PSZ	Piszkesteto	2.44	163	ePg	Pg	02 26 12.2	+0.2
KWP	Kalwaria	2.56	103	ePg	Pg	02 26 14.7	+0.3
KWP	Kalwaria	2.56	103	ePg	Pg	02 26 14.6	+0.3
KOLS	Kolonicke sedl	2.58	120	ePG	Pg	02 26 13.2	-1.6
PRU	Pruhonice	2.79	266	ePG	Pb	02 26 15.9	-0.1
PRU				eSG	Sb	02 26 51.6	+0.8
	9.4nm,0.6s						
BRG	Berggiesshubel	3.20	283	Pg	Pg	02 26 24.8	-1.7
BRG				Sg	Sg	02 27 07.2	-0.7
BRG	Berggiesshubel	3.20	283	Pg	Pg	02 26 24.8	-1.7
BRG				Sg	Sg	02 27 07.2	-0.7
KHC	Kasperske Hory	3.61	254	ePG	Pb	02 26 29.7	-0.2
KHC				eSG	Sb	02 27 18.1	+3.8
GERES	GERESS Array B	3.65	249	Pn	Pn	02 26 23.4	+0.5
	0.1nm,0.3s,baz=59,slow=14,SNR=3.3						
GERES				Pg	Pg	02 26 32.3	-2.8
	0.3nm,0.3s,baz=64,slow=16,SNR=11						
GERES				Sn	Sn	02 27 04.8	-1.8
	0.6nm,0.3s,baz=68,slow=21,SNR=4.5						
GERES				Lg		02 27 20.4	
	1.8nm,0.3s,baz=70,slow=27,SNR=13						
GERES	GERESS Array B	3.65	249	Pg	Pb	02 26 32.3	+1.8
CLL	Collm	3.87	288	ePg	Pg	02 26 39.0	-0.3
CLL				eSg	Sg	02 27 30.0	+0.6
	comp=Z,9.0nm,0.9s						
NKC	Novy Kostel	4.12	272	eSG	Sg	02 27 34.9	-2.6
	comp=Z,6.6nm,0.5s						
MOX	Moxa	4.65	278	(SG)	Sg	02 27 56.4	+1.9
AKASG	Malin Array Be	6.63	82	Pn	Pn	02 27 07.6	+3.7
	comp=Z,0.5nm,0.3s,baz=275,slow=11,SNR=4.4						
AKASG				Pg	Pg	02 27 26.9	-5.3
	comp=Z,0.4nm,0.3s,baz=271,slow=14,SNR=4.5						
AKASG	Malin Array Be	6.63	82	Pn	Pn	02 27 07.6	+3.7
AKASG				Pg	Pg	02 27 26.9	-5.3
FINES	FINESS Array B	11.91	17	Pn	Pn	02 28 12.6	-3.6
	comp=Z,0.1nm,0.3s,baz=193,slow=11,SNR=5.9						

KRSC 12 02:32:36, 4924N×15713E, h5km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	3.05	356	P	Pn	02 33 25.5	+0.6
RUS	Russkaya	3.31	15	eP	Pn	02 33 31.3	+2.8
RUS				i S	Sn	02 34 11.2	+2.9
GRL	Gorelyy	3.37	10	P	Pn	02 33 32.5	+3.2
GRL				i S	Sn	02 34 13.0	+3.4
SDLR	Sedlovina	4.19	15	P	Pn	02 33 44.1	+3.5
SDLR				i S	Sn	02 34 33.5	+3.6
SPN	Mys Shipunski	4.27	24	P	Pn	02 33 45.3	+3.7
SPN				i S	Sn	02 34 36.2	+4.4
GNL	Ganaly	4.49	6	P	Pn	02 33 48.0	+3.3
MKZ	Mys Kozlova	6.04	26	P	Pn	02 34 08.9	+3.0
KBTR	Krutoberegovo	7.79	24	P	Pn	02 34 33.0	+3.1

*CSEM **12** 02:36:12.9±0.9, 38.63N×28.54W, h6km±6km, ML0.9, Error ellipse: s-maj=2.6km s-min=1.9km az=170.0, After PDA*
*PDA **12** 02:36:12.9±0.9, 38.63N×28.54W, h6km±6km, MD2.6, ML0.9, Error ellipse: s-maj=2.6km s-min=1.9km az=170.0*
SVSA 12 02:36:12.9±0.9, 3863N×2854W, h6km±6km, MD2.6, ML0.9, Error ellipse: s-maj=2.6km s-min=1.9km az=170.0, Azores Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCED	Cedros	0.13	268	eP	Pg	02 36 15.0	-0.5
PCED				eS	Sg	02 36 17.7	+0.4
PCED							
	13nm,0.2s						
PCED	Cedros	0.13	268	eP	Pg	02 36 15.0	-0.5
PCED				eS	Sg	02 36 17.7	+0.4
CALA	Caldeira	0.14	248	eP	Pg	02 36 15.5	-0.2
CALA				eS	Sg	02 36 18.0	+0.4
PICO	Pico	0.16	146	eP	Pg	02 36 16.1	0.0
PICO				eS	Sg	02 36 18.4	+0.1
PCND	Candelaria	0.17	160	eS	Sg	02 36 18.7	0.0
PCND							
	9.8nm,0.1s						
ROSA	Rosais	0.25	70	eP	Pg	02 36 17.4	-0.4
ROSA				eS	Sg	02 36 20.9	-0.2
PMAN	Manadas	0.35	90	eS	Sg	02 36 24.0	-0.4
PMAN							
	8.2nm,0.1s						
PID	Ribeirinha	0.38	120	erx		02 36 21.7	

*ISCJB **12** 02:37:29.7±2.6, 56.29N±0.07×153.6W±0.1, h0km±16km, mb3.9/8, Error ellipse: s-maj=14.9km s-min=7.6km az=91.0*
*NEIC **12** 02:37:35.0, 56.16N×153.20W, h63km, ML3.4(AEIC), After AEIC.*
*IDC **12** 02:37:36.3±6.7, 56.15N×153.49W, h33km±44km, mb3.6/9, mb1 3.8/10, mb1mx3.6/20, mbtmp3.8/10, ML3.3/1, Error ellipse: s-maj=37.4km s-min=23.8km az=33.0*
ISC 12 02:37:34.6±2.7, 56.38N±0.08×153.6W±0.1, h19km±17km, n22, σ1s13/27, mb3.7/8, Kodiak Island region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	1.51	21	Pn	Pn	02 38 01.1	+0.5
KDAK				Sn	Sn	02 38 20.8	+1.0
	12nm,0.3s,baz=69,slow=23,SNR=18						
KDAK				Lg		02 38 32.6	
	6.3nm,0.3s,baz=350,slow=22,SNR=3.5						
KDAK	Kodiak Island	1.51	21	P	Pn	02 38 01.2	+0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK				S	Sn	02 38 21.6	+1.8
SDPT	Sand Point	4.02	258	P	Pn	02 38 34.9	-0.2
SDPT				S	Sn	02 39 20.3	-1.2
SEW	Seward	4.33	29	P	Pn	02 38 38.5	-0.9
SEW				S	Sn	02 39 26.3	-2.9
SLKM	Skilak Lake	4.50	22	P	Pn	02 38 40.8	-0.9
SLKM				S	Sn	02 39 32.5	-1.1
SVW2	Sparrevohn	4.85	348	P	Pn	02 38 46.7	+0.2
RC01	Rabbit Creek A	5.13	21	P	Pn	02 38 49.7	-0.7
TTA	Tatalina	6.69	350	*e*Pn	Pn	02 39 14.1	+2.3
	5.8nm,0.8s						
TRF	Thorofare Moun	7.29	12	P	Pn	02 39 18.9	-1.1
KTH	Kantishna Hill	7.32	9	P	Pn	02 39 19.1	-1.4
INK	Inuvik	15.05	29	Pn	Pn	02 41 09.1	+2.9
	0.1nm,0.3s,baz=254,slow=19,SNR=3.2						
YKA	Yellowknife Ar	20.49	57	P	P	02 42 12.7	+1.4
	0.9nm,0.6s,baz=271,slow=8.8,SNR=4.5						
NVAR	Mina Array Bea	29.42	113	P	P	02 43 35.6	-1.3
	0.6nm,0.6s,mb3.5,baz=287,slow=11,SNR=4.5						
ARCES	ARCESS Array B	54.39	0	P	P	02 47 00.0	-0.2
	2.3nm,0.7s,mb4.2,baz=17,slow=9.8,SNR=4.1						
SONM	Songino Array	56.71	307	P	P	02 47 18.5	+1.6
	2.1nm,0.8s,mb4.2,baz=46,slow=7.4,SNR=16						
NB2	NORSAR Subarra	62.31	8	P	P	02 47 55.7	+0.2
	comp=Z,0.6nm,0.8s,mb3.8,baz=352,slow=6.9						
NOA	NORSAR Array B	62.31	8	P	P	02 47 56.1	+0.5
	comp=Z,0.7nm,0.7s,mb3.9,baz=352,slow=6.7,SNR=4.1						
MKAR	Makanchi Array	67.09	322	P	P	02 48 26.9	+0.2
	comp=Z,0.4nm,0.7s,mb3.5,baz=32,slow=8.5,SNR=2.8						
AKTK	Aktyubinsk	70.38	339	P	P	02 48 47.4	+0.2
AKTO	Aktyubinsk	70.38	339	P	P	02 48 47.4	+0.2
	comp=Z,0.6nm,0.5s,mb3.8,baz=40,slow=3.4,SNR=4.4						
GERES	GERESS Array B	74.61	9	P	P	02 49 13.0	+0.5
	comp=Z,0.4nm,0.7s,mb3.5,baz=343,slow=4.2,SNR=5.2						
ESDC	Sonseca Array	80.91	23	P	P	02 49 48.1	+0.6
	comp=Z,0.3nm,0.6s,mb3.4,baz=330,slow=4.2,SNR=4.0						

*IDC **12** 02:42:35.5±1.4, 131S×12678E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.8/13, mbtmp3.9/5, Error ellipse: s-maj=185.1km s-min=20.2km az=69.0*

*ISCJB **12** 02:42:38.0±0.8, 12S±03×127.1E±08, h33km, mb4.0/9, Error ellipse: s-maj=125.6km s-min=11.4km az=137.8*

*NEIC **12** 02:42:40.2±0.7, 129S×12694E, h35km, mb4.1/5, Error ellipse: s-maj=105.0km s-min=9.5km az=69.0*

ISC 12 02:42:40.1±0.8**, 13S**±03×**1271E**±08**, h35km, n11,** σ**0s83**/11**, mb4.0**/9**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	19.87	160	*e*P	Pn	02 47 08.5	-1.4
	1.9nm,0.5s						
AS31	Alice Springs	23.23	164	*e*P	P	02 47 44.0	-0.1
ASAR	Alice Springs	23.23	164	P	P	02 47 43.8	-0.3
	2.6nm,0.8s,mb3.7,baz=348,slow=11,SNR=19						
STKA	Stephens Creek	33.39	157	P	P	02 49 17.7	+2.6
	2.1nm,0.9s,mb4.1,baz=350,slow=10.0,SNR=3.4						
ULN	Ulaanbaatar	51.95	343	*e*P	P	02 51 45.1	-0.5
	1.7nm,0.6s,mb4.2						
SONM	Songino Array	52.12	342	P	P	02 51 46.9	+0.1
	0.6nm,0.6s,mb3.7,baz=160,slow=7.5,SNR=4.6						
MKAR	Makanchi Array	61.87	327	P	P	02 52 56.0	+0.3
	1.4nm,0.4s,mb4.4,baz=115,slow=7.6,SNR=15						
KURK	Kurchatov	66.14	329	*e*P	P	02 53 23.4	-0.4
	4.2nm,0.8s,mb4.5						
BRVK	Borovoye	71.76	328	*e*P	P	02 53 58.6	-0.2
	1.3nm,0.9s,mb3.9						
CHKZ	Chkalovo	71.89	329	*e*P	P	02 53 59.7	+0.2
	3.1nm,1.1s,mb4.2						
VNDA	Vanda	78.46	173	P	P	02 54 38.0	+0.7
	0.4nm,0.7s,mb3.5,baz=310,slow=5.6,SNR=2.5						

*TIF **12** 03:07:36.0, 4259N×4345E, h17km*

*ISCJB **12** 03:07:37.5±0.5, 4260N±002×4350E±003, h5km±3km, Error ellipse: s-maj=4.0km s-min=3.7km az=122.5*

*MOS **12** 03:07:39.1±0.6, 4269N×4367E, h9km, mb3.6/1, Error ellipse: s-maj=13.8km s-min=7.4km az=68.4*

ISC 12 03:07:37.7±0.5**, 4258N**±002×**4349E**±003**, h8km**±3km**, n19,** σ**1s04**/37**, 3C-3D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.03	267	P	Pg	03 07 39.5	+0.2
ONI				S	Sg	03 07 41.2	+0.9
DIGR	Digorskoe uzhe	0.32	12	⇑*i*PG	Pg	03 07 44.1	0.0
DIGR				*i* S	Sg	03 07 49.9	+1.5
ZEI	Tsey	0.35	58	⇓*i*PG	Pg	03 07 44.9	+0.2
ZEI				*i* S	Sg	03 07 51.3	+1.9
LACR	Lac	0.64	67	⇓*i*PG	Pg	03 07 49.6	-0.5
LACR				*i* S	Sg	03 07 59.4	+0.9
KORR	Kora	0.66	40	⇑*i*PG	Pg	03 07 50.0	-0.4
KORR				*i* S	Sg	03 08 00.1	+1.1
GOR	Gori	0.75	142	S	Sg	03 08 02.8	+0.8
ARNR	Ardon	0.84	43	⇑*i*PG	Pg	03 07 53.1	-0.8
ARNR				*i* S	Sg	03 08 05.5	+0.7
KMSR	Komsomolskaya	0.98	36	*e*PG	Pg	03 07 55.4	-1.2
KMSR				*i* S	Sg	03 08 09.5	+0.1
VLKR	Vladikavkaz	0.99	62	*e*PG	Pg	03 07 55.5	-1.2
VLKR				*e*S	Sg	03 08 09.6	0.0
CHVG	Ch'k'valeri	1.05	278	P	Pg	03 07 58.0	+0.2
CHVG				S	Sg	03 08 10.8	-0.7
SNJR	Sundja	1.09	63	⇓*i*PG	Pg	03 07 57.0	-1.6
SNJR				*e*S	Sg	03 08 12.3	-0.4
BTKR	Batakoyurt	1.10	44	*e*PG	Pg	03 07 57.3	-1.6
BTKR				*e*S	Sg	03 08 12.8	-0.5
KUBR	Kubataba	1.22	357	PG	Pg	03 08 02.0	+0.9
KUBR				S	Sb	03 08 20.0	+3.1
KUBR				pmax	pmax		
	comp=Z,16nm,0.2s						
KUBR				smax			
	comp=N,52nm,0.5s						
TBLG	Delisi	1.26	132	P	Pn	03 08 01.2	-0.4
TBLG				S	Sb	03 08 18.0	0.0
PRTR	Priterechnaya	1.30	26	*e*PG	Pg	03 08 00.4	-2.4
PRTR				*e*S	Sb	03 08 18.2	-1.2
MTA	Mtatsminda	1.31	132	P	Pn	03 08 01.1	-1.3
MTA				S	Sb	03 08 19.8	+0.2
KIV0	Kislovodsk Arr	1.49	337	PG	Pg	03 08 05.6	-0.7
KIV0				S	Sn	03 08 25.3	+0.9
KIV	Kislovodsk	1.49	337	PG	Pg	03 08 05.8	-0.6
KIV				S	Sn	03 08 25.4	+0.9
KIV				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KIV				smax			
	comp=N,27nm,0.7s						
DGRG	David-gareji	1.80	128	P	Pn	03 08 10.8	+1.8
DGRG				S	Sn	03 08 35.6	+3.5

*NEIC **12** 03:10:24.6, 3525S×7072W, h0km, ML3.3(GUC), After GUC.*

GUC 12 03:10:24.6±0.6**, 3525S**×**7072W, h0km**±2km**, MD3.8, ML3.3, 2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.67	339	⇓*i*P	Pg	03 10 38.1	+0.6
SFDO				*i* S	Sg	03 10 48.7	+2.5
TALC	Talca	0.76	258	*i* S	Sg	03 10 51.8	+2.8
TALC				AML	AML	03 10 53.6	
	comp=E,2μm,0.1s						
CHCH	Chadas Angostu	1.31	3	⇓*i*P	Pg	03 10 48.6	-1.1
CHCH				*i* S	Sg	03 11 07.8	+1.1
TACH	Talagante	1.60	354	*e*P	Pn	03 10 53.5	-0.6
TACH				*i* S	Sn	03 11 15.3	-0.1
PCH	Pirque	1.63	6	*e*P	Pn	03 10 54.1	-0.4
PCH				*i* S	Sn	03 11 16.4	+0.2
CCHI	Chillan	1.74	219	AML	AML	03 11 23.6	
	comp=E,618nm,0.6s						
SAN	Santiago	1.79	2	AML	AML	03 11 24.0	
	comp=E,385nm,0.2s						
CLCH	Cerro Calan	1.85	5	*e*P	Pn	03 10 57.6	+0.1
CLCH				*i* S	Sn	03 11 22.8	+1.1
CLCH				AML	AML	03 11 34.8	
	comp=E,394nm,0.3s						
LCCH	Las Cruces	1.90	338	*e*P	Pn	03 10 58.2	0.0
LCCH				*i* S	Sn	03 11 23.7	+0.9
FCH	Farellones	1.95	11	*e*P	Pn	03 11 00.0	+1.1
FCH				*i* S	Sn	03 11 26.6	+2.6
FCH				AML	AML	03 11 35.4	
	comp=E,340nm,0.7s						
PEL	Peldehue	2.10	1	*e*P	Pn	03 11 01.5	+0.5
PEL				*i* S	Sn	03 11 29.7	+2.0
PEL				AML	AML	03 11 41.0	
	comp=E,800nm,0.7s						
PEL	Peldehue	2.10	1	*e*P	Pn	03 11 01.5	+0.5
PEL				*i* S	Sn	03 11 29.7	+2.0

*IDC **12** 03:27:57.8±0.9, 684S×15446E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.1/14, mbtmp4.1/8, ML4.0/1, Error ellipse: s-maj=31.3km s-min=23.2km az=100.0*

*ISCJB **12** 03:28:05.3±3.4, 70S±0.1×1545E±0.1, h71km±29km, mb3.9/9, Error ellipse: s-maj=24.7km s-min=21.0km az=71.5*

*NEIC **12** 03:28:08.1±2.0, 696S×15440E, h81km±17km, mb4.2/2, Error ellipse: s-maj=14.9km s-min=13.2km az=223.0*

ISC 12 03:28:07.6±2.7**, 70S**±01×**1545E**±01**, h78km**±23km**, n14,** σ**0s42**/12**, mb3.9**/9**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.63	251	*e*Pn	Pn	03 29 56.1	+0.1
DZM	Mont Dzumac	18.94	144	P	Pn	03 32 23.7	0.0
	0.4nm,0.3s,baz=333,slow=16,SNR=4.6						
WRAB	Tennant Creek	23.38	235	*e*P	P	03 33 09.1	-0.2
	6.9nm,0.8s,mb4.0						
WB2	Warramunga Arr	23.39	235	*e*P	P	03 33 09.0	-0.4
ASAR	Alice Springs	25.79	228	P	P	03 33 31.6	+0.4
	0.7nm,0.5s,mb3.3,baz=58,slow=10,SNR=8.6						
STKA	Stephens Creek	27.53	204	P	P	03 33 46.5	-0.4
	1.6nm,0.7s,mb3.7,baz=21,slow=10,SNR=4.2						
FITZ	Fitzroy Crossi	30.18	246	P	P	03 34 10.7	+0.3
	3.9nm,0.9s,mb4.0,baz=58,slow=12,SNR=9.2						
SONM	Songino Array	69.04	328	P	P	03 39 04.5	-0.4
	0.6nm,0.5s,mb3.6,baz=142,slow=5.4,SNR=5.9						
MKAR	Makanchi Array	83.05	319	P	P	03 40 25.3	+0.9
	2.2nm,0.8s,mb4.1,baz=103,slow=5.4,SNR=13						
MAW	Mawson	84.21	203	P	P	03 40 30.8	+0.4
	0.8nm,0.6s,mb3.7,baz=43,slow=5.0,SNR=5.0						
KURK	Kurchatov	86.50	322	*e*P	P	03 40 41.0	-0.7
	1.1nm,0.5s,mb4.0						
NVAR	Mina Array Bea	92.12	52	P	P	03 41 08.4	+0.2
	1.2nm,0.8s,mb4.2,baz=247,slow=4.3,SNR=6.6						
GERES	GERESS Array B	126.77	329	PKP	PKPdf	03 47 03.3	+1.2
	0.5nm,0.7s,baz=64,slow=3.1,SNR=5.6						
TORD	Torodi Ar. Bea	152.52	285	PKPbc	PKPbc	03 47 57.0	+2.1
	1.0nm,0.8s,baz=65,slow=2.2,SNR=6.2						
TORD				PKPab	PKPab	03 48 08.0	+2.5
	1.0nm,0.7s,baz=85,slow=1.8,SNR=6.4						

*IDC **12** 03:32:20.3±0.6, 679S×15446E, h0km, mb4.7/12, mb1 4.8/13, mb1mx4.8/15, mbtmp4.7/13, ML4.5/1, MS4.3/14, Ms1 4.3/14, ms1mx4.1/23, Error ellipse: s-maj=25.4km s-min=17.1km az=94.0*

*BJI **12** 03:32:23.7, 638S×15498E, h36km, mB5.1, mb5.0, Ms4.8, Msz4.3*

*ISCJB **12** 03:32:24.3±0.2, 675S±004×15444E±003, h33km, mb5.0/71, MS4.4/29, Error ellipse: s-maj=6.5km s-min=4.4km az=154.9*

*MOS **12** 03:32:25.8±1.0, 640S×15436E, h35km, mb5.1/38, MS4.3/10, Error ellipse: s-maj=10.4km s-min=8.9km az=81.1*

*HRVD **12** 03:32:29.0±0.2, 741S×15415E, h78km±3km, MW5.1/78, Centroid moment Tensor Solution. LP body waves: s14,c15;Mantle waves: s78,c117; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.11±.27; $M_{\theta\theta}$-0.61±.24; $M_{\phi\phi}$1.72±.22; $M_{r\theta}$3.79±.11; $M_{\theta\phi}$3.12±.20; $M_{\phi r}$-3.33±.11; Best double couple: $M_0$5.56700×10^{16} NP1:ϕ_s245.00000°,δ46.00000°,λ-18.00000°. NP2: ϕ_s348.00000°,δ77.00000°,λ-135.00000°. Principal axes: T 4.0980, Plg20.0000°, Azm110.0000°; N 2.9400, Plg43.0000°, Azm0.0000°; P -7.0350, Plg40.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **12** 03:32:29.0±1.0, 683S×15440E, h64km±9km, mb5.1/40 Error ellipse: s-maj=7.9km s-min=5.6km az=164.0*

ISC 12 03:32:26.6±1.3**, 681S**±006×**15447E**±003**, h39km**±11km**, h37km**±1.5km**:pP-P, n334,** σ**0s89**/279**, mb5.0**/71**, MS4.4**/29**, 73C-72D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.02	116	Pn	Pn	03 33 59.2	+6.1
	18nm,0.3s,baz=273,slow=1.5,SNR=4.3						
HNR	Honiara	6.02	116	P	Pn	03 33 59.2	+6.1
HNR				pmax	pmax		
	comp=Z,18nm,0.3s						
HNR	Honiara	6.02	116	*e*Pn	Pn	03 33 58.8	+5.6
	comp=Z,412nm,1.0s						
PMG	Port Moresby	7.68	250	Pn	Pn	03 34 17.9	+2.0
	comp=Z,1.7nm,0.3s,baz=38,slow=11,SNR=9.9						
PMG				LR	LR	03 37 07.9	
	comp=Z,2μm,19.4s,baz=50,slow=37						
PMG	Port Moresby	7.68	250	*e*Pn	Pn	03 34 17.5	+1.6
PMG				*e*Sn	Sn	03 35 46.1	+4.5
CTA	Charters Tower	15.42	210	*e*P	Pn	03 36 05.7	+4.4
	comp=Z,27nm,0.9s						
CTA	Charters Tower	15.42	210	Pn	Pn	03 36 05.7	+4.4
	comp=Z,0.5nm,0.3s,baz=38,slow=13,SNR=14						
CTA				LR	LR	03 41 02.8	
	comp=Z,1μm,19.0s,baz=28,slow=34						
CTA	Charters Tower	15.42	210	P	Pn	03 36 05.7	+4.4
CTA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CTA				MLR	MLR		
	comp=Z,1μm,19.0s						
CTAO	Charters Tower	15.42	210	*e*P	Pn	03 36 05.2	+3.9
DZM	Mont Dzumac	19.08	144	*e*P	Pn	03 36 45.9	-0.9
DZM	Mont Dzumac	19.08	144	P	Pn	03 36 46.3	-0.5
	comp=Z,1.6nm,0.3s,baz=338,slow=9.3,SNR=12						
KAKA	Kakadu	22.48	253	*e*P	P	03 37 22.2	-0.2
	comp=Z,53nm,1.1s,mb4.9						
WRAB	Tennant Creek	23.48	234	P	P	03 37 31.6	-1.2
	comp=Z,255nm,0.9s,mb5.7,SNR=5.4						
WRAB	Tennant Creek	23.48	234	*e*P	P	03 37 31.3	-1.5
WRAB				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.0						
WRAB	Tennant Creek	23.48	234	*e*P	P	03 37 31.3	-1.5
	comp=Z,55nm,0.9s,mb5.0						
WB2	Warramunga Arr	23.49	234	⇓*i*P	P	03 37 31.5	-1.4
ARMA	Armidale	23.64	186	*e*P	P	03 37 33.7	-0.6
AS31	Alice Springs	25.91	227	*e*P	P	03 37 54.4	-0.5
ASAR	Alice Springs	25.91	227	P	P	03 37 53.8	-1.2
	comp=Z,9.2nm,0.9s,mb4.3,baz=62,slow=8.8,SNR=25						
ASAR				ScP	ScP	03 45 04.2	+4.8
	comp=Z,2.5nm,1.0s,baz=50,slow=3.1,SNR=9.4						
ASAR				LR	LR	03 47 40.5	
	comp=Z,525nm,18.2s,MS4.1,baz=336,slow=36						
ASAR	Alice Springs	25.91	227	P	P	03 37 53.8	-1.1
ASAR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ASAR				pmax	pmax		
	comp=N,3.0nm,1.0s						
ASAR				MLR	MLR		
	comp=Z,525nm,18.2s						
ASPA	Alice Springs	25.91	227	*e*P	P	03 37 54.4	-0.5
STKA	Stephens Creek	27.69	204	*e*P	P	03 38 09.3	-1.6
	comp=Z,7.4nm,1.0s,mb4.3						
STKA	Stephens Creek	27.69	204	P	P	03 38 09.1	-1.8
	comp=Z,6.7nm,0.9s,mb4.3,baz=347,slow=8.5,SNR=9.8						
STKA				LR	LR	03 49 41.6	
	comp=Z,1μm,18.1s,MS4.5,baz=30,slow=38						
FITZ	Fitzroy Crossi	30.25	246	*e*P	P	03 38 33.1	-0.6
	comp=Z,25nm,1.0s,mb4.9						
FITZ	Fitzroy Crossi	30.25	246	P	P	03 38 33.2	-0.5
	comp=Z,14nm,0.9s,mb4.7,baz=73,slow=7.7,SNR=8.4						
FITZ				LR	LR	03 52 02.5	
	comp=Z,1μm,18.1s,MS4.7,baz=263,slow=39						
FORT	Forrest	34.37	223	*e*P	P	03 39 08.8	-1.0
	comp=Z,33nm,0.7s,mb5.4						
JOW	Kunigami	41.98	324	LR	LR	03 55 23.7	
	comp=Z,292nm,19.8s,MS4.2,baz=128,slow=33						
JHJ	Hachijo jima 2	42.09	341	LR	LR	03 55 13.6	
	comp=Z,151nm,18.5s,MS3.9,baz=311,slow=33						
YHNB	Yeheng	44.92	315	*e*P	P	03 40 37.2	-0.3
SSE	Sheshan	49.33	322	P	P	03 41 12.6	+0.7
SSE				AP	pP	03 41 24.2	+1.0
SSE				XP	sP	03 41 29.3	+1.6
SSE				PP	PP	03 43 07.1	+1.1
SSE				S	S	03 48 15.3	-0.4
SSE				XS	sS	03 48 34.9	+0.6
SSE				AMB	AMB		
	comp=Z,31nm,0.8s,mb5.4						
SSE				AMB	AMB		
	comp=Z,103nm,4.2s						
SSE				LR	LR		
	comp=N,101nm,19.9s,MS3.9						
SSE				LR	LR		
	comp=E,80nm,20.0s,MS3.9						
SSE				LR	LR		
	comp=Z,220nm,20.3s,MS4.2						
INCN	Inchon	51.15	332	*e*P	P	03 41 24.9	-0.7
	comp=Z,30nm,0.9s,mb5.2						
NJ2	Nanjing	51.44	321	*e*P	P	03 41 27.4	-0.4
NJ2				AP	pP	03 41 37.3	-1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,60nm,4.6s						
NJ2				LR	LR		
	comp=N,840nm,22.2s,MS4.9						
NJ2				LR	LR		
	comp=E,1μm,23.2s,MS4.9						
NJ2				LR	LR		
	comp=Z,380nm,14.2s						
WHN	Wuhan	53.44	316	⇓P	P	03 41 44.5	+1.9
VLA	Vladivostok	53.75	340	*i* P	P	03 41 42.3	-2.6
VLA				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
VLA				MLR	MLR		
	comp=Z,200nm,15.6s,MS4.3						
YSS	Yuzh-Sakhalins	54.52	350	*e*P	P	03 41 46.5	-4.0
YSS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
PPT	Papeete	55.55	107	*e*S	S	03 49 48.1	+7.4
	comp=Z,116nm,25.2s						
PPT				*e*SS	SS	03 53 35.8	+10
	comp=Z,116nm,26.2s						
PPT				*e*LQ		03 55 58.7	
	comp=Z,761nm,26.8s						
PPT				*e*LR	LR	03 58 17.7	
	comp=Z,314nm,30.2s						
PPT	Papeete	55.55	107	LR	LR	04 01 10.0	
	comp=Z,192nm,18.2s,MS4.2,baz=294,slow=31						
MDJ	Mudanjiang	55.87	339	P	P	03 41 59.3	-1.0
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,110nm,5.9s						
SNY	Shenyang	56.03	332	⇓P	P	03 41 59.2	-2.2
SNY				AP	pP	03 42 14.3	+1.5
SNY				PP	PP	03 44 05.7	-0.8
SNY				S	S	03 49 45.4	-1.7
SNY				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb5.1						
SNY				AMB	AMB		
	comp=Z,112nm,12.0s						
SNY				LR	LR		
	comp=N,218nm,18.6s						
SNY				LR	LR		
	comp=E,187nm,10.2s						
SNY				LR	LR		
	comp=Z,182nm,15.0s,MS4.3						
TBI	Tubuai	56.23	113	*e*S	S	03 49 55.6	+5.8
	comp=Z,113nm,32.9s						
TBI				*e*LQ		03 56 13.0	
	comp=Z,943nm,30.2s						
TBI				*e*LR	LR	03 58 48.6	
	comp=Z,314nm,37.2s						
CN2	Changchun	56.80	335	*e*P	P	03 42 06.0	-0.9
CN2				*e*S	S	03 49 43.7	-14
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=Z,200nm,17.0s,MS4.3						
GYA	Guiyang	56.92	308	P	P	03 42 09.9	+2.2
GYA				AP	pP	03 42 20.0	+0.8
GYA				XP	sP	03 42 23.9	+0.2
GYA				PP	PP	03 44 16.3	+1.9
GYA				S	S	03 49 54.5	-4.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
GYA				AMB	AMB		
	comp=Z,120nm,3.6s						
GYA				LR	LR		
	comp=N,250nm,17.0s,MS4.7						
GYA				LR	LR		
	comp=E,400nm,17.3s,MS4.7						
GYA				LR	LR		
	comp=Z,390nm,16.5s,MS4.6						
BJI	Beijing	58.47	326	*e*P	P	03 42 20.8	+2.2
BJI				S	S	03 50 20.4	+1.2
BJI				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.6						
BJI				LR	LR		
	comp=N,256nm,16.7s,MS4.5						
BJI				LR	LR		
	comp=E,214nm,19.1s,MS4.5						
BJI				LR	LR		
	comp=Z,245nm,20.2s,MS4.3						
XAN	Xi'an	59.21	316	P	P	03 42 24.0	+0.3
XAN				PP	PP	03 44 38.6	+3.9
XAN				S	S	03 50 29.3	+0.6
XAN				AMB	AMB		
	comp=Z,32nm,1.3s,mb5.2						
XAN				AMB	AMB		
	comp=Z,83nm,6.1s						
XAN				LR	LR		
	comp=N,140nm,22.0s,MS4.2						
XAN				LR	LR		
	comp=E,148nm,19.6s,MS4.2						
XAN				LR	LR		
	comp=Z,333nm,17.6s,MS4.5						
KMI	Kunming	59.48	304	P	P	03 42 28.6	+3.0
KMI				AP	pP	03 42 40.5	+3.4
KMI				XP	sP	03 42 44.4	+2.8
KMI				AMB	AMB		
	comp=Z,23nm,1.1s,mb5.1						
KMI				AMB	AMB		
	comp=Z,139nm,4.1s						
KMI				LR	LR		
	comp=N,191nm,18.0s,MS4.5						
KMI				LR	LR		
	comp=E,208nm,16.9s,MS4.5						
KMI				LR	LR		
	comp=Z,213nm,18.0s,MS4.3						
PET	Petropavlovsk	59.70	3	*e*P	pP	03 42 38.9	+0.2
PET				*e**PP	pP	03 42 57.0	+18
PET				*e*S	S	03 50 41.3	+6.1
PET				*e*SS	SS	03 54 31.6	+0.3
PET				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
PET				pmax	pmax		
	comp=Z,100nm,15.2s						
PET				pmax	pmax		
	comp=Z,100nm,13.8s						
PET				smax			
	comp=N,100nm,14.9s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.5						
CHTO	Chiang Mai	60.35	296	*e*P	P	03 42 32.0	+0.4
CHTO				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
CHTO	Chiang Mai	60.35	296	*e*P	P	03 42 32.0	+0.4
	comp=Z,21nm,1.4s,mb5.0						
CD2	Chengdu	61.29	311	P	P	03 42 39.5	+1.5
CD2				XP	sP	03 42 53.2	-0.9
CD2				PP	PP	03 44 56.0	+2.8
CD2				PPP		03 46 26.4	
CD2				S	S	03 50 56.3	+0.8
CD2				XS	sS	03 51 13.4	-1.2
CD2				SS	SS	03 54 59.1	+2.9
CD2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.6						
CD2				AMB	AMB		
	comp=Z,40nm,4.5s						
CD2				LR	LR		
	comp=N,140nm,20.4s						
CD2				LR	LR		
	comp=Z,160nm,15.6s,MS4.3						
HHC	Hu-ho-hao-te	61.63	324	*e*P	P	03 42 40.2	-0.1
HHC				AP	pP	03 42 50.4	-1.4

HHC XP sP 03 42 54.3 -2.1
HHC PCP PcP 03 43 21.9 +0.3
HHC PP PP 03 44 57.6 +1.4
HHC SCP ScP 03 47 19.6 -0.5
HHC PCS PcS 03 47 23.4 -1.1
HHC S **S** **03 50 57.3 -2.5**
HHC XS sS 03 51 13.5 -5.4
HHC PS 03 51 17.6
HHC SCS ScS 03 52 25.5 -3.3
HHC SS SS 03 54 59.4 -2.1
HHC AMB AMB
comp=Z,20nm,1.1s,mb5.2
HHC AMB AMB
comp=Z,78nm,5.0s
HHC LR LR
comp=N,184nm,22.9s,MS4.6
HHC LR LR
comp=E,496nm,22.4s,MS4.6
HHC LR LR
comp=Z,227nm,21.0s,MS4.3
BTO Baotou 62.39 323 *e*P **P** **03 42 45.3 -0.1**
LZH Lanzhou 63.81 316 ⇑P **P** **03 42 56.7 +1.9**
LZH AP pP 03 43 07.4 +1.0
LZH XP sP 03 43 12.6 +1.7
LZH PP PP 03 45 19.0 +3.6
LZH S **S** **03 51 28.0 +0.9**
LZH XS sS 03 51 45.0 -1.4
LZH PS 03 51 52.0
LZH *e*SS SS 03 55 38.0 +2.4
LZH AMB AMB
comp=Z,60nm,1.4s,mb5.4
LZH AMB AMB
comp=Z,220nm,5.0s
LZH LR LR
comp=N,950nm,17.0s
LZH LR LR
comp=Z,2μm,18.0s,MS5.2
TAOE Nuku Hiva Isla 64.74 97 *e*LR LR 04 02 33.5
comp=Z,4μm,40.9s
GTA Gaotai 68.24 317 ⇑P **P** **03 43 24.6 +1.3**
GTA AP pP 03 43 35.0 0.0
GTA XP sP 03 43 39.3 -0.2
GTA PP PP 03 45 58.5 +4.4
GTA SCP 03 47 51.0
GTA PCS 03 47 52.6
GTA S S 03 52 26.3 +5.3
GTA XS sS 03 52 36.7 -3.7
GTA SCS ScS 03 53 17.9 -1.7
GTA SS SS 03 56 43.7 -0.7
GTA AMB AMB
comp=Z,28nm,1.4s,mb5.1
GTA AMB AMB
comp=Z,134nm,5.3s
GTA LR LR
comp=N,162nm,18.7s,MS4.4
GTA LR LR
comp=E,153nm,20.6s,MS4.4
GTA LR LR
comp=Z,171nm,21.3s,MS4.2
ULN Ulaanbaatar 68.56 328 *e*P **P** **03 43 25.1 -0.2**
SONM Songino Array 68.89 328 P **P** **03 43 28.0 +0.6**
comp=Z,6.3nm,0.8s,mb4.6,baz=140,slow=4.7,SNR=25
SONM LR LR 04 13 50.2
comp=Z,178nm,18.2s,MS4.3,baz=118,slow=36
SONM Songino Array 68.89 328 P **P** **03 43 28.0 +0.7**
SONM pmax pmax
comp=Z,6.0nm,0.8s
SONM MLR MLR
comp=Z,178nm,18.2s
RKT Rikitea 69.50 112 *e*LQ 04 02 21.1
comp=Z,382nm,33.2s
RKT *e*LR LR 04 04 42.7
comp=Z,239nm,23.2s
VNDA Vanda 70.78 178 P **P** **03 43 38.8 -0.1**
comp=Z,4.5nm,1.1s,mb4.3,baz=324,slow=5.3,SNR=10
VNDA LR LR 04 12 45.4
comp=Z,240nm,18.0s,MS4.5,baz=350,slow=34
YAK Yakutsk 71.26 348 *e*P **P** **03 43 38.4 -3.4**
YAK pmax pmax
comp=Z,30nm,1.3s,mb5.1
ZAK Zakamensk 72.06 328 *e*P **P** **03 43 46.2 -0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
BOD Bodaibo 72.25 339 *e*P **P** **03 43 44.8 -3.0**
BOD pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
TLY Talaya 72.63 330 *e*P **P** **03 43 42.9 -7.2**
TLY *e*S S 03 53 14.5 +2.3
TLY *e* 03 53 52.0
TLY pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
TLY MLR MLR
comp=Z,133nm,17.0s,MS4.3
MIR Mirnyy 72.67 202 *e*P **P** **03 43 53.0 +2.7**
MIR pmax pmax
comp=Z,190nm,1.2s,mb5.9
JIRN Jiri 74.24 301 *e*P **P** **03 44 00.8 +1.3**
comp=Z,24nm,0.7s,mb5.2
GUN Gumba 74.57 301 *e*P **P** **03 44 02.8 +1.4**
comp=Z,94nm,1.0s,mb5.7
PKI Pulchoki 74.88 301 *e*P **P** **03 44 04.1 +0.9**
comp=Z,50nm,1.0s,mb5.4
PKI Pulchoki 74.88 301 *e*P **P** **03 44 04.1 +0.9**
PKI pmax pmax
comp=Z,51nm,1.0s,mb5.4
KKN Kakani 75.05 301 *e*P **P** **03 44 05.2 +1.0**
BILL Bilibino 75.13 5⇓*e*P **P** **03 44 01.3 -3.4**
BILL *e* pP 03 44 10.7 -5.8
BILL *e* 03 44 18.8
BILL *e* 03 47 00.3
BILL *e*S S 03 53 44.0 +3.6
BILL pmax pmax
comp=Z,12nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.5
DMN Daman 75.15 301 *e*P **P** **03 44 05.8 +1.0**
comp=Z,120nm,1.0s,mb5.8
GKN Gorkha 75.65 301 *e*P **P** **03 44 08.5 +0.8**
comp=Z,78nm,1.0s,mb5.6
KOLN Koldanda 76.47 301 *e*P **P** **03 44 13.0 +0.7**
comp=Z,54nm,0.9s,mb5.5
SVW2 Sparrevohn 78.02 22 *e*P **P** **03 44 19.8 -1.3**
WMQ Urumqi 78.33 317 P **P** **03 44 23.5 +0.8**
WMQ AP pP 03 44 33.5 -1.1
WMQ XP sP 03 44 37.5 -1.5
WMQ PP PP 03 47 21.5 +1.5
WMQ S S 03 54 13.5 -1.8
WMQ SCS ScS 03 54 37.5 -2.6
WMQ SS SS 03 59 18.5 +0.2
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,102nm,6.0s
WMQ LR LR
comp=N,135nm,15.0s,MS4.5
WMQ LR LR
comp=E,124nm,15.0s,MS4.5
WMQ LR LR
comp=Z,75nm,14.0s,MS4.2
TTA Tatalina 79.03 21 *e*P **P** **03 44 24.8 -1.8**
TTA pmax pmax
comp=Z,22nm,1.2s,mb5.0
TTA Tatalina 79.03 21 *e*P **P** **03 44 24.8 -1.8**
comp=Z,22nm,1.2s,mb5.0
PMR Palmer 80.83 24 *e*P **P** **03 44 35.6 -0.7**
IMA2 Indian Mountai 81.79 19 *e*P **P** **03 44 39.6 -1.8**
MCK McKinley 82.08 22 *e*P **P** **03 44 41.1 -1.8**
MCK pmax pmax
comp=Z,12nm,1.1s,mb4.7
MCK McKinley 82.08 22 *e*P **P** **03 44 41.1 -1.8**
comp=Z,12nm,1.1s,mb4.7
NDI New Delhi 82.16 300 *e*P **P** **03 44 43.0 -0.3**
MKAR Makanchi Array 82.92 319 P **P** **03 44 47.9 +0.7**
comp=Z,21nm,0.9s,mb5.2,baz=100,slow=6.3,SNR=77
MKAR Makanchi Array 82.92 319 P **P** **03 44 47.9 +0.6**
MKAR pmax pmax
comp=Z,21nm,0.9s
MKAR Makanchi Array 82.92 319 P **P** **03 44 47.9 +0.6**
COLA College 83.09 21 *e*P **P** **03 44 45.8 -2.4**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
COLA College 83.09 21 *e*P **P** **03 44 45.8 -2.4**
comp=Z,9.1nm,0.8s,mb4.9
QSPA South Pole Qui 83.17 180 *e*P **P** **03 44 48.6 0.0**
comp=Z,30nm,1.1s,mb5.2

ZAL Zalesovo 83.74 326 P **P** **03 44 51.4 -0.2**
comp=Z,3.2nm,0.9s,mb4.4,baz=19,slow=5.6,SNR=13
ZAL Zalesovo 83.74 326 P **P** **03 44 51.4 -0.1**
ZAL pmax pmax
comp=Z,3.0nm,0.9s
MAW Mawson 84.37 203 P **P** **03 44 54.9 +0.2**
comp=Z,4.1nm,0.9s,mb4.6,baz=102,slow=2.9,SNR=12
MAW LR LR 04 20 50.7
comp=Z,172nm,20.3s,MS4.4,baz=297,slow=34
MAW Mawson 84.37 203 *e*P **P** **03 44 54.3 -0.4**
comp=Z,36nm,1.4s,mb5.3
NVS Novosibirsk 84.91 327 *i* P **P** **03 44 56.6 -0.8**
NVS pmax pmax
comp=N,9.0nm,1.5s
NVS pmax pmax
comp=E,19nm,1.5s
NVS pmax pmax
comp=Z,24nm,1.5s,mb5.1
DAWY Dawson 85.94 24 *e*P **P** **03 45 02.0 -0.6**
KURK Kurchatov 86.36 322 P **P** **03 45 04.3 -0.3**
comp=Z,53nm,1.3s,mb5.6,SNR=8.0
KURK Kurchatov 86.36 322 *e*P **P** **03 45 03.6 -1.0**
KURK pmax pmax
comp=Z,19nm,1.4s,mb5.1
KURK Kurchatov 86.36 322 *e*P **P** **03 45 03.6 -1.1**
comp=Z,19nm,1.4s,mb5.1
FRU Bishkek 87.19 314 *e*P **P** **03 45 10.0 +1.3**
FRU *e* pP 03 45 20.0 -0.7
AAK Ala-Archa 87.24 313 *e*P **P** **03 45 03.4 -5.5**
AAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
O02C Red Bluff 88.83 49 ⇑P **P** **03 45 16.4 -0.1**
baz=89
MNRC McLaughlin Nat 88.87 51 ⇑P **P** **03 45 17.0 +0.3**
baz=89
WDC Whiskeytown Da 89.08 49 ⇓P **P** **03 45 17.0 -0.7**
baz=89
O03C Acorn Hollow, 89.37 50 ⇓P **P** **03 45 18.0 -1.0**
baz=90
E03A Lebam 89.39 43 ⇓P **P** **03 45 18.4 -0.8**
baz=90
PACP Pacheco Peak 89.48 53 ⇓P **P** **03 45 19.7 +0.2**
baz=90
S04C Ingram Canyon, 89.52 52 ⇑P **P** **03 45 19.9 +0.1**
baz=90
ORV Oroville 89.70 50 ⇑P **P** **03 45 20.1 -0.5**
baz=90
INK Inuvik 89.73 21 P **P** **03 45 19.3 -1.4**
comp=Z,3.2nm,1.0s,mb4.6,baz=182,slow=6.0,SNR=4.8
INK Inuvik 89.73 21 P **P** **03 45 19.3 -1.4**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 89.73 21 *e*P **P** **03 45 18.6 -2.1**
comp=Z,5.8nm,1.0s,mb4.9
G04A Mulino 89.91 45 ⇑P **P** **03 45 20.3 -1.3**
baz=90
PKD Parkfield 89.91 54 ⇓P **P** **03 45 21.4 -0.2**
baz=90
C04A Brinnon 90.00 42 P **P** **03 45 20.8 -1.2**
baz=90
H04A Detroit Lake 90.03 45 ⇑P **P** **03 45 21.1 -0.9**
baz=90
LAVA Lava Cap Winer 90.17 51 ⇑P **P** **03 45 22.4 -0.3**
baz=90
O05C Quincy 90.21 50 ⇓P **P** **03 45 23.1 +0.1**
baz=90
M05C Lookout 90.25 49 ⇓P **P** **03 45 22.4 -0.7**
baz=90
SMMC Simmler 90.26 55 ⇑P **P** **03 45 23.0 -0.2**
baz=90
S05C Merced 90.28 53 ⇑P **P** **03 45 23.0 -0.3**
baz=90
CMB Columbia Colle 90.34 52 *e*P **P** **03 45 23.9 +0.3**
CMB pmax pmax
comp=Z,7.0nm,1.2s,mb4.9
CMB Columbia Colle 90.34 52 *e*P **P** **03 45 23.9 +0.3**
comp=Z,7.0nm,1.2s,mb4.9
CMB Columbia Colle 90.34 52 ⇑P **P** **03 45 23.3 -0.3**
baz=90
PKM Peak Mountain 90.35 55 ⇑P **P** **03 45 24.7 +1.1**
baz=90
A04A Legoe Bay, Lum 90.35 41 ⇑P **P** **03 45 22.9 -0.7**
baz=90
P05C Yuba Gap, Truc 90.35 51 ⇓P **P** **03 45 23.8 +0.1**
baz=90
J05A Fort Rock 90.48 47 ⇓P **P** **03 45 24.1 -0.1**
baz=91,SNR=7.8
D05A Enumclaw 90.57 43 ⇑P **P** **03 45 24.0 -0.6**
baz=91
I05A Bend 90.59 46 ⇓P **P** **03 45 24.3 -0.4**
baz=91
BEKR Beckwourth 90.62 50 P **P** **03 45 24.8 -0.1**
baz=91,SNR=7.8
B05A Bryant 90.67 42 ⇓P **P** **03 45 24.4 -0.7**
baz=91
R05C Kirkwood Meado 90.67 51 ⇓P **P** **03 45 25.0 -0.1**
baz=91
H05A Madras 90.69 45 ⇓P **P** **03 45 24.2 -1.0**
baz=91
F05A White Salmon 90.72 44 ⇑P **P** **03 45 24.4 -0.9**
baz=91
M06C Likely Place G 90.73 49 ⇑P **P** **03 45 25.1 -0.3**
baz=91
T06C Millerton Lake 90.73 53 ⇑P **P** **03 45 25.3 -0.1**
baz=91
S06C San Francisco 90.74 52 ⇑P **P** **03 45 25.1 -0.3**
baz=91,SNR=6.7
A05A Maple Falls 90.80 41 ⇑P **P** **03 45 24.6 -1.2**
baz=91
C05A Tolt Reservoir 90.85 42 ⇑P **P** **03 45 25.1 -0.8**
baz=91
WCN Washoe City 91.00 51 ⇓P **P** **03 45 26.8 +0.1**
baz=91
O06A Flanigan 91.07 50 ⇑P **P** **03 45 27.1 +0.1**
baz=91
VES Vestal, Richgr 91.07 54 ⇓P **P** **03 45 26.6 -0.4**
baz=91
KCC Kaiser Creek 91.08 53 ⇓P **P** **03 45 26.6 -0.4**
baz=91
K06A Valley Falls 91.12 47 ⇓P **P** **03 45 26.8 -0.4**
baz=91
R06C Coleville 91.14 52 ⇓P **P** **03 45 27.3 0.0**
baz=91,SNR=6.9
N06A Buffalo Meadow 91.14 49 ⇑P **P** **03 45 27.1 -0.2**
baz=91,SNR=12
ARVC Arvin 91.18 55 ⇑P **P** **03 45 27.1 -0.4**
baz=91
HELL Mitchell Peak, 91.23 53 ⇑P **P** **03 45 27.4 -0.3**
baz=91,SNR=5.3
J06A Christmas Vall 91.26 47 ⇑P **P** **03 45 27.0 -0.8**
baz=91,SNR=5.8
I06A Prineville 91.31 46 ⇑P **P** **03 45 27.7 -0.4**
baz=91
PAHR Pah Rah Range 91.34 50 *e*P **P** **03 45 28.9 +0.7**
comp=Z,17nm,1.1s,mb5.3
R07C Lee Vining 91.39 52 ⇓P **P** **03 45 28.7 +0.2**
baz=92
FMP Fort Macarthur 91.44 56 ⇓P **P** **03 45 29.5 +0.8**
baz=92
DECC Green Verdugo 91.48 56 ⇑P **P** **03 45 28.8 0.0**
baz=92
ISA Isabella 91.54 54 *e*P **P** **03 45 29.8 +0.7**
ISA pmax pmax
comp=Z,12nm,1.3s,mb5.1
ISA Isabella 91.54 54 *e*P **P** **03 45 29.8 +0.7**
comp=Z,12nm,1.3s,mb5.1
ISA Isabella 91.54 54 ⇑P **P** **03 45 29.3 +0.2**
baz=92,SNR=5.4
MTUM Tungsten Hills 91.68 53 *e*P **P** **03 45 30.5 +0.7**
L07A Adell 91.68 48 ⇑P **P** **03 45 29.8 0.0**
baz=92,SNR=6.6
Q07A Schurz 91.69 51 ⇓P **P** **03 45 29.9 +0.1**
baz=92
MWC Mount Wilson 91.70 56 *e*P **P** **03 45 31.1 +1.2**
M07A Soldier Meadow 91.73 49 ⇑P **P** **03 45 30.1 +0.1**
baz=92
O07A Toulon 91.79 50 ⇑P **P** **03 45 30.4 +0.1**
baz=92,SNR=13
CHKZ Chkalovo 91.80 324 *e*P **P** **03 45 28.0 -2.3**
CHKZ pmax pmax
comp=Z,10.0nm,1.3s,mb5.0
CHKZ Chkalovo 91.80 324 *e*P **P** **03 45 27.9 -2.4**
comp=Z,10nm,1.3s,mb5.0
BVAR Borovoye Array 91.83 323 P **P** **03 45 28.5 -2.0**
comp=Z,3.2nm,0.6s,mb4.8,baz=106,slow=5.3,SNR=19
BVAR Borovoye Array 91.83 323 P **P** **03 45 28.5 -2.0**
BVAR pmax pmax
comp=Z,3.0nm,0.6s

EDW2 Edwards Air Fo 91.83 55 ⇓P **P** **03 45 31.3 +0.7**
baz=92,SNR=9.4
I07A Izee 91.84 46 P **P** **03 45 30.2 -0.3**
baz=92,SNR=5.8
BRVK Borovoye 91.90 323 *e*P **P** **03 45 29.1 -1.7**
BRVK pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
BRVK Borovoye 91.90 323 *e*P **P** **03 45 29.1 -1.7**
comp=Z,2.7nm,0.9s,mb4.6
TIN Tinemaha 91.91 53 ⇓P **P** **03 45 31.5 +0.6**
baz=92
CWC Cottonwood Cre 91.95 54 ⇓P **P** **03 45 31.6 +0.6**
baz=92
BFSC Mount Baldy St 92.03 56 ⇑P **P** **03 45 31.5 +0.1**
baz=92,SNR=6.4
HAWA Hanford 92.12 44 *e*P **P** **03 45 31.1 -0.7**
comp=Z,1.7nm,1.4s,mb4.2
LRMC Laurel Mountai 92.15 55 ⇑P **P** **03 45 32.7 +0.7**
baz=92,SNR=8.0
R08A Mina 92.16 52 ⇑P **P** **03 45 32.7 +0.7**
baz=92
WVOR Wild Horse Val 92.25 48 *e*P **P** **03 45 32.1 -0.3**
WVOR pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
WVOR Wild Horse Val 92.25 48 *e*P **P** **03 45 32.1 -0.3**
comp=Z,7.2nm,1.1s,mb4.9
DAC Darwin (Calif) 92.32 54 *e*P **P** **03 45 33.4 +0.6**
DAC pmax pmax
comp=Z,24nm,1.1s,mb5.4
DAC Darwin (Calif) 92.32 54 *e*P **P** **03 45 33.4 +0.6**
comp=Z,24nm,1.1s,mb5.5
M08A Happy Creek Ra 92.33 49 ⇓P **P** **03 45 33.1 +0.3**
baz=92
109C Camp Elliot, M 92.33 57 ⇑P **P** **03 45 33.3 +0.5**
baz=92
SYO Syowa Base 92.33 199⇑*e*P **P** **03 45 33.0 +0.2**
SYO Syowa Base 92.33 199⇓*e*pP pP 03 45 43.7 -1.2
MURC Murrieta 92.33 57 ⇓P **P** **03 45 33.1 +0.3**
baz=92
O08A Rochester Mine 92.36 50 ⇑P **P** **03 45 33.5 +0.6**
baz=92
Q08A Gabbs 92.36 51 P **P** **03 45 33.4 +0.5**
baz=92,SNR=18
MPMC Manual Prospec 92.38 54 ⇓P **P** **03 45 33.6 +0.6**
baz=92,SNR=17
N08A GE Springer Mi 92.43 49 ⇓P **P** **03 45 33.6 +0.3**
baz=92,SNR=11
L08A Fields 92.44 48 ⇑P **P** **03 45 33.2 -0.1**
baz=93,SNR=6.2
I08A Drewsey 92.48 46 ⇑P **P** **03 45 32.9 -0.6**
baz=93
H08A Prairie City 92.49 46 ⇓P **P** **03 45 32.8 -0.7**
baz=93
F08A Pendleton 92.57 44 ⇑P **P** **03 45 33.2 -0.7**
baz=93
GRAC Grapevine Rang 92.58 53 ⇓P **P** **03 45 34.3 +0.3**
baz=93
BBRC Big Bear Sol-O 92.64 56 ⇑P **P** **03 45 34.3 +0.1**
baz=93
S09A Goldfield 92.78 53 ⇓P **P** **03 45 35.3 +0.4**
baz=93,SNR=27
GSC Goldstone 92.85 55 *e*P **P** **03 45 36.0 +0.8**
GSC Goldstone 92.85 55 ⇓P **P** **03 45 35.4 +0.3**
baz=93,SNR=5.8
N09A Rock Creek Ran 92.90 49 ⇑P **P** **03 45 35.6 +0.2**
baz=93
MONP Monument Peak 92.91 57 ⇓P **P** **03 45 36.1 +0.7**
baz=93
L09A Wilkinson Ranc 92.92 48 ⇑P **P** **03 45 35.2 -0.3**
baz=93
FURC Furnace Creek, 92.93 54 ⇑P **P** **03 45 36.1 +0.5**
baz=93,SNR=5.9
Q09A Carvers 92.94 51 ⇑P **P** **03 45 36.1 +0.5**
baz=93,SNR=5.6
PFO Pinyon Flat Ob 92.95 57 ⇑P **P** **03 45 36.2 +0.5**
baz=93
K09A Rome 92.95 48 ⇓P **P** **03 45 34.8 -0.9**
baz=93
R09A Tonopah 92.96 52 P **P** **03 45 36.0 +0.4**
baz=93,SNR=18
M09A Marrel Ranch, 93.02 49 ⇓P **P** **03 45 36.2 +0.2**
baz=93
P09A Austin 93.05 51 ⇑P **P** **03 45 36.3 +0.2**
baz=93
O09A Fish Creek Ran 93.08 50 ⇓P **P** **03 45 36.6 +0.4**
baz=93,SNR=18
BMN Battle Mountai 93.08 50 *e*P **P** **03 45 36.6 +0.4**
BMN pmax pmax
comp=Z,14nm,1.0s,mb5.3
BMN Battle Mountai 93.08 50 *e*P **P** **03 45 36.6 +0.4**
comp=Z,14nm,1.0s,mb5.3
I09A Lost Marbles R 93.09 46 ⇑P **P** **03 45 35.4 -0.9**
baz=93
HEC Hector,Ludlow 93.19 55 ⇓P **P** **03 45 36.6 -0.1**
baz=93
H09A Durkee 93.22 46 ⇑P **P** **03 45 36.0 -0.9**
baz=93
SHOC Shoshone 93.34 54 ⇓P **P** **03 45 37.5 0.0**
baz=94
U10A Ash Meadows, A 93.35 54 ⇓P **P** **03 45 38.2 +0.7**
baz=94,SNR=6.3
BELC Belle Mtn. 93.37 56 ⇓P **P** **03 45 38.3 +0.7**
baz=94,SNR=11
SWSC Sam W. Stewart 93.43 57 ⇓P **P** **03 45 38.5 +0.6**
baz=94
TPNV Topopah Spring 93.47 53 *e*P **P** **03 45 38.7 +0.7**
TPNV *e**PP pP 03 45 50.7 +0.6
TPNV pmax pmax
comp=Z,18nm,1.2s,mb5.4
TPNV Topopah Spring 93.47 53 *e*P **P** **03 45 38.7 +0.7**
comp=Z,18nm,1.2s,mb5.4
TPNV *e*pP pP 03 45 50.7 +0.6
TPNV Topopah Spring 93.47 53 P **P** **03 45 38.6 +0.5**
baz=94,SNR=16
BMO Blue Mountains 93.49 45 *e*P **P** **03 45 36.9 -1.2**
BMO *e**PP pP 03 45 48.9 -1.3
BMO pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
BMO Blue Mountains 93.49 45 *e*P **P** **03 45 36.9 -1.2**
comp=Z,6.1nm,1.1s,mb4.9
BMO *e*pP pP 03 45 48.9 -1.3
R10A Warm Springs 93.56 52 ⇓P **P** **03 45 39.1 +0.6**
baz=94
P10A Eureka 93.57 51 ⇓P **P** **03 45 38.9 +0.3**
baz=94
TUQ Turquoise Mtn. 93.58 55 ⇓P **P** **03 45 38.8 +0.3**
baz=94
O10A Cortez Mining, 93.61 50 ⇑P **P** **03 45 39.0 +0.3**
baz=94
N10A Dunphy 93.65 50 ⇓P **P** **03 45 39.1 +0.2**
baz=94
M10A I.L. Ranch, Tu 93.71 49 ⇓P **P** **03 45 39.4 +0.2**
baz=94
GMRC Granite Mounta 93.73 56 ⇓P **P** **03 45 39.9 +0.7**
baz=94,SNR=13
NEW Newport 93.97 42 *e*P **P** **03 45 38.9 -1.4**
NEW *e**PP pP 03 45 50.9 -1.5
NEW pmax pmax
comp=Z,10.0nm,1.2s
NEW Newport 93.97 42 *e*P **P** **03 45 38.9 -1.4**
comp=Z,10nm,1.2s,mb5.1
NEW *e*pP pP 03 45 50.9 -1.5
IRM Iron Mountain 94.09 56 ⇑P **P** **03 45 41.7 +0.8**
baz=94,SNR=8.6
U11A Corn Creek 94.11 54 ⇓P **P** **03 45 41.8 +0.9**
baz=94
P11A Circle Ranch, 94.11 51 ⇑P **P** **03 45 41.5 +0.5**
baz=94
O11A Cowboy Ranch, 94.24 50 ⇓P **P** **03 45 41.9 +0.3**
baz=94,SNR=9.2
N11A Elko Archery C 94.24 50 ⇑P **P** **03 45 41.8 +0.2**
baz=94
GLA Glamis 94.25 57 ⇑P **P** **03 45 42.5 +0.9**
baz=94
M11A Holland Ranch, 94.26 49 ⇑P **P** **03 45 41.7 0.0**
baz=94
SHPR Sheep Range 94.30 54 *e*P **P** **03 45 42.8 +0.9**
W12A Cal Nev Ari 94.42 55 ⇓P **P** **03 45 42.8 +0.4**
baz=94
V12A Nelson 94.48 55 ⇑P **P** **03 45 43.2 +0.6**
baz=95
Y12C Blythe 94.57 57 ⇓P **P** **03 45 43.7 +0.6**
baz=95
P12A McGill 94.76 51 ⇑P **P** **03 45 44.6 +0.7**
baz=95
N12A Clover Valley, 94.77 50 ⇑P **P** **03 45 44.2 +0.1**
baz=95

Q12A Willow Creek R 94.78 51 ⇓P P 03 45 44.7 +0.6
baz=95,SNR=6.7
U12A Valley of Fire 94.79 54 ⇓P P 03 45 44.7 +0.6
baz=95
M12A Wells 94.91 49 ⇑P P 03 45 44.7 0.0
baz=95
PDMCI Parker Dam,Lak 94.94 56 ⇑P P 03 45 45.3 +0.5
baz=95
O12A Currie 94.95 50 ⇑P P 03 45 44.9 0.0
baz=95,SNR=7.9
Y13A Salome 95.15 57 ⇓P P 03 45 46.8 +1.0
baz=95
W13A Hualapai Mount 95.21 55 ⇓P P 03 45 46.9 +0.9
baz=95
X13A Yucca 95.21 56 ⇓P P 03 45 46.6 +0.6
baz=95
N13A Wendover, West 95.40 50 ⇑P P 03 45 47.2 +0.3
baz=96
HLID Hailey 95.45 47 *e*P P 03 45 46.6 -0.5
comp=Z,2.0nm,0.9s,mb4.5
ARUT Antelope Range 95.77 53 *e*P P 03 45 48.5 -0.1
CCUT Cedar City 95.82 53 *e*P P 03 45 49.8 +1.0
Y14A Wickenburg 95.84 57 ⇓P P 03 45 50.0 +1.1
baz=96
W14A Seligman 95.87 55 ⇑P P 03 45 50.3 +1.3
baz=96
X14A Yava 95.98 56 ⇑P P 03 45 50.8 +1.3
baz=96
WALA Waterton Lakes 96.15 41 *e*P P 03 45 50.2 -0.2
comp=Z,9.9nm,1.1s,mb5.2
WALA *e*pP pP 03 45 59.0 -3.4
WALA *e* 03 46 07.6
YKA Yellowknife Ar 96.42 28 P P 03 45 50.5 -1.0
comp=Z,3.2nm,0.9s,mb4.7,baz=269,slow=4.3,SNR=12
YKA LR LR 04 32 31.6
comp=Z,141nm,18.1s,MS4.5,baz=270,slow=38
YKA Yellowknife Ar 96.42 28 P P 03 45 50.5 -1.0
YKA pmax pmax
comp=Z,3.0nm,0.9s
YKA MLR MLR
comp=Z,141nm,18.1s
YKA Yellowknife Ar 96.42 28 P P 03 45 50.5 -1.0
YKA LR LR 04 32 31.6
X15A Humboldt 96.52 56 ⇓P P 03 45 53.3 +1.3
baz=97
W15A Williams 96.54 55 ⇑P P 03 45 53.5 +1.4
baz=97
EDM Edmonton 96.71 37 *e*P P 03 45 51.4 -1.4
EDM *e**PP pP 03 46 02.9 -2.0
MSU Marysvale 96.81 52 *e*P P 03 45 54.9 +1.6
116A Eloy 96.84 58 ⇑P P 03 45 54.8 +1.4
baz=97
HWUT Hardware Ranch 97.44 49 *e*P P 03 45 55.2 -0.9
comp=Z,2.3nm,0.9s,mb4.6
RRI2 Red Ridge 97.69 47 *e*P P 03 45 56.9 -0.4
comp=Z,2.9nm,0.8s,mb4.9
SVE Sverdlovsk 97.75 326 *e*P P 03 46 06.5 +9.0
TPAW Teton Pass 97.96 47 *e*P P 03 45 58.6 +0.1
comp=Z,4.6nm,1.1s,mb4.9
WSAR Wadi Sarin 97.99 292 LR LR 04 33 18.2
comp=Z,34nm,20.4s,MS3.8,baz=153,slow=37
MOOW Moose Ponds 98.12 47 *e*P P 03 45 58.3 -0.9
comp=Z,1.5nm,1.0s,mb4.5
PDAR Pinedale Array 98.96 48 P P 03 46 02.1 -0.9
comp=Z,2.4nm,1.0s,mb4.7,baz=270,slow=3.0,SNR=13
PDAR LR LR 04 27 56.3
comp=Z,346nm,19.4s,MS4.9,baz=276,slow=34
SMCO Snowmass 100.89 52 *e*Pdif Pdif 03 46 12.3 +0.7
comp=Z,3.5nm,0.9s
AKASG Malin Array Be 117.08 324 PKP PKPdf 03 51 06.7 -0.7
comp=Z,2.3nm,0.5s,baz=57,slow=2.3,SNR=14
AKASG Malin Array Be 117.08 324 PKIKP PKPdf 03 51 06.7 -0.6
AKASG pmax pmax
comp=Z,2.0nm,0.5s
BRTR Keskin Array B 117.87 311 PKP PKPdf 03 51 09.2 +0.4
comp=Z,1.7nm,1.0s,baz=146,slow=2.4,SNR=5.1
BRTR PP PP 03 52 25.8 +2.9
comp=Z,1.8nm,1.1s,baz=79,slow=6.4,SNR=5.8
BRTR Keskin Array B 117.87 311 PKIKP PKPdf 03 51 09.3 +0.5
BRTR 03 52 25.8
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR pmax pmax
comp=Z,2.0nm,1.1s
NB2 NORSAR Subarra 119.35 340 PKPd PKPdf 03 51 08.5 -3.2
comp=Z,1.9nm,1.0s,baz=39,slow=1.9
NOA NORSAR Array B 119.35 340 PKP PKPdf 03 51 10.8 -0.9
comp=Z,2.2nm,0.8s,baz=44,slow=1.9,SNR=8.5
NOA NORSAR Array B 119.35 340 PKIKP PKPdf 03 51 10.8 -0.9
NOA pmax pmax
comp=Z,2.0nm,0.8s
MLR Muntele Rosu 121.25 320 ⇑*i*P PKPdf 03 51 15.1 -0.2
MLR Muntele Rosu 121.25 320 ⇑P PKPdf 03 51 15.1 -0.2
KOLS Kolonicke sedl 121.89 325 *e*PKP PKPdf 03 51 17.1 +0.5
STHS Stebnicka Huta 122.23 326 *e*PKP PKPdf 03 51 18.0 +0.8
CRVS Cervenica-Dubn 122.37 325 *e*PKP PKPdf 03 51 17.8 +0.3
KECS Kecovo 123.14 325 *e*PKIKP PKPdf 03 51 20.0 +1.0
KECS Kecovo 123.14 325 *e* PKPdf 03 51 20.0 +1.0
OKC Ostrava-Krasne 123.69 327 *e*PKPdf PKPdf 03 51 20.3 +0.3
PSZ Piszkesteto 123.77 325 ⇓*i*P PKPdf 03 51 20.7 +0.5
PSZ Piszkesteto 123.77 325 *e*PKPdf PKPdf 03 51 20.0 -0.1
BZS Buzias 123.91 322 ⇑*i*P PKPdf 03 51 20.6 +0.2
BZS Buzias 123.91 322 ⇑P PKPdf 03 51 20.6 +0.1
MORC Moravsky Berou 124.05 328 ⇓*i*P PKPdf 03 51 21.1 +0.4
MORC Moravsky Berou 124.05 328 *e*PKPdf PKPdf 03 51 20.8 +0.1
VYHS Vyhne 124.06 326 *e*PKP PKPdf 03 51 20.9 +0.2
VTS Vitosha 124.26 318 ⇑*i*P PKPdf 03 51 21.6 +0.5
VTS Vitosha 124.26 318 ⇑P PKPdf 03 51 21.6 +0.5
DPC Dobruska-Polom 124.35 329 *e*PKPdf PKPdf 03 51 21.8 +0.5
PVCC Panska Ves 125.13 330 *e*PKPdf PKPdf 03 51 23.1 +0.3
PVCC *e*x x 03 51 32.9
ZST Bratislava 125.19 326 *e*PKP PKPdf 03 51 21.9 -1.0
BRG Berggiesshubel 125.22 330 *e*PKP PKPdf 03 51 22.9 -0.1
comp=Z,8.2nm,1.3s
BRG *e* 03 51 35.1
comp=Z,11nm,1.7s
BRG Berggiesshubel 125.22 330 *e*PKIKP PKPdf 03 51 22.9 0.0
BRG *e* 03 51 35.1
BRG pmax pmax
comp=Z,2.0nm,1.3s
BRG pmax pmax
comp=Z,8.0nm,1.7s
GRUS Gruza 125.30 320 ⇓*i*PKP PKPdf 03 51 23.3 +0.2
CLL Collm 125.40 331 ⇓*i*PKIKP PKPdf 03 51 23.5 +0.2
comp=Z,logA/T=1.0
CLL *e* 03 51 28.0
CLL Collm 125.40 331 ⇓*i*PKPdf PKPdf 03 51 23.5 +0.2
comp=Z,10.0nm,1.0s
CLL *e*x x 03 51 28.0
CLL Collm 125.40 331 *e*PKIKP PKPdf 03 51 17.0 -6.3
CLL pmax pmax
comp=Z,10.0nm,1.0s
CLL Collm 125.40 331 *e*PKP PKPdf 03 51 17.0 -6.3
CLL *e*pPKP pPKPdf 03 51 58.0 +22
PKSM Moragy 125.40 324 ⇓*i*P PKPdf 03 51 23.3 0.0
PKSM Moragy 125.40 324 ⇓P PKPdf 03 51 23.3 0.0
TREC Trest 125.42 328 *e*PKPdf PKPdf 03 51 23.4 +0.1
TREC *e*x x 03 51 35.4
TREC AMS AMS 04 52 10.0
comp=Z,100nm,17.0s
PRU Pruhonice 125.48 329 *e*PKPdf PKPdf 03 51 23.5 +0.1
PRU *e*x x 03 51 35.5
DIVS Divcibare 125.65 321 ⇓*i*PKP PKPdf 03 51 24.3 +0.5
BBLS Bajina Basta - 126.13 321 ⇓*i*PKP PKPdf 03 51 25.7 +1.0
NKC Novy Kostel 126.36 331 *e*PKPdf PKPdf 03 51 25.4 +0.3
NKC *e*x x 03 51 35.3
KHC Kasperske Hory 126.50 329 *e*PKPdf PKPdf 03 51 25.8 +0.4
KHC *e*x x 03 51 37.0
KHC AMS AMS 04 49 50.0
comp=Z,100nm,16.8s
GEC2 GERESS Array S 126.62 329 *e*PKIKP PKPdf 03 51 25.8 +0.2
GEC2 *e* 03 51 37.5
GERES GERESS Array B 126.62 329 PKP PKPdf 03 51 26.0 +0.4
comp=Z,6.1nm,0.8s,baz=74,slow=1.6,SNR=42
GERES GERESS Array B 126.62 329 PKIKP PKPdf 03 51 26.0 +0.4
GERES pmax pmax
comp=Z,6.0nm,0.9s
GRA1 Grafenberg Arr 127.32 331 *e*PKP PKPdf 03 51 27.3 +0.3
GRF Grafenberg Arr 127.32 331 *e*PKPdf PKPdf 03 51 27.3 +0.3
STU Stuttgart 128.92 331 *e*PKIKP PKPdf 03 51 30.7 +0.7
CPUP Villa Florida 134.87 138 PKP PKPdf 03 51 41.9 +0.6
comp=Z,1.4nm,0.6s,baz=226,slow=5.6,SNR=5.0
CPUP Villa Florida 134.87 138 PKIKP PKPdf 03 51 41.9 +0.7
CPUP pmax pmax
comp=Z,1.0nm,0.6s

SDV Santo Domingo 135.29 84 *e*PKPdf PKPdf 03 51 42.5 +0.5
SAML Samuel 139.34 112 *e*PKPdf PKPdf 03 51 49.7 +0.2
BDFB Brasilia 148.48 135 PKPbc PKPbc 03 52 09.9 +0.8
comp=Z,14nm,0.9s,baz=57,slow=0.6,SNR=8.5
BDFB Brasilia 148.48 135 PKIKP PKPbc 03 52 09.9 +0.9
BDFB pmax pmax
comp=Z,14nm,0.9s
TOA0 Torodi Ar. Sit 152.47 285 *e*PKPbc PKPbc 03 52 19.1 +0.5
TORD Torodi Ar. Bea 152.47 285 PKPbc PKPbc 03 52 19.2 +0.6
comp=Z,4.6nm,0.8s,baz=61,slow=1.6,SNR=9.8
TORD PKPab PKPab 03 52 30.5 +1.6
comp=Z,13nm,0.7s,baz=68,slow=2.4,SNR=19
TORD Torodi Ar. Bea 152.47 285 PKPbc PKPbc 03 52 19.2 +0.6
TORD PKPab PKPab 03 52 30.5 +1.6

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*NIED **12** 03:37:00, 32.60N×142.40E, h8km, Mw4.2 Best double couple: M₀2.28000×10¹⁵ NP1:φs182.00000°, δ66.00000°, λ-85.00000°. NP2:φs351.00000°, δ24.00000°, λ-100.00000°.*
*IDC **12** 03:37:36.5±0.6, 32.42N×142.57E, h0km, mb4.2/16, mb1 4.3/20, mb1mx4.3/27, mbtmp4.2/20, ML4.1/4, MS3.0/3, Ms1 3.0/3, ms1mx2.8/24, Error ellipse: s-maj=19.6km s-min=14.9km az=81.0*
*JMA **12** 03:37:38.5±0.3, 32.64N×142.43E, h0km, M4.5*
*ISCJB **12** 03:37:39.9±1.4, 32.50N±0.04×142.48E±0.05, h31km±10km, mb4.3/45, Error ellipse: s-maj=8.7km s-min=5.3km az=81.4*
*MOS **12** 03:37:39.9±0.8, 32.38N×142.48E, h33km, mb4.6/25, Error ellipse: s-maj=18.7km s-min=9.6km az=113.4*
*BJI **12** 03:37:40.6, 32.40N×142.50E, h33km, mB4.6, mb4.5, Ms4.0, Msz3.6*
*NEIC **12** 03:37:41.6±2.6, 32.43N×142.55E, h33km±17km, mb4.4/25, Error ellipse: s-maj=7.4km s-min=5.9km az=91.0*
ISC 12 03:37:40.8±1.4**, 32.50N**±0.04×**142.52E**±0.05**, h26**km±10km**, n112, σ0.88**/121**, mb4.3**/45**, Southeast of Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHJ2 Mitsune 2.35 286 P Pn 03 38 17.8 +0.1
JHJ Hachijo jima 2 2.38 286 Pn Pn 03 38 17.7 -0.4
126nm,0.3s,baz=86,slow=21,SNR=101
JHJ Sn Sn 03 38 45.8 -0.7
121nm,0.3s,baz=222,slow=23,SNR=6.5
BSO1 Boso 1 2.50 330 P Pn 03 38 19.1 -0.7
BSO3 Boso 3 2.84 324 P Pn 03 38 24.3 -0.1
JMY Miyakejima3 2.96 303 P Pn 03 38 26.3 +0.2
BSO4 Boso 4 3.07 324 P Pn 03 38 28.0 +0.3
JIM2 Oshima 3 3.39 311 P Pn 03 38 31.8 -0.2
JIM2 *e*S Sn 03 39 10.9 -0.5
JOD2 Odawara 2 3.96 315 P Pn 03 38 39.5 -0.4
JOD2 *e*S Sn 03 39 23.9 -1.6
JYN Shimob 4.45 313 P Pn 03 38 47.9 +1.3
JRY Ryogami san 4.61 321 P Pn 03 38 49.7 +0.9
JRY *e*S Sn 03 39 42.0 +0.6
JAG Ashikaga 4.66 328 P Pn 03 38 49.5 0.0
JAG S Sn 03 39 41.3 -1.4
JIE Ise 5.21 293 P Pn 03 38 57.8 +0.8
MJAR Matsushiro Arr 5.37 320 Pn Pn 03 39 00.3 +1.0
15nm,0.3s,baz=158,slow=12,SNR=89
MJAR Sn Sn 03 40 01.7 +1.5
11nm,0.3s,baz=110,slow=25,SNR=6.6
MJAR LR LR 03 41 00.4
comp=Z,138nm,18.8s,baz=130,slow=38
MJAR Matsushiro Arr 5.37 320 P Pn 03 39 00.3 +1.0
MJAR 03 40 01.7
MJAR pmax pmax
comp=Z,15nm,0.3s
MJAR smax
comp=N,11nm,0.3s
MJAR MLR MLR
comp=Z,138nm,18.8s
MAJO Matsushiro 5.38 320 *e*P Pn 03 39 00.6 +1.3
MAJO *e* 03 40 00.6
MAJO pmax pmax
comp=Z,50nm,0.4s
MAJO Matsushiro 5.38 320 *e*Pn Pn 03 39 00.6 +1.3
comp=Z,50nm,0.4s
MAJO *e*Sn Sn 03 40 00.6 +0.3
MAT Matsushiro 5.38 320 P Pn 03 39 00.7 +1.4
MAT S Sn 03 39 59.5 -0.8
MAT Matsushiro 5.38 320 P Pn 03 39 00.8 +1.5
MAT *e*S Sn 03 40 00.4 +0.1
CBIJ Chichi jima 5.39 183 Pn Pn 03 38 55.4 -4.2
comp=Z,8.1nm,0.3s,baz=250,slow=20,SNR=25
CBIJ Sn Sn 03 39 56.6 -4.1
comp=Z,99nm,0.3s,baz=282,slow=21,SNR=10
CBIJ LR LR 03 40 30.6
comp=Z,247nm,20.3s,baz=55,slow=33
CBIJ Chichi jima 5.39 183 P Pn 03 38 57.5 -2.1
JMM Marumori 5.53 346 P Pn 03 38 59.6 -1.9
JMM *e*S Sn 03 39 58.7 -5.5
JGM Miyama 5.77 305 P Pn 03 39 06.8 +2.1
JNS Sasagawa 5.92 335 P Pn 03 39 06.8 +0.1
JMK Ichinoseki 6.52 351 P Pn 03 39 12.8 -2.2
JMK *e*S Sn 03 40 22.2 -6.3
ASAJ Asahikawa 11.60 0 Pn Pn 03 40 23.1 -1.4
comp=Z,1.5nm,0.3s,baz=214,slow=11,SNR=7.8
ASAJ LR LR 03 45 36.5
comp=Z,50nm,18.6s,baz=180,slow=41
ASAJ Asahikawa 11.60 0 P Pn 03 40 23.2 -1.4
ASAJ pmax pmax
comp=Z,2.0nm,0.3s
ASAJ MLR MLR
comp=Z,50nm,18.6s
YSS Yuzh-Sakhalins 14.44 1 P Pn 03 41 01.2 -2.2
KLR Kul'dur 18.56 337 *e*P Pn 03 41 52.6 -3.3
KLR pmax pmax
comp=Z,28nm,1.4s
HIA Hailar 23.88 321 *e*P P 03 42 52.4 +0.2
HIA pmax pmax
comp=Z,19nm,0.8s
HIA Hailar 23.88 321 *e*P P 03 42 52.4 +0.2
comp=Z,19nm,0.8s,mb4.6
KMI Kunming 35.46 268 P P 03 44 36.3 +1.3
KMI AP pP 03 44 45.9 +3.1
KMI XP sP 03 44 50.3 +4.2
KMI PP PP 03 45 56.3 +0.7
KMI S S 03 50 06.9 -1.5
KMI XS sS 03 50 26.6 +5.2
KMI SS SS 03 52 25.7 -17
KMI AMB AMB
comp=Z,7.0nm,0.7s,mb4.7
KMI AMB AMB
comp=Z,32nm,3.5s
KMI LR LR
comp=N,121nm,18.3s
KMI LR LR
comp=E,136nm,18.3s
KMI LR LR
comp=Z,134nm,19.7s
KURK Kurchatov 49.52 311 *e*P P 03 46 29.7 +0.5
KURK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KURK Kurchatov 49.52 311 *e*P P 03 46 29.6 +0.5
comp=Z,4.2nm,0.8s,mb4.5
WRAB Tennant Creek 52.72 190 *e*P P 03 46 52.3 -0.9
WRAB pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
WRAB Tennant Creek 52.72 190 *e*P P 03 46 52.3 -0.9
comp=Z,4.6nm,0.7s,mb4.5
WB2 Warramunga Arr 52.73 190 *e*P P 03 46 52.5 -0.7
FITZ Fitzroy Crossi 52.85 200 *e*P P 03 46 54.4 +0.3
comp=Z,11nm,1.4s,mb4.6
FITZ Fitzroy Crossi 52.85 200 P P 03 46 54.0 -0.1
comp=Z,2.4nm,0.8s,mb4.2,baz=90,slow=9.7,SNR=5.8
CHKZ Chkalovo 54.13 316 *e*P P 03 47 02.6 -0.9
CHKZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CHKZ Chkalovo 54.13 316 *e*P P 03 47 02.6 -0.9
comp=Z,2.1nm,0.7s,mb4.2
BVAR Borovoye Array 54.35 315 P P 03 47 05.8 +0.7
comp=Z,0.7nm,0.5s,mb3.8,baz=80,slow=7.9,SNR=2.7
BVAR Borovoye Array 54.35 315 P P 03 47 05.8 +0.7
BVAR pmax pmax
comp=Z,1.0nm,0.5s
AS31 Alice Springs 56.45 189 *e*P P 03 47 19.8 -0.5
ASAR Alice Springs 56.45 189 P P 03 47 19.6 -0.7
comp=Z,0.8nm,0.4s,mb4.1,baz=13,slow=8.1,SNR=16
ASAR Alice Springs 56.45 189 P P 03 47 19.6 -0.7
ASAR pmax pmax
comp=Z,1.0nm,0.4s

INK Inuvik 58.03 26 P P 03 47 31.4 0.0
comp=Z,4.2nm,0.8s,mb4.5,baz=294,slow=5.9,SNR=7.5
INK Inuvik 58.03 26 P P 03 47 31.4 0.0
INK pmax pmax
comp=Z,4.0nm,0.8s
INK Inuvik 58.03 26 *e*P P 03 47 31.1 -0.4
comp=Z,4.2nm,0.8s,mb4.5
AKTK Aktyubinsk 62.42 314 P P 03 48 01.7 +0.2
AKTO Aktyubinsk 62.42 314 P P 03 48 01.7 +0.2
comp=Z,1.7nm,0.6s,mb4.3,baz=86,slow=13,SNR=7.3
AKTO Aktyubinsk 62.42 314 P P 03 48 01.7 +0.2
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
STKA Stephens Creek 64.04 181 P P 03 48 11.9 -0.2
comp=Z,1.2nm,0.4s,mb4.2,baz=342,slow=3.2,SNR=3.7
ARCES ARCESS Array B 68.56 340 P P 03 48 41.6 +0.5
comp=Z,2.4nm,0.9s,mb4.1,baz=41,slow=11,SNR=3.9
ARCES ARCESS Array B 68.56 340 P P 03 48 41.6 +0.5
ARCES pmax pmax
comp=Z,2.0nm,0.9s
JOF Joensuu 70.39 333 *e*p P 03 48 51.6 -0.9
comp=Z,2.8nm,0.4s,mb4.5
YBH Yreka Blue Hor 72.42 51 P P 03 49 05.7 +1.0
comp=Z,4.4nm,0.9s,mb4.4,baz=260,slow=3.3,SNR=4.4
YBH Yreka Blue Hor 72.42 51 P P 03 49 05.7 +1.0
YBH pmax pmax
comp=Z,4.0nm,0.9s
KAF Kangasniemi 72.75 334 *e*p P 03 49 05.8 -0.9
comp=Z,4.5nm,0.4s,mb4.8,baz=51,slow=5.6
KAF Kangasniemi 72.75 334 *e*P P 03 49 05.8 -0.9
KAF pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
NEW Newport 72.77 43 *e*P P 03 49 06.6 -0.2
NEW pmax pmax
comp=Z,3.0nm,1.0s
NEW Newport 72.77 43 *e*P P 03 49 06.6 -0.2
comp=Z,3.2nm,1.0s,mb4.2
FINES FINESS Array B 73.25 333 P P 03 49 09.8 +0.2
comp=Z,7.3nm,1.0s,mb4.6,baz=56,slow=5.9,SNR=30
FINES FINESS Array B 73.25 333 P P 03 49 09.8 +0.2
FINES pmax pmax
comp=Z,7.0nm,1.0s
WVOR Wild Horse Val 74.73 49 *e*P P 03 49 18.9 +0.6
WVOR pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
WVOR Wild Horse Val 74.73 49 *e*P P 03 49 18.9 +0.6
comp=Z,3.0nm,0.9s,mb4.2
HLID Hailey 76.80 47 *e*P P 03 49 30.5 +0.4
comp=Z,1.0nm,0.5s,mb4.0
NVAR Mina Array Bea 76.99 53 P P 03 49 32.0 +0.8
comp=Z,3.4nm,0.7s,mb4.4,baz=279,slow=7.2,SNR=18
AKASG Malin Array Be 78.45 323 P P 03 49 39.1 -0.2
comp=Z,1.0nm,0.5s,mb4.0,baz=48,slow=5.9,SNR=8.6
AKASG Malin Array Be 78.45 323 P P 03 49 39.1 -0.2
AKASG pmax pmax
comp=Z,1.0nm,0.5s
NB2 NORSAR Subarra 78.72 338 P P 03 49 40.4 -0.4
comp=Z,2.9nm,0.7s,mb4.3,baz=40,slow=5.6
NOA NORSAR Array B 78.72 338 P P 03 49 40.8 0.0
comp=Z,2.4nm,0.7s,mb4.2,baz=40,slow=5.6,SNR=11
NOA NORSAR Array B 78.72 338 P P 03 49 40.8 0.0
NOA pmax pmax
comp=Z,2.0nm,0.7s
MOOW Moose Ponds 78.92 45 *e*P P 03 49 42.7 +0.8
comp=Z,0.9nm,0.7s,mb3.8
TPAW Teton Pass 78.95 45 *e*P P 03 49 43.1 +1.0
comp=Z,2.1nm,0.6s,mb4.2
LOHW Long Hollow 79.09 45 *e*P P 03 49 43.5 +0.7
comp=Z,4.2nm,1.3s,mb4.2
TPNV Topopah Spring 79.16 53 *e*P P 03 49 43.4 +0.2
TPNV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TPNV Topopah Spring 79.16 53 *e*P P 03 49 43.4 +0.2
comp=Z,5.6nm,0.8s,mb4.5
HWUT Hardware Ranch 79.63 47 *e*P P 03 49 46.4 +0.6
comp=Z,1.6nm,0.8s,mb4.0
DUG Dugway 79.64 49 *e*P P 03 49 46.1 +0.3
DUG pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
DUG Dugway 79.64 49 *e*P P 03 49 46.1 +0.2
comp=Z,2.4nm,0.7s,mb4.2
BW06 Boulder Array 80.20 45 *e*P P 03 49 48.5 -0.4
comp=Z,1.9nm,0.8s,mb4.1
PDAR Pinedale Array 80.20 45 P P 03 49 49.2 +0.4
comp=Z,1.5nm,0.8s,mb4.0,baz=301,slow=2.8,SNR=12
BRTR Keskin Array B 82.56 313 P P 03 50 01.9 +0.5
comp=Z,1.0nm,0.8s,mb3.9,baz=114,slow=3.4,SNR=5.1
BRTR Keskin Array B 82.56 313 P P 03 50 01.9 +0.5
BRTR pmax pmax
comp=Z,1.0nm,0.8s
RSSD Black Hills 82.60 42 *e*P P 03 50 01.5 -0.1
RSSD pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
RSSD Black Hills 82.60 42 *e*P P 03 50 01.5 -0.1
comp=Z,1.8nm,0.7s,mb4.2
ULM Lac du Bonnet 82.78 33 P P 03 50 01.5 -1.0
comp=Z,1.6nm,0.8s,mb4.1,baz=261,slow=6.7,SNR=2.9
STHS Stebnicka Huta 83.19 326 *e*P P 03 50 06.6 +1.9
KECS Kecovo 84.20 325 *e*pP pP 03 50 21.4 +3.0
KECS Kecovo 84.20 325 *e*P pP 03 50 21.5 +3.1
MORC Moravsky Berou 84.66 328 *e*P P 03 50 12.4 +0.3
MORC pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
MORC Moravsky Berou 84.66 328 *e*P P 03 50 12.4 +0.2
comp=Z,1.5nm,0.5s,mb4.4
PSZ Piszkesteto 84.88 325 *e*P P 03 50 14.2 +1.0
PSZ pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
PSZ Piszkesteto 84.88 325 *e*P P 03 50 14.2 +1.0
comp=Z,5.9nm,1.0s,mb4.7
VYHS Vyhne 84.98 326 *e*P P 03 50 14.7 +1.0
TUC Tucson 85.48 54 *e*P P 03 50 16.1 -0.1
TUC pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
TUC Tucson 85.48 54 *e*P P 03 50 16.1 -0.1
comp=Z,1.7nm,1.0s,mb4.1
CLL Collm 85.48 331 P P 03 50 16.0 -0.3
comp=Z,logA/T=0.8,mb4.7
CLL Collm 85.48 331 *e*P P 03 50 16.0 -0.3
comp=Z,7.0nm,1.1s,mb4.7
ANMO Albuquerque 86.79 50 *e*P P 03 50 23.4 +0.7
ANMO pmax pmax
comp=Z,1.0nm,0.8s
ANMO Albuquerque 86.79 50 *e*P P 03 50 23.4 +0.7
comp=Z,1.3nm,0.8s,mb4.2
GERES GERESS Array B 87.05 329 P P 03 50 24.0 +0.1
comp=Z,0.3nm,0.5s,mb3.8,baz=45,slow=8.1,SNR=3.9
MNTX Cornudas Mount 89.51 52 *e*P P 03 50 35.7 0.0
comp=Z,0.5nm,0.7s,mb4.0
AMTX Amarillo 89.88 48 *e*P P 03 50 37.6 +0.2
comp=Z,2.9nm,0.8s,mb4.7
WMOK Wichita Mounta 91.77 46 *e*P P 03 50 45.8 -0.4
WMOK pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
WMOK Wichita Mounta 91.77 46 *e*P P 03 50 45.8 -0.4
comp=Z,2.3nm,0.8s,mb4.6
LOR Lormes 92.32 333 *e*PKIKP P 03 50 47.9 -0.8
LPL La Plagne 92.61 331 *e*PKIKP P 03 50 48.9 -1.2
comp=Z,4.7nm,0.8s,mb4.7
LPG La Plagne 92.62 331 *e*PKIKP P 03 50 49.2 -0.9
comp=Z,4.7nm,0.6s,mb4.8
AVF Avril sur Loir 92.91 333 *e*PKIKP P 03 50 50.7 -0.7
comp=Z,14nm,1.0s,mb5.0
TORD Torodi Ar. Bea 121.15 314 PKP PKPdf 03 56 31.1 -0.1
comp=Z,0.5nm,0.9s,baz=14,slow=1.2,SNR=4.3
SAML Samuel 146.61 51 *e*PKPbc PKPbc 03 57 19.6 -0.3

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*NIED **12** 03:41:00, 22.30N×121.50E, h5km, Mw4.1 Best double couple: M₀1.49000×10¹⁵ NP1:φs72.00000°, δ75.00000°, λ-158.00000°. NP2:φs337.00000°, δ69.00000°, λ-16.00000°.*
*ISCJB **12** 03:41:54.0±0.7, 22.11N±0.04×121.57E±0.05, h42km±7km, mb4.1/17, MS4.3/1, Error ellipse: s-maj=8.8km s-min=6.1km az=84.6*
*BJI **12** 03:41:53.1, 22.12N×121.07E, h13km, mb4.6, ML3.9*
*NEIC **12** 03:41:55.0±0.5, 22.08N×121.54E, h35km, mb4.3/3, Error ellipse: s-maj=13.1km s-min=9.4km az=74.0*
*IDC **12** 03:41:56.2±5.0, 22.07N×121.58E, h46km±50km, mb3.9/15, mb1 4.0/16, mb1mx3.9/23, mbtmp4.2/16, ML3.7/1, MS3.8/2, Ms1 3.8/2, ms1mx3.2/23, Error ellipse: s-maj=34.8km s-min=15.2km az=63.0*
*JMA **12** 03:41:56.4±0.2, 22.30N×121.53E, h85km, M4.3*
*MAN **12** 03:42:50.6, 17.76N×120.86E, h1km*

ISC 12 03:41:56.1±0.7**, 2216N**±004×**12157E**±005**, h42**^{km}±7^{km}**, n48,** σ**1**^{s}**10**/61**, mb4.1**/17**, MS4.3**/1**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**2.00**	**1**	*e*Pg	**Pn**	**03 42 25.8**	**-1.6**
YHNB	**Yeheng**	**2.50**	**356**	*e*Pg	**Pn**	**03 42 34.5**	**+0.2**
YOJ	**Yonaguni jima**	**2.65**	**30**	P	**Pn**	**03 42 36.4**	**+0.2**
YOJ				S	**Sn**	**03 43 06.8**	**-0.3**
HATJ	**Hateruma jima**	**2.79**	**47**	P	**Pn**	**03 42 38.9**	**+0.7**
HATJ				S	**Sn**	**03 43 11.1**	**+0.4**
TATO	**Taipei**	**2.80**	**358**	*e*Pn	**Pn**	**03 42 39.1**	**+0.7**
IRIF	**Iriomote-Funau**	**2.94**	**42**	P	**Pn**	**03 42 40.9**	**+0.7**
IRIF				S	**Sn**	**03 43 15.2**	**+1.0**
JKRS	**Kuro-shima**	**3.05**	**47**	P	**Pn**	**03 42 42.7**	**+0.9**
JKRS				S	**Sn**	**03 43 17.4**	**+0.4**
JIJ	**Ishigaki jima**	**3.23**	**47**	P	**Pn**	**03 42 44.7**	**+0.5**
JIJ				S	**Sn**	**03 43 20.7**	**-0.6**
JTJ	**Tarama**	**3.79**	**49**	P	**Pn**	**03 42 52.8**	**+0.8**
JTJ				S	**Sn**	**03 43 35.6**	**+0.3**
QZH	**Quanzhou**	**3.89**	**316**	P	**Pn**	**03 42 50.7**	**-2.6**
QZH				S	**Sn**	**03 43 32.0**	**-5.8**
QZH				Smax			
	comp=N,230nm,0.4s						
QZH				Smax			
	comp=E,240nm,0.4s						
JMJ	**Miyako jima 2**	**4.32**	**52**	S	**Sn**	**03 43 49.1**	**+0.8**
JOGS	**Gusukube**	**4.37**	**53**	P	**Pn**	**03 43 01.0**	**+1.1**
JOGS				S	**Sn**	**03 43 51.3**	**+1.7**
CAUP	**Cauayan**	**5.19**	**177**	*e*P	**Pn**	**03 43 14.5**	**+3.3**
BOLP	**Bolinao**	**5.96**	**196**	*e*P	**Pn**	**03 43 20.4**	**-1.3**
JKE	**Kume jima 2**	**6.31**	**48**	P	**Pn**	**03 43 27.1**	**+0.5**
JKE				S	**Sn**	**03 44 34.7**	**-2.7**
BALP	**Baler**	**6.38**	**180**	*e*P	**Pn**	**03 43 27.8**	**+0.3**
JAGN	**Aguni-jima**	**6.79**	**48**	P	**Pn**	**03 43 33.0**	**-0.2**
JAGN				*e*S	**Sn**	**03 44 48.1**	**-1.1**
JIH	**Iheya**	**7.58**	**49**	P	**Pn**	**03 43 44.6**	**+0.7**
JIH				*e*S	**Sn**	**03 45 06.8**	**-1.7**
GZH	**Guangzhou**	**7.66**	**278**	P	**Pn**	**03 43 39.5**	**-5.5**
GZH				S	**Sn**	**03 44 54.7**	**-16**
GZH				Smax			
	comp=N,100nm,0.8s						
GZH				Smax			
	comp=E,67nm,0.8s						
JOW	**Kunigami**	**7.67**	**51**	P	**Pn**	**03 43 45.5**	**+0.2**
	comp=E,2.6nm,0.3s,baz=197,slow=10,SNR=14						
JOW				LR	LR	03 46 57.4	
	comp=E,254nm,22.0s,baz=93,slow=39						
JOW	**Kunigami**	**7.67**	**51**	P	**Pn**	**03 43 45.4**	**+0.1**
JOW				*e*S	**Sn**	**03 45 08.7**	**-2.2**
JTK	**Tokunoshima**	**8.73**	**49**	P	**Pn**	**03 43 58.2**	**-1.5**
JTK				*e*S	**Sn**	**03 45 33.8**	**-2.9**
JAM	**Amami Oshima**	**9.57**	**48**	*e*S	**Sn**	**03 45 53.7**	**-3.7**
NJ2	**Nanjing**	**10.15**	**347**	*e*P	**Pn**	**03 44 19.6**	**+0.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
MJAR	**Matsushiro Arr**	**20.34**	**42**	P	**P**	**03 46 31.1**	**+2.3**
	comp=Z,6.1nm,1.0s,baz=233,slow=11,SNR=12						
ASAJ	**Asahikawa**	**27.95**	**33**	P	**P**	**03 47 43.6**	**+1.1**
	comp=Z,1.5nm,0.3s,mb4.1,baz=227,slow=27,SNR=2.9						
SONM	**Songino Array**	**28.37**	**338**	P	**P**	**03 47 45.7**	**-0.5**
	comp=Z,1.5nm,0.8s,mb3.7,baz=154,slow=10.0,SNR=6.5						
MKAR	**Makanchi Array**	**40.05**	**317**	P	**P**	**03 49 27.9**	**+0.7**
	comp=Z,1.6nm,0.6s,mb3.9,baz=107,slow=10,SNR=5.8						
PMG	**Port Moresby**	**40.17**	**139**	P	**P**	**03 49 26.0**	**-2.1**
	comp=Z,18nm,0.9s,mb4.8,baz=84,slow=3.8,SNR=3.1						
ZAL	**Zalesovo**	**42.14**	**328**	P	**P**	**03 49 44.8**	**+0.5**
	comp=Z,2.0nm,0.3s,mb4.2,baz=299,slow=6.4,SNR=4.1						
KURK	**Kurchatov**	**43.88**	**321**	*e*P	**P**	**03 49 56.9**	**-1.5**
	comp=Z,2.3nm,0.7s,mb4.0						
ASAR	**Alice Springs**	**47.10**	**164**	P	**P**	**03 50 23.5**	**-0.4**
	comp=Z,0.5nm,0.3s,mb3.9,baz=346,slow=7.8,SNR=9.7						
BVAR	**Borovoye Array**	**49.47**	**322**	P	**P**	**03 50 42.7**	**+0.6**
	comp=Z,0.8nm,0.4s,mb4.1,baz=93,slow=10,SNR=4.1						
BRVK	**Borovoye**	**49.54**	**322**	*e*P	**P**	**03 50 42.8**	**+0.1**
	comp=Z,3.1nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**49.55**	**323**	*e*P	**P**	**03 50 42.2**	**-0.5**
	comp=Z,2.0nm,0.7s,mb4.3						
AKTK	**Aktyubinsk**	**56.47**	**317**	P	**P**	**03 51 34.9**	**+1.1**
AKTO	**Aktyubinsk**	**56.47**	**317**	P	**P**	**03 51 34.9**	**+1.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=110,slow=12,SNR=3.4						
STKA	**Stephens Creek**	**57.05**	**160**	P	**P**	**03 51 37.6**	**-0.2**
	comp=Z,1.9nm,0.6s,mb4.3,baz=336,slow=8.1,SNR=4.1						
ARCES	**ARCESS Array B**	**71.54**	**338**	P	**P**	**03 53 12.3**	**-0.4**
	comp=Z,1.1nm,0.6s,mb3.9,baz=67,slow=9.3,SNR=5.9						
ARCES	**ARCESS Array B**	**71.54**	**338**	P	**P**	**03 53 12.3**	**-0.5**
FINES	**FINESS Array B**	**73.37**	**330**	P	**P**	**03 53 22.6**	**-1.0**
	comp=Z,1.7nm,0.9s,mb4.0,baz=59,slow=5.3,SNR=6.9						
BRTR	**Keskin Array B**	**74.66**	**307**	P	**P**	**03 53 32.4**	**+1.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=102,slow=5.2,SNR=3.7						
NB2	**NORSAR Subarra**	**80.17**	**332**	P	**P**	**03 54 00.8**	**-1.2**
	comp=Z,0.7nm,0.6s,mb3.8,baz=59,slow=5.6						
NOA	**NORSAR Array B**	**80.17**	**332**	P	**P**	**03 54 00.6**	**-1.4**
	comp=Z,1.2nm,0.8s,mb3.9,baz=64,slow=5.2,SNR=5.2						
VYHS	**Vyhne**	**81.72**	**319**	*e*P	**P**	**03 54 10.7**	**+0.5**
CLL	**Collm**	**83.88**	**323**	*e*P	**P**	**03 54 21.0**	**-0.4**
GERES	**GERESS Array B**	**84.63**	**321**	P	**P**	**03 54 25.7**	**+0.5**
	comp=Z,1.8nm,0.7s,mb4.3,baz=57,slow=4.9,SNR=14						
LSZ	**Lusaka**	**98.68**	**257**	LR	LR	04 37 04.3	
	comp=Z,112nm,20.4s,MS4.3,baz=79,slow=34						

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*CSEM **12** 03:49:41.5±0.6, 3733N×2435W, h10^{km}, ML1.8, Error ellipse: s-maj=4.7km s-min=2.5km az=76.0, After PDA*
*PDA **12** 03:49:41.5±0.6, 3733N×2435W, h10^{km}, MD2.5, ML1.8, Error ellipse: s-maj=4.7km s-min=2.5km az=76.0*
SVSA 12 03:49:41.5±0.6**, 3733N×2435W, h10**^{km}**, MD2.5, ML1.8, Error ellipse: s-maj=4.7km s-min=2.5km az=76.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.65**	**241**	*e*P	Pg	03 49 51.8	-2.4
PSMN				*e*S	Sg	03 50 00.2	-2.5
MIRA	**Miradouro**	**0.87**	**302**	*e*P	Pg	03 49 55.0	-3.2
FRA1	**Furnas**	**0.90**	**298**	*e*rx		03 50 05.3	
VIF	**Vila Franca**	**0.96**	**296**	*e*S	Sg	03 50 07.5	-5.0
VIF							
	12nm,0.1s						
PRCH	**Ribeira Ch**	**0.98**	**295**	*e*S	Sg	03 50 08.1	-5.1
PRCH							
	20nm,0.1s						
MESC	**Monte Escuro**	**0.99**	**299**	*e*P	Pg	03 49 57.0	-3.5
MESC				*e*S	Sg	03 50 08.1	-5.2
LFA	**Lagoa do Fogo**	**1.00**	**297**	*e*P	Pg	03 49 56.9	-3.9
PMAT	**Coroa da Mata**	**1.01**	**299**	*e*S	Sg	03 50 08.6	-5.6
PMAT							
	7.8nm,0.1s						
CML	**Cha da Macela**	**1.05**	**295**	*e*P	Pg	03 49 57.6	-4.1
CML				*e*S	Sg	03 50 09.7	-5.6
FAC	**Faja de Cima**	**1.12**	**294**	*e*P	Pb	03 49 58.6	-4.4
FAC				*e*S	Sb	03 50 11.5	-6.2
PFET	**Feteiras**	**1.24**	**294**	*e*P	Pn	03 50 00.2	-4.7
SET2	**Ginetes**	**1.27**	**295**	*e*P	Pn	03 50 00.9	-4.3
SET2				*e*S	Sb	03 50 14.9	-6.9

NNC 12 04:16:21.4±19.0**, 3721N×7141E, h252**^{km}±214^{km}**, mb1.9, mpv3.0, 4C-1D, Error ellipse: s-maj=304.6km s-min=107.9km az=47.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.93**	**354**	⇑P	Pn	04 17 47.7	-0.9
	1.2nm,0.4s,baz=181,slow=12,SNR=38						
KK31				⇑S	S	04 18 59.5	+1.0
	1.0nm,0.3s,baz=193,slow=44,SNR=3.3						
TKM2	**Tokmak 2**	**6.55**	**28**	⇑P	Pn	04 17 56.4	0.0
	0.3nm,0.6s						
AB31	**Akbulak array**	**14.64**	**329**	⇓P	Pn	04 19 39.8	+2.7
	0.2nm,0.3s,baz=156,slow=12,SNR=9.8						
AB31				⇑S	S	04 22 16.1	-2.5
	0.3nm,0.5s,baz=155,slow=23,SNR=2.7						

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*IDC **12** 04:24:30.4±3.4, 3773N×2048E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.4/18, mbtmp3.5/4, Error ellipse: s-maj=149.1km s-min=24.4km az=109.0*
*ISCJB **12** 04:24:32.1±1.1, 3768N±004×2024E±006, h9^{km}±7^{km}, mb3.4/5, Error ellipse: s-maj=8.4km s-min=6.5km az=127.5*
*CSEM **12** 04:24:33.8±0.2, 3771N×2027E, h2^{km}, MD3.7, Error ellipse: s-maj=3.8km s-min=2.5km az=30.0*
*ATH **12** 04:24:34.9, 3785N×2043E, h13^{km}±2^{km}, MD3.7/5*
*NEIC **12** 04:24:34.9, 3785N×2043E, h13^{km}, mb3.6/1, MD3.7(ATH), ML3.0(THE), After ATH.*
*THE **12** 04:24:35.7, 3779N×2051E, h0^{km}, ML3.0*
ISC 12 04:24:32.5±1.1**, 3770N**±004×**2028E**±006**, h2**^{km}±6^{km}**, n25,** σ**1**^{s}**24**/32**, mb3.4**/5**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.53**	**27**	*e*PB	**Pg**	**04 24 42.1**	**-0.6**
VLS				*e*SB	**Sg**	**04 24 47.8**	**-1.8**
RLS	**Riolos of Patr**	**1.00**	**69**	*e*PB	**Pb**	**04 24 50.9**	**-1.7**
LKD	**Levkas**	**1.04**	**16**	*e*Pg	**Pg**	**04 24 50.7**	**-1.7**
LKD				*e*Sg	**Sg**	**04 25 07.7**	**+1.7**
ITM	**Ithomi**	**1.41**	**111**	*e*PG	**Pg**	**04 25 00.3**	**+0.8**
ITM				*e*SB	**Sb**	**04 25 19.4**	**+1.4**
EVR	**Evrytania**	**1.71**	**44**	*e*PB	**Pb**	**04 25 03.7**	**-0.8**
IGT	**Igoumenitsa**	**1.83**	**1**	*e*Pb	**Pb**	**04 25 07.4**	**+0.8**
IGT				*e*Sb	**Sb**	**04 25 30.6**	**+0.7**
JAN	**Janina**	**2.00**	**13**	*e*PN	**Pn**	**04 25 08.5**	**+1.2**
KEK	**Kerkira**	**2.04**	**350**	*e*PN	**Pn**	**04 25 09.3**	**+1.5**
AGG	**Agios Georgios**	**2.08**	**50**	*e*Pb	**Pn**	**04 25 09.1**	**+0.7**
AGG				*e*Sb	**Sn**	**04 25 34.7**	**-0.2**
MEV	**Metsovon**	**2.21**	**19**	*e*Pn	**Pn**	**04 25 12.0**	**+1.9**
VLI	**Veliai**	**2.34**	**114**	*e*PN	**Pb**	**04 25 15.2**	**-0.1**
LKR	**Lokris**	**2.34**	**65**	*e*PB	**Pn**	**04 25 12.2**	**+0.2**
XOR	**Xorichti**	**2.82**	**53**	*e*Pn	**Pn**	**04 25 18.2**	**-0.4**
KZN	**Kozani**	**2.85**	**24**	*e*PB	**Pn**	**04 25 20.0**	**+1.1**
LIT	**Litokhoron**	**2.95**	**35**	*e*Pn	**Pn**	**04 25 21.1**	**+0.8**
LIT				*e*Sn	**Sn**	**04 25 55.4**	**-0.9**
FNA	**Florina**	**3.19**	**15**	*e*Pn	**Pn**	**04 25 24.8**	**+1.1**
FNA				*e*Sn	**Sn**	**04 26 02.5**	**+0.3**
PE1	**Pezze di Greco**	**3.81**	**325**	*e*Pn	**Pn**	**04 25 32.3**	**+0.1**
SG1	**Sgolgore (BA)**	**4.20**	**319**	*e*Pn	**Pn**	**04 25 38.4**	**+0.9**
FINES	**FINESS Array B**	**24.04**	**7**	P	**P**	**04 29 46.9**	**-1.9**
	0.6nm,0.4s,mb3.4,baz=172,slow=9.1,SNR=10						
FINES	**FINESS Array B**	**24.04**	**7**	P	**P**	**04 29 46.9**	**-1.9**
NOA	**NORSAR Array B**	**24.05**	**349**	P	**P**	**04 29 46.7**	**-2.2**
	0.2nm,0.4s,mb2.9,baz=161,slow=9.4,SNR=2.5						
KAF	**Kangasniemi**	**24.72**	**7**	*e*p	**P**	**04 29 52.3**	**-2.8**
	0.7nm,0.4s,mb3.5						
TORD	**Torodi Ar. Bea**	**29.54**	**219**	P	**P**	**04 30 37.9**	**-0.6**
	0.7nm,1.3s,mb3.2,baz=22,slow=9.0,SNR=2.9						
ARCES	**ARCESS Array B**	**32.02**	**3**	P	**P**	**04 30 57.4**	**-2.8**
	1.6nm,0.8s,mb3.9,baz=186,slow=12,SNR=12						
ARCES	**ARCESS Array B**	**32.02**	**3**	P	**P**	**04 30 57.4**	**-2.8**

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*ISCJB **12** 04:26:27.8±0.9, 5153N±005×1603E±004, h0^{km}, Error ellipse: s-maj=6.8km s-min=3.2km az=19.5*
*WAR **12** 04:26:30.4, 5154N×1606E, ML2.6, Mining Induced*
*PRU **12** 04:26:31.6, 5145N×1600E, h0^{km}*
ISC 12 04:26:29.7±0.9**, 5152N**±005×**1604E**±004**, h0**^{km}**, n13,** σ**0**^{s}**84**/26**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**167**	*e*Pg	**Pg**	**04 26 43.3**	**+0.3**
KSP				*e*Sg	**Sg**	**04 26 52.7**	**+0.7**
UPC	**Upice**	**1.01**	**181**	*e*PG	**Pg**	**04 26 49.4**	**+0.3**
DPC	**Dobruska-Polom**	**1.18**	**171**	*e*PG	**Pg**	**04 26 52.1**	**-0.3**
DPC				*e*SG	**Sg**	**04 27 07.5**	**-0.2**
	35nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**224**	*e*PG	**Pg**	**04 26 56.2**	**+0.4**
PVCC				*e*SG	**Sg**	**04 27 14.6**	**+1.2**
	151nm,0.2s						
BRG	**Berggiesshubel**	**1.47**	**245**	PG	**Pg**	**04 26 58.0**	**+0.1**
BRG				SG	**Sg**	**04 27 18.0**	**+1.0**
	28nm,0.3s						
PRU	**Pruhonice**	**1.81**	**212**	*e*PG	**Pg**	**04 27 03.3**	**-1.0**
PRU				*e*SG	**Sg**	**04 27 27.3**	**-0.4**
	31nm,0.2s						
CLL	**Collm**	**1.92**	**265**	*e*Pg	**Pg**	**04 27 05.0**	**-1.4**
CLL				*e*x	x	04 27 10.0	
CLL				*e*Sg	**Sg**	**04 27 31.0**	**-0.3**
	comp=Z,20nm,0.5s						
NKC	**Novy Kostel**	**2.62**	**242**	*e*SG	**Sg**	**04 27 55.0**	**+1.2**
	comp=Z,25nm,0.2s						
OJC	**Ojcow**	**2.71**	**117**	*e*Pg	**Pg**	**04 27 21.3**	**-0.4**
OJC				*e*Sg	**Sg**	**04 27 57.0**	**+0.2**
KHC	**Kasperske Hory**	**2.87**	**214**	*e*PN	**Pn**	**04 27 16.3**	**-0.3**
KHC				*e*PG	**Pg**	**04 27 21.0**	**-3.6**
KHC				*e*SN	**Sn**	**04 27 50.5**	**-1.3**
KHC				*e*SG	**Sg**	**04 28 00.5**	**-1.3**
	comp=Z,7.1nm,0.4s						
MOX	**Moxa**	**2.93**	**254**	(PN)	**Pn**	**04 27 19.4**	**+1.9**
MOX				*e*PG	**Pg**	**04 27 26.0**	**+0.2**
MOX				*i* SG	**Sg**	**04 28 03.3**	**-0.4**
SMOL	**Smolenice**	**3.14**	**163**	*e*SG	**Sg**	**04 28 10.9**	**+0.4**
STHS	**Stebnicka Huta**	**3.93**	**120**	*e*PG	**Pg**	**04 27 45.1**	**0.0**
STHS				*e*SG	**Sg**	**04 28 40.9**	**+4.9**

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*IDC **12** 04:38:32.8±1.0, 980S×10733E, h0^{km}, mb3.9/6, mb1 3.9/7, mb1mx3.8/16, mbtmp3.8/7, ML3.4/1, Error ellipse: s-maj=39.1km s-min=20.5km az=57.0*
*NEIC **12** 04:38:34.7±0.5, 985S×10739E, h10^{km}, mb4.4/4, Error ellipse: s-maj=25.6km s-min=8.8km az=50.0*
*ISCJB **12** 04:38:36.2±0.7, 98S±02×1075E±02, h33^{km}, mb4.0/10, Error ellipse: s-maj=33.0km s-min=11.2km az=101.0*
ISC 12 04:38:38.4±0.7**, 99S**±02×**1075E**±02**, h35**^{km}**, n18,** σ**0**^{s}**94**/16**, mb4.0**/10**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.42**	**117**	P	**Pn**	**04 43 02.1**	**-0.9**
	0.1nm,0.3s,baz=263,slow=17,SNR=2.5						
ASAR	**Alice Springs**	**28.72**	**122**	P	**P**	**04 44 34.5**	**+2.2**
	0.3nm,0.5s,mb3.3,baz=296,slow=9.3,SNR=5.6						
STKA	**Stephens Creek**	**38.42**	**130**	P	**P**	**04 45 56.7**	**+0.1**
	1.6nm,0.9s,mb3.7,baz=303,slow=4.5,SNR=3.2						
STKA	**Stephens Creek**	**38.42**	**130**	P	**P**	**04 45 56.7**	**+0.1**
JIRN	**Jiri**	**42.61**	**332**	*e*P	**P**	**04 46 31.9**	**+0.7**
GUN	**Gumba**	**42.97**	**331**	*e*P	**P**	**04 46 34.6**	**+0.5**
DMN	**Daman**	**43.09**	**330**	*e*P	**P**	**04 46 36.8**	**+1.8**
	30nm,1.1s,mb4.9						
KKN	**Kakani**	**43.16**	**331**	*e*P	**P**	**04 46 35.9**	**+0.3**
KOLN	**Koldanda**	**43.97**	**329**	*e*P	**P**	**04 46 42.6**	**+0.4**
SONM	**Songino Array**	**57.44**	**359**	P	**P**	**04 48 22.8**	**-0.8**
	1.1nm,0.7s,mb4.0,baz=174,slow=7.6,SNR=7.7						
MKAR	**Makanchi Array**	**60.72**	**340**	P	**P**	**04 48 45.9**	**-0.5**
	1.1nm,0.4s,mb4.3,baz=133,slow=8.5,SNR=7.3						
MAW	**Mawson**	**64.79**	**197**	P	**P**	**04 49 13.1**	**-0.4**
	1.2nm,0.7s,mb4.0,baz=49,slow=17,SNR=6.5						
KURK	**Kurchatov**	**65.33**	**340**	*e*P	**P**	**04 49 17.1**	**+0.2**
	4.7nm,1.2s,mb4.4						
BRVK	**Borovoye**	**70.23**	**337**	*e*P	**P**	**04 49 46.7**	**-1.2**
	1.0nm,0.6s,mb3.9						
CHKZ	**Chkalovo**	**70.58**	**338**	*e*P	**P**	**04 49 48.7**	**-1.3**
	1.9nm,0.7s,mb4.1						
BRTR	**Keskin Array B**	**84.07**	**312**	P	**P**	**04 51 04.8**	**-0.7**
	0.4nm,0.6s,mb3.8,baz=150,slow=6.3,SNR=3.7						
WMOK	**Wichita Mounta**	**145.51**	**40**	*e*PKPbc	PKPbc	04 58 13.8	+0.9
JCT	**Junction City**	**147.34**	**47**	*e*PKPbc	PKPbc	04 58 19.8	+1.5

WEL 12 05:26:26.3±0.1**, 4247S×17270E, h5**^{km}**, ML3.5**/15**, 1C-1D, Error ellipse: s-maj=2.0km s-min=1.0km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTZ	**Lake Taylor**	**0.45**	**225**	PG	Pg	05 26 35.4	+0.5
LTZ				SG	Sg	05 26 41.3	+0.6
KHZ	**Kahutara**	**0.62**	**86**	⇓P*	Pb	05 26 39.0	-0.6
KHZ				SG	Sg	05 26 47.9	+1.6
THZ	**Tophouse**	**0.72**	**12**	⇑P*	Pb	05 26 39.6	-1.6
THZ				S*	Sb	05 26 49.6	-1.8
DSZ	**Denniston Nort**	**0.98**	**317**	P*	Pb	05 26 45.0	-0.7
CRLZ	**Canterbury Las**	**1.11**	**183**	P*	Pb	05 26 47.5	-0.5
BSWZ	**Blackbirch Sta**	**1.15**	**50**	*e*P*	Pb	05 26 48.3	-0.3
MQZ	**McQueen's Vall**	**1.24**	**182**	P*	Pb	05 26 48.9	-1.3
MQZ				S*	Sb	05 27 05.2	-1.3
NNZ	**Nelson**	**1.34**	**22**	PN	Pn	05 26 50.5	-1.2
TUWZ	**Tuamarina**	**1.39**	**42**	PN	Pn	05 26 51.6	-0.7
WVZ	**Waitaha Valley**	**1.57**	**246**	PN	Pn	05 26 54.8	0.0
QRZ	**Quartz Range**	**1.64**	**355**	*e*PN	Pn	05 26 55.9	+0.1
TCW	**Tory Channel**	**1.72**	**44**	PN	Pn	05 26 56.8	0.0
RPZ	**Rata Peaks**	**1.74**	**223**	PN	Pn	05 26 56.2	-0.8
SNZO	**South Karori**	**1.89**	**53**	PN	Pn	05 26 59.1	-0.1
DUWZ	**D'Urville Isla**	**1.90**	**29**	PN	Pn	05 26 59.6	+0.3
MRW	**Makara Radio**	**1.94**	**51**	*e*PN	Pn	05 26 60.0	+0.1
CAW	**Cannon Point**	**2.23**	**53**	*e*PN	Pn	05 27 03.6	-0.2
KIW	**Kapiti Island**	**2.30**	**47**	*e*PN	Pn	05 27 05.4	+0.5
FOZ	**Fox Glacier**	**2.47**	**243**	*e*PN	Pn	05 27 06.0	-1.1
LBZ	**Lake Benmore**	**2.66**	**223**	*e*PN	Pn	05 27 08.9	-0.8
ODZ	**Otahua Downs**	**2.98**	**209**	PN	Pn	05 27 12.6	-1.5

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*IDC **12** 05:57:25.1±7.3, 2875S×6756W, h93^{km}±55^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.3/15, mbtmp3.6/3, Error ellipse: s-maj=78.5km s-min=49.1km az=19.0*
*ISCJB **12** 05:57:27.1±1.1, 2839S±009×6747W±009, h111^{km}±15^{km}, mb3.5/2, Error ellipse: s-maj=14.4km s-min=13.5km az=125.0*
*NEIC **12** 05:57:27.7±2.6, 2867S×6738W, h116^{km}±18^{km}, mb3.6/1, Error ellipse: s-maj=34.8km s-min=15.4km az=214.0*
*GUC **12** 05:57:29.5±0.8, 2846S×6765W, h125^{km}, ML3.9*
ISC 12 05:57:28.6±1.0**, 2841S**±008×**6750W**±009**, h109**^{km}±14^{km}**, n15,** σ**0**^{s}**93**/16**, mb3.5**/2**, 2C-2D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**2.74**	**292**	⇓*i*P	**Pn**	**05 58 11.6**	**+0.5**
CPCH				*i* S	**Sn**	**05 58 43.3**	**-0.4**
VACH	**Vallenar**	**2.88**	**266**	⇓*i*P	**Pn**	**05 58 13.6**	**+0.7**
VACH				*i* S	**Sn**	**05 58 46.3**	**-0.7**
LCO	**Las Campanas**	**2.88**	**257**	⇑*i*P	**Pn**	**05 58 13.6**	**+0.7**
LCO				*i* S	**Sn**	**05 58 47.2**	**+0.1**
LCO				AML	AML	05 58 51.2	
	comp=E,296nm,0.5s						
CDCH	**Caldera**	**3.24**	**294**	*e*P	**Pn**	**05 58 18.4**	**+0.6**
CDCH				*i* S	**Sn**	**05 58 54.1**	**-1.6**
TLL	**Tololo Astrono**	**3.38**	**238**	⇑*i*P	**Pn**	**05 58 19.8**	**+0.2**
TLL				*i* S	**Sn**	**05 58 59.0**	**0.0**
TLL				AML	AML	05 59 05.3	
	comp=E,213nm,0.5s						
LVC	**Limon Verde**	**5.91**	**347**	*e*Pn	**Pn**	**05 58 57.3**	**+3.5**
CPUP	**Villa Florida**	**9.27**	**79**	P	**Pn**	**05 59 37.7**	**-1.7**
	comp=E,0.7nm,0.3s,baz=228,slow=8.0,SNR=8.7						
CPUP	**Villa Florida**	**9.27**	**79**	P	**Pn**	**05 59 37.7**	**-1.7**
SAML	**Samuel**	**19.78**	**13**	*e*P	**P**	**06 01 50.9**	**+0.7**
	comp=E,1.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.59**	**68**	P	**P**	**06 09 17.7**	**-0.5**
	comp=E,0.5nm,0.6s,mb3.5,baz=284,slow=7.0,SNR=6.2						
PDAR	**Pinedale Array**	**80.71**	**330**	P	**P**	**06 09 29.4**	**-0.3**
	comp=E,0.4nm,0.5s,mb3.5,baz=121,slow=6.8,SNR=5.3						
ASAR	**Alice Springs**	**124.27**	**204**	PKP	PKPdf	06 16 12.7	-1.8
	comp=E,0.3nm,0.5s,baz=144,slow=1.8,SNR=4.6						
ZAL	**Zalesovo**	**147.44**	**31**	PKPbc	PKPbc	06 16 58.8	-1.0
	comp=E,1.3nm,0.3s,baz=73,slow=1.4,SNR=3.1						
MKAR	**Makanchi Array**	**150.10**	**44**	PKPbc	PKPbc	06 17 04.8	-1.7
	comp=E,0.8nm,0.7s,baz=315,slow=0.5,SNR=6.0						
MKAR	**Makanchi Array**	**150.10**	**44**	PKPbc	PKPbc	06 17 04.8	-1.7

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*IDC **12** 06:00:16.1±0.7, 1506S×17364W, h0^{km}, mb4.3/7, mb1 4.6/8, mb1mx4.4/13, mbtmp4.4/8, MS3.8/6, Ms1 3.7/6, ms1mx3.4/20, Error ellipse: s-maj=37.0km s-min=17.3km az=130.0*
*ISCJB **12** 06:00:19.8±0.4, 150S±0.1×1739W±0.1, h33^{km}, mb4.3/15, MS3.8/6, Error ellipse: s-maj=23.1km s-min=10.5km az=75.4*
*NEIC **12** 06:00:24.8±0.3, 1505S×17383W, mb4.4/9, Error ellipse: s-maj=15.6km s-min=7.4km az=127.0*
ISC 12 06:00:21.8±0.4**, 150S**±01×**1738W**±01**, h35**^{km}**, (h53**^{km}±4.3^{km}**:pP-P), n48,** σ**0**^{s}**52**/28**, mb4.3**/15**, MS3.8**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.27**	**61**	Pn	**Pn**	**06 00 51.4**	**-5.3**
	504nm,0.3s,baz=136,slow=1.0,SNR=202						
AFI				Sn	**Sn**	**06 01 10.7**	**-13**
	1μm,0.3s,baz=63,slow=22,SNR=26						
AFI	**Afiamalu**	**2.27**	**61**	Pn	**Pn**	**06 00 51.5**	**-5.3**
AFI				*e*Sn	**Sn**	**06 01 09.5**	**-14**
AFI				Sn	**Sn**	**06 01 10.7**	**-13**
PPT	**Papeete**	**23.39**	**100**	*e*LR	LR	06 10 45.3	
	110nm,28.8s						
TBI	**Tubuai**	**24.41**	**114**	*e*LR	LR	06 11 21.5	
	173nm,27.2s						
URZ	**Urewera**	**24.48**	**197**	P	**P**	**06 05 37.9**	**+0.4**
	5.2nm,0.5s,mb4.2,baz=88,slow=4.0,SNR=7.1						
URZ				LR	LR	06 14 21.8	
	comp=Z,324nm,18.2s,MS3.9,baz=150,slow=34						
HNR	**Honiara**	**26.23**	**279**	LR	LR	06 13 52.8	
	comp=Z,123nm,20.6s,MS3.4,baz=178,slow=31						
RKT	**Rikitea**	**37.49**	**108**	*e*LR	LR	06 17 33.0	
	80nm,28.2s						
STKA	**Stephens Creek**	**43.87**	**240**	P	**P**	**06 08 25.3**	**+0.6**
	1.2nm,0.4s,mb3.9,baz=66,slow=11,SNR=4.3						
STKA				LR	LR	06 24 25.9	
	comp=Z,73nm,19.9s,MS3.6,baz=203,slow=33						
WRAB	**Tennant Creek**	**49.53**	**257**	*e*P	**P**	**06 09 09.2**	**+0.2**
	2.0nm,0.3s,mb4.6						
AS31	**Alice Springs**	**49.84**	**252**	*e*P	**P**	**06 09 11.2**	**-0.2**
AS31				*e*pP	pP	06 09 28.2	+6.4
ASAR	**Alice Springs**	**49.84**	**252**	P	**P**	**06 09 11.4**	**0.0**
	11nm,0.7s,mb5.0,baz=86,slow=8.1,SNR=120						
SBA	**Scott Base**	**63.58**	**185**	*e*P	**P**	**06 10 49.5**	**+0.6**
	2.7nm,0.8s,mb4.3						
VNDA	**Vanda**	**63.69**	**186**	P	**P**	**06 10 49.2**	**-0.5**
	2.5nm,0.9s,mb4.3,baz=0.3,slow=6.6,SNR=18						
VNDA	**Vanda**	**63.69**	**186**	P	**P**	**06 10 49.2**	**-0.5**
VNDA				*e*pP	pP	06 11 05.4	+5.0
NVAR	**Mina Array Bea**	**74.33**	**42**	P	**P**	**06 11 55.9**	**+0.3**
	2.8nm,0.8s,mb4.2,baz=222,slow=8.1,SNR=16						
NVAR	**Mina Array Bea**	**74.33**	**42**	P	**P**	**06 11 55.9**	**+0.3**
QSPA	**South Pole Qui**	**75.00**	**180**	*e*P	**P**	**06 11 59.0**	**-0.5**
	14nm,0.9s,mb4.9						
WVOR	**Wild Horse Val**	**76.40**	**39**	P	**P**	**06 12 07.7**	**+0.1**
	7.5nm,1.3s,mb4.5						
ARUT	**Antelope Range**	**77.23**	**45**	*e*P	**P**	**06 12 12.6**	**+0.4**
ARUT				*e*PcP	PcP	06 12 28.0	+5.2
MSU	**Marysvale**	**78.45**	**45**	*e*P	**P**	**06 12 20.2**	**+1.1**
HLID	**Hailey**	**79.60**	**40**	*e*P	**P**	**06 12 25.6**	**+0.3**
	1.9nm,0.8s,mb4.1						
HLID				*e*pP	pP	06 12 39.1	+2.8
MCK	**McKinley**	**80.84**	**11**	*e*P	**P**	**06 12 31.2**	**-0.8**
	2.2nm,0.8s,mb4.1						
MCK				*e*PcP	PcP	06 12 37.1	-1.4
MCMT	**McKenzie Canyo**	**81.22**	**39**	*e*P	**P**	**06 12 34.0**	**-0.1**
MCMT				*e*	pP	06 12 46.9	+1.8
MCMT				*e*		06 12 53.7	
TPAW	**Teton Pass**	**81.72**	**41**	*e*P	**P**	**06 12 36.3**	**-0.3**
	3.0nm,1.0s,mb4.2						
TPAW				*e*	pP	06 12 49.4	+1.7
COLA	**College**	**82.08**	**11**	*e*P	**P**	**06 12 38.0**	**-0.6**
	6.6nm,0.8s,mb4.6						
IMA2	**Indian Mountai**	**82.26**	**8**	*e*P	**P**	**06 12 39.7**	**+0.2**
PDAR	**Pinedale Array**	**82.26**	**42**	P	**P**	**06 12 39.2**	**-0.3**
	0.7nm,0.8s,mb3.7,baz=257,slow=3.7,SNR=6.9						
PDAR				LR	LR	06 42 11.8	
	comp=Z,57nm,19.1s,MS4.0,baz=10,slow=31						
MAW	**Mawson**	**88.01**	**199**	P	**P**	**06 13 07.3**	**-0.9**
	3.4nm,0.6s,mb4.7,baz=138,slow=6.1,SNR=18						
MAW	**Mawson**	**88.01**	**199**	*e*P	**P**	**06 13 07.2**	**-1.0**
	1.4nm,0.6s,mb4.4						
MAW				*e*PcP	PcP	06 13 10.1	0.0
YKA	**Yellowknife Ar**	**89.93**	**24**	LR	LR	06 48 20.5	
	comp=Z,36nm,18.8s,MS3.8,baz=270,slow=32						
ULM	**Lac du Bonnet**	**93.90**	**39**	LR	LR	06 48 50.6	
	comp=Z,63nm,20.3s,MS4.1,baz=10,slow=31						
HSP	**Hornsund**	**117.83**	**358**	P	Pdif	06 15 13.8	-8.7
HSP	**Hornsund**	**117.83**	**358**	P	Pdif	06 15 13.8	-8.7
ARCES	**ARCESS Array B**	**124.20**	**352**	PKP	PKPdf	06 19 15.9	-0.7
	2.1nm,0.7s,baz=299,slow=2.5,SNR=5.4						
GRA1	**Grafenberg Arr**	**145.20**	**354**	*e*PKP	pPKPdf	06 20 09.1	+2.1
GRF	**Grafenberg Arr**	**145.20**	**354**	*e*PKP	pPKPdf	06 20 09.1	+2.1
KHC	**Kasperske Hory**	**145.47**	**351**	*e*pPKP	pPKPdf	06 20 10.0	+2.5
KHC				*e*sPKP		06 20 19.0	
BR131	**Keskin Array S**	**145.63**	**321**	*e*PKPdf	PKPdf	06 19 57.7	+1.4
BRTR	**Keskin Array B**	**145.63**	**321**	PKPbc	PKPbc	06 19 57.9	+1.2
	1.4nm,0.7s,baz=100,slow=2.3,SNR=9.0						
GERES	**GERESS Array B**	**145.73**	**351**	PKPbc	PKPbc	06 19 57.2	+0.2
	0.7nm,0.6s,baz=288,slow=1.3,SNR=6.3						
LOR	**Lormes**	**147.81**	**3**	*e*PKP1	PKPbc	06 20 02.9	0.0
	3.4nm,0.6s						
SSF	**Saint Saulge**	**148.00**	**3**	*e*PKP1	PKPbc	06 20 03.5	+0.1
AVF	**Avril sur Loir**	**148.25**	**4**	*e*PKP1	PKPbc	06 20 03.8	-0.3
	3.0nm,0.7s						
CABF	**La Chapelle**	**148.52**	**0**	*e*PKP1	PKPbc	06 20 05.5	+0.7
	18nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPL	La Plagne	149.62	359	ePKP1	PKPbc	06 20 08.8	+1.3
	7.6nm,0.8s						
LPG	La Plagne	149.63	359	ePKP1	PKPbc	06 20 09.0	+1.4
	12nm,0.9s						
MBDF	Montbardon	150.40	359	ePKP1	PKPbc	06 20 09.4	0.0
	10nm,0.9s						
TORD	Torodi Ar. Bea	175.25	113	PKP	PKPdf	06 20 27.3	-0.6
	0.5nm,1.0s,baz=207,slow=1.3,SNR=3.8						

ISCJB 12 06:08:49.8±0.5, 42.44N±0.03×2.33E±0.04, h5km, Error ellipse: s-maj=4.6km s-min=3.2km az=104.5
MDD 12 06:08:49.9±0.5, 42.34N×2.40E, h5km±5km, mbLg1.6/14, Error ellipse: s-maj=5.1km s-min=2.6km az=159.0, PRXIMO
STR 12 06:08:50.5±0.0, 42.36N×2.36E, h5km±1km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0
LDG 12 06:08:50.4±0.2, 42.34N×2.36E, h4km, Ml2.2/7, Error ellipse: s-maj=2.6km s-min=1.2km az=143.0
ISC 12 06:08:49.9±0.7, 42.37N±0.03×2.37E±0.04, h15km±7km, n32, σ0.59/30, 1C, Pyrenees

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBRU	Bruguera	0.17	238	Pg	Pg	06 08 53.8	-0.2
CBRU				Lg		06 08 56.5	
	54nm,0.1s						
FILF	Fillols	0.23	37	Pg	Pg	06 08 54.9	-0.1
FILF				Sg	Sg	06 08 58.2	-0.3
FILF	Fillols	0.23	37	Pg	Pg	06 08 54.9	-0.1
FILF				Lg		06 08 58.2	
VALF	Valcebollere	0.26	276	Pg	Pg	06 08 55.9	+0.4
VALF				Sg	Sg	06 08 59.8	+0.5
VALF	Valcebollere	0.26	276	Pg	Pg	06 08 55.9	+0.4
VALF				Lg		06 08 59.8	
CLLI	Llivia	0.31	290	Pg	Pg	06 08 56.9	+0.5
CLLI				Lg		06 09 02.4	
	4.9nm,0.1s						
EJON	La Jonquera	0.39	79	⇑Pg	Pg	06 08 57.3	-0.4
	2.9nm,0.1s,SNR=18						
EJON				Lg		06 09 02.5	
	21nm,0.1s,SNR=12						
SJAF	Saint Jean de	0.40	74	Pg	Pg	06 08 57.4	-0.4
SJAF				Lg		06 09 02.5	
CORG	Organya	0.79	260	Pg	Pg	06 09 05.6	+0.3
CORG				Lg		06 09 16.9	
	0.9nm,0.1s						
CSOR	Sort	0.92	271	Pg	Pg	06 09 07.7	+0.1
CSOR				Lg		06 09 21.8	
SALF	Salau	0.95	294	Pg	Pg	06 09 09.2	+0.8
SALF				Lg		06 09 21.7	
MTLF	Montolieu	0.97	353	ePg	Pg	06 09 09.4	+0.7
MTLF				eSg	Sg	06 09 22.4	+1.0
	4.2nm,0.2s						
MTLF	Montolieu	0.97	353	Pg	Pg	06 09 09.4	+0.7
MTLF				Lg		06 09 22.4	
	2.1nm,0.2s						
CAVN	Les Avellanes	1.30	248	Pg	Pg	06 09 14.8	-0.1
CAVN				Lg		06 09 31.1	
	9.4nm,0.2s						
EPOB	Poblet	1.40	224	Pg	Pg	06 09 15.9	-1.0
	0.4nm,0.1s,SNR=7.7						
EPOB				Lg		06 09 34.1	
	3.3nm,0.1s,SNR=19						
EPF	Esparros	1.63	294	ePn	Pn	06 09 18.4	+0.3
EPF	Esparros	1.63	294	ePg	Pg	06 09 21.1	-0.2
EPF				eSg	Sg	06 09 41.6	-0.9
	2.7nm,0.3s						
EPF	Esparros	1.63	294	Pn	Pn	06 09 18.4	+0.3
EPF				Pg	Pg	06 09 21.1	-0.2
EPF				Lg		06 09 41.6	
	1.4nm,0.3s						
EBIE	Bielsa	1.68	281	Pg	Pg	06 09 21.7	-0.3
	0.7nm,0.2s,SNR=10						
EBIE				Lg		06 09 44.9	
	0.7nm,0.1s,SNR=7.8						
LASF	Ste Croix	2.02	32	eSg	Sg	06 09 55.0	+0.2
	1.6nm,0.3s						
LASF	Ste Croix	2.02	32	Lg		06 09 55.0	
	0.8nm,0.3s						
ERTA	Horta de San J	2.08	228	Pg	Pg	06 09 30.9	+1.1
	0.5nm,0.1s,SNR=7.9						
ERTA				Lg		06 09 55.2	
	2.8nm,0.3s,SNR=5.8						
ESAC	San Caprasio	2.21	254	Lg		06 10 00.9	
	6.0nm,0.1s,SNR=7.9						
CAF	Calviac	2.56	355	eSg	Sg	06 10 12.1	-0.1
	1.4nm,0.2s						
CAF	Calviac	2.56	355	Lg		06 10 12.1	
	0.7nm,0.2s						
SJPF	Ste Jean	2.75	287	eSg	Sg	06 10 16.9	-1.3
	1.0nm,0.2s						
SJPF	Ste Jean	2.75	287	Lg		06 10 16.9	
	0.5nm,0.2s						
LFF	La Frestale	2.82	336	eSg	Sg	06 10 20.3	-0.3
	5.5nm,0.3s						
LFF	La Frestale	2.82	336	Lg		06 10 20.3	
	2.8nm,0.3s						
EMOS	Mosqueruela	2.93	228	Lg		06 10 23.0	
	SNR=7.9						
RJF	Les Rejaudoux	2.99	348	eSg	Sg	06 10 25.6	-0.4
	2.6nm,0.3s						
RJF	Les Rejaudoux	2.99	348	Lg		06 10 25.6	
	1.3nm,0.3s						

BJI 12 06:15:25.9, 2.14N×96.44E, h31km, mB5.0, mb5.1, Ms4.9, Msz4.6
ISCJB 12 06:15:26.4±0.2, 2.20N±0.03×96.36E±0.03, h29km, mb5.0/95, MS4.5/34, Error ellipse: s-maj=5.0km s-min=4.2km az=63.5
MOS 12 06:15:27.1±0.9, 2.28N×96.39E, h33km, mb5.3/36, MS4.6/5, Error ellipse: s-maj=9.4km s-min=5.7km az=107.1
NEIC 12 06:15:28.2±0.2, 2.19N×96.37E, mb5.0/45, Error ellipse: s-maj=4.7km s-min=3.4km az=219.0
NEIC Felt [II] at Sinabang.
IDC 12 06:15:29.6±3.7, 2.25N×96.38E, h40km±33km, mb4.2/21, mb1 4.3/22, mb1mx4.3/23, mbtmp4.4/22, ML4.0/1, MS4.2/10, Ms1 4.2/10, ms1mx3.9/25, Error ellipse: s-maj=17.5km s-min=11.8km az=55.0
ISC 12 06:15:28.9±0.2, 2.21N±0.03×96.37E±0.03, h31km, h31km±.9km: pP-P, n262, σ0.98/229, mb5.0/95, MS4.5/34, 35C-24D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TSI	Tuntungan	2.54	60	P	Pn	06 16 08.1	+0.2
	3μm,1.2s						
PSI	Prapat	2.62	77	Pn	Pn	06 16 09.1	+0.1
	32nm,0.3s,baz=261,slow=6.9,SNR=200						
PSI				LR	LR	06 16 50.7	
	comp=Z,2μm,21.1s,baz=324,slow=31						
PSI	Prapat	2.62	77	Pn	Pn	06 16 09.1	+0.1
PSI				LR	LR	06 16 50.7	
BSI	Banda Aceh	3.43	342	P	Pn	06 16 17.2	-3.0
	354nm,0.7s						
PPI	Padang Panjang	4.82	123	P	Pn	06 16 39.3	0.0
	119nm,0.8s						
IPM	Ipoh	5.16	64	P	Pn	06 16 45.4	+1.4
KULM	Kulim	5.25	54	ePn	Pn	06 16 45.5	+0.3
SNG	Songkhla	6.50	40	P	Pn	06 17 01.0	-1.4
	1μm,1.0s						
KGM	Kluang	6.95	91	P	Pn	06 17 10.8	+2.3
KSI	Kapahiang	8.52	133	P	Pn	06 17 33.8	+3.7
	201nm,0.8s						
NNT	Nongplab	10.84	18	P		06 18 14.0	
NST	Nakhon Sawan	13.88	15	P	Pn	06 18 50.4	+7.0
KSM	Kuching	13.95	93	ePn	Pn	06 18 45.9	+1.6
KKTK	Khon Kaen	15.41	24	P	Pn	06 19 04.0	+0.1
	741nm,0.9s						
CM31	Chiang Mai Arr	16.34	9	ePn	Pn	06 19 16.2	+0.2
	32nm,0.6s						
PALK	Pallekele	16.40	288	eP	Pn	06 19 21.5	+4.8
	41nm,1.0s						
CHG	Chiang Mai	16.69	9	⇓P	Pn	06 19 19.4	-1.0
	25nm,0.8s						
CHTO	Chiang Mai	16.69	9	P	Pn	06 19 19.7	-0.7
	SNR=7.0						
CHTO	Chiang Mai	16.69	9	eP	Pn	06 19 19.1	-1.3
CHTO				pmax	pmax		
	comp=Z,15nm,0.8s						
CHTO	Chiang Mai	16.69	9	ePn	Pn	06 19 19.1	-1.3
	comp=Z,16nm,0.8s						
NANT	Nan	17.02	14	⇑P	Pn	06 19 26.0	+1.4
	comp=Z,175nm,0.5s						
CHRT	Chiangrai	17.86	11	⇓P	Pn	06 19 34.0	-1.0
	comp=Z,282nm,1.0s						
KKM	Kota Kinabalu	20.15	79	P	P	06 20 00.9	+0.3
KKM	Kota Kinabalu	20.15	79	eP	P	06 20 01.3	+0.8
QIZ	Qiongzhong	21.29	37	P	P	06 20 12.1	-0.7
QIZ				AP		06 20 20.7	
QIZ				S	S	06 24 08.6	+0.9
QIZ				XS	sS	06 24 20.0	-0.9
QIZ				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.4						
QIZ				LR	LR		
	comp=N,2μm,13.9s,MS4.8						
QIZ				LR	LR		
	comp=E,2μm,13.2s,MS4.8						
QIZ				LR	LR		
	comp=Z,3μm,13.4s,MS4.9						
QIZ	Qiongzhong	21.29	37	eP	P	06 20 12.2	-0.6
	comp=Z,55nm,1.3s,mb4.7						
TSM	Tawau	21.57	84	P	P	06 20 15.6	-0.2
HYB	Hyderabad	23.12	312	i P	P	06 20 36.5	+4.2
HYB	Hyderabad	23.12	312	eP	P	06 20 36.5	+4.2
KMI	Kunming	23.59	15	P	P	06 20 37.1	+0.1
KMI				AP		06 20 45.3	
KMI				XP	sP	06 20 48.4	-1.1
KMI				PP		06 21 10.7	
KMI				PPP		06 21 22.8	
KMI				S	S	06 24 50.9	+1.8
KMI				XS	sS	06 25 06.1	+2.4
KMI				AMB	AMB		
	comp=Z,28nm,1.4s,mb4.5						
KMI				AMB	AMB		
	comp=Z,336nm,3.6s						
KMI				LR	LR		
	comp=N,642nm,17.7s,MS4.4						
KMI				LR	LR		
	comp=E,900nm,18.5s,MS4.4						
KMI				LR	LR		
	comp=Z,1μm,13.3s						
GYA	Guiyang	26.06	21	⇑iP	P	06 20 58.7	-0.7
GYA				AP	pP	06 21 05.7	-2.6
GYA				XP	sP	06 21 09.3	-2.8
GYA				S	S	06 25 32.0	+3.5
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
GYA				AMB	AMB		
	comp=Z,200nm,5.2s						
GYA				LR	LR		
	comp=N,870nm,15.0s,MS4.5						
GYA				LR	LR		
	comp=E,620nm,13.5s,MS4.5						
GYA				LR	LR		
	comp=Z,1μm,14.7s,MS4.5						
GZH	Guangzhou	26.49	37	P	P	06 21 07.5	+4.2
GZH				LR	LR		
	comp=N,946nm,12.7s,MS4.7						
GZH				LR	LR		
	comp=E,1μm,14.0s,MS4.7						
GZH				LR	LR		
	comp=Z,2μm,13.4s,MS4.9						
JIRN	Jiri	27.11	340	eP	P	06 21 10.1	+1.1
	comp=Z,197nm,1.1s,mb5.6						
PKI	Pulchoki	27.31	338	eP	P	06 21 11.3	+0.5
GUN	Gumba	27.45	340	eP	P	06 21 13.0	+1.0
	comp=Z,124nm,0.8s,mb5.5						
DMN	Daman	27.46	338	eP	P	06 21 13.1	+1.0
KKN	Kakani	27.56	338	eP	P	06 21 13.2	+0.2
	comp=Z,136nm,1.0s,mb5.5						
KKN	Kakani	27.56	338	eP	P	06 21 13.2	+0.2
KKN				pmax	pmax		
	comp=Z,136nm,1.0s,mb5.5						
LSA	Lhasa	27.78	350	P	P	06 21 16.2	+1.2
LSA				AMB	AMB		
	comp=Z,120nm,1.0s,mb5.5						
LSA	Lhasa	27.78	350	eP	P	06 21 15.9	+0.9
LSA				pmax	pmax		
	comp=Z,121nm,0.9s,mb5.5						
LSA	Lhasa	27.78	350	eP	P	06 21 15.9	+0.9
	comp=Z,121nm,0.9s,mb5.5						
GKN	Gorkha	27.99	337	eP	P	06 21 17.6	+0.8
	comp=Z,116nm,0.8s,mb5.6						
KOLN	Koldanda	28.20	336	eP	P	06 21 19.7	+1.0
	comp=Z,99nm,0.9s,mb5.4						
CD2	Chengdu	29.39	13	P	P	06 21 28.0	-1.2
CD2				AP	pP	06 21 37.5	-0.7
CD2				XP	sP	06 21 41.7	-0.2
CD2				PP	PP	06 22 23.6	-12
CD2				S	S	06 26 17.3	-3.7
CD2				XS	sS	06 26 32.8	-3.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				AMB	AMB		
	comp=Z,50nm,5.8s						
CD2				LR	LR		
	comp=N,580nm,16.2s						
CD2				LR	LR		
	comp=Z,640nm,15.0s,MS4.4						
LGTI	Lohaghat	31.13	332	i P	P	06 21 47.3	+2.7
QZH	Quanzhou	31.15	42	P	P	06 21 44.0	-0.8
QZH				eS	S	06 26 47.0	-1.6
QZH				LR	LR		
	comp=N,2μm,17.4s,MS5.0						
QZH				LR	LR		
	comp=E,1μm,14.7s,MS5.0						
QZH				LR	LR		
	comp=Z,2μm,16.2s,MS4.9						
MBWA	Marble Bar	32.59	137	eP	P	06 21 57.5	0.0
	comp=Z,6.8nm,0.6s,mb4.8						
WHN	Wuhan	32.92	29	⇓P	P	06 21 57.0	-3.4
WHN				LR	LR		
	comp=Z,1μm,14.0s,MS4.8						
XAN	Xi'an	33.77	19	P	P	06 22 06.2	-1.5
XAN				AP	pP	06 22 15.6	-1.1
XAN				S	S	06 27 24.6	-4.7
XAN				AMB	AMB		
	comp=Z,79nm,1.1s,mb5.6						
XAN				LR	LR		
	comp=N,422nm,17.1s,MS4.3						
XAN				LR	LR		
	comp=E,212nm,15.7s,MS4.3						
XAN				LR	LR		
	comp=Z,701nm,17.4s,MS4.4						
LZH	Lanzhou	34.41	11	P	P	06 22 13.0	-0.3
LZH				AP	pP	06 22 23.4	+1.1
LZH				XP	sP	06 22 27.9	+1.8
LZH				PP	PP	06 23 31.0	-0.5
LZH				PPP		06 23 47.0	
LZH				S	S	06 27 40.0	+0.7
LZH				XS	sS	06 27 57.0	+2.8
LZH				eSS	SS	06 29 55.0	-14
LZH				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.3						
LZH				AMB	AMB		
	comp=Z,250nm,4.6s						
LZH				LR	LR		
	comp=E,1μm,13.2s						
LZH				LR	LR		
	comp=Z,2μm,14.8s,MS5.0						
FITZ	Fitzroy Crossi	35.19	126	eP	P	06 22 19.1	-0.9
	comp=Z,20nm,0.9s,mb5.0						
FITZ				i pP	pP	06 22 26.3	-2.8
FITZ	Fitzroy Crossi	35.19	126	P	P	06 22 19.5	-0.6
	comp=Z,10nm,0.8s,mb4.8,baz=302,slow=5.9,SNR=14						
NJ2	Nanjing	36.46	33	eP	P	06 22 31.1	+0.2
NJ2				AP	pP	06 22 40.8	+0.8
NJ2				XP	sP	06 22 44.8	+1.1
NJ2				PP	PP	06 23 56.1	+2.0
NJ2				S	S	06 28 12.0	+1.3
NJ2				XS	sS	06 28 27.0	+1.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,70nm,3.9s						
NJ2				LR	LR		
	comp=N,1μm,17.3s,MS5.0						
NJ2				LR	LR		
	comp=E,2μm,18.0s,MS5.0						
NJ2				LR	LR		
	comp=Z,510nm,17.0s,MS4.4						
SSE	Sheshan	37.08	37	P	P	06 22 37.9	+1.7
SSE				AP	pP	06 22 46.8	+1.5
SSE				PP	PP	06 24 02.4	+1.4
SSE				S	S	06 28 22.4	+2.1
SSE				XS	sS	06 28 37.1	+1.9
SSE				AMB	AMB		
	comp=Z,25nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,64nm,4.0s						
SSE				LR	LR		
	comp=N,662nm,16.7s,MS4.6						
SSE				LR	LR		
	comp=E,419nm,16.8s,MS4.6						
SSE				LR	LR		
	comp=Z,918nm,15.7s,MS4.7						
GTA	Gaotai	37.16	4	⇑P	P	06 22 36.4	-0.5
GTA				AP	pP	06 22 44.0	-1.9
GTA				XP	sP	06 22 47.0	-2.7
GTA				PP	PP	06 24 03.2	+1.4
GTA				PPP		06 24 23.0	
GTA				PCP	PcP	06 24 57.9	+1.3
GTA				S	S	06 28 20.4	-1.0
GTA				SS	SS	06 30 49.8	-15
GTA				SCS	ScS	06 32 48.3	-0.7
GTA				AMB	AMB		
	comp=Z,39nm,1.3s,mb5.1						
GTA				AMB	AMB		
	comp=Z,84nm,6.5s						
GTA				LR	LR		
	comp=N,484nm,16.0s,MS4.5						
GTA				LR	LR		
	comp=E,338nm,14.5s,MS4.5						
GTA				LR	LR		
	comp=Z,548nm,15.3s,MS4.5						
KAKA	Kakadu	38.76	113	⇓iP	P	06 22 49.2	-1.2
	comp=Z,20nm,0.6s,mb5.0						
KAKA				i pP	pP	06 22 57.4	-2.1
JOW	Kunigami	39.17	48	P	P	06 22 53.9	0.0
	comp=Z,28nm,0.7s,mb5.1,baz=248,slow=9.4,SNR=12						
JOW				LR	LR	06 37 52.7	
	comp=Z,218nm,21.3s,MS4.0,baz=162,slow=34						
BTO	Baotou	40.17	16	eP	P	06 23 01.3	-0.8
HHC	Hu-ho-hao-te	40.84	18	eP	P	06 23 08.1	+0.4
HHC				AP	pP	06 23 17.9	+1.1
HHC				XP	sP	06 23 21.9	+1.4
HHC				PP	PP	06 24 46.5	+4.4
HHC				PCP	PcP	06 25 08.2	0.0
HHC				SCP	ScP	06 28 54.4	-1.1
HHC				PCS	PcS	06 28 58.8	-0.2
HHC				S	S	06 29 17.1	+0.3
HHC				XS	sS	06 29 34.6	+2.7
HHC				SS	SS	06 32 16.3	-2.3
HHC				SCS	ScS	06 33 07.9	-2.5
HHC				AMB	AMB		
	comp=Z,45nm,1.3s,mb4.9						
HHC				AMB	AMB		
	comp=Z,174nm,4.7s						
HHC				LR	LR		
	comp=N,550nm,14.0s,MS4.7						
HHC				LR	LR		
	comp=E,543nm,13.2s,MS4.7						
HHC				LR	LR		
	comp=Z,596nm,14.7s,MS4.6						
BJT	Baijiatuau	41.70	23	eP	P	06 23 14.9	+0.1
BJT				pmax	pmax		
	comp=Z,115nm,1.1s						
BJT	Baijiatuau	41.70	23	eP	P	06 23 14.9	+0.1
	comp=Z,115nm,1.1s,mb5.4						
BJI	Beijing	41.73	23	eP	P	06 23 15.0	+0.1
BJI				AP	pP	06 23 24.3	+0.2
BJI				AMB	AMB		
	comp=Z,86nm,1.1s,mb5.3						
BJI				LR	LR		
	comp=N,321nm,16.3s,MS4.5						
BJI				LR	LR		
	comp=E,423nm,14.8s,MS4.5						
BJI				LR	LR		
	comp=Z,172nm,18.6s,MS4.0						
WSAR	Wadi Sarin	42.11	303	P	P	06 23 18.1	0.0
	comp=Z,4.4nm,0.8s,mb4.1,baz=118,slow=6.3,SNR=3.7						
WMQ	Urumqi	42.14	351	P	P	06 23 19.0	+0.6
WMQ				AP	pP	06 23 29.0	+1.5
WMQ				XP	sP	06 23 33.0	+1.8
WMQ				PP	PP	06 25 00.0	+3.8
WMQ				S	S	06 29 36.0	-0.1
WMQ				SS	SS	06 32 39.0	-5.4
WMQ				AMB	AMB		
	comp=Z,46nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,124nm,4.0s						
WMQ				LR	LR		
	comp=N,325nm,12.0s,MS4.7						
WMQ				LR	LR		
	comp=E,586nm,13.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,389nm,12.0s,MS4.5						
DL2	Dalian	43.19	29	P	P	06 23 27.2	+0.4
DL2				eS	S	06 29 54.1	+2.6
DL2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
DL2				LR	LR		
	comp=N,190nm,11.9s,MS4.4						
DL2				LR	LR		
	comp=E,210nm,13.9s,MS4.4						
DL2				LR	LR		
	comp=Z,250nm,13.3s,MS4.3						
WRAB	Tennant Creek	43.28	122	⇓iP	P	06 23 27.0	-0.6
WRAB	Tennant Creek	43.28	122	eP	P	06 23 26.5	-1.1
	comp=Z,28nm,0.6s,mb5.2						
WB2	Warramunga Arr	43.28	122	eP	P	06 23 26.7	-0.9
WB2				i pP	pP	06 23 36.5	-0.3
ULHL	Ulahol	43.75	338	P	P	06 23 32.5	+1.2
	SNR=7.1						
KZA	Kyzart	43.98	337	P	P	06 23 35.0	+1.7
	SNR=6.0						
UCH	Uchtor	44.40	337	P	P	06 23 38.4	+1.8
	SNR=5.5						
TKM2	Tokmak 2	44.58	338	P	P	06 23 32.8	-5.2
	SNR=5.2						
FORT	Forrest	44.58	140	eP	P	06 23 39.2	+1.2
	comp=Z,19nm,0.6s,mb5.1						
FORT				epP	pP	06 23 47.2	0.0
KBK	Karagaybulak	44.59	337	P	P	06 23 40.1	+2.0
	SNR=7.8						
AML	Almayashu	44.65	336	P	P	06 23 40.1	+1.6
	SNR=19						
ASPA	Alice Springs	44.66	127	eP	P	06 23 38.5	-0.2
AS31	Alice Springs	44.66	127	eP	P	06 23 38.5	-0.2
ASAR	Alice Springs	44.66	127	P	P	06 23 38.6	-0.1
	comp=Z,4.5nm,0.7s,mb4.4,baz=300,slow=8.0,SNR=69						
ASAR				PcP	PcP	06 25 21.9	+0.9
	comp=Z,2.0nm,0.8s,baz=313,slow=3.7,SNR=3.8						
AAK	Ala-Archa	44.75	337	P	P	06 23 40.0	+0.6
	SNR=6.6						
AAK	Ala-Archa	44.75	337c	iP	P	06 23 39.3	-0.1
AAK				pmax	pmax		
	comp=Z,19nm,1.7s,mb4.7						
AAK	Ala-Archa	44.75	337	eP	P	06 23 40.9	+1.5
	comp=Z,4.6nm,0.6s,mb4.5						
FRU	Bishkek	44.87	337	eP	P	06 23 41.0	+0.7
FRU				e		06 23 53.0	
FRU				pmax	pmax		
	comp=Z,40nm,2.0s,mb4.9						
CHMS	Chumysh	44.96	338	P	P	06 23 42.0	+0.9
	SNR=6.0						
EKS2	Erkin-Say	45.06	336	P	P	06 23 43.3	+1.5
	SNR=13						
USP	Ospenovka	45.28	337	P	P	06 23 44.5	+0.9
	SNR=36						
MKAR	Makanchi Array	46.07	347	P	P	06 23 49.3	-0.5
	comp=Z,71nm,0.7s,mb5.7,baz=160,slow=7.8,SNR=296						
SONM	Songino Array	46.27	9	P	P	06 23 50.9	-0.5
	comp=Z,8.7nm,0.6s,mb4.8,baz=191,slow=8.7,SNR=10						
SONM				PcP	PcP	06 25 25.7	-0.8
	comp=Z,3.9nm,0.7s,baz=182,slow=3.2,SNR=5.4						
SONM				LR	LR	06 45 31.4	
	comp=Z,636nm,18.7s,MS4.6,baz=3.8,slow=39						
SONM	Songino Array	46.27	9	P	P	06 23 50.9	-0.5
SONM						06 25 25.7	
SNY	Shenyang	46.40	28	⇑P	P	06 23 50.9	-1.5
SNY				AP	pP	06 24 02.7	+1.1
SNY				XP	sP	06 24 08.7	+3.4
SNY				PP	PP	06 25 37.5	-4.1
SNY				S	S	06 30 29.8	-8.2
SNY				XS	sS	06 30 56.5	+3.3
SNY				SS	SS	06 33 57.4	-6.4
SNY				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.8						
SNY				AMB	AMB		
	comp=Z,93nm,6.0s						

SNY LR LR
comp=N,250nm,16.2s,MS4.7
SNY LR LR
comp=E,546nm,13.8s,MS4.7
SNY LR LR
comp=Z,612nm,13.8s,MS4.7
ULN Ulaanbaatar 46.41 10 *e*P **P 06 23 52.3 -0.2**
ULN *e**PP pP 06 24 00.7 -1.0
ULN pmax pmax
comp=Z,22nm,1.2s,mb5.0
ULN Ulaanbaatar 46.41 10 *e*P **P 06 23 52.3 -0.2**
comp=Z,22nm,1.2s,mb5.0
ULN *ep*P pP 06 24 00.7 -1.0
KK31 Karatay Array 46.79 334 *i* P **P 06 23 55.9 +0.4**
KK31 pmax pmax
comp=Z,15nm,0.6s,mb5.1
CN2 Changchun 48.79 28 *e*P **P 06 24 13.4 +2.4**
CN2 *e*AP pP 06 24 23.3 +3.0
CN2 *e*S **S 06 31 14.4 +2.4**
CN2 SS SS 06 34 41.0 -1.7
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CN2 LR LR
comp=N,400nm,15.0s,MS4.7
CN2 LR LR
comp=E,500nm,15.0s,MS4.7
CN2 LR LR
comp=Z,500nm,15.0s,MS4.6
TLY Talaya 49.67 6 *e*P **P 06 24 18.0 +0.3**
TLY *e*S **S 06 31 21.8 -2.6**
TLY pmax pmax
comp=Z,13nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,408nm,18.0s,MS4.5
TLY Talaya 49.67 6 *e*P **P 06 24 18.5 +0.7**
IRK Irkutsk 50.30 6 *e*P **P 06 24 19.5 -3.0**
IRK pmax pmax
comp=Z,37nm,0.9s,mb5.4
KURK Kurchatov 50.61 345 P **P 06 24 24.6 -0.2**
comp=Z,192nm,1.4s,mb5.8,SNR=17
KURK Kurchatov 50.61 345 P **P 06 24 25.0 +0.1**
SNR=24
KURK Kurchatov 50.61 345 *e*P **P 06 24 24.6 -0.2**
KURK pmax pmax
comp=Z,50nm,1.1s,mb5.4
KURK Kurchatov 50.61 345 *e*P **P 06 24 24.6 -0.2**
comp=Z,50nm,1.1s,mb5.3
HIA Hailar 50.96 20 *e*P **P 06 24 27.4 -0.1**
HIA *e* pP 06 24 34.8 -2.0
HIA pmax pmax
comp=Z,14nm,0.7s
HIA Hailar 50.96 20 *e*P **P 06 24 27.4 -0.1**
comp=Z,14nm,0.7s,mb5.0
HIA *e* pP 06 24 34.8 -2.0
MDJ Mudanjiang 51.40 30 P **P 06 24 31.3 +0.5**
MDJ AP pP 06 24 37.6 -2.5
MDJ XP sP 06 24 41.2 -2.6
MDJ PP PP 06 26 27.7 -0.3
MDJ SCP ScP 06 29 41.0 +1.6
MDJ PCS PcS 06 29 43.5 +0.6
MDJ S **S 06 31 52.8 +4.4**
MDJ XS sS 06 32 01.4 -2.4
MDJ AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
MDJ AMB AMB
comp=Z,80nm,5.2s
MDJ LR LR
comp=N,169nm,17.0s,MS4.4
MDJ LR LR
comp=E,230nm,15.0s,MS4.4
MDJ LR LR
comp=Z,214nm,13.0s,MS4.4
MAJO Matsushiro 51.52 43 *e*P **P 06 24 31.7 +0.1**
MAT Matsushiro 51.52 43 P **P 06 24 31.2 -0.4**
MAT S **S 06 31 51.0 +1.0**
MJAR Matsushiro Arr 51.52 43 P **P 06 24 31.3 -0.3**
comp=Z,2.4nm,0.7s,mb4.3,baz=227,slow=5.9,SNR=9.1
MJAR LR LR 06 48 05.8
comp=Z,300nm,18.4s,MS4.3,baz=245,slow=38
VLA Vladivostok 51.57 33 *e*P **P 06 24 31.5 -0.5**
VLA pmax pmax
comp=Z,35nm,1.4s,mb5.1
VLA MLR MLR
comp=Z,440nm,11.4s,MS4.7
PMG Port Moresby 51.89 104 *e*P **P 06 24 34.8 +0.3**
PMG *e**PP pP 06 24 43.0 -0.8
PMG *e* 06 25 47.1
PMG pmax pmax
comp=Z,260nm,0.7s
PMG Port Moresby 51.89 104 *e*P **P 06 24 34.8 +0.3**
comp=Z,260nm,0.7s
PMG *ep*P pP 06 24 43.0 -0.8
PMG *e*PcP PcP 06 25 47.1 +0.2
ZAL Zalesovo 52.43 351 P **P 06 24 38.3 -0.1**
comp=Z,27nm,0.5s,mb5.4,baz=309,slow=5.7,SNR=102
ZAL LR LR 06 52 28.9
comp=Z,261nm,20.0s,MS4.3,baz=295,slow=42
OPO Ambohidratompo 52.59 245 P **P 06 24 40.7 +1.0**
comp=Z,4.7nm,1.0s,mb4.4,baz=50,slow=7.6,SNR=3.2
NVS Novosibirsk 53.55 351 *i* P **P 06 24 45.9 -0.8**
NVS *i* 06 24 59.9
NVS pmax pmax
comp=Z,48nm,1.0s,mb5.4
NVS pmax pmax
comp=N,37nm,1.0s
NVS pmax pmax
comp=E,28nm,1.0s
UMR Umm Al-Rimmam 53.56 306 *e*P **P 06 24 47.2 +0.4**
UMR AMb AMB 06 24 48.7
comp=Z,21nm,0.8s,mb5.1
CTA Charters Tower 53.70 117 *e*P **P 06 24 48.3 +0.5**
comp=Z,7.6nm,0.7s,mb4.7
CTA Charters Tower 53.70 117 *e*P **P 06 24 48.3 +0.5**
CTA pmax pmax
comp=Z,8.0nm,0.7s
CTAO Charters Tower 53.70 117 *e*P **P 06 24 48.3 +0.5**
CTAO *e**PP pP 06 24 57.1 0.0
CTAO pmax pmax
comp=Z,11nm,0.9s,mb4.8
CTAO Charters Tower 53.70 117 *e*P **P 06 24 48.2 +0.5**
comp=Z,11nm,0.9s,mb4.8
CTAO *ep*P pP 06 24 57.1 0.0
KRAR Krasnoyarsk 53.71 358 ⇓ *i*P **P 06 24 48.4 +0.5**
NAY Al-Naaiem 53.84 305 *e*P **P 06 24 48.9 +0.1**
NAY AMb AMB 06 24 50.4
comp=Z,11nm,0.5s,mb5.1
MIB Mutribah 53.96 306 *e*P **P 06 24 49.7 0.0**
MIB AMb AMB 06 24 51.3
comp=Z,31nm,0.6s,mb5.5
RST Umm Al-Ruwaisa 54.13 305 *e*P **P 06 24 51.0 +0.1**
RST AMb AMB 06 24 52.3
comp=Z,11nm,0.5s,mb5.0
STKA Stephens Creek 54.65 132 *e*P **P 06 24 54.8 +0.1**
comp=Z,7.3nm,0.6s,mb4.9
STKA *ep*P pP 06 25 05.9 +1.8
STKA Stephens Creek 54.65 132 P **P 06 24 55.0 +0.3**
comp=Z,8.3nm,0.7s,mb4.9,baz=306,slow=6.5,SNR=16
STKA LR LR 06 50 27.6
comp=Z,320nm,19.1s,MS4.4,baz=115,slow=38
BVAR Borovoye Array 55.03 341 P **P 06 24 56.5 -1.0**
comp=Z,16nm,0.6s,mb5.2,baz=147,slow=8.3,SNR=56
BRVK Borovoye 55.09 341 ⇑P **P 06 24 57.3 -0.6**
SNR=8.9
BRVK Borovoye 55.09 341 *e*P **P 06 24 57.4 -0.5**
BRVK pmax pmax
comp=Z,20nm,0.9s,mb5.2
BRVK Borovoye 55.09 341 *e*P **P 06 24 57.4 -0.6**
comp=Z,20nm,0.9s,mb5.1
CHKZ Chkalovo 55.51 342 *e*P **P 06 25 00.7 -0.2**
CHKZ pmax pmax
comp=Z,43nm,0.8s,mb5.5
CHKZ Chkalovo 55.51 342 *e*P **P 06 25 00.7 -0.3**
comp=Z,43nm,0.8s,mb5.5
KLR Kul'dur 55.73 27 *e*P **P 06 25 00.0 -2.5**
KLR MLR MLR
comp=E,900nm,16.0s
KLR MLR MLR
comp=E,500nm,13.5s
KLR MLR MLR
comp=Z,2μm,13.5s,MS5.5
HABR Khabarovsk 56.79 30 *e*P **P 06 25 09.4 -0.7**
HABR *e*S **S 06 33 00.6 -0.5**
HABR pmax pmax
comp=Z,28nm,1.1s,mb5.2
BOD Bodaibo 57.18 11 *e*P **P 06 25 12.3 -0.5**

BOD pmax pmax
comp=Z,22nm,1.1s,mb5.1
AKTK Aktyubinsk 57.95 332 P **P 06 25 17.6 -0.7**
AKTO Aktyubinsk 57.95 332 P **P 06 25 17.6 -0.7**
comp=Z,6.2nm,0.6s,mb4.8,baz=136,slow=6.5,SNR=10
KMBO Kilima Mbogo 59.20 267 P **P 06 25 28.1 +1.1**
comp=Z,2.8nm,0.9s,mb4.3,baz=53,slow=12,SNR=5.2
KMBO LR LR 06 48 04.9
comp=Z,244nm,18.9s,MS4.3,baz=96,slow=33
KMBO Kilima Mbogo 59.20 267 *e*P **P 06 25 27.4 +0.4**
KMBO *e**PP pP 06 25 35.9 -0.5
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 59.20 267 *e*P **P 06 25 27.4 +0.5**
comp=Z,3.9nm,0.9s,mb4.4
KMBO *ep*P pP 06 25 35.9 -0.6
YSS Yuzh-Sakhalins 59.99 35 ⇓ *e*P **P 06 25 32.0 -0.4**
YSS *e* 06 25 39.0
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.6
YSS pmax pmax
comp=E,30nm,0.9s
YSS Yuzh-Sakhalins 59.99 35 *e*P **P 06 25 32.3 -0.1**
comp=E,59nm,1.1s,mb5.5
GNI Garni 59.99 316 ⇑ *i*P **P 06 25 33.6 +1.2**
GNI pmax pmax
comp=Z,8.0nm,1.0s
GNI Garni 59.99 316 *e*P **P 06 25 32.4 0.0**
comp=Z,19nm,1.7s,mb4.8
SVE Sverdlovsk 61.45 339 ⇑ *e*P **P 06 25 41.2 -1.1**
SVE *i* 06 25 57.5
SVE pmax pmax
comp=Z,40nm,1.0s,mb5.5
SVE pmax pmax
comp=Z,240nm,1.0s
SVE MLR MLR
comp=N,300nm,14.0s,MS4.6
SVE MLR MLR
comp=E,100nm,14.0s,MS4.6
SVE MLR MLR
comp=Z,300nm,14.0s,MS4.6
ZEI Tsey 61.70 318 *e*P **P 06 25 43.0 -1.0**
ZEI *e**PP pP 06 25 52.8 -0.7
ZEI *e* 06 27 57.9
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb5.1
ARU Arti 61.94 337 ⇑ *i*P **P 06 25 44.5 -1.1**
ARU *e* 06 26 23.6
ARU *e* 06 27 56.8
ARU *e*S **S 06 34 06.1 -1.5**
ARU *e* 06 35 28.0
ARU *e*SS SS 06 38 06.3 -3.8
ARU pmax pmax
comp=Z,21nm,0.8s,mb5.3
ARU MLR MLR
comp=Z,200nm,19.0s,MS4.3
ARU MLR MLR
comp=N,60nm,24.0s,MS4.2
ARU MLR MLR
comp=E,200nm,20.0s,MS4.2
KIV Kislovodsk 63.00 319 *e*P **P 06 25 52.7 -0.1**
KIV pmax pmax
comp=Z,18nm,1.2s,mb5.1
KIV Kislovodsk 63.00 319 *e*P **P 06 25 52.7 0.0**
comp=Z,18nm,1.2s,mb5.1
MALT Malatya 63.84 312 *e*P **P 06 25 58.1 -0.2**
MALT pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
MALT Malatya 63.84 312 *e*P **P 06 25 58.1 -0.2**
comp=Z,3.0nm,1.0s,mb4.3
EIL Elat 64.22 302 *e*P **P 06 26 01.8 +1.0**
YAK Yakutsk 64.69 17 *e*P **P 06 26 03.0 -0.8**
YAK *e**PP pP 06 26 11.0 -2.4
YAK pmax pmax
comp=Z,25nm,0.6s,mb5.4
YAK Yakutsk 64.69 17 *e*P **P 06 26 03.0 -0.9**
comp=Z,25nm,0.6s,mb5.4
YAK *ep*P pP 06 26 11.0 -2.4
SOKR Solikamsk 64.85 339 *c i*P **P 06 26 04.4 -0.5**
SOKR pmax pmax
comp=Z,50nm,1.1s,mb5.5
BR131 Keskin Array S 67.82 312 *e*P **P 06 26 24.5 +0.6**
comp=Z,1.7nm,0.6s,mb4.2
BRTR Keskin Array B 67.82 312 P **P 06 26 23.1 -0.9**
comp=Z,1.1nm,0.7s,mb4.0,baz=141,slow=8.0,SNR=5.8
BRTR LR LR 06 56 50.2
comp=Z,73nm,21.3s,MS3.9,baz=95,slow=37
VRSR Storozhevoye 68.26 325 *e*P **P 06 26 24.7 -1.9**
VRSR pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
VRSR pmax pmax
comp=N,6.0nm,0.8s
VRSR pmax pmax
comp=E,10.0nm,0.9s
LSZ Lusaka 69.61 253 *e*P **P 06 26 35.6 +0.5**
LSZ *e**PP pP 06 26 44.5 -0.2
MA2 Magadan 70.79 26 *e*P **P 06 26 41.7 -0.6**
MA2 *e**PP pP 06 26 51.4 -0.5
MA2 *e* 06 27 01.5
MOS Moscow 71.04 329 *e*P **P 06 26 49.6 +5.8**
MOS *e* 06 27 08.5
MOS *e* 06 29 29.6
MOS pmax pmax
comp=Z,60nm,0.7s,mb5.6
MOS pmax pmax
comp=Z,50nm,0.7s,mb5.5
OBN Obninsk 71.33 328 *ke*P **P 06 26 45.2 -0.3**
OBN *e**PP pP 06 26 51.5 -3.7
OBN *SP sP 06 26 58.0 -0.8
OBN S S 06 36 03.0 +1.7
OBN pmax pmax
comp=Z,17nm,0.7s,mb5.1
OBN MLR MLR
comp=N,100nm,19.0s
OBN Obninsk 71.33 328 *e*P **P 06 26 45.0 -0.5**
comp=N,20nm,0.7s,mb5.1
PET Petropavlovsk 71.86 34 ⇑ *e*P **P 06 26 47.8 -1.0**
PET pmax pmax
comp=Z,38nm,1.0s,mb5.3
KLMR Klimovskoe 72.49 335 *e*P **P 06 26 51.0 -1.5**
KLMR pmax pmax
comp=Z,40nm,1.4s,mb5.2
TIRR Tirgusor 72.82 316 ⇓ *i*P **P 06 26 54.2 -0.3**
TIRR Tirgusor 72.82 316 ⇓ P **P 06 26 54.2 -0.3**
SANT Santorini 73.36 307 *e*P pP 06 27 05.3 -2.0
MAW Mawson 73.51 193 *e*P **P 06 26 58.0 -0.5**
comp=Z,2.5nm,1.2s,mb4.0
MAW Mawson 73.51 193 P **P 06 26 57.5 -1.0**
comp=Z,1.1nm,0.6s,mb4.0,baz=347,slow=11,SNR=5.7
MAW Mawson 73.51 193 *e*P **P 06 26 58.0 -0.5**
MAW pmax pmax
comp=Z,3.0nm,1.2s
LBTB Lobatse 73.59 243 *e*P **P 06 26 59.5 +0.5**
LBTB pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LBTB Lobatse 73.59 243 *e*P **P 06 26 59.5 +0.5**
comp=Z,5.3nm,0.7s,mb4.6
AKASG Malin Array Be 73.96 322 P **P 06 26 59.9 -1.3**
comp=Z,1.6nm,0.6s,mb4.2,baz=90,slow=4.4,SNR=10
AKBB Malin Array Si 73.96 322 *e*P **P 06 27 01.3 +0.1**
AKBB *e* 06 27 08.3
VRI Vrincioaia 74.32 317 ⇑ *i*P **P 06 27 04.7 +1.4**
VRI Vrincioaia 74.32 317 ⇑ P **P 06 27 04.7 +1.5**
MLR Muntele Rosu 74.77 317 ⇑ *i*P **P 06 27 06.9 +1.0**
MLR Muntele Rosu 74.77 317 ⇑ P **P 06 27 06.9 +1.1**
JOF Joensuu 76.88 335 *ep* **P 06 27 16.6 -1.4**
comp=Z,7.7nm,0.8s,mb4.7
DRGR 77.23 317 ⇓ *i*P pP 06 27 26.4 -3.3
APA Apatity 77.89 340 ⇑ *e*P **P 06 27 22.0 -1.6**
APA *i* 06 27 28.0
APA pmax pmax
comp=Z,31nm,1.0s,mb5.2
SUW Suwalki 78.38 325 *e*P **P 06 27 26.0 -0.3**
SUW pmax pmax
comp=Z,11nm,0.6s,mb5.0
SUW Suwalki 78.38 325 *e*P **P 06 27 26.0 -0.3**
comp=Z,11nm,0.6s,mb5.0
FINES FINESS Array B 78.72 333 P **P 06 27 27.4 -0.9**
comp=Z,4.1nm,0.6s,mb4.5,baz=99,slow=5.8,SNR=24
FINES FINESS Array B 78.72 333 *i* P **P 06 27 27.7 -0.5**
FINES pmax pmax
comp=Z,4.0nm,0.6s
KAF Kangasniemi 78.81 333 *ep* **P 06 27 27.2 -1.5**
comp=Z,6.6nm,0.6s,mb4.7,baz=102,slow=5.1
KAF Kangasniemi 78.81 333 *e*P **P 06 27 27.2 -1.5**

KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
SUR Sutherland 79.02 237 *e*P **P 06 27 29.9 +0.1**
comp=Z,125nm,1.8s,mb5.5
PSZ Piszkesteto 79.31 318 ⇑ *i*P pP 06 27 40.4 -0.8
PSZ Piszkesteto 79.31 318 *e*P **P 06 27 31.5 +0.1**
PSZ *e* pP 06 27 40.4 -0.8
PSZ pmax pmax
comp=Z,11nm,0.9s,mb4.8
PSZ Piszkesteto 79.31 318 *e*P **P 06 27 31.5 +0.1**
comp=Z,11nm,0.9s,mb4.8
PSZ *e*PcP PcP 06 27 40.4 +0.9
PKSM Moragy 79.92 316 ⇑ *i*P **P 06 27 34.6 -0.1**
PKSM Moragy 79.92 316 ⇑ P **P 06 27 34.6 -0.1**
BILL Bilibino 80.52 21 ⇑ P **P 06 27 38.0 0.0**
BILL pmax pmax
comp=Z,15nm,1.6s,mb4.7
BILL MLR MLR
comp=Z,500nm,17.0s,MS4.9
KEV Kevo 80.88 341 *ep* **P 06 27 38.4 -1.5**
comp=Z,16nm,1.0s,mb4.9
KEV Kevo 80.88 341 *e*P **P 06 27 38.4 -1.5**
KEV pmax pmax
comp=Z,16nm,1.0s,mb4.9
MORC Moravsky Berou 81.10 320 ⇑ *i*P pP 06 27 49.2 -1.7
MORC Moravsky Berou 81.10 320 *e*P **P 06 27 41.4 +0.3**
MORC *e**PP pP 06 27 50.2 -0.7
MORC pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
MORC Moravsky Berou 81.10 320 ⇑ P pP 06 27 49.2 -1.7
MORC Moravsky Berou 81.10 320 *e*P **P 06 27 41.4 +0.3**
comp=Z,3.2nm,1.1s,mb4.2
MORC *ep*P pP 06 27 50.2 -0.7
ZST Bratislava 81.20 318 *e*P **P 06 27 45.4 +3.8**
ARCES ARCESS Array B 81.31 340 P **P 06 27 42.1 -0.1**
comp=Z,5.4nm,0.7s,mb4.6,baz=94,slow=5.0,SNR=34
ARCES LR LR 07 09 41.7
comp=Z,196nm,18.7s,MS4.5,baz=286,slow=40
ARE0 ARCESS Array S 81.31 340 *e*P **P 06 27 42.1 -0.1**
DPC Dobruska-Polom 81.95 320 *ep*P pP 06 27 52.8 -2.6
DPC *es*P sP 06 28 01.0 +2.1
UPC Upice 82.16 321 *ep*P pP 06 27 57.0 +0.5
UPC *ex* x 06 28 03.1
BOJS Bojanci 82.20 315 *e*P pP 06 27 55.7 -1.0
PERS Pernice 82.39 317 *e*P pP 06 27 56.6 -1.0
ROBS Robic 83.47 316 *e*P pP 06 28 01.3 -1.9
GEC2 GERESS Array S 83.51 319 *e*P **P 06 27 54.0 +0.3**
GEC2 *e**PP pP 06 28 03.0 -0.5
GERES GERESS Array B 83.51 319 P **P 06 27 52.3 -1.4**
comp=Z,1.6nm,0.7s,mb4.2,baz=87,slow=5.5,SNR=13
KHC Kasperske Hory 83.61 319 *ep*P pP 06 28 02.5 -1.5
CLL Collm 84.13 321 P **P 06 27 57.0 +0.2**
comp=Z,logA/T=0.7,mb4.6
CLL Collm 84.13 321 *e*P **P 06 27 57.0 +0.2**
comp=Z,5.0nm,1.0s,mb4.6
CLL LmV 07 18 00.0
comp=Z,100nm,18.7s
GRA1 Grafenberg Arr 85.18 320 *e*P **P 06 28 02.1 0.0**
comp=Z,4.0nm,0.9s,mb4.5
GRF Grafenberg Arr 85.18 320 *e*P **P 06 28 02.1 0.0**
comp=Z,4.0nm,0.9s,mb4.5
GRF Grafenberg Arr 85.18 320 *e*P **P 06 28 02.1 0.0**
GRF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
GRF Grafenberg Arr 85.18 320 *e*P **P 06 28 02.1 0.0**
GRF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
NB2 NORSAR Subarra 85.72 331 P **P 06 28 03.5 -1.3**
comp=Z,3.7nm,0.8s,mb4.7,baz=91,slow=5.6
NOA NORSAR Array B 85.72 331 P **P 06 28 04.1 -0.7**
comp=Z,1.8nm,0.9s,mb4.3,baz=91,slow=5.7,SNR=3.9
NOA LR LR 07 13 49.3
comp=Z,122nm,20.1s,MS4.3,baz=90,slow=41
KEST Kesra 86.30 305 P **P 06 28 07.7 0.0**
comp=Z,1.4nm,0.9s,mb4.2,baz=131,slow=9.3,SNR=2.9
VNDA Vanda 86.97 169 P **P 06 28 10.7 -0.3**
comp=Z,0.6nm,0.7s,mb3.9,baz=305,slow=8.2,SNR=3.2
LPG La Plagne 88.17 315 *e*P pP 06 28 24.5 -2.1
comp=Z,15nm,0.7s
TORD Torodi Ar. Bea 94.05 283 P **P 06 28 45.4 +1.3**
comp=Z,0.8nm,0.8s,mb4.2,baz=98,slow=5.4,SNR=4.3
IMA2 Indian Mountai 95.97 23 *e*P **P 06 28 52.6 -0.3**
SML Sawmill 99.73 26 *e*P Pdif 06 29 16.7 +6.9
TBI Tubuai 113.02 114 *e*LR LR 07 07 56.7
comp=Z,112nm,24.2s
PPT Papeete 113.58 108 *e*LR LR 07 08 13.1
comp=Z,88nm,22.5s
MSO Missoula 124.36 25 *e*PKPdf PKPdf 06 34 24.6 -0.1
MNRC McLaughlin Nat 125.72 37 ⇑ P PKPdf 06 34 28.9 +1.6
baz=126
K09A Rome 125.74 31 ⇑ P PKPdf 06 34 28.1 +0.8
baz=126
L08A Fields 125.79 31 ⇑ P PKPdf 06 34 28.7 +1.3
baz=126
N06A Buffalo Meadow 125.99 34 ⇑ P PKPdf 06 34 28.8 +1.0
baz=126
RKT Rikitea 126.13 117 *e*LR LR 07 14 00.5
comp=Z,103nm,25.5s
BEKR Beckwourth 126.30 35 ⇓ P PKPdf 06 34 29.4 +1.0
baz=126
O06A Flanigan 126.39 34 ⇓ P PKPdf 06 34 29.7 +1.1
baz=126
ULM Lac du Bonnet 126.69 10 PKP PKPdf 06 34 28.6 -0.6
comp=Z,2.1nm,0.6s,baz=310,slow=6.0,SNR=4.3
N08A GE Springer Mi 126.90 33 ⇑ P PKPdf 06 34 30.6 +1.0
baz=127
O07A Toulon 126.93 34 ⇑ P PKPdf 06 34 30.8 +1.2
baz=127
M11A Holland Ranch, 127.65 30 ⇓ P PKPdf 06 34 33.3 +2.3
baz=128
M12A Wells 128.10 30 ⇓ P PKPdf 06 34 33.7 +1.9
baz=128
R07C Lee Vining 128.25 36 ⇓ P PKPdf 06 34 35.3 +3.2
baz=128
NVAR Mina Array Bea 128.44 35 PKP PKPdf 06 34 33.0 +0.5
comp=Z,1.4nm,0.8s,baz=302,slow=1.0,SNR=7.2
NVAR Mina Array Bea 128.44 35 PKP PKPdf 06 34 33.0 +0.5
REDW Red Top Meadow 128.45 25 *e*PKPdf PKPdf 06 34 32.3 -0.2
REDW *ep*PKPdf pPKPdf 06 34 42.8 +0.1
REDW *e*PP PP 06 36 37.0 -0.6
N12A Clover Valley, 128.46 30 ⇓ P PKPdf 06 34 34.1 +1.6
baz=128
O11A Cowboy Ranch, 128.68 31 ⇓ P PKPdf 06 34 34.7 +1.8
baz=128
O12A Currie 129.04 31 ⇓ P PKPdf 06 34 35.2 +1.6
baz=129
R09A Tonopah 129.27 34 ⇑ P PKPdf 06 34 35.5 +1.5
baz=129
PDAR Pinedale Array 129.48 25 PKP PKPdf 06 34 33.8 -0.7
comp=Z,0.5nm,0.6s,baz=305,slow=3.1,SNR=4.5
S09A Goldfield 129.54 35 ⇑ P PKPdf 06 34 36.0 +1.4
baz=129
P12A McGill 129.55 31 ⇑ P PKPdf 06 34 36.6 +2.0
baz=129
MPMC Manual Prospec 130.53 36 ⇑ P PKPdf 06 34 37.7 +1.3
baz=130
LRMC Laurel Mountai 130.81 37 ⇑ P PKPdf 06 34 39.9 +2.9
baz=131
BELC Belle Mtn. 132.83 37 ⇓ P PKPdf 06 34 43.0 +2.2
baz=133
W13A Hualapai Mount 133.30 35 ⇓ P PKPdf 06 34 44.1 +2.4
baz=133
GLA Glamis 134.19 37 ⇑ P PKPdf 06 34 46.0 +2.6
baz=134
Y14A Wickenburg 134.64 35 ⇓ P PKPdf 06 34 46.8 +2.6
baz=134
X15A Humboldt 134.67 34 ⇓ P PKPdf 06 34 46.4 +2.1
baz=134
ANMO Albuquerque 137.28 28 ⇑ *i*PKIKP PKPdf 06 34 50.1 +1.0
MIAR Mount Ida 142.26 13 *e*PKIKP PKPdf 06 34 53.2 -5.0
JCT Junction City 144.02 24 *e*PKIKP PKPdf 06 35 00.1 -1.2
NATX Nacogdoches 144.63 16 *e*PKPdf PKPdf 06 35 01.8 -0.6
CPUP Villa Florida 145.17 224 PKP PKPdf 06 35 03.0 -0.2
comp=Z,3.2nm,0.6s,baz=98,slow=4.6,SNR=11
CPUP Villa Florida 145.17 224 *e*PKPdf PKPdf 06 35 03.6 +0.3

GII **12** *06:18:11.1±0.0, 2989N×3629E, h0km, ML2.4/4*
ISCJB **12** *06:18:14.2±0.9, 2994N±004×3618E±006, h10km, Error ellipse: s-maj=7.3km s-min=5.5km az=48.7*
HLW **12** *06:18:14.8, 3002N×3644E, h20km, Mb2.8*
ISC 12 06:18:14.6±1.0, 2995N±004×3621E±006, h10km, n18,
σ1°30/28, 3C-1D, Western Arabian Peninsula

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HRFI	Mount Harif	1.02	275	Pg	Pg	06 18 31.5	-2.7
HRFI				Sg	Sg	06 18 47.5	+0.1
AQBJ	Aqaba	1.03	258	Pg	Pg	06 18 32.7	-1.6
PRNI	Paran	1.12	291	Pg	Pg	06 18 33.5	-2.5
PRNI				Sg	Sg	06 18 51.0	+0.5
EIL	Elat	1.12	256	Pg	Pg	06 18 33.5	-2.8
EIL				Sg	Sg	06 18 50.3	-0.5
MBH	Mount Berech	1.13	262	Pg	Pg	06 18 33.9	-2.5
MBH				Sg	Sg	06 18 51.0	0.0
MZDA	Masada	1.54	332	Pn	Pn	06 18 41.5	-0.6
MZDA				Sn	Sn	06 19 05.1	+3.0
MKRJ	Makawir	1.67	343	Pn	Pn	06 18 42.8	-1.1
MKRJ				Sn	Sn	06 19 05.5	+0.1
SVTA	Shivta	1.68	306	Pn	Pn	06 18 43.6	-0.4
SVTA				Sn	Sn	06 19 06.5	+0.8
KZIT	Kziot	1.83	302	Pn	Pn	06 18 44.4	-1.7
KZIT				Sn	Sn	06 19 11.1	+1.8
KZIT	Kziot	1.83	302	Pn	Pn	06 18 44.3	-1.8
HDHB	Dhahab	1.85	229	⇑P	Pn	06 18 46.7	+0.4
HNKL	Nakhl	1.93	270	⇑eP	Pn	06 18 48.2	+0.7
HNKL				S	Sn	06 19 12.9	+1.1
HKAT	Jabal Katrina	2.40	234	⇑P	Pn	06 18 55.3	+1.4
HKAT				S	Sn	06 19 24.0	+0.7
TR2		2.67	235	⇓iP	Pn	06 18 59.0	+1.3
AMAG	Maghara	2.68	286	P	Pn	06 18 58.6	+0.8
TR1		2.76	226	P	Pn	06 18 59.6	+0.7
SUZ		2.93	269	P	Pn	06 19 02.2	+1.0
SUZ		2.93	269	P	Pn	06 19 02.2	+1.0

*NEIC **12** 06:20:58.6, 3530S×7073W, h0km, ML3.3(GUC), After GUC.*

GUC 12 06:20:58.6±0.8**, 3530S**×**7073W, h0**km±6km**, MD3.7, ML3.3, 2C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	Talca	0.75	262	AML	AML	06 21 27.9	
	comp=N,2μm,0.1s						
LNCH	Linares	0.90	232	i P	Pg	06 21 16.1	+0.3
LNCH				i S	Sg	06 21 29.7	+2.2
CHCH	Chadas Angostu	1.37	3	⇓iP	Pg	06 21 23.2	-1.5
CHCH				i S	Sg	06 21 42.9	+0.4
TACH	Talagante	1.65	354	⇓iP	Pn	06 21 28.1	-0.7
TACH				i S	Sn	06 21 50.6	-0.1
PCH	Pirque	1.69	6	⇑iP	Pn	06 21 28.9	-0.4
PCH				i S	Sn	06 21 52.4	+0.8
CLCH	Cerro Calan	1.91	5	i P	Pn	06 21 32.5	+0.2
CLCH				AML	AML	06 22 06.6	
	comp=E,277nm,0.7s						
LCCH	Las Cruces	1.95	339	⇓iP	Pn	06 21 33.0	+0.1
LCCH				i S	Sn	06 21 59.3	+1.3
FCH	Farellones	2.00	10	eP	Pn	06 21 34.6	+1.0
FCH				i S	Sn	06 22 01.9	+2.6
FCH				AML	AML	06 22 03.0	
	comp=N,270nm,0.2s						
PEL	Peldehue	2.15	1	eP	Pn	06 21 36.5	+0.8
PEL				i S	Sn	06 22 05.0	+2.0
PEL				AML	AML	06 22 11.4	
	comp=E,481nm,0.6s						
PEL	Peldehue	2.15	1	eP	Pn	06 21 36.5	+0.8
PEL				i S	Sn	06 22 05.0	+2.0
ROCH	El Roble	2.33	354	⇑iP	Pn	06 21 40.0	+1.8
ROCH				i S	Sn	06 22 10.3	+2.8

*NEIC **12** 06:49:23.8, 1715N×9448W, h146km, MD3.8(MEX), After MEX.*

MEX 12 06:49:23.8±1.4**, 1715N**×**9448W, h146**km±13km**, MD3.8, 1C, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.39	261	⇑iP	Pn	06 49 43.2	-0.9
CMIG				i S	Sn	06 49 57.0	-2.6
HUIG	Huatulco	2.08	229	i P	Pn	06 49 57.3	-2.3
HUIG				i S	Sn	06 50 25.5	-1.6
OXX	Oaxaca	2.15	268	i P	Pn	06 50 00.0	-0.4
OXX				i S	Sn	06 50 28.0	-0.5
VHO	Vista Hermosa	2.16	268	i P	Pn	06 50 00.2	-0.3
VHO				i S	Sn	06 50 27.7	-1.0
TPIG	Tehuac#an	3.02	295	i P	Pn	06 50 10.7	-0.6
TPIG				i S	Sn	06 50 43.9	-4.0
UTMO	Huajuapan	3.25	282	eP	Pn	06 50 13.3	-0.8
UTMO				i S	Sn	06 50 50.8	-2.2

*BJI **12** 06:55:20.6, 970S×10760E, h10km, mB5.3, mb5.2, Ms4.8, Msz4.7*

*NEIC **12** 06:55:22.7±0.1, 969S×10759E, h10km, mb5.1/37, Error ellipse: s-maj=5.8km s-min=3.7km az=50.0*

*HRVD **12** 06:55:22.7±0.3, 994S×10758E, h12km, MW5.0/65, Centroid moment Tensor Solution. LP body waves: s30,c40;Mantle waves: s65,c106; Half duration: 0 Moment tensor: Scale 10[16]Nm; M_{rr}-3.19±.09; $M_{\theta\theta}$2.65±.07; $M_{\phi\phi}$0.53±.10; $M_{r\theta}$-0.67±.25; $M_{\theta\phi}$-1.28±.07; $M_{\phi r}$-1.29±.28; Best double couple: $M_0$3.50700×10[16] NP1:ϕ_s315.00000°, δ48.00000°, λ-61.00000°. NP2: ϕ_s95.00000°, δ49.00000°, λ-119.00000°. Principal axes: T 3.2530, Plg1.0000°, Azm205.0000°; N 0.5010, Plg21.0000°, Azm115.0000°; P -3.7610, Plg69.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **12** 06:55:24.6±0.2, 973S±003×10759E±004, h36km, mb5.2/88, MS4.4/36 Error ellipse: s-maj=5.6km s-min=4.7km az=139.7*

*MOS **12** 06:55:24.9±0.9, 953S×10771E, h33km, mb5.4/30, Error ellipse: s-maj=12.5km s-min=6.4km az=114.0*

*IDC **12** 06:55:26.5±0.5, 968S×10763E, h37km±3km, mb4.6/19, mb1 4.6/21, mb1mx4.6/23, mbtmp4.7/21, ML4.4/2, MS4.1/19, Ms1 4.1/19, ms1mx4.0/30, Error ellipse: s-maj=18.7km s-min=11.9km az=55.0*

ISC 12 06:55:26.8±0.2**, 973S**±003×**10757E**±004**, h38**km**, h38**km±1.6km**:pP-P, n314,** σ1§00/223**, mb5.2**/88**, MS4.4**/36**, 51C-40D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	2.88	1	P	Pn	06 56 09.7	-0.5
	4μm,0.9s						
BJII	Banjamegara	3.18	42	P	Pn	06 56 12.7	-1.6
	740nm,0.8s						
BJII	Banjamegara	3.18	42	⇓iP	Pn	06 56 14.1	-0.2
BJII				i S	Sn	06 56 51.2	+0.2
CBJI	Citeko	3.36	348	P	Pn	06 56 11.5	-5.3
	3μm,0.9s						
SBJI	Serang	3.86	338	P	Pn	06 56 22.2	-1.4
	2μm,1.0s						
KSI	Kapahiang	7.80	320	P	Pn	06 57 14.7	-3.0
	365nm,0.8s						
COCO	West Island	10.82	256	ePn	Pn	06 57 54.2	-4.9
	533nm,1.2s						
COCO				eSn	Sn	06 59 56.0	-2.9
KSM	Kuching	11.45	14	ePn	Pn	06 58 05.2	-2.5
KGM	Kluang	12.41	340	P	Pn	06 58 18.9	-1.9
PCI	Palu	15.02	55	P	Pn	06 58 56.9	+0.6
	279nm,1.2s						
PSI	Prapat	15.14	325	Pn	Pn	06 58 57.1	-0.6
	1.1nm,0.3s,baz=164,slow=12,SNR=12						
PSI				LR	LR	07 06 31.5	
	comp=Z,806nm,18.9s,baz=138,slow=44						
IPM	Ipoh	15.55	335	P	Pn	06 59 08.0	+4.9
MBWA	Marble Bar	16.31	136	ePn	Pn	06 59 06.5	-6.4
KULM	Kulim	16.43	335	ePn	Pn	06 59 07.5	-7.0
TSM	Tawau	17.30	37	P	Pn	06 59 27.2	+1.8
KKM	Kota Kinabalu	17.88	29	P	Pn	06 59 34.3	+1.9
KKM	Kota Kinabalu	17.88	29	eP	Pn	06 59 31.3	-1.1
FITZ	Fitzroy Crossi	19.40	117	eP	Pn	06 59 50.5	-0.3
	34nm,0.8s						
FITZ	Fitzroy Crossi	19.40	117	P	Pn	06 59 49.9	-0.9
	0.9nm,0.3s,baz=244,slow=5.2,SNR=24						
BSI	Banda Aceh	19.45	321	P	Pn	06 59 50.9	-0.6
	392nm,1.4s						
NNT	Nongplab	23.50	340	P	P	07 00 33.5	+0.3
KAKA	Kakadu	24.57	99	eP	P	07 00 42.3	-0.7
	33nm,0.7s,mb5.0						
BUKP	Musuan	24.68	45	eP	P	07 00 45.1	+1.0
NWAO	Narrogin (SRO)	24.75	160	LR	LR	07 09 28.6	
	comp=Z,516nm,18.7s,MS4.0,baz=133,slow=34						
NST	Nakhon Sawan	26.29	344	P	P	07 00 59.6	+1.0
	66nm,1.0s,mb5.1						
KKTK	Khon Kaen	26.32	350	P	P	07 01 00.0	+1.1
	432nm,0.9s,mb6.0						
WRAB	Tennant Creek	27.76	114	P	P	07 01 11.0	-0.8
	73nm,0.9s,mb5.3,SNR=5.4						
WRAB	Tennant Creek	27.76	114	⇑iP	P	07 01 11.8	0.0
WRAB	Tennant Creek	27.76	114	eP	P	07 01 11.2	-0.7
	24nm,0.9s,mb4.8						
WB2	Warramunga Arr	27.77	115	eP	P	07 01 11.1	-0.8
FORT	Forrest	28.33	141	eP	P	07 01 18.1	+1.2
	9.7nm,0.6s,mb4.6						
QIZ	Qiongzhong	28.66	4	P	P	07 01 19.8	0.0
QIZ				AP	pP	07 01 24.1	-6.4
QIZ				XP	sP	07 01 25.8	-9.3
QIZ				S	S	07 06 06.2	+0.2
QIZ				XS	sS	07 06 16.3	-7.5
QIZ				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.6						
QIZ				LR	LR		
	comp=N,562nm,14.5s						
QIZ				LR	LR		
	comp=Z,813nm,15.5s,MS4.4						
ASPA	Alice Springs	28.70	122	eP	P	07 01 20.9	+0.7
AS31	Alice Springs	28.71	122	eP	P	07 01 20.9	+0.6
ASAR	Alice Springs	28.71	122	P	P	07 01 19.8	-0.5
	comp=Z,1.4nm,0.7s,baz=297,slow=8.6,SNR=18						
ASAR				PcP	PcP	07 04 30.4	+0.4
	comp=Z,3.4nm,0.8s,baz=308,slow=3.1,SNR=8.4						
ASAR				pPcP		07 04 41.5	
	comp=Z,2.5nm,0.7s,baz=292,slow=2.1,SNR=6.0						
ASAR				Sn	S	07 06 54.6	+48
	comp=Z,7.9nm,1.2s,baz=300,slow=23,SNR=9.7						
ASAR				LR	LR	07 13 32.4	
	comp=Z,395nm,19.1s,MS4.0,baz=82,slow=38						
ASAR	Alice Springs	28.71	122	P	P	07 01 19.8	-0.5
ASAR						07 04 30.4	
NANT	Nan	29.14	347	⇑P	P	07 01 25.5	+1.4
	comp=Z,188nm,0.4s,mb6.2						
CM31	Chiang Mai Arr	29.27	343	eP	P	07 01 25.4	+0.1
CHTO	Chiang Mai	29.61	343	P	P	07 01 29.5	+1.2
	SNR=8.2						
CHTO	Chiang Mai	29.61	343	P	P	07 01 29.5	+1.2
	SNR=8.2						
CHTO	Chiang Mai	29.61	343	eP	P	07 01 28.2	-0.1
CHTO				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.2						
CHTO	Chiang Mai	29.61	343	eP	P	07 01 28.2	-0.1
	comp=Z,52nm,1.1s,mb5.2						
CHRT	Chiangrai	30.39	345	⇓P	P	07 01 35.5	+0.3
	comp=Z,166nm,0.9s,mb5.8						
GZH	Guangzhou	33.10	10	P	P	07 02 04.0	+5.1
GZH				LR	LR		
	comp=N,338nm,13.4s,MS4.5						
GZH				LR	LR		
	comp=E,512nm,15.2s,MS4.5						
GZH				LR	LR		
	comp=Z,654nm,14.9s,MS4.5						
KMI	Kunming	34.96	352	P	P	07 02 17.3	+2.2
KMI				XP	sP	07 02 28.7	-1.8
KMI				S	S	07 07 51.7	+7.6
KMI				AMB	AMB		
	comp=Z,46nm,1.4s,mb5.2						
KMI				AMB	AMB		
	comp=Z,321nm,3.6s						
KMI				LR	LR		
	comp=N,1μm,14.3s,MS4.8						
KMI				LR	LR		
	comp=E,763nm,15.7s,MS4.8						
KMI				LR	LR		
	comp=Z,1μm,14.3s,MS4.8						
GYA	Guiyang	35.98	359	⇓iP	P	07 02 24.9	+1.0
GYA				AP	pP	07 02 29.4	-5.3
GYA				XP	sP	07 02 32.2	-7.1
GYA				PP	PP	07 03 48.5	+2.5
GYA				PCP	PcP	07 04 49.8	-0.1
GYA				S	S	07 08 06.7	+6.9
GYA				SCP	ScP	07 08 34.2	+1.1
GYA				SCS	ScS	07 12 39.0	+0.4
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
GYA				AMB	AMB		
	comp=Z,250nm,4.8s						
GYA				LR	LR		
	comp=N,550nm,16.5s,MS4.6						
GYA				LR	LR		
	comp=E,800nm,17.9s,MS4.6						
GYA				LR	LR		
	comp=Z,940nm,16.4s,MS4.6						
NACB	Ninganchiao	36.37	22	P	P	07 02 27.8	+0.6
YHNB	Yeheng	36.74	21	eP	P	07 02 30.4	0.0
STKA	Stephens Creek	38.43	130	eP	P	07 02 44.6	-0.1
	comp=Z,8.9nm,0.7s,mb4.6						
STKA	Stephens Creek	38.43	130	P	P	07 02 44.9	+0.2
	comp=Z,9.1nm,0.6s,mb4.7,baz=300,slow=8.0,SNR=22						
STKA				LR	LR	07 19 14.9	
	comp=Z,434nm,18.0s,MS4.3,baz=55,slow=37						
CTAO	Charters Tower	38.68	110	P	P	07 02 47.4	+0.6
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
CTAO	Charters Tower	38.68	110	P	P	07 02 47.4	+0.6
	comp=Z,5.2nm,0.6s,mb4.4						
PMG	Port Moresby	39.02	93	P	P	07 02 50.3	+0.7
PMG				pmax	pmax		
	comp=Z,17nm,0.8s						
PMG	Port Moresby	39.02	93	P	P	07 02 50.2	+0.6
	comp=Z,17nm,0.8s,mb4.8						
WHN	Wuhan	40.56	9	⇓P	P	07 03 03.3	+0.9
WHN				S	S	07 09 14.0	+4.9
WHN				LR	LR		
	comp=Z,1μm,15.4s,MS4.8						
CD2	Chengdu	40.57	355	P	P	07 03 02.0	-0.5
CD2				AP	pP	07 03 06.2	-7.2
CD2				XP	sP	07 03 09.1	-8.9
CD2				PP	PP	07 04 39.6	+3.3
CD2				S	S	07 09 09.7	+0.5
CD2				XS	sS	07 09 17.4	-10
CD2				SS	SS	07 12 03.2	-6.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
CD2				AMB	AMB		
	comp=Z,160nm,6.8s						
CD2				LR	LR		
	comp=N,490nm,13.8s						
CD2				LR	LR		
	comp=Z,590nm,15.6s,MS4.5						
LSA	Lhasa	42.27	339	P	P	07 03 17.6	+1.2
LSA				AMB	AMB		
	comp=Z,110nm,0.8s,mb5.5						
JIRN	Jiri	42.55	331	eP	P	07 03 19.7	+1.0
	comp=Z,234nm,0.9s,mb5.9						
SSE	Sheshan	42.64	17	P	P	07 03 20.5	+1.1
SSE				AP	pP	07 03 23.5	-6.9
SSE				XP	sP	07 03 25.2	-10
SSE				PCP	PcP	07 05 11.8	+0.8
SSE				S	S	07 09 44.1	+4.3
SSE				XS	sS	07 09 49.4	-8.6
SSE				SCS	ScS	07 13 21.5	+4.0
SSE				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,103nm,4.7s						
SSE				LR	LR		
	comp=N,105nm,16.6s,MS4.0						
SSE				LR	LR		
	comp=E,119nm,16.6s,MS4.0						
SSE				LR	LR		
	comp=Z,191nm,18.6s,MS4.0						
PKI	Pulchoki	42.85	330	eP	P	07 03 21.5	+0.4
	comp=Z,136nm,1.2s,mb5.6						
PKI	Pulchoki	42.85	330	eP	P	07 03 21.5	+0.4
PKI				pmax	pmax		
	comp=Z,137nm,1.2s,mb5.6						
GUN	Gumba	42.91	331	eP	P	07 03 22.4	+0.8
	comp=Z,482nm,1.3s,mb6.1						
NJ2	Nanjing	42.92	14	eP	P	07 03 22.9	+1.2
NJ2				AP	pP	07 03 27.4	-5.3
NJ2				XP	sP	07 03 29.9	-7.3
NJ2				PP	PP	07 05 05.3	+3.6
NJ2				S	S	07 09 47.0	+3.1
NJ2				XS	sS	07 09 55.0	-7.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,70nm,3.5s						
NJ2				LR	LR		
	comp=N,1μm,24.2s,MS4.8						
NJ2				LR	LR		
	comp=E,800nm,26.2s,MS4.8						
NJ2				LR	LR		
	comp=Z,1μm,22.0s,MS4.7						
DMN	Daman	43.02	330	eP	P	07 03 23.0	+0.5
	comp=Z,205nm,1.0s,mb5.8						
KKN	Kakani	43.09	331	eP	P	07 03 23.4	+0.3
	comp=Z,194nm,1.0s,mb5.8						
KKN	Kakani	43.09	331	eP	P	07 03 23.4	+0.3
KKN				pmax	pmax		
	comp=Z,194nm,1.0s,mb5.8						
XAN	Xi'an	43.54	2	P	P	07 03 26.4	-0.3
XAN				S	S	07 09 55.0	+1.9
XAN				AMB	AMB		
	comp=Z,35nm,0.8s,mb5.1						
XAN				AMB	AMB		
	comp=Z,144nm,5.0s						
XAN				LR	LR		
	comp=N,475nm,17.0s,MS4.6						
XAN				LR	LR		
	comp=E,405nm,16.1s,MS4.6						
XAN				LR	LR		
	comp=Z,1μm,17.2s,MS4.8						
GKN	Gorkha	43.58	330	eP	P	07 03 27.4	+0.4
	comp=Z,161nm,0.9s,mb5.7						
GUMO	Guam	43.67	59	LR	LR	07 22 23.7	
	comp=Z,118nm,20.9s,MS3.8,baz=250,slow=37						
KOLN	Koldanda	43.91	329	eP	P	07 03 30.3	+0.6
	comp=Z,175nm,1.0s,mb5.7						
LZH	Lanzhou	45.70	356	P	P	07 03 44.8	+0.9
LZH				PP	PP	07 05 33.0	+1.6
LZH				XS	sS	07 10 40.1	-2.6
LZH				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.4						
LZH				AMB	AMB		
	comp=Z,230nm,4.0s						
LZH				LR	LR		
	comp=N,2μm,14.8s						
LZH				LR	LR		
	comp=Z,2μm,15.5s,MS5.2						
GTA	Gaotai	49.41	352	⇓P	P	07 04 13.8	+1.1
GTA				AP	pP	07 04 18.3	-5.6
GTA				XP	sP	07 04 21.0	-7.4
GTA				PCP	PcP	07 05 35.6	+1.0
GTA				PP	PP	07 06 09.5	+2.5
GTA				PPP		07 07 03.6	
GTA				S	S	07 11 20.0	+2.9
GTA				XS	sS	07 11 28.4	-7.1
GTA				SS	SS	07 14 48.1	-1.0
GTA				AMB	AMB		
	comp=Z,31nm,1.1s,mb5.2						
GTA				AMB	AMB		
	comp=Z,383nm,5.4s						
GTA				LR	LR		
	comp=N,555nm,18.0s,MS4.7						
GTA				LR	LR		
	comp=E,364nm,17.6s,MS4.7						
GTA				LR	LR		
	comp=Z,613nm,17.2s,MS4.7						
CBIJ	Chichi jima	49.66	42	LR	LR	07 25 34.5	
	comp=Z,232nm,18.8s,MS4.2,baz=83,slow=36						
BTO	Baotou	50.13	2	eP	P	07 04 17.3	-0.9
BJI	Beijing	50.15	9	eP	P	07 04 17.8	-0.6
BJI				AMB	AMB		
	comp=Z,39nm,1.0s,mb5.4						
BJI				LR	LR		
	comp=N,681nm,18.4s,MS4.8						
BJI				LR	LR		
	comp=E,293nm,14.2s,MS4.8						
BJI				LR	LR		
	comp=Z,261nm,23.9s						
HHC	Hu-ho-hao-te	50.46	4	eP	P	07 04 20.6	-0.1
HHC				AP	pP	07 04 25.1	-6.7
HHC				XP	sP	07 04 27.6	-8.7
HHC				PCP	PcP	07 05 37.9	-0.6
HHC				PP	PP	07 06 18.3	+1.8
HHC				SCP	ScP	07 09 32.1	+0.7
HHC				PCS	PcS	07 09 34.0	-1.7
HHC				S	S	07 11 34.8	+3.2
HHC				XS	sS	07 11 41.8	-8.3
HHC				PS		07 11 45.0	
HHC				SCS	ScS	07 14 08.1	-0.4
HHC				SS	SS	07 15 06.7	+0.9
HHC				AMB	AMB		
	comp=Z,21nm,1.0s,mb5.1						
HHC				AMB	AMB		
	comp=Z,227nm,5.3s						
HHC				LR	LR		
	comp=N,540nm,16.1s,MS4.8						
HHC				LR	LR		
	comp=E,447nm,12.9s,MS4.8						
HHC				LR	LR		
	comp=Z,612nm,15.7s,MS4.7						
JHJ	Hachijo jima 2	52.50	34	LR	LR	07 28 53.9	
	comp=Z,126nm,19.7s,MS4.0,baz=241,slow=38						
MAJO	Matsushiro	54.30	30	eP	P	07 04 47.2	-1.9
MAJO				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
MAJO	Matsushiro	54.30	30	eP	P	07 04 47.2	-1.9
	comp=Z,21nm,0.9s,mb5.1						
MAT	Matsushiro	54.30	30	P	P	07 04 46.9	-2.2
MAT				S	S	07 12 22.0	-2.2
MJAR	Matsushiro Arr	54.30	30	P	P	07 04 46.9	-2.2
	comp=Z,19nm,0.9s,mb5.0,baz=206,slow=7.9,SNR=43						
MJAR				pP	pP	07 04 58.4	-2.0
	comp=Z,12nm,0.9s,baz=197,slow=7.8,SNR=7.6						
MJAR				LR	LR	07 31 14.6	
	comp=Z,75nm,18.8s,MS3.8,baz=225,slow=40						
MJAR	Matsushiro Arr	54.30	30	P	P	07 04 46.9	-2.2
MJAR				*PP	pP	07 04 58.4	-2.0
CN2	Changchun	55.70	16	eP	P	07 04 57.6	-1.7
CN2				eXP	sP	07 05 04.6	-10
CN2				eS	S	07 12 42.5	-0.4
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
CN2				LR	LR		
	comp=N,200nm,18.0s,MS4.4						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS4.4						
CN2				LR	LR		
	comp=Z,300nm,16.0s,MS4.5						
WMQ	Urumqi	56.27	343	P	P	07 05 04.0	+0.6
WMQ				XP	sP	07 05 11.0	-8.2
WMQ				PCP	PcP	07 06 02.0	+1.5
WMQ				PP	PP	07 07 11.0	+2.1
WMQ				S	S	07 12 52.0	+1.4
WMQ				SCS	ScS	07 14 49.0	-0.5
WMQ				SS	SS	07 16 38.0	+0.4
WMQ				AMB	AMB		
	comp=Z,41nm,1.0s,mb5.4						
WMQ				AMB	AMB		
	comp=Z,218nm,5.0s						
WMQ				LR	LR		
	comp=N,169nm,12.0s,MS4.7						
WMQ				LR	LR		
	comp=E,356nm,14.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,145nm,12.0s,MS4.3						
SONM	Songino Array	57.31	359	P	P	07 05 11.3	+0.5
	comp=Z,11nm,0.7s,mb5.0,baz=175,slow=7.9,SNR=52						
SONM				pP	pP	07 05 22.7	+0.6
	comp=Z,9.2nm,0.7s,baz=168,slow=7.9,SNR=9.2						
SONM				LR	LR	07 31 58.3	
	comp=Z,466nm,20.8s,MS4.6,baz=259,slow=38						
SONM	Songino Array	57.31	359	P	P	07 05 11.3	+0.5
SONM				*PP	pP	07 05 22.7	+0.6
ULN	Ulaanbaatar	57.34	360	P	P	07 05 11.6	+0.7
	SNR=14						
ULN	Ulaanbaatar	57.34	360	P	P	07 05 11.6	+0.7
	SNR=14						
ULN	Ulaanbaatar	57.34	360	eP	P	07 05 11.3	+0.4
ULN				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
ULN	Ulaanbaatar	57.34	360	eP	P	07 05 11.3	+0.4
	comp=Z,24nm,0.9s,mb5.2						
MIR	Mirnyy	57.61	187	d iP	P	07 05 14.5	+1.6
MIR				i		07 06 02.0	
MIR				pmax	pmax		
	comp=Z,190nm,1.7s,mb5.8						
MDJ	Mudanjiang	57.64	18	P	P	07 05 12.2	-0.9
MDJ				AP	pP	07 05 15.4	-9.0
MDJ				PP	PP	07 07 19.7	-1.4
MDJ				SCP	ScP	07 10 05.5	+2.7

MDJ PCS PcS 07 10 06.7 -0.4
MDJ S **S** **07 13 15.7 +7.1**
MDJ SCS ScS 07 15 01.7 +2.3
MDJ AMB AMB
comp=Z,12nm,1.4s,mb4.7
MDJ LR LR
comp=N,103nm,14.9s,MS4.0
MDJ LR LR
comp=E,38nm,18.1s,MS4.0
MDJ LR LR
comp=Z,93nm,17.0s,MS4.0
WSAR Wadi Sarin 58.01 305 P **P** **07 05 14.2 -1.4**
comp=Z,6.5nm,0.8s,mb4.7,baz=136,slow=5.6,SNR=6.2
KZA Kyzart 59.46 332 P **P** **07 05 25.4 -0.3**
SNR=11
ZAK Zakamensk 59.97 357 *e*P **P** **07 05 29.1 -0.1**
ZAK *e* pP 07 05 40.6 0.0
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
TKM2 Tokmak 2 59.97 333 P **P** **07 05 29.1 -0.2**
SNR=12
AML Almayashu 60.22 331 P **P** **07 05 31.1 +0.2**
SNR=6.2
AAK Ala-Archa 60.24 332*d* *i*P **P** **07 05 29.9 -1.2**
AAK pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
AAK Ala-Archa 60.24 332 *e*P **P** **07 05 29.8 -1.4**
comp=Z,3.3nm,0.6s,mb4.5
FRU Bishkek 60.34 333⇓ *e*P **P** **07 05 31.0 -0.8**
FRU pmax pmax
comp=Z,50nm,2.2s,mb5.2
EKS2 Erkin-Say 60.59 332 P **P** **07 05 33.6 +0.1**
SNR=7.5
MKAR Makanchi Array 60.63 340 P **P** **07 05 33.5 -0.2**
comp=Z,18nm,0.7s,mb5.3,baz=141,slow=7.8,SNR=52
MKAR pP pP 07 05 45.2 +0.1
comp=Z,11nm,0.5s,baz=143,slow=7.1,SNR=9.0
MKAR Makanchi Array 60.63 340 P **P** **07 05 33.5 -0.3**
MKAR pP pP 07 05 45.2 +0.1
USP Ospenovka 60.74 333 P **P** **07 05 33.7 -0.8**
SNR=5.1
TLY Talaya 61.25 357 *e*P **P** **07 05 38.2 +0.2**
TLY *e*S **S** **07 14 04.0 +8.8**
TLY pmax pmax
comp=Z,11nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,295nm,17.0s,MS4.5
TLY Talaya 61.25 357 *e*P **P** **07 05 37.8 -0.2**
comp=Z,8.5nm,0.9s,mb4.9
MOY Mondy 61.41 355 *e*P **P** **07 05 39.7 +0.7**
MOY pmax pmax
comp=Z,9.0nm,1.9s,mb4.6
IRK Irkutsk 61.78 358⇑ *i*P **P** **07 05 41.7 +0.1**
IRK pmax pmax
comp=Z,33nm,2.4s,mb5.0
KLR Kul'dur 62.43 18⇑ *i*P **P** **07 05 42.3 -3.6**
KLR pmax pmax
comp=E,23nm,1.2s
KLR pmax pmax
comp=Z,64nm,1.2s,mb5.6
HABR Khabarovsk 62.82 20⇓ *i*P **P** **07 05 48.0 -0.5**
HABR *e*S **S** **07 14 14.9 -0.2**
HABR pmax pmax
comp=Z,58nm,1.1s,mb5.6
RPZ Rata Peaks 64.23 134 LR LR 07 35 03.7
comp=Z,323nm,20.6s,MS4.5,baz=322,slow=37
YSS Yuzh-Sakhalins 64.55 26⇑ *i*P **P** **07 05 59.0 -0.9**
YSS *e* pP 07 06 10.0 -1.4
YSS *e* 07 06 17.5
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 64.55 26 *e*P **P** **07 05 59.6 -0.3**
comp=Z,53nm,0.9s,mb5.6
MAW Mawson 64.94 197 *e*P **P** **07 06 01.4 -1.0**
comp=Z,6.1nm,0.6s,mb4.8
MAW Mawson 64.94 197 P **P** **07 06 01.7 -0.7**
comp=Z,8.8nm,0.7s,mb4.9,baz=51,slow=6.5,SNR=40
MAW LR LR 07 25 30.7
comp=Z,102nm,21.8s,MS4.0,baz=54,slow=28
MAW Mawson 64.94 197 *e*P **P** **07 06 01.4 -1.0**
MAW pmax pmax
comp=Z,6.0nm,0.6s
KURK Kurchatov 65.24 340 P **P** **07 06 04.2 -0.2**
comp=Z,186nm,0.9s,mb6.1,SNR=12
KURK Kurchatov 65.24 340 P **P** **07 06 04.6 +0.2**
SNR=22
KURK Kurchatov 65.24 340 P **P** **07 06 04.6 +0.2**
SNR=22
KURK Kurchatov 65.24 340*d* *i*P **P** **07 06 04.0 -0.4**
KURK Kurchatov 65.24 340 *e*P **P** **07 06 04.4 0.0**
comp=Z,31nm,0.9s,mb5.3
ZAL Zalesovo 66.29 346 P **P** **07 06 10.3 -0.8**
comp=Z,3.9nm,0.8s,mb4.5,baz=303,slow=2.4,SNR=17
ZAL LR LR 07 39 18.9
comp=Z,178nm,18.5s,MS4.3,baz=224,slow=40
ZAL Zalesovo 66.29 346 P **P** **07 06 10.3 -0.8**
ZAL LR LR 07 39 18.9
NVS Novosibirsk 67.50 345 *e*P **P** **07 06 17.9 -1.0**
BOD Bodaibo 67.51 4 *e*P **P** **07 06 17.9 -1.0**
BOD pmax pmax
comp=Z,18nm,1.3s,mb4.9
CLNS Chul'man 67.85 10 *e*P **P** **07 06 19.7 -1.4**
CLNS *e**PP pP 07 06 30.1 -2.5
CLNS *e* 07 06 42.7
CLNS *e* 07 08 48.9
CLNS *e*S S 07 15 17.2 +0.6
CLNS *e*PS 07 15 44.9
CLNS *e*SS SS 07 19 36.8 -1.8
CLNS pmax pmax
comp=Z,31nm,1.0s,mb5.3
CLNS pmax pmax
comp=N,14nm,1.1s
CLNS pmax pmax
comp=E,14nm,0.9s
CLNS pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=E,5.0nm,0.7s
CLNS smax
comp=E,17nm,0.9s
CLNS smax
comp=Z,5.0nm,0.5s
CLNS smax
comp=N,6.0nm,0.8s
URZ Urewera 67.99 127 LR LR 07 33 34.2
comp=N,170nm,19.8s,MS4.3,baz=223,slow=34
BVAR Borovoye Array 70.08 337 P **P** **07 06 34.6 -0.3**
comp=N,12nm,0.7s,mb4.9,baz=144,slow=8.3,SNR=61
BVAR pP pP 07 06 45.8 -0.7
comp=N,12nm,0.8s,baz=140,slow=9.2,SNR=5.8
BVAR LR LR 07 41 31.7
comp=N,156nm,20.0s,MS4.2,baz=139,slow=40
BVAR Borovoye Array 70.08 337 P **P** **07 06 34.6 -0.3**
BVAR *PP pP 07 06 45.8 -0.7
BRVK Borovoye 70.15 337 P **P** **07 06 35.1 -0.2**
comp=N,108nm,0.9s,mb5.8,SNR=8.6
BRVK Borovoye 70.15 337 P **P** **07 06 35.5 +0.2**
SNR=10
BRVK Borovoye 70.15 337 *e*P **P** **07 06 35.0 -0.3**
BRVK pmax pmax
comp=Z,16nm,1.1s,mb4.9
BRVK Borovoye 70.15 337 *e*P **P** **07 06 35.0 -0.3**
comp=Z,16nm,1.1s,mb4.9
KMBO Kilima Mbogo 70.42 272 P **P** **07 06 38.3 +1.4**
comp=Z,4.6nm,0.9s,mb4.4,baz=78,slow=7.6,SNR=7.6
KMBO LR LR 07 30 15.8
comp=Z,109nm,21.8s,MS4.1,baz=274,slow=30
KMBO Kilima Mbogo 70.42 272 *e*P **P** **07 06 38.7 +1.7**
KMBO pmax pmax
comp=Z,45nm,1.8s
KMBO Kilima Mbogo 70.42 272 *e*P **P** **07 06 38.7 +1.7**
comp=Z,46nm,1.8s,mb5.1
CHKZ Chkalovo 70.50 338 *e*P **P** **07 06 37.6 +0.1**
CHKZ pmax pmax
comp=Z,15nm,0.6s,mb5.1
CHKZ Chkalovo 70.50 338 *e*P **P** **07 06 37.5 +0.1**
comp=Z,15nm,0.6s,mb5.1
SYO Syowa Base 73.16 200⇑ *e*P **P** **07 06 52.4 -1.0**
SYO Syowa Base 73.16 200⇓ *e*pP pP 07 06 56.0 -9.1
VNDA Vanda 73.20 169 P **P** **07 06 52.5 -1.2**
comp=Z,2.6nm,1.0s,mb4.1,baz=300,slow=6.0,SNR=8.2
VNDA LR LR 07 33 23.3
comp=Z,91nm,20.6s,MS4.0,baz=316,slow=31
VNDA Vanda 73.20 169 *e*P **P** **07 06 53.2 -0.5**
VNDA pmax pmax
comp=Z,14nm,1.6s
VNDA Vanda 73.20 169 *e*P **P** **07 06 53.2 -0.5**
comp=Z,14nm,1.6s,mb4.7
YAK Yakutsk 73.59 11 *e*P **P** **07 06 54.9 -1.0**
YAK *e* pP 07 07 07.6 0.0
YAK pmax pmax
comp=Z,26nm,1.0s,mb5.1
YAK pmax pmax
comp=N,12nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.5s
YAK pmax pmax
comp=Z,18nm,1.0s,mb5.0
YAK pmax pmax
comp=N,10.0nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK Yakutsk 73.59 11 *e*P **P** **07 06 55.0 -0.9**
comp=E,26nm,0.7s,mb5.3
AKTK Aktyubinsk 73.74 330 P **P** **07 06 56.5 -0.4**
AKTO Aktyubinsk 73.74 330 P **P** **07 06 56.5 -0.4**
comp=E,11nm,0.8s,mb4.9,baz=107,slow=18,SNR=20
SBA Scott Base 74.28 169 *e*P **P** **07 07 00.0 0.0**
SBA pmax pmax
comp=Z,13nm,1.4s,mb4.7
SBA Scott Base 74.28 169 *e*P **P** **07 06 60.0 0.0**
comp=Z,13nm,1.4s,mb4.7
PET Petropavlovsk 76.09 29*d* *i*P **P** **07 07 09.4 -1.0**
PET pmax pmax
comp=Z,76nm,2.5s,mb5.2
SVE Sverdlovsk 76.71 336⇓ *i*P **P** **07 07 13.8 -0.1**
SVE *e* pP 07 07 25.0 -0.6
SVE *e*S S 07 17 06.0 +8.0
SVE pmax pmax
comp=Z,120nm,2.0s,mb5.5
MA2 Magadan 77.22 21*d* *i*P **P** **07 07 16.6 -0.2**
MA2 pmax pmax
comp=Z,28nm,1.0s,mb5.2
MA2 Magadan 77.22 21 *e*P **P** **07 07 16.7 0.0**
comp=Z,22nm,1.0s,mb5.0
ARU Arti 77.31 335 P **P** **07 07 17.0 -0.3**
comp=Z,313nm,1.2s,mb6.1,SNR=16
ARU Arti 77.31 335⇓ *i*P **P** **07 07 17.2 -0.1**
ARU *e* pP 07 07 27.9 -1.1
ARU *e* 07 10 11.1
ARU *e*PPP 07 12 00.9
ARU *e*S S 07 17 05.0 +0.4
ARU *e*SS SS 07 22 04.2 +1.0
ARU pmax pmax
comp=Z,59nm,1.1s,mb5.4
LSZ Lusaka 77.34 256 *e*P **P** **07 07 18.3 +0.8**
LSZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LSZ Lusaka 77.34 256 *e*P **P** **07 07 18.3 +0.9**
comp=Z,5.3nm,0.8s,mb4.5
ZEI Tsey 77.97 318 *e*P **P** **07 07 20.8 -0.2**
ZEI *e**PP pP 07 07 32.9 +0.2
ZEI *e* 07 10 16.0
ZEI pmax pmax
comp=Z,18nm,0.5s,mb5.3
LBTB Lobatse 78.73 246 *e*P **P** **07 07 27.1 +1.9**
LBTB pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LBTB Lobatse 78.73 246 *e*P **P** **07 07 27.1 +1.9**
comp=Z,3.6nm,0.7s,mb4.4
ASF Jabal al Asfar 79.18 305 P **P** **07 07 28.8 +1.2**
comp=Z,10nm,0.8s,mb4.8,baz=13,slow=3.2,SNR=15
KIV Kislovodsk 79.28 318⇑ P **P** **07 07 29.0 +0.8**
KIV *e* pP 07 07 38.2 -1.7
KIV pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
EIL Elat 80.00 302 *e*P **P** **07 07 32.8 +0.6**
comp=Z,134nm,0.8s,mb5.9
SOKR Solikamsk 80.05 336*d* *i*P **P** **07 07 32.1 -0.3**
SOKR pmax pmax
comp=Z,50nm,1.3s,mb5.3
QSPA South Pole Qui 80.28 180 *e*P **P** **07 07 33.2 -0.4**
comp=Z,23nm,1.3s,mb5.0
MMAI Mount Meron Ar 80.64 306 P **P** **07 07 37.1 +1.5**
comp=Z,8.5nm,0.5s,mb4.9,baz=92,slow=7.5,SNR=16
MMAI pP pP 07 07 48.2 +0.8
comp=Z,9.5nm,0.9s,baz=93,slow=10,SNR=4.3
PECR Pechory 83.93 330 *e*P **P** **07 07 52.4 -0.3**
BR131 Keskin Array S 84.06 312 *e*P **P** **07 07 53.5 +0.1**
comp=Z,15nm,1.1s,mb5.0
BRTR Keskin Array B 84.06 312 P **P** **07 07 53.4 0.0**
comp=Z,10nm,1.0s,mb4.9,baz=141,slow=6.6,SNR=32
BRTR pP pP 07 08 04.2 -1.1
comp=Z,9.8nm,0.9s,baz=177,slow=2.5,SNR=16
BRTR LR LR 07 51 46.8
comp=Z,76nm,18.1s,MS4.1,baz=348,slow=40
BRTR Keskin Array B 84.06 312 P **P** **07 07 53.4 0.0**
BRTR *PP pP 07 08 04.2 -1.0
BRTR Keskin Array B 84.06 312 P **P** **07 07 53.4 0.0**
BRTR pP pP 07 08 04.2 -1.1
BRTR LR LR 07 51 46.8
VRSR Storozhevoye 84.38 324 *e*P **P** **07 07 54.4 -0.6**
VRSR pmax pmax
comp=N,10.0nm,0.9s
VRSR pmax pmax
comp=E,30nm,0.9s
VRSR pmax pmax
comp=Z,30nm,0.9s,mb5.4
SIM Simferopol' **85.34 317** *e*P **P** **07 08 00.6 +0.7**
SIM pmax pmax
comp=Z,32nm,0.8s,mb5.5
TSUM Tsumeb 86.84 251 *e*P **P** **07 08 08.7 +1.4**
comp=Z,4.8nm,0.7s,mb4.8
MOS Moscow 86.98 328 *e*P **P** **07 08 07.1 -0.8**
MOS *e* pP 07 08 18.5 -1.3
MOS pmax pmax
comp=Z,63nm,0.8s,mb5.9
MOS pmax pmax
comp=Z,200nm,1.8s,mb6.0
OBN Obninsk 87.31 327ĸ *i*P **P** **07 08 09.3 -0.2**
OBN *e* 07 08 15.8
OBN *e* pP 07 08 21.5 +0.1
OBN *e* 07 18 51.3
OBN pmax pmax
comp=Z,81nm,1.7s,mb5.7
OBN MLR MLR
comp=N,100nm,17.0s
OBN Obninsk 87.31 327 *e*P **P** **07 08 09.3 -0.3**
comp=N,22nm,0.4s,mb5.8
BILL Bilibino 87.87 19⇓ P **P** **07 08 10.0 -2.2**
BILL *e* 07 18 33.7
BILL pmax pmax
comp=Z,20nm,1.7s,mb5.1
BILL MLR MLR
comp=Z,100nm,20.0s,MS4.2
KLMR Klimovskoe 88.05 333 *e*P **P** **07 08 12.8 -0.3**
KLMR pmax pmax
comp=Z,130nm,1.7s,mb5.9
TIRR Tirgusor 89.11 315⇑ *i*P **P** **07 08 18.7 +0.7**
TIRR Tirgusor 89.11 315 *e*P **P** **07 08 18.6 +0.5**
VNA1 Neumayer--Stat 89.14 197 *e*P **P** **07 08 13.9 -4.3**
VNA1 *e* 07 08 15.0
VNA1 *e* 07 08 16.8
CFR Carcaliu 89.47 316⇑ *i*P **P** **07 08 19.9 +0.1**
CFR Carcaliu 89.47 316 ⇑P **P** **07 08 19.9 +0.1**
HARR Harsova 89.50 315⇑ *i*P **P** **07 08 20.7 +0.8**
HARR Harsova 89.50 315 ⇑P **P** **07 08 20.7 +0.8**
APE Apeiranthos 89.52 308⇑ *i*P **P** **07 08 20.1 +0.1**
APE Apeiranthos 89.52 308 ⇑P **P** **07 08 20.1 +0.2**
AKASG Malin Array Be 90.17 321 P **P** **07 08 21.9 -1.1**
comp=Z,2.5nm,0.8s,mb4.6,baz=85,slow=4.9,SNR=12
AKASG PP PP 07 11 50.9 -6.0
comp=Z,0.2nm,0.2s,baz=99,slow=4.8,SNR=3.0
AKASG Malin Array Be 90.17 321 P **P** **07 08 21.9 -1.1**
AKASG PP PP 07 11 50.9 -6.0
VRI Vrincioaia 90.60 316⇑ *i*P **P** **07 08 26.1 +1.1**
VRI Vrincioaia 90.60 316 ⇑P **P** **07 08 26.1 +1.1**
PLOR Plostina 90.65 316⇑ *i*P **P** **07 08 26.0 +0.7**
MLR Muntele Rosu 91.05 316 P **P** **07 08 27.7 +0.6**
comp=Z,9.7nm,1.0s,mb5.1,baz=182,slow=1.7,SNR=12
MLR Muntele Rosu 91.05 316⇑ *i*P **P** **07 08 28.1 +1.0**
MLR Muntele Rosu 91.05 316 ⇑P **P** **07 08 28.1 +1.0**
MTUR Matau 91.60 315⇓ *i*P **P** **07 08 26.6 -3.1**
MTUR Matau 91.60 315⇓ P **P** **07 08 26.6 -3.1**
BURAR Bucovina Array 92.00 318⇑ *i*P **P** **07 08 32.6 +1.1**
VTS Vitosha 92.39 313⇑ *i*P **P** **07 08 34.1 +0.8**
VTS Vitosha 92.39 313 ⇑P **P** **07 08 34.1 +0.8**
APA Apatity 92.97 338⇑ *i*P **P** **07 08 40.0 +4.0**
APA pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
DRGR 93.51 317⇑ *i*P **P** **07 08 39.1 +0.6**
DRGR 93.51 317 ⇑P **P** **07 08 39.1 +0.6**
BZS Buzias 94.06 315⇓ *i*P **P** **07 08 40.1 -0.9**
BZS Buzias 94.06 315⇓ P **P** **07 08 40.1 -0.9**
FINES FINESS Array B 94.42 332 P **P** **07 08 42.2 -0.5**
comp=Z,1.1nm,0.8s,mb4.4,baz=48,slow=2.8,SNR=4.3
FINES LR LR 07 57 33.1
comp=Z,93nm,18.6s,MS4.3,baz=148,slow=40
PKSM Moragy 96.20 316⇑ *i*P **P** **07 08 50.7 -0.1**
PKSM Moragy 96.20 316 ⇑P **P** **07 08 50.7 -0.1**
ARCES ARCESS Array B 96.27 339 P **P** **07 08 49.5 -1.6**
comp=Z,5.9nm,1.0s,mb5.0,baz=95,slow=3.9,SNR=7.3
ARCES pP pP 07 09 01.9 -1.1
comp=Z,3.8nm,0.8s,baz=86,slow=6.2,SNR=3.3
ARCES LR LR 07 57 50.8
comp=Z,102nm,18.9s,MS4.3,baz=279,slow=39
ARCES ARCESS Array B 96.27 339 P **P** **07 08 49.5 -1.6**
ARCES *PP pP 07 09 01.9 -1.2
ARCES ARCESS Array B 96.27 339 P **P** **07 08 49.5 -1.6**
ARCES pP pP 07 09 01.9 -1.1
ARCES LR LR 07 57 50.8
TBI Tubuai 97.88 115 *e*LR LR 07 40 45.8
comp=Z,113nm,42.2s
PPT Papeete 99.14 110 *e*LR LR 07 41 20.4
comp=Z,123nm,24.0s
CLL Collm 100.37 320 *e*Pdif Pdif 07 09 09.0 -0.5
comp=Z,8.0nm,1.5s
CLL Collm 100.37 320 *e*P Pdif 07 09 09.0 -0.5
CLL pmax pmax
comp=Z,8.0nm,1.5s
NOA NORSAR Array B 101.52 330 PP PP 07 13 22.8 -2.0
comp=Z,1.0nm,0.8s,baz=91,slow=7.3,SNR=3.5
TORD Torodi Ar. Bea 107.50 281 PKiKP PKiKP 07 13 50.0 +0.6
comp=Z,0.6nm,0.7s,baz=52,slow=1.0,SNR=7.0
TORD Torodi Ar. Bea 107.50 281 PKPdf PKiKP 07 13 50.0 +0.6
RKT Rikitea 110.67 119 *e*LR LR 07 46 41.3
comp=Z,118nm,26.0s
YKA Yellowknife Ar 119.20 21 PKP PKPdf 07 14 11.3 -0.3
comp=Z,3.3nm,0.8s,baz=309,slow=1.5,SNR=11
B05A Bryant 123.45 38⇓ P PKPdf 07 14 21.3 +1.5
baz=123
C05A Tolt Reservoir 123.94 38⇑ P PKPdf 07 14 22.1 +1.4
baz=124
F04A Amboy 124.23 40⇑ P PKPdf 07 14 22.3 +1.0
baz=124
G04A Mulino 124.49 41⇑ P PKPdf 07 14 23.7 +1.9
baz=124
H04A Detroit Lake 124.89 42⇓ P PKPdf 07 14 23.8 +1.2
baz=125
EDM Edmonton 125.59 29 *e*PKIKP PKPdf 07 14 24.6 +0.7
J05A Fort Rock 126.07 43⇓ P PKPdf 07 14 26.2 +1.3
baz=126
MCCM Marconi Confer 126.74 49⇓ P PKPdf 07 14 26.6 +0.5
baz=127
FARB Farallon Islan 126.79 50⇑ P PKPdf 07 14 26.4 +0.2
baz=127
J06A Christmas Vall 126.81 42⇓ P PKPdf 07 14 28.1 +1.8
baz=127
MNRC McLaughlin Nat 126.82 48⇓ P PKPdf 07 14 28.6 +2.4
baz=127
L05A Lakeview 126.83 44⇑ P PKPdf 07 14 26.8 +0.6
baz=127
I07A Izee 126.88 41⇓ P PKPdf 07 14 28.6 +2.2
baz=127
K06A Valley Falls 126.93 43⇓ P PKPdf 07 14 28.6 +2.1
baz=127
O04C Chester 127.31 46⇓ P PKPdf 07 14 29.3 +2.1
baz=127
BEKR Beckwourth 127.99 46⇓ P PKPdf 07 14 30.1 +1.6
baz=128
P05C Yuba Gap, Truc 128.02 47⇓ P PKPdf 07 14 30.2 +1.6
baz=128
N06A Buffalo Meadow 128.03 45⇑ P PKPdf 07 14 30.4 +1.9
baz=128
O06A Flanigan 128.26 46⇑ P PKPdf 07 14 29.9 +0.9
baz=128
L08A Fields 128.46 43⇑ P PKPdf 07 14 32.1 +2.7
baz=128
R05C Kirkwood Meado 128.62 48⇑ P PKPdf 07 14 31.9 +2.2
baz=129
CMB Columbia Colle 128.63 49⇑ P PKPdf 07 14 31.8 +2.1
baz=129
K09A Rome 128.65 42⇑ P PKPdf 07 14 31.7 +1.9
baz=129
S05C Merced 128.91 49⇓ P PKPdf 07 14 32.2 +2.0
baz=129
MSO Missoula 128.97 36 *e*PKPdf PKPdf 07 14 31.6 +1.3
S06C San Francisco 129.08 49⇑ P PKPdf 07 14 32.4 +1.8
baz=129
CHMT Chamberlain Mo 129.32 35 *e*PKPdf PKPdf 07 14 31.8 +0.8
SDP Sudden Peak, L 129.67 53⇑ P PKPdf 07 14 32.9 +1.2
baz=130
NVAR Mina Array Bea 130.01 47 PKP PKPdf 07 14 34.0 +1.7
comp=Z,1.1nm,0.8s,baz=228,slow=1.7,SNR=7.2
NVAR pPKP pPKPdf 07 14 45.7 +1.0
comp=Z,0.6nm,0.6s,baz=226,slow=1.4,SNR=3.0
NVAR Mina Array Bea 130.01 47 PKP PKPdf 07 14 34.0 +1.7
NVAR pPKP pPKPdf 07 14 45.7 +1.0
DLMT Dillon 130.55 37 *e*PKPdf PKPdf 07 14 35.1 +1.8
MCMT McKenzie Canyo 130.69 37 *e*PKPdf PKPdf 07 14 35.3 +1.7
S09A Goldfield 131.07 48⇑ P PKPdf 07 14 36.6 +2.3
baz=131
O11A Cowboy Ranch, 131.18 44⇑ P PKPdf 07 14 37.4 +2.8
baz=131
MPMC Manual Prospec 131.50 50⇓ P PKPdf 07 14 37.8 +2.7
baz=131
EDW2 Edwards Air Fo 131.53 52⇑ P PKPdf 07 14 38.2 +2.9
baz=132
SCI San Clemente I 131.70 54⇑ P PKPdf 07 14 38.8 +3.2
baz=132
O12A Currie 131.75 44⇑ P PKPdf 07 14 38.8 +3.2
baz=132
P12A McGill 131.99 45⇑ P PKPdf 07 14 38.7 +2.6
baz=132
TPNV Topopah Spring 132.09 48⇑ P PKPdf 07 14 39.5 +3.2
baz=132
HWUT Hardware Ranch 133.19 40 *e*PKPdf PKPdf 07 14 40.1 +1.8
LAO LASA Array 133.29 32 *e*PKPdf PKPdf 07 14 39.8 +1.3
GMRC Granite Mounta 133.36 51⇑ P PKPdf 07 14 41.8 +3.2
baz=133
BELC Belle Mtn. 133.38 52⇑ P PKPdf 07 14 41.5 +2.8
baz=133
V12A Nelson 133.60 49⇑ P PKPdf 07 14 41.6 +2.5
baz=134
PDAR Pinedale Array 133.81 38 PKP PKPdf 07 14 41.0 +1.4
comp=Z,0.7nm,0.7s,baz=65,slow=1.5,SNR=6.1
PDAR pPKP pPKPdf 07 14 52.8 +0.9
comp=Z,0.5nm,0.8s,baz=343,slow=4.6,SNR=3.9
SCHQ Schefferville 134.79 355 PKP PKPdf 07 14 42.0 +0.6
comp=Z,1.6nm,0.5s,baz=284,slow=19,SNR=5.6
W14A Seligman 135.13 49⇓ P PKPdf 07 14 46.0 +4.0
baz=135
ULM Lac du Bonnet 135.18 21 PKP PKPdf 07 14 42.5 +0.4
comp=Z,1.6nm,0.7s,baz=133,slow=1.1,SNR=3.0
X14A Yava 135.58 50⇓ P PKPdf 07 14 46.7 +3.9
baz=136
Y14A Wickenburg 135.71 51⇑ P PKPdf 07 14 46.3 +3.2
baz=136
X15A Humboldt 136.07 50⇓ P PKPdf 07 14 47.5 +3.7
baz=136
RSSD Black Hills 136.15 33 *e*PKIKP PKPdf 07 14 44.8 +0.9
PV10 Paradox Valley 136.53 43 *e*PKPdf PKPdf 07 14 46.8 +2.2
ANMO Albuquerque 140.07 46⇓ *i*PKIKP PKPdf 07 14 51.4 +0.3
ANMO Albuquerque 140.07 46 *e*PKPdf PKPdf 07 14 51.2 +0.1
CPUP Villa Florida 141.27 202 PKP PKPdf 07 14 54.1 +0.8
comp=Z,1.6nm,0.8s,baz=48,slow=3.3,SNR=3.4
MNTX Cornudas Mount 142.45 50 *e*PKPdf PKPdf 07 14 52.8 -2.5
AMTX Amarillo 143.38 42 *e*PKPdf PKPdf 07 14 56.7 -0.3
FRNY Flat Rock 145.01 1 *e*PKPdf PKPdf 07 14 59.0 -0.8
BDFB Brasilia 145.07 224 PKPbc PKPbc 07 15 01.2 +1.8
comp=Z,9.9nm,0.8s,baz=159,slow=1.5,SNR=16
LONY Lake Ozonia 145.19 3 *e*PKPbc PKPbc 07 15 00.4 +0.6
WMOK Wichita Mounta 145.36 40 *e*PKPdf PKPdf 07 15 01.4 +0.9
LBNH Lisbon 145.61 359 *e*PKIKP PKPdf 07 15 02.0 +1.1
NCB Newcomb 145.85 2 *e*PKPbc PKPbc 07 15 02.6 +0.7
ACCN Adirondack Com 146.45 2 *e*PKPdf PKPdf 07 15 02.8 +0.5
ACCN *e*PKPbc PKPbc 07 15 04.1 +0.4
SLM Saint Louis 147.08 26 *e*PKP2 PKPab 07 15 06.1 -1.0
CCM Cathedral Cave 147.10 28 *e*PKP2 PKPab 07 15 06.2 -1.0
JCT Junction City 147.19 47 *e*PKPdf PKPdf 07 15 05.2 +1.7
JCT *e*PKPbc PKPbc 07 15 07.8 +2.0
JCT *e*PKPab PKPab 07 15 10.1 +2.5
BINY Binghamton 147.50 5 *e*PKPbc PKPbc 07 15 07.4 +0.7

FVM	**French Village**	**147.54**	**27**	*e*PKP2	PKPab	07 15 07.3	-1.6
LVC	**Limon Verde**	**147.68**	**186**	*e*PKPbc	PKPbc	07 15 09.3	+2.1
BLO	**Bloomington**	**148.08**	**21**	*e*PKPbc	PKPbc	07 15 08.9	+0.6
BLO				*e*PKPab	PKPab	07 15 12.2	+1.1
MIAR	**Mount Ida**	**148.62**	**35**	*e*PKPbc	PKPbc	07 15 11.1	+1.5
MIAR				*e*PKPab	PKPab	07 15 14.9	+1.7
USIN	**University of**	**148.72**	**24**	*e*PKPbc	PKPbc	07 15 10.8	+0.9
SSPA	**Standing Stone**	**148.84**	**8**	*e*PKPdf	PKPdf	07 15 06.9	+0.6
SSPA				*e*PKPbc	PKPbc	07 15 10.9	+0.7
PARMO	**Parma**	**148.93**	**28**	*e*PKPdf	PKPdf	07 15 07.2	+0.8
PARMO				*e*PKPbc	PKPbc	07 15 11.4	+1.0
PARMO				*e*PKPab	PKPab	07 15 15.3	+0.9
WCI	**Wyandotte Cave**	**149.00**	**22**	*e*PKIKP	PKPdf	07 15 07.5	+1.0
WCI				*e*		07 15 11.5	
WCI				*e*		07 15 16.4	
UALR	**University of**	**149.12**	**33**	*e*PKPbc	PKPbc	07 15 12.1	+1.2
HBAR	**Harrisburg**	**149.39**	**30**	*e*PKPbc	PKPbc	07 15 12.8	+1.3
GLAT	**Glass**	**149.46**	**27**	*e*PKPbc	PKPbc	07 15 13.3	+1.5
MVL	**Millersville**	**149.65**	**6**	*e*PKPbc	PKPbc	07 15 12.8	+0.6
NATX	**Nacogdoches**	**149.91**	**40**	*e*PKPdf	PKPdf	07 15 09.4	+1.5
NATX				*e*PKPbc	PKPbc	07 15 14.6	+1.7
NATX				*e*PKPab	PKPab	07 15 21.0	+2.5
WVT	**Waverly**	**150.22**	**26**	*e*PKP2	PKPbc	07 15 14.7	+1.1
HKT	**Hockley**	**150.29**	**44**	*e*PKIKP	PKPdf	07 15 16.2	+7.6
OXF	**Oxford**	**150.84**	**30**	*e*PKIKP	PKPdf	07 15 10.2	+0.8
OXF				*e*		07 15 16.0	
OXF				*e*		07 15 23.9	
PLAL	**Pickwick Lake**	**151.08**	**27**	*e*PKPdf	PKPdf	07 15 10.3	+0.5
PLAL				*e*PKPbc	PKPbc	07 15 16.0	+0.4
FWV	**Forest Hill**	**151.25**	**14**	*e*PKPdf	PKPdf	07 15 10.6	+0.6
FWV				*e*PKPbc	PKPbc	07 15 16.5	+0.4
TZTN	**Tazewell**	**151.46**	**19**	*e*PKPdf	PKPdf	07 15 11.6	+1.2
TZTN				*e*PKPbc	PKPbc	07 15 17.5	+1.0
ELN	**Prospectdale**	**151.60**	**14**	*e*PKPbc	PKPbc	07 15 17.2	+0.4
SWET	**Sewanee**	**151.79**	**24**	*e*PKPbc	PKPbc	07 15 17.7	+0.4
CPCT	**Cooper Cave**	**152.12**	**21**	*e*PKPdf	PKPdf	07 15 13.0	+1.6
CPCT				*e*PKPbc	PKPbc	07 15 19.2	+1.1
CPCT				*e*PKPab	PKPab	07 15 28.9	+1.2
MYNC	**Murphy**	**152.60**	**21**	*e*PKIKP	PKPbc	07 15 20.1	+1.0
MYNC				*e*		07 15 30.8	

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*IDC **12** 07:02:47.6±3.4, 3865N×4632E, h0km, mb3.3/1, mb1 3.5/3, mb1mx3.2/19, mbtmp3.3/3, ML3.2/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/24, Error ellipse: s-maj=77.0km s-min=27.9km az=60.0*
*ISCJB **12** 07:02:49.2±0.4, 3859N±003×4569E±004, h10km, mb3.6/3, MS3.2/2, Error ellipse: s-maj=5.1km s-min=3.5km az=155.6*
*CSEM **12** 07:02:51.9±0.1, 3840N×4537E, h16km, ML3.6, Error ellipse: s-maj=1.7km s-min=1.3km az=10.0*
*MOS **12** 07:02:53.0±1.8, 3853N×4576E, h33km, mb4.1/3, Error ellipse: s-maj=21.4km s-min=13.0km az=115.6*
*TEH **12** 07:02:53.8, 3841N×4547E, h14km, Mn3.6*
*NEIC **12** 07:02:54.2, 3892N×4557E, h3km, ML3.2(THR), After THR.*
*THR **12** 07:02:55.7±0.4, 3893N×4556E, h18km±13km, ML3.2*
ISC 12 07:02:49.7±0.5**, 3850N**±002×**4562E**±004**, h1**km±4km**, n50, σ1ˢ45**/58**, mb3.7**/3**, MS3.2**/2**, 2C-1D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IAZR	**Azarshahr**	**0.87**	**161**	*e*Pg	**Pg**	**07 03 09.0**	**+2.7**
IAZR				*e*Sg	**Sg**	**07 03 20.2**	**+2.6**
MAKU	**Maku**	**1.12**	**320**	*e*PG	**Pg**	**07 03 11.0**	**-0.1**
MAKU				AML	AML	07 03 27.0	
	comp=N,1μm,0.2s						
MAKU				AML	AML	07 03 28.6	
	comp=E,1μm,0.2s						
IBST	**Bostanabad**	**1.28**	**128**	*e*Pn	**Pn**	**07 03 18.0**	**+3.2**
CLDR	**Caldiran**	**1.48**	**296**	PN	**Pn**	**07 03 16.2**	**-1.2**
TVAN	**Van**	**1.74**	**272**	*i* P	**Pn**	**07 03 22.6**	**+1.6**
TVAN				*i* S	**Sn**	**07 03 44.0**	**+0.2**
HKR	**Hakkari**	**1.75**	**239**	PN	**Pn**	**07 03 18.7**	**-2.4**
ISRB	**Sarab**	**1.75**	**112**	*e*Sn	**Sn**	**07 03 48.2**	**+4.1**
VANB	**Van**	**1.75**	**274**	PN	**Pn**	**07 03 19.9**	**-1.3**
VANT	**Van**	**1.75**	**269**	PN	**Pn**	**07 03 21.2**	**0.0**
HAKT	**HAKKARI**	**1.78**	**239**	*i* P	**Pn**	**07 03 22.3**	**+0.8**
HAKT				*i* S	**Sn**	**07 03 47.1**	**+2.3**
GNI	**Garni**	**1.78**	**338**	PN	**Pn**	**07 03 24.1**	**+2.4**
GNI	**Garni**	**1.78**	**338**	Pn	**Pn**	**07 03 24.5**	**+2.9**
	comp=E,47nm,0.3s,baz=139,slow=19,SNR=80						
GNI				Lg		07 03 49.3	
	comp=E,40nm,0.3s,baz=212,slow=21,SNR=10						
GRMI	**Germi**	**1.81**	**79**	*e*Pg	**Pg**	**07 03 29.1**	**+4.8**
GRMI				AML	AML	07 04 03.2	
	comp=N,222nm,0.4s						
GRMI				AML	AML	07 04 03.9	
	comp=E,170nm,0.3s						
GRMI	**Germi**	**1.81**	**79**	*e*Pn	**Pg**	**07 03 28.0**	**+3.7**
GRMI	**Germi**	**1.81**	**79**	*e*Pg	**Pg**	**07 03 29.1**	**+4.8**
	SNR=91						
CUKT	**Cukurca**	**2.02**	**232**	PN	**Pn**	**07 03 23.5**	**-1.4**
DIGO	**Kars**	**2.58**	**318**	*i* P	**Pg**	**07 03 39.0**	**-0.2**
DIGO				*i* S	**Sg**	**07 04 20.5**	**+7.8**
KARS	**Kars**	**2.87**	**318**	*e*PN	**Pn**	**07 03 38.4**	**+1.8**
DGRG	**David-gareji**	**2.95**	**356**	P	**Pg**	**07 03 46.7**	**+0.5**
DGRG				S	**Sn**	**07 04 19.4**	**+5.6**
MTA	**Mtatsminda**	**3.25**	**349**	P	**Pg**	**07 03 51.7**	**-0.3**
MTA				S	**Sg**	**07 04 35.1**	**+1.0**
TBLG	**Delisi**	**3.29**	**348**	*e*PN	**Pg**	**07 03 52.5**	**-0.3**
TBLG				*e*S	**Sg**	**07 04 36.5**	**+1.0**
TBLG	**Delisi**	**3.29**	**348**	P	**Pg**	**07 03 52.5**	**-0.3**
TBLG				S	**Sg**	**07 04 36.5**	**+1.0**
BEST	**Besiri**	**3.48**	**261**	*i* P	**Pb**	**07 03 49.2**	**-2.9**
BEST				*i* S	**Sg**	**07 04 40.7**	**-0.7**
EZM	**Erzurum**	**3.59**	**294**	*e*PN	**Pn**	**07 03 47.1**	**+0.6**
SNGE	**Sanandaj**	**3.67**	**157**	*e*PN	**Pb**	**07 03 59.7**	**+4.3**
SNGE				AML	AML	07 04 58.2	
	comp=E,22nm,0.7s						
SNGE				AML	AML	07 04 59.4	
	comp=N,33nm,1.0s						
SNGE	**Sanandaj**	**3.67**	**157**	*e*Pn	**Pg**	**07 03 59.0**	**-1.1**
SNGE				*e*Sn	**Sg**	**07 04 47.0**	**-0.7**
MARD	**Mardin**	**4.01**	**254**	*i* P	**Pg**	**07 04 03.8**	**-2.7**
MARD				*i* S	**Sg**	**07 05 00.3**	**+1.9**
ONI	**Oni**	**4.40**	**339**	P	**Pg**	**07 04 14.5**	**+0.6**
ZEI	**Tsey**	**4.46**	**343**	*e*PN	**Pg**	**07 04 13.7**	**-1.4**
ZEI				*i*		07 05 15.1	
MAK	**Makhachkala**	**4.68**	**17**	*e*Pn	**Pn**	**07 03 57.3**	**-4.2**
PTK	**Pertek**	**4.89**	**277**	*e*P	**Pn**	**07 04 04.7**	**+0.4**
CHTH	**Charan**	**5.10**	**119**	*e*PN	**Pb**	**07 04 17.1**	**-2.7**
CHTH	**Charan**	**5.10**	**119**	*e*Pn	**Pb**	**07 04 17.0**	**-2.7**
ASAO	**Ashtian**	**5.31**	**137**	*e*Pn	**Pb**	**07 04 21.2**	**-2.0**
ASAO	**Ashtian**	**5.31**	**137**	*e*Pn	**Pb**	**07 04 21.0**	**-2.2**
KIV	**Kislovodsk**	**5.88**	**339**	⇑*e*P	**Pn**	**07 04 18.4**	**+0.5**
ANN	**Anapa**	**8.78**	**318**	*e*P	**Pn**	**07 04 55.0**	**-2.8**
ANN				pmax	pmax		
	comp=Z,150nm,1.7s						
BRTR	**Keskin Array B**	**9.39**	**281**	Pn	**Pn**	**07 05 11.3**	**+5.2**
	comp=Z,0.1nm,0.3s,baz=95,slow=15,SNR=6.4						
ISP	**Isparta**	**11.91**	**272**	⇑*e*P	**Pn**	**07 05 33.5**	**-7.2**
AKASG	**Malin Array Be**	**16.84**	**322**	Pn	**Pn**	**07 06 45.6**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=132,slow=11,SNR=9.3						
WSAR	**Wadi Sarin**	**18.84**	**140**	LR	LR	07 14 23.9	
	comp=Z,49nm,18.1s,baz=119,slow=37						
AAK	**Ala-Archa**	**22.27**	**70**	⇓*e*P	**P**	**07 07 47.0**	**-1.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
BRVK	**Borovoye**	**22.38**	**41**	*e*P	**P**	**07 07 48.6**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb3.9						
VRAC	**Vranov**	**23.40**	**307**	LR	LR	07 18 18.0	
	comp=Z,54nm,21.6s,MS3.0,baz=62,slow=39						
GERES	**GERESS Array B**	**25.12**	**305**	P	**P**	**07 08 17.9**	**+1.8**
	comp=Z,0.4nm,0.6s,mb3.3,baz=114,slow=11,SNR=3.5						
KHC	**Kasperske Hory**	**25.27**	**305**	*e*P	**P**	**07 08 17.0**	**-0.4**
KURK	**Kurchatov**	**26.25**	**52**	*e*P	**P**	**07 08 26.8**	**+0.5**
HFS	**Hagfors**	**29.54**	**328**	LR	LR	07 20 53.7	
	comp=Z,87nm,20.3s,MS3.4,baz=328,slow=37						
KBS	**Kingsbay**	**42.73**	**351**	*e*P	**P**	**07 10 48.7**	**+0.2**
YKA	**Yellowknife Ar**	**78.10**	**351**	*i* P	**P**	**07 14 48.9**	**-1.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						

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*NEIC **12** 07:15:22.4, 1973N×6297W, h25km, MD3.8(RSPR), After RSPR.*
RSPR 12 07:15:22.4, 1973N×6297W, h25km±35km**, MD3.8**/5**, 6C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**2.03**	**230**	⇑*e*P	Pn	07 15 53.3	-1.7
STVI	**Saint Thomas**	**2.33**	**234**	⇓*e*P	Pn	07 15 57.8	-1.3
STVI				*e*S	Sn	07 16 24.1	-2.8
MTP	**Monte Pirata**	**2.94**	**237**	⇑*e*P	Pn	07 16 05.8	-1.7
MTP				*e*S	Sn	07 16 39.2	-2.8
CBYP	**Canovanas**	**3.09**	**243**	⇑*e*P	Pn	07 16 08.6	-1.0
CBYP				*e*S	Sn	07 16 44.3	-1.5
HUMP	**Col San Antoni**	**3.15**	**240**	⇑*e*P	Pn	07 16 08.8	-1.6
HUMP				*e*S	Sn	07 16 45.7	-1.5
CPD	**Cerro la Pandu**	**3.26**	**239**	⇑*e*P	Pn	07 16 09.7	-2.2
CPD				*e*S	Sn	07 16 48.1	-1.7
AOPR	**Arecibo Observ**	**3.83**	**250**	⇑*e*P	Pn	07 16 18.1	-1.6

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*CSEM **12** 07:19:52.6±1.2, 3785N×2628W, h2km±4km, ML2.0, Error ellipse: s-maj=5.2km s-min=1.3km az=26.0, After PDA*
*PDA **12** 07:19:52.6±1.2, 3785N×2628W, h2km±4km, MD2.9, ML2.0, Error ellipse: s-maj=5.2km s-min=1.3km az=26.0*
SVSA 12 07:19:52.6±1.2**, 3785N**×**2628W, h2**km±4km**, MD2.9, ML2.0, Error ellipse: s-maj=5.2km s-min=1.3km az=26.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SET2	**Ginetes**	**0.37**	**91**	*e*P	Pg	07 19 59.6	-0.1
SET2				*e*S	Sg	07 20 05.1	+0.5
SET4	**Mosteiros**	**0.38**	**87**	*e*P	Pg	07 19 59.4	-0.5
SET4				*e*S	Sg	07 20 05.0	+0.2
PFET	**Feteiras**	**0.39**	**95**	*e*P	Pg	07 19 59.8	-0.2
PFET				*i* S	Sg	07 20 05.4	+0.3
PSAN	**Santo Antonio**	**0.43**	**90**	*i* S	Sg	07 20 06.6	0.0
PDA	**Ponta Delgada**	**0.50**	**102**	*e*S	Sg	07 20 07.8	-0.8
FAC	**Faja de Cima**	**0.50**	**99**	*i* S	Sg	07 20 08.4	-0.3
CML	**Cha da Macela**	**0.58**	**98**	*i* S	Sg	07 20 10.3	-1.1
PVER	**Pico Vermelho**	**0.61**	**95**	*e*S	Sg	07 20 10.9	-1.2
PVER							
	61nm,0.2s						
LFA	**Lagoa do Fogo**	**0.63**	**97**	*e*P	Pg	07 20 03.5	-1.2
PMAT	**Coroa da Mata**	**0.64**	**93**	*e*S	Sg	07 20 11.7	-1.4
PMAT							
	49nm,0.2s						
PRCH	**Ribeira Ch**	**0.64**	**101**	*e*S	Sg	07 20 11.8	-1.5
PRCH							
	116nm,0.2s						
MESC	**Monte Escuro**	**0.66**	**95**	*e*P	Pg	07 20 03.8	-1.5
MESC				*e*S	Sg	07 20 12.5	-1.3
VIF	**Vila Franca**	**0.67**	**99**	*e*S	Sg	07 20 13.1	-1.1
VIF							
	18nm,0.2s						
PCNG	**Congro**	**0.70**	**97**	*e*S	Sg	07 20 13.2	-2.0
PCNG							
	46nm,0.2s						
FRA1	**Furnas**	**0.74**	**98**	*i* rx		07 20 17.9	
PFAD	**Fenais da Ajud**	**0.76**	**91**	*e*S	Sg	07 20 14.8	-2.0
MIRA	**Miradouro**	**0.79**	**95**	*e*P	Pg	07 20 05.8	-2.0
MIRA				*i* S	Sg	07 20 15.5	-2.6
PFAV	**Pico das Favas**	**1.07**	**324**	*e*P	Pg	07 20 09.3	-3.8
PFAV				*e*S	Sg	07 20 22.3	-4.6
PFAV							
	12nm,0.2s						
PFAV	**Pico das Favas**	**1.07**	**324**	*e*P	Pg	07 20 09.3	-3.8
PFAV				*e*S	Sg	07 20 22.3	-4.6
RIB2	**Ribeirinha**	**1.08**	**319**	*e*P	Pg	07 20 09.5	-3.8
RIB2				*e*S	Sg	07 20 22.6	-4.7
RIB2							
	16nm,0.2s						
RIB2	**Ribeirinha**	**1.08**	**319**	*e*P	Pg	07 20 09.5	-3.8
RIB2				*e*S	Sg	07 20 22.6	-4.7
PVNV	**Vila Nova**	**1.14**	**323**	*e*P	Pg	07 20 10.5	-4.0
PVNV				*e*S	Sg	07 20 24.2	-5.1
PVNV							
	11nm,0.2s						
PVNV	**Vila Nova**	**1.14**	**323**	*e*P	Pg	07 20 10.5	-4.0
PVNV				*e*S	Sg	07 20 24.2	-5.1
PPAD	**Pico dos Padre**	**1.16**	**317**	*e*S	Sg	07 20 24.9	-5.0
PPAD							
	8.8nm,0.1s						
PSMN	**Pico do Norte,**	**1.28**	**131**	*e*S	Sg	07 20 27.8	-6.1
PMAN	**Manadas**	**1.63**	**299**	*e*P	Pn	07 20 17.2	-5.1
PICO	**Pico**	**1.81**	**292**	*e*P	Pn	07 20 20.1	-4.7
PICO				*e*S	Sn	07 20 41.0	-7.4
CALA	**Caldeira**	**2.04**	**292**	*e*P	Pn	07 20 23.5	-4.5
CALA				*e*S	Sn	07 20 46.8	-7.3

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*SZGRF **12** 07:23:13.7, 2254S×17790W, h33km, South of Fiji Islands*
*CSEM **12** 07:23:20.6, 2073S×17770W, h33km, mb5.5*
*MOS **12** 07:24:01.4±1.4, 2107S×17809W, h410km, mb4.5/17, Error ellipse: s-maj=15.1km s-min=10.6km az=55.5*
*ISCJB **12** 07:24:05.1±1.2, 2120S±006×17817W±005, h448km±14km, mb4.3/57, Error ellipse: s-maj=10.2km s-min=5.7km az=131.7*
*IDC **12** 07:24:07.3±2.1, 2129S×17806W, h470km±22km, mb3.9/10, mb1 3.9/12, mb1mx3.9/15, mbtmp4.7/12, Error ellipse: s-maj=14.5km s-min=12.5km az=121.0*
*NEIC **12** 07:24:20.4±0.7, 2122S×17846W, h619km±7km, mb4.4/36, Error ellipse: s-maj=10.3km s-min=4.4km az=147.0*
*BJI **12** 07:24:20.4, 2120S×17850W, h619km, mB4.6, mb4.4*
ISC 12 07:24:08.2±1.4**, 2121S**±007×**17815W**±005**, h471**km±16km**, n328, σ0ˢ63**/265**, mb4.3**/57**, 85C-69D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.01**	**179**	S	**S**	**07 27 33.0**	**-6.2**
	33nm,0.3s,baz=270,slow=20,SNR=3.1						
AFI	**Afiamalu**	**9.47**	**41**	P	**P**	**07 26 12.0**	**-7.6**
	2.7nm,0.3s,baz=220,slow=7.9,SNR=4.9						
AFI				S	**S**	**07 27 54.9**	**-13**
	13nm,0.3s,baz=91,slow=19,SNR=6.6						
AFI	**Afiamalu**	**9.47**	**41**	P	**P**	**07 26 12.0**	**-7.6**
AFI				S	**S**	**07 27 54.9**	**-13**
FUNA	**Funafuti**	**12.87**	**348**	*e*P	**P**	**07 27 06.9**	**+11**
DZM	**Mont Dzumac**	**14.35**	**264**	P	**P**	**07 27 10.9**	**-1.1**
	0.3nm,0.3s,baz=96,slow=19,SNR=3.1						
URZ	**Urewera**	**17.48**	**193**	P	**P**	**07 27 41.2**	**-3.7**
	4.8nm,0.3s,baz=331,slow=6.7,SNR=16						
URZ				S	**S**	**07 30 39.4**	**-3.3**
	1.5nm,0.3s,baz=66,slow=21,SNR=12						
RPZ	**Rata Peaks**	**24.18**	**199**	P	**P**	**07 28 43.3**	**-2.7**
	13nm,0.9s,mb4.4,baz=56,slow=3.6,SNR=3.5						
ARMA	**Armidale**	**28.64**	**245**	*e*P	**P**	**07 29 27.1**	**+1.8**
CNB	**Canberra Magne**	**31.71**	**237**	⇓*i*P	**P**	**07 29 53.4**	**+1.4**
	19nm,0.8s,mb4.6						
CTA	**Charters Tower**	**33.28**	**265**	*e*P	**P**	**07 30 06.4**	**+1.0**
	8.2nm,0.4s,mb4.5						
CTAO	**Charters Tower**	**33.28**	**265**	*e*P	**P**	**07 30 05.8**	**+0.4**
TOO	**Toolangi**	**35.37**	**234**	*e*P	**P**	**07 30 24.3**	**+1.3**
	7.0nm,0.8s,mb4.1						
TOO	**Toolangi**	**35.37**	**234**	*e*P	**P**	**07 30 24.3**	**+1.3**
TOO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
PMG	**Port Moresby**	**35.37**	**284**	P	**P**	**07 30 23.4**	**+0.5**
	comp=Z,22nm,0.7s,mb4.7,baz=111,slow=8.7,SNR=6.2						
STKA	**Stephens Creek**	**37.36**	**245**	*e*P	**P**	**07 30 40.4**	**+0.9**
	comp=Z,8.0nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**37.36**	**245**	P	**P**	**07 30 40.5**	**+1.0**
	comp=Z,7.1nm,0.6s,mb4.3,baz=96,slow=9.1,SNR=15						
AS31	**Alice Springs**	**44.22**	**257**	⇓*i*P	**P**	**07 31 34.7**	**+0.3**
AS31				*e*S	**S**	**07 37 32.8**	**+0.2**
ASAR	**Alice Springs**	**44.22**	**257**	P	**P**	**07 31 34.8**	**+0.4**
	comp=Z,15nm,0.6s,mb4.6,baz=85,slow=8.6,SNR=242						
ASAR				pP	pP	07 33 04.5	+1.6
	comp=Z,1.3nm,0.8s,baz=95,slow=7.9,SNR=2.8						
ASAR				S	**S**	**07 37 33.0**	**+0.3**
	comp=Z,2.0nm,0.9s,baz=95,slow=16,SNR=10						
ASAR	**Alice Springs**	**44.22**	**257**	P	**P**	**07 31 34.8**	**+0.4**
ASAR				*PP	pP	07 33 04.5	+1.6
ASAR				S	**S**	**07 37 33.0**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,15nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				smax			
	comp=N,2.0nm,0.9s						
ASPA	**Alice Springs**	**44.22**	**257**	⇓*i*P	**P**	**07 31 34.7**	**+0.3**
ASPA				*e*S	**S**	**07 37 32.8**	**+0.1**
WB2	**Warramunga Arr**	**44.35**	**263**	*e*P	**P**	**07 31 34.9**	**-0.5**
WRAB	**Tennant Creek**	**44.36**	**263***c*	*i*P	**P**	**07 31 35.7**	**+0.3**
WRAB	**Tennant Creek**	**44.36**	**263**	*e*P	**P**	**07 31 35.2**	**-0.2**
KAKA	**Kakadu**	**47.85**	**272**	⇓*i*P	**P**	**07 32 02.3**	**+0.2**
	comp=N,26nm,0.9s,mb4.6						
FORT	**Forrest**	**48.89**	**247**	*e*P	**P**	**07 32 10.0**	**+0.1**
	comp=N,29nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**52.80**	**263**	*e*P	**P**	**07 32 39.3**	**+0.9**
	comp=N,11nm,1.2s,mb4.0						
SBA	**Scott Base**	**57.16**	**184**	*e*P	**P**	**07 33 11.0**	**+1.9**
VNDA	**Vanda**	**57.20**	**185**	P	**P**	**07 33 08.0**	**-1.3**
	comp=N,1.5nm,0.5s,mb3.6,baz=350,slow=7.2,SNR=13						
VNDA	**Vanda**	**57.20**	**185**	P	**P**	**07 33 08.0**	**-1.3**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MBWA	**Marble Bar**	**57.56**	**258**	*e*P	**P**	**07 33 11.8**	**0.0**
	comp=Z,32nm,1.0s,mb4.6						
QSPA	**South Pole Qui**	**68.86**	**180**	*e*P	**P**	**07 34 25.2**	**+0.5**
	comp=Z,13nm,0.9s,mb4.5						
JOW	**Kunigami**	**70.51**	**310**	P	**P**	**07 34 34.2**	**-0.4**
	comp=Z,22nm,1.0s,mb4.7,baz=169,slow=7.9,SNR=5.9						
MJAR	**Matsushiro Arr**	**70.69**	**324**	P	**P**	**07 34 35.4**	**-0.2**
	comp=Z,4.3nm,0.6s,mb4.2,baz=156,slow=5.5,SNR=13						
MJAR	**Matsushiro Arr**	**70.69**	**324**	P	**P**	**07 34 35.4**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MJAR	**Matsushiro Arr**	**70.69**	**324**	P	**P**	**07 34 35.4**	**-0.2**
MAJO	**Matsushiro**	**70.69**	**324**	*e*P	**P**	**07 34 35.5**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
MAJO	**Matsushiro**	**70.69**	**324**	*e*P	**P**	**07 34 35.5**	**-0.2**
	comp=Z,7.5nm,0.8s,mb4.3						
MAT	**Matsushiro**	**70.69**	**324**	P	**P**	**07 34 36.1**	**+0.4**
YSS	**Yuzh-Sakhalins**	**76.46**	**334**	P	**P**	**07 35 08.0**	**-0.7**
PET	**Petropavlovsk**	**76.62**	**346**	⇑*i*P	**P**	**07 35 05.2**	**-4.3**
PET				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.5						
HAST	**UC Hastings Re**	**78.34**	**43**	⇑P	**P**	**07 35 19.0**	**+0.1**
	baz=79						
SCI	**San Clemente I**	**78.35**	**48**	⇑P	**P**	**07 35 18.8**	**-0.1**
	baz=79						
BNLO	**Ben Lomond (Sa**	**78.40**	**43**	⇑P	**P**	**07 35 19.1**	**-0.1**
	baz=79						
SMMC	**Simmler**	**78.71**	**45**	⇓P	**P**	**07 35 21.3**	**+0.4**
	baz=79						
PKD	**Parkfield**	**78.73**	**44**	⇓P	**P**	**07 35 21.7**	**+0.7**
	baz=79						
VLA	**Vladivostok**	**78.78**	**325**	⇓*e*P	**P**	**07 35 21.1**	**-0.1**
VLA				pmax	pmax		
	comp=Z,32nm,1.7s,mb4.6						
U04C	**Hernandez Rese**	**78.82**	**44**	⇑P	**P**	**07 35 22.1**	**+0.6**
	baz=79						
PACP	**Pacheco Peak**	**78.89**	**43**	⇑P	**P**	**07 35 22.5**	**+0.6**
	baz=79						
S04C	**Ingram Canyon,**	**79.16**	**43**	⇑P	**P**	**07 35 23.7**	**+0.4**
	baz=80						
O01C	**Eel River Cons**	**79.27**	**39**	⇓P	**P**	**07 35 24.6**	**+0.8**
	baz=80						
109C	**Camp Elliot, M**	**79.30**	**49**	⇓P	**P**	**07 35 23.6**	**-0.4**
	baz=80						
MNRC	**McLaughlin Nat**	**79.31**	**41**	⇓P	**P**	**07 35 24.3**	**+0.3**
	baz=80						
ARVC	**Arvin**	**79.39**	**46**	⇑P	**P**	**07 35 24.3**	**-0.1**
	baz=80						
MWC	**Mount Wilson**	**79.39**	**47**	*e*P	**P**	**07 35 24.7**	**+0.2**
JCC	**Jacoby Creek**	**79.58**	**39**	⇑P	**P**	**07 35 25.2**	**-0.3**
	baz=80						
GASB	**Alder Springs**	**79.62**	**40**	⇓P	**P**	**07 35 26.4**	**+0.7**
	baz=80						
MURC	**Murrieta**	**79.63**	**48**	⇓P	**P**	**07 35 25.7**	**-0.1**
	baz=80						
VES	**Vestal, Richgr**	**79.63**	**45**	⇑P	**P**	**07 35 25.3**	**-0.5**
	baz=80						
BFSC	**Mount Baldy St**	**79.67**	**47**	⇑P	**P**	**07 35 25.6**	**-0.4**
	baz=80						
S05C	**Merced**	**79.70**	**43**	⇓P	**P**	**07 35 26.0**	**-0.1**
	baz=80						
MONP	**Monument Peak**	**79.78**	**49**	⇓P	**P**	**07 35 26.9**	**+0.3**
	baz=80,SNR=5.5						
EDW2	**Edwards Air Fo**	**79.81**	**46**	⇓P	**P**	**07 35 26.6**	**-0.1**
	baz=80,SNR=8.0						
DVTC	**Desert V Tower**	**79.88**	**49**	⇓P	**P**	**07 35 26.7**	**-0.4**
	baz=80						
T06C	**Millerton Lake**	**79.90**	**44**	⇓P	**P**	**07 35 26.8**	**-0.4**
	baz=80						
O02C	**Red Bluff**	**79.91**	**40**	⇑P	**P**	**07 35 27.8**	**+0.5**
	baz=80						
SUTB	**Sutter Butte**	**79.93**	**41**	⇑P	**P**	**07 35 26.7**	**-0.6**
	baz=80						
ISA	**Isabella**	**79.93**	**46**	*e*P	**P**	**07 35 27.9**	**+0.6**
ISA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
ISA	**Isabella**	**79.93**	**46**	*e*P	**P**	**07 35 27.9**	**+0.6**
	comp=Z,3.0nm,0.6s,mb4.0						
ISA	**Isabella**	**79.93**	**46**	⇑P	**P**	**07 35 27.3**	**0.0**
	baz=80						
CMB	**Columbia Colle**	**80.08**	**43**	*e*P	**P**	**07 35 27.8**	**-0.3**
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
CMB	**Columbia Colle**	**80.08**	**43**	*e*P	**P**	**07 35 27.8**	**-0.4**
	comp=Z,6.2nm,0.9s,mb4.1						
CMB	**Columbia Colle**	**80.08**	**43**	⇑P	**P**	**07 35 27.8**	**-0.3**
	baz=80						
PFO	**Pinyon Flat Ob**	**80.15**	**48**	⇑P	**P**	**07 35 28.6**	**+0.1**
	baz=81						
HELL	**Mitchell Peak,**	**80.16**	**44**	⇑P	**P**	**07 35 28.1**	**-0.4**
	baz=81						
NJ2	**Nanjing**	**80.22**	**310**	*e*P	**P**	**07 35 28.8**	**-0.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
O03C	**Acorn Hollow,**	**80.25**	**40**	⇑P	**P**	**07 35 29.3**	**+0.3**
	baz=81						
LAVA	**Lava Cap Winer**	**80.29**	**42**	⇑P	**P**	**07 35 29.0**	**-0.2**
	baz=81						
ORV	**Oroville**	**80.30**	**41**	⇓P	**P**	**07 35 28.9**	**-0.4**
	baz=81						
WDC	**Whiskeytown Da**	**80.31**	**40**	⇑P	**P**	**07 35 29.3**	**0.0**
	baz=81						
S06C	**San Francisco**	**80.33**	**43**	⇑P	**P**	**07 35 29.3**	**-0.1**
	baz=81						
KCC	**Kaiser Creek**	**80.34**	**44**	⇑P	**P**	**07 35 29.1**	**-0.4**
	baz=81						
M02C	**Callahan**	**80.63**	**39**	⇓P	**P**	**07 35 31.7**	**+0.7**
	baz=81						
CWC	**Cottonwood Cre**	**80.64**	**45**	⇑P	**P**	**07 35 31.0**	**0.0**
	baz=81						
R05C	**Kirkwood Meado**	**80.67**	**42**	⇑P	**P**	**07 35 31.5**	**+0.3**
	baz=81						
BELC	**Belle Mtn.**	**80.68**	**48**	P	**P**	**07 35 31.5**	**+0.3**
	baz=81,SNR=6.0						
P05C	**Yuba Gap, Truc**	**80.70**	**42**	⇓P	**P**	**07 35 31.5**	**+0.2**
	baz=81						
MPMC	**Manual Prospec**	**80.81**	**46**	⇓P	**P**	**07 35 32.0**	**+0.1**
	baz=81						
MTUM	**Tungsten Hills**	**80.84**	**44**	*e*P	**P**	**07 35 32.9**	**+0.8**
GSC	**Goldstone**	**80.85**	**47**	*e*P	**P**	**07 35 32.5**	**+0.4**
GSC	**Goldstone**	**80.85**	**47**	⇑P	**P**	**07 35 32.1**	**0.0**
	baz=81						
MAW	**Mawson**	**80.85**	**200**	P	**P**	**07 35 31.4**	**-0.8**
	comp=Z,1.1nm,1.0s,mb3.4,baz=137,slow=8.8,SNR=8.3						
MAW	**Mawson**	**80.85**	**200**	P	**P**	**07 35 31.4**	**-0.8**
MAW				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TIN	**Tinemaha**	**80.89**	**45**	⇑P	**P**	**07 35 32.4**	**0.0**
	baz=81						
O05C	**Quincy**	**80.91**	**41**	⇓P	**P**	**07 35 32.3**	**-0.1**
	baz=81						
HEC	**Hector,Ludlow**	**80.91**	**47**	⇓P	**P**	**07 35 32.3**	**-0.1**
	baz=81						
YBH	**Yreka Blue Hor**	**80.93**	**39**	*e*P	**P**	**07 35 32.8**	**+0.2**
YBH				pmax	pmax		
	comp=Z,13nm,0.8s						
YBH	**Yreka Blue Hor**	**80.93**	**39**	*e*P	**P**	**07 35 32.8**	**+0.2**
	comp=Z,13nm,0.8s,mb4.5						
YBH	**Yreka Blue Hor**	**80.93**	**39**	⇑P	**P**	**07 35 32.8**	**+0.3**
	baz=81						
WAKR	**Walker**	**80.96**	**43**	*e*P	**P**	**07 35 33.5**	**+0.8**
R06C	**Coleville**	**80.96**	**43**	⇓P	**P**	**07 35 33.0**	**+0.3**
	baz=81,SNR=6.2						
R07C	**Lee Vining**	**80.96**	**43**	⇑P	**P**	**07 35 33.1**	**+0.3**
	baz=81						
HABR	**Khabarovsk**	**80.99**	**331**	*e*P	**P**	**07 35 32.8**	**-0.1**
HABR				*e*S	S	07 45 10.2	+7.7
GLA	**Glamis**	**80.99**	**49**	*e*P	**P**	**07 35 33.8**	**+0.9**
GLA	**Glamis**	**80.99**	**49**	⇓P	**P**	**07 35 33.4**	**+0.5**
	baz=81,SNR=5.1						
MDJ	**Mudanjiang**	**81.01**	**325**	P	**P**	**07 35 32.8**	**-0.2**
MDJ				AMB	AMB		

comp=Z,7.0nm,1.1s,mb4.1
MDJ AMB AMB
comp=Z,71nm,5.4s
O04C Chester 81.02 41 ⇑P P 07 35 33.2 +0.1
baz=81
HATC Hat Creek Radi 81.10 40 ⇑P P 07 35 33.8 +0.3
baz=82
K02A Glendale 81.14 37 ⇑P P 07 35 33.5 -0.1
baz=82
BEKR Beckwourth 81.19 41 ⇓P P 07 35 34.0 +0.1
baz=82,SNR=6.9
WCN Washoe City 81.23 42 ⇓P P 07 35 34.5 +0.4
baz=82,SNR=5.6
GMRC Granite Mounta 81.34 48 ⇑P P 07 35 34.9 +0.1
baz=82
IRM Iron Mountain 81.36 48 ⇓P P 07 35 35.1 +0.3
baz=82
GRAC Grapevine Rang 81.42 45 ⇑P P 07 35 35.4 +0.3
baz=82
FURC Furnace Creek, 81.46 46 ⇑P P 07 35 35.0 -0.3
baz=82
J02A Umpqua 81.47 37 ⇓P P 07 35 35.5 +0.1
baz=82
M04C Macdoel 81.47 39 ⇓P P 07 35 35.6 +0.2
baz=82
TUQ Turquoise Mtn. 81.52 47 ⇓P P 07 35 35.6 -0.1
baz=82
SHOC Shoshone 81.54 46 ⇑P P 07 35 35.6 -0.1
baz=82
Y12C Blythe 81.58 49 ⇓P P 07 35 36.2 +0.2
baz=82
Q07A Schurz 81.61 43 ⇑P P 07 35 36.2 +0.1
baz=82
M05C Lookout 81.62 40 ⇓P P 07 35 36.2 0.0
baz=82
NVAR Mina Array Bea 81.64 43 P P 07 35 36.4 +0.1
comp=Z,5.7nm,0.8s,mb4.1,baz=231,slow=11,SNR=44
NVAR pP pP 07 37 19.9 +0.1
comp=Z,1.4nm,1.1s,baz=213,slow=6.2,SNR=4.2
L04A Klamath Falls 81.68 39 ⇑P P 07 35 36.5 +0.1
baz=82,SNR=5.3
O06A Flanigan 81.70 41 ⇑P P 07 35 36.7 +0.2
baz=82,SNR=5.9
PAHR Pah Rah Range 81.70 42 eP P 07 35 36.6 +0.1
comp=Z,9.6nm,1.0s,mb4.3
R08A Mina 81.72 44 ⇓P P 07 35 36.4 -0.2
baz=82
U10A Ash Meadows, A 81.79 46 ⇑P P 07 35 37.3 +0.3
baz=82
M06C Likely Place G 81.92 40 ⇓P P 07 35 38.1 +0.4
baz=82
S09A Goldfield 81.93 44 ⇑P P 07 35 37.7 0.0
baz=82
I03A Eugene 82.02 37 ⇓P P 07 35 38.1 -0.1
baz=82
N06A Buffalo Meadow 82.04 41 P P 07 35 38.3 0.0
baz=82,SNR=7.3
K04A Chilquin 82.05 38 ⇓P P 07 35 38.2 -0.1
baz=82
Y13A Salome 82.10 49 ⇑P P 07 35 39.4 +0.8
baz=82
Q08A Gabbs 82.12 43 ⇑P P 07 35 38.6 -0.1
baz=82,SNR=9.8
TPNV Topopah Spring 82.14 46 eP P 07 35 38.9 +0.1
TPNV pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
TPNV Topopah Spring 82.14 46 eP P 07 35 38.9 +0.1
comp=Z,7.2nm,0.9s,mb4.2
TPNV Topopah Spring 82.14 46 P P 07 35 38.9 +0.1
baz=82,SNR=9.2
PDMCI Parker Dam,Lak 82.14 49 ⇑P P 07 35 39.1 +0.3
baz=82
W12A Cal Nev Ari 82.17 48 ⇓P P 07 35 38.6 -0.4
baz=83
L05A Lakeview 82.22 39 ⇑P P 07 35 39.6 +0.4
baz=83
O07A Toulon 82.28 42 P P 07 35 39.6 +0.1
baz=83,SNR=14
R09A Tonopah 82.32 44 ⇑P P 07 35 39.6 -0.1
baz=83,SNR=10
V12A Nelson 82.41 47 ⇑P P 07 35 40.4 +0.2
baz=83
U11A Corn Creek 82.43 46 ⇑P P 07 35 40.4 +0.2
baz=83
Z14A Wintersburg 82.50 50 ⇓P P 07 35 41.1 +0.5
baz=83
P08A Dixie Valley 82.51 42 ⇓P P 07 35 40.9 +0.2
baz=83
X13A Yucca 82.51 49 ⇓P P 07 35 41.0 +0.3
baz=83,SNR=5.5
Q09A Carvers 82.59 44 ⇓P P 07 35 41.1 +0.1
baz=83
SHPR Sheep Range 82.62 46 eP P 07 35 41.5 +0.2
SNY Shenyang 82.66 320 ⇓P P 07 35 41.3 -0.1
SNY AMB AMB
comp=Z,10.0nm,0.5s,mb4.6
115A Sonoran Desert 82.67 51 ⇓P P 07 35 42.0 +0.5
baz=83
W13A Hualapai Mount 82.74 48 P P 07 35 42.4 +0.5
baz=83,SNR=5.8
J05A Fort Rock 82.75 38 ⇓P P 07 35 42.2 +0.3
baz=83,SNR=17
Y14A Wickenburg 82.75 50 ⇓P P 07 35 42.2 +0.3
baz=83
CN2 Changchun 82.77 323 eP P 07 35 43.0 +1.0
CN2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.2
M07A Soldier Meadow 82.82 41 ⇑P P 07 35 42.5 +0.3
baz=83,SNR=5.5
R10A Warm Springs 82.85 44 P P 07 35 42.9 +0.5
baz=83,SNR=20
116A Eloy 82.98 51 ⇑P P 07 35 43.7 +0.7
baz=83
U12A Valley of Fire 83.00 47 ⇓P P 07 35 43.6 +0.5
baz=83
P09A Austin 83.02 43 ⇑P P 07 35 43.1 -0.2
baz=83
K06A Valley Falls 83.02 39 ⇓P P 07 35 43.7 +0.4
baz=83,SNR=7.5
H04A Detroit Lake 83.08 37 P P 07 35 43.2 -0.3
baz=84,SNR=7.3
L07A Adell 83.10 40 P P 07 35 44.1 +0.4
baz=84,SNR=10
N08A GE Springer Mi 83.10 41 P P 07 35 43.7 0.0
baz=84,SNR=14
X14A Yava 83.11 49 ⇑P P 07 35 44.2 +0.5
baz=84
G04A Mulino 83.25 36 ⇓P P 07 35 44.3 -0.1
baz=84
I05A Bend 83.27 37 ⇓P P 07 35 44.4 -0.1
baz=84
M08A Happy Creek Ra 83.34 41 ⇑P P 07 35 45.0 +0.1
baz=84
O09A Fish Creek Ran 83.34 42 ⇓P P 07 35 44.8 -0.1
baz=84,SNR=6.5
J06A Christmas Vall 83.35 39 P P 07 35 44.7 -0.2
baz=84,SNR=9.1
W14A Seligman 83.36 48 ⇑P P 07 35 45.7 +0.8
baz=84
BMN Battle Mountai 83.47 42 eP P 07 35 45.5 0.0
BMN pmax pmax
comp=Z,11nm,0.9s,mb4.4
BMN Battle Mountai 83.47 42 eP P 07 35 45.5 0.0
comp=Z,10nm,0.9s,mb4.4
E03A Lebam 83.52 34 ⇓P P 07 35 45.7 0.0
baz=84
N09A Rock Creek Ran 83.52 42 ⇑P P 07 35 45.8 0.0
baz=84,SNR=5.7
X15A Humboldt 83.58 49 ⇓P P 07 35 46.5 +0.5
baz=84
H05A Madras 83.59 37 ⇑P P 07 35 46.0 -0.1
baz=84
F04A Amboy 83.74 35 ⇑P P 07 35 46.5 -0.3
baz=84
I06A Prineville 83.74 38 P P 07 35 47.4 +0.5
baz=84,SNR=19
WVOR Wild Horse Val 83.76 40 eP P 07 35 46.5 -0.5
WVOR pmax pmax
comp=Z,13nm,1.3s,mb4.3
WVOR Wild Horse Val 83.76 40 eP P 07 35 46.5 -0.5
comp=Z,13nm,1.3s,mb4.3
D03A Wishkah Elem. 83.78 34 ⇓P P 07 35 46.7 -0.4
baz=84
L08A Fields 83.80 40 P P 07 35 47.3 +0.2
baz=84,SNR=7.4
O10A Cortez Mining, 83.84 43 ⇑P P 07 35 47.4 0.0
baz=84
M09A Marrel Ranch, 83.90 41 ⇓P P 07 35 48.0 +0.3
baz=84,SNR=6.4
C03A Quillayute Air 83.91 33 ⇓P P 07 35 47.0 -0.7
baz=84
P11A Circle Ranch, 83.91 44 ⇓P P 07 35 47.5 -0.1
baz=84
W15A Williams 83.91 49 ⇓P P 07 35 48.3 +0.6
baz=84
E04A Onalaska 83.99 35 ⇑P P 07 35 48.3 +0.1
baz=84
SVW2 Sparrevohn 84.02 11 eP P 07 35 46.5 -1.8
K08A Mann Creek Ran 84.03 40 P P 07 35 48.5 +0.2
baz=84,SNR=6.7
N10A Dunphy 84.08 42 ⇑P P 07 35 48.7 +0.2
baz=84
L09A Wilkinson Ranc 84.11 41 ⇑P P 07 35 48.5 -0.2
baz=84
Q12A Willow Creek R 84.22 44 ⇓P P 07 35 49.2 -0.1
baz=85
F05A White Salmon 84.23 36 ⇓P P 07 35 49.1 -0.2
baz=85
I07A Izee 84.23 38 P P 07 35 49.6 +0.3
baz=85,SNR=9.5
O11A Cowboy Ranch, 84.29 43 P P 07 35 49.8 +0.2
baz=85,SNR=7.5
P12A McGill 84.41 44 ⇑P P 07 35 50.3 +0.1
baz=85
K09A Rome 84.46 40 ⇓P P 07 35 50.3 -0.1
baz=85
M10A I.L. Ranch, Tu 84.51 42 P P 07 35 51.0 +0.3
baz=85,SNR=6.2
SLKM Skilak Lake 84.53 13 eP P 07 35 48.8 -1.9
C04A Brinnon 84.58 34 ⇓P P 07 35 51.1 +0.1
baz=85
N11A Elko Archery C 84.62 43 ⇑P P 07 35 51.2 0.0
baz=85
I08A Drewsey 84.67 39 ⇓P P 07 35 51.4 0.0
baz=85,SNR=5.1
D05A Enumclaw 84.76 35 ⇓P P 07 35 52.3 +0.4
baz=85
M11A Holland Ranch, 84.93 42 ⇑P P 07 35 53.0 +0.3
baz=85
O12A Currie 84.95 43 ⇓P P 07 35 52.4 -0.4
baz=85
H08A Prairie City 84.97 38 ⇑P P 07 35 52.7 -0.3
baz=85
N12A Clover Valley, 85.08 43 ⇑P P 07 35 53.1 -0.4
baz=86
I09A Lost Marbles R 85.19 39 ⇑P P 07 35 53.4 -0.6
baz=86
C05A Tolt Reservoir 85.23 34 ⇑P P 07 35 53.7 -0.5
baz=86
A04A Legoe Bay, Lum 85.35 33 ⇑P P 07 35 54.7 -0.1
baz=86
B05A Bryant 85.38 34 ⇑P P 07 35 54.7 -0.3
baz=86
M12A Wells 85.47 42 ⇓P P 07 35 55.1 -0.3
baz=86
HAWA Hanford 85.60 36 eP P 07 35 55.6 -0.4
comp=Z,0.8nm,1.0s,mb3.3
N13A Wendover, West 85.61 43 ⇑P P 07 35 55.8 -0.3
baz=86
H09A Durkee 85.64 39 ⇓P P 07 35 55.7 -0.5
baz=86,SNR=7.1
TTA Tatalina 85.66 10 eP P 07 35 54.2 -2.1
TTA pmax pmax
comp=Z,11nm,1.0s,mb4.4
TTA Tatalina 85.66 10 eP P 07 35 54.1 -2.1
comp=Z,11nm,1.0s,mb4.5
F08A Pendleton 85.67 37 ⇓P P 07 35 55.8 -0.5
baz=86
MSU Marysvale 85.70 46 eP P 07 35 56.6 +0.1
BMO Blue Mountains 85.96 39 eP P 07 35 57.2 -0.5
comp=Z,4.9nm,0.9s,mb4.1
TMUT Trail Mountain 86.75 46 eP P 07 36 01.6 +0.1
HLID Hailey 86.95 41 eP P 07 36 02.6 +0.1
comp=Z,3.7nm,0.9s,mb4.1
SRU San Rafael 87.11 46 eP P 07 36 03.2 0.0
SRU pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
SRU San Rafael 87.11 46 eP P 07 36 03.2 0.0
comp=Z,3.6nm,0.4s,mb4.5
MCK McKinley 87.69 13 eP P 07 36 03.9 -2.0
MCK pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
MCK McKinley 87.69 13 eP P 07 36 03.9 -2.0
comp=Z,3.9nm,0.8s,mb4.2
ANMO Albuquerque 87.96 51 eP P 07 36 07.5 +0.4
ANMO pmax pmax
comp=Z,3.0nm,0.9s
ANMO Albuquerque 87.96 51 eP P 07 36 07.5 +0.4
comp=Z,3.1nm,0.9s,mb4.0
GDL2 Guadalupe Moun 88.27 55 eP P 07 36 09.0 +0.3
XAN Xi'an 88.45 307 P P 07 36 10.7 +1.3
XAN AMB AMB
comp=Z,7.0nm,1.3s,mb4.2
MCMT McKenzie Canyo 88.58 40 eP P 07 36 09.7 -0.3
RRI2 Red Ridge 88.75 42 eP P 07 36 11.0 +0.2
comp=Z,8.7nm,0.8s,mb4.6
COLA College 88.93 12 c iP P 07 36 09.6 -2.1
COLA College 88.93 12 eP P 07 36 09.3 -2.3
comp=Z,12nm,0.8s,mb4.8
DLMT Dillon 89.02 40 eP P 07 36 12.0 -0.1
comp=Z,5.9nm,0.8s,mb4.5
REDW Red Top Meadow 89.05 42 eP P 07 36 12.2 0.0
comp=Z,11nm,1.1s,mb4.6
TPAW Teton Pass 89.05 42 eP P 07 36 12.2 0.0
comp=Z,7.6nm,1.1s,mb4.4
SNOW Snow King Moun 89.16 42 eP P 07 36 12.8 0.0
comp=Z,5.0nm,0.6s,mb4.5
HIA Hailar 89.19 325 ⇑eP P 07 36 13.0 +0.1
IMW Indian Meadow 89.27 42 P P 07 36 13.9 +0.7
comp=Z,6.5nm,0.7s,mb4.6
MOOW Moose Ponds 89.31 42 eP P 07 36 13.2 -0.3
comp=Z,2.8nm,0.9s,mb4.1
LOHW Long Hollow 89.33 42 eP P 07 36 13.2 -0.3
comp=Z,4.6nm,0.8s,mb4.4
QLMT Earthquake Lak 89.44 41 eP P 07 36 13.7 -0.3
FLWY Flagg Ranch 89.51 42 eP P 07 36 14.4 0.0
comp=Z,8.7nm,0.7s,mb4.7
KMI Kunming 89.54 297 P P 07 36 11.7 -2.8
KMI AMB AMB
comp=Z,3.0nm,0.9s,mb4.1
SMCO Snowmass 89.56 47 eP P 07 36 14.9 +0.3
comp=Z,2.2nm,0.7s,mb4.1
BW06 Boulder Array 89.57 43 eP P 07 36 13.9 -0.7
comp=Z,4.5nm,0.8s,mb4.3
PDAR Pinedale Array 89.57 43 P P 07 36 13.8 -0.9
comp=Z,4.5nm,0.8s,mb4.4,baz=232,slow=2.1,SNR=46
HHC Hu-ho-hao-te 89.74 314 eP P 07 36 11.0 -4.4
HHC SKS 07 45 43.2
HHC S S 07 46 07.5 -19
HHC AMB AMB
comp=Z,7.0nm,1.1s,mb4.4
HHC AMB AMB
comp=Z,72nm,8.6s
DAWY Dawson 90.18 16 eP P 07 36 15.2 -2.2
CD2 Chengdu 91.05 303 eP P 07 36 17.5 -4.0
YAK Yakutsk 92.71 338 ⇑eP P 07 36 27.2 -1.9
YAK pmax pmax
comp=Z,15nm,0.7s,mb5.1
LZH Lanzhou 93.08 307 eP P 07 36 31.1 +0.3
LZH PP PP 07 40 27.0 +5.3
LZH AMB AMB
comp=Z,19nm,1.1s,mb5.0
RSSD Black Hills 93.76 44 eP P 07 36 33.5 -0.4
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
RSSD Black Hills 93.76 44 eP P 07 36 33.5 -0.5
comp=Z,3.4nm,0.9s,mb4.4
INK Inuvik 94.99 15 eP P 07 36 37.6 -1.9
MKAR Makanchi Array 111.58 313 PKiKP PKiKP 07 41 46.2 -2.1
comp=Z,0.6nm,0.8s,baz=64,slow=5.5,SNR=4.3
MKAR Makanchi Array 111.58 313 i PKIKP PKiKP 07 41 46.9 -1.5
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 114.42 317 ⇑i PKIKP PKiKP 07 41 55.2 +1.4
CHKZ Chkalovo 119.35 320 ePKIKP PKPdf 07 42 00.0 -3.3
BVAR Borovoye Array 119.53 320 PKIKP PKPdf 07 42 02.1 -1.6
comp=Z,1.0nm,0.3s,baz=27,slow=1.7,SNR=8.2
BVAR Borovoye Array 119.53 320 PKIKP PKPdf 07 42 02.1 -1.5
BVAR pmax pmax
comp=Z,1.0nm,0.3s
ARU Arti 125.70 325 i PKIKP PKPdf 07 42 13.3 -2.2
ARU e 07 43 54.2
ARU e 07 48 50.8
AKTO Aktyubinsk 127.50 318 PKP PKPdf 07 42 17.9 -1.0
comp=Z,1.1nm,0.8s,baz=290,slow=0.4,SNR=8.1
AKTO Aktyubinsk 127.50 318 PKIKP PKPdf 07 42 17.9 -1.0
AKTO pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 129.59 349 PKP PKPdf 07 42 20.4 -2.5
comp=Z,2.7nm,0.7s,baz=67,slow=1.7,SNR=19
ARCES ARCESS Array B 129.59 349 PKIKP PKPdf 07 42 20.4 -2.5
ARCES pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 136.41 343 PKP PKPdf 07 42 32.9 -2.8
comp=Z,2.2nm,0.8s,baz=108,slow=6.2,SNR=5.8
FINES PP PP 07 45 23.1 0.0
comp=Z,1.7nm,0.9s,baz=349,slow=3.9,SNR=4.7
FINES FINESS Array B 136.41 343 PKIKP PKPdf 07 42 32.9 -2.8
FINES 07 45 23.1
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES pmax pmax
comp=Z,2.0nm,0.9s
OBN Obninsk 137.31 331 i PKIKP PKPdf 07 42 38.0 +0.7
KIV Kislovodsk 139.34 314 i PKIKP PKPdf 07 42 41.6 +0.5
NOA NORSAR Array B 139.66 353 PKP PKPdf 07 42 40.0 -1.6
comp=Z,0.6nm,0.6s,baz=19,slow=4.1,SNR=4.0
NOA NORSAR Array B 139.66 353 PKIKP PKPdf 07 42 40.1 -1.5
NOA pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 143.56 331 PKP PKPdf 07 42 45.2 -3.4
comp=Z,6.4nm,0.6s,baz=42,slow=4.3,SNR=56
AKASG Malin Array Be 143.56 331 PKHKP 07 42 45.2
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKBB Malin Array Si 143.56 331 ePKHKP 07 42 45.2
MALT Malatya 144.24 307 ⇑iP PKPdf 07 42 49.3 -0.5
MALT Malatya 144.24 307 ePKPdf PKPdf 07 42 47.2 -2.6
SIM Simferopol' 144.44 319 i PKIKP PKPdf 07 42 49.6 -0.5
SIM pmax pmax
comp=Z,17nm,0.9s
LVV L'vov 146.48 334 ePKHKP PKPdf 07 42 51.1 -2.5
BSEG Bad Segeberg 146.69 351 ePKPbc PKPbc 07 42 55.4 -1.1
DCN Croghan 147.16 10 eP PKPdf 07 42 55.4 +0.7
BRTR Keskin Array B 147.20 311 PKPbc PKPbc 07 42 57.1 -0.7
comp=Z,3.2nm,0.7s,baz=140,slow=4.2,SNR=14
BRTR Keskin Array B 147.20 311 PKIKP PKPbc 07 42 57.2 -0.6
BRTR pmax pmax
comp=Z,3.0nm,0.7s
DLF Lyons Farm 147.33 9 eP PKPdf 07 42 54.0 -1.0
RUE Ruedersdorf 147.45 346 ePKPbc PKPbc 07 42 57.5 -1.0
BURAR Bucovina Array 147.60 330 ⇑iP PKPbc 07 42 59.0 +0.1
UPC Upice 148.70 342 ePKPbc PKPbc 07 43 01.0 -0.6
UPC ePKPab PKPab 07 43 06.9 -0.2
CLL Collm 148.72 346 ePKPbc PKPbc 07 43 00.8 -0.9
CLL Collm 148.72 346 ⇓i PKPbc PKPbc 07 43 00.7 -1.0
comp=Z,17nm,0.9s
CLL i PKiKP PKiKP 07 43 02.6 -0.2
comp=Z,13nm,0.8s
CLL ePKPab PKPab 07 43 06.0 -1.2
comp=Z,9.0nm,0.9s
DPC Dobruska-Polom 148.75 342 ePKPbc PKPbc 07 43 01.3 -0.5
DPC ePKPab PKPab 07 43 07.1 -0.2
MORC Moravsky Berou 148.89 340 ⇑iP PKPbc 07 43 01.9 -0.2
MORC Moravsky Berou 148.89 340 ePKPbc PKPbc 07 43 01.4 -0.7
BRG Berggiesshubel 148.91 345 ePKP PKPbc 07 43 01.6 -0.6
comp=Z,5.4nm,0.8s
BRG Berggiesshubel 148.91 345 ePKHKP PKPbc 07 43 01.5 -0.6
BRG pmax pmax
comp=Z,28nm,0.8s
FBE Freiberg 149.00 346 ePKPbc PKPbc 07 43 01.7 -0.7
FBE ePKPab PKPab 07 43 07.8 -0.6
EIL Elat 149.03 293 ePKPab PKPbc 07 43 03.0 +0.6
PVCC Panska Ves 149.07 344 ePKPbc PKPbc 07 43 02.1 -0.4
VOIR 149.23 327 ⇑iP PKPbc 07 43 04.6 +1.7
DRGR 149.36 331 ⇑iP PKPbc 07 43 02.8 -0.4
PRU Pruhonice 149.57 344 ePKPbc PKPbc 07 43 03.0 -0.7
VRAC Vranov 149.60 341 ⇑iP PKPbc 07 43 02.9 -0.9
PSZ Piszkesteto 149.64 336 ⇑iP PKPbc 07 43 03.5 -0.4
TANN Tannenbergstha 149.67 347 ePKPbc PKPbc 07 43 03.3 -0.7
WERD Werda 149.68 347 ePKPbc PKPbc 07 43 03.3 -0.7
WERN Wernitzgruen 149.81 347 ePKPbc PKPbc 07 43 03.5 -0.8
WERN ePKPab PKPab 07 43 11.3 -0.4
NKC Novy Kostel 149.85 346 ePKPbc PKPbc 07 43 03.8 -0.6
NKC ePKPab PKPab 07 43 10.8 -1.1
MANZ Manzenberg 150.15 347 ePKPbc PKPbc 07 43 04.7 -0.4
KHC Kasperske Hory 150.61 344 ePKPbc PKPbc 07 43 05.6 -0.6
KHC ePKPab PKPab 07 43 13.3 -1.7
GRF Grafenberg Arr 150.62 348 ePKPbc PKPbc 07 43 05.6 -0.6
BZS Buzias 150.75 331 ⇑iP PKPdf 07 43 06.0 +5.6
GEC2 GERESS Array S 150.84 344 ePKPbc PKPbc 07 43 05.9 -0.8
GERES GERESS Array B 150.84 344 PKPbc PKPbc 07 43 06.1 -0.6
comp=Z,4.6nm,0.8s,baz=42,slow=2.2,SNR=32
GERES GERESS Array B 150.84 344 PKIKP PKPbc 07 43 06.1 -0.6
GERES pmax pmax
comp=Z,5.0nm,0.8s
GIVF Givet 151.07 356 ePKP1 PKPbc 07 43 06.7 -0.5
comp=Z,17nm,0.8s
BAIF Baives 151.15 357 ePKP1 PKPbc 07 43 07.0 -0.4
comp=Z,23nm,1.1s
PKSM Moragy 151.53 335 ⇑iP PKPbc 07 43 05.9 -2.4
FUR Furstenfeldbru 152.06 346 ePKPbc PKPbc 07 43 08.8 -0.6
VTS Vitosha 152.16 325 ⇑iP PKPbc 07 43 06.6 -3.1
CDF Champ du Feu 152.51 352 ePKP1 PKPbc 07 43 09.8 -0.6
comp=Z,3.9nm,0.6s
MEZF Maizieres J'vi 152.65 355 ePKP1 PKPbc 07 43 10.4 -0.3
HAU Haudompre 153.02 353 ePKP1 PKPbc 07 43 10.8 -0.8
LOR Lormes 153.95 357 ePKP1 PKPbc 07 43 12.9 -0.6
SSF Saint Saulge 154.18 357 ePKP1 PKPbc 07 43 13.4 -0.6
comp=Z,9.3nm,1.1s
ESDC Sonseca Array 160.93 14 PKPab PKPab 07 43 58.1 -1.4
comp=Z,0.6nm,0.7s,baz=346,slow=4.8,SNR=4.7
TORD Tondi Kr. Bea 171.98 179 PKP PKPdf 07 43 21.2 -0.8
comp=Z,1.3nm,0.9s,baz=133,slow=0.2,SNR=6.5
TORD PKPab PKPab 07 44 48.7 +0.3
comp=Z,1.3nm,1.2s,baz=173,slow=4.7,SNR=3.7

NEIC ***12*** *08:04:22.8, 3740S×17658E, h239km, MG4.1(WEL), After WEL.*

WEL 12 08:04:22.5±0.2, 3739S×17661E, h240km±1km, ML4.0/17, 4C, Error ellipse: s-maj=3.3km s-min=2.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.96**	**156**	P		Pn	08 04 56.3	+0.1
URZ	**Urewera**	**0.96**	**156**	⇑PN		Pn	08 04 56.3	0.0
URZ				SN		S	08 05 22.3	-0.4
MWZ	**Matawai**	**1.20**	**143**	P		Pn	08 04 57.9	+0.2
MWZ				S		S	08 05 25.1	-0.2
MWZ	**Matawai**	**1.20**	**143**	⇑PN		Pn	08 04 57.9	+0.2
MWZ				SN		S	08 05 25.1	-0.2
MXZ	**Matakaoa Point**	**1.36**	**98**	eP		Pn	08 04 59.1	+0.3
MXZ	**Matakaoa Point**	**1.36**	**98**	PN		Pn	08 04 58.9	0.0
MXZ				SN		S	08 05 27.2	-0.2
PUZ	**Puketiti**	**1.48**	**118**	eP		Pn	08 04 59.8	+0.1
PUZ	**Puketiti**	**1.48**	**118**	ePN		Pn	08 04 59.8	+0.1
BKZ	**Black Stump Fm**	**1.78**	**183**	P		Pn	08 05 02.3	+0.1
BKZ	**Black Stump Fm**	**1.78**	**183**	⇑PN		Pn	08 05 02.2	+0.1
BKZ				SN		S	08 05 33.3	-0.1
KNZ	**Kokohu**	**1.84**	**153**	P		Pn	08 05 02.7	0.0
KNZ	**Kokohu**	**1.84**	**153**	⇑PN		Pn	08 05 02.7	0.0
KNZ				SN		S	08 05 33.7	-0.6
TWVZ	**Taurewa**	**1.92**	**208**	P		Pn	08 05 03.9	+0.5
TWVZ	**Taurewa**	**1.92**	**208**	PN		Pn	08 05 03.9	+0.5
OTVZ	**Oturere**	**1.92**	**202**	ePN		Pn	08 05 04.2	+0.7
FWVZ	**Far West T-bar**	**2.04**	**204**	eP		Pn	08 05 05.1	+0.6
FWVZ	**Far West T-bar**	**2.04**	**204**	ePN		Pn	08 05 05.1	+0.5
MOVZ	**Moawhango**	**2.13**	**198**	P		Pn	08 05 05.1	-0.2
MOVZ	**Moawhango**	**2.13**	**198**	PN		Pn	08 05 05.0	-0.3
PXZ	**Pawanui**	**2.65**	**176**	PN		Pn	08 05 09.8	-0.8
PXZ				SN		S	08 05 48.1	-0.4
WAZ	**Wanganui**	**2.69**	**208**	eP		Pn	08 05 10.8	-0.2
WAZ	**Wanganui**	**2.69**	**208**	ePN		Pn	08 05 10.6	-0.4
TSZ	**Takapari Road**	**2.72**	**191**	P		Pn	08 05 10.4	-0.9
TSZ	**Takapari Road**	**2.72**	**191**	PN		Pn	08 05 10.4	-1.0
TSZ				eSN		S	08 05 49.1	-0.7
MRZ	**Mangatainoka R**	**3.37**	**193**	P		Pn	08 05 16.6	-1.9
MRZ	**Mangatainoka R**	**3.37**	**193**	PN		Pn	08 05 16.6	-1.9
MRZ				eSN		S	08 06 00.1	-2.7
KIW	**Kapiti Island**	**3.71**	**200**	P		Pn	08 05 20.6	-1.9
KIW	**Kapiti Island**	**3.71**	**200**	PN		Pn	08 05 20.5	-1.9
MTW	**Mount Morrison**	**3.86**	**192**	P		Pn	08 05 21.9	-2.3
MTW	**Mount Morrison**	**3.86**	**192**	ePN		Pn	08 05 21.7	-2.5
CAW	**Cannon Point**	**3.91**	**197**	P		Pn	08 05 22.7	-2.0
CAW	**Cannon Point**	**3.91**	**197**	PN		Pn	08 05 22.6	-2.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DUWZ	D'Urville Isla	4.00	211	PN	Pn	08 05 23.6	-2.3
TRWZ	Traveller	4.07	190	PN	Pn	08 05 24.5	-2.2
MRW	Makara Radio	4.11	200	P	Pn	08 05 25.1	-2.1
MRW	Makara Radio	4.11	200	PN	Pn	08 05 24.8	-2.4
MSWZ	Moikau Station	4.16	194	P	Pn	08 05 25.5	-2.2
MSWZ	Moikau Station	4.16	194	PN	Pn	08 05 24.9	-2.9
SNZO	South Karori	4.19	200	P	Pn	08 05 25.6	-2.5
SNZO	South Karori	4.19	200	PN	Pn	08 05 25.5	-2.6
SNZO				eSN	S	08 06 16.0	-4.1
TCW	Tory Channel	4.23	205	P	Pn	08 05 26.2	-2.4
TCW	Tory Channel	4.23	205	PN	Pn	08 05 26.2	-2.4
TCW				SN	S	08 06 17.7	-3.3
TUWZ	Tuamarina	4.54	206	PN	Pn	08 05 29.7	-2.6
NNZ	Nelson	4.57	212	eP	Pn	08 05 29.9	-2.8
QRZ	Quartz Range	4.68	221	eP	Pn	08 05 30.6	-3.4
BSWZ	Blackbirch Sta	4.81	205	P	Pn	08 05 33.3	-2.3
THZ	Tophouse	5.22	212	eP	Pn	08 05 37.3	-3.4
KHZ	Kahutara	5.55	204	P	Pn	08 05 42.2	-2.6
DSZ	Denniston Nort	5.72	219	eP	Pn	08 05 42.7	-4.2
LTZ	Lake Taylor	6.33	210	eP	Pn	08 05 51.1	-3.5
MQZ	McQueen's Vall	7.00	204	eP	Pn	08 05 58.9	-4.1
ODZ	Otahua Downs	8.87	209	eP	Pn	08 06 23.6	-3.2

MAN 12 08:08:59.9, 1353N×11993E, h2^{km}, mb2.4, ML4.0, MS2.8, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.37	57	eP	Pg	08 09 07.5	+0.5
LUBP				eS	Sg	08 09 11.2	-0.6
PGP	Puerto Galera	1.00	92⇑	eP	Pg	08 09 17.9	-1.2
TGY	Tagaytay City	1.13	60⇑	eP	Pg	08 09 23.3	+1.7
TGY				i S	Sg	08 09 36.5	+0.2
BUSP	Coron	1.54	170	eP	Pn	08 09 28.1	-0.3
BUSP				eS	Sn	08 09 46.0	-3.1
BOAC	Boac	1.87	92	eP	Pn	08 09 25.1	-7.7
OTRP	Odiongan	2.35	119	eP	Pn	08 09 40.2	+0.7
BALP	Baler	2.71	36	eP	Pn	08 09 44.9	+0.4

IDC 12 08:21:13.3±2.0, 1897S×16973E, h0^{km}, mb4.2/5, mb1 4.3/6, mb1mx4.1/10, mbtmp4.2/6, ML3.2/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/21, Error ellipse: s-maj=59.2km s-min=27.2km az=111.0
ISCJB 12 08:21:17.2±6.7, 190S±02×1695E±03, h29^{km}±46^{km}, mb4.2/6, MS3.2/3, Error ellipse: s-maj=52.4km s-min=17.4km az=59.4
ISC 12 08:21:18.6±7.0, 191S±02×1696E±03, h30^{km}±48^{km}, n12, σ0^{s}50/10, mb4.2/6, MS3.2/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.23	224	eP	Pn	08 22 20.7	-0.4
DZM	Mont Dzumac	4.23	224	Pn	Pn	08 22 21.0	-0.1
	1.2nm,0.3s,baz=72,slow=20,SNR=32						
DZM				Sn	Sn	08 23 09.1	-0.4
	3.6nm,0.3s,baz=127,slow=23,SNR=2.8						
DZM				LR	LR	08 23 48.0	
	comp=Z,388nm,18.1s,baz=198,slow=36						
AFI	Afiamalu	18.55	77	LR	LR	08 30 16.6	
	comp=Z,48nm,19.4s,baz=138,slow=30						
CTA	Charters Tower	22.05	263	LR	LR	08 33 03.9	
	comp=Z,67nm,20.8s,MS3.0,baz=222,slow=32						
STKA	Stephens Creek	28.25	238	P	P	08 27 10.2	+1.1
	1.1nm,0.6s,mb3.7,baz=83,slow=8.1,SNR=2.5						
STKA				LR	LR	08 37 47.1	
	comp=Z,66nm,20.8s,MS3.2,baz=205,slow=35						
ASAR	Alice Springs	33.53	256	P	P	08 27 55.1	-0.4
	4.3nm,0.7s,mb4.5,baz=84,slow=8.8,SNR=74						
ASAR				LR	LR	08 41 05.0	
	comp=Z,92nm,21.6s,MS3.5,baz=4.3,slow=35						
ASPA	Alice Springs	33.53	256	eP	P	08 27 55.8	+0.2
FITZ	Fitzroy Crossi	41.62	264	eP	P	08 29 04.5	+0.5
	8.7nm,0.8s,mb4.4						
MJAR	Matsushiro Arr	62.76	332	P	P	08 31 40.4	-0.6
	2.7nm,0.9s,mb4.4,baz=163,slow=7.0,SNR=7.4						
MAW	Mawson	78.75	202	P	P	08 33 18.1	-0.1
	1.5nm,0.8s,mb4.0,baz=88,slow=6.9,SNR=4.8						
SONM	Songino Array	87.29	323	P	P	08 34 02.2	-0.2
	1.9nm,1.0s,mb4.3,baz=134,slow=6.4,SNR=6.8						
GERES	GERESS Array B	144.50	332	PKP	PKPdf	08 40 49.8	-2.2
	0.8nm,0.8s,baz=113,slow=3.0,SNR=5.8						

MAN 12 08:24:32.2, 1763N×12088E, h1^{km}, mb2.0, ML3.7, MS0.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.16	278	eP	Pg	08 24 35.8	+0.4
APYP	Conner	0.42	56	eP	Pg	08 24 40.5	+0.3
APYP				eS	Sg	08 24 53.2	+7.6
SGCP	Mt. Cagua	1.27	61	eP	Pg	08 25 02.3	+5.8
BALP	Baler	1.99	160	eP	Pn	08 25 07.2	+0.2

ISCJB 12 08:42:54.0±1.9, 53.1N±03×163.1W±02, h33^{km}, mb3.8/6, Error ellipse: s-maj=37.9km s-min=9.0km az=145.8
NEIC 12 08:43:00.6±3.8, 5391N×16362W, h28^{km}±33^{km}, ML3.3(AEIC), Error ellipse: s-maj=56.5km s-min=8.9km az=161.0
IDC 12 08:43:01.2±4.8, 5472N×16398W, h0^{km}, mb3.8/6, mb1 3.8/8, mb1mx3.7/23, mbtmp3.7/8, ML3.4/2, Error ellipse: s-maj=118.4km s-min=22.0km az=169.0
ISC 12 08:43:01.9±1.9, 541N±03×1636W±02, h35^{km}, n15, σ1^{s}14/17, mb3.8/6, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	Akutan	1.25	273	P	Pn	08 43 24.0	+1.1
AKLV	Akutan Long Va	1.36	274	P	Pn	08 43 25.5	+1.1
SDPT	Sand Point	2.23	54	P	Pn	08 43 37.5	+1.1
OKCD	Okmok Cone D	2.73	258	P	Pn	08 43 41.9	-1.4
KDAK	Kodiak Island	7.23	55	Pn	Pn	08 44 45.2	+0.2
	0.6nm,0.3s,baz=211,slow=5.9,SNR=6.2						
KDAK				Sn	Sn	08 46 03.8	-2.2
	0.2nm,0.3s,baz=114,slow=10,SNR=2.3						
KDAK	Kodiak Island	7.23	55	Pn	Pn	08 44 45.2	+0.2
KDAK				Sn	Sn	08 46 03.8	-2.2
AMKA	Amchitka	10.69	262	ePn	Pn	08 45 30.2	-2.3
DAWY	Dawson	15.87	41	ePn	Pn	08 46 42.9	+0.4
DAWY				eP		08 46 48.7	
INK	Inuvik	20.02	33	P	P	08 47 31.2	-0.4
	0.1nm,0.3s,baz=248,slow=5.7,SNR=5.6						
YKA	Yellowknife Ar	26.50	52	P	P	08 48 38.3	+2.4
	0.8nm,0.6s,mb3.4,baz=274,slow=9.7,SNR=4.4						
SONM	Songino Array	53.32	303	P	P	08 52 17.9	+0.4
	1.5nm,1.1s,mb3.8,baz=33,slow=8.8,SNR=4.9						
ARCES	ARCESS Array B	56.51	356	P	P	08 52 39.8	-0.7
	1.6nm,0.8s,mb4.1,baz=9.7,slow=8.6,SNR=5.5						
FINES	FINESS Array B	64.56	355	P	P	08 53 35.3	-0.1
	0.8nm,0.6s,mb3.9,baz=31,slow=7.8,SNR=5.2						
MKAR	Makanchi Array	65.04	316	P	P	08 53 38.7	+0.2
	0.2nm,0.3s,mb3.6,baz=27,slow=5.2,SNR=3.1						
AKASG	Malin Array Be	75.03	352	P	P	08 54 40.0	+0.1
	1.0nm,0.5s,mb4.0,baz=13,slow=5.5,SNR=5.9						

ISCJB 12 09:00:12.4±0.6, 4041N±003×2395E±005, h11^{km}±4^{km}, Error ellipse: s-maj=6.1km s-min=4.6km az=125.0
ATH 12 09:00:12.9, 4041N×2393E, h26^{km}±1^{km}, MD3.1/4
NEIC 12 09:00:13.4, 4041N×2395E, h5^{km}, MD3.1(ATH), After THE.
CSEM 12 09:00:13.0±0.2, 4042N×2399E, h8^{km}, ML2.3, Error ellipse: s-maj=3.5km s-min=2.8km az=66.0
THE 12 09:00:13.4, 4041N×2395E, h5^{km}, ML2.3
ISC 12 09:00:12.8±0.6, 4040N±003×2398E±005, h12^{km}±5^{km}, n14, σ0^{s}55/24, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.07	177	ePg	Pg	09 00 15.5	+0.2
OUR				eSg	Sg	09 00 16.6	-0.6
OUR	Ouranopolis	0.07	177	ePg	Pg	09 00 15.5	+0.2
OUR				eSg	Sg	09 00 16.5	-0.7
PLG	Polygyros	0.41	266	ePb	Pg	09 00 21.0	+0.1
PLG				eSb	Sg	09 00 26.4	+0.1
PAIG	Paliouri	0.53	206	ePg	Pg	09 00 22.9	-0.2
PAIG				eSg	Sg	09 00 30.1	0.0
SOH	Sokhos	0.63	312	ePg	Pg	09 00 25.4	+0.3
SOH				eSg	Sg	09 00 34.4	+0.9
HORT	Hortiatis	0.70	286	ePg	Pg	09 00 26.2	-0.1
HORT				eSg	Sg	09 00 35.8	+0.4
THE	Thessaloniki	0.81	287	ePg	Pg	09 00 28.1	-0.3
THE				eSg	Sg	09 00 39.0	+0.1
NVR	Nevrokopi	0.95	355	ePN	Pn	09 00 31.3	-0.6
NVR				eSN	Sn	09 00 44.3	-1.0
LIA	Limnos Island	1.05	118	ePN	Pn	09 00 33.8	+0.5
KNT	Kendrikon	1.12	313	ePg	Pg	09 00 34.3	0.0
XOR	Xorichti	1.20	211	ePg	Pg	09 00 36.2	+0.3
MMB	Musomiste	1.20	351	ePg	Pg	09 00 35.3	-0.5
MMB				eSg	Sg	09 00 52.1	+0.7
RDO	Rodhopi	1.40	57	ePN	Pn	09 00 39.1	+1.1
VAY	Valandovo	1.41	311	ePg	Pg	09 00 38.6	-1.2
VAY				eSg	Sg	09 00 58.0	-0.1

ISCJB 12 09:07:16.1±3.0, 60S±0.1×1467E±0.1, h55^{km}±25^{km}, mb4.0/6, MS3.4/3, Error ellipse: s-maj=24.6km s-min=17.3km az=55.9
IDC 12 09:07:17.0±4.0, 598S×14675E, h49^{km}±34^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.8/15, mbtmp4.1/8, ML3.9/2, MS3.4/5, Ms1 3.4/5, ms1mx3.1/19, Error ellipse: s-maj=33.0km s-min=25.2km az=47.0
NEIC 12 09:07:17.4±2.4, 594S×14670E, h56^{km}±19^{km}, mb4.3/4, Error ellipse: s-maj=20.1km s-min=13.6km az=190.0
ISC 12 09:07:17.9±2.9, 60S±01×1467E±01, h54^{km}±24^{km}, n19, σ0^{s}66/16, mb4.0/6, MS3.4/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.42	172	P	Pn	09 08 08.2	-0.4
	32nm,0.3s,baz=20,slow=5.1,SNR=31						
PMG				S	Sn	09 08 47.8	-0.1
	49nm,0.3s,baz=356,slow=22,SNR=4.0						
HNR	Honiara	13.56	105	LR	LR	09 14 36.4	
	comp=Z,97nm,20.3s,baz=1.0,slow=32						
CTA	Charters Tower	14.01	182	P	Pn	09 10 35.3	+1.7
	0.9nm,0.3s,baz=3.3,slow=14,SNR=11						
CTA				LR	LR	09 14 35.9	
	comp=Z,82nm,20.9s,baz=276,slow=31						
KAKA	Kakadu	15.56	244	eP	Pn	09 10 54.2	+0.4
	22nm,0.6s						
WRAB	Tennant Creek	18.33	220	eP	Pn	09 11 27.0	-1.1
	15nm,0.9s						
WB2	Warramunga Arr	18.33	220	eP	Pn	09 11 27.1	-1.1
AS31	Alice Springs	21.45	214	eP	P	09 12 01.8	+0.2
ASAR	Alice Springs	21.45	214	P	P	09 12 01.8	+0.1
	1.6nm,0.8s,mb3.4,baz=54,slow=9.0,SNR=19						
ASAR				LR	LR	09 21 25.2	
	comp=Z,196nm,20.4s,MS3.5,baz=290,slow=40						
ASPA	Alice Springs	21.45	214	eP	P	09 12 01.9	+0.3
FITZ	Fitzroy Crossi	23.81	238	eP	P	09 12 26.5	+0.7
	9.6nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	23.81	238	P	P	09 12 26.1	+0.4
	3.6nm,0.7s,mb3.9,baz=85,slow=12,SNR=12						
FITZ				LR	LR	09 22 58.9	
	comp=Z,73nm,20.1s,MS3.1,baz=61,slow=40						
DZM	Mont Dzumac	24.89	132	P	P	09 12 35.2	-0.4
	41nm,1.4s,mb4.8,baz=80,slow=16,SNR=6.0						
STKA	Stephens Creek	26.18	190	eP	P	09 12 47.4	+0.1
	3.0nm,0.9s,mb3.8						
STKA	Stephens Creek	26.18	190	P	P	09 12 47.4	+0.1
	1.1nm,0.5s,mb3.7,baz=192,slow=1.4,SNR=6.2						
STKA				LR	LR	09 23 52.2	
	comp=Z,114nm,18.4s,MS3.4,baz=24,slow=38						
SONM	Songino Array	64.26	331	P	P	09 17 47.4	0.0
	1.3nm,1.1s,mb3.9,baz=151,slow=3.4,SNR=4.2						
VNDA	Vanda	71.93	177	P	P	09 18 35.4	-0.1
	1.6nm,0.9s,mb4.0,baz=334,slow=6.5,SNR=7.3						
TORD	Torodi Ar. Bea	144.80	284	PKP	PKPdf	09 26 47.6	-1.1
	1.0nm,0.9s,baz=65,slow=3.4,SNR=5.2						
SAML	Samuel	146.72	116	ePKPbc	PKPbc	09 26 53.9	+0.2
BDFB	Brasilia	154.03	146	PKPbc	PKPbc	09 27 12.8	+1.3
	1.4nm,0.4s,baz=191,slow=5.2,SNR=2.8						

SZGRF 12 09:30:00.3, 1392N×12194E, h33^{km}, mb4.9, Mindoro, Philippine Islands
MAN 12 09:30:09.0, 1388N×12029E, h56^{km}, mb3.7, ML4.8, MS3.6
MAN F INTENSITY II - QUEZON CITY.
NEIC 12 09:30:08.9±0.2, 1386N×12051E, mb5.0/28, Error ellipse: s-maj=7.9km s-min=5.1km az=75.0
NEIC Felt [II PIVS] at Quezon City, Luzon.
ISCJB 12 09:30:08.7±0.3, 1384N±002×12037E±004, h87^{km}±3^{km}, mb4.8/63, Error ellipse: s-maj=6.7km s-min=3.9km az=162.2
BJI 12 09:30:08.3, 1384N×12064E, h93^{km}, mB4.8, mb4.7
MOS 12 09:30:08.9±0.9, 1396N×12073E, h95^{km}, mb5.0/25, Error ellipse: s-maj=14.9km s-min=6.4km az=116.3
IDC 12 09:30:09.0±0.6, 1381N×12040E, h82^{km}±5^{km}, mb4.2/14, mb1 4.3/14, mb1mx4.2/19, mbtmp4.5/14, MS3.4/15, Ms1 3.4/15, ms1mx3.3/41, Error ellipse: s-maj=15.4km s-min=11.2km az=79.0
ISC 12 09:30:10.1±0.3, 1385N±002×12043E±004, h84^{km}±3^{km}, h81^{km}±2.0^{km}:pP-P, n190, σ1^{s}21/194, mb4.8/63, 31C-9D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.21	236	eP	Pn	09 30 19.1	-3.3
LUBP				eS	Sn	09 30 26.5	-5.0
TGY	Tagaytay City	0.55	63	eP	Pn	09 30 25.3	+0.6
TGY				i S	Sn	09 30 38.5	+3.1
TGY	Tagaytay City	0.55	63	P	Pn	09 30 24.3	-0.3
	9µm,0.3s,baz=273,slow=2.5,SNR=207						
TGY				S	Sn	09 30 37.1	+1.6
	15µm,0.3s,baz=65,slow=20,SNR=29						
PGP	Puerto Galera	0.62	124⇑	eP	Pn	09 30 24.8	-0.4
PGP				i S	Sn	09 30 35.1	-1.4
LQP	Lukban	1.11	76⇓	eP	Pn	09 30 31.7	+1.1
LQP				i S	Sn	09 30 49.2	+3.1
BOAC	Boac	1.43	106	eP	Pn	09 30 33.8	-0.9
BOAC				eS	Sn	09 30 54.0	+0.8
POLP	Polilio Island	1.70	59	eP	Pn	09 30 38.2	0.0
PCPH	Palayan	1.82	21⇑	eP	Pn	09 30 38.2	-1.4
PCPH				eS	Sn	09 31 00.1	-2.0
BUSP	Coron	1.85	187	eP	Pn	09 30 38.7	-1.4
SCZP	Santa Cruz	1.98	345	eP	Pn	09 30 39.2	-2.5
OTRP	Odiongan	2.15	134	eP	Pn	09 30 44.2	+0.2
BALP	Baler	2.18	30	eP	Pn	09 30 44.7	+0.3
AUQP	San Andres	2.25	103	eP	Pn	09 30 47.4	+2.0
BCPH	Baguio City Da	2.52	3⇑	eP	Pn	09 30 48.2	-0.7
BCPH				eS	Sn	09 31 18.8	+0.1
BOLP	Bolinao	2.56	349	eP	Pn	09 30 47.5	-2.0
ENPP	El Nido	2.81	201	eP	Pn	09 30 51.5	-1.3
KALP	Kalibo	2.85	139	eP	Pn	09 30 59.9	+6.5
CUYO	Cuyo Island	3.04	169	eP	Pn	09 30 54.8	-1.2
RCP	Roxas	3.21	135	eP	Pn	09 30 59.9	+1.7
CAUP	Cauayan	3.35	23	eP	Pn	09 31 01.3	+1.1
PVCP	Virac	3.63	94⇑	eP	Pn	09 31 05.1	+1.2
PVCP	Virac	3.63	94	eP	Pn	09 31 05.8	+1.9
PALP	Palanan	3.73	31⇓	eP	Pn	09 31 08.3	+3.1
PALP	Palanan	3.73	31	eP	Pn	09 31 05.7	+0.4
ABRA	Dolores	3.78	4	eP	Pn	09 31 06.1	+0.1
GUIM	Jordan	3.84	146	eP	Pn	09 31 08.0	+1.2
CVP	Callao Caves	4.06	19⇑	eP	Pn	09 31 10.0	+0.3
APYP	Conner	4.06	11	eP	Pn	09 31 10.6	+0.8
PPR	Puerto Princes	4.38	202⇑	iP	Pn	09 31 13.2	-0.9
PPR				i S	Sn	09 32 13.2	+9.3
SNPH	Sibulan	5.26	148	eP	Pn	09 31 28.5	+2.4
PAGZ	Pagadian	6.63	154	eP	Pn	09 31 47.8	+3.0
BUKP	Musuan	7.48	142	eP	Pn	09 31 59.9	+3.5
KKM	Kota Kinabalu	8.80	209	ePn	Pn	09 32 13.7	-0.7
KKM				eSn	Sn	09 33 43.0	-8.9
YHNB	Yeheng	10.80	5	ePn	Pn	09 32 39.4	-2.2
QIZ	Qiongzhong	11.38	298	P	Pn	09 32 47.6	-2.0
QIZ				XP		09 33 15.4	
QIZ				AMB	AMB		
	comp=Z,18nm,1.1s						
QIZ	Qiongzhong	11.38	298	ePn	Pn	09 32 47.7	-1.9
QIZ				eSn	Sn	09 34 46.2	-8.6
JOW	Kunigami	14.85	28	LR	LR	09 38 41.5	
	comp=Z,101nm,18.6s,baz=24,slow=34						
KSM	Kuching	15.86	220	eP	Pn	09 33 50.3	+2.1
SSE	Sheshan	17.18	2	P	Pn	09 34 04.5	0.0
SSE				AMB	AMB		
	comp=Z,29nm,0.6s						
SSE				AMB	AMB		
	comp=Z,88nm,3.7s						
SSE				LR	LR		
	comp=N,128nm,17.4s						
SSE				LR	LR		
	comp=E,44nm,17.5s						
SSE				LR	LR		
	comp=Z,195nm,19.6s						
WHN	Wuhan	17.53	342	P	Pn	09 34 11.0	+2.1
NJ2	Nanjing	18.17	356	eP	Pn	09 34 16.2	-0.4
NJ2				PP		09 34 31.2	
NJ2				S	S	09 37 40.0	+0.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,30nm,3.5s						
NJ2				LR	LR		
	comp=N,770nm,15.9s						
NJ2				LR	LR		
	comp=E,460nm,28.4s						
NJ2				LR	LR		
	comp=Z,410nm,27.9s						
KMI	Kunming	20.07	307	P	P	09 34 39.5	+3.0
KMI				AMB	AMB		
	comp=Z,11nm,1.4s						
KMI				LR	LR		
	comp=N,187nm,14.5s						
KMI				LR	LR		
	comp=E,143nm,17.6s						
KMI				LR	LR		
	comp=Z,157nm,23.7s						
CHTO	Chiang Mai	21.19	286	eP	P	09 34 48.3	-0.3
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.0						
CHTO	Chiang Mai	21.19	286	eP	P	09 34 48.3	-0.4
	comp=Z,6.9nm,0.9s,mb4.0						
XAN	Xi'an	22.65	335	P	P	09 35 03.7	-0.4
XAN				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.5						
CD2	Chengdu	22.88	321	P	P	09 35 07.3	+0.8
CD2				AMB	AMB		
	comp=Z,40nm,0.7s,mb4.9						
JHJ	Hachijo jima 2	26.05	39	LR	LR	09 44 13.4	
	comp=Z,44nm,20.3s,baz=313,slow=32						
BJT	Baijiatuau	26.33	353	eP	P	09 35 38.0	0.0
BJT				pmax	pmax		
	comp=Z,31nm,0.9s						
BJT	Baijiatuau	26.33	353	eP	P	09 35 38.0	0.0
	comp=Z,31nm,0.9s,mb4.7						
BJI	Beijing	26.35	353	eP	P	09 35 37.8	-0.3
BJI				AMB	AMB		
	comp=Z,32nm,0.9s,mb4.8						
BJI				LR	LR		
	comp=Z,44nm,21.1s						
LZH	Lanzhou	26.68	329	eP	P	09 35 42.1	+1.0
LZH				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.5						
MJAR	Matsushiro Arr	27.64	32	P	P	09 35 47.9	-1.7
	comp=Z,1.3nm,0.7s,baz=206,slow=7.6,SNR=4.1						
MJAR				LR	LR	09 44 49.9	
	comp=Z,27nm,21.1s,baz=200,slow=32						
SNY	Shenyang	28.01	5 ⇓	P	P	09 35 52.2	-0.7
SNY				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.2						
VLA	Vladivostok	30.79	17	deP	P	09 36 15.0	-2.6
VLA				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.0						
GTA	Gaotai	31.27	328	eP	P	09 36 23.6	+1.8
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.6						
FITZ	Fitzroy Crossi	32.16	171	eP	P	09 36 28.9	-0.8
	comp=Z,7.9nm,1.1s,mb4.4						
FITZ	Fitzroy Crossi	32.16	171	eP	pP	09 36 47.9	-1.3
	comp=Z,17nm,0.9s						
FITZ	Fitzroy Crossi	32.16	171	P	P	09 36 29.2	-0.4
	comp=Z,2.6nm,0.8s,mb4.0,baz=28,slow=13,SNR=4.4						
FITZ				pP	pP	09 36 47.7	-1.4
	comp=Z,11nm,1.0s,baz=15,slow=9.1,SNR=8.6						
JIRN	Jiri	34.70	299	eP	P	09 36 53.2	+1.5
	comp=Z,62nm,0.5s,mb5.7						
MBWA	Marble Bar	34.80	181	eP	P	09 36 52.6	+0.1
	comp=Z,6.2nm,0.6s,mb4.6						
GUN	Gumba	35.04	299	eP	P	09 36 56.0	+1.4
	comp=Z,55nm,0.5s,mb5.7						
PKI	Pulchoki	35.35	298	eP	P	09 36 58.0	+0.7
	comp=Z,46nm,0.7s,mb5.4						
PKI	Pulchoki	35.35	298	eP	P	09 36 58.0	+0.7
PKI				pmax	pmax		
	comp=Z,46nm,0.7s,mb5.4						
KKN	Kakani	35.52	299	eP	P	09 36 59.6	+0.9
	comp=Z,36nm,0.7s,mb5.4						
KKN	Kakani	35.52	299	eP	P	09 36 59.6	+0.9
KKN				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.4						
DMN	Daman	35.62	298	eP	P	09 37 00.4	+0.8
	comp=Z,48nm,0.8s,mb5.5						
ULN	Ulaanbaatar	35.69	345	⇑P	P	09 37 00.6	+0.4
	SNR=12						
ULN	Ulaanbaatar	35.69	345	eP	P	09 37 00.5	+0.3
ULN				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.3						
ULN	Ulaanbaatar	35.69	345	eP	P	09 37 00.5	+0.3
	comp=Z,28nm,0.7s,mb5.3						
SONM	Songino Array	35.84	344	P	P	09 37 01.7	+0.3
	comp=Z,34nm,0.6s,mb5.5,baz=163,slow=10,SNR=268						
SONM				LR	LR	09 51 23.1	
	comp=Z,103nm,21.0s,baz=344,slow=36						
GKN	Gorkha	36.12	299	eP	P	09 37 04.3	+0.4
WRAB	Tennant Creek	36.26	157	eP	P	09 37 03.6	-1.5
WRAB				e*PP	pP	09 37 22.7	-2.1
WRAB				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.4						
WRAB	Tennant Creek	36.26	157	eP	P	09 37 03.6	-1.4
	comp=Z,39nm,0.8s,mb5.4						
WRAB				epP	pP	09 37 22.7	-2.1
WB2	Warramunga Arr	36.27	158	eP	P	09 37 04.0	-1.1
WB2	Warramunga Arr	36.27	158	eP	pP	09 37 22.8	-2.1
KLR	Kul'dur	36.49	12	eP	P	09 37 02.8	-4.2
KOLN	Koldanda	36.95	298	eP	P	09 37 11.7	+0.8
	comp=Z,38nm,0.9s,mb5.3						
YSS	Yuzh-Sakhalins	37.92	25⇓	iP	P	09 37 16.4	-2.8
YSS				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.5						
ZAK	Zakamensk	39.02	343	eP	P	09 37 27.8	-0.5
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
AS31	Alice Springs	39.55	160	eP	P	09 37 31.7	-1.0
ASAR	Alice Springs	39.55	160	P	P	09 37 32.4	-0.4
	comp=Z,2.3nm,0.6s,mb4.2,baz=339,slow=6.7,SNR=36						
ASAR				pP	pP	09 37 51.0	-1.6
	comp=Z,7.9nm,0.6s,baz=339,slow=6.9,SNR=22						
ASAR				ScP	ScP	09 43 19.2	-0.5
	comp=Z,0.7nm,0.9s,baz=355,slow=6.1,SNR=4.3						
ASPA	Alice Springs	39.55	160	eP	P	09 37 31.7	-1.0
ASPA	Alice Springs	39.55	160	eP	pP	09 37 51.3	-1.4
TLY	Talaya	40.08	344	eP	P	09 37 37.4	+0.3
TLY				pmax	pmax		
	comp=Z,19nm,2.0s,mb4.6						
TLY				MLR	MLR		
	comp=Z,76nm,24.0s						
TLY	Talaya	40.08	344	eP	P	09 37 37.5	+0.3
WMQ	Urumqi	40.93	323	P	P	09 37 45.0	+0.9
WMQ				AP	pP	09 38 10.0	+5.9
WMQ				XP	sP	09 38 23.0	+9.2
WMQ				PP	PP	09 39 23.0	+3.0
WMQ				S	S	09 43 43.0	-6.6
WMQ				XS	sS	09 44 28.0	+4.0
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,112nm,4.0s						
WMQ				LR	LR		
	comp=N,1µm,12.0s						
WMQ				LR	LR		
	comp=E,2µm,12.0s						
WMQ				LR	LR		
	comp=Z,98nm,12.0s						
FORT	Forrest	44.98	171	eP	P	09 38 16.6	-0.2
	comp=Z,20nm,0.7s,mb5.0						
FORT	Forrest	44.98	171	eP	pP	09 38 35.3	-1.8
	comp=Z,24nm,0.8s						
KLBR	Kellerberrin	45.26	183	eP	P	09 38 19.1	+0.1
	comp=Z,19nm,0.9s,mb4.8						
HNR	Honiara	45.53	118	LR	LR	09 57 42.8	
	comp=Z,66nm,18.2s,baz=359,slow=36						
MKAR	Makanchi Array	45.75	324	P	P	09 38 23.8	+0.8
	comp=Z,7.0nm,0.8s,mb4.5,baz=131,slow=9.0,SNR=47						
MKAR				pP	pP	09 38 43.8	+0.4
	comp=Z,0.9nm,0.6s,baz=123,slow=13,SNR=2.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR				PcP	PcP	09 39 59.4	0.0
	comp=Z,2.3nm,0.9s,baz=114,slow=6.0,SNR=4.4						
ULHL	**Ulahol**	**47.43**	**315**	P	**P**	**09 38 37.9**	**+1.9**
	SNR=14						
KZA	**Kyzart**	**48.04**	**315**	P	**P**	**09 38 43.2**	**+2.5**
	SNR=15						
TKM2	**Tokmak 2**	**48.13**	**316**	P	**P**	**09 38 43.1**	**+1.6**
	SNR=11						
TKM2	**Tokmak 2**	**48.13**	**316**	*i* P	**P**	**09 38 42.9**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
KBK	**Karagaybulak**	**48.47**	**315**	P	**P**	**09 38 46.1**	**+2.0**
	SNR=5.8						
YAK	**Yakutsk**	**48.56**	**6**	*d i*P	**P**	**09 38 41.7**	**-3.1**
YAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**48.77**	**315**	P	**P**	**09 38 47.4**	**+1.0**
	SNR=5.1						
AAK	**Ala-Archa**	**48.77**	**315**	⇓*i*P	**P**	**09 38 47.4**	**+1.0**
AAK				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.7						
AAK	**Ala-Archa**	**48.77**	**315**	*e*P	**P**	**09 38 47.0**	**+0.7**
	comp=Z,7.1nm,0.8s,mb4.7						
ZAL	**Zalesovo**	**48.80**	**333**	P	**P**	**09 38 46.4**	**-0.2**
	comp=Z,3.3nm,0.5s,mb4.5,baz=348,slow=6.7,SNR=14						
ZAL				LR	LR	10 01 38.6	
	comp=Z,46nm,18.7s,baz=304,slow=39						
ZAL	**Zalesovo**	**48.80**	**333**	P	**P**	**09 38 46.4**	**-0.2**
ZAL				LR	LR	10 01 38.6	
USP	**Ospenovka**	**49.01**	**316**	P	**P**	**09 38 49.4**	**+1.2**
	SNR=11						
EKS2	**Erkin-Say**	**49.27**	**315**	P	**P**	**09 38 51.6**	**+1.4**
	SNR=9.4						
STKA	**Stephens Creek**	**49.79**	**156**	*e*P	**P**	**09 38 53.3**	**-0.8**
	comp=Z,2.0nm,1.1s,mb4.0						
STKA	**Stephens Creek**	**49.79**	**156**	P	**P**	**09 38 53.2**	**-0.9**
	comp=Z,1.6nm,0.8s,mb4.0,baz=333,slow=12,SNR=3.4						
KURK	**Kurchatov**	**49.92**	**326**	P	**P**	**09 38 55.5**	**+0.4**
	comp=Z,299nm,1.2s,SNR=34						
KURK	**Kurchatov**	**49.92**	**326**	⇑P	**P**	**09 38 55.8**	**+0.7**
	SNR=25						
KURK	**Kurchatov**	**49.92**	**326**	*c i*P	**P**	**09 38 55.6**	**+0.5**
KURK	**Kurchatov**	**49.92**	**326**	*e*P	**P**	**09 38 55.5**	**+0.4**
	comp=Z,54nm,1.0s,mb5.4						
NVS	**Novosibirsk**	**50.09**	**333**	*e*P	**P**	**09 38 56.1**	**-0.3**
KK31	**Karatay Array**	**51.68**	**314**	*i* P	**P**	**09 39 08.9**	**+0.6**
KK31				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
BRVK	**Borovoye**	**55.57**	**326**	⇑P	**P**	**09 39 37.4**	**+0.7**
	SNR=25						
BRVK	**Borovoye**	**55.57**	**326**	*e*P	**P**	**09 39 37.3**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.4						
BRVK	**Borovoye**	**55.57**	**326**	*e*P	**P**	**09 39 37.3**	**+0.5**
	comp=Z,33nm,0.8s,mb5.4						
CHKZ	**Chkalovo**	**55.66**	**327**	*e*P	**P**	**09 39 37.6**	**+0.2**
CHKZ				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.4						
CHKZ	**Chkalovo**	**55.66**	**327**	*e*P	**P**	**09 39 37.6**	**+0.3**
	comp=Z,24nm,0.6s,mb5.4						
BILL	**Bilibino**	**61.64**	**18**	P	**P**	**09 40 13.0**	**-5.9**
BILL				*e*S	**S**	**09 48 49.0**	**+14**
BILL				*e*		09 49 55.7	
BILL				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.7						
SVE	**Sverdlovsk**	**62.13**	**327**	⇑*e*P	**P**	**09 40 21.2**	**-1.0**
SVE				*e*		09 40 52.0	
SVE				*e*		09 49 04.7	
SVE				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
SVE				pmax	pmax		
	comp=Z,296nm,1.1s						
ARU	**Arti**	**63.11**	**327**	⇑*i*P	**P**	**09 40 28.0**	**-0.7**
ARU				*e*		09 40 56.1	
ARU				*e*		09 42 44.2	
ARU				*e*S	**S**	**09 49 05.2**	**+12**
ARU				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
RDF	**Al-Radifah**	**68.58**	**296**	*e*P	**P**	**09 41 03.7**	**-0.1**
RDF				AMb	AMB	09 41 05.2	
	comp=Z,32nm,0.9s,mb5.2						
MIB	**Mutribah**	**68.70**	**297**	*e*P	**P**	**09 41 04.3**	**-0.3**
MIB				AMb	AMB	09 41 05.6	
	comp=Z,26nm,0.7s,mb5.2						
NAY	**Al-Naaiem**	**68.83**	**296**	*e*P	**P**	**09 41 05.0**	**-0.4**
NAY				AMb	AMB	09 41 06.5	
	comp=Z,11nm,0.7s,mb4.8						
RST	**Umm Al-Ruwaisa**	**69.02**	**297**	*e*P	**P**	**09 41 05.8**	**-0.8**
RST				AMb	AMB	09 41 08.0	
	comp=Z,14nm,0.8s,mb4.8						
GNI	**Garni**	**70.31**	**308**	LR	LR	10 15 13.8	
	comp=Z,22nm,20.3s,baz=171,slow=38						
GNI	**Garni**	**70.31**	**308**	⇑*i*P	**P**	**09 41 15.1**	**+0.6**
GNI				pmax	pmax		
	comp=Z,20nm,1.7s						
KIV	**Kislovodsk**	**71.73**	**312**	*d i*P	**P**	**09 41 24.0**	**+1.0**
KIV				*i* *PP	pP	09 41 45.1	+0.2
KIV				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
KIV	**Kislovodsk**	**71.73**	**312**	*e*P	**P**	**09 41 24.2**	**+1.1**
	comp=Z,12nm,0.6s,mb4.9						
KLMR	**Klimovskoe**	**73.59**	**330**	*e*P	**P**	**09 41 32.8**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.9						
OBN	**Obninsk**	**75.26**	**324**	⇑*e*P	**P**	**09 41 42.6**	**-1.1**
OBN				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.8						
OBN	**Obninsk**	**75.26**	**324**	*e*P	**P**	**09 41 42.7**	**-1.0**
	comp=Z,11nm,0.4s,mb5.0						
MALT	**Malatya**	**75.33**	**306**	⇑*i*P	**P**	**09 41 46.3**	**+2.1**
MALT	**Malatya**	**75.33**	**306**	*e*P	**P**	**09 41 45.9**	**+1.7**
	comp=Z,6.6nm,0.8s,mb4.4						
ANN	**Anapa**	**75.44**	**313**	*e*P	**P**	**09 41 50.4**	**+5.6**
ANN				*e*S		09 51 43.0	
ANN				pmax	pmax		
	comp=Z,132nm,1.5s,mb5.4						
IMA2	**Indian Mountai**	**75.78**	**25**	*e*P	**P**	**09 41 46.4**	**-0.3**
JOF	**Joensuu**	**77.39**	**332**	*e*p	**P**	**09 41 53.8**	**-2.0**
	comp=Z,7.1nm,0.4s,mb4.8						
MCK	**McKinley**	**77.98**	**27**	*e*P	**P**	**09 41 58.3**	**-0.8**
MCK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
MCK	**McKinley**	**77.98**	**27**	*e*P	**P**	**09 41 58.3**	**-0.8**
	comp=Z,9.1nm,0.9s,mb4.5						
KEV	**Kevo**	**78.30**	**339**	*e*p	**P**	**09 41 58.6**	**-2.2**
	comp=Z,2.1nm,0.6s,mb4.0						
KEV	**Kevo**	**78.30**	**339**	*e*P	**P**	**09 41 58.6**	**-2.2**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**78.85**	**339**	P	**P**	**09 42 02.7**	**-1.2**
	comp=Z,3.3nm,0.6s,mb4.3,baz=79,slow=7.2,SNR=19						
ARCES				LR	LR	10 19 16.4	
	comp=Z,41nm,21.3s,baz=283,slow=37						
BR131	**Keskin Array S**	**78.85**	**308**	*e*P	**P**	**09 42 04.7**	**+0.9**
	comp=Z,1.7nm,0.7s,mb4.0						
BRTR	**Keskin Array B**	**78.85**	**308**	P	**P**	**09 42 04.2**	**+0.3**
	comp=Z,2.6nm,0.9s,mb4.1,baz=133,slow=4.9,SNR=12						
BRTR				LR	LR	10 22 38.5	
	comp=Z,16nm,19.2s,baz=266,slow=40						
EIL	**Elat**	**79.41**	**298**	*e*P	**P**	**09 42 08.4**	**+1.5**
KAF	**Kangasniemi**	**79.80**	**332**	*e*p	**P**	**09 42 06.7**	**-2.3**
	comp=Z,1.1nm,0.3s,mb4.2,baz=75,slow=5.0						
KAF	**Kangasniemi**	**79.80**	**332**	*e*P	**P**	**09 42 06.7**	**-2.3**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
FINES	**FINESS Array B**	**80.02**	**331**	P	**P**	**09 42 09.4**	**-0.8**
	comp=Z,2.5nm,0.5s,mb4.3,baz=57,slow=5.7,SNR=23						
FINES				pP	pP	09 42 29.8	-2.7
	comp=Z,1.9nm,0.8s,baz=52,slow=7.5,SNR=2.1						
FINES				LR	LR	10 17 01.9	
	comp=Z,23nm,21.4s,baz=150,slow=35						
FINES	**FINESS Array B**	**80.02**	**331**	P	**P**	**09 42 09.4**	**-0.8**
FINES				*PP	pP	09 42 29.8	-2.7
AKASG	**Malin Array Be**	**80.17**	**320**	P	**P**	**09 42 09.5**	**-1.6**
	comp=Z,4.7nm,0.8s,mb4.4,baz=66,slow=5.5,SNR=10.0						
VSU	**Vasula**	**80.24**	**328**	*c i*P	**P**	**09 42 10.6**	**-0.8**
DAWY	**Dawson**	**82.06**	**26**	*e*P	**P**	**09 42 23.3**	**+2.3**
HARR	**Harsova**	**82.15**	**314**	⇑*i*P	**P**	**09 42 22.1**	**+0.6**
HARR	**Harsova**	**82.15**	**314**	⇑P	**P**	**09 42 22.1**	**+0.6**
VRI	**Vrincioaia**	**82.74**	**315**	⇑*i*P	**P**	**09 42 25.9**	**+1.3**
VRI	**Vrincioaia**	**82.74**	**315**	⇑P	**P**	**09 42 25.9**	**+1.3**
INK	**Inuvik**	**83.05**	**21**	*e*P	**P**	**09 42 24.7**	**-1.5**
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
INK	**Inuvik**	**83.05**	**21**	*e*P	**P**	**09 42 24.6**	**-1.5**
	comp=Z,3.8nm,0.7s,mb4.3						
SUW	**Suwalki**	**83.12**	**324**	*e*P	**P**	**09 42 25.9**	**-0.7**
MLR	**Muntele Rosu**	**83.36**	**315**	LR	LR	10 22 18.3	
	comp=Z,36nm,21.1s,baz=2.1,slow=38						
MLR	**Muntele Rosu**	**83.36**	**315**	⇑*i*P	**P**	**09 42 28.9**	**+1.1**
MLR	**Muntele Rosu**	**83.36**	**315**	⇑P	**P**	**09 42 28.9**	**+1.1**
BURAR	**Bucovina Array**	**83.37**	**317**	⇑*i*P	**P**	**09 42 28.0**	**+0.2**
VOIR		**83.98**	**315**	⇑*i*P	**P**	**09 42 29.8**	**-1.2**
VOIR		**83.98**	**315**	⇑P	**P**	**09 42 29.8**	**-1.2**
KWP	**Kalwaria**	**84.50**	**320**	*e*P	**P**	**09 42 34.2**	**+0.6**
DRGR		**85.22**	**317**	⇑*i*P	**P**	**09 42 37.5**	**+0.3**
DRGR		**85.22**	**317**	⇑P	**P**	**09 42 37.5**	**+0.3**
SANT	**Santorini**	**85.84**	**306**	*e*P	**P**	**09 42 44.4**	**+4.2**
SANT				*e*PP	PP	09 45 55.4	-5.3
VTS	**Vitosha**	**85.97**	**313**	⇑*i*P	**P**	**09 42 41.4**	**+0.5**
VTS	**Vitosha**	**85.97**	**313**	⇑P	**P**	**09 42 41.4**	**+0.4**
OJC	**Ojcow**	**86.14**	**321**	*i* Pc		09 42 41.8	
NB2	**NORSAR Subarra**	**87.00**	**333**	P	**P**	**09 42 44.3**	**-1.7**
	comp=Z,9.3nm,0.8s,mb4.8,baz=67,slow=4.6						
NOA	**NORSAR Array B**	**87.00**	**333**	P	**P**	**09 42 44.1**	**-1.9**
	comp=Z,6.9nm,0.7s,mb4.7,baz=68,slow=4.6,SNR=29						
NOA				pP	pP	09 43 06.0	-2.5
	comp=Z,1.4nm,0.6s,baz=68,slow=4.8,SNR=2.7						
NOA				LR	LR	10 23 09.9	
	comp=Z,30nm,21.8s,baz=155,slow=36						
NOA	**NORSAR Array B**	**87.00**	**333**	P	**P**	**09 42 44.1**	**-1.9**
NOA				*PP	pP	09 43 06.0	-2.5
NOA	**NORSAR Array B**	**87.00**	**333**	P	**P**	**09 42 44.1**	**-1.8**
NOA				pP	pP	09 43 06.0	-2.5
NOA				LR	LR	10 23 09.9	
KSP	**Ksiaz**	**88.07**	**322**	*e*P	**P**	**09 42 51.4**	**+0.3**
PKSM	**Moragy**	**88.08**	**317**	⇑*i*P	**P**	**09 42 50.8**	**-0.3**
PKSM	**Moragy**	**88.08**	**317**	⇑P	**P**	**09 42 50.9**	**-0.3**
JMIC	**Jan Mayen**	**88.58**	**345**	LR	LR	10 24 38.0	
	comp=Z,35nm,21.8s,baz=78,slow=37						
BRG	**Berggiesshubel**	**89.46**	**323**	*e*P	**P**	**09 42 57.4**	**-0.2**
	comp=Z,2.6nm,0.8s,mb4.3						
BRG	**Berggiesshubel**	**89.46**	**323**	*e*P	**P**	**09 42 57.4**	**-0.2**
BRG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
CLL	**Collm**	**89.85**	**323**	*e*P	**P**	**09 42 58.0**	**-1.4**
KHC	**Kasperske Hory**	**90.32**	**321**	⇓*i*P	**P**	**09 43 01.7**	**+0.1**
GERES	**GERESS Array B**	**90.35**	**321**	P	**P**	**09 43 01.5**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.3,baz=67,slow=4.5,SNR=15						
GERES				LR	LR	10 23 44.4	
	comp=Z,17nm,18.8s,baz=261,slow=36						
GRA1	**Grafenberg Arr**	**91.52**	**322**	*e*P	**P**	**09 43 07.1**	**-0.1**
	comp=Z,6.0nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**91.52**	**322**	*e*P	**P**	**09 43 07.1**	**-0.1**
	comp=Z,6.0nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**91.52**	**322**	*e*P	**P**	**09 43 07.1**	**-0.1**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**91.52**	**322**	*e*P	**P**	**09 43 07.1**	**-0.1**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.8						
YKA	**Yellowknife Ar**	**92.74**	**22**	P	**P**	**09 43 11.7**	**-1.1**
	comp=Z,2.9nm,0.8s,mb4.7,baz=312,slow=4.4,SNR=13						
YKA				LR	LR	10 24 11.5	
	comp=Z,27nm,20.7s,baz=165,slow=35						
YKA	**Yellowknife Ar**	**92.74**	**22**	P	**P**	**09 43 11.7**	**-1.1**
YKA				LR	LR	10 24 11.5	

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*IDC **12** 09:46:29.3±0.7, 8.14S×118.07E, h0km, mb4.2/8, mb1 4.4/9, mb1mx4.2/15, mbtmp4.3/9, ML4.6/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/26, Error ellipse: s-maj=32.9km s-min=12.3km az=60.0*

*BJI **12** 09:46:30.5, 8.31S×118.82E, h25km, mB4.9, mb4.8, Ms4.4, Msz4.1*

*NEIC **12** 09:46:33.1±0.3, 8.19S×118.16E, h25km, mb4.9/11, Error ellipse: s-maj=13.4km s-min=5.2km az=57.0*

NEIC Felt [III] at Sumbawa Besar and [II] at Raba.

*MOS **12** 09:46:35.3±2.2, 7.99S×118.61E, h45km, mb4.6/13, Error ellipse: s-maj=22.8km s-min=9.7km az=111.8*

*ISCJB **12** 09:46:38.1±1.0, 8.18S±0.06×118.40E±0.06, h84km±11km, mb4.6/32, Error ellipse: s-maj=12.7km s-min=6.1km az=95.6*

ISC 12 09:46:39.5±0.9**, 8.22S**±0.06×**118.40E**±0.06**, h79**km±9km**, n75, σ1§27**/75**, mb4.6**/32**, 9C-2D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.36**	**128**	P	**Pn**	**09 47 17.1**	**+0.9**
	0.0nm,0.0s						
DNP	**Denpasar**	**3.19**	**262**	P	**Pn**	**09 47 26.4**	**-1.0**
	0.0nm,0.0s						
NBBI	**Negara**	**3.75**	**267**	P	**Pn**	**09 47 39.5**	**+4.5**
	0.0nm,0.0s						
KRKI	**Karangkates**	**5.89**	**270**	P	**Pn**	**09 48 05.7**	**+1.5**
	0.0nm,0.0s						
LEM	**Lembang**	**10.78**	**277**	P	**Pn**	**09 49 11.4**	**+0.5**
	0.0nm,0.0s						
CBJI	**Citeko**	**11.60**	**278**	P	**Pn**	**09 49 16.7**	**-5.3**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**12.09**	**145**	*e*P	**Pn**	**09 49 25.5**	**-3.2**
	37nm,0.6s						
FITZ				*e*S	**Sn**	**09 51 41.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**12.09**	**145**	Pn	**Pn**	**09 49 25.6**	**-3.1**
	2.6nm,0.3s,baz=327,slow=8.5,SNR=64						
FITZ				Sn	**Sn**	**09 51 42.1**	**+0.5**
	0.6nm,0.3s,baz=181,slow=14,SNR=3.9						
FITZ				LR	LR	09 54 49.8	
	comp=Z,97nm,21.2s,baz=314,slow=41						
MBWA	**Marble Bar**	**12.93**	**174**	*e*Pn	**Pn**	**09 49 35.0**	**-5.0**
	12nm,0.7s						
KAKA	**Kakadu**	**14.51**	**109**	*e*P	**Pn**	**09 49 58.4**	**-2.3**
	22nm,0.6s						
SWI	**Sorong**	**14.74**	**61**	P	**Pn**	**09 50 11.3**	**+7.5**
	0.0nm,0.0s						
WRAB	**Tennant Creek**	**19.34**	**129**	*de*P	**Pn**	**09 51 00.4**	**+0.1**
WRAB	**Tennant Creek**	**19.34**	**129**	*e*P	**Pn**	**09 50 59.2**	**-1.1**
	15nm,0.6s						
WB2	**Warramunga Arr**	**19.35**	**129**	*e*P	**Pn**	**09 50 59.5**	**-0.9**
ASPA	**Alice Springs**	**21.37**	**138**	*e*P	**P**	**09 51 21.0**	**+0.6**
AS31	**Alice Springs**	**21.37**	**138**	*e*P	**P**	**09 51 20.8**	**+0.4**
ASAR	**Alice Springs**	**21.37**	**138**	P	**P**	**09 51 20.9**	**+0.5**
	6.7nm,0.6s,mb4.2,baz=312,slow=10.0,SNR=60						
ASAR				S	**S**	**09 55 24.1**	**+11**
	2.1nm,0.9s,baz=310,slow=24,SNR=4.5						
ASAR				LR	LR	10 00 16.6	
	comp=Z,83nm,19.4s,baz=170,slow=38						
ASAR	**Alice Springs**	**21.37**	**138**	P	**P**	**09 51 20.9**	**+0.5**
ASAR				S	**S**	**09 55 24.1**	**+11**
ASAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ASAR				MLR	MLR		
	comp=Z,83nm,19.4s						
KLBR	**Kellerberrin**	**23.27**	**181**	*e*P	**P**	**09 51 38.7**	**-1.3**
	comp=Z,63nm,1.2s,mb4.8						
FORT	**Forrest**	**24.20**	**159**	*e*P	**P**	**09 51 48.9**	**+0.4**
	comp=Z,23nm,0.7s,mb4.6						
CTA	**Charters Tower**	**29.41**	**117**	LR	LR	10 06 14.6	
	comp=Z,79nm,19.1s,baz=52,slow=40						
STKA	**Stephens Creek**	**31.93**	**141**	*e*P	**P**	**09 52 58.8**	**+1.3**
	comp=Z,3.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**31.93**	**141**	P	**P**	**09 52 58.6**	**+1.1**
	comp=Z,3.7nm,0.6s,mb4.3,baz=310,slow=8.6,SNR=18						
KMI	**Kunming**	**36.48**	**336**	P	**P**	**09 53 38.7**	**+1.8**
KMI				LR	LR		
	comp=Z,36nm,16.0s						
TOO	**Toolangi**	**38.15**	**144**	*e*P	**P**	**09 53 54.1**	**+3.1**
	comp=Z,5.9nm,0.7s,mb4.5						
TOO	**Toolangi**	**38.15**	**144**	*e*P	**P**	**09 53 54.1**	**+3.1**
TOO				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
SSE	**Sheshan**	**39.18**	**4**	P	**P**	**09 53 57.3**	**-2.3**
SSE				AMB	AMB		
	comp=Z,45nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,74nm,6.1s						
NJ2	**Nanjing**	**40.04**	**1**	*e*P	**P**	**09 54 07.8**	**+1.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CD2	**Chengdu**	**41.36**	**341**	P	**P**	**09 54 18.2**	**+0.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
LSA	**Lhasa**	**45.92**	**326**	*e*P	**P**	**09 54 54.6**	**+0.4**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
LSA	**Lhasa**	**45.92**	**326**	*e*P	**P**	**09 54 54.6**	**+0.3**
	comp=Z,4.0nm,0.4s,mb4.5						
LZH	**Lanzhou**	**46.15**	**344**	*e*P	**P**	**09 54 58.2**	**+2.2**
LZH				AP	pP	09 55 05.6	-10
LZH				XP	sP	09 55 08.7	-16
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
JIRN	**Jiri**	**47.37**	**320**	*e*P	**P**	**09 55 04.7**	**-0.8**
	comp=Z,48nm,1.1s,mb5.1						
GUN	**Gumba**	**47.74**	**320**	*e*P	**P**	**09 55 07.7**	**-0.7**
	comp=Z,103nm,1.2s,mb5.5						
PKI	**Pulchoki**	**47.81**	**319**	*e*P	**P**	**09 55 07.5**	**-1.4**
DMN	**Daman**	**48.03**	**319**	*e*P	**P**	**09 55 09.5**	**-1.1**
	comp=Z,42nm,1.1s,mb5.2						
KKN	**Kakani**	**48.04**	**319**	*e*P	**P**	**09 55 09.5**	**-1.2**
BJI	**Beijing**	**48.05**	**358**	*e*P	**P**	**09 55 11.6**	**+0.8**
BJI				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.7						
DZM	**Mont Dzumac**	**48.17**	**112**	LR	LR	10 14 25.1	
	comp=Z,122nm,18.3s,baz=198,slow=34						
MJAR	**Matsushiro Arr**	**48.25**	**21**	P	**P**	**09 55 12.5**	**+0.1**
	comp=Z,1.6nm,0.8s,mb3.9,baz=218,slow=6.6,SNR=5.3						
MJAR	**Matsushiro Arr**	**48.25**	**21**	P	**P**	**09 55 12.5**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GKN	**Gorkha**	**48.60**	**319**	*e*P	**P**	**09 55 13.7**	**-1.3**
KOLN	**Koldanda**	**49.12**	**318**	*e*P	**P**	**09 55 15.8**	**-3.2**
	comp=Z,21nm,1.0s,mb5.0						
GTA	**Gaotai**	**50.42**	**341**	*e*P	**P**	**09 55 31.7**	**+2.8**
GTA				AP	pP	09 55 38.1	-10
GTA				XP	sP	09 55 41.5	-16
GTA				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.3						
VLA	**Vladivostok**	**52.55**	**12**	⇓*e*P	**P**	**09 55 42.1**	**-2.6**
VLA				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
MDJ	**Mudanjiang**	**53.55**	**10**	P	**P**	**09 55 53.0**	**+0.9**
MDJ				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,28nm,4.6s						
ULN	**Ulaanbaatar**	**56.73**	**351**	*e*P	**P**	**09 56 15.0**	**0.0**
ULN				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
ULN	**Ulaanbaatar**	**56.73**	**351**	*e*P	**P**	**09 56 15.0**	**0.0**
	comp=Z,13nm,1.1s,mb4.9						
SONM	**Songino Array**	**56.81**	**350**	P	**P**	**09 56 15.6**	**0.0**
	comp=Z,7.2nm,0.8s,mb4.8,baz=168,slow=6.7,SNR=42						
SONM	**Songino Array**	**56.81**	**350**	P	**P**	**09 56 15.6**	**0.0**
SONM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KLR	**Kul'dur**	**58.39**	**10**	*e*P	**P**	**09 56 21.7**	**-4.9**
WMQ	**Urumqi**	**58.80**	**334**	*e*P	**P**	**09 56 31.0**	**+1.5**
WMQ				PP	PP	09 58 42.0	+1.8
WMQ				S	**S**	**10 04 33.0**	**+4.3**
WMQ				SCS	ScS	10 06 16.0	+4.0
WMQ				SS	SS	10 08 27.0	+4.0
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				LR	LR		
	comp=N,45nm,15.0s						
WMQ				LR	LR		
	comp=E,62nm,15.0s						
WMQ				LR	LR		
	comp=Z,27nm,14.0s						
YSS	**Yuzh-Sakhalins**	**59.05**	**19**	⇑*e*P	**P**	**09 56 30.5**	**-0.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.8s,mb4.5						
ZAK	**Zakamensk**	**59.82**	**349**	*e*P	**P**	**09 56 35.4**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.1						
TLY	**Talaya**	**60.99**	**350**	⇑*e*P	**P**	**09 56 44.4**	**-0.1**
TLY				*i* *PP	pP	09 57 05.0	+0.2
TLY				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.3						
MKAR	**Makanchi Array**	**63.49**	**333**	P	**P**	**09 56 59.3**	**-1.9**
	comp=Z,0.8nm,0.7s,mb3.8,baz=134,slow=8.6,SNR=6.0						
MKAR	**Makanchi Array**	**63.49**	**333**	*i* P	**P**	**09 57 02.7**	**+1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AAK	**Ala-Archa**	**64.50**	**325**	⇑*e*P	**P**	**09 57 13.1**	**+5.3**
AAK				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb4.0						
KURK	**Kurchatov**	**68.04**	**334**	⇑*e*P	**P**	**09 57 33.6**	**+3.2**
ZAL	**Zalesovo**	**68.10**	**339**	P	**P**	**09 57 28.8**	**-2.0**
	comp=Z,1.9nm,0.4s,mb4.3,baz=246,slow=3.1,SNR=6.3						
ZAL	**Zalesovo**	**68.10**	**339**	*i* P	**P**	**09 57 29.7**	**-1.1**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MAW	**Mawson**	**69.77**	**200**	P	**P**	**09 57 41.1**	**-0.1**
	comp=Z,4.2nm,1.0s,mb4.2,baz=94,slow=5.6,SNR=12						
MAW	**Mawson**	**69.77**	**200**	P	**P**	**09 57 41.1**	**-0.1**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PET	**Petropavlovsk**	**69.92**	**25**	*c i*P	**P**	**09 57 41.9**	**-0.2**
PET				pmax	pmax		
	comp=Z,30nm,1.7s,mb4.8						
YAK	**Yakutsk**	**70.58**	**6**	⇑*e*P	**P**	**09 57 47.7**	**+1.6**
YAK				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
VNDA	**Vanda**	**72.85**	**171**	P	**P**	**09 57 60.0**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.7,baz=314,slow=13,SNR=6.4						
VNDA	**Vanda**	**72.85**	**171**	P	**P**	**09 58 00.0**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VNDA	**Vanda**	**72.85**	**171**	P	**P**	**09 57 60.0**	**+0.2**
SYO	**Syowa Base**	**78.37**	**201**	⇑*e*P	**P**	**09 58 31.0**	**-0.2**
GNI	**Garni**	**82.98**	**312**	⇑*e*P	**P**	**09 59 01.3**	**+5.4**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIV	**Kislovodsk**	**85.52**	**315**	*i* P	**P**	**09 59 13.4**	**+4.7**
VSU	**Vasula**	**97.81**	**328**	⇑*e*P	**P**	**10 00 10.4**	**+4.4**
CPUP	**Villa Florida**	**145.41**	**187**	PKPbc	PKPbc	10 06 10.7	+2.3
	comp=Z,1.5nm,0.6s,baz=148,slow=3.4,SNR=5.5						
CPUP	**Villa Florida**	**145.41**	**187**	PKP2	PKPab	10 06 10.7	+2.1
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CPUP	**Villa Florida**	**145.41**	**187**	*e*PKPbc	PKPbc	10 06 10.2	+1.9

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*BER **12** 10:04:52.9±3.3, 60.12N×25.51E, h0km, ML2.1(NAO), Suspected explosion*

*ISCJB **12** 10:04:53.2±0.6, 60.23N±0.03×25.14E±0.06, h0km, Error ellipse: s-maj=5.1km s-min=3.9km az=102.0*

*NAO **12** 10:04:53.4±1.8, 60.17N×25.48E, ML2.1*

*HEL **12** 10:04:54.8±0.1, 60.21N×25.21E, h0km, ML2.3, ML2.1(NAO), Explosion*

*IDC **12** 10:04:55.8±0.9, 60.34N×25.18E, h0km, mb1 3.0/4, mb1mx2.9/21, mbtmp3.0/4, ML3.0/4, Error ellipse: s-maj=10.7km s-min=5.8km az=132.0*

ISC 12 10:04:53.8±0.5**, 60.23N**±0.03×**25.16E**±0.05**, h0**km**, n22, σ1§30**/41**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.38**	**269**	*e*P	**Pg**	**10 05 01.7**	**+0.6**
MEF				*e*S	**Sg**	**10 05 06.9**	**+0.9**
PVF	**Pernaja**	**0.47**	**47**	*e*P	**Pg**	**10 05 02.8**	**-0.1**
PVF				*e*S	**Sg**	**10 05 09.0**	**-0.1**
FIA0	**FINESS Array S**	**1.30**	**20**	*e*P	**Pg**	**10 05 18.0**	**-0.7**
FIA0				*e*S	**Sg**	**10 05 34.8**	**-0.8**
FIA0	**FINESS Array S**	**1.30**	**20**	Pg	**Pg**	**10 05 18.1**	**-0.6**
	baz=189,slow=18						
FIA0				Lg		10 05 34.3	
	baz=185,slow=37						
FINES	**FINESS Array B**	**1.30**	**20**	Pg	**Pg**	**10 05 18.1**	**-0.7**
	5.9nm,0.3s,baz=197,slow=17,SNR=181						
FINES				Pn	**Pn**	**10 05 20.6**	**+1.4**
	5.9nm,0.3s,baz=186,slow=11,SNR=104						
FINES				Lg		10 05 34.0	
	2.5nm,0.3s,baz=194,slow=28,SNR=15						
FINES				Sn	**Sn**	**10 05 39.0**	**+1.7**
	12nm,0.3s,baz=196,slow=23,SNR=31						
FINES				Rg		10 05 43.1	
	5.2nm,0.3s,baz=190,slow=31,SNR=4.2						
RAF	**Rauma**	**1.85**	**297**	*e*P	**Pn**	**10 05 28.1**	**+1.3**
RAF				*e*S	**Sn**	**10 05 52.4**	**+1.4**
RAF				MSG		10 05 56.6	
	comp=Z,24nm,0.1s						
VSU	**Vasula**	**1.95**	**155**	*e*P	**Pn**	**10 05 29.1**	**+1.0**
VSU				*e*S	**Sn**	**10 05 53.2**	**0.0**
KEF	**Keuruu**	**1.95**	**356**	*e*P	**Pn**	**10 05 29.9**	**+1.7**
KEF				*e*S	**Sn**	**10 05 55.0**	**+1.7**
KAF	**Kangasniemi**	**1.97**	**16**	*e*P	**Pn**	**10 05 29.6**	**+1.2**
KAF				*e*S	**Sn**	**10 05 54.9**	**+1.0**
KAF				MSG		10 05 57.7	
	comp=Z,15nm,0.1s						
SUF	**Sumiainen**	**2.54**	**10**	*e*PB	**Pb**	**10 05 38.7**	**-1.6**
SUF				*e*SB	**Sb**	**10 06 11.4**	**-0.8**

SUF				MSG		10 06 14.2	
	comp=Z,17nm,0.1s						
VAF	Ylistaro	3.06	338	eP	Pn	10 05 45.8	+2.4
VAF				eSB	Sb	10 06 24.9	-2.2
JOF	Joensuu	3.99	45	eP	Pn	10 05 56.2	0.0
JOF				eS	Sn	10 06 42.3	-1.5
JOF				MSG		10 07 00.3	
	comp=Z,4.1nm,0.2s						
HFS	Hagfors	5.72	274	eP	Pn	10 06 20.4	+0.4
HFS				eS	Sn	10 07 26.0	-0.4
HFS				eSG	Sg	10 07 55.3	-2.4
HFS	Hagfors	5.72	274	Pn	Pn	10 06 20.3	+0.3
	comp=Z,0.1nm,0.3s,baz=96,slow=13,SNR=9.7						
HFS				Sn	Sn	10 07 25.2	-1.2
	comp=Z,0.4nm,0.3s,baz=89,slow=29,SNR=6.3						
HFS				Lg		10 07 53.8	
	comp=Z,0.6nm,0.3s,baz=73,slow=31,SNR=5.5						
HFS	Hagfors	5.72	274	Pn	Pn	10 06 20.4	+0.4
	baz=106,slow=11						
HFS				Sn	Sn	10 07 26.0	-0.4
	baz=88,slow=28						
HFS				Lg		10 07 55.3	
	baz=80,slow=28						
NB2	NORSAR Subarra	6.91	283	eP	Pn	10 06 35.7	-0.6
NB2				eSG	Sg	10 08 30.1	-5.5
NB2	NORSAR Subarra	6.91	283	Pn	Pn	10 06 35.7	-0.6
	baz=92,slow=14						
NB2				Lg		10 08 30.1	
	baz=89,slow=28						
NOA	NORSAR Array B	6.91	283	Pn	Pn	10 06 35.6	-0.6
	comp=Z,0.3nm,0.3s,baz=96,slow=8.9,SNR=2.8						
NOA				Sn	Sn	10 07 52.0	-3.5
	comp=Z,0.3nm,0.3s,baz=232,slow=20,SNR=2.6						
NOA				Lg		10 08 25.4	
	comp=Z,0.4nm,0.3s,baz=75,slow=14,SNR=3.3						
ARA0	ARCESS Array S	9.35	1	Pn	Pn	10 07 08.6	-1.2
	baz=175,slow=14						
ARA0	ARCESS Array S	9.35	1	eP	Pn	10 07 08.6	-1.2
ARCES	ARCESS Array B	9.35	1	Pn	Pn	10 07 08.4	-1.4
	comp=Z,0.2nm,0.3s,baz=181,slow=13,SNR=17						
ARCES				Sn	Sn	10 08 47.8	-7.9
	comp=Z,0.1nm,0.3s,baz=175,slow=21,SNR=3.2						
AKASG	Malin Array Be	9.82	165	Pn	Pn	10 07 14.1	-2.1
	comp=Z,0.6nm,0.3s,baz=342,slow=13,SNR=3.6						

JMA 12 10:45:47.4, 2812N×14215E, h35km, M4.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.02	178	P	Pn	10 46 05.7	+0.5
CBIJ				eS	Sn	10 46 18.8	+0.5
JHJ2	Mitsune	5.37	339	P	Pn	10 47 07.8	+2.9
JHJ2				eS	Sn	10 48 08.6	+3.1
TK01	Tokai 1	6.86	326	P	Pn	10 47 28.6	+3.2
JHU	Hanno	8.08	343	P	Pn	10 47 44.2	+2.0
JHU				eS	Sn	10 49 12.7	+0.3
JRY	Ryogami san	8.34	342	P	Pn	10 47 49.5	+3.7
JRY				eS	Sn	10 49 21.1	+2.4
JHO	Hitachi	8.57	351	P	Pn	10 47 49.8	+0.9
JHO				eS	Sn	10 49 21.7	-2.7
JAG	Ashikaga	8.59	345	P	Pn	10 47 52.1	+2.9
JAG				eS	Sn	10 49 26.0	+1.2
JFK	Kawauchi	9.28	354	eS	Sn	10 49 37.1	-4.7
JMK	Ichinoseki	10.83	356	eS	Sn	10 50 12.7	-7.1

*BJI **12** 10:46:17.9, 197S×12807E, h10km, mB5.1, mb4.5*
*IDC **12** 10:46:26.2±0.8, 104S×12761E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.1/15, mbtmp4.1/8, ML3.4/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/20, Error ellipse: s-maj=56.0km s-min=16.5km az=79.0*
*NEIC **12** 10:46:27.5±0.4, 104S×12767E, h10km, mb4.7/9, Error ellipse: s-maj=19.9km s-min=5.5km az=67.0*
*ISCJB **12** 10:46:28.9±0.5, 105S±008×1277E±02, h33km, mb4.5/17, MS3.0/2, Error ellipse: s-maj=25.3km s-min=6.7km az=135.9*
ISC 12 10:46:31.0±0.5**, 108S**±008×**1278E**±02**, h35km, n30, σ0.86/29, mb4.5/17, MS3.0/2, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.45	158	eP	Pn	10 49 25.6	0.0
	12nm,0.6s						
FITZ	Fitzroy Crossi	17.05	187	P	Pn	10 50 27.7	+1.1
	0.1nm,0.3s,baz=0.0,slow=13,SNR=4.0						
FITZ				LR	LR	10 57 15.1	
	comp=Z,82nm,20.0s,baz=248,slow=38						
WRAB	Tennant Creek	19.81	161	eP	Pn	10 50 58.7	-1.5
	12nm,0.8s						
WB2	Warramunga Arr	19.82	161	eP	Pn	10 50 58.4	-1.9
AS31	Alice Springs	23.23	166	eP	P	10 51 35.1	0.0
ASAR	Alice Springs	23.23	166	P	P	10 51 34.1	-0.9
	4.7nm,0.8s,mb4.0,baz=344,slow=9.3,SNR=30						
ASAR				LR	LR	11 01 46.0	
	comp=Z,52nm,19.9s,MS3.0,baz=2.5,slow=40						
ASPA	Alice Springs	23.23	166	eP	P	10 51 35.1	0.0
JOW	Kunigami	27.75	1	LR	LR	11 01 46.7	
	comp=Z,37nm,18.6s,MS3.0,baz=174,slow=33						
STKA	Stephens Creek	33.30	158	eP	P	10 53 07.6	+2.3
	5.3nm,0.8s,mb4.5						
STKA	Stephens Creek	33.30	158	P	P	10 53 07.5	+2.2
	5.5nm,0.7s,mb4.6,baz=334,slow=8.1,SNR=9.9						
MJAR	Matsushiro Arr	38.66	13	P	P	10 53 51.5	+0.3
	2.9nm,1.0s,mb4.0,baz=183,slow=9.0,SNR=7.9						
XAN	Xi'an	39.17	335	P	P	10 53 55.2	-0.2
XAN				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.5						
LZH	Lanzhou	43.17	331	eP	P	10 54 28.5	+0.2
LZH				AP	pP	10 54 34.0	-4.6
LZH				XP	sP	10 54 38.0	-4.8
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
GTA	Gaotai	47.75	331	eP	P	10 55 05.6	+1.0
GTA				AP	pP	10 55 10.7	-4.3
GTA				XP	sP	10 55 14.6	-4.5
GTA				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.7						
JIRN	Jiri	49.10	309	eP	P	10 55 15.0	0.0
GUN	Gumba	49.47	309	eP	P	10 55 17.6	-0.2
	comp=Z,28nm,0.7s,mb5.4						
PKI	Pulchoki	49.67	308	eP	P	10 55 18.8	-0.5
KKN	Kakani	49.88	308	eP	P	10 55 19.8	-1.1
DMN	Daman	49.93	308	eP	P	10 55 21.6	+0.3
GKN	Gorkha	50.48	308	eP	P	10 55 25.6	+0.2
	comp=Z,12nm,0.7s,mb5.1						
KOLN	Koldanda	51.19	308	eP	P	10 55 30.7	-0.1
	comp=Z,20nm,0.8s,mb5.1						
ULN	Ulaanbaatar	51.98	342	eP	P	10 55 36.9	+0.2
	comp=Z,2.0nm,0.8s,mb4.1						
ULN				ePcP	PcP	10 56 49.0	+0.2
SONM	Songino Array	52.16	342	P	P	10 55 38.3	+0.3
	comp=Z,1.7nm,0.7s,mb4.1,baz=156,slow=7.6,SNR=11						
MKAR	Makanchi Array	62.09	326	P	P	10 56 47.7	-0.5
	comp=Z,2.8nm,0.4s,mb4.8,baz=122,slow=8.6,SNR=27						
MKAR	Makanchi Array	62.09	326	P	P	10 56 47.7	-0.5
KURK	Kurchatov	66.34	328	eP	P	10 57 15.5	-0.6
	comp=Z,9.3nm,0.8s,mb4.9						
CHKZ	Chkalovo	72.09	328	eP	P	10 57 51.1	-0.6
	comp=Z,2.2nm,0.8s,mb4.1						
CHKZ				ePcP	PcP	10 58 10.4	+0.4
VNDA	Vanda	78.56	173	P	P	10 58 29.7	+0.8
	comp=Z,0.5nm,0.7s,mb3.6,baz=325,slow=10,SNR=3.8						
MAW	Mawson	79.65	201	P	P	10 58 35.0	+0.1
	comp=Z,1.3nm,0.9s,mb3.8,baz=35,slow=7.1,SNR=4.3						
QSPA	South Pole Qui	88.86	180	eP	P	10 59 23.5	+2.0
	comp=Z,3.2nm,1.0s,mb4.6						

NEIC 12 10:49:09.7±0.7**, 3290N×10089W, h5km, MN2.8, Error ellipse: s-maj=12.2km s-min=9.4km az=1.0, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMTX	Amarillo	2.09	342	ePn	Pn	10 49 46.3	+1.0
AMTX				ePg	Pg	10 49 47.7	-2.0
AMTX				Sn	Sn	10 50 12.1	+0.4
AMTX				eSg	Sg	10 50 16.5	-0.2
WMOK	Wichita Mounta	2.54	43	ePn	Pn	10 49 51.7	+0.1
WMOK				eSn	Sn	10 50 24.3	+1.3
JCT	Junction City	2.58	159	ePn	Pn	10 49 52.4	+0.3
JCT				eSg	Sg	10 50 28.7	-3.9
MNTX	Cornudas Mount	3.98	254	ePn	Pn	10 50 11.7	+0.3
MNTX				ePg	Pg	10 50 22.4	-3.6
MNTX				Sn	Sn	10 51 02.0	+3.6
MNTX				eSg	Sg	10 51 13.0	-4.6
ANMO	Albuquerque	5.06	295	Pn	Pn	10 50 24.9	-1.3
ANMO				ePb	Pb	10 50 36.8	-1.9
ANMO				eSg	Sg	10 51 44.9	-7.3
LENM	Lemitar	5.23	286	Pn	Pn	10 50 37.0	+8.5
LENM				eSg	Sg	10 51 53.7	-4.1
LAZ	Ladron	5.42	288	ePn	Pn	10 50 32.0	+0.8
MIAR	Mount Ida	6.32	73	ePn	Pn	10 50 43.0	-0.4
MIAR				eSg	Sg	10 52 30.9	-1.7
MVCO	Mesa Verde	7.58	307	ePg	Pg	10 51 30.6	-4.2
MVCO				eSg	Sg	10 53 06.7	-6.2
ISCO	Idaho Springs	7.87	332	ePg	Pg	10 51 35.0	-5.4
ISCO				eSg	Sg	10 53 14.5	-7.8
SMCO	Snowmass	7.97	324	ePg	Pg	10 51 35.9	-6.4
PV01	Paradox Valley	8.15	312	ePg	Pg	10 51 41.1	-4.6
RSSD	Black Hills	11.47	349	PgPg		10 52 41.1	
RSSD				eLg		10 55 13.4	

*NIED **12** 11:11:00, 3700N×14170E, h32km, Mw4.2 Best double couple: $M_0$2.48000×10^15 NP1:ϕ_s25.00000°, δ89.00000°, λ106.00000°. NP2:ϕ_s119.00000°, δ16.00000°, λ5.00000°.*
*MOS **12** 11:11:31.8±1.1, 3702N×14186E, h38km, mb4.4/12, Error ellipse: s-maj=15.2km s-min=9.6km az=116.4*
*ISCJB **12** 11:11:32.0±0.8, 3698N±003×14177E±006, h35km±6km, mb4.2/21, MS3.7/10, Error ellipse: s-maj=7.8km s-min=5.6km az=39.5*
*NEIC **12** 11:11:33.2, 3699N×14165E, h50km, mb4.6/5, MW4.2(NIED), After JMA.*
NEIC Recorded [2 JMA] in Fukushima and [1 JMA] in Ibaraki, Miyagi and Tochigi Prefectures.
*JMA **12** 11:11:33.2±0.2, 3699N×14165E, h50km±3km, M4.5*
JMA Felt II J1.
*IDC **12** 11:11:34.2±3.7, 3700N×14170E, h35km±30km, mb3.9/11, mb1 4.0/14, mb1mx3.9/24, mbtmp4.1/14, ML3.8/3, MS3.5/11, Ms1 3.6/11, ms1mx3.3/21, Error ellipse: s-maj=21.1km s-min=17.9km az=102.0*
*BJI **12** 11:11:35.3, 3707N×14172E, h60km, mB4.8, mb4.6, Ms3.8, Msz3.7*
ISC 12 11:11:32.3±1.0**, 3701N**±003×**14172E**±005**, h22km**±6km**, n69, σ0.85/76, mb4.2/21, MS3.7/10, 1C-8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.74	277	⇓P	Pb	11 11 46.6	+0.1
ONAJ				eS	Sb	11 11 56.2	0.0
JFK	Kawauchi	0.76	298	⇓P	Pb	11 11 47.0	+0.2
JFK				eS	Sb	11 11 56.7	0.0
JHO	Hitachi	1.00	247	⇓P	Pb	11 11 49.9	-1.1
JHO				eS	Sb	11 12 02.3	-1.5
JMM	Marumori	1.12	319	⇓P	Pn	11 11 52.5	-0.2
JFT	Otama	1.21	295	⇓P	Pn	11 11 54.5	+0.6
JFT				eS	Sn	11 12 09.2	-0.5
JIO	Ouri	1.47	349	⇓P	Pn	11 11 57.3	-0.2
JIO				eS	Sn	11 12 14.4	-1.6
JOU	Okura	1.59	329	⇑P	Pn	11 11 59.6	+0.5
JOU				eS	Sn	11 12 19.3	+0.3
JFY	Yanaizu	1.65	284	⇓P	Pn	11 12 00.7	+0.7
JFY				eS	Sn	11 12 21.3	+0.7
JYS	Shirataka	1.78	313	P	Pn	11 12 02.7	+0.9
JAG	Ashikaga	1.91	253	⇓P	Pn	11 12 03.4	-0.2
JAG				S	Sn	11 12 26.8	-0.2
MJAR	Matsushiro Arr	2.86	262	Pn	Pn	11 12 17.8	+1.2
	20nm,0.3s,baz=83,slow=15,SNR=93						
MJAR				Sn	Sn	11 12 55.3	+5.1
	29nm,0.3s,baz=81,slow=25,SNR=9.0						
MJAR	Matsushiro Arr	2.86	262	P	Pn	11 12 17.8	+1.2
MJAR						11 12 55.3	
MJAR				pmax	pmax		
	comp=Z,20nm,0.3s						
MJAR				smax			
	comp=N,29nm,0.3s						
MAJO	Matsushiro	2.86	262	eP	Pn	11 12 17.7	+1.1
MAT	Matsushiro	2.86	262	P	Pn	11 12 18.1	+1.5
MAT				eS	Sn	11 12 54.6	+4.3
JHJ	Hachijo jima 2	4.20	203	Pn	Pn	11 12 35.3	+0.3
	comp=N,25nm,0.3s,baz=245,slow=19,SNR=24						
JHJ				Sn	Sn	11 13 20.7	-2.7
	comp=N,69nm,0.3s,baz=52,slow=21,SNR=8.4						
ASAJ	Asahikawa	7.13	5	Pn	Pn	11 13 15.2	-0.1
	comp=N,1.2nm,0.3s,baz=241,slow=11,SNR=10						
ASAJ				Sn	Sn	11 14 34.0	-1.6
	comp=N,1.7nm,0.3s,baz=320,slow=31,SNR=3.6						
ASAJ				LR	LR	11 16 50.7	
	comp=N,145nm,18.6s,baz=170,slow=44						
ASAJ	Asahikawa	7.13	5	P	Pn	11 13 15.2	0.0
ASAJ						11 14 34.0	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,145nm,18.6s						
VLA	Vladivostok	9.69	312	eP	Pn	11 13 55.0	+4.7
VLA				pmax	pmax		
	comp=Z,52nm,1.5s						
YSS	Yuzh-Sakhalins	9.96	4	P	Pn	11 13 54.0	-0.1
MDJ	Mudanjiang	11.91	313	P	Pn	11 14 27.8	+7.0
MDJ				AMB	AMB		
	comp=Z,11nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,30nm,4.0s						
CN2	Changchun	14.12	304	eP	Pn	11 14 51.4	+0.5
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s						
KLR	Kul'dur	14.20	332	eP	Pn	11 14 57.8	+5.8
KLR				MLR	MLR		
	comp=Z,1μm,13.0s						
JOW	Kunigami	15.26	232	LR	LR	11 20 27.9	
	comp=Z,98nm,21.0s,baz=229,slow=35						
BJI	Beijing	20.19	286	eP	P	11 16 05.4	0.0
BJI				AMB	AMB		
	comp=Z,11nm,0.9s						
YAK	Yakutsk	26.14	347	eP	P	11 17 05.3	+0.4
YAK				pmax	pmax		
	comp=N,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.3						
ULN	Ulaanbaatar	27.57	304	eP	P	11 17 16.8	-0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
ULN	Ulaanbaatar	27.57	304	eP	P	11 17 16.8	-0.9
	comp=Z,5.7nm,0.8s,mb4.2						
SONM	Songino Array	28.00	304	P	P	11 17 21.7	+0.1
	comp=Z,3.3nm,0.5s,mb4.2,baz=104,slow=8.9,SNR=19						
SONM				LR	LR	11 28 54.5	
	comp=Z,75nm,18.8s,MS3.3,baz=78,slow=37						
SONM	Songino Array	28.00	304	P	P	11 17 21.7	+0.2
SONM				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,75nm,18.8s						
ZAK	Zakamensk	30.47	308	eP	P	11 17 43.0	-0.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
KMI	Kunming	35.20	262	P	P	11 18 25.7	+0.9
KMI				PP	PP	11 19 44.3	-0.5
KMI				S	S	11 23 55.9	-1.0
KMI				SS	SS	11 26 11.2	-19
KMI				SSS		11 26 38.4	
KMI				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.4						
KMI				AMB	AMB		
	comp=Z,52nm,5.0s						
KMI				LR	LR		
	comp=N,97nm,17.1s						
KMI				LR	LR		
	comp=E,138nm,22.8s						
KMI				LR	LR		
	comp=Z,176nm,24.1s						
WMQ	Urumqi	41.07	297	eP	P	11 19 15.5	+1.3
WMQ				AP	pP	11 19 25.5	+4.7
WMQ				PP	PP	11 20 53.5	+4.4
WMQ				S	S	11 25 25.5	-0.2
WMQ				SS	SS	11 28 23.5	-4.8
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,101nm,4.0s						
WMQ				LR	LR		
	comp=N,85nm,12.0s,MS4.0						
WMQ				LR	LR		
	comp=E,104nm,12.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,68nm,12.0s,MS3.7						
ZAL	Zalesovo	42.12	312	P	P	11 19 22.8	-0.1
	comp=Z,2.2nm,0.7s,mb3.9,baz=24,slow=9.0,SNR=11						
ZAL	Zalesovo	42.12	312	P	P	11 19 22.8	-0.1
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NVS	Novosibirsk	43.03	314	eP	P	11 19 29.3	-0.9
MKAR	Makanchi Array	44.34	302	P	P	11 19 40.2	-0.6
	comp=Z,3.3nm,0.8s,mb4.1,baz=86,slow=10,SNR=22						
MKAR	Makanchi Array	44.34	302	P	P	11 19 40.2	-0.6
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	44.34	302	P	P	11 19 40.2	-0.6
KURK	Kurchatov	46.14	308	eP	P	11 19 54.7	-0.3
KURK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
KURK	Kurchatov	46.14	308	eP	P	11 19 54.7	-0.3
	comp=Z,8.2nm,0.6s,mb4.8						
KDAK	Kodiak Island	46.95	42	P	P	11 20 00.7	-0.7
	comp=Z,7.2nm,0.7s,mb4.7,baz=292,slow=5.0,SNR=4.6						
CHKZ	Chkalovo	50.50	313	eP	P	11 20 28.3	-0.4
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
CHKZ	Chkalovo	50.50	313	eP	P	11 20 28.3	-0.4
	comp=Z,4.3nm,0.5s,mb4.6						
INK	Inuvik	54.30	27	P	P	11 20 57.1	+0.3
	comp=Z,1.9nm,0.8s,mb4.1,baz=304,slow=8.8,SNR=4.6						
INK	Inuvik	54.30	27	P	P	11 20 57.1	+0.2
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FITZ	Fitzroy Crossi	56.88	198	eP	P	11 21 16.0	+0.6
	comp=Z,13nm,1.9s,mb4.6						
WB2	Warramunga Arr	57.07	188	eP	P	11 21 16.0	-0.8
AS31	Alice Springs	60.80	188	eP	P	11 21 42.8	+0.1
ASAR	Alice Springs	60.80	188	P	P	11 21 42.0	-0.6
	comp=Z,1.7nm,0.7s,mb4.3,baz=14,slow=6.4,SNR=24						
ASAR				LR	LR	11 46 19.6	
	comp=Z,68nm,21.0s,MS3.8,baz=230,slow=34						
ASPA	Alice Springs	60.80	188	eP	P	11 21 42.8	+0.1
ARCES	ARCESS Array B	64.10	339	LR	LR	11 52 50.8	
	comp=Z,37nm,21.1s,MS3.5,baz=77,slow=39						
KAF	Kangasniemi	68.44	333	ep	P	11 22 31.5	-1.0
	comp=Z,1.5nm,0.4s,mb4.4						
KAF	Kangasniemi	68.44	333	eP	P	11 22 31.5	-1.0
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
FINES	FINESS Array B	68.95	332	P	P	11 22 35.5	-0.2
	comp=Z,1.4nm,0.8s,mb4.0,baz=46,slow=8.2,SNR=6.0						
FINES				LR	LR	11 55 05.3	
	comp=Z,40nm,18.8s,MS3.7,baz=177,slow=38						
FINES	FINESS Array B	68.95	332	P	P	11 22 35.5	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES				MLR	MLR		
	comp=Z,40nm,18.8s						
NB2	NORSAR Subarra	74.30	337	P	P	11 23 07.9	0.0
	comp=Z,0.2nm,0.6s,mb3.2,baz=47,slow=6.2						
NOA	NORSAR Array B	74.30	337	P	P	11 23 07.3	-0.6
	comp=Z,0.9nm,0.7s,mb3.8,baz=39,slow=5.9,SNR=4.9						
NOA				LR	LR	11 57 47.5	
	comp=Z,63nm,21.9s,MS3.9,baz=175,slow=37						
NOA	NORSAR Array B	74.30	337	P	P	11 23 07.4	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,63nm,21.9s						
AKASG	Malin Array Be	74.46	322	P	P	11 23 08.5	-0.4
	comp=Z,0.4nm,0.4s,mb3.7,baz=46,slow=6.5,SNR=3.5						
AKASG				LR	LR	11 58 47.5	
	comp=Z,38nm,19.2s,MS3.7,baz=85,slow=38						
NVAR	Mina Array Bea	74.81	53	P	P	11 23 11.8	+1.0
	comp=Z,2.0nm,0.9s,mb4.0,baz=270,slow=9.4,SNR=11						
BRTR	Keskin Array B	79.05	312	LR	LR	12 03 04.8	
	comp=Z,20nm,19.8s,MS3.5,baz=266,slow=39						
PV10	Paradox Valley	80.61	49	eP	P	11 23 45.2	+1.9
CLL	Collm	81.23	330	P	P	11 23 49.0	+2.4
	comp=Z,logA/T=0.8,mb4.5						
CLL	Collm	81.23	330	eP	P	11 23 49.0	+2.4
	comp=Z,8.0nm,1.2s,mb4.5						
GERES	GERESS Array B	82.86	328	P	P	11 23 55.2	+0.1
	comp=Z,0.3nm,0.5s,mb3.5,baz=46,slow=7.6,SNR=2.6						
GERES				LR	LR	12 05 37.6	
	comp=Z,37nm,18.5s,MS3.8,baz=266,slow=39						
PPT	Papeete	84.41	117	eLR	LR	11 50 36.2	
	comp=Z,87nm,23.5s						
PPT	Papeete	84.41	117	LR	LR	11 54 39.5	
	comp=Z,72nm,19.7s,MS4.1,baz=103,slow=31						
TBI	Tubuai	88.31	121	eLR	LR	11 52 24.6	
	comp=Z,79nm,30.0s						
RKT	Rikitea	98.52	112	eLR	LR	11 57 08.3	
	comp=Z,65nm,27.8s						

*ATH **12** 11:31:10.7, 3703N×2834E, h54km±9km, MD3.0/3*
*CSEM **12** 11:31:12.5±0.1, 3693N×2803E, h17km±1km, MD2.7, Error ellipse: s-maj=2.8km s-min=2.2km az=179.0*
*ISK **12** 11:31:12.6, 3693N×2803E, h18km, MD2.7*
*ISCJB **12** 11:31:13.3±0.8, 3696N±005×2804E±005, h24km±10km, Error ellipse: s-maj=7.8km s-min=6.7km az=49.2*
ISC 12 11:31:13.4±0.6**, 3695N**±004×**2803E**±005**, h19km**±7km**, n7, σ0.75/12, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.27	48	PG	Pg	11 31 19.7	+0.2
YER				SG	Sg	11 31 24.1	+0.4
DAT	Datca	0.42	238	PG	Pg	11 31 21.5	-0.6
DAT				SG	Sg	11 31 28.0	0.0
DALT	Dalyan (Mudla)	0.52	110	ePG	Pg	11 31 22.8	-1.1
DALT				eSG	Sg	11 31 31.2	+0.2
BODT	Bodrum	0.58	281	ePG	Pg	11 31 24.7	-0.3
ARG	Arkhangelos	0.74	174	eP	Pg	11 31 27.1	-0.8
ARG				eS	Sg	11 31 39.4	+1.7
SMG	Samos	1.21	309	eP	Pn	11 31 34.8	-0.5
SMG				eS	Sb	11 31 52.0	+1.0
KARP	Karpathos	1.57	207	eP	Pn	11 31 40.1	-0.1

*ISCJB **12** 11:31:41.8±1.2, 4015N±003×1970E±007, h6km±6km, Error ellipse: s-maj=10.0km s-min=4.9km az=42.7*
*CSEM **12** 11:31:42.3±0.4, 4016N×1973E, h2km, MD3.3, Error ellipse: s-maj=6.9km s-min=2.8km az=111.0*
*ATH **12** 11:31:43.1, 4008N×1964E, h15km±3km, MD3.3/5*
*THE **12** 11:31:43.4, 4014N×1972E, h1km, ML2.8*
*NEIC **12** 11:31:43.1, 4008N×1964E, h15km, MD3.3(ATH), After ATH.*
ISC 12 11:31:42.3±1.3**, 4015N**±004×**1968E**±008**, h10km**±6km**, n14, σ0.99/25, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.29	60	i Pg	Pg	11 31 47.6	-0.5
TPE				i Sg	Sg	11 31 51.5	-0.5
KEK	Kerkira	0.45	168	ePB	Pg	11 31 50.6	-0.4
KEK				eSB	Sg	11 31 57.0	+0.1
LSK	Leskovik	0.70	90	i Pg	Pg	11 31 55.9	0.0
LSK				i Sg	Sg	11 32 05.6	+0.5
IGT	Igoumenitsa	0.80	141	ePg	Pg	11 31 57.2	-0.5
IGT				eSg	Sg	11 32 08.2	+0.2
JAN	Janina	1.03	118	ePN	Pn	11 32 02.2	-0.5
JAN				eSN	Sn	11 32 16.3	-0.9
MEV	Metsovon	1.25	107	ePg	Pg	11 32 06.8	+0.7
MEV				eSg	Sg	11 32 23.7	+1.4
FNA	Florina	1.44	63	ePg	Pg	11 32 08.9	-0.9
FNA				eSg	Sg	11 32 29.2	+0.7
FNA	Florina	1.44	63	ePg	Pg	11 32 08.9	-1.0
FNA				eSg	Sg	11 32 29.2	+0.6
BIA	Bitola	1.52	55	ePg	Pg	11 32 10.2	-1.3
BIA				eSg	Sg	11 32 31.9	+0.7
KZN	Kozani	1.61	84	ePN	Pg	11 32 14.0	+0.9
LKD	Levkas	1.63	152	ePg	Pn	11 32 12.2	+1.2
LKD				eSg	Sg	11 32 34.0	-0.6
EVR	Evrytania	2.06	126	ePN	Pn	11 32 19.4	+2.5
VLS	Valsamata	2.09	160	ePN	Pn	11 32 18.9	+1.5
AGG	Agios Georgios	2.34	118	ePn	Pb	11 32 22.4	-2.1
AGG				eSn	Sb	11 32 52.1	-1.3

MAN 12 11:32:54.2, 982N×12490E, h32km, mb2.6, ML4.1, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.32	352	eP	Pb	11 33 02.7	+0.6
MSLP				eS	Sb	11 33 09.9	+2.5
SCPH	Surigao	0.58	93	eP	Pb	11 33 06.7	+0.7
SCPH				eS	Sb	11 33 15.8	+1.8
TBP	Tagbilaran	1.03	263	eP	Pn	11 33 12.3	-0.1
TBP				eS	Sn	11 33 25.3	-0.5
LLP	Lapu-Lapu	1.05	298	⇑eP	Pn	11 33 12.4	-0.3
LLP				eS	Sn	11 33 26.4	+0.2
CGP	Cagayan de Oro	1.37	189	iS	Sn	11 33 36.3	+2.3
SNPH	Sibulan	1.71	254	eP	Pn	11 33 24.0	+2.3
BUKP	Musuan	1.93	175	eP	Pn	11 33 36.4	+12
PAGZ	Pagadian	2.47	218	eP	Pn	11 33 39.6	+7.5

ISCJB **12** *12:07:01.7±1.4, 527N±004×8248W±005, h10km±9km, mb4.4/48, MS4.1/24, Error ellipse: s-maj=8.7km s-min=4.8km az=121.5*

HRVD **12** *12:07:02.3±0.2, 502N×8258W, h21km±1km, MW5.1/75, Centroid moment Tensor Solution. LP body waves: s53,c76; Mantle waves: s75,c130; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.05±.15; $M_{\theta\theta}$0.32±.11; $M_{\phi\phi}$-0.37±.15; $M_{r\theta}$0.81±.22; $M_{\theta\phi}$5.66±.12; $M_{\phi r}$0.45±.26; Best double couple: $M_0$5.74500×10^{16} NP1:ϕ_s1.00000°, δ82.00000°, λ175.00000°. NP2:ϕ_s92.00000°, δ85.00000°, λ8.00000°. Principal axes: T 5.7860, Plg9.0000°, Azm317.0000°; N -0.0820, Plg81.0000°, Azm122.0000°; P -5.7040, Plg2.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC **12** *12:07:02.3±0.3, 511N×8252W, h10km, mb4.6/42 Error ellipse: s-maj=11.2km s-min=5.3km az=51.0*

BJI **12** *12:07:02.3, 510N×8250W, h10km, mB5.1, Ms4.8, Msz4.5*

CASC **12** *12:07:03.2±1.8, 528N×8257W, h6km±164km, MD4.3, mb4.6(NEIC)*

IDC **12** *12:07:07.7±2.8, 504N×8258W, h50km±26km, mb4.0/11, mb1 4.2/17, mb1mx4.1/26, mbtmp4.4/17, ML3.9/6, MS4.1/25, Ms1 4.1/25, ms1mx4.0/34, Error ellipse: s-maj=21.6km s-min=12.9km az=65.0*

ISC 12 12:07:04.5±1.7**, 527N**±004×**8247W**±005**, h15**km±10km**, n261, σ0.97**/235**, mb4.4**/48**, MS4.1**/24**, 69C-67D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTCR	Cotoan	3.62	355	⇑eP	Pn	12 07 59.7	-0.3
CTCR				eS	Sn	12 08 43.9	+1.5
BUS	Buena Vista	4.45	343	⇑eP	Pn	12 08 10.6	-0.8
BUS				eS	Sn	12 09 05.0	+2.0
LCR2	La Lucha 2	4.70	341	⇑eP	Pn	12 08 13.6	-1.3
LAJ	Bijagual	4.85	340	⇑iP	Pn	12 08 15.6	-1.4
LAJ				eS	Sn	12 09 13.2	+0.3
ICR	Volcan Irazu	4.88	344	⇑eP	Pn	12 08 18.2	+0.9
SJS	Escuela Geolog	4.90	341	⇓eP	Pn	12 08 17.5	-0.2
SJS				eS	Sn	12 09 12.5	-1.7
PRS1	Puriscal	5.03	339	⇑eP	Pn	12 08 17.2	-2.3
CGA2	Cerro Gallo 2	5.12	337	⇓eP	Pn	12 08 19.6	-1.0
JCR	Jicaral	5.26	330	⇑eP	Pn	12 08 19.9	-2.6
JCR				eS	Sn	12 09 21.7	-1.2
JTS	JuntasAbangare	5.57	334	P	Pn	12 08 24.3	-2.5
	52nm,0.3s,baz=150,slow=6.2,SNR=134						
JTS				S	Sn	12 09 28.0	-2.5
	97nm,0.3s,baz=102,slow=21,SNR=18						
VCR	Vista de Mar	5.76	327	⇑eP	Pn	12 08 27.6	-1.9
VCR				eS	Sn	12 09 34.6	-0.6
LIM1	Limonal	6.06	333	iP	Pn	12 08 32.8	-0.8
APYN	Apoyeque	7.92	331	eP	Pn	12 08 59.3	+0.3
COPN	Copaltepe	7.99	330	eP	Pn	12 09 01.0	+0.9
ROSC	El Rosal	8.11	93	P	Pn	12 09 06.6	+4.9
	3.6nm,0.3s,baz=91,slow=17,SNR=11						
ROSC	El Rosal	8.11	93	Pn	Pn	12 09 02.4	+0.7
MIRN	Miramar	8.27	330	eP	Pn	12 09 04.5	+0.6
LEON	Leon	8.34	329	eP	Pn	12 09 05.3	+0.4
SDV	Santo Domingo	12.28	72	P	Pn	12 10 01.9	+3.1
	1.9nm,0.3s,baz=271,slow=12,SNR=17						
SDV				S	Sn	12 12 20.5	+5.1
	2.9nm,0.3s,baz=344,slow=17,SNR=3.8						
SDV				LR	LR	12 14 39.9	
	comp=Z,818nm,20.6s,baz=241,slow=36						
SDV	Santo Domingo	12.28	72	ePn	Pn	12 10 01.6	+2.8
	29nm,0.6s						
SDV				eSn	Sn	12 12 13.8	-1.6
ATAH	Atahualpa	12.84	162	P	Pn	12 10 07.8	+1.2
	1.2nm,0.3s,baz=341,slow=6.0,SNR=10						
ATAH				LR	LR	12 14 38.1	
	comp=Z,4μm,19.6s,baz=334,slow=35						
CMIG	Matias Romero	16.91	315	P	Pn	12 11 00.9	+0.3
	0.3nm,0.3s,baz=133,slow=13,SNR=4.5						
CMIG				LR	LR	12 16 23.1	
	comp=Z,1μm,21.9s,baz=118,slow=33						
NNA	Nana	18.03	162	P	Pn	12 11 11.4	-3.1
	1.4nm,0.3s,baz=337,slow=8.3,SNR=9.2						
NNA				LR	LR	12 18 15.2	
	comp=Z,273nm,18.1s,baz=316,slow=37						
NNA	Nana	18.03	162	ePn	Pn	12 11 11.1	-3.4
	83nm,1.0s						
PCRV	Puerto La Cruz	18.32	73	P	Pn	12 11 19.8	+1.7
	0.9nm,0.3s,baz=209,slow=15,SNR=4.0						
SJG	San Juan	20.42	50	P	P	12 11 43.2	+2.1
	24nm,0.8s,baz=265,slow=8.1,SNR=7.7						
SJG				LR	LR	12 18 50.1	
	comp=Z,463nm,22.0s,MS3.8,baz=270,slow=34						
SJG	San Juan	20.42	50	eP	P	12 11 42.9	+1.8
	31nm,0.8s						
SAML	Samuel	23.85	126	eP	P	12 12 12.9	-4.4
	27nm,1.1s,mb4.6						
LRAL	Lakeview Retre	27.95	352	eP	P	12 12 54.1	-0.2
	11nm,0.8s,mb4.5						
OXF	Oxford	29.80	348	P	P	12 13 10.2	-0.6
	18nm,0.8s,mb4.8						
SIV	San Ignacio	29.91	135	P	P	12 13 09.7	-2.0
	1.4nm,0.7s,mb3.8,baz=295,slow=9.4,SNR=8.4						
LVC	Limon Verde	30.72	155	P	P	12 13 17.4	-1.4
	1.9nm,0.7s,mb4.1,baz=290,slow=9.5,SNR=3.7						
LVC	Limon Verde	30.72	155	P	P	12 13 18.0	-0.8
	7.5nm,1.1s,mb4.4						
MIAR	Mount Ida	30.90	342	P	P	12 13 19.6	-0.9
	4.0nm,1.0s,mb4.2						
WVT	Waverly	31.11	352	eP	P	12 13 21.1	-1.2
	6.3nm,0.6s,mb4.6						
SIUC	Southern Illin	32.88	350	eP	P	12 13 36.7	-1.1
	28nm,1.4s,mb5.0						
USIN	University of	32.89	352	eP	P	12 13 38.0	+0.1
	20nm,0.8s,mb5.1						
WMOK	Wichita Mounta	32.98	335	eP	P	12 13 36.8	-1.9
	5.4nm,1.1s,mb4.4						
CCM	Cathedral Cave	33.60	347	eP	P	12 13 42.9	-1.3
	11nm,0.8s,mb4.8						
MNTX	Cornudas Mount	33.95	324	eP	P	12 13 47.0	-0.2
	34nm,1.8s,mb5.0						
LAZ	Ladron	36.92	325	eP	P	12 14 14.1	+1.4
LAZ				ePP	PP	12 15 36.1	-0.7
ANMO	Albuquerque	36.93	326	eP	P	12 14 12.9	+0.1
	7.5nm,1.1s,mb4.4						
TUC	Tucson	37.74	319	eP	P	12 14 19.9	+0.2
	2.8nm,0.8s,mb4.0						
116A	Eloy	38.50	318	⇓P	P	12 14 26.9	+0.8
	baz=39,SNR=5.9						
SDCO	Great Sand Dun	38.55	330	P	P	12 14 20.7	-5.8
115A	Sonoran Desert	38.93	318	⇑P	P	12 14 30.5	+0.8
	baz=39						
CFAA	Coronel Fontan	39.09	161	P	P	12 14 28.4	-2.7
	0.3nm,0.7s,mb3.2,baz=359,slow=8.5,SNR=6.3						
CFAA	Coronel Fontan	39.09	161	P	P	12 14 28.4	-2.7
MVCO	Mesa Verde	39.71	327	eP	P	12 14 36.9	+0.6
CPUP	Villa Florida	39.75	143	P	P	12 14 34.9	-1.6
	1.7nm,0.7s,mb3.9,baz=281,slow=6.4,SNR=5.7						
CPUP				LR	LR	12 32 15.2	
	comp=Z,397nm,20.7s,MS4.2,baz=299,slow=38						
CPUP	Villa Florida	39.75	143	eP	P	12 14 34.8	-1.8
	13nm,0.8s,mb4.7						
Z14A	Wintersburg	39.81	318	⇑P	P	12 14 37.8	+0.7
	baz=40						
BDFB	Brasilia	39.94	122	LR	LR	12 33 35.1	
	comp=Z,498nm,19.0s,MS4.4,baz=303,slow=40						
X15A	Humboldt	40.06	320	⇑P	P	12 14 40.1	+1.0
	baz=40,SNR=10						
WUAZ	Wupatki	40.19	322	eP	P	12 14 41.3	+1.1
	20nm,1.2s,mb4.7						
WUAZ				e		12 14 52.5	
Y14A	Wickenburg	40.21	319	⇓P	P	12 14 41.2	+0.9
	baz=40						
ISCO	Idaho Springs	40.22	332	eP	P	12 14 40.1	-0.3
	3.2nm,0.7s,mb4.2						
SMCO	Snowmass	40.39	330	eP	P	12 14 43.2	+1.4
	6.3nm,0.8s,mb4.4						
PV01	Paradox Valley	40.43	328	eP	P	12 14 43.1	+1.0
X14A	Yava	40.46	320	⇓P	P	12 14 43.4	+1.0
	baz=41,SNR=6.7						
W15A	Williams	40.52	321	⇑P	P	12 14 44.5	+1.6
	baz=41						
Y13A	Salome	40.67	318	⇓P	P	12 14 45.2	+1.0
	baz=41,SNR=8.2						
PV10	Paradox Valley	40.85	327	eP	P	12 14 45.9	+0.2
GLA	Glamis	40.89	317	⇓P	P	12 14 46.6	+0.6
	baz=41						
W14A	Seligman	41.05	321	⇓P	P	12 14 48.7	+1.3
	baz=41,SNR=6.0						
Y12C	Blythe	41.10	318	⇑P	P	12 14 48.2	+0.5
	baz=41						
X13A	Yucca	41.15	319	⇓P	P	12 14 48.7	+0.5
	baz=41						
PDMCI	Parker Dam,Lak	41.17	319	⇓P	P	12 14 49.1	+0.8
	baz=41						
W13A	Hualapai Mount	41.49	320	⇓P	P	12 14 52.4	+1.4
	baz=42,SNR=9.1						
IRM	Iron Mountain	41.76	318	⇑P	P	12 14 54.0	+0.9
	baz=42						
MONP	Monument Peak	41.90	315	⇑P	P	12 14 55.0	+0.7
	baz=42						
SRU	San Rafael	42.19	327	eP	P	12 14 57.2	+0.6
	7.6nm,0.9s,mb4.3						
BELC	Belle Mtn.	42.24	317	P	P	12 14 58.0	+1.0
	baz=42,SNR=6.0						
W12A	Cal Nev Ari	42.26	319	⇓P	P	12 14 57.7	+0.5
	baz=42						
PFO	Pinyon Flat Ob	42.33	316	⇓P	P	12 14 58.6	+0.9
	baz=42						
109C	Camp Elliot, M	42.38	315	⇑P	P	12 14 58.8	+0.6
	baz=42						
V12A	Nelson	42.50	320	P	P	12 15 00.3	+1.1
	baz=43,SNR=8.1						
CCUT	Cedar City	42.74	323	eP	P	12 15 01.9	+0.8
U12A	Valley of Fire	42.74	321	⇑P	P	12 15 02.0	+0.9
	baz=43						
MURC	Murrieta	42.84	316	⇓P	P	12 15 02.3	+0.4
	baz=43						
ARUT	Antelope Range	42.94	323	eP	P	12 15 03.6	+0.8
HEC	Hector,Ludlow	42.94	318	⇓P	P	12 15 03.4	+0.7
	baz=43						
BBRC	Big Bear Sol-O	43.02	317	⇑P	P	12 15 04.3	+1.0
	baz=43						
TUQ	Turquoise Mtn.	43.02	319	⇓P	P	12 15 04.4	+0.9
	baz=43						
RSSD	Black Hills	43.09	337	eP	P	12 15 04.4	+0.4
	20nm,1.5s,mb4.6						
U11A	Corn Creek	43.27	320	⇓P	P	12 15 06.4	+1.0
	baz=43						
MPU	Maple Canyon	43.43	327	P	P	12 15 00.9	-5.8
	6.6nm,0.9s,mb4.4						
BFSC	Mount Baldy St	43.51	316	⇑P	P	12 15 07.6	+0.3
	baz=44						
GSC	Goldstone	43.53	318	⇓P	P	12 15 08.0	+0.5
	baz=44						
SHOC	Shoshone	43.53	319	⇓P	P	12 15 08.2	+0.7
	baz=44						
FMP	Fort Macarthur	43.66	315	⇓P	P	12 15 08.9	+0.3
	baz=44						
U10A	Ash Meadows, A	43.87	320	⇑P	P	12 15 11.3	+1.0
	baz=44						
EDW2	Edwards Air Fo	44.09	317	⇑P	P	12 15 12.0	0.0
	baz=44						
TPNV	Topopah Spring	44.14	320	eP	P	12 15 12.9	+0.5
	30nm,1.9s,mb4.7						
TPNV	Topopah Spring	44.14	320	⇓P	P	12 15 13.7	+1.2
	baz=44						
LRMC	Laurel Mountai	44.22	318	⇓P	P	12 15 13.3	+0.2
	baz=44						
FURC	Furnace Creek,	44.25	319	⇓P	P	12 15 14.0	+0.7
	baz=44						
PDAR	Pinedale Array	44.39	331	P	P	12 15 14.7	+0.2
	2.0nm,0.7s,mb4.0,baz=127,slow=9.6,SNR=18						
PDAR				LR	LR	12 35 59.5	
	comp=Z,249nm,18.6s,MS4.2,baz=272,slow=39						
MPMC	Manual Prospec	44.42	318	⇓P	P	12 15 15.1	+0.4
	baz=45						
HWUT	Hardware Ranch	44.53	329	eP	P	12 15 15.7	+0.2
	3.8nm,0.6s,mb4.4						
Q12A	Willow Creek R	44.58	324	⇓P	P	12 15 16.7	+0.8
	baz=45						
ARVC	Arvin	44.80	316	⇑P	P	12 15 17.7	0.0
	baz=45						
ISA	Isabella	44.85	317	P	P	12 15 15.9	-2.2
	1.4nm,0.9s,mb3.8						
ISA	Isabella	44.85	317	⇑P	P	12 15 18.7	+0.5
	baz=45						
GRAC	Grapevine Rang	44.89	320	⇑P	P	12 15 18.6	+0.2
	baz=45						
P12A	McGill	44.91	324	⇓P	P	12 15 19.6	+1.0
	baz=45						
R10A	Warm Springs	44.99	322	⇑P	P	12 15 20.6	+1.4
	baz=45						
CWC	Cottonwood Cre	45.03	318	⇓P	P	12 15 20.0	+0.4
	baz=45						
S09A	Goldfield	45.23	320	P	P	12 15 21.8	+0.7
	baz=45,SNR=10						
O12A	Currie	45.34	325	⇓P	P	12 15 22.7	+0.8
	baz=46						
VES	Vestal, Richgr	45.36	317	⇑P	P	12 15 22.9	+0.7
	baz=46						
PKM	Peak Mountain	45.36	316	⇓P	P	12 15 22.5	+0.4
	baz=46						
N13A	Wendover, West	45.43	326	⇓P	P	12 15 23.2	+0.5
	baz=46						
TPH	Tonopah	45.44	321	P	P	12 15 23.6	+0.8
	7.3nm,0.7s,mb4.6						
R09A	Tonopah	45.44	321	P	P	12 15 23.6	+0.8
	baz=46,SNR=9.1						
REDW	Red Top Meadow	45.47	331	eP	P	12 15 23.4	+0.5
	7.9nm,1.0s,mb4.5						
LOHW	Long Hollow	45.53	331	eP	P	12 15 23.2	-0.3
	2.4nm,0.7s,mb4.2						
TPAW	Teton Pass	45.61	331	eP	P	12 15 24.1	0.0
	13nm,1.3s,mb4.7						
RRI2	Red Ridge	45.68	331	eP	P	12 15 25.1	+0.4
	7.1nm,0.8s,mb4.7						
MOOW	Moose Ponds	45.70	331	eP	P	12 15 22.9	-2.0
	7.1nm,1.4s,mb4.4						
SMMC	Simmler	45.71	316	⇓P	P	12 15 24.5	-0.4
	baz=46						
RCTC	Rector, Farmer	45.73	318	⇑P	P	12 15 25.0	-0.1
	baz=46						
M13A	Montello	45.75	326	⇓P	P	12 15 25.5	+0.3
	baz=46						
O11A	Cowboy Ranch,	45.78	324	⇑P	P	12 15 25.8	+0.3
	baz=46						
HELL	Mitchell Peak,	45.79	318	P	P	12 15 25.8	+0.2
	baz=46,SNR=7.8						
N12A	Clover Valley,	45.89	325	⇓P	P	12 15 26.7	+0.3
	baz=46						
IMW	Indian Meadow	45.91	331	eP	P	12 15 28.9	+2.5
	2.6nm,0.7s,mb4.3						
P10A	Eureka	45.93	323	⇑P	P	12 15 27.4	+0.7
	baz=46						
FLWY	Flagg Ranch	45.93	332	eP	P	12 15 26.4	-0.3
	2.7nm,0.6s,mb4.3						
R08A	Mina	46.16	321	⇑P	P	12 15 29.3	+0.8
	baz=46,SNR=7.3						
M12A	Wells	46.20	326	⇑P	P	12 15 28.9	+0.1
	baz=46						
MLAC	Mammoth Lakes	46.21	319	⇑P	P	12 15 29.7	+0.9
	baz=46						
ULM	Lac du Bonnet	46.23	348	P	P	12 15 27.6	-1.4
	2.3nm,0.7s,mb4.2,baz=175,slow=3.4,SNR=3.6						
N11A	Elko Archery C	46.27	325	⇑P	P	12 15 29.6	+0.3
	baz=46						
P09A	Austin	46.29	323	⇓P	P	12 15 30.0	+0.6
	baz=46						
NVAR	Mina Array Bea	46.33	321	P	P	12 15 30.8	+1.0
	5.2nm,0.8s,mb4.5,baz=130,slow=8.1,SNR=35						
U05C	Westside ANR,	46.34	317	⇓P	P	12 15 29.7	-0.2
	baz=46						
KCC	Kaiser Creek	46.35	319	⇑P	P	12 15 30.6	+0.7
	baz=46						
Q08A	Gabbs	46.35	321	⇑P	P	12 15 30.3	+0.3
	baz=46,SNR=6.5						
O10A	Cortez Mining,	46.37	324	⇓P	P	12 15 30.4	+0.2
	baz=47						
T06C	Millerton Lake	46.43	318	⇓P	P	12 15 30.4	-0.2
	baz=47						
N10A	Dunphy	46.65	324	⇑P	P	12 15 32.7	+0.4
	baz=47						
O09A	Fish Creek Ran	46.70	323	P	P	12 15 33.4	+0.7
	baz=47,SNR=8.8						
GCMT	Greycliff	46.78	334	eP	P	12 15 33.0	-0.3
QLMT	Earthquake Lak	46.84	332	eP	P	12 15 35.2	+1.4
BMN	Battle Mountai	46.89	323	eP	P	12 15 34.4	+0.3
	14nm,1.1s,mb4.8						
T05C	Eagle Field, D	47.02	317	⇑P	P	12 15 35.1	0.0
	baz=47						
PLCA	Paso Flores	47.06	168	eP	P	12 15 31.9	-3.7
	5.1nm,0.8s,mb4.5						
R06C	Coleville	47.12	320	⇓P	P	12 15 36.7	+0.7
	baz=47,SNR=5.5						
M10A	I.L. Ranch, Tu	47.19	325	⇑P	P	12 15 37.6	+1.0
	baz=47						
N09A	Rock Creek Ran	47.33	324	⇓P	P	12 15 37.8	+0.1
	baz=48						
HLID	Hailey	47.40	328	eP	P	12 15 38.5	+0.3
	2.8nm,0.9s,mb4.2						
CMB	Columbia Colle	47.45	319	P	P	12 15 34.6	-4.0
CMB	Columbia Colle	47.45	319	⇓P	P	12 15 38.3	-0.3
	baz=48						
PACP	Pacheco Peak	47.49	317	⇓P	P	12 15 38.8	-0.1
	baz=48						
R05C	Kirkwood Meado	47.62	320	⇑P	P	12 15 40.4	+0.5
	baz=48						
N08A	GE Springer Mi	47.65	323	⇑P	P	12 15 40.4	+0.3
	baz=48						
O07A	Toulon	47.72	322	⇑P	P	12 15 40.6	-0.1
	baz=48						
WCN	Washoe City	47.76	321	⇑P	P	12 15 41.3	+0.3
	baz=48						
R04C	Big Horse Ranc	47.93	319	⇓P	P	12 15 42.8	+0.5
	baz=48						
LAVA	Lava Cap Winer	48.08	319	⇓P	P	12 15 43.5	+0.1
	baz=48						
WENL	Wente Brothers	48.13	318	⇓P	P	12 15 45.2	+1.3
	baz=48						
L09A	Wilkinson Ranc	48.15	325	⇑P	P	12 15 43.9	-0.1
	baz=48						
M08A	Happy Creek Ra	48.21	324	⇓P	P	12 15 44.3	-0.1
	baz=48						
P05C	Yuba Gap, Truc	48.30	320	⇓P	P	12 15 45.3	+0.1
	baz=48						
O06A	Flanigan	48.31	321	⇑P	P	12 15 45.1	-0.1
	baz=48						
BDM	Black Diamond	48.38	318	⇑P	P	12 15 45.4	-0.4
	baz=48						
BEKR	Beckwourth	48.47	321	⇑P	P	12 15 46.6	+0.2
	baz=49						
Q04C	Lincoln	48.54	319	⇑P	P	12 15 46.6	-0.4
	baz=49						
K09A	Rome	48.62	325	⇓P	P	12 15 47.4	-0.2
	baz=49,SNR=20						
M07A	Soldier Meadow	48.64	323	⇑P	P	12 15 46.9	-0.9
	baz=49						
L08A	Fields	48.65	325	⇑P	P	12 15 46.9	-1.0
	baz=49						
N06A	Buffalo Meadow	48.66	322	⇑P	P	12 15 47.3	-0.6
	baz=49,SNR=5.8						
O05C	Quincy	48.87	321	⇓P	P	12 15 49.4	-0.1
	baz=49						
OHCM	Honcut	48.88	320	eP	P	12 15 49.3	-0.3
WVOR	Wild Horse Val	48.97	325	eP	P	12 15 50.0	-0.4
	29nm,1.5s,mb5.1						
ORV	Oroville	49.02	320	⇓P	P	12 15 50.9	+0.3
	baz=49,SNR=6.5						
SUTB	Sutter Butte	49.02	319	⇑P	P	12 15 50.2	-0.5
	baz=49						
K08A	Mann Creek Ran	49.07	325	⇑P	P	12 15 51.2	+0.1
	baz=49,SNR=10						
L07A	Adell	49.12	324	⇑P	P	12 15 51.5	0.0
	baz=49						
ELFS	Eagle Lake Fie	49.13	321	⇓P	P	12 15 51.0	-0.5
	baz=49						
O04C	Chester	49.18	321	⇑P	P	12 15 51.8	-0.1
	baz=49						
M06C	Likely Place G	49.32	322	⇓P	P	12 15 52.8	-0.2
	baz=50						
I09A	Lost Marbles R	49.45	327	⇓P	P	12 15 53.3	-0.7
	baz=50						
O03C	Acorn Hollow,	49.60	320	⇓P	P	12 15 52.3	-2.8
	baz=50						
M05C	Lookout	49.82	322	⇓P	P	12 15 56.0	-0.8
	baz=50						
H09A	Durkee	49.87	327	⇓P	P	12 15 56.3	-0.8
	baz=50						
P01C	Double 8 Ranch	50.16	319	⇑P	P	12 15 57.3	-2.1
	baz=50						
H08A	Prairie City	50.32	327	⇑P	P	12 15 59.7	-0.9
	baz=50						
J06A	Christmas Vall	50.35	325	⇑P	P	12 15 59.6	-1.3
	baz=50						
M03C	McCloud	50.37	321	⇑P	P	12 15 58.4	-2.6
	baz=50						
M04C	Macdoel	50.49	322	⇓P	P	12 16 00.2	-1.7
	baz=51						
I07A	Izee	50.50	326	⇓P	P	12 16 00.9	-1.1
	baz=51						
L04A	Klamath Falls	50.74	322	⇓P	P	12 16 02.7	-1.1
	baz=51						
I06A	Prineville	50.81	325	⇑P	P	12 16 02.6	-1.7
	baz=51						
M02C	Callahan	50.90	321	⇓P	P	12 16 03.3	-1.6
	baz=51						
K04A	Chilquin	50.90	323	⇑P	P	12 16 03.3	-1.7
	baz=51						
YBH	Yreka Blue Hor	50.99	322	LR	LR	12 38 06.1	
	comp=Z,329nm,20.3s,MS4.3,baz=142,slow=36						
YBH	Yreka Blue Hor	50.99	322	⇓P	P	12 16 04.7	-1.0
	baz=51						
J05A	Fort Rock	51.00	324	⇓P	P	12 16 05.4	-0.3
	baz=51						
SCHQ	Schefferville	51.01	12	P	P	12 16 07.3	+1.6
	4.7nm,0.9s,mb4.4,baz=160,slow=7.6,SNR=4.8						
SCHQ				LR	LR	12 36 35.6	
	comp=Z,145nm,21.4s,MS4.0,baz=120,slow=34						
SCHQ	Schefferville	51.01	12	eP	P	12 16 04.8	-0.9
	13nm,1.0s,mb4.8						
WALA	Waterton Lakes	51.13	334	eP	P	12 16 06.4	-0.3
	3.4nm,0.8s,mb4.3						
F08A	Pendleton	51.20	328	⇓P	P	12 16 06.2	-1.0
	baz=51						
I05A	Bend	51.55	325	⇑P	P	12 16 09.7	-0.1
	baz=52						
NEW	Newport	52.04	331	LR	LR	12 39 10.0	
	comp=Z,220nm,19.7s,MS4.2,baz=289,slow=37						
K02A	Glendale	52.05	322	⇑P	P	12 16 12.9	-0.7
	baz=52						
H04A	Detroit Lake	52.39	325	⇓P	P	12 16 15.4	-0.7
	baz=53						
F05A	White Salmon	52.71	326	⇑P	P	12 16 18.1	-0.4
	baz=53						
G04A	Mulino	52.87	325	⇑P	P	12 16 19.1	-0.6
	baz=53						
I02A	Mapleton	52.95	323	⇑P	P	12 16 19.9	-0.4
	baz=53						
F04A	Amboy	53.27	326	⇑P	P	12 16 21.7	-0.8
	baz=54						
D05A	Enumclaw	53.80	327	⇑P	P	12 16 26.0	-0.5
	baz=54						
C05A	Tolt Reservoir	53.96	328	⇓P	P	12 16 26.9	-0.8
	baz=54						
EDM	Edmonton	54.07	338	eP	P	12 16 27.6	-0.8
D04A	Dobbs Creek Ra	54.19	327	⇓P	P	12 16 28.1	-1.3
	baz=54						
E03A	Lebam	54.27	326	⇓P	P	12 16 29.7	-0.3
	baz=54						
C04A	Brinnon	54.65	327	⇑P	P	12 16 31.9	-0.8
	baz=55						
A05A	Maple Falls	54.98	329	⇓P	P	12 16 34.4	-0.8
	baz=55						
A04A	Legoe Bay, Lum	55.13	329	⇑P	P	12 16 35.7	-0.5
	baz=55						
RKT	Rikitea	58.51	239	eS	S	12 24 59.4	-3.7
	132nm,32.8s						
RKT				eLR	LR	12 34 33.9	
	465nm,28.2s						
BBB	Bella Bella	59.97	329	LR	LR	12 45 32.8	
	comp=Z,139nm,19.1s,MS4.1,baz=92,slow=38						
YKA	Yellowknife Ar	61.82	344	P	P	12 17 22.0	-0.8
	1.7nm,0.7s,mb4.3,baz=141,slow=6.1,SNR=15						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA				LR	LR	12 49 06.8	
	comp=Z,75nm,18.3s,MS3.9,baz=90,slow=41						
PPT	Papeete	69.99	249	eS	S	12 27 17.9	-7.4
	66nm,23.5s						
PPT				eLR	LR	12 39 41.2	
	198nm,25.8s,baz=60						
PPT	Papeete	69.99	249	LR	LR	12 40 07.0	
	comp=Z,84nm,21.7s,MS4.0,baz=112,slow=28						
TBI	Tubuai	71.23	243	eLR	LR	12 40 29.6	
	645nm,29.0s						
INK	Inuvik	71.50	342	LR	LR	12 52 23.3	
	comp=Z,274nm,19.8s,MS4.5,baz=299,slow=38						
SUMG	Summit	72.38	13	P	P	12 18 29.6	-0.3
	9.2nm,1.1s,mb4.6						
BORG	Borgarnes	73.23	23	LR	LR	12 45 54.5	
	comp=Z,70nm,21.2s,MS3.9,baz=9.9,slow=32						
MCK	McKinley	75.02	335	eP	P	12 18 44.8	-0.6
KDAK	Kodiak Island	75.03	329	LR	LR	12 52 45.4	
	comp=Z,121nm,20.3s,MS4.2,baz=13,slow=36						
IMA2	Indian Mountai	77.64	337	eP	P	12 18 58.2	-2.1
ESDC	Sonseca Array	77.81	51	P	P	12 19 01.7	+0.5
	1.2nm,0.7s,mb4.0,baz=268,slow=5.3,SNR=8.2						
ESDC				LR	LR	12 46 33.7	
	comp=Z,69nm,21.8s,MS3.9,baz=290,slow=30						
ESLA	Sonseca Array	77.81	51	P	P	12 19 03.9	+2.7
	1.6nm,1.0s,mb3.9						
JMIC	Jan Mayen	79.84	19	LR	LR	12 50 03.8	
	comp=Z,58nm,21.8s,MS3.9,baz=99,slow=32						
TORD	Torodi Ar. Bea	83.15	77	P	P	12 19 29.9	+0.1
	1.2nm,1.0s,mb3.9,baz=285,slow=4.0,SNR=7.0						
TORD				LR	LR	12 51 08.8	
	comp=Z,76nm,21.1s,MS4.0,baz=310,slow=32						
NOA	NORSAR Array B	87.22	29	LR	LR	12 54 18.6	
	comp=Z,34nm,18.4s,MS3.8,baz=275,slow=32						
GERES	GERESS Array B	90.13	41	LR	LR	12 58 08.8	
	comp=Z,68nm,19.2s,MS4.1,baz=276,slow=34						
ARCES	ARCESS Array B	91.30	20	LR	LR	12 55 52.5	
	comp=Z,73nm,21.7s,MS4.1,baz=113,slow=32						
FINES	FINESS Array B	94.14	27	LR	LR	12 57 45.7	
	comp=Z,68nm,21.4s,MS4.1,baz=342,slow=32						
QSPA	South Pole Qui	95.28	180	eP	P	12 20 27.3	-0.5
	3.1nm,0.7s,mb4.8						
AKASG	Malin Array Be	99.42	37	LR	LR	13 01 55.5	
	comp=Z,46nm,20.2s,MS4.0,baz=305,slow=33						
MDJ	Mudanjiang	122.61	333	PKP	PKPdf	12 25 57.3	-2.2
MDJ				PP	PP		
	comp=Z,34nm,4.7s						
MDJ				LR	LR		
	comp=N,38nm,28.4s,MS4.4						
MDJ				LR	LR		
	comp=E,109nm,24.8s,MS4.4						
MDJ				LR	LR		
	comp=Z,49nm,23.1s,MS4.1						
CN2	Changchun	125.05	336	ePKP	PKPdf	12 26 04.4	+0.2
MKAR	Makanchi Array	126.43	13	PKP	PKPdf	12 26 05.0	-1.8
	comp=Z,0.4nm,0.6s,baz=36,slow=1.4,SNR=5.4						
WMQ	Urumqi	130.34	9	ePKP	PKPdf	12 26 15.0	+0.7
HHC	Hu-ho-hao-te	132.34	346	ePKP	PKPdf	12 26 14.4	-3.7
HHC				PP	PP	12 28 39.4	-1.4
HHC				PKS		12 29 49.0	
HHC				SKS	SKSdf	12 33 23.6	-5.3
HHC				SKKS	SKKSac	12 35 32.4	-4.1
HHC				SS	SS	12 46 17.9	-0.8
HHC				PP	PP		
	comp=Z,33nm,6.9s						
HHC				LR	LR		
	comp=N,101nm,32.3s,MS4.5						
HHC				LR	LR		
	comp=E,97nm,34.1s,MS4.5						
HHC				LR	LR		
	comp=Z,147nm,35.1s,MS4.4						
SSE	Sheshan	137.36	329	PKP	PKPdf	12 26 27.4	0.0
SSE				PP	PP	12 29 15.8	+3.2
SSE				SS	SS	12 47 21.8	+2.7
SSE				LR	LR		
	comp=N,35nm,20.3s,MS4.5						
SSE				LR	LR		
	comp=E,92nm,20.3s,MS4.5						
SSE				LR	LR		
	comp=Z,44nm,20.7s,MS4.2						
NJ2	Nanjing	137.70	333	ePKP	PKPdf	12 26 23.1	-5.0
NJ2				PP	PP	12 29 15.0	+0.3
NJ2				PKS		12 29 58.0	
NJ2				PP	PP		
	comp=Z,60nm,6.7s						
LZH	Lanzhou	138.44	352	ePKP	PKPdf	12 26 24.2	-5.2
ASAR	Alice Springs	140.50	239	PKhKP		12 26 26.1	
	comp=Z,0.4nm,0.8s,baz=125,slow=3.6,SNR=5.0						
ASAR				PKP	PKPdf	12 26 33.9	+0.7
	comp=Z,0.7nm,0.8s,baz=81,slow=2.3,SNR=5.0						
CD2	Chengdu	143.54	351	ePKP	PKPdf	12 26 34.9	-3.7
KOLN	Koldanda	144.51	22	eP	PKPdf	12 26 42.1	+1.8
GKN	Gorkha	144.66	20	eP	PKPdf	12 26 40.7	+0.1
KKN	Kakani	145.07	19	eP	PKPbc	12 26 41.3	+0.6
	comp=Z,24nm,0.7s						
GUN	Gumba	145.15	18	eP	PKPbc	12 26 42.9	+1.9
	comp=Z,58nm,1.1s						
DMN	Daman	145.18	20	eP	PKPbc	12 26 41.9	+0.8
	comp=Z,34nm,1.0s						
PKI	Pulchoki	145.32	19	eP	PKPbc	12 26 43.4	+1.9
	comp=Z,23nm,1.0s						
JIRN	Jiri	145.48	18	eP	PKPdf	12 26 43.8	+1.8
GYA	Guiyang	147.25	345	PKP	PKPdf	12 26 48.9	+3.9
KMI	Kunming	149.37	351	PKP	PKPdf	12 26 46.0	-2.4
KMI				APKP		12 26 50.1	
KMI				XPKP		12 26 52.9	

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*ISCJB **12** 12:34:10.2±0.6, 4777N±003×801E±004, h2km, Error ellipse: s-maj=4.7km s-min=4.3km az=27.2*
*ZUR **12** 12:34:10.9, 4779N×804E, h3km±6km, ML1.5/4*
*STR **12** 12:34:10.5±0.8, 4779N×8.10E, h2km±1km, Ml1.7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **12** 12:34:10.9±0.4, 4779N×806E, h10km, Md2.6/2, Ml2.3/2, Error ellipse: s-maj=5.7km s-min=3.3km az=110.0*
ISC 12 12:34:11.1±0.6**, 4778N**±003×**804E**±004**, h2**km**, n11, σ0s58**/17**, 2C, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SULZ	Sulz-Cheisache	0.26	168	⇑iPg	Pg	12 34 16.4	+0.3
	168nm,0.9s						
SLE	Schleitheim	0.31	93	⇑iPg	Pg	12 34 17.2	+0.2
	103nm,1.1s						
TRULL	Truellikon	0.46	107	ePg	Pg	12 34 20.2	+0.4
	28nm,0.2s						
BFO	Black Forest	0.58	20	ePg	Pg	12 34 21.6	-0.6
BFO				eSg	Sg	12 34 29.3	-0.5
BOURR	Bourrignon	0.67	235	ePn	Pg	12 34 24.3	+0.4
	36nm,1.5s						
ECH	Echery	0.73	307	Pg	Pg	12 34 25.1	0.0
ECH				Sg	Sg	12 34 34.3	-0.3
WLS	Welschbruch	0.78	324	Pg	Pg	12 34 26.3	+0.3
WLS				Sg	Sg	12 34 37.6	+1.4
HINF	Hinteralfeld	0.80	273	ePg	Pg	12 34 26.3	-0.1
HINF				eSg	Sg	12 34 37.5	+0.7
	6.3nm,0.2s						
CDF	Champ du Feu	0.81	321	ePg	Pg	12 34 26.4	-0.2
CDF				eSg	Sg	12 34 37.3	+0.2
	4.5nm,0.2s						
HAU	Haudompre	1.16	282	ePg	Pg	12 34 32.0	-1.3
HAU				eSg	Sg	12 34 48.0	-0.3
	7.6nm,0.3s						
CABF	La Chapelle	1.77	229	eSg	Sg	12 35 07.6	-0.4

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*ISCJB **12** 12:38:22.1±2.8, 7976N±0.10×21.1E±06, h7km±15km, Error ellipse: s-maj=19.5km s-min=13.2km az=97.7*
*CSEM **12** 12:38:23.8±0.8, 7986N×21.12E, h12km, ML3.1, Error ellipse: s-maj=17.3km s-min=7.5km az=22.0*
*BER **12** 12:38:25.0±3.5, 7991N×2127E, h23km, MD3.3, ML3.4, ML3.1(NAO)*
*NAO **12** 12:38:26.0±3.6, 7985N×2063E, h27km±20km, ML3.1*
ISC 12 12:38:23.5±3.1**, 798N**±01×**209E**±06**, h13**km±16km**, n8, σ0s69**/15**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPA0	Spitsbergen Ar	1.88	210	Pn	Pn	12 38 55.6	+0.3
	baz=25,slow=14						
SPA0				Pg	Pg	12 39 00.1	+0.5
	baz=38,slow=18						
SPA0				Lg		12 39 25.7	
	baz=27,slow=28						
SPA0	Spitsbergen Ar	1.88	210	Pg	Pg	12 39 00.1	+0.5
KBS	Kingsbay	1.90	246	Pn	Pn	12 38 55.0	-0.6
KBS				Pg	Pg	12 38 59.6	-0.3
KBS				Lg		12 39 24.7	
KBS	Kingsbay	1.90	246	eP	Pn	12 38 55.0	-0.6
KBS				ePg	Pg	12 38 59.4	-0.6
KBS				eSg	Sg	12 39 24.7	+0.1
KBS				AML	AML	12 39 25.9	
	comp=Z,324nm,0.2s						
HSP	Hornsund	3.04	204	Pn	Pn	12 39 14.3	+3.0
HSP				Sn	Sg	12 40 00.9	-0.3
HOPEN	Hopen	3.45	164	eP	Pn	12 39 17.1	+0.3
HOPEN				eS	Sn	12 39 57.3	-0.2
HOPEN				AML	AML	12 40 18.9	
	comp=N,418nm,0.6s						
KEV	Kevo	10.25	168	ep	Pn	12 40 50.1	-0.1
ARA0	ARCESS Array S	10.42	171	Pn	Pn	12 40 51.9	-0.7
	baz=357,slow=11						
ARA0				Sn	Sn	12 42 39.4	-10
	baz=9.8,slow=22						

IDC 12 13:01:03.9±7.2**, 1820S**×**16894E, h0**km**, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.8**/10**, mbtmp3.8**/4**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.4**/26**, Error ellipse: s-maj=199.3km s-min=33.2km az=117.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.51	211	Pn	Pn	13 02 07.3	-6.2
	0.7nm,0.3s,baz=57,slow=22,SNR=13						
DZM				LR	LR	13 03 00.8	
	comp=Z,93nm,18.5s,baz=23,slow=26						
DZM				Sn	Sn	13 03 03.4	-3.2
	2.0nm,0.3s,baz=322,slow=23,SNR=2.2						
STKA	Stephens Creek	28.18	236	P	P	13 06 57.5	-0.6
	0.4nm,0.5s,baz=105,slow=12,SNR=2.5						
ASAR	Alice Springs	33.12	254	P	P	13 07 42.6	+1.0
	1.9nm,0.6s,baz=86,slow=8.9,SNR=7.9						
MJAR	Matsushiro Arr	61.70	332	P	P	13 11 22.8	-1.1
	0.2nm,0.3s,baz=26,slow=26,SNR=4.0						
SONM	Songino Array	86.22	323	P	P	13 13 48.7	+1.4
	0.6nm,0.8s,baz=126,slow=7.3,SNR=3.4						

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*ISCJB **12** 13:11:01.1±0.4, 5261S±005×1403E±02, h10km, mb4.8/17, MS3.9/11, Error ellipse: s-maj=15.7km s-min=7.3km az=9.6*
*IDC **12** 13:11:01.5±0.7, 5265S×14025E, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.4/10, mbtmp4.4/6, MS3.9/9, Ms1 3.9/9, ms1mx3.6/20, Error ellipse: s-maj=33.1km s-min=18.6km az=93.0*
*NEIC **12** 13:11:03.1±0.3, 5261S×14022E, h10km, mb4.8/13, Error ellipse: s-maj=12.7km s-min=6.1km az=95.0*
*BJI **12** 13:11:03.0, 5260S×14020E, h10km, mB5.5, mb5.1, Ms4.3, Msz4.5*
ISC 12 13:11:02.9±0.4**, 5265S**±005×**1403E**±02**, h10**km**, n71, σ0s90**/32**, mb4.8**/17**, MS3.9**/11**, 3C, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAU	Tasmania Unive	10.82	29	eP	Pn	13 13 38.0	+0.1
	22nm,1.0s						
TOO	Toolangi	15.51	16	eP	Pn	13 14 41.4	-0.2
	24nm,1.3s						
CASY	Casey	20.09	216	eP	P	13 15 36.4	-0.2
STKA	Stephens Creek	20.78	3	eP	P	13 15 44.7	+0.6
	5.5nm,0.6s						
STKA	Stephens Creek	20.78	3	P	P	13 15 44.9	+0.9
	8.1nm,0.7s,baz=174,slow=11,SNR=20						
STKA				LR	LR	13 22 30.5	
	comp=Z,191nm,19.4s,MS3.5,baz=8.5,slow=33						
RPZ	Rata Peaks	22.23	79	LR	LR	13 22 43.6	
	comp=Z,404nm,19.4s,MS3.9,baz=25,slow=32						
FORT	Forrest	23.61	333	eP	P	13 16 13.6	-0.6
	28nm,0.8s,mb4.7						
NWAO	Narrogin (SRO)	25.78	311	LR	LR	13 24 09.3	
	comp=Z,493nm,19.5s,MS4.0,baz=76,slow=31						
VNDA	Vanda	26.21	170	P	P	13 16 36.7	-1.1
	6.8nm,0.8s,mb4.2,baz=325,slow=9.5,SNR=24						
VNDA				LR	LR	13 26 10.2	
	comp=Z,270nm,18.1s,MS3.8,baz=332,slow=35						
VNDA	Vanda	26.21	170	eP	P	13 16 37.6	-0.2
	19nm,1.1s,mb4.5						
SBA	Scott Base	27.07	168	eP	P	13 16 46.2	+0.6
	43nm,1.4s,mb4.8						
SBA				e		13 16 57.7	
URZ	Urewera	29.19	75	P	P	13 17 04.2	-0.4
	14nm,0.9s,mb4.7,baz=65,slow=5.8,SNR=4.0						
URZ				LR	LR	13 26 52.1	
	comp=Z,168nm,18.1s,MS3.7,baz=292,slow=32						
ASAR	Alice Springs	29.34	348	P	P	13 17 05.5	-0.3
	3.4nm,0.6s,mb4.3,baz=164,slow=10,SNR=72						
ASAR				PcP	PcP	13 20 11.2	-0.9
	0.4nm,0.5s,baz=169,slow=3.1,SNR=5.1						
ASPA	Alice Springs	29.34	348	eP	P	13 17 05.4	-0.5
AS31	Alice Springs	29.34	348	eP	P	13 17 05.4	-0.5
WB2	Warramunga Arr	32.97	350	⇑iP	P	13 17 37.1	-0.7
WRAB	Tennant Creek	32.98	350	P	P	13 17 37.0	-0.9
	99nm,0.8s,mb5.8,SNR=6.7						
WRAB	Tennant Creek	32.98	350	eP	P	13 17 37.3	-0.5
	51nm,1.2s,mb5.3						
MBWA	Marble Bar	35.21	325	eP	P	13 17 56.5	-0.8
	9.4nm,1.0s,mb4.7						
FITZ	Fitzroy Crossi	36.34	336	eP	P	13 18 06.9	0.0
	12nm,0.6s,mb5.0						
QSPA	South Pole Qui	37.47	180	eP	P	13 18 16.5	-0.1
	11nm,0.8s,mb4.7						
MAW	Mawson	38.44	217	P	P	13 18 24.6	-0.2
	1.0nm,0.4s,mb3.9,baz=104,slow=8.7,SNR=3.1						
MAW				LR	LR	13 31 57.5	
	comp=Z,351nm,21.9s,MS4.1,baz=66,slow=33						
MAW	Mawson	38.44	217	eP	P	13 18 25.2	+0.4
MAW				e		13 18 54.1	
KAKA	Kakadu	40.33	348	⇑iP	P	13 18 40.1	-0.4
	24nm,0.8s,mb5.0						
PMG	Port Moresby	43.48	10	LR	LR	13 36 25.4	
	comp=Z,142nm,20.6s,MS3.9,baz=226,slow=35						
SYO	Syowa Base	45.66	210	⇑eP	P	13 19 22.6	-1.1
SNAA	Sanae	53.28	194	P	P	13 20 21.4	-0.5
	2.2nm,1.0s,mb4.0,baz=137,slow=9.3,SNR=6.0						
SNAA	Sanae	53.28	194	eP	P	13 20 21.1	-0.8
	15nm,1.3s,mb4.8						
KSM	Kuching	59.51	325	P	P	13 21 06.6	+0.3
TBI	Tubuai	59.88	90	eLR	LR	13 38 27.2	
	78nm,29.0s						
PMSA	Palmer Station	61.41	168	eP	P	13 21 25.8	+6.5
	19nm,0.8s,mb5.3						
KULM	Kulim	66.76	316	P	P	13 21 54.2	-0.2
RKT	Rikitea	68.83	101	eLR	LR	13 42 50.8	
	95nm,29.5s						
SUR	Sutherland	80.28	228	eP	P	13 23 17.0	+3.0
	14nm,0.9s,mb4.9						
KMI	Kunming	84.08	326	P	P	13 23 36.4	+2.5
KMI				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.8						
MJAR	Matsushiro Arr	88.83	358	LR	LR	14 03 34.6	
	comp=Z,66nm,20.1s,MS4.0,baz=160,slow=36						
CD2	Chengdu	89.11	329	eP	P	13 24 00.3	+1.8
CD2				XP	sP	13 24 07.3	+4.3
CD2				PP	PP	13 27 33.8	+5.3
CD2				SKS		13 34 27.8	
CD2				S	S	13 34 47.8	+0.5
CD2				SS	SS	13 40 46.2	+5.5
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.5						
CD2				LR	LR		
	comp=E,80nm,21.6s						
CD2				LR	LR		
	comp=Z,230nm,14.4s						
ASAJ	Asahikawa	96.40	2	LR	LR	14 10 02.1	
	comp=Z,24nm,20.4s,MS3.7,baz=154,slow=37						
MDJ	Mudanjiang	97.32	352	P	P	13 24 38.1	+1.8
MDJ				AP	pP	13 24 41.4	+1.7
MDJ				XP	sP	13 24 42.7	+1.9
MDJ				PP	PP	13 28 36.0	+3.1
MDJ				S	S	13 36 03.0	+2.6
MDJ				XS	sS	13 36 10.0	+4.1
MDJ				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,43nm,5.0s						
MDJ				LR	LR		
	comp=N,19nm,25.4s,MS3.5						
MDJ				LR	LR		
	comp=E,9.0nm,25.4s,MS3.5						
MDJ				LR	LR		
	comp=Z,21nm,17.4s						
WMQ	Urumqi	106.21	323	ePDIF	Pdif	13 25 19.0	+3.1
WMQ				PP	PP	13 29 46.0	+6.1
WMQ				S	Sdif	13 37 15.0	+0.2
WMQ				SS	SS	13 44 46.0	+4.5
WMQ				PP	PP		
	comp=Z,453nm,7.0s						
WMQ				LR	LR		
	comp=N,54nm,15.0s,MS4.3						
WMQ				LR	LR		
	comp=E,41nm,15.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,38nm,15.0s,MS4.1						
NVAR	Mina Array Bea	125.83	72	PKP	PKPdf	13 30 06.8	+1.8
	comp=Z,0.3nm,0.5s,baz=240,slow=5.0,SNR=2.6						
TORD	Torodi Ar. Bea	128.64	236	PKP	PKPdf	13 30 10.0	-0.3
	comp=Z,0.4nm,0.9s,baz=236,slow=1.4,SNR=2.4						
FINES	FINESS Array B	144.63	311	PKP	PKPdf	13 30 37.6	-2.2
	comp=Z,4.0nm,0.9s,baz=104,slow=6.3,SNR=11						
KAF	Kangasniemi	144.71	312	epkp	PKPdf	13 30 36.6	-3.3
	baz=91,slow=1.2						
ARCES	ARCESS Array B	146.31	325	PKPbc	PKPbc	13 30 42.3	-1.5
	comp=Z,2.5nm,0.5s,baz=93,slow=3.3,SNR=32						
ARE0	ARCESS Array S	146.31	325	ePKPdf	PKPdf	13 30 41.8	-0.9
GEC2	GERESS Array S	146.64	285	ePKPdf	PKPdf	13 30 43.0	-0.2
GERES	GERESS Array B	146.64	285	PKPbc	PKPbc	13 30 44.1	-0.7
	comp=Z,4.3nm,0.9s,baz=149,slow=3.1,SNR=20						
KHC	Kasperske Hory	146.84	286	ePKP	PKPdf	13 30 41.5	-2.1
KHC				epPKP	pPKPdf	13 30 49.5	+2.5
BRG	Berggiesshubel	147.38	289	eP	PKPdf	13 30 52.9	+8.4
BRG				e		13 30 56.0	
CLL	Collm	148.10	289	ePKP2	PKPab	13 30 53.0	+1.4
FRF	La Foret Royal	148.23	272	ePKIKP	PKPdf	13 30 46.3	+0.4
GRA1	Grafenberg Arr	148.47	285	ePKP	PKPdf	13 30 49.3	+3.0
GRF	Grafenberg Arr	148.47	285	ePKP	PKPdf	13 30 49.3	+3.0
MBDF	Montbardon	148.78	274	ePKIKP	PKPdf	13 30 48.7	+1.9
	comp=Z,28nm,0.8s						
LPG	La Plagne	149.19	275	ePKIKP	PKPdf	13 30 48.6	+1.2
LPL	La Plagne	149.21	276	ePKIKP	PKPdf	13 30 48.6	+1.1
	comp=Z,13nm,0.8s						
BFO	Black Forest	149.59	281	ePKPbc	PKPbc	13 30 52.6	-0.1
CABF	La Chapelle	150.14	277	ePKIKP	PKPdf	13 30 50.9	+2.0
LASF	Ste Croix	150.21	271	ePKIKP	PKPdf	13 30 47.2	-1.8
HINF	Hinteralfeld	150.24	280	ePKIKP	PKPdf	13 30 46.3	-2.8
HAU	Haudompre	150.63	280	ePKIKP	PKPdf	13 30 47.6	-2.1
MTLF	Montolieu	150.81	268	ePKIKP	PKPdf	13 30 48.3	-1.7
NB2	NORSAR Subarra	151.59	307	PKPa		13 30 55.6	
	comp=Z,3.6nm,0.8s,baz=81,slow=3.8						
NOA	NORSAR Array B	151.59	307	PKPbc	PKPbc	13 30 56.0	-1.4
	comp=Z,2.5nm,0.9s,baz=248,slow=3.0,SNR=4.1						
NOA				PKPab	PKPab	13 31 02.4	-3.5
	comp=Z,3.2nm,0.7s,baz=249,slow=3.1,SNR=6.1						
NOA	NORSAR Array B	151.59	307	PKPbc	PKPbc	13 30 56.0	-1.4
NOA				PKPab	PKPab	13 31 02.4	-3.5
LOR	Lormes	151.80	277	ePKIKP	PKPdf	13 30 50.4	-1.1
AVF	Avril sur Loir	151.88	275	ePKIKP	PKPdf	13 30 50.5	-1.1
SSF	Saint Saulge	151.92	276	ePKIKP	PKPdf	13 30 50.9	-0.8
ESDC	Sonseca Array	152.36	256	PKPbc	PKPbc	13 30 58.5	-0.7
	comp=Z,0.6nm,0.6s,baz=104,slow=1.7,SNR=5.8						
BAIF	Baives	152.77	282	ePKIKP	PKPdf	13 30 52.7	-0.2

KRSC 12 13:33:39, 5497N×15944E, h284km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMNR	Kamenistaya	0.91	30	P	Pn	13 34 19.6	+2.4
KPT	Kopyto	1.09	24	P	Pn	13 34 20.5	+2.4
KOZ	Kozyrevsk	1.12	13	eP	Pn	13 34 20.7	+2.5
ZLN	Zelenaya	1.30	36	P	Pn	13 34 22.8	+3.5
ZLN				eS	S	13 34 53.6	+2.3
SRDR	Sredinnyy	1.36	7	P	Pn	13 34 21.8	+2.2
MKZ	Mys Kozlova	1.39	106	eP	Pn	13 34 21.8	+2.0
MKZ				eS	S	13 34 52.2	0.0
KLY	Klyuchi	1.51	27	S	S	13 34 55.6	+1.9
GNL	Ganaly	1.55	215	eP	Pn	13 34 23.8	+2.9
AVH	Avacha	1.76	194	P	Pn	13 34 25.5	+3.1
NLC	Nalytchevo	1.80	182	eP	Pn	13 34 25.3	+2.5
NLC				eS	S	13 34 58.4	+0.9
SPN	Mys Shipunski	1.91	169	eP	Pn	13 34 25.7	+2.1
SPN				eS	S	13 34 58.9	-0.1
SRKR	Sorokina	1.95	29	P	Pn	13 34 26.6	+2.7
SRKR				S	S	13 35 00.5	+0.9
PET	Petropavlovsk	2.00	194	eP	Pn	13 34 27.4	+3.0
PET				S	S	13 35 01.8	+1.4
KBTR	Krutoberegovo	2.28	56	eP	Pn	13 34 29.3	+2.5
KBTR				eS	S	13 35 04.7	0.0
GRL	Gorelyy	2.56	199	P	Pn	13 34 31.6	+2.4
RUS	Russkaya	2.60	193	eP	Pn	13 34 31.7	+2.0
RUS				eS	S	13 35 10.3	+0.3

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*ISCJB **12** 14:00:42.3±0.4, 5628S±007×257W±0.1, h10km, mb4.8/16, MS3.7/2, Error ellipse: s-maj=11.6km s-min=8.9km az=112.9*
*IDC **12** 14:00:42.9±0.6, 5628S×2563W, h0km, mb4.7/7, mb1 4.7/8, mb1mx4.4/15, mbtmp4.6/8, ML4.1/1, MS3.9/2, Ms1 3.9/2, ms1mx3.3/16, Error ellipse: s-maj=22.5km s-min=17.8km az=85.0*
*NEIC **12** 14:00:43.0±4.3, 5632S×2566W, h4km±26km, mb4.8/16, Error ellipse: s-maj=8.2km s-min=6.2km az=224.0*
*BJI **12** 14:00:43.0, 5630S×2570W, h4km, mB5.1, Ms4.8, Msz4.7*
ISC 12 14:00:43.9±0.4**, 5633S**±007×**257W**±01**, h10**km**, n47, σ0s65**/29**, mb4.8**/16**, MS3.7**/2**, 2C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.23	159	e	Pn	14 04 33.0	+1.0
VNA1				e		14 04 35.6	
VNA1				e		14 04 44.1	
SNAA	Sanae	18.16	157	P	Pn	14 04 56.5	+0.4
	0.7nm,0.3s,baz=316,slow=12,SNR=23						
SNAA	Sanae	18.16	157	eP	Pn	14 04 55.4	-0.7
	17nm,0.8s						
EFI	East Falkland	19.46	270	eP	Pn	14 05 10.7	-1.2
	79nm,1.2s						
PMSA	Palmer Station	20.35	230	P	P	14 05 22.7	+2.4
	baz=74,slow=9.3						
PMSA				LR	LR	14 11 50.8	
	comp=Z,296nm,18.4s,MS3.7,baz=239,slow=33						
PMSA	Palmer Station	20.35	230	eP	P	14 05 19.5	-0.8
	31nm,0.8s						
PMSA				LR	LR	14 11 50.8	
USHA	Ushuaia	23.92	256	P	P	14 05 58.0	+0.1
	7.0nm,0.7s,mb4.2,baz=70,slow=8.4,SNR=3.8						
USHA				LR	LR	14 12 41.5	
	comp=Z,247nm,18.5s,MS3.7,baz=132,slow=30						
SYO	Syowa Base	30.84	140	⇑eP	P	14 06 59.8	-0.3
SYO	Syowa Base	30.84	140	⇑ePP	PP	14 08 08.3	-1.3
QSPA	South Pole Qui	33.92	180	eP	P	14 07 27.1	0.0
	39nm,0.6s,mb5.5						
CPUP	Villa Florida	37.62	310	P	P	14 07 59.3	+0.5
	5.3nm,0.5s,mb4.5,baz=135,slow=7.3,SNR=22						
CPUP	Villa Florida	37.62	310	eP	P	14 07 58.9	+0.1
	59nm,1.0s,mb5.3						
MAW	Mawson	39.43	143	P	P	14 08 14.4	+0.4
	4.6nm,0.7s,mb4.3,baz=233,slow=7.3,SNR=18						
MAW				PcP	PcP	14 10 22.3	+0.3
	1.9nm,0.7s,baz=259,slow=7.3,SNR=4.2						
MAW	Mawson	39.43	143	eP	P	14 08 13.7	-0.3
	5.1nm,0.7s,mb4.4						
MAW				ePcP	PcP	14 10 21.8	-0.2
SBA	Scott Base	45.86	184	eP	P	14 09 06.1	-0.1
	4.1nm,0.7s,mb4.5						
LVC	Limon Verde	46.16	299	eP	P	14 09 09.8	+1.3
	44nm,0.6s,mb5.6						
VNDA	Vanda	46.33	182	P	P	14 09 10.0	+0.1
	6.1nm,0.6s,mb4.7,baz=186,slow=6.2,SNR=62						
VNDA	Vanda	46.33	182	eP	P	14 09 09.5	-0.4
	6.4nm,0.7s,mb4.7						
LBTB	Lobatse	48.30	72	P	P	14 09 25.0	-0.3
	2.5nm,0.7s,mb4.3						
TSUM	Tsumeb	49.11	59	P	P	14 09 31.0	-0.4
	3.8nm,0.9s,mb4.4						
CASY	Casey	53.36	160	eP	P	14 10 03.6	+0.2
	5.5nm,0.9s,mb4.5						
SAML	Samuel	55.59	313	eP	P	14 10 19.8	+0.2
	3.9nm,0.5s,mb4.7						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	59.11	297	eP	P	14 10 43.5	-0.9
	33nm,0.9s,mb5.4						
DBIC	Dimbokro	65.09	23	P	P	14 11 25.0	+0.4
	11nm,0.9s,mb4.9,baz=175,slow=5.9,SNR=13						
DBIC	Dimbokro	65.09	23	eP	P	14 11 24.6	0.0
	16nm,1.0s,mb5.0						
TOA0	Torodi Ar. Sit	72.90	28	eP	P	14 12 13.3	+0.1
TORD	Torodi Ar. Bea	72.90	28	P	P	14 12 13.5	+0.3
	10nm,0.6s,mb4.9,baz=197,slow=6.5,SNR=48						
SDV	Santo Domingo	74.80	314	eP	P	14 12 24.8	+0.5
	5.2nm,0.5s,mb4.7						
STKA	Stephens Creek	91.48	169	eP	P	14 13 49.7	-0.8
ASAR	Alice Springs	98.47	161	P	P	14 14 21.9	-0.4
	1.0nm,0.6s,mb4.5,baz=183,slow=4.0,SNR=7.9						
FINES	FINESS Array B	124.25	27	PKP	PKPdf	14 19 40.9	-2.0
	1.7nm,0.9s,baz=180,slow=8.6,SNR=3.7						
PAGZ	Pagadian	125.88	141	eP	PKPdf	14 19 44.5	-1.4
MATI	Mati	126.01	145	eP	PKPdf	14 19 36.9	-9.3
ARCES	ARCESS Array B	130.90	21	PKP	PKPdf	14 19 53.5	-2.0
	1.2nm,0.8s,baz=202,slow=2.0,SNR=5.4						
ARCES	ARCESS Array B	130.90	21	PKP	PKPdf	14 19 53.5	-2.1
KMI	Kunming	131.66	108	PKP	PKPdf	14 20 00.0	+3.0
CD2	Chengdu	136.79	104	ePKP	PKPdf	14 20 05.7	-0.9
YKA	Yellowknife Ar	136.93	317	PKP	PKPdf	14 20 05.3	-1.5
	1.1nm,0.6s,baz=126,slow=2.2,SNR=11						
YKA	Yellowknife Ar	136.93	317	PKP	PKPdf	14 20 05.3	-1.5
WMQ	Urumqi	137.15	78	ePKP	PKPdf	14 20 08.0	+0.8
NJ2	Nanjing	145.49	120	ePKP	PKPdf	14 20 22.8	+0.6
INK	Inuvik	146.54	320	ePKPdf	PKPdf	14 20 23.3	-0.7
SONM	Songino Array	149.92	86	PKPbc	PKPbc	14 20 33.5	-0.9
	4.2nm,0.5s,baz=232,slow=3.0,SNR=22						
ULN	Ulaanbaatar	150.30	86	ePKPbc	PKPbc	14 20 33.9	-1.4
MCK	McKinley	151.59	309	ePKPbc	PKPbc	14 20 37.0	-1.3
MJAR	Matsushiro Arr	157.42	144	PKPab	PKPab	14 21 11.0	-0.7
	1.4nm,0.7s,baz=187,slow=4.7,SNR=7.1						
MDJ	Mudanjiang	160.52	117	PKP	PKPdf	14 20 42.9	-0.9
MDJ				PP	PP		
	comp=Z,94nm,5.1s						

IDC **12** *15:00:01.8±1.0, 19.06S×169.74E, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.3/11, mbtmp4.2/9, ML3.3/1, MS3.5/8, Ms1 3.5/8, ms1mx3.3/17, Error ellipse: s-maj=30.1km s-min=21.1km az=115.0*

ISCJB **12** *15:00:07.9±2.9, 19.17S±0.08×169.7E±0.1, h59km±23km, mb4.5/20, MS3.4/6, Error ellipse: s-maj=22.7km s-min=13.9km az=174.5*

NEIC **12** *15:00:10.9±2.6, 19.25S×169.52E, h69km±21km, mb4.7/10, Error ellipse: s-maj=23.5km s-min=14.1km az=84.0*

BJI **12** *15:00:16.2, 19.48S×169.01E, h123km, mB4.8, mb4.6*

ISC 12 15:00:12.1±2.7**, 19.20S**±0.08×**169.6E**±0.2**, h79**km±21km**, n43, σ0.91**/31**, mb4.4**/20**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.11	225	eP	Pn	15 01 08.1	-4.3
DZM	Mont Dzumac	4.11	225	Pn	Pn	15 01 08.9	-3.5
	1.8nm,0.3s,baz=73,slow=19,SNR=21						
DZM				Sn	Sn	15 01 59.8	+0.5
	6.7nm,0.3s,baz=286,slow=22,SNR=3.0						
DZM				LR	LR	15 02 35.8	
	comp=Z,715nm,18.8s,baz=281,slow=36						
HNR	Honiara	13.48	315	LR	LR	15 07 02.7	
	comp=Z,40nm,20.6s,baz=178,slow=31						
HNR	Honiara	13.48	315	eP	Pn	15 03 21.0	+1.1
	90nm,0.9s						
AFI	Afiamalu	18.61	76	LR	LR	15 09 48.6	
	comp=Z,180nm,18.7s,baz=286,slow=32						
CTA	Charters Tower	22.00	264	LR	LR	15 11 18.2	
	comp=Z,60nm,18.6s,baz=49,slow=30						
PMG	Port Moresby	23.80	291	P	P	15 05 18.1	+0.6
	31nm,1.0s,mb4.6,baz=202,slow=2.3,SNR=4.0						
PMG	Port Moresby	23.80	291	eP	P	15 05 18.0	+0.5
	47nm,1.1s,mb4.7						
RPZ	Rata Peaks	24.47	177	LR	LR	15 12 15.3	
	comp=Z,262nm,18.4s,baz=168,slow=30						
STKA	Stephens Creek	28.15	238	P	P	15 05 57.2	+0.5
	1.2nm,0.6s,mb3.6,baz=25,slow=8.3,SNR=4.8						
STKA				LR	LR	15 15 22.2	
	comp=Z,114nm,19.6s,baz=24,slow=32						
STKA	Stephens Creek	28.15	238	eP	P	15 05 55.6	-1.2
WRAB	Tennant Creek	33.19	263	P	P	15 06 39.4	-1.7
	13nm,1.2s,mb4.6						
AS31	Alice Springs	33.47	256	eP	P	15 06 43.5	-0.1
ASAR	Alice Springs	33.47	256	P	P	15 06 43.8	+0.2
	3.8nm,0.7s,mb4.4,baz=85,slow=8.7,SNR=13						
ASAR				LR	LR	15 19 55.4	
	comp=Z,93nm,21.5s,baz=7.9,slow=36						
ASPA	Alice Springs	33.47	256	eP	P	15 06 43.7	+0.1
FITZ	Fitzroy Crossi	41.59	264	eP	P	15 07 53.1	+1.0
	16nm,1.0s,mb4.7						
MBWA	Marble Bar	46.70	259	eP	P	15 08 30.0	-2.9
	23nm,1.2s,mb4.8						
VNDA	Vanda	58.48	182	P	P	15 10 00.5	+0.6
	2.2nm,1.2s,mb4.1,baz=335,slow=8.8,SNR=4.0						
VNDA	Vanda	58.48	182	eP	P	15 09 59.2	-0.7
	4.7nm,1.3s,mb4.4						
SBA	Scott Base	58.71	181	eP	P	15 10 02.0	+0.5
	15nm,1.4s,mb4.8						
MJAR	Matsushiro Arr	62.88	332	P	P	15 10 29.1	-0.6
	3.5nm,1.0s,mb4.3,baz=158,slow=6.4,SNR=12						
MJAR				LR	LR	15 31 26.2	
	comp=Z,37nm,21.6s,baz=170,slow=30						
MAJO	Matsushiro	62.88	332	P	P	15 10 28.7	-1.1
	5.4nm,1.0s,mb4.4						
YSS	Yuzh-Sakhalins	70.16	341	eP	P	15 11 15.7	-0.4
	11nm,1.0s,mb4.6						
NJ2	Nanjing	70.42	316	eP	P	15 11 18.1	+0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
QSPA	South Pole Qui	70.85	180	eP	P	15 11 20.5	+0.1
	comp=Z,4.0nm,0.9s,mb4.2						
MDJ	Mudanjiang	73.25	331	P	P	15 11 35.0	+0.3
MDJ				AP	pP	15 12 04.9	+10
MDJ				XP	sP	15 12 18.2	+14
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,51nm,4.7s						
MDJ				LR	LR		
	comp=N,13nm,20.3s						
MDJ				LR	LR		
	comp=E,13nm,23.0s						
MDJ				LR	LR		
	comp=Z,20nm,25.7s						
XAN	Xi'an	78.34	312	P	P	15 12 04.3	+0.6
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.2						
KMI	Kunming	78.54	302	P	P	15 12 05.3	+0.5
KMI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.5						
MAW	Mawson	78.60	202	P	P	15 12 06.4	+1.3
	comp=Z,2.3nm,0.8s,mb4.0,baz=91,slow=6.3,SNR=6.9						
MAW	Mawson	78.60	202	eP	P	15 12 06.2	+1.1
	comp=Z,16nm,1.5s,mb4.6						
CD2	Chengdu	80.48	307	eP	P	15 12 14.5	-0.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
SONM	Songino Array	87.39	323	P	P	15 12 51.0	+0.5
	comp=Z,2.8nm,0.9s,mb4.2,baz=132,slow=5.0,SNR=12						
NVAR	Mina Array Bea	88.52	48	P	P	15 12 55.6	-0.2
	comp=Z,0.1nm,0.4s,mb3.2,baz=219,slow=11,SNR=2.8						
WMQ	Urumqi	97.42	314	eP	P	15 13 37.0	+0.1
GERES	GERESS Array B	144.62	332	PKP	PKPdf	15 19 38.4	-1.1
	comp=Z,1.0nm,0.8s,baz=35,slow=3.3,SNR=8.7						
CDF	Champ du Feu	147.53	338	ePKIKP	PKPdf	15 19 47.5	+3.1
HINF	Hinteralfeld	148.19	338	ePKIKP	PKPdf	15 19 49.1	+3.6
	comp=Z,2.8nm,0.6s						
CABF	La Chapelle	149.49	337	ePKIKP	PKPdf	15 19 52.2	+4.6
	comp=Z,11nm,0.9s						
LOR	Lormes	149.67	341	ePKIKP	PKPdf	15 19 52.9	+5.0
SSF	Saint Saulge	149.97	341	ePKIKP	PKPdf	15 19 53.7	+5.3
LPL	La Plagne	150.16	335	ePKIKP	PKPdf	15 19 54.7	+6.0
LPG	La Plagne	150.17	335	ePKIKP	PKPdf	15 19 54.8	+6.1
MBDF	Montbardon	150.80	334	ePKIKP	PKPdf	15 19 53.8	+4.1

IDC 12 15:35:45.3±2.6**, 9.09S**×**108.00E, h0**km**, mb3.8**/4**, mb1 3.9**/5**, mb1mx3.7**/16**, mbtmp3.8**/5**, ML3.6**/1**, Error ellipse: s-maj=90.8km s-min=23.2km az=52.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.33	119	eP	Pn	15 40 10.0	-3.0
	6.2nm,1.4s						
FITZ				eS	Sn	15 43 26.8	-24
FITZ	Fitzroy Crossi	19.33	119	P	Pn	15 40 12.6	-0.4
	0.1nm,0.3s,baz=268,slow=17,SNR=11						
ASAR	Alice Springs	28.70	123	P	P	15 41 44.3	+0.3
	0.6nm,0.6s,baz=296,slow=9.1,SNR=12						
MJAR	Matsushiro Arr	53.54	30	P	P	15 45 07.6	-0.2
	1.2nm,0.9s,baz=207,slow=7.4,SNR=5.1						
SONM	Songino Array	56.69	359	P	P	15 45 31.2	+0.7
	0.3nm,0.5s,baz=142,slow=7.2,SNR=2.6						
MKAR	Makanchi Array	60.18	340	P	P	15 45 54.6	-0.2
	1.0nm,0.5s,baz=151,slow=8.2,SNR=12						

ISCJB **12** *15:51:15.1±0.9, 19.41S±0.09×177.70W±0.09, h545km±13km, mb4.0/22, Error ellipse: s-maj=15.4km s-min=10.6km az=87.9*

BJI **12** *15:51:15.1, 19.56S×176.74W, h584km, mB4.7, mb4.4*

IDC **12** *15:51:16.6±1.4, 19.41S×177.68W, h549km±17km, mb3.4/9, mb1 3.5/11, mb1mx3.5/16, mbtmp4.4/11, Error ellipse: s-maj=17.0km s-min=12.1km az=135.0*

NEIC **12** *15:51:17.2±0.9, 19.42S×177.68W, h559km±11km, mb4.2/17, Error ellipse: s-maj=11.0km s-min=8.3km az=135.0*

ISC 12 15:51:17.8±1.1**, 19.46S**±0.09×**177.61W**±0.09**, h568**km±13km**, n49, σ0.90**/43**, mb4.0**/22**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.85	46	P	P	15 53 14.0	-0.6
	10nm,0.3s,baz=335,slow=4.9,SNR=6.5						
AFI				S	S	15 54 44.2	-6.1
	1.4nm,0.3s,baz=193,slow=23,SNR=1.9						
DZM	Mont Dzumac	15.14	257	P	P	15 54 29.9	+1.4
	0.7nm,0.3s,baz=90,slow=20,SNR=8.1						
URZ	Urewera	19.29	193	P	P	15 55 05.2	-1.4
	2.2nm,0.3s,baz=46,slow=3.8,SNR=12						
SNZO	South Karori	22.75	195	P	P	15 55 27.9	-10
CTA	Charters Tower	33.97	263	eP	P	15 57 15.1	+0.2
	5.0nm,0.4s,mb4.4						
CTA	Charters Tower	33.97	263	P	P	15 57 15.0	+0.1
	10nm,0.7s,mb4.5,baz=78,slow=10,SNR=13						
CTAO	Charters Tower	33.97	263	eP	P	15 57 15.2	+0.3
	14nm,0.8s,mb4.5						
PMG	Port Moresby	35.48	281	P	P	15 57 27.2	-0.2
	16nm,0.9s,mb4.5,baz=215,slow=10.0,SNR=3.2						
STKA	Stephens Creek	38.58	243	eP	P	15 57 53.3	+0.5
	2.6nm,1.1s,mb3.7						
STKA	Stephens Creek	38.58	243	P	P	15 57 53.4	+0.6
	2.0nm,0.7s,mb3.8,baz=90,slow=6.4,SNR=14						
STKA	Stephens Creek	38.58	243	eP	P	15 57 53.3	+0.5
STKA				epP		15 59 28.0	
WB2	Warramunga Arr	45.11	261	eP	P	15 58 43.6	-0.5
WRAB	Tennant Creek	45.11	261	eP	P	15 58 43.2	-0.9
	8.2nm,0.7s,mb4.4						
AS31	Alice Springs	45.12	256	eP	P	15 58 43.9	-0.3
ASAR	Alice Springs	45.12	256	P	P	15 58 44.0	-0.1
	4.3nm,0.7s,mb4.1,baz=86,slow=8.0,SNR=132						
ASAR				PcP	PcP	16 00 12.3	-0.1
	0.7nm,0.6s,baz=101,slow=4.4,SNR=4.1						
ASAR				S	S	16 04 41.7	-0.9
	1.6nm,0.8s,baz=92,slow=16,SNR=12						
ASPA	Alice Springs	45.13	256	eP	P	15 58 43.9	-0.3
KAKA	Kakadu	48.33	270	eP	P	15 59 08.1	-0.2
	5.0nm,0.4s,mb4.4						
FITZ	Fitzroy Crossi	53.54	262	eP	P	15 59 46.2	+0.2
	4.7nm,0.5s,mb4.1						
FITZ	Fitzroy Crossi	53.54	262	P	P	15 59 46.1	0.0
	2.0nm,0.5s,mb3.7,baz=180,slow=0.0						
MBWA	Marble Bar	58.45	257	eP	P	16 00 19.4	-0.4
	5.4nm,0.6s,mb4.0						
SBA	Scott Base	58.93	184	eP	P	16 00 24.5	+1.4
	4.7nm,0.8s,mb3.8						
VNDA	Vanda	58.97	185	P	P	16 00 24.4	+1.0
	1.2nm,0.8s,mb3.2,baz=356,slow=8.1,SNR=7.2						
VNDA	Vanda	58.97	185	eP	P	16 00 23.9	+0.5
	1.1nm,0.7s,mb3.2						
MJAR	Matsushiro Arr	69.60	323	P	P	16 01 30.5	-0.1
	3.9nm,0.7s,mb4.1,baz=157,slow=5.5,SNR=18						
MAJO	Matsushiro	69.60	323	eP	P	16 01 30.3	-0.3
	5.5nm,0.6s,mb4.3						
KKM	Kota Kinabalu	69.86	284	P	P	16 01 32.6	+0.5
QSPA	South Pole Qui	70.60	180	eP	P	16 01 36.9	+0.4
	9.6nm,0.8s,mb4.4						
KSM	Kuching	73.64	278	eP	P	16 01 54.4	+0.3
YSS	Yuzh-Sakhalins	75.13	333	eP	P	16 02 03.5	+1.1
	10nm,0.8s,mb4.3						
CMB	Columbia Colle	78.45	43	P	P	16 02 21.6	+1.0
	4.1nm,1.2s,mb3.6						
MDJ	Mudanjiang	79.88	325	P	P	16 02 28.9	+0.8
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,64nm,4.8s						
MDJ	Mudanjiang	79.88	325	eP	P	16 02 29.3	+1.2
	comp=Z,9.8nm,0.9s,mb4.1						
NVAR	Mina Array Bea	80.02	43	P	P	16 02 30.4	+1.5
	comp=Z,0.4nm,0.9s,mb2.7,baz=252,slow=2.5,SNR=3.7						
MAW	Mawson	82.66	200	P	P	16 02 41.7	-0.6
	comp=Z,0.9nm,0.6s,mb3.5,baz=50,slow=20,SNR=6.5						
MAW	Mawson	82.66	200	eP	P	16 02 42.1	-0.2
	comp=Z,1.0nm,1.1s,mb3.3						
MA2	Magadan	82.88	344	eP	P	16 02 41.8	-1.7
KULM	Kulim	83.99	278	eP	P	16 02 49.3	+0.4
MCK	McKinley	85.88	12	eP	P	16 02 57.1	-1.0
	comp=Z,3.8nm,0.9s,mb4.0						
COLA	College	87.12	12	P	P	16 03 01.5	-2.4
	comp=Z,5.8nm,0.6s,mb4.4						
XAN	Xi'an	87.80	307	P	P	16 03 08.2	+1.1
XAN				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.2						
SNAA	Sanae	89.04	178	P	P	16 03 11.7	-1.2
	comp=Z,2.2nm,0.8s,mb4.0						
ARCES	ARCESS Array B	127.97	350	PKP	PKPdf	16 09 19.1	-0.5
	comp=Z,1.0nm,0.5s,baz=329,slow=1.4,SNR=6.7						
AKASG	Malin Array Be	142.28	332	PKhKP		16 09 41.9	
	comp=Z,0.9nm,0.5s,baz=44,slow=4.0,SNR=11						
BR131	Keskin Array S	146.40	314	ePKPbc	PKPbc	16 09 55.8	+0.1
BRTR	Keskin Array B	146.40	314	PKPbc	PKPbc	16 09 55.7	0.0
	comp=Z,1.6nm,0.7s,baz=144,slow=5.4,SNR=9.7						
CLL	Collm	147.13	348	⇓iPKPbc	PKPbc	16 09 57.3	-0.3
	comp=Z,8.0nm,0.8s						
CLL				ePKPab	PKPab	16 10 01.0	-0.2
BRG	Berggiesshubel	147.34	346	eP	PKPdf	16 09 58.0	+3.2
	comp=Z,2.6nm,0.7s						
BRG				e		16 10 01.5	
	comp=Z,3.1nm,0.9s						
KHC	Kasperske Hory	149.06	346	ePKPbc	PKPbc	16 10 02.5	0.0
GERES	GERESS Array B	149.30	345	PKPbc	PKPbc	16 10 03.3	+0.3
	comp=Z,2.6nm,0.8s,baz=40,slow=2.3,SNR=18						

ISCJB **12** *15:51:53.5±2.1, 19.3S±0.1×177.6W±0.1, h498km±26km, mb3.8/13, Error ellipse: s-maj=22.0km s-min=16.6km az=34.0*

IDC **12** *15:51:54.8±2.9, 19.34S×177.47W, h500km±35km, mb3.2/7, mb1 3.4/9, mb1mx3.3/15, mbtmp4.2/9, Error ellipse: s-maj=25.6km s-min=18.5km az=43.0*

NEIC **12** *15:51:54.3±1.4, 19.33S×177.52W, h497km±18km, mb4.0/11, Error ellipse: s-maj=16.3km s-min=12.7km az=199.0*

ISC 12 15:51:54.6±1.8**, 19.4S**±0.1×**177.5W**±0.1**, h501**km±23km**, n27, σ0.75**/27**, mb3.8**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	9.87	182	P	P	15 54 09.6	-0.9
	38nm,0.3s,baz=252,slow=19,SNR=2.7						
RAR	Rarotonga	16.72	99	P	P	15 55 23.0	+0.4
	1.2nm,0.3s,baz=140,slow=24,SNR=6.5						
RAR	Rarotonga	16.72	99	P	P	15 55 23.0	+0.4
URZ	Urewera	19.42	193	P	P	15 55 48.0	+0.2
	2.7nm,0.3s,baz=353,slow=4.8,SNR=11						
CTA	Charters Tower	34.10	263	eP	P	15 57 57.8	+1.0
	2.8nm,0.3s,mb4.2						
CTA	Charters Tower	34.10	263	P	P	15 57 58.0	+1.2
	3.8nm,0.4s,mb4.2,baz=78,slow=15,SNR=8.5						
CTAO	Charters Tower	34.10	263	eP	P	15 57 57.8	+1.0
	4.2nm,0.4s,mb4.2						
STKA	Stephens Creek	38.73	243	eP	P	15 58 36.1	+1.1
	1.9nm,1.0s,mb3.5						
STKA	Stephens Creek	38.73	243	P	P	15 58 36.1	+1.0
	1.9nm,0.8s,mb3.6,baz=83,slow=7.5,SNR=7.3						
STKA	Stephens Creek	38.73	243	eP	P	15 58 35.8	+0.7
WB2	Warramunga Arr	45.24	261	eP	P	15 59 26.4	0.0
WRAB	Tennant Creek	45.24	261	eP	P	15 59 26.1	-0.4
	4.2nm,0.7s,mb4.0						
AS31	Alice Springs	45.26	256	eP	P	15 59 26.8	+0.2
ASAR	Alice Springs	45.26	256	P	P	15 59 26.9	+0.3
	1.7nm,0.4s,mb3.8,baz=85,slow=8.2,SNR=15						
ASPA	Alice Springs	45.26	256	eP	P	15 59 26.8	+0.2
KAKA	Kakadu	48.44	270	eP	P	15 59 50.2	-0.5
	4.5nm,0.5s,mb4.0						
FITZ	Fitzroy Crossi	53.67	261	eP	P	16 00 29.0	+0.3
	2.8nm,0.5s,mb3.9						
FITZ	Fitzroy Crossi	53.67	261	P	P	16 00 28.8	+0.1
	1.3nm,0.4s,mb3.6,baz=135,slow=5.7						
MBWA	Marble Bar	58.58	257	eP	P	16 01 01.3	-1.4
	3.6nm,0.6s,mb3.9						
SBA	Scott Base	59.05	184	eP	P	16 01 07.2	+1.4
	3.8nm,0.9s,mb3.7						
VNDA	Vanda	59.09	185	P	P	16 01 07.1	+0.9
	0.6nm,0.6s,mb3.1,baz=13,slow=6.6,SNR=4.3						
VNDA	Vanda	59.09	185	eP	P	16 01 05.2	-1.0
	0.7nm,0.6s,mb3.2						
MJAR	Matsushiro Arr	69.58	323	P	P	16 02 13.2	+0.4
	1.2nm,0.5s,mb3.7,baz=155,slow=5.0,SNR=6.8						
QSPA	South Pole Qui	70.71	180	eP	P	16 02 19.5	-0.1
	5.1nm,0.8s,mb4.1						
YSS	Yuzh-Sakhalins	75.09	333	P	P	16 02 44.0	-0.7
	4.9nm,0.9s,mb4.0						
MAW	Mawson	82.81	200	eP	P	16 03 24.4	-1.4
	0.9nm,1.0s,mb3.2						
MAW	Mawson	82.81	200	P	P	16 03 24.5	-1.3
	0.3nm,0.4s,mb3.2,baz=144,slow=8.7,SNR=3.8						

LDG **12** *16:16:14.8±0.2, 19.10S×169.03E, h210km, Mb4.4/2, Error ellipse: s-maj=18.9km s-min=3.4km az=119.0*

ISCJB **12** *16:16:14.4±1.0, 19.40S±0.07×169.34E±0.10, h228km±7km, mb4.4/30, Error ellipse: s-maj=16.3km s-min=9.2km az=52.1*

NEIC **12** *16:16:15.8±1.6, 19.37S×169.37E, h229km±14km, mb4.5/18, Error ellipse: s-maj=15.5km s-min=11.2km az=117.0*

MOS **12** *16:16:15.8±1.3, 19.43S×169.35E, h237km, mb4.7/9, Error ellipse: s-maj=15.4km s-min=13.1km az=16.3*

IDC **12** *16:16:16.2±1.6, 19.45S×169.29E, h226km±14km, mb4.1/8, mb1 4.3/10, mb1mx4.1/13, mbtmp4.7/10, Error ellipse: s-maj=25.1km s-min=13.7km az=147.0*

BJI **12** *16:16:19.4, 19.38S×169.21E, h274km, mB4.8, mb4.7*

ISC 12 16:16:15.1±0.9**, 19.39S**±0.07×**169.38E**±0.10**, h219**km±7km**, h280**km±4.1km**:pP-P, n102, σ1.03**/62**, mb4.4**/30**, 12C-5D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKM	Butte a Klehm	2.02	328	iP	Pn	16 16 55.2	0.0
DZM	Mont Dzumac	3.83	225	eP	Pn	16 17 15.0	-0.4
DZM				eS	S	16 18 02.3	-0.8
DZM	Mont Dzumac	3.83	225	P	Pn	16 17 15.4	-0.1
	6.2nm,0.3s,baz=59,slow=18,SNR=83						
DZM				S	S	16 18 01.9	-1.2
	6.5nm,0.3s,baz=291,slow=22,SNR=3.1						
HNR	Honiara	13.46	316	P	Pn	16 19 19.0	+1.4
	15nm,0.3s,baz=116,slow=23,SNR=18						
HNR	Honiara	13.46	316	ePn	Pn	16 19 19.9	+2.3
ARMA	Armidale	19.46	232	eP	P	16 20 27.0	+1.7
CTA	Charters Tower	21.77	264	⇓iP	P	16 20 50.1	+0.6
	13nm,0.9s,mb4.5						
CTA	Charters Tower	21.77	264	P	P	16 20 50.7	+1.2
	15nm,0.7s,mb4.6,baz=95,slow=11,SNR=16						
CTA	Charters Tower	21.77	264	⇓iP	P	16 20 50.1	+0.6
CTA				pmax	pmax		
	comp=Z,13nm,0.9s						
CTAO	Charters Tower	21.77	264	eP	P	16 20 50.6	+1.1
CTAO				pmax	pmax		
	comp=Z,40nm,1.1s,mb4.9						
CTAO	Charters Tower	21.77	264	eP	P	16 20 50.6	+1.1
	comp=Z,40nm,1.1s,mb4.9						
PMG	Port Moresby	23.67	292	P	P	16 21 07.4	+0.7
	comp=Z,9.0nm,0.7s,mb4.5,baz=108,slow=23,SNR=5.8						
PMG	Port Moresby	23.67	292	eP	P	16 21 06.6	-0.1
PMG				pmax	pmax		
	comp=Z,51nm,1.3s						
PMG	Port Moresby	23.67	292	eP	P	16 21 06.6	-0.1
	comp=Z,50nm,1.3s,mb5.0						
CNB	Canberra Magne	23.75	224	⇓iP	P	16 21 08.5	+1.0
	comp=Z,22nm,0.7s,mb4.9						
TOO	Toolangi	27.60	224	eP	P	16 21 42.2	+0.1
	comp=Z,3.8nm,1.3s,mb3.9						
TOO	Toolangi	27.60	224	eP	P	16 21 42.2	+0.1
TOO				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb3.9						
STKA	Stephens Creek	27.88	238	⇓iP	P	16 21 44.9	+0.4
	comp=Z,7.0nm,0.6s,mb4.5						
STKA	Stephens Creek	27.88	238	P	P	16 21 45.2	+0.7
	comp=Z,6.3nm,0.5s,mb4.5,baz=66,slow=9.2,SNR=32						
WB2	Warramunga Arr	32.95	263	eP	P	16 22 27.3	-1.7
WRAB	Tennant Creek	32.95	263	eP	P	16 22 28.1	-0.9
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.6						
WRAB	Tennant Creek	32.95	263	eP	P	16 22 28.1	-0.9
	comp=Z,17nm,0.9s,mb4.6						
AS31	Alice Springs	33.22	256	eP	P	16 22 31.2	-0.1
ASAR	Alice Springs	33.22	256	P	P	16 22 31.5	+0.2
	comp=Z,37nm,0.5s,mb5.2,baz=83,slow=9.1,SNR=694						
ASAR				pP	pP	16 23 17.9	+1.9
	comp=Z,3.1nm,0.7s,baz=84,slow=9.2,SNR=4.4						
ASAR				PcP	PcP	16 25 08.1	-0.4
	comp=Z,0.7nm,0.7s,baz=100,slow=2.1,SNR=4.1						
ASAR				S	S	16 27 33.1	-1.5
	comp=Z,0.7nm,0.8s,baz=80,slow=17,SNR=4.5						
ASPA	Alice Springs	33.22	256	eP	P	16 22 31.2	-0.1
FORT	Forrest	38.90	245	eP	P	16 23 18.8	-0.6
	comp=Z,10nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	41.36	264	⇓iP	P	16 23 40.2	+0.6
	comp=Z,13nm,0.9s,mb4.4						
MBWA	Marble Bar	46.45	259	eP	P	16 24 20.2	+0.2
	comp=Z,7.6nm,0.7s,mb4.1						
MBWA				e		16 25 45.2	
KLBR	Kellerberrin	47.77	245	eP	P	16 24 29.9	-0.3
	comp=Z,59nm,1.7s,mb4.6						
MUN	Mundaring	49.09	244	eP	P	16 24 41.2	+0.9
VNDA	Vanda	58.29	182	eP	P	16 25 46.0	-0.8
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VNDA	Vanda	58.29	182	eP	P	16 25 46.0	-0.9
	comp=Z,2.2nm,1.1s,mb3.7						
SBA	Scott Base	58.52	181	eP	P	16 25 49.0	+0.6
SBA				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.3						
SBA	Scott Base	58.52	181	eP	P	16 25 49.0	+0.6
	comp=Z,9.7nm,1.3s,mb4.3						
MJAR	Matsushiro Arr	62.94	332	P	P	16 26 17.9	-0.3
	comp=Z,3.1nm,0.6s,mb4.1,baz=171,slow=7.3,SNR=20						
MAJO	Matsushiro	62.95	332	eP	P	16 26 15.1	-3.1
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
MAJO	Matsushiro	62.95	332	eP	P	16 26 15.1	-3.2
	comp=Z,4.6nm,0.6s,mb4.3						
MAT	Matsushiro	62.95	332	P	P	16 26 18.1	-0.1
YSS	Yuzh-Sakhalins	70.26	341	P	P	16 27 05.0	+0.5
YSS	Yuzh-Sakhalins	70.26	341	eP	P	16 27 05.2	+0.7
	comp=Z,6.9nm,0.9s,mb4.3						
NJ2	Nanjing	70.41	316	eP	P	16 27 04.5	-0.8
NJ2				AP	pP	16 28 10.5	+14
NJ2				XP	sP	16 28 40.7	+21
NJ2				PP	PP	16 29 45.8	+1.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,70nm,5.2s						
NJ2				LR	LR		
	comp=N,1μm,23.1s						
NJ2				LR	LR		
	comp=E,5μm,14.0s						
NJ2				LR	LR		
	comp=Z,1μm,22.0s						
MDJ	Mudanjiang	73.31	332	P	P	16 27 23.1	+0.5
MDJ				AP	pP	16 28 25.4	+11
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,82nm,5.4s						
NIKO	Nikolski	74.49	13	eP	P	16 27 27.4	-2.0
CN2	Changchun	74.65	329	eP	P	16 27 30.4	0.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
BJI	Beijing	77.14	321	eP	P	16 27 43.8	-0.6
BJI				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.2						
XAN	Xi'an	78.31	312	P	P	16 27 51.8	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XAN				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.3						
KMI	Kunming	78.46	302	P	P	16 27 53.6	+1.9
KMI				AP	pP	16 28 58.8	+15
KMI				XP	sP	16 29 27.9	+21
KMI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.2						
MA2	Magadan	80.14	351	P	P	16 27 54.7	-6.0
MA2				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.6						
MA2	Magadan	80.14	351	P	P	16 27 54.6	-6.1
	comp=Z,20nm,1.3s,mb4.6						
CD2	Chengdu	80.43	307	eP	P	16 28 02.5	+0.2
LZH	Lanzhou	82.92	312	eP	P	16 28 14.9	-0.4
LZH				AP	pP	16 29 22.8	+15
LZH				XP	sP	16 29 52.6	+21
LZH				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.7						
CMB	Columbia Colle	87.16	48	eP	P	16 28 35.2	-1.1
CMB				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
CMB	Columbia Colle	87.16	48	eP	P	16 28 35.2	-1.1
	comp=Z,7.5nm,0.9s,mb4.4						
BILL	Bilibino	87.20	359	eP	P	16 28 35.1	-1.4
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
BILL	Bilibino	87.20	359	eP	P	16 28 35.1	-1.4
	comp=Z,4.6nm,0.7s,mb4.3						
SONM	Songino Array	87.42	323	P	P	16 28 38.0	+0.5
	comp=Z,3.6nm,0.8s,mb4.1,baz=142,slow=6.4,SNR=24						
NVAR	Mina Array Bea	88.80	48	P	P	16 28 45.2	+1.1
	comp=Z,3.4nm,0.9s,mb4.2,baz=216,slow=5.7,SNR=18						
ZAK	Zakamensk	90.49	324	eP	P	16 28 49.9	-2.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.7						
PDAR	Pinedale Array	96.62	47	P	P	16 29 22.4	+2.4
	comp=Z,0.5nm,0.7s,mb3.8,baz=247,slow=6.5,SNR=2.9						
YKA	Yellowknife Ar	100.74	27	P	Pdif	16 29 39.0	+0.6
	comp=Z,0.7nm,0.6s,baz=249,slow=4.6,SNR=5.6						
YKA	Yellowknife Ar	100.74	27	P	Pdif	16 29 39.0	+0.5
ARCES	ARCESS Array B	125.25	345	PKP	PKPdf	16 34 48.1	-1.4
	comp=Z,1.5nm,0.4s,baz=82,slow=2.8,SNR=44						
FINES	FINESS Array B	130.77	338	PKhKP		16 34 56.4	
	comp=Z,1.3nm,0.8s,baz=90,slow=4.6,SNR=4.8						
AKASG	Malin Array Be	135.69	324	PKP	PKPdf	16 35 08.2	-1.1
	comp=Z,0.9nm,0.6s,baz=52,slow=2.2,SNR=5.2						
KOLS	Kolonicke sedl	140.42	326	ePKP	PKPdf	16 35 17.5	-0.5
DPC	Dobruska-Polom	142.42	332	ePKP	PKPdf	16 35 20.5	-1.0
UPC	Upice	142.44	332	ePKP	PKPdf	16 35 17.4	-4.2
VYHS	Vyhne	142.48	328	ePKP	PKPdf	16 35 23.4	+1.8
NKC	Novy Kostel	144.16	335	ePKP	PKPdf	16 35 23.0	-1.6
KHC	Kasperske Hory	144.53	332	ePKP	PKPdf	16 35 24.5	-0.7
GEC2	GERESS Array S	144.68	332	ePKIKP	PKPdf	16 35 24.7	-0.8
GERES	GERESS Array B	144.68	332	PKP	PKPdf	16 35 25.0	-0.5
	comp=Z,8.6nm,0.8s,baz=37,slow=3.5,SNR=70						
GRA1	Grafenberg Arr	145.08	335	ePKP	PKPdf	16 35 26.2	0.0
GRF	Grafenberg Arr	145.08	335	ePKP	PKPdf	16 35 26.2	0.0
SNF	Seneffe	146.76	343	PKPbc	PKPbc	16 35 31.1	0.0
WLF	Walferdange	146.94	340	PKPbc	PKPbc	16 35 31.4	-0.2
GIVF	Givet	146.97	342	⇑iPKP1	PKPbc	16 35 31.2	-0.5
	comp=Z,12nm,0.6s						
DOU	Dourbes	147.04	342	PKPbc	PKPbc	16 35 31.7	-0.2
BAIF	Baives	147.19	342	⇑iPKP1	PKPbc	16 35 32.0	-0.3
	comp=Z,13nm,0.8s						
BFO	Black Forest	147.31	336	ePKP2	PKPbc	16 35 31.6	-1.0
CDF	Champ du Feu	147.63	338	⇑iPKP1	PKPbc	16 35 33.1	-0.4
	comp=Z,12nm,0.7s						
HAU	Haudompre	148.30	338	⇑iPKP1	PKPbc	16 35 34.8	-0.5
	comp=Z,9.9nm,0.6s						
MEZF	Maizieres J'vi	148.31	340	⇑iPKP1	PKPbc	16 35 35.2	-0.1
	comp=Z,16nm,0.6s						
FLN	La Foliniere	149.57	347	ePKP1	PKPbc	16 35 38.0	-0.4
CABF	La Chapelle	149.58	337	⇑iPKP1	PKPbc	16 35 38.5	0.0
	comp=Z,12nm,0.6s						
LOR	Lormes	149.78	340	⇑iPKP1	PKPbc	16 35 38.5	-0.4
	comp=Z,15nm,0.8s						
GRR	Gorron	150.01	347	ePKP1	PKPbc	16 35 38.7	-0.8
SSF	Saint Saulge	150.07	340	⇑iPKP1	PKPbc	16 35 39.3	-0.3
	comp=Z,7.8nm,0.6s						
LPL	La Plagne	150.25	335	ePKP1	PKPbc	16 35 40.3	+0.3
	comp=Z,11nm,0.9s						
LPG	La Plagne	150.25	335	ePKP1	PKPbc	16 35 40.3	+0.2
	comp=Z,19nm,0.9s						
SMF	Signal de Mont	150.33	340	ePKP1	PKPbc	16 35 39.7	-0.6
AVF	Avril sur Loir	150.36	340	ePKP1	PKPbc	16 35 39.7	-0.6
SGMF	Saint Gilles	150.47	349	ePKP1	PKPbc	16 35 39.6	-1.0
BGF	Bois d'Agland	150.73	341	ePKP1	PKPbc	16 35 40.7	-0.5
	comp=Z,8.9nm,0.5s						
MBDF	Montbardon	150.88	334	⇑iPKP1	PKPbc	16 35 41.1	-0.4
	comp=Z,12nm,0.8s						
ORIF	Oris-en-Rattie	151.08	335	⇑iPKP1	PKPbc	16 35 41.8	-0.2
	comp=Z,14nm,0.7s						
TCF	Toulx Ste Croi	151.17	341	⇑iPKP1	PKPbc	16 35 41.6	-0.6
	comp=Z,5.8nm,0.6s						
MFF	Saint Martin d	151.53	345	ePKP1	PKPbc	16 35 43.3	+0.3
	comp=Z,6.6nm,0.6s						
PGF	Pioggiola	151.57	329	ePKP1	PKPbc	16 35 42.8	-0.3
	comp=Z,49nm,0.8s						
VIVF	Saint-Julien-l	151.59	337	⇑iPKP1	PKPbc	16 35 42.8	-0.4
	comp=Z,6.4nm,0.7s						
RJF	Les Rejaudoux	152.26	341	ePKP1	PKPbc	16 35 44.2	-0.5
LFF	La Frestale	152.82	342	ePKP1	PKPbc	16 35 45.2	-0.7

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*NEIC **12** 16:27:24.7, 16.14N×97.93W, h16km, MD3.8(MEX), After MEX.*

MEX 12 16:27:24.7±1.1**, 16.14N×97.93W, h16**km±18km**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.47	51	i P	Pn	16 27 47.0	-3.5
VHO				i S	Sn	16 28 04.7	-4.7
OXX	Oaxaca	1.48	51	i P	Pn	16 27 47.0	-3.7
OXX				i S	Sn	16 28 05.0	-4.8
UTMO	Huajuapan	1.68	4	eP	Pn	16 27 49.2	-4.3
UTMO				i S	Sn	16 28 09.5	-5.2
ACX	Acapulco	2.04	291	eP	Pn	16 27 55.0	-3.4
ACX				i S	Sn	16 28 18.0	-5.5
TPIG	Tehuac#an	2.33	13	i P	Pn	16 28 00.4	-1.9
TPIG				i S	Sn	16 28 26.8	-3.8
MEIG	Mezcala	2.40	318	i P	Pn	16 28 03.0	-0.3
MEIG				i S	Sn	16 28 29.7	-2.7
CAIG	El Cayaco	2.42	292	i P	Pn	16 28 01.3	-2.3
CAIG				i S	Sn	16 28 28.2	-4.6
PPM	Popocatepetl	2.99	347	eP	Pn	16 28 10.6	-0.8
PPM				i S	Sn	16 28 44.6	-2.2

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*NEIC **12** 16:50:41.7±2.3, 10.01S×109.88E, h10km, mb4.3/1, Error ellipse: s-maj=114.0km s-min=20.6km az=53.0*
NEIC Felt [III] at Pacitan and Trenggalek; [II] at Gunung Kidul and Ponorogo.
*ISCJB **12** 16:50:43.1±1.8, 10.1S±0.1×109.9E±0.3, h33km, mb3.8/4, Error ellipse: s-maj=50.1km s-min=9.0km az=140.3*
*IDC **12** 16:50:46.6±5.0, 8.09S×111.98E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.5/14, mbtmp3.8/3, Error ellipse: s-maj=408.8km s-min=27.2km az=53.0*

ISC 12 16:50:45.8±1.9**, 10.0S**±0.1×**110.0E**±0.4**, h35**km**, n7, σ1.19**/9**, mb3.8**/4**, 1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	2.65	355	⇓iP	Pn	16 51 27.2	+1.2
BJII				i S	Sn	16 51 56.2	-0.8
MBWA	Marble Bar	14.55	141	ePn	Pn	16 54 07.6	-1.5
MBWA				eSn	Sn	16 56 42.0	-7.1
WRAB	Tennant Creek	25.52	116	eP	P	16 56 09.8	-1.2
	4.6nm,0.7s,mb4.1						
AS31	Alice Springs	26.59	124	eP	P	16 56 21.8	+1.1
ASAR	Alice Springs	26.59	124	P	P	16 56 22.4	+1.7
	0.8nm,0.6s,mb3.5,baz=305,slow=9.3,SNR=18						
STKA	Stephens Creek	36.48	131	P	P	16 57 52.3	+4.8
	1.5nm,0.7s,mb4.0,baz=324,slow=8.3,SNR=4.5						
MKAR	Makanchi Array	61.69	339	P	P	17 00 59.8	-0.5
	0.2nm,0.3s,mb3.8,baz=158,slow=7.3,SNR=5.1						

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*ISCJB **12** 16:52:05.7±1.3, 24.42S±0.06×179.3W±0.1, h431km±18km, mb3.9/12, Error ellipse: s-maj=17.7km s-min=9.2km az=161.5*
*NEIC **12** 16:52:07.3±1.1, 24.33S×179.47W, h429km±15km, mb4.0/10, Error ellipse: s-maj=18.1km s-min=13.8km az=81.0*
*IDC **12** 16:52:10.5±1.9, 24.61S×179.55W, h450km±18km, mb3.3/5, mb1 3.6/7, mb1mx3.4/12, mbtmp4.5/7, Error ellipse: s-maj=26.7km s-min=20.2km az=49.0*

ISC 12 16:52:10.9±1.2**, 24.71S**±0.08×**179.6W**±0.2**, h452**km±12km**, n49, σ0.91**/49**, mb3.9**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.77	162	P	P	16 53 34.0	+0.9
	136nm,0.3s,baz=254,slow=20,SNR=13						
RAO				S	S	16 54 41.0	+0.9
	138nm,0.3s,baz=80,slow=21,SNR=6.5						
RAO	Raoul Island	4.77	162	eP	P	16 53 33.7	+0.6
RAO				eS	S	16 54 30.4	-10
AFI	Afiamalu	13.03	36	P	P	16 54 53.6	-7.2
	6.4nm,0.3s,baz=38,slow=21,SNR=11						
AFI				S	S	16 57 03.6	-17
	3.2nm,0.3s,baz=321,slow=21,SNR=5.8						
AFI	Afiamalu	13.03	36	eP	P	16 54 52.5	-8.3
AFI				eS	S	16 57 02.9	-18
DZM	Mont Dzumac	13.07	279	eP	P	16 55 03.4	+2.2
DZM	Mont Dzumac	13.07	279	P	P	16 55 03.2	+2.0
	3.3nm,0.3s,baz=83,slow=16,SNR=41						
PUZ	Puketiti	13.45	187	ePN	P	16 55 03.9	-1.4
URZ	Urewera	13.80	191	P	P	16 55 08.8	-0.3
	13nm,0.3s,baz=32,slow=2.3,SNR=50						
URZ				S	S	16 57 37.3	+1.1
	0.8nm,0.3s,baz=277,slow=20,SNR=3.9						
URZ	Urewera	13.80	191	ePN	P	16 55 07.4	-1.6
MWZ	Matawai	13.80	189	ePN	P	16 55 09.1	0.0
KNZ	Kokohu	14.46	189	ePN	P	16 55 16.9	+0.8
PXZ	Pawanui	15.57	190	ePN	P	16 55 27.0	-1.0
MRZ	Mangatainoka R	16.41	193	ePN	P	16 55 36.5	-0.4
CAW	Cannon Point	16.95	194	ePN	P	16 55 42.6	+0.1
SNZO	South Karori	17.22	195	eP	P	16 55 44.7	-0.6
	54nm,0.6s						
SNZO				eS	S	16 58 42.6	+0.1
TCW	Tory Channel	17.23	196	ePN	P	16 55 44.5	-1.0
QRZ	Quartz Range	17.37	200	PN	P	16 55 47.3	+0.4
NNZ	Nelson	17.48	198	PN	P	16 55 47.8	-0.2
TUWZ	Tuamarina	17.52	196	ePN	P	16 55 48.4	-0.1
THZ	Tophouse	18.11	198	ePN	P	16 55 53.8	-0.8
KHZ	Kahutara	18.55	196	PN	P	16 55 58.2	-0.6
LTZ	Lake Taylor	19.23	198	ePN	P	16 56 04.7	-0.3
RPZ	Rata Peaks	20.45	200	P	P	16 56 15.8	-0.3
	5.0nm,0.3s,baz=234,slow=21,SNR=11						
CTAO	Charters Tower	31.84	271	eP	P	16 57 57.4	+0.5
	15nm,0.5s,mb4.7						
STKA	Stephens Creek	34.76	249	eP	P	16 58 23.1	+1.3
	2.3nm,1.2s,mb3.5						
STKA	Stephens Creek	34.76	249	P	P	16 58 22.6	+0.8
	4.0nm,0.7s,mb4.0,baz=93,slow=12,SNR=9.6						
STKA				PcP	PcP	17 00 43.8	+0.8
	1.1nm,0.5s,baz=145,slow=22,SNR=4.4						
STKA	Stephens Creek	34.76	249	eP	P	16 58 22.6	+0.8
PMG	Port Moresby	35.10	290	eP	P	16 58 23.9	-0.7
AS31	Alice Springs	42.26	261	eP	P	16 59 22.8	-0.2
ASAR	Alice Springs	42.26	261	P	P	16 59 23.1	+0.1
	1.3nm,0.4s,mb3.7,baz=94,slow=7.0,SNR=38						
ASAR				PcP	PcP	17 01 07.3	+0.5
	0.5nm,0.5s,baz=101,slow=4.6,SNR=5.2						
ASPA	Alice Springs	42.26	261	eP	P	16 59 23.0	0.0
WB2	Warramunga Arr	42.70	267	eP	P	16 59 25.9	-0.6
WRAB	Tennant Creek	42.70	267	eP	P	16 59 25.8	-0.7
	5.1nm,0.5s,mb4.2						
FITZ	Fitzroy Crossi	51.12	266	eP	P	17 00 30.7	+0.2
	5.4nm,0.7s,mb4.0						
SBA	Scott Base	53.60	184	eP	P	17 00 50.9	+2.6
	5.8nm,1.0s,mb3.9						
VNDA	Vanda	53.61	185	P	P	17 00 48.6	+0.2
	0.4nm,0.3s,mb3.2,baz=332,slow=4.4,SNR=7.1						
VNDA	Vanda	53.61	185	eP	P	17 00 48.4	0.0
	1.9nm,1.0s,mb3.4						
MBWA	Marble Bar	55.59	260	eP	P	17 01 01.9	-0.5
	13nm,1.2s,mb4.1						
CASY	Casey	59.55	206	P	P	17 01 29.5	+0.1
	3.2nm,0.7s,mb3.9						
QSPA	South Pole Qui	65.38	180	P	P	17 02 09.4	+1.9
	0.7nm,0.4s,mb3.6						
MAW	Mawson	77.12	200	P	P	17 03 17.5	+0.9
	1.1nm,0.6s,mb3.6,baz=132,slow=5.9,SNR=6.1						
MAW	Mawson	77.12	200	eP	P	17 03 17.3	+0.7
	1.5nm,0.6s,mb3.7						
YSS	Yuzh-Sakhalins	79.01	335	P	P	17 03 26.5	-0.3
	4.1nm,0.7s,mb4.1						
ARCES	ARCESS Array B	132.74	348	PKP	PKPdf	17 10 32.4	-1.0
	1.9nm,0.9s,baz=56,slow=1.2,SNR=6.2						
NOA	NORSAR Array B	142.93	351	PKhKP		17 10 47.3	
	1.1nm,0.8s,baz=16,slow=5.0,SNR=3.2						
AKASG	Malin Array Be	145.84	327	PKPbc	PKPbc	17 10 56.7	-1.9
	1.1nm,0.4s,baz=45,slow=4.1,SNR=12						
BR131	Keskin Array S	148.34	306	ePKPbc	PKPbc	17 11 04.5	-0.8
BRTR	Keskin Array B	148.34	306	PKPbc	PKPbc	17 11 04.6	-0.7
	1.3nm,0.6s,baz=140,slow=4.5,SNR=9.8						
CLL	Collm	151.73	343	i PKPbc	PKPbc	17 11 12.4	-0.9
	comp=Z,6.0nm,0.8s						

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*ISCJB **12** 16:59:43.1±1.1, 17.6S±0.3×178.3W±0.3, h624km±33km, mb4.2/10, Error ellipse: s-maj=57.9km s-min=29.8km az=108.4*
*IDC **12** 16:59:43.3±2.0, 17.63S×178.60W, h554km±32km, mb3.6/3, mb1 3.6/5, mb1mx3.2/14, mbtmp4.5/5, Error ellipse: s-maj=116.2km s-min=20.4km az=148.0*
*NEIC **12** 16:59:43.2±0.9, 17.70S×178.53W, h567km±14km, mb4.3/8, Error ellipse: s-maj=41.2km s-min=12.7km az=149.0*

ISC 12 16:59:43.7±1.3**, 17.7S**±0.3×**178.3W**±0.4**, h591**km±48km**, n20, σ0.60**/17**, mb4.2**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.36	60	P	P	17 01 36.6	0.0
	2.9nm,0.3s,baz=271,slow=24,SNR=4.6						
DZM	Mont Dzumac	14.96	251	P	P	17 02 51.3	-0.4
	0.8nm,0.3s,baz=91,slow=21,SNR=8.4						
ARMA	Armidale	30.10	240	eP	P	17 05 07.2	+0.6
CTAO	Charters Tower	33.55	260	eP	P	17 05 35.6	-0.2
	13nm,1.1s,mb4.5						
CNB	Canberra Magne	33.60	232	eP	P	17 05 36.2	-0.1
	14nm,1.2s,mb4.5						
TOO	Toolangi	37.34	231	eP	P	17 06 07.6	+0.4
	2.8nm,0.6s,mb4.0						
STKA	Stephens Creek	38.78	241	eP	P	17 06 19.1	+0.3
	3.6nm,0.5s,mb4.2						
STKA	Stephens Creek	38.78	241	P	P	17 06 19.4	+0.6
	4.5nm,0.5s,mb4.3,baz=98,slow=10.0,SNR=34						
WB2	Warramunga Arr	44.73	259	eP	P	17 07 05.0	-0.4
WRAB	Tennant Creek	44.73	259	eP	P	17 07 05.1	-0.4
	24nm,1.4s,mb4.5						
AS31	Alice Springs	44.91	254	eP	P	17 07 07.0	+0.1
ASAR	Alice Springs	44.91	254	P	P	17 07 07.1	+0.2
	23nm,0.6s,mb4.9,baz=88,slow=8.2,SNR=555						
ASPA	Alice Springs	44.91	254	eP	P	17 07 07.0	+0.1
KAKA	Kakadu	47.66	269	eP	P	17 07 28.1	+0.5
	6.7nm,0.8s,mb4.2						
FORT	Forrest	50.15	244	eP	P	17 07 44.1	-1.8
	9.1nm,0.8s,mb4.3						
FITZ	Fitzroy Crossi	53.13	260	P	P	17 08 08.3	+1.0
	1.1nm,0.5s,mb3.5,baz=108,slow=3.2,SNR=9.2						
MBWA	Marble Bar	58.19	256	eP	P	17 08 42.0	-0.2
	5.6nm,0.8s,mb3.8						
BRTR	Keskin Array B	144.70	315	PKP	PKPdf	17 18 16.9	+3.0
	0.5nm,0.5s,baz=119,slow=5.1,SNR=5.2						
CLL	Collm	145.29	347	ePKP1	PKPbc	17 18 19.0	+2.9
GERES	GERESS Array B	147.45	345	PKPbc	PKPbc	17 18 24.3	+2.3
	0.7nm,0.5s,baz=36,slow=3.8,SNR=10						

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*ISCJB **12** 17:06:03.7±0.8, 47.35S±0.10×105.1E±0.2, h10km, mb4.6/12, MS4.0/10, Error ellipse: s-maj=26.3km s-min=10.4km az=48.0*
*IDC **12** 17:06:04.0±1.5, 47.34S×104.92E, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.2/11, mbtmp4.3/6, MS4.0/11, Ms1 4.0/11, ms1mx3.9/17, Error ellipse: s-maj=57.0km s-min=18.7km az=126.0*
*NEIC **12** 17:06:05.1±0.6, 47.34S×105.05E, h10km, mb4.8/9, Error ellipse: s-maj=21.0km s-min=8.9km az=117.0*
*HRVD **12** 17:06:05.1±0.3, 47.22S×104.81E, h23km±2km, MW4.9/67, Centroid moment Tensor Solution. LP body waves: s22,c27; Mantle waves: s67,c94; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.80±.17; $M_{\theta\theta}$-0.52±.13; $M_{\phi\phi}$1.32±.15; $M_{r\theta}$0.82±.24; $M_{\theta\phi}$2.77±.10; $M_{\phi r}$-0.35±.22; Best double couple: $M_0$3.10700×10^{16} NP1:ϕ_s353.00000°, δ72.00000°, λ-165.00000°. NP2: ϕ_s258.00000°, δ76.00000°, λ-18.00000°. Principal axes: T 3.3270, Plg3.0000°, Azm306.0000°; N -0.4420, Plg67.0000°, Azm43.0000°; P -2.8870, Plg23.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 12 17:06:05.1±0.8**, 47.37S**±0.10×**105.0E**±0.2**, h10**km**, n29, σ0.95**/16**, mb4.6**/12**, MS4.0**/10**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	17.16	37	LR	LR	17 15 14.9	
	comp=Z,577nm,19.2s,baz=23,slow=32						
CASY	Casey	19.18	173	eP	Pn	17 10 29.5	-0.4
	47nm,1.3s						
MBWA	Marble Bar	28.74	30	eP	P	17 12 01.7	-1.0
	24nm,1.3s,mb4.8						
MAW	Mawson	29.46	212	P	P	17 12 08.3	-0.9
	9.3nm,1.3s,mb4.4,baz=51,slow=11,SNR=9.1						
MAW				LR	LR	17 22 07.0	
	comp=Z,366nm,18.6s,MS4.0,baz=60,slow=33						
MAW	Mawson	29.46	212	eP	P	17 12 08.0	-1.2
	17nm,1.4s,mb4.6						
MAW				LR	LR	17 22 07.0	
STKA	Stephens Creek	31.82	74	P	P	17 12 29.4	-0.5
	4.0nm,0.9s,mb4.2,baz=238,slow=4.9,SNR=5.8						
STKA				LR	LR	17 23 43.6	
	comp=Z,222nm,19.0s,MS3.9,baz=215,slow=33						
STKA	Stephens Creek	31.82	74	P	P	17 12 29.4	-0.5
STKA				eP	pP	17 12 31.0	-2.0
STKA				LR	LR	17 23 43.6	
ASAR	Alice Springs	33.04	54	P	P	17 12 40.5	-0.1
	2.5nm,0.9s,mb4.1,baz=216,slow=8.6,SNR=12						
ASAR				LR	LR	17 24 32.7	
	comp=Z,357nm,19.0s,MS4.1,baz=218,slow=34						
FITZ	Fitzroy Crossi	33.75	37	P	P	17 12 48.8	+2.0
	2.6nm,0.9s,mb4.2,baz=215,slow=22,SNR=3.6						
WRAB	Tennant Creek	36.30	51	eP	P	17 13 08.2	-0.6
	49nm,1.4s,mb5.2						
VNDA	Vanda	37.18	162	P	P	17 13 17.1	+0.8
	4.1nm,0.8s,mb4.3,baz=290,slow=8.9,SNR=23						
VNDA				LR	LR	17 27 29.3	
	comp=Z,513nm,18.7s,MS4.3,baz=296,slow=34						
VNDA	Vanda	37.18	162	eP	P	17 13 16.4	+0.1
	11nm,0.9s,mb4.7						
VNDA				LR	LR	17 27 29.3	
SBA	Scott Base	38.28	162	eP	P	17 13 27.7	+2.0
	64nm,1.8s,mb5.0						
QSPA	South Pole Qui	42.77	180	eP	P	17 14 02.3	-0.4
	20nm,1.1s,mb4.8						
CTAO	Charters Tower	43.05	65	eP	P	17 14 04.4	-0.6
	39nm,1.4s,mb4.9						
SNAA	Sanae	50.96	203	P	P	17 15 06.6	-0.2
	3.7nm,1.0s,mb4.3,baz=142,slow=10.0,SNR=14						
RAO	Raoul Island	60.70	102	LR	LR	17 36 13.0	
	comp=Z,138nm,20.1s,MS4.1,baz=144,slow=30						
KMBO	Kilima Mbogo	74.23	286	LR	LR	17 42 29.2	
	comp=Z,119nm,21.4s,MS4.2,baz=96,slow=30						
WSAR	Wadi Sarin	81.74	318	LR	LR	17 48 21.2	
	comp=Z,78nm,18.0s,MS4.1,baz=33,slow=31						
TBI	Tubuai	83.01	117	eLR	LR	17 44 37.2	
	392nm,29.8s,baz=220						
MJAR	Matsushiro Arr	88.67	26	LR	LR	17 57 34.4	
	comp=Z,41nm,18.4s,MS3.9,baz=35,slow=35						
RKT	Rikitea	91.54	127	eLR	LR	17 48 35.6	
	107nm,25.5s						
AAK	Ala-Archa	93.60	338	P	P	17 19 22.4	+0.9
	2.8nm,0.6s,mb4.9						
SONM	Songino Array	94.83	1	LR	LR	17 59 44.3	
	comp=Z,90nm,21.7s,MS4.2,baz=174,slow=34						
MKAR	Makanchi Array	95.86	345	LR	LR	17 59 40.4	
	comp=Z,6.3nm,21.8s,MS3.0,baz=0.0,slow=34						
NVAR	Mina Array Bea	147.41	90	PKPbc	PKPbc	17 25 49.3	+0.2
	0.8nm,0.7s,baz=210,slow=4.1,SNR=7.3						
WVOR	Wild Horse Val	149.01	83	ePKPbc	PKPbc	17 25 51.8	-1.6
MSU	Marysvale	151.61	94	ePKPbc	PKPbc	17 25 59.5	-0.1
BOZ	Bozeman (W)	154.88	80	ePKPdf	PKPdf	17 26 01.2	+3.1
BOZ				ePKPbc	PKPbc	17 26 09.3	+2.5

JMA 12 17:26:17.0±0.6**, 44.55N**×**148.71E, h30**km**, M3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.45	242	P	Pn	17 26 53.4	-1.5
NEM2				eS	Sn	17 27 20.8	-3.0
JRA	Rausu	2.65	258	P	Pn	17 26 58.7	+1.0
JRA				eS	Sn	17 27 30.2	+1.4
JNK	Nakash	3.03	253	P	Pn	17 27 03.4	+0.5
JNK				eS	Sn	17 27 36.9	-1.3
JAK	Akkeshi	3.30	243	P	Pn	17 27 05.8	-0.7
JAK				eS	Sn	17 27 42.3	-2.4
JTKR	Abashiri--Toko	3.50	262	P	Pn	17 27 10.9	+1.6
JAR	Ashorobuto	3.78	252	P	Pn	17 27 14.3	+1.1
JAR				eS	Sn	17 27 57.2	+0.5
JMP	Maruseppu	3.88	264	P	Pn	17 27 16.5	+1.9
JOB	Onbets	3.90	247	P	Pn	17 27 15.2	+0.4
JCH	Churui	4.34	245	P	Pn	17 27 21.2	+0.3
JFR	Furan	4.63	255	P	Pn	17 27 27.3	+2.3
JEM	Erimo	4.78	240	P	Pn	17 27 28.6	+1.7
JNBK	Urakawa-nobuka	4.90	244	P	Pn	17 27 29.1	+0.6
JBT2	Biratori 2	4.93	251	P	Pn	17 27 30.4	+1.4
JNB	Noboribetsu	5.95	252	P	Pn	17 27 44.6	+1.5
JNB				eS	Sn	17 28 49.2	-1.0
JKB	Kayabe	6.21	247	P	Pn	17 27 46.7	+0.1
JKB				eS	Sn	17 28 51.8	-4.7
JANG	Nango	6.76	234	P	Pn	17 27 52.1	-2.0
JANG				eS	Sn	17 29 01.4	-8.7
JTH	Tanohata	6.86	230	P	Pn	17 27 53.0	-2.5
JTH				eS	Sn	17 29 04.1	-8.4
JIO	Ouri	8.22	225	eS	Sn	17 29 34.1	-12

JMA 12 17:29:11.4±0.3**, 44.18N**×**148.16E, h0**km**, M3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.93	246	P	Pn	17 29 46.2	+0.7
NEM2				eS	Sn	17 30 11.4	+0.9
JRA	Rausu	2.20	265	P	Pn	17 29 49.9	+0.7
JRA				eS	Sn	17 30 18.3	+1.1
JNK	Nakash	2.56	258	P	Pn	17 29 55.3	+1.2
JNK				eS	Sn	17 30 27.0	+1.1
JAK	Akkeshi	2.78	246	P	Pn	17 29 57.8	+0.6
JAK				eS	Sn	17 30 32.5	+1.1
JAR	Ashorobuto	3.30	256	P	Pn	17 30 06.3	+2.0
JAR				eS	Sn	17 30 47.6	+3.3
JCH	Churui	3.83	248	P	Pn	17 30 13.8	+2.2
JCH				eS	Sn	17 30 58.8	+1.5
JKK2	Kamakawa 2	3.92	267	P	Pn	17 30 14.0	+1.2
JNBK	Urakawa-nobuka	4.38	246	P	Pn	17 30 20.8	+1.6
JKB	Kayabe	5.70	249	P	Pn	17 30 38.5	+1.2
JKB				eS	Sn	17 31 42.4	-1.1
JOT	Ohata	5.93	244	P	Pn	17 30 41.3	+0.8
JOT				eS	Sn	17 31 46.7	-2.5
JANG	Nango	6.22	235	P	Pn	17 30 44.7	+0.2
JANG				eS	Sn	17 31 54.0	-2.3

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*ISCJB **12** 17:38:19.5±0.4, 44.11N±0.03×7.02E±0.03, h21km±5km, Error ellipse: s-maj=4.6km s-min=3.8km az=56.5*
*STR **12** 17:38:19.9±0.5, 44.12N×7.01E, h5km±1km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **12** 17:38:19.3±0.1, 44.12N×6.97E, h2km, Md2.6/4, Ml2.1/4, Error ellipse: s-maj=1.8km s-min=1.2km az=70.0*

ISC 12 17:38:18.9±0.4**, 44.14N**±0.02×**6.98E**±0.03**, h18**km±3km**, n19, σ0.83**/37**, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOUF	Mont Tournerai	0.23	123	Pg	Pg	17 38 23.9	-0.4
TOUF				Sg	Sg	17 38 27.8	-0.1
MVIF	Mont Vial	0.27	153	Pg	Pg	17 38 24.5	-0.5
MVIF				Sg	Sg	17 38 29.2	+0.1
AUTN	L'Aution	0.35	114	Pg	Pg	17 38 26.1	-0.2
AUTN				Sg	Sg	17 38 32.2	+0.9
LUCF	Luceram	0.36	133	Pg	Pg	17 38 26.3	-0.2
SBF	Sospel	0.43	130	ePg	Pg	17 38 27.5	-0.2
SBF				eSg	Sg	17 38 33.3	-0.3
	25nm,0.3s						

SAOF	**Saorge**	**0.44**	**110**	Pg	**Pg**	**17 38 27.8**	**-0.1**
SAOF				Sg	**Sg**	**17 38 34.5**	**+0.6**
MBDF	**Montbardon**	**0.61**	**346**	*e*Pg	**Pg**	**17 38 31.5**	**+0.5**
MBDF				*e*Sg	**Sg**	**17 38 39.6**	**+0.5**
	8.3nm,0.3s						
FRF	**La Foret Royal**	**0.63**	**203**	*e*Pg	**Pg**	**17 38 30.8**	**-0.5**
FRF				*e*Sg	**Sg**	**17 38 38.5**	**-1.2**
	12nm,0.2s						
TAVF	**Tavernes**	**0.85**	**232**	Pg	**Pg**	**17 38 35.2**	**-0.3**
TAVF				Sg	**Sg**	**17 38 48.8**	**+2.1**
LMR	**La Mourre**	**0.87**	**203**	*e*Pg	**Pg**	**17 38 35.3**	**-0.7**
LMR				*e*Sg	**Sg**	**17 38 45.9**	**-1.6**
	5.4nm,0.2s						
LMR				*e*Sn	**Sn**	**17 38 49.2**	**+0.6**
VILF	**Villemus**	**0.96**	**253**	Pg	**Pg**	**17 38 39.8**	**+2.2**
SMRF	**Simiane la Rot**	**1.03**	**261**	*e*Pg	**Pg**	**17 38 39.2**	**+0.3**
SMRF				*e*Sn	**Sn**	**17 38 51.6**	**-0.8**
SMRF				*e*Sg	**Sg**	**17 38 53.4**	**+1.0**
	9.1nm,0.2s						
PUYF	**Puyloubier**	**1.11**	**237**	Pg	**Pg**	**17 38 40.7**	**+0.3**
PUYF				Sg	**Sg**	**17 38 56.3**	**+1.4**
ORIF	**Oris-en-Rattie**	**1.11**	**315**	*e*Pg	**Pg**	**17 38 40.3**	**-0.1**
ORIF				*e*Sg	**Sg**	**17 38 54.0**	**-1.0**
	4.1nm,0.3s						
LPG	**La Plagne**	**1.37**	**353**	*e*Pg	**Pg**	**17 38 45.6**	**+0.2**
LPL	**La Plagne**	**1.39**	**353**	*e*Pg	**Pg**	**17 38 45.9**	**+0.2**
VIVF	**Saint-Julien-l**	**1.80**	**294**	*e*Pg	**Pg**	**17 38 51.3**	**-2.3**
VIVF				*e*Sn	**Sn**	**17 39 11.8**	**+0.3**
VIVF				*e*Sg	**Sg**	**17 39 16.0**	**-1.0**
	1.1nm,0.2s						
PGF	**Pioggiola**	**2.17**	**137**	*e*Pn	**Pn**	**17 38 54.5**	**+0.4**
PGF				*e*Sn	**Sn**	**17 39 20.6**	**+0.1**
LASF	**Ste Croix**	**2.25**	**270**	*e*Pn	**Pn**	**17 38 55.7**	**+0.4**
LASF				*e*Sn	**Sn**	**17 39 22.1**	**-0.5**
	1.7nm,0.3s						

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*ISCJB **12** 17:40:08.4±1.5, 4105N±006×7320E±006, h13km±10km, mb3.7/3, Error ellipse: s-maj=9.7km s-min=7.0km az=152.0*
*KNET **12** 17:40:11.6±0.6, 4124N×7368E, h5km±2km, ml3.2, Error ellipse: s-maj=4.8km s-min=3.4km az=74.0*
*NNC **12** 17:40:12.3±6.6, 41.11N×7333E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=66.7km s-min=19.4km az=176.0*
*NEIC **12** 17:40:14.2±4.4, 41.12N×7352E, h52km±34km, Error ellipse: s-maj=49.8km s-min=22.9km az=182.0*
*IDC **12** 17:40:16.6±6.1, 4126N×7353E, h71km±57km, mb3.4/3, mb1 3.4/7, mb1mx3.1/24, mbtmp3.5/7, ML2.9/4, Error ellipse: s-maj=55.5km s-min=48.5km az=6.0*
ISC 12 17:40:13.2±1.4, **4103N**±010×**7345E**±008, **h45**km±15km, **n31**, σ**1^{s}48**/44, **mb3.7**/3, **21C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.11**	**9**	⇓P	**Pn**	**17 40 28.9**	**-3.5**
	126nm,0.1s,SNR=189						
AML				⇑S	**Sn**	**17 40 42.9**	**-3.6**
	533nm,0.3s						
UCH	**Uchtor**	**1.44**	**33**	⇑P	**Pn**	**17 40 34.7**	**-2.0**
	18nm,0.1s,SNR=27						
UCH				⇑S	**Sn**	**17 40 52.1**	**-2.3**
	182nm,0.3s						
EKS2	**Erkin-Say**	**1.65**	**8**	⇓P	**Pn**	**17 40 38.8**	**-0.9**
	38nm,0.2s,SNR=36						
EKS2				⇓S	**Sn**	**17 40 59.2**	**-0.4**
	101nm,0.2s						
KZA	**Kyzart**	**1.71**	**52**	⇓P	**Pn**	**17 40 39.1**	**-1.4**
	41nm,0.1s,SNR=78						
KZA				⇓S	**Sn**	**17 41 00.3**	**-0.8**
	133nm,0.2s						
AAK	**Ala-Archa**	**1.78**	**26**	⇓P	**Pn**	**17 40 40.9**	**-0.5**
	52nm,0.2s,SNR=21						
AAK				⇓S	**Sn**	**17 41 02.7**	**-0.2**
	267nm,0.3s						
AAK	**Ala-Archa**	**1.78**	**26**	*e*Pn	**Pn**	**17 40 39.6**	**-1.8**
AAK				*e*Sn	**Sn**	**17 40 58.0**	**-4.9**
KBK	**Karagaybulak**	**1.97**	**34**	⇑P	**Pn**	**17 40 44.1**	**0.0**
	62nm,0.1s,SNR=49						
KBK				⇑S	**Sn**	**17 41 09.0**	**+1.4**
	569nm,0.4s						
CHMS	**Chumysh**	**2.19**	**26**	⇓P	**Pn**	**17 40 48.3**	**+1.2**
	108nm,0.3s,SNR=40						
CHMS				⇑S	**Sn**	**17 41 15.4**	**+2.4**
	272nm,0.4s						
USP	**Ospenovka**	**2.37**	**19**	⇑P	**Pn**	**17 40 51.2**	**+1.6**
	62nm,0.2s,SNR=71						
USP				⇑S	**Sn**	**17 41 21.5**	**+4.2**
	223nm,0.3s						
ULHL	**Ulahol**	**2.42**	**59**	⇑P	**Pn**	**17 40 50.3**	**+0.1**
	28nm,0.2s,SNR=13						
ULHL				⇓S	**Sn**	**17 41 22.9**	**+4.3**
	82nm,0.2s						
TKM2	**Tokmak 2**	**2.47**	**40**	⇑P	**Pn**	**17 40 52.4**	**+1.4**
	125nm,0.3s,SNR=158						
TKM2				⇑S	**Sn**	**17 41 23.8**	**+3.8**
	152nm,0.3s						
TKM2	**Tokmak 2**	**2.47**	**40**	⇑Pn	**Pn**	**17 40 52.4**	**+1.4**
	4.4nm,0.4s						
TKM2				⇑Sn	**Sn**	**17 41 23.7**	**+3.7**
	14nm,0.5s						
KK31	**Karatay Array**	**3.01**	**314**	⇑Pn	**Pn**	**17 41 00.1**	**+1.7**
	18nm,0.3s,baz=142,slow=117,SNR=630						
KK31				⇓Sn	**Sn**	**17 41 44.2**	**+11**
	34nm,0.3s						
KNDC	**Almaty**	**3.41**	**49**	⇑Pn	**Pn**	**17 41 10.6**	**+6.8**
	35nm,0.5s						
KNDC				⇑Sn	**Sn**	**17 41 54.0**	**+11**
	251nm,0.8s						
MKAR	**Makanchi Array**	**8.59**	**45**	P	**Pn**	**17 42 15.0**	**+0.1**
	0.0nm,0.3s,baz=235,slow=10.0,SNR=2.6						
MK05	**Makanchi Array**	**8.59**	**45**	⇑Pn	**Pn**	**17 42 23.0**	**+8.1**
	1.4nm,0.7s						
MK05				⇑Lg		17 44 43.3	
	3.5nm,0.8s						
KURK	**Kurchatov**	**10.33**	**19**	⇓Lg		17 45 37.4	
	18nm,1.3s						
KURK	**Kurchatov**	**10.33**	**19**	Pn	**Pn**	**17 42 42.6**	**+3.9**
VOSK	**Vostochnaya**	**11.82**	**353**	⇓Pn	**Pn**	**17 42 57.0**	**-2.1**
	3.1nm,1.5s						
VOSK				⇓Lg		17 46 23.9	
	7.4nm,1.2s						
BVA0	**Borovoye Array**	**12.18**	**351**	⇑Pn	**Pn**	**17 43 01.9**	**-2.1**
	0.2nm,0.5s,baz=154,slow=15,SNR=4.0						
BVA0				⇓Lg		17 46 37.3	
	1.4nm,1.1s,baz=159,slow=30,SNR=3.8						
BVAR	**Borovoye Array**	**12.18**	**351**	P	**Pn**	**17 43 03.2**	**-0.8**
	0.2nm,0.3s,baz=157,slow=15,SNR=4.1						
AB31	**Akbulak array**	**12.58**	**315**	⇑Pn	**Pn**	**17 43 08.4**	**-1.1**
	0.5nm,0.5s,baz=120,slow=15,SNR=13						
AKTK	**Aktyubinsk**	**14.28**	**316**	P	**Pn**	**17 43 34.3**	**+1.7**
AKTO	**Aktyubinsk**	**14.28**	**316**	⇑Pn	**Pn**	**17 43 37.4**	**+4.8**
AKTO	**Aktyubinsk**	**14.28**	**316**	P	**Pn**	**17 43 34.3**	**+1.7**
	0.1nm,0.3s,baz=128,slow=11,SNR=4.0						
ZAL	**Zalesovo**	**14.99**	**27**	P	**Pn**	**17 43 43.2**	**+1.2**
	0.1nm,0.3s,baz=323,slow=5.1,SNR=2.0						
ZAL	**Zalesovo**	**14.99**	**27**	P	**Pn**	**17 43 43.2**	**+1.1**
FINES	**FINESS Array B**	**34.95**	**322**	P	**P**	**17 47 00.2**	**-0.6**
	0.6nm,0.6s,mb3.7,baz=111,slow=11,SNR=4.7						
FINES	**FINESS Array B**	**34.95**	**322**	P	**P**	**17 47 00.2**	**-0.6**
ARCES	**ARCESS Array B**	**37.78**	**335**	P	**P**	**17 47 23.4**	**-1.5**
	2.2nm,1.0s,mb3.9,baz=105,slow=9.2,SNR=5.1						
TORD	**Torodi Ar. Bea**	**67.76**	**268**	P	**P**	**17 51 07.4**	**+1.3**
	0.4nm,0.8s,mb3.5,baz=50,slow=4.3,SNR=5.8						

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*NEIC **12** 17:44:01.6±1.9, 624S×13004E, h151km±19km, mb4.2/5, Error ellipse: s-maj=19.3km s-min=12.5km az=64.0*
*ISCJB **12** 17:44:03.0±1.7, 637S±009×1300E±02, h189km±18km, mb3.6/3, Error ellipse: s-maj=30.1km s-min=10.4km az=141.6*
*IDC **12** 17:44:05.7±7.3, 626S×13039E, h195km±66km, mb3.4/2, mb1 3.3/3, mb1mx3.1/11, mbtmp3.8/3, Error ellipse: s-maj=143.4km s-min=16.2km az=73.0*
ISC 12 17:44:05.4±1.4, **649S**±008×**1302E**±01, **h205**km±14km, **n14**, σ**1^{s}37**/20, **mb3.5**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.55**	**161**	*e*P	**Pn**	**17 45 39.0**	**-0.8**
	5.4nm,0.2s						
KAKA				*e*S	**Sn**	**17 46 50.8**	**-4.0**
FITZ	**Fitzroy Crossi**	**12.38**	**201**	*e*P	**Pn**	**17 46 54.5**	**-0.4**
	14nm,1.7s						
FITZ				*e*S	**Sn**	**17 49 04.1**	**-8.9**
WRAB	**Tennant Creek**	**13.95**	**164**	*e*Pn	**Pn**	**17 47 16.1**	**+1.6**
WRAB				*e*Sn	**Sn**	**17 49 41.5**	**-8.9**
WB2	**Warramunga Arr**	**13.96**	**164**	*e*P	**Pn**	**17 47 17.4**	**+2.8**
WB2				*e*S	**Sn**	**17 49 43.0**	**-7.6**
AS31	**Alice Springs**	**17.44**	**169**	*e*P	**Pn**	**17 47 58.1**	**+1.6**
AS31				*e*S	**S**	**17 51 04.8**	**-0.5**
ASAR	**Alice Springs**	**17.44**	**169**	P	**Pn**	**17 47 58.4**	**+1.8**
	0.3nm,0.3s,baz=349,slow=11,SNR=39						
ASAR				S	**S**	**17 51 10.2**	**+4.8**
	0.2nm,0.3s,baz=356,slow=27,SNR=6.7						
ASPA	**Alice Springs**	**17.44**	**169**	*e*P	**Pn**	**17 47 58.1**	**+1.6**
ASPA				*e*S	**S**	**17 51 04.8**	**-0.5**
MBWA	**Marble Bar**	**17.77**	**214**	*e*P	**Pn**	**17 47 59.6**	**-0.8**
	14nm,1.2s						
CTAO	**Charters Tower**	**20.61**	**133**	P	**P**	**17 48 26.2**	**-2.6**
	12nm,1.1s						
KULM	**Kulim**	**31.76**	**291**	P	**P**	**17 50 09.5**	**-0.8**
ULN	**Ulaanbaatar**	**57.85**	**342**	*e*P	**P**	**17 53 35.1**	**-0.5**
	1.0nm,0.8s,mb3.5						
SONM	**Songino Array**	**58.03**	**341**	P	**P**	**17 53 37.0**	**+0.1**
	0.3nm,0.6s,mb3.1,baz=167,slow=4.6,SNR=4.6						
MKAR	**Makanchi Array**	**67.93**	**327**	P	**P**	**17 54 42.6**	**+0.6**
	1.1nm,0.4s,mb3.9,baz=125,slow=7.1,SNR=22						
CPUP	**Villa Florida**	**146.56**	**168**	PKPbc	PKPbc	18 03 25.9	+3.2
	0.9nm,0.6s,baz=153,slow=4.5,SNR=2.8						

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*NIED **12** 18:15:00, 2270N×12050E, h29km, Mw4.0 Best double couple: Mo1.27000×10^{15} NP1:φs201.00000°, δ83.00000°, λ148.00000°. NP2:φs296.00000°, δ58.00000°, λ9.00000°.*
*ISCJB **12** 18:15:35.9±1.8, 2280N±004×12045E±004, h26km±15km, mb4.0/10, Error ellipse: s-maj=6.4km s-min=6.0km az=86.4*
*JMA **12** 18:15:36.4±0.5, 2268N×12047E, h80km, M4.0*
*NEIC **12** 18:15:39.9±2.6, 2274N×12095E, h42km±24km, mb4.2/5, Error ellipse: s-maj=32.6km s-min=16.2km az=68.0*
*IDC **12** 18:15:45.8±6.5, 2282N×12135E, h85km±64km, mb3.5/6, mb1 3.6/7, mb1mx3.3/21, mbtmp3.8/7, ML3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/19, Error ellipse: s-maj=51.7km s-min=20.6km az=68.0*
*BJI **12** 18:15:45.4, 2361N×12005E, h5km, ML3.5, Ms3.4*
ISC 12 18:15:36.2±1.9, **2281N**±004×**12048E**±004, **h12**km±12km, **n29**, σ**1^{s}10**/37, **mb4.0**/10, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**1.70**	**37**	*e*Pn	**Pn**	**18 16 04.5**	**-1.1**
NACB				*e*Sn	**Sn**	**18 16 25.8**	**-1.4**
YHNB	**Yeheng**	**2.02**	**24**	*e*Pn	**Pn**	**18 16 09.1**	**-1.0**
TATO	**Taipei**	**2.34**	**23**	*e*Pn	**Pn**	**18 16 16.6**	**+2.1**
QZH	**Quanzhou**	**2.74**	**321**	*e*PG	**Pn**	**18 16 19.0**	**-0.9**
QZH				S	**Sn**	**18 16 51.8**	**-1.1**
QZH				Smax			
	comp=N,400nm,0.9s						
QZH				Smax			
	comp=E,260nm,0.8s						
YOJ	**Yonaguni jima**	**2.84**	**54**	P	**Pn**	**18 16 21.7**	**+0.4**
YOJ				*e*S	**Sn**	**18 16 56.2**	**+0.7**
HATJ	**Hateruma jima**	**3.29**	**67**	P	**Pn**	**18 16 27.6**	**0.0**
HATJ				*e*S	**Sn**	**18 17 06.9**	**+0.3**
IRIF	**Iriomote-Funau**	**3.34**	**62**	P	**Pn**	**18 16 28.4**	**+0.2**
IRIF				*e*S	**Sn**	**18 17 09.1**	**+1.2**
JKRS	**Kuro-shima**	**3.54**	**66**	P	**Pn**	**18 16 31.4**	**+0.5**
JKRS				S	**Sn**	**18 17 12.7**	**+0.1**
JIJ	**Ishigaki jima**	**3.70**	**65**	P	**Pn**	**18 16 32.6**	**-0.5**
JIJ				S	**Sn**	**18 17 15.9**	**-0.7**
JTJ	**Tarama**	**4.28**	**64**	P	**Pn**	**18 16 42.1**	**+1.1**
JOGS	**Gusukube**	**4.91**	**66**	P	**Pn**	**18 16 50.2**	**+0.4**
APYP	**Conner**	**4.98**	**172**	*e*P	**Pn**	**18 16 52.1**	**+1.4**
APYP				*e*S	**Sn**	**18 17 47.5**	**-0.7**
JKE	**Kume jima 2**	**6.72**	**57**	P	**Pn**	**18 17 13.9**	**-0.8**
JOW	**Kunigami**	**8.13**	**59**	P	**Pn**	**18 17 31.2**	**-2.8**
	comp=E,1.5nm,0.3s,baz=196,slow=8.1,SNR=9.9						
JOW	**Kunigami**	**8.13**	**59**	P	**Pn**	**18 17 32.2**	**-1.8**
NJ2	**Nanjing**	**9.32**	**351**	*e*P	**Pn**	**18 17 50.6**	**+0.3**
NJ2				AP		18 17 54.8	
NJ2				XP		18 17 58.2	
NJ2				S	**Sn**	**18 19 35.5**	**+0.5**
NJ2				Smax			
	comp=N,30nm,1.0s						
NJ2				Smax			
	comp=E,20nm,1.0s						
NJ2				LR	LR		
	comp=N,210nm,14.2s						
NJ2				LR	LR		
	comp=E,160nm,13.0s						
MJAR	**Matsushiro Arr**	**20.56**	**44**	P	**P**	**18 20 13.0**	**-1.6**
	comp=E,2.4nm,0.9s,baz=232,slow=8.1,SNR=5.0						
SONM	**Songino Array**	**27.40**	**339**	P	**P**	**18 21 24.8**	**+3.3**
	comp=E,0.6nm,0.9s,mb3.1,baz=141,slow=9.3,SNR=2.4						
ASAJ	**Asahikawa**	**27.98**	**35**	LR	LR	18 32 46.3	
	comp=E,69nm,19.6s,baz=240,slow=37						
TLY	**Talaya**	**31.62**	**340**	P	**P**	**18 22 04.6**	**+5.7**
	comp=E,2.5nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**38.89**	**317**	P	**P**	**18 23 09.1**	**+7.6**
	comp=E,0.7nm,0.7s,mb3.5,baz=117,slow=9.7,SNR=5.7						
PET	**Petropavlovsk**	**41.81**	**34**	P	**P**	**18 23 19.0**	**-6.6**
	comp=E,22nm,1.1s,mb4.7						
PET				*e*	pP	18 23 22.8	-6.6
WRAB	**Tennant Creek**	**44.59**	**161**	*e*P	**P**	**18 23 44.7**	**-3.4**
	comp=E,6.4nm,0.8s,mb4.5						
AS31	**Alice Springs**	**48.01**	**163**	*e*P	**P**	**18 24 14.2**	**-0.8**
ASAR	**Alice Springs**	**48.01**	**163**	P	**P**	**18 24 14.7**	**-0.3**
	comp=E,0.9nm,0.5s,mb4.0,baz=342,slow=6.8,SNR=21						
BRVK	**Borovoye**	**48.41**	**322**	P	**P**	**18 24 18.5**	**+0.5**
	comp=E,1.2nm,1.0s,mb3.9						
ARCES	**ARCESS Array B**	**70.57**	**338**	P	**P**	**18 26 53.0**	**+2.0**
	comp=E,0.5nm,0.5s,mb3.7,baz=46,slow=3.5,SNR=4.2						
FINES	**FINESS Array B**	**72.30**	**330**	P	**P**	**18 27 03.0**	**+1.5**
	comp=E,1.5nm,0.9s,mb3.9,baz=178,slow=8.8,SNR=3.4						
INK	**Inuvik**	**74.73**	**22**	*e*P	**P**	**18 27 12.2**	**-3.7**
	comp=E,1.7nm,0.7s,mb4.1						

IDC 12 18:21:36.2±5.2, **1986S**×**7057W**, **h42**km±43km, **mb4.0**/2, **mb1 3.9**/5, **mb1mx3.6**/17, **mbtmp4.0**/5, **ML4.2**/2, **MS3.2**/2, **Ms1 3.2**/2, **ms1mx2.8**/18, **Error ellipse: s-maj=44.2km s-min=24.5km az=102.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**3.15**	**151**	P	Pn	18 22 22.4	-0.9
	6.2nm,0.3s,baz=306,slow=10,SNR=74						
LVC				S	Sn	18 23 00.8	+1.2
	30nm,0.3s,baz=102,slow=22,SNR=6.5						
SIV	**San Ignacio**	**9.83**	**68**	P	Pn	18 23 55.6	+0.7
	1.3nm,0.3s,baz=254,slow=11,SNR=53						
CPUP	**Villa Florida**	**13.78**	**120**	P	Pn	18 24 48.5	-0.5
	0.3nm,0.3s,baz=17,slow=18,SNR=1.9						
ATAH	**Atahualpa**	**14.87**	**328**	LR	LR	18 31 06.9	
	comp=Z,49nm,18.4s,baz=99,slow=39						
BDFB	**Brasilia**	**21.88**	**83**	P	P	18 26 26.4	+0.8
	3.1nm,0.7s,baz=236,slow=11,SNR=2.5						
BDFB				LR	LR	18 36 10.1	
	comp=Z,122nm,19.6s,baz=199,slow=40						
TORD	**Torodi Ar. Bea**	**78.29**	**71**	P	P	18 33 31.7	-0.1
	4.0nm,0.8s,baz=252,slow=5.2,SNR=18						
ZAL	**Zalesovo**	**141.10**	**23**	PKP	PKPdf	18 41 01.1	-0.9
	0.7nm,0.5s,baz=238,slow=1.2,SNR=3.7						
MKAR	**Makanchi Array**	**145.17**	**33**	PKPbc	PKPbc	18 41 09.1	+0.3
	1.3nm,0.6s,baz=343,slow=3.8,SNR=14						
MJAR	**Matsushiro Arr**	**149.83**	**310**	PKPbc	PKPbc	18 41 21.8	0.0
	0.5nm,0.7s,baz=65,slow=5.5,SNR=3.2						
SONM	**Songino Array**	**151.99**	**4**	PKPbc	PKPbc	18 41 26.8	+0.1
	0.8nm,0.7s,baz=10,slow=1.3,SNR=6.7						

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*NIED **12** 18:39:00, 2870N×13020E, h44km, Mw5.5 Best double couple: Mo2.03000×10^{17} NP1:φs26.00000°, δ76.00000°, λ65.00000°. NP2:φs269.00000°, δ28.00000°, λ150.00000°.*
*BJI **12** 18:39:12.8, 2861N×13053E, h28km, mB5.3, mb5.3, Ms5.4, Msz5.3*
*MOS **12** 18:39:15.7±0.9, 2884N×13004E, h21km, mb5.8/115, MS5.2/59, Error ellipse: s-maj=6.7km s-min=3.6km az=115.4*
*ISCJB **12** 18:39:16.9±0.1, 2880N±002×13001E±002, h28km, mb5.6/256, MS5.1/148, Error ellipse: s-maj=2.6km s-min=2.0km az=105.3*
*SZGRF **12** 18:39:17.9, 2898N×13137E, h33km, mb6.0, MS5.3, Southeast of Ryukyu Islands, Japan*
*JMA **12** 18:39:17.6±0.2, 2869N×130.18E, h56km±4km, M5.3*
JMA Felt III J1.
*NEIC **12** 18:39:17.2±0.1, 2879N×13002E, h22km, mb5.6/173, ME5.0, MS5.0/92, MW5.4, MW5.5(NIED), Error ellipse: s-maj=3.1km s-min=2.7km az=157.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; Mrr1.07; Mθθ-0.21; Mφφ-0.86; Mrθ0.68; Mθφ-0.50; Mφr0.77; Best double couple: Mo1.50000×10^{17} NP1:φs37.00000°, δ67.00000°, λ98.00000°. NP2:φs199.00000°, δ24.00000°, λ73.00000°. Principal axes: T 1.4900, Plg68.0000°, Azm321.0000°; N 0.0300, Plg7.0000°, Azm214.0000°; P -1.5200, Plg21.0000°, Azm122.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Recorded [3 JMA] on Amami-oshima and [1 JMA] on Kuchino-shima.
*IDC **12** 18:39:17.1±3.0, 2879N×13004E, h22km±18km, mb5.2/23, mb1 5.2/29, mb1mx5.2/30, mbtmp5.3/29, ML4.7/6, MS4.8/23, Ms1 4.8/23, ms1mx4.7/26 Error ellipse: s-maj=14.5km s-min=11.7km az=74.0*
*HRVD **12** 18:39:18.1±0.1, 2861N×13038E, h31km, MW5.5/83, Centroid moment Tensor Solution. LP body waves: s74,c142;Mantle waves: s83,c183; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; Mrr1.45±.03; Mθθ-0.30±.02; Mφφ-1.16±.02; Mrθ0.70±.03; Mθφ-0.72±.01; Mφr0.84±.03; Best double couple: Mo1.86600×10^{17} NP1:φs203.00000°, δ28.00000°, λ78.00000°. NP2: φs36.00000°, δ63.00000°, λ96.00000°. Principal axes: T 1.8160, Plg71.0000°, Azm319.0000°; N 0.0920, Plg5.0000°, Azm213.0000°; P -1.9150, Plg18.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*BGS **12** 18:39:21.0±1.5, 2894N×12871E, h33km, mb5.4*
ISC 12 18:39:18.7±0.1, **2881N**±002×**13003E**±002, **h29**km, **h29**km±.5km**:pP-P, n1137**, σ**0^{s}91**/1106, **mb5.6**/256, **MS5.1**/148, **348C-96D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.50**	**186**	P	**Pb**	**18 39 28.3**	**-0.8**
JZK				S	**Sb**	**18 39 36.3**	**+0.1**
JAM	**Amami Oshima**	**0.55**	**223**	P	**Pb**	**18 39 29.9**	**0.0**
JAM				S	**Sb**	**18 39 39.4**	**+2.0**
JNN	**Nakanoshima**	**1.03**	**353**	P	**Pn**	**18 39 38.3**	**+1.1**
JNN				*e*S	**Sn**	**18 39 54.8**	**+4.2**
JTK	**Tokunoshima**	**1.40**	**223**	P	**Pn**	**18 39 42.7**	**+0.5**
JKC	**Kuchinoerabu**	**1.65**	**5**	P	**Pn**	**18 39 46.2**	**+0.6**
JTN	**Tanegashima 3**	**2.01**	**24**	P	**Pn**	**18 39 50.5**	**-0.1**
JTSR	**Tashiro 2**	**2.47**	**18**	P	**Pn**	**18 39 56.8**	**-0.1**
JOW	**Kunigami**	**2.51**	**219**	Pn	**Pn**	**18 39 57.4**	**-0.1**
	245nm,0.3s,baz=88,slow=14,SNR=1231						
JOW				Sn	**Sn**	**18 40 25.6**	**-1.5**
	346nm,0.3s,baz=82,slow=16,SNR=9.0						
JOW				LR	LR	18 40 42.5	
	comp=Z,9μm,18.6s,baz=36,slow=34						
JIH	**Iheya**	**2.54**	**226**	P	**Pn**	**18 39 58.3**	**+0.4**
JNAR	**Kushima--Naru**	**2.91**	**21**	P	**Pn**	**18 40 03.2**	**+0.2**
JTSN	**Tsuno**	**3.65**	**20**	P	**Pn**	**18 40 12.6**	**-0.6**
JKIT	**Kitakata**	**3.99**	**18**	P	**Pn**	**18 40 18.1**	**+0.2**
JTA	**Tamana**	**4.16**	**6**	P	**Pn**	**18 40 22.0**	**+1.8**
JNU	**Nakatsue**	**4.36**	**9**	P	**Pn**	**18 40 24.5**	**+1.6**
JUS	**Usuki**	**4.49**	**19**	P	**Pn**	**18 40 24.3**	**-0.4**
JFI	**Itaya**	**4.61**	**4**	P	**Pn**	**18 40 28.5**	**+2.2**
JTO	**Tosashimizu**	**4.69**	**30**	P	**Pn**	**18 40 24.6**	**-2.8**
UWA2	**Uwa jima 2**	**4.92**	**26**	P	**Pn**	**18 40 28.6**	**-2.0**
JFA	**Akaike**	**4.93**	**7**	P	**Pn**	**18 40 32.2**	**+1.5**
JMN	**Monobe**	**5.90**	**33**	P	**Pn**	**18 40 43.1**	**-1.0**
JJS	**Sakaide**	**6.46**	**30**	P	**Pn**	**18 40 51.2**	**-0.6**
JWM	**Minabe**	**6.78**	**41**	P	**Pn**	**18 40 54.8**	**-1.3**
JAD	**Aida**	**7.05**	**29**	P	**Pn**	**18 40 58.9**	**-1.0**
JKN2	**Miekihoku**	**7.59**	**43**	P	**Pn**	**18 41 06.0**	**-1.3**
JKSM	**Kasumi**	**7.81**	**29**	P	**Pn**	**18 41 10.8**	**+0.5**
JWT	**Wachi**	**7.90**	**34**	P	**Pn**	**18 41 10.7**	**-0.8**
SSE	**Sheshan**	**8.00**	**289**	P	**Pn**	**18 41 14.8**	**+1.9**
SSE				XP		18 41 26.7	
SSE				S	**Sn**	**18 42 45.0**	**+2.6**
SSE				AMB	AMB		
	comp=Z,63nm,0.9s						
SSE				AMB	AMB		
	comp=Z,384nm,5.5s						
SSE				LR	LR		
	comp=N,7μm,15.8s						
SSE				LR	LR		
	comp=E,8μm,15.8s						
SSE				LR	LR		
	comp=Z,16μm,13.2s						
JKY	**Yasaka**	**8.04**	**31**	P	**Pn**	**18 41 13.3**	**-0.1**
TATO	**Taipei**	**8.53**	**245**	*e*Pn	**Pn**	**18 41 22.0**	**+1.9**
YHNB	**Yeheng**	**8.77**	**244**	*e*Pn	**Pn**	**18 41 24.0**	**+0.6**
NACB	**Ninganchiao**	**8.86**	**240**	*e*Pn	**Pn**	**18 41 23.1**	**-1.5**
JGM	**Miyama**	**8.90**	**38**	P	**Pn**	**18 41 25.1**	**-0.1**
INCN	**Inchon**	**9.10**	**343**	⇑P	**Pn**	**18 41 32.5**	**+4.5**
	SNR=48						
INCN	**Inchon**	**9.10**	**343**	⇑*e*Pn	**Pn**	**18 41 32.2**	**+4.2**
INCN				*e*		18 41 40.0	
JHJ	**Hachijo jima 2**	**9.41**	**60**	Pn	**Pn**	**18 41 32.5**	**+0.3**
	comp=Z,17nm,0.3s,baz=43,slow=21,SNR=8.6						
JHJ				LR	LR	18 44 45.6	
	comp=Z,9μm,20.8s,baz=89,slow=35						
JGN	**Niukaw**	**9.61**	**38**	P	**Pn**	**18 41 34.4**	**-0.6**
NJ2	**Nanjing**	**10.17**	**291**	*e*P	**Pn**	**18 41 48.1**	**+5.4**
NJ2				AP		18 41 55.2	
NJ2				PP		18 41 56.7	
NJ2				XP		18 42 00.0	
NJ2				S	**Sn**	**18 43 44.0**	**+8.3**
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,630nm,8.0s						
NJ2				LR	LR		
	comp=N,10μm,19.3s						
NJ2				LR	LR		
	comp=E,31μm,12.4s						
NJ2				LR	LR		
	comp=Z,13μm,17.2s						
MAJO	**Matsushiro**	**10.33**	**40**	*e*P	**Pn**	**18 41 44.2**	**-0.7**
MAJO	**Matsushiro**	**10.33**	**40**	*e*Pn	**Pn**	**18 41 43.9**	**-1.0**
MAT	**Matsushiro**	**10.33**	**40**	P	**Pn**	**18 41 42.8**	**-2.1**
MJAR	**Matsushiro Arr**	**10.33**	**40**	Pn	**Pn**	**18 41 43.9**	**-1.0**
	comp=Z,1.7nm,0.3s,baz=250,slow=14,SNR=42						
MJAR	**Matsushiro Arr**	**10.33**	**40**	P	**Pn**	**18 41 43.9**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JHG	**Hegura jima**	**10.69**	**31**	P	**Pn**	**18 41 50.9**	**+1.1**
CBIJ	**Chichi jima**	**10.88**	**96**	Pn	**Pn**	**18 41 49.5**	**-2.9**
	comp=Z,74nm,0.3s,baz=287,slow=2.3,SNR=20						
CBIJ				LR	LR	18 45 31.3	
	comp=Z,7μm,18.8s,baz=255,slow=34						
QZH	**Quanzhou**	**10.91**	**252**	⇓*i*P	**Pn**	**18 41 58.6**	**+5.8**
QZH				PP		18 42 04.7	
QZH				S	**Sn**	**18 44 04.2**	**+10**
QZH				AMB	AMB		
	comp=Z,170nm,1.0s						
QZH				LR	LR		
	comp=N,24μm,15.7s						
QZH				LR	LR		
	comp=E,15μm,16.3s						
QZH				LR	LR		
	comp=Z,20μm,16.1s						
DL2	**Dalian**	**12.24**	**327**	⇑*i*P	**Pn**	**18 42 15.1**	**+4.1**
DL2				*e*S	**Sn**	**18 44 33.5**	**+7.1**
DL2				AMB	AMB		
	comp=Z,40nm,1.3s						
DL2				AMB	AMB		
	comp=Z,490nm,4.5s						
DL2				LR	LR		
	comp=N,5μm,16.2s						
DL2				LR	LR		
	comp=E,5μm,16.2s						
DL2				LR	LR		
	comp=Z,7μm,14.7s						
TIA	**Tai'an**	**13.14**	**307**	⇑P	**Pn**	**18 42 27.4**	**+4.1**
TIA				AMB	AMB		
	comp=Z,270nm,1.5s						
TIA				LR	LR		
	comp=N,6μm,13.0s						
TIA				LR	LR		
	comp=E,6μm,13.0s						
CVP	**Callao Caves**	**13.38**	**216**	⇓*e*P	**Pn**	**18 42 24.0**	**-2.5**
WHN	**Wuhan**	**13.74**	**281**	⇓P	**Pn**	**18 42 34.7**	**+3.2**
WHN				LR	LR		

comp=Z,17µm,14.9s
SNY Shenyang 14.01 340 ⇑P **Pn** **18 42 38.4 +3.3**
SNY AP 18 42 41.3
SNY XP 18 42 45.2
SNY PP 18 42 49.7
SNY S **Sn** **18 45 24.3 +15**
SNY AMB AMB
comp=Z,88nm,1.7s
SNY AMB AMB
comp=Z,1µm,8.4s
SNY LR LR
comp=N,14µm,11.8s
SNY LR LR
comp=E,8µm,10.4s
SNY LR LR
comp=Z,17µm,11.3s
CAUP Cauayan 14.02 214 *e*P **Pn** **18 42 32.9 -2.4**
ABRA Dolores 14.02 220 *e*P **Pn** **18 42 32.8 -2.5**
VLA Vladivostok 14.36 6 *e*P **Pn** **18 42 47.8 +8.0**
VLA *e* 18 45 18.0
VLA pmax pmax
comp=Z,76nm,1.3s
VLA MLR MLR
comp=Z,6µm,16.2s
VLA Vladivostok 14.36 6⇑*e*P **Pn** **18 42 34.5 -5.3**
BCPH Baguio City Da 15.13 217⇑*e*P **Pn** **18 42 49.5 -0.8**
BALP Baler 15.17 213 *e*P **Pn** **18 42 50.2 -0.6**
CN2 Changchun 15.40 347 ⇓P **Pn** **18 42 55.3 +1.5**
CN2 *e*XP sP 18 43 05.2 -4.6
CN2 *e*S **Sn** **18 45 45.7 +2.2**
CN2 AMB AMB
comp=Z,30nm,1.0s
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,15µm,12.0s
CN2 LR LR
comp=E,3µm,12.0s
CN2 LR LR
comp=Z,17µm,14.0s
BOLP Bolinao 15.49 219 *e*P **Pn** **18 42 48.3 -6.6**
HKC Hong Kong 15.70 249 P **Pn** **18 43 00.0 +2.3**
MDJ Mudanjiang 15.78 359 P **Pn** **18 42 58.9 +0.2**
MDJ S **Sn** **18 45 56.5 +3.9**
MDJ PCP PcP 18 47 57.5 +0.2
MDJ SCP ScP 18 51 30.2 +0.8
MDJ PCS PcS 18 51 33.1 +0.4
MDJ AMB AMB
comp=Z,27nm,1.1s
MDJ AMB AMB
comp=Z,873nm,10.6s
MDJ LR LR
comp=N,4µm,14.7s
MDJ LR LR
comp=E,3µm,14.7s
MDJ LR LR
comp=Z,5µm,19.1s
MDJ Mudanjiang 15.78 359⇑*e*P **Pn** **18 42 59.5 +0.9**
comp=Z,87nm,1.3s
POLP Polilio Island 15.89 210 *e*P **Pn** **18 43 05.5 +5.3**
BJT Baijiatuau 15.97 318⇑*i*P **Pn** **18 43 04.1 +2.9**
BJT pmax pmax
comp=Z,232nm,0.9s
BJT Baijiatuau 15.97 318⇑*i*Pn **Pn** **18 43 04.1 +2.9**
comp=Z,232nm,0.9s
BJI Beijing 15.98 318 *e*P **Pn** **18 43 04.5 +3.2**
BJI AP pP 18 43 14.7 +2.3
BJI S **Sn** **18 46 07.7 +10**
BJI PCP PcP 18 47 52.6 -5.0
BJI AMB AMB
comp=Z,138nm,1.9s
BJI LR LR
comp=N,11µm,16.3s
BJI LR LR
comp=E,8µm,14.2s
BJI LR LR
comp=Z,6µm,16.8s
SCZP Santa Cruz 15.99 218 *e*P **Pn** **18 43 04.9 +3.5**
TGY Tagaytay City 16.89 212 Pn **Pn** **18 43 12.7 -0.2**
comp=Z,16nm,0.3s,baz=68,slow=6.2,SNR=5.8
TGY LR LR 18 50 04.1
comp=Z,19nm,18.3s,baz=18,slow=38
TGY Tagaytay City 16.89 212 P **Pn** **18 43 12.7 -0.2**
TGY pmax pmax
comp=Z,17nm,0.3s
TGY MLR MLR
comp=Z,19nm,18.3s
LUBP Lubang 17.54 213 *e*P **Pn** **18 43 15.2 -5.7**
OTRP Odiongan 17.99 206 *e*P **Pn** **18 43 27.2 +0.7**
ASAJ Asahikawa 18.28 30 P **Pn** **18 43 27.4 -2.6**
comp=Z,0.9nm,0.3s,baz=230,slow=14,SNR=16
ASAJ LR LR 18 51 14.8
comp=Z,968nm,18.2s,baz=238,slow=39
ASAJ Asahikawa 18.28 30 P **Pn** **18 43 27.5 -2.5**
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,968nm,18.3s
XAN Xi'an 18.74 291 P **Pn** **18 43 36.7 +1.0**
XAN S **Sn** **18 47 03.5 -0.9**
XAN AMB AMB
comp=Z,224nm,1.4s
XAN LR LR
comp=N,2µm,16.9s
XAN LR LR
comp=E,3µm,17.6s
XAN LR LR
comp=Z,4µm,16.3s
BUSP Coron 19.08 211 *e*P **Pn** **18 43 39.6 0.0**
MSLP Maasin 19.20 196 *e*P **Pn** **18 43 42.7 +1.4**
LLP Lapu-Lapu 19.26 198⇓*e*P **Pn** **18 43 43.0 +1.1**
comp=Z,119µm,1.6s
HHC Hu-ho-hao-te 19.29 313 *e*P **Pn** **18 43 42.9 +0.6**
HHC AP pP 18 43 51.1 +2.1
HHC XP sP 18 43 55.6 +2.8
HHC PP 18 44 00.1
HHC S **Sn** **18 47 12.1 -5.6**
HHC PCP PcP 18 48 04.2 +1.2
HHC SCP ScP 18 51 37.5 +0.8
HHC AMB AMB
comp=Z,33nm,0.8s
HHC LR LR
comp=N,4µm,16.7s
HHC LR LR
comp=E,4µm,16.1s
HHC LR LR
comp=Z,7µm,17.1s
GUIM Jordan 19.39 203 *e*P **Pn** **18 43 48.0 +4.6**
SCPH Surigao 19.41 194 *e*P **Pn** **18 43 43.5 -0.1**
YUK Yuzh-Kuril'sk 19.77 36 *e*P **Pn** **18 43 46.0 -2.0**
YUK pmax pmax
comp=Z,120nm,0.4s
YUK pmax pmax
comp=N,2µm,2.0s
YUK pmax pmax
comp=E,2µm,2.0s
YUK pmax pmax
comp=Z,2µm,2.0s
YUK MLR MLR
comp=Z,6µm,17.0s
YUK MLR MLR
comp=N,5µm,16.0s
YUK MLR MLR
comp=E,5µm,17.0s
TBP Tagbilaran 19.89 198 *e*P **Pn** **18 43 47.7 -1.6**
HABR Khabarovsk 20.01 10⇑*i*P **P** **18 43 46.8 -2.1**
HABR *e*S **S** **18 47 26.2 -6.2**
HABR pmax pmax
comp=Z,90nm,1.1s
HABR MLR MLR
comp=Z,4µm,16.6s,MS4.9
ENPP El Nido 20.13 212 *e*P **P** **18 43 52.2 +2.0**
BTO Baotou 20.17 311 *e*P **P** **18 43 51.5 +0.8**
BTO LR LR
comp=N,1µm,14.5s,MS4.5
BTO LR LR
comp=E,1µm,16.5s,MS4.5
BUTP Butuan 20.17 193 *e*P pP 18 44 02.7 +4.1
BUTP Butuan 20.17 193 *e*P **P** **18 43 51.7 +1.0**
SNPH Sibulan 20.39 200 *e*P **P** **18 43 54.0 +0.9**
KLR Kul'dur 20.43 3 *e*P **P** **18 43 49.5 -4.0**
KLR *e*S **S** **18 47 35.0 -5.8**
KLR MLR MLR
comp=Z,7µm,13.0s,MS5.2
GUMO Guam 20.48 135 P **P** **18 43 53.7 -0.4**
comp=Z,349nm,1.1s,baz=242,slow=3.6,SNR=5.2
GUMO LR LR 18 50 09.2
comp=Z,2µm,20.2s,MS4.5,baz=147,slow=32
GUMO Guam 20.48 135 P **P** **18 43 53.7 -0.4**
GUMO pmax pmax
comp=Z,349nm,1.1s
GUMO MLR MLR
comp=Z,2µm,20.2s,MS4.5
YSS Yuzh-Sakhalins 20.66 25⇑*e*P **P** **18 43 55.8 -0.2**
YSS *e**SP sP 18 44 07.5 -0.2
YSS *e* 18 44 22.0
YSS *i* S **S** **18 47 50.0 +4.7**
YSS pmax pmax
comp=Z,720nm,1.5s
YSS pmax pmax
comp=N,270nm,1.3s
YSS pmax pmax
comp=E,90nm,1.0s
YSS pmax pmax
comp=N,300nm,2.0s
YSS pmax pmax
comp=E,500nm,2.0s
YSS pmax pmax
comp=Z,1µm,2.0s
YSS pmax pmax
comp=Z,520nm,1.5s
YSS smax
comp=N,2µm,16.0s
YSS MLR MLR
comp=Z,4µm,18.0s,MS4.9
YSS MLR MLR
comp=N,3µm,16.0s,MS4.8
YSS MLR MLR
comp=E,2µm,18.0s,MS4.8
YSS Yuzh-Sakhalins 20.66 25⇑*e*P **P** **18 43 55.8 -0.2**
comp=E,720nm,1.5s
YSS *e*sP sP 18 44 07.5 -0.2
YSS *e* 18 44 22.0
YSS *i* S **S** **18 47 50.0 +4.7**
YSS LR LR
comp=Z,4µm,18.0s,MS4.9
GYA Guiyang 20.83 269⇑*i*P **P** **18 43 57.2 -0.6**
GYA AP 18 44 03.9
GYA PP 18 44 19.5
GYA S **S** **18 47 48.0 -0.6**
GYA AMB AMB
comp=Z,130nm,1.3s
GYA AMB AMB
comp=Z,1µm,10.8s
GYA LR LR
comp=N,7µm,13.2s,MS5.3
GYA LR LR
comp=E,7µm,15.9s,MS5.3
GYA LR LR
comp=Z,9µm,14.7s,MS5.3
QIZ Qiongzhong 20.84 247⇑P **P** **18 43 59.6 +1.7**
QIZ XP sP 18 44 11.4 +1.8
QIZ PP 18 44 21.2
QIZ S **S** **18 47 46.3 -2.5**
QIZ XS sS 18 47 58.2 -3.3
QIZ AMB AMB
comp=Z,165nm,1.2s
QIZ LR LR
comp=N,4µm,18.7s,MS5.0
QIZ LR LR
comp=E,5µm,20.4s,MS5.0
QIZ LR LR
comp=Z,7µm,23.2s,MS4.9
QIZ Qiongzhong 20.84 247⇑*e*P **P** **18 43 59.2 +1.3**
comp=Z,212nm,1.2s
BUKP Musuan 21.34 194 *e*P **P** **18 44 02.6 -0.8**
BUKP Musuan 21.34 194 *e*P **P** **18 44 02.6 -0.8**
HIA Hailar 21.89 342⇑*e*P **P** **18 44 07.2 -2.1**
HIA pmax pmax
comp=Z,41nm,0.9s
HIA MLR MLR
comp=Z,7µm,19.0s
HIA Hailar 21.89 342⇑*e*P **P** **18 44 07.2 -2.1**
comp=Z,40nm,0.9s,mb4.8
HIA LR LR
comp=Z,7µm,19.0s,MS5.1
CD2 Chengdu 22.86 282 P **P** **18 44 18.6 -1.0**
CD2 AP 18 44 25.5
CD2 XP sP 18 44 30.3 -1.0
CD2 PP 18 44 47.1
CD2 S **S** **18 48 17.9 -9.5**
CD2 AMB AMB
comp=Z,390nm,3.7s
CD2 LR LR
comp=E,4µm,18.0s
CD2 LR LR
comp=Z,4µm,18.6s,MS4.9
BATP Bataraza 23.00 212 *e*P **P** **18 44 19.8 -1.2**
LZH Lanzhou 23.21 295⇑P **P** **18 44 23.3 0.0**
LZH AP 18 44 30.5
LZH XP sP 18 44 34.8 -0.2
LZH PP 18 44 59.0
LZH S **S** **18 48 38.2 +5.2**
LZH XS sS 18 48 53.0 +6.0
LZH AMB AMB
comp=Z,490nm,1.4s,mb5.7
LZH AMB AMB
comp=Z,1µm,4.1s
LZH LR LR
comp=E,9µm,11.6s
LZH LR LR
comp=Z,11µm,12.3s,MS5.5
KMI Kunming 24.58 268 P **P** **18 44 36.1 +0.1**
KMI AP 18 44 43.5
KMI XP sP 18 44 46.5 -1.6
KMI PP 18 45 14.5
KMI PPP 18 45 25.5
KMI S **S** **18 48 56.6 +1.5**
KMI XS sS 18 49 09.1 -0.1
KMI SS 18 49 57.7
KMI SSS 18 50 10.7
KMI AMB AMB
comp=Z,255nm,1.1s,mb5.7
KMI LR LR
comp=N,5µm,14.6s,MS5.3
KMI LR LR
comp=E,5µm,15.1s,MS5.3
KMI LR LR
comp=Z,6µm,15.4s,MS5.2
ULN Ulaanbaatar 26.04 323⇑P **P** **18 44 49.5 +0.2**
SNR=33
ULN Ulaanbaatar 26.04 323⇑*e*P **P** **18 44 49.0 -0.3**
ULN *e* 18 48 17.1
ULN MLR MLR
comp=Z,6µm,20.0s,MS5.1
ULN Ulaanbaatar 26.04 323⇑*e*P **P** **18 44 49.0 -0.2**
ULN *e*PcP PcP 18 48 17.1 +0.3
ULN *e*ScP ScP 18 51 54.9 +0.7
ULN LR LR
comp=Z,6µm,20.0s,MS5.1
KKM Kota Kinabalu 26.15 213 P **P** **18 44 49.3 -1.0**
SONM Songino Array 26.37 323 P **P** **18 44 51.5 -0.7**
comp=Z,20nm,0.7s,mb4.8,baz=136,slow=7.7,SNR=123
SONM ScP ScP 18 51 56.5 +1.3
comp=Z,1.7nm,1.0s,baz=134,slow=4.3,SNR=5.1
SONM LR LR 18 56 44.3
comp=Z,6µm,19.0s,MS5.2,baz=124,slow=40
SONM PKPPKP 19 19 30.5
comp=Z,0.2nm,0.6s,baz=17,slow=1.5,SNR=3.6
SONM Songino Array 26.37 323 P **P** **18 44 51.5 -0.7**
SONM ScP ScP 18 51 56.5 +1.3
SONM LR LR 18 56 44.3
UBT Ubonrachathani 26.76 245 ⇓P pP 18 45 09.0 +4.7
TSM Tawau 26.98 208 P **P** **18 44 57.8 0.0**
GTA Gaotai 27.04 301 ⇑P **P** **18 44 58.7 +0.4**
GTA AP pP 18 45 06.3 -0.6
GTA XP sP 18 45 10.1 -0.4
GTA PCP PcP 18 48 17.3 -1.8
GTA S **S** **18 49 35.8 +1.6**
GTA XS sS 18 49 47.6 -0.8
GTA SS 18 50 53.6
GTA SCP ScP 18 51 55.0 -2.2
GTA PCS PcS 18 52 00.4 -0.2
GTA SCS ScS 18 55 44.7 -3.6
GTA AMB AMB
comp=Z,46nm,1.0s,mb5.0
GTA AMB AMB
comp=Z,340nm,6.9s
GTA LR LR
comp=N,7µm,16.8s,MS5.5
GTA LR LR
comp=E,7µm,16.0s,MS5.5
GTA LR LR
comp=Z,11µm,16.4s,MS5.5
KKTK Khon Kaen 27.95 250⇑P **P** **18 45 07.6 +1.2**
comp=Z,2µm,0.5s
CLNS Chul'man 28.25 354 *e*P **P** **18 45 06.0 -3.1**
CLNS *e**PP pP 18 45 10.4 -7.3
CLNS *e*PPP 18 45 54.3
CLNS *e* 18 48 20.9
CLNS *e*S **S** **18 49 46.4 -6.8**
CLNS pmax pmax
comp=N,39nm,1.0s
CLNS pmax pmax
comp=Z,54nm,1.0s,mb5.1
CLNS pmax pmax
comp=E,11nm,0.7s
CLNS pmax pmax
comp=Z,27nm,1.1s,mb4.8
CLNS pmax pmax
comp=N,22nm,0.9s
CLNS pmax pmax
comp=E,14nm,0.8s
CLNS smax
comp=N,549nm,17.0s
CLNS smax
comp=Z,349nm,14.6s
CLNS smax
comp=E,101nm,15.7s
CLNS MLR MLR
comp=N,2µm,13.0s,MS5.1
CLNS MLR MLR
comp=Z,3µm,13.0s,MS5.1
CLNS MLR MLR
comp=E,3µm,15.0s,MS5.1
NANT Nan 28.56 256⇑P **P** **18 45 13.0 +1.1**
comp=E,450nm,0.5s,mb6.5
SKR Severo-Kuril's 29.39 35 *e*P **P** **18 45 14.0 -5.2**
SKR *e* 18 45 20.1
SKR *e*PPP 18 46 09.0
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.5
SKR pmax pmax
comp=Z,1µm,3.0s
SKR MLR MLR
comp=Z,2µm,20.0s,MS4.8
SKR MLR MLR
comp=N,2µm,18.0s,MS4.8
SKR MLR MLR
comp=E,1µm,18.0s,MS4.8
ZAK Zakamensk 29.54 324⇓*e*P **P** **18 45 20.5 -0.1**
ZAK pmax pmax
comp=Z,17nm,1.2s,mb4.7
CHG Chiang Mai 30.05 258⇑P **P** **18 45 25.0 -0.1**
comp=Z,98nm,0.8s,mb5.6
CHTO Chiang Mai 30.05 258⇑P **P** **18 45 25.9 +0.8**
SNR=16
CHTO Chiang Mai 30.05 258 *e*P **P** **18 45 24.6 -0.5**
CHTO *e* 18 48 27.0
CHTO pmax pmax
comp=Z,72nm,0.8s,mb5.5
CHTO MLR MLR
comp=Z,4µm,19.0s,MS5.0
CHTO Chiang Mai 30.05 258 *e*P **P** **18 45 24.6 -0.6**
comp=Z,73nm,0.8s,mb5.5
CHTO *e*PcP PcP 18 48 26.9 +0.4
CHTO LR LR
comp=Z,4µm,19.0s,MS5.0
TLY Talaya 30.16 327 P **P** **18 45 27.0 +0.9**
comp=Z,96nm,1.2s,mb5.4,SNR=7.1
TLY Talaya 30.16 327⇑P **P** **18 45 25.8 -0.2**
SNR=14
TLY Talaya 30.16 327*c* *i*P **P** **18 45 25.1 -1.0**
TLY *e*S **S** **18 50 25.5 +2.3**
TLY *e*SS SS 18 51 56.5 -36
TLY *e*SSS 18 52 24.7
TLY pmax pmax
comp=Z,43nm,1.7s,mb4.9
TLY MLR MLR
comp=Z,4µm,15.0s,MS5.2
TLY Talaya 30.16 327⇑*i*P **P** **18 45 25.1 -1.0**
TLY *e*S **S** **18 50 25.5 +2.3**
TLY *e*SS SS 18 51 56.5 -36
TLY *e*SSS 18 52 24.7
CM31 Chiang Mai Arr 30.20 257 PFAKE 18 45 40.0 +14
CM31 LR LR
comp=Z,4µm,19.0s,MS5.0
IRK Irkutsk 30.22 328⇓*i*P **P** **18 45 26.9 +0.3**
IRK *e* 18 55 58.0
IRK pmax pmax
comp=Z,90nm,2.2s,mb5.1
NST Nakhon Sawan 30.51 251 ⇓P **P** **18 45 30.7 +1.6**
comp=Z,63nm,0.9s,mb5.5
BOD Bodaibo 31.08 343 *e*P **P** **18 45 26.1 -8.1**
BOD pmax pmax
comp=Z,16nm,0.8s,mb4.9
MOY Mondy 31.46 325 *e*P **P** **18 45 37.2 -0.4**
MOY pmax pmax
comp=Z,34nm,2.2s,mb4.8
PET Petropavlovsk 32.07 33α *i*P **P** **18 45 42.6 -0.3**
PET *e*PPP 18 46 53.9
PET *e* 18 48 31.3
PET *i* S **S** **18 50 50.7 -2.4**
PET *e*SS SS 18 52 42.9 -28
PET pmax pmax
comp=Z,200nm,1.8s,mb5.7
PET pmax pmax
comp=Z,70nm,1.0s,mb5.5
PET pmax pmax
comp=Z,100nm,13.9s
PET pmax pmax
comp=Z,22nm,1.0s,mb4.9
PET smax
comp=N,500nm,13.2s
PET MLR MLR
comp=Z,3µm,18.0s,MS5.0
PET MLR MLR
comp=Z,2µm,19.0s
PET MLR MLR
comp=E,900nm,21.0s,MS4.9
PET MLR MLR
comp=N,2µm,19.0s,MS4.9
PET smax
comp=N,17nm,0.3s
PET smax
comp=E,16nm,0.4s
PET Petropavlovsk 32.07 33 *i* Pcu **P** **18 45 42.6 -0.3**
comp=E,70nm,1.0s,mb5.5
PET *e*PPP 18 46 53.9
PET *e* 18 48 31.3
PET *i* S **S** **18 50 50.7 -2.4**
PET *e*SS SS 18 52 42.9 -28
PET LR LR
comp=Z,3µm,18.0s,MS5.0
NNT Nongplab 32.48 247 P **P** **18 45 48.5 +2.0**
KSM Kuching 33.06 218 *e*P **P** **18 45 51.6 0.0**
YAK Yakutsk 33.22 360 *e*P **P** **18 45 51.9 -1.1**
YAK *e**PP pP 18 46 00.4 -1.2
YAK *e*PPP 18 47 14.5
YAK *e* 18 48 34.4
YAK *e*S **S** **18 51 10.3 -0.7**
YAK *e**SS sS 18 51 20.4 -4.9
YAK pmax pmax
comp=Z,43nm,1.0s,mb5.3
YAK pmax pmax
comp=N,30nm,1.4s
YAK pmax pmax
comp=E,3.0nm,0.8s
YAK pmax pmax
comp=Z,11nm,0.8s,mb4.8
YAK pmax pmax
comp=N,12nm,1.2s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK smax
comp=N,11nm,1.1s
YAK smax
comp=Z,4.0nm,1.1s
YAK smax
comp=E,10.0nm,1.5s
YAK MLR MLR
comp=Z,1µm,13.0s,MS4.9
YAK MLR MLR
comp=N,1µm,17.0s,MS4.8
YAK MLR MLR
comp=E,477nm,14.0s,MS4.8

YAK **Yakutsk** 33.22 360 *e*P P 18 45 51.9 -1.1
comp=E,43nm,1.0s,mb5.3
YAK *e*pP pP 18 46 00.4 -1.2
YAK *e*PPP 18 47 14.5
YAK *e* 18 48 34.4
YAK *e*S **S** **18 51 10.3 -0.7**
YAK *es*S sS 18 51 20.4 -4.9
YAK LR LR
comp=Z,1µm,13.0s,MS4.9
LSA **Lhasa** 33.83 281 P P **18 46 00.0 +1.7**
LSA AP pP 18 46 08.4 +1.5
LSA XP sP 18 46 12.6 +2.1
LSA PCP PcP 18 48 31.0 -5.8
LSA S **S** **18 51 26.0 +5.6**
LSA XS sS 18 51 45.0 +10
LSA SCP ScP 18 52 14.1 -5.3
LSA PCS PcS 18 52 17.0 -5.8
LSA SCS ScS 18 56 17.7 -3.3
LSA AMB AMB
comp=Z,40nm,0.9s,mb5.3
LSA LR LR
comp=N,1µm,18.0s,MS5.2
LSA LR LR
comp=E,4µm,15.3s,MS5.2
LSA LR LR
comp=Z,4µm,15.3s,MS5.3
LSA **Lhasa** 33.83 281⇑ *i*P P **18 45 59.6 +1.3**
LSA pmax pmax
comp=Z,46nm,1.0s,mb5.4
LSA MLR MLR
comp=Z,4µm,21.0s,MS5.1
LSA **Lhasa** 33.83 281⇑ *i*P P **18 45 59.6 +1.4**
comp=Z,46nm,1.0s,mb5.4
LSA LR LR
comp=Z,4µm,21.0s,MS5.1
MA2 **Magadan** 33.86 19*c* *i*P P **18 45 57.6 -0.9**
MA2 pmax pmax
comp=Z,98nm,1.7s,mb5.5
MA2 MLR MLR
comp=Z,1µm,18.0s,MS4.7
MA2 **Magadan** 33.86 19⇑ *i*P P **18 45 57.6 -0.9**
comp=Z,98nm,1.7s,mb5.5
MA2 LR LR
comp=Z,1µm,18.0s,MS4.7
SHL **Shillong** 33.99 274 *ex* P **18 46 05.6 +5.9**
WAKE **Wake Island** 34.65 98 PFAKE 18 46 20.0 +15
WAKE LR LR
comp=Z,2µm,19.0s,MS4.9
KULM **Kulim** 36.35 236⇑ *e*P P **18 46 21.2 +1.2**
KULM *e*PcP PcP 18 48 44.7 +0.5
IPM **Ipoh** 36.64 234 P P **18 46 23.1 +0.6**
WMQ **Ürumqi** 36.83 306 P P **18 46 24.0 -0.1**
WMQ XP sP 18 46 35.0 -1.4
WMQ PP PP 18 47 50.0 +1.7
WMQ PCP PcP 18 48 46.0 +0.4
WMQ S **S** **18 52 07.0 +0.4**
WMQ AMB AMB
comp=Z,45nm,1.1s,mb5.2
WMQ AMB AMB
comp=Z,224nm,5.0s
WMQ LR LR
comp=N,3µm,10.0s,MS5.5
WMQ LR LR
comp=E,3µm,10.0s,MS5.5
WMQ LR LR
comp=Z,3µm,10.0s,MS5.4
KGM **Kluang** 36.85 229 P P **18 46 25.8 +1.6**
KRAR **Krasnoyarsk** 37.86 326⇓ *e*P P **18 46 32.1 -0.7**
KRAR pmax pmax
comp=Z,47nm,1.7s,mb4.9
KRAR MLR MLR
comp=Z,2µm,18.0s,MS4.9
CAL **Calcutta** 37.95 270 *ex* x 18 48 24.0
GUN **Gumba** 38.69 280 *e*P P **18 46 40.9 +1.1**
comp=Z,645nm,1.2s,mb6.2
PKI **Pulchoki** 39.17 279 *e*P P **18 46 44.3 +0.4**
comp=Z,425nm,1.1s,mb6.1
PKI **Pulchoki** 39.17 279 *e*P P **18 46 44.3 +0.4**
PKI pmax pmax
comp=Z,425nm,1.1s,mb6.1
KKN **Kakani** 39.24 280 *e*P P **18 46 45.0 +0.6**
comp=Z,741nm,1.2s,mb6.3
KKN **Kakani** 39.24 280 *e*P P **18 46 45.0 +0.6**
KKN pmax pmax
comp=Z,741nm,1.2s,mb6.3
DMN **Daman** 39.43 279 *e*P P **18 46 46.5 +0.5**
comp=Z,513nm,1.3s,mb6.1
BOK **Bokaro** 39.72 273 *e*P P **18 46 48.3 -0.1**
BOK AMb AMB 18 46 50.4
comp=Z,118nm,1.2s,mb5.5
GKN **Gorkha** 39.75 280 *e*P P **18 46 48.9 +0.2**
comp=Z,317nm,1.0s,mb6.0
KOLN **Koldanda** 40.70 280 *e*P P **18 46 56.7 +0.2**
MKAR **Makanchi Array** 41.07 309 P P **18 46 59.1 -0.5**
comp=Z,20nm,0.7s,mb4.8,baz=90,slow=9.9,SNR=135
MKAR PcP PcP 18 48 58.1 -0.8
comp=Z,23nm,0.9s,baz=96,slow=5.4,SNR=9.3
MKAR ScP ScP 18 52 48.5 +1.9
comp=Z,2.0nm,0.8s,baz=103,slow=5.5,SNR=4.8
MKAR **Makanchi Array** 41.07 309 P P **18 46 59.1 -0.5**
MKAR 18 48 58.1
MKAR pmax pmax
comp=Z,20nm,0.7s
MKAR pmax pmax
comp=Z,23nm,0.9s
MKAR pmax pmax
comp=N,2.0nm,0.8s
MKAR **Makanchi Array** 41.07 309 P P **18 46 59.1 -0.5**
MKAR *e* 18 48 58.1
ZAL **Zalesovo** 41.23 320 P P **18 47 01.0 +0.1**
comp=N,41nm,0.5s,mb5.3,baz=6.3,slow=7.9,SNR=120
ZAL PcP PcP 18 48 58.8 -0.6
comp=N,8.5nm,0.9s,baz=348,slow=0.5,SNR=4.6
ZAL LR LR 19 06 11.8
comp=N,3µm,19.3s,MS5.1,baz=357,slow=39
ZAL **Zalesovo** 41.23 320 P P **18 47 01.0 +0.1**
ZAL 18 48 58.8
ZAL pmax pmax
comp=Z,41nm,0.5s
ZAL pmax pmax
comp=Z,9.0nm,0.9s
ZAL MLR MLR
comp=Z,3µm,19.3s
ZAL **Zalesovo** 41.23 320 P P **18 47 01.0 +0.1**
ZAL *e* 18 48 58.8
KAKA **Kakadu** 41.34 176 *e*P P **18 47 00.0 -1.8**
comp=Z,50nm,0.9s,mb5.1
PMG **Port Moresby** 41.44 154⇑ *e*P pP 18 47 12.6 +1.2
PMG **Port Moresby** 41.44 154 PFAKE 18 47 10.0 +7.4
PMG LR LR
comp=Z,2µm,21.0s,MS4.9
NVS **Novosibirsk** 42.38 321⇓ *i*P P **18 47 10.6 +0.3**
NVS *e* 18 49 01.9
NVS *e* 18 57 08.0
NVS pmax pmax
comp=Z,158nm,1.1s,mb5.6
NVS pmax pmax
comp=N,66nm,1.5s
NVS pmax pmax
comp=E,143nm,1.2s
AMKA **Amchitka** 42.91 44⇑ *e*P P **18 47 13.3 -1.3**
AMKA *e*pP pP 18 47 22.1 -1.3
LGTI **Lohaghat** 43.22 283 *i*P P **18 47 20.5 +3.4**
KURK **Kurchatov** 44.10 314 P P **18 47 23.1 -1.1**
comp=E,319nm,1.0s,mb6.0,SNR=25
KURK **Kurchatov** 44.10 314 ⇑P P **18 47 23.8 -0.5**
SNR=24
KURK **Kurchatov** 44.10 314⇑ *i*P P **18 47 23.2 -1.0**
KURK pmax pmax
comp=Z,57nm,0.9s,mb5.3
KURK MLR MLR
comp=Z,6µm,20.0s,MS5.5
BILL **Bilibino** 44.73 18α *i*P P **18 47 28.6 -0.6**
BILL *e* pP 18 47 36.2 -1.8
BILL *i* 18 49 11.6
BILL *e* 18 49 21.1
BILL *e*S **S** **18 53 57.1 -6.9**
BILL pmax pmax
comp=Z,200nm,1.5s,mb5.7
BILL pmax pmax
comp=Z,146nm,1.7s,mb5.5
BILL MLR MLR
comp=Z,2µm,18.0s,MS5.1
BILL **Bilibino** 44.73 18 *i* Pcu P **18 47 28.6 -0.6**
comp=Z,146nm,1.7s,mb5.5
BILL *e* pP 18 47 36.2 -1.8
BILL *i* 18 49 11.6
BILL *e* 18 49 21.1
BILL *e*S **S** **18 53 57.1 -6.9**
comp=Z,2µm,18.0s,MS5.1
ULHL **Ulahol** 45.08 302 P P **18 47 33.2 +1.2**
SNR=9.0
KSH **Kashi** 45.39 298 P P **18 47 36.7 +2.3**
KSH AP pP 18 47 43.2 -0.1
KSH XP sP 18 47 46.1 -0.7
KSH PCP PcP 18 49 15.7 +2.2
KSH PP PP 18 49 22.6 +1.7
KSH PPP 18 50 04.5
KSH SCP ScP 18 53 05.5 +1.5
KSH PCS PcS 18 53 08.5 +1.1
KSH S **S** **18 54 15.7 +2.1**
KSH XS sS 18 54 27.9 -0.3
KSH SCS ScS 18 57 28.0 -0.9
KSH SS SS 18 57 29.4 -8.0
KSH AMB AMB
comp=Z,122nm,0.8s,mb5.8
KSH LR LR
comp=N,8µm,15.4s,MS5.9
KSH LR LR
comp=E,4µm,11.8s,MS5.9
KSH LR LR
comp=Z,8µm,18.6s
SMLA **Simla** 45.49 287 *e*P P **18 47 35.2 -0.1**
SMLA AMb AMB 18 47 37.9
comp=Z,211nm,2.0s,mb5.6
TKM2 **Tokmak 2** 45.55 303 P P **18 47 36.7 +1.0**
SNR=93
TKM2 **Tokmak 2** 45.55 303 *i* P P **18 47 35.7 0.0**
TKM2 pmax pmax
comp=Z,87nm,0.8s,mb5.7
TKM2 **Tokmak 2** 45.55 303 *i* P P **18 47 35.7 0.0**
comp=Z,87nm,0.8s,mb5.7
SDNR **Sundarnagar** 45.59 287 *e*P P **18 47 36.0 0.0**
KZA **Kyzart** 45.82 302 P P **18 47 39.7 +1.8**
SNR=46
MIDW **Midway** 45.90 77 PFAKE 18 47 50.0 +11
MIDW LR LR
comp=Z,835nm,20.0s,MS4.7
NDI **New Delhi** 45.97 283 *e*P P **18 47 38.5 -0.6**
NDI *e*P 18 47 39.0
NDI AMb AMB 18 47 41.4
comp=Z,286nm,1.3s,mb6.0
KBK **Karagaybulak** 46.03 303 P P **18 47 41.0 +1.4**
SNR=25
CHMS **Chumysh** 46.17 303 P P **18 47 41.1 +0.5**
SNR=34
FRU **Bishkek** 46.27 303⇑ *i*P P **18 47 42.0 +0.6**
FRU *i* pP 18 47 49.0 -1.3
FRU *e* 18 49 32.0
FRU pmax pmax
comp=Z,110nm,1.5s,mb5.6
FRU MLR MLR
comp=Z,2µm,16.5s,MS5.2
USP **Ospenovka** 46.35 304 P P **18 47 42.2 +0.2**
SNR=30
UCH **Uchtor** 46.36 302 P P **18 47 44.5 +2.3**
SNR=25
AAK **Ala-Archa** 46.37 303 P P **18 47 43.2 +1.1**
SNR=8.9
AAK **Ala-Archa** 46.37 303 P P **18 47 42.2 0.0**
comp=Z,171nm,0.8s,mb6.0,SNR=6.3
AAK **Ala-Archa** 46.37 303 ⇑P P **18 47 41.7 -0.5**
SNR=12
AAK **Ala-Archa** 46.37 303*c* *i*P P **18 47 41.6 -0.6**
AAK pmax pmax
comp=Z,44nm,1.3s,mb5.2
AAK MLR MLR
comp=Z,2µm,20.0s,MS5.2
AAK **Ala-Archa** 46.37 303⇑ *i*P P **18 47 41.6 -0.6**
comp=Z,44nm,1.3s,mb5.2
AAK LR LR
comp=Z,2µm,20.0s,MS5.2
NGP **Nagpur** 46.55 273 *ex* P **18 47 39.1 -4.5**
NGP AMb AMB 18 47 41.2
comp=Z,124nm,0.8s,mb5.9
FITZ **Fitzroy Crossi** 46.83 186⇑ *i*P P **18 47 44.7 -1.1**
comp=Z,39nm,1.2s,mb5.2
FITZ *e*pP pP 18 47 53.2 -1.5
FITZ *e*PP PP 18 49 40.3 +4.2
FITZ *e*S **S** **18 54 31.9 -2.5**
FITZ *e*SS SS 18 58 04.6 +3.6
EKS2 **Erkin-Say** 46.89 303 P P **18 47 47.3 +1.0**
SNR=37
AML **Almayashu** 46.98 302 P P **18 47 48.3 +1.3**
SNR=24
BHPL **Bhopal** 47.29 276 *e*P P **18 47 48.1 -1.2**
BHPL AMb AMB 18 47 51.3
comp=Z,84nm,1.4s,mb5.5
HNR **Honiara** 47.75 138 PFAKE 18 48 00.0 +7.1
HNR LR LR
comp=Z,1µm,21.0s,MS4.9
NIL **Nilore** 48.28 291 P P **18 47 58.3 +1.2**
comp=Z,148nm,0.6s,mb6.2,SNR=5.0
NIL **Nilore** 48.28 291 P P **18 47 58.0 +0.9**
HYB **Hyderabad** 48.36 268⇓ *i*P P **18 47 58.5 +0.8**
HYB *e* pP 18 48 06.0 -0.6
HYB **Hyderabad** 48.36 268⇓ *e*P P **18 47 58.5 +0.8**
AKL **Akola** 48.49 273 *e*P P **18 47 59.8 +1.1**
AKL AMb AMB 18 48 00.6
comp=Z,217nm,1.4s,mb6.0
WRAB **Tennant Creek** 48.64 175 P P **18 47 58.0 -1.8**
comp=Z,1µm,0.8s,SNR=19
WRAB **Tennant Creek** 48.64 175⇑ *i*P P **18 47 58.5 -1.3**
WRAB *e**PP pP 18 48 06.6 -2.2
WRAB pmax pmax
comp=Z,302nm,0.9s,mb6.3
WRAB **Tennant Creek** 48.64 175⇑ *i*P P **18 47 58.5 -1.4**
comp=Z,207nm,0.9s,mb6.2
WRAB *e*pP pP 18 48 06.6 -2.2
WB2 **Warramunga Arr** 48.65 175⇑ *i*P P **18 47 58.6 -1.3**
WB2 *e*pP pP 18 48 07.1 -1.7
MDRS **Chennai** 48.71 262 *ex* x 18 47 40.0
AJM **Ajmer** 48.74 281 *i* P P **18 48 00.0 -0.6**
AJM *e*P 18 48 00.1
AJM AMb AMB 18 48 03.0
comp=Z,74nm,1.3s,mb5.5
KK31 **Karatay Array** 49.27 304 *i* P P **18 48 04.1 -0.6**
KK31 pmax pmax
comp=Z,40nm,0.7s,mb5.6
KK31 **Karatay Array** 49.27 304 *i* P P **18 48 04.1 -0.6**
comp=Z,40nm,0.7s,mb5.6
BVAR **Borovoye Array** 49.46 317 P P **18 48 06.2 +0.1**
comp=Z,105nm,0.8s,mb6.0,baz=101,slow=8.0,SNR=528
BVAR PcP PcP 18 49 27.7 -0.3
comp=Z,34nm,1.0s,baz=96,slow=3.0,SNR=4.6
BVAR **Borovoye Array** 49.46 317 P P **18 48 06.2 +0.1**
BVAR 18 49 27.7
BVAR pmax pmax
comp=Z,105nm,0.8s
BVAR pmax pmax
comp=Z,34nm,1.0s
BVAR **Borovoye Array** 49.46 317 P P **18 48 06.2 +0.1**
comp=Z,105nm,0.8s,mb5.9
BVAR *e* 18 49 27.7
BRVK **Borovoye** 49.52 317 P P **18 48 06.2 -0.4**
comp=Z,1µm,1.2s,SNR=98
BRVK **Borovoye** 49.52 317 ⇑P P **18 48 06.5 -0.1**
SNR=44
BRVK **Borovoye** 49.52 317 *e*P P **18 48 06.5 -0.1**
BRVK *e**PP pP 18 48 14.8 -0.7
BRVK pmax pmax
comp=Z,95nm,0.7s,mb5.9
BRVK **Borovoye** 49.52 317 *e*P P **18 48 06.5 -0.1**
comp=Z,95nm,0.7s,mb5.9
BRVK *e*pP pP 18 48 14.8 -0.7
LATR **Latur** 49.72 270 *e*P P **18 48 10.1 +2.0**
MBWA **Marble Bar** 50.66 192⇑ *e*P P **18 48 14.0 -1.2**
comp=Z,160nm,1.4s,mb5.8
MBWA *e*pP pP 18 48 23.5 -0.7
CTA **Charters Tower** 51.08 160⇑ *i*P P **18 48 17.7 -0.7**
comp=Z,30nm,0.9s,mb5.2
CTA *e*PP PP 18 49 43.8 -31
CTA *e*S **S** **18 55 38.7 +4.7**
CTA *e*SS SS 18 59 19.9 +11
CTA **Charters Tower** 51.08 160⇑ *i*P P **18 48 17.7 -0.7**
CTA *e*S **S** **18 55 38.7 +4.7**
CTA pmax pmax
comp=Z,30nm,0.9s
CTAO **Charters Tower** 51.08 160 *e*P P **18 48 17.5 -0.9**
CTAO *e**PP pP 18 48 24.8 -2.5
CTAO pmax pmax
comp=Z,45nm,0.9s,mb5.4
CTAO MLR MLR
comp=Z,2µm,19.0s,MS5.1
CTAO **Charters Tower** 51.08 160 *e*P P **18 48 17.5 -0.9**
comp=Z,45nm,0.9s,mb5.4
CTAO *e*pP pP 18 48 24.8 -2.5
CTAO LR LR
comp=Z,2µm,19.0s,MS5.1
PALK **Pallekele** 51.12 255 *e*P P **18 48 19.3 +0.6**
comp=Z,150nm,1.5s,mb5.7
PALK LR LR
comp=Z,2µm,20.0s,MS5.1
UNV **Unalaska Valle** 51.79 42 PFAKE 18 48 30.0 +6.3
UNV LR LR
comp=Z,2µm,22.0s,MS5.0
KAD **Karad** 52.23 270 *e*P P **18 48 26.9 -0.1**
KAD *i* P 18 48 27.6
KAD AMb AMB 18 48 28.6
comp=Z,130nm,0.8s,mb5.9
AS31 **Alice Springs** 52.31 176 *e*P P **18 48 26.7 -0.8**
AS31 *e*pP pP 18 48 35.9 -0.6
ASAR **Alice Springs** 52.31 176 P P **18 48 26.8 -0.8**
comp=Z,28nm,0.9s,mb5.2,baz=0.4,slow=7.0,SNR=165
ASAR S **S** **18 55 50.7 -0.3**
comp=Z,2.0nm,1.1s,baz=15,slow=20,SNR=5.4
ASAR LR LR 19 09 52.9
comp=Z,855nm,20.0s,MS4.8,baz=1.3,slow=35
ASAR **Alice Springs** 52.31 176 P P **18 48 26.8 -0.8**
ASAR S **S** **18 55 50.7 -0.3**
ASAR pmax pmax
comp=Z,28nm,0.9s
ASAR smax
comp=N,2.0nm,1.1s
ASAR MLR MLR
comp=Z,855nm,20.0s
ASPA **Alice Springs** 52.31 176 *e*P P **18 48 26.7 -0.9**
ASPA *e*pP pP 18 48 35.9 -0.6
TNA **Tin City** 52.62 28⇑ *i*P P **18 48 29.6 -0.3**
comp=Z,83nm,1.2s,mb5.5
TNA *e*pP pP 18 48 38.7 -0.1
MNGI **Mangalore** 53.49 265 *e*P P **18 48 36.8 +0.5**
AB31 **Akbulak array** 56.08 312⇑ *e*P P **18 48 54.8 -0.2**
ARU **Arti** 56.38 321 P P **18 48 57.0 -0.2**
comp=Z,1µm,1.0s,SNR=70
ARU **Arti** 56.38 321⇑ *i*P P **18 48 56.9 -0.3**
ARU *e* 18 49 51.1
ARU *e* 18 50 59.8
ARU *e*PPP 18 52 18.6
ARU *e*S **S** **18 56 44.2 -1.7**
ARU *e* 18 58 42.5
ARU pmax pmax
comp=Z,193nm,0.9s,mb6.1
ARU MLR MLR
comp=Z,2µm,16.0s,MS5.3
ARU MLR MLR
comp=N,2µm,18.0s,MS5.4
ARU MLR MLR
comp=E,2µm,17.0s,MS5.4
ARU **Arti** 56.38 321⇑ *i*P P **18 48 56.9 -0.3**
comp=E,193nm,0.9s,mb6.1
ARU *e* 18 49 51.1
ARU *e* 18 50 59.8
ARU *e*PPP 18 52 18.6
ARU *e*S **S** **18 56 44.2 -1.7**
ARU *e* 18 58 42.5
ARU LR LR
comp=Z,2µm,16.0s,MS5.3
AKTK **Aktyubinsk** 57.19 314 P P **18 49 02.5 -0.4**
AKTO **Aktyubinsk** 57.19 314 P P **18 49 02.5 -0.4**
comp=Z,36nm,0.8s,mb5.4,baz=88,slow=7.4,SNR=71
AKTO **Aktyubinsk** 57.19 314 P P **18 49 02.5 -0.4**
AKTO pmax pmax
comp=Z,36nm,0.8s,mb5.5
SOKR **Solikamsk** 57.21 325*c* *i*P P **18 49 02.9 -0.2**
SOKR S **S** **18 57 07.7 +11**
SOKR pmax pmax
comp=Z,260nm,1.1s,mb6.2
SOKR MLR MLR
comp=Z,5µm,23.0s,MS5.6
TTA **Tatalina** 57.50 31 *e*P P **18 49 04.9 -0.2**
TTA *e**PP pP 18 49 17.5 +3.3
TTA **Tatalina** 57.50 31 *e*P P **18 49 05.3 +0.2**
SVW2 **Sparrevohn** 57.74 34 *e*P P **18 49 07.2 +0.4**
IMA2 **Indian Mountai** 58.49 28 *e*P P **18 49 12.1 +0.1**
FORT **Forrest** 59.29 182 *e*P P **18 49 16.8 -0.8**
comp=Z,19nm,0.8s,mb5.2
FORT *e*pP pP 18 49 25.3 -1.4
ABKT **Ailbek** 59.41 299 P P **18 49 19.4 +1.0**
comp=Z,355nm,0.8s,mb6.5,SNR=26
KDAK **Kodiak Island** 59.50 37 P P **18 49 18.6 -0.5**
comp=Z,31nm,0.8s,mb5.4,baz=288,slow=4.6,SNR=14
KDAK **Kodiak Island** 59.50 37⇑ *i*P P **18 49 17.8 -1.3**
KDAK LR LR
comp=Z,216nm,22.0s,MS4.2
SLKM **Skilak Lake** 60.40 34 *e*P P **18 49 23.8 -1.4**
SLKM *e**PP pP 18 49 33.4 -0.9
MCK **McKinley** 60.65 30⇑ *e*P P **18 49 26.2 -0.7**
MCK *e* 18 50 09.5
MCK pmax pmax
comp=Z,72nm,1.1s,mb5.7
MCK **McKinley** 60.65 30⇑ *e*P P **18 49 26.2 -0.7**
comp=Z,72nm,1.1s,mb5.7
MCK *e*PcP PcP 18 50 09.5 -1.4
PMR **Palmer** 60.80 33 *e*P P **18 49 27.5 -0.4**
PMR pmax pmax
comp=Z,114nm,1.2s,mb5.9
PMR MLR MLR
comp=Z,409nm,21.0s,MS4.5
PMR **Palmer** 60.80 33 *e*P P **18 49 27.5 -0.4**
comp=Z,114nm,1.2s,mb5.9
PMR LR LR
comp=Z,409nm,21.0s,MS4.5
COLA **College** 60.99 29 *e*P P **18 49 28.8 -0.5**
COLA pmax pmax
comp=Z,37nm,1.1s,mb5.4
COLA MLR MLR
comp=Z,500nm,22.0s,MS4.6
COLA **College** 60.99 29 *e*P P **18 49 28.8 -0.5**
comp=Z,37nm,1.1s,mb5.4
COLA LR LR
comp=Z,500nm,22.0s,MS4.6
STKA **Stephens Creek** 61.35 169⇑ *i*P P **18 49 30.5 -1.2**
comp=Z,6.7nm,0.9s,mb4.8
STKA *e*pP pP 18 49 38.8 -2.0
STKA *e*PP PP 18 51 32.2 -15
STKA **Stephens Creek** 61.35 169 P P **18 49 30.6 -1.1**
comp=Z,6.4nm,0.8s,mb4.8,baz=1.6,slow=4.7,SNR=10
STKA LR LR 19 14 17.1
comp=Z,714nm,19.2s,MS4.8,baz=233,slow=34
DZM **Mont Dzumac** 61.58 141 *e*P P **18 49 32.9 -0.4**
ARMA **Armidale** 62.40 159 *e*P P **18 49 38.3 -0.4**
ARMA *e*pP pP 18 49 45.8 -2.1
DIV **Divide** 62.47 33⇑ *i*P P **18 49 39.0 -0.2**
comp=Z,336nm,1.1s,mb6.4
DIV *e*pP pP 18 49 46.9 -1.4
DIV *e*sP sP 18 49 50.6 -1.2
EYAK **Cordova Ski Ar** 62.58 34 *e*P P **18 49 39.7 -0.3**
MENT **Mentasta** 63.09 31 *e*P P **18 49 44.0 +0.7**
WBK **Wadi Bani Khal** 63.48 282 ⇑P P **18 49 47.5 +1.5**
SNR=8.4
BIDO **Bidbid** 63.87 284 ⇑P P **18 49 49.7 +1.2**
SNR=10.0
ADE **Adelaide** 63.96 172 P P **18 49 48.9 -0.2**
SMDO **Samad** 64.10 283 P P **18 49 51.2 +1.2**
SNR=8.9
JMDO **Jabal Madar** 64.31 282 ⇑P P **18 49 52.4 +1.0**
SNR=8.0
PECR **Pechory** 64.36 322 *i*P P **18 49 50.7 -1.0**
PECR *e*S **S** **18 58 32.0 +3.9**
PECR pmax pmax
comp=Z,2µm,1.4s
PECR pmax pmax
comp=Z,500nm,2.0s,mb6.2
PECR MLR MLR
comp=Z,3µm,13.0s,MS5.6
PECR MLR MLR
comp=N,800nm,15.0s,MS5.4
PECR MLR MLR
comp=E,2µm,14.0s,MS5.4
PECR MLR MLR
comp=Z,3µm,13.0s
PECR MLR MLR
comp=E,1µm,14.0s

HOQ Hoqain 64.54 284 ⇑P **P 18 49 53.8 +1.0**
SNR=13
KIP Kipapa 64.70 78 PFAKE 18 50 00.0 +6.1
KIP LR LR
comp=Z,785nm,19.0s,MS4.9
DAWY Dawson 64.74 29⇑*i*P **P 18 49 54.0 -0.2**
DAWY *e*pP pP 18 50 02.7 -0.7
BSY Bisya 64.95 283 P **P 18 49 56.6 +1.0**
SNR=20
ASHO Ashiyiah 65.19 286 ⇑P **P 18 49 57.8 +0.7**
SNR=27
ARQ Araqi 65.30 284 ⇓P **P 18 49 58.9 +1.1**
SNR=7.3
KLMR Klimovskoe 65.53 327*d* *i*P **P 18 49 58.1 -1.2**
KLMR pmax pmax
comp=Z,180nm,1.4s,mb5.9
KLMR pmax pmax
comp=Z,120nm,11.2s
KLMR MLR MLR
comp=Z,3μm,23.0s,MS5.4
LVZ Lovozero 65.63 336 *e*P **P 18 49 58.3 -1.6**
LVZ S S 18 58 37.5 -6.1
LVZ pmax pmax
comp=Z,15nm,0.9s,mb5.0
LVZ pmax pmax
comp=N,18nm,1.5s
LVZ pmax pmax
comp=E,11nm,1.2s
LVZ Lovozero 65.63 336 PFAKE 18 50 10.0 +10
LVZ LR LR
comp=Z,8μm,20.0s,MS5.9
MAK Makhachkala 65.83 307 *i* P **P 18 49 59.0 -2.3**
MAK *e* 18 50 30.8
MAK *e* 18 52 23.2
MAK *i* S S 18 58 45.7 -0.4
MAK *i* 18 59 52.8
MAK *i* SS SS 19 03 00.4 -0.6
MAK pmax pmax
comp=Z,233nm,2.0s,mb5.9
MAK MLR MLR
comp=Z,3μm,17.0s,MS5.5
MAK Makhachkala 65.83 307 *i* P **P 18 49 59.0 -2.3**
comp=Z,233nm,2.0s,mb5.9
MAK *e* 18 50 30.8
MAK *e* 18 52 23.2
MAK *i* S S 18 58 45.7 -0.4
MAK *i* 18 59 52.8
MAK *i* SS SS 19 03 00.4 -0.6
MAK LR LR
comp=Z,3μm,17.0s,MS5.5
INK Inuvik 65.89 24 *e*P **P 18 50 01.5 -0.2**
INK pmax pmax
comp=Z,57nm,1.0s
INK Inuvik 65.89 24⇑*i*P **P 18 50 01.3 -0.4**
comp=Z,2μm,1.0s
DGAR Diego Garcia 66.10 246 PFAKE 18 50 10.0 +7.0
DGAR LR LR
comp=Z,1μm,19.0s,MS5.2
APA Apatity 66.18 335⇓*i*P **P 18 50 02.6 -0.9**
APA *e*S S 18 58 50.0 -0.3
APA pmax pmax
comp=Z,50nm,1.0s,mb5.5
APA MLR MLR
comp=Z,2μm,17.0s,MS5.5
CNB Canberra Magne 66.34 163 *e*P **P 18 50 02.7 -1.8**
comp=Z,11nm,1.0s,mb4.8
CNB *e*pP pP 18 50 11.9 -1.8
MAUI Maui 66.47 78 *i* P **P 18 50 09.3 +3.9**
SPB4 Spitsbergen Ar 66.64 348⇑*i*P **P 18 50 04.8 -1.6**
KBS Kingsbay 67.01 349 *e*P **P 18 50 08.5 -0.3**
KBS *e*PP PP 18 52 36.2 -0.4
KBS *e*S S 18 59 00.8 +0.4
KBS AMS AMS 19 21 39.8
comp=Z,684nm,21.0s,MS4.8
KBS Kingsbay 67.01 349 PFAKE 18 50 20.0 +11
KBS LR LR
comp=Z,1μm,20.0s,MS5.1
VRHR Novokhopersk 67.20 317 *e*P **P 18 50 09.5 -0.5**
VRHR pmax pmax
comp=Z,180nm,1.1s,mb6.0
VRHR pmax pmax
comp=N,50nm,0.7s
VRHR pmax pmax
comp=E,130nm,1.1s
VRHR pmax pmax
comp=Z,1μm,20.0s
VRHR pmax pmax
comp=N,660nm,15.0s
VRHR pmax pmax
comp=E,920nm,16.0s
TOO Toolangi 67.61 167 *e*P **P 18 50 12.3 -0.3**
comp=E,5.4nm,0.9s,mb4.6
TOO *e*pP pP 18 50 20.4 -1.4
TOO Toolangi 67.61 167 *e*P **P 18 50 12.3 -0.3**
TOO *e**PP pP 18 50 20.4 -1.4
TOO pmax pmax
comp=Z,5.0nm,0.9s
KEV Kevo 67.63 338 *e*P **P 18 50 10.2 -2.5**
KEV pmax pmax
comp=Z,31nm,0.8s,mb5.4
KEV MLR MLR
comp=Z,3μm,21.0s,MS5.4
KEV Kevo 67.63 338 *e*P **P 18 50 10.2 -2.5**
comp=Z,31nm,0.8s,mb5.4
KEV LR LR
comp=Z,3μm,21.0s,MS5.4
DGRG David-gareji 67.81 306 P **P 18 50 14.9 +1.0**
SKAG Skagway 67.92 33 *e*P **P 18 50 15.3 +0.8**
comp=Z,83nm,1.0s,mb5.7
MOS Moscow 68.00 322 *e*P **P 18 50 13.1 -2.0**
MOS *e* pP 18 50 23.0 -1.3
MOS *e* 18 50 39.8
MOS *e* 18 52 41.0
MOS *e*S S 18 59 09.9 -2.4
MOS pmax pmax
comp=Z,400nm,1.6s,mb6.2
MOS pmax pmax
comp=Z,286nm,1.5s,mb6.1
MOS MLR MLR
comp=Z,2μm,17.6s,MS5.4
MOS MLR MLR
comp=N,2μm,15.6s
MTA Mtatsminda 68.14 306 P **P 18 50 16.3 +0.3**
TBLG Delisi 68.17 307 *e*P **P 18 50 17.2 +1.1**
TBLG Delisi 68.17 307 P **P 18 50 17.2 +1.1**
ARCES ARCESS Array B 68.20 338 P **P 18 50 15.1 -1.2**
comp=N,10nm,0.7s,mb5.0,baz=70,slow=6.9,SNR=49
ARCES LR LR 19 25 08.3
comp=N,2μm,20.7s,MS5.4,baz=55,slow=40
ARCES ARCESS Array B 68.20 338 P **P 18 50 15.1 -1.2**
ARCES pmax pmax
comp=Z,10.0nm,0.7s
ARCES MLR MLR
comp=Z,2μm,20.7s
ARCES ARCESS Array B 68.20 338 P **P 18 50 15.1 -1.2**
ARCES LR LR 19 25 08.3
ARE0 ARCESS Array S 68.20 338⇑*i*P **P 18 50 14.7 -1.6**
ARE0 *e*pP pP 18 50 24.0 -1.5
GOF Gofitskoye 68.23 310 *e*P **P 18 50 16.7 +0.2**
GOF pmax pmax
comp=Z,260nm,1.3s,mb6.1
ZEI Tsey 68.41 308 *e*P **P 18 50 17.6 0.0**
ZEI *e**PP pP 18 50 25.3 -1.5
ZEI pmax pmax
comp=Z,88nm,0.8s,mb5.8
VOR Voronezh 68.44 318 *e*P **P 18 50 16.5 -1.3**
VOR *e* pP 18 50 24.0 -3.0
VOR pmax pmax
comp=N,80nm,1.3s
VOR pmax pmax
comp=E,300nm,1.3s
VOR pmax pmax
comp=Z,340nm,1.3s,mb6.2
JOF Joensuu 68.57 331 *e*p **P 18 50 16.8 -1.8**
comp=Z,24nm,0.4s,mb5.5
VRSR Storozhevoye 68.61 318 *e*P **P 18 50 18.0 -0.9**
VRSR *e**PP pP 18 50 28.1 0.0
VRSR pmax pmax
comp=Z,250nm,1.1s,mb6.1
VRSR pmax pmax
comp=N,150nm,1.0s
VRSR pmax pmax
comp=E,290nm,1.0s
VRSR MLR MLR
comp=Z,3μm,16.0s,MS5.6
VRSR MLR MLR
comp=N,740nm,18.0s,MS5.5
VRSR MLR MLR
comp=E,2μm,16.0s,MS5.5
GNI Garni 68.70 305 P **P 18 50 21.2 +1.7**
SNR=18
GNI Garni 68.70 305*c* *i*P **P 18 50 20.9 +1.4**
GNI pmax pmax
comp=Z,171nm,1.7s
GNI MLR MLR
comp=Z,600nm,17.0s
GNI Garni 68.70 305⇑*i*P **P 18 50 20.9 +1.4**
comp=Z,171nm,1.7s,mb5.7
GNI LR LR
comp=Z,600nm,17.0s,MS4.9
ALE Alert 68.73 2 P **P 18 50 19.0 -0.6**
comp=Z,414nm,1.1s,mb6.3,SNR=12
SIT Sitka 68.73 36 *e*P **P 18 50 19.7 +0.1**
SIT pmax pmax
comp=Z,107nm,1.2s,mb5.7
SIT Sitka 68.73 36 *e*P **P 18 50 19.7 +0.1**
comp=Z,106nm,1.2s,mb5.7
OBN Obninsk 68.78 322 P **P 18 50 19.8 -0.1**
comp=Z,630nm,1.1s,mb6.5,SNR=9.3
OBN Obninsk 68.78 322α *i*P **P 18 50 18.8 -1.1**
OBN *e**PP pP 18 50 27.6 -1.6
OBN *e* 18 50 44.2
OBN *e* 19 00 04.7
OBN pmax pmax
comp=Z,300nm,1.6s,mb6.0
OBN pmax pmax
comp=Z,250nm,1.7s,mb5.9
OBN MLR MLR
comp=Z,4μm,21.0s,MS5.6
OBN Obninsk 68.78 322 *i* Pcu **P 18 50 18.8 -1.1**
comp=Z,250nm,1.7s,mb5.9
OBN *e*pP pP 18 50 27.6 -1.6
OBN *e* 18 50 44.2
OBN *e* 19 00 04.7
OBN LR LR
comp=Z,4μm,21.0s,MS5.6
ONI Oni 68.78 308 P **P 18 50 21.2 +1.3**
KIV Kislovodsk 68.84 309 P **P 18 50 21.2 +0.9**
comp=Z,1μm,1.0s,SNR=50
KIV Kislovodsk 68.84 309 ⇑P **P 18 50 21.3 +1.0**
SNR=87
KIV Kislovodsk 68.84 309⇑*i*P **P 18 50 21.0 +0.7**
KIV pmax pmax
comp=Z,318nm,1.1s,mb6.2
KIV MLR MLR
comp=Z,810nm,19.0s,MS5.0
KIV Kislovodsk 68.84 309⇑*i*P **P 18 50 21.0 +0.7**
comp=Z,318nm,1.1s,mb6.2
KIV LR LR
comp=Z,810nm,19.0s,MS5.0
DIGO Kars 69.59 306 *i* P **P 18 50 26.5 +1.5**
WHFO Wadi Hawf 69.81 280 ⇑P **P 18 50 26.8 +0.5**
SNR=24
PUL Pulkovo 70.21 328⇑*i*P **P 18 50 29.1 +0.3**
TRO Tromso 70.21 340 *e*P **P 18 50 23.6 -5.2**
TRO *e*PP PP 18 53 02.4 -1.9
TRO *e*S S 18 59 37.9 -0.5
TRO AMS AMS 19 26 08.8
comp=Z,2μm,20.7s,MS5.3
UMR Umm Al-Rimmam 70.27 293 *e*P **P 18 50 29.0 -0.1**
UMR AMb AMB 18 50 31.8
comp=Z,160nm,1.0s,mb5.9
HAKT HAKKARI 70.38 303 *i* P **P 18 50 28.4 -1.4**
KBD Kabd 70.43 293 *e*P **P 18 50 29.6 -0.5**
KBD AMb AMB 18 50 32.2
comp=Z,386nm,1.3s,mb6.2
AFI Afiamalu 70.45 119 PFAKE 18 50 40.0 +10
AFI LR LR
comp=Z,1μm,21.0s,MS5.2
CRAG Craig 70.45 37 *e*P **P 18 50 30.7 +0.4**
comp=Z,41nm,1.1s,mb5.3
ABTO Aybut 70.46 279 ⇑P **P 18 50 30.8 +0.5**
SNR=9.6
MIB Mutribah 70.48 294 *e*P **P 18 50 30.2 -0.2**
MIB AMb AMB 18 50 32.4
comp=Z,174nm,1.3s,mb5.8
RDF Al-Radifah 70.65 293 *e*P **P 18 50 31.5 +0.1**
RDF AMb AMB 18 50 32.7
comp=Z,151nm,0.7s,mb6.1
NAY Al-Naaiem 70.77 293 *e*P **P 18 50 32.0 -0.2**
NAY AMb AMB 18 50 34.7
comp=Z,84nm,1.0s,mb5.6
RST Umm Al-Ruwaisa 70.87 294 *e*P **P 18 50 32.3 -0.5**
RST AMb AMB 18 50 35.0
comp=Z,129nm,0.9s,mb5.8
KAF Kangasniemi 71.02 331 *e*p **P 18 50 31.6 -2.1**
comp=Z,26nm,0.7s,mb5.3,baz=62,slow=5.7
KAF Kangasniemi 71.02 331 *e*P **P 18 50 31.6 -2.1**
KAF pmax pmax
comp=Z,26nm,0.7s,mb5.3
ERZM Erzurum 71.21 306 *i* P **P 18 50 36.5 +1.6**
FIA1 FINESS Array S 71.41 331⇑*e*P **P 18 50 34.4 -1.7**
FIA1 *e*pP pP 18 50 45.3 0.0
FINES FINESS Array B 71.41 331 P **P 18 50 34.8 -1.2**
comp=Z,23nm,0.6s,mb5.3,baz=72,slow=6.2,SNR=170
FINES LR LR 19 25 10.0
comp=Z,2μm,21.1s,MS5.4,baz=201,slow=38
FINES FINESS Array B 71.41 331 *i* P **P 18 50 35.2 -0.9**
FINES pmax pmax
comp=Z,23nm,0.6s
BNGL BINGOL 71.72 305 *i* P **P 18 50 39.1 +1.1**
ANN Anapa 72.04 312*c* *i*P **P 18 50 39.5 -0.3**
ANN *e* 18 53 15.4
ANN *e*S S 18 59 56.3 -3.3
ANN *e* 19 00 46.6
ANN pmax pmax
comp=Z,402nm,1.2s,mb6.2
ANN MLR MLR
comp=E,2μm,22.0s
ANN MLR MLR
comp=Z,2μm,22.0s,MS5.3
BEST Besiri 72.05 304 *i* P **P 18 50 40.6 +0.7**
VSU Vasula 72.43 328⇑*i*P **P 18 50 41.5 -0.7**
KELT Kelkit 72.61 307 *i* P **P 18 50 44.4 +1.1**
MARD Mardin 72.63 303 *i* P **P 18 50 44.1 +0.8**
RES Resolute Bay 72.72 11⇑*i*P **P 18 50 43.7 -0.2**
RES pmax pmax
comp=Z,88nm,0.9s,mb5.7
RES Resolute Bay 72.72 11⇑*i*P **P 18 50 43.7 -0.2**
comp=Z,3μm,0.9s
DAG Danmarks Havn 72.91 353⇓*i*P **P 18 50 44.0 -1.0**
comp=Z,102nm,1.1s,mb5.7
DAG Danmarks Havn 72.91 353⇓*i*P **P 18 50 44.0 -1.0**
DAG pmax pmax
comp=Z,103nm,1.1s,mb5.7
MALT Malatya 73.94 305⇑*i*P **P 18 50 52.6 +1.5**
MALT Malatya 73.94 305 *e*P **P 18 50 52.8 +1.7**
MALT pmax pmax
comp=Z,110nm,1.0s,mb5.7
MALT Malatya 73.94 305⇑*i*P **P 18 50 52.3 +1.2**
comp=Z,107nm,1.0s,mb5.7
SIM Simferopol' 74.13 313*c* *i*P **P 18 50 52.0 -0.2**
SIM *e* pP 18 51 01.0 -0.5
SIM S S 19 00 18.6 -4.8
SIM pmax pmax
comp=Z,151nm,0.9s,mb5.9
AKASG Malin Array Be 74.61 320 P **P 18 50 53.8 -1.2**
comp=Z,21nm,0.5s,mb5.3,baz=54,slow=6.1,SNR=114
AKASG LR LR 19 27 11.5
comp=Z,2μm,18.3s,MS5.3,baz=55,slow=38
AKASG Malin Array Be 74.61 320 *i* P **P 18 50 54.0 -1.0**
AKASG pmax pmax
comp=Z,21nm,0.5s
AKASG Malin Array Be 74.61 320 *i* P **P 18 50 54.0 -1.0**
comp=Z,21nm,0.5s,mb5.3
AKBB Malin Array Si 74.61 320 *e*P **P 18 50 53.9 -1.1**
GZT Gaziantep 74.95 304 *i* P **P 18 50 58.0 +1.0**
BOYT Boyabat 75.11 309 *i* P **P 18 50 58.6 +0.7**
NSS Namsos 75.30 337 *e*P **P 18 50 51.1 -7.9**
NSS AMS AMS 19 29 56.6
comp=Z,3μm,18.3s,MS5.7
YKW3 Yellowknife Ar 75.47 26 *e*P **P 18 50 59.9 0.0**
YKA Yellowknife Ar 75.52 26 P **P 18 51 00.2 0.0**
comp=Z,27nm,0.8s,mb5.2,baz=302,slow=5.5,SNR=122
YKA LR LR 19 28 15.7
comp=Z,289nm,20.8s,MS4.6,baz=270,slow=39
YKA Yellowknife Ar 75.52 26 P **P 18 51 00.2 0.0**
YKA pmax pmax
comp=Z,27nm,0.8s
YKA MLR MLR
comp=Z,289nm,20.8s
YKA Yellowknife Ar 75.52 26 P **P 18 51 00.2 0.0**
YKA LR LR 19 28 15.7
CTKT Corum 75.53 308 *i* P **P 18 50 58.2 -2.1**
BALT Daday 76.08 310 *i* P **P 18 51 04.4 +0.9**
CDAG Cicekdag 76.25 308 *i* P **P 18 51 04.7 +0.3**
COBT Iskenderun 76.26 304 *i* P **P 18 51 05.2 +0.8**
JMIC Jan Mayen 76.27 347 *e*P **P 18 51 01.7 -2.8**
JMIC *e* 18 59 57.4
JMIC *e*SS SS 19 05 50.7 +10
JMIC AMS AMS 19 29 55.7
comp=Z,473nm,18.9s,MS4.8
SUW Suwalki 76.29 324 *e*Pc **P 18 51 04.1 -0.6**
comp=Z,0.2nm,1.0s,mb3.0
SUW *e*PcP PcP 18 51 15.7 -0.8
SUW *e*S S 19 00 56.0 +8.6
SUW L 19 28 14.1
comp=Z,3.4nm,18.6s
SUW Suwalki 76.29 324⇑*e*P **P 18 51 04.1 -0.6**
SUW *e* 18 51 15.7
SUW *e*S S 19 00 56.0 +8.6
SUW pmax pmax
comp=Z,200nm,1.0s,mb6.0
SUW MLR MLR
comp=Z,3μm,18.6s,MS5.7
SUW Suwalki 76.29 324⇑*e*P **P 18 51 04.1 -0.6**
SUW *e*PcP PcP 18 51 15.7 -0.8
SUW *e*S S 19 00 56.0 +8.6
KIS Kishinev 76.54 316*c* *i*P **P 18 51 04.0 -2.1**
KIS *e* pP 18 51 12.0 -3.4
KIS *e* 18 54 05.0
KIS *e* 18 55 45.0
KIS *e* 19 00 54.0
KIS *e* 19 01 08.0
KIS *e* 19 01 42.0
KIS pmax pmax
comp=Z,500nm,2.0s,mb6.1
KIS MLR MLR
comp=N,1μm,15.0s,MS5.5
KIS MLR MLR
comp=E,2μm,15.0s,MS5.5
KIS MLR MLR
comp=Z,3μm,15.0s,MS5.7
KIS MLR MLR
comp=Z,3μm,16.0s
BR131 Keskin Array S 76.71 308⇑*i*P **P 18 51 07.1 +0.1**
comp=Z,87nm,0.8s,mb5.7
BRTR Keskin Array B 76.71 308 P **P 18 51 07.4 +0.4**
comp=Z,109nm,1.0s,mb5.7,baz=99,slow=4.3,SNR=254
BRTR LR LR 19 30 16.1
comp=Z,604nm,20.4s,MS4.9,baz=34,slow=40
BRTR Keskin Array B 76.71 308 P **P 18 51 07.4 +0.4**
BRTR pmax pmax
comp=Z,109nm,1.0s
BRTR MLR MLR
comp=Z,604nm,20.4s
ANTO Ankara 77.23 308⇑*i*P **P 18 51 10.4 +0.5**
ANTO Ankara 77.23 308 P **P 18 51 10.7 +0.7**
SNR=26
ANTO Ankara 77.23 308⇑*i*P **P 18 51 10.2 +0.3**
ANTO pmax pmax
comp=Z,148nm,1.1s,mb5.8
ANTO MLR MLR
comp=Z,1μm,22.0s,MS5.1
ANTO Ankara 77.23 308⇑*i*P **P 18 51 10.2 +0.3**
comp=Z,148nm,1.1s,mb5.8
ANTO LR LR
comp=Z,1μm,22.0s,MS5.1
SGKT Sivrigoynuk 77.41 309 *i* P **P 18 51 11.3 +0.3**
NB2 NORSAR Subarra 77.70 334 P **P 18 51 10.9 -1.7**
comp=Z,69nm,1.2s,mb5.5,baz=49,slow=5.6
NOA NORSAR Array B 77.70 334 P **P 18 51 11.1 -1.5**
comp=Z,18nm,0.9s,mb5.0,baz=50,slow=5.6,SNR=32
NOA PP PP 18 54 06.4 -1.6
comp=Z,2.2nm,0.8s,baz=48,slow=8.7,SNR=4.2
NOA LR LR 19 28 58.0
comp=Z,823nm,18.4s,MS5.1,baz=30,slow=38
NOA NORSAR Array B 77.70 334 P **P 18 51 11.1 -1.5**
NOA 18 54 06.4
NOA pmax pmax
comp=Z,18nm,0.9s
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA MLR MLR
comp=Z,823nm,18.4s
NOA NORSAR Array B 77.70 334 P **P 18 51 11.1 -1.5**
NOA PP PP 18 54 06.4 -1.6
NOA LR LR 19 28 58.0
MEST Erdemli 77.75 305 *i* P **P 18 51 12.6 -0.2**
CFR Carcaliu 77.82 315⇓*i*P **P 18 51 13.5 +0.3**
CFR Carcaliu 77.82 315 ⇓P **P 18 51 13.5 +0.2**
BHL Bhannes 77.85 302 *e*P **P 18 51 13.8 +0.4**
RCY Rachaya 77.91 302 *e*P **P 18 51 15.0 +1.3**
NAO01 NORSAR Array S 77.95 334⇑*i*P **P 18 51 11.8 -2.1**
comp=Z,43nm,1.3s,mb5.2
LVV L'vov 77.96 320⇑*i*P **P 18 51 14.1 +0.1**
LVV *e* 18 51 30.7
LVV *e*S S 19 01 05.5 0.0
LVV *e*PS 19 01 46.5
LVV MLR MLR
comp=Z,2μm,18.0s,MS5.5
LVV MLR MLR
comp=N,600nm,17.0s,MS5.5
LVV MLR MLR
comp=E,2μm,18.0s,MS5.5
TIRR Tirgusor 77.99 314⇑*i*P **P 18 51 14.1 -0.1**
TIRR Tirgusor 77.99 314 P **P 18 51 14.7 +0.5**
TIRR Tirgusor 77.99 314 *e*P **P 18 51 14.0 -0.2**
comp=E,55nm,1.0s,mb5.4
HENT Hendek 78.08 310 *i* P **P 18 51 14.0 -0.7**
HARR Harsova 78.18 315⇓*i*P **P 18 51 15.9 +0.7**
HARR Harsova 78.18 315 ⇓P **P 18 51 15.9 +0.7**
KDHN Kadinhani 78.31 307 *i* P **P 18 51 16.1 +0.1**
WAR Warsaw 78.32 324 *e*P **P 18 51 16.4 +0.4**
WAR *e*S S 19 01 19.4 +10
WAR L 19 29 17.6
comp=Z,2.8nm,18.5s
VRI Vrincioaia 78.35 316⇓*i*P **P 18 51 16.5 +0.3**
VRI Vrincioaia 78.35 316 ⇓P **P 18 51 16.5 +0.3**
BURAR Bucovina Array 78.39 318⇑*i*P **P 18 51 16.5 +0.1**
BURAR Bucovina Array 78.39 318 ⇑P **P 18 51 16.4 +0.1**
PLOR Plostina 78.41 316⇑*i*P **P 18 51 16.6 +0.1**
PLOR Plostina 78.41 316 ⇑P **P 18 51 16.7 +0.2**
C03A Quillayute Air 78.57 41 ⇓P **P 18 51 17.9 +0.5**
baz=78
SUMG Summit 78.57 356⇑*i*P **P 18 51 17.7 +0.3**
comp=Z,242nm,1.1s,mb6.0
SUMG *e*PP PP 18 54 10.5 -4.8
ERMK Ermenek 78.61 305 *i* P **P 18 51 17.4 -0.2**
ESKT Eskisehir 78.72 309 *i* P **P 18 51 17.9 -0.4**
KWP Kalwaria 78.79 321 *e*Pc **P 18 51 19.1 +0.5**
comp=Z,0.7nm,2.4s
KWP L 19 29 07.1
comp=Z,4.4nm,18.5s
KWP Kalwaria 78.79 321⇑*e*P **P 18 51 19.1 +0.5**
KWP pmax pmax
comp=Z,700nm,2.4s,mb6.2
KWP MLR MLR
comp=Z,4μm,18.5s,MS5.8
ISR Istrita 78.83 315⇓*i*P **P 18 51 21.3 +2.5**
LBOS 78.84 280⇑*e*P **P 18 51 20.8 +1.4**
LBOS AMb AMB 18 51 21.8
comp=Z,89nm,0.9s,mb5.7
SCO Scoresbysund 78.98 351 *i* P **P 18 51 18.7 -0.9**
comp=Z,49nm,0.9s,mb5.4
SCO *i* S S 19 01 12.6 -3.8
SCO Scoresbysund 78.98 351 *i* P **P 18 51 18.7 -0.9**
SCO *i* S S 19 01 12.6 -3.8
SCO pmax pmax
comp=Z,49nm,0.9s,mb5.4
MLR Muntele Rosu 79.01 316⇑*i*P **P 18 51 20.0 +0.2**
MLR Muntele Rosu 79.01 316 P **P 18 51 20.2 +0.4**
CSS Prodhromos 79.08 304 *e*P **P 18 51 21.8 +1.6**
B04A Port Angeles 79.12 41 ⇑P **P 18 51 20.9 +0.5**
baz=79
KONO Kongsberg 79.20 334 *e*P **P 18 51 16.8 -4.1**
KONO *e*S S 19 01 18.0 -0.8
KONO Kongsberg 79.20 334 *i* Pr **P 18 51 20.0 -0.9**
KONO LR LR
comp=Z,2μm,20.0s,MS5.3
A04A Legoe Bay, Lum 79.23 40 ⇑P **P 18 51 21.2 +0.1**
baz=79
SNX Sinaia 79.34 316⇑*i*P **P 18 51 21.8 +0.2**
SNX Sinaia 79.34 316 ⇑P **P 18 51 21.8 +0.2**

DHBB Dhamar BB 79.37 281⇑ eP P 18 51 23.2 +1.4
DHBB AMb AMB 18 51 24.4
comp=Z,42nm,0.6s,mb5.6
KOLS Kolonicke sedl 79.40 320 eP P 18 51 21.9 0.0
KOLS e 18 51 25.9
KOLS ePP PP 18 54 17.2 -5.0
A05A Maple Falls 79.44 40 ⇑P P 18 51 21.6 -0.5
baz=79
D03A Wishkah Elem. 79.45 42 ⇓P P 18 51 23.1 +0.9
baz=79
BUC1 Bucharest 79.53 315 P P 18 51 23.3 +0.6
VOIR 79.58 316 ⇓iP P 18 51 23.4 +0.5
VOIR 79.58 316 ⇓P P 18 51 23.4 +0.4
ULDT Uludag 79.59 310 i P P 18 51 23.2 +0.2
GKP Gorka Klasztor 79.68 326 ePc P 18 51 23.3 -0.2
comp=Z,0.5nm,3.1s
GKP eS S 19 01 25.1 +1.2
GKP L 19 30 28.6
comp=Z,5.3nm,16.9s
GKP Gorka Klasztor 79.68 326⇑ eP P 18 51 23.3 -0.2
GKP eS S 19 01 25.1 +1.2
GKP pmax pmax
comp=Z,500nm,3.1s
GKP MLR MLR
comp=Z,5μm,16.9s,MS6.0
MTUR Matau 79.68 316 ⇑P P 18 51 31.0 +7.5
STHS Stebnicka Huta 79.72 321 eP P 18 51 24.1 +0.4
STHS pmax pmax
comp=Z,16nm,1.0s,mb4.9
STHS Stebnicka Huta 79.72 321 eP P 18 51 24.1 +0.4
comp=Z,16nm,1.0s,mb4.9
ISP Isparta 79.75 307 eP P 18 51 23.7 -0.1
ISP pmax pmax
comp=Z,80nm,1.3s,mb5.5
ISP Isparta 79.75 307⇑ iP P 18 51 23.3 -0.5
comp=Z,80nm,1.3s,mb5.5
TKTP Tekketepe 79.78 308 i P P 18 51 23.6 -0.5
B05A Bryant 79.82 40 ⇑P P 18 51 24.2 0.0
baz=80,SNR=5.1
GDZ Gediz 79.86 309 i P P 18 51 24.3 -0.1
CRVS Cervenica-Dubn 79.87 321 eP P 18 51 24.7 +0.2
E03A Lebam 79.87 42 ⇓P P 18 51 24.9 +0.4
baz=80,SNR=8.0
OJC Ojcow 80.07 322⇑ iP P 18 51 25.7 +0.1
OJC e 18 54 28.3
OJC eS S 19 01 31.2 +3.3
OJC MLR MLR
comp=Z,19μm,17.3s
F03A Seaside 80.19 43 ⇓P P 18 51 26.7 +0.4
baz=80,SNR=6.7
TRBA At Turbah 80.22 280⇑ eP P 18 51 27.7 +1.3
TRBA AMb AMB 18 51 29.0
comp=Z,41nm,0.7s,mb5.5
NIE Niedzica 80.23 321 i Pc P 18 51 27.2 +0.8
NIE ePP PP 18 54 29.0 0.0
DRGR 80.28 318⇑ iP P 18 51 27.0 +0.3
DRGR 80.28 318 P P 18 51 27.1 +0.4
DRGR 80.28 318 ⇑P P 18 51 27.0 +0.3
ZIMR 80.29 315⇑ iP P 18 51 27.8 +1.0
ZIMR 80.29 315 ⇑iP P 18 51 27.8 +1.0
EIL Elat 80.30 298⇑ iP P 18 51 27.0 +0.2
comp=Z,3μm,1.5s
BER Bergen 80.33 336 eP P 18 51 23.9 -3.0
BER eS S 19 01 32.8 +2.1
BER i 19 07 39.6
BER AMS AMS 19 33 02.5
comp=Z,3μm,19.2s,MS5.6
E04A Onalaska 80.34 42 ⇑P P 18 51 27.4 +0.4
baz=80
C05A Tolt Reservoir 80.36 41 ⇑P P 18 51 27.2 +0.1
baz=80,SNR=9.7
D05A Enumclaw 80.45 41 ⇑P P 18 51 28.1 +0.5
baz=80
COP Copenhagen 80.51 329 i S S 19 01 42.6 +10
COP
comp=Z,1μm,20.0s
COP Copenhagen 80.51 329⇑ iP P 18 51 27.6 -0.3
COP i S S 19 01 42.6 +10
COP pmax pmax
comp=Z,64nm,1.1s,mb5.5
COP MLR MLR
comp=Z,1μm,20.0s,MS5.2
COP Copenhagen 80.51 329⇑ iP P 18 51 27.6 -0.3
comp=Z,64nm,1.1s,mb5.5
COP i S S 19 01 42.6 +10
COP LR LR
comp=Z,1μm,20.0s,MS5.2
KECS Kecovo 80.64 321 i P P 18 51 28.7 +0.1
KECS pmax pmax
comp=Z,17nm,1.1s,mb4.9
KECS Kecovo 80.64 321 i P P 18 51 28.7 +0.1
comp=Z,17nm,1.1s,mb4.9
KECS ePP PP 18 54 24.9 -7.6
G03A Yamhill 80.68 43 ⇑P P 18 51 29.0 +0.2
baz=80
DNZL Cakiroluk 80.84 308 i P P 18 51 29.9 +0.2
F04A Amboy 80.87 42 ⇓P P 18 51 30.1 +0.2
baz=81,SNR=8.3
RAC Raciborz 81.00 323 eP P 18 51 31.0 +0.4
RAC MLR MLR
comp=Z,3μm,17.6s,MS5.7
I02A Mapleton 81.03 45 ⇓P P 18 51 31.3 +0.5
baz=81
COR Corvallis 81.05 44 eP P 18 51 32.2 +1.4
COR pmax pmax
comp=Z,51nm,0.9s,mb5.5
COR Corvallis 81.05 44 eP P 18 51 31.5 +0.6
comp=Z,58nm,0.9s,mb5.5
COR LR LR
comp=Z,321nm,19.0s,MS4.7
LIKS Likavka 81.09 322 eP P 18 51 31.7 +0.7
AKHS Akhisar 81.09 309 i P P 18 51 29.8 -1.3
SNZO South Karori 81.09 148 PFAKE 18 51 40.0 +8.9
SNZO LR LR
comp=Z,898nm,20.0s,MS5.1
OKC Ostrava-Krasne 81.16 323⇑ iP P 18 51 31.6 +0.2
OKC epP pP 18 51 39.2 -1.6
OKC AMS AMS 19 30 30.0
comp=Z,2μm,16.3s
OKC Ostrava-Krasne 81.16 323⇑ iP P 18 51 31.6 +0.2
OKC e pP 18 51 39.2 -1.6
G04A Mulino 81.22 43 ⇑P P 18 51 32.2 +0.4
baz=81
ALN Alexandroupoli 81.26 312 eP P 18 51 31.9 -0.1
PSZ Piszkesteto 81.28 320⇑ eP P 18 51 32.5 +0.4
PSZ Piszkesteto 81.28 320⇑ iP P 18 51 32.4 +0.3
PSZ Piszkesteto 81.28 320 P P 18 51 32.6 +0.5
KEBM Edson Butte 81.31 46⇑ iP P 18 51 32.8 +0.6
KEBM epP pP 18 51 40.5 -1.1
I03A Eugene 81.39 44 ⇓P P 18 51 33.4 +0.8
baz=81
MUD Monsted U'grnd 81.44 331 eS S 19 01 43.9 +1.7
MUD
comp=Z,1μm,19.0s
MUD Monsted U'grnd 81.44 331⇑ iP P 18 51 32.3 -0.6
MUD eS S 19 01 43.9 +1.7
MUD pmax pmax
comp=Z,66nm,1.0s,mb5.5
MUD Monsted U'grnd 81.44 331⇑ iP P 18 51 32.3 -0.6
comp=Z,66nm,1.0s,mb5.5
MUD eS S 19 01 43.9 +1.7
F05A White Salmon 81.46 42 ⇑P P 18 51 33.3 +0.3
baz=81
RDO Rodhopi 81.46 312 eP P 18 51 32.3 -0.7
MORC Moravsky Berou 81.52 323 ⇓iP P 18 51 33.7 +0.4
MORC Moravsky Berou 81.52 323⇑ iP P 18 51 33.7 +0.4
MORC pmax pmax
comp=Z,45nm,1.1s,mb5.3
MORC Moravsky Berou 81.52 323⇑ iP P 18 51 33.7 +0.3
comp=Z,45nm,1.1s,mb5.3
J02A Umpqua 81.52 45 ⇑P P 18 51 34.0 +0.7
baz=81
BZS Buzias 81.55 318⇑ iP P 18 51 33.1 -0.4
BZS Buzias 81.55 318 P P 18 51 33.3 -0.2
BZS Buzias 81.55 318 ⇑P P 18 51 33.1 -0.3
VYHS Vyhne 81.55 321 i P P 18 51 34.1 +0.6
VYHS e 18 54 28.7
VYHS Vyhne 81.55 321 i P P 18 51 34.1 +0.6
comp=Z,39nm,1.2s,mb5.2
VYHS ePP PP 18 54 28.7 -11
VYHS LR LR
comp=Z,3μm,17.4s,MS5.7
KSP Ksiaz 81.56 324 ePc P 18 51 34.0 +0.5
comp=Z,0.7nm,2.8s
KSP eS S 19 01 45.2 +1.7
KSP L 19 31 32.0
comp=Z,5.4nm,18.4s
KSP Ksiaz 81.56 324⇑ eP P 18 51 33.9 +0.4
KSP ePP PP 18 54 40.5 +0.5
KSP eS S 19 01 43.5 0.0
KSP eSS SS 19 07 00.9 +0.3
KSP LR LR
comp=Z,6μm,18.4s,MS6.0
EDM Edmonton 81.57 33 eP P 18 51 33.7 +0.1
EDM Edmonton 81.57 33⇑ eP P 18 51 33.5 -0.1
AYVA Ayvalik 81.64 310 i P P 18 51 33.6 -0.4
HOOD Mount Hood Mea 81.65 43 eP P 18 51 35.0 +0.9
HOOD epP pP 18 51 43.8 +0.4
H04A Detroit Lake 81.67 43 ⇑P P 18 51 34.2 0.0
baz=82
BOZC Bozcaada 81.79 311 i P P 18 51 33.4 -1.4
DPC Dobruska-Polom 81.83 324⇑ iP P 18 51 35.6 +0.6
DPC epP pP 18 51 45.1 +0.7
DPC AMS AMS 19 31 20.0
comp=Z,3μm,16.5s
RUE Ruedersdorf 81.84 326 eP P 18 51 35.4 +0.4
comp=Z,140nm,1.2s,mb5.8
RUE Ruedersdorf 81.84 326 eP P 18 51 35.0 0.0
comp=Z,105nm,1.1s,mb5.7
K02A Glendale 81.89 46 ⇓P P 18 51 35.5 +0.2
baz=82
UPC Upice 81.90 324⇑ iP P 18 51 35.6 +0.3
J03A Ideyld Park 81.90 45 ⇓P P 18 51 35.8 +0.5
baz=82,SNR=7.4
PRK Paraskevi 81.95 310 eP P 18 51 35.4 -0.2
M01C Crescent City 81.97 47 ⇑P P 18 51 36.2 +0.5
baz=82
BUD Budapest 82.01 320⇑ eP P 18 51 36.4 +0.5
L02A Cave Junction 82.14 46 ⇓P P 18 51 37.0 +0.4
baz=82
URLA Izmir 82.18 309 i P P 18 51 36.0 -0.8
VTS Vitosha 82.20 314 ⇓iP P 18 51 37.2 +0.3
VTS Vitosha 82.20 314 P P 18 51 37.6 +0.7
VTS Vitosha 82.20 314 ⇓P P 18 51 37.2 +0.3
H05A Madras 82.27 43 ⇓P P 18 51 37.6 +0.3
baz=82
VRAC Vranov 82.30 323⇑ iP P 18 51 38.1 +0.7
VRAC Vranov 82.30 323 P P 18 51 38.2 +0.8
VRAC Vranov 82.30 323⇑ P P 18 51 38.1 +0.7
HAWA Hanford 82.30 41⇑ iP P 18 51 37.6 +0.2
comp=Z,45nm,1.1s,mb5.3
HAWA epP pP 18 51 46.2 -0.7
SMOL Smolenice 82.31 322 i P P 18 51 38.3 +0.8
LIA Limnos Island 82.34 311 eP P 18 51 33.5 -4.1
SMG Samos 82.35 309 eP P 18 51 35.1 -2.6
NVR Nevrokopi 82.44 313 eP P 18 51 37.7 -0.4
I05A Bend 82.51 43 ⇑P P 18 51 38.8 +0.3
baz=82
CHOS Chios island 82.53 310 eP P 18 51 38.6 0.0
BSEG Bad Segeberg 82.56 329 eP P 18 51 38.7 -0.1
comp=Z,86nm,1.0s,mb5.7
BSEG Bad Segeberg 82.56 329 eP P 18 51 38.7 -0.1
BSEG pmax pmax
comp=Z,86nm,1.0s,mb5.7
JCC Jacoby Creek 82.57 47 ⇑P P 18 51 38.7 -0.2
baz=82
NEW Newport 82.59 38⇑ iP P 18 51 38.7 -0.2
NEW pmax pmax
comp=Z,33nm,1.0s
NEW Newport 82.59 38⇑ iP P 18 51 38.7 -0.2
comp=Z,32nm,1.0s,mb5.3
PVCC Panska Ves 82.63 324⇑ iP P 18 51 39.8 +0.7
PVCC AMS AMS 19 32 10.0
comp=Z,3μm,18.1s
ZST Bratislava 82.67 322 i P P 18 51 40.1 +0.8
comp=Z,33nm,1.0s,mb5.3
ZST LR LR
comp=Z,3μm,16.8s,MS5.7
BRG Berggiesshubel 82.74 325 eP P 18 51 39.9 +0.2
comp=Z,64nm,1.4s,mb5.5
BRG Berggiesshubel 82.74 325⇑ iP P 18 51 40.0 +0.3
comp=Z,38nm,1.4s,mb5.2
BRG i pP 18 51 49.5 +0.4
comp=Z,11nm,1.2s
BRG PP PP 18 54 52.0 +2.2
BRG S S 19 01 59.0 +3.4
BRG PS 19 02 56.0
BRG SS SS 19 07 35.0 +17
BRG PKKS 19 13 39.0
BRG
comp=N,1μm,12.6s
BRG
comp=E,911nm,15.6s
BRG
comp=Z,2μm,16.5s
BRG Berggiesshubel 82.74 325⇑ iP P 18 51 40.0 +0.3
BRG i pP 18 51 49.5 +0.4
BRG PP PP 18 54 52.0 +2.2
BRG S S 19 01 59.0 +3.4
BRG PS 19 02 56.0
BRG pmax pmax
comp=Z,2.0nm,1.4s
BRG pmax pmax
comp=Z,38nm,1.2s
BRG MLR MLR
comp=N,11μm,12.6s
BRG MLR MLR
comp=E,1μm,15.6s
BRG MLR MLR
comp=Z,911nm,16.5s
BRG Berggiesshubel 82.74 325⇑ iP P 18 51 40.0 +0.3
comp=Z,38nm,1.4s,mb5.2
BRG i pP 18 51 49.5 +0.4
BRG PP PP 18 54 52.0 +2.2
BRG S S 19 01 59.0 +3.4
BRG PS 19 02 56.0
BRG SS SS 19 07 35.0 +17
BRG PKKS 19 13 39.0
BRG LR LR
comp=Z,2μm,16.5s,MS5.5
LRW Lerwick 82.78 338⇑ eP P 18 51 38.5 -1.4
LRW Lerwick 82.78 338⇑ eP P 18 51 38.5 -1.4
WAL1 Walls 82.83 338⇑ eP P 18 51 39.2 -1.0
WAL1 Walls 82.83 338⇑ eP P 18 51 39.2 -1.0
TREC Trest 82.89 323⇑ iP P 18 51 40.9 +0.4
TREC AMS AMS 19 31 50.0
comp=Z,2μm,16.4s
OUR Ouranopolis 82.90 312 eP P 18 51 39.8 -0.8
YBH Yreka Blue Hor 82.93 46⇑ eP P 18 51 40.9 +0.2
YBH pmax pmax
comp=Z,21nm,1.0s
YBH MLR MLR
comp=Z,288nm,21.0s
YBH Yreka Blue Hor 82.93 46⇑ eP P 18 51 40.9 +0.2
comp=Z,21nm,1.0s,mb5.1
YBH LR LR
comp=Z,288nm,21.0s,MS4.6
YBH Yreka Blue Hor 82.93 46 P P 18 51 41.4 +0.7
baz=83,SNR=8.8
CLL Collm 82.94 326 eP P 18 51 40.9 +0.2
comp=Z,253nm,1.5s,mb6.0
CLL epP pP 18 51 48.9 -1.3
CLL ePP PP 18 54 51.7 +0.3
CLL eS S 19 02 03.5 +5.8
CLL eSS SS 19 07 29.4 +8.3
CLL eL 19 32 51.0
comp=Z,3μm,18.0s
CLL Collm 82.94 326 ⇑P P 18 51 40.9 +0.2
comp=Z,logA/T=2.2,mb6.0
CLL e*PP pP 18 51 49.0 -1.2
CLL i 18 52 00.8
CLL ePP PP 18 54 52.0 +0.6
CLL eS S 19 02 00.0 +2.3
CLL eSS SS 19 07 25.0 +3.9
CLL Collm 82.94 326⇑ iP P 18 51 40.9 +0.2
comp=Z,249nm,1.5s,mb6.0
CLL epP pP 18 51 49.0 -1.2
CLL i x 18 52 00.8
CLL ePP PP 18 54 52.0 +0.6
CLL eS S 19 02 00.0 +2.3
CLL eSS SS 19 07 25.0 +3.9
CLL Collm 82.94 326⇑ iP P 18 51 40.9 +0.2
CLL e*PP pP 18 51 49.0 -1.2
CLL eS S 19 02 00.0 +2.3
CLL pmax pmax
comp=Z,249nm,1.5s,mb6.0
CLL MLR MLR
comp=Z,4μm,16.9s,MS5.8
CLL Collm 82.94 326⇑ iP P 18 51 40.9 +0.2
comp=Z,249nm,1.5s,mb6.0
CLL epP pP 18 51 49.0 -1.2
CLL LR LR 19 33 13.2
comp=Z,4μm,16.9s,MS5.8
PKSM Moragy 82.95 319⇑ iP P 18 51 40.7 -0.1
PKSM Moragy 82.95 319 P P 18 51 41.1 +0.3
PKSM Moragy 82.95 319⇑ eP P 18 51 40.8 0.0
PRU Pruhonice 82.97 324⇑ iP P 18 51 41.3 +0.4
PRU AMS AMS 19 33 20.0
comp=Z,3μm,14.8s
FBE Freiberg 83.00 325 eP P 18 51 41.4 +0.3
comp=Z,236nm,1.5s,mb6.0
J05A Fort Rock 83.01 44 ⇓P P 18 51 41.8 +0.7
baz=83,SNR=28
M02C Callahan 83.02 46 ⇓P P 18 51 42.0 +0.8
baz=83,SNR=6.0
SOH Sokhos 83.04 313 eP P 18 51 40.1 -1.2
O01C Eel River Cons 83.07 48 ⇓P P 18 51 42.2 +0.8
baz=83
K04A Chilguin 83.07 45 ⇓P P 18 51 41.5 0.0
baz=83
F08A Pendleton 83.07 41 P P 18 51 42.3 +0.9
baz=83,SNR=25
KNT Kendrikon 83.15 313 eP P 18 51 41.6 -0.3
L04A Klamath Falls 83.21 45 P P 18 51 42.6 +0.5
baz=83,SNR=10
KARP Karpathos 83.22 307 eP P 18 51 41.9 -0.3
PLG Polygyros 83.22 312 eP P 18 51 41.7 -0.5
I06A Prineville 83.27 43 P P 18 51 43.1 +0.6
baz=83,SNR=20
VAY Valandovo 83.28 314 eP P 18 51 41.9 -0.6
PAIG Paliouri 83.31 312 eP P 18 51 42.0 -0.6
STIP Stip 83.32 314 eP P 18 51 42.3 -0.4
HORT Hortiatis 83.33 313 eP P 18 51 42.1 -0.7
DIVS Divcibare 83.35 317 i P P 18 51 42.5 -0.3
THE Thessaloniki 83.39 313 eP P 18 51 42.3 -0.8
M04C Macdoel 83.45 46 ⇑P P 18 51 43.9 +0.5
baz=83,SNR=16
CONA Conrad Observa 83.50 322 i P P 18 51 44.7 +1.0
comp=Z,317nm,1.7s,mb6.2,SNR=59
APE Apeiranthos 83.57 309 eP P 18 51 41.0 -3.0
APE Apeiranthos 83.57 309⇑ iP P 18 51 42.9 -1.1
APE Apeiranthos 83.57 309 ⇑P P 18 51 42.9 -1.0
AOS Alonnisos 83.58 311 eP P 18 51 43.1 -0.9
GRG Griva 83.58 313 eP P 18 51 42.9 -1.2
NRDL Niedersach Rie 83.58 328 eP P 18 51 44.2 +0.1
comp=Z,146nm,1.5s,mb5.9
I07A Izee 83.61 43 ⇑P P 18 51 44.9 +0.7
baz=83,SNR=16
SKO Skopje 83.64 315 eP P 18 51 45.1 +0.8
WDC Whiskeytown Da 83.66 47⇑ eP P 18 51 44.1 -0.4
WDC e*PP pP 18 51 53.3 -0.6
WDC pmax pmax
comp=Z,32nm,1.1s,mb5.4
WDC MLR MLR
comp=Z,346nm,20.0s,MS4.7
WDC Whiskeytown Da 83.66 47⇑ eP P 18 51 44.1 -0.3
comp=Z,32nm,1.1s,mb5.4
WDC epP pP 18 51 53.3 -0.6
WDC LR LR
comp=Z,346nm,20.0s,MS4.7
WDC Whiskeytown Da 83.66 47 ⇑P P 18 51 44.5 0.0
baz=84,SNR=7.9
J06A Christmas Vall 83.69 44 P P 18 51 45.2 +0.6
baz=84,SNR=31
O02C Red Bluff 83.72 47 ⇓P P 18 51 44.9 +0.2
baz=84,SNR=7.4
P01C Double 8 Ranch 83.74 48 ⇓P P 18 51 44.8 -0.1
baz=84
TANN Tannenbergstha 83.76 325 eP P 18 51 45.2 +0.2
comp=Z,78nm,1.3s,mb5.7
WERD Werda 83.82 325 eP P 18 51 45.4 +0.1
comp=Z,86nm,1.2s,mb5.8
BBLS Bajina Basta - 83.82 317 i P P 18 51 45.9 +0.6
WALA Waterton Lakes 83.83 36⇑ eP P 18 51 44.9 -0.4
comp=Z,45nm,1.1s,mb5.5
GUNZ Gunzen 83.86 325 eP P 18 51 45.8 +0.3
comp=Z,198nm,1.6s,mb6.0
H08A Prairie City 83.86 42 P P 18 51 46.1 +0.6
baz=84,SNR=20
CLZ Clausthal 83.88 327 eP P 18 51 46.1 +0.5
comp=Z,332nm,1.1s,mb6.4
CLZ Clausthal 83.88 327 eP P 18 51 46.1 +0.5
CLZ pmax pmax
comp=Z,332nm,1.1s,mb6.4
K06A Valley Falls 83.88 44 ⇑P P 18 51 46.3 +0.7
baz=84,SNR=30
NKC Novy Kostel 83.88 325⇑ iP P 18 51 46.0 +0.4
NKC AMS AMS 19 33 30.0
comp=Z,4μm,15.6s
WERN Wernitzgruen 83.88 325 eP P 18 51 45.9 +0.3
comp=Z,142nm,1.2s,mb6.0
XOR Xorichti 83.92 312 eP P 18 51 44.5 -1.3
L05A Lakeview 83.94 45 P P 18 51 46.8 +0.9
baz=84,SNR=9.3
NEO Neokhori 83.94 312 eP P 18 51 44.8 -1.1
RAR Rarotonga 83.98 118 PFAKE 18 52 00.0 +14
RAR LR LR
comp=Z,1.0nm,22.0s
KHC Kasperske Hory 83.99 324⇑ iP P 18 51 46.6 +0.5
KHC ex x 18 52 03.0
KHC AMS AMS 19 32 50.0
comp=Z,3μm,18.1s
LIT Litokhoron 83.99 313 eP P 18 51 45.3 -0.8
MOX Moxa 84.04 326 eP P 18 51 46.5 +0.1
comp=Z,136nm,1.6s,mb5.8
MOX Moxa 84.04 326 i P P 18 51 46.5 +0.1
comp=Z,111nm,1.5s,mb5.8
MOX e 18 52 05.4
MOX e 18 55 06.0
MOX
comp=Z,2μm,18.0s
MOX Moxa 84.04 326 i P P 18 51 46.5 +0.1
MOX e 18 55 06.0
MOX pmax pmax
comp=Z,111nm,1.5s,mb5.8
MOX MLR MLR
comp=Z,2μm,18.0s,MS5.6
MOX Moxa 84.04 326 i P P 18 51 46.5 +0.1
comp=Z,111nm,1.5s,mb5.8
MOX epP pP 18 52 05.4 +10
MOX ePP PP 18 55 06.0 +5.6
MOX eS S 19 02 18.0 +9.2
MOX eSS SS 19 08 00.0 +23
MOX LR LR
comp=Z,2μm,18.0s,MS5.6
GASB Alder Springs 84.04 48 ⇓P P 18 51 47.1 +0.7
baz=84,SNR=6.9
ARSA Arzberg 84.09 321⇑ iP P 18 51 47.0 +0.3
comp=Z,192nm,1.8s,mb5.9,SNR=31
BSMT Bassoo Peak 84.09 38 eP P 18 51 47.5 +0.8
GEC2 GERESS Array S 84.10 323 eP P 18 51 46.8 +0.1
comp=Z,84nm,1.2s,mb5.8
GEC2 GERESS Array S 84.10 323 eP P 18 51 46.8 +0.1
GEC2 pmax pmax
comp=Z,84nm,1.2s,mb5.8
GERES GERESS Array B 84.10 323 P P 18 51 46.9 +0.2
comp=Z,32nm,0.9s,mb5.5,baz=46,slow=4.4,SNR=216
GERES PKKPbc PKKPbc 19 10 00.5 +0.2
comp=Z,0.1nm,0.3s,baz=231,slow=3.1,SNR=5.2
GERES LR LR 19 33 13.2
comp=Z,3μm,18.0s,MS5.7,baz=151,slow=38
BORG Borgarnes 84.10 348 eP P 18 51 46.9 +0.2
comp=Z,72nm,1.0s,mb5.8
BORG LR LR
comp=Z,602nm,21.0s,MS5.0
M05C Lookout 84.12 46 ⇓P P 18 51 47.1 +0.3
baz=84,SNR=12
HOPS Hopland 84.16 49 PFAKE 18 52 00.0 +13
HOPS LR LR
comp=Z,602nm,19.0s,MS5.0
HOPS Hopland 84.16 49 ⇑P P 18 51 47.2 +0.1
baz=84
MANZ Manzenberg 84.21 325 eP P 18 51 47.7 +0.4
comp=Z,68nm,1.0s,mb5.7
HATC Hat Creek Radi 84.22 46 ⇓P P 18 51 47.5 +0.2
baz=84,SNR=7.4
I08A Drewsey 84.27 43 ⇓P P 18 51 48.1 +0.6
baz=84
ROTZ Rotzenmuhle 84.29 325 eP P 18 51 48.3 +0.6
comp=Z,154nm,1.3s,mb6.0
O03C Acorn Hollow, 84.30 47 ⇑P P 18 51 47.9 +0.2
baz=84
KZN Kozani 84.34 313 eP P 18 51 46.6 -1.3
WET Wettzell 84.34 324 eP P 18 51 48.2 +0.3
comp=Z,53nm,1.2s,mb5.5

WET **Wettzell** 84.34 324 *e*P P 18 51 48.2 +0.3
WET pmax pmax
comp=Z,53nm,1.2s,mb5.5
H09A Durkee 84.36 42 P P 18 51 49.0 +0.9
baz=84,SNR=10
MOA Molln 84.41 322 *i* P P 18 51 48.7 +0.5
comp=Z,122nm,1.4s,mb5.8,SNR=50
LKR Lokris 84.43 311 *e*P P 18 51 46.3 -2.1
NPS Neapolis 84.45 307 *e*P P 18 51 48.2 -0.3
BMO Blue Mountains 84.46 41⇑*i*P P 18 51 48.5 -0.1
comp=Z,58nm,1.4s,mb5.5
BMO LR LR
comp=Z,242nm,19.0s,MS4.6
SFJD Kangerlussuaq 84.49 0 *i* S S 19 02 13.8 +0.5
SFJD
comp=Z,600nm,20.0s
SFJD Kangerlussuaq 84.49 0⇑*i*P P 18 51 48.1 -0.6
SFJD *i* S S 19 02 13.8 +0.5
SFJD pmax pmax
comp=Z,63nm,0.9s,mb5.8
SFJD MLR MLR
comp=Z,600nm,20.0s,MS5.0
SFJD Kangerlussuaq 84.49 0⇑*i*P P 18 51 48.1 -0.6
comp=Z,63nm,0.9s,mb5.8
SFJD *i* S S 19 02 13.8 +0.5
SFJD LR LR
comp=Z,600nm,20.0s,MS5.0
OHR Ohrid 84.51 314 *e*P P 18 51 47.6 -1.2
K07A Rock Creek Ran 84.55 44 ⇓P P 18 51 49.9 +0.9
baz=84
OBR Brabster 84.59 337⇑*e*P P 18 51 48.2 -1.0
OBR Brabster 84.59 337⇑*e*P P 18 51 48.2 -1.0
M06C Likely Place G 84.62 46 ⇑P P 18 51 50.0 +0.6
baz=84,SNR=10
MNRC McLaughlin Nat 84.64 48 ⇓P P 18 51 50.1 +0.7
baz=84,SNR=6.3
AGG Agios Georgios 84.67 312 *e*P P 18 51 48.1 -1.5
PERS Pernice 84.68 321 *i* P P 18 51 49.8 +0.2
UBBA Unterbreizbach 84.72 327 *e*P P 18 51 49.8 0.0
comp=Z,166nm,1.5s,mb5.9
I09A Lost Marbles R 84.72 42 ⇑P P 18 51 50.2 +0.4
baz=84,SNR=8.4
O04C Chester 84.73 47 ⇑P P 18 51 50.1 +0.2
baz=84,SNR=10
ELFS Eagle Lake Fie 84.79 46 ⇓P P 18 51 50.9 +0.6
baz=85,SNR=7.3
IBBN Ibbenburen 84.79 329 *e*P P 18 51 49.9 -0.3
comp=Z,280nm,1.2s,mb6.3
GRA1 Grafenberg Arr 84.84 325 *e*P P 18 51 51.0 +0.6
comp=Z,195nm,1.3s,mb6.1
GRA1 *e*PP PP 18 55 08.0 +1.1
GRA1 LR LR
comp=Z,1μm,20.5s,MS5.3
GRF Grafenberg Arr 84.84 325 *e*P P 18 51 51.0 +0.6
comp=Z,195nm,1.3s,mb6.1
GRF *e*PP PP 18 55 08.0 +1.1
GRF *e*L 19 34 53.5
comp=Z,1μm,20.5s
GRF Grafenberg Arr 84.84 325 *e*P P 18 51 51.0 +0.6
GRF *e* 18 55 08.0
GRF pmax pmax
comp=Z,195nm,1.3s,mb6.1
GRF MLR MLR
comp=Z,1μm,20.5s,MS5.3
GRF Grafenberg Arr 84.84 325 *e*P P 18 51 51.0 +0.6
GRF *e* 18 55 08.0
GRF pmax pmax
comp=Z,195nm,1.3s,mb6.1
GRF MLR MLR
comp=Z,1μm,20.5s,MS5.3
ORE Reay 84.85 338⇑*i*P P 18 51 49.5 -1.0
ORE Reay 84.85 338⇑*i*P P 18 51 49.5 -1.0
L07A Adell 84.88 44 ⇑P P 18 51 51.4 +0.8
baz=85,SNR=32
SUTB Sutter Butte 84.88 48 ⇓P P 18 51 50.2 -0.5
baz=85
ORV Oroville 84.89 47 ⇓P P 18 51 50.0 -0.6
baz=85,SNR=11
WIT Witteveen 84.94 329⇑*e*P P 18 51 51.6 +0.6
WIT *ex* x 18 51 59.6
K08A Mann Creek Ran 84.99 43 P P 18 51 52.0 +0.8
baz=85,SNR=24
OHCM Honcut 85.02 48 *e*P P 18 51 48.8 -2.5
O05C Quincy 85.03 47 P P 18 51 51.7 +0.3
baz=85,SNR=9.1
Q03C Winters 85.05 48 ⇑P P 18 51 52.9 +1.4
baz=85
OBKA Obir 85.07 321 ⇓*i*P P 18 51 51.7 +0.1
comp=Z,317nm,3.2s,SNR=12
WVOR Wild Horse Val 85.07 44⇑*i*P P 18 51 51.8 +0.2
WVOR pmax pmax
comp=Z,20nm,0.9s,mb5.2
WVOR Wild Horse Val 85.07 44⇑*i*P P 18 51 51.8 +0.2
comp=Z,19nm,0.9s,mb5.2
EVR Evrytania 85.07 312 *e*P P 18 51 49.6 -2.0
MSO Missoula 85.17 38⇑*i*P P 18 51 51.7 -0.4
comp=Z,29nm,1.3s,mb5.2
MSO LR LR
comp=Z,213nm,21.0s,MS4.5
BOJS Bojanci 85.28 320 *e*P P 18 51 52.8 +0.1
JAN Janina 85.28 313 *e*P P 18 51 51.5 -1.2
N06A Buffalo Meadow 85.28 46 P P 18 51 53.3 +0.6
baz=85,SNR=31
M07A Soldier Meadow 85.34 45 ⇓P P 18 51 53.6 +0.7
baz=85,SNR=19
VAM Vamos 85.35 308 *e*P P 18 51 52.6 -0.4
Q04C Lincoln 85.36 48 ⇑*i*P P 18 51 52.3 -0.7
baz=85
FCC Fort Churchill 85.36 21⇑*i*P P 18 51 52.6 -0.5
FCC *e**PP pP 18 52 01.5 -1.0
FCC pmax pmax
comp=Z,151nm,1.3s,mb6.0
FCC Fort Churchill 85.36 21⇑*i*P P 18 51 52.6 -0.5
comp=Z,152nm,1.3s,mb6.0
FCC *ep*P pP 18 52 01.5 -1.0
LJU Ljubljana 85.36 321 *e*P P 18 51 52.8 -0.3
KBA Koelnbreinsper 85.37 322⇑*i*P P 18 51 53.1 0.0
comp=Z,172nm,2.1s,mb5.8,SNR=12
KBA Koelnbreinsper 85.37 322⇑*i*P P 18 51 53.1 0.0
KBA pmax pmax
comp=Z,172nm,2.1s,mb5.8
L08A Fields 85.39 44 ⇓P P 18 51 53.7 +0.5
baz=85,SNR=59
MCD Coleburn Disti 85.42 337⇑*e*P P 18 51 51.9 -1.5
MCD Coleburn Disti 85.42 337⇑*e*P P 18 51 51.9 -1.5
BEKR Beckwourth 85.45 47 P P 18 51 53.7 +0.2
baz=85,SNR=25
WTSB Winterswijk 85.46 329⇑*e*P P 18 51 53.2 -0.4
comp=Z,93nm,1.1s,mb5.8
WTSB *ex* x 18 52 01.2
K09A Rome 85.47 43 P P 18 51 54.3 +0.7
baz=85,SNR=39
MVH1 Achvaich 85.47 337⇑*i*P P 18 51 52.5 -1.2
MVH1 Achvaich 85.47 337⇑*i*P P 18 51 52.5 -1.2
CHMT Chamberlain Mo 85.49 38 *e*P P 18 51 53.6 -0.1
VLI Veliai 85.52 310 *e*P P 18 51 51.2 -2.6
MME1 Meikle Cairn 85.52 337⇑*i*P P 18 51 52.5 -1.4
MME1 Meikle Cairn 85.52 337⇑*i*P P 18 51 52.5 -1.4
FFC Flin Flon 85.57 27 P P 18 51 54.1 0.0
comp=Z,256nm,1.2s,mb6.3,SNR=12
FFC Flin Flon 85.57 27 P P 18 51 54.1 0.0
BUG Bochum--Univer 85.60 328 *e*P P 18 51 53.9 -0.4
comp=Z,152nm,1.3s,mb6.1
P05C Yuba Gap, Truc 85.60 47 P P 18 51 54.5 +0.2
baz=85,SNR=8.4
O06A Flanigan 85.62 46 ⇓P P 18 51 54.7 +0.4
baz=85,SNR=38
IGT Igoumenitsa 85.69 313 *e*P P 18 51 53.8 -0.9
VOY Vojsko 85.72 321 *e*P P 18 51 54.7 -0.1
VOY *e* 18 52 18.8
RLS Riolos of Patr 85.77 311 *e*P P 18 51 54.3 -0.8
BNLO Ben Lomond (Sa 85.77 50 ⇑P P 18 51 54.7 -0.3
baz=86
FUR Furstenfeldbru 85.78 324 *e*P P 18 51 55.6 +0.4
comp=Z,132nm,1.3s,mb6.0
FUR Furstenfeldbru 85.78 324 *e*P P 18 51 55.6 +0.4
FUR pmax pmax
comp=Z,132nm,1.3s,mb6.0
M08A Happy Creek Ra 85.79 44 P P 18 51 56.2 +1.0
baz=86,SNR=23
ROBS Robic 85.80 321 *e*P P 18 51 54.0 -1.2
N07B Gerlach 85.81 45 ⇑P P 18 51 56.0 +0.7
baz=86
LAVA Lava Cap Winer 85.82 48 P P 18 51 55.3 0.0
baz=86,SNR=14
P06A Stead Airport, 85.84 47 ⇑P P 18 51 55.3 -0.2
baz=86
TNS Taunus Mts 85.86 327 *e*P P 18 51 55.7 +0.2
comp=Z,62nm,1.2s,mb5.7
TNS Taunus Mts 85.86 327 *e*P P 18 51 55.7 +0.2
TNS pmax pmax
comp=Z,62nm,1.2s,mb5.7
L09A Wilkinson Ranc 85.90 44 ⇑P P 18 51 56.8 +1.1
baz=86
KEK Kerkira 85.93 313 *e*P P 18 51 55.0 -0.9
GMNA Gemona 85.93 322 P P 18 51 56.5 +0.6
comp=Z,127nm,0.9s,mb6.2
LKD Levkas 85.94 312 *e*P P 18 51 55.2 -0.8
ITM Ithomi 85.94 310 *e*P P 18 51 54.3 -1.7
R04C Big Horse Ranc 85.97 48 ⇑P P 18 51 55.3 -0.8
baz=86
FVI Forni Avoltri 85.98 322 P P 18 51 55.7 -0.4
comp=Z,21nm,0.5s,mb5.6
TOD Tromm 86.09 326 *e*P P 18 51 56.6 -0.1
S04C Ingram Canyon, 86.13 49 ⇑P P 18 51 56.4 -0.4
baz=86
WCN Washoe City 86.15 47 ⇓P P 18 51 57.0 +0.1
baz=86,SNR=8.2
PAHR Pah Rah Range 86.16 46⇑*i*P P 18 51 57.1 +0.1
comp=Z,47nm,0.9s,mb5.7
PAHR *ep*P pP 18 52 06.1 -0.3
WTTA Wattenberg 86.17 323⇑*i*P P 18 51 56.6 -0.5
comp=Z,120nm,1.6s,mb5.9,SNR=11
WTTA Wattenberg 86.17 323⇑*i*P P 18 51 56.6 -0.5
WTTA pmax pmax
comp=Z,120nm,1.6s,mb5.9
KAC Achnashellach 86.18 338⇑*e*P P 18 51 55.9 -1.2
KAC Achnashellach 86.18 338⇑*e*P P 18 51 55.9 -1.2
O07A Toulon 86.22 46 P P 18 51 58.1 +0.8
baz=86,SNR=27
VLS Valsamata 86.28 312 *e*P P 18 51 55.9 -1.7
R05C Kirkwood Meado 86.28 48 P P 18 51 58.1 +0.5
baz=86,SNR=7.0
N08A GE Springer Mi 86.33 45 ⇑P P 18 51 58.6 +0.8
baz=86,SNR=41
M09A Marrel Ranch, 86.38 44 ⇑P P 18 51 58.8 +0.7
baz=86,SNR=9.2
HRY Holter Researc 86.38 37 *e*P P 18 51 58.3 +0.2
MOTA Moosalm 86.39 323 *i* P P 18 51 57.7 -0.5
comp=Z,20nm,1.0s,mb5.3,SNR=18
MOTA Moosalm 86.39 323 *i* P P 18 51 57.7 -0.5
MOTA pmax pmax
comp=Z,20nm,1.0s,mb5.3
SQTA Sankt Quirin 86.42 323⇑*i*P P 18 51 58.0 -0.3
comp=Z,14nm,1.0s,mb5.2,SNR=9.1
SQTA Sankt Quirin 86.42 323⇑*i*P P 18 51 58.0 -0.3
SQTA pmax pmax
comp=Z,15nm,1.0s,mb5.2
KPL Plockton 86.42 338⇑*e*P P 18 51 57.1 -1.2
KPL Plockton 86.42 338⇑*e*P P 18 51 57.1 -1.2
PACP Pacheco Peak 86.43 49 ⇑P P 18 51 58.5 +0.1
baz=86,SNR=8.3
STU Stuttgart 86.45 325 *e*P P 18 51 58.1 -0.3
comp=Z,34nm,1.2s,mb5.5
STU Stuttgart 86.45 325 *e*P P 18 51 57.9 -0.5
STU pmax pmax
comp=Z,32nm,1.0s,mb5.5
STU Stuttgart 86.45 325 *e*P P 18 51 57.8 -0.7
comp=Z,32nm,0.9s,mb5.5
KSB Sheil Bridge 86.45 338⇑*e*P P 18 51 56.9 -1.5
KSB Sheil Bridge 86.45 338⇑*e*P P 18 51 56.9 -1.5
CMB Columbia Colle 86.45 48⇑*e*P P 18 51 57.5 -1.0
CMB *e**PP pP 18 52 06.6 -1.3
CMB pmax pmax
comp=Z,29nm,0.8s,mb5.6
CMB MLR MLR
comp=Z,423nm,21.0s,MS4.8
CMB Columbia Colle 86.45 48⇑*e*P P 18 51 57.5 -0.9
comp=Z,29nm,0.8s,mb5.6
CMB *ep*P pP 18 52 06.6 -1.3
CMB LR LR
comp=Z,423nm,21.0s,MS4.8
CMB Columbia Colle 86.45 48 ⇑P P 18 51 58.2 -0.3
baz=86,SNR=16
SAO San Andreas Ge 86.45 50 PFAKE 18 52 10.0 +12
SAO LR LR
comp=Z,443nm,19.0s,MS4.9
ESY Stoneypath 86.47 335⇑*e*P P 18 51 56.9 -1.7
ESY Stoneypath 86.47 335⇑*e*P P 18 51 56.9 -1.7
P07A Fallon 86.56 46 ⇑P P 18 51 59.6 +0.6
baz=86
HAST UC Hastings Re 86.59 50 ⇑P P 18 51 59.1 0.0
baz=86,SNR=6.3
O08A Rochester Mine 86.60 45 ⇑P P 18 51 59.6 +0.5
baz=86
LRM Limekiln Ridge 86.61 38 *e*P P 18 51 59.9 +0.7
EGMT Eagleton 86.62 36⇑*i*P P 18 51 59.3 0.0
comp=Z,76nm,1.1s,mb5.8
N09A Rock Creek Ran 86.66 45 ⇑P P 18 52 00.3 +0.8
baz=86,SNR=15
KSK Scoval 86.67 338 *e*P P 18 51 58.7 -0.8
KSK Scoval 86.67 338 *e*P P 18 51 58.7 -0.8
HGN Heimansgroeve 86.68 328⇑*e*P P 18 51 59.2 -0.4
comp=Z,70nm,1.2s,mb5.8
HGN *e*PP PP 18 55 15.4 -6.4
HGN *e*S S 19 02 33.1 -1.7
HGN *e*SS SS 19 08 39.9 +24
EBL Broad Law 86.74 336⇑*e*P P 18 51 58.4 -1.5
EBL Broad Law 86.74 336⇑*e*P P 18 51 58.4 -1.5
MEM Membach 86.75 328 P P 18 51 59.5 -0.4
BEBN Eben Emael 86.77 328 P P 18 51 59.6 -0.4
R06C Coleville 86.78 47 ⇓P P 18 52 00.8 +0.7
baz=87,SNR=13
WAKR Walker 86.80 47 *e*P P 18 52 00.9 +0.7
DLMT Dillon 86.81 39⇑*i*P P 18 52 00.5 +0.2
comp=Z,83nm,1.1s,mb5.9
KAR1 Arisaig 86.81 338⇑*e*P P 18 51 58.9 -1.3
KAR1 Arisaig 86.81 338⇑*e*P P 18 51 58.9 -1.3
EAU Auchinoon 86.83 336⇑*e*P P 18 51 59.1 -1.2
EAU Auchinoon 86.83 336⇑*e*P P 18 51 59.1 -1.2
M10A I.L. Ranch, Tu 86.87 44 ⇓P P 18 52 01.5 +1.0
baz=87,SNR=12
RUP Ruppelstein 86.87 327 *e*P P 18 52 00.3 -0.2
S05C Merced 86.87 49 ⇑P P 18 51 59.9 -0.6
baz=87,SNR=8.3
EAB Aberfoyle 86.88 336⇑*e*P P 18 51 59.2 -1.4
EAB Aberfoyle 86.88 336⇑*e*P P 18 51 59.2 -1.4
HLID Hailey 86.90 41⇑*e*P P 18 52 01.0 +0.3
comp=Z,33nm,1.1s,mb5.5
HLID *ep*P pP 18 52 09.4 -0.7
CTI Castel Tesino 86.93 322 P P 18 51 59.9 -0.9
comp=Z,48nm,1.0s,mb5.7
PCOU Corrie 86.95 336⇑*e*P P 18 51 59.0 -1.9
PCOU Corrie 86.95 336⇑*e*P P 18 51 59.0 -1.9
P08A Dixie Valley 86.99 46 ⇓P P 18 52 01.7 +0.6
baz=87
V03C Hunter Liggett 87.01 50 ⇑P P 18 52 01.6 +0.4
baz=87
MCMT McKenzie Canyo 87.01 39 *e*P P 18 52 01.4 +0.3
DAVA Damuels 87.07 324 *i* P P 18 52 01.2 -0.3
comp=Z,92nm,2.7s,mb5.5,SNR=11
BMN Battle Mountai 87.09 45 *e*P P 18 52 03.0 +1.4
BMN pmax pmax
comp=Z,55nm,1.3s,mb5.6
BMN Battle Mountai 87.09 45⇑*e*P P 18 52 02.1 +0.5
comp=Z,55nm,1.4s,mb5.6
BMN LR LR
comp=Z,259nm,20.0s,MS4.6
U04C Hernandez Rese 87.12 50 ⇓P P 18 52 02.3 +0.6
baz=87
XAL Allendale 87.13 335 *e*P P 18 52 00.7 -1.1
XAL Allendale 87.13 335 *e*P P 18 52 00.7 -1.1
ESK Eskdalemuir 87.15 335⇑*e*P P 18 51 60.0 -1.9
ESK Eskdalemuir 87.15 335⇑*e*P P 18 51 60.0 -1.9
ESK Eskdalemuir 87.15 335 *e*P P 18 52 00.1 -1.8
ESK pmax pmax
comp=Z,66nm,1.1s,mb5.8
ESK MLR MLR
comp=Z,1μm,19.0s,MS5.3
ESK Eskdalemuir 87.15 335 *e*P P 18 52 00.1 -1.7
comp=Z,66nm,1.1s,mb5.8
ESK LR LR
comp=Z,1μm,19.0s,MS5.3
BOZ Bozeman (W) 87.17 38 *e*P P 18 52 02.5 +0.6
BOZ pmax pmax
comp=Z,28nm,1.1s,mb5.4
BOZ Bozeman (W) 87.17 38⇑*i*P P 18 52 02.3 +0.4
comp=Z,28nm,1.1s,mb5.4
BOZ LR LR
comp=Z,449nm,21.0s,MS4.8
BFO Black Forest 87.17 325 P P 18 52 01.9 -0.1
comp=Z,84nm,1.0s,mb5.9,SNR=7.7
BFO Black Forest 87.17 325 *e*P P 18 52 01.0 -1.0
comp=Z,25nm,1.3s,mb5.3
BCLA Clavier 87.21 328 P P 18 52 02.1 0.0
ECK Cauldkaine Hil 87.22 335⇑*e*P P 18 52 01.1 -1.1
ECK AMb AMB 18 52 02.5
comp=Z,112nm,1.2s,mb6.0
ECK Cauldkaine Hil 87.22 335⇑*e*P P 18 52 01.1 -1.1
ECK AMb AMB 18 52 02.5
comp=Z,112nm,1.2s,mb6.0
O09A Fish Creek Ran 87.27 45 ⇑P P 18 52 03.1 +0.7
baz=87,SNR=25
STR Strasbourg 87.28 326 *e*P P 18 52 02.5 0.0
R07C Lee Vining 87.29 48 ⇓P P 18 52 03.2 +0.7
baz=87,SNR=11
WLF Walferdange 87.33 327 *e*P P 18 52 02.8 +0.1
comp=Z,134nm,1.4s,mb6.0
WLF Walferdange 87.33 327 P P 18 52 02.5 -0.3
WLF Walferdange 87.33 327⇑*e*P P 18 52 01.9 -0.8
WLF *e**PP pP 18 52 11.0 -1.2
WLF pmax pmax
comp=Z,91nm,1.3s,mb5.8
WLF Walferdange 87.33 327⇑*e*P P 18 52 01.9 -0.9
comp=Z,91nm,1.3s,mb5.8
WLF *ep*P pP 18 52 11.0 -1.2
BRMO Bormio 87.34 323 P P 18 52 02.7 -0.1
N10A Dunphy 87.36 44 ⇓P P 18 52 03.8 +0.8
baz=87
M11A Holland Ranch, 87.38 43 ⇓P P 18 52 04.2 +1.2
baz=87,SNR=9.8
RGNG Rignano Grg 87.39 317 P P 18 52 03.2 +0.2
V04C Ramage Ranch, 87.47 50 ⇑P P 18 52 03.5 +0.1
baz=87
T06C Millerton Lake 87.47 49 ⇑P P 18 52 03.1 -0.4
baz=87,SNR=11
PKD Parkfield 87.52 50 ⇑P P 18 52 03.7 +0.1
baz=87,SNR=5.9
KCC Kaiser Creek 87.55 48 P P 18 52 04.0 +0.2
baz=87,SNR=10.0
Q08A Gabbs 87.56 46 P P 18 52 04.4 +0.5
baz=87,SNR=17
NVAR Mina Array Bea 87.58 47 P P 18 52 04.6 +0.7
comp=Z,6.8nm,0.9s,mb4.9,baz=283,slow=4.4,SNR=46
WLS Welschbruch 87.60 326 *e*P P 18 52 03.1 -0.9
SNF Seneffe 87.61 329 P P 18 52 04.1 0.0
O10A Cortez Mining, 87.62 45 ⇑P P 18 52 05.3 +1.1
baz=87,SNR=10
FELD Feldberg im Sc 87.64 325 *e*P P 18 52 03.4 -0.8
CDF Champ du Feu 87.64 326 *e*P P 18 52 03.8 -0.4
comp=Z,94nm,1.2s,mb5.6
CDF Champ du Feu 87.64 326 *e*P P 18 52 03.8 -0.4
CDF pmax pmax
comp=Z,47nm,1.2s,mb5.6
CDF Champ du Feu 87.64 326 *e*P P 18 52 03.8 -0.4
comp=Z,47nm,1.2s,mb5.6
GIVF Givet 87.65 328 *e*P P 18 52 03.8 -0.5
comp=Z,123nm,1.2s,mb5.7
GIVF Givet 87.65 328 *e*P P 18 52 03.8 -0.5
GIVF pmax pmax
comp=Z,62nm,1.2s,mb5.7
GIVF Givet 87.65 328 *e*P P 18 52 03.8 -0.5
comp=Z,62nm,1.2s,mb5.7
LIBD Limburg 87.65 326 *e*P P 18 52 03.5 -0.8
P09A Austin 87.66 45 ⇓P P 18 52 04.9 +0.5
baz=88
MLAC Mammoth Lakes 87.69 48 ⇑P P 18 52 05.3 +0.8
baz=88
R08A Mina 87.75 47 ⇓P P 18 52 04.9 +0.2
baz=88
DOU Dourbes 87.76 328 P P 18 52 04.2 -0.6
N11A Elko Archery C 87.78 44 ⇑P P 18 52 06.0 +1.1
baz=88
FSSB Fossombrone 87.79 320 P P 18 52 04.3 -0.7
comp=Z,92nm,1.2s,mb5.9
QLMT Earthquake Lak 87.79 39 *e*P P 18 52 06.0 +1.0
QLMT *ep*P pP 18 52 15.1 +0.7
ARV Arcevia 87.82 320 P P 18 52 05.9 +0.8
comp=Z,38nm,1.1s,mb5.5
ECH Echery 87.83 326 *e*P P 18 52 04.2 -0.9
TUE Stuetta 87.88 324 P P 18 52 05.3 -0.1
M12A Wells 87.91 43 P P 18 52 06.9 +1.3
baz=88,SNR=26
BAIF Baives 87.96 328 *e*P P 18 52 05.2 -0.6
comp=Z,73nm,1.2s,mb5.5
BAIF Baives 87.96 328 *e*P P 18 52 05.2 -0.6
BAIF pmax pmax
comp=Z,36nm,1.3s,mb5.4
BAIF Baives 87.96 328 *e*P P 18 52 05.2 -0.6
comp=Z,36nm,1.3s,mb5.5
SNTG Esanatoglia 87.97 319 P P 18 52 06.5 +0.7
comp=Z,82nm,1.0s,mb5.9
V05C Boulder Hill, 87.99 50 ⇓P P 18 52 06.7 +0.8
baz=88
LHO Holmfirth 87.99 334⇑*e*P P 18 52 04.7 -1.2
LHO Holmfirth 87.99 334⇑*e*P P 18 52 04.7 -1.2
MTUM Tungsten Hills 88.03 48 *e*P P 18 52 06.1 0.0
P10A Eureka 88.04 45 ⇑P P 18 52 06.8 +0.6
baz=88
Q09A Carvers 88.06 46 ⇑P P 18 52 06.7 +0.5
baz=88
KBI1 Birley Grange 88.08 333⇑*e*P P 18 52 04.6 -1.8
KBI1 Birley Grange 88.08 333⇑*e*P P 18 52 04.6 -1.8
MOF Molkenrain 88.09 326 *e*P P 18 52 05.7 -0.7
HELL Mitchell Peak, 88.11 49 ⇑P P 18 52 06.1 -0.4
baz=88,SNR=9.6
GCMT Greycliff 88.12 37 *e*P P 18 52 07.3 +0.7
YMR Madison River 88.15 39 *e*P P 18 52 07.8 +1.1
comp=Z,28nm,0.5s,mb5.8
BBS Basel-Blauen 88.16 325 *e*P P 18 52 05.5 -1.2
N12A Clover Valley, 88.18 43 ⇓P P 18 52 07.5 +0.8
baz=88,SNR=17
SFI Santa Sofia 88.18 320 P P 18 52 08.5 +1.7
comp=Z,99nm,1.3s,mb5.9
O11A Cowboy Ranch, 88.24 44 ⇑P P 18 52 07.9 +0.8
baz=88
HINF Hinteralfeld 88.25 326 *e*P P 18 52 06.0 -1.1
comp=Z,39nm,1.1s,mb5.2
HINF Hinteralfeld 88.25 326 *e*P P 18 52 06.0 -1.1
HINF pmax pmax
comp=Z,19nm,1.1s,mb5.2
HINF Hinteralfeld 88.25 326 *e*P P 18 52 06.0 -1.1
comp=Z,19nm,1.1s,mb5.2
YNR Norris Junctio 88.28 38 *e*P P 18 52 08.7 +1.5
YNR *ep*P pP 18 52 20.4 +3.7
SEI Scarperia 88.36 321 P P 18 52 08.8 +1.1
comp=Z,165nm,0.8s,mb6.3
YFT Old Faithful 88.36 39 *e*P P 18 52 10.1 +2.4
HAU Haudompre 88.37 326 *e*P P 18 52 06.9 -0.8
comp=Z,62nm,1.2s,mb5.4
HAU *e*R
comp=Z,3μm,17.5s
HAU Haudompre 88.37 326 *e*P P 18 52 06.9 -0.8
HAU pmax pmax
comp=Z,31nm,1.2s,mb5.4
HAU MLR MLR
comp=Z,3μm,17.5s,MS5.8
HAU Haudompre 88.37 326 *e*P P 18 52 06.9 -0.8
comp=Z,31nm,1.2s,mb5.4
HAU LR LR
comp=Z,3μm,17.5s,MS5.8
M13A Montello 88.39 43 ⇑P P 18 52 08.3 +0.5
baz=88,SNR=13
THEF They Montfort 88.39 326 *e*P P 18 52 07.0 -0.8
VVLD Villa Vallon 88.43 318 P P 18 52 07.0 -1.0
R09A Tonopah 88.47 47 P P 18 52 08.8 +0.6
baz=88,SNR=26
TPH Tonopah 88.47 47 *e*P P 18 52 08.4 +0.2
TPH *e**PP pP 18 52 18.1 +0.4
TPH pmax pmax
comp=Z,46nm,1.4s,mb5.5
TPH Tonopah 88.47 47 *e*P P 18 52 08.4 +0.2
comp=Z,46nm,1.4s,mb5.5
TPH *ep*P pP 18 52 18.1 +0.5
P11A Circle Ranch, 88.52 45 ⇑P P 18 52 09.1 +0.7
baz=88
LKWY Lake 88.53 38 PFAKE 18 52 20.0 +12
LKWY LR LR
comp=Z,496nm,21.0s,MS4.9
VES Vestal, Richgr 88.55 49 ⇓P P 18 52 07.9 -0.7
baz=88
LOMF Lomont 88.58 325 *e*P P 18 52 06.8 -1.9
PKM Peak Mountain 88.59 51 ⇑P P 18 52 09.3 +0.5
baz=88
MEZF Maizieres J'vi 88.66 327 *e*P P 18 52 08.8 -0.3
comp=Z,209nm,1.4s,mb6.0
MEZF Maizieres J'vi 88.66 327 *e*P P 18 52 08.8 -0.3

comp=Z,209nm,1.4s,mb6.3
IMW Indian Meadow 88.66 39 *e*P **P 18 52 13.1 +4.0**
comp=Z,35nm,1.2s,mb5.6
FLWY Flagg Ranch 88.67 39⇑*i*P **P 18 52 10.8 +1.7**
comp=Z,31nm,0.7s,mb5.7
N13A Wendover, West 88.68 43⇑P **P 18 52 09.8 +0.7**
baz=88,SNR=8.2
S09A Goldfield 88.68 47 P **P 18 52 09.8 +0.6**
baz=88,SNR=13
O12A Currie 88.71 44⇑P **P 18 52 10.1 +0.8**
baz=88,SNR=11
RRI2 Red Ridge 88.80 40⇑*i*P **P 18 52 10.8 +1.1**
comp=Z,21nm,0.9s,mb5.5
RRI2 *e*pP pP 18 52 17.6 -1.6
MOOW Moose Ponds 88.86 39⇑*i*P **P 18 52 11.0 +1.0**
comp=Z,28nm,1.4s,mb5.4
CWC Cottonwood Cre 88.87 48⇓P **P 18 52 10.1 0.0**
baz=89
TPAW Teton Pass 88.91 40⇑*i*P **P 18 52 11.5 +1.2**
comp=Z,25nm,1.0s,mb5.5
R10A Warm Springs 88.93 46⇑P **P 18 52 10.9 +0.6**
baz=89
HVU Hansel Valley 88.95 42⇑*e*P **P 18 52 10.9 +0.5**
HVU *e**PP pP 18 52 20.1 +0.2
HVU pmax pmax
comp=Z,36nm,1.3s,mb5.5
HVU Hansel Valley 88.95 42⇑*e*P **P 18 52 10.9 +0.4**
comp=Z,36nm,1.3s,mb5.5
HVU *e*pP pP 18 52 20.1 +0.2
GRAC Grapevine Rang 89.01 48⇓P **P 18 52 09.9 -0.9**
baz=89
SBD1 Bryn Du 89.02 334 *e*P **P 18 52 09.9 -0.9**
SBD1 Bryn Du 89.02 334 *e*P **P 18 52 09.9 -0.9**
LOHW Long Hollow 89.03 39⇑*i*P **P 18 52 11.6 +0.8**
comp=Z,8.2nm,0.9s,mb5.1
SNOW Snow King Moun 89.04 39⇑*e*P **P 18 52 12.1 +1.2**
comp=Z,20nm,0.9s,mb5.5
REDW Red Top Meadow 89.05 40 *e*P **P 18 52 10.5 -0.4**
comp=Z,42nm,1.4s,mb5.6
REDW *e*pP pP 18 52 20.3 -0.1
ISA Isabella 89.06 49 PFAKE 18 52 20.0 +9.1
ISA LR LR
comp=Z,117nm,19.0s,MS4.3
ISA Isabella 89.06 49⇓P **P 18 52 10.1 -0.8**
baz=89
P12A McGill 89.09 45⇑P **P 18 52 11.9 +0.8**
baz=89,SNR=15
ORO Oropa 89.15 323 P **P 18 52 10.0 -1.4**
comp=Z,17nm,0.7s,mb5.5
HLM1 Long Mynd 89.17 333⇑*e*P **P 18 52 10.1 -1.4**
HLM1 AMb AMB 18 52 18.3
comp=Z,31nm,1.6s,mb5.4
HLM1 Long Mynd 89.17 333⇑*e*P **P 18 52 10.1 -1.4**
HLM1 AMb AMB 18 52 18.3
comp=Z,31nm,1.6s,mb5.4
SOI Samo 89.25 314 P **P 18 52 12.2 +0.3**
DAC Darwin (Calif) 89.28 48 *e*P **P 18 52 12.1 +0.1**
DAC pmax pmax
comp=Z,11nm,1.2s,mb5.1
DAC MLR MLR
comp=Z,363nm,19.0s,MS4.8
DAC Darwin (Calif) 89.28 48 *e*P **P 18 52 12.1 0.0**
comp=Z,11nm,1.2s,mb5.1
DAC LR LR
comp=Z,363nm,19.0s,MS4.8
AHID Auburn Hatcher 89.29 40 *e*P **P 18 52 12.4 +0.4**
comp=Z,8.0nm,0.3s,mb5.5
AHID LR LR
comp=Z,279nm,19.0s,MS4.7
LAO LASA Array 89.30 35 PFAKE 18 52 20.0 +7.9
LAO LR LR
comp=Z,390nm,20.0s,MS4.8
BGU Big Grassy Mou 89.34 42 *e*P **P 18 52 13.1 +0.8**
BGU *e*pP pP 18 52 21.9 +0.2
TRCR Troy Canyon 89.35 46 *e*P **P 18 52 12.7 +0.4**
TRCR *e*pP pP 18 52 21.3 -0.5
Q12A Willow Creek R 89.40 45⇑P **P 18 52 12.8 +0.2**
baz=89
HAE Alders End 89.41 333⇑*e*P **P 18 52 11.2 -1.4**
HAE AMb AMB 18 52 19.4
comp=Z,83nm,1.9s,mb5.7
HAE Alders End 89.41 333⇑*e*P **P 18 52 11.2 -1.4**
HAE AMb AMB 18 52 19.4
comp=Z,83nm,1.9s,mb5.7
SPUT South Promonto 89.44 42⇑*e*P **P 18 52 13.1 +0.4**
CABF La Chapelle 89.45 325 *e*P **P 18 52 12.1 -0.7**
comp=Z,48nm,1.3s,mb5.4
CABF La Chapelle 89.45 325 *e*P **P 18 52 12.1 -0.7**
CABF pmax pmax
comp=Z,24nm,1.3s,mb5.4
CABF La Chapelle 89.45 325 *e*P **P 18 52 12.1 -0.7**
comp=Z,24nm,1.3s,mb5.4
MPMC Manual Prospec 89.48 48⇑P **P 18 52 13.2 +0.3**
baz=89,SNR=7.3
OSI Osito Adit 89.50 50⇑P **P 18 52 13.1 +0.1**
baz=89
MCH1 Michaelchurch 89.62 333⇑*e*P **P 18 52 12.4 -1.1**
MCH1 Michaelchurch 89.62 333⇑*e*P **P 18 52 12.4 -1.1**
FURC Furnace Creek, 89.65 48⇑P **P 18 52 13.5 -0.2**
baz=90,SNR=6.7
HTR Trewern Hill 89.67 333⇑*e*P **P 18 52 12.8 -1.0**
HTR AMb AMB 18 52 14.2
comp=Z,70nm,1.7s,mb5.7
HTR Trewern Hill 89.67 333⇑*e*P **P 18 52 12.8 -1.0**
HTR AMb AMB 18 52 14.2
comp=Z,70nm,1.7s,mb5.7
LRMC Laurel Mountai 89.69 49⇓P **P 18 52 13.6 -0.3**
baz=90
SNCC San Nicolas Is 89.73 52⇓P **P 18 52 14.1 0.0**
baz=90
HWUT Hardware Ranch 89.77 41⇑*e*P **P 18 52 14.4 +0.2**
comp=Z,76nm,1.2s,mb5.9
EDW2 Edwards Air Fo 89.83 50⇑P **P 18 52 14.7 +0.1**
baz=90
LPL La Plagne 89.87 324 *e*P **P 18 52 14.3 -0.5**
comp=Z,21nm,0.9s,mb5.2
LPL La Plagne 89.87 324 *e*P **P 18 52 14.3 -0.5**
LPL pmax pmax
comp=Z,11nm,0.9s,mb5.2
LPL La Plagne 89.87 324 *e*P **P 18 52 14.3 -0.5**
comp=Z,11nm,0.9s,mb5.2
LPG La Plagne 89.88 324 *e*P **P 18 52 14.5 -0.3**
comp=Z,23nm,0.8s,mb5.3
LPG La Plagne 89.88 324 *e*P **P 18 52 14.5 -0.3**
LPG pmax pmax
comp=Z,12nm,0.8s,mb5.3
LPG La Plagne 89.88 324 *e*P **P 18 52 14.5 -0.3**
comp=Z,12nm,0.8s,mb5.3
DUG Dugway 89.92 43 *e*P **P 18 52 16.0 +1.0**
DUG pmax pmax
comp=Z,59nm,1.4s,mb5.7
DUG Dugway 89.92 43⇑*i*P **P 18 52 15.8 +0.8**
comp=Z,59nm,1.4s,mb5.7
U10A Ash Meadows, A 90.03 48⇓P **P 18 52 16.0 +0.5**
baz=90
NOQ North Oquirrh 90.05 42 *e*P **P 18 52 16.0 +0.4**
comp=Z,92nm,1.3s,mb6.0
LOR Lormes 90.09 327 *e*P **P 18 52 14.8 -1.0**
comp=Z,54nm,1.3s,mb5.4
LOR *e*R
comp=Z,4µm,18.2s
LOR Lormes 90.09 327 *e*P **P 18 52 14.8 -1.0**
LOR pmax pmax
comp=Z,27nm,1.3s,mb5.4
LOR MLR MLR
comp=Z,4µm,18.3s,MS5.8
LOR Lormes 90.09 327 *e*P **P 18 52 14.8 -1.0**
comp=Z,27nm,1.3s,mb5.4
LOR LR LR
comp=Z,4µm,18.3s,MS5.8
BW06 Boulder Array 90.16 39 *e*P **P 18 52 16.9 +0.8**
BW06 LR LR
comp=Z,361nm,19.0s,MS4.8
PDAR Pinedale Array 90.16 39 P **P 18 52 16.4 +0.4**
comp=Z,7.8nm,0.8s,mb5.1,baz=318,slow=2.0,SNR=42
TCUT Toone Canyon 90.17 42 *e*P **P 18 52 15.8 -0.3**
BNI Bardonecchia 90.22 324 *e*P **P 18 52 16.1 -0.3**
BNI pmax pmax
comp=Z,19nm,1.1s,mb5.3
BNI Bardonecchia 90.22 324 *e*P **P 18 52 16.1 -0.3**
comp=Z,19nm,1.1s,mb5.3
CTU Camp Tracy 90.24 42 *e*P **P 18 52 16.9 +0.5**
comp=Z,20nm,1.0s,mb5.4
CTU *e*pP pP 18 52 27.4 +1.5
PPT Papeete 90.24 110 *e*S S 19 03 06.0 -2.5
comp=Z,994nm,25.5s
PPT *e*SS SS 19 09 08.8 +0.7
comp=Z,405nm,24.2s
PPT *e*LR LR 19 21 07.8
comp=Z,685nm,27.0s
PPT Papeete 90.24 110 LR LR 19 24 35.2
comp=Z,313nm,19.7s,MS4.8,baz=308,slow=30
FMP Fort Macarthur 90.31 51⇓P **P 18 52 16.4 -0.3**
baz=90
SHOC Shoshone 90.37 48⇓P **P 18 52 16.9 -0.1**
baz=90
GSC Goldstone 90.38 49 *e*P **P 18 52 17.8 +0.7**
GSC Goldstone 90.38 49⇓P **P 18 52 16.9 -0.2**
baz=90
CIS Catalina Islan 90.41 51⇓P **P 18 52 17.1 -0.2**
baz=90
SSF Saint Saulge 90.41 327 *e*P **P 18 52 16.4 -0.9**
comp=Z,31nm,1.2s,mb5.2
SSF Saint Saulge 90.41 327 *e*P **P 18 52 16.4 -0.9**
SSF pmax pmax
comp=Z,15nm,1.2s,mb5.2
SSF Saint Saulge 90.41 327 *e*P **P 18 52 16.4 -0.9**
comp=Z,15nm,1.2s,mb5.2
BFSC Mount Baldy St 90.43 50⇓P **P 18 52 17.0 -0.3**
baz=90
NLU North Lily Min 90.51 43 *e*P **P 18 52 18.8 +1.1**
SMF Signal de Mont 90.54 326 *e*P **P 18 52 17.0 -0.9**
comp=Z,114nm,1.3s,mb5.8
SMF Signal de Mont 90.54 326 *e*P **P 18 52 17.0 -0.9**
SMF pmax pmax
comp=Z,57nm,1.3s,mb5.7
SMF Signal de Mont 90.54 326 *e*P **P 18 52 17.0 -0.9**
comp=Z,57nm,1.3s,mb5.7
SBF Sospel 90.62 322 *e*P **P 18 52 17.0 -1.3**
comp=Z,87nm,1.1s,mb5.7
SBF Sospel 90.62 322 *e*P **P 18 52 17.0 -1.3**
SBF pmax pmax
comp=Z,43nm,1.1s,mb5.7
SBF Sospel 90.62 322 *e*P **P 18 52 17.0 -1.3**
comp=Z,44nm,1.1s,mb5.7
PGF Pioggiola 90.64 321 *e*P **P 18 52 17.3 -1.1**
AVF Avril sur Loir 90.68 327 *e*P **P 18 52 17.7 -0.8**
comp=Z,46nm,1.1s,mb5.4
AVF Avril sur Loir 90.68 327 *e*P **P 18 52 17.7 -0.8**
AVF pmax pmax
comp=Z,23nm,1.1s,mb5.4
AVF Avril sur Loir 90.68 327 *e*P **P 18 52 17.7 -0.8**
comp=Z,23nm,1.1s,mb5.4
DAU Daniels Canyon 90.71 42 *e*P **P 18 52 20.0 +1.4**
SHPR Sheep Range 90.73 47 *e*P **P 18 52 20.1 +1.4**
MPU Maple Canyon 90.74 43 *e*P **P 18 52 20.4 +1.7**
comp=Z,49nm,1.0s,mb5.8
MPU LR LR
comp=Z,598nm,20.0s,MS5.0
TUQ Turquoise Mtn. 90.88 48⇓P **P 18 52 19.5 +0.1**
baz=91
HEC Hector,Ludlow 90.97 49⇑P **P 18 52 19.7 -0.1**
baz=91
LDF La Druitiere 90.98 330 *e*P **P 18 52 19.2 -0.7**
comp=Z,198nm,1.3s,mb6.0
LDF La Druitiere 90.98 330 *e*P **P 18 52 19.2 -0.7**
LDF pmax pmax
comp=Z,99nm,1.3s,mb6.0
LDF La Druitiere 90.98 330 *e*P **P 18 52 19.2 -0.7**
comp=Z,99nm,1.3s,mb6.0
FLN La Foliniere 91.02 330 *e*P **P 18 52 19.3 -0.8**
comp=Z,178nm,1.3s,mb5.9
FLN *e*R
comp=Z,4µm,22.8s
FLN La Foliniere 91.02 330 *e*P **P 18 52 19.3 -0.8**
FLN pmax pmax
comp=Z,89nm,1.3s,mb5.9
FLN MLR MLR
comp=Z,4µm,22.8s,MS5.8
FLN La Foliniere 91.02 330 *e*P **P 18 52 19.3 -0.8**
comp=Z,89nm,1.3s,mb5.9
FLN LR LR
comp=Z,4µm,22.8s,MS5.8
BGF Bois d'Agland 91.09 327 *e*P **P 18 52 19.9 -0.5**
PLDF La Plantade 91.13 326 *e*P **P 18 52 20.1 -0.5**
U12A Valley of Fire 91.17 47⇓P **P 18 52 21.2 +0.4**
baz=91
CCUT Cedar City 91.23 45 *e*P **P 18 52 21.5 +0.5**
FRF La Foret Royal 91.25 323 *e*P **P 18 52 19.9 -1.3**
comp=Z,75nm,1.2s,mb5.6
FRF La Foret Royal 91.25 323 *e*P **P 18 52 19.9 -1.3**
FRF pmax pmax
comp=Z,37nm,1.2s,mb5.6
FRF La Foret Royal 91.25 323 *e*P **P 18 52 19.9 -1.3**
comp=Z,37nm,1.2s,mb5.6
AGO Saint Agoulin 91.31 326 *e*P **P 18 52 21.1 -0.3**
MVU Marysvale 91.34 44 PFAKE 18 52 30.0 +8.4
MVU LR LR
comp=Z,261nm,22.0s,MS4.6
MSU Marysvale 91.36 44⇑*e*P **P 18 52 22.9 +1.2**
MSU *e**PP pP 18 52 32.9 +1.7
VIVF Saint-Julien-l 91.38 325 *e*P **P 18 52 20.8 -1.0**
comp=Z,66nm,1.6s,mb5.4
VIVF Saint-Julien-l 91.38 325 *e*P **P 18 52 20.8 -1.0**
VIVF pmax pmax
comp=Z,33nm,1.6s,mb5.4
VIVF Saint-Julien-l 91.38 325 *e*P **P 18 52 20.8 -1.0**
comp=Z,33nm,1.6s,mb5.4
V12A Nelson 91.40 47⇓P **P 18 52 22.4 +0.6**
baz=91
ULM Lac du Bonnet 91.40 27 P **P 18 52 21.6 -0.2**
comp=Z,29nm,0.9s,mb5.6,baz=321,slow=4.8,SNR=28
ULM LR LR 19 41 02.0
comp=Z,266nm,18.3s,MS4.7,baz=338,slow=40
ULM Lac du Bonnet 91.40 27 *e*P **P 18 52 21.4 -0.4**
comp=Z,58nm,1.0s,mb5.9
ULM LR LR
comp=Z,403nm,20.0s,MS4.9
TMUT Trail Mountain 91.45 43 *e*P **P 18 52 22.0 -0.1**
GRR Gorron 91.46 330 *e*P **P 18 52 21.6 -0.5**
comp=Z,264nm,1.3s,mb6.1
GRR Gorron 91.46 330 *e*P **P 18 52 21.6 -0.5**
GRR pmax pmax
comp=Z,132nm,1.3s,mb6.1
GRR Gorron 91.46 330 *e*P **P 18 52 21.6 -0.5**
comp=Z,132nm,1.3s,mb6.1
LMR La Mourre 91.48 323 *e*P **P 18 52 21.3 -0.9**
SMRF Simiane la Rot 91.53 323 *e*P **P 18 52 21.2 -1.3**
PYM Petit Puy Mans 91.58 326 *e*P **P 18 52 22.7 0.0**
TCF Toulx Ste Croi 91.59 327 *e*P **P 18 52 22.2 -0.5**
comp=Z,37nm,1.1s,mb5.3
TCF Toulx Ste Croi 91.59 327 *e*P **P 18 52 22.2 -0.5**
TCF pmax pmax
comp=Z,19nm,1.1s,mb5.3
TCF Toulx Ste Croi 91.59 327 *e*P **P 18 52 22.2 -0.5**
comp=Z,18nm,1.1s,mb5.3
109C Camp Elliot, M 91.59 51⇑P **P 18 52 22.6 -0.2**
baz=91
PFO Pinyon Flat Ob 91.61 50 *e*P **P 18 52 22.2 -0.6**
PFO pmax pmax
comp=Z,11nm,0.7s,mb5.3
PFO MLR MLR
comp=Z,517nm,20.0s,MS5.0
PFO Pinyon Flat Ob 91.61 50 *e*P **P 18 52 22.2 -0.6**
comp=Z,11nm,0.7s,mb5.3
PFO LR LR
comp=Z,509nm,20.0s,MS5.0
PFO Pinyon Flat Ob 91.61 50⇓P **P 18 52 22.8 0.0**
baz=91
W12A Cal Nev Ari 91.64 48⇑P **P 18 52 22.8 -0.2**
baz=91
BELC Belle Mtn. 91.68 49⇓P **P 18 52 23.1 0.0**
baz=92
SRU San Rafael 91.97 43⇑*i*P **P 18 52 25.1 +0.6**
SRU pmax pmax
comp=Z,35nm,1.0s,mb5.6
SRU San Rafael 91.97 43⇑*i*P **P 18 52 25.1 +0.6**
comp=Z,35nm,1.0s,mb5.6
MONP Monument Peak 92.06 51⇑P **P 18 52 25.0 +0.1**
baz=92
IRM Iron Mountain 92.15 49⇑P **P 18 52 25.6 +0.3**
baz=92,SNR=7.1
RWWY Rawlins 92.18 39⇑*e*P **P 18 52 25.9 +0.4**
comp=Z,15nm,0.8s,mb5.4
RSSD Black Hills 92.19 36⇑*i*P **P 18 52 25.8 +0.3**
RSSD pmax pmax
comp=Z,25nm,0.9s,mb5.5
RSSD Black Hills 92.19 36⇑*i*P **P 18 52 25.8 +0.3**
comp=Z,23nm,0.9s,mb5.5
SGMF Saint Gilles 92.31 330 *e*P **P 18 52 25.7 -0.3**
comp=Z,156nm,1.1s,mb5.9
SGMF Saint Gilles 92.31 330 *e*P **P 18 52 25.7 -0.3**
SGMF pmax pmax
comp=Z,78nm,1.1s,mb6.0
SGMF Saint Gilles 92.31 330 *e*P **P 18 52 25.7 -0.3**
comp=Z,78nm,1.1s,mb6.0
LASF Ste Croix 92.35 324 *e*P **P 18 52 24.6 -1.6**
W13A Hualapai Mount 92.41 47⇑P **P 18 52 26.8 +0.2**
baz=92,SNR=5.8
DVTC Desert V Tower 92.41 51⇓P **P 18 52 26.6 +0.1**
baz=92
SWSC Sam W. Stewart 92.45 50⇑P **P 18 52 26.6 -0.1**
baz=92
MFF Saint Martin d 92.47 328 *e*P **P 18 52 27.5 +0.7**
comp=Z,114nm,1.3s,mb5.7
MFF Saint Martin d 92.47 328 *e*P **P 18 52 27.5 +0.7**
MFF pmax pmax
comp=Z,57nm,1.3s,mb5.7
MFF Saint Martin d 92.47 328 *e*P **P 18 52 27.5 +0.7**
comp=Z,57nm,1.3s,mb5.7
ROSF Rostrenen 92.55 331 *e*P **P 18 52 26.8 -0.4**
comp=Z,212nm,1.1s,mb6.2
ROSF Rostrenen 92.55 331 *e*P **P 18 52 26.8 -0.4**
ROSF pmax pmax
comp=Z,106nm,1.1s,mb6.2
ROSF Rostrenen 92.55 331 *e*P **P 18 52 26.8 -0.4**
comp=Z,106nm,1.1s,mb6.2
RJF Les Rejaudoux 92.63 326 *e*P **P 18 52 27.2 -0.4**
comp=Z,83nm,1.3s,mb5.7
RJF *e*R
comp=Z,3µm,18.8s
RJF Les Rejaudoux 92.63 326 *e*P **P 18 52 27.2 -0.4**
RJF pmax pmax
comp=Z,41nm,1.3s,mb5.7
RJF MLR MLR
comp=Z,3µm,18.8s,MS5.8
RJF Les Rejaudoux 92.63 326 *e*P **P 18 52 27.2 -0.4**
comp=Z,41nm,1.3s,mb5.7
RJF LR LR
comp=Z,3µm,18.8s,MS5.8
CAF Calviac 92.64 326 *e*P **P 18 52 27.4 -0.2**
comp=Z,40nm,1.3s,mb5.4
CAF Calviac 92.64 326 *e*P **P 18 52 27.4 -0.2**
CAF pmax pmax
comp=Z,20nm,1.3s,mb5.4
CAF Calviac 92.64 326 *e*P **P 18 52 27.4 -0.2**
comp=Z,20nm,1.3s,mb5.4
LCHF La Chataignera 92.69 329 *e*P **P 18 52 28.2 +0.4**
PDMCI Parker Dam,Lak 92.73 48⇑P **P 18 52 28.1 +0.1**
baz=92
X13A Yucca 92.75 48⇑P **P 18 52 28.6 +0.5**
baz=93,SNR=9.9
Y12C Blythe 92.81 49⇓P **P 18 52 28.9 +0.5**
baz=93
QUIF Quistinic 92.83 331 *e*P **P 18 52 27.8 -0.7**
comp=Z,149nm,1.2s,mb6.0
QUIF Quistinic 92.83 331 *e*P **P 18 52 27.8 -0.7**
QUIF pmax pmax
comp=Z,74nm,1.2s,mb6.0
QUIF Quistinic 92.83 331 *e*P **P 18 52 27.8 -0.7**
comp=Z,74nm,1.2s,mb6.0
W14A Seligman 92.85 47⇓P **P 18 52 29.6 +1.0**
baz=93,SNR=18
KMBO Kilima Mbogo 92.97 270 P **P 18 52 30.3 +1.2**
comp=Z,6.8nm,0.9s,mb5.0,baz=36,slow=6.2,SNR=12
KMBO LR LR 19 37 10.6
comp=Z,415nm,19.9s,MS4.9,baz=96,slow=37
KMBO Kilima Mbogo 92.97 270 *i* P **P 18 52 30.7 +1.6**
KMBO pmax pmax
comp=Z,7.0nm,1.0s
KMBO Kilima Mbogo 92.97 270 *e*P **P 18 52 30.4 +1.3**
comp=Z,13nm,1.1s,mb5.3
KMBO LR LR
comp=Z,496nm,19.0s,MS5.0
GLA Glamis 93.03 50⇑*i*P **P 18 52 30.0 +0.6**
GLA *e**PP pP 18 52 38.4 -0.5
GLA Glamis 93.03 50⇑P **P 18 52 29.7 +0.3**
baz=93,SNR=9.3
TBI Tubuai 93.21 115 *e*S S 19 03 31.2 -4.1
comp=Z,539nm,28.0s
TBI *e*SS SS 19 09 50.1 -0.7
comp=Z,258nm,24.0s
TBI *e*LR LR 19 22 27.6
comp=Z,654nm,22.8s
Y13A Salome 93.23 48⇑P **P 18 52 31.0 +0.7**
baz=93
LFF La Frestale 93.28 327 *e*P **P 18 52 30.1 -0.4**
comp=Z,87nm,1.1s,mb5.8
LFF La Frestale 93.28 327 *e*P **P 18 52 30.1 -0.4**
LFF pmax pmax
comp=Z,44nm,1.1s,mb5.8
LFF La Frestale 93.28 327 *e*P **P 18 52 30.1 -0.4**
comp=Z,44nm,1.1s,mb5.8
W15A Williams 93.40 47⇑P **P 18 52 32.4 +1.4**
baz=93,SNR=14
PHWY Pilot Hill 93.40 38⇑*e*P **P 18 52 31.5 +0.3**
X14A Yava 93.44 47⇑P **P 18 52 32.2 +0.9**
baz=93,SNR=19
Y14A Wickenburg 93.69 48⇑P **P 18 52 33.1 +0.6**
baz=94,SNR=17
MTLF Montoliu 93.70 325 *e*P **P 18 52 30.8 -1.7**
WUAZ Wupatki 93.75 46⇑*i*P **P 18 52 33.5 +0.8**
comp=Z,30nm,1.0s,mb5.7
WUAZ *e*pP pP 18 52 41.9 -0.3
X15A Humboldt 93.85 47⇑P **P 18 52 34.1 +0.9**
baz=94,SNR=23
SMCO Snowmass 94.00 41⇑*e*P **P 18 52 34.1 +0.3**
comp=Z,19nm,1.0s,mb5.5
SMCO *e*pP pP 18 52 43.0 -0.4
Z14A Wintersburg 94.09 48⇓P **P 18 52 34.7 +0.4**
baz=94
ISCO Idaho Springs 94.35 40 *e*P **P 18 52 36.8 +1.3**
ISCO Idaho Springs 94.35 40⇑*e*P **P 18 52 36.2 +0.8**
MVCO Mesa Verde 94.42 43 *e*P **P 18 52 35.9 +0.1**
comp=Z,32nm,1.5s,mb5.5
EPF Esparros 94.87 326 *e*P **P 18 52 36.4 -1.5**
KEST Kesra 94.91 315 P **P 18 52 37.8 -0.2**
comp=Z,4.7nm,1.0s,mb4.9,baz=290,slow=2.3,SNR=7.9
KEST PP PP 18 56 27.4 +0.3
comp=Z,2.1nm,1.1s,baz=259,slow=0.7,SNR=3.5
KEST LR LR 19 43 24.3
comp=Z,487nm,18.0s,MS5.0,baz=182,slow=40
115A Sonoran Desert 94.97 49⇑P **P 18 52 39.0 +0.7**
baz=95
116A Eloy 95.40 48⇓P **P 18 52 41.1 +0.9**
baz=95
SCHQ Schefferville 95.44 10 P **P 18 52 39.8 -0.7**
comp=Z,12nm,0.9s,mb5.3,baz=353,slow=4.1,SNR=8.8
SCHQ LR LR 19 39 10.8
comp=Z,1µm,19.9s,MS5.3,baz=181,slow=38
SCHQ Schefferville 95.44 10 *e*P **P 18 52 38.3 -2.2**
comp=Z,9.9nm,0.9s,mb5.2
SCHQ LR LR
comp=Z,2µm,20.0s,MS5.5
DRV Dumont d'Urvil 95.48 176 SS SS 19 10 25.0 +1.8
SJPF Ste Jean 95.58 326 *e*P **P 18 52 39.9 -1.2**
CASY Casey 95.96 188 PFAKE 18 52 50.0 +7.2
CASY LR LR
comp=Z,925nm,20.0s,MS5.3
TUC Tucson 96.16 48⇑*i*P **P 18 52 44.3 +0.6**
TUC *e**PP pP 18 52 53.6 +0.3
TUC pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
TUC MLR MLR
comp=Z,353nm,19.0s,MS4.9
TUC Tucson 96.16 48⇑*i*P **P 18 52 44.3 +0.5**
comp=Z,10.0nm,1.0s,mb5.2
TUC *e*pP pP 18 52 53.6 +0.3
TUC LR LR
comp=Z,353nm,19.0s,MS4.9
ANMO Albuquerque 97.16 44 *e*P **P 18 52 49.0 +0.8**
ANMO *e**PP pP 18 52 57.4 -0.4
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO MLR MLR
comp=Z,342nm,22.0s
ANMO Albuquerque 97.16 44 *e*P **P 18 52 49.0 +0.8**
comp=Z,4.7nm,1.3s,mb4.8
ANMO *e*pP pP 18 52 57.4 -0.4
ANMO LR LR
comp=Z,342nm,22.0s,MS4.8
MBAR Mbarara 98.43 274⇓*i*P **P 18 52 54.0 0.0**
ESDC Sonseca Array 99.53 326 P **P 18 52 58.6 -0.3**
comp=Z,4.0nm,1.0s,mb4.8,baz=26,slow=4.6,SNR=14
ESDC PP PP 18 56 55.9 -6.8
comp=Z,0.7nm,0.7s,baz=47,slow=9.3,SNR=4.2
ESDC LR LR 19 43 40.4
comp=Z,1µm,18.0s,MS5.4,baz=45,slow=39
ESLA Sonseca Array 99.53 326 PFAKE 18 53 10.0 +11
ESLA LR LR
comp=Z,8µm,19.0s,MS6.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNTX	Cornudas Mount	100.02	45	PFAKE		18 53 10.0	+8.9
MNTX				LR	LR		
	comp=Z,406nm,20.0s,MS4.9						
AMTX	Amarillo	100.03	41	PFAKE		18 53 10.0	+8.9
AMTX				LR	LR		
	comp=Z,318nm,20.0s,MS4.8						
MTE	Manteigas	100.67	328	ePP	PP	18 57 14.6	+3.3
ERPA	Erie	104.18	23	PFAKE		18 53 30.0	+10
ERPA				LR	LR		
	comp=Z,370nm,20.0s,MS4.9						
NCB	Newcomb	104.24	18	PFAKE		18 53 30.0	+10
NCB				LR	LR		
	comp=Z,403nm,21.0s,MS4.9						
LBNH	Lisbon	104.58	16	PFAKE		18 53 30.0	+8.7
LBNH				LR	LR		
	comp=Z,532nm,19.0s,MS5.1						
RKT	Rikitea	104.93	108	ePS	PS	19 06 57.5	0.0
	comp=Z,264nm,26.2s						
RKT	Rikitea	104.93	108	eSS	SS	19 12 34.6	-0.3
	comp=Z,466nm,27.0s						
RKT				eLR	LR	19 27 53.2	
	comp=Z,392nm,24.0s						
BINY	Binghamton	105.38	20	PFAKE		18 57 50.0	+11
BINY				LR	LR		
	comp=Z,572nm,20.0s,MS5.1						
SSPA	Standing Stone	106.21	22	PFAKE		18 57 50.0	+10
SSPA				LR	LR		
	comp=Z,512nm,20.0s,MS5.1						
HRV	Harvard--Oak R	106.30	16	PFAKE		18 57 50.0	+10
HRV				LR	LR		
	comp=Z,392nm,19.0s,MS5.0						
MCWV	Mont Chateau	106.42	24	PFAKE		18 57 50.0	+9.5
MCWV				LR	LR		
	comp=Z,942nm,19.0s,MS5.4						
OXF	Oxford	106.81	33	PFAKE		18 57 50.0	+8.7
OXF				LR	LR		
	comp=Z,403nm,19.0s,MS5.0						
LSZ	Lusaka	107.42	262	PFAKE		18 57 50.0	+7.6
LSZ				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
VNDA	Vanda	107.81	173	PP	PP	18 58 06.6	+2.2
	comp=Z,3.5nm,0.9s,baz=355,slow=3.4,SNR=11						
VNDA	Vanda	107.81	173	PFAKE		18 57 50.0	+6.9
VNDA				LR	LR		
	comp=Z,778nm,20.0s,MS5.3						
MAW	Mawson	108.20	202	PKKPbc	PKKPbc	19 08 55.1	+0.1
	comp=Z,1.5nm,0.9s,baz=285,slow=5.1,SNR=5.2						
CBN	Corbin	108.57	22	PFAKE		18 57 50.0	+5.5
CBN				LR	LR		
	comp=Z,591nm,19.0s,MS5.2						
SBA	Scott Base	108.64	172	PFAKE		18 57 50.0	+5.3
SBA				LR	LR		
	comp=Z,282nm,20.0s,MS4.8						
MYNC	Murphy	108.75	29	PFAKE		18 58 00.0	+15
MYNC				LR	LR		
	comp=Z,499nm,21.0s,MS5.1						
LRAL	Lakeview Retre	109.17	32	PFAKE		18 58 00.0	+14
LRAL				LR	LR		
	comp=Z,437nm,22.0s,MS5.0						
TORD	Torodi Ar. Bea	114.95	303	PKP	PKiKP	18 57 56.8	+0.2
	comp=Z,4.5nm,1.0s,baz=19,slow=2.7,SNR=15						
TORD				PP	PP	18 58 53.3	-2.4
	comp=Z,6.0nm,1.0s,baz=31,slow=4.0,SNR=4.5						
TORD				PKKPbc	PKKPbc	19 08 32.1	-0.6
	comp=Z,1.5nm,0.9s,baz=246,slow=3.1,SNR=6.1						
DWPF	Disney	115.88	31	PFAKE		18 58 10.0	+12
DWPF				LR	LR		
	comp=Z,423nm,19.0s,MS5.1						
SYO	Syowa Base	116.72	204	⇓ePKPdf	PKPdf	18 58 00.6	+0.6
QSPA	South Pole Qui	118.58	180	eP	PKPdf	18 58 01.9	-1.7
QSPA				LR	LR		
	comp=Z,330nm,19.0s,MS5.0						
DBIC	Dimbokro	124.04	302	PKP	PKPdf	18 58 14.3	+0.2
	comp=Z,12nm,1.0s,baz=114,slow=1.6,SNR=7.5						
DBIC	Dimbokro	124.04	302	PKP	PKPdf	18 58 14.3	+0.2
DBIC				LR	LR		
	comp=Z,515nm,20.0s,MS5.2						
LIC	Lamto	124.46	302	ePKIKP	PKPdf	18 58 13.9	-1.0
	comp=Z,65nm,1.2s						
LIC				eR			
	comp=Z,123nm,19.5s						
LIC	Lamto	124.46	302	ePKPdf	PKPdf	18 58 13.9	-1.0
LIC				LR	LR		
	comp=Z,60nm,19.5s,MS4.3						
SJG	San Juan	130.80	20	PFAKE		18 58 40.0	+13
SJG				LR	LR		
	comp=Z,276nm,20.0s,MS5.0						
SDV	Santo Domingo	137.54	31	ePKPpre		18 58 33.6	
SDV				ePKPdf	PKPdf	18 58 40.5	+0.9
SDV				epPKPdf	pPKPdf	18 58 49.8	+0.4
SDV				LR	LR		
	comp=Z,185nm,21.0s,MS4.8						
ROSC	El Rosal	139.14	39	PKP	PKPdf	18 58 44.2	+1.7
	comp=Z,4.1nm,0.3s,baz=288,slow=9.6,SNR=6.5						
ROSC	El Rosal	139.14	39	ePKPdf	PKPdf	18 58 43.7	+1.1
NNA	Nana	149.87	62	ePKPdf	PKPdf	18 59 03.8	+2.7
HOPE	Hope Point	152.72	197	PFAKE		18 59 10.0	+4.6
HOPE				LR	LR		
	comp=Z,968nm,21.0s,MS5.6						
SAML	Samuel	156.66	35	ePKPdf	PKPdf	18 59 11.3	+0.4
SAML				epPKPdf	pPKPdf	18 59 20.5	-0.1
LVC	Limon Verde	161.86	74	PFAKE		18 59 30.0	+13
LVC				LR	LR		
	comp=Z,308nm,19.0s						
BDFB	Brasilia	166.77	352	PKP	PKPdf	18 59 22.2	+1.0
	comp=Z,6.1nm,0.8s,baz=329,slow=3.5,SNR=6.4						
BDFB				PKPab	PKPab	19 00 24.2	-0.1
	comp=Z,16nm,1.0s,baz=349,slow=1.2,SNR=8.1						
BDFB	Brasilia	166.77	352	PKIKP	PKPdf	18 59 22.2	+0.9
BDFB						19 00 24.2	
BDFB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BDFB				pmax	pmax		
	comp=Z,16nm,1.0s						
BDFB	Brasilia	166.77	352	PKP	PKPdf	18 59 22.2	+1.0
BDFB				PKPab	PKPab	19 00 24.2	-0.1
BDFB				LR	LR		
	comp=Z,875nm,21.0s						
CPUP	Villa Florida	173.02	71	PKPdf	PKPdf	18 59 25.4	+0.5
CPUP	Villa Florida	173.02	71	PKP	PKPdf	18 59 25.7	+0.8
	comp=Z,4.3nm,0.8s,baz=235,slow=1.2,SNR=9.2						
CPUP	Villa Florida	173.02	71	ePKPdf	PKPdf	18 59 25.1	+0.1
CPUP				epPKPdf	pPKPdf	18 59 34.2	-0.5

MEX 12 18:40:43.0±0.4**, 1585N×9744W, h10km, MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.28	94	eP	Pn	18 41 03.9	-3.1
HUIG				i S	Sb	18 41 19.2	-4.6
VHO	Vista Hermosa	1.39	29	i P	Pn	18 41 04.8	-3.6
VHO				i S	Sb	18 41 22.3	-4.5
OXX	Oaxaca	1.40	29	eP	Pn	18 41 05.0	-3.6
OXX				i S	Sn	18 41 21.0	-6.1
UTMO	Huajuapan	2.00	350	i P	Pn	18 41 14.0	-2.7
UTMO				i S	Sn	18 41 37.9	-3.9
TPIG	Tehuac#an	2.55	2	i S	Sn	18 41 53.0	-2.5

*NEIC **12** 18:40:48.5, 3677S×17740E, h195km, MG4.0(WEL), After WEL.*

WEL 12 18:40:49.0±0.4**, 3681S×17748E, h193**km±3km**, ML4.0**/18**, Error ellipse: s-maj=4.7km s-min=3.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	1.40	154	eP	Pn	18 41 21.3	+0.2
PUZ	Puketiti	1.40	154	PN	Pn	18 41 21.1	-0.1
PUZ				SN	Sn	18 41 44.8	-1.3
URZ	Urewera	1.47	191	P	Pn	18 41 21.9	+0.1
URZ	Urewera	1.47	191	PN	Pn	18 41 21.9	+0.1
URZ				SN	Sn	18 41 47.5	+0.2
MWZ	Matawai	1.52	179	eP	Pn	18 41 22.5	+0.3
MWZ				S	Sn	18 41 48.5	+0.5
MWZ	Matawai	1.52	179	PN	Pn	18 41 22.4	+0.2
MWZ				SN	Sn	18 41 48.5	+0.5
KNZ	Kokohu	2.21	176	PN	Pn	18 41 29.4	+0.2
KNZ				SN	Sn	18 42 00.1	-0.3
BKZ	Black Stump Fm	2.48	198	P	Pn	18 41 32.4	+0.3
BKZ	Black Stump Fm	2.48	198	PN	Pn	18 41 32.4	+0.3
MOVZ	Moawhango	2.93	207	PN	Pn	18 41 37.4	+0.1
PXZ	Pawanui	3.25	188	PN	Pn	18 41 40.7	-0.5
PXZ				SN	Sn	18 42 21.1	-0.9
TSZ	Takapari Road	3.45	200	P	Pn	18 41 42.9	-0.8
TSZ	Takapari Road	3.45	200	PN	Pn	18 41 42.9	-0.8
WAZ	Wanganui	3.53	213	eP	Pn	18 41 45.0	+0.3
WAZ	Wanganui	3.53	213	PN	Pn	18 41 45.0	+0.3
BFZ	Birch Farm	3.98	194	P	Pn	18 41 49.2	-1.0
BFZ	Birch Farm	3.98	194	PN	Pn	18 41 49.3	-0.9
MRZ	Mangatainoka R	4.12	201	P	Pn	18 41 50.8	-1.2
MRZ	Mangatainoka R	4.12	201	PN	Pn	18 41 50.7	-1.2
MRZ				SN	Sn	18 42 39.3	-2.1
TIWZ	Tintock	4.15	197	PN	Pn	18 41 51.2	-1.1
KIW	Kapiti Island	4.51	206	P	Pn	18 41 55.4	-1.5
KIW	Kapiti Island	4.51	206	PN	Pn	18 41 55.4	-1.5
MTW	Mount Morrison	4.61	199	P	Pn	18 41 56.1	-2.0
MTW	Mount Morrison	4.61	199	PN	Pn	18 41 56.0	-2.1
CAW	Cannon Point	4.68	203	P	Pn	18 41 57.1	-2.0
CAW	Cannon Point	4.68	203	PN	Pn	18 41 57.1	-2.0
TRWZ	Traveller	4.79	196	PN	Pn	18 41 58.8	-1.6
PAWZ	Paruwai Farm	4.83	199	P	Pn	18 41 58.8	-2.2
PAWZ	Paruwai Farm	4.83	199	PN	Pn	18 41 58.9	-2.1
MRW	Makara Radio	4.91	205	P	Pn	18 41 59.7	-2.3
MRW	Makara Radio	4.91	205	PN	Pn	18 41 59.7	-2.3
MSWZ	Moikau Station	4.91	200	P	Pn	18 41 59.8	-2.2
MSWZ	Moikau Station	4.91	200	PN	Pn	18 41 59.8	-2.3
SNZO	South Karori	4.98	205	eP	Pn	18 42 00.5	-2.4
SNZO	South Karori	4.98	205	PN	Pn	18 42 00.4	-2.5
TCW	Tory Channel	5.05	209	P	Pn	18 42 01.3	-2.5
NNZ	Nelson	5.43	215	eP	Pn	18 42 06.3	-2.4
BSWZ	Blackbirch Sta	5.64	209	P	Pn	18 42 09.0	-2.4
THZ	Tophouse	6.08	214	eP	Pn	18 42 15.0	-2.2
KHZ	Kahutara	6.37	207	eP	Pn	18 42 18.1	-2.8
LTZ	Lake Taylor	7.18	212	eP	Pn	18 42 28.1	-3.4
MQZ	McQueen's Vall	7.81	207	eP	Pn	18 42 35.5	-4.2

CASC 12 19:14:00.7±2.7**, 1252N×8784W, h57**km±144km**, MD3.6, ML3.2, 3C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.75	1	⇓eP	x	19 14 20.2	
CNCH				eS	x	19 14 32.6	
CRIN	San Cristobal	0.80	77	⇓eP	Pn	19 14 17.1	+1.2
LEON	Leon	0.93	96	⇓eP	Pn	19 14 17.4	-0.3
BLLM	Bellamira	0.99	337	eP	x	19 14 23.1	
BLLM				eS	x	19 14 37.0	
VSM	San Miguel	1.00	335	eP	x	19 14 23.9	
VSM				eS	x	19 14 37.9	
MIRN	Miramar	1.11	94	⇑eP	Pn	19 14 20.3	+0.3
MIRN				eS	Sn	19 14 34.5	+0.1
CNGN	Cerro Negro	1.12	91	eP	Pn	19 14 20.2	0.0
COPN	Copaltepe	1.27	105	⇑eP	Pn	19 14 21.8	-0.3
COPN				eS	Sn	19 14 37.9	-0.3
SNVI	San Vicente	1.46	318	eP	x	19 14 29.6	
SNVI				eS	x	19 14 47.8	
APYN	Apoyeque	1.49	101	⇓eP	Pn	19 14 25.4	+0.3
APYN				eS	Sn	19 14 44.6	+1.2
XAVN	Gruta Xavier	1.53	104	eP	Pn	19 14 25.8	+0.2
XAVN				eS	Sn	19 14 44.6	+0.1
MGAN	Managua	1.60	103	eS	Sn	19 14 45.9	-0.4
	comp=N,307nm,0.4s						
LFRS	El Faro	1.62	313	⇓eP	x	19 14 31.2	
LFRS				eS	x	19 14 49.4	
TICN	Ticuantepe	1.65	107	⇑eP	Pn	19 14 27.1	-0.2
TICN				eS	Sn	19 14 49.1	+1.7

*STR **12** 19:17:04.5±0.1, 43.12N×1.15W, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*LDG **12** 19:17:04.1±0.1, 4309N×1.18W, h12km, Md2.0/1, Ml1.5/1, Error ellipse: s-maj=2.5km s-min=0.8km az=28.0*

MDD 12 19:17:04.0±0.6**, 4311N×116W, h9**km±4km**, mbLg0.9**/6**, Error ellipse: s-maj=5.6km s-min=2.6km az=17.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJPF	Ste Jean	0.05	277	ePg	Pg	19 17 06.6	+0.7
SJPF				eSg	Sg	19 17 08.4	+1.1
	27nm,0.2s						
SJPF	Ste Jean	0.05	277	Pg	Pg	19 17 06.6	+0.7
SJPF				Lg		19 17 08.4	
	14nm,0.2s						
LARF	Larrau	0.14	119	Pg	Pg	19 17 07.8	+0.6
LARF				Sg	Sg	19 17 10.5	+1.2
LARF	Larrau	0.14	119	Pg	Pg	19 17 07.8	+0.6
LARF				Lg		19 17 10.5	
OSSF	Osses	0.17	332	Pg	Pg	19 17 08.2	+0.6
OSSF				Sg	Sg	19 17 10.7	+0.6
OSSF	Osses	0.17	332	Pg	Pg	19 17 08.2	+0.6
OSSF				Lg		19 17 10.8	
ELIZ	Elizondo	0.28	282	Pg	Pg	19 17 09.9	+0.2
	1.0nm,0.1s,SNR=7.9						
ELIZ				Lg		19 17 14.6	
	10nm,0.2s,SNR=7.9						
EALK	Alkurruntz	0.28	294	Pg	Pg	19 17 09.9	+0.2
	1.6nm,0.1s,SNR=7.9						
EALK				Lg		19 17 14.1	
	1.7nm,0.1s,SNR=7.9						
IUSE	Utxeti	0.33	241	Pg	Pg	19 17 09.9	-0.7
	1.0nm,0.1s,SNR=7.9						
IUSE				Lg		19 17 15.5	
	2.3nm,0.1s,SNR=7.9						
ATE	Arette	0.33	93	Pg	Pg	19 17 11.0	+0.4
ATE				Sg	Sg	19 17 16.1	+1.0
ATE	Arette	0.33	93	Pg	Pg	19 17 11.0	+0.4
ATE				Lg		19 17 16.0	
EBIE	Bielsa	1.04	113	Pg	Pg	19 17 23.0	-1.0
	0.4nm,0.1s,SNR=7.9						
EBIE				Lg		19 17 37.5	
	1.5nm,0.2s,SNR=7.9						
EPF	Esparros	1.10	93	ePg	Pg	19 17 25.2	+0.1
EPF				eSg	Sg	19 17 39.7	+0.3
	0.9nm,0.2s						
EPF	Esparros	1.10	93	Pg	Pg	19 17 25.2	+0.1
EPF				Lg		19 17 39.7	
	0.4nm,0.2s						

*BJI **12** 19:41:52.0, 1069S×10775E, h10km, mB5.0, mb4.9, Ms4.4, Msz4.2*

*ISCJB **12** 19:41:57.4±1.4, 984S±004×10748E±004, h1km±9km, mb4.9/65, MS4.0/12, Error ellipse: s-maj=7.1km s-min=5.9km az=149.7*

*IDC **12** 19:41:59.2±0.5, 972S×10754E, h0km, mb4.4/16, mb1 4.5/18, mb1mx4.4/23, mbtmp4.4/18, ML4.2/2, MS3.8/8, Ms1 3.8/8, ms1mx3.5/28, Error ellipse: s-maj=20.0km s-min=12.4km az=57.0*

*NEIC **12** 19:42:00.5±0.2, 979S×10753E, h10km, mb4.9/32, Error ellipse: s-maj=7.6km s-min=5.4km az=62.0*

*HRVD **12** 19:42:00.4±0.5, 983S×10752E, h15km±1km, MW4.7/49, Centroid moment Tensor Solution. LP body waves: s12,c12; Mantle waves: s49,c64; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.59±.16; $M_{\theta\theta}$0.95±.09; $M_{\phi\phi}$0.64±.11; $M_{r\theta}$0.87±.21; $M_{\theta\phi}$-0.34±.06; $M_{\phi r}$0.11±.25; Best double couple: $M_0$1.60600×10^{16} NP1:ϕ_s129.00000°, δ32.00000°, λ-69.00000°. NP2: ϕ_s284.00000°, δ60.00000°, λ-103.00000°. Principal axes: T 1.3360, Plg14.0000°, Azm24.0000°; N 0.5390, Plg11.0000°, Azm291.0000°; P -1.8770, Plg72.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **12** 19:42:02.8±1.2, 971S×10763E, h37km, mb5.1/29 Error ellipse: s-maj=13.7km s-min=7.4km az=113.5*

ISC 12 19:42:00.6±1.6**, 984S**±004×**10750E**±004**, h9**km±10km**, h17**km±2.6km**: pP-P, n154, σ1s08**/139**, mb4.8**/65**, MS4.0**/12**, 7C-11D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	2.99	2	P	Pn	19 42 46.7	-1.5
	6μm,0.8s						
BJII	Banjamegara	3.31	42	P	Pn	19 42 51.6	-1.0
	500nm,1.1s						
BJII	Banjamegara	3.31	42	⇓iP	Pn	19 42 52.1	-0.5
BJII				i S	Sn	19 43 33.2	+1.1
JCJI	Jatiwangi	3.41	13	P	Pn	19 42 51.0	-3.0
	4μm,0.9s						
CBJI	Citeko	3.46	349	P	Pn	19 42 50.1	-4.5
	3μm,0.8s						
TNG	Tangerang	3.74	347	P	Pn	19 42 58.5	+0.1
	1μm,0.5s						
SBJI	Serang	3.93	340	P	Pn	19 43 00.4	-0.7
	1μm,1.3s						
KRKI	Karangkates	5.17	72	P	Pn	19 43 20.0	+1.8
	447nm,0.6s						
KLI	Kotabumi	5.59	332	P	Pn	19 43 27.2	+3.3
	149nm,2.1s						
KSI	Kapahiang	7.84	321	P	Pn	19 43 53.5	-1.3
	183nm,0.8s						
COCO	West Island	10.72	256	ePn	Pn	19 44 33.8	-0.5
COCO				eSn	Sn	19 46 25.1	-9.4
KSM	Kuching	11.58	14	ePn	Pn	19 44 47.1	+1.1
PCI	Palu	15.15	55	P	Pn	19 45 34.5	-0.2
	115nm,1.1s						
PSI	Prapat	15.18	325	Pn	Pn	19 45 35.4	+0.2
	1.1nm,0.3s,baz=154,slow=9.3,SNR=10						
PSI				LR	LR	19 53 16.1	
	comp=Z,206nm,18.3s,baz=279,slow=45						
TSI	Tuntungan	15.96	326	P	Pn	19 45 49.7	+4.4
	74nm,0.8s						
MBWA	Marble Bar	16.29	135	ePn	Pn	19 45 45.0	-4.6
	13nm,0.6s						
MBWA				eSn	Sn	19 48 30.7	-20
KULM	Kulim	16.50	335	ePn	Pn	19 45 47.5	-4.8
TSM	Tawau	17.43	37	P	Pn	19 46 06.4	+2.4
KKM	Kota Kinabalu	18.01	29	ePn	Pn	19 46 09.7	-1.4
FITZ	Fitzroy Crossi	19.42	117	eP	Pn	19 46 28.8	+0.6
	8.7nm,0.5s						
FITZ				eS	Sn	19 49 47.3	-19
FITZ	Fitzroy Crossi	19.42	117	P	Pn	19 46 28.1	-0.1
	0.6nm,0.3s,baz=281,slow=9.9,SNR=64						
BSI	Banda Aceh	19.49	321	P	Pn	19 46 29.0	0.0
	128nm,1.0s						
NNT	Nongplab	23.58	341	P	P	19 47 13.5	+1.8
NWAO	Narrogin (SRO)	24.67	160	LR	LR	19 55 41.2	
	comp=Z,421nm,21.8s,MS3.9,baz=336,slow=33						
NWAO	Narrogin (SRO)	24.67	160	eP	P	19 47 21.2	-0.5
NWAO				pmax	pmax		
	comp=Z,23nm,1.1s						
NWAO	Narrogin (SRO)	24.67	160	eP	P	19 47 21.2	-0.5
	comp=Z,23nm,1.1s,mb4.6						
UBT	Ubonrachathani	25.04	354	⇑P	P	19 47 37.0	+12
NST	Nakhon Sawan	26.37	344	P	P	19 47 32.0	-5.1
KKTK	Khon Kaen	26.41	350	⇓P	P	19 47 38.0	+0.5
	comp=Z,247nm,0.6s,mb5.9						
WRAB	Tennant Creek	27.79	114	eP	P	19 47 49.3	-0.5
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.6						
WRAB	Tennant Creek	27.79	114	eP	P	19 47 49.3	-0.5
	comp=Z,16nm,1.0s,mb4.6						
WB2	Warramunga Arr	27.79	114	⇑iP	P	19 47 49.3	-0.6
FORT	Forrest	28.29	140	eP	P	19 47 54.3	0.0
	comp=Z,9.9nm,0.7s,mb4.5						
ASPA	Alice Springs	28.71	122	eP	P	19 48 02.9	+4.8
ASAR	Alice Springs	28.71	122	P	P	19 47 57.5	-0.6
	comp=Z,4.4nm,0.7s,mb4.3,baz=303,slow=8.8,SNR=24						
ASAR				PcP	PcP	19 51 09.2	+0.8
	comp=Z,1.9nm,0.7s,baz=315,slow=2.0,SNR=10						
ASAR				LR	LR	19 59 18.4	
	comp=Z,141nm,21.3s,MS3.5,baz=62,slow=36						
ASAR	Alice Springs	28.71	122	P	P	19 47 57.5	-0.6
ASAR						19 51 09.2	
AS31	Alice Springs	28.71	122	eP	P	19 48 02.9	+4.8
QIZ	Qiongzhong	28.78	5	P	P	19 47 59.6	+1.0
	comp=Z,25nm,1.2s,mb4.8						
CM31	Chiang Mai Arr	29.35	343	eP	P	19 48 04.7	+0.9
	comp=Z,33nm,1.1s,mb5.0						
CHG	Chiang Mai	29.69	343	⇓P	P	19 48 07.7	+0.9
	comp=Z,17nm,1.0s,mb4.7						
CHTO	Chiang Mai	29.69	343	eP	P	19 48 06.7	-0.1
CHTO				e		19 48 18.7	
CHTO				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
CHTO	Chiang Mai	29.69	343	eP	P	19 48 06.7	-0.1
	comp=Z,19nm,1.0s,mb4.8						
CHTO				e		19 48 18.7	
KMI	Kunming	35.05	352	P	P	19 48 55.7	+1.9
KMI				AP	pP	19 49 02.0	+5.6
KMI				XP	sP	19 49 03.2	+5.7
KMI				S	S	19 54 30.6	+4.4
KMI				SS	SS	19 56 48.8	-9.5
KMI				AMB	AMB		
	comp=Z,22nm,1.0s,mb5.0						
KMI				AMB	AMB		
	comp=Z,136nm,6.4s						
KMI				LR	LR		
	comp=N,96nm,13.9s,MS4.0						
KMI				LR	LR		
	comp=E,147nm,10.5s,MS4.0						
KMI				LR	LR		
	comp=Z,94nm,12.3s,MS3.8						
GYA	Guiyang	36.09	359	⇑iP	P	19 49 03.6	+1.0
GYA				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.6						
GYA				AMB	AMB		
	comp=Z,250nm,6.0s						
YHNB	Yeheng	36.87	21	P	P	19 49 08.2	-1.2
STKA	Stephens Creek	38.42	130	⇓iP	P	19 49 22.2	-0.2
	comp=Z,8.9nm,0.7s,mb4.6						
STKA	Stephens Creek	38.42	130	P	P	19 49 22.9	+0.5
	comp=Z,13nm,0.8s,mb4.7,baz=308,slow=8.2,SNR=21						
STKA				PcP	PcP	19 51 36.4	+0.7
	comp=Z,1.6nm,0.8s,baz=108,slow=9.3,SNR=3.1						
STKA				LR	LR	20 06 14.5	
	comp=Z,195nm,20.5s,MS3.9,baz=24,slow=38						
CTA	Charters Tower	38.72	110	P	P	19 49 26.1	+1.2
	comp=Z,3.1nm,0.8s,mb4.1,baz=274,slow=13,SNR=3.5						
CTAO	Charters Tower	38.72	110	eP	P	19 49 26.2	+1.3
CTAO				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.8						
CTAO	Charters Tower	38.72	110	eP	P	19 49 26.2	+1.3
	comp=Z,24nm,1.3s,mb4.8						
PMG	Port Moresby	39.09	93	P	P	19 49 29.4	+1.3
	comp=Z,16nm,1.0s,mb4.7,baz=40,slow=3.5,SNR=3.1						
PMG				LR	LR	20 03 46.4	
	comp=Z,56nm,22.0s,MS3.4,baz=183,slow=34						
CD2	Chengdu	40.67	355	⇑iP	P	19 49 41.5	+0.3
CD2				AP	pP	19 49 46.0	+2.1
CD2				XP	sP	19 49 49.0	+4.0
CD2				PP	PP	19 51 19.1	+4.3
CD2				S	S	19 55 51.8	+0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
CD2				LR	LR		
	comp=N,130nm,14.4s						
CD2				LR	LR		
	comp=Z,170nm,15.6s,MS4.0						
WHN	Wuhan	40.68	9	P	P	19 49 43.0	+1.7
JOW	Kunigami	41.66	28	P	P	19 49 48.5	-0.8
	comp=Z,24nm,0.8s,mb4.8,baz=109,slow=2.3,SNR=7.6						
LSA	Lhasa	42.34	339	P	P	19 49 56.0	+1.1
SSE	Sheshan	42.77	17	P	P	19 49 57.5	-0.8
SSE				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,88nm,4.7s						
PKI	Pulchoki	42.90	331	eP	P	19 50 00.1	+0.6
	comp=Z,32nm,0.9s,mb5.1						
PKI	Pulchoki	42.90	331	eP	P	19 50 00.1	+0.6
PKI				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
GUN	Gumba	42.97	331	eP	P	19 50 00.8	+0.8
	comp=Z,66nm,0.8s,mb5.4						
DMN	Daman	43.08	330	eP	P	19 50 01.9	+1.0
	comp=Z,106nm,0.9s,mb5.6						
KKN	Kakani	43.15	331	eP	P	19 50 02.1	+0.6
	comp=Z,72nm,1.0s,mb5.3						
KKN	Kakani	43.15	331	eP	P	19 50 02.1	+0.6
KKN				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.4						
GKN	Gorkha	43.64	330	eP	P	19 50 04.6	-0.8
XAN	Xi'an	43.65	2	P	P	19 50 05.2	-0.3
XAN				AMB	AMB		
	comp=Z,29nm,0.9s,mb5.0						
KOLN	Koldanda	43.97	329	eP	P	19 50 06.5	-1.5
	comp=Z,74nm,0.7s,mb5.5						
LZH	Lanzhou	45.80	356	eP	P	19 50 23.0	+0.3
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,163nm,4.1s						
GTA	Gaotai	49.51	352	eP	P	19 50 53.0	+1.5
GTA				AP	pP	19 50 59.1	+4.9
GTA				XP	sP	19 51 03.2	+7.9

GTA PP PP 19 52 43.2 -2.5
GTA AMB AMB
comp=Z,13nm,0.9s,mb5.0
GTA AMB AMB
comp=Z,143nm,5.7s
GTA LR LR
comp=N,206nm,20.6s,MS4.2
GTA LR LR
comp=E,156nm,21.0s,MS4.2
GTA LR LR
comp=Z,168nm,16.1s,MS4.1
BJT Baijiatuau 50.25 9 *e*P **P 19 50 57.1 0.0**
BJT pmax pmax
comp=Z,31nm,1.0s
BJT Baijiatuau 50.25 9 *e*P **P 19 50 57.0 0.0**
comp=Z,31nm,1.0s,mb5.3
BJI Beijing 50.27 9 *e*P **P 19 50 56.7 -0.5**
BJI AMB AMB
comp=Z,26nm,1.0s,mb5.2
JHJ Hachijo jima 2 52.64 34 LR LR 20 13 47.1
comp=Z,84nm,20.7s,MS3.8,baz=288,slow=36
MAJO Matsushiro 54.43 30 *e*P **P 19 51 25.1 -3.0**
MAJO pmax pmax
comp=Z,13nm,1.0s,mb4.8
MAJO Matsushiro 54.43 30 *e*P **P 19 51 25.1 -3.0**
comp=Z,12nm,1.0s,mb4.8
MAT Matsushiro 54.43 30 P **P 19 51 25.2 -2.9**
MAT S **S 19 58 56.0 -11**
MJAR Matsushiro Arr 54.43 30 P **P 19 51 25.9 -2.2**
comp=Z,9.9nm,0.9s,mb4.7,baz=203,slow=7.7,SNR=38
CN2 Changchun 55.82 16 *e*P **P 19 51 39.3 +1.1**
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.8
WMQ Urumqi 56.35 343 *e*P **P 19 51 43.0 +1.0**
WMQ XP sP 19 51 50.0 +4.2
WMQ PP PP 19 53 50.0 +2.6
WMQ S **S 19 59 31.0 -1.5**
WMQ AMB AMB
comp=Z,17nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,121nm,5.0s
WMQ LR LR
comp=N,89nm,14.0s,MS4.1
WMQ LR LR
comp=E,76nm,14.0s,MS4.1
WMQ LR LR
comp=Z,79nm,14.0s,MS4.0
CASY Casey 56.40 179 P **P 19 51 42.0 -0.3**
comp=Z,8.1nm,0.9s,mb4.8
SONM Songino Array 57.42 359 P **P 19 51 50.0 +0.4**
comp=Z,5.4nm,0.8s,mb4.7,baz=183,slow=7.2,SNR=7.8
SONM LR LR 20 18 06.3
comp=Z,198nm,20.2s,MS4.2,baz=205,slow=38
MDJ Mudanjiang 57.77 19 P **P 19 51 53.0 +1.0**
MDJ AP pP 19 51 55.9 +1.1
MDJ XP sP 19 51 57.9 +2.1
MDJ AMB AMB
comp=Z,5.0nm,0.6s,mb4.7
MDJ AMB AMB
comp=Z,76nm,5.3s
WSAR Wadi Sarin 58.01 305 P **P 19 51 54.1 +0.4**
comp=Z,2.6nm,0.9s,mb4.3,baz=167,slow=16,SNR=2.0
HIA Hailar 59.83 9 P **P 19 52 05.3 -1.0**
HIA pmax pmax
comp=Z,11nm,1.3s
HIA Hailar 59.83 9 P **P 19 52 05.3 -1.0**
comp=Z,11nm,1.3s,mb4.7
TKM2 Tokmak 2 60.04 333 *i* P **P 19 52 07.7 -0.1**
TKM2 pmax pmax
comp=Z,11nm,0.6s,mb5.1
AAK Ala-Archa 60.30 332*d i*P **P 19 52 10.1 +0.5**
AAK pmax pmax
comp=Z,8.0nm,1.7s,mb4.5
MKAR Makanchi Array 60.70 340 P **P 19 52 12.4 +0.1**
comp=Z,7.5nm,0.5s,mb5.1,baz=144,slow=7.2,SNR=55
HABR Khabarovsk 62.95 20⇓*e*P **P 19 52 26.9 -0.6**
HABR *e*S **S 20 00 57.8 +0.2**
HABR pmax pmax
comp=Z,25nm,1.1s,mb5.3
YSS Yuzh-Sakhalins 64.69 26⇓*e*P **P 19 52 37.0 -1.9**
YSS *e* 19 52 49.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 64.69 26 *e*P **P 19 52 37.5 -1.3**
comp=Z,28nm,1.0s,mb5.2
YSS *e* 19 52 49.6
MAW Mawson 64.81 197 P **P 19 52 40.0 +0.3**
comp=Z,6.0nm,0.5s,mb4.8,baz=65,slow=5.5,SNR=38
MAW Mawson 64.81 197 *e*P **P 19 52 39.6 -0.1**
MAW pmax pmax
comp=Z,9.0nm,0.7s
MAW Mawson 64.81 197 *e*P **P 19 52 39.6 -0.1**
comp=Z,9.0nm,0.7s,mb4.9
KURK Kurchatov 65.32 340 *e*P **P 19 52 43.3 +0.3**
KURK pmax pmax
comp=Z,18nm,0.8s,mb5.2
KURK Kurchatov 65.32 340 *e*P **P 19 52 43.3 +0.3**
comp=Z,18nm,0.8s,mb5.2
ZAL Zalesovo 66.38 346 P **P 19 52 48.5 -1.4**
comp=Z,1.6nm,0.4s,mb4.4,baz=188,slow=14,SNR=7.3
ZAL Zalesovo 66.38 346 P **P 19 52 48.5 -1.4**
KRAR Krasnoyarsk 66.73 351⇓*e*P **P 19 52 51.2 -0.9**
KRAR pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
VOSK Vostochnaya 69.69 337 *i* P **P 19 53 09.6 -1.1**
VOSK pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BVAR Borovoye Array 70.15 337 P **P 19 53 13.5 0.0**
comp=Z,2.9nm,0.7s,mb4.3,baz=147,slow=8.5,SNR=18
BRVK Borovoye 70.22 337 *e*P **P 19 53 13.5 -0.4**
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BRVK Borovoye 70.22 337 *e*P **P 19 53 13.5 -0.4**
comp=Z,6.4nm,0.8s,mb4.6
SYO Syowa Base 73.03 200⇑*e*P **P 19 53 30.5 -0.3**
SYO Syowa Base 73.03 200⇓*e*pP pP 19 53 32.4 -1.3
VNDA Vanda 73.11 169 P **P 19 53 30.5 -0.8**
comp=Z,1.9nm,0.9s,mb4.0,baz=318,slow=6.5,SNR=8.0
VNDA Vanda 73.11 169 *e*P **P 19 53 30.1 -1.2**
VNDA pmax pmax
comp=Z,7.0nm,1.3s
VNDA Vanda 73.11 169 *e*P **P 19 53 30.1 -1.2**
comp=Z,7.1nm,1.3s,mb4.4
YAK Yakutsk 73.71 11 *e*P **P 19 53 33.9 -0.9**
YAK pmax pmax
comp=Z,12nm,1.4s,mb4.6
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK Yakutsk 73.71 11 *e*P **P 19 53 33.7 -1.1**
comp=E,11nm,0.6s,mb5.0
AKTK Aktyubinsk 73.80 330 P **P 19 53 34.4 -1.0**
AKTO Aktyubinsk 73.80 330 P **P 19 53 34.4 -1.0**
comp=E,1.7nm,0.6s,mb4.2,baz=105,slow=14,SNR=8.8
SBA Scott Base 74.18 169 *e*P **P 19 53 37.4 -0.2**
SBA pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
SBA Scott Base 74.18 169 *e*P **P 19 53 37.4 -0.3**
comp=Z,6.9nm,1.1s,mb4.5
SVE Sverdlovsk 76.78 336 *e*P **P 19 53 50.3 -2.2**
SVE *e*S S 20 03 40.0 +0.1
SVE pmax pmax
comp=Z,40nm,1.7s,mb5.1
SVE MLR MLR
comp=N,100nm,12.0s,MS4.5
SVE MLR MLR
comp=E,100nm,12.0s,MS4.5
SVE MLR MLR
comp=Z,200nm,12.0s,MS4.7
LSZ Lusaka 77.24 257 *e*P **P 19 53 56.8 +1.7**
LSZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
LSZ Lusaka 77.24 257 *e*P **P 19 53 56.8 +1.7**
comp=Z,9.2nm,1.0s,mb4.7
MA2 Magadan 77.34 21 *e*P **P 19 53 55.6 -0.1**
MA2 *e* 19 54 08.1
MA2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MA2 Magadan 77.34 21 *e*P **P 19 53 53.8 -1.9**
comp=Z,7.3nm,0.7s,mb4.7
ARU Arti 77.38 335⇓*i*P **P 19 53 56.1 +0.2**
ARU *e* 19 54 04.5
ARU *e* 19 56 52.7
ARU *e*S S 20 03 45.8 -0.6
ARU pmax pmax
comp=Z,13nm,1.2s,mb4.7
ZEI Tsey 78.00 318 *e*P **P 19 54 10.4 +11**
ZEI pmax pmax
comp=Z,17nm,0.5s,mb5.2
LBTB Lobatse 78.62 246 *e*P **P 19 54 04.2 +1.4**
LBTB pmax pmax
comp=Z,13nm,1.1s,mb4.8
LBTB Lobatse 78.62 246 *e*P **P 19 54 04.2 +1.4**
comp=Z,13nm,1.1s,mb4.8
KIV Kislovodsk 79.31 318 ⇑P **P 19 54 04.0 -2.5**
KIV *e* 19 54 18.0
KIV pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
KIV Kislovodsk 79.31 318 *e*P **P 19 54 16.0 +9.5**
comp=Z,6.1nm,0.6s,mb4.7
KIV *e* 19 54 28.9
MALT Malatya 80.09 312 P **P 19 54 11.2 +0.4**
MALT pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MALT Malatya 80.09 312 P **P 19 54 11.2 +0.4**
comp=Z,5.4nm,1.1s,mb4.4
BRTR Keskin Array B 84.07 312 P **P 19 54 31.6 -0.2**
comp=Z,0.8nm,0.7s,mb4.0,baz=148,slow=7.3,SNR=8.0
VRSR Storozhevoye 84.42 324 *e*P **P 19 54 35.3 +1.8**
VRSR pmax pmax
comp=N,9.0nm,0.9s
VRSR pmax pmax
comp=E,8.0nm,0.9s
VRSR pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
SNAA Sanae 86.98 197 *e*P **P 19 54 46.8 +0.6**
SNAA pmax pmax
comp=Z,11nm,1.1s
SNAA Sanae 86.98 197 *e*P **P 19 54 46.8 +0.6**
comp=Z,11nm,1.1s,mb5.0
OBN Obninsk 87.36 327⇓*e*P **P 19 54 48.7 +0.7**
OBN *e* 19 55 00.1
OBN pmax pmax
comp=Z,35nm,1.7s,mb5.3
KLMR Klimovskoe 88.11 333 *e*P **P 19 54 51.6 0.0**
KLMR pmax pmax
comp=Z,30nm,1.7s,mb5.2
VNA1 Neumayer--Stat 89.01 197 *e*P **P 19 54 57.4 +1.5**
VNA1 *e* 19 55 30.1
VNA1 *e* 19 55 31.8
AKASG Malin Array Be 90.21 321 P **P 19 55 00.2 -1.3**
comp=Z,0.2nm,0.4s,mb3.8,baz=88,slow=3.6,SNR=4.4
AKASG PP PP 19 58 35.9 +0.8
comp=Z,1.2nm,0.7s,baz=91,slow=6.0,SNR=8.3
ARCES ARCESS Array B 96.35 339 LR LR 20 45 39.0
comp=Z,51nm,18.3s,MS4.0,baz=230,slow=40
KONO Kongsberg 102.41 329⇑*e*P Pdif 19 55 53.4 -3.5
TORD Torodi Ar. Bea 107.44 281 PKiKP PKiKP 20 00 27.6 0.0
comp=Z,0.3nm,0.6s,baz=83,slow=1.6,SNR=5.7
BDFB Brasilia 144.94 224 PKPbc PKPdf 20 01 39.2 +1.1
comp=Z,6.4nm,0.7s,baz=159,slow=1.9,SNR=9.7
LONY Lake Ozonia 145.30 3 *e*PKPdf PKPdf 20 01 38.9 +0.2
WMOK Wichita Mounta 145.49 40 *e*PKIKP PKPdf 20 01 39.5 +0.4
NCB Newcomb 145.96 2 *e*PKPdf PKPdf 20 01 40.7 +0.8
CCM Cathedral Cave 147.24 28 *e*PKIKP PKPdf 20 01 39.5 -2.6
CCM *e* 20 01 43.7
JCT Junction City 147.32 47 *e*PKP2 PKPab 20 01 45.6 -0.8
LVC Limon Verde 147.56 186 PKPbc PKPbc 20 01 47.8 +2.6
comp=Z,12nm,1.0s,baz=233,slow=4.9,SNR=9.2
LVC Limon Verde 147.56 186 *e*PKPbc PKPbc 20 01 47.6 +2.4
BINY Binghamton 147.62 5 *e*PKPdf PKPdf 20 01 42.3 -0.4
MIAR Mount Ida 148.75 35 *e*PKP2 PKPab 20 01 48.4 -3.7
WCI Wyandotte Cave 149.13 21 *e*PKP2 PKPab 20 01 49.5 -4.2
MVL Millersville 149.77 6 *e*PKPbc PKPbc 20 01 48.9 -2.1
WVT Waverly 150.35 26 *e*PKIKP PKPdf 20 01 52.7 +5.6
WVT *e* 20 02 03.8
PLAL Pickwick Lake 151.21 27 *e*PKPbc PKPbc 20 01 54.3 -0.1
TZTN Tazewell 151.59 19 *e*PKPbc PKPbc 20 01 54.6 -0.6
ELN Prospectdale 151.73 14 *e*PKPbc PKPbc 20 01 55.5 -0.1
SWET Sewanee 151.92 24 *e*PKPbc PKPbc 20 01 55.8 -0.2
SIV San Ignacio 151.95 204 PKPbc PKPbc 20 01 58.0 +1.9
comp=Z,5.0nm,0.9s,baz=156,slow=2.3,SNR=24

IDC ***12*** *19:45:55.4±0.9, 978S×10772E, h0km, mb4.2/7, mb1 4.2/7, mb1mx4.0/16, mbtmp4.2/7, Error ellipse: s-maj=35.0km s-min=19.2km az=70.0*
ISCJB ***12*** *19:45:58.2±0.8, 98S±0.1×1077E±02, h33km, mb4.2/7, Error ellipse: s-maj=29.9km s-min=17.4km az=143.6*
ISC 12 19:46:00.6±0.8**, 98S**±01×**1076E**±02**, h35**km**, n8,** σ**0ˢ86**/8**, mb4.2**/7**, 1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**28.60**	**122**	P	**P**	**19 51 53.7**	**+0.3**
	1.3nm,0.6s,mb3.8,baz=298,slow=8.8,SNR=3.1						
STKA	**Stephens Creek**	**38.32**	**130**	P	**P**	**19 53 18.6**	**+0.8**
	3.0nm,0.6s,mb4.2,baz=295,slow=9.1,SNR=5.9						
MJAR	**Matsushiro Arr**	**54.35**	**30**	P	**P**	**19 55 21.7**	**-2.0**
	2.6nm,0.9s,mb4.2,baz=204,slow=7.4,SNR=8.2						
SONM	**Songino Array**	**57.42**	**359**	P	**P**	**19 55 46.0**	**+0.3**
	0.7nm,0.5s,mb3.9,baz=175,slow=7.7,SNR=4.5						
MKAR	**Makanchi Array**	**60.74**	**340**	P	**P**	**19 56 09.1**	**+0.4**
	2.0nm,0.5s,mb4.5,baz=148,slow=8.4,SNR=16						
MAW	**Mawson**	**64.86**	**197**	P	**P**	**19 56 35.8**	**-0.3**
	1.7nm,0.6s,mb4.3,baz=76,slow=6.4,SNR=12						
BVAR	**Borovoye Array**	**70.20**	**337**	P	**P**	**19 57 10.7**	**+0.9**
	2.4nm,0.7s,mb4.3,baz=143,slow=8.9,SNR=9.2						
SYO	**Syowa Base**	**73.08**	**200**⇓	*e*P	**P**	**19 57 26.4**	**-0.7**

ISCJB ***12*** *20:01:37.3±3.1, 1666S±008×7040W±005, h2km±20km, mb3.9/4, Error ellipse: s-maj=13.3km s-min=8.0km az=17.2*
NEIC ***12*** *20:01:43.7±0.9, 1672S×7032W, h35km, Error ellipse: s-maj=19.6km s-min=16.4km az=82.0*
IDC ***12*** *20:01:46.1±2.6, 1670S×7007W, h54km±26km, mb3.6/4, mb1 3.9/7, mb1mx3.6/18, mbtmp3.9/7, ML4.0/3, Error ellipse: s-maj=41.1km s-min=25.2km az=32.0*
ISC 12 20:01:39.6±2.0**, 1666S**±008×**7048W**±007**, h4**km±15km**, n12,** σ**0ˢ94**/14**, mb3.9**/4**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.99**	**281**⇑	*i*P	**Pg**	**20 01 57.9**	**-0.7**
ARE				*i* S	**Sg**	**20 02 12.1**	**+0.7**
LVC	**Limon Verde**	**6.10**	**166**	P	**Pn**	**20 03 11.0**	**+0.4**
	1.4nm,0.3s,baz=347,slow=8.9,SNR=22						
LVC				S	**Sn**	**20 04 31.9**	**+11**
	0.3nm,0.3s,baz=64,slow=14,SNR=2.9						
LVC	**Limon Verde**	**6.10**	**166**	*e*Pn	**Pn**	**20 03 10.7**	**+0.1**
LVC				*e*Sn	**Sn**	**20 04 21.1**	**+0.2**
NNA	**Nana**	**7.72**	**306**	P	**Pn**	**20 03 41.3**	**+8.6**
	0.5nm,0.3s,baz=190,slow=13,SNR=3.6						
SIV	**San Ignacio**	**9.06**	**87**	P	**Pn**	**20 03 50.8**	**-0.3**
	1.1nm,0.3s,baz=270,slow=13,SNR=14						
SIV				S	**Sn**	**20 05 34.3**	**+0.8**
	0.1nm,0.3s,baz=189,slow=22,SNR=3.1						
SAML	**Samuel**	**10.46**	**44**	*e*Pn	**Pn**	**20 04 10.7**	**+0.4**
	12nm,0.8s						
PDAR	**Pinedale Array**	**69.19**	**330**	P	**P**	**20 12 48.8**	**+1.3**
	0.5nm,0.8s,mb3.5,baz=115,slow=8.3,SNR=3.6						
ULM	**Lac du Bonnet**	**70.28**	**343**	P	**P**	**20 12 53.1**	**-0.9**
	2.1nm,0.7s,mb4.2,baz=162,slow=6.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**77.21**	**72**	P	**P**	**20 13 32.0**	**-2.7**
	1.1nm,0.8s,mb3.8,baz=260,slow=4.8,SNR=3.7						
YKA	**Yellowknife Ar**	**86.15**	**341**	P	**P**	**20 14 22.0**	**+0.1**
	0.6nm,0.7s,mb4.0,baz=139,slow=5.7,SNR=4.8						
MJAR	**Matsushiro Arr**	**147.79**	**314**	PKPbc	PKPbc	20 21 27.1	+1.4
	2.5nm,0.9s,baz=79,slow=1.7,SNR=12						
SONM	**Songino Array**	**148.81**	**4**	PKPbc	PKPbc	20 21 28.0	-0.4
	1.8nm,0.8s,baz=296,slow=1.5,SNR=9.6						

IDC ***12*** *20:02:26.7±1.9, 4882N×15568E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/20, mbtmp3.8/7, ML4.2/1, Error ellipse: s-maj=58.0km s-min=30.1km az=99.0*
MOS ***12*** *20:02:31.3±2.0, 4890N×155.16E, h33km, mb4.1/4, Error ellipse: s-maj=36.7km s-min=16.5km az=78.0*
ISCJB ***12*** *20:02:33.4±2.1, 489N±02×1552E±03, h54km±17km, mb3.7/6, Error ellipse: s-maj=40.5km s-min=12.1km az=72.6*
ISC 12 20:02:35.7±1.8**, 489N**±02×**1552E**±03**, h59**km±13km**, n14,** σ**1ˢ41**/16**, mb3.7**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.88**	**19**	*e*PN	**Pn**	**20 02 59.5**	**-6.0**
SKR				*e*S	**Sn**	**20 03 26.0**	**-2.2**
SKR				smax			
	comp=E,320nm,0.3s						
SKR				smax			
	comp=N,120nm,0.4s						
PET	**Petropavlovsk**	**4.67**	**27**	*e*PN	**Pn**	**20 03 43.9**	**+0.2**
PET				*e*S	**Sn**	**20 04 38.8**	**+2.2**
PET				pmax	pmax		
	comp=Z,14nm,0.6s						
PET				smax			
	comp=E,28nm,0.5s						
PET				smax			
	comp=N,48nm,0.6s						
ASAJ	**Asahikawa**	**9.89**	**246**	Pn	**Pn**	**20 04 55.8**	**+0.7**
	comp=N,2.2nm,0.3s,baz=57,slow=10,SNR=20						
ASAJ	**Asahikawa**	**9.89**	**246**	PN	**Pn**	**20 04 55.8**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	**Makanchi Array**	**47.19**	**296**	P	**P**	**20 11 01.4**	**-0.9**
	comp=Z,0.2nm,0.2s,mb3.6,baz=77,slow=6.4,SNR=3.8						
ARCES	**ARCESS Array B**	**56.26**	**341**	P	**P**	**20 12 08.7**	**-1.3**
	comp=Z,1.9nm,0.9s,mb4.1,baz=18,slow=8.9,SNR=4.3						
ARCES	**ARCESS Array B**	**56.26**	**341**	P	**P**	**20 12 08.7**	**-1.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**62.66**	**335**	P	**P**	**20 12 53.6**	**-0.4**
	comp=Z,1.3nm,0.9s,mb4.0,baz=31,slow=8.3,SNR=3.1						
FINES	**FINESS Array B**	**62.66**	**335**	P	**P**	**20 12 53.7**	**-0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**74.70**	**200**	P	**P**	**20 14 07.8**	**-1.3**
	comp=Z,0.4nm,0.9s,mb3.4,baz=12,slow=5.9,SNR=4.7						
GERES	**GERESS Array B**	**77.09**	**335**	P	**P**	**20 14 24.1**	**+1.5**
	comp=Z,0.5nm,0.7s,mb3.6,baz=28,slow=6.0,SNR=5.7						
GERES	**GERESS Array B**	**77.09**	**335**	P	**P**	**20 14 24.1**	**+1.4**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**77.73**	**318**	P	**P**	**20 14 28.4**	**+2.2**
	comp=Z,0.9nm,0.9s,mb3.7,baz=61,slow=6.7,SNR=4.4						
BRTR	**Keskin Array B**	**77.73**	**318**	P	**P**	**20 14 28.5**	**+2.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

IDC 12 20:11:28.1±2.6**, 2271N**×**1208W, h0**km**, mb3.6**/4**, mb1 3.8**/6**, mb1mx3.5**/21**, mbtmp3.7**/6**, ML3.6**/2**, Error ellipse: s-maj=73.0km s-min=30.6km az=88.0, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**12.04**	**32**	Lg		20 17 44.8	
	0.2nm,0.3s,baz=308,slow=17,SNR=4.3						
TORD	**Torodi Ar. Bea**	**16.17**	**124**	Pn	Pn	20 15 16.1	-0.6
	0.2nm,0.3s,baz=310,slow=12,SNR=11						
TORD				Sn	Sn	20 18 11.6	-5.1
	0.1nm,0.3s,baz=306,slow=22,SNR=3.8						
DBIC	**Dimbokro**	**17.39**	**155**	P	Pn	20 15 31.0	-1.2
	0.2nm,0.3s,baz=305,slow=12,SNR=3.7						
KEST	**Kesra**	**22.70**	**50**	P	P	20 16 32.7	+1.4
	0.9nm,0.8s,baz=122,slow=16,SNR=2.8						
GERES	**GERESS Array B**	**33.13**	**32**	P	P	20 18 04.8	-1.1
	1.0nm,0.8s,baz=220,slow=8.0,SNR=7.6						
FINES	**FINESS Array B**	**46.73**	**24**	P	P	20 19 58.1	-0.7
	0.7nm,0.5s,baz=206,slow=5.7,SNR=7.3						
MKAR	**Makanchi Array**	**76.67**	**45**	P	P	20 23 21.5	+0.6
	0.5nm,0.5s,baz=285,slow=4.8,SNR=5.6						
ASAR	**Alice Springs**	**148.75**	**99**	PKPbc	PKPbc	20 31 18.5	+1.1
	0.5nm,0.7s,baz=287,slow=2.0,SNR=9.7						

ISCJB ***12*** *20:17:03.2±0.8, 6263S±007×1650E±05, h10km, mb4.4/6, MS4.2/7, Error ellipse: s-maj=33.5km s-min=9.8km az=168.1*
IDC ***12*** *20:17:03.2±1.9, 6277S×16486E, h0km, mb4.4/2, mb1 4.7/4, mb1mx4.5/7, mbtmp4.6/4, ML4.6/2, MS4.3/9, Ms1 4.3/9, ms1mx4.1/14, Error ellipse: s-maj=62.6km s-min=32.4km az=83.0*
NEIC ***12*** *20:17:05.0±0.9, 6265S×16495E, h10km, mb4.9/4, Error ellipse: s-maj=37.7km s-min=11.1km az=84.0*
HRVD ***12*** *20:17:05.0±0.2, 6252S×16557E, h15km±1km, MW5.2/63, Centroid moment Tensor Solution. LP body waves: s29,c34;Mantle waves: s63,c93; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-0.81±.21; $M_{\theta\theta}$4.71±.18; $M_{\phi\phi}$-3.90±.15; $M_{r\theta}$-5.57±1.00; $M_{\theta\phi}$-1.18±.14; $M_{\phi r}$-0.58±.54; Best double couple: $M_0$6.71800×10¹⁶ NP1:ϕ_s329.00000°, δ36.00000°, λ-7.00000°. NP2: ϕ_s65.00000°, δ86.00000°, λ-126.00000°. Principal axes: T 8.2060, Plg31.0000°, Azm184.0000°; N -2.9800, Plg35.0000°, Azm68.0000°; P -5.2300, Plg39.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 12 20:17:04.6±0.8**, 6265S**±007×**1650E**±05**, h10**km**, n18,** σ**1ˢ02**/11**, mb4.4**/6**, MS4.2**/7**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**14.98**	**183**	Pn	**Pn**	**20 20 35.6**	**-0.8**
	1.6nm,0.3s,baz=353,slow=13,SNR=52						
VNDA				LR	LR	20 25 23.2	
	comp=Z,2μm,20.4s,baz=15,slow=34						
VNDA	**Vanda**	**14.98**	**183**	*e*Pn	**Pn**	**20 20 35.7**	**-0.7**
	36nm,0.9s						
VNDA				LR	LR	20 25 23.2	
SBA	**Scott Base**	**15.29**	**179**	*e*Pn	**Pn**	**20 20 41.2**	**+0.8**
	364nm,1.8s						
RPZ	**Rata Peaks**	**19.29**	**13**	P	**Pn**	**20 21 31.0**	**+0.5**
	3.7nm,0.3s,baz=187,slow=3.6,SNR=18						
RPZ				LR	LR	20 27 41.5	
	comp=Z,2μm,19.0s,baz=198,slow=33						
URZ	**Urewera**	**25.51**	**22**	LR	LR	20 31 27.0	
	comp=Z,971nm,18.4s,MS4.4,baz=152,slow=34						
QSPA	**South Pole Qui**	**27.44**	**180**	*e*P	**P**	**20 22 50.6**	**0.0**
	3.7nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**34.24**	**323**	P	**P**	**20 23 51.5**	**+0.9**
	5.6nm,1.1s,mb4.4,baz=140,slow=7.9,SNR=4.2						
STKA				LR	LR	20 35 11.9	
	comp=Z,395nm,20.2s,MS4.1,baz=326,slow=32						
RAO	**Raoul Island**	**35.21**	**26**	LR	LR	20 33 47.3	
	comp=Z,91nm,21.8s,MS3.5,baz=274,slow=28						
MAW	**Mawson**	**38.56**	**217**	P	**P**	**20 24 29.4**	**+1.9**
	1.8nm,0.8s,mb3.9,baz=109,slow=5.7,SNR=4.8						
MAW				LR	LR	20 40 23.5	
	comp=Z,743nm,20.3s,MS4.5,baz=132,slow=36						
AS31	**Alice Springs**	**44.23**	**317**	*e*P	**P**	**20 25 12.2**	**-1.8**
ASAR	**Alice Springs**	**44.23**	**317**	P	**P**	**20 25 13.7**	**-0.3**
	5.5nm,0.8s,mb4.3,baz=159,slow=7.0,SNR=39						
ASAR				LR	LR	20 42 38.7	
	comp=Z,182nm,20.2s,MS4.0,baz=170,slow=35						
SNAA	**Sanae**	**45.69**	**185**	*e*P	**P**	**20 25 24.3**	**-1.3**
	6.6nm,1.1s,mb4.5						
PMG	**Port Moresby**	**54.70**	**338**	P	**P**	**20 26 34.1**	**+0.1**
	32nm,1.2s,mb5.2						
PPT	**Papeete**	**54.87**	**56**	LR	LR	20 44 54.9	
	comp=Z,196nm,18.1s,MS4.2,baz=234,slow=30						
LVC	**Limon Verde**	**84.96**	**131**	LR	LR	20 59 03.4	
	comp=Z,132nm,18.7s,MS4.3,baz=309,slow=30						
TORD	**Torodi Ar. Bea**	**129.16**	**201**	PKP	PKPdf	20 36 11.8	-1.2
	1.0nm,0.9s,baz=187,slow=2.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**129.16**	**201**	PKP	PKPdf	20 36 11.8	-1.2
BRTR	**Keskin Array B**	**143.14**	**255**	PKhKP		20 36 34.0	
	0.8nm,0.9s,baz=191,slow=2.5,SNR=4.6						

ISCJB ***12*** *20:20:43.7±0.9, 4155N±005×2024E±005, h10km±10km, Error ellipse: s-maj=9.1km s-min=5.7km az=152.6*
NEIC ***12*** *20:20:43.9, 4157N×2025E, h2km, ML2.5(THE), After THE.*
THE ***12*** *20:20:43.9, 4157N×2025E, h1km, ML2.5*
CSEM ***12*** *20:20:43.8±0.5, 4156N×2022E, h5km, ML2.5, Error ellipse: s-maj=11.3km s-min=5.4km az=172.0*
SKO ***12*** *20:20:45.2, 4149N×2020E, h5km, M2.2, ML2.2*
ISC 12 20:20:44.2±0.9**, 4154N**±006×**2021E**±005**, h15**km±9km**, n11,** σ**0ˢ78**/21**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**234**	*e*Pg	**Pg**	**20 20 50.3**	**-0.5**
TIR				*e*Sg	**Sg**	**20 20 55.8**	**+0.4**
OHR	**Ohrid**	**0.61**	**134**	*i* Pg	**Pg**	**20 20 56.4**	**+0.2**
OHR				*i* Sg	**Sg**	**20 21 04.7**	**+0.3**
OHR				*e*Lg		20 21 04.7	
	comp=E,57nm,0.5s						

OHR eLg 20 21 05.0
comp=N,99nm,0.5s
OHR Ohrid 0.61 134 *e*Pg **Pg** **20 20 56.5 +0.3**
OHR *e*Sg **Sg** **20 21 04.5 +0.1**
BIA Bitola 0.98 121 *e*Pg **Pg** **20 21 15.7 -0.5**
BIA *e*Sg **Sg** **20 21 17.7 +1.6**
BIA Bitola 0.98 121 *i* Pg **Pg** **20 21 02.2 -1.0**
BIA *i* Sg **Sg** **20 21 15.5 -0.6**
BIA eLg 20 21 16.1
comp=N,20nm,0.3s
BIA eLg 20 21 17.2
comp=E,36nm,0.3s
BIA Bitola 0.98 121 *i* Pg **Pg** **20 21 02.2 -1.0**
BIA *e*Sg **Sg** **20 21 17.7 +1.6**
SKO Skopje 1.02 64 *i* Pg **Pg** **20 21 04.7 +0.9**
SKO *i* Sg **Sg** **20 21 17.7 +0.6**
SKO eLg 20 21 17.8
comp=E,39nm,0.0s
SKO eLg 20 21 18.0
comp=N,166nm,0.6s
SKO Skopje 1.02 64 *i* Pg **Pg** **20 21 04.7 +0.9**
SKO *i* Sg **Sg** **20 21 17.6 +0.5**
FNA Florina 1.16 130 *e*Pg **Pg** **20 21 05.3 -1.2**
FNA *e*Sg **Sg** **20 21 22.2 +0.6**
STIP Stip 1.49 83 *e*Pg **Pn** **20 21 10.0 -0.4**
STIP *e*Sg **Sg** **20 21 31.0 -1.2**
GRG Griva 1.75 109 *e*Pb **Pn** **20 21 14.8 +0.7**

IDC 12 20:36:19.6±4.0, 089N×9745E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.6/18, mbtmp3.9/4, Error ellipse: s-maj=170.4km s-min=27.9km az=59.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.01**	**127**	P	P	20 44 21.1	+0.4
	0.4nm,0.7s,baz=297,slow=7.8,SNR=6.3						
SONM	**Songino Array**	**47.40**	**8**	P	P	20 44 55.7	+0.1
	0.4nm,0.4s,baz=185,slow=9.5,SNR=5.5						
MKAR	**Makanchi Array**	**47.60**	**346**	P	P	20 44 57.1	0.0
	1.6nm,0.5s,baz=159,slow=8.0,SNR=21						
ZAL	**Zalesovo**	**53.90**	**351**	P	P	20 45 44.4	-0.2
	1.6nm,0.4s,baz=301,slow=9.5,SNR=4.0						

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*LDG **12** 20:46:07.9±0.5, 2506N×9226E, h10km, Mb5.0/23, Ms3.9/5, Error ellipse: s-maj=26.6km s-min=10.7km az=145.0*
*MOS **12** 20:46:08.7±0.8, 2466N×9269E, h36km, mb5.1/56, MS4.1/10, Error ellipse: s-maj=7.9km s-min=4.1km az=123.0*
*ISCJB **12** 20:46:09.2±0.1, 2464N±002×9271E±002, h42km, mb4.8/121, MS4.2/33, Error ellipse: s-maj=3.6km s-min=2.4km az=23.0*
*IDC **12** 20:46:11.6±0.5, 2469N×9276E, h42km±3km, mb4.3/19, mb1 4.4/19, mb1mx4.4/22, mbtmp4.6/19, MS4.1/15, Ms1 4.1/15, ms1mx3.9/23, Error ellipse: s-maj=14.5km s-min=10.1km az=41.0*
*NEIC **12** 20:46:11.3±0.1, 2466N×9271E, mb4.9/64, MS4.3/5, Error ellipse: s-maj=4.5km s-min=2.7km az=215.0*
NEIC Felt at Sylhet, Bangladesh.
*BJI **12** 20:46:11.3, 2497N×9288E, h42km, mB4.9, mb4.8, ML4.7, Ms4.5, Msz4.3*
*HRVD **12** 20:46:11.3±0.4, 2459N×9286E, h33km±1km, MW5.0/69, Centroid moment Tensor Solution. LP body waves: s24,c29;Mantle waves: s69,c104; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.17±.21; $M_{\theta\theta}$-2.62±.14; $M_{\phi\phi}$ 1.45±.13; $M_{r\theta}$-0.15±.17; $M_{\theta\phi}$2.53±.12; $M_{r\phi}$~1.82±.18; Best double couple: M_o3.85900×10^{16} NP1:ϕ_s156.00000°,δ73.00000°,λ149.00000°. NP2: ϕ_s156.00000°,δ73.00000°,λ.00000°. Principal axes: T 3.7940, Plg34.0000°, Azm112.0000°; N 0.1300, Plg55.0000°, Azm309.0000°; P -3.9240, Plg8.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **12** 20:46:22.3, 2567N×9131E, h44km, mb5.1, MS4.3, India-Bangladesh border region*

ISC 12 20:46:11.7±0.1, 2471N±003×9274E±002, h44km, h44km±.5km:pP-P, n354, σ0s96/383, mb4.8/121, MS4.2/32, 26C-17D, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**1.16**	**318**	*i* P	**Pn**	**20 46 36.0**	**+4.6**
SHL				*e*S	**Sn**	**20 46 52.4**	**+6.4**
SHL				AML	AML	20 46 53.4	
	comp=E,313μm,0.3s						
SHL				AML	AML	20 46 53.6	
	comp=N,166μm,0.2s						
TURI	**Tura**	**2.34**	**291**	*ex*	x	20 47 04.0	
TURI				*ex*	x	20 48 18.5	
LKP	**Lekhapani**	**3.97**	**48**	*e*P	**Pn**	**20 47 11.0**	**+1.0**
LKP				*ex*	x	20 48 09.0	
SLGI	**Shiliguri**	**4.38**	**298**	*e*P	**Pn**	**20 47 15.1**	**-0.5**
CAL	**Calcutta**	**4.59**	**243**	*e*P	**Pn**	**20 47 31.8**	**+13**
CAL				*e*S	**Sn**	**20 48 19.9**	**+9.5**
CAL				AML	AML	20 49 14.7	
	comp=N,2μm,0.4s						
CAL				AML	AML	20 49 18.6	
	comp=E,2μm,0.6s						
LSA	**Lhasa**	**5.17**	**344**	P	**Pn**	**20 47 27.6**	**+1.1**
LSA				S	**Sn**	**20 48 26.4**	**+1.6**
LSA				Smax			
	comp=N,380nm,0.8s						
LSA				Smax			
	comp=E,870nm,0.7s						
LSA	**Lhasa**	**5.17**	**344**	*e*P	**Pn**	**20 47 27.7**	**+1.2**
LSA				*e*		20 48 29.1	
LSA				pmax	pmax		
	comp=Z,293nm,0.6s						
LSA	**Lhasa**	**5.17**	**344**	*e*Pn	**Pn**	**20 47 27.7**	**+1.2**
	comp=Z,293nm,0.6s						
LSA				*e*Sn	**Sn**	**20 48 29.1**	**+4.3**
BOK	**Bokaro**	**6.32**	**263**	*e*P	**Pn**	**20 47 41.7**	**-0.6**
BOK				*e*S	**Sn**	**20 48 45.0**	**-8.2**
GUN	**Gumba**	**6.93**	**299**	*e*Pn	**Pn**	**20 47 51.4**	**+0.7**
GUN				*e*Sn	**Sn**	**20 49 06.2**	**-2.1**
	comp=Z,1μm,0.7s						
PKI	**Pulchoki**	**7.18**	**295**	*e*Pn	**Pn**	**20 47 53.7**	**-0.4**
PKI				*e*Sn	**Sn**	**20 49 10.0**	**-4.3**
	comp=Z,369nm,0.5s						
KKN	**Kakani**	**7.37**	**296**	*e*Pn	**Pn**	**20 47 56.1**	**-0.6**
KKN				*e*Sn	**Sn**	**20 49 15.1**	**-3.8**
	comp=Z,834nm,0.6s						
DMN	**Daman**	**7.44**	**294**	*e*Pn	**Pn**	**20 47 57.1**	**-0.6**
DMN				*e*Sn	**Sn**	**20 49 16.6**	**-4.2**
	comp=Z,543nm,0.6s						
GKN	**Gorkha**	**7.97**	**296**	*e*Pn	**Pn**	**20 48 04.2**	**-0.8**
GKN				*e*Sn	**Sn**	**20 49 29.7**	**-4.1**
	comp=Z,498nm,0.3s						
CHRT	**Chiangrai**	**8.10**	**125**	⇓P	**Pn**	**20 48 06.0**	**-0.7**
	comp=Z,163nm,1.3s						
CHTO	**Chiang Mai**	**8.22**	**134**	*e*P	**Pn**	**20 48 08.0**	**-0.4**
CHTO				*e*		20 49 39.4	
CHTO				pmax	pmax		
	comp=Z,13nm,0.6s						
CHTO	**Chiang Mai**	**8.22**	**134**	*e*Pn	**Pn**	**20 48 08.0**	**-0.4**
	comp=Z,13nm,0.6s						
CHTO				*e*Sn	**Sn**	**20 49 39.4**	**-0.5**
CM31	**Chiang Mai Arr**	**8.48**	**136**	*e*Pn	**Pn**	**20 48 09.9**	**-2.0**
	comp=Z,15nm,0.7s						
KOLN	**Koldanda**	**8.76**	**292**	*e*Pn	**Pn**	**20 48 14.5**	**-1.2**
KOLN				*e*Sn	**Sn**	**20 49 47.3**	**-5.7**
	comp=Z,228nm,0.3s						
KMI	**Kunming**	**9.09**	**85**	P	**Pn**	**20 48 22.0**	**+1.8**
KMI				PP		20 48 32.6	
KMI				XP		20 48 34.5	
KMI				PPP		20 48 39.7	
KMI				S	**Sn**	**20 50 02.8**	**+1.7**
KMI				SS		20 50 16.1	
KMI				SSS		20 50 29.3	
KMI				AMB	AMB		
	comp=Z,18nm,1.5s						
KMI				AMB	AMB		
	comp=Z,243nm,4.8s						
KMI				LR	LR		
	comp=N,3μm,15.2s						
KMI				LR	LR		
	comp=E,2μm,15.2s						
KMI				LR	LR		
	comp=Z,2μm,16.6s						
NANT	**Nan**		**9.45 127**	P	**Pn**	**20 48 26.5**	**+1.4**
ALBI	**Allahabad**		**9.94 276**	*e*P	**Pn**	**20 48 28.5**	**-3.3**
BLSP	**Bilaspur**		**10.08 257**	*e*P	**Pn**	**20 48 40.0**	**+6.3**
BLSP				*e*S	**Sn**	**20 50 20.0**	**-5.4**
VIS	**Vishakhapatnam**		**11.20 233**	*e*P	**Pn**	**20 48 46.5**	**-2.6**
VIS				*e*S	**Sn**	**20 50 39.7**	**-13**
NST	**Nakhon Sawan**		**11.35 141**	P	**Pn**	**20 48 48.4**	**-2.8**
CD2	**Chengdu**		**11.54 55**	*e*P	**Pn**	**20 48 52.4**	**-1.4**
CD2				PP		20 49 01.7	
CD2				XP		20 49 07.5	
CD2				S	**Sn**	**20 50 57.6**	**-3.6**
CD2				SS		20 51 11.7	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CD2				AMB	AMB		
	comp=Z,40nm,6.4s						
CD2				LR	LR		
	comp=N,1μm,11.6s						
CD2				LR	LR		
	comp=Z,1μm,16.2s						
JBP	**Jabalpur**		**11.77 265**⇑	*e*P	**Pn**	**20 48 56.6**	**-0.3**
JBP				*ex*	x	20 49 08.9	
	comp=Z,147nm,1.6s						
JBP				*i* x	x	20 51 01.0	
GYA	**Guiyang**		**12.69 79**⇑	*i* P	**Pn**	**20 49 08.3**	**-1.1**
GYA				AP		20 49 16.4	
GYA				XP		20 49 23.1	
GYA				S	**Sn**	**20 51 24.4**	**-4.8**
GYA				AMB	AMB		
	comp=Z,30nm,1.0s						
GYA				AMB	AMB		
	comp=Z,150nm,6.6s						
GYA				LR	LR		
	comp=N,550nm,10.9s						
GYA				LR	LR		
	comp=E,570nm,12.1s						
GYA				LR	LR		
	comp=Z,640nm,12.1s						
PBA	**Port Blair**		**12.98 180**	*ex*	x	20 48 55.6	
PBA				*ex*	x	20 49 03.4	
NGP	**Nagpur**		**13.10 257**	*e*P	**Pn**	**20 49 12.9**	**-2.2**
NGP				*e*S	**Sn**	**20 51 24.4**	**-15**
NGP				AML	AML	20 53 20.5	
	comp=N,45nm,0.5s						
NGP				AML	AML	20 53 20.6	
	comp=E,32nm,0.4s						
BHPL	**Bhopal**		**14.08 267**	*e*P	**Pn**	**20 49 26.0**	**-2.5**
NDI	**New Delhi**		**14.43 289**	*e*P	**Pn**	**20 49 32.0**	**-1.2**
NDI				*ex*	x	20 52 00.0	
LZH	**Lanzhou**		**14.83 38**	P	**Pn**	**20 49 36.3**	**-2.1**
LZH				AP	pP	20 49 44.4	-10
LZH				PP		20 49 46.8	
LZH				XP	sP	20 49 51.0	-8.6
LZH				*e*S	**Sn**	**20 52 20.1**	**-1.4**
LZH				XS	sS	20 52 32.0	-23
LZH				SS		20 52 37.0	
LZH				AMB	AMB		
	comp=Z,130nm,1.2s						
LZH				AMB	AMB		
	comp=Z,330nm,4.2s						
LZH				LR	LR		
	comp=E,2μm,12.5s						
LZH				LR	LR		
	comp=Z,3μm,17.0s						
AKL	**Akola**		**15.05 258**	*e*P	**Pn**	**20 49 40.0**	**-1.3**
AKL				*i* S	**S**	**20 52 24.0**	**-19**
AKL				AML	AML	20 54 15.5	
	comp=N,33nm,0.8s						
AKL				AML	AML	20 54 18.0	
	comp=E,32nm,0.2s						
HYB	**Hyderabad**		**15.09 244**	*i* P	**Pn**	**20 49 39.0**	**-2.9**
HYB				*e*		20 49 45.0	
HYB				*e*		20 52 12.0	
HYB				*e*S	**S**	**20 52 25.0**	**-18**
HYB	**Hyderabad**		**15.09 244**	*e*P	**Pn**	**20 49 39.0**	**-2.9**
HYB				*e*S	**S**	**20 52 46.0**	**+2.5**
SMLA	**Simla**		**15.17 298**	*ex*	x	20 49 39.4	
SMLA				*ex*	x	20 52 20.8	
GTA	**Gaotai**		**15.83 20**	P	**Pn**	**20 49 47.8**	**-3.6**
GTA				AP	pP	20 49 56.3	-8.7
GTA				XP	sP	20 50 03.2	-7.5
GTA				S	S	20 52 38.0	-20
GTA				XS	sS	20 52 51.4	-24
GTA				PCP	PcP	20 54 50.7	+2.4
GTA				SCP	ScP	20 58 20.5	+1.5
GTA				PCS	PcS	20 58 24.8	+1.0
GTA				SCS	ScS	21 01 56.6	-1.0
GTA				AMB	AMB		
	comp=Z,17nm,1.3s						
GTA				AMB	AMB		
	comp=Z,74nm,5.6s						
GTA				LR	LR		
	comp=N,1μm,16.0s						
GTA				LR	LR		
	comp=E,1μm,13.0s						
GTA				LR	LR		
	comp=Z,2μm,16.1s						
AJM	**Ajmer**		**16.43 280**	*e*P	**Pn**	**20 49 55.7**	**-3.2**
AJM				*ex*	x	20 52 46.0	
AJM				AML	AML	20 52 48.0	
	comp=E,31nm,0.5s						
AJM				AML	AML	20 52 48.0	
	comp=N,34nm,0.5s						
DLH	**Dalhousie**		**16.66 302**	*e*P	**Pn**	**20 50 04.0**	**+2.1**
QIZ	**Qiongzhong**		**16.84 106**	P	**Pn**	**20 50 05.2**	**+1.0**
QIZ				AP	pP	20 50 15.0	-1.3
QIZ				S	**S**	**20 53 07.0**	**-12**
QIZ				XS	sS	20 53 21.7	-14
QIZ				SS		20 53 28.4	
QIZ				AMB	AMB		
	comp=Z,69nm,1.4s						
QIZ				AMB	AMB		
	comp=Z,347nm,4.2s						
QIZ				LR	LR		
	comp=E,798nm,13.8s						
QIZ				LR	LR		
	comp=Z,1μm,14.4s						
QIZ	**Qiongzhong**		**16.84 106**	*e*Pn	**Pn**	**20 50 04.7**	**+0.5**
	comp=Z,89nm,1.3s						
XAN	**Xi'an**		**16.87 53**	P	**Pn**	**20 50 01.2**	**-3.4**
XAN				PP		20 50 21.1	
XAN				S	**S**	**20 53 12.6**	**-7.2**
XAN				AMB	AMB		
	comp=Z,156nm,2.5s						
XAN				LR	LR		
	comp=N,584nm,20.7s						
XAN				LR	LR		
	comp=E,361nm,16.6s						
XAN				LR	LR		
	comp=Z,840nm,22.5s						
KAD	**Karad**		**18.81 251**	*e*P	**Pn**	**20 50 25.1**	**-3.3**
KAD				*ex*	x	20 53 37.9	
GZH	**Guangzhou**		**18.91 91**	P	**Pn**	**20 50 28.8**	**-0.7**
GZH				S	**S**	**20 54 00.0**	**-1.0**
GZH				LR	LR		
	comp=N,306nm,16.5s						
GZH				LR	LR		
	comp=E,1μm,16.5s						
GZH				LR	LR		
	comp=Z,1μm,15.9s						
CHCP	**Chirah Chowk**		**19.18 302**	P	**Pn**	**20 50 30.6**	**-2.1**
WMQ	**Urumqi**		**19.51 349**	P	**Pn**	**20 50 37.0**	**+0.3**
WMQ				AP	pP	20 50 47.0	+1.3
WMQ				PP		20 50 57.0	
WMQ				S	**S**	**20 54 09.0**	**-4.1**
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s						
WMQ				AMB	AMB		
	comp=Z,104nm,4.0s						
WMQ				LR	LR		
	comp=N,495nm,5.0s						
WMQ				LR	LR		
	comp=E,1μm,6.0s						
WMQ				LR	LR		
	comp=Z,615nm,5.0s						
WHN	**Wuhan**		**20.00 68**⇓	*i* P	**Pn**	**20 50 45.2**	**+2.8**
WHN				LR	LR		
	comp=Z,2μm,18.1s						
CEP	**Cherat**		**20.29 301**	P	**P**	**20 50 44.3**	**+0.7**
CEP				S	**S**	**20 54 22.0**	**-6.6**
SBDP	**Sheikh Budin**		**20.68 296**	P	**P**	**20 50 48.4**	**+0.5**
PALK	**Pallekele**		**20.82 216**	*e*P	**P**	**20 50 49.4**	**+0.1**
	comp=Z,68nm,1.4s						
BTO	**Baotou**		**21.45 38**	*e*P	**P**	**20 50 54.7**	**-1.5**
BTO				S	**S**	**20 54 42.9**	**-8.7**
BTO				LR	LR		
	comp=N,301nm,11.2s						
BTO				LR	LR		
	comp=E,344nm,18.0s						
IPM	**Ipoh**		**21.63 157**	P	**P**	**20 50 57.1**	**-1.0**
HHC	**Hu-ho-hao-te**		**22.50 40**	*e*P	**P**	**20 51 05.7**	**-1.6**
HHC				AP		20 51 17.1	
HHC				XP	sP	20 51 22.7	-0.9
HHC				PP		20 51 34.7	
HHC				PCP	PcP	20 55 01.0	+0.9
HHC				S	**S**	**20 55 05.2**	**-6.4**
HHC				XS	sS	20 55 21.7	-7.7
HHC				SS		20 55 47.4	
HHC				SCP	ScP	20 58 33.6	-0.4
HHC				PCS	PcS	20 58 37.5	-1.4
HHC				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.2						
HHC				AMB	AMB		
	comp=Z,170nm,5.4s						
HHC				LR	LR		
	comp=N,563nm,12.3s,MS4.3						
HHC				LR	LR		
	comp=E,495nm,15.5s,MS4.3						
HHC				LR	LR		
	comp=Z,1μm,16.7s,MS4.4						
PSI	**Prapat**		**22.58 164**	P	**P**	**20 51 09.6**	**+1.4**
	comp=Z,5.5nm,0.5s,mb4.3,baz=348,slow=14,SNR=7.0						
AAK	**Ala-Archa**		**23.37 324**⇑	*i* P	**P**	**20 51 17.3**	**+0.9**
AAK				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.1						
AAK	**Ala-Archa**		**23.37 324**	*e*pP	pP	20 51 29.1	+1.8
FRU	**Bishkek**		**23.45 325**	*e*P	**P**	**20 51 18.5**	**+1.4**
FRU				*e*		20 51 24.0	
QZH	**Quanzhou**		**23.45 84**	P	**P**	**20 51 15.1**	**-2.1**
QZH				S	**S**	**20 55 31.0**	**+3.8**
QZH				LR	LR		
	comp=N,2μm,10.3s						
QZH				LR	LR		
	comp=E,530nm,6.4s						
QZH				LR	LR		
	comp=Z,3μm,18.2s						
MKAR	**Makanchi Array**		**23.57 342**	P	**P**	**20 51 18.2**	**0.0**
	comp=Z,13nm,0.7s,mb4.5,baz=162,slow=9.1,SNR=91						
MKAR				pP		20 51 29.7	
	comp=Z,13nm,0.5s,baz=158,slow=10,SNR=13						
TIA	**Tai'an**		**23.87 56**	*e*P	**P**	**20 51 19.6**	**-1.4**
TIA				AMB	AMB		
	comp=Z,39nm,1.0s,mb4.8						
NJ2	**Nanjing**		**24.07 66**	*e*P	**P**	**20 51 22.8**	**0.0**
NJ2				AP		20 51 34.3	
NJ2				S	**S**	**20 55 34.0**	**-3.2**
NJ2				XS	sS	20 55 54.0	-2.8
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,630nm,4.5s						
NJ2				LR	LR		
	comp=N,3μm,20.8s						
NJ2				LR	LR		
	comp=E,980nm,12.2s						
NJ2				LR	LR		
	comp=Z,280nm,31.6s						
KGM	**Kluang**		**24.77 154**	P	**P**	**20 51 29.1**	**0.0**
BJT	**Baijiatuau**		**24.89 47**	*e*P	**P**	**20 51 30.5**	**+0.3**
BJT				pmax	pmax		
	comp=Z,87nm,1.4s						
BJT	**Baijiatuau**		**24.89 47**	*e*P	**P**	**20 51 30.5**	**+0.3**
	comp=Z,87nm,1.4s,mb5.1						
BJI	**Beijing**		**24.90 46**	*e*P	**P**	**20 51 30.7**	**+0.3**
BJI				AP		20 51 42.4	
BJI				S	**S**	**20 55 52.2**	**+1.6**
BJI				AMB	AMB		
	comp=Z,21nm,1.8s,mb4.4						
BJI				LR	LR		
	comp=N,459nm,19.3s						
BJI				LR	LR		
	comp=E,383nm,11.0s						
BJI				LR	LR		
	comp=Z,469nm,24.4s						
SONM	**Songino Array**		**25.49 22**	P	**P**	**20 51 36.3**	**+0.6**
	comp=Z,23nm,0.7s,mb4.8,baz=204,slow=9.5,SNR=116						
SONM				ScP	ScP	20 58 43.8	+1.7
	comp=Z,0.9nm,1.0s,baz=204,slow=3.2,SNR=4.5						
SONM				LR	LR	21 02 53.0	
	comp=Z,946nm,20.3s,MS4.3,baz=204,slow=39						
ULN	**Ulaanbaatar**		**25.74 23**	*e*P	**P**	**20 51 38.3**	**+0.3**
ULN				pmax	pmax		
	comp=Z,34nm,0.9s,mb4.9						
ULN	**Ulaanbaatar**		**25.74 23**	*e*P	**P**	**20 51 38.2**	**+0.2**
	comp=Z,34nm,0.9s,mb4.9						
SSE	**Sheshan**		**25.89 69**	P	**P**	**20 51 40.2**	**+0.9**
SSE				S	**S**	**20 56 05.1**	**-1.1**
SSE				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
SSE				LR	LR		
	comp=N,623nm,20.4s,MS4.1						
SSE				LR	LR		
	comp=E,134nm,20.5s,MS4.1						
SSE				LR	LR		
	comp=Z,390nm,16.4s,MS4.0						
YHNB	**Yeheng**		**26.00 84**	*e*P	**P**	**20 51 40.7**	**+0.4**
NACB	**Ninganchiao**		**26.25 85**	*e*P	**P**	**20 51 43.6**	**+0.9**
ZAK	**Zakamensk**		**26.90 15**	*e*P	**P**	**20 51 48.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.5						
ABRA	**Dolores**		**26.98 100**	*e*P	**P**	**20 51 50.6**	**+1.5**
APYP	**Conner**		**27.38 99**	*e*P	**P**	**20 51 53.5**	**+0.7**
MOY	**Mondy**		**27.65 11**	*e*P	**P**	**20 51 56.6**	**+1.4**
KURK	**Kurchatov**		**28.16 341**	*e*P	**P**	**20 51 59.0**	**-0.8**
KURK				*e**PP	pP	20 52 12.6	+1.0
DL2	**Dalian**		**28.20 53**	P	**P**	**20 51 59.9**	**-0.1**
DL2				AP	pP	20 52 11.6	-0.2
DL2				*e*S	**S**	**20 56 43.0**	**+0.4**
DL2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
DL2				LR	LR		
	comp=N,250nm,19.2s,MS4.0						
DL2				LR	LR		
	comp=E,310nm,19.2s,MS4.0						
DL2				LR	LR		
	comp=Z,240nm,17.5s,MS3.8						
TLY	**Talaya**		**28.20 14**⇑	*e*P	**P**	**20 52 01.2**	**+1.2**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
CAUP	**Cauayan**		**28.21 100**	*e*P	**P**	**20 52 05.7**	**+5.5**
BALP	**Baler**		**28.44 103**	*e*P	**P**	**20 52 02.9**	**+0.7**
ZAL	**Zalesovo**		**29.79 351**	P	**P**	**20 52 14.9**	**+0.8**
	comp=Z,3.5nm,0.7s,mb4.2,baz=312,slow=6.8,SNR=20						
ZAL				pP	pP	20 52 27.2	+1.1
	comp=Z,11nm,0.5s,baz=307,slow=9.1,SNR=17						
ZAL				LR	LR	21 06 09.7	
	comp=Z,380nm,19.8s,MS4.0,baz=304,slow=40						
ZAL	**Zalesovo**		**29.79 351**	P	**P**	**20 52 15.0**	**+0.8**
ZAL				*PP	pP	20 52 27.2	+1.2
ZAL	**Zalesovo**		**29.79 351**	P	**P**	**20 52 14.9**	**+0.8**
ZAL				pP	pP	20 52 27.2	+1.1
ZAL				LR	LR	21 06 09.7	
SNY	**Shenyang**		**30.70 49**	⇑P	**P**	**20 52 21.6**	**-0.6**
SNY				AP	pP	20 52 30.8	-3.3
SNY				XP	sP	20 52 35.2	-4.2
SNY				PP	PP	20 53 20.8	-11
SNY				S	**S**	**20 57 20.5**	**-1.4**
SNY				XS	sS	20 57 33.7	-8.0
SNY				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.7						
SNY				AMB	AMB		
	comp=Z,110nm,5.5s						
SNY				LR	LR		
	comp=N,281nm,16.8s,MS4.2						
SNY				LR	LR		
	comp=E,372nm,15.6s,MS4.2						
SNY				LR	LR		
	comp=Z,406nm,14.4s,MS4.2						
NVS	**Novosibirsk**		**30.91 349**	*e*P	**P**	**20 52 23.4**	**-0.7**
NVS				*e*S	**S**	**20 57 23.2**	**-2.0**
NVS				pmax	pmax		
	comp=N,20nm,1.3s						
NVS				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.9						
NVS				smax			
	comp=N,27nm,2.0s						

KRAR Krasnoyarsk 31.27 0⇓ *i*P P **20 52 28.4 +1.1**
KRAR pmax pmax
comp=Z,21nm,1.9s,mb4.6
TSM Tawau 31.57 126 P P **20 52 30.7 +0.8**
JOW Kunigami 32.01 78 P P **20 52 32.8 -0.9**
comp=Z,31nm,0.4s,mb5.5,baz=283,slow=6.2,SNR=78
CN2 Changchun 32.77 46 *e*P P **20 52 40.5 +0.1**
CN2 *e*AP pP 20 52 52.4 +0.1
CN2 *e*S S **20 57 53.3 -0.9**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.3
CN2 LR LR
comp=E,300nm,15.0s,MS4.3
CN2 LR LR
comp=Z,300nm,15.0s,MS4.1
BVAR Borovoye Array 32.92 335 P P **20 52 41.9 +0.1**
comp=Z,2.6nm,0.6s,mb4.3,baz=142,slow=11,SNR=19
BVAR LR LR 21 07 56.5
comp=Z,512nm,18.8s,MS4.3,baz=319,slow=40
BVAR Borovoye Array 32.92 335 P P **20 52 41.9 +0.1**
BVAR LR LR 21 07 56.5
MDJ Mudanjiang 35.83 47 P P **20 53 06.4 -0.5**
MDJ AP pP 20 53 17.5 -1.4
MDJ XP sP 20 53 22.2 -1.9
MDJ S S **20 58 41.0 -0.4**
MDJ XS sS 20 58 58.7 -2.7
MDJ SCS ScS 21 03 21.1 -0.3
MDJ AMB AMB
comp=Z,10.0nm,1.2s,mb4.6
MDJ AMB AMB
comp=Z,63nm,6.0s
MDJ LR LR
comp=N,169nm,19.8s,MS3.9
MDJ LR LR
comp=E,93nm,18.1s,MS3.9
MDJ LR LR
comp=Z,119nm,18.1s,MS3.7
VLA Vladivostok 36.91 50 *i*P P **20 53 14.9 -1.2**
VLA *e* pP 20 53 28.2 +0.1
VLA *e* 20 54 39.2
VLA *e*S S **20 58 56.2 -1.7**
VLA pmax pmax
comp=Z,83nm,1.4s,mb5.4
VLA MLR MLR
comp=Z,300nm,16.4s,MS4.2
SVE Sverdlovsk 39.58 333 *e*P P **20 53 38.8 +0.3**
SVE *e* pP 20 53 49.0 -1.6
SVE *e* 20 55 46.0
SVE pmax pmax
comp=Z,40nm,1.5s,mb4.9
SVE MLR MLR
comp=N,200nm,12.0s,MS4.3
SVE MLR MLR
comp=E,200nm,12.0s,MS4.3
SVE MLR MLR
comp=Z,200nm,12.0s,MS4.2
ARU Arti 40.21 331⇑ *i*P P **20 53 43.3 -0.5**
ARU *e* 20 55 16.0
ARU *e*PPP 20 55 39.5
ARU *e*S S **20 59 44.6 -3.1**
ARU *e*SS SS 21 02 45.1 -1.9
ARU pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
ARU MLR MLR
comp=Z,300nm,18.5s,MS4.2
ARU MLR MLR
comp=N,100nm,19.0s,MS4.2
ARU MLR MLR
comp=E,300nm,22.0s,MS4.2
MIB Mutribah 40.48 288 *e*P P **20 53 46.5 +0.5**
MIB AMb AMB 20 53 48.6
comp=Z,17nm,0.7s,mb4.9
MAJO Matsushiro 40.52 62 *e*P P **20 53 45.8 -0.6**
MAJO pmax pmax
comp=Z,26nm,0.9s,mb4.9
MAJO Matsushiro 40.52 62 *e*P P **20 53 45.8 -0.6**
comp=Z,26nm,0.9s,mb4.9
MAT Matsushiro 40.52 62 P P **20 53 45.7 -0.7**
MAT S S **20 59 59.0 +6.6**
MJAR Matsushiro Arr 40.53 62 P P **20 53 46.1 -0.3**
comp=Z,7.2nm,0.5s,mb4.6,baz=269,slow=9.0,SNR=60
MJAR pP pP 20 53 58.4 -0.2
comp=Z,7.3nm,0.7s,baz=268,slow=9.4,SNR=9.4
MJAR PcP PcP 20 55 48.7 +0.5
comp=Z,2.4nm,1.0s,baz=303,slow=3.0,SNR=4.1
MJAR LR LR 21 12 01.7
comp=Z,349nm,21.7s,MS4.2,baz=275,slow=38
MJAR Matsushiro Arr 40.53 62 P P **20 53 46.2 -0.2**
MJAR *PP pP 20 53 58.4 -0.1
MJAR 20 55 48.7
NAY Al-Naaiem 40.61 287 *e*P P **20 53 48.8 +1.7**
NAY AMb AMB 20 53 49.6
comp=Z,11nm,0.7s,mb4.6
HABR Khabarovsk 40.72 43⇑ *e*P P **20 53 47.7 -0.3**
HABR *e*S S **20 59 53.4 -1.9**
HABR pmax pmax
comp=Z,20nm,1.2s,mb4.6
RST Umm Al-Ruwaisa 40.80 287 *e*P P **20 53 48.8 +0.1**
RST AMb AMB 20 53 50.3
comp=Z,27nm,0.6s,mb5.1
JHJ Hachijo jima 2 41.74 67 LR LR 21 12 52.1
comp=Z,175nm,18.4s,MS4.0,baz=85,slow=38
GNI Garni 42.82 303 P P **20 54 00.4 -4.8**
GNI pmax pmax
comp=Z,9.0nm,0.9s
GNI Garni 42.82 303 P P **20 54 00.3 -4.9**
comp=Z,9.5nm,0.9s,mb4.5
SOKR Solikamsk 42.90 334 *e*P P **20 54 07.1 +1.3**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,370nm,18.0s,MS4.3
ASAJ Asahikawa 44.71 52 P P **20 54 20.9 +0.6**
comp=Z,11nm,0.6s,mb4.9,baz=261,slow=10,SNR=19
YAK Yakutsk 44.82 24 *e*P P **20 54 20.9 -0.3**
YAK *e* pP 20 54 32.9 -0.6
YAK pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
YAK pmax pmax
comp=N,4.0nm,1.2s
YAK pmax pmax
comp=E,5.0nm,1.5s
YAK pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK MLR MLR
comp=Z,325nm,18.0s,MS4.3
YAK MLR MLR
comp=N,191nm,19.0s,MS4.2
YAK MLR MLR
comp=E,163nm,15.0s,MS4.2
YAK Yakutsk 44.82 24 *e*P P **20 54 19.8 -1.4**
comp=E,17nm,0.5s,mb5.1
KIV Kislovodsk 44.83 308 *ce*P P **20 54 22.3 +1.0**
KIV *i* *PP pP 20 54 34.3 +0.8
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.7
KIV Kislovodsk 44.83 308 *e*P P **20 54 22.0 +0.7**
comp=Z,14nm,0.6s,mb5.0
KIV *ep*P pP 20 54 35.4 +1.9
KIV *ep*P pP 20 54 35.6 +2.1
YSS Yuzh-Sakhalins 45.31 48⇓ *e*P P **20 54 24.5 -0.7**
YSS *e* pP 20 54 35.0 -2.4
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.1
YSS Yuzh-Sakhalins 45.31 48 *e*P P **20 54 25.3 +0.2**
MALT Malatya 47.62 300⇑ *i*P P **20 54 45.4 +2.1**
MALT Malatya 47.62 300 *e*P P **20 54 41.6 -1.7**
VRSR Storozhevoye 48.47 317 *e*P P **20 54 49.5 -0.3**
VRSR pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
VRSR pmax pmax
comp=N,4.0nm,1.8s
VRSR pmax pmax
comp=E,7.0nm,0.8s
OBN Obninsk 50.87 322 *ce*P P **20 55 07.5 -0.5**
OBN *e*PP pP 20 55 20.6 +0.1
OBN *e* 21 02 42.2
OBN pmax pmax
comp=Z,32nm,1.7s,mb5.0
OBN MLR MLR
comp=Z,100nm,21.0s,MS3.8
OBN Obninsk 50.87 322 P P **20 55 07.7 -0.3**
comp=Z,5.2nm,0.4s,mb4.8
KLMR Klimovskoe 51.02 330 *e*P P **20 55 07.6 -1.6**
KLMR pmax pmax
comp=Z,20nm,1.4s,mb4.8
EIL Elat 51.20 289 *e*P P **20 55 10.2 -0.3**
comp=Z,94nm,0.8s,mb5.8
EIL *ep*P pP 20 55 21.8 -1.2
BR131 Keskin Array S 51.33 302 *e*P P **20 55 10.1 -1.4**
BR131 *ep*P pP 20 55 24.1 +0.2
BRTR Keskin Array B 51.33 302 P P **20 55 11.4 -0.1**
comp=Z,0.4nm,0.4s,mb3.7,baz=133,slow=9.9,SNR=6.7
BRTR pP pP 20 55 24.1 +0.1
comp=Z,1.2nm,0.5s,baz=118,slow=8.8,SNR=8.0
BRTR LR LR 21 21 45.0
comp=Z,42nm,19.5s,MS3.5,baz=95,slow=42
BRTR Keskin Array B 51.33 302 P P **20 55 11.4 -0.1**
BRTR *PP pP 20 55 24.1 +0.1
FITZ Fitzroy Crossi 53.28 140 *e*P P **20 55 25.5 -0.4**
comp=Z,16nm,1.5s,mb4.7
AKASG Malin Array Be 54.64 316 P P **20 55 35.3 -0.6**
comp=Z,5.1nm,0.5s,mb4.8,baz=83,slow=6.4,SNR=29
AKASG pP pP 20 55 47.5 -0.9
comp=Z,3.8nm,0.5s,baz=76,slow=7.1,SNR=6.7
AKASG LR LR 21 24 41.5
comp=Z,89nm,19.6s,MS3.8,baz=105,slow=42
AKASG Malin Array Be 54.64 316 P P **20 55 35.3 -0.6**
AKASG *PP pP 20 55 47.5 -0.9
AKBB Malin Array Si 54.64 316 *e*P P **20 55 35.3 -0.6**
AKBB *e**PP pP 20 55 47.5 -0.9
CFR Carcaliu 55.27 309⇑ *i*P P **20 55 41.1 +0.7**
JOF Joensuu 55.34 331 *ep* P **20 55 39.9 -1.1**
comp=Z,12nm,0.6s,mb5.1
HARR Harsova 55.43 308⇓ *i*P P **20 55 42.3 +0.7**
VRI Vrincioaia 56.24 310⇓ *i*P P **20 55 48.8 +1.4**
PET Petropavlovsk 56.25 42⇑ *e*P P **20 55 49.2 +1.7**
PET pmax pmax
comp=Z,24nm,1.3s,mb5.1
PLOR Plostina 56.30 310⇓ *i*P P **20 55 49.5 +1.7**
VSU Vasula 56.77 325 *di*P P **20 55 50.9 -0.3**
MLR Muntele Rosu 56.80 309⇓ *i*P P **20 55 53.0 +1.6**
BURAR Bucovina Array 57.23 312⇑ *i*P P **20 55 54.9 +0.5**
KAF Kangasniemi 57.46 329 *ep* P **20 55 55.5 -0.6**
comp=Z,3.2nm,0.5s,mb4.6,baz=98,slow=7.0
KAF Kangasniemi 57.46 329 *e*P P **20 55 55.5 -0.6**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
FINES FINESS Array B 57.48 328 P P **20 55 55.7 -0.5**
comp=Z,3.6nm,0.6s,mb4.6,baz=106,slow=7.7,SNR=37
FINES pP pP 20 56 07.8 -0.9
comp=Z,4.9nm,0.6s,baz=119,slow=7.4,SNR=8.6
FINES LR LR 21 23 12.4
comp=Z,149nm,20.7s,MS4.1,baz=253,slow=39
FINES FINESS Array B 57.48 328 P P **20 55 55.7 -0.5**
FINES *PP pP 20 56 07.9 -0.9
SUW Suwalki 58.47 320 *e*P P **20 56 02.5 -0.6**
SUW *e* pP 20 56 15.1 -0.6
SUW L 21 23 42.9
comp=Z,0.2nm,22.7s
SUW Suwalki 58.47 320 *e*P P **20 56 02.5 -0.6**
comp=Z,38nm,0.8s,mb5.5
SUW *e*P 20 56 02.5
SUW *ep*P pP 20 56 14.9 -0.8
SUW *e* pP 20 56 15.1 -0.6
KEV Kevo 58.68 338 *ep* P **20 56 03.5 -1.1**
comp=Z,8.5nm,0.9s,mb4.8
KEV Kevo 58.68 338 *e*P P **20 56 03.5 -1.1**
KEV pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KWP Kalwaria 58.82 314 *e*P P **20 56 06.2 +0.7**
KWP *e* pP 20 56 18.5 +0.3
KWP L 21 20 50.7
comp=Z,0.2nm,30.1s
KWP Kalwaria 58.82 314 *e*P P **20 56 05.3 -0.2**
KWP *e**PP pP 20 56 17.2 -1.0
KWP *e* pP 20 56 18.5 +0.3
KWP pmax pmax
comp=Z,35nm,0.8s,mb5.4
KWP Kalwaria 58.82 314 *e*P P **20 56 05.2 -0.3**
comp=Z,35nm,0.8s,mb5.4
KWP *e*P 20 56 06.2
KWP *ep*P pP 20 56 17.2 -1.0
KWP *e* pP 20 56 18.5 +0.3
DRGR 58.97 311⇓ *i*P P **20 56 07.8 +1.2**
VTS Vitosha 58.99 306⇑ *i*P P **20 56 07.4 +0.6**
KOLS Kolonicke sedl 59.14 314 *e*P P **20 56 06.3 -1.4**
KOLS *ep*P pP 20 56 19.3 -1.1
ARCES ARCESS Array B 59.14 338 P P **20 56 07.5 -0.2**
comp=Z,2.5nm,0.7s,mb4.4,baz=95,slow=7.5,SNR=14
ARCES LR LR 21 24 16.2
comp=Z,236nm,19.6s,MS4.3,baz=266,slow=39
KMBO Kilima Mbogo 59.53 253 P P **20 56 12.2 +1.7**
comp=Z,0.9nm,0.5s,mb4.1,baz=76,slow=12,SNR=4.1
KMBO LR LR 21 19 56.2
comp=Z,168nm,18.6s,MS4.2,baz=95,slow=34
CRVS Cervenica-Dubn 59.67 314 *e*P P **20 56 12.8 +1.4**
CRVS *ep*P pP 20 56 24.7 +0.6
STHS Stebnicka Huta 59.78 314 *e*P P **20 56 12.1 -0.1**
STHS *e* pP 20 56 22.3 -2.6
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
STHS Stebnicka Huta 59.78 314 *e*P P **20 56 12.1 -0.1**
comp=Z,3.1nm,0.8s,mb4.4
STHS *e* pP 20 56 22.3 -2.6
BZS Buzias 59.83 310⇓ *i*P P **20 56 12.9 +0.4**
WRAB Tennant Creek 60.07 134 *e*P P **20 56 14.3 +0.1**
WRAB *e**PP pP 20 56 27.6 +0.7
WB2 Warramunga Arr 60.08 134 *e*P P **20 56 14.2 0.0**
KECS Kecovo 60.35 313 *e*P P **20 56 14.6 -1.5**
KECS *e* pP 20 56 28.3 -0.4
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KECS Kecovo 60.35 313 *e*P P **20 56 14.6 -1.5**
comp=Z,2.3nm,0.7s,mb4.3
KECS *e* pP 20 56 28.3 -0.4
NIE Niedzica 60.39 314 *e*P P **20 56 17.7 +1.3**
MUN Mundaring 60.66 157 *e*P P **20 56 17.9 -0.3**
OJC Ojcow 60.66 315 *e*P P **20 56 17.5 -0.7**
OJC *e**SP sP 20 56 30.6 -5.4
PSZ Piszkesteto 60.79 313⇑ *i*P P **20 56 20.2 +1.1**
PSZ Piszkesteto 60.79 313 *e*P P **20 56 19.2 +0.1**
PSZ *e**PP pP 20 56 31.8 0.0
PSZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
PSZ Piszkesteto 60.79 313 *e*P P **20 56 19.2 +0.1**
comp=Z,7.7nm,1.0s,mb4.8
PSZ *ep*P pP 20 56 31.8 0.0
KLBR Kellerberrin 60.88 156 *e*P P **20 56 19.0 -0.7**
comp=Z,60nm,1.5s,mb5.5
BILL Bilibino 61.17 24 P P **20 56 22.0 +0.3**
BILL *e* pP 20 56 32.9 -1.5
BILL 20 57 00.0
BILL pmax pmax
comp=Z,23nm,1.7s,mb5.0
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.3
VYHS Vyhne 61.44 313 *e*P P **20 56 23.5 0.0**
VYHS *ep*P pP 20 56 35.1 -1.1
VYHS Vyhne 61.44 313 *e*P P **20 56 23.5 0.0**
VYHS *e* pP 20 56 35.2 -1.0
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.4
VYHS Vyhne 61.44 313 *e*P P **20 56 23.5 0.0**
comp=Z,4.3nm,1.3s,mb4.4
VYHS *e* pP 20 56 35.2 -1.0
OKC Ostrava-Krasne 61.76 315 *e*P P **20 56 26.3 +0.7**
OKC *ep*P pP 20 56 38.1 -0.2
OKC AMS AMS 21 26 10.0
comp=Z,100nm,13.6s
OKC Ostrava-Krasne 61.76 315 *e*P P **20 56 26.3 +0.7**
OKC *ep*P pP 20 56 38.1 -0.2
PKSM Moragy 61.83 311⇑ *i*P P **20 56 26.4 +0.3**
GKP Gorka Klasztor 62.02 319 *e*P pP 20 56 39.9 -0.3
GKP *e* 20 56 52.2
GKP L 21 26 17.0
comp=Z,0.3nm,22.3s
MORC Moravsky Berou 62.15 315⇓ *i*P P **20 56 29.1 +0.8**
MORC Moravsky Berou 62.15 315 *e*P P **20 56 28.3 0.0**
MORC *e**PP pP 20 56 41.2 +0.2
MORC pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
MORC Moravsky Berou 62.15 315 *e*P P **20 56 28.2 0.0**
comp=Z,8.2nm,0.8s,mb4.9
MORC *ep*P pP 20 56 41.2 +0.2
ASPA Alice Springs 62.49 137 *e*P P **20 56 30.8 +0.3**
AS31 Alice Springs 62.49 137 *e*P P **20 56 30.8 +0.3**
AS31 *e*P 20 56 30.9
ASAR Alice Springs 62.49 137 P P **20 56 30.8 +0.3**
comp=Z,15nm,0.6s,mb5.3,baz=319,slow=6.9,SNR=441
ASAR pP pP 20 56 43.5 +0.3
comp=Z,8.3nm,0.6s,baz=321,slow=6.9,SNR=12
VRAC Vranov 62.82 314⇓ *i*P P **20 56 34.0 +1.3**
KSP Ksiaz 62.83 316 *e*P P **20 56 33.9 +1.1**
KSP *e* pP 20 56 45.9 +0.3
KSP L 21 26 24.2
comp=Z,0.5nm,24.1s
KSP Ksiaz 62.83 316 *e*P P **20 56 33.2 +0.4**
KSP *ep*P pP 20 56 45.3 -0.3
DPC Dobruska-Polom 62.87 316 *e*P P **20 56 33.9 +0.8**
DPC *ep*P pP 20 56 46.0 +0.2
DPC AMS AMS 21 26 30.0
comp=Z,200nm,16.0s
UPC Upice 63.05 316 *e*P P **20 56 35.1 +0.8**
UPC *ep*P pP 20 56 47.2 +0.2
TREC Trest 63.54 314 *e*P P **20 56 38.0 +0.5**
TREC AMS AMS 21 27 10.0
comp=Z,200nm,19.9s
PVCC Panska Ves 63.96 316 *e*P P **20 56 40.8 +0.5**
PVCC *ep*P pP 20 56 53.3 +0.3
PRU Pruhonice 64.05 315 *e*P P **20 56 41.5 +0.6**
PRU *ep*P pP 20 56 53.3 -0.4
PRU AMS AMS 21 26 10.0
comp=Z,200nm,23.6s
PERS Pernice 64.18 312 *e* P **20 56 41.8 +0.1**
PERS *i* pP 20 56 54.2 -0.3
RUE Ruedersdorf 64.19 318 *e*P P **20 56 41.9 +0.1**
comp=Z,17nm,0.7s,mb5.2
BOJS Bojanci 64.27 310 *e*P P **20 56 43.8 +1.4**
BOJS *e* pP 20 56 54.6 -0.5
BRG Berggiesshubel 64.31 316 *e*P P **20 56 43.0 +0.4**
comp=Z,10.0nm,0.7s,mb5.0
BRG Berggiesshubel 64.31 316 *e*P P **20 56 42.6 0.0**
comp=Z,6.1nm,0.7s,mb4.7
BRG *i* pP 20 56 55.4 0.0
comp=Z,8.7nm,0.7s
BRG
comp=N,261nm,23.3s
BRG
comp=E,124nm,25.4s
BRG
comp=Z,156nm,18.5s
BRG Berggiesshubel 64.31 316 *e*P P **20 56 42.6 0.0**
BRG *i* pP 20 56 55.3 0.0
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
BRG pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
BRG MLR MLR
comp=N,9μm,23.3s,MS5.8
BRG MLR MLR
comp=E,261nm,25.5s,MS5.8
BRG MLR MLR
comp=Z,124nm,18.5s
BRG Berggiesshubel 64.31 316 *e*P P **20 56 42.6 0.0**
comp=Z,6.1nm,0.7s,mb4.7
BRG *i* pP 20 56 55.4 0.0
BRG LR LR
comp=Z,160nm,18.5s,MS4.2
NB2 NORSAR Subarra 64.64 328 P P **20 56 43.6 -1.1**
comp=Z,12nm,0.8s,mb5.0,baz=84,slow=6.5
NOA NORSAR Array B 64.64 328 P P **20 56 43.8 -0.9**
comp=Z,6.0nm,0.8s,mb4.7,baz=84,slow=6.5,SNR=16
NOA pP pP 20 56 56.4 -1.1
comp=Z,7.5nm,0.7s,baz=85,slow=6.6,SNR=14
NOA LR LR 21 28 00.1
comp=Z,170nm,20.4s,MS4.2,baz=80,slow=39
NOA NORSAR Array B 64.64 328 P P **20 56 43.8 -0.9**
NOA *PP pP 20 56 56.4 -1.1
FBE Freiberg 64.67 317 *e*P P **20 56 45.4 +0.5**
comp=Z,20nm,1.2s,mb5.0
FBE *ep*P pP 20 56 58.0 +0.3
FORT Forrest 64.72 147 *e*P P **20 56 45.2 0.0**
comp=Z,8.8nm,0.5s,mb5.0
GEC2 GERESS Array S 64.77 314 *e*P P **20 56 45.8 +0.2**
comp=Z,18nm,1.1s,mb5.0
GEC2 pmax pmax
comp=Z,18nm,1.1s,mb5.0
GERES GERESS Array B 64.77 314 P P **20 56 46.1 +0.6**
comp=Z,7.4nm,0.6s,mb4.9,baz=78,slow=6.1,SNR=107
GERES pP pP 20 56 58.5 +0.2
comp=Z,13nm,0.6s,baz=78,slow=6.1,SNR=24
GERES LR LR 21 31 08.5
comp=Z,53nm,19.4s,MS3.7,baz=80,slow=42
GERES GERESS Array B 64.77 314 P P **20 56 46.1 +0.5**
GERES *PP pP 20 56 58.5 +0.2
KHC Kasperske Hory 64.80 315 *e*P P **20 56 46.0 +0.2**
KHC *ep*P pP 20 56 56.7 -1.9
KHC AMS AMS 21 27 50.0
comp=Z,200nm,21.2s
NAO01 NORSAR Array S 64.82 328 *e*P P **20 56 45.0 -0.9**
comp=Z,5.7nm,0.6s,mb4.8
NAO01 *ep*P pP 20 56 57.3 -1.3
CLL Collm 64.83 317⇑ P P **20 56 45.4 -0.6**
comp=Z,logA/T=0.9,mb4.7
CLL *i* *PP pP 20 56 58.5 -0.3
CLL *eS* S **21 05 30.0 +6.2**
CLL Collm 64.83 317⇑ *i*P P **20 56 45.4 -0.6**
comp=Z,9.0nm,1.1s,mb4.7
CLL *i* pP pP 20 56 58.5 -0.3
CLL *eS* S **21 05 30.0 +6.2**
CLL Collm 64.83 317⇑ *i*P P **20 56 45.4 -0.6**
CLL pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
WET Wettzell 65.25 315 *e*P P **20 56 49.0 +0.3**
comp=Z,9.0nm,0.9s,mb4.8
WET Wettzell 65.25 315 *e*P P **20 56 49.0 +0.3**
WET pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
TANN Tannenbergstha 65.31 316 *e*P P **20 56 49.3 +0.2**
comp=Z,9.0nm,0.9s,mb4.8
NKC Novy Kostel 65.35 316 *e*P P **20 56 49.8 +0.5**
NKC *ep*P pP 20 57 02.3 +0.2
WERN Wernitzgruen 65.38 316 *e*P P **20 56 49.7 +0.1**
comp=Z,8.0nm,0.9s,mb4.8
GUNZ Gunzen 65.40 316 *e*P P **20 56 50.1 +0.4**
comp=Z,17nm,1.0s,mb5.0
GUNZ *ep*P pP 20 57 02.6 +0.1
WERD Werda 65.40 316 *e*P P **20 56 50.0 +0.3**
comp=Z,12nm,1.1s,mb4.8
WERD *ep*P pP 20 57 02.5 0.0
ROTZ Rotzenmuhle 65.58 315 *e*P P **20 56 51.6 +0.8**
comp=Z,19nm,1.0s,mb5.1
MANZ Manzenberg 65.61 316 *e*P P **20 56 51.6 +0.6**
comp=Z,10.0nm,1.1s,mb4.8
MOX Moxa 65.80 316 *e*P P **20 56 52.5 +0.2**
comp=Z,8.0nm,0.9s,mb4.8
MOX *ep*P pP 20 57 04.9 -0.2
BSEG Bad Segeberg 66.04 320 *e*P P **20 56 54.4 +0.6**
comp=Z,13nm,0.8s,mb5.0
BSEG *ep*P pP 20 57 06.9 +0.3
BSEG Bad Segeberg 66.04 320 *e*P P **20 56 54.4 +0.6**
BSEG *e**PP pP 20 57 06.9 +0.3
BSEG pmax pmax
comp=Z,13nm,0.8s,mb5.0
GRA1 Grafenberg Arr 66.22 315 *e*P P **20 56 55.5 +0.5**
comp=Z,44nm,1.8s,mb5.2
GRA1 *ep*P pP 20 57 08.0 +0.2
GRA1 LR LR
comp=Z,200nm,20.9s,MS4.3
GRF Grafenberg Arr 66.22 315 *e*P P **20 56 55.5 +0.5**
comp=Z,44nm,1.8s,mb5.2
GRF *ep*P pP 20 57 08.0 +0.2
GRF *eL* 21 28 51.3
comp=Z,203nm,20.9s
GRF Grafenberg Arr 66.22 315 *e*P P **20 56 55.5 +0.5**
GRF *e**PP pP 20 57 08.0 +0.2
GRF pmax pmax
comp=Z,44nm,1.8s,mb5.2
GRF MLR MLR
comp=Z,200nm,20.9s,MS4.3
GRF Grafenberg Arr 66.22 315 *e*P P **20 56 55.5 +0.5**
GRF *e**PP pP 20 57 08.0 +0.2
GRF pmax pmax
comp=Z,44nm,1.8s,mb5.2

GRF				MLR	MLR		
	comp=Z,200nm,20.9s,MS4.3						
CLZ	**Clausthal**	**66.36**	**318**	*e*P	**P**	**20 56 56.4**	**+0.5**
	comp=Z,18nm,1.0s,mb5.1						
CLZ				*e*pP	pP	20 57 08.6	-0.1
CLZ	**Clausthal**	**66.36**	**318**	*e*P	**P**	**20 56 56.4**	**+0.5**
CLZ				*e**PP	pP	20 57 08.6	-0.1
CLZ				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
NRDL	**Niedersach Rie**	**66.41**	**319**	*e*P	**P**	**20 56 56.7**	**+0.6**
	comp=Z,20nm,1.2s,mb5.0						
NRDL				*e*pP	pP	20 57 08.9	-0.1
FUR	**Furstenfeldbru**	**66.47**	**314**	*e*P	**P**	**20 56 56.8**	**+0.2**
	comp=Z,10.0nm,0.8s,mb4.9						
FUR	**Furstenfeldbru**	**66.47**	**314**	*e*P	**P**	**20 56 56.8**	**+0.2**
FUR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
SQTA	**Sankt Quirin**	**66.71**	**313**	⇑*i*	pP	20 57 09.8	-1.1
	comp=Z,4.0nm,0.6s						
SQTA	**Sankt Quirin**	**66.71**	**313**	⇓*i*P	**P**	**20 56 57.6**	**-0.4**
	comp=Z,5.0nm,0.8s,mb4.6						
SQTA				⇑*i*pP	pP	20 57 09.8	-1.1
	comp=Z,4.0nm,0.6s						
SQTA	**Sankt Quirin**	**66.71**	**313**	⇓*i*P	**P**	**20 56 57.6**	**-0.5**
SQTA				*i*	pP	20 57 09.8	-1.1
SQTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
MOTA	**Moosalm**	**66.75**	**313**	⇑*i*	pP	20 57 10.2	-1.0
	comp=Z,6.1nm,0.8s						
MOTA	**Moosalm**	**66.75**	**313**	⇓*i*P	**P**	**20 56 57.9**	**-0.5**
	comp=Z,5.5nm,0.9s,mb4.6						
MOTA				⇑*i*pP	pP	20 57 10.2	-1.0
	comp=Z,6.1nm,0.8s						
MOTA	**Moosalm**	**66.75**	**313**	⇓*i*P	**P**	**20 56 57.9**	**-0.4**
MOTA				*i*	pP	20 57 10.2	-1.0
MOTA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
DAVA	**Damuels**	**67.58**	**313**	⇑*e*	pP	20 57 16.0	-0.4
	comp=Z,17nm,0.7s						
DAVA	**Damuels**	**67.58**	**313**	⇑*i*P	**P**	**20 57 03.6**	**0.0**
	comp=Z,11nm,0.8s,mb4.9						
DAVA				⇑*e*pP	pP	20 57 16.0	-0.4
	comp=Z,17nm,0.7s						
STU	**Stuttgart**	**67.71**	**315**	*e*P	**P**	**20 57 04.9**	**+0.5**
	comp=Z,15nm,0.9s,mb5.0						
STU				*e*pP	pP	20 57 17.1	-0.1
STU	**Stuttgart**	**67.71**	**315**	*e*P	**P**	**20 57 04.7**	**+0.3**
STU				*e**PP	pP	20 57 16.7	-0.5
STU				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
STU	**Stuttgart**	**67.71**	**315**	*e*P	**P**	**20 57 04.7**	**+0.3**
	comp=Z,14nm,0.7s,mb5.1						
STU				*e*pP	pP	20 57 16.7	-0.6
TNS	**Taunus Mts**	**67.87**	**316**	*e*P	**P**	**20 57 06.1**	**+0.7**
	comp=Z,14nm,1.1s,mb4.9						
TNS				*e*pP	pP	20 57 18.4	+0.1
TNS	**Taunus Mts**	**67.87**	**316**	*e*P	**P**	**20 57 06.1**	**+0.7**
TNS				*e**PP	pP	20 57 18.4	+0.1
TNS				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
BFO	**Black Forest**	**68.37**	**314**	*e*P	**P**	**20 57 07.7**	**-0.8**
BFO				*e**PP	pP	20 57 20.2	-1.2
CTA	**Charters Tower**	**68.50**	**126**	*e*P	**P**	**20 57 09.7**	**+0.3**
	comp=Z,12nm,1.5s,mb4.6						
CTA	**Charters Tower**	**68.50**	**126**	*e*P	**P**	**20 57 09.7**	**+0.3**
CTA				pmax	pmax		
	comp=Z,12nm,1.5s						
CDF	**Champ du Feu**	**69.03**	**315**	*e*P	**P**	**20 57 12.2**	**-0.5**
	comp=Z,16nm,0.8s,mb4.7						
CDF	**Champ du Feu**	**69.03**	**315**	*e*P	**P**	**20 57 12.2**	**-0.5**
CDF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
CDF	**Champ du Feu**	**69.03**	**315**	*e*P	**P**	**20 57 12.2**	**-0.5**
	comp=Z,8.1nm,0.8s,mb4.7						
PGF	**Pioggiola**	**69.31**	**308**	*e*P	**P**	**20 57 14.1**	**-0.3**
	comp=Z,49nm,0.7s,mb5.2						
PGF	**Pioggiola**	**69.31**	**308**	*e*P	**P**	**20 57 14.1**	**-0.3**
PGF				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.2						
PGF	**Pioggiola**	**69.31**	**308**	*e*P	**P**	**20 57 14.1**	**-0.3**
	comp=Z,24nm,0.7s,mb5.2						
WLF	**Walferdange**	**69.44**	**316**	*e*P	**P**	**20 57 16.1**	**+0.9**
	comp=Z,30nm,1.2s,mb5.1						
WLF				*e*pP	pP	20 57 28.7	+0.6
WLF	**Walferdange**	**69.44**	**316**	*e*P	**P**	**20 57 16.5**	**+1.3**
WLF				*e*pP	pP	20 57 28.9	+0.8
HINF	**Hinteralfeld**	**69.45**	**314**	*e*P	**P**	**20 57 14.8**	**-0.5**
HAU	**Haudompre**	**69.73**	**314**	*e*P	**P**	**20 57 16.5**	**-0.5**
	comp=Z,14nm,0.7s,mb4.7						
HAU				*e*R			
	comp=Z,116nm,21.2s						
HAU	**Haudompre**	**69.73**	**314**	*e*P	**P**	**20 57 16.5**	**-0.5**
HAU				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
HAU				MLR	MLR		
	comp=Z,120nm,21.3s,MS4.1						
HAU	**Haudompre**	**69.73**	**314**	*e*P	**P**	**20 57 16.5**	**-0.5**
	comp=Z,7.2nm,0.7s,mb4.7						
HAU				LR	LR		
	comp=Z,120nm,21.3s,MS4.1						
SBF	**Sospel**	**70.07**	**310**	*e*P	**P**	**20 57 18.8**	**-0.3**
	comp=Z,42nm,0.7s,mb5.2						
SBF	**Sospel**	**70.07**	**310**	*e*P	**P**	**20 57 18.8**	**-0.3**
SBF				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.2						
SBF	**Sospel**	**70.07**	**310**	*e*P	**P**	**20 57 18.8**	**-0.3**
	comp=Z,21nm,0.7s,mb5.2						
LPG	**La Plagne**	**70.11**	**312**	*e*P	**P**	**20 57 19.6**	**+0.3**
	comp=Z,28nm,0.7s,mb5.0						
LPG	**La Plagne**	**70.11**	**312**	*e*P	**P**	**20 57 19.6**	**+0.3**
LPG				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
LPG	**La Plagne**	**70.11**	**312**	*e*P	**P**	**20 57 19.6**	**+0.3**
	comp=Z,14nm,0.7s,mb5.0						
LPL	**La Plagne**	**70.12**	**312**	*e*P	**P**	**20 57 19.6**	**+0.2**
	comp=Z,22nm,0.6s,mb4.9						
LPL	**La Plagne**	**70.12**	**312**	*e*P	**P**	**20 57 19.6**	**+0.2**
LPL				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
LPL	**La Plagne**	**70.12**	**312**	*e*P	**P**	**20 57 19.6**	**+0.2**
	comp=Z,11nm,0.6s,mb5.0						
GIVF	**Givet**	**70.17**	**317**	*e*P	**P**	**20 57 19.5**	**-0.2**
CABF	**La Chapelle**	**70.26**	**313**	*e*P	**P**	**20 57 20.1**	**-0.2**
MBDF	**Montbardon**	**70.30**	**311**	*e*P	**P**	**20 57 20.0**	**-0.5**
	comp=Z,16nm,0.6s,mb4.8						
MBDF	**Montbardon**	**70.30**	**311**	*e*P	**P**	**20 57 20.0**	**-0.5**
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
MBDF	**Montbardon**	**70.30**	**311**	*e*P	**P**	**20 57 20.0**	**-0.5**
	comp=Z,7.8nm,0.6s,mb4.8						
MEZF	**Maizieres J'vi**	**70.44**	**315**	*e*P	**P**	**20 57 21.2**	**-0.1**
	comp=Z,37nm,0.7s,mb5.1						
MEZF	**Maizieres J'vi**	**70.44**	**315**	*e*P	**P**	**20 57 21.2**	**-0.1**
	comp=Z,37nm,0.7s,mb5.4						
BAIF	**Baives**	**70.56**	**317**	*e*P	**P**	**20 57 21.9**	**-0.2**
ORIF	**Oris-en-Rattie**	**70.86**	**311**	*e*P	**P**	**20 57 23.9**	**0.0**
	comp=Z,10nm,0.7s,mb4.5						
ORIF				*e*R			
	comp=Z,90nm,18.1s						
ORIF	**Oris-en-Rattie**	**70.86**	**311**	*e*P	**P**	**20 57 23.9**	**0.0**
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**70.86**	**311**	*e*P	**P**	**20 57 23.9**	**0.0**
	comp=Z,5.1nm,0.7s,mb4.6						
LMR	**La Mourre**	**70.86**	**310**	*e*P	**P**	**20 57 23.6**	**-0.3**
KEST	**Kesra**	**70.93**	**301**	P	**P**	**20 57 25.4**	**+1.1**
	comp=Z,4.3nm,0.8s,mb4.4,baz=50,slow=1.1,SNR=12						
KEST				pP	pP	20 57 37.7	+0.5
	comp=Z,4.0nm,0.8s,baz=224,slow=2.0,SNR=7.3						
SMRF	**Simiane la Rot**	**71.33**	**310**	*e*P	**P**	**20 57 26.8**	**+0.1**
LOR	**Lormes**	**71.55**	**314**	*e*P	**P**	**20 57 27.3**	**-0.8**
LOR				*e*R			
	comp=Z,93nm,23.0s						
LOR	**Lormes**	**71.55**	**314**	*e*P	**P**	**20 57 27.3**	**-0.8**
LOR				LR	LR		
	comp=Z,90nm,23.0s,MS4.0						
VIVF	**Saint-Julien-l**	**71.70**	**312**	*e*P	**P**	**20 57 28.6**	**-0.4**
	comp=Z,11nm,0.7s,mb4.6						
VIVF	**Saint-Julien-l**	**71.70**	**312**	*e*P	**P**	**20 57 28.6**	**-0.4**
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
VIVF	**Saint-Julien-l**	**71.70**	**312**	*e*P	**P**	**20 57 28.6**	**-0.4**
	comp=Z,5.5nm,0.7s,mb4.6						
SMF	**Signal de Mont**	**71.74**	**314**	*e*P	**P**	**20 57 28.6**	**-0.6**
	comp=Z,19nm,0.8s,mb4.8						
SMF	**Signal de Mont**	**71.74**	**314**	*e*P	**P**	**20 57 28.6**	**-0.6**
SMF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
SMF	**Signal de Mont**	**71.74**	**314**	*e*P	**P**	**20 57 28.6**	**-0.6**
	comp=Z,9.7nm,0.8s,mb4.8						
SSF	**Saint Saulge**	**71.84**	**314**	*e*P	**P**	**20 57 29.3**	**-0.5**
	comp=Z,32nm,0.9s,mb4.9						
SSF	**Saint Saulge**	**71.84**	**314**	*e*P	**P**	**20 57 29.3**	**-0.5**
SSF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
SSF	**Saint Saulge**	**71.84**	**314**	*e*P	**P**	**20 57 29.3**	**-0.5**
	comp=Z,16nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**72.02**	**314**	*e*P	**P**	**20 57 30.3**	**-0.6**
	comp=Z,20nm,0.9s,mb4.7						
AVF	**Avril sur Loir**	**72.02**	**314**	*e*P	**P**	**20 57 30.3**	**-0.6**
AVF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
AVF	**Avril sur Loir**	**72.02**	**314**	*e*P	**P**	**20 57 30.3**	**-0.6**
	comp=Z,10nm,0.9s,mb4.8						
BGF	**Bois d'Agland**	**72.42**	**314**	*e*P	**P**	**20 57 33.3**	**0.0**
LASF	**Ste Croix**	**72.49**	**311**	*e*P	**P**	**20 57 33.8**	**+0.1**
	comp=Z,14nm,0.7s,mb4.7						
TCF	**Toulx Ste Croi**	**72.92**	**313**	*e*P	**P**	**20 57 36.2**	**-0.1**
	comp=Z,25nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**72.92**	**313**	*e*P	**P**	**20 57 36.2**	**-0.1**
TCF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**72.92**	**313**	*e*P	**P**	**20 57 36.2**	**-0.1**
	comp=Z,12nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**73.10**	**138**	*e*P	**P**	**20 57 36.7**	**-0.6**
	comp=Z,3.1nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**73.10**	**138**	P	**P**	**20 57 37.1**	**-0.2**
	comp=Z,3.3nm,0.4s,mb4.6,baz=342,slow=7.5,SNR=32						
STKA				LR	LR	21 33 44.2	
	comp=Z,146nm,19.0s,MS4.3,baz=206,slow=39						
CAF	**Calviac**	**73.45**	**312**	*e*P	**P**	**20 57 39.5**	**+0.2**
	comp=Z,13nm,0.8s,mb4.6						
CAF	**Calviac**	**73.45**	**312**	*e*P	**P**	**20 57 39.5**	**+0.2**
CAF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
CAF	**Calviac**	**73.45**	**312**	*e*P	**P**	**20 57 39.5**	**+0.2**
	comp=Z,6.4nm,0.8s,mb4.6						
RJF	**Les Rejaudoux**	**73.69**	**313**	*e*P	**P**	**20 57 41.2**	**+0.4**
	comp=Z,24nm,0.8s,mb4.8						
RJF	**Les Rejaudoux**	**73.69**	**313**	*e*P	**P**	**20 57 41.2**	**+0.4**
RJF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
RJF	**Les Rejaudoux**	**73.69**	**313**	*e*P	**P**	**20 57 41.2**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9						
LDF	**La Druitiere**	**73.70**	**316**	*e*P	**P**	**20 57 40.2**	**-0.6**
	comp=Z,38nm,0.9s,mb5.0						
LDF	**La Druitiere**	**73.70**	**316**	*e*P	**P**	**20 57 40.2**	**-0.6**
LDF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
LDF	**La Druitiere**	**73.70**	**316**	*e*P	**P**	**20 57 40.2**	**-0.6**
	comp=Z,19nm,0.9s,mb5.0						
MTLF	**Montolieu**	**73.85**	**311**	*e*P	**P**	**20 57 41.6**	**-0.1**
	comp=Z,23nm,1.1s,mb4.7						
MTLF	**Montolieu**	**73.85**	**311**	*e*P	**P**	**20 57 41.6**	**-0.1**
MTLF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
MTLF	**Montolieu**	**73.85**	**311**	*e*P	**P**	**20 57 41.6**	**-0.1**
	comp=Z,12nm,1.1s,mb4.7						
GRR	**Gorron**	**74.23**	**316**	*e*P	**P**	**20 57 43.4**	**-0.5**
LFF	**La Frestale**	**74.33**	**313**	*e*P	**P**	**20 57 44.7**	**+0.2**
	comp=Z,17nm,0.7s,mb4.8						
LFF	**La Frestale**	**74.33**	**313**	*e*P	**P**	**20 57 44.7**	**+0.2**
LFF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
LFF	**La Frestale**	**74.33**	**313**	*e*P	**P**	**20 57 44.7**	**+0.2**
	comp=Z,8.4nm,0.7s,mb4.8						
LSZ	**Lusaka**	**74.44**	**245**	*e*P	**P**	**20 57 46.5**	**+1.4**
LSZ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
LSZ	**Lusaka**	**74.44**	**245**	*e*P	**P**	**20 57 46.5**	**+1.3**
	comp=Z,5.1nm,0.6s,mb4.6						
SGMF	**Saint Gilles**	**75.34**	**317**	*e*P	**P**	**20 57 50.7**	**+0.3**
EMHD	**Djebel Mahouad**	**75.69**	**303**	P	**P**	**20 57 54.0**	**+1.6**
ROSF	**Rostrenen**	**75.76**	**317**	*e*P	**P**	**20 57 52.5**	**-0.2**
QUIF	**Quistinic**	**75.84**	**316**	*e*P	**P**	**20 57 52.9**	**-0.3**
SJPF	**Ste Jean**	**76.29**	**311**	*e*P	**P**	**20 57 56.4**	**+0.6**
IMA2	**Indian Mountai**	**76.64**	**23**	*e*P	**P**	**20 57 58.1**	**+0.4**
SUMG	**Summit**	**77.53**	**347**	*e*P	**P**	**20 58 02.3**	**-0.5**
	comp=Z,5.0nm,0.7s,mb4.5						
COLA	**College**	**79.33**	**22**	*e*P	**P**	**20 58 12.5**	**-0.2**
COLA				*e**PP	pP	20 58 24.7	-1.1
COLA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
COLA	**College**	**79.33**	**22**	*e*P	**P**	**20 58 12.4**	**-0.2**
	comp=Z,3.0nm,0.5s,mb4.5						
COLA				*e*pP	pP	20 58 24.7	-1.0
TOO	**Toolangi**	**79.34**	**140**	*e*P	**P**	**20 58 13.3**	**+0.6**
	comp=Z,3.6nm,0.6s,mb4.5						
TOO	**Toolangi**	**79.34**	**140**	*e*P	**P**	**20 58 13.3**	**+0.6**
TOO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ESDC	**Sonseca Array**	**79.49**	**309**	P	**P**	**20 58 14.1**	**+0.5**
	comp=Z,0.5nm,0.5s,mb3.7,baz=69,slow=5.4,SNR=8.3						
ESDC				pP	pP	20 58 26.4	-0.3
	comp=Z,0.7nm,0.6s,baz=43,slow=4.5,SNR=4.6						
MCK	**McKinley**	**79.61**	**23**	*e*P	**P**	**20 58 13.8**	**-0.4**
CNB	**Canberra Magne**	**80.21**	**136**	*e*P	**P**	**20 58 17.6**	**+0.1**
	comp=Z,6.5nm,0.6s,mb4.7						
PMR	**Palmer**	**80.79**	**25**	*e*P	**P**	**20 58 20.2**	**-0.4**
PMR				*e**PP	pP	20 58 32.8	-0.9
PMR				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
PMR	**Palmer**	**80.79**	**25**	*e*P	**P**	**20 58 20.2**	**-0.4**
	comp=Z,5.9nm,0.4s,mb4.9						
PMR				*e*pP	pP	20 58 32.8	-0.9
INK	**Inuvik**	**81.25**	**16**	*e*P	**P**	**20 58 23.3**	**+0.3**
INK				*e**PP	pP	20 58 36.0	-0.2
LBTB	**Lobatse**	**81.62**	**238**	*e*P	**P**	**20 58 25.6**	**+0.6**
LBTB				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
LBTB	**Lobatse**	**81.62**	**238**	*e*P	**P**	**20 58 25.6**	**+0.7**
	comp=Z,14nm,0.7s,mb5.0						
DAWY	**Dawson**	**82.66**	**20**	*e*P	**P**	**20 58 30.4**	**0.0**
DAWY				*e*pP	pP	20 58 43.1	-0.5
TOA0	**Torodi Ar. Sit**	**85.54**	**282**	*e*P	**P**	**20 58 46.3**	**+1.3**
TOA0				*e*pP	pP	20 58 58.3	0.0
TORD	**Torodi Ar. Bea**	**85.54**	**282**	P	**P**	**20 58 46.6**	**+1.6**
	comp=Z,4.0nm,0.6s,mb4.8,baz=65,slow=4.0,SNR=89						
TORD				pP	pP	20 58 58.7	+0.4
	comp=Z,4.8nm,0.7s,baz=68,slow=3.5,SNR=14						
TORD				PKKPbc	PKKPbc	21 16 48.9	+0.9
	comp=Z,0.3nm,0.5s,baz=314,slow=1.4,SNR=8.3						
TORD	**Torodi Ar. Bea**	**85.54**	**282**	P	**P**	**20 58 46.6**	**+1.6**
TORD				pP	pP	20 58 58.7	+0.4
TORD				PKKPbc	PKKPbc	21 16 48.9	+0.9
YKA	**Yellowknife Ar**	**90.40**	**12**	P	**P**	**20 59 09.8**	**+1.5**
	comp=Z,1.8nm,1.1s,mb4.3,baz=328,slow=5.0,SNR=4.5						
MAW	**Mawson**	**94.69**	**191**	LR	LR	21 39 44.4	
	comp=Z,75nm,19.2s,MS4.2,baz=245,slow=34						
SCHQ	**Schefferville**	**98.86**	**348**	LR	LR	21 48 24.9	
	comp=Z,116nm,19.1s,MS4.4,baz=135,slow=38						
ROSC	**El Rosal**	**148.03**	**335**	PKPbc	PKPbc	21 05 55.0	+2.7
	comp=Z,20nm,0.9s,baz=116,slow=6.6,SNR=14						
ROSC				pPKPbc	pPKPbc	21 06 08.2	+2.2
	comp=Z,6.1nm,0.5s,baz=104,slow=17,SNR=1.7						
SAML	**Samuel**	**152.21**	**300**	*e*PKPbc	PKPbc	21 06 03.3	+0.9
CPUP	**Villa Florida**	**152.97**	**260**	PKPbc	PKPbc	21 06 04.1	0.0
	comp=Z,3.1nm,0.6s,baz=77,slow=3.1,SNR=12						
CPUP				pPKPbc	pPKPbc	21 06 17.5	-0.3
	comp=Z,4.9nm,0.6s,baz=52,slow=2.7,SNR=8.2						
CPUP	**Villa Florida**	**152.97**	**260**	PKPbc	PKPbc	21 06 04.1	0.0
CPUP				*e*PKPbc	PKPbc	21 06 04.3	+0.2
CPUP				pPKPbc	pPKPbc	21 06 17.5	-0.3

MEX 12 20:54:13.0±1.0**, 1623N×9753W, h28**^{km}±53^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.13**	**43**	*i* P	Pn	20 54 29.8	-3.1
VHO				*i* S	Sn	20 54 45.0	-2.5
OXX	**Oaxaca**	**1.15**	**43**	*i* P	Pn	20 54 29.5	-3.6
OXX				*i* S	Sn	20 54 45.5	-2.4
HUIG	**Huatulco**	**1.45**	**108**	*i* P	Pn	20 54 35.8	-1.5
HUIG				*i* S	Sn	20 54 51.7	-3.6
UTMO	**Huajuapan**	**1.61**	**351**	*i* P	Pn	20 54 38.0	-1.5
UTMO				*i* S	Sn	20 54 58.0	-1.3
TPIG	**Tehuac#an**	**2.18**	**4**	*e*P	Pn	20 54 45.7	-1.6
TPIG				*i* S	Sn	20 55 11.5	-1.8
MEIG	**Mezcala**	**2.61**	**310**	*e*P	Pn	20 54 52.3	-1.0
MEIG				*i* S	Sn	20 55 20.8	-3.2

IDC 12 20:56:18.0±2.7**, 246N×12762E, h0**^{km}**, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.5**/14**, mbtmp3.8**/3**, Error ellipse: s-maj=324.8km s-min=25.2km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.68**	**167**	P	P	21 01 58.6	0.0
	0.4nm,0.3s,baz=350,slow=7.6,SNR=11						
ASAR				PcP	PcP	21 05 21.8	-0.5
	0.5nm,0.5s,baz=344,slow=2.2,SNR=8.0						
STKA	**Stephens Creek**	**36.63**	**160**	P	P	21 03 27.0	+1.0
	2.4nm,0.7s,baz=342,slow=6.5,SNR=4.9						
MKAR	**Makanchi Array**	**59.10**	**325**	P	P	21 06 20.4	+0.4
	0.7nm,0.6s,baz=118,slow=8.7,SNR=9.6						

*NEIC **12** 21:28:30.9, 4308N×0.14E, h9^{km}, MD2.5(LDG), After LDG.*
*LDG **12** 21:28:30.9±0.1, 4308N×0.14E, h9^{km}, Md2.5/1, Ml2.3/7, Error ellipse: s-maj=1.3km s-min=1.0km az=137.0*
*STR **12** 21:28:30.8±0.3, 4307N×0.15E, h5^{km}±1^{km}, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
MDD 12 21:28:31.0±0.5**, 4306N×016E, h6**^{km}±3^{km}**, mbLg1.6**/13**, Error ellipse: s-maj=4.0km s-min=2.5km az=2.0, PRXIMO, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.06**	**255**	Pg	Pg	21 28 33.0	+0.4
LABF				Sg	Sg	21 28 34.6	+0.9
LABF	**Labassere**	**0.06**	**255**	Pg	Pg	21 28 33.1	+0.5
LABF				Lg		21 28 34.7	
EPF	**Esparros**	**0.14**	**104**	*e*Pg	Pg	21 28 34.3	+0.5
EPF				*e*Sg	Sg	21 28 36.7	+1.0
	82nm,0.2s						
EPF	**Esparros**	**0.14**	**104**	Pg	Pg	21 28 34.3	+0.5
EPF				Lg		21 28 36.7	
	41nm,0.2s						
VIEF	**Viey**	**0.20**	**209**	Pg	Pg	21 28 35.2	+0.2
VIEF				Sg	Sg	21 28 38.3	+0.5
VIEF	**Viey**	**0.20**	**209**	Pg	Pg	21 28 35.2	+0.1
VIEF				Lg		21 28 38.3	
RESF	**Ens**	**0.29**	**152**	Pg	Pg	21 28 36.9	+0.3
RESF				Sg	Sg	21 28 41.5	+1.1
RESF	**Ens**	**0.29**	**152**	Pg	Pg	21 28 36.9	+0.3
RESF				Lg		21 28 41.5	
EBIE	**Bielsa**	**0.38**	**182**	Pg	Pg	21 28 38.3	+0.1
	2.1nm,0.1s,SNR=52						
EBIE				Lg		21 28 43.4	
	16nm,0.2s,SNR=7.9						
REYF	**Montagne du Re**	**0.40**	**271**	Pg	Pg	21 28 38.3	-0.5
REYF				Sg	Sg	21 28 44.0	0.0
REYF	**Montagne du Re**	**0.40**	**271**	Pg	Pg	21 28 38.9	+0.1
REYF				Lg		21 28 44.1	
MELF	**Melles**	**0.48**	**113**	Pg	Pg	21 28 40.0	-0.3
MELF				Lg		21 28 46.7	
SALF	**Salau**	**0.82**	**111**	Pg	Pg	21 28 46.1	-0.5
SALF				Lg		21 28 57.7	
SJPF	**Ste Jean**	**1.01**	**273**	*e*Sg	Sg	21 29 02.8	-0.8
GRBF	**Gourbit**	**1.04**	**102**	Pg	Pg	21 28 50.6	-0.2
EALK	**Alkurruntz**	**1.23**	**278**	Pg	Pg	21 28 54.2	-0.3
	0.3nm,0.1s,SNR=7.9						
EALK				Lg		21 29 11.5	
	1.3nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**1.23**	**278**	Pg	Pg	21 28 54.2	-0.3
EALK				Lg		21 29 12.0	
ELIZ	**Elizondo**	**1.24**	**275**	Pg	Pg	21 28 55.1	+0.4
	0.3nm,0.2s,SNR=7.9						
ELIZ				Lg		21 29 12.0	
	0.5nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**1.42**	**199**	Pg	Pg	21 28 58.0	-0.2
	8.4nm,0.1s,SNR=7.9						
ESAC				Lg		21 29 17.3	
	17nm,0.1s,SNR=7.9						
MTLF	**Montolieu**	**1.53**	**79**	*e*Pg	Pg	21 28 59.7	-0.6
MTLF				*e*Sg	Sg	21 29 19.4	-0.8
	5.1nm,0.2s						
MTLF	**Montolieu**	**1.53**	**79**	Pg	Pg	21 28 59.7	-0.6
MTLF				Lg		21 29 19.4	
	2.5nm,0.2s						
EPOB	**Poblet**	**1.84**	**158**	Pg	Pg	21 29 05.0	-1.3
	0.4nm,0.1s,SNR=7.9						
EPOB				Lg		21 29 29.1	
	1.1nm,0.1s,SNR=7.9						
LFF	**La Frestale**	**1.92**	**12**	*e*Pg	Pg	21 29 06.4	-1.4
LFF				*e*Sg	Sg	21 29 32.1	-0.6
	4.0nm,0.2s						
LFF	**La Frestale**	**1.92**	**12**	Pg	Pg	21 29 06.4	-1.4
LFF				Lg		21 29 32.1	
	2.0nm,0.2s						
ERTA	**Horta de San J**	**2.11**	**176**	Pg	Pg	21 29 10.2	-1.2
	0.3nm,0.1s,SNR=7.9						
ERTA				Lg		21 29 37.4	
	2.3nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.11**	**176**	Pg	Pg	21 29 10.2	-1.2
ERTA				Sn	Sn	21 29 32.5	-0.8
ERTA				Lg		21 29 37.4	
CAF	**Calviac**	**2.31**	**36**	*e*Pg	Pg	21 29 13.7	-1.6
CAF				*e*Sg	Sg	21 29 43.2	-2.2
	3.4nm,0.2s						
CAF	**Calviac**	**2.31**	**36**	Pg	Pg	21 29 13.7	-1.6
CAF				Lg		21 29 43.2	
	1.7nm,0.2s						
RJF	**Les Rejaudoux**	**2.44**	**23**	*e*Pg	Pg	21 29 16.3	-1.5
RJF				*e*Sg	Sg	21 29 47.1	-2.4
	1.9nm,0.2s						
RJF	**Les Rejaudoux**	**2.44**	**23**	Pg	Pg	21 29 16.3	-1.5
RJF				Lg		21 29 47.1	
	0.9nm,0.2s						
LASF	**Ste Croix**	**2.87**	**68**	*e*Pg	Pg	21 29 24.3	-1.7
LASF				*e*Sg	Sg	21 30 01.1	-2.2
	1.9nm,0.2s						
LASF	**Ste Croix**	**2.87**	**68**	Pg	Pg	21 29 24.3	-1.7
LASF				Lg		21 30 01.1	
	0.9nm,0.2s						
MFF	**Saint Martin d**	**3.54**	**357**	*e*Sg	Sg	21 30 20.6	-4.2
	1.0nm,0.2s						
MFF	**Saint Martin d**	**3.54**	**357**	Lg		21 30 20.6	
	0.0nm,0.2s						
VIVF	**Saint-Julien-l**	**3.72**	**60**	*e*Sg	Sg	21 30 27.7	-2.8
	0.9nm,0.2s						
VIVF	**Saint-Julien-l**	**3.72**	**60**	Lg		21 30 27.7	
	0.4nm,0.2s						
ESDC	**Sonseca Array**	**4.59**	**224**	Pn	Pn	21 29 39.9	-1.0
	0.3nm,0.5s,baz=104,slow=5.9,SNR=6.1						

*IDC **12** 21:29:23.9±1.0, 9.12S×10762E, h0^{km}, mb4.1/5, mb1 4.1/6, mb1mx3.8/16, mbtmp4.0/6, ML3.4/1, Error ellipse: s-maj=39.4km s-min=19.9km az=62.0*
*NEIC **12** 21:29:25.5±0.5, 9.12S×10761E, h10^{km}, mb4.9/7, Error ellipse: s-maj=24.8km s-min=7.8km az=51.0*
*ISCJB **12** 21:29:26.9±0.7, 9.1S±02×1077E±02, h33^{km}, mb4.4/12, Error ellipse: s-maj=35.2km s-min=11.0km az=102.3*
ISC 12 21:29:29.2±0.7**, 91S**±02**×1077E**±02**, h35**^{km}**, n14,** σ0.41/15**, mb4.4**/12**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.58**	**119**	P	**Pn**	**21 33 55.4**	**-0.3**
	0.1nm,0.3s,baz=24,slow=17,SNR=3.7						
FITZ				S	**S**	**21 37 17.6**	**-16**
	0.1nm,0.3s,baz=156,slow=20,SNR=4.8						
ASAR	**Alice Springs**	**28.93**	**123**	P	**P**	**21 35 25.1**	**+0.1**
	0.2nm,0.4s,mb3.2,baz=298,slow=8.0,SNR=6.3						
STKA	**Stephens Creek**	**38.73**	**131**	P	**P**	**21 36 50.1**	**+0.2**
	2.0nm,0.7s,mb4.0,baz=275,slow=7.5,SNR=6.3						
PKI	**Pulchoki**	**42.39**	**330**	*e*P	**P**	**21 37 19.1**	**-1.0**
GUN	**Gumba**	**42.44**	**331**	*e*P	**P**	**21 37 20.9**	**+0.4**
	39nm,1.0s,mb5.0						
DMN	**Daman**	**42.57**	**330**	*e*P	**P**	**21 37 21.7**	**+0.1**
	20nm,0.9s,mb4.8						
KKN	**Kakani**	**42.63**	**330**	*e*P	**P**	**21 37 22.3**	**+0.2**
	18nm,0.8s,mb4.8						
GKN	**Gorkha**	**43.12**	**330**	*e*P	**P**	**21 37 26.2**	**+0.1**
	11nm,0.4s,mb5.0						
KOLN	**Koldanda**	**43.46**	**328**	*e*P	**P**	**21 37 29.0**	**+0.2**
	17nm,0.6s,mb4.9						
SONM	**Songino Array**	**56.73**	**359**	P	**P**	**21 39 09.6**	**+0.2**
	1.2nm,0.5s,mb4.2,baz=178,slow=8.7,SNR=13						
MKAR	**Makanchi Array**	**60.11**	**340**	P	**P**	**21 39 32.6**	**-0.3**
	3.6nm,0.5s,mb4.7,baz=150,slow=8.3,SNR=43						
KURK	**Kurchatov**	**64.72**	**340**	*e*P	**P**	**21 40 03.2**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	5.9nm,0.9s,mb4.6						
KURK				*e*pP	pP	21 40 14.1	-0.4
MAW	**Mawson**	**65.54**	**197**	P	**P**	**21 40 09.0**	**-0.1**
	0.8nm,0.6s,mb3.9,baz=59,slow=7.3,SNR=9.0						
BRVK	**Borovoye**	**69.65**	**337**	*e*P	**P**	**21 40 35.7**	**+0.7**
	0.9nm,0.6s,mb3.9						

PRE 12 21:32:39.0±0.6,2193S×3276E,h5km,ML4.4, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**2.58**	**260**	*e*P	Pn	21 33 22.1	+0.8
MSNA				*e*S	Sn	21 33 54.0	+1.0
MSNA				AML	AML	21 34 17.5	
	comp=Z,484nm,0.6s						
POGA	**Pongola**	**5.52**	**191**	*e*P	Pn	21 34 01.9	+0.2
POGA				*e*S	Sn	21 35 02.8	-2.7
POGA				AML	AML	21 36 06.9	
	comp=Z,72nm,0.7s						
SLR	**Silverton**	**5.58**	**226**	*e*P	Pn	21 34 03.9	+1.2
SLR				*e*S	Sn	21 35 05.2	-2.0
SLR				AML	AML	21 35 55.4	
	comp=Z,182nm,0.7s						
ERPM	**east rand prop**	**5.96**	**223**	*e*S	Sn	21 35 14.8	-1.7
ERPM				AML	AML	21 36 08.0	
	comp=Z,132nm,0.7s						
LBTB	**Lobatse**	**7.26**	**244**	*e*P	Pn	21 34 27.0	+1.3
LBTB				*e*S	Sn	21 35 45.5	-3.0
LBTB				AML	AML	21 36 40.7	
	comp=Z,78nm,0.8s						
SWZ	**Schweizer**	**8.55**	**231**	*e*P	Pn	21 34 44.5	+1.1
SWZ				*e*S	Sn	21 36 16.1	-4.1
SWZ				AML	AML	21 37 37.6	
	comp=Z,37nm,0.7s						
KSD	**Kokstad**	**9.09**	**199**	*e*P	Pn	21 34 51.8	+1.0
KSD				*e*S	Sn	21 36 28.9	-4.5
KSD				AML	AML	21 37 49.6	
	comp=Z,18nm,0.7s						
UPI	**Upington**	**12.23**	**236**	*e*P	Pn	21 35 35.2	+1.4
UPI				*e*S	Sn	21 37 44.3	-6.3
UPI				AML	AML	21 39 15.4	
	comp=Z,13nm,0.7s						
SUR	**Sutherland**	**14.87**	**223**	*e*P	Pn	21 36 12.0	+2.2
SUR				*e*S	Sn	21 38 47.6	-7.4

*NEIC **12** 21:55:06.0±1.3, 3457N×7368E, h35km, Error ellipse: s-maj=30.5km s-min=9.3km az=55.0*
*ISCJB **12** 21:55:06.5±1.3, 3496N±008×740E±0.1, h48km±17km, mb3.5/3, Error ellipse: s-maj=23.1km s-min=7.6km az=119.7*
*IDC **12** 21:55:12.0±10.0, 3489N×7386E, h78km±100km, mb3.3/4, mb1 3.4/6, mb1mx3.1/21, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=55.5km s-min=30.2km az=18.0*
*NNC **12** 21:55:15.6±2.2, 3562N×7263E, h0km, mb2.9, mpv3.3, Error ellipse: s-maj=46.4km s-min=16.6km az=83.0*
ISC 12 21:55:04.2±2.3**,3506N**±008×**740E**±01**,h8**km±15km**,n23,** σ1§**36**/29**,mb3.5**/3**,4C-3D,Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**2.98**	**147**	*e*x	**Pb**	**21 55 57.0**	**-0.6**
DLH				*e*S	**Sn**	**21 56 30.0**	**+2.3**
SDNR	**Sundarnagar**	**4.32**	**144**	*e*P	**Pn**	**21 56 10.5**	**+0.4**
SDNR				*e*x	x	21 57 19.0	
SMLA	**Simla**	**4.72**	**145**	*e*P	**Pn**	**21 56 17.6**	**+1.9**
SMLA				*e*S	**Sn**	**21 57 10.9**	**+0.3**
	493nm,0.4s						
KLP	**Kalpa**	**4.99**	**134**	*e*P	**Pn**	**21 56 21.1**	**+1.9**
KLP				*e*S	**Sn**	**21 57 17.1**	**0.0**
KLP				AML	AML	21 57 43.1	
	comp=N,118nm,0.6s						
KLP				AML	AML	21 57 44.2	
	comp=E,88nm,0.6s						
KHET	**Khetri**	**7.13**	**167**	*e*S	**Sn**	**21 58 02.0**	**-7.8**
KHET				AML	AML	21 59 09.1	
	comp=E,9.3nm,0.1s						
KHET				AML	AML	21 59 10.0	
	comp=N,13nm,0.2s						
SONA	**Sohna**	**7.27**	**158**	*e*S	**Sn**	**21 58 06.3**	**-7.1**
SONA				AML	AML	21 58 51.1	
	comp=N,27nm,0.9s						
SONA				AML	AML	21 58 56.7	
	comp=E,18nm,0.6s						
KK31	**Karatay Array**	**8.48**	**342**	⇑Pn	**Pn**	**21 57 11.0**	**+3.7**
	comp=E,0.6nm,0.3s,baz=170,slow=13,SNR=5.7						
KK31				⇓Sn	**Sn**	**21 58 42.2**	**-1.0**
	comp=E,1.3nm,0.3s,baz=332,slow=71,SNR=6.1						
KOLN	**Koldanda**	**10.93**	**129**	*e*P	**Pn**	**21 57 39.8**	**-1.1**
	comp=E,3.2nm,0.2s						
GKN	**Gorkha**	**11.46**	**125**	*e*P	**Pn**	**21 57 47.5**	**-0.5**
	comp=E,10.0nm,0.3s						
DMN	**Daman**	**12.03**	**125**	*e*P	**Pn**	**21 57 54.3**	**-1.5**
	comp=E,7.5nm,0.4s						
KKN	**Kakani**	**12.03**	**124**	*e*P	**Pn**	**21 57 54.3**	**-1.6**
	comp=E,12nm,0.6s						
PKI	**Pulchoki**	**12.26**	**124**	*e*P	**Pn**	**21 57 57.5**	**-1.5**
	comp=E,9.1nm,0.5s						
MKAR	**Makanchi Array**	**13.27**	**25**	P	**Pn**	**21 58 21.1**	**+8.3**
	comp=E,0.1nm,0.3s,baz=204,slow=12,SNR=6.1						
AB31	**Akbulak array**	**17.57**	**328**	⇓P	**Pn**	**21 59 08.5**	**-0.8**
	comp=E,0.2nm,0.3s,baz=134,slow=13,SNR=5.6						
AB31				⇓S	**Sn**	**22 02 12.6**	**-12**
	comp=E,0.4nm,0.6s,baz=134,slow=13,SNR=5.6						
BVA0	**Borovoye Array**	**18.15**	**353**	⇑P	**Pn**	**21 59 18.8**	**+2.3**
	comp=E,0.1nm,0.5s,baz=164,slow=10,SNR=10						
BVA0				⇑S	**Sn**	**22 02 36.4**	**-2.6**
	comp=E,0.4nm,0.9s						
AKTK	**Aktyubinsk**	**19.28**	**328**	P	**Pn**	**21 59 30.8**	**+0.5**
AKTO	**Aktyubinsk**	**19.28**	**328**	⇑P	**Pn**	**21 59 30.2**	**-0.1**
	comp=E,0.1nm,1.1s						
AKTO	**Aktyubinsk**	**19.28**	**328**	P	**Pn**	**21 59 30.8**	**+0.5**
	comp=E,0.3nm,0.3s,baz=127,slow=10.0,SNR=6.4						
ZAL	**Zalesovo**	**20.34**	**19**	P	**P**	**21 59 42.8**	**+2.0**
	comp=E,1.9nm,0.4s,baz=264,slow=6.1,SNR=9.1						
ARCES	**ARCESS Array B**	**43.41**	**337**	P	**P**	**22 03 08.0**	**+0.7**
	comp=E,1.3nm,0.8s,mb3.7,baz=113,slow=8.8,SNR=5.0						
ARCES	**ARCESS Array B**	**43.41**	**337**	P	**P**	**22 03 08.0**	**+0.7**
TORD	**Torodi Ar. Bea**	**68.17**	**271**	P	**P**	**22 06 03.3**	**-1.6**
	comp=E,0.2nm,0.4s,mb3.5,baz=48,slow=5.5,SNR=21						
ASAR	**Alice Springs**	**81.42**	**127**	P	**P**	**22 07 20.8**	**-0.8**
	comp=E,0.3nm,0.7s,mb3.4,baz=298,slow=4.8,SNR=4.6						

*NEIC **12** 22:24:45.5, 3682S×17734E, h235km, MG3.9(WEL), After WEL.*
WEL 12 22:24:45.8±0.3**,3667S×17742E,h219**km±3km**,ML3.9**/6**, Error ellipse: s-maj=4.5km s-min=3.3km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**1.56**	**155**	P	Pn	22 25 21.6	-0.1
PUZ				S	S	22 25 48.7	-1.0
PUZ	**Puketiti**	**1.56**	**155**	PN	Pn	22 25 21.7	0.0
PUZ				SN	S	22 25 48.7	-1.0
URZ	**Urewera**	**1.61**	**189**	P	Pn	22 25 22.3	+0.2
URZ	**Urewera**	**1.61**	**189**	PN	Pn	22 25 22.3	+0.1
URZ				SN	S	22 25 50.3	-0.2
MWZ	**Matawai**	**1.67**	**177**	P	Pn	22 25 23.1	+0.4
MWZ				S	S	22 25 51.8	+0.3
MWZ	**Matawai**	**1.67**	**177**	PN	Pn	22 25 23.1	+0.4
MWZ				SN	S	22 25 51.7	+0.3
KNZ	**Kokohu**	**2.36**	**175**	*e*P	Pn	22 25 29.4	0.0
KNZ	**Kokohu**	**2.36**	**175**	PN	Pn	22 25 29.4	0.0
KNZ				SN	S	22 26 03.0	-0.5
TSZ	**Takapari Road**	**3.58**	**198**	PN	Pn	22 25 42.1	-1.1
TSZ				SN	S	22 26 26.8	-1.6
MRZ	**Mangatainoka R**	**4.24**	**199**	*e*P	Pn	22 25 49.5	-1.7
MRZ	**Mangatainoka R**	**4.24**	**199**	PN	Pn	22 25 49.4	-1.8
MRZ				SN	S	22 26 40.6	-2.3
KIW	**Kapiti Island**	**4.63**	**204**	P	Pn	22 25 54.2	-1.8
KIW	**Kapiti Island**	**4.63**	**204**	PN	Pn	22 25 54.1	-1.8

MEX 12 22:46:30.0±1.1**,1791N×9955W,h3**km±22km**,MD3.6,1C, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.07**	**286**	⇑*i*P	Pg	22 46 30.9	-0.6
MEIG				*i* S	Sg	22 46 32.5	+0.1
PLIG	**Platanillo**	**0.49**	**5**	*i* P	Pg	22 46 39.7	+0.3
PLIG				*i* S	Sg	22 46 45.5	-0.1
ACX	**Acapulco**	**1.09**	**199**	*i* P	Pg	22 46 49.0	-1.9
ACX				*i* S	Sg	22 47 02.0	-3.1
PPM	**Popocatepetl**	**1.45**	**37**	*e*P	Pn	22 46 54.0	-3.1
PPM				*i* S	Sb	22 47 15.3	-1.2
UTMO	**Huajuapan**	**1.66**	**92**	*i* P	Pn	22 46 55.3	-4.8
UTMO				*i* S	Sn	22 47 18.2	-3.7

OTT 12 23:05:31.6±1.1**,6838N×6732W,h18**km**,MN3.4**/6**,165km northwest from Qikiqtarjuaq, Nu Baffin Island Seismic Zone, Nt.,Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRB	**Frobisher Bay**	**4.68**	**187**	PN	Pn	23 06 40.8	-0.6
FRB				SN	Sn	23 07 31.9	-3.2
FRB				LG		23 07 53.0	
FRB				Trac		23 07 59.0	
	comp=Z,57nm,0.2s						
ILON	**Igloolik, Nuna**	**5.34**	**287**	PN	Pn	23 06 48.5	-1.9
ILON				SN	Sn	23 07 48.4	-3.1
ILON				LG		23 08 11.6	
ILON				Trac		23 08 24.2	
	comp=Z,28nm,0.3s						
GIFN	**Gifford Fjord,**	**5.36**	**294**	PN	Pn	23 06 50.1	-0.5
GIFN				SN	Sn	23 07 48.7	-3.1
GIFN				LG		23 08 15.2	
GIFN				Trac		23 08 24.8	
	comp=Z,32nm,0.3s						
PINU	**Pond Inlet**	**5.61**	**325**	PN	Pn	23 06 21.2	-33
PINU				SN	Sn	23 07 20.4	-38
PINU				LG		23 07 50.1	
PINU				Trac		23 07 55.6	
	comp=Z,10nm,0.2s						
SRLN	**Sarcpa Lake, N**	**5.90**	**279**	PN	Pn	23 06 58.3	+0.3
SRLN				SN	Sn	23 08 03.2	-1.9
SRLN				LG		23 08 31.6	
SRLN				Trac		23 08 37.1	
	comp=Z,25nm,0.3s						
AP3N	**Apex site 3 Nu**	**6.28**	**288**	PN	Pn	23 07 02.7	-0.6
AP3N				SN	Sn	23 08 15.2	+0.8
AP3N				LG		23 08 45.4	
AP3N				Trac		23 08 48.0	
	comp=Z,32nm,0.5s						
SFJD	**Kangerlussuaq**	**6.50**	**94**	PN	Pn	23 07 04.3	-2.0
SFJD				SN	Sn	23 08 10.5	-10
QILN	**Qililugaq Expl**	**7.50**	**266**	PN	Pn	23 07 16.2	-3.9
QILN				SN	Sn	23 08 40.0	-4.6
QILN				LG		23 09 20.1	
QILN				Trac		23 09 21.4	
	comp=Z,10nm,0.4s						
KUQ	**Kuujjuuaa**	**10.32**	**183**	PN	Pn	23 08 00.8	+2.0
KUQ				SN	Sn	23 09 47.2	-6.8
KUQ				LG		23 10 42.4	
KUQ				Trac		23 11 00.4	
	comp=Z,7.4nm,0.3s						
RES	**Resolute Bay**	**10.68**	**318**	PN	Pn	23 08 01.4	-2.2
RES				SN	Sn	23 09 54.5	-8.2
RES				LG		23 11 00.5	
SCHQ	**Schefferville**	**13.60**	**179**	PN	Pn	23 08 43.8	+0.2
SCHQ				SN	Sn	23 10 54.9	-19
WEMQ	**Wemindji, Queb**	**16.19**	**204**	PN	Pn	23 09 15.1	-3.1
WEMQ				SN	Sn	23 12 01.1	-16
WEMQ				LG		23 13 47.5	

*ISCJB **12** 23:27:53.7±1.0, 104N±003×12633E±005, h33km±8km, mb5.0/84, MS3.9/20, Error ellipse: s-maj=8.7km s-min=5.0km az=147.8*
*BJI **12** 23:27:53.6, 085N×126.19E, h39km, mB5.0, mb5.0, Ms4.4, Msz4.0*
*MOS **12** 23:27:54.1±1.2, 109N×12625E, h33km, mb5.2/39, Error ellipse: s-maj=13.9km s-min=6.4km az=109.4*
*IDC **12** 23:27:55.3±4.1, 103N×12620E, h29km±28km, mb4.6/19, mb1 4.6/20, mb1mx4.6/21, mbtmp4.8/20, ML4.5/1, MS3.7/5, Ms1 3.7/5, ms1mx3.3/27, Error ellipse: s-maj=21.5km s-min=10.6km az=71.0*
*NEIC **12** 23:27:57.9±1.6, 102N×12626E, h53km±14km, mb5.0/29, Error ellipse: s-maj=10.1km s-min=5.2km az=69.0*
ISC 12 23:27:57.3±0.8**,103N**±003×**12634E**±005**,h44**km±7km**, h28**km±1.9km**:pP-P,n193,**σ1§**11**/199**,mb5.0**/84**,MS3.9**/20**, 13C-10D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**5.04**	**158**	P	**Pn**	**23 29 18.6**	**+8.3**
	0.0nm,0.0s						
SWI	**Sorong**	**5.27**	**111**	P	**Pn**	**23 29 17.5**	**+4.1**
	0.0nm,0.0s						
PCI	**Palu**	**6.78**	**254**	P	**Pn**	**23 29 35.3**	**+1.2**
	0.0nm,0.0s						
BAKI	**Biak**	**10.02**	**103**	P	**Pn**	**23 30 27.4**	**+8.9**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**11.26**	**296**	*e*Pn	**Pn**	**23 30 38.3**	**+2.7**
KAKA	**Kakadu**	**14.93**	**156**	*e*P	**Pn**	**23 31 31.1**	**+5.7**
	61nm,0.7s						
KSM	**Kuching**	**16.03**	**272**	*e*Pn	**Pn**	**23 31 43.3**	**+3.7**
CAUP	**Cauayan**	**16.43**	**345**	*e*P	**Pn**	**23 31 46.5**	**+1.9**
KRKI	**Karangkates**	**16.58**	**236**	P	**Pn**	**23 31 54.7**	**+8.2**
	356nm,1.1s						
ABRA	**Dolores**	**17.42**	**342**	*e*P	**Pn**	**23 31 56.5**	**-0.4**
APYP	**Conner**	**17.46**	**344**	*e*P	**Pn**	**23 31 57.0**	**-0.5**
BJII	**Banjamegara**	**18.55**	**243**	P	**Pn**	**23 32 11.7**	**+0.9**
	68nm,1.7s						
FITZ	**Fitzroy Crossi**	**19.02**	**182**	⇑*i*P	**Pn**	**23 32 14.3**	**-2.2**
	24nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.02**	**182**	P	**Pn**	**23 32 14.7**	**-1.8**
	1.0nm,0.3s,baz=28,slow=10,SNR=25						
WRAB	**Tennant Creek**	**22.26**	**160**	P	**P**	**23 32 50.3**	**-0.1**
	578nm,0.9s,mb6.0,SNR=37						
WRAB	**Tennant Creek**	**22.26**	**160**	*e*P	**P**	**23 32 49.8**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,162nm,1.0s,mb5.4						
WRAB	**Tennant Creek**	**22.26**	**160**	*e*P	**P**	**23 32 49.8**	**-0.6**
	comp=Z,162nm,1.0s,mb5.4						
WB2	**Warramunga Arr**	**22.27**	**160**	⇑*i*P	**P**	**23 32 49.7**	**-0.8**
MBWA	**Marble Bar**	**22.98**	**196**	*e*P	**P**	**23 32 57.3**	**-0.7**
KGM	**Kluang**	**23.03**	**273**	P	**P**	**23 32 59.1**	**+0.6**
YHNB	**Yeheng**	**23.99**	**349**	*e*P	**P**	**23 33 04.7**	**-3.0**
QIZ	**Qiongzhong**	**24.11**	**319**	P	**P**	**23 33 07.9**	**-0.9**
QIZ				XP	sP	23 33 20.8	-4.9
QIZ				S	**S**	**23 37 23.4**	**-0.2**
QIZ				XS	sS	23 37 37.5	-5.5
QIZ				AMB	AMB		
	comp=Z,168nm,2.4s,mb5.0						
QIZ				LR	LR		
	comp=N,195nm,19.0s						
QIZ	**Qiongzhong**	**24.11**	**319**	*e*P	**P**	**23 33 07.6**	**-1.2**
	comp=N,17nm,0.9s,mb4.5						
IPM	**Ipoh**	**25.51**	**278**	P	**P**	**23 33 22.3**	**+0.8**
AS31	**Alice Springs**	**25.62**	**164**	*e*P	**P**	**23 33 22.4**	**-0.2**
ASAR	**Alice Springs**	**25.62**	**164**	P	**P**	**23 33 22.4**	**-0.2**
	comp=N,5.5nm,0.5s,mb4.3,baz=350,slow=7.6,SNR=109						
ASAR				PcP	PcP	23 36 53.3	+0.9
	comp=N,2.3nm,0.7s,baz=349,slow=2.5,SNR=4.1						
ASAR				S	**S**	**23 37 50.6**	**+2.9**
	comp=N,2.9nm,0.9s,baz=351,slow=23,SNR=4.8						
ASAR				LR	LR	23 44 13.2	
	comp=N,122nm,20.7s,MS3.4,baz=93,slow=38						
ASAR	**Alice Springs**	**25.62**	**164**	P	**P**	**23 33 22.4**	**-0.2**
ASAR						23 36 53.3	
ASAR				S	**S**	**23 37 50.6**	**+2.9**
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR				smax			
	comp=N,3.0nm,1.0s						
ASAR				MLR	MLR		
	comp=Z,122nm,20.7s						
ASPA	**Alice Springs**	**25.62**	**164**	*e*P	**P**	**23 33 22.3**	**-0.3**
JOW	**Kunigami**	**25.72**	**4**	P	**P**	**23 33 25.1**	**+1.6**
	comp=Z,44nm,0.7s,mb5.1,baz=226,slow=9.3,SNR=10						
KULM	**Kulim**	**25.99**	**280**	*e*P	**P**	**23 33 25.1**	**-0.7**
PSI	**Prapat**	**27.45**	**274**	P	**P**	**23 33 37.7**	**-1.3**
	comp=Z,24nm,0.8s,mb4.8,baz=89,slow=5.4,SNR=25						
PSI	**Prapat**	**27.45**	**274**	P	**P**	**23 33 37.7**	**-1.3**
PSI				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.8						
PSI	**Prapat**	**27.45**	**274**	P	**P**	**23 33 37.7**	**-1.3**
CTA	**Charters Tower**	**28.66**	**138**	⇑*i*P	**P**	**23 33 48.8**	**-1.0**
	comp=Z,6.7nm,1.1s,mb4.3						
CTA	**Charters Tower**	**28.66**	**138**	P	**P**	**23 33 50.8**	**+1.0**
	comp=Z,4.6nm,0.7s,mb4.3,baz=321,slow=11,SNR=4.2						
CTA	**Charters Tower**	**28.66**	**138**	P	**P**	**23 33 50.8**	**+1.0**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SSE	**Sheshan**	**30.30**	**351**	P	**P**	**23 34 04.5**	**+0.2**
SSE				AP	pP	23 34 12.6	-3.5
SSE				XP	sP	23 34 17.2	-4.1
SSE				S	**S**	**23 39 02.5**	**+1.2**
SSE				XS	sS	23 39 17.6	-3.3
SSE				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,31nm,5.5s						
SSE				LR	LR		
	comp=N,52nm,20.0s,MS3.3						
SSE				LR	LR		
	comp=E,55nm,19.9s,MS3.3						
SSE				LR	LR		
	comp=Z,103nm,20.7s,MS3.5						
WHN	**Wuhan**	**31.48**	**340**	P	**P**	**23 34 16.5**	**+1.7**
GYA	**Guiyang**	**31.58**	**325**	⇑*i*P	**P**	**23 34 15.5**	**-0.1**
GYA				AP	pP	23 34 22.7	-4.7
GYA				PP	PP	23 35 19.4	-8.1
GYA				S	**S**	**23 39 21.7**	**+0.3**
GYA				SCP	ScP	23 40 49.0	+2.1
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,260nm,6.3s						
GYA				LR	LR		
	comp=N,380nm,17.4s,MS4.3						
GYA				LR	LR		
	comp=E,390nm,17.8s,MS4.3						
GYA				LR	LR		
	comp=Z,410nm,17.0s,MS4.2						
NJ2	**Nanjing**	**31.66**	**348**	*e*P	**P**	**23 34 18.8**	**+2.5**
NJ2				AP	pP	23 34 28.3	+0.3
NJ2				S	**S**	**23 39 24.0**	**+1.5**
NJ2				XS	sS	23 39 40.0	-2.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,330nm,4.3s						
NJ2				LR	LR		
	comp=N,150nm,22.0s,MS3.8						
NJ2				LR	LR		
	comp=E,210nm,24.4s,MS3.8						
NJ2				LR	LR		
	comp=Z,260nm,25.5s,MS3.8						
FORT	**Forrest**	**31.67**	**177**	⇑*i*P	**P**	**23 34 16.3**	**-0.1**
	comp=Z,60nm,0.7s,mb5.5						
CHTO	**Chiang Mai**	**32.16**	**305**	*e*P	**P**	**23 34 20.1**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
CHTO	**Chiang Mai**	**32.16**	**305**	*e*P	**P**	**23 34 20.1**	**-0.6**
	comp=Z,4.2nm,0.6s,mb4.5						
KMI	**Kunming**	**33.06**	**318**	P	**P**	**23 34 29.3**	**+0.7**
KMI				AP	pP	23 34 37.0	-3.4
KMI				XP	sP	23 34 40.1	-5.5
KMI				S	**S**	**23 39 49.8**	**+5.4**
KMI				XS	sS	23 40 01.4	-2.7
KMI				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.7						
KMI				AMB	AMB		
	comp=Z,80nm,3.5s						
KMI				LR	LR		
	comp=N,192nm,22.2s,MS3.9						
KMI				LR	LR		
	comp=E,175nm,23.9s,MS3.9						
KMI				LR	LR		
	comp=Z,260nm,23.3s,MS3.9						
KLBR	**Kellerberrin**	**33.45**	**193**	*e*P	**P**	**23 34 32.3**	**+0.3**
	comp=Z,30nm,0.5s,mb5.5						
MUN	**Mundaring**	**34.20**	**195**	*e*P	**P**	**23 34 38.9**	**+0.4**
NWAO	**Narrogin (SRO)**	**34.85**	**193**	*e*P	**P**	**23 34 42.5**	**-1.6**
NWAO				pmax	pmax		
	comp=Z,17nm,0.6s						
NWAO	**Narrogin (SRO)**	**34.85**	**193**	*e*P	**P**	**23 34 42.5**	**-1.6**
	comp=Z,17nm,0.6s,mb5.2						
HNR	**Honiara**	**35.05**	**108**	LR	LR	23 49 22.2	
	comp=Z,127nm,19.1s,MS3.7,baz=359,slow=37						
STKA	**Stephens Creek**	**35.78**	**157**	*e*P	**P**	**23 34 51.9**	**-0.2**
	comp=Z,22nm,0.7s,mb5.2						
STKA	**Stephens Creek**	**35.78**	**157**	P	**P**	**23 34 52.1**	**+0.1**
	comp=Z,27nm,0.7s,mb5.3,baz=328,slow=8.6,SNR=56						
STKA				LR	LR	23 50 16.7	
	comp=Z,164nm,21.5s,MS3.8,baz=5.5,slow=37						
CD2	**Chengdu**	**36.62**	**326**	P	**P**	**23 34 58.4**	**-0.9**
CD2				AP	pP	23 35 05.7	-5.5
CD2				XP	sP	23 35 09.1	-7.3
CD2				PP	PP	23 36 24.1	+0.9
CD2				S	**S**	**23 40 40.6**	**+1.4**
CD2				XS	sS	23 40 52.8	-6.2
CD2				SS	SS	23 43 08.8	-12
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				AMB	AMB		
	comp=Z,40nm,5.6s						
CD2				LR	LR		
	comp=N,280nm,20.4s						
CD2				LR	LR		
	comp=Z,80nm,20.4s,MS3.5						
XAN	**Xi'an**	**36.67**	**335**	P	**P**	**23 34 58.4**	**-1.3**
XAN				AMB	AMB		
	comp=Z,19nm,0.9s,mb4.9						
MJAR	**Matsushiro Arr**	**37.01**	**16**	P	**P**	**23 35 01.7**	**-0.9**
	comp=Z,8.8nm,0.7s,mb4.7,baz=189,slow=8.9,SNR=40						
MJAR	**Matsushiro Arr**	**37.01**	**16**	P	**P**	**23 35 01.7**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MJAR	**Matsushiro Arr**	**37.01**	**16**	P	**P**	**23 35 01.7**	**-0.9**
MAJO	**Matsushiro**	**37.01**	**16**	*e*P	**P**	**23 35 01.6**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
MAJO	**Matsushiro**	**37.01**	**16**	*e*P	**P**	**23 35 01.6**	**-1.0**
	comp=Z,16nm,0.9s,mb4.9						
MAT	**Matsushiro**	**37.01**	**16**	P	**P**	**23 35 01.7**	**-0.9**
ARMA	**Armidale**	**39.47**	**145**	*e*P	**P**	**23 35 24.2**	**+0.9**
BJT	**Baijiatuau**	**39.90**	**348**	*e*P	**P**	**23 35 24.7**	**-2.1**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BJT	**Baijiatuau**	**39.90**	**348**	*e*P	**P**	**23 35 24.7**	**-2.1**
	comp=Z,7.9nm,0.6s,mb4.6						
BJI	**Beijing**	**39.92**	**348**	*e*P	**P**	**23 35 26.1**	**-0.9**
BJI				S	**S**	**23 41 19.5**	**-9.5**
BJI				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.7						
BJI				LR	LR		
	comp=Z,178nm,27.6s,MS3.8						
LZH	**Lanzhou**	**40.65**	**332**	*e*P	**P**	**23 35 32.1**	**-1.0**
LZH				AP	pP	23 35 41.8	-3.3
LZH				XP	sP	23 35 47.8	-2.4
LZH				*e*S	**S**	**23 41 40.0**	**+0.1**
LZH				XS	sS	23 41 57.0	-2.9
LZH				*e*SS	SS	23 44 38.0	-3.3
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.5						
LZH				AMB	AMB		
	comp=Z,80nm,5.0s						
LZH				LR	LR		
	comp=N,250nm,13.4s						
LZH				LR	LR		
	comp=Z,660nm,14.8s,MS4.6						
SNY	**Shenyang**	**40.69**	**357**	⇑P	**P**	**23 35 34.5**	**+1.1**
SNY				PP	PP	23 37 15.5	+7.8
SNY				S	**S**	**23 41 39.1**	**-1.4**
SNY				SS	SS	23 44 41.7	-0.4
SNY				AMB	AMB		
	comp=Z,33nm,0.8s,mb5.0						
SNY				AMB	AMB		
	comp=Z,73nm,4.4s						
SNY				LR	LR		
	comp=N,147nm,24.6s,MS4.0						
SNY				LR	LR		
	comp=E,168nm,20.4s,MS4.0						
SNY				LR	LR		
	comp=Z,158nm,19.8s,MS3.9						
HHC	**Hu-ho-hao-te**	**41.84**	**343**	*e*P	**P**	**23 35 43.6**	**+0.8**
HHC				AP	pP	23 35 53.3	-1.6
HHC				XP	sP	23 35 57.4	-2.6
HHC				PP	PP	23 37 24.5	+4.4
HHC				PCS	PcS	23 41 29.4	-0.3

HHC S **S** **23 42 00.0 +2.5**
HHC XS sS 23 42 16.8 -0.8
HHC SS SS 23 45 02.1 -2.7
HHC SCS ScS 23 45 41.3 -0.6
HHC AMB AMB
comp=Z,11nm,1.0s,mb4.4
HHC AMB AMB
comp=Z,42nm,5.8s
HHC LR LR
comp=N,99nm,20.9s,MS3.8
HHC LR LR
comp=E,86nm,16.1s,MS3.8
HHC LR LR
comp=Z,171nm,25.6s
VLA Vladivostok 42.20 6*c iP* **P** **23 35 46.4 +0.6**
VLA pmax pmax
comp=Z,21nm,0.8s,mb4.8
TOO Toolangi 42.30 157⇑ *iP* **P** **23 35 47.7 +1.1**
comp=Z,4.2nm,0.7s,mb4.2
TOO Toolangi 42.30 157⇑ *iP* **P** **23 35 47.7 +1.1**
TOO pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
CN2 Changchun 42.59 359 *eP* **P** **23 35 53.0 +4.0**
CN2 *e*AP pP 23 36 00.5 -0.5
CN2 *e*S **S** **23 42 15.3 +6.6**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
CN2 LR LR
comp=N,200nm,17.0s,MS4.2
CN2 LR LR
comp=E,200nm,17.0s,MS4.2
CN2 LR LR
comp=Z,200nm,21.0s,MS4.0
MDJ Mudanjiang 43.50 3 P **P** **23 35 57.1 +0.8**
MDJ AP pP 23 36 03.3 -5.1
MDJ SCP ScP 23 41 35.3 +3.8
MDJ PCS PcS 23 41 37.8 +1.4
MDJ S **S** **23 42 24.8 +2.9**
MDJ AMB AMB
comp=Z,31nm,0.7s,mb5.2
MDJ AMB AMB
comp=Z,32nm,5.6s
MDJ LR LR
comp=N,66nm,20.9s
MDJ LR LR
comp=Z,84nm,22.5s,MS3.6
MDJ Mudanjiang 43.50 3 *eP* **P** **23 35 56.8 +0.5**
comp=Z,25nm,0.8s,mb5.0
LSA Lhasa 43.97 314 *eP* **P** **23 36 00.6 +0.5**
LSA pmax pmax
comp=Z,13nm,0.6s,mb4.8
LSA Lhasa 43.97 314 *eP* **P** **23 36 00.6 +0.6**
comp=Z,13nm,0.6s,mb4.8
GTA Gaotai 45.22 331 ⇓P **P** **23 36 09.4 -0.7**
GTA PP PP 23 38 01.1 +4.7
GTA XS sS 23 43 09.5 +2.3
GTA AMB AMB
comp=Z,7.0nm,0.8s,mb4.5
GTA AMB AMB
comp=Z,80nm,5.8s
GTA LR LR
comp=N,101nm,19.1s,MS4.0
GTA LR LR
comp=E,129nm,18.3s,MS4.0
GTA LR LR
comp=Z,162nm,18.4s,MS4.0
ASAJ Asahikawa 45.27 16 P **P** **23 36 11.5 +1.0**
comp=Z,12nm,0.8s,mb4.8,baz=218,slow=14,SNR=14
ASAJ Asahikawa 45.27 16 P **P** **23 36 11.5 +1.0**
ASAJ pmax pmax
comp=Z,12nm,0.8s
DZM Mont Dzumac 45.36 123 P **P** **23 36 11.8 +0.7**
comp=Z,8.8nm,1.0s,mb4.6,baz=335,slow=10,SNR=3.6
GUN Gumba 47.03 308 *eP* **P** **23 36 24.0 -0.3**
comp=Z,53nm,0.6s,mb5.6
PKI Pulchoki 47.25 308 *eP* **P** **23 36 24.8 -1.2**
comp=Z,41nm,1.2s,mb5.2
PKI Pulchoki 47.25 308 *eP* **P** **23 36 24.8 -1.2**
PKI pmax pmax
comp=Z,41nm,1.2s,mb5.2
KKN Kakani 47.45 308 *eP* **P** **23 36 26.3 -1.3**
comp=Z,37nm,0.9s,mb5.3
KKN Kakani 47.45 308 *eP* **P** **23 36 26.3 -1.3**
KKN pmax pmax
comp=Z,37nm,0.9s,mb5.3
DMN Daman 47.51 308 *eP* **P** **23 36 27.7 -0.3**
comp=Z,57nm,1.0s,mb5.5
HABR Khabarovsk 47.86 8 *eP* **P** **23 36 31.6 +0.9**
HABR *e*S **S** **23 43 29.0 +4.3**
HABR pmax pmax
comp=Z,28nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 47.93 15 *eP* **P** **23 36 31.0 -0.3**
YSS *e* 23 36 48.0
YSS Yuzh-Sakhalins 47.93 15 *eP* **P** **23 36 31.5 +0.2**
comp=Z,8.1nm,0.4s,mb5.1
GKN Gorkha 48.05 308 *eP* **P** **23 36 31.2 -1.0**
comp=Z,44nm,0.9s,mb5.5
KLR Kul'dur 48.24 5 *eP* **P** **23 36 31.0 -2.7**
HIA Hailar 48.39 354*c iP* **P** **23 36 35.9 +1.1**
HIA Hailar 48.39 354 *eP* **P** **23 36 35.9 +1.0**
comp=Z,17nm,1.0s,mb5.0
KOLN Koldanda 48.78 307 *eP* **P** **23 36 37.2 -0.6**
comp=Z,79nm,0.8s,mb5.8
ULN Ulaanbaatar 49.56 343 P **P** **23 36 44.3 +0.5**
SNR=7.1
ULN Ulaanbaatar 49.56 343 ⇓*iP* **P** **23 36 43.6 -0.2**
ULN Ulaanbaatar 49.56 343 *eP* **P** **23 36 43.0 -0.8**
comp=Z,7.3nm,0.6s,mb4.9
HYB Hyderabad 49.71 292 *i* P **P** **23 36 44.5 -0.4**
HYB Hyderabad 49.71 292 *eP* **P** **23 36 44.5 -0.4**
SONM Songino Array 49.73 342 P **P** **23 36 44.8 -0.2**
comp=Z,7.4nm,0.8s,mb4.8,baz=161,slow=8.3,SNR=21
SONM LR LR 23 58 18.8
comp=Z,64nm,20.1s,MS3.6,baz=25,slow=37
SONM Songino Array 49.73 342 P **P** **23 36 44.8 -0.3**
SONM pmax pmax
comp=Z,7.0nm,0.8s
SONM MLR MLR
comp=Z,64nm,20.1s
ZAK Zakamensk 52.94 342 *eP* **P** **23 37 06.5 -2.6**
ZAK *e* 23 38 18.2
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
TLY Talaya 53.97 343 *eP* **P** **23 37 17.1 +0.5**
TLY *e*SS ScS 23 47 06.8 +4.5
TLY pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
TLY MLR MLR
comp=Z,111nm,24.0s,MS3.8
TLY Talaya 53.97 343 *eP* **P** **23 37 19.9 +3.2**
WMQ Urumqi 54.72 326 *eP* **P** **23 37 23.0 +0.9**
WMQ AP pP 23 37 33.0 -1.5
WMQ XP sP 23 37 37.0 -2.6
WMQ PP PP 23 39 27.0 +2.0
WMQ S **S** **23 45 00.0 +0.6**
WMQ SCS ScS 23 47 06.0 -1.7
WMQ SS SS 23 48 43.0 +0.3
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,103nm,6.0s
WMQ LR LR
comp=N,137nm,12.0s,MS4.5
WMQ LR LR
comp=E,257nm,13.0s,MS4.5
WMQ LR LR
comp=Z,138nm,12.0s,MS4.2
CLNS Chul'man 55.65 359 *eP* **P** **23 37 27.4 -1.4**
CLNS pmax pmax
comp=N,14nm,0.9s
CLNS pmax pmax
comp=Z,19nm,0.9s,mb5.1
CLNS pmax pmax
comp=E,7.0nm,0.8s
MKAR Makanchi Array 59.55 326 P **P** **23 37 55.5 -0.8**
comp=E,8.2nm,0.5s,mb5.0,baz=118,slow=7.0,SNR=76
MKAR Makanchi Array 59.55 326 P **P** **23 37 55.5 -0.8**
MKAR pmax pmax
comp=Z,8.0nm,0.5s
YAK Yakutsk 60.90 2*d iP* **P** **23 38 05.6 +0.1**
YAK pmax pmax
comp=Z,42nm,0.8s,mb5.6
YAK Yakutsk 60.90 2 *eP* **P** **23 38 06.7 +1.2**
KZA Kyzart 61.35 319 P **P** **23 38 10.6 +2.1**
SNR=7.2
MA2 Magadan 61.40 14 *eP* **P** **23 38 10.1 +1.2**
MA2 pmax pmax
comp=Z,30nm,0.8s,mb5.5
MA2 Magadan 61.40 14 *eP* **P** **23 38 08.0 -0.9**
comp=Z,22nm,0.8s,mb5.3
TKM2 Tokmak 2 61.52 320 P **P** **23 38 11.0 +1.3**
SNR=12
TKM2 Tokmak 2 61.52 320 *i* P **P** **23 38 08.4 -1.3**
TKM2 pmax pmax
comp=Z,15nm,0.7s,mb5.2
AAK Ala-Archa 62.10 319⇑ *eP* **P** **23 38 12.3 -1.3**
AAK pmax pmax
comp=Z,12nm,1.0s,mb5.0
AAK Ala-Archa 62.10 319 *eP* **P** **23 38 14.6 +1.0**
CHMS Chumysh 62.10 319 P **P** **23 38 14.4 +0.8**
SNR=5.9
USP Ospenovka 62.39 320 P **P** **23 38 16.7 +1.2**
SNR=23
AML Almayashu 62.41 318 P **P** **23 38 15.2 -0.4**
SNR=19
EKS2 Erkin-Say 62.59 319 P **P** **23 38 17.0 +0.2**
SNR=12
ZAL Zalesovo 62.81 334 P **P** **23 38 16.7 -1.6**
comp=Z,4.6nm,0.9s,mb4.6,baz=352,slow=8.3,SNR=21
ZAL LR LR 00 09 28.4
comp=Z,64nm,18.5s,MS3.8,baz=323,slow=40
ZAL Zalesovo 62.81 334 *i* P **P** **23 38 17.7 -0.6**
ZAL pmax pmax
comp=Z,5.0nm,0.9s
KURK Kurchatov 63.81 328 P **P** **23 38 24.0 -0.9**
comp=Z,270nm,0.5s,SNR=46
KURK Kurchatov 63.81 328 P **P** **23 38 24.1 -0.8**
SNR=13
KURK Kurchatov 63.81 328*d iP* **P** **23 38 23.8 -1.1**
KURK Kurchatov 63.81 328 *eP* **P** **23 38 23.4 -1.5**
NVS Novosibirsk 64.10 334 *i* P **P** **23 38 25.3 -1.5**
NVS pmax pmax
comp=Z,17nm,1.0s,mb5.0
NVS pmax pmax
comp=N,16nm,1.2s
NVS pmax pmax
comp=E,13nm,1.2s
KK31 Karatay Array 64.95 318 *i* P **P** **23 38 31.2 -1.2**
KK31 pmax pmax
comp=Z,27nm,1.1s,mb5.2
BRVK Borovoye 69.44 328 P **P** **23 39 00.0 -0.8**
comp=Z,161nm,1.0s,mb5.9,SNR=17
BRVK Borovoye 69.44 328 ⇓P **P** **23 39 00.2 -0.6**
SNR=13
BRVK Borovoye 69.44 328 *eP* **P** **23 39 00.1 -0.7**
comp=Z,15nm,0.9s,mb4.9
MIR Mirnyy 71.46 193*d iP* **P** **23 39 15.0 +1.9**
MIR pmax pmax
comp=Z,190nm,1.0s,mb6.0
ABKT Ailbek 72.28 310 P **P** **23 39 18.1 0.0**
comp=Z,82nm,0.8s,mb5.7,SNR=6.9
SVE Sverdlovsk 76.05 329 *eP* **P** **23 39 39.3 -0.7**
SVE pmax pmax
comp=Z,40nm,1.6s,mb5.1
ARU Arti 77.00 328 P **P** **23 39 44.3 -1.1**
comp=Z,149nm,0.5s,SNR=13
ARU Arti 77.00 328 ⇓*iP* **P** **23 39 44.4 -1.0**
ARU *e* pP 23 39 54.4 -4.0
ARU *e* 23 42 37.6
ARU *e*PPP 23 44 22.3
ARU *e*S S 23 49 30.9 +0.3
ARU pmax pmax
comp=Z,14nm,0.7s,mb5.0
QRN Al-Qurain 79.35 299 *eP* **P** **23 39 57.4 -1.0**
QRN AMb AMB 23 40 02.4
comp=Z,30nm,0.5s,mb5.5
KBD Kabd 79.58 299 *eP* **P** **23 39 59.0 -0.7**
KBD AMb AMB 23 40 02.5
comp=Z,76nm,1.0s,mb5.6
NAY Al-Naaiem 79.98 299 *eP* **P** **23 40 01.1 -0.8**
NAY AMb AMB 23 40 04.5
comp=Z,23nm,0.9s,mb5.1
RST Umm Al-Ruwaisa 80.21 300 *eP* **P** **23 40 02.7 -0.4**
RST AMb AMB 23 40 05.4
comp=Z,64nm,0.7s,mb5.7
VNDA Vanda 80.81 173 P **P** **23 40 06.0 -0.3**
comp=Z,4.7nm,0.7s,mb4.5,baz=312,slow=6.3,SNR=23
VNDA Vanda 80.81 173 P **P** **23 40 06.1 -0.2**
VNDA pmax pmax
comp=Z,5.0nm,0.7s
MAW Mawson 81.10 200 P **P** **23 40 08.3 +0.4**
comp=Z,5.6nm,0.7s,mb4.6,baz=86,slow=6.3,SNR=24
MAW Mawson 81.10 200 P **P** **23 40 08.3 +0.5**
MAW pmax pmax
comp=Z,6.0nm,0.7s
SBA Scott Base 81.73 172 *eP* **P** **23 40 11.9 +0.7**
GNI Garni 82.91 310 ⇓*iP* **P** **23 40 18.2 +0.9**
GNI pmax pmax
comp=Z,19nm,1.7s
GNI Garni 82.91 310 *eP* **P** **23 40 18.7 +1.3**
comp=Z,12nm,0.8s,mb5.0
TTA Tatalina 83.47 27 *eP* **P** **23 40 20.1 -0.2**
ZEI Tsey 83.75 313 *eP* **P** **23 40 22.1 +0.4**
ZEI *e**PP pP 23 40 29.7 -5.0
ZEI pmax pmax
comp=Z,14nm,0.5s,mb5.3
KIV Kislovodsk 84.71 314*de*P **P** **23 40 27.9 +1.4**
KIV pmax pmax
comp=Z,10.0nm,1.3s,mb4.8
KIV Kislovodsk 84.71 314 *eP* **P** **23 40 24.1 -2.5**
comp=Z,12nm,0.9s,mb5.0
IMA2 Indian Mountai 84.99 24 *eP* **P** **23 40 28.9 +1.0**
SLKM Skilak Lake 85.87 30 *eP* **P** **23 40 32.5 +0.2**
VRHR Novokhopersk 85.88 321 *eP* **P** **23 40 32.7 +0.3**
VRHR pmax pmax
comp=Z,30nm,0.8s,mb5.6
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.5s
KELT Kelkit 87.11 310 *i* P **P** **23 40 40.3 +1.9**
ELZG Elazig 87.29 308 *i* P **P** **23 40 41.1 +1.8**
VRSR Storozhevoye 87.41 321 *eP* **P** **23 40 40.2 +0.3**
VRSR pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
VRSR pmax pmax
comp=N,8.0nm,0.9s
VRSR pmax pmax
comp=E,20nm,2.0s
KLMR Klimovskoe 87.55 331 *eP* **P** **23 40 39.3 -1.2**
KLMR pmax pmax
comp=Z,30nm,1.1s,mb5.4
MALT Malatya 87.73 308 *eP* **P** **23 40 42.8 +1.4**
comp=Z,17nm,1.4s,mb5.1
GZT Gaziantep 88.41 307 *i* P **P** **23 40 46.1 +1.5**
ANN Anapa 88.50 315 *eP* **P** **23 40 43.7 -1.4**
ANN *e* 23 51 03.8
ANN *e* 23 51 19.8
ANN pmax pmax
comp=Z,45nm,0.7s,mb5.9
ASF Jabal al Asfar 88.98 302 P **P** **23 40 49.1 +1.7**
comp=Z,14nm,1.0s,mb5.3,baz=355,slow=3.6,SNR=16
ASF Jabal al Asfar 88.98 302 P **P** **23 40 49.1 +1.8**
ASF pmax pmax
comp=Z,14nm,1.0s
OBN Obninsk 89.03 325 ⇓P **P** **23 40 49.0 +1.5**
OBN pmax pmax
comp=Z,42nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,100nm,21.0s,MS4.2
KMBO Kilima Mbogo 89.11 269 P **P** **23 40 48.2 +0.3**
comp=Z,2.6nm,0.7s,mb4.7,baz=66,slow=8.9,SNR=9.7
KMBO Kilima Mbogo 89.11 269 *i* P **P** **23 40 51.7 +3.8**
KMBO pmax pmax
comp=Z,3.0nm,0.7s
KMBO Kilima Mbogo 89.11 269 *eP* **P** **23 40 49.0 +1.1**
SYO Syowa Base 89.78 201⇑ *eP* **P** **23 40 51.0 0.0**
BOYT Boyabat 90.41 311 *i* P **P** **23 40 54.7 +0.8**
SIM Simferopol' 90.86 315 *eP* **P** **23 40 56.4 +0.3**
SIM pmax pmax
comp=Z,13nm,0.7s,mb5.4
QSPA South Pole Qui 90.95 180 *eP* **P** **23 40 56.7 +0.2**
comp=Z,2.3nm,0.9s,mb4.5
DAWY Dawson 90.96 26 *eP* **P** **23 40 57.2 +0.7**
JOF Joensuu 91.39 333 *ep* **P** **23 40 57.9 -0.6**
comp=Z,13nm,0.8s,mb5.3
JOF Joensuu 91.39 333 *eP* **P** **23 40 57.9 -0.6**
JOF pmax pmax
comp=Z,13nm,0.8s,mb5.3
BR131 Keskin Array S 91.43 310 *eP* **P** **23 40 59.1 +0.4**
comp=Z,1.9nm,0.8s,mb4.5
BRTR Keskin Array B 91.43 310 P **P** **23 40 58.4 -0.4**
comp=Z,1.8nm,0.8s,mb4.5,baz=120,slow=7.3,SNR=11
BRTR Keskin Array B 91.43 310 P **P** **23 40 58.4 -0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 92.83 340 P **P** **23 41 03.3 -1.9**
comp=Z,4.1nm,0.8s,mb4.9,baz=74,slow=8.9,SNR=7.3
ARCES ARCESS Array B 92.83 340 P **P** **23 41 03.3 -1.9**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
AKASG Malin Array Be 93.73 321 P **P** **23 41 08.6 -0.7**
comp=Z,2.7nm,0.7s,mb4.8,baz=71,slow=4.7,SNR=13
AKASG Malin Array Be 93.73 321 *i* P **P** **23 41 08.8 -0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 93.73 321 P **P** **23 41 08.6 -0.8**
KAF Kangasniemi 93.79 332 *ep* **P** **23 41 07.7 -1.9**
baz=78,slow=4.1
FINES FINESS Array B 94.01 332 P **P** **23 41 08.9 -1.8**
comp=Z,4.0nm,0.8s,mb4.9,baz=98,slow=7.9,SNR=7.3
FINES FINESS Array B 94.01 332 *i* P **P** **23 41 09.6 -1.0**
FINES pmax pmax
comp=Z,4.0nm,0.8s
NB2 NORSAR Subarra101.01 333 P Pdif 23 41 40.9 -1.3
comp=Z,2.3nm,0.8s,baz=70,slow=4.6
NOA NORSAR Array B101.01 333 P Pdif 23 41 41.1 -1.1
comp=Z,0.7nm,0.7s,baz=72,slow=4.6,SNR=2.9
NOA NORSAR Array B101.01 333 P Pdif 23 41 41.1 -1.1
NOA pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 103.94 321 Pdiff Pdif 23 41 56.1 +0.9
comp=Z,0.5nm,0.7s,baz=97,slow=8.0,SNR=3.4
GERES GERESS Array B 103.94 321 P Pdif 23 41 56.1 +0.9
GERES pmax pmax
comp=Z,1.0nm,0.7s
VNA1 Neumayer--Stat 104.53 194⇑ *i*Pdiff Pdif 23 41 56.4 -1.4
VNA1 *e* 23 42 39.5
VNA1 *e* 23 42 40.6
VNA1 *e* 23 42 42.6
VNA1 *e* 23 42 53.7
TORD Torodi Ar. Bea 123.34 286 PKP PKPdf 23 46 50.5 +1.1
comp=Z,2.3nm,0.8s,baz=84,slow=1.8,SNR=22
TORD Torodi Ar. Bea 123.34 286 PKP PKPdf 23 46 50.5 +1.1
MDZ Mendoza 145.24 157 *eP* PKPbc 23 47 32.1 +2.3

IDC 12 23:39:50.2±2.7, 5980S×1681W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.7/13, mbtmp3.9/2, Error ellipse: s-maj=91.2km s-min=44.2km az=9.0, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**43.49**	**302**	P	P	23 47 54.8	-0.3
	1.3nm,0.6s,baz=164,slow=7.9,SNR=6.3						
TORD	**Torodi Ar. Bea**	**74.21**	**19**	P	P	23 51 28.6	-0.2
	0.6nm,0.5s,baz=178,slow=5.9,SNR=13						
SONM	**Songino Array**	**145.50**	**84**	PKPbc	PKPbc	23 59 28.4	-1.8
	1.0nm,0.7s,baz=242,slow=3.2,SNR=5.8						

*ISCJB **12** 23:57:12.4±0.9, 704S±009×14372E±007, h33km, mb3.6/4, MS3.3/1, Error ellipse: s-maj=13.5km s-min=9.3km az=34.3*
*IDC **12** 23:57:12.4±0.9, 694S×14379E, h17km±5km, mb3.6/5, mb1 4.0/7, mb1mx3.8/10, mbtmp3.9/7, ML3.9/2, MS3.3/3, Ms1 3.3/3, ms1mx3.2/18, Error ellipse: s-maj=27.5km s-min=18.2km az=88.0*
*NEIC **12** 23:57:14.5±0.8, 702S×14368E, h35km, mb3.9/2, Error ellipse: s-maj=20.6km s-min=16.3km az=108.0*
ISC 12 23:57:14.5±0.8, 704S±009×14369E±007, h35km, n19, σ1§13/17, mb3.6/4, MS3.3/1, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.16**	**125**	Pn	**Pn**	**23 58 15.0**	**-0.4**
	18nm,0.3s,baz=342,slow=5.5,SNR=43						
PMG				Sn	**Sn**	**23 59 02.2**	**-0.5**
	18nm,0.3s,baz=284,slow=4.2,SNR=3.7						
KAKA	**Kakadu**	**12.43**	**242**	*eP*	**Pn**	**00 00 06.2**	**-2.7**
	44nm,0.5s						
CTA	**Charters Tower**	**13.20**	**169**	LR	LR	00 05 26.0	
	comp=Z,103nm,18.8s,baz=43,slow=37						
WRAB	**Tennant Creek**	**15.70**	**214**	*e*Pn	**Pn**	**00 00 52.1**	**-0.8**
	7.9nm,0.7s						
WB2	**Warramunga Arr**	**15.70**	**214**	*eP*	**Pn**	**00 00 51.4**	**-1.6**
WB2				*e*S	**S**	**00 03 40.6**	**-19**
AS31	**Alice Springs**	**19.01**	**209**	*eP*	**Pn**	**00 01 34.8**	**+0.7**
ASAR	**Alice Springs**	**19.02**	**209**	P	**Pn**	**00 01 34.5**	**+0.3**
	1.5nm,0.3s,baz=42,slow=8.7,SNR=108						
ASAR				LR	LR	00 09 20.7	
	comp=Z,107nm,21.7s,baz=14,slow=38						
ASPA	**Alice Springs**	**19.02**	**209**	*eP*	**Pn**	**00 01 34.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**20.74**	**236**	*eP*	**P**	**00 01 53.2**	**+1.2**
	2.2nm,0.4s						
FITZ				*e*		00 01 58.6	
FITZ	**Fitzroy Crossi**	**20.74**	**236**	P	**P**	**00 01 52.8**	**+0.8**
	1.2nm,0.4s,baz=47,slow=16,SNR=9.3						
FITZ				pP		00 01 58.7	
	6.3nm,0.6s,baz=67,slow=11,SNR=7.7						
FITZ				LR	LR	00 10 30.3	
	comp=Z,140nm,21.9s,MS3.3,baz=249,slow=38						
STKA	**Stephens Creek**	**24.79**	**184**	*eP*	**P**	**00 02 34.9**	**+1.9**
	2.2nm,0.9s,mb3.7						
STKA	**Stephens Creek**	**24.79**	**184**	P	**P**	**00 02 34.5**	**+1.5**
	1.6nm,0.7s,mb3.7,baz=3.4,slow=13,SNR=3.4						
MJAR	**Matsushiro Arr**	**43.66**	**354**	P	**P**	**00 05 14.5**	**-1.2**
	0.3nm,0.4s,mb3.4,baz=186,slow=11,SNR=3.2						
MJAR				pP	pP	00 05 20.0	-6.0
	1.1nm,0.8s,baz=181,slow=8.6,SNR=2.7						
VNDA	**Vanda**	**71.09**	**176**	P	**P**	**00 08 29.9**	**+0.8**
	0.9nm,0.6s,mb3.9,baz=308,slow=7.0,SNR=6.2						
MKAR	**Makanchi Array**	**76.24**	**322**	P	**P**	**00 09 00.5**	**+1.2**
	0.3nm,0.4s,mb3.6,baz=103,slow=8.8,SNR=4.9						
MKAR				pP	pP	00 09 05.9	-4.4
	0.9nm,0.4s,baz=99,slow=7.5,SNR=3.9						
MKAR	**Makanchi Array**	**76.24**	**322**	P	**P**	**00 09 00.5**	**+1.2**
MKAR				pP	pP	00 09 05.9	-4.4
ZAL	**Zalesovo**	**78.17**	**329**	pP	pP	00 09 15.7	-5.5
	1.0nm,0.5s,baz=321,slow=4.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**142.13**	**282**	PKP	PKPdf	00 16 46.1	+3.2
	2.3nm,1.1s,baz=83,slow=2.8,SNR=5.6						
DBIC	**Dimbokro**	**148.78**	**271**	PKPbc	PKPbc	00 17 00.2	+2.1
	8.4nm,1.0s,baz=48,slow=5.3,SNR=8.6						
DBIC				pPKPbc	pPKPbc	00 17 05.8	-3.7
	3.3nm,0.6s,baz=93,slow=3.6,SNR=2.6						

*ISCJB **13** 00:04:41.9±0.9, 38.10N±002×2672E±004, h1km±6km, Error ellipse: s-maj=5.7km s-min=3.9km az=145.8*
*CSEM **13** 00:04:41.7±0.1, 38.13N×2680E, h2km, MD3.1, Error ellipse: s-maj=2.1km s-min=1.5km az=81.0*
*ATH **13** 00:04:42.4, 38.09N×2658E, h19km±1km, MD3.3/5*
*NEIC **13** 00:04:42.4, 38.09N×2658E, h19km, MD3.1(ISK), MD3.3(ATH), After ATH.*
*ISK **13** 00:04:43.0, 38.12N×2691E, h5km, MD3.1*
ISC 13 00:04:42.7±0.6, 3812N±002×2672E±004, h3km±5km, n25, σ1§07/37, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.26**	**337**	*i* P	**Pg**	**00 04 47.9**	**+0.2**
URLA				*i* S	**Sg**	**00 04 51.6**	**+0.5**
BLCB	**Balcova**	**0.36**	**43**	*i* PG	**Pg**	**00 04 49.0**	**-0.7**
BLCB				*i* SG	**Sg**	**00 04 54.4**	**-0.1**
SMG	**Samos**	**0.42**	**168**	⇑*i*PB	**Pg**	**00 04 51.2**	**+0.4**
SMG				*e*SB	**Sg**	**00 04 57.8**	**+1.5**
IZM	**Izmir**	**0.51**	**57**	PG	**Pg**	**00 04 52.1**	**-0.4**
IZM				SG	**Sg**	**00 04 59.0**	**-0.1**
KDAG	**Bornova**	**0.51**	**56**	*i* P	**Pg**	**00 04 52.0**	**-0.6**
KDAG				*i* S	**Sg**	**00 04 58.9**	**-0.3**
AYDN	**Tasoluk**	**1.02**	**116**	*i* P	**Pg**	**00 05 02.3**	**-0.1**
AYDN				*i* S	**Sg**	**00 05 15.6**	**0.0**
AKHS	**Akhisar**	**1.14**	**48**	*i* P	**Pg**	**00 05 03.8**	**-0.8**
AKHS				*i* S	**Sg**	**00 05 19.1**	**-0.3**
AKHS	**Akhisar**	**1.14**	**48**	*i* P	**Pg**	**00 05 03.8**	**-0.8**
AKHS				*i* S	**Sg**	**00 05 19.1**	**-0.4**
AKS	**Akhisar**	**1.14**	**48**	PG	**Pg**	**00 05 03.7**	**-0.9**
BODT	**Bodrum**	**1.16**	**156**	PN	**Pn**	**00 05 05.1**	**-0.7**
PRK	**Paraskevi**	**1.18**	**343**	*e*PN	**Pn**	**00 05 04.7**	**-1.4**
PRK				*e*SN	**Sn**	**00 05 20.9**	**-1.8**

AYVA	**Ayvalik**	**1.19**	**359**	*i* P	**Pg**	**00 05 05.0**	**-0.5**
AYVA				*i* S	**Sg**	**00 05 21.7**	**+0.9**
BDRM	**Kayabasi**	**1.20**	**151**	*i* P	**Pg**	**00 05 05.0**	**-0.7**
BDRM				*i* S	**Sg**	**00 05 21.8**	**+0.5**
APE	**Apeiranthos**	**1.41**	**222**	*e*PN	**Pn**	**00 05 07.9**	**-1.4**
APE				*e*SN	**Sn**	**00 05 25.5**	**-3.0**
DAT	**Datca**	**1.55**	**154**	*e*PN	**Pn**	**00 05 11.8**	**+0.6**
YER	**Yerkesik**	**1.58**	**128**	*e*PN	**Pn**	**00 05 11.4**	**-0.3**
EZN	**Ezine**	**1.73**	**350**	*e*PN	**Pn**	**00 05 16.3**	**+2.6**
DST	**Dursunbey**	**2.10**	**44**	*e*PN	**Pn**	**00 05 19.2**	**+0.4**
LIA	**Limnos Island**	**2.14**	**326**	*e*PN	**Pn**	**00 05 18.9**	**-0.5**
GADA	**Gvkgeada**	**2.17**	**343**	*e*PN	**Pn**	**00 05 22.9**	**+3.2**
ORLT	**Orhaneli**	**2.56**	**41**	*e*PN	**Pn**	**00 05 26.0**	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.59**	**8**	*e*PN	**Pn**	**00 05 27.7**	**+2.2**
ENEZ	**Enez**	**2.65**	**351**	*e*PN	**Pn**	**00 05 29.3**	**+3.0**
RDO	**Rodhopi**	**3.16**	**344**	*e*PN	**Pn**	**00 05 32.9**	**-0.4**
YLV	**Yalova**	**3.19**	**39**	*e*PN	**Pn**	**00 05 35.2**	**+1.4**

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*NEIC **13** 00:08:36.1±4.7, 49.85S×161.12E, h10km, Error ellipse: s-maj=90.6km s-min=11.2km az=174.0*

*ISCJB **13** 00:08:41.4±1.4, 49.1S±.02×161.4E±0.1, h10km, Error ellipse: s-maj=28.3km s-min=8.9km az=143.2*

ISC 13 00:08:42.7±1.3**, 49.1S**±.02×**161.3E**±.01**, h10km, n30, σ1.25**/40**, North of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ	**The Paps**	**5.05**	**66**	PN	**Pn**	**00 09 57.7**	**-0.7**
APZ				SN	**Sn**	**00 10 55.5**	**-1.3**
DCZ	**Deep Cove**	**5.38**	**51**	*e*P	**Pn**	**00 10 03.7**	**+0.7**
DCZ				S	**Sn**	**00 11 04.3**	**-0.8**
DCZ	**Deep Cove**	**5.38**	**51**	PN	**Pn**	**00 10 03.5**	**+0.5**
DCZ				SN	**Sn**	**00 11 04.3**	**-0.8**
WHZ	**Wether Hill Ro**	**5.53**	**58**	P	**Pn**	**00 10 06.0**	**+0.9**
WHZ	**Wether Hill Ro**	**5.53**	**58**	PN	**Pn**	**00 10 06.0**	**+0.9**
SYZ	**Scrubby Hill**	**5.88**	**68**	PN	**Pn**	**00 10 09.6**	**-0.3**
SYZ				SN	**Sn**	**00 11 15.7**	**-1.7**
MLZ	**Mavora Lakes**	**6.00**	**54**	P	**Pn**	**00 10 13.0**	**+1.4**
MLZ	**Mavora Lakes**	**6.00**	**54**	PN	**Pn**	**00 10 12.9**	**+1.3**
MLZ				SN	**Sn**	**00 11 21.5**	**+1.2**
TUZ	**Tuapeka**	**6.47**	**65**	*e*P	**Pn**	**00 10 17.9**	**-0.1**
TUZ				S	**Sn**	**00 11 31.9**	**0.0**
TUZ	**Tuapeka**	**6.47**	**65**	PN	**Pn**	**00 10 17.9**	**-0.1**
TUZ				SN	**Sn**	**00 11 31.9**	**+0.1**
EAZ	**Earnscleugh**	**6.70**	**58**	*e*P	**Pn**	**00 10 21.5**	**+0.4**
EAZ	**Earnscleugh**	**6.70**	**58**	PN	**Pn**	**00 10 21.5**	**+0.4**
EAZ				SN	**Sn**	**00 11 37.4**	**0.0**
WKZ	**Wanaka**	**6.79**	**54**	*e*P	**Pn**	**00 10 24.9**	**+2.5**
WKZ	**Wanaka**	**6.79**	**54**	PN	**Pn**	**00 10 24.8**	**+2.3**
JCZ	**Jackson Bay**	**7.18**	**49**	*e*P	**Pn**	**00 10 31.1**	**+3.3**
JCZ	**Jackson Bay**	**7.18**	**49**	PN	**Pn**	**00 10 31.0**	**+3.3**
ODZ	**Otahua Downs**	**7.57**	**62**	*e*P	**Pn**	**00 10 31.4**	**-1.7**
ODZ	**Otahua Downs**	**7.57**	**62**	PN	**Pn**	**00 10 31.4**	**-1.6**
LBZ	**Lake Benmore**	**7.71**	**56**	*e*P	**Pn**	**00 10 34.5**	**-0.6**
LBZ	**Lake Benmore**	**7.71**	**56**	PN	**Pn**	**00 10 34.5**	**-0.5**
LBZ				SN	**Sn**	**00 12 00.6**	**-1.9**
FOZ	**Fox Glacier**	**8.02**	**50**	*e*P	**Pn**	**00 10 42.1**	**+2.9**
FOZ	**Fox Glacier**	**8.02**	**50**	PN	**Pn**	**00 10 42.1**	**+2.9**
WVZ	**Waitaha Valley**	**8.90**	**51**	PN	**Pn**	**00 10 52.1**	**+0.8**
DSZ	**Denniston Nort**	**10.41**	**49**	*e*P	**Pn**	**00 11 12.6**	**+0.6**
THZ	**Tophouse**	**10.96**	**53**	*e*P	**Pn**	**00 11 19.9**	**+0.3**
THZ	**Tophouse**	**10.96**	**53**	PN	**Pn**	**00 11 19.3**	**-0.3**
TAU	**Tasmania Unive**	**11.47**	**297**	*e*Pn	**Pn**	**00 11 22.5**	**-4.0**
TAU				*e*Sn	**Sn**	**00 13 19.7**	**-15**
NNZ	**Nelson**	**11.60**	**52**	*e*P	**Pn**	**00 11 29.6**	**+1.3**
NNZ	**Nelson**	**11.60**	**52**	PN	**Pn**	**00 11 29.6**	**+1.3**
AS31	**Alice Springs**	**33.24**	**310**	*e*P	**P**	**00 15 19.2**	**-0.7**

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*ISCJB **13** 00:11:52.0±1.3, 53.18N±0.10×164.05W±0.08, h36km±9km, mb3.9/14, Error ellipse: s-maj=16.9km s-min=7.2km az=147.5*

*NEIC **13** 00:11:55.2, 53.24N×164.21W, h43km, ML3.2(AEIC), After AEIC.*

*IDC **13** 00:11:58.6±1.4, 53.76N×164.09W, h46km±8km, mb3.5/12, mb1 3.7/13, mb1mx3.5/25, mbtmp3.8/13, ML3.5/1, Error ellipse: s-maj=31.9km s-min=16.4km az=1.0*

ISC 13 00:11:53.5±2.4**, 53.22N**±.009×**164.11W**±.007**, h34**km±18km**, h45**km±2.3km**:pP-P, n23,** σ**0.90**/28**, mb3.9**/14**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUT	**Akutan**	**1.35**	**313**	P	**Pn**	**00 12 15.9**	**0.0**
AKUT				S	**Sn**	**00 12 33.0**	**+0.4**
AKLV	**Akutan Long Va**	**1.45**	**311**	P	**Pn**	**00 12 17.3**	**0.0**
AKLV				S	**Sn**	**00 12 35.6**	**+0.5**
OKCD	**Okmok Cone D**	**2.41**	**277**	P	**Pn**	**00 12 30.7**	**+0.1**
OKCE	**Okmok Cone E**	**2.44**	**276**	P	**Pn**	**00 12 31.5**	**+0.5**
NIKO	**Nikolski**	**2.87**	**267**	P	**Pn**	**00 12 36.5**	**-0.4**
NIKO				S	**Sn**	**00 13 09.3**	**-1.0**
SDPT	**Sand Point**	**3.01**	**43**	P	**Pn**	**00 12 39.4**	**+0.6**
SDPT				S	**Sn**	**00 13 13.4**	**-0.3**
KDAK	**Kodiak Island**	**7.97**	**50**	P	**Pn**	**00 13 47.2**	**+0.2**
	0.6nm,0.3s,baz=248,slow=3.8,SNR=5.7						
KDAK				S	**Sn**	**00 15 11.3**	**-4.7**
	0.6nm,0.3s,baz=146,slow=21,SNR=6.6						
INK	**Inuvik**	**20.90**	**32**	P	**P**	**00 16 31.0**	**-1.9**
	0.6nm,0.5s,baz=226,slow=11,SNR=4.0						
INK	**Inuvik**	**20.90**	**32**	P	**P**	**00 16 31.0**	**-1.9**
YKA	**Yellowknife Ar**	**27.25**	**50**	P	**P**	**00 17 35.5**	**+1.0**
	0.2nm,0.4s,mb3.0,baz=270,slow=9.2,SNR=3.1						
YKA				pP	pP	00 17 48.6	+4.5
	0.7nm,0.6s,baz=272,slow=8.9,SNR=4.1						
NVAR	**Mina Array Bea**	**34.53**	**97**	P	**P**	**00 18 42.7**	**+4.0**
	0.4nm,0.6s,mb3.5,baz=304,slow=8.1,SNR=3.5						
NVAR				pP	pP	00 18 54.6	+6.3
	0.8nm,0.8s,baz=286,slow=8.0,SNR=3.6						
SONM	**Songino Array**	**53.56**	**303**	P	**P**	**00 21 12.2**	**+1.1**
	0.6nm,0.5s,mb3.8,baz=203,slow=6.4,SNR=7.5						
KEV	**Kevo**	**57.07**	**355**	*e*p	**P**	**00 21 33.6**	**-2.7**
	1.5nm,0.5s,mb4.3						
ARCES	**ARCESS Array B**	**57.35**	**356**	P	**P**	**00 21 37.6**	**-0.7**
	0.7nm,0.6s,mb3.9,baz=10,slow=7.4,SNR=4.6						
JOF	**Joensuu**	**63.57**	**352**	*e*p	**P**	**00 22 20.1**	**-0.7**
	1.3nm,0.4s,mb4.3						
KAF	**Kangasniemi**	**64.72**	**355**	*e*p	**P**	**00 22 27.6**	**-0.7**
	2.0nm,0.4s,mb4.5						
BVAR	**Borovoye Array**	**64.80**	**327**	P	**P**	**00 22 28.8**	**0.0**
	1.3nm,0.7s,mb4.1,baz=52,slow=6.6,SNR=11						
BVAR				pP	pP	00 22 42.0	+2.8
	1.4nm,0.7s,baz=46,slow=8.5,SNR=7.6						
FINES	**FINESS Array B**	**65.39**	**355**	P	**P**	**00 22 31.6**	**-1.0**
	1.1nm,0.6s,mb4.1,baz=29,slow=8.7,SNR=8.3						
MKAR	**Makanchi Array**	**65.47**	**316**	P	**P**	**00 22 33.5**	**+0.3**
	0.4nm,0.2s,mb4.0,baz=42,slow=5.6,SNR=5.9						
AKTO	**Aktyubinsk**	**70.79**	**333**	P	**P**	**00 23 07.4**	**+0.9**
	1.9nm,0.7s,mb4.1,baz=50,slow=5.3,SNR=7.1						
AKASG	**Malin Array Be**	**75.84**	**351**	P	**P**	**00 23 36.2**	**-0.1**
	0.4nm,0.3s,mb3.8,baz=8.4,slow=5.2,SNR=4.8						
GERES	**GERESS Array B**	**78.29**	**1**	P	**P**	**00 23 51.2**	**+1.2**
	0.3nm,0.8s,mb3.3,baz=302,slow=2.5,SNR=3.6						
BRTR	**Keskin Array B**	**86.16**	**346**	P	**P**	**00 24 32.9**	**+1.6**
	1.0nm,0.8s,mb4.1,baz=29,slow=3.7,SNR=6.3						

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*BJI **13** 00:15:31.1, 6.00S×152.07E, h38km, mB5.3, mb5.3, Ms5.0, Msz4.8*

*IDC **13** 00:15:36.3±1.8, 5.72S×151.40E, h31km±11km, mb5.1/16, mb1 5.2/18, mb1mx5.2/19, mbtmp5.3/18, MS4.6/16, Ms1 4.6/16, ms1mx4.4/22, Error ellipse: s-maj=15.4km s-min=10.7km az=116.0*

*MOS **13** 00:15:36.8±0.9, 5.47S×151.12E, h33km, mb5.6/37, MS4.9/29, Error ellipse: s-maj=9.2km s-min=6.2km az=96.1*

*ISCJB **13** 00:15:36.3±0.1, 5.75S±.003×151.25E±.002, h37km, mb5.4/95, MS4.9/87, Error ellipse: s-maj=4.5km s-min=3.5km az=163.1*

*CSEM **13** 00:15:36.3, 6.07S×151.38E, h33km, mb5.7*

*HRVD **13** 00:15:37.5±0.1, 6.06S×151.60E, h53km, MW5.4/86, Centroid moment Tensor Solution. LP body waves: s79,c146;Mantle waves: s86,c154; Half duration: 1.2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.90±.02; $M_{\theta\theta}$-0.24±.02; $M_{\phi\phi}$-0.65±.02; $M_{r\theta}$0.14±.01; $M_{\theta\phi}$-0.57±.02; $M_{\phi r}$0.98±.02; Best double couple: $M_0$1.40200×10^{17} NP1:ϕ_s235.00000°,δ27.00000°,λ126.00000°. NP2: ϕ_s16.00000°,δ69.00000°,λ73.00000°. Principal axes: T 1.3830, Plg63.0000°, Azm260.0000°; N 0.0370, Plg15.0000°, Azm22.0000°; P -1.4210, Plg22.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 00:15:37.5±0.1, 5.77S×151.30E, mb5.5/42, MS5.0/49, MW5.4 Error ellipse: s-maj=4.9km s-min=4.0km az=122.0, Moment Tensor Solution. s14 Moment tensor: Scale 10^{17}Nm; M_{rr}1.39; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-1.42; $M_{r\theta}$-0.08; $M_{\theta\phi}$0.19; $M_{\phi r}$0.87; Best double couple: $M_0$1.70000×10^{17} NP1: ϕ_s354.00000°,δ61.00000°,λ91.00000°. NP2: ϕ_s171.00000°,δ29.00000°,λ88.00000°. Principal axes: T 1.6400, Plg74.0000°, Azm267.0000°; N 0.0500, Plg1.0000°, Azm173.0000°; P -1.6900, Plg16.0000°, Azm83.0000°;*

ISC 13 00:15:38.2±0.1**, 5.79S**±.003×**151.31E**±.002**, h39km, h39**km±1.0km**:pP-P, n707,** σ**0.83**/401**, mb5.4**/95**, MS4.9**/87**, 133C-87D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.46**	**229**	Pn	**Pn**	**00 17 01.1**	**+4.0**
	180nm,0.3s,baz=56,slow=6.9,SNR=184						
PMG				Sn	**Sn**	**00 18 01.8**	**+3.2**
	341nm,0.3s,baz=149,slow=23,SNR=6.4						
PMG	**Port Moresby**	**5.46**	**229**	P	**Pn**	**00 17 01.1**	**+4.1**
PMG						00 18 01.8	
PMG				pmax	pmax		
	comp=Z,180nm,0.3s						
PMG				smax			
	comp=N,341nm,0.3s						
PMG	**Port Moresby**	**5.46**	**229**	*e*Pn	**Pn**	**00 17 00.7**	**+3.6**
PMG				*e*Sn	**Sn**	**00 18 02.2**	**+3.6**
HNR	**Honiara**	**9.30**	**113**	Pn	**Pn**	**00 17 48.8**	**-0.8**
	comp=N,74nm,0.3s,baz=256,slow=1.5,SNR=24						
HNR				Sn	**Sn**	**00 19 31.9**	**-1.1**
	comp=N,22nm,0.3s,baz=261,slow=4.6,SNR=3.9						
CTA	**Charters Tower**	**15.04**	**199**	*e*P	**Pn**	**00 19 10.2**	**+2.3**
	comp=N,18nm,0.6s						
CTA	**Charters Tower**	**15.04**	**199**	Pn	**Pn**	**00 19 09.7**	**+1.8**
	comp=N,0.2nm,0.3s,baz=40,slow=15,SNR=3.4						
CTA	**Charters Tower**	**15.04**	**199**	*e*P	**Pn**	**00 19 10.2**	**+2.3**
CTA				pmax	pmax		
	comp=Z,18nm,0.6s						
CTAO	**Charters Tower**	**15.04**	**199**	*e*P	**Pn**	**00 19 13.9**	**+6.0**
KAKA	**Kakadu**	**19.84**	**248**	⇑*i*P	**Pn**	**00 20 07.2**	**-0.3**
	comp=Z,772nm,0.7s						
KAKA				*e*S	**S**	**00 23 45.6**	**-1.4**
GUMO	**Guam**	**20.28**	**342**	P	**P**	**00 20 12.4**	**+1.9**
	comp=Z,633nm,1.1s,baz=162,slow=7.1,SNR=13						
GUMO				LR	LR	00 26 42.2	
	comp=Z,846nm,20.7s,MS4.1,baz=344,slow=33						
WRAB	**Tennant Creek**	**21.67**	**228**	*e*P	**P**	**00 20 26.1**	**+0.7**
WB2	**Warramunga Arr**	**21.67**	**228**	⇑*i*P	**P**	**00 20 26.2**	**+0.7**
WB2				*e*S	**S**	**00 24 23.0**	**-0.2**
DZM	**Mont Dzumac**	**21.83**	**139**	*e*P	**P**	**00 20 24.0**	**-3.1**
DZM	**Mont Dzumac**	**21.83**	**139**	P	**P**	**00 20 25.5**	**-1.6**
	comp=Z,29nm,0.7s,mb4.8,baz=354,slow=8.7,SNR=22						
AS31	**Alice Springs**	**24.42**	**222**	⇑*i*P	**P**	**00 20 53.6**	**+0.5**
ASAR	**Alice Springs**	**24.43**	**222**	P	**P**	**00 20 53.7**	**+0.6**
	comp=Z,354nm,0.9s,mb5.8,baz=57,slow=8.6,SNR=628						
ASAR				S	**S**	**00 25 14.3**	**+3.9**
	comp=Z,14nm,1.1s,baz=41,slow=17,SNR=4.6						
ASAR				ScP	ScP	00 28 08.4	+1.5
	comp=Z,9.7nm,0.8s,baz=44,slow=2.8,SNR=10						
ASAR				LR	LR	00 30 25.7	
	comp=Z,2µm,20.1s,MS4.6,baz=52,slow=36						
ASAR	**Alice Springs**	**24.43**	**222**	P	**P**	**00 20 53.7**	**+0.6**
ASAR				S	**S**	**00 25 14.3**	**+3.9**
ASPA	**Alice Springs**	**24.43**	**222**	⇑*i*P	**P**	**00 20 53.6**	**+0.5**
ARMA	**Armidale**	**24.50**	**179**	*e*P	**P**	**00 20 52.9**	**-0.9**
STKA	**Stephens Creek**	**27.50**	**198**	*e*P	**P**	**00 21 19.4**	**-1.5**
	comp=Z,19nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**27.50**	**198**	P	**P**	**00 21 19.2**	**-1.7**
	comp=Z,25nm,0.8s,mb4.9,baz=7.2,slow=9.7,SNR=34						
STKA				LR	LR	00 33 11.6	
	comp=Z,1µm,19.0s,MS4.5,baz=138,slow=38						
FITZ	**Fitzroy Crossi**	**27.89**	**242**	⇑*i*P	**P**	**00 21 25.1**	**+0.8**
	comp=Z,734nm,0.6s						
FITZ				*e*S	**S**	**00 26 11.6**	**+6.5**
FITZ	**Fitzroy Crossi**	**27.89**	**242**	P	**P**	**00 21 25.1**	**+0.8**
	comp=Z,329nm,0.6s,mb6.1,baz=75,slow=7.9,SNR=879						
FITZ				S	**S**	**00 26 09.5**	**+4.4**
	comp=Z,8.8nm,0.7s,baz=286,slow=20,SNR=3.9						
FITZ				LR	LR	00 33 25.5	
	comp=Z,2µm,19.6s,MS4.7,baz=40,slow=38						
TOO	**Toolangi**	**32.08**	**189**	*e*P	**P**	**00 22 00.5**	**-0.9**
	comp=Z,8.5nm,0.9s,mb4.6						
TOO	**Toolangi**	**32.08**	**189**	*e*P	**P**	**00 22 00.5**	**-0.9**
TOO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
FORT	**Forrest**	**33.09**	**218**	⇑*i*P	**P**	**00 22 10.0**	**-0.3**
	comp=Z,325nm,0.7s,mb6.4						
MBWA	**Marble Bar**	**34.19**	**240**	⇑P	**P**	**00 22 20.5**	**+0.6**
	SNR=23						
MBWA	**Marble Bar**	**34.19**	**240**	*e*P	**P**	**00 22 20.3**	**+0.5**
TSM	**Tawau**	**34.86**	**286**	P	**P**	**00 22 26.1**	**+0.5**
KKM	**Kota Kinabalu**	**36.95**	**288**	*e*P	**P**	**00 22 42.5**	**-1.0**
AFI	**Afiamalu**	**37.21**	**105**	PFAKE		00 23 00.0	+14
AFI				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
JOW	**Kunigami**	**39.35**	**327**	LR	LR	00 36 09.3	
	comp=Z,1µm,21.9s,MS4.8,baz=161,slow=31						
JHJ	**Hachijo jima 2**	**40.21**	**345**	LR	LR	00 36 58.1	
	comp=Z,646nm,21.4s,MS4.4,baz=202,slow=32						
KLBR	**Kellerberrin**	**40.55**	**227**	⇑*i*P	**P**	**00 23 12.9**	**-0.8**
	comp=Z,88nm,0.7s,mb5.5						
NACB	**Ninganchiao**	**41.54**	**317**	*e*P	**P**	**00 23 23.1**	**+1.2**
KSM	**Kuching**	**41.57**	**279**	*e*P	**P**	**00 23 22.1**	**+0.1**
NWAO	**Narrogin (SRO)**	**41.64**	**225**	P	**P**	**00 23 21.4**	**-1.3**
	comp=Z,36nm,0.9s,mb5.0,baz=63,slow=6.1,SNR=9.8						
NWAO	**Narrogin (SRO)**	**41.64**	**225**	*e*P	**P**	**00 23 22.2**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,40nm,0.9s						
NWAO	**Narrogin (SRO)**	**41.64**	**225**	*e*P	**P**	**00 23 22.2**	**-0.5**
	comp=Z,40nm,0.9s,mb5.0						
MUN	**Mundaring**	**41.88**	**227**	⇑*i*P	**P**	**00 23 24.4**	**-0.2**
YHNB	**Yeheng**	**42.02**	**317**	*e*P	**P**	**00 23 27.4**	**+1.7**
TATO	**Taipei**	**42.15**	**318**	*e*P	**P**	**00 23 28.7**	**+1.9**
MJAR	**Matsushiro Arr**	**43.86**	**345**	P	**P**	**00 23 37.9**	**-2.8**
	comp=Z,4.7nm,0.9s,baz=160,slow=9.2,SNR=6.9						
MJAR				PcP	PcP	00 25 26.1	-0.3
	comp=Z,12nm,0.8s,baz=165,slow=4.0,SNR=13						
MJAR				ScP	ScP	00 29 13.6	-1.5
	comp=Z,12nm,1.2s,baz=162,slow=4.9,SNR=13						
MJAR				LR	LR	00 40 46.3	
	comp=Z,709nm,19.6s,baz=190,slow=34						
MJAR	**Matsushiro Arr**	**43.86**	**345**	P	**P**	**00 23 37.9**	**-2.7**
MJAR						00 25 26.1	
MAJO	**Matsushiro**	**43.86**	**345**	*e*P	**P**	**00 23 39.4**	**-1.2**
MAJO				*e*		00 25 25.0	
MAT	**Matsushiro**	**43.86**	**345**	P	**P**	**00 23 38.1**	**-2.5**
MAT				*e*S	**S**	**00 30 18.0**	**+9.0**
MAT	**Matsushiro**	**43.86**	**345**	P	**P**	**00 23 38.0**	**-2.6**
MAT				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
MAT				MLR	MLR		
	comp=Z,1µm,18.0s,MS4.8						
MAT	**Matsushiro**	**43.86**	**345**	P	**P**	**00 23 38.0**	**-2.6**
	comp=Z,6.0nm,0.8s,mb4.4						
MAT				S	**S**	**00 30 29.0**	**+20**
MAT				LR	LR		
	comp=Z,1µm,18.0s,MS4.8						
QZH	**Quanzhou**	**44.11**	**315**	⇓*i*P	**P**	**00 23 44.8**	**+2.1**
QZH				S	**S**	**00 30 14.2**	**+1.5**
QZH				AMB	AMB		
	comp=Z,470nm,1.2s,mb6.1						
QZH				LR	LR		
	comp=N,2µm,21.8s						
QZH				LR	LR		
	comp=E,1µm,15.8s						
QZH				LR	LR		
	comp=Z,2µm,20.8s,MS5.0						
SSE	**Sheshan**	**46.62**	**324**	P	**P**	**00 24 03.5**	**+1.0**
SSE				XP	sP	00 24 19.7	+1.4
SSE				S	**S**	**00 30 51.5**	**+2.6**
SSE				XS	sS	00 31 10.8	+3.4
SSE				AMB	AMB		
	comp=Z,36nm,0.6s,mb5.5						
SSE				AMB	AMB		
	comp=Z,180nm,5.9s						
SSE				LR	LR		
	comp=N,619nm,23.5s,MS4.6						
SSE				LR	LR		
	comp=E,478nm,23.5s,MS4.6						
SSE				LR	LR		
	comp=Z,1µm,24.0s,MS4.7						
GZH	**Guangzhou**	**46.90**	**309**	P	**P**	**00 24 05.8**	**+1.1**
GZH				S	**S**	**00 30 56.8**	**+4.0**
GZH				LR	LR		
	comp=N,547nm,19.6s,MS4.9						
GZH				LR	LR		
	comp=E,1µm,20.8s,MS4.9						
GZH				LR	LR		
	comp=Z,2µm,22.4s,MS5.0						
QIZ	**Qiongzhong**	**47.71**	**302**	P	**P**	**00 24 11.8**	**+0.8**
QIZ				XP	sP	00 24 24.3	-2.5
QIZ				PP	PP	00 26 00.7	-2.1
QIZ				S	**S**	**00 31 08.2**	**+3.8**
QIZ				SS	SS	00 34 39.5	+6.6
QIZ				AMB	AMB		
	comp=Z,23nm,1.5s,mb5.0						
QIZ				AMB	AMB		
	comp=Z,363nm,4.4s						
QIZ				LR	LR		
	comp=E,1µm,24.3s						
QIZ				LR	LR		
	comp=Z,2µm,25.6s,MS5.0						
QIZ	**Qiongzhong**	**47.71**	**302**	*e*P	**P**	**00 24 10.2**	**-0.8**
ERM	**Erimo**	**48.15**	**352**	PFAKE		00 24 30.0	+16
ERM				LR	LR		
	comp=Z,25nm,19.0s						
KGM	**Kluang**	**48.55**	**278**	P	**P**	**00 24 17.7**	**+0.3**
NJ2	**Nanjing**	**48.69**	**323**	*e*P	**P**	**00 24 20.1**	**+1.5**
NJ2				AP	pP	00 24 30.0	+0.2
NJ2				S	**S**	**00 31 16.0**	**-2.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,90nm,4.9s						
NJ2				LR	LR		
	comp=N,2µm,19.4s						
NJ2				LR	LR		
	comp=E,820nm,10.8s						
NJ2				LR	LR		
	comp=Z,930nm,24.4s,MS4.7						
INCN	**Inchon**	**48.81**	**334**	⇑P	**P**	**00 24 20.1**	**+0.6**
	SNR=8.6						
INCN	**Inchon**	**48.81**	**334**	*e*P	**P**	**00 24 20.5**	**+1.0**
	comp=Z,67nm,1.0s,mb5.6						
INCN				*e*pP	pP	00 24 37.2	+6.5
ASAJ	**Asahikawa**	**50.29**	**352**	LR	LR	00 43 34.4	
	comp=Z,525nm,21.6s,MS4.5,baz=174,slow=33						
WHN	**Wuhan**	**50.56**	**318**	⇑P	**P**	**00 24 34.0**	**+1.2**
IPM	**Ipoh**	**51.23**	**280**	P	**P**	**00 24 38.2**	**+0.3**
KULM	**Kulim**	**51.76**	**281**	*e*P	**P**	**00 24 42.0**	**+0.2**
KULM				*e*pP	pP	00 24 54.1	+1.0
DL2	**Dalian**	**52.28**	**331**	P	**P**	**00 24 46.3**	**+0.6**
DL2				S	**S**	**00 32 07.4**	**-0.7**
DL2				XS	sS	00 32 27.4	+0.6
DL2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
DL2				LR	LR		
	comp=N,230nm,20.0s,MS4.4						
DL2				LR	LR		
	comp=E,240nm,21.0s,MS4.4						
DL2				LR	LR		
	comp=Z,360nm,20.3s,MS4.4						
TIA	**Tai'an**	**52.64**	**325**	P	**P**	**00 24 47.2**	**-1.2**
YSS	**Yuzh-Sakhalins**	**53.05**	**353**	*e*P	**P**	**00 24 49.0**	**-2.4**
YSS				S	**S**	**00 32 14.0**	**-4.7**
YSS				*e*SSS		00 37 40.0	
SNY	**Shenyang**	**53.72**	**334**	⇑P	**P**	**00 24 55.4**	**-0.9**
SNY				AP	pP	00 25 06.7	-1.0
SNY				XP	sP	00 25 11.3	-0.9
SNY				PP	PP	00 26 58.6	+1.2
SNY				S	**S**	**00 32 32.9**	**+5.1**
SNY				XS	sS	00 32 52.5	+6.0
SNY				SS	SS	00 36 05.3	-3.5
SNY				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.9						
SNY				AMB	AMB		
	comp=Z,243nm,5.6s						
SNY				LR	LR		
	comp=N,544nm,24.5s,MS4.7						
SNY				LR	LR		
	comp=E,468nm,20.8s,MS4.7						
SNY				LR	LR		
	comp=Z,545nm,25.9s						
ENH	**Enshi**	**53.75**	**314**	PFAKE		00 25 10.0	+13
ENH				LR	LR		
	comp=Z,11nm,22.0s						
GYA	**Guiyang**	**53.83**	**309**	⇑*i*P	**P**	**00 24 58.5**	**+1.4**
GYA				AP	pP	00 25 08.5	+0.1
GYA				XP	sP	00 25 12.4	-0.6
GYA				PP	PP	00 26 59.3	+0.9
GYA				S	**S**	**00 32 27.0**	**-2.2**
GYA				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.4						
GYA				AMB	AMB		
	comp=Z,280nm,4.5s						
GYA				LR	LR		
	comp=N,590nm,16.1s,MS5.0						
GYA				LR	LR		
	comp=E,870nm,15.4s,MS5.0						
GYA				LR	LR		
	comp=Z,1µm,16.0s,MS5.0						
MDJ	**Mudanjiang**	**53.84**	**341**	P	**P**	**00 24 56.4**	**-0.8**
MDJ				AP	pP	00 25 05.5	-3.0
MDJ				XP	sP	00 25 09.4	-3.6
MDJ				PCP	PcP	00 26 01.3	-1.2
MDJ				PP	PP	00 26 56.9	-1.6
MDJ				SCP	ScP	00 29 57.2	-0.2
MDJ				PCS	PcS	00 30 01.4	-0.3
MDJ				S	**S**	**00 32 28.4**	**-0.9**
MDJ				XS	sS	00 32 43.7	-4.4
MDJ				SCS	ScS	00 34 41.6	-1.8
MDJ				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,105nm,6.9s						
MDJ				LR	LR		
	comp=N,381nm,36.0s,MS4.6						
MDJ				LR	LR		
	comp=E,784nm,32.7s,MS4.6						
MDJ				LR	LR		
	comp=Z,476nm,22.9s						
MDJ	**Mudanjiang**	**53.84**	**341**	*e*P	**P**	**00 24 55.8**	**-1.3**
	comp=Z,24nm,1.3s,mb5.0						
COCO	**West Island**	**54.10**	**259**	*e*P	**P**	**00 24 59.1**	**0.0**
	comp=Z,394nm,1.2s,mb6.2						
CN2	**Changchun**	**54.60**	**337**	*e*P	**P**	**00 25 02.2**	**-0.5**
CN2				*e*AP	pP	00 25 12.3	-1.8
CN2				*e*S	**S**	**00 32 39.1**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.7						
CN2				LR	LR		
	comp=N,400nm,21.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,21.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,21.0s,MS4.5						
NST	**Nakhon Sawan**	**54.97**	**294**	P	**P**	**00 25 06.5**	**+1.1**
NANT	**Nan**	**55.52**	**297**	⇓P	**P**	**00 25 09.0**	**-0.4**
	comp=Z,81nm,1.0s,mb5.7						
HABR	**Khabarovsk**	**55.88**	**347**	⇑*i*P	**P**	**00 25 11.1**	**-0.8**
HABR				*e*S	**S**	**00 32 57.1**	**+0.4**
HABR				pmax	pmax		
	comp=Z,55nm,1.7s,mb5.3						
BJT	**Baijiatuau**	**55.89**	**328**	*e*P	**P**	**00 25 10.9**	**-1.1**
BJT				pmax	pmax		
	comp=Z,14nm,0.9s						
BJT				MLR	MLR		
	comp=Z,877nm,20.0s						
BJT	**Baijiatuau**	**55.89**	**328**	*e*P	**P**	**00 25 10.9**	**-1.1**
	comp=Z,14nm,0.9s,mb5.0						
BJT				LR	LR		
	comp=Z,877nm,20.0s,MS4.8						
BJI	**Beijing**	**55.91**	**328**	P	**P**	**00 25 11.3**	**-0.8**
BJI				S	**S**	**00 32 58.2**	**+1.1**
BJI				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.9						
BJI				AMB	AMB		
	comp=Z,294nm,4.0s						
BJI				LR	LR		
	comp=N,709nm,20.3s,MS4.7						
BJI				LR	LR		
	comp=E,331nm,25.2s,MS4.7						
BJI				LR	LR		
	comp=Z,699nm,33.8s						

KMI **Kunming** **56.32 305** P **P** **00 25 16.8 +1.7**
KMI AP pP 00 25 27.5 +1.0
KMI XP sP 00 25 32.9 +1.9
KMI PP PP 00 27 24.3 +3.6
KMI S **S** **00 33 03.5 +1.0**
KMI XS sS 00 33 21.5 +0.1
KMI AMB AMB
comp=Z,67nm,1.1s,mb5.6
KMI LR LR
comp=N,401nm,23.9s,MS4.6
KMI LR LR
comp=E,449nm,26.1s,MS4.6
KMI LR LR
comp=Z,957nm,36.0s
XAN Xi'an **56.33 318** P **P** **00 25 15.1 0.0**
XAN PP PP 00 27 24.4 +3.7
XAN S **S** **00 33 01.7 -0.9**
XAN AMB AMB
comp=Z,33nm,0.8s,mb5.4
XAN LR LR
comp=N,254nm,20.4s,MS4.5
XAN LR LR
comp=E,336nm,21.4s,MS4.5
XAN LR LR
comp=Z,853nm,21.2s,MS4.8
CHRT Chiangrai **56.71 298** ⇑P **P** **00 25 18.0 +0.1**
comp=Z,290nm,0.8s,mb6.4
CM31 Chiang Mai Arr **56.96 296** PFAKE 00 25 30.0 +10
CM31 LR LR
comp=Z,556nm,20.0s,MS4.7
CHG Chiang Mai **57.08 297** ⇑P **P** **00 25 21.0 +0.5**
comp=Z,20nm,1.1s,mb5.1
CHTO Chiang Mai **57.08 297** P **P** **00 25 21.6 +1.1**
SNR=12
CHTO Chiang Mai **57.08 297** *e*P **P** **00 25 20.5 0.0**
CHTO pmax pmax
comp=Z,28nm,1.2s,mb5.2
CHTO MLR MLR
comp=Z,432nm,21.0s,MS4.5
CHTO Chiang Mai **57.08 297** *e*P **P** **00 25 20.5 0.0**
comp=Z,28nm,1.2s,mb5.2
CHTO LR LR
comp=Z,432nm,21.0s,MS4.5
KLR Kul'dur **57.38 345** *e*P **P** **00 25 18.7 -3.9**
KLR *e*S ScS 00 35 06.5 -2.4
CD2 Chengdu **58.26 312** P **P** **00 25 29.5 +0.7**
CD2 AP pP 00 25 39.7 -0.5
CD2 XP sP 00 25 43.6 -1.1
CD2 PCP PcP 00 26 20.0 +0.3
CD2 PP PP 00 27 40.6 +2.6
CD2 SCP ScP 00 30 16.2 -0.6
CD2 PCS PcS 00 30 20.4 -0.8
CD2 S **S** **00 33 28.4 +0.3**
CD2 SCS ScS 00 35 13.0 -2.3
CD2 SS SS 00 37 22.4 +2.2
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.5
CD2 AMB AMB
comp=Z,180nm,5.9s
CD2 LR LR
comp=E,650nm,22.8s
CD2 LR LR
comp=Z,840nm,22.2s,MS4.8
PPT Papeete **58.85 107** *e*S **S** **00 33 36.3 +0.5**
comp=Z,855nm,26.5s
PPT *e*LR LR 00 43 06.6
comp=Z,561nm,25.0s
PPT Papeete **58.85 107** LR LR 00 45 17.1
comp=Z,293nm,19.0s,MS4.4,baz=323,slow=30
PET Petropavlovsk **58.92 5** *e*P **P** **00 25 38.6 +5.3**
PET *e*S **S** **00 33 41.0 +4.4**
PET *e*SSS 00 39 58.0
PET MLR MLR
comp=Z,300nm,19.0s,MS4.4
HHC Hu-ho-hao-te **58.99 326** *e*P **P** **00 25 34.1 +0.2**
HHC AP pP 00 25 44.2 -1.1
HHC XP sP 00 25 48.1 -1.7
HHC PCP PcP 00 26 22.5 -0.1
HHC PP PP 00 27 46.1 +1.6
HHC SCP ScP 00 30 20.0 -0.1
HHC PCS PcS 00 30 23.2 -1.3
HHC S **S** **00 33 34.1 -3.5**
HHC XS sS 00 33 54.9 -1.7
HHC PS 00 33 55.8
HHC SCS ScS 00 35 17.4 -3.3
HHC SS SS 00 37 35.0 +3.3
HHC AMB AMB
comp=Z,35nm,1.0s,mb5.3
HHC AMB AMB
comp=Z,208nm,6.1s
HHC LR LR
comp=N,685nm,18.8s,MS4.9
HHC LR LR
comp=E,582nm,19.4s,MS4.9
HHC LR LR
comp=Z,1μm,19.0s,MS5.0
TBI Tubuai **59.52 114** *e*S **S** **00 33 44.6 +0.2**
comp=Z,666nm,28.8s
TBI *e*SS SS 00 37 43.0 +3.0
comp=Z,243nm,26.5s
TBI *e*LR LR 00 43 21.2
comp=Z,2μm,38.0s
BTO Baotou **59.71 324** *e*P **P** **00 25 37.9 -0.9**
PMOR Pomariorio Ree **60.34 104** *e*P **P** **00 25 44.9 +1.7**
comp=Z,162nm,1.4s,mb5.9
LZH Lanzhou **60.91 317** *e*P **P** **00 25 48.2 +1.2**
LZH AP pP 00 26 01.7 +3.2
LZH XP sP 00 26 05.0 +2.0
LZH PP PP 00 28 04.5 +3.1
LZH *e*S **S** **00 34 02.1 -0.2**
LZH XS sS 00 34 23.0 +1.7
LZH SS SS 00 38 03.1 +1.3
LZH AMB AMB
comp=Z,83nm,1.5s,mb5.6
LZH AMB AMB
comp=Z,240nm,4.3s
LZH LR LR
comp=E,435nm,15.3s
LZH LR LR
comp=Z,778nm,16.3s,MS4.9
DRV Dumont d'Urvil **61.28 185** P **P** **00 25 46.0 -3.5**
DRV S **S** **00 34 08.0 +1.1**
HIA Hailar **61.34 337** *c i*P **P** **00 25 49.4 -0.5**
HIA Hailar **61.34 337** *e*P **P** **00 25 49.3 -0.6**
comp=Z,30nm,0.8s,mb5.5
MA2 Magadan **65.16 360** ⇓*i*P **P** **00 26 13.2 -2.0**
MA2 pmax pmax
comp=Z,25nm,1.3s,mb5.1
GTA Gaotai **65.38 318** ⇑P **P** **00 26 17.4 +0.7**
GTA AP pP 00 26 28.0 -0.2
GTA XP sP 00 26 32.2 -0.5
GTA PCP PcP 00 26 49.9 +1.4
GTA PP PP 00 28 45.1 +4.4
GTA PCS 00 30 50.5
GTA S S 00 35 00.0 +1.9
GTA XS sS 00 35 17.5 +0.2
GTA PS 00 35 25.9
GTA SCS ScS 00 36 07.7 -1.3
GTA SS SS 00 39 17.8 +6.2
GTA AMB AMB
comp=Z,15nm,0.7s,mb5.1
GTA AMB AMB
comp=Z,217nm,5.8s
GTA LR LR
comp=N,232nm,18.2s,MS4.7
GTA LR LR
comp=E,419nm,19.4s,MS4.7
GTA LR LR
comp=Z,530nm,21.3s,MS4.7
SHL Shillong **65.53 301** *e*P **P** **00 26 18.2 +0.5**
CLNS Chul'man **66.04 344** *e*P **P** **00 26 18.5 -2.4**
CLNS *e**PP pP 00 26 25.9 -6.6
CLNS *e* 00 28 42.9
CLNS *e*PPP 00 30 15.4
CLNS *e*S S 00 35 06.5 +0.4
CLNS *e* 00 36 17.0
CLNS pmax pmax
comp=Z,25nm,0.9s,mb5.2
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,0.8s
CLNS pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS smax
comp=E,203nm,14.2s
CLNS smax
comp=Z,80nm,12.8s
CLNS smax
comp=N,138nm,3.1s
ULN Ulaanbaatar **66.06 329** P **P** **00 26 21.8 +0.7**
SNR=18
ULN Ulaanbaatar **66.06 329** *e*P **P** **00 26 21.1 +0.1**
ULN pmax pmax
comp=Z,61nm,1.3s,mb5.5
ULN Ulaanbaatar **66.06 329** *e*P **P** **00 26 21.1 +0.1**
comp=Z,61nm,1.3s,mb5.5
SONM Songino Array **66.37 329** P **P** **00 26 22.9 -0.2**
comp=Z,30nm,0.9s,mb5.3,baz=134,slow=5.2,SNR=98
SONM LR LR 00 54 36.2
comp=Z,489nm,20.0s,MS4.7,baz=127,slow=35
SONM PKPPKP 00 54 58.0
comp=Z,1.1nm,0.9s,baz=299,slow=4.6,SNR=5.1
CASY Casey **66.64 197** ⇑*i*P **P** **00 26 23.6 -1.2**
CASY Casey **66.64 197** *e*P **P** **00 26 23.4 -1.3**
comp=Z,36nm,1.0s,mb5.3
CASY *e*pP pP 00 26 35.8 -0.6
CASY LR LR
comp=Z,1μm,20.0s,MS5.1
LSA Lhasa **67.58 305** P **P** **00 26 32.0 +1.3**
LSA Lhasa **67.58 305** *e*P **P** **00 26 31.5 +0.8**
LSA pmax pmax
comp=Z,52nm,0.7s,mb5.7
LSA Lhasa **67.58 305** *e*P **P** **00 26 31.5 +0.8**
comp=Z,52nm,0.7s,mb5.7
TAOE Nuku Hiva Isla **67.98 97** *e*LR LR 00 46 55.1
comp=Z,2μm,25.4s
ZAK Zakamensk **69.57 329** ⇓*i*P **P** **00 26 42.8 -0.3**
ZAK pmax pmax
comp=Z,39nm,1.2s,mb5.2
YAK Yakutsk **69.65 349** *c i*P **P** **00 26 41.8 -1.8**
YAK pmax pmax
comp=Z,78nm,1.7s,mb5.4
YAK Yakutsk **69.65 349** *e*P **P** **00 26 42.4 -1.2**
comp=Z,41nm,1.0s,mb5.3
BOK Bokaro **70.19 298** *e*P **P** **00 26 47.3 +0.3**
BOK AMb AMB 00 26 49.4
comp=Z,49nm,1.6s,mb5.2
TLY Talaya **70.19 331** P **P** **00 26 47.1 +0.1**
SNR=9.2
TLY Talaya **70.19 331** *e*P **P** **00 26 46.4 -0.6**
TLY *e* 00 29 19.1
TLY *e*PPP 00 31 09.4
TLY *e*S S 00 35 58.7 +3.0
TLY pmax pmax
comp=Z,29nm,1.1s,mb5.1
TLY MLR MLR
comp=Z,529nm,20.0s,MS4.8
TLY Talaya **70.19 331** *e*P **P** **00 26 46.4 -0.6**
IRK Irkutsk **70.25 331** *e*P **P** **00 26 46.2 -1.1**
IRK *e* 00 27 01.0
IRK pmax pmax
comp=Z,65nm,1.4s,mb5.4
VIS Vishakhapatnam **71.02 291** *e*P **P** **00 26 52.0 0.0**
VIS AMb AMB 00 26 53.1
comp=Z,52nm,0.9s,mb5.5
GUN Gumba **71.36 302** *e*P **P** **00 26 54.6 +0.5**
comp=Z,164nm,0.8s,mb6.0
MOY Mondy **71.50 330** *e*P **P** **00 26 54.6 -0.3**
MOY pmax pmax
comp=Z,66nm,1.5s,mb5.3
PALK Pallekele **71.63 280** *e*P **P** **00 26 55.9 +0.2**
comp=Z,14nm,0.6s,mb5.0
PKI Pulchoki **71.66 301** *e*P **P** **00 26 55.9 0.0**
comp=Z,111nm,1.1s,mb5.7
PKI Pulchoki **71.66 301** *e*P **P** **00 26 55.9 0.0**
PKI pmax pmax
comp=Z,111nm,1.1s,mb5.7
KKN Kakani **71.84 302** *e*P **P** **00 26 57.1 +0.2**
comp=Z,98nm,0.8s,mb5.8
KKN Kakani **71.84 302** *e*P **P** **00 26 57.1 +0.2**
KKN pmax pmax
comp=Z,98nm,0.8s,mb5.8
VNDA Vanda **71.91 178** P **P** **00 26 56.5 -0.9**
comp=Z,23nm,0.8s,mb5.2,baz=330,slow=6.5,SNR=101
VNDA LR LR 00 57 55.0
comp=Z,265nm,18.3s,MS4.5,baz=0.7,slow=35
VNDA Vanda **71.91 178** *e*P **P** **00 26 56.5 -0.9**
VNDA pmax pmax
comp=Z,33nm,0.9s
VNDA Vanda **71.91 178** *e*P **P** **00 26 56.5 -0.9**
comp=Z,33nm,0.9s,mb5.3
DMN Daman **71.93 301** *e*P **P** **00 26 57.9 +0.4**
comp=Z,191nm,0.9s,mb6.0
GKN Gorkha **72.44 302** *e*P **P** **00 27 00.5 -0.1**
comp=Z,212nm,1.0s,mb6.0
MIR Mirnyy **72.48 201** *d i*P **P** **00 27 00.0 -0.8**
MIR pmax pmax
comp=Z,950nm,1.2s
SBA Scott Base **72.48 177** *e*P **P** **00 27 01.0 +0.2**
SBA pmax pmax
comp=Z,37nm,1.1s,mb5.2
SBA Scott Base **72.48 177** *e*P **P** **00 27 01.0 +0.2**
comp=Z,37nm,1.1s,mb5.2
RKT Rikitea **72.79 112** *e*S S 00 36 25.3 -0.3
comp=Z,291nm,30.8s
RKT *e*SS SS 00 41 06.5 +0.6
comp=Z,152nm,35.5s
RKT *e*LR LR 00 49 29.9
comp=Z,2μm,32.2s
MDRS Chennai **73.01 285** *ex* x 00 27 18.7
MDRS *ex* x 00 27 58.0
KOLN Koldanda **73.26 301** *e*P **P** **00 27 05.3 -0.1**
comp=Z,152nm,0.8s,mb6.0
BILL Bilibino **74.41 6** ⇑*e*P **P** **00 27 10.3 -1.8**
BILL pmax pmax
comp=Z,23nm,1.0s,mb5.1
BILL Bilibino **74.41 6** *e*P **P** **00 27 10.8 -1.3**
comp=Z,15nm,0.8s,mb5.0
BILL LR LR
comp=Z,243nm,19.0s,MS4.5
HYB Hyderabad **75.41 290** *i* P **P** **00 27 18.0 +0.1**
HYB Hyderabad **75.41 290** *e*P **P** **00 27 18.0 +0.1**
WMQ Urumqi **75.46 318** P **P** **00 27 18.0 -0.2**
WMQ AP pP 00 27 28.0 -2.0
WMQ XP sP 00 27 33.0 -1.4
WMQ PP PP 00 30 09.0 +1.5
WMQ S S 00 36 54.0 -1.6
WMQ SCS ScS 00 37 26.0 -2.5
WMQ SS SS 00 41 48.0 +1.4
WMQ AMB AMB
comp=Z,38nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,223nm,6.0s
WMQ LR LR
comp=N,379nm,16.0s,MS4.9
WMQ LR LR
comp=E,254nm,15.0s,MS4.9
WMQ LR LR
comp=Z,329nm,14.0s,MS4.8
NGP Nagpur **75.69 293** *ex* **P** **00 27 14.6 -5.0**
NGP AMb AMB 00 27 18.9
comp=Z,69nm,1.4s,mb5.4
LGTI Lohaghat **76.54 302** *i* P **P** **00 27 26.5 +2.1**
AKL Akola **77.47 293** *e*P **P** **00 27 28.8 -0.8**
AKL AMb AMB 00 27 30.3
comp=Z,108nm,0.8s,mb5.9
BHPL Bhopal **77.60 295** *e*P **P** **00 27 29.7 -0.6**
BHPL AMb AMB 00 27 30.4
comp=Z,54nm,0.7s,mb5.6
KDAK Kodiak Island **77.72 27** *e*P **P** **00 27 31.0 0.0**
SVW2 Sparrevohn **78.31 23** *e*P **P** **00 27 33.6 -0.6**
SVW2 *e*pP pP 00 27 46.4 +0.3
NDI New Delhi **78.94 301** *e*P **P** **00 27 36.8 -0.9**
NDI AMb AMB 00 27 39.2
comp=Z,109nm,1.7s,mb5.5
TTA Tatalina **79.23 22** *e*P **P** **00 27 38.7 -0.6**
KAD Karad **79.50 289** *e*P **P** **00 27 40.4 -0.4**
KAD AMb AMB 00 27 43.4
comp=Z,63nm,1.6s,mb5.3
SMLA Simla **79.53 303** *e*P **P** **00 27 41.0 0.0**
SMLA AMb AMB 00 27 43.4
comp=Z,111nm,1.5s,mb5.6
MKAR Makanchi Array **80.09 319** P **P** **00 27 43.4 -0.6**
comp=Z,16nm,0.9s,mb5.0,baz=101,slow=6.3,SNR=58
MKAR PKKPbc PKKPbc 00 46 27.2 -0.5
comp=Z,1.0nm,0.6s,baz=287,slow=2.0,SNR=7.2
MKAR PKPPKP 00 54 32.8
comp=Z,0.2nm,0.5s,baz=309,slow=5.8,SNR=3.9
MKAR Makanchi Array **80.09 319** ⇑*e*P **P** **00 27 43.4 -0.6**
SLKM Skilak Lake **80.19 25** *e*P **P** **00 27 42.9 -1.6**
SLKM *e**PP pP 00 27 55.8 -0.6
AJM Ajmer **80.72 298** *e*P **P** **00 27 46.3 -1.0**
AJM AMb AMB 00 27 48.5
comp=Z,83nm,1.8s,mb5.4
ZAL Zalesovo **81.16 327** P **P** **00 27 48.1 -1.6**
comp=Z,8.5nm,0.6s,mb4.9,baz=1.0,slow=6.5,SNR=44
ZAL LR LR 01 05 44.1
comp=Z,515nm,20.4s,MS4.9,baz=357,slow=37
PMR Palmer **81.19 25** *e*P **P** **00 27 49.1 -0.8**
PMR pmax pmax
comp=Z,49nm,1.2s,mb5.3
PMR MLR MLR
comp=Z,400nm,18.0s,MS4.8
PMR Palmer **81.19 25** *e*P **P** **00 27 49.1 -0.8**
comp=Z,49nm,1.2s,mb5.3
PMR LR LR
comp=Z,400nm,18.0s,MS4.8
SML Sawmill **81.63 25** *e*P **P** **00 27 53.7 +1.5**
IMA2 Indian Mountai **81.88 20** *e*P **P** **00 27 52.3 -1.2**
EYAK Cordova Ski Ar **82.15 26** *e*P **P** **00 27 54.2 -0.7**
EYAK *e*pP pP 00 28 06.3 -0.5
MCK McKinley **82.34 23** *e*P **P** **00 27 54.0 -1.9**
MCK *e**PP pP 00 28 06.4 -1.4
MCK pmax pmax
comp=Z,63nm,1.0s,mb5.5
MCK McKinley **82.34 23** *e*P **P** **00 27 54.0 -2.0**
comp=Z,63nm,1.0s,mb5.5
MCK *e*pP pP 00 28 06.4 -1.4
NVS Novosibirsk **82.34 327** ⇑*i*P **P** **00 27 54.0 -1.9**
NVS *e*S S 00 38 09.6 +0.6
NVS pmax pmax
comp=Z,36nm,1.3s,mb5.1
NVS pmax pmax
comp=E,23nm,1.4s
NVS smax
comp=E,23nm,2.5s
NVS smax
comp=N,11nm,1.9s
DIV Divide **82.40 26** *e*P **P** **00 27 56.3 +0.1**
DIV LR LR
comp=Z,717nm,19.0s,MS5.1
KSH Kashi **82.45 311** *e*P **P** **00 27 58.3 +1.8**
KSH AP pP 00 28 08.4 0.0
KSH XP sP 00 28 12.2 -0.6
KSH S S 00 38 10.3 +0.2
KSH SKS 00 38 12.1
KSH XS sS 00 38 27.3 -2.5
KSH SS SS 00 43 34.7 +3.2
KSH AMB AMB
comp=Z,85nm,0.7s,mb5.8
KSH AMB AMB
comp=Z,376nm,3.9s
KSH LR LR
comp=N,329nm,5.9s
KSH LR LR
comp=E,611nm,8.9s
KSH LR LR
comp=Z,554nm,14.0s,MS5.1
COLA College **83.31 22** *e*P **P** **00 27 58.5 -2.5**
COLA *e**PP pP 00 28 11.6 -1.3
COLA pmax pmax
comp=Z,58nm,0.8s,mb5.7
COLA MLR MLR
comp=Z,441nm,19.0s,MS4.8
COLA College **83.31 22** *e*P **P** **00 27 58.5 -2.4**
comp=Z,58nm,0.8s,mb5.7
COLA *e*pP pP 00 28 11.6 -1.3
COLA LR LR
comp=Z,441nm,19.0s,MS4.8
TKM2 Tokmak 2 **83.54 314** P **P** **00 28 01.6 -0.5**
SNR=21
TKM2 Tokmak 2 **83.54 314** *i* P **P** **00 28 01.6 -0.5**
TKM2 pmax pmax
comp=Z,19nm,0.8s,mb5.3
KZA Kyzart **83.59 313** P **P** **00 28 03.9 +1.5**
SNR=8.2
KURK Kurchatov **83.63 322** P **P** **00 28 01.2 -1.4**
comp=Z,270nm,0.9s,mb6.4,SNR=11
KURK Kurchatov **83.63 322** ⇑P **P** **00 28 01.5 -1.1**
SNR=25
KURK Kurchatov **83.63 322** *e*P **P** **00 28 01.4 -1.2**
KURK pmax pmax
comp=Z,56nm,1.0s,mb5.7
KURK Kurchatov **83.63 322** *e*P **P** **00 28 01.4 -1.2**
comp=Z,56nm,1.0s,mb5.7
KBK Karagaybulak **83.94 314** P **P** **00 28 04.4 +0.2**
SNR=9.9
MENT Mentasta **84.06 25** *e*P **P** **00 28 04.4 -0.4**
MAW Mawson **84.09 203** ⇑*i*P **P** **00 28 03.9 -1.0**
comp=Z,15nm,0.7s,mb5.2
MAW Mawson **84.09 203** P **P** **00 28 04.0 -1.0**
comp=Z,20nm,0.8s,mb5.3,baz=91,slow=6.2,SNR=49
MAW LR LR 01 02 44.7
comp=Z,474nm,21.2s,MS4.8,baz=73,slow=34
MAW Mawson **84.09 203** ⇑*i*P **P** **00 28 03.8 -1.2**
comp=Z,62nm,1.1s,mb5.7
CHMS Chumysh **84.16 314** P **P** **00 28 05.2 -0.1**
SNR=12
QSPA South Pole Qui **84.18 180** ⇑*i*P **P** **00 28 04.4 -1.0**
comp=Z,73nm,0.9s,mb5.8
FRU Bishkek **84.22 314** ⇑*i*P **P** **00 28 06.0 +0.4**
FRU pmax pmax
comp=Z,120nm,1.9s,mb5.7
AAK Ala-Archa **84.26 314** P **P** **00 28 06.6 +0.8**
SNR=7.6
AAK Ala-Archa **84.26 314** ⇑P **P** **00 28 05.2 -0.6**
SNR=18
AAK Ala-Archa **84.26 314** *c i*P **P** **00 28 04.9 -0.9**
AAK pmax pmax
comp=Z,56nm,1.7s,mb5.4
AAK Ala-Archa **84.26 314** *e*P **P** **00 28 04.3 -1.5**
AAK LR LR
comp=Z,483nm,22.0s,MS4.8
USP Ospenovka **84.41 314** P **P** **00 28 06.5 0.0**
SNR=31
AML Almayashu **84.73 313** P **P** **00 28 09.1 +0.9**
SNR=42
EKS2 Erkin-Say **84.79 314** P **P** **00 28 08.9 +0.5**
SNR=32
SIT Sitka **85.89 32** *e*P **P** **00 28 14.5 +0.6**
SIT *e**PP pP 00 28 26.1 +0.2
DAWY Dawson **86.29 24** *e*pP pP 00 28 28.3 +0.4
SKAG Skagway **86.60 29** *e*P **P** **00 28 17.2 -0.2**
SKAG *e*pP pP 00 28 29.5 +0.1
SKAG LR LR
comp=Z,600nm,18.0s,MS5.0
CRAG Craig **86.63 34** *e*P **P** **00 28 17.5 -0.1**
CRAG *e*pP pP 00 28 29.9 +0.3
KK31 Karatay Array **87.23 314** *i* P **P** **00 28 19.7 -0.8**
KK31 pmax pmax
comp=Z,78nm,1.2s,mb5.8
BBB Bella Bella **88.78 37** P **P** **00 28 27.8 -0.1**
comp=Z,7.4nm,0.8s,mb5.0,baz=217,slow=2.6,SNR=4.6
DLBC Dease Lake **88.99 31** P **P** **00 28 29.1 +0.2**
comp=Z,45nm,1.1s,mb5.7,baz=267,slow=4.0,SNR=11
BVAR Borovoye Array **89.14 323** P **P** **00 28 27.1 -2.4**
comp=Z,8.2nm,0.7s,mb5.2,baz=105,slow=5.8,SNR=62
BVAR LR LR 01 08 36.6
comp=Z,166nm,21.7s,MS4.4,baz=139,slow=36
BRVK Borovoye **89.21 323** ⇑P **P** **00 28 27.9 -2.0**
SNR=7.7
BRVK Borovoye **89.21 323** *e*P **P** **00 28 27.5 -2.4**
BRVK pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
BRVK MLR MLR
comp=Z,245nm,21.0s,MS4.6
BRVK Borovoye **89.21 323** *e*P **P** **00 28 27.4 -2.4**
comp=Z,5.1nm,0.9s,mb4.8
BRVK LR LR
comp=Z,245nm,21.0s,MS4.6
INK Inuvik **89.90 21** P **P** **00 28 31.8 -1.4**
comp=Z,49nm,1.1s,mb5.8,baz=251,slow=5.1,SNR=43
INK Inuvik **89.90 21** *e*P **P** **00 28 31.5 -1.7**
INK *e*pP pP 00 28 44.0 -1.2
HOPS Hopland **90.20 51** *e*pP pP 00 28 53.5 +7.0
I02A Mapleton **90.29 46** ⇓P **P** **00 28 35.2 +0.3**
baz=90
K02A Glendale **90.37 47** ⇓P **P** **00 28 35.0 -0.4**
baz=90
J02A Umpqua **90.39 47** ⇑P **P** **00 28 35.0 -0.5**
baz=90

GASB	**Alder Springs**	**90.56**	**50**	⇑P	**P**	**00 28 35.9**	**-0.3**
	baz=91						
O02C	**Red Bluff**	**90.57**	**50**	⇓P	**P**	**00 28 36.3**	**0.0**
	baz=91						
M02C	**Callahan**	**90.67**	**49**	⇑P	**P**	**00 28 36.6**	**-0.1**
	baz=91						
MNRC	**McLaughlin Nat**	**90.68**	**51**	⇑P	**P**	**00 28 36.8**	**0.0**
	baz=91						
BNLO	**Ben Lomond (Sa**	**90.68**	**53**	⇓P	**P**	**00 28 36.7**	**-0.1**
	baz=91						
COR	**Corvallis**	**90.74**	**45**	PFAKE		00 28 50.0	+13
COR				LR	LR		
	comp=Z,742nm,19.0s,MS5.1						
D03A	**Wishkah Elem.**	**90.75**	**43**	⇑P	**P**	**00 28 37.0**	**-0.1**
	baz=91						
WDC	**Whiskeytown Da**	**90.81**	**49**	⇑P	**P**	**00 28 37.1**	**-0.2**
	baz=91						
E03A	**Lebam**	**90.81**	**43**	⇓P	**P**	**00 28 37.0**	**-0.4**
	baz=91						
YBH	**Yreka Blue Hor**	**90.82**	**48**	⇑P	**P**	**00 28 37.3**	**-0.1**
	baz=91						
J03A	**Ideyld Park**	**90.83**	**47**	⇓P	**P**	**00 28 37.6**	**+0.2**
	baz=91						
BDM	**Black Diamond**	**91.02**	**52**	⇓P	**P**	**00 28 38.9**	**+0.5**
	baz=91						
B04A	**Port Angeles**	**91.05**	**42**	⇓P	**P**	**00 28 38.6**	**+0.1**
	baz=91						
SUTB	**Sutter Butte**	**91.23**	**51**	⇑P	**P**	**00 28 38.8**	**-0.5**
	baz=91						
V03C	**Hunter Liggett**	**91.31**	**54**	⇑P	**P**	**00 28 40.3**	**+0.6**
	baz=91						
C04A	**Brinnon**	**91.36**	**42**	P	**P**	**00 28 39.5**	**-0.4**
	baz=91						
PACP	**Pacheco Peak**	**91.38**	**53**	⇑P	**P**	**00 28 40.8**	**+0.8**
	baz=91						
S04C	**Ingram Canyon,**	**91.40**	**53**	⇑P	**P**	**00 28 40.5**	**+0.4**
	baz=91						
G04A	**Mulino**	**91.40**	**45**	⇓P	**P**	**00 28 40.7**	**+0.6**
	baz=91						
M04C	**Macdoel**	**91.47**	**48**	⇓P	**P**	**00 28 40.7**	**+0.3**
	baz=92						
L04A	**Klamath Falls**	**91.47**	**48**	⇑P	**P**	**00 28 40.2**	**-0.2**
	baz=92						
ORV	**Oroville**	**91.48**	**51**	⇑P	**P**	**00 28 40.1**	**-0.4**
	baz=92						
F04A	**Amboy**	**91.53**	**44**	⇓P	**P**	**00 28 40.4**	**-0.3**
	baz=92						
H04A	**Detroit Lake**	**91.54**	**45**	⇑P	**P**	**00 28 41.0**	**+0.3**
	baz=92						
HATC	**Hat Creek Radi**	**91.65**	**49**	⇓P	**P**	**00 28 41.5**	**+0.2**
	baz=92						
U04C	**Hernandez Rese**	**91.71**	**54**	⇑P	**P**	**00 28 42.5**	**+0.9**
	baz=92						
PKD	**Parkfield**	**91.86**	**54**	⇑P	**P**	**00 28 42.7**	**+0.4**
	baz=92						
O04C	**Chester**	**91.88**	**50**	⇓P	**P**	**00 28 42.5**	**+0.1**
	baz=92						
M05C	**Lookout**	**91.94**	**49**	⇓P	**P**	**00 28 42.6**	**-0.1**
	baz=92						
D05A	**Enumclaw**	**91.96**	**43**	⇓P	**P**	**00 28 42.5**	**-0.2**
	baz=92						
O05C	**Quincy**	**91.97**	**50**	⇓P	**P**	**00 28 42.4**	**-0.3**
	baz=92						
LAVA	**Lava Cap Winer**	**91.99**	**51**	P	**P**	**00 28 42.9**	**0.0**
	baz=92,SNR=5.7						
B05A	**Bryant**	**92.01**	**42**	⇓P	**P**	**00 28 42.3**	**-0.6**
	baz=92						
J05A	**Fort Rock**	**92.08**	**47**	⇓P	**P**	**00 28 43.4**	**+0.1**
	baz=92,SNR=11						
I05A	**Bend**	**92.14**	**46**	⇑P	**P**	**00 28 43.6**	**0.0**
	baz=92						
P05C	**Yuba Gap, Truc**	**92.14**	**51**	⇑P	**P**	**00 28 43.6**	**0.0**
	baz=92,SNR=7.5						
S05C	**Merced**	**92.17**	**53**	⇑P	**P**	**00 28 43.4**	**-0.3**
	baz=92						
ELFS	**Eagle Lake Fie**	**92.18**	**50**	⇓P	**P**	**00 28 43.7**	**-0.1**
	baz=92						
F05A	**White Salmon**	**92.19**	**44**	⇓P	**P**	**00 28 43.8**	**+0.1**
	baz=92						
CMB	**Columbia Colle**	**92.19**	**52**	*e*P	**P**	**00 28 44.2**	**+0.4**
CMB				*e**PP	pP	00 28 54.9	-0.9
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
CMB				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.4						
CMB	**Columbia Colle**	**92.19**	**52**	*e*P	**P**	**00 28 44.2**	**+0.4**
	comp=Z,9.0nm,1.0s,mb5.0						
CMB				*e*pP	pP	00 28 54.9	-0.9
CMB				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
CMB	**Columbia Colle**	**92.19**	**52**	⇓P	**P**	**00 28 43.4**	**-0.4**
	baz=92,SNR=5.5						
C05A	**Tolt Reservoir**	**92.22**	**42**	⇑P	**P**	**00 28 43.2**	**-0.7**
	baz=92						
H05A	**Madras**	**92.22**	**46**	⇑P	**P**	**00 28 43.7**	**-0.2**
	baz=92						
SMMC	**Simmler**	**92.24**	**55**	⇑P	**P**	**00 28 43.7**	**-0.3**
	baz=92						
L05A	**Lakeview**	**92.24**	**48**	⇑P	**P**	**00 28 44.5**	**+0.4**
	baz=92						
SYO	**Syowa Base**	**92.25**	**200**	⇓*e*P	**P**	**00 28 42.0**	**-2.0**
SYO	**Syowa Base**	**92.25**	**200**	⇑*e*P	pP	00 28 53.2	-2.9
PKM	**Peak Mountain**	**92.35**	**55**	⇓P	**P**	**00 28 45.1**	**+0.6**
	baz=92						
BEKR	**Beckwourth**	**92.39**	**50**	⇑P	**P**	**00 28 44.6**	**-0.1**
	baz=92,SNR=5.9						
M06C	**Likely Place G**	**92.43**	**49**	⇑P	**P**	**00 28 45.0**	**+0.1**
	baz=92						
R05C	**Kirkwood Meado**	**92.50**	**52**	⇑P	**P**	**00 28 45.4**	**+0.2**
	baz=92						
T06C	**Millerton Lake**	**92.63**	**53**	⇑P	**P**	**00 28 46.0**	**+0.2**
	baz=93						
P06A	**Stead Airport,**	**92.73**	**51**	⇓P	**P**	**00 28 46.6**	**+0.3**
	baz=93						
K06A	**Valley Falls**	**92.75**	**47**	P	**P**	**00 28 46.4**	**+0.1**
	baz=93,SNR=8.9						
WCN	**Washoe City**	**92.80**	**51**	⇓P	**P**	**00 28 46.9**	**+0.3**
	baz=93						
O06A	**Flanigan**	**92.82**	**50**	P	**P**	**00 28 46.9**	**+0.2**
	baz=93,SNR=8.4						
J06A	**Christmas Vall**	**92.86**	**47**	⇓P	**P**	**00 28 46.3**	**-0.6**
	baz=93,SNR=6.6						
N06A	**Buffalo Meadow**	**92.87**	**50**	P	**P**	**00 28 47.0**	**+0.1**
	baz=93,SNR=7.3						
I06A	**Prineville**	**92.88**	**46**	⇓P	**P**	**00 28 46.9**	**-0.1**
	baz=93						
KCC	**Kaiser Creek**	**92.97**	**53**	⇓P	**P**	**00 28 47.5**	**+0.1**
	baz=93,SNR=6.6						
R06C	**Coleville**	**92.97**	**52**	⇑P	**P**	**00 28 48.0**	**+0.6**
	baz=93,SNR=6.1						
WAKR	**Walker**	**92.98**	**52**	*e*P	**P**	**00 28 48.4**	**+1.0**
WAKR				*e*pP	pP	00 28 59.3	-0.1
VES	**Vestal, Richgr**	**93.03**	**54**	⇓P	**P**	**00 28 47.4**	**-0.3**
	baz=93						
PAHR	**Pah Rah Range**	**93.12**	**51**	*e*P	**P**	**00 28 48.6**	**+0.5**
	comp=Z,13nm,1.0s,mb5.3						
HELL	**Mitchell Peak,**	**93.15**	**54**	⇓P	**P**	**00 28 48.4**	**+0.2**
	baz=93,SNR=6.8						
ARVC	**Arvin**	**93.18**	**55**	⇓P	**P**	**00 28 48.8**	**+0.5**
	baz=93						
R07C	**Lee Vining**	**93.25**	**52**	⇑P	**P**	**00 28 49.2**	**+0.5**
	baz=93,SNR=5.4						
L07A	**Adell**	**93.35**	**48**	⇓P	**P**	**00 28 49.6**	**+0.5**
	baz=93						
I07A	**Izee**	**93.40**	**46**	P	**P**	**00 28 49.5**	**+0.2**
	baz=93,SNR=7.4						
M07A	**Soldier Meadow**	**93.42**	**49**	⇑P	**P**	**00 28 49.6**	**+0.1**
	baz=94						
K07A	**Rock Creek Ran**	**93.47**	**48**	⇓P	**P**	**00 28 49.4**	**-0.3**
	baz=94						
Q07A	**Schurz**	**93.51**	**51**	⇓P	**P**	**00 28 49.7**	**-0.1**
	baz=94						
FMP	**Fort Macarthur**	**93.51**	**57**	⇓P	**P**	**00 28 49.7**	**-0.1**
	baz=94						
ISA	**Isabella**	**93.51**	**55**	⇑P	**P**	**00 28 49.5**	**-0.4**
	baz=94						
DECC	**Green Verdugo**	**93.52**	**56**	⇓P	**P**	**00 28 49.9**	**0.0**
	baz=94						
N07B	**Gerlach**	**93.53**	**50**	⇓P	**P**	**00 28 49.9**	**0.0**
	baz=94,SNR=5.8						
O07A	**Toulon**	**93.55**	**50**	⇓P	**P**	**00 28 50.2**	**+0.2**
	baz=94,SNR=7.4						
HAWA	**Hanford**	**93.57**	**44**	*e*P	**P**	**00 28 50.2**	**+0.1**
HAWA				*e*pP	pP	00 29 02.2	0.0
MTUM	**Tungsten Hills**	**93.57**	**53**	*e*P	**P**	**00 28 51.1**	**+0.9**
MTUM				*e*pP	pP	00 29 00.4	-1.8
MWC	**Mount Wilson**	**93.74**	**56**	*e*P	**P**	**00 28 52.0**	**+1.1**
MWC				*e**PP	pP	00 29 02.5	-0.4

TIN	**Tinemaha**	**93.82**	**53**	⇓P	**P**	**00 28 51.9**	**+0.7**
	baz=94						
EDW2	**Edwards Air Fo**	**93.84**	**55**	⇑P	**P**	**00 28 52.1**	**+0.7**
	baz=94						
NVAR	**Mina Array Bea**	**93.86**	**52**	P	**P**	**00 28 51.4**	**-0.1**
	comp=Z,8.4nm,0.8s,mb5.2,baz=258,slow=4.2,SNR=50						
CWC	**Cottonwood Cre**	**93.89**	**54**	⇓P	**P**	**00 28 51.8**	**+0.2**
	baz=94						
WVOR	**Wild Horse Val**	**93.90**	**48**	*e*P	**P**	**00 28 51.6**	**-0.1**
WVOR				*e**PP	pP	00 29 03.7	0.0
WVOR				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.4						
WVOR	**Wild Horse Val**	**93.90**	**48**	*e*P	**P**	**00 28 51.6**	**-0.1**
	comp=Z,21nm,1.3s,mb5.4						
WVOR				*e*pP	pP	00 29 03.7	0.0
R08A	**Mina**	**94.01**	**52**	⇑P	**P**	**00 28 52.3**	**+0.2**
	baz=94						
M08A	**Happy Creek Ra**	**94.02**	**49**	⇓P	**P**	**00 28 52.4**	**+0.2**
	baz=94						
H08A	**Prairie City**	**94.03**	**46**	⇓P	**P**	**00 28 51.9**	**-0.4**
	baz=94						
K08A	**Mann Creek Ran**	**94.03**	**48**	⇓P	**P**	**00 28 52.1**	**-0.2**
	baz=94						
F08A	**Pendleton**	**94.05**	**45**	⇑P	**P**	**00 28 51.9**	**-0.4**
	baz=94						
I08A	**Drewsey**	**94.06**	**46**	⇓P	**P**	**00 28 52.0**	**-0.4**
	baz=94						
BFSC	**Mount Baldy St**	**94.07**	**56**	⇓P	**P**	**00 28 52.4**	**0.0**
	baz=94						
L08A	**Fields**	**94.10**	**48**	⇑P	**P**	**00 28 52.8**	**+0.2**
	baz=94						
P08A	**Dixie Valley**	**94.12**	**51**	⇓P	**P**	**00 28 53.1**	**+0.4**
	baz=94						
LRMC	**Laurel Mountai**	**94.14**	**55**	⇑P	**P**	**00 28 53.4**	**+0.7**
	baz=94						
N08A	**GE Springer Mi**	**94.16**	**50**	⇓P	**P**	**00 28 53.1**	**+0.3**
	baz=94						
Q08A	**Gabbs**	**94.18**	**52**	P	**P**	**00 28 53.2**	**+0.3**
	baz=94,SNR=8.6						
DAC	**Darwin (Calif)**	**94.27**	**54**	*e*P	**P**	**00 28 54.3**	**+1.0**
DAC				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.4						
DAC				MLR	MLR		
	comp=Z,867nm,20.0s,MS5.2						
DAC	**Darwin (Calif)**	**94.27**	**54**	*e*P	**P**	**00 28 54.3**	**+0.9**
	comp=Z,15nm,1.0s,mb5.4						
DAC				LR	LR		
	comp=Z,867nm,20.0s,MS5.2						
MPMC	**Manual Prospec**	**94.34**	**54**	⇑P	**P**	**00 28 54.2**	**+0.6**
	baz=94,SNR=11						
MURC	**Murrieta**	**94.41**	**57**	⇓P	**P**	**00 28 54.4**	**+0.5**
	baz=94						
109C	**Camp Elliot, M**	**94.44**	**58**	⇑P	**P**	**00 28 54.5**	**+0.3**
	baz=94						
GRAC	**Grapevine Rang**	**94.50**	**53**	⇓P	**P**	**00 28 54.5**	**+0.1**
	baz=94						
K09A	**Rome**	**94.59**	**48**	⇑P	**P**	**00 28 55.9**	**+1.0**
	baz=95						
L09A	**Wilkinson Ranc**	**94.59**	**48**	⇑P	**P**	**00 28 54.8**	**0.0**
	baz=95						
N09A	**Rock Creek Ran**	**94.63**	**50**	⇓P	**P**	**00 28 54.8**	**-0.2**
	baz=95						
I09A	**Lost Marbles R**	**94.66**	**46**	⇓P	**P**	**00 28 54.5**	**-0.6**
	baz=95						
S09A	**Goldfield**	**94.66**	**53**	⇑P	**P**	**00 28 55.3**	**+0.2**
	baz=95,SNR=19						
M09A	**Marrel Ranch,**	**94.72**	**49**	⇓P	**P**	**00 28 55.4**	**0.0**
	baz=95						
H09A	**Durkee**	**94.76**	**46**	⇑P	**P**	**00 28 55.4**	**-0.2**
	baz=95						
Q09A	**Carvers**	**94.76**	**52**	⇑P	**P**	**00 28 55.8**	**+0.1**
	baz=95						
R09A	**Tonopah**	**94.81**	**52**	P	**P**	**00 28 56.1**	**+0.3**
	baz=95,SNR=10						
BMN	**Battle Mountai**	**94.83**	**50**	PFAKE		00 29 10.0	+14
BMN				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
O09A	**Fish Creek Ran**	**94.84**	**50**	⇑P	**P**	**00 28 56.1**	**+0.1**
	baz=95						
GSC	**Goldstone**	**94.84**	**55**	*e*P	**P**	**00 28 56.9**	**+0.9**
GSC				*e**PP	pP	00 29 08.6	+0.6
GSC	**Goldstone**	**94.84**	**55**	⇑P	**P**	**00 28 56.5**	**+0.5**
	baz=95						
FURC	**Furnace Creek,**	**94.87**	**54**	⇓P	**P**	**00 28 56.6**	**+0.5**
	baz=95						
MONP	**Monument Peak**	**95.01**	**58**	⇓P	**P**	**00 28 57.5**	**+0.8**
	baz=95						
BMO	**Blue Mountains**	**95.02**	**46**	*e*P	**P**	**00 28 56.2**	**-0.6**
BMO				pmax	pmax		
	comp=Z,12nm,1.3s,mb5.2						
BMO				MLR	MLR		
	comp=Z,616nm,21.0s,MS5.0						
BMO	**Blue Mountains**	**95.02**	**46**	*e*P	**P**	**00 28 56.2**	**-0.6**
	comp=Z,12nm,1.3s,mb5.2						
BMO				LR	LR		
	comp=Z,616nm,21.0s,MS5.0						
PFO	**Pinyon Flat Ob**	**95.03**	**57**	⇓P	**P**	**00 28 57.0**	**+0.2**
	baz=95						
SVE	**Sverdlovsk**	**95.17**	**326**	*e*P	**P**	**00 28 54.8**	**-2.7**
SVE				*e*		00 32 49.0	
SVE				*e*S	SKSac	00 39 24.0	-6.2
SVE				*e*		00 50 18.0	
SVE				pmax	pmax		
	comp=Z,40nm,2.0s,mb5.5						
SVE				MLR	MLR		
	comp=N,300nm,19.0s,MS4.9						
SVE				MLR	MLR		
	comp=E,300nm,19.0s,MS4.9						
SVE				MLR	MLR		
	comp=Z,500nm,19.0s,MS5.0						
HEC	**Hector,Ludlow**	**95.20**	**56**	⇓P	**P**	**00 28 58.1**	**+0.5**
	baz=95						
U10A	**Ash Meadows, A**	**95.30**	**54**	⇓P	**P**	**00 28 58.7**	**+0.6**
	baz=95						
SHOC	**Shoshone**	**95.31**	**55**	⇓P	**P**	**00 28 58.3**	**+0.2**
	baz=95						
NEW	**Newport**	**95.32**	**42**	*e*P	**P**	**00 28 57.7**	**-0.5**
NEW				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NEW	**Newport**	**95.32**	**42**	*e*P	**P**	**00 28 57.7**	**-0.4**
	comp=Z,8.9nm,1.1s,mb5.1						
P10A	**Eureka**	**95.37**	**51**	⇑P	**P**	**00 28 58.6**	**+0.2**
	baz=95						
O10A	**Cortez Mining,**	**95.37**	**50**	⇓P	**P**	**00 28 58.8**	**+0.4**
	baz=95						
R10A	**Warm Springs**	**95.42**	**52**	⇓P	**P**	**00 28 59.1**	**+0.5**
	baz=96						
BELC	**Belle Mtn.**	**95.43**	**56**	⇑P	**P**	**00 28 58.7**	**+0.1**
	baz=96						
SWSC	**Sam W. Stewart**	**95.54**	**58**	⇓P	**P**	**00 28 59.9**	**+0.8**
	baz=96						
TUQ	**Turquoise Mtn.**	**95.57**	**55**	⇑P	**P**	**00 28 59.8**	**+0.5**
	baz=96						
GMRC	**Granite Mounta**	**95.75**	**56**	⇑P	**P**	**00 29 00.6**	**+0.5**
	baz=96						
P11A	**Circle Ranch,**	**95.91**	**51**	⇓P	**P**	**00 29 00.6**	**-0.2**
	baz=96						
O11A	**Cowboy Ranch,**	**96.01**	**50**	⇑P	**P**	**00 29 01.4**	**0.0**
	baz=96						
U11A	**Corn Creek**	**96.06**	**54**	⇓P	**P**	**00 29 01.9**	**+0.3**
	baz=96						
IRM	**Iron Mountain**	**96.14**	**56**	⇓P	**P**	**00 29 02.1**	**+0.2**
	baz=96						
SHPR	**Sheep Range**	**96.24**	**54**	*e*P	**P**	**00 29 03.6**	**+1.2**
SHPR				*e*pP	pP	00 29 14.9	+0.5
ARU	**Arti**	**96.30**	**326**	⇓*i*P	**P**	**00 28 59.0**	**-3.6**
ARU				*e*		00 32 51.4	
ARU				*e*PPP		00 34 55.0	
ARU				*e*S	S	00 39 32.4	-47
ARU				*e*PS	PS	00 41 37.5	-6.4
ARU				*e*SS	SS	00 46 44.6	-7.8
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.0						
ARU				MLR	MLR		
	comp=Z,900nm,23.0s,MS5.2						
ARU				MLR	MLR		
	comp=N,200nm,20.0s,MS5.1						
ARU				MLR	MLR		
	comp=E,700nm,23.0s,MS5.1						
ARU	**Arti**	**96.30**	**326**	PFAKE		00 29 10.0	+7.4
ARU				LR	LR		
	comp=Z,719nm,21.0s,MS5.1						
GLA	**Glamis**	**96.36**	**57**	*e*P	**P**	**00 29 04.5**	**+1.6**
GLA	**Glamis**	**96.36**	**57**	⇑P	**P**	**00 29 03.6**	**+0.7**
	baz=96						
V12A	**Nelson**	**96.46**	**55**	⇓P	**P**	**00 29 03.4**	**0.0**
	baz=96						

N12A	**Clover Valley,**	**96.51**	**50**	⇑P	**P**	**00 29 03.2**	**-0.4**
	baz=96						
AKTK	**Aktyubinsk**	**96.52**	**320**	P	**P**	**00 29 03.5**	**-0.1**
AKTK				LR	LR	01 13 24.9	
AKTO	**Aktyubinsk**	**96.52**	**320**	P	**P**	**00 29 03.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=90,slow=5.9,SNR=3.6						
AKTO				LR	LR	01 13 24.9	
	comp=Z,468nm,21.0s,MS4.9,baz=83,slow=36						
P12A	**McGill**	**96.56**	**51**	⇑P	**P**	**00 29 04.0**	**+0.2**
	baz=97						
Q12A	**Willow Creek R**	**96.61**	**51**	⇑P	**P**	**00 29 03.9**	**-0.1**
	baz=97						
NEE2	**Needles Airpor**	**96.61**	**56**	⇑P	**P**	**00 29 03.9**	**-0.1**
	baz=97						
M12A	**Wells**	**96.62**	**49**	⇑P	**P**	**00 29 04.0**	**-0.1**
	baz=97						
Y12C	**Blythe**	**96.64**	**57**	⇑P	**P**	**00 29 04.6**	**+0.4**
	baz=97						
O12A	**Currie**	**96.71**	**50**	⇓P	**P**	**00 29 04.4**	**-0.1**
	baz=97						
U12A	**Valley of Fire**	**96.74**	**54**	⇑P	**P**	**00 29 04.6**	**0.0**
	baz=97						
BSMT	**Bassoo Peak**	**96.87**	**43**	*e*P	**P**	**00 29 05.0**	**-0.2**
YKW3	**Yellowknife Ar**	**96.98**	**28**	*e*P	**P**	**00 29 04.7**	**-1.0**
YKA	**Yellowknife Ar**	**96.99**	**28**	P	**P**	**00 29 04.6**	**-1.1**
	comp=Z,9.4nm,0.7s,mb5.3,baz=270,slow=4.6,SNR=56						
YKA				PKKPbc	PKKPbc	00 45 44.3	-1.9
	comp=Z,1.7nm,0.7s,baz=82,slow=2.7,SNR=10.0						
YKA				LR	LR	01 09 06.8	
	comp=Z,570nm,21.0s,MS5.0,baz=270,slow=33						
YKA	**Yellowknife Ar**	**96.99**	**28**	P	**P**	**00 29 04.6**	**-1.1**
YKA				PKKPbc	PKKPbc	00 45 44.3	-1.9
YKA				LR	LR	01 09 06.8	
HLID	**Hailey**	**97.05**	**47**	*e*P	**P**	**00 29 05.9**	**-0.1**
M13A	**Montello**	**97.19**	**49**	⇓P	**P**	**00 29 07.0**	**+0.4**
	baz=97						
W13A	**Hualapai Mount**	**97.22**	**55**	⇓P	**P**	**00 29 07.5**	**+0.7**
	baz=97						
Y13A	**Salome**	**97.22**	**57**	⇓P	**P**	**00 29 07.2**	**+0.4**
	baz=97						
X13A	**Yucca**	**97.25**	**56**	⇓P	**P**	**00 29 07.5**	**+0.6**
	baz=97						
WALA	**Waterton Lakes**	**97.47**	**41**	*e*P	**P**	**00 29 08.0**	**+0.1**
	comp=Z,37nm,1.7s,mb5.5						
EDM	**Edmonton**	**97.80**	**37**	*e*P	**P**	**00 29 09.4**	**0.0**
W14A	**Seligman**	**97.88**	**55**	⇓P	**P**	**00 29 10.3**	**+0.5**
	baz=98						
Y14A	**Wickenburg**	**97.91**	**57**	⇑P	**P**	**00 29 10.4**	**+0.5**
	baz=98						
X14A	**Yava**	**98.02**	**56**	⇓P	**P**	**00 29 11.6**	**+1.2**
	baz=98						
DUG	**Dugway**	**98.19**	**50**	PFAKE		00 29 20.0	+8.8
DUG				LR	LR		
	comp=Z,632nm,20.0s,MS5.1						
DLMT	**Dillon**	**98.37**	**45**	*e*P	**P**	**00 29 17.5**	**+5.5**
LRM	**Limekiln Ridge**	**98.47**	**45**	*e*P	**P**	**00 29 16.6**	**+4.2**
115A	**Sonoran Desert**	**98.53**	**58**	⇓P	**P**	**00 29 13.6**	**+0.9**
	baz=99						
X15A	**Humboldt**	**98.56**	**56**	⇓P	**P**	**00 29 13.7**	**+0.9**
	baz=99						
BOZ	**Bozeman (W)**	**99.05**	**45**	*e*P	**P**	**00 29 15.0**	**0.0**
BOZ				MLR	MLR		
	comp=Z,552nm,19.0s,MS5.1						
TMUT	**Trail Mountain**	**99.42**	**51**	*e*P	**P**	**00 29 18.0**	**+1.3**
TMUT				*e*pP	pP	00 29 29.6	+0.8
AHID	**Auburn Hatcher**	**99.47**	**48**	PFAKE		00 29 30.0	+13
AHID				LR	LR		
	comp=Z,972nm,19.0s,MS5.3						
EGMT	**Eagleton**	**100.25**	**42**	PFAKE		00 29 30.0	+10
EGMT				LR	LR		
	comp=Z,297nm,20.0s,MS4.8						
BW06	**Boulder Array**	**100.61**	**48**	PFAKE		00 29 30.0	+8.1
BW06				LR	LR		
	comp=Z,997nm,19.0s,MS5.3						
PDAR	**Pinedale Array**	**100.61**	**48**	P	Pdif	00 29 21.1	-0.9
	comp=Z,2.0nm,0.7s,baz=259,slow=1.6,SNR=21						
PDAR				PKKPbc	PKKPbc	00 45 42.0	+6.0
	comp=Z,0.4nm,0.6s,baz=92,slow=4.5,SNR=3.5						
VNA1	**Neumayer--Stat**	**102.50**	**187**	⇑*i*Pdiff	Pdif	00 29 26.3	-4.0
VNA1				*e*		00 29 30.4	
VNA1				*e*		00 29 37.0	
VNA1				*e*		00 29 41.3	
VNA1				*e*		00 29 50.4	
VNA1				*e*		00 45 24.7	
VNA1				*e*		00 45 29.7	
SMCO	**Snowmass**	**102.72**	**51**	*e*Pdif	Pdif	00 29 31.9	+0.6
ANMO	**Albuquerque**	**103.31**	**56**	PFAKE		00 29 50.0	+16
ANMO				LR	LR		
	comp=Z,290nm,20.0s,MS4.8						
KEV	**Kevo**	**106.80**	**343**	*e*P	Pdif	00 29 46.3	-3.2
KEV				*e*PKP	PKiKP	00 33 53.7	-5.7
AMTX	**Amarillo**	**107.24**	**55**	PFAKE		00 34 10.0	+10
AMTX				LR	LR		
	comp=Z,498nm,20.0s,MS5.1						
ARCES	**ARCESS Array B**	**107.36**	**343**	PKiKP	PKiKP	00 33 58.9	-1.6
	comp=Z,2.3nm,0.7s,baz=108,slow=2.2,SNR=22						
ARCES				PKKPbc	PKKPbc	00 45 13.5	-2.3
	comp=Z,2.0nm,0.8s,baz=135,slow=0.2,SNR=8.0						
MOS	**Moscow**	**107.97**	**327**	*e*P	Pdif	00 29 57.3	+2.6
JOF	**Joensuu**	**108.46**	**335**	*e*p	Pdif	00 29 52.9	-4.0
	comp=Z,1.1nm,0.5s						
JOF	**Joensuu**	**108.46**	**335**	*e*pkp	PKiKP	00 33 59.9	-2.6
JOF	**Joensuu**	**108.46**	**335**	*e*P	Pdif	00 29 52.9	-4.0
JOF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**108.46**	**335**	*e*P	Pdif	00 29 52.9	-4.0
JOF				*e*PKP	PKiKP	00 33 59.9	-2.6
KAF	**Kangasniemi**	**110.90**	**336**	*e*P	Pdif	00 30 04.1	-3.6
KAF				*e*PKP	PKiKP	00 34 03.1	-4.0
FINES	**FINESS Array B**	**111.32**	**335**	Pdiff	Pdif	00 30 06.4	-3.2
	comp=Z,1.5nm,0.8s,baz=60,slow=4.6,SNR=5.1						
FINES				PKiKP	PKiKP	00 34 06.5	-1.4
	comp=Z,2.3nm,0.7s,baz=114,slow=3.9,SNR=10						
FINES				PKKPbc	PKKPbc	00 45 01.2	-2.0
	comp=Z,2.1nm,1.1s,baz=263,slow=1.5,SNR=3.7						
FINES	**FINESS Array B**	**111.32**	**335**	P	Pdif	00 30 06.4	-3.2
FINES						00 34 06.5	
FINES	**FINESS Array B**	**111.32**	**335**	Pdif	Pdif	00 30 06.4	-3.2
FINES				PKPdf	PKiKP	00 34 06.5	-1.4
FINES				PKKPbc	PKKPbc	00 45 01.2	-2.0
MALT	**Malatya**	**111.48**	**309**	⇑*i*P	PKiKP	00 34 09.0	+0.8
MALT	**Malatya**	**111.48**	**309**	⇑P	PKiKP	00 34 09.0	+0.8
EYMN	**Ely**	**112.33**	**40**	PFAKE		00 34 20.0	+10
EYMN				LR	LR		
	comp=Z,425nm,20.0s,MS5.0						
AKASG	**Malin Array Be**	**114.42**	**324**	PKP	PKiKP	00 34 12.5	-1.3
	comp=Z,9.1nm,0.8s,baz=62,slow=2.1,SNR=23						
AKBB	**Malin Array Si**	**114.42**	**324**	*e*PKIKP	PKiKP	00 34 12.4	-1.4
BR131	**Keskin Array S**	**114.84**	**311**	*e*PKPdf	PKiKP	00 34 14.0	-0.7
BR131				LR	LR		
	comp=Z,298nm,21.0s,MS4.9						
BRTR	**Keskin Array B**	**114.84**	**311**	PKP	PKiKP	00 34 13.7	-0.9
	comp=Z,5.2nm,0.8s,baz=116,slow=2.9,SNR=33						
BRTR				PP	PP	00 35 13.2	-0.1
	comp=Z,2.2nm,1.0s,baz=108,slow=4.3,SNR=4.2						
ANTO	**Ankara**	**115.43**	**312**	⇓*i*P	PKPdf	00 34 15.4	-0.4
ANTO	**Ankara**	**115.43**	**312**	⇓P	PKPdf	00 34 15.3	-0.4
ANTO				LR	LR		
	comp=Z,144nm,20.0s,MS4.6						
SUW	**Suwalki**	**116.32**	**329**	*e*PKP	PKPdf	00 34 16.5	-1.0
CFR	**Carcaliu**	**117.12**	**318**	⇑*i*P	PKPdf	00 34 18.8	-0.2
CFR	**Carcaliu**	**117.12**	**318**	⇑P	PKPdf	00 34 18.8	-0.2
TIRR	**Tirgusor**	**117.18**	**317**	⇑*i*P	PKPdf	00 34 18.5	-0.6
NB2	**NORSAR Subarra**	**117.32**	**339**	PKPd	PKPdf	00 34 17.3	-2.1
	comp=Z,2.9nm,0.9s,baz=44,slow=1.9						
NOA	**NORSAR Array B**	**117.32**	**339**	PKP	PKPdf	00 34 17.2	-2.2
	comp=Z,5.6nm,0.9s,baz=49,slow=1.9,SNR=14						
HARR	**Harsova**	**117.43**	**318**	⇑*i*P	PKPdf	00 34 19.9	+0.3
HARR	**Harsova**	**117.43**	**318**	⇑P	PKPdf	00 34 19.9	+0.3
ISP	**Isparta**	**117.68**	**310**	*c i*PKIKP	PKPdf	00 34 18.4	-1.7
VRI	**Vrincioaia**	**117.79**	**319**	⇑*i*P	PKPdf	00 34 19.0	-1.3
VRI	**Vrincioaia**	**117.79**	**319**	⇑P	PKPdf	00 34 19.0	-1.3
BURAR	**Bucovina Array**	**118.05**	**322**	⇑*i*P	PKPdf	00 34 21.3	+0.5
BURAR	**Bucovina Array**	**118.05**	**322**	⇑P	PKPdf	00 34 21.3	+0.5
PRD	**Provadia**	**118.31**	**316**	*e*P	PKPdf	00 34 21.2	-0.1
MLR	**Muntele Rosu**	**118.44**	**319**	PKP	PKPdf	00 34 20.8	-0.8
	comp=Z,19nm,1.0s,baz=331,slow=1.5,SNR=33						
MLR	**Muntele Rosu**	**118.44**	**319**	⇑*i*P	PKPdf	00 34 21.0	-0.6
MLR	**Muntele Rosu**	**118.44**	**319**	PKIKP	PKPdf	00 34 21.5	-0.1
MLR	**Muntele Rosu**	**118.44**	**319**	⇑P	PKPdf	00 34 21.0	-0.6
KWP	**Kalwaria**	**118.67**	**325**	*e*PKP	PKPdf	00 34 21.1	-0.9
LBTB	**Lobatse**	**119.00**	**237**	*e*PKIKP	PKPdf	00 34 22.7	+0.1
VOIR		**119.04**	**320**	⇑*i*P	PKPdf	00 34 24.1	+1.4
VOIR		**119.04**	**320**	⇑P	PKPdf	00 34 24.1	+1.4

KOLS Kolonicke sedl 119.24 324 *e*PKP PKPdf 00 34 22.8 -0.3
SZH Strazhica 119.28 317 *i* P PKPdf 00 34 23.5 +0.3
STHS Stebnicka Huta 119.61 325 *i* PKP PKPdf 00 34 23.8 0.0
GKP Gorka Klasztor 119.72 330 *e*PKP PKPdf 00 34 23.4 -0.6
CRVS Cervenica-Dubn 119.73 324 *e*PKP PKPdf 00 34 23.6 -0.4
LSZ Lusaka 119.90 249 *e*PKIKP PKPdf 00 34 24.9 +0.5
DRGR 119.95 322 ⇑*i*P PKPdf 00 34 23.8 -0.7
DRGR 119.95 322 PKIKP PKPdf 00 34 24.4 -0.1
DRGR 119.95 322 ⇑P PKPdf 00 34 23.8 -0.6
DIM Dimitrovgrad 120.00 316 *e*P PKPdf 00 34 24.3 -0.3
OJC Ojcow 120.02 326 *e*PKP PKPdf 00 34 23.8 -0.8
NIE Niedzica 120.14 325 *e*PKP PKPdf 00 34 25.0 +0.2
CRAR CRAIOVA 120.30 319 ⇑*i*P PKPdf 00 34 25.9 +0.8
RDO Rodhopi 120.32 315 *e*P PKPdf 00 34 26.9 -4.3
KECS Kecovo 120.50 324 *e*PKP PKPdf 00 34 24.9 -0.6
KECS Kecovo 120.50 324 *e*PKP PKPdf 00 34 25.0 -0.5
ACSO Alum Creek Sta 120.60 46 PFAKE 00 34 40.0 +14
ACSO LR LR
comp=Z,219nm,19.0s,MS4.8
KARP Karpathos 120.89 308 *e*P PKPdf 00 34 24.8 -1.5
LOS Limnos 121.07 314 *e*P PKPdf 00 34 25.8 -0.9
PSZ Piszkesteto 121.12 324⇑*e*PKP/D PKPdf 00 34 26.3 -0.4
PSZ Piszkesteto 121.12 324⇑*i*P PKPdf 00 34 26.2 -0.5
PSZ Piszkesteto 121.12 324 PKIKP PKPdf 00 34 27.0 +0.3
PSZ Piszkesteto 121.12 324 *e*PKPdf PKPdf 00 34 25.5 -1.2
OKC Ostrava-Krasne 121.13 327 *e*PKPdf PKPdf 00 34 26.1 -0.6
OKC AMS AMS 01 27 50.0
comp=Z,300nm,17.1s
BZS Buzias 121.15 321 ⇓*i*P PKPdf 00 34 26.1 -0.7
BZS Buzias 121.15 321 PKIKP PKPdf 00 34 26.3 -0.5
BZS Buzias 121.15 321 ⇓P PKPdf 00 34 26.1 -0.7
VTS Vitosha 121.39 317 *i* P PKPdf 00 34 25.8 -1.4
VTS Vitosha 121.39 317⇑*i*P PKPdf 00 34 26.9 -0.3
VTS Vitosha 121.39 317 PKIKP PKPdf 00 34 27.0 -0.2
VTS Vitosha 121.39 317 ⇑P PKPdf 00 34 26.9 -0.4
NVR Nevrokopi 121.42 316 *e*P PKPdf 00 34 25.5 -1.8
MMB Musomiste 121.43 316 *e*P PKPdf 00 34 27.1 -0.2
MMB Musomiste 121.43 316 *i* P PKPdf 00 34 26.2 -1.1
VYHS Vyhne 121.44 325 *i* PKP PKPdf 00 34 26.5 -0.8
MORC Moravsky Berou 121.49 327 ⇓*i*P PKPdf 00 34 27.1 -0.3
MORC Moravsky Berou 121.49 327 *e*PKPdf PKPdf 00 34 27.1 -0.3
MORC *ep*PKPdf pPKPdf 00 34 39.4 -0.4
KSP Ksiaz 121.57 328 *e*PKP PKPdf 00 34 27.3 -0.3
APE Apeiranthos 121.69 310 ⇓*i*P PKPdf 00 34 26.1 -1.7
APE Apeiranthos 121.69 310 ⇓P PKPdf 00 34 26.1 -1.7
OUR Ouranopolis 121.72 314 *e*P PKPdf 00 34 26.7 -1.2
KKB Krupnik 121.76 316 *i* P PKPdf 00 34 26.2 -1.7
DPC Dobruska-Polom 121.84 328 *e*PKPdf PKPdf 00 34 27.7 -0.4
DPC AMS AMS 01 26 40.0
comp=Z,400nm,24.4s
BUD Budapest 121.84 324⇑*e*PKP/D PKPdf 00 34 27.3 -0.8
RUE Ruedersdorf 121.88 331 *e*PKPdf PKPdf 00 34 27.5 -0.7
UPC Upice 121.91 328 *e*PKPdf PKPdf 00 34 27.9 -0.3
ERPA Erie 121.99 43 PFAKE 00 34 40.0 +12
ERPA LR LR
comp=Z,627nm,19.0s,MS5.3
PAIG Paliouri 122.08 314 *e*P PKPdf 00 34 27.1 -1.4
KNT Kendrikon 122.17 316 *e*P PKPdf 00 34 27.3 -1.4
NPS Neapolis 122.18 308 *e*P PKPdf 00 34 27.9 -0.8
AOS Alonnisos 122.21 313 *e*P PKPdf 00 34 27.4 -1.4
VRAC Vranov 122.27 327⇑*i*P PKPdf 00 34 27.7 -1.2
VRAC Vranov 122.27 327 PKIKP PKPdf 00 34 29.2 +0.3
VRAC Vranov 122.27 327 ⇑P PKPdf 00 34 27.7 -1.2
THE Thessaloniki 122.32 315 *e*P PKPdf 00 34 27.0 -2.1
VAY Valandovo 122.33 316 *e*PKP PKPdf 00 34 26.8 -2.2
STIP Stip 122.45 316 *e*PKP PKPdf 00 34 27.8 -1.4
GRUS Gruza 122.50 319 *i* PKP PKPdf 00 34 28.5 -0.8
BSEG Bad Segeberg 122.54 334 *e*PKPdf PKPdf 00 34 29.0 -0.4
ZST Bratislava 122.59 325 *e*PKIKP PKPdf 00 34 29.6 +0.1
ZST MLR MLR
comp=Z,200nm,23.4s,MS4.7
GRG Griva 122.59 316 *e*P PKPdf 00 34 28.3 -1.3
NEO Neokhori 122.64 314 *e*P PKPdf 00 34 25.3 -4.3
XOR Xorichti 122.64 314 *e*P PKPdf 00 34 28.5 -1.2
PVCC Panska Ves 122.65 329 *e*PKPdf PKPdf 00 34 29.1 -0.6
PKSM Moragy 122.70 323 ⇑*i*P PKPdf 00 34 29.0 -0.8
PKSM Moragy 122.70 323 PKIKP PKPdf 00 34 29.4 -0.3
BRG Berggiesshubel 122.77 329 *e*PKPdf PKPdf 00 34 29.0 -0.9
BRG Berggiesshubel 122.77 329 *i* PKP PKPdf 00 34 29.5 -0.4
comp=Z,29nm,1.1s
BRG *i* 00 34 41.7
comp=Z,9.7nm,1.0s
BRG PP PP 00 36 05.0 -3.0
BRG SS SS 00 52 57.0 +9.1
BRG
comp=N,158nm,19.1s
BRG
comp=E,165nm,21.5s
BRG
comp=Z,356nm,20.8s
BRG Berggiesshubel 122.77 329 *i* PKIKP PKPdf 00 34 29.5 -0.4
BRG *i* 00 34 41.7
BRG 00 36 05.0
BRG SS SS 00 52 57.0 +9.1
BRG pmax pmax
comp=Z,1.0nm,1.1s
BRG pmax pmax
comp=Z,29nm,1.0s
BRG MLR MLR
comp=N,10µm,19.1s
BRG MLR MLR
comp=E,158nm,21.5s
BRG MLR MLR
comp=Z,165nm,20.8s,MS4.7
BRG Berggiesshubel 122.77 329 *i* PKP PKPdf 00 34 29.5 -0.4
BRG *i* 00 34 41.7
BRG PP PP 00 36 05.0 -3.0
BRG SS SS 00 52 57.0 +9.1
BRG LR LR
comp=Z,360nm,20.8s,MS5.0
SKO Skopje 122.84 317 *e*PKP PKPdf 00 34 29.5 -0.5
LIT Litokhoron 122.86 315 *e*P PKPdf 00 34 28.6 -1.5
DIVS Divcibare 122.87 320 *i* PKP PKPdf 00 34 29.5 -0.5
TREC Trest 122.88 327 *e*PKPdf PKPdf 00 34 29.5 -0.6
TREC AMS AMS 01 26 40.0
comp=Z,400nm,20.8s
CLL Collm 122.98 330 *i* PKPdf PKPdf 00 34 29.5 -0.8
comp=Z,36nm,0.9s
CLL *ep*PKPdf pPKPdf 00 34 41.5 -1.2
CLL *e*PP PP 00 36 11.6 +2.2
CLL *e*PPP 00 38 54.8
CLL *e*PS PS 00 46 16.9 +11
CLL *e*PPS 00 47 33.4
CLL *e*SS SS 00 53 13.4 +23
CLL *e*SSS 00 57 42.1
CLL *e*L 01 27 52.6
comp=Z,440nm,22.0s
CLL Collm 122.98 330⇑*i*PKIKP PKPdf 00 34 28.8 -1.5
comp=Z,logA/T=1.6
CLL *e**PPKP 00 34 42.0
CLL *e*PP PP 00 36 11.0 +1.6
CLL *e*PPP 00 38 54.0
CLL *e*PS PS 00 46 03.0 -2.5
CLL *e*PPS 00 47 30.0
CLL *e*SS SS 00 52 48.0 -2.5
CLL Collm 122.98 330⇑*i*PKPdf PKPdf 00 34 28.8 -1.5
comp=Z,36nm,0.9s
CLL *ep*PKPdf pPKPdf 00 34 42.0 -0.7
CLL *e*PP PP 00 36 11.0 +1.6
CLL *e*PPP 00 38 54.0
CLL *e*PS PS 00 46 03.0 -2.5
CLL *e*PPS 00 47 30.0
CLL *e*SS SS 00 52 48.0 -2.5
CLL Collm 122.98 330⇑*i*PKIKP PKPdf 00 34 28.8 -1.5
CLL *e*PS PS 00 46 03.0 -2.5
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL MLR MLR
comp=Z,400nm,22.8s,MS5.0
CLL Collm 122.98 330⇑*i*PKP PKPdf 00 34 28.8 -1.5
CLL *e*PS PS 00 46 03.0 -2.5
CLL LR LR
comp=Z,400nm,22.8s,MS5.0
PRU Pruhonice 122.98 328 *e*PKPdf PKPdf 00 34 29.4 -0.9
PRU AMS AMS 01 28 20.0
comp=Z,400nm,19.5s
FBE Freiberg 123.04 330 *e*PKPdf PKPdf 00 34 30.0 -0.4
LKR Lokris 123.04 313 *e*P PKPdf 00 34 28.6 -1.8
SOP Sopron 123.17 325⇑*e*PKP/D 00 34 30.0
VAM Vamos 123.24 309 *e*P PKPdf 00 34 28.5 -2.3
BIA Bitola 123.31 316 *e*PKP PKPdf 00 34 29.3 -1.7
BBLS Bajina Basta - 123.35 320 *i* PKP PKPdf 00 34 31.4 +0.4

FNA Florina 123.37 316 *e*P PKPdf 00 34 30.2 -0.8
AGG Agios Georgios 123.39 314 *e*P PKPdf 00 34 30.1 -1.0
CONA Conrad Observa 123.43 326⇑*i*PKiKP PKiKP 00 34 30.6 -0.8
comp=Z,43nm,1.3s,SNR=11
BLA Blacksburg 123.53 49 PFAKE 00 34 40.0 +8.7
BLA LR LR
comp=Z,76nm,21.0s,MS4.3
OHR Ohrid 123.64 316 *e*PKP PKPdf 00 34 30.1 -1.5
TANN Tannenbergstha 123.80 330 *e*PKPdf PKPdf 00 34 31.2 -0.6
EVR Evrytania 123.80 314 *e*P PKPdf 00 34 28.6 -3.3
WERD Werda 123.86 330 *e*PKPdf PKPdf 00 34 31.3 -0.7
WERD *ep*PKPdf pPKPdf 00 34 43.5 -0.8
GUNZ Gunzen 123.89 330 *e*PKPdf PKPdf 00 34 31.4 -0.6
CLZ Clausthal 123.91 332 *e*PKPdf PKPdf 00 34 31.6 -0.5
NKC Novy Kostel 123.92 329 *e*PKPdf PKPdf 00 34 31.5 -0.6
WERN Wernitzgruen 123.92 329 *e*PKPdf PKPdf 00 34 31.8 -0.3
KHC Kasperske Hory 123.99 328 *e*PKPdf PKPdf 00 34 31.6 -0.6
KHC *ep*PKP pPKPdf 00 34 44.0 -0.6
KHC AMS AMS 01 28 20.0
comp=Z,400nm,21.9s
KHC Kasperske Hory 123.99 328*c* *i*PKIKP PKPdf 00 34 31.6 -0.6
ARSA Arzberg 124.00 325⇑*i*P PKPdf 00 34 30.4 -1.9
comp=Z,53nm,1.6s
MOX Moxa 124.08 330 *e*PKPdf PKPdf 00 34 31.7 -0.7
MOX Moxa 124.08 330 *e*P PKPdf 00 34 31.8 -0.6
comp=Z,44nm,1.5s
MOX *e* 00 36 24.0
MOX
comp=Z,300nm,21.0s
MOX Moxa 124.08 330 *e*PKIKP PKPdf 00 34 31.8 -0.6
MOX *e* 00 36 24.0
MOX pmax pmax
comp=Z,44nm,1.5s
MOX MLR MLR
comp=Z,300nm,21.0s,MS4.9
GEC2 GERESS Array S 124.10 327 *e*PKPdf PKPdf 00 34 31.6 -0.8
GERES GERESS Array B 124.10 327 PKP PKPdf 00 34 31.8 -0.7
comp=Z,19nm,0.7s,baz=72,slow=1.5,SNR=203
MANZ Manzenberg 124.24 329 *e*PKPdf PKPdf 00 34 32.1 -0.6
GTTG Gvttingen 124.29 332 *e*PKPdf PKPdf 00 34 33.3 +0.5
ROTZ Rotzenmuhle 124.33 329 *e*PKPdf PKPdf 00 34 32.1 -0.8
WET Wettzell 124.36 328 *e*PKPdf PKPdf 00 34 32.2 -0.7
MOA Molln 124.37 326⇑*i*P PKPdf 00 34 31.8 -1.2
comp=Z,50nm,1.7s,SNR=8.8
RLS Riolos of Patr 124.38 313 *e*P PKPdf 00 34 30.8 -2.2
IGT Igoumenitsa 124.61 315 *e*P PKPdf 00 34 32.9 -0.5
BINY Binghamton 124.64 42 PFAKE 00 34 40.0 +6.5
BINY LR LR
comp=Z,602nm,19.0s,MS5.3
LKD Levkas 124.72 314 *e*P PKPdf 00 34 32.8 -0.8
IBBN Ibbenburen 124.78 334 *e*PKPdf PKPdf 00 34 33.0 -0.7
GRA1 Grafenberg Arr 124.87 329 *e*PKPdf PKPdf 00 34 33.0 -0.9
GRA1 *ep*PKPdf pPKPdf 00 34 45.4 -0.9
GRA1 LR LR
comp=Z,400nm,21.3s,MS5.0
GRF Grafenberg Arr 124.87 329 *e*PKPdf PKPdf 00 34 33.0 -0.9
GRF *ep*PKPdf pPKPdf 00 34 45.4 -0.9
GRF *eL* 01 31 03.4
comp=Z,406nm,21.3s
KBA Koelnbreinsper 125.32 326⇑*i*P PKPdf 00 34 33.6 -1.2
comp=Z,51nm,1.4s
DWPF Disney 125.39 60 PFAKE 00 34 50.0 +15
DWPF LR LR
comp=Z,469nm,21.0s,MS5.1
CBN Corbin 125.40 47 PFAKE 00 34 50.0 +15
CBN LR LR
comp=Z,698nm,19.0s,MS5.3
WTSB Winterswijk 125.44 334 *e*PKP PKPdf 00 34 34.2 -0.8
comp=Z,50nm,1.6s
BUG Bochum--Univer 125.60 333 *e*PKPdf PKPdf 00 34 34.9 -0.4
FUR Furstenfeldbru 125.80 328 *e*PKPdf PKPdf 00 34 35.0 -0.7
TNS Taunus Mts 125.89 331 *e*PKPdf PKPdf 00 34 35.3 -0.6
FVI Forni Avoltri 125.92 326 PKIKP PKPdf 00 34 35.0 -0.9
TOD Tromm 126.13 331 PKIKP PKPdf 00 34 36.0 -0.3
WATA Walderalm 126.14 327⇑*i*P PKPdf 00 34 35.5 -0.8
comp=Z,37nm,1.1s,SNR=16
WTTA Wattenberg 126.15 327 *i* P PKPdf 00 34 35.8 -0.6
comp=Z,139nm,1.3s,SNR=32
MOTA Moosalm 126.39 327⇑*i*P PKPdf 00 34 36.0 -0.8
comp=Z,42nm,1.0s,SNR=44
SQTA Sankt Quirin 126.41 327⇑*i*P PKPdf 00 34 36.2 -0.7
comp=Z,38nm,1.0s,SNR=26
STU Stuttgart 126.48 330 *e*PKPdf PKPdf 00 34 36.4 -0.6
STU *ep*PKPdf pPKPdf 00 34 48.5 -0.9
STU Stuttgart 126.48 330 *e*PKPdf PKPdf 00 34 36.7 -0.3
STU *ep*PKPdf pPKPdf 00 34 49.0 -0.4
ESK Eskdalemuir 126.55 342 PFAKE 00 34 50.0 +13
ESK LR LR
comp=Z,264nm,20.0s,MS4.9
HGN Heimansgroeve 126.68 333 *e*PKP PKPdf 00 34 36.7 -0.6
comp=Z,1.4nm,1.0s
MEM Membach 126.75 333 P PKPdf 00 34 37.3 -0.2
APPI Appiano 126.85 326 PKP PKPdf 00 34 36.4 -1.3
LANF Langenberg 127.03 331 PKP PKPdf 00 34 38.1 +0.1
DAVA Damuels 127.08 328⇑*i*P PKPdf 00 34 37.5 -0.6
comp=Z,53nm,1.2s,SNR=23
SPAK Spaichingen-Ko 127.13 329 PKP PKPdf 00 34 37.9 -0.3
BCLA Clavier 127.20 333 P PKPdf 00 34 38.3 -0.1
BFO Black Forest 127.21 330 *e*PKPdf PKPdf 00 34 37.4 -1.0
BRMO Bormio 127.32 327 PKP PKPdf 00 34 37.6 -1.0
STR Strasbourg 127.32 330 PKP PKPdf 00 34 39.0 +0.4
UCC Uccle 127.35 334 P PKPdf 00 34 38.1 -0.5
WLF Walferdange 127.35 332 *e*PKPdf PKPdf 00 34 37.7 -0.9
WLF Walferdange 127.35 332 P PKPdf 00 34 37.3 -1.4
WLF Walferdange 127.35 332 *e*P PKPdf 00 34 38.5 -0.1
WLF *ep*PKPdf pPKPdf 00 34 50.3 -0.8
CING Cingoli 127.49 322 PKP PKPdf 00 34 39.4 +0.5
SNF Seneffe 127.59 334 P PKPdf 00 34 38.4 -0.7
WLS Welschbruch 127.64 330 PKP PKPdf 00 34 39.0 -0.2
GIVF Givet 127.65 333 *e*PKIKP PKPdf 00 34 38.8 -0.4
comp=Z,130nm,1.2s
FELD Feldberg im Sc 127.67 329 PKP PKPdf 00 34 39.0 -0.3
CDF Champ du Feu 127.68 330 *e*PKIKP PKPdf 00 34 38.3 -1.0
comp=Z,47nm,1.2s
SNTG Esanatoglia 127.71 322 PKP PKPdf 00 34 39.3 0.0
DOU Dourbes 127.75 333 P PKPdf 00 34 39.2 -0.3
ECH Echery 127.87 330 PKP PKPdf 00 34 39.2 -0.4
TUE Stuetta 127.88 327 PKP PKPdf 00 34 39.0 -0.6
AQU L'Aquila 127.91 321 PKIKP PKPdf 00 34 39.8 +0.1
BAIF Baives 127.95 334 *e*PKIKP PKPdf 00 34 39.4 -0.4
comp=Z,36nm,1.0s
BADI Badiali 127.99 323 PKP PKPdf 00 34 39.9 0.0
TSUM Tsumeb 128.11 240 *e*PKPdf PKPdf 00 34 40.8 +0.7
MOF Molkenrain 128.12 330 PKP PKPdf 00 34 39.9 -0.2
BBS Basel-Blauen 128.19 329 PKIKP PKPdf 00 34 39.9 -0.4
SEI Scarperia 128.21 324 PKP PKPdf 00 34 40.7 +0.4
HINF Hinteralfeld 128.29 330 *e*PKIKP PKPdf 00 34 39.5 -0.9
comp=Z,129nm,1.2s
HAU Haudompre 128.41 331 *e*PKIKP PKPdf 00 34 39.9 -0.8
comp=Z,112nm,1.1s
HAU *e*R
comp=Z,458nm,21.8s
HAU Haudompre 128.41 331 *e*PKPdf PKPdf 00 34 39.9 -0.8
HAU LR LR
comp=Z,460nm,21.8s,MS5.1
THEF They Montfort 128.43 331 PKP PKPdf 00 34 40.7 0.0
GSCL Gusciola 128.48 325 PKP PKPdf 00 34 40.8 0.0
MTTG Motta San Giov 128.54 315 PKP PKPdf 00 34 41.2 +0.3
LOMF Lomont 128.62 330 PKP PKPdf 00 34 41.2 +0.1
MEZF Maizieres J'vi 128.69 332 *e*PKIKP PKPdf 00 34 41.0 -0.2
comp=Z,179nm,1.3s
MCGN Macugnaga 128.93 328 PKP PKPdf 00 34 41.9 +0.2
CABF La Chapelle 129.49 329 *e*PKIKP PKPdf 00 34 42.6 -0.1
comp=Z,170nm,1.2s
LPL La Plagne 129.89 328 *e*PKIKP PKPdf 00 34 43.3 -0.2
comp=Z,39nm,0.8s
LPG La Plagne 129.89 328 *e*PKIKP PKPdf 00 34 43.3 -0.2
comp=Z,55nm,0.9s
LOR Lormes 130.13 331 *e*PKIKP PKPdf 00 34 43.4 -0.5
comp=Z,104nm,1.4s
LOR *e*R
comp=Z,416nm,21.2s
LOR Lormes 130.13 331 *e*PKPdf PKPdf 00 34 43.4 -0.5
LOR LR LR
comp=Z,420nm,21.3s,MS5.1
OG05 Jujurieux 130.20 329 PKP PKPdf 00 34 44.7 +0.6
BNI Bardecchia 130.22 327 *e*PKIKP PKPdf 00 34 44.3 +0.2
MBDF Montbardon 130.38 327 *e*PKIKP PKPdf 00 34 43.9 -0.5
comp=Z,139nm,1.8s
SAOF Saorge 130.43 326 PKP PKPdf 00 34 45.1 +0.6
SSF Saint Saulge 130.44 331 *e*PKIKP PKPdf 00 34 44.1 -0.4
comp=Z,65nm,1.1s
PGF Pioggiola 130.49 324 *e*PKIKP PKPdf 00 34 44.2 -0.4
comp=Z,297nm,1.4s

AUTN L'Aution 130.50 326 PKP PKPdf 00 34 45.5 +0.9
SBF Sospel 130.57 326 *e*PKIKP PKPdf 00 34 44.1 -0.7
comp=Z,89nm,1.0s
SMF Signal de Mont 130.58 331 *e*PKIKP PKPdf 00 34 44.3 -0.5
comp=Z,115nm,1.3s
TOUF Mont Tournerai 130.58 326 PKP PKPdf 00 34 45.7 +0.9
LUCF Luceram 130.61 326 PKP PKPdf 00 34 45.5 +0.7
REVF Revere 130.69 326 PKP PKPdf 00 34 45.7 +0.7
HYF Humbligny 130.70 332 *e*PKIKP PKPdf 00 34 45.0 0.0
AVF Avril sur Loir 130.71 331 *e*PKIKP PKPdf 00 34 44.3 -0.7
comp=Z,54nm,1.4s
ORIF Oris-en-Rattie 130.73 328 *e*PKIKP PKPdf 00 34 44.5 -0.6
comp=Z,39nm,0.8s
ORIF *e*R
comp=Z,609nm,21.2s
FLN La Foliniere 130.94 336 *e*PKIKP PKPdf 00 34 45.0 -0.5
comp=Z,74nm,1.0s
FLN *e*R
comp=Z,293nm,22.2s
FLN La Foliniere 130.94 336 *e*PKPdf PKPdf 00 34 45.0 -0.5
FLN LR LR
comp=Z,290nm,22.3s,MS4.9
BGF Bois d'Agland 131.12 331 *e*PKIKP PKPdf 00 34 45.5 -0.3
comp=Z,82nm,1.2s
PLDF La Plantade 131.17 330 PKP PKPdf 00 34 46.8 +0.9
FRF La Foret Royal 131.21 326 *e*PKIKP PKPdf 00 34 45.5 -0.5
comp=Z,117nm,1.4s
AGO Saint Agoulin 131.35 331 PKP PKPdf 00 34 47.1 +0.9
GRR Gorron 131.39 335 *e*PKIKP PKPdf 00 34 46.1 -0.2
comp=Z,47nm,0.9s
VIVF Saint-Julien-l 131.41 329 *e*PKIKP PKPdf 00 34 46.2 -0.2
comp=Z,150nm,1.5s
LMR La Mourre 131.43 326 *e*PKIKP PKPdf 00 34 46.0 -0.4
comp=Z,109nm,1.1s
COLF Collangettes 131.45 330 PKP PKPdf 00 34 46.8 +0.4
SMRF Simiane la Rot 131.52 327 *e*PKIKP PKPdf 00 34 46.4 -0.2
comp=Z,133nm,1.2s
TCF Toulx Ste Croi 131.62 332 *e*PKIKP PKPdf 00 34 46.1 -0.7
comp=Z,56nm,1.1s
PYM Petit Puy Mans 131.62 331 PKP PKPdf 00 34 48.2 +1.4
LBL Lubilhac 131.87 330 PKP PKPdf 00 34 48.9 +1.7
VSL Villasalto 132.03 320 *e*PKPdf PKPdf 00 34 47.1 -0.4
SGMF Saint Gilles 132.18 337 *e*PKIKP PKPdf 00 34 47.4 -0.4
comp=Z,46nm,0.9s
LASF Ste Croix 132.37 328 *e*PKIKP PKPdf 00 34 47.8 -0.4
comp=Z,64nm,1.1s
ROSF Rostrenen 132.39 337 *e*PKIKP PKPdf 00 34 47.7 -0.5
comp=Z,96nm,1.4s
MFF Saint Martin d 132.47 333 *e*PKIKP PKPdf 00 34 49.1 +0.7
comp=Z,30nm,0.9s
RJF Les Rejaudoux 132.67 331 *e*PKIKP PKPdf 00 34 49.0 +0.3
comp=Z,82nm,1.4s
RJF *e*R
comp=Z,380nm,23.0s
RJF Les Rejaudoux 132.67 331 *e*PKPdf PKPdf 00 34 49.0 +0.3
RJF LR LR
comp=Z,380nm,23.0s,MS5.0
CAF Calviac 132.68 330 *e*PKIKP PKPdf 00 34 49.0 +0.2
comp=Z,59nm,1.3s
LFF La Frestale 133.31 331 *e*PKIKP PKPdf 00 34 50.2 +0.3
comp=Z,94nm,1.3s
MTLF Montolieu 133.73 329 *e*PKIKP PKPdf 00 34 50.9 +0.2
comp=Z,76nm,1.6s
KEST Kesra 134.09 316 PKP PKPdf 00 34 51.6 +0.2
comp=Z,16nm,1.0s,baz=276,slow=1.7,SNR=28
KEST SKPbc SKPbc 00 38 16.1 -1.6
comp=Z,5.4nm,1.2s,baz=31,slow=5.1,SNR=3.8
ROSC El Rosal 134.56 89 PKP PKPdf 00 34 53.7 +1.4
comp=Z,3.7nm,0.3s,baz=101,slow=20,SNR=6.5
EPF Esparros 134.91 330 *e*PKIKP PKPdf 00 34 52.4 -0.5
comp=Z,28nm,1.1s
EBIE Bielsa 135.26 330 PKP PKPdf 00 34 58.6 +5.0
SJPF Ste Jean 135.62 331 *e*PKIKP PKPdf 00 34 53.1 -1.2
comp=Z,19nm,0.8s
ESAC San Caprasio 136.28 329 PKP PKPdf 00 34 57.4 +1.9
ELAN Lanestosa 136.55 333 PKP PKPdf 00 34 54.0 -2.0
BBSR BB Station 137.27 47 PFAKE 00 35 10.0 +13
BBSR LR LR
comp=Z,776nm,22.0s,MS5.4
CPUP Villa Florida 137.69 140 PKP PKPdf 00 34 57.9 -0.2
comp=Z,4.0nm,0.6s,baz=308,slow=0.8,SNR=13
CPUP Villa Florida 137.69 140 PKIKP PKPdf 00 34 57.9 -0.2
CPUP pmax pmax
comp=Z,4.0nm,0.6s
ECHE Chera 138.08 327 PKIKP PKPdf 00 34 57.4 -1.4
SDV Santo Domingo 138.31 83 *e*PKPdf PKPdf 00 34 59.7 +0.4
SDV *ep*PKPdf pPKPdf 00 35 11.8 +0.2
GUD Guadarrama 138.91 331 PKIKP PKPdf 00 34 59.2 -1.2
STS Santiago 138.98 337 PKIKP PKPdf 00 34 58.1 -2.4
ETOB Tobarra 139.08 327 PKP PKPdf 00 35 01.7 +1.0
EMUR La Murta 139.48 326 PKP PKPdf 00 35 00.3 -1.1
ESDC Sonseca Array 139.57 330 PKhKP 00 34 51.8
comp=Z,0.3nm,0.4s,baz=16,slow=3.4,SNR=5.6
ESDC PKP PKPdf 00 35 01.3 -0.2
comp=Z,1.9nm,0.7s,baz=34,slow=2.8,SNR=12
ESDC PP PP 00 37 56.5 -0.1
comp=Z,3.3nm,1.1s,baz=42,slow=7.1,SNR=6.8
ESDC SKPbc SKPbc 00 38 33.3 -0.7
comp=Z,2.3nm,0.8s,baz=27,slow=1.7,SNR=6.9
ESLA Sonseca Array 139.57 330 PFAKE 00 35 10.0 +8.5
ESLA LR LR
comp=Z,2µm,21.0s,MS5.8
EVIA Vianos 139.59 328 PKIKP PKPdf 00 35 00.1 -1.5
EQES Quesada 140.51 327 PKP 00 34 57.3
EBAN Banos Encina 140.62 328 PKIKP PKPdf 00 35 02.5 -1.0
MTE Manteigas 140.65 334 *e*PKPdf PKPdf 00 35 03.2 -0.3
EADA Adamuz 141.03 329 PKP 00 34 58.8
EBER Berja 141.07 326 PKP 00 34 59.9
PCBR Castelo Branco 141.08 334 *e*PKP PKPdf 00 35 04.6 +0.3
ELUQ Luque 141.32 328 PKHKP 00 34 58.1
EGUA Guajares 141.49 327 PKIKP PKPdf 00 35 05.9 +0.9
ELOJ Sierra Loja 141.57 328 PKHKP 00 34 58.8
PTOM Tomar 141.67 334 *e*PKP 00 35 01.7
EBAD Badajoz 141.75 332 PKP 00 35 00.8
EMIJ Mijas 142.34 328 PKP 00 35 01.5
EMIN Mina Concepcio 142.38 331 PKP 00 35 01.4
SAML Samuel 142.63 113 *e*PKPdf PKPdf 00 35 07.2 +0.2
ESPR Espera 142.67 329 PKP 00 35 01.2
PBEJ Beja 142.74 332 *e*PKP 00 35 03.7
EJIF Jimena Fronter 142.79 328 PKHKP 00 35 01.5
EGRO El Granado 142.95 331 PKP 00 35 00.7
CAM4 Nova Friburgo 148.91 155 *e*P PKPdf 00 35 22.0 +4.3
CAM4 *i* 00 35 23.5
CAM4 *i* 00 35 25.5
CAM4 *i* 00 37.1
CAM4 *i* 00 35 50.6
TOA0 Torodi Ar. Sit 149.17 286 *e*PKPbc PKPbc 00 35 22.6 +0.2
TORD Torodi Ar. Bea 149.17 286 PKP PKPdf 00 35 17.8 -0.3
comp=Z,2.6nm,1.0s,baz=15,slow=0.3,SNR=4.4
TORD PKPbc PKPbc 00 35 22.5 +0.1
comp=Z,139nm,0.7s,baz=30,slow=2.2,SNR=196
PMPS Porto Santo 150.53 339 *e*PKP PKPbc 00 35 26.3 +0.6
PMAR Madeira 151.03 339 *e*PKP PKPbc 00 35 27.9 +1.0
BDFB Brasilia 151.38 138 PKP PKPdf 00 35 22.4 +0.8
comp=Z,36nm,0.6s,baz=170,slow=4.2,SNR=7.6
BDFB PKPbc PKPbc 00 35 27.3 -0.4
comp=Z,36nm,0.6s,baz=277,slow=1.0,SNR=60
BDFB PKPab PKPab 00 35 35.3 -0.7
comp=Z,13nm,0.8s,baz=349,slow=13,SNR=5.0
BDFB Brasilia 151.38 138 PKP PKPdf 00 35 22.4 +0.8
BDFB PKPbc PKPbc 00 35 27.3 -0.4
BDFB PKPab PKPab 00 35 35.3 -0.7
BDFB LR LR
comp=Z,474nm,21.0s,MS5.3
BAO Brasilia Array 151.40 138 PKPdf PKPbc 00 35 28.0 +0.3
CFTV Fuerteventura 153.57 330 PKP PKPbc 00 35 33.3 +0.7
CCAN Las Canadas 154.91 334 PKP PKPdf 00 35 25.3 -1.4
DBIC Dimbokro 156.29 273 PKP PKPdf 00 35 29.5 +0.9
comp=Z,4.2nm,0.8s,baz=71,slow=9.5,SNR=4.1
DBIC PKPbc pPKPdf 00 35 38.4 -2.6
comp=Z,9.3nm,0.8s,baz=89,slow=6.0,SNR=14
DBIC PKPab PKPab 00 35 57.5 +0.8
comp=Z,64nm,0.9s,baz=80,slow=5.0,SNR=26
DBIC Dimbokro 156.29 273 PKP PKPdf 00 35 29.5 +0.9
DBIC PKPbc pPKPdf 00 35 38.4 -2.6
DBIC *ep*PKPbc PKPdf 00 35 38.7 +10
DBIC PKPab PKPab 00 35 57.5 +0.8
DBIC LR LR
comp=Z,383nm,21.0s,MS5.2
LIC Lamto 156.46 272 *e*PKP2 PKPab 00 35 58.0 +0.5
comp=Z,165nm,1.1s
LIC *e*R
comp=Z,171nm,21.8s
LIC Lamto 156.46 272 *e*PKPab PKPab 00 35 58.0 +0.5
LIC LR LR

	comp=Z,90nm,21.8s,MS4.6						

IDC ***13*** *00:18:36.6±2.0, 60.29S×27.72W, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.7/11, mbtmp3.9/3, Error ellipse: s-maj=85.0km s-min=29.3km az=92.0*
ISCJB ***13*** *00:18:37.7±1.8, 60.5S±0.2×26.8W±0.8, h10km, mb3.7/3, Error ellipse: s-maj=57.9km s-min=23.5km az=165.6*
ISC 13 00:18:38.5±1.7**, 60.5S**±0.2×**27.2W**±0.8**, h10km, n5, σ1^{s}74**/4**, mb3.7**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.81**	**151**	*e*	**Pn**	**00 21 39.7**	**-0.9**
VNA1				*e*		00 21 40.9	
VNA1				*e*		00 21 45.5	
VNA1				*e*		00 21 49.1	
VNA1				*e*		00 21 52.3	
VNA1				*e*		00 21 53.9	
VNA1				*e*		00 21 55.9	
VNA1				*e*		00 22 01.2	
MAW	**Mawson**	**36.68**	**140**	P	**P**	**00 25 46.9**	**+1.4**
	1.8nm,1.0s,mb3.9,baz=217,slow=10,SNR=2.4						
VNDA	**Vanda**	**42.17**	**183**	P	**P**	**00 26 31.2**	**0.0**
	0.9nm,0.8s,mb3.4,baz=207,slow=5.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**76.91**	**29**	P	**P**	**00 30 30.5**	**-0.4**
	0.8nm,0.5s,mb3.9,baz=198,slow=6.3,SNR=18						
SONM	**Songino Array**	**150.70**	**94**	PKPbc	PKPbc	00 38 29.9	-1.0
	1.1nm,0.6s,baz=198,slow=3.0,SNR=5.0						

ISCJB ***13*** *00:23:28.0±0.3, 48.72N±0.02×9.28E±0.02, h2km±5km, Error ellipse: s-maj=3.6km s-min=2.3km az=132.4*
BGR ***13*** *00:23:30.8±0.3, 48.69N×9.29E, h10km, ML1.8/3, Error ellipse: s-maj=3.3km s-min=2.2km az=167.0*
LEDBW ***13*** *00:23:31.1±0.1, 48.641N±0.006×9.272E±0.007, h9km±2km, ML1.6, Error ellipse: s-maj=2.6km s-min=2.2km az=87.0*
LDG ***13*** *00:23:31.4±0.2, 48.60N×9.25E, h16km, Ml2.1/8, Error ellipse: s-maj=2.6km s-min=2.2km az=85.0*
STR ***13*** *00:23:32.8±0.5, 48.59N×9.12E, h10km±1km, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 13 00:23:30.0±0.3**, 48.66N**±0.02×**9.27E**±0.02**, h16km**±3km**, n41, σ0^{s}98**/69**, 5C-7D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STU	**Stuttgart**	**0.12**	**335**	*e*Pg	**Pg**	**00 23 34.2**	**+0.6**
	SNR=5.0						
STU				*e*Sg	**Sg**	**00 23 36.1**	**0.0**
	SNR=14						
STU	**Stuttgart**	**0.12**	**335**	*i* Sg	**Sg**	**00 23 36.4**	**+0.4**
STU	**Stuttgart**	**0.12**	**335**	⇓*i*Pg	**Pg**	**00 23 34.2**	**+0.6**
TUBL	**Tuebingen-Lenn**	**0.19**	**222**	⇑*i*P*	**Pg**	**00 23 35.4**	**+0.8**
TUBL				*i* S*	**Sg**	**00 23 37.8**	**+0.2**
TUBL	**Tuebingen-Lenn**	**0.19**	**222**	⇑*i*Pg	**Pg**	**00 23 35.4**	**+0.8**
TUBL				*i* Sg	**Sg**	**00 23 37.8**	**+0.2**
BUCH	**Bad Urach**	**0.22**	**166**	⇓*i*P*	**Pg**	**00 23 35.2**	**+0.2**
BUCH				S*	**Sg**	**00 23 38.2**	**-0.2**
LBG	**Lerchenberg**	**0.32**	**271**	⇑*i*P*	**Pg**	**00 23 37.3**	**+0.6**
LBG				*i* S*	**Sg**	**00 23 41.6**	**+0.5**
LBG	**Lerchenberg**	**0.32**	**271**	⇑*i*Pg	**Pg**	**00 23 37.3**	**+0.6**
LBG				*i* Sg	**Sg**	**00 23 41.6**	**+0.5**
BHBD	**Braunhartsberg**	**0.45**	**203**	⇑*e*Pg	**Pg**	**00 23 39.4**	**+0.4**
BHBD				*e*Sg	**Sg**	**00 23 45.4**	**+0.2**
GUT	**Gutenstein**	**0.60**	**190**	⇓P*	**Pb**	**00 23 42.0**	**0.0**
GUT				⇑*i*PmP		00 23 43.8	
GUT				S*	**Sg**	**00 23 49.9**	**0.0**
GUT				SmS		00 23 52.9	
GUT	**Gutenstein**	**0.60**	**190**	⇓Pg	**Pb**	**00 23 42.0**	**0.0**
GUT				Sg	**Sg**	**00 23 49.9**	**0.0**
GUT	**Gutenstein**	**0.60**	**190**	⇑*i*PmP		00 23 43.8	
GUT				SmS		00 23 52.9	
HDH	**Heidenheim-Cha**	**0.63**	**97**	⇑*i*P*	**Pb**	**00 23 43.0**	**+0.5**
HDH				S*	**Sb**	**00 23 51.4**	**+0.4**
HDH	**Heidenheim-Cha**	**0.63**	**97**	⇑*i*Pg	**Pb**	**00 23 43.0**	**+0.5**
HDH				Sg	**Sb**	**00 23 51.4**	**+0.4**
BFO	**Black Forest**	**0.71**	**242**	*e*Pg	**Pg**	**00 23 44.2**	**+0.4**
	SNR=20						
BFO				*e*Sg	**Sg**	**00 23 54.5**	**+1.2**
	SNR=7.5						
SIND	**Sindeldorf**	**0.72**	**18**	P*	**Pb**	**00 23 45.5**	**+1.4**
SIND				PmP		00 23 46.1	
SIND				Sg	**Sg**	**00 23 55.5**	**+1.8**
SIND	**Sindeldorf**	**0.72**	**18**	PmP		00 23 46.1	
SIND				S	**Sg**	**00 23 55.5**	**+1.8**
SWS	**Schriesheim-Wi**	**0.90**	**336**	P*	**Pb**	**00 23 48.9**	**+1.7**
SWS				S*	**Sb**	**00 24 01.4**	**+2.4**
SISB	**Singen-Schiene**	**1.00**	**192**	Pg	**Pg**	**00 23 50.2**	**+0.9**
SISB				Sg	**Sg**	**00 24 03.1**	**+0.7**
SISB				SmS		00 24 04.0	
LANF	**Langenberg**	**1.02**	**289**	Pg	**Pg**	**00 23 50.9**	**+1.2**
LANF				Sg	**Sg**	**00 24 04.6**	**+1.5**
UBR	**Ueberruh**	**1.13**	**150**	P	**Pn**	**00 23 52.5**	**+1.4**
UBR				Sg	**Sg**	**00 24 07.8**	**+1.2**
UBR				SmS		00 24 08.3	
KIZ	**Kirchzarten**	**1.15**	**232**	⇓*i*Pn	**Pn**	**00 23 50.9**	**-0.4**
KIZ				⇓*i*Pg	**Pg**	**00 23 52.4**	**+0.3**
KIZ				Sg	**Sg**	**00 24 07.2**	**+0.1**
KIZ	**Kirchzarten**	**1.15**	**232**	⇓*i*P	**Pg**	**00 23 52.4**	**+0.3**
WLS	**Welschbruch**	**1.30**	**260**	Pg	**Pg**	**00 23 55.3**	**+0.3**
WLS				Sg	**Sg**	**00 24 11.4**	**-0.5**
CDF	**Champ du Feu**	**1.35**	**260**	*e*Pg	**Pg**	**00 23 56.1**	**+0.1**
CDF				*e*Sg	**Sg**	**00 24 13.1**	**-0.5**
	3.9nm,0.2s						
FUR	**Furstenfeldbru**	**1.43**	**110**	*e*Pg	**Pg**	**00 23 57.9**	**+0.5**
	SNR=1.9						
FUR				*e*Sg	**Sg**	**00 24 16.1**	**+0.1**
	SNR=4.9						
ECH	**Echery**	**1.48**	**253**	Pg	**Pg**	**00 23 58.5**	**+0.1**
ECH				Sg	**Sg**	**00 24 17.4**	**-0.2**
HINF	**Hinteralfeld**	**1.82**	**243**	*e*Pg	**Pg**	**00 24 04.6**	**-0.4**
HINF				*e*Sg	**Sg**	**00 24 27.6**	**-1.1**
	1.3nm,0.2s						
HAU	**Haudompre**	**2.06**	**252**	*e*Pn	**Pn**	**00 24 03.2**	**-0.6**
HAU	**Haudompre**	**2.06**	**252**	*e*Pg	**Pg**	**00 24 09.4**	**-0.1**
HAU				*e*Sg	**Sg**	**00 24 36.5**	**+0.3**
	1.9nm,0.3s						
UBBA	**Unterbreizbach**	**2.21**	**12**	*e*Sg	**Sg**	**00 24 40.4**	**-0.6**
	SNR=2.4						
WLF	**Walferdange**	**2.28**	**297**	*e*Sg	**Sg**	**00 24 42.5**	**-0.8**
	SNR=1.5						
WET	**Wettzell**	**2.43**	**77**	*e*Pg	**Pg**	**00 24 16.3**	**-0.3**
	SNR=1.2						
WET				*e*Sg	**Sg**	**00 24 47.3**	**-0.7**
	SNR=2.8						
MOX	**Moxa**	**2.50**	**37**	*e*Sg	**Sg**	**00 24 49.5**	**-0.8**
	SNR=4.4						
GUNZ	**Gunzen**	**2.62**	**48**	*e*Sg	**Sg**	**00 24 53.2**	**-1.0**
	SNR=2.2						
WERD	**Werda**	**2.66**	**47**	*e*Sg	**Sg**	**00 24 53.7**	**-1.9**
	SNR=3.8						
TANN	**Tannenbergstha**	**2.72**	**49**	*e*Sg	**Sg**	**00 24 56.1**	**-1.3**
	SNR=3.6						
SFTF	**Sexfontaines**	**2.86**	**262**	*e*Pg	**Pg**	**00 24 23.3**	**-1.4**
SFTF				*e*Sg	**Sg**	**00 25 00.7**	**-1.0**
	0.9nm,0.2s						
GEC2	**GERESS Array S**	**2.94**	**85**	*e*Sg	**Sg**	**00 25 03.3**	**-1.0**
	SNR=2.2						
CABF	**La Chapelle**	**2.97**	**228**	*e*Pg	**Pg**	**00 24 25.7**	**-1.3**
CABF				*e*Sg	**Sg**	**00 25 03.3**	**-2.2**
	0.5nm,0.2s						
LOR	**Lormes**	**3.90**	**251**	*e*Pg	**Pg**	**00 24 42.2**	**-2.4**
LOR				*e*Sg	**Sg**	**00 25 32.5**	**-2.5**
	0.8nm,0.2s						

ISCJB ***13*** *00:24:44.0±0.8, 38.13N±0.02×26.60E±0.05, h5km±5km, Error ellipse: s-maj=6.5km s-min=4.1km az=162.9*
ATH ***13*** *00:24:43.7, 38.10N×26.71E, h41km±1km, MD3.1/3*
CSEM ***13*** *00:24:43.0±0.2, 38.12N×26.63E, h9km±1km, MD2.8, Error ellipse: s-maj=3.2km s-min=2.9km az=78.0*
ISK ***13*** *00:24:44.2, 38.16N×26.68E, h19km, MD2.8*
ISC 13 00:24:44.3±0.7**, 38.14N**±0.03×**26.60E**±0.05**, h11km**±5km**, n14, σ0^{s}78**/25**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.22**	**359**	*i* P	**Pg**	**00 24 49.0**	**+0.1**
URLA				*i* S	**Sg**	**00 24 52.5**	**+0.5**
BLCB	**Balcova**	**0.42**	**55**	PG	**Pg**	**00 24 52.1**	**-0.5**
BLCB				SG	**Sg**	**00 24 57.5**	**-0.8**
SMG	**Samos**	**0.47**	**156**	*e*P	**Pg**	**00 24 53.8**	**+0.3**
SMG				*e*S	**Sg**	**00 25 00.9**	**+1.2**
IZM	**Izmir**	**0.58**	**63**	PG	**Pg**	**00 24 55.1**	**-0.5**
IZM				SG	**Sg**	**00 25 03.2**	**0.0**
KDAG	**Bornova**	**0.59**	**63**	*i* P	**Pg**	**00 24 55.3**	**-0.4**
KDAG				*i* S	**Sg**	**00 25 03.8**	**+0.3**
AYDN	**Tasoluk**	**1.12**	**115**	*i* P	**Pb**	**00 25 04.8**	**-0.8**
AYDN				*i* S	**Sb**	**00 25 19.7**	**-0.4**
PRK	**Paraskevi**	**1.13**	**347**	*e*P	**Pb**	**00 25 05.4**	**-0.4**
PRK				*e*S	**Sb**	**00 25 20.9**	**+0.3**
AYVA	**Ayvalik**	**1.17**	**3**	*i* P	**Pb**	**00 25 06.4**	**-0.1**
AYVA				*i* S	**Sb**	**00 25 23.2**	**+1.6**
AKHS	**Akhisar**	**1.20**	**52**	*i* P	**Pn**	**00 25 07.1**	**+0.1**
AKHS				*i* S	**Sb**	**00 25 23.6**	**+1.0**
AKHS	**Akhisar**	**1.20**	**52**	*i* P	**Pn**	**00 25 07.1**	**+0.1**
AKHS				*i* S	**Sb**	**00 25 23.5**	**+0.9**
AKS	**Akhisar**	**1.20**	**52**	*e*PN	**Pn**	**00 25 06.1**	**-0.9**
BODT	**Bodrum**	**1.21**	**152**	*e*PN	**Pn**	**00 25 06.4**	**-0.7**
BDRM	**Kayabasi**	**1.26**	**148**	*i* P	**Pn**	**00 25 07.2**	**-0.6**
BDRM				*i* S	**Sb**	**00 25 26.4**	**+2.1**
APE	**Apeiranthos**	**1.37**	**219**	*e*P	**Pn**	**00 25 08.3**	**-0.9**

KRSC 13 00:29:54, 50.39N×157.95E, h10km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**2.03**	**339**	P	Pn	00 30 26.8	-1.5
RUS	**Russkaya**	**2.08**	**10**	*e*P	Pn	00 30 31.5	+2.6
RUS				*i* S	Sn	00 30 58.3	+3.5
GRL	**Gorelyy**	**2.17**	**2**	*e*P	Pn	00 30 33.1	+3.0
GRL				*i* S	Sn	00 31 01.1	+4.1
PET	**Petropavlovsk**	**2.67**	**9**	P	Pn	00 30 40.4	+3.3
PET				*i* S	Sn	00 31 13.4	+3.9
NLC	**Nalytchevo**	**2.92**	**17**	*e*P	Pn	00 30 43.1	+2.7
NLC				*i* S	Sn	00 31 18.0	+2.5
SDLR	**Sedlovina**	**2.95**	**11**	*e*P	Pn	00 30 44.2	+3.3
SDLR				*e*S	Sn	00 31 19.8	+3.5
SPN	**Mys Shipunski**	**3.00**	**25**	P	Pn	00 30 44.6	+3.0
SPN				*i* S	Sn	00 31 21.3	+3.7
GNL	**Ganaly**	**3.31**	**360**	*e*P	Pn	00 30 47.4	+1.6
MKZ	**Mys Kozlova**	**4.77**	**28**	*e*P	Pn	00 31 09.0	+3.1
MKZ				*i* S	Sn	00 32 02.9	+1.7
KBTR	**Krutoberegovo**	**6.52**	**25**	*e*P	Pn	00 31 32.1	+2.2

BJI ***13*** *00:48:04.4, 18.90S×177.90W, h528km, mB4.4, mb4.5*
ISCJB ***13*** *00:48:05.8±0.8, 19.00S±0.10×177.78W±0.08, h580km±12km, mb4.2/21, Error ellipse: s-maj=15.9km s-min=9.8km az=126.8*
IDC ***13*** *00:48:07.7±1.4, 18.87S×177.77W, h593km±16km, mb3.5/10, mb1 3.7/12, mb1mx3.6/16, mbtmp4.5/12, Error ellipse: s-maj=16.3km s-min=11.5km az=142.0*
NEIC ***13*** *00:48:10.5±2.1, 18.95S×177.87W, h628km±24km, mb4.5/13, Error ellipse: s-maj=14.1km s-min=11.4km az=80.0*
ISC 13 00:48:06.2±0.8**, 19.05S**±0.10×**177.68W**±0.08**, h571km**±11km**, n71, σ0^{s}93**/40**, mb4.2**/21**, 3C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.63**	**49**	P	**P**	**00 50 01.1**	**+0.1**
	17nm,0.3s,baz=158,slow=1.9,SNR=16						
AFI				S	**S**	**00 51 33.4**	**-1.6**
	9.8nm,0.3s,baz=42,slow=23,SNR=6.7						
AFI	**Afiamalu**	**7.63**	**49**	*e*P	**P**	**00 50 01.2**	**+0.3**
	44nm,0.5s						
AFI				*e*S	**S**	**00 51 35.2**	**+0.2**
DZM	**Mont Dzumac**	**15.17**	**256**	P	**P**	**00 51 17.4**	**+0.4**
	1.5nm,0.3s,baz=66,slow=18,SNR=13						
HNR	**Honiara**	**23.67**	**291**	*e*P	**P**	**00 52 32.9**	**-1.1**
RPZ	**Rata Peaks**	**26.35**	**199**	P	**P**	**00 52 58.7**	**+1.0**
	7.3nm,0.5s,mb4.6,baz=70,slow=17,SNR=6.8						
CTA	**Charters Tower**	**33.96**	**262**	*e*P	**P**	**00 54 03.2**	**+0.3**
	7.3nm,0.6s,mb4.4						
CTAO	**Charters Tower**	**33.96**	**262**	*e*P	**P**	**00 54 03.6**	**+0.6**
	6.8nm,0.5s,mb4.4						
PMG	**Port Moresby**	**35.34**	**281**	P	**P**	**00 54 14.7**	**+0.3**
	34nm,0.9s,mb4.9,baz=333,slow=2.2,SNR=7.4						
PMG	**Port Moresby**	**35.34**	**281**	*e*P	**P**	**00 54 14.8**	**+0.4**
	53nm,1.0s,mb5.0						
TAU	**Tasmania Unive**	**37.87**	**223**	P	**P**	**00 54 34.1**	**-1.1**
STKA	**Stephens Creek**	**38.70**	**243**	*e*P	**P**	**00 54 43.0**	**+1.1**
	2.8nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**38.70**	**243**	P	**P**	**00 54 42.9**	**+1.0**
	2.9nm,0.4s,mb4.2,baz=88,slow=7.8,SNR=7.1						
STKA	**Stephens Creek**	**38.70**	**243**	*e*P	**P**	**00 54 42.8**	**+0.9**
WB2	**Warramunga Arr**	**45.10**	**261**	*e*P	**P**	**00 55 31.9**	**-0.3**
WRAB	**Tennant Creek**	**45.10**	**261**	*e*P	**P**	**00 55 31.9**	**-0.3**
	13nm,0.4s,mb4.8						
AS31	**Alice Springs**	**45.16**	**255**	*e*P	**P**	**00 55 32.7**	**+0.1**
ASAR	**Alice Springs**	**45.16**	**255**	P	**P**	**00 55 32.9**	**+0.3**
	14nm,0.7s,mb4.6,baz=88,slow=8.1,SNR=137						
ASAR				PcP	PcP	00 57 00.2	-0.4
	1.2nm,0.6s,baz=100,slow=4.0,SNR=4.7						
ASAR				ScP	ScP	00 59 58.6	-0.4
	0.3nm,0.5s,baz=104,slow=4.8,SNR=4.7						
ASAR				S	**S**	**01 01 28.6**	**-2.4**
	3.7nm,0.7s,baz=92,slow=16,SNR=24						
ASPA	**Alice Springs**	**45.16**	**255**	*e*P	**P**	**00 55 32.8**	**+0.2**
KAKA	**Kakadu**	**48.26**	**270**	*e*P	**P**	**00 55 55.5**	**-0.4**
	12nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.53**	**261**	*e*P	**P**	**00 56 34.0**	**-0.1**
	3.4nm,0.3s,mb4.2						
MBWA	**Marble Bar**	**58.47**	**256**	*e*P	**P**	**00 57 07.5**	**-0.6**
	64nm,1.7s,mb4.6						
VNDA	**Vanda**	**59.37**	**185**	P	**P**	**00 57 15.1**	**+0.9**
	2.0nm,0.6s,mb3.5,baz=358,slow=6.8,SNR=25						
VNDA	**Vanda**	**59.37**	**185**	*e*P	**P**	**00 57 15.3**	**+1.1**
	3.5nm,0.9s,mb3.6						
MJAR	**Matsushiro Arr**	**69.23**	**323**	P	**P**	**00 58 15.2**	**-1.3**
	1.6nm,0.6s,mb3.7,baz=156,slow=4.9,SNR=8.1						
QSPA	**South Pole Qui**	**71.01**	**180**	*e*P	**P**	**00 58 27.7**	**+0.7**
	13nm,0.8s,mb4.5						
MDJ	**Mudanjiang**	**79.51**	**325**	P	**P**	**00 59 16.3**	**+2.1**
MDJ				AP	pP	01 01 13.0	-1.7
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,141nm,7.9s						
NVAR	**Mina Array Bea**	**79.77**	**43**	P	**P**	**00 59 15.8**	**+0.2**
	comp=Z,1.3nm,0.7s,mb3.4,baz=232,slow=9.9,SNR=9.1						
WVOR	**Wild Horse Val**	**81.83**	**40**	*e*P	**P**	**00 59 26.1**	**-0.1**
	comp=Z,3.4nm,0.9s,mb3.8						
MAW	**Mawson**	**83.02**	**200**	P	**P**	**00 59 31.5**	**-0.7**
	comp=Z,2.3nm,0.6s,mb3.9,baz=130,slow=6.2,SNR=14						
MAW	**Mawson**	**83.02**	**200**	*e*P	**P**	**00 59 31.9**	**-0.3**
	comp=Z,3.6nm,0.7s,mb4.0						
ANMO	**Albuquerque**	**86.27**	**51**	P	**P**	**00 59 48.3**	**+0.3**
	comp=Z,0.8nm,0.8s,mb3.4,baz=236,slow=3.6,SNR=4.6						
PDAR	**Pinedale Array**	**87.71**	**43**	P	**P**	**00 59 54.5**	**-0.2**
	comp=Z,1.2nm,0.8s,mb3.7,baz=219,slow=1.9,SNR=10						
SYO	**Syowa Base**	**88.20**	**193**	⇑*e*P	**P**	**00 59 55.3**	**-1.7**
KMI	**Kunming**	**88.96**	**297**	P	**P**	**01 00 03.4**	**+2.8**
KMI				AMB	AMB		
	comp=Z,11nm,0.5s,mb4.9						
SNAA	**Sanae**	**89.44**	**178**	*e*P	**P**	**01 00 01.2**	**-1.6**
	comp=Z,3.2nm,0.8s,mb4.2						
VNA1	**Neumayer--Stat**	**90.23**	**176**	⇑*i*	**P**	**01 00 06.7**	**+0.2**
CD2	**Chengdu**	**90.26**	**303**	*e*P	**P**	**01 00 07.7**	**+1.1**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	**110.42**	**314**	PKiKP	PKiKP	01 05 31.6	-2.4
	comp=Z,0.4nm,0.3s,baz=290,slow=0.6,SNR=4.7						
BVAR	**Borovoye Array**	**118.16**	**321**	PKP	PKPdf	01 05 46.6	-2.3
	comp=Z,1.0nm,0.4s,baz=110,slow=1.8,SNR=8.9						
ARCES	**ARCESS Array B**	**127.56**	**350**	PKP	PKPdf	01 06 04.5	-2.4
	comp=Z,1.0nm,0.4s,baz=19,slow=0.9,SNR=22						
FINES	**FINESS Array B**	**134.47**	**344**	PKP	PKPdf	01 06 19.0	-0.9
	comp=Z,1.2nm,0.9s,baz=77,slow=6.0,SNR=3.5						
AKASG	**Malin Array Be**	**141.89**	**332**	PKhKP		01 06 27.1	
	comp=Z,0.5nm,0.3s,baz=43,slow=4.0,SNR=4.7						
EKA	**Eskdalemuir Ar**	**143.54**	**5**	PKP	PKPdf	01 06 33.0	-3.4
	comp=Z,2.4nm,0.5s,baz=321,slow=3.1,SNR=16						
BURAR	**Bucovina Array**	**145.94**	**332**	⇓*i*P	PKPdf	01 06 42.2	+1.7
BRTR	**Keskin Array B**	**146.07**	**314**	PKPbc	PKPbc	01 06 41.5	-1.3
	comp=Z,1.2nm,0.6s,baz=136,slow=4.4,SNR=9.1						
CLL	**Collm**	**146.72**	**348**	*i* PKPbc	PKPbc	01 06 43.2	-1.4
	comp=Z,8.0nm,0.6s						
MLR	**Muntele Rosu**	**147.16**	**329**	⇓*i*P	PKPdf	01 06 44.2	+1.7
MMAI	**Mount Meron Ar**	**147.33**	**302**	PKPbc	PKPbc	01 06 45.8	-0.4
	comp=Z,1.8nm,0.5s,baz=48,slow=5.0,SNR=5.3						
DRGR		**147.66**	**333**	⇑*i*P	PKPdf	01 06 46.0	+2.6
KHC	**Kasperske Hory**	**148.65**	**346**	*e*PKPbc	PKPbc	01 06 48.5	-1.0
GERES	**GERESS Array B**	**148.89**	**345**	PKPbc	PKPbc	01 06 48.5	-1.5
	comp=Z,1.8nm,0.7s,baz=297,slow=5.8,SNR=4.6						
GIVF	**Givet**	**148.96**	**357**	*e*PKP1	PKPbc	01 06 48.6	-1.6
BAIF	**Baives**	**149.03**	**358**	*e*PKP1	PKPbc	01 06 48.9	-1.5
	comp=Z,8.3nm,0.7s						
FLN	**La Foliniere**	**150.28**	**4**	*e*PKP1	PKPbc	01 06 51.3	-2.1
CDF	**Champ du Feu**	**150.44**	**353**	*e*PKP1	PKPbc	01 06 52.3	-1.4
	comp=Z,5.4nm,0.5s						
LDF	**La Druitiere**	**150.46**	**3**	*e*PKP1	PKPbc	01 06 51.8	-2.0
	comp=Z,6.9nm,0.5s						
MEZF	**Maizieres J'vi**	**150.54**	**356**	*e*PKP1	PKPbc	01 06 52.8	-1.2
SGMF	**Saint Gilles**	**150.60**	**7**	*e*PKP1	PKPbc	01 06 51.7	-2.4
GRR	**Gorron**	**150.62**	**4**	*e*PKP1	PKPbc	01 06 52.3	-1.9
	comp=Z,9.8nm,0.5s						
HAU	**Haudompre**	**150.93**	**354**	*e*PKP1	PKPbc	01 06 53.1	-1.8
	comp=Z,5.6nm,0.4s						
HINF	**Hinteralfeld**	**151.07**	**354**	*e*PKP1	PKPbc	01 06 53.5	-1.7
	comp=Z,6.3nm,0.7s						
LOR	**Lormes**	**151.83**	**358**	*e*PKP1	PKPbc	01 06 55.3	-1.6
	comp=Z,26nm,1.1s						
SSF	**Saint Saulge**	**152.05**	**358**	*e*PKP1	PKPbc	01 06 55.9	-1.5
AVF	**Avril sur Loir**	**152.32**	**358**	*e*PKP1	PKPbc	01 06 57.2	-0.8
CABF	**La Chapelle**	**152.34**	**354**	*e*PKP1	PKPbc	01 06 57.2	-0.8
MFF	**Saint Martin d**	**152.45**	**4**	*e*PKP1	PKPbc	01 06 57.4	-0.8
	comp=Z,2.5nm,0.4s						
SMF	**Signal de Mont**	**152.45**	**358**	*e*PKP1	PKPbc	01 06 57.0	-1.2
BGF	**Bois d'Agland**	**152.56**	**359**	*e*PKP1	PKPbc	01 06 57.4	-1.1
TCF	**Toulx Ste Croi**	**152.84**	**0**	*e*PKP1	PKPbc	01 06 57.3	-1.8
	comp=Z,1.7nm,0.6s						
MBDF	**Montbardon**	**154.13**	**353**	*e*PKP1	PKPbc	01 07 00.5	-1.3
	comp=Z,8.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**174.10**	**174**	PKP	PKPdf	01 07 09.1	-1.6
	comp=Z,0.8nm,0.9s,baz=359,slow=1.7,SNR=3.9						
TORD				PKPab	PKPab	01 08 46.6	+0.2
	comp=Z,0.6nm,0.6s,baz=186,slow=4.7,SNR=6.7						

ISCJB ***13*** *01:05:06.4±2.1, 6.08S±0.09×147.5E±0.1, h54km±19km, mb4.0/9, Error ellipse: s-maj=22.8km s-min=13.3km az=42.3*
IDC ***13*** *01:05:06.8±3.0, 6.15S×147.71E, h47km±28km, mb3.7/7, mb1 3.9/8, mb1mx3.8/13, mbtmp4.0/8, ML3.0/1, Error ellipse: s-maj=37.9km s-min=14.8km az=105.0*
NEIC ***13*** *01:05:09.2±1.9, 6.17S×147.48E, h65km±16km, mb4.4/5, Error ellipse: s-maj=16.6km s-min=12.8km az=91.0*
ISC 13 01:05:09.7±1.8**, 6.18S**±0.09×**147.5E**±0.1**, h67km**±16km**, n22, σ0^{s}88**/23**, mb3.9**/9**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.22**	**185**	P	**Pn**	**01 05 57.6**	**-0.3**
	13nm,0.3s,baz=2.8,slow=4.3,SNR=27						
PMG				S	**Sn**	**01 06 39.6**	**+4.6**
	29nm,0.3s,baz=185,slow=22,SNR=9.4						
PMG	**Port Moresby**	**3.22**	**185**	*e*Pn	**Pn**	**01 05 57.8**	**0.0**
PMG				*e*Sn	**Sn**	**01 06 36.6**	**+1.5**
KAKA	**Kakadu**	**16.16**	**245**	*e*P	**Pn**	**01 08 51.6**	**-0.9**
	11nm,0.4s						
WRAB	**Tennant Creek**	**18.68**	**222**	*e*P	**Pn**	**01 09 22.8**	**-0.6**
	8.0nm,0.7s						
WRAB				S	**S**	**01 12 48.8**	**-2.8**
WB2	**Warramunga Arr**	**18.69**	**222**	*e*P	**Pn**	**01 09 23.4**	**-0.1**
AS31	**Alice Springs**	**21.73**	**215**	*e*P	**P**	**01 09 56.5**	**+1.1**
AS31				*e*S	**S**	**01 13 53.3**	**+1.4**
ASAR	**Alice Springs**	**21.73**	**215**	P	**P**	**01 09 55.0**	**-0.3**
	2.4nm,0.6s,mb3.7,baz=50,slow=8.4,SNR=32						
ASAR				S	**S**	**01 13 58.0**	**+6.1**
	1.6nm,1.0s,baz=37,slow=22,SNR=4.5						
ASPA	**Alice Springs**	**21.73**	**215**	*e*P	**P**	**01 09 55.6**	**+0.2**
ASPA				*e*S	**S**	**01 13 56.2**	**+4.2**
FITZ	**Fitzroy Crossi**	**24.36**	**239**	*e*P	**P**	**01 10 22.1**	**+0.8**
	20nm,0.9s,mb4.4						
FITZ	**Fitzroy Crossi**	**24.36**	**239**	P	**P**	**01 10 21.3**	**0.0**
	9.2nm,0.7s,mb4.2,baz=85,slow=10,SNR=20						
STKA	**Stephens Creek**	**26.15**	**191**	P	**P**	**01 10 36.3**	**-1.3**
	1.7nm,0.6s,mb3.7,baz=136,slow=14,SNR=5.0						
MBWA	**Marble Bar**	**30.69**	**238**	*e*P	**P**	**01 11 18.8**	**+0.8**
	7.8nm,0.8s,mb4.5						
MJAR	**Matsushiro Arr**	**43.37**	**349**	P	**P**	**01 13 05.4**	**0.0**
	1.2nm,0.6s,mb3.8,baz=176,slow=9.3,SNR=7.2						
SONM	**Songino Array**	**64.77**	**331**	P	**P**	**01 15 40.9**	**-0.2**
	0.8nm,0.8s,mb3.6,baz=152,slow=6.7,SNR=3.7						
VNDA	**Vanda**	**71.71**	**177**	P	**P**	**01 16 23.8**	**-0.8**
	1.1nm,0.8s,mb3.7,baz=330,slow=8.1,SNR=6.8						
MKAR	**Makanchi Array**	**77.91**	**320**	P	**P**	**01 17 01.5**	**+1.1**
	0.3nm,0.5s,mb3.3,baz=99,slow=6.3,SNR=3.9						
QSPA	**South Pole Qui**	**83.79**	**180**	*e*P	**P**	**01 17 31.7**	**0.0**
	3.2nm,0.7s,mb4.3						
MPU	**Maple Canyon**	**102.30**	**51**	*e*P	Pdif	01 18 59.4	+1.7
	8.7nm,0.7s						
GERES	**GERESS Array B**	**122.30**	**326**	PKP	PKPdf	01 23 56.0	-1.0
	0.2nm,0.5s,baz=54,slow=2.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**145.56**	**284**	PKPbc	PKPbc	01 24 40.9	+0.4
	2.4nm,0.5s,baz=67,slow=3.8,SNR=61						
SAML	**Samuel**	**145.97**	**116**	*e*PKPbc	PKPbc	01 24 42.7	+0.9
DBIC	**Dimbokro**	**152.47**	**273**	PKPbc	PKPbc	01 24 59.8	+1.5
	1.2nm,0.5s,baz=20,slow=3.8,SNR=5.3						

IDC ***13*** *02:02:36.0±0.5, 8.65N×91.99E, h0km, mb4.2/21, mb1 4.3/22, mb1mx4.3/23, mbtmp4.2/22, ML4.3/1, MS3.9/18, Ms1 4.0/18, ms1mx3.8/27, Error ellipse: s-maj=18.8km s-min=11.9km az=54.0*
SZGRF ***13*** *02:02:36.8, 8.59N×92.93E, h32km, mb4.9, Nicobar Islands, India, region*
ISCJB ***13*** *02:02:38.6±0.2, 8.61N±0.03×91.96E±0.03, h30km, mb4.6/90, MS4.0/30, Error ellipse: s-maj=4.9km s-min=4.0km az=49.7*
MOS ***13*** *02:02:39.1±1.0, 8.66N×92.07E, h33km, mb4.9/42, Error ellipse: s-maj=10.6km s-min=5.5km az=114.1*
NEIC ***13*** *02:02:40.5±0.2, 8.61N×92.01E, mb4.8/45, Error ellipse: s-maj=6.4km s-min=4.0km az=46.0*
BJI ***13*** *02:02:41.4, 8.77N×92.12E, h29km, mB4.8, mb4.7, Ms4.3, Msz4.0*
ISC 13 02:02:41.0±0.2**, 8.64N**±0.03×**91.97E**±0.03**, h32km, h32km**±1.0km**:pP-P, n243, σ1^{s}11**/240**, mb4.6**/90**, MS4.0**/30**, 12C-8D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	**Nongplab**	**8.58**	**62**	P	**Pn**	**02 04 44.0**	**+1.0**
SNG	**Songkhla**	**8.69**	**99**	P	**Pn**	**02 04 47.0**	**+2.5**
	298nm,0.8s						
PSI	**Prapat**	**9.03**	**130**	Pn	**Pn**	**02 04 48.1**	**-1.0**
	3.5nm,0.3s,baz=313,slow=10,SNR=12						
PSI				Sn	**Sn**	**02 06 24.9**	**-4.9**
	3.2nm,0.3s,baz=346,slow=18,SNR=2.5						
PSI				LR	LR	02 08 46.9	
	comp=Z,867nm,20.0s,baz=294,slow=41						
PSI	**Prapat**	**9.03**	**130**	P	**Pn**	**02 04 48.1**	**-1.1**
PSI						02 06 24.9	
KULM	**Kulim**	**9.24**	**111**	*e*Pn	**Pn**	**02 04 52.1**	**0.0**
KULM				*e*Sn	**Sn**	**02 06 31.6**	**-3.3**
NST	**Nakhon Sawan**	**10.61**	**48**	P	**Pn**	**02 05 12.0**	**+1.3**
PALK	**Pallekele**	**11.24**	**264**	*e*Pn	**Pn**	**02 05 20.1**	**+0.7**
	35nm,0.6s						
PALK				*e*Sn	**Sn**	**02 07 17.9**	**-5.9**
CHTO	**Chiang Mai**	**12.17**	**33**	*e*P	**Pn**	**02 05 32.3**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CHTO	**Chiang Mai**	**12.17**	**33**	*e*Pn	**Pn**	**02 05 32.3**	**+0.2**
	comp=Z,8.4nm,0.5s						
MDRS	**Chennai**	**12.32**	**292**	*e*S	**Sn**	**02 07 39.4**	**-11**
VIS	**Vishakhapatnam**	**12.33**	**318**	*e*P	**Pn**	**02 05 31.1**	**-3.2**
VIS				*e*S	**Sn**	**02 07 38.6**	**-12**
KKTK	**Khon Kaen**	**13.07**	**53**	⇓P	**Pn**	**02 05 55.0**	**+11**
	comp=Z,247nm,0.5s						
NANT	**Nan**	**13.18**	**39**	P	**Pn**	**02 05 52.0**	**+6.1**
HYB	**Hyderabad**	**15.70**	**305**	*i* P	**Pn**	**02 06 20.0**	**+0.2**
	comp=Z,100nm,1.0s						
HYB				*e*		02 08 58.0	
HYB				*e*S	**Sn**	**02 09 11.0**	**-1.7**
HYB	**Hyderabad**	**15.70**	**305**	*e*P	**Pn**	**02 06 24.0**	**+4.2**
HYB				*e*S	**Sn**	**02 09 11.0**	**-1.7**
HYB				pmax	pmax		
	comp=Z,100nm,1.0s						
HYB	**Hyderabad**	**15.70**	**305**	*e*P	**Pn**	**02 06 24.0**	**+4.2**
	comp=Z,100nm,1.0s						
HYB				*e*S	**Sn**	**02 09 11.0**	**-1.7**
BOK	**Bokaro**	**16.15**	**340**	*e*P	**Pn**	**02 06 23.3**	**-2.3**
BOK				AMb	AMB	02 06 29.1	
	comp=Z,48nm,0.4s						
BOK				*e*x	x	02 09 09.2	

Code	Station	Dist	Azi	Phase	ISC phase	Time	Res
BLSP	Bilaspur	16.41	326	ex	x	02 10 18.0	
SHL	Shillong	16.83	360	eP	Pn	02 06 31.5	-2.7
MNGI	Mangalore	17.37	286	eP	Pn	02 06 39.5	-1.4
MNGI				AMb	AMB	02 06 46.4	
	comp=Z,107nm,1.3s						
NGP	Nagpur	17.60	316	eP	Pn	02 06 40.0	-3.7
NGP				ex	x	02 06 41.9	
	comp=Z,25nm,0.7s						
NGP				ex	x	02 09 44.9	
LATR	Latur	17.84	305	eP	Pn	02 06 45.5	-1.2
LATR				ex	x	02 09 49.0	
JBP	Jabalpur	18.45	323⇓	iP	Pn	02 06 53.5	-0.7
JBP				ex	x	02 07 04.3	
	comp=Z,47nm,1.8s						
JBP				i x	x	02 10 06.7	
KAD	Karad	19.33	298	eP	Pn	02 07 01.3	-3.5
KAD				AMb	AMB	02 07 07.0	
	comp=Z,52nm,1.5s						
KAD				ex	x	02 10 22.5	
KMI	Kunming	19.34	31	P	Pn	02 07 04.7	-0.2
KMI				AP	pP	02 07 11.0	-1.2
KMI				XP	sP	02 07 14.8	-1.5
KMI				PP		02 07 23.0	
KMI				S	Sn	02 10 38.6	-2.2
KMI				XS	sS	02 10 49.8	-4.5
KMI				AMB	AMB		
	comp=Z,103nm,3.9s						
KMI				LR	LR		
	comp=N,521nm,21.4s						
KMI				LR	LR		
	comp=E,436nm,18.5s						
KMI				LR	LR		
	comp=Z,565nm,22.8s						
KSM	Kuching	19.60	110	eP	Pn	02 07 06.0	-2.0
JIRN	Jiri	19.69	345	eP	Pn	02 07 09.0	0.0
	comp=Z,76nm,0.4s						
JIRN	Jiri	19.69	345	eP	Pn	02 07 09.0	0.0
	comp=Z,76nm,0.4s						
PKI	Pulchoki	19.82	343	eP	Pn	02 07 10.1	-0.5
	comp=Z,74nm,0.4s						
PKI	Pulchoki	19.82	343	eP	Pn	02 07 11.3	+0.7
	comp=Z,74nm,0.4s						
PKI	Pulchoki	19.82	343	eP	Pn	02 07 11.3	+0.7
PKI				pmax	pmax		
	comp=Z,75nm,0.4s						
PKI	Pulchoki	19.82	343	eP	Pn	02 07 11.3	+0.7
	comp=Z,74nm,0.4s						
DMN	Daman	19.95	342	eP	Pn	02 07 12.3	+0.2
	comp=Z,123nm,0.7s						
DMN	Daman	19.95	342	eP	Pn	02 07 12.5	+0.4
	comp=Z,123nm,0.7s						
DMN	Daman	19.95	342	eP	Pn	02 07 12.5	+0.4
	comp=Z,123nm,0.7s						
GUN	Gumba	20.01	344	eP	P	02 07 11.8	+0.9
	comp=Z,126nm,0.6s						
GUN	Gumba	20.01	344	eP	P	02 07 12.1	+1.2
	comp=Z,126nm,0.6s						
GUN	Gumba	20.01	344	eP	P	02 07 12.1	+1.2
	comp=Z,126nm,0.6s						
KKN	Kakani	20.06	343	eP	P	02 07 13.4	+1.8
	comp=Z,77nm,0.5s						
KKN	Kakani	20.06	343	eP	P	02 07 13.6	+2.0
	comp=Z,77nm,0.5s						
KKN	Kakani	20.06	343	eP	P	02 07 13.6	+2.0
KKN				pmax	pmax		
	comp=Z,77nm,0.5s						
KKN	Kakani	20.06	343	eP	P	02 07 13.6	+2.0
	comp=Z,77nm,0.5s						
BHPL	Bhopal	20.12	318	eP	P	02 07 11.1	-1.1
BHPL				AMb	AMB	02 07 25.6	
	comp=Z,45nm,1.2s						
POO	Poona	20.14	301	ex	x	02 07 07.0	
POO				ex	x	02 07 23.5	
POO				ex	x	02 07 32.5	
POO				i x	x	02 10 39.0	
QIZ	Qiongzhong	20.18	57	P	P	02 07 13.0	+0.2
QIZ				XP	sP	02 07 24.9	-0.5
QIZ				S	S	02 10 56.1	-1.4
QIZ				AMB	AMB		
	comp=Z,16nm,0.6s						
QIZ				AMB	AMB		
	comp=Z,294nm,3.7s						
QIZ				LR	LR		
	comp=N,469nm,18.9s,MS4.0						
QIZ				LR	LR		
	comp=E,432nm,18.9s,MS4.0						
QIZ				LR	LR		
	comp=Z,288nm,15.7s,MS3.7						
QIZ	Qiongzhong	20.18	57	eP	P	02 07 12.7	0.0
	comp=Z,44nm,1.3s						
GKN	Gorkha	20.46	341	eP	P	02 07 16.5	+0.6
GKN	Gorkha	20.46	341	eP	P	02 07 16.6	+0.7
	comp=Z,97nm,0.4s						
GKN	Gorkha	20.46	341	eP	P	02 07 16.6	+0.7
	comp=Z,97nm,0.4s						
KOLN	Koldanda	20.60	339	eP	P	02 07 18.1	+0.7
	comp=Z,79nm,0.5s						
KOLN	Koldanda	20.60	339	eP	P	02 07 18.2	+0.8
	comp=Z,67nm,0.5s						
KOLN	Koldanda	20.60	339	eP	P	02 07 18.2	+0.8
	comp=Z,67nm,0.5s						
LSA	Lhasa	20.96	358	P	P	02 07 22.0	+0.7
LSA	Lhasa	20.96	358	eP	P	02 07 22.2	+0.9
LSA				pmax	pmax		
	comp=Z,61nm,0.7s						
LSA	Lhasa	20.96	358	eP	P	02 07 22.2	+0.9
	comp=Z,61nm,0.7s						
GYA	Guiyang	22.55	36⇑	iP	P	02 07 37.5	-0.8
GYA				AP		02 07 44.8	
GYA				XP	sP	02 07 47.9	-3.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
GYA				AMB	AMB		
	comp=Z,70nm,5.7s						
GYA				LR	LR		
	comp=N,670nm,15.3s,MS4.4						
GYA				LR	LR		
	comp=E,810nm,16.9s,MS4.4						
GYA				LR	LR		
	comp=Z,740nm,17.6s,MS4.2						
LGTI	Lohaghat	23.44	334	ex	x	02 07 58.7	
NDI	New Delhi	24.29	327	eP	P	02 07 54.3	-1.1
NDI				AMb	AMB	02 07 59.5	
	comp=Z,30nm,0.8s,mb4.8						
NDI				eS	S	02 12 15.0	+2.7
CD2	Chengdu	24.74	25	P	P	02 07 59.1	-0.4
CD2				AP		02 08 04.8	
CD2				PP		02 08 36.9	
CD2				PPP		02 08 46.3	
CD2				S	S	02 12 16.6	-2.9
CD2				XS	sS	02 12 30.0	-4.7
CD2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.0						
CD2				AMB	AMB		
	comp=Z,50nm,3.7s						
CD2				LR	LR		
	comp=N,220nm,15.6s						
CD2				LR	LR		
	comp=Z,200nm,16.2s,MS3.7						
LZH	Lanzhou	29.39	20	eP	P	02 08 42.6	+1.4
LZH				AP	pP	02 08 50.8	+0.3
LZH				XP	sP	02 08 54.2	-0.2
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb4.8						
XAN	Xi'an	29.71	29	P	P	02 08 42.1	-1.9
XAN				S	S	02 13 34.3	-3.6
XAN				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.3						
XAN				LR	LR		
	comp=N,202nm,18.9s,MS4.0						
XAN				LR	LR		
	comp=E,269nm,19.1s,MS4.0						
XAN				LR	LR		
	comp=Z,440nm,18.6s,MS4.1						
GTA	Gaotai	31.43	12	eP	P	02 09 00.1	+0.8
GTA				AP	pP	02 09 09.2	+0.6
GTA				XP	sP	02 09 13.5	+1.0
GTA				PP	PP	02 10 06.2	-4.3
GTA				S	S	02 14 07.7	+2.8
GTA				XS	sS	02 14 22.1	+1.8
GTA				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.0						
GTA				AMB	AMB		
	comp=Z,66nm,4.9s						
GTA				LR	LR		
	comp=N,165nm,15.2s,MS3.9						
GTA				LR	LR		
	comp=E,150nm,19.0s,MS3.9						
GTA				LR	LR		
	comp=Z,156nm,13.7s						
NJ2	Nanjing	34.13	43	eP	P	02 09 24.5	+1.6
NJ2				AP	pP	02 09 34.2	+1.9
NJ2				S	S	02 14 46.0	-0.9
NJ2				XS	sS	02 15 02.0	-0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,100nm,10.8s						
NJ2				LR	LR		
	comp=N,370nm,14.6s						
NJ2				LR	LR		
	comp=E,180nm,19.7s						
NJ2				LR	LR		
	comp=Z,300nm,12.2s,MS4.2						
SSE	Sheshan	35.21	47	P	P	02 09 33.3	+1.1
SSE				XP	sP	02 09 45.6	+0.1
SSE				S	S	02 15 05.7	+2.1
SSE				XS	sS	02 15 20.2	+1.2
SSE				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,67nm,4.6s						
SSE				LR	LR		
	comp=N,149nm,15.5s,MS4.0						
SSE				LR	LR		
	comp=E,116nm,15.5s,MS4.0						
SSE				LR	LR		
	comp=Z,177nm,8.6s						
WMQ	Urumqi	35.24	355	P	P	02 09 34.0	+1.5
WMQ				AP	pP	02 09 44.0	+2.2
WMQ				XP	sP	02 09 48.0	+2.3
WMQ				PP	PP	02 10 54.0	+1.3
WMQ				S	S	02 15 05.0	+1.1
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,101nm,5.0s						
WMQ				LR	LR		
	comp=N,178nm,12.0s,MS4.4						
WMQ				LR	LR		
	comp=E,402nm,14.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,148nm,12.0s,MS4.0						
HHC	Hu-ho-hao-te	36.49	25	eP	P	02 09 44.8	+1.6
HHC				AP	pP	02 09 54.8	+2.2
HHC				XP	sP	02 09 58.6	+2.1
HHC				PCP	PcP	02 12 09.2	+2.7
HHC				S	S	02 15 25.2	+2.0
HHC				XS	sS	02 15 40.6	+1.9
HHC				SCP	ScP	02 15 51.0	+0.3
HHC				PCS	PcS	02 15 54.0	-0.3
HHC				SCS	ScS	02 19 56.5	-0.6
HHC				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
HHC				AMB	AMB		
	comp=Z,80nm,4.4s						
HHC				LR	LR		
	comp=N,115nm,21.7s,MS4.0						
HHC				LR	LR		
	comp=E,230nm,20.3s,MS4.0						
HHC				LR	LR		
	comp=Z,114nm,20.9s,MS3.6						
AAK	Ala-Archa	37.17	338d	iP	P	02 09 50.3	+1.3
AAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.5						
AAK	Ala-Archa	37.17	338	eP	P	02 09 50.4	+1.4
	comp=Z,10nm,0.8s,mb4.7						
FRU	Bishkek	37.30	339	eP	P	02 09 59.0	+8.9
BJI	Beijing	38.00	31	P	P	02 09 54.6	-1.4
JOW	Kunigami	38.83	58	P	P	02 10 03.2	+0.2
	comp=Z,21nm,0.4s,mb5.2,baz=268,slow=7.9,SNR=17						
JOW				LR	LR	02 29 13.0	
	comp=Z,134nm,18.7s,MS3.8,baz=326,slow=41						
MKAR	Makanchi Array	38.90	349	P	P	02 10 03.8	+0.2
	comp=Z,2.7nm,0.5s,mb4.3,baz=170,slow=8.9,SNR=37						
KK31	Karatay Array	39.13	335	i P	P	02 10 06.3	+0.8
KK31				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.9						
MBWA	Marble Bar	40.26	138	eP	P	02 10 14.9	0.0
	comp=Z,8.8nm,0.8s,mb4.5						
SONM	Songino Array	40.93	15	P	P	02 10 20.6	+0.2
	comp=Z,6.4nm,0.8s,mb4.3,baz=197,slow=8.3,SNR=32						
SONM				LR	LR	02 30 07.6	
	comp=Z,264nm,19.9s,MS4.1,baz=14,slow=40						
ULN	Ulaanbaatar	41.13	15d	iP	P	02 10 21.7	-0.3
ULN	Ulaanbaatar	41.13	15	eP	P	02 10 21.6	-0.5
	comp=Z,8.8nm,0.8s,mb4.4						
FITZ	Fitzroy Crossi	42.56	129	P	P	02 10 32.7	-1.1
	comp=Z,3.1nm,0.9s,mb4.0,baz=117,slow=23,SNR=11						
ZAK	Zakamensk	42.66	11	eP	P	02 10 32.4	-2.1
ZAK				e	pP	02 10 43.1	-0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.0						
SNY	Shenyang	43.24	35	⇑P	P	02 10 39.6	+0.4
SNY				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb4.7						
KURK	Kurchatov	43.38	348	eP	P	02 10 40.7	+0.4
KURK				e*PP	pP	02 10 50.4	+0.5
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
KURK	Kurchatov	43.38	348	eP	P	02 10 40.7	+0.3
	comp=Z,11nm,0.8s,mb4.7						
KURK				epP	pP	02 10 50.4	+0.6
TLY	Talaya	43.97	10	eP	P	02 10 56.7	+12
TLY				e		02 12 22.9	
TLY				eS	S	02 17 14.7	-0.1
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,82nm,17.0s,MS3.7						
ZAL	Zalesovo	45.53	354	P	P	02 10 58.3	+0.7
	comp=Z,2.6nm,0.4s,mb4.5,baz=290,slow=9.9						
ZAL				LR	LR	02 33 15.0	
	comp=Z,267nm,21.8s,MS4.1,baz=288,slow=40						
CN2	Changchun	45.56	34	eP	P	02 10 57.2	-0.6
CN2				eAP	pP	02 11 07.1	-0.3
CN2				eS	S	02 17 37.9	0.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				LR	LR		
	comp=N,200nm,19.0s,MS4.2						
CN2				LR	LR		
	comp=E,200nm,19.0s,MS4.2						
CN2				LR	LR		
	comp=Z,200nm,22.0s,MS4.0						
NVS	Novosibirsk	46.60	353	eP	P	02 11 05.5	-0.4
NVS				pmax	pmax		
	comp=N,13nm,0.9s						
NVS				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
BVAR	Borovoye Array	47.59	342	P	P	02 11 13.9	+0.2
	comp=Z,1.2nm,0.6s,mb4.1,baz=171,slow=10,SNR=8.2						
BRVK	Borovoye	47.65	342	eP	P	02 11 15.0	+0.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
BRVK	Borovoye	47.65	342	eP	P	02 11 15.0	+0.8
	comp=Z,4.9nm,0.9s,mb4.5						
NWAO	Narrogin (SRO)	47.84	151	P	P	02 11 16.4	+0.8
	comp=Z,8.3nm,0.8s,mb4.8,baz=267,slow=22,SNR=5.6						
MDJ	Mudanjiang	48.41	36	P	P	02 11 22.0	+2.0
MDJ				AP	pP	02 11 28.2	-1.5
MDJ				XP	sP	02 11 30.9	-2.6
MDJ				PP	PP	02 13 14.8	+2.0
MDJ				SCP	ScP	02 16 41.4	+3.0
MDJ				PCS	PcS	02 16 43.8	+1.8
MDJ				S	S	02 18 22.7	+4.2
MDJ				XS	sS	02 18 33.4	-1.0
MDJ				SCS	ScS	02 21 13.6	+3.2
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,32nm,4.2s						
MDJ				LR	LR		
	comp=N,55nm,16.6s,MS3.8						
MDJ				LR	LR		
	comp=E,68nm,18.8s,MS3.8						
MDJ				LR	LR		
	comp=Z,93nm,23.2s,MS3.7						
MAJO	Matsushiro	50.27	49	eP	P	02 11 34.1	-0.1
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
MAJO	Matsushiro	50.27	49	eP	P	02 11 34.1	-0.1
	comp=Z,5.4nm,0.6s,mb4.8						
MAT	Matsushiro	50.27	49	P	P	02 11 34.1	-0.1
MAT	Matsushiro	50.27	49	P	P	02 11 34.0	-0.2
MJAR	Matsushiro Arr	50.27	49	P	P	02 11 34.4	+0.2
	comp=Z,0.8nm,0.5s,mb4.0,baz=250,slow=7.3,SNR=7.1						
MJAR				PcP	PcP	02 12 54.3	+1.5
	comp=Z,1.2nm,0.6s,baz=244,slow=3.2,SNR=3.2						
MJAR				LR	LR	02 36 29.1	
	comp=Z,113nm,19.4s,MS3.9,baz=240,slow=40						
MJAR	Matsushiro Arr	50.27	49	P	P	02 11 34.4	+0.2
MJAR						02 12 54.3	
JHJ	Hachijo jima 2	50.33	54	LR	LR	02 34 03.4	
	comp=Z,64nm,21.5s,MS3.6,baz=298,slow=38						
WRAB	Tennant Creek	50.47	125	eP	P	02 11 34.7	-1.0
WRAB				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
WRAB	Tennant Creek	50.47	125	eP	P	02 11 34.7	-1.0
	comp=Z,16nm,0.6s,mb5.2						
WB2	Warramunga Arr	50.47	125⇓	iP	P	02 11 34.7	-1.1
BOD	Bodaibo	51.93	15	eP	P	02 11 45.3	-1.4
BOD				e	pP	02 11 55.2	-1.2
BOD				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
ASPA	Alice Springs	52.06	129⇓	iP	P	02 11 46.9	-0.8
AS31	Alice Springs	52.06	129⇓	iP	P	02 11 46.9	-0.8
ASAR	Alice Springs	52.06	129	P	P	02 11 47.0	-0.7
	comp=Z,3.3nm,0.6s,mb4.5,baz=301,slow=7.2,SNR=71						
ASAR				PcP	PcP	02 13 00.0	+0.5
	comp=Z,1.8nm,0.6s,baz=306,slow=4.8,SNR=4.9						
ASAR				S	S	02 19 06.7	-2.7
	comp=Z,0.9nm,1.1s,baz=189,slow=28,SNR=3.1						
GNI	Garni	52.37	315	eP	P	02 11 52.4	+2.5
GNI				pmax	pmax		
	comp=Z,12nm,0.8s						
GNI	Garni	52.37	315	eP	P	02 11 52.4	+2.4
	comp=Z,12nm,0.8s,mb4.9						
SVE	Sverdlovsk	53.91	339	eP	P	02 12 00.0	-1.3
SVE				e	pP	02 12 09.4	-1.7
SVE				eS	S	02 19 49.0	+15
ARU	Arti	54.36	338⇑	iP	P	02 12 02.2	-2.4
ARU				e		02 13 06.5	
ARU				e		02 14 01.2	
ARU				eS	S	02 19 36.6	-3.9
ARU				eSS	SS	02 23 22.0	-0.9
ARU				eSSS		02 25 14.9	
ARU				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
KIV	Kislovodsk	55.31	318⇑	eP	P	02 12 11.7	+0.2
KIV				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
KMBO	Kilima Mbogo	55.38	263	P	P	02 12 14.4	+2.5
	comp=Z,1.6nm,0.7s,mb4.2,baz=49,slow=13,SNR=5.5						
KMBO				LR	LR	02 31 34.4	
	comp=Z,155nm,20.8s,MS4.1,baz=204,slow=31						
KMBO	Kilima Mbogo	55.38	263	eP	P	02 12 14.5	+2.6
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMBO	Kilima Mbogo	55.38	263	eP	P	02 12 14.4	+2.5
	comp=Z,3.3nm,0.9s,mb4.4						
MALT	Malatya	56.33	311	eP	P	02 12 21.0	+2.2
MALT				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
MALT	Malatya	56.33	311	eP	P	02 12 21.0	+2.2
	comp=Z,4.1nm,1.0s,mb4.4						
SOKR	Solikamsk	57.32	340c	iP	P	02 12 26.3	+0.5
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
YSS	Yuzh-Sakhalins	57.52	39⇓	iP	P	02 12 27.9	+0.7
YSS				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ANN	Anapa	59.12	317	eP	P	02 12 33.2	-5.1
ANN				eS	S	02 20 34.5	-8.9
ANN				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
YAK	Yakutsk	59.97	19⇑	eP	P	02 12 43.9	-0.3
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
BR131	Keskin Array S	60.30	311	eP	P	02 12 45.9	-0.6
	comp=Z,1.8nm,0.6s,mb4.3						
BR131				epP	pP	02 12 54.2	-2.1
BRTR	Keskin Array B	60.30	311	P	P	02 12 45.9	-0.6
	comp=Z,1.2nm,0.9s,mb3.9,baz=112,slow=7.5,SNR=7.5						
BRTR	Keskin Array B	60.30	311	i P	P	02 12 45.9	-0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	62.20	133	eP	P	02 12 58.6	-0.7
	comp=Z,4.4nm,0.6s,mb4.8						
STKA	Stephens Creek	62.20	133	P	P	02 12 59.5	+0.2
	comp=Z,4.8nm,0.7s,mb4.8,baz=314,slow=6.9,SNR=8.6						
STKA				LR	LR	02 39 35.6	
	comp=Z,175nm,20.5s,MS4.2,baz=213,slow=36						
OBN	Obninsk	63.59	328c	eP	P	02 13 08.0	-0.6
OBN				e		02 13 44.4	
OBN				eSS	SS	02 25 44.2	-3.6
OBN				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.3						
OBN				MLR	MLR		
	comp=Z,100nm,22.0s,MS4.0						
KLMR	Klimovskoe	64.83	335	eP	P	02 13 15.5	-1.3
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
AKASG	Malin Array Be	66.22	322	P	P	02 13 24.2	-1.5
	comp=Z,1.1nm,0.7s,mb4.0,baz=94,slow=3.9,SNR=6.2						
AKASG				LR	LR	02 45 56.8	
	comp=Z,48nm,20.8s,MS3.7,baz=270,slow=39						
AKASG	Malin Array Be	66.22	322	i P	P	02 13 24.2	-1.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VRI	Vrincioaia	66.66	316⇑	iP	P	02 13 25.8	-2.7
MA2	Magadan	67.10	28	i P	P	02 13 37.8	+6.5
MA2				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LSZ	Lusaka	67.51	250	eP	P	02 13 35.5	+1.6
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
LSZ	Lusaka	67.51	250	eP	P	02 13 35.5	+1.6
	comp=Z,2.6nm,0.7s,mb4.4						
TOO	Toolangi	67.89	136	eP	P	02 13 38.1	+1.8
	comp=Z,8.5nm,0.7s,mb4.9						
TOO	Toolangi	67.89	136	eP	P	02 13 38.1	+1.8
TOO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
BURAR	Bucovina Array	68.03	318⇑	iP	P	02 13 33.3	-3.9
ARMA	Armidale	69.13	127	eP	P	02 13 46.7	+2.6
JOF	Joensuu	69.23	335	ep	P	02 13 43.6	-1.1
	comp=Z,2.9nm,0.5s,mb4.5						
JOF	Joensuu	69.23	335	eP	P	02 13 43.6	-1.1
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KOLS	Kolonicke sedl	70.21	319	eP	P	02 13 51.5	+0.8
CRVS	Cervenica-Dubn	70.73	319	eP	P	02 13 54.8	+0.9
STHS	Stebnicka Huta	70.96	319	eP	P	02 13 53.5	-1.8
STHS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
STHS	Stebnicka Huta	70.96	319	eP	P	02 13 53.5	-1.8
	comp=Z,3.9nm,0.9s,mb4.3						
FINES	FINESS Array B	71.03	332	P	P	02 13 54.8	-1.0
	comp=Z,2.3nm,0.8s,mb4.2,baz=89,slow=5.7,SNR=11						
FINES				LR	LR	02 50 58.6	
	comp=Z,112nm,19.5s,MS4.1,baz=115,slow=41						
KAF	Kangasniemi	71.13	333	ep	P	02 13 54.7	-1.6
	comp=Z,1.5nm,0.4s,mb4.3						
KAF	Kangasniemi	71.13	333	eP	P	02 13 54.7	-1.6
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
KECS	Kecovo	71.31	318	eP	P	02 13 57.5	+0.1
KECS				e	pP	02 14 05.3	-2.1
KECS				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
KECS	Kecovo	71.31	318	eP	P	02 13 57.5	+0.1
	comp=Z,2.4nm,1.1s,mb4.0						
KECS				e	pP	02 14 05.3	-2.1
OJC	Ojcow	72.00	320	eP	P	02 14 01.1	-0.5
VYHS	Vyhne	72.40	318	eP	P	02 14 03.2	-0.7
VYHS				epP	pP	02 14 11.9	-2.1
LBTB	Lobatse	72.73	241	eP	P	02 14 07.4	+1.5
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
LBTB	Lobatse	72.73	241	eP	P	02 14 07.4	+1.5
	comp=Z,5.6nm,0.6s,mb4.7						
OKC	Ostrava-Krasne	73.01	319	eP	P	02 14 10.0	+2.4
MORC	Moravsky Berou	73.39	319	eP	P	02 14 09.5	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MORC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
MORC	**Moravsky Berou**	**73.39**	**319**	eP	**P**	**02 14 09.5**	**-0.4**
	comp=Z,3.5nm,1.0s,mb4.2						
KEV	**Kevo**	**73.40**	**341**	ep	**P**	**02 14 17.0**	**+7.1**
	comp=Z,1.7nm,0.6s,mb4.2						
KEV	**Kevo**	**73.40**	**341**	eP	**P**	**02 14 17.0**	**+7.1**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ZST	**Bratislava**	**73.52**	**318**	eP	**P**	**02 14 11.0**	**+0.4**
ZST				e		02 14 16.3	
ZST				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ZST	**Bratislava**	**73.52**	**318**	eP	**P**	**02 14 11.0**	**+0.4**
	comp=Z,9.1nm,0.9s,mb4.7						
ZST				e		02 14 16.3	
ARCES	**ARCESS Array B**	**73.82**	**340**	P	**P**	**02 14 12.2**	**-0.2**
	comp=Z,1.2nm,0.7s,mb3.9,baz=91,slow=6.1,SNR=6.4						
ARCES				LR	LR	02 49 14.6	
	comp=Z,127nm,22.0s,MS4.2,baz=298,slow=38						
ARE0	**ARCESS Array S**	**73.82**	**340**	eP	**P**	**02 14 13.3**	**+1.0**
DPC	**Dobruska-Polom**	**74.23**	**320**	eP	**P**	**02 14 14.9**	**+0.1**
UPC	**Upice**	**74.45**	**320**	eP	**P**	**02 14 16.1**	**+0.1**
PRU	**Pruhonice**	**75.34**	**319**	eP	**P**	**02 14 21.1**	**-0.1**
PVCC	**Panska Ves**	**75.37**	**320**	eP	**P**	**02 14 21.6**	**+0.3**
BRG	**Berggiesshubel**	**75.79**	**320**	eP	**P**	**02 14 23.7**	**0.0**
	comp=Z,6.0nm,0.9s,mb4.5						
BRG				epP	pP	02 14 32.2	-1.6
BRG	**Berggiesshubel**	**75.79**	**320**	eP	**P**	**02 14 24.1**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.1						
BRG				e	pP	02 14 32.7	-1.1
	comp=Z,3.8nm,1.0s						
BRG	**Berggiesshubel**	**75.79**	**320**	eP	**P**	**02 14 24.1**	**+0.4**
BRG				e	pP	02 14 32.7	-1.1
BRG				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
GEC2	**GERESS Array S**	**75.82**	**318**	eP	**P**	**02 14 23.9**	**0.0**
	comp=Z,9.0nm,1.1s,mb4.6						
GEC2				epP	pP	02 14 32.9	-1.1
GEC2	**GERESS Array S**	**75.82**	**318**	eP	**P**	**02 14 23.9**	**0.0**
GEC2				e*PP	pP	02 14 32.9	-1.1
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
GERES	**GERESS Array B**	**75.82**	**318**	P	**P**	**02 14 24.1**	**+0.2**
	comp=Z,2.3nm,0.8s,mb4.2,baz=90,slow=5.3,SNR=26						
GERES				LR	LR	02 51 57.4	
	comp=Z,44nm,19.2s,MS3.8,baz=270,slow=39						
KHC	**Kasperske Hory**	**75.92**	**318**	eP	**P**	**02 14 24.4**	**-0.1**
KHC				epP	pP	02 14 36.5	+1.9
RUE	**Ruedersdorf**	**76.00**	**322**	eP	**P**	**02 14 24.5**	**-0.4**
	comp=Z,22nm,0.7s,mb5.2						
RUE				epP	pP	02 14 33.6	-1.4
FBE	**Freiberg**	**76.16**	**320**	eP	**P**	**02 14 25.9**	**0.0**
	comp=Z,15nm,0.9s,mb4.9						
WET	**Wettzell**	**76.38**	**318**	eP	**P**	**02 14 27.1**	**0.0**
	comp=Z,8.0nm,1.1s,mb4.6						
WET	**Wettzell**	**76.38**	**318**	eP	**P**	**02 14 27.1**	**0.0**
WET				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
CLL	**Collm**	**76.41**	**321**	eP	**P**	**02 14 26.7**	**-0.5**
	comp=Z,6.0nm,1.0s,mb4.5						
CLL	**Collm**	**76.41**	**321**	P	**P**	**02 14 27.0**	**-0.2**
	comp=Z,logA/T=0.7,mb4.4						
CLL	**Collm**	**76.41**	**321**	eL		02 14 33.0	
CLL	**Collm**	**76.41**	**321**	eP	**P**	**02 14 27.0**	**-0.2**
	comp=Z,7.0nm,1.3s,mb4.4						
CLL	**Collm**	**76.41**	**321**	eP	**P**	**02 14 27.0**	**-0.2**
CLL				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
WERN	**Wernitzgruen**	**76.75**	**320**	eP	**P**	**02 14 28.3**	**-0.9**
	comp=Z,11nm,1.1s,mb4.7						
WERN				epP	pP	02 14 38.0	-1.3
GUNZ	**Gunzen**	**76.78**	**320**	eP	**P**	**02 14 29.4**	**0.0**
	comp=Z,9.0nm,1.1s,mb4.6						
WERD	**Werda**	**76.80**	**320**	eP	**P**	**02 14 29.3**	**-0.2**
	comp=Z,7.0nm,1.1s,mb4.5						
ROTZ	**Rotzenmuhle**	**76.84**	**319**	eP	**P**	**02 14 30.2**	**+0.5**
	comp=Z,12nm,1.1s,mb4.7						
ROTZ				epP	pP	02 14 39.6	-0.2
MANZ	**Manzenberg**	**76.91**	**319**	eP	**P**	**02 14 30.7**	**+0.6**
	comp=Z,13nm,1.0s,mb4.8						
MOX	**Moxa**	**77.25**	**320**	eP	**P**	**02 14 33.1**	**+1.1**
	comp=Z,10.0nm,1.4s,mb4.5						
FUR	**Furstenfeldbru**	**77.41**	**317**	eP	**P**	**02 14 33.2**	**+0.3**
	comp=Z,40nm,1.8s,mb5.0						
FUR	**Furstenfeldbru**	**77.41**	**317**	eP	**P**	**02 14 33.2**	**+0.3**
FUR				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.0						
GRA1	**Grafenberg Arr**	**77.48**	**319**	eP	**P**	**02 14 33.7**	**+0.4**
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**77.48**	**319**	eP	**P**	**02 14 33.7**	**+0.4**
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**77.48**	**319**	eP	**P**	**02 14 33.7**	**+0.4**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**77.48**	**319**	eP	**P**	**02 14 33.7**	**+0.4**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
NOA	**NORSAR Array B**	**78.01**	**331**	P	**P**	**02 14 34.7**	**-1.6**
	comp=Z,1.2nm,0.8s,mb3.9,baz=94,slow=5.8,SNR=2.8						
NOA				LR	LR	02 53 18.8	
	comp=Z,68nm,21.2s,MS4.0,baz=85,slow=39						
CLZ	**Clausthal**	**78.07**	**321**	eP	**P**	**02 14 36.3**	**-0.2**
	comp=Z,12nm,1.1s,mb4.7						
CLZ	**Clausthal**	**78.07**	**321**	eP	**P**	**02 14 36.3**	**-0.2**
CLZ				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
BSEG	**Bad Segeberg**	**78.15**	**323**	eP	**P**	**02 14 36.9**	**-0.1**
	comp=Z,12nm,0.9s,mb4.8						
BSEG	**Bad Segeberg**	**78.15**	**323**	eP	**P**	**02 14 36.9**	**-0.1**
BSEG				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
GTTG	**Gvttingen**	**78.31**	**321**	eP	**P**	**02 14 37.9**	**0.0**
STU	**Stuttgart**	**78.80**	**318**	eP	**P**	**02 14 40.9**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.6						
MAW	**Mawson**	**78.86**	**191**	P	**P**	**02 14 41.3**	**+0.4**
	comp=Z,5.1nm,1.1s,mb4.4,baz=358,slow=4.6,SNR=7.2						
MAW	**Mawson**	**78.86**	**191**	eP	**P**	**02 14 41.1**	**+0.2**
MAW				pmax	pmax		
	comp=Z,8.0nm,0.4s						
MAW	**Mawson**	**78.86**	**191**	eP	**P**	**02 14 41.1**	**+0.2**
	comp=Z,7.5nm,0.4s,mb5.0						
KEST	**Kesra**	**79.04**	**305**	P	**P**	**02 14 43.0**	**+1.1**
	comp=Z,1.2nm,0.7s,mb3.9,baz=164,slow=23,SNR=6.2						
TNS	**Taunus Mts**	**79.27**	**319**	eP	**P**	**02 14 43.2**	**0.0**
	comp=Z,13nm,1.3s,mb4.7						
TNS	**Taunus Mts**	**79.27**	**319**	eP	**P**	**02 14 43.2**	**0.0**
TNS				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
BFO	**Black Forest**	**79.38**	**318**	eP	**P**	**02 14 43.3**	**-0.5**
	comp=Z,19nm,1.9s,mb4.7						
BFO	**Black Forest**	**79.38**	**318**	eP	**P**	**02 14 43.3**	**-0.5**
BFO				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.7						
IBBN	**Ibbenburen**	**79.68**	**322**	eP	**P**	**02 14 45.2**	**-0.2**
	comp=Z,23nm,1.4s,mb4.9						
LPG	**La Plagne**	**80.55**	**315**	eP	**P**	**02 14 50.3**	**+0.2**
	comp=Z,28nm,1.0s,mb4.9						
LPG	**La Plagne**	**80.55**	**315**	eP	**P**	**02 14 50.3**	**+0.2**
LPG				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
LPG	**La Plagne**	**80.55**	**315**	eP	**P**	**02 14 50.3**	**+0.2**
	comp=Z,14nm,1.0s,mb4.8						
BNI	**Bardonecchia**	**80.62**	**314**	eP	**P**	**02 14 51.4**	**+0.9**
BNI				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
BNI	**Bardonecchia**	**80.62**	**314**	eP	**P**	**02 14 51.4**	**+0.9**
	comp=Z,16nm,1.1s,mb4.8						
WLF	**Walferdange**	**80.77**	**319**	eP	**P**	**02 14 50.9**	**-0.4**
	comp=Z,29nm,1.8s,mb4.9						
JMIC	**Jan Mayen**	**85.29**	**341**	LR	LR	02 59 34.4	
	comp=Z,53nm,19.4s,MS3.9,baz=266,slow=40						
SYO	**Syowa Base**	**85.51**	**197**	⇑eP	**P**	**02 15 16.0**	**+0.2**
SYO	**Syowa Base**	**85.51**	**197**	⇑esP	sP	02 15 30.3	+0.6
TORD	**Torodi Ar. Bea**	**88.33**	**283**	P	**P**	**02 15 30.4**	**+1.0**
	comp=Z,1.4nm,0.7s,mb4.3,baz=85,slow=4.1,SNR=9.7						
TORD				LR	LR	02 53 07.3	
	comp=Z,66nm,20.1s,MS4.0,baz=80,slow=34						
ESDC	**Sonseca Array**	**89.08**	**310**	P	**P**	**02 15 33.5**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.9,baz=59,slow=4.2,SNR=4.1						
MDT	**Midelt**	**90.85**	**303**	LR	LR	02 57 52.1	
	comp=Z,82nm,20.8s,MS4.2,baz=240,slow=36						
VNDA	**Vanda**	**94.11**	**168**	P	**P**	**02 15 55.9**	**-0.5**
	comp=Z,0.5nm,0.7s,mb4.0,baz=303,slow=6.8,SNR=3.5						
VNDA				LR	LR	02 55 18.4	
	comp=Z,74nm,19.3s,MS4.2,baz=296,slow=34						
VNDA	**Vanda**	**94.11**	**168**	eP	**P**	**02 15 55.8**	**-0.5**
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**94.11**	**168**	eP	**P**	**02 15 55.8**	**-0.6**
	comp=Z,0.9nm,0.7s,mb4.3						
DBIC	**Dimbokro**	**95.71**	**278**	LR	LR	02 56 51.5	
	comp=Z,70nm,19.0s,MS4.2,baz=63,slow=34						
INK	**Inuvik**	**96.84**	**15**	eP	**P**	**02 16 08.3**	**-0.5**
VNA1	**Neumayer--Stat**	**101.50**	**200**	⇑iPdiff	Pdif	02 16 28.3	-1.3
VNA1				e		02 16 41.2	
YKA	**Yellowknife Ar**	**106.16**	**12**	PP	PP	02 21 18.7	+4.4
	comp=Z,0.7nm,0.7s,baz=332,slow=7.1,SNR=5.4						
BOZ	**Bozeman (W)**	**121.95**	**19**	ePKIKP	PKPdf	02 21 33.4	+1.4
HLID	**Hailey**	**122.78**	**23**	ePKPdf	PKPdf	02 21 34.7	+1.1
HLID				epPKPdf	pPKPdf	02 21 44.8	+0.7
MOOW	**Moose Ponds**	**123.93**	**20**	ePKPdf	PKPdf	02 21 36.4	+0.5
LOHW	**Long Hollow**	**124.10**	**20**	ePKPdf	PKPdf	02 21 37.5	+1.4
SNOW	**Snow King Moun**	**124.18**	**20**	ePKPdf	PKPdf	02 21 37.7	+1.4
REDW	**Red Top Meadow**	**124.23**	**20**	ePKPdf	PKPdf	02 21 37.4	+1.0
BW06	**Boulder Array**	**125.19**	**19**	ePKPdf	PKPdf	02 21 38.4	+0.2
PDAR	**Pinedale Array**	**125.20**	**19**	PKP	PKPdf	02 21 38.8	+0.6
	comp=Z,0.7nm,0.7s,baz=39,slow=1.3,SNR=8.5						
NVAR	**Mina Array Bea**	**125.33**	**29**	PKP	PKPdf	02 21 39.2	+0.7
	comp=Z,0.9nm,0.7s,baz=322,slow=0.8,SNR=8.4						
NVAR	**Mina Array Bea**	**125.33**	**29**	PKP	PKPdf	02 21 39.2	+0.7
RSSD	**Black Hills**	**125.52**	**14**	ePKIKP	PKPdf	02 21 39.6	+0.7
HWUT	**Hardware Ranch**	**125.53**	**22**	ePKPdf	PKPdf	02 21 39.5	+0.7
MSU	**Marysvale**	**127.97**	**24**	ePKIKP	PKPdf	02 21 45.9	+2.3
MNTX	**Cornudas Mount**	**136.59**	**22**	ePKPdf	PKPdf	02 22 01.1	+1.3
JCT	**Junction City**	**139.49**	**16**	ePKIKP	PKPdf	02 22 06.0	+0.9
CPUP	**Villa Florida**	**145.98**	**235**	PKPbc	PKPbc	02 22 18.5	+1.1
	comp=Z,0.8nm,0.6s,baz=12,slow=5.1,SNR=4.3						

CSEM ***13*** *02:09:54.9±0.1, 4179N×2368E, h8km, MD3.0, Error ellipse: s-maj=1.8km s-min=1.3km az=121.0*
ISCJB ***13*** *02:09:54.9±0.4, 4175N±002×2363E±003, h9km±4km, Error ellipse: s-maj=3.8km s-min=3.2km az=52.9*
THE ***13*** *02:09:55.8, 4175N×2362E, h2km, ML2.9*
SOF ***13*** *02:09:55.1, 4176N×2369E, h13km, MD3.0*
NEIC ***13*** *02:09:57.2, 4166N×2378E, h18km, MD3.3(ATH), ML2.9(THE), After ATH.*
SKO ***13*** *02:09:57.1, 4175N×2360E, h0km*
ATH ***13*** *02:09:57.2, 4166N×2378E, h18km±2km, MD3.3/3*
ISC 13 02:09:55.5±0.4**, 4175N**±002×**2364E**±003**, h12**km±3km**, n32, σ0ˢ72**/54**, 1D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	**Musomiste**	**0.18**	**157**	ePg	**Pg**	**02 10 00.1**	**+0.5**
MMB				eSg	**Sg**	**02 10 03.1**	**+0.9**
MMB	**Musomiste**	**0.18**	**157**	i Pg	**Pg**	**02 10 00.0**	**+0.5**
KKB	**Krupnik**	**0.43**	**286**	i P	**Pg**	**02 10 04.1**	**+0.1**
NVR	**Nevrokopi**	**0.44**	**157**	ePB	**Pg**	**02 10 04.2**	**0.0**
NVR				eSB	**Sg**	**02 10 09.0**	**-1.0**
KNT	**Kendrikon**	**0.81**	**223**	ePg	**Pg**	**02 10 11.2**	**0.0**
KNT				eSg	**Sg**	**02 10 22.1**	**+0.3**
RZN	**Rozhen**	**0.81**	**94**	i P	**Pg**	**02 10 11.0**	**-0.2**
PLD	**Plovdiv**	**0.87**	**66**	ePg	**Pg**	**02 10 12.4**	**0.0**
PLD				eSg	**Sg**	**02 10 24.0**	**+0.2**
PGB	**Panagyurishte**	**0.89**	**26**	i P	**Pg**	**02 10 12.0**	**-0.7**
VTS	**Vitosha**	**0.90**	**339**	ePg	**Pg**	**02 10 13.2**	**+0.3**
VTS				eSg	**Sg**	**02 10 25.0**	**+0.4**
VTS	**Vitosha**	**0.90**	**339**	i P	**Pg**	**02 10 13.3**	**+0.5**
VTS	**Vitosha**	**0.90**	**339**	ePg	**Pg**	**02 10 13.1**	**+0.3**
VTS				eSg	**Sg**	**02 10 25.0**	**+0.5**
VAY	**Valandovo**	**0.91**	**242**	ePg	**Pg**	**02 10 13.1**	**+0.1**
VAY				eSg	**Sg**	**02 10 25.3**	**+0.3**
VAY	**Valandovo**	**0.91**	**242**	ePg	**Pg**	**02 10 13.0**	**0.0**
VAY				eSg	**Sg**	**02 10 24.5**	**-0.4**
VAY	**Valandovo**	**0.91**	**242**	ePg	**Pg**	**02 10 13.1**	**0.0**
VAY				eSg	**Sg**	**02 10 24.5**	**-0.4**
SOH	**Sokhos**	**0.95**	**193**	ePg	**Pg**	**02 10 13.5**	**-0.5**
SOH				eSg	**Sg**	**02 10 27.1**	**+0.8**
STIP	**Stip**	**1.09**	**267**	ePg	**Pg**	**02 10 16.6**	**+0.1**
STIP				eSg	**Sg**	**02 10 31.3**	**+0.7**
STIP	**Stip**	**1.09**	**267**	ePg	**Pg**	**02 10 16.5**	**+0.1**
STIP				eSg	**Sg**	**02 10 31.0**	**+0.4**
STIP	**Stip**	**1.09**	**267**	ePg	**Pg**	**02 10 16.5**	**+0.1**
STIP				eSg	**Sg**	**02 10 31.3**	**+0.7**
GRG	**Griva**	**1.22**	**230**	ePg	**Pg**	**02 10 18.8**	**-0.3**
GRG				eSg	**Sg**	**02 10 35.9**	**+1.0**
HORT	**Hortiatis**	**1.22**	**199**	ePg	**Pg**	**02 10 18.6**	**-0.4**
HORT				eSg	**Sg**	**02 10 34.9**	**0.0**
THE	**Thessaloniki**	**1.23**	**205**	ePg	**Pg**	**02 10 18.6**	**-0.5**
THE				eSg	**Sg**	**02 10 35.2**	**0.0**
THE	**Thessaloniki**	**1.23**	**205**	ePg	**Pg**	**02 10 18.6**	**-0.6**
THE				eSg	**Sg**	**02 10 35.2**	**+0.1**
KDZ	**Kurdzhali**	**1.34**	**94**	i P	**Pn**	**02 10 18.9**	**-1.1**
PLG	**Polygyros**	**1.39**	**186**	ePN	**Pn**	**02 10 21.3**	**+0.6**
PLG				eSN	**Sn**	**02 10 39.5**	**+0.6**
OUR	**Ouranopolis**	**1.44**	**169**	ePg	**Pg**	**02 10 21.7**	**-1.5**
OUR				eSg	**Sg**	**02 10 41.7**	**-0.2**
RDO	**Rodhopi**	**1.55**	**112**	ePN	**Pn**	**02 10 24.1**	**+1.1**
RDO				eSN	**Sn**	**02 10 43.6**	**+0.5**
PAIG	**Paliouri**	**1.82**	**179**	ePb	**Pb**	**02 10 27.2**	**-1.6**
PAIG				eSb	**Sb**	**02 10 52.7**	**+1.1**
FNA	**Florina**	**1.96**	**241**	ePb	**Pb**	**02 10 29.7**	**-1.4**
FNA				eSb	**Sb**	**02 10 54.6**	**-0.9**
JMB	**Yambol**	**2.31**	**71**	ePn	**Pn**	**02 10 34.0**	**+0.7**
XOR	**Xorichti**	**2.41**	**188**	ePn	**Pn**	**02 10 35.5**	**+0.7**
BZS	**Buzias**	**4.13**	**340**	⇓iP	**Pn**	**02 10 59.2**	**+0.8**
NB2	**NORSAR Subarra**	**20.74**	**343**	P	**P**	**02 14 34.8**	**-1.2**
	comp=Z,2.8nm,0.7s,baz=94,slow=5.9						

MOS 13 02:36:02.3±0.2**, 4301N**×**4543E, h10**km**, mb3.6**/1**, 1C-4D, Error ellipse: s-maj=34.6km s-min=11.0km az=9.4, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.46**	**278**	ePG	Pg	02 36 12.5	+1.2
SNJR				i S	Sg	02 36 20.7	+3.4
VLKR	**Vladikavkaz**	**0.56**	**274**	ePG	Pg	02 36 14.1	+1.0
VLKR				eS	Sg	02 36 23.5	+3.1
BTKR	**Batakoyurt**	**0.75**	**300**	⇓iPG	Pg	02 36 17.3	+0.6
BTKR				i S	Sg	02 36 29.0	+2.5
LACR	**Lac**	**0.85**	**258**	⇓iPG	Pg	02 36 19.2	+0.4
LACR				i S	Sg	02 36 32.4	+2.5
ARNR	**Ardon**	**0.86**	**283**	⇓iPG	Pg	02 36 19.3	+0.4
ARNR				i S	Sg	02 36 32.6	+2.4
KMSR	**Komsomolskaya**	**0.91**	**294**	⇓iPG	Pg	02 36 20.1	+0.3
KMSR				i S	Sg	02 36 33.9	+2.2
KORR	**Kora**	**1.00**	**275**	⇑iPG	Pg	02 36 21.8	+0.2
KORR				i S	Sg	02 36 36.7	+2.0
ZEI	**Tsey**	**1.15**	**259**	ePG	Pg	02 36 24.0	-0.4
ZEI				eS	Sb	02 36 40.6	+1.3
DIGR	**Digorskoe uzhe**	**1.36**	**266**	ePG	Pg	02 36 27.0	-1.5
DIGR				eS	Sb	02 36 45.8	+0.4
ONI	**Oni**	**1.52**	**254**	P	Pn	02 36 31.1	+1.6
ONI				S	Sn	02 36 52.7	+3.3
DGRG	**David-gareji**	**1.56**	**182**	P	Pn	02 36 34.6	+4.5
DGRG				S	Sn	02 36 58.1	+7.9

CSEM ***13*** *02:52:24.7±0.2, 4252N×225E, h2km, ML2.2, Error ellipse: s-maj=6.0km s-min=4.2km az=173.0*
STR ***13*** *02:52:24.6±0.2, 4252N×220E, h5km±1km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
MDD 13 02:52:25.5±0.3**, 4251N**×**221E, h0**km**, mbLg1.4**/6**, 1C, Error ellipse: s-maj=2.9km s-min=2.1km az=161.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLLI	**Llivia**	**0.18**	**259**	Pg	Pg	02 52 28.8	-0.2
CLLI				Lg		02 52 31.4	
	6.7nm,0.1s						
VALF	**Valcebollere**	**0.18**	**233**	Pg	Pg	02 52 28.9	-0.1
VALF				Sg	Sg	02 52 31.5	+0.1
VALF	**Valcebollere**	**0.18**	**233**	Pg	Pg	02 52 29.0	0.0
VALF				Lg		02 52 31.6	
CARF	**Carcanieres**	**0.22**	**339**	Pg	Pg	02 52 29.5	-0.2
CARF				Sg	Sg	02 52 32.7	+0.2
CARF	**Carcanieres**	**0.22**	**339**	Pg	Pg	02 52 29.5	-0.2
CARF				Lg		02 52 32.6	
CBRU	**Bruguera**	**0.23**	**186**	Pg	Pg	02 52 29.7	-0.2
CBRU				Lg		02 52 33.0	
	36nm,0.1s						
FILF	**Fillols**	**0.26**	**79**	Pg	Pg	02 52 28.5	-2.0
FILF				Sg	Sg	02 52 30.8	-3.1
FILF	**Fillols**	**0.26**	**79**	Pg	Pg	02 52 28.5	-2.0
FILF				Lg		02 52 30.9	
EJON	**La Jonquera**	**0.50**	**97**	⇑Pg	Pg	02 52 34.7	-0.5
	2.6nm,0.1s,SNR=18						
EJON				Lg		02 52 40.8	
	8.3nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**0.50**	**97**	Pg	Pg	02 52 34.7	-0.4
	2.6nm,0.1s,SNR=18						
CORG	**Organya**	**0.72**	**247**	Pg	Pg	02 52 38.6	-0.7
CORG				Lg		02 52 48.9	
SALF	**Salau**	**0.80**	**288**	Pg	Pg	02 52 39.7	-1.1
SALF				Sg	Sg	02 52 49.6	-1.5
SALF	**Salau**	**0.80**	**288**	Pg	Pg	02 52 39.8	-1.0
SALF				Lg		02 52 49.6	
CSOR	**Sort**	**0.81**	**261**	Pg	Pg	02 52 40.3	-0.8
CSOR				Lg		02 52 51.7	
EPOB	**Poblet**	**1.44**	**217**	Pg	Pg	02 52 51.9	-1.1
	0.3nm,0.1s,SNR=13						
EPOB				Lg		02 53 10.5	
	1.5nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**1.44**	**217**	Pg	Pg	02 52 51.9	-1.1
	0.3nm,0.1s,SNR=13						
EBIE	**Bielsa**	**1.54**	**277**	Pg	Pg	02 52 54.6	-0.4
	0.3nm,0.1s,SNR=6.9						
EBIE				Lg		02 53 15.1	
	2.3nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**1.54**	**277**	Pg	Pg	02 52 54.6	-0.4
	0.3nm,0.1s,SNR=6.9						
ERTA	**Horta de San J**	**2.10**	**223**	Pg	Pg	02 53 03.6	-2.1
	SNR=7.9						
ERTA				Sn	Sn	02 53 27.4	-1.3
	0.2nm,0.2s,SNR=7.9						
ERTA				Lg		02 53 31.8	
	0.6nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**2.10**	**223**	Pg	Pg	02 53 03.6	-2.1
	SNR=7.9						

LDG ***13*** *02:57:47.3±0.1, 4383N×664E, h11km, Md2.1/4, Ml1.3/1, Error ellipse: s-maj=2.8km s-min=2.1km az=2.0*
STR 13 02:57:43.3±0.5**, 4413N**×**692E, h5**km±1km**, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOUF	**Mont Tournerai**	**0.26**	**116**	Pg	Pg	02 57 48.4	0.0
TOUF				Sg	Sg	02 57 52.7	+0.8
MVIF	**Mont Vial**	**0.29**	**144**	Pg	Pg	02 57 49.2	+0.3
MVIF				Sg	Sg	02 57 53.3	+0.6
LUCF	**Luceram**	**0.39**	**128**	Pg	Pg	02 57 51.3	+0.5
LUCF				Sg	Sg	02 57 56.7	+0.8
SBF	**Sospel**	**0.46**	**125**	ePg	Pg	02 57 58.5	+6.4
SBF				eSg	Sg	02 58 05.9	+7.8
	2.7nm,0.2s						
FRF	**La Foret Royal**	**0.60**	**199**	ePg	Pg	02 57 52.7	-2.2
FRF				eSg	Sg	02 57 57.0	-5.7
	4.1nm,0.2s						
LMR	**La Mourre**	**0.85**	**201**	ePg	Pg	02 57 57.1	-2.5
LMR				eSn	Sn	02 58 07.2	-7.5
	3.0nm,0.2s						
SMRF	**Simiane la Rot**	**0.98**	**261**	ePg	Pg	02 58 02.0	-0.1
SMRF				eSg	Sg	02 58 13.2	-1.7
	2.5nm,0.3s						

BJI 13 03:24:00.5, 4830N×**12193E, h9**km**, ML3.9, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CN2	**Changchun**	**5.12**	**150**	ePG	Pg	03 25 32.8	-5.8
CN2				eSG	Sg	03 26 34.8	-10
CN2				Smax			
	comp=N,100nm,0.7s						
CN2				Smax			
	comp=E,100nm,0.7s						
NJ2	**Nanjing**	**16.40**	**189**	eP	Pn	03 27 49.8	-1.0

ISCJB ***13*** *03:38:45.9±1.5, 4013N±004×197E±01, h9km±6km, Error ellipse: s-maj=15.4km s-min=5.7km az=26.3*
SKO ***13*** *03:38:46.8, 4000N×1982E, h0km*
NEIC ***13*** *03:38:46.5, 4007N×1971E, h29km, MD3.3(ATH), After ATH.*
CSEM ***13*** *03:38:46.4±0.3, 4013N×1982E, h12km, MD3.3, Error ellipse: s-maj=6.7km s-min=2.4km az=108.0*
ATH ***13*** *03:38:46.5, 4007N×1971E, h29km±2km, MD3.3/5*
ISC 13 03:38:46.8±1.4**, 4012N**±004×**198E**±01**, h12**km±5km**, n11, σ0ˢ85**/19**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.26**	**48**	i Pg	**Pg**	**03 38 50.8**	**-1.4**
TPE				i Sg	**Sg**	**03 38 55.1**	**-0.8**
SRN	**Sarande**	**0.30**	**142**	i Pg	**Pg**	**03 38 52.3**	**-0.7**
SRN				i Sg	**Sg**	**03 38 57.7**	**+0.6**
KEK	**Kerkira**	**0.41**	**176**	ePB	**Pg**	**03 38 54.6**	**-0.3**
KEK				eSB	**Sg**	**03 39 01.5**	**+1.1**
JAN	**Janina**	**0.96**	**118**	ePN	**Pn**	**03 39 05.3**	**-0.8**
JAN				eSN	**Sn**	**03 39 18.6**	**-1.1**
OHR	**Ohrid**	**1.27**	**38**	ePg	**Pg**	**03 39 10.6**	**-0.6**
OHR				eSg	**Sg**	**03 39 28.8**	**+1.1**
OHR	**Ohrid**	**1.27**	**38**	ePg	**Pg**	**03 39 10.6**	**-0.6**
OHR				eSg	**Sg**	**03 39 28.7**	**+1.0**
BIA	**Bitola**	**1.49**	**52**	ePn	**Pn**	**03 39 14.4**	**+0.9**
BIA				eSn	**Sg**	**03 39 36.0**	**+1.1**
BIA	**Bitola**	**1.49**	**52**	ePn	**Pn**	**03 39 14.3**	**+0.9**
BIA				eSn	**Sg**	**03 39 35.9**	**+1.0**
KZN	**Kozani**	**1.55**	**82**	ePN	**Pn**	**03 39 15.2**	**+1.0**
EVR	**Evrytania**	**1.99**	**127**	ePN	**Pn**	**03 39 20.1**	**-0.2**
VLS	**Valsamata**	**2.04**	**161**	ePB	**Pn**	**03 39 21.1**	**+0.1**

MOS ***13*** *03:46:53.0±0.9, 885N×12297E, h52km, mb4.9/11, Error ellipse: s-maj=24.4km s-min=10.4km az=124.7*
MAN ***13*** *03:46:54.4, 883N×12271E, h30km, mb4.4, ML5.2, MS4.6*
MAN F INTENSITY II - TANHAY NEGROS ORIENTAL.
ISCJB ***13*** *03:46:54.5±0.3, 880N±002×12275E±003, h59km±4km, mb4.5/39, MS3.4/7, Error ellipse: s-maj=5.5km s-min=3.9km az=148.3*
IDC ***13*** *03:46:55.2±0.9, 877N×12287E, h56km±7km, mb4.0/19, mb1 4.1/20, mb1mx4.0/25, mbtmp4.3/20, MS3.5/8, Ms1 3.5/8, ms1mx3.3/22, Error ellipse: s-maj=24.5km s-min=12.1km az=72.0*
BJI ***13*** *03:46:58.3, 894N×12276E, h81km, mB4.8, mb4.3*
NEIC ***13*** *03:46:60.0±0.8, 873N×12269E, h95km±7km, mb4.8/20, Error ellipse: s-maj=9.7km s-min=5.5km az=61.0*
ISC 13 03:46:55.7±0.3**, 880N**±002×**12277E**±003**, h53**km±4km**, h59**km±1.0km**:pP-P, n99, σ1ˢ06**/102**, mb4.5**/39**, MS3.4**/7**, 6C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.71**	**40**	eP	**Pn**	**03 47 09.8**	**+0.1**
IPIL	**Ipil**	**1.03**	**191**	⇑eP	**Pn**	**03 47 12.7**	**-1.2**
IPIL				i S	**Sn**	**03 47 26.0**	**-1.3**
IPIL	**Ipil**	**1.03**	**191**	eP	**Pn**	**03 47 12.6**	**-1.3**
PAGZ	**Pagadian**	**1.12**	**147**	eP	**Pn**	**03 47 14.7**	**-0.4**
PAGZ				eS	**Sn**	**03 47 31.6**	**+2.1**
TBP	**Tagbilaran**	**1.39**	**51**	eP	**Pn**	**03 47 17.8**	**-1.0**
TBP				eS	**Sn**	**03 47 35.1**	**-0.9**
GUIM	**Jordan**	**1.82**	**354**	eP	**Pn**	**03 47 24.6**	**0.0**
GUIM				eS	**Sn**	**03 47 47.1**	**+0.6**
LLP	**Lapu-Lapu**	**1.91**	**38**	⇑iP	**Pn**	**03 47 25.4**	**-0.4**
LLP				i S	**Sn**	**03 47 48.4**	**-0.3**
CGP	**Cagayan de Oro**	**1.93**	**100**	i S	**Sn**	**03 47 51.0**	**+1.8**
CTBH	**Cotabato--PC H**	**2.14**	**137**	⇑eP	**Pn**	**03 47 29.4**	**+0.4**
CTBH				i S	**Sn**	**03 47 54.6**	**+0.1**
BUKP	**Musuan**	**2.44**	**112**	eP	**Pn**	**03 47 34.4**	**+1.3**
MSLP	**Maasin**	**2.45**	**57**	eP	**Pn**	**03 47 33.7**	**+0.5**
CUYO	**Cuyo Island**	**2.67**	**320**	eP	**Pn**	**03 47 35.6**	**-0.7**
RCP	**Roxas**	**2.74**	**359**	⇑eP	**Pn**	**03 47 37.7**	**+0.5**
RCP				eS	**Sn**	**03 48 09.1**	**0.0**
BUTP	**Butuan**	**2.82**	**86**	eP	**Pn**	**03 47 39.1**	**+0.8**
SCPH	**Surigao**	**2.85**	**70**	⇑eP	**Pn**	**03 47 37.9**	**-0.9**
OCLP	**Ormoc**	**2.88**	**39**	eP	**Pn**	**03 47 38.4**	**-0.7**
KALP	**Kalibo**	**2.89**	**352**	eP		03 47 54.0	
KCP	**Kidapawan**	**2.91**	**128**	⇓eP	**Pn**	**03 47 43.8**	**+4.4**
PLP	**Palo**	**3.20**	**43**	eP	**Pn**	**03 47 43.1**	**-0.4**

DAV Davao City (W) 3.27 122 ePn Pn 03 47 51.7 +7.3
OTRP Odiongan 3.61 348 eP Pn 03 47 49.5 +0.3
MMPH Masbate 3.63 13 eP Pn 03 47 54.8 +5.4
BUSP Coron 4.07 322 eP Pn 03 47 54.3 -1.0
ENPP El Nido 4.07 306 eP Pn 03 47 54.6 -0.8
PPR Puerto Princes 4.11 284⇑iP Pn 03 47 58.0 +2.1
PPR iS Sn 03 48 37.0 -5.6
BOAC Boac 4.72 349 eP Pn 03 48 03.7 -0.6
BATP Bataraza 4.91 270 eP Pn 03 48 04.5 -2.5
LUBP Lubang 5.49 333 eP Pn 03 48 14.7 -0.2
TGY Tagaytay City 5.57 341 P Pn 03 48 21.0 +5.0
34nm,0.3s,baz=243,slow=5.5,SNR=3.0
KKM Kota Kinabalu 7.06 248 ePn Pn 03 48 36.6 +0.3
CAUP Cauayan 8.15 354 eP Pn 03 48 53.0 +1.7
KSM Kuching 14.38 240 ePn Pn 03 50 13.4 -2.9
JOW Kunigami 18.68 16 P Pn 03 51 10.6 +0.3
3.4nm,0.3s,baz=226,slow=9.8,SNR=13
JOW LR LR 03 57 30.1
comp=Z,177nm,21.2s,baz=316,slow=34
GUMO Guam 22.19 76 LR LR 04 00 26.9
comp=Z,69nm,19.7s,MS3.1,baz=236,slow=37
KULM Kulim 22.23 262 eP P 03 51 48.2 +0.5
GYA Guiyang 23.28 321 P P 03 51 58.9 +0.1
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.3
KAKA Kakadu 23.43 156 eP P 03 51 59.1 -1.1
comp=Z,15nm,0.6s,mb4.6
PSI Prapat 24.45 257 P P 03 52 10.4 +0.9
comp=Z,13nm,0.9s,mb4.4,baz=67,slow=6.6,SNR=12
PSI LR LR 04 01 17.5
comp=Z,87nm,21.1s,MS3.2,baz=248,slow=35
KMI Kunming 25.05 313 P P 03 52 16.8 +1.9
KMI AMB AMB
comp=Z,10.0nm,1.1s,mb4.3
FITZ Fitzroy Crossi 26.88 174 eP P 03 52 31.3 -0.2
comp=Z,11nm,0.8s,mb4.5
FITZ Fitzroy Crossi 26.88 174 P P 03 52 29.8 -1.7
comp=Z,6.6nm,0.8s,mb4.2,baz=352,slow=8.7,SNR=11
JHJ Hachijo jima 2 28.86 31 LR LR 04 02 29.2
comp=Z,114nm,20.7s,MS3.5,baz=228,slow=32
WRAB Tennant Creek 30.75 158 eP P 03 53 05.5 -0.3
WRAB pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
WRAB Tennant Creek 30.75 158 eP P 03 53 05.5 -0.3
comp=Z,3.0nm,0.5s,mb4.4
WB2 Warramunga Arr 30.75 158 eP P 03 53 06.3 +0.4
MJAR Matsushiro Arr 30.98 25 LR LR 04 05 01.3
comp=Z,130nm,19.0s,MS3.6,baz=240,slow=35
AS31 Alice Springs 34.05 162 eP P 03 53 35.5 +0.7
ASAR Alice Springs 34.05 162 P P 03 53 34.6 -0.1
comp=Z,2.5nm,0.4s,mb4.5,baz=338,slow=6.6,SNR=37
ASAR PcP PcP 03 56 10.5 -1.0
comp=Z,0.8nm,0.5s,baz=344,slow=2.8,SNR=6.2
ASPA Alice Springs 34.05 162 eP P 03 53 35.5 +0.7
ASAJ Asahikawa 39.18 23 P P 03 54 17.4 -1.0
comp=Z,1.6nm,0.4s,mb4.1,baz=224,slow=12,SNR=4.6
JIRN Jiri 39.27 303 eP P 03 54 21.0 +1.8
comp=Z,73nm,1.1s,mb5.3
GUN Gumba 39.62 304 eP P 03 54 23.9 +1.8
comp=Z,49nm,0.8s,mb5.3
FORT Forrest 39.68 173 eP P 03 54 22.6 0.0
comp=Z,9.5nm,0.5s,mb4.8
PKI Pulchoki 39.88 303 eP P 03 54 25.5 +1.2
comp=Z,37nm,1.1s,mb5.0
PKI Pulchoki 39.88 303 eP P 03 54 25.5 +1.2
PKI pmax pmax
comp=Z,37nm,1.1s,mb5.0
KKN Kakani 40.07 303 eP P 03 54 27.0 +1.2
comp=Z,28nm,0.8s,mb5.0
KKN Kakani 40.07 303 eP P 03 54 27.0 +1.2
KKN pmax pmax
comp=Z,29nm,0.8s,mb5.1
DMN Daman 40.15 303 eP P 03 54 28.0 +1.5
comp=Z,77nm,1.3s,mb5.3
KLBR Kellerberrin 40.45 187 eP P 03 54 28.6 -0.4
comp=Z,70nm,1.6s,mb5.1
GKN Gorkha 40.67 303 eP P 03 54 31.6 +0.8
comp=Z,18nm,0.8s,mb4.8
SONM Songino Array 41.30 343 P P 03 54 35.9 -0.1
comp=Z,2.2nm,0.7s,mb3.9,baz=162,slow=8.8,SNR=12
SONM pP pP 03 54 50.8 +1.0
comp=Z,0.9nm,0.7s,baz=155,slow=8.5,SNR=3.4
SONM LR LR 04 12 06.9
comp=Z,35nm,21.6s,MS3.2,baz=36,slow=36
SONM Songino Array 41.30 343 P P 03 54 35.9 -0.1
SONM *PP pP 03 54 50.8 +1.0
KOLN Koldanda 41.46 302 eP P 03 54 38.6 +1.3
comp=Z,47nm,0.9s,mb5.1
STKA Stephens Creek 44.27 157 eP P 03 55 00.2 +0.2
comp=Z,5.4nm,0.6s,mb4.5
STKA Stephens Creek 44.27 157 P P 03 54 59.5 -0.5
comp=Z,4.3nm,0.7s,mb4.3,baz=328,slow=10,SNR=11
STKA LR LR 04 14 57.2
comp=Z,103nm,21.4s,MS3.7,baz=23,slow=38
MKAR Makanchi Array 51.17 325 P P 03 55 53.8 +0.4
comp=Z,3.3nm,0.8s,mb4.3,baz=125,slow=8.1,SNR=20
MKAR PcP PcP 03 57 07.8 -0.5
comp=Z,1.0nm,0.5s,baz=117,slow=5.2,SNR=4.9
ZAL Zalesovo 54.32 333 P P 03 56 16.6 -0.1
comp=Z,1.7nm,0.5s,mb4.2,baz=95,slow=8.6,SNR=4.2
KURK Kurchatov 55.38 327 eP P 03 56 24.4 +0.1
KURK pmax pmax
comp=Z,26nm,1.4s,mb5.1
KURK Kurchatov 55.38 327 eP P 03 56 24.4 +0.1
comp=Z,26nm,1.4s,mb5.1
BVAR Borovoye Array 60.95 327 P P 03 57 03.2 0.0
comp=Z,3.0nm,0.8s,mb4.5,baz=120,slow=8.8,SNR=15
BRVK Borovoye 61.02 327 eP P 03 57 03.3 -0.5
BRVK pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
BRVK Borovoye 61.02 327 eP P 03 57 03.3 -0.4
comp=Z,6.2nm,1.0s,mb4.7
WSAR Wadi Sarin 62.86 292 P P 03 57 16.4 +0.4
comp=Z,2.2nm,0.7s,mb4.4,baz=148,slow=15,SNR=4.4
AKTK Aktyubinsk 67.27 321 P P 03 57 44.3 -0.4
AKTO Aktyubinsk 67.27 321 P P 03 57 44.3 -0.4
comp=Z,3.6nm,0.7s,mb4.5,baz=105,slow=6.4,SNR=21
GNI Garni 75.24 309 P P 03 58 34.4 +1.5
comp=Z,3.1nm,0.4s,mb4.6,baz=34,slow=7.3,SNR=2.8
KIV Kislovodsk 76.82 313 eP P 03 58 43.0 +1.2
KIV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
JOF Joensuu 82.90 333 ep P 03 59 12.8 -1.9
comp=Z,1.9nm,0.5s,mb4.4
JOF Joensuu 82.90 333 eP P 03 59 12.8 -1.9
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
BR131 Keskin Array S 83.78 309 eP P 03 59 19.1 -0.1
comp=Z,2.0nm,0.9s,mb4.2
BRTR Keskin Array B 83.78 309 P P 03 59 19.5 +0.3
comp=Z,2.5nm,0.9s,mb4.4,baz=113,slow=5.4,SNR=14
BRTR pP pP 03 59 35.8 +1.4
comp=Z,1.2nm,0.9s,baz=98,slow=6.4,SNR=3.4
KEV Kevo 83.80 340 ep P 03 59 17.1 -2.2
comp=Z,6.7nm,0.9s,mb4.8
KEV Kevo 83.80 340 eP P 03 59 17.1 -2.2
KEV pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
ARCES ARCESS Array B 84.36 339 P P 03 59 20.4 -1.8
comp=Z,0.7nm,0.4s,mb4.2,baz=84,slow=5.9,SNR=15
ARCES pP pP 03 59 36.2 -1.2
comp=Z,0.6nm,0.4s,baz=82,slow=6.4,SNR=1.8
ARCES ARCESS Array B 84.36 339 P P 03 59 20.4 -1.8
ARCES pP pP 03 59 36.2 -1.2
KAF Kangasniemi 85.31 332 ep P 03 59 25.7 -1.2
comp=Z,1.3nm,0.5s,mb4.3
KAF Kangasniemi 85.31 332 eP P 03 59 25.7 -1.2
KAF pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
AKASG Malin Array Be 85.50 320 P P 03 59 26.6 -1.2
comp=Z,0.7nm,0.5s,mb4.1,baz=71,slow=4.2,SNR=6.0
FINES FINESS Array B 85.53 331 P P 03 59 27.1 -0.9
comp=Z,0.9nm,0.6s,mb4.2,baz=74,slow=4.1,SNR=9.7
KMBO Kilima Mbogo 85.74 268 P P 03 59 30.4 +1.3
comp=Z,2.4nm,0.9s,mb4.4,baz=51,slow=5.5,SNR=4.8
KMBO LR LR 04 37 43.3
comp=Z,35nm,20.0s,MS3.8,baz=97,slow=36
KMBO Kilima Mbogo 85.74 268 P P 03 59 30.4 +1.3
KMBO LR LR 04 37 43.3
INK Inuvik 86.90 21 eP P 03 59 34.7 -0.1
INK pmax pmax
comp=Z,2.0nm,0.5s
INK Inuvik 86.90 21 eP P 03 59 34.7 -0.1
comp=Z,2.1nm,0.5s,mb4.6
VNDA Vanda 88.94 172 P P 03 59 41.8 -2.7
comp=Z,0.3nm,0.3s,mb4.1,baz=48,slow=17,SNR=8.1
VNDA Vanda 88.94 172 eP P 03 59 42.2 -2.3
VNDA pmax pmax
comp=Z,1.0nm,0.9s
VNDA Vanda 88.94 172 eP P 03 59 42.2 -2.2
comp=Z,1.2nm,0.9s,mb4.2
NOA NORSAR Array B 92.52 333 P P 03 59 59.2 -2.0
comp=Z,0.5nm,0.8s,mb4.0,baz=71,slow=4.4,SNR=3.6
NOA NORSAR Array B 92.52 333 P P 03 59 59.2 -2.0
TORD Torodi Ar. Bea 117.56 290 PKP PKPdf 04 05 35.9 +0.3
comp=Z,0.8nm,0.7s,baz=112,slow=1.0,SNR=7.1

KRSC 13 04:21:20, 4972N×15664E, h10^{km}, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.35	329	eP	Pn	04 21 45.5	+0.7
ALID				eS	Sb	04 22 03.8	+1.2
MIPR	Malaya Ipel'ka	2.56	2	eP	Pn	04 22 03.7	+2.2
MIPR				eS	Sn	04 22 34.9	+2.2
RUS	Russkaya	2.96	23	eP	Pn	04 22 08.7	+1.6
RUS				eS	Sn	04 22 43.2	+0.5
GRL	Gorelyy	2.98	17	eP	Pn	04 22 09.4	+2.1
GRL				eS	Sn	04 22 44.5	+1.5
PET	Petropavlovsk	3.54	20	eS	Sn	04 23 00.4	+3.5
AVH	Avacha	3.78	19	P	Pn	04 22 21.7	+3.3
SPN	Mys Shipunski	3.99	31	eP	Pn	04 22 24.0	+2.8
SPN				eS	Sn	04 23 09.8	+1.8
GNL	Ganaly	4.06	11	eP	Pn	04 22 25.8	+3.6

CSEM 13 04:29:23.5, 4173S×17264E, h80^{km}, mb5.5
ISCJB 13 04:29:24.6±0.2, 4186S±002×17282E±003, h99^{km}, mb5.0/33, Error ellipse: s-maj=3.9km s-min=2.2km az=99.7
IDC 13 04:29:24.6±0.6, 4198S×17292E, h90^{km}±3^{km}, mb4.7/10, mb1 4.7/11, mb1mx4.7/11, mbtmp5.0/11, MS4.0/11, Ms1 4.0/11, ms1mx3.9/12, Error ellipse: s-maj=15.3km s-min=7.9km az=123.0
MOS 13 04:29:24.3±1.6, 4179S×17281E, h85^{km}, mb5.0/10, Error ellipse: s-maj=12.2km s-min=11.8km az=174.6
HRVD 13 04:29:25.2±0.2, 4161S×17252E, h93^{km}±1^{km}, MW5.2/74, Centroid moment Tensor Solution. LP body waves: s53,c84; Mantle waves: s74,c114; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.21±.17; $M_{\theta\theta}$3.87±.21; $M_{\phi\phi}$-0.66±.19; $M_{r\theta}$3.79±.14; $M_{\theta\phi}$7.14±.18; $M_{\phi r}$-0.80±.13; Best double couple: $M_0$8.74300×10^{16} NP1:ϕ_s12.00000°, δ57.00000°, λ-163.00000°. NP2: ϕ_s273.00000°, δ75.00000°, λ-34.00000°. Principal axes: T 9.6360, Plg12.0000°, Azm326.0000°; N -1.7940, Plg53.0000°, Azm72.0000°; P -7.8500, Plg34.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
WEL 13 04:29:25.8±0.1, 4176S×17265E, h94^{km}±1^{km}, ML5.9/25 Error ellipse: s-maj=0.9km s-min=0.7km az=90.0, reported intensity MM 6.
WEL Felt from Northland to Otago, and from West Coast to Wairarapa, maximum.
NEIC 13 04:29:25.2, 4179S×17267E, h100^{km}, mb5.0/20, After WEL.
NEIC Felt widely in lower North Island and upper South Island.
BJI 13 04:29:25.2, 4187S×17361E, h115^{km}, mB5.7, mb5.2
ISC 13 04:29:25.5±0.2, 4191S±002×17288E±003, h99^{km}±4.1^{km}: pP-P, n292, σ1^{s}14/219, mb5.0/32, 20C-49D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	Tophouse	0.14	7	P	Pn	04 29 39.0	-0.4
THZ				S	Sn	04 29 48.1	-1.6
THZ	Tophouse	0.14	7	⇓PN	Pn	04 29 39.0	-0.4
THZ				eSN	Sn	04 29 48.2	-1.5
KHZ	Kahutara	0.71	136	P	Pn	04 29 44.7	+1.8
KHZ	Kahutara	0.71	136	⇑PN	Pn	04 29 44.7	+1.8
KHZ				SN	Sn	04 29 58.2	+2.3
BSWZ	Blackbirch Sta	0.77	76	P	Pn	04 29 44.9	+1.5
BSWZ	Blackbirch Sta	0.77	76	⇓PN	Pn	04 29 44.9	+1.5
NNZ	Nelson	0.78	29	P	Pn	04 29 43.3	-0.3
NNZ				S	Sn	04 29 56.7	-0.4
NNZ	Nelson	0.78	29	⇓PN	Pn	04 29 43.3	-0.3
NNZ				SN	Sn	04 29 56.5	-0.6
DSZ	Denniston Nort	0.82	281	P	Pn	04 29 41.7	-2.2
DSZ	Denniston Nort	0.82	281	⇑PN	Pn	04 29 41.7	-2.2
DSZ				eSN	Sn	04 29 53.0	-4.7
TUWZ	Tuamarina	0.93	60	⇓PN	Pn	04 29 46.0	+1.0
TUWZ				SN	Sn	04 30 00.4	+0.7
LTZ	Lake Taylor	0.99	207	P	Pn	04 29 46.4	+0.7
LTZ	Lake Taylor	0.99	207	⇑PN	Pn	04 29 46.4	+0.7
LTZ				SN	Sn	04 30 00.4	-0.5
CMWZ	Cape Campbell	1.01	82	P	Pn	04 29 47.6	+1.7
CMWZ	Cape Campbell	1.01	82	⇓PN	Pn	04 29 47.7	+1.7
QRZ	Quartz Range	1.11	346	P	Pn	04 29 45.1	-1.9
QRZ	Quartz Range	1.11	346	⇓PN	Pn	04 29 45.0	-2.0
QRZ				SN	Sn	04 29 58.6	-4.6
TCW	Tory Channel	1.25	57	P	Pn	04 29 49.7	+1.0
TCW	Tory Channel	1.25	57	⇓PN	Pn	04 29 49.7	+1.0
TCW				SN	Sn	04 30 06.1	-0.2
DUWZ	D'Urville Isla	1.35	36	⇓PN	Pn	04 29 50.3	+0.5
DUWZ				SN	Sn	04 30 08.9	+0.6
SNZO	South Karori	1.49	67	P	Pn	04 29 52.3	+0.7
SNZO	South Karori	1.49	67	⇑PN	Pn	04 29 52.3	+0.7
SNZO				eSN	Sn	04 30 11.6	+0.3
MRW	Makara Radio	1.52	64	P	Pn	04 29 52.7	+0.7
MRW	Makara Radio	1.52	64	⇓PN	Pn	04 29 52.7	+0.7
WEL	Wellington	1.54	67	P	Pn	04 29 53.0	+0.8
WEL	Wellington	1.54	67	⇓PN	Pn	04 29 52.9	+0.7
BHW	Baring Head	1.57	72	P	Pn	04 29 53.2	+0.6
BHW	Baring Head	1.57	72	⇓PN	Pn	04 29 53.2	+0.6
BHW				SN	Sn	04 30 13.2	+0.1
CRLZ	Canterbury Las	1.68	186	P	Pn	04 29 54.4	+0.4
CRLZ	Canterbury Las	1.68	186	⇑PN	Pn	04 29 54.4	+0.5
CRLZ				SN	Sn	04 30 14.3	-1.3
MQZ	McQueen's Vall	1.81	185	P	Pn	04 29 55.8	+0.2
MQZ	McQueen's Vall	1.81	185	⇑PN	Pn	04 29 55.8	+0.2
MQZ				SN	Sn	04 30 17.4	-1.1
CAW	Cannon Point	1.83	65	⇓PN	Pn	04 29 56.2	+0.4
CAW				SN	Sn	04 30 19.0	+0.2
MSWZ	Moikau Station	1.84	75	P	Pn	04 29 56.4	+0.4
MSWZ	Moikau Station	1.84	75	⇓PN	Pn	04 29 56.4	+0.4
MSWZ				SN	Sn	04 30 18.8	-0.4
KIW	Kapiti Island	1.85	56	P	Pn	04 29 56.7	+0.6
KIW	Kapiti Island	1.85	56	⇓PN	Pn	04 29 56.7	+0.6
KIW				SN	Sn	04 30 19.1	-0.2
WVZ	Waitaha Valley	1.97	233	⇓PN	Pn	04 29 56.7	-0.9
PAWZ	Paruwai Farm	1.98	76	P	Pn	04 29 57.9	+0.2
PAWZ	Paruwai Farm	1.98	76	⇓PN	Pn	04 29 57.9	+0.1
PAWZ				SN	Sn	04 30 22.0	-0.3
MTW	Mount Morrison	2.10	70	P	Pn	04 29 59.4	0.0
MTW	Mount Morrison	2.10	70	⇓PN	Pn	04 29 59.3	0.0
MTW				SN	Sn	04 30 25.3	0.0
TRWZ	Traveller	2.16	77	⇓PN	Pn	04 30 00.3	+0.1
RPZ	Rata Peaks	2.25	216	P	Pn	04 30 00.5	-0.9
	baz=19,slow=14						
RPZ				S	Sn	04 30 26.9	-1.9
	2µm,0.3s,baz=15,slow=22,SNR=35						
RPZ	Rata Peaks	2.25	216	P	Pn	04 30 00.4	-0.9
RPZ	Rata Peaks	2.25	216	⇓PN	Pn	04 30 00.4	-1.0
RPZ				SN	Sn	04 30 27.1	-1.6
MRZ	Mangatainoka R	2.38	60	P	Pn	04 30 02.7	-0.3
MRZ	Mangatainoka R	2.38	60	⇓PN	Pn	04 30 02.7	-0.4
TIWZ	Tintock	2.53	65	⇓PN	Pn	04 30 04.4	-0.5
WAZ	Wanganui	2.67	37	P	Pn	04 30 07.6	+0.7
WAZ	Wanganui	2.67	37	⇓PN	Pn	04 30 07.6	+0.7
NRZ	Ngariki Road	2.69	18	P	Pn	04 30 07.2	+0.2
NRZ	Ngariki Road	2.69	18	⇑PN	Pn	04 30 07.2	+0.2
NWEZ	Newall Road	2.73	16	⇓PN	Pn	04 30 07.8	+0.2
DFE	Dawson Falls	2.74	20	P	Pn	04 30 08.4	+0.7
NEZ	North Egmont	2.79	20	P	Pn	04 30 08.4	0.0
NEZ	North Egmont	2.79	20	⇑PN	Pn	04 30 08.3	0.0
BFZ	Birch Farm	2.81	65	P	Pn	04 30 07.8	-0.9
BFZ	Birch Farm	2.81	65	⇓PN	Pn	04 30 07.8	-1.0
PKE	Pukeiti	2.83	18	P	Pn	04 30 09.0	0.0
PKE	Pukeiti	2.83	18	⇓PN	Pn	04 30 09.0	0.0
RAEZ	Rainy Point	2.86	24	P	Pn	04 30 09.9	+0.6
RAEZ	Rainy Point	2.86	24	⇓PN	Pn	04 30 09.9	+0.6
FOZ	Fox Glacier	2.88	234	⇓PN	Pn	04 30 06.8	-2.8
TSZ	Takapari Road	2.97	53	P	Pn	04 30 09.9	-0.9
TSZ	Takapari Road	2.97	53	⇓PN	Pn	04 30 09.8	-1.0
VRZ	Vera Road	3.12	28	P	Pn	04 30 13.2	+0.3
VRZ	Vera Road	3.12	28	⇓PN	Pn	04 30 13.1	+0.2
LBZ	Lake Benmore	3.17	218	P	Pn	04 30 11.7	-1.8
LBZ	Lake Benmore	3.17	218	⇓PN	Pn	04 30 11.7	-1.7
PKVZ	Pokaka	3.22	37	⇓PN	Pn	04 30 13.5	-0.6
WNVZ	Wahianoa	3.30	40	P	Pn	04 30 14.9	-0.3
MOVZ	Moawhango	3.31	42	P	Pn	04 30 14.6	-0.8
MOVZ	Moawhango	3.31	42	⇓PN	Pn	04 30 14.5	-0.9
DRZ	Dome Shelter	3.33	39	P	Pn	04 30 15.6	0.0
TUVZ	Tukino	3.38	40	P	Pn	04 30 16.0	-0.2
TUVZ	Tukino	3.38	40	⇓PN	Pn	04 30 15.9	-0.4
WPVZ	Whakapapa	3.38	38	P	Pn	04 30 15.9	-0.3
NGZ	Ngauruhoe	3.42	38	P	Pn	04 30 16.4	-0.5
OTVZ	Oturere	3.46	39	⇓PN	Pn	04 30 17.0	-0.4
WTVZ	West Tongariro	3.47	37	P	Pn	04 30 16.7	-0.8
ODZ	Otahua Downs	3.54	207	P	Pn	04 30 17.7	-0.7
ODZ	Otahua Downs	3.54	207	⇓PN	Pn	04 30 17.7	-0.7
PXZ	Pawanui	3.55	60	⇓PN	Pn	04 30 16.8	-1.8
KATZ	Kakaramea	3.63	37	P	Pn	04 30 19.6	0.0
HIZ	Hauiti	3.71	25	P	Pn	04 30 20.0	-0.7
HIZ	Hauiti	3.71	25	⇓PN	Pn	04 30 20.0	-0.8
JCZ	Jackson Bay	3.72	233	eP	Pn	04 30 18.2	-2.7
JCZ	Jackson Bay	3.72	233	⇓PN	Pn	04 30 18.0	-2.9
RATZ	Rangitukua	3.75	37	P	Pn	04 30 21.6	+0.3
WATZ	Wairara	3.87	35	P	Pn	04 30 22.2	-0.6
BKZ	Black Stump Fm	3.88	46	P	Pn	04 30 21.4	-1.6
BKZ	Black Stump Fm	3.88	46	⇓PN	Pn	04 30 21.3	-1.7
HATZ	Hinemaiaia	3.88	40	P	Pn	04 30 21.2	-1.9
WHTZ	Whakaora	4.00	37	P	Pn	04 30 23.6	-1.0
WKZ	Wanaka	4.06	223	⇓PN	Pn	04 30 22.2	-3.2
EAZ	Earnscleugh	4.22	217	eP	Pn	04 30 24.5	-3.1
EAZ	Earnscleugh	4.22	217	⇓PN	Pn	04 30 24.4	-3.2
PATZ	Paeroa	4.37	37	P	Pn	04 30 28.5	-1.1
MSZ	Milford Sound	4.55	231	P	Pn	04 30 29.5	-2.6
TAZ	Tarawera	4.60	38	P	Pn	04 30 31.0	-1.8
TOZ	Tahuroa Road	4.63	27	P	Pn	04 30 32.0	-1.2
TOZ	Tahuroa Road	4.63	27	⇑PN	Pn	04 30 31.9	-1.3
KNZ	Kokohu	4.65	53	P	Pn	04 30 30.3	-3.2
TUZ	Tuapeka	4.68	209	P	Pn	04 30 32.4	-1.4
TUZ	Tuapeka	4.68	209	⇓PN	Pn	04 30 32.2	-1.7
MLZ	Mavora Lakes	4.85	223	eP	Pn	04 30 33.1	-3.0
URZ	Urewera	4.88	43	P	Pn	04 30 33.0	-3.5
	30nm,0.3s,baz=242,slow=11,SNR=114						
URZ				S	Sn	04 31 27.8	-4.0
	323nm,0.3s,baz=105,slow=20,SNR=25						
URZ	Urewera	4.88	43	P	Pn	04 30 33.2	-3.3
MWZ	Matawai	5.04	47	P	Pn	04 30 35.6	-3.1
MKAZ	Moumakai	5.10	21	P	Pn	04 30 39.0	-0.6
MKAZ	Moumakai	5.10	21	⇓PN	Pn	04 30 38.9	-0.7
WTAZ	Waiatarua	5.13	15	P	Pn	04 30 40.1	+0.1
OTAZ	Otara	5.19	18	P	Pn	04 30 40.7	-0.1
KAAZ	Kauri Point	5.27	16	P	Pn	04 30 42.4	+0.6
MTAZ	Motutapu	5.35	18	P	Pn	04 30 42.1	-0.8
WHZ	Wether Hill Ro	5.35	220	eP	Pn	04 30 39.4	-3.5
DCZ	Deep Cove	5.48	227	eP	Pn	04 30 41.1	-3.5
KUZ	Kuaotunu	5.60	24	P	Pn	04 30 44.8	-1.5
PUZ	Puketiti	5.63	49	P	Pn	04 30 42.6	-4.1
MXZ	Matakaoa Point	6.02	46	P	Pn	04 30 48.7	-3.4
OUZ	Omahuta	6.70	5	eP	Pn	04 31 00.3	-0.9
TAU	Tasmania Unive	18.89	258	Pn	Pn	04 33 44.8	+5.0
	466nm,0.7s,SNR=13						
TAU	Tasmania Unive	18.89	258	eP	Pn	04 33 43.4	+3.6
TAU				pmax	pmax		
	comp=Z,189nm,1.4s						
TAU	Tasmania Unive	18.89	258	eP	Pn	04 33 43.4	+3.6
	comp=Z,189nm,1.4s						
RIV	Riverview	18.92	288	eP	Pn	04 33 42.4	+2.3
CNB	Canberra Magne	19.49	282	eP	Pn	04 33 47.1	+0.2
	comp=Z,8.5nm,0.5s						
DZM	Mont Dzumac	20.50	343	eP	P	04 33 56.9	+1.3
DZM	Mont Dzumac	20.50	343	P	P	04 33 57.0	+1.4
	comp=Z,96nm,0.9s,baz=159,slow=11,SNR=43						
DZM				LR	LR	04 40 40.3	
	comp=Z,176nm,19.9s,baz=27,slow=33						
ARMA	Armidale	20.58	297	eP	P	04 33 58.7	+2.3
TOO	Toolangi	21.46	273	eP	P	04 34 07.4	+1.5
	comp=Z,25nm,1.1s,mb4.5						
TOO	Toolangi	21.46	273	eP	P	04 34 07.4	+1.5
TOO				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.5						
STKA	Stephens Creek	26.82	282	eP	P	04 34 58.5	+2.0
	comp=Z,7.4nm,0.9s,mb4.2						
STKA	Stephens Creek	26.82	282	P	P	04 34 57.3	+0.8
	comp=Z,8.1nm,0.9s,mb4.3,baz=115,slow=8.4,SNR=6.6						
STKA				pP	pP	04 35 18.3	-0.1
	comp=Z,20nm,0.9s,baz=105,slow=11,SNR=8.0						
RAR	Rarotonga	30.90	57	P	P	04 35 33.5	+0.8
	comp=Z,39nm,1.1s,mb5.0,baz=259,slow=8.1,SNR=3.8						
RAR				pP	pP	04 35 54.3	-0.6
	comp=Z,62nm,0.9s,baz=230,slow=7.3,SNR=8.0						
RAR				LR	LR	04 45 02.0	
	comp=Z,108nm,21.5s,baz=250,slow=30						
RAR	Rarotonga	30.90	57	P	P	04 35 33.5	+0.8
RAR				*PP	pP	04 35 54.3	-0.6
RAR	Rarotonga	30.90	57	P	P	04 35 33.5	+0.8
RAR				pP	pP	04 35 54.3	-0.6
RAR				LR	LR	04 45 02.0	
CTA	Charters Tower	31.30	306	eP	P	04 35 36.8	+0.6
	comp=Z,21nm,0.9s,mb4.9						
CTA	Charters Tower	31.30	306	P	P	04 35 37.3	+1.0
	comp=Z,24nm,0.8s,mb5.0,baz=135,slow=9.6,SNR=15						
CTA				LR	LR	04 46 22.2	
	comp=Z,256nm,21.7s,baz=152,slow=32						
CTA	Charters Tower	31.30	306	eP	P	04 35 36.8	+0.6
CTA				pmax	pmax		
	comp=Z,21nm,0.9s						
CTAO	Charters Tower	31.30	306	eP	P	04 35 36.9	+0.7
CTAO				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
CTAO	Charters Tower	31.30	306	eP	P	04 35 36.9	+0.7
	comp=Z,30nm,0.9s,mb5.0						
HNR	Honiara	34.29	337	LR	LR	04 47 14.7	
	comp=Z,260nm,19.3s,baz=178,slow=31						
VNDA	Vanda	36.02	184	P	P	04 36 21.0	+4.0
	comp=Z,1.4nm,0.7s,mb4.0,baz=2.9,slow=8.3,SNR=6.8						
VNDA				ScP	ScP	04 42 17.9	-0.8
	comp=Z,1.1nm,0.7s,baz=344,slow=2.3,SNR=5.6						
VNDA				LR	LR	04 49 58.4	
	comp=Z,164nm,19.2s,baz=16,slow=34						
VNDA	Vanda	36.02	184	P	P	04 36 21.0	+3.9
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VNDA				pmax	pmax		
	comp=N,1.0nm,0.7s						
VNDA				MLR	MLR		
	comp=Z,165nm,19.2s						
VNDA	Vanda	36.02	184	eP	P	04 36 22.2	+5.2
	comp=Z,54nm,2.3s,mb5.1						
TBI	Tubuai	36.35	71	eLR	LR	04 46 20.9	
	comp=Z,351nm,35.2s						
AS31	Alice Springs	37.09	287	⇑iP	P	04 36 26.6	+0.4
ASAR	Alice Springs	37.09	287	P	P	04 36 25.9	-0.2
	comp=Z,7.5nm,0.5s,mb4.8,baz=126,slow=7.3,SNR=70						
ASAR				pP	pP	04 36 47.6	-1.2
	comp=Z,4.3nm,0.7s,baz=128,slow=8.8,SNR=4.3						
ASAR				PcP	PcP	04 38 44.2	-0.5
	comp=Z,2.7nm,0.6s,baz=126,slow=4.3,SNR=4.4						
ASAR				LR	LR	04 49 59.1	
	comp=Z,394nm,19.1s,baz=138,slow=33						
ASAR	Alice Springs	37.09	287	P	P	04 36 26.0	-0.2
ASAR				*PP	pP	04 36 47.6	-1.2
ASAR						04 38 44.2	
ASPA	Alice Springs	37.09	287	⇑iP	P	04 36 26.6	+0.4
FORT	Forrest	37.39	272	eP	P	04 36 28.9	+0.2
	comp=Z,18nm,0.9s,mb5.0						
WB2	Warramunga Arr	39.20	292	eP	P	04 36 43.7	-0.2
WRAB	Tennant Creek	39.20	292	P	P	04 36 44.0	+0.1
	comp=Z,517nm,0.6s,mb6.5,SNR=64						
WRAB	Tennant Creek	39.20	292	⇑iP	P	04 36 43.9	-0.1
	comp=Z,92nm,0.8s,mb5.7						
PMG	Port Moresby	39.50	318	P	P	04 36 47.8	+1.4
	comp=Z,70nm,0.8s,mb5.5,baz=142,slow=5.5,SNR=13						
PMG				pP	pP	04 37 08.4	-0.8
	comp=Z,61nm,0.9s,baz=160,slow=4.6,SNR=6.2						
PMG				LR	LR	04 50 30.6	
	comp=Z,252nm,19.4s,baz=59,slow=32						
PMG	Port Moresby	39.50	318	⇑iP	P	04 36 47.6	+1.2
PMG				e*PP	pP	04 37 08.2	-1.0
PMG				pmax	pmax		
	comp=Z,76nm,0.9s						
PMG	Port Moresby	39.50	318	⇑iP	P	04 36 47.6	+1.2
	comp=Z,76nm,0.9s,mb5.5						
PMG				epP	pP	04 37 08.2	-1.0

PPT	Papeete	40.16	64	eLR	LR	04 47 59.7	
	comp=Z,659nm,34.0s						
PPT	Papeete	40.16	64	P	P	04 36 53.0	+1.1
	comp=Z,28nm,0.8s,mb5.1,baz=122,slow=6.9,SNR=2.9						
PPT				LR	LR	04 49 23.6	
	comp=Z,170nm,19.8s,baz=185,slow=30						
CASY	Casey	41.52	213	eP	P	04 37 04.7	+1.7
NWAO	Narrogin (SRO)	44.42	263	LR	LR	04 52 03.5	
	comp=Z,204nm,21.2s,baz=79,slow=31						
KLBR	Kellerberrin	44.67	265	eP	P	04 37 28.0	-0.4
	comp=Z,19nm,0.7s,mb4.9						
KAKA	Kakadu	45.58	298	eP	P	04 37 35.7	+0.1
	comp=Z,40nm,0.6s,mb5.3						
MUN	Mundaring	45.63	263	eP	P	04 37 36.3	+0.3
FITZ	Fitzroy Crossi	46.57	286	⇓iP	P	04 37 43.1	-0.2
	comp=Z,13nm,0.4s,mb5.0						
FITZ	Fitzroy Crossi	46.57	286	P	P	04 37 43.8	+0.4
	comp=Z,7.9nm,0.5s,mb4.7,baz=146,slow=7.9,SNR=58						
FITZ				PcP	PcP	04 39 16.9	+1.0
	comp=Z,5.7nm,0.8s,baz=146,slow=7.0,SNR=3.0						
RKT	Rikitea	47.04	83	eLR	LR	04 51 10.7	
	comp=Z,259nm,34.8s						
QSPA	South Pole Qui	48.22	180	⇓iP	P	04 38 00.9	+4.7
	comp=Z,65nm,0.7s,mb5.6						
MIR	Mirnyy	48.52	212	eP	P	04 38 00.0	+1.6
MIR				e		04 38 33.0	
MIR				pmax	pmax		
	comp=Z,300nm,2.0s,mb5.9						
MBWA	Marble Bar	48.95	278	eP	P	04 38 01.1	-0.7
	comp=Z,15nm,0.7s,mb5.0						
MAW	Mawson	58.89	205	eP	P	04 39 16.1	+2.1
	comp=Z,14nm,1.0s,mb5.0						
MAW	Mawson	58.89	205	P	P	04 39 16.1	+2.1
	comp=Z,9.8nm,0.4s,mb5.2,baz=122,slow=7.9,SNR=169						
MAW				LR	LR	05 02 10.0	
	comp=Z,146nm,18.8s,baz=103,slow=33						
MAW	Mawson	58.89	205	eP	P	04 39 16.1	+2.1
MAW				pmax	pmax		
	comp=Z,14nm,1.0s						
SYO	Syowa Base	64.14	197	⇑iP	P	04 39 50.0	+0.7
SYO	Syowa Base	64.14	197	⇓iX		04 40 14.0	
SNAA	Sanae	66.69	181	eP	P	04 40 07.5	+1.7
SNAA				pmax	pmax		
	comp=Z,31nm,1.4s						
SNAA	Sanae	66.69	181	eP	P	04 40 07.5	+1.7
	comp=Z,31nm,1.4s,mb4.9						
VNA1	Neumayer--Stat	67.75	180	⇓iP	P	04 40 15.1	+2.6
VNA1				e		04 40 16.2	
VNA1				e		04 40 19.3	
VNA1				e		04 40 21.0	
VNA1				e		04 40 23.8	
VNA1				e	pP	04 40 39.1	+1.7
VNA1				e	pP	04 40 41.1	+3.7
VNA1				e		04 40 46.0	
VNA1				e		04 40 48.5	
VNA1				e		04 40 54.8	
VNA1				e		04 41 00.2	
KKM	Kota Kinabalu	70.22	298	⇑iP	P	04 40 28.3	+0.5
KSM	Kuching	70.93	290	eP	P	04 40 32.8	+0.7
PLCA	Paso Flores	79.70	136	P	P	04 41 25.9	+3.6
	comp=Z,6.8nm,0.9s,mb4.5,baz=221,slow=7.2,SNR=3.2						
PLCA	Paso Flores	79.70	136	eP	P	04 41 26.4	+4.1
PLCA				pmax	pmax		
	comp=Z,35nm,1.6s						
PLCA	Paso Flores	79.70	136	eP	P	04 41 26.4	+4.0
	comp=Z,35nm,1.6s,mb4.9						
PSI	Prapat	79.99	283	P	P	04 41 27.1	+3.1
	comp=Z,1.8nm,0.5s,mb4.2,baz=183,slow=8.1,SNR=3.6						
PSI				pP	pP	04 41 47.1	-2.4
	comp=Z,18nm,0.9s,baz=187,slow=5.2,SNR=5.9						
KULM	Kulim	80.45	286	eP	P	04 41 27.6	+1.3
MJAR	Matsushiro Arr	84.26	333	P	P	04 41 46.2	0.0
	comp=Z,6.2nm,1.0s,mb4.4,baz=168,slow=6.3,SNR=15						
MJAR				pP	pP	04 42 11.0	-0.9
	comp=Z,1.6nm,0.7s,baz=168,slow=7.8,SNR=3.2						
MAJO	Matsushiro	84.26	333	eP	P	04 41 46.1	-0.1
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
MAJO	Matsushiro	84.26	333	eP	P	04 41 46.1	-0.1
	comp=Z,6.8nm,0.9s,mb4.5						
MAT	Matsushiro	84.26	333	P	P	04 41 46.1	-0.1
MAT				eS	S	04 51 59.0	-4.5
MAT	Matsushiro	84.26	333	eP	P	04 41 46.0	-0.2
MAT				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.6						
MAT	Matsushiro	84.26	333	eP	P	04 41 46.0	-0.2
	comp=Z,12nm,1.2s,mb4.6						
NJ2	Nanjing	88.80	317	eP	P	04 42 09.3	+1.0
NJ2				AP	pP	04 42 38.1	+3.8
NJ2				S	S	04 52 47.0	-0.4
NJ2				XS	sS	04 53 37.0	+4.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,120nm,10.1s						
NJ2				LR	LR		
	comp=N,800nm,30.4s						
NJ2				LR	LR		
	comp=E,550nm,31.6s						
NJ2				LR	LR		
	comp=Z,250nm,19.9s						
ASAJ	Asahikawa	89.84	339	P	P	04 42 14.8	+1.6
	comp=Z,12nm,0.8s,mb5.0,baz=245,slow=6.9,SNR=14						
ASAJ				pP	pP	04 42 37.2	-2.0
	comp=Z,6.1nm,0.8s,baz=276,slow=17,SNR=2.3						
ASAJ	Asahikawa	89.84	339	P	P	04 42 14.8	+1.6
ASAJ				*PP	pP	04 42 37.2	-2.0
ASAJ				pmax	pmax		
	comp=Z,12nm,0.8s						
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YSS	Yuzh-Sakhalins	92.43	340	d iP	P	04 42 26.4	+1.2
YSS				i *PP	pP	04 42 56.4	+5.2
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.9						
KMI	Kunming	92.93	301	P	P	04 42 33.3	+5.8
KMI				AP	pP	04 43 00.3	+6.8
KMI				XP	sP	04 43 12.3	+8.3
KMI				PP	PP	04 46 14.3	+3.1
KMI				S	S	04 53 22.8	-2.2
KMI				XS	sS	04 54 15.1	+5.1
KMI				SS	SS	04 59 45.3	+4.5
KMI				SSS		05 03 27.3	
KMI				AMB	AMB		
	comp=Z,6.0nm,1.7s,mb4.7						
KMI				AMB	AMB		
	comp=Z,156nm,5.9s						
KMI				LR	LR		
	comp=N,87nm,23.7s						
KMI				LR	LR		
	comp=E,93nm,20.8s						
KMI				LR	LR		
	comp=Z,111nm,18.8s						
MDJ	Mudanjiang	94.45	331	P	P	04 42 36.1	+1.6
MDJ				AP	pP	04 43 04.8	+4.2
MDJ				XP	sP	04 43 16.1	+5.1
MDJ				PP	PP	04 46 24.9	+1.8
MDJ				S	S	04 53 38.8	+0.4
MDJ				XS	sS	04 54 29.5	+6.0
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,62nm,4.6s						
MDJ				LR	LR		
	comp=N,36nm,37.7s						
MDJ				LR	LR		
	comp=E,53nm,37.7s						
MDJ				LR	LR		
	comp=Z,79nm,28.2s						
CN2	Changchun	95.35	328	eP	P	04 42 39.3	+0.7
CN2				eXP	sP	04 43 25.0	+10
CN2				eS	S	04 53 42.6	-3.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.4						
CD2	Chengdu	96.40	306	eP	P	04 42 43.1	-0.3
CD2				XP	sP	04 43 26.1	+6.2
CD2				PP	PP	04 46 41.3	+3.1
CD2				SKS		04 53 07.6	
CD2				S	S	04 53 50.6	-4.6
CD2				XS	sS	04 54 44.1	+3.7
CD2				SS	SS	05 00 32.6	+2.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
CD2				LR	LR		
	comp=N,80nm,25.2s						
CD2				LR	LR		
	comp=Z,80nm,20.4s						
CPUP	Villa Florida	97.77	136	P	P	04 42 52.8	+3.3
	comp=Z,1.2nm,0.7s,mb4.5,baz=205,slow=5.5,SNR=3.3						
CPUP				LR	LR	05 17 27.8	
	comp=Z,95nm,21.1s,baz=9.9,slow=30						
HHC	Hu-ho-hao-te	99.31	318	eP	P	04 42 57.0	+0.6
HHC				AP	pP	04 43 29.6	+7.0
HHC				XP	sP	04 43 43.1	+10
HHC				PP	PP	04 47 04.0	+3.6
HHC				SKS		04 53 22.3	
HHC				S	S	04 54 14.4	-5.5
HHC				XS	sS	04 55 11.8	+6.6
HHC				PS	PS	04 56 02.4	+3.2
HHC				SS	SS	05 01 10.8	-0.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb5.2						
HHC				AMB	AMB		
	comp=Z,63nm,6.0s						
HHC				LR	LR		
	comp=N,90nm,38.9s						
HHC				LR	LR		
	comp=E,92nm,36.1s						
HHC				LR	LR		
	comp=Z,88nm,35.1s						
LZH	Lanzhou	100.01	310	eP	Pdif	04 43 01.6	+2.0
LZH				AP		04 43 31.3	
LZH				XP		04 43 41.9	
LZH				PP	PP	04 47 11.0	+5.2
LZH				SKS		04 53 28.3	
LZH				eS	Sdif	04 54 24.0	-1.8
LZH				XS	sS	04 55 13.0	+1.9
LZH				SS	SS	05 01 21.0	+0.1
LZH				AMB	AMB		
	comp=Z,36nm,1.1s						
LZH				AMB	AMB		
	comp=Z,160nm,4.2s						
SONM	Songino Array	106.92	320	PKiKP	PKiKP	04 47 37.9	-1.7
	comp=Z,0.5nm,0.7s,baz=130,slow=2.3,SNR=3.7						
BILL	Bilibino	109.73	357	eP	Pdif	04 43 42.4	-0.4
BILL				e		04 54 06.7	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	Yellowknife Ar	119.02	30	PKP	PKPdf	04 47 59.9	-2.7
	comp=Z,0.8nm,0.7s,baz=264,slow=1.4,SNR=6.5						
YKA				PKKPbc	PKKPbc	04 58 17.2	+0.5
	comp=Z,0.5nm,0.7s,baz=48,slow=4.3,SNR=5.0						
YKA	Yellowknife Ar	119.02	30	PKP	PKPdf	04 47 59.9	-2.7
YKA				PKKPbc	PKKPbc	04 58 17.2	+0.5
WVT	Waverly	119.22	66	ePKIKP	PKPdf	04 48 02.0	-1.0
MKAR	Makanchi Array	119.26	308	PKP	PKPdf	04 48 01.9	-1.2
	comp=Z,0.9nm,0.5s,baz=101,slow=1.2,SNR=9.0						
MKAR				pPKP	pPKPdf	04 48 27.7	-2.5
	comp=Z,1.1nm,0.8s,baz=120,slow=0.4,SNR=2.6						
MKAR	Makanchi Array	119.26	308	i PKIKP	PKPdf	04 48 01.9	-1.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WCI	Wyandotte Cave	121.36	65	ePKIKP	PKPdf	04 48 06.1	-1.0
KURK	Kurchatov	123.29	311	⇑iPKIKP	PKPdf	04 48 09.9	-0.9
KURK	Kurchatov	123.29	311	ePKPdf	PKPdf	04 48 09.5	-1.4
BRVK	Borovoye	128.96	311	ePKIKP	PKPdf	04 48 21.3	-0.4
ARU	Arti	136.39	313	i PKIKP	PKPdf	04 48 33.2	-2.4
KIV	Kislovodsk	143.92	290	c iPKIKP	PKPdf	04 48 47.4	-1.9
KIV				e		04 49 19.6	
KIV				e		04 52 02.5	
KIV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GOF	Gofitskoye	143.94	292	ePKIKP	PKPdf	04 48 46.8	-2.5
GOF				pmax	pmax		
	comp=Z,90nm,0.7s						
EIL	Elat	144.09	264	ePKPdf	PKPdf	04 48 48.8	-0.8
LIC	Lamto	144.42	184	⇑iPKIKP	PKPdf	04 48 50.6	+0.5
	comp=Z,47nm,0.6s						
DBIC	Dimbokro	144.86	184	PKP	PKPdf	04 48 51.7	+0.8
	comp=Z,24nm,0.5s,baz=157,slow=4.1,SNR=56						
DBIC				pPKP	pPKPdf	04 49 15.8	-2.3
	comp=Z,22nm,0.8s,baz=144,slow=4.2,SNR=4.3						
DBIC	Dimbokro	144.86	184	PKIKP	PKPdf	04 48 51.7	+0.8
DBIC						04 49 15.8	
DBIC				pmax	pmax		
	comp=Z,24nm,0.5s						
DBIC				pmax	pmax		
	comp=Z,22nm,0.9s						
DBIC	Dimbokro	144.86	184	ePKPbc	PKPdf	04 48 51.5	+0.6
ELZG	Elazig	144.95	280	i P	PKPdf	04 48 51.4	+0.4
MALT	Malatya	145.29	280	ePKIKP	PKPdf	04 48 52.5	+0.9
KELT	Kelkit	145.30	283	i P	PKPbc	04 48 51.8	+0.2
GZT	Gaziantep	145.58	278	i P	PKPdf	04 48 53.1	+0.9
SUMG	Summit	145.75	16	ePKPbc	PKPdf	04 48 52.1	-0.3
LVZ	Lovozero	145.75	333	i PKIKP	PKPdf	04 48 50.9	-1.5
VRHR	Novokhopersk	145.77	303	ePKP2	PKPab	04 48 53.1	-0.5
VRHR				pmax	pmax		
	comp=Z,20nm,0.5s						
VRHR				pmax	pmax		
	comp=N,40nm,0.4s						
KLMR	Klimovskoe	146.21	320	i PKIKP	PKPdf	04 48 52.7	-0.5
KLMR				pmax	pmax		
	comp=Z,130nm,1.6s						
KEV	Kevo	147.02	339	epkp	PKPdf	04 48 53.7	-0.9
VRSR	Storozhevoye	147.31	303	i PKP2	PKPdf	04 48 56.8	+1.8
VRSR				pmax	pmax		
	comp=Z,20nm,1.4s						
ARCES	ARCESS Array B	147.56	339	PKPbc	PKPdf	04 48 56.2	+0.8
	comp=Z,7.1nm,0.6s,baz=46,slow=1.2,SNR=38						
ARCES	ARCESS Array B	147.56	339	PKPbc	PKPdf	04 48 56.2	+0.8
ARE0	ARCESS Array S	147.56	339	ePKPbc	PKPdf	04 48 56.0	+0.6
ANN	Anapa	147.78	290	i PKP2	PKPab	04 49 01.3	-0.1
ANN				pmax	pmax		
	comp=Z,33nm,1.2s						
OBN	Obninsk	148.73	310	d iPKP2	PKPdf	04 49 00.8	+3.4
OBN				e		04 52 35.6	
OBN				pmax	pmax		
	comp=Z,32nm,0.9s						
OBN	Obninsk	148.73	310	ePKPbc	PKPdf	04 49 00.8	+3.4
JOF	Joensuu	149.23	326	epkp	PKPdf	04 48 59.6	+1.4
BR131	Keskin Array S	149.28	280	ePKPbc	PKPbc	04 49 02.5	-0.2
BRTR	Keskin Array B	149.28	280	PKPbc	PKPbc	04 49 02.5	-0.1
	comp=Z,4.3nm,0.6s,baz=138,slow=3.8,SNR=23						
BRTR				pPKPbc	pPKPbc	04 49 26.6	-3.0
	comp=Z,11nm,0.8s,baz=141,slow=6.4,SNR=9.9						
ELDT	Eldivan	149.65	281	i P	PKPdf	04 49 01.3	+2.4
BALT	Daday	149.96	283	i P	PKPdf	04 49 03.7	+4.4
TOA0	Torodi Ar. Sit	150.34	198	ePKPbc	PKPbc	04 49 05.8	+0.6
TOA0				ePKPab	PKPab	04 49 13.3	+1.4
TORD	Torodi Ar. Bea	150.34	198	PKPbc	PKPbc	04 49 05.3	+0.1
	comp=Z,6.1nm,0.4s,baz=253,slow=0.2,SNR=75						
TORD				PKPab	PKPab	04 49 13.0	+1.1
	comp=Z,8.5nm,0.4s,baz=159,slow=3.2,SNR=19						
TORD				pPKPab	pPKPab	04 49 36.3	-1.9
	comp=Z,13nm,0.8s,baz=162,slow=3.2,SNR=3.8						
SGKT	Sivrigoynuk	150.68	281	i P	PKPdf	04 49 05.2	+4.7
TKTP	Tekketepe	151.20	275	i P	PKPdf	04 49 05.6	+4.3
ESKT	Eskisehir	151.27	278	i P	PKPdf	04 49 04.6	+3.2
KAF	Kangasniemi	151.67	327	epkp	PKPdf	04 49 06.2	+4.2
FIA1	FINESS Array S	152.09	326	ePKPbc	PKPbc	04 49 07.7	-1.6
FIA1				ePKPab	PKPab	04 49 18.0	-1.2
FINES	FINESS Array B	152.09	326	PKPbc	PKPbc	04 49 08.0	-1.3
	comp=Z,9.5nm,0.6s,baz=81,slow=2.8,SNR=92						
FINES				PKPab	PKPab	04 49 17.9	-1.2
	comp=Z,6.7nm,0.7s,baz=83,slow=6.0,SNR=9.4						
FINES				pPKPbc	pPKPbc	04 49 31.5	-4.8
	comp=Z,6.6nm,0.5s,baz=75,slow=3.8,SNR=5.6						
FINES	FINESS Array B	152.09	326	⇑iPKIKP	PKPdf	04 49 08.0	+5.4
FINES	FINESS Array B	152.09	326	PKPbc	PKPbc	04 49 08.0	-1.3
FINES				PKPab	PKPab	04 49 17.9	-1.2
FINES				pPKPbc	pPKPbc	04 49 31.5	-4.8
ULDT	Uludag	152.71	279	i P	PKPdf	04 49 09.7	+6.2
AKASG	Malin Array Be	153.62	302	PKPbc	PKPbc	04 49 11.5	-1.2
	comp=Z,1.6nm,0.4s,baz=70,slow=3.0,SNR=17						
AKASG				PKPab	PKPab	04 49 24.6	-1.1
	comp=Z,3.2nm,0.6s,baz=70,slow=3.7,SNR=17						
AKBB	Malin Array Si	153.62	302	ePKIKP	PKPdf	04 49 11.1	+6.3
AKBB				e		04 49 24.7	
NB2	NORSAR Subarra	157.84	336	P	PKPab	04 49 42.1	-1.6
	comp=Z,4.7nm,0.8s,baz=48,slow=4.8						
NOA	NORSAR Array B	157.84	336	PKPab	PKPab	04 49 42.0	-1.8
	comp=Z,3.8nm,0.8s,baz=41,slow=4.6,SNR=12						
NOA				pPKPab	pPKPab	04 50 06.2	-3.7
	comp=Z,2.0nm,0.8s,baz=39,slow=4.6,SNR=3.2						
NOA	NORSAR Array B	157.84	336	PKP2	PKPab	04 49 42.0	-1.7
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KOLS	Kolonicke sedl	158.30	299	e	PKPab	04 49 47.3	+1.6
CRVS	Cervenica-Dubn	158.83	299	ePKP	PKPab	04 49 48.7	+0.7
KECS	Kecovo	159.53	298	ePKP	PKPab	04 49 49.6	-1.5
VYHS	Vyhne	160.61	299	ePKP	PKPab	04 49 54.2	-1.6
VYHS	Vyhne	160.61	299	ePKP2	PKPab	04 49 54.3	-1.5
DPC	Dobruska-Polom	161.75	306	ePKPab	PKPab	04 50 01.5	+0.8
UPC	Upice	161.88	306	ePKPab	PKPab	04 50 02.1	+0.8
PVCC	Panska Ves	162.74	307	ePKPab	PKPab	04 50 05.9	+0.8
PRU	Pruhonice	162.95	306	ePKPab	PKPab	04 50 05.2	-0.8
BRG	Berggiesshubel	162.97	309	ePKPab	PKPab	04 50 06.2	+0.1
BRG	Berggiesshubel	162.97	309	eP	PKPab	04 50 06.6	+0.5
	comp=Z,6.3nm,0.9s						
BRG				e		04 50 29.7	
	comp=Z,4.3nm,0.9s						
BRG	Berggiesshubel	162.97	309	ePKP2	PKPab	04 50 06.6	+0.5
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BSEG	Bad Segeberg	163.28	322	ePKPab	PKPab	04 50 07.1	-0.4
FBE	Freiberg	163.29	310	ePKPab	PKPab	04 50 08.2	+0.7
CLL	Collm	163.32	311	ePKPab	PKPab	04 50 07.0	-0.7
	comp=Z,6.0nm,1.1s						
CLL	Collm	163.32	311	ePKP2	PKPab	04 50 07.0	-0.7
CLL				pmax	pmax		
	comp=Z,11nm,1.1s						
KHC	Kasperske Hory	163.82	304	ePKPab	PKPab	04 50 10.4	+0.6
GERES	GERESS Array B	163.84	302	PKPab	PKPab	04 50 10.0	+0.1
	comp=Z,1.7nm,0.9s,baz=60,slow=5.4,SNR=12						
GERES				pPKPab	pPKPab	04 50 32.3	-3.8
	comp=Z,0.6nm,0.8s,baz=97,slow=3.2,SNR=2.2						
GERES	GERESS Array B	163.84	302	PKP2	PKPab	04 50 10.0	+0.1
GERES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TANN	Tannenbergstha	164.02	309	ePKPab	PKPab	04 50 11.2	+0.5
WERD	Werda	164.10	309	ePKPab	PKPab	04 50 11.1	+0.1
NKC	Novy Kostel	164.10	308	ePKPab	PKPab	04 50 10.3	-0.8
GUNZ	Gunzen	164.12	309	ePKPab	PKPab	04 50 11.6	+0.5
WERN	Wernitzgruen	164.12	308	ePKPab	PKPab	04 50 12.0	+0.8
MANZ	Manzenberg	164.40	308	ePKPab	PKPab	04 50 13.3	+0.9
MOX	Moxa	164.41	310	ePKPab	PKPab	04 50 12.7	+0.3
ROTZ	Rotzenmuhle	164.43	307	ePKPab	PKPab	04 50 13.5	+1.0
IBBN	Ibbenburen	165.51	321	ePKPab	PKPab	04 50 17.0	-0.3
KEST	Kesra	165.77	250	PKPab	PKPab	04 50 19.9	+1.5
	comp=Z,0.7nm,0.8s,baz=262,slow=12,SNR=2.8						
KEST				pPKPab	pPKPab	04 50 42.4	-2.2
	comp=Z,1.8nm,0.9s,baz=159,slow=5.0,SNR=5.0						
CDF	Champ du Feu	167.94	308	ePKP2	PKPab	04 50 26.5	-1.5
	comp=Z,31nm,1.2s						
HAU	Haudompre	168.68	307	ePKP2	PKPab	04 50 29.0	-2.3
CAF	Calviac	172.66	297	ePKP2	PKPab	04 50 47.4	-1.5
	comp=Z,27nm,1.4s						
ESDC	Sonseca Array	176.73	228	PKP	PKPdf	04 49 23.5	-0.6
	comp=Z,0.9nm,0.8s,baz=63,slow=0.4,SNR=4.1						
ESDC				PKPab	PKPab	04 51 06.8	-0.2
	comp=Z,0.8nm,0.8s,baz=106,slow=3.1,SNR=4.5						

NIED ***13*** *04:31:00, 24.20N×122.40E, h17km, Mw4.4 Best double couple: M₀4.01000×10[15] NP1:φs75.00000°, δ70.00000°, λ70.00000°. NP2:φs302.00000°, δ28.00000°, λ133.00000°.*
ISCJB ***13*** *04:31:54.3±0.4, 24.01N±0.03×122.32E±0.02, h39km±4km, mb4.6/58, MS4.0/7, Error ellipse: s-maj=5.1km s-min=3.4km az=173.2*
BJI ***13*** *04:31:55.0, 24.03N×122.33E, h36km, mB4.6, mb4.5, ML4.4, Ms4.2, Msz4.0*
JMA ***13*** *04:31:55.7±0.2, 24.18N×122.36E, h49km±5km, M4.6*
NEIC ***13*** *04:31:55.4±0.8, 24.04N×122.34E, h36km±6km, mb4.8/30, ML5.1(TAP), Error ellipse: s-maj=10.1km s-min=6.1km az=187.0*
NEIC Recorded [2 TAP] in I-lan County.
IDC ***13*** *04:31:56.4±3.9, 24.13N×122.49E, h46km±37km, mb4.2/15, mb1 4.2/17, mb1mx4.1/22, mbtmp4.3/17, ML3.7/2, MS3.7/7, Ms1 3.7/7, ms1mx3.3/31, Error ellipse: s-maj=26.2km s-min=17.6km az=60.0*
MOS ***13*** *04:31:57.5±0.7, 24.49N×122.31E, h50km, mb5.0/26, Error ellipse: s-maj=15.7km s-min=7.1km az=117.2*
ISC 13 04:31:56.1±0.4**, 24.06N**±0.03×**122.35E**±0.02**, h40**km±3km**,**
n162, σ1.03/178**, mb4.6**/58**, MS4.0**/7**, 13C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.70	279	ePn	Pn	04 32 08.1	-1.4
YOJ	Yonaguni jima	0.72	56	P	Pn	04 32 08.9	-0.9
YOJ				S	Sn	04 32 18.3	-1.4
YHNB	Yeheng	1.07	305	ePn	Pn	04 32 14.9	+0.3
TATO	Taipei	1.20	319	⇑P	Pn	04 32 17.6	+1.3
	SNR=81						
TATO	Taipei	1.20	319	ePn	Pn	04 32 17.3	+0.9
IRIF	Iriomote-Funau	1.29	78	P	Pn	04 32 17.2	-0.4
IRIF				eS	Sn	04 32 33.9	+0.3
HATJ	Hateruma jima	1.33	90	P	Pn	04 32 18.1	0.0
HATJ				eS	Sn	04 32 35.1	+0.5
JKRS	Kuro-shima	1.53	83	P	Pn	04 32 21.3	+0.5
JKRS				eS	Sn	04 32 39.8	+0.3
JIJ	Ishigaki jima	1.67	79	P	Pn	04 32 22.2	-0.5
JIJ				eS	Sn	04 32 42.7	-0.2
JTJ	Tarama	2.22	74	P	Pn	04 32 30.3	-0.1
JTJ				eS	Sn	04 32 57.2	+0.6
JMJ	Miyako jima 2	2.79	74	P	Pn	04 32 39.4	+1.3
JMJ				eS	Sn	04 33 11.4	+0.9
JOGS	Gusukube	2.87	75	eS	Sn	04 33 14.0	+1.3
QZH	Quanzhou	3.53	285	⇑iP	Pn	04 32 48.3	-0.1
QZH				S	Sn	04 33 26.8	-2.1
QZH				Smax			
	comp=N,1μm,0.4s						
QZH				Smax			
	comp=E,980nm,0.4s						
JKE	Kume jima 2	4.61	60	P	Pn	04 33 03.0	-0.2
JAGN	Aguni-jima	5.09	59	P	Pn	04 33 11.0	+1.2
JIH	Iheya	5.88	59	P	Pn	04 33 19.9	-0.7
JOW	Kunigami	6.03	62	P	Pn	04 33 21.2	-1.4
	comp=E,5.5nm,0.3s,baz=229,slow=10,SNR=18						
APYP	Conner	6.25	190	eP	Pn	04 33 23.4	-2.4
CVP	Callao Caves	6.34	185	eP	Pn	04 33 25.0	-2.0
ABRA	Dolores	6.56	194	eP	Pn	04 33 29.9	0.0
JTK	Tokunoshima	7.01	57	P	Pn	04 33 34.4	-1.7
SSE	Sheshan	7.08	352	P	Pn	04 33 37.5	+0.4
SSE				S	Sn	04 34 59.4	+3.1
SSE				Smax			
	comp=N,81nm,1.0s						
SSE				Smax			
	comp=E,57nm,1.0s						
SSE				LR	LR		
	comp=N,685nm,13.0s						
SSE				LR	LR		
	comp=E,159nm,13.0s						
SSE				LR	LR		
	comp=Z,937nm,12.9s						
CAUP	Cauayan	7.10	184	eP	Pn	04 33 38.6	+1.2
BOLP	Bolinao	7.97	197	eP	Pn	04 33 42.1	-7.2
NJ2	Nanjing	8.54	340	eP	Pn	04 33 57.8	+0.7
NJ2				AP		04 34 04.8	
NJ2				XP		04 34 09.8	
NJ2				S	Sn	04 35 33.9	+1.8
NJ2				XS		04 35 44.8	
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,130nm,5.0s						
NJ2				Smax			
	comp=N,140nm,1.1s						
NJ2				Smax			
	comp=E,220nm,1.2s						
NJ2				LR	LR		
	comp=N,2μm,13.0s						
NJ2				LR	LR		
	comp=E,1μm,14.0s						
NJ2				LR	LR		
	comp=Z,1μm,13.0s						
QIZ	Qiongzhong	12.66	249	eP	Pn	04 34 52.6	-1.0
QIZ				S	Sn	04 37 13.3	+0.1
QIZ				AMB	AMB		
	comp=Z,28nm,1.5s						
QIZ				AMB	AMB		
	comp=Z,95nm,4.1s						
QIZ				LR	LR		
	comp=N,267nm,14.9s						

QIZ LR LR
comp=Z,253nm,16.8s
GYA Guiyang 14.39 283 P **Pn** **04 35 18.4 +1.3**
GYA AP pP 04 35 25.8 -7.3
GYA XP sP 04 35 30.5 -7.8
GYA S **Sn** **04 37 48.3 -7.0**
GYA AMB AMB
comp=Z,10.0nm,1.0s
GYA AMB AMB
comp=Z,60nm,4.5s
GYA LR LR
comp=N,870nm,10.5s
GYA LR LR
comp=E,740nm,13.5s
GYA LR LR
comp=Z,720nm,14.7s
XAN Xi'an 15.37 313 P **Pn** **04 35 36.3 +6.3**
XAN AMB AMB
comp=Z,20nm,0.9s
XAN LR LR
comp=Z,500nm,17.1s
SNY Shenyang 17.75 3 ⇑P **Pn** **04 36 01.5 +1.5**
SNY AP pP 04 36 09.5 -0.9
SNY XP sP 04 36 14.3 -1.2
SNY PP 04 36 17.9
SNY S **S** **04 39 21.3 -1.2**
SNY XS sS 04 39 30.3 -8.0
SNY SS 04 39 42.5
SNY AMB AMB
comp=Z,8.0nm,0.5s
SNY AMB AMB
comp=Z,171nm,6.0s
SNY LR LR
comp=N,433nm,12.0s
SNY LR LR
comp=E,237nm,10.8s
SNY LR LR
comp=Z,449nm,12.7s
JHJ Hachijo jima 2 17.75 56 LR LR 04 42 45.2
comp=Z,66nm,21.8s,baz=273,slow=37
CD2 Chengdu 17.84 297 P **Pn** **04 36 02.3 +1.2**
CD2 AP pP 04 36 10.5 -0.9
CD2 XP sP 04 36 14.8 -1.7
CD2 S **S** **04 39 16.9 -7.4**
CD2 XS sS 04 39 29.5 -11
CD2 SS 04 39 39.3
CD2 AMB AMB
comp=Z,10.0nm,0.7s
CD2 AMB AMB
comp=Z,50nm,3.8s
CD2 LR LR
comp=N,260nm,9.0s
CD2 LR LR
comp=Z,370nm,14.4s
KMI Kunming 17.87 277 P **Pn** **04 36 03.4 +1.9**
KMI AP pP 04 36 10.6 -1.1
KMI XP sP 04 36 16.8 0.0
KMI PPP 04 36 28.9
KMI S **S** **04 39 17.3 -7.6**
KMI XS sS 04 39 31.3 -9.4
KMI SS 04 39 40.3
KMI SSS 04 39 52.4
KMI AMB AMB
comp=Z,11nm,1.7s
KMI AMB AMB
comp=Z,96nm,3.6s
KMI LR LR
comp=N,715nm,13.4s
KMI LR LR
comp=E,570nm,13.9s
KMI LR LR
comp=Z,535nm,14.3s
MJAR Matsushiro Arr 18.47 44 P **Pn** **04 36 07.5 -1.4**
comp=Z,0.2nm,0.3s,baz=229,slow=9.2,SNR=4.1
MJAR LR LR 04 44 35.1
comp=Z,25nm,18.5s,baz=230,slow=41
HHC Hu-ho-hao-te 19.03 334 *e*P **Pn** **04 36 17.3 +1.8**
HHC AP pP 04 36 25.5 +1.0
HHC XP sP 04 36 29.5 -0.1
HHC PP 04 36 34.4
HHC S **S** **04 39 46.3 -2.0**
HHC XS sS 04 39 57.3 -6.9
HHC SS 04 40 12.3
HHC PCP PcP 04 40 39.9 +1.5
HHC AMB AMB
comp=Z,15nm,1.2s
HHC AMB AMB
comp=Z,64nm,5.8s
HHC LR LR
comp=N,625nm,14.0s
HHC LR LR
comp=E,284nm,14.7s
HHC LR LR
comp=Z,672nm,14.6s
CN2 Changchun 19.86 7 *e*P **Pn** **04 36 24.4 -1.0**
CN2 *e*XP sP 04 36 37.5 -1.2
CN2 *e*S **S** **04 40 02.5 -2.4**
CN2 AMB AMB
comp=Z,10.0nm,0.9s
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,12.0s
CN2 LR LR
comp=E,200nm,12.0s
CN2 LR LR
comp=Z,600nm,19.0s
LZH Lanzhou 19.96 311 *e*P **Pn** **04 36 27.6 +0.9**
LZH AP pP 04 36 37.5 +2.8
LZH XP sP 04 36 40.8 +1.0
LZH PP 04 36 47.1
LZH *e*S **S** **04 40 04.0 -3.1**
LZH XS sS 04 40 15.5 -7.6
LZH SS 04 40 33.6
LZH AMB AMB
comp=Z,28nm,1.5s
LZH AMB AMB
comp=Z,89nm,4.0s
LZH LR LR
comp=E,377nm,12.5s
LZH LR LR
comp=Z,512nm,14.0s
GTA Gaotai 24.43 314 *e*P **P** **04 37 12.1 +1.3**
GTA AP 04 37 22.9
GTA XP sP 04 37 27.3 +0.7
GTA PP 04 37 49.6
GTA PPP 04 37 59.8
GTA S **S** **04 41 30.1 +2.1**
GTA XS sS 04 41 45.3 -0.9
GTA AMB AMB
comp=Z,12nm,0.8s,mb4.4
GTA AMB AMB
comp=Z,49nm,5.0s
GTA LR LR
comp=N,128nm,15.2s,MS4.0
GTA LR LR
comp=E,323nm,14.1s,MS4.0
GTA LR LR
comp=Z,328nm,17.5s,MS3.9
HIA Hailar 25.24 356 *i* P **P** **04 37 16.9 -1.3**
ASAJ Asahikawa 25.98 35 P **P** **04 37 23.3 -1.6**
comp=Z,3.3nm,0.4s,mb4.2,baz=233,slow=7.7,SNR=11
HABR Khabarovsk 26.36 19 *e*P **P** **04 37 26.5 -1.8**
HABR *e*S **S** **04 41 53.1 -5.5**
ULN Ulaanbaatar 26.69 337 P **P** **04 37 31.6 +0.3**
SNR=7.2
ULN Ulaanbaatar 26.69 337⇑ *e*P **P** **04 37 31.1 -0.2**
ULN Ulaanbaatar 26.69 337 *e*P **P** **04 37 31.0 -0.3**
comp=Z,26nm,1.3s,mb4.6
SONM Songino Array 26.90 336 P **P** **04 37 33.4 +0.1**
comp=Z,19nm,0.8s,mb4.7,baz=148,slow=9.8,SNR=94
SONM LR LR 04 49 24.5
comp=Z,379nm,18.8s,MS4.0,baz=284,slow=39
ZAK Zakamensk 30.17 335 *e*P **P** **04 38 01.6 -0.7**
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
WMQ Urumqi 34.51 313 *e*P **P** **04 38 42.0 +1.7**
WMQ AP pP 04 38 52.0 +0.6
WMQ XP sP 04 38 56.0 -0.2
WMQ PP PP 04 39 59.0 +0.1
WMQ S **S** **04 44 07.0 +0.8**
WMQ SS SS 04 46 18.0 -19
WMQ AMB AMB
comp=Z,17nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,89nm,4.0s
WMQ LR LR
comp=N,89nm,12.0s,MS3.9
WMQ LR LR
comp=E,103nm,14.0s,MS3.9
WMQ LR LR
comp=Z,78nm,12.0s,MS3.7
MKAR Makanchi Array 39.17 316 P **P** **04 39 20.5 +0.6**
comp=Z,6.4nm,0.4s,mb4.7,baz=106,slow=10,SNR=56
ZAL Zalesovo 40.93 327 P **P** **04 39 33.6 -0.9**
comp=Z,9.1nm,0.7s,mb4.5,baz=4.8,slow=8.7,SNR=37
ZAL Zalesovo 40.93 327 *i* P **P** **04 39 34.2 -0.4**
ZAL pmax pmax
comp=Z,9.0nm,0.7s
NVS Novosibirsk 42.18 327 *e*P **P** **04 39 43.6 -1.2**
NVS pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
NVS pmax pmax
comp=E,9.0nm,0.8s
KURK Kurchatov 42.87 320 P **P** **04 39 51.0 +0.6**
SNR=6.2
KURK Kurchatov 42.87 320 *c i* P **P** **04 39 50.3 -0.1**
KURK Kurchatov 42.87 320 *e*P **P** **04 39 49.7 -0.7**
comp=E,6.8nm,0.5s,mb4.6
BRVK Borovoye 48.51 321 ⇑P **P** **04 40 35.1 +0.2**
SNR=9.6
BRVK Borovoye 48.51 321⇑ *i*P **P** **04 40 34.9 0.0**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BRVK Borovoye 48.51 321⇑ *i*P **P** **04 40 34.9 0.0**
comp=Z,6.6nm,0.8s,mb4.7
ASAR Alice Springs 48.75 166 P **P** **04 40 36.6 -0.2**
comp=Z,1.4nm,0.6s,mb4.2,baz=343,slow=7.7,SNR=6.8
BILL Bilibino 51.44 19 *e*P **P** **04 40 56.1 -1.1**
BILL *e* 04 42 10.8
BILL *e*S **S** **04 48 05.0 -9.2**
BILL pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
AKTO Aktyubinsk 55.60 316 *i* P **P** **04 41 27.5 -0.2**
AKTO pmax pmax
comp=Z,1.0nm,1.1s,mb3.8
ARU Arti 55.84 323⇓ *i*P **P** **04 41 28.2 -1.2**
ARU *e* 04 43 27.9
ARU *e*S **S** **04 49 10.1 -3.8**
ARU *e*SS SS 04 52 59.3 -0.5
ARU pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
STKA Stephens Creek 58.59 161 P **P** **04 41 48.6 -0.2**
comp=Z,3.6nm,1.0s,mb4.4,baz=328,slow=11,SNR=3.3
STKA pP pP 04 42 00.9 +0.4
comp=Z,4.6nm,0.7s,baz=333,slow=9.0,SNR=5.3
STKA Stephens Creek 58.59 161 *e*P **P** **04 41 48.3 -0.5**
GNI Garni 65.75 305 *i* P **P** **04 42 38.9 +2.2**
GNI pmax pmax
comp=Z,17nm,1.8s
GNI Garni 65.75 305 *e*P **P** **04 42 35.8 -0.9**
comp=Z,6.3nm,0.6s,mb4.8
ZEI Tsey 65.85 308 *e*P **P** **04 42 37.7 +0.3**
ZEI pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
MIB Mutribah 66.05 293 *e*P **P** **04 42 38.6 -0.1**
MIB AMb AMB 04 42 40.1
comp=Z,24nm,0.7s,mb5.3
RDF Al-Radifah 66.10 292 *e*P **P** **04 42 38.4 -0.6**
RDF AMb AMB 04 42 40.5
comp=Z,39nm,0.6s,mb5.6
NAY Al-Naaiem 66.27 293 *e*P **P** **04 42 40.0 -0.1**
NAY AMb AMB 04 42 41.5
comp=Z,16nm,0.7s,mb5.2
KIV Kislovodsk 66.49 309⇑ *e*P **P** **04 42 42.6 +1.1**
KIV pmax pmax
comp=Z,31nm,1.5s,mb5.1
KIV Kislovodsk 66.49 309⇑ *i*P **P** **04 42 42.5 +0.9**
comp=Z,14nm,0.9s,mb5.0
OBN Obninsk 68.25 322 *e*P **P** **04 42 52.5 -0.2**
OBN *e**PP pP 04 43 17.8 +13
OBN pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
JOF Joensuu 69.33 331 *e*p **P** **04 42 58.2 -1.2**
comp=Z,3.1nm,0.4s,mb4.6
JOF Joensuu 69.33 331 *e*P **P** **04 42 58.2 -1.2**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
KEV Kevo 69.49 338 *e*p **P** **04 42 59.3 -1.0**
comp=Z,4.2nm,0.7s,mb4.5
KEV Kevo 69.49 338 *e*P **P** **04 42 59.3 -1.0**
KEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ANN Anapa 69.98 311 *e*P **P** **04 43 02.8 -0.5**
ANN pmax pmax
comp=Z,59nm,1.5s,mb5.3
ARCES ARCESS Array B 70.05 338 P **P** **04 43 03.4 -0.4**
comp=Z,1.8nm,0.7s,mb4.1,baz=69,slow=6.8,SNR=13
ARCES LR LR 05 17 24.9
comp=Z,63nm,18.2s,MS3.9,baz=130,slow=39
MALT Malatya 70.95 304⇑ *i*P **P** **04 43 11.1 +1.9**
MALT pmax pmax
comp=Z,13nm,0.8s,mb4.9
MALT Malatya 70.95 304⇑ *i*P **P** **04 43 11.1 +1.9**
comp=Z,13nm,0.8s,mb4.9
KAF Kangasniemi 71.79 331 *e*p **P** **04 43 13.2 -1.1**
comp=Z,3.4nm,0.6s,mb4.5,baz=72,slow=5.6
KAF Kangasniemi 71.79 331 *e*P **P** **04 43 13.2 -1.1**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
FINES FINESS Array B 72.09 330 P **P** **04 43 15.3 -0.8**
comp=Z,1.5nm,0.5s,mb4.2,baz=55,slow=6.6,SNR=32
FINES LR LR 05 18 24.5
comp=Z,132nm,18.2s,MS4.2,baz=3.6,slow=39
DAWY Dawson 72.16 27 *e*P **P** **04 43 16.5 0.0**
INK Inuvik 72.94 22 *e*P **P** **04 43 20.7 -0.5**
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 72.94 22 *e*P **P** **04 43 20.7 -0.5**
comp=Z,4.6nm,0.9s,mb4.4
AKASG Malin Array Be 73.67 319 P **P** **04 43 24.7 -0.8**
comp=Z,2.5nm,0.7s,mb4.3,baz=60,slow=6.3,SNR=14
AKASG Malin Array Be 73.67 319 P **P** **04 43 24.7 -0.8**
BR131 Keskin Array S 74.10 307⇓ *i*P **P** **04 43 29.1 +1.0**
comp=Z,9.0nm,0.8s,mb4.8
BRTR Keskin Array B 74.10 307 P **P** **04 43 29.2 +1.2**
comp=Z,7.4nm,0.8s,mb4.7,baz=101,slow=6.4,SNR=44
ANTO Ankara 74.67 307⇑ *i*P **P** **04 43 32.1 +0.8**
ANTO pmax pmax
comp=Z,11nm,0.7s,mb4.9
ANTO Ankara 74.67 307⇑ *i*P **P** **04 43 32.1 +0.7**
comp=Z,11nm,0.7s,mb4.9
CSS Prodhromos 75.87 302 *e*P **P** **04 43 38.7 +0.5**
comp=Z,14nm,0.9s,mb4.9
NB2 NORSAR Subarra 78.83 332 P **P** **04 43 53.8 -1.0**
comp=Z,1.8nm,0.6s,mb4.2,baz=58,slow=5.3
NOA NORSAR Array B 78.83 332 P **P** **04 43 53.5 -1.3**
comp=Z,1.6nm,0.6s,mb4.1,baz=57,slow=5.5,SNR=8.7
NOA LR LR 05 22 46.5
comp=Z,88nm,18.5s,MS4.1,baz=75,slow=39
NOA NORSAR Array B 78.83 332 P **P** **04 43 53.5 -1.3**
NOA LR LR 05 22 46.5
PSZ Piszkesteto 80.36 318 *e*P **P** **04 44 02.8 -0.3**
PSZ pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
PSZ Piszkesteto 80.36 318 *e*P **P** **04 44 02.8 -0.3**
comp=Z,4.0nm,1.1s,mb4.3
OKC Ostrava-Krasne 80.58 320 AMS AMS 05 22 30.0
VYHS Vyhne 80.76 319 *e*P **P** **04 44 05.8 +0.6**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
VYHS Vyhne 80.76 319 *e*P **P** **04 44 05.8 +0.6**
comp=Z,3.9nm,1.2s,mb4.2
MORC Moravsky Berou 80.95 321 *e*P **P** **04 44 06.2 -0.1**
MORC pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
MORC Moravsky Berou 80.95 321 *e*P **P** **04 44 06.2 -0.1**
comp=Z,1.3nm,0.5s,mb4.1
PVCC Panska Ves 82.30 322 AMS AMS 05 25 40.0
comp=Z,200nm,22.5s
TREC Trest 82.36 321 AMS AMS 05 26 00.0
comp=Z,100nm,12.3s
PRU Pruhonice 82.58 322 AMS AMS 05 24 20.0
comp=Z,100nm,12.2s
YKA Yellowknife Ar 82.67 23 P **P** **04 44 14.6 -0.7**
comp=Z,1.1nm,0.6s,mb4.1,baz=309,slow=5.0,SNR=12
SUMG Summit 82.73 354 *e*P **P** **04 44 16.1 +0.4**
comp=Z,2.8nm,0.4s,mb4.7
CLL Collm 82.79 323 *e*P **P** **04 44 15.0 -0.9**
comp=Z,logA/T=0.9,mb4.7
CLL *e*PP PP 04 47 25.0 -1.3
CLL Collm 82.79 323 *e*P **P** **04 44 15.0 -0.9**
comp=Z,11nm,1.5s,mb4.7
CLL *e*PP PP 04 47 25.0 -1.3
CLL LmV 05 25 00.0
comp=Z,100nm,19.9s
KHC Kasperske Hory 83.54 321 *e*P **P** **04 44 19.5 -0.3**
KHC AMS AMS 05 25 20.0
comp=Z,100nm,11.8s
GERES GERESS Array B 83.61 321 P **P** **04 44 20.1 -0.1**
comp=Z,1.8nm,0.7s,mb4.3,baz=59,slow=4.3,SNR=20
GERES LR LR 05 25 46.1
comp=Z,58nm,18.8s,MS4.0,baz=270,slow=39
GERES GERESS Array B 83.61 321 P **P** **04 44 20.1 -0.1**
GERES LR LR 05 25 46.1
GRA1 Grafenberg Arr 84.59 323 *e*PKP **P** **04 44 23.9 -1.2**
GRF Grafenberg Arr 84.59 323 *e*P **P** **04 44 23.9 -1.2**
KMBO Kilima Mbogo 85.97 267 P **P** **04 44 34.4 +2.3**
comp=Z,1.2nm,0.7s,mb4.2,baz=63,slow=9.0,SNR=3.6
CDF Champ du Feu 87.47 323 *e*P **P** **04 44 39.1 -0.2**
comp=Z,25nm,1.4s,mb5.0
CDF Champ du Feu 87.47 323 *e*P **P** **04 44 39.1 -0.2**
CDF pmax pmax
comp=Z,13nm,1.4s,mb5.0
CDF Champ du Feu 87.47 323 *e*P **P** **04 44 39.1 -0.2**
comp=Z,13nm,1.4s,mb5.0
JCW Jim Creek 87.95 37 P **P** **04 44 42.9 +1.3**
HINF Hinteralfeld 88.03 323 *e*P **P** **04 44 41.4 -0.7**
HAU Haudompre 88.21 323 *e*P **P** **04 44 42.5 -0.4**
KMOR Kings Mountain 88.49 40 P **P** **04 44 34.7 -9.5**
FMW Mount Fremont 88.81 38 P **P** **04 44 47.1 +1.4**
ETW Entiat 89.17 37 P **P** **04 44 48.5 +1.1**
EDM Edmonton 89.19 30 *e*P **P** **04 44 48.0 +0.5**
LPG La Plagne 89.40 321 *e*P **P** **04 44 49.0 +0.5**
comp=Z,7.9nm,0.7s,mb4.8
LPG La Plagne 89.40 321 *e*P **P** **04 44 49.0 +0.5**
LPG pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
LPG La Plagne 89.40 321 *e*P **P** **04 44 49.0 +0.5**
comp=Z,4.0nm,0.7s,mb4.9
LPL La Plagne 89.40 321 *e*P **P** **04 44 48.9 +0.4**
comp=Z,4.9nm,0.7s,mb4.7
LPL La Plagne 89.40 321 *e*P **P** **04 44 48.9 +0.4**
LPL pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
LPL La Plagne 89.40 321 *e*P **P** **04 44 48.9 +0.4**
comp=Z,2.5nm,0.7s,mb4.7
EBG Ellensburg 89.44 38 P **P** **04 44 50.0 +1.3**
MDW Midway 90.06 38 P **P** **04 44 53.1 +1.5**
ORIF Oris-en-Rattie 90.24 321 *e*P **P** **04 44 53.0 +0.6**
comp=Z,6.3nm,0.7s,mb4.7
ORIF Oris-en-Rattie 90.24 321 *e*P **P** **04 44 53.0 +0.6**
ORIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
ORIF Oris-en-Rattie 90.24 321 *e*P **P** **04 44 53.0 +0.6**
comp=Z,3.2nm,0.7s,mb4.8
SMF Signal de Mont 90.39 323 *e*P **P** **04 44 52.8 -0.3**
comp=Z,14nm,0.9s,mb5.0
SMF Signal de Mont 90.39 323 *e*P **P** **04 44 52.8 -0.3**
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
SMF Signal de Mont 90.39 323 *e*P **P** **04 44 52.8 -0.3**
comp=Z,7.3nm,0.9s,mb5.0
NEW Newport 90.50 35 *e*P **P** **04 44 54.0 +0.4**
NEW pmax pmax
comp=Z,7.0nm,0.9s
NEW Newport 90.50 35 *e*P **P** **04 44 54.0 +0.4**
comp=Z,6.7nm,0.9s,mb5.0
AVF Avril sur Loir 90.57 323 *e*P **P** **04 44 53.6 -0.3**
comp=Z,19nm,1.1s,mb5.0
AVF Avril sur Loir 90.57 323 *e*P **P** **04 44 53.6 -0.3**
AVF pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
AVF Avril sur Loir 90.57 323 *e*P **P** **04 44 53.6 -0.3**
comp=Z,9.6nm,1.1s,mb5.0
SMRF Simiane la Rot 90.96 320 *e*P **P** **04 44 55.1 -0.7**
VIVF Saint-Julien-l 90.97 321 *e*P **P** **04 44 55.8 0.0**
WALA Waterton Lakes 91.64 33 *e*P **P** **04 44 59.7 +0.8**
comp=Z,3.5nm,0.9s,mb4.7
CAF Calviac 92.42 322 *e*P **P** **04 45 03.0 +0.5**
comp=Z,16nm,1.1s,mb5.0
CAF Calviac 92.42 322 *e*P **P** **04 45 03.0 +0.5**
CAF pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
CAF Calviac 92.42 322 *e*P **P** **04 45 03.0 +0.5**
comp=Z,8.1nm,1.1s,mb5.0
RJF Les Rejaudoux 92.49 323 *e*P **P** **04 45 03.3 +0.5**
comp=Z,28nm,1.2s,mb5.2
RJF Les Rejaudoux 92.49 323 *e*P **P** **04 45 03.3 +0.5**
RJF pmax pmax
comp=Z,14nm,1.2s,mb5.2
RJF Les Rejaudoux 92.49 323 *e*P **P** **04 45 03.3 +0.5**
comp=Z,14nm,1.2s,mb5.2
BMO Blue Mountains 92.50 38 *e*P **P** **04 45 03.1 +0.2**
comp=Z,2.5nm,1.0s,mb4.5
EPF Esparros 94.57 321 *e*P **P** **04 45 12.6 +0.2**
DLMT Dillon 94.74 35 *e*P **P** **04 45 14.5 +1.3**
comp=Z,2.1nm,0.8s,mb4.6
SJPF Ste Jean 95.40 322 *e*P **P** **04 45 17.0 +0.8**
comp=Z,14nm,0.9s,mb5.1
SJPF Ste Jean 95.40 322 *e*P **P** **04 45 17.0 +0.8**
SJPF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
SJPF Ste Jean 95.40 322 *e*P **P** **04 45 17.0 +0.8**
comp=Z,7.1nm,0.9s,mb5.1
NVAR Mina Array Bea 95.79 43 P **P** **04 45 18.1 +0.1**
comp=Z,1.0nm,0.8s,mb4.3,baz=276,slow=8.0,SNR=5.7
SDV Santo Domingo 144.89 23 *e*PKPbc PKPdf 04 51 28.9 +0.2
ROSC El Rosal 146.98 32 *e*PKPbc PKPbc 04 51 36.9 +2.6

ISCJB ***13*** *05:11:56.4±1.9,208S±0.1×178.1W±0.1,h333km±23km, mb3.6/7, Error ellipse: s-maj=26.5km s-min=16.2km az=86.8*
IDC ***13*** *05:11:58.8±2.6, 2070S×17803W, h353km±28km, mb3.4/6, mb1 3.6/8, mb1mx3.5/13, mbtmp4.2/8, Error ellipse: s-maj=26.9km s-min=15.6km az=131.0*
NEIC ***13*** *05:11:58.5±1.6, 2067S×17803W, h351km±19km, mb3.6/2, Error ellipse: s-maj=23.5km s-min=13.0km az=132.0*

ISC 13 05:11:57.9±1.8,208S±01×1780W±01,h335km±23km,n17, σ0s82/13,mb3.6/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.05**	**42**	P		P	**Pn**	**05 14 04.0**	**-0.4**
	4.4nm,0.3s,baz=172,slow=15,SNR=4.3								
URZ	**Urewera**	**17.95**	**192**	P		P		**05 15 46.1**	**+1.1**
	0.6nm,0.3s,baz=14,slow=19,SNR=3.5								
RPZ	**Rata Peaks**	**24.64**	**199**	P		P		**05 16 49.2**	**+0.2**
	11nm,0.9s,mb4.1,baz=357,slow=16,SNR=4.3								
CTAO	**Charters Tower**	**33.43**	**265**	*e*P		P		**05 18 07.5**	**+1.3**
	4.0nm,0.5s,mb3.9								
STKA	**Stephens Creek**	**37.65**	**244**	P		P		**05 18 41.9**	**+0.1**
	3.7nm,0.6s,mb3.8,baz=86,slow=10,SNR=11								
STKA	**Stephens Creek**	**37.65**	**244**	*e*P		P		**05 18 41.5**	**-0.3**
AS31	**Alice Springs**	**44.43**	**257**	*e*P		P		**05 19 35.8**	**-0.7**
ASAR	**Alice Springs**	**44.43**	**257**	P		P		**05 19 36.2**	**-0.3**
	4.2nm,0.5s,mb3.8,baz=94,slow=8.2,SNR=75								
WB2	**Warramunga Arr**	**44.52**	**262**	*e*P		P		**05 19 36.6**	**-0.6**
VNDA	**Vanda**	**57.66**	**185**	P		P		**05 21 12.5**	**-1.6**
	0.5nm,0.7s,mb3.0,baz=23,slow=6.5,SNR=3.4								
VNDA	**Vanda**	**57.66**	**185**	*e*P		P		**05 21 12.3**	**-1.7**
	0.6nm,0.7s,mb3.0								
NVAR	**Mina Array Bea**	**81.23**	**43**	P		P		**05 23 38.0**	**+0.9**
	0.2nm,0.3s,mb3.3,baz=209,slow=6.2,SNR=3.5								
PDAR	**Pinedale Array**	**89.17**	**43**	P		P		**05 24 16.1**	**+0.1**
	0.5nm,0.6s,mb3.5,baz=160,slow=2.9,SNR=6.4								
ARCES	**ARCESS Array B**	**129.16**	**350**	PKP		PKPdf		05 30 22.8	-3.6
	1.4nm,0.9s,baz=57,slow=4.5,SNR=3.5								
AKASG	**Malin Array Be**	**143.22**	**331**	PKhKP				05 30 44.2	
	0.5nm,0.5s,baz=37,slow=4.0,SNR=4.2								
AKASG				PKP		PKPdf		05 30 48.9	-3.4
	0.2nm,0.3s,baz=38,slow=3.8,SNR=3.2								
AKASG	**Malin Array Be**	**143.22**	**331**	PKP		PKPdf		05 30 44.2	-8.1
AKASG				PKP		PKPdf		05 30 48.9	-3.4
GERES	**GERESS Array B**	**150.43**	**344**	PKPbc		PKPbc		05 31 07.4	-2.6
	0.4nm,0.7s,baz=335,slow=3.5,SNR=4.3								

MAN 13 05:34:26.4,799N×12475E,h134km,mb3.8,ML4.9,MS5.5, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.33**	**109**	*e*P		Pn		05 34 46.3	+1.2
CGP	**Cagayan de Oro**	**0.47**	**354**⇑	*i*P		Pn		05 34 48.8	+3.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CGP				i S	Sn	05 35 02.8	+2.4
CTBH	Cotabato--PC H	0.91	213	⇑eP	Pn	05 34 42.6	-6.2
CTBH				i S	Sn	05 34 49.6	-16
PAGZ	Pagadian	1.36	264	eP	Pn	05 34 53.8	+0.6
PAGZ				eS	Sn	05 35 10.3	-3.3
BESP	Borongan	3.66	11	eP	Pn	05 35 22.6	+0.9

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*ISCJB **13** 05:34:37.6±0.6, 3809N±003×2687E±004, h7km±5km, Error ellipse: s-maj=5.8km s-min=4.4km az=166.7*
*CSEM **13** 05:34:37.0±0.1, 3808N×2691E, h10km, MD2.7, Error ellipse: s-maj=4.0km s-min=2.6km az=99.0*
*ISK **13** 05:34:37.0, 3809N×2692E, h16km, MD2.7*
*ATH **13** 05:34:38.5, 3808N×2662E, h17km±9km, MD3.0/3*
ISC 13 05:34:38.3±0.5, **3810N**±002×**2690E**±004, **h14**km±4km, **n17**, σ**0.81**/27, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.31	22	i PG	Pg	05 34 44.0	-0.6
BLCB				i SG	Sg	05 34 48.3	-0.6
URLA	Izmir	0.35	318	i P	Pg	05 34 45.3	-0.1
URLA				i S	Sg	05 34 50.5	+0.3
SMG	Samos	0.39	187	ePB	Pg	05 34 46.6	+0.4
SMG				eSB	Sg	05 34 52.9	+1.4
IZM	Izmir	0.41	44	i PG	Pg	05 34 46.5	-0.1
IZM				i SG	Sg	05 34 52.1	-0.1
KDAG	Bornova	0.42	44	i P	Pg	05 34 46.9	+0.2
KDAG				i S	Sg	05 34 52.8	+0.5
KDAG	Bornova	0.42	44	i P	Pg	05 34 46.8	+0.1
KDAG				i S	Sg	05 34 52.8	+0.4
AYDN	Tasoluk	0.89	119	i P	Pb	05 34 56.0	+0.4
AYDN				i S	Sg	05 35 07.6	+0.3
AKHS	Akhisar	1.06	43	i P	Pb	05 34 59.0	+0.6
AKHS				i S	Sb	05 35 12.7	+0.5
AKS	Akhisar	1.06	43	PG	Pg	05 34 58.4	-0.3
BODT	Bodrum	1.09	162	PG	Pg	05 34 57.5	-1.8
BDRM	Kayabasi	1.12	157	i P	Pb	05 34 59.0	-0.5
BDRM				i S	Sb	05 35 15.2	+1.3
PRK	Paraskevi	1.24	337	ePN	Pn	05 35 01.2	0.0
PRK				eSN	Sn	05 35 17.6	-0.2
YER	Yerkesik	1.46	131	ePN	Pn	05 35 02.9	-1.4
DAT	Datca	1.47	158	ePN	Pn	05 35 03.2	-1.2
APE	Apeiranthos	1.50	227	ePN	Pn	05 35 03.8	-0.9
BOZC	Bozcaada	1.86	340	i P	Pn	05 35 11.7	+2.0
CANB	Canakkale	1.92	4	ePN	Pn	05 35 10.5	0.0

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*CSEM **13** 05:46:40.4±0.1, 4481N×3699E, h10km, mb4.2, Error ellipse: s-maj=2.9km s-min=2.3km az=1.0*
*IDC **13** 05:46:41.3±1.4, 4485N×3671E, h0km, mb3.3/4, mb1 3.5/8, mb1mx3.4/22, mbtmp3.4/8, ML3.8/2, MS2.9/1, Ms1 3.0/1, ms1mx2.2/21, Error ellipse: s-maj=17.3km s-min=15.6km az=47.0*
*NEIC **13** 05:46:41.8±0.6, 4485N×3687E, h10km, Error ellipse: s-maj=10.3km s-min=9.2km az=167.0*
*MOS **13** 05:46:41.9±1.5, 4505N×3684E, h18km, mb4.2/1, Error ellipse: s-maj=12.9km s-min=10.6km az=6.6*
*ISCJB **13** 05:46:42.2±0.4, 4493N±004×3685E±003, h33km, mb3.2/3, Error ellipse: s-maj=5.5km s-min=3.2km az=17.4*
ISC 13 05:46:44.9±0.4, **4484N**±004×**3684E**±004, **h50**km±9km, **n60**, σ**0.99**/87, **mb3.2**/3, **7C-3D, Crimea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANN	Anapa	0.42	95	⇑i P	Pn	05 46 53.7	-1.5
ANN				i		05 46 59.9	
ANN				pmax	pmax		
	comp=Z,238nm,0.2s						
ANN				smax			
	comp=N,4μm,0.3s						
ANN				smax			
	comp=E,3μm,0.3s						
KERU	Kerch	0.55	330	i P	Pn	05 46 57.6	+0.9
KERU				pmax	pmax		
	comp=Z,506nm,0.3s						
KERU				pmax	pmax		
	comp=E,1μm,0.9s						
KERU				pmax	pmax		
	comp=E,580nm,0.5s						
KERU	Kerch	0.55	330	i P	Pn	05 46 57.6	+0.9
	comp=E,506nm,0.3s						
FEO	Feodosiya	1.05	280	eP	Pn	05 47 11.2	+8.0
FEO				i		05 47 18.4	
FEO				smax			
	comp=N,170nm,0.5s						
FEO				smax			
	comp=E,110nm,0.3s						
FEO	Feodosiya	1.05	280	i S	Sn	05 47 18.4	+1.6
SUDU	Sudak	1.31	273	⇑eP	Pn	05 47 07.7	+0.9
SUDU				i		05 47 24.7	
SUDU				pmax	pmax		
	comp=Z,25nm,0.2s						
SUDU				smax			
	comp=N,236nm,0.5s						
SUDU				smax			
	comp=E,320nm,0.7s						
SUDU	Sudak	1.31	273	eP	Pn	05 47 07.7	+0.9
	comp=E,25nm,0.2s						
SUDU				i S	Sn	05 47 24.7	+1.5
	comp=E,236nm,0.5s						
ALU	Alushta	1.75	266	⇑eP	Pn	05 47 13.0	+0.3
ALU				i S	Sn	05 47 34.0	+0.2
ALU				pmax	pmax		
	comp=Z,35nm,0.2s						
ALU				smax			
	comp=N,127nm,0.4s						
ALU				smax			
	comp=E,167nm,0.4s						
ALU	Alushta	1.75	266	eP	Pn	05 47 13.0	+0.3
	comp=E,35nm,0.2s						
ALU				i S	Sn	05 47 34.0	+0.2
SIM	Simferopol'	1.94	274	⇓eP	Pn	05 47 16.3	+0.9
SIM				i S	Sn	05 47 39.3	+0.7
SIM				pmax	pmax		
	comp=Z,50nm,0.5s						
SIM				smax			
	comp=N,50nm,0.6s						
SIM				smax			
	comp=E,140nm,0.7s						
SIM	Simferopol'	1.94	274	eP	Pn	05 47 16.3	+0.9
	comp=E,50nm,0.5s						
SIM				i S	Sn	05 47 39.3	+0.7
	comp=E,50nm,0.6s						
YAL	Yalta	1.95	261	⇑i P	Pn	05 47 15.9	+0.4
YAL				i S	Sn	05 47 38.5	-0.3
YAL				pmax	pmax		
	comp=Z,100nm,0.3s						
YAL				smax			
	comp=N,234nm,0.4s						
YAL				smax			
	comp=E,188nm,0.4s						
YAL	Yalta	1.95	261	i P	Pn	05 47 15.9	+0.4
	comp=E,234nm,0.4s						
YAL				i S	Sn	05 47 38.5	-0.3
SEV	Sevastopol'	2.28	264	⇑eP	Pn	05 47 20.2	+0.1
SEV				eS	Sn	05 47 46.8	-0.2
SEV				pmax	pmax		
	comp=Z,10.0nm,0.4s						
SEV				smax			
	comp=N,100nm,0.4s						
SEV				smax			
	comp=E,20nm,0.4s						
SEV	Sevastopol'	2.28	264	eP	Pn	05 47 20.2	+0.1
	comp=E,10.0nm,0.4s						
SEV				eS	Sn	05 47 46.8	-0.2
DIKM	Dikmen	3.39	201	PN	Pn	05 47 34.9	-0.4
DIKM				SN	Sn	05 48 09.8	-4.4
DIKM	Dikmen	3.39	201	ePn	Pn	05 47 34.9	-0.4
DIKM				eSn	Sn	05 48 09.8	-4.4
BZK	Bozkurt	3.54	217	PN	Pn	05 47 38.1	+0.7
BZK				SN	Sn	05 48 15.0	-3.0
BYBT	Boyabat	3.69	205	PN	Pn	05 47 39.8	+0.3
BOYT	Boyabat	3.70	203	i P	Pn	05 47 39.0	-0.5
BOYT				i S	Sn	05 48 14.2	-7.6
BALT	Daday	4.16	219	i P	Pn	05 47 45.7	-0.1
KIV	Kislovodsk	4.28	100	ePn	Pn	05 47 47.6	+0.1
KIV				eSn	Sn	05 48 36.0	-0.2
KIV	Kislovodsk	4.28	100	ePn	Pn	05 47 47.6	+0.1
KIV				eS	Sn	05 48 36.0	-0.1
TOS	Tosya	4.33	210	PN	Pn	05 47 49.1	+1.0
CTKT	Corum	4.47	200	i P	Pn	05 47 50.7	+0.5
CTKT				i S	Sn	05 48 34.6	-6.3
SAFT	Safranbolu	4.71	222	PN	Pn	05 47 54.2	+0.8
BCA	Borcka	4.87	132	ePN	Pn	05 47 55.0	-0.6
SVSK	Karacayir	4.92	179	ePN	Pn	05 47 56.7	+0.4
CORM	Corum	4.94	200	eP	Pn	05 47 56.8	+0.3
KELT	Kelkit	5.01	158	i P	Pn	05 47 56.8	-0.8
KELT				i S	Sn	05 48 49.2	-5.0
ELDT	Eldivan	5.02	211	i P	Pn	05 47 57.8	+0.1
SVST	Sivas	5.06	179	i P	Pn	05 47 59.1	+0.9
BR131	Keskin Array S	5.63	206	ePn	Pn	05 48 06.0	-0.1
	comp=E,4.5nm,0.3s						
BR131				eSn	Sn	05 49 06.4	-3.1
BR131	Keskin Array S	5.63	206	ePn	Pn	05 48 05.9	-0.1
	comp=E,4.5nm,0.3s						
BRTR	Keskin Array B	5.63	206	Pn	Pn	05 48 06.2	+0.2
	comp=E,1.7nm,0.3s,baz=21,slow=12,SNR=42						
BRTR				Sn	Sn	05 49 06.8	-2.6
	comp=E,0.9nm,0.3s,baz=45,slow=24,SNR=9.4						
BRTR	Keskin Array B	5.63	206	Pn	Pn	05 48 06.2	+0.1
BRTR				Sn	Sn	05 49 06.8	-2.6
TIRR	Tirgusor	6.03	269	⇓i P	Pn	05 48 10.8	-0.6
TIRR	Tirgusor	6.03	269	S	Sn	05 49 14.5	-4.6
CFR	Carcaliu	6.18	276	⇑i P	Pn	05 48 10.1	-3.5
CFR	Carcaliu	6.18	276	S	Sn	05 49 16.2	-6.7
VRI	Vrincioaia	7.20	282	S	Sn	05 49 46.2	-1.7
PLOR	Plostina	7.25	282	S	Sn	05 49 48.4	-0.8
MLR	Muntele Rosu	7.73	279	Pn	Pn	05 48 36.3	+1.5
	comp=E,0.4nm,0.3s,baz=148,slow=12,SNR=4.4						
MLR				Sn	Sn	05 49 59.2	-1.8
	comp=E,1.3nm,0.3s,baz=150,slow=16,SNR=10.0						
MLR	Muntele Rosu	7.73	279	⇑i P	Pn	05 48 34.5	-0.3
MLR	Muntele Rosu	7.73	279	S	Sn	05 50 00.4	-0.6
AKASG	Malin Array Be	7.79	322	Pn	Pn	05 48 35.4	-0.3
	comp=E,1.7nm,0.3s,baz=132,slow=14,SNR=7.1						
AKASG				Sn	Sn	05 49 56.9	-5.5
	comp=E,3.8nm,0.3s,baz=133,slow=24,SNR=12						
AKASG	Malin Array Be	7.79	322	Pn	Pn	05 48 35.4	-0.3
AKASG				Sn	Sn	05 49 56.9	-5.5
AKASG	Malin Array Be	7.79	322	Pn	Pn	05 48 35.3	-0.3
AKASG				Sn	Sn	05 49 56.9	-5.5
BURAR	Bucovina Array	8.53	293	⇓i P	Pn	05 48 45.2	-0.5
BURAR	Bucovina Array	8.53	293	S	Sn	05 50 18.5	-2.0
AKTK	Aktyubinsk	15.31	61	Pn	Pn	05 50 17.0	-0.7
AKTK				Sn	Sn	05 52 52.8	-13
AKTO	Aktyubinsk	15.31	61	Pn	Pn	05 50 17.0	-0.7
	comp=E,0.2nm,0.3s,baz=267,slow=12,SNR=5.3						
AKTO				Sn	Sn	05 52 52.8	-13
	comp=E,0.3nm,0.3s,baz=86,slow=19,SNR=5.0						
FINES	FINESS Array B	17.80	343	Pn	Pn	05 50 45.0	-4.0
	comp=E,0.1nm,0.3s,baz=160,slow=13,SNR=7.0						
FINES				Sn	Sn	05 53 50.9	-16
	comp=E,0.2nm,0.3s,baz=160,slow=24,SNR=5.1						
HFS	Hagfors	20.64	326	P	P	05 51 20.8	+0.6
	comp=E,5.5nm,1.2s,baz=129,slow=11,SNR=5.3						
HFS	Hagfors	20.64	326	P	P	05 51 20.8	+0.6
HFS	Hagfors	20.64	326	P	P	05 51 20.8	+0.6
NB2	NORSAR Subarra	22.17	326	P	P	05 51 36.5	-0.1
	comp=Z,0.7nm,0.6s,mb3.3,baz=123,slow=8.6						
NOA	NORSAR Array B	22.17	326	P	P	05 51 37.0	+0.5
	comp=Z,0.4nm,0.5s,mb3.1,baz=125,slow=10,SNR=3.3						
MKAR	Makanchi Array	31.40	70	P	P	05 53 03.2	+2.1
	comp=Z,0.3nm,0.4s,mb3.5,baz=288,slow=7.7,SNR=3.6						
TORD	Torodi Ar. Bea	43.49	235	P	P	05 54 44.1	+0.8
	comp=Z,0.2nm,0.6s,mb3.0,baz=35,slow=8.9,SNR=3.3						

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*MDD **13** 05:48:45.5±1.2, 3680N×705W, h51km±11km, mb3.3/5, Error ellipse: s-maj=8.9km s-min=4.5km az=16.0, PRXIMO*
INMG 13 05:48:44.9±1.0, **3674N**×**703W**, **h16**km±4km, **ML2.0**, **1D**, **Error ellipse: s-maj=6.3km s-min=2.5km az=29.0, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERIP	Rio Piedras	0.65	344	P	Pg	05 48 58.1	+0.3
	21nm,0.1s,SNR=7.9						
ERIP				S	Sg	05 49 06.1	-0.4
	28nm,0.1s,SNR=7.9						
EGRO	El Granado	0.87	336	⇓P	Pb	05 49 00.9	-0.7
	4.8nm,0.1s,SNR=18						
EGRO				S	Sb	05 49 12.4	-0.5
	14nm,0.1s,SNR=16						
ESPR	Espera	0.95	82	P	Pb	05 49 03.7	+0.7
	2.1nm,0.1s,SNR=5.4						
ESPR				S	Sb	05 49 15.0	-0.4
	21nm,0.2s,SNR=5.0						
EMIN	Mina Concepcio	1.06	16	P	Pb	05 49 03.6	-1.3
	0.4nm,0.1s,SNR=22						
EMIN				S	Sb	05 49 17.0	-1.6
	3.5nm,0.1s,SNR=9.7						
PBEJ	Beja	1.44	333	eP	Pn	05 49 08.7	-1.6
PBEJ				S	Sn	05 49 26.4	-2.5
PTEO	Sao Teotonio	1.57	301	eP	Pn	05 49 10.3	-1.8
PTEO				eS	Sn	05 49 28.8	-3.3
EBAD	Badajoz	2.01	0	P	Pn	05 49 16.7	-1.4
	2.2nm,0.1s,SNR=17						
EBAD				S	Sn	05 49 39.9	-3.1
	2.6nm,0.1s,SNR=8.0						
PESTR	Estremoz	2.17	348	ePn	Pn	05 49 18.7	-1.6
PESTR				eSn	Sn	05 49 44.1	-2.7
EADA	Adamuz	2.42	53	P	Pn	05 49 25.2	+1.5
	0.1nm,0.1s,SNR=4.0						
EADA				S	Sn	05 49 51.2	-1.7
	0.2nm,0.1s,SNR=4.0						
PTOM	Tomar	3.07	340	eSn	Sn	05 50 05.6	-3.5
PCBR	Castelo Branco	3.11	354	ePn	Pn	05 49 31.9	-1.4
PCBR				eSn	Sn	05 50 06.9	-3.2
PCBR							
	3.1nm,0.1s						

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*BJI **13** 05:57:37.1, 3453N×7995E, h17km, mB4.4, mb4.3, ML4.0, Ms3.9, Msz3.6*
*ISCJB **13** 05:57:37.4±1.8, 3480N±004×8013E±005, h15km±14km, mb4.0/22, MS3.0/2, Error ellipse: s-maj=7.0km s-min=6.4km az=144.4*
*MOS **13** 05:57:39.7±1.5, 3478N×8012E, h33km, mb4.3/2, Error ellipse: s-maj=20.3km s-min=8.3km az=110.7*
*NNC **13** 05:57:41.5±5.7, 3469N×7959E, h22km±50km, mb3.6, mpv3.4, Error ellipse: s-maj=51.9km s-min=38.4km az=33.0*
*IDC **13** 05:57:42.1±4.0, 3475N×8020E, h44km±38km, mb3.6/15, mb1 3.8/18, mb1mx3.7/24, mbtmp3.9/18, ML3.6/3, MS3.2/2, Ms1 3.2/2, ms1mx2.7/34, Error ellipse: s-maj=22.6km s-min=18.7km az=10.0*
*NEIC **13** 05:57:43.4±2.0, 3483N×8025E, h55km±16km, mb4.0/4, Error ellipse: s-maj=16.3km s-min=12.8km az=153.0*
*NDI **13** 05:57:49.3±4.0, 3455N×8051E, h33km, ML3.8, mb4.0(NEIC)*
ISC 13 05:57:40.8±1.9, **3475N**±004×**8013E**±006, **h26**km±15km, **n70**, σ**1.46**/71, **mb4.0**/22, **MS3.0**/2, **5C-5D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLP	Kalpa	3.57	207	eP	Pn	05 58 42.9	+8.4
KLP				eS	Sn	05 59 21.4	+5.6
KLP				AML	AML	05 59 42.9	
	comp=E,395nm,0.8s						
KLP				AML	AML	05 59 42.9	
	comp=N,342nm,0.5s						
DLH	Dalhousie	4.11	239	ex	x	05 58 46.0	
DLH				eS	Sn	05 59 39.0	+10
SDNR	Sundarnagar	4.18	220	eP	Pn	05 58 52.6	+10
SDNR				ex	x	05 59 57.4	
JOSI	Joshimath	4.21	187	ex	x	05 58 29.6	
JOSI				eS	Sn	05 59 33.4	+2.0
JOSI				AML	AML	05 59 39.2	
	comp=N,340nm,0.8s						
JOSI				AML	AML	05 59 42.9	
	comp=E,210nm,1.0s						
PONG	Pong	4.47	233	ex	x	05 59 00.0	
BHK	Bhakra	4.55	224	ex	x	05 59 10.0	
LGTI	Lohaghat	5.28	179	ex	x	05 59 05.8	
CHCP	Chirah Chowk	5.79	261	P	Pn	05 59 04.9	-0.1
KSH	Kashi	5.80	326	P	Pn	05 59 08.8	+3.7
KSH				Smax			
	comp=N,241nm,1.0s						
KSH				Smax			
	comp=E,479nm,1.2s						
NDI	New Delhi	6.53	203	ex	x	05 59 15.0	
CEP	Cherat	6.87	265	P	Pn	05 59 18.4	-1.3
CEP				S	Sn	06 00 41.0	+4.0
SONA	Sohna	6.98	203	eP	Pn	05 59 22.4	+1.2
SONA				eS	Sn	06 00 36.1	-3.6
KHET	Khetri	7.61	210	ex	x	05 59 29.5	
KHET				⇓eS	Sn	06 00 53.8	-1.4
SBDP	Sheikh Budin	8.16	255	P	Pn	05 59 35.6	-1.8
DRP	Derazinda	8.84	253	P	Pn	05 59 45.6	-1.2
TKM2	Tokmak 2	8.89	338	⇑Pn	Pn	05 59 50.0	+2.5
	comp=E,1.0nm,0.7s						
TKM2				⇓Lg		06 02 18.4	
	comp=E,7.5nm,1.2s						
AAK	Ala-Archa	9.02	332	eP	Pn	05 59 52.4	+3.1
AAK				pmax	pmax		
	comp=Z,18nm,0.7s						
AAK	Ala-Archa	9.02	332	ePn	Pn	05 59 52.4	+3.1
	comp=Z,18nm,0.7s						
FRU	Bishkek	9.15	334	eP	Pn	05 59 55.0	+4.0
FRU				pmax	pmax		
	comp=Z,60nm,1.3s						
LSA	Lhasa	10.60	115	P	Pn	06 00 14.0	+3.1
WMQ	Urumqi	10.79	31	eP	Pn	06 00 21.0	+7.5
WMQ				AMB	AMB		
	comp=Z,14nm,1.0s						
KK31	Karatay Array	11.21	321	Pn	Pn	06 00 19.8	+0.5
	comp=Z,1.5nm,0.4s,baz=128,slow=12,SNR=25						
KK31				⇑Sn	Sn	06 02 24.7	+1.1
	comp=Z,3.1nm,0.6s						
MK02	Makanchi Array	12.12	7	⇑Pn	Pn	06 00 32.3	+0.5
	comp=Z,5.5nm,0.6s						
MK02				⇑Sn	Sn	06 02 52.7	+6.7
	comp=Z,9.8nm,1.0s						
MKAR	Makanchi Array	12.14	7	P	Pn	06 00 31.5	-0.6
	comp=Z,0.5nm,0.3s,baz=180,slow=12,SNR=18						
KURK	Kurchatov	16.00	357	eP	Pn	06 01 16.9	-7.0
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KURK	Kurchatov	16.00	357	ePn	Pn	06 01 16.9	-7.0
	comp=Z,7.8nm,0.7s						
KURK				e		06 01 26.1	
GTA	Gaotai	16.38	68	eP	Pn	06 01 28.3	-0.5
GTA				AP	pP	06 01 32.6	-6.0
GTA				XP	sP	06 01 35.6	-6.4
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s						
VOSK	Vostochnaya	19.12	343	⇓P	Pn	06 02 00.4	-2.2
	comp=Z,7.0nm,1.2s						
ZAL	Zalesovo	19.47	8	P	Pn	06 02 04.4	-2.4
	comp=Z,0.3nm,0.3s,baz=288,slow=7.6,SNR=3.8						
BVAR	Borovoye Array	19.54	342	P	Pn	06 02 05.6	-2.1
	comp=Z,0.4nm,0.3s,baz=156,slow=11,SNR=18						
BRVK	Borovoye	19.60	342	eP	Pn	06 02 04.8	-3.6
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRVK	Borovoye	19.60	342	eP	Pn	06 02 04.8	-3.6
	comp=Z,5.9nm,0.9s						
AB31	Akbulak array	20.77	320	P	P	06 02 20.8	+1.2
	comp=Z,3.6nm,0.7s,baz=123,slow=9.8,SNR=26						
KMI	Kunming	21.77	110	P	P	06 02 30.8	+0.4
KMI				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.2						
WSAR	Wadi Sarin	21.98	244	P	P	06 02 33.1	+0.5
	comp=Z,6.2nm,0.7s,mb4.2,baz=64,slow=11,SNR=7.0						
WSAR				LR	LR	06 11 12.1	
	comp=Z,43nm,20.5s,MS2.9,baz=148,slow=37						
AKTK	Aktyubinsk	22.48	321	P	P	06 02 38.1	+0.2
AKTO	Aktyubinsk	22.48	321	P	P	06 02 35.3	-2.6
	comp=Z,0.1nm,0.7s,mb2.4						
AKTO	Aktyubinsk	22.48	321	P	P	06 02 38.1	+0.2
	comp=Z,2.5nm,0.7s,mb3.8,baz=112,slow=9.8,SNR=4.6						
SONM	Songino Array	23.54	48	P	P	06 02 48.4	-0.6
	comp=Z,1.0nm,0.6s,mb3.4,baz=245,slow=9.7,SNR=8.8						
SONM				LR	LR	06 12 28.0	
	comp=Z,68nm,19.6s,MS3.1,baz=47,slow=38						
GYA	Guiyang	24.23	103	P	P	06 02 55.1	-0.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
BR131	Keskin Array S	37.02	292	eP	P	06 04 52.4	+4.2
	comp=Z,1.4nm,0.6s,mb4.0						
BRTR	Keskin Array B	37.02	292	P	P	06 04 48.0	-0.2
	comp=Z,0.8nm,0.6s,mb3.7,baz=110,slow=8.3,SNR=5.3						
AKASG	Malin Array Be	39.82	310	P	P	06 05 10.2	-1.5
	comp=Z,1.8nm,0.6s,mb4.0,baz=79,slow=7.7,SNR=8.1						
JOF	Joensuu	41.18	328	ep	P	06 05 20.6	-2.4
	comp=Z,0.6nm,0.4s,mb3.6						
JOF	Joensuu	41.18	328	eP	P	06 05 20.6	-2.4
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
MLR	Muntele Rosu	42.08	302	⇓i P	P	06 05 31.0	+0.7
FINES	FINESS Array B	43.13	325	P	P	06 05 38.0	-0.8
	comp=Z,0.9nm,0.4s,mb3.9,baz=128,slow=12,SNR=12						
DRGR		44.20	304	⇓i P	P	06 05 48.5	+1.0
ARCES	ARCESS Array B	45.67	336	P	P	06 05 57.5	-1.7
	comp=Z,2.6nm,1.1s,mb4.1,baz=101,slow=14,SNR=2.7						
MJAR	Matsushiro Arr	46.61	70	P	P	06 06 09.6	+3.0
	comp=Z,0.6nm,0.3s,mb3.9,baz=302,slow=10.0,SNR=3.4						
VRAC	Vranov	48.00	308	⇑i P	P	06 06 18.5	+1.1
HFS	Hagfors	49.01	323	P	P	06 06 24.2	-1.0
	comp=Z,2.5nm,0.7s,mb4.4,baz=101,slow=12,SNR=2.8						
PRU	Pruhonice	49.23	309	eP	P	06 06 27.0	+0.1
BRG	Berggiesshubel	49.49	310	e(P)	P	06 06 32.3	+3.5
	comp=Z,2.4nm,1.0s,mb4.2						
BRG	Berggiesshubel	49.49	310	eP	P	06 06 32.3	+3.5
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
GERES	GERESS Array B	49.95	308	P	P	06 06 33.0	+0.6
	comp=Z,2.1nm,1.0s,mb4.1,baz=100,slow=4.6,SNR=9.3						
KHC	Kasperske Hory	49.98	308	eP	P	06 06 33.7	+1.1
NB2	NORSAR Subarra	50.22	324	P	P	06 06 35.9	+1.5
	comp=Z,2.4nm,0.8s,mb4.3,baz=88,slow=7.9						
NOA	NORSAR Array B	50.22	324	P	P	06 06 33.5	-1.0
	comp=Z,1.4nm,0.6s,mb4.1,baz=89,slow=7.5,SNR=5.0						
GRA1	Grafenberg Arr	51.40	309	eP	P	06 06 49.2	+5.9
GRF	Grafenberg Arr	51.40	309	eP	P	06 06 49.2	+5.9
HINF	Hinteralfeld	54.63	308	eP	P	06 07 08.8	+1.7
	comp=Z,7.9nm,0.9s,mb4.4						
LPG	La Plagne	55.32	305	eP	P	06 07 15.7	+3.6
LPL	La Plagne	55.33	305	eP	P	06 07 15.7	+3.5
	comp=Z,7.7nm,0.6s,mb4.6						
EKA	Eskdalemuir Ar	58.63	318	P	P	06 07 34.9	-0.6
	comp=Z,3.5nm,0.9s,mb4.4,baz=66,slow=7.1,SNR=3.9						
ESDC	Sonseca Array	64.78	302	P	P	06 08 16.6	-0.3
	comp=Z,0.2nm,0.5s,mb3.4,baz=51,slow=6.6,SNR=2.3						
TOA0	Torodi Ar. Sit	73.20	275	eP	P	06 09 11.6	+2.3
TORD	Torodi Ar. Bea	73.20	275	P	P	06 09 08.3	-0.9
	comp=Z,1.2nm,0.4s,mb4.2,baz=45,slow=5.6,SNR=14						
ASAR	Alice Springs	77.31	131	P	P	06 09 31.9	-1.0
	comp=Z,1.1nm,0.8s,mb3.9,baz=317,slow=5.5,SNR=12						
YKA	Yellowknife Ar	82.37	7	P	P	06 09 58.6	-1.7
	comp=Z,0.6nm,0.7s,mb3.6,baz=347,slow=5.4,SNR=3.7						

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*NNC **13** 06:10:06.7±11.0, 4078N×7189E, h0km, mb5.2, mpv5.3, Error ellipse: s-maj=126.2km s-min=70.6km az=34.0*
*BJI **13** 06:10:13.7, 4160N×7284E, h17km, mb4.6, mB4.7, ML4.4, Ms4.3, Msz4.1*
*NEIC **13** 06:10:13.9±0.2, 4147N×7291E, h10km, mb4.8/45, Error ellipse: s-maj=6.5km s-min=4.7km az=209.0*
*KNET **13** 06:10:14.7±0.7, 4166N×7287E, h4km±3km, ml4.6, Error ellipse: s-maj=5.7km s-min=4.0km az=126.0*
*ISCJB **13** 06:10:15.7±0.6, 4148N±002×7285E±003, h31km±4km, mb4.5/75, MS3.7/28, Error ellipse: s-maj=4.0km s-min=3.6km az=174.4*
*IDC **13** 06:10:16.5±3.3, 4151N×7273E, h25km±22km, mb4.3/17, mb1 4.5/21, mb1mx4.4/26, mbtmp4.5/21, ML4.5/4, MS3.6/17, Ms1 3.6/17, ms1mx3.4/43, Error ellipse: s-maj=11.8km s-min=8.7km az=156.0*
*MOS **13** 06:10:17.1±1.4, 4169N×7277E, h33km, mb4.8/40, Error ellipse: s-maj=6.9km s-min=5.1km az=122.0*
ISC 13 06:10:16.0±0.7, **4156N**±002×**7283E**±003, **h20**km±5km, **h15**km±.3km**:pP-P**, **n241**, σ**1.32**/269, **mb4.5**/75, **MS3.7**/28, **28C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	0.87	48	P	Pb	06 10 30.2	-2.2
	2μm,0.3s,SNR=919						
AML				⇑S	Sb	06 10 42.8	-0.7
	3μm,0.3s						
EKS2	Erkin-Say	1.31	32	P	Pn	06 10 37.8	-1.4
	457nm,0.2s,SNR=489						
EKS2				⇓S	Sn	06 10 55.2	-0.9
	1μm,0.3s						
UCH	Uchtor	1.43	61	⇓P	Pn	06 10 40.7	0.0
	332nm,0.2s,SNR=399						
UCH				⇓S	Sn	06 11 01.3	+2.4

2µm,0.3s
AAK Ala-Archa 1.64 49 P Pn 06 10 44.1 +0.4
2µm,0.3s,SNR=278
AAK Ala-Archa 1.64 49 ePn Pn 06 10 43.2 -0.5
FRU Bishkek 1.84 46⇑ePN Pn 06 10 47.9 +1.4
FRU *i* S **Sn 06 11 15.7 +6.5**
FRU pmax pmax
comp=Z,4µm,0.9s
FRU smax
comp=E,6µm,1.8s
KZA Kyzart 1.89 73 P Pn 06 10 49.3 +2.2
comp=E,2µm,0.3s,SNR=324
KZA ⇑S **Sn 06 11 14.8 +4.6**
comp=E,6µm,0.4s
KBK Karagaybulak 1.92 54 ⇑P Pn 06 10 49.5 +1.9
comp=E,3µm,0.4s,SNR=1026
KBK ⇓S **Sn 06 11 15.1 +3.9**
comp=E,5µm,0.3s
CHMS Chumysh 2.03 44 ⇑P Pn 06 10 51.1 +2.0
comp=E,3µm,0.5s,SNR=551
CHMS ⇓S **Sn 06 11 19.3 +5.5**
comp=E,3µm,0.4s
USP Ospenovka 2.11 35 ⇓P Pn 06 10 51.5 +1.3
comp=E,2µm,0.3s,SNR=3721
USP ⇑S **Sn 06 11 21.1 +5.3**
comp=E,3µm,0.3s
KK31 Karatay Array 2.31 313 ⇑Pn Pn 06 10 53.4 +0.5
comp=E,476nm,0.4s,baz=137,slow=78,SNR=6916
KK31 ⇑Lg 06 11 25.0
comp=E,965nm,0.5s,baz=262,slow=348,SNR=9.6
KK31 Karatay Array 2.31 313 *i* PN Pn 06 10 53.4 +0.5
KK31 pmax pmax
comp=Z,476nm,0.4s
TKM2 Tokmak 2 2.47 56 ⇑P Pn 06 10 57.9 +2.8
comp=Z,5µm,0.5s,SNR=6421
TKM2 Tokmak 2 2.47 56 ⇑Pn Pn 06 10 58.8 +3.7
comp=Z,318nm,0.6s
TKM2 ⇓Lg 06 11 32.8
comp=Z,329nm,0.7s
TKM2 Tokmak 2 2.47 56 *i* PN Pn 06 10 58.7 +3.6
TKM2 pmax pmax
comp=Z,4µm,0.5s
ULHL Ulahol 2.64 74 ⇑P Pn 06 11 00.3 +2.8
comp=E,811nm,0.4s,SNR=188
KSH Kashi 3.15 129⇑*i*PG Pb 06 11 08.5 -2.7
KSH S **Sb 06 11 49.3 +0.2**
KSH Smax
comp=N,2µm,0.7s
KSH Smax
comp=E,2µm,0.8s
KNDC Almaty 3.49 60 ⇑Pn Pn 06 11 13.4 +4.3
comp=E,2µm,0.9s
KNDC ⇑Lg 06 12 04.5
comp=E,4µm,0.8s
AAA Alma-Ata 3.50 59 ePN Pb 06 11 17.6 +0.3
AAA *e*S **Sb 06 12 02.0 +2.7**
AAA pmax pmax
comp=Z,2.0nm,0.8s
AAA smax
comp=N,3.0nm,0.9s
CEP Cherat 7.75 186 P Pn 06 12 10.7 +3.0
CEP S **Sn 06 13 41.0 +6.1**
CHCP Chirah Chowk 7.89 177 P Pn 06 12 13.1 +3.5
MK05 Makanchi Array 8.58 49 ⇑Pn Pn 06 12 21.0 +1.9
comp=N,52nm,0.8s
MKAR Makanchi Array 8.58 49 Pn Pn 06 12 21.3 +2.2
comp=N,5.2nm,0.3s,baz=233,slow=14,SNR=80
MKAR Sn **Sn 06 13 55.0 -0.2**
comp=N,0.8nm,0.3s,baz=214,slow=26,SNR=2.2
MKAR Lg 06 14 49.2
comp=N,5.8nm,0.3s,baz=240,slow=28,SNR=6.5
MKAR Makanchi Array 8.58 49 P Pn 06 12 21.3 +2.3
MKAR 06 13 55.0
MKAR Makanchi Array 8.58 49 Pn Pn 06 12 21.3 +2.2
MKAR Sn **Sn 06 13 55.0 -0.2**
MKAR Lg 06 14 49.2
SBDP Sheikh Budin 9.38 191 P Pn 06 12 31.9 +1.9
KURK Kurchatov 10.00 22 ⇑P Pn 06 12 37.8 -0.7
SNR=9.3
KURK Kurchatov 10.00 22 *c* iP Pn 06 12 37.2 -1.3
KURK Kurchatov 10.00 22 ePn Pn 06 12 36.9 -1.6
DRP Derazinda 10.02 193 P Pn 06 12 40.7 +2.0
SDNR Sundarnagar 10.57 160 eP Pn 06 12 46.0 -0.3
SDNR *ex* x 06 14 43.6
WMQ Urumqi 11.18 73 eP Pn 06 12 55.0 +0.4
WMQ PP 06 13 04.0
WMQ S **Sn 06 14 59.0 0.0**
WMQ SS 06 15 13.0
WMQ AMB AMB
comp=Z,16nm,0.8s
WMQ LR LR
comp=N,1µm,6.0s
WMQ LR LR
comp=E,985nm,6.0s
WMQ LR LR
comp=Z,786nm,5.0s
VOSK Vostochnaya 11.24 354 ⇓Pn Pn 06 12 56.6 +1.1
comp=Z,8.6nm,0.5s
VOSK ⇑Sn **Sn 06 15 12.4 +12**
comp=Z,62nm,1.1s
VOSK Vostochnaya 11.24 354 *i* P Pn 06 12 52.9 -2.6
VOSK pmax pmax
comp=Z,9.0nm,0.4s
BVA0 Borovoye Array 11.59 353 Pn Pn 06 12 58.1 -2.1
comp=Z,3.4nm,0.6s,baz=158,slow=12,SNR=133
BVA0 ⇑Sn **Sn 06 15 16.9 +7.8**
comp=Z,9.8nm,1.0s,baz=163,slow=25,SNR=5.5
BVAR Borovoye Array 11.59 353 Pn Pn 06 12 58.1 -2.2
comp=Z,9.8nm,0.3s,baz=178,slow=8.9,SNR=91
BVAR Sn **Sn 06 15 06.0 -3.1**
comp=Z,5.0nm,0.3s,baz=160,slow=23,SNR=6.5
BVAR Lg 06 16 12.7
comp=Z,2.7nm,0.3s,baz=156,slow=26,SNR=3.1
BVAR LR LR 06 17 47.4
comp=Z,188nm,21.1s,baz=260,slow=39
BVAR Borovoye Array 11.59 353 P Pn 06 12 58.1 -2.2
BVAR 06 15 06.0
BRVK Borovoye 11.64 352 ⇑P Pn 06 12 59.8 -1.1
SNR=13
BRVK Borovoye 11.64 352 ePn Pn 06 12 59.3 -1.6
BRVK *e*Sn **Sn 06 15 07.5 -2.6**
AB31 Akbulak array 11.87 315 Pn Pn 06 13 01.9 -2.2
comp=Z,112nm,0.6s,baz=120,slow=13,SNR=1313
AB31 ⇑Sn **Sn 06 15 07.8 -8.2**
comp=Z,36nm,0.7s,baz=121,slow=22,SNR=8.6
AKTK Aktyubinsk 13.57 316 Pn Pn 06 13 25.3 -2.1
AKTK Sn **Sn 06 15 51.5 -6.1**
AKTK Lg 06 17 25.1
AKTK LR LR 06 18 51.2
AKTO Aktyubinsk 13.57 316 ⇑Pn Pn 06 13 24.2 -3.1
comp=Z,1.1nm,0.7s
AKTO ⇓Sn **Sn 06 15 55.6 -1.9**
comp=Z,2.2nm,1.5s
AKTO Aktyubinsk 13.57 316 Pn Pn 06 13 25.3 -2.1
comp=Z,3.5nm,0.3s,baz=126,slow=14,SNR=179
AKTO Sn **Sn 06 15 51.5 -6.1**
comp=Z,1.4nm,0.3s,baz=138,slow=18,SNR=5.3
AKTO Lg 06 17 25.1
comp=Z,0.5nm,0.3s,baz=352,slow=12,SNR=2.3
AKTO LR LR 06 18 51.2
comp=Z,470nm,18.1s,baz=139,slow=38
AKTO Aktyubinsk 13.57 316 P Pn 06 13 25.3 -2.1
AKTO 06 15 51.5
ZAL Zalesovo 14.75 29 Pn Pn 06 13 43.0 -0.4
comp=Z,2.8nm,0.3s,baz=252,slow=13,SNR=36
ZAL Sn **Sn 06 16 18.5 -7.7**
comp=Z,0.6nm,0.3s,baz=238,slow=12,SNR=2.9
ZAL Lg 06 17 58.3
comp=Z,0.2nm,0.3s,baz=157,slow=18,SNR=1.9
ZAL LR LR 06 20 34.6
comp=Z,95nm,18.4s,baz=76,slow=42
ZAL Zalesovo 14.75 29 P Pn 06 13 43.0 -0.3
ZAL 06 16 18.5
NVS Novosibirsk 14.97 24 eP Pn 06 13 45.7 -0.7
NVS *e* 06 16 26.2
AJM Ajmer 15.11 174 eP Pn 06 13 46.4 -1.9
AJM AMb AMB 06 13 53.6
comp=Z,11nm,0.4s
KOLN Koldanda 16.34 144 eP Pn 06 14 01.0 -3.2
comp=Z,58nm,0.5s
GKN Gorkha 16.62 141 eP Pn 06 14 04.9 -2.8
comp=Z,147nm,0.7s
KKN Kakani 17.11 139 eP Pn 06 14 10.0 -3.8
comp=Z,139nm,0.7s
KKN Kakani 17.11 139 eP Pn 06 14 10.0 -3.8
KKN pmax pmax
comp=Z,139nm,0.7s
DMN Daman 17.17 140 eP Pn 06 14 12.3 -2.4
comp=Z,67nm,0.7s
SVE Sverdlovsk 17.19 337 eP Pn 06 14 12.0 -2.9
SVE MLR MLR
comp=N,300nm,12.0s
SVE MLR MLR
comp=E,200nm,12.0s
SVE MLR MLR
comp=Z,400nm,12.0s
GUN Gumba 17.30 138 eP Pn 06 14 14.1 -2.2
comp=Z,107nm,0.6s
PKI Pulchoki 17.35 140 eP Pn 06 14 14.4 -2.5
comp=Z,120nm,0.7s
PKI Pulchoki 17.35 140 eP Pn 06 14 14.4 -2.5
PKI pmax pmax
comp=Z,120nm,0.7s
ARU Arti 17.53 333 ⇓*i* P Pn 06 14 16.5 -2.6
ARU *e*S **Sn 06 17 25.4 -8.3**
ARU pmax pmax
comp=Z,52nm,0.8s
ARU MLR MLR
comp=Z,200nm,18.0s
ARU MLR MLR
comp=N,200nm,19.0s
ARU MLR MLR
comp=E,90nm,17.0s
JIRN Jiri 17.66 137 eP Pn 06 14 18.7 -2.1
comp=E,61nm,0.4s
BHPL Bhopal 18.66 167 eP Pn 06 14 30.4 -2.6
BHPL AMb AMB 06 14 39.8
comp=Z,29nm,1.0s
JBP Jabalpur 19.29 160⇑*i* P Pn 06 14 38.3 -2.3
JBP *ex* x 06 14 43.0
comp=Z,33nm,0.8s
JBP *i* x x 06 18 01.7
SOKR Solikamsk 20.61 336*d* iP P 06 14 57.9 +4.0
SOKR pmax pmax
comp=Z,30nm,1.4s
GTA Gaotai 20.61 87 eP P 06 14 55.9 +2.0
GTA AP 06 15 00.8
GTA XP sP 06 15 03.3 +1.1
GTA PP 06 15 20.4
GTA S **S 06 18 48.5 +5.1**
GTA XS sS 06 18 54.3 +1.7
GTA PCP PcP 06 19 02.8 -1.3
GTA SCP ScP 06 22 34.8 -4.7
GTA PCS PcS 06 22 36.8 -5.1
GTA AMB AMB
comp=Z,7.0nm,1.1s
GTA AMB AMB
comp=Z,108nm,4.6s
GTA LR LR
comp=N,156nm,13.7s,MS3.7
GTA LR LR
comp=E,174nm,16.0s,MS3.7
GTA LR LR
comp=Z,215nm,17.5s,MS3.6
BOK Bokaro 20.80 144 eP P 06 14 54.3 -1.6
BOK AMb AMB 06 14 59.1
comp=Z,54nm,0.8s
GNI Garni 21.26 276 P P 06 15 02.5 +1.6
comp=Z,8.3nm,0.5s,mb4.4,baz=346,slow=9.5,SNR=7.2
GNI LR LR 06 24 30.4
comp=Z,58nm,21.5s,MS2.9,baz=220,slow=40
GNI Garni 21.26 276 P P 06 15 03.6 +2.7
SNR=6.3
GNI Garni 21.26 276 eP P 06 15 02.4 +1.5
GNI pmax pmax
comp=Z,32nm,0.9s
GNI Garni 21.26 276 eP P 06 15 02.4 +1.6
comp=Z,32nm,0.9s,mb4.7
GNI *e*pP 06 15 08.4
ZEI Tsey 21.44 283 eP P 06 15 03.5 +0.7
ZEI *e**PP 06 15 17.4
ZEI pmax pmax
comp=Z,14nm,0.5s,mb4.5
WSAR Wadi Sarin 21.79 217 P P 06 15 06.8 +0.2
comp=Z,11nm,0.5s,mb4.5,baz=25,slow=8.1,SNR=31
WSAR LR LR 06 25 10.6
comp=Z,123nm,18.9s,MS3.3,baz=250,slow=41
WSAR Wadi Sarin 21.79 217 P P 06 15 06.8 +0.2
WSAR LR LR 06 25 10.6
ASHO Ashiyiah 21.85 225 ⇓P P 06 15 07.3 +0.1
SNR=6.2
GOF Gofitskoye 21.90 289 eP P 06 15 13.1 +5.3
GOF pmax pmax
comp=Z,20nm,0.6s,mb4.7
KIV Kislovodsk 22.20 286 *i* P P 06 15 12.8 +1.8
KIV MLR MLR
comp=Z,200nm,16.0s,MS3.6
KIV Kislovodsk 22.20 286 eP P 06 15 13.1 +2.1
comp=Z,20nm,0.6s,mb4.7
ZAK Zakamensk 22.80 57 eP P 06 15 18.0 +0.6
ZAK *e* 06 15 49.5
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb3.9
ZAK pmax pmax
comp=Z,3.0nm,0.9s,mb3.7
TLY Talaya 23.30 54 eP P 06 15 30.1 +7.5
TLY *e* 06 15 52.1
TLY *e*SS 06 20 30.5
TLY pmax pmax
comp=Z,6.0nm,1.0s,mb4.0
TLY MLR MLR
comp=Z,189nm,25.0s,MS3.5
TLY Talaya 23.30 54 eP P 06 15 22.3 -0.4
comp=Z,1.4nm,0.3s,mb3.9
TLY *e* 06 15 30.9
SONM Songino Array 24.54 64 P P 06 15 35.7 +1.5
comp=Z,3.3nm,1.0s,mb3.8,baz=272,slow=10.0,SNR=14
SONM LR LR 06 25 54.3
comp=Z,196nm,18.7s,MS3.6,baz=86,slow=38
HYB Hyderabad 24.55 167 *i* P P 06 15 35.0 +0.7
LZH Lanzhou 24.70 93 eP P 06 15 38.3 +2.7
LZH AP 06 15 41.5
LZH XP sP 06 15 44.0 -0.3
LZH PP 06 16 14.5
LZH *e*S **S 06 19 51.5 -4.9**
LZH SS 06 20 52.5
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.5
LZH AMB AMB
comp=Z,90nm,4.5s
LZH LR LR
comp=N,342nm,11.3s
LZH LR LR
comp=Z,477nm,12.2s,MS4.2
ULN Ulaanbaatar 24.98 64⇑eP P 06 15 40.3 +2.1
VIS Vishakhapatnam 25.41 156 eP P 06 15 41.6 -0.4
VIS AMb AMB 06 15 49.8
comp=Z,36nm,1.3s,mb4.8
ANN Anapa 25.89 289 eP P 06 15 45.8 -0.6
ANN pmax pmax
comp=Z,33nm,1.3s,mb4.7
MALT Malatya 26.47 274 eP P 06 15 53.9 +2.2
MALT pmax pmax
comp=Z,14nm,1.1s,mb4.4
MALT Malatya 26.47 274 eP P 06 15 53.9 +2.1
comp=Z,14nm,1.1s,mb4.4
CD2 Chengdu 26.99 103 eP P 06 15 55.9 -0.5
CD2 AP pP 06 16 00.3 -2.2
CD2 S **S 06 20 29.9 -2.8**
CD2 SS 06 21 44.0
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=E,100nm,16.3s
CD2 LR LR
comp=Z,90nm,14.2s,MS3.5
OBN Obninsk 27.30 312 eP P 06 15 59.9 +0.7
OBN *e**SP sP 06 16 17.5 +10
OBN *e* 06 16 43.7
OBN pmax pmax
comp=Z,16nm,1.2s,mb4.4
OBN MLR MLR
comp=Z,200nm,19.0s,MS3.7
KLMR Klimovskoe 27.96 325 eP P 06 16 05.1 0.0
KLMR pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
HHC Hu-ho-hao-te 28.99 78 eP P 06 16 14.0 -0.3
HHC AP pP 06 16 18.3 -2.1
HHC PP PP 06 17 07.0 -13
HHC PCP PcP 06 19 23.8 +1.2
HHC S **S 06 21 01.9 -2.4**
HHC SS SS 06 22 29.1 -38
HHC SCP ScP 06 23 03.5 +0.6
HHC PCS PcS 06 23 05.3 0.0
HHC SCS ScS 06 26 55.8 -1.0
HHC AMB AMB
comp=Z,10.0nm,1.3s,mb4.4
HHC AMB AMB
comp=Z,29nm,3.6s
HHC LR LR
comp=N,190nm,17.1s,MS3.9
HHC LR LR
comp=E,141nm,15.2s,MS3.9
HHC LR LR
comp=Z,226nm,13.7s,MS3.9
BR131 Keskin Array S 29.62 280 eP P 06 16 21.5 +1.7
comp=Z,3.3nm,0.7s,mb4.2
BRTR Keskin Array B 29.62 280 P P 06 16 20.7 +0.8
comp=Z,4.3nm,0.9s,mb4.2,baz=106,slow=9.2,SNR=14
KMI Kunming 29.69 114 P P 06 16 21.8 +1.4
KMI AP pP 06 16 25.8 -0.8
KMI PP PP 06 17 18.0 -10
KMI S **S 06 21 17.0 +1.8**
KMI SS SS 06 22 50.3 -31
KMI SSS 06 23 10.8
KMI AMB AMB
comp=Z,9.0nm,0.9s,mb4.5
KMI AMB AMB
comp=Z,81nm,4.4s
KMI LR LR
comp=N,96nm,13.1s,MS3.9
KMI LR LR
comp=E,121nm,11.1s,MS3.9
KMI LR LR
comp=Z,120nm,13.5s,MS3.7
AKASG Malin Array Be 31.17 302 P P 06 16 34.0 +0.5
comp=Z,3.7nm,0.6s,mb4.4,baz=77,slow=8.0,SNR=11
AKBB Malin Array Si 31.17 302 eP P 06 16 34.2 +0.6
JOF Joensuu 32.35 325 ep P 06 16 44.2 +0.3
comp=Z,5.4nm,0.7s,mb4.5
JOF Joensuu 32.35 325 eP P 06 16 44.2 +0.3
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LVZ Lovozero 33.39 335⇑eP P 06 16 54.2 +1.2
LVZ *e*S **S 06 22 16.4 +3.5**
LVZ pmax pmax
comp=Z,23nm,1.0s,mb5.1
LVZ pmax pmax
comp=N,5.0nm,1.3s
LVZ pmax pmax
comp=E,11nm,1.2s
LVZ MLR MLR
comp=Z,283nm,22.0s,MS3.9
LVZ MLR MLR
comp=N,99nm,12.0s
LVZ MLR MLR
comp=E,66nm,13.0s
APA Apatity 33.62 334⇓eP P 06 16 56.7 +1.7
APA *i* 06 17 06.6
MLR Muntele Rosu 33.84 293 LR LR 06 33 14.7
comp=E,225nm,20.7s,MS3.9,baz=77,slow=41
FINES FINESS Array B 34.24 322 P P 06 16 59.5 -1.0
comp=E,2.2nm,0.5s,mb4.3,baz=113,slow=8.7,SNR=26
FINES LR LR 06 31 26.8
comp=E,134nm,18.5s,MS3.7,baz=161,slow=37
FINES FINESS Array B 34.24 322 *i* P P 06 16 59.5 -0.9
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 34.24 322 P P 06 16 59.5 -1.0
FINES LR LR 06 31 26.8
KAF Kangasniemi 34.30 323 ep P 06 17 02.3 +1.3
baz=104,slow=8.7
KOLS Kolonicke sedl 35.78 299 eP P 06 17 14.6 +0.9
KOLS *e*PP PP 06 18 20.6 -14
CRVS Cervenica-Dubn 36.32 300 eP P 06 17 21.2 +2.9
CRVS Cervenica-Dubn 36.32 300 eP P 06 17 21.3 +3.0
STHS Stebnicka Huta 36.39 300 eP P 06 17 18.7 -0.2
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
STHS Stebnicka Huta 36.39 300 eP P 06 17 18.7 -0.2
comp=Z,2.7nm,0.7s,mb4.3
KEV Kevo 36.72 335 ep P 06 17 22.5 +0.8
KECS Kecovo 37.02 299 eP P 06 17 24.6 +0.3
KECS pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
KECS Kecovo 37.02 299 eP P 06 17 24.6 +0.3
comp=Z,2.8nm,0.7s,mb4.2
ARCES ARCESS Array B 37.10 335 P P 06 17 24.5 -0.5
comp=Z,6.1nm,0.5s,mb4.7,baz=111,slow=7.9,SNR=53
ARCES LR LR 06 33 20.4
comp=Z,139nm,18.8s,MS3.8,baz=272,slow=37
ARE0 ARCESS Array S 37.10 335 eP P 06 17 26.4 +1.4
SNY Shenyang 37.44 72 ⇑P P 06 17 28.1 +0.2
SNY AMB AMB
comp=Z,9.0nm,0.5s,mb4.9
NJ2 Nanjing 37.67 89 eP P 06 17 30.3 +0.5
NJ2 AP pP 06 17 34.8 -1.2
NJ2 S **S 06 23 17.0 -1.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
NJ2 AMB AMB
comp=Z,120nm,10.3s
NJ2 LR LR
comp=N,400nm,24.6s
NJ2 LR LR
comp=E,150nm,11.1s
NJ2 LR LR
comp=Z,210nm,14.1s
VYHS Vyhne 38.10 299 eP P 06 17 34.9 +1.5
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
VYHS Vyhne 38.10 299 eP P 06 17 34.9 +1.5
comp=Z,2.3nm,0.9s,mb3.9
CN2 Changchun 38.21 68 eP P 06 17 34.3 -0.1
CN2 *e*XP sP 06 17 41.3 -1.8
CN2 *e*S **S 06 23 25.6 -1.3**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
CN2 LR LR
comp=N,200nm,18.0s,MS4.1
CN2 LR LR
comp=E,200nm,18.0s,MS4.1
CN2 LR LR
comp=Z,200nm,16.0s,MS4.0
OKC Ostrava-Krasne 38.32 302 AMS AMS 06 34 30.0
comp=Z,100nm,12.1s
MORC Moravsky Berou 38.72 302 eP P 06 17 39.7 +1.1
MORC pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
MORC Moravsky Berou 38.72 302 eP P 06 17 39.6 +1.1
comp=Z,4.9nm,0.7s,mb4.3
YAK Yakutsk 39.08 39*d* iP P 06 17 41.7 +0.1
YAK pmax pmax
comp=Z,19nm,0.7s,mb4.9
YAK MLR MLR
comp=Z,100nm,17.0s,MS3.7
DPC Dobruska-Polom 39.40 303 eP P 06 17 44.7 +0.4
DPC AMS AMS 06 35 00.0
comp=Z,200nm,14.3s
VRAC Vranov 39.41 301 LR LR 06 37 12.3
comp=Z,78nm,18.4s,MS3.6,baz=80,slow=41
UPC Upice 39.57 303 eP P 06 17 46.5 +0.8
SSE Sheshan 39.88 89 P P 06 17 47.3 -1.0
SSE AMB AMB
comp=Z,27nm,0.6s,mb5.2
SSE AMB AMB
comp=Z,76nm,5.4s
SSE LR LR
comp=N,43nm,23.0s,MS3.4
SSE LR LR
comp=E,40nm,23.0s,MS3.4
SSE LR LR
comp=Z,35nm,14.0s
HFS Hagfors 40.11 318 LR LR 06 35 00.8
comp=Z,151nm,20.8s,MS3.8,baz=256,slow=37
TREC Trest 40.12 301 AMS AMS 06 35 40.0
comp=Z,100nm,12.8s
PVCC Panska Ves 40.47 303 eP P 06 17 54.8 +1.6
PVCC AMS AMS 06 35 40.0
comp=Z,200nm,20.0s
PRU Pruhonice 40.59 302 eP P 06 17 55.4 +1.2
PRU *e*S **S 06 24 12.6 +10**
PRU AMS AMS 06 35 50.0
comp=Z,100nm,13.0s
BRG Berggiesshubel 40.80 304 eP P 06 17 57.5 +1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,4.8nm,1.2s,mb4.0						
BRG	**Berggiesshubel**	**40.80**	**304**	*e*P	**P**	**06 17 57.5**	**+1.6**
BRG				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
MDJ	**Mudanjiang**	**40.86**	**66**	P	**P**	**06 17 54.8**	**-1.6**
MDJ				PP	PP	06 19 28.3	-2.4
MDJ				PCP	PcP	06 19 56.4	-0.6
MDJ				SCP	ScP	06 23 46.0	+0.6
MDJ				PCS	PcS	06 23 47.3	-0.5
MDJ				S	**S**	**06 24 05.1**	**-1.5**
MDJ				SCS	ScS	06 28 00.6	+0.2
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,65nm,4.8s						
MDJ				LR	LR		
	comp=N,80nm,17.8s						
MDJ				LR	LR		
	comp=E,16nm,24.3s						
MDJ				LR	LR		
	comp=Z,52nm,14.8s,MS3.5						
FBE	**Freiberg**	**41.16**	**304**	*e*P	**P**	**06 17 59.6**	**+0.7**
	comp=Z,10.0nm,0.8s,mb4.5						
CLL	**Collm**	**41.30**	**305**	P	**P**	**06 18 01.0**	**+0.9**
	comp=Z,logA/T=0.7,mb4.1						
CLL				*i* PCP	PcP	06 20 00.7	+2.3
CLL				*e*S	**S**	**06 24 12.0**	**-1.2**
CLL	**Collm**	**41.30**	**305**	*e*P	**P**	**06 18 01.0**	**+0.9**
	comp=Z,6.0nm,1.1s,mb4.1						
CLL				*i* (PcP)	PcP	06 20 00.7	+2.3
CLL				*e*S	**S**	**06 24 12.0**	**-1.2**
CLL	**Collm**	**41.30**	**305**	*e*P	**P**	**06 17 59.0**	**-1.1**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
CLL	**Collm**	**41.30**	**305**	*e*P	**P**	**06 17 59.0**	**-1.1**
	comp=Z,6.0nm,1.1s,mb4.1						
NB2	**NORSAR Subarra**	**41.33**	**320**	P	**P**	**06 17 59.0**	**-1.3**
	comp=Z,12nm,1.0s,mb4.5,baz=89,slow=8.6						
NOA	**NORSAR Array B**	**41.33**	**320**	P	**P**	**06 17 58.3**	**-2.0**
	comp=Z,8.4nm,1.0s,mb4.3,baz=90,slow=8.4,SNR=13						
NOA				LR	LR	06 35 36.6	
	comp=Z,104nm,21.0s,MS3.7,baz=80,slow=37						
GEC2	**GERESS Array S**	**41.36**	**301**	*e*P	**P**	**06 18 01.4**	**+0.8**
	comp=Z,9.0nm,0.8s,mb4.5						
GEC2	**GERESS Array S**	**41.36**	**301**	*e*P	**P**	**06 18 01.4**	**+0.8**
GEC2				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
GERES	**GERESS Array B**	**41.36**	**301**	P	**P**	**06 18 01.2**	**+0.6**
	comp=Z,8.7nm,0.7s,mb4.5,baz=71,slow=7.4,SNR=45						
GERES				LR	LR	06 36 45.2	
	comp=Z,88nm,18.4s,MS3.7,baz=261,slow=38						
KHC	**Kasperske Hory**	**41.38**	**301**	*e*P	**P**	**06 18 02.0**	**+1.3**
KHC				AMS	AMS	06 36 20.0	
	comp=Z,100nm,16.0s						
WET	**Wettzell**	**41.82**	**302**	*e*P	**P**	**06 18 05.8**	**+1.5**
	comp=Z,9.0nm,1.0s,mb4.3						
WET	**Wettzell**	**41.82**	**302**	*e*P	**P**	**06 18 05.8**	**+1.5**
WET				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.3						
NKC	**Novy Kostel**	**41.86**	**303**	AMS	AMS	06 36 40.0	
	comp=Z,200nm,20.0s						
WERD	**Werda**	**41.90**	**304**	*e*P	**P**	**06 18 06.1**	**+1.1**
	comp=Z,7.0nm,1.0s,mb4.2						
KONO	**Kongsberg**	**42.19**	**318**	⇑*e*P	**P**	**06 18 08.0**	**+0.7**
GRA1	**Grafenberg Arr**	**42.75**	**303**	*e*P	**P**	**06 18 14.0**	**+2.1**
	comp=Z,8.0nm,0.8s,mb4.5						
GRF	**Grafenberg Arr**	**42.75**	**303**	*e*P	**P**	**06 18 14.0**	**+2.1**
	comp=Z,8.0nm,0.8s,mb4.5						
GRF	**Grafenberg Arr**	**42.75**	**303**	*e*P	**P**	**06 18 14.0**	**+2.1**
GRF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
GRF	**Grafenberg Arr**	**42.75**	**303**	*e*P	**P**	**06 18 14.0**	**+2.1**
GRF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
HABR	**Khabarovsk**	**43.45**	**59**	*e*P	**P**	**06 18 15.2**	**-2.3**
HABR				*e*S	**S**	**06 24 39.1**	**-5.7**
CDF	**Champ du Feu**	**45.59**	**302**	*e*P	**P**	**06 18 33.0**	**-1.7**
	comp=Z,9.0nm,0.8s,mb4.5						
CDF	**Champ du Feu**	**45.59**	**302**	*e*P	**P**	**06 18 33.0**	**-1.7**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CDF	**Champ du Feu**	**45.59**	**302**	*e*P	**P**	**06 18 33.0**	**-1.7**
	comp=Z,4.5nm,0.8s,mb4.5						
HINF	**Hinteralfeld**	**46.04**	**301**	*e*P	**P**	**06 18 37.5**	**-0.7**
	comp=Z,14nm,1.0s,mb4.5						
HINF	**Hinteralfeld**	**46.04**	**301**	*e*P	**P**	**06 18 37.5**	**-0.7**
HINF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
HINF	**Hinteralfeld**	**46.04**	**301**	*e*P	**P**	**06 18 37.5**	**-0.7**
	comp=Z,6.9nm,1.0s,mb4.5						
HAU	**Haudompre**	**46.31**	**302**	*e*P	**P**	**06 18 39.7**	**-0.6**
	comp=Z,9.1nm,0.6s,mb4.5						
HAU				*e*R			
	comp=Z,99nm,19.5s						
HAU	**Haudompre**	**46.31**	**302**	*e*P	**P**	**06 18 39.7**	**-0.6**
HAU				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
HAU				MLR	MLR		
	comp=Z,100nm,19.5s,MS3.8						
HAU	**Haudompre**	**46.31**	**302**	*e*P	**P**	**06 18 39.7**	**-0.6**
	comp=Z,4.6nm,0.6s,mb4.6						
HAU				LR	LR		
	comp=Z,100nm,19.5s,MS3.8						
LPG	**La Plagne**	**46.86**	**298**	*e*P	**P**	**06 18 44.2**	**-0.4**
	comp=Z,14nm,0.9s,mb4.6						
LPG	**La Plagne**	**46.86**	**298**	*e*P	**P**	**06 18 44.2**	**-0.4**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
LPG	**La Plagne**	**46.86**	**298**	*e*P	**P**	**06 18 44.2**	**-0.4**
	comp=Z,6.8nm,0.9s,mb4.6						
LPL	**La Plagne**	**46.86**	**298**	*e*P	**P**	**06 18 44.7**	**+0.1**
	comp=Z,17nm,0.8s,mb4.7						
LPL	**La Plagne**	**46.86**	**298**	*e*P	**P**	**06 18 44.7**	**+0.1**
LPL				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LPL	**La Plagne**	**46.86**	**298**	*e*P	**P**	**06 18 44.7**	**+0.1**
	comp=Z,8.5nm,0.8s,mb4.7						
RSL	**Roselend**	**46.87**	**299**	*e*P	**P**	**06 18 44.8**	**+0.1**
CABF	**La Chapelle**	**46.92**	**300**	*e*P	**P**	**06 18 45.1**	**0.0**
	comp=Z,44nm,1.3s,mb4.9						
CABF	**La Chapelle**	**46.92**	**300**	*e*P	**P**	**06 18 45.1**	**0.0**
CABF				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
CABF	**La Chapelle**	**46.92**	**300**	*e*P	**P**	**06 18 45.1**	**0.0**
	comp=Z,22nm,1.3s,mb4.9						
SBF	**Sospel**	**46.97**	**296**	*e*P	**P**	**06 18 44.2**	**-1.3**
	comp=Z,50nm,1.0s,mb5.1						
SBF	**Sospel**	**46.97**	**296**	*e*P	**P**	**06 18 44.2**	**-1.3**
SBF				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
SBF	**Sospel**	**46.97**	**296**	*e*P	**P**	**06 18 44.2**	**-1.3**
	comp=Z,25nm,1.0s,mb5.1						
BNI	**Bardonecchia**	**47.06**	**298**	*e*P	**P**	**06 18 47.4**	**+1.2**
BNI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
BNI	**Bardonecchia**	**47.06**	**298**	*e*P	**P**	**06 18 47.4**	**+1.2**
	comp=Z,13nm,1.0s,mb4.8						
MBDF	**Montbardon**	**47.11**	**297**	*e*P	**P**	**06 18 44.6**	**-2.0**
	comp=Z,32nm,0.9s,mb4.9						
MBDF	**Montbardon**	**47.11**	**297**	*e*P	**P**	**06 18 44.6**	**-2.0**
MBDF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
MBDF	**Montbardon**	**47.11**	**297**	*e*P	**P**	**06 18 44.6**	**-2.0**
	comp=Z,16nm,0.9s,mb5.0						
FRF	**La Foret Royal**	**47.61**	**296**	*e*P	**P**	**06 18 49.5**	**-1.0**
	comp=Z,44nm,1.1s,mb5.1						
FRF	**La Foret Royal**	**47.61**	**296**	*e*P	**P**	**06 18 49.5**	**-1.0**
FRF				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
FRF	**La Foret Royal**	**47.61**	**296**	*e*P	**P**	**06 18 49.5**	**-1.0**
	comp=Z,22nm,1.1s,mb5.1						
ORIF	**Oris-en-Rattie**	**47.63**	**298**	*e*P	**P**	**06 18 50.2**	**-0.5**
	comp=Z,21nm,1.1s,mb4.8						
ORIF				*e*R			
	comp=Z,114nm,22.5s						
ORIF	**Oris-en-Rattie**	**47.63**	**298**	*e*P	**P**	**06 18 50.2**	**-0.5**
ORIF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
ORIF	**Oris-en-Rattie**	**47.63**	**298**	*e*P	**P**	**06 18 50.2**	**-0.5**
	comp=Z,11nm,1.1s,mb4.8						
SMF	**Signal de Mont**	**48.36**	**301**	*e*P	**P**	**06 18 55.6**	**-0.7**
VIVF	**Saint-Julien-l**	**48.46**	**298**	*e*P	**P**	**06 18 56.3**	**-0.7**
	comp=Z,12nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**48.46**	**298**	*e*P	**P**	**06 18 56.3**	**-0.7**
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**48.46**	**298**	*e*P	**P**	**06 18 56.3**	**-0.7**
	comp=Z,6.0nm,0.9s,mb4.6						
JMIC	**Jan Mayen**	**48.60**	**334**	LR	LR	06 39 36.1	
	comp=Z,43nm,19.4s,MS3.4,baz=137,slow=36						
AVF	**Avril sur Loir**	**48.63**	**301**	*e*P	**P**	**06 18 57.5**	**-0.8**
	comp=Z,47nm,1.3s,mb5.1						
AVF	**Avril sur Loir**	**48.63**	**301**	*e*P	**P**	**06 18 57.5**	**-0.8**
AVF				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
AVF	**Avril sur Loir**	**48.63**	**301**	*e*P	**P**	**06 18 57.5**	**-0.8**
	comp=Z,24nm,1.3s,mb5.1						
LASF	**Ste Croix**	**49.29**	**297**	*e*P	**P**	**06 19 02.2**	**-1.2**
	comp=Z,14nm,0.9s,mb4.7						
ASAJ	**Asahikawa**	**49.81**	**62**	P	**P**	**06 19 07.4**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.3,baz=187,slow=21,SNR=4.3						
ASAJ	**Asahikawa**	**49.81**	**62**	P	**P**	**06 19 07.4**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAJO	**Matsushiro**	**49.94**	**73**	*e*P	**P**	**06 19 08.6**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
MAJO	**Matsushiro**	**49.94**	**73**	*e*P	**P**	**06 19 08.6**	**+0.2**
	comp=Z,10nm,0.7s,mb5.0						
MAT	**Matsushiro**	**49.94**	**73**	P	**P**	**06 19 07.6**	**-0.8**
MAT	**Matsushiro**	**49.94**	**73**	*e*P	**P**	**06 19 08.0**	**-0.4**
MAT				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
MAT	**Matsushiro**	**49.94**	**73**	*e*P	**P**	**06 19 08.0**	**-0.4**
	comp=Z,14nm,1.0s,mb5.0						
MJAR	**Matsushiro Arr**	**49.94**	**73**	P	**P**	**06 19 08.9**	**+0.5**
	comp=Z,12nm,0.9s,mb4.9,baz=294,slow=8.9,SNR=42						
CAF	**Calviac**	**50.15**	**299**	*e*P	**P**	**06 19 09.2**	**-0.8**
KMBO	**Kilima Mbogo**	**53.31**	**226**	P	**P**	**06 19 33.5**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.8,baz=54,slow=10,SNR=4.5						
KMBO	**Kilima Mbogo**	**53.31**	**226**	P	**P**	**06 19 33.5**	**-0.1**
BILL	**Bilibino**	**53.46**	**28**	*e*P	**P**	**06 19 34.5**	**-0.2**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BORG	**Borgarnes**	**55.00**	**329**	LR	LR	06 43 02.1	
	comp=Z,112nm,20.6s,MS3.9,baz=8.0,slow=36						
ESDC	**Sonseca Array**	**56.45**	**296**	P	**P**	**06 19 55.4**	**-0.9**
	comp=Z,1.6nm,0.6s,mb4.2,baz=58,slow=7.6,SNR=12						
IMA2	**Indian Mountai**	**66.88**	**19**	*e*P	**P**	**06 21 06.3**	**-0.3**
TOA0	**Torodi Ar. Sit**	**67.31**	**268**	*e*P	**P**	**06 21 10.2**	**+0.9**
TOA0				*e*PP	PP	06 23 42.2	+4.6
TORD	**Torodi Ar. Bea**	**67.31**	**268**	P	**P**	**06 21 08.5**	**-0.9**
	comp=Z,2.6nm,0.7s,mb4.4,baz=54,slow=4.6,SNR=24						
COLA	**College**	**69.23**	**17**	*e*P	**P**	**06 21 21.2**	**-0.2**
COLA				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
COLA	**College**	**69.23**	**17**	*e*P	**P**	**06 21 21.2**	**-0.2**
	comp=Z,15nm,0.9s,mb4.9						
DAWY	**Dawson**	**71.68**	**14**	*e*P	**P**	**06 21 36.1**	**-0.3**
PMR	**Palmer**	**71.73**	**20**	*e*P	**P**	**06 21 35.6**	**-1.1**
PMR				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
PMR	**Palmer**	**71.73**	**20**	*e*P	**P**	**06 21 35.6**	**-1.0**
	comp=Z,11nm,1.1s,mb4.7						
SML	**Sawmill**	**71.75**	**19**	*e*P	**P**	**06 21 30.9**	**-5.8**
YKW3	**Yellowknife Ar**	**76.06**	**4**	*e*P	**P**	**06 22 01.6**	**-0.4**
YKA	**Yellowknife Ar**	**76.13**	**4**	P	**P**	**06 22 01.6**	**-0.8**
	comp=Z,5.9nm,0.8s,mb4.6,baz=351,slow=5.8,SNR=17						
YKA				LR	LR	06 56 16.3	
	comp=Z,21nm,20.1s,MS3.4,baz=85,slow=36						
YKA	**Yellowknife Ar**	**76.13**	**4**	⇑*e*P	**P**	**06 22 01.6**	**-0.8**
DBIC	**Dimbokro**	**76.39**	**267**	P	**P**	**06 22 03.5**	**-0.4**
	comp=Z,8.3nm,1.1s,mb4.6,baz=145,slow=13,SNR=3.2						
LIC	**Lamto**	**76.81**	**267**	*e*P	**P**	**06 22 06.3**	**+0.1**
	comp=Z,28nm,1.1s,mb4.8						
LIC	**Lamto**	**76.81**	**267**	*e*P	**P**	**06 22 06.3**	**+0.1**
	comp=Z,14nm,1.1s,mb4.8						
FITZ	**Fitzroy Crossi**	**76.86**	**129**	*e*P	**P**	**06 22 06.8**	**+0.3**
	comp=Z,8.0nm,1.4s,mb4.5						
WB2	**Warramunga Arr**	**83.54**	**124**	*e*P	**P**	**06 22 42.3**	**-0.2**
EDM	**Edmonton**	**85.45**	**4**	*e*P	**P**	**06 22 52.1**	**-0.1**
ASAR	**Alice Springs**	**86.04**	**126**	P	**P**	**06 22 54.8**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.5,baz=324,slow=5.1,SNR=21						
ULM	**Lac du Bonnet**	**88.04**	**353**	LR	LR	07 05 26.1	
	comp=Z,45nm,21.6s,MS3.9,baz=316,slow=38						
WALA	**Waterton Lakes**	**89.57**	**4**	*e*P	**P**	**06 23 12.0**	**-0.1**
	comp=Z,6.1nm,0.9s,mb4.9						
EYMN	**Ely**	**89.81**	**350**	*e*P	**P**	**06 23 12.8**	**-0.3**
NEW	**Newport**	**90.13**	**7**	*e*P	**P**	**06 23 14.7**	**0.0**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NEW	**Newport**	**90.13**	**7**	*e*P	**P**	**06 23 14.7**	**0.0**
	comp=Z,2.7nm,0.8s,mb4.6						
BSMT	**Bassoo Peak**	**90.72**	**5**	*e*P	**P**	**06 23 18.5**	**+1.1**
CHMT	**Chamberlain Mo**	**91.75**	**4**	*e*P	**P**	**06 23 22.2**	**0.0**
BOZ	**Bozeman (W)**	**93.09**	**3**	*e*P	**P**	**06 23 29.3**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
BOZ	**Bozeman (W)**	**93.09**	**3**	*e*P	**P**	**06 23 29.2**	**+0.9**
	comp=Z,2.0nm,0.9s,mb4.5						
PDAR	**Pinedale Array**	**96.03**	**2**	P	**P**	**06 23 41.0**	**-0.9**
	comp=Z,0.6nm,0.7s,mb4.1,baz=30,slow=2.9,SNR=6.9						
HWUT	**Hardware Ranch**	**97.13**	**3**	*e*P	**P**	**06 23 47.5**	**+0.7**
	comp=Z,2.6nm,0.6s,mb4.8						

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*NEIC **13** 06:10:29.8, 3306S×6894W, h11km, ML3.6(GUC), After GUC.*

GUC 13 06:10:29.8±0.5**, 3306S×6894W, h11**km±3km**, MD3.3, ML3.6, 5C-3D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDZ	**Mendoza**	**0.19**	**23**	*e*P	Pg	06 10 35.4	+1.5
MDZ				*e*		06 10 39.5	
FCH	**Farellones**	**1.17**	**256**	⇓*i*P	Pb	06 10 51.0	-0.9
FCH				*i* S	Sb	06 11 07.6	+0.6
CLCH	**Cerro Calan**	**1.38**	**256**	⇓*i*P	Pn	06 10 54.8	-0.2
CLCH				*i* S	Sn	06 11 13.9	+0.7
PCH	**Pirque**	**1.43**	**247**	⇑*i*P	Pn	06 10 55.7	0.0
PCH				*i* S	Sn	06 11 16.2	+1.7
JACH	**Jahuel**	**1.44**	**285**	⇑*i*P	Pn	06 10 56.5	+0.7
JACH				*i* S	Sn	06 11 16.2	+1.4
ROCH	**El Roble**	**1.74**	**272**	⇑*i*P	Pn	06 11 01.7	+1.7
ROCH				*i* S	Sn	06 11 25.9	+3.7
TACH	**Talagante**	**1.77**	**250**	⇓*i*P	Pn	06 11 01.7	+1.3
TACH				*i* S	Sn	06 11 25.9	+3.0
LCCH	**Las Cruces**	**2.24**	**259**	⇑*i*P	Pn	06 11 09.4	+2.6
LCCH				*i* S	Sn	06 11 39.8	+5.2
SFDO	**San Fernando**	**2.32**	**228**	⇑*i*P	Pn	06 11 11.0	+3.0
SFDO				*i* S	Sn	06 11 42.3	+5.9
TLL	**Tololo Astrono**	**3.29**	**331**	AML	AML	06 12 19.5	
	comp=N,114nm,0.5s						

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*MOS **13** 06:25:06.2±0.3, 5231N×15494E, h625km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=56.1km az=136.0*

KRSC 13 06:25:09, 5287N×15452E, h553km, ML4.3, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**1.49**	**113**	*e*P	P	06 26 19.3	+2.4
GNL	**Ganaly**	**2.21**	**67**	*e*P	P	06 26 22.3	+2.4
RUS	**Russkaya**	**2.47**	**99**	P	P	06 26 23.6	+2.4
RUS				S	S	06 27 18.1	-1.9
RUS	**Russkaya**	**2.47**	**99**	*e*P	P	06 26 23.6	+2.4
RUS				*i* S	S	06 27 18.1	-1.9
AVH	**Avacha**	**2.58**	**79**	*e*P	P	06 26 24.6	+2.9
NLC	**Nalytchevo**	**2.93**	**82**	P	P	06 26 26.9	+3.1
NLC				S	S	06 27 23.2	-1.5
NLC	**Nalytchevo**	**2.93**	**82**	*e*P	P	06 26 26.9	+3.1
NLC				*i* S	S	06 27 23.2	-1.5
SPN	**Mys Shipunski**	**3.33**	**84**	P	P	06 26 28.8	+2.5
SPN				S	S	06 27 26.5	-2.9
SPN	**Mys Shipunski**	**3.33**	**84**	*e*P	P	06 26 28.8	+2.5
SPN				*i* S	S	06 27 26.5	-2.9
MKZ	**Mys Kozlova**	**4.60**	**66**	P	P	06 26 38.7	+3.0
MKZ				S	S	06 27 43.5	-3.0
MKZ	**Mys Kozlova**	**4.60**	**66**	*e*P	P	06 26 38.7	+3.0
MKZ				*i* S	S	06 27 43.5	-3.0
KBTR	**Krutoberegovo**	**5.87**	**52**	P	P	06 26 49.2	+2.7
KBTR				S	S	06 28 02.5	-3.9
KBTR	**Krutoberegovo**	**5.87**	**52**	*e*P	P	06 26 49.2	+2.7
KBTR				*i* S	S	06 28 02.5	-3.9

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*ISCJB **13** 06:29:15.1±0.7, 3849N±008×4564E±005, h10km, Error ellipse: s-maj=11.3km s-min=5.5km az=8.7*

*THR **13** 06:29:15.1±0.5, 3842N×4552E, h14km±6km, ML3.3*

*CSEM **13** 06:29:16.0±0.1, 3842N×4554E, h18km, MD3.3, Error ellipse: s-maj=3.7km s-min=2.7km az=19.0*

*ISK **13** 06:29:18.4, 3838N×4544E, h66km, MD3.3*

ISC 13 06:29:16.1±0.7**, 3849N**±008×**4559E**±005**, h10**km**, n9, σ1s07**/13**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAKU	**Maku**	**1.12**	**321**	*e*PG	**Pg**	**06 29 36.4**	**-1.2**
MAKU				AML	AML	06 29 54.5	
	comp=E,487nm,0.3s						
CLDR	**Caldiran**	**1.46**	**297**	PN	**Pn**	**06 29 42.8**	**+0.3**
CLDR				SN	**Sn**	**06 30 01.0**	**-0.7**
HKR	**Hakkari**	**1.72**	**239**	PN	**Pn**	**06 29 45.0**	**-1.0**
VANT	**Van**	**1.73**	**269**	*e*PN	**Pn**	**06 29 47.2**	**+1.0**
VANB	**Van**	**1.73**	**274**	*e*PN	**Pn**	**06 29 46.4**	**+0.2**
GNI	**Garni**	**1.79**	**339**	*e*PN	**Pn**	**06 29 49.2**	**+2.2**
GRMI	**Germi**	**1.83**	**79**	*e*PG	**Pg**	**06 29 49.7**	**-1.4**
GRMI				*e*SG	**Sg**	**06 30 15.3**	**+0.4**
GRMI				AML	AML	06 30 16.7	
	comp=E,354nm,0.3s						
GRMI				AML	AML	06 30 17.0	
	comp=N,267nm,0.2s						
GRMI	**Germi**	**1.83**	**79**	*e*Pg	**Pg**	**06 29 49.7**	**-1.5**
	SNR=90						
GRMI				*e*Sg	**Sg**	**06 30 15.3**	**+0.4**
	SNR=90						
SNGE	**Sanandaj**	**3.67**	**157**	*e*PN	**Pn**	**06 30 13.3**	**+0.5**
SNGE				*e*SG	**Sg**	**06 31 07.8**	**-6.1**

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*BJI **13** 06:37:39.9, 363N×12514E, h280km, mB4.4, mb4.6*

*MAN **13** 06:37:49.5, 435N×12489E, h326km, mb4.3, ML5.2, MS5.3*

*ISCJB **13** 06:37:51.0±0.3, 441N±003×12470E±004, h327km±3km, mb4.5/87, Error ellipse: s-maj=6.8km s-min=4.5km az=144.2*

*NEIC **13** 06:37:51.7±0.9, 441N×12465E, h320km±9km, mb4.6/38, Error ellipse: s-maj=8.4km s-min=5.1km az=69.0*

*IDC **13** 06:37:51.6±1.3, 441N×12464E, h321km±12km, mb4.1/25, mb1 4.1/25, mb1mx4.1/26, mbtmp4.8/25, Error ellipse: s-maj=14.0km s-min=7.3km az=77.0*

*MOS **13** 06:37:52.9±1.0, 444N×12473E, h348km, mb4.6/24, Error ellipse: s-maj=13.5km s-min=6.3km az=115.0*

ISC 13 06:37:52.0±0.3**, 441N**±003×**12471E**±004**, h321**km±3km**, h282**km±3.6km**: pP-P, n211, σ1s07**/209**, mb4.5**/86**, 12C-10D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.61**	**8**	⇓*i*P	**Pn**	**06 38 47.0**	**+1.5**
KCP				*i* S	**S**	**06 39 29.0**	**+0.6**
DAV	**Davao City (W)**	**2.78**	**18**	*e*P	**Pn**	**06 38 47.0**	**-0.1**
MATI	**Mati**	**2.95**	**31**	*e*P	**Pn**	**06 38 46.4**	**-2.3**
BUKP	**Musuan**	**3.46**	**6**	*e*P	**Pn**	**06 38 53.7**	**0.0**
CGP	**Cagayan de Oro**	**4.02**	**360**	⇓*e*P	**Pn**	**06 38 57.0**	**-2.4**
CGP				*e*S	**S**	**06 39 52.4**	**-1.3**
SNPH	**Sibulan**	**5.12**	**343**	*e*P	**Pn**	**06 39 12.5**	**+0.9**
TSM	**Tawau**	**6.82**	**269**	P	**Pn**	**06 39 30.9**	**-0.6**
PCI	**Palu**	**7.19**	**223**	P	**Pn**	**06 39 35.0**	**-0.9**
	541nm,1.0s						
SWI	**Sorong**	**8.38**	**129**	P	**Pn**	**06 39 50.3**	**0.0**
	87nm,1.0s						
KKM	**Kota Kinabalu**	**8.62**	**281**	P	**Pn**	**06 39 53.5**	**+0.3**
KKM	**Kota Kinabalu**	**8.62**	**281**	*e*Pn	**Pn**	**06 39 51.6**	**-1.6**
AAI	**Ambon**	**8.76**	**157**	P	**Pn**	**06 39 56.5**	**+1.6**
	339nm,0.7s						
PVCP	**Virac**	**9.14**	**357**	*e*P	**Pn**	**06 39 59.1**	**-0.5**
LUBP	**Lubang**	**10.26**	**335**	*e*P	**Pn**	**06 40 13.6**	**+0.5**
TGY	**Tagaytay City**	**10.32**	**339**	P	**Pn**	**06 40 16.4**	**+2.5**
	baz=168,slow=5.0,SNR=9.0						
BALP	**Baler**	**11.67**	**345**	*e*P	**Pn**	**06 40 29.7**	**-0.4**
SCZP	**Santa Cruz**	**12.24**	**338**	*e*P	**Pn**	**06 40 36.6**	**-0.4**
BAKI	**Biak**	**12.67**	**116**	P	**Pn**	**06 40 44.1**	**+2.0**
	501nm,1.2s						
CAUP	**Cauayan**	**12.77**	**347**	*e*P	**Pn**	**06 40 44.1**	**+0.8**
BOLP	**Bolinao**	**12.79**	**339**	*e*P	**Pn**	**06 40 42.6**	**-1.0**
APYP	**Conner**	**13.79**	**346**	*e*P	**Pn**	**06 40 56.3**	**+0.8**
KSM	**Kuching**	**14.68**	**259**	*e*Pn	**Pn**	**06 41 03.4**	**-2.5**
JAY	**Jayapura**	**17.40**	**113**	P	**P**	**06 41 34.5**	**+0.6**
	61nm,0.9s						
KAKA	**Kakadu**	**18.66**	**156**	*e*P	**P**	**06 41 46.8**	**-0.6**
	33nm,0.5s						
BJII	**Banjamegara**	**18.98**	**232**	P	**P**	**06 41 55.2**	**+4.4**
	52nm,1.8s						
NACB	**Ninganchiao**	**19.88**	**352**	*e*P	**P**	**06 41 58.9**	**-1.4**
YHNB	**Yeheng**	**20.40**	**351**	*e*P	**P**	**06 42 03.8**	**-1.8**
QIZ	**Qiongzhong**	**20.54**	**316**	P	**P**	**06 42 07.8**	**+0.9**
QIZ				XP	sP	06 43 25.3	-12
QIZ				S	**S**	**06 45 41.4**	**+5.6**
QIZ				AMB	AMB		
	comp=Z,47nm,1.2s						
QIZ				AMB	AMB		
	comp=Z,150nm,4.3s						
QIZ	**Qiongzhong**	**20.54**	**316**	*e*P	**P**	**06 42 06.6**	**-0.3**
	comp=Z,21nm,0.6s						
QZH	**Quanzhou**	**21.25**	**345**	⇓*i*P	**P**	**06 42 15.0**	**+1.6**
KGM	**Kluang**	**21.49**	**264**	P	**P**	**06 42 17.5**	**+1.8**
FITZ	**Fitzroy Crossi**	**22.39**	**178**	*e*P	**P**	**06 42 23.9**	**+0.1**
	comp=Z,20nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**22.39**	**178**	P	**P**	**06 42 23.9**	**+0.1**
	comp=Z,13nm,0.7s,mb4.3,baz=5.6,slow=5.2,SNR=19						
JOW	**Kunigami**	**22.55**	**8**	P	**P**	**06 42 24.5**	**-0.8**
	comp=Z,61nm,0.8s,mb4.8,baz=227,slow=5.8,SNR=12						
IPM	**Ipoh**	**23.62**	**271**	P	**P**	**06 42 36.3**	**+1.4**
SNG	**Songkhla**	**24.13**	**278**	P	**P**	**06 42 40.0**	**+0.4**
	comp=Z,38nm,0.7s,mb4.7						
KKTK	**Khon Kaen**	**24.54**	**300**	⇑P	**P**	**06 42 44.0**	**+0.7**
PSI	**Prapat**	**25.79**	**267**	P	**P**	**06 42 54.2**	**-0.2**
	comp=Z,7.1nm,0.6s,mb4.0,baz=71,slow=6.7,SNR=7.5						
PSI				ScP	ScP	06 49 23.8	+0.9
	comp=Z,2.8nm,0.4s,baz=251,slow=0.7,SNR=3.7						
PSI	**Prapat**	**25.79**	**267**	P	**P**	**06 42 54.2**	**-0.2**
PSI				ScP	ScP	06 49 23.8	+0.9
WRAB	**Tennant Creek**	**25.98**	**159**	*e*P	**P**	**06 42 51.8**	**-4.3**
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	**25.98**	**159**	*e*P	**P**	**06 42 51.8**	**-4.4**
	comp=Z,12nm,0.7s,mb4.2						
WB2	**Warramunga Arr**	**25.99**	**159**	*e*P	**P**	**06 42 55.4**	**-0.8**
PMG	**Port Moresby**	**26.25**	**122**	⇑*e*P	**P**	**06 43 04.5**	**+6.0**
NANT	**Nan**	**27.47**	**303**	⇑P	**P**	**06 43 09.0**	**-0.4**
	comp=Z,125nm,1.0s,mb5.1						
GYA	**Guiyang**	**27.91**	**324**	P	**P**	**06 43 14.3**	**+1.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.1						
NJ2	**Nanjing**	**28.04**	**349**	*e*P	**P**	**06 43 15.9**	**+1.5**
NJ2				AP		06 44 11.0	
NJ2				S	**S**	**06 47 37.0**	**+2.2**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,120nm,11.3s						
NJ2				LR	LR		
	comp=N,350nm,15.2s						
NJ2				LR	LR		
	comp=E,550nm,19.5s						
NJ2				LR	LR		
	comp=Z,930nm,22.8s						
CBIJ	**Chichi jima**	**28.05**	**35**	P	**P**	**06 43 13.2**	**-1.3**
	comp=Z,103nm,0.6s,mb5.3,baz=293,slow=22,SNR=5.3						
CHG	**Chiang Mai**	**28.95**	**302**	⇓P	**P**	**06 43 23.6**	**+1.2**
	comp=Z,28nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**28.95**	**302**	*e*P	**P**	**06 43 23.6**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.4						
CHTO	**Chiang Mai**	**28.95**	**302**	*e*P	**P**	**06 43 23.6**	**+1.1**
	comp=Z,14nm,0.6s,mb4.4						
AS31	**Alice Springs**	**29.31**	**163**	*e*P	**P**	**06 43 25.5**	**-0.1**
ASAR	**Alice Springs**	**29.31**	**163**	P	**P**	**06 43 25.4**	**-0.1**
	comp=Z,1.4nm,0.3s,mb3.7,baz=342,slow=7.9,SNR=20						
ASAR				PcP	PcP	06 46 22.7	-0.4
	comp=Z,1.6nm,0.5s,baz=354,slow=2.5,SNR=5.1						
ASAR				S	**S**	**06 47 54.0**	**-0.7**
	comp=Z,4.4nm,1.0s,baz=350,slow=21,SNR=14						
ASAR				ScP	ScP	06 49 34.8	+1.0
	comp=Z,1.8nm,0.9s,baz=335,slow=2.0,SNR=7.0						
ASAR	**Alice Springs**	**29.31**	**163**	P	**P**	**06 43 25.5**	**-0.1**
ASAR						06 46 22.7	
ASAR				S	**S**	**06 47 54.0**	**-0.7**
ASPA	**Alice Springs**	**29.31**	**163**	*e*P	**P**	**06 43 25.5**	**-0.1**
ENH	**Enshi**	**29.47**	**332**	*e*P	**P**	**06 43 26.9**	**-0.1**
	comp=Z,6.7nm,0.5s,mb4.1						

KMI Kunming 29.49 316 P P 06 43 28.9 +1.7
KMI AP 06 44 21.5
KMI PP PP 06 44 42.3 +0.9
KMI S S 06 48 05.1 +7.6
KMI AMB AMB
comp=Z,31nm,0.7s,mb4.7
KMI LR LR
comp=N,90nm,13.0s
KMI LR LR
comp=E,101nm,14.7s
KMI LR LR
comp=Z,56nm,15.5s
JHJ Hachijo jima 2 31.84 24 P P 06 43 47.2 -0.4
comp=Z,71nm,0.6s,mb5.0,baz=106,slow=7.4,SNR=4.1
CTA Charters Tower 32.26 140 P P 06 43 52.1 +0.8
comp=Z,5.2nm,0.8s,mb3.8,baz=20,slow=11,SNR=3.6
CTAO Charters Tower 32.26 140 eP P 06 43 52.0 +0.7
CD2 Chengdu 32.93 326 eP P 06 43 56.0 -1.1
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.2
XAN Xi'an 32.94 335 P P 06 43 57.1 0.0
XAN AMB AMB
comp=Z,28nm,0.8s,mb4.5
MAJO Matsushiro 34.30 19 eP P 06 44 08.0 -0.8
MAJO pmax pmax
comp=Z,26nm,0.8s,mb4.5
MAJO Matsushiro 34.30 19 eP P 06 44 08.0 -0.9
comp=Z,26nm,0.8s,mb4.5
MAT Matsushiro 34.30 19 P P 06 44 08.0 -0.8
MAT eS S 06 49 23.0 +11
MAT Matsushiro 34.30 19 eP P 06 44 08.0 -0.8
MAT pmax pmax
comp=Z,19nm,0.8s,mb4.4
MAT Matsushiro 34.30 19 eP P 06 44 08.0 -0.8
comp=Z,19nm,0.8s,mb4.4
MJAR Matsushiro Arr 34.30 19 P P 06 44 08.2 -0.6
comp=Z,25nm,0.8s,mb4.5,baz=193,slow=8.8,SNR=113
MJAR PcP PcP 06 46 37.3 +0.5
comp=Z,0.8nm,0.4s,baz=193,slow=2.5,SNR=5.2
MJAR ScP ScP 06 49 51.2 +0.5
comp=Z,1.0nm,0.9s,baz=197,slow=1.3,SNR=4.2
MJAR Matsushiro Arr 34.30 19 P P 06 44 08.2 -0.6
MJAR 06 46 37.3
FORT Forrest 35.14 175 eP P 06 44 16.0 +0.1
comp=Z,12nm,0.6s,mb4.3
BJT Baijiatuau 36.28 349 eP P 06 44 25.6 0.0
BJT pmax pmax
comp=Z,56nm,1.0s
BJT Baijiatuau 36.28 349 eP P 06 44 25.6 0.0
comp=Z,56nm,1.0s,mb4.8
KLBR Kellerberrin 36.41 190 eP P 06 44 26.4 -0.3
comp=Z,30nm,1.1s,mb4.4
LZH Lanzhou 36.92 331 eP P 06 44 32.5 +1.5
LZH AP pP 06 45 28.8 -4.9
LZH XP sP 06 46 01.0 -9.5
LZH AMB AMB
comp=Z,69nm,1.5s,mb4.7
LZH AMB AMB
comp=Z,148nm,4.0s
SNY Shenyang 37.27 359 ⇑P P 06 44 33.6 -0.2
SNY AMB AMB
comp=Z,25nm,1.0s,mb4.4
HHC Hu-ho-hao-te 38.16 344 eP P 06 44 41.8 +0.6
HHC AP pP 06 45 40.0 -4.3
HHC XP sP 06 46 12.3 -8.7
HHC PP PP 06 46 20.3 +4.0
HHC PCP PcP 06 46 48.1 -0.4
HHC SCP ScP 06 50 07.8 +2.7
HHC S S 06 50 16.8 +6.8
HHC PCS PcS 06 50 37.1 -0.9
HHC XS sS 06 51 58.8 -5.0
HHC SS SS 06 53 12.9 -0.2
HHC SCS ScS 06 54 18.0 +2.3
HHC AMB AMB
comp=Z,18nm,1.9s,mb4.0
HHC AMB AMB
comp=Z,76nm,5.5s
HHC LR LR
comp=N,69nm,24.7s
HHC LR LR
comp=E,96nm,21.8s
HHC LR LR
comp=Z,72nm,22.8s
CN2 Changchun 39.23 1 eP P 06 44 52.4 +2.3
STKA Stephens Creek 39.50 157 eP P 06 44 53.1 +0.8
comp=Z,10nm,0.8s,mb4.1
STKA Stephens Creek 39.50 157 P P 06 44 53.1 +0.8
comp=Z,9.9nm,0.7s,mb4.2,baz=341,slow=6.4,SNR=17
STKA Stephens Creek 39.50 157 eP P 06 44 51.5 -0.8
MDJ Mudanjiang 40.27 5 P P 06 44 58.0 -0.6
MDJ AP pP 06 45 54.4 -7.9
MDJ XP sP 06 46 24.3 -15
MDJ PP PP 06 46 37.3 -1.7
MDJ PCP PcP 06 46 55.6 +0.4
MDJ SCP ScP 06 50 18.6 +5.3
MDJ PCS PcS 06 50 46.8 +0.6
MDJ S S 06 50 49.4 +8.0
MDJ SCS ScS 06 54 33.4 +5.2
MDJ AMB AMB
comp=Z,9.0nm,0.8s,mb4.0
MDJ AMB AMB
comp=Z,39nm,4.3s
LSA Lhasa 40.49 312 P P 06 45 02.0 +1.7
LSA Lhasa 40.49 312 eP P 06 45 01.2 +0.9
LSA pmax pmax
comp=Z,13nm,0.6s,mb4.3
LSA Lhasa 40.49 312 eP P 06 45 01.1 +0.8
comp=Z,13nm,0.6s,mb4.3
GTA Gaotai 41.50 331 P P 06 45 09.3 +0.8
GTA AP pP 06 46 06.8 -5.9
GTA PP PP 06 46 51.5 -0.6
GTA PCP PcP 06 47 01.4 +2.1
GTA PPP 06 47 36.8
GTA SCP ScP 06 50 19.8 +1.7
GTA S S 06 51 04.3 +4.9
GTA SCS ScS 06 54 37.3 +1.6
GTA AMB AMB
comp=Z,16nm,1.2s,mb4.0
GTA AMB AMB
comp=Z,112nm,6.1s
GTA LR LR
comp=N,74nm,12.6s
GTA LR LR
comp=E,76nm,12.5s
GTA LR LR
comp=Z,85nm,14.1s
ASAJ Asahikawa 42.57 19 P P 06 45 18.2 +1.2
comp=Z,50nm,0.8s,mb4.7,baz=232,slow=13,SNR=50
JIRN Jiri 43.35 306 eP P 06 45 24.3 +1.0
comp=Z,62nm,0.7s,mb4.9
GUN Gumba 43.70 307 eP P 06 45 27.1 +1.0
comp=Z,80nm,0.7s,mb5.0
PKI Pulchoki 43.94 306 eP P 06 45 28.1 +0.1
comp=Z,20nm,0.6s,mb4.4
PKI Pulchoki 43.94 306 eP P 06 45 28.1 +0.1
PKI pmax pmax
comp=Z,20nm,0.6s,mb4.4
KKN Kakani 44.13 306 eP P 06 45 30.1 +0.6
comp=Z,31nm,0.6s,mb4.6
KKN Kakani 44.13 306 eP P 06 45 30.1 +0.6
KKN pmax pmax
comp=Z,31nm,0.6s,mb4.6
DMN Daman 44.20 306 eP P 06 45 30.6 +0.6
comp=Z,52nm,0.9s,mb4.7
GKN Gorkha 44.74 306 eP P 06 45 34.4 +0.1
comp=Z,19nm,0.6s,mb4.4
HABR Khabarovsk 44.78 10⇑eP P 06 45 35.5 +0.9
HABR eS S 06 51 49.8 +2.9
HIA Hailar 44.89 355 eP P 06 45 35.2 -0.2
HIA pmax pmax
comp=Z,7.0nm,0.8s
HIA Hailar 44.89 355 eP P 06 45 35.2 -0.2
comp=Z,7.3nm,0.8s,mb3.9
KLR Kul'dur 45.06 7 eP P 06 45 33.0 -3.7
KLR e 06 47 08.0
YSS Yuzh-Sakhalins 45.16 17⇑eP P 06 45 37.5 0.0
YSS pmax pmax
comp=Z,34nm,1.1s,mb4.4
YSS Yuzh-Sakhalins 45.16 17 eP P 06 45 36.7 -0.8
comp=Z,18nm,0.8s,mb4.3
KOLN Koldanda 45.49 305 eP P 06 45 40.8 +0.7
comp=Z,110nm,0.7s,mb5.1
CNB Canberra Magne 45.80 152 eP P 06 45 44.6 +2.1
comp=Z,9.6nm,1.4s,mb3.7
ULN Ulaanbaatar 45.87 343 P P 06 45 43.9 +0.8
SNR=12
ULN Ulaanbaatar 45.87 343 eP P 06 45 43.2 +0.1
ULN pmax pmax
comp=Z,30nm,1.1s,mb4.3
ULN Ulaanbaatar 45.87 343 eP P 06 45 43.2 +0.1
comp=Z,30nm,1.1s,mb4.3
ULN epP pP 06 46 29.7 -19
SONM Songino Array 46.04 343 P P 06 45 44.5 +0.1
comp=Z,13nm,0.9s,mb4.1,baz=155,slow=7.7,SNR=52
SONM PcP PcP 06 47 14.1 -0.7
comp=Z,0.8nm,0.4s,baz=150,slow=6.0,SNR=3.9
SONM ScP ScP 06 50 37.2 +0.5
comp=Z,1.2nm,0.9s,baz=174,slow=5.5,SNR=4.2
SONM Songino Array 46.04 343 P P 06 45 44.5 +0.2
SONM 06 47 14.2
HYB Hyderabad 46.99 290 i P P 06 45 53.0 +1.3
HYB Hyderabad 46.99 290 eP P 06 45 53.0 +1.3
ZAK Zakamensk 49.24 342 eP P 06 46 08.5 -0.2
ZAK e 06 47 26.1
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb3.5
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb3.5
TLY Talaya 50.28 343 P P 06 46 17.5 +1.0
SNR=8.2
TLY Talaya 50.28 343c iP P 06 46 16.9 +0.4
TLY pmax pmax
comp=Z,17nm,0.9s,mb4.3
TLY Talaya 50.28 343 eP P 06 46 16.1 -0.4
WMQ Urumqi 51.03 326 eP P 06 46 22.0 0.0
WMQ AP pP 06 47 24.0 -5.1
WMQ XP sP 06 47 54.0 -11
WMQ PP PP 06 48 24.0 +1.8
WMQ S S 06 53 17.0 +3.0
WMQ SCS ScS 06 55 39.0 +0.8
WMQ SS SS 06 56 56.0 +2.4
WMQ AMB AMB
comp=Z,18nm,1.0s,mb4.3
WMQ AMB AMB
comp=Z,102nm,5.0s
WMQ LR LR
comp=N,45nm,14.0s
WMQ LR LR
comp=E,51nm,13.0s
WMQ LR LR
comp=Z,28nm,12.0s
MOY Mondy 51.08 341 eP P 06 46 23.0 +0.6
MOY pmax pmax
comp=Z,46nm,1.7s,mb4.4
MKAR Makanchi Array 55.86 326 P P 06 46 57.0 +0.2
comp=Z,18nm,0.7s,mb4.5,baz=123,slow=8.8,SNR=110
MKAR PcP PcP 06 47 50.8 -0.7
comp=Z,8.1nm,0.8s,baz=135,slow=3.9,SNR=10
MKAR ScP ScP 06 51 18.8 -0.2
comp=Z,0.7nm,0.8s,baz=111,slow=6.8,SNR=2.7
MKAR Makanchi Array 55.86 326 P P 06 46 57.1 +0.2
MKAR 06 47 50.8
ULHL Ulahol 57.18 319 P P 06 47 07.5 +1.4
SNR=5.4
YAK Yakutsk 57.61 3 eP P 06 47 09.9 +0.8
YAK pmax pmax
comp=Z,16nm,0.8s,mb4.4
YAK pmax pmax
comp=N,9.0nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.2s
YAK Yakutsk 57.61 3 eP P 06 47 08.7 -0.4
comp=E,30nm,0.7s,mb4.7
KZA Kyzart 57.76 318 P P 06 47 11.5 +1.4
SNR=15
TKM2 Tokmak 2 57.91 319 P P 06 47 12.0 +0.8
SNR=9.8
AAK Ala-Archa 58.51 318⇑eP P 06 47 15.0 -0.3
AAK pmax pmax
comp=Z,17nm,1.6s,mb4.2
AAK Ala-Archa 58.51 318 eP P 06 47 15.2 -0.1
comp=Z,12nm,1.1s,mb4.2
MA2 Magadan 58.56 15d iP P 06 47 16.5 +0.9
MA2 e 06 48 02.8
MA2 pmax pmax
comp=N,60nm,0.7s
MA2 pmax pmax
comp=E,20nm,0.7s
MA2 pmax pmax
comp=Z,130nm,0.7s,mb5.5
MA2 Magadan 58.56 15 eP P 06 47 16.0 +0.4
comp=Z,83nm,0.7s,mb5.3
MA2 ePcP PcP 06 48 02.4 +0.3
USP Ospenovka 58.78 319 P P 06 47 17.6 +0.4
SNR=21
AML Almayashu 58.83 317 P P 06 47 18.9 +1.4
SNR=14
EKS2 Erkin-Say 59.00 318 P P 06 47 19.7 +1.1
SNR=18
ZAL Zalesovo 59.08 334 P P 06 47 18.5 -0.7
comp=Z,2.6nm,0.3s,mb4.2,baz=69,slow=4.2,SNR=7.9
KURK Kurchatov 60.10 328 P P 06 47 25.8 -0.3
SNR=17
KURK Kurchatov 60.10 328 eP P 06 47 25.6 -0.5
comp=Z,31nm,0.8s,mb4.8
NVS Novosibirsk 60.37 334 eP P 06 47 26.2 -1.7
NVS eS S 06 55 13.8 -2.9
NVS pmax pmax
comp=N,17nm,1.8s
NVS pmax pmax
comp=E,23nm,1.8s
NVS pmax pmax
comp=Z,27nm,1.8s,mb4.4
NVS smax
comp=E,16nm,1.9s
BVAR Borovoye Array 65.66 327 P P 06 48 01.8 -0.7
comp=E,2.5nm,0.3s,mb4.4,baz=130,slow=8.1,SNR=24
BRVK Borovoye 65.73 327 P P 06 48 02.5 -0.5
SNR=9.8
BRVK Borovoye 65.73 327 eP P 06 48 02.4 -0.5
BRVK pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
BRVK Borovoye 65.73 327 eP P 06 48 02.4 -0.6
comp=Z,7.4nm,0.7s,mb4.5
WSAR Wadi Sarin 66.31 293 P P 06 48 06.0 -0.6
comp=Z,3.0nm,0.6s,mb4.2,baz=29,slow=10,SNR=4.1
BILL Bilibino 69.42 15 eP P 06 48 25.5 -0.3
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
AKTK Aktyubinsk 71.88 322 P P 06 48 40.0 -0.6
AKTO Aktyubinsk 71.88 322 P P 06 48 40.0 -0.6
comp=Z,3.3nm,0.3s,mb4.5,baz=106,slow=9.9,SNR=18
SVE Sverdlovsk 72.33 329 eP P 06 48 43.5 +0.3
SVE pmax pmax
comp=Z,40nm,1.2s,mb5.0
ARU Arti 73.29 328⇓iP P 06 48 47.2 -1.6
ARU e 06 49 02.0
ARU eS S 06 57 48.4 -2.1
ARU eSS SS 07 02 33.0 -6.7
ARU pmax pmax
comp=Z,12nm,0.7s,mb4.7
RDF Al-Radifah 76.65 299 eP P 06 49 07.2 -0.7
RDF AMb AMB 06 49 08.3
comp=Z,32nm,0.8s,mb5.1
MIB Mutribah 76.87 299 eP P 06 49 08.3 -0.7
MIB AMb AMB 06 49 09.9
comp=Z,42nm,0.7s,mb5.3
NAY Al-Naaiem 76.93 299 eP P 06 49 08.3 -1.1
NAY AMb AMB 06 49 09.8
comp=Z,19nm,0.9s,mb4.8
RST Umm Al-Ruwaisa 77.15 299 eP P 06 49 09.5 -1.2
RST AMb AMB 06 49 11.1
comp=Z,40nm,0.6s,mb5.3
SVW2 Sparrevohn 81.18 29 eP P 06 49 33.2 +0.9
TTA Tatalina 81.21 27 eP P 06 49 33.5 +1.0
comp=Z,34nm,1.1s,mb5.0
KDAK Kodiak Island 82.39 32 eP P 06 49 39.7 +1.1
IMA2 Indian Mountai 82.58 24 eP P 06 49 40.5 +0.9
MAW Mawson 83.70 200 P P 06 49 44.8 -0.5
comp=Z,2.4nm,0.7s,mb4.1,baz=49,slow=7.0,SNR=12
KLMR Klimovskoe 83.83 331 eP P 06 49 44.2 -1.7
KLMR pmax pmax
comp=Z,50nm,1.3s,mb5.2
VNDA Vanda 84.36 172 P P 06 49 47.8 -0.7
comp=Z,1.1nm,0.6s,mb3.9,baz=316,slow=5.7,SNR=14
MALT Malatya 84.38 308 eP P 06 49 50.3 +1.7
MCK McKinley 84.45 26 eP P 06 49 49.3 +0.3
MCK pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
MCK McKinley 84.45 26 eP P 06 49 49.3 +0.3
comp=Z,5.5nm,0.9s,mb4.4
MOS Moscow 84.74 325 eP P 06 49 49.8 -0.6
MOS pmax pmax
comp=Z,63nm,1.3s,mb5.3
ANN Anapa 84.99 314 eP P 06 49 50.6 -1.1
ANN eS S 06 59 44.3 -8.6
ANN pmax pmax
comp=Z,86nm,1.2s,mb5.5
OBN Obninsk 85.35 325⇑iP P 06 49 52.5 -0.9
OBN e*PP pP 06 51 18.2 +10
OBN pmax pmax
comp=Z,52nm,1.3s,mb5.2
OBN Obninsk 85.35 325 eP P 06 49 52.5 -0.9
comp=Z,27nm,0.8s,mb5.1
OBN epP pP 06 50 55.5 -13
ASF Jabal al Asfar 85.83 302 P P 06 49 55.2 -0.6
comp=Z,7.6nm,0.9s,mb4.5,baz=261,slow=2.1,SNR=8.1
KMBO Kilima Mbogo 87.56 269 P P 06 50 04.5 +0.5
comp=Z,5.5nm,0.8s,mb4.4,baz=45,slow=9.8,SNR=11
KMBO Kilima Mbogo 87.56 269 eP P 06 50 05.8 +1.8
KMBO pmax pmax
comp=Z,7.0nm,0.9s
KMBO Kilima Mbogo 87.56 269 eP P 06 50 05.8 +1.8
comp=Z,7.1nm,0.9s,mb4.5
EIL Elat 87.64 299 eP P 06 50 05.6 +1.2
JOF Joensuu 87.66 333 ep P 06 50 02.2 -2.3
comp=Z,3.4nm,0.3s,mb4.7
JOF Joensuu 87.66 333 eP P 06 50 02.2 -2.3
JOF pmax pmax
comp=Z,3.0nm,0.3s,mb4.6
BR131 Keskin Array S 88.04 310 eP P 06 50 05.7 -0.7
comp=Z,3.3nm,0.8s,mb4.2
BRTR Keskin Array B 88.04 310 P P 06 50 05.3 -1.0
comp=Z,3.8nm,0.8s,mb4.3,baz=118,slow=5.2,SNR=19
KEV Kevo 88.56 340 ep P 06 50 05.5 -3.3
DAWY Dawson 88.65 26 eP P 06 50 09.8 +0.6
ARCES ARCESS Array B 89.12 340 P P 06 50 08.7 -2.6
comp=Z,3.0nm,0.8s,mb4.2,baz=84,slow=4.4,SNR=9.7
KAF Kangasniemi 90.06 332 ep P 06 50 12.9 -2.9
baz=77,slow=4.2
AKASG Malin Array Be 90.10 321 P P 06 50 14.1 -1.9
comp=Z,2.9nm,0.7s,mb4.3,baz=73,slow=3.7,SNR=13
AKASG Malin Array Be 90.10 321 i P P 06 50 14.1 -1.8
AKASG pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 90.28 332 P P 06 50 15.0 -1.8
comp=Z,3.5nm,0.7s,mb4.4,baz=94,slow=5.7,SNR=21
FINES FINESS Array B 90.28 332 i P P 06 50 15.0 -1.8
FINES pmax pmax
comp=Z,4.0nm,0.7s
TIRR Tirgusor 91.44 315⇓iP P 06 50 21.8 -0.3
SYO Syowa Base 92.33 201⇓eP P 06 50 25.4 -0.8
VRI Vrincioaia 92.42 316⇓iP P 06 50 26.0 -0.6
MLR Muntele Rosu 93.02 316⇓iP P 06 50 29.5 +0.1
BURAR Bucovina Array 93.16 318⇑iP P 06 50 29.8 -0.2
SUW Suwalki 93.21 325 eP P 06 50 28.5 -1.8
SUW pmax pmax
comp=Z,37nm,1.0s,mb5.4
SUW Suwalki 93.21 325 eP P 06 50 28.5 -1.8
comp=Z,37nm,1.0s,mb5.4
QSPA South Pole Qui 94.31 180 eP P 06 50 36.3 +0.9
comp=Z,1.4nm,0.6s,mb4.2
KOLS Kolonicke sedl 94.83 320 eP P 06 50 37.8 +0.1
DRGR 94.99 318⇑iP P 06 50 37.8 -0.6
CRVS Cervenica-Dubn 95.36 320 eP P 06 50 39.9 -0.2
STHS Stebnicka Huta 95.38 320 eP P 06 50 40.5 +0.3
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
STHS Stebnicka Huta 95.38 320 eP P 06 50 40.5 +0.3
comp=Z,3.5nm,0.9s,mb4.4
KECS Kecovo 96.09 320 eP P 06 50 42.5 -0.9
KECS pmax pmax
comp=Z,4.0nm,1.2s,mb4.4
KECS Kecovo 96.09 320 eP P 06 50 42.5 -0.9
comp=Z,3.7nm,1.2s,mb4.4
OJC Ojcow 96.10 321 eP P 06 50 43.7 +0.2
NB2 NORSAR Subarra 97.28 333 P P 06 50 45.9 -2.9
comp=Z,2.6nm,0.8s,mb4.4,baz=69,slow=4.4
NOA NORSAR Array B 97.28 333 P P 06 50 46.5 -2.3
comp=Z,2.2nm,0.8s,mb4.3,baz=68,slow=4.6,SNR=7.3
BRG Berggiesshubel 99.49 323 eP Pdif 06 50 59.3 +0.7
comp=Z,3.7nm,0.9s
BRG Berggiesshubel 99.49 323 eP Pdif 06 50 59.3 +0.7
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
YKA Yellowknife Ar 99.70 24 P Pdif 06 50 59.3 -0.2
comp=Z,1.4nm,0.9s,baz=305,slow=5.0,SNR=3.7
CLL Collm 99.91 324 ePDIF Pdif 06 51 01.0 +0.5
KHC Kasperske Hory 100.28 321⇑eP Pdif 06 51 03.9 +1.7
GERES GERESS Array B 100.30 321 P Pdif 06 51 01.5 -0.7
comp=Z,1.4nm,0.9s,baz=58,slow=3.7,SNR=9.4
GERES PP PP 06 55 15.1 +2.4
comp=Z,0.4nm,0.8s,baz=69,slow=5.4,SNR=4.3
NVAR Mina Array Bea 107.94 47 PKiKP PKiKP 06 55 43.7 +2.1
comp=Z,0.7nm,0.7s,baz=237,slow=1.9,SNR=6.9
NVAR PKKP PKKPbc 07 06 55.8 +1.1
comp=Z,0.4nm,0.7s,baz=132,slow=2.2,SNR=5.2
NVAR Mina Array Bea 107.94 47 PKPdf PKiKP 06 55 43.7 +2.1
NVAR PKKP PKKPbc 07 06 55.8 +1.1
PDAR Pinedale Array 112.15 40 PKiKP PKiKP 06 55 50.2 +0.8
comp=Z,0.3nm,0.6s,baz=48,slow=2.2,SNR=3.8
PDAR PKKP PKKPbc 07 06 50.3 +9.1
comp=Z,0.2nm,0.5s,baz=60,slow=4.3,SNR=3.5
ULM Lac du Bonnet 115.31 28 PKP PKPdf 06 55 54.9 -0.6
comp=Z,2.5nm,0.9s,baz=146,slow=3.6,SNR=3.0
ULM Lac du Bonnet 115.31 28 PKP PKPdf 06 55 54.9 -0.6
SCHQ Schefferville 120.19 8 PKP PKPdf 06 56 05.2 +0.2
comp=Z,5.9nm,0.8s,baz=317,slow=3.1,SNR=8.5
TORD Torodi Ar. Bea 120.80 288 PKP PKPdf 06 56 06.1 0.0
comp=Z,2.9nm,0.7s,baz=54,slow=1.9,SNR=20
TORD Torodi Ar. Bea 120.80 288 PKP PKPdf 06 56 06.1 0.0
JCT Junction City 125.11 48 ePKIKP PKPdf 06 56 16.0 +1.6
CPUP Villa Florida 158.12 175 PKPab PKPab 06 57 45.3 -0.9
comp=Z,2.0nm,0.8s,baz=168,slow=5.2,SNR=4.2

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*NIED **13** 07:50:00, 24.20N×122.30E, h23km, Mw4.0 Best double couple: $M_0$9.55000×10^14 NP1:ϕ_s69.00000°, δ78.00000°, λ75.00000°. NP2:ϕ_s300.00000°, δ19.00000°, λ139.00000°.*
*ISCJB **13** 07:50:53.6±1.6, 24.2N±0.1×122.23E±0.05, h29km±9km, mb3.8/6, MS3.2/1, Error ellipse: s-maj=21.1km s-min=6.9km az=9.3*
*JMA **13** 07:50:54.8±0.5, 24.17N×122.30E, h35km, M3.6*
*IDC **13** 07:50:59.9±6.9, 24.35N×122.78E, h81km±71km, mb3.6/6, mb1 3.6/7, mb1mx3.4/20, mbtmp3.9/7, ML2.9/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/19, Error ellipse: s-maj=71.3km s-min=22.1km az=64.0*
ISC 13 07:50:53.8±2.3, **24.2N**±0.1×**122.27E**±0.04, **h18**km±14km, **n15**, σ0.78/20, **mb3.8**/6, **MS3.2**/1, **Taiwan region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
YOJ Yonaguni jima 0.73 67 P Pb 07 51 08.4 +0.4
YOJ S Sb 07 51 17.8 +0.1
IRIF Iriomote-Funau 1.34 83 P Pn 07 51 17.8 +0.3
IRIF S Sn 07 51 35.3 +0.4
HATJ Hateruma jima 1.41 94 P Pn 07 51 17.7 -0.7
HATJ S Sn 07 51 36.7 +0.2
JKRS Kuro-shima 1.59 87 P Pn 07 51 22.2 +1.3
JKRS S Sn 07 51 40.6 -0.4
JIJ Ishigaki jima 1.72 83 P Pn 07 51 22.0 -0.7
JIJ S Sn 07 51 44.3 +0.1
JTJ Tarama 2.27 78 P Pn 07 51 30.8 +0.6
JTJ S Sn 07 51 58.0 +0.3
JMJ Miyako jima 2 2.83 76 eS Sn 07 52 11.1 -0.4
JOW Kunigami 6.04 63 P Pn 07 52 19.8 -2.3
0.8nm,0.3s,baz=205,slow=17,SNR=4.2
MJAR Matsushiro Arr 18.44 44 LR LR 08 01 35.1
comp=Z,46nm,19.5s,baz=215,slow=35
SONM Songino Array 26.77 336 P P 07 56 33.2 +0.7
2.5nm,0.7s,mb3.9,baz=148,slow=9.4,SNR=18
MKAR Makanchi Array 39.04 316 P P 07 58 20.2 +0.9
1.1nm,0.6s,mb3.8,baz=104,slow=10.0,SNR=15
ZAL Zalesovo 40.80 327 P P 07 58 33.9 -0.1
1.7nm,0.7s,mb3.8,baz=14,slow=8.6,SNR=9.3
ZAL LR LR 08 17 54.2
comp=Z,37nm,19.7s,MS3.2,baz=88,slow=40
ASAR Alice Springs 48.87 166 P P 07 59 38.1 -0.1
0.3nm,0.6s,mb3.5,baz=353,slow=14,SNR=6.0
ARCES ARCESS Array B 69.92 338 P P 08 02 02.0 -1.7
0.7nm,0.3s,mb4.0,baz=89,slow=2.3,SNR=18
BRTR Keskin Array B 73.98 307 P P 08 02 28.3 +0.3
1.1nm,0.8s,mb3.8,baz=113,slow=5.6,SNR=6.1

ISCJB ***13*** *08:39:19.4±3.3, 13.8S±0.2×167.0E±0.1, h221km±31km, mb4.2/9, Error ellipse: s-maj=33.1km s-min=19.4km az=173.1*
NEIC ***13*** *08:39:20.8±2.3, 13.91S×166.99E, h209km±21km, mb4.5/4, Error ellipse: s-maj=21.0km s-min=10.9km az=174.0*
IDC ***13*** *08:39:21.3±3.6, 13.92S×167.06E, h217km±34km, mb3.8/7, mb1 3.8/8, mb1mx3.6/16, mbtmp4.3/8, Error ellipse: s-maj=26.9km s-min=19.5km az=175.0*
ISC 13 08:39:21.2±3.1**, 13.9S**±0.2×**167.0E**±0.1**, h218**km±29km**, n33,** σ**0.43**/18**, mb4.2**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.15	184	P	Pn	08 41 16.2	-0.1
	0.3nm,0.3s,baz=24,slow=23,SNR=14						
CTA	Charters Tower	20.79	250	P	P	08 43 46.8	+1.1
	6.0nm,0.8s,baz=62,slow=6.7,SNR=6.4						
CTAO	Charters Tower	20.79	250	eP	P	08 43 45.3	-0.4
	7.3nm,0.7s						
STKA	Stephens Creek	29.36	228	eP	P	08 45 05.1	+1.2
	7.0nm,0.5s,mb4.5						
STKA	Stephens Creek	29.36	228	P	P	08 45 04.9	+1.0
	9.7nm,0.6s,mb4.6,baz=48,slow=7.6,SNR=43						
STKA				PcP	PcP	08 48 04.5	+0.1
	3.2nm,1.0s,baz=74,slow=7.4,SNR=3.0						
STKA	Stephens Creek	29.36	228	eP	P	08 45 05.0	+1.1
WB2	Warramunga Arr	31.80	255	eP	P	08 45 25.2	-0.1
WRAB	Tennant Creek	31.80	255	eP	P	08 45 25.2	-0.1
	3.0nm,0.6s,mb4.0						
RAR	Rarotonga	32.42	108	P	P	08 45 30.8	+0.1
	9.0nm,0.8s,mb4.4,baz=106,slow=1.8,SNR=3.8						
RAR	Rarotonga	32.42	108	P	P	08 45 30.8	0.0
AS31	Alice Springs	32.76	248	eP	P	08 45 33.2	-0.4
ASAR	Alice Springs	32.76	248	P	P	08 45 33.5	-0.2
	4.4nm,0.5s,mb4.3,baz=73,slow=9.4,SNR=108						
ASPA	Alice Springs	32.77	248	eP	P	08 45 33.5	-0.2
FORT	Forrest	39.53	238	eP	P	08 46 31.3	+0.4
	23nm,0.6s,mb4.8						
KLBR	Kellerberrin	48.31	240	eP	P	08 47 40.2	-0.4
	65nm,1.8s,mb4.7						
NWAO	Narrogin (SRO)	48.98	238	P	P	08 47 45.5	-0.2
	6.1nm,0.6s,mb4.1,baz=80,slow=8.4,SNR=6.8						
MJAR	Matsushiro Arr	57.07	332	P	P	08 48 44.8	+0.1
	0.3nm,0.4s,mb3.3,baz=193,slow=3.3,SNR=4.3						
MAW	Mawson	82.56	202	P	P	08 51 19.6	-0.2
	1.1nm,0.8s,mb3.6,baz=109,slow=5.2,SNR=6.4						
LOR	Lormes	143.88	340	ePKP1	PKPdf	08 58 30.7	+0.3
SSF	Saint Saulge	144.18	341	ePKP1	PKPdf	08 58 31.3	+0.4
LPL	La Plagne	144.35	336	ePKP1	PKPdf	08 58 31.7	+0.5
	9.7nm,1.0s						
LPG	La Plagne	144.35	336	ePKP1	PKPdf	08 58 31.8	+0.6
	6.8nm,0.7s						
AVF	Avril sur Loir	144.47	341	ePKP1	PKPdf	08 58 30.7	-0.7
	7.5nm,0.8s						
MBDF	Montbardon	144.98	335	ePKP1	PKPdf	08 58 32.6	+0.3
	10nm,0.8s						
ORIF	Oris-en-Rattie	145.18	336	ePKP1	PKPbc	08 58 33.6	+0.8
	18nm,0.9s						
SBF	Sospel	145.40	334	ePKP1	PKPbc	08 58 34.5	+1.0
MFF	Saint Martin d	145.67	344	ePKP1	PKPbc	08 58 36.0	+1.7
	10nm,0.7s						
VIVF	Saint-Julien-l	145.69	338	ePKP1	PKPbc	08 58 35.8	+1.5
FRF	La Foret Royal	145.99	334	ePKP1	PKPbc	08 58 35.5	+0.3
	18nm,0.8s						
SMRF	Simiane la Rot	146.09	336	ePKP1	PKPbc	08 58 36.4	+0.9
CAF	Calviac	146.54	340	ePKP1	PKPbc	08 58 36.4	-0.4
MTLF	Montolieu	147.89	339	ePKP1	PKPbc	08 58 41.2	+0.7
KEST	Kesra	150.43	321	PKPbc	PKPbc	08 58 48.0	+1.3
	1.9nm,0.7s,baz=335,slow=3.7,SNR=3.7						

BJI ***13*** *08:41:43.7, 5.15N×94.53E, h41km, mB5.1, mb5.4, Ms4.6, Msz4.5*
MOS ***13*** *08:41:46.8±0.9, 5.61N×94.66E, h43km, mb5.5/96, MS4.5/31, Error ellipse: s-maj=7.9km s-min=3.8km az=124.1*
NEIC ***13*** *08:41:46.4±0.1, 5.52N×94.66E, h30km, mb5.3/110, MS4.7/104, Error ellipse: s-maj=4.3km s-min=2.6km az=212.0*
NEIC Felt [III] at Banda Aceh.
HRVD ***13*** *08:41:46.4±0.2, 5.27N×94.54E, h54km±1km, MW5.1/75, Centroid moment Tensor Solution. LP body waves: s54,c80;Mantle waves: s75,c113; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.90±.17; $M_{\theta\theta}$-2.44±.13; $M_{\phi\phi}$-2.46±.16; $M_{r\theta}$2.38±.10; $M_{\theta\phi}$3.10±.12; $M_{\phi r}$-1.77±.12; Best double couple: $M_0$6.01100×10^{16} NP1:ϕ_s320.00000°,δ31.00000°,λ99.00000°. NP2: ϕ_s130.00000°,δ60.00000°,λ85.00000°. Principal axes: T 5.7030, Plg75.0000°, Azm27.0000°; N 0.6170, Plg4.0000°, Azm133.0000°; P -6.3190, Plg15.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
CRAAG ***13*** *08:41:47.4, 5.55N×94.72E, Mb5.4*
ISCJB ***13*** *08:41:47.2±0.2, 5.45N±0.03×94.67E±0.02, h50km, mb5.3/194, MS4.5/138, Error ellipse: s-maj=4.3km s-min=3.2km az=41.3*
IDC ***13*** *08:41:49.5±0.6, 5.49N×94.74E, h55km±4km, mb4.8/24, mb1 4.8/25, mb1mx4.8/26, mbtmp5.1/25, MS4.2/19, Ms1 4.2/19, ms1mx4.0/27, Error ellipse: s-maj=13.4km s-min=8.8km az=49.0*
SZGRF ***13*** *08:41:50.0, 5.94N×95.15E, h33km, mb5.2, Northern Sumatera, Indonesia*
ISC 13 08:41:49.4±0.2**, 5.49N**±0.03×**94.67E**±0.02**, h52**km**,**
h52km±1.8km**:pP-P, n802,** σ**0.99**/589**, mb5.3**/194**, MS4.5**/138**,**
208C-80D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.01	122	P	Pn	08 43 03.7	+1.7
	26nm,0.3s,baz=302,slow=12,SNR=53						
PSI				LR	LR	08 45 27.8	
	comp=Z,3μm,19.7s,baz=284,slow=44						
PSI	Prapat	5.01	122	P	Pn	08 43 03.7	+1.7
PSI				LR	LR	08 45 27.8	
KULM	Kulim	5.96	92	ePn	Pn	08 43 15.6	+0.6
KULM				eSn	Sn	08 44 19.5	-2.5
SNG	Songkhla	6.15	74	P	Pn	08 43 18.0	+0.4
	2μm,1.0s						
IPM	Ipoh	6.42	99	P	Pn	08 43 21.2	-0.1
NNT	Nongplab	8.65	35	P	Pn	08 43 56.5	+4.6
KGM	Kluang	9.30	111	P	Pn	08 44 01.1	+0.4
NST	Nakhon Sawan	11.46	28	P	Pn	08 44 34.0	+3.7
KKTK	Khon Kaen	13.43	36	P	Pn	08 45 02.0	+4.9
CM31	Chiang Mai Arr	13.55	18	ePn	Pn	08 45 04.0	+5.1
CHG	Chiang Mai	13.89	17	⇑P	Pn	08 45 08.4	+5.0
	50nm,0.8s						
CHTO	Chiang Mai	13.89	17	⇓P	Pn	08 45 09.2	+5.8
	SNR=25						
CHTO	Chiang Mai	13.89	17	eP	Pn	08 45 05.4	+2.0
CHTO				pmax	pmax		
	comp=Z,158nm,0.8s						
CHTO	Chiang Mai	13.89	17	ePn	Pn	08 45 05.3	+1.9
	comp=Z,158nm,0.8s						
PALK	Pallekele	13.99	278	Pn	Pn	08 45 05.4	+0.6
	comp=Z,376nm,0.6s,SNR=24						
PALK	Pallekele	13.99	278	ePn	Pn	08 45 03.4	-1.3
PALK				eSn	Sn	08 47 25.4	-13
NANT	Nan	14.48	23	⇓P	Pn	08 45 14.0	+2.7
	comp=Z,712nm,1.0s						
KSM	Kuching	16.11	104	eP	Pn	08 45 35.9	+3.6
VIS	Vishakhapatnam	16.45	319	eP	Pn	08 45 34.8	-1.9
VIS				AMb	AMB	08 45 39.4	
	comp=Z,47nm,0.3s						
VIS				ex	x	08 48 26.0	
BWNR	Bhubaneshwar	17.05	330	ex	x	08 45 00.0	
BWNR				ex	x	08 47 58.0	
TRD	Trivandrum	17.83	281	ex	S	08 49 01.6	-14
HYB	Hyderabad	19.72	308	i P	Pn	08 46 16.0	-0.4
	comp=Z,120nm,1.0s						
HYB				e		08 46 18.5	
HYB				e		08 49 45.0	
HYB				eS	S	08 49 48.0	-6.0
HYB	Hyderabad	19.72	308	eP	Pn	08 46 16.0	-0.4
HYB				eS	S	08 49 55.0	+1.0
HYB				pmax	pmax		
	comp=Z,120nm,1.0s						
HYB	Hyderabad	19.72	308	eP	Pn	08 46 16.0	-0.4
	comp=Z,120nm,1.0s						
HYB				eS	S	08 49 55.0	+1.0
QIZ	Qiongzhong	20.00	46	P	P	08 46 19.9	+2.3
QIZ				AP		08 46 29.4	
QIZ				PP		08 46 39.0	
QIZ				PPP		08 47 20.8	
QIZ				S	S	08 50 03.3	+3.7
QIZ				XS	sS	08 50 14.8	-4.0
QIZ				SS		08 50 32.3	
QIZ				AMB	AMB		
	comp=Z,54nm,1.2s						
QIZ				AMB	AMB		
	comp=Z,342nm,3.7s						
QIZ				LR	LR		
	comp=N,2μm,17.0s						
QIZ				LR	LR		
	comp=Z,2μm,18.3s,MS4.5						
QIZ	Qiongzhong	20.00	46	eP	P	08 46 16.3	-1.3
	comp=Z,262nm,1.6s						
BOK	Bokaro	20.07	336	eP	P	08 46 17.1	-1.3
BOK				AMb	AMB	08 46 23.6	
	comp=Z,359nm,0.9s						
BOK				eS	S	08 50 00.1	-0.9
SHL	Shillong	20.14	353	eP	P	08 46 15.5	-3.6
SHL				eP		08 46 16.7	
SHL				eS	S	08 50 00.8	-1.6
BLSP	Bilaspur	20.51	325	ex	P	08 46 25.0	+1.9
KMI	Kunming	21.01	21	P	P	08 46 31.1	+2.7
KMI				AP		08 46 38.4	
KMI				XP	sP	08 46 42.5	-4.5
KMI				PP		08 46 56.3	
KMI				PPP		08 47 03.8	
KMI				S	S	08 50 23.3	+3.9
KMI				XS	sS	08 50 35.1	-3.7
KMI				SS		08 50 59.4	
KMI				SSS		08 51 13.3	
KMI				AMB	AMB		
	comp=Z,125nm,0.9s,mb5.2						
KMI				LR	LR		
	comp=N,708nm,19.1s,MS4.2						
KMI				LR	LR		
	comp=E,830nm,20.0s,MS4.2						
KMI				LR	LR		
	comp=Z,1μm,24.3s,MS4.1						
KKM	Kota Kinabalu	21.45	87	P	P	08 46 35.4	+2.2
KKM	Kota Kinabalu	21.45	87	ePn	P	08 46 32.6	-0.6
NGP	Nagpur	21.72	317	eP	P	08 46 33.0	-3.1
NGP				AMP		08 46 48.5	
	comp=Z,134nm,0.9s						
NGP				ex	x	08 50 31.7	
LATR	Latur	21.85	308	ex	P	08 46 40.0	+2.5
LATR				ex	x	08 50 32.0	
JBP	Jabalpur	22.57	323	⇑eP	P	08 46 44.3	-0.8
JBP				ex	x	08 46 50.4	
	comp=Z,125nm,1.7s						
JBP				i x	x	08 50 56.5	
AKL	Akola	22.86	313	eP	P	08 46 48.0	-0.2
AKL				AMb	AMB	08 46 52.1	
	comp=Z,117nm,1.7s,mb5.0						
AKL				eS	S	08 50 57.6	+3.8
TSM	Tawau	23.15	92	P	P	08 46 50.7	-0.5
KAD	Karad	23.23	302	eP	P	08 46 51.3	-0.7
KAD				AMb	AMB	08 46 54.7	
	comp=Z,52nm,1.8s,mb4.7						
JIRN	Jiri	23.48	341	eP	P	08 46 52.9	-1.5
PKI	Pulchoki	23.66	339	eP	P	08 46 55.3	-0.7
	comp=Z,76nm,0.6s,mb5.3						
PKI	Pulchoki	23.66	339	eP	P	08 46 55.3	-0.7
PKI				pmax	pmax		
	comp=Z,76nm,0.6s,mb5.3						
GYA	Guiyang	23.80	28	⇑iP	P	08 46 58.0	+0.8
GYA				AP		08 47 07.4	
GYA				XP	sP	08 47 11.3	-5.4
GYA				PP		08 47 34.5	
GYA				S	S	08 51 16.3	+7.2
GYA				XS	sS	08 51 29.4	-2.0
GYA				AMB	AMB		
	comp=Z,40nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,280nm,6.7s						
GYA				LR	LR		
	comp=N,1μm,16.9s,MS4.6						
GYA				LR	LR		
	comp=E,1μm,15.9s,MS4.6						
GYA				LR	LR		
	comp=Z,1μm,17.6s,MS4.4						
DMN	Daman	23.81	339	eP	P	08 46 56.7	-0.6
GUN	Gumba	23.81	340	eP	P	08 46 56.5	-0.9
	comp=Z,241nm,0.7s,mb5.7						
KKN	Kakani	23.91	339	eP	P	08 46 57.5	-0.8
	comp=Z,205nm,0.9s,mb5.6						
KKN	Kakani	23.91	339	eP	P	08 46 57.5	-0.8
KKN				pmax	pmax		
	comp=Z,205nm,0.9s,mb5.6						
POO	Poona	24.10	304	ex	P	08 47 02.0	+2.0
POO				i x	x	08 51 23.0	
BHPL	Bhopal	24.25	318	eP	P	08 47 01.4	0.0
BHPL				AMb	AMB	08 47 06.2	
	comp=Z,88nm,0.8s,mb5.2						
BHPL				ex	x	08 51 13.0	
LSA	Lhasa	24.31	353	P	P	08 47 03.3	+1.3
LSA				AP		08 47 10.9	
LSA				XP	sP	08 47 15.1	-6.3
LSA				S	S	08 51 07.1	-10
LSA				AMB	AMB		
	comp=Z,120nm,0.6s,mb5.5						
LSA				LR	LR		
	comp=N,410nm,31.4s,MS4.0						
LSA				LR	LR		
	comp=E,570nm,27.2s,MS4.0						
LSA				LR	LR		
	comp=Z,860nm,29.3s,MS4.1						
LSA	Lhasa	24.31	353	eP	P	08 47 02.0	0.0
LSA				pmax	pmax		
	comp=Z,91nm,0.6s,mb5.4						
LSA				MLR	MLR		
	comp=Z,1μm,29.5s,MS4.2						
LSA	Lhasa	24.31	353	eP	P	08 47 02.0	+0.1
	comp=Z,91nm,0.6s,mb5.4						
LSA				LR	LR		
	comp=Z,1μm,29.5s,MS4.2						
GKN	Gorkha	24.34	338	eP	P	08 47 01.8	-0.4
	comp=Z,178nm,0.6s,mb5.7						
KOLN	Koldanda	24.53	336	eP	P	08 47 04.6	+0.6
	comp=Z,357nm,0.7s,mb6.0						
GZH	Guangzhou	25.12	44	P	P	08 47 14.4	+5.1
GZH				LR	LR		
	comp=N,741nm,16.8s,MS4.4						
GZH				LR	LR		
	comp=E,790nm,17.4s,MS4.4						
GZH				LR	LR		
	comp=Z,1μm,16.5s,MS4.6						
CD2	Chengdu	26.70	18	⇑iP	P	08 47 23.4	-0.2
CD2				AP	pP	08 47 31.9	-4.9
CD2				XP	sP	08 47 37.3	-5.8
CD2				PP		08 48 07.9	
CD2				S	S	08 51 52.3	-3.0
CD2				AMB	AMB		
	comp=Z,40nm,0.5s,mb5.2						
CD2				AMB	AMB		
	comp=Z,100nm,6.2s						
CD2				LR	LR		
	comp=E,410nm,13.8s						
CD2				LR	LR		
	comp=Z,300nm,18.6s,MS3.9						
TGY	Tagaytay City	27.24	70	P	P	08 47 29.2	+0.8
	comp=Z,72nm,0.3s,baz=90,slow=6.5,SNR=3.3						
LGTI	Lohaghat	27.46	332	i x	P	08 47 32.5	+2.1
AJM	Ajmer	28.31	320	eP	P	08 47 38.0	0.0
AJM				AMb	AMB	08 47 49.0	
	comp=Z,31nm,0.9s,mb4.9						
NDI	New Delhi	28.39	326	eP	P	08 47 35.9	-2.8
NDI				AMb	AMB	08 47 39.3	
	comp=Z,34nm,0.4s,mb5.3						
QZH	Quanzhou	30.02	47	P	P	08 47 54.8	+1.7
QZH				LR	LR		
	comp=N,2μm,8.1s						
QZH				LR	LR		
	comp=E,1μm,12.3s						
QZH				LR	LR		
	comp=Z,2μm,23.0s						
BUKP	Musuan	30.28	84	eP	P	08 47 55.4	-0.1
SMLA	Simla	30.34	329	eP	P	08 47 55.0	-1.1
SMLA				AMb	AMB	08 47 58.9	
	comp=Z,74nm,1.3s,mb5.3						
WHN	Wuhan	31.06	34	P	P	08 48 03.0	+0.7
WHN				LR	LR		
	comp=Z,3μm,15.2s,MS5.1						
XAN	Xi'an	31.34	23	P	P	08 48 04.4	-0.4
XAN				AMB	AMB		
	comp=Z,132nm,1.0s,mb5.7						
XAN				LR	LR		
	comp=N,389nm,19.0s,MS4.3						
XAN				LR	LR		
	comp=E,434nm,17.2s,MS4.3						
XAN				LR	LR		
	comp=Z,1μm,19.2s,MS4.5						
LZH	Lanzhou	31.60	14	eP	P	08 48 07.0	-0.1
LZH				AP	pP	08 48 16.3	-4.2
LZH				XP	sP	08 48 21.0	-5.7
LZH				PP	PP	08 49 12.4	-6.8
LZH				PCP	PcP	08 50 59.8	+1.4
LZH				eS	S	08 53 13.0	+0.7
LZH				SS	SS	08 55 05.1	-24
LZH				AMB	AMB		
	comp=Z,65nm,1.2s,mb5.3						
LZH				AMB	AMB		
	comp=Z,250nm,4.4s						
LZH				LR	LR		
	comp=E,679nm,15.9s						
LZH				LR	LR		
	comp=Z,980nm,16.8s,MS4.6						
YHNB	Yeheng	31.96	51	ePn	P	08 48 10.3	+0.1
DLH	Dalhousie	32.08	329	ex	x	08 49 10.0	
TATO	Taipei	32.21	50	PFAKE		08 48 20.0	+7.6
TATO				LR	LR		
	comp=Z,919nm,20.0s,MS4.5						
GTA	Gaotai	34.09	7	⇑iP	P	08 48 29.0	+0.2
GTA				AP	pP	08 48 38.1	-4.2
GTA				XP	sP	08 48 42.4	-6.1
GTA				PP	PP	08 49 44.4	-2.4
GTA				PPP		08 50 03.8	
GTA				PCP	PcP	08 51 05.4	+0.1
GTA				S	S	08 53 53.0	+2.0
GTA				XS	sS	08 54 09.8	-3.9
GTA				SCP	ScP	08 54 46.3	+0.5
GTA				PCS	PcS	08 54 50.0	-1.5
GTA				SS	SS	08 56 05.8	-14
GTA				SCS	ScS	08 58 47.1	-0.8
GTA				AMB	AMB		
	comp=Z,103nm,0.8s,mb5.8						
GTA				AMB	AMB		
	comp=Z,252nm,9.1s						
GTA				LR	LR		
	comp=N,354nm,22.8s,MS4.1						
GTA				LR	LR		
	comp=E,262nm,23.6s,MS4.1						
GTA				LR	LR		
	comp=Z,498nm,24.3s,MS4.2						
NJ2	Nanjing	34.79	38	eP	P	08 48 36.1	+1.2
NJ2				AP	pP	08 48 45.8	-2.6
NJ2				S	S	08 54 05.0	+3.3
NJ2				XS	sS	08 54 21.0	-3.5
NJ2				AMB	AMB		
	comp=Z,80nm,0.9s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,80nm,7.0s						
NJ2				LR	LR		
	comp=N,580nm,22.1s,MS4.4						
NJ2				LR	LR		
	comp=E,440nm,21.0s,MS4.4						
NJ2				LR	LR		
	comp=Z,270nm,20.9s,MS4.0						
SSE	Sheshan	35.62	41	P	P	08 48 41.4	-0.6
SSE				AP	pP	08 48 50.1	-5.5
SSE				XP	sP	08 48 53.9	-7.8
SSE				PP	PP	08 50 02.4	-1.2
SSE				S	S	08 54 15.6	+1.1
SSE				SCS	ScS	08 58 58.3	+2.2
SSE				AMB	AMB		
	comp=Z,27nm,0.9s,mb5.2						
SSE				AMB	AMB		
	comp=Z,103nm,10.4s						
SSE				LR	LR		
	comp=N,321nm,21.0s,MS4.3						
SSE				LR	LR		
	comp=E,471nm,21.0s,MS4.3						
SSE				LR	LR		
	comp=Z,622nm,20.5s,MS4.4						
MBWA	Marble Bar	36.14	138	eP	P	08 48 46.0	-0.5
TIA	Tai'an	36.88	31	⇑P	P	08 48 53.3	+0.5
BTO	Baotou	37.59	19	eP	P	08 48 57.9	-0.9
BTO				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.4						
KSH	Kashi	37.85	336	i PR	P	08 49 02.3	+1.3
KSH				AP	pP	08 49 11.9	-2.7
KSH				XP	sP	08 49 15.6	-5.2
KSH				PP	PP	08 50 32.3	+4.1
KSH				PPP		08 50 54.1	
KSH				PCP	PcP	08 51 17.8	+1.3
KSH				S	S	08 54 51.8	+3.3
KSH				SCP	ScP	08 55 01.3	+1.8
KSH				PCS	PcS	08 55 05.5	+0.2
KSH				XS	sS	08 55 07.8	-3.6
KSH				SS	SS	08 57 29.8	-5.8
KSH				SCS	ScS	08 59 09.4	+0.8
KSH				AMB	AMB		
	comp=Z,133nm,0.8s,mb5.7						
KSH				LR	LR		
	comp=N,333nm,4.4s						
KSH				LR	LR		
	comp=E,397nm,5.6s						
KSH				LR	LR		
	comp=Z,570nm,11.3s,MS4.6						
HHC	Hu-ho-hao-te	38.33	21	eP	P	08 49 05.4	+0.4
HHC				AP	pP	08 49 15.3	-3.4
HHC				XP	sP	08 49 19.4	-5.4
HHC				PP	PP	08 50 37.5	+4.1
HHC				PCP	PcP	08 51 19.0	+1.0
HHC				S	S	08 54 57.5	+1.8
HHC				SCP	ScP	08 55 02.9	+1.5
HHC				PCS	PcS	08 55 06.9	-0.2
HHC				XS	sS	08 55 14.0	-4.7
HHC				SS	SS	08 57 38.4	-7.5
HHC				SCS	ScS	08 59 11.8	+0.5
HHC				AMB	AMB		
	comp=Z,68nm,1.0s,mb5.3						
HHC				AMB	AMB		
	comp=Z,112nm,8.6s						
HHC				LR	LR		
	comp=N,842nm,20.4s,MS4.7						
HHC				LR	LR		
	comp=E,579nm,16.7s,MS4.7						
HHC				LR	LR		
	comp=Z,793nm,21.0s,MS4.5						
JOW	Kunigami	38.42	53	P	P	08 49 07.2	+1.4
	comp=Z,11nm,0.3s,mb5.0,baz=247,slow=11,SNR=16						
WBK	Wadi Bani Khal	38.43	300	⇑P	P	08 49 09.0	+3.2
	SNR=6.3						
FITZ	Fitzroy Crossi	38.51	128	⇑iP	P	08 49 05.4	-1.2
	comp=Z,32nm,0.6s,mb5.2						
FITZ	Fitzroy Crossi	38.51	128	P	P	08 49 05.5	-1.1
	comp=Z,19nm,0.7s,mb5.0,baz=315,slow=5.4,SNR=53						
FITZ				ScP	ScP	08 55 00.8	-1.3
	comp=Z,3.8nm,0.9s,baz=265,slow=2.4,SNR=4.0						
WMQ	Urumqi	38.67	352	P	P	08 49 08.0	+0.1
WMQ				AP	pP	08 49 18.0	-3.5
WMQ				XP	sP	08 49 22.0	-5.7
WMQ				PP	PP	08 50 41.0	+3.9
WMQ				S	S	08 55 02.0	+1.2
WMQ				SS	SS	08 57 44.0	-8.7
WMQ				AMB	AMB		
	comp=Z,102nm,1.0s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,721nm,5.0s						
WMQ				LR	LR		
	comp=N,298nm,14.0s,MS4.6						
WMQ				LR	LR		
	comp=E,625nm,15.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,368nm,14.0s,MS4.3						
JMDO	Jabal Madar	39.10	299	P	P	08 49 14.1	+2.6
	SNR=6.1						
SMDO	Samad	39.38	300	P	P	08 49 16.7	+2.9
	SNR=9.9						
BJT	Baijiatuau	39.46	26	eP	P	08 49 16.1	+1.7
BJT				pmax	pmax		
	comp=Z,128nm,0.9s						
BJT				MLR	MLR		
	comp=Z,793nm,21.0s						
BJT	Baijiatuau	39.46	26	eP	P	08 49 16.1	+1.6
	comp=Z,128nm,0.9s,mb5.7						
BJT				LR	LR		

comp=Z,793nm,21.0s,MS4.5
BJI Beijing 39.48 26 P **P** **08 49 16.1 +1.5**
BJI S **S** **08 55 23.1 +10**
BJI AMB AMB
comp=Z,148nm,1.0s,mb5.7
BJI LR LR
comp=N,408nm,22.5s,MS4.4
BJI LR LR
comp=E,449nm,21.6s,MS4.4
BJI LR LR
comp=Z,697nm,28.8s
BIDO Bidbid 39.48 301 P **P** **08 49 18.0 +3.3**
SNR=11
BSY Bisya 40.01 299 P **P** **08 49 22.1 +3.0**
SNR=18
ULHL Ulahol 40.10 339 P **P** **08 49 21.0 +1.2**
SNR=14
HOQ Hoqain 40.20 300 ⇑P **P** **08 49 23.7 +3.1**
SNR=6.6
KZA Kyzart 40.33 338 P **P** **08 49 23.1 +1.5**
SNR=51
UCH Uchtor 40.74 337 P **P** **08 49 26.7 +1.6**
SNR=25
ARQ Araqi 40.80 300 P **P** **08 49 28.4 +2.9**
SNR=7.5
TKM2 Tokmak 2 40.92 339 P **P** **08 49 27.8 +1.2**
SNR=83
KBK Karagaybulak 40.94 338 P **P** **08 49 28.6 +1.8**
SNR=61
AML Almayashu 40.98 336 P **P** **08 49 28.7 +1.6**
SNR=216
AAK Ala-Archa 41.09 337 P **P** **08 49 29.5 +1.5**
SNR=36
AAK Ala-Archa 41.09 337 P **P** **08 49 28.2 +0.2**
comp=Z,605nm,0.7s,mb6.3,SNR=23
AAK Ala-Archa 41.09 337 P **P** **08 49 28.7 +0.7**
SNR=43
AAK Ala-Archa 41.09 337*c* *i*P **P** **08 49 28.4 +0.4**
AAK pmax pmax
comp=Z,102nm,1.0s,mb5.4
AAK MLR MLR
comp=Z,200nm,20.0s,MS4.0
AAK Ala-Archa 41.09 337 *e*P **P** **08 49 28.1 +0.1**
comp=Z,75nm,0.8s,mb5.4
AAK LR LR
comp=Z,211nm,20.0s,MS4.0
FRU Bishkek 41.22 337⇑*e*P **P** **08 49 30.0 +1.0**
FRU *e* pP 08 49 45.0 +2.3
FRU *e* 08 51 05.0
FRU pmax pmax
comp=Z,220nm,2.0s,mb5.4
DL2 Dalian 41.26 32⇑*i*P **P** **08 49 30.6 +1.2**
DL2 S **S** **08 55 43.8 +4.2**
DL2 AMB AMB
comp=Z,80nm,0.8s,mb5.4
DL2 AMB AMB
comp=Z,130nm,7.6s
DL2 LR LR
comp=N,320nm,17.5s,MS4.3
DL2 LR LR
comp=E,240nm,17.4s,MS4.3
DL2 LR LR
comp=Z,410nm,17.4s,MS4.3
CHMS Chumysh 41.30 338 P **P** **08 49 30.4 +0.7**
SNR=32
EKS2 Erkin-Say 41.40 337 P **P** **08 49 31.9 +1.5**
SNR=102
USP Ospenovka 41.63 338 P **P** **08 49 33.2 +0.9**
SNR=129
ASHO Ashiyiah 41.66 301⇑P **P** **08 49 35.0 +2.3**
SNR=17
KAKA Kakadu 41.66 116⇑*i*P **P** **08 49 31.8 -0.9**
comp=Z,14nm,0.6s,mb4.8
MKAR Makanchi Array 42.52 347 P **P** **08 49 39.8 +0.2**
comp=Z,54nm,0.7s,mb5.4,baz=163,slow=8.6,SNR=441
MUN Mundaring 42.53 153 *e*P **P** **08 49 43.2 +3.4**
KLBR Kellerberrin 42.95 151 *e*P **P** **08 49 45.7 +2.6**
comp=Z,28nm,1.1s,mb4.9
INCN Inchon 43.17 38 P **P** **08 49 45.5 +0.6**
SNR=8.2
INCN Inchon 43.17 38 *e*P **P** **08 49 44.8 -0.1**
comp=Z,39nm,0.8s,mb5.2
INCN LR LR
comp=Z,1μm,19.0s,MS4.8
SONM Songino Array 43.38 12 P **P** **08 49 46.4 -0.1**
comp=Z,47nm,0.8s,mb5.3,baz=190,slow=8.4,SNR=253
SONM PcP PcP 08 51 34.9 +0.6
comp=Z,7.5nm,0.5s,baz=198,slow=3.6,SNR=11
SONM ScP ScP 08 55 20.2 -1.1
comp=Z,3.4nm,0.9s,baz=198,slow=4.1,SNR=6.5
SONM LR LR 09 10 00.1
comp=Z,389nm,20.3s,MS4.3,baz=201,slow=39
SONM Songino Array 43.38 12 P **P** **08 49 46.4 -0.2**
SONM 08 51 34.9
ULN Ulaanbaatar 43.54 12 ⇓P **P** **08 49 47.9 0.0**
SNR=10
ULN Ulaanbaatar 43.54 12⇑*i*P **P** **08 49 47.5 -0.4**
ULN LR LR
comp=Z,386nm,22.0s,MS4.3
SNY Shenyang 44.41 31 ⇑P **P** **08 49 54.9 +0.1**
SNY AP pP 08 50 05.3 -3.4
SNY XP sP 08 50 08.8 -6.0
SNY PP PP 08 51 40.1 +1.0
SNY S **S** **08 56 25.9 +0.1**
SNY AMB AMB
comp=Z,55nm,1.1s,mb5.2
SNY AMB AMB
comp=Z,121nm,4.4s
SNY LR LR
comp=N,542nm,18.6s,MS4.5
SNY LR LR
comp=E,279nm,21.0s,MS4.5
SNY LR LR
comp=Z,740nm,21.2s,MS4.6
ZAK Zakamensk 45.33 8⇓*i*P **P** **08 50 01.7 -0.4**
ZAK *e* 08 51 39.4
ZAK pmax pmax
comp=Z,14nm,1.5s,mb4.6
ZAK pmax pmax
comp=Z,7.0nm,1.6s,mb4.2
ZAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
ABKT Ailbek 46.33 319 P **P** **08 50 10.5 +0.5**
comp=Z,420nm,0.6s,SNR=6.0
WRAB Tennant Creek 46.48 124 P **P** **08 50 11.0 -0.2**
comp=Z,550nm,0.6s,SNR=61
WRAB Tennant Creek 46.48 124⇑*i*P **P** **08 50 11.2 0.0**
WRAB Tennant Creek 46.48 124 *e*P **P** **08 50 11.0 -0.3**
comp=Z,76nm,0.6s,mb5.8
WRAB LR LR
comp=Z,498nm,20.0s,MS4.5
WB2 Warramunga Ar 46.49 124⇑*i*P **P** **08 50 11.0 -0.3**
TLY Talaya 46.65 8 P **P** **08 50 12.9 +0.4**
comp=Z,168nm,0.8s,mb6.0,SNR=12
TLY Talaya 46.65 8 ⇓P **P** **08 50 13.2 +0.7**
SNR=17
TLY Talaya 46.65 8⇓*i*P **P** **08 50 12.9 +0.4**
TLY *e*S **S** **08 56 58.2 +0.2**
TLY *e*SS SS 08 59 54.4 -30
TLY pmax pmax
comp=Z,28nm,1.0s,mb5.2
TLY MLR MLR
comp=Z,409nm,19.0s,MS4.4
TLY Talaya 46.65 8 *e*P **P** **08 50 12.9 +0.4**
comp=Z,19nm,0.8s,mb5.1
TLY LR LR
comp=Z,459nm,20.0s,MS4.4
CN2 Changchun 46.78 31 *e*P **P** **08 50 13.8 +0.2**
CN2 *e*XP sP 08 50 27.5 -6.1
CN2 *e*S **S** **08 57 00.8 +0.8**
CN2 SS SS 09 00 20.1 -6.7
CN2 AMB AMB
comp=Z,60nm,0.6s,mb5.7
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,20.0s,MS4.4
CN2 LR LR
comp=E,300nm,20.0s,MS4.4
KURK Kurchatov 47.04 346 P **P** **08 50 16.1 +0.5**
comp=E,1μm,0.7s
KURK Kurchatov 47.04 346 ⇑P **P** **08 50 16.3 +0.7**
SNR=85
KURK Kurchatov 47.04 346*c* *i*P **P** **08 50 16.2 +0.6**
KURK Kurchatov 47.04 346 *e*P **P** **08 50 16.0 +0.4**
comp=E,139nm,0.6s,mb6.1
KURK LR LR
comp=Z,230nm,20.0s,MS4.1
IRK Irkutsk 47.28 8 *e*P **P** **08 50 16.5 -1.0**
IRK *e* 08 57 13.3
IRK pmax pmax
comp=Z,64nm,1.9s,mb5.2
ASPA Alice Springs 48.01 129⇑*i*P **P** **08 50 22.8 -0.3**
AS31 Alice Springs 48.01 129⇑*i*P **P** **08 50 22.8 -0.3**
ASAR Alice Springs 48.01 129 P **P** **08 50 22.9 -0.3**
comp=Z,28nm,0.8s,mb5.4,baz=300,slow=7.6,SNR=318
ASAR S **S** **08 57 14.8 -2.5**
comp=Z,3.8nm,0.9s,baz=298,slow=14,SNR=18
ASAR LR LR 09 09 56.0
comp=Z,329nm,21.8s,MS4.3,baz=306,slow=35
ASAR Alice Springs 48.01 129 P **P** **08 50 22.9 -0.2**
ASAR S **S** **08 57 14.9 -2.4**
FORT Forrest 48.17 141 *e*P **P** **08 50 24.8 +0.5**
comp=Z,49nm,0.8s,mb5.6
HIA Hailar 48.52 22 *e*P **P** **08 50 26.8 -0.2**
HIA pmax pmax
comp=Z,27nm,0.5s
HIA MLR MLR
comp=Z,1μm,20.0s
HIA Hailar 48.52 22 *e*P **P** **08 50 26.8 -0.3**
comp=Z,27nm,0.5s,mb5.5
HIA LR LR
comp=Z,1μm,20.0s,MS4.9
ZAL Zalesovo 48.97 352 P **P** **08 50 30.9 +0.4**
comp=Z,41nm,0.5s,mb5.7,baz=302,slow=6.3,SNR=152
ZAL ScP ScP 08 55 43.5 -1.1
comp=Z,3.9nm,1.0s,baz=56,slow=0.3,SNR=4.3
ZAL S **S** **08 57 31.3 +0.4**
comp=Z,1.4nm,0.4s,baz=93,slow=23,SNR=5.5
ZAL LR LR 09 14 22.8
comp=Z,126nm,21.1s,MS3.9,baz=288,slow=40
ZAL Zalesovo 48.97 352 P **P** **08 50 30.9 +0.4**
ZAL S **S** **08 57 31.3 +0.4**
ZAL Zalesovo 48.97 352 P **P** **08 50 30.9 +0.4**
ZAL ScP ScP 08 55 43.5 -1.1
ZAL S **S** **08 57 31.3 +0.4**
ZAL LR LR 09 14 22.8
MDJ Mudanjiang 49.51 33 P **P** **08 50 34.3 -0.3**
MDJ AP pP 08 50 43.3 -5.4
MDJ XP sP 08 50 47.1 -7.6
MDJ PCP PcP 08 51 55.3 -0.6
MDJ PP PP 08 52 28.8 -0.3
MDJ SCP ScP 08 55 48.4 +1.6
MDJ PCS PcS 08 55 52.1 -0.5
MDJ S **S** **08 57 41.0 +2.6**
MDJ XS sS 08 57 56.5 -5.5
MDJ SCS ScS 09 00 23.3 +1.7
MDJ AMB AMB
comp=Z,48nm,0.8s,mb5.6
MDJ AMB AMB
comp=Z,92nm,4.7s
MDJ LR LR
comp=N,57nm,19.6s,MS4.4
MDJ LR LR
comp=E,379nm,20.3s,MS4.4
MDJ LR LR
comp=Z,377nm,23.7s,MS4.3
MDJ Mudanjiang 49.51 33 *e*P **P** **08 50 34.1 -0.5**
comp=Z,59nm,1.0s,mb5.6
MDJ LR LR
comp=Z,479nm,20.0s,MS4.5
VLA Vladivostok 49.83 35*de*P **P** **08 50 37.0 -0.1**
VLA *e* pP 08 50 48.2 -2.9
VLA pmax pmax
comp=Z,87nm,1.5s,mb5.6
VLA MLR MLR
comp=Z,900nm,17.7s,MS4.8
VLA Vladivostok 49.83 35 *i* P **P** **08 50 38.3 +1.2**
NVS Novosibirsk 50.07 351⇑*i*P **P** **08 50 38.0 -0.9**
NVS *e* pP 08 50 49.9 -3.0
NVS *e*S **S** **08 57 44.9 -1.4**
NVS pmax pmax
comp=Z,92nm,1.1s,mb5.7
NVS pmax pmax
comp=N,94nm,1.6s
NVS pmax pmax
comp=E,58nm,1.3s
NVS smax
comp=E,66nm,1.9s
KBD Kabd 50.20 304 *e*P **P** **08 50 40.5 +0.6**
KBD AMb AMb 08 50 41.9
comp=Z,209nm,0.8s,mb6.2
RDF Al-Radifah 50.24 303 *e*P **P** **08 50 40.7 +0.6**
RDF AMb AMb 08 50 41.8
comp=Z,90nm,0.6s,mb6.0
UMR Umm Al-Rimmam 50.30 304 *e*P **P** **08 50 41.0 +0.3**
UMR AMb AMb 08 50 42.4
comp=Z,88nm,0.8s,mb5.8
MAJO Matsushiro 50.40 46 *e*P **P** **08 50 41.3 -0.1**
MAJO pmax pmax
comp=Z,15nm,0.8s,mb5.1
MAJO MLR MLR
comp=Z,525nm,21.0s,MS4.5
MAJO Matsushiro 50.40 46 *e*P **P** **08 50 41.3 -0.1**
comp=Z,15nm,0.8s,mb5.1
MAJO LR LR
comp=Z,525nm,21.0s,MS4.5
MAT Matsushiro 50.40 46 P **P** **08 50 41.0 -0.4**
MAT *e*S **S** **08 57 52.7 +1.8**
MAT Matsushiro 50.40 46 *e*P **P** **08 50 41.0 -0.4**
MAT pmax pmax
comp=Z,17nm,1.0s,mb5.0
MAT Matsushiro 50.40 46 *e*P **P** **08 50 41.0 -0.4**
comp=Z,17nm,1.0s,mb5.0
MAT S S 08 58 12.0 +21
MJAR Matsushiro Arr 50.40 46 P **P** **08 50 41.5 +0.1**
comp=Z,8.0nm,0.8s,mb4.8,baz=251,slow=8.6,SNR=32
MJAR PcP PcP 08 51 59.0 -0.2
comp=Z,7.5nm,1.0s,baz=260,slow=3.4,SNR=8.9
MJAR ScP ScP 08 55 48.9 -1.8
comp=Z,1.5nm,0.9s,baz=272,slow=4.7,SNR=4.2
MJAR LR LR 09 12 31.9
comp=Z,411nm,22.0s,MS4.4,baz=260,slow=37
MJAR Matsushiro Arr 50.40 46 P **P** **08 50 41.5 +0.1**
MJAR 08 51 59.0
MJAR Matsushiro Arr 50.40 46 P **P** **08 50 41.5 +0.1**
MJAR PcP PcP 08 51 59.0 -0.2
MJAR ScP ScP 08 55 48.9 -1.8
MJAR LR LR 09 12 31.9
KRAR Krasnoyarsk 50.40 359⇑*i*P **P** **08 50 41.6 +0.2**
KRAR pmax pmax
comp=Z,121nm,0.8s,mb6.0
NAY Al-Naaiem 50.60 304 *e*P **P** **08 50 43.5 +0.6**
NAY AMb AMb 08 50 44.7
comp=Z,71nm,0.7s,mb5.7
MIB Mutribah 50.70 304 *e*P **P** **08 50 44.2 +0.6**
MIB AMb AMb 08 50 46.0
comp=Z,182nm,0.9s,mb6.0
RST Umm Al-Ruwaisa 50.88 304 *e*P **P** **08 50 45.2 +0.2**
RST AMb AMb 08 50 47.2
comp=Z,120nm,1.0s,mb5.8
BRVK Borovoye 51.47 341 P **P** **08 50 49.8 +0.4**
comp=Z,652nm,0.6s,SNR=40
BRVK Borovoye 51.47 341 ⇓P **P** **08 50 49.6 +0.2**
SNR=33
BRVK Borovoye 51.47 341 *e*P **P** **08 50 49.2 -0.2**
BRVK pmax pmax
comp=Z,49nm,0.8s,mb5.5
BRVK Borovoye 51.47 341 *e*P **P** **08 50 49.2 -0.2**
comp=Z,50nm,0.8s,mb5.5
KLR Kul'dur 53.68 29 *e*P **P** **08 51 02.8 -3.0**
KLR pmax pmax
comp=E,43nm,1.4s
KLR pmax pmax
comp=Z,74nm,1.4s,mb5.4
BOD Bodaibo 54.34 13 *e*P **P** **08 51 07.3 -3.3**
BOD pmax pmax
comp=Z,53nm,1.0s,mb5.4
PMG Port Moresby 54.36 106 P **P** **08 51 10.6 -0.2**
comp=Z,27nm,0.7s,mb5.3,baz=99,slow=2.0,SNR=8.3
PMG Port Moresby 54.36 106⇑*e*P **P** **08 51 11.0 +0.3**
PMG Port Moresby 54.36 106 *e*P **P** **08 51 10.5 -0.2**
comp=Z,35nm,0.8s,mb5.3
HABR Khabarovsk 54.87 32⇑*i*P **P** **08 51 14.6 +0.2**
HABR *e*S **S** **08 58 56.7 +4.9**
HABR pmax pmax
comp=Z,53nm,0.8s,mb5.6
HABR MLR MLR
comp=Z,700nm,19.1s,MS4.8
GNI Garni 56.48 315 ⇓P **P** **08 51 26.6 +0.6**
SNR=8.5
GNI Garni 56.48 315*c* *i*P **P** **08 51 26.1 +0.2**
GNI pmax pmax
comp=Z,46nm,1.2s
GNI Garni 56.48 315 *e*P **P** **08 51 26.0 0.0**
comp=Z,27nm,0.9s,mb5.3
GNI LR LR
comp=Z,122nm,20.0s,MS4.0
CTA Charters Tower 56.71 118 P **P** **08 51 27.2 -0.4**
comp=Z,15nm,1.0s,mb5.0,baz=275,slow=10.0,SNR=6.3
CTA LR LR 09 16 14.2
comp=Z,308nm,20.4s,MS4.4,baz=53,slow=36
CTA Charters Tower 56.71 118 P **P** **08 51 27.2 -0.4**
CTA LR LR 09 16 14.2
CTAO Charters Tower 56.71 118 *e*P **P** **08 51 27.2 -0.4**
CTAO pmax pmax
comp=Z,19nm,1.0s,mb5.1
CTAO MLR MLR
comp=Z,418nm,20.0s,MS4.5
CTAO Charters Tower 56.71 118 *e*P **P** **08 51 27.2 -0.3**
comp=Z,19nm,1.0s,mb5.1
CTAO LR LR
comp=Z,418nm,20.0s,MS4.5
KMBO Kilima Mbogo 57.71 265 P **P** **08 51 36.6 +2.0**
comp=Z,4.8nm,0.9s,mb4.5,baz=59,slow=7.0,SNR=9.3
KMBO LR LR 09 12 19.3
comp=Z,444nm,21.7s,MS4.5,baz=93,slow=32
KMBO Kilima Mbogo 57.71 265 *e*P **P** **08 51 35.9 +1.2**
comp=Z,3.9nm,0.8s,mb4.5
KMBO LR LR
comp=Z,478nm,21.0s,MS4.6
SVE Sverdlovsk 57.80 339⇑*i*P **P** **08 51 35.0 -0.3**
SVE *e* pP 08 51 49.0 -0.6
SVE *e* 08 59 27.0
SVE *e* 08 59 50.0
SVE *e*S ScS 09 01 12.0 -8.2
SVE pmax pmax
comp=Z,160nm,2.0s,mb5.7
STKA Stephens Creek 58.10 133 *e*P **P** **08 51 37.1 -0.3**
comp=Z,15nm,1.4s,mb4.8
STKA Stephens Creek 58.10 133 P **P** **08 51 37.0 -0.3**
comp=Z,9.4nm,0.7s,mb5.0,baz=303,slow=7.5,SNR=23
STKA LR LR 09 20 17.5
comp=Z,253nm,18.9s,MS4.3,baz=225,slow=40
ZEI Tsey 58.14 318 *e*P **P** **08 51 37.6 0.0**
ZEI pmax pmax
comp=Z,35nm,0.7s,mb5.5
ARU Arti 58.28 337 P **P** **08 51 38.2 -0.4**
comp=Z,297nm,1.0s,mb6.3,SNR=13
ARU Arti 58.28 337⇑*i*P **P** **08 51 38.1 -0.5**
ARU *e* 08 52 25.5
ARU *e* 08 53 44.7
ARU *e*S **S** **08 59 41.1 +4.2**
ARU *e* 09 01 19.6
ARU *e*SS SS 09 03 31.8 +2.5
ARU pmax pmax
comp=Z,47nm,1.0s,mb5.5
ARU Arti 58.28 337 PFAKE 08 51 50.0 +11
ARU LR LR
comp=Z,187nm,20.0s,MS4.2
YSS Yuzh-Sakhalins 58.35 37⇑*i*P **P** **08 51 38.6 -0.5**
YSS *e* 08 52 25.0
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.8
YSS MLR MLR
comp=E,400nm,19.0s
YSS MLR MLR
comp=Z,400nm,19.0s,MS4.5
YSS Yuzh-Sakhalins 58.35 37 *e*P **P** **08 51 39.1 -0.1**
comp=Z,42nm,0.9s,mb5.5
YSS LR LR
comp=Z,345nm,20.0s,MS4.5
KIV Kislovodsk 59.43 319 P **P** **08 51 46.4 -0.2**
comp=Z,320nm,0.8s,SNR=6.0
KIV Kislovodsk 59.43 319 ⇓P **P** **08 51 46.6 0.0**
SNR=7.0
KIV Kislovodsk 59.43 319*c* *i*P **P** **08 51 46.2 -0.4**
KIV pmax pmax
comp=Z,62nm,1.1s,mb5.5
KIV Kislovodsk 59.43 319 *e*P **P** **08 51 46.3 -0.3**
comp=Z,47nm,0.9s,mb5.5
KIV LR LR
comp=Z,88nm,20.0s,MS3.9
GOF Gofitskoye 59.67 320 *e*P **P** **08 51 47.5 -0.8**
GOF pmax pmax
comp=Z,60nm,0.8s,mb5.7
MALT Malatya 60.41 311 *e*P **P** **08 51 53.7 +0.4**
MALT pmax pmax
comp=Z,24nm,1.2s,mb5.1
MALT Malatya 60.41 311 *e*P **P** **08 51 53.7 +0.4**
comp=Z,24nm,1.2s,mb5.1
EIL Elat 61.07 301 *e*P **P** **08 51 57.2 -0.6**
comp=Z,212nm,0.8s,mb6.3
RCY Rachaya 61.15 305 *e*P **P** **08 52 00.2 +1.9**
SOKR Solikamsk 61.20 339*c* *i*P **P** **08 51 58.5 -0.2**
SOKR pmax pmax
comp=Z,60nm,1.2s,mb5.6
BHL Bhannes 61.38 306 *e*P **P** **08 52 01.5 +1.5**
YAK Yakutsk 62.09 18*c* *i*P **P** **08 52 03.3 -1.4**
YAK pmax pmax
comp=Z,74nm,1.1s,mb5.7
YAK Yakutsk 62.09 18 *e*P **P** **08 52 03.3 -1.4**
comp=Z,56nm,0.5s,mb6.0
YAK LR LR
comp=Z,355nm,22.0s,MS4.5
VRHR Novokhopersk 63.18 326 *e*P **P** **08 52 10.4 -1.6**
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.6
VRHR pmax pmax
comp=N,7.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,0.9s
TOO Toolangi 63.77 137 *e*P **P** **08 52 16.9 +1.1**
comp=E,9.5nm,0.7s,mb4.9
TOO Toolangi 63.77 137 *e*P **P** **08 52 16.9 +1.1**
TOO pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
BR131 Keskin Array S 64.38 312 *e*P **P** **08 52 19.3 -0.5**
comp=Z,10nm,0.6s,mb5.0
BRTR Keskin Array B 64.38 312 P **P** **08 52 19.2 -0.7**
comp=Z,17nm,0.7s,mb5.2,baz=127,slow=7.3,SNR=109
BRTR pP pP 08 52 35.2 +0.8
comp=Z,14nm,0.7s,baz=129,slow=7.6,SNR=11
BRTR LR LR 09 21 11.6
comp=Z,83nm,21.0s,MS3.9,baz=348,slow=37
BRTR Keskin Array B 64.38 312 P **P** **08 52 19.2 -0.7**
BRTR *PP pP 08 52 35.2 +0.8
PECR Pechory 64.47 332 *i* P **P** **08 52 19.0 -1.4**
PECR *e* pP 08 52 33.0 -2.0
PECR pmax pmax
comp=Z,800nm,1.4s
VRSR Storozhevoye 64.61 325*c* *i*P **P** **08 52 19.6 -1.8**
VRSR pmax pmax
comp=Z,40nm,0.9s,mb5.5
VRSR pmax pmax
comp=N,10.0nm,0.7s
VRSR pmax pmax
comp=E,50nm,0.8s
ANTO Ankara 65.05 312⇑*i*P **P** **08 52 23.7 -0.5**
ANTO Ankara 65.05 312 P **P** **08 52 24.2 0.0**
SNR=8.9
ANTO Ankara 65.05 312 *e*P **P** **08 52 23.8 -0.4**
ANTO *e* pP 08 52 39.6 +0.8
ANTO pmax pmax
comp=Z,17nm,0.8s,mb5.1
ANTO MLR MLR
comp=Z,105nm,21.0s,MS4.0
ANTO Ankara 65.05 312 *e*P **P** **08 52 23.8 -0.4**
comp=Z,17nm,0.8s,mb5.1
ANTO *e* pP 08 52 39.6 +0.8
ANTO LR LR
comp=Z,105nm,21.0s,MS4.0
ARMA Armidale 65.11 127 *e*P **P** **08 52 25.9 +1.3**
CNB Canberra Magne 65.43 133 *e*P **P** **08 52 24.7 -2.0**
comp=Z,8.0nm,0.8s,mb4.8
SIM Simferopol' 65.52 317 *e*P **P** **08 52 27.0 -0.2**
SIM pmax pmax
comp=Z,57nm,0.9s,mb5.6
ISP Isparta 66.32 309 *e*P **P** **08 52 32.6 +0.2**
ISP pmax pmax
comp=Z,26nm,0.6s,mb5.4
ISP Isparta 66.32 309 *e*P **P** **08 52 32.6 +0.2**
comp=Z,26nm,0.6s,mb5.4
MOS Moscow 67.38 329 *e*P **P** **08 52 37.1 -2.0**
MOS *e* pP 08 52 52.4 -1.4
MOS *e* 08 53 03.1
MOS pmax pmax
comp=Z,89nm,0.7s,mb5.9

MOS pmax pmax
comp=Z,200nm,1.4s,mb6.0
OBN Obninsk 67.67 328*c* *i*P **P** **08 52 39.8 -1.1**
OBN *e* pP 08 52 52.2 -3.4
OBN *e* 08 55 09.9
OBN *e*S S 09 01 35.1 +0.8
OBN pmax pmax
comp=Z,121nm,1.4s,mb5.7
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
OBN Obninsk 67.67 328 *e*P **P** **08 52 40.1 -0.9**
comp=Z,36nm,0.5s,mb5.7
OBN LR LR
comp=Z,122nm,21.0s,MS4.1
SKR Severo-Kuril's 67.92 37 *e*P **P** **08 52 37.5 -5.0**
SKR *e* 08 52 45.0
SKR *e* pP 08 52 54.5 -2.7
SKR pmax pmax
comp=Z,70nm,0.6s,mb5.9
MA2 Magadan 68.64 27*c* *i*P **P** **08 52 46.2 -0.8**
MA2 S S 09 01 44.3 -1.5
MA2 *e*PS 09 02 08.1
MA2 *e* 09 02 40.1
MA2 *e*SS SS 09 06 09.5 -1.4
MA2 pmax pmax
comp=Z,40nm,0.7s,mb5.5
MA2 MLR MLR
comp=Z,400nm,20.2s,MS4.7
MA2 Magadan 68.64 27 *e*P **P** **08 52 46.4 -0.6**
comp=Z,29nm,0.7s,mb5.3
MA2 LR LR
comp=Z,205nm,19.0s,MS4.4
KLMR Klimovskoe 68.82 334 *e*P **P** **08 52 46.1 -2.1**
KLMR pmax pmax
comp=Z,60nm,1.4s,mb5.3
LSZ Lusaka 68.99 251 *e*P **P** **08 52 50.9 +1.7**
LSZ *e* pP 08 53 01.9 -2.0
LSZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
LSZ MLR MLR
comp=Z,660nm,21.0s,MS4.8
LSZ Lusaka 68.99 251 *e*P **P** **08 52 50.9 +1.7**
comp=Z,5.0nm,0.9s,mb4.4
LSZ *e* pP 08 53 01.9 -2.0
LSZ LR LR
comp=Z,660nm,21.0s,MS4.8
TIRR Tirgusor 69.31 316⇑ *i*P **P** **08 52 50.6 -0.6**
TIRR Tirgusor 69.31 316 *e*P **P** **08 52 50.3 -0.9**
TIRR *e* pP 08 53 05.8 0.0
CHOS Chios island 69.88 309 *e*P **P** **08 52 55.2 +0.5**
SANT Santorini 70.04 307 *e*P **P** **08 52 55.5 -0.2**
PET Petropavlovsk 70.16 35 *e*P **P** **08 52 54.1 -2.3**
PET MLR MLR
comp=Z,200nm,19.0s,MS4.4
PET Petropavlovsk 70.16 35 PFAKE 08 53 10.0 +14
PET LR LR
comp=Z,342nm,21.0s,MS4.6
JMB Yambol 70.19 313 *e*P **P** **08 52 56.0 -0.6**
ALN Alexandroupoli 70.30 311 *e*P **P** **08 52 56.9 -0.4**
AKASG Malin Array Be 70.34 322 P **P** **08 52 56.1 -1.5**
comp=Z,18nm,0.6s,mb5.2,baz=89,slow=5.0,SNR=83
AKASG pP pP 08 53 11.4 -0.8
comp=Z,16nm,0.9s,baz=90,slow=4.6,SNR=7.1
AKBB Malin Array Si 70.34 322 *e*P **P** **08 52 56.0 -1.5**
VRI Vrincioaia 70.78 317⇓ *i*P **P** **08 53 00.7 +0.5**
VRI Vrincioaia 70.78 317 ⇓ *i*P **P** **08 53 00.7 +0.5**
PLOR Plostina 70.83 317⇑ *i*P **P** **08 53 00.9 +0.4**
LOS Limnos 70.87 310 *e*P **P** **08 53 00.8 0.0**
KDZ Kurdzhali 70.90 312 *e*P **P** **08 53 00.5 -0.4**
PVL Pavlikeni 71.24 314 *e*P **P** **08 53 03.0 0.0**
MLR Muntele Rosu 71.24 316⇑ *i*P **P** **08 53 03.3 +0.3**
MLR Muntele Rosu 71.24 316 P **P** **08 53 03.4 +0.4**
MLR Muntele Rosu 71.24 316 ⇑P **P** **08 53 03.3 +0.3**
MTUR Matau 71.80 316 P **P** **08 53 05.3 -1.0**
VOIR 71.85 316⇓ *i*P **P** **08 53 05.8 -0.8**
MIR Mirnyy 71.87 181 *e*P **P** **08 53 08.0 +1.2**
MIR pmax pmax
comp=Z,110nm,1.0s,mb5.7
PAIG Paliouri 71.93 310 *e*P **P** **08 53 06.7 -0.4**
MMB Musomiste 72.14 312 *e*P **P** **08 53 07.7 -0.7**
BURAR Bucovina Array 72.16 318⇑ *i*P **P** **08 53 08.7 +0.2**
HORT Hortiatis 72.47 311 *e*P **P** **08 53 09.4 -1.0**
CASY Casey 72.51 173 PFAKE 08 53 20.0 +9.4
CASY LR LR
comp=Z,967nm,22.0s,MS5.0
KKB Krupnik 72.66 312 *e*P **P** **08 53 10.1 -1.4**
VTS Vitosha 72.67 313 *e*P **P** **08 53 11.0 -0.6**
VTS Vitosha 72.67 313⇑ *i*P **P** **08 53 11.2 -0.4**
VTS Vitosha 72.67 313 P **P** **08 53 11.4 -0.2**
VTS Vitosha 72.67 313 ⇑P **P** **08 53 11.2 -0.4**
KNT Kendrikon 72.70 311 *e*P **P** **08 53 10.9 -0.8**
AGG Agios Georgios 72.85 309 *e*P **P** **08 53 11.1 -1.5**
LIT Litokhoron 72.86 310 *e*P **P** **08 53 11.4 -1.3**
VAY Valandovo 72.96 311 *i*P **P** **08 53 11.7 -1.6**
GRG Griva 73.04 311 *e*P **P** **08 53 12.8 -1.0**
JOF Joensuu 73.22 335 *e*p **P** **08 53 13.0 -1.8**
comp=Z,10.0nm,0.5s,mb5.0
JOF Joensuu 73.22 335 *e*P **P** **08 53 13.0 -1.8**
JOF pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
STIP Stip 73.30 312 *i*P **P** **08 53 13.5 -1.7**
LVV L'vov 73.37 320 *i*P **P** **08 53 15.1 -0.6**
LBTB Lobatse 73.58 242 *e*P **P** **08 53 17.9 +1.0**
LBTB *e* pP 08 53 34.6 +2.9
LBTB pmax pmax
comp=Z,25nm,1.0s,mb5.1
LBTB MLR MLR
comp=Z,497nm,19.0s,MS4.8
LBTB Lobatse 73.58 242 *e*P **P** **08 53 17.9 +1.0**
comp=Z,25nm,1.0s,mb5.1
LBTB *e* pP 08 53 34.6 +2.9
LBTB LR LR
comp=Z,497nm,19.0s,MS4.8
DRGR 73.69 317⇑ *i*P **P** **08 53 17.7 +0.1**
DRGR 73.69 317 P **P** **08 53 17.8 +0.2**
DRGR 73.69 317 ⇑P **P** **08 53 17.7 +0.2**
BIA Bitola 73.86 311 *i*P **P** **08 53 16.8 -1.7**
SKO Skopje 73.89 312 *i*P **P** **08 53 17.4 -1.4**
VSU Vasula 73.90 330*d* *i*P **P** **08 53 17.3 -1.5**
VSU Vasula 73.90 330 *i*Pr **P** **08 53 17.3 -1.5**
LVZ Lovozero 73.97 340 P **P** **08 53 18.2 -1.0**
comp=Z,311nm,0.6s,SNR=16
LVZ Lovozero 73.97 340⇓ *e*P **P** **08 53 17.1 -2.1**
LVZ *e*S S 09 02 47.9 +0.5
LVZ *e*SS SS 09 07 28.0 -4.7
LVZ pmax pmax
comp=Z,28nm,0.9s,mb5.2
LVZ pmax pmax
comp=N,1.0nm,0.6s
LVZ pmax pmax
comp=E,4.0nm,0.5s
LVZ MLR MLR
comp=N,89nm,17.0s,MS4.3
LVZ MLR MLR
comp=Z,156nm,17.0s,MS4.4
LVZ MLR MLR
comp=E,129nm,22.0s,MS4.3
LVZ Lovozero 73.97 340 PFAKE 08 53 30.0 +11
LVZ LR LR
comp=Z,164nm,21.0s,MS4.3
LKD Levkas 74.12 309 *e*P **P** **08 53 19.5 -0.5**
KWP Kalwaria 74.18 320 *e*P **P** **08 53 20.4 0.0**
APA Apatity 74.25 340⇓ *i*P **P** **08 53 20.0 -0.9**
APA *i* pP 08 53 35.2 -0.5
APA *i* 08 53 39.8
APA pmax pmax
comp=Z,44nm,0.9s,mb5.4
BZS Buzias 74.25 316⇑ *i*P **P** **08 53 20.5 -0.4**
BZS Buzias 74.25 316 P **P** **08 53 20.7 -0.2**
BZS Buzias 74.25 316 ⇑P **P** **08 53 20.5 -0.3**
OHR Ohrid 74.26 311 *i*P **P** **08 53 18.9 -2.0**
KOLS Kolonicke sedl 74.34 319 *e*P **P** **08 53 21.8 +0.5**
KOLS *e* pP 08 53 36.4 +0.2
IGT Igoumenitsa 74.45 309 *e*P **P** **08 53 20.9 -1.1**
SUW Suwalki 74.74 325 *e*P **P** **08 53 22.8 -0.9**
BOSA Boshof 74.78 239 P **P** **08 53 25.4 +1.5**
comp=Z,7.8nm,0.8s,mb4.7,baz=109,slow=6.0,SNR=15
BOSA pP pP 08 53 41.3 +2.6
comp=Z,23nm,1.0s,baz=83,slow=5.2,SNR=7.9
CRVS Cervenica-Dubn 74.86 319 *e*P **P** **08 53 24.5 +0.1**
CRVS *e* pP 08 53 41.1 +1.9
FIA1 FINESS Array S 75.05 332 *e*P **P** **08 53 24.6 -0.9**
FIA1 *e* pP 08 53 40.5 +0.2
FINES FINESS Array B 75.05 332 P **P** **08 53 24.8 -0.7**
comp=Z,8.3nm,0.6s,mb4.9,baz=105,slow=6.0,SNR=81
FINES pP pP 08 53 40.5 +0.2
comp=Z,10nm,0.6s,baz=115,slow=9.0,SNR=7.8
FINES LR LR 09 31 53.3
comp=Z,72nm,18.3s,MS4.0,baz=171,slow=40
FINES FINESS Array B 75.05 332 P **P** **08 53 24.8 -0.7**
FINES *PP pP 08 53 40.5 +0.2
FINES FINESS Array B 75.05 332 P **P** **08 53 24.8 -0.7**
FINES pP pP 08 53 40.5 +0.2
FINES LR LR 09 31 53.3
STHS Stebnicka Huta 75.08 320 *i*P **P** **08 53 25.7 0.0**
STHS *es*P pP 08 53 38.2 -2.3
STHS Stebnicka Huta 75.08 320 *i*P **P** **08 53 25.7 0.0**
STHS *e* pP 08 53 38.3 -2.2
STHS pmax pmax
comp=Z,24nm,0.8s,mb5.2
STHS Stebnicka Huta 75.08 320 *i*P **P** **08 53 25.7 0.0**
comp=Z,24nm,0.8s,mb5.2
STHS *e* pP 08 53 38.3 -2.2
KAF Kangasniemi 75.14 333 *ep* **P** **08 53 23.6 -2.4**
comp=Z,12nm,0.5s,mb5.1,baz=105,slow=5.4
KAF Kangasniemi 75.14 333 *e*P **P** **08 53 23.6 -2.4**
KAF pmax pmax
comp=Z,12nm,0.5s,mb5.1
KECS Kecovo 75.44 319 *i*P **P** **08 53 27.3 -0.4**
KECS *e* pP 08 53 43.3 +0.7
KECS pmax pmax
comp=Z,16nm,0.7s,mb5.1
KECS Kecovo 75.44 319 *i*P **P** **08 53 27.3 -0.4**
comp=Z,16nm,0.7s,mb5.0
KECS *e* pP 08 53 43.3 +0.7
NIE Niedzica 75.68 320 *e*P **P** **08 53 29.7 +0.6**
PSZ Piszkesteto 75.75 318⇑ *i*P **P** **08 53 29.5 0.0**
PSZ Piszkesteto 75.75 318⇑ *i*P **P** **08 53 29.4 -0.1**
PSZ Piszkesteto 75.75 318 *e*P **P** **08 53 29.3 -0.2**
PSZ *e* pP 08 53 45.1 +0.7
PSZ pmax pmax
comp=Z,30nm,0.8s,mb5.3
PSZ Piszkesteto 75.75 318 *e*P **P** **08 53 29.3 -0.1**
comp=Z,30nm,0.8s,mb5.3
PSZ *e* pP 08 53 45.1 +0.8
OJC Ojcow 76.13 320 *i*Pc 08 53 31.6
MAW Mawson 76.32 192 *e*P **P** **08 53 33.5 +0.8**
comp=Z,3.3nm,0.8s,mb4.3
MAW Mawson 76.32 192 P **P** **08 53 33.2 +0.4**
comp=Z,1.2nm,0.7s,baz=22,slow=6.8,SNR=8.1
MAW LR LR 09 20 57.5
comp=Z,176nm,18.6s,MS4.4,baz=174,slow=31
MAW Mawson 76.32 192 *e*P **P** **08 53 33.5 +0.8**
MAW pmax pmax
comp=Z,3.0nm,0.8s
PKSM Moragy 76.39 316⇑ *i*P **P** **08 53 32.7 -0.4**
PKSM Moragy 76.39 316 P **P** **08 53 32.8 -0.3**
PKSM Moragy 76.39 316 ⇑P **P** **08 53 32.6 -0.5**
LIKS Likavka 76.42 319 *e*P **P** **08 53 33.0 -0.3**
LIKS Likavka 76.42 319 *e*P **P** **08 53 33.1 -0.2**
VYHS Vyhne 76.53 318 *i*P **P** **08 53 33.8 -0.1**
VYHS *e* pP 08 53 49.0 +0.2
VYHS *e* 09 26 55.9
VYHS *e* 09 28 10.8
VYHS Vyhne 76.53 318 *i*P **P** **08 53 33.8 -0.1**
VYHS *e* pP 08 53 49.0 +0.2
VYHS pmax pmax
comp=Z,13nm,0.9s,mb4.9
VYHS Vyhne 76.53 318 *i*P **P** **08 53 33.8 -0.1**
comp=Z,13nm,0.9s,mb4.9
VYHS *e* pP 08 53 49.0 +0.2
RAC Raciborz 77.14 320 *e*P **P** **08 53 37.8 +0.5**
OKC Ostrava-Krasne 77.14 320 *e*P **P** **08 53 37.7 +0.4**
OKC *e*pP pP 08 53 53.4 +1.2
KEV Kevo 77.25 341 *e*P **P** **08 53 36.5 -1.5**
comp=Z,31nm,0.7s,mb5.3
KEV LR LR
comp=Z,186nm,22.0s,MS4.4
GRI Girifalco 77.42 308 P **P** **08 53 39.9 +1.0**
GRI pmax pmax
comp=Z,53nm,0.9s,mb5.5
GRI Girifalco 77.42 308 P **P** **08 53 39.9 +1.0**
comp=Z,53nm,0.9s,mb5.5
MORC Moravsky Berou 77.52 320⇑ *i*P **P** **08 53 39.8 +0.3**
MORC Moravsky Berou 77.52 320 P **P** **08 53 39.9 +0.4**
MORC Moravsky Berou 77.52 320 *e*P **P** **08 53 39.5 0.0**
comp=Z,39nm,1.1s,mb5.2
ZST Bratislava 77.64 318 *e*P **P** **08 53 40.4 +0.2**
ZST *e* pP 08 53 52.7 -2.4
ZST pmax pmax
comp=Z,54nm,0.8s,mb5.5
ZST Bratislava 77.64 318 *e*P **P** **08 53 40.4 +0.2**
comp=Z,54nm,0.8s,mb5.5
ZST *e* pP 08 53 52.7 -2.4
ARCES ARCESS Array B 77.67 340 P **P** **08 53 39.9 -0.5**
comp=Z,20nm,0.6s,mb5.2,baz=96,slow=5.7,SNR=196
ARCES PP PP 08 56 35.2 -0.7
comp=Z,8.6nm,0.9s,baz=112,slow=8.3,SNR=5.4
ARCES LR LR 09 33 50.6
comp=Z,125nm,19.6s,MS4.2,baz=212,slow=40
ARCES ARCESS Array B 77.67 340 P **P** **08 53 39.9 -0.4**
ARCES 08 56 35.3
ARE0 ARCESS Array S 77.67 340 *e*P **P** **08 53 40.0 -0.3**
BILL Bilibino 78.10 21*c* *i*P **P** **08 53 41.7 -1.0**
BILL pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
BILL MLR MLR
comp=Z,600nm,17.0s,MS5.0
BILL Bilibino 78.10 21 *e*P **P** **08 53 41.8 -0.9**
comp=Z,20nm,0.8s,mb5.1
GKP Gorka Klasztor 78.11 323 *e*P **P** **08 53 41.9 -0.8**
KTK1 Kautokeino 78.30 340⇑ *i*P **P** **08 53 43.0 -0.7**
KTK1 AMb AMb 08 53 44.8
comp=Z,53nm,0.9s,mb5.5
DPC Dobruska-Polom 78.36 320 *e*P **P** **08 53 44.9 +0.8**
DPC *e*pP pP 08 54 00.8 +1.7
DPC *e*S S 09 03 35.1 -0.6
DPC AMS AMS 09 27 10.0
DPC Dobruska-Polom 78.36 320 *e*P **P** **08 53 44.9 +0.8**
DPC *e*pP pP 08 54 00.8 +1.7
DPC *e*S S 09 03 35.1 -0.6
KSP Ksiaz 78.42 321 *e*P **P** **08 53 45.3 +0.8**
KSP Ksiaz 78.42 321 *e*P **P** **08 53 44.5 0.0**
KSP *e*S S 09 03 33.5 -2.9
CONA Conrad Observa 78.45 318⇑ *i*P **P** **08 53 44.6 0.0**
comp=Z,103nm,2.8s,mb5.3,SNR=12
UPC Upice 78.57 320 *e*P **P** **08 53 45.6 +0.3**
UPC *e*pP pP 08 54 01.7 +1.5
DOBS Dobrina 78.58 316 *e*P **P** **08 53 45.4 +0.1**
ARSA Arzberg 78.62 317 *i*P **P** **08 53 46.0 +0.4**
comp=Z,116nm,2.0s,mb5.5,SNR=16
BOJS Bojanci 78.69 315 *e*P **P** **08 53 45.6 -0.3**
TREC Trest 78.81 319 *e*P **P** **08 53 46.8 +0.2**
TREC *e*pP pP 08 54 02.9 +1.4
TREC AMS AMS 09 23 50.0
TREC Trest 78.81 319 *e*P **P** **08 53 46.8 +0.2**
TREC *e**PP pP 08 54 02.9 +1.4
PERS Pernice 78.86 316 *e*P **P** **08 53 47.1 +0.2**
OBKA Obir 79.24 316⇑ *i*P **P** **08 53 49.4 +0.5**
comp=Z,121nm,1.9s,mb5.5
SMY Shemya 79.26 37 PFAKE 08 54 00.0 +11
SMY LR LR
comp=Z,177nm,19.0s,MS4.4
SUR Sutherland 79.42 236 PFAKE 08 54 00.0 +10
SUR LR LR
comp=Z,617nm,21.0s,MS4.9
PRU Pruhonice 79.47 320 *e*P **P** **08 53 50.4 +0.2**
PRU *e*pP pP 08 54 06.2 +1.0
PRU *e*S S 09 03 46.6 -0.9
PRU AMS AMS 09 24 00.0
PRU Pruhonice 79.47 320 *e*P **P** **08 53 50.4 +0.2**
PRU *e*pP pP 08 54 06.2 +1.0
PRU *e*S S 09 03 46.6 -0.9
PVCC Panska Ves 79.49 320 *e*P **P** **08 53 50.7 +0.4**
PVCC *e*pP pP 08 54 06.9 +1.6
MOA Molln 79.51 318 *i*P **P** **08 53 50.1 -0.3**
comp=Z,64nm,2.4s,mb5.1,SNR=11
VOY Vojsko 79.67 316 *e*P **P** **08 53 51.2 -0.1**
VOY *e* pP 08 54 06.9 +0.6
TSUM Tsumeb 79.67 249 PFAKE 08 54 00.0 +8.7
TSUM LR LR
comp=Z,267nm,20.0s,MS4.6
AQU L'Aquila 79.87 312 P **P** **08 53 53.2 +0.8**
AQU pmax pmax
comp=Z,31nm,0.6s,mb5.4
AQU L'Aquila 79.87 312 P **P** **08 53 53.2 +0.8**
comp=Z,31nm,0.6s,mb5.4
BRG Berggiesshubel 79.91 321 *e*P **P** **08 53 52.5 -0.1**
comp=Z,62nm,1.8s,mb5.2
BRG Berggiesshubel 79.91 321 *e*P **P** **08 53 52.8 +0.2**
comp=Z,14nm,1.0s,mb4.8
BRG *i* pP 08 54 04.8 -2.8
comp=Z,5.7nm,0.9s
BRG Berggiesshubel 79.91 321 *e*P **P** **08 53 52.8 +0.2**
BRG *i* pP 08 54 04.8 -2.8
BRG pmax pmax
comp=Z,12nm,1.0s,mb4.8
BRG pmax pmax
comp=Z,14nm,0.9s,mb4.9
TRO Tromso 79.93 340⇑ *i*P **P** **08 53 50.3 -2.4**
ROBS Robic 79.94 316 *e*P **P** **08 53 52.5 -0.3**
GEC2 GERESS Array S 79.95 319 *e*P **P** **08 53 52.8 0.0**
comp=Z,46nm,0.9s,mb5.4
GEC2 GERESS Array S 79.95 319 *e*P **P** **08 53 52.8 0.0**
GEC2 pmax pmax
comp=Z,46nm,0.9s,mb5.4
GERES GERESS Array B 79.95 319 P **P** **08 53 53.1 +0.3**
comp=Z,26nm,0.7s,mb5.3,baz=97,slow=5.2,SNR=248
GERES LR LR 09 32 47.2
comp=Z,58nm,21.7s,MS3.9,baz=272,slow=38
KHC Kasperske Hory 80.04 319 *e*P **P** **08 53 53.3 0.0**
KHC *ep*P pP 08 54 11.8 +3.5
KHC *e*S S 09 03 51.7 -1.8
KHC AMS AMS 09 24 00.0
KHC Kasperske Hory 80.04 319 *e*P **P** **08 53 53.3 0.0**
KHC *ep*P pP 08 54 11.8 +3.5
KHC *e*S S 09 03 51.7 -1.8
KBA Koelnbreinsper 80.10 317⇑ *i*P **P** **08 53 53.3 -0.3**
comp=Z,49nm,2.0s,mb5.1,SNR=13
KBA Koelnbreinsper 80.10 317⇑ *i*P **P** **08 53 53.3 -0.3**
KBA pmax pmax
comp=Z,49nm,2.0s,mb5.1
RUE Ruedersdorf 80.12 322 *e*P **P** **08 53 53.4 -0.3**
comp=Z,50nm,0.9s,mb5.4
RUE Ruedersdorf 80.12 322 *e*P **P** **08 53 53.8 0.0**
comp=Z,37nm,0.8s,mb5.4
FBE Freiberg 80.29 321 *e*P **P** **08 53 54.6 0.0**
comp=Z,28nm,0.9s,mb5.2
FSSB Fossombrone 80.37 313 P **P** **08 53 55.6 +0.5**
comp=Z,37nm,0.7s,mb5.4
WET Wettzell 80.50 319 *e*P **P** **08 53 55.7 -0.1**
comp=Z,26nm,1.0s,mb5.1
WET Wettzell 80.50 319 *e*P **P** **08 53 55.7 -0.1**
WET pmax pmax
comp=Z,26nm,1.0s,mb5.1
CLL Collm 80.53 321 *e*P **P** **08 53 55.3 -0.6**
comp=Z,20nm,1.1s,mb5.0
CLL Collm 80.53 321 ⇑P **P** **08 53 55.6 -0.3**
comp=Z,logA/T=1.3,mb5.0
CLL *e**SP sP 08 54 09.0 -7.8
CLL *e* 08 54 16.0
CLL *e*S S 09 04 00.0 +1.4
CLL *e*SS SS 09 09 12.0 +0.4
CLL Collm 80.53 321⇑ *i*P **P** **08 53 55.6 -0.3**
comp=Z,20nm,1.1s,mb5.0
CLL *es*P sP 08 54 09.0 -7.8
CLL *ex* x 08 54 16.0
CLL *e*S S 09 04 00.0 +1.4
CLL *e*SS SS 09 09 12.0 +0.4
CLL LmV 09 36 00.0
comp=Z,100nm,21.9s
BADI Badiali 80.75 313 P **P** **08 53 57.9 +0.8**
TANN Tannenbergstha 80.83 320 *e*P **P** **08 53 57.3 -0.2**
comp=Z,25nm,1.5s,mb4.9
NKC Novy Kostel 80.83 320 *e*P **P** **08 53 57.7 +0.2**
NKC *ep*P pP 08 54 13.7 +1.2
NKC AMS AMS 09 24 40.0
NKC Novy Kostel 80.83 320 *e*P **P** **08 53 57.7 +0.2**
NKC *ep*P pP 08 54 13.7 +1.2
WERN Wernitzgruen 80.88 320 *e*P **P** **08 53 57.7 -0.1**
comp=Z,12nm,1.0s,mb4.8
GUNZ Gunzen 80.91 320 *e*P **P** **08 53 57.9 -0.1**
comp=Z,14nm,1.0s,mb4.8
WERD Werda 80.93 320 *e*P **P** **08 53 57.7 -0.4**
comp=Z,43nm,1.9s,mb5.0
ROTZ Rotzenmuhle 80.97 319 *e*P **P** **08 53 58.6 +0.3**
comp=Z,23nm,1.0s,mb5.1
MANZ Manzenberg 81.04 320 *e*P **P** **08 53 59.1 +0.4**
comp=Z,40nm,1.2s,mb5.2
WTTA Wattenberg 81.27 317 *i*P **P** **08 53 59.6 -0.3**
comp=Z,122nm,2.2s,mb5.5,SNR=17
WTTA Wattenberg 81.27 317 *i*P **P** **08 53 59.6 -0.3**
WTTA pmax pmax
comp=Z,122nm,2.2s,mb5.4
WATA Walderalm 81.31 317⇑ *i*P **P** **08 53 59.5 -0.6**
comp=Z,19nm,1.1s,mb4.9,SNR=9.6
WATA Walderalm 81.31 317⇑ *i*P **P** **08 53 59.5 -0.6**
WATA pmax pmax
comp=Z,19nm,1.1s,mb4.9
MOX Moxa 81.38 320 *e*P **P** **08 54 00.2 -0.3**
comp=Z,24nm,1.4s,mb4.9
MOX Moxa 81.38 320 *e*P **P** **08 54 00.4 -0.1**
comp=Z,29nm,1.6s,mb5.0
MOX *e* pP 08 54 16.3 +0.8
MOX
comp=Z,100nm,23.0s
MOX Moxa 81.38 320 *e*P **P** **08 54 00.4 -0.1**
MOX *e* pP 08 54 16.3 +0.8
MOX pmax pmax
comp=Z,29nm,1.6s,mb5.0
MOX MLR MLR
comp=Z,100nm,23.0s,MS4.1
FUR Furstenfeldbru 81.53 318 *e*P **P** **08 54 00.7 -0.6**
comp=Z,28nm,1.0s,mb5.2
FUR Furstenfeldbru 81.53 318 *e*P **P** **08 54 00.7 -0.6**
FUR pmax pmax
comp=Z,28nm,1.0s,mb5.2
SQTA Sankt Quirin 81.56 317 *i*P **P** **08 54 01.1 -0.3**
comp=Z,13nm,0.8s,mb4.9,SNR=15
SQTA Sankt Quirin 81.56 317 *i*P **P** **08 54 01.1 -0.3**
SQTA pmax pmax
comp=Z,13nm,0.8s,mb4.9
FNVD Fontana Vidola 81.58 314 P **P** **08 54 02.7 +1.2**
GRA1 Grafenberg Arr 81.60 319 *e*P **P** **08 54 01.9 +0.3**
comp=Z,25nm,1.0s,mb5.1
GRA1 *e* pP 08 54 13.6 -3.1
GRA1 *e* pP 08 54 18.0 +1.3
GRA1 *e* 08 54 22.3
GRF Grafenberg Arr 81.60 319 *e*P **P** **08 54 01.9 +0.3**
comp=Z,25nm,1.0s,mb5.1
GRF *e* pP 08 54 13.6 -3.1
GRF *e* pP 08 54 18.0 +1.3
GRF *e* 08 54 22.3
GRF Grafenberg Arr 81.60 319 *e*P **P** **08 54 01.9 +0.3**
GRF *e* pP 08 54 13.6 -3.1
GRF *e* pP 08 54 18.0 +1.3
GRF pmax pmax
comp=Z,25nm,1.0s,mb5.1
GRF Grafenberg Arr 81.60 319 *e*P **P** **08 54 01.9 +0.3**
GRF *e* pP 08 54 13.6 -3.1
GRF *e* pP 08 54 18.0 +1.3
GRF pmax pmax
comp=Z,25nm,1.0s,mb5.1
MOTA Moosalm 81.63 317⇑ *i*P **P** **08 54 01.3 -0.5**
comp=Z,30nm,1.1s,mb5.1,SNR=16
MOTA Moosalm 81.63 317⇑ *i*P **P** **08 54 01.3 -0.5**
MOTA pmax pmax
comp=Z,30nm,1.1s,mb5.1
NB2 NORSAR Subarra 82.06 331 P **P** **08 54 02.6 -1.4**
comp=Z,11nm,1.0s,mb4.7,baz=94,slow=5.6
NOA NORSAR Array B 82.06 331 P **P** **08 54 02.5 -1.5**
comp=Z,5.4nm,0.9s,mb4.5,baz=94,slow=5.5,SNR=12
NOA PP PP 08 57 07.6 -4.8
comp=Z,1.6nm,0.8s,baz=77,slow=9.6,SNR=3.7
NOA LR LR 09 36 17.3
comp=Z,81nm,19.4s,MS4.1,baz=95,slow=40
NOA NORSAR Array B 82.06 331 P **P** **08 54 02.6 -1.4**
NOA 08 57 07.6
BRMO Bormio 82.12 316 *i*Pu **P** **08 54 04.7 +0.3**
comp=Z,12nm,0.7s,mb5.0
CLZ Clausthal 82.19 321 *e*P **P** **08 54 04.5 -0.2**
comp=Z,22nm,1.0s,mb5.0
CLZ Clausthal 82.19 321 *e*P **P** **08 54 04.5 -0.2**
CLZ pmax pmax
comp=Z,22nm,1.0s,mb5.0
BSEG Bad Segeberg 82.27 324 *e*P **P** **08 54 04.9 -0.2**
comp=Z,31nm,1.1s,mb5.2
BSEG Bad Segeberg 82.27 324 *e*P **P** **08 54 04.9 -0.2**
BSEG pmax pmax
comp=Z,31nm,1.1s,mb5.2
SPB4 Spitsbergen Ar 82.27 348 *e*P **P** **08 54 04.6 -0.6**
NRDL Niedersach Rie 82.36 322 *e*P **P** **08 54 05.7 +0.1**

comp=Z,49nm,1.5s,mb5.2
UBBA Unterbreizbach 82.41 320 *e*P **P** **08 54 05.6 -0.3**
comp=Z,37nm,2.0s,mb5.0
DAVA Damuels 82.46 317 *i* P **P** **08 54 06.2 0.0**
comp=Z,66nm,1.6s,mb5.3,SNR=12
DAVA Damuels 82.46 317 *i* P **P** **08 54 06.2 0.0**
comp=Z,66nm,1.6s,mb5.3
VSL Villasalto 82.91 309 *e*P **P** **08 54 08.9 +0.5**
comp=Z,31nm,0.9s,mb5.3
VSL *e* pP 08 54 24.3 +0.8
STU Stuttgart 82.92 318 *e*P **P** **08 54 08.2 -0.3**
comp=Z,18nm,1.0s,mb5.1
STU Stuttgart 82.92 318 *e*P **P** **08 54 08.5 0.0**
KEST Kesra 83.03 305 P **P** **08 54 10.5 +1.4**
comp=Z,12nm,0.9s,mb4.9,baz=254,slow=0.2,SNR=24
KEST LR LR 09 30 37.4
comp=Z,65nm,21.3s,MS4.0,baz=312,slow=35
PGF Pioggiola 83.13 312 *e*P **P** **08 54 09.7 +0.1**
comp=Z,66nm,0.9s,mb5.3
PGF Pioggiola 83.13 312 *e*P **P** **08 54 09.7 +0.1**
PGF pmax pmax
comp=Z,33nm,0.9s,mb5.4
PGF Pioggiola 83.13 312 *e*P **P** **08 54 09.7 +0.1**
comp=Z,33nm,0.9s,mb5.4
KBS Kingsbay 83.25 349 PFAKE 08 54 20.0 +10
KBS LR LR
comp=Z,192nm,19.0s,MS4.5
SYO Syowa Base 83.29 197⇑ *e*P **P** **08 54 10.8 +0.3**
SYO Syowa Base 83.29 197⇑ *e*PcP PcP 08 54 14.0 -0.8
SYO Syowa Base 83.29 197⇑ *e*sP sP 08 54 24.6 -6.7
TNS Taunus Mts 83.40 320 *e*P **P** **08 54 10.8 -0.2**
comp=Z,17nm,1.1s,mb5.0
TNS Taunus Mts 83.40 320 *e*P **P** **08 54 10.8 -0.2**
TNS pmax pmax
comp=Z,17nm,1.1s,mb5.0
BFO Black Forest 83.50 318 P **P** **08 54 11.4 -0.1**
comp=Z,107nm,0.8s,mb6.0,SNR=5.7
BFO Black Forest 83.50 318 *e*P **P** **08 54 10.7 -0.8**
comp=Z,16nm,0.9s,mb5.2
BFO Black Forest 83.50 318 *e*P **P** **08 54 10.7 -0.8**
BFO pmax pmax
comp=Z,16nm,0.9s,mb5.2
FELD Feldberg im Sc 83.73 317 *e*P **P** **08 54 12.3 -0.4**
IBBN Ibbenburen 83.81 322 *e*P **P** **08 54 12.8 -0.3**
comp=Z,25nm,1.0s,mb5.3
LANF Langenberg 83.84 319 *e*P **P** **08 54 13.2 0.0**
BUG Bochum--Univer 84.12 321 *e*P **P** **08 54 14.4 -0.3**
comp=Z,36nm,1.5s,mb5.3
WLS Welschbruch 84.15 318 *e*P **P** **08 54 14.5 -0.3**
CDF Champ du Feu 84.20 318⇑ *i*P **P** **08 54 14.6 -0.5**
comp=Z,18nm,0.9s,mb4.9
CDF Champ du Feu 84.20 318⇑ *i*P **P** **08 54 14.6 -0.5**
CDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
CDF Champ du Feu 84.20 318⇑ *i*P **P** **08 54 14.6 -0.5**
comp=Z,9.1nm,0.9s,mb4.9
SBF Sospel 84.24 313⇑ *i*P **P** **08 54 15.3 0.0**
comp=Z,110nm,0.8s,mb5.8
SBF Sospel 84.24 313⇑ *i*P **P** **08 54 15.3 0.0**
SBF pmax pmax
comp=Z,55nm,0.8s,mb5.7
SBF Sospel 84.24 313⇑ *i*P **P** **08 54 15.3 0.0**
comp=Z,55nm,0.8s,mb5.7
ECH Echery 84.29 318 *e*P **P** **08 54 15.0 -0.5**
HINF Hinteralfeld 84.50 317⇑ *i*P **P** **08 54 15.7 -0.9**
comp=Z,5.7nm,0.7s,mb4.5
HINF Hinteralfeld 84.50 317⇑ *i*P **P** **08 54 15.7 -0.9**
HINF pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
HINF Hinteralfeld 84.50 317⇑ *i*P **P** **08 54 15.7 -0.9**
comp=Z,2.9nm,0.7s,mb4.5
ABSA Djebel Ababsia 84.53 306 P **P** **08 54 18.5 +1.8**
CMAH Djebel Manchou 84.56 306 P **P** **08 54 18.1 +1.2**
CGMA Guelma 84.57 306 P **P** **08 54 20.0 +3.0**
LPG La Plagne 84.66 315⇑ *i*P **P** **08 54 17.8 +0.4**
comp=Z,52nm,0.8s,mb5.4
LPG La Plagne 84.66 315⇑ *i*P **P** **08 54 17.8 +0.4**
LPG pmax pmax
comp=Z,26nm,0.8s,mb5.4
LPG La Plagne 84.66 315⇑ *i*P **P** **08 54 17.8 +0.4**
comp=Z,26nm,0.8s,mb5.4
LPL La Plagne 84.68 315⇑ *i*P **P** **08 54 17.8 +0.3**
comp=Z,59nm,0.8s,mb5.5
LPL La Plagne 84.68 315⇑ *i*P **P** **08 54 17.8 +0.3**
LPL pmax pmax
comp=Z,30nm,0.8s,mb5.5
LPL La Plagne 84.68 315⇑ *i*P **P** **08 54 17.8 +0.3**
comp=Z,30nm,0.8s,mb5.5
MBDF Montbardon 84.68 314⇑ *i*P **P** **08 54 16.9 -0.6**
comp=Z,16nm,0.7s,mb5.0
MBDF Montbardon 84.68 314⇑ *i*P **P** **08 54 16.9 -0.6**
MBDF pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
MBDF Montbardon 84.68 314⇑ *i*P **P** **08 54 16.9 -0.6**
comp=Z,8.3nm,0.7s,mb5.0
BNI Bardonecchia 84.73 315 *e*P **P** **08 54 17.8 0.0**
BNI *e* pP 08 54 31.9 -1.0
BNI pmax pmax
comp=Z,17nm,0.8s,mb5.2
BNI Bardonecchia 84.73 315 *e*P **P** **08 54 17.8 0.0**
comp=Z,17nm,0.8s,mb5.2
BNI *e* pP 08 54 31.9 -1.0
FRF La Foret Royal 84.82 313⇑ *i*P **P** **08 54 18.4 +0.2**
comp=Z,64nm,0.9s,mb5.5
FRF La Foret Royal 84.82 313⇑ *i*P **P** **08 54 18.4 +0.2**
FRF pmax pmax
comp=Z,32nm,0.9s,mb5.5
FRF La Foret Royal 84.82 313⇑ *i*P **P** **08 54 18.4 +0.2**
comp=Z,32nm,0.9s,mb5.5
HAU Haudompre 84.84 318⇑ *i*P **P** **08 54 17.8 -0.5**
comp=Z,43nm,0.8s,mb5.3
HAU *e*R
comp=Z,68nm,23.0s
HAU Haudompre 84.84 318⇑ *i*P **P** **08 54 17.8 -0.5**
HAU pmax pmax
comp=Z,22nm,0.8s,mb5.3
HAU MLR MLR
comp=Z,70nm,23.0s,MS4.0
HAU Haudompre 84.84 318⇑ *i*P **P** **08 54 17.8 -0.5**
comp=Z,22nm,0.8s,mb5.3
HAU LR LR
comp=Z,70nm,23.0s,MS4.0
WLF Walferdange 84.89 319 *e*P **P** **08 54 18.7 +0.1**
comp=Z,88nm,1.9s,mb5.6
LMR La Mourre 84.93 313⇑ *i*P **P** **08 54 18.9 +0.1**
comp=Z,69nm,1.1s,mb5.4
LMR La Mourre 84.93 313⇑ *i*P **P** **08 54 18.9 +0.1**
LMR pmax pmax
comp=Z,35nm,1.1s,mb5.4
LMR La Mourre 84.93 313⇑ *i*P **P** **08 54 18.9 +0.1**
comp=Z,34nm,1.1s,mb5.4
THEF They Montfort 85.07 318 *e*P **P** **08 54 19.0 -0.5**
CABF La Chapelle 85.08 316⇑ *i*P **P** **08 54 19.6 +0.1**
comp=Z,30nm,0.7s,mb5.2
CABF La Chapelle 85.08 316⇑ *i*P **P** **08 54 19.6 +0.1**
CABF pmax pmax
comp=Z,15nm,0.7s,mb5.2
CABF La Chapelle 85.08 316⇑ *i*P **P** **08 54 19.6 +0.1**
comp=Z,15nm,0.7s,mb5.2
CKFL Kef-Lekhel 85.13 306 P **P** **08 54 22.5 +2.7**
ORIF Oris-en-Rattie 85.31 315⇑ *i*P **P** **08 54 20.4 -0.3**
comp=Z,14nm,0.6s,mb5.0
ORIF *e*R
comp=Z,98nm,21.8s
ORIF Oris-en-Rattie 85.31 315⇑ *i*P **P** **08 54 20.4 -0.3**
ORIF pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
ORIF Oris-en-Rattie 85.31 315⇑ *i*P **P** **08 54 20.4 -0.3**
comp=Z,7.2nm,0.6s,mb5.0
CASM Ain Smara 85.32 306 P **P** **08 54 22.0 +1.3**
CTEI Djebel Teioual 85.40 306 P **P** **08 54 23.0 +1.9**
SMRF Simiane la Rot 85.58 314⇑ *i*P **P** **08 54 22.6 +0.6**
comp=Z,58nm,1.1s,mb5.4
SMRF Simiane la Rot 85.58 314⇑ *i*P **P** **08 54 22.6 +0.6**
comp=Z,58nm,1.1s,mb5.7
MEZF Maizieres J'vi 85.68 318⇑ *i*P **P** **08 54 22.1 -0.4**
GIVF Givet 85.73 320⇑ *i*P **P** **08 54 22.4 -0.4**
DFRA Djebel Bou Aff 85.80 306 P **P** **08 54 24.8 +1.7**
CKHR Kef el Ahmar 86.13 306 P **P** **08 54 25.8 +1.1**
BAIF Baives 86.13 320⇑ *i*P **P** **08 54 24.8 +0.1**
comp=Z,22nm,0.8s,mb5.2
BAIF Baives 86.13 320⇑ *i*P **P** **08 54 24.8 +0.1**
BAIF pmax pmax
comp=Z,11nm,0.8s,mb5.1
BAIF Baives 86.13 320⇑ *i*P **P** **08 54 24.8 +0.1**
comp=Z,11nm,0.8s,mb5.1
VIVF Saint-Julien-l 86.17 315⇑ *i*P **P** **08 54 24.9 0.0**
LOR Lormes 86.56 317⇑ *i*P **P** **08 54 26.5 -0.4**
comp=Z,37nm,0.8s,mb5.3
LOR *e*R
comp=Z,52nm,21.2s
LOR Lormes 86.56 317⇑ *i*P **P** **08 54 26.5 -0.4**
LOR pmax pmax
comp=Z,19nm,0.8s,mb5.4
LOR MLR MLR
comp=Z,50nm,21.3s,MS3.9
LOR Lormes 86.56 317⇑ *i*P **P** **08 54 26.5 -0.4**
comp=Z,18nm,0.8s,mb5.4
LOR LR LR
comp=Z,50nm,21.3s,MS3.9
SMF Signal de Mont 86.62 316⇑ *i*P **P** **08 54 26.7 -0.4**
comp=Z,26nm,0.7s,mb5.2
SMF Signal de Mont 86.62 316⇑ *i*P **P** **08 54 26.7 -0.4**
SMF pmax pmax
comp=Z,13nm,0.7s,mb5.3
SMF Signal de Mont 86.62 316⇑ *i*P **P** **08 54 26.7 -0.4**
comp=Z,13nm,0.7s,mb5.3
LASF Ste Croix 86.81 314⇑ *i*P **P** **08 54 28.4 +0.3**
comp=Z,24nm,0.9s,mb5.1
SSF Saint Saulge 86.82 317⇑ *i*P **P** **08 54 27.8 -0.3**
comp=Z,18nm,0.8s,mb5.0
SSF Saint Saulge 86.82 317⇑ *i*P **P** **08 54 27.8 -0.3**
SSF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
SSF Saint Saulge 86.82 317⇑ *i*P **P** **08 54 27.8 -0.3**
comp=Z,9.0nm,0.8s,mb5.0
PLDF La Plantade 86.82 316 *e*P **P** **08 54 28.5 +0.4**
AVF Avril sur Loir 86.94 317⇑ *i*P **P** **08 54 28.3 -0.4**
comp=Z,27nm,1.0s,mb5.1
AVF Avril sur Loir 86.94 317⇑ *i*P **P** **08 54 28.3 -0.4**
AVF pmax pmax
comp=Z,14nm,1.0s,mb5.2
AVF Avril sur Loir 86.94 317⇑ *i*P **P** **08 54 28.3 -0.4**
comp=Z,14nm,1.0s,mb5.1
LBL Lubilhac 87.15 315 *e*P **P** **08 54 30.3 +0.6**
AGO Saint Agoulin 87.16 316 *e*P **P** **08 54 29.9 +0.1**
PYM Petit Puy Mans 87.27 316 *e*P **P** **08 54 30.1 -0.2**
TCF Toulx Ste Croi 87.77 316 *e*P **P** **08 54 33.0 +0.3**
CAF Calviac 88.01 315⇑ *i*P **P** **08 54 34.2 +0.4**
comp=Z,28nm,1.1s,mb5.1
CAF Calviac 88.01 315⇑ *i*P **P** **08 54 34.2 +0.4**
CAF pmax pmax
comp=Z,14nm,1.1s,mb5.1
CAF Calviac 88.01 315⇑ *i*P **P** **08 54 34.2 +0.4**
comp=Z,14nm,1.1s,mb5.1
MTLF Montolieu 88.06 313⇑ *i*P **P** **08 54 34.4 +0.3**
comp=Z,17nm,0.8s,mb5.0
MTLF Montolieu 88.06 313⇑ *i*P **P** **08 54 34.4 +0.3**
MTLF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
MTLF Montolieu 88.06 313⇑ *i*P **P** **08 54 34.4 +0.3**
comp=Z,8.5nm,0.8s,mb5.0
TNA Tin City 88.11 24 PFAKE 08 54 50.0 +16
TNA LR LR
comp=Z,213nm,19.0s,MS4.6
RJF Les Rejaudoux 88.36 315⇑ *i*P **P** **08 54 36.0 +0.5**
comp=Z,12nm,0.7s,mb5.0
RJF *e*R
comp=Z,54nm,20.8s
RJF Les Rejaudoux 88.36 315⇑ *i*P **P** **08 54 36.0 +0.5**
RJF pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
RJF MLR MLR
comp=Z,50nm,20.8s,MS3.9
RJF Les Rejaudoux 88.36 315⇑ *i*P **P** **08 54 36.0 +0.5**
comp=Z,6.2nm,0.6s,mb5.0
RJF LR LR
comp=Z,50nm,20.8s,MS3.9
LFF La Frestale 88.94 315⇑ *i*P **P** **08 54 38.9 +0.7**
comp=Z,20nm,0.8s,mb5.2
LFF La Frestale 88.94 315⇑ *i*P **P** **08 54 38.9 +0.7**
LFF pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
LFF La Frestale 88.94 315⇑ *i*P **P** **08 54 38.9 +0.7**
comp=Z,10nm,0.8s,mb5.2
LDF La Druitiere 89.09 319⇑ *i*P **P** **08 54 38.9 0.0**
comp=Z,35nm,0.9s,mb5.4
LDF La Druitiere 89.09 319⇑ *i*P **P** **08 54 38.9 0.0**
LDF pmax pmax
comp=Z,17nm,0.9s,mb5.4
LDF La Druitiere 89.09 319⇑ *i*P **P** **08 54 38.9 0.0**
comp=Z,18nm,0.9s,mb5.4
FLN La Foliniere 89.31 319⇑ *i*P **P** **08 54 39.9 0.0**
comp=Z,41nm,0.9s,mb5.5
FLN *e*R
comp=Z,91nm,21.8s
FLN La Foliniere 89.31 319⇑ *i*P **P** **08 54 39.9 0.0**
FLN pmax pmax
comp=Z,21nm,0.9s,mb5.5
FLN MLR MLR
comp=Z,90nm,21.8s,MS4.2
FLN La Foliniere 89.31 319⇑ *i*P **P** **08 54 39.9 0.0**
comp=Z,21nm,0.9s,mb5.5
FLN LR LR
comp=Z,90nm,21.8s,MS4.2
MFF Saint Martin d 89.36 317⇑ *i*P **P** **08 54 41.2 +1.0**
comp=Z,53nm,1.4s,mb5.4
MFF Saint Martin d 89.36 317⇑ *i*P **P** **08 54 41.2 +1.0**
MFF pmax pmax
comp=Z,27nm,1.4s,mb5.4
MFF Saint Martin d 89.36 317⇑ *i*P **P** **08 54 41.2 +1.0**
comp=Z,27nm,1.4s,mb5.4
EPF Esparros 89.45 313 *e*P **P** **08 54 40.3 -0.3**
NIKO Nikolski 89.56 37 *e*P **P** **08 54 39.4 -1.7**
DAG Danmarks Havn 89.91 348⇓ *i*P **P** **08 54 41.4 -1.3**
comp=Z,4.2nm,0.5s,mb5.0
DAG Danmarks Havn 89.91 348⇓ *i*P **P** **08 54 41.4 -1.3**
DAG pmax pmax
comp=Z,4.0nm,0.5s,mb5.0
ESK Eskdalemuir 90.00 326 PFAKE 08 54 50.0 +6.8
ESK LR LR
comp=Z,131nm,19.0s,MS4.4
VNDA Vanda 90.50 168 P **P** **08 54 44.5 -1.0**
comp=Z,1.3nm,0.9s,mb4.2,baz=291,slow=11,SNR=4.0
VNDA PKKPbc PKKPbc 09 12 12.8 +0.2
comp=Z,1.0nm,0.9s,baz=197,slow=1.3,SNR=4.0
VNDA LR LR 09 31 30.1
comp=Z,195nm,18.4s,MS4.6,baz=304,slow=33
VNDA Vanda 90.50 168 PFAKE 08 55 00.0 +14
VNDA LR LR
comp=Z,274nm,19.0s,MS4.7
SJPF Ste Jean 90.58 313⇑ *i*P **P** **08 54 46.9 +1.0**
comp=Z,29nm,0.9s,mb5.3
SJPF Ste Jean 90.58 313⇑ *i*P **P** **08 54 46.9 +1.0**
SJPF pmax pmax
comp=Z,14nm,0.9s,mb5.3
SJPF Ste Jean 90.58 313⇑ *i*P **P** **08 54 46.9 +1.0**
comp=Z,14nm,0.9s,mb5.3
SGMF Saint Gilles 90.75 318 *e*P **P** **08 54 46.6 -0.1**
UNV Unalaska Valle 90.81 36 PFAKE 08 55 00.0 +13
UNV LR LR
comp=Z,343nm,19.0s,MS4.8
QUIF Quistinic 91.20 318 *e*P **P** **08 54 49.0 +0.2**
ALE Alert 91.50 357 P **P** **08 54 49.0 -1.2**
comp=Z,170nm,0.6s,SNR=6.7
SBA Scott Base 91.60 168 *e*P **P** **08 54 50.7 +0.1**
SBA pmax pmax
comp=Z,17nm,1.3s,mb5.2
SBA Scott Base 91.60 168 *e*P **P** **08 54 50.7 0.0**
comp=Z,17nm,1.3s,mb5.2
TORD Torodi Ar. Bea 91.65 283 P **P** **08 54 52.3 +1.5**
comp=Z,6.5nm,1.0s,mb4.9,baz=79,slow=4.4,SNR=24
TORD PP PP 08 58 31.8 +2.1
comp=Z,1.0nm,1.0s,baz=103,slow=7.8,SNR=4.0
TORD PKKPbc PKKPbc 09 12 10.9 +1.2
comp=Z,0.4nm,0.5s,baz=297,slow=3.2,SNR=6.0
TORD LR LR 09 34 53.2
comp=Z,169nm,19.1s,MS4.5,baz=105,slow=35
NVL N'lazarevskaya 92.78 199 *e*P **P** **08 55 04.3 +8.2**
NVL pmax pmax
comp=Z,17nm,1.2s,mb5.3
NVL pmax pmax
comp=Z,384nm,23.6s
ESDC Sonseca Array 93.15 310 P **P** **08 54 58.5 +0.7**
comp=Z,4.3nm,0.6s,mb5.1,baz=61,slow=4.2,SNR=28
ESLA Sonseca Array 93.15 310 *e*P **P** **08 54 58.4 +0.6**
comp=Z,0.4nm,0.5s
IMA2 Indian Mountai 93.62 22 *e*P **P** **08 54 59.2 -0.7**
TTA Tatalina 93.80 26 *e*P **P** **08 55 00.2 -0.6**
SVW2 Sparrevohn 94.61 27 *e*P **P** **08 55 03.4 -1.1**
QSPA South Pole Qui 95.40 180 PFAKE 08 55 20.0 +12
QSPA LR LR
comp=Z,562nm,20.0s,MS5.0
COLA College 96.33 22 PFAKE 08 55 20.0 +7.7
COLA LR LR
comp=Z,145nm,22.0s,MS4.4
MCK McKinley 96.43 24 *e*P **P** **08 55 12.2 -0.6**
MCK pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
MCK MLR MLR
comp=Z,140nm,22.0s,MS4.4
MCK McKinley 96.43 24 *e*P **P** **08 55 12.2 -0.6**
comp=Z,2.6nm,0.6s,mb4.8
MCK LR LR
comp=Z,140nm,22.0s,MS4.4
SUMG Summit 96.57 347 *e*P **P** **08 55 13.2 -0.3**
comp=Z,14nm,1.1s,mb5.3
KDAK Kodiak Island 97.24 30 P **P** **08 55 15.0 -1.4**
comp=Z,6.7nm,0.8s,mb5.2,baz=353,slow=8.1,SNR=3.5
KDAK Kodiak Island 97.24 30 P **P** **08 55 15.0 -1.4**
KDAK LR LR
comp=Z,71nm,20.0s,MS4.2
PMR Palmer 97.29 26 *e*P **P** **08 55 15.7 -1.0**
PMR pmax pmax
comp=Z,14nm,1.1s,mb5.3
PMR MLR MLR
comp=Z,100nm,20.0s,MS4.3
PMR Palmer 97.29 26 *e*P **P** **08 55 15.7 -1.0**
comp=Z,14nm,1.1s,mb5.3
PMR LR LR
comp=Z,100nm,20.0s,MS4.3
DBIC Dimbokro 98.78 278 LR LR 09 39 59.4
comp=Z,106nm,19.7s,MS4.3,baz=68,slow=35
DBIC Dimbokro 98.78 278 PFAKE 08 55 40.0 +17
DBIC LR LR
comp=Z,255nm,21.0s,MS4.7
DIV Divide 98.94 25 PFAKE 08 55 40.0 +16
DIV LR LR
comp=Z,705nm,20.0s,MS5.2
INK Inuvik 99.13 16 LR LR 09 50 03.9
comp=Z,180nm,18.1s,MS4.6,baz=300,slow=41
INK Inuvik 99.13 16 *e*P **P** **08 55 24.0 -0.9**
INK pmax pmax
comp=Z,12nm,1.1s
INK Inuvik 99.13 16 *e*P **P** **08 55 23.9 -1.0**
comp=Z,12nm,1.1s,mb5.3
SIT Sitka 105.67 26 PFAKE 09 00 20.0 +13
SIT LR LR
comp=Z,351nm,20.0s,MS4.9
EDM Edmonton 116.91 18 *e*PKIKP PKPdf 09 00 27.6 -0.5
B05A Bryant 117.53 27⇑ P PKPdf 09 00 29.4 +0.1
baz=117
SCHQ Schefferville 117.95 348 PKP PKPdf 09 00 30.1 0.0
comp=Z,2.4nm,0.4s,baz=176,slow=2.3,SNR=7.4
SCHQ Schefferville 117.95 348 PKP PKPdf 09 00 30.1 0.0
SCHQ LR LR
comp=Z,279nm,19.0s,MS4.9
C05A Tolt Reservoir 118.14 27⇓ P PKPdf 09 00 30.4 -0.1
baz=118
D05A Enumclaw 118.38 28⇓ P PKPdf 09 00 31.2 +0.3
baz=118
F04A Amboy 119.09 29⇑ P PKPdf 09 00 32.5 +0.2
baz=119
NEW Newport 119.65 24 *e*PKIKP PKPdf 09 00 33.2 -0.2
NEW MLR MLR
comp=Z,273nm,22.0s
I02A Mapleton 119.77 31⇓ P PKPdf 09 00 33.9 +0.3
baz=120
I03A Eugene 120.07 31⇓ P PKPdf 09 00 34.6 +0.4
baz=120
HAWA Hanford 120.09 27 *e*PKPdf PKPdf 09 00 34.5 +0.3
H04A Detroit Lake 120.11 30⇓ P PKPdf 09 00 34.5 +0.2
baz=120
J02A Umpqua 120.35 32⇑ P PKPdf 09 00 35.4 +0.7
baz=120
H05A Madras 120.61 29⇑ P PKPdf 09 00 36.0 +0.8
baz=120
J03A Ideyld Park 120.66 31⇑ P PKPdf 09 00 35.7 +0.4
baz=120
K02A Glendale 120.81 32⇓ P PKPdf 09 00 36.1 +0.5
baz=121
F08A Pendleton 120.88 27⇓ P PKPdf 09 00 36.0 +0.3
baz=121
I05A Bend 120.94 30⇑ P PKPdf 09 00 36.7 +0.8
baz=121
J05A Fort Rock 121.60 30⇑ P PKPdf 09 00 38.0 +0.9
baz=121
I06A Prineville 121.62 29⇑ P PKPdf 09 00 38.0 +0.8
baz=121
I07A Izee 121.85 28⇓ P PKPdf 09 00 38.4 +0.7
baz=122
H08A Prairie City 121.91 28⇑ P PKPdf 09 00 37.9 +0.2
baz=122
YBH Yreka Blue Hor 121.95 32 PFAKE 09 00 50.0 +12
YBH LR LR
comp=Z,98nm,20.0s,MS4.5
YBH Yreka Blue Hor 121.95 32⇑ P PKPdf 09 00 37.7 -0.1
baz=122
L04A Klamath Falls 122.07 31⇑ P PKPdf 09 00 37.7 -0.3
baz=122
MSO Missoula 122.08 23 *e*PKPdf PKPdf 09 00 37.7 -0.4
MSO LR LR
comp=Z,152nm,20.0s,MS4.6
M02C Callahan 122.11 33⇓ P PKPdf 09 00 38.9 +0.8
baz=122
J06A Christmas Vall 122.16 30⇓ P PKPdf 09 00 38.7 +0.5
baz=122
H09A Durkee 122.26 27⇓ P PKPdf 09 00 38.6 +0.2
baz=122
CHMT Chamberlain Mo 122.27 22 *e*PKPdf PKPdf 09 00 38.0 -0.4
BMO Blue Mountains 122.27 26 *e*PKIKP PKPdf 09 00 37.7 -0.7
BMO MLR MLR
comp=Z,148nm,20.0s,MS4.6
M04C Macdoel 122.37 32⇑ P PKPdf 09 00 39.1 +0.5
baz=122
I08A Drewsey 122.42 28⇓ P PKPdf 09 00 39.4 +0.7
baz=122
K06A Valley Falls 122.45 30⇓ P PKPdf 09 00 39.6 +0.9
baz=122
EGMT Eagleton 122.56 19 *e*PKPdf PKPdf 09 00 38.8 -0.1
EGMT LR LR
comp=Z,191nm,21.0s,MS4.7
L05A Lakeview 122.70 31⇑ P PKPdf 09 00 40.1 +0.9
baz=122
I09A Lost Marbles R 122.76 27⇓ P PKPdf 09 00 39.4 0.0
baz=122
WDC Whiskeytown Da 122.84 33⇑ P PKPdf 09 00 39.5 0.0
baz=123
O02C Red Bluff 122.99 34⇓ P PKPdf 09 00 40.3 +0.5
baz=123
K07A Rock Creek Ran 123.02 29⇓ P PKPdf 09 00 40.5 +0.7
baz=123
M05C Lookout 123.04 32⇑ P PKPdf 09 00 40.2 +0.4
baz=123
P01C Double 8 Ranch 123.17 35⇑ P PKPdf 09 00 40.9 +0.8
baz=123
HATC Hat Creek Radi 123.26 32⇑ P PKPdf 09 00 40.9 +0.6
baz=123
K08A Mann Creek Ran 123.36 29⇓ P PKPdf 09 00 41.4 +0.8
baz=123
GASB Alder Springs 123.39 34⇓ P PKPdf 09 00 41.8 +1.3
baz=123
L07A Adell 123.48 30⇑ P PKPdf 09 00 41.8 +1.1
baz=123
M06C Likely Place G 123.50 31⇑ P PKPdf 09 00 41.4 +0.7
baz=123
WVOR Wild Horse Val 123.51 29 *e*PKIKP PKPdf 09 00 41.3 +0.5
WVOR MLR MLR
comp=Z,152nm,21.0s,MS4.6
HOPS Hopland 123.64 35⇑ P PKPdf 09 00 41.2 +0.1
baz=124
ULM Lac du Bonnet 123.75 8 PKP PKPdf 09 00 40.4 -0.8
comp=Z,14nm,0.7s,baz=355,slow=2.7,SNR=20
ULM Lac du Bonnet 123.75 8 PKP PKPdf 09 00 40.4 -0.8
ULM LR LR
comp=Z,276nm,20.0s,MS4.9
K09A Rome 123.75 28⇑ P PKPdf 09 00 41.6 +0.4
baz=124
ELFS Eagle Lake Fie 123.79 32⇑ P PKPdf 09 00 42.0 +0.7
baz=124
O04C Chester 123.81 33⇓ P PKPdf 09 00 42.1 +0.7
baz=124
DLMT Dillon 123.82 23 *e*PKPdf PKPdf 09 00 41.6 +0.2
L08A Fields 123.84 29⇑ P PKPdf 09 00 42.7 +1.2
baz=124
BOZ Bozeman (W) 123.94 22 *e*PKIKP PKPdf 09 00 42.0 +0.4
BOZ MLR MLR
comp=Z,166nm,20.0s,MS4.7
M07A Soldier Meadow 124.03 30⇑ P PKPdf 09 00 42.8 +1.0
baz=124

MNRC	**McLaughlin Nat**	**124.08**	**35**	⇓P	PKPdf	09 00 43.0	+1.1
	baz=124						
ORV	**Oroville**	**124.13**	**33**	⇓P	PKPdf	09 00 41.8	-0.2
	baz=124						
O05C	**Quincy**	**124.16**	**33**	⇓P	PKPdf	09 00 42.5	+0.5
	baz=124						
MCMT	**McKenzie Canyo**	**124.16**	**23**	*e*PKPdf	PKPdf	09 00 42.8	+0.8
N06A	**Buffalo Meadow**	**124.16**	**31**	⇑P	PKPdf	09 00 42.6	+0.5
	baz=124						
L09A	**Wilkinson Ranc**	**124.30**	**29**	⇓P	PKPdf	09 00 43.8	+1.5
	baz=124						
M08A	**Happy Creek Ra**	**124.38**	**30**	⇑P	PKPdf	09 00 43.6	+1.1
	baz=124						
Q03C	**Winters**	**124.49**	**35**	⇓P	PKPdf	09 00 43.7	+1.1
	baz=124						
BEKR	**Beckwourth**	**124.53**	**32**	⇓P	PKPdf	09 00 43.3	+0.6
	baz=124						
GCMT	**Greycliff**	**124.53**	**20**	*e*PKPdf	PKPdf	09 00 43.4	+0.6
HLID	**Hailey**	**124.56**	**25**	*e*PKPdf	PKPdf	09 00 43.5	+0.7
HLID				LR	LR		
	comp=Z,350nm,22.0s,MS5.0						
N07B	**Gerlach**	**124.58**	**31**	⇓P	PKPdf	09 00 44.2	+1.3
	baz=124						
O06A	**Flanigan**	**124.59**	**32**	⇑P	PKPdf	09 00 43.1	+0.2
	baz=124						
QLMT	**Earthquake Lak**	**124.71**	**22**	*e*PKPdf	PKPdf	09 00 43.4	+0.3
LAO	**LASA Array**	**124.85**	**17**	*e*PKPdf	PKPdf	09 00 44.0	+0.6
LAO				LR	LR		
	comp=Z,285nm,20.0s,MS4.9						
M09A	**Marrel Ranch,**	**124.86**	**29**	⇓P	PKPdf	09 00 44.6	+1.2
	baz=125						
P06A	**Stead Airport,**	**124.91**	**32**	⇑P	PKPdf	09 00 44.7	+1.2
	baz=125						
N08A	**GE Springer Mi**	**125.00**	**30**	⇓P	PKPdf	09 00 44.8	+1.2
	baz=125						
O07A	**Toulon**	**125.09**	**31**	⇑P	PKPdf	09 00 44.7	+0.8
	baz=125						
LAVA	**Lava Cap Winer**	**125.11**	**34**	⇑P	PKPdf	09 00 44.1	+0.2
	baz=125						
M10A	**I.L. Ranch, Tu**	**125.22**	**28**	⇓P	PKPdf	09 00 45.7	+1.6
	baz=125						
N09A	**Rock Creek Ran**	**125.25**	**30**	⇑P	PKPdf	09 00 45.2	+1.0
	baz=125						
YFT	**Old Faithful**	**125.26**	**22**	*e*PKPdf	PKPdf	09 00 45.9	+1.7
WCN	**Washoe City**	**125.26**	**32**	⇑P	PKPdf	09 00 44.7	+0.6
	baz=125						
LKWY	**Lake**	**125.32**	**22**	*e*PKIKP	PKPdf	09 00 45.5	+1.2
LKWY				MLR	MLR		
	comp=Z,401nm,20.0s,MS5.1						
R05C	**Kirkwood Meado**	**125.52**	**33**	⇓P	PKPdf	09 00 44.8	+0.2
	baz=125						
FLWY	**Flagg Ranch**	**125.62**	**22**	*e*PKPdf	PKPdf	09 00 45.5	+0.7
M11A	**Holland Ranch,**	**125.64**	**28**	⇓P	PKPdf	09 00 46.4	+1.5
	baz=125						
S04C	**Ingram Canyon,**	**125.66**	**35**	⇓P	PKPdf	09 00 45.8	+0.9
	baz=126						
IMW	**Indian Meadow**	**125.69**	**23**	*e*PKPdf	PKPdf	09 00 46.3	+1.4
BMN	**Battle Mountai**	**125.72**	**30**	PFAKE		09 01 00.0	+15
BMN				LR	LR		
	comp=Z,111nm,19.0s,MS4.5						
CMB	**Columbia Colle**	**125.82**	**34**	PFAKE		09 01 00.0	+15
CMB				LR	LR		
	comp=Z,231nm,20.0s,MS4.8						
CMB	**Columbia Colle**	**125.82**	**34**	⇓P	PKPdf	09 00 46.1	+0.9
	baz=126						
P08A	**Dixie Valley**	**125.85**	**31**	⇑P	PKPdf	09 00 46.7	+1.4
	baz=126						
N10A	**Dunphy**	**125.85**	**29**	⇑P	PKPdf	09 00 46.4	+1.1
	baz=126						
MOOW	**Moose Ponds**	**125.89**	**23**	*e*PKPdf	PKPdf	09 00 45.9	+0.5
O09A	**Fish Creek Ran**	**125.94**	**30**	⇑P	PKPdf	09 00 46.4	+1.0
	baz=126						
R06C	**Coleville**	**125.98**	**33**	⇑P	PKPdf	09 00 47.0	+1.5
	baz=126						
RRI2	**Red Ridge**	**126.00**	**23**	*e*PKPdf	PKPdf	09 00 46.4	+0.9
PACP	**Pacheco Peak**	**126.03**	**36**	⇓P	PKPdf	09 00 47.1	+1.4
	baz=126						
Q07A	**Schurz**	**126.03**	**32**	⇓P	PKPdf	09 00 47.1	+1.5
	baz=126						
TPAW	**Teton Pass**	**126.03**	**23**	*e*PKPdf	PKPdf	09 00 46.2	+0.6
M12A	**Wells**	**126.06**	**27**	⇓P	PKPdf	09 00 46.8	+1.1
	baz=126						
LOHW	**Long Hollow**	**126.06**	**23**	*e*PKPdf	PKPdf	09 00 46.3	+0.6
SNOW	**Snow King Moun**	**126.13**	**23**	*e*PKPdf	PKPdf	09 00 46.6	+0.8
N11A	**Elko Archery C**	**126.14**	**28**	⇓P	PKPdf	09 00 47.4	+1.6
	baz=126						
REDW	**Red Top Meadow**	**126.17**	**23**	*e*PKPdf	PKPdf	09 00 46.5	+0.6
O10A	**Cortez Mining,**	**126.19**	**29**	⇓P	PKPdf	09 00 47.4	+1.5
	baz=126						
HAST	**UC Hastings Re**	**126.30**	**36**	⇓P	PKPdf	09 00 47.4	+1.3
	baz=126						
S05C	**Merced**	**126.34**	**35**	⇓P	PKPdf	09 00 47.1	+0.9
	baz=126						
M13A	**Montello**	**126.44**	**27**	⇓P	PKPdf	09 00 47.5	+1.1
	baz=126						
N12A	**Clover Valley,**	**126.44**	**28**	⇑P	PKPdf	09 00 47.7	+1.3
	baz=126						
EYMN	**Ely**	**126.52**	**5**	*e*PKPdf	PKPdf	09 00 46.5	0.0
EYMN				LR	LR		
	comp=Z,151nm,20.0s,MS4.7						
Q08A	**Gabbs**	**126.55**	**32**	⇑P	PKPdf	09 00 47.9	+1.3
	baz=126						
AHID	**Auburn Hatcher**	**126.58**	**23**	*e*PKPdf	PKPdf	09 00 47.2	+0.5
AHID				LR	LR		
	comp=Z,157nm,20.0s,MS4.7						
NVAR	**Mina Array Bea**	**126.67**	**32**	PKP	PKPdf	09 00 48.5	+1.6
	comp=Z,5.8nm,0.8s,baz=345,slow=1.2,SNR=40						
O11A	**Cowboy Ranch,**	**126.72**	**29**	⇑P	PKPdf	09 00 48.6	+1.6
	baz=126						
N13A	**Wendover, West**	**126.83**	**27**	⇑P	PKPdf	09 00 48.3	+1.2
	baz=127						
R08A	**Mina**	**126.83**	**32**	⇑P	PKPdf	09 00 48.8	+1.7
	baz=127						
KCC	**Kaiser Creek**	**126.92**	**34**	⇑P	PKPdf	09 00 48.1	+0.8
	baz=127						
T06C	**Millerton Lake**	**126.93**	**34**	⇑P	PKPdf	09 00 48.4	+1.0
	baz=127						
O12A	**Currie**	**127.04**	**28**	⇑P	PKPdf	09 00 48.7	+1.2
	baz=127						
BW06	**Boulder Array**	**127.18**	**22**	PFAKE		09 01 00.0	+12
BW06				LR	LR		
	comp=Z,224nm,21.0s,MS4.8						
PDAR	**Pinedale Array**	**127.18**	**22**	PKP	PKPdf	09 00 48.0	+0.1
	comp=Z,7.2nm,0.8s,baz=90,slow=1.4,SNR=52						
PKD	**Parkfield**	**127.19**	**36**	⇓P	PKPdf	09 00 49.0	+1.1
	baz=127						
V04C	**Ramage Ranch,**	**127.22**	**36**	⇑P	PKPdf	09 00 49.4	+1.6
	baz=127						
MTUM	**Tungsten Hills**	**127.31**	**33**	*e*PKPdf	PKPdf	09 00 49.2	+1.2
HWUT	**Hardware Ranch**	**127.36**	**25**	*e*PKPdf	PKPdf	09 00 48.7	+0.6
HWUT				LR	LR		
	comp=Z,224nm,20.0s,MS4.8						
R09A	**Tonopah**	**127.46**	**31**	⇓P	PKPdf	09 00 49.7	+1.4
	baz=127						
TPH	**Tonopah**	**127.50**	**32**	PFAKE		09 01 00.0	+12
TPH				LR	LR		
	comp=Z,136nm,21.0s,MS4.6						
HELL	**Mitchell Peak,**	**127.55**	**34**	⇓P	PKPdf	09 00 49.2	+0.7
	baz=127						
PTRM	**Twissleman Ran**	**127.59**	**36**	*e*PKPdf	PKPdf	09 00 49.4	+0.8
P12A	**McGill**	**127.59**	**29**	⇓P	PKPdf	09 00 50.1	+1.5
	baz=127						
S09A	**Goldfield**	**127.76**	**32**	⇓P	PKPdf	09 00 50.4	+1.5
	baz=128						
R10A	**Warm Springs**	**127.81**	**31**	⇑P	PKPdf	09 00 50.6	+1.6
	baz=128						
RSSD	**Black Hills**	**127.82**	**17**	*e*PKIKP	PKPdf	09 00 49.3	+0.3
Q12A	**Willow Creek R**	**127.97**	**29**	⇑P	PKPdf	09 00 50.8	+1.5
	baz=128						
DUG	**Dugway**	**127.99**	**27**	*e*PKIKP	PKPdf	09 00 50.2	+0.8
DUG				MLR	MLR		
	comp=Z,149nm,19.0s,MS4.7						
GRAC	**Grapevine Rang**	**128.22**	**33**	⇑P	PKPdf	09 00 51.3	+1.5
	baz=128						
CWC	**Cottonwood Cre**	**128.24**	**34**	⇓P	PKPdf	09 00 51.3	+1.5
	baz=128						
ISA	**Isabella**	**128.59**	**35**	PFAKE		09 01 00.0	+10
ISA				LR	LR		
	comp=Z,39nm,19.0s,MS4.1						
ISA	**Isabella**	**128.59**	**35**	⇑P	PKPdf	09 00 51.5	+1.0
	baz=128						
DAC	**Darwin (Calif)**	**128.63**	**34**	*e*PKIKP	PKPdf	09 00 51.6	+1.0
DAC				MLR	MLR		
	comp=Z,138nm,19.0s,MS4.7						
MPU	**Maple Canyon**	**128.65**	**26**	PFAKE		09 01 00.0	+9.4
MPU				LR	LR		
	comp=Z,1µm,21.0s						
SBC	**Santa Barbara**	**128.72**	**37**	⇓P	PKPdf	09 00 52.4	+1.6
	baz=128						
ARVC	**Arvin**	**128.76**	**35**	⇑P	PKPdf	09 00 52.5	+1.7
	baz=129						
MPMC	**Manual Prospec**	**128.85**	**34**	⇑P	PKPdf	09 00 52.8	+1.8
	baz=129						
FURC	**Furnace Creek,**	**128.89**	**33**	⇓P	PKPdf	09 00 52.5	+1.4
	baz=129						
RWWY	**Rawlins**	**128.98**	**21**	*e*PKPdf	PKPdf	09 00 51.9	+0.6
LBNH	**Lisbon**	**129.05**	**348**	PFAKE		09 01 00.0	+8.6
LBNH				LR	LR		
	comp=Z,159nm,21.0s,MS4.7						
U10A	**Ash Meadows, A**	**129.21**	**32**	⇑P	PKPdf	09 00 53.1	+1.4
	baz=129						
EDW2	**Edwards Air Fo**	**129.42**	**35**	⇑P	PKPdf	09 00 53.0	+0.9
	baz=129						
TMUT	**Trail Mountain**	**129.43**	**26**	*e*PKPdf	PKPdf	09 00 53.5	+1.4
SHOC	**Shoshone**	**129.62**	**33**	⇑P	PKPdf	09 00 54.2	+1.7
	baz=129						
MVU	**Marysvale**	**129.63**	**27**	PFAKE		09 01 00.0	+7.5
MVU				LR	LR		
	comp=Z,206nm,21.0s,MS4.8						
MSU	**Marysvale**	**129.64**	**27**	*e*PKIKP	PKPdf	09 00 53.8	+1.3
NCB	**Newcomb**	**129.76**	**350**	PFAKE		09 01 00.0	+7.3
NCB				LR	LR		
	comp=Z,89nm,19.0s,MS4.5						
GSC	**Goldstone**	**129.78**	**34**	⇓P	PKPdf	09 00 54.5	+1.8
	baz=130						
SRU	**San Rafael**	**129.88**	**26**	*e*PKIKP	PKPdf	09 00 53.8	+0.8
PHWY	**Pilot Hill**	**129.93**	**20**	*e*PKPdf	PKPdf	09 00 53.5	+0.5
V12A	**Nelson**	**130.52**	**32**	⇓P	PKPdf	09 00 56.0	+1.9
	baz=130						
HRV	**Harvard--Oak R**	**130.62**	**347**	PFAKE		09 01 10.0	+16
HRV				LR	LR		
	comp=Z,105nm,21.0s,MS4.5						
WES	**Weston**	**130.68**	**346**	PFAKE		09 01 10.0	+16
WES				LR	LR		
	comp=Z,424nm,22.0s,MS5.1						
GMRC	**Granite Mounta**	**130.80**	**33**	⇓P	PKPdf	09 00 56.8	+2.1
	baz=131						
BELC	**Belle Mtn.**	**131.19**	**34**	⇓P	PKPdf	09 00 57.5	+2.0
	baz=131						
ISCO	**Idaho Springs**	**131.21**	**21**	*e*PKIKP	PKPdf	09 00 56.0	+0.5
ISCO				MLR	MLR		
	comp=Z,213nm,20.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**131.22**	**35**	PFAKE		09 01 10.0	+15
PFO				LR	LR		
	comp=Z,163nm,20.0s,MS4.7						
SMCO	**Snowmass**	**131.26**	**22**	*e*PKPdf	PKPdf	09 00 56.8	+1.2
SMCO				*e*SKPbc	SKPbc	09 04 14.5	-1.5
W13A	**Hualapai Mount**	**131.50**	**32**	⇑P	PKPdf	09 00 58.6	+2.6
	baz=131						
IRM	**Iron Mountain**	**131.54**	**33**	⇓P	PKPdf	09 00 58.5	+2.4
	baz=131						
JFWS	**Jewell Farm**	**131.62**	**5**	*e*PKIKP	PKPdf	09 00 55.6	-0.7
JFWS				MLR	MLR		
	comp=Z,177nm,19.0s,MS4.8						
BINY	**Binghamton**	**131.78**	**351**	PFAKE		09 01 10.0	+13
BINY				LR	LR		
	comp=Z,211nm,22.0s,MS4.8						
W14A	**Seligman**	**131.83**	**31**	⇓P	PKPdf	09 00 59.0	+2.3
	baz=132						
X13A	**Yucca**	**131.92**	**32**	⇑P	PKPdf	09 00 58.7	+1.9
	baz=132						
PDMCI	**Parker Dam,Lak**	**131.98**	**32**	⇑P	PKPdf	09 00 59.0	+2.0
	baz=132						
SWSC	**Sam W. Stewart**	**132.08**	**35**	⇑P	PKPdf	09 00 59.2	+2.1
	baz=132						
DVTC	**Desert V Tower**	**132.11**	**36**	⇓P	PKPdf	09 00 59.8	+2.7
	baz=132						
Y12C	**Blythe**	**132.19**	**33**	⇑P	PKPdf	09 00 59.3	+2.0
	baz=132						
W15A	**Williams**	**132.27**	**30**	⇑P	PKPdf	09 00 59.7	+2.2
	baz=132						
MVCO	**Mesa Verde**	**132.34**	**25**	*e*PKPdf	PKPdf	09 00 58.9	+1.2
ERPA	**Erie**	**132.38**	**355**	PFAKE		09 01 10.0	+12
ERPA				LR	LR		
	comp=Z,173nm,20.0s,MS4.8						
WUAZ	**Wupatki**	**132.44**	**29**	*e*PKPdf	PKPdf	09 00 59.0	+1.2
WUAZ				LR	LR		
	comp=Z,156nm,20.0s,MS4.7						
X14A	**Yava**	**132.51**	**31**	⇓P	PKPdf	09 01 00.3	+2.4
	baz=132						
Y13A	**Salome**	**132.52**	**33**	P	PKPdf	09 01 00.2	+2.2
	baz=132						
GLA	**Glamis**	**132.55**	**34**	⇓P	PKPdf	09 00 59.7	+1.7
	baz=132						
X15A	**Humboldt**	**132.83**	**31**	⇑P	PKPdf	09 01 00.4	+1.9
	baz=133						
Y14A	**Wickenburg**	**132.86**	**32**	⇑P	PKPdf	09 01 00.6	+2.0
	baz=133						
SDCO	**Great Sand Dun**	**133.07**	**22**	PFAKE		09 01 10.0	+11
SDCO				LR	LR		
	comp=Z,191nm,22.0s,MS4.8						
Z14A	**Wintersburg**	**133.34**	**32**	⇓P	PKPdf	09 01 01.9	+2.4
	baz=133						
SSPA	**Standing Stone**	**133.60**	**352**	PFAKE		09 01 10.0	+10
SSPA				LR	LR		
	comp=Z,146nm,22.0s,MS4.7						
115A	**Sonoran Desert**	**134.23**	**32**	⇓P	PKPdf	09 01 03.2	+2.0
	baz=134						
ACSO	**Alum Creek Sta**	**134.46**	**357**	PFAKE		09 01 10.0	+8.4
ACSO				LR	LR		
	comp=Z,97nm,22.0s,MS4.5						
116A	**Eloy**	**134.61**	**32**	⇓P	PKPdf	09 01 03.8	+1.9
	baz=134						
MCWV	**Mont Chateau**	**134.80**	**354**	PFAKE		09 01 10.0	+7.8
MCWV				LR	LR		
	comp=Z,191nm,19.0s,MS4.8						
ANMO	**Albuquerque**	**135.12**	**25**	*e*PKIKP	PKPdf	09 01 04.0	+1.2
ANMO				MLR	MLR		
	comp=Z,161nm,22.0s						
TUC	**Tucson**	**135.29**	**31**	*e*PKIKP	PKPdf	09 01 04.6	+1.4
TUC				MLR	MLR		
	comp=Z,108nm,22.0s,MS4.5						
BLO	**Bloomington**	**135.56**	**1**	*e*PKIKP	PKPdf	09 01 03.8	+0.2
Y22C	**IRIS PASSCAL I**	**135.68**	**26**	⇓P	PKPdf	09 01 05.8	+1.9
	baz=136						
CBN	**Corbin**	**135.91**	**351**	PFAKE		09 01 20.0	+16
CBN				LR	LR		
	comp=Z,287nm,22.0s,MS5.0						
WCI	**Wyandotte Cave**	**136.50**	**1**	*e*PKIKP	PKPdf	09 01 04.5	-0.9
WCI				MLR	MLR		
	comp=Z,159nm,19.0s,MS4.8						
AMTX	**Amarillo**	**136.99**	**20**	PFAKE		09 01 20.0	+14
AMTX				LR	LR		
	comp=Z,228nm,22.0s,MS4.9						
PARMO	**Parma**	**137.87**	**5**	*e*PKPdf	PKPdf	09 01 08.5	+0.6
WMOK	**Wichita Mounta**	**138.03**	**17**	PFAKE		09 01 20.0	+12
WMOK				LR	LR		
	comp=Z,207nm,19.0s,MS4.9						
TZTN	**Tazewell**	**138.16**	**358**	*e*PKPdf	PKPdf	09 01 07.3	-1.1
MNTX	**Cornudas Mount**	**138.37**	**26**	*e*PKPdf	PKPdf	09 01 09.3	+0.4
MNTX				*e*SKPbc	SKPbc	09 04 39.4	+0.5
MNTX				LR	LR		
	comp=Z,143nm,19.0s,MS4.7						
WVT	**Waverly**	**138.54**	**3**	PFAKE		09 01 20.0	+11
WVT				LR	LR		
	comp=Z,152nm,20.0s,MS4.7						
CPCT	**Cooper Cave**	**139.28**	**359**	*e*PKPdf	PKPdf	09 01 11.2	+0.7
CPCT				*e*SKPdf	SKPdf	09 04 39.5	-1.4
MIAR	**Mount Ida**	**139.43**	**10**	*e*PKPdf	PKPdf	09 01 11.4	+0.6
MIAR				*e*SKPdf	SKPdf	09 04 42.8	+1.7
MIAR				LR	LR		
	comp=Z,187nm,20.0s,MS4.8						
PLAL	**Pickwick Lake**	**139.67**	**3**	*e*PKPdf	PKPdf	09 01 10.7	-0.5
PLAL				LR	LR		
	comp=Z,188nm,21.0s,MS4.8						
OXF	**Oxford**	**140.03**	**5**	PFAKE		09 01 20.0	+8.1
OXF				LR	LR		
	comp=Z,139nm,19.0s,MS4.7						
JCT	**Junction City**	**141.65**	**20**	*e*PKHKP		09 01 09.1	
JCT				*e*		09 01 15.7	
JCT				MLR	MLR		
	comp=Z,202nm,21.0s,MS4.8						
LRAL	**Lakeview Retre**	**141.66**	**2**	PFAKE		09 01 30.0	+15
LRAL				LR	LR		
	comp=Z,186nm,20.0s,MS4.8						
NATX	**Nacogdoches**	**141.91**	**13**	PFAKE		09 01 30.0	+15
NATX				LR	LR		
	comp=Z,227nm,20.0s,MS4.9						
BDFB	**Brasilia**	**142.01**	**252**	PKP	PKPdf	09 01 17.3	+1.9
	comp=Z,4.5nm,1.0s,baz=127,slow=1.2,SNR=4.5						
BDFB	**Brasilia**	**142.01**	**252**	PKP	PKPdf	09 01 17.3	+1.9
BDFB				LR	LR		
	comp=Z,423nm,22.0s,MS5.2						
HKT	**Hockley**	**143.36**	**15**	PFAKE		09 01 30.0	+12
HKT				LR	LR		
	comp=Z,151nm,19.0s,MS4.8						
CPUP	**Villa Florida**	**146.17**	**229**	PKPbc	PKPbc	09 01 24.3	+0.6
	comp=Z,5.8nm,0.7s,baz=96,slow=2.2,SNR=23						
CPUP	**Villa Florida**	**146.17**	**229**	*e*PKPdf	PKPdf	09 01 23.6	+0.9
DWPF	**Disney**	**146.39**	**354**	PFAKE		09 01 40.0	+17
DWPF				LR	LR		
	comp=Z,197nm,21.0s,MS4.9						
SJG	**San Juan**	**149.87**	**321**	*e*PKP2	PKPbc	09 01 34.4	+0.8
SJG				MLR	MLR		
	comp=Z,155nm,22.0s						
MGV	**Manicaragua**	**152.08**	**349**	*e*P	PKPdf	09 01 41.8	+10
SAML	**Samuel**	**157.76**	**260**	PFAKE		09 01 50.0	+10
SAML				LR	LR		
	comp=Z,258nm,22.0s,MS5.0						
SDV	**Santo Domingo**	**159.54**	**314**	PFAKE		09 01 50.0	+7.9
SDV				LR	LR		
	comp=Z,72nm,21.0s,MS4.5						
ROSC	**El Rosal**	**164.96**	**313**	PKP	PKPdf	09 01 49.7	+2.2
	comp=Z,5.0nm,0.4s,baz=135,slow=5.7,SNR=8.7						
ROSC	**El Rosal**	**164.96**	**313**	*e*PKPdf	PKPdf	09 01 49.5	+2.0

WEL 13 08:51:10.8±0.5**,3951S**×**17962E,h33^{km},ML3.6**/3**,Error ellipse: s-maj=5.2km s-min=2.6km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**1.59**	**287**	PN	Pn	08 51 36.3	-0.2
KNZ				SN	Sn	08 51 55.0	-0.9
PUZ	**Puketiti**	**1.79**	**323**	PN	Pn	08 51 38.2	-1.0
MWZ	**Matawai**	**2.01**	**305**	PN	Pn	08 51 41.9	-0.4
MWZ				SN	Sn	08 52 04.1	-2.2
PXZ	**Pawanui**	**2.19**	**255**	PN	Pn	08 51 44.2	-0.6
PXZ				SN	Sn	08 52 09.4	-1.4
URZ	**Urewera**	**2.32**	**302**	PN	Pn	08 51 46.7	0.0
URZ				SN	Sn	08 52 12.5	-1.5
MRZ	**Mangatainoka R**	**3.31**	**248**	PN	Pn	08 51 59.0	-1.2
MRZ				SN	Sn	08 52 35.8	-2.6

IDC 13 09:05:33.8±5.0**,2215S**×**6638W,h299^{km}**±50^{km}**,mb3.2**/2**, mb1 3.4**/4**,mb1mx3.1**/15**,mbtmp3.9**/4**,Error ellipse: s-maj=78.3km s-min=39.8km az=11.0,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**9.25**	**119**	P	Pn	09 07 42.6	0.0
	0.2nm,0.3s,baz=292,slow=14,SNR=3.8						
BDFB	**Brasilia**	**18.54**	**73**	P	P	09 09 29.6	+0.4
	1.4nm,0.3s,baz=256,slow=11,SNR=21						
TORD	**Torodi Ar. Bea**	**75.38**	**69**	P	P	09 16 45.4	+0.6
	1.0nm,0.4s,baz=253,slow=5.5,SNR=23						
PDAR	**Pinedale Array**	**75.86**	**329**	P	P	09 16 47.9	+0.4
	0.3nm,0.6s,baz=141,slow=9.3,SNR=2.7						

*IDC **13** 09:07:14.4±1.7, 1891S×16901E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx4.0/11, mbtmp4.0/6, ML3.2/1, MS3.5/6, Ms1 3.5/6, ms1mx3.2/21, Error ellipse: s-maj=48.4km s-min=25.1km az=106.0*

*ISCJB **13** 09:07:17.4±1.4, 190S±0.1×1690E±02, h33^{km}, mb4.1/6, MS3.6/4, Error ellipse: s-maj=37.0km s-min=11.9km az=51.0*

ISC 13 09:07:19.5±1.3**,190S**±01×**1691E**±02**,h35^{km},n15, $\sigma 1^{s}04$**/11**,mb4.1**/6**,MS3.6**/4**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.96**	**218**	*e*P	**Pn**	**09 08 15.7**	**-1.9**
DZM	**Mont Dzumac**	**3.96**	**218**	Pn	**Pn**	**09 08 16.0**	**-1.6**
	1.5nm,0.3s,baz=62,slow=16,SNR=46						
DZM				LR	LR	09 09 03.0	
	comp=Z,190nm,21.8s,baz=250,slow=27						
DZM				Sn	**Sn**	**09 09 03.2**	**+0.4**
	2.5nm,0.3s,baz=41,slow=20,SNR=2.1						
AFI	**Afiamalu**	**19.05**	**78**	LR	LR	09 16 54.4	
	comp=Z,201nm,19.6s,baz=177,slow=30						
ARMA	**Armidale**	**19.49**	**231**	*e*P	**Pn**	**09 11 52.1**	**+7.2**
URZ	**Urewera**	**20.48**	**162**	LR	LR	09 17 56.7	
	comp=Z,209nm,20.8s,MS3.5,baz=182,slow=31						
CNB	**Canberra Magne**	**23.86**	**223**	*e*P	**P**	**09 12 30.5**	**+0.9**
	7.8nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**27.86**	**237**	*e*P	**P**	**09 13 11.6**	**+5.9**
	1.6nm,0.7s,mb3.8						
STKA	**Stephens Creek**	**27.86**	**237**	P	**P**	**09 13 06.2**	**+0.5**
	2.4nm,0.9s,mb3.8,baz=71,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**33.03**	**256**	P	**P**	**09 13 51.4**	**0.0**
	2.9nm,0.7s,mb4.3,baz=85,slow=8.9,SNR=15						
ASAR				LR	LR	09 26 18.6	
	comp=Z,126nm,19.1s,MS3.6,baz=356,slow=35						
VNDA	**Vanda**	**58.72**	**182**	P	**P**	**09 17 13.6**	**0.0**
	1.3nm,1.0s,mb3.9,baz=358,slow=7.6,SNR=3.9						
JOW	**Kunigami**	**60.30**	**318**	LR	LR	09 38 50.1	
	comp=Z,40nm,19.3s,MS3.6,baz=172,slow=32						
MJAR	**Matsushiro Arr**	**62.41**	**332**	P	**P**	**09 17 37.5**	**-1.4**
	3.5nm,1.0s,mb4.5,baz=159,slow=8.0,SNR=4.1						
ASAJ	**Asahikawa**	**67.27**	**340**	LR	LR	09 45 01.3	
	comp=Z,50nm,18.6s,MS3.8,baz=346,slow=34						
SONM	**Songino Array**	**86.88**	**323**	P	**P**	**09 20 02.0**	**+1.5**
	1.3nm,0.9s,mb4.2,baz=142,slow=5.4,SNR=6.5						
GERES	**GERESS Array B**	**144.15**	**332**	PKP	PKPdf	09 26 50.9	-0.6
	0.3nm,0.5s,baz=43,slow=2.7,SNR=4.9						

*ISCJB **13** 09:12:21.8±0.8, 2523S±008×1800W±02, h539^{km}±15^{km}, mb4.2/9, Error ellipse: s-maj=21.3km s-min=11.8km az=0.9*

*IDC **13** 09:12:24.2±1.1, 2541S×17970E, h518^{km}±16^{km}, mb3.6/6, mb1 3.8/9, mb1mx3.6/15, mbtmp4.7/9, Error ellipse: s-maj=20.0km s-min=15.1km az=160.0*

*NEIC **13** 09:12:24.1±1.1, 2541S×17973E, h525^{km}±13^{km}, mb4.7/6, Error ellipse: s-maj=19.7km s-min=14.2km az=193.0*

ISC 13 09:12:24.2±0.9**,2546S**±009×**1797E**±01**,h523^{km}**±12^{km}**, n35,$\sigma 0^{s}86$**/33**,mb4.3**/9**,3D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.32**	**152**	P	**P**	**09 13 47.3**	**+0.6**
	220nm,0.3s,baz=82,slow=21,SNR=18						
RAO				S	**S**	**09 14 54.1**	**+0.1**
	27nm,0.3s,baz=270,slow=20,SNR=2.2						
RAO	**Raoul Island**	**4.32**	**152**	P	**P**	**09 13 47.3**	**+0.6**
RAO				S	**S**	**09 14 54.1**	**+0.1**
DZM	**Mont Dzumac**	**12.62**	**283**	P	**P**	**09 15 09.1**	**-0.1**
	0.9nm,0.3s,baz=92,slow=15,SNR=9.1						
URZ	**Urewera**	**12.96**	**189**	P	**P**	**09 15 11.6**	**-1.1**
	7.2nm,0.3s,baz=17,slow=4.8,SNR=18						
URZ				S	**S**	**09 17 32.6**	**-5.9**
	1.5nm,0.3s,baz=270,slow=21,SNR=8.7						
URZ	**Urewera**	**12.96**	**189**	PN	**P**	**09 15 11.3**	**-1.4**
BKZ	**Black Stump Fm**	**13.94**	**191**	PN	**P**	**09 15 22.3**	**-0.7**
AFI	**Afiamalu**	**13.99**	**36**	P	**P**	**09 15 17.1**	**-6.3**
	3.2nm,0.3s,baz=97,slow=21,SNR=3.4						
NNZ	**Nelson**	**16.58**	**197**	PN	**P**	**09 15 49.0**	**-1.3**
THZ	**Tophouse**	**17.22**	**197**	*e*PN	**P**	**09 15 55.9**	**-0.2**
LTZ	**Lake Taylor**	**18.34**	**198**	PN	**P**	**09 16 05.9**	**-0.5**
RPZ	**Rata Peaks**	**19.54**	**199**	P	**P**	**09 16 17.8**	**+0.4**
	2.9nm,0.3s,baz=27,slow=1.9,SNR=14						
ARMA	**Armidale**	**25.28**	**252**	*e*P	**P**	**09 17 11.4**	**+2.6**
CTA	**Charters Tower**	**31.27**	**273**	⇓*i*P	**P**	**09 18 01.8**	**+0.7**
	17nm,0.4s,mb4.9						
CTA	**Charters Tower**	**31.27**	**273**	P	**P**	**09 18 01.9**	**+0.8**
	23nm,0.4s,mb5.0,baz=96,slow=11,SNR=78						
CTAO	**Charters Tower**	**31.27**	**273**	*e*P	**P**	**09 18 01.8**	**+0.7**
	22nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**33.94**	**250**	⇓*i*P	**P**	**09 18 24.6**	**+0.9**
	3.5nm,1.8s,mb3.6						
STKA	**Stephens Creek**	**33.94**	**250**	P	**P**	**09 18 24.7**	**+1.0**
	1.9nm,0.7s,mb3.8,baz=83,slow=12,SNR=5.2						
STKA	**Stephens Creek**	**33.94**	**250**	*e*P	**P**	**09 18 24.5**	**+0.8**
PMG	**Port Moresby**	**34.80**	**291**	P	**P**	**09 18 30.4**	**-0.5**
	19nm,0.8s,mb4.7,baz=113,slow=4.5,SNR=5.2						
PMG	**Port Moresby**	**34.80**	**291**	*e*P	**P**	**09 18 29.9**	**-1.0**
	18nm,0.8s,mb4.7						
AS31	**Alice Springs**	**41.56**	**262**	*e*P	**P**	**09 19 26.2**	**+0.3**
ASAR	**Alice Springs**	**41.56**	**262**	P	**P**	**09 19 26.3**	**+0.4**
	5.2nm,0.7s,mb4.2,baz=92,slow=6.5,SNR=30						
ASAR				S	**S**	**09 25 04.3**	**+0.4**
	1.0nm,0.5s,baz=94,slow=16,SNR=9.7						
ASPA	**Alice Springs**	**41.57**	**262**	*e*P	**P**	**09 19 26.3**	**+0.4**
WB2	**Warramunga Arr**	**42.07**	**268**	⇓*i*P	**P**	**09 19 29.4**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRAB	Tennant Creek	42.08	268	eP	P	09 19 29.4	-0.5
	9.5nm,0.6s,mb4.5						
KAKA	Kakadu	46.23	277	eP	P	09 20 01.3	-0.8
	5.1nm,0.3s,mb4.5						
FITZ	Fitzroy Crossi	50.48	267	eP	P	09 20 33.1	-0.7
	9.9nm,0.6s,mb4.4						
MJAR	Matsushiro Arr	73.04	326	P	P	09 23 00.1	-0.7
	3.4nm,0.8s,mb3.8,baz=159,slow=5.7,SNR=13						
NVAR	Mina Array Bea	86.04	44	P	P	09 24 10.7	+1.5
	1.1nm,0.7s,mb3.6,baz=231,slow=11,SNR=9.7						
ARCES	ARCESS Array B	133.35	348	SKPbc	SKPbc	09 33 21.6	+1.7
	1.0nm,0.5s,baz=35,slow=4.4,SNR=11						
FINES	FINESS Array B	139.83	341	PKhKP		09 30 45.5	
	1.3nm,0.9s,baz=70,slow=2.2,SNR=5.2						
FINES				SKPbc	SKPbc	09 33 40.6	+1.6
	0.7nm,0.5s,baz=48,slow=2.8,SNR=7.9						
NB2	NORSAR Subarra	143.57	351	PKPa	PKPdf	09 30 57.1	-2.2
	comp=Z,0.9nm,0.5s,baz=14,slow=3.3						
NOA	NORSAR Array B	143.57	351	PKP	PKPdf	09 30 57.1	-2.1
	comp=Z,1.8nm,0.8s,baz=22,slow=3.8,SNR=6.5						
AKASG	Malin Array Be	146.13	326	PKPbc	PKPbc	09 31 04.8	-0.9
	comp=Z,1.0nm,0.4s,baz=42,slow=4.3,SNR=10						
BRTR	Keskin Array B	148.29	305	PKPbc	PKPbc	09 31 12.0	+0.6
	comp=Z,0.7nm,0.6s,baz=158,slow=6.9,SNR=4.0						
BRTR				PKPab	PKPab	09 31 16.9	+0.4
	comp=Z,2.0nm,0.7s,baz=100,slow=3.7,SNR=11						

*ISCJB **13** 09:13:34.9±0.5, 5901N±003×13706W±007, h10km, Error ellipse: s-maj=5.5km s-min=4.2km az=116.0*

*PGC **13** 09:13:37.2, 5899N×13709W, h1km, ML3.9/4, 107km southwest of Haines, Ak Glacier Bay, Alaska.*

*NEIC **13** 09:13:37.2, 5899N×13709W, h1km, ML3.6(AEIC), ML3.9(PGC), After PGC.*

ISC 13 09:13:36.8±0.5**, 5901N**±002×**13708W**±006**, h10**km**, n30,** σ**1s21**/58**, 1D, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLBC	Pleasant Camp	0.58	39	⇓P	Pg	09 13 47.9	-0.2
PLBC				S	Sg	09 13 56.6	+1.0
SKAG	Skagway	1.01	63	P	Pg	09 13 55.6	-0.6
SKAG				S	Sg	09 14 10.0	+0.7
YKU2	Yakutat	1.42	292	P	Pn	09 14 00.9	-1.8
HYT	Haines Junctio	1.83	353	Pn	Pn	09 14 08.8	+0.4
HYT				Pg	Pg	09 14 10.5	-1.5
HYT				Sn	Sn	09 14 34.0	+2.5
HYT				Sg	Sg	09 14 35.5	-0.2
HYT				Trac		09 14 36.1	
	comp=Z,367nm,0.3s						
HYT	Haines Junctio	1.83	353	Pn	Pn	09 14 08.8	+0.4
HYT				Pg	Pg	09 14 10.5	-1.5
HYT				Sn	Sn	09 14 34.0	+2.5
HYT				Sg	Sg	09 14 35.5	-0.2
WHY	Whitehorse	1.99	33	Pn	Pn	09 14 11.5	+0.9
WHY				Pg	Pg	09 14 13.3	-1.7
WHY				Sg	Sg	09 14 40.0	-0.9
WHY				Trac		09 14 42.2	
	comp=Z,805nm,0.3s						
WHY	Whitehorse	1.99	33	P	Pn	09 14 11.4	+0.9
WHY				S	Sn	09 14 39.4	+3.9
SIT	Sitka	2.17	154	P	Pn	09 14 13.6	+0.5
SIT				S	Sn	09 14 41.9	+1.9
DLBC	Dease Lake	3.72	96	Trac		09 15 38.0	
	comp=Z,156nm,0.3s						
DLBC	Dease Lake	3.72	96	Pn	Pn	09 14 34.7	+0.4
DLBC				Pg	Pg	09 14 44.0	-4.1
DLBC				Sn	Sn	09 15 19.4	+1.1
DLBC				Sg	Sg	09 15 32.1	-4.3
CRAG	Craig	4.15	147	P	Pn	09 14 42.3	+2.0
BMRM	Bremner River	4.26	301	P	Pn	09 14 40.8	-0.9
DIV	Divide	4.84	300	ePn	Pn	09 14 50.6	+0.8
DAWY	Dawson	5.19	349	Pn	Pn	09 14 55.0	+0.5
DAWY				Sn	Sn	09 15 54.0	-0.5
DAWY				Sg	Sg	09 16 18.9	-4.6
DAWY				Trac		09 16 24.2	
	comp=Z,41nm,0.4s						
DAWY	Dawson	5.19	349	P	Pn	09 14 55.0	+0.5
NDB	Naden	5.56	154	Pn	Pn	09 15 00.4	+0.7
NDB				Sg	Sg	09 16 34.4	-1.0
NDB				Trac		09 16 50.6	
	comp=Z,23nm,0.6s						
NDB	Naden	5.56	154	Pn	Pn	09 15 00.4	+0.7
NDB				Sg	Sg	09 16 34.4	-1.0
RUBB	Prince Rupert	6.02	138	Pn	Pn	09 15 05.5	-0.3
RUBB				Pg	Pg	09 15 26.3	-5.8
RUBB				Sn	Sn	09 16 12.5	-2.3
RUBB				Sg	Sg	09 16 45.2	-4.8
RUBB				Trac		09 16 49.1	
	comp=Z,53nm,0.6s						
RUBB	Prince Rupert	6.02	138	Pn	Pn	09 15 05.5	-0.3
RUBB				Pg	Pg	09 15 26.3	-5.8
RUBB				Sn	Sn	09 16 12.5	-2.3
RUBB				Sg	Sg	09 16 45.2	-4.8
PMR	Palmer	6.52	298	P	Pn	09 15 12.5	-0.3
BNAB	Bonilla	6.59	144	Pn	Pn	09 15 18.0	+4.2
BNAB				Sg	Sg	09 17 03.5	-4.9
BNAB				Trac		09 17 22.2	
	comp=Z,6.0nm,0.6s						
BNAB	Bonilla	6.59	144	Pn	Pn	09 15 18.0	+4.2
BNAB				Sg	Sg	09 17 03.5	-4.9
FNBB	Fort Nelson	7.28	85	Pn	Pn	09 15 23.9	+0.7
FNBB				Pg	Pg	09 15 51.5	-4.7
FNBB				Sn	Sn	09 16 44.6	-1.3
FNBB				Sg	Sg	09 17 26.6	-3.9
FNBB				Trac		09 17 39.3	
	comp=Z,11nm,0.6s						
FNBB	Fort Nelson	7.28	85	Pn	Pn	09 15 23.9	+0.7
FNBB				Pg	Pg	09 15 51.5	-4.7
FNBB				Sn	Sn	09 16 44.6	-1.3
FNBB				Sg	Sg	09 17 26.6	-3.9
FSB	Fort Saint Jam	8.35	117	Trac		09 18 16.8	
	comp=Z,9.1nm,0.7s						
BBB	Bella Bella	8.51	140	Trac		09 18 14.3	
	comp=Z,6.0nm,0.7s						
BMBC	Bull Mountain	8.57	104	Trac		09 18 20.8	
	comp=Z,32nm,1.1s						
BMBC	Bull Mountain	8.57	104	Sg	Sx	09 18 04.9	
INK	Inuvik	9.46	8	Pn	Pn	09 15 53.4	+0.2
INK				Sg	Sn	09 18 31.9	+52
INK				Trac		09 18 49.4	
	comp=Z,10.0nm,0.8s						
YKW3	Yellowknife Ar	11.51	62	Pn	Pn	09 16 22.3	+1.1
YKW3				Sg	Sn	09 19 39.5	+70
YKW3				Trac		09 19 52.8	
	comp=Z,5.0nm,0.9s						

CASC 13 09:34:03.1±2.8**, 1292N**×**8881W, h76**km±53km**, MD3.7, ML3.0, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNVI	San Vicente	0.69	357	eP	x	09 34 26.2	
SNVI				eS	x	09 34 38.3	
VSM	San Miguel	0.72	46	eP	x	09 34 27.1	
VSM				eS	x	09 34 40.6	
LFRS	El Faro	0.74	340	eP	x	09 34 26.3	
LCBS	La Ceiba	0.75	347	eP	x	09 34 26.6	
BLLM	Bellamira	0.76	47	eP	x	09 34 27.4	
BLLM				eS	x	09 34 41.3	
LBRS	Las Brisas	0.85	344	eP	x	09 34 28.4	
SNET	Serv Nac Est T	0.87	332	eP	x	09 34 19.5	
SNET				eS	x	09 34 31.8	
BOQS	Boqueron	0.93	330	eP	x	09 34 29.2	
BOQS				eS	x	09 34 42.8	
CNCH	Conchagua	1.01	69	eP	x	09 34 30.8	
SBLS	San Blas	1.21	319	eP	x	09 34 33.4	
SBLS				eS	x	09 34 50.3	
SNJE	San Jose	1.23	321	eP	x	09 34 33.0	
SNJE				eS	x	09 34 49.8	
RBDL	Robledal	1.47	324	eP	x	09 34 37.2	
CRIN	San Cristobal	1.73	97	eP	Pn	09 34 32.7	+1.5
CRIN				eS	Sn	09 34 53.2	+0.7
LEON	Leon	1.93	105	eP	Pn	09 34 34.0	+0.1
CNGN	Cerro Negro	2.10	101	eP	Pn	09 34 37.0	+0.8
MIRN	Miramar	2.10	103	eP	Pn	09 34 36.9	+0.8
COPN	Copaltepe	2.28	109	eP	Pn	09 34 39.4	+0.8
APYN	Apoyeque	2.49	106	eP	Pn	09 34 42.2	+0.8
APYN				eS	Sn	09 35 11.5	+0.6
MGAN	Managua	2.61	107	eS	Sn	09 35 13.3	-0.5
MGAN				i		09 35 17.9	
	comp=N,95nm,0.2s						
MGAN				e		09 35 18.4	
	comp=E,108nm,0.4s						

*ISCJB **13** 09:34:09.9±1.3, 476N±02×1538E±02, h33km, mb3.8/8, Error ellipse: s-maj=31.2km s-min=9.1km az=92.9*

*MOS **13** 09:34:09.5±1.3, 4758N×15368E, h33km, mb4.2/6, Error ellipse: s-maj=25.5km s-min=16.7km az=73.7*

*IDC **13** 09:34:15.8±9.7, 4757N×15358E, h64km±75km, mb3.5/7, mb1 3.6/8, mb1mx3.4/21, mbtmp3.8/8, ML3.3/1, Error ellipse: s-maj=82.5km s-min=26.4km az=84.0*

ISC 13 09:34:11.8±1.3**, 477N**±02×**1539E**±02**, h35**km**, n18,** σ**0s63**/19**, mb3.8**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.38	25	ePN	Pn	09 35 01.5	-0.6
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR	Kuril'sk	4.79	242	PN	Pn	09 35 16.5	-4.9
KUR				eS	Sn	09 36 15.0	-0.6
KUR				pmax	pmax		
	comp=Z,190nm,1.0s						
KUR				smax			
	comp=N,210nm,1.0s						
KUR				smax			
	comp=E,60nm,1.0s						
ASAJ	Asahikawa	8.61	250	P	Pn	09 36 14.6	+0.8
	comp=E,0.4nm,0.3s,baz=100,slow=14,SNR=5.4						
MKAR	Makanchi Array	46.98	297	P	P	09 42 38.8	-0.5
	comp=E,0.5nm,0.4s,mb3.8,baz=60,slow=7.3,SNR=4.9						
MKAR	Makanchi Array	46.98	297	P	P	09 42 38.8	-0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	Borovoye Array	50.68	309	P	P	09 43 08.1	+0.4
	comp=Z,0.6nm,0.5s,mb3.8,baz=49,slow=7.3,SNR=4.6						
BVAR	Borovoye Array	50.68	309	P	P	09 43 08.1	+0.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	Joensuu	60.75	334	ep	P	09 44 19.8	-0.1
	comp=Z,0.5nm,0.3s,mb4.1						
JOF	Joensuu	60.75	334	eP	P	09 44 19.8	-0.1
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
FINES	FINESS Array B	63.44	335	P	P	09 44 38.7	+0.7
	comp=Z,0.5nm,0.4s,mb4.0,baz=37,slow=6.4,SNR=12						
FINES	FINESS Array B	63.44	335	P	P	09 44 38.7	+0.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	NORSAR Subarra	67.54	341	P	P	09 45 05.5	+1.0
	comp=Z,1.0nm,0.6s,mb4.0,baz=26,slow=6.5						
NOA	NORSAR Array B	67.54	341	P	P	09 45 05.5	+1.0
	comp=Z,2.6nm,0.9s,mb4.2,baz=29,slow=6.1,SNR=5.8						
NOA	NORSAR Array B	67.54	341	P	P	09 45 05.5	+1.0
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	71.08	326	P	P	09 45 26.1	-0.2
	comp=Z,1.5nm,0.6s,mb4.1,baz=32,slow=6.2,SNR=6.6						
AKASG	Malin Array Be	71.08	326	P	P	09 45 26.2	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	Alice Springs	73.22	199	P	P	09 45 39.2	0.0
	comp=Z,0.2nm,0.7s,mb3.2,baz=10,slow=6.7,SNR=3.4						
GERES	GERESS Array B	77.87	334	P	P	09 46 04.8	-1.0
	comp=Z,0.2nm,0.5s,mb3.4,baz=34,slow=8.1,SNR=3.9						

*IDC **13** 09:53:07.5±4.2, 2993S×17741W, h21km±25km, mb4.7/9, mb1 4.8/10, mb1mx4.8/13, mbtmp4.8/10, ML4.7/1, MS4.5/15, Ms1 4.4/15, ms1mx4.3/19, Error ellipse: s-maj=19.5km s-min=13.2km az=68.0*

*MOS **13** 09:53:09.0±1.6, 2996S×17771W, h33km, mb5.4/25, Error ellipse: s-maj=14.1km s-min=10.5km az=74.9*

*ISCJB **13** 09:53:09.1±0.1, 3028S±004×17771W±006, h45km, mb5.1/57, MS4.5/25, Error ellipse: s-maj=8.4km s-min=3.7km az=78.0*

*HRVD **13** 09:53:11.5±0.3, 2988S×17727W, h39km±1km, MW5.2/53, Centroid moment Tensor Solution. LP body waves: s45,c60; Mantle waves: s53,c75; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.04±.28; $M_{\theta\theta}$1.08±.23; $M_{\phi\phi}$-6.12±.20; $M_{r\theta}$1.30±.21; $M_{\theta\phi}$-2.00±.18; $M_{\phi r}$3.26±.21; Best double couple: $M_0$6.82000×10^{16} NP1:ϕ_s188.00000°, δ30.00000°, λ80.00000°. NP2:ϕ_s20.00000°, δ61.00000°, λ96.00000°. Principal axes: T 6.0400, Plg74.0000°, Azm304.0000°; N 1.5590, Plg5.0000°, Azm197.0000°; P -7.5990, Plg15.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 09:53:11.5±0.2, 2995S×17778W, mb5.2/40 Error ellipse: s-maj=8.9km s-min=5.3km az=141.0*

*BJI **13** 09:53:13.4, 2990S×17780W, h52km, mB5.4, mb5.1, Ms5.0, Msz4.6*

ISC 13 09:53:11.0±0.1**, 3021S**±004×**17767W**±006**, h47**km**, h47**km±1.1km**:pP-P, n441,** σ**0s73**/306**, mb5.1**/57**, MS4.5**/25**, 100C-79D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.98	347	Pn	Pn	09 53 24.0	-4.3
	2µm,0.3s,baz=105,slow=4.4,SNR=138						
RAO				Sn	Sn	09 53 36.4	-4.7
	10µm,0.3s,baz=289,slow=23,SNR=26						
RAO	Raoul Island	0.98	347	ePn	Pn	09 53 24.0	-4.3
PUZ	Puketiti	8.54	202	PN	Pn	09 55 08.3	-3.7
PUZ				SN	Sn	09 56 45.2	-1.8
WCZ	Waipu Caves	8.81	227	PN	Pn	09 55 22.1	+6.5
OUZ	Omahuta	8.89	234	PN	Pn	09 55 24.6	+7.8
MWZ	Matawai	9.03	205	PN	Pn	09 55 14.8	-3.9
MWZ				SN	Sn	09 56 57.6	-1.3
URZ	Urewera	9.12	207	Pn	Pn	09 55 17.7	-2.2
	1.4nm,0.3s,baz=174,slow=19,SNR=9.3						
URZ				Sn	Sn	09 57 02.5	+1.3
	14nm,0.3s,baz=179,slow=23,SNR=9.8						
URZ	Urewera	9.12	207	PN	Pn	09 55 17.2	-2.7
URZ				SN	Sn	09 57 00.8	-0.4
TIWZ	Tintock	11.78	205	SN	Sn	09 58 00.8	-5.4
MRZ	Mangatainoka R	11.79	206	PN	Pn	09 55 56.4	0.0
MRZ				SN	Sn	09 57 57.4	-9.1
KIW	Kapiti Island	12.22	208	SN	Sn	09 58 10.3	-6.9
SNZO	South Karori	12.68	207	Pn	Pn	09 56 10.9	+2.3
THZ	Tophouse	13.82	211	SN	Sn	09 58 48.3	-7.7
KHZ	Kahutara	14.09	208	PN	Pn	09 56 25.7	-2.1
KHZ				SN	Sn	09 58 51.8	-11
LTZ	Lake Taylor	14.92	210	SN	Sn	09 59 10.1	-13
MQZ	McQueen's Vall	15.52	207	SN	Sn	09 59 22.4	-15
RPZ	Rata Peaks	16.20	211	Pn	Pn	09 56 57.2	+1.9
	2.6nm,0.3s,baz=54,slow=6.9,SNR=9.4						
RPZ				Sn	Sn	09 59 43.0	-11
	1.6nm,0.3s,baz=230,slow=20,SNR=7.3						
DZM	Mont Dzumac	16.39	296	eP	Pn	09 57 03.1	+5.3
DZM	Mont Dzumac	16.39	296	Pn	Pn	09 57 03.7	+5.9
	0.5nm,0.3s,baz=96,slow=15,SNR=12						
DZM				LR	LR	10 02 07.5	
	comp=Z,2µm,19.2s,baz=303,slow=33						
RAR	Rarotonga	18.43	65	P	Pn	09 57 14.6	-8.3
	1.5nm,0.3s,baz=265,slow=5.8,SNR=8.1						
RAR				LR	LR	10 02 34.0	
	comp=Z,932nm,19.4s,baz=44,slow=31						
RAR	Rarotonga	18.43	65	P	Pn	09 57 14.6	-8.3
RAR				LR	LR	10 02 34.0	
TBI	Tubuai	26.05	82	eLQ		10 03 40.6	
	1µm,25.5s						
TBI				eLR	LR	10 05 07.0	
	2µm,27.0s,baz=248						
ARMA	Armidale	26.47	262	eP	P	09 58 47.8	+4.1
CNB	Canberra Magne	28.11	251	eP	P	09 59 02.4	+4.0
	49nm,1.1s,mb5.0						
PPT	Papeete	28.52	70	eLQ		10 04 36.5	
	1µm,24.0s						
PPT				eLR	LR	10 06 10.6	
	2µm,26.2s,baz=239						
PPT	Papeete	28.52	70	LR	LR	10 07 13.4	
	comp=Z,712nm,18.2s,MS4.3,baz=259,slow=30						
HNR	Honiara	29.39	310	LR	LR	10 09 03.8	
	comp=Z,396nm,20.8s,MS4.0,baz=179,slow=32						
TOO	Toolangi	31.30	246	eP	P	09 59 29.8	+3.2
	29nm,1.0s,mb5.1						
TOO	Toolangi	31.30	246	eP	P	09 59 29.8	+3.2
TOO				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.1						
CTA	Charters Tower	34.05	279	eP	P	09 59 53.1	+2.4
	comp=Z,45nm,1.0s,mb5.4						
CTA	Charters Tower	34.05	279	P	P	09 59 53.0	+2.4
	comp=Z,52nm,0.9s,mb5.5,baz=102,slow=10.0,SNR=23						
CTA				LR	LR	10 12 19.2	
	comp=Z,1µm,18.7s,MS4.7,baz=107,slow=34						
CTA	Charters Tower	34.05	279	eP	P	09 59 53.1	+2.4
CTA				pmax	pmax		
	comp=Z,45nm,1.0s						
CTAO	Charters Tower	34.05	279	eP	P	09 59 52.8	+2.1
CTAO				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.5						
CTAO	Charters Tower	34.05	279	eP	P	09 59 52.8	+2.1
	comp=Z,56nm,1.0s,mb5.5						
STKA	Stephens Creek	34.80	257	eP	P	09 59 59.1	+2.0
	comp=Z,21nm,0.9s,mb5.1						
STKA	Stephens Creek	34.80	257	P	P	10 00 00.1	+3.0
	comp=Z,32nm,0.9s,mb5.2,baz=95,slow=9.2,SNR=42						
STKA				LR	LR	10 13 14.9	
	comp=Z,1µm,18.5s,MS4.7,baz=43,slow=34						
RKT	Rikitea	38.63	90	eS	S	10 06 19.8	-3.1
	comp=Z,290nm,29.5s						
RKT				eLR	LR	10 10 57.3	
	comp=Z,1µm,27.2s,baz=256						
PMG	Port Moresby	38.78	295	LR	LR	10 13 49.4	
	comp=Z,683nm,20.7s,MS4.5,baz=324,slow=32						
TAOE	Nuku Hiva Isla	40.97	67	eLR	LR	10 11 56.4	
	comp=Z,3µm,26.1s						
AS31	Alice Springs	43.41	267	eP	P	10 01 09.3	+0.3
ASAR	Alice Springs	43.41	267	P	P	10 01 09.2	+0.3
	comp=Z,15nm,0.7s,mb4.8,baz=104,slow=7.6,SNR=89						
ASAR				PcP	PcP	10 02 58.9	+2.2
	comp=Z,4.2nm,0.8s,baz=113,slow=3.5,SNR=5.4						
ASAR				ScP	ScP	10 06 48.5	+4.2
	comp=Z,1.3nm,0.9s,baz=130,slow=4.0,SNR=4.5						
ASAR				LR	LR	10 18 45.5	
	comp=Z,2µm,18.4s,MS5.0,baz=128,slow=35						
ASAR	Alice Springs	43.41	267	P	P	10 01 09.3	+0.3
ASAR						10 02 58.9	
ASPA	Alice Springs	43.41	267	eP	P	10 01 09.3	+0.3
WB2	Warramunga Arr	44.37	272	⇓iP	P	10 01 16.2	-0.5
WRAB	Tennant Creek	44.37	272	P	P	10 01 16.2	-0.5
	comp=Z,379nm,0.7s,mb6.2,SNR=20						
WRAB	Tennant Creek	44.37	272	⇑iP	P	10 01 17.0	+0.3
WRAB	Tennant Creek	44.37	272	eP	P	10 01 16.8	0.0
	comp=Z,88nm,0.9s,mb5.5						
FORT	Forrest	46.37	255	eP	P	10 01 32.9	+0.3
	comp=Z,22nm,0.7s,mb5.2						
SBA	Scott Base	48.25	184	eP	P	10 01 51.5	+4.3
SBA				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
SBA	Scott Base	48.25	184	eP	P	10 01 51.5	+4.3
	comp=Z,40nm,1.2s,mb5.3						
VNDA	Vanda	48.31	186	P	P	10 01 49.8	+2.1
	comp=Z,4.1nm,1.0s,mb4.4,baz=26,slow=5.9,SNR=12						
VNDA				LR	LR	10 16 54.8	
	comp=Z,158nm,21.9s,MS4.0,baz=37,slow=29						
VNDA	Vanda	48.31	186	eP	P	10 01 50.7	+3.0
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNDA	Vanda	48.31	186	eP	P	10 01 50.6	+3.0
	comp=Z,4.3nm,1.0s,mb4.4						
KAKA	Kakadu	49.18	280	eP	P	10 01 52.5	-1.8
	comp=Z,16nm,0.8s,mb5.1						
FITZ	Fitzroy Crossi	52.65	270	⇓iP	P	10 02 21.2	+0.8
	comp=Z,18nm,0.9s,mb5.0						
KLBR	Kellerberrin	54.68	251	eP	P	10 02 34.7	-0.6
	comp=Z,57nm,1.4s,mb5.4						
NWAO	Narrogin (SRO)	54.73	249	LR	LR	10 24 04.9	
	comp=Z,476nm,18.3s,MS4.6,baz=88,slow=34						
CASY	Casey	55.44	208	eP	P	10 02 41.3	+0.5
MBWA	Marble Bar	56.53	263	eP	P	10 02 48.5	-0.1
	comp=Z,28nm,1.1s,mb5.2						
RPN	Rapa Nui	59.21	105	LR	LR	10 21 43.8	
	comp=Z,423nm,20.1s,MS4.6,baz=64,slow=29						
QSPA	South Pole Qui	59.90	180	eP	P	10 03 14.7	+2.6
	comp=Z,79nm,1.1s,mb5.7						
MIR	Mirnyy	62.42	207	c iP	P	10 03 21.0	-8.2
MIR				i		10 04 10.0	
MIR				pmax	pmax		
	comp=Z,280nm,1.0s						
MAW	Mawson	72.59	200	⇑iP	P	10 04 34.7	+1.4
	comp=Z,16nm,0.8s,mb5.0						
MAW	Mawson	72.59	200	P	P	10 04 34.9	+1.6
	comp=Z,20nm,0.9s,mb5.0,baz=124,slow=7.0,SNR=61						
MAW				LR	LR	10 35 37.4	
	comp=Z,181nm,18.2s,MS4.4,baz=304,slow=35						
SYO	Syowa Base	77.37	193	⇓eP	P	10 05 01.0	+0.1
SYO	Syowa Base	77.37	193	⇓epP	pP	10 05 15.0	+0.5
MJAR	Matsushiro Arr	78.25	325	P	P	10 05 04.4	-1.4
	comp=Z,9.8nm,0.8s,mb4.8,baz=161,slow=5.1,SNR=28						
MJAR				LR	LR	10 33 47.3	
	comp=Z,187nm,21.6s,MS4.4,baz=220,slow=31						
MAJO	Matsushiro	78.25	325	eP	P	10 05 04.5	-1.3
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
MAJO	Matsushiro	78.25	325	eP	P	10 05 04.5	-1.3
	comp=Z,18nm,0.9s,mb5.0						
MAT	Matsushiro	78.25	325	P	P	10 05 03.6	-2.2
MAT				S	S	10 15 07.2	+10
MAT	Matsushiro	78.25	325	eP	P	10 05 04.0	-1.8
MAT				S		10 15 30.0	
MAT				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
MAT	Matsushiro	78.25	325	eP	P	10 05 04.0	-1.8
	comp=Z,15nm,1.0s,mb4.9						
MAT				S		10 15 30.0	
SNAA	Sanae	78.34	178	P	P	10 05 07.2	+0.9
	comp=Z,1.5nm,0.9s,baz=194,slow=4.6,SNR=6.7						
NVL	N'lazarevskaya	79.08	183	⇑iP	P	10 05 10.7	+0.3
NVL				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
NVL				pmax	pmax		
	comp=Z,344nm,17.5s						
VNA1	Neumayer--Stat	79.14	176	eP	P	10 05 13.2	+2.5
VNA1				e		10 05 18.6	
VNA1				e		10 05 20.6	
VNA1				e	pP	10 05 22.2	-2.1
VNA1				e	pP	10 05 25.3	+1.0
VNA1				e	pP	10 05 31.3	+7.0
VNA1				e		10 05 39.5	
VNA1				e		10 05 53.6	
SSE	Sheshan	84.20	311	P	P	10 05 37.8	+0.5
SSE				AP	pP	10 05 52.1	+1.0
SSE				XP	sP	10 05 58.1	+1.8
SSE				S	S	10 16 00.3	+1.4
SSE				XS	sS	10 16 25.4	+3.5
SSE				AMB	AMB		
	comp=Z,25nm,0.6s,mb5.5						
SSE				AMB	AMB		
	comp=Z,58nm,5.7s						
SSE				LR	LR		
	comp=N,58nm,26.5s,MS4.0						
SSE				LR	LR		
	comp=E,61nm,26.5s,MS4.0						
SSE				LR	LR		
	comp=Z,103nm,24.4s,MS4.1						
V04C	Ramage Ranch,	84.50	43	⇓P	P	10 05 39.7	+0.7
	baz=85						
V03C	Hunter Liggett	84.55	43	⇑P	P	10 05 39.9	+0.7
	baz=85						
HAST	UC Hastings Re	84.62	42	⇓P	P	10 05 39.9	+0.5
	baz=85						
YSS	Yuzh-Sakhalins	84.70	334	eP	P	10 05 39.0	-0.9
YSS				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.5						
YSS	Yuzh-Sakhalins	84.70	334	eP	P	10 05 40.2	+0.3
	comp=Z,45nm,0.9s,mb5.6						
FARB	Farallon Islan	84.70	41	⇑P	P	10 05 40.1	+0.2
	baz=85						
BNLO	Ben Lomond (Sa	84.78	41	⇑P	P	10 05 40.4	+0.2
	baz=85						
SMMC	Simmler	84.80	44	⇑P	P	10 05 41.1	+0.7
	baz=85						
PTRM	Twissleman Ran	84.91	44	eP	P	10 05 41.7	+0.8
PTRM				epP	pP	10 05 55.7	+1.0
PKD	Parkfield	84.91	43	⇑P	P	10 05 41.3	+0.3
	baz=85						
LRV	Little Rabbit	84.96	43	eP	P	10 05 41.7	+0.5
U04C	Hernandez Rese	85.05	43	⇑P	P	10 05 42.4	+0.7
	baz=85,SNR=6.1						
PACP	Pacheco Peak	85.20	42	⇑P	P	10 05 42.9	+0.5
	baz=85						
V05C	Boulder Hill,	85.24	44	⇑P	P	10 05 43.1	+0.5
	baz=85						
MWC	Mount Wilson	85.26	46	eP	P	10 05 43.3	+0.6
WENL	Wente Brothers	85.36	41	⇑P	P	10 05 43.4	+0.2

baz=86
ARVC Arvin 85.39 45 ⇑P P 10 05 43.5 +0.2
baz=86
MURC Murrieta 85.39 47 ⇓P P 10 05 43.4 0.0
baz=86
PET Petropavlovsk 85.41 346 *e*P P 10 05 45.0 +1.5
PET *e*S S 10 16 12.6 +1.6
PET pmax pmax
comp=Z,25nm,0.9s,mb5.3
PET MLR MLR
comp=Z,100nm,19.0s,MS4.2
MONP Monument Peak 85.42 48 ⇑P P 10 05 44.1 +0.6
baz=86
CVS Carmenet Viney 85.46 40 ⇑P P 10 05 43.3 -0.4
baz=86
DVTC Desert V Tower 85.48 48 ⇓P P 10 05 44.0 +0.2
baz=86
T05C Eagle Field, D 85.48 42 ⇓P P 10 05 44.1 +0.3
baz=86
BFSC Mount Baldy St 85.52 46 ⇓P P 10 05 44.1 +0.1
baz=86,SNR=5.7
S04C Ingram Canyon, 85.52 42 ⇓P P 10 05 44.3 +0.3
baz=86,SNR=6.9
BDM Black Diamond 85.53 41 ⇑P P 10 05 43.9 -0.1
baz=86
VES Vestal, Richgr 85.71 44 P P 10 05 44.9 -0.1
baz=86,SNR=11
EDW2 Edwards Air Fo 85.74 45 ⇓P P 10 05 44.9 -0.1
baz=86,SNR=6.8
MNRC McLaughlin Nat 85.84 40 ⇑P P 10 05 46.1 +0.5
baz=86,SNR=5.7
PFO Pinyon Flat Ob 85.87 47 *e*P P 10 05 46.2 +0.5
PFO *e**PP pP 10 05 59.7 +0.2
PFO pmax pmax
comp=Z,17nm,1.3s,mb5.1
PFO Pinyon Flat Ob 85.87 47 *e*P P 10 05 46.2 +0.5
comp=Z,17nm,1.3s,mb5.1
PFO *epP* pP 10 05 59.7 +0.2
PFO Pinyon Flat Ob 85.87 47 ⇑P P 10 05 46.2 +0.4
baz=86
Q03C Winters 85.91 40 ⇑P P 10 05 45.3 -0.6
baz=86
RCTC Rector, Farmer 85.93 44 ⇓P P 10 05 45.4 -0.6
baz=86
ISA Isabella 85.96 45 *e*P P 10 05 46.4 +0.2
ISA *e**PP pP 10 06 00.3 +0.4
ISA pmax pmax
comp=Z,20nm,1.2s,mb5.2
ISA Isabella 85.96 45 *e*P P 10 05 46.4 +0.2
comp=Z,20nm,1.2s,mb5.2
ISA *epP* pP 10 06 00.3 +0.3
ISA Isabella 85.96 45 P P 10 05 46.5 +0.3
baz=86,SNR=15
O01C Eel River Cons 85.98 38 ⇑P P 10 05 46.4 +0.1
baz=86
S05C Merced 85.99 42 ⇑P P 10 05 46.1 -0.2
baz=86,SNR=9.7
BBRC Big Bear Sol-O 86.00 46 ⇑P P 10 05 46.1 -0.2
baz=86
T06C Millerton Lake 86.12 43 ⇑P P 10 05 46.8 -0.2
baz=86,SNR=10
GASB Alder Springs 86.23 39 ⇑P P 10 05 47.9 +0.4
baz=86,SNR=5.4
R04C Big Horse Ranc 86.26 41 ⇓P P 10 05 46.8 -0.9
baz=86
HELL Mitchell Peak, 86.31 43 P P 10 05 47.5 -0.4
baz=86,SNR=9.3
LRMC Laurel Mountai 86.32 45 ⇑P P 10 05 48.2 +0.2
baz=86,SNR=11
NJ2 Nanjing 86.34 310 *e*P P 10 05 48.8 +0.8
NJ2 AP pP 10 06 02.3 +0.5
NJ2 S S 10 16 17.0 -3.1
NJ2 XS sS 10 16 39.0 -4.1
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.3
NJ2 AMB AMB
comp=Z,180nm,7.3s
NJ2 LR LR
comp=N,380nm,14.9s
NJ2 LR LR
comp=E,420nm,32.9s
NJ2 LR LR
comp=Z,190nm,20.0s
RRX Edison Barstow 86.35 46 ⇑P P 10 05 47.7 -0.4
baz=86
BELC Belle Mtn. 86.41 47 P P 10 05 49.1 +0.7
baz=86,SNR=8.8
Q04C Lincoln 86.42 41 ⇑P P 10 05 48.0 -0.4
baz=86
CMB Columbia Colle 86.43 42 *e*P P 10 05 48.6 +0.1
CMB *e**PP pP 10 06 02.1 -0.1
CMB pmax pmax
comp=Z,15nm,1.0s,mb5.2
CMB Columbia Colle 86.43 42 *e*P P 10 05 48.6 +0.2
comp=Z,15nm,1.0s,mb5.2
CMB *epP* pP 10 06 02.0 -0.2
CMB Columbia Colle 86.43 42 ⇓P P 10 05 48.2 -0.3
baz=86,SNR=14
GLA Glamis 86.55 48 *e*P P 10 05 50.1 +1.0
GLA *e**PP pP 10 06 03.6 +0.7
GLA Glamis 86.55 48 ⇓P P 10 05 49.7 +0.6
baz=87,SNR=5.5
KCC Kaiser Creek 86.57 43 ⇓P P 10 05 49.4 +0.2
baz=87
O02C Red Bluff 86.57 39 ⇓P P 10 05 49.6 +0.4
baz=87,SNR=8.4
OHCM Honcut 86.70 40 *e*P P 10 05 49.6 -0.2
OHCM *epP* pP 10 06 03.8 +0.3
CWC Cottonwood Cre 86.71 44 P P 10 05 50.2 +0.3
baz=87,SNR=6.5
LAVA Lava Cap Winer 86.72 41 ⇑P P 10 05 49.5 -0.4
baz=87,SNR=6.3
HEC Hector,Ludlow 86.73 46 ⇓P P 10 05 50.0 0.0
baz=87,SNR=7.4
GSC Goldstone 86.75 46 *e*P P 10 05 50.7 +0.7
GSC *e**PP pP 10 06 04.5 +0.7
GSC Goldstone 86.75 46 ⇑P P 10 05 50.4 +0.4
baz=87,SNR=10
MPMC Manual Prospec 86.82 45 ⇑P P 10 05 50.7 +0.3
baz=87,SNR=15
ORV Oroville 86.84 40 ⇑P P 10 05 50.1 -0.4
baz=87,SNR=5.8
O03C Acorn Hollow, 86.85 39 ⇓P P 10 05 50.3 -0.3
baz=87
DAC Darwin (Calif) 86.90 45 *e*P P 10 05 51.3 +0.5
DAC *e**PP pP 10 06 04.9 +0.3
WDC Whiskeytown Da 86.98 39 *e*P P 10 05 51.4 +0.2
WDC pmax pmax
comp=Z,19nm,1.2s,mb5.2
WDC Whiskeytown Da 86.98 39 *e*P P 10 05 51.4 +0.2
comp=Z,18nm,1.2s,mb5.2
WDC Whiskeytown Da 86.98 39 ⇓P P 10 05 50.9 -0.3
baz=87,SNR=5.9
MTUM Tungsten Hills 87.03 43 *e*P P 10 05 52.1 +0.7
MTUM *epP* pP 10 06 05.5 +0.3
TIN Tinemaha 87.03 44 ⇓P P 10 05 51.6 +0.1
baz=87
IRM Iron Mountain 87.05 47 ⇓P P 10 05 51.9 +0.4
baz=87,SNR=12
MLAC Mammoth Lakes 87.06 43 ⇓P P 10 05 52.0 +0.5
baz=87
R05C Kirkwood Meado 87.06 41 P P 10 05 51.6 0.0
baz=87,SNR=9.5
GMRC Granite Mounta 87.12 47 ⇓P P 10 05 52.2 +0.3
baz=87,SNR=7.6
P05C Yuba Gap, Truc 87.17 41 ⇑P P 10 05 52.0 0.0
baz=87,SNR=8.2
Y12C Blythe 87.19 48 ⇑P P 10 05 52.6 +0.4
baz=87
R07C Lee Vining 87.24 42 ⇓P P 10 05 52.4 0.0
baz=87
WAKR Walker 87.29 42 *e*P P 10 05 52.7 0.0
R06C Coleville 87.30 42 P P 10 05 53.0 +0.3
baz=87,SNR=8.2
TUQ Turquoise Mtn. 87.38 46 ⇓P P 10 05 53.5 +0.4
baz=88
M02C Callahan 87.39 38 ⇓P P 10 05 53.2 0.0
baz=88
O05C Quincy 87.45 40 ⇓P P 10 05 53.0 -0.4
baz=88
SHOC Shoshone 87.46 46 ⇑P P 10 05 53.6 +0.1
baz=88,SNR=9.9
FURC Furnace Creek, 87.47 45 ⇓P P 10 05 53.3 -0.3
baz=88,SNR=7.3
GRAC Grapevine Rang 87.51 44 ⇓P P 10 05 53.9 +0.1
baz=88
L02A Cave Junction 87.53 37 ⇑P P 10 05 53.9 0.0
baz=88
O04C Chester 87.60 40 ⇓P P 10 05 54.2 0.0
baz=88
WCN Washoe City 87.65 41 ⇓P P 10 05 54.2 -0.2
baz=88,SNR=5.7
Y13A Salome 87.68 48 ⇑P P 10 05 55.3 +0.8
baz=88
BEKR Beckwourth 87.69 40 ⇑P P 10 05 54.2 -0.4
baz=88
M03C McCloud 87.70 38 ⇑P P 10 05 54.3 -0.3
baz=88
YBH Yreka Blue Hor 87.70 38 ⇑P P 10 05 54.7 0.0
baz=88
HATC Hat Creek Radi 87.74 39 ⇑P P 10 05 54.3 -0.5
baz=88
U10A Ash Meadows, A 87.77 45 ⇑P P 10 05 55.3 +0.3
baz=88,SNR=11
NEE2 Needles Airpor 87.78 47 ⇓P P 10 05 55.0 0.0
baz=88
PDMCI Parker Dam,Lak 87.78 48 ⇑P P 10 05 55.3 +0.2
baz=88
P06A Stead Airport, 87.83 41 ⇓P P 10 05 54.9 -0.4
baz=88
NVAR Mina Array Bea 87.90 43 P P 10 05 55.1 -0.5
comp=Z,7.0nm,0.9s,mb4.9,baz=206,slow=6.3,SNR=46
Q07A Schurz 87.95 42 ⇓P P 10 05 55.8 0.0
baz=88
W12A Cal Nev Ari 87.95 47 ⇓P P 10 05 56.3 +0.4
baz=88,SNR=7.6
R08A Mina 87.97 43 ⇓P P 10 05 55.6 -0.3
baz=88,SNR=8.0
Z14A Wintersburg 87.97 49 ⇑P P 10 05 56.1 +0.2
baz=88
115A Sonoran Desert 88.04 50 ⇑P P 10 05 56.5 +0.3
baz=88
S09A Goldfield 88.08 44 ⇓P P 10 05 56.2 -0.3
baz=88,SNR=6.1
PAHR Pah Rah Range 88.14 41 *e*P P 10 05 56.9 +0.1
comp=Z,13nm,1.1s,mb5.1
X13A Yucca 88.17 48 ⇑P P 10 05 57.4 +0.6
baz=88,SNR=7.9
O06A Flanigan 88.19 40 ⇓P P 10 05 56.0 -1.0
baz=88
V12A Nelson 88.24 46 ⇑P P 10 05 57.5 +0.3
baz=88,SNR=5.4
M05C Lookout 88.28 39 ⇑P P 10 05 56.9 -0.5
baz=88
Y14A Wickenburg 88.29 49 ⇑P P 10 05 57.6 +0.1
baz=88,SNR=8.7
116A Eloy 88.30 50 ⇓P P 10 05 57.6 0.0
baz=88
P07A Fallon 88.31 41 ⇓P P 10 05 57.2 -0.4
baz=88
TPH Tonopah 88.31 43 *e*P P 10 05 58.0 +0.5
TPH *e* pP 10 06 11.5 +0.2
TPH pmax pmax
comp=Z,16nm,1.0s,mb5.2
TPH Tonopah 88.31 43 *e*P P 10 05 58.0 +0.5
comp=Z,16nm,1.0s,mb5.2
TPH *e* pP 10 06 11.5 +0.2
Q08A Gabbs 88.41 42 ⇑P P 10 05 57.3 -0.6
baz=88,SNR=8.4
L04A Klamath Falls 88.45 38 ⇓P P 10 05 57.9 -0.3
baz=89
W13A Hualapai Mount 88.45 47 ⇑P P 10 05 58.2 0.0
baz=89
R09A Tonopah 88.50 43 ⇑P P 10 05 58.4 -0.1
baz=89,SNR=18
SHPR Sheep Range 88.54 46 *e*P P 10 05 59.4 +0.8
M06C Likely Place G 88.54 39 ⇓P P 10 05 58.5 -0.2
baz=89
N06A Buffalo Meadow 88.59 40 ⇑P P 10 05 58.3 -0.5
baz=89,SNR=8.0
MDJ Mudanjiang 88.63 325 P P 10 05 59.5 +0.5
MDJ AP pP 10 06 11.8 -1.1
MDJ XP sP 10 06 16.6 -1.5
MDJ PP PP 10 09 26.8 -1.1
MDJ S S 10 16 41.8 -0.2
MDJ XS sS 10 17 02.8 -2.4
MDJ AMB AMB
comp=Z,13nm,0.9s,mb5.3
MDJ AMB AMB
comp=Z,62nm,4.7s
MDJ LR LR
comp=N,71nm,21.0s,MS4.2
MDJ LR LR
comp=E,74nm,21.7s,MS4.2
MDJ LR LR
comp=Z,125nm,22.4s,MS4.3
X14A Yava 88.70 48 ⇑P P 10 05 59.9 +0.5
baz=89,SNR=12
O07A Toulon 88.73 41 ⇓P P 10 05 58.6 -1.0
baz=89,SNR=7.5
TUC Tucson 88.77 51 *e*P P 10 06 00.2 +0.5
TUC pmax pmax
comp=Z,22nm,1.6s,mb5.2
TUC Tucson 88.77 51 *e*P P 10 06 00.2 +0.5
comp=Z,22nm,1.6s,mb5.2
Q09A Carvers 88.83 43 ⇑P P 10 05 59.6 -0.4
baz=89
K04A Chilquin 88.84 38 ⇑P P 10 05 59.5 -0.5
baz=89
P08A Dixie Valley 88.87 42 ⇑P P 10 05 59.9 -0.3
baz=89
U12A Valley of Fire 88.88 46 ⇓P P 10 06 00.7 +0.5
baz=89,SNR=7.6
L05A Lakeview 88.93 39 ⇓P P 10 06 00.7 +0.2
baz=89
R10A Warm Springs 88.99 44 ⇑P P 10 06 01.0 +0.2
baz=89,SNR=11
HABR Khabarovsk 89.02 331 ⇑*i*P P 10 06 01.0 +0.1
HABR S SKSac 10 16 27.5 +0.8
HABR pmax pmax
comp=Z,59nm,1.7s,mb5.6
HABR MLR MLR
comp=Z,238nm,17.6s,MS4.7
W14A Seligman 89.03 48 ⇓P P 10 06 01.9 +1.0
baz=89,SNR=8.8
CFAA Coronel Fontan 89.12 126 P P 10 06 02.1 +0.7
comp=Z,0.3nm,0.9s,baz=308,slow=1.5,SNR=6.9
X15A Humboldt 89.13 49 P P 10 06 02.3 +0.9
baz=89,SNR=10
P09A Austin 89.32 42 ⇑P P 10 06 01.9 -0.4
baz=89
M07A Soldier Meadow 89.39 40 ⇑P P 10 06 02.4 -0.2
baz=90
W15A Williams 89.54 48 ⇑P P 10 06 04.0 +0.7
baz=90
N08A GE Springer Mi 89.56 41 ⇓P P 10 06 03.0 -0.5
baz=90,SNR=8.3
J05A Fort Rock 89.57 37 ⇑P P 10 06 03.4 0.0
baz=90,SNR=6.5
O09A Fish Creek Ran 89.70 42 ⇓P P 10 06 03.6 -0.5
baz=90,SNR=5.7
L07A Adell 89.72 39 ⇓P P 10 06 03.9 -0.3
baz=90,SNR=6.9
K06A Valley Falls 89.76 38 ⇓P P 10 06 03.9 -0.5
baz=90,SNR=6.4
P10A Eureka 89.76 43 ⇑P P 10 06 04.1 -0.2
baz=90
SNY Shenyang 89.83 320 ⇓P P 10 06 04.4 -0.3
SNY AMB AMB
comp=Z,8.0nm,0.8s,mb5.1
BMN Battle Mountai 89.86 42 *e*P P 10 06 04.5 -0.3
BMN pmax pmax
comp=Z,19nm,1.3s,mb5.3
BMN Battle Mountai 89.86 42 *e*P P 10 06 04.5 -0.3
comp=Z,19nm,1.3s,mb5.3
M08A Happy Creek Ra 89.87 40 ⇓P P 10 06 03.5 -1.3
baz=90,SNR=6.1
N09A Rock Creek Ran 89.96 41 ⇓P P 10 06 04.7 -0.6
baz=90
H04A Detroit Lake 90.05 36 ⇑P P 10 06 04.9 -0.8
baz=90
J06A Christmas Vall 90.12 38 ⇑P P 10 06 05.3 -0.7
baz=90,SNR=8.2
P11A Circle Ranch, 90.14 43 ⇑P P 10 06 05.8 -0.3
baz=90
CN2 Changchun 90.16 323 *e*P P 10 06 05.8 -0.4
CN2 *e*XP sP 10 06 24.4 -0.8
CN2 *e*S S 10 16 53.8 -2.5
CN2 AMB AMB
comp=Z,20nm,1.3s,mb5.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,20.0s,MS4.7
CN2 LR LR
comp=E,200nm,20.0s,MS4.7
CN2 LR LR
comp=Z,200nm,21.0s,MS4.5
O10A Cortez Mining, 90.18 42 ⇓P P 10 06 06.1 -0.2
baz=90
K07A Rock Creek Ran 90.23 39 ⇑P P 10 06 06.4 -0.1
baz=90
F03A Seaside 90.25 34 ⇓P P 10 06 06.4 -0.2
baz=90
G04A Mulino 90.27 35 ⇓P P 10 06 06.2 -0.6
baz=90
CCUT Cedar City 90.31 46 *e*P P 10 06 07.7 +0.8
CCUT *e* pP 10 06 21.2 +0.4
WUAZ Wupatki 90.32 48 *e*P P 10 06 07.5 +0.6
comp=Z,8.7nm,0.7s,mb5.2
WUAZ *epP* pP 10 06 21.7 +0.9
Q12A Willow Creek R 90.36 44 ⇑P P 10 06 06.9 -0.2
baz=90,SNR=5.5
M09A Marrel Ranch, 90.38 41 ⇓P P 10 06 07.2 0.0
baz=90,SNR=5.2
L08A Fields 90.39 40 ⇓P P 10 06 07.2 -0.1
baz=90,SNR=6.8
WVOR Wild Horse Val 90.39 39 *e*P P 10 06 07.1 -0.2
WVOR *e* pP 10 06 17.0 -4.1
WVOR pmax pmax
comp=Z,16nm,1.4s,mb5.2
WVOR Wild Horse Val 90.39 39 *e*P P 10 06 07.1 -0.2
comp=Z,16nm,1.4s,mb5.2
WVOR *e* pP 10 06 17.0 -4.1
N10A Dunphy 90.45 42 ⇑P P 10 06 07.5 -0.1
baz=91
H05A Madras 90.52 37 ⇓P P 10 06 07.5 -0.4
baz=91,SNR=6.6
I06A Prineville 90.56 38 ⇓P P 10 06 08.2 +0.1
baz=91,SNR=12
O11A Cowboy Ranch, 90.57 43 ⇓P P 10 06 07.9 -0.2
baz=91,SNR=7.8
P12A McGill 90.59 43 ⇑P P 10 06 08.1 -0.2
baz=91,SNR=6.7
L09A Wilkinson Ranc 90.65 40 ⇑P P 10 06 08.1 -0.4
baz=91
K08A Mann Creek Ran 90.67 39 ⇑P P 10 06 08.4 -0.2
baz=91,SNR=9.6
E03A Lebam 90.68 34 ⇑P P 10 06 08.8 +0.1
baz=91,SNR=6.0
F04A Amboy 90.81 35 ⇑P P 10 06 08.8 -0.4
baz=91
M10A I.L. Ranch, Tu 90.96 41 ⇑P P 10 06 10.0 0.0
baz=91
D03A Wishkah Elem. 90.99 33 ⇑P P 10 06 09.6 -0.5
baz=91
I07A Izee 91.03 38 ⇓P P 10 06 10.2 -0.1
baz=91,SNR=11
K09A Rome 91.07 40 ⇑P P 10 06 10.2 -0.3
baz=91,SNR=8.7
E04A Onalaska 91.13 34 ⇑P P 10 06 10.7 0.0
baz=91
O12A Currie 91.19 43 ⇓P P 10 06 10.8 -0.2
baz=91
C03A Quillayute Air 91.21 33 ⇓P P 10 06 11.0 -0.1
baz=91
F05A White Salmon 91.26 35 ⇑P P 10 06 10.9 -0.4
baz=91
M11A Holland Ranch, 91.33 42 ⇓P P 10 06 11.7 0.0
baz=91,SNR=7.0
N12A Clover Valley, 91.39 42 ⇑P P 10 06 11.8 -0.2
baz=92
I08A Drewsey 91.41 38 ⇓P P 10 06 11.5 -0.6
baz=92
D04A Dobbs Creek Ra 91.45 34 ⇓P P 10 06 11.1 -1.1
baz=92
MSU Marysvale 91.64 46 *e*P P 10 06 14.2 +1.1
MSU *e**PP pP 10 06 28.2 +1.2
GYA Guiyang 91.70 300 P P 10 06 19.3 +5.9
GYA AP pP 10 06 32.5 +5.3
GYA XP sP 10 06 37.9 +5.5
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.5
GYA AMB AMB
comp=Z,110nm,5.7s
GYA LR LR
comp=N,420nm,18.7s,MS5.0
GYA LR LR
comp=E,390nm,18.9s,MS5.0
GYA LR LR
comp=Z,340nm,19.4s,MS4.8
H08A Prairie City 91.77 38 ⇑P P 10 06 12.8 -0.9
baz=92
C04A Brinnon 91.80 33 ⇑P P 10 06 13.0 -0.8
baz=92
M12A Wells 91.82 42 ⇑P P 10 06 13.7 -0.3
baz=92
N13A Wendover, West 91.88 43 ⇑P P 10 06 13.9 -0.3
baz=92
I09A Lost Marbles R 91.90 39 ⇓P P 10 06 13.7 -0.6
baz=92,SNR=5.4
D05A Enumclaw 91.90 34 ⇓P P 10 06 14.2 -0.1
baz=92
MNTX Cornudas Mount 92.13 54 *e*P P 10 06 15.5 +0.1
comp=Z,7.4nm,1.3s,mb4.9
MNTX *epP* pP 10 06 29.2 0.0
M13A Montello 92.22 42 ⇓P P 10 06 15.2 -0.6
baz=92
DUG Dugway 92.30 44 *e*P P 10 06 16.4 +0.3
H09A Durkee 92.40 38 ⇑P P 10 06 15.7 -0.9
baz=92
C05A Tolt Reservoir 92.40 34 ⇓P P 10 06 15.6 -1.0
baz=92
F08A Pendleton 92.57 37 ⇑P P 10 06 16.9 -0.5
baz=93
HAWA Hanford 92.58 36 *e*P P 10 06 17.4 -0.1
B05A Bryant 92.60 33 ⇑P P 10 06 17.0 -0.6
baz=93
BMO Blue Mountains 92.72 38 *e*P P 10 06 17.2 -0.9
BMO *e**PP pP 10 06 31.1 -0.8
BMO pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
BMO Blue Mountains 92.72 38 *e*P P 10 06 17.2 -0.8
comp=Z,2.5nm,0.8s,mb4.7
BMO *epP* pP 10 06 31.1 -0.8
TMUT Trail Mountain 92.72 45 *e*P P 10 06 19.3 +1.2
TMUT *epP* pP 10 06 26.3 -5.6
SRU San Rafael 93.03 46 *e*P P 10 06 20.1 +0.6
SRU *e**PP pP 10 06 33.6 +0.2
ANMO Albuquerque 93.23 51 *e*P P 10 06 20.9 +0.4
ANMO *e* 10 06 39.7
ANMO pmax pmax
comp=Z,7.0nm,1.2s
ANMO Albuquerque 93.23 51 *e*P P 10 06 20.9 +0.4
comp=Z,7.2nm,1.2s,mb5.0
ANMO *e* 10 06 39.7
HLID Hailey 93.47 41 *e*P P 10 06 21.6 +0.1
comp=Z,5.2nm,0.6s,mb5.1
KMI Kunming 93.99 297 P P 10 06 26.6 +2.7
KMI AP pP 10 06 40.1 +2.3
KMI XP sP 10 06 44.8 +1.8
KMI PP PP 10 10 13.6 +3.3
KMI PPP 10 12 15.3
KMI S S 10 17 29.4 -1.3
KMI XS sS 10 17 50.3 -3.7
KMI SS SS 10 23 55.4 +4.5
KMI SSS 10 27 29.6
KMI AMB AMB
comp=Z,4.0nm,1.1s,mb4.8
KMI AMB AMB
comp=Z,66nm,5.2s
KMI LR LR
comp=N,88nm,24.8s,MS4.3
KMI LR LR
comp=E,87nm,24.0s,MS4.3
KMI LR LR
comp=Z,99nm,23.2s,MS4.2
AHID Auburn Hatcher 94.89 43 *e*P P 10 06 28.3 +0.3
comp=Z,13nm,0.8s,mb5.4
RRI2 Red Ridge 95.11 42 *e*P P 10 06 29.4 +0.3
RRI2 *epP* pP 10 06 37.5 -5.4
MCMT McKenzie Canyo 95.14 40 *e*P P 10 06 29.2 0.0
MCMT *epP* pP 10 06 43.0 -0.1
SMCO Snowmass 95.31 47 *e*P P 10 06 30.3 +0.3
REDW Red Top Meadow 95.39 42 *e*P P 10 06 30.1 -0.3
comp=Z,9.8nm,1.1s,mb5.2
REDW *epP* pP 10 06 44.0 -0.2
TPAW Teton Pass 95.41 42 *e*P P 10 06 30.8 +0.3
comp=Z,6.9nm,1.2s,mb5.0
TPAW *epP* pP 10 06 44.7 +0.5

SNOW	**Snow King Moun**	**95.51**	**42**	*e*P	**P**	**10 06 30.8**	**-0.1**
	comp=Z,8.9nm,0.9s,mb5.2						
SNOW				*e*pP	pP	10 06 44.6	-0.1
DLMT	**Dillon**	**95.61**	**40**	*e*P	**P**	**10 06 31.3**	**0.0**
	comp=Z,9.1nm,1.3s,mb5.0						
IMW	**Indian Meadow**	**95.66**	**42**	*e*P	**P**	**10 06 34.6**	**+3.0**
	comp=Z,7.6nm,1.1s,mb5.0						
IMW				*e*	pP	10 06 48.5	+3.1
LOHW	**Long Hollow**	**95.69**	**42**	*e*P	**P**	**10 06 31.5**	**-0.2**
PDAR	**Pinedale Array**	**95.80**	**43**	P	**P**	**10 06 29.7**	**-2.5**
	comp=Z,0.8nm,0.8s,mb4.2,baz=252,slow=3.0,SNR=7.7						
PDAR				PKKPbc	PKKPbc	10 23 28.8	+7.5
	comp=Z,0.6nm,0.7s,baz=77,slow=6.7,SNR=4.2						
PDAR				LR	LR	10 47 19.2	
	comp=Z,174nm,18.2s,MS4.6,baz=240,slow=34						
FLWY	**Flagg Ranch**	**95.91**	**42**	*e*P	**P**	**10 06 33.0**	**+0.3**
	comp=Z,12nm,1.1s,mb5.2						
FLWY				*e*pP	pP	10 06 46.9	+0.3
QLMT	**Earthquake Lak**	**95.94**	**41**	*e*P	**P**	**10 06 33.6**	**+0.7**
CD2	**Chengdu**	**96.23**	**302**	*e*P	**P**	**10 06 33.0**	**-1.2**
CD2				AP	pP	10 06 46.5	-1.5
CD2				XP	sP	10 06 51.8	-1.4
CD2				PP	PP	10 10 28.4	+0.7
CD2				SKS		10 17 04.3	
CD2				S	S	10 17 45.1	-5.0
CD2				XS	sS	10 18 08.0	-5.5
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.5						
CD2				AMB	AMB		
	comp=Z,180nm,9.8s						
CD2				LR	LR		
	comp=N,70nm,18.0s						
CD2				LR	LR		
	comp=Z,70nm,16.8s,MS4.2						
HHC	**Hu-ho-hao-te**	**96.31**	**314**	*e*P	**P**	**10 06 35.4**	**+0.9**
HHC				AP	pP	10 06 48.9	+0.5
HHC				XP	sP	10 06 54.1	+0.6
HHC				PP	PP	10 10 31.3	+3.0
HHC				S	S	10 17 47.9	-2.9
HHC				XS	sS	10 18 11.0	-3.2
HHC				PS	PS	10 19 19.0	+2.9
HHC				SS	SS	10 24 24.8	+1.0
HHC				AMB	AMB		
	comp=Z,15nm,1.5s,mb5.2						
HHC				AMB	AMB		
	comp=Z,53nm,7.1s						
HHC				LR	LR		
	comp=N,100nm,24.7s,MS4.5						
HHC				LR	LR		
	comp=E,159nm,27.5s,MS4.5						
HHC				LR	LR		
	comp=Z,187nm,26.9s,MS4.4						
BOZ	**Bozeman (W)**	**96.32**	**40**	*e*P	**P**	**10 06 34.4**	**-0.2**
COLA	**College**	**97.58**	**12**	*e*P	**P**	**10 06 38.3**	**-2.0**
COLA				*e*	pP	10 06 49.1	-5.1
COLA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.7						
COLA	**College**	**97.58**	**12**	*e*P	**P**	**10 06 38.2**	**-2.0**
	comp=Z,1.7nm,0.8s,mb4.6						
COLA				*e*	pP	10 06 49.1	-5.1
BILL	**Bilibino**	**98.68**	**354**	*e*P	**P**	**10 06 44.2**	**-1.0**
BILL				*e*		10 10 46.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.7						
BILL				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.7						
LZH	**Lanzhou**	**98.84**	**307**	*e*P	**P**	**10 06 46.0**	**+0.1**
LZH				AP	pP	10 06 59.0	-0.8
LZH				XP	sP	10 07 05.0	0.0
LZH				PP	PP	10 10 50.0	+2.3
LZH				SKS		10 17 18.0	
LZH				*e*S	S	10 18 08.8	-3.6
LZH				SS	SS	10 25 01.0	+1.5
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb5.4						
LZH				AMB	AMB		
	comp=Z,90nm,5.4s						
LZH				LR	LR		
	comp=E,477nm,17.8s						
LZH				LR	LR		
	comp=Z,855nm,18.9s,MS5.3						
CPUP	**Villa Florida**	**99.88**	**128**	LR	LR	10 43 11.7	
	comp=Z,160nm,20.5s,MS4.5,baz=60,slow=30						
RSSD	**Black Hills**	**99.88**	**45**	*e*P	Pdif	10 06 50.4	-0.2
WMQ	**Urumqi**	**113.33**	**308**	*e*PDIF	Pdif	10 07 52.0	+1.6
WMQ				PP	PP	10 12 40.0	+5.5
WMQ				SKS	SKSdf	10 18 52.0	+0.2
WMQ				SS	SS	10 28 18.0	+1.2
WMQ				PP	PP		
	comp=Z,124nm,7.0s						
WMQ				LR	LR		
	comp=N,137nm,15.0s,MS5.0						
WMQ				LR	LR		
	comp=E,234nm,15.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,252nm,16.0s,MS4.9						
NVS	**Novosibirsk**	**119.18**	**319**	*e*PKIKP	PKPdf	10 11 57.8	+3.0
KURK	**Kurchatov**	**121.12**	**314⇑**	*i*PKIKP	PKPdf	10 11 58.1	-0.4
KURK	**Kurchatov**	**121.12**	**314⇑**	*e*PKP	PKPdf	10 11 58.1	-0.4
AAK	**Ala-Archa**	**122.24**	**304⇑**	*e*PKIKP	PKPdf	10 11 59.9	-0.8
BRVK	**Borovoye**	**126.53**	**316⇑**	*e*PKIKP	PKPdf	10 12 07.0	-1.9
SVE	**Sverdlovsk**	**131.93**	**321**	*e*PKIKP	PKPdf	10 12 18.0	-1.2
SVE				*e*		10 12 33.0	
SVE				*e*		10 14 47.0	
ARCES	**ARCESS Array B**	**138.46**	**348**	PKhKP		10 12 21.2	
	comp=Z,0.6nm,0.4s,baz=60,slow=3.0,SNR=9.2						
JOF	**Joensuu**	**142.34**	**339**	*e*pkp	PKPdf	10 12 31.7	-6.7
GNI	**Garni**	**144.24**	**298**	*e*PKIKP	PKPdf	10 12 40.4	-1.3
GNI				*e*		10 12 56.8	
BHD	**Baghdad**	**144.28**	**286**	*e*x	x	10 12 37.0	
MOS	**Moscow**	**144.34**	**326**	*e*PKHKP		10 12 35.8	
MOS				pmax	pmax		
	comp=Z,57nm,1.0s						
KAF	**Kangasniemi**	**144.46**	**341**	*e*pkp	PKPdf	10 12 37.2	-4.9
	baz=36,slow=3.3						
ZEI	**Tsey**	**144.65**	**302**	*e*PKIKP	PKPdf	10 12 41.4	-1.0
GOF	**Gofitskoye**	**144.91**	**306**	*e*PKIKP	PKPdf	10 12 41.2	-1.7
GOF				pmax	pmax		
	comp=Z,50nm,0.7s						
PUL	**Pulkovo**	**144.95**	**336⇓**	*i*PKIKP	PKPdf	10 12 40.5	-2.4
FINES	**FINESS Array B**	**145.06**	**340**	PKP	PKPdf	10 12 40.8	-2.3
	comp=Z,63nm,0.8s,baz=64,slow=4.4,SNR=176						
HAKT	**HAKKARI**	**145.09**	**293**	*i* P	PKPbc	10 12 43.6	+0.9
OBN	**Obninsk**	**145.18**	**326***c*	*i*PKIKP	PKPdf	10 12 41.3	-2.0
OBN				pmax	pmax		
	comp=Z,72nm,1.0s						
OBN	**Obninsk**	**145.18**	**326**	*e*PKPdf	PKPdf	10 12 41.7	-1.6
KIV	**Kislovodsk**	**145.35**	**305**	*e*PKIKP	PKPdf	10 12 43.5	-0.1
KIV				*e*		10 12 56.8	
KIV	**Kislovodsk**	**145.35**	**305**	*e*PKPdf	PKPdf	10 12 43.5	-0.2
KIV				*e*		10 12 56.8	
MSL	**Mosul**	**145.57**	**291**	*e*x	x	10 12 46.0	
VRSR	**Storozhevoye**	**145.57**	**318**	*e*PKP2	PKPab	10 12 42.9	-1.6
ERZM	**Erzurum**	**146.84**	**298**	*i* P	PKPbc	10 12 49.0	+1.0
VSU	**Vasula**	**147.17**	**336⇑**	*i*PKP2	PKPbc	10 12 47.8	-1.1
KELT	**Kelkit**	**148.43**	**298**	*i* P	PKPbc	10 12 52.9	+0.6
NB2	**NORSAR Subarra**	**148.60**	**352**	PKPa	PKPbc	10 12 50.8	-2.0
	comp=Z,23nm,0.9s,baz=13,slow=2.8						
NOA	**NORSAR Array B**	**148.60**	**352**	PKPbc	PKPbc	10 12 51.1	-1.7
	comp=Z,11nm,0.8s,baz=16,slow=4.2,SNR=34						
ELZG	**Elazig**	**148.79**	**295**	*i* P	PKPbc	10 12 54.6	+1.3
ANN	**Anapa**	**148.84**	**308**	*i* PKIKP	PKPdf	10 12 51.7	+2.2
ANN				pmax	pmax		
	comp=Z,78nm,1.4s						
MALT	**Malatya**	**149.24**	**295**	*e*PKP2	PKPbc	10 12 55.3	+0.9
MNK	**Minsk**	**149.58**	**330**	*e*PKHKP	PKPbc	10 12 52.0	-3.3
GZT	**Gaziantep**	**149.99**	**293**	*i* P	PKPbc	10 12 56.8	+0.6
KONO	**Kongsberg**	**150.15**	**353**	*e*PKHKP	PKPbc	10 12 55.3	-1.3
KONO				*e*		10 13 01.7	
KONO	**Kongsberg**	**150.15**	**353**	*e*PKPbc	PKPbc	10 12 55.3	-1.4
KONO				*e*PKPab	PKPab	10 13 01.6	-1.1
KONO				*e*pPKPdf	pPKPdf	10 13 05.8	-0.1
COBT	**Iskenderun**	**151.08**	**292**	*i* P	PKPbc	10 12 59.6	+0.7
AKASG	**Malin Array Be**	**151.32**	**323**	PKP	PKPdf	10 12 52.1	-1.2
	comp=Z,0.2nm,0.3s,baz=49,slow=2.1,SNR=4.0						
AKASG				PKPbc	PKPbc	10 12 57.9	-1.5
	comp=Z,12nm,0.9s,baz=43,slow=2.3,SNR=50						
AKBB	**Malin Array Si**	**151.32**	**323**	*e*PKIKP	PKPbc	10 12 58.2	-1.2
AKBB				*e*		10 13 04.3	
BOYT	**Boyabat**	**151.47**	**302**	*i* P	PKPbc	10 12 59.9	+0.2
BHL	**Bhannes**	**151.59**	**286**	*e*P	PKPbc	10 13 00.5	+0.5
EIL	**Elat**	**151.78**	**277**	*e*PKPbc	PKPbc	10 13 01.3	+0.9
SUW	**Suwalki**	**151.83**	**334**	*e*PKP	PKPbc	10 12 59.4	-1.2
BALT	**Daday**	**152.56**	**303**	*i* P	PKPbc	10 13 02.4	+0.2
BR131	**Keskin Array S**	**152.76**	**299**	*e*PKPbc	PKPbc	10 13 02.3	-0.4
BRTR	**Keskin Array B**	**152.76**	**299**	PKPbc	PKPbc	10 13 02.1	-0.5
	comp=Z,9.1nm,0.9s,baz=116,slow=2.9,SNR=35						
MEST	**Erdemli**	**152.77**	**292**	*i* P	PKPbc	10 13 02.8	+0.1
ANTO	**Ankara**	**153.37**	**299**	*e*PKIKP	PKPbc	10 13 04.4	+0.4
KWP	**Kalwaria**	**155.23**	**327**	*e*PKP	PKPab	10 13 23.6	-0.5
KWP				L		10 46 06.5	
	comp=Z,3.3nm,17.6s						
KWP	**Kalwaria**	**155.23**	**327**	*e*PKP	PKPab	10 13 23.6	-0.5
BSEG	**Bad Segeberg**	**155.59**	**349**	*e*PKPab	PKPab	10 13 24.3	-1.3
DBIC	**Dimbokro**	**155.63**	**162**	PKP	PKPdf	10 13 00.4	+0.9
	comp=Z,8.0nm,1.0s,baz=195,slow=7.4,SNR=3.7						
KOLS	**Kolonicke sedl**	**155.92**	**327**	*e*PKP	PKPdf	10 13 01.6	+1.7
KOLS				*e*		10 13 27.3	
STHS	**Stebnicka Huta**	**156.06**	**329**	*e*PKP	PKPab	10 13 27.2	-0.4
RUE	**Ruedersdorf**	**156.20**	**342**	*e*PKPab	PKPab	10 13 27.0	-1.3
CRVS	**Cervenica-Dubn**	**156.32**	**327**	*e*PKP	PKPab	10 13 26.2	-2.6
KSP	**Ksiaz**	**156.89**	**337**	*e*PKP	PKPab	10 13 30.7	-0.5
NRDL	**Niedersach Rie**	**157.01**	**348**	*e*PKPab	PKPab	10 13 30.2	-1.5
OKC	**Ostrava-Krasne**	**157.04**	**333**	*e*PKPab	PKPab	10 13 30.9	-1.0
KECS	**Kecovo**	**157.08**	**328**	*i* PKP	PKPab	10 13 31.0	-1.0
DRGR		**157.12**	**322⇑**	*i*P	PKPab	10 13 29.4	-2.8
UPC	**Upice**	**157.27**	**337**	*e*PKPab	PKPab	10 13 32.5	-0.4
DPC	**Dobruska-Polom**	**157.30**	**336**	*e*PKPab	PKPab	10 13 32.7	-0.3
CLL	**Collm**	**157.47**	**342**	*e*PKIKP	PKPdf	10 13 03.0	+1.1
CLL				*e*		10 13 18.0	
CLL				*i* PKP2	PKPab	10 13 32.2	-1.5
CLL				*e*		10 13 38.0	
CLL	**Collm**	**157.47**	**342**	*e*PKPdf	PKPdf	10 13 03.0	+1.1
CLL				*e*PKPdif		10 13 18.0	
CLL				*i* PKPab	PKPab	10 13 32.2	-1.5
	comp=Z,28nm,1.0s						
CLL				*e*x	x	10 13 38.0	
CLL				*e*(PP)		10 17 30.0	
IBBN	**Ibbenburen**	**157.56**	**351**	*e*PKPab	PKPab	10 13 32.8	-1.3
CLZ	**Clausthal**	**157.58**	**347**	*e*PKPab	PKPab	10 13 33.1	-1.1
BRG	**Berggiesshubel**	**157.60**	**340**	*e*PKPab	PKPab	10 13 33.1	-1.2
BRG	**Berggiesshubel**	**157.60**	**340**	*e*PKP	pPKPdf	10 13 19.2	+2.8
	comp=Z,3.9nm,1.2s						
BRG				*i*		10 13 33.1	
	comp=Z,15nm,0.9s						
FBE	**Freiberg**	**157.73**	**341**	*e*PKPab	PKPab	10 13 33.8	-1.0
PSZ	**Piszkesteto**	**157.76**	**328⇓**	*i*PKP/p	PKPab	10 13 34.4	-0.6
PSZ	**Piszkesteto**	**157.76**	**328⇓**	*i*P	PKPab	10 13 35.0	0.0
VYHS	**Vyhne**	**157.81**	**330**	*i* PKP	PKPab	10 13 34.1	-1.1
PRU	**Pruhonice**	**158.20**	**338**	*e*PKPab	PKPab	10 13 35.9	-1.0
TANN	**Tannenbergstha**	**158.43**	**342**	*e*PKPab	PKPab	10 13 36.9	-1.0
MOX	**Moxa**	**158.43**	**344**	*e*PKPab	PKPab	10 13 36.5	-1.4
MOX	**Moxa**	**158.43**	**344**	*e*P	PKPab	10 13 36.9	-1.0
	comp=Z,32nm,1.5s						
MOX	**Moxa**	**158.43**	**344**	*e*PKP2	PKPab	10 13 36.9	-1.0
MOX				pmax	pmax		
	comp=Z,32nm,1.5s						
WERD	**Werda**	**158.44**	**342**	*e*PKPab	PKPab	10 13 36.9	-1.0
BUG	**Bochum--Univer**	**158.47**	**352**	*e*PKPab	PKPab	10 13 35.9	-2.2
GUNZ	**Gunzen**	**158.51**	**342**	*e*PKPab	PKPab	10 13 37.3	-0.9
WERN	**Wernitzgruen**	**158.57**	**342**	*e*PKPab	PKPab	10 13 37.6	-0.9
NKC	**Novy Kostel**	**158.60**	**342**	*e*PKPab	PKPab	10 13 37.9	-0.7
UBBA	**Unterbreizbach**	**158.62**	**347**	*e*PKPab	PKPab	10 13 37.1	-1.6
MANZ	**Manzenberg**	**158.91**	**342**	*e*PKPab	PKPab	10 13 39.0	-1.0
ROTZ	**Rotzenmuhle**	**159.09**	**342**	*e*PKPab	PKPab	10 13 40.1	-0.6
VTS	**Vitosha**	**159.21**	**312⇑**	*i*P	PKPab	10 13 41.8	+0.6
KHC	**Kasperske Hory**	**159.25**	**339**	*e*PKPab	PKPab	10 13 40.6	-0.9
GRA1	**Grafenberg Arr**	**159.41**	**343**	*e*PKPab	PKPab	10 13 41.5	-0.6
GRF	**Grafenberg Arr**	**159.41**	**343**	*e*PKPab	PKPab	10 13 41.5	-0.6
WET	**Wettzell**	**159.46**	**340**	*e*PKPab	PKPab	10 13 41.7	-0.6
GEC2	**GERESS Array S**	**159.47**	**338**	*e*PKPab	PKPab	10 13 41.3	-1.1
GERES	**GERESS Array B**	**159.47**	**338**	PKP	PKPdf	10 13 01.2	-3.1
	comp=Z,0.8nm,0.9s,baz=224,slow=5.6,SNR=4.4						
GERES				PKPab	PKPab	10 13 41.6	-0.8
	comp=Z,4.7nm,0.8s,baz=35,slow=4.9,SNR=23						
CONA	**Conrad Observa**	**159.48**	**333⇓**	*i*PKPab	PKPab	10 13 42.2	-0.2
	comp=Z,12nm,1.0s						
TNS	**Taunus Mts**	**159.48**	**349**	*e*PKPab	PKPab	10 13 41.1	-1.3
PKSM	**Moragy**	**159.58**	**326⇑**	*i*P	PKPab	10 13 41.7	-1.2
GIVF	**Givet**	**160.04**	**355**	*e*PKP2	PKPab	10 13 43.1	-1.8
BAIF	**Baives**	**160.12**	**356**	*e*PKP2	PKPab	10 13 43.6	-1.6
	comp=Z,130nm,1.7s						
MOA	**Molln**	**160.13**	**336⇓**	*i*P	PKPab	10 13 45.0	-0.3
	comp=Z,16nm,1.3s						
STU	**Stuttgart**	**160.73**	**346**	*e*PKPab	PKPab	10 13 47.7	-0.2
FUR	**Furstenfeldbru**	**160.80**	**342**	*e*PKPab	PKPab	10 13 47.4	-0.8
PERS	**Pernice**	**160.82**	**332**	*e*PKPdf	PKPab	10 13 47.2	-1.0
PERS				*e*PKPbc	PKPab	10 13 52.1	+3.8
BFO	**Black Forest**	**161.33**	**347**	*e*PKPab	PKPab	10 13 48.7	-1.8
FLN	**La Foliniere**	**161.34**	**6**	*e*PKP2	PKPab	10 13 48.6	-2.0
	comp=Z,36nm,1.1s						
CDF	**Champ du Feu**	**161.43**	**350**	*e*PKP2	PKPab	10 13 49.3	-1.6
	comp=Z,34nm,1.2s						
WTTA	**Wattenberg**	**161.51**	**340⇑**	*i*P	PKPab	10 13 50.5	-0.8
	comp=Z,22nm,0.8s						
MOTA	**Moosalm**	**161.59**	**341⇑**	*i*P	PKPab	10 13 50.8	-0.9
	comp=Z,25nm,1.1s						
MEZF	**Maizieres J'vi**	**161.61**	**354**	*e*PKP2	PKPab	10 13 50.3	-1.4
	comp=Z,61nm,1.2s						
BOJS	**Bojanci**	**161.67**	**330**	*e*PKPbc	PKPab	10 13 51.7	-0.3
SQTA	**Sankt Quirin**	**161.68**	**340⇓**	*i*P	PKPab	10 13 51.2	-0.8
	comp=Z,15nm,1.0s						
GRR	**Gorron**	**161.68**	**7**	*e*PKP2	PKPab	10 13 50.0	-2.0
VOJS	**Vojsko**	**161.81**	**333**	*i* PKPbc	PKPab	10 13 50.8	-1.8
HAU	**Haudompre**	**161.96**	**351**	*e*PKP2	PKPab	10 13 51.6	-1.7
	comp=Z,60nm,1.4s						
DAVA	**Damuels**	**161.97**	**343⇑**	*i*P	PKPab	10 13 52.4	-0.9
	comp=Z,14nm,0.8s						
HINF	**Hinteralfeld**	**162.07**	**350**	*e*PKP2	PKPab	10 13 51.9	-1.9
LOR	**Lormes**	**162.92**	**356**	*e*PKP2	PKPab	10 13 55.8	-1.7
TORD	**Torodi Ar. Bea**	**163.01**	**178**	PKP	PKPdf	10 13 08.9	+0.9
	comp=Z,2.6nm,1.2s,baz=188,slow=2.3,SNR=4.9						
TORD				PKPab	PKPab	10 13 59.0	+1.2
	comp=Z,6.0nm,0.8s,baz=163,slow=2.2,SNR=6.3						
TORD				PP	PP	10 17 49.0	+6.3
	comp=Z,1.8nm,1.1s,baz=231,slow=11,SNR=3.8						
TORD	**Torodi Ar. Bea**	**163.01**	**178**	PKP	PKPdf	10 13 08.9	+0.9
TORD				PKPab	PKPab	10 13 59.0	+1.2
TORD				PP	PP	10 17 49.0	+6.3
SSF	**Saint Saulge**	**163.15**	**357**	*e*PKP2	PKPab	10 13 56.9	-1.6
	comp=Z,44nm,1.4s						
CABF	**La Chapelle**	**163.36**	**351**	*e*PKP2	PKPab	10 13 58.0	-1.4
AVF	**Avril sur Loir**	**163.42**	**358**	*e*PKP2	PKPab	10 13 57.8	-1.9
	comp=Z,12nm,1.0s						
SMF	**Signal de Mont**	**163.55**	**356**	*e*PKP2	PKPab	10 13 58.6	-1.6
	comp=Z,38nm,1.1s						
BGF	**Bois d'Agland**	**163.67**	**359**	*e*PKP2	PKPab	10 13 58.9	-1.9
TCF	**Toulx Ste Croi**	**163.94**	**0**	*e*PKP2	PKPab	10 14 00.2	-1.8
	comp=Z,10.0nm,1.0s						
LPL	**La Plagne**	**164.33**	**348**	*e*PKP2	PKPab	10 14 03.0	-0.7
	comp=Z,14nm,0.9s						
LPG	**La Plagne**	**164.35**	**348**	*e*PKP2	PKPab	10 14 03.2	-0.5
	comp=Z,27nm,1.0s						
RJF	**Les Rejaudoux**	**164.91**	**2**	*e*PKP2	PKPab	10 14 04.4	-1.8
ORIF	**Oris-en-Rattie**	**165.05**	**350**	*e*PKP2	PKPab	10 14 05.9	-0.9
	comp=Z,26nm,1.0s						
MBDF	**Montbardon**	**165.09**	**348**	*e*PKP2	PKPab	10 14 05.5	-1.5
	comp=Z,20nm,1.0s						
VIVF	**Saint-Julien-l**	**165.26**	**353**	*e*PKP2	PKPab	10 14 06.5	-1.3
	comp=Z,57nm,1.5s						
SBF	**Sospel**	**165.78**	**345**	*e*PKP2	PKPab	10 14 08.4	-1.6
	comp=Z,114nm,1.2s						
ESDC	**Sonseca Array**	**169.24**	**27**	PKP	PKPdf	10 13 13.4	+0.4
	comp=Z,0.1nm,0.4s,baz=344,slow=4.3,SNR=5.0						
ESDC				PKPab	PKPab	10 14 23.9	-1.4
	comp=Z,1.4nm,0.8s,baz=307,slow=5.5,SNR=5.6						

ISCJB ***13*** *09:59:10.8±2.6, 12.0S±0.1×167.3E±0.1, h315km±25km, mb4.2/15, Error ellipse: s-maj=19.8km s-min=18.6km az=69.1*

IDC ***13*** *09:59:11.4±4.0, 12.02S×167.34E, h304km±37km, mb3.7/7, mb1 3.8/8, mb1mx3.7/14, mbtmp4.4/8, Error ellipse: s-maj=25.6km s-min=19.1km az=77.0*

NEIC ***13*** *09:59:11.3±1.9, 11.95S×167.31E, h308km±17km, mb4.4/8, Error ellipse: s-maj=12.3km s-min=11.4km az=225.0*

ISC 13 09:59:12.0±2.7**, 12.0S**±0.1×**167.3E**±0.1**, h314**km±26km**, n26, σ0.65**/23**, mb4.2**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.06**	**185**	*e*P	**Pn**	**10 01 30.6**	**-0.1**
DZM	**Mont Dzumac**	**10.06**	**185**	P	**Pn**	**10 01 30.6**	**-0.2**
	2.6nm,0.3s,baz=57,slow=19,SNR=26						
ARMA	**Armidale**	**23.42**	**216**	*e*P	**P**	**10 03 55.3**	**+1.6**
CNB	**Canberra Magne**	**28.37**	**212**	*e*P	**P**	**10 04 38.0**	**+0.2**
	3.7nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**30.88**	**226**	*e*P	**P**	**10 04 59.2**	**-0.6**
	8.6nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**30.88**	**226**	P	**P**	**10 05 00.9**	**+1.1**
	9.9nm,0.5s,mb4.6,baz=46,slow=8.7,SNR=33						
STKA	**Stephens Creek**	**30.88**	**226**	*e*P	**P**	**10 05 00.6**	**+0.8**
RPZ	**Rata Peaks**	**31.78**	**175**	P	**P**	**10 05 06.9**	**-0.8**
	9.4nm,0.8s,mb4.4,baz=359,slow=13,SNR=5.8						
TOO	**Toolangi**	**32.12**	**214**	*e*P	**P**	**10 05 11.0**	**+0.3**
	3.1nm,0.5s,mb4.1						
WB2	**Warramunga Arr**	**32.64**	**252**	*e*P	**P**	**10 05 14.9**	**-0.2**
WRAB	**Tennant Creek**	**32.64**	**252**	*e*P	**P**	**10 05 14.7**	**-0.4**
	5.7nm,0.4s,mb4.5						
AS31	**Alice Springs**	**33.79**	**245**	*e*P	**P**	**10 05 24.5**	**-0.5**
ASAR	**Alice Springs**	**33.79**	**245**	P	**P**	**10 05 24.6**	**-0.5**
	4.1nm,0.7s,mb4.1,baz=75,slow=9.4,SNR=20						
ASPA	**Alice Springs**	**33.80**	**245**	*e*P	**P**	**10 05 24.5**	**-0.6**
KAKA	**Kakadu**	**34.09**	**265**	*e*P	**P**	**10 05 28.0**	**+0.5**
	11nm,0.4s,mb4.7						
FITZ	**Fitzroy Crossi**	**40.66**	**256**	*e*P	**P**	**10 06 22.8**	**+0.5**
	13nm,0.4s,mb4.5						
MJAR	**Matsushiro Arr**	**55.53**	**332**	P	**P**	**10 08 15.4**	**+0.2**
	1.4nm,0.6s,mb3.5,baz=163,slow=7.7,SNR=6.4						
VNDA	**Vanda**	**65.59**	**181**	P	**P**	**10 09 22.5**	**-0.2**
	1.7nm,0.5s,mb4.0,baz=352,slow=6.3,SNR=12						
SBA	**Scott Base**	**65.86**	**180**	*e*P	**P**	**10 09 25.0**	**+0.6**
	5.8nm,0.8s,mb4.4						
QSPA	**South Pole Qui**	**78.03**	**180**	*e*P	**P**	**10 10 35.8**	**-0.3**
	8.6nm,0.8s,mb4.5						
COLA	**College**	**83.70**	**18**	*e*P	**P**	**10 11 05.0**	**-1.0**
	4.8nm,0.9s,mb4.3						
MAW	**Mawson**	**84.44**	**202**	P	**P**	**10 11 09.1**	**-0.5**
	2.3nm,0.7s,mb4.1,baz=79,slow=5.9,SNR=8.0						
NVAR	**Mina Array Bea**	**85.44**	**49**	P	**P**	**10 11 15.7**	**+1.1**
	0.6nm,0.7s,mb3.5,baz=238,slow=9.9,SNR=4.4						
ARCES	**ARCESS Array B**	**117.63**	**346**	PKP	PKPdf	10 17 20.0	-0.7
	0.8nm,0.6s,baz=68,slow=1.9,SNR=7.8						
KEST	**Kesra**	**149.10**	**324**	PKPbc	PKPbc	10 18 24.9	+1.7
	1.0nm,0.6s,baz=198,slow=3.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**165.94**	**276**	PKPab	PKPab	10 19 43.9	+2.6
	1.1nm,0.9s,baz=98,slow=3.4,SNR=3.7						

BJI ***13*** *09:59:39.6, 20.20S×41.10E, h10km*

ISCJB ***13*** *09:59:42.5±0.5, 20.04S±0.07×41.09E±0.08, h10km, mb4.6/34, MS3.7/4, Error ellipse: s-maj=10.4km s-min=9.9km az=22.0*

IDC ***13*** *09:59:42.5±0.8, 20.06S×41.10E, h0km, mb4.3/13, mb1 4.4/15, mb1mx4.3/25, mbtmp4.4/15, ML4.6/2, MS3.8/7, Ms1 3.8/7, ms1mx3.6/36, Error ellipse: s-maj=19.9km s-min=19.0km az=132.0*

NEIC ***13*** *09:59:43.7±0.3, 20.16S×41.12E, h10km, mb4.7/20, Error ellipse: s-maj=9.4km s-min=8.8km az=122.0*

LDG ***13*** *09:59:48.3±0.9, 18.89S×41.11E, h10km, Mb4.9/13, Error ellipse: s-maj=59.3km s-min=4.0km az=13.0*

SZGRF ***13*** *09:59:52.0, 19.04S×40.60E, h33km, mb4.6, Mozambique Channel*

ISC 13 09:59:44.3±0.5**, 20.07S**±0.09×**41.10E**±0.09**, h10**km**, n91, σ0.76**/73**, mb4.6**/34**, MS3.7**/4**, Mozambique Channel**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**5.94**	**76**	Pn	**Pn**	**10 01 12.0**	**-0.3**
	75nm,0.3s,baz=256,slow=13,SNR=329						
OPO				Sn	**Sn**	**10 02 15.7**	**-4.7**
	177nm,0.3s,baz=149,slow=23,SNR=25						
LSZ	**Lusaka**	**13.19**	**289**	Pn	**Pn**	**10 02 47.3**	**-4.3**
	2.0nm,0.3s,baz=128,slow=15,SNR=12						
LSZ				Sn	**Sn**	**10 05 04.5**	**-14**
	4.6nm,0.3s,baz=228,slow=21,SNR=5.9						
LSZ				LR	LR	10 08 27.1	
	comp=Z,486nm,18.3s,baz=158,slow=40						
LSZ	**Lusaka**	**13.19**	**289**	*e*Pn	**Pn**	**10 02 47.3**	**-4.3**
LSZ				*e*Sn	**Sn**	**10 05 03.4**	**-15**
LBTB	**Lobatse**	**15.14**	**248**	Pn	**Pn**	**10 03 11.9**	**-6.2**
	1.5nm,0.3s,baz=79,slow=12,SNR=16						
LBTB				Sn	**Sn**	**10 05 49.1**	**-17**
	1.6nm,0.3s,baz=66,slow=16,SNR=3.5						
LBTB				LR	LR	10 08 50.9	
	comp=Z,217nm,18.5s,baz=86,slow=36						
LBTB	**Lobatse**	**15.14**	**248**	*e*P	**Pn**	**10 03 12.3**	**-5.8**
KMBO	**Kilima Mbogo**	**19.20**	**348**	P	**Pn**	**10 04 09.0**	**-0.1**
	0.3nm,0.3s,baz=181,slow=16,SNR=9.4						
KMBO				S	**Sn**	**10 07 38.8**	**-5.4**
	0.2nm,0.3s,baz=230,slow=21,SNR=2.2						
KMBO				LR	LR	10 11 25.2	
	comp=Z,173nm,19.5s,baz=92,slow=37						
KMBO	**Kilima Mbogo**	**19.20**	**348**	*e*P	**Pn**	**10 04 11.8**	**+2.7**
	3.9nm,0.7s						
SUR	**Sutherland**	**21.89**	**232**	P	**P**	**10 04 37.2**	**-0.2**
	28nm,0.9s,mb4.7,baz=54,slow=6.7,SNR=12						
SUR				LR	LR	10 12 53.4	
	comp=Z,225nm,19.9s,MS3.6,baz=138,slow=36						
SUR	**Sutherland**	**21.89**	**232**	*e*P	**P**	**10 04 37.0**	**-0.4**
	22nm,0.7s,mb4.7						
TSUM	**Tsumeb**	**22.16**	**268**	P	**P**	**10 04 41.1**	**+0.8**
	11nm,0.8s,mb4.3,baz=88,slow=9.9,SNR=20						
TSUM				S	**S**	**10 08 38.5**	**-5.9**
	4.1nm,0.7s,baz=234,slow=21,SNR=4.7						
TSUM				LR	LR	10 13 30.0	
	comp=Z,324nm,18.3s,MS3.8,baz=323,slow=37						
TSUM	**Tsumeb**	**22.16**	**268**	*e*P	**P**	**10 04 41.5**	**+1.2**
	13nm,0.6s,mb4.5						
TSUM				S	**S**	**10 08 38.5**	**-5.9**
WSAR	**Wadi Sarin**	**46.32**	**23**	P	**P**	**10 08 09.5**	**-0.8**
	4.0nm,0.9s,mb4.4,baz=216,slow=2.8,SNR=3.1						
RDF	**Al-Radifah**	**49.10**	**7**	*e*P	**P**	**10 08 43.1**	**+11**
RDF				AMb	AMB	10 08 47.8	
	comp=Z,19nm,1.3s,mb5.0						
NAY	**Al-Naaiem**	**49.39**	**7**	*e*P	**P**	**10 08 45.9**	**+12**
NAY				AMb	AMB	10 08 48.0	
	comp=Z,8.4nm,1.1s,mb4.7						
MAW	**Mawson**	**49.49**	**169**	P	**P**	**10 08 34.1**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.4,baz=299,slow=11,SNR=6.4						
RST	**Umm Al-Ruwaisa**	**49.61**	**7**	*e*P	**P**	**10 08 46.5**	**+11**
RST				AMb	AMB	10 08 49.5	
	comp=Z,32nm,0.6s,mb5.5						
MIB	**Mutribah**	**49.95**	**7**	*e*P	**P**	**10 08 50.1**	**+12**
MIB				AMb	AMB	10 08 52.2	
	comp=Z,29nm,0.8s,mb5.4						
POO	**Poona**	**50.03**	**42**	*e*x	x	10 09 32.0	
TORD	**Torodi Ar. Bea**	**50.91**	**307**	P	**P**	**10 08 45.7**	**+0.1**
	comp=Z,4.8nm,0.8s,mb4.5,baz=125,slow=7.4,SNR=27						
TORD				LR	LR	10 31 03.3	
	comp=Z,114nm,19.6s,MS3.9,baz=150,slow=37						
DBIC	**Dimbokro**	**52.42**	**296**	P	**P**	**10 08 56.9**	**0.0**
	comp=Z,8.7nm,1.1s,mb4.6,baz=121,slow=9.0,SNR=8.1						
DBIC				LR	LR	10 30 05.4	
	comp=Z,76nm,21.8s,MS3.7,baz=102,slow=35						
MALT	**Malatya**	**58.12**	**358**	*e*P	**P**	**10 09 39.9**	**+1.9**
	comp=Z,5.5nm,0.8s,mb4.6						
BRTR	**Keskin Array B**	**59.89**	**353**	P	**P**	**10 09 50.5**	**+0.3**
	comp=Z,2.7nm,0.7s,mb4.4,baz=171,slow=8.8,SNR=17						
PGF	**Pioggiola**	**68.98**	**335**	*e*P	**P**	**10 10 49.5**	**-0.3**
	comp=Z,209nm,1.8s,mb5.5						
PGF	**Pioggiola**	**68.98**	**335**	*e*P	**P**	**10 10 49.5**	**-0.3**
	comp=Z,104nm,1.8s,mb5.5						
KECS	**Kecovo**	**70.69**	**346**	*e*P	**P**	**10 10 59.9**	**-0.3**
SBF	**Sospel**	**70.71**	**335**	*e*P	**P**	**10 10 59.9**	**-0.5**
	comp=Z,96nm,1.2s,mb5.3						
SBF	**Sospel**	**70.71**	**335**	*e*P	**P**	**10 10 59.9**	**-0.5**
	comp=Z,48nm,1.2s,mb5.3						
FRF	**La Foret Royal**	**70.78**	**334**	*e*P	**P**	**10 11 01.3**	**+0.5**
CRVS	**Cervenica-Dubn**	**70.86**	**346**	*e*P	**P**	**10 11 01.2**	**-0.1**
VYHS	**Vyhne**	**71.09**	**345**	*e*P	**P**	**10 11 02.0**	**-0.7**
AKASG	**Malin Array Be**	**71.23**	**352**	P	**P**	**10 11 02.6**	**-1.0**
	comp=Z,3.2nm,0.6s,mb4.5,baz=173,slow=5.6,SNR=20						
STHS	**Stebnicka Huta**	**71.39**	**346**	*e*P	**P**	**10 11 04.9**	**+0.4**
	comp=Z,2.4nm,0.8s,mb4.2						
MBDF	**Montbardon**	**71.69**	**335**	*e*P	**P**	**10 11 06.3**	**0.0**
	comp=Z,16nm,0.9s,mb4.6						
MBDF	**Montbardon**	**71.69**	**335**	*e*P	**P**	**10 11 06.3**	**0.0**
	comp=Z,7.8nm,0.9s,mb4.6						
LPG	**La Plagne**	**72.34**	**335**	*e*P	**P**	**10 11 10.2**	**0.0**
	comp=Z,12nm,0.8s,mb4.5						
LPG	**La Plagne**	**72.34**	**335**	*e*P	**P**	**10 11 10.2**	**0.0**
	comp=Z,5.8nm,0.8s,mb4.6						
LPL	**La Plagne**	**72.36**	**335**	*e*P	**P**	**10 11 10.3**	**0.0**
	comp=Z,6.3nm,0.8s,mb4.3						
LPL	**La Plagne**	**72.36**	**335**	*e*P	**P**	**10 11 10.3**	**0.0**
	comp=Z,3.2nm,0.8s,mb4.3						
MORC	**Moravsky Berou**	**72.61**	**344**	*e*P	**P**	**10 11 10.1**	**-1.7**
	comp=Z,4.2nm,1.0s,mb4.3						
ESDC	**Sonseca Array**	**72.81**	**325**	P	**P**	**10 11 14.0**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.1,baz=136,slow=6.0,SNR=4.0						
GERES	**GERESS Array B**	**72.83**	**341**	P	**P**	**10 11 12.9**	**-0.3**

	comp=Z,1.5nm,0.7s,mb4.0,baz=141,slow=6.5,SNR=15						
CABF	La Chapelle	73.52	336	eP	P	10 11 17.3	+0.1
	comp=Z,24nm,1.0s,mb4.8						
CABF	La Chapelle	73.52	336	eP	P	10 11 17.3	+0.1
	comp=Z,12nm,1.0s,mb4.8						
HINF	Hinteralfeld	74.23	337	eP	P	10 11 20.9	-0.5
GRA1	Grafenberg Arr	74.34	340	eP	P	10 11 21.7	-0.3
	comp=Z,6.0nm,1.1s,mb4.4						
GRA1				e		10 11 33.6	
GRF	Grafenberg Arr	74.34	340	eP	P	10 11 21.7	-0.3
	comp=Z,6.0nm,1.1s,mb4.4						
GRF				e		10 11 33.6	
LFF	La Frestale	74.42	331	eP	P	10 11 23.0	+0.5
SMF	Signal de Mont	74.44	334	eP	P	10 11 22.6	0.0
	comp=Z,19nm,1.2s,mb4.6						
SMF	Signal de Mont	74.44	334	eP	P	10 11 22.6	0.0
	comp=Z,9.7nm,1.2s,mb4.6						
CDF	Champ du Feu	74.58	337	eP	P	10 11 22.9	-0.5
	comp=Z,8.6nm,1.0s,mb4.3						
CDF	Champ du Feu	74.58	337	eP	P	10 11 22.9	-0.5
	comp=Z,4.3nm,1.0s,mb4.3						
HAU	Haudompre	74.58	337	eP	P	10 11 23.1	-0.3
	comp=Z,24nm,1.1s,mb4.7						
HAU	Haudompre	74.58	337	eP	P	10 11 23.1	-0.3
	comp=Z,12nm,1.1s,mb4.7						
AVF	Avril sur Loir	74.76	334	eP	P	10 11 24.5	+0.1
	comp=Z,26nm,1.4s,mb4.7						
AVF	Avril sur Loir	74.76	334	eP	P	10 11 24.5	+0.1
	comp=Z,13nm,1.4s,mb4.7						
BGF	Bois d'Agland	74.78	334	eP	P	10 11 25.0	+0.4
TCF	Toulx Ste Croi	74.83	333	eP	P	10 11 25.6	+0.7
	comp=Z,31nm,1.1s,mb4.8						
TCF	Toulx Ste Croi	74.83	333	eP	P	10 11 25.6	+0.7
	comp=Z,15nm,1.1s,mb4.8						
LOR	Lormes	74.94	335	eP	P	10 11 25.6	+0.1
	comp=Z,24nm,1.2s,mb4.7						
LOR	Lormes	74.94	335	eP	P	10 11 25.6	+0.1
	comp=Z,12nm,1.2s,mb4.7						
SUW	Suwalki	75.37	349	eP	P	10 11 27.2	-0.8
	comp=Z,27nm,1.0s,mb5.1						
MEZF	Maizieres J'vi	75.48	336	eP	P	10 11 28.2	-0.4
MKAR	Makanchi Array	76.22	28	P	P	10 11 32.5	-0.4
	comp=Z,1.0nm,0.5s,mb4.0,baz=224,slow=6.3,SNR=8.0						
GTA	Gaotai	80.65	42	eP	P	10 11 58.3	+1.0
GTA				AP	pP	10 12 02.4	+1.8
GTA				XP	sP	10 12 05.5	+3.7
NOA	NORSAR Array B	84.34	346	P	P	10 12 17.0	+0.5
	comp=Z,1.8nm,1.0s,mb4.2,baz=155,slow=5.2,SNR=3.1						
NOA	NORSAR Array B	84.34	346	P	P	10 12 17.0	+0.5
ASAR	Alice Springs	84.61	113	P	P	10 12 19.4	+1.4
	comp=Z,1.8nm,0.8s,mb4.2,baz=256,slow=4.5,SNR=9.5						
PHWY	Pilot Hill	144.61	314	ePKPdf	PKPdf	10 19 19.3	-1.8
WALA	Waterton Lakes	144.82	331	ePKPdf	PKPdf	10 19 19.4	-2.1
ISCO	Idaho Springs	145.37	312	ePKPbc	PKPbc	10 19 21.7	-0.6
BOZ	Bozeman (W)	146.02	325	ePKPbc	PKPbc	10 19 24.7	+0.4
CHMT	Chamberlain Mo	146.02	328	ePKPbc	PKPbc	10 19 24.3	0.0
FLWY	Flagg Ranch	146.46	322	ePKPbc	PKPbc	10 19 25.3	-0.3
PDAR	Pinedale Array	146.53	319	PKPbc	PKPbc	10 19 24.1	-1.8
	comp=Z,2.5nm,0.7s,baz=73,slow=4.8,SNR=27						
SMCO	Snowmass	146.59	312	ePKPdf	PKPdf	10 19 25.9	+1.4
IMW	Indian Meadow	146.71	322	ePKPab	PKPab	10 19 28.5	+1.0
DLMT	Dillon	146.72	325	ePKPbc	PKPbc	10 19 26.9	+0.5
NEW	Newport	146.83	333	ePKPbc	PKPbc	10 19 26.1	-0.6
SNOW	Snow King Moun	146.86	321	ePKPbc	PKPbc	10 19 26.1	-0.6
TPAW	Teton Pass	146.96	321	ePKPdf	PKPdf	10 19 25.9	+0.9
RRI2	Red Ridge	147.26	321	ePKPbc	PKPbc	10 19 28.0	+0.1
ANMO	Albuquerque	147.80	304	ePKPbc	PKPbc	10 19 29.5	+0.1
MNTX	Cornudas Mount	147.82	298	ePKPbc	PKPbc	10 19 28.9	-0.5
HWUT	Hardware Ranch	148.42	319	ePKPbc	PKPbc	10 19 30.6	-0.4
TCUT	Toone Canyon	148.59	318	ePKPbc	PKPbc	10 19 31.7	+0.3
CTU	Camp Tracy	149.04	318	ePKPdf	PKPdf	10 19 29.1	+0.6
CTU				ePKPbc	PKPbc	10 19 32.6	0.0
CTU				ePKPab	PKPab	10 19 36.9	+0.1
SRU	San Rafael	149.07	314	ePKPbc	PKPbc	10 19 32.1	-0.5
BMO	Blue Mountains	149.48	329	ePKPbc	PKPbc	10 19 33.2	-0.5
MSU	Marysvale	150.48	314	ePKPbc	PKPbc	10 19 36.6	+0.4
WUAZ	Wupatki	151.32	308	ePKPbc	PKPbc	10 19 39.0	+0.9
NVAR	Mina Array Bea	154.45	320	PKPbc	PKPbc	10 19 45.7	+0.7
	comp=Z,0.2nm,0.6s,baz=192,slow=1.8,SNR=3.9						

*BGS **13** 10:35:03.7±2.0, 3352N×2702E, h33km, mb5.1*
*SZGRF **13** 10:35:06.0, 3432N×2707E, h10km, mb5.0, MS4.5, Eastern Mediterranean Sea*
*CSEM **13** 10:35:07.9, 3445N×2666E, h10km, mb5.2*
*MOS **13** 10:35:07.8±1.3, 3441N×2650E, h10km, mb5.5/81, MS4.7/41, Error ellipse: s-maj=3.9km s-min=1.8km az=111.7*
*SFS **13** 10:35:07.0, 3394N×2664E, h0km, ML4.6*
*HLW **13** 10:35:09.1, 3442N×2672E, h12km, Mb5.2*
*ATH **13** 10:35:09.1, 3428N×2655E, h21km±1km, MD4.7/26*
*ISCJB **13** 10:35:10.1±0.1, 3437N±001×2659E±001, h31km, mb5.2/214, MS4.7/64, Error ellipse: s-maj=1.8km s-min=1.1km az=49.8*
*BJI **13** 10:35:10.4, 3418N×2701E, h11km, mB5.4, mb5.3, Ms5.0, Msz4.7*
*CRAAG **13** 10:35:10.5, 3442N×2668E, Mb5.0*
*PDG **13** 10:35:10.3±0.1, 3534N×2767E, h12km±1km*
*NEIC **13** 10:35:12.7±0.2, 3442N×2657E, mb5.2/176, MS4.5/5, MD4.7(ATH), ML4.6(NIC), ML5.0(THE), Error ellipse: s-maj=3.8km s-min=2.2km az=26.0*
*HRVD **13** 10:35:12.7±0.3, 3446N×2658E, h25km±1km, MW5.3/81, Centroid moment Tensor Solution. LP body waves: s49,c66;Mantle waves: s81,c138; Half duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.04±.03; $M_{\theta\theta}$-0.55±.02; $M_{\phi\phi}$0.59±.02; $M_{r\theta}$0.12±.05; $M_{\theta\phi}$-0.76±.02; $M_{\phi r}$-0.33±.05; Best double couple: $M_0$1.01000×10^{17} NP1:ϕ_s107.00000°,δ76.00000°,λ169.00000°. NP2: ϕ_s200.00000°,δ80.00000°,λ14.00000°. Principal axes: T 1.0870, Plg17.0000°, Azm64.0000°; N -0.1550, Plg72.0000°, Azm235.0000°; P -0.9320, Plg3.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NIC **13** 10:35:13.9±0.3, 3442N×2674E, h25km, mb4.9, ML4.6, MW4.3*
*ISK **13** 10:35:13.3, 3449N×2663E, h79km, ML5.0*
*IDC **13** 10:35:13.1±1.9, 3458N×2644E, h29km±12km, mb4.8/27, mb1 4.9/34, mb1mx4.8/36, mbtmp4.9/34, ML4.4/7, MS4.7/21, Ms1 4.7/21, ms1mx4.4/41, Error ellipse: s-maj=10.9km s-min=10.4km az=139.0*
*THE **13** 10:35:16.6, 3459N×2649E, h30km, ML5.0*
ISC 13 10:35:12.4±0.1, **3436N**±001×**2656E**±001, **h33**km, **h33**km±.6km**:pP-P, n1349, σ1s38**/1448, **mb5.2**/214, **MS4.7**/64, **113C-69D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.88	306	ePN	Pn	10 35 26.5	-1.9
NPS	Neapolis	1.19	319	ePN	Pn	10 35 32.0	-0.7
NPS				eSN	Sn	10 35 49.9	+2.1
KARP	Karpathos	1.28	22	⇑iPN	Pn	10 35 35.4	+1.4
KARP				eSN	Sn	10 35 53.3	+3.3
SIVA	Sivas	1.59	295	ePg	Pn	10 35 39.4	+1.3
SIVA				eSg	Sn	10 35 57.9	+0.4
SIVA	Sivas	1.59	295	P	Pn	10 35 39.9	+1.8
SIVA				S	Sn	10 36 00.6	+3.2
SIVA	Sivas	1.59	295	ePg	Pn	10 35 39.4	+1.3
SIVA				eSg	Sn	10 35 57.9	+0.4
SIVA				S	Sn	10 36 00.6	+3.1
IDI	Anoyia	1.66	304	Pn	Pn	10 35 39.6	+0.5
	66nm,0.3s,baz=124,slow=14,SNR=164						
GVD	Gavdhos	2.10	284	ePN	Pn	10 35 46.0	+0.8
SANT	Santorini	2.20	336	ePb	Pb	10 35 47.0	-4.6
SANT				eSb	Sb	10 36 10.5	-7.8
VAM	Vamos	2.21	299	ePN	Pn	10 35 48.0	+1.4
VAM				eSN	Sn	10 36 15.4	+2.6
ARG	Arkhangelos	2.25	34	⇑iPB	Pb	10 35 49.3	-3.1
ARG				eSN	Sn	10 36 17.8	+3.9
NISR	Nisiros	2.29	11	ePN	Pn	10 35 48.5	+0.6
KARN	Karanos	2.41	296	ePn	Pn	10 35 51.2	+1.7
KARN				eSn	Sn	10 36 17.2	-0.6
DAT	Datca	2.50	19	PN	Pn	10 35 50.7	-0.1
BODT	Bodrum	2.77	13	PN	Pn	10 35 55.1	+0.8
BDRM	Kayabasi	2.79	15	iP	Pn	10 35 55.7	+1.0
APE	Apeiranthos	2.83	343	ePn	Pn	10 35 55.5	+0.3
APE				eSn	Sn	10 36 25.6	-2.6
APE	Apeiranthos	2.83	343	c iP	Pn	10 35 55.4	+0.2
APE	Apeiranthos	2.83	343	⇑iP	Pn	10 35 55.8	+0.6
APE	Apeiranthos	2.83	343	ePn	Pn	10 35 56.4	+1.2
APE				eSn	Sn	10 36 31.3	+3.1
DALT	Dalyan (Mudla)	2.94	35	PN	Pn	10 35 58.5	+1.8
KSL	Kastellorizon	3.05	53	ePN	Pn	10 35 59.0	+0.7
SLUM		3.08	202	⇓P	Pn	10 35 58.8	+0.2
SLUM				S	Sn	10 36 34.2	0.0
YER	Yerkesik	3.10	26	PN	Pn	10 36 00.3	+1.3
HMAT	Matruh	3.29	172	⇓P	Pn	10 36 00.9	-0.6
HMAT				S	Sn	10 36 38.0	-1.5
SMG	Samos	3.35	4	ePN	Pn	10 36 03.8	+1.4
SMG				eSN	Sn	10 36 44.2	+3.2
KYTH	Kithira	3.46	305	ePN	Pn	10 36 05.5	+1.6
AYDN	Tasoluk	3.46	18	iP	Pn	10 36 05.2	+1.3
ELL	Elmali	3.62	48	PN	Pn	10 36 08.1	+2.0
VLI	Veliai	3.78	310	ePN	Pn	10 36 09.0	+0.7
DENT	Denizli	3.93	30	PN	Pn	10 36 11.1	+0.7
URLA	Izmir	3.99	0	iP	Pn	10 36 11.4	+0.2
BLCB	Balcova	4.04	5	PN	Pn	10 36 12.8	+1.0
CHOS	Chios island	4.04	354	ePn	Pn	10 36 12.0	+0.1
CHOS				eSn	Sn	10 36 55.9	-2.1
IZM	Izmir	4.07	8	PN	Pn	10 36 13.9	+1.6
KDAG	Bornova	4.08	8	iP	Pn	10 36 13.5	+1.1
KVR	Kavouri	4.13	328	ePN	Pn	10 36 14.5	+1.3
ANTB	Antalya	4.19	52	PN	Pn	10 36 14.7	+0.8
NAIG	Nisos Aigina	4.21	325	ePN	Pn	10 36 15.5	+1.3
ATH	Athens Observa	4.28	328	ePN	Pn	10 36 16.5	+1.4
PTL	Penteli	4.28	330	⇓iPN	Pn	10 36 17.0	+1.8
BCK	Bucak	4.50	45	PN	Pn	10 36 18.4	+0.2
AKHS	Akhisar	4.62	12	iP	Pn	10 36 20.6	+0.8
AKS	Akhisar	4.62	12	PN	Pn	10 36 21.1	+1.2
ITM	Ithomi	4.70	308	ePN	Pn	10 36 22.4	+1.4
ISP	Isparta	4.72	41	PN	Pn	10 36 21.7	+0.5
ISP	Isparta	4.72	41	ePn	Pn	10 36 21.8	+0.6
ISP				eSn	Sn	10 37 16.3	+1.5
PPCY	Paphos	4.80	82	P	Pn	10 36 21.3	-1.0
PPCY				S	Sn	10 37 14.5	-2.2
PRK	Paraskevi	4.88	357	ePN	Pn	10 36 25.0	+1.6
ALFC	Alevga	5.03	79	P	Pn	10 36 25.3	-0.2
	41nm,0.2s						
ALFC				S	Sn	10 37 20.4	-2.1
SWA1		5.13	188	⇓P	Pn	10 36 26.9	0.0
LKR	Lokris	5.16	327	ePN	Pn	10 36 28.2	+1.0
SWA2		5.19	191	⇓P	Pn	10 36 27.4	-0.3
SZAC	Souni-Zanaja	5.23	84	P	Pn	10 36 27.7	-0.5
SZAC				S	Sn	10 37 26.1	-1.3
AOS	Alonnisos	5.26	337	ePn	Pn	10 36 29.8	+1.2
AOS	Alonnisos	5.26	337	P	Pn	10 36 30.1	+1.4
AOS	Alonnisos	5.26	337	P	Pn	10 36 30.1	+1.4
GDZ	Gediz	5.27	26	iP	Pn	10 36 29.5	+0.7
MANS	Anshas	5.38	128	P	Pn	10 36 33.3	+3.0
HDMB	Hadim	5.48	60	PN	Pn	10 36 32.1	+0.5
ALT	Altintas	5.48	30	PN	Pn	10 36 31.2	-0.5
BOZC	Bozcaada	5.49	356	iP	Pn	10 36 37.2	+5.4
RLS	Riolos of Patr	5.53	313	ePN	Pn	10 36 34.1	+1.8
MAMC	Mammari	5.54	80	P	Pn	10 36 32.1	-0.3
CSS	Prodhromos	5.61	82	P	Pn	10 36 32.4	-1.0
	26nm,0.6s						
CSS				S	Sn	10 37 34.9	-1.8
CSS	Prodhromos	5.61	82	ePn	Pn	10 36 32.1	-1.4
CSS				P		10 36 32.4	
CSS				eSn	Sn	10 37 32.1	-4.6
CSS				S	Sn	10 37 34.9	-1.8
CSS	Prodhromos	5.61	82	ePn	Pn	10 36 32.1	-1.3
NEO	Neokhori	5.62	333	⇑iPN	Pn	10 36 35.5	+2.0
LIA	Limnos Island	5.64	349	ePN	Pn	10 36 35.0	+1.2
ERMK	Ermenek	5.66	64	iP	Pn	10 36 36.4	+2.3
CANB	Canakkale	5.66	4	PN	Pn	10 36 33.8	-0.3
XOR	Xorichti	5.68	333	ePn	Pn	10 36 35.5	+1.1
XOR	Xorichti	5.68	333	P	Pn	10 36 35.6	+1.2
XOR	Xorichti	5.68	333	P	Pn	10 36 35.6	+1.2
LOS	Limnos	5.69	348	ePn	Pn	10 36 35.9	+1.4
AANS		5.76	133	⇓P	Pn	10 36 33.4	-2.2
AGG	Agios Georgios	5.76	325	ePn	Pn	10 36 37.1	+1.5
HMYD	Mayadein	5.80	141	P	Pn	10 36 34.7	-1.3
HNAT	Natroun	5.84	143	⇑P	Pn	10 36 35.5	-1.0
GADA	Gvkgeada	5.84	355	PN	Pn	10 36 37.5	+0.8
KONT	Konya--Tatoy	5.90	51	PN	Pn	10 36 39.5	+2.1
EVR	Evrytania	5.94	321	ePN	Pn	10 36 40.9	+2.9
SQR		5.95	137	⇓P	Pn	10 36 36.3	-1.8
ORLT	Orhaneli	5.97	17	PN	Pn	10 36 38.6	+0.2
LPK	Lapseki	6.00	1	PN	Pn	10 36 38.8	-0.1
FYM	Al Fayyum	6.01	140	⇑P	Pn	10 36 37.3	-1.6
FYM				S	Sn	10 37 41.7	-4.8
PAIG	Paliouri	6.01	338	ePn	Pn	10 36 40.1	+1.1
AYT	Al 'Ayyat	6.06	139	⇓P	Pn	10 36 38.4	-1.2
BNT	Bandirma	6.08	10	PN	Pn	10 36 39.6	-0.3
KDHN	Kadinhani	6.11	46	iP	Pn	10 36 41.0	+0.7
IKL	Isikli	6.12	70	PN	Pn	10 36 40.2	-0.2
VLS	Valsamata	6.15	310	ePN	Pn	10 36 42.8	+2.0
PHNC	Paralimni	6.19	82	P	Pn	10 36 41.3	-0.1
ESKT	Eskisehir	6.19	32	ePN	Pn	10 36 40.5	-0.9
KIZT	Kizilcal	6.21	42	ePN	Pn	10 36 42.9	+1.2
KOT	Kottamia	6.28	133	⇓P	Pn	10 36 41.0	-1.7
KOT				S	Sn	10 37 48.4	-4.8
MRMT	Marmara Adasi	6.29	7	PN	Pn	10 36 42.0	-0.7
OUR	Ouranopolis	6.31	342	ePn	Pn	10 36 44.6	+1.6
RKY	Sarkoy-Tekirda	6.34	4	ePN	Pn	10 36 45.2	+1.8
AWBH		6.34	161	⇑P	Pn	10 36 42.7	-0.8
HSAF	As Saff	6.35	137	⇓eP	Pn	10 36 42.3	-1.3
ENEZ	Enez	6.37	357	ePN	Pn	10 36 45.0	+1.1
GEMT	Gemlik	6.41	18	ePN	Pn	10 36 45.9	+1.4
HHAG	Hagoal	6.43	132	⇑P	Pn	10 36 42.9	-1.8
LKD	Levkas	6.44	314	ePn	Pn	10 36 45.3	+0.4
LKD				eSn	Sn	10 37 55.4	-1.7
LKD	Levkas	6.44	314	P	Pn	10 36 45.5	+0.7
LKD				S	Sn	10 37 55.8	-1.3
LKD	Levkas	6.44	314	P	Pn	10 36 45.5	+0.7
LKD				S	Sn	10 37 55.8	-1.3
MFT	Murefte	6.44	5	ePN	Pn	10 36 44.5	-0.4
GLL	Jalalah	6.47	136	⇑P	Pn	10 36 43.3	-1.9
PLG	Polygyros	6.50	338	ePN	Pn	10 36 47.0	+1.4
ALN	Alexandroupoli	6.54	357	ePn	Pn	10 36 47.1	+0.9
ADVT	Abdulvahap	6.57	22	ePN	Pn	10 36 45.9	-0.7
MEST	Erdemli	6.57	68	iP	Pn	10 36 48.3	+1.6
YLV	Yalova	6.59	19	ePN	Pn	10 36 45.2	-1.6
LIT	Litokhoron	6.59	332	ePn	Pn	10 36 47.7	+0.9
GPA	Golpazari	6.63	26	ePN	Pn	10 36 47.3	-0.1
AMAG	Maghara	6.73	122	⇑P	Pn	10 36 46.5	-2.3
HORT	Hortiatis	6.81	337	ePn	Pn	10 36 51.5	+1.6
RDO	Rodhopi	6.82	353	ePN	Pn	10 36 51.3	+1.2
THE	Thessaloniki	6.88	337	ePn	Pn	10 36 52.3	+1.4
MEV	Metsovon	6.89	323	ePn	Pn	10 36 52.6	+1.6
HRT	Hereke	6.91	20	ePN	Pn	10 36 51.1	-0.1
ELBA	Catalca	6.94	12	iP	Pn	10 36 57.0	+5.3
SOH	Sokhos	6.94	339	ePn	Pn	10 36 53.3	+1.6
MERS	Mersin	6.95	67	ePN	Pn	10 36 52.6	+0.8
SUZ		6.97	129	P	Pn	10 36 50.3	-1.8
JAN	Janina	6.99	321	ePN	Pn	10 36 54.6	+2.3
KZN	Kozani	7.06	329	ePN	Pn	10 36 58.0	+4.7
MDU	Mudurnu	7.13	30	ePN	Pn	10 36 54.6	+0.3
KLYT	Kilyos	7.16	15	ePN	Pn	10 36 53.9	-0.8
IGT	Igoumenitsa	7.18	318	ePn	Pn	10 36 56.7	+1.7
IGT	Igoumenitsa	7.18	318	P	Pn	10 36 55.2	+0.3
IGT	Igoumenitsa	7.18	318	P	Pn	10 36 55.2	+0.2
ZAF		7.18	133	⇑P	Pn	10 36 53.4	-1.6
OFRI	'Ofer	7.25	101	P	Pn	10 36 54.3	-1.6
HNTI	Hanita	7.29	98	P	Pn	10 36 56.3	-0.2
NVR	Nevrokopi	7.30	344	ePN	Pn	10 36 58.0	+1.4
ZNM		7.31	131	⇑P	Pn	10 36 55.5	-1.3
ZNM		7.31	131	P	Pn	10 36 55.5	-1.3
KDZ	Kurdzhali	7.33	353	eP	Pn	10 36 57.4	+0.3
KDZ	Kurdzhali	7.33	353	P	Pn	10 36 57.6	+0.5
HFRF	Wahat Farafira	7.34	168	⇑P	Pn	10 36 56.4	-0.9
GRG	Griva	7.37	335	ePn	Pn	10 36 59.2	+1.6
KNT	Kendrikon	7.38	338	ePn	Pn	10 36 59.5	+1.7
KNT	Kendrikon	7.38	338	P	Pn	10 36 59.8	+2.0
KNT	Kendrikon	7.38	338	P	Pn	10 36 59.8	+2.0
SLTI	Sal'it	7.41	104	P	Pn	10 36 56.6	-1.5
SLTI				S	Sn	10 38 14.0	-6.9
ANTO	Ankara	7.42	40	ePN	Pn	10 36 58.2	0.0
ANTO	Ankara	7.42	40	⇑iP	Pn	10 36 58.8	+0.6
ANTO	Ankara	7.42	40	eP	Pn	10 36 58.8	+0.6
ANTO				pmax	pmax		
	comp=Z,168nm,1.3s						
ANTO	Ankara	7.42	40	ePn	Pn	10 36 58.8	+0.6
	comp=Z,168nm,1.3s						
ANTO	Ankara	7.42	40	P	Pn	10 36 59.5	+1.3
	SNR=20						
KZIT	Kziot	7.45	115	P	Pn	10 36 57.6	-1.1
KZIT				S	Sn	10 38 15.6	-6.4
RZN	Rozhen	7.46	349	eP	Pn	10 37 00.0	+1.2
EDRB	Edirne	7.48	1	ePN	Pn	10 36 58.5	-0.6
KARA	Karaisali	7.48	65	ePN	Pn	10 36 58.4	-0.7
MMAI	Mount Meron Ar	7.49	98	Pn	Pn	10 36 57.6	-1.6
	comp=Z,46nm,0.3s,baz=280,slow=11,SNR=42						
MMAI				Sn	Sn	10 38 21.2	-1.8
	comp=Z,32nm,0.3s,baz=263,slow=14,SNR=5.2						
BHL	Bhannes	7.55	91	ePn	Pn	10 36 57.2	-2.9
MMB	Musomiste	7.56	344	ePn	Pn	10 37 01.1	+0.9
MMB	Musomiste	7.56	344	eP	Pn	10 37 01.3	+1.1
KEK	Kerkira	7.60	317	ePN	Pn	10 37 02.0	+1.2
KAMT	Kaman	7.60	47	ePN	Pn	10 37 02.0	+1.2
SVTA	Shivta	7.61	114	P	Pn	10 36 59.9	-0.9
FNA	Florina	7.62	329	ePn	Pn	10 37 02.8	+1.8
VAY	Valandovo	7.63	337	ePn	Pn	10 37 02.5	+1.3
VAY	Valandovo	7.63	337	ePn	Pn	10 37 01.8	+0.5
VAY	Valandovo	7.63	337	ePn	Pn	10 37 01.7	+0.5
MMLI	Mount Malkishu	7.65	102	P	Pn	10 37 00.5	-1.0
KSDI	Kefar Szold	7.66	96	P	Pn	10 37 00.6	-1.0
HNKL	Nakhl	7.68	123	⇑P	Pn	10 36 60.0	-1.9
HNKL				S	Sn	10 38 20.8	-7.0
MASH	Mash'abbe Sade	7.70	114	P	Pn	10 37 01.1	-1.0
DIM	Dimitrovgrad	7.72	354	P	Pn	10 37 03.1	+0.7
RCY	Rachaya	7.74	94	ePn	Pn	10 37 01.2	-1.5
BR131	Keskin Array S	7.79	45	ePn	Pn	10 37 04.0	+0.6
BRTR	Keskin Array B	7.79	45	Pn	Pn	10 37 03.8	+0.5
	comp=Z,1.1nm,0.3s,baz=218,slow=13,SNR=108						
BRTR				Sn	Sn	10 38 31.2	+0.8
	comp=Z,1.6nm,0.3s,baz=27,slow=12,SNR=4.4						
BRTR				ScP	ScP	10 47 12.4	+1.8
	comp=Z,0.1nm,0.3s,baz=182,slow=3.6,SNR=6.8						
BRTR	Keskin Array B	7.79	45	Pn	Pn	10 37 03.8	+0.5
BRTR				Sn	Sn	10 38 31.2	+0.8
BRTR				ScP	ScP	10 47 12.4	+1.8
BRTR	Keskin Array B	7.79	45	Pn	Pn	10 37 03.8	+0.5
BRTR				Sn	Sn	10 38 31.2	+0.8
HMDT	Nahal Hemdat	7.79	103	P	Pn	10 37 01.9	-1.5
BIA	Bitola	7.84	330	ePn	Pn	10 37 06.4	+2.4
BIA	Bitola	7.84	330	ePn	Pn	10 37 03.0	-1.1
BIA	Bitola	7.84	330	ePn	Pn	10 37 02.9	-1.1
ARNB	Al Arnab	7.86	76	⇓iP	Pn	10 37 04.3	0.0
BRBR	Barbar	7.86	94	⇑iP	Pn	10 37 02.7	-1.7
PLD	Plovdiv	7.87	350	ePn	Pn	10 37 06.0	+1.6
DRGI	Dragot	7.91	108	P	Pn	10 37 03.7	-1.4
CEYT	Ceyhan	7.93	68	ePN	Pn	10 37 03.9	-1.4
KDZE	Karadeniz Ereo	7.94	28	ePN	Pn	10 37 04.6	-0.8
KKB	Krupnik	7.98	341	eP	Pn	10 37 07.7	+1.7
KKB	Krupnik	7.98	341	P	Pn	10 37 08.9	+2.9
MZDA	Masada	8.01	110	P	Pn	10 37 05.0	-1.3
MZDA				S	Sn	10 38 29.6	-6.1
SLNF	Slenfeh	8.03	78	⇓iP	Pn	10 37 05.7	-0.9
HTY	Hatay	8.03	75	ePN	Pn	10 37 07.3	+0.7
TCHB	Talchebab	8.03	99	⇑iP	Pn	10 37 06.2	-0.5
HRDS	Abu Rudays	8.04	133	P	Pn	10 37 05.8	-1.0
HRDS	Abu Rudays	8.04	133	P	Pn	10 37 05.8	-1.1
BIDA	Albida	8.06	83	⇑iP	Pn	10 37 05.3	-1.8
GRB	Gharib	8.07	137	⇓P	Pn	10 37 05.4	-1.8
STIP	Stip	8.09	336	ePn	Pn	10 37 08.7	+1.1
STIP	Stip	8.09	336	ePn	Pn	10 37 07.6	0.0
STIP	Stip	8.09	336	ePn	Pn	10 37 07.5	0.0
JMB	Yambol	8.10	0	ePn	Pn	10 37 08.2	+0.7
QASN	Qassioun	8.11	93	⇑iP	Pn	10 37 07.5	-0.3
KOZT	Kozan	8.13	65	ePN	Pn	10 37 08.7	+0.6
OHR	Ohrid	8.14	328	ePn	Pn	10 37 10.2	+2.1
OHR	Ohrid	8.14	328	ePn	Pn	10 37 07.6	-0.6
OHR	Ohrid	8.14	328	ePn	Pn	10 37 07.5	-0.7
ASUT		8.16	147	P	Pn	10 37 07.7	-0.7
CDAG	Cicekdag	8.16	48	iP	Pn	10 37 09.3	+0.8
WRDH	Warideh	8.17	79	⇑iP	Pn	10 37 07.2	-1.4
PRNI	Paran	8.18	117	P	Pn	10 37 07.8	-0.9
PRNI				S	Sn	10 38 33.7	-6.3
ZFRI	Zfri	8.21	115	P	Pn	10 37 07.6	-1.5
MARH	Ras Al Marh	8.22	90	⇑iP	Pn	10 37 07.9	-1.4
TOTH	TOTAH	8.27	94	⇓iP	Pn	10 37 09.7	-0.2
BTCH	Batrach	8.27	76	⇑iP	Pn	10 37 09.6	-0.4
HRFI	Mount Harif	8.37	119	P	Pn	10 37 10.8	-0.6
CANT	Cankiri	8.38	40	ePN	Pn	10 37 11.3	-0.2
PGB	Panagyurishte	8.39	348	P	Pn	10 37 10.9	-0.7
SAFT	Safranbolu	8.40	33	ePN	Pn	10 37 11.2	-0.6
MBH	Mount Berech	8.42	120	P	Pn	10 37 11.6	-0.4
KFRA	Kufra	8.46	81	⇑iP	Pn	10 37 12.7	+0.1
EIL	Elat	8.52	121	P	Pn	10 37 12.6	-0.8
TR2		8.54	132	⇑P	Pn	10 37 11.7	-1.9
DRWC	Darouich	8.54	72	⇑iP	Pn	10 37 14.6	+0.9
SKO	Skopje	8.60	334	ePn	Pn	10 37 16.3	+1.8
SKO	Skopje	8.60	334	ePn	Pn	10 37 15.0	+0.5
SKO	Skopje	8.60	334	ePn	Pn	10 37 14.9	+0.4
HKAT	Jabal Katrina	8.61	131	P	Pn	10 37 12.8	-1.8
VTS	Vitosha	8.63	343	ePn	Pn	10 37 16.9	+2.0
VTS	Vitosha	8.63	343	⇓iP	Pn	10 37 16.3	+1.4
VTS	Vitosha	8.63	343	eP	Pn	10 37 16.0	+1.1
HBST	Basata	8.64	124	⇓P	Pn	10 37 13.8	-1.2
SALA	Sala	8.65	98	⇑iP	Pn	10 37 14.5	-0.6
CORM	Corum	8.66	46	ePN	Pn	10 37 14.7	-0.6
BNN	Bunyan	8.71	56	ePN	Pn	10 37 16.5	+0.6
TIR	Tirane	8.76	325	P	Pn	10 37 18.1	+1.5
RABH	Abou Rabah	8.80	87	⇓iP	Pn	10 37 17.8	+0.6
PRD	Provadia	8.85	4	eP	Pn	10 37 17.9	0.0
HDHB	Dhahab	8.88	127	⇑P	Pn	10 37 16.6	-1.7
ROOS	tl_alroos	8.88	88	⇑iP	Pn	10 37 17.9	-0.4
PVL	Pavlikeni	8.90	354	P	Pn	10 37 18.1	-0.4
TOS	Tosya	8.91	39	ePN	Pn	10 37 18.0	-0.7
ASF	Jabal al Asfar	8.93	101	Pn	Pn	10 37 17.8	-1.1
	comp=Z,3.6nm,0.3s,baz=159,slow=7.4,SNR=20						
ASF				Sn	Sn	10 38 52.2	-6.1
	comp=Z,3.9nm,0.3s,baz=43,slow=22,SNR=7.8						
TR1		8.95	133	P	Pn	10 37 17.5	-1.7
BALT	Daday	8.96	35	iP	Pn	10 37 20.3	+0.8
LCI	Lecce	8.99	314	Pn	Pn	10 37 18.3	-1.5
ZALF	Zalf	9.10	96	⇑iP	Pn	10 37 21.2	-0.1
GAZ	Gaziantep	9.10	69	ePN	Pn	10 37 21.6	+0.3
HDK1	Dakhla	9.12	164	⇑P	Pn	10 37 21.0	-0.7
TIP	Timpagrande	9.22	304	ePn	Pn	10 37 24.0	+1.1
TIP	Timpagrande	9.22	304	ePn	Pn	10 37 24.0	+1.1
SOI	Samo	9.26	297	P	Pn	10 37 23.0	-0.6
SOI				pmax	pmax		
	comp=Z,227nm,0.9s						
SOI	Samo	9.26	297	Pn	Pn	10 37 23.0	-0.6
	comp=Z,227nm,0.9s						
HHRG	Al Ghardaqah	9.32	138	⇓P	Pn	10 37 22.8	-1.6
AKRG	Al Kharijah	9.46	158	⇑P	Pn	10 37 25.4	-0.9
SLMH	Al Salmeh	9.47	76	⇑iP	Pn	10 37 25.3	-1.2
GTR	Jabal at Tayr	9.47	158	⇑P	Pn	10 37 25.3	-1.1
MTTG	Motta San Giov	9.51	296	Pn	Pn	10 37 26.5	-0.4
	comp=Z,347nm,0.7s						
ULC	Ulcinj	9.52	325	⇑iPn	Pn	10 37 27.2	0.0
ULC				eSn	Sn	10 39 08.8	-4.2
BZK	Bozkurt	9.58	35	ePN	Pn	10 37 26.7	-1.2
BOYT	Boyabat	9.65	41	iP	Pn	10 37 32.5	+3.7
HAVL	Avola	9.66	289	Pn	Pn	10 37 27.4	-1.6
	comp=Z,1μm,0.6s						
MSI	Messina ING	9.68	297	Pn	Pn	10 37 29.9	+0.6
PVY	Plav	9.71	330	⇑iPn	Pn	10 37 27.9	-1.7
PVY				eSn	Sn	10 39 10.4	-7.1
SSY	Sortino	9.75	290	Pn	Pn	10 37 29.5	-0.7
	comp=Z,634nm,0.7s						
PZI	Palazzolo	9.82	289	P	Pn	10 37 30.7	-0.5
PZI				pmax	pmax		
	comp=Z,13nm,0.2s						
PZI	Palazzolo	9.82	289	Pn	Pn	10 37 30.7	-0.5
	comp=Z,13nm,0.2s						
ORI	Oriolo Calabro	9.87	308	P	Pn	10 37 31.7	-0.2
ORI				pmax	pmax		
	comp=Z,604nm,0.6s						
ORI	Oriolo Calabro	9.87	308	Pn	Pn	10 37 31.7	-0.2
	comp=Z,604nm,0.6s						
TTG	Podgorica	9.88	327	⇑iPn	Pn	10 37 31.0	-1.0
TTG				eSn	Sn	10 39 16.4	-5.5
BUM	Brajici-Budva	9.95	325	⇑iPn	Pn	10 37 33.0	0.0
BUM				eSn	Sn	10 39 19.1	-4.4
IVA	Berane	9.97	330	⇑iPn	Pn	10 37 31.3	-1.9
IVA				eSn	Sn	10 39 16.3	-7.5
DIKM	Dikmen	10.00	41	ePN	Pn	10 37 32.4	-1.2
SVSK	Karacayir	10.01	53	ePN	Pn	10 37 34.0	+0.3
HVZN	Vizzini	10.03	290	Pn	Pn	10 37 32.4	-1.7
	comp=Z,828nm,0.4s						
HSFG		10.03	139	⇑P	Pn	10 37 32.5	-1.6
TIRR	Tirgusor	10.19	8	⇑iP	Pn	10 37 35.7	-0.5
TIRR	Tirgusor	10.19	8	P	Pn	10 37 37.0	+0.8
TIRR	Tirgusor	10.19	8	ePn	Pn	10 37 36.2	0.0
TIRR	Tirgusor	10.19	8	ePn	Pn	10 37 36.2	0.0

Sta	Name	Dist	Az	Phase	ISC	Time	Res
MNO	Monte Soro	10.24	294	P	Pn	10 37 38.5	+1.6
MNO				pmax	pmax		
	comp=Z,319nm,0.5s						
MNO	Monte Soro	10.24	294	Pn	Pn	10 37 38.5	+1.6
	comp=Z,319nm,0.5s						
CUC	Castrocucco	10.25	306	P	Pn	10 37 36.0	-1.1
HCY	Herceg Novi	10.25	324	⇑-iPn	Pn	10 37 37.1	0.0
HCY				eSn	Sn	10 39 26.4	-4.5
HCY	Herceg Novi	10.25	324	i Pdu	Pn	10 37 37.1	0.0
HCY				eSn	Sn	10 39 26.4	-4.5
NKY	Niksic	10.30	327	⇑iPn	Pn	10 37 36.8	-1.0
NKY				eSn	Sn	10 39 26.1	-6.0
NKY	Niksic	10.30	327	⇑iPn	Pn	10 37 36.8	-1.0
NKY				eSn	Sn	10 39 26.1	-6.0
RAFF	Raffo Rosso	10.31	290	Pn	Pn	10 37 37.0	-1.0
	comp=Z,1μm,1.1s						
VAE	Valguarnera	10.33	291	Pn	Pn	10 37 38.9	+0.7
	comp=Z,21nm,0.3s,baz=65,slow=12,SNR=36						
VAE				Sn	Sn	10 39 28.5	-4.3
	comp=Z,12nm,0.3s,baz=297,slow=4.8,SNR=5.1						
VAE	Valguarnera	10.33	291	Pn	Pn	10 37 38.9	+0.7
VAE				Sn	Sn	10 39 28.5	-4.3
MALT	Malatya	10.35	64	⇑iP	Pn	10 37 38.5	0.0
MALT	Malatya	10.35	64	ePn	Pn	10 37 38.5	0.0
MYA	Malataya	10.35	64	ePN	Pn	10 37 37.9	-0.6
URFA	Urfa	10.41	69	ePN	Pn	10 37 38.7	-0.6
TREB	Trebinje	10.53	325	P	Pn	10 37 39.1	-1.8
TREB				S	Sn	10 39 30.5	-7.2
GRUS	Gruza	10.54	336	⇓iPn	Pn	10 37 41.0	-0.1
PLE	Pljevlja	10.55	330	⇑iPn	Pn	10 37 39.4	-1.9
PLE				eSn	Sn	10 39 30.6	-7.6
BRY	Bratogost	10.58	326	⇑iPn	Pn	10 37 41.0	-0.7
BRY				eSn	Sn	10 39 33.5	-5.4
UPM	Unac-Piva	10.65	328	⇑iPn	Pn	10 37 41.3	-1.3
UPM				eSn	Sn	10 39 34.0	-6.7
MRLC	Muro Lucano	10.86	309	Pn	Pn	10 37 45.3	-0.1
	comp=Z,332nm,1.9s						
FAVR	Favara	10.87	289	Pn	Pn	10 37 46.2	+0.7
	comp=Z,428nm,1.4s						
MTUR	Matau	10.91	354	P	Pn	10 37 47.1	+0.9
MTUR	Matau	10.91	354	P	Pn	10 37 47.0	+0.8
HQSR		10.93	140	P	Pn	10 37 45.3	-1.0
FGMS	Monte Sant'Ang	11.12	314	Pn	Pn	10 37 46.1	-2.9
VOIR		11.12	354	⇑iP	Pn	10 37 49.0	-0.1
VOIR		11.12	354	⇑P	Pn	10 37 49.0	-0.1
MLR	Muntele Rosu	11.13	358	Pn	Pn	10 37 49.0	-0.1
	comp=Z,0.2nm,0.3s,baz=183,slow=5.5,SNR=24						
MLR				LR	LR	10 42 47.8	
	comp=Z,3μm,18.4s,baz=184,slow=42						
MLR	Muntele Rosu	11.13	358	⇑P	Pn	10 37 49.6	+0.5
MLR	Muntele Rosu	11.13	358	⇑iP	Pn	10 37 49.6	+0.5
PTK	Pertek	11.26	63	ePN	Pn	10 37 50.2	-0.6
FG5	Orsara di Pugl	11.29	311	P	Pn	10 37 49.1	-2.2
FG5				pmax	pmax		
	comp=Z,304nm,1.4s						
FG5	Orsara di Pugl	11.29	311	Pn	Pn	10 37 49.1	-2.2
	comp=Z,304nm,1.4s						
RGNG	Rignano Grg	11.32	313	Pn	Pn	10 37 48.2	-3.5
HADB		11.38	140	⇑P	Pn	10 37 51.5	-1.0
PLOR	Plostina	11.48	0	⇑iP	Pn	10 37 51.0	-2.9
VRI	Vrincioaia	11.49	1	⇓iP	Pn	10 37 52.9	-1.2
VRI	Vrincioaia	11.49	1	P	Pn	10 37 55.6	+1.5
VRI	Vrincioaia	11.49	1	⇓P	Pn	10 37 52.9	-1.2
PSB1	Pescosannita	11.54	310	Pn	Pn	10 37 55.9	+1.1
	comp=Z,190nm,0.9s						
KELT	Kelkit	11.64	57	i P	Pn	10 37 58.0	+1.9
CIGN	Sant'Elia a Pi	11.72	312	Pn	Pn	10 37 59.0	+1.8
	comp=Z,271nm,1.2s						
EMRS	Mersa Alam	11.76	140	P	Pn	10 37 56.9	-0.9
BZS	Buzias	11.86	343	⇓iP	Pn	10 37 59.3	+0.1
BZS	Buzias	11.86	343	⇓P	Pn	10 37 59.3	+0.1
EZC	Erzincan	11.87	59	ePN	Pn	10 37 52.7	-6.6
MARD	Mardin	11.91	72	i P	Pn	10 38 01.8	+2.0
SIM	Simferopol'	12.06	27	eP	Pn	10 38 03.8	+1.9
SIM				pmax	pmax		
	comp=Z,30nm,0.8s						
HAGS	Hagol	12.36	141	P	Pn	10 38 05.4	-0.5
SDI	San Donato	12.44	310	P	Pn	10 38 06.9	-0.1
SDI				pmax	pmax		
	comp=Z,19nm,0.8s						
SDI	San Donato	12.44	310	Pn	Pn	10 38 06.9	-0.1
	comp=Z,19nm,0.8s						
INTR	Introdacqua	12.54	311	Pn	Pn	10 38 07.1	-1.3
	comp=Z,87nm,0.9s						
BNGL	BINGOL	12.58	64	i P	Pn	10 38 11.6	+2.7
VVLD	Villa Vallelon	12.64	310	Pn	Pn	10 38 10.9	+1.1
	comp=Z,153nm,0.9s						
KIS	Kishinev	12.74	7	eP	Pn	10 38 10.0	-1.1
DRGR		12.76	348	⇓iP	Pn	10 38 11.8	+0.4
DRGR		12.76	348	⇓P	Pn	10 38 11.8	+0.4
TERO	Teramo	13.07	313	Pn	Pn	10 38 13.4	-2.2
	comp=Z,140nm,1.2s						
FIAM	Fiamignano	13.17	311	Pn	Pn	10 38 20.0	+3.0
BURAR	Bucovina Array	13.28	356	⇑iP	Pn	10 38 18.9	+0.4
BURAR	Bucovina Array	13.28	356	⇑P	Pn	10 38 18.9	+0.3
PKSM	Moragy	13.28	335	⇓iP	Pn	10 38 19.0	+0.4
PKSM	Moragy	13.28	335	P	Pn	10 38 15.7	-2.9
PKSM				⇓P		10 38 19.0	
PKSM	Moragy	13.28	335	⇓eP	Pn	10 38 19.0	+0.4
ANN	Anapa	13.37	36	eP	Pn	10 38 17.5	-2.2
ANN				eS	Sn	10 40 44.3	-2.7
ANN				pmax	pmax		
	comp=Z,47nm,1.3s						
MNS	Montasola	13.51	310	P	Pn	10 38 22.7	+1.1
MNS				pmax	pmax		
	comp=Z,44nm,0.8s						
MNS	Montasola	13.51	310	Pn	Pn	10 38 22.7	+1.1
	comp=Z,44nm,0.8s						
NVLJ	Novalja	13.60	322	i Pn	Pn	10 38 21.0	-1.9
NVLJ				i Sn	Sn	10 40 40.8	-12
MSL	Mosul	13.63	77	ex	x	10 38 20.0	
MSL				ex	x	10 38 28.0	
MSL				ex	x	10 40 51.0	
PKS9	Tamasi	13.73	335	⇑eP	Pn	10 38 25.9	+1.2
BCA	Borcka	13.82	55	ePN	Pn	10 38 24.5	-1.5
SNTG	Esanatoglia	13.83	314	Pn	Pn	10 38 24.6	-1.4
ASS	Assisi	13.89	313	P	Pn	10 38 26.9	0.0
ASS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ASS	Assisi	13.89	313	Pn	Pn	10 38 26.9	0.0
	comp=Z,2.0nm,0.4s						
BOJS	Bojanci	14.10	326	ePn	Pn	10 38 26.8	-2.9
BOJS				eSn	Sn	10 40 54.0	-11
CUKT	Cukurca	14.13	73	ePN	Pn	10 38 29.8	-0.3
KEST	Kesra	14.17	280	Pn	Pn	10 38 30.3	-0.4
	comp=Z,0.4nm,0.3s,baz=46,slow=8.3,SNR=9.4						
VANB	Van	14.18	68	ePN	Pn	10 38 29.6	-1.2
VANB	Van	14.18	68	P	Pn	10 38 36.0	+5.2
FSSB	Fossombrone	14.18	315	Pn	Pn	10 38 29.0	-1.8
HAKT	HAKKARI	14.25	72	i P	Pn	10 38 33.2	+1.5
HKR	Hakkari	14.28	72	ePN	Pn	10 38 31.6	-0.5
PESA	Pesaro	14.30	316	Pn		10 38 41.1	
BADI	Badiali	14.39	314	Pn	Pn	10 38 33.3	-0.4
	comp=Z,436nm,2.0s						
PSZ	Piszkesteto	14.44	342	⇑eP	Pn	10 38 35.6	+1.3
PSZ	Piszkesteto	14.44	342	ePn	Pn	10 38 34.6	+0.3
PSZ	Piszkesteto	14.44	342	⇑iP	Pn	10 38 33.0	-1.3
PSZ	Piszkesteto	14.44	342	ePn	Pn	10 38 34.6	+0.3
KARS	Kars	14.52	60	ePN	Pn	10 38 32.9	-2.6
CRE	Caprese Michel	14.63	314	P	Pn	10 38 38.5	+1.6
CRE				pmax	pmax		
	comp=Z,35nm,0.7s						
CRE	Caprese Michel	14.63	314	Pn	Pn	10 38 38.5	+1.6
	comp=Z,35nm,0.7s						
VSL	Villasalto	14.66	295	eP	Pn	10 38 44.0	+6.6
VSL				ePn	Pn	10 38 44.9	+7.5
VSL	Villasalto	14.66	295	ePn	pP	10 38 44.9	-7.0
CLDR	Caldiran	14.71	66	ePN	Pn	10 38 37.0	-1.0
KECS	Kecovo	14.82	344	ePN	Pn	10 38 38.3	-1.2
LJU	Ljubljana	14.84	325	ePn	Pn	10 38 36.8	-2.9
LJU				i Sn	Sn	10 41 14.5	-8.4
BHD	Baghdad	14.86	89	i x	x	10 38 39.0	
BHD				ex	x	10 41 28.0	
BHD				ex	x	10 43 57.5	
BHD				ex	x	10 44 49.0	
SFI	Santa Sofia	14.86	314	P	Pn	10 38 42.5	+2.5
SFI				pmax	pmax		
	comp=Z,208nm,1.1s						
SFI	Santa Sofia	14.86	314	Pn	Pn	10 38 42.5	+2.5
	comp=Z,208nm,1.1s						
KOLS	Kolonicke sedl	14.91	349	ePN	Pn	10 38 41.7	+1.1
CSNT	Castellina Chi	14.95	312	Pn	Pn	10 38 41.3	+0.1
	comp=Z,171nm,1.0s						
GRFL	Gerfalco	14.98	310	Pn	Pn	10 38 42.8	+1.2
	comp=Z,115nm,1.0s						
CRVS	Cervenica-Dubn	15.02	347	ePN	Pn	10 38 41.2	-0.9
PERS	Pernice	15.02	328	i Pn	Pn	10 38 37.8	-4.3
VOY	Vojsko	15.13	324	ePn	Pn	10 38 41.6	-2.0
VOY				e		10 38 48.2	
VOY				e(Sn)	Sn	10 41 21.5	-8.5
OBKA	Obir	15.17	327	⇑iP	Pn	10 38 41.1	-3.1
	comp=Z,155nm,1.9s,SNR=6.9						
SEI	Scarperia	15.23	314	Pn	Pn	10 38 45.6	+0.7
	comp=Z,250nm,0.8s						
VYHS	Vyhne	15.25	340	i PN	Pn	10 38 43.6	-1.6
SOP	Sopron	15.28	334	eP	Pn	10 38 44.7	-0.9
SOP	Sopron	15.28	334	P	Pn	10 38 43.9	-1.7
ARSA	Arzberg	15.33	330	⇑iP	Pn	10 38 44.0	-2.2
	comp=Z,174nm,1.8s,SNR=34						
ZST	Bratislava	15.53	336	ePN	Pn	10 38 47.1	-1.7
ZST	Bratislava	15.53	336	eP	Pn	10 38 47.2	-1.6
ZST				MLR	MLR		
	comp=Z,4μm,13.3s						
ONI	Oni	15.55	53	P	Pn	10 38 49.8	+0.8
ONI				S	PcP	10 43 55.8	+5.7
STHS	Stebnicka Huta	15.55	347	ePN	Pn	10 38 52.3	+3.2
PII	Pisa	15.55	312	P	Pn	10 38 49.8	+0.7
PII				pmax	pmax		
	comp=Z,30nm,0.6s						
PII	Pisa	15.55	312	Pn	Pn	10 38 49.8	+0.7
	comp=Z,30nm,0.6s						
LVV	L'vov	15.56	354	eP	Pn	10 38 53.1	+3.9
LVV				MLR	MLR		
	comp=Z,6μm,10.0s						
GNI	Garni	15.58	63	Pn	Pn	10 38 50.0	+0.6
	baz=160,slow=2.5,SNR=34						
GNI				LR	LR	10 46 26.9	
	comp=Z,5μm,20.1s,baz=79,slow=43						
GNI	Garni	15.58	63	⇑P	Pn	10 38 52.3	+2.8
	SNR=58						
GNI	Garni	15.58	63c	iP	Pn	10 38 51.2	+1.8
GNI				pmax	pmax		
	comp=Z,317nm,1.9s						
GNI				MLR	MLR		
	comp=Z,5μm,20.0s						
GNI	Garni	15.58	63	eP	Pn	10 38 51.7	+2.3
GNI	Garni	15.58	63	ePn	Pn	10 38 47.3	-2.1
GMNA	Gemona	15.62	324	Pn	Pn	10 38 48.2	-1.8
ZCCA	Zocca	15.62	314	Pn	Pn	10 38 52.6	+2.6
	comp=Z,131nm,1.1s						
PTCC	Patocco-Chiusa	15.66	324	Pn	Pn	10 38 47.5	-3.0
KIV	Kislovodsk	15.73	48	Pn	Pn	10 38 53.1	+1.7
	comp=Z,1μm,1.1s,SNR=42						
KIV	Kislovodsk	15.73	48	⇑P	Pn	10 38 53.8	+2.4
	SNR=57						
KIV	Kislovodsk	15.73	48c	iP	Pn	10 38 52.6	+1.2
KIV				pmax	pmax		
	comp=Z,301nm,1.4s						
KIV				MLR	MLR		
	comp=Z,2μm,13.0s						
KIV	Kislovodsk	15.73	48	eP	Pn	10 38 53.3	+1.9
	comp=Z,351nm,1.1s						
KIV	Kislovodsk	15.73	48	eP	Pn	10 38 53.3	+1.9
	comp=Z,351nm,1.1s						
NIE	Niedzica	15.74	345	eP	Pn	10 38 51.5	0.0
CONA	Conrad Observa	15.75	333	i Pn	Pn	10 38 49.7	-2.0
	comp=Z,340nm,3.5s,SNR=28						
CMAH	Djebel Manchou	15.76	284	P	Pn	10 38 57.1	+5.3
CGMA	Guelma	15.76	283	P	pP	10 39 00.0	-4.1
RAVA	Ravarino	15.77	316	Pn	Pn	10 38 57.8	+5.8
GSCL	Gusciola	15.86	314	Pn	Pn	10 38 56.1	+3.1
	comp=Z,70nm,1.0s						
VLC	Villacollemand	15.87	313	eP	Pn	10 38 52.4	-0.9
VLC	Villacollemand	15.87	313	eP	Pn	10 38 52.3	-0.9
JAVC	Velka Javorina	15.92	338	P	Pn	10 38 52.3	-1.6
ZEI	Tsey	15.93	53	eP	Pn	10 38 55.3	+1.3
PGF	Pioggiola	15.98	306	eP	Pn	10 38 53.2	-1.5
	comp=Z,237nm,1.1s						
PGF	Pioggiola	15.98	306	eP	Pn	10 38 53.2	-1.5
PGF				pmax	pmax		
	comp=Z,119nm,1.1s						
PGF	Pioggiola	15.98	306	eP	Pn	10 38 53.2	-1.5
	comp=Z,119nm,1.1s						
ERBM	Eremo	16.00	314	Pn	Pn	10 39 00.0	+5.2
	comp=Z,136nm,1.1s						
FVI	Forni Avoltri	16.07	324	Pn	Pn	10 38 53.5	-2.3
TBLG	Delisi	16.08	57	eP	Pn	10 38 57.8	+1.9
TBLG	Delisi	16.08	57	P	Pn	10 38 57.8	+1.9
MTA	Mtatsminda	16.11	58	P	Pn	10 38 56.6	+0.3
KBA	Koelnbreinsper	16.15	326	⇑iP	Pn	10 38 54.7	-2.1
	comp=Z,166nm,1.4s,SNR=18						
KBA	Koelnbreinsper	16.15	326	⇑iP	Pn	10 38 54.7	-2.1
KBA				pmax	pmax		
	comp=Z,166nm,1.4s						
CAEH	'Ain El Ouahch	16.22	284	P	Pn	10 39 04.0	+6.3
GRAM		16.25	313	P	Pn	10 38 58.0	0.0
CTI	Castel Tesino	16.28	320	Pn	Pn	10 38 55.3	-3.2
CKFL	Kef-Lekhel	16.31	283	P	Pn	10 39 03.0	+4.1
CODM		16.32	313	P	Pn	10 38 58.0	-1.0
MOA	Molln	16.33	329	⇑iP	Pn	10 38 56.9	-2.1
	comp=Z,247nm,2.4s,SNR=8.0						
DGRG	David-gareji	16.43	59	P	Pn	10 39 01.7	+1.3
AKASG	Malin Array Be	16.45	6	Pn	Pn	10 38 57.7	-2.9
	comp=Z,2.7nm,0.3s,baz=192,slow=10,SNR=19						
AKASG				Sn	Sn	10 42 04.4	+2.4
	baz=193,slow=22,SNR=9.2						
AKASG				LR	LR	10 45 16.8	
	comp=Z,2μm,21.0s,baz=190,slow=37						
AKASG				ScP	ScP	10 47 24.4	+1.0
	comp=Z,0.5nm,0.3s,baz=223,slow=1.8,SNR=11						
AKASG	Malin Array Be	16.45	6	Pn	Pn	10 38 57.7	-2.9
AKASG				Sn	Sn	10 42 04.4	+2.4
AKASG				LR	LR	10 45 16.8	
AKASG				ScP	ScP	10 47 24.4	+1.0
AKASG	Malin Array Be	16.45	6	Pn	Pn	10 38 57.7	-2.9
AKASG				Sn	Sn	10 42 04.4	+2.4
AKBB	Malin Array Si	16.45	6	ePn	Pn	10 38 58.9	-1.7
AKBB				eSn	Sn	10 42 04.7	+2.7
AKBB	Malin Array Si	16.45	6	ePn	Pn	10 38 58.9	-1.7
AKBB				eSn	Sn	10 42 04.7	+2.7
SEST	Monte Rota	16.46	323	Pn	Pn	10 38 59.2	-1.5
CASM	Ain Smara	16.50	282	P	Pn	10 39 07.5	+6.3
KRUC	Moravsky	16.51	336	P	Pn	10 38 57.7	-3.7
GOF	Gofitskoye	16.55	45	⇑iP	Pn	10 39 02.7	+0.9
GOF				pmax	pmax		
	comp=Z,280nm,1.3s						
CTEI	Djebel Teioual	16.56	282	P	Pn	10 39 08.0	+6.0
OJC	Ojcow	16.61	345	eP	Pn	10 39 01.3	-1.3
OJC				eS	Sn	10 42 08.5	+2.6
OJC				MLR	MLR		
	comp=Z,12μm,19.0s						
OJC	Ojcow	16.61	345	eP	Pn	10 39 01.3	-1.3
OJC				eS	Sn	10 42 08.5	+2.6
VRAC	Vranov	16.66	337	Pn	Pn	10 39 01.3	-2.0
	comp=Z,0.7nm,0.3s,baz=137,slow=9.6,SNR=26						
VRAC				Sn	Sn	10 42 13.5	+6.3
	comp=Z,0.1nm,0.3s,baz=136,slow=18,SNR=1.7						
VRAC	Vranov	16.66	337	⇑P	Pn	10 39 00.7	-2.6
VRAC	Vranov	16.66	337	⇑iP	Pn	10 39 00.7	-2.5
OKC	Ostrava-Krasne	16.66	341	eP	Pn	10 39 01.7	-1.6
OKC				ex	x	10 42 34.6	
OKC				AMS	AMS	10 46 40.0	
	comp=Z,4μm,12.0s						
BOB	Bobbio (Coli)	16.77	313	Pn	Pn	10 39 05.2	+0.6
MORC	Moravsky Berou	16.78	339	⇑iP	Pn	10 39 01.8	-2.9
MORC	Moravsky Berou	16.78	339	eP	Pn	10 39 03.1	-1.6
MORC				pmax	pmax		
	comp=Z,46nm,0.9s						
MORC	Moravsky Berou	16.78	339	eP	Pn	10 39 03.1	-1.6
	comp=Z,46nm,0.9s						
MORC	Moravsky Berou	16.78	339	eP	Pn	10 39 03.1	-1.6
	comp=Z,46nm,0.9s						
APPI	Appiano	16.78	321	Pn	Pn	10 39 03.1	-1.7
RAC	Raciborz	16.87	341	eP	Pn	10 39 04.3	-1.6
RAC				MLR	MLR		
	comp=Z,5μm,13.8s						
MABI	Malga Bissina	16.90	319	Pn	Pn	10 39 04.9	-1.3
CMER	Merouana	16.98	280	P	Pn	10 39 10.0	+2.7
DFRA	Djebel Bou Aff	17.00	283	P	Pn	10 39 10.5	+3.0
TREC	Trest	17.02	335	eP	Pn	10 39 06.0	-1.8
TREC				eS	Sn	10 42 16.5	+0.5
TREC				AMS	AMS	10 46 50.0	
	comp=Z,2μm,11.9s						
WTTA	Wattenberg	17.10	323	⇑iP	Pn	10 39 07.6	-1.2
	comp=Z,458nm,1.6s,SNR=35						
WTTA	Wattenberg	17.10	323	⇑iP	Pn	10 39 07.6	-1.2
WTTA				pmax	pmax		
	comp=Z,458nm,1.6s						
WATA	Walderalm	17.18	323	⇓iP	Pn	10 39 08.3	-1.4
	comp=Z,131nm,1.0s,SNR=30						
WATA	Walderalm	17.18	323	⇓iP	Pn	10 39 08.3	-1.5
WATA				pmax	pmax		
	comp=Z,131nm,1.0s						
BRMO	Bormio	17.23	319	Pn	Pn	10 39 08.9	-1.6
FIN	Finale Ligure	17.25	310	P	Pn	10 39 09.5	-1.1
FIN	Finale Ligure	17.25	310	Pn	Pn	10 39 17.4	+6.8
SQTA	Sankt Quirin	17.29	323	⇓iP	Pn	10 39 09.6	-1.5
	comp=Z,339nm,1.7s,SNR=38						
SQTA	Sankt Quirin	17.29	323	⇓iP	Pn	10 39 09.6	-1.5
SQTA				pmax	pmax		
	comp=Z,339nm,1.7s						
CKHR	Kef el Ahmar	17.29	282	P	Pn	10 39 13.5	+2.4
RORO		17.29	310	P	Pn	10 39 10.9	-0.3
IMI	Imperia	17.31	309	Pn	Pn	10 39 12.1	+0.7
GEC2	GERESS Array S	17.34	330	eP	Pn	10 39 09.4	-2.4
	comp=Z,92nm,0.9s						
GEC2	GERESS Array S	17.34	330	eP	Pn	10 39 09.4	-2.4
GEC2				pmax	pmax		
	comp=Z,92nm,0.9s						
GERES	GERESS Array B	17.34	330	P	Pn	10 39 09.8	-1.9
	comp=Z,1.2nm,0.3s,baz=146,slow=13,SNR=37						
GERES				S	Sn	10 42 29.2	+5.5
	comp=Z,0.1nm,0.3s,baz=146,slow=16,SNR=2.1						
GERES				ScP	ScP	10 47 25.9	+0.7
	baz=194,slow=2.8,SNR=5.7						
GERES	GERESS Array B	17.34	330	P	Pn	10 39 09.8	-2.0
GERES				S	Sn	10 42 29.2	+5.5
SET	Setif	17.38	282	P	Pn	10 39 15.0	+2.8
NEGI	Negi	17.40	309	P	Pn	10 39 11.6	-0.9
MOTA	Moosalm	17.42	323	⇓iP	Pn	10 39 10.8	-2.0
	comp=Z,73nm,1.0s,SNR=22						
MOTA	Moosalm	17.42	323	⇓iP	Pn	10 39 10.8	-2.0
MOTA				pmax	pmax		
	comp=Z,73nm,1.0s						
MONE	Monesi	17.48	309	P	Pn	10 39 10.9	-2.5
ROB	Roburent	17.50	310	P	Pn	10 39 13.5	-0.3
SAOF	Saorge	17.56	309	eP	Pn	10 39 13.3	-1.2
SBF	Sospel	17.58	308	eP	Pn	10 39 14.3	-0.5
	comp=Z,571nm,1.0s						
SBF	Sospel	17.58	308	eP	Pn	10 39 14.3	-0.5
SBF				pmax	pmax		
	comp=Z,286nm,1.0s						
SBF	Sospel	17.58	308	eP	Pn	10 39 14.3	-0.5
	comp=Z,286nm,1.0s						
KHC	Kasperske Hory	17.62	331	eP	Pn	10 39 13.1	-2.1
KHC				epP	pP	10 39 21.5	-3.2
KHC				ex	x	10 39 46.0	
KHC				eS	Sn	10 42 34.6	+4.2
KHC				AMS	AMS	10 47 10.0	
	comp=Z,3μm,13.8s						
KHC	Kasperske Hory	17.62	331c	iP	Pn	10 39 13.1	-2.1
KHC	Kasperske Hory	17.62	331	eP	Pn	10 39 13.1	-2.1
KHC				e		10 39 21.5	
KHC				e		10 39 46.0	
KHC				eS	Sn	10 42 34.6	+4.2
AUTN	L'Aution	17.65	309	eP	Pn	10 39 14.3	-1.3
DPC	Dobruska-Polom	17.65	338	eP	Pn	10 39 14.0	-1.6
DPC				eS	Sn	10 42 32.8	+1.6
DPC				AMS	AMS	10 47 30.0	
	comp=Z,4μm,13.2s						
DPC	Dobruska-Polom	17.65	338	eP	Pn	10 39 14.0	-1.6
DPC				eS	Sn	10 42 32.8	+1.6
LUCF	Luceram	17.65	308	eP	Pn	10 39 13.1	-2.6
ENR	Entracque	17.76	309	P	Pn	10 39 16.2	-0.7
TOUF	Mont Tournerai	17.77	309	eP	Pn	10 39 17.0	-0.1
TUE	Stuetta	17.79	318	P	Pn	10 39 16.7	-0.7
STV	Sta Anna Valdi	17.83	309	P	Pn	10 39 17.3	-0.5
UPC	Upice	17.89	338	eP	Pn	10 39 16.8	-1.7
FUR	Furstenfeldbru	17.91	325	eP	Pn	10 39 16.4	-2.3
	comp=Z,160nm,0.8s						
FUR	Furstenfeldbru	17.91	325	eP	Pn	10 39 16.4	-2.3
FUR				pmax	pmax		
	comp=Z,160nm,0.8s						
WET	Wettzell	17.91	330	eP	Pn	10 39 16.4	-2.4
	comp=Z,70nm,0.9s						
WET	Wettzell	17.91	330	eP	Pn	10 39 16.4	-2.4
WET				pmax	pmax		
	comp=Z,70nm,0.9s						
PRU	Pruhonice	17.94	334	eP	Pn	10 39 16.8	-2.4
PRU				eS	Sn	10 42 43.7	+5.4
PRU				AMS	AMS	10 48 20.0	
	comp=Z,3μm,13.3s						
PRU	Pruhonice	17.94	334	eP	Pn	10 39 16.8	-2.4
PRU				eS	Sn	10 42 43.7	+5.4
FRF	La Foret Royal	17.97	307	eP	Pn	10 39 17.9	-1.7
	comp=Z,183nm,1.2s						
FRF	La Foret Royal	17.97	307	eP	Pn	10 39 17.9	-1.7
FRF				pmax	pmax		
	comp=Z,91nm,1.2s						
FRF	La Foret Royal	17.97	307	eP	Pn	10 39 17.9	-1.7
	comp=Z,91nm,1.2s						
LMR	La Mourre	17.97	306	eP	Pn	10 39 17.0	-2.6
	comp=Z,136nm,1.2s						
LMR	La Mourre	17.97	306	eP	Pn	10 39 17.0	-2.6
LMR				pmax	pmax		
	comp=Z,68nm,1.2s						
LMR	La Mourre	17.97	306	eP	Pn	10 39 17.0	-2.6
	comp=Z,68nm,1.2s						
RST	Umm Al-Ruwaisa	18.00	100	eP	Pn	10 39 18.6	-1.4
RST				AMb	AMB	10 39 23.7	
	comp=Z,276nm,1.2s						
DAVA	Damuels	18.01	321	⇓iP	Pn	10 39 18.6	-1.4
	comp=Z,212nm,1.3s,SNR=26						
PZZ	Prazzo	18.09	310	P	Pn	10 39 19.0	-2.0
KSP	Ksiaz	18.09	339	eP	Pn	10 39 19.3	-1.8
KSP				epP	pP	10 39 21.8	-8.1
KSP				eS	Sn	10 42 47.0	+5.1
KSP				L		10 48 26.6	
	comp=Z,6.4nm,15.1s						
KSP	Ksiaz	18.09	339	⇑eP	Pn	10 39 19.3	-1.8
KSP				epP	pP	10 39 28.4	-1.5
KSP				eS	Sn	10 42 35.0	-6.9
KSP	Ksiaz	18.09	339	⇑eP	Pn	10 39 19.3	-1.8
KSP				epP	pP	10 39 28.4	-1.5
ORX	Oropa	18.10	314	P	Pn	10 39 19.6	-1.6
UBR	Ueberruh	18.15	322	P	Pn	10 39 20.6	-1.1
NAY	Al-Naaiem	18.29	100	eP	Pn	10 39 22.6	-0.9
NAY				AMb	AMB	10 39 27.2	
	comp=Z,226nm,1.2s						
RSP	Reno Superiore	18.30	312	P	Pn	10 39 20.8	-2.7
WAR	Warsaw	18.31	349	eP	Pn	10 39 23.1	-0.6
WAR				eS	Sn	10 42 51.1	+3.9
WAR				esS	sS	10 42 54.2	-11
WAR				L		10 48 41.0	
	comp=Z,1.4nm,21.8s						
WAR	Warsaw	18.31	349	eP	Pn	10 39 23.1	-0.6
WAR				eS	Sn	10 42 51.1	+3.9
WAR				MLR	MLR		
	comp=Z,1μm,21.8s						
WAR	Warsaw	18.31	349	eP	Pn	10 39 23.1	-0.6
WAR				eS	Sn	10 42 51.1	+3.9
WAR				eSS		10 42 54.2	
WAR	Warsaw	18.31	349	eP	Pn	10 39 23.1	-0.6
WAR				eS	Sn	10 42 51.1	+3.9
PVCC	Panska Ves	18.38	335	eP	Pn	10 39 22.3	-2.3
PVCC				AMS	AMS	10 49 00.0	
	comp=Z,2μm,14.1s						
MBDF	Montbardon	18.40	310	eP	Pn	10 39 23.9	-0.9
	comp=Z,299nm,0.9s						
MBDF	Montbardon	18.40	310	eP	Pn	10 39 23.9	-0.9
MBDF				pmax	pmax		
	comp=Z,149nm,0.9s						
MBDF	Montbardon	18.40	310	eP	Pn	10 39 23.9	-0.9
	comp=Z,149nm,0.9s						
MAK	Makhachkala	18.44	56c	iP	Pn	10 39 27.2	+1.9
MAK				i S	Sn	10 42 56.7	+6.5
MAK				pmax	pmax		
	comp=Z,696nm,1.4s						
MAK				MLR	MLR		
	comp=Z,3μm,21.0s						
MAK	Makhachkala	18.44	56	i Pr	Pn	10 39 27.7	+2.4
RRL	Cesana Torines	18.48	311	P	Pn	10 39 23.9	-1.9
LSD	Ceresole Reale	18.51	313	P	Pn	10 39 25.0	-1.1
UMR	Umm Al-Rimmam	18.57	99	eP	Pn	10 39 26.2	-0.7
UMR				AMb	AMB	10 39 30.2	
	comp=Z,482nm,1.4s						
MAHO	Mahon	18.60	294	eP	Pn	10 39 25.6	-1.6
MAHO				eS	Sn	10 43 13.6	+19
BNI	Bardonecchia	18.61	311	eP	Pn	10 39 27.5	+0.2
BNI				pmax	pmax		
	comp=Z,36nm,0.8s						

BNI Bardonecchia 18.61 311 *e*Pn **Pn 10 39 27.5 +0.2**
comp=Z,36nm,0.8s
BNI Bardonecchia 18.61 311 *e*Pn **Pn 10 39 27.5 +0.2**
comp=Z,36nm,0.8s
RDF Al-Radifah 18.66 101 *e*P **Pn 10 39 26.7 -1.3**
RDF AMb AMB 10 39 30.8
comp=Z,169nm,1.0s
ROTZ Rotzenmuhle 18.67 330 *e*P **Pn 10 39 25.5 -2.6**
comp=Z,41nm,1.2s
KBD Kabd 18.69 100 *e*P **Pn 10 39 27.0 -1.3**
KBD AMb AMB 10 39 31.8
comp=Z,767nm,1.2s
HDH Heidenheim-Cha 18.71 324 P **Pn 10 39 26.5 -2.0**
VILF Villemus 18.71 307 *e*P **Pn 10 39 28.6 +0.1**
SISB Singen-Schiene 18.74 321 P **Pn 10 39 31.6 +2.6**
LPG La Plagne 18.78 312 *e*P **Pn 10 39 28.8 -0.6**
comp=Z,193nm,1.0s
LPG La Plagne 18.78 312 *e*P **Pn 10 39 28.8 -0.6**
LPG pmax pmax
comp=Z,97nm,1.0s
LPG La Plagne 18.78 312 *e*P **Pn 10 39 28.8 -0.6**
comp=Z,96nm,1.0s
LPL La Plagne 18.80 312 *e*P **Pn 10 39 28.0 -1.6**
comp=Z,264nm,1.2s
LPL La Plagne 18.80 312 *e*P **Pn 10 39 28.0 -1.6**
LPL pmax pmax
comp=Z,132nm,1.2s
LPL La Plagne 18.80 312 *e*P **Pn 10 39 28.0 -1.6**
comp=Z,132nm,1.2s
TREF Trevaresse 18.84 306 *e*P **Pn 10 39 32.7 +2.6**
SMRF Simiane la Rot 18.85 307 *e*P **Pn 10 39 28.8 -1.5**
comp=Z,218nm,1.2s
SMRF Simiane la Rot 18.85 307 *e*P **Pn 10 39 28.8 -1.5**
comp=Z,109nm,1.2s
MANZ Manzenberg 18.88 330 *e*P **Pn 10 39 27.9 -2.7**
comp=Z,51nm,1.0s
BRG Berggiesshubel 18.89 335 *e*P **Pn 10 39 27.6 -3.1**
comp=Z,102nm,1.1s
BRG Berggiesshubel 18.89 335 *i* P **Pn 10 39 28.6 -2.2**
comp=Z,38nm,1.1s
BRG *i* 10 39 36.8
comp=Z,59nm,1.1s
BRG *i* 10 39 52.3
comp=Z,37nm,1.0s
BRG S **Sn 10 42 52.0 -9.2**
BRG
comp=N,2µm,14.3s
BRG
comp=E,902nm,18.8s
BRG
comp=Z,2µm,11.4s
BRG Berggiesshubel 18.89 335 *i* P **Pn 10 39 28.6 -2.1**
BRG S **Sn 10 42 52.0 -9.2**
BRG pmax pmax
comp=Z,15nm,1.1s
BRG MLR MLR
comp=N,37µm,14.3s
BRG MLR MLR
comp=E,2µm,18.8s
BRG MLR MLR
comp=Z,902nm,11.4s
BRG Berggiesshubel 18.89 335 *i* P **Pn 10 39 28.6 -2.2**
comp=Z,38nm,1.1s
BRG *i* 10 39 36.8
BRG *i* 10 39 52.3
BRG S **Sn 10 42 52.0 -9.2**
GUT Gutenstein 18.91 322 P **Pn 10 39 29.2 -1.8**
NKC Novy Kostel 18.94 331 *e*P **Pn 10 39 28.9 -2.4**
NKC *e*S **Sn 10 43 02.4 +0.1**
NKC AMS AMS 10 48 00.0
comp=Z,3µm,13.5s
NKC Novy Kostel 18.94 331 *e*P **Pn 10 39 28.9 -2.4**
NKC *e*S **Sn 10 43 02.4 +0.1**
RSL Roselend 18.95 313 *e*P **Pn 10 39 30.6 -0.8**
WERN Wernitzgruen 19.01 331 *e*P **Pn 10 39 29.1 -3.1**
comp=Z,58nm,1.2s
GRA1 Grafenberg Arr 19.04 328 *e*P **Pn 10 39 30.1 -2.4**
comp=Z,194nm,1.3s
GRA1 *e*S **Sn 10 42 59.9 -4.8**
GRF Grafenberg Arr 19.04 328 *e*P **Pn 10 39 30.1 -2.4**
comp=Z,194nm,1.3s
GRF *e*S **Sn 10 42 59.9 -4.8**
GRF *e*L 10 49 10.9
comp=Z,2µm,18.8s
GRF Grafenberg Arr 19.04 328 *e*P **Pn 10 39 30.1 -2.4**
GRF *e*S **Sn 10 42 59.9 -4.8**
GRF pmax pmax
comp=Z,194nm,1.3s
GRF MLR MLR
comp=Z,2µm,18.8s
GRF Grafenberg Arr 19.04 328 *e*P **Pn 10 39 30.1 -2.4**
comp=Z,194nm,1.3s
GRF *e*S **Sn 10 42 59.9 -4.8**
BUCH Bad Urach 19.04 323 P **Pn 10 39 30.7 -1.8**
ORIF Oris-en-Rattie 19.05 310 *e*P **Pn 10 39 30.8 -1.9**
comp=Z,127nm,0.9s
ORIF *e*R
comp=Z,3µm,22.8s
ORIF Oris-en-Rattie 19.05 310 *e*P **Pn 10 39 30.8 -1.9**
ORIF pmax pmax
comp=Z,64nm,0.9s
ORIF Oris-en-Rattie 19.05 310 *e*P **Pn 10 39 30.8 -1.9**
comp=Z,64nm,0.9s
PRAF Pradon 19.05 306 *e*P **Pn 10 39 28.9 -3.8**
TANN Tannenbergstha 19.07 332 *e*P **Pn 10 39 30.1 -2.9**
comp=Z,60nm,0.9s
GUNZ Gunzen 19.09 331 *e*P **Pn 10 39 30.5 -2.6**
comp=Z,76nm,0.9s
SPAK Spaichingen-Ko 19.10 321 *e*P **Pn 10 39 31.5 -1.8**
FBE Freiberg 19.14 334 *e*P **Pn 10 39 30.7 -3.1**
comp=Z,134nm,0.9s
WERD Werda 19.16 331 *e*P **Pn 10 39 31.3 -2.7**
comp=Z,66nm,1.0s
VRSR Storozhevoye 19.18 25 *e*P **Pn 10 39 32.4 -1.8**
VRSR *e*S **Sn 10 43 04.9 -3.2**
VRSR pmax pmax
comp=Z,110nm,1.5s
VRSR pmax pmax
comp=N,160nm,1.1s
VRSR pmax pmax
comp=E,100nm,0.9s
VRSR smax
comp=N,390nm,6.4s
VRSR smax
comp=Z,140nm,3.1s
VRSR smax
comp=E,570nm,7.7s
OG01 Vacheresse 19.24 314 *e*P **Pn 10 39 33.0 -1.9**
OCF Saint Nazaire 19.28 308 *e*P **Pn 10 39 34.8 -0.6**
OG26 St.-Nazaire-De 19.28 308 *e*P **Pn 10 39 34.8 -0.6**
ABA Alger-Bouzarea 19.28 284 P **Pn 10 39 34.0 -1.5**
STU Stuttgart 19.33 323 *e*P **Pn 10 39 33.5 -2.5**
comp=Z,137nm,0.8s
STU Stuttgart 19.33 323 *e*P **Pn 10 39 34.0 -2.0**
STU pmax pmax
comp=Z,128nm,0.8s
STU Stuttgart 19.33 323 *e*P **Pn 10 39 34.0 -2.0**
comp=Z,128nm,0.8s
STU *e*pP pP 10 39 43.7 +0.1
STU Stuttgart 19.33 323 *e*P **Pn 10 39 34.0 -2.0**
comp=Z,128nm,0.8s
STU *e*pP pP 10 39 43.7 +0.2
EMHD Djebel Mahouad 19.36 282 P **Pn 10 39 37.0 +0.7**
FELD Feldberg im Sc 19.37 320 *e*P **Pn 10 39 33.7 -2.8**
BBS Basel-Blauen 19.39 318 *e*P **Pn 10 39 34.8 -2.0**
LBG Lerchenberg 19.46 323 P **Pn 10 39 35.8 -1.7**
KIZ Kirchzarten 19.46 320 P **Pn 10 39 36.3 -1.3**
BFO Black Forest 19.48 321 P **Pn 10 39 35.3 -2.5**
comp=Z,622nm,0.7s,SNR=21
BFO Black Forest 19.48 321 *e*P **Pn 10 39 35.0 -2.8**
comp=Z,92nm,0.9s
BFO Black Forest 19.48 321 *e*P **Pn 10 39 35.0 -2.8**
BFO pmax pmax
comp=Z,92nm,0.9s
SIND Sindeldorf 19.52 325 P **Pn 10 39 36.4 -1.9**
CLL Collm 19.59 334 *e*P **Pn 10 39 35.2 -3.9**
comp=Z,149nm,1.2s
CLL Collm 19.59 334 P **Pn 10 39 36.0 -3.1**
comp=Z,logA/T=1.8
CLL *e**SP sP 10 39 49.0 -1.6
CLL *e*S **Sn 10 43 07.0 -11**
CLL Collm 19.59 334 *e*P **Pn 10 39 36.0 -3.1**
comp=Z,57nm,0.9s
CLL *e*sP sP 10 39 49.0 -1.6
CLL *e*S **Sn 10 43 07.0 -11**
CLL *e*S **Sn 10 43 07.0 -11**

CLL Collm 19.59 334 *e*P **Pn 10 39 36.0 -3.1**
CLL *e*S **Sn 10 43 07.0 -11**
CLL pmax pmax
comp=Z,28nm,0.9s
CLL MLR MLR
comp=Z,4µm,14.1s
MOX Moxa 19.59 331 *e*P **Pn 10 39 35.6 -3.5**
comp=Z,87nm,1.1s
MOX Moxa 19.59 331 *e*P **Pn 10 39 37.1 -2.0**
comp=Z,104nm,1.6s
MOX *e* 10 40 03.9
MOX *e* 10 43 22.0
MOX
comp=Z,2µm,18.0s
MOX Moxa 19.59 331 *e*P **Pn 10 39 37.1 -2.0**
MOX *e* 10 43 22.0
MOX pmax pmax
comp=Z,104nm,1.6s
MOX MLR MLR
comp=Z,2µm,18.0s
MOX Moxa 19.59 331 *e*P **Pn 10 39 37.1 -2.0**
comp=Z,104nm,1.6s
MOX *e* 10 40 03.9
MOX *e* 10 43 22.0
ETOS Mallorca 19.68 293 P **Pn 10 39 39.3 -0.9**
comp=Z,8.5nm,0.9s
ETOS Mallorca 19.68 293 P **Pn 10 39 39.3 -0.9**
comp=Z,8.5nm,0.9s
LOMF Lomont 19.71 317 *e*P **Pn 10 39 38.4 -2.1**
CABF La Chapelle 19.74 314 *e*P **Pn 10 39 37.0 -3.9**
comp=Z,339nm,1.1s
CABF La Chapelle 19.74 314 *e*P **Pn 10 39 37.0 -3.9**
CABF pmax pmax
comp=Z,170nm,1.1s
CABF La Chapelle 19.74 314 *e*P **Pn 10 39 37.0 -3.9**
comp=Z,170nm,1.1s
SUW Suwalki 19.79 354 *e*P **Pn 10 39 38.7 -2.8**
SUW *e*pP pP 10 39 40.2 -8.4
SUW *e*S **Sn 10 43 20.6 -2.3**
SUW *e*sS sS 10 43 23.5 -11
SUW L 10 48 46.5
comp=Z,7.4nm,14.4s
SUW Suwalki 19.79 354 *e*P **Pn 10 39 38.7 -2.8**
SUW *e*S **Sn 10 43 20.6 -2.3**
SUW MLR MLR
comp=Z,7µm,14.4s
SUW Suwalki 19.79 354 *e*P **Pn 10 39 38.7 -2.8**
SUW *e*pP pP 10 39 40.2 -8.4
SUW *e*S **Sn 10 43 20.6 -2.3**
SUW *e*SS 10 43 23.5
SUW Suwalki 19.79 354 *e*P **Pn 10 39 38.7 -2.8**
SUW *e*pP pP 10 39 40.2 -8.4
VIVF Saint-Julien-l 19.80 308 *e*P **Pn 10 39 38.9 -2.7**
comp=Z,301nm,1.2s
VIVF Saint-Julien-l 19.80 308 *e*P **Pn 10 39 38.9 -2.7**
VIVF pmax pmax
comp=Z,151nm,1.2s
VIVF Saint-Julien-l 19.80 308 *e*P **Pn 10 39 38.9 -2.7**
comp=Z,151nm,1.2s
MOF Molkenrain 19.83 319 *e*P **Pn 10 39 38.7 -3.2**
OG05 Jujurieux 19.83 312 *e*P **Pn 10 39 39.0 -3.0**
STR Strasbourg 19.93 321 *e*P **Pn 10 39 42.1 -1.1**
HINF Hinteralfeld 19.96 318 *e*P **Pn 10 39 40.6 -2.9**
comp=Z,160nm,0.9s
HINF Hinteralfeld 19.96 318 *e*P **Pn 10 39 40.6 -2.9**
HINF pmax pmax
comp=Z,80nm,0.9s
HINF Hinteralfeld 19.96 318 *e*P **Pn 10 39 40.6 -2.9**
comp=Z,80nm,0.9s
VRHR Novokhopersk 19.99 29 *e*P **Pn 10 39 42.1 -1.7**
VRHR *e*S **Sn 10 43 21.9 -5.7**
VRHR pmax pmax
comp=Z,150nm,0.6s
VRHR pmax pmax
comp=N,350nm,1.0s
VRHR pmax pmax
comp=E,410nm,1.3s
VRHR smax
comp=N,270nm,1.4s
VRHR smax
comp=E,160nm,1.4s
VRHR smax
comp=Z,30nm,0.9s
VRHR MLR MLR
comp=Z,2µm,26.0s
VRHR MLR MLR
comp=N,1µm,18.0s
VRHR MLR MLR
comp=E,420nm,11.0s
ECH Echery 20.03 320 *e*P **P 10 39 41.7 -0.7**
GKP Gorka Klasztor 20.03 343 *e*P **P 10 39 40.6 -1.9**
GKP *e*pP 10 39 42.2
GKP *e*S **S 10 43 25.0 -0.8**
GKP L 10 49 12.5
comp=Z,4.2nm,19.6s
GKP Gorka Klasztor 20.03 343 *e*P **P 10 39 40.6 -1.9**
GKP *e*pP 10 39 42.2
GKP *e*S **S 10 43 25.0 -0.8**
GKP Gorka Klasztor 20.03 343 *e*P **P 10 39 40.6 -1.9**
GKP *e*pP 10 39 42.2
LASF Ste Croix 20.04 306 *e*P **P 10 39 43.7 +1.2**
comp=Z,313nm,1.4s
LASF Ste Croix 20.04 306 *e*P **P 10 39 43.7 +1.2**
comp=Z,156nm,1.4s
WLS Welschbruch 20.04 320 *e*P **P 10 39 42.5 -0.1**
SWS Schriesheim-Wi 20.05 324 P **P 10 39 44.0 +1.4**
TOD Tromm 20.08 325 *e*P **P 10 39 41.7 -1.3**
CDF Champ du Feu 20.08 320 *e*P **P 10 39 42.3 -0.7**
comp=Z,445nm,1.0s
CDF Champ du Feu 20.08 320 *e*P **P 10 39 42.3 -0.7**
CDF pmax pmax
comp=Z,223nm,1.0s
CDF Champ du Feu 20.08 320 *e*P **P 10 39 42.3 -0.7**
comp=Z,223nm,1.0s
MNK Minsk 20.16 2 *e*P **P 10 39 38.0 -5.8**
MNK *e*S **S 10 43 18.0 -10**
MNK pmax pmax
comp=Z,280nm,1.0s
MNK pmax pmax
comp=N,400nm,1.5s
MNK MLR MLR
comp=Z,5µm,12.0s,MS5.1
LANF Langenberg 20.16 322 *e*P **P 10 39 43.6 -0.2**
EJON La Jonquera 20.19 301 P **P 10 39 43.6 -0.6**
comp=Z,6.2nm,0.6s
KTD Kalmit 20.24 323 P **P 10 39 47.5 +2.8**
RUE Ruedersdorf 20.30 337 *e*P **P 10 39 43.0 -2.3**
comp=Z,252nm,1.1s
RUE Ruedersdorf 20.30 337 *e*P **P 10 39 45.5 +0.1**
comp=Z,280nm,1.1s
RUE *e*pP 10 39 55.1
RUE Ruedersdorf 20.30 337 *e*P **P 10 39 45.5 +0.2**
comp=Z,280nm,1.1s
RUE *e*pP 10 39 55.1
HAU Haudompre 20.35 318 *e*P **P 10 39 44.9 -1.0**
comp=Z,441nm,1.0s
HAU *e*R
comp=Z,2µm,17.2s
HAU Haudompre 20.35 318 *e*P **P 10 39 44.9 -1.0**
HAU pmax pmax
comp=Z,221nm,1.0s
HAU MLR MLR
comp=Z,2µm,17.2s,MS4.5
HAU Haudompre 20.35 318 *e*P **P 10 39 44.9 -1.0**
comp=Z,221nm,1.0s
HAU LR LR
comp=Z,2µm,17.2s,MS4.5
UBBA Unterbreizbach 20.40 329 *e*P **P 10 39 43.7 -2.7**
comp=Z,59nm,1.4s
EBNR Beni Rached 20.50 283 P **P 10 39 49.0 +1.5**
NE53 Naroch' 20.54 0 *e*P **P 10 39 43.0 -5.0**
NE53 *e*S **S 10 43 25.7 -10**
LRDF Laroque-de-Fa 20.57 302 *e*P **P 10 39 47.6 -0.7**
ECHA Ech Chlef 20.64 282 P **P 10 39 50.0 +1.0**
TNS Taunus Mts 20.67 326 *e*P **P 10 39 48.0 -1.4**
comp=Z,147nm,0.9s
TNS Taunus Mts 20.67 326 *e*P **P 10 39 48.0 -1.4**
TNS pmax pmax
comp=Z,147nm,0.9s
THEF They Montfort 20.67 318 *e*P **P 10 39 48.8 -0.6**
COLF Collangettes 20.70 309 *e*P **P 10 39 48.4 -1.3**
ETRT Tiaret 20.74 280 P **P 10 39 53.0 +2.9**
VALF Valcebollere 20.80 300 *e*P **P 10 39 51.6 +0.8**
EANR 'Ain N'Sour 20.87 282 P **P 10 39 52.0 +0.5**
LBL Lubilhac 20.88 308 *e*P **P 10 39 52.7 +1.1**

MTLF Montolieu 20.92 303 *e*P **P 10 39 50.6 -1.4**
comp=Z,118nm,1.1s
MTLF Montolieu 20.92 303 *e*P **P 10 39 50.6 -1.4**
MTLF pmax pmax
comp=Z,59nm,1.1s
MTLF Montolieu 20.92 303 *e*P **P 10 39 50.6 -1.4**
comp=Z,59nm,1.1s
PLDF La Plantade 20.94 310 *e*P **P 10 39 51.4 -0.9**
CLZ Clausthal 21.01 331 *e*P **P 10 39 50.8 -2.3**
comp=Z,63nm,1.0s,mb4.9
CLZ Clausthal 21.01 331 *e*P **P 10 39 50.8 -2.3**
CLZ pmax pmax
comp=Z,63nm,1.0s,mb4.9
SMF Signal de Mont 21.11 312 *e*P **P 10 39 52.4 -1.7**
comp=Z,97nm,0.8s,mb4.9
SMF Signal de Mont 21.11 312 *e*P **P 10 39 52.4 -1.7**
SMF pmax pmax
comp=Z,48nm,0.8s,mb4.9
SMF Signal de Mont 21.11 312 *e*P **P 10 39 52.4 -1.7**
comp=Z,48nm,0.8s,mb4.9
OJGS Djebel Guires 21.18 280 P pP 10 40 03.0 -0.7
OKGL Djebel Kef Gue 21.23 282 P **P 10 40 02.0 +6.6**
PYM Petit Puy Mans 21.24 309 *e*P **P 10 39 54.8 -0.7**
EPOB Poblet 21.25 297 P **P 10 39 55.7 +0.1**
comp=Z,25nm,0.7s,mb4.7
EPOB Poblet 21.25 297 P **P 10 39 55.7 +0.1**
comp=Z,25nm,0.7s,mb4.7
AGO Saint Agoulin 21.29 310 *e*P **P 10 39 54.9 -1.1**
MEZF Maizieres J'vi 21.34 318 *e*P **P 10 39 56.1 -0.5**
comp=Z,1µm,1.3s,mb5.7
MEZF Maizieres J'vi 21.34 318 *e*P **P 10 39 56.1 -0.5**
comp=Z,516nm,1.3s,mb5.7
FRNF Fournols 21.38 308 *e*P **P 10 39 57.5 +0.5**
LOR Lormes 21.39 314 *e*P **P 10 39 55.6 -1.5**
comp=Z,130nm,0.9s,mb4.9
LOR *e*R
comp=Z,1µm,22.2s
LOR Lormes 21.39 314 *e*P **P 10 39 55.6 -1.5**
LOR pmax pmax
comp=Z,65nm,0.9s,mb5.0
LOR MLR MLR
comp=Z,1µm,22.3s,MS4.3
LOR Lormes 21.39 314 *e*P **P 10 39 55.6 -1.5**
comp=Z,65nm,0.9s,mb5.0
LOR LR LR
comp=Z,1µm,22.3s,MS4.3
WLF Walferdange 21.43 322 *e*P **P 10 39 57.0 -0.6**
comp=Z,124nm,0.9s,mb5.2
WLF Walferdange 21.43 322 P **P 10 39 57.2 -0.4**
WLF Walferdange 21.43 322 *e*P **P 10 39 57.2 -0.4**
WLF pmax pmax
comp=Z,92nm,0.8s,mb5.2
WLF Walferdange 21.43 322 *e*P **P 10 39 57.2 -0.4**
comp=Z,92nm,0.8s,mb5.2
WLF *e*pP 10 40 06.7
WLF Walferdange 21.43 322 *e*P **P 10 39 57.2 -0.4**
comp=Z,92nm,0.8s,mb5.2
WLF *e*pP 10 40 06.7
AVF Avril sur Loir 21.47 312 *e*P **P 10 39 56.5 -1.5**
comp=Z,137nm,1.1s,mb4.9
AVF Avril sur Loir 21.47 312 *e*P **P 10 39 56.5 -1.5**
AVF pmax pmax
comp=Z,69nm,1.1s,mb4.9
AVF Avril sur Loir 21.47 312 *e*P **P 10 39 56.5 -1.5**
comp=Z,68nm,1.1s,mb4.9
SALF Salau 21.48 300 *e*P **P 10 40 01.5 +3.4**
SSF Saint Saulge 21.50 313 *e*P **P 10 39 57.3 -1.0**
comp=Z,319nm,1.1s,mb5.4
SSF Saint Saulge 21.50 313 *e*P **P 10 39 57.3 -1.0**
SSF pmax pmax
comp=Z,159nm,1.1s,mb5.4
SSF Saint Saulge 21.50 313 *e*P **P 10 39 57.3 -1.0**
comp=Z,159nm,1.1s,mb5.4
CAF Calviac 21.54 307 *e*P **P 10 39 58.0 -0.7**
comp=Z,119nm,0.9s,mb5.0
CAF Calviac 21.54 307 *e*P **P 10 39 58.0 -0.7**
CAF pmax pmax
comp=Z,59nm,0.9s,mb5.0
CAF Calviac 21.54 307 *e*P **P 10 39 58.0 -0.7**
comp=Z,60nm,0.9s,mb5.0
VERF Verneugheol 21.57 309 *e*P **P 10 39 58.9 -0.2**
MLS Moulis 21.60 301 *e*P **P 10 40 02.0 +2.6**
NRDL Niedersach Rie 21.62 332 *e*P **P 10 39 57.2 -2.4**
comp=Z,103nm,1.3s,mb5.1
BGF Bois d'Agland 21.68 311 *e*P **P 10 39 59.2 -1.0**
comp=Z,233nm,1.0s,mb5.3
BGF Bois d'Agland 21.68 311 *e*P **P 10 39 59.2 -1.0**
BGF pmax pmax
comp=Z,117nm,1.0s,mb5.3
BGF Bois d'Agland 21.68 311 *e*P **P 10 39 59.2 -1.0**
comp=Z,116nm,1.0s,mb5.3
ERTA Horta de San J 21.74 295 P **P 10 40 01.6 +0.8**
comp=Z,7.0nm,0.6s,mb4.3
ERTA Horta de San J 21.74 295 P **P 10 40 01.6 +0.8**
comp=Z,7.0nm,0.6s,mb4.3
OBN Obninsk 21.89 16 P **P 10 40 00.1 -2.4**
comp=Z,1µm,1.0s,SNR=20
OBN Obninsk 21.89 16*c i*P **P 10 40 00.6 -1.9**
OBN pmax pmax
comp=Z,267nm,2.0s,mb5.3
OBN MLR MLR
comp=Z,2µm,14.0s,MS4.7
OBN Obninsk 21.89 16 *e*P **P 10 40 00.8 -1.7**
comp=Z,231nm,0.9s,mb5.6
EBEN Beniarda 21.93 289 P **P 10 40 03.8 +1.0**
comp=Z,12nm,0.6s,mb4.5
EBEN Beniarda 21.93 289 P **P 10 40 03.8 +1.0**
comp=Z,12nm,0.6s,mb4.5
TCF Toulx Ste Croi 21.96 310 *e*P **P 10 40 02.4 -0.9**
comp=Z,134nm,1.0s,mb5.0
TCF Toulx Ste Croi 21.96 310 *e*P **P 10 40 02.4 -0.9**
TCF pmax pmax
comp=Z,67nm,1.0s,mb5.0
TCF Toulx Ste Croi 21.96 310 *e*P **P 10 40 02.4 -0.9**
comp=Z,67nm,1.0s,mb5.0
RJF Les Rejaudoux 22.04 307 *e*P **P 10 40 02.0 -2.0**
comp=Z,190nm,0.9s,mb5.2
RJF *e*R
comp=Z,2µm,21.5s
RJF Les Rejaudoux 22.04 307 *e*P **P 10 40 02.0 -2.0**
RJF pmax pmax
comp=Z,95nm,0.9s,mb5.2
RJF MLR MLR
comp=Z,2µm,21.5s,MS4.5
RJF Les Rejaudoux 22.04 307 *e*P **P 10 40 02.0 -2.0**
comp=Z,95nm,0.9s,mb5.2
RJF LR LR
comp=Z,2µm,21.5s,MS4.5
BUG Bochum-Univer 22.05 327 *e*P **P 10 40 02.9 -1.3**
comp=Z,165nm,0.9s,mb5.5
MEM Membach 22.10 324 P **P 10 40 07.0 +2.3**
EPF Esparros 22.15 301 *e*P **P 10 40 05.4 +0.1**
comp=Z,67nm,0.9s,mb4.8
EPF Esparros 22.15 301 *e*P **P 10 40 05.4 +0.1**
EPF pmax pmax
comp=Z,33nm,0.9s,mb4.8
EPF Esparros 22.15 301 *e*P **P 10 40 05.4 +0.1**
comp=Z,33nm,0.9s,mb4.8
EBIE Bielsa 22.21 300 P **P 10 40 06.7 +0.7**
comp=Z,12nm,0.8s,mb4.4
EBIE Bielsa 22.21 300 P **P 10 40 06.7 +0.8**
comp=Z,12nm,0.8s,mb4.4
USTO Oran 22.22 281 P pP 10 40 17.0 +2.1
HGN Heimansgroeve 22.23 324[1] *e*P **P 10 40 05.8 -0.3**
comp=Z,146nm,1.2s,mb5.3
HGN *ex* x 10 40 14.6
HGN *e*S **S 10 44 09.6 +0.5**
EMOS Mosqueruela 22.26 294 P **P 10 40 09.4 +3.0**
comp=Z,12nm,0.7s,mb4.4
EMOS Mosqueruela 22.26 294 P **P 10 40 09.4 +3.0**
comp=Z,12nm,0.7s,mb4.4
BCLA Clavier 22.33 322 P **P 10 40 06.5 -0.7**
BEBN Eben Emael 22.38 324 P **P 10 40 08.0 +0.3**
GIVF Givet 22.38 321 *e*P **P 10 40 06.6 -1.1**
comp=Z,269nm,0.9s,mb5.4
GIVF Givet 22.38 321 *e*P **P 10 40 06.6 -1.1**
GIVF pmax pmax
comp=Z,135nm,0.9s,mb5.4
GIVF Givet 22.38 321 *e*P **P 10 40 06.6 -1.1**
comp=Z,134nm,0.9s,mb5.4
LFF La Frestale 22.43 306 *e*P **P 10 40 07.6 -0.6**
comp=Z,166nm,0.9s,mb5.2
LFF La Frestale 22.43 306 *e*P **P 10 40 07.6 -0.6**
LFF pmax pmax
comp=Z,83nm,0.9s,mb5.2
LFF La Frestale 22.43 306 *e*P **P 10 40 07.6 -0.6**
comp=Z,83nm,0.9s,mb5.2

IBBN Ibbenburen 22.44 329 *e*P P **10 40 05.6 -2.8**
comp=Z,134nm,1.0s,mb5.3
DOU Dourbes 22.50 321 P P **10 40 07.5 -1.4**
CART Cartagena 22.51 286 *e*P P **10 40 03.4 -5.7**
CART *e*S **S 10 44 24.2 +10**
ECHE Chera 22.56 291 P P **10 40 11.4 +1.8**
ECHE pmax pmax
comp=Z,32nm,1.2s,mb4.6
ECHE Chera 22.56 291 P P **10 40 11.4 +1.8**
comp=Z,32nm,1.2s,mb4.6
ECHE Chera 22.56 291 P P **10 40 11.4 +1.8**
comp=Z,32nm,1.2s,mb4.6
WTSB Winterswijk 22.62 327 *e*P P **10 40 08.3 -2.0**
comp=Z,29nm,1.6s,mb4.5
BSEG Bad Segeberg 22.68 335 *e*P P **10 40 09.1 -1.7**
comp=Z,102nm,1.1s,mb5.2
BSEG Bad Segeberg 22.68 335 *e*P P **10 40 09.1 -1.7**
BSEG pmax pmax
comp=Z,102nm,1.1s,mb5.2
BAIF Baives 22.68 321 *e*P P **10 40 09.4 -1.5**
comp=Z,667nm,1.1s,mb5.7
BAIF Baives 22.68 321 *e*P P **10 40 09.4 -1.5**
BAIF pmax pmax
comp=Z,334nm,1.1s,mb5.7
BAIF Baives 22.68 321 *e*P P **10 40 09.4 -1.5**
comp=Z,334nm,1.1s,mb5.7
MOS Moscow 22.71 16α *i*P P **10 40 09.8 -1.3**
MOS *e* 10 40 33.5
MOS *e* 10 40 45.5
MOS *e*S **S 10 44 15.7 -2.0**
MOS *e*SS 10 44 49.4
MOS pmax pmax
comp=Z,700nm,1.5s,mb5.9
MOS pmax pmax
comp=Z,521nm,1.5s,mb5.7
MOS MLR MLR
comp=N,2μm,13.7s,MS4.8
MOS MLR MLR
comp=E,1μm,13.7s,MS4.8
MOS MLR MLR
comp=Z,3μm,13.7s,MS5.0
ODZI Dziouia 22.81 280 P pP 10 40 27.0 +5.8
SNF Seneffe 22.90 322 P **P 10 40 12.6 -0.6**
ETOB Tobarra 22.96 289 P P **10 40 15.3 +1.5**
comp=Z,3.4nm,0.5s
ETOB Tobarra 22.96 289 P P **10 40 15.3 +1.5**
comp=Z,3.4nm,0.5s
UCC Uccle 23.04 322 P P **10 40 13.1 -1.5**
SJPF Ste Jean 23.29 300 *e*P P **10 40 18.0 +0.7**
comp=Z,106nm,1.1s,mb4.9
SJPF Ste Jean 23.29 300 *e*P P **10 40 18.0 +0.7**
SJPF pmax pmax
comp=Z,53nm,1.1s,mb4.9
SJPF Ste Jean 23.29 300 *e*P P **10 40 18.0 +0.7**
comp=Z,53nm,1.1s,mb4.9
COP Copenhagen 23.46 340 *i* P P **10 40 22.2 +3.2**
comp=Z,38nm,0.6s,mb5.0
COP *i* 10 40 43.6
COP *i* S **S 10 44 39.8 +10**
COP
comp=Z,1μm,17.0s
COP Copenhagen 23.46 340 *e*P P **10 40 22.2 +3.2**
COP *i* 10 40 43.6
COP pmax pmax
comp=Z,38nm,0.6s,mb5.0
COP MLR MLR
comp=Z,1μm,17.0s,MS4.5
COP Copenhagen 23.46 340 *e*P P **10 40 22.2 +3.2**
comp=Z,38nm,0.6s,mb5.0
COP *i*
COP *i* S **S 10 44 39.8 +10**
COP LR LR
comp=Z,1μm,17.0s,MS4.5
ENIJ Nijar 23.48 285 P P **10 40 15.5 -3.7**
ENIJ pmax pmax
comp=Z,143nm,1.7s,mb5.1
ENIJ Nijar 23.48 285 P P **10 40 15.5 -3.7**
comp=Z,143nm,1.7s,mb5.1
ENIJ Nijar 23.48 285 P P **10 40 15.5 -3.7**
comp=Z,143nm,1.7s,mb5.1
EALK Alkurruntz 23.51 300 P P **10 40 21.9 +2.4**
comp=Z,3.8nm,0.5s,mb4.1
ELIZ Elizondo 23.52 300 P P **10 40 20.9 +1.4**
ELIZ pmax pmax
comp=Z,17nm,0.9s,mb4.5
ELIZ Elizondo 23.52 300 P P **10 40 20.9 +1.4**
comp=Z,17nm,0.9s,mb4.5
ELIZ Elizondo 23.52 300 P P **10 40 20.9 +1.4**
comp=Z,17nm,0.9s,mb4.5
MFF Saint Martin d 23.59 309 *e*P P **10 40 20.2 0.0**
comp=Z,283nm,1.1s,mb5.3
MFF Saint Martin d 23.59 309 *e*P P **10 40 20.2 0.0**
MFF pmax pmax
comp=Z,142nm,1.1s,mb5.3
MFF Saint Martin d 23.59 309 *e*P P **10 40 20.2 0.0**
comp=Z,142nm,1.1s,mb5.3
EVIA Vianos 23.70 289 P P **10 40 22.1 +0.9**
EVIA pmax pmax
comp=Z,25nm,0.8s,mb4.7
EVIA Vianos 23.70 289 P P **10 40 22.1 +0.9**
comp=Z,25nm,0.8s,mb4.7
EVIA Vianos 23.70 289 P P **10 40 22.1 +0.9**
comp=Z,25nm,0.8s,mb4.7
EHUE Huescar 23.77 287 P P **10 40 26.0 +4.2**
EHUE pmax pmax
comp=Z,16nm,1.2s,mb4.3
EHUE Huescar 23.77 287 P P **10 40 26.0 +4.2**
comp=Z,16nm,1.2s,mb4.3
EHUE Huescar 23.77 287 P P **10 40 26.0 +4.2**
comp=Z,16nm,1.2s,mb4.3
LCHF La Chataignera 24.00 309 *e*P P **10 40 24.1 +0.2**
MENF Mencas 24.05 320 *e*P P **10 40 23.9 -0.5**
VSU Vasula 24.11 0⇑*i*P P **10 40 23.4 -1.6**
EQES Quesada 24.15 287 P P **10 40 26.7 +1.4**
comp=Z,7.3nm,0.6s,mb4.3
EQES Quesada 24.15 287 P P **10 40 26.7 +1.4**
comp=Z,7.3nm,0.6s,mb4.3
LDF La Druitiere 24.38 314 *e*P P **10 40 26.0 -1.4**
comp=Z,348nm,1.3s,mb5.3
LDF La Druitiere 24.38 314 *e*P P **10 40 26.0 -1.4**
LDF pmax pmax
comp=Z,174nm,1.3s,mb5.3
LDF La Druitiere 24.38 314 *e*P P **10 40 26.0 -1.4**
comp=Z,174nm,1.3s,mb5.3
LRYF La Roche-sur-Y 24.48 308 *e*P P **10 40 28.2 -0.2**
ECOG Cogollos-Vega 24.56 286 P P **10 40 32.3 +3.3**
ECOG pmax pmax
comp=Z,17nm,0.6s,mb4.8
ECOG Cogollos-Vega 24.56 286 P P **10 40 32.3 +3.2**
comp=Z,17nm,0.6s,mb4.8
ECOG Cogollos-Vega 24.56 286 P P **10 40 32.3 +3.3**
comp=Z,17nm,0.6s,mb4.8
FLN La Foliniere 24.66 314 *e*P P **10 40 29.1 -0.9**
comp=Z,396nm,1.2s,mb5.5
FLN *e*R
comp=Z,2μm,21.0s
FLN La Foliniere 24.66 314 *e*P P **10 40 29.1 -0.9**
FLN pmax pmax
comp=Z,198nm,1.2s,mb5.5
FLN MLR MLR
comp=Z,2μm,21.0s,MS4.5
FLN La Foliniere 24.66 314 *e*P P **10 40 29.1 -0.9**
comp=Z,198nm,1.2s,mb5.5
FLN LR LR
comp=Z,2μm,21.0s,MS4.5
GRR Gorron 24.73 313 *e*P P **10 40 29.3 -1.3**
comp=Z,233nm,1.0s,mb5.4
GRR Gorron 24.73 313 *e*P P **10 40 29.3 -1.3**
GRR pmax pmax
comp=Z,117nm,1.0s,mb5.4
GRR Gorron 24.73 313 *e*P P **10 40 29.3 -1.3**
comp=Z,117nm,1.0s,mb5.4
ESDC Sonseca Array 24.88 291 P P **10 40 32.1 +0.2**
comp=Z,13nm,0.7s,mb4.6,baz=82,slow=9.4,SNR=55
ESDC LR LR 10 50 51.6
comp=Z,618nm,20.4s,MS4.1,baz=115,slow=38
ESDC Sonseca Array 24.88 291 P P **10 40 32.1 +0.2**
comp=Z,1.7nm,0.3s
ESLA Sonseca Array 24.88 291 *e*P P **10 40 32.5 +0.5**
comp=Z,44nm,1.2s,mb4.9
ESLA Sonseca Array 24.88 291 *e*P P **10 40 32.5 +0.6**
comp=Z,44nm,1.2s,mb4.9
ELAN Lanestosa 24.89 300 P P **10 40 33.8 +1.7**
comp=Z,8.1nm,0.8s,mb4.3
ELAN Lanestosa 24.89 300 P P **10 40 33.8 +1.7**
comp=Z,8.1nm,0.8s,mb4.3

ELOJ Sierra Loja 25.03 285 P P **10 40 32.8 -0.5**
ELOJ pmax pmax
comp=Z,13nm,0.7s,mb4.6
ELOJ Sierra Loja 25.03 285 P P **10 40 32.8 -0.5**
comp=Z,13nm,0.7s,mb4.6
ELOJ Sierra Loja 25.03 285 P P **10 40 32.8 -0.5**
comp=Z,13nm,0.7s,mb4.6
PECR Pechory 25.03 23 *i*P P **10 40 32.4 -1.0**
PECR *e* 10 41 09.0
PECR *i*S S **10 44 52.7 -2.6**
PECR *e*SS 10 45 52.6
PECR pmax pmax
comp=Z,700nm,2.0s,mb5.8
PECR smax
comp=N,900nm,7.0s
PECR smax
comp=E,900nm,7.0s
PECR MLR MLR
comp=E,1μm,11.0s
PECR MLR MLR
comp=Z,4μm,11.0s,MS5.1
PECR MLR MLR
comp=N,800nm,9.0s
GUD Guadarrama 25.08 294 P P **10 40 34.6 +0.8**
GUD pmax pmax
comp=Z,18nm,0.6s,mb4.8
GUD Guadarrama 25.08 294 P P **10 40 34.6 +0.8**
comp=Z,18nm,0.6s,mb4.8
GUD Guadarrama 25.08 294 P P **10 40 34.6 +0.8**
comp=Z,18nm,0.6s,mb4.8
MUD Monsted U'grnd 25.10 337⇑*i*P P **10 40 31.6 -2.4**
comp=Z,68nm,0.9s,mb5.2
MUD *i*S S **10 44 57.2 +0.8**
MUD
comp=Z,660nm,15.0s
MUD Monsted U'grnd 25.10 337⇑*e*P P **10 40 31.6 -2.4**
MUD *i*S S **10 44 57.2 +0.8**
MUD pmax pmax
comp=Z,68nm,0.9s,mb5.2
MUD Monsted U'grnd 25.10 337⇑*e*P P **10 40 31.6 -2.4**
comp=Z,68nm,0.9s,mb5.2
MUD *i*S S **10 44 57.2 +0.8**
MAL Malaga 25.26 284 *e*P P **10 40 43.0 +7.6**
MAL *e*S S 10 45 27.2 +28
DHBB Dhamar BB 25.45 136 *e*P P **10 40 40.6 +3.5**
DHBB AMb AMB 10 40 41.6
comp=Z,97nm,0.8s,mb5.4
DHBB Dhamar BB 25.45 136 *e*P P **10 40 40.6 +3.5**
comp=Z,49nm,0.8s,mb5.1
PUL Pulkovo 25.54 4⇓*i*P P **10 40 38.0 +0.1**
PUL *e*PPP 10 41 20.6
PUL pmax pmax
comp=Z,719nm,1.1s,mb6.1
PUL pmax pmax
comp=E,115nm,1.0s
PUL MLR MLR
comp=Z,4μm,18.0s,MS4.9
PUL MLR MLR
comp=N,2μm,11.0s
PUL MLR MLR
comp=E,814nm,10.0s
PUL Pulkovo 25.54 4⇑*e*P P **10 40 38.0 +0.1**
EMIJ Mijas 25.56 284 P P **10 40 38.4 +0.2**
comp=E,32nm,0.5s,mb5.1
EMIJ Mijas 25.56 284 P P **10 40 38.3 +0.1**
comp=E,32nm,0.5s,mb5.1
ABKT Ailbek 25.67 73 P P **10 40 40.3 +1.2**
comp=E,2μm,1.0s,SNR=42
SGMF Saint Gilles 25.72 311 *e*P P **10 40 38.9 -0.7**
comp=E,313nm,1.1s,mb5.5
SGMF Saint Gilles 25.72 311 *e*P P **10 40 38.9 -0.7**
SGMF pmax pmax
comp=Z,157nm,1.1s,mb5.5
SGMF Saint Gilles 25.72 311 *e*P P **10 40 38.9 -0.7**
comp=Z,156nm,1.1s,mb5.5
REAL Reales 25.92 284 *e*P P **10 40 42.0 +0.6**
MDT Midelt 25.97 275 P P **10 40 43.5 +1.6**
comp=Z,7.0nm,0.6s,mb4.4,baz=89,slow=13,SNR=24
MDT LR LR 10 52 52.8
comp=Z,2μm,21.7s,MS4.5,baz=80,slow=41
QUIF Quistinic 25.98 310 *e*P P **10 40 41.1 -0.9**
comp=Z,177nm,0.8s,mb5.4
QUIF Quistinic 25.98 310 *e*P P **10 40 41.1 -0.9**
QUIF pmax pmax
comp=Z,89nm,0.8s,mb5.3
QUIF Quistinic 25.98 310 *e*P P **10 40 41.1 -0.9**
comp=Z,89nm,0.8s,mb5.4
LIJA Lijar 26.04 285 *e*P P **10 40 42.0 -0.5**
EJIF Jimena Fronter 26.13 284 P P **10 40 43.4 +0.1**
EJIF pmax pmax
comp=Z,9.0nm,0.5s,mb4.6
EJIF Jimena Fronter 26.13 284 P P **10 40 43.4 +0.1**
comp=Z,8.9nm,0.5s,mb4.5
EJIF Jimena Fronter 26.13 284 P P **10 40 43.4 +0.1**
comp=Z,8.9nm,0.5s,mb4.5
EARI Arriondas 26.18 299 P P **10 40 46.5 +2.7**
comp=Z,5.9nm,0.8s,mb4.2
EARI Arriondas 26.18 299 P P **10 40 46.5 +2.7**
comp=Z,5.9nm,0.8s,mb4.2
ROSF Rostrenen 26.20 311 *e*P P **10 40 42.9 -1.0**
comp=Z,186nm,0.9s,mb5.3
ROSF Rostrenen 26.20 311 *e*P P **10 40 42.9 -1.0**
ROSF pmax pmax
comp=Z,93nm,0.9s,mb5.3
ROSF Rostrenen 26.20 311 *e*P P **10 40 42.9 -1.0**
comp=Z,93nm,0.9s,mb5.3
SKP1 Kophill 26.25 320 *e*P P **10 40 44.0 -0.4**
SKP1 Kophill 26.25 320 *e*P P **10 40 44.0 -0.4**
TRBA At Turbah 26.38 139 *e*P P **10 40 49.0 +3.5**
TRBA AMb AMB 10 40 50.1
comp=Z,30nm,0.6s,mb5.0
LBOS 26.50 136 *e*P P **10 40 50.1 +3.5**
CNIL Conil 26.61 284 *e*P P **10 40 50.0 +2.4**
BANOM Banah 26.98 100 ⇑P P **10 40 52.7 +1.7**
SNR=9.1
FINES FINESS Array B 27.10 359 P P **10 40 50.1 -2.0**
comp=Z,16nm,0.8s,mb4.6,baz=155,slow=11,SNR=99
FINES LR LR 10 51 45.6
comp=Z,895nm,18.7s,MS4.4,baz=349,slow=37
FINES FINESS Array B 27.10 359 *i*P P **10 40 50.0 -2.1**
FINES pmax pmax
comp=Z,16nm,0.8s
FIA1 FINESS Array S 27.10 359 *e*P P **10 40 49.8 -2.3**
FIA1 *e*pP pP 10 41 00.1 -1.6
FIA1 FINESS Array S 27.10 359 *e*P P **10 40 49.8 -2.3**
FIA1 *e*pP pP 10 41 00.1 -1.5
HFS Hagfors 27.12 346 P P **10 40 50.1 -2.1**
comp=Z,17nm,0.7s,mb4.7,baz=133,slow=8.7,SNR=32
HFS LR LR 10 52 28.1
comp=Z,569nm,18.6s,MS4.2,baz=157,slow=38
PBRG Braganca 27.12 296 *e*P P **10 40 52.1 -0.2**
comp=Z,16nm,1.4s,mb4.4
PBRG *e*pP pP 10 40 59.6 -2.2
ECAL Calabor 27.13 296 P P **10 40 53.0 +0.7**
comp=Z,14nm,0.6s,mb4.7
ECAL Calabor 27.13 296 P P **10 40 53.0 +0.6**
comp=Z,14nm,0.6s,mb4.7
HFA0 Hagfors New Ar 27.13 346 P P **10 40 53.6 +1.2**
ATD Arta Tunnel 27.15 143 P P **10 40 57.1 +4.6**
comp=Z,19nm,0.9s,mb4.6,baz=326,slow=14,SNR=5.3
EBAD Badajoz 27.23 289 P P **10 40 53.2 -0.1**
comp=Z,11nm,0.5s,mb4.7
HGH Gray Hill 27.30 318 *e*P P **10 40 53.2 -0.6**
HGH AMb AMB 10 40 60.0
comp=Z,67nm,1.6s,mb4.9
HGH Gray Hill 27.30 318 *e*P P **10 40 53.2 -0.6**
HGH AMb AMB 10 40 60.0
comp=Z,67nm,1.6s,mb4.9
ASHO Ashiyiah 27.34 103 ⇑P P **10 40 55.6 +1.5**
SNR=11
PCBR Castelo Branco 27.59 291 *e*P P **10 40 57.4 +1.0**
EPON Pontenova 27.59 299 P P **10 40 57.7 +1.2**
comp=Z,2.6nm,0.5s,mb4.1
EPON Pontenova 27.59 299 P P **10 40 57.7 +1.3**
comp=Z,2.6nm,0.5s,mb4.1
KONO Kongsberg 27.65 341 *e*P P **10 40 56.8 -0.2**
KONO *e*S S **10 45 38.5 +1.8**
KONO Kongsberg 27.65 341 *i*P P **10 40 55.9 -1.1**
KONO Kongsberg 27.65 341 *e*P P **10 40 54.4 -2.6**
comp=Z,30nm,1.0s,mb4.9
MTE Manteigas 27.65 293 *e*P P **10 41 01.7 +4.7**
MTE *e*S S **10 45 37.0 +0.3**
MTE *e*LR LR 10 48 53.9
comp=Z,558nm,19.8s
MTE Manteigas 27.65 293 *e*P P **10 41 01.7 +4.7**
MTE *e*S S **10 45 37.0 +0.3**

TZC Tazercounte 27.66 275 *i*P P **10 40 57.0 -0.1**
PESTR Estremoz 27.68 289 *e*P P **10 40 57.5 +0.2**
PESTR *e*S S **10 45 46.1 +8.9**
HLM1 Long Mynd 27.76 320 *e*P P **10 40 56.7 -1.3**
HLM1 AMb AMB 10 40 57.5
comp=Z,52nm,3.0s,mb4.7
HLM1 Long Mynd 27.76 320 *e*P P **10 40 56.7 -1.3**
HLM1 AMb AMB 10 40 57.5
comp=Z,52nm,3.0s,mb4.7
KAF Kangasniemi 27.77 360 *e*p P **10 40 55.4 -2.7**
comp=Z,8.1nm,0.4s,mb4.7,baz=177,slow=9.0
KAF Kangasniemi 27.77 360 *e*P P **10 40 55.4 -2.7**
KAF pmax pmax
comp=Z,8.0nm,0.4s,mb4.7
KLMR Klimovskoe 27.80 14*c i*P P **10 40 56.9 -1.5**
KLMR *e*S S **10 45 34.1 -5.0**
KLMR pmax pmax
comp=Z,460nm,1.4s,mb5.9
KLMR MLR MLR
comp=Z,3μm,12.0s,MS5.0
PVRL Vila Real 27.82 295 *e*P P **10 41 01.5 +3.0**
PVIS Viseu 27.93 293 *e*P P **10 41 02.4 +2.9**
comp=Z,32nm,1.6s,mb4.7
PBEJ Beja 27.93 288 *e*P P **10 41 00.3 +0.8**
comp=Z,18nm,1.0s,mb4.7
PBEJ *e*pP pP 10 41 06.4 -2.6
AKTK Aktyubinsk 27.97 45 P P **10 41 00.1 +0.3**
AKTK Aktyubinsk 27.97 45 P P **10 41 00.1 +0.3**
AKTO Aktyubinsk 27.97 45 P P **10 41 00.1 +0.3**
comp=Z,32nm,0.8s,mb5.0,baz=248,slow=11,SNR=69
AKTO Aktyubinsk 27.97 45 *i*P P **10 40 59.8 0.0**
AKTO pmax pmax
comp=Z,52nm,2.2s,mb4.8
PCAB Cabril 28.08 295 *e*P P **10 41 01.9 +1.1**
PCAB *e*pP pP 10 41 09.9 -0.5
PTOM Tomar 28.31 291 *e*P P **10 41 04.0 +1.2**
comp=Z,29nm,1.3s,mb4.8
ARQ Araqi 28.35 105 ⇓P P **10 41 05.1 +1.9**
SNR=13
BLS5 Blasjo 28.36 338 *e*P P **10 41 03.6 +0.3**
NAO01 NORSAR Array S 28.37 344 *e*P P **10 41 01.7 -1.7**
comp=Z,47nm,0.8s,mb5.2
NAO01 NORSAR Array S 28.37 344 *e*P P **10 41 01.7 -1.7**
comp=Z,47nm,0.8s,mb5.2
NB2 NORSAR Subarra 28.47 344 P P **10 41 01.7 -2.6**
comp=Z,47nm,1.2s,mb5.0,baz=152,slow=9.3
NB2 NORSAR Subarra 28.47 344 P P **10 41 02.0 -2.3**
NOA NORSAR Array B 28.47 344 P P **10 41 02.0 -2.3**
comp=Z,17nm,1.0s,mb4.7,baz=151,slow=8.6,SNR=19
PTEO Sao Teotonio 28.64 287 *e*P P **10 41 06.5 +0.7**
comp=Z,14nm,0.7s,mb4.8
AB31 Akbulak array 28.71 49 *i*P P **10 41 06.5 0.0**
JOF Joensuu 28.74 5 *e*p P **10 41 04.1 -2.6**
HOQ Hoqain 28.86 104 P P **10 41 09.7 +1.9**
SNR=18
PLOU Loures 28.90 289 *e*P P **10 41 08.7 +0.6**
comp=Z,93nm,1.6s,mb5.3
CKE Keswick 28.93 323 *e*P P **10 41 06.9 -1.5**
CKE Keswick 28.93 323 *e*P P **10 41 06.9 -1.5**
PMAFR Mafra 29.00 290 *e*S S **10 46 09.1 +11**
XDE Dent Fell 29.08 323 *e*P P **10 41 08.9 -0.8**
XDE AMb AMB 10 41 19.6
comp=Z,193nm,1.1s,mb5.7
XDE Dent Fell 29.08 323 *e*P P **10 41 08.9 -0.8**
XDE AMb AMB 10 41 19.6
comp=Z,193nm,1.1s,mb5.7
BBO1 Bothel 29.08 324 *e*P P **10 41 08.4 -1.3**
BBO1 Bothel 29.08 324 *e*P P **10 41 08.4 -1.3**
BSY Bisya 29.18 105 P P **10 41 12.9 +2.2**
SNR=11
BSYO Bisya 29.22 105 P P **10 41 12.9 +1.9**
SNR=11
BHH Howats Hill 29.26 324 *e*P P **10 41 10.4 -0.9**
BHH Howats Hill 29.26 324 *e*P P **10 41 10.4 -0.9**
EKA Eskdalemuir Ar 29.36 325 P P **10 41 11.4 -0.7**
comp=Z,20nm,0.9s,mb4.8,baz=126,slow=9.1,SNR=19
EKA Eskdalemuir Ar 29.36 325 P P **10 41 11.4 -0.8**
ESK Eskdalemuir 29.37 325 *e*P P **10 41 11.8 -0.5**
ESK pmax pmax
comp=Z,83nm,1.1s,mb5.4
ESK Eskdalemuir 29.37 325 *e*P P **10 41 11.8 -0.5**
comp=Z,83nm,1.1s,mb5.4
ESK Eskdalemuir 29.37 325 *e*P P **10 41 11.8 -0.5**
comp=Z,83nm,1.1s,mb5.4
GIM North Isle of 29.46 322 *e*P P **10 41 12.2 -0.9**
GIM North Isle of 29.46 322 *e*P P **10 41 12.2 -0.9**
BER Bergen 29.47 339 *e*P P **10 41 06.3 -6.8**
BER *e*PP PP 10 42 16.4 -3.6
BER *e*S S **10 46 03.4 -1.8**
BER AMS AMS 10 56 12.0
comp=Z,1μm,15.3s,MS4.7
BWH Wardlaw 29.51 324 *e*P P **10 41 13.1 -0.5**
BWH AMb AMB 10 41 14.7
comp=Z,13nm,1.4s,mb4.5
BWH Wardlaw 29.51 324 *e*P P **10 41 13.1 -0.5**
BWH AMb AMB 10 41 14.7
comp=Z,13nm,1.4s,mb4.5
SMDO Samad 29.71 104 P P **10 41 17.0 +1.7**
SNR=18
DOMB Dombas 29.85 343 *e*P P **10 41 16.9 +0.3**
DOMB AMb AMB 10 41 17.5
comp=Z,64nm,1.4s,mb5.2
DOMB Dombas 29.85 343 *e*P P **10 41 14.9 -1.7**
comp=Z,64nm,1.4s,mb5.2
DOMB Dombas 29.85 343 *e*P P **10 41 16.9 +0.4**
comp=Z,64nm,1.4s,mb5.2,SNR=31
GAL1 Galloway 29.87 323 *e*P P **10 41 15.3 -1.4**
GAL1 Galloway 29.87 323 *e*P P **10 41 15.3 -1.4**
DLF Lyons Farm 30.08 319 *e*P P **10 41 20.3 +1.8**
WSAR Wadi Sarin 30.09 103 P P **10 41 22.0 +3.4**
comp=Z,14nm,1.0s,mb4.7,baz=286,slow=10.0,SNR=6.3
WSAR ScP ScP 10 48 03.1 +3.7
comp=Z,5.2nm,1.0s,baz=359,slow=4.7,SNR=3.7
WSAR Wadi Sarin 30.09 103 P P **10 41 22.0 +3.4**
WSAR ScP ScP 10 48 03.1 +3.7
JMDO Jabal Madar 30.09 105 P P **10 41 21.0 +2.3**
SNR=7.4
EAB Aberfoyle 30.39 325 *e*P P **10 41 20.4 -0.9**
EAB Aberfoyle 30.39 325 *e*P P **10 41 20.4 -0.9**
DCN Croghan 30.50 319 *e*P P **10 41 18.8 -3.5**
GMK Mull of Kintyr 30.55 323 *e*P P **10 41 22.1 -0.6**
GMK Mull of Kintyr 30.55 323 *e*P P **10 41 22.1 -0.6**
WBK Wadi Bani Khal 30.67 104 P P **10 41 27.3 +3.5**
SNR=5.7
TOA0 Torodi Ar. Sit 30.89 233 *e*P P **10 41 25.9 +0.1**
TOA0 Torodi Ar. Sit 30.89 233 *e*P P **10 41 25.9 +0.1**
TORD Torodi Ar. Bea 30.89 233 P P **10 41 26.5 +0.7**
comp=Z,42nm,0.8s,mb5.3,baz=35,slow=9.6,SNR=227
TORD ScP ScP 10 48 03.7 +1.6
comp=Z,1.8nm,0.8s,baz=42,slow=2.4,SNR=3.7
TORD LR LR 10 55 43.4
comp=Z,4μm,19.4s,MS5.0,baz=35,slow=40
ARU Arti 31.03 35 P P **10 41 27.0 0.0**
comp=Z,154nm,1.9s,mb5.5,SNR=7.6
ARU Arti 31.03 35⇓*i*P P **10 41 26.0 -1.0**
ARU *e* 10 42 27.3
ARU *e*PPP 10 42 39.3
ARU *e* 10 44 21.1
ARU *e*S **S 10 46 28.2 -1.6**
ARU *e*SS SS 10 48 11.3 -32
ARU *e* 10 51 57.0
ARU pmax pmax
comp=Z,31nm,1.4s,mb5.0
ARU MLR MLR
comp=Z,1μm,20.0s,MS4.5
ARU MLR MLR
comp=N,1μm,18.0s,MS4.5
ARU MLR MLR
comp=E,600nm,21.0s,MS4.5
ORE Reay 31.48 330 *e*P P **10 41 30.3 -0.6**
ORE Reay 31.48 330 *e*P P **10 41 30.3 -0.6**
NSS Namsos 31.49 348 *e*P P **10 41 28.3 -2.7**
NSS AMS AMS 10 56 59.2
comp=Z,967nm,16.2s,MS4.6
VAL Valentia 31.65 315⇑*i*S S **10 46 31.1 -8.4**
SOKR Solikamsk 32.07 29*c i*P P **10 41 35.7 -0.4**
SOKR S S **10 46 43.9 -2.1**
SOKR pmax pmax
comp=Z,90nm,1.5s,mb5.4
SOKR MLR MLR
comp=Z,2μm,21.0s,MS4.7
SVE Sverdlovsk 32.22 35⇑*i*P P **10 41 37.4 0.0**
SVE *e* 10 46 48.0
SVE *e* 10 49 07.0
SVE pmax pmax

comp=Z,140nm,1.9s,mb5.5
SVE MLR MLR
comp=N,500nm,12.0s,MS4.9
SVE MLR MLR
comp=E,2µm,12.0s,MS4.9
SVE MLR MLR
comp=Z,2µm,12.0s,MS5.0
MOR8 Moi Rana 32.65 351 *e*P **P 10 41 39.6 -1.6**
MOR8 AMb AMB 10 41 42.0
comp=Z,44nm,1.3s,mb5.2
MOR8 Moi Rana 32.65 351 *e*P **P 10 41 39.6 -1.6**
comp=Z,44nm,1.3s,mb5.2
MOR8 Moi Rana 32.65 351 *e*P **P 10 41 39.7 -1.5**
comp=Z,44nm,1.3s,mb5.2,SNR=31
APA Apatity 33.49 5⇓*i*P **P 10 41 46.8 -1.7**
APA *i* pP 10 41 56.0 -2.1
APA *e*S **S 10 47 07.0 -1.0**
APA pmax pmax
comp=Z,170nm,1.5s,mb5.8
APA MLR MLR
comp=Z,3µm,14.0s,MS5.2
LVZ Lovozero 33.90 5 P **P 10 41 51.5 -0.6**
comp=Z,486nm,1.1s,SNR=12
LVZ Lovozero 33.90 5⇓*i*P **P 10 41 50.7 -1.4**
LVZ *e*S **S 10 47 10.6 -3.9**
LVZ pmax pmax
comp=Z,117nm,1.1s,mb5.7
LVZ pmax pmax
comp=N,67nm,1.0s
LVZ pmax pmax
comp=E,37nm,1.2s
LVZ smax
comp=E,122nm,3.3s
LVZ MLR MLR
comp=Z,2µm,16.0s,MS5.0
LVZ MLR MLR
comp=N,2µm,14.0s,MS4.9
LVZ MLR MLR
comp=E,342nm,13.0s,MS4.9
EFAM Famara 34.33 272 P **P 10 41 57.3 +1.4**
comp=E,38nm,0.7s,mb5.4
EFAM Famara 34.33 272 P **P 10 41 57.3 +1.4**
comp=E,38nm,0.7s,mb5.4
LOF Lofoten 34.63 351 *e*P **P 10 42 00.5 +2.1**
LOF *ep*P pP 10 42 07.4 -0.7
KTK1 Kautokeino 34.75 358 *e*P **P 10 41 57.4 -2.1**
KTK1 AMb AMB 10 41 59.9
comp=Z,70nm,1.2s,mb5.5
KTK1 Kautokeino 34.75 358 *e*P **P 10 41 57.4 -2.1**
comp=Z,70nm,1.2s,mb5.5
KTK1 Kautokeino 34.75 358 *e*P **P 10 41 57.4 -2.1**
comp=Z,70nm,1.2s,mb5.5,SNR=30
KK31 Karatay Array 35.04 62 *i* P **P 10 42 02.7 +0.7**
ARCES ARCESS Array B 35.23 359 P **P 10 42 01.7 -1.9**
comp=Z,15nm,0.6s,mb5.1,baz=176,slow=8.3,SNR=167
ARCES LR LR 10 56 25.9
comp=Z,1µm,19.7s,MS4.7,baz=173,slow=36
ARE0 ARCESS Array S 35.23 359 *e*P **P 10 42 02.0 -1.6**
ARE0 ARCESS Array S 35.23 359 *e*P **P 10 42 02.0 -1.6**
KEV Kevo 35.45 0 *e*P **P 10 42 01.1 -4.4**
comp=Z,3.2nm,0.4s,mb4.6
KEV Kevo 35.45 0 *e*P **P 10 42 01.1 -4.4**
KEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
PMPS Porto Santo 35.52 280 *e*P **P 10 42 07.9 +1.9**
PMPS *ep*P pP 10 42 15.0 -0.7
TRO Tromso 35.58 355 *e*P **P 10 42 03.6 -3.0**
TRO AMS AMS 10 58 28.6
comp=Z,1µm,15.5s,MS4.7
BRVK Borovoye 36.02 45 P **P 10 42 11.8 +1.4**
comp=Z,288nm,1.3s,mb6.0,SNR=13
BRVK Borovoye 36.02 45 P **P 10 42 11.7 +1.3**
SNR=42
BRVK Borovoye 36.02 45 *e*P **P 10 42 10.7 +0.3**
BRVK pmax pmax
comp=Z,69nm,1.4s,mb5.4
BRVK Borovoye 36.02 45 *e*P **P 10 42 10.7 +0.4**
comp=Z,69nm,1.4s,mb5.4
BRVK Borovoye 36.02 45 *e*P **P 10 42 10.7 +0.3**
comp=Z,69nm,1.4s,mb5.4
PMAR Madeira 36.07 280 *e*P **P 10 42 13.6 +2.8**
PMAR *ep*P pP 10 42 23.0 +2.5
BVAR Borovoye Array 36.08 45 P **P 10 42 11.7 +0.8**
comp=Z,20nm,0.7s,mb5.1,baz=256,slow=6.0,SNR=82
BVAR LR LR 11 00 58.3
comp=Z,881nm,19.5s,MS4.5,baz=135,slow=43
KMBO Kilima Mbogo 36.70 162 P **P 10 42 20.2 +4.1**
comp=Z,6.7nm,1.0s,mb4.4,baz=355,slow=10,SNR=8.9
KMBO LR LR 10 57 20.3
comp=Z,1µm,19.2s,MS4.7,baz=95,slow=36
KMBO Kilima Mbogo 36.70 162 *i* P **P 10 42 22.5 +6.3**
KMBO pmax pmax
comp=Z,7.0nm,1.0s
KMBO Kilima Mbogo 36.70 162 *e*P **P 10 42 20.1 +3.9**
comp=Z,6.8nm,1.0s,mb4.4
KMBO Kilima Mbogo 36.70 162 *e*P **P 10 42 20.1 +3.9**
comp=Z,6.8nm,1.0s,mb4.4
AML Almayashu 37.43 64 P **P 10 42 24.6 +2.2**
SNR=8.8
EKS2 Erkin-Say 37.46 63 P **P 10 42 24.2 +1.6**
SNR=41
USP Ospenovka 37.95 62 P **P 10 42 27.7 +0.9**
SNR=10
AAK Ala-Archa 37.99 63 P **P 10 42 29.1 +2.0**
SNR=13
AAK Ala-Archa 37.99 63 P **P 10 42 28.3 +1.2**
comp=Z,235nm,0.9s,mb5.9,SNR=9.4
AAK Ala-Archa 37.99 63 P **P 10 42 28.3 +1.2**
SNR=26
AAK Ala-Archa 37.99 63*c i*P **P 10 42 27.9 +0.8**
AAK pmax pmax
comp=Z,81nm,1.7s,mb5.2
AAK MLR MLR
comp=Z,800nm,18.0s,MS4.6
AAK Ala-Archa 37.99 63 *e*P **P 10 42 28.0 +0.9**
comp=Z,67nm,1.0s,mb5.3
AAK Ala-Archa 37.99 63 *e*P **P 10 42 28.0 +0.9**
comp=Z,67nm,1.0s,mb5.3
FRU Bishkek 38.06 63 *e*P **P 10 42 28.5 +0.8**
FRU *e* 10 43 56.0
FRU pmax pmax
comp=Z,250nm,2.1s,mb5.6
CHMS Chumysh 38.15 62 P **P 10 42 30.0 +1.5**
SNR=26
KBK Karagaybulak 38.32 63 P **P 10 42 32.1 +2.3**
SNR=13
KZA Kyzart 38.59 64 P **P 10 42 34.4 +2.2**
SNR=12
TKM2 Tokmak 2 38.78 62 P **P 10 42 35.0 +1.3**
SNR=22
ULHL Ulahol 39.31 63 P **P 10 42 40.5 +2.4**
SNR=26
KSH Kashi 39.43 68 *e*P **P 10 42 41.6 +2.4**
KSH AP pP 10 42 51.0 +2.1
KSH PP PP 10 44 15.8 +5.8
KSH PPP 10 44 38.9
KSH PCP PcP 10 44 50.1 +3.3
KSH SCP ScP 10 48 35.4 +2.5
KSH S **S 10 48 39.6 +0.9**
KSH XS sS 10 48 55.6 +0.8
KSH SS SS 10 51 25.5 -8.0
KSH SCS ScS 10 52 45.8 +0.8
KSH AMB AMB
comp=Z,182nm,1.3s,mb5.7
KSH LR LR
comp=N,637nm,6.7s
KSH LR LR
comp=E,601nm,7.2s
KSH LR LR
comp=Z,1µm,18.6s,MS4.7
DBIC Dimbokro 40.00 234 P **P 10 42 44.3 +0.4**
comp=Z,23nm,0.8s,mb5.0,baz=29,slow=10.0,SNR=28
DBIC LR LR 11 01 06.5
comp=Z,3µm,18.0s,MS5.2,baz=273,slow=39
DBIC Dimbokro 40.00 234 P **P 10 42 44.3 +0.4**
DBIC pmax pmax
comp=Z,23nm,0.8s
DBIC MLR MLR
comp=Z,3µm,18.0s
DBIC Dimbokro 40.00 234 *e*P **P 10 42 44.2 +0.3**
comp=Z,16nm,0.7s,mb4.9
DBIC Dimbokro 40.00 234 *e*P **P 10 42 44.2 +0.3**
comp=Z,16nm,0.7s,mb4.9
LIC Lamto 40.44 233⇑*i*P **P 10 42 48.3 +0.7**
comp=Z,187nm,1.2s,mb5.4
LIC *e*R
comp=Z,1µm,20.0s
LIC Lamto 40.44 233⇑*i*P **P 10 42 48.3 +0.7**
comp=Z,94nm,1.3s,mb5.4
LIC LR LR
comp=Z,660nm,20.0s,MS4.5
LIC Lamto 40.44 233⇑*i*P **P 10 42 48.3 +0.7**
comp=Z,94nm,1.2s,mb5.4
KURK Kurchatov 40.80 50 P **P 10 42 51.7 +1.2**
comp=Z,539nm,1.0s,mb6.1,SNR=12
KURK Kurchatov 40.80 50⇓P **P 10 42 51.9 +1.4**
SNR=56
KURK Kurchatov 40.80 50 *e*P **P 10 42 51.5 +1.0**
KURK pmax pmax
comp=Z,80nm,0.9s,mb5.3
KURK Kurchatov 40.80 50 *e*P **P 10 42 51.5 +1.0**
comp=Z,80nm,0.9s,mb5.3
KURK Kurchatov 40.80 50 *e*P **P 10 42 51.5 +1.0**
comp=Z,80nm,0.9s,mb5.3
JMIC Jan Mayen 41.18 343 *e*P **P 10 42 58.9 +5.3**
JMIC *e*S **S 10 49 07.8 +3.0**
JMIC AMS AMS 11 02 23.7
comp=Z,623nm,14.1s,MS4.6
JMIC Jan Mayen 41.18 343 *e*P **P 10 42 58.9 +5.2**
SNR=29
JMIC *e*S **S 10 49 07.8 +2.9**
SNR=30
BORG Borgarnes 41.80 331 P **P 10 42 59.3 +0.6**
comp=Z,34nm,1.1s,mb4.9,baz=143,slow=3.4,SNR=5.8
BORG Borgarnes 41.80 331 *e*P **P 10 43 00.4 +1.6**
comp=Z,119nm,1.3s,mb5.4
BORG Borgarnes 41.80 331 *e*P **P 10 43 00.4 +1.6**
comp=Z,119nm,1.3s,mb5.4
NDI New Delhi 43.19 83 *e*P **P 10 43 10.5 +0.5**
MKAR Makanchi Array 43.26 56 P **P 10 43 11.7 +1.1**
comp=Z,28nm,0.6s,mb5.2,baz=275,slow=6.8,SNR=148
MKAR Makanchi Array 43.26 56 *i* P **P 10 43 11.6 +1.0**
MKAR pmax pmax
comp=Z,28nm,0.6s
NVS Novosibirsk 43.85 44⇑*i*P **P 10 43 16.3 +1.0**
NVS *e* 10 44 57.2
NVS *e*S **S 10 49 42.5 -1.6**
NVS pmax pmax
comp=N,69nm,1.2s
NVS pmax pmax
comp=E,98nm,1.2s
NVS pmax pmax
comp=Z,214nm,1.2s,mb5.8
NVS pmax pmax
comp=E,120nm,2.2s
NVS pmax pmax
comp=Z,144nm,2.2s,mb5.3
NVS pmax pmax
comp=N,53nm,2.0s
NVS smax
comp=N,38nm,2.0s
NVS smax
comp=E,75nm,1.8s
SPB4 Spitsbergen Ar 44.14 357 *e*P **P 10 43 16.8 -1.0**
SPB4 Spitsbergen Ar 44.14 357 *e*P **P 10 43 16.8 -0.9**
SCO Scoresbysund 44.50 339 *i* P **P 10 43 20.2 -0.3**
comp=E,32nm,0.8s,mb5.1
SCO Scoresbysund 44.50 339 *i* P **P 10 43 20.2 -0.3**
SCO pmax pmax
comp=Z,32nm,0.8s,mb5.1
ZAL Zalesovo 44.72 46 P **P 10 43 23.0 +0.7**
comp=Z,20nm,0.6s,mb5.1,baz=209,slow=8.1,SNR=19
ZAL LR LR 11 07 59.8
comp=Z,566nm,19.4s,MS4.5,baz=199,slow=44
ZAL Zalesovo 44.72 46 P **P 10 43 23.0 +0.7**
ZAL LR LR 11 07 59.8
KBS Kingsbay 45.09 356 *e*P **P 10 43 24.9 -0.4**
KBS *e*SS SS 10 53 17.4 -7.6
KBS AMS AMS 11 04 39.5
comp=Z,386nm,16.9s,MS4.4
KBS Kingsbay 45.09 356 *e*P **P 10 43 23.7 -1.6**
KBS pmax pmax
comp=Z,42nm,0.9s,mb5.3
KBS Kingsbay 45.09 356 *e*P **P 10 43 23.7 -1.6**
comp=Z,42nm,0.9s,mb5.3
KBS Kingsbay 45.09 356 *e*P **P 10 43 24.9 -0.4**
SNR=28
KBS *e*SS SS 10 53 17.4 -7.7
SNR=41
DAG Danmarks Havn 47.09 347 *i* P **P 10 43 39.0 -2.0**
DAG Danmarks Havn 47.09 347 *e*P **P 10 43 39.0 -2.0**
WMQ Urumqi 47.41 59 P **P 10 43 45.0 +1.5**
WMQ AP pP 10 43 55.0 +1.6
WMQ XP sP 10 43 59.0 +1.6
WMQ PP PP 10 45 35.0 +0.1
WMQ S **S 10 50 35.0 -0.5**
WMQ SCS ScS 10 53 33.0 -1.8
WMQ SS SS 10 53 57.0 -6.3
WMQ AMB AMB
comp=Z,56nm,1.0s,mb5.5
WMQ AMB AMB
comp=Z,305nm,5.0s
WMQ LR LR
comp=N,2µm,14.0s,MS5.3
WMQ LR LR
comp=E,1µm,14.0s,MS5.3
WMQ LR LR
comp=Z,1µm,13.0s,MS5.1
JBP Jabalpur 47.66 89⇓*i*P **P 10 43 46.9 +1.4**
JBP *ex* x 10 43 48.6
comp=Z,108nm,1.1s
JBP *i* S sP 10 43 57.0 -2.4
KOLN Koldanda 48.76 81 *e*P **P 10 43 55.4 +1.5**
comp=Z,279nm,1.2s,mb6.2
HYB Hyderabad 49.19 96⇓*i*P **P 10 43 59.0 +1.7**
comp=Z,80nm,1.0s,mb5.7
HYB *ep*P pP 10 44 09.0 +1.8
HYB *e*PcP PcP 10 45 21.5 +1.4
HYB *e*S **S 10 51 04.0 +3.4**
HYB Hyderabad 49.19 96⇓*e*P **P 10 43 59.0 +1.7**
HYB pmax pmax
comp=Z,80nm,1.0s,mb5.7
HYB Hyderabad 49.19 96⇓*e*P **P 10 43 59.0 +1.7**
comp=Z,80nm,1.0s,mb5.7
KRAR Krasnoyarsk 49.35 43*d i*P **P 10 44 00.3 +1.9**
KRAR pmax pmax
comp=Z,220nm,1.2s,mb6.1
LSZ Lusaka 49.38 178 P **P 10 44 01.1 +2.4**
comp=Z,20nm,0.9s,mb5.1,baz=6.4,slow=8.4,SNR=26
LSZ Lusaka 49.38 178⇑P **P 10 44 01.1 +2.4**
SNR=13
LSZ Lusaka 49.38 178 *e*P **P 10 44 00.8 +2.1**
LSZ *e* 10 45 23.2
LSZ pmax pmax
comp=Z,25nm,1.0s,mb5.2
LSZ Lusaka 49.38 178 *e*P **P 10 44 00.8 +2.1**
comp=Z,25nm,1.0s,mb5.2
LSZ *ep*PcP PcP 10 45 23.1 +2.4
LSZ Lusaka 49.38 178 *e*P **P 10 44 00.8 +2.1**
comp=Z,25nm,1.0s,mb5.2
LSZ Lusaka 49.38 178 *e*PcP PcP 10 45 23.1 +2.3
GKN Gorkha 49.52 81 *e*P **P 10 44 01.0 +1.3**
comp=Z,228nm,0.9s,mb6.2
DMN Daman 50.05 81 *e*P **P 10 44 05.1 +1.3**
comp=Z,318nm,1.0s
KKN Kakani 50.12 81 *e*P **P 10 44 05.6 +1.3**
comp=Z,335nm,1.2s,mb6.2
KKN Kakani 50.12 81 *e*P **P 10 44 05.6 +1.3**
KKN pmax pmax
comp=Z,335nm,1.2s,mb6.2
SUMG Summit 50.14 339 *e*P **P 10 44 04.5 +0.1**
comp=Z,36nm,0.7s,mb5.5
SUMG Summit 50.14 339 *e*P **P 10 44 04.5 +0.1**
comp=Z,36nm,0.7s,mb5.5
PKI Pulchoki 50.31 81 *e*P **P 10 44 07.2 +1.4**
comp=Z,316nm,1.1s
PKI Pulchoki 50.31 81 *e*P **P 10 44 07.2 +1.4**
PKI pmax pmax
comp=Z,317nm,1.1s
GUN Gumba 50.57 80 *e*P **P 10 44 09.1 +1.4**
comp=Z,294nm,1.0s,mb6.2
JIRN Jiri 50.92 80 *e*P **P 10 44 11.9 +1.6**
comp=Z,444nm,1.3s,mb6.2
SFJD Kangerlussuaq 53.94 332 P **P 10 44 30.4 -2.3**
comp=Z,3.8nm,0.5s,mb4.6,baz=40,slow=7.9,SNR=2.7
TSUM Tsumeb 53.94 191 *e*P **P 10 44 34.2 +1.5**
comp=Z,43nm,1.2s,mb5.2
TSUM *ep*P pP 10 44 44.6 +1.8
TSUM Tsumeb 53.94 191 *e*P **P 10 44 34.2 +1.4**
comp=Z,43nm,1.2s,mb5.2
TSUM *ep*P pP 10 44 44.7 +1.9
LSA Lhasa 54.14 76 P **P 10 44 35.6 +1.4**
LSA Lhasa 54.14 76 *e*P **P 10 44 36.3 +2.1**
LSA pmax pmax
comp=Z,22nm,0.7s,mb5.2
LSA Lhasa 54.14 76 *e*P **P 10 44 36.3 +2.1**
comp=Z,22nm,0.7s,mb5.2
LSA *ep*P pP 10 44 45.9 +1.7
LSA Lhasa 54.14 76 *e*P **P 10 44 36.3 +2.1**
comp=Z,22nm,0.7s,mb5.2
LSA *ep*P pP 10 44 45.9 +1.7
MOY Mondy 54.70 47 *e*P **P 10 44 40.4 +2.1**
MOY pmax pmax
comp=Z,160nm,2.0s,mb5.7
ALE Alert 56.01 351 P **P 10 44 47.0 -0.7**
comp=Z,309nm,1.1s,mb6.2,SNR=9.8
TLY Talaya 56.30 47 P **P 10 44 51.0 +1.2**
comp=Z,324nm,1.2s,mb6.2,SNR=22
TLY Talaya 56.30 47⇓P **P 10 44 52.2 +2.4**
SNR=33
TLY Talaya 56.30 47*c i*P **P 10 44 51.3 +1.5**
TLY *e*S **S 10 52 34.0 -3.7**
TLY *e*SSS 10 58 38.2
TLY pmax pmax
comp=Z,106nm,1.3s,mb5.7
TLY MLR MLR
comp=Z,543nm,17.0s,MS4.7
TLY Talaya 56.30 47 *e*P **P 10 44 51.9 +2.1**
comp=Z,73nm,1.2s,mb5.6
TLY Talaya 56.30 47 *e*P **P 10 44 51.9 +2.1**
comp=Z,73nm,1.2s,mb5.6
ZAK Zakamensk 56.41 48⇓*i*P **P 10 44 52.1 +1.6**
ZAK pmax pmax
comp=Z,49nm,1.2s,mb5.4
IRK Irkutsk 56.54 46⇑*i*P **P 10 44 52.1 +0.6**
IRK pmax pmax
comp=Z,235nm,1.4s,mb6.0
GTA Gaotai 57.32 62⇑P **P 10 44 58.4 +1.4**
GTA AP pP 10 45 08.4 +1.3
GTA XP sP 10 45 12.3 +1.3
GTA PCP PcP 10 45 50.9 0.0
GTA PP PP 10 47 08.3 +3.9
GTA PPP 10 48 30.8
GTA SCP ScP 10 49 46.8 -1.3
GTA PCS PcS 10 49 49.8 -2.1
GTA S **S 10 52 53.6 +2.5**
GTA SS SS 10 56 46.3 +5.6
GTA AMB AMB
comp=Z,34nm,1.3s,mb5.2
GTA AMB AMB
comp=Z,197nm,5.7s
GTA LR LR
comp=N,115nm,15.2s
GTA LR LR
comp=E,179nm,22.0s
GTA LR LR
comp=Z,146nm,18.6s,MS4.1
LBTB Lobatse 59.05 181 *e*P **P 10 45 11.8 +2.7**
LBTB pmax pmax
comp=Z,22nm,1.0s,mb5.1
LBTB Lobatse 59.05 181 *e*P **P 10 45 11.8 +2.7**
comp=Z,22nm,1.0s,mb5.1
LBTB *ep*P pP 10 45 21.8 +2.5
LBTB Lobatse 59.05 181 *e*P **P 10 45 11.8 +2.7**
comp=Z,22nm,1.0s,mb5.1
LBTB *ep*P pP 10 45 21.8 +2.5
SONM Songino Array 59.10 51 P **P 10 45 10.8 +1.4**
comp=Z,22nm,0.6s,mb5.4,baz=279,slow=8.2,SNR=149
ULN Ulaanbaatar 59.51 50⇓P **P 10 45 14.1 +1.9**
SNR=48
ULN Ulaanbaatar 59.51 50*i*P **P 10 45 13.9 +1.6**
ULN Ulaanbaatar 59.51 50 *e*P **P 10 45 13.7 +1.4**
ULN Ulaanbaatar 59.51 50 *e*P **P 10 45 13.7 +1.4**
BOD Bodaibo 60.37 38 *e*P **P 10 45 09.3 -8.9**
BOD pmax pmax
comp=Z,31nm,1.5s,mb5.1
LZH Lanzhou 61.51 64 *e*P **P 10 45 27.6 +1.7**
LZH AP pP 10 45 37.6 +1.5
LZH XP sP 10 45 41.5 +1.5
LZH PCP PcP 10 46 09.8 +2.2
LZH PP PP 10 47 44.8 +3.3
LZH *e*S **S 10 53 46.0 +0.8**
LZH XS sS 10 54 02.0 0.0
LZH SS SS 10 57 45.4 -1.1
LZH AMB AMB
comp=Z,94nm,1.5s,mb5.7
LZH AMB AMB
comp=Z,250nm,4.0s
LZH LR LR
comp=N,845nm,15.7s
LZH LR LR
comp=Z,1µm,17.0s,MS5.1
CD2 Chengdu 63.59 69 P **P 10 45 41.0 +1.2**
CD2 AMB AMB
comp=Z,40nm,1.0s,mb5.4
BTO Baotou 64.15 57 *e*P **P 10 45 44.0 +0.5**
SCHQ Schefferville 64.54 320 P **P 10 45 45.1 -1.0**
comp=Z,18nm,0.5s,mb5.4,baz=60,slow=4.4,SNR=32
SCHQ LR LR 11 12 30.5
comp=Z,272nm,20.4s,MS4.4,baz=74,slow=35
SCHQ Schefferville 64.54 320 *e*P **P 10 45 45.9 -0.1**
comp=Z,28nm,0.6s,mb5.5
SCHQ Schefferville 64.54 320 *e*P **P 10 45 45.9 -0.2**
comp=Z,28nm,0.6s,mb5.5
HHC Hu-ho-hao-te 65.12 56 *e*P **P 10 45 51.5 +1.7**
HHC AP pP 10 46 01.8 +1.7
HHC XP sP 10 46 05.8 +1.9
HHC PCP PcP 10 46 24.8 +2.5
HHC PP PP 10 48 16.6 +3.4
HHC SCP 10 50 23.4
HHC PCS 10 50 26.8
HHC S S 10 54 32.0 +1.8
HHC XS sS 10 54 46.1 -1.0
HHC PS 10 54 53.5
HHC SCS ScS 10 55 39.6 -2.8
HHC SS SS 10 58 42.8 0.0
HHC AMB AMB
comp=Z,97nm,1.3s,mb5.7
HHC AMB AMB
comp=Z,442nm,7.3s
HHC LR LR
comp=N,978nm,26.1s,MS5.0
HHC LR LR
comp=E,515nm,23.3s,MS5.0
HHC LR LR
comp=Z,661nm,20.4s,MS4.8
CHG Chiang Mai 65.34 83⇑P **P 10 45 52.0 +0.8**
comp=Z,32nm,1.0s,mb5.3
CHTO Chiang Mai 65.34 83⇑P **P 10 45 53.0 +1.8**
SNR=7.6
CHTO Chiang Mai 65.34 83 *e*P **P 10 45 52.1 +0.9**
CHTO pmax pmax
comp=Z,44nm,1.3s,mb5.3
CHTO Chiang Mai 65.34 83 *e*P **P 10 45 52.1 +0.9**
comp=Z,44nm,1.3s,mb5.3
CHTO Chiang Mai 65.34 83 *e*P **P 10 45 52.1 +0.9**
comp=Z,44nm,1.3s,mb5.3
KMI Kunming 65.39 76 P **P 10 45 52.4 +0.8**
KMI AP pP 10 46 03.9 +2.1
KMI XP sP 10 46 07.6 +1.9
KMI PP PP 10 48 19.4 +3.8
KMI PPP 10 49 55.8
KMI S S 10 54 35.1 +1.5
KMI XS sS 10 54 50.5 0.0
KMI SS SS 10 58 52.9 +5.8
KMI AMB AMB
comp=Z,24nm,1.2s,mb5.1
KMI LR LR
comp=N,303nm,24.6s,MS4.6
KMI LR LR
comp=E,333nm,21.5s,MS4.6
KMI LR LR
comp=Z,295nm,18.5s,MS4.5
CM31 Chiang Mai Arr 65.51 84 *e*P **P 10 45 53.7 +1.3**
comp=Z,12nm,0.8s,mb5.0
YAK Yakutsk 65.99 30 *e*P **P 10 45 55.5 +0.1**
YAK pmax pmax
comp=Z,19nm,0.8s,mb5.2
YAK pmax pmax
comp=N,16nm,1.6s
YAK pmax pmax
comp=E,21nm,1.4s
YAK MLR MLR
comp=Z,443nm,25.0s,MS4.6
YAK MLR MLR
comp=N,359nm,23.0s
YAK Yakutsk 65.99 30 *e*P **P 10 45 54.6 -0.9**
comp=N,21nm,0.7s,mb5.3

YAK ep P P 10 46 04.7 -1.0
YAK Yakutsk 65.99 30 *e* P **P 10 45 54.6 -0.8**
comp=N,21nm,0.7s,mb5.3
YAK ep P P 10 46 04.7 -1.0
XAN Xi'an 66.15 64 P **P 10 45 57.6 +1.1**
XAN AMB AMB
comp=Z,30nm,1.9s,mb5.0
XAN LR LR
comp=N,259nm,22.2s,MS4.7
XAN LR LR
comp=E,369nm,20.6s,MS4.7
XAN LR LR
comp=Z,573nm,22.2s,MS4.7
CLNS Chul'man 66.21 36 *e* P **P 10 45 57.4 +0.6**
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=Z,18nm,1.0s,mb5.1
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS MLR MLR
comp=Z,400nm,14.0s,MS4.8
CLNS MLR MLR
comp=N,400nm,12.0s,MS5.0
CLNS MLR MLR
comp=E,500nm,15.0s,MS5.0
HIA Hailar 66.77 45 *e* P **P 10 46 01.7 +1.3**
HIA pmax pmax
comp=Z,183nm,1.3s
HIA Hailar 66.77 45 *e* P **P 10 46 01.7 +1.3**
comp=Z,183nm,1.3s,mb6.0
HIA Hailar 66.77 45 *e* P **P 10 46 01.7 +1.3**
comp=Z,183nm,1.3s,mb6.0
NANT Nan 66.79 83 ⇑P **P 10 45 59.0 -1.5**
comp=Z,204nm,0.8s,mb6.2
GYA Guiyang 67.89 72⇑ *i* P **P 10 46 08.3 +0.8**
GYA AP pP 10 46 21.3 +3.5
GYA PP PP 10 48 39.0 +1.6
GYA SCP 10 50 34.3
GYA S S 10 55 02.9 -0.8
GYA XS sS 10 55 21.1 +0.4
GYA AMB AMB
comp=Z,50nm,1.3s,mb5.4
GYA AMB AMB
comp=Z,300nm,4.2s
GYA LR LR
comp=N,650nm,29.6s,MS4.8
GYA LR LR
comp=E,540nm,29.9s,MS4.8
GYA LR LR
comp=Z,480nm,26.1s,MS4.6
NST Nakhon Sawan 67.90 86 P **P 10 46 08.9 +1.3**
BJT Baijiatuau 68.64 56 *e* P **P 10 46 13.4 +1.2**
BJT pmax pmax
comp=Z,43nm,1.1s
BJT Baijiatuau 68.64 56 *e* P **P 10 46 13.4 +1.2**
comp=Z,43nm,1.1s,mb5.3
BJT Baijiatuau 68.64 56 *e* P **P 10 46 13.4 +1.2**
comp=Z,43nm,1.1s,mb5.3
KKTK Khon Kaen 69.78 84 ⇓P sP 10 46 38.0 +4.6
comp=Z,167nm,0.9s
WHN Wuhan 71.84 65 P **P 10 46 31.0 -0.8**
LBNH Lisbon 72.37 312 *e* P **P 10 46 37.3 +2.3**
LBNH pmax pmax
comp=Z,30nm,1.1s,mb5.1
LBNH Lisbon 72.37 312 *e* P **P 10 46 37.3 +2.3**
comp=Z,30nm,1.1s,mb5.1
LBNH Lisbon 72.37 312 *e* P **P 10 46 37.3 +2.3**
comp=Z,30nm,1.1s,mb5.1
SNY Shenyang 72.68 51 ⇑P **P 10 46 37.3 +0.5**
SNY AP pP 10 46 48.0 +0.8
SNY XP sP 10 46 53.3 +2.3
SNY PP PP 10 49 18.0 -0.7
SNY S S 10 55 57.0 -2.7
SNY AMB AMB
comp=Z,35nm,1.3s,mb5.1
SNY AMB AMB
comp=Z,162nm,3.7s
SNY LR LR
comp=N,369nm,19.8s,MS4.9
SNY LR LR
comp=E,546nm,23.3s,MS4.9
SNY LR LR
comp=Z,571nm,19.6s,MS4.8
CN2 Changchun 72.84 48 ⇑P **P 10 46 39.0 +1.2**
CN2 *e* XP sP 10 46 53.3 +1.3
CN2 *e* S S 10 56 00.3 -1.3
CN2 AMB AMB
comp=Z,40nm,1.2s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,20.0s,MS5.0
CN2 LR LR
comp=E,400nm,20.0s,MS5.0
CN2 LR LR
comp=Z,600nm,21.0s,MS4.8
HNH Hanover 72.87 311 *e* P **P 10 46 39.5 +1.6**
comp=Z,1.9nm,0.9s
HNH Hanover 72.87 311 *e* P **P 10 46 39.5 +1.5**
comp=Z,1.9nm,0.9s
DL2 Dalian 72.88 54 P **P 10 46 45.4 +7.4**
DL2 S S 10 56 13.5 +12
DL2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
DL2 LR LR
comp=N,260nm,18.2s,MS4.7
DL2 LR LR
comp=E,220nm,15.1s,MS4.7
DL2 LR LR
comp=Z,280nm,15.7s,MS4.6
WES Weston 72.95 310 *e* P **P 10 46 40.0 +1.6**
WES pmax pmax
comp=Z,70nm,1.4s,mb5.4
WES Weston 72.95 310 *e* P **P 10 46 40.0 +1.6**
comp=Z,70nm,1.4s,mb5.4
WES Weston 72.95 310 *e* P **P 10 46 40.0 +1.6**
comp=Z,70nm,1.4s,mb5.4
FRNY Flat Rock 73.08 313 *e* P **P 10 46 39.9 +0.7**
FRNY Flat Rock 73.08 313 *e* P **P 10 46 39.9 +0.7**
BILL Bilibino 73.55 15 *e* P **P 10 46 41.6 -0.4**
BILL *e* S S 10 56 04.6 -5.0
BILL pmax pmax
comp=Z,20nm,1.2s,mb4.9
BILL MLR MLR
comp=Z,400nm,15.0s,MS4.8
KLR Kul'dur 73.61 41 *e* P **P 10 46 40.0 -2.3**
KLR *e* S S 10 56 05.5 -4.8
KLR *e* SS SS 11 00 51.0 -2.7
KLR pmax pmax
comp=E,72nm,2.0s
KLR pmax pmax
comp=Z,170nm,2.0s,mb5.6
KLR MLR MLR
comp=E,600nm,14.0s
KLR MLR MLR
comp=Z,1μm,14.0s,MS5.4
LONY Lake Ozonia 73.80 313 *e* P **P 10 46 44.4 +0.9**
LONY Lake Ozonia 73.80 313 *e* P **P 10 46 44.3 +0.9**
KULM Kulim 73.90 95 *e* P **P 10 46 45.3 +1.3**
KULM Kulim 73.90 95 *e* P **P 10 46 45.3 +1.3**
QIZ Qiongzhong 74.12 78 P **P 10 46 46.1 +0.8**
QIZ XP sP 10 46 59.0 -0.5
QIZ S S 10 56 15.8 -0.2
QIZ XS sS 10 56 29.3 -3.9
QIZ AMB AMB
comp=Z,49nm,1.5s,mb5.2
QIZ LR LR
comp=N,367nm,23.4s,MS4.7
QIZ LR LR
comp=E,291nm,26.6s,MS4.7
QIZ LR LR
comp=Z,340nm,21.6s,MS4.6
NJ2 Nanjing 74.42 62 *e* P **P 10 46 49.1 +2.1**
NJ2 AP pP 10 46 59.4 +2.0
NJ2 S S 10 56 20.0 +0.6
NJ2 XS sS 10 56 37.0 +0.5
NJ2 AMB AMB
comp=Z,260nm,1.0s,mb6.1
NJ2 AMB AMB
comp=Z,120nm,3.9s
NJ2 LR LR
comp=N,200nm,15.2s
NJ2 LR LR
comp=E,500nm,22.2s
NJ2 LR LR
comp=Z,160nm,12.6s,MS4.5
MDJ Mudanjiang 74.93 46 P **P 10 46 49.3 -0.7**
MDJ AP pP 10 46 58.8 -1.6
MDJ XP sP 10 47 02.4 -1.8
MDJ S S 10 56 23.5 -1.6
MDJ XS sS 10 56 39.5 -2.7
MDJ SCS ScS 10 56 57.8 -1.9
MDJ AMB AMB
comp=Z,18nm,1.2s,mb4.9
MDJ AMB AMB
comp=Z,72nm,5.0s
MDJ LR LR
comp=N,512nm,29.6s,MS4.7
MDJ LR LR
comp=E,303nm,29.6s,MS4.7
MDJ LR LR
comp=Z,289nm,26.1s,MS4.5
MDJ Mudanjiang 74.93 46 *e* P **P 10 46 50.2 +0.2**
comp=Z,9.7nm,0.7s,mb4.8
MDJ Mudanjiang 74.93 46 *e* P **P 10 46 50.2 +0.2**
comp=Z,9.7nm,0.7s,mb4.8
MA2 Magadan 75.71 26c *i* P **P 10 46 55.0 +0.5**
MA2 pmax pmax
comp=Z,70nm,1.8s,mb5.3
MA2 Magadan 75.71 26 *e* P **P 10 46 54.8 +0.3**
comp=Z,45nm,1.0s,mb5.4
MA2 Magadan 75.71 26 *e* P **P 10 46 54.8 +0.3**
comp=Z,45nm,1.0s,mb5.4
HABR Khabarovsk 75.83 41⇑ *e* P **P 10 46 56.1 +0.9**
HABR S S 10 56 35.7 +0.6
HABR pmax pmax
comp=Z,44nm,1.2s,mb5.3
HABR MLR MLR
comp=Z,650nm,25.6s,MS4.8
BINY Binghamton 75.97 312 *e* P **P 10 46 57.8 +1.8**
comp=Z,40nm,1.0s,mb5.3
BINY Binghamton 75.97 312 *e* P **P 10 46 57.8 +1.8**
comp=Z,40nm,1.0s,mb5.3
INK Inuvik 76.56 353 *e* P **P 10 46 58.1 -1.2**
INK *e* *PP pP 10 47 08.5 -1.3
INK pmax pmax
comp=Z,19nm,0.9s
INK Inuvik 76.56 353 *e* P **P 10 46 58.1 -1.2**
comp=Z,20nm,0.9s,mb5.0
INK *e* pP pP 10 47 08.5 -1.3
INK Inuvik 76.56 353 *e* P **P 10 46 58.1 -1.2**
comp=Z,20nm,0.9s,mb5.0
INK *e* pP pP 10 47 08.5 -1.3
SSE Sheshan 76.61 62 P **P 10 46 59.6 0.0**
SSE AP pP 10 47 09.1 -0.9
SSE XP sP 10 47 12.8 -1.1
SSE S S 10 56 42.8 -0.9
SSE XS sS 10 56 58.8 -2.1
SSE SS SS 11 01 37.5 -1.8
SSE AMB AMB
comp=Z,33nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,109nm,9.8s
SSE LR LR
comp=N,282nm,27.5s,MS4.6
SSE LR LR
comp=E,287nm,27.5s,MS4.6
SSE LR LR
comp=Z,302nm,20.6s
INCN Inchon 76.98 54 P **P 10 47 03.4 +1.7**
SNR=8.1
INCN Inchon 76.98 54 *e* P **P 10 47 03.1 +1.5**
comp=Z,67nm,1.3s,mb5.4
INCN Inchon 76.98 54 *e* P **P 10 47 03.2 +1.5**
comp=Z,67nm,1.3s,mb5.4
VLA Vladivostok 77.15 46 *de* P **P 10 47 02.2 -0.4**
VLA *e* pP 10 47 12.0 -1.0
VLA *e* S S 10 56 42.5 -7.0
VLA pmax pmax
comp=Z,69nm,1.0s,mb5.5
VLA Vladivostok 77.15 46 *i* Pr **P 10 47 02.0 -0.6**
MVL Millersville 77.43 310 *e* P **P 10 47 06.0 +1.8**
SSPA Standing Stone 78.03 311 *e* P **P 10 47 09.2 +1.6**
comp=Z,39nm,1.2s,mb5.2
SSPA Standing Stone 78.03 311 *e* P **P 10 47 09.2 +1.6**
comp=Z,39nm,1.2s,mb5.2
SDMD Soldier's Deli 78.07 310 *e* P **P 10 47 07.5 -0.3**
SDMD Soldier's Deli 78.07 310 *e* P **P 10 47 07.5 -0.3**
ERPA Erie 78.46 313 *e* P **P 10 47 10.6 +0.7**
comp=Z,40nm,1.0s,mb5.3
ERPA Erie 78.46 313 *e* P **P 10 47 10.6 +0.7**
comp=Z,40nm,1.0s,mb5.3
YKA Yellowknife Ar 78.56 343 P **P 10 47 10.0 -0.5**
comp=Z,3.2nm,0.6s,mb4.4,baz=35,slow=5.4,SNR=10
YKA LR LR 11 25 55.7
comp=Z,430nm,19.2s,MS4.8,baz=280,slow=39
YKA Yellowknife Ar 78.56 343 *i* P **P 10 47 10.0 -0.5**
YKA pmax pmax
comp=Z,3.0nm,0.6s
YKA Yellowknife Ar 78.56 343 P **P 10 47 10.0 -0.5**
YKA LR LR 11 25 55.7
TNA Tin City 79.77 6 *e* pP pP 10 47 27.2 -0.4
TNA Tin City 79.77 6 *e* pP pP 10 47 27.2 -0.4
MCWV Mont Chateau 79.82 311 *e* P **P 10 47 18.1 +0.7**
comp=Z,53nm,1.2s,mb5.3
MCWV Mont Chateau 79.82 311 *e* P **P 10 47 18.1 +0.7**
comp=Z,53nm,1.2s,mb5.3
IMA2 Indian Mountai 79.89 0 *e* P **P 10 47 17.6 -0.2**
IMA2 *e* P 10 47 18.0
YSS Yuzh-Sakhalins 80.84 39⇑ *i* P **P 10 47 23.0 +0.1**
YSS *e* 10 47 29.0
YSS *e* S S 10 57 28.0 -0.9
YSS pmax pmax
comp=Z,60nm,1.1s,mb5.4
YSS Yuzh-Sakhalins 80.84 39 *e* P **P 10 47 23.7 +0.8**
comp=Z,62nm,1.2s,mb5.4
FFC Flin Flon 80.88 333 P **P 10 47 23.9 +0.9**
comp=Z,128nm,0.8s,mb5.9,SNR=5.8
COLA College 81.00 358 *e* P **P 10 47 23.3 -0.4**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
COLA College 81.00 358 *e* P **P 10 47 23.3 -0.4**
comp=Z,9.3nm,0.8s,mb4.8
COLA College 81.00 358 *e* P **P 10 47 23.3 -0.4**
comp=Z,9.3nm,0.8s,mb4.8
EYMN Ely 81.13 323 *e* P **P 10 47 23.9 -0.4**
comp=Z,8.1nm,0.9s,mb4.7
EYMN Ely 81.13 323 *e* P **P 10 47 24.0 -0.4**
comp=Z,8.1nm,0.9s,mb4.7
DAWY Dawson 81.28 354 *e* P **P 10 47 25.4 +0.2**
DAWY Dawson 81.28 354 *e* P **P 10 47 25.4 +0.2**
ACSO Alum Creek Sta 81.40 313 *e* P **P 10 47 26.4 +0.6**
comp=Z,30nm,1.2s,mb5.1
ULM Lac du Bonnet 81.61 327 P **P 10 47 27.0 0.0**
comp=Z,11nm,1.0s,mb4.7,baz=21,slow=5.5,SNR=9.0
ULM LR LR 11 25 59.3
comp=Z,270nm,19.5s,MS4.6,baz=285,slow=37
ULM Lac du Bonnet 81.61 327 *e* P **P 10 47 26.7 -0.3**
comp=Z,12nm,0.8s,mb4.9
ULM Lac du Bonnet 81.61 327 *e* P **P 10 47 26.7 -0.3**
comp=Z,12nm,0.8s,mb4.9
FWV Forest Hill 81.67 310 *e* P **P 10 47 28.4 +1.2**
FWV Forest Hill 81.67 310 *e* P **P 10 47 28.4 +1.2**
MCK McKinley 82.18 358 *e* P **P 10 47 30.0 +0.1**
MCK pmax pmax
comp=Z,14nm,0.9s,mb4.9
MCK McKinley 82.18 358 *e* P **P 10 47 30.0 +0.1**
comp=Z,14nm,0.9s,mb4.9
MCK *e* pP pP 10 47 39.6 -0.8
MCK McKinley 82.18 358 *e* P **P 10 47 30.0 +0.1**
comp=Z,14nm,0.9s,mb4.9
MCK *e* pP pP 10 47 39.6 -0.8
JFWS Jewell Farm 83.86 319 *e* P **P 10 47 39.3 +0.7**
JFWS pmax pmax
comp=Z,28nm,1.0s,mb5.3
JFWS Jewell Farm 83.86 319 *e* P **P 10 47 39.3 +0.7**
comp=Z,28nm,1.0s,mb5.3
JFWS Jewell Farm 83.86 319 *e* P **P 10 47 39.3 +0.7**
comp=Z,28nm,1.0s,mb5.3
KSM Kuching 84.00 92 *e* P **P 10 47 41.2 +1.8**
KSM Kuching 84.00 92 *e* P **P 10 47 41.2 +1.8**
BLO Bloomington 84.19 314 *e* P **P 10 47 41.5 +1.2**
BLO pmax pmax
comp=Z,40nm,1.0s,mb5.5
BLO Bloomington 84.19 314 *e* P **P 10 47 41.5 +1.2**
comp=Z,40nm,1.0s,mb5.5
BLO Bloomington 84.19 314 *e* P **P 10 47 41.5 +1.2**
comp=Z,40nm,1.0s,mb5.5
PMR Palmer 84.33 358 *e* P **P 10 47 40.4 -0.6**
PMR pmax pmax
comp=Z,46nm,1.4s,mb5.4
PMR MLR MLR
comp=Z,200nm,20.0s,MS4.5
PMR Palmer 84.33 358 *e* P **P 10 47 40.4 -0.6**
comp=Z,46nm,1.4s,mb5.4
PMR LR LR
comp=Z,200nm,20.0s,MS4.5
PMR Palmer 84.33 358 *e* P **P 10 47 40.4 -0.6**
comp=Z,46nm,1.4s,mb5.4
WCI Wyandotte Cave 84.66 313 *e* P **P 10 47 44.1 +1.4**
SVW2 Sparrevohn 84.87 1 *e* P **P 10 47 44.2 +0.5**
SVW2 *e* pP pP 10 47 54.0 -0.3
SVW2 Sparrevohn 84.87 1 *e* P **P 10 47 44.2 +0.5**
SVW2 *e* pP pP 10 47 54.0 -0.3
MAJO Matsushiro 84.99 49 *e* P **P 10 47 45.0 +0.6**
MAJO pmax pmax
comp=Z,38nm,1.1s,mb5.4
MAJO Matsushiro 84.99 49 *e* P **P 10 47 45.0 +0.7**
comp=Z,38nm,1.1s,mb5.4
MAJO Matsushiro 84.99 49 *e* P **P 10 47 45.0 +0.6**
comp=Z,38nm,1.1s,mb5.4
MAT Matsushiro 84.99 49 P **P 10 47 44.6 +0.2**
MAT S S 10 58 07.6 -3.4
MAT Matsushiro 84.99 49 *e* P **P 10 47 45.0 +0.6**
MAT *e* S S 10 58 08.0 -3.0
MAT pmax pmax
comp=Z,44nm,1.2s,mb5.5
MAT MLR MLR
comp=Z,710nm,20.0s,MS5.0
MAT Matsushiro 84.99 49 *e* P **P 10 47 45.0 +0.6**
comp=Z,44nm,1.2s,mb5.5
MAT *e* S S 10 58 08.0 -3.0
MAT LR LR
comp=Z,710nm,20.0s,MS5.0
MAT Matsushiro 84.99 49 *e* P **P 10 47 45.0 +0.6**
comp=Z,44nm,1.2s,mb5.5
MAT *e* S S 10 58 08.0 -3.0
MJAR Matsushiro Arr 84.99 49 P **P 10 47 45.4 +1.1**
comp=Z,22nm,0.9s,mb5.3,baz=310,slow=5.3,SNR=71
MJAR LR LR 11 29 38.1
comp=Z,368nm,20.1s,MS4.8,baz=305,slow=38
MJAR Matsushiro Arr 84.99 49 P **P 10 47 45.4 +1.1**
MJAR LR LR 11 29 38.1
CPCT Cooper Cave 85.33 310 *e* P **P 10 47 48.3 +2.2**
CPCT Cooper Cave 85.33 310 *e* P **P 10 47 48.3 +2.2**
SLKM Skilak Lake 85.44 358 *e* P **P 10 47 46.2 -0.4**
SLKM *e* pP pP 10 47 56.9 -0.2
SLKM Skilak Lake 85.44 358 *e* P **P 10 47 46.2 -0.4**
SLKM *e* pP pP 10 47 56.9 -0.2
USIN University of 85.65 314 *e* P **P 10 47 48.5 +0.9**
comp=Z,33nm,0.8s,mb5.6
USIN University of 85.65 314 *e* P **P 10 47 48.5 +0.9**
comp=Z,33nm,0.8s,mb5.6
EDM Edmonton 86.08 337 *e* P **P 10 47 50.1 +0.3**
EDM *e* pP pP 10 48 00.1 -0.3
EDM Edmonton 86.08 337 *e* P **P 10 47 50.1 +0.3**
EDM *e* pP pP 10 48 00.1 -0.2
SWET Sewanee 86.37 311 *e* P **P 10 47 52.3 +1.1**
SWET Sewanee 86.37 311 *e* P **P 10 47 52.3 +1.1**
BAO Brasilia Array 86.46 249 P **P 10 47 55.0 +3.4**
BDFB Brasilia 86.48 249 P **P 10 47 55.1 +3.4**
comp=Z,7.3nm,0.7s,mb5.0,baz=50,slow=4.8,SNR=9.2
BDFB LR LR 11 31 36.7
comp=Z,595nm,18.6s,MS5.0,baz=275,slow=39
SIUC Southern Illin 86.74 314 *e* P **P 10 47 54.1 +1.1**
comp=Z,57nm,0.9s,mb5.8
SIUC Southern Illin 86.74 314 *e* P **P 10 47 54.1 +1.1**
comp=Z,57nm,0.9s,mb5.8
WVT Waverly 86.95 312 *e* P **P 10 47 54.2 +0.2**
WVT pmax pmax
comp=Z,17nm,0.8s,mb5.3
WVT Waverly 86.95 312 *e* P **P 10 47 54.1 +0.1**
comp=Z,17nm,0.8s,mb5.3
WVT Waverly 86.95 312 *e* P **P 10 47 54.2 +0.2**
comp=Z,17nm,0.8s,mb5.3
FVM French Village 87.27 315 *e* P **P 10 47 57.1 +1.5**
FVM pmax pmax
comp=Z,36nm,0.9s,mb5.6
FVM French Village 87.27 315 *e* P **P 10 47 57.1 +1.5**
comp=Z,36nm,0.9s,mb5.6
FVM French Village 87.27 315 *e* P **P 10 47 57.1 +1.5**
comp=Z,36nm,0.9s,mb5.6
PARMO Parma 87.76 314 *e* P **P 10 47 59.0 +1.0**
PARMO Parma 87.76 314 *e* P **P 10 47 59.0 +1.1**
PLAL Pickwick Lake 87.86 312 *e* P **P 10 47 58.8 +0.4**
comp=Z,13nm,0.9s,mb5.2
PLAL Pickwick Lake 87.86 312 *e* P **P 10 47 58.8 +0.4**
comp=Z,13nm,0.9s,mb5.2
KDAK Kodiak Island 88.21 360 LR LR 11 29 51.8
comp=Z,413nm,20.8s,MS4.8,baz=9.1,slow=37
KDAK Kodiak Island 88.21 360 *e* P **P 10 47 59.8 -0.2**
KDAK *e* pP pP 10 48 10.4 -0.2
KDAK Kodiak Island 88.21 360 *e* P **P 10 47 59.8 -0.3**
KDAK *e* pP pP 10 48 10.4 -0.3
GNAR Gosnell 88.39 313 *e* pP pP 10 48 22.7 +11
GNAR Gosnell 88.39 313 *e* pP pP 10 48 22.7 +11
LRAL Lakeview Retre 88.45 310 *e* P **P 10 48 02.7 +1.5**
comp=Z,36nm,0.9s,mb5.6
LAO LASA Array 88.82 330 *e* P **P 10 48 04.3 +1.3**
comp=Z,28nm,0.8s,mb5.6
LAO LASA Array 88.82 330 *e* P **P 10 48 04.3 +1.4**
comp=Z,28nm,0.8s,mb5.6
EGMT Eagleton 89.15 332 *e* P **P 10 48 05.7 +1.2**
comp=Z,20nm,1.0s,mb5.4
WALA Waterton Lakes 89.81 335 *e* P **P 10 48 07.7 +0.1**
comp=Z,21nm,0.9s,mb5.5
WALA *e* pP pP 10 48 17.5 -0.7
WALA Waterton Lakes 89.81 335 *e* P **P 10 48 07.7 +0.1**
comp=Z,21nm,0.9s,mb5.5
WALA *e* pP pP 10 48 17.5 -0.7
RSSD Black Hills 89.89 327 *e* P **P 10 48 09.2 +1.3**
RSSD pmax pmax
comp=Z,18nm,1.0s,mb5.4
RSSD Black Hills 89.89 327 *e* P **P 10 48 09.2 +1.2**
comp=Z,18nm,1.0s,mb5.4
RSSD Black Hills 89.89 327 *e* P **P 10 48 09.2 +1.3**
comp=Z,18nm,1.0s,mb5.4
KSU1 Kansas State U 89.96 319 *e* P **P 10 48 09.0 +0.7**
KSU1 Kansas State U 89.96 319 *e* P **P 10 48 09.0 +0.7**
SDV Santo Domingo 90.93 281 P **P 10 48 15.2 +2.4**
comp=Z,13nm,1.1s,mb5.2,baz=316,slow=1.1,SNR=5.6
SDV Santo Domingo 90.93 281 *e* P **P 10 48 15.1 +2.3**
comp=Z,23nm,1.0s,mb5.5
SDV *e* pP pP 10 48 24.6 +1.2
SDV Santo Domingo 90.93 281 *e* P **P 10 48 15.1 +2.3**
comp=Z,23nm,1.0s,mb5.5
SDV *e* pP pP 10 48 24.6 +1.2
GCMT Greycliff 90.95 331 *e* P **P 10 48 13.3 +0.4**
GCMT Greycliff 90.95 331 *e* P **P 10 48 13.3 +0.4**
HRY Holter Researc 91.03 333 *e* P **P 10 48 14.1 +0.8**
HRY Holter Researc 91.03 333 *e* P **P 10 48 14.1 +0.8**
CHMT Chamberlain Mo 91.39 334 *e* P **P 10 48 15.8 +0.8**
CHMT Chamberlain Mo 91.39 334 *e* P **P 10 48 15.8 +0.8**
MIAR Mount Ida 91.47 314 *e* P **P 10 48 16.9 +1.6**
MIAR pmax pmax
comp=Z,18nm,1.1s,mb5.3
MIAR Mount Ida 91.47 314 *e* P **P 10 48 16.9 +1.6**
comp=Z,18nm,1.1s,mb5.3
NEW Newport 91.57 337 *e* P **P 10 48 16.5 +0.7**
NEW pmax pmax
comp=Z,22nm,0.8s
NEW Newport 91.57 337 *e* P **P 10 48 16.5 +0.7**
comp=Z,22nm,0.8s,mb5.5
NEW *e* pP pP 10 48 26.7 +0.3
NEW Newport 91.57 337 *e* P **P 10 48 16.5 +0.7**
comp=Z,22nm,0.8s,mb5.5
NEW *e* pP pP 10 48 26.7 +0.3
MSO Missoula 91.71 334 *e* P **P 10 48 16.9 +0.4**
comp=Z,5.7nm,0.9s,mb4.9
MSO *e* pP pP 10 48 26.9 -0.2
MSO Missoula 91.71 334 *e* P **P 10 48 16.9 +0.5**
comp=Z,5.7nm,0.9s,mb4.9
MSO *e* pP pP 10 48 26.9 -0.1
BOZ Bozeman (W) 91.84 332 *e* P **P 10 48 18.7 +1.6**
BOZ pmax pmax
comp=Z,9.0nm,1.3s,mb4.9
BOZ Bozeman (W) 91.84 332 *e* P **P 10 48 18.6 +1.6**
comp=Z,9.2nm,1.3s,mb5.0
BOZ Bozeman (W) 91.84 332 *e* P **P 10 48 18.6 +1.5**
comp=Z,9.2nm,1.3s,mb5.0
LKWY Lake 92.26 331 *e* pP pP 10 48 31.4 +1.9
A05A Maple Falls 92.44 340 ⇑P **P 10 48 19.2 -0.6**
baz=92
DLMT Dillon 92.45 333 *e* P **P 10 48 21.2 +1.3**
comp=Z,10nm,1.0s,mb5.1
DLMT Dillon 92.45 333 *e* P **P 10 48 21.2 +1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,10nm,1.0s,mb5.1						
PHWY	Pilot Hill	92.74	326	eP	P	10 48 22.6	+1.4
PHWY	Pilot Hill	92.74	326	eP	P	10 48 22.6	+1.4
RPW	Rockport	92.77	339	P	P	10 48 21.1	-0.3
RPW	Rockport	92.77	339	P	P	10 48 21.0	-0.3
FLWY	Flagg Ranch	92.78	331	eP	P	10 48 22.3	+0.9
	comp=Z,18nm,1.1s,mb5.4						
OD2	Odessa Site #2	92.85	337	P	P	10 48 22.7	+1.0
OD2	Odessa Site #2	92.85	337	P	P	10 48 22.7	+1.0
CMW	Cultus Mountai	92.97	340	P	P	10 48 22.0	-0.2
MCMT	McKenzie Canyo	93.00	332	eP	P	10 48 23.8	+1.4
MCMT	McKenzie Canyo	93.00	332	eP	P	10 48 23.8	+1.4
IMW	Indian Meadow	93.03	331	eP	P	10 48 27.5	+5.0
	comp=Z,11nm,1.0s,mb5.2						
MOOW	Moose Ponds	93.07	331	eP	P	10 48 23.6	+0.9
	comp=Z,5.9nm,1.0s,mb5.0						
MOOW				epP	pP	10 48 33.7	+0.4
MOOW	Moose Ponds	93.07	331	eP	P	10 48 23.6	+0.9
	comp=Z,5.9nm,1.0s,mb5.0						
MOOW				epP	pP	10 48 33.7	+0.4
B05A	Bryant	93.11	340	⇑P	P	10 48 22.2	-0.7
	baz=93						
JCW	Jim Creek	93.12	340	P	P	10 48 22.9	0.0
JCW	Jim Creek	93.12	340	P	P	10 48 22.9	0.0
LOHW	Long Hollow	93.12	330	eP	P	10 48 23.7	+0.7
	comp=Z,13nm,1.7s,mb5.1						
LOHW	Long Hollow	93.12	330	eP	P	10 48 23.7	+0.7
	comp=Z,13nm,1.7s,mb5.1						
RWWY	Rawlins	93.23	327	eP	P	10 48 24.0	+0.5
	comp=Z,8.2nm,0.8s,mb5.2						
SNOW	Snow King Moun	93.31	330	eP	P	10 48 24.8	+1.0
	comp=Z,8.1nm,0.9s,mb5.2						
SNOW				epP	pP	10 48 35.1	+0.7
SNOW	Snow King Moun	93.31	330	eP	P	10 48 24.8	+1.0
	comp=Z,8.1nm,0.9s,mb5.2						
SNOW				epP	pP	10 48 35.1	+0.7
TPAW	Teton Pass	93.37	330	eP	P	10 48 25.7	+1.6
	comp=Z,10nm,0.8s,mb5.3						
TPAW				epP	pP	10 48 35.5	+0.8
DCID1	Drake Creek	93.38	331	eP	P	10 48 26.2	+2.0
PDAR	Pinedale Array	93.39	329	P	P	10 48 24.2	+0.1
	comp=Z,1.7nm,0.9s,mb4.5,baz=35,slow=3.6,SNR=11						
PDAR				LR	LR	11 32 49.2	
	comp=Z,371nm,19.0s,MS4.9,baz=34,slow=37						
PDAR	Pinedale Array	93.39	329	P	P	10 48 24.2	0.0
REDW	Red Top Meadow	93.43	330	eP	P	10 48 25.5	+1.1
	comp=Z,5.1nm,0.9s,mb5.0						
REDW				epP	pP	10 48 35.4	+0.4
REDW	Red Top Meadow	93.43	330	eP	P	10 48 25.5	+1.1
	comp=Z,5.1nm,0.9s,mb5.0						
C05A	Tolt Reservoir	93.50	339	⇓P	P	10 48 24.5	-0.2
	baz=93						
RRI2	Red Ridge	93.64	331	eP	P	10 48 27.1	+1.7
RMW	Rattlesnake Mo	93.75	339	P	P	10 48 26.1	+0.3
GBL	Gable Mountain	93.80	337	P	P	10 48 27.4	+1.4
C04A	Brinnon	93.85	340	⇓P	P	10 48 27.7	+1.4
	baz=94						
EBG	Ellensburg	93.87	338	P	P	10 48 27.2	+0.8
HDW	Hoodsport	93.94	340	P	P	10 48 27.9	+1.2
ISCO	Idaho Springs	94.00	325	eP	P	10 48 27.8	+0.8
ISCO				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.2						
ISCO	Idaho Springs	94.00	325	eP	P	10 48 27.8	+0.8
	comp=Z,13nm,1.2s,mb5.2						
HAWA	Hanford	94.00	337	eP	P	10 48 28.2	+1.2
	comp=Z,1.5nm,0.9s,mb4.4						
HAWA				eP		10 48 28.3	
HAWA				epP	pP	10 48 38.0	+0.4
WMOK	Wichita Mounta	94.33	318	eP	P	10 48 29.7	+1.2
BMO	Blue Mountains	94.61	335	eP	P	10 48 29.8	0.0
	comp=Z,8.5nm,0.8s,mb5.2						
SAML	Samuel	94.77	262	eP	P	10 48 34.2	+3.7
	comp=Z,7.1nm,1.3s,mb4.9						
H09A	Durkee	94.90	335	⇑P	P	10 48 31.8	+0.7
	baz=94						
F05A	White Salmon	95.06	338	⇓P	P	10 48 32.8	+0.9
	baz=95						
E03A	Lebam	95.08	340	⇑P	P	10 48 33.0	+1.0
	baz=95						
SMCO	Snowmass	95.13	326	epP	pP	10 48 43.5	+0.7
MTMW	Mount Mitchell	95.16	339	P	P	10 48 33.7	+1.4
HWUT	Hardware Ranch	95.18	330	eP	P	10 48 33.1	+0.7
	comp=Z,12nm,0.8s,mb5.4						
H08A	Prairie City	95.37	336	⇑P	P	10 48 33.4	+0.1
	baz=95						
HOOD	Mount Hood Mea	95.62	338	epP	pP	10 48 55.3	+10
G04A	Mulino	95.98	339	⇓P	P	10 48 37.5	+1.5
	baz=96						
I07A	Izee	96.04	336	⇓P	P	10 48 37.5	+1.2
	baz=96						
H05A	Madras	96.10	338	⇓P	P	10 48 37.6	+1.0
	baz=96						
G03A	Yamhill	96.12	339	⇓P	P	10 48 38.0	+1.3
	baz=96						
H04A	Detroit Lake	96.36	338	⇓P	P	10 48 38.1	+0.3
	baz=96						
I06A	Prineville	96.40	337	⇓P	P	10 48 39.7	+1.8
	baz=96						
M13A	Montello	96.45	331	⇑P	P	10 48 39.8	+1.6
	baz=96						
I05A	Bend	96.54	337	⇑P	P	10 48 40.1	+1.5
	baz=96						
K09A	Rome	96.64	334	⇑P	P	10 48 40.4	+1.4
	baz=96						
M12A	Wells	96.69	332	⇑P	P	10 48 41.0	+1.7
	baz=96						
BROR	Big Rock Looko	96.82	338	P	P	10 48 41.1	+1.2
K08A	Mann Creek Ran	96.88	335	⇑P	P	10 48 40.8	+0.7
	baz=96						
DUG	Dugway	96.88	330	eP	P	10 48 40.8	+0.7
DUG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
DUG	Dugway	96.88	330	eP	P	10 48 40.8	+0.7
	comp=Z,5.2nm,0.9s,mb5.0						
DUG				epP	pP	10 48 50.9	+0.2
J06A	Christmas Vall	96.99	336	⇑P	P	10 48 41.7	+1.0
	baz=97						
M11A	Holland Ranch,	97.02	332	⇓P	P	10 48 43.1	+2.3
	baz=97						
K07A	Rock Creek Ran	97.18	335	⇑P	P	10 48 43.3	+1.8
	baz=97						
L09A	Wilkinson Ranc	97.21	334	⇑P	P	10 48 43.4	+1.7
	baz=97						
J05A	Fort Rock	97.32	337	⇓P	P	10 48 44.0	+1.9
	baz=97						
M09A	Marrel Ranch,	97.65	334	⇓P	P	10 48 45.9	+2.3
	baz=97						
L07A	Adell	97.81	335	⇓P	P	10 48 46.1	+1.8
	baz=97						
M08A	Happy Creek Ra	97.97	334	⇓P	P	10 48 46.6	+1.6
	baz=98						
N09A	Rock Creek Ran	98.18	333	⇓P	P	10 48 47.9	+2.0
	baz=98						
ANMO	Albuquerque	98.24	323	eP	P	10 48 46.8	+0.5
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANMO	Albuquerque	98.24	323	eP	P	10 48 46.8	+0.6
	comp=Z,2.6nm,0.9s,mb4.8						
ANMO				epP	pP	10 48 56.9	+0.1
ANMO				esP	sP	10 49 00.9	+0.3
L05A	Lakeview	98.29	336	⇓P	P	10 48 48.6	+2.1
	baz=98						
M04C	Macdoel	98.86	337	⇓P	P	10 48 50.5	+1.4
	baz=98						
O07A	Toulon	99.28	334	⇓P	P	10 48 51.7	+0.8
	baz=99						
O06A	Flanigan	99.62	335	⇑P	Pdif	10 48 52.5	+0.1
	baz=99						
CPUP	Villa Florida	99.72	245	LR	LR	11 40 15.9	
	comp=Z,536nm,18.3s,MS5.1,baz=31,slow=39						
MNTX	Cornudas Mount	100.23	320	eP	Pdif	10 48 55.5	+0.4
	comp=Z,2.8nm,1.0s						
NVAR	Mina Array Bea	100.58	333	P	Pdif	10 48 58.2	+1.5
	comp=Z,0.8nm,0.7s,baz=44,slow=5.2,SNR=5.4						
NVAR	Mina Array Bea	100.58	333	P	Pdif	10 48 58.2	+1.5
WB2	Warramunga Arr	115.36	98	ePKP	PKPdf	10 53 51.5	+1.0
ASPA	Alice Springs	116.76	101	ePKP	PKPdf	10 53 54.5	+1.3
ASAR	Alice Springs	116.76	101	PKP	PKPdf	10 53 53.9	+0.7
	comp=Z,1.0nm,0.7s,baz=310,slow=1.6,SNR=20						
ASAR				PP	PP	10 55 02.3	+0.7
	comp=Z,1.8nm,1.1s,baz=296,slow=7.1,SNR=3.2						
ASAR				PKKPbc	PKKPbc	11 04 21.8	+2.2
	comp=Z,0.7nm,0.9s,baz=117,slow=3.9,SNR=17						
ASAR	Alice Springs	116.76	101	PKIKP	PKPdf	10 53 53.9	+0.7
ASAR						10 55 02.3	
AS31	Alice Springs	116.77	101	ePKPdf	PKPdf	10 53 54.7	+1.5
QSPA	South Pole Qui	124.21	180	ePKPdf	PKPdf	10 54 07.3	-0.2
QSPA				eP		10 54 08.0	
STKA	Stephens Creek	126.37	107	ePKP	PKPdf	10 54 12.4	+0.7
	comp=Z,4.6nm,1.0s						
STKA	Stephens Creek	126.37	107	PKP	PKPdf	10 54 12.2	+0.5
	comp=Z,6.4nm,1.1s,baz=145,slow=4.0,SNR=4.8						
VNDA	Vanda	132.55	168	PKP	PKPdf	10 54 24.6	+1.1
	comp=Z,0.9nm,0.8s,baz=272,slow=7.5,SNR=4.2						
RKT	Rikitea	160.35	300	eLR	LR	11 49 29.4	
	comp=Z,210nm,25.5s						
PPT	Papeete	162.93	347	eLR	LR	11 50 38.4	
	comp=Z,304nm,26.0s						
TBI	Tubuai	168.49	341	eSS	SS	11 21 05.6	+2.1
	comp=Z,141nm,29.2s						
TBI				eLR	LR	11 53 13.1	
	comp=Z,296nm,25.8s						

PRE 13 10:51:39.8±0.5**, 2070S**×**3308E, h5**km**, ML4.2, Mozambique**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSNA	Messina	3.28	240	eP	Pn	10 52 33.2	+1.4
MSNA				eS	Sn	10 53 12.1	+1.0
MSNA				AML	AML	10 53 27.1	
	comp=Z,202nm,0.6s						
SLR	Silverton	6.67	220	eS	Sn	10 54 32.4	-2.4
SLR				AML	AML	10 55 13.7	
	comp=Z,107nm,0.6s						
POGA	Pongola	6.77	191	eP	Pn	10 53 19.9	+0.1
POGA				eS	Sn	10 54 33.5	-3.7
POGA				AML	AML	10 55 19.4	
	comp=Z,37nm,0.5s						
LBTB	Lobatse	8.12	237	eP	Pn	10 53 39.7	+1.3
LBTB				eS	Sn	10 55 06.8	-3.7
LBTB				AML	AML	10 56 08.3	
	comp=Z,38nm,0.5s						
GRM	Grahamstown	13.85	204	eP	Pn	10 54 58.9	+2.2

IDC 13 10:52:21.1±0.7, 3042S×7246W, h0km, mb4.3/9, mb1 4.3/13, mb1mx4.2/20, mbtmp4.2/13, ML4.4/3, MS3.4/2, Ms1 3.4/2, ms1mx2.9/20, Error ellipse: s-maj=24.9km s-min=18.1km az=82.0
ISCJB 13 10:52:24.5±2.0, 3056S±004×7259W±006, h33km±14km, mb4.2/13, MS3.4/1, Error ellipse: s-maj=9.1km s-min=6.0km az=138.9
NEIC 13 10:52:25.2, 3060S×7243W, h23km, mb4.5/3, ML4.4(GUC), After GUC.
GUC 13 10:52:25.2±0.9, 3060S×7243W, h23km±6km, ML4.4
ISC 13 10:52:24.3±2.0**, 3053S**±004×**7255W**±006**, h20**km±14km**, n43, σ1s05**/45**, mb4.2**/13**, MS3.4**/1**, 6C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.55	77	⇑iP	Pn	10 52 50.4	-0.4
TLL				iS	Sn	10 53 10.7	+0.4
TLL				AML	AML	10 53 12.3	
	comp=N,10μm,0.5s						
TLL	Tololo Astrono	1.55	77	⇑iP	Pn	10 52 50.4	-0.4
TLL				iS	Sn	10 53 10.7	+0.4
CHNG	Los Chungos	1.63	147	⇑iP	Pn	10 52 50.9	-0.9
CHNG				iS	Sn	10 53 10.2	-1.9
IHA	Instituto Hidr	2.61	163	⇓iP	Pn	10 53 04.6	-0.8
IHA				iS	Sn	10 53 34.8	-1.7
JACH	Jahuel	2.72	143	⇓iP	Pn	10 53 07.9	+1.0
PEL	Peldehue	3.06	149	⇑iP	Pn	10 53 11.7	+0.2
PEL				iS	Sn	10 53 47.2	-0.3
PEL				AML	AML	10 53 48.9	
	comp=E,905nm,0.0s						
PEL	Peldehue	3.06	149	⇑iP	Pn	10 53 11.7	+0.2
PEL				iS	Sn	10 53 47.2	-0.3
CLCH	Cerro Calan	3.34	150	⇑iP	Pn	10 53 15.8	+0.5
CLCH				iS	Sn	10 53 53.6	-0.7
CLCH				AML	AML	10 53 55.8	
	comp=E,833nm,0.7s						
CLCH				AML	AML	10 54 01.4	
	comp=E,977nm,0.7s						
FCH	Farellones	3.39	146	eP	Pn	10 53 17.0	+0.9
FCH				iS	Sn	10 53 56.4	+0.7
FCH				AML	AML	10 54 02.1	
	comp=E,370nm,0.6s						
TACH	Talagante	3.41	157	eP	Pn	10 53 16.7	+0.5
PCH	Pirque	3.54	151	eP	Pn	10 53 18.8	+0.7
CFAA	Coronel Fontan	3.86	107	Pn	Pn	10 53 25.2	+2.8
	comp=E,3.4nm,0.3s,baz=294,slow=11,SNR=214						
CFAA				Sn	Sn	10 54 08.6	+1.4
	comp=E,2.6nm,0.3s,baz=217,slow=22,SNR=7.5						
CFAA	Coronel Fontan	3.86	107	Pn	Pn	10 53 25.2	+2.8
CFAA				Sn	Sn	10 54 08.6	+1.4
MDZ	Mendoza	3.94	128	eP	Pn	10 53 28.3	+4.8
MDZ				e		10 53 42.5	
MDZ				e		10 54 32.5	
SFDO	San Fernando	4.28	163	eP	Pn	10 53 28.4	+0.2
LVC	Limon Verde	8.53	23	Pn	Pn	10 54 22.9	-3.7
	comp=E,0.7nm,0.3s,baz=201,slow=9.2,SNR=8.4						
LVC				Sn	Sn	10 55 57.7	-4.5
	comp=E,2.7nm,0.3s,baz=150,slow=23,SNR=6.3						
PLCA	Paso Flores	10.31	171	Pn	Pn	10 54 51.0	0.0
	baz=358,slow=12						
CPUP	Villa Florida	14.03	76	Pn	Pn	10 55 40.5	-1.4
	comp=E,0.3nm,0.3s,baz=224,slow=14,SNR=2.5						
CPUP				LR	LR	11 00 34.6	
	comp=E,101nm,20.9s,baz=264,slow=35						
SIV	San Ignacio	17.88	39	P	Pn	10 56 29.3	-2.5
	comp=E,0.5nm,0.3s,baz=225,slow=11,SNR=40						
SAML	Samuel	23.18	24	eP	P	10 57 29.6	-0.1
	comp=E,9.0nm,1.2s,mb4.1						
ATAH	Atahualpa	24.04	346	LR	LR	11 05 40.6	
	comp=E,120nm,18.7s,MS3.4,baz=12,slow=34						
BDFB	Brasilia	26.92	62	P	P	10 58 02.8	-1.2
	comp=E,7.2nm,0.7s,mb4.3,baz=237,slow=10.0,SNR=11						
SDV	Santo Domingo	39.23	3	P	P	10 59 54.4	+3.2
	comp=E,2.6nm,0.6s,mb4.1,baz=216,slow=3.7,SNR=4.1						
SNAA	Sanae	54.97	159	P	P	11 01 54.2	+0.3
	comp=E,2.4nm,0.8s,mb4.3,baz=297,slow=7.2,SNR=12						
QSPA	South Pole Qui	59.70	180	eP	P	11 02 28.0	+0.6
	comp=E,3.7nm,0.8s,mb4.5						
MNTX	Cornudas Mount	69.28	330	eP	P	11 03 28.2	-1.8
	comp=E,4.7nm,0.8s,mb4.5						
ANMO	Albuquerque	72.54	331	P	P	11 03 49.8	0.0
	comp=E,2.8nm,0.9s,mb4.2,baz=147,slow=9.0,SNR=9.7						
DBIC	Dimbokro	74.52	72	P	P	11 04 01.9	+0.4
	comp=E,4.7nm,0.9s,mb4.4,baz=166,slow=12,SNR=4.2						
SADO	Sadowa	75.17	355	P	P	11 04 04.3	-0.9
	comp=E,3.5nm,0.7s,mb4.4,baz=211,slow=3.0,SNR=3.5						
MAW	Mawson	76.63	164	P	P	11 04 13.8	+0.2
	comp=E,1.9nm,0.5s,mb4.3,baz=202,slow=6.3,SNR=23						
CCUT	Cedar City	77.74	328	eP	P	11 04 21.0	+1.3
PDAR	Pinedale Array	80.47	333	P	P	11 04 34.3	-0.4
	comp=E,0.6nm,0.8s,mb3.6,baz=116,slow=3.4,SNR=5.2						
NVAR	Mina Array Bea	80.79	325	P	P	11 04 37.5	+1.1
	comp=E,0.6nm,0.7s,mb3.6,baz=157,slow=4.9						
TORD	Torodi Ar. Bea	83.46	71	P	P	11 04 51.0	+0.6
	comp=E,2.0nm,0.9s,mb4.2,baz=282,slow=5.9,SNR=10.0						
MCMT	McKenzie Canyo	83.50	332	eP	P	11 04 51.0	+0.3
ASAR	Alice Springs	120.44	208	PKP	PKPdf	11 11 13.4	-0.8
	comp=E,0.2nm,0.5s,baz=146,slow=1.5,SNR=4.1						
BRVK	Borovoye	144.89	39	ePKPdf	PKPdf	11 11 59.5	-0.4
BVAR	Borovoye Array	144.96	39	PKP	PKPdf	11 11 59.7	-0.3
	comp=E,3.6nm,0.5s,baz=309,slow=2.5,SNR=24						
KURK	Kurchatov	150.54	39	ePKPdf	PKPdf	11 12 08.9	-0.3
KURK				ePKPbc	PKPbc	11 12 13.8	-0.8
KURK				ePKPab	PKPab	11 12 16.6	-4.6
AAK	Ala-Archa	151.09	56	ePKPdf	PKPdf	11 12 09.0	-1.0
AAK				ePKPbc	PKPbc	11 12 15.7	-0.1
AAK				ePKPab	PKPab	11 12 18.3	-5.2
ZAL	Zalesovo	151.46	28	PKPbc	PKPbc	11 12 16.4	-0.3
	comp=E,3.7nm,0.5s,baz=200,slow=2.3,SNR=13						
ZAL	Zalesovo	151.46	28	PKPbc	PKPbc	11 12 16.4	-0.3
MKAR	Makanchi Array	154.67	43	PKP	PKPdf	11 12 14.6	-0.7
	comp=E,0.1nm,0.3s,baz=27,slow=1.9,SNR=3.5						
MKAR				PKPbc	PKPbc	11 12 23.7	-0.1
	comp=E,0.6nm,0.7s,baz=336,slow=2.7,SNR=7.1						

KNET 13 11:01:27.7±0.7, 4174N×7288E, h3km±3km, ml2.4, Error ellipse: s-maj=6.1km s-min=4.2km az=140.0
ISCJB 13 11:01:28.5±1.4, 4166N±0.10×7277E±0.06, h10km, Error ellipse: s-maj=14.1km s-min=6.3km az=175.6
ISC 13 11:01:29.9±1.3**, 417N**±01×**7280E**±006**, h10**km**, n11, σ1s58**/19**, 12C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	0.78	58	⇑P	Pg	11 01 41.4	-3.5
	35nm,0.2s,SNR=32						
AML				⇑S	Sg	11 01 53.6	-1.6
	50nm,0.2s						
EKS2	Erkin-Say	1.19	37	⇑P	Pb	11 01 49.1	-3.4
	7.4nm,0.1s,SNR=6.5						
EKS2				⇑S	Sb	11 02 06.5	-1.3
	15nm,0.2s						
UCH	Uchtor	1.37	68	⇑P	Pn	11 01 52.2	-2.9
	4.6nm,0.1s,SNR=9.0						
UCH				⇓S	Sb	11 02 12.1	-1.1
	15nm,0.2s						
AAK	Ala-Archa	1.55	54	⇓P	Pn	11 01 57.0	-0.5
	26nm,0.3s,SNR=13						
KBK	Karagaybulak	1.85	59	⇑P	Pn	11 02 01.6	0.0
	15nm,0.2s,SNR=8.0						
KBK				⇓S	Sn	11 02 27.3	+2.3
	50nm,0.3s						
CHMS	Chumysh	1.93	48	⇑P	Pn	11 02 03.0	+0.2
	8.2nm,0.2s,SNR=5.5						
CHMS				⇑S	Sn	11 02 29.8	+2.8
	45nm,0.4s						
USP	Ospenovka	1.99	39	⇑P	Pn	11 02 03.6	+0.1
	14nm,0.2s,SNR=12						
USP				⇑S	Sn	11 02 31.3	+2.8
	35nm,0.2s						
KK31	Karatay Array	2.19	310	P	Pn	11 02 04.7	-1.6
	1.9nm,0.2s,baz=331,slow=5.4,SNR=92						
KK31				⇑S	Sn	11 02 34.1	+0.7
	7.5nm,0.3s,baz=207,slow=59,SNR=4.0						
TKM2	Tokmak 2	2.39	59	⇓P	Pn	11 02 10.3	+1.1
	19nm,0.4s,SNR=21						
TKM2	Tokmak 2	2.39	59	⇑P	Pn	11 02 09.6	+0.4
	1.2nm,0.5s						
TKM2				⇓S	Sn	11 02 43.5	+5.0
	2.5nm,0.5s						
ULHL	Ulahol	2.62	77	P	Pn	11 02 14.1	+1.9
	SNR=8.3						

ISCJB 13 11:15:48.2±0.8, 185N±02×6902W±006, h150km±11km, Error ellipse: s-maj=37.7km s-min=6.9km az=20.2
SSNC 13 11:15:48.2, 1953N×7067W, h0km, MD3.1, ML3.5
NEIC 13 11:15:49.7, 1831N×6889W, h162km, MD4.1(RSPR), After RSPR.
RSPR 13 11:15:49.7, 1831N×6889W, h162km±1km, MD4.1/15, MD4.1/15
ISC 13 11:15:48.9±0.9**, 184N**±02×**6905W**±006**, h145**km±13km**, n21, σ0s41**/38**, 11C-6D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MPR	Mayaguez	1.82	96	⇑eP	Pn	11 16 22.4	+0.7
MPR				eS	Sn	11 16 47.1	+0.4
AGPR	Aguadilla, PR	1.84	88	⇑eP	Pn	11 16 22.6	+0.8
AGPR				eS	Sn	11 16 47.4	+0.3
LSP	Las Mesas	1.88	97	eS	Sn	11 16 48.2	+0.4
CRPR	Cabo Rojo, PR	1.89	102	⇓eP	Pn	11 16 22.4	+0.1
CRPR				eS	Sn	11 16 47.7	-0.4
MGP	Maguayo	1.91	102	⇓eP	Pn	11 16 22.8	+0.2
MGP				eS	Sn	11 16 48.6	+0.2
LRS	Lares	2.10	93	⇑eP	Pn	11 16 24.7	-0.1
LRS				eS	Sn	11 16 52.5	+0.1
AOPR	Arecibo Observ	2.18	91	⇑eP	Pn	11 16 25.6	-0.2
AOPR				eS	Sn	11 16 54.4	+0.1
OBIP	Obispado Ponce	2.35	99	⇑eP	Pn	11 16 28.3	+0.4
OBIP				eS	Sn	11 16 57.2	-0.8
CELP	Cerrillos	2.37	98	⇓eP	Pn	11 16 28.3	+0.2
CELP				eS	Sn	11 16 57.8	-0.6
ICM	Isla Caja Muer	2.46	102	⇑eP	Pn	11 16 29.4	+0.1
ICM				eS	Sn	11 16 59.9	-0.4
SJG	San Juan	2.77	96	⇓eP	Pn	11 16 33.0	-0.1
SJG				eS	Sn	11 17 07.2	0.0
CPD	Cerro la Pandu	3.00	97	⇑eP	Pn	11 16 35.8	-0.3
CPD				eS	Sn	11 17 12.5	0.0
CBYP	Canovanas	3.04	92	⇑eP	Pn	11 16 36.5	+0.1
CBYP				eS	Sn	11 17 13.4	+0.2
HUMP	Col San Antoni	3.05	95	⇓eP	Pn	11 16 36.5	-0.2
HUMP				eS	Sn	11 17 13.4	-0.2
MTP	Monte Pirata	3.33	95	⇓eP	Pn	11 16 40.3	0.0
MTP				eS	Sn	11 17 20.1	0.0
CULB	Culebra	3.53	91	⇑eP	Pn	11 16 42.9	+0.1
CULB	Culebra	3.53	91	eS	Sn	11 17 25.0	+0.2
STVI	Saint Thomas	3.88	90	⇑eP	Pn	11 16 47.3	-0.1
STVI				eS	Sn	11 17 32.7	-0.2
CDVI	St. Croix	4.13	99	⇑eP	Pn	11 16 50.9	+0.3
CDVI				eS	Sn	11 17 37.8	-0.8
TBVI	Tortola	4.21	89	eS	Sn	11 17 40.6	-0.1
MASC	Masc	5.20	291	ePG	Pn	11 17 05.7	+0.9
	baz=175						
MASC				eSG	Sn	11 18 02.8	-1.2
	comp=N,815nm,0.1s						
MASC				e			
	comp=E,579nm,0.1s						

KRSC 13 11:16:02, 6073N×16557E, h4km, ML4.2
BJI 13 11:16:05.9, 6090N×16550E, h25km, mb4.5, Ms4.7, Msz4.0
ISCJB 13 11:16:06.6±1.7, 6075N±004×16531E±009, h23km±13km, mb4.1/25, MS4.1/2, Error ellipse: s-maj=8.6km s-min=5.2km az=86.9
MOS 13 11:16:06.5±1.6, 6077N×16548E, h22km, mb4.1/5, Error ellipse: s-maj=19.9km s-min=9.2km az=83.1
IDC 13 11:16:06.4±0.8, 6103N×16559E, h0km, mb3.9/15, mb1 4.0/15, mb1mx3.9/25, mbtmp3.9/15, MS3.9/1, Ms1 3.9/1, ms1mx2.9/36, Error ellipse: s-maj=22.7km s-min=15.5km az=167.0
NEIC 13 11:16:09.9±3.5, 6090N×16545E, h25km±25km, mb4.4/7, Error ellipse: s-maj=14.9km s-min=7.4km az=174.0
ISC 13 11:16:10.0±0.7**, 6076N**±005×**16535E**±008**, h36**km±8km**, n62, σ0s95**/71**, mb4.1**/25**, MS4.1**/2**, 2C-1D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMKR	Semkarok	4.65	208	eP	Pn	11 17 17.0	-0.7
SRKR	Sorokina	4.66	210	eP	Pn	11 17 16.9	-0.9
KBTR	Krutoberegovo	4.75	197	P	Pn	11 17 18.0	-1.1
KBTR				S	Sn	11 18 14.1	+1.2
KBTR	Krutoberegovo	4.75	197	eP	Pn	11 17 18.0	-1.1
KBTR				iS	Sn	11 18 14.1	+1.2
ZLN	Zelenaya	5.32	209	eP	Pn	11 17 27.4	+0.5
KPT	Kopyto	5.51	212	eP	Pn	11 17 29.8	+0.3
KMNR	Kamenistaya	5.69	211	eP	Pn	11 17 32.4	+0.4
MKZ	Mys Kozlova	6.51	199	P	Pn	11 17 43.4	+0.1
MKZ				S	Sn	11 18 56.9	+0.6
MKZ	Mys Kozlova	6.51	199	eP	Pn	11 17 43.4	+0.1
MKZ				iS	Sn	11 18 56.9	+0.6
BILL	Bilibino	7.32	3	⇓iPN	Pn	11 17 53.7	-0.7
BILL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BILL	Bilibino	7.32	3	ePn	Pn	11 17 54.2	-0.2
	comp=Z,20nm,0.4s						
MA2	Magadan	7.37	267	ePN	Pn	11 17 54.8	-0.2
MA2				pmax	pmax		
	comp=Z,40nm,1.0s						
MA2	Magadan	7.37	267	ePn	Pn	11 17 54.8	-0.2
	comp=Z,41nm,0.7s						
MA2				eSn	Sn	11 19 16.3	-1.0
GNL	Ganaly	8.14	213	eP	Pn	11 18 06.8	+1.3
SPN	Mys Shipunski	8.21	203	P	Pn	11 18 05.1	-1.4
SPN				S	Sn	11 19 33.3	-4.7
SPN	Mys Shipunski	8.21	203	eP	Pn	11 18 05.1	-1.4
SPN				iS	Sn	11 19 33.3	-4.7
YAK	Yakutsk	17.00	290	eP	Pn	11 20 07.7	+2.9
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,12nm,1.4s						
YAK				pmax	pmax		
	comp=E,11nm,1.7s						
TTA	Tatalina	18.18	66	eP	Pn	11 20 19.7	+0.3
TTA				pmax	pmax		
	comp=Z,33nm,1.3s						
TTA	Tatalina	18.18	66	eP	Pn	11 20 19.7	+0.3
	comp=Z,33nm,1.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IMA2	**Indian Mountai**	**18.80**	**56**	*e*P	**Pn**	**11 20 27.7**	**+0.6**
MCK	**McKinley**	**21.14**	**62**	*e*P	**P**	**11 20 51.2**	**-0.5**
MCK				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.3						
MCK	**McKinley**	**21.14**	**62**	*e*P	**P**	**11 20 51.2**	**-0.5**
	comp=Z,15nm,0.9s,mb4.3						
HABR	**Khabarovsk**	**21.19**	**248**	*e*P	**P**	**11 20 46.5**	**-5.8**
HABR				S	**S**	**11 24 44.6**	**-1.2**
COLA	**College**	**21.37**	**59**	*e*P	**P**	**11 20 46.9**	**-7.2**
KDAK	**Kodiak Island**	**21.43**	**79**	P	**P**	**11 20 53.4**	**-1.4**
	comp=Z,5.2nm,0.8s,mb3.9,baz=220,slow=13,SNR=4.2						
ASAJ	**Asahikawa**	**21.49**	**229**	P	**P**	**11 20 59.2**	**+3.8**
	comp=Z,1.5nm,0.6s,mb3.5,baz=279,slow=7.4,SNR=3.6						
ASAJ	**Asahikawa**	**21.49**	**229**	P	**P**	**11 20 59.3**	**+3.8**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**26.25**	**47**	P	**P**	**11 21 40.9**	**-0.8**
	comp=Z,5.4nm,0.8s,mb4.1,baz=283,slow=13,SNR=10						
INK	**Inuvik**	**26.25**	**47**	P	**P**	**11 21 40.9**	**-0.7**
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	**Inuvik**	**26.25**	**47**	*e*P	**P**	**11 21 43.1**	**+1.5**
MJAR	**Matsushiro Arr**	**29.73**	**228**	P	**P**	**11 22 17.0**	**+4.3**
	comp=Z,0.9nm,0.8s,mb3.6,baz=1.1,slow=12,SNR=4.8						
SNY	**Shenyang**	**31.52**	**252**	⇑P	**P**	**11 22 26.5**	**-2.0**
SNY				AMB	AMB		
	comp=Z,8.0nm,0.5s,mb4.8						
ULN	**Ulaanbaatar**	**35.13**	**275**	*i* P	**P**	**11 23 00.8**	**+0.8**
SONM	**Songino Array**	**35.48**	**276**	P	**P**	**11 23 04.7**	**+1.8**
	comp=Z,1.7nm,0.9s,mb4.0,baz=51,slow=7.0,SNR=6.4						
SONM				LR	LR	11 37 07.1	
	comp=Z,195nm,20.1s,MS3.9,baz=18,slow=35						
NJ2	**Nanjing**	**41.66**	**248**	*e*P	**P**	**11 23 52.5**	**-2.3**
NJ2				PP	PP	11 25 33.3	+1.8
NJ2				S	**S**	**11 30 08.0**	**-0.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NJ2				LR	LR		
	comp=N,300nm,19.2s,MS4.5						
NJ2				LR	LR		
	comp=E,690nm,23.4s,MS4.5						
NJ2				LR	LR		
	comp=Z,280nm,27.9s,MS4.0						
EDM	**Edmonton**	**42.21**	**62**	*e*P	**P**	**11 23 59.0**	**-0.3**
GTA	**Gaotai**	**44.90**	**273**	*e*P	**P**	**11 24 22.6**	**+1.7**
GTA				AP	pP	11 24 27.6	-4.0
GTA				XP	sP	11 24 29.5	-6.4
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.2						
KURK	**Kurchatov**	**46.35**	**299**	⇑*e*P	**P**	**11 24 32.6**	**+0.2**
KURK	**Kurchatov**	**46.35**	**299**	*e*P	**P**	**11 24 32.9**	**+0.5**
	comp=Z,5.1nm,0.7s,mb4.6						
ARCES	**ARCESS Array B**	**46.88**	**342**	P	**P**	**11 24 36.5**	**-0.1**
	comp=Z,1.1nm,0.6s,mb4.0,baz=35,slow=8.9,SNR=4.9						
HRY	**Holter Researc**	**47.60**	**68**	*e*P	**P**	**11 24 42.2**	**0.0**
MKAR	**Makanchi Array**	**47.64**	**293**	P	**P**	**11 24 42.1**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=45,slow=7.7,SNR=5.6						
MKAR	**Makanchi Array**	**47.64**	**293**	*i* P	**P**	**11 24 41.5**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**48.04**	**306**	P	**P**	**11 24 46.4**	**+0.8**
	comp=Z,2.1nm,0.5s,mb4.4,baz=53,slow=7.6,SNR=12						
MCMT	**McKenzie Canyo**	**48.56**	**70**	*e*P	**P**	**11 24 48.9**	**-0.7**
HLID	**Hailey**	**48.80**	**72**	*e*P	**P**	**11 24 50.8**	**-0.7**
	comp=Z,1.3nm,0.7s,mb4.1						
GCMT	**Greycliff**	**49.27**	**67**	*e*P	**P**	**11 24 55.7**	**+0.6**
FLWY	**Flagg Ranch**	**50.12**	**69**	*e*P	**P**	**11 25 02.3**	**+0.8**
	comp=Z,5.4nm,0.8s,mb4.6						
IMW	**Indian Meadow**	**50.15**	**69**	*e*P	**P**	**11 25 05.7**	**+4.0**
	comp=Z,2.6nm,0.7s,mb4.4						
TPAW	**Teton Pass**	**50.46**	**70**	*e*P	**P**	**11 25 04.5**	**+0.5**
	comp=Z,1.5nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	**50.93**	**79**	P	**P**	**11 25 07.4**	**-0.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=295,slow=9.4,SNR=11						
PDAR	**Pinedale Array**	**51.66**	**69**	P	**P**	**11 25 13.1**	**0.0**
	comp=Z,2.4nm,0.7s,mb4.3,baz=320,slow=3.7,SNR=23						
FINES	**FINESS Array B**	**54.18**	**337**	P	**P**	**11 25 31.5**	**-0.2**
	comp=Z,1.0nm,0.7s,mb3.8,baz=8.1,slow=6.7,SNR=6.1						
FINES	**FINESS Array B**	**54.18**	**337**	*i* P	**P**	**11 25 31.5**	**-0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**54.18**	**337**	P	**P**	**11 25 31.5**	**-0.2**
KMI	**Kunming**	**55.07**	**259**	P	**P**	**11 25 38.1**	**0.0**
KMI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.8						
NOA	**NORSAR Array B**	**56.91**	**345**	P	**P**	**11 25 51.5**	**+0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=15,slow=7.2,SNR=3.6						
NOA	**NORSAR Array B**	**56.91**	**345**	P	**P**	**11 25 51.5**	**+0.2**
AKASG	**Malin Array Be**	**63.43**	**330**	P	**P**	**11 26 35.8**	**-0.2**
	comp=Z,0.4nm,0.4s,mb3.9,baz=26,slow=6.0,SNR=3.7						
CLL	**Collm**	**66.10**	**341**	*e*P	**P**	**11 26 53.0**	**-0.3**
GERES	**GERESS Array B**	**68.38**	**340**	P	**P**	**11 27 08.4**	**+0.7**
	comp=Z,0.5nm,0.8s,mb3.6,baz=15,slow=5.8,SNR=3.7						
ASAR	**Alice Springs**	**87.92**	**209**	P	**P**	**11 29 00.0**	**+4.2**
	comp=Z,0.4nm,0.9s,mb3.6,baz=10,slow=5.6,SNR=4.1						

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*ISCJB **13** 12:20:21.0±5.2, 5.6S±0.3×150.4E±0.3, h71km±34km, mb3.8/4, Error ellipse: s-maj=66.8km s-min=40.6km az=83.7*

*NEIC **13** 12:20:23.0±5.0, 5.61S×150.40E, h74km±29km, mb4.1/1, Error ellipse: s-maj=53.3km s-min=41.6km az=93.0*

*IDC **13** 12:20:23.2±8.7, 5.69S×150.45E, h71km±62km, mb3.7/3, mb1 3.7/4, mb1mx3.4/13, mbtmp3.9/4, ML2.5/1, MS3.7/3, Ms1 3.7/3, ms1mx3.0/26, Error ellipse: s-maj=71.9km s-min=55.7km az=107.0*

ISC 13 12:20:22.3±5.2**, 5.6S**±0.3×**150.5E**±0.4**, h70**km±33km**, n13, σ0.63**/11**, mb3.8**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.01**	**221**	P	**Pn**	**12 21 34.9**	**0.0**
	1.2nm,0.3s,baz=156,slow=22,SNR=5.5						
PMG				S	**Sn**	**12 22 31.2**	**-0.3**
	3.7nm,0.3s,baz=178,slow=20,SNR=4.0						
PMG				LR	LR	12 23 20.7	
	comp=Z,117nm,19.5s,baz=292,slow=36						
PMG	**Port Moresby**	**5.01**	**221**	P	**Pn**	**12 21 34.9**	**0.0**
PMG				*e*S	**Sn**	**12 22 32.2**	**+0.7**
PMG				LR	LR	12 23 20.7	
WRAB	**Tennant Creek**	**21.19**	**226**	*e*P	**P**	**12 25 01.9**	**-0.1**
	8.9nm,0.8s,mb4.2						
WB2	**Warramunga Arr**	**21.19**	**226**	*e*P	**P**	**12 25 01.3**	**-0.7**
AS31	**Alice Springs**	**24.03**	**220**	*e*P	**P**	**12 25 30.3**	**-0.3**
ASAR	**Alice Springs**	**24.03**	**220**	P	**P**	**12 25 30.1**	**-0.6**
	2.5nm,0.7s,mb3.7,baz=56,slow=8.9,SNR=36						
ASPA	**Alice Springs**	**24.03**	**220**	*e*P	**P**	**12 25 30.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**27.25**	**241**	P	**P**	**12 26 01.0**	**+1.2**
	1.2nm,0.6s,mb3.6,baz=78,slow=10.0,SNR=5.7						
STKA	**Stephens Creek**	**27.44**	**197**	P	**P**	**12 26 02.3**	**+0.8**
	2.7nm,1.0s,mb3.7,baz=350,slow=16,SNR=3.5						
AFI	**Afiamalu**	**38.07**	**105**	LR	LR	12 40 24.8	
	comp=Z,609nm,18.3s,baz=201,slow=32						
JHJ	**Hachijo jima 2**	**39.81**	**346**	LR	LR	12 42 27.0	
	comp=Z,79nm,18.5s,baz=308,slow=33						
TORD	**Torodi Ar. Bea**	**148.32**	**286**	PKPbc	PKPbc	12 40 01.8	+1.2
	1.4nm,0.7s,baz=70,slow=4.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	**148.32**	**286**	PKPbc	PKPbc	12 40 01.8	+1.2

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*IDC **13** 12:36:00.8±0.7, 19.58S×174.41W, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.3/15, mbtmp4.3/11, MS3.9/9, Ms1 3.9/9, ms1mx3.7/19, Error ellipse: s-maj=26.9km s-min=17.8km az=126.0*

*ISCJB **13** 12:36:02.8±0.3, 19.59S±0.07×174.44W±0.09, h25km, mb4.7/29, MS4.3/14, Error ellipse: s-maj=13.2km s-min=8.7km az=72.1*

*NEIC **13** 12:36:02.0±0.3, 19.41S×174.45W, h10km, mb4.8/13, Error ellipse: s-maj=16.7km s-min=8.7km az=127.0*

*BJI **13** 12:36:02.5, 19.40S×174.50W, h10km, mB5.2, mb5.0, Ms5.0, Msz4.7*

*MOS **13** 12:36:04.3±1.0, 19.60S×174.52W, h33km, mb4.9/8, Error ellipse: s-maj=19.5km s-min=17.0km az=56.2*

ISC 13 12:36:04.7±0.3**, 19.53S**±0.07×**174.38W**±0.09**, h27**km**, h27**km±1.1km**:pP-P, n103, σ1.02**/63**, mb4.7**/29**, MS4.3**/14**, 5C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.12**	**24**	Pn	**Pn**	**12 37 29.4**	**-3.9**
	12nm,0.3s,baz=119,slow=21,SNR=19						
AFI				Sn	**Sn**	**12 38 34.3**	**-8.1**
	4.1nm,0.3s,baz=360,slow=23,SNR=2.0						
AFI	**Afiamalu**	**6.12**	**24**	*e*P	**Pn**	**12 37 29.5**	**-3.8**
AFI				pmax	pmax		
	comp=Z,59nm,0.4s						
AFI	**Afiamalu**	**6.12**	**24**	*e*P	**Pn**	**12 37 29.5**	**-3.8**
	comp=Z,58nm,0.4s						
RAR	**Rarotonga**	**13.80**	**99**	Pn	**Pn**	**12 39 07.1**	**-12**
	comp=Z,2.9nm,0.3s,baz=266,slow=7.0,SNR=9.1						
RAR				Sn	Sn	12 41 22.9	-28
	comp=Z,0.1nm,0.3s,baz=104,slow=18,SNR=2.3						
DZM	**Mont Dzumac**	**18.11**	**259**	*e*P	**Pn**	**12 40 19.1**	**+4.8**
DZM	**Mont Dzumac**	**18.11**	**259**	P	**Pn**	**12 40 19.7**	**+5.4**
	comp=Z,0.7nm,0.3s,baz=78,slow=18,SNR=7.2						
DZM				LR	LR	12 45 06.9	
	comp=Z,148nm,18.4s,baz=260,slow=30						
URZ	**Urewera**	**20.08**	**200**	P	**P**	**12 40 35.4**	**-0.7**
	comp=Z,8.6nm,0.6s,baz=334,slow=3.2,SNR=5.9						
TBI	**Tubuai**	**23.50**	**104**	*e*LQ		12 45 32.6	
	comp=Z,328nm,26.5s						
TBI				*e*LR	LR	12 46 21.5	
	comp=Z,605nm,29.5s						
PPT	**Papeete**	**23.59**	**89**	*e*LQ		12 45 36.1	
	comp=Z,826nm,26.0s						
PPT				*e*LR	LR	12 46 36.7	
	comp=Z,721nm,26.2s						
PPT	**Papeete**	**23.59**	**89**	LR	LR	12 47 17.7	
	comp=Z,346nm,21.7s,MS3.8,baz=259,slow=29						
SNZO	**South Karori**	**23.62**	**201**	P	**P**	**12 41 15.4**	**+1.7**
HNR	**Honiara**	**26.77**	**288**	LR	LR	12 51 19.8	
	comp=Z,182nm,18.1s,MS3.7,baz=179,slow=34						
RPZ	**Rata Peaks**	**27.04**	**204**	P	**P**	**12 41 45.3**	**+0.6**
	comp=Z,17nm,0.7s,mb4.7,baz=253,slow=4.5,SNR=6.0						
RKT	**Rikitea**	**36.81**	**103**	*e*LR	LR	12 52 29.2	
	comp=Z,457nm,30.2s						
CTA	**Charters Tower**	**36.98**	**262**	*e*P	**P**	**12 43 11.9**	**+0.1**
	comp=Z,11nm,0.8s,mb4.7						
CTA	**Charters Tower**	**36.98**	**262**	P	**P**	**12 43 11.8**	**0.0**
	comp=Z,4.3nm,0.4s,mb4.6,baz=113,slow=5.5,SNR=11						
CTA	**Charters Tower**	**36.98**	**262**	*e*P	**P**	**12 43 11.9**	**+0.1**
CTA				pmax	pmax		
	comp=Z,11nm,0.8s						
CTAO	**Charters Tower**	**36.98**	**262**	*e*P	**P**	**12 43 11.7**	**-0.1**
STKA	**Stephens Creek**	**41.27**	**244**	*e*P	**P**	**12 43 46.8**	**-0.9**
	comp=Z,3.1nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**41.27**	**244**	P	**P**	**12 43 45.5**	**-2.1**
	comp=Z,3.4nm,0.9s,mb4.0,baz=68,slow=8.1,SNR=4.8						
STKA				LR	LR	12 58 24.6	
	comp=Z,203nm,18.1s,MS4.0,baz=206,slow=33						
AS31	**Alice Springs**	**48.05**	**255**	*e*P	**P**	**12 44 42.0**	**+0.3**
ASAR	**Alice Springs**	**48.05**	**255**	P	**P**	**12 44 40.3**	**-1.5**
	comp=Z,2.9nm,0.7s,mb4.4,baz=93,slow=8.0,SNR=34						
ASAR				PcP	PcP	12 46 10.6	+1.2
	comp=Z,1.2nm,0.7s,baz=102,slow=3.6,SNR=4.4						
ASPA	**Alice Springs**	**48.06**	**255**	*e*P	**P**	**12 44 42.0**	**+0.2**
WB2	**Warramunga Arr**	**48.10**	**260**	*e*P	**P**	**12 44 40.1**	**-2.0**
WRAB	**Tennant Creek**	**48.10**	**260**	*e*P	**P**	**12 44 41.0**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**48.10**	**260**	*e*P	**P**	**12 44 41.0**	**-1.2**
	comp=Z,9.5nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**56.54**	**261**	P	**P**	**12 45 46.4**	**+1.7**
	comp=Z,1.5nm,0.6s,mb4.2,baz=169,slow=10,SNR=7.6						
SBA	**Scott Base**	**59.09**	**185**	*e*P	**P**	**12 46 03.3**	**+0.7**
SBA				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
SBA	**Scott Base**	**59.09**	**185**	*e*P	**P**	**12 46 03.3**	**+0.7**
	comp=Z,14nm,0.9s,mb5.0						
VNDA	**Vanda**	**59.20**	**186**	P	**P**	**12 46 03.3**	**-0.1**
	comp=Z,8.6nm,1.0s,mb4.7,baz=3.7,slow=6.5,SNR=10						
VNDA				LR	LR	13 07 35.5	
	comp=Z,78nm,19.3s,MS3.9,baz=331,slow=32						
VNDA	**Vanda**	**59.20**	**186**	*e*P	**P**	**12 46 03.1**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VNDA	**Vanda**	**59.20**	**186**	*e*P	**P**	**12 46 03.1**	**-0.3**
	comp=Z,5.8nm,0.9s,mb4.6						
QSPA	**South Pole Qui**	**70.54**	**180**	*e*P	**P**	**12 47 18.9**	**+1.7**
	comp=Z,30nm,1.1s,mb5.1						
MJAR	**Matsushiro Arr**	**71.51**	**321**	P	**P**	**12 47 24.0**	**+0.9**
	comp=Z,1.0nm,0.7s,mb3.8,baz=158,slow=5.6,SNR=5.3						
MAT	**Matsushiro**	**71.51**	**321**	P	**P**	**12 47 24.6**	**+1.5**
MAT	**Matsushiro**	**71.51**	**321**	P	**P**	**12 47 25.0**	**+1.9**
YSS	**Yuzh-Sakhalins**	**76.61**	**331**	*e*P	**P**	**12 47 53.8**	**+0.9**
NVAR	**Mina Array Bea**	**78.01**	**42**	P	**P**	**12 48 01.3**	**+0.6**
	comp=Z,3.8nm,1.0s,mb4.3,baz=235,slow=12,SNR=22						
SSE	**Sheshan**	**79.72**	**308**	P	**P**	**12 48 10.8**	**+0.7**
SSE				S	S	12 58 11.3	+0.3
SSE				XS	sS	12 58 27.3	+2.2
SSE				AMB	AMB		
	comp=Z,18nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,157nm,8.4s						
SSE				LR	LR		
	comp=N,72nm,21.5s,MS4.7						
SSE				LR	LR		
	comp=E,335nm,21.5s,MS4.7						
SSE				LR	LR		
	comp=Z,259nm,13.4s						
ARUT	**Antelope Range**	**80.78**	**45**	*e*P	**P**	**12 48 16.7**	**+0.9**
MDJ	**Mudanjiang**	**81.73**	**323**	P	**P**	**12 48 21.3**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,35nm,4.2s						
MDJ				LR	LR		
	comp=N,60nm,19.2s,MS4.5						
MDJ				LR	LR		
	comp=E,213nm,20.6s,MS4.5						
MDJ				LR	LR		
	comp=Z,96nm,15.1s						
NJ2	**Nanjing**	**81.92**	**308**	*e*P	**P**	**12 48 21.5**	**-0.4**
NJ2				AP	pP	12 48 29.4	-1.1
NJ2				S	S	12 58 32.0	-2.0
NJ2				XS	sS	12 58 46.0	-2.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,120nm,3.8s						
NJ2				LR	LR		
	comp=N,1μm,25.2s,MS5.4						
NJ2				LR	LR		
	comp=E,2μm,22.2s,MS5.4						
NJ2				LR	LR		
	comp=Z,1μm,12.6s						
HLID	**Hailey**	**83.39**	**39**	*e*P	**P**	**12 48 29.5**	**0.0**
	comp=Z,5.7nm,1.0s,mb4.6						
MNTX	**Cornudas Mount**	**83.43**	**53**	*e*P	**P**	**12 48 29.3**	**-0.4**
	comp=Z,2.5nm,1.0s,mb4.2						
TTA	**Tatalina**	**83.45**	**8**	P	**P**	**12 48 29.8**	**0.0**
TTA				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
TTA	**Tatalina**	**83.45**	**8**	P	**P**	**12 48 29.8**	**0.0**
	comp=Z,12nm,1.3s,mb4.8						
MAW	**Mawson**	**83.61**	**199**	P	**P**	**12 48 29.4**	**-1.2**
	comp=Z,0.9nm,0.6s,mb4.1,baz=120,slow=4.8,SNR=5.9						
MAW				LR	LR	13 24 01.6	
	comp=Z,104nm,18.9s,MS4.2,baz=237,slow=34						
MAW	**Mawson**	**83.61**	**199**	*e*P	**P**	**12 48 29.9**	**-0.7**
MAW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MAW	**Mawson**	**83.61**	**199**	*e*P	**P**	**12 48 29.9**	**-0.8**
	comp=Z,4.9nm,1.0s,mb4.6						
CN2	**Changchun**	**83.65**	**321**	*e*P	**P**	**12 48 31.5**	**+0.6**
CN2				*e*XP	sP	12 48 46.0	+3.4
CN2				*e*S	S	12 58 50.8	-0.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.1						
SNY	**Shenyang**	**83.70**	**318**	⇑P	**P**	**12 48 31.8**	**+0.7**
SNY				AMB	AMB		
	comp=Z,11nm,0.5s,mb5.2						
ANMO	**Albuquerque**	**84.16**	**50**	⇑*e*P	**P**	**12 48 34.1**	**+0.6**
PV01	**Paradox Valley**	**84.23**	**46**	*e*P	**P**	**12 48 33.8**	**0.0**
MCMT	**McKenzie Canyo**	**85.04**	**39**	*e*P	**P**	**12 48 38.0**	**+0.1**
MCK	**McKinley**	**85.33**	**11**	*e*P	**P**	**12 48 38.5**	**-0.8**
MCK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
MCK	**McKinley**	**85.33**	**11**	*e*P	**P**	**12 48 38.5**	**-0.8**
	comp=Z,5.6nm,0.9s,mb4.7						
DLMT	**Dillon**	**85.48**	**39**	*e*P	**P**	**12 48 39.2**	**-0.9**
	comp=Z,5.3nm,1.1s,mb4.6						
PDAR	**Pinedale Array**	**85.94**	**42**	P	**P**	**12 48 41.5**	**-0.9**
	comp=Z,0.7nm,0.8s,mb3.9,baz=245,slow=3.1,SNR=5.4						
PDAR				LR	LR	13 20 31.6	
	comp=Z,30nm,18.4s,MS3.7,baz=81,slow=31						
COLA	**College**	**86.57**	**11**	⇑*e*P	**P**	**12 48 45.2**	**-0.3**
COLA	**College**	**86.57**	**11**	*e*P	**P**	**12 48 44.9**	**-0.6**
	comp=Z,9.2nm,0.8s,mb5.1						
DAWY	**Dawson**	**87.63**	**15**	*e*P	**P**	**12 48 50.5**	**-0.1**
SYO	**Syowa Base**	**88.39**	**192**	⇑*e*P	**P**	**12 48 51.6**	**-2.7**
SYO	**Syowa Base**	**88.39**	**192**	⇑*e*pP	pP	12 49 02.0	-0.9
BILL	**Bilibino**	**88.46**	**353**	*e*P	**P**	**12 48 53.3**	**-1.3**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.4						
HHC	**Hu-ho-hao-te**	**91.14**	**313**	*e*P	**P**	**12 49 08.0**	**+0.9**
HHC				AP	pP	12 49 16.1	+0.3
HHC				XP	sP	12 49 19.3	+0.4
HHC				PP	PP	12 52 47.3	+3.4
HHC				SKS		12 59 37.3	
HHC				S	S	13 00 02.0	-1.5
HHC				XS	sS	13 00 15.6	-2.3
HHC				PS	PS	13 01 17.0	+2.2
HHC				SS	SS	13 06 09.8	+2.0
HHC				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb5.0						
HHC				AMB	AMB		
	comp=Z,94nm,7.1s						
HHC				LR	LR		
	comp=N,71nm,31.3s,MS4.1						
HHC				LR	LR		
	comp=E,104nm,34.2s,MS4.1						
HHC				LR	LR		
	comp=Z,87nm,33.2s,MS4.0						
KMI	**Kunming**	**91.97**	**296**	P	**P**	**12 49 15.3**	**+4.4**
KMI				AP	pP	12 49 22.6	+3.0
KMI				XP	sP	12 49 26.1	+3.4
KMI				PP	PP	12 52 52.3	+1.8
KMI				S	S	13 00 10.4	-0.5
KMI				XS	sS	13 00 21.0	-4.3
KMI				PS	PS	13 01 21.5	-2.4
KMI				SS	SS	13 06 20.6	+1.0
KMI				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb5.0						
KMI				AMB	AMB		
	comp=Z,118nm,4.6s						
KMI				LR	LR		
	comp=N,91nm,22.2s,MS4.3						
KMI				LR	LR		
	comp=E,96nm,23.2s,MS4.3						
KMI				LR	LR		
	comp=Z,91nm,30.3s						
CD2	**Chengdu**	**93.16**	**302**	*e*P	**P**	**12 49 15.0**	**-1.4**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,30nm,8.4s						
YKA	**Yellowknife Ar**	**94.23**	**24**	LR	LR	13 23 52.2	
	comp=Z,60nm,20.8s,MS4.0,baz=240,slow=30						
LZH	**Lanzhou**	**94.91**	**306**	*e*P	**P**	**12 49 24.9**	**+0.4**
LZH				AP	pP	12 49 33.9	+0.7
LZH				XP	sP	12 49 38.0	+1.7
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,70nm,4.9s						
LZH				LR	LR		
	comp=E,337nm,17.8s						
LZH				LR	LR		
	comp=Z,436nm,18.9s,MS5.0						
ULM	**Lac du Bonnet**	**97.70**	**39**	LR	LR	13 27 25.3	
	comp=Z,104nm,18.6s,MS4.3,baz=264,slow=32						
MKAR	**Makanchi Array**	**113.00**	**313**	PKiKP	PKiKP	12 54 40.3	+0.9
	comp=Z,0.3nm,0.7s,baz=98,slow=3.2,SNR=2.6						
ARCES	**ARCESS Array B**	**128.53**	**351**	PKhKP		12 55 03.9	
	comp=Z,1.2nm,0.8s,baz=8.0,slow=27,SNR=3.3						
FINES	**FINESS Array B**	**135.72**	**346**	PKP	PKPdf	12 55 21.2	-1.5
	comp=Z,0.4nm,0.6s,baz=357,slow=34,SNR=2.7						
AKASG	**Malin Array Be**	**143.71**	**335**	PKP	PKPdf	12 55 39.4	+2.2
	comp=Z,0.7nm,0.4s,baz=39,slow=4.8,SNR=5.3						
MALT	**Malatya**	**145.97**	**310**	*e*PKIKP	PKPdf	12 55 40.2	-0.9
STHS	**Stebnicka Huta**	**147.65**	**341**	*e*	PKPdf	12 55 41.4	-2.6
KOLS	**Kolonicke sedl**	**147.74**	**339**	*e*PKP	PKPab	12 55 53.5	+4.2
KOLS	**Kolonicke sedl**	**147.74**	**339**	*e*PKP	PKPdf	12 55 41.5	-2.6
KOLS				*e*	PKPab	12 55 53.5	+4.2
CLL	**Collm**	**147.75**	**351**	*e*PKPbc	PKPbc	12 55 47.0	0.0
CLL				*e*(pPKiKP)		12 55 53.0	
	comp=Z,12nm,0.9s						
UPC	**Upice**	**148.00**	**347**	*e*PKP	pPKPab	12 56 05.5	+6.4
BRG	**Berggiesshubel**	**148.03**	**350**	*e*P	PKPdf	12 55 44.0	-0.6
	comp=Z,1.9nm,1.1s						
BRG				*e*		12 55 53.0	
	comp=Z,3.3nm,1.0s						
BRG	**Berggiesshubel**	**148.03**	**350**	*e*PKIKP	PKPdf	12 55 44.0	-0.6
BRG				*e*		12 55 53.0	
BRG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DPC	**Dobruska-Polom**	**148.09**	**347**	*e*PKP	pPKPdf	12 55 56.6	+3.0
OKC	**Ostrava-Krasne**	**148.14**	**345**	*e*PKP	pPKPdf	12 55 59.9	+6.2
PVCC	**Panska Ves**	**148.26**	**349**	*e*PKP	pPKPdf	12 55 56.4	+2.5
BR131	**Keskin Array S**	**148.61**	**316**	PKPbc	PKPbc	12 55 49.1	-0.1
BRTR	**Keskin Array B**	**148.61**	**316**	PKPbc	PKPbc	12 55 50.8	+1.5
	comp=Z,1.3nm,0.7s,baz=135,slow=3.4,SNR=9.9						
KECS	**Kecovo**	**148.71**	**341**	*e*PKP	PKPdf	12 55 47.1	+1.4
PRU	**Pruhonice**	**148.78**	**349**	*e*PKP	pPKPdf	12 55 57.7	+3.0
VYHS	**Vyhne**	**149.19**	**343**	*e*PKP	pPKPdf	12 55 58.2	+2.8
TREC	**Trest**	**149.26**	**347**	*e*PKP	pPKPdf	12 55 59.0	+3.5
GIVF	**Givet**	**149.49**	**1**	*e*PKP1	PKPbc	12 55 45.7	-5.7
BAIF	**Baives**	**149.51**	**2**	*e*PKP1	PKPbc	12 55 46.4	-5.1
GRA1	**Grafenberg Arr**	**149.57**	**353**	*e*PKP	PKPab	12 55 57.2	+0.5
GRF	**Grafenberg Arr**	**149.57**	**353**	*e*PKP	PKPab	12 55 57.2	+0.5
KHC	**Kasperske Hory**	**149.78**	**350**	*e*PKP	PKPab	12 55 57.6	0.0
GERES	**GERESS Array B**	**150.03**	**349**	PKPbc	PKPbc	12 55 55.0	+2.2
	comp=Z,0.9nm,0.7s,baz=344,slow=2.9,SNR=6.1						
GERES	**GERESS Array B**	**150.03**	**349**	PKPbc	PKPbc	12 55 55.0	+2.2
MEZF	**Maizieres J'vi**	**151.09**	**1**	*e*PKP1	PKPbc	12 55 53.2	-2.1
HINF	**Hinteralfeld**	**151.76**	**358**	*e*PKP1	PKPbc	12 55 52.7	-4.1
AVF	**Avril sur Loir**	**152.74**	**3**	*e*PKP1	PKPbc	12 55 55.1	-3.9
	comp=Z,66nm,1.7s						
SMF	**Signal de Mont**	**152.91**	**3**	*e*PKP1	PKPbc	12 55 55.9	-3.5
	comp=Z,49nm,1.5s						
TORD	**Torodi Ar. Bea**	**172.62**	**149**	PKP	PKPdf	12 56 13.1	+1.9
	comp=Z,0.8nm,0.9s,baz=296,slow=1.4,SNR=4.3						

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*ISCJB **13** 12:37:39.3±0.6, 33.86N±0.04×135.36E±0.04, h58km±5km, mb3.5/2, Error ellipse: s-maj=6.7km s-min=5.6km az=157.9*

*IDC **13** 12:37:39.7±4.0, 34.00N×135.38E, h35km±45km, mb3.5/2, mb1 3.6/5, mb1mx3.3/23, mbtmp3.8/5, ML3.4/3, Error ellipse: s-maj=30.9km s-min=26.1km az=116.0*

*JMA **13** 12:37:40.4, 33.88N×135.35E, h53km±1km, M3.4 Broadband fault plane solution: P waves. NP1: φs121.00000°, δ28.00000°, λ-153.00000°. NP2: φs6.00000°, δ77.00000°, λ-65.00000°. Principal axes: T Plg28.0000°, Azm76.0000°; N Plg25.0000°, Azm180.0000°; P Plg51.0000°, Azm305.0000°;*

JMA Felt I J1.

*NEIC **13** 12:37:40.4, 33.88N×135.35E, h53km, MG3.4(JMA), After JMA.*

ISC 13 12:37:40.4±0.6**, 33.87N**±0.04×**135.35E**±0.04**, h51**km±5km**, n18, σ0.57**/32**, mb3.5**/2**, 3C-5D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.02**	**169**	⇓P	**Pn**	**12 37 48.3**	**+0.1**
JWM				S	**Sn**	**12 37 53.9**	**+0.2**
JWY	**Kouya**	**0.40**	**30**	⇓P	**Pn**	**12 37 51.0**	**+0.4**
JWY				S	**Sn**	**12 37 58.3**	**+0.4**
JWZ	**Kozaga**	**0.46**	**138**	⇓P	**Pn**	**12 37 51.2**	**-0.1**
JWZ				S	**Sn**	**12 37 59.4**	**+0.4**
JAJ2	**Tsuna**	**0.67**	**325**	⇑P	**Pn**	**12 37 53.9**	**+0.1**
JAJ2				S	**Sn**	**12 38 03.6**	**+0.2**
JAI	**Aioi**	**0.75**	**264**	⇑P	**Pn**	**12 37 54.5**	**-0.4**
JAI				S	**Sn**	**12 38 04.7**	**-0.7**
JHE	**Heguri**	**0.83**	**20**	⇑P	**Pn**	**12 37 55.7**	**-0.1**
JHE				S	**Sn**	**12 38 06.9**	**-0.2**
JKN2	**Miekihoku**	**0.85**	**64**	⇓P	**Pn**	**12 37 55.9**	**-0.2**
JKN2				*e*S	**Sn**	**12 38 07.6**	**-0.1**
JKS	**Kasai**	**1.18**	**339**	⇓P	**Pn**	**12 38 00.5**	**-0.1**
JKS				S	**Sn**	**12 38 15.0**	**-0.6**
TSUJ	**Tsu 2**	**1.22**	**46**	P	**Pn**	**12 38 00.7**	**-0.4**
TSUJ				S	**Sn**	**12 38 15.8**	**-0.7**
MAJO	**Matsushiro**	**3.54**	**40**	*e*Pn	**Pn**	**12 38 32.7**	**-0.2**
MAT	**Matsushiro**	**3.54**	**40**	P	**Pn**	**12 38 32.9**	**0.0**
MAT				*e*S	**Sn**	**12 39 16.0**	**+2.5**
MAT	**Matsushiro**	**3.54**	**40**	*e*P	**Pn**	**12 38 33.0**	**+0.1**
MAT				S	**Sn**	**12 39 16.0**	**+2.5**

MJAR	Matsushiro Arr	3.54	41	Pn	Pn	12 38 32.9	0.0
	1.1nm,0.3s,baz=248,slow=14,SNR=24						
MJAR				Pg	Pn	12 38 43.6	+11
	2.3nm,0.3s,baz=211,slow=15,SNR=23						
MJAR				Lg		12 39 27.8	
	1.0nm,0.3s,baz=224,slow=27,SNR=6.8						
JHJ	Hachijo jima 2	3.78	100	Pn	Pn	12 38 35.8	-0.3
	15nm,0.3s,baz=74,slow=20,SNR=6.4						
JHJ				Sn	Sn	12 39 18.4	-0.9
	34nm,0.3s,baz=70,slow=20,SNR=6.2						
JOW	Kunigami	9.30	223	Pn	Pn	12 39 52.9	+1.0
	1.2nm,0.3s,baz=94,slow=14,SNR=7.8						
JOW				Sn	Sn	12 41 27.0	-8.0
	0.5nm,0.3s,baz=106,slow=25,SNR=2.8						
SONM	Songino Array	25.78	311	P	P	12 43 06.5	+0.1
	0.7nm,0.7s,mb3.3,baz=122,slow=9.7,SNR=4.0						
MKAR	Makanchi Array	41.70	304	P	P	12 45 24.4	+0.3
	0.7nm,0.5s,mb3.6,baz=94,slow=8.3,SNR=6.1						
MKAR	Makanchi Array	41.70	304	P	P	12 45 24.4	+0.3

KRSC 13 12:51:40, 4918N×15819E, h31^{km}, ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	Alaid	2.40	316	P	Pn	12 52 17.6	+0.5
RUS	Russkaya	3.26	3	eP	Pn	12 52 32.5	+3.5
RUS				iS	Sn	12 53 10.1	+3.3
GRL	Gorelyy	3.38	359	eP	Pn	12 52 33.9	+3.3
GRL				iS	Sn	12 53 12.8	+3.2
PET	Petropavlovsk	3.86	4	iP	Pn	12 52 41.5	+4.3
PET				iS	Sn	12 53 25.6	+4.1
SPN	Mys Shipunski	4.09	16	eP	Pn	12 52 44.0	+3.6
SPN				iS	Sn	12 53 30.0	+2.9
AVH	Avacha	4.11	5	eP	Pn	12 52 45.5	+4.9
GNL	Ganaly	4.52	358	eP	Pn	12 52 51.2	+4.9
MKZ	Mys Kozlova	5.81	21	eP	Pn	12 53 07.0	+3.0
MKZ				iS	Sn	12 54 11.0	+1.4
KBTR	Krutoberegovo	7.58	20	eP	Pn	12 53 32.0	+3.7

ISCJB 13 13:08:39.2±4.6, 474N±02×1544E±03, h17^{km}±31^{km}, mb3.6/6, Error ellipse: s-maj=43.2km s-min=11.7km az=66.7

MOS 13 13:08:41.5±1.5, 4743N×15426E, h33^{km}, mb4.1/2, Error ellipse: s-maj=36.4km s-min=21.8km az=82.1

IDC 13 13:08:46.5±10.0, 4733N×15407E, h55^{km}±84^{km}, mb3.5/6, mb1 3.5/7, mb1mx3.3/20, mbtmp3.7/7, ML3.1/1, Error ellipse: s-maj=97.0km s-min=31.6km az=85.0

ISC 13 13:08:42.0±4.9, 474N±02×1545E±03, h25^{km}±33^{km}, n11, σ0^{s}88/12, mb3.6/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.45	18	ePN	Pn	13 09 34.0	0.0
SKR				eS	Sn	13 10 13.9	-0.1
SKR				pmax	pmax		
	comp=Z,30nm,0.4s						
SKR				smax			
	comp=N,80nm,0.2s						
SKR				smax			
	comp=E,50nm,0.2s						
ASAJ	Asahikawa	8.92	253	P	Pn	13 10 49.4	+0.3
	comp=E,0.3nm,0.3s,baz=244,slow=10,SNR=4.3						
MKAR	Makanchi Array	47.44	297	P	P	13 17 12.9	-1.5
	comp=E,0.4nm,0.4s,mb3.7,baz=64,slow=8.5,SNR=4.9						
FINES	FINESS Array B	63.82	335	P	P	13 19 11.9	-0.2
	comp=E,1.1nm,0.9s,mb3.9,baz=27,slow=8.8,SNR=7.5						
FINES	FINESS Array B	63.82	335	P	P	13 19 11.9	-0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NB2	NORSAR Subarra	67.89	342	P	P	13 19 38.9	+0.7
	comp=Z,0.7nm,0.6s,mb3.9,baz=26,slow=6.5						
NOA	NORSAR Array B	67.89	342	P	P	13 19 38.8	+0.6
	comp=Z,0.8nm,0.6s,mb4.0,baz=26,slow=6.5,SNR=4.7						
NOA	NORSAR Array B	67.89	342	P	P	13 19 38.8	+0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	71.49	327	P	P	13 19 59.9	-0.5
	comp=Z,0.2nm,0.3s,mb3.5,baz=33,slow=6.0,SNR=4.5						
ASAR	Alice Springs	73.14	200	P	P	13 20 09.8	-0.4
	comp=Z,0.3nm,0.8s,mb3.3,baz=16,slow=5.4,SNR=4.1						
BRTR	Keskin Array B	78.52	317	P	P	13 20 43.1	+2.1
	comp=Z,0.2nm,0.3s,mb3.5,baz=62,slow=4.1,SNR=4.2						

IDC 13 13:26:42.7±0.9, 1726S×17376W, h0^{km}, mb4.0/6, mb1 4.3/7, mb1mx4.1/13, mbtmp4.0/7, ML1.8/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/20, Error ellipse: s-maj=38.5km s-min=20.6km az=122.0

NEIC 13 13:26:44.2±0.5, 17.19S×17386W, h10^{km}, mb4.1/2, Error ellipse: s-maj=19.7km s-min=9.9km az=123.0

ISCJB 13 13:26:45.6±0.6, 172S±0.1×1739W±0.1, h33^{km}, mb4.0/7, Error ellipse: s-maj=23.7km s-min=10.2km az=74.4

ISC 13 13:26:47.9±0.7, 172S±01×1738W±01, h35^{km}, n16, σ0^{s}76/16, mb4.0/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.82	31	Pn	Pn	13 27 43.0	-1.2
	4.3nm,0.3s,baz=154,slow=18,SNR=10						
AFI				Sn	Sn	13 28 20.1	-7.7
	13nm,0.3s,baz=56,slow=19,SNR=4.3						
AFI				LR	LR	13 28 58.7	
	comp=Z,133nm,21.3s,baz=198,slow=35						
AFI	Afiamalu	3.82	31	eP	Pn	13 27 42.9	-1.3
AFI				Sn	Sn	13 28 20.1	-7.7
AFI				LR	LR	13 28 58.7	
URZ	Urewera	22.43	199	P	P	13 31 42.4	-1.1
	3.6nm,0.5s,mb4.1,baz=150,slow=20,SNR=5.9						
WRAB	Tennant Creek	49.07	258	eP	P	13 35 31.2	-0.3
AS31	Alice Springs	49.20	253	eP	P	13 35 32.3	-0.2
ASAR	Alice Springs	49.20	253	P	P	13 35 32.5	-0.1
	14nm,0.6s,mb5.1,baz=89,slow=8.5,SNR=236						
ASAR				PcP	PcP	13 36 56.4	+1.0
	0.9nm,0.6s,baz=106,slow=3.5,SNR=4.6						
ASPA	Alice Springs	49.20	253	eP	P	13 35 32.3	-0.3
SBA	Scott Base	61.42	185	eP	P	13 37 01.6	+1.0
	1.2nm,0.7s,mb4.1						
VNDA	Vanda	61.54	186	P	P	13 37 01.7	+0.3
	0.4nm,0.9s,mb3.6,baz=12,slow=6.6,SNR=3.6						
VNDA	Vanda	61.54	186	eP	P	13 37 01.4	0.0
	1.6nm,1.1s,mb4.1						
MJAR	Matsushiro Arr	70.07	320	P	P	13 37 57.6	+1.3
	0.3nm,0.4s,mb3.5,baz=166,slow=7.7,SNR=4.8						
NVAR	Mina Array Bea	75.93	42	P	P	13 38 31.8	+0.8
	0.8nm,0.7s,mb3.8,baz=229,slow=12,SNR=8.2						
NVAR	Mina Array Bea	75.93	42	P	P	13 38 31.8	+0.8
PDAR	Pinedale Array	83.87	42	P	P	13 39 13.9	0.0
	0.2nm,0.4s,mb3.6,baz=242,slow=3.2,SNR=3.8						
BRTR	Keskin Array B	147.29	319	PKPbc	PKPbc	13 46 28.8	+1.2
	1.3nm,0.8s,baz=122,slow=1.9,SNR=7.6						
GERES	GERESS Array B	147.86	351	PKPbc	PKPbc	13 46 29.2	+0.1
	0.5nm,0.7s,baz=9.9,slow=3.1,SNR=5.7						

ISCJB 13 13:51:24.9±0.8, 223S±0.1×685W±0.1, h115^{km}±9^{km}, mb3.6/2, Error ellipse: s-maj=22.2km s-min=19.6km az=75.1

IDC 13 13:51:25.6±0.7, 2225S×6853W, h102^{km}±11^{km}, mb3.4/3, mb1 3.4/6, mb1mx3.3/17, mbtmp3.6/6, Error ellipse: s-maj=29.7km s-min=23.1km az=9.0

NEIC 13 13:51:25.7±0.9, 2227S×6850W, h107^{km}±9^{km}, Error ellipse: s-maj=17.4km s-min=14.3km az=137.0

ISC 13 13:51:26.1±0.8, 223S±01×685W±01, h108^{km}±9^{km}, n10, σ0^{s}84/14, mb3.6/2, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.51	230	P	Pn	13 51 43.5	+0.7
	162nm,0.3s,baz=45,slow=7.0,SNR=1444						
LVC				S	Sn	13 51 55.8	+0.5
	955nm,0.3s,baz=117,slow=20,SNR=158						
LVC	Limon Verde	0.51	230	ePn	Pn	13 51 43.4	+0.5
LVC				eSn	Sn	13 51 55.4	0.0
CFAA	Coronel Fontan	9.29	179	P	Pn	13 53 35.8	-1.2
	0.1nm,0.3s,baz=358,slow=14,SNR=4.8						
CFAA				S	Sn	13 55 13.6	-6.1
	0.1nm,0.3s,baz=230,slow=18,SNR=4.2						
CFAA	Coronel Fontan	9.29	179	P	Pn	13 53 35.8	-1.2
CFAA				S	Sn	13 55 13.6	-6.1
SIV	San Ignacio	9.39	50	P	Pn	13 53 37.2	-1.3
	0.4nm,0.3s,baz=241,slow=12,SNR=21						
SIV				S	Sn	13 55 14.1	-8.1
	baz=302,slow=20,SNR=2.2						
CPUP	Villa Florida	10.95	114	P	Pn	13 53 59.9	+0.4
	0.3nm,0.3s,baz=253,slow=8.7,SNR=3.6						
BDFB	Brasilia	20.45	75	P	P	13 55 55.6	+0.7
	3.9nm,0.7s,baz=234,slow=11,SNR=5.0						
PDAR	Pinedale Array	74.98	330	P	P	14 02 55.0	-0.5
	0.2nm,0.4s,mb3.2,baz=141,slow=9.6,SNR=2.2						
TORD	Torodi Ar. Bea	77.25	70	P	P	14 03 09.4	+1.0
	1.6nm,0.5s,mb4.0,baz=252,slow=5.6,SNR=9.2						
MKAR	Makanchi Array	146.03	37	PKPbc	PKPbc	14 10 53.5	+0.2
	0.3nm,0.6s,baz=316,slow=4.0,SNR=2.2						

BJI 13 14:14:39.8, 864S×10786E, h10^{km}, mB5.0, mb4.7, Ms4.6, Msz4.4

NEIC 13 14:14:47.9±0.2, 770S×10802E, h10^{km}, mb4.8/21, Error ellipse: s-maj=11.1km s-min=5.4km az=48.0

NEIC Felt [IV] at Pangandaran; [III] at Cijulang, Cilacap and Pameungpeuk; [II] at Ciamis and Garut.

ISCJB 13 14:14:49.8±0.3, 778S±005×10795E±005, h33^{km}, mb4.7/58, MS3.8/14, Error ellipse: s-maj=7.8km s-min=5.2km az=93.3

MOS 13 14:14:51.5±1.0, 764S×10805E, h47^{km}, mb5.0/13, Error ellipse: s-maj=15.4km s-min=8.4km az=111.6

IDC 13 14:14:52.5±2.3, 764S×10804E, h41^{km}±19^{km}, mb4.4/22, mb1 4.4/22, mb1mx4.4/23, mbtmp4.6/22, MS3.6/7, Ms1 3.6/7, ms1mx3.3/18, Error ellipse: s-maj=19.7km s-min=11.9km az=65.0

ISC 13 14:14:51.9±0.3, 782S±004×10790E±004, h35^{km}, (h14^{km}±4.2^{km}:pP-P), n154, σ1^{s}24/128, mb4.7/58, MS3.8/14, 9C-7D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	1.03	344	P	Pn	14 15 15.9	+6.1
	0.0nm,0.0s						
JCJI	Jatiwangi	1.37	16	P	Pn	14 15 17.7	+3.1
	0.0nm,0.0s						
CBJI	Citeko	1.74	323	P	Pn	14 15 22.4	+2.8
	0.0nm,0.0s						
BJII	Banjamegara	1.86	75	P	Pn	14 15 24.1	+2.9
	0.0nm,0.0s						
BJII	Banjamegara	1.86	75	⇓iP	Pn	14 15 25.2	+4.0
BJII				iS	Sn	14 15 50.4	+6.9
TNG	Tangerang	2.06	323	P	Pn	14 15 33.2	+9.2
	0.0nm,0.0s						
YOGI	Yogyakarta	2.37	90	⇓eP	Pn	14 15 30.4	+2.1
YOGI				eS	Sn	14 15 56.9	+0.7
SBJI	Serang	2.44	314	P	Pn	14 15 36.0	+6.8
	0.0nm,0.0s						
KLI	Kotabumi	4.22	314	P	Pn	14 16 02.2	+8.5
	0.0nm,0.0s						
KRKI	Karangkates	4.52	95	P	Pn	14 16 02.2	+4.3
	0.0nm,0.0s						
KSI	Kapahiang	6.71	308	P	Pn	14 16 34.5	+6.6
	0.0nm,0.0s						
MBWA	Marble Bar	17.50	140	eP	Pn	14 18 51.2	-2.0
	6.6nm,0.6s						
FITZ	Fitzroy Crossi	20.06	122	eP	P	14 19 22.8	+0.7
	35nm,0.8s						
FITZ				eS	S	14 22 53.4	-12
FITZ	Fitzroy Crossi	20.06	122	P	P	14 19 23.1	+1.0
	15nm,0.7s,baz=309,slow=6.5,SNR=26						
FITZ				S	S	14 22 53.3	-12
	2.2nm,0.6s,baz=210,slow=23,SNR=5.9						
AAI	Ambon	20.60	80	P	P	14 19 30.2	+2.3
	122nm,0.9s						
KAKA	Kakadu	24.62	103	eP	P	14 20 08.2	-0.7
	31nm,0.6s,mb5.0						
NWAO	Narrogin (SRO)	26.44	162	LR	LR	14 30 20.9	
	comp=Z,156nm,20.3s,MS3.5,baz=173,slow=35						
WRAB	Tennant Creek	28.31	118	eP	P	14 20 41.8	-0.3
WRAB				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.8						
WRAB	Tennant Creek	28.31	118	eP	P	14 20 41.8	-0.3
	comp=Z,25nm,1.0s,mb4.8						
WB2	Warramunga Arr	28.31	118	eP	P	14 20 42.0	-0.2
ASPA	Alice Springs	29.49	125	eP	P	14 20 52.7	+0.1
ASPA				eS	S	14 26 41.3	+57
ASAR	Alice Springs	29.49	125	P	P	14 20 52.7	+0.1
	comp=Z,3.8nm,1.0s,mb4.1,baz=306,slow=9.2,SNR=22						
ASAR				PcP	PcP	14 23 57.5	+0.1
	comp=Z,1.2nm,0.5s,baz=332,slow=1.5,SNR=6.4						
ASAR				LR	LR	14 32 21.0	
	comp=Z,94nm,20.9s,MS3.4,baz=177,slow=36						
ASAR	Alice Springs	29.49	125	P	P	14 20 52.7	+0.1
ASAR						14 23 57.6	
AS31	Alice Springs	29.49	125	eP	P	14 20 52.7	+0.1
AS31				eS	S	14 26 41.3	+57
KMI	Kunming	33.13	351	P	P	14 21 26.5	+1.8
KMI				AP	pP	14 21 30.5	-4.3
KMI				XP	sP	14 21 32.0	-7.0
KMI				PP	PP	14 22 40.9	+1.0
KMI				S	S	14 26 46.6	+5.0
KMI				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.4						
KMI				LR	LR		
	comp=N,114nm,19.2s,MS3.8						
KMI				LR	LR		
	comp=E,102nm,16.7s,MS3.8						
KMI				LR	LR		
	comp=Z,126nm,18.2s,MS3.7						
GYA	Guiyang	34.09	358	⇑iP	P	14 21 33.8	+0.7
GYA				AP	pP	14 21 37.9	-5.3
GYA				XP	sP	14 21 41.3	-6.1
GYA				PP	PP	14 22 48.5	-2.1
GYA				PCP	PcP	14 24 10.6	+0.6
GYA				S	S	14 26 58.9	+2.3
GYA				SCP	ScP	14 27 54.0	+1.9
GYA				SCS	ScS	14 31 55.4	+1.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,480nm,16.8s,MS4.4						
GYA				LR	LR		
	comp=E,370nm,17.0s,MS4.4						
GYA				LR	LR		
	comp=Z,410nm,16.9s,MS4.2						
HYB	Hyderabad	38.34	311	iP	P	14 22 11.0	+1.7
CD2	Chengdu	38.71	354	eP	P	14 22 11.5	-1.0
CD2				AP	pP	14 22 16.0	-6.7
CD2				XP	sP	14 22 18.5	-8.4
CD2				PP	PP	14 23 44.4	+2.9
CD2				S	S	14 28 08.3	+1.2
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
CD2				LR	LR		
	comp=E,60nm,16.8s						
CD2				LR	LR		
	comp=Z,70nm,15.6s,MS3.6						
CTA	Charters Tower	39.06	112	eP	P	14 22 16.4	+1.0
	comp=Z,6.9nm,0.9s,mb4.4						
CTA	Charters Tower	39.06	112	eP	P	14 22 16.4	+1.0
CTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
STKA	Stephens Creek	39.43	132	eP	P	14 22 18.4	-0.1
	comp=Z,13nm,0.6s,mb4.8						
STKA	Stephens Creek	39.43	132	P	P	14 22 19.0	+0.5
	comp=Z,15nm,0.6s,mb4.9,baz=310,slow=8.4,SNR=70						
STKA				PcP	PcP	14 24 25.1	-0.9
	comp=Z,2.1nm,0.5s,baz=297,slow=2.3,SNR=3.4						
STKA				LR	LR	14 39 20.0	
	comp=Z,161nm,20.0s,MS3.9,baz=344,slow=37						
SSE	Sheshan	40.73	18	P	P	14 22 28.3	-1.0
SSE				AMB	AMB		
	comp=Z,34nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,83nm,4.4s						
NJ2	Nanjing	41.01	14	eP	P	14 22 31.9	+0.4
NJ2				AP	pP	14 22 36.4	-5.4
NJ2				S	S	14 28 42.0	+0.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,500nm,4.4s						
NJ2				LR	LR		
	comp=N,600nm,19.2s,MS4.5						
NJ2				LR	LR		
	comp=E,140nm,16.7s,MS4.5						
NJ2				LR	LR		
	comp=Z,620nm,15.3s,MS4.6						
PKI	Pulchoki	41.37	329	eP	P	14 22 36.7	+2.2
GUN	Gumba	41.41	330	eP	P	14 22 36.8	+1.9
	comp=Z,12nm,0.4s,mb4.9						
DMN	Daman	41.56	329	eP	P	14 22 38.1	+2.0
	comp=Z,18nm,0.7s,mb4.8						
KKN	Kakani	41.62	329	eP	P	14 22 37.4	+0.9
	comp=Z,8.9nm,0.5s,mb4.6						
KKN	Kakani	41.62	329	eP	P	14 22 37.4	+0.9
KKN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
XAN	Xi'an	41.64	1	P	P	14 22 36.1	-0.6
XAN				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.4						
GKN	Gorkha	42.12	329	eP	P	14 22 42.1	+1.5
	comp=Z,9.0nm,0.4s,mb4.7						
KOLN	Koldanda	42.48	327	eP	P	14 22 43.9	+0.3
	comp=Z,14nm,0.6s,mb4.8						
LZH	Lanzhou	43.84	355	eP	P	14 22 54.5	-0.1
LZH				AP	pP	14 22 57.9	-7.0
LZH				XP	sP	14 23 01.8	-7.3
LZH				PP	PP	14 24 38.8	+1.9
LZH				eS	S	14 29 27.0	+3.9
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,72nm,5.0s						
LZH				LR	LR		
	comp=E,430nm,15.3s						
LZH				LR	LR		
	comp=Z,715nm,16.5s,MS4.7						
GTA	Gaotai	47.59	352	eP	P	14 23 25.1	+0.9
GTA				AP	pP	14 23 30.4	-4.2
GTA				XP	sP	14 23 33.8	-4.9
GTA				PCP	PcP	14 24 54.3	+0.7
GTA				PP	PP	14 25 16.6	+0.8
GTA				PPP		14 26 06.8	
GTA				S	S	14 30 20.4	+3.3
GTA				SCS	ScS	14 33 12.8	-2.3
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb4.2						
GTA				AMB	AMB		
	comp=Z,36nm,4.9s						
GTA				LR	LR		
	comp=N,102nm,17.9s,MS4.0						
GTA				LR	LR		
	comp=E,92nm,17.5s,MS4.0						
GTA				LR	LR		
	comp=Z,106nm,18.2s,MS3.9						
SNY	Shenyang	51.45	15	⇑P	P	14 23 52.8	-0.8
SNY				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.8						
MJAR	Matsushiro Arr	52.50	31	P	P	14 23 58.9	-2.6
	comp=Z,0.5nm,0.4s,mb3.8,baz=216,slow=6.8,SNR=6.9						
MJAR				PcP	PcP	14 25 11.0	-0.6
	comp=Z,1.3nm,0.8s,baz=213,slow=5.9,SNR=4.5						
CN2	Changchun	53.79	16	eP	P	14 24 12.3	+1.4
WMQ	Urumqi	54.56	342	eP	P	14 24 16.0	-0.6
WMQ				XP	sP	14 24 23.0	-8.2
WMQ				PP	PP	14 26 20.0	+0.9
WMQ				S	S	14 31 53.0	-0.5
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,112nm,5.0s						
WMQ				LR	LR		
	comp=N,45nm,14.0s,MS3.8						
WMQ				LR	LR		
	comp=E,42nm,14.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,36nm,13.0s,MS3.6						
SONM	Songino Array	55.43	359	P	P	14 24 22.3	-0.5
	comp=Z,3.3nm,0.5s,mb4.6,baz=177,slow=8.3,SNR=36						
SONM				PcP	PcP	14 25 22.5	-0.2
	comp=Z,5.5nm,0.5s,baz=176,slow=4.0,SNR=22						
SONM				ScP	ScP	14 29 15.3	-3.6
	comp=Z,0.7nm,0.7s,baz=179,slow=4.3,SNR=4.8						
SONM				LR	LR	14 49 30.6	
	comp=Z,91nm,21.3s,MS3.8,baz=194,slow=38						
SONM	Songino Array	55.43	359	P	P	14 24 22.3	-0.5
SONM						14 25 22.5	
ULN	Ulaanbaatar	55.45	359	⇓iP	P	14 24 22.3	-0.6
MDJ	Mudanjiang	55.74	19	P	P	14 24 25.1	0.0
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,64nm,5.3s						
ZAK	Zakamensk	58.10	357	eP	P	14 24 38.3	-3.5
ZAK				e		14 25 32.6	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
MKAR	Makanchi Array	58.96	340	P	P	14 24 46.4	-1.3
	comp=Z,9.4nm,0.5s,mb5.1,baz=148,slow=7.8,SNR=56						
MKAR				PcP	PcP	14 25 36.6	0.0
	comp=Z,3.1nm,0.6s,baz=141,slow=6.2,SNR=4.4						
MKAR	Makanchi Array	58.96	340	⇑eP	P	14 24 46.4	-1.3
MKAR	Makanchi Array	58.96	340	P	P	14 24 46.4	-1.3
MKAR				PcP	PcP	14 25 36.6	0.0
KLR	Kul'dur	60.53	18	eP	P	14 24 56.4	-2.1
HABR	Khabarovsk	60.94	20	eP	P	14 24 59.3	-2.0
HABR				S	S	14 33 14.0	-3.0
KK31	Karatay Array	61.02	329	iP	P	14 25 01.9	0.0
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
YSS	Yuzh-Sakhalins	62.71	26	⇑eP	P	14 25 12.8	-0.4
YSS				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.7						
KURK	Kurchatov	63.57	340	⇓iP	P	14 25 17.9	-1.1
KURK	Kurchatov	63.57	340	eP	P	14 25 17.6	-1.3
	comp=Z,6.4nm,0.7s,mb4.8						
ZAL	Zalesovo	64.54	345	P	P	14 25 23.2	-2.1
	comp=Z,2.1nm,0.4s,mb4.5,baz=15,slow=7.1,SNR=6.3						
ZAL				LR	LR	14 56 30.9	
	comp=Z,32nm,18.0s,MS3.6,baz=67,slow=39						
ZAL	Zalesovo	64.54	345	P	P	14 25 23.2	-2.1
ZAL				LR	LR	14 56 30.9	
MAW	Mawson	66.84	197	eP	P	14 25 40.5	+0.3
	comp=Z,3.5nm,0.6s,mb4.6						
MAW	Mawson	66.84	197	P	P	14 25 40.4	+0.3
	comp=Z,4.6nm,0.6s,mb4.7,baz=56,slow=6.5,SNR=20						
MAW				LR	LR	14 51 45.8	
	comp=Z,39nm,18.4s,MS3.7,baz=247,slow=33						
MAW	Mawson	66.84	197	eP	P	14 25 40.5	+0.3
MAW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BVAR	Borovoye Array	68.47	337	P	P	14 25 49.6	-0.8
	comp=Z,7.9nm,0.5s,mb5.0,baz=144,slow=9.1,SNR=46						
BVAR				PcP	PcP	14 26 15.1	-0.4
	comp=Z,3.7nm,0.6s,baz=137,slow=6.9,SNR=5.6						
BRVK	Borovoye	68.53	337	eP	P	14 25 50.6	-0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.7						
BRVK	Borovoye	68.53	337	eP	P	14 25 50.6	-0.3
	comp=Z,2.6nm,0.3s,mb4.6						
RDF	Al-Radifah	68.61	305	eP	P	14 25 51.2	-0.2
RDF				AMb	AMB	14 25 52.7	
	comp=Z,27nm,0.8s,mb5.2						
UMR	Umm Al-Rimmam	68.72	306	eP	P	14 25 52.0	0.0
UMR				AMb	AMB	14 25 53.4	
	comp=Z,64nm,0.6s,mb5.7						
NAY	Al-Naaiem	68.99	305	eP	P	14 25 53.5	-0.1
NAY				AMb	AMB	14 25 54.8	
	comp=Z,14nm,0.7s,mb5.0						
KMBO	Kilima Mbogo	70.67	272	P	P	14 26 05.8	+1.7
	comp=Z,2.1nm,0.8s,mb4.1,baz=87,slow=3.2,SNR=5.1						
KMBO				LR	LR	14 52 49.1	
	comp=Z,26nm,18.6s,MS3.5,baz=88,slow=32						
YAK	Yakutsk	71.67	11	⇑eP	P	14 26 08.6	-1.4
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
AKTK	Aktyubinsk	72.28	329	P	P	14 26 12.6	-1.1
AKTO	Aktyubinsk	72.28	329	P	P	14 26 12.6	-1.1
	comp=Z,3.5nm,0.6s,mb4.5,baz=127,slow=3.7,SNR=16						
AKTO	Aktyubinsk	72.28	329	iP	P	14 26 12.8	-0.9
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
VNDA	Vanda	75.00	170	P	P	14 26 29.5	-0.2
	comp=Z,1.7nm,0.4s,mb4.3,baz=323,slow=5.7,SNR=14						
VNDA	Vanda	75.00	170	eP	P	14 26 29.2	-0.5
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VNDA	Vanda	75.00	170	eP	P	14 26 29.2	-0.5

	comp=Z,4.4nm,0.9s,mb4.4						
SYO	Syowa Base	75.04	200⇓	eP	P	14 26 29.2	-0.7
SVE	Sverdlovsk	75.12	335	eP	P	14 26 40.5	+10
ARU	Arti	75.74	334⇓	iP	P	14 26 33.0	-0.9
ARU				e	pP	14 26 43.0	-1.9
ARU				e		14 29 21.9	
ARU				ePPP		14 31 09.3	
ARU				eS	S	14 36 11.2	-2.0
ARU				eSS	SS	14 41 00.9	-4.3
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LSZ	Lusaka	78.10	256	eP	P	14 26 49.0	+1.8
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
LSZ	Lusaka	78.10	256	eP	P	14 26 49.0	+1.8
	comp=Z,9.6nm,0.7s,mb4.8						
ASF	Jabal al Asfar	78.35	305	P	P	14 26 50.4	+1.8
	comp=Z,4.1nm,0.6s,mb4.5,baz=132,slow=5.2,SNR=7.0						
QSPA	South Pole Qui	82.17	180	eP	P	14 27 09.1	-0.1
	comp=Z,9.0nm,1.2s,mb4.6						
BR131	Keskin Array S	83.04	312	eP	P	14 27 13.9	+0.3
	comp=Z,3.0nm,0.7s,mb4.4						
BRTR	Keskin Array B	83.04	312	P	P	14 27 13.8	+0.1
	comp=Z,3.8nm,0.7s,mb4.5,baz=133,slow=7.0,SNR=29						
BRTR	Keskin Array B	83.04	312⇑	eP	P	14 27 13.8	+0.1
VRSR	Storozhevoye	83.04	324	eP	P	14 27 12.8	-0.9
VRSR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
VRSR				pmax	pmax		
	comp=N,5.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,20nm,0.8s						
SUR	Sutherland	83.42	238	P	P	14 27 18.4	+2.8
	comp=E,6.8nm,0.7s,mb4.8,baz=56,slow=6.6,SNR=7.8						
MOS	Moscow	85.55	328	eP	P	14 27 23.8	-2.6
OBN	Obninsk	85.89	327	c iP	P	14 27 27.6	-0.5
OBN				eS	S	14 37 49.2	-10
OBN				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.5						
OBN	Obninsk	85.89	327	eP	P	14 27 27.6	-0.5
	comp=Z,12nm,0.6s,mb5.3						
BILL	Bilibino	85.97	19	P	P	14 27 28.0	-0.5
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb4.0						
KLMR	Klimovskoe	86.51	333	eP	P	14 27 29.9	-1.3
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.9						
TSUM	Tsumeb	87.76	251	eP	P	14 27 39.3	+2.0
	comp=Z,9.1nm,0.8s,mb5.1						
TIRR	Tirgusor	87.99	315⇑	iP	P	14 27 38.6	+0.3
TIRR	Tirgusor	87.99	315	eP	P	14 27 38.1	-0.1
AKASG	Malin Array Be	88.89	321	P	P	14 27 41.3	-1.2
	comp=Z,1.7nm,0.5s,mb4.7,baz=88,slow=4.8,SNR=12						
AKASG	Malin Array Be	88.89	321	i P	P	14 27 41.5	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SNAA	Sanae	89.01	197	P	P	14 27 43.5	+0.4
	comp=Z,2.0nm,0.8s,mb4.5,baz=138,slow=4.2,SNR=17						
VRI	Vrincioaia	89.45	316⇑	iP	P	14 27 46.0	+0.8
BURAR	Bucovina Array	90.81	318⇓	iP	P	14 27 52.2	+0.7
JOF	Joensuu	90.86	334	ep	P	14 27 49.9	-1.9
	comp=Z,7.9nm,0.6s,mb5.2						
JOF	Joensuu	90.86	334	eP	P	14 27 49.9	-1.9
JOF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.2						
VNA1	Neumayer--Stat	91.04	197	eP	P	14 27 53.3	+0.7
VNA1				e		14 27 54.2	
VNA1				e		14 27 56.9	
VNA1				e	pP	14 28 02.0	-1.7
VNA1				e		19 22 37.6	
VNA1				e		19 22 41.4	
FIA1	FINESS Array S	92.91	332	eP	P	14 28 00.8	-0.5
FINES	FINESS Array B	92.91	332	P	P	14 28 00.6	-0.6
	comp=Z,4.3nm,0.8s,mb4.9,baz=110,slow=7.0,SNR=18						
FINES	FINESS Array B	92.91	332	i P	P	14 28 00.6	-0.7
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KAF	Kangasniemi	92.94	332	ep	P	14 28 00.0	-1.4
	comp=Z,2.7nm,0.5s,mb4.9,baz=93,slow=4.2						
KAF	Kangasniemi	92.94	332	eP	P	14 28 00.0	-1.4
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb5.0						
ARCES	ARCESS Array B	94.61	340	P	P	14 28 07.5	-1.5
	comp=Z,1.7nm,0.8s,mb4.5,baz=93,slow=6.1,SNR=9.9						
GERES	GERESS Array B	98.59	318	P	P	14 28 26.8	-0.3
	comp=Z,0.4nm,0.6s,mb4.2,baz=98,slow=2.7,SNR=5.4						
HFS	Hagfors	98.82	330	P	P	14 28 27.2	-1.0
	comp=Z,2.3nm,1.0s,mb4.7,baz=132,slow=6.4,SNR=5.3						
NOA	NORSAR Array B	100.03	331	P	Pdif	14 28 32.4	-1.1
	comp=Z,0.7nm,0.8s,baz=82,slow=6.5,SNR=2.6						
TORD	Torodi Ar. Bea	107.45	281	PKiKP	PKiKP	14 33 14.9	+0.1
	comp=Z,0.4nm,0.5s,baz=67,slow=1.6,SNR=7.8						
YKA	Yellowknife Ar	117.31	21	PKP	PKPdf	14 33 31.5	-2.1
	comp=Z,1.3nm,0.5s,baz=316,slow=0.8,SNR=10.0						
EDM	Edmonton	123.78	28	ePKIKP	PKPdf	14 33 45.5	-0.5
MSO	Missoula	127.24	35	ePKPdf	PKPdf	14 33 52.6	0.0
NVAR	Mina Array Bea	128.48	46	PKP	PKPdf	14 33 56.6	+1.7
	comp=Z,0.7nm,0.7s,baz=249,slow=3.8,SNR=6.6						
DLMT	Dillon	128.84	36	ePKPdf	PKPdf	14 33 57.2	+1.6
PDAR	Pinedale Array	132.12	37	PKP	PKPdf	14 34 02.0	+0.1
	comp=Z,0.7nm,0.6s,baz=122,slow=1.1,SNR=6.8						
PDAR				SKPbc	SKPbc	14 37 24.6	-0.9
	comp=Z,0.9nm,1.0s,baz=242,slow=1.9,SNR=6.1						
ULM	Lac du Bonnet	133.30	21	PKP	PKPdf	14 34 03.8	-0.3
	comp=Z,1.1nm,0.6s,baz=85,slow=9.4,SNR=2.9						
RSSD	Black Hills	134.38	32	ePKIKP	PKPdf	14 34 06.2	+0.1
PV10	Paradox Valley	134.91	42	PKPdf	PKPdf	14 34 09.9	+2.7
CPUP	Villa Florida	143.15	202	PKP	PKPdf	14 34 20.6	-1.6
	comp=Z,1.8nm,0.8s,baz=153,slow=2.7,SNR=5.1						
WMOK	Wichita Mounta	143.69	39	ePKIKP	PKPdf	14 34 20.9	-2.2
NCB	Newcomb	143.94	3	ePKPpre		14 34 20.9	
ACCN	Adirondack Com	144.55	2	ePKP	PKPdf	14 34 21.9	-2.6
ERPA	Erie	145.14	10	ePKP	PKPdf	14 34 24.7	-0.9
BINY	Binghamton	145.59	5	ePKP	PKPdf	14 34 26.2	-0.2
JCT	Junction City	145.65	45	ePKIKP	PKPdf	14 34 27.6	+1.1
QUA2	Belchertown	145.68	0	ePKP	PKPdf	14 34 26.9	+0.4
FVM	French Village	145.70	26	ePKIKP	PKPdf	14 34 26.2	-0.4
ACSO	Alum Creek Sta	146.29	15	ePKP	PKPdf	14 34 27.1	-0.5
BDFB	Brasilia	146.64	226	PKPbc	PKPbc	14 34 31.9	+2.1
	comp=Z,11nm,0.6s,baz=142,slow=3.1,SNR=17						
MIAR	Mount Ida	146.87	34	ePKP2	PKPab	14 34 30.5	-1.3
SSPA	Standing Stone	146.92	8	ePKPdf	PKPdf	14 34 29.7	+1.1
WCI	Wyandotte Cave	147.12	21	ePKP2	PKPbc	14 34 29.2	-2.0
UALR	University of	147.35	32	PKPbc	PKPbc	14 34 31.6	-0.2
MCWV	Mont Chateau	147.55	11	ePKPbc	PKPbc	14 34 32.8	+0.4
MVL	Millersville	147.74	6	ePKPbc	PKPbc	14 34 32.6	-0.2
WVT	Waverly	148.37	25	ePKP2	PKPbc	14 34 34.6	+0.1
OXF	Oxford	149.03	29	ePKP2	PKPbc	14 34 36.2	0.0
PLAL	Pickwick Lake	149.24	26	ePKPbc	PKPbc	14 34 36.2	-0.5
FWV	Forest Hill	149.34	14	ePKPbc	PKPbc	14 34 36.3	-0.7
TZTN	Tazewell	149.56	18	ePKPbc	PKPbc	14 34 37.4	-0.1
ELN	Prospectdale	149.69	14	ePKPbc	PKPbc	14 34 37.5	-0.4
SWET	Sewanee	149.93	23	ePKPbc	PKPbc	14 34 37.9	-0.5
CPCT	Cooper Cave	150.24	21	ePKPbc	PKPbc	14 34 39.5	+0.3
LRAL	Lakeview Retre	151.36	27	ePKPbc	PKPbc	14 34 41.9	0.0

*NIED **13** 14:52:00, 3820N×14480E, h8km, Mw4.1 Best double couple: M₀1.34000×10¹⁵ NP1:φs228.00000°, δ65.00000°, λ-78.00000°. NP2:φs21.00000°, δ27.00000°, λ-114.00000°.*

*IDC **13** 14:52:42.5±0.8, 38.10N×14499E, h0km, mb3.8/10, mb1 4.1/13, mb1mx4.0/24, mbtmp4.0/13, ML4.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/29, Error ellipse: s-maj=23.3km s-min=18.2km az=133.0*

*NEIC **13** 14:52:44.2±0.8, 3824N×14497E, h10km, mb4.3/3, Error ellipse: s-maj=22.2km s-min=10.5km az=153.0*

*MOS **13** 14:52:45.8±1.5, 3826N×14484E, h33km, mb4.5/3, Error ellipse: s-maj=14.8km s-min=11.0km az=119.1*

*ISCJB **13** 14:52:46.2±0.6, 3832N±004×14484E±005, h33km, mb3.9/13, Error ellipse: s-maj=5.8km s-min=4.5km az=92.2*

*JMA **13** 14:52:47.3±0.2, 3820N×14476E, h61km, M4.6*

*BJI **13** 14:52:47.5, 3884N×14485E, h10km, mB4.8, mb4.4*

ISC 13 14:52:48.1±0.6, **3830N**±004×**14485E**±005, **h35**km, **n43**, σ**1.21**/60, **mb3.9**/13, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.61	288	P	Pn	14 53 27.8	+0.1
OFUJ				eS	Sn	14 53 58.0	-0.1
MIYJ	Miyakonagasawa	2.68	299	P	Pn	14 53 29.0	+0.3
MIYJ				S	Sn	14 54 00.1	+0.1
JIO	Ouri	2.75	274	P	Pn	14 53 29.3	-0.4
JIO				S	Sn	14 54 00.9	-0.8
JMK	Ichinoseki	2.92	284	P	Pn	14 53 32.2	+0.3
JMK				S	Sn	14 54 05.9	+0.2
JOT	Ohata	4.25	318	P	Pn	14 53 50.6	+0.4
JOT				eS	Sn	14 54 38.2	-0.4
JCH	Churui	4.46	346	P	Pn	14 53 52.6	-0.5
JCH				S	Sn	14 54 42.0	-1.7
JKB	Kayabe	4.63	322	P	Pn	14 53 56.0	+0.6
JKB				eS	Sn	14 54 47.8	-0.1
NEM2	Nemuro 2	5.11	7	P	Pn	14 53 59.9	-2.1
NEM2				eS	Sn	14 54 55.8	-4.0
JRY	Ryogami san	5.27	246	S	Sn	14 54 58.8	-4.9
JOD2	Odawara 2	5.53	239	P	Pn	14 54 05.6	-2.2
MJAR	Matsushiro Arr	5.57	254	Pn	Pn	14 54 08.3	0.0
	8.6nm,0.3s,baz=79,slow=15,SNR=155						
MJAR				Sn	Sn	14 55 09.7	-1.4
	2.5nm,0.3s,baz=89,slow=26,SNR=5.6						
MAJO	Matsushiro	5.57	254	eP	Pn	14 54 08.7	+0.3
MAJO						14 55 13.2	
MAJO				pmax	pmax		
	comp=Z,37nm,0.4s						
MAJO	Matsushiro	5.57	254	ePn	Pn	14 54 08.7	+0.3
	comp=Z,37nm,0.4s						
MAJO				Sn	Sn	14 55 13.2	+2.0
MAT	Matsushiro	5.57	254	P	Pn	14 54 08.8	+0.4
MAT				eS	Sn	14 55 10.3	-0.8
MAT	Matsushiro	5.57	254	eP	Pn	14 54 09.0	+0.6
MAT				S	Sn	14 55 10.0	-1.1
MAT				pmax	pmax		
	comp=Z,33nm,0.8s						
MAT	Matsushiro	5.57	254	eP	Pn	14 54 09.0	+0.6
	comp=Z,33nm,0.8s						
MAT				S	Sn	14 55 10.0	-1.1
JOSM	Okushiri--Mats	5.59	314	P	Pn	14 54 09.5	+0.9
JTKR	Abashiri--Toko	5.71	353	P	Pn	14 54 10.2	-0.1
JTKR				S	Sn	14 55 12.4	-2.2
JHR	Hokuryu	5.93	338	P	Pn	14 54 15.4	+2.1
JHR				S	Sn	14 55 21.0	+1.0
ASAJ	Asahikawa	6.05	344	Pn	Pn	14 54 15.7	+0.6
	comp=Z,6.9nm,0.3s,baz=205,slow=10,SNR=60						
ASAJ				Sn	Sn	14 55 22.4	-0.7
	comp=Z,4.0nm,0.3s,baz=193,slow=10.0,SNR=3.8						
ASAJ	Asahikawa	6.05	344	P	Pn	14 54 15.7	+0.6
ASAJ						14 55 22.5	
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
JHJ	Hachijo jima 2	6.61	220	Pn	Pn	14 54 18.9	-3.7
	comp=N,20nm,0.3s,baz=67,slow=23,SNR=8.6						
JHJ				Sn	Sn	14 55 26.6	-10
	comp=N,23nm,0.3s,baz=85,slow=20,SNR=3.7						
YSS	Yuzh-Sakhalins	8.79	351	P	Pn	14 54 55.0	+2.5
YSS				e		14 56 27.0	
VLA	Vladivostok	10.95	300	eP	Pn	14 55 23.8	+1.7
VLA				pmax	pmax		
	comp=Z,55nm,1.5s						
MDJ	Mudanjiang	13.06	304	P	Pn	14 55 53.9	+2.9
MDJ				AMB	AMB		
	comp=Z,11nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,64nm,4.5s						
KLR	Kul'dur	14.43	323	eP	Pn	14 56 06.8	-2.9
SONM	Songino Array	29.40	301	P	P	14 58 51.0	+3.0
	comp=Z,0.3nm,0.4s,mb3.4,baz=87,slow=10,SNR=4.6						
SONM				LR	LR	15 11 01.9	
	comp=Z,29nm,19.9s,baz=275,slow=37						
GTA	Gaotai	34.81	286	eP	P	14 59 38.0	+2.6
GTA				AP	pP	14 59 41.9	-3.7
GTA				XP	sP	14 59 44.8	-5.0
GTA				AMB	AMB		
	comp=Z,2.0nm,1.0s,mb4.0						
KDAK	Kodiak Island	44.33	43	P	P	15 00 53.9	-0.8
	comp=Z,5.9nm,0.8s,mb4.4,baz=290,slow=1.8,SNR=6.5						
MKAR	Makanchi Array	45.77	302	P	P	15 01 05.8	-0.2
	comp=Z,0.1nm,0.3s,mb3.2,baz=79,slow=3.1,SNR=2.4						
KURK	Kurchatov	47.31	308	eP	P	15 01 16.3	-1.8
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KURK	Kurchatov	47.31	308	eP	P	15 01 16.3	-1.9
	comp=Z,3.2nm,0.8s,mb4.3						
INK	Inuvik	52.01	28	P	P	15 01 54.5	+0.5
	comp=Z,2.4nm,0.8s,mb4.2,baz=282,slow=6.8,SNR=7.5						
INK	Inuvik	52.01	28	P	P	15 01 54.5	+0.6
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	52.01	28	eP	P	15 01 54.0	+0.1
	comp=Z,1.2nm,0.4s,mb4.2						
ZRNK	Zerenda	52.57	312	P	P	15 01 57.5	-0.6
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ZRNK	Zerenda	52.57	312	P	P	15 01 57.5	-0.6
	comp=Z,2.2nm,0.6s,mb4.3						
ASAR	Alice Springs	62.49	191	P	P	15 03 06.5	-1.4
	comp=Z,0.7nm,0.8s,mb3.8,baz=7.7,slow=5.6,SNR=8.3						
ASAR				PcP	PcP	15 03 46.0	-1.0
	comp=Z,0.3nm,0.5s,baz=6.8,slow=5.1,SNR=4.5						
FINES	FINESS Array B	68.94	333	P	P	15 03 49.8	+0.3
	comp=Z,1.0nm,0.8s,mb3.8,baz=67,slow=11,SNR=5.4						
FINES				PcP	PcP	15 04 15.7	+2.0
	comp=Z,1.0nm,0.5s,baz=58,slow=5.2,SNR=9.8						
NVAR	Mina Array Bea	72.04	55	P	P	15 04 09.2	+0.8
	comp=Z,0.8nm,0.7s,mb3.8,baz=285,slow=8.0,SNR=6.9						
PDAR	Pinedale Array	74.82	47	P	P	15 04 25.4	+0.7
	comp=Z,0.9nm,0.6s,mb3.9,baz=288,slow=2.8,SNR=9.0						
AKASG	Malin Array Be	74.93	324	P	P	15 04 25.9	+0.4
	comp=Z,0.3nm,0.4s,mb3.6,baz=44,slow=6.7,SNR=4.3						
GERES	GERESS Array B	83.03	330	P	P	15 05 10.1	+0.3
	comp=Z,0.3nm,0.5s,mb3.5,baz=46,slow=5.8,SNR=4.4						

*IDC **13** 15:09:50.3±2.1, 2323N×9421E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.4/19, mbtmp3.8/3, Error ellipse: s-maj=98.3km s-min=25.9km az=67.0*

*NEIC **13** 15:10:00.5±0.7, 2326N×9403E, h88km±10km, mb4.2/2, Error ellipse: s-maj=19.1km s-min=6.0km az=46.0*

*ISCJB **13** 15:10:03.2±1.9, 232N±0.1×937E±0.1, h144km±22km, mb3.8/5, Error ellipse: s-maj=28.5km s-min=12.0km az=84.3*

ISC 13 15:10:01.5±1.1, **232N**±01×**939E**±01, **h100**km±14km, **n17**, σ**0.84**/24, **mb3.8**/5, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURI	Tura	3.96	306	eP	Pn	15 11 16.5	+16
TURI				eS	Sn	15 12 10.0	+24
CHTO	Chiang Mai	6.46	132	P	Pn	15 11 31.9	-2.1
JIRN	Jiri	8.22	304	ePn	Pn	15 11 58.6	+0.7
JIRN				eSn	Sn	15 13 28.4	-0.7
	100nm,0.5s						
GUN	Gumba	8.59	305	ePn	Pn	15 12 04.3	+1.4
GUN				eSn	Sn	15 13 37.1	-0.9
	48nm,0.3s						
PKI	Pulchoki	8.78	301	ePn	Pn	15 12 06.6	+1.0
PKI				eSn	Sn	15 13 41.8	-1.0
	30nm,0.4s						
KKN	Kakani	8.99	302	ePn	Pn	15 12 09.4	+1.1
KKN				eSn	Sn	15 13 48.0	+0.3
	26nm,0.2s						
DMN	Daman	9.04	301	ePn	Pn	15 12 09.9	+0.9
DMN				eSn	Sn	15 13 49.1	+0.1
	29nm,0.5s						
GKN	Gorkha	9.59	302	ePn	Pn	15 12 17.3	+0.8
GKN				eSn	Sn	15 14 00.9	-1.5
	50nm,0.3s						
KOLN	Koldanda	10.31	298	ePn	Pn	15 12 26.5	+0.1
KOLN				eSn	Sn	15 14 19.3	-0.7
	14nm,0.3s						
MKAR	Makanchi Array	25.30	341	P	P	15 15 19.4	+0.7
	2.5nm,0.5s,mb3.9,baz=140,slow=9.6,SNR=16						
SONM	Songino Array	26.52	19	P	P	15 15 28.8	-0.8
	0.4nm,0.8s,mb3.0,baz=203,slow=11,SNR=2.3						
KURK	Kurchatov	29.90	340	eP	P	15 15 59.6	-0.1
	1.6nm,0.8s,mb3.7						
WRAB	Tennant Creek	58.31	134	eP	P	15 19 45.9	+0.1
WB2	Warramunga Arr	58.31	134	eP	P	15 19 45.6	-0.3
ASPA	Alice Springs	60.71	137	eP	P	15 20 02.7	+0.3
AS31	Alice Springs	60.71	137	eP	P	15 20 02.7	+0.3
	2.5nm,0.4s,mb4.6						
ASAR	Alice Springs	60.71	137	P	P	15 20 02.4	0.0
	0.8nm,0.5s,mb4.0,baz=319,slow=6.7,SNR=41						

*ISCJB **13** 15:11:16.5±0.6, 3077S±003×6890W±009, h103km±8km, mb4.2/3, Error ellipse: s-maj=12.9km s-min=4.1km az=176.1*

*NEIC **13** 15:11:17.4±0.5, 3077S×6891W, h99km±5km, mb4.3/2, Error ellipse: s-maj=10.5km s-min=5.0km az=92.0*

*GUC **13** 15:11:17.6±0.7, 3079S×6928W, h145km±13km, ML4.3*

*IDC **13** 15:11:18.9±1.0, 3096S×6891W, h111km±6km, mb3.8/1, mb1 3.7/2, mb1mx3.3/14, mbtmp4.0/2, MS4.8/1, Ms1 4.8/1, ms1mx3.1/20, Error ellipse: s-maj=46.6km s-min=34.1km az=135.0*

ISC 13 15:11:17.6±0.5, **3076S**±003×**6890W**±008, **h97**km±8km, **n39**, σ**0.98**/50, **mb4.2**/3, **8C-2D**, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.75	289⇑	iP	Pn	15 11 47.5	+0.8
TLL				i S	Sn	15 12 09.8	+0.8
TLL				AML	AML	15 12 14.9	
	comp=N,3μm,0.9s						
TLL	Tololo Astrono	1.75	289⇑	iP	Pn	15 11 47.5	+0.8
TLL				i S	Sn	15 12 09.8	+0.8
MDZ	Mendoza	2.12	179	eP	Pn	15 11 53.6	+2.1
MDZ				e		15 12 05.8	
MDZ				S	Sn	15 12 20.7	+3.2
MDZ				e		15 12 31.7	
LCO	Las Campanas	2.34	318⇑	iP	Pn	15 11 55.1	+0.7
LCO				i S	Sn	15 12 23.7	+0.9
JACH	Jahuel	2.40	217	eP	Pn	15 11 55.4	+0.2
JACH				i S	Sn	15 12 24.0	-0.1
CHNG	Los Chungos	2.49	243	eP	Pn	15 11 55.1	-1.3
CHNG				i S	Sn	15 12 23.2	-3.1
VACH	Vallenar	2.71	323⇑	iP	Pn	15 11 59.8	+0.4
VACH				i S	Sn	15 12 31.1	-0.4
VACH				AML	AML	15 12 32.7	
	comp=E,2μm,0.3s						
VACH	Vallenar	2.71	323⇑	iP	Pn	15 11 59.8	+0.4
VACH				i S	Sn	15 12 31.1	-0.4
FCH	Farellones	2.82	204	eP	Pn	15 12 02.1	+1.3
FCH				i S	Sn	15 12 35.2	+1.1
FCH				AML	AML	15 12 41.0	
	comp=E,660nm,0.5s						
FCH	Farellones	2.82	204	eP	Pn	15 12 02.1	+1.3
FCH				i S	Sn	15 12 36.5	+2.4
FCH	Farellones	2.82	204	eP	Pn	15 12 02.1	+1.3
FCH				i S	Sn	15 12 36.5	+2.4
PEL	Peldehue	2.82	212	eP	Pn	15 12 00.6	-0.2
PEL				i S	Sn	15 12 33.5	-0.6
PEL				AML	AML	15 12 39.0	
	comp=E,962nm,0.3s						
PEL	Peldehue	2.82	212	eP	Pn	15 12 00.5	-0.3
PEL	Peldehue	2.82	212	eP	Pn	15 12 00.6	-0.2
PEL				i S	Sn	15 12 33.5	-0.6
ROCH	El Roble	2.84	219⇑	iP	Pn	15 12 00.7	-0.5
CLCH	Cerro Calan	2.97	207⇓	iP	Pn	15 12 03.2	+0.4
CLCH				i S	Sn	15 12 37.6	-0.2
CLCH				AML	AML	15 12 49.0	
	comp=E,1μm,0.6s						
PCH	Pirque	3.16	205⇑	iP	Pn	15 12 05.5	0.0
TACH	Talagante	3.36	210⇑	iP	Pn	15 12 06.5	-1.6
CHCH	Chadas Angostu	3.49	205	i P	Pn	15 12 09.6	-0.3
CHCH				i S	Sn	15 12 50.1	-0.1
CPCH	Copiapo	3.62	339	eP	Pn	15 12 12.1	+0.5
CPCH				i S	Sn	15 12 52.8	-0.5
CACH	El Canelo	3.64	203⇓	eP	Pn	15 12 11.8	0.0
CACH				i S	Sn	15 12 54.1	+0.3
CDCH	Caldera	4.04	335	eP	Pn	15 12 17.0	-0.3
CDCH				i S	Sn	15 12 59.0	-4.6
SFDO	San Fernando	4.24	204	eP	Pn	15 12 17.5	-2.4
LVC	Limon Verde	8.12	360	ePn	Pn	15 13 11.4	-1.2
	comp=E,9.6nm,0.4s						
PLCA	Paso Flores	10.04	187	P	Pn	15 13 37.6	-1.2
	comp=E,0.2nm,0.3s,baz=1.5,slow=15,SNR=3.1						
CPUP	Villa Florida	11.09	69	P	Pn	15 13 51.2	-1.8
	comp=E,0.4nm,0.3s,baz=232,slow=13,SNR=4.4						
CPUP	Villa Florida	11.09	69	eP	Pn	15 13 53.0	0.0
SAML	Samuel	22.35	15	eP	P	15 16 07.0	-0.4
	comp=E,6.2nm,1.0s,mb3.9						
CMIG	Matias Romero	53.74	329	LR	LR	15 37 01.2	
	comp=E,785nm,19.6s,baz=330,slow=29						
MSU	Marysvale	79.86	327	eP	P	15 23 16.3	+0.9
RWWY	Rawlins	80.29	332	eP	P	15 23 18.1	+0.4
	comp=E,18nm,1.2s,mb4.8						
TORD	Torodi Ar. Bea	80.58	69	P	P	15 23 19.9	+0.6
	comp=E,1.8nm,0.8s,mb4.0,baz=245,slow=5.1,SNR=8.4						
TORD				pP	pP	15 23 48.3	+3.8
	comp=E,1.1nm,0.7s,baz=254,slow=5.6,SNR=4.4						
RSSD	Black Hills	81.14	335	eP	P	15 23 22.3	+0.1
YAK	Yakutsk	146.46	344	ePKPbc	PKPbc	15 30 46.1	-1.3
ZAL	Zalesovo	150.08	32	PKPbc	PKPbc	15 30 56.4	-0.4
	comp=E,3.4nm,0.6s,baz=166,slow=1.6,SNR=15						
ZAL				pPKPbc	pPKPbc	15 31 27.2	+3.7
	comp=E,1.5nm,0.8s,baz=176,slow=3.3,SNR=3.4						
ASAJ	Asahikawa	151.85	307	PKPbc	PKPbc	15 31 00.8	-0.2
	comp=E,1.5nm,0.8s,baz=149,slow=12,SNR=4.2						
MKAR	Makanchi Array	152.62	46	PKPbc	PKPbc	15 31 02.0	-0.7
	comp=E,1.8nm,0.7s,baz=336,slow=3.2,SNR=9.8						
MKAR				PKPab	PKPab	15 31 13.5	-0.1
	comp=E,1.5nm,0.7s,baz=306,slow=4.2,SNR=7.0						
MKAR				pPKPbc	pPKPbc	15 31 31.6	+2.1
	comp=E,1.5nm,0.8s,baz=318,slow=3.3,SNR=3.6						
MKAR	Makanchi Array	152.62	46	PKPbc	PKPbc	15 31 02.0	-0.7
MKAR				PKPab	PKPab	15 31 13.5	-0.1
MKAR				pPKPbc	pPKPbc	15 31 31.6	+2.2
MJAR	Matsushiro Arr	156.75	292	PKPab	PKPab	15 31 30.6	-0.6
	comp=E,0.5nm,0.9s,baz=100,slow=2.8,SNR=4.4						

*CSEM **13** 15:14:21.4, 1830N×10366W, h10km, mb5.6*

*IDC **13** 15:14:22.8±1.6, 1857N×10345W, h4km±9km, mb4.8/27, mb1 4.8/30, mb1mx4.8/31, mbtmp4.8/30, ML4.5/3, MS4.9/25, Ms1 4.8/25, ms1mx4.7/31, Error ellipse: s-maj=14.1km s-min=7.4km az=38.0*

*BJI **13** 15:14:23.8, 1844N×10365W, h22km, mB5.5, mb5.4, Ms5.3, Msz4.9*

*SZGRF **13** 15:14:23.0, 1842N×10425W, h25km, mb5.3, MS4.8, Near coast of Jalisco, Mexico*

*ISCJB **13** 15:14:23.5±0.2, 1836N±003×10351W±002, h22km, mb5.2/173, MS4.9/49, Error ellipse: s-maj=4.0km s-min=1.6km az=54.5*

*HRVD **13** 15:14:25.1±0.2, 1845N×10363W, h24km, MW5.3/80, Centroid moment Tensor Solution. LP body waves: s74,c107;Mantle waves: s80,c146; Half duration: 1.1 Moment tensor: Scale 10¹⁷Nm; Mrr0.83±.02; Mθθ-0.28±.01; Mφφ-0.55±.02; Mrθ-0.38±.02; Mθφ-0.36±.01; Mφr-0.67±.03; Best double couple: M₀1.12200×10¹⁷ NP1:φs38.00000°, δ23.00000°, λ96.00000°. NP2: φs211.00000°, δ67.00000°, λ87.00000°. Principal axes: T 1.1400, Plg68.0000°, Azm116.0000°; N -0.0370, Plg2.0000°, Azm212.0000°; P -1.1030, Plg22.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 15:14:25.1±0.3, 1846N×10348W, mb5.3/137, MS4.9/9, MD5.1(MEX) Error ellipse: s-maj=6.3km s-min=3.5km az=37.0*

NEIC Felt at Colima, Patzcuaro, Tecoman and Zihuatanejo.

*MEX **13** 15:14:26.4±0.7, 1827N×10361W, h22km±7km, MD5.1*

*MOS **13** 15:14:26.0±1.0, 1858N×10337W, h33km, mb5.5/61, MS4.9/20, Error ellipse: s-maj=7.7km s-min=4.3km az=80.1*

ISC 13 15:14:25.0±0.2, **1828N**±002×**10353W**±002, **h24**km, **h24**km±.4km**:pP-P**, **n669**, σ**1.09**/803, **mb5.3**/172, **MS4.9**/49, **218C-148D**, **Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.17	88⇓	iP	Pb	15 14 31.3	+1.1
MMIG				i S	Sb	15 14 35.8	+2.2
CJM	Chamela	1.88	310	i P	Pn	15 14 53.6	-2.0
CJM				i S	Sn	15 15 14.9	-3.6
ZIIG	Zihuatanejo	2.08	109⇑	eP	Pn	15 14 58.3	-0.1
ZIIG				eS	Sn	15 15 22.1	-1.4
SFJM	Santa Fe	2.24	12	i P	Pn	15 15 00.5	-0.1
MOIG	Morelia	2.61	58⇑	eP	Pn	15 15 06.9	+1.2
MOIG				eS	Sn	15 15 36.4	-0.3
MRX	Morelia	2.62	57	eP	Pn	15 15 06.5	+0.6
CAIG	El Cayaco	3.34	111	i P	Pn	15 15 16.4	+0.6
CAIG				eS	Sn	15 15 55.3	+0.6

CAIG **El Cayaco** 3.34 111 *i* P **Pn** 15 15 16.4 +0.6
CAIG *eS* **Sn** 15 15 57.3 +2.6
ACX Acapulco 3.72 112 *i* P **Pn** 15 15 22.5 +1.5
ACX *eP* 15 15 23.4
ACX *i* S **Sn** 15 16 04.0 -0.1
MEIG Mezcala 3.73 95 *i* P **Pn** 15 15 22.4 +1.2
MEIG *i* S **Sn** 15 16 04.4 +0.1
PLIG Platanillo 3.83 88 *i* P **Pn** 15 15 24.2 +1.8
PLIG *i* S **Sn** 15 16 07.1 +0.5
IIZ Mezontepec 4.16 77 *i* P **Pn** 15 15 29.4 +2.4
IIZ *i* S **Sn** 15 16 17.4 +2.6
UNM Universidad Na 4.25 75 *eP* **Pn** 15 15 30.0 +1.8
UNM *eP* 15 15 30.2
UNM *eP* 15 15 34.9
UNM *i* S **Sn** 15 16 16.8 -0.3
UNM *i* S **Sn** 15 16 21.7 +4.6
UNM *i* S **Sn** 15 16 22.1 +5.1
UNM Universidad Na 4.25 75 *eP* **Pn** 15 15 34.9 +6.7
UNM *i* S **Sn** 15 16 16.8 -0.3
UNM Universidad Na 4.25 75 *eP* **Pn** 15 15 34.9 +6.7
UNM *i* S **Sn** 15 16 16.8 -0.3
UNM *i* S **Sn** 15 16 21.7 +4.6
UNM *i* S **Sn** 15 16 22.1 +5.1
YAIG Yautepec 4.27 82 *eP* **Pn** 15 15 29.3 +0.8
YAIG *i* S **Sn** 15 16 17.6 +0.1
PTVM Pico Tres Padr 4.38 72 *eP* **Pn** 15 15 34.0 +4.0
CIVM Cilcuayo 4.38 79 *eP* **Pn** 15 15 32.6 +2.6
ZAIG Zacatecas 4.55 11⇓ *eP* **Pn** 15 15 41.5 +9.1
ZAIG *eS* **Sn** 15 16 25.2 +0.6
RFVM Rio Frio 4.63 76 *eP* **Pn** 15 15 37.6 +4.1
PPM Popocatepetl 4.71 80 *eP* **Pn** 15 15 37.0 +2.4
PPM *i* P 15 15 37.1
PPM *i* P 15 15 38.9
PPM *i* S **Sn** 15 16 30.9 +2.4
PPM Popocatepetl 4.71 80 *eP* **Pn** 15 15 37.5 +2.9
PPM *i* S **Sn** 15 16 30.9 +2.4
UTMO Huajupan 5.46 94 *eP* **Pn** 15 15 47.0 +2.1
UTMO *i* S **Sn** 15 16 49.0 +1.9
TPIG Tehuac#an 5.86 88 *eP* **Pn** 15 15 52.5 +2.2
TPIG *i* S **Sn** 15 16 53.5 -3.2
VHO Vista Hermosa 6.59 99 *eP* **Pn** 15 16 02.0 +1.6
VHO *i* S **Sn** 15 17 14.3 -0.4
OXX Oaxaca 6.59 99 *i* P **Pn** 15 16 03.0 +2.5
OXX *i* S **Sn** 15 17 20.0 +5.1
LVIG Laguna Verde 6.88 77 *eP* **Pn** 15 16 05.8 +1.5
LVIG *i* S **Sn** 15 17 23.9 +2.1
HUIG Huatulco 7.53 108 *i* P **Pn** 15 16 16.4 +3.2
HUIG *i* S **Sn** 15 17 38.5 +0.7
LNIG Linares 7.59 29 *eP* **Pn** 15 16 14.4 +0.3
LNIG *i* S **Sn** 15 17 40.9 +1.6
CMIG Matias Romero 8.32 97 Pn **Pn** 15 16 25.7 +1.5
9.1nm,0.3s,baz=278,slow=12,SNR=63
CMIG Sn **Sn** 15 17 60.0 +2.5
8.4nm,0.3s,baz=341,slow=18,SNR=4.0
CMIG LR LR 15 19 56.8
comp=Z,21µm,18.3s,baz=276,slow=40
LPIG La Paz 8.57 314 Pn **Pn** 15 16 27.0 -0.6
5.2nm,0.3s,baz=326,slow=4.4,SNR=17
LPIG Sn **Sn** 15 18 03.3 -0.3
4.7nm,0.3s,baz=33,slow=3.8,SNR=2.3
LPIG LR LR 15 19 19.0
comp=Z,15µm,18.9s,baz=140,slow=35
LPIG La Paz 8.57 314 *eP* **Pn** 15 16 30.3 +2.6
LPIG La Paz 8.57 314 Pn **Pn** 15 16 27.0 -0.6
LPIG *eP* 15 16 30.3
LPIG Sn **Sn** 15 18 03.3 -0.3
LPIG LR LR 15 19 18.9
TUIG Tuzandepetl 8.66 90 *eP* **Pn** 15 16 32.6 +3.8
JCT Junction City 12.61 15 P **Pn** 15 17 22.7 -0.1
JCT pmax pmax
comp=Z,218nm,1.4s
JCT Junction City 12.61 15 Pn **Pn** 15 17 22.7 -0.1
comp=Z,218nm,1.4s
MNTX Cornudas Mount 13.46 353 *eP* **Pn** 15 17 36.4 +1.9
comp=Z,210nm,1.9s
HKT Hockley 13.57 30 *eP* **Pn** 15 17 35.6 -0.3
HKT pmax pmax
comp=Z,269nm,1.8s
HKT Hockley 13.57 30 *eP* **Pn** 15 17 35.6 -0.3
comp=Z,269nm,1.8s
TUC Tucson 15.42 336 *eP* **Pn** 15 18 01.8 +0.8
TUC pmax pmax
comp=Z,40nm,1.1s
TUC Tucson 15.42 336 *eP* **Pn** 15 18 01.8 +0.8
comp=Z,40nm,1.1s
NATX Nacogdoches 15.63 29 P **Pn** 15 18 03.6 0.0
comp=Z,519nm,1.2s
116A Eloy 16.01 334 ⇑P **Pn** 15 18 09.1 +0.5
baz=16,SNR=12
116A ⇓S **Sn** 15 21 08.0 +2.6
baz=16
Y22C IRIS PASSCAL I 16.02 350 ⇓P **Pn** 15 18 08.8 +0.1
baz=16
115A Sonoran Desert 16.35 333 ⇑P **Pn** 15 18 12.6 -0.4
baz=16,SNR=9.0
AMTX Amarillo 16.61 5 Pn **Pn** 15 18 13.9 -2.4
comp=Z,94nm,1.3s
ANMO Albuquerque 16.80 352 Pn **Pn** 15 18 18.1 -0.6
comp=Z,0.1nm,0.3s,baz=168,slow=14,SNR=12
ANMO Sn **Sn** 15 21 22.2 -2.4
comp=Z,0.1nm,0.3s,baz=235,slow=15,SNR=2.1
ANMO LR LR 15 25 35.4
comp=Z,7µm,18.6s,baz=312,slow=41
ANMO Albuquerque 16.80 352 *eP* **Pn** 15 18 19.8 +1.0
comp=Z,31nm,1.0s
WMOK Wichita Mounta 16.93 14 *eP* **Pn** 15 18 18.5 -1.7
WMOK pmax pmax
comp=Z,71nm,1.2s
WMOK Wichita Mounta 16.93 14 *eP* **Pn** 15 18 18.5 -1.7
comp=Z,71nm,1.2s
Z14A Wintersburg 17.23 332 ⇑P **Pn** 15 18 24.7 +0.7
baz=17,SNR=6.4
Z14A ⇑S **Sn** 15 21 37.5 +2.6
baz=17
Y14A Wickenburg 17.75 333 ⇓P **Pn** 15 18 31.0 +0.6
baz=18,SNR=9.2
Y14A ⇓S **Sn** 15 21 51.2 +3.7
baz=18
GLA Glamis 17.87 328 ⇓P **Pn** 15 18 32.6 +0.7
baz=18,SNR=11
GLA ⇑S **Sn** 15 21 55.5 +5.1
baz=18
X15A Humboldt 17.91 336 ⇓P **Pn** 15 18 33.1 +0.7
baz=18,SNR=8.6
X15A ⇑S **Sn** 15 21 54.7 +3.3
baz=18
Y13A Salome 18.00 331 ⇓P **Pn** 15 18 34.1 +0.5
baz=18
Y13A ⇑S **Sn** 15 21 59.2 +5.5
baz=18
X14A Yava 18.15 334 P **Pn** 15 18 36.5 +1.1
baz=18,SNR=8.1
X14A ⇓S **Sn** 15 22 01.4 +4.0
baz=18
DVTC Desert V Tower 18.24 324 ⇑P **Pn** 15 18 37.2 +0.6
baz=18,SNR=12
Y12C Blythe 18.28 330 ⇓P **Pn** 15 18 37.4 +0.4
baz=18
Y12C ⇓S **Sn** 15 22 04.1 +3.7
baz=18
SWSC Sam W. Stewart 18.29 325 ⇓P **Pn** 15 18 38.0 +0.9
baz=18,SNR=9.3
SWSC ⇓S **Sn** 15 22 05.2 +4.5
baz=18
MIAR Mount Ida 18.47 27 *eP* **Pn** 15 18 36.8 -2.5
MIAR pmax pmax
comp=Z,145nm,1.4s
MIAR Mount Ida 18.47 27 *eP* **Pn** 15 18 36.8 -2.5
comp=Z,145nm,1.4s
WUAZ Wupatki 18.52 339 *eP* **Pn** 15 18 40.2 +0.2
comp=Z,229nm,1.5s
W15A Williams 18.53 337 ⇓P **Pn** 15 18 40.5 +0.4
baz=18
W15A ⇓S **Sn** 15 22 09.2 +2.7
baz=18
PDMCI Parker Dam,Lak 18.55 331 ⇑P **Pn** 15 18 39.8 -0.5
baz=18
PDMCI ⇓S **Sn** 15 22 08.4 +1.5
baz=18
MONP Monument Peak 18.59 324 ⇑P **Pn** 15 18 41.8 +1.0
baz=18,SNR=21
MONP ⇑S **Sn** 15 22 13.2 +5.2
baz=18
X13A Yucca 18.66 333 ⇓P **Pn** 15 18 41.4 -0.2
baz=19,SNR=16
X13A ⇑S **Sn** 15 22 12.3 +2.7
baz=19
W14A Seligman 18.88 335 ⇓P **Pn** 15 18 44.4 +0.1
baz=19,SNR=12
W14A ⇑S **Sn** 15 22 15.9 +1.1
baz=19
IRM Iron Mountain 18.91 329 ⇑P **Pn** 15 18 44.4 -0.3
baz=19,SNR=42
IRM ⇑S **Sn** 15 22 18.1 +2.4
baz=19
109C Camp Elliot, M 18.98 323 ⇓P **Pn** 15 18 44.4 -1.1
baz=19,SNR=6.3
109C ⇑S **Sn** 15 22 20.3 +2.9
baz=19
W13A Hualapai Mount 19.11 333 ⇓P **Pn** 15 18 46.7 -0.4
baz=19,SNR=14
W13A ⇑S **Sn** 15 22 22.5 +2.0
baz=19
PFO Pinyon Flat Ob 19.16 325 *eP* **Pn** 15 18 47.5 -0.1
PFO pmax pmax
comp=Z,112nm,1.4s
PFO Pinyon Flat Ob 19.16 325 *eP* **Pn** 15 18 47.5 -0.1
comp=Z,112nm,1.4s
PFO Pinyon Flat Ob 19.16 325 ⇑P **Pn** 15 18 48.1 +0.5
baz=19,SNR=14
PFO ⇑S **Sn** 15 22 25.3 +3.8
baz=19
NEE2 Needles Airpor 19.16 331 ⇓P **Pn** 15 18 46.6 -1.1
baz=19
NEE2 ⇑S **Sn** 15 22 23.1 +1.5
baz=19
UALR University of 19.21 29 *eP* **Pn** 15 18 44.8 -3.4
comp=Z,23nm,0.5s
BELC Belle Mtn. 19.21 327 ⇑P **Pn** 15 18 47.6 -0.7
baz=19,SNR=22
BELC ⇑S **Sn** 15 22 27.6 +4.6
baz=19
MVCO Mesa Verde 19.36 348 *eP* **Pn** 15 18 48.5 -1.5
MURC Murrieta 19.56 324 ⇑P **Pn** 15 18 52.1 -0.3
baz=20,SNR=17
MURC ⇑S **Sn** 15 22 30.9 -0.3
baz=20
JTS JuntasAbangare 19.66 111 P **Pn** 15 18 54.1 +0.4
comp=Z,0.8nm,0.3s,baz=301,slow=8.6,SNR=18
JTS S **Sn** 15 22 39.0 +5.2
comp=Z,0.4nm,0.3s,baz=356,slow=6.2,SNR=2.2
JTS LR LR 15 25 32.3
comp=Z,2µm,18.7s,baz=320,slow=34
W12A Cal Nev Ari 19.71 332 ⇑P **Pn** 15 18 52.3 -2.0
baz=20,SNR=6.2
W12A ⇓S **Sn** 15 22 34.6 -0.5
baz=20
BBRC Big Bear Sol-O 19.90 326 ⇑P **Pn** 15 18 56.2 -0.3
baz=20
SCI San Clemente I 19.90 320 ⇓P **Pn** 15 18 54.4 -2.1
baz=20
HEC Hector,Ludlow 20.04 328 ⇓P **P** 15 18 57.1 +0.9
baz=20,SNR=13
HEC ⇑S **S** 15 22 43.7 +3.4
baz=20
V12A Nelson 20.06 332 ⇑P **P** 15 18 56.9 +0.4
baz=20,SNR=21
V12A ⇑S **S** 15 22 42.5 +1.7
baz=20
CIS Catalina Islan 20.11 321 P **P** 15 18 58.0 +0.9
baz=20,SNR=5.7
CIS ⇓S **S** 15 22 45.0 +3.1
baz=20
FMP Fort Macarthur 20.26 322 ⇑P **P** 15 18 59.0 +0.3
baz=20
FMP ⇓S **S** 15 22 44.1 -0.7
baz=20
PV01 Paradox Valley 20.26 348 *eP* **P** 15 18 58.8 +0.1
BFSC Mount Baldy St 20.29 324 ⇓P **P** 15 18 59.7 +0.7
baz=20,SNR=24
BFSC ⇑S **S** 15 22 46.0 +0.7
baz=20
TUQ Turquoise Mtn. 20.32 330 ⇑P **P** 15 19 00.0 +0.7
baz=20,SNR=33
TUQ ⇓S **S** 15 22 44.8 -1.1
baz=20
RRX Edison Barstow 20.42 327 ⇑P **P** 15 19 00.9 +0.5
baz=20
RRX ⇓S **S** 15 22 46.6 -1.3
baz=20
OXF Oxford 20.48 35 *eP* **P** 15 18 58.7 -2.4
OXF pmax pmax
comp=Z,132nm,1.1s
OXF Oxford 20.48 35 *eP* **P** 15 18 58.7 -2.4
comp=Z,132nm,1.1s
U12A Valley of Fire 20.52 334 ⇑P **P** 15 19 01.8 +0.3
baz=20,SNR=9.6
U12A ⇑S **S** 15 22 48.0 -2.0
baz=20
PV10 Paradox Valley 20.59 348 *eP* **P** 15 19 00.8 -1.4
HBAR Harrisburg 20.64 31 P **P** 15 19 01.5 -1.4
GSC Goldstone 20.65 328 ⇑P **P** 15 19 03.5 +0.7
baz=21,SNR=27
GSC ⇓S **S** 15 22 52.7 +0.2
baz=21
DECC Green Verdugo 20.67 323 ⇓P **P** 15 19 04.4 +1.3
baz=21,SNR=8.0
DECC ⇑S **S** 15 22 55.1 +2.1
baz=21
SNCC San Nicolas Is 20.68 319 ⇓P **P** 15 19 03.8 +0.5
baz=21
SNCC ⇓S **S** 15 22 54.2 +1.0
baz=21
SHOC Shoshone 20.86 330 ⇓P **P** 15 19 05.9 +0.7
baz=21,SNR=16
SHOC ⇓S **S** 15 22 57.3 +0.5
baz=21
LRAL Lakeview Retre 20.88 42 *eP* **P** 15 19 03.3 -2.1
comp=Z,39nm,0.7s
U11A Corn Creek 20.88 332 ⇑P **P** 15 19 05.6 +0.2
baz=21
EDW2 Edwards Air Fo 20.95 325 ⇓P **P** 15 19 06.4 +0.3
baz=21,SNR=18
EDW2 ⇓S **S** 15 22 59.1 +0.7
baz=21
BLG Laguna Peak 21.00 322 ⇑P **P** 15 19 07.6 +1.0
baz=21
BLG ⇑S **S** 15 23 02.8 +3.4
baz=21
SMCO Snowmass 21.03 353 *eP* **P** 15 19 04.8 -2.3
comp=Z,61nm,1.3s,mb4.8
CCUT Cedar City 21.04 338 *eP* **P** 15 19 07.9 +0.7
OSI Osito Adit 21.16 323 ⇑P **P** 15 19 09.0 +0.6
baz=21
OSI ⇑S **S** 15 23 03.9 +1.3
baz=21
LRMC Laurel Mountai 21.24 327 P **P** 15 19 10.1 +0.9
baz=21,SNR=31
LRMC ⇓S **S** 15 23 06.3 +2.2
baz=21
BSC Santa Cruz Isl 21.26 321 ⇓P **P** 15 19 10.0 +0.5
baz=21
ARUT Antelope Range 21.28 338 *eP* **P** 15 19 10.4 +0.7
U10A Ash Meadows, A 21.31 331 ⇓P **P** 15 19 10.1 +0.1
baz=21,SNR=11
U10A ⇓S **S** 15 23 07.4 +1.9
baz=21
ISCO Idaho Springs 21.52 356 *eP* **P** 15 19 10.8 -1.5
ISCO pmax pmax
comp=Z,19nm,1.0s,mb4.5
ISCO Idaho Springs 21.52 356 *eP* **P** 15 19 10.8 -1.5
comp=Z,18nm,1.0s,mb4.5
MSU Marysvale 21.52 341 *eP* **P** 15 19 12.4 +0.1
PLAL Pickwick Lake 21.57 37 *eP* **P** 15 19 10.6 -2.2
comp=Z,57nm,0.8s,mb5.0
HALT Halls 21.58 33 P **P** 15 19 11.0 -2.0
MPMC Manual Prospec 21.59 328 ⇑P **P** 15 19 13.4 +0.4
baz=22,SNR=73
MPMC ⇓S **S** 15 23 12.9 +2.0
baz=22
ARVC Arvin 21.59 324 ⇓P **P** 15 19 13.6 +0.5
baz=22,SNR=11
ARVC ⇑S **S** 15 23 13.2 +2.2
baz=22
FURC Furnace Creek, 21.60 330 ⇑P **P** 15 19 12.9 -0.3
baz=22
FURC ⇑S **S** 15 23 13.0 +1.7
baz=22
SBC Santa Barbara 21.61 321 ⇓P **P** 15 19 14.1 +0.8
baz=22
SBC ⇓S **S** 15 23 16.0 +4.5
baz=22
SRU San Rafael 21.62 345 *eP* **P** 15 19 11.5 -1.9
SRU pmax pmax
comp=Z,35nm,1.3s,mb4.6
SRU San Rafael 21.62 345 *eP* **P** 15 19 11.4 -2.0
comp=Z,35nm,1.3s,mb4.6
ISA Isabella 21.79 326 *eP* **P** 15 19 15.9 +0.7
ISA pmax pmax
comp=Z,71nm,0.9s,mb5.1
ISA Isabella 21.79 326 *eP* **P** 15 19 15.8 +0.6
comp=Z,71nm,0.9s,mb5.1
ISA Isabella 21.79 326 ⇓P **P** 15 19 15.9 +0.7
baz=22,SNR=34
ISA ⇑S **S** 15 23 17.1 +2.1
baz=22
DAC Darwin (Calif) 21.81 328 *eP* **P** 15 19 15.8 +0.4
DAC pmax pmax
comp=Z,27nm,1.1s,mb4.6
DAC Darwin (Calif) 21.81 328 *eP* **P** 15 19 15.8 +0.4
comp=Z,27nm,1.1s,mb4.6
TMUT Trail Mountain 21.97 344 *eP* **P** 15 19 12.5 -4.7
PKM Peak Mountain 21.99 322 ⇓P **P** 15 19 18.0 +0.6
baz=22,SNR=5.7
PKM ⇓S **S** 15 23 18.1 -0.8
baz=22
SDP Sudden Peak, L 22.17 320 ⇑P **P** 15 19 19.3 0.0
baz=22,SNR=9.2
SDP ⇓S **S** 15 23 22.0 -0.4
baz=22
CWC Cottonwood Cre 22.18 328 ⇑P **P** 15 19 19.3 -0.1
baz=22,SNR=15
CWC ⇓S **S** 15 23 22.3 -0.3
baz=22
VES Vestal, Richgr 22.25 325 ⇑P **P** 15 19 20.7 +0.5
baz=22,SNR=24
GRAC Grapevine Rang 22.27 330 ⇑P **P** 15 19 20.4 +0.1
baz=22,SNR=26
GRAC ⇓S **S** 15 23 26.0 +1.8
baz=22
SMMC Simmler 22.39 322 ⇓P **P** 15 19 21.8 +0.2
baz=22,SNR=9.7
SMMC ⇑S **S** 15 23 31.4 +4.8
baz=22
MGV Manicaragua 22.42 76 *eP* **P** 15 19 25.4 +3.5
CCM Cathedral Cave 22.44 26 *eP* **P** 15 19 18.3 -3.8
CCM pmax pmax
comp=Z,45nm,1.9s,mb4.6
CCM Cathedral Cave 22.44 26 *eP* **P** 15 19 18.3 -3.8
comp=Z,45nm,1.9s,mb4.6
WVT Waverly 22.55 35 *eP* **P** 15 19 20.1 -3.2
WVT pmax pmax
comp=Z,74nm,1.3s,mb5.0
WVT Waverly 22.55 35 *eP* **P** 15 19 20.1 -3.1
comp=Z,74nm,1.3s,mb5.0
RCTC Rector, Farmer 22.69 325 ⇓P **P** 15 19 24.9 +0.1
baz=23
RCTC ⇑S **S** 15 23 33.1 +1.1
baz=23
FVM French Village 22.73 28 *eP* **P** 15 19 21.8 -3.4
FVM pmax pmax
comp=Z,20nm,0.6s,mb4.7
FVM French Village 22.73 28 *eP* **P** 15 19 21.8 -3.4
comp=Z,20nm,0.6s,mb4.7
V05C Boulder Hill, 22.73 324 ⇓P **P** 15 19 25.4 +0.2
baz=23
V05C ⇓S **S** 15 23 36.1 +3.3
baz=23
TIN Tinemaha 22.73 328 ⇑P **P** 15 19 25.4 +0.2
baz=23,SNR=5.6
PTRM Twissleman Ran 22.75 323 *eP* **P** 15 19 26.2 +0.8
S09A Goldfield 22.78 331 ⇑P **P** 15 19 26.1 +0.4
baz=23,SNR=13
S09A ⇑S **S** 15 23 31.4 -2.2
baz=23
NLU North Lily Min 22.82 343 P **P** 15 19 24.7 -1.5
R10A Warm Springs 22.84 333 ⇓P **P** 15 19 25.6 -0.7
baz=23
R10A ⇑S **S** 15 23 34.9 +0.3
baz=23
HELL Mitchell Peak, 22.85 326 ⇑P **P** 15 19 27.1 +0.6
baz=23,SNR=45
HELL ⇑S **S** 15 23 34.2 -0.5
baz=23
Q12A Willow Creek R 22.90 337 ⇑P **P** 15 19 26.4 -0.5
baz=23
Q12A ⇓S **S** 15 23 33.5 -2.0
baz=23
SWET Sewanee 22.99 39 P **P** 15 19 25.1 -2.8
PHWY Pilot Hill 23.00 356 *eP* **P** 15 19 27.0 -1.0
DAU Daniels Canyon 23.04 345 *eP* **P** 15 19 29.9 +1.5
TPH Tonopah 23.07 332 P **P** 15 19 29.5 +0.7
TPH pmax pmax
comp=Z,32nm,1.1s,mb4.7
TPH Tonopah 23.07 332 P **P** 15 19 29.5 +0.7
comp=Z,32nm,1.1s,mb4.7
V04C Ramage Ranch, 23.12 322 ⇑P **P** 15 19 29.8 +0.4
baz=23,SNR=6.3
V04C ⇓S **S** 15 23 40.3 +1.1
baz=23
MTUM Tungsten Hills 23.13 328 *eP* **P** 15 19 31.3 +1.8
R09A Tonopah 23.14 332 ⇑P **P** 15 19 29.3 -0.1
baz=23,SNR=13
R09A ⇑S **S** 15 23 36.9 -2.5
baz=23
PKD Parkfield 23.15 323 ⇑P **P** 15 19 29.5 -0.2
baz=23,SNR=12
PKD ⇑S **S** 15 23 39.9 +0.3
baz=23
U05C Westside ANR, 23.19 324 ⇓P **P** 15 19 30.5 +0.5
baz=23
DUG Dugway 23.26 342 *eP* **P** 15 19 30.9 +0.1
DUG pmax pmax
comp=Z,16nm,1.1s,mb4.4
DUG Dugway 23.26 342 *eP* **P** 15 19 30.9 +0.1
comp=Z,16nm,1.1s,mb4.3
P12A McGill 23.31 337 ⇑P **P** 15 19 31.0 -0.3
baz=23
P12A ⇓S **S** 15 23 40.7 -1.5
baz=23
SLM Saint Louis 23.35 27 *eP* **P** 15 19 28.0 -3.8
SLM pmax pmax
comp=Z,77nm,0.9s,mb5.1
SLM Saint Louis 23.35 27 *eP* **P** 15 19 28.0 -3.8
comp=Z,77nm,0.9s,mb5.1
CTU Camp Tracy 23.43 344 P **P** 15 19 31.6 -0.9
comp=Z,8.4nm,0.9s,mb4.2
T06C Millerton Lake 23.46 326 ⇑P **P** 15 19 32.0 -0.9
baz=23,SNR=13
T06C ⇑S **S** 15 23 43.8 -0.8
baz=23
MLAC Mammoth Lakes 23.48 328 ⇓P **P** 15 19 33.6 +0.6
baz=23
MLAC ⇑S **S** 15 23 45.7 +0.7
baz=23
KCC Kaiser Creek 23.49 327 ⇑P **P** 15 19 33.3 +0.1
baz=23,SNR=32
KCC ⇓S **S** 15 23 45.9 +0.7
baz=23
U04C Hernandez Rese 23.58 323 ⇑P **P** 15 19 34.3 +0.3
baz=24,SNR=8.0
U04C ⇓S **S** 15 23 46.9 +0.3
baz=24
V03C Hunter Liggett 23.61 322 ⇓P **P** 15 19 34.9 +0.7
baz=24,SNR=8.8
V03C ⇑S **S** 15 23 50.7 +3.7
baz=24
Q09A Carvers 23.67 333 ⇑P **P** 15 19 35.1 +0.2
baz=24
P11A Circle Ranch, 23.70 336 ⇑P **P** 15 19 34.8 -0.2
baz=24
P11A ⇓S **S** 15 23 47.9 -0.6
baz=24
R08A Mina 23.70 330 ⇓P **P** 15 19 35.4 +0.3
baz=24,SNR=6.8
R08A ⇓S **S** 15 23 48.8 +0.3
baz=24
LRV Little Rabbit 23.76 323 *eP* **P** 15 19 36.6 +1.0
NVAR Mina Array Bea 23.85 330 P **P** 15 19 37.0 +0.5
comp=Z,6.3nm,0.8s,baz=140,slow=9.5,SNR=76
NVAR PcP PcP 15 23 20.1 +1.0
comp=Z,2.0nm,0.9s,baz=116,slow=3.9,SNR=3.6
T05C Eagle Field, D 23.90 324 ⇑P **P** 15 19 37.2 +0.3
baz=24
R07C Lee Vining 23.94 329 ⇓P **P** 15 19 37.7 +0.4
baz=24,SNR=12
R07C ⇓S **S** 15 23 52.9 +0.4
baz=24
O12A Currie 23.95 338 ⇑P **P** 15 19 37.1 -0.3
baz=24,SNR=8.7

O12A ⇓S S 15 23 54.9 +2.3
baz=24
CPCT Cooper Cave 24.00 41 *eP* P 15 19 35.4 -2.5
USIN University of 24.02 32 *eP* P 15 19 35.8 -2.2
comp=Z,71nm,0.7s,mb5.2
Q08A Gabbs 24.03 332 ⇓P P 15 19 38.2 +0.1
baz=24,SNR=27
Q08A ⇓S S 15 23 54.7 +0.9
baz=24
P10A Eureka 24.03 335 ⇑P P 15 19 38.7 +0.5
baz=24
HAST UC Hastings Re 24.04 322 ⇑P P 15 19 38.7 +0.5
baz=24,SNR=15
HAST ⇓S S 15 23 55.9 +1.8
baz=24
S05C Merced 24.04 326 ⇓P P 15 19 37.8 -0.4
baz=24
S05C ⇑S S 15 23 55.7 +1.7
baz=24
O11A Cowboy Ranch, 24.16 337 ⇑P P 15 19 39.0 -0.3
baz=24
O11A ⇓S S 15 23 55.1 -0.9
baz=24
HWUT Hardware Ranch 24.24 345 *eP* P 15 19 38.0 -2.1
comp=Z,27nm,1.3s,mb4.5
P09A Austin 24.25 334 ⇓P P 15 19 40.2 +0.1
baz=24
P09A ⇓S S 15 23 56.7 -0.8
baz=24
N13A Wendover, West 24.30 340 ⇓P P 15 19 40.6 +0.1
baz=24
N13A ⇑S S 15 23 59.2 +1.0
baz=24
PACP Pacheco Peak 24.32 324 ⇑P P 15 19 41.0 +0.2
baz=24,SNR=10
PACP ⇓S S 15 23 59.6 +1.0
baz=24
R06C Coleville 24.48 329 P P 15 19 43.4 +1.2
baz=24,SNR=10.0
R06C ⇑S S 15 24 03.2 +2.0
baz=24
Q07A Schurz 24.50 330 ⇑P P 15 19 42.8 +0.4
baz=24
N12A Clover Valley, 24.57 339 ⇑P P 15 19 43.1 0.0
baz=24
N12A ⇑S S 15 24 03.5 +0.9
baz=24
CMB Columbia Colle 24.58 327 *eP* P 15 19 43.0 -0.2
CMB pmax pmax
comp=Z,24nm,1.0s,mb4.7
CMB Columbia Colle 24.58 327 *eP* P 15 19 43.0 -0.2
comp=Z,24nm,1.0s,mb4.7
CMB Columbia Colle 24.58 327 P P 15 19 43.4 +0.2
baz=24,SNR=16
CMB ⇑S S 15 24 03.0 +0.2
baz=24
O10A Cortez Mining, 24.62 336 ⇑P P 15 19 43.2 -0.3
baz=24
O10A ⇓S S 15 24 05.3 +1.9
baz=24
S04C Ingram Canyon, 24.70 324 ⇓P P 15 19 44.6 +0.4
baz=25
M13A Montello 24.74 341 ⇓P P 15 19 44.1 -0.5
baz=25
M13A ⇓S S 15 24 03.8 -1.6
baz=25
P08A Dixie Valley 24.78 332 ⇓P P 15 19 44.7 -0.2
baz=25
N11A Elko Archery C 24.79 337 ⇑P P 15 19 45.0 0.0
baz=25
N11A ⇑S S 15 24 06.7 +0.6
baz=25
O09A Fish Creek Ran 24.80 334 ⇑P P 15 19 45.2 +0.1
baz=25
O09A ⇓S S 15 24 07.5 +1.3
baz=25
BNLO Ben Lomond (Sa 24.92 323 ⇑P P 15 19 46.1 0.0
baz=25
WCI Wyandotte Cave 24.93 34 *eP* P 15 19 43.4 -2.9
WCI pmax pmax
comp=Z,39nm,0.6s,mb5.1
WCI Wyandotte Cave 24.93 34 *eP* P 15 19 43.4 -2.9
comp=Z,39nm,0.6s,mb5.1
R05C Kirkwood Meado 24.93 328 ⇑P P 15 19 47.3 +1.0
baz=25,SNR=12
R05C ⇑S S 15 24 08.5 +0.1
baz=25
PDAR Pinedale Array 24.94 349 P P 15 19 45.0 -1.4
comp=Z,1.5nm,0.8s,baz=163,slow=8.8,SNR=15
PDAR PcP PcP 15 23 21.8 +0.3
comp=Z,2.8nm,0.9s,baz=178,slow=4.2,SNR=5.2
PDAR S S 15 24 08.7 +0.2
comp=Z,0.4nm,0.9s,baz=256,slow=41,SNR=2.4
PDAR LR LR 15 30 11.4
comp=Z,4µm,20.8s,MS4.9,baz=186,slow=38
N10A Dunphy 24.99 336 ⇑P P 15 19 46.3 -0.6
baz=25
N10A ⇑S S 15 24 08.7 -0.7
baz=25
P07A Fallon 25.02 331 ⇑P P 15 19 47.2 +0.1
baz=25
WENL Wente Brothers 25.02 324 ⇑P P 15 19 47.9 +0.7
baz=25,SNR=10
BMN Battle Mountai 25.03 335 *eP* P 15 19 47.0 -0.2
BMN pmax pmax
comp=Z,22nm,0.9s,mb4.7
BMN Battle Mountai 25.03 335 *eP* P 15 19 47.0 -0.2
comp=Z,22nm,0.9s,mb4.7
M12A Wells 25.03 339 ⇓P P 15 19 47.1 -0.1
baz=25
M12A ⇑S S 15 24 10.7 +0.6
baz=25
R04C Big Horse Ranc 25.04 326 ⇓P P 15 19 47.7 +0.4
baz=25,SNR=8.6
R04C ⇓S S 15 24 09.6 -0.6
baz=25
JRSC Jasper Ridge 25.14 323 ⇑P P 15 19 48.5 +0.3
baz=25
WCN Washoe City 25.24 329 ⇑P P 15 19 49.9 +0.8
baz=25,SNR=30
WCN ⇓S S 15 24 16.6 +3.3
baz=25
LAVA Lava Cap Winer 25.31 327 ⇑P P 15 19 49.7 -0.1
baz=25,SNR=13
LAVA ⇓S S 15 24 16.7 +2.3
baz=25
TZTN Tazewell 25.31 40 *eP* P 15 19 47.5 -2.3
BDM Black Diamond 25.32 324 ⇓P P 15 19 49.8 0.0
baz=25
BDM ⇓S S 15 24 18.6 +4.0
baz=25
M11A Holland Ranch, 25.35 338 ⇑P P 15 19 50.1 0.0
baz=25,SNR=7.9
M11A ⇓S S 15 24 16.1 +1.1
baz=25
PAHR Pah Rah Range 25.38 331 *eP* P 15 19 51.0 +0.6
comp=Z,61nm,1.6s,mb4.9
N09A Rock Creek Ran 25.51 335 ⇓P P 15 19 51.2 -0.3
baz=25
N09A ⇓S S 15 24 16.4 -1.1
baz=25
O07A Toulon 25.51 332 ⇓P P 15 19 51.6 0.0
baz=25,SNR=9.7
O07A ⇓S S 15 24 18.3 +0.7
baz=25
BLO Bloomington 25.52 32 *eP* P 15 19 49.1 -2.5
BLO pmax pmax
comp=Z,41nm,0.6s,mb5.1
BLO Bloomington 25.52 32 *eP* P 15 19 49.0 -2.6
comp=Z,41nm,0.6s,mb5.1
P06A Stead Airport, 25.60 330 ⇑P P 15 19 51.3 -1.0
baz=26
P06A ⇓S S 15 24 21.5 +2.5
baz=26
P05C Yuba Gap, Truc 25.66 328 ⇑P P 15 19 53.2 +0.3
baz=26,SNR=9.7
P05C ⇑S S 15 24 25.2 +5.3
baz=26
N08A GE Springer Mi 25.70 334 ⇓P P 15 19 53.0 -0.3
baz=26
N08A ⇓S S 15 24 25.3 +4.7
baz=26
M10A I.L. Ranch, Tu 25.70 337 ⇓P P 15 19 52.8 -0.5
baz=26
M10A ⇑S S 15 24 27.1 +6.5
baz=26
Q04C Lincoln 25.70 326 ⇓P P 15 19 53.7 +0.4
baz=26,SNR=12
REDW Red Top Meadow 25.76 348 *eP* P 15 19 52.4 -1.4
comp=Z,54nm,1.4s,mb4.9
RSSD Black Hills 25.76 359 *eP* P 15 19 52.1 -1.8
RSSD pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
RSSD Black Hills 25.76 359 *eP* P 15 19 52.1 -1.8
comp=Z,9.0nm,1.0s,mb4.2
SNOW Snow King Moun 25.83 348 *eP* P 15 19 55.5 +1.0
comp=Z,7.8nm,0.9s,mb4.2
RRI2 Red Ridge 25.84 347 *eP* P 15 19 53.7 -0.9
comp=Z,16nm,0.9s,mb4.5
Q03C Winters 25.89 325 ⇓P P 15 19 54.9 -0.1
baz=26
TPAW Teton Pass 25.90 348 *eP* P 15 19 53.6 -1.5
comp=Z,34nm,1.1s,mb4.8
CVS Carmenet Viney 25.93 324 ⇓P P 15 19 55.4 +0.1
baz=26
LOHW Long Hollow 25.95 348 *eP* P 15 19 55.5 0.0
comp=Z,33nm,1.3s,mb4.7
O06A Flanigan 25.95 331 ⇑P P 15 19 55.1 -0.4
baz=26
M09A Marrel Ranch, 25.96 336 ⇑P P 15 19 55.4 -0.2
baz=26
BEKR Beckwourth 25.97 329 ⇑P P 15 19 56.3 +0.6
baz=26,SNR=13
BEKR ⇓S S 15 24 35.7 +11
baz=26
MCCM Marconi Confer 26.02 323 ⇑P P 15 19 56.1 -0.1
baz=26
N07B Gerlach 26.06 333 ⇓P P 15 19 56.5 0.0
baz=26,SNR=8.0
N07B ⇑S S 15 24 28.6 +2.4
baz=26
MOOW Moose Ponds 26.11 348 *eP* P 15 19 57.4 +0.4
comp=Z,8.9nm,1.0s,mb4.2
OHCM Honcut 26.13 327 *eP* P 15 19 57.7 +0.5
OHCM *e* pP 15 20 04.5 +0.4
NSHM Saint Helena R 26.13 324 *eP* P 15 19 57.5 +0.3
SUTB Sutter Butte 26.20 327 ⇑P P 15 19 57.7 -0.2
baz=26
SUTB ⇑S S 15 24 36.0 +7.5
baz=26
IMW Indian Meadow 26.29 348 P P 15 19 59.8 +1.2
comp=Z,43nm,1.6s,mb4.7
ORV Oroville 26.30 327 ⇓P P 15 19 59.1 +0.4
baz=26,SNR=14
ORV ⇑S S 15 24 34.9 +4.8
baz=26
MNRC McLaughlin Nat 26.30 325 ⇑P P 15 19 59.4 +0.7
baz=26
MNRC ⇑S S 15 24 37.0 +6.9
baz=26
O05C Quincy 26.31 329 ⇑P P 15 19 59.4 +0.5
baz=26,SNR=5.5
O05C ⇑S S 15 24 33.0 +2.7
baz=26
M08A Happy Creek Ra 26.36 334 ⇓P P 15 19 58.9 -0.4
baz=26
N06A Buffalo Meadow 26.42 331 P P 15 20 00.4 +0.6
baz=26,SNR=12
N06A ⇓S S 15 24 37.7 +5.8
baz=26
L09A Wilkinson Ranc 26.55 336 ⇑P P 15 20 00.9 -0.1
baz=26
L09A ⇓S S 15 24 46.5 +12
baz=26
M07A Soldier Meadow 26.64 333 ⇓P P 15 20 01.7 -0.2
baz=27,SNR=6.0
M07A ⇑S S 15 24 43.5 +8.1
baz=27
O04C Chester 26.67 329 ⇑P P 15 20 02.6 +0.5
baz=27,SNR=14
O04C ⇓S S 15 24 38.2 +2.2
baz=27
ELFS Eagle Lake Fie 26.73 330 ⇑P P 15 20 02.1 -0.5
baz=27
HLID Hailey 26.82 342 *eP* P 15 20 00.2 -3.3
comp=Z,6.7nm,1.1s
O03C Acorn Hollow, 26.90 327 ⇑P P 15 20 04.4 +0.3
baz=27
L08A Fields 26.97 335 ⇑P P 15 20 03.8 -0.9
baz=27
GASB Alder Springs 27.00 326 ⇓P P 15 20 06.1 +1.0
baz=27
JFWS Jewell Farm 27.01 22 P P 15 20 02.0 -3.1
JFWS pmax pmax
comp=Z,19nm,0.7s,mb4.7
JFWS Jewell Farm 27.01 22 P P 15 20 02.0 -3.2
comp=Z,19nm,0.7s,mb4.7
M06C Likely Place G 27.07 331 ⇑P P 15 20 06.0 +0.3
baz=27,SNR=6.1
M06C ⇑S S 15 24 51.4 +9.1
baz=27
K09A Rome 27.16 337 ⇑P P 15 20 05.7 -0.8
baz=27,SNR=12
L07A Adell 27.23 334 ⇓P P 15 20 06.4 -0.7
baz=27
L07A ⇓S S 15 24 43.0 -1.8
baz=27
HATC Hat Creek Radi 27.23 329 ⇓P P 15 20 06.8 -0.3
baz=27
WVOR Wild Horse Val 27.29 335 *eP* P 15 20 05.8 -1.8
WVOR pmax pmax
comp=Z,15nm,1.1s,mb4.4
WVOR Wild Horse Val 27.29 335 *eP* P 15 20 05.8 -1.8
comp=Z,15nm,1.1s,mb4.4
O02C Red Bluff 27.42 327 ⇓P P 15 20 09.6 +0.8
baz=27
O02C ⇑S S 15 24 48.9 +1.1
baz=27
K08A Mann Creek Ran 27.48 336 ⇑P P 15 20 09.2 -0.1
baz=27,SNR=8.3
K08A ⇑S S 15 24 54.8 +6.1
baz=27
ELN Prospectdale 27.49 42 *eP* P 15 20 06.3 -3.1
M05C Lookout 27.51 330 ⇑P P 15 20 09.1 -0.5
baz=27
M05C ⇑S S 15 24 53.3 +4.2
baz=27
MCMT McKenzie Canyo 27.59 346 P P 15 20 10.1 -0.2
WDC Whiskeytown Da 27.59 328 ⇓P P 15 20 09.3 -1.0
baz=28
WDC ⇓S S 15 24 52.3 +1.8
baz=28
FWV Forest Hill 27.66 41 *eP* P 15 20 08.3 -2.7
BLA Blacksburg 27.69 42 *eP* P 15 20 08.2 -3.0
BLA pmax pmax
comp=Z,6.0nm,1.2s
BLA Blacksburg 27.69 42 *eP* P 15 20 08.2 -3.0
comp=Z,5.5nm,1.2s
K07A Rock Creek Ran 27.75 335 ⇑P P 15 20 11.5 -0.2
baz=28
K07A ⇓S S 15 24 51.5 -1.5
baz=28
L05A Lakeview 27.91 332 ⇑P P 15 20 13.5 +0.4
baz=28
M03C McCloud 27.91 329 ⇑P P 15 20 12.5 -0.6
baz=28
O01C Eel River Cons 27.94 325 ⇓P P 15 20 12.9 -0.6
baz=28
DLMT Dillon 28.04 346 P P 15 20 15.0 +0.6
comp=Z,21nm,1.2s,mb4.7
BOZ Bozeman (W) 28.11 348 *eP* P 15 20 13.4 -1.5
BOZ pmax pmax
comp=Z,10.0nm,1.3s,mb4.3
BOZ Bozeman (W) 28.11 348 *eP* P 15 20 13.4 -1.6
comp=Z,10nm,1.3s,mb4.3
ACSO Alum Creek Sta 28.15 35 *eP* P 15 20 13.7 -1.6
M04C Macdoel 28.16 330 ⇑P P 15 20 14.4 -1.0
baz=28
N02C Big Bar 28.16 327 ⇑P P 15 20 15.4 -0.1
baz=28
K06A Valley Falls 28.26 333 ⇑P P 15 20 16.1 -0.2
baz=28
K06A ⇓S S 15 25 01.8 +0.9
baz=28
I09A Lost Marbles R 28.27 338 ⇑P P 15 20 15.2 -1.2
baz=28,SNR=6.1
KHMM Horse Mountain 28.42 327 *eP* P 15 20 18.0 +0.2
L04A Klamath Falls 28.49 331 ⇓P P 15 20 18.3 -0.1
baz=28
I08A Drewsey 28.52 337 ⇓P P 15 20 18.2 -0.4
baz=28
I08A ⇑S S 15 25 09.8 +4.8
baz=28
YBH Yreka Blue Hor 28.54 329 P P 15 20 19.2 +0.4
comp=Z,0.5nm,0.4s,baz=199,slow=9.8,SNR=1.9
YBH S S 15 25 06.8 +1.4
comp=Z,0.6nm,0.6s,baz=202,slow=22,SNR=1.8
YBH LR LR 15 30 57.8
comp=Z,1µm,21.8s,MS4.5,baz=157,slow=35
YBH Yreka Blue Hor 28.54 329 P P 15 20 19.2 +0.4
YBH S S 15 25 06.8 +1.4
YBH Yreka Blue Hor 28.54 329 ⇓S S 15 25 10.4 +4.9
baz=28
J06A Christmas Vall 28.59 334 ⇑P P 15 20 18.2 -1.0
baz=28
J06A ⇓S S 15 25 08.6 +2.5
baz=28
K04A Chilquin 28.76 331 ⇑P P 15 20 20.0 -0.7
baz=29
H09A Durkee 28.84 339 ⇓P P 15 20 20.6 -0.9
baz=29
H09A ⇑S S 15 25 12.6 +2.4
baz=29
BMO Blue Mountains 28.89 339 *eP* P 15 20 20.8 -1.2
comp=Z,6.6nm,1.0s,mb4.3
J05A Fort Rock 29.07 333 ⇑P P 15 20 22.9 -0.7
baz=29
H08A Prairie City 29.07 337 ⇑P P 15 20 22.7 -0.9
baz=29
H08A ⇑S S 15 25 05.0 -8.8
baz=29
I06A Prineville 29.18 335 ⇓P P 15 20 23.3 -1.2
baz=29
I06A ⇓S S 15 25 10.0 -5.5
baz=29
M01C Crescent City 29.33 328 ⇓P P 15 20 25.9 +0.1
baz=29
I05A Bend 29.80 334 ⇑P P 15 20 29.7 -0.2
baz=30
EGMT Eagleton 30.10 352 *eP* P 15 20 30.9 -1.8
comp=Z,23nm,1.3s,mb4.8
H05A Madras 30.18 334 ⇑P P 15 20 33.2 -0.1
baz=30
J02A Umpqua 30.20 330 ⇑P P 15 20 33.3 -0.2
baz=30
F08A Pendleton 30.22 339 ⇓P P 15 20 33.1 -0.6
baz=30
I03A Eugene 30.53 331 ⇑P P 15 20 36.3 -0.1
baz=30
H04A Detroit Lake 30.61 333 ⇓P P 15 20 36.9 -0.2
baz=30
I02A Mapleton 30.80 331 ⇓P P 15 20 39.4 +0.5
baz=31
G04A Mulino 31.15 334 ⇓P P 15 20 41.8 -0.1
baz=31
EYMN Ely 31.18 16 *eP* P 15 20 39.3 -2.9
comp=Z,14nm,0.7s,mb4.9
F05A White Salmon 31.29 336 ⇓P P 15 20 43.7 +0.6
baz=31
ROSC El Rosal 31.49 111 P P 15 20 48.3 +3.3
comp=Z,6.8nm,0.4s,mb4.8,baz=90,slow=9.1,SNR=14
ROSC El Rosal 31.49 111 *eP* P 15 20 47.2 +2.3
F04A Amboy 31.71 335 ⇑P P 15 20 46.8 0.0
baz=32
F04A ⇓S S 15 25 52.5 -2.6
baz=32
NEW Newport 31.89 343 P P 15 20 45.8 -2.6
comp=Z,0.8nm,0.3s,baz=62,slow=22,SNR=2.3
NEW PcP PcP 15 23 38.5 -0.1
comp=Z,7.2nm,0.9s,baz=159,slow=2.6,SNR=6.7
NEW S S 15 25 57.3 -0.6
comp=Z,0.5nm,0.3s,baz=104,slow=11,SNR=2.0
NEW LR LR 15 34 31.6
comp=Z,3µm,18.3s,MS5.1,baz=160,slow=38
NEW Newport 31.89 343 P P 15 20 45.8 -2.6
NEW 15 23 38.6
NEW S S 15 25 57.3 -0.6
NEW Newport 31.89 343 P P 15 20 45.8 -2.6
NEW PcP PcP 15 23 38.5 -0.1
NEW S S 15 25 57.3 -0.6
NEW LR LR 15 34 31.6
ULM Lac du Bonnet 32.48 9 P P 15 20 50.8 -2.8
comp=Z,2.5nm,0.6s,mb4.3,baz=218,slow=9.7,SNR=4.0
ULM PcP PcP 15 23 38.8 -1.4
comp=Z,8.1nm,1.1s,baz=199,slow=3.7,SNR=3.4
ULM S S 15 26 04.8 -2.2
comp=Z,1.2nm,0.6s,baz=95,slow=17,SNR=1.6
ULM LR LR 15 34 43.9
comp=Z,2µm,18.5s,MS4.9,baz=95,slow=38
D05A Enumclaw 32.57 336 ⇓P P 15 20 54.3 -0.1
baz=32
D05A ⇑S S 15 26 07.8 -0.7
baz=32
E03A Lebam 32.67 334 ⇓P P 15 20 55.5 +0.1
baz=33
C05A Tolt Reservoir 32.88 337 ⇑P P 15 20 56.9 -0.2
baz=33
D03A Wishkah Elem. 33.22 334 ⇓P P 15 20 59.8 -0.2
baz=33
SDV Santo Domingo 33.26 102 P P 15 21 03.3 +2.8
comp=Z,90nm,0.8s,mb5.8,baz=310,slow=3.5,SNR=74
SDV LR LR 15 34 54.1
comp=Z,2µm,21.2s,MS4.7,baz=288,slow=37
SDV Santo Domingo 33.26 102 *eP* P 15 21 03.1 +2.7
comp=Z,92nm,0.8s,mb5.8
SADO Sadowa 33.35 32 P P 15 20 58.0 -3.3
comp=Z,4.9nm,0.5s,mb4.7,baz=239,slow=9.9,SNR=9.7
SADO PcP PcP 15 23 43.0 +0.3
comp=Z,6.9nm,0.7s,baz=229,slow=3.9,SNR=3.9
SADO S S 15 26 18.2 -2.5
comp=Z,3.3nm,0.7s,baz=117,slow=11,SNR=2.8
SADO Sadowa 33.35 32 P P 15 20 58.0 -3.3
SADO PcP PcP 15 23 43.0 +0.3
SADO S S 15 26 18.2 -2.5
C04A Brinnon 33.38 336 ⇓P P 15 21 00.9 -0.6
baz=33
BINY Binghamton 33.42 39 *eP* P 15 20 59.3 -2.5
comp=Z,9.9nm,0.6s,mb4.9
B05A Bryant 33.51 337 ⇑P P 15 21 01.1 -1.5
baz=33
B05A ⇑S S 15 26 21.7 -1.4
baz=33
B04A Port Angeles 33.87 336 ⇑P P 15 21 05.0 -0.8
baz=34
B04A ⇓S S 15 26 24.9 -3.8
baz=34
A04A Legoe Bay, Lum 34.11 337 ⇓P P 15 21 07.0 -0.9
baz=34
A04A ⇓S S 15 26 30.5 -1.9
baz=34
A05A Maple Falls 34.12 338 ⇑P P 15 21 07.2 -0.7
baz=34
SJG San Juan 35.47 84 P P 15 21 20.1 +0.5
comp=Z,94nm,0.8s,mb5.8,baz=269,slow=6.3,SNR=34
SJG PcP PcP 15 23 48.6 -0.1
comp=Z,7.0nm,0.7s,baz=273,slow=6.1,SNR=3.2
SJG LR LR 15 36 37.7
comp=Z,1µm,21.4s,MS4.6,baz=90,slow=38
SJG San Juan 35.47 84 P P 15 21 20.1 +0.6
SJG 15 23 48.6
SJG pmax pmax
comp=Z,94nm,0.8s
SJG pmax pmax
comp=Z,7.0nm,0.7s
SJG MLR MLR
comp=Z,1µm,21.5s
SJG San Juan 35.47 84 *eP* P 15 21 19.4 -0.1
comp=Z,59nm,0.6s,mb5.7
PCRV Puerto La Cruz 38.48 97 P P 15 21 47.0 +1.8
comp=Z,14nm,0.8s,mb4.7,baz=37,slow=0.2,SNR=7.8
PCRV PP PP 15 23 15.8 +2.4
comp=Z,4.4nm,0.9s,baz=9.9,slow=16,SNR=1.6
PCRV S S 15 27 40.1 +0.8
comp=Z,2.8nm,0.7s,baz=286,slow=19,SNR=2.4
BBB Bella Bella 38.95 336 P P 15 21 48.4 -0.8
comp=Z,13nm,1.3s,mb4.5,baz=167,slow=14,SNR=2.6
BBB S S 15 27 47.8 +1.5
comp=Z,7.7nm,1.2s,baz=38,slow=5.5,SNR=2.1
BBB LR LR 15 38 35.8
comp=Z,1µm,19.4s,MS4.8,baz=155,slow=38
NNA Nana 39.98 137 P P 15 21 57.5 -0.1
comp=Z,51nm,1.2s,mb5.1
DLBC Dease Lake 44.56 340 P P 15 22 33.3 -1.7
comp=Z,6.2nm,0.8s,mb4.5,baz=158,slow=5.7,SNR=4.8
DLBC S S 15 29 11.8 +2.5
comp=Z,3.6nm,0.8s,baz=354,slow=0.8,SNR=1.9
YKA Yellowknife Ar 44.84 353 P P 15 22 34.7 -2.5
comp=Z,1.3nm,0.7s,baz=160,slow=9.1,SNR=3.7
YKA S S 15 29 12.3 -1.0
comp=Z,0.7nm,0.7s,baz=145,slow=38,SNR=2.8
YKA LR LR 15 42 38.6
comp=Z,7µm,19.0s,MS5.6,baz=180,slow=38
YKA Yellowknife Ar 44.84 353 P P 15 22 34.7 -2.5
YKA S S 15 29 12.3 -1.0

YKA Yellowknife Ar 44.84 353 P **P** **15 22 34.7 -2.5**
YKA S **S** **15 29 12.3 -1.0**
YKA LR LR 15 42 38.6
TAOE Nuku Hiva Isla 45.09 236 *e*LR LR 15 35 12.2
comp=Z,2µm,23.9s
SCHQ Schefferville 45.96 29 P **P** **15 22 45.0 -1.1**
comp=Z,2.8nm,0.5s,mb4.5,baz=234,slow=12,SNR=7.6
SCHQ LR LR 15 43 21.2
comp=Z,560nm,21.3s,MS4.5,baz=283,slow=38
SCHQ Schefferville 45.96 29 *e*P **P** **15 22 45.0 -1.1**
SAML Samuel 48.14 121 *e*P **P** **15 23 02.4 -0.8**
comp=Z,75nm,1.4s,mb5.5
RKT Rikitea 51.35 218 *e*S **S** **15 30 47.7 +2.2**
comp=Z,387nm,28.2s
RKT *e*SS SS 15 34 24.5 +3.3
comp=Z,100nm,27.2s
RKT *e*LR LR 15 38 20.5
comp=Z,650nm,25.2s,baz=32
DAWY Dawson 51.78 341 *e*P **P** **15 23 30.2 -0.5**
MENT Mentasta 52.46 338 *e*P **P** **15 23 36.0 +0.2**
LVC Limon Verde 52.89 139 *e*P **P** **15 23 41.9 +2.9**
comp=Z,114nm,1.7s,mb5.5
KDAK Kodiak Island 53.35 330 P **P** **15 23 43.3 +0.9**
comp=Z,13nm,1.2s,mb4.7,baz=119,slow=21,SNR=2.5
KDAK S **S** **15 31 13.8 +0.8**
comp=Z,5.8nm,1.0s,baz=348,slow=18,SNR=1.7
INK Inuvik 53.46 347 P **P** **15 23 42.4 -0.8**
comp=Z,16nm,1.0s,mb4.9,baz=145,slow=9.1,SNR=12
INK S **S** **15 31 10.5 -3.8**
comp=Z,1.4nm,1.0s,baz=68,slow=16,SNR=2.2
INK LR LR 15 46 31.8
comp=Z,1µm,22.0s,MS5.0,baz=150,slow=36
INK Inuvik 53.46 347 P **P** **15 23 42.4 -0.8**
INK S **S** **15 31 10.5 -3.8**
INK pmax pmax
comp=Z,16nm,1.0s
INK smax
comp=N,1.0nm,1.0s
INK MLR MLR
comp=Z,1µm,22.0s
INK Inuvik 53.46 347 *e*P **P** **15 23 42.1 -1.1**
comp=Z,25nm,1.1s,mb5.1
SLKM Skilak Lake 53.60 333 *e*P **P** **15 23 44.2 0.0**
PMR Palmer 53.72 335 *e*P **P** **15 23 44.8 -0.3**
PMR pmax pmax
comp=Z,22nm,0.8s,mb5.1
PMR Palmer 53.72 335 *e*P **P** **15 23 44.8 -0.3**
comp=Z,22nm,0.8s,mb5.1
MCK McKinley 54.83 337 *e*P **P** **15 23 53.0 -0.1**
MCK pmax pmax
comp=Z,28nm,1.3s,mb5.1
MCK McKinley 54.83 337 *e*P **P** **15 23 53.0 -0.2**
comp=Z,28nm,1.3s,mb5.1
COLA College 55.10 339 *e*P **P** **15 23 54.0 -1.1**
COLA pmax pmax
comp=Z,29nm,1.4s,mb5.1
COLA College 55.10 339 *e*P **P** **15 23 54.0 -1.1**
comp=Z,29nm,1.4s,mb5.1
SVW2 Sparrevohn 56.19 333 *e*P **P** **15 24 02.2 -0.8**
TTA Tatalina 57.18 334 *e*P **P** **15 24 09.1 -0.9**
PPT Papeete 57.62 234 *e*S **S** **15 32 11.7 +1.8**
comp=Z,594nm,27.0s
PPT *e*SS SS 15 36 03.3 +3.2
comp=Z,369nm,29.0s
PPT *e*LQ 15 38 47.6
comp=Z,552nm,25.0s
PPT *e*LR LR 15 40 57.9
comp=Z,910nm,25.8s,baz=50
PPT Papeete 57.62 234 LR LR 15 42 13.1
comp=Z,386nm,19.5s,MS4.5,baz=61,slow=29
IMA2 Indian Mountai 57.79 338 *e*P **P** **15 24 12.6 -1.7**
IMA2 *e* pP 15 24 19.9 -1.8
FCH Farellones 60.34 148⇑ *e*P **P** **15 24 34.8 +2.8**
TBI Tubuai 61.02 229 *e*S **S** **15 32 54.6 +0.7**
comp=Z,389nm,28.5s
TBI *e*SS SS 15 36 56.5 +3.0
comp=Z,113nm,30.0s
TBI *e*LR LR 15 42 44.2
comp=Z,872nm,26.0s,baz=52
TNA Tin City 62.98 335 *e*P **P** **15 24 49.1 -0.6**
comp=Z,41nm,1.0s,mb5.5
TNA *e* pP 15 24 55.9 -1.3
CPUP Villa Florida 63.09 133 P **P** **15 24 51.4 +0.9**
comp=Z,16nm,0.7s,mb5.3,baz=306,slow=6.6,SNR=40
CPUP LR LR 15 51 05.8
comp=Z,662nm,20.2s,MS4.8,baz=301,slow=35
CPUP Villa Florida 63.09 133 *e*P **P** **15 24 51.3 +0.8**
CPUP *e* 15 25 01.2
CPUP pmax pmax
comp=Z,49nm,0.6s
CPUP Villa Florida 63.09 133 *e*P **P** **15 24 51.3 +0.8**
comp=Z,49nm,0.6s,mb5.8
CPUP *e* 15 25 01.2
BDFB Brasilia 64.23 118 P **P** **15 24 59.7 +1.7**
comp=Z,24nm,0.9s,mb5.2,baz=294,slow=8.4,SNR=25
BDFB LR LR 15 52 11.7
comp=Z,778nm,18.1s,MS4.9,baz=309,slow=35
BDFB Brasilia 64.23 118 *e*P **P** **15 24 59.5 +1.5**
SUMG Summit 65.29 18 *e*P **P** **15 25 04.2 -0.8**
comp=Z,6.9nm,0.6s,mb4.9
PLCA Paso Flores 66.23 153 P **P** **15 25 12.9 +1.9**
comp=Z,22nm,1.1s,mb5.1,baz=326,slow=6.9,SNR=13
PLCA LR LR 15 47 59.9
comp=Z,1µm,18.1s,MS5.1,baz=357,slow=30
PLCA Paso Flores 66.23 153 *e*P **P** **15 25 12.6 +1.6**
comp=Z,54nm,1.4s,mb5.4
BILL Bilibino 73.28 337⇓ *i*P **P** **15 25 54.6 +0.2**
BILL pmax pmax
comp=Z,26nm,2.1s,mb4.8
BILL MLR MLR
comp=Z,1µm,19.0s,MS5.2
BILL Bilibino 73.28 337 *e*P **P** **15 25 54.4 0.0**
comp=Z,46nm,1.3s,mb5.2
JMIC Jan Mayen 74.49 20 *e*P **P** **15 26 00.6 -0.9**
JMIC *e*S S 15 35 35.6 +0.5
JMIC AMS AMS 16 00 19.0
comp=Z,401nm,16.6s,MS4.8
KBS Kingsbay 76.88 10 *e*P **P** **15 26 14.2 -1.0**
KBS *e*S S 15 35 57.7 -3.9
KBS AMS AMS 16 02 27.4
comp=Z,846nm,20.1s,MS5.0
CCAN Las Canadas 78.95 64 P **P** **15 26 27.6 +1.0**
comp=Z,157nm,2.0s,mb5.6
EOSO Osorio 79.88 64 P **P** **15 26 31.9 +0.2**
comp=Z,244nm,2.4s,mb5.7
PET Petropavlovsk 80.19 323 *d i*P **P** **15 26 38.9 +5.5**
PET *i* S S 15 36 38.0 +1.0
PET *e*SS SS 15 41 53.9 +6.1
PET pmax pmax
comp=Z,38nm,1.5s,mb5.1
PET pmax pmax
comp=Z,100nm,6.7s
PET smax
comp=N,200nm,6.6s
PET smax
comp=E,300nm,5.5s
PET smax
comp=E,500nm,19.8s
PET MLR MLR
comp=Z,200nm,22.0s,MS4.4
PET MLR MLR
comp=Z,200nm,21.0s
PET Petropavlovsk 80.19 323 *e*P **P** **15 26 34.0 +0.7**
comp=Z,54nm,1.3s,mb5.3
BJO Bjornoya 80.66 13 AMS AMS 16 04 09.5
comp=Z,1µm,19.7s,MS5.3
EFAM Famara 81.31 62 P **P** **15 26 40.9 +1.5**
comp=Z,207nm,1.7s,mb5.8
STS Santiago 81.32 48⇑ P **P** **15 26 39.2 -0.3**
STS pmax pmax
comp=Z,167nm,1.7s,mb5.7
STS Santiago 81.32 48⇑ P **P** **15 26 39.2 -0.2**
comp=Z,166nm,1.7s,mb5.7
PTO Porto 81.79 49 *e*P **P** **15 26 42.3 +0.4**
comp=Z,48nm,1.1s,mb5.3
PCAB Cabril 82.04 49 *e*P **P** **15 26 44.0 +0.8**
comp=Z,57nm,1.9s,mb5.2
MA2 Magadan 82.10 330 *e*P **P** **15 26 43.8 +0.3**
MA2 *e* pP 15 26 51.2 0.0
MA2 pmax pmax
comp=Z,58nm,1.3s,mb5.3
MA2 Magadan 82.10 330 *e*P **P** **15 26 43.8 +0.3**
comp=Z,58nm,1.3s,mb5.3
MA2 *e* pP 15 26 51.2 0.0
EPON Pontenova 82.17 47⇑ P **P** **15 26 44.0 +0.1**
comp=Z,118nm,1.9s,mb5.5

PTOM Tomar 82.38 51 *e*P **P** **15 26 45.5 +0.5**
comp=Z,56nm,0.9s,mb5.5
PVRL Vila Real 82.39 49 *e*P **P** **15 26 45.4 +0.3**
comp=Z,51nm,1.4s,mb5.3
PVIS Viseu 82.43 50 *e*P **P** **15 26 46.0 +0.7**
comp=Z,47nm,1.8s,mb5.1
PTEO Sao Teotonio 82.76 53 *e*P **P** **15 26 47.7 +0.7**
comp=Z,56nm,1.6s,mb5.3
MTE Manteigas 82.78 50 *e*P **P** **15 26 47.4 +0.3**
comp=Z,76nm,1.6s,mb5.5
MTE Manteigas 82.78 50 *e*S S 15 37 05.3 +1.5
MTE Manteigas 82.78 50 *e*P **P** **15 26 47.9 +0.7**
comp=Z,121nm,1.4s,mb5.7
ECAL Calabor 82.89 48 P **P** **15 26 46.5 -1.1**
comp=Z,188nm,2.7s,mb5.6
PBRG Braganca 82.93 48 *e*P **P** **15 26 48.4 +0.5**
comp=Z,35nm,1.5s,mb5.2
PCBR Castelo Branco 83.00 50 *e*P **P** **15 26 48.7 +0.5**
comp=Z,56nm,1.2s,mb5.5
PESTR Estremoz 83.22 51 *e*P **P** **15 26 49.6 +0.2**
PESTR Estremoz 83.22 51 *e*S S 15 37 11.1 +2.9
PESTR Estremoz 83.22 51 Q 15 47 40.6
PESTR *e*LR LR 15 54 07.4
BER Bergen 83.22 28 *e*P **P** **15 26 48.9 -0.4**
BER *e*S S 15 37 08.0 -0.3
BER *e* 15 37 12.4
BER AMS AMS 16 05 24.0
comp=Z,280nm,16.8s,MS4.7
BER Bergen 83.22 28 *e*P **P** **15 26 49.1 -0.3**
BER LR LR
comp=Z,280nm,16.8s,MS4.7
PBEJ Beja 83.27 52 *e*P **P** **15 26 49.6 0.0**
comp=Z,42nm,1.6s,mb5.2
TRO Tromso 83.48 17 *e*P **P** **15 26 50.0 -0.8**
TRO *e*S S 15 37 09.7 -1.2
TRO *e* 15 37 12.9
TRO AMS AMS 16 05 41.3
comp=Z,403nm,20.2s,MS4.8
EARI Arriondas 83.53 47⇑ P **P** **15 26 49.6 -1.4**
comp=Z,186nm,2.4s,mb5.8
EBAD Badajoz 83.68 51⇑ P **P** **15 26 51.7 -0.1**
comp=Z,179nm,3.2s
EGRO El Granado 83.71 53⇑ P **P** **15 26 52.6 +0.7**
comp=Z,110nm,1.9s,mb5.7
NSS Namsos 84.01 23 *e*P **P** **15 26 52.7 -0.7**
EMIN Mina Concepcio 84.24 52⇑ P **P** **15 26 54.2 -0.5**
comp=Z,245nm,2.6s,mb5.9
GRR Gorron 84.63 41⇑ *i*P **P** **15 26 57.0 +0.4**
comp=Z,259nm,1.4s,mb5.9
GRR Gorron 84.63 41⇑ *i*P **P** **15 26 57.0 +0.4**
GRR pmax pmax
comp=Z,130nm,1.4s,mb5.9
GRR Gorron 84.63 41⇑ *i*P **P** **15 26 57.0 +0.4**
comp=Z,130nm,1.4s,mb5.9
FLN La Foliniere 84.73 40 *e*P **P** **15 26 57.7 +0.6**
comp=Z,92nm,0.7s,mb5.7
FLN *e*R
comp=Z,512nm,19.5s
FLN La Foliniere 84.73 40 *e*P **P** **15 26 57.7 +0.6**
FLN pmax pmax
comp=Z,46nm,0.7s,mb5.7
FLN MLR MLR
comp=Z,510nm,19.5s,MS4.9
FLN La Foliniere 84.73 40 *e*P **P** **15 26 57.7 +0.6**
comp=Z,46nm,0.7s,mb5.7
FLN LR LR
comp=Z,510nm,19.5s,MS4.9
ELAN Lanestosa 84.77 46 P **P** **15 26 57.5 +0.2**
comp=Z,123nm,1.5s,mb5.8
LDF La Druitiere 85.01 40 *e*P **P** **15 26 58.9 +0.4**
comp=Z,361nm,1.7s,mb5.9
LDF La Druitiere 85.01 40 *e*P **P** **15 26 58.9 +0.4**
LDF pmax pmax
comp=Z,180nm,1.7s,mb5.9
LDF La Druitiere 85.01 40 *e*P **P** **15 26 58.9 +0.4**
comp=Z,180nm,1.7s,mb5.9
ESPR Espera 85.15 53⇑ P **P** **15 27 00.2 +1.0**
comp=Z,194nm,1.3s,mb6.1
GUD Guadarrama 85.15 49⇑ P **P** **15 27 00.0 +0.8**
GUD pmax pmax
comp=Z,113nm,1.4s,mb5.8
GUD Guadarrama 85.15 49⇑ P **P** **15 27 00.0 +0.8**
comp=Z,113nm,1.4s,mb5.8
ARCES ARCESS Array B 85.33 16 P **P** **15 26 58.6 -1.5**
comp=Z,6.4nm,0.9s,mb4.8,baz=305,slow=4.3,SNR=15
ARCES S S 15 37 21.2 -8.1
comp=Z,0.8nm,0.3s,baz=215,slow=21,SNR=16
ARE0 ARCESS Array S 85.33 16 *e*P **P** **15 26 59.0 -1.1**
LCHF La Chataignera 85.34 42 *e*P **P** **15 27 01.3 +1.2**
KONO Kongsberg 85.46 28 *e*P **P** **15 26 59.9 -0.9**
KONO *e*SKSa 15 37 22.9
KONO Kongsberg 85.46 28 P **P** **15 26 58.6 -2.2**
KONO *i* 15 37 30.8
KONO pmax pmax
comp=Z,20nm,0.8s,mb5.3
KONO Kongsberg 85.46 28 P **P** **15 26 58.6 -2.1**
comp=Z,20nm,0.8s,mb5.3
KONO *e* 15 27 01.0
KONO *i* 15 37 30.8
NB2 NORSAR Subarra 85.48 26 P **P** **15 27 00.4 -0.4**
comp=Z,0.5nm,0.6s,baz=303,slow=4.8
NOA NORSAR Array B 85.48 26 P **P** **15 27 00.7 -0.2**
comp=Z,12nm,1.0s,mb5.0,baz=301,slow=4.8,SNR=20
NOA LR LR 16 09 31.2
comp=Z,279nm,18.2s,MS4.7,baz=300,slow=39
NOA NORSAR Array B 85.48 26 P **P** **15 27 00.7 -0.2**
NOA LR LR 16 09 31.2
KEV Kevo 85.56 15 *e*p **P** **15 26 58.1 -3.1**
comp=Z,13nm,0.9s,mb5.2
KEV Kevo 85.56 15 *e*P **P** **15 26 58.1 -3.1**
KEV pmax pmax
comp=Z,13nm,0.9s,mb5.2
EJIF Jimena Fronter 85.58 53⇑ P **P** **15 27 02.1 +0.8**
EJIF pmax pmax
comp=Z,98nm,1.4s,mb5.8
EJIF Jimena Fronter 85.58 53⇑ P **P** **15 27 02.1 +0.7**
comp=Z,98nm,1.4s,mb5.8
ESDC Sonseca Array 85.62 50 P **P** **15 27 02.2 +0.6**
comp=Z,5.3nm,0.6s,mb5.0,baz=304,slow=4.9,SNR=52
ESDC S S 15 37 30.6 -1.6
comp=Z,0.1nm,0.3s,baz=300,slow=24,SNR=3.1
ESDC Sonseca Array 85.62 50⇑ P **P** **15 27 01.9 +0.3**
comp=Z,53nm,1.3s,mb5.6
ESLA Sonseca Array 85.62 50 *e*P **P** **15 27 02.0 +0.5**
comp=Z,44nm,1.6s,mb5.4
EADA Adamuz 85.68 51⇑ P **P** **15 27 02.5 +0.7**
comp=Z,254nm,1.6s,mb6.2
MFF Saint Martin d 85.74 42 *e*P **P** **15 27 03.4 +1.3**
comp=Z,194nm,1.5s,mb5.8
MFF Saint Martin d 85.74 42 *e*P **P** **15 27 03.4 +1.3**
MFF pmax pmax
comp=Z,97nm,1.5s,mb5.8
MFF Saint Martin d 85.74 42 *e*P **P** **15 27 03.4 +1.3**
comp=Z,97nm,1.5s,mb5.8
EMIJ Mijas 86.07 53⇑ P **P** **15 27 04.3 +0.5**
comp=Z,142nm,1.7s,mb5.9
EALK Alkurruntz 86.09 46 P **P** **15 27 01.0 -2.9**
comp=Z,191nm,1.5s,mb6.1
ELUQ Luque 86.11 52 P **P** **15 27 04.1 +0.1**
EBAN Banos Encina 86.27 51 P **P** **15 27 05.5 +0.8**
EBAN pmax pmax
comp=Z,89nm,1.6s,mb5.8
EBAN Banos Encina 86.27 51 P **P** **15 27 05.5 +0.7**
comp=Z,89nm,1.6s,mb5.8
SJPF Ste Jean 86.33 46 *e*P **P** **15 27 04.0 -1.0**
ELOJ Sierra Loja 86.34 52⇑ P **P** **15 27 06.5 +1.4**
ELOJ pmax pmax
comp=Z,121nm,1.3s,mb6.0
ELOJ Sierra Loja 86.34 52⇑ P **P** **15 27 06.5 +1.4**
comp=Z,121nm,1.3s,mb6.0
LARF Larrau 86.52 46 *e*P **P** **15 27 07.6 +1.6**
ERON Agron 86.64 52 P **P** **15 27 07.2 +0.6**
comp=Z,51nm,1.3s,mb5.6
ECOG Cogollos-Vega 86.73 52⇓ P **P** **15 27 08.2 +1.2**
ECOG pmax pmax
comp=Z,131nm,1.6s,mb5.9
ECOG Cogollos-Vega 86.73 52⇓ P **P** **15 27 08.2 +1.2**
comp=Z,131nm,1.6s,mb5.9
EQES Quesada 86.92 51 P **P** **15 27 06.7 -1.2**
comp=Z,365nm,2.3s,mb6.2
LFF La Frestale 86.95 44⇑ *i*P **P** **15 27 08.6 +0.5**
comp=Z,54nm,0.9s,mb5.5
LFF La Frestale 86.95 44⇑ *i*P **P** **15 27 08.6 +0.5**
LFF pmax pmax
comp=Z,27nm,0.9s,mb5.5
LFF La Frestale 86.95 44⇑ *i*P **P** **15 27 08.6 +0.5**
comp=Z,27nm,0.9s,mb5.5

BAIF Baives 87.03 38 *e*P **P** **15 27 08.0 -0.5**
comp=Z,38nm,1.1s,mb5.2
BAIF Baives 87.03 38 *e*P **P** **15 27 08.0 -0.5**
BAIF pmax pmax
comp=Z,19nm,1.1s,mb5.2
BAIF Baives 87.03 38 *e*P **P** **15 27 08.0 -0.5**
comp=Z,19nm,1.1s,mb5.2
EVIA Vianos 87.04 50 P **P** **15 27 08.8 +0.3**
EVIA pmax pmax
comp=Z,137nm,1.4s,mb6.0
EVIA Vianos 87.04 50 P **P** **15 27 08.8 +0.3**
comp=Z,137nm,1.4s,mb6.0
EHUE Huescar 87.27 51 P **P** **15 27 10.7 +1.1**
EHUE pmax pmax
comp=Z,33nm,0.9s,mb5.6
EHUE Huescar 87.27 51 P **P** **15 27 10.7 +1.1**
comp=Z,33nm,0.9s,mb5.6
RJF Les Rejaudoux 87.31 43⇑ *i*P **P** **15 27 09.2 -0.6**
comp=Z,68nm,1.2s,mb5.5
RJF *e*R
comp=Z,420nm,17.2s
RJF Les Rejaudoux 87.31 43⇑ *i*P **P** **15 27 09.2 -0.6**
RJF pmax pmax
comp=Z,34nm,1.2s,mb5.5
RJF MLR MLR
comp=Z,420nm,17.3s,MS4.9
RJF Les Rejaudoux 87.31 43⇑ *i*P **P** **15 27 09.2 -0.6**
comp=Z,34nm,1.2s,mb5.5
RJF LR LR
comp=Z,420nm,17.3s,MS4.9
ESAC San Caprasio 87.36 47 P **P** **15 27 10.6 +0.6**
comp=Z,301nm,1.9s,mb6.2
TCF Toulx Ste Croi 87.37 42⇑ *i*P **P** **15 27 09.2 -0.9**
comp=Z,44nm,1.1s,mb5.3
TCF Toulx Ste Croi 87.37 42⇑ *i*P **P** **15 27 09.2 -0.9**
TCF pmax pmax
comp=Z,22nm,1.1s,mb5.3
TCF Toulx Ste Croi 87.37 42⇑ *i*P **P** **15 27 09.2 -0.9**
comp=Z,22nm,1.1s,mb5.3
GIVF Givet 87.37 38 *e*P **P** **15 27 09.8 -0.3**
EBER Berja 87.38 52 P **P** **15 27 05.3 -4.8**
comp=Z,330nm,2.4s,mb6.1
EBIE Bielsa 87.42 46 P **P** **15 27 10.3 -0.1**
comp=Z,122nm,1.8s,mb5.8
EPF Esparros 87.42 45⇑ *i*P **P** **15 27 10.1 -0.3**
comp=Z,15nm,0.6s,mb5.1
EPF Esparros 87.42 45⇑ *i*P **P** **15 27 10.1 -0.3**
EPF pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
EPF Esparros 87.42 45⇑ *i*P **P** **15 27 10.1 -0.3**
comp=Z,7.7nm,0.6s,mb5.1
RESF Ens 87.50 46 *e*P **P** **15 27 11.7 +0.9**
BGF Bois d'Agland 87.66 42 *e*P **P** **15 27 10.7 -0.8**
WTSB Winterswijk 87.66 35 *e*P **P** **15 27 11.2 -0.4**
comp=Z,30nm,1.2s,mb5.4
HGN Heimansgroeve 87.72 37 *e*P **P** **15 27 11.0 -0.8**
comp=Z,25nm,1.4s,mb5.3
ETOB Tobarra 87.74 50 P **P** **15 27 12.5 +0.6**
comp=Z,289nm,2.8s,mb6.0
CAF Calviac 87.82 43⇑ *i*P **P** **15 27 11.4 -0.9**
comp=Z,76nm,1.8s,mb5.3
CAF Calviac 87.82 43⇑ *i*P **P** **15 27 11.4 -0.9**
CAF pmax pmax
comp=Z,38nm,1.8s,mb5.3
CAF Calviac 87.82 43⇑ *i*P **P** **15 27 11.4 -0.9**
comp=Z,38nm,1.8s,mb5.3
SSF Saint Saulge 87.86 41⇑ *i*P **P** **15 27 11.5 -1.0**
comp=Z,51nm,1.5s,mb5.2
SSF Saint Saulge 87.86 41⇑ *i*P **P** **15 27 11.5 -1.0**
SSF pmax pmax
comp=Z,25nm,1.5s,mb5.2
SSF Saint Saulge 87.86 41⇑ *i*P **P** **15 27 11.5 -1.0**
comp=Z,25nm,1.5s,mb5.2
EMOS Mosqueruela 87.87 48 P **P** **15 27 13.3 +0.8**
comp=Z,164nm,1.6s,mb6.0
AVF Avril sur Loir 87.88 41 *e*P **P** **15 27 11.1 -1.5**
comp=Z,19nm,1.1s,mb4.9
AVF Avril sur Loir 87.88 41 *e*P **P** **15 27 11.1 -1.5**
AVF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
AVF Avril sur Loir 87.88 41 *e*P **P** **15 27 11.1 -1.5**
comp=Z,9.4nm,1.1s,mb4.9
MLS Moulis 87.96 45 *e*P **P** **15 27 12.7 -0.2**
LOR Lormes 88.00 41⇑ *i*P **P** **15 27 12.3 -0.8**
comp=Z,79nm,1.4s,mb5.4
LOR *e*R
comp=Z,522nm,18.2s
LOR Lormes 88.00 41⇑ *i*P **P** **15 27 12.3 -0.8**
LOR pmax pmax
comp=Z,39nm,1.4s,mb5.4
LOR MLR MLR
comp=Z,520nm,18.3s,MS5.0
LOR Lormes 88.00 41⇑ *i*P **P** **15 27 12.3 -0.8**
comp=Z,39nm,1.4s,mb5.5
LOR LR LR
comp=Z,520nm,18.3s,MS5.0
IBBN Ibbenburen 88.03 35 *e*P **P** **15 27 12.9 -0.4**
comp=Z,25nm,1.3s,mb5.3
IBBN *e*pP pP 15 27 20.0 -1.0
SALF Salau 88.10 45 *e*P **P** **15 27 14.4 +0.8**
BUG Bochum--Univer 88.16 36 *e*P **P** **15 27 13.0 -0.9**
comp=Z,25nm,1.3s,mb5.3
MEZF Maizieres J'vi 88.19 39⇑ *i*P **P** **15 27 13.4 -0.7**
comp=Z,40nm,1.1s,mb5.2
MEZF Maizieres J'vi 88.19 39⇑ *i*P **P** **15 27 13.4 -0.7**
comp=Z,40nm,1.1s,mb5.6
SMF Signal de Mont 88.25 41 *e*P **P** **15 27 14.3 0.0**
EMUR La Murta 88.26 51 P **P** **15 27 13.9 -0.4**
comp=Z,168nm,2.5s,mb5.8
WLF Walferdange 88.33 38 *e*P **P** **15 27 14.1 -0.6**
comp=Z,38nm,1.4s,mb5.4
MTLF Montolieu 88.56 45 *e*P **P** **15 27 15.2 -0.6**
comp=Z,36nm,1.2s,mb5.3
MTLF Montolieu 88.56 45 *e*P **P** **15 27 15.2 -0.6**
MTLF pmax pmax
comp=Z,18nm,1.2s,mb5.3
MTLF Montolieu 88.56 45 *e*P **P** **15 27 15.2 -0.6**
comp=Z,18nm,1.2s,mb5.3
BSEG Bad Segeberg 88.60 33 *e*P **P** **15 27 15.2 -0.8**
comp=Z,48nm,1.4s,mb5.6
BSEG Bad Segeberg 88.60 33 *e*P **P** **15 27 15.2 -0.8**
BSEG pmax pmax
comp=Z,48nm,1.4s,mb5.6
EBEN Beniarda 88.67 50 P **P** **15 27 14.1 -2.2**
comp=Z,188nm,1.9s,mb6.1
LVZ Lovozero 88.82 15⇓ *e*P **P** **15 27 22.9 +5.9**
LVZ *e* 15 37 39.0
LVZ *e* 15 38 02.4
LVZ *e*SS SS 15 43 50.9 -4.2
LVZ pmax pmax
comp=Z,21nm,1.2s,mb5.3
LVZ pmax pmax
comp=N,6.0nm,1.3s
LVZ pmax pmax
comp=E,8.0nm,1.3s
LVZ MLR MLR
comp=Z,1µm,20.0s,MS5.3
LVZ MLR MLR
comp=N,432nm,15.0s,MS5.1
LVZ MLR MLR
comp=E,265nm,13.0s,MS5.1
LVZ pmax pmax
comp=Z,16nm,0.8s,mb5.4
LVZ pmax pmax
comp=N,18nm,0.9s
THEF They Montfort 88.88 39 *e*P **P** **15 27 16.1 -1.2**
HAU Haudompre 89.19 39 *e*P **P** **15 27 18.0 -0.8**
HAU *e*R
comp=N,768nm,18.5s
HAU Haudompre 89.19 39 *e*P **P** **15 27 18.0 -0.8**
HAU LR LR
comp=Z,770nm,18.5s,MS5.2
NRDL Niedersach Rie 89.21 34 *e*P **P** **15 27 18.2 -0.6**
comp=Z,32nm,1.4s,mb5.5
NRDL *e*pP pP 15 27 25.6 -1.0
LASF Ste Croix 89.34 43 *e*P **P** **15 27 19.2 -0.2**
comp=Z,74nm,1.5s,mb5.5
EJON La Jonquera 89.37 45 P **P** **15 27 17.4 -2.2**
comp=Z,149nm,2.9s,mb5.8
TNS Taunus Mts 89.39 37 *e*P **P** **15 27 18.9 -0.8**
comp=Z,28nm,1.3s,mb5.4
TNS Taunus Mts 89.39 37 *e*P **P** **15 27 18.9 -0.8**
TNS pmax pmax
comp=Z,28nm,1.3s,mb5.4
VIVF Saint-Julien-l 89.53 43 *e*P **P** **15 27 19.8 -0.6**
comp=Z,65nm,1.6s,mb5.4

VIVF Saint-Julien-I 89.53 43 *e*P **P 15 27 19.8 -0.6**
VIVF pmax pmax
comp=Z,33nm,1.6s,mb5.4
VIVF Saint-Julien-I 89.53 43 *e*P **P 15 27 19.8 -0.6**
comp=Z,32nm,1.6s,mb5.4
CDF Champ du Feu 89.56 39 *e*P **P 15 27 19.7 -0.8**
HINF Hinteralfeld 89.58 39 *e*P **P 15 27 19.5 -1.1**
WLS Welschbruch 89.60 38 *e*P **P 15 27 21.1 +0.4**
LANF Langenberg 89.61 38 *e*P **P 15 27 19.5 -1.2**
YAK Yakutsk 89.62 338*e i*P **P 15 27 21.2 +0.5**
YAK *i* *PP pP 15 27 28.2 -0.3
YAK pmax pmax
comp=Z,17nm,1.1s,mb5.3
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK Yakutsk 89.62 338 *e*P **P 15 27 20.6 -0.2**
comp=E,24nm,1.0s,mb5.5
YAK *e* pP 15 27 27.7 -0.8
CLZ Clausthal 89.67 35 *e*P **P 15 27 20.6 -0.4**
comp=Z,48nm,1.4s,mb5.6
CLZ Clausthal 89.67 35 *e*P **P 15 27 20.6 -0.4**
CLZ pmax pmax
comp=Z,48nm,1.4s,mb5.6
MOF Molkenrain 89.73 39 *e*P **P 15 27 19.5 -1.8**
UBBA Unterbreizbach 89.97 36 *e*P **P 15 27 21.8 -0.6**
comp=Z,33nm,1.7s,mb5.4
UBBA *e*pP pP 15 27 29.5 -0.7
BBS Basel-Blauen 90.14 39 *e*P **P 15 27 20.2 -3.0**
BFO Black Forest 90.22 38 *e*P **P 15 27 22.3 -1.3**
comp=Z,18nm,1.5s,mb5.2
BFO Black Forest 90.22 38 *e*P **P 15 27 22.3 -1.3**
BFO pmax pmax
comp=Z,18nm,1.5s,mb5.2
FELD Feldberg im Sc 90.24 39 *e*P **P 15 27 23.0 -0.7**
ORIF Oris-en-Rattie 90.28 42⇑*i*P **P 15 27 23.3 -0.5**
comp=Z,19nm,1.0s,mb5.1
ORIF *e*R
comp=Z,598nm,18.8s
ORIF Oris-en-Rattie 90.28 42⇑*i*P **P 15 27 23.3 -0.5**
ORIF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
ORIF Oris-en-Rattie 90.28 42⇑*i*P **P 15 27 23.3 -0.5**
comp=Z,9.5nm,1.0s,mb5.1
SMRF Simiane la Rot 90.50 43 *e*P **P 15 27 24.7 -0.2**
STU Stuttgart 90.51 38 *e*P **P 15 27 24.5 -0.4**
comp=Z,28nm,1.6s,mb5.3
LPL La Plagne 90.55 41 *e*P **P 15 27 25.1 0.0**
comp=Z,9.2nm,0.8s,mb4.8
LPL La Plagne 90.55 41 *e*P **P 15 27 25.1 0.0**
LPL pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
LPL La Plagne 90.55 41 *e*P **P 15 27 25.1 0.0**
comp=Z,4.6nm,0.8s,mb4.9
LPG La Plagne 90.57 41 *e*P **P 15 27 25.5 +0.3**
KAF Kangasniemi 90.63 21 *e*p **P 15 27 22.2 -3.3**
baz=312,slow=4.4
MBDF Montbardon 90.93 42 *e*P **P 15 27 26.6 -0.3**
comp=Z,69nm,1.5s,mb5.5
MBDF Montbardon 90.93 42 *e*P **P 15 27 26.6 -0.3**
MBDF pmax pmax
comp=Z,34nm,1.5s,mb5.5
MBDF Montbardon 90.93 42 *e*P **P 15 27 26.6 -0.3**
comp=Z,34nm,1.5s,mb5.5
MOX Moxa 90.95 35 *e*P **P 15 27 26.4 -0.6**
comp=Z,44nm,1.8s,mb5.5
MOX Moxa 90.95 35 *e*P **P 15 27 26.9 -0.1**
comp=Z,30nm,1.7s,mb5.3
MOX
comp=Z,300nm,19.0s
MOX Moxa 90.95 35 *e*P **P 15 27 26.9 -0.1**
MOX pmax pmax
comp=Z,30nm,1.7s,mb5.3
MOX MLR MLR
comp=Z,300nm,19.0s,MS4.8
FINES FINESS Array B 91.01 22 P **P 15 27 25.5 -1.7**
comp=Z,4.9nm,1.0s,mb4.8,baz=237,slow=6.6,SNR=11
FINES LR LR 16 08 22.5
comp=Z,472nm,20.9s,MS4.9,baz=139,slow=36
FINES FINESS Array B 91.01 22 P **P 15 27 25.5 -1.7**
FINES LR LR 16 08 22.5
RUE Ruedersdorf 91.14 33 *e*P **P 15 27 27.3 -0.5**
comp=Z,29nm,1.4s,mb5.4
GRA1 Grafenberg Arr 91.22 36 *e*P **P 15 27 28.2 0.0**
comp=Z,72nm,1.8s,mb5.7
GRA1 *e*pP pP 15 27 34.8 -1.1
GRA1 *e*S S 15 38 27.7 +2.5
GRA1 LR LR
comp=Z,400nm,20.1s,MS4.8
GRF Grafenberg Arr 91.22 36 *e*P **P 15 27 28.2 0.0**
comp=Z,72nm,1.8s,mb5.7
GRF *e*pP pP 15 27 34.8 -1.1
GRF *e*S S 15 38 27.7 +2.5
GRF *e*L 16 10 42.1
comp=Z,408nm,20.1s
GRF Grafenberg Arr 91.22 36 *e*P **P 15 27 28.2 0.0**
GRF *e**PP pP 15 27 34.8 -1.1
GRF *e*S S 15 38 27.7 +2.5
GRF pmax pmax
comp=Z,72nm,1.8s,mb5.7
GRF MLR MLR
comp=Z,400nm,20.1s,MS4.8
GRF Grafenberg Arr 91.22 36 *e*P **P 15 27 28.2 0.0**
GRF *e**PP pP 15 27 34.8 -1.1
GRF *e*S S 15 38 27.7 +2.5
GRF pmax pmax
comp=Z,72nm,1.8s,mb5.7
GRF MLR MLR
comp=Z,400nm,20.1s,MS4.8
CLL Collm 91.36 34 *e*P **P 15 27 27.7 -1.1**
comp=Z,16nm,1.4s,mb5.2
CLL *e*S S 15 38 25.7 -0.8
CLL Collm 91.36 34⇑P **P 15 27 28.0 -0.8**
comp=Z,logA/T=1.1,mb5.2
CLL *e**PP pP 15 27 36.0 -0.6
CLL *e*PP PP 15 31 06.0 -0.3
CLL *e* 15 38 02.0
CLL *e**SS sS 15 38 36.0 -3.3
CLL *e*SS SS 15 44 30.0 -1.8
CLL Collm 91.36 34⇑*i*P **P 15 27 28.0 -0.8**
comp=Z,16nm,1.4s,mb5.2
CLL Lm 15 10 00.0
comp=N,300nm,19.3s
CLL Lm 15 10 00.0
comp=E,300nm,20.7s
CLL Lm 15 10 00.0
comp=Z,500nm,19.0s
CLL *e*pP pP 15 27 36.0 -0.6
CLL *e*PP PP 15 31 06.0 -0.3
CLL *e*SKSac SKSac 15 38 02.0 +2.3
CLL *e*sS sS 15 38 36.0 -3.3
CLL *e*SS SS 15 44 30.0 -1.8
CLL Collm 91.36 34⇑*i*P **P 15 27 28.0 -0.8**
CLL *e* 15 38 02.0
CLL pmax pmax
comp=Z,57nm,1.4s,mb5.7
CLL MLR MLR
comp=Z,500nm,19.0s,MS5.0
CLL Collm 91.36 34⇑*i*P **P 15 27 28.0 -0.8**
comp=Z,16nm,1.4s,mb5.2
CLL *e*SKS 15 38 02.0
CLL *e*S S 15 38 36.0 +10
CLL LR LR
comp=Z,500nm,19.0s,MS5.0
WERD Werda 91.43 35 *e*P **P 15 27 28.6 -0.6**
comp=Z,32nm,1.6s,mb5.4
GUNZ Gunzen 91.49 35 *e*P **P 15 27 29.0 -0.4**
comp=Z,34nm,1.6s,mb5.4
TANN Tannenbergstha 91.53 35 *e*P **P 15 27 29.2 -0.5**
comp=Z,27nm,1.6s,mb5.3
TANN *e*pP pP 15 27 36.5 -0.9
WERN Wernitzgruen 91.55 35 *e*P **P 15 27 29.4 -0.3**
comp=Z,47nm,1.7s,mb5.5
WERN *e*pP pP 15 27 37.2 -0.3
MANZ Manzenberg 91.56 36 *e*P **P 15 27 29.5 -0.3**
comp=Z,36nm,1.7s,mb5.4
NKC Novy Kostel 91.62 35 *e*P **P 15 27 30.6 +0.5**
NKC *e*pP pP 15 27 37.8 0.0
NKC AMS AMS 16 09 50.0
comp=Z,400nm,14.8s
NKC Novy Kostel 91.62 35 *e*P **P 15 27 30.6 +0.5**
NKC *e*pP pP 15 27 37.8 0.0
JOF Joensuu 91.69 19 *e*p **P 15 27 27.0 -3.4**
comp=Z,1.1nm,0.5s,mb4.4

JOF Joensuu 91.69 19 *e*P **P 15 27 27.0 -3.4**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.4
ROTZ Rotzenmuhle 91.73 36 *e*P **P 15 27 30.4 -0.2**
comp=Z,38nm,1.7s,mb5.5
FBE Freiberg 91.75 34 *e*P **P 15 27 30.0 -0.7**
comp=Z,32nm,1.6s,mb5.4
YSS Yuzh-Sakhalins 91.98 321 *e*P **P 15 27 31.0 -0.8**
YSS *e* pP 15 27 38.7 -0.8
YSS *e* 15 38 00.0
YSS pmax pmax
comp=Z,50nm,1.2s,mb5.7
YSS Yuzh-Sakhalins 91.98 321 *e*P **P 15 27 32.1 +0.3**
comp=Z,9.5nm,1.0s,mb5.1
YSS *e* pP 15 27 39.2 -0.3
FUR Furstenfeldbru 92.02 37 *e*P **P 15 27 31.9 0.0**
comp=Z,19nm,0.9s,mb5.4
FUR Furstenfeldbru 92.02 37 *e*P **P 15 27 31.9 0.0**
FUR pmax pmax
comp=Z,19nm,0.9s,mb5.4
BRG Berggiesshubel 92.09 34 *e*P **P 15 27 31.4 -0.8**
comp=Z,23nm,1.4s,mb5.3
BRG *e*pP pP 15 27 39.1 -0.9
BRG Berggiesshubel 92.09 34 *e*P **P 15 27 32.0 -0.2**
comp=Z,14nm,1.4s,mb5.1
BRG *e* pP 15 27 39.3 -0.7
comp=Z,16nm,1.7s
BRG *e*pP pP 15 27 54.5 +14
comp=Z,2.3nm,1.0s
BRG S S 15 38 35.0 +1.9
BRG SS SS 15 44 36.0 -6.4
BRG *e* 15 47 22.4
comp=Z,2.1nm,1.2s
BRG
comp=N,148nm,20.0s
BRG
comp=E,176nm,15.9s
BRG
comp=Z,282nm,16.6s
BRG Berggiesshubel 92.09 34 *e*P **P 15 27 32.0 -0.2**
BRG *e* pP 15 27 39.3 -0.7
BRG S S 15 38 35.0 +1.9
BRG SS SS 15 44 36.0 -6.4
BRG pmax pmax
comp=Z,2.0nm,1.4s,mb4.2
BRG pmax pmax
comp=Z,14nm,1.7s,mb5.0
BRG pmax pmax
comp=Z,16nm,1.0s,mb5.3
BRG pmax pmax
comp=Z,2.0nm,1.2s,mb4.3
BRG MLR MLR
comp=N,2μm,20.0s,MS5.6
BRG MLR MLR
comp=E,148nm,15.9s,MS5.6
BRG Berggiesshubel 92.09 34 *e*P **P 15 27 32.0 -0.2**
comp=E,14nm,1.4s,mb5.1
BRG *e* pP 15 27 39.3 -0.7
BRG *e*pP pP 15 27 54.5 +14
BRG S S 15 38 35.0 +1.9
BRG SS SS 15 44 36.0 -6.4
BRG *e* 15 47 22.4
BRG LR LR
comp=Z,280nm,16.6s,MS4.8
WET Wettzell 92.42 36 *e*P **P 15 27 33.6 -0.2**
comp=Z,45nm,1.6s,mb5.5
WET Wettzell 92.42 36 *e*P **P 15 27 33.6 -0.2**
WET pmax pmax
comp=Z,45nm,1.6s,mb5.5
PVCC Panska Ves 92.61 34 *e*P **P 15 27 35.0 +0.4**
PVCC *e*pP pP 15 27 42.0 -0.4
PVCC AMS AMS 16 12 20.0
comp=Z,800nm,29.2s
KHC Kasperske Hory 92.82 36 *e*P **P 15 27 36.1 +0.5**
KHC *e*pP pP 15 27 42.9 -0.5
KHC *ex* x 15 38 49.9
KHC AMS AMS 16 13 50.0
comp=Z,400nm,13.7s
PRU Pruhonice 92.89 35 *e*P **P 15 27 36.2 +0.3**
PRU *e*pP pP 15 27 43.0 -0.7
PRU *ex* x 15 38 50.5
PRU AMS AMS 16 13 00.0
comp=Z,400nm,16.9s
PRU Pruhonice 92.89 35 *e*P **P 15 27 36.2 +0.3**
PRU *e**PP pP 15 27 43.0 -0.7
PRU MLR MLR
comp=Z,400nm,16.9s,MS4.9
GEC2 GERESS Array S 93.04 36 *e*P **P 15 27 36.1 -0.5**
comp=Z,34nm,1.6s,mb5.5
GEC2 *e*pP pP 15 27 43.5 -0.9
GEC2 GERESS Array S 93.04 36 *e*P **P 15 27 36.1 -0.5**
GEC2 *e**PP pP 15 27 43.5 -0.9
GEC2 pmax pmax
comp=Z,34nm,1.6s,mb5.5
GERES GERESS Array B 93.04 36 P **P 15 27 36.5 -0.2**
comp=Z,3.0nm,1.0s,mb4.7,baz=311,slow=2.8,SNR=23
GERES S SKSac 15 38 13.5 +4.3
comp=Z,0.1nm,0.3s,baz=182,slow=35,SNR=2.1
GERES LR LR 16 11 30.1
comp=Z,337nm,19.2s,MS4.8,baz=302,slow=37
URZ Urewera 93.11 231 LR LR 15 59 47.2
comp=Z,255nm,21.8s,MS4.6,slow=29
UPC Upice 93.39 34 *e*P **P 15 27 39.0 +0.8**
UPC *e*pP pP 15 27 45.4 -0.6
ASAJ Asahikawa 93.48 319 P **P 15 27 39.0 +0.3**
comp=Z,8.9nm,1.0s,mb5.2,baz=304,slow=5.3,SNR=6.9
ASAJ Asahikawa 93.48 319 P **P 15 27 39.0 +0.3**
ASAJ pmax pmax
comp=Z,9.0nm,1.0s
DPC Dobruska-Polom 93.64 34 *e*P **P 15 27 39.7 +0.3**
DPC *e*pP pP 15 27 46.7 -0.5
DPC *ex* x 15 38 57.3
DPC AMS AMS 16 12 00.0
comp=Z,300nm,15.4s
DPC Dobruska-Polom 93.64 34 *e*P **P 15 27 39.7 +0.3**
DPC *e**PP pP 15 27 46.7 -0.5
DPC MLR MLR
comp=Z,300nm,15.4s,MS4.9
TREC Trest 93.78 35 *e*P **P 15 27 40.9 +0.8**
TREC *e*pP pP 15 27 46.2 -1.6
TREC AMS AMS 16 11 10.0
comp=Z,500nm,18.6s
MORC Moravsky Berou 94.62 34 *e*P **P 15 27 43.5 -0.4**
MORC pmax pmax
comp=Z,36nm,1.6s,mb5.5
MORC Moravsky Berou 94.62 34 *e*P **P 15 27 43.5 -0.4**
comp=Z,36nm,1.6s,mb5.5
OKC Ostrava-Krasne 94.90 34 *e*P **P 15 27 45.4 +0.2**
OKC *e*pP pP 15 27 52.3 -0.6
OKC AMS AMS 16 14 40.0
comp=Z,400nm,16.5s
OKC Ostrava-Krasne 94.90 34 *e*P **P 15 27 45.4 +0.2**
OKC *e*pP pP 15 27 52.3 -0.6
ZST Bratislava 95.29 35 *e*P **P 15 27 47.5 +0.6**
comp=Z,67nm,1.5s,mb5.8
ZST LR LR
comp=Z,300nm,17.2s,MS4.8
HABR Khabarovsk 95.56 325 *e*P **P 15 27 54.0 +5.8**
HABR *e*S SKSac 15 38 27.2 +4.4
KLMR Klimovskoe 95.73 17 *e*P **P 15 27 47.1 -1.9**
KLMR pmax pmax
comp=Z,30nm,1.5s,mb5.5
VYHS Vyhne 96.06 34 *i* P **P 15 27 50.6 +0.2**
VYHS *e* pP 15 27 57.9 -0.3
VYHS pmax pmax
comp=Z,16nm,1.3s,mb5.3
VYHS Vyhne 96.06 34 *i* P **P 15 27 50.6 +0.2**
comp=Z,16nm,1.3s,mb5.3
VYHS *e* pP 15 27 57.9 -0.3
DBIC Dimbokro 96.10 81 P **P 15 27 50.8 +0.2**
comp=Z,10nm,1.1s,mb5.2,baz=290,slow=6.7,SNR=3.4
DBIC LR LR 16 06 04.7
comp=Z,258nm,21.2s,MS4.7,baz=272,slow=32
DBIC Dimbokro 96.10 81 P **P 15 27 50.6 0.0**
comp=Z,23nm,1.3s,mb5.4
STHS Stebnicka Huta 96.76 33 *e*P **P 15 27 54.6 +0.9**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.8
STHS Stebnicka Huta 96.76 33 *e*P **P 15 27 54.6 +0.9**
comp=Z,4.1nm,1.1s,mb4.8
KEST Kesra 96.84 49 P **P 15 27 54.7 +0.6**
comp=Z,5.8nm,1.1s,mb4.9,baz=300,slow=1.9,SNR=5.3
KECS Kecovo 96.94 34 *e*P **P 15 27 53.7 -0.8**
KECS pmax pmax
comp=Z,9.0nm,1.5s,mb5.0

KECS Kecovo 96.94 34 *e*P **P 15 27 53.7 -0.8**
comp=Z,8.7nm,1.5s,mb5.0
PSZ Piszkesteto 96.97 34 *e*P **P 15 27 55.3 +0.7**
PSZ *e* pP 15 28 02.4 +0.1
PSZ pmax pmax
comp=Z,50nm,1.4s,mb5.8
PSZ Piszkesteto 96.97 34 *e*P **P 15 27 55.3 +0.7**
comp=Z,50nm,1.4s,mb5.8
PSZ *e* pP 15 28 02.4 +0.1
KOLS Kolonicke sedl 97.59 33 *e*P **P 15 27 56.8 -0.6**
KOLS Kolonicke sedl 97.59 33 *e*P **P 15 27 56.9 -0.5**
KOLS pmax pmax
comp=Z,11nm,1.5s,mb5.2
KOLS Kolonicke sedl 97.59 33 *e*P **P 15 27 56.9 -0.5**
comp=Z,10nm,1.5s,mb5.2
LVV L'vov 97.91 31 *e*P **P 15 27 56.5 -2.3**
LVV MLR MLR
comp=Z,2μm,20.0s,MS5.5
OBN Obninsk 99.41 22⇑*e*P **P 15 28 04.3 -1.3**
OBN *e* pP 15 28 12.1 -1.2
OBN *e* 15 38 40.0
OBN *e*SS SS 15 46 24.7 -1.6
OBN pmax pmax
comp=Z,28nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,600nm,18.0s,MS5.1
OBN Obninsk 99.41 22⇑*e*P **P 15 28 04.4 -1.2**
OBN LR LR
comp=Z,600nm,18.0s,MS5.1
AKASG Malin Array Be 99.76 28 P Pdif 15 28 05.2 -1.8
comp=Z,1.4nm,0.6s,baz=306,slow=3.9,SNR=22
AKASG LR LR 16 14 35.4
comp=Z,195nm,18.5s,MS4.6,baz=355,slow=36
AKASG Malin Array Be 99.76 28 *i* P Pdif 15 28 05.3 -1.8
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB Malin Array Si 99.76 28 *e*P Pdif 15 28 05.5 -1.6
TORD Torodi Ar. Bea 99.94 73 P Pdif 15 28 07.7 -0.2
comp=Z,1.2nm,0.9s,baz=298,slow=4.3,SNR=4.8
TORD PP PP 15 32 10.0 -2.8
comp=Z,3.2nm,1.2s,baz=304,slow=7.2,SNR=7.9
TORD LR LR 16 17 48.5
comp=Z,332nm,18.1s,MS4.9,baz=280,slow=38
TORD Torodi Ar. Bea 99.94 73 P Pdif 15 28 07.7 -0.2
TORD PP PP 15 32 10.0 -2.8
TORD LR LR 16 17 48.5
MJAR Matsushiro Arr 100.22 314 P Pdif 15 28 10.2 +1.1
comp=Z,1.2nm,0.9s,baz=51,slow=4.7,SNR=6.3
MAT Matsushiro 100.22 314 P Pdif 15 28 10.4 +1.2
MAT Matsushiro 100.22 314 P Pdif 15 28 10.0 +0.8
MDJ Mudanjiang 100.89 324 P Pdif 15 28 11.6 -0.5
MDJ AMB AMB
comp=Z,5.0nm,0.8s
MDJ AMB AMB
comp=Z,52nm,4.2s
ANN Anapa 107.84 28 *e*P Pdif 15 28 38.6 -4.4
ANN pmax pmax
comp=Z,52nm,0.9s
BRTR Keskin Array B 109.81 34 PKiKP PKiKP 15 32 54.4 +0.3
comp=Z,1.1nm,0.9s,baz=345,slow=2.2,SNR=4.4
HHC Hu-ho-hao-te 112.74 332 *e*PKP PKiKP 15 33 01.0 +1.4
HHC PP PP 15 33 52.6 +5.4
HHC PKS 15 36 36.6
HHC SKS SKSdf 15 40 02.1 -8.2
HHC SKKS SKKSac 15 40 35.6 -12
HHC SS SS 15 49 21.3 -6.6
HHC PP PP
comp=Z,66nm,10.0s
HHC LR LR
comp=N,264nm,20.7s,MS5.0
HHC LR LR
comp=E,284nm,19.1s,MS5.0
HHC LR LR
comp=Z,301nm,22.6s,MS4.8
BTO Baotou 113.62 333 *e*PKP PKiKP 15 33 01.8 +0.5
SSE Sheshan 114.77 318 PKP PKiKP 15 33 00.3 -3.2
SSE PP PP 15 34 01.3 -0.3
SSE LR LR
comp=N,97nm,19.9s,MS4.6
SSE LR LR
comp=E,116nm,19.9s,MS4.6
SSE LR LR
comp=Z,146nm,17.7s,MS4.6
MKAR Makanchi Array 115.02 356 PKP PKiKP 15 33 03.4 -0.6
comp=Z,1.1nm,0.6s,baz=354,slow=1.2,SNR=6.7
MKAR PKKPbc PKKPbc 15 43 40.2 +0.5
comp=Z,0.3nm,0.4s,baz=157,slow=3.4,SNR=5.6
MKAR Makanchi Array 115.02 356⇑*i*PKIKP PKiKP 15 33 03.4 -0.6
NJ2 Nanjing 115.55 321 *e*PKP PKPdf 15 33 09.5 +4.5
NJ2 PKS 15 36 44.0
NJ2 SKS SKSdf 15 40 16.0 +0.4
NJ2 SKKS SKKSac 15 41 05.0 -2.0
NJ2 PP PP
comp=Z,340nm,8.7s
NJ2 LR LR
comp=N,2μm,27.9s,MS5.6
NJ2 LR LR
comp=E,1μm,28.1s,MS5.6
NJ2 LR LR
comp=Z,1μm,24.2s,MS5.3
WMQ Urumqi 117.35 351 *e*PKP PKPdf 15 33 08.0 -0.5
GTA Gaotai 118.60 340 PKP PKPdf 15 33 12.3 +1.4
GTA PP PP 15 34 32.3 +4.0
GTA PKS 15 36 46.4
GTA SKS SKSdf 15 40 19.3 -2.1
GTA SKKS SKKSac 15 41 21.3 -6.0
GTA SS SS 15 50 42.5 -2.1
GTA PP PP
comp=Z,129nm,5.3s
GTA LR LR
comp=N,328nm,17.5s,MS5.2
GTA LR LR
comp=E,410nm,18.2s,MS5.2
GTA LR LR
comp=Z,425nm,17.1s,MS5.1
AAK Ala-Archa 119.36 2⇑*i*PKIKP PKPdf 15 33 11.8 -0.5
AAK Ala-Archa 119.36 2⇑*e*PKP PKPdf 15 33 11.8 -0.5
LZH Lanzhou 120.04 335 *e*PKP PKPdf 15 33 14.0 +0.4
LZH LR LR
comp=E,217nm,18.9s
LZH LR LR
comp=Z,318nm,19.9s,MS5.0
STKA Stephens Creek 120.26 243 PKP PKPdf 15 33 14.5 +0.4
comp=Z,2.9nm,0.9s,baz=146,slow=3.6,SNR=4.0
CD2 Chengdu 124.50 331 *e*PKP PKPdf 15 33 18.5 -3.7
WB2 Warramunga Arr 125.52 258 *e*P PKPdf 15 33 25.0 +0.8
AS31 Alice Springs 126.40 254 *e*P PKPdf 15 33 26.4 +0.6
ASAR Alice Springs 126.40 254 PKP PKPdf 15 33 26.5 +0.7
comp=Z,3.3nm,1.0s,baz=90,slow=2.3,SNR=18
ASPA Alice Springs 126.40 254 *e*P PKPdf 15 33 26.4 +0.6
GYA Guiyang 126.73 326 PKP PKPdf 15 33 27.0 +0.5
GYA PKS 15 37 02.4
GYA SKKS SKKSac 15 42 19.5 -0.3
GYA PP PP
comp=Z,120nm,7.8s
GYA LR LR
comp=N,160nm,20.8s,MS4.8
GYA LR LR
comp=E,180nm,21.4s,MS4.8
GYA LR LR
comp=Z,190nm,20.0s,MS4.8
KMI Kunming 129.84 328 PKP PKPdf 15 33 32.3 -0.1
KMI PP PP 15 35 48.0 +4.2
KMI SS SS 15 53 01.0 -5.5
KMI PP PP
comp=Z,140nm,6.2s
KMI LR LR
comp=N,343nm,16.3s
KMI LR LR
comp=E,183nm,24.4s
KMI LR LR
comp=Z,367nm,16.3s,MS5.2
MAW Mawson 129.93 173 PKP PKPdf 15 33 33.3 +0.7
comp=Z,5.6nm,0.9s,baz=235,slow=4.1,SNR=14
HYB Hyderabad 144.47 357 *i* PKP PKPdf 15 33 58.0 -1.3
HYB *e* 15 34 06.0
HYB Hyderabad 144.47 357 *e*P PKPdf 15 33 58.0 -1.3
KULM Kulim 146.57 312 *e*PKP PKPdf 15 34 05.9 +3.0

MEX 13 16:07:50.3±0.6,1805N×10348W,h26$^{km}_{\pm 6}$,MD4.1,
Near coast of Michoacan

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.27**	**28**	*i* P	Pb	16 07 55.7	-1.3
MMIG				*i* S	Sb	16 08 00.2	-1.4
SFJM	**Santa Fe**	**2.46**	**10**	*i* P	Pn	16 08 27.0	-1.7
SFJM				*i* S	Sn	16 08 55.0	-2.9
MOIG	**Morelia**	**2.71**	**53**	*i* P	Pn	16 08 30.9	-1.1
MOIG				*i* S	Sn	16 09 01.8	-2.1
MEIG	**Mezcala**	**3.67**	**91**	*e*P	Pn	16 08 47.0	+1.6
MEIG				*i* S	Sn	16 09 25.3	-2.6
PLIG	**Platanillo**	**3.79**	**84**	*e*P	Pn	16 08 46.9	-0.1
PLIG				*i* S	Sn	16 09 25.9	-4.9
PPM	**Popocatepetl**	**4.71**	**77**	*i* S	Sn	16 09 51.4	-2.0
UTMO	**Huajuapan**	**5.41**	**91**	*i* S	Sn	16 10 11.8	+1.2

*IDC **13** 16:18:01.5±1.0, 3707N×6877E, h0km, mb3.7/10, mb1 3.9/13, mb1mx3.8/21, mbtmp3.8/13, ML3.5/3, MS3.7/6, Ms1 3.7/6, ms1mx3.2/39, Error ellipse: s-maj=22.7km s-min=16.4km az=180.0*
*NNC **13** 16:18:02.1±2.2, 3738N×6845E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=21.8km s-min=13.9km az=2.0*
*ISCJB **13** 16:18:04.2±2.3, 3727N±005×6877E±007, h26km±17km, mb3.9/18, MS3.6/7, Error ellipse: s-maj=10.7km s-min=6.4km az=110.3*
*BJI **13** 16:18:05.5, 37.19N×69.04E, h17km, mB4.9, mb4.4, ML4.1, Ms4.0, Msz3.8*
*MOS **13** 16:18:06.0±1.6, 3740N×6885E, h33km, mb4.3/8, Error ellipse: s-maj=10.2km s-min=7.2km az=92.7*
*NEIC **13** 16:18:07.5±0.4, 3734N×6893E, h35km, mb4.5/13, Error ellipse: s-maj=11.0km s-min=6.9km az=213.0*
ISC 13 16:18:07.8±0.9, **3720N**±005×**6879E**±007, **h38**km±9km, **n81**, σ**1^{s}36**/82, **mb3.9**/18, **MS3.6**/7, **5C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**4.22**	**142**	P	**Pn**	**16 19 14.5**	**+4.9**
SBDP	**Sheikh Budin**	**5.17**	**161**	P	**Pn**	**16 19 23.3**	**+0.7**
DRP	**Derazinda**	**5.57**	**167**	P	**Pn**	**16 19 33.4**	**+5.3**
KK31	**Karatay Array**	**6.04**	**12**	Pn	**Pn**	**16 19 33.5**	**-1.1**
	3.5nm,0.5s,baz=212,slow=51,SNR=37						
KK31				⇑Lg		16 21 10.0	
	22nm,0.6s,baz=164,slow=62,SNR=3.1						
KSH	**Kashi**	**6.10**	**66**	*e*PG	**Pn**	**16 19 50.3**	**+15**
KSH				*e*S	**Sn**	**16 20 51.4**	**+7.4**
KSH				Smax			
	comp=N,194nm,1.0s						
KSH				Smax			
	comp=E,182nm,1.0s						
AML	**Almayashu**	**6.21**	**36**	P	**Pn**	**16 19 37.3**	**+0.4**
	SNR=12						
EKS2	**Erkin-Say**	**6.67**	**34**	P	**Pn**	**16 19 43.8**	**+0.6**
	SNR=14						
KZA	**Kyzart**	**6.97**	**44**	P	**Pn**	**16 19 48.8**	**+1.5**
	SNR=60						
AAK	**Ala-Archa**	**6.97**	**37**	P	**Pn**	**16 19 49.8**	**+2.4**
	SNR=8.5						
AAK	**Ala-Archa**	**6.97**	**37**	*e*PN	**Pn**	**16 19 47.7**	**+0.3**
AAK	**Ala-Archa**	**6.97**	**37**	*e*Pn	**Pn**	**16 19 46.8**	**-0.7**
	comp=E,17nm,0.6s						
FRU	**Bishkek**	**7.18**	**37**	*e*PN	**Pn**	**16 19 51.5**	**+1.2**
FRU				*e*		16 21 10.0	
FRU				*e*S	Sn	16 21 41.0	+30
FRU				*i*		16 22 01.0	
FRU				pmax	pmax		
	comp=Z,80nm,2.2s						
FRU				smax			
	comp=E,280nm,2.6s						
KBK	**Karagaybulak**	**7.21**	**39**	P	**Pn**	**16 19 52.2**	**+1.5**
	SNR=48						
CHMS	**Chumysh**	**7.38**	**36**	P	**Pn**	**16 19 53.2**	**+0.4**
	SNR=8.7						
USP	**Ospenovka**	**7.47**	**34**	P	**Pn**	**16 19 53.3**	**-0.9**
	SNR=10						
TKM2	**Tokmak 2**	**7.74**	**40**	P	**Pn**	**16 19 58.2**	**+0.3**
	SNR=21						
TKM2	**Tokmak 2**	**7.74**	**40**	⇑Pn	**Pn**	**16 19 56.9**	**-1.0**
	comp=E,2.1nm,0.8s						
TKM2				⇑Lg		16 22 10.2	
	comp=E,51nm,2.9s						
AB31	**Akbulak array**	**13.65**	**335**	Pn	**Pn**	**16 21 13.5**	**-5.2**
	comp=E,2.3nm,0.5s,baz=152,slow=13,SNR=48						
AB31				⇑Sn	**Sn**	**16 23 41.8**	**-7.2**
	comp=E,2.5nm,0.6s,baz=163,slow=22,SNR=4.8						
MK02	**Makanchi Array**	**13.86**	**42**	⇑P	**Pn**	**16 21 19.3**	**-2.2**
	comp=E,10nm,1.2s						
MKAR	**Makanchi Array**	**13.86**	**42**	Pn	**Pn**	**16 21 18.8**	**-2.9**
	comp=E,0.1nm,0.3s,baz=232,slow=12,SNR=22						
KURK	**Kurchatov**	**15.23**	**24**	P	**Pn**	**16 21 35.7**	**-4.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	**Kurchatov**	**15.23**	**24**	P	**Pn**	**16 21 35.7**	**-4.3**
	comp=Z,2.8nm,0.6s						
AKTK	**Aktyubinsk**	**15.32**	**333**	Pn	**Pn**	**16 21 36.5**	**-4.7**
AKTK				Lg		16 26 02.5	
AKTO	**Aktyubinsk**	**15.32**	**333**	Pn	**Pn**	**16 21 36.5**	**-4.7**
	comp=Z,0.2nm,0.3s,baz=147,slow=13,SNR=6.1						
AKTO				Lg		16 26 02.5	
	comp=Z,0.1nm,0.3s,baz=135,slow=20,SNR=2.5						
KOLN	**Koldanda**	**15.63**	**123**	*e*P	**Pn**	**16 21 43.1**	**-2.1**
	comp=Z,24nm,0.6s						
WMQ	**Urumqi**	**15.81**	**59**	P	**Pn**	**16 21 50.0**	**+2.4**
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s						
BVA0	**Borovoye Array**	**15.86**	**4**	Pn	**Pn**	**16 21 44.7**	**-3.5**
	comp=Z,2.1nm,0.9s,baz=176,slow=13,SNR=47						
BVA0				⇓Lg		16 26 22.1	
	comp=Z,5.8nm,2.9s						
BVAR	**Borovoye Array**	**15.86**	**4**	Pn	**Pn**	**16 21 44.2**	**-4.0**
	comp=Z,0.4nm,0.3s,baz=178,slow=14,SNR=13						
BVAR				Lg		16 26 25.1	
	comp=Z,0.0nm,0.3s,baz=165,slow=28,SNR=2.7						
BRVK	**Borovoye**	**15.89**	**3**	*e*P	**Pn**	**16 21 44.9**	**-3.7**
BRVK				pmax	pmax		
	comp=Z,16nm,0.7s						
BRVK	**Borovoye**	**15.89**	**3**	*e*P	**Pn**	**16 21 44.9**	**-3.6**
	comp=Z,16nm,0.7s						
GKN	**Gorkha**	**16.18**	**120**	*e*P	**Pn**	**16 21 51.7**	**-0.6**
	comp=Z,71nm,0.6s						
DMN	**Daman**	**16.75**	**120**	*e*P	**Pn**	**16 21 58.9**	**-0.6**
	comp=Z,49nm,0.7s						
KKN	**Kakani**	**16.76**	**119**	*e*P	**Pn**	**16 21 59.6**	**0.0**
	comp=Z,108nm,0.6s						
KKN	**Kakani**	**16.76**	**119**	*e*P	**Pn**	**16 21 59.6**	**0.0**
KKN				pmax	pmax		
	comp=Z,108nm,0.6s						
PKI	**Pulchoki**	**16.99**	**120**	*e*P	**Pn**	**16 22 02.2**	**-0.2**
	comp=Z,92nm,0.6s						
PKI	**Pulchoki**	**16.99**	**120**	*e*P	**Pn**	**16 22 02.2**	**-0.2**
PKI				pmax	pmax		
	comp=Z,92nm,0.6s						
GUN	**Gumba**	**17.11**	**118**	*e*P	**Pn**	**16 22 04.5**	**+0.5**
	comp=Z,124nm,0.9s						
ZAL	**Zalesovo**	**20.06**	**28**	P	**P**	**16 22 34.0**	**-3.7**
	comp=Z,2.1nm,0.6s,baz=243,slow=8.6,SNR=9.3						
LSA	**Lhasa**	**20.08**	**105**	*e*P	**P**	**16 22 39.6**	**+1.7**
LSA	**Lhasa**	**20.08**	**105**	P	**P**	**16 22 39.3**	**+1.4**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LSA	**Lhasa**	**20.08**	**105**	P	**P**	**16 22 39.3**	**+1.4**
	comp=Z,8.0nm,0.8s						
NVS	**Novosibirsk**	**20.22**	**25**	*e*P	**P**	**16 22 37.9**	**-1.6**
NVS				pmax	pmax		
	comp=N,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,1.0nm,0.5s						
SVE	**Sverdlovsk**	**20.38**	**347**	*e*P	**P**	**16 22 47.2**	**+6.1**
SVE				*e*		16 23 06.0	
ARU	**Arti**	**20.43**	**344**	*e*P	**P**	**16 22 41.5**	**-0.2**
ARU				*e*		16 23 03.8	
ARU				*e*S	**S**	**16 26 30.3**	**+2.0**
ARU				*e*SS		16 26 46.6	
GTA	**Gaotai**	**24.39**	**75**	*e*P	**P**	**16 23 25.3**	**+2.9**
GTA				AP		16 23 29.9	
GTA				XP	sP	16 23 32.8	-4.8
GTA				AMB	AMB		
	comp=Z,7.0nm,2.0s,mb3.7						
GTA				AMB	AMB		
	comp=Z,107nm,7.3s						
GTA				LR	LR		
	comp=N,199nm,17.1s,MS3.8						
GTA				LR	LR		
	comp=E,241nm,20.2s,MS3.8						
GTA				LR	LR		
	comp=Z,272nm,18.2s,MS3.8						
ASF	**Jabal al Asfar**	**26.62**	**269**	LR	LR	16 36 49.0	
	comp=Z,230nm,19.1s,MS3.8,baz=259,slow=42						
BRTR	**Keskin Array B**	**27.53**	**286**	P	**P**	**16 23 51.5**	**+0.8**
	comp=Z,0.7nm,0.7s,mb3.4,baz=108,slow=7.0,SNR=4.3						
ZAK	**Zakamensk**	**27.90**	**51**	*e*P	**P**	**16 23 56.4**	**+2.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
LZH	**Lanzhou**	**28.06**	**82**	*e*P	**P**	**16 23 59.3**	**+3.8**
LZH				AP	pP	16 24 04.5	-1.6
LZH				XP	sP	16 24 07.6	-3.1
LZH				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.6						
TLY	**Talaya**	**28.47**	**48**	P	**P**	**16 23 59.1**	**-0.1**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
TLY	**Talaya**	**28.47**	**48**	P	**P**	**16 23 59.1**	**-0.1**
	comp=Z,2.2nm,0.8s,mb3.8						
SONM	**Songino Array**	**29.42**	**57**	P	**P**	**16 24 08.3**	**+0.8**
	comp=Z,0.7nm,0.7s,mb3.5,baz=270,slow=7.5,SNR=6.4						
SONM				LR	LR	16 37 17.1	
	comp=Z,219nm,20.1s,MS3.8,baz=289,slow=39						
AKASG	**Malin Array Be**	**31.12**	**308**	P	**P**	**16 24 21.6**	**-1.1**
	comp=Z,2.3nm,0.8s,mb4.0,baz=85,slow=7.1,SNR=8.9						
JOF	**Joensuu**	**34.38**	**330**	*e*p	**P**	**16 24 49.8**	**-1.3**
	comp=Z,1.6nm,0.4s,mb4.3						
JOF	**Joensuu**	**34.38**	**330**	*e*P	**P**	**16 24 49.8**	**-1.3**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
FINES	**FINESS Array B**	**35.91**	**326**	P	**P**	**16 25 03.5**	**-0.8**
	comp=Z,1.1nm,0.6s,mb4.0,baz=120,slow=9.1,SNR=9.1						
FINES				LR	LR	16 41 03.8	
	comp=Z,76nm,20.0s,MS3.5,baz=122,slow=38						
KAF	**Kangasniemi**	**36.08**	**327**	*e*p	**P**	**16 25 03.1**	**-2.6**
	baz=114,slow=8.4						
GERES	**GERESS Array B**	**41.07**	**304**	P	**P**	**16 25 47.9**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.1,baz=81,slow=9.6,SNR=4.7						
NB2	**NORSAR Subarra**	**42.75**	**323**	P	**P**	**16 25 59.7**	**-1.6**
	comp=Z,2.4nm,0.6s,mb4.1,baz=98,slow=8.6						
NOA	**NORSAR Array B**	**42.75**	**323**	P	**P**	**16 25 59.8**	**-1.6**
	comp=Z,2.3nm,0.6s,mb4.1,baz=98,slow=8.1,SNR=8.9						
NOA				LR	LR	16 46 51.2	
	comp=Z,47nm,18.0s,MS3.4,baz=70,slow=40						
YAK	**Yakutsk**	**44.44**	**36**	*e*P	**P**	**16 26 13.9**	**-1.0**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
YAK	**Yakutsk**	**44.44**	**36**	*e*P	**P**	**16 26 13.9**	**-1.0**
	comp=Z,5.6nm,0.8s,mb4.3						
HINF	**Hinteralfeld**	**45.74**	**304**	*e*P	**P**	**16 26 26.4**	**+1.2**
LPG	**La Plagne**	**46.27**	**301**	*e*P	**P**	**16 26 32.2**	**+2.8**
LPL	**La Plagne**	**46.27**	**301**	*e*P	**P**	**16 26 31.7**	**+2.2**
	comp=Z,2.9nm,0.5s,mb4.2						
LPL	**La Plagne**	**46.27**	**301**	*e*P	**P**	**16 26 31.7**	**+2.2**
LPL				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
LPL	**La Plagne**	**46.27**	**301**	*e*P	**P**	**16 26 31.7**	**+2.2**
	comp=Z,1.5nm,0.5s,mb4.2						
SMF	**Signal de Mont**	**47.98**	**303**	*e*P	**P**	**16 26 43.8**	**+1.0**
AVF	**Avril sur Loir**	**48.28**	**303**	*e*P	**P**	**16 26 46.0**	**+0.9**
	comp=Z,7.6nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**48.28**	**303**	*e*P	**P**	**16 26 46.0**	**+0.9**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	**48.28**	**303**	*e*P	**P**	**16 26 46.0**	**+0.9**
	comp=Z,3.8nm,0.9s,mb4.4						
TCF	**Toulx Ste Croi**	**49.16**	**303**	*e*P	**P**	**16 26 53.8**	**+1.9**
MJAR	**Matsushiro Arr**	**54.34**	**68**	P	**P**	**16 27 31.1**	**+0.6**
	comp=Z,0.6nm,0.9s,mb3.5,baz=299,slow=10.0,SNR=4.0						
ESDC	**Sonseca Array**	**55.56**	**297**	P	**P**	**16 27 39.0**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.4,baz=64,slow=7.2,SNR=4.3						
BORG	**Borgarnes**	**57.10**	**329**	LR	LR	16 55 12.7	
	comp=Z,46nm,19.7s,MS3.6,baz=8.2,slow=39						
TORD	**Torodi Ar. Bea**	**63.97**	**267**	P	**P**	**16 28 37.0**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.9,baz=38,slow=6.7,SNR=6.1						
TORD				LR	LR	16 58 27.6	
	comp=Z,56nm,18.6s,MS3.8,baz=320,slow=38						
WRAB	**Tennant Creek**	**83.87**	**121**	*e*P	**P**	**16 30 32.9**	**-0.6**
WB2	**Warramunga Arr**	**83.88**	**121**	*e*P	**P**	**16 30 31.7**	**-1.8**
ASPA	**Alice Springs**	**86.11**	**124**	*e*P	**P**	**16 30 44.3**	**-0.4**
AS31	**Alice Springs**	**86.12**	**124**	*e*P	**P**	**16 30 44.3**	**-0.4**
ASAR	**Alice Springs**	**86.12**	**124**	P	**P**	**16 30 43.5**	**-1.2**
	comp=Z,0.8nm,0.6s,mb4.1,baz=311,slow=4.9,SNR=21						

*NIED **13** 16:19:00, 32.10N×132.10E, h38km, Mw3.8 Best double couple: M0 5.20000×10^14 NP1:φs216.00000°, δ76.00000°, λ-71.00000°. NP2:φs341.00000°, δ23.00000°, λ-143.00000°.*
*ISCJB **13** 16:19:29.0±0.8, 32.10N±004×132.15E±005, h30km±6km, mb3.6/3, Error ellipse: s-maj=8.5km s-min=5.1km az=101.8*
*IDC **13** 16:19:29.2±1.4, 3166N×13272E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/21, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=47.6km s-min=27.9km az=81.0*
*JMA **13** 16:19:30.0±0.1, 32.13N×132.09E, h29km±2km, M3.7*
JMA Felt I J1.
ISC 13 16:19:29.7±0.9, **3213N**±004×**13212E**±005, **h26**km±6km, **n13**, σ**0^{s}63**/22, **mb3.6**/3, **5C-3D, Shikoku**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.53**	**283**	⇓P	**Pb**	**16 19 40.0**	**-0.4**
JTSN				S	**Sb**	**16 19 47.4**	**-0.3**
JKIT	**Kitakata**	**0.75**	**312**	⇑P	**Pb**	**16 19 44.0**	**-0.1**
JKIT				*e*S	**Sb**	**16 19 54.3**	**+0.4**
JTZ	**Takazaki**	**0.90**	**256**	⇑P	**Pb**	**16 19 45.8**	**-0.9**
JTZ				S	**Sb**	**16 19 58.4**	**+0.1**
JNAR	**Kushima--Naru**	**0.93**	**230**	⇑P	**Pn**	**16 19 47.0**	**-0.1**
JNAR				S	**Sb**	**16 19 59.8**	**+0.6**
JTO	**Tosashimizu**	**0.93**	**38**	⇓P	**Pn**	**16 19 46.8**	**-0.3**
JTO				*e*S	**Sb**	**16 19 58.7**	**-0.5**
JUS	**Usuki**	**0.99**	**342**	P	**Pn**	**16 19 48.2**	**+0.4**
JUS				*e*S	**Sb**	**16 20 01.5**	**+0.8**
UWA2	**Uwa jima 2**	**1.17**	**21**	⇓P	**Pn**	**16 19 50.3**	**0.0**
UWA2				*e*S	**Sn**	**16 20 04.5**	**-0.9**
JIU2	**Izumi 2**	**1.18**	**291**	⇑P	**Pn**	**16 19 50.4**	**-0.1**
JIU2				*e*S	**Sn**	**16 20 05.4**	**-0.3**
JZO	**Okuchi**	**1.29**	**271**	⇑P	**Pn**	**16 19 51.6**	**-0.4**
JZO				S	**Sn**	**16 20 08.7**	**+0.3**
MJAR	**Matsushiro Arr**	**6.69**	**47**	Pn	**Pn**	**16 21 08.7**	**+2.4**
	0.3nm,0.3s,baz=244,slow=14,SNR=8.7						
SONM	**Songino Array**	**25.03**	**316**	P	**P**	**16 25 01.2**	**+10**
	0.5nm,0.6s,mb3.3,baz=115,slow=7.5,SNR=4.4						
ASAR	**Alice Springs**	**55.50**	**178**	P	**P**	**16 29 02.6**	**+0.2**
	0.4nm,0.7s,mb3.5,baz=13,slow=12,SNR=7.0						
STKA	**Stephens Creek**	**64.28**	**171**	P	**P**	**16 30 02.5**	**-0.2**
	2.0nm,0.9s,mb4.1,baz=358,slow=9.0,SNR=3.9						

MAN 13 17:03:38.8, 1836N×12052E, h25km, mb2.1, ML3.8, MS4.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.10**	**113**	⇑*i*P	Pb	17 03 44.5	+1.1
PIP				*e*S	Sb	17 03 50.1	+3.6
ABRA	**Dolores**	**0.73**	**166**	*e*P	Pb	17 03 52.6	-0.3
APYP	**Conner**	**0.85**	**126**	*e*P	Pb	17 03 54.6	-0.2
APYP				*e*S	Sb	17 04 07.9	+2.1

*ISCJB **13** 17:44:45.9±0.9, 40.18N±003×1976E±006, h10km±5km, Error ellipse: s-maj=8.6km s-min=5.3km az=36.8*
*CSEM **13** 17:44:46.8±0.1, 40.11N×1975E, h2km, MD3.3, Error ellipse: s-maj=2.6km s-min=2.2km az=89.0*
*NEIC **13** 17:44:47.7, 4005N×1970E, h16km, MD3.3(ATH), After ATH.*
*ATH **13** 17:44:47.7, 4005N×1970E, h16km±2km, MD3.3/5*
*SKO **13** 17:44:53.1, 4034N×1998E, h0km*
ISC 13 17:44:46.5±0.9, **4017N**±003×**1977E**±007, **h8**km±5km, **n15**, σ**1^{s}10**/26, **Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.22**	**56**	*i* Pg	**Pg**	**17 44 50.4**	**-0.6**
TPE				*i* Sg	**Sg**	**17 44 54.4**	**+0.4**
SRN	**Sarande**	**0.34**	**149**	*i* Pg	**Pg**	**17 44 52.1**	**-1.1**
SRN				*i* Sg	**Sg**	**17 44 58.2**	**+0.5**
KEK	**Kerkira**	**0.46**	**177**	*e*PB	**Pg**	**17 44 54.5**	**-0.9**
KEK				*e*SB	**Sg**	**17 45 00.2**	**-1.2**
LSK	**Leskovik**	**0.64**	**92**	*i* Pg	**Pg**	**17 44 59.2**	**+0.4**
LSK				*i* Sg	**Sg**	**17 45 08.7**	**+1.6**
JAN	**Janina**	**0.98**	**121**	*e*PN	**Pn**	**17 45 06.2**	**-0.3**
JAN				*e*SN	**Sn**	**17 45 19.0**	**-1.5**
OHR	**Ohrid**	**1.22**	**39**	*e*Pg	**Pg**	**17 45 11.5**	**+1.5**
OHR				*e*Sg	**Sg**	**17 45 24.4**	**-1.4**
OHR	**Ohrid**	**1.22**	**39**	*e*Pg	**Pg**	**17 45 11.4**	**+1.4**
OHR				*e*Sg	**Sg**	**17 45 24.4**	**-1.4**
BIA	**Bitola**	**1.45**	**54**	*e*Pg	**Pg**	**17 45 14.4**	**0.0**
BIA				*e*Sg	**Sg**	**17 45 32.1**	**-1.2**
BIA	**Bitola**	**1.45**	**54**	*e*Pg	**Pg**	**17 45 14.3**	**-0.1**
BIA				*e*Sg	**Sg**	**17 45 32.1**	**-1.2**
KZN	**Kozani**	**1.54**	**84**	*e*PN	**Pg**	**17 45 17.6**	**+1.6**
EVR	**Evrytania**	**2.01**	**128**	*e*PN	**Pn**	**17 45 22.9**	**+2.2**
VLS	**Valsamata**	**2.09**	**162**	*e*PN	**Pn**	**17 45 23.1**	**+1.3**
VAY	**Valandovo**	**2.42**	**61**	*e*Pn	**Pb**	**17 45 29.8**	**-0.5**
VAY				*e*Sn	**Sb**	**17 45 59.3**	**-0.8**
VAY	**Valandovo**	**2.42**	**61**	*e*Pn	**Pb**	**17 45 29.7**	**-0.5**
VAY				*e*Sn	**Sb**	**17 45 59.3**	**-0.8**
SG1	**Sgolgore (BA)**	**2.45**	**287**	*e*Pn	**Pn**	**17 45 27.2**	**+0.4**

MAN 13 18:06:41, 958N×12585E, h27km, mb3.1, ML4.4, MS1.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.41**	**300**	⇓*e*P	Pb	18 06 51.1	+1.2
SCPH				*e*S	Sb	18 07 00.1	+4.2
BUTP	**Butuan**	**0.65**	**201**	*e*P	Pb	18 06 53.8	+0.1
MSLP	**Maasin**	**1.12**	**300**	*e*P	Pn	18 07 02.6	+1.7
CGP	**Cagayan de Oro**	**1.60**	**226**	⇑*i*P	Pn	18 07 06.0	-1.5
CGP				*i* S	Sn	18 07 27.8	+0.6
PLP	**Palo**	**1.79**	**332**	*i* P	Pn	18 07 10.0	-0.1
PLP				*e*S	Sn	18 07 32.4	+0.4
BUKP	**Musuan**	**1.86**	**205**	*e*P	Pn	18 07 12.3	+1.2
BESP	**Borongan**	**2.05**	**349**	*e*P	Pn	18 07 14.4	+0.7
MATI	**Mati**	**2.65**	**171**	*e*P	Pn	18 07 22.8	+0.9
PVCP	**Virac**	**4.32**	**338**	*e*P	Pn	18 07 46.9	+2.0
BUSP	**Coron**	**6.05**	**294**	*e*P	Pn	18 08 09.8	+1.1
BUSP				*e*S	Sn	18 09 11.7	-5.3

PRE 13 18:42:18.6±0.6, **2081S×3386E, h5km, ML3.9, Mozambique**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.89**	**246**	*e*P	Pn	18 43 20.5	+1.5
MSNA				*e*S	Sn	18 44 05.0	0.0
MSNA				AML	AML	18 44 21.2	
	comp=Z,98nm,0.4s						
POGA	**Pongola**	**6.85**	**197**	*e*P	Pn	18 44 00.1	+0.4
POGA				*e*S	Sn	18 45 13.9	-4.1
POGA				AML	AML	18 46 03.9	
	comp=Z,21nm,0.6s						
LBTB	**Lobatse**	**8.69**	**240**	*e*P	Pn	18 44 25.9	+1.0
LBTB				*e*S	Sn	18 45 59.8	-3.6
LBTB				AML	AML	18 46 46.9	
	comp=Z,18nm,0.5s						

*ISCJB **13** 18:59:03.9±0.8, 3652N±005×2880E±005, h5km±8km, Error ellipse: s-maj=8.2km s-min=6.9km az=170.1*
*ATH **13** 18:59:03.7, 3641N×2875E, h50km, MD3.0/3*
*CSEM **13** 18:59:03.0±0.1, 3653N×2879E, h2km, MD3.2, Error ellipse: s-maj=3.0km s-min=2.0km az=13.0*
*ISK **13** 18:59:03.8, 3653N×2878E, h5km, MD3.2*
ISC 13 18:59:04.4±0.7, **3653N**±005×**2880E**±005, **h6**km±7km, **n14**, σ**0^{s}64**/16, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DALT	**Dalyan (Mudla)**	**0.27**	**332**	*i* PG	**Pg**	**18 59 09.2**	**-0.6**
DALT				*i* SG	**Sg**	**18 59 14.2**	**+0.8**
ARG	**Arkhangelos**	**0.62**	**240**	*e*P	**Pg**	**18 59 16.2**	**-0.2**
ARG				*e*S	**Sg**	**18 59 25.4**	**+0.8**
YER	**Yerkesik**	**0.73**	**326**	PG	**Pg**	**18 59 18.1**	**-0.4**
KSL	**Kastellorizon**	**0.74**	**120**	*e*P	**Pg**	**18 59 18.5**	**-0.2**
ELL	**Elmali**	**0.92**	**76**	PG	**Pg**	**18 59 22.1**	**0.0**
DAT	**Datca**	**1.00**	**282**	PG	**Pg**	**18 59 23.2**	**-0.4**
DENT	**Denizli**	**1.24**	**9**	PN	**Pn**	**18 59 27.7**	**-0.5**
BODT	**Bodrum**	**1.31**	**295**	PN	**Pn**	**18 59 28.9**	**-0.2**
BCK	**Bucak**	**1.71**	**57**	PN	**Pn**	**18 59 35.3**	**+0.6**
ISP	**Isparta**	**1.90**	**46**	*e*PN	**Pn**	**18 59 37.6**	**+0.3**
SMG	**Samos**	**1.96**	**308**	*e*P	**Pn**	**18 59 36.5**	**-1.6**
IZM	**Izmir**	**2.23**	**327**	*e*PN	**Pn**	**18 59 42.7**	**+0.8**
BLCB	**Balcova**	**2.32**	**324**	*e*PN	**Pn**	**18 59 43.7**	**+0.6**
AKS	**Akhisar**	**2.47**	**342**	*e*PN	**Pn**	**18 59 45.4**	**+0.2**

*IDC **13** 19:01:55.0±4.0, 7186N×441W, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.6/21, mbtmp3.8/7, ML3.1/1, Error ellipse: s-maj=79.0km s-min=21.6km az=166.0*
*NAO **13** 19:01:57.0±1.5, 7123N×439W*
*ISCJB **13** 19:01:57.9±0.5, 7149N±006×458W±0.10, h10km, mb4.0/18, Error ellipse: s-maj=9.0km s-min=4.5km az=170.3*
*NEIC **13** 19:01:59.4, 7136N×459W, h0km, mb4.3/13, After BER.*
*CSEM **13** 19:01:59.7±0.1, 7121N×459W, h10km, mb4.3/13, Error ellipse: s-maj=2.7km s-min=2.2km az=24.0*
*BER **13** 19:02:01.1±1.5, 7125N×4.19W, h24km±31km, ML2.3*
ISC 13 19:01:59.5±0.5, **7141N**±006×**472W**±010, **h10**km, **n60**, σ**1^{s}03**/64, **mb4.0**/18, **Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.23**	**252**	*e*P	**Pn**	**19 02 23.1**	**+0.3**
JNW	**Jan Mayen West**	**1.26**	**254**	*e*P	**Pn**	**19 02 23.5**	**+0.3**
JMIC	**Jan Mayen**	**1.30**	**253**	Pg	**Pg**	**19 02 23.6**	**-0.9**
JMIC				Lg		19 02 39.8	
JMIC	**Jan Mayen**	**1.30**	**253**	Pn	**Pn**	**19 02 23.9**	**+0.2**
	3.1nm,0.3s,baz=127,slow=8.5,SNR=7.3						
JMIC				Sn	**Sn**	**19 02 40.3**	**-0.9**
	7.3nm,0.3s,baz=174,slow=22,SNR=8.9						
JMIC	**Jan Mayen**	**1.30**	**253**	*e*P	**Pn**	**19 02 23.7**	**0.0**
JMIC				*e*S	**Sb**	**19 02 40.6**	**-0.1**
JMI	**Jan Mayen**	**1.39**	**251**	*e*P	**Pn**	**19 02 25.5**	**+0.6**
JMI				*e*S	**Sn**	**19 02 43.4**	**+0.1**
JMI				AML	AML	19 02 48.1	
	comp=Z,60nm,0.6s						
JMI	**Jan Mayen**	**1.39**	**251**	*e*P	**Pn**	**19 02 25.5**	**+0.6**
	SNR=62						
JMI				*e*S	**Sn**	**19 02 43.4**	**+0.1**
	comp=Z,60nm,0.6s,SNR=62						
KBS	**Kingsbay**	**8.62**	**22**	Pn	**Pn**	**19 04 04.3**	**0.0**
SPA0	**Spitsbergen Ar**	**8.69**	**29**	Pn	**Pn**	**19 04 05.2**	**0.0**
	baz=228,slow=16						
ARA0	**ARCESS Array S**	**10.22**	**86**	Pn	**Pn**	**19 04 22.4**	**-3.8**
	baz=287,slow=10						
ARCES	**ARCESS Array B**	**10.22**	**86**	Pn	**Pn**	**19 04 22.4**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=297,slow=11,SNR=9.6						
KEV	**Kevo**	**10.61**	**84**	P	**Pn**	**19 04 26.9**	**-4.7**
NOA	**NORSAR Array B**	**12.17**	**141**	Pn	**Pn**	**19 04 50.0**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=328,slow=13,SNR=3.4						
NOA	**NORSAR Array B**	**12.17**	**141**	Pn	**Pn**	**19 04 50.0**	**-3.0**
HFS	**Hagfors**	**13.52**	**137**	Pn	**Pn**	**19 05 08.1**	**-3.2**
	comp=Z,0.6nm,0.3s,baz=342,slow=9.3,SNR=20						
HFS	**Hagfors**	**13.52**	**137**	Pn	**Pn**	**19 05 08.9**	**-2.4**
	baz=336,slow=12						
FIA0	**FINESS Array S**	**15.63**	**114**	P	**Pn**	**19 05 35.8**	**-4.0**
	baz=330,slow=12						
FINES	**FINESS Array B**	**15.63**	**114**	Pn	**Pn**	**19 05 35.4**	**-4.4**
	comp=Z,0.1nm,0.3s,baz=327,slow=14,SNR=7.2						
EKA	**Eskdalemuir Ar**	**16.16**	**177**	Pn	**Pn**	**19 05 45.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=352,slow=12,SNR=6.8						
EKA	**Eskdalemuir Ar**	**16.16**	**177**	Pn	**Pn**	**19 05 45.2**	**-1.4**
SUW	**Suwalki**	**21.27**	**130**	*e*P	**P**	**19 06 46.6**	**+0.7**
	comp=Z,31nm,0.8s,mb4.7						
CLL	**Collm**	**21.71**	**149**	P	**P**	**19 06 52.3**	**+1.7**
	comp=Z,logA/T=0.6,mb3.8						
CLL	**Collm**	**21.71**	**149**	*i* P	**P**	**19 06 52.3**	**+1.7**
	comp=Z,4.0nm,0.9s,mb3.9						
BAIF	**Baives**	**21.81**	**164**	*e*P	**P**	**19 06 51.6**	**-0.2**
	comp=Z,7.0nm,0.7s,mb3.9						
BAIF	**Baives**	**21.81**	**164**	*e*P	**P**	**19 06 51.6**	**-0.2**
	comp=Z,3.5nm,0.7s,mb3.9						
GIVF	**Givet**	**21.83**	**163**	*e*P	**P**	**19 06 51.7**	**-0.2**
BRG	**Berggiesshubel**	**22.29**	**148**	*e*P	**P**	**19 06 58.1**	**+1.3**
	comp=Z,2.4nm,1.5s,mb3.4						
LDF	**La Druitiere**	**22.99**	**172**	*e*P	**P**	**19 07 03.5**	**-0.8**
	comp=Z,102nm,1.5s,mb4.7						
LDF	**La Druitiere**	**22.99**	**172**	*e*P	**P**	**19 07 03.5**	**-0.8**
	comp=Z,51nm,1.5s,mb4.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ROSF	Rostrenen	23.16	178	eP	P	19 07 04.9	-1.2
CDF	Champ du Feu	23.75	160	eP	P	19 07 12.5	+0.5
GERES	GERESS Array B	24.21	149	P	P	19 07 16.4	+0.2
	comp=Z,0.8nm,0.8s,mb3.2,baz=353,slow=9.4,SNR=6.4						
VRAC	Vranov	24.26	145	P	P	19 07 16.5	-0.2
	comp=Z,1.9nm,0.6s,mb3.7,baz=308,slow=10,SNR=4.4						
HINF	Hinteralfeld	24.29	161	eP	P	19 07 17.1	+0.2
LOR	Lormes	24.56	166	eP	P	19 07 19.4	0.0
	comp=Z,6.3nm,0.7s,mb4.0						
LOR	Lormes	24.56	166	eP	P	19 07 19.4	0.0
	comp=Z,3.2nm,0.7s,mb4.0						
AVF	Avril sur Loir	24.99	167	eP	P	19 07 23.4	+0.1
	comp=Z,4.1nm,0.8s,mb3.7						
AVF	Avril sur Loir	24.99	167	eP	P	19 07 23.4	+0.1
	comp=Z,2.0nm,0.8s,mb3.7						
STHS	Stebnicka Huta	25.10	138	eP	P	19 07 25.7	+1.4
SMF	Signal de Mont	25.18	166	eP	P	19 07 25.0	0.0
	comp=Z,9.9nm,0.8s,mb4.1						
SMF	Signal de Mont	25.18	166	eP	P	19 07 25.0	0.0
	comp=Z,4.9nm,0.8s,mb4.1						
BGF	Bois d'Agland	25.19	168	eP	P	19 07 25.3	+0.2
	comp=Z,21nm,0.9s,mb4.3						
BGF	Bois d'Agland	25.19	168	eP	P	19 07 25.3	+0.2
	comp=Z,10nm,0.9s,mb4.3						
CABF	La Chapelle	25.41	162	eP	P	19 07 27.4	+0.3
VYHS	Vyhne	25.47	142	eP	P	19 07 27.6	-0.1
KOLS	Kolonicke sedl	25.78	136	eP	P	19 07 32.7	+2.2
AKASG	Malin Array Be	25.82	125	P	P	19 07 28.5	-2.4
	comp=Z,1.3nm,0.6s,mb3.7,baz=336,slow=9.6,SNR=7.8						
AKBB	Malin Array Si	25.82	125	eP	P	19 07 28.5	-2.3
RJF	Les Rejaudoux	26.36	170	eP	P	19 07 35.8	+0.1
	comp=Z,21nm,0.9s,mb4.4						
RJF	Les Rejaudoux	26.36	170	eP	P	19 07 35.8	+0.1
	comp=Z,10nm,0.9s,mb4.4						
LFF	La Frestale	26.68	171	eP	P	19 07 39.2	+0.6
	comp=Z,16nm,0.8s,mb4.3						
LFF	La Frestale	26.68	171	eP	P	19 07 39.2	+0.6
	comp=Z,8.0nm,0.8s,mb4.3						
CAF	Calviac	26.77	169	eP	P	19 07 39.6	+0.2
VIVF	Saint-Julien-l	27.02	165	eP	P	19 07 42.3	+0.6
MBDF	Montbardon	27.34	162	eP	P	19 07 46.4	+1.9
	comp=Z,13nm,1.0s,mb4.1						
MBDF	Montbardon	27.34	162	eP	P	19 07 46.4	+1.9
	comp=Z,6.7nm,1.0s,mb4.1						
EPF	Esparros	28.57	172	eP	P	19 07 55.7	+0.2
	comp=Z,24nm,1.2s,mb4.5						
EPF	Esparros	28.57	172	eP	P	19 07 55.7	+0.2
	comp=Z,12nm,1.2s,mb4.5						
ESDC	Sonseca Array	31.81	179	P	P	19 08 25.0	+0.8
	comp=Z,0.8nm,0.6s,mb3.7,baz=358,slow=8.5,SNR=6.5						
TORD	Torodi Ar. Bea	58.36	173	P	P	19 11 54.8	-0.1
	comp=Z,0.8nm,0.5s,mb4.0,baz=351,slow=7.4,SNR=25						

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*BJI **13** 19:03:04.4, 7150N×440W, h10km, mB5.0, mb4.8, Ms4.6, Msz4.4*
*NAO **13** 19:03:04.9±1.3, 7128N×425W, ML3.0*
*CSEM **13** 19:03:05.3, 7148N×411W, h2km, mb4.9*
*ISCJB **13** 19:03:06.9±0.1, 7140N±002×421W±006, h12km, mb4.8/177, MS4.2/38, Error ellipse: s-maj=3.0km s-min=2.1km az=117.2*
*IDC **13** 19:03:06.4±0.5, 7138N×434W, h0km, mb4.3/17, mb1 4.6/20, mb1mx4.5/23, mbtmp4.4/20, ML4.3/3, MS4.3/8, Ms1 4.3/8, ms1mx4.1/12, Error ellipse: s-maj=15.6km s-min=11.5km az=42.0*
*MOS **13** 19:03:06.5±0.9, 7144N×417W, h10km, mb5.1/96, MS4.1/30, Error ellipse: s-maj=15.4km s-min=2.9km az=97.2*
*NEIC **13** 19:03:07.4, 7150N×436W, h0km, mb5.0/135, MS4.1/11, After BER.*
*HRVD **13** 19:03:07.4±0.2, 7145N×405W, h12km, MW5.0/74, Centroid moment Tensor Solution. LP body waves: s25,c31;Mantle waves: s74,c133; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.06±.08; $M_{\theta\theta}$0.83±.08; $M_{\phi\phi}$2.23±.07; $M_{r\theta}$-0.18±.31; $M_{\theta\phi}$1.56±.06; $M_{\phi r}$-1.16±.23; Best double couple: $M_0$3.36400×10^{16} NP1:ϕ_s222.00000°, δ36.00000°, λ-76.00000°. NP2: ϕ_s24.00000°, δ55.00000°, λ-100.00000°. Principal axes: T 3.4190, Plg9.0000°, Azm122.0000°; N -0.1090, Plg8.0000°, Azm30.0000°; P -3.3090, Plg77.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BER **13** 19:03:08.4±3.6, 7152N×450W, h10km, MD2.5, ML3.3, ML3.0(NAO)*
*BGS **13** 19:03:14.0±1.8, 7080N×253W, h5km, mb4.9*
*SZGRF **13** 19:03:25.7, 70.18N×186W, h33km, mb4.8, MS3.7, Jan Mayen Island region*

ISC 13 19:03:08.5±0.1**, 7139N**±002×**400W**±006**, h13**km**, h13**km±.9km**:pP-P, n626,** σ1.07/659**, mb4.8**/177**, MS4.2**/37**, 124C-52D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	Jan Mayen East	1.45	256	eP	Pn	19 03 30.8	-3.6
JNE				eS	Sn	19 03 48.0	-5.3
JNW	Jan Mayen West	1.48	258	eP	Pn	19 03 30.7	-4.1
JNW				AML	AML	19 03 55.4	
	comp=Z,837nm,0.6s						
JMIC	Jan Mayen	1.52	257	Pg	Pg	19 03 31.7	-6.0
JMIC				Lg		19 03 49.3	
JMIC	Jan Mayen	1.52	257	Pn	Pn	19 03 31.6	-3.8
	comp=Z,30nm,0.3s,baz=40,slow=4.7,SNR=35						
JMIC				Sn	Sn	19 03 48.5	-6.5
	comp=Z,107nm,0.3s,baz=197,slow=23,SNR=15						
JMIC	Jan Mayen	1.52	257	eP	Pn	19 03 31.5	-3.9
JMIC				eS	Sn	19 03 48.5	-6.5
JMIC				AML	AML	19 03 52.8	
	comp=Z,573nm,0.5s						
SCO	Scoresbysund	5.95	270	iP	Pn	19 04 34.3	-1.9
	comp=Z,30nm,0.4s						
SCO	Scoresbysund	5.95	270	eP	Pn	19 04 34.3	-1.9
SCO				pmax	pmax		
	comp=Z,30nm,0.4s						
SCO	Scoresbysund	5.95	270	eP	Pn	19 04 34.3	-1.9
	comp=Z,30nm,0.4s						
DAG	Danmarks Havn	6.72	330⇓	iP	Pn	19 04 43.1	-3.7
	comp=Z,100nm,0.4s						
DAG				i		19 05 56.1	
DAG	Danmarks Havn	6.72	330⇓	eP	Pn	19 04 43.1	-3.7
DAG				i		19 05 56.1	
DAG				pmax	pmax		
	comp=Z,101nm,0.4s						
DAG	Danmarks Havn	6.72	330⇓	eP	Pn	19 04 43.1	-3.7
	comp=Z,101nm,0.4s						
DAG				i		19 05 56.1	
LOF	Lofoten	6.89	110	eP	Pn	19 04 48.6	-0.6
TRO	Tromso	7.84	92	eP	Pn	19 04 58.5	-3.7
TRO				eS	Sn	19 06 21.7	-9.1
MOR8	Moi Rana	8.46	119	eP	Pn	19 05 09.4	-1.3
KBS	Kingsbay	8.55	21	Pn	Pn	19 05 10.3	-1.7
KBS	Kingsbay	8.55	21	ePn	Pn	19 05 11.2	-0.8
KBS	Kingsbay	8.55	21⇑	eP	Pn	19 05 12.1	+0.1
KBS	Kingsbay	8.55	21	eP	Pn	19 05 10.3	-1.7
	comp=Z,47nm,0.6s						
SPB4	Spitsbergen Ar	8.59	29	eP	Pn	19 05 12.4	-0.1
SPA0	Spitsbergen Ar	8.59	29	Pn	Pn	19 05 12.8	+0.3
	baz=216,slow=16						
NSS	Namsos	9.10	131	eP	Pn	19 05 16.4	-3.0
NSS				eS	Sn	19 06 53.3	-8.4
NSS	Namsos	9.10	131	eP	Pn	19 05 16.4	-3.0
NSS				eS	Sn	19 06 53.5	-8.3
FSV	Svinoy	9.22	187	eP	Pn	19 05 21.3	+0.2
FSV	Svinoy	9.22	187	eP	Pn	19 05 21.3	+0.2
BORG	Borgarnes	9.26	233	Pn	Pn	19 05 26.2	+4.6
	comp=Z,1.1nm,0.3s,baz=42,slow=9.6,SNR=5.8						
BORG				LR	LR	19 08 05.8	
	comp=Z,740nm,20.2s,baz=317,slow=33						
BORG	Borgarnes	9.26	233	eP	Pn	19 05 21.7	0.0
	comp=Z,38nm,1.0s						
BORG				LR	LR	19 08 05.8	
BORG	Borgarnes	9.26	233	eP	Pn	19 05 21.7	0.0
	comp=Z,38nm,1.0s						
FVA	Vagar	9.45	190	eP	Pn	19 05 24.9	+0.6
FVA	Vagar	9.45	190	eP	Pn	19 05 24.9	+0.6
FTO	Torshavn	9.48	188	eP	Pn	19 05 24.9	+0.2
FTO	Torshavn	9.48	188	eP	Pn	19 05 24.9	+0.2
KTK1	Kautokeino	9.49	91	eP	Pn	19 05 24.2	-0.7
ARA0	ARCESS Array S	9.99	86	Pn	Pn	19 05 29.9	-1.9
	baz=288,slow=12						
ARCES	ARCESS Array B	9.99	86	Pn	Pn	19 05 29.9	-1.9
	comp=Z,3.7nm,0.3s,baz=290,slow=11,SNR=92						
KEV	Kevo	10.38	84	ep	Pn	19 05 34.4	-2.7
	comp=Z,17nm,0.4s						
KEV	Kevo	10.38	84	eP	Pn	19 05 34.4	-2.7
KEV				pmax	pmax		
	comp=Z,17nm,0.4s						
FOO	Floro	10.46	156	eP	Pn	19 05 29.4	-8.7
SUMG	Summit	10.64	293	eP	Pn	19 05 38.6	-2.0
	comp=Z,81nm,0.8s						
SUMG	Summit	10.64	293	eP	Pn	19 05 38.6	-2.0
	comp=Z,81nm,0.8s						
DOMB	Dombas	10.68	145	eP	Pn	19 05 39.3	-1.9
SUE	Sulen	10.94	157	eP	Pn	19 05 42.0	-2.7
HYA	Hoyanger	11.03	153	eP	Pn	19 05 44.4	-1.6
WAL1	Walls	11.22	174	eP	Pn	19 05 46.4	-2.2
WAL1	Walls	11.22	174	eP	Pn	19 05 46.4	-2.2
LRW	Lerwick	11.36	173	eP	Pn	19 05 48.4	-2.0
LRW	Lerwick	11.36	173	eP	Pn	19 05 48.4	-2.0
ASK	Askoy	11.55	157	eP	Pn	19 05 49.3	-3.8
ASK				eS	Sn	19 07 50.8	-11
ASK	Askoy	11.55	157	eP	Pn	19 05 49.3	-3.8
ASK				eS	Sn	19 07 53.4	-8.6
BER	Bergen	11.67	157	eP	Pn	19 05 51.8	-2.9
BER	Bergen	11.67	157	eP	Pn	19 05 53.6	-1.1
BER	Bergen	11.67	157	eP	Pn	19 05 53.6	-1.1
EGD	Espegrend	11.77	157	eP	Pn	19 05 51.5	-4.4
EGD	Espegrend	11.77	157	eP	Pn	19 05 51.7	-4.2
NB2	NORSAR Subarra	12.01	142	Pn	Pn	19 05 57.6	-1.7
	baz=325,slow=14						
NOA	NORSAR Array B	12.01	142	Pn	Pn	19 05 56.9	-2.5
	comp=Z,1.4nm,0.3s,baz=334,slow=12,SNR=10.0						
NAO01	NORSAR Array S	12.13	143	eP	Pn	19 05 59.0	-2.0
	comp=Z,7.9nm,0.6s						
NAO01	NORSAR Array S	12.13	143	eP	Pn	19 05 59.0	-1.9
	comp=Z,7.9nm,0.6s						
ODD1	Odda	12.30	154	eP	Pn	19 06 00.6	-2.6
BLS5	Blasjo	12.75	155	eP	Pn	19 06 07.3	-2.1
OBR	Brabster	12.84	178	eP	Pn	19 06 08.8	-1.8
OBR	Brabster	12.84	178	eP	Pn	19 06 08.8	-1.8
ORE	Reay	12.90	179	eP	Pn	19 06 09.3	-2.2
ORE	Reay	12.90	179	eP	Pn	19 06 09.3	-2.2
KONO	Kongsberg	13.01	148	eP	Pn	19 06 12.7	-0.3
KONO	Kongsberg	13.01	148	eP	Pn	19 06 12.2	-0.8
KONO				pmax	pmax		
	comp=Z,46nm,1.1s						
KONO	Kongsberg	13.01	148	eP	Pn	19 06 12.2	-0.8
	comp=Z,46nm,1.1s						
APA0	Apatity Array	13.34	88	Pn	Pn	19 06 14.9	-2.5
	baz=305,slow=14						
HFS	Hagfors	13.35	139	Pn	Pn	19 06 16.0	-1.6
	comp=Z,4.9nm,0.3s,baz=344,slow=9.9,SNR=65						
HFS				Sn	Sn	19 08 39.2	-6.6
	comp=Z,0.9nm,0.3s,baz=356,slow=20,SNR=3.5						
HFS				LR	LR	19 11 17.7	
	comp=Z,2μm,21.2s,baz=340,slow=37						
HFS	Hagfors	13.35	139	P	Pn	19 06 16.4	-1.2
	baz=347,slow=10						
MVH1	Achvaich	13.52	180	eP	Pn	19 06 18.2	-1.8
MVH1	Achvaich	13.52	180	eP	Pn	19 06 18.2	-1.8
LVZ	Lovozero	13.71	86⇓	iP	Pn	19 06 19.2	-3.3
LVZ				pmax	pmax		
	comp=Z,49nm,0.9s						
LVZ				pmax	pmax		
	comp=N,16nm,0.8s						
LVZ				pmax	pmax		
	comp=E,20nm,0.7s						
LVZ				MLR	MLR		
	comp=Z,713nm,14.0s						
LVZ				MLR	MLR		
	comp=N,382nm,21.0s						
LVZ				MLR	MLR		
	comp=E,683nm,19.0s						
LVZ	Lovozero	13.71	86	iP	Pn	19 06 19.2	-3.3
	comp=E,382nm,21.0s						
MCD	Coleburn Disti	13.87	178	eP	Pn	19 06 22.6	-2.2
MCD	Coleburn Disti	13.87	178	eP	Pn	19 06 22.6	-2.2
KAC	Achnashellach	13.96	183	eP	Pn	19 06 23.8	-2.1
KAC	Achnashellach	13.96	183	eP	Pn	19 06 23.8	-2.1
KPL	Plockton	14.13	184	eP	Pn	19 06 26.6	-1.6
KPL	Plockton	14.13	184	eP	Pn	19 06 26.6	-1.6
MME1	Meikle Cairn	14.14	178	eP	Pn	19 06 26.7	-1.7
MME1	Meikle Cairn	14.14	178	eP	Pn	19 06 26.7	-1.7
KAR1	Arisaig	14.55	184	eP	Pn	19 06 32.6	-1.4
KAR1	Arisaig	14.55	184	eP	Pn	19 06 32.6	-1.4
KAF	Kangasniemi	14.95	113	ep	Pn	19 06 36.1	-3.3
	comp=E,38nm,0.6s						
KAF	Kangasniemi	14.95	113	eP	Pn	19 06 36.1	-3.3
KAF				pmax	pmax		
	comp=Z,39nm,0.6s						
EAB	Aberfoyle	15.27	181	eP	Pn	19 06 42.6	-1.0
EAB	Aberfoyle	15.27	181	eP	Pn	19 06 42.6	-1.0
FIA0	FINESS Array S	15.41	115	P	Pn	19 06 43.5	-2.0
	baz=331,slow=12						
FIA1	FINESS Array S	15.41	115	eP	Pn	19 06 43.2	-2.3
FIA1	FINESS Array S	15.41	115	eP	Pn	19 06 43.2	-2.3
FINES	FINESS Array B	15.41	115	Pn	Pn	19 06 43.3	-2.2
	comp=Z,1.4nm,0.3s,baz=331,slow=11,SNR=42						
FINES				LR	LR	19 12 06.0	
	comp=Z,2μm,19.4s,baz=304,slow=35						
EDI	Edinburgh	15.53	178	eP	Pn	19 06 45.9	-1.2
EDI	Edinburgh	15.53	178	eP	Pn	19 06 45.9	-1.2
EAU	Auchinoon	15.61	179	eP	Pn	19 06 47.0	-1.1
EAU	Auchinoon	15.61	179	eP	Pn	19 06 47.0	-1.1
EBL	Broad Law	15.69	178	eP	Pn	19 06 48.5	-0.7
EBL	Broad Law	15.69	178	eP	Pn	19 06 48.5	-0.7
JOF	Joensuu	15.86	104	ep	Pn	19 06 46.9	-4.4
	comp=Z,22nm,0.5s						
JOF	Joensuu	15.86	104	eP	Pn	19 06 46.9	-4.4
JOF				pmax	pmax		
	comp=Z,22nm,0.5s						
MUD	Monsted U'grnd	16.00	153	iP	Pn	19 06 46.0	-7.2
	comp=Z,24nm,1.1s						
MUD							
	comp=Z,400nm,17.0s						
EKA	Eskdalemuir Ar	16.12	178	Pn	Pn	19 06 53.0	-1.8
	comp=Z,2.4nm,0.3s,baz=355,slow=12,SNR=36						
EKA				Sn	Sn	19 09 42.2	-11
	comp=Z,0.7nm,0.3s,baz=353,slow=26,SNR=4.9						
ESK	Eskdalemuir	16.14	178	eP	Pn	19 06 53.5	-1.5
ESK				pmax	pmax		
	comp=Z,81nm,1.0s						
ESK	Eskdalemuir	16.14	178	eP	Pn	19 06 53.5	-1.5
	comp=Z,81nm,1.0s						
ESK	Eskdalemuir	16.14	178	eP	Pn	19 06 53.5	-1.5
	comp=Z,81nm,1.0s						
BHH	Howats Hill	16.36	178	eP	Pn	19 06 57.5	-0.4
BHH	Howats Hill	16.36	178	eP	Pn	19 06 57.5	-0.4
BBO1	Bothel	16.72	178	eP	Pn	19 07 01.7	-0.7
BBO1	Bothel	16.72	178	eP	Pn	19 07 01.7	-0.7
SFJD	Kangerlussuaq	16.76	278	iP	Pn	19 07 03.1	+0.1
SFJD							
	comp=Z,1μm,17.0s						
SFJD	Kangerlussuaq	16.76	278	eP	Pn	19 07 03.1	+0.1
CKE	Keswick	16.87	178	eP	Pn	19 07 03.8	-0.5
CKE	Keswick	16.87	178	eP	Pn	19 07 03.8	-0.5
XDE	Dent Fell	16.95	179	eP	Pn	19 07 05.2	-0.1
XDE	Dent Fell	16.95	179	eP	Pn	19 07 05.2	-0.1
COP	Copenhagen	17.26	147⇓	iP	Pn	19 07 09.7	+0.5
	comp=Z,137nm,1.5s						
COP							
	comp=Z,340nm,19.0s						
LHO	Holmfirth	17.94	176	eP	Pn	19 07 17.7	+0.1
LHO	Holmfirth	17.94	176	eP	Pn	19 07 17.7	+0.1
PUL	Pulkovo	18.00	113⇑	eP	Pn	19 07 16.9	-1.5
PUL				pmax	pmax		
	comp=Z,116nm,0.9s						
PUL				pmax	pmax		
	comp=N,174nm,1.0s						
PUL				pmax	pmax		
	comp=E,102nm,1.2s						
PUL				MLR	MLR		
	comp=Z,1μm,15.0s						
PUL				MLR	MLR		
	comp=N,1μm,14.0s						
PUL				MLR	MLR		
	comp=E,726nm,13.0s						
PUL	Pulkovo	18.00	113	eP	Pn	19 07 16.9	-1.5
	comp=E,1μm,14.0s						
VSU	Vasula	18.06	120c	iP	Pn	19 07 17.6	-1.5
VSU	Vasula	18.06	120	iP	Pn	19 07 17.6	-1.5
WCB1	Church Bay	18.08	181	eP	Pn	19 07 18.6	-0.8
WCB1				AMb	AMB	19 07 24.9	
	comp=Z,74nm,1.3s						
WCB1	Church Bay	18.08	181	eP	Pn	19 07 18.6	-0.8
WCB1				AMb	AMB	19 07 24.9	
	comp=Z,74nm,1.3s						
WLF1	Llynfaes	18.17	181	eP	Pn	19 07 19.0	-1.4
WLF1	Llynfaes	18.17	181	eP	Pn	19 07 19.0	-1.4
WPM1	Penmaenmawr	18.20	180	eP	Pn	19 07 20.1	-0.7
WPM1	Penmaenmawr	18.20	180	eP	Pn	19 07 20.1	-0.7
YRC	Rhoscolyn	18.21	181	eP	Pn	19 07 20.2	-0.7
YRC				AMb	AMB	19 07 20.8	
	comp=Z,69nm,1.5s						
YRC	Rhoscolyn	18.21	181	eP	Pn	19 07 20.2	-0.7
YRC				AMb	AMB	19 07 20.8	
	comp=Z,69nm,1.5s						
YRE	Yr Eifl	18.48	181	eP	Pn	19 07 22.9	-1.4
YRE				AMb	AMB	19 07 33.8	
	comp=Z,100nm,1.5s						
YRE	Yr Eifl	18.48	181	eP	Pn	19 07 22.9	-1.4
YRE				AMb	AMB	19 07 33.8	
	comp=Z,100nm,1.5s						
BSEG	Bad Segeberg	18.61	153	eP	Pn	19 07 25.9	+0.1
	comp=Z,68nm,1.2s						
BSEG	Bad Segeberg	18.61	153	eP	Pn	19 07 25.9	+0.1
BSEG				pmax	pmax		
	comp=Z,68nm,1.2s						
HLM1	Long Mynd	18.95	178	eP	Pn	19 07 29.0	-0.9
HLM1				AMb	AMB	19 07 33.2	
	comp=Z,91nm,1.9s						
HLM1	Long Mynd	18.95	178	eP	Pn	19 07 29.0	-0.9
HLM1				AMb	AMB	19 07 33.2	
	comp=Z,91nm,1.9s						
HTR	Trewern Hill	19.38	179	eP	Pn	19 07 33.6	-1.6
HTR				AMb	AMB	19 07 38.8	
	comp=Z,56nm,1.3s						
HTR	Trewern Hill	19.38	179	eP	Pn	19 07 33.6	-1.6
HTR				AMb	AMB	19 07 38.8	
	comp=Z,56nm,1.3s						
KLMR	Klimovskoe	19.98	99c	iP	Pn	19 07 39.5	-2.8
KLMR				pmax	pmax		
	comp=Z,280nm,1.6s						
KLMR				MLR	MLR		
	comp=Z,2μm,20.0s						
KLMR	Klimovskoe	19.98	99	iP	Pn	19 07 39.5	-2.8
	comp=Z,2μm,20.0s						
NRDL	Niedersach Rie	19.98	154	eP	Pn	19 07 40.9	-1.4
	comp=Z,42nm,1.1s						
WTSB	Winterswijk	20.09	160	eP	P	19 07 41.5	-0.2
	comp=Z,33nm,1.1s						
GKP	Gorka Klasztor	20.46	142	eP	P	19 07 46.4	+0.7
	comp=Z,0.4nm,1.1s						
GKP				epP		19 07 48.5	
GKP				L		19 15 41.3	
	comp=Z,2.0nm,19.4s						
GKP	Gorka Klasztor	20.46	142	eP	P	19 07 46.4	+0.7
GKP				e*PP		19 07 48.5	
GKP				pmax	pmax		
	comp=Z,400nm,1.1s						
GKP				MLR	MLR		
	comp=Z,2μm,19.4s,MS4.5						
GKP	Gorka Klasztor	20.46	142	eP	P	19 07 46.4	+0.7
	comp=Z,0.4nm,1.1s						
GKP				epP		19 07 48.5	
RUE	Ruedersdorf	20.57	148	eP	P	19 07 47.2	+0.3
	comp=Z,65nm,0.8s						
RUE	Ruedersdorf	20.57	148	eP	P	19 07 47.4	+0.5
	comp=Z,201nm,1.5s						
RUE	Ruedersdorf	20.57	148	eP	P	19 07 47.4	+0.5
	comp=Z,201nm,1.5s						
CLZ	Clausthal	20.66	154	eP	P	19 07 48.2	+0.3
	comp=Z,49nm,1.1s						
CLZ	Clausthal	20.66	154	eP	P	19 07 48.2	+0.3
CLZ				pmax	pmax		
	comp=Z,49nm,1.1s						
BUG	Bochum--Univer	20.66	160	eP	P	19 07 48.1	+0.2
	comp=Z,56nm,1.4s						
UCC	Uccle	21.01	165	P	P	19 07 51.8	0.0
SUW	Suwalki	21.08	131	eP	P	19 07 51.6	-0.8
	comp=Z,0.2nm,1.8s						
SUW				epP		19 07 54.3	
SUW				eS	S	19 11 43.6	-3.1
SUW				L		19 14 49.8	
	comp=Z,1.0nm,25.2s						
SUW	Suwalki	21.08	131	eP	P	19 07 51.6	-0.8
SUW				epP		19 07 54.3	
SUW				eS	S	19 11 43.6	-3.1
MENF	Mencas	21.09	169	eP	P	19 07 52.9	+0.3
BEBN	Eben Emael	21.13	163	P	P	19 07 53.4	+0.4
HGN	Heimansgroeve	21.19	162⇑	eP	P	19 07 54.0	+0.3
	comp=Z,49nm,1.1s,mb4.7						
HGN				eS	S	19 11 44.8	-4.1
SNF	Seneffe	21.29	165	P	P	19 07 55.1	+0.3
MEM	Membach	21.35	162	P	P	19 07 55.6	+0.2
BCLA	Clavier	21.47	164	P	P	19 07 57.0	+0.3
CLL	Collm	21.57	150	eP	P	19 07 57.5	-0.2
	comp=Z,70nm,1.4s,mb4.9						
CLL	Collm	21.57	150	⇑P	P	19 07 57.7	0.0
	comp=Z,logA/T=1.7,mb4.9						
CLL				i *SP	sP	19 08 01.9	-1.3
CLL				eS	S	19 11 56.0	-0.4
CLL	Collm	21.57	150⇑	iP	P	19 07 57.7	0.0
	comp=Z,70nm,1.4s,mb4.9						
CLL				i sP	sP	19 08 01.9	-1.3
CLL				eS	S	19 11 56.0	-0.4
	comp=N,200nm,13.2s						
CLL				eS	S	19 11 56.0	-0.4
	comp=E,400nm,13.6s						
CLL	Collm	21.57	150⇑	iP	P	19 07 57.7	0.0
CLL				eS	S	19 11 56.0	-0.4
CLL				pmax	pmax		
	comp=Z,4.0nm,1.4s						
CLL				MLR	MLR		
	comp=Z,700nm,20.0s						
UBBA	Unterbreizbach	21.61	155	eP	P	19 07 58.4	+0.3
	comp=Z,84nm,1.5s,mb5.0						
DOU	Dourbes	21.73	165	P	P	19 07 59.1	-0.4
BAIF	Baives	21.73	166⇑	iP	P	19 07 59.5	0.0
	comp=Z,48nm,0.8s,mb4.7						
BAIF	Baives	21.73	166⇑	iP	P	19 07 59.5	0.0
BAIF				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.7						
BAIF	Baives	21.73	166⇑	iP	P	19 07 59.5	0.0
	comp=Z,24nm,0.8s,mb4.7						
GIVF	Givet	21.74	165⇑	iP	P	19 07 59.6	0.0
	comp=Z,137nm,1.3s,mb4.9						
GIVF	Givet	21.74	165⇑	iP	P	19 07 59.6	0.0
GIVF				pmax	pmax		
	comp=Z,69nm,1.3s,mb4.9						
GIVF	Givet	21.74	165⇑	iP	P	19 07 59.6	0.0
	comp=Z,69nm,1.3s,mb4.9						
MNK	Minsk	21.82	124	eP	P	19 07 58.0	-2.4
MNK				pmax	pmax		
	comp=Z,200nm,1.2s,mb5.4						
MNK				pmax	pmax		
	comp=N,370nm,1.6s						
FBE	Freiberg	22.00	150	eP	P	19 08 01.9	-0.5
	comp=Z,95nm,1.2s,mb5.1						
MOX	Moxa	22.00	153	eP	P	19 08 02.3	-0.1
	comp=Z,112nm,1.5s,mb5.1						
MOX	Moxa	22.00	153⇓	iP	P	19 08 03.0	+0.6
	comp=Z,125nm,1.6s,mb5.1						
MOX				e		19 08 16.5	
MOX							
	comp=Z,500nm,19.0s						
MOX	Moxa	22.00	153⇓	iP	P	19 08 03.0	+0.6
MOX				pmax	pmax		
	comp=Z,125nm,1.6s,mb5.1						
MOX				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.0						
BRG	Berggiesshubel	22.14	149	eP	P	19 08 02.9	-1.0
	comp=Z,48nm,1.1s,mb4.8						
BRG	Berggiesshubel	22.14	149	eP	P	19 08 03.5	-0.3
	comp=Z,29nm,1.1s,mb4.6						
BRG				ePP		19 08 23.7	
	comp=Z,14nm,1.1s						
BRG				S	S	19 12 05.0	-2.6
BRG				SS		19 12 30.0	
BRG							
	comp=N,312nm,29.8s						
BRG							
	comp=E,110nm,21.9s						
BRG							
	comp=Z,416nm,26.7s						
BRG	Berggiesshubel	22.14	149	eP	P	19 08 03.5	-0.4
BRG				S	S	19 12 05.0	-2.6
BRG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,29nm,1.1s						

BRG MLR MLR
comp=N,14µm,29.8s
BRG MLR MLR
comp=E,312nm,21.9s
BRG MLR MLR
comp=Z,110nm,26.7s
BRG Berggiesshubel 22.14 149 *e*P **P 19 08 03.5 -0.3**
comp=Z,29nm,1.1s,mb4.6
BRG *e*PP 19 08 23.7
BRG S **S** **19 12 05.0 -2.6**
BRG SS 19 12 30.0
BRG LR LR
comp=Z,420nm,26.7s,MS3.7
WAR Warsaw 22.22 137 *e*P **P 19 08 05.0 +0.3**
comp=Z,1.0nm,2.0s
WAR L 19 16 17.9
comp=Z,1.3nm,21.1s
WERD Werda 22.30 152 *e*P **P 19 08 05.5 0.0**
comp=Z,49nm,0.9s,mb4.9
WLF Walferdange 22.30 162 *e*P **P 19 08 05.8 +0.3**
comp=Z,42nm,1.4s,mb4.7
WLF Walferdange 22.30 162 P **P 19 08 06.1 +0.6**
WLF Walferdange 22.30 162 *e*P **P 19 08 05.9 +0.4**
WLF pmax pmax
comp=Z,29nm,1.1s,mb4.6
WLF Walferdange 22.30 162 *e*P **P 19 08 05.9 +0.4**
comp=Z,30nm,1.1s,mb4.6
TANN Tannenbergstha 22.35 152 *e*P **P 19 08 06.1 0.0**
comp=Z,448nm,3.0s
GUNZ Gunzen 22.38 152 *e*P **P 19 08 06.4 0.0**
comp=Z,55nm,1.0s,mb4.9
WERN Wernitzgruen 22.46 152 *e*P **P 19 08 07.5 +0.2**
comp=Z,98nm,1.2s,mb5.1
NKC Novy Kostel 22.53 152 *e*P **P 19 08 08.4 +0.4**
NKC *e*S **S** **19 12 18.4 +3.4**
NKC AMS AMS 19 18 40.0
comp=Z,700nm,14.3s
NKC Novy Kostel 22.53 152 *e*P **P 19 08 08.4 +0.4**
NKC *e*S **S** **19 12 18.4 +3.4**
PVCC Panska Ves 22.58 148 *e*P **P 19 08 08.4 -0.2**
PVCC AMS AMS 19 14 50.0
comp=Z,700nm,29.5s
KSP Ksiaz 22.59 145 *e*P **P 19 08 08.9 +0.3**
comp=Z,0.5nm,1.8s
KSP L 19 15 03.2
comp=Z,1.3nm,27.5s
KSP Ksiaz 22.59 145⇑ *e*P **P 19 08 08.7 +0.1**
KSP *e*S **S** **19 12 18.5 +2.3**
MANZ Manzenberg 22.72 152 *e*P **P 19 08 09.9 -0.1**
comp=Z,34nm,1.3s,mb4.6
FLN La Foliniere 22.76 174⇑ *i*P **P 19 08 09.1 -1.3**
comp=Z,355nm,1.4s,mb5.3
FLN *e*R
comp=Z,471nm,20.8s
FLN La Foliniere 22.76 174⇑ *i*P **P 19 08 09.1 -1.3**
FLN pmax pmax
comp=Z,178nm,1.4s,mb5.3
FLN MLR MLR
comp=Z,470nm,20.8s,MS3.9
FLN La Foliniere 22.76 174⇑ *i*P **P 19 08 09.1 -1.3**
comp=Z,178nm,1.4s,mb5.3
FLN LR LR
comp=Z,470nm,20.8s,MS3.9
UPC Upice 22.86 146 *e*P **P 19 08 11.5 +0.1**
GRA1 Grafenberg Arr 22.88 154 *e*P **P 19 08 11.9 +0.3**
comp=Z,48nm,1.1s,mb4.8
GRA1 LR LR
comp=Z,600nm,37.5s,MS3.8
GRF Grafenberg Arr 22.88 154 *e*P **P 19 08 11.9 +0.3**
comp=Z,48nm,1.1s,mb4.8
GRF *e*L 19 14 46.1
comp=Z,582nm,37.5s
GRF Grafenberg Arr 22.88 154 *e*P **P 19 08 11.9 +0.3**
GRF pmax pmax
comp=Z,48nm,1.1s,mb4.8
GRF MLR MLR
comp=Z,600nm,37.5s,MS3.8
GRF Grafenberg Arr 22.88 154 *e*P **P 19 08 11.9 +0.3**
GRF pmax pmax
comp=Z,48nm,1.1s,mb4.8
GRF MLR MLR
comp=Z,600nm,37.5s,MS3.8
LDF La Druitiere 22.94 173⇑ *i*P **P 19 08 11.1 -1.3**
comp=Z,362nm,1.4s,mb5.3
LDF La Druitiere 22.94 173⇑ *i*P **P 19 08 11.1 -1.3**
LDF pmax pmax
comp=Z,181nm,1.4s,mb5.3
LDF La Druitiere 22.94 173⇑ *i*P **P 19 08 11.1 -1.3**
comp=Z,181nm,1.4s,mb5.3
ROTZ Rotzenmuhle 22.95 152 *e*P **P 19 08 12.2 -0.2**
comp=Z,17nm,1.0s,mb4.4
DPC Dobruska-Polom 23.06 145 *e*P **P 19 08 14.0 +0.4**
DPC *e*S **S** **19 12 28.5 +4.3**
DPC AMS AMS 19 18 40.0
comp=Z,900nm,14.4s
PRU Pruhonice 23.10 148 *e*P **P 19 08 14.6 +0.6**
PRU *e*S **S** **19 12 27.3 +2.5**
PRU AMS AMS 19 16 00.0
comp=Z,600nm,21.5s
GRR Gorron 23.12 175 *e*P **P 19 08 12.8 -1.5**
comp=Z,240nm,1.3s,mb5.2
GRR Gorron 23.12 175 *e*P **P 19 08 12.8 -1.5**
GRR pmax pmax
comp=Z,120nm,1.3s,mb5.2
GRR Gorron 23.12 175 *e*P **P 19 08 12.8 -1.5**
comp=Z,120nm,1.3s,mb5.2
ROSF Rostrenen 23.13 179 *e*P **P 19 08 12.5 -1.9**
comp=Z,198nm,1.3s,mb5.1
ROSF Rostrenen 23.13 179 *e*P **P 19 08 12.5 -1.9**
ROSF pmax pmax
comp=Z,99nm,1.3s,mb5.1
ROSF Rostrenen 23.13 179 *e*P **P 19 08 12.5 -1.9**
comp=Z,99nm,1.3s,mb5.1
LANF Langenberg 23.14 160 *e*P **P 19 08 15.4 +0.9**
SGMF Saint Gilles 23.22 178 *e*P **P 19 08 14.1 -1.2**
comp=Z,124nm,1.1s,mb4.9
SGMF Saint Gilles 23.22 178 *e*P **P 19 08 14.1 -1.2**
SGMF pmax pmax
comp=Z,62nm,1.1s,mb5.0
SGMF Saint Gilles 23.22 178 *e*P **P 19 08 14.1 -1.2**
comp=Z,62nm,1.1s,mb5.2
MEZF Maizieres J'vi 23.35 165⇑ *i*P **P 19 08 16.7 0.0**
STU Stuttgart 23.51 158 *e*P **P 19 08 18.5 +0.1**
comp=Z,60nm,1.4s,mb4.8
STU Stuttgart 23.51 158 *e*P **P 19 08 18.9 +0.5**
STU pmax pmax
comp=Z,26nm,0.9s,mb4.7
STU Stuttgart 23.51 158 *e*P **P 19 08 18.9 +0.5**
comp=Z,26nm,0.9s,mb4.7
MOS Moscow 23.54 110 *e*P **P 19 08 17.0 -1.6**
MOS *e* 19 08 23.3
MOS *e* 19 08 47.2
MOS pmax pmax
comp=Z,400nm,3.0s
MOS MLR MLR
comp=N,2µm,17.0s
MOS MLR MLR
comp=Z,2µm,17.0s,MS4.7
QUIF Quistinic 23.55 179 *e*P **P 19 08 17.4 -1.3**
comp=Z,270nm,1.5s,mb5.2
QUIF Quistinic 23.55 179 *e*P **P 19 08 17.4 -1.3**
QUIF pmax pmax
comp=Z,135nm,1.5s,mb5.2
QUIF Quistinic 23.55 179 *e*P **P 19 08 17.4 -1.3**
comp=Z,135nm,1.5s,mb5.2
CDF Champ du Feu 23.65 161⇑ *i*P **P 19 08 20.3 +0.7**
comp=Z,84nm,1.4s,mb4.7
CDF Champ du Feu 23.65 161⇑ *i*P **P 19 08 20.3 +0.7**
CDF pmax pmax
comp=Z,42nm,1.4s,mb4.7
CDF Champ du Feu 23.65 161⇑ *i*P **P 19 08 20.3 +0.7**
comp=Z,42nm,1.4s,mb4.7
WET Wettzell 23.65 152 *e*P **P 19 08 20.3 +0.6**
comp=Z,74nm,1.6s,mb4.9
WET Wettzell 23.65 152 *e*P **P 19 08 20.3 +0.6**
WET pmax pmax
comp=Z,74nm,1.6s,mb4.9
WLS Welschbruch 23.66 161 *e*P **P 19 08 20.2 +0.5**
RAC Raciborz 23.67 143 *e*P **P 19 08 19.9 +0.1**
RAC MLR MLR
comp=Z,2µm,15.2s,MS4.6
THEF They Montfort 23.71 163 *e*P **P 19 08 21.1 +1.0**
OBN Obninsk 23.76 112 *c i*P **P 19 08 19.4 -1.2**
OBN *e* 19 12 03.5
OBN *e*S **S** **19 12 36.7 +1.3**
OBN pmax pmax
comp=Z,113nm,2.0s,mb5.0
OBN MLR MLR
comp=Z,1µm,16.0s,MS4.5
OBN Obninsk 23.76 112 *e*P **P 19 08 19.7 -0.9**
comp=Z,91nm,0.9s,mb5.2
KHC Kasperske Hory 23.77 151 *e*P **P 19 08 21.8 +1.0**
KHC *ex* 19 08 33.0
KHC *e*S **S** **19 12 41.9 +6.2**
KHC AMS AMS 19 15 30.0
comp=Z,500nm,20.4s
ECH Echery 23.83 161 *e*P **P 19 08 22.1 +0.8**
MORC Moravsky Berou 23.84 144⇓ *i*P **P 19 08 21.6 +0.2**
MORC Moravsky Berou 23.84 144 *e*P **P 19 08 20.9 -0.5**
MORC pmax pmax
comp=Z,56nm,1.5s,mb4.8
MORC Moravsky Berou 23.84 144 *e*P **P 19 08 20.9 -0.5**
comp=Z,56nm,1.5s,mb4.8
MORC Moravsky Berou 23.84 144 *e*P **P 19 08 21.1 -0.3**
BFO Black Forest 23.84 159 *e*P **P 19 08 21.9 +0.5**
comp=Z,68nm,1.3s,mb4.9
BFO Black Forest 23.84 159 *e*P **P 19 08 21.9 +0.5**
BFO pmax pmax
comp=Z,68nm,1.3s,mb4.9
OJC Ojcow 23.86 140⇑ *i*P **P 19 08 21.3 -0.3**
OJC *e* 19 08 56.6
OJC *e*S **S** **19 12 40.8 +3.6**
OJC MLR MLR
comp=Z,11µm,18.0s
OKC Ostrava-Krasne 23.90 143 *e*P **P 19 08 22.2 +0.3**
OKC *e*S **S** **19 12 46.5 +8.8**
OKC AMS AMS 19 19 00.0
comp=Z,1µm,14.4s
OKC Ostrava-Krasne 23.90 143 *e*P **P 19 08 22.2 +0.3**
OKC *e*S **S** **19 12 46.5 +8.8**
TREC Trest 23.93 147 *e*P **P 19 08 22.9 +0.7**
TREC AMS AMS 19 16 40.0
comp=Z,700nm,22.3s
HAU Haudompre 23.96 163⇑ *i*P **P 19 08 22.9 +0.4**
comp=Z,40nm,1.1s,mb4.5
HAU *e*R
comp=Z,765nm,21.5s
HAU Haudompre 23.96 163⇑ *i*P **P 19 08 22.9 +0.4**
HAU pmax pmax
comp=Z,20nm,1.1s,mb4.5
HAU MLR MLR
comp=Z,770nm,21.5s,MS4.1
HAU Haudompre 23.96 163⇑ *i*P **P 19 08 22.9 +0.4**
comp=Z,20nm,1.1s,mb4.5
HAU LR LR
comp=Z,770nm,21.5s,MS4.1
GEC2 GERESS Array S 24.07 151 *e*P **P 19 08 24.3 +0.8**
comp=Z,44nm,1.3s,mb4.7
GEC2 GERESS Array S 24.07 151 *e*P **P 19 08 24.3 +0.8**
GEC2 pmax pmax
comp=Z,44nm,1.3s,mb4.7
GERES GERESS Array B 24.07 151 P **P 19 08 23.7 +0.2**
comp=Z,6.2nm,0.8s,mb4.1,baz=352,slow=8.1,SNR=50
GERES LR LR 19 17 20.0
comp=Z,458nm,21.1s,MS3.9,baz=175,slow=35
VRAC Vranov 24.11 146 P **P 19 08 23.8 0.0**
comp=Z,14nm,0.7s,mb4.5,baz=342,slow=9.6,SNR=32
VRAC LR LR 19 18 17.1
comp=Z,499nm,18.0s,MS4.0,baz=349,slow=38
VRAC Vranov 24.11 146⇑ *i*P **P 19 08 24.6 +0.7**
VRAC Vranov 24.11 146 P **P 19 08 23.8 -0.1**
VRAC pmax pmax
comp=Z,14nm,0.7s
VRAC MLR MLR
comp=Z,499nm,18.0s
VRAC Vranov 24.11 146⇑ *e*P **P 19 08 24.6 +0.8**
SPAK Spaichingen-Ko 24.12 159 *e*P **P 19 08 25.0 +1.1**
MOF Molkenrain 24.19 162 *e*P **P 19 08 24.5 -0.1**
HINF Hinteralfeld 24.20 162⇑ *i*P **P 19 08 25.0 +0.4**
comp=Z,122nm,1.7s,mb4.7
HINF Hinteralfeld 24.20 162⇑ *i*P **P 19 08 25.0 +0.4**
HINF pmax pmax
comp=Z,61nm,1.7s,mb4.8
HINF Hinteralfeld 24.20 162⇑ *i*P **P 19 08 25.0 +0.4**
comp=Z,61nm,1.7s,mb4.8
FELD Feldberg im Sc 24.26 160 *e*P **P 19 08 25.2 0.0**
FUR Furstenfeldbru 24.38 155 *e*P **P 19 08 28.7 +2.4**
comp=Z,73nm,1.1s,mb5.0
FUR Furstenfeldbru 24.38 155 *e*P **P 19 08 28.7 +2.4**
FUR pmax pmax
comp=Z,73nm,1.1s,mb5.0
HYF Humbligny 24.40 169 *e*P **P 19 08 26.6 +0.1**
LOR Lormes 24.48 167⇑ *i*P **P 19 08 27.3 +0.1**
comp=Z,134nm,1.2s,mb5.0
LOR *e*R
comp=Z,412nm,22.8s
LOR Lormes 24.48 167⇑ *i*P **P 19 08 27.3 +0.1**
LOR pmax pmax
comp=Z,67nm,1.2s,mb5.0
LOR MLR MLR
comp=Z,410nm,22.8s,MS3.9
LOR Lormes 24.48 167⇑ *i*P **P 19 08 27.3 +0.1**
comp=Z,67nm,1.2s,mb5.0
LOR LR LR
comp=Z,410nm,22.8s,MS3.9
BBS Basel-Blauen 24.61 161 *e*P **P 19 08 28.6 +0.2**
LOMF Lomont 24.65 162 *e*P **P 19 08 29.7 +0.9**
SSF Saint Saulge 24.66 168⇑ *i*P **P 19 08 28.8 -0.1**
comp=Z,115nm,1.2s,mb5.0
SSF Saint Saulge 24.66 168⇑ *i*P **P 19 08 28.8 -0.1**
SSF pmax pmax
comp=Z,57nm,1.2s,mb5.0
SSF Saint Saulge 24.66 168⇑ *i*P **P 19 08 28.8 -0.1**
comp=Z,57nm,1.2s,mb5.0
NIE Niedzica 24.73 140 *e*P **P 19 08 30.2 +0.7**
LCHF La Chataignera 24.85 175 *e*P **P 19 08 30.9 +0.4**
LRYF La Roche-sur-Y 24.91 176 *e*P **P 19 08 31.7 +0.5**
AVF Avril sur Loir 24.92 168⇑ *i*P **P 19 08 31.2 -0.1**
comp=Z,63nm,1.1s,mb4.8
AVF Avril sur Loir 24.92 168⇑ *i*P **P 19 08 31.2 -0.1**
AVF pmax pmax
comp=Z,32nm,1.1s,mb4.8
AVF Avril sur Loir 24.92 168⇑ *i*P **P 19 08 31.2 -0.1**
comp=Z,32nm,1.1s,mb4.8
STHS Stebnicka Huta 24.93 139 *e*P **P 19 08 33.0 +1.7**
STHS pmax pmax
comp=Z,28nm,1.1s,mb4.7
STHS Stebnicka Huta 24.93 139 *e*P **P 19 08 33.0 +1.7**
comp=Z,28nm,1.1s,mb4.7
MFF Saint Martin d 24.93 174⇑ *i*P **P 19 08 32.3 +1.0**
comp=Z,81nm,0.9s,mb5.0
MFF Saint Martin d 24.93 174⇑ *i*P **P 19 08 32.3 +1.0**
MFF pmax pmax
comp=Z,40nm,0.9s,mb5.0
MFF Saint Martin d 24.93 174⇑ *i*P **P 19 08 32.3 +1.0**
comp=Z,40nm,0.9s,mb5.0
SMOL Smolenice 25.03 145 *e*P **P 19 08 33.1 +0.9**
DAVA Damuels 25.06 157⇑ *i*P **P 19 08 34.0 +1.5**
comp=Z,47nm,1.6s,mb4.8,SNR=9.8
SMF Signal de Mont 25.10 167⇑ *i*P **P 19 08 32.8 -0.1**
comp=Z,114nm,1.0s,mb5.1
SMF Signal de Mont 25.10 167⇑ *i*P **P 19 08 32.8 -0.1**
SMF pmax pmax
comp=Z,57nm,1.0s,mb5.1
SMF Signal de Mont 25.10 167⇑ *i*P **P 19 08 32.8 -0.1**
comp=Z,57nm,1.0s,mb5.1
BGF Bois d'Agland 25.12 169⇑ *i*P **P 19 08 33.0 -0.1**
comp=Z,86nm,0.9s,mb5.0
BGF Bois d'Agland 25.12 169⇑ *i*P **P 19 08 33.0 -0.1**
BGF pmax pmax
comp=Z,43nm,0.9s,mb5.0
BGF Bois d'Agland 25.12 169⇑ *i*P **P 19 08 33.0 -0.1**
comp=Z,43nm,0.9s,mb5.0
MOA Molln 25.13 150⇑ *i*P **P 19 08 33.6 +0.5**
comp=Z,55nm,1.6s,mb4.8,SNR=15
MOTA Moosalm 25.16 155⇑ *i*P **P 19 08 34.5 +1.2**
comp=Z,52nm,1.4s,mb4.9,SNR=13
MOTA Moosalm 25.16 155⇑ *i*P **P 19 08 34.5 +1.1**
MOTA pmax pmax
comp=Z,52nm,1.4s,mb4.9
LVV L'vov 25.16 134 *i*P **P 19 08 30.9 -2.5**
LVV *e*S **S** **19 12 53.5 -4.6**
LVV *e* 19 12 56.7
LVV MLR MLR
comp=N,800nm,14.0s,MS4.4
LVV MLR MLR
comp=E,100nm,14.0s,MS4.4
LVV MLR MLR
comp=Z,800nm,14.0s,MS4.4
WATA Walderalm 25.23 155⇓ *i*P **P 19 08 35.3 +1.3**
comp=Z,58nm,1.3s,mb4.9,SNR=18
WATA Walderalm 25.23 155⇓ *i*P **P 19 08 35.3 +1.3**
WATA pmax pmax
comp=Z,58nm,1.3s,mb5.0
ZST Bratislava 25.28 146 *e*P **P 19 08 35.4 +0.9**
comp=Z,94nm,1.7s,mb5.0
ZST LR LR
comp=Z,700nm,14.6s,MS4.3
SQTA Sankt Quirin 25.29 155⇑ *i*P **P 19 08 36.0 +1.4**
comp=Z,64nm,1.4s,mb5.0,SNR=23
SQTA Sankt Quirin 25.29 155⇑ *i*P **P 19 08 36.0 +1.4**
SQTA pmax pmax
comp=Z,64nm,1.4s,mb5.0
WTTA Wattenberg 25.31 155 *i*P **P 19 08 36.1 +1.3**
comp=Z,141nm,1.4s,mb5.3,SNR=32
WTTA Wattenberg 25.31 155 *i*P **P 19 08 36.1 +1.3**
WTTA pmax pmax
comp=Z,141nm,1.4s,mb5.3
VYHS Vyhne 25.32 143 *e*P **P 19 08 35.2 +0.4**
VYHS pmax pmax
comp=Z,19nm,1.2s,mb4.5
VYHS Vyhne 25.32 143 *e*P **P 19 08 35.2 +0.4**
comp=Z,18nm,1.2s,mb4.5
CONA Conrad Observa 25.32 148 *i*P **P 19 08 35.6 +0.8**
comp=Z,86nm,1.1s,mb5.2,SNR=40
CABF La Chapelle 25.32 164⇑ *i*P **P 19 08 35.2 +0.4**
comp=Z,183nm,1.5s,mb5.1
CABF La Chapelle 25.32 164⇑ *i*P **P 19 08 35.2 +0.4**
CABF pmax pmax
comp=Z,92nm,1.5s,mb5.1
CABF La Chapelle 25.32 164⇑ *i*P **P 19 08 35.2 +0.4**
comp=Z,92nm,1.5s,mb5.1
TCF Toulx Ste Croi 25.35 170⇑ *i*P **P 19 08 35.0 -0.2**
comp=Z,78nm,1.0s,mb4.9
TCF Toulx Ste Croi 25.35 170⇑ *i*P **P 19 08 35.0 -0.2**
TCF pmax pmax
comp=Z,39nm,1.0s,mb4.9
TCF Toulx Ste Croi 25.35 170⇑ *i*P **P 19 08 35.0 -0.2**
comp=Z,39nm,1.0s,mb4.9
CRVS Cervenica-Dubn 25.46 139 *e*P **P 19 08 37.7 +1.6**
KOLS Kolonicke sedl 25.60 138 *e*P **P 19 08 38.0 +0.6**
AKASG Malin Array Be 25.62 126 P **P 19 08 36.0 -1.5**
comp=Z,20nm,0.7s,mb4.7,baz=334,slow=9.2,SNR=26
AKBB Malin Array Si 25.62 126 *e*P **P 19 08 36.6 -1.0**
AGO Saint Agoulin 25.64 168 *e*P **P 19 08 38.5 +0.7**
KECS Kecovo 25.65 140 *e*P **P 19 08 37.7 -0.2**
KECS pmax pmax
comp=Z,11nm,1.0s,mb4.3
KECS Kecovo 25.65 140 *e*P **P 19 08 37.7 -0.2**
comp=Z,11nm,1.0s,mb4.3
SOP Sopron 25.67 147⇓ *e*P **P 19 08 41.1 +3.0**
KBA Koelnbreinsper 25.74 152⇑ *i*P **P 19 08 40.2 +1.5**
comp=Z,48nm,1.1s,mb5.0
KBA Koelnbreinsper 25.74 152⇑ *i*P **P 19 08 40.2 +1.6**
KBA pmax pmax
comp=Z,48nm,1.0s,mb5.0
PLDF La Plantade 25.76 168 *e*P **P 19 08 38.9 +0.1**
TUE Stuetta 25.79 158 P **P 19 08 40.9 +1.7**
VERF Verneugheol 25.91 170 *e*P **P 19 08 40.4 +0.2**
ARSA Arzberg 25.92 149⇑ *i*P **P 19 08 41.5 +1.3**
comp=Z,24nm,0.9s,mb4.7,SNR=6.8
BRMO Bormio 25.92 157 P **P 19 08 42.2 +1.9**
PYM Petit Puy Mans 25.94 169 *e*P **P 19 08 41.2 +0.7**
PSZ Piszkesteto 26.07 142⇓ *e*P **P 19 08 42.6 +0.9**
PSZ Piszkesteto 26.07 142⇓ *i*P **P 19 08 42.9 +1.2**
PSZ Piszkesteto 26.07 142 *e*P **P 19 08 42.1 +0.4**
PSZ pmax pmax
comp=Z,45nm,1.3s,mb4.8
PSZ Piszkesteto 26.07 142 *e*P **P 19 08 42.1 +0.4**
comp=Z,45nm,1.3s,mb4.8
FVI Forni Avoltri 26.12 153 P **P 19 08 43.3 +1.2**
FVI pmax pmax
comp=Z,21nm,1.1s,mb4.6
FVI Forni Avoltri 26.12 153 P **P 19 08 43.3 +1.2**
comp=Z,21nm,1.1s,mb5.0
COLF Collangettes 26.21 168 *e*P **P 19 08 43.7 +0.7**
FRNF Fournols 26.27 170 *e*P **P 19 08 43.9 +0.4**
RJF Les Rejaudoux 26.30 171⇑ *i*P **P 19 08 43.7 0.0**
comp=Z,199nm,1.0s,mb5.3
RJF *e*R
comp=Z,496nm,20.8s
RJF Les Rejaudoux 26.30 171⇑ *i*P **P 19 08 43.7 0.0**
RJF pmax pmax
comp=Z,100nm,1.0s,mb5.3
RJF MLR MLR
comp=Z,500nm,20.8s,MS4.0
RJF Les Rejaudoux 26.30 171⇑ *i*P **P 19 08 43.7 0.0**
comp=Z,100nm,1.0s,mb5.3
RJF LR LR
comp=Z,500nm,20.8s,MS4.0
BUD Budapest 26.32 143⇑ *e*P **P 19 08 45.0 +1.1**
MABI Malga Bissina 26.35 157 P **P 19 08 45.8 +1.6**
LPL La Plagne 26.46 163⇑ *i*P **P 19 08 46.3 +1.1**
comp=Z,21nm,0.9s,mb4.4
LPL La Plagne 26.46 163⇑ *i*P **P 19 08 46.3 +1.1**
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
LPL La Plagne 26.46 163⇑ *i*P **P 19 08 46.3 +1.1**
comp=Z,10nm,0.9s,mb4.4
LBL Lubilhac 26.47 168 *e*P **P 19 08 45.7 +0.4**
ORO Oropa 26.48 161 P **P 19 08 47.3 +2.0**
ORO pmax pmax
comp=Z,4.0nm,0.2s,mb4.6
ORO Oropa 26.48 161 P **P 19 08 47.3 +2.0**
comp=Z,3.6nm,0.2s,mb4.6
LPG La Plagne 26.48 163⇑ *i*P **P 19 08 46.6 +1.2**
comp=Z,80nm,1.4s,mb4.8
LPG La Plagne 26.48 163⇑ *i*P **P 19 08 46.6 +1.2**
LPG pmax pmax
comp=Z,40nm,1.4s,mb4.8
LPG La Plagne 26.48 163⇑ *i*P **P 19 08 46.6 +1.2**
comp=Z,40nm,1.4s,mb4.8
SOKR Solikamsk 26.50 85*c i*P **P 19 08 45.2 -0.3**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb4.7
LFF La Frestale 26.63 172⇑ *i*P **P 19 08 46.8 +0.1**
comp=Z,106nm,1.2s,mb5.0
LFF La Frestale 26.63 172⇑ *i*P **P 19 08 46.8 +0.1**
LFF pmax pmax
comp=Z,53nm,1.2s,mb5.0
LFF La Frestale 26.63 172⇑ *i*P **P 19 08 46.8 +0.1**
comp=Z,53nm,1.2s,mb5.0
CAF Calviac 26.70 170⇑ *i*P **P 19 08 47.5 +0.1**
comp=Z,70nm,1.1s,mb4.8
CAF Calviac 26.70 170⇑ *i*P **P 19 08 47.5 +0.1**
CAF pmax pmax
comp=Z,35nm,1.1s,mb4.8
CAF Calviac 26.70 170⇑ *i*P **P 19 08 47.5 +0.1**
comp=Z,35nm,1.1s,mb4.8
BNI Bardonecchia 26.92 163 *e*P **P 19 08 49.5 +0.2**
BNI pmax pmax
comp=Z,29nm,1.4s,mb4.6
BNI Bardonecchia 26.92 163 *e*P **P 19 08 49.5 +0.2**
comp=Z,28nm,1.4s,mb4.6
VIVF Saint-Julien-l 26.94 166⇑ *i*P **P 19 08 50.0 +0.5**
comp=Z,42nm,1.1s,mb4.6
VIVF Saint-Julien-l 26.94 166⇑ *i*P **P 19 08 50.0 +0.5**
VIVF pmax pmax
comp=Z,21nm,1.1s,mb4.6
VIVF Saint-Julien-l 26.94 166⇑ *i*P **P 19 08 50.0 +0.5**
comp=Z,21nm,1.1s,mb4.6
ORIF Oris-en-Rattie 26.98 164⇑ *i*P **P 19 08 50.4 +0.5**
comp=Z,66nm,1.2s,mb4.7
ORIF *e*R
comp=Z,758nm,22.2s
ORIF Oris-en-Rattie 26.98 164⇑ *i*P **P 19 08 50.4 +0.5**
ORIF pmax pmax
comp=Z,33nm,1.2s,mb4.7
ORIF Oris-en-Rattie 26.98 164⇑ *i*P **P 19 08 50.4 +0.5**
comp=Z,33nm,1.2s,mb4.7
MBDF Montbardon 27.25 163⇑ *i*P **P 19 08 53.7 +1.4**
comp=Z,106nm,1.3s,mb4.9
MBDF Montbardon 27.25 163⇑ *i*P **P 19 08 53.7 +1.4**
MBDF pmax pmax
comp=Z,53nm,1.3s,mb4.9
MBDF Montbardon 27.25 163⇑ *i*P **P 19 08 53.7 +1.4**
comp=Z,53nm,1.3s,mb4.9
PKSM Moragy 27.47 145⇓ *i*P **P 19 08 54.8 +0.5**
PKSM Moragy 27.47 145⇓ *e*P **P 19 08 54.8 +0.5**
BURAR Bucovina Array 27.50 134⇓ *i*P **P 19 08 56.1 +1.5**
BURAR Bucovina Array 27.50 134⇓ *e*P **P 19 08 56.1 +1.5**
LASF Ste Croix 27.66 168 *e*P **P 19 08 57.1 +1.1**
comp=Z,105nm,1.5s,mb5.0
DRGR 27.73 138⇓ *i*P **P 19 08 57.7 +1.1**
DRGR 27.73 138⇓ *e*P **P 19 08 57.6 +1.1**
VRSR Storozhevoye 27.93 113 *e*P **P 19 08 57.6 -0.8**
VRSR pmax pmax
comp=Z,20nm,0.9s,mb4.8

VRSR pmax pmax
comp=N,50nm,1.0s
VRSR pmax pmax
comp=E,10.0nm,0.8s
VRSR MLR MLR
comp=N,670nm,17.0s,MS4.4
VRSR MLR MLR
comp=Z,990nm,17.0s,MS4.5
VRSR MLR MLR
comp=E,450nm,16.0s,MS4.4
EARI Arriondas 28.17 182 P **P** **19 09 01.5 +0.9**
comp=E,73nm,1.4s,mb5.1
EPON Pontenova 28.18 185 P **P** **19 09 02.6 +1.9**
comp=E,78nm,1.3s,mb5.2
VLC Villacollemand 28.20 158 *e*P **P** **19 09 02.1 +1.3**
comp=E,73nm,1.2s,mb5.2
ELAN Lanestosa 28.24 179 P **P** **19 09 00.6 -0.5**
comp=E,62nm,1.6s,mb5.0
EALK Alkurruntz 28.27 176 P **P** **19 09 01.8 +0.3**
comp=E,55nm,1.1s,mb5.1
MTLF Montolieu 28.29 170⇑ *i*P **P** **19 09 02.3 +0.7**
comp=E,66nm,1.3s,mb4.8
MTLF Montolieu 28.29 170⇑ *i*P **P** **19 09 02.3 +0.7**
MTLF pmax pmax
comp=Z,33nm,1.3s,mb4.8
MTLF Montolieu 28.29 170⇑ *i*P **P** **19 09 02.3 +0.7**
comp=Z,33nm,1.3s,mb4.8
ELIZ Elizondo 28.33 176 P **P** **19 09 01.2 -0.7**
ELIZ pmax pmax
comp=Z,18nm,0.9s,mb4.7
ELIZ Elizondo 28.33 176 P **P** **19 09 01.2 -0.8**
comp=Z,18nm,0.9s,mb4.7
SJPF Ste Jean 28.39 176 *e*P **P** **19 09 02.3 -0.2**
comp=E,51nm,1.2s,mb4.7
SJPF Ste Jean 28.39 176 *e*P **P** **19 09 02.3 -0.2**
SJPF pmax pmax
comp=Z,25nm,1.2s,mb4.7
SJPF Ste Jean 28.39 176 *e*P **P** **19 09 02.3 -0.2**
comp=Z,25nm,1.2s,mb4.7
EPF Esparros 28.52 173⇑ *i*P **P** **19 09 03.6 0.0**
comp=Z,113nm,1.0s,mb5.2
EPF Esparros 28.52 173⇑ *i*P **P** **19 09 03.6 0.0**
EPF pmax pmax
comp=Z,57nm,1.0s,mb5.3
EPF Esparros 28.52 173⇑ *i*P **P** **19 09 03.6 0.0**
comp=Z,56nm,1.0s,mb5.2
MLS Moulis 28.62 172 *e*P **P** **19 09 04.9 +0.4**
BZS Buzias 28.62 141 ⇓ *i*P **P** **19 09 05.8 +1.2**
VIEF Viey 28.65 174 *e*P **P** **19 09 06.2 +1.4**
STS Santiago 28.67 187 P **P** **19 09 00.7 -4.3**
STS pmax pmax
comp=Z,45nm,1.2s,mb5.1
STS Santiago 28.67 187 P **P** **19 09 00.7 -4.3**
comp=Z,45nm,1.2s,mb5.1
RESF Ens 28.74 173 *e*P **P** **19 09 07.3 +1.7**
EBIE Bielsa 28.85 174 P **P** **19 09 07.3 +0.7**
comp=Z,45nm,1.0s,mb5.2
VALF Valcebollere 29.22 171 *e*P **P** **19 09 11.2 +1.4**
VRI Vrincioaia 29.50 134 ⇓ *i*P **P** **19 09 13.7 +1.3**
VRI Vrincioaia 29.50 134 ⇓ P **P** **19 09 13.7 +1.3**
ECAL Calabor 29.56 184 P **P** **19 09 09.6 -3.3**
comp=Z,34nm,1.3s,mb4.9
ARU Arti 29.58 87 *e*P **P** **19 09 13.2 +0.1**
ARU *e*PPP 19 10 13.2
ARU *e* 19 12 19.7
ARU *e*S **S** **19 14 09.4 +1.6**
ARU *e*SS SS 19 15 37.5 -36
ARU MLR MLR
comp=Z,600nm,19.0s,MS4.2
ARU MLR MLR
comp=N,400nm,18.0s,MS4.2
ARU MLR MLR
comp=E,300nm,18.0s,MS4.2
MLR Muntele Rosu 29.68 135 P **P** **19 09 14.9 +1.0**
comp=E,5.4nm,1.0s,mb4.2,baz=337,slow=11,SNR=4.8
MLR LR LR 19 21 40.1
comp=E,2µm,19.3s,MS4.8,baz=308,slow=37
MLR Muntele Rosu 29.68 135 P **P** **19 09 14.9 +1.0**
MLR pmax pmax
comp=Z,5.0nm,1.0s
MLR MLR MLR
comp=Z,2µm,19.3s
MLR Muntele Rosu 29.68 135⇑ *i*P **P** **19 09 14.8 +0.9**
MLR Muntele Rosu 29.68 135⇑ *i*P **P** **19 09 14.8 +0.9**
ESAC San Caprasio 29.80 175 P **P** **19 09 16.7 +1.8**
comp=Z,116nm,1.7s,mb5.3
SVE Sverdlovsk 29.92 85 *e*P **P** **19 09 15.8 -0.3**
SVE pmax pmax
comp=Z,44nm,1.8s,mb4.9
EPOB Poblet 30.22 172 P **P** **19 09 16.4 -2.4**
comp=Z,53nm,1.4s,mb5.1
CFR Carcaliu 30.48 132 ⇓ *i*P **P** **19 09 21.4 +0.4**
CFR Carcaliu 30.48 132 ⇓ P **P** **19 09 21.4 +0.3**
ERTA Horta de San J 30.59 174 P **P** **19 09 22.3 +0.4**
comp=Z,67nm,1.5s,mb5.2
GUD Guadarrama 30.82 180 P **P** **19 09 24.3 +0.3**
GUD pmax pmax
comp=Z,19nm,1.0s,mb4.9
GUD Guadarrama 30.82 180 P **P** **19 09 24.3 +0.3**
comp=Z,19nm,1.0s,mb4.9
MTE Manteigas 31.12 185 *e*P **P** **19 09 28.1 +1.5**
MTE *e*LQ 19 17 07.1
MTE *e*LR LR 19 18 08.4
comp=Z,297nm,20.0s
EMOS Mosqueruela 31.15 175 P **P** **19 09 28.4 +1.4**
comp=Z,51nm,1.3s,mb5.2
TIRR Tirgusor 31.23 132 ⇓ *i*P **P** **19 09 27.6 0.0**
TIRR Tirgusor 31.23 132 ⇓ P **P** **19 09 27.6 0.0**
ESDC Sonseca Array 31.79 180 P **P** **19 09 32.6 +0.1**
comp=Z,3.8nm,0.7s,mb4.3,baz=1.4,slow=8.3,SNR=24
ESDC Sonseca Array 31.79 180 P **P** **19 09 32.0 -0.5**
comp=Z,17nm,1.0s,mb4.8
ESLA Sonseca Array 31.79 180 *e*P **P** **19 09 32.7 +0.1**
comp=Z,9.2nm,1.3s,mb4.5
VTS Vitosha 31.85 140 ⇓ *i*P **P** **19 09 33.3 +0.2**
VTS Vitosha 31.85 140 ⇓ P **P** **19 09 33.3 +0.2**
ETOS Mallorca 31.89 170 P **P** **19 09 32.1 -1.3**
comp=Z,178nm,1.7s,mb5.6
ECHE Chera 31.91 176 P **P** **19 09 32.4 -1.2**
ECHE pmax pmax
comp=Z,23nm,1.2s,mb4.9
ECHE Chera 31.91 176 P **P** **19 09 32.4 -1.2**
comp=Z,22nm,1.2s,mb4.9
PMAFR Mafra 32.62 188 *e*LR LR 19 19 22.2
PESTR Estremoz 32.65 185 *e*P **P** **19 09 40.4 +0.3**
comp=Z,17nm,1.3s,mb4.8
PESTR *e*LQ 19 17 07.5
PESTR *e*LR LR 19 18 59.6
EBAD Badajoz 32.74 184 P **P** **19 09 41.1 +0.2**
comp=Z,36nm,1.5s,mb5.1
EVIA Vianos 32.83 178 P **P** **19 09 42.6 +0.9**
EVIA pmax pmax
comp=Z,15nm,0.8s,mb5.0
EVIA Vianos 32.83 178 P **P** **19 09 42.6 +0.9**
comp=Z,15nm,0.8s,mb5.0
ETOB Tobarra 32.84 176 P **P** **19 09 43.6 +1.8**
comp=Z,39nm,1.3s,mb5.2
ANN Anapa 33.23 121 *e*P **P** **19 09 44.5 -0.7**
ANN *e*S **S** **19 15 03.6 -1.3**
ANN pmax pmax
comp=Z,77nm,1.3s,mb5.5
ANN MLR MLR
comp=Z,1µm,15.0s,MS4.8
EADA Adamuz 33.30 181 P **P** **19 09 45.5 -0.3**
comp=Z,43nm,1.6s,mb5.1
EBAN Banos Encina 33.30 180 P **P** **19 09 46.6 +0.8**
EBAN pmax pmax
comp=Z,21nm,1.1s,mb5.0
EBAN Banos Encina 33.30 180 P **P** **19 09 46.6 +0.8**
comp=Z,21nm,1.1s,mb5.0
PBEJ Beja 33.49 186 *e*P **P** **19 09 49.8 +2.3**
comp=Z,28nm,1.7s,mb4.9
EMUR La Murta 33.65 176 P **P** **19 09 48.0 -0.9**
comp=Z,76nm,1.3s,mb5.5
EHUE Huescar 33.65 178 P **P** **19 09 50.5 +1.6**
EHUE pmax pmax
comp=Z,21nm,1.1s,mb5.0
EHUE Huescar 33.65 178 P **P** **19 09 50.5 +1.6**
comp=Z,21nm,1.1s,mb5.0
EQES Quesada 33.66 179 P **P** **19 09 49.1 +0.2**
comp=Z,32nm,1.0s,mb5.2
EMIN Mina Concepcio 33.72 184 P **P** **19 09 51.0 +1.5**
comp=Z,33nm,2.0s,mb4.9
ELUQ Luque 33.90 180 P **P** **19 09 52.0 +1.0**
ELUQ pmax pmax
comp=Z,57nm,1.7s,mb5.2
ELUQ Luque 33.90 180 P **P** **19 09 52.0 +0.9**
comp=Z,57nm,1.7s,mb5.2
ECOG Cogollos-Vega 34.18 179 P **P** **19 09 53.4 -0.1**
ECOG pmax pmax
comp=Z,17nm,1.3s,mb4.8
ECOG Cogollos-Vega 34.18 179 P **P** **19 09 53.4 -0.1**
comp=Z,17nm,1.3s,mb4.8
ELOJ Sierra Loja 34.31 180 P **P** **19 09 54.2 -0.4**
ELOJ pmax pmax
comp=Z,8.0nm,1.8s,mb4.3
ELOJ Sierra Loja 34.31 180 P **P** **19 09 54.2 -0.4**
comp=Z,7.7nm,1.8s,mb4.3
ERON Agron 34.44 180 P **P** **19 09 57.2 +1.5**
comp=Z,4.8nm,0.6s,mb4.6
ENIJ Nijar 34.50 177 P **P** **19 09 58.8 +2.6**
EBER Berja 34.57 178 P **P** **19 09 59.0 +2.2**
comp=Z,94nm,1.5s,mb5.5
GOF Gofitskoye 34.59 114 *e*P **P** **19 09 56.6 -0.4**
GOF pmax pmax
comp=Z,50nm,1.0s,mb5.4
ESPR Espera 34.60 183 P **P** **19 09 56.3 -0.8**
comp=Z,35nm,1.4s,mb5.1
EGUA Guajares 34.63 179 P **P** **19 09 57.0 -0.3**
EGUA pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
EGUA Guajares 34.63 179 P **P** **19 09 57.0 -0.4**
comp=Z,4.8nm,1.3s,mb4.3
EMIJ Mijas 34.90 181 P **P** **19 10 01.1 +1.5**
comp=Z,44nm,1.3s,mb5.2
EJIF Jimena Fronter 35.02 182 P **P** **19 10 00.8 +0.1**
EJIF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
EJIF Jimena Fronter 35.02 182 P **P** **19 10 00.8 +0.1**
comp=Z,7.8nm,1.0s,mb4.6
KIV Kislovodsk 35.50 115*c* *i*P **P** **19 10 05.7 +0.8**
KIV pmax pmax
comp=Z,25nm,1.2s,mb5.0
KIV MLR MLR
comp=Z,400nm,14.0s,MS4.3
KIV Kislovodsk 35.50 115 *e*P **P** **19 10 05.5 +0.7**
comp=Z,23nm,1.1s,mb5.0
BRVK Borovoye 36.14 80 P **P** **19 10 11.3 +0.9**
SNR=6.3
BRVK Borovoye 36.14 80 *e*P **P** **19 10 10.2 -0.1**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BRVK Borovoye 36.14 80 *e*P **P** **19 10 10.2 -0.2**
comp=Z,4.2nm,0.8s,mb4.4
BVAR Borovoye Array 36.20 80 LR LR 19 25 07.9
comp=Z,145nm,21.4s,MS3.7,baz=322,slow=36
KEST Kesra 36.41 162 P **P** **19 10 13.2 +0.5**
comp=Z,5.7nm,1.1s,mb4.4,baz=320,slow=3.0,SNR=8.1
INK Inuvik 36.56 331 *e*P **P** **19 10 12.4 -1.6**
INK pmax pmax
comp=Z,19nm,1.2s
INK Inuvik 36.56 331 *e*P **P** **19 10 12.4 -1.5**
comp=Z,19nm,1.2s,mb4.8
BR131 Keskin Array S 36.97 128 *e*P **P** **19 10 18.6 +1.1**
comp=Z,4.8nm,0.8s,mb4.4
BR131 LR LR
comp=Z,397nm,20.0s,MS4.2
BRTR Keskin Array B 36.97 128 P **P** **19 10 18.6 +1.1**
comp=Z,4.5nm,0.8s,mb4.4,baz=336,slow=6.1,SNR=23
BRTR PP PP 19 11 40.0 -1.7
comp=Z,5.6nm,1.2s,baz=347,slow=10,SNR=5.1
ISP Isparta 38.00 133*c* *i*P **P** **19 10 27.1 +1.0**
YKA Yellowknife Ar 38.16 315 P **P** **19 10 26.6 -0.9**
comp=Z,3.2nm,0.7s,mb4.1,baz=28,slow=8.8,SNR=4.9
YKA PcP PcP 19 12 41.4 -0.7
comp=Z,1.2nm,0.7s,baz=3.9,slow=3.9,SNR=3.7
YKA Yellowknife Ar 38.16 315 P **P** **19 10 26.6 -0.9**
YKA PcP PcP 19 12 41.4 -0.7
NVS Novosibirsk 38.60 68 *e*P **P** **19 10 31.6 +0.4**
NVS *e*S **S** **19 16 20.0 -7.1**
NVS pmax pmax
comp=N,10.0nm,1.4s
NVS pmax pmax
comp=Z,13nm,1.4s,mb4.5
NVS pmax pmax
comp=E,4.0nm,1.0s
NVS smax
comp=N,4.0nm,1.4s
NVS smax
comp=E,9.0nm,1.9s
MALT Malatya 39.54 124⇑ *i*P **P** **19 10 41.2 +2.1**
MALT Malatya 39.54 124 *e*P **P** **19 10 40.5 +1.4**
MALT pmax pmax
comp=Z,50nm,1.7s,mb5.0
MALT Malatya 39.54 124 *e*P **P** **19 10 40.5 +1.4**
comp=Z,50nm,1.7s,mb5.0
GNI Garni 39.60 115 LR LR 19 27 37.8
comp=Z,478nm,18.6s,MS4.4,baz=311,slow=37
GNI Garni 39.60 115*c* *i*P **P** **19 10 41.2 +1.6**
GNI pmax pmax
comp=Z,34nm,1.7s
GNI MLR MLR
comp=Z,300nm,13.0s
ZAL Zalesovo 39.85 67 P **P** **19 10 42.2 +0.6**
comp=Z,0.7nm,0.6s,baz=186,slow=11,SNR=3.0
BILL Bilibino 40.67 6 *e*P **P** **19 10 48.2 -0.2**
BILL *e* 19 12 49.3
BILL *e*S **S** **19 16 59.2 +1.1**
BILL pmax pmax
comp=Z,7.0nm,1.3s,mb4.1
BILL MLR MLR
comp=Z,300nm,18.0s,MS4.2
KURK Kurchatov 40.77 75⇑ *e*P **P** **19 10 48.4 -0.9**
KURK Kurchatov 40.77 75 *e*P **P** **19 10 47.7 -1.6**
comp=Z,5.9nm,0.8s,mb4.3
IMA2 Indian Mountai 41.27 342 *e*P **P** **19 10 52.8 -0.6**
DAWY Dawson 41.40 332 *e*P **P** **19 10 53.0 -1.5**
COLA College 41.78 338 *i* P **P** **19 10 58.5 +0.9**
MCK McKinley 43.01 338 *e*P **P** **19 11 07.3 -0.3**
MCK pmax pmax
comp=Z,12nm,1.4s,mb4.4
MCK McKinley 43.01 338 *e*P **P** **19 11 07.3 -0.3**
comp=Z,12nm,1.4s,mb4.4
YAK Yakutsk 43.06 30 ⇓ *i*P **P** **19 11 06.6 -1.4**
YAK pmax pmax
comp=Z,23nm,1.4s,mb4.7
YAK MLR MLR
comp=Z,100nm,16.0s,MS3.8
CFTV Fuerteventura 43.39 193 P **P** **19 11 11.5 +0.9**
comp=Z,9.6nm,0.9s,mb4.5
ULM Lac du Bonnet 44.00 293 P **P** **19 11 14.0 -1.6**
comp=Z,7.5nm,1.1s,mb4.3,baz=25,slow=7.0,SNR=4.8
EYMN Ely 44.73 287 *e*P **P** **19 11 20.4 -0.9**
comp=Z,17nm,1.0s,mb4.8
MKAR Makanchi Array 45.38 74 P **P** **19 11 26.6 0.0**
comp=Z,1.8nm,0.7s,mb4.0,baz=342,slow=6.2,SNR=10
ABKT Aibek 45.70 102 P **P** **19 11 30.8 +1.7**
comp=Z,73nm,0.9s,mb5.6,SNR=6.5
EDM Edmonton 46.15 308 *e*P **P** **19 11 32.3 -0.4**
MOY Mondy 46.43 56 *e*P **P** **19 11 42.8 +7.9**
FRU Bishkek 46.52 84 *e*P **P** **19 11 37.0 +1.5**
AAK Ala-Archa 46.66 84 P **P** **19 11 38.0 +1.3**
SNR=6.0
AAK Ala-Archa 46.66 84 ⇓ *i*P **P** **19 11 36.7 +0.1**
AAK pmax pmax
comp=Z,16nm,2.0s,mb4.6
AAK MLR MLR
comp=Z,200nm,16.0s,MS4.2
AAK Ala-Archa 46.66 84 P **P** **19 11 36.9 +0.3**
comp=Z,13nm,1.0s,mb4.8
CLNS Chul'man 47.12 36 *e*P **P** **19 11 38.3 -2.0**
CLNS pmax pmax
comp=Z,24nm,1.4s,mb4.9
CLNS pmax pmax
comp=N,10.0nm,1.0s
CLNS pmax pmax
comp=E,4.0nm,1.0s
ZAK Zakamensk 48.20 55 *e*P **P** **19 11 47.2 -1.5**
ZAK pmax pmax
comp=Z,2.0nm,1.7s,mb3.9
JFWS Jewell Farm 48.86 283 *e*P **P** **19 11 52.6 -1.1**
JFWS pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
JFWS Jewell Farm 48.86 283 *e*P **P** **19 11 52.6 -1.1**
comp=Z,10nm,0.8s,mb4.9
WMQ Urumqi 49.72 72 *e*P **P** **19 12 02.0 +1.7**
WMQ XP sP 19 12 09.0 +3.0
WMQ PP PP 19 13 57.0 +2.2
WMQ S **S** **19 19 09.0 +0.1**
WMQ SCS ScS 19 21 50.0 -1.7
WMQ SS SS 19 22 37.0 -4.2
WMQ AMB AMB
comp=Z,18nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,113nm,5.0s
WMQ LR LR
comp=N,195nm,12.0s,MS4.5
WMQ LR LR
comp=E,256nm,12.0s,MS4.5
WMQ LR LR
comp=Z,238nm,12.0s,MS4.4
EGMT Eagleton 49.95 302 *e*P **P** **19 12 01.9 -0.2**
comp=Z,14nm,1.0s,mb5.0
MIB Mutribah 50.01 118 *e*P **P** **19 12 02.7 +0.2**
UMR Umm Al-Rimmam 50.35 117 *e*P **P** **19 12 05.4 +0.3**
NAY Al-Naaiem 50.50 118 *e*P **P** **19 12 06.2 0.0**
RDF Al-Radifah 50.90 118 *e*P **P** **19 12 09.4 +0.2**
BLO Bloomington 51.08 278 *e*P **P** **19 12 09.7 -0.9**
BLO pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
BLO Bloomington 51.08 278 *e*P **P** **19 12 09.7 -0.9**
comp=Z,10nm,0.5s,mb5.0
SONM Songino Array 51.36 54 P **P** **19 12 12.2 -0.5**
comp=Z,0.7nm,0.8s,baz=318,slow=6.4,SNR=3.8
SONM PcP PcP 19 13 27.6 +0.3
comp=Z,1.1nm,0.8s,baz=326,slow=4.6,SNR=4.8
ULN Ulaanbaatar 51.50 53⇑ *e*P **P** **19 12 15.5 +1.8**
WCI Wyandotte Cave 51.87 277 *e*P **P** **19 12 16.4 -0.1**
WCI pmax pmax
comp=Z,11nm,0.9s,mb4.8
WCI Wyandotte Cave 51.87 277 *e*P **P** **19 12 16.4 -0.1**
comp=Z,11nm,0.9s,mb4.8
CHMT Chamberlain Mo 51.91 305 *e*P **P** **19 12 16.1 -0.7**
RSSD Black Hills 51.92 296 *e*P **P** **19 12 16.9 0.0**
RSSD pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
RSSD Black Hills 51.92 296 *e*P **P** **19 12 16.9 0.0**
comp=Z,10nm,1.1s,mb4.7
FVM French Village 53.40 281 *e*P **P** **19 12 26.8 -1.0**
FVM pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
FVM French Village 53.40 281 *e*P **P** **19 12 26.8 -1.1**
comp=Z,9.6nm,0.7s,mb4.8
CCM Cathedral Cave 53.59 282 *e*P **P** **19 12 26.7 -2.6**
CCM pmax pmax
comp=Z,13nm,0.7s,mb5.0
CCM Cathedral Cave 53.59 282 *e*P **P** **19 12 26.7 -2.6**
comp=Z,14nm,0.7s,mb5.0
LOHW Long Hollow 54.25 301 *e*P **P** **19 12 34.2 +0.2**
comp=Z,1.3nm,0.6s,mb4.0
SWET Sewanee 54.51 275 *e*P **P** **19 12 34.9 -1.1**
RRI2 Red Ridge 54.69 301 P **P** **19 12 37.3 +0.1**
comp=Z,6.1nm,0.5s,mb4.9
PDAR Pinedale Array 54.74 300 P **P** **19 12 36.5 -1.1**
comp=Z,1.7nm,0.7s,mb4.2,baz=33,slow=5.7,SNR=13
BMO Blue Mountains 54.88 307 *e*P **P** **19 12 37.7 -1.0**
comp=Z,5.7nm,1.0s,mb4.6
HLID Hailey 55.32 304 *e*P **P** **19 12 41.5 -0.4**
comp=Z,9.1nm,1.4s,mb4.6
ISCO Idaho Springs 56.36 295 *e*P **P** **19 12 49.6 +0.3**
ISCO pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
ISCO Idaho Springs 56.36 295 *e*P **P** **19 12 49.5 +0.3**
comp=Z,8.4nm,1.2s,mb4.7
HWUT Hardware Ranch 56.37 301 *e*P **P** **19 12 49.3 0.0**
comp=Z,5.9nm,1.0s,mb4.6
I06A Prineville 56.46 309⇑ P **P** **19 12 49.8 -0.2**
baz=56
H02A Toledo 56.70 312⇑ P **P** **19 12 51.9 +0.2**
baz=56
HABR Khabarovsk 56.94 31 *e*P **P** **19 12 53.3 -0.1**
HABR *e*S **S** **19 20 49.1 +2.1**
HABR pmax pmax
comp=Z,25nm,1.6s,mb5.0
HABR MLR MLR
comp=Z,108µm,13.9s
K09A Rome 57.00 306 ⇓ P **P** **19 12 53.7 -0.1**
baz=57
J06A Christmas Vall 57.10 309⇑ P **P** **19 12 54.6 +0.1**
baz=57
J05A Fort Rock 57.34 310 ⇓ P **P** **19 12 57.1 +0.9**
baz=57
GTA Gaotai 57.35 63 *e*P **P** **19 12 57.3 +1.0**
GTA AP pP 19 13 00.5 0.0
GTA XP sP 19 13 03.3 +1.2
GTA PP PP 19 15 06.3 +2.7
GTA PPP 19 16 29.3
GTA S **S** **19 20 54.6 +2.1**
GTA XS sS 19 21 01.4 +2.0
GTA PS 19 21 08.8
GTA SS SS 19 24 45.8 +3.9
GTA AMB AMB
comp=Z,3.0nm,1.5s,mb4.1
GTA AMB AMB
comp=Z,57nm,5.4s
GTA LR LR
comp=N,125nm,20.5s,MS4.2
GTA LR LR
comp=E,165nm,18.6s,MS4.2
GTA LR LR
comp=Z,210nm,19.8s,MS4.2
K06A Valley Falls 57.55 309⇑ P **P** **19 12 58.8 +1.1**
baz=57
MIAR Mount Ida 57.55 282 *e*P **P** **19 12 57.2 -0.5**
MIAR pmax pmax
comp=Z,25nm,1.2s,mb5.1
MIAR Mount Ida 57.55 282 *e*P **P** **19 12 57.1 -0.6**
comp=Z,25nm,1.2s,mb5.1
DUG Dugway 58.03 301 *e*P **P** **19 13 01.2 +0.1**
DUG pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
DUG Dugway 58.03 301 *e*P **P** **19 13 01.2 +0.2**
comp=Z,9.3nm,1.1s,mb4.7
TOA0 Torodi Ar. Sit 58.31 173 *e*P **P** **19 13 02.4 -0.6**
TORD Torodi Ar. Bea 58.31 173 P **P** **19 13 02.8 -0.3**
comp=Z,14nm,1.1s,mb4.9,baz=352,slow=7.2,SNR=64
M08A Happy Creek Ra 58.34 306 ⇓ P **P** **19 13 03.6 +0.4**
baz=58
L05A Lakeview 58.40 309 ⇓ P **P** **19 13 03.0 -0.7**
baz=58
O12A Currie 58.49 303⇑ P **P** **19 13 03.9 -0.4**
baz=58
M07A Soldier Meadow 58.60 307 ⇓ P **P** **19 13 05.2 +0.2**
baz=58
PV01 Paradox Valley 58.76 297 *e*P **P** **19 13 06.3 +0.2**
O11A Cowboy Ranch, 58.86 304 ⇓ P **P** **19 13 07.3 +0.4**
baz=58
N08A GE Springer Mi 58.90 306 ⇓ P **P** **19 13 07.8 +0.6**
baz=58
WMOK Wichita Mounta 58.99 287 *e*P **P** **19 13 06.8 -1.0**
WMOK pmax pmax
comp=Z,15nm,1.1s,mb4.9
WMOK Wichita Mounta 58.99 287 *e*P **P** **19 13 06.8 -1.0**
comp=Z,15nm,1.1s,mb4.9
BIDO Bidbid 59.09 109 P **P** **19 13 09.2 +0.7**
SNR=5.7
N07B Gerlach 59.12 307 ⇓ P **P** **19 13 09.7 +1.0**
baz=59
M05C Lookout 59.13 309⇑ P **P** **19 13 09.1 +0.4**
baz=59
HHC Hu-ho-hao-te 59.20 53 *e*P **P** **19 13 10.1 +0.8**
HHC AP pP 19 13 14.8 +1.3
HHC XP sP 19 13 17.3 +2.3
HHC PCP PcP 19 13 59.5 +1.9
HHC PP PP 19 15 23.3 +3.3
HHC SCP ScP 19 17 57.3 -0.7
HHC PCS PcS 19 18 00.3 +0.8
HHC S **S** **19 21 15.1 -1.6**
HHC XS sS 19 21 23.0 -0.6
HHC PS 19 21 29.6
HHC SS SS 19 25 09.3 -1.7
HHC AMB AMB
comp=Z,19nm,1.2s,mb5.0
HHC AMB AMB
comp=Z,50nm,8.1s
HHC LR LR
comp=N,185nm,21.9s,MS4.3
HHC LR LR
comp=E,177nm,23.7s,MS4.3
HHC LR LR
comp=Z,257nm,19.6s,MS4.4
O09A Fish Creek Ran 59.23 305⇑ P **P** **19 13 08.2 -1.2**
baz=59
P12A McGill 59.27 303 ⇓ P **P** **19 13 10.4 +0.7**
baz=59
N06A Buffalo Meadow 59.37 307 ⇓ P **P** **19 13 10.6 +0.2**
baz=59
MSU Marysvale 59.42 300 *e*P **P** **19 13 10.9 +0.1**

SMDO	**Samad**	**59.51**	**109**	⇑P	**P**	**19 13 11.1**	**-0.2**
	SNR=5.4						
MVCO	**Mesa Verde**	**59.60**	**296**	*e*P	**P**	**19 13 12.6**	**+0.7**
CN2	**Changchun**	**59.63**	**40**	*e*P	**P**	**19 13 12.3**	**+0.1**
CN2				*e*XP	sP	19 13 19.3	+1.3
CN2				*e*S	**S**	**19 21 19.0**	**-3.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=E,200nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=Z,200nm,16.0s,MS4.3						
MDJ	**Mudanjiang**	**59.68**	**37**	P	**P**	**19 13 10.4**	**-2.2**
MDJ				AP	pP	19 13 13.5	-3.3
MDJ				PP	PP	19 15 21.5	-2.7
MDJ				SCP	ScP	19 17 58.5	-1.6
MDJ				PCS	PcS	19 18 00.1	-1.5
MDJ				S	**S**	**19 21 19.9**	**-2.9**
MDJ				SCS	ScS	19 22 59.8	-2.8
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,41nm,5.0s						
MDJ				LR	LR		
	comp=N,69nm,20.0s,MS3.8						
MDJ				LR	LR		
	comp=E,27nm,23.0s,MS3.8						
MDJ				LR	LR		
	comp=Z,92nm,19.0s,MS3.9						
O06A	**Flanigan**	**59.92**	**307**	⇓P	**P**	**19 13 14.4**	**+0.2**
	baz=60						
JMDO	**Jabal Madar**	**60.17**	**109**	⇑P	**P**	**19 13 16.0**	**+0.1**
	SNR=6.2						
N02C	**Big Bar**	**60.17**	**310**	⇓P	**P**	**19 13 17.3**	**+1.4**
	baz=60						
CCUT	**Cedar City**	**60.65**	**301**	P	**P**	**19 13 20.1**	**+0.9**
Q08A	**Gabbs**	**60.65**	**305**	⇓P	**P**	**19 13 18.9**	**-0.3**
	baz=60						
WCN	**Washoe City**	**60.71**	**307**	⇑P	**P**	**19 13 20.3**	**+0.7**
	baz=60						
P05C	**Yuba Gap, Truc**	**60.93**	**307**	⇓P	**P**	**19 13 20.3**	**-0.8**
	baz=60						
ANMO	**Albuquerque**	**61.11**	**294**	*e*P	**P**	**19 13 22.3**	**0.0**
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANMO	**Albuquerque**	**61.11**	**294**	*e*P	**P**	**19 13 22.3**	**0.0**
	comp=Z,2.8nm,0.9s,mb4.4						
OHCM	**Honcut**	**61.12**	**308**	*e*P	**P**	**19 13 22.0**	**-0.4**
SNY	**Shenyang**	**61.12**	**43**	⇑P	**P**	**19 13 22.6**	**+0.2**
SNY				AMB	AMB		
	comp=Z,13nm,0.6s,mb5.2						
NVAR	**Mina Array Bea**	**61.16**	**305**	P	**P**	**19 13 22.0**	**-0.6**
	comp=Z,1.0nm,0.9s,mb4.0,baz=29,slow=3.6,SNR=7.9						
NVAR	**Mina Array Bea**	**61.16**	**305**	P	**P**	**19 13 22.0**	**-0.6**
S09A	**Goldfield**	**61.53**	**304**	⇓P	**P**	**19 13 25.3**	**+0.2**
	baz=61						
LZH	**Lanzhou**	**61.59**	**61**	*e*P	**P**	**19 13 27.0**	**+1.4**
LZH				AP	pP	19 13 30.1	+0.3
LZH				XP	sP	19 13 32.3	+0.9
LZH				PP	PP	19 15 44.0	+2.8
LZH				*e*S	**S**	**19 21 44.0**	**-3.3**
LZH				SS	SS	19 25 46.0	-2.5
LZH				AMB	AMB		
	comp=Z,15nm,1.1s,mb5.0						
LZH				AMB	AMB		
	comp=Z,77nm,5.0s						
LZH				LR	LR		
	comp=E,335nm,15.5s						
LZH				LR	LR		
	comp=Z,488nm,17.0s,MS4.7						
CMB	**Columbia Colle**	**62.07**	**307**	⇓P	**P**	**19 13 29.1**	**+0.3**
	baz=62						
W14A	**Seligman**	**62.76**	**300**	⇑P	**P**	**19 13 34.6**	**+1.1**
	baz=62						
HELL	**Mitchell Peak,**	**62.99**	**305**	⇓P	**P**	**19 13 35.8**	**+0.8**
	baz=63						
DAC	**Darwin (Calif)**	**63.00**	**304**	*e*P	**P**	**19 13 35.8**	**+0.8**
DAC				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
DAC	**Darwin (Calif)**	**63.00**	**304**	*e*P	**P**	**19 13 35.8**	**+0.8**
	comp=Z,4.2nm,0.9s,mb4.6						
MPMC	**Manual Prospec**	**63.17**	**304**	⇓P	**P**	**19 13 36.8**	**+0.7**
	baz=63						
JCT	**Junction City**	**63.26**	**286**	*e*P	**P**	**19 13 36.4**	**-0.3**
JCT				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.2						
JCT	**Junction City**	**63.26**	**286**	*e*P	**P**	**19 13 36.4**	**-0.4**
	comp=Z,27nm,1.3s,mb5.2						
X13A	**Yucca**	**63.55**	**300**	⇓P	**P**	**19 13 39.0**	**+0.3**
	baz=63						
LRMC	**Laurel Mountai**	**63.77**	**304**	⇑P	**P**	**19 13 39.8**	**-0.4**
	baz=63						
LSA	**Lhasa**	**63.78**	**75**	*e*P	**P**	**19 13 41.5**	**+1.3**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
LSA	**Lhasa**	**63.78**	**75**	*e*P	**P**	**19 13 41.5**	**+1.3**
	comp=Z,5.2nm,0.8s,mb4.6						
ISA	**Isabella**	**63.81**	**304**	⇓P	**P**	**19 13 40.6**	**+0.3**
	baz=63						
MNTX	**Cornudas Mount**	**63.82**	**291**	*e*P	**P**	**19 13 39.9**	**-0.6**
	comp=Z,2.8nm,0.9s,mb4.3						
EDW2	**Edwards Air Fo**	**64.42**	**304**	⇓P	**P**	**19 13 44.1**	**-0.3**
	baz=64						
Y12C	**Blythe**	**64.54**	**300**	⇑P	**P**	**19 13 45.9**	**+0.8**
	baz=64						
DBIC	**Dimbokro**	**64.65**	**181**	P	**P**	**19 13 45.2**	**-0.7**
	comp=Z,7.4nm,0.9s,mb4.7,baz=275,slow=2.8,SNR=5.1						
DBIC	**Dimbokro**	**64.65**	**181**	P	**P**	**19 13 45.2**	**-0.7**
BELC	**Belle Mtn.**	**64.71**	**302**	⇓P	**P**	**19 13 47.0**	**+0.8**
	baz=64						
PKM	**Peak Mountain**	**64.89**	**305**	⇓P	**P**	**19 13 48.6**	**+1.2**
	baz=64						
LIC	**Lamto**	**65.09**	**181**	*e*P	**P**	**19 13 48.2**	**-0.6**
	comp=Z,83nm,1.4s,mb5.3						
LIC				*e*R			
	comp=Z,54nm,20.8s						
LIC	**Lamto**	**65.09**	**181**	*e*P	**P**	**19 13 48.2**	**-0.6**
	comp=Z,41nm,1.4s,mb5.3						
LIC				LR	LR		
	comp=Z,30nm,20.8s,MS3.5						
MAT	**Matsushiro**	**69.08**	**32**	P	**P**	**19 14 13.6**	**-0.5**
MAT				*e*S	S	19 23 21.6	+2.6
MAT	**Matsushiro**	**69.08**	**32**	*e*P	**P**	**19 14 13.0**	**-1.1**
MJAR	**Matsushiro Arr**	**69.08**	**32**	P	**P**	**19 14 13.8**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.1,baz=346,slow=5.3,SNR=16						
NJ2	**Nanjing**	**69.37**	**50**	*e*P	**P**	**19 14 18.5**	**+2.6**
NJ2				AP	pP	19 14 23.3	+3.1
NJ2				S	S	19 23 25.0	+2.5
NJ2				XS	sS	19 23 33.0	+3.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,520nm,4.5s						
NJ2				LR	LR		
	comp=N,320nm,19.0s,MS5.3						
NJ2				LR	LR		
	comp=E,2μm,22.2s,MS5.3						
NJ2				LR	LR		
	comp=Z,360nm,32.6s						
SSE	**Sheshan**	**70.85**	**48**	P	**P**	**19 14 22.5**	**-2.5**
SSE				AP	pP	19 14 25.8	-3.5
SSE				S	S	19 23 35.6	-4.2
SSE				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,65nm,4.1s						
SSE				LR	LR		
	comp=N,48nm,25.2s,MS3.9						
SSE				LR	LR		
	comp=E,74nm,25.2s,MS3.9						
SSE				LR	LR		
	comp=Z,92nm,23.5s,MS4.0						
GYA	**Guiyang**	**71.45**	**62**	⇑*i*P	**P**	**19 14 28.5**	**-0.1**
GYA				AP	pP	19 14 32.8	-0.1
GYA				XP	sP	19 14 35.8	+1.4
GYA				PP	PP	19 17 08.5	+1.4
GYA				S	S	19 23 43.8	-2.9
GYA				SKS		19 24 24.8	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,4.5s						
GYA				LR	LR		
	comp=N,340nm,18.6s,MS4.8						
GYA				LR	LR		
	comp=E,270nm,18.0s,MS4.8						
GYA				LR	LR		
	comp=Z,310nm,19.4s,MS4.6						
KMI	**Kunming**	**71.58**	**66**	P	**P**	**19 14 29.3**	**-0.1**
KMI				AP	pP	19 14 33.5	-0.1
KMI				XP	sP	19 14 35.6	+0.4
KMI				PP	PP	19 17 08.3	+0.1
KMI				PPP		19 18 51.4	
KMI				S	S	19 23 47.6	-0.6
KMI				XS	sS	19 23 54.3	-0.9
KMI				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.2						
KMI				AMB	AMB		
	comp=Z,106nm,3.8s						
KMI				LR	LR		
	comp=N,134nm,24.5s						
KMI				LR	LR		
	comp=E,117nm,17.8s						
KMI				LR	LR		
	comp=Z,147nm,22.3s,MS4.2						
CHTO	**Chiang Mai**	**76.38**	**72**	*e*P	**P**	**19 14 57.5**	**0.0**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CHTO	**Chiang Mai**	**76.38**	**72**	*e*P	**P**	**19 14 57.5**	**0.0**
	comp=Z,8.2nm,0.9s,mb4.7						
KMBO	**Kilima Mbogo**	**77.12**	**137**	P	**P**	**19 15 03.7**	**+2.1**
	comp=Z,0.7nm,0.4s,mb3.9,baz=254,slow=8.1,SNR=4.2						
KMBO	**Kilima Mbogo**	**77.12**	**137**	P	**P**	**19 15 03.7**	**+2.0**
SAML	**Samuel**	**89.08**	**238**	*e*P	**P**	**19 16 03.9**	**+0.5**
	comp=Z,6.2nm,1.2s,mb4.8						
PPT	**Papeete**	**122.46**	**320**	*e*LR	LR	19 59 49.6	
	comp=Z,99nm,22.2s						
RKT	**Rikitea**	**124.30**	**303**	*e*LR	LR	20 00 41.4	
	comp=Z,147nm,36.8s						
ASAR	**Alice Springs**	**126.61**	**50**	PKP	PKPdf	19 22 10.1	-1.4
	comp=Z,1.4nm,0.8s,baz=348,slow=1.8,SNR=12						
TBI	**Tubuai**	**128.05**	**319**	*e*LR	LR	20 02 24.8	
	comp=Z,135nm,35.8s						
MAW	**Mawson**	**145.73**	**141**	PKPbc	PKPbc	19 22 45.6	-1.5
	comp=Z,4.2nm,0.9s,baz=289,slow=9.3,SNR=6.8						
MAW	**Mawson**	**145.73**	**141**	*e*PKPdf	PKPdf	19 22 45.2	-1.5

NAO ***13*** *19:13:31.8±4.4, 7762N×2420E, h6km±21km, ML2.2*
CSEM ***13*** *19:13:35.7, 7758N×2357E, h19km, ML2.6, After BER*
BER 13 19:13:35.7±3.0**, 7758N**×**2357E, h19**km±40km**, MD1.9, ML2.6, ML2.2**(NAO)**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPEN	**Hopen**	**1.12**	**162**	*e*P	Pn	19 13 54.0	-2.3
HOPEN				*e*S	Sb	19 14 09.2	-1.4
HOPEN				AML	AML	19 14 13.1	
	comp=N,179nm,0.3s						
SPA0	**Spitsbergen Ar**	**1.64**	**295**	Pn	Pn	19 14 01.9	-1.6
	baz=117,slow=18						
SPA0				Pg	Pg	19 14 04.3	-2.9
	baz=108,slow=18						
SPA0				Lg		19 14 26.8	
	baz=104,slow=28						
SPA0	**Spitsbergen Ar**	**1.64**	**295**	Pn	Pn	19 14 01.9	-1.5
	baz=117,slow=18,SNR=62						
SPA0	**Spitsbergen Ar**	**1.64**	**295**	Pg	Pg	19 14 04.3	-2.9
	baz=108,slow=17,SNR=94						
SPA0				Lg		19 14 26.8	
	baz=104,slow=24,SNR=47						
HSP	**Hornsund**	**1.86**	**256**	P	Pn	19 14 05.2	-1.3
KBS	**Kingsbay**	**2.74**	**305**	Pn	Pn	19 14 16.6	-2.0
KBS				Pg	Pg	19 14 24.3	-3.9
KBS				Lg		19 14 58.1	

IDC ***13*** *19:22:35.4±0.8, 2681N×97.10E, h0km, mb3.7/13, mb1 3.9/13, mb1mx3.8/23, mbtmp3.7/13, MS4.0/1, Ms1 4.0/1, ms1mx2.7/27, Error ellipse: s-maj=31.6km s-min=17.1km az=48.0*
BJI ***13*** *19:22:38.2, 2680N×9695E, h22km, ML3.5, Ms3.3, Msz3.2*
MOS ***13*** *19:22:38.3±1.2, 2674N×9694E, h33km, mb4.5/2, Error ellipse: s-maj=18.3km s-min=11.0km az=43.1*
ISCJB ***13*** *19:22:39.3±1.9, 2662N±009×9674E±007, h41km±17km, mb3.8/15, MS4.1/1, Error ellipse: s-maj=14.8km s-min=10.0km az=36.7*
NEIC ***13*** *19:22:41.0±1.5, 2685N×97.11E, h39km±13km, mb4.3/2, Error ellipse: s-maj=13.6km s-min=8.1km az=224.0*
ISC 13 19:22:39.4±1.5**, 2677N**±007×**9692E**±003**, h26**km±12km**, n38,** σ**0.96**/45**, mb3.8**/15**, MS4.1**/1**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**5.49**	**106**	PG	**Pb**	**19 24 13.9**	**-0.6**
KMI				SG	**Sn**	**19 25 30.3**	**+29**
KMI				Smax			
	comp=N,30nm,1.2s						
KMI				Smax			
	comp=E,24nm,1.3s						
KMI				LR	LR		
	comp=N,114nm,5.8s						
KMI				LR	LR		
	comp=E,133nm,5.8s						
KMI				LR	LR		
	comp=Z,191nm,7.9s						
LSA	**Lhasa**	**5.87**	**301**	P	**Pn**	**19 24 07.6**	**+2.9**
LSA				S	**Sn**	**19 25 11.0**	**-0.1**
LSA				Smax			
	comp=N,10.0nm,0.7s						
LSA				Smax			
	comp=E,30nm,0.7s						
LSA	**Lhasa**	**5.87**	**301**	*e*P	**Pn**	**19 24 07.4**	**+2.7**
LSA				pmax	pmax		
	comp=Z,17nm,0.6s						
LSA	**Lhasa**	**5.87**	**301**	*e*Pn	**Pn**	**19 24 07.3**	**+2.7**
	comp=Z,17nm,0.6s						
CD2	**Chengdu**	**7.28**	**54**	*e*P	**Pn**	**19 24 22.8**	**-1.3**
CD2				S	**Sn**	**19 25 46.0**	**+0.1**
CD2				SG	Sn	19 26 31.0	+45
CD2				Smax			
	comp=N,10.0nm,1.6s						
CD2				Smax			
	comp=E,10.0nm,1.9s						
GUN	**Gumba**	**9.88**	**279**	*e*P	**Pn**	**19 25 00.7**	**+0.9**
	comp=E,94nm,0.4s						
GUN				*e*S	**Sn**	**19 26 49.2**	**-0.6**
PKI	**Pulchoki**	**10.28**	**277**	*e*P	**Pn**	**19 25 05.5**	**+0.3**
	comp=E,73nm,0.6s						
PKI				*e*S	**Sn**	**19 26 57.7**	**-1.9**
PKI	**Pulchoki**	**10.28**	**277**	*e*P	**Pn**	**19 25 05.5**	**+0.3**
PKI				*e*S	**Sn**	**19 26 57.7**	**-1.9**
PKI				pmax	pmax		
	comp=Z,73nm,0.6s						
KKN	**Kakani**	**10.40**	**278**	*e*P	**Pn**	**19 25 07.2**	**+0.3**
	comp=Z,64nm,0.5s						
KKN				*e*S	**Sn**	**19 27 01.5**	**-1.1**
KKN	**Kakani**	**10.40**	**278**	*e*P	**Pn**	**19 25 07.2**	**+0.3**
KKN				*e*S	**Sn**	**19 27 01.5**	**-1.1**
KKN				pmax	pmax		
	comp=Z,64nm,0.5s						
DMN	**Daman**	**10.55**	**277**	*e*P	**Pn**	**19 25 09.3**	**+0.4**
	comp=Z,46nm,0.7s						
GKN	**Gorkha**	**10.98**	**279**	*e*P	**Pn**	**19 25 14.8**	**-0.1**
	comp=Z,42nm,0.4s						
GKN				*e*S	**Sn**	**19 27 14.8**	**-2.0**
KOLN	**Koldanda**	**11.89**	**278**	*e*P	**Pn**	**19 25 27.5**	**+0.3**
	comp=Z,47nm,0.7s						
SONM	**Songino Array**	**22.31**	**17**	P	**P**	**19 27 34.0**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.1,baz=200,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**23.10**	**334**	P	**P**	**19 27 42.6**	**-0.6**
	comp=Z,1.3nm,0.6s,mb3.6,baz=139,slow=9.1,SNR=12						
ZAK	**Zakamensk**	**24.08**	**10**	*e*P	**P**	**19 27 52.3**	**-0.4**
KURK	**Kurchatov**	**27.70**	**335**	*e*P	**P**	**19 28 29.7**	**+4.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
KURK	**Kurchatov**	**27.70**	**335**	*e*P	**P**	**19 28 29.7**	**+4.3**
	comp=Z,2.5nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**32.84**	**330**	P	**P**	**19 29 11.3**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.5,baz=123,slow=11,SNR=3.7						
MJAR	**Matsushiro Arr**	**36.24**	**64**	P	**P**	**19 29 38.7**	**-1.6**
	comp=Z,0.5nm,0.8s,mb3.5,baz=295,slow=15,SNR=4.3						
MJAR	**Matsushiro Arr**	**36.24**	**64**	P	**P**	**19 29 38.7**	**-1.6**
AKTK	**Aktyubinsk**	**37.88**	**319**	P	**P**	**19 29 55.3**	**+1.2**
AKTO	**Aktyubinsk**	**37.88**	**319**	P	**P**	**19 29 55.3**	**+1.2**
	comp=Z,1.7nm,0.7s,mb3.9,baz=115,slow=5.0,SNR=4.5						
BRTR	**Keskin Array B**	**53.47**	**301**	P	**P**	**19 31 57.9**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.5,baz=111,slow=7.9,SNR=3.4						
AKASG	**Malin Array Be**	**55.84**	**315**	LR	LR	19 58 34.0	
	comp=Z,134nm,18.6s,MS4.1,baz=330,slow=39						
FINES	**FINESS Array B**	**57.73**	**328**	P	**P**	**19 32 28.0**	**0.0**
	comp=Z,1.5nm,0.8s,mb4.1,baz=115,slow=8.6,SNR=5.0						
WRAB	**Tennant Creek**	**58.93**	**138**	*e*P	**P**	**19 32 36.7**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**58.93**	**138**	*e*P	**P**	**19 32 36.7**	**+0.4**
	comp=Z,2.8nm,0.6s,mb4.5						
AS31	**Alice Springs**	**61.57**	**141**	*e*P	**P**	**19 32 54.5**	**+0.1**
ASAR	**Alice Springs**	**61.57**	**141**	P	**P**	**19 32 54.9**	**+0.5**
	comp=Z,0.8nm,0.5s,mb4.1,baz=325,slow=6.6,SNR=18						
VRAC	**Vranov**	**64.09**	**314**	P	**P**	**19 33 11.3**	**+0.2**
	comp=Z,1.2nm,0.5s,mb4.2,baz=127,slow=8.4,SNR=3.6						
NB2	**NORSAR Subarra**	**64.92**	**328**	P	**P**	**19 33 16.6**	**0.0**
	comp=Z,1.4nm,0.7s,mb4.1,baz=78,slow=6.5						
NOA	**NORSAR Array B**	**64.92**	**328**	P	**P**	**19 33 16.7**	**+0.1**
	comp=Z,1.3nm,0.7s,mb4.1,baz=80,slow=6.6,SNR=5.4						
NOA	**NORSAR Array B**	**64.92**	**328**	P	**P**	**19 33 16.7**	**+0.1**
GERES	**GERESS Array B**	**66.04**	**314**	P	**P**	**19 33 24.8**	**+0.9**
	comp=Z,0.2nm,0.4s,mb3.5,baz=55,slow=8.5,SNR=2.8						
STKA	**Stephens Creek**	**72.21**	**141**	P	**P**	**19 34 01.1**	**-1.0**
	comp=Z,1.9nm,1.0s,mb4.0,baz=258,slow=14,SNR=3.5						
TORD	**Torodi Ar. Bea**	**88.74**	**284**	P	**P**	**19 35 31.9**	**+1.2**
	comp=Z,0.6nm,0.8s,mb4.0,baz=65,slow=5.8,SNR=3.0						
BDFB	**Brasilia**	**145.59**	**282**	PKPbc	PKPbc	19 42 16.7	+1.2
	comp=Z,2.0nm,0.8s,baz=148,slow=5.4,SNR=3.5						

SZGRF ***13*** *19:43:06.8, 7202N×533W, h33km, mb4.2, MS3.3, Jan Mayen Island region*
NAO ***13*** *19:43:06.8±1.4, 7126N×429W, ML2.7*
ISCJB ***13*** *19:43:07.7±0.3, 7151N±003×446W±008, h10km, mb4.2/62, MS3.7/30, Error ellipse: s-maj=4.2km s-min=3.7km az=157.8*
MOS ***13*** *19:43:07.9±1.2, 7155N×408W, h10km, mb4.6/39, Error ellipse: s-maj=19.4km s-min=3.8km az=98.4*
IDC ***13*** *19:43:08.0±0.7, 7145N×474W, h0km, mb4.0/14, mb1 4.1/15, mb1mx4.0/23, mbtmp4.0/15, ML4.2/1, MS3.7/22, Ms1 3.7/22, ms1mx3.7/31, Error ellipse: s-maj=17.1km s-min=14.6km az=151.0*
NEIC ***13*** *19:43:09.7, 7136N×452W, h0km, mb4.4/45, After BER.*
HRVD ***13*** *19:43:09.7±0.4, 7138N×406W, h12km, MW4.7/49, Centroid moment Tensor Solution. LP body waves: s5,c5;Mantle waves: s49,c59; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.04±.07; $M_{\theta\theta}$0.37±.07; $M_{\phi\phi}$0.66±.05; $M_{r\theta}$-0.69±.35; $M_{\theta\phi}$0.54±.06; $M_{\phi r}$-0.06±.28; Best double couple: $M_0$1.26100×10^{16} NP1:ϕ_s198.00000°, δ36.00000°, λ-125.00000°. NP2:ϕ_s59.00000°, δ61.00000°, λ-67.00000°. Principal axes: T 1.1890, Plg13.0000°, Azm133.0000°; N 0.1400, Plg20.0000°, Azm227.0000°; P -1.3330, Plg66.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BER ***13*** *19:43:10.7±2.5, 7137N×450W, h10km, MD1.7, ML2.8, ML2.7(NAO)*
CSEM ***13*** *19:43:12.0, 7125N×341W, h10km, mb4.6*
BGS ***13*** *19:43:15.3±2.0, 7093N×221W, h5km, mb4.7*
ISC 13 19:43:09.3±0.3**, 7145N**±003×**440W**±009**, h10**km**, n295,** σ**1.13**/297**, mb4.2**/62**, MS3.7**/30**, 11C-19D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.34**	**252**	*e*P	**Pn**	**19 43 33.3**	**-0.8**
JNE				AML	AML	19 43 56.4	
	comp=Z,194nm,0.4s						
JNW	**Jan Mayen West**	**1.37**	**254**	*e*P	**Pn**	**19 43 33.3**	**-1.2**
JMIC	**Jan Mayen**	**1.41**	**253**	Pg	**Pg**	**19 43 33.1**	**-3.3**
JMIC				Lg		19 43 51.0	
JMIC	**Jan Mayen**	**1.41**	**253**	Pn	**Pn**	**19 43 33.1**	**-2.0**
	comp=Z,12nm,0.3s,baz=23,slow=3.9,SNR=25						
JMIC				Sn	**Sn**	**19 43 51.0**	**-2.6**
	comp=Z,15nm,0.3s,baz=7.9,slow=22,SNR=10						
JMIC	**Jan Mayen**	**1.41**	**253**	*e*P	**Pn**	**19 43 33.3**	**-1.7**
JMI	**Jan Mayen**	**1.50**	**252**	*e*P	**Pn**	**19 43 34.8**	**-1.4**
JMI				*e*S	**Sn**	**19 43 53.7**	**-2.2**
JMI				AML	AML	19 43 55.0	
	comp=Z,92nm,0.2s						
JMI	**Jan Mayen**	**1.50**	**252**	*e*P	**Pn**	**19 43 34.8**	**-1.4**
JMI				*e*S	**Sn**	**19 43 53.7**	**-2.2**
SCO	**Scoresbysund**	**5.82**	**269**	*i* P	**Pn**	**19 44 35.9**	**+0.3**
SCO	**Scoresbysund**	**5.82**	**269**	*e*P	**Pn**	**19 44 35.9**	**+0.3**
DAG	**Danmarks Havn**	**6.60**	**330**	⇓*i*P	**Pn**	**19 44 45.6**	**-0.8**
	comp=Z,13nm,0.6s						
DAG	**Danmarks Havn**	**6.60**	**330**	⇓*i*P	**Pn**	**19 44 45.6**	**-0.8**
DAG				pmax	pmax		
	comp=Z,13nm,0.6s						
LOF	**Lofoten**	**7.03**	**110**	*e*P	**Pn**	**19 44 51.0**	**-1.3**
HSP	**Hornsund**	**7.74**	**35**	*e*Pg	**Pn**	**19 45 01.7**	**-0.3**
HSP	**Hornsund**	**7.74**	**35**	*e*Pg	**Pn**	**19 45 01.7**	**-0.3**
TRO	**Tromso**	**7.97**	**92**	*e*P	**Pn**	**19 45 00.8**	**-4.5**
KBS	**Kingsbay**	**8.54**	**21**	Pn	**Pn**	**19 45 13.3**	**+0.3**
KBS	**Kingsbay**	**8.54**	**21**	*i* P	**Pn**	**19 45 13.6**	**+0.5**
KBS	**Kingsbay**	**8.54**	**21**	*e*Pn	**Pn**	**19 45 13.2**	**+0.1**
MOR8	**Moi Rana**	**8.60**	**119**	*e*P	**Pn**	**19 45 12.2**	**-1.7**
MOR8				*e*S	**Sn**	**19 46 42.9**	**-8.0**
MOR8				AML	AML	19 46 44.2	
	comp=Z,19nm,0.4s						
MOR8	**Moi Rana**	**8.60**	**119**	*e*P	**Pn**	**19 45 12.2**	**-1.7**
MOR8				*e*S	**Sn**	**19 46 42.9**	**-8.0**
MOR8	**Moi Rana**	**8.60**	**119**	*e*P	**Pn**	**19 45 12.1**	**-1.8**
	SNR=47						
SPB4	**Spitsbergen Ar**	**8.60**	**29**	*e*Pn	**Pn**	**19 45 14.9**	**+1.0**
SPA0	**Spitsbergen Ar**	**8.61**	**29**	Pn	**Pn**	**19 45 14.8**	**+0.9**
	baz=221,slow=16						
BORG	**Borgarnes**	**9.19**	**231**	LR	LR	19 48 07.9	
	comp=Z,174nm,20.8s,baz=102,slow=33						
NSS	**Namsos**	**9.24**	**131**	*e*P	**Pn**	**19 45 18.9**	**-3.7**
ARA0	**ARCESS Array S**	**10.12**	**86**	Pn	**Pn**	**19 45 31.6**	**-3.0**
	baz=290,slow=10						
ARA0	**ARCESS Array S**	**10.12**	**86**	P	**Pn**	**19 45 31.6**	**-3.0**
	SNR=47						
ARCES	**ARCESS Array B**	**10.12**	**86**	Pn	**Pn**	**19 45 32.2**	**-2.4**
	comp=Z,0.6nm,0.3s,baz=289,slow=11,SNR=24						
SUMG	**Summit**	**10.50**	**292**	*e*P	**Pn**	**19 45 41.4**	**+1.6**
	comp=Z,9.4nm,0.8s						
KEV	**Kevo**	**10.51**	**84**	*e*p	**Pn**	**19 45 36.5**	**-3.5**
	comp=Z,4.9nm,0.5s						
KEV	**Kevo**	**10.51**	**84**	*e*P	**Pn**	**19 45 37.2**	**-2.8**
KEV				pmax	pmax		
	comp=Z,26nm,1.2s						
KEV	**Kevo**	**10.51**	**84**	*e*P	**Pn**	**19 45 37.2**	**-2.8**
	comp=Z,26nm,1.2s						
KEV	**Kevo**	**10.51**	**84**	*e*P	**Pn**	**19 45 37.2**	**-2.8**
	comp=Z,26nm,1.2s						
FOO	**Floro**	**10.57**	**155**	*e*Pn	**Pn**	**19 45 32.5**	**-8.3**
DOMB	**Dombas**	**10.80**	**144**	*e*Pn	**Pn**	**19 45 42.3**	**-1.7**
HYA	**Hoyanger**	**11.14**	**153**	*e*Pn	**Pn**	**19 45 48.7**	**0.0**
WAL1	**Walls**	**11.30**	**173**	*e*P	**Pn**	**19 45 49.0**	**-1.8**
WAL1	**Walls**	**11.30**	**173**	*e*P	**Pn**	**19 45 49.0**	**-1.8**
LRW	**Lerwick**	**11.44**	**172**	*e*P	**Pn**	**19 45 51.2**	**-1.5**
LRW	**Lerwick**	**11.44**	**172**	*e*P	**Pn**	**19 45 51.2**	**-1.5**
NB2	**NORSAR Subarra**	**12.14**	**141**	Pn	**Pn**	**19 45 59.5**	**-2.8**
	baz=325,slow=14						
NOA	**NORSAR Array B**	**12.14**	**141**	Pn	**Pn**	**19 45 59.3**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=338,slow=12,SNR=7.2						
NOA				Sn	**Sn**	**19 48 05.0**	**-13**
	comp=Z,0.4nm,0.3s,baz=105,slow=5.4,SNR=3.7						
NOA				LR	LR	19 50 26.8	
	comp=Z,562nm,21.6s,baz=335,slow=36						
ORE	**Reay**	**12.96**	**179**	*e*P	**Pn**	**19 46 12.7**	**-0.8**
ORE	**Reay**	**12.96**	**179**	*e*P	**Pn**	**19 46 12.7**	**-0.8**
KONO	**Kongsberg**	**13.13**	**147**	*i* P	**Pn**	**19 46 14.7**	**-1.1**
HFS	**Hagfors**	**13.48**	**138**	Pn	**Pn**	**19 46 18.5**	**-2.1**
	comp=Z,1.0nm,0.3s,baz=338,slow=11,SNR=40						
HFS				Sn	**Sn**	**19 48 40.5**	**-10**
	comp=Z,0.7nm,0.3s,baz=348,slow=22,SNR=7.5						
HFS				LR	LR	19 51 37.9	
	comp=Z,648nm,18.2s,baz=322,slow=38						
HFS	**Hagfors**	**13.48**	**138**	Pn	**Pn**	**19 46 18.3**	**-2.2**
	baz=329,slow=12						
MCD	**Coleburn Disti**	**13.93**	**177**	*e*P	**Pn**	**19 46 26.2**	**-0.6**
MCD	**Coleburn Disti**	**13.93**	**177**	*e*P	**Pn**	**19 46 26.2**	**-0.6**
MME1	**Meikle Cairn**	**14.21**	**177**	*e*P	**Pn**	**19 46 29.2**	**-1.3**
MME1	**Meikle Cairn**	**14.21**	**177**	*e*P	**Pn**	**19 46 29.2**	**-1.3**
KAF	**Kangasniemi**	**15.09**	**113**	*e*p	**Pn**	**19 46 38.3**	**-4.2**
	comp=Z,14nm,0.7s						
KAF	**Kangasniemi**	**15.09**	**113**	*e*P	**Pn**	**19 46 38.3**	**-4.2**

KAF pmax pmax
comp=Z,14nm,0.7s
EAB Aberfoyle 15.32 180 *e*P **Pn** **19 46 45.3 -0.3**
EAB Aberfoyle 15.32 180 *e*P **Pn** 19 46 45.3 -0.3
FIA0 FINESS Array S 15.55 115 P **Pn** 19 46 45.2 -3.3
baz=332,slow=14
FIA1 FINESS Array S 15.55 115 *e*P **Pn** **19 46 45.6 -3.0**
FIA1 FINESS Array S 15.55 115 *e*P **Pn** 19 46 45.6 -3.0
FINES FINESS Array B 15.55 115 Pn **Pn** 19 46 45.2 -3.3
comp=Z,0.2nm,0.3s,baz=334,slow=13,SNR=17
FINES LR LR 19 52 07.1
comp=Z,492nm,19.4s,baz=318,slow=34
FINES FINESS Array B 15.55 115 Pn **Pn** **19 46 45.2 -3.4**
FINES LR LR 19 52 07.1
EAU Auchinoon 15.67 178 *e*P **Pn** **19 46 50.4 +0.2**
EAU Auchinoon 15.67 178 *e*P **Pn** 19 46 50.4 +0.2
JOF Joensuu 16.00 104 *e*p **Pn** 19 46 49.4 -5.0
comp=Z,9.2nm,0.7s
JOF Joensuu 16.00 104 *e*P **Pn** **19 46 49.4 -5.0**
JOF pmax pmax
comp=Z,9.0nm,0.7s
EKA Eskdalemuir Ar 16.19 177 Pn **Pn** **19 46 55.5 -1.4**
comp=Z,0.5nm,0.3s,baz=356,slow=12,SNR=12
BWH Wardlaw 16.34 178 *e*P **Pn** **19 46 59.3 +0.5**
BWH Wardlaw 16.34 178 *e*P **Pn** 19 46 59.3 +0.5
BHH Howats Hill 16.43 178 *e*P **Pn** 19 47 00.6 +0.6
BHH Howats Hill 16.43 178 *e*P **Pn** 19 47 00.6 +0.6
SFJD Kangerlussuaq 16.63 277 P **Pn** **19 47 02.8 +0.4**
BBO1 Bothel 16.79 178 *e*P **Pn** **19 47 05.4 +0.9**
BBO1 Bothel 16.79 178 *e*P **Pn** 19 47 05.4 +0.9
CKE Keswick 16.94 177 *e*P **Pn** **19 47 06.5 +0.2**
CKE Keswick 16.94 177 *e*P **Pn** 19 47 06.5 +0.2
XDE Dent Fell 17.01 178 *e*P **Pn** 19 47 07.9 +0.6
XDE AMb AMB 19 47 11.4
comp=Z,54nm,1.5s
XDE Dent Fell 17.01 178 *e*P **Pn** **19 47 07.9 +0.6**
XDE AMb AMB 19 47 11.4
comp=Z,54nm,1.5s
PUL Pulkovo 18.15 112 *de*P **Pn** **19 47 19.4 -2.0**
PUL MLR MLR
comp=N,254nm,13.0s
PUL MLR MLR
comp=Z,369nm,13.0s
PUL MLR MLR
comp=Z,239nm,17.0s
PUL Pulkovo 18.15 112 *e*P **Pn** **19 47 19.4 -2.0**
comp=Z,239nm,17.0s
VSU Vasula 18.20 120 *i* P **Pn** **19 47 19.8 -2.3**
SBD1 Bryn Du 18.62 178 *e*P **Pn** **19 47 27.3 +0.2**
SBD1 Bryn Du 18.62 178 *e*P **Pn** 19 47 27.3 +0.2
HLM1 Long Mynd 19.01 177 *e*P **Pn** 19 47 31.4 -0.5
HLM1 AMb AMB 19 47 39.9
comp=Z,43nm,1.6s
HLM1 Long Mynd 19.01 177 *e*P **Pn** **19 47 31.4 -0.5**
HLM1 AMb AMB 19 47 39.9
comp=Z,43nm,1.6s
HTR Trewern Hill 19.45 178 *e*P **Pn** **19 47 36.1 -1.1**
HTR AMb AMB 19 47 48.1
comp=Z,45nm,1.7s
HTR Trewern Hill 19.45 178 *e*P **Pn** 19 47 36.1 -1.1
HTR AMb AMB 19 47 48.1
comp=Z,45nm,1.7s
HGH Gray Hill 19.90 177 *e*P **Pn** **19 47 42.0 -0.5**
HGH AMb AMB 19 47 49.3
comp=Z,82nm,1.7s
HGH Gray Hill 19.90 177 *e*P **Pn** **19 47 42.0 -0.5**
HGH AMb AMB 19 47 49.3
comp=Z,82nm,1.7s
KLMR Klimovskoe 20.12 99 *e*P **P** **19 47 42.5 -0.8**
KLMR pmax pmax
comp=Z,70nm,1.2s
KLMR Klimovskoe 20.12 99 *e*P **P** **19 47 42.5 -0.8**
comp=Z,70nm,1.2s
GKP Gorka Klasztor 20.58 141 *e*P **P** **19 47 48.6 +0.3**
CSA1 St Austell 21.17 181 *e*P **P** **19 47 55.1 +0.4**
CSA1 St Austell 21.17 181 *e*P **P** **19 47 55.1 +0.4**
SUW Suwalki 21.22 131 *e*P **P** **19 47 56.2 +1.0**
comp=Z,1.2nm,0.9s,mb3.2
CLL Collm 21.69 149 P **P** **19 48 00.0 -0.3**
comp=Z,logA/T=1.0,mb4.2
CLL *e**PP 19 48 02.0
CLL *i* *SP sP 19 48 04.2 -0.2
CLL *e*S **S** **19 51 58.0 -2.2**
CLL Collm 21.69 149 *i* P **P** **19 48 00.0 -0.3**
comp=Z,9.0nm,0.9s,mb4.2
CLL *e*pP 19 48 02.0
CLL *i* sP sP 19 48 04.2 -0.2
comp=Z,36nm,1.6s
CLL *e*S **S** **19 51 58.0 -2.2**
CLL Lm 19 55 00.0
comp=Z,300nm,21.9s
CLL Collm 21.69 149 *i* P **P** **19 48 00.0 -0.3**
comp=Z,9.0nm,0.9s,mb4.2
CLL *e*S **S** **19 51 58.0 -2.2**
BAIF Baives 21.82 165 *e*P **P** **19 48 01.7 0.0**
comp=Z,67nm,1.3s,mb4.6
BAIF Baives 21.82 165 *e*P **P** **19 48 01.7 0.0**
BAIF pmax pmax
comp=Z,34nm,1.3s,mb4.6
BAIF Baives 21.82 165 *e*P **P** **19 48 01.7 0.0**
comp=Z,34nm,1.3s,mb4.6
GIVF Givet 21.84 164 *e*P **P** **19 48 01.9 +0.1**
comp=Z,28nm,0.9s,mb4.4
GIVF Givet 21.84 164 *e*P **P** **19 48 01.9 +0.1**
GIVF pmax pmax
comp=Z,14nm,0.9s,mb4.4
GIVF Givet 21.84 164 *e*P **P** **19 48 01.9 +0.1**
comp=Z,14nm,0.9s,mb4.4
MNK Minsk 21.96 124 *e*P **P** **19 48 01.0 -2.2**
MOX Moxa 22.11 152 *e*P **P** **19 48 05.1 +0.3**
comp=Z,33nm,1.9s,mb4.4
MOX
comp=Z,100nm,16.0s
MOX Moxa 22.11 152 *e*P **P** **19 48 05.1 +0.3**
MOX pmax pmax
comp=Z,33nm,1.9s,mb4.4
MOX MLR MLR
comp=Z,100nm,16.0s,MS3.3
BRG Berggiesshubel 22.26 148 *e*P **P** **19 48 06.7 +0.3**
comp=Z,4.5nm,0.8s,mb4.0
NKC Novy Kostel 22.64 151 *e*P **P** **19 48 10.8 +0.4**
NKC AMS AMS 19 58 30.0
comp=Z,200nm,12.6s
PVCC Panska Ves 22.70 147 *e*P **P** **19 48 12.7 +1.6**
PVCC AMS AMS 19 55 30.0
KSP Ksiaz 22.71 145 *e*P **P** **19 48 10.9 -0.2**
FLN La Foliniere 22.84 173 *e*P **P** **19 48 11.5 -1.0**
comp=Z,32nm,0.8s,mb4.5
FLN *e*R
comp=Z,212nm,21.8s
FLN La Foliniere 22.84 173 *e*P **P** **19 48 11.5 -1.0**
FLN pmax pmax
comp=Z,16nm,0.8s,mb4.5
FLN MLR MLR
comp=Z,210nm,21.8s,MS3.5
FLN La Foliniere 22.84 173 *e*P **P** **19 48 11.5 -1.0**
comp=Z,16nm,0.8s,mb4.5
FLN LR LR
comp=Z,210nm,21.8s,MS3.5
UPC Upice 22.98 145 *e*P **P** **19 48 15.0 +1.0**
GRA1 Grafenberg Arr 22.99 153 *e*P **P** **19 48 14.7 +0.6**
comp=Z,7.0nm,0.9s,mb4.1
GRA1 LR LR
comp=Z,200nm,36.6s,MS3.3
GRF Grafenberg Arr 22.99 153 *e*P **P** **19 48 14.7 +0.6**
comp=Z,7.0nm,0.9s,mb4.1
GRF *e*L 19 54 55.2
comp=Z,188nm,36.6s
GRF Grafenberg Arr 22.99 153 *e*P **P** **19 48 14.7 +0.6**
GRF pmax pmax
comp=Z,7.0nm,0.9s,mb4.1
GRF MLR MLR
comp=Z,200nm,36.6s,MS3.3
GRF Grafenberg Arr 22.99 153 *e*P **P** **19 48 14.7 +0.6**
GRF pmax pmax
comp=Z,7.0nm,0.9s,mb4.1
GRF MLR MLR
comp=Z,200nm,36.6s,MS3.3
LDF La Druitiere 23.02 173 *e*P **P** **19 48 13.4 -1.0**
comp=Z,38nm,0.9s,mb4.5
LDF La Druitiere 23.02 173 *e*P **P** **19 48 13.4 -1.0**
LDF pmax pmax
comp=Z,19nm,0.9s,mb4.5
LDF La Druitiere 23.02 173 *e*P **P** **19 48 13.4 -1.0**
comp=Z,19nm,0.9s,mb4.5

DPC Dobruska-Polom 23.19 145 *e*P **P** **19 48 16.2 0.0**
DPC AMS AMS 19 58 40.0
comp=Z,300nm,13.5s
DPC Dobruska-Polom 23.19 145 *e*P **P** **19 48 16.2 0.0**
comp=Z,300nm,13.5s
GRR Gorron 23.20 174 *e*P **P** **19 48 15.5 -0.8**
comp=Z,29nm,0.9s,mb4.4
GRR Gorron 23.20 174 *e*P **P** **19 48 15.5 -0.8**
GRR pmax pmax
comp=Z,15nm,0.9s,mb4.4
GRR Gorron 23.20 174 *e*P **P** **19 48 15.5 -0.8**
comp=Z,15nm,0.9s,mb4.4
PRU Pruhonice 23.22 148 *e*P **P** **19 48 17.4 +0.9**
PRU AMS AMS 19 56 10.0
comp=Z,200nm,22.2s
PRU Pruhonice 23.22 148 *e*P **P** **19 48 17.4 +0.9**
comp=Z,200nm,22.2s
SGMF Saint Gilles 23.29 177 *e*P **P** **19 48 16.5 -0.7**
comp=Z,62nm,1.1s,mb4.7
SGMF Saint Gilles 23.29 177 *e*P **P** **19 48 16.5 -0.7**
SGMF pmax pmax
comp=Z,31nm,1.1s,mb4.7
SGMF Saint Gilles 23.29 177 *e*P **P** **19 48 16.5 -0.7**
comp=Z,31nm,1.1s,mb4.7
MEZF Maizieres J'vi 23.44 164 *e*P **P** **19 48 19.0 +0.1**
MOS Moscow 23.68 109 *e*P **P** **19 48 22.5 +1.3**
MOS *e* 19 48 53.2
MOS MLR MLR
comp=Z,500nm,16.9s,MS4.0
MOS MLR MLR
comp=N,500nm,17.0s
CDF Champ du Feu 23.75 160 *e*P **P** **19 48 22.5 +0.7**
comp=N,5.3nm,0.7s,mb3.8
CDF Champ du Feu 23.75 160 *e*P **P** **19 48 22.5 +0.7**
CDF pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
CDF Champ du Feu 23.75 160 *e*P **P** **19 48 22.5 +0.7**
comp=Z,2.7nm,0.7s,mb3.8
KHC Kasperske Hory 23.89 150 *e*P **P** **19 48 24.1 +1.0**
KHC AMS AMS 19 56 50.0
comp=Z,200nm,19.4s
KHC Kasperske Hory 23.89 150 *e*P **P** **19 48 23.5 +0.4**
OBN Obninsk 23.90 112 *ci*P **P** **19 48 22.0 -1.2**
OBN *e* 19 48 27.9
OBN pmax pmax
comp=Z,11nm,1.1s,mb4.2
OBN MLR MLR
comp=Z,400nm,15.0s,MS4.0
OBN Obninsk 23.90 112 *e*P **P** **19 48 22.0 -1.2**
comp=Z,29nm,0.9s,mb4.7
OBN Obninsk 23.90 112 *e*P **P** **19 48 22.0 -1.2**
comp=Z,29nm,0.9s,mb4.7
BFO Black Forest 23.95 159 *e*P **P** **19 48 24.4 +0.8**
MORC Moravsky Berou 23.96 143 ⇑*i*P **P** **19 48 24.0 +0.2**
MORC Moravsky Berou 23.96 143 *e*P **P** **19 48 23.0 -0.8**
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
MORC Moravsky Berou 23.96 143 *e*P **P** **19 48 23.0 -0.8**
comp=Z,5.1nm,0.8s,mb4.0
MORC Moravsky Berou 23.96 143 *e*P **P** **19 48 23.0 -0.8**
comp=Z,5.1nm,0.8s,mb4.0
OJC Ojcow 23.99 140 *e*P **P** **19 48 23.4 -0.6**
OKC Ostrava-Krasne 24.02 142 *e*P **P** **19 48 24.2 -0.1**
OKC AMS AMS 19 59 00.0
comp=Z,400nm,15.2s
TREC Trest 24.05 147 *e*P **P** **19 48 25.2 +0.6**
TREC AMS AMS 19 56 30.0
comp=Z,200nm,25.4s
TREC Trest 24.05 147 *e*P **P** **19 48 25.2 +0.6**
comp=Z,200nm,25.4s
HAU Haudompre 24.05 162 *e*P **P** **19 48 25.2 +0.6**
comp=Z,6.7nm,0.8s,mb3.9
HAU *e*R
comp=Z,249nm,22.2s
HAU Haudompre 24.05 162 *e*P **P** **19 48 25.2 +0.6**
HAU pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
HAU MLR MLR
comp=Z,250nm,22.3s,MS3.6
HAU Haudompre 24.05 162 *e*P **P** **19 48 25.2 +0.6**
comp=Z,3.3nm,0.8s,mb3.8
HAU LR LR
comp=Z,250nm,22.3s,MS3.6
GEC2 GERESS Array S 24.19 150 *e*P **P** **19 48 25.0 -0.8**
GERES GERESS Array B 24.19 150 P **P** **19 48 26.8 +1.0**
comp=Z,1.6nm,0.7s,mb3.5,baz=354,slow=9.4,SNR=14
GERES LR LR 19 57 21.1
comp=Z,146nm,21.6s,MS3.4,baz=170,slow=35
VRAC Vranov 24.24 145 P **P** **19 48 26.8 +0.5**
comp=Z,7.3nm,0.7s,mb4.2,baz=350,slow=8.8,SNR=17
VRAC LR LR 19 58 08.6
comp=Z,153nm,18.8s,MS3.5,baz=333,slow=37
VRAC Vranov 24.24 145 ⇑*i*P **P** **19 48 26.8 +0.5**
VRAC Vranov 24.24 145 *e*P **P** **19 48 26.7 +0.4**
HINF Hinteralfeld 24.29 161 *e*P **P** **19 48 27.3 +0.5**
comp=Z,6.6nm,0.8s,mb3.8
HINF Hinteralfeld 24.29 161 *e*P **P** **19 48 27.3 +0.5**
HINF pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
HINF Hinteralfeld 24.29 161 *e*P **P** **19 48 27.3 +0.5**
comp=Z,3.3nm,0.8s,mb3.8
LOR Lormes 24.57 166 *e*P **P** **19 48 29.7 +0.4**
comp=Z,20nm,0.7s,mb4.5
LOR *e*R
comp=Z,147nm,23.0s
LOR Lormes 24.57 166 *e*P **P** **19 48 29.7 +0.4**
LOR pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
LOR MLR MLR
comp=Z,150nm,23.0s,MS3.4
LOR Lormes 24.57 166 *e*P **P** **19 48 29.7 +0.4**
comp=Z,10nm,0.7s,mb4.5
LOR LR LR
comp=Z,150nm,23.0s,MS3.4
SSF Saint Saulge 24.75 167 *e*P **P** **19 48 31.2 +0.2**
comp=Z,11nm,0.6s,mb4.3
SSF Saint Saulge 24.75 167 *e*P **P** **19 48 31.2 +0.2**
SSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.3
SSF Saint Saulge 24.75 167 *e*P **P** **19 48 31.2 +0.2**
comp=Z,5.7nm,0.6s,mb4.3
NIE Niedzica 24.86 139 *e*P **P** **19 48 33.9 +2.0**
LCHF La Chataignera 24.92 174 *e*P **P** **19 48 33.7 +1.2**
MFF Saint Martin d 25.01 173 *e*P **P** **19 48 34.8 +1.5**
comp=Z,23nm,0.6s,mb4.5
MFF Saint Martin d 25.01 173 *e*P **P** **19 48 34.8 +1.5**
MFF pmax pmax
comp=Z,11nm,0.6s,mb4.6
MFF Saint Martin d 25.01 173 *e*P **P** **19 48 34.8 +1.5**
comp=Z,11nm,0.6s,mb4.6
AVF Avril sur Loir 25.01 167 *e*P **P** **19 48 33.6 +0.3**
comp=Z,26nm,1.1s,mb4.3
AVF Avril sur Loir 25.01 167 *e*P **P** **19 48 33.6 +0.3**
AVF pmax pmax
comp=Z,13nm,1.1s,mb4.4
AVF Avril sur Loir 25.01 167 *e*P **P** **19 48 33.6 +0.3**
comp=Z,13nm,1.1s,mb4.4
STHS Stebnicka Huta 25.06 138 *e*P **P** **19 48 34.6 +0.9**
STHS pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
STHS Stebnicka Huta 25.06 138 *e*P **P** **19 48 34.6 +0.9**
comp=Z,7.3nm,0.7s,mb4.3
SMF Signal de Mont 25.19 167 *e*P **P** **19 48 35.1 +0.2**
comp=Z,24nm,0.8s,mb4.5
SMF Signal de Mont 25.19 167 *e*P **P** **19 48 35.1 +0.2**
SMF pmax pmax
comp=Z,12nm,0.8s,mb4.5
SMF Signal de Mont 25.19 167 *e*P **P** **19 48 35.1 +0.2**
comp=Z,12nm,0.8s,mb4.5
BGF Bois d'Agland 25.21 168 *e*P **P** **19 48 35.4 +0.3**
comp=Z,40nm,0.8s,mb4.7
BGF Bois d'Agland 25.21 168 *e*P **P** **19 48 35.4 +0.3**
BGF pmax pmax
comp=Z,20nm,0.8s,mb4.7
BGF Bois d'Agland 25.21 168 *e*P **P** **19 48 35.4 +0.3**
comp=Z,20nm,0.8s,mb4.7
MOTA Moosalm 25.27 155 ⇑*i*P **P** **19 48 36.9 +1.3**
comp=Z,9.7nm,1.3s,mb4.2
MOTA Moosalm 25.27 155 ⇑*i*P **P** **19 48 36.9 +1.3**
MOTA pmax pmax
comp=Z,10.0nm,1.3s,mb4.2
WATA Walderalm 25.34 154 ⇓*i*P **P** **19 48 37.6 +1.3**
comp=Z,5.3nm,1.0s,mb4.0
WATA Walderalm 25.34 154 ⇓*i*P **P** **19 48 37.6 +1.3**
WATA pmax pmax
comp=Z,5.0nm,1.0s,mb4.0

ZST Bratislava 25.40 145 *e*P **P** **19 48 38.0 +1.1**
ZST MLR MLR
comp=Z,100nm,21.5s,MS3.3
SQTA Sankt Quirin 25.40 155 ⇓*i*P **P** **19 48 38.6 +1.7**
comp=Z,4.8nm,0.9s,mb4.0
SQTA Sankt Quirin 25.40 155 ⇓*i*P **P** **19 48 38.6 +1.7**
SQTA pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
CABF La Chapelle 25.41 163 *e*P **P** **19 48 37.5 +0.5**
comp=Z,13nm,0.8s,mb4.2
CABF La Chapelle 25.41 163 *e*P **P** **19 48 37.5 +0.5**
CABF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
CABF La Chapelle 25.41 163 *e*P **P** **19 48 37.5 +0.5**
comp=Z,6.6nm,0.8s,mb4.2
WTTA Wattenberg 25.42 154 ⇓*i*P **P** **19 48 39.8 +2.8**
comp=Z,16nm,1.2s,mb4.5
WTTA Wattenberg 25.42 154 ⇓*i*P **P** **19 48 39.8 +2.8**
WTTA pmax pmax
comp=Z,16nm,1.2s,mb4.4
TCF Toulx Ste Croi 25.43 169 *e*P **P** **19 48 37.4 +0.2**
comp=Z,21nm,0.8s,mb4.4
TCF Toulx Ste Croi 25.43 169 *e*P **P** **19 48 37.4 +0.2**
TCF pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
TCF Toulx Ste Croi 25.43 169 *e*P **P** **19 48 37.4 +0.2**
comp=Z,10nm,0.8s,mb4.4
CONA Conrad Observa 25.44 147 ⇓*i*P **P** **19 48 40.0 +2.8**
comp=Z,18nm,1.0s,mb4.6
VYHS Vyhne 25.44 142 *e*P **P** **19 48 36.9 -0.3**
VYHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.0
VYHS Vyhne 25.44 142 *e*P **P** **19 48 36.9 -0.3**
comp=Z,5.2nm,1.1s,mb4.0
AGO Saint Agoulin 25.73 168 *e*P **P** **19 48 40.2 +0.4**
KOLS Kolonicke sedl 25.74 137 *e*P **P** **19 48 41.5 +1.6**
AKASG Malin Array Be 25.76 126 P **P** **19 48 38.9 -1.2**
comp=Z,5.4nm,0.6s,mb4.3,baz=335,slow=9.5,SNR=21
AKASG Malin Array Be 25.76 126 P **P** **19 48 38.9 -1.2**
AKBB Malin Array Si 25.76 126 *e*P **P** **19 48 38.9 -1.2**
KECS Kecovo 25.78 140 *e*P **P** **19 48 39.6 -0.7**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
KECS Kecovo 25.78 140 *e*P **P** **19 48 39.6 -0.7**
comp=Z,3.3nm,0.8s,mb3.9
PLDF La Plantade 25.84 167 *e*P **P** **19 48 40.9 0.0**
PYM Petit Puy Mans 26.02 168 *e*P **P** **19 48 42.6 +0.1**
PSZ Piszkesteto 26.20 141 ⇓*i*P **P** **19 48 45.3 +1.2**
PSZ Piszkesteto 26.20 141 *e*P **P** **19 48 45.1 +1.0**
comp=Z,14nm,1.4s,mb4.3
COLF Collangettes 26.30 167 *e*P **P** **19 48 45.9 +0.9**
RJF Les Rejaudoux 26.38 171 *e*P **P** **19 48 46.0 +0.3**
comp=Z,30nm,0.6s,mb4.7
RJF *e*R
comp=Z,183nm,22.0s
RJF Les Rejaudoux 26.38 171 *e*P **P** **19 48 46.0 +0.3**
RJF pmax pmax
comp=Z,15nm,0.6s,mb4.7
RJF MLR MLR
comp=Z,180nm,22.0s,MS3.6
RJF Les Rejaudoux 26.38 171 *e*P **P** **19 48 46.0 +0.3**
comp=Z,15nm,0.6s,mb4.7
RJF LR LR
comp=Z,180nm,22.0s,MS3.6
LBL Lubilhac 26.55 168 *e*P **P** **19 48 46.1 -1.2**
LPL La Plagne 26.56 162 *e*P **P** **19 48 48.6 +1.3**
comp=Z,7.6nm,0.8s,mb4.0
LPL La Plagne 26.56 162 *e*P **P** **19 48 48.6 +1.3**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
LPL La Plagne 26.56 162 *e*P **P** **19 48 48.6 +1.3**
comp=Z,3.8nm,0.8s,mb4.0
LPG La Plagne 26.58 162 *e*P **P** **19 48 49.0 +1.5**
comp=Z,10nm,1.0s,mb4.0
LPG La Plagne 26.58 162 *e*P **P** **19 48 49.0 +1.5**
LPG pmax pmax
comp=Z,5.0nm,1.0s,mb4.0
LPG La Plagne 26.58 162 *e*P **P** **19 48 49.0 +1.5**
comp=Z,5.2nm,1.0s,mb4.0
LFF La Frestale 26.70 172 *e*P **P** **19 48 49.2 +0.5**
comp=Z,35nm,0.9s,mb4.6
LFF La Frestale 26.70 172 *e*P **P** **19 48 49.2 +0.5**
LFF pmax pmax
comp=Z,18nm,0.9s,mb4.6
LFF La Frestale 26.70 172 *e*P **P** **19 48 49.2 +0.5**
comp=Z,18nm,0.9s,mb4.6
CAF Calviac 26.78 170 *e*P **P** **19 48 49.8 +0.4**
comp=Z,11nm,0.8s,mb4.1
CAF Calviac 26.78 170 *e*P **P** **19 48 49.8 +0.4**
CAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
CAF Calviac 26.78 170 *e*P **P** **19 48 49.8 +0.4**
comp=Z,5.3nm,0.8s,mb4.1
VIVF Saint-Julien-l 27.03 166 *e*P **P** **19 48 52.5 +0.9**
comp=Z,8.9nm,1.0s,mb4.0
VIVF Saint-Julien-l 27.03 166 *e*P **P** **19 48 52.5 +0.9**
VIVF pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
VIVF Saint-Julien-l 27.03 166 *e*P **P** **19 48 52.5 +0.9**
comp=Z,4.4nm,1.0s,mb3.9
ORIF Oris-en-Rattie 27.07 164 *e*P **P** **19 48 52.8 +0.8**
comp=Z,10nm,0.7s,mb4.1
ORIF *e*R
comp=Z,267nm,22.0s
ORIF Oris-en-Rattie 27.07 164 *e*P **P** **19 48 52.8 +0.8**
ORIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
ORIF Oris-en-Rattie 27.07 164 *e*P **P** **19 48 52.8 +0.8**
comp=Z,5.2nm,0.7s,mb4.2
MBDF Montbardon 27.34 162 *e*P **P** **19 48 56.0 +1.6**
comp=Z,13nm,0.8s,mb4.2
MBDF Montbardon 27.34 162 *e*P **P** **19 48 56.0 +1.6**
MBDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
MBDF Montbardon 27.34 162 *e*P **P** **19 48 56.0 +1.6**
comp=Z,6.6nm,0.8s,mb4.2
PKSM Moragy 27.59 144 ⇓*i*P **P** **19 48 57.7 +1.0**
PKSM Moragy 27.59 144 ⇓P **P** **19 48 57.7 +1.0**
BURAR Bucovina Array 27.64 134 ⇓*i*P **P** **19 48 56.2 -0.9**
BURAR Bucovina Array 27.64 134 ⇓P **P** **19 48 56.2 -0.9**
LASF Ste Croix 27.75 167 *e*P **P** **19 48 59.5 +1.5**
comp=Z,9.2nm,0.8s,mb4.2
DRGR 27.86 138 ⇓*i*P **P** **19 49 01.6 +2.6**
DRGR 27.86 138 ⇓P **P** **19 49 01.6 +2.6**
MTLF Montolieu 28.37 170 *e*P **P** **19 49 04.6 +1.0**
comp=Z,15nm,1.2s,mb4.2
MTLF Montolieu 28.37 170 *e*P **P** **19 49 04.6 +1.0**
MTLF pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
MTLF Montolieu 28.37 170 *e*P **P** **19 49 04.6 +1.0**
comp=Z,7.5nm,1.2s,mb4.2
SJPF Ste Jean 28.45 175 *e*P **P** **19 49 04.7 +0.3**
EPF Esparros 28.59 173 *e*P **P** **19 49 05.9 +0.3**
comp=Z,17nm,0.7s,mb4.6
EPF Esparros 28.59 173 *e*P **P** **19 49 05.9 +0.3**
EPF pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
EPF Esparros 28.59 173 *e*P **P** **19 49 05.9 +0.3**
comp=Z,8.5nm,0.7s,mb4.6
BZS Buzias 28.75 140 ⇑*i*P **P** **19 49 06.8 -0.2**
BZS Buzias 28.75 140 ⇑P **P** **19 49 06.8 -0.2**
PLOR Plostina 29.63 133 ⇑*i*P **P** **19 49 21.6 +6.8**
VRI Vrincioaia 29.64 133 ⇓*i*P **P** **19 49 15.3 +0.5**
VRI Vrincioaia 29.64 133 ⇓P **P** **19 49 15.3 +0.4**
ARU Arti 29.71 87 *e*P **P** **19 49 14.6 -0.9**
ARU *e*PPP 19 50 16.1
ARU MLR MLR
comp=Z,200nm,19.0s,MS3.8
ARU MLR MLR
comp=N,100nm,18.0s,MS3.6
ARU MLR MLR
comp=E,100nm,19.0s,MS3.6
MLR Muntele Rosu 29.81 134 LR LR 20 01 41.3
comp=E,608nm,19.4s,MS4.2,baz=169,slow=37
CFR Carcaliu 30.62 132 ⇑*i*P **P** **19 49 21.9 -1.6**
CFR Carcaliu 30.62 132 ⇑P **P** **19 49 21.9 -1.6**
SCHQ Schefferville 30.86 271 LR LR 20 00 46.1
comp=E,214nm,20.9s,MS3.8,baz=80,slow=34
ESDC Sonseca Array 31.85 179 P **P** **19 49 34.9 +0.5**
comp=E,1.4nm,0.6s,mb4.0,baz=0.3,slow=8.6,SNR=15
ANN Anapa 33.38 120 *e*P **P** **19 49 47.7 -0.1**
ANN *e*S **S** **19 55 07.9 -0.8**
ANN pmax pmax
comp=Z,40nm,1.5s,mb5.1
ANN MLR MLR
comp=Z,527nm,17.0s,MS4.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKTK	Aktyubinsk	34.60	93	P	P	19 49 59.5	+1.1
AKTK				LR	LR	20 03 41.3	
AKTK	Aktyubinsk	34.60	93	P	P	19 49 59.5	+1.1
AKTO	Aktyubinsk	34.60	93	P	P	19 49 59.5	+1.1
	comp=Z,1.4nm,0.8s,mb3.9,baz=313,slow=12,SNR=5.8						
AKTO				LR	LR	20 03 41.3	
	comp=Z,174nm,20.2s,MS3.8,baz=169,slow=36						
GOF	Gofitskoye	34.74	114	iP	P	19 50 01.2	+1.6
GOF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
VAE	Valguarnera	35.41	154	LR	LR	20 03 48.6	
	comp=Z,73nm,19.4s,MS3.5,baz=147,slow=35						
KEST	Kesra	36.51	161	P	P	19 50 15.1	+0.3
	comp=Z,1.3nm,0.8s,mb3.8,baz=354,slow=12,SNR=4.1						
KEST				LR	LR	20 04 32.3	
	comp=Z,56nm,20.5s,MS3.3,baz=14,slow=35						
BR131	Keskin Array S	37.11	128	eP	P	19 50 21.2	+1.3
	comp=Z,1.7nm,0.8s,mb3.9						
BR131	Keskin Array S	37.11	128	eP	P	19 50 21.2	+1.3
	comp=Z,1.7nm,0.8s,mb3.9						
BRTR	Keskin Array B	37.11	128	P	P	19 50 20.9	+0.9
	comp=Z,1.3nm,0.6s,mb3.9,baz=348,slow=7.4,SNR=8.6						
BRTR				LR	LR	20 07 27.5	
	comp=Z,119nm,18.9s,MS3.7,baz=161,slow=39						
BRTR	Keskin Array B	37.11	128	⇑eP	P	19 50 21.2	+1.3
YKA	Yellowknife Ar	38.02	315	LR	LR	20 06 02.5	
	comp=Z,178nm,18.7s,MS3.9,baz=50,slow=36						
MDT	Midelt	38.69	180	P	P	19 50 34.2	+0.9
	comp=Z,0.6nm,0.6s,mb3.5,baz=343,slow=3.4,SNR=4.1						
MDT				LR	LR	20 04 35.0	
	comp=Z,48nm,21.0s,MS3.3,baz=28,slow=33						
MDT	Midelt	38.69	180	P	P	19 50 34.2	+0.9
MDT				LR	LR	20 04 35.0	
IDI	Anoyia	39.36	141	LR	LR	20 08 35.1	
	comp=Z,90nm,18.4s,MS3.6,baz=267,slow=39						
MALT	Malatya	39.69	123	eP	P	19 50 41.9	+0.3
MALT				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
MALT	Malatya	39.69	123	eP	P	19 50 41.9	+0.3
	comp=Z,9.3nm,1.1s,mb4.4						
MALT	Malatya	39.69	123	eP	P	19 50 41.9	+0.3
	comp=Z,9.3nm,1.1s,mb4.4						
GNI	Garni	39.74	115	LR	LR	20 07 38.7	
	comp=Z,144nm,18.3s,MS3.9,baz=126,slow=37						
GNI	Garni	39.74	115	iP	P	19 50 42.6	+0.6
GNI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GNI				MLR	MLR		
	comp=Z,100nm,17.0s						
ZAL	Zalesovo	39.94	67	LR	LR	20 09 31.5	
	comp=Z,85nm,19.7s,MS3.6,baz=93,slow=40						
ULM	Lac du Bonnet	43.85	292	LR	LR	20 08 50.6	
	comp=Z,105nm,19.8s,MS3.8,baz=30,slow=35						
MKAR	Makanchi Array	45.49	74	P	P	19 51 29.2	+0.5
	comp=Z,2.2nm,1.0s,mb4.0,baz=337,slow=5.8,SNR=9.4						
AAK	Ala-Archa	46.78	84	iP	P	19 51 37.0	-1.9
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
AAK				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.8						
SONM	Songino Array	51.43	54	P	P	19 52 15.7	+1.2
	comp=Z,0.2nm,0.4s,mb3.4,baz=350,slow=41,SNR=2.6						
SONM				LR	LR	20 15 33.7	
	comp=Z,46nm,20.2s,MS3.5,baz=59,slow=38						
PDAR	Pinedale Array	54.60	299	P	P	19 52 38.2	+0.4
	comp=Z,0.4nm,0.7s,mb3.6,baz=29,slow=7.3,SNR=4.4						
PDAR				LR	LR	20 15 58.2	
	comp=Z,190nm,18.1s,MS4.2,baz=58,slow=36						
PDAR	Pinedale Array	54.60	299	P	P	19 52 38.2	+0.3
HABR	Khabarovsk	56.95	31	eP	P	19 52 52.4	-2.4
HABR				eS	S	20 00 45.2	-3.7
TOA0	Torodi Ar. Sit	58.39	173	eP	P	19 53 04.7	-0.2
TORD	Torodi Ar. Bea	58.39	173	P	P	19 53 04.8	-0.1
	comp=Z,2.2nm,0.5s,mb4.4,baz=350,slow=7.5,SNR=62						
TORD				LR	LR	20 18 59.1	
	comp=Z,68nm,19.8s,MS3.8,baz=355,slow=37						
DBIC	Dimbokro	64.71	180	P	P	19 53 47.4	-0.2
	comp=Z,4.6nm,0.9s,mb4.5,baz=76,slow=7.8,SNR=5.2						
DBIC				LR	LR	20 24 35.8	
	comp=Z,60nm,18.9s,MS3.8,baz=330,slow=38						
MJAR	Matsushiro Arr	69.09	32	P	P	19 54 15.6	+0.1
	comp=Z,1.7nm,1.0s,mb3.9,baz=345,slow=8.1,SNR=8.3						
ASAR	Alice Springs	126.68	50	PKP	PKPdf	20 02 10.8	-2.1
	comp=Z,0.3nm,0.7s,baz=351,slow=2.1,SNR=5.9						

*ISCJB **13** 20:06:59.1±0.6, 7177N±0.07×4.1W±0.1, h10km, mb3.8/11, MS3.2/11, Error ellipse: s-maj=9.7km s-min=5.8km az=177.5*

*IDC **13** 20:06:59.4±3.0, 7169N×441W, h0km, mb3.6/5, mb1 3.9/9, mb1mx3.6/24, mbtmp3.7/9, ML3.2/4, MS3.3/12, Ms1 3.3/12, ms1mx3.0/36, Error ellipse: s-maj=56.4km s-min=20.8km az=169.0*

*CSEM **13** 20:07:01.4±0.1, 7175N×443W, h30km, mb4.2/6, Ms2.7, Error ellipse: s-maj=4.1km s-min=2.4km az=5.0*

*BER **13** 20:07:04.5±0.6, 7151N×433W, h15km, ML2.5*

*NEIC **13** 20:07:05.0, 7143N×425W, h18km, mb4.1/7, After BER.*

ISC 13 20:07:00.4±0.6**, 7173N**±007×**43W**±01**, h10**km**, n73,** σ1s**11**/72**, mb3.8**/11**, MS3.2**/11**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNE	Jan Mayen East	1.48	242	eP	Pn	20 07 25.9	-1.2
JNW	Jan Mayen West	1.50	244	eP	Pn	20 07 26.5	-0.9
JMIC	Jan Mayen	1.54	243	Pn	Pn	20 07 26.2	-1.7
	6.5nm,0.3s,baz=75,slow=6.2,SNR=6.1						
JMIC				Sn	Sn	20 07 43.2	-4.8
	6.9nm,0.3s,baz=184,slow=20,SNR=7.3						
JMIC	Jan Mayen	1.54	243	eP	Pn	20 07 27.0	-1.0
JMIC				eS	Sn	20 07 43.0	-5.0
JMIC	Jan Mayen	1.54	243	eP	Pn	20 07 27.0	-1.0
	SNR=53						
JMIC				Sn	Sn	20 07 43.2	-4.8
JMI	Jan Mayen	1.63	243	eP	Pn	20 07 28.0	-1.2
JMI				eS	Sn	20 07 45.7	-4.6
JMI				AML	AML	20 07 51.4	
	comp=Z,58nm,0.5s						
JMI	Jan Mayen	1.63	243	eP	Pn	20 07 28.0	-1.2
JMI				eS	Sn	20 07 45.7	-4.6
JMI	Jan Mayen	1.63	243	eP	Pn	20 07 28.0	-1.2
	SNR=53						
JMI				eS	Sn	20 07 45.7	-4.6
	comp=Z,58nm,0.5s,SNR=53						
LOF	Lofoten	7.11	112	ePn	Pn	20 08 45.0	+0.5
TRO	Tromso	7.96	94	ePn	Pn	20 08 54.5	-1.7
KBS	Kingsbay	8.27	22	Pn	Pn	20 09 08.1	+7.6
MOR8	Moi Rana	8.72	120	ePn	Pn	20 09 06.1	-0.5
NSS	Namsos	9.40	132	ePn	Pn	20 09 12.8	-3.2
NSS				AML	AML	20 10 52.0	
	comp=Z,4.2nm,0.4s						
KTK1	Kautokeino	9.61	93	ePn	Pn	20 09 20.8	+2.0
KTK1				AML	AML	20 11 13.4	
	comp=Z,3.9nm,0.4s						
KTK1	Kautokeino	9.61	93	ePn	Pn	20 09 19.1	+0.3
KTK1	Kautokeino	9.61	93	ePn	Pn	20 09 19.1	+0.3
ARCES	ARCESS Array B	10.08	88	Pn	Pn	20 09 25.9	+0.7
	comp=Z,0.2nm,0.3s,baz=292,slow=11,SNR=12						
SUMG	Summit	10.42	291	eP	Pn	20 09 33.1	+3.2
	comp=Z,4.9nm,0.8s						
SUMG	Summit	10.42	291	eP	Pn	20 09 33.1	+3.3
	comp=Z,4.9nm,0.8s						
NOA	NORSAR Array B	12.35	142	Pn	Pn	20 09 52.5	-3.8
	comp=Z,0.2nm,0.3s,baz=334,slow=12,SNR=2.9						
NOA				LR	LR	20 14 19.7	
	comp=Z,92nm,21.8s,baz=335,slow=36						
NAO01	NORSAR Array S	12.46	143	Pn	Pn	20 09 58.2	+0.3
HFS	Hagfors	13.67	139	Pn	Pn	20 10 12.4	-2.0
	comp=Z,0.5nm,0.3s,baz=345,slow=11,SNR=20						
HFS				LR	LR	20 15 31.1	
	comp=Z,136nm,18.2s,baz=333,slow=38						
KAF	Kangasniemi	15.18	114	ep	Pn	20 10 31.7	-3.1
	comp=Z,4.2nm,0.7s						
FINES	FINESS Array B	15.65	116	Pn	Pn	20 10 38.9	-2.1
	comp=Z,0.1nm,0.3s,baz=339,slow=10,SNR=6.5						
FINES				LR	LR	20 16 00.1	
	comp=Z,88nm,18.9s,baz=172,slow=34						
JOF	Joensuu	16.04	105	ep	Pn	20 10 42.8	-3.3
EKA	Eskdalemuir Ar	16.47	178	Pn	Pn	20 10 48.9	-2.7
	comp=Z,0.2nm,0.3s,baz=354,slow=12,SNR=5.4						
ESK	Eskdalemuir	16.49	178	Pn	Pn	20 10 52.4	+0.6
ESK	Eskdalemuir	16.49	178	Pn	Pn	20 10 52.4	+0.6
BAIF	Baives	22.09	165	eP	P	20 11 55.2	-0.5
MEZF	Maizieres J'vi	23.71	164	eP	P	20 12 12.7	+0.1
MORC	Moravsky Berou	24.18	144	eP	P	20 12 16.5	-0.3
MORC	Moravsky Berou	24.18	144	eP	P	20 12 16.5	-0.4
GERES	GERESS Array B	24.42	150	P	P	20 12 19.1	0.0
	comp=Z,0.4nm,0.7s,mb3.0,baz=347,slow=16,SNR=4.9						
GERES				LR	LR	20 21 25.2	
	comp=Z,39nm,18.4s,MS2.9,baz=89,slow=36						
VRAC	Vranov	24.45	146	P	P	20 12 19.9	+0.5
	comp=Z,1.9nm,0.7s,mb3.6,baz=337,slow=8.0,SNR=4.0						
VRAC				LR	LR	20 21 29.3	
	comp=Z,39nm,21.8s,MS2.9,baz=276,slow=36						
HINF	Hinteralfeld	24.55	162	eP	P	20 12 20.5	+0.2
LOR	Lormes	24.84	167	eP	P	20 12 23.0	+0.1
	comp=Z,11nm,0.9s,mb4.1						
LOR				eR			
	comp=Z,54nm,23.0s						
LOR	Lormes	24.84	167	eP	P	20 12 23.0	+0.1
	comp=Z,5.7nm,0.9s,mb4.1						
LOR				LR	LR		
	comp=Z,50nm,23.0s,MS3.0						
SSF	Saint Saulge	25.02	167	eP	P	20 12 24.6	+0.1
AVF	Avril sur Loir	25.28	168	eP	P	20 12 26.7	-0.2
MFF	Saint Martin d	25.28	173	eP	P	20 12 28.6	+1.7
	comp=Z,15nm,1.0s,mb4.2						
MFF	Saint Martin d	25.28	173	eP	P	20 12 28.6	+1.7
	comp=Z,7.4nm,1.0s,mb4.2						
SMF	Signal de Mont	25.46	167	eP	P	20 12 29.5	+1.0
	comp=Z,12nm,1.0s,mb4.1						
SMF	Signal de Mont	25.46	167	eP	P	20 12 29.5	+1.0
	comp=Z,5.9nm,1.0s,mb4.1						
CABF	La Chapelle	25.68	163	eP	P	20 12 30.8	+0.3
TCF	Toulx Ste Croi	25.71	170	eP	P	20 12 30.6	-0.2
AKASG	Malin Array Be	25.90	126	P	P	20 12 32.6	0.0
	comp=Z,1.3nm,0.6s,mb3.6,baz=335,slow=9.5,SNR=9.7						
PSZ	Piszkesteto	26.41	142	eP	P	20 12 36.7	-0.4
	comp=Z,1.4nm,0.5s,mb3.8						
PSZ	Piszkesteto	26.41	142	eP	P	20 12 36.7	-0.4
	comp=Z,1.4nm,0.5s,mb3.8						
RJF	Les Rejaudoux	26.65	171	eP	P	20 12 39.4	+0.1
	comp=Z,8.2nm,0.7s,mb4.0						
RJF				eR			
	comp=Z,56nm,18.8s						
RJF	Les Rejaudoux	26.65	171	eP	P	20 12 39.4	+0.1
	comp=Z,4.1nm,0.7s,mb4.1						
RJF				LR	LR		
	comp=Z,60nm,18.8s,MS3.2						
LPL	La Plagne	26.82	163	eP	P	20 12 42.6	+1.8
LPG	La Plagne	26.84	163	eP	P	20 12 43.0	+2.0
CAF	Calviac	27.06	170	eP	P	20 12 43.1	+0.1
	comp=Z,8.0nm,0.9s,mb4.0						
CAF	Calviac	27.06	170	eP	P	20 12 43.1	+0.1
	comp=Z,4.0nm,0.9s,mb4.0						
ORIF	Oris-en-Rattie	27.34	164	eP	P	20 12 46.2	+0.7
ORIF				eR			
	comp=Z,49nm,21.2s						
MBDF	Montbardon	27.61	163	eP	P	20 12 49.4	+1.5
MTLF	Montolieu	28.65	170	eP	P	20 12 58.6	+1.4
EPF	Esparros	28.87	173	eP	P	20 12 59.4	+0.2
MLR	Muntele Rosu	29.99	135	LR	LR	20 25 34.9	
	comp=Z,94nm,20.2s,MS3.4,baz=337,slow=37						
SCHQ	Schefferville	30.88	270	LR	LR	20 24 01.4	
	comp=Z,43nm,18.7s,MS3.1,baz=298,slow=33						
ESDC	Sonseca Array	32.13	179	P	P	20 13 28.7	+0.7
	comp=Z,0.4nm,0.6s,mb3.4,baz=360,slow=8.9,SNR=4.6						
YKA	Yellowknife Ar	37.84	315	LR	LR	20 29 55.4	
	comp=Z,27nm,19.4s,MS3.1,baz=90,slow=36						
KURK	Kurchatov	40.79	75	P	P	20 14 41.2	-0.6
KURK	Kurchatov	40.79	75	P	P	20 14 41.2	-0.6
ULM	Lac du Bonnet	43.77	292	LR	LR	20 34 04.2	
	comp=Z,38nm,18.1s,MS3.4,baz=236,slow=37						
WALA	Waterton Lakes	49.82	306	P	P	20 15 53.8	+0.3
WALA	Waterton Lakes	49.82	306	P	P	20 15 53.8	+0.3
BBB	Bella Bella	50.23	318	LR	LR	20 39 06.6	
	comp=Z,47nm,18.5s,MS3.5,baz=125,slow=38						
NEW	Newport	51.37	308	LR	LR	20 39 05.1	
	comp=Z,46nm,19.0s,MS3.5,baz=145,slow=38						
ULN	Ulaanbaatar	51.38	53	P	P	20 16 05.5	+0.3
ULN	Ulaanbaatar	51.38	53	P	P	20 16 05.5	+0.2
TORD	Torodi Ar. Bea	58.67	173	P	P	20 16 58.6	+0.6
	comp=Z,0.8nm,0.7s,mb3.9,baz=355,slow=6.8,SNR=13						
YBH	Yreka Blue Hor	58.87	310	LR	LR	20 42 48.3	
	comp=Z,44nm,19.4s,MS3.6,baz=325,slow=36						

*ISCJB **13** 20:14:46.4±0.6, 3422N±004×2656E±0.10, h10km, Error ellipse: s-maj=11.8km s-min=5.4km az=157.2*

*HLW **13** 20:14:46.5, 3441N×2656E, h10km, Mb3.1*

*CSEM **13** 20:14:47.3±0.4, 3423N×2657E, h20km, ML3.1, Error ellipse: s-maj=15.5km s-min=7.8km az=90.0*

*ATH **13** 20:14:50.0, 3451N×2644E, h7km, MD3.4/5*

ISC 13 20:14:47.3±0.7**, 3429N**±004×**265E**±01**, h10**km**, n12,** σ1s**02**/15**, 5C-1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.87	312	ePB	Pb	20 15 03.2	-1.3
NPS	Neapolis	1.21	324	ePN	Pn	20 15 09.5	-0.6
KARP	Karpathos	1.38	24	ePB	Pb	20 15 12.5	-0.5
VAM	Vamos	2.18	301	ePN	Pn	20 15 27.5	+4.0
SLUM		2.98	201	⇑P	Pn	20 15 35.6	+1.0
HMAT	Matruh	3.23	171	⇓P	Pn	20 15 38.4	+0.5
HMAT				S	Sn	20 16 16.3	-0.1
VLI	Veliai	3.77	311	ePN	Pn	20 15 48.5	+3.1
SWA1		5.05	188	⇑P	Pn	20 16 03.9	+0.9
SWA1				S	Sn	20 17 00.1	-1.3
SWA2		5.10	190	⇑P	Pn	20 16 04.1	+0.4
SWA2				S	Sn	20 17 01.4	-1.3
AWBH		6.30	160	⇑P	Pn	20 16 20.5	+0.4
AMAG	Maghara	6.75	121	⇑P	Pn	20 16 25.7	-0.6
HDK1	Dakhla	9.07	163	P	Pn	20 16 59.0	+0.8

*NIED **13** 21:00:00, 42.10N×144.10E, h32km, Mw4.1 Best double couple: Mo1.77000×10^15 NP1:φs264.00000°, δ55.00000°, λ-123.00000°. NP2:φs133.00000°, δ46.00000°, λ-52.00000°.*

*ISCJB **13** 21:00:54.3±0.5, 42.11N±003×14420E±004, h51km±4km, mb4.2/28, MS3.5/7, Error ellipse: s-maj=6.5km s-min=3.7km az=80.2*

*MOS **13** 21:00:54.1±1.0, 42.12N×144.17E, h52km, mb4.5/13, Error ellipse: s-maj=12.4km s-min=7.6km az=93.3*

*JMA **13** 21:00:55.0±0.1, 42.15N×144.15E, h62km±2km, M4.3 Broadband fault plane solution: P waves. NP1: φs20.00000°, δ7.00000°, λ30.00000°. NP2:φs260.00000°, δ86.00000°, λ96.00000°. Principal axes: T Plg48.0000°, Azm176.0000°; N Plg6.0000°, Azm79.0000°; P Plg41.0000°, Azm344.0000°;*

JMA Felt II J1.

*SKHL **13** 21:00:55.2±0.2, 42.10N×14420E, h62km±16km, mb5.3/2*

*BJI **13** 21:00:56.2, 4234N×14407E, h51km, mB4.9, mb4.4, Ms4.2*

*NEIC **13** 21:00:56.5±1.3, 42.19N×14401E, h48km±12km, mb4.3/7, Error ellipse: s-maj=12.8km s-min=9.4km az=105.0*

NEIC Recorded [2 JMA] in the Kushiro-Obihiro area and [1 JMA] in eastern and south-central Hokkaido.

*IDC **13** 21:00:58.0±2.1, 42.17N×14405E, h56km±17km, mb3.9/13, mb1 4.1/15, mb1mx3.9/23, mbtmp4.2/15, ML3.9/2, MS3.3/8, Ms1 3.3/8, ms1mx3.0/27, Error ellipse: s-maj=17.0km s-min=12.2km az=101.0*

ISC 13 21:00:55.9±0.4**, 4216N**±003×**14417E**±004**, h47**km±4km**, h47**km±5.3km**:pP-P, n83,** σ1s**00**/105**, mb4.2**/28**, MS3.5**/7**, 12C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCH	Churui	0.75	307	⇑P	Pn	21 01 10.1	-0.1
JCH				S	Sn	21 01 20.5	0.0
JEM	Erimo	0.77	259	⇑P	Pn	21 01 10.1	-0.3
JEM				eS	Sn	21 01 20.3	-0.7
JOB	Onbets	0.78	342	⇑P	Pn	21 01 10.7	+0.1
JOB				eS	Sn	21 01 22.0	+0.7
JAK	Akkeshi	0.92	25	⇑P	Pn	21 01 12.4	-0.1
JAK				S	Sn	21 01 25.3	+0.7
JNBK	Urakawa-nobuka	1.06	277	⇑P	Pn	21 01 14.1	-0.3
JAR	Ashorobuto	1.17	346	⇑P	Pn	21 01 15.7	-0.2
JAR				S	Sn	21 01 31.2	+0.5
JBT2	Biratori 2	1.47	295	⇑P	Pn	21 01 19.1	-0.9
JNK	Nakash	1.48	16	⇑P	Pn	21 01 19.6	-0.5
JNK				S	Sn	21 01 37.8	-0.4
JFR	Furan	1.53	311	P	Pn	21 01 20.6	-0.2
JFR				S	Sn	21 01 39.5	-0.1
NEM2	Nemuro 2	1.67	43	P	Pn	21 01 22.4	-0.3
NEM2				eS	Sn	21 01 42.2	-0.7
JTKR	Abashiri--Toko	1.82	354	⇑P	Pn	21 01 25.3	+0.6
JTKR				eS	Sn	21 01 47.4	+0.9
JRA	Rausu	1.91	21	⇑P	Pn	21 01 26.1	+0.2
JRA				S	Sn	21 01 49.4	+0.7
YUK	Yuzh-Kuril'sk	2.24	33	⇓iP	Pn	21 01 31.0	+0.4
YUK				AMB	AMB	21 01 33.5	
	490nm,0.3s						
YUK				AMB	AMB	21 01 33.5	
	530nm,0.4s						
YUK				AMB	AMB	21 01 33.5	
	830nm,0.4s						
YUK				iS	Sn	21 01 56.5	-0.5
YUK				A		21 02 01.4	
	9μm,0.5s						
YUK				A		21 02 01.4	
	3μm,0.5s						
YUK				A		21 02 04.0	
	8μm,0.4s						
YUK				A		21 02 04.0	
	8μm,0.8s						
YUK	Yuzh-Kuril'sk	2.24	33	⇓iPN	Pn	21 01 31.0	+0.4
YUK				iS	Sn	21 01 56.5	-0.5
YUK				pmax	pmax		
	comp=N,530nm,0.4s						
YUK				pmax	pmax		
	comp=Z,830nm,0.4s						
YUK				pmax	pmax		
	comp=E,490nm,0.3s						
YUK				smax			
	comp=N,9μm,0.5s						
YUK				smax			
	comp=E,3μm,0.5s						
YUK				smax			
	comp=N,8μm,0.4s						
YUK				smax			
	comp=E,8μm,0.8s						
ASAJ	Asahikawa	2.27	330	P	Pn	21 01 31.9	+1.0
	comp=E,21nm,0.3s,baz=185,slow=10,SNR=156						
ASAJ				S	Sn	21 01 59.2	+1.6
	comp=E,49nm,0.3s,baz=135,slow=32,SNR=13						
ASAJ				LR	LR	21 02 50.8	
	comp=E,640nm,19.9s,baz=123,slow=51						
ASAJ	Asahikawa	2.27	330	PN	Pn	21 01 31.9	+1.0
ASAJ				S	Sn	21 01 59.2	+1.6
ASAJ				pmax	pmax		
	comp=Z,21nm,0.3s						
ASAJ				smax			
	comp=N,49nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,640nm,20.0s						
KUR	Kuril'sk	4.08	40	⇓iP	Pn	21 01 54.9	-0.8
KUR				AMB	AMB	21 01 55.5	
	comp=Z,152nm,0.5s						
KUR				eS	Sn	21 02 41.0	-1.1
KUR				A		21 02 48.0	
	comp=Z,380nm,0.6s						
KUR				A		21 02 48.0	
	comp=Z,243nm,0.6s						
KUR	Kuril'sk	4.08	40	⇓iPN	Pn	21 01 54.9	-0.8
KUR				eS	Sn	21 02 41.0	-1.1
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax			
	comp=N,380nm,0.6s						
KUR				smax			
	comp=E,240nm,0.6s						
YSS	Yuzh-Sakhalins	4.90	349	eP	Pn	21 02 07.0	0.0
YSS				eS	Sn	21 03 01.5	-0.8
YSS				A		21 03 05.0	
	comp=E,70nm,0.4s						
YSS				AMS	AMS	21 04 23.0	
	comp=E,300nm,16.0s						
YSS	Yuzh-Sakhalins	4.90	349	ePn	Pn	21 02 06.0	-0.9
YSS				eSn	Sn	21 02 57.3	-5.1
MAJO	Matsushiro	7.27	221	⇓iPN	Pn	21 02 40.0	+0.5
MAJO				pmax	pmax		
	comp=Z,20nm,0.6s						
MAJO	Matsushiro	7.27	221	⇓iP	Pn	21 02 40.0	+0.5
	comp=Z,20nm,0.6s						
MAT	Matsushiro	7.27	221	P	Pn	21 02 39.6	+0.1
MAT				eS	Sn	21 04 01.0	+0.3
MAT	Matsushiro	7.27	221	ePN	Pn	21 02 40.0	+0.5
MAT				pmax	pmax		
	comp=Z,13nm,0.8s						
MAT	Matsushiro	7.27	221	eP	Pn	21 02 40.0	+0.5
	comp=Z,13nm,0.8s						
MAT				S	Sn	21 04 01.0	+0.3
MJAR	Matsushiro Arr	7.27	221	P	Pn	21 02 39.8	+0.3
	comp=Z,2.0nm,0.3s,baz=30,slow=13,SNR=90						
MJAR				S	Sn	21 04 02.5	+1.8
	baz=15,slow=25,SNR=2.3						
MJAR				LR	LR	21 06 14.5	
	comp=Z,230nm,20.1s,baz=30,slow=44						
MJAR	Matsushiro Arr	7.27	221	PN	Pn	21 02 39.8	+0.3
MJAR				S	Sn	21 04 02.5	+1.9
HABR	Khabarovsk	9.00	318	ePN	Pn	21 02 54.2	-9.0
JHJ	Hachijo jima 2	9.67	202	P	Pn	21 03 10.8	-1.6
	comp=Z,18nm,0.3s,baz=238,slow=19,SNR=4.4						
JHJ				LR	LR	21 07 09.4	
	comp=Z,138nm,21.6s,baz=304,slow=39						
KLR	Kul'dur	11.19	313	ePN	Pn	21 03 32.3	-0.9
SNY	Shenyang	15.32	276	⇑P	Pn	21 04 26.9	-2.0
SNY				AMB	AMB		
	comp=Z,21nm,0.5s						
JOW	Kunigami	20.09	225	LR	LR	21 12 57.5	
	comp=Z,68nm,20.6s,MS3.0,baz=116,slow=36						
YAK	Yakutsk	21.70	341	iP	P	21 05 39.1	-3.8
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
YAK	Yakutsk	21.70	341	eP	P	21 05 39.7	-3.2
	comp=Z,14nm,0.3s,mb4.9						
NJ2	Nanjing	22.50	252	eP	P	21 05 54.8	+3.4
NJ2				AP		21 06 04.0	
NJ2				XP	sP	21 06 08.1	-0.3
NJ2				PP		21 06 22.5	
NJ2				S	S	21 09 51.0	-4.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.5						
NJ2				LR	LR		
	comp=N,150nm,12.2s,MS3.8						
NJ2				LR	LR		
	comp=E,160nm,14.8s,MS3.8						
ULN	Ulaanbaatar	26.67	295	eP	P	21 06 29.7	-0.7
ULN				e	pP	21 06 44.0	+1.4
ULN				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
ULN	Ulaanbaatar	26.67	295	eP	P	21 06 29.7	-0.7
	comp=Z,4.6nm,1.1s,mb3.9						
ULN				e	pP	21 06 44.0	+1.4
SONM	Songino Array	27.11	295	P	P	21 06 35.2	+0.8
	comp=Z,1.8nm,0.7s,mb3.7,baz=78,slow=8.4,SNR=18						
SONM				LR	LR	21 18 33.0	
	comp=Z,66nm,18.3s,MS3.2,baz=266,slow=39						
BILL	Bilibino	28.51	17	P	P	21 06 46.7	-0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
BILL				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.1						
TLY	Talaya	28.93	303	P	P	21 06 49.0	-1.6
ZAK	Zakamensk	29.12	301	eP	P	21 06 52.4	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.7						
GTA	Gaotai	33.42	280	eP	P	21 07 32.1	+2.0
GTA				AP	pP	21 07 40.8	-1.6
GTA				XP	sP	21 07 44.8	-3.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.4						
KMI	Kunming	38.03	257	P	P	21 08 11.3	+1.7
KMI				AP	pP	21 08 20.6	-1.5
KMI				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.2						
IMA2	Indian Mountai	41.21	33	eP	P	21 08 37.7	+1.6
KDAK	Kodiak Island	41.93	46	P	P	21 08 42.2	+0.3
	comp=Z,5.5nm,0.6s,mb4.4,baz=46,slow=3.2,SNR=9.8						
MKAR	Makanchi Array	43.39	298	P	P	21 08 54.2	+0.4
	comp=Z,1.0nm,0.4s,mb3.9,baz=75,slow=10,SNR=14						
MKAR				PcP	PcP	21 10 42.5	+0.8
	comp=Z,0.6nm,0.3s,baz=49,slow=5.5,SNR=4.1						
MKAR	Makanchi Array	43.39	298	⇑eP	P	21 08 54.2	+0.4
MKAR	Makanchi Array	43.39	298	P	P	21 08 54.2	+0.4
MKAR				PcP	PcP	21 10 42.5	+0.8
LSA	Lhasa	44.05	271	P	P	21 08 58.1	-1.0
KURK	Kurchatov	44.62	305	eP	P	21 09 03.8	+0.2
KURK				e	pP	21 09 17.8	+1.5
KURK				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.0nm,0.6s,mb4.3						
KURK	Kurchatov	44.62	305	eP	P	21 09 03.8	+0.2
	comp=Z,3.2nm,0.6s,mb4.3						
KURK				e	pP	21 09 17.8	+1.4
BVAR	Borovoye Array	48.82	310	P	P	21 09 37.1	+0.6
	comp=Z,3.4nm,0.5s,mb4.7,baz=76,slow=9.2,SNR=33						
BVAR				PcP	PcP	21 11 01.5	+0.8
	comp=Z,1.3nm,0.7s,baz=66,slow=3.7,SNR=4.5						
BVAR				LR	LR	21 30 29.6	
	comp=Z,16nm,18.3s,MS3.0,baz=316,slow=36						
BVAR	Borovoye Array	48.82	310	P	P	21 09 37.1	+0.6
BVAR						21 11 01.5	
INK	Inuvik	48.87	29	P	P	21 09 37.9	+1.1
	comp=Z,2.6nm,0.5s,mb4.5,baz=306,slow=4.0,SNR=14						
INK	Inuvik	48.87	29	P	P	21 09 37.9	+1.1
BRVK	Borovoye	48.87	310	eP	P	21 09 37.5	+0.6
BRVK				e	pP	21 09 50.6	+0.9
ZRNK	Zerenda	49.64	310	P	P	21 09 38.5	-4.2
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
ZRNK	Zerenda	49.64	310	P	P	21 09 38.5	-4.3
	comp=Z,3.6nm,0.6s,mb4.6						
ARU	Arti	54.01	317⇓	iP	P	21 10 15.0	-0.3
ARU				e		21 12 12.1	
ARU				eS	S	21 17 45.8	-2.1
ARU				eSS	SS	21 21 23.3	-6.3
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
KEV	Kevo	59.42	339	ep	P	21 10 51.5	-2.2
	comp=Z,1.7nm,0.7s,mb4.2						
KEV	Kevo	59.42	339	eP	P	21 10 51.5	-2.2
KEV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
ARCES	ARCESS Array B	59.96	339	P	P	21 10 56.9	-0.5
	comp=Z,2.0nm,1.0s,mb4.1,baz=38,slow=8.0,SNR=5.4						
CTAO	Charters Tower	61.96	178	P	P	21 11 09.4	-1.6
WRAB	Tennant Creek	62.44	190	eP	P	21 11 13.1	-1.1
JOF	Joensuu	62.46	332	ep	P	21 11 12.7	-1.6
	comp=Z,1.0nm,0.4s,mb4.3						
JOF	Joensuu	62.46	332	eP	P	21 11 12.7	-1.6
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
KAF	Kangasniemi	64.73	333	ep	P	21 11 27.7	-1.6
	comp=Z,1.3nm,0.5s,mb4.2,baz=45,slow=6.2						
KAF	Kangasniemi	64.73	333	eP	P	21 11 27.7	-1.6
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
FINES	FINESS Array B	65.28	332	P	P	21 11 32.5	-0.3
	comp=Z,2.4nm,0.5s,mb4.5,baz=56,slow=7.1,SNR=56						
FINES				LR	LR	21 42 57.4	
	comp=Z,48nm,18.7s,MS3.7,baz=150,slow=39						
FINES	FINESS Array B	65.28	332	i P	P	21 11 32.5	-0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
OBN	Obninsk	65.28	323	eP	P	21 11 32.4	-0.5
OBN				e		21 13 53.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
ASAR	Alice Springs	66.18	190	P	P	21 11 39.5	+0.8
	comp=Z,1.0nm,0.9s,mb3.9,baz=9.2,slow=6.1,SNR=7.9						
NB2	NORSAR Subarra	70.27	338	P	P	21 12 03.7	-0.6
	comp=Z,1.3nm,0.6s,mb4.0,baz=34,slow=6.5						
NOA	NORSAR Array B	70.27	338	P	P	21 12 04.0	-0.2
	comp=Z,1.3nm,0.7s,mb4.0,baz=34,slow=6.3,SNR=5.2						
NVAR	Mina Array Bea	70.28	56	P	P	21 12 07.1	+2.8
	comp=Z,1.9nm,0.7s,mb4.2,baz=293,slow=5.9,SNR=14						
NVAR	Mina Array Bea	70.28	56	P	P	21 12 07.1	+2.7
RRI2	Red Ridge	71.25	48	eP	P	21 12 11.2	+1.0
	comp=Z,3.2nm,1.0s,mb4.2						
RRI2				epP	pP	21 12 25.1	+1.4
AKASG	Malin Array Be	71.54	323	P	P	21 12 12.0	0.0
	comp=Z,0.7nm,0.4s,mb3.9,baz=41,slow=6.2,SNR=10						
AKASG	Malin Array Be	71.54	323	i P	P	21 12 12.0	0.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	72.60	48	P	P	21 12 20.0	+1.7
	comp=Z,1.2nm,0.5s,mb4.0,baz=16,slow=1.1,SNR=20						
CLL	Collm	77.68	331	eP	P	21 12 49.0	+1.4
GERES	GERESS Array B	79.44	329	P	P	21 12 57.7	+0.5
	comp=Z,0.2nm,0.4s,mb3.4,baz=54,slow=5.3,SNR=3.6						
GERES				LR	LR	21 50 58.1	
	comp=Z,44nm,21.1s,MS3.8,baz=288,slow=38						
TORD	Torodi Ar. Bea	115.04	319	PKP	PKiKP	21 19 32.0	+0.2
	comp=Z,0.1nm,0.3s,baz=25,slow=1.7,SNR=8.7						

*IDC **13** 21:04:21.0±2.3, 2863N×13991E, h214^{km}±25^{km}, mb3.6/3, mb1 3.5/7, mb1mx3.2/21, mbtmp4.2/7, Error ellipse: s-maj=72.1km s-min=10.9km az=68.0*
*ISCJB **13** 21:04:22.1±0.5, 2892N±005×1408E±02, h249^{km}±6^{km}, mb3.5/4, Error ellipse: s-maj=23.7km s-min=4.9km az=151.5*
*NEIC **13** 21:04:22.7, 2886N×14067E, h239^{km}, mb3.6/1, After JMA.*
*JMA **13** 21:04:22.7±0.2, 2886N×14067E, h239^{km}±5^{km}, M3.9*
ISC 13 21:04:23.0±0.5**, 2895N**±005×**1408E**±02**, h243**^{km}±6^{km}**, n27,** σ1^{s}**10**/43**, mb3.5**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.20	147	P	Pn	21 05 06.6	-0.1
	70nm,0.3s,baz=255,slow=23,SNR=14						
CBIJ				S	S	21 05 41.4	+0.2
	70nm,0.3s,baz=272,slow=23,SNR=12						
CBIJ	Chichi jima	2.20	147	P	Pn	21 05 06.6	-0.1
CBIJ				S	S	21 05 41.0	-0.2
JHHJ	Haha-jima-NKT	2.60	152	P	Pn	21 05 10.1	-0.7
JHHJ				S	S	21 05 47.2	-1.2
JHJ2	Mitsune	4.24	349	P	Pn	21 05 30.1	+0.8
JHJ2				eS	S	21 06 21.7	-0.2
JHJ	Hachijo jima 2	4.25	348	P	Pn	21 05 30.6	+1.2
	12nm,0.3s,baz=250,slow=12,SNR=3.4						
JHJ				S	S	21 06 22.4	+0.2
	24nm,0.3s,baz=70,slow=22,SNR=5.5						
BSO1	Boso 1	5.69	1	P	Pn	21 05 49.0	+1.9
BSO1				S	S	21 06 54.4	+0.2
BSO3	Boso 3	5.84	357	P	Pn	21 05 50.2	+1.2
BSO3				S	S	21 06 56.2	-1.4
BSO4	Boso 4	6.04	356	P	Pn	21 05 52.9	+1.5
BSO4				S	S	21 07 00.7	-1.4
HMMJ	Hamamatsu 2	6.45	337	P	Pn	21 05 58.0	+1.4
JIE	Ise	6.46	328	P	Pn	21 05 56.9	+0.2
JOD2	Odawara 2	6.47	347	P	Pn	21 05 57.9	+1.1
JOD2				S	S	21 07 10.2	-1.7
JKN2	Miekihoku	6.55	325	P	Pn	21 05 58.0	+0.2
JRY	Ryogami san	7.23	348	P	Pn	21 06 06.2	-0.3
JRY				S	S	21 07 25.4	-4.1
MJAR	Matsushiro Arr	7.89	344	P	Pn	21 06 15.3	+0.5
	1.0nm,0.3s,baz=124,slow=13,SNR=8.0						
MJAR				S	S	21 07 43.8	-0.9
	0.4nm,0.3s,baz=164,slow=12,SNR=4.1						
MAJO	Matsushiro	7.89	344	ePn	Pn	21 06 14.9	+0.1
MAJO				Sn	S	21 07 41.8	-2.9
MAT	Matsushiro	7.89	344	P	Pn	21 06 15.1	+0.3
MAT				eS	S	21 07 46.2	+1.5
MAT	Matsushiro	7.89	344	P	Pn	21 06 16.3	+1.5
MAT				eS	S	21 07 43.5	-1.2
MAT	Matsushiro	7.89	344	P	Pn	21 06 16.0	+1.2
MAT				S	S	21 07 40.0	-4.7
JMK	Ichinoseki	9.98	2	P	Pn	21 06 42.9	+1.5
JMK				S	S	21 08 30.3	-3.3
ASAJ	Asahikawa	15.21	5	P	Pn	21 07 50.2	+4.4
	0.6nm,0.3s,baz=216,slow=9.4,SNR=7.8						
WRAB	Tennant Creek	48.99	188	eP	P	21 12 44.9	-0.3
	1.1nm,0.4s,mb3.5						
BVAR	Borovoye Array	55.87	317	P	P	21 13 33.7	-1.9
	0.6nm,0.5s,mb3.4,baz=101,slow=7.6,SNR=5.3						
BRVK	Borovoye	55.93	317	P	P	21 13 35.7	-0.3
ARCES	ARCESS Array B	71.40	340	P	P	21 15 18.1	+1.3
	0.7nm,0.5s,mb3.6,baz=76,slow=7.5,SNR=6.3						
JOF	Joensuu	72.89	333	ep	P	21 15 24.8	-0.8
KAF	Kangasniemi	75.29	334	ep	P	21 15 38.7	-0.7
FINES	FINESS Array B	75.76	333	P	P	21 15 42.0	-0.1
	1.1nm,0.9s,mb3.5,baz=72,slow=6.2,SNR=8.1						

*CSEM **13** 21:19:03.9±0.9, 3867N×2859W, h5^{km}±17^{km}, ML1.2, Error ellipse: s-maj=5.0km s-min=3.5km az=88.0, After PDA*
*PDA **13** 21:19:03.9±0.9, 3867N×2859W, h5^{km}±17^{km}, MD2.6, ML1.2, Error ellipse: s-maj=5.0km s-min=3.5km az=88.0*
SVSA 13 21:19:03.9±0.9**, 3867N**×**2859W, h5**^{km}±17^{km}**, MD2.6, ML1.2, Error ellipse: s-maj=5.0km s-min=3.5km az=88.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CALA	Caldeira	0.13	225	i P	Pg	21 19 06.3	-0.2
CALA				eS	Sg	21 19 08.8	+0.6
CALA	Caldeira	0.13	225	eS	Sg	21 19 08.8	+0.6
HOR	Horta	0.15	193	eS	Sg	21 19 08.4	-0.5
PICO	Pico	0.21	143	eP	Pg	21 19 07.8	-0.3
PICO				eS	Sg	21 19 10.8	-0.1
PCND	Candelaria	0.23	154	eP	Pg	21 19 08.3	0.0
PCND				eS	Sg	21 19 11.3	0.0
PCND							
	20nm,0.2s						
PTEI	Pico do Teixo	0.25	134	eS	Sg	21 19 12.2	0.0
PTEI							
	6.8nm,0.2s						
ROSA	Rosais	0.28	80	eP	Pg	21 19 08.8	-0.4
ROSA				eS	Sg	21 19 12.6	-0.3
PBOI	Pico dos Bois	0.29	145	eS	Sg	21 19 13.3	0.0
PBOI							
	18nm,0.2s						
PAMA	Santo Amaro	0.32	88	eS	Sg	21 19 14.2	-0.1
PAMA							
	14nm,0.2s						
PMAN	Manadas	0.39	96	eS	Sg	21 19 15.7	-0.9
PMAN							
	15nm,0.1s						

*CSEM **13** 21:35:01.0, 4183N×4367E, h17^{km}, mb3.5, After OBN*
*MOS **13** 21:35:01.2±0.3, 4183N×4367E, h17^{km}, mb3.5/1, Error ellipse: s-maj=35.4km s-min=12.0km az=79.2*
TIF 13 21:34:57.0, 4174N×**4339E, h7**^{km}±1^{km}**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONI	Oni	0.84	3	P	Pg	21 35 17.2	+4.0
ONI				S	Sg	21 35 26.5	+2.4
TBLG	Delisi	1.01	90	P	Pg	21 35 17.0	+0.6
TBLG				S	Sg	21 35 31.9	+2.4
TBLG	Delisi	1.01	90	ePg	Pg	21 35 17.0	+0.6
TBLG				eSg	Sg	21 35 31.9	+2.4
MTA	Mtatsminda	1.05	92	P	Pg	21 35 17.8	+0.6
MTA				S	Sg	21 35 33.2	+2.4
ZEI	Tsey	1.09	20	ePg	Pg	21 35 19.6	+1.6
ZEI				eSg	Sg	21 35 35.9	+3.7
DIGR	Digorskoe uzhe	1.17	7	ePg	Pg	21 35 20.9	+1.5
DIGR				eSg	Sg	21 35 38.3	+3.8
LACR	Lac	1.27	32	i Pg	Pg	21 35 21.6	+0.1
LACR				i Sg	Sg	21 35 39.4	+1.4
KORR	Kora	1.43	20	i Pg	Pg	21 35 24.6	+0.1
KORR				eSg	Sg	21 35 44.5	+1.4
DGRG	David-gareji	1.52	100	P	Pn	21 35 26.3	+1.7
DGRG				S	Sn	21 35 48.9	+4.3
ARNR	Ardon	1.59	24	i Pg	Pg	21 35 26.5	-1.0
ARNR				eSg	Sg	21 35 47.9	-0.2
BTKR	Batakoyurt	1.84	27	ePn	Pn	21 35 29.8	+0.8
BTKR				eSg	Sg	21 35 53.6	-2.5

*IDC **13** 21:40:07.2±1.0, 5342N×16662W, h0^{km}, mb4.0/14, mb1 4.1/15, mb1mx4.1/22, mbtmp4.0/15, ML3.4/1, MS3.3/8, Ms1 3.3/8, ms1mx3.0/26, Error ellipse: s-maj=30.5km s-min=18.1km az=177.0*
*BJI **13** 21:40:07.6, 5320N×16690W, h30^{km}, mB4.7, mb4.7, Ms4.0, Msz4.0*
*ISCJB **13** 21:40:12.9±0.7, 5325N±007×16677W±006, h55^{km}±5^{km}, mb4.1/28, MS3.3/9, Error ellipse: s-maj=11.9km s-min=5.3km az=139.9*
*NEIC **13** 21:40:13.7±0.8, 5322N×16686W, h49^{km}±5^{km}, mb4.3/10, ML4.0(AEIC), Error ellipse: s-maj=12.3km s-min=6.0km az=163.0*
ISC 13 21:40:13.6±0.7**, 5322N**±007×**16679W**±006**, h52**^{km}±5^{km}**, n59,** σ1^{s}**05**/63**, mb4.1**/28**, MS3.3**/9**, Fox Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKCD	Okmok Cone D	0.82	285	P	Pn	21 40 28.7	-0.3
OKCD				S	Sn	21 40 41.2	+0.9
OKCE	Okmok Cone E	0.85	285	P	Pn	21 40 29.3	-0.1
OKCE				S	Sn	21 40 43.1	+2.2
AKLV	Akutan Long Va	1.07	27	P	Pn	21 40 32.2	-0.1
AKUT	Akutan	1.10	33	ePn	Pn	21 40 26.2	-6.5
AKUT				P		21 40 31.8	
AKUT				eSn	Sn	21 40 46.6	-0.3
AKUT				S	Sn	21 40 48.2	+1.4
NIKO	Nikolski	1.27	260	P	Pn	21 40 34.0	-1.0
NIKO				S	Sn	21 40 50.0	-0.9
SDPT	Sand Point	4.27	58	ePn	Pn	21 41 15.3	-0.7
SDPT				eSn	Sn	21 42 03.4	-1.2
SPIA	Saint Paul Isl	4.43	335	ePn	Pn	21 41 16.3	-2.0
SPIA				Sn	Sn	21 42 08.1	-0.5
KDAK	Kodiak Island	9.26	55	Pn	Pn	21 42 20.4	-4.1
	0.4nm,0.3s,baz=217,slow=10,SNR=3.5						
KDAK				Sn	Sn	21 43 57.0	-10
	baz=342,slow=20,SNR=1.8						
SVW2	Sparrevohn	9.96	33	Pn	Pn	21 42 35.9	+1.9
IMA2	Indian Mountai	14.44	22	ePn	Pn	21 43 36.9	+1.9
DAWY	Dawson	17.75	42	ePn	Pn	21 44 17.4	+0.4
DLBC	Dease Lake	21.10	61	P	P	21 44 54.8	+1.0
	4.4nm,0.8s,mb3.8,baz=274,slow=11,SNR=3.8						
INK	Inuvik	21.77	33	P	P	21 45 01.6	+0.7
	7.9nm,0.8s,mb4.2,baz=244,slow=9.3,SNR=11						
YKA	Yellowknife Ar	28.50	50	LR	LR	21 59 20.0	
	comp=Z,25nm,19.1s,MS2.8,baz=270,slow=41						
YBH	Yreka Blue Hor	31.44	93	LR	LR	21 56 19.5	
	comp=Z,55nm,20.5s,MS3.2,baz=328,slow=31						
NVAR	Mina Array Bea	36.14	94	P	P	21 47 09.5	-1.2
	0.6nm,0.6s,mb3.7,baz=303,slow=8.5,SNR=2.6						
PDAR	Pinedale Array	38.72	82	P	P	21 47 32.7	+0.1
	1.1nm,0.9s,mb3.6,baz=317,slow=6.3,SNR=7.5						
MJAR	Matsushiro Arr	41.29	269	P	P	21 47 55.4	+1.5
	0.9nm,0.7s,mb3.5,baz=50,slow=8.0,SNR=5.3						
MJAR				LR	LR	22 02 32.7	
	comp=Z,71nm,20.4s,MS3.5,baz=50,slow=32						
MJAR	Matsushiro Arr	41.29	269	P	P	21 47 55.4	+1.5
MJAR				LR	LR	22 02 32.7	
MDJ	Mudanjiang	41.40	285	P	P	21 47 52.3	-2.5
MDJ				PP	PP	21 49 28.5	-2.7
MDJ				S	S	21 54 07.9	+1.9
MDJ				SCS	ScS	21 57 56.3	+2.4
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,35nm,4.5s						
MDJ				LR	LR		
	comp=N,16nm,21.8s,MS3.1						
MDJ				LR	LR		
	comp=E,23nm,21.8s,MS3.1						
MDJ				LR	LR		
	comp=Z,39nm,21.8s,MS3.2						
ULM	Lac du Bonnet	42.37	64	LR	LR	22 06 42.2	
	comp=Z,24nm,21.4s,MS3.0,baz=10,slow=38						
JHJ	Hachijo jima 2	42.68	264	LR	LR	22 02 00.2	
	comp=Z,74nm,20.7s,MS3.6,baz=298,slow=31						
CN2	Changchun	44.29	286	eP	P	21 48 14.8	-3.4
MNTX	Cornudas Mount	48.46	91	eP	P	21 48 52.3	+1.4
	comp=Z,1.7nm,0.9s,mb4.1						
ULN	Ulaanbaatar	51.84	301	eP	P	21 49 15.7	-0.8
	comp=Z,3.6nm,0.9s,mb4.3						
SONM	Songino Array	52.20	302	P	P	21 49 18.9	-0.3
	comp=Z,1.0nm,0.7s,mb3.9,baz=41,slow=5.6,SNR=9.1						
SONM				PcP	PcP	21 50 31.2	+1.0
	comp=Z,2.3nm,0.9s,baz=63,slow=2.1,SNR=9.2						
JMIC	Jan Mayen	55.12	9	LR	LR	22 14 48.4	
	comp=Z,38nm,18.3s,MS3.5,baz=276,slow=38						
NJ2	Nanjing	55.97	279	eP	P	21 49 47.1	+0.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
ARCES	ARCESS Array B	57.23	355	P	P	21 49 54.3	-1.3
	comp=Z,0.9nm,0.8s,mb3.9,baz=21,slow=7.7,SNR=4.7						
BVAR	Borovoye Array	63.91	326	P	P	21 50 41.2	+0.2
	comp=Z,3.6nm,0.5s,mb4.6,baz=52,slow=6.7,SNR=27						
BVAR				PcP	PcP	21 51 16.4	+0.1
	comp=Z,1.7nm,0.6s,baz=52,slow=2.5,SNR=6.6						
MKAR	Makanchi Array	64.34	315	P	P	21 50 43.0	-1.0
	comp=Z,0.9nm,0.7s,mb3.9,baz=45,slow=7.0,SNR=8.2						
MKAR				PcP	PcP	21 51 18.0	-0.2
	comp=Z,0.5nm,0.6s,baz=21,slow=5.2,SNR=4.0						
FINES	FINESS Array B	65.23	353	P	P	21 50 48.5	-1.2
	comp=Z,2.2nm,1.0s,mb4.1,baz=0.0,slow=0.8,SNR=3.9						
FINES				LR	LR	22 18 43.0	
	comp=Z,23nm,20.6s,MS3.4,baz=91,slow=36						
NOA	NORSAR Array B	66.08	1	P	P	21 50 54.0	-1.2
	comp=Z,1.0nm,0.8s,mb3.9,baz=110,slow=14,SNR=2.8						
NOA				PcP	PcP	21 51 24.8	-0.6
	comp=Z,0.8nm,0.7s,baz=1.6,slow=5.0,SNR=3.9						
NOA				LR	LR	22 16 39.8	
	comp=Z,18nm,20.8s,MS3.2,baz=340,slow=33						
KMI	Kunming	70.56	286	P	P	21 51 24.3	+1.1
KMI				AP	pP	21 51 31.3	-6.4
KMI				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.3						
AKASG	Malin Array Be	75.58	350	P	P	21 51 51.6	-1.2
	comp=Z,1.0nm,0.6s,mb3.9,baz=9.9,slow=4.9,SNR=6.4						
BAIF	Baives	76.82	6	eP	P	21 51 59.6	-0.3
GERES	GERESS Array B	78.31	360	P	P	21 52 07.6	-0.6
	comp=Z,0.4nm,0.7s,mb3.5,baz=28,slow=6.0,SNR=4.3						
LOR	Lormes	79.57	6	eP	P	21 52 15.5	+0.4
SSF	Saint Saulge	79.75	7	eP	P	21 52 15.9	-0.2
	comp=Z,5.1nm,0.8s,mb4.2						
SSF	Saint Saulge	79.75	7	eP	P	21 52 15.9	-0.2
	comp=Z,2.5nm,0.8s,mb4.2						
AVF	Avril sur Loir	80.01	7	eP	P	21 52 17.1	-0.4
	comp=Z,6.5nm,0.9s,mb4.3						
AVF	Avril sur Loir	80.01	7	eP	P	21 52 17.1	-0.4
	comp=Z,3.3nm,0.9s,mb4.3						
SMF	Signal de Mont	80.19	7	eP	P	21 52 17.5	-1.0
	comp=Z,3.1nm,0.6s,mb4.1						
SMF	Signal de Mont	80.19	7	eP	P	21 52 17.5	-1.0
	comp=Z,1.5nm,0.6s,mb4.1						
TCF	Toulx Ste Croi	80.43	8	eP	P	21 52 19.4	-0.3
	comp=Z,5.4nm,0.8s,mb4.2						
TCF	Toulx Ste Croi	80.43	8	eP	P	21 52 19.4	-0.3
	comp=Z,2.7nm,0.8s,mb4.2						
LPL	La Plagne	81.49	5	eP	P	21 52 26.5	+1.1
	comp=Z,6.5nm,1.0s,mb4.2						
LPL	La Plagne	81.49	5	eP	P	21 52 26.5	+1.1
	comp=Z,3.3nm,1.0s,mb4.2						
LPG	La Plagne	81.51	5	eP	P	21 52 26.7	+1.2
LFF	La Frestale	81.64	9	eP	P	21 52 26.1	-0.1
CAF	Calviac	81.77	8	eP	P	21 52 26.9	+0.1
MBDF	Montbardon	82.28	5	eP	P	21 52 30.7	+1.2
	comp=Z,15nm,0.9s,mb4.6						
MBDF	Montbardon	82.28	5	eP	P	21 52 30.7	+1.2
	comp=Z,7.4nm,0.9s,mb4.6						
MTLF	Montolieu	83.35	8	eP	P	21 52 35.3	+0.2
	comp=Z,8.9nm,0.8s,mb4.5						
MTLF	Montolieu	83.35	8	eP	P	21 52 35.3	+0.2
	comp=Z,4.4nm,0.8s,mb4.5						
BR131	Keskin Array S	85.76	344	eP	P	21 52 47.8	+0.6
	comp=Z,3.3nm,0.9s,mb4.6						
BRTR	Keskin Array B	85.76	344	P	P	21 52 48.1	+0.9
	comp=Z,4.0nm,0.9s,mb4.7,baz=54,slow=2.0,SNR=22						
ESDC	Sonseca Array	86.29	13	P	P	21 52 50.1	+0.2
	comp=Z,0.8nm,0.6s,mb4.1,baz=342,slow=4.4,SNR=8.8						
ASAR	Alice Springs	92.15	232	P	P	21 53 18.4	+1.0
	comp=Z,0.9nm,0.9s,mb4.1,baz=47,slow=5.2,SNR=7.4						

GUC 13 21:47:43.3±0.9**, 2508S**×**6903W, h79**^{km}±67^{km}**, MD3.6, ML2.8, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	1.32	289⇑	iP	Pn	21 48 07.4	+1.1
CPN1				i S	Sn	21 48 25.8	+2.2
CPN1				AML	AML	21 48 26.9	
	comp=N,319nm,0.5s						
ANCH	Antofagasta	1.87	318	eP	Pn	21 48 13.7	+0.3
ANCH				i S	Sn	21 48 37.9	+1.6
CEN1	Los Morros	1.99	327⇓	eP	Pn	21 48 15.2	+0.2
CEN1				i S	Sn	21 48 38.0	-1.1
CEN1				AML	AML	21 48 42.9	
	comp=E,94nm,0.5s						
CDCH	Caldera	2.56	219	eP	Pn	21 48 23.6	+0.9
CDCH				i S	Sn	21 48 54.4	+1.5

*NEIC **13** 21:52:56.0, 1970N×6299W, h25^{km}, MD3.7(RSPR), After RSPR.*
*RSPR **13** 21:52:56.0, 1970N×6299W, h25^{km}±21^{km}, MD3.6/5, MD3.6/5*
TRN 13 21:52:53.2, 1954N×**6288W, h35**^{km}**, 4C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STVI	Saint Thomas	2.29	239⇑	eP	Pn	21 53 30.5	+2.1
STVI				eS	Sn	21 53 57.4	+2.0
MTP	Monte Pirata	2.91	241⇓	eP	Pn	21 53 38.7	+1.7
MTP				eS	Sn	21 54 12.3	+1.6
CBYP	Canovanas	3.09	246⇑	eP	Pn	21 53 41.6	+2.2
CBYP				eS	Sn	21 54 16.4	+1.3
HUMP	Col San Antoni	3.14	244⇑	eP	Pn	21 53 42.0	+1.9
HUMP				eS	Sn	21 54 18.4	+2.1
CRPR	Cabo Rojo, PR	4.29	250⇑	eP	Pn	21 53 58.1	+2.2

*SZGRF **13** 21:54:08.0, 5833S×14072W, h33^{km}, mb5.1, Pacific-Antarctic Ridge*
*IDC **13** 21:54:09.3±0.6, 5824S×13985W, h0^{km}, mb4.8/9, mb1 4.8/9, mb1mx4.8/11, mbtmp4.8/9, MS4.6/12, Ms1 4.6/12, ms1mx4.6/13, Error ellipse: s-maj=26.6km s-min=16.3km az=165.0*
*ISCJB **13** 21:54:09.2±0.3, 5823S±006×1398W±0.1, h10^{km}, mb5.0/21, MS4.8/49, Error ellipse: s-maj=8.7km s-min=8.3km az=26.3*
*NEIC **13** 21:54:10.9±0.2, 58.19S×13978W, h10^{km}, mb5.3/15, MS4.9/32, Error ellipse: s-maj=12.2km s-min=8.4km az=168.0*
*HRVD **13** 21:54:10.9±0.1, 5866S×13969W, h12^{km}, MW5.3/89, Centroid moment Tensor Solution. LP body waves: s63,c102;Mantle waves: s89,c144; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.05±.01; $M_{\theta\theta}$-0.91±.02; $M_{\phi\phi}$-0.13±.01; $M_{r\theta}$0.13±.04; $M_{\theta\phi}$-0.11±.01; $M_{\phi r}$0.00±.04; Best double couple: $M_0$0.99800×10^{17} NP1:ϕ_s262.00000°,δ41.00000°,λ89.00000°. NP2: ϕ_s83.00000°,δ49.00000°,λ91.00000°. Principal axes: T 1.0590, Plg86.0000°, Azm3.0000°; N -0.1170, Plg1.0000°, Azm263.0000°; P -0.9370, Plg4.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **13** 21:54:10.9, 5820S×13980W, h10^{km}, mB5.5, Ms5.2, Msz4.8*
*MOS **13** 21:54:11.0±2.1, 5846S×13978W, h10^{km}, mb5.4/7, MS4.9/16, Error ellipse: s-maj=26.3km s-min=13.5km az=87.8*
*CSEM **13** 21:54:12.3, 58.17S×13969W, h33^{km}, mb5.6*
ISC 13 21:54:10.2±2.8**, 5823S**±007×**1398W**±01**, h7**^{km}±16^{km}**, n224,** σ**0**^{s}**96**/50**, mb5.0**/21**, MS4.8**/49**, 8C-22D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBA	Scott Base	26.35	203	eP	P	21 59 48.0	+1.2
SBA				pmax	pmax		
	comp=Z,114nm,1.4s,mb5.2						
SBA				MLR	MLR		
	comp=Z,3µm,20.0s,MS4.9						
SBA	Scott Base	26.35	203	eP	P	21 59 48.0	+1.2
	comp=Z,114nm,1.4s,mb5.2						
SBA				LR	LR		
	comp=Z,3µm,20.0s,MS4.9						
VNDA	Vanda	27.30	204	P	P	21 59 55.9	+0.5
	comp=Z,21nm,1.3s,mb4.5,baz=70,slow=7.7,SNR=24						
VNDA				PcP	PcP	22 03 15.3	+0.5
	comp=Z,3.9nm,1.0s,baz=316,slow=4.5,SNR=3.8						
VNDA				LR	LR	22 07 52.4	
	comp=Z,4µm,20.2s,MS5.0,baz=154,slow=30						
VNDA	Vanda	27.30	204	P	P	21 59 55.9	+0.6
VNDA						22 03 15.3	
VNDA				pmax	pmax		
	comp=Z,21nm,1.3s						
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNDA				MLR	MLR		
	comp=Z,4µm,20.2s						
VNDA	Vanda	27.30	204	eP	P	21 59 56.9	+1.6
	comp=Z,90nm,1.6s,mb5.0						
VNDA				LR	LR		
	comp=Z,4µm,21.0s,MS5.0						

QSPA South Pole Qui 31.93 180 ⇓*i*P **P** **22 00 37.5 +1.2**
QSPA *e*PP PP 22 01 51.6 +3.2
QSPA LR LR
comp=Z,4μm,20.0s,MS5.1
SNZO South Karori 33.13 281 PFAKE 22 01 00.0 +13
SNZO LR LR
comp=Z,1μm,19.0s,MS4.6
PMSA Palmer Station 34.66 133 *e*P **P** **22 01 00.8 +0.5**
comp=Z,32nm,1.2s,mb5.1
PMSA LR LR
comp=Z,2μm,19.0s,MS4.8
RKT Rikitea 35.25 8 *e*S **S** **22 06 41.0 +1.8**
comp=Z,380nm,27.2s
RKT *e*LQ 22 09 06.5
comp=Z,647nm,30.0s
RKT *e*LR LR 22 10 38.5
comp=Z,6μm,28.5s,baz=181
TBI Tubuai 35.53 345 *e*S **S** **22 06 42.1 -1.5**
comp=Z,343nm,35.5s
TBI *e*LR LR 22 10 34.6
comp=Z,6μm,28.0s,baz=178
RPN Rapa Nui 37.70 48 LR LR 22 11 36.4
comp=Z,496nm,19.8s,MS4.3,baz=194,slow=28
USHA Ushuaia 37.82 117 P **P** **22 01 26.8 -0.5**
comp=Z,10.0nm,0.9s,mb4.5,baz=289,slow=1.7,SNR=4.4
RAO Raoul Island 39.08 301 LR LR 22 11 55.4
comp=Z,130nm,21.6s,MS3.7,baz=28,slow=27
RAR Rarotonga 39.72 330 LR LR 22 12 11.9
comp=Z,322nm,21.5s,MS4.1,baz=109,slow=27
RAR Rarotonga 39.72 330 PFAKE 22 01 50.0 +6.8
RAR LR LR
comp=Z,1.0nm,21.0s
PPT Papeete 41.24 346 *e*S **S** **22 08 09.1 -0.7**
comp=Z,478nm,26.2s
PPT *e*LQ 22 11 22.3
comp=Z,913nm,28.2s
PPT *e*LR LR 22 13 13.1
comp=Z,5μm,25.5s,baz=180
PPT Papeete 41.24 346 LR LR 22 14 46.0
comp=Z,2μm,19.1s,MS4.9,baz=186,slow=30
EFI East Falkland 44.66 119 P **P** **22 02 23.2 -0.3**
EFI MLR MLR
comp=Z,2μm,21.0s,MS5.0
CASY Casey 45.25 212 PFAKE 22 02 40.0 +12
CASY LR LR
comp=Z,2μm,20.0s,MS5.0
PLCA Paso Flores 46.05 99 P **P** **22 02 35.1 +0.6**
comp=Z,23nm,1.3s,mb5.0,baz=217,slow=9.7,SNR=6.6
PLCA LR LR 22 16 30.8
comp=Z,1μm,21.5s,MS4.8,baz=205,slow=29
TAU Tasmania Unive 46.36 256 P **P** **22 02 37.6 +0.6**
TAU MLR MLR
comp=Z,850nm,20.0s,MS4.7
VNA1 Neumayer--Stat 46.91 160 ⇑*i*P **P** **22 02 40.1 -1.2**
VNA1 *e* pP 22 02 43.6 +0.2
VNA1 *e* 22 02 44.5
VNA1 *e* 22 04 12.4
VNA1 *e* 22 04 28.1
SNAA Sanae 46.95 163 ⇓*e*P **P** **22 02 40.4 -1.2**
SNAA *e* 22 04 13.1
SNAA *e* 22 04 30.8
SNAA pmax pmax
comp=Z,79nm,1.4s
SNAA Sanae 46.95 163 ⇓*e*P **P** **22 02 40.4 -1.2**
comp=Z,79nm,1.4s,mb5.5
SNAA *e*PcP PcP 22 04 13.1 -0.9
SNAA *e*PP PP 22 04 30.8 -1.1
TAOE Nuku Hiva Isla 49.26 360 *e*S **S** **22 10 05.9 +0.1**
comp=Z,1μm,26.2s
TAOE *e*LR LR 22 17 03.0
comp=Z,10μm,27.6s
MIR Mirnyy 49.48 205 *d*i*P* **P** **22 03 02.5 +1.4**
NVL N'lazarevskaya 49.73 168 ⇓*i*P **P** **22 03 02.0 -1.1**
NVL *i* S **S** **22 10 13.2 +0.8**
NVL *e*SSS 22 15 07.7
NVL pmax pmax
comp=Z,34nm,1.4s,mb5.2
NVL pmax pmax
comp=N,18nm,1.0s
NVL pmax pmax
comp=E,12nm,1.4s
NVL pmax pmax
comp=Z,1μm,15.3s
SYO Syowa Base 53.06 180 ⇓*i*P **P** **22 03 26.0 -2.0**
SYO Syowa Base 53.06 180 ⇓*e*X 22 04 31.4
MAW Mawson 53.37 191 P **P** **22 03 29.5 -0.7**
comp=Z,14nm,0.9s,mb4.9,baz=166,slow=10,SNR=23
MAW LR LR 22 23 55.4
comp=Z,1μm,20.6s,MS5.0,baz=168,slow=34
MAW Mawson 53.37 191 *e*P **P** **22 03 29.5 -0.7**
MAW pmax pmax
comp=Z,12nm,0.9s
MAW MLR MLR
comp=Z,2μm,21.0s
MAW Mawson 53.37 191 *e*P **P** **22 04 45.1 0.0**
comp=Z,12nm,0.9s,mb4.8
MAW LR LR
comp=Z,2μm,21.0s,MS5.2
STKA Stephens Creek 57.66 261 *e*P **P** **22 04 01.8 +0.6**
comp=Z,6.9nm,0.9s,mb4.7
STKA Stephens Creek 57.66 261 P **P** **22 04 01.6 +0.4**
comp=Z,7.7nm,0.9s,mb4.7,baz=136,slow=6.5,SNR=12
STKA LR LR 22 23 04.0
comp=Z,589nm,20.0s,MS4.7,baz=204,slow=30
LVC Limon Verde 61.02 86 *e*P **P** **22 04 25.1 +0.7**
comp=Z,44nm,1.1s,mb5.5
CPUP Villa Florida 64.12 99 P **P** **22 04 45.0 -0.1**
comp=Z,3.5nm,0.7s,mb4.5,baz=221,slow=6.7,SNR=11
CPUP LR LR 22 29 00.3
comp=Z,441nm,18.0s,MS4.7,baz=200,slow=33
CPUP Villa Florida 64.12 99 *e*P **P** **22 04 45.1 0.0**
CPUP pmax pmax
comp=Z,98nm,1.5s
CPUP Villa Florida 64.12 99 *e*P **P** **22 04 45.1 0.0**
comp=Z,98nm,1.5s,mb5.6
CTAO Charters Tower 64.70 273 PFAKE 22 05 00.0 +11
CTAO LR LR
comp=Z,679nm,19.0s,MS4.9
FORT Forrest 65.47 251 *e*P **P** **22 04 54.3 +0.4**
comp=Z,20nm,0.7s,mb5.3
NNA Nana 65.77 73 *e*P **P** **22 04 55.8 0.0**
comp=Z,38nm,1.0s,mb5.4
AS31 Alice Springs 68.28 260 *e*P **P** **22 05 10.7 -1.1**
ASAR Alice Springs 68.28 260 P **P** **22 05 11.0 -0.8**
comp=Z,10nm,0.8s,mb4.9,baz=143,slow=5.8,SNR=44
ASAR LR LR 22 30 53.2
comp=Z,696nm,18.3s,MS4.9,baz=180,slow=32
ASPA Alice Springs 68.28 260 *e*P **P** **22 05 11.1 -0.7**
NWAO Narrogin (SRO) 68.95 241 P **P** **22 05 16.8 +0.9**
WB2 Warramunga Arr 71.11 263 *e*P **P** **22 05 28.8 -0.4**
WRAB Tennant Creek 71.12 263 *e*P **P** **22 05 28.8 -0.5**
WRAB pmax pmax
comp=Z,24nm,1.1s,mb5.0
WRAB Tennant Creek 71.12 263 *e*P **P** **22 05 28.8 -0.5**
comp=Z,24nm,1.1s,mb5.0
PMG Port Moresby 73.14 280 PFAKE 22 05 50.0 +8.6
PMG LR LR
comp=Z,675nm,20.0s,MS4.9
SAML Samuel 75.40 83 *e*P **P** **22 05 53.9 -0.7**
comp=Z,50nm,1.6s,mb5.2
SAML *e*PcP PcP 22 06 07.3 -0.4
FITZ Fitzroy Crossi 77.17 257 *e*P **P** **22 06 06.1 +1.5**
comp=Z,10nm,1.0s,mb4.7
MBWA Marble Bar 77.60 250 *e*P **P** **22 06 06.3 -0.7**
MBWA *e*PcP PcP 22 06 17.9 +0.7
BDFB Brasilia 77.79 100 P **P** **22 06 08.1 0.0**
comp=Z,5.1nm,1.0s,mb4.4,baz=190,slow=2.4,SNR=4.8
BDFB LR LR 22 37 37.9
comp=Z,946nm,18.4s,MS5.2,baz=207,slow=34
POHA Pohakuloa 78.78 345 PFAKE 22 06 30.0 +16
POHA LR LR
comp=Z,1μm,22.0s,MS5.2
ROSC El Rosal 81.52 66 P **P** **22 06 30.1 +1.7**
comp=Z,10nm,0.5s,mb5.0,baz=118,slow=18,SNR=17
ROSC LR LR 22 36 06.7
comp=Z,307nm,19.5s,MS4.7,baz=199,slow=31
SDV Santo Domingo 86.81 68 *e*P **P** **22 06 54.1 -1.2**
comp=Z,11nm,0.8s,mb5.2
SUR Sutherland 88.28 164 P **P** **22 07 02.6 +0.2**
TEIG Tepich 89.00 47 *e*P **P** **22 07 08.1 +2.4**
comp=Z,31nm,1.0s,mb5.6
GUMO Guam 93.89 289 PFAKE 22 07 40.0 +12
GUMO LR LR
comp=Z,1.0nm,22.0s
ISA Isabella 95.23 17 P **P** **22 07 34.1 -0.5**
ISA MLR MLR
comp=Z,205nm,20.0s,MS4.6
SJG San Juan 96.92 67 P **P** **22 07 41.9 -0.4**
ANMO Albuquerque 96.94 27 PFAKE 22 07 50.0 +7.6
ANMO LR LR
comp=Z,589nm,21.0s,MS5.0
CMB Columbia Colle 97.27 15 PFAKE 22 07 50.0 +6.1
CMB LR LR
comp=Z,747nm,22.0s,MS5.1
TPH Tonopah 97.79 18 PFAKE 22 08 00.0 +14
TPH LR LR
comp=Z,798nm,20.0s,MS5.2
SDCO Great Sand Dun 99.83 27 PFAKE 22 08 10.0 +15
SDCO LR LR
comp=Z,1μm,19.0s,MS5.4
HWUT Hardware Ranch 102.23 21 Pdif Pdif 22 08 05.7 -0.3
HWUT LR LR
comp=Z,530nm,22.0s,MS5.0
RSSD Black Hills 106.23 26 PFAKE 22 12 50.0 +15
RSSD LR LR
comp=Z,522nm,21.0s,MS5.1
NEW Newport 107.77 16 PFAKE 22 12 50.0 +12
NEW LR LR
comp=Z,434nm,22.0s,MS5.0
PMR Palmer 119.71 355 *e*PKIKP PKPdf 22 13 00.3 -0.7
PMR MLR MLR
comp=Z,379nm,20.0s,MS5.0
MCK McKinley 121.84 355 *e*PKIKP PKPdf 22 13 04.2 -0.9
MCK MLR MLR
comp=Z,217nm,20.0s,MS4.8
YKA Yellowknife Ar 121.96 13 PKP PKPdf 22 13 04.2 -1.1
comp=Z,2.7nm,1.0s,baz=190,slow=2.0,SNR=5.1
DAWY Dawson 121.97 0 *e*PKPdf PKPdf 22 13 03.8 -1.5
NJ2 Nanjing 122.45 279 *e*PKP PKPdf 22 13 03.5 -2.7
NJ2 PP PP 22 14 46.0 +3.6
NJ2 PKS 22 16 38.0
NJ2 PP PP
comp=Z,100nm,6.7s
NJ2 LR LR
comp=N,800nm,30.8s,MS5.2
NJ2 LR LR
comp=E,520nm,33.9s,MS5.2
NJ2 LR LR
comp=Z,320nm,33.1s,MS4.8
YSS Yuzh-Sakhalins 122.64 307 PFAKE 22 13 20.0 +13
YSS LR LR
comp=Z,257nm,19.0s,MS4.9
COLA College 122.93 356 *e*PKIKP PKPdf 22 13 04.4 -2.8
COLA MLR MLR
comp=Z,395nm,20.0s,MS5.1
IMA2 Indian Mountai 124.42 353 *e*PKPdf PKPdf 22 13 08.6 -1.5
KMI Kunming 125.41 261 PKP PKPdf 22 13 13.3 +1.4
KMI PP PP 22 15 07.9 +5.5
KMI SS SS 22 32 03.4 +2.5
KMI PP PP
comp=Z,100nm,4.9s
KMI LR LR
comp=N,122nm,13.8s,MS4.9
KMI LR LR
comp=E,130nm,15.8s,MS4.9
KMI LR LR
comp=Z,145nm,22.8s
ENH Enshi 125.98 270 PFAKE 22 13 20.0 +7.0
ENH LR LR
comp=Z,160nm,21.0s,MS4.7
INK Inuvik 126.31 3 *e*PKIKP PKPdf 22 13 12.2 -1.4
TOA0 Torodi Ar. Sit 126.52 131 *e*PKPdf PKPdf 22 13 13.1 -0.9
TORD Torodi Ar. Bea 126.52 131 PKP PKPdf 22 13 13.2 -0.8
comp=Z,8.2nm,1.1s,baz=231,slow=0.8,SNR=17
TORD PP PP 22 15 04.7 -5.1
comp=Z,4.9nm,1.2s,baz=193,slow=5.2,SNR=6.2
MDJ Mudanjiang 126.72 297 PKP PKPdf 22 13 14.8 +0.4
MDJ PP PP 22 15 12.9 +1.8
MDJ PKS 22 16 51.5
MDJ SKS SKSdf 22 20 26.8 +0.2
MDJ SS SS 22 32 22.0 +4.6
MDJ PP PP
comp=Z,45nm,5.1s
MDJ LR LR
comp=N,88nm,31.8s,MS4.4
MDJ LR LR
comp=E,101nm,31.8s,MS4.4
MDJ LR LR
comp=Z,195nm,31.8s,MS4.6
MDJ Mudanjiang 126.72 297 PFAKE 22 13 30.0 +16
MDJ LR LR
comp=Z,158nm,20.0s,MS4.7
CN2 Changchun 128.10 294 *e*PKP PKPdf 22 13 20.0 +3.0
CN2 PP PP 22 15 28.8 +8.6
CN2 PP PP
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,14.0s,MS5.1
CN2 LR LR
comp=E,200nm,14.0s,MS5.1
CN2 LR LR
comp=Z,200nm,16.0s,MS4.9
MA2 Magadan 129.48 322 PFAKE 22 13 30.0 +10
MA2 LR LR
comp=Z,383nm,20.0s,MS5.1
CD2 Chengdu 129.51 266 *e*PKP PKPdf 22 13 18.4 -1.3
CD2 XPKP 22 13 23.0
CD2 PP PP 22 15 32.8 +3.4
CD2 PKS 22 16 53.5
CD2 SKS SKSdf 22 20 28.6 -3.2
CD2 SKKS SKKSac 22 22 24.4 -2.6
CD2 SS SS 22 32 54.4 +2.5
CD2 PP PP
comp=Z,120nm,8.4s
CD2 LR LR
comp=E,190nm,19.2s
CD2 LR LR
comp=Z,90nm,13.2s
BJT Baijiatuau 129.94 284 PFAKE 22 13 30.0 +9.4
BJT LR LR
comp=Z,171nm,20.0s,MS4.7
BILL Bilibino 131.99 336 PFAKE 22 13 30.0 +5.6
BILL LR LR
comp=Z,286nm,20.0s,MS5.0
HHC Hu-ho-hao-te 132.93 281 *e*PKP PKPdf 22 13 24.1 -2.1
HHC PP PP 22 15 55.8 +4.3
HHC PKS 22 16 59.4
HHC SKS SKSdf 22 20 30.8 -7.2
HHC SKKS SKKSac 22 22 41.8 -6.3
HHC SS SS 22 33 33.8 0.0
HHC LR LR
comp=N,91nm,26.6s,MS4.6
HHC LR LR
comp=E,135nm,26.6s,MS4.6
HHC LR LR
comp=Z,160nm,24.9s,MS4.6
LZH Lanzhou 133.46 270 *e*PKP PKPdf 22 13 24.0 -3.2
LZH XPKP 22 13 29.0
LZH PP PP 22 15 56.6 +1.7
LZH SKKS SKKSac 22 22 45.1 -6.2
LZH SS SS 22 33 37.0 -3.2
LZH PP PP
comp=Z,110nm,5.2s
LZH LR LR
comp=E,225nm,19.2s
LZH LR LR
comp=Z,315nm,20.0s,MS5.0
HIA Hailar 134.75 295 PFAKE 22 13 40.0 +10
HIA LR LR
comp=Z,225nm,22.0s,MS4.8
LSA Lhasa 135.09 253 *e*PKIKP PKPdf 22 13 31.3 +1.0
LSA MLR MLR
comp=Z,178nm,19.0s,MS4.8
GTA Gaotai 138.06 270 *e*PKP PKPdf 22 13 37.3 +1.5
GTA PP PP 22 16 25.5 +1.6
GTA PKS 22 17 11.6
GTA PPP 22 19 32.6
GTA SKS SKSdf 22 20 45.9 -1.0
GTA SKKS SKKSac 22 23 15.8 -3.1
GTA SS SS 22 34 36.8 +1.5
GTA PP PP
comp=Z,78nm,8.0s
GTA LR LR
comp=N,61nm,18.6s,MS4.5
GTA LR LR
comp=E,67nm,18.2s,MS4.5
GTA LR LR
comp=Z,107nm,17.1s,MS4.7
YAK Yakutsk 138.64 314 PFAKE 22 13 50.0 +13
YAK LR LR
comp=Z,190nm,20.0s,MS4.8
SONM Songino Array 140.44 285 PKhKP 22 13 32.2
comp=Z,0.6nm,0.8s,baz=137,slow=2.7,SNR=5.0
SONM PKP PKPdf 22 13 37.5 -2.6
comp=Z,0.4nm,0.6s,baz=153,slow=2.7,SNR=3.8
ZAK Zakamensk 143.63 286 *e*PKHKP 22 13 41.2
ZAK pmax pmax
comp=Z,5.0nm,1.7s
ZAK pmax pmax
comp=Z,5.0nm,1.5s
ELOJ Sierra Loja 144.34 107 PKIKP PKPdf 22 13 44.2 -2.9
PCBR Castelo Branco 144.66 100 *e*PKP PKPdf 22 13 46.1 -1.5
ECOG Cogollos-Vega 144.74 107 PKIKP PKPdf 22 13 45.2 -2.5
HATD Hatta, Dubai 144.75 206 P PKPdf 22 13 45.5 -2.2
SNR=6.1
EADA Adamuz 144.91 105 PKP PKPdf 22 13 45.7 -2.4
MTE Manteigas 145.04 99 *e*PKP PKPdf 22 13 46.5 -1.8
MTE Manteigas 145.04 99 *e*P PKPbc 22 13 46.2 -1.4
PVIS Viseu 145.09 99 *e*PKP PKPdf 22 13 47.3 -1.0
ENIJ Nijar 145.19 109 PKP2 PKPab 22 13 47.4 -0.8
EBAN Banos Encina 145.31 106 PKP2 PKPab 22 13 46.7 -1.9
EQES Quesada 145.40 107 PKP PKPdf 22 13 46.6 -2.3
MOY Mondy 145.56 286 *e*PKIKP PKPdf 22 13 48.8 -0.3
MOY pmax pmax
comp=Z,117nm,2.8s
PVRL Vila Real 145.58 98 *e*PKP PKPdf 22 13 49.1 -0.1
EHUE Huescar 145.65 108 PKP2 PKPab 22 13 48.1 -1.8
PCAB Cabril 145.73 97 *e*PKP PKPdf 22 13 49.6 +0.2
BANOM Banah 145.76 206 ⇑P PKPdf 22 13 48.2 -1.3
SNR=6.3
EVIA Vianos 146.32 107 PKP2 PKPab 22 13 51.9 -0.5
EMUR La Murta 146.35 109 PKP PKPdf 22 13 50.9 +0.4
ESDC Sonseca Array 146.36 104 PKPbc PKPbc 22 13 51.4 -0.3
comp=Z,2.7nm,0.8s,baz=238,slow=3.9,SNR=20
ESDC Sonseca Array 146.36 104 PKP PKPdf 22 13 51.6 +1.0
ESLA Sonseca Array 146.36 104 *e*PKP PKPdf 22 13 51.6 +1.1
PBRG Braganca 146.47 99 *e*PKP PKPdf 22 13 52.0 +1.3
ECAL Calabor 146.57 98 PKP PKPdf 22 13 50.7 -0.2
GUD Guadarrama 146.98 103 PKP2 PKPab 22 13 53.5 -1.5
SUMG Summit 147.19 33 *e*PKP PKPdf 22 13 52.3 +0.4
WMQ Urumqi 147.59 265 PKP PKPdf 22 13 55.0 +2.4
WMQ PP PP 22 17 28.0 +6.5
WMQ SKS SKSdf 22 21 02.0 +0.4
WMQ SKKS SKKSac 22 24 17.0 +3.2
WMQ SS SS 22 36 30.0 +4.6
WMQ PP PP
comp=Z,68nm,7.0s
WMQ LR LR
comp=N,189nm,20.0s,MS5.0
WMQ LR LR
comp=E,135nm,20.0s,MS5.0
WMQ LR LR
comp=Z,142nm,20.0s,MS4.8
KEST Kesra 149.65 124 PKPbc PKPbc 22 14 00.6 0.0
comp=Z,5.1nm,1.1s,baz=198,slow=6.4,SNR=4.6
EALK Alkurruntz 150.20 102 PKP PKPbc 22 14 01.2 -0.7
SJPF Ste Jean 150.27 102 *e*PKIKP PKPbc 22 14 01.5 -0.6
comp=Z,224nm,1.6s
ATE Arette 150.52 103 PKP PKPbc 22 14 02.6 -0.1
REYF Montagne du Re 150.67 103 PKP PKPbc 22 14 03.3 +0.3
EBIE Bielsa 150.67 104 PKP PKPbc 22 14 03.1 +0.1
RESF Ens 150.86 104 PKP PKPbc 22 14 04.0 +0.5
EPF Esparros 151.02 104 *e*PKIKP PKPbc 22 14 02.5 -1.3
comp=Z,79nm,1.6s
EIL Elat 151.22 170 *e*PKPbc PKPbc 22 14 04.8 +0.5
SALF Salau 151.26 105 PKP PKPbc 22 14 04.8 +0.4
MTLF Montolieu 152.20 106 *e*PKIKP PKPbc 22 14 04.7 -1.8
comp=Z,35nm,1.2s
MKAR Makanchi Array 152.41 264 PKPbc PKPbc 22 14 06.0 -1.1
comp=Z,11nm,1.1s,baz=130,slow=3.8,SNR=32
LFF La Frestale 152.56 102 *e*PKIKP PKPbc 22 14 05.7 -1.7
comp=Z,102nm,1.5s
CAF Calviac 153.24 103 *e*PKIKP PKPbc 22 14 07.5 -1.3
comp=Z,143nm,1.9s
AAK Ala-Archa 153.53 249 ⇓P PKPbc 22 14 09.0 -0.5
SNR=12
AAK Ala-Archa 153.53 249 *e*PKPbc PKPbc 22 14 09.2 -0.3
AAK *e*PKPab PKPab 22 14 21.0 -0.9
LASF Ste Croix 153.56 106 *e*PKIKP PKPdf 22 14 05.0 +3.2
comp=Z,60nm,1.6s
FRU Bishkek 153.62 249 *e*PKIKP PKPbc 22 14 09.0 -0.7
FRU *e* 22 14 23.0
FRU pmax pmax
comp=Z,50nm,2.0s
TCF Toulx Ste Croi 154.23 101 *e*PKIKP PKPdf 22 14 06.2 +3.4
comp=Z,78nm,1.9s
MBDF Montbardon 155.49 109 *e*PKIKP PKPdf 22 14 07.9 +3.4
comp=Z,23nm,1.2s
LOR Lormes 155.73 101 *e*PKIKP PKPdf 22 14 08.4 +3.6
comp=Z,21nm,1.2s
CSS Prodhromos 156.28 166 *e*PKPab PKPab 22 14 33.1 -0.4
KURK Kurchatov 156.71 268 *e*PKIKP PKPdf 22 14 03.9 -2.2
ECH Echery 158.05 103 PKP PKPdf 22 14 08.1 +0.3
FELD Feldberg im Sc 158.26 104 PKP PKPdf 22 14 08.3 +0.2
WLS Welschbruch 158.27 103 PKP PKPdf 22 14 07.2 -0.9
WLF Walferdange 158.42 99 *e*PKPab PKPab 22 14 42.7 -0.1
BFO Black Forest 158.72 104 *e*PKPdf PKPdf 22 14 08.5 -0.1
SQTA Sankt Quirin 159.45 110 ⇓*i*PKPdf PKPdf 22 14 09.8 +0.3
comp=Z,20nm,1.5s
MOTA Moosalm 159.48 109 ⇑*i*PKPdf PKPdf 22 14 09.7 +0.2
comp=Z,20nm,1.5s
WTTA Wattenberg 159.69 110 ⇓*i*PKPdf PKPdf 22 14 08.3 -1.4
comp=Z,20nm,1.4s
TNS Taunus Mts 159.94 100 *e*PKPab PKPab 22 14 49.1 -0.3
BUG Bochum--Univer 160.01 96 *e*PKPab PKPab 22 14 48.9 -0.8
MALT Malatya 160.04 176 ⇓*i*P PKPdf 22 14 11.0 +0.9
MALT Malatya 160.04 176 ⇓P PKPdf 22 14 11.0 +0.9
FUR Furstenfeldbru 160.12 108 *e*PKPdf PKPdf 22 14 09.3 -0.9
FUR *e*PKPab PKPab 22 14 49.4 -0.8
BR131 Keskin Array S 161.00 164 *e*PKPdf PKPdf 22 14 10.1 -1.1
BRTR Keskin Array B 161.00 164 PKP PKPdf 22 14 10.8 -0.4
comp=Z,3.7nm,1.2s,baz=165,slow=1.9,SNR=11
BRTR PKPab PKPab 22 14 52.7 -1.4
comp=Z,3.2nm,0.9s,baz=180,slow=6.2,SNR=12
ANTO Ankara 161.02 162 ⇓*i*P PKPab 22 14 53.2 -0.9
VTS Vitosha 161.06 138 ⇓*i*P PKPab 22 14 53.3 -1.0
GRA1 Grafenberg Arr 161.06 104 *e*PKPdf PKPdf 22 14 10.5 -0.8
GRA1 *e*PKPab PKPab 22 14 52.7 -1.6
GRA1 LR LR
comp=Z,300nm,20.0s
GRF Grafenberg Arr 161.06 104 *e*PKPdf PKPdf 22 14 10.5 -0.8
GRF *e*PKPab PKPab 22 14 52.7 -1.6
GRF *e*L 23 33 46.1
comp=Z,297nm,20.0s
UBBA Unterbreizbach 161.10 100 *e*PKPdf PKPdf 22 14 10.9 -0.4
UBBA *e*PKPab PKPab 22 14 52.4 -2.1
MOA Molln 161.39 113 ⇑*i*PKPdf PKPdf 22 14 11.4 -0.2
comp=Z,7.8nm,1.5s
WET Wettzell 161.56 108 *e*PKPdf PKPdf 22 14 10.5 -1.3
WET *e*PKPab PKPab 22 14 55.2 -1.3
ARSA Arzberg 161.57 116 ⇑*i*PKPdf PKPdf 22 14 10.5 -1.3
comp=Z,9.6nm,1.6s
ROTZ Rotzenmuhle 161.61 105 *e*PKPab PKPab 22 14 55.9 -0.8
GNI Garni 161.67 191 *e*PKIKP PKPdf 22 14 12.5 +0.6
GNI MLR MLR
comp=Z,422nm,19.0s
HLG Helgoland 161.68 89 *e*PKPab PKPab 22 14 56.6 -0.4
MANZ Manzenberg 161.70 105 *e*PKPdf PKPdf 22 14 11.2 -0.7
GEC2 GERESS Array S 161.78 110 *e*PKPdf PKPdf 22 14 10.8 -1.2
GEC2 *e*PKPab PKPab 22 14 56.0 -1.5
GERES GERESS Array B 161.78 110 PKP PKPdf 22 14 10.7 -1.3
comp=Z,2.6nm,1.1s,baz=166,slow=2.8,SNR=8.5
GERES PKPab PKPab 22 14 56.2 -1.3
comp=Z,2.4nm,1.0s,baz=198,slow=3.9,SNR=6.9
MOX Moxa 161.84 102 *e*PKPdf PKPdf 22 14 11.1 -1.0
CLZ Clausthal 161.86 98 *e*PKPdf PKPdf 22 14 11.5 -0.6
KHC Kasperske Hory 161.90 109 *e*PKPAB PKPab 22 14 56.5 -1.5
KHC AMS AMS 23 19 40.0
comp=Z,300nm,22.0s
WERN Wernitzgruen 162.01 104 *e*PKPdf PKPdf 22 14 11.6 -0.7
NKC Novy Kostel 162.02 104 AMS AMS 23 28 30.0
GUNZ Gunzen 162.04 104 *e*PKPdf PKPdf 22 14 11.3 -1.0
GUNZ *e*PKPab PKPab 22 14 58.3 -0.3
WERD Werda 162.07 104 *e*PKPdf PKPdf 22 14 11.2 -1.1
WERD *e*PKPab PKPab 22 14 58.6 -0.2
TANN Tannenbergstha 162.14 104 *e*PKPdf PKPdf 22 14 11.5 -0.9
CONA Conrad Observa 162.22 115 ⇑*i*PKPdf PKPdf 22 14 09.6 -2.9
comp=Z,8.8nm,1.5s
BRVK Borovoye 162.34 266 *e*PKIKP PKPdf 22 14 10.0 -2.6
FBE Freiberg 162.89 104 *e*PKPab PKPab 22 15 01.6 -0.7
PRU Pruhonice 162.93 108 *e*PKPAB PKPab 22 15 02.0 -0.5
PRU AMS AMS 23 20 50.0
comp=Z,300nm,22.5s
CLL Collm 162.94 102 *e*PKPab PKPab 22 15 01.0 -1.5
comp=Z,10.0nm,1.1s

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLL				LmV		22 28 00.0	
	comp=Z,200nm,20.8s						
TREC	Trest	162.96	111	AMS	AMS	23 33 00.0	
	comp=Z,300nm,20.0s						
BRG	Berggiesshubel	163.17	105	P	PKPdf	22 14 18.0	+4.6
BRG				e		22 39 23.0	
BRG							
	comp=N,130nm,19.1s						
BRG							
	comp=E,92nm,22.4s						
BRG							
	comp=Z,173nm,19.9s						
BRG	Berggiesshubel	163.17	105	P	PKPdf	22 14 18.0	+4.6
BRG				e		22 39 23.0	
BRG				LR	LR		
	comp=Z,170nm,19.9s						
PVCC	Panska Ves	163.28	106	AMS	AMS	23 32 20.0	
	comp=Z,300nm,17.8s						
UPC	Upice	164.00	108	ePKPAB	PKPab	22 15 06.8	-0.4
VYHS	Vyhne	164.02	118	ePKP	PKPdf	22 14 13.6	-0.6
VYHS				e		22 15 05.2	
DPC	Dobruska-Polom	164.05	109	ePKPAB	PKPab	22 15 07.0	-0.4
DPC				AMS	AMS	23 33 20.0	
	comp=Z,400nm,19.9s						
PSZ	Piszkesteto	164.09	122	⇑iP	PKPab	22 15 04.1	-3.5
VOIR		164.19	138	⇓iP	PKPab	22 15 06.2	-1.8
MORC	Moravsky Berou	164.29	113	ePKIKP	PKPdf	22 14 08.6	-5.8
DRGR		164.42	130	⇑iP	PKPab	22 15 08.5	-0.6
HARR	Harsova	164.47	146	⇓iP	PKPab	22 15 08.4	-0.9
MLR	Muntele Rosu	164.55	139	⇓iP	PKPab	22 15 08.4	-1.2
OKC	Ostrava-Krasne	164.62	114	AMS	AMS	23 30 00.0	
	comp=Z,200nm,16.9s						
KECS	Kecovo	164.77	121	e	PKPab	22 15 06.8	-3.8
CFR	Carcaliu	164.98	145	⇓iP	PKPab	22 15 10.4	-1.1
PLOR	Plostina	165.10	140	⇓iP	PKPab	22 15 12.9	+0.8
NB2	NORSAR Subarra	165.14	67	P	PKPab	22 15 11.1	-1.1
	comp=Z,30nm,1.7s,baz=270,slow=5.1						
NOA	NORSAR Array B	165.14	67	PKPab	PKPab	22 15 11.5	-0.7
	comp=Z,3.9nm,1.1s,baz=268,slow=4.7,SNR=4.5						
NOA	NORSAR Array B	165.14	67	PKP2	PKPab	22 15 11.5	-0.7
NOA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VRI	Vrincioaia	165.14	141	⇓iP	PKPab	22 15 09.9	-2.3
CRVS	Cervenica-Dubn	165.52	122	ePKP	PKPab	22 15 12.5	-1.4
KIV	Kislovodsk	165.62	187	ePKIKP	PKPdf	22 14 14.7	-0.9
KIV				MLR	MLR		
	comp=Z,338nm,21.0s						
KIV	Kislovodsk	165.62	187	ePKPdf	PKPdf	22 14 14.7	-0.9
KIV				LR	LR		
	comp=Z,338nm,21.0s						
KOLS	Kolonicke sedl	165.90	124	ePKP	PKPab	22 15 12.8	-2.8
KOLS	Kolonicke sedl	165.90	124	ePKP		22 14 26.8	
BURAR	Bucovina Array	166.09	133	⇓iP	PKPab	22 15 14.9	-1.5
BURAR	Bucovina Array	166.09	133	⇓PKP2	PKPab	22 15 15.0	-1.4
ARCES	ARCESS Array B	167.00	23	PKPab	PKPab	22 15 18.2	-2.2
	comp=Z,3.7nm,1.1s,baz=357,slow=9.2,SNR=3.8						
ARCES	ARCESS Array B	167.00	23	PKP2	PKPab	22 15 18.3	-2.1
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARU	Arti	169.91	268	PFAKE		22 14 30.0	+11
ARU				LR	LR		
	comp=Z,377nm,22.0s						
AKASG	Malin Array Be	170.13	135	PKP	PKPdf	22 14 15.1	-3.6
	comp=Z,0.3nm,0.4s,baz=345,slow=1.1,SNR=8.9						
AKASG				PKPab	PKPab	22 15 31.9	-2.4
	comp=Z,3.8nm,0.8s,baz=218,slow=4.3,SNR=11						
AKASG	Malin Array Be	170.13	135	PKP	PKPdf	22 14 15.1	-3.6
AKASG				PKPab	PKPab	22 15 31.9	-2.4
FINES	FINESS Array B	172.19	60	PKPab	PKPab	22 15 42.4	-1.1
	comp=Z,2.8nm,0.9s,baz=231,slow=1.2,SNR=7.1						
FINES	FINESS Array B	172.19	60	PKP2	PKPab	22 15 42.4	-1.0
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	Obninsk	176.29	146	ePKIKP	PKPdf	22 14 18.5	-2.6
OBN				pmax	pmax		
	comp=Z,8.0nm,1.6s						
OBN	Obninsk	176.29	146	ePKPdf	PKPdf	22 14 18.3	-2.8
OBN				LR	LR		
	comp=Z,452nm,20.0s						

CASC 13 22:02:43.1±3.1, 1417N×9049W, h37km±38km, MD3.6, 1C-6D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TER	Terranova	0.23	306	eP	Pn	22 02 50.2	-0.2
FUG	Fuego 3	0.44	309	⇑iP	Pn	22 02 53.2	+0.2
TP2	Tecpan 2	0.80	320	⇓eP	Pn	22 02 58.7	+0.8
RTR	El Retiro	0.86	108	⇓eP	x	22 03 02.3	
RTR				eS	x	22 03 14.4	
SBLS	San Blas	0.90	111	⇓eP	x	22 03 02.0	
SBLS				eS	x	22 03 13.9	
SNJE	San Jose	0.91	109	⇓eP	x	22 03 02.4	
SNJE				eS	x	22 03 14.2	
BOQS	Boqueron	1.25	110	⇓eP	x	22 03 06.1	
BOQS				eS	x	22 03 22.2	
SNET	Serv Nac Est T	1.31	111	eP	x	22 02 51.6	
SNET				eS	x	22 03 07.3	
LBRS	Las Brisas	1.47	107	⇓eP	x	22 03 09.1	
LBRS				eS	x	22 03 26.5	
LFRS	El Faro	1.49	111	eP	x	22 03 07.8	
LFRS				eS	x	22 03 24.9	
LCBS	La Ceiba	1.55	109	eP	x	22 03 09.2	
LCBS				eS	x	22 03 27.7	
SNVI	San Vicente	1.69	109	eP	x	22 03 11.1	
SNVI				eS	x	22 03 30.9	
VSM	San Miguel	2.27	109	eP	x	22 03 18.9	
VSM				eS	x	22 03 45.3	

*ISCJB **13** 22:12:54.9±1.9, 2949N±007×5196E±009, h14km±19km, Error ellipse: s-maj=14.4km s-min=9.6km az=69.8*
*CSEM **13** 22:12:55.7, 2963N×5209E, h14km, ML3.2, After THR*
*KISR **13** 22:12:55.3±0.7, 2956N×5191E, h33km, ML3.0*
*THR **13** 22:12:55.7±0.3, 2963N×5209E, h14km±12km, ML3.2*
ISC 13 22:12:56.4±2.2**, 2949N**±008×**5196E**±009**, h13**km±22km**, n9, σ0§55**/14**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.50	143	ePG	Pg	22 13 24.3	-0.9
GHIR				eSG	Sg	22 13 45.3	+0.7
GHIR				AML	AML	22 13 54.0	
	comp=N,269nm,0.6s						
GHIR				AML	AML	22 13 58.0	
	comp=E,400nm,0.7s						
GHIR	Ghir-Karzin	1.50	143	ePg	Pg	22 13 24.3	-0.9
	SNR=90						
GHIR				eSg	Sg	22 13 45.3	+0.7
	comp=E,400nm,0.7s,SNR=90						
NASN	Na'in	3.38	12	ePn	Pn	22 13 48.1	-0.7
QRN	Al-Qurain	3.62	259	eP	Pn	22 13 51.9	-0.2
QRN				eS	Sn	22 14 34.9	+0.3
QRN				AML	AML	22 14 36.5	
	comp=Z,38nm,0.2s						
RDF	Al-Radifah	3.90	263	eP	Pn	22 13 55.8	-0.2
RDF				eS	Sn	22 14 41.5	0.0
RDF				AML	AML	22 14 42.5	
	comp=Z,14nm,0.3s						
MIB	Mutribah	4.04	276	eP	Pn	22 13 58.2	+0.3
MIB				eS	Sn	22 14 44.4	-0.6
MIB				AML	AML	22 14 46.0	
	comp=Z,27nm,0.6s						
KRBR	Kerman	4.20	82	ePn	Pn	22 14 00.1	0.0
ASAO	Ashtian	5.31	342	ePN	Pn	22 14 15.5	+0.2
ASAO				AML	AML	22 15 21.5	
	comp=N,11nm,0.5s						
ASAO				AML	AML	22 15 24.7	
	comp=E,8.6nm,0.7s						
SNGE	Sanandaj	6.82	326	ePN	Pn	22 14 37.1	+1.1

IGQ 13 22:51:52.7, 130N×7940W, h12km±5km, Mb4.0, Ms3.8, 2C-5D, Error ellipse: s-maj=3.9km s-min=2.6km az=127.6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAG1	Magdalena	1.41	195	P	Pn	22 52 18.2	0.0
COTA	Cotacachi	1.43	132	P	Pn	22 52 20.0	+1.6
COTA				S	Sn	22 52 38.8	+1.6
YANA	Yana	1.63	150	⇓P	Pn	22 52 24.0	+2.7
YANA				S	Sn	22 52 45.2	+3.0
PINO	Pino	1.65	151	⇑P	Pn	22 52 24.0	+2.5
TERV	Terraza Guagua	1.67	151	⇓P	Pn	22 52 24.6	+2.9
GGP	Refugio Guagua	1.67	151	⇓P	Pn	22 52 24.6	+2.8
GGP				S	Sn	22 52 48.9	+5.8
JUA2	San Juan 2	1.70	152	P	Pn	22 52 24.9	+2.7
CAYA	Cayambe	1.86	131	⇓P	Pn	22 52 27.5	+3.1
CAYR	Refugio Cayamb	1.89	132	⇑P	Pn	22 52 28.1	+3.4
CAYR				S	Sn	22 52 52.6	+4.1
ANTI	Antisana	2.13	145	⇓P	Pn	22 52 32.3	+4.2
ANTI				S	Sn	22 53 01.7	+7.2
VC1	Cotopaxi 1	2.17	153	P	Pn	22 52 33.2	+4.5
VC1				S	Sn	22 53 01.7	+6.2
TAMB	Tambo	2.23	152	P	Pn	22 52 34.4	+4.9

*ISCJB **13** 23:16:39.7±1.7, 4283N±007×4802E±010, h10km, Error ellipse: s-maj=11.9km s-min=7.8km az=99.6*
*MOS **13** 23:16:39.6±1.8, 4266N×4795E, h13km, mb4.0/1, Error ellipse: s-maj=21.4km s-min=13.6km az=16.7*
ISC 13 23:16:40.3±1.7**, 4275N**±007×**4806E**±010**, h10**km**, n11, σ1§74**/21**, 1C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSR	Manas	0.26	259	⇑iPG	Pg	23 16 44.0	-1.5
MNSR				eS	Sg	23 16 49.0	0.0
MNSR				pmax	pmax		
	comp=Z,352nm,0.2s						
BUJR	Buynaksk	0.70	276	i PG	Pg	23 16 55.8	+1.9
BUJR				pmax	pmax		
	comp=Z,78nm,0.2s						
GNBR	Gunib	0.89	246	⇓iPG	Pg	23 16 54.0	-3.4
GNBR				eS	Sg	23 17 06.0	-2.9
GNBR				pmax	pmax		
	comp=Z,76nm,0.2s						
DBC	Dubki	0.94	287	ePG	Pg	23 16 56.0	-2.4
DBC				i S	Sg	23 17 12.0	+1.3
DBC				pmax	pmax		
	comp=Z,24nm,0.2s						
DLMR	Dylym	1.10	287	ePG	Pg	23 16 59.2	-2.2
DLMR				eS	Sg	23 17 17.5	+1.9
DLMR				pmax	pmax		
	comp=Z,175nm,0.2s						
KSMR	Kasumkent	1.15	177	⇓iPG	Pg	23 16 59.7	-2.7
KSMR				eS	Sb	23 17 18.2	+0.9
KSMR				pmax	pmax		
	comp=Z,135nm,0.2s						
BTLR	Botlikh	1.36	267	PG	Pg	23 17 02.0	-4.3
BTLR				eS	Sb	23 17 20.5	-2.7
BTLR				pmax	pmax		
	comp=Z,58nm,0.3s						
DGRG	David-gareji	2.38	238	P	Pn	23 17 20.8	+1.4
DGRG				S	Sn	23 17 51.2	+2.5
MTA	Mtatsminda	2.65	248	P	Pn	23 17 24.0	+1.0
MTA				S	Sn	23 17 56.2	+1.1
TBLG	Delisi	2.67	249	ePN	Pn	23 17 24.0	+0.7
TBLG				eS	Sn	23 17 55.6	-0.1
TBLG	Delisi	2.67	249	P	Pn	23 17 24.1	+0.8
TBLG				S	Sn	23 17 55.6	-0.1

*IDC **13** 23:19:09.0±1.2, 6790N×2059E, h0km, mb1 2.9/3, mb1mx2.9/19, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=22.0km s-min=6.7km az=123.0*
*NAO **13** 23:19:09.6±1.4, 6783N×2046E, ML2.1*
*BER **13** 23:19:10.9±3.3, 6786N×2018E, h0km, ML1.9, ML2.1(NAO), Suspected explosion*
HEL 13 23:19:10.3±0.2**, 6785N**×**2037E, h0**km**, ML2.1, ML1.9**(BER)**, ML2.1**(NAO)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIF	Kilpisjarvi	1.17	8	eP	Pg	23 19 32.1	-0.6
KIF				eS	Sg	23 19 47.8	0.0
KTK1	Kautokeino	1.57	41	eP	Pn	23 19 39.9	+0.4
KTK1				eSN	Sn	23 20 02.8	+2.2
KTK1				AML	AML	23 20 05.4	
	comp=Z,13nm,0.4s						
TRO	Tromso	1.86	344	eP	Pn	23 19 42.4	-1.0
TRO				eS	Sn	23 20 07.1	-0.6
TRO				AML	AML	23 20 10.8	
	comp=Z,11nm,0.3s						
ARA0	ARCESS Array S	2.52	46	eP	Pn	23 19 52.9	+0.4
ARA0				eSG		23 20 27.6	
ARA0	ARCESS Array S	2.52	46	Pn	Pn	23 19 52.9	+0.4
	baz=226,slow=16						
ARA0				Lg		23 20 27.6	
	baz=223,slow=28						
ARCES	ARCESS Array B	2.52	46	Pg	Pg	23 19 51.7	-7.0
	comp=Z,1.0nm,0.3s,baz=225,slow=15,SNR=13						
ARCES				Lg		23 20 25.2	
	comp=Z,2.3nm,0.3s,baz=228,slow=26,SNR=12						
LOF	Lofoten	2.58	279	eSG	Sg	23 20 30.7	-2.7
LOF				AML	AML	23 20 32.9	
	comp=Z,14nm,0.4s						
MOR8	Moi Rana	2.87	237	eSG	Sg	23 20 33.2	-9.5
MOR8				AML	AML	23 20 34.6	
	comp=Z,20nm,0.5s						
KEV	Kevo	3.08	49	eS	Sn	23 20 34.8	-2.9
KEV				eSB	Sb	23 20 41.0	-3.0
KEV				MSG		23 20 44.7	
	comp=Z,5.9nm,0.4s						
KU4	Liikasenvaara	3.90	108	eP	Pn	23 20 11.5	+0.1
NSS	Namsos	4.76	229	eSG	Sg	23 21 36.1	-7.3
NSS				AML	AML	23 21 37.7	
	comp=Z,5.1nm,0.4s						
APA0	Apatity Array	4.81	87	Pn	Pn	23 20 22.9	-1.1
	baz=278,slow=14						
APA0	Apatity Array	4.81	87	eP	Pn	23 20 22.9	-1.1
FIA0	FINESS Array S	6.88	156	Pn	Pn	23 20 52.1	-0.4
	baz=349,slow=12						
FIA0				Sn	Sn	23 22 08.1	-3.4
	baz=350,slow=28						
FIA0				Lg		23 22 43.5	
	baz=343,slow=28						
FIA0	FINESS Array S	6.88	156	eP	Pn	23 20 52.1	-0.4
FIA0				eS	Sn	23 22 08.1	-3.4
FIA0				eSG		23 22 43.5	
FINES	FINESS Array B	6.88	156	Pn	Pn	23 20 52.0	-0.4
	comp=Z,0.1nm,0.3s,baz=349,slow=12,SNR=6.1						
FINES				Lg		23 22 45.3	
	comp=Z,0.3nm,0.3s,baz=349,slow=26,SNR=5.7						
NB2	NORSAR Subarra	7.89	214	eP	Pn	23 21 04.4	-1.9
NB2				eSG		23 23 13.6	
NB2	NORSAR Subarra	7.89	214	Pn	Pn	23 21 04.4	-1.9
NB2				Lg		23 23 13.6	
	baz=20,slow=37						
NOA	NORSAR Array B	7.89	214	Pn	Pn	23 21 04.3	-2.0
	comp=Z,0.1nm,0.3s,baz=24,slow=11,SNR=2.7						
NOA				Lg		23 23 17.8	
	comp=Z,0.3nm,0.3s,baz=35,slow=14,SNR=3.5						
HFS	Hagfors	8.28	204	eP	Pn	23 21 09.0	-2.6
HFS	Hagfors	8.28	204	Pn	Pn	23 21 09.5	-2.1
	comp=Z,0.1nm,0.3s,baz=16,slow=12,SNR=5.0						
HFS				Lg		23 23 28.5	
	comp=Z,0.2nm,0.3s,baz=29,slow=25,SNR=5.4						
HFS	Hagfors	8.28	204	Pn	Pn	23 21 09.0	-2.6
	baz=10,slow=12						

*IDC **13** 23:28:13.8±1.3, 1223N×8692W, h0km, mb4.4/6, mb1 4.3/7, mb1mx4.0/20, mbtmp4.3/7, ML3.3/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/29, Error ellipse: s-maj=41.6km s-min=17.4km az=47.0*
*CASC **13** 23:28:15.7±2.1, 1171N×8764W, h45km±161km, MD4.2, mb4.2(NEIC)*
*ISCJB **13** 23:28:16.7±0.9, 1169N±006×8750W±007, h54km±9km, mb4.2/15, MS3.0/2, Error ellipse: s-maj=14.5km s-min=6.1km az=108.2*
*NEIC **13** 23:28:17.8±1.3, 1181N×8732W, h42km±16km, mb4.2/10, Error ellipse: s-maj=24.5km s-min=9.2km az=215.0*
ISC 13 23:28:18.8±0.9**, 1178N**±006×**8741W**±008**, h51**km±9km**, n49, σ1§01**/47**, mb4.2**/15**, MS3.0**/2**, 9C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	0.81	39	⇑eP	Pn	23 28 34.1	+0.2
COPN	Copaltepe	0.89	64	⇓iP	Pn	23 28 35.2	+0.2
MIRN	Miramar	0.94	46	⇓eP	Pn	23 28 36.0	+0.3
CRIN	San Cristobal	0.98	21	eP	Pn	23 28 36.0	-0.2
TELN	Telica	0.99	35	eP	Pn	23 28 36.3	-0.1
CNGN	Cerro Negro	0.99	44	⇑eP	Pn	23 28 36.5	+0.1
CNGN				⇑iP		23 28 36.5	
XAVN	Gruta Xavier	1.12	71	⇓eP	Pn	23 28 38.0	-0.1
APYN	Apoyeque	1.13	66	⇑eP	Pn	23 28 38.4	+0.2
TISN	Laguna Tiscapa	1.17	72	eP	Pn	23 28 38.8	0.0
TICN	Ticuantepe	1.18	78	eP	Pn	23 28 38.6	-0.3
MGAN	Managua	1.19	72	⇑eP	Pn	23 28 38.8	-0.3
MGAN				eS	Sn	23 28 57.7	+3.5
CONN	Concepcion	1.76	97	⇑eP	Pn	23 28 45.4	-1.4
LCBS	La Ceiba	2.41	321	⇓eP	x	23 29 07.8	
LCBS				eS	x	23 29 35.9	
BOQS	Boqueron	2.67	317	⇓eP	x	23 29 11.7	
BOQS				eS	x	23 29 42.5	
JTS	JuntasAbangare	2.83	121	Pn	Pn	23 29 00.2	-1.2
	2.2nm,0.3s,baz=323,slow=16,SNR=16						
JTS				Sn	Sn	23 29 33.2	-1.1
	6.5nm,0.3s,baz=290,slow=17,SNR=6.9						
JTS				LR	LR	23 30 25.5	
	comp=Z,469nm,18.6s,baz=147,slow=48						
JCR	Jicaral	2.96	130	eP	Pn	23 29 02.1	-1.1
SBLS	San Blas	2.98	314	eP	x	23 29 16.4	
SBLS				eS	x	23 29 49.4	
SNJE	San Jose	2.98	314	eP	x	23 29 16.0	
SNJE				eS	x	23 29 49.6	
RTR	El Retiro	3.03	314	eP	x	23 29 17.3	
RTR				eS	x	23 29 51.0	
RBDL	Robledal	3.21	316	eP	x	23 29 19.8	
RBDL				eS	x	23 29 55.8	
CGA2	Cerro Gallo 2	3.38	121	eP	Pn	23 29 09.1	+0.1
PRS1	Puriscal	3.53	120	⇑eP	Pn	23 29 12.9	+1.9
PRS1				eS	Sn	23 29 54.7	+3.2
LAJ	Bijagual	3.75	120	eP	Pn	23 29 10.2	-3.8
LAJ				eS	Sn	23 29 50.3	-6.6
LCR2	La Lucha 2	3.91	121	⇑eP	Pn	23 29 17.3	+1.0
LCR2				eS	Sn	23 30 02.0	+1.1
BUS	Buena Vista	4.21	121	⇑eP	Pn	23 29 21.1	+0.6
CMIG	Matias Romero	8.96	307	Pn	Pn	23 30 24.5	-1.0
	0.6nm,0.3s,baz=44,slow=18,SNR=4.9						
SDV	Santo Domingo	16.75	98	ePn	Pn	23 32 08.1	-1.7
	3.1nm,0.6s						
ATAH	Atahualpa	20.70	154	LR	LR	23 38 45.7	
	comp=Z,60nm,21.6s,MS2.9,baz=175,slow=30						
LRAL	Lakeview Retre	21.16	1	eP	P	23 33 00.7	+1.1
	8.5nm,0.7s,mb4.2						
JCT	Junction City	21.87	330	P	P	23 33 07.1	-0.1
MIAR	Mount Ida	23.35	347	eP	P	23 33 22.1	-0.6
	8.5nm,0.8s,mb4.2						
CPCT	Cooper Cave	23.71	6	eP	P	23 33 26.8	+0.8
TZTN	Tazewell	24.90	7	eP	P	23 33 37.3	+0.5
LPIG	La Paz	24.95	303	P	P	23 33 41.9	+4.7
	6.8nm,0.3s,mb4.7,baz=79,slow=5.2,SNR=3.7						
LPIG				LR	LR	23 44 52.7	
	comp=Z,66nm,20.7s,MS3.1,baz=255,slow=40						
WMOK	Wichita Mounta	25.09	337	P	P	23 33 39.2	+0.7
	9.5nm,1.3s,mb4.2						
MNTX	Cornudas Mount	25.84	323	eP	P	23 33 47.3	+2.0
	1.8nm,0.9s,mb3.6						
AMTX	Amarillo	26.41	333	eP	P	23 33 50.4	0.0
	9.6nm,1.0s,mb4.3						
ACSO	Alum Creek Sta	28.61	7	eP	P	23 34 10.0	-0.2
	2.3nm,0.4s,mb4.3						
SADO	Sadowa	33.63	11	P	P	23 34 52.2	-2.1
	6.1nm,0.9s,mb4.5,baz=163,slow=1.1,SNR=3.8						
SADO	Sadowa	33.63	11	P	P	23 34 52.2	-2.1
MPU	Maple Canyon	35.34	327	P	P	23 35 09.6	+0.4
PDAR	Pinedale Array	36.38	332	P	P	23 35 17.9	-0.1
	0.5nm,0.8s,mb3.5,baz=112,slow=7.3,SNR=4.4						
REDW	Red Top Meadow	37.44	331	eP	P	23 35 27.3	+0.2
	6.8nm,0.8s,mb4.5						
TPAW	Teton Pass	37.58	332	eP	P	23 35 29.4	+1.1
	13nm,1.4s,mb4.5						
MOOW	Moose Ponds	37.69	332	eP	P	23 35 29.2	+0.1
	3.2nm,1.0s,mb4.0						
ULM	Lac du Bonnet	38.98	351	P	P	23 35 37.4	-2.7
	1.9nm,0.7s,mb4.0,baz=150,slow=7.3,SNR=6.0						
NEW	Newport	44.01	332	P	P	23 36 21.5	+0.3
SCHQ	Schefferville	45.90	16	P	P	23 36 34.4	-1.8
	7.8nm,0.9s,mb4.6,baz=190,slow=17,SNR=4.4						
BDFB	Brasilia	47.57	124	P	P	23 36 49.5	+0.2
	4.2nm,0.8s,mb4.5,baz=300,slow=8.0,SNR=6.2						

*ATH **14** 00:15:04.8, 3829N×2220E, h20km±1km, MD3.5/15, ML3.2*
*CSEM **14** 00:15:04.6±0.1, 3825N×2221E, h2km, ML3.2, Error ellipse: s-maj=1.7km s-min=1.5km az=49.0*
*IDC **14** 00:15:04.1±1.2, 3831N×2230E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.4/20, mbtmp3.4/6, ML3.1/2, Error ellipse: s-maj=24.0km s-min=22.7km az=19.0*
*ISCJB **14** 00:15:04.4±0.5, 3827N±002×2225E±002, h4km±3km, mb3.4/3, Error ellipse: s-maj=3.5km s-min=3.1km az=63.8*
*THE **14** 00:15:06.1, 3831N×2233E, h3km, ML3.3*
*NEIC **14** 00:15:06.1, 3831N×2233E, h3km, ML3.2(ATH), ML3.3(THE), After THE.*
ISC 14 00:15:05.2±0.5**, 3827N**±002×**2224E**±003**, h6**km±3km**, n57, σ0§86**/76**, mb3.4**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.64	251	ePB	Pg	00 15 16.9	-0.7
RLS				eSN	Sg	00 15 26.3	+0.4
LKR	Lokris	0.71	57	ePN	Pg	00 15 18.5	-0.3
LKR				eSN	Sg	00 15 29.0	+1.0
EVR	Evrytania	0.73	333	ePN	Pg	00 15 18.4	-0.7
EVR				eSN	Sg	00 15 28.6	0.0
AGG	Agios Georgios	0.75	6	ePg	Pg	00 15 18.7	-1.0
	comp=Z,26nm,0.2s						
AGG				eSg	Sg	00 15 31.0	+1.6
MGER	Gerania Oros	0.86	109	ePN	Pg	00 15 22.5	+0.9
MGER				eSN	Sg	00 15 34.0	+1.3
NAIG	Nisos Aigina	1.11	117	ePN	Pn	00 15 27.0	-0.4
NAIG				eSN	Sn	00 15 42.5	-0.5
ATH	Athens Observa	1.21	104	ePN	Pn	00 15 28.5	-0.1
ATH				eSN	Sn	00 15 45.0	-0.3
KVR	Kavouri	1.29	110	ePN	Pn	00 15 29.5	-0.3
NEO	Neokhori	1.29	36	ePN	Pn	00 15 29.4	-0.4
NEO				eSN	Sn	00 15 47.1	-0.3
VLS	Valsamata	1.30	266	ePN	Pn	00 15 28.5	-1.4
VLS				eSN	Sn	00 15 47.6	-0.1
PTL	Penteli	1.30	99	ePN	Pn	00 15 30.5	+0.5
LKD	Levkas	1.32	290	ePg	Pg	00 15 29.1	-1.4
LKD				eSg	Sg	00 15 51.6	+4.1
XOR	Xorichti	1.32	34	ePg	Pg	00 15 29.8	-0.7
XOR				eSg	Sg	00 15 47.8	0.0
AOS	Alonnisos	1.57	55	ePg	Pg	00 15 33.5	-1.8
VLI	Veliai	1.65	160	ePN	Pn	00 15 34.8	+0.1
MEV	Metsovon	1.70	333	ePb	Pb	00 15 36.6	-0.4
	comp=Z,15nm,0.3s						
JAN	Janina	1.75	322	ePN	Pn	00 15 36.0	-0.2
LIT	Litokhoron	1.84	6	ePb	Pb	00 15 37.0	-2.3
	comp=Z,3.2nm,0.4s						
LIT				eSb	Sb	00 16 02.4	-0.1
IGT	Igoumenitsa	1.95	311	ePb	Pb	00 15 41.6	+0.5
PAIG	Paliouri	2.00	34	ePb	Pn	00 15 38.8	-0.8
PAIG				eSb	Sn	00 16 04.9	0.0
KZN	Kozani	2.06	350	ePN	Pn	00 15 41.3	+0.9
KYTH	Kithira	2.09	162	ePN	Pn	00 15 42.0	+1.2
LSK	Leskovik	2.27	326	i Pn	Pb	00 15 47.1	+0.6
LSK				i Sn	Sg	00 16 24.9	+6.9
LSK	Leskovik	2.27	326	ePn	Pb	00 15 47.1	+0.6
PLG	Polygyros	2.30	24	ePN	Pn	00 15 43.2	-0.5
SRN	Sarande	2.37	313	i Pn	Pb	00 15 47.7	-0.6
SRN				i Sn	Sg	00 16 24.4	+3.1
KEK	Kerkira	2.38	308	ePB	Pn	00 15 45.0	+0.2
HORT	Hortiatis	2.42	16	ePn	Pn	00 15 44.6	-0.7
THE	Thessaloniki	2.42	13	ePn	Pn	00 15 44.5	-0.9
OUR	Ouranopolis	2.46	33	ePn	Pn	00 15 45.5	-0.4
	comp=Z,2.8nm,0.4s						
FNA	Florina	2.60	345	ePn	Pn	00 15 48.5	+0.8
	comp=Z,2.0nm,0.5s						
FNA				eSn	Sn	00 16 20.0	+0.4
GRG	Griva	2.69	3	ePn	Pn	00 15 48.6	-0.3
SOH	Sokhos	2.69	18	ePn	Pn	00 15 49.1	0.0
SOH				eSn	Sn	00 16 22.0	+0.1
LOS	Limnos	2.77	52	ePn	Pn	00 15 49.6	-0.5
LIA	Limnos Island	2.81	54	ePN	Pn	00 15 50.5	-0.2
BIA	Bitola	2.83	346	ePn	Pn	00 15 52.5	+1.5
BIA				eSn	Sn	00 16 28.0	+2.5
BIA	Bitola	2.83	346	ePn	Pn	00 15 52.5	+1.5
APE	Apeiranthos	2.88	114	ePB	Pn	00 15 53.5	+1.9
KNT	Kendrikon	2.93	10	ePn	Pn	00 15 52.5	+0.1
CHOS	Chios island	3.00	87	ePn	Pn	00 15 54.3	+0.9

VAY	**Valandovo**	**3.06**	**5**	*e*Pn	**Pn**	**00 15 54.2**	**+0.1**
VAY	**Valandovo**	**3.06**	**5**	*e*Pn	**Pn**	**00 15 54.1**	**0.0**
VAM	**Vamos**	**3.26**	**151**	*e*PN	**Pn**	**00 15 57.5**	**+0.6**
PRK	**Paraskevi**	**3.30**	**72**	*e*PN	**Pn**	**00 15 57.7**	**+0.3**
NVR	**Nevrokopi**	**3.32**	**22**	*e*PN	**Pn**	**00 15 58.0**	**+0.3**
MMB	**Musomiste**	**3.51**	**19**	*e*P	**Pn**	**00 16 00.0**	**-0.3**
IDI	**Anoyia**	**3.66**	**144**	Pn	**Pn**	**00 16 02.2**	**-0.2**
	1.2nm,0.3s,baz=346,slow=14,SNR=29						
IDI				Sn	**Sn**	**00 16 45.2**	**-0.7**
	3.0nm,0.3s,baz=74,slow=23,SNR=5.9						
RDO	**Rodhopi**	**3.84**	**41**	*e*PN	**Pn**	**00 16 05.5**	**+0.7**
RZN	**Rozhen**	**3.91**	**28**	*e*P	**Pn**	**00 16 06.0**	**+0.2**
KDZ	**Kurdzhali**	**4.17**	**35**	*e*P	**Pn**	**00 16 08.0**	**-1.3**
VTS	**Vitosha**	**4.38**	**9**	*e*P	**Pn**	**00 16 13.0**	**+0.7**
MLR	**Muntele Rosu**	**7.72**	**20**	Pn	**Pn**	**00 17 02.2**	**+4.0**
	0.3nm,0.3s,baz=149,slow=9.3,SNR=6.0						
BRTR	**Keskin Array B**	**9.00**	**77**	Pn	**Pn**	**00 17 15.9**	**+0.2**
	0.2nm,0.3s,baz=268,slow=12,SNR=8.5						
ESDC	**Sonseca Array**	**20.40**	**282**	P	**P**	**00 19 43.8**	**+1.0**
	1.2nm,0.8s,baz=74,slow=11,SNR=9.2						
NOA	**NORSAR Array B**	**23.82**	**347**	P	**P**	**00 20 17.5**	**-1.4**
	0.5nm,0.7s,mb3.0,baz=152,slow=9.5,SNR=2.9						
TORD	**Torodi Ar. Bea**	**30.97**	**222**	P	**P**	**00 21 23.6**	**+0.3**
	0.5nm,0.7s,mb3.5,baz=36,slow=9.3,SNR=7.8						
MKAR	**Makanchi Array**	**44.10**	**59**	P	**P**	**00 23 13.3**	**-0.9**
	0.7nm,0.4s,mb3.8,baz=278,slow=7.4,SNR=7.1						

SKHL 14 00:23:09.9±1.9**,5274N×14292E,h10^{km},mb4.1**/4**,2C, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**0.81**	**1**⇑	*i*Pg	Pg	00 23 27.6	+2.1
OKH				AMB	AMB	00 23 27.9	
	1µm,0.2s						
OKH				*e*Sg	Sg	00 23 40.0	+3.9
OKH				A		00 23 40.7	
	1µm,0.7s						
NKL	**Nikolayevsk**	**1.42**	**288**⇑	*i*Pg	Pg	00 23 37.0	-0.1
NKL				AMB	AMB	00 23 38.0	
	50nm,0.4s						
NKL				AMB	AMB	00 23 38.0	
	120nm,0.4s						
NKL				AMB	AMB	00 23 38.0	
	70nm,0.4s						
NKL				*e*Sg	Sg	00 23 55.5	0.0
NKL				A		00 23 58.0	
	1µm,0.7s						
NKL				A		00 23 58.0	
	560nm,0.7s						
TYV	**Tymovskoe**	**1.89**	**185**	*e*Pg	Pg	00 23 48.0	+1.9
TYV				AMB	AMB	00 23 55.0	
	21nm,0.6s						
TYV				AMB	AMB	00 23 55.0	
	23nm,0.6s						
TYV				*e*Sg	Sg	00 24 13.0	+2.4
GRNR	**Gornyy**	**4.49**	**247**	*e*rx	rx	00 25 29.8	
EKMR	**Ekimchan**	**6.04**	**277**	*e*Pg	Pg	00 25 04.5	-1.1
EKMR				AMB	AMB	00 25 10.0	
	2.0nm,0.3s						
EKMR				AMB	AMB	00 25 10.0	
	3.0nm,0.3s						
EKMR				AMB	AMB	00 25 10.0	
	4.0nm,0.3s						
EKMR				*e*Sg	Sg	00 26 29.5	+5.6
EKMR				A		00 26 30.2	
	19nm,0.5s						
EKMR				A		00 26 30.2	
	5.0nm,0.5s						
EKMR				A		00 26 30.2	
	8.0nm,0.5s						
KLR	**Kul'dur**	**7.88**	**248**	*e*rx	rx	00 26 40.0	
KLR				*e*rx	rx	00 27 29.1	
BMKR	**Bomnak**	**8.58**	**289**	*e*rx	rx	00 27 38.8	
YASR	**Yasnyy**	**9.03**	**279**	*e*rx	rx	00 27 08.1	
YASR				*e*Sg	Sn	00 28 01.1	+59
YASR				A		00 28 08.3	
	7.0nm,0.8s						

*NEIC **14** 00:28:04.1,16.16N×98.69W,h17^{km},MD3.7(MEX),After MEX.*

MEX 14 00:28:04.1±1.1**,1616N×9869W,h17**^{km}±23^{km}**,MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**1.37**	**301**	*i* P	Pn	00 28 24.5	-4.0
ACX				*i* S	Sn	00 28 41.0	-5.3
UTMO	**Huajuapan**	**1.86**	**27**	*i* P	Pn	00 28 30.8	-4.4
UTMO				*i* S	Sn	00 28 53.6	-4.8
MEIG	**Mezcala**	**1.97**	**333**	*e*P	Pn	00 28 34.8	-1.9
MEIG				*i* S	Sn	00 28 56.6	-4.4
VHO	**Vista Hermosa**	**2.08**	**64**	*i* P	Pn	00 28 35.8	-2.5
VHO				*i* S	Sn	00 28 59.5	-4.3
OXX	**Oaxaca**	**2.09**	**64**	*i* P	Pn	00 28 36.0	-2.4
OXX				*i* S	Sn	00 28 59.0	-5.1
PLIG	**Platanillo**	**2.35**	**341**	*i* P	Pn	00 28 38.8	-3.2
PLIG				*i* S	Sn	00 29 07.3	-3.2
TPIG	**Tehuac#an**	**2.58**	**29**	*e*P	Pn	00 28 43.8	-1.3
TPIG				*i* S	Sn	00 29 10.7	-5.4

*CSEM **14** 01:01:30.6±0.7,38.61N×28.55W,h6^{km}±5^{km},ML1.1,Error ellipse: s-maj=2.4km s-min=1.9km az=152.0,After PDA*
*PDA **14** 01:01:30.6±0.7,38.61N×28.55W,h6^{km}±5^{km},MD2.8,ML1.1, Error ellipse: s-maj=2.4km s-min=1.9km az=152.0*

SVSA 14 01:01:30.6±0.7**,3861N×2855W,h6**^{km}±5^{km}**,MD2.8,ML1.1, Error ellipse: s-maj=2.4km s-min=1.9km az=152.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.12**	**256**	*e*P	Pg	01 01 32.9	-0.3
CALA				*e*S	Sg	01 01 35.2	+0.2
PICO	**Pico**	**0.15**	**139**	*e*P	Pg	01 01 33.9	+0.3
PICO				*e*S	Sg	01 01 35.7	+0.1
PCND	**Candelaria**	**0.16**	**154**	*e*S	Sg	01 01 35.8	-0.2
PCND							
	17nm,0.2s						
ROSA	**Rosais**	**0.26**	**66**	*e*P	Pg	01 01 35.2	-0.6
ROSA				*e*S	Sg	01 01 39.1	-0.2
PMAN	**Manadas**	**0.36**	**86**	*e*S	Sg	01 01 41.8	-0.5
PMAN							
	11nm,0.1s						

*NAO **14** 01:25:44.6±1.4,71.27N×4.33W*
*CSEM **14** 01:25:44.5,71.57N×5.02W,h10^{km},mb4.6*
*ISCJB **14** 01:25:45.6±0.2,71.50N±0.03×4.61W±0.07,h10^{km},mb4.3/83, MS3.4/23,Error ellipse: s-maj=4.3km s-min=3.2km az=152.6*
*BJI **14** 01:25:45.1,71.60N×4.80W,h12^{km},mB4.8,mb4.6,Ms4.2, Msz3.8*
*MOS **14** 01:25:46.8±1.2,71.41N×4.10W,h10^{km},mb4.6/52,Error ellipse: s-maj=22.1km s-min=3.7km az=97.5*
*IDC **14** 01:25:46.1±0.8,71.44N×4.63W,h0^{km},mb4.1/11, mb1 4.2/13,mb1mx4.1/21,mbtmp4.1/13,ML3.7/2,MS3.4/16, Ms1 3.4/16,ms1mx3.2/28,Error ellipse: s-maj=19.2km s-min=17.6km az=25.0*
*BER **14** 01:25:48.8±2.3,71.52N×4.81W,h10^{km},MD2.3,ML3.0*
*NEIC **14** 01:25:48.1,71.65N×4.82W,h12^{km},mb4.4/58,After BER.*
*VIE **14** 01:25:50.0±2.9,71.35N×4.15W,h10^{km},mb4.1/5,Ms4.0/5, Error ellipse: s-maj=46.8km s-min=37.3km az=139.0 844 km NE of Akureyri*
*SZGRF **14** 01:25:55.4,71.15N×2.77W,h33^{km},mb4.2,Jan Mayen Island region*

ISC 14 01:25:47.0±0.2**,7144N**±003×**471W**±007**,h10**^{km}**, (h17**^{km}±3.7^{km}**:pP-P),n283,**σ0^{s}**97**/294**,mb4.3**/83**,MS3.4**/23**, 23C-2D,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.25**	**250**	*e*P	**Pn**	**01 26 10.1**	**-0.4**
JNE				*e*S	**Sb**	**01 26 25.7**	**-1.0**
JNE				AML	AML	01 26 29.3	
	comp=Z,462nm,0.5s						
JNE	**Jan Mayen East**	**1.25**	**250**	*e*P	**Pn**	**01 26 10.1**	**-0.4**
JNE				*e*S	**Sb**	**01 26 25.7**	**-1.0**
JNE	**Jan Mayen East**	**1.25**	**250**	*e*P	**Pn**	**01 26 10.1**	**-0.4**
	SNR=50						
JNE				*e*S	**Sb**	**01 26 25.7**	**-1.0**
	comp=Z,462nm,0.5s,SNR=50						
JNW	**Jan Mayen West**	**1.27**	**253**	*e*P	**Pn**	**01 26 10.7**	**-0.1**
JMIC	**Jan Mayen**	**1.31**	**252**	Pg	**Pg**	**01 26 11.1**	**-1.2**
JMIC				Lg		01 26 28.4	
JMIC	**Jan Mayen**	**1.31**	**252**	Pn	**Pn**	**01 26 10.3**	**-1.1**
	comp=Z,7.6nm,0.3s,baz=4.2,slow=4.3,SNR=14						
JMIC				Sn	**Sn**	**01 26 28.0**	**-1.0**
	comp=Z,22nm,0.3s,baz=175,slow=22,SNR=24						
JMIC	**Jan Mayen**	**1.31**	**252**	*e*P	**Pn**	**01 26 10.5**	**-1.0**
JMIC				*e*S	**Sb**	**01 26 28.4**	**-0.2**
JMIC	**Jan Mayen**	**1.31**	**252**	Pg	**Pg**	**01 26 11.1**	**-1.2**
JMI	**Jan Mayen**	**1.40**	**250**	*e*P	**Pn**	**01 26 12.1**	**-0.5**
JMI				*e*S	**Sn**	**01 26 30.8**	**-0.4**
JMI				AML	AML	01 26 33.8	
	comp=Z,242nm,0.5s						
JMI	**Jan Mayen**	**1.40**	**250**	*e*P	**Pn**	**01 26 12.1**	**-0.5**
JMI				*e*S	**Sn**	**01 26 30.8**	**-0.4**
JMI	**Jan Mayen**	**1.40**	**250**	*e*P	**Pn**	**01 26 12.1**	**-0.5**
	SNR=50						
JMI				*e*S	**Sn**	**01 26 30.8**	**-0.4**
	comp=Z,242nm,0.5s,SNR=50						
SCO	**Scoresbysund**	**5.72**	**269**	*i* P	**Pn**	**01 27 19.0**	**+7.0**
	comp=Z,2.7nm,0.5s						
SCO	**Scoresbysund**	**5.72**	**269**	*e*P	**Pn**	**01 27 19.0**	**+7.0**
SCO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SCO	**Scoresbysund**	**5.72**	**269**	*e*P	**Pn**	**01 27 19.0**	**+7.0**
	comp=Z,2.7nm,0.5s						
DAG	**Danmarks Havn**	**6.56**	**331**⇑	*i*P	**Pn**	**01 27 23.1**	**-0.5**
	comp=Z,10nm,0.4s						
DAG	**Danmarks Havn**	**6.56**	**331**⇑	*i*P	**Pn**	**01 27 23.1**	**-0.5**
DAG				pmax	pmax		
	comp=Z,10.0nm,0.4s						
LOF	**Lofoten**	**7.12**	**109**	*e*P	**Pn**	**01 27 30.2**	**-1.1**
TRO	**Tromso**	**8.07**	**92**	*e*P	**Pn**	**01 27 39.3**	**-5.1**
KBS	**Kingsbay**	**8.59**	**22**	Pn	**Pn**	**01 27 51.2**	**-0.2**
KBS	**Kingsbay**	**8.59**	**22**	*e*Pn	**Pn**	**01 27 50.8**	**-0.7**
KBS	**Kingsbay**	**8.59**	**22**	*e*P	**Pn**	**01 27 50.8**	**-0.6**
SPB4	**Spitsbergen Ar**	**8.66**	**29**	*e*Pn	**Pn**	**01 27 52.5**	**+0.1**
SPA0	**Spitsbergen Ar**	**8.66**	**30**	Pn	**Pn**	**01 27 52.2**	**-0.2**
	baz=228,slow=16						
MOR8	**Moi Rana**	**8.69**	**118**	*e*P	**Pn**	**01 27 50.6**	**-2.1**
NSS	**Namsos**	**9.31**	**130**	*e*P	**Pn**	**01 27 57.2**	**-4.0**
KTK1	**Kautokeino**	**9.72**	**91**	*e*P	**Pn**	**01 28 04.7**	**-2.3**
ARCES	**ARCESS Array B**	**10.22**	**86**	Pn	**Pn**	**01 28 09.9**	**-3.8**
	comp=Z,0.4nm,0.3s,baz=293,slow=11,SNR=12						
ARA0	**ARCESS Array S**	**10.22**	**86**	Pn	**Pn**	**01 28 09.9**	**-3.9**
	baz=291,slow=14						
SUMG	**Summit**	**10.41**	**292**	*e*Pn	**Pn**	**01 28 18.5**	**+2.2**
KEV	**Kevo**	**10.61**	**84**	*e*p	**Pn**	**01 28 14.4**	**-4.7**
	comp=Z,4.8nm,0.5s						
KEV	**Kevo**	**10.61**	**84**	*e*P	**Pn**	**01 28 14.4**	**-4.7**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DOMB	**Dombas**	**10.85**	**143**	*e*P	**Pn**	**01 28 20.5**	**-1.9**
HYA	**Hoyanger**	**11.18**	**152**	*e*P	**Pn**	**01 28 26.5**	**-0.4**
NB2	**NORSAR Subarra**	**12.19**	**141**	Pn	**Pn**	**01 28 37.8**	**-3.0**
	comp=Z,2.4nm,0.8s,baz=335,slow=14						
NB2	**NORSAR Subarra**	**12.19**	**141**	P	**Pn**	**01 28 37.8**	**-3.0**
	baz=323,slow=14						
NOA	**NORSAR Array B**	**12.19**	**141**	Pn	**Pn**	**01 28 38.0**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=329,slow=13,SNR=4.6						
NOA				LR	LR	01 33 14.7	
	comp=Z,186nm,19.7s,baz=335,slow=37						
NAO01	**NORSAR Array S**	**12.31**	**142**	P	**Pn**	**01 28 41.9**	**-0.4**
KONO	**Kongsberg**	**13.18**	**147**	*e*P	**Pn**	**01 28 53.9**	**-0.3**
HFS	**Hagfors**	**13.54**	**138**	Pn	**Pn**	**01 28 56.5**	**-2.6**
	comp=Z,1.1nm,0.3s,baz=338,slow=11,SNR=39						
HFS				LR	LR	01 33 46.1	
	comp=Z,265nm,21.6s,baz=335,slow=36						
HFS	**Hagfors**	**13.54**	**138**	P	**Pn**	**01 28 55.6**	**-3.5**
	baz=332,slow=14						
HFS	**Hagfors**	**13.54**	**138**	P	**Pn**	**01 28 56.5**	**-2.6**
KAF	**Kangasniemi**	**15.18**	**112**	*e*p	**Pn**	**01 29 16.9**	**-4.5**
	comp=Z,9.5nm,0.7s						
KAF	**Kangasniemi**	**15.18**	**112**	*e*P	**Pn**	**01 29 16.9**	**-4.5**
KAF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FIA0	**FINESS Array S**	**15.64**	**114**	P	**Pn**	**01 29 23.6**	**-3.8**
FINES	**FINESS Array B**	**15.64**	**114**	Pn	**Pn**	**01 29 23.8**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=9.8						
FINES				LR	LR	01 34 45.2	
	comp=Z,198nm,19.4s,baz=143,slow=34						
JOF	**Joensuu**	**16.09**	**104**	*e*p	**Pn**	**01 29 27.5**	**-5.8**
	comp=Z,4.3nm,0.7s						
JOF	**Joensuu**	**16.09**	**104**	*e*P	**Pn**	**01 29 27.5**	**-5.8**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**16.18**	**177**	Pn	**Pn**	**01 29 33.9**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=354,slow=12,SNR=21						
ESK	**Eskdalemuir**	**16.20**	**177**	*e*P	**Pn**	**01 29 34.9**	**+0.2**
ESK				pmax	pmax		
	comp=Z,16nm,0.7s						
ESK	**Eskdalemuir**	**16.20**	**177**	*e*P	**Pn**	**01 29 34.9**	**+0.1**
	comp=Z,16nm,0.7s						
ESK	**Eskdalemuir**	**16.20**	**177**	*e*P	**Pn**	**01 29 34.9**	**+0.2**
	comp=Z,16nm,0.7s						
SFJD	**Kangerlussuaq**	**16.53**	**277**	LR	LR	01 35 13.0	
	comp=Z,131nm,18.6s,baz=164,slow=34						
BSEG	**Bad Segeberg**	**18.76**	**152**	*e*P	**Pn**	**01 30 07.0**	**+0.4**
	comp=Z,16nm,1.0s						
BSEG	**Bad Segeberg**	**18.76**	**152**	*e*P	**Pn**	**01 30 07.0**	**+0.4**
BSEG				pmax	pmax		
	comp=Z,16nm,1.0s						
NRDL	**Niedersach Rie**	**20.13**	**153**	*e*P	**P**	**01 30 21.7**	**+0.6**
	comp=Z,9.0nm,1.0s						
WTSB	**Winterswijk**	**20.22**	**159**	*e*P	**P**	**01 30 23.5**	**+1.4**
	comp=Z,14nm,0.7s						
KLMR	**Klimovskoe**	**20.22**	**99**	*e*P	**P**	**01 30 20.4**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,40nm,1.3s						
KLMR	**Klimovskoe**	**20.22**	**99**	*e*P	**P**	**01 30 20.4**	**-1.7**
	comp=Z,40nm,1.3s						
CLZ	**Clausthal**	**20.80**	**153**	*e*P	**P**	**01 30 29.2**	**+0.7**
	comp=Z,11nm,1.0s						
CLZ	**Clausthal**	**20.80**	**153**	*e*P	**P**	**01 30 29.2**	**+0.7**
CLZ				pmax	pmax		
	comp=Z,11nm,1.0s						
BEBN	**Eben Emael**	**21.25**	**162**	P	**P**	**01 30 34.0**	**+0.8**
SUW	**Suwalki**	**21.29**	**130**	*e*P	**P**	**01 30 32.5**	**-1.2**
SUW				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.0						
SUW	**Suwalki**	**21.29**	**130**	*e*P	**P**	**01 30 32.5**	**-1.2**
	comp=Z,80nm,0.9s,mb5.0						
SUW	**Suwalki**	**21.29**	**130**	*e*P	**P**	**01 30 32.5**	**-1.2**
	comp=Z,80nm,0.9s,mb5.0						
HGN	**Heimansgroeve**	**21.31**	**161**	*e*P	**P**	**01 30 34.1**	**+0.2**
	comp=Z,18nm,1.0s,mb4.4						
HGN				*e*S	**S**	**01 34 35.7**	**+5.2**
MEM	**Membach**	**21.47**	**161**	P	**P**	**01 30 35.5**	**-0.1**
MEM	**Membach**	**21.47**	**161**	P	**P**	**01 30 35.4**	**-0.2**
BCLA	**Clavier**	**21.59**	**162**	P	**P**	**01 30 37.5**	**+0.7**
CLL	**Collm**	**21.73**	**149**	*e*P	**P**	**01 30 38.3**	**-0.1**
	comp=Z,15nm,1.0s,mb4.4						
CLL	**Collm**	**21.73**	**149**	⇑P	**P**	**01 30 38.4**	**0.0**
	comp=Z,logA/T=1.2,mb4.4						
CLL				*i* *PP		01 30 41.4	
CLL				*i* *SP	sP	01 30 42.7	+0.1
CLL				*i*		01 30 54.0	
CLL				*e*S	**S**	**01 34 40.0**	**+1.2**
CLL	**Collm**	**21.73**	**149**⇑	*i*P	**P**	**01 30 38.4**	**0.0**
	comp=Z,15nm,1.0s,mb4.4						
CLL				*i* pP		01 30 41.4	
CLL				*i* sP	sP	01 30 42.7	+0.1
CLL				*i* x	x	01 30 54.0	
CLL				*e*S	**S**	**01 34 40.0**	**+1.2**
CLL	**Collm**	**21.73**	**149**⇑	*i*P	**P**	**01 30 38.4**	**0.0**
CLL				*i*		01 30 42.7	
CLL				*e*S	**S**	**01 34 40.0**	**+1.2**
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
CLL	**Collm**	**21.73**	**149**⇑	*i*P	**P**	**01 30 38.4**	**0.0**
	comp=Z,15nm,1.0s,mb4.4						
CLL				*i*		01 30 41.4	
CLL				*i*		01 30 42.7	
CLL				*e*S	**S**	**01 34 40.0**	**+1.2**
DOU	**Dourbes**	**21.84**	**164**	P	**P**	**01 30 42.6**	**+3.0**
DOU	**Dourbes**	**21.84**	**164**	P	**P**	**01 30 42.5**	**+2.9**
BAIF	**Baives**	**21.84**	**164**	*e*P	**P**	**01 30 38.9**	**-0.7**
	comp=Z,20nm,0.8s,mb4.3						
BAIF	**Baives**	**21.84**	**164**	*e*P	**P**	**01 30 38.9**	**-0.7**
BAIF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
BAIF	**Baives**	**21.84**	**164**	*e*P	**P**	**01 30 38.9**	**-0.7**
	comp=Z,9.9nm,0.8s,mb4.3						
GIVF	**Givet**	**21.85**	**163**	*e*P	**P**	**01 30 39.7**	**-0.1**
	comp=Z,39nm,1.0s,mb4.5						
GIVF	**Givet**	**21.85**	**163**	*e*P	**P**	**01 30 39.7**	**-0.1**
GIVF				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
GIVF	**Givet**	**21.85**	**163**	*e*P	**P**	**01 30 39.7**	**-0.1**
	comp=Z,20nm,1.0s,mb4.5						
TNS	**Taunus Mts**	**22.13**	**157**	*e*P	**P**	**01 30 42.4**	**-0.3**
	comp=Z,12nm,1.3s,mb4.2						
TNS	**Taunus Mts**	**22.13**	**157**	*e*P	**P**	**01 30 42.4**	**-0.3**
TNS				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.2						
MOX	**Moxa**	**22.15**	**152**	*e*P	**P**	**01 30 42.8**	**-0.2**
	comp=Z,11nm,1.1s,mb4.2						
MOX	**Moxa**	**22.15**	**152**	*e*P	**P**	**01 30 43.1**	**+0.1**
	comp=Z,15nm,1.4s,mb4.2						
MOX	**Moxa**	**22.15**	**152**	*e*P	**P**	**01 30 43.1**	**+0.1**
MOX				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.1						
FBE	**Freiberg**	**22.16**	**149**	*e*P	**P**	**01 30 42.2**	**-0.9**
	comp=Z,20nm,1.0s,mb4.5						
BRG	**Berggiesshubel**	**22.31**	**148**	*e*P	**P**	**01 30 44.2**	**-0.4**
	comp=Z,3.7nm,1.1s,mb3.7						
BRG				*e*		01 30 46.2	
	comp=Z,8.1nm,1.0s						
BRG	**Berggiesshubel**	**22.31**	**148**	*e*P	**P**	**01 30 44.2**	**-0.4**
BRG				*e*		01 30 46.2	
BRG				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.5						
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
WERD	**Werda**	**22.45**	**151**	*e*P	**P**	**01 30 45.9**	**-0.2**
	comp=Z,12nm,0.9s,mb4.3						
TANN	**Tannenbergstha**	**22.51**	**150**	*e*P	**P**	**01 30 47.0**	**+0.3**
	comp=Z,8.0nm,0.9s,mb4.2						
GUNZ	**Gunzen**	**22.54**	**151**	*e*P	**P**	**01 30 47.3**	**+0.3**
	comp=Z,13nm,1.0s,mb4.3						
NKC	**Novy Kostel**	**22.68**	**151**	*e*P	**P**	**01 30 48.8**	**+0.2**
PVCC	**Panska Ves**	**22.75**	**147**	*e*P	**P**	**01 30 48.8**	**-0.5**
KSP	**Ksiaz**	**22.76**	**144**	*e*P	**P**	**01 30 49.2**	**-0.2**
FLN	**La Foliniere**	**22.84**	**173**	*e*P	**P**	**01 30 48.7**	**-1.5**
	comp=Z,156nm,1.5s,mb4.9						
FLN				*e*R			
	comp=Z,56nm,23.0s						
FLN	**La Foliniere**	**22.84**	**173**	*e*P	**P**	**01 30 48.7**	**-1.5**
FLN				pmax	pmax		
	comp=Z,78nm,1.5s,mb4.9						
FLN				MLR	MLR		
	comp=Z,60nm,23.0s,MS3.0						
FLN	**La Foliniere**	**22.84**	**173**	*e*P	**P**	**01 30 48.7**	**-1.5**
	comp=Z,78nm,1.5s,mb4.9						
FLN				LR	LR		
	comp=Z,60nm,23.0s,MS3.0						
MANZ	**Manzenberg**	**22.87**	**151**	*e*P	**P**	**01 30 49.8**	**-0.8**
	comp=Z,7.0nm,1.1s,mb4.0						
LDF	**La Druitiere**	**23.02**	**172**	*e*P	**P**	**01 30 50.6**	**-1.6**
	comp=Z,50nm,0.9s,mb4.6						
LDF	**La Druitiere**	**23.02**	**172**	*e*P	**P**	**01 30 50.6**	**-1.6**
LDF				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.6						
LDF	**La Druitiere**	**23.02**	**172**	*e*P	**P**	**01 30 50.6**	**-1.6**
	comp=Z,25nm,0.9s,mb4.7						
GRA1	**Grafenberg Arr**	**23.02**	**153**	*e*P	**P**	**01 30 52.6**	**+0.4**
	comp=Z,11nm,0.8s,mb4.3						
GRF	**Grafenberg Arr**	**23.02**	**153**	*e*P	**P**	**01 30 52.6**	**+0.4**
	comp=Z,11nm,0.8s,mb4.3						
GRF	**Grafenberg Arr**	**23.02**	**153**	*e*P	**P**	**01 30 52.6**	**+0.4**
GRF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.3						
GRF	**Grafenberg Arr**	**23.02**	**153**	*e*P	**P**	**01 30 52.6**	**+0.4**
GRF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.3						
UPC	**Upice**	**23.03**	**145**	*e*P	**P**	**01 30 52.3**	**+0.1**
ROTZ	**Rotzenmuhle**	**23.10**	**151**	*e*P	**P**	**01 30 53.2**	**+0.2**
	comp=Z,9.0nm,0.9s,mb4.2						
ROSF	**Rostrenen**	**23.19**	**178**	*e*P	**P**	**01 30 52.0**	**-1.9**
	comp=Z,81nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**23.19**	**178**	*e*P	**P**	**01 30 52.0**	**-1.9**
ROSF				pmax	pmax		
	comp=Z,40nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**23.19**	**178**	*e*P	**P**	**01 30 52.0**	**-1.9**
	comp=Z,40nm,1.2s,mb4.7						
GRR	**Gorron**	**23.20**	**173**	*e*P	**P**	**01 30 52.2**	**-1.8**
	comp=Z,55nm,1.0s,mb4.7						
GRR	**Gorron**	**23.20**	**173**	*e*P	**P**	**01 30 52.2**	**-1.8**
GRR				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.6						
GRR	**Gorron**	**23.20**	**173**	*e*P	**P**	**01 30 52.2**	**-1.8**
	comp=Z,27nm,1.0s,mb4.6						
DPC	**Dobruska-Polom**	**23.24**	**144**	*e*P	**P**	**01 30 54.0**	**-0.4**
DPC				AMS	AMS	01 41 30.0	
	comp=Z,100nm,12.1s						
PRU	**Pruhonice**	**23.26**	**147**	*e*P	**P**	**01 30 54.5**	**-0.2**
PRU				*e*pP		01 31 01.6	
PRU	**Pruhonice**	**23.26**	**147**	*e*P	**P**	**01 30 54.5**	**-0.2**
PRU				*e*		01 31 01.6	
SGMF	**Saint Gilles**	**23.28**	**176**	*e*P	**P**	**01 30 53.8**	**-1.1**
	comp=Z,48nm,1.1s,mb4.5						
SGMF	**Saint Gilles**	**23.28**	**176**	*e*P	**P**	**01 30 53.8**	**-1.1**
SGMF				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.5						
SGMF	**Saint Gilles**	**23.28**	**176**	*e*P	**P**	**01 30 53.8**	**-1.1**
	comp=Z,24nm,1.1s,mb4.5						
MEZF	**Maizieres J'vi**	**23.46**	**164**	*e*P	**P**	**01 30 55.9**	**-0.9**
	comp=Z,24nm,1.1s,mb4.3						
MEZF	**Maizieres J'vi**	**23.46**	**164**	*e*P	**P**	**01 30 55.9**	**-0.9**
	comp=Z,24nm,1.0s,mb4.6						
QUIF	**Quistinic**	**23.61**	**177**	*e*P	**P**	**01 30 57.0**	**-1.3**
	comp=Z,10nm,0.7s,mb4.1						
QUIF	**Quistinic**	**23.61**	**177**	*e*P	**P**	**01 30 57.0**	**-1.3**
QUIF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
QUIF	**Quistinic**	**23.61**	**177**	*e*P	**P**	**01 30 57.0**	**-1.3**
	comp=Z,5.3nm,0.7s,mb4.1						
STU	**Stuttgart**	**23.65**	**157**	*e*P	**P**	**01 30 59.8**	**+1.2**
	comp=Z,12nm,1.0s,mb4.3						
STU	**Stuttgart**	**23.65**	**157**	P	**P**	**01 30 59.5**	**+0.9**
CDF	**Champ du Feu**	**23.77**	**160**	*e*P	**P**	**01 30 59.7**	**-0.1**
	comp=Z,10nm,0.9s,mb4.0						
CDF	**Champ du Feu**	**23.77**	**160**	*e*P	**P**	**01 30 59.7**	**-0.1**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
CDF	**Champ du Feu**	**23.77**	**160**	*e*P	**P**	**01 30 59.7**	**-0.1**
	comp=Z,5.1nm,0.9s,mb4.0						
WET	**Wettzell**	**23.81**	**151**	*e*P	**P**	**01 31 01.0**	**+0.9**
	comp=Z,10.0nm,1.3s,mb4.1						
WET	**Wettzell**	**23.81**	**151**	*e*P	**P**	**01 31 01.0**	**+0.9**
WET				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.1						
KHC	**Kasperske Hory**	**23.93**	**149**	*e*P	**P**	**01 31 02.1**	**+0.9**
KHC				AMS	AMS	01 41 50.0	
	comp=Z,100nm,9.8s						
KHC	**Kasperske Hory**	**23.93**	**149**⇑	*e*P	**P**	**01 31 01.7**	**+0.5**
KHC	**Kasperske Hory**	**23.93**	**149**	*e*P	**P**	**01 31 02.1**	**+0.9**
ECH	**Echery**	**23.95**	**160**	*e*P	**P**	**01 31 02.5**	**+1.1**
BFO	**Black Forest**	**23.98**	**158**	*e*P	**P**	**01 31 02.2**	**+0.6**
	comp=Z,15nm,1.1s,mb4.3						
BFO	**Black Forest**	**23.98**	**158**	*e*P	**P**	**01 31 02.2**	**+0.6**
BFO				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
BFO	**Black Forest**	**23.98**	**158**	*e*P	**P**	**01 31 03.0**	**+1.3**
OBN	**Obninsk**	**23.99**	**111**⇓	*e*P	**P**	**01 31 00.4**	**-1.3**
OBN				*e*		01 31 27.2	
OBN				*e*S	**S**	**01 35 19.3**	**+0.8**
OBN				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.3						
OBN				MLR	MLR		
	comp=Z,200nm,15.0s,MS3.7						
OBN	**Obninsk**	**23.99**	**111**	*e*P	**P**	**01 31 00.2**	**-1.5**
	comp=Z,37nm,1.4s,mb4.6						
MORC	**Moravsky Berou**	**24.02**	**143**	*e*P	**P**	**01 31 01.3**	**-0.7**
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
MORC	**Moravsky Berou**	**24.02**	**143**	*e*P	**P**	**01 31 01.3**	**-0.7**
	comp=Z,3.6nm,0.8s,mb3.9						
MORC	**Moravsky Berou**	**24.02**	**143**	*e*P	**P**	**01 31 01.7**	**-0.3**
OJC	**Ojcow**	**24.05**	**139**	*e*P	**P**	**01 31 01.5**	**-0.8**
HAU	**Haudompre**	**24.08**	**162**	*e*P	**P**	**01 31 02.2**	**-0.3**
	comp=Z,15nm,1.0s,mb4.1						
HAU				*e*R			
	comp=Z,74nm,22.0s						
HAU	**Haudompre**	**24.08**	**162**	*e*P	**P**	**01 31 02.2**	**-0.3**
HAU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						

HAU MLR MLR
comp=Z,70nm,22.0s,MS3.1
HAU Haudompre 24.08 162 *e*P **P 01 31 02.2 -0.3**
comp=Z,7.7nm,1.0s,mb4.1
HAU LR LR
comp=Z,70nm,22.0s,MS3.1
OKC Ostrava-Krasne 24.08 142 *e*P **P 01 31 02.2 -0.3**
OKC AMS AMS 01 41 40.0
comp=Z,200nm,12.5s
TREC Trest 24.10 146 *e*P **P 01 31 03.2 +0.5**
TREC AMS AMS 01 42 00.0
comp=Z,100nm,9.2s
GEC2 GERESS Array S 24.23 149 *e*P **P 01 31 04.2 +0.3**
comp=Z,11nm,1.3s,mb4.1
GEC2 GERESS Array S 24.23 149 *e*P **P 01 31 04.2 +0.3**
GEC2 pmax pmax
comp=Z,11nm,1.3s,mb4.1
GERES GERESS Array B 24.23 149 P **P 01 31 05.1 +1.2**
comp=Z,3.2nm,0.8s,mb3.8,baz=359,slow=9.3,SNR=18
GERES LR LR 01 39 58.5
comp=Z,52nm,20.6s,MS3.0,baz=291,slow=35
VRAC Vranov 24.29 145 P **P 01 31 05.2 +0.7**
comp=Z,5.9nm,0.7s,mb4.1,baz=337,slow=9.9,SNR=14
VRAC LR LR 01 41 23.8
comp=Z,52nm,18.6s,MS3.0,baz=337,slow=39
HINF Hinteralfeld 24.32 161 *e*P **P 01 31 04.4 -0.3**
comp=Z,7.5nm,0.9s,mb3.8
HINF Hinteralfeld 24.32 161 *e*P **P 01 31 04.4 -0.3**
HINF pmax pmax
comp=Z,4.0nm,0.9s,mb3.9
HINF Hinteralfeld 24.32 161 *e*P **P 01 31 04.4 -0.3**
comp=Z,3.8nm,0.9s,mb3.8
HYF Humbligny 24.50 168 *e*P **P 01 31 05.9 -0.5**
LOR Lormes 24.59 166 *e*P **P 01 31 06.7 -0.5**
comp=Z,23nm,0.7s,mb4.5
LOR *e*R
comp=Z,44nm,19.0s
LOR Lormes 24.59 166 *e*P **P 01 31 06.7 -0.5**
LOR pmax pmax
comp=Z,11nm,0.7s,mb4.5
LOR MLR MLR
comp=Z,40nm,19.0s,MS2.9
LOR Lormes 24.59 166 *e*P **P 01 31 06.7 -0.5**
comp=Z,11nm,0.7s,mb4.5
LOR LR LR
comp=Z,40nm,19.0s,MS2.9
SSF Saint Saulge 24.76 167 *e*P **P 01 31 08.3 -0.5**
comp=Z,22nm,0.7s,mb4.5
SSF Saint Saulge 24.76 167 *e*P **P 01 31 08.3 -0.5**
SSF pmax pmax
comp=Z,11nm,0.7s,mb4.5
SSF Saint Saulge 24.76 167 *e*P **P 01 31 08.3 -0.5**
comp=Z,11nm,0.7s,mb4.5
NIE Niedzica 24.92 139 *e*P **P 01 31 10.7 +0.5**
LCHF La Chataignera 24.92 173 *e*P **P 01 31 12.0 +1.8**
MFF Saint Martin d 25.01 173 *e*P **P 01 31 11.7 +0.7**
comp=Z,23nm,0.6s,mb4.5
MFF Saint Martin d 25.01 173 *e*P **P 01 31 11.7 +0.7**
MFF pmax pmax
comp=Z,11nm,0.6s,mb4.6
MFF Saint Martin d 25.01 173 *e*P **P 01 31 11.7 +0.7**
comp=Z,11nm,0.6s,mb4.6
AVF Avril sur Loir 25.02 167 *e*P **P 01 31 10.6 -0.6**
comp=Z,28nm,0.9s,mb4.5
AVF Avril sur Loir 25.02 167 *e*P **P 01 31 10.6 -0.6**
AVF pmax pmax
comp=Z,14nm,0.9s,mb4.5
AVF Avril sur Loir 25.02 167 *e*P **P 01 31 10.6 -0.6**
comp=Z,14nm,0.9s,mb4.5
STHS Stebnicka Huta 25.12 138 *e*P **P 01 31 13.4 +1.4**
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
STHS Stebnicka Huta 25.12 138 *e*P **P 01 31 13.4 +1.4**
comp=Z,4.9nm,0.9s,mb4.0
DAVA Damuels 25.19 156⇑ *i*P **P 01 31 13.2 +0.5**
comp=Z,19nm,1.2s,mb4.5
SMF Signal de Mont 25.20 166 *e*P **P 01 31 13.3 +0.5**
comp=Z,43nm,1.0s,mb4.7
SMF Signal de Mont 25.20 166 *e*P **P 01 31 13.3 +0.5**
SMF pmax pmax
comp=Z,21nm,1.0s,mb4.6
SMF Signal de Mont 25.20 166 *e*P **P 01 31 13.3 +0.5**
comp=Z,22nm,1.0s,mb4.6
BGF Bois d'Agland 25.22 168 *e*P **P 01 31 12.4 -0.5**
comp=Z,49nm,0.8s,mb4.8
BGF Bois d'Agland 25.22 168 *e*P **P 01 31 12.4 -0.5**
BGF pmax pmax
comp=Z,24nm,0.8s,mb4.8
BGF Bois d'Agland 25.22 168 *e*P **P 01 31 12.4 -0.5**
comp=Z,24nm,0.8s,mb4.8
KWP Kalwaria 25.24 135 *e*P **P 01 31 13.0 -0.1**
KWP pmax pmax
comp=Z,22nm,1.3s,mb4.5
KWP Kalwaria 25.24 135 *e*P **P 01 31 13.0 -0.1**
comp=Z,22nm,1.3s,mb4.5
MOTA Moosalm 25.30 154⇑ *i*P **P 01 31 15.0 +1.3**
comp=Z,9.8nm,1.1s,mb4.2
MOTA Moosalm 25.30 154⇑ *i*P **P 01 31 15.0 +1.3**
MOTA pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
WATA Walderalm 25.38 154⇑ *i*P **P 01 31 15.7 +1.4**
comp=Z,12nm,1.2s,mb4.3
WATA Walderalm 25.38 154⇑ *i*P **P 01 31 15.7 +1.3**
WATA pmax pmax
comp=Z,12nm,1.2s,mb4.3
CABF La Chapelle 25.43 162 *e*P **P 01 31 14.6 -0.3**
comp=Z,11nm,0.7s,mb4.2
CABF La Chapelle 25.43 162 *e*P **P 01 31 14.6 -0.3**
CABF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
CABF La Chapelle 25.43 162 *e*P **P 01 31 14.6 -0.3**
comp=Z,5.4nm,0.7s,mb4.2
SQTA Sankt Quirin 25.44 154⇑ *i*P **P 01 31 16.5 +1.6**
comp=Z,13nm,1.2s,mb4.3
SQTA Sankt Quirin 25.44 154⇑ *i*P **P 01 31 16.5 +1.6**
SQTA pmax pmax
comp=Z,13nm,1.2s,mb4.3
TCF Toulx Ste Croi 25.45 169 *e*P **P 01 31 14.4 -0.6**
comp=Z,51nm,1.0s,mb4.7
TCF Toulx Ste Croi 25.45 169 *e*P **P 01 31 14.4 -0.6**
TCF pmax pmax
comp=Z,26nm,1.0s,mb4.7
TCF Toulx Ste Croi 25.45 169 *e*P **P 01 31 14.4 -0.6**
comp=Z,26nm,1.0s,mb4.7
ZST Bratislava 25.45 145 *e*P **P 01 31 15.3 +0.3**
ZST pmax pmax
comp=Z,6.0nm,1.2s,mb4.0
ZST Bratislava 25.45 145 *e*P **P 01 31 15.3 +0.3**
comp=Z,6.3nm,1.2s,mb4.0
WTTA Wattenberg 25.45 154⇑ *i*P **P 01 31 16.5 +1.4**
comp=Z,19nm,1.0s,mb4.6
WTTA Wattenberg 25.45 154⇑ *i*P **P 01 31 16.5 +1.4**
WTTA pmax pmax
comp=Z,19nm,1.0s,mb4.6
CONA Conrad Observa 25.48 147⇑ *i*P **P 01 31 16.1 +0.8**
comp=Z,22nm,0.9s,mb4.7
VYHS Vyhne 25.50 142 *i* P **P 01 31 15.7 +0.2**
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.0
VYHS Vyhne 25.50 142 *i* P **P 01 31 15.7 +0.2**
comp=Z,6.2nm,1.2s,mb4.0
CRVS Cervenica-Dubn 25.65 138 *e*P **P 01 31 19.1 +2.2**
AGO Saint Agoulin 25.74 167 *e*P **P 01 31 18.8 +1.1**
KOLS Kolonicke sedl 25.80 137 *e*P **P 01 31 18.7 +0.5**
AKASG Malin Array Be 25.83 125 P **P 01 31 16.9 -1.7**
comp=Z,6.8nm,0.7s,mb4.3,baz=333,slow=9.3,SNR=21
AKBB Malin Array Si 25.83 125 *e*P **P 01 31 16.9 -1.6**
KECS Kecovo 25.84 139 *i* P **P 01 31 18.4 -0.2**
KECS pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
KECS Kecovo 25.84 139 *i* P **P 01 31 18.4 -0.2**
comp=Z,3.6nm,0.8s,mb4.0
PLDF La Plantade 25.86 167 *e*P **P 01 31 19.5 +0.8**
KBA Koelnbreinsper 25.89 151⇑ *i*P **P 01 31 19.5 +0.5**
comp=Z,9.1nm,0.9s,mb4.3
KBA Koelnbreinsper 25.89 151⇑ *i*P **P 01 31 19.5 +0.5**
KBA pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
PYM Petit Puy Mans 26.03 168 *e*P **P 01 31 21.5 +1.2**
PSZ Piszkesteto 26.26 141 *e*P **P 01 31 23.1 +0.7**
PSZ pmax pmax
comp=Z,9.0nm,1.1s,mb4.2
PSZ Piszkesteto 26.26 141 *e*P **P 01 31 23.1 +0.7**
comp=Z,8.9nm,1.1s,mb4.2
COLF Collangettes 26.31 167 *e*P **P 01 31 24.0 +1.1**
RJF Les Rejaudoux 26.38 170 *e*P **P 01 31 23.1 -0.4**
comp=Z,51nm,0.8s,mb4.8
RJF *e*R
comp=Z,57nm,19.8s
RJF Les Rejaudoux 26.38 170 *e*P **P 01 31 23.1 -0.4**
RJF pmax pmax
comp=Z,25nm,0.8s,mb4.8
RJF MLR MLR
comp=Z,60nm,19.8s,MS3.1
RJF Les Rejaudoux 26.38 170 *e*P **P 01 31 23.1 -0.4**
comp=Z,25nm,0.8s,mb4.8
RJF LR LR
comp=Z,60nm,19.8s,MS3.1
LBL Lubilhac 26.57 167 *e*P **P 01 31 26.4 +1.3**
LPL La Plagne 26.58 162 *e*P **P 01 31 25.6 +0.3**
comp=Z,45nm,1.6s,mb4.5
LPL La Plagne 26.58 162 *e*P **P 01 31 25.6 +0.3**
LPL pmax pmax
comp=Z,23nm,1.6s,mb4.5
LPL La Plagne 26.58 162 *e*P **P 01 31 25.6 +0.3**
comp=Z,22nm,1.6s,mb4.5
LPG La Plagne 26.60 162 *e*P **P 01 31 26.0 +0.5**
comp=Z,19nm,1.1s,mb4.2
LPG La Plagne 26.60 162 *e*P **P 01 31 26.0 +0.5**
LPG pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
LPG La Plagne 26.60 162 *e*P **P 01 31 26.0 +0.5**
comp=Z,9.7nm,1.1s,mb4.2
LFF La Frestale 26.71 171 *e*P **P 01 31 26.3 -0.1**
comp=Z,13nm,0.6s,mb4.3
LFF La Frestale 26.71 171 *e*P **P 01 31 26.3 -0.1**
LFF pmax pmax
comp=Z,7.0nm,0.6s,mb4.4
LFF La Frestale 26.71 171 *e*P **P 01 31 26.3 -0.1**
comp=Z,6.5nm,0.6s,mb4.3
CAF Calviac 26.79 169 *e*P **P 01 31 26.9 -0.3**
comp=Z,29nm,1.0s,mb4.5
CAF Calviac 26.79 169 *e*P **P 01 31 26.9 -0.3**
CAF pmax pmax
comp=Z,15nm,1.0s,mb4.5
CAF Calviac 26.79 169 *e*P **P 01 31 26.9 -0.3**
comp=Z,15nm,1.0s,mb4.5
VIVF Saint-Julien-l 27.05 165 *e*P **P 01 31 29.5 0.0**
comp=Z,27nm,1.3s,mb4.3
VIVF Saint-Julien-l 27.05 165 *e*P **P 01 31 29.5 0.0**
VIVF pmax pmax
comp=Z,13nm,1.3s,mb4.3
VIVF Saint-Julien-l 27.05 165 *e*P **P 01 31 29.5 0.0**
comp=Z,13nm,1.3s,mb4.3
ORIF Oris-en-Rattie 27.09 163 *e*P **P 01 31 29.8 -0.1**
ORIF *e*R
comp=Z,66nm,22.8s
MBDF Montbardon 27.36 162 *e*P **P 01 31 33.1 +0.8**
comp=Z,11nm,0.8s,mb4.2
MBDF Montbardon 27.36 162 *e*P **P 01 31 33.1 +0.8**
MBDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
MBDF Montbardon 27.36 162 *e*P **P 01 31 33.1 +0.8**
comp=Z,5.4nm,0.8s,mb4.1
LASF Ste Croix 27.76 167 *e*P **P 01 31 36.5 +0.6**
comp=Z,12nm,1.0s,mb4.2
MTLF Montolieu 28.38 169 *e*P **P 01 31 41.6 +0.2**
comp=Z,14nm,1.1s,mb4.2
MTLF Montolieu 28.38 169 *e*P **P 01 31 41.6 +0.2**
MTLF pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
MTLF Montolieu 28.38 169 *e*P **P 01 31 41.6 +0.2**
comp=Z,7.3nm,1.1s,mb4.2
SJPF Ste Jean 28.45 175 *e*P **P 01 31 41.7 -0.4**
EPF Esparros 28.59 172 *e*P **P 01 31 42.9 -0.4**
comp=Z,24nm,0.8s,mb4.7
EPF Esparros 28.59 172 *e*P **P 01 31 42.9 -0.4**
EPF pmax pmax
comp=Z,12nm,0.8s,mb4.7
EPF Esparros 28.59 172 *e*P **P 01 31 42.9 -0.4**
comp=Z,12nm,0.8s,mb4.7
ARU Arti 29.81 87 *e*P **P 01 31 52.3 -1.8**
ARU *e*PPP 01 32 50.3
ARU *e* 01 34 57.1
ARU *e*S **S 01 36 46.5 -4.1**
ARU MLR MLR
comp=N,40nm,18.0s,MS3.2
ARU MLR MLR
comp=E,40nm,18.0s,MS3.2
ARU MLR MLR
comp=Z,90nm,18.0s,MS3.5
MLR Muntele Rosu 29.88 134 LR LR 01 44 19.1
comp=Z,232nm,18.9s,MS3.8,baz=109,slow=37
SVE Sverdlovsk 30.14 84 *e*P **P 01 31 56.7 -0.4**
SCHQ Schefferville 30.76 271 LR LR 01 43 10.8
comp=Z,102nm,21.4s,MS3.5,baz=54,slow=34
ESDC Sonseca Array 31.84 179 P **P 01 32 12.8 +0.7**
comp=Z,1.5nm,0.6s,mb4.0,baz=3.0,slow=8.4,SNR=16
ESLA Sonseca Array 31.84 179 *e*P **P 01 32 13.5 +1.5**
comp=Z,0.5nm,0.7s,mb3.5
GOF Gofitskoye 34.83 113 *e*P **P 01 32 37.6 -0.5**
KIV Kislovodsk 35.73 114‖ *e*P **P 01 32 46.8 +1.0**
KIV *e* 01 34 05.6
KIV *e*S **S 01 38 17.6 -5.1**
KIV *e*SS SS 01 41 01.3 +3.1
KIV pmax pmax
comp=Z,11nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,100nm,15.0s,MS3.7
KEST Kesra 36.53 161 P **P 01 32 53.7 +1.0**
comp=Z,1.6nm,0.8s,mb3.9,baz=358,slow=11,SNR=5.2
KEST LR LR 01 48 04.9
comp=Z,16nm,18.6s,MS2.8,baz=213,slow=37
BR131 Keskin Array S 37.18 128 *e*P **P 01 32 59.3 +1.0**
comp=Z,1.5nm,0.7s,mb3.9
BRTR Keskin Array B 37.18 128 P **P 01 32 59.0 +0.8**
comp=Z,2.1nm,0.8s,mb4.0,baz=342,slow=6.3,SNR=14
BRTR LR LR 01 49 56.8
comp=Z,44nm,18.9s,MS3.3,baz=213,slow=39
YKA Yellowknife Ar 37.96 315 LR LR 01 48 39.9
comp=Z,42nm,18.6s,MS3.3,baz=90,slow=36
MALT Malatya 39.76 123 *e*P **P 01 33 21.5 +1.5**
MALT pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
MALT Malatya 39.76 123 *e*P **P 01 33 21.5 +1.6**
comp=Z,4.2nm,1.1s,mb4.1
GNI Garni 39.83 115‖ *e*P **P 01 33 21.8 +1.3**
GNI pmax pmax
comp=Z,12nm,1.5s
GNI MLR MLR
comp=Z,100nm,19.0s
BILL Bilibino 40.64 5⇓ *e*P **P 01 33 37.3 +10**
BILL *e* 01 35 25.6
BILL pmax pmax
comp=Z,9.0nm,1.6s,mb4.2
BILL MLR MLR
comp=Z,100nm,21.0s,MS3.6
KURK Kurchatov 40.98 74⇑ *i*P **P 01 33 29.6 -0.5**
ULM Lac du Bonnet 43.77 292 LR LR 01 51 36.3
comp=Z,46nm,18.7s,MS3.4,baz=29,slow=35
MKAR Makanchi Array 45.59 74 P **P 01 34 06.6 -0.6**
comp=Z,1.1nm,0.8s,mb3.8,baz=321,slow=7.0,SNR=6.6
AAK Ala-Archa 46.88 83 *e*P **P 01 34 17.1 -0.3**
AAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
AAK MLR MLR
comp=Z,100nm,16.0s,MS3.9
WMQ Urumqi 49.92 71 *e*P **P 01 34 41.0 +0.2**
WMQ XP sP 01 34 48.0 +2.8
WMQ PP PP 01 36 37.0 +1.4
WMQ S **S 01 41 49.0 -2.0**
WMQ SCS ScS 01 44 29.0 -3.4
WMQ SS SS 01 45 18.0 -5.7
WMQ AMB AMB
comp=Z,18nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,105nm,5.0s
WMQ LR LR
comp=N,38nm,14.0s,MS3.7
WMQ LR LR
comp=E,45nm,14.0s,MS3.7
WMQ LR LR
comp=Z,35nm,14.0s,MS3.5
SONM Songino Array 51.51 53 LR LR 01 59 31.4
comp=Z,36nm,18.4s,MS3.4,baz=188,slow=39
ULN Ulaanbaatar 51.65 53‖ *e*P **P 01 34 54.8 +0.9**
PDAR Pinedale Array 54.51 299 P **P 01 35 16.7 +1.7**
comp=Z,0.3nm,0.7s,mb3.5,baz=20,slow=4.7,SNR=3.5
PDAR LR LR 01 58 26.6
comp=Z,66nm,18.9s,MS3.7,baz=191,slow=36
HABR Khabarovsk 57.02 31 *e*P **P 01 35 33.7 +0.7**
HABR *e*S **S 01 43 27.6 +0.2**
TOA0 Torodi Ar. Sit 58.39 173 *e*P **P 01 35 43.1 +0.4**
TORD Torodi Ar. Bea 58.39 173 P **P 01 35 42.9 +0.3**
comp=Z,4.8nm,0.6s,mb4.7,baz=350,slow=7.5,SNR=92
TORD LR LR 01 59 19.9
comp=Z,18nm,18.5s,MS3.2,baz=270,slow=34
HHC Hu-ho-hao-te 59.36 52 *e*P **P 01 35 49.0 -0.4**
HHC AP pP 01 35 53.8 +1.2
HHC XP sP 01 35 56.1 +2.3
HHC PCP PcP 01 36 37.8 +0.5
HHC PP PP 01 38 01.1 +0.7
HHC SCP ScP 01 40 36.5 -1.6
HHC PCS PcS 01 40 38.6 -0.7
HHC S **S 01 43 53.0 -5.0**
HHC SCS ScS 01 45 34.8 -4.8
HHC SS SS 01 47 48.8 -3.9
HHC AMB AMB
comp=Z,9.0nm,1.3s,mb4.6
HHC AMB AMB
comp=Z,70nm,6.2s
HHC LR LR
comp=N,82nm,19.9s,MS4.0
HHC LR LR
comp=E,80nm,18.0s,MS4.0
HHC LR LR
comp=Z,66nm,19.9s,MS3.8
CN2 Changchun 59.74 40 *e*P **P 01 35 52.3 +0.3**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
MDJ Mudanjiang 59.78 36 P **P 01 35 50.5 -1.8**
MDJ AP pP 01 35 53.6 -1.9
MDJ AMB AMB
comp=Z,6.0nm,0.7s,mb4.7
MDJ AMB AMB
comp=Z,26nm,4.2s
LZH Lanzhou 61.77 61 *e*P **P 01 36 07.1 +1.3**
LZH AP pP 01 36 14.5 +5.4
LZH XP sP 01 36 17.1 +6.8
LZH AMB AMB
comp=Z,13nm,1.0s,mb5.0
DBIC Dimbokro 64.70 180 P **P 01 36 25.2 0.0**
comp=Z,4.6nm,0.7s,mb4.6,baz=351,slow=6.7,SNR=5.8
MJAR Matsushiro Arr 69.16 31 P **P 01 36 54.3 +0.7**
comp=Z,0.8nm,0.5s,mb3.9,baz=336,slow=6.6,SNR=7.2
NJ2 Nanjing 69.52 49 *e*P **P 01 36 58.6 +2.8**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
ROSC El Rosal 79.00 252 LR LR 02 10 41.7
comp=Z,26nm,18.9s,MS3.6,baz=19,slow=34
ASAR Alice Springs 126.76 49 PKP PKPdf 01 44 50.1 -0.7
comp=Z,0.6nm,0.5s,baz=21,slow=2.3,SNR=6.0

WEL 14 01:42:34.7±0.1, 3857S×17748E, h64km±2km, ML3.5/6, 2C-5D, Error ellipse: s-maj=1.6km s-min=1.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.24**	**8**	⇓	PN	Pn	01 42 44.6	-0.3
MWZ					SN	Sn	01 42 52.2	-0.1
URZ	**Urewera**	**0.43**	**317**	⇓	PN	Pn	01 42 45.8	-0.6
URZ					SN	Sn	01 42 54.0	-0.9
KNZ	**Kokohu**	**0.47**	**162**	⇑	PN	Pn	01 42 47.2	+0.4
PUZ	**Puketiti**	**0.79**	**51**	⇓	PN	Pn	01 42 50.1	-0.2
PUZ					SN	Sn	01 43 02.0	+0.2
BKZ	**Black Stump Fm**	**0.97**	**232**	⇓	PN	Pn	01 42 53.0	+0.3
BKZ					SN	Sn	01 43 06.6	+0.7
MXZ	**Matakaoa Point**	**1.20**	**33**	⇓	PN	Pn	01 42 55.4	-0.1
KRVZ	**Karewarewa**	**1.53**	**250**		PN	Pn	01 42 59.9	-0.1
PXZ	**Pawanui**	**1.53**	**198**		PN	Pn	01 42 58.9	-1.1
PXZ					SN	Sn	01 43 18.7	-0.2
OTVZ	**Oturere**	**1.54**	**247**		PN	Pn	01 42 60.0	0.0
MOVZ	**Moawhango**	**1.58**	**238**		PN	Pn	01 43 00.3	-0.3
NGZ	**Ngauruhoe**	**1.59**	**247**		PN	Pn	01 43 00.6	-0.1
TUVZ	**Tukino**	**1.59**	**243**		PN	Pn	01 43 00.6	-0.1
WPVZ	**Whakapapa**	**1.64**	**247**		PN	Pn	01 43 01.3	0.0
WNVZ	**Wahianoa**	**1.65**	**242**		PN	Pn	01 43 01.5	-0.1
FWVZ	**Far West T-bar**	**1.65**	**245**		PN	Pn	01 43 01.4	-0.1
TWVZ	**Taurewa**	**1.67**	**252**		PN	Pn	01 43 01.7	-0.1
MTVZ	**Mangateitei**	**1.77**	**242**	⇑	PN	Pn	01 43 02.9	-0.2
MTVZ					*e*SN	Sn	01 43 23.8	-0.8
PKVZ	**Pokaka**	**1.81**	**246**		PN	Pn	01 43 03.5	-0.2
TSZ	**Takapari Road**	**1.90**	**218**		PN	Pn	01 43 03.5	-1.3
WAZ	**Wanganui**	**2.27**	**238**		PN	Pn	01 43 10.3	+0.3
WAZ					SN	Sn	01 43 37.3	+0.5
BFZ	**Birch Farm**	**2.31**	**204**		PN	Pn	01 43 08.9	-1.6
TIWZ	**Tintock**	**2.52**	**209**		PN	Pn	01 43 11.2	-2.2
MRZ	**Mangatainoka R**	**2.55**	**215**		PN	Pn	01 43 11.4	-2.4
MRZ					SN	Sn	01 43 41.5	-2.2
NEZ	**North Egmont**	**2.73**	**254**	*e*	PN	Pn	01 43 17.1	+0.9
KIW	**Kapiti Island**	**3.03**	**220**		PN	Pn	01 43 17.9	-2.3
CAW	**Cannon Point**	**3.14**	**216**		PN	Pn	01 43 18.7	-3.1
TRWZ	**Traveller**	**3.14**	**205**		PN	Pn	01 43 18.9	-2.9
DUWZ	**D'Urville Isla**	**3.54**	**230**		PN	Pn	01 43 24.8	-2.3
TCW	**Tory Channel**	**3.61**	**222**	*e*	PN	Pn	01 43 24.9	-3.3

PRE 14 02:05:07.1±0.8, 2126S×3404E, h5km, ML3.8, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.89**	**253**		*e*P	Pn	02 06 09.0	+1.5
MSNA					*e*S	Sn	02 06 53.4	-0.1
MSNA					AML	AML	02 07 03.7	
comp=Z,62nm,0.5s								
POGA	**Pongola**	**6.47**	**200**		*e*P	Pn	02 06 43.0	0.0
POGA					*e*S	Sn	02 07 53.7	-3.6
POGA					AML	AML	02 08 34.9	
comp=Z,9.0nm,0.7s								
LBTB	**Lobatse**	**8.62**	**243**		*e*P	Pn	02 07 13.4	+0.9
LBTB					*e*S	Sn	02 08 46.6	-3.6
LBTB					AML	AML	02 09 39.0	
comp=Z,8.8nm,0.6s								
UPI	**Upington**	**13.59**	**236**		*e*P	Pn	02 08 22.8	+2.3
UPI					*e*S	Sn	02 10 44.8	-7.1
UPI					AML	AML	02 11 31.0	
comp=Z,1.8nm,0.8s								

NEIC ***14*** *02:14:15.7±1.9, 5559N×16124E, h62km±19km, Error ellipse: s-maj=55.2km s-min=12.5km az=135.0*
ISCJB ***14*** *02:14:16.9±0.4, 5529N±002×16147E±008, h91km±4km, mb3.9/7, Error ellipse: s-maj=7.5km s-min=3.5km az=33.0*
IDC ***14*** *02:14:16.5±9.3, 5559N×16124E, h68km±96km, mb3.6/7, mb1 3.9/8, mb1mx3.4/21, mbtmp3.9/8, ML3.8/1, Error ellipse: s-maj=99.0km s-min=17.8km az=136.0*
KRSC ***14*** *02:14:16, 5529N×16143E, h78km, ML4.2*
MOS ***14*** *02:14:17.5±0.4, 5527N×16143E, h65km, mb4.2/1, Error ellipse: s-maj=38.8km s-min=12.9km az=80.0*
ISC 14 02:14:17.9±0.4, 5530N±002×16147E±008, h86km±4km, n38, σ0s73/66, mb3.9/7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.76**	**168**		PN	**Pn**	**02 14 34.0**	**-0.5**
MKZ					S	**Sn**	**02 14 47.0**	**0.0**
MKZ	**Mys Kozlova**	**0.76**	**168**		*e*P	**Pn**	**02 14 34.0**	**-0.5**
MKZ					*i* S	**Sn**	**02 14 47.0**	**0.0**
ZLN	**Zelenaya**	**0.81**	**333**		*i* P	**Pn**	**02 14 35.1**	**-0.1**
ZLN					*i* S	**Sn**	**02 14 48.6**	**+0.5**
KMNR	**Kamenistaya**	**0.84**	**304**		*i* P	**Pn**	**02 14 35.1**	**-0.3**
KMNR					*i* S	**Sn**	**02 14 49.1**	**+0.6**
CIRR	**Tsirk**	**0.92**	**334**		*i* P	**Pn**	**02 14 36.4**	**+0.1**
CIRR					*i* S	**Sn**	**02 14 50.8**	**+0.7**
KPT	**Kopyto**	**0.97**	**314**		*e*P	**Pn**	**02 14 36.3**	**-0.6**
KPT					*i* S	**Sn**	**02 14 50.7**	**-0.5**
KRSR	**Krestovskiy**	**1.05**	**332**		*i* P	**Pn**	**02 14 37.4**	**-0.5**
KRSR					*i* S	**Sn**	**02 14 52.4**	**-0.5**
KLY	**Klyuchi**	**1.12**	**336**		PN	**Pn**	**02 14 37.7**	**-0.9**
KLY					S	**Sn**	**02 14 53.5**	**-0.7**
KLY	**Klyuchi**	**1.12**	**336**		*e*P	**Pn**	**02 14 37.7**	**-0.9**
KLY					*i* S	**Sn**	**02 14 53.5**	**-0.7**
KOZR	**Kozyr**	**1.18**	**312**		PN	**Pn**	**02 14 39.0**	**-0.4**
KOZR					S	**Sn**	**02 14 55.7**	**+0.2**
KOZ	**Kozyrevsk**	**1.18**	**311**		*e*P	**Pn**	**02 14 39.0**	**-0.4**
KOZ					*i* S	**Sn**	**02 14 55.7**	**+0.1**
KBTR	**Krutoberegovo**	**1.19**	**39**		PN	**Pn**	**02 14 39.8**	**+0.3**
KBTR					S	**Sn**	**02 14 56.9**	**+1.1**
KBTR	**Krutoberegovo**	**1.19**	**39**		*e*P	**Pn**	**02 14 39.8**	**+0.3**
KBTR					*i* S	**Sn**	**02 14 56.9**	**+1.1**
BDR	**Baidarnaya**	**1.28**	**354**		*e*P	**Pn**	**02 14 40.8**	**+0.1**

BDR				iS	Sn	02 14 58.5	+0.7
SMKR	Semkarok	1.29	0	eP	Pn	02 14 40.8	+0.1
SMKR				iS	Sn	02 14 58.4	+0.4
SRKR	Sorokina	1.37	353	eP	Pn	02 14 41.9	+0.1
SRKR				iS	Sn	02 15 00.5	+0.7
SRDR	Sredinnyy	1.42	317	eP	Pn	02 14 41.7	-0.7
SRDR				iS	Sn	02 15 00.1	-0.8
KII	Karymskiy	1.72	224	PN	Pn	02 14 46.1	-0.1
KII				S	Sn	02 15 08.1	+0.3
KII	Karymskiy	1.72	224	eP	Pn	02 14 46.1	-0.1
KII				iS	Sn	02 15 08.1	+0.3
SPN	Mys Shipunski	2.36	202	PN	Pn	02 14 54.0	-0.7
SPN				S	Sn	02 15 21.2	-1.6
SPN	Mys Shipunski	2.36	202	eP	Pn	02 14 54.0	-0.7
SPN				iS	Sn	02 15 21.2	-1.6
NLC	Nalytchevo	2.47	211	PN	Pn	02 14 55.6	-0.5
NLC				S	Sn	02 15 24.0	-1.4
NLC	Nalytchevo	2.47	211	eP	Pn	02 14 55.6	-0.5
NLC				iS	Sn	02 15 24.0	-1.4
AVH	Avacha	2.59	219	eP	Pn	02 14 58.3	+0.6
AVH				iS	Sn	02 15 28.5	+0.2
GNL	Ganaly	2.61	233	eP	Pn	02 14 58.2	+0.2
PET	Petropavlovsk	2.81	217	PN	Pn	02 15 01.3	+0.6
PET				S	Sn	02 15 33.6	-0.1
PET	Petropavlovsk	2.81	217	ePn	Pn	02 15 00.6	-0.1
PET				eSn	Sn	02 15 35.5	+1.8
PET	Petropavlovsk	2.81	217	eP	Pn	02 15 01.3	+0.6
PET				iS	Sn	02 15 33.6	-0.1
GRL	Gorelyy	3.40	218	eP	Pn	02 15 10.1	+1.4
GRL				iS	Sn	02 15 48.8	+0.8
MIPR	Malaya Ipel'ka	4.12	225	eP	Pn	02 15 19.3	+0.9
ASAJ	Asahikawa	16.49	235	P	Pn	02 18 04.5	+0.7
	0.6nm,0.3s,baz=88,slow=6.5,SNR=7.3						
MJAR	Matsushiro Arr	24.57	230	P	P	02 19 30.2	+0.5
	1.2nm,0.5s,mb3.6,baz=19,slow=11,SNR=7.3						
INK	Inuvik	31.64	40	P	P	02 20 31.6	-1.2
	1.8nm,0.5s,mb4.1,baz=352,slow=5.9,SNR=9.4						
YKA	Yellowknife Ar	41.01	45	P	P	02 21 51.1	-1.3
	1.0nm,0.6s,mb3.8,baz=302,slow=7.2,SNR=3.7						
NVAR	Mina Array Bea	54.27	72	P	P	02 23 35.5	+0.5
	0.9nm,0.6s,mb4.0,baz=312,slow=6.0,SNR=8.9						
PDAR	Pinedale Array	55.77	63	P	P	02 23 46.1	+0.3
	0.8nm,0.6s,mb3.9,baz=323,slow=2.7,SNR=7.8						
ULM	Lac du Bonnet	56.74	49	P	P	02 23 51.6	-1.1
	1.2nm,0.4s,mb4.2,baz=301,slow=15,SNR=4.6						
ASAR	Alice Springs	82.10	205	P	P	02 26 30.8	+1.9
	0.3nm,0.5s,mb3.4,baz=355,slow=3.6,SNR=4.7						

*HLW **14** 02:16:11.3, 3565N×2546E, h33km, Mb3.6*
*CSEM **14** 02:16:12.7±0.1, 3529N×2536E, h20km, ML4.1, Error ellipse: s-maj=1.7km s-min=1.3km az=65.0*
*ATH **14** 02:16:12.0, 3544N×2538E, h19km±1km, MD3.9/22, ML4.1*
*ISCJB **14** 02:16:12.6±0.5, 3529N±002×2531E±003, h26km±4km, mb3.9/9, Error ellipse: s-maj=3.8km s-min=2.7km az=108.9*
*NEIC **14** 02:16:12.0, 3544N×2538E, h19km, mb3.9/4, ML3.6(THE), ML4.1(ATH), After ATH.*
*IDC **14** 02:16:14.0±1.7, 3543N×2526E, h14km±12km, mb3.9/8, mb1 3.9/9, mb1mx3.7/21, mbtmp3.9/9, MS2.4/1, Ms1 2.4/1, ms1mx1.9/34, Error ellipse: s-maj=32.9km s-min=16.4km az=147.0*
*THE **14** 02:16:17.9, 3568N×2539E, h5km, ML3.6*
ISC 14 02:16:13.4±0.6, 3532N±002×2531E±002, h14km±4km, n137, σ1s22/156, mb3.9/9, 9C, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	Neapolis	0.25	102	⇑iPB	Pg	02 16 17.9	-0.8
NPS				eSB	Sg	02 16 21.5	-0.9
IDI	Anoyia	0.34	265	Pg	Pg	02 16 21.0	+0.6
	284nm,0.3s,baz=91,slow=18,SNR=454						
IDI				Lg		02 16 26.4	
	3µm,0.3s,baz=0.2,slow=13,SNR=177						
XRY	Khrisi	0.54	144	ePB	Pb	02 16 23.8	-0.9
VAM	Vamos	0.91	276	ePN	Pn	02 16 31.0	-0.8
VAM				eSN	Sn	02 16 43.6	-1.1
SANT	Santorini	1.06	6	eP	Pb	02 16 32.5	-1.0
SANT				eS	Sb	02 16 47.2	0.0
SANT	Santorini	1.06	6	eP	Pb	02 16 32.5	-1.0
SANT				eS	Sb	02 16 47.2	0.0
GVD	Gavdhos	1.11	245	ePN	Pn	02 16 35.5	+1.0
KARP	Karpathos	1.53	81	ePN	Pn	02 16 39.2	-1.1
KARP				eSN	Sn	02 16 59.6	-0.3
APE	Apeiranthos	1.76	6	ePN	Pn	02 16 41.8	-1.6
APE				eSN	Sn	02 17 03.5	-2.1
NISR	Nisiros	1.96	48	ePN	Pn	02 16 45.0	-1.2
KYTH	Kithira	2.08	298	ePB	Pn	02 16 47.0	-0.9
DAT	Datca	2.32	52	PN	Pn	02 16 52.2	+1.1
BODT	Bodrum	2.38	42	PN	Pn	02 16 52.0	+0.1
BODT				SN	Sg	02 17 28.6	-1.2
VLI	Veliai	2.38	307	ePN	Pn	02 16 51.4	-0.6
ARG	Arkhangelos	2.46	68	ePB	Pn	02 16 52.5	-0.6
SMG	Samos	2.69	27	ePN	Pn	02 16 54.4	-1.8
KVR	Kavouri	2.80	334	ePN	Pn	02 16 57.0	-0.7
NAIG	Nisos Aigina	2.84	329	ePB	Pn	02 16 58.5	+0.1
ATH	Athens Observa	2.94	335	ePN	Pn	02 16 59.0	-0.7
PTL	Penteli	2.96	337	ePN	Pn	02 16 59.0	-1.0
DALT	Dalyan (Mudla)	3.06	61	ePN	Pn	02 17 02.3	+1.0
CHOS	Chios island	3.12	11	ePn	Pn	02 17 01.1	-1.1
CHOS				eSn	Sn	02 17 34.9	-4.4
MGER	Gerania Oros	3.13	329	ePN	Pn	02 17 02.0	-0.3
BLCB	Balcova	3.36	24	ePN	Pn	02 17 04.7	-0.8
IZM	Izmir	3.45	26	ePN	Pn	02 17 06.9	+0.2
LKR	Lokris	3.81	332	ePN	Pn	02 17 12.0	+0.4
SLUM		3.82	181	⇑P	Pn	02 17 12.7	+1.0
SLUM				S	Sn	02 17 56.9	+0.5
DENT	Denizli	3.86	50	ePN	Pn	02 17 14.4	+2.1
ELL	Elmali	3.99	68	ePN	Pn	02 17 14.8	+0.7
PRK	Paraskevi	4.00	11	ePN	Pn	02 17 12.5	-1.7
AOS	Alonnisos	4.01	344	ePn	Pn	02 17 15.0	+0.6
AKS	Akhisar	4.08	29	ePN	Pn	02 17 16.4	+1.1
RLS	Riolos of Patr	4.13	313	ePN	Pn	02 17 16.8	+0.8
NEO	Neokhori	4.32	338	ePN	Pn	02 17 18.6	0.0
XOR	Xorichti	4.38	338	ePn	Pn	02 17 20.6	+1.1
AGG	Agios Georgios	4.40	328	ePn	Pn	02 17 21.0	+1.3
	comp=Z,1.3nm,0.6s						
AGG				eSn	Sn	02 18 10.7	-0.1
EVR	Evrytania	4.55	323	ePN	Pn	02 17 22.8	+0.9
EZN	Ezine	4.57	10	ePN	Pn	02 17 20.5	-1.6
ANTB	Antalya	4.61	68	ePN	Pn	02 17 24.5	+1.9
LOS	Limnos	4.61	358	ePn	Pn	02 17 23.4	+0.8
VLS	Valsamata	4.75	308	ePN	Pn	02 17 25.5	+1.0
BCK	Bucak	4.76	62	ePN	Pn	02 17 27.3	+2.5
PAIG	Paliouri	4.78	345	ePn	Pn	02 17 24.5	-0.4
GADA	Gvkgeada	4.89	5	ePN	Pn	02 17 25.6	-0.8
DST	Dursunbey	5.03	31	ePN	Pn	02 17 30.0	+1.6
LKD	Levkas	5.04	314	ePn	Pn	02 17 30.0	+1.5
LKD				eSn	Sn	02 18 27.6	+1.1
OUR	Ouranopolis	5.12	349	ePn	Pn	02 17 29.1	-0.5
LPK	Lapseki	5.18	12	ePN	Pn	02 17 29.4	-1.0
PLG	Polygyros	5.26	344	ePN	Pn	02 17 31.6	0.0
LIT	Litokhoron	5.27	336	ePn	Pn	02 17 32.6	+0.8
	comp=Z,1.0nm,0.5s						
ENEZ	Enez	5.45	7	ePN	Pn	02 17 33.4	-0.8
MEV	Metsovon	5.51	325	ePn	Pn	02 17 36.4	+1.3
	comp=Z,2.3nm,0.4s						
HORT	Hortiatis	5.55	342	ePn	Pn	02 17 36.5	+0.9
HORT	Hortiatis	5.55	342	ePn	Pn	02 17 36.5	+0.9
RKY	Sarkoy-Tekirda	5.56	15	ePN	Pn	02 17 35.9	+0.2
JAN	Janina	5.60	322	ePN	Pn	02 17 36.0	-0.2
ALN	Alexandroupoli	5.60	6	ePn	Pn	02 17 36.5	+0.2
SOH	Sokhos	5.71	345	ePn	Pn	02 17 37.7	0.0
IGT	Igoumenitsa	5.78	318	ePn	Pn	02 17 40.1	+1.5
IGT				eSn	Sn	02 18 44.3	-0.5
HDMB	Hadim	6.03	72	ePN	Pn	02 17 44.6	+2.4
SWA1		6.04	177	P	Pn	02 17 43.3	+1.0
SWA1				S	Sn	02 18 50.4	-1.0
SWA1		6.04	177	P	Pn	02 17 43.3	+0.9
SWA1				S	Sn	02 18 50.3	-1.1
SWA2		6.06	179	P	Pn	02 17 43.6	+1.1
GRG	Griva	6.08	339	ePn	Pn	02 17 43.7	+0.9
ESKT	Eskisehir	6.08	45	ePN	Pn	02 17 45.5	+2.6
KNT	Kendrikon	6.14	343	ePn	Pn	02 17 45.1	+1.5
	comp=Z,1.3nm,0.7s						
YLV	Yalova	6.14	30	ePN	Pn	02 17 45.5	+1.8
ADVT	Abdulvahap	6.19	33	ePN	Pn	02 17 45.9	+1.5
KONT	Konya--Tatoy	6.25	63	ePN	Pn	02 17 47.3	+2.2
FNA	Florina	6.28	332	ePn	Pn	02 17 47.7	+2.1
FNA				eSn	Sn	02 18 56.5	-0.6
KIZT	Kizilcal	6.34	54	ePN	Pn	02 17 48.9	+2.5
BIA	Bitola	6.50	332	ePn	Pn	02 17 56.3	+7.6
CSS	Prodhromos	6.58	91	ePn	Pn	02 17 48.7	-1.0
CSS				eSn	Sn	02 18 59.5	-5.0
CSS	Prodhromos	6.58	91	ePn	Pn	02 17 48.7	-1.0
EDRB	Edirne	6.62	9	ePN	Pn	02 17 50.3	+0.1
STIP	Stip	6.82	340	ePn	Pn	02 17 56.8	+3.7
STIP	Stip	6.82	340	ePn	Pn	02 17 56.7	+3.7
IKL	Isikli	6.87	80	ePN	Pn	02 17 55.4	+1.7
ANTO	Ankara	7.48	50	ePN	Pn	02 18 04.1	+2.1
ANTO	Ankara	7.48	50	ePn	Pn	02 18 01.1	-0.9
	7.7nm,0.7s						
AWBH		7.61	155	⇑P	Pn	02 18 04.4	+0.5
MERS	Mersin	7.62	76	ePN	Pn	02 18 05.6	+1.7
HSAF	As Saff	7.75	135	⇑P	Pn	02 18 05.0	-0.8
GLL	Jalalah	7.87	135	⇑P	Pn	02 18 06.8	-0.7
BR131	Keskin Array S	7.95	54	ePn	Pn	02 18 09.5	+1.1
	2.1nm,0.7s						
BRTR	Keskin Array B	7.95	54	Pn	Pn	02 18 09.4	+1.0
	0.2nm,0.3s,baz=233,slow=16,SNR=15						
AMAG	Maghara	8.11	123	⇑P	Pn	02 18 08.6	-2.1
SUZ		8.37	129	⇑P	Pn	02 18 12.9	-1.4
HFRF	Wahat Farafira	8.54	162	⇑P	Pn	02 18 17.1	+0.5
HFRF	Wahat Farafira	8.54	162	P	Pn	02 18 17.0	+0.4
ZAF		8.58	132	P	Pn	02 18 16.6	-0.6
MMAI	Mount Meron Ar	8.67	102	Sn	Sn	02 19 53.0	-3.0
	2.9nm,0.3s,baz=298,slow=26,SNR=5.1						
VAE	Valguarnera	9.05	287	Pn	Pn	02 18 28.1	+4.5
	0.4nm,0.3s,baz=62,slow=23,SNR=2.8						
VAE	Valguarnera	9.05	287	Pn	Pn	02 18 28.1	+4.5
HNKL	Nakhl	9.07	124	P	Pn	02 18 22.6	-1.2
HNKL				S	Sn	02 19 58.2	-7.6
EIL	Elat	9.89	122	ePn	Pn	02 18 34.0	-1.2
	100nm,0.6s						
EIL				eSn	Sn	02 20 18.6	-7.5
EIL	Elat	9.89	122	ePn	Pn	02 18 34.0	-1.2
	100nm,0.6s						
EIL				eSn	Sn	02 20 18.6	-7.4
TR2		9.94	132	P	Pn	02 18 35.0	-0.8
HKAT	Jabal Katrina	10.01	130	P	Pn	02 18 35.7	-1.0
TR1		10.36	132	P	Pn	02 18 40.5	-1.0
HDK1	Dakhla	10.36	159	P	Pn	02 18 42.9	+1.3
AKRG	Al Kharijah	10.75	154	P	Pn	02 18 47.6	+0.7
GTR	Jabal at Tayr	10.77	154	⇑P	Pn	02 18 48.2	+1.1
BOJS	Bojanci	12.73	326	ePn	Pn	02 19 14.0	0.0
BOJS				iSn	Sn	02 21 28.6	-6.9
KEST	Kesra	13.02	276	Pn	Pn	02 19 23.7	+5.8
	0.1nm,0.3s,baz=95,slow=22,SNR=3.5						
KWP	Kalwaria	14.43	353	ePn	Pn	02 19 30.5	-6.7
	7.9nm,0.7s						
VRAC	Vranov	15.38	338	Sn	Sn	02 22 32.5	-7.6
	1.2nm,0.3s,baz=136,slow=7.9,SNR=3.9						
AKASG	Malin Array Be	15.64	9	Pn	Pn	02 19 55.5	+2.2
	1.6nm,0.3s,baz=200,slow=11,SNR=14						
GEC2	GERESS Array S	16.00	331	ePn	Pn	02 19 55.1	-3.0
GNI	Garni	16.11	67	LR	LR	02 25 57.5	
	comp=Z,16nm,20.4s,baz=350,slow=36						
MBDF	Montbardon	17.00	309	eP	Pn	02 20 11.6	+0.9
	9.4nm,0.8s						
MBDF	Montbardon	17.00	309	eP	Pn	02 20 11.6	+0.9
	4.7nm,0.8s						
LPG	La Plagne	17.37	311	eP	Pn	02 20 15.8	+0.4
LPL	La Plagne	17.39	311	eP	Pn	02 20 15.6	0.0
CABF	La Chapelle	18.34	314	eP	Pn	02 20 24.6	-2.6
	7.7nm,0.7s						
CABF	La Chapelle	18.34	314	eP	Pn	02 20 24.6	-2.6
	3.8nm,0.7s						
HINF	Hinteralfeld	18.56	318	eP	Pn	02 20 28.2	-1.8
CDF	Champ du Feu	18.69	320	eP	Pn	02 20 29.8	-1.8
HAU	Haudompre	18.95	318	eP	Pn	02 20 32.3	-2.4
SMF	Signal de Mont	19.70	312	eP	Pn	02 20 39.7	-4.0
LOR	Lormes	19.99	313	eP	Pn	02 20 43.1	-4.0
	2.5nm,0.4s						
LOR	Lormes	19.99	313	eP	Pn	02 20 43.1	-4.0
	1.2nm,0.4s						
AVF	Avril sur Loir	20.07	312	eP	P	02 20 44.7	-1.6
SSF	Saint Saulge	20.10	312	eP	P	02 20 44.7	-1.9
	22nm,1.2s						
SSF	Saint Saulge	20.10	312	eP	P	02 20 44.7	-1.9
	11nm,1.2s						
BAIF	Baives	21.29	320	eP	P	02 20 57.0	-2.5
MFF	Saint Martin d	22.19	308	eP	P	02 21 08.0	-1.1
	14nm,0.9s,mb4.1						
MFF	Saint Martin d	22.19	308	eP	P	02 21 08.0	-1.1
	6.8nm,0.9s,mb4.1						
FLN	La Foliniere	23.26	313	eP	P	02 21 16.7	-3.8
ESDC	Sonseca Array	23.58	289	P	P	02 21 23.7	-0.1
	1.3nm,0.8s,mb3.4,baz=83,slow=9.7,SNR=10						
FINES	FINESS Array B	26.15	1	P	P	02 21 46.6	-0.6
	0.7nm,0.6s,mb3.4,baz=159,slow=11,SNR=4.2						
EKA	Eskdalemuir Ar	27.98	325	P	P	02 22 02.8	-0.8
	1.5nm,0.8s,mb3.7,baz=126,slow=9.7,SNR=2.5						
TORD	Torodi Ar. Bea	30.68	230	P	P	02 22 28.8	+1.2
	3.2nm,0.6s,mb4.3,baz=33,slow=8.5,SNR=52						
BVAR	Borovoye Array	36.15	46	P	P	02 23 15.1	-0.1
	0.6nm,0.5s,mb3.8,baz=238,slow=7.8,SNR=5.8						
DBIC	Dimbokro	39.76	231	P	P	02 23 46.6	+0.9
	4.2nm,0.8s,mb4.2,baz=135,slow=20,SNR=4.1						
MKAR	Makanchi Array	43.59	57	P	P	02 24 15.8	-1.2
	1.7nm,0.3s,mb4.2,baz=265,slow=8.9,SNR=30						
SONM	Songino Array	59.29	51	P	P	02 26 16.7	+2.1
	0.6nm,0.6s,mb3.8,baz=288,slow=8.3,SNR=5.6						

KRSC 14 02:21:37, 5520N×16257E, h35km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.81	217	eP	Pn	02 21 53.6	+1.7
MKZ				iS	Sn	02 22 05.8	+3.2
KBTR	Krutoberegovo	1.02	8	iP	Pn	02 21 54.9	+0.1
KBTR				iS	Sn	02 22 08.3	+0.4
ZLN	Zelenaya	1.29	310	eP	Pn	02 22 00.7	+2.1
ZLN				iS	Sn	02 22 17.8	+3.2
CIRR	Tsirk	1.38	312	eP	Pn	02 22 02.0	+2.2
CIRR				iS	Sn	02 22 19.9	+3.1
KMNR	Kamenistaya	1.44	294	eP	Pn	02 22 03.3	+2.7
KMNR				iS	Sn	02 22 22.7	+4.5
SMKR	Semkarok	1.52	336	eP	Pn	02 22 02.7	+1.1
SMKR				iS	Sn	02 22 21.1	+0.9
KRSR	Krestovskiy	1.52	313	eP	Pn	02 22 03.6	+1.9
KRSR				iS	Sn	02 22 22.9	+2.6
KPT	Kopyto	1.54	301	eP	Pn	02 22 04.4	+2.5
KPT				iS	Sn	02 22 23.9	+3.2
KLY	Klyuchi	1.56	317	eP	Pn	02 22 02.7	+0.5
KLY				iS	Sn	02 22 21.7	+0.6
BDR	Baidarnaya	1.57	331	eP	Pn	02 22 04.0	+1.6
BDR				iS	Sn	02 22 23.3	+1.8
SRKR	Sorokina	1.66	332	eP	Pn	02 22 05.0	+1.4
SRKR				iS	Sn	02 22 25.5	+1.9
KOZ	Kozyrevsk	1.75	300	eP	Pn	02 22 07.9	+3.0
KOZ				iS	Sn	02 22 30.4	+4.4
SRDR	Sredinnyy	1.96	306	eP	Pn	02 22 09.9	+2.1
SRDR				iS	Sn	02 22 33.6	+2.5
SPN	Mys Shipunski	2.58	216	eP	Pn	02 22 17.1	+0.8
SPN				iS	Sn	02 22 45.9	-0.6
NLC	Nalytchevo	2.78	224	eP	Pn	02 22 20.9	+1.9
NLC				iS	Sn	02 22 52.6	+1.3
AVH	Avacha	2.97	231	eP	Pn	02 22 24.1	+2.5
AVH				iS	Sn	02 22 57.9	+1.9
GNL	Ganaly	3.09	243	eP	Pn	02 22 26.5	+3.2
PET	Petropavlovsk	3.17	228	eP	Pn	02 22 26.7	+2.3
PET				iS	Sn	02 23 03.0	+2.0
RUS	Russkaya	3.67	223	eP	Pn	02 22 33.6	+2.4
RUS				iS	Sn	02 23 14.0	+0.8
GRL	Gorelyy	3.76	227	eP	Pn	02 22 36.2	+3.8
GRL				iS	Sn	02 23 18.7	+3.3

*ISCJB **14** 02:32:50.0±0.4, 4144N±004×7250E±004, h10km, mb3.8/11, Error ellipse: s-maj=5.6km s-min=4.6km az=151.9*
*MOS **14** 02:32:50.8±2.0, 4153N×7274E, h10km, mb4.5/1, Error ellipse: s-maj=13.4km s-min=8.4km az=96.6*
*IDC **14** 02:32:52.1±0.9, 4154N×7272E, h0km, mb3.8/10, mb1 4.0/13, mb1mx3.8/25, mbtmp3.9/13, ML4.0/3, MS2.8/1, Ms1 2.8/1, ms1mx2.2/29, Error ellipse: s-maj=14.4km s-min=13.3km az=175.0*
*KNET **14** 02:32:54.0±0.5, 4168N×7292E, h0km, ml3.7, Error ellipse: s-maj=4.6km s-min=2.8km az=124.0*
*NEIC **14** 02:32:55.8±0.4, 4143N×7298E, h35km, mb4.3/7, Error ellipse: s-maj=11.9km s-min=6.3km az=225.0*
*NNC **14** 02:32:57.2±3.0, 4196N×7271E, h18km±14km, mb4.3, mpv4.1, Error ellipse: s-maj=28.7km s-min=8.6km az=8.0*
ISC 14 02:32:52.5±0.4, 4148N±004×7262E±004, h10km, n53, σ1s59/70, mb3.8/11, 22C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	1.04	51	⇓P	Pg	02 33 08.7	-3.7
	314nm,0.2s,SNR=150						
AML				⇓S	Sg	02 33 18.8	-7.1
	955nm,0.4s						
EKS2	Erkin-Say	1.47	36	⇓P	Pn	02 33 16.3	-2.7
	62nm,0.2s,SNR=37						
EKS2				⇓S	Sn	02 33 33.5	-4.7
	255nm,0.3s						
UCH	Uchtor	1.60	61	⇓P	Pn	02 33 19.3	-1.6
	65nm,0.2s,SNR=50						
AAK	Ala-Archa	1.82	50	⇓P	Pn	02 33 22.9	-0.8
	434nm,0.3s,SNR=88						
AAK				⇑S	Sn	02 33 45.4	-1.4
	292nm,0.2s						
AAK	Ala-Archa	1.82	50	ePn	Pn	02 33 22.0	-1.7
AAK				eSn	Sn	02 33 44.3	-2.5
FRU	Bishkek	2.01	47	⇑iPN	Pn	02 33 27.5	+1.0
FRU				iS	Sn	02 33 53.0	+1.3
FRU				pmax	pmax		
	comp=Z,360nm,0.8s						
FRU				smax			
	comp=N,1µm,1.5s						
KZA	Kyzart	2.06	72	⇑P	Pn	02 33 27.8	+0.7
	comp=N,250nm,0.2s,SNR=62						
KZA				⇑S	Sn	02 33 54.7	+1.9
	comp=N,509nm,0.3s						
KBK	Karagaybulak	2.10	55	⇑P	Pn	02 33 28.0	+0.3
	comp=N,339nm,0.3s,SNR=356						
KBK				⇑S	Sn	02 33 55.1	+1.3
	comp=N,1µm,0.4s						
CHMS	Chumysh	2.20	45	⇓P	Pn	02 33 29.6	+0.6
	comp=N,314nm,0.3s,SNR=178						
CHMS				⇑S	Sn	02 33 57.5	+1.2
	comp=N,721nm,0.4s						
KK31	Karatay Array	2.25	317	Pn	Pn	02 33 32.2	+2.4
	comp=N,35nm,0.2s,baz=316,slow=6.1,SNR=1754						
KK31				⇓Lg		02 34 02.4	
	comp=N,82nm,0.2s,baz=45,slow=226,SNR=12						
USP	Ospenovka	2.27	37	⇓P	Pn	02 33 30.7	+0.7
	comp=N,529nm,0.6s,SNR=313						
USP				⇑S	Sn	02 33 59.5	+1.5
	comp=N,782nm,0.3s						
TKM2	Tokmak 2	2.64	56	⇑P	Pn	02 33 36.5	+1.4
	comp=N,639nm,0.7s,SNR=688						
TKM2	Tokmak 2	2.64	56	⇑Pn	Pn	02 33 37.2	+2.1
	comp=N,30nm,0.6s						
TKM2				⇑Lg		02 34 11.3	
	comp=N,85nm,0.6s						
ULHL	Ulahol	2.81	73	⇑P	Pn	02 33 39.1	+1.6
	comp=N,89nm,0.3s,SNR=185						
KNDC	Almaty	3.66	60	⇓Pg	Pg	02 33 57.1	-5.6
	comp=N,80nm,0.5s						
KNDC				⇑Lg		02 34 43.0	
	comp=N,230nm,0.4s						
AAA	Alma-Ata	3.68	59	ePN	Pn	02 33 56.5	+7.2
AAA				eS	Sn	02 34 41.5	+8.8
MK05	Makanchi Array	8.75	49	⇑Pn	Pn	02 34 59.5	+0.4
	comp=N,5.1nm,0.8s,baz=235,slow=16						
MK05				⇑Lg		02 37 23.8	
	comp=N,11nm,0.8s,baz=245,slow=27						
MKAR	Makanchi Array	8.75	49	Pn	Pn	02 34 59.9	+0.8
	comp=N,1.0nm,0.3s,baz=234,slow=14,SNR=18						
KURK	Kurchatov	10.13	22	⇑Pn	Pn	02 35 14.8	-3.2
	comp=N,1.7nm,0.7s						
KURK				⇓Sn	Sn	02 37 04.9	-6.8
	comp=N,6.5nm,0.8s						
KURK				⇑Lg		02 38 04.6	
	comp=N,48nm,1.7s						
KURK	Kurchatov	10.13	22	eP	Pn	02 35 14.7	-3.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	10.13	22	ePn	Pn	02 35 14.7	-3.3
	comp=Z,3.9nm,0.9s						
BVA0	Borovoye Array	11.65	353	⇑Pn	Pn	02 35 37.8	-1.0
	comp=Z,0.4nm,0.5s						
BVA0				⇑Sn	Sn	02 37 44.0	-4.9
	comp=Z,1.4nm,1.1s,baz=160,slow=24,SNR=4.6						
BVA0				⇑Lg		02 38 56.5	
	comp=Z,2.0nm,0.9s,baz=153,slow=29,SNR=3.5						
BVAR	Borovoye Array	11.65	353	Pn	Pn	02 35 37.1	-1.7
	comp=Z,1.8nm,0.3s,baz=156,slow=11,SNR=28						
BVAR				Sn	Sn	02 37 43.6	-5.3
	comp=Z,1.1nm,0.3s,baz=159,slow=23,SNR=5.4						
BVAR				LR	LR	02 40 25.6	
	comp=Z,45nm,19.2s,baz=129,slow=39						
BVAR	Borovoye Array	11.65	353	P	Pn	02 35 37.1	-1.7
BVAR						02 37 43.6	
BRVK	Borovoye	11.70	353	eP	Pn	02 35 37.7	-1.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	11.70	353	ePn	Pn	02 35 37.7	-1.6
	comp=Z,3.2nm,0.6s						
AB31	Akbulak array	11.82	315	⇑Pn	Pn	02 35 40.5	-0.5
	comp=Z,8.8nm,0.5s						
AB31				⇑Sn	Sn	02 37 46.8	-6.2
	comp=Z,2.0nm,0.4s						
AKTK	Aktyubinsk	13.52	316	Pn	Pn	02 36 03.9	-0.5
AKTK				Sn	Sn	02 38 29.4	-5.3
AKTO	Aktyubinsk	13.52	316	Pn	Pn	02 36 03.9	-0.5
	comp=Z,0.9nm,0.3s,baz=125,slow=14,SNR=42						
AKTO				Sn	Sn	02 38 29.4	-5.3
	comp=Z,0.1nm,0.3s,baz=163,slow=18,SNR=3.3						
KOLN	Koldanda	16.37	143	eP	Pn	02 36 39.2	-3.1
	comp=Z,9.3nm,0.5s						
GKN	Gorkha	16.66	140	eP	Pn	02 36 43.9	-2.0
	comp=Z,15nm,0.5s						
KKN	Kakani	17.15	139	eP	Pn	02 36 50.1	-2.0
	comp=Z,21nm,0.7s						
KKN	Kakani	17.15	139	eP	Pn	02 36 50.1	-2.0
KKN				pmax	pmax		
	comp=Z,21nm,0.7s						
DMN	Daman	17.21	140	eP	Pn	02 36 50.1	-2.8
GUN	Gumba	17.35	137	eP	Pn	02 36 53.8	-0.9
	comp=Z,28nm,0.7s						
PKI	Pulchoki	17.39	139	eP	Pn	02 36 52.6	-2.6
	comp=Z,15nm,0.7s						
PKI	Pulchoki	17.39	139	eP	Pn	02 36 52.6	-2.6
PKI				pmax	pmax		
	comp=Z,15nm,0.7s						
ARU	Arti	17.53	333	eP	Pn	02 36 55.8	-1.1
ARU				eS	Sn	02 40 05.7	-6.3
ARU				MLR	MLR		
	comp=Z,20nm,17.0s						
ARU				MLR	MLR		
	comp=N,20nm,20.0s						
JIRN	Jiri	17.71	137	eP	Pn	02 36 57.4	-1.8
	comp=N,12nm,0.4s						
WSAR	Wadi Sarin	21.63	217	P	P	02 37 45.2	+2.5
	comp=N,1.8nm,0.5s,mb3.8,baz=338,slow=23,SNR=6.4						
KIV	Kislovodsk	22.08	287	eP	P	02 37 50.6	+3.1
KIV				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.3						
KIV	Kislovodsk	22.08	287	eP	P	02 37 50.6	+3.1
	comp=Z,6.1nm,0.5s,mb4.3						
BRTR	Keskin Array B	29.48	280	P	P	02 38 59.9	+3.3
	comp=Z,0.6nm,0.9s,mb3.3,baz=66,slow=11,SNR=3.0						
FINES	FINESS Array B	34.21	322	P	P	02 39 39.0	+0.9
	comp=Z,0.8nm,0.6s,mb3.8,baz=108,slow=12,SNR=4.4						
ARCES	ARCESS Array B	37.11	335	P	P	02 40 03.6	+0.6
	comp=Z,1.1nm,0.5s,mb3.9,baz=107,slow=8.2,SNR=11						
HFS	Hagfors	40.06	318	P	P	02 40 28.4	+0.5
	comp=Z,1.2nm,0.4s,mb4.0,baz=97,slow=12,SNR=6.8						
GERES	GERESS Array B	41.27	301	P	P	02 40 39.8	+2.0
	comp=Z,1.0nm,0.7s,mb3.5,baz=76,slow=8.4,SNR=7.0						
NOA	NORSAR Array B	41.28	320	P	P	02 40 37.9	-0.1
	comp=Z,0.7nm,0.9s,mb3.3,baz=93,slow=7.6,SNR=3.0						
MJAR	Matsushiro Arr	50.12	73	P	P	02 41 48.0	+0.2
	comp=Z,1.0nm,0.7s,mb4.0,baz=287,slow=8.9,SNR=4.8						
MJAR	Matsushiro Arr	50.12	73	P	P	02 41 48.0	+0.2
TORD	Torodi Ar. Bea	67.15	267	P	P	02 43 48.6	+2.2
	comp=Z,0.6nm,0.8s,mb3.7,baz=51,slow=5.8,SNR=9.6						
ROSA	Rosais	72.53	306	e	P	02 44 18.0	-1.5
ASAR	Alice Springs	86.12	126	P	P	02 45 33.2	-0.4
	comp=Z,0.2nm,0.4s,mb3.7,baz=318,slow=6.7,SNR=4.6						

*IDC **14** 02:41:11.4±2.1, 3948N×8105E, h0km, mb3.4/3, mb1 3.6/4,*

mb1mx3.3/20, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=47.8km s-min=24.8km az=138.0
BJI ***14*** *02:41:11.5, 3935N×8137E, h15km, mb4.2, ML3.6*
ISCJB ***14*** *02:41:15.2±1.2, 3958N±009×812E±0.1, h33km, mb3.7/2, Error ellipse: s-maj=14.2km s-min=9.6km az=96.6*
ISC 14 02:41:16.8±1.2**, 3948N**±009×**812E**±01**, h35km, n7, σ0s91**/10**, mb3.7**/2**, 4C, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**5.46**	**311**	⇑Pn	**Pn**	**02 42 36.8**	**+1.2**
	0.2nm,0.6s						
TKM2				⇑Lg		02 44 07.4	
	1.0nm,0.5s						
WMQ	**Urumqi**	**6.51**	**46**	*e*P	**Pn**	**02 42 52.0**	**+1.9**
WMQ				S	**Sn**	**02 44 03.0**	**-0.1**
WMQ				Smax			
	comp=N,92nm,1.0s						
WMQ				Smax			
	comp=E,97nm,1.0s						
MK05	**Makanchi Array**	**7.36**	**6**	⇑Pn	**Pn**	**02 43 01.0**	**-0.7**
	comp=E,3.7nm,0.7s,baz=190,slow=13						
MK05				⇑Sn	**Sn**	**02 44 23.1**	**-0.9**
	comp=E,8.1nm,0.7s,baz=191,slow=25						
MKAR	**Makanchi Array**	**7.36**	**6**	Pn	**Pn**	**02 43 01.4**	**-0.3**
	comp=E,1.7nm,0.3s,baz=183,slow=12,SNR=45						
MKAR				Sn	**Sn**	**02 44 24.4**	**+0.5**
	comp=E,3.6nm,0.3s,baz=188,slow=25,SNR=14						
SONM	**Songino Array**	**19.98**	**57**	P	**Pn**	**02 45 47.4**	**-0.5**
	comp=E,0.2nm,0.3s,baz=252,slow=12,SNR=3.3						
BRTR	**Keskin Array B**	**36.32**	**286**	P	**P**	**02 48 17.4**	**+0.3**
	comp=E,0.7nm,0.5s,mb3.8,baz=77,slow=8.7,SNR=5.8						
TORD	**Torodi Ar. Bea**	**73.72**	**274**	P	**P**	**02 52 45.9**	**-1.2**
	comp=E,0.3nm,0.5s,mb3.5,baz=42,slow=4.9,SNR=16						

NIED ***14*** *03:01:00, 4500N×14950E, h35km, Mw4.0 Best double couple: Mo1.04000×10^{15} NP1:φs356.00000°, δ71.00000°, λ76.00000°. NP2:φs213.00000°, δ24.00000°, λ125.00000°.*
BJI ***14*** *03:01:46.4, 4456N×14994E, h22km, mB4.4, mb4.5*
ISCJB ***14*** *03:01:49.7±0.5, 4483N±006×14975E±006, h33km, mb4.4/16, MS3.2/5, Error ellipse: s-maj=9.3km s-min=4.0km az=110.6*
SKHL ***14*** *03:01:51.6±1.1, 4498N×14963E, h33km±10km, mb4.7/3*
NEIC ***14*** *03:01:51.2±1.0, 4481N×14979E, h35km, Error ellipse: s-maj=24.0km s-min=11.9km az=136.0*
MOS ***14*** *03:01:52.2±1.4, 4492N×14946E, h54km, mb4.2/6, Error ellipse: s-maj=14.0km s-min=13.2km az=57.2*
JMA ***14*** *03:01:53.4±1.0, 4504N×14953E, h30km, M4.5*
IDC ***14*** *03:01:53.5±4.7, 4503N×14940E, h46km±44km, mb3.6/8, mb1 3.8/9, mb1mx3.6/20, mbtmp3.8/9, ML3.3/1, MS3.1/6, Ms1 3.1/6, ms1mx2.9/21, Error ellipse: s-maj=28.4km s-min=24.2km az=110.0*
ISC 14 03:01:51.7±0.5**, 4489N**±006×**14976E**±006**, h35km, n79, σ1s48**/94**, mb4.4**/16**, MS3.2**/5**, 8D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.38**	**285**	⇓*i*P	**Pn**	**03 02 10.8**	**-3.7**
KUR				AMB	AMB	03 02 11.2	
	150nm,0.5s						
KUR				AMB	AMB	03 02 11.2	
	200nm,0.5s						
KUR				AMB	AMB	03 02 11.2	
	460nm,0.5s						
KUR				*i* S	**Sn**	**03 02 26.0**	**-5.5**
KUR				A		03 02 28.8	
	2μm,0.5s						
KUR				A		03 02 28.8	
	1μm,0.5s						
KUR				A		03 02 40.0	
	5μm,2.0s						
KUR				A		03 02 40.0	
	4μm,2.0s						
KUR	**Kuril'sk**	**1.38**	**285**	⇓*i*PN	**Pn**	**03 02 10.8**	**-3.7**
KUR				*i* S	**Sn**	**03 02 26.0**	**-5.5**
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=E,200nm,0.5s						
KUR				pmax	pmax		
	comp=Z,460nm,0.5s						
KUR				smax			
	comp=N,2μm,0.5s						
KUR				smax			
	comp=E,1μm,0.5s						
KUR				smax			
	comp=N,5μm,2.0s						
KUR				smax			
	comp=E,4μm,2.0s						
YUK	**Yuzh-Kuril'sk**	**2.92**	**254**	*e*P	**Pn**	**03 02 36.0**	**+0.4**
YUK				AMB	AMB	03 02 38.5	
	comp=E,220nm,0.3s						
YUK				AMB	AMB	03 02 38.5	
	comp=E,120nm,0.3s						
YUK				AMB	AMB	03 02 38.5	
	comp=E,250nm,0.3s						
YUK				*e*S	**Sn**	**03 03 08.5**	**-1.0**
YUK				A		03 03 17.7	
	comp=E,2μm,0.8s						
YUK				A		03 03 17.7	
	comp=E,2μm,0.8s						
YUK				A		03 03 22.0	
	comp=E,2μm,0.5s						
YUK				A		03 03 22.0	
	comp=E,530nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.92**	**254**	*e*PN	**Pn**	**03 02 36.0**	**+0.4**
YUK				*e*S	**Sn**	**03 03 08.5**	**-1.0**
YUK				pmax	pmax		
	comp=N,220nm,0.3s						
YUK				pmax	pmax		
	comp=E,120nm,0.3s						
YUK				pmax	pmax		
	comp=Z,250nm,0.3s						
YUK				smax			
	comp=N,2μm,0.8s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,530nm,0.4s						
NEM2	**Nemuro 2**	**3.27**	**244**	P	**Pn**	**03 02 39.8**	**-0.6**
NEM2				*e*S	**Sn**	**03 03 15.2**	**-2.9**
JRA	**Rausu**	**3.46**	**256**	P	**Pn**	**03 02 44.6**	**+1.6**
JNK	**Nakash**	**3.85**	**252**	P	**Pn**	**03 02 49.7**	**+1.3**
JNK				*e*S	**Sn**	**03 03 30.7**	**-1.7**
JAK	**Akkeshi**	**4.12**	**244**	P	**Pn**	**03 02 52.2**	**+0.1**
JAK				*e*S	**Sn**	**03 03 36.4**	**-2.6**
JTKR	**Abashiri--Toko**	**4.29**	**260**	P	**Pn**	**03 02 55.6**	**+1.1**
JAR	**Ashorobuto**	**4.60**	**252**	P	**Pn**	**03 03 00.6**	**+1.9**
JAR				*e*S	**Sn**	**03 03 51.3**	**+0.4**
JMP	**Maruseppu**	**4.67**	**261**	P	**Pn**	**03 03 01.3**	**+1.7**
JOB	**Onbets**	**4.72**	**247**	P	**Pn**	**03 03 02.3**	**+1.9**
JOB				*e*S	**Sn**	**03 03 52.8**	**-1.1**
JSE	**Soyaes**	**5.09**	**273**	P	**Pn**	**03 03 08.7**	**+3.2**
JKK2	**Kamakawa 2**	**5.13**	**261**	P	**Pn**	**03 03 08.4**	**+2.4**
JCH	**Churui**	**5.16**	**246**	P	**Pn**	**03 03 08.7**	**+2.2**
ASAJ	**Asahikawa**	**5.18**	**264**	P	**Pn**	**03 03 09.2**	**+2.5**
	comp=E,4.5nm,0.3s,baz=89,slow=16,SNR=21						
ASAJ				LR	LR	03 05 13.9	
	comp=E,164nm,19.2s,baz=92,slow=40						
ASAJ	**Asahikawa**	**5.18**	**264**	P	**Pn**	**03 03 09.2**	**+2.5**
ASAJ	**Asahikawa**	**5.18**	**264**	PN	**Pn**	**03 03 09.3**	**+2.6**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,164nm,19.2s						
YSS	**Yuzh-Sakhalins**	**5.30**	**295**	⇓*i*P	**Pn**	**03 03 09.7**	**+1.3**
YSS				AMB	AMB	03 03 10.0	
	comp=Z,20nm,0.5s						
YSS				*e*S	**Sn**	**03 04 07.0**	**-1.2**
YSS				A		03 04 08.6	
	comp=Z,20nm,0.5s						
YSS	**Yuzh-Sakhalins**	**5.30**	**295**	*e*PN	**Pn**	**03 03 09.1**	**+0.7**
YSS				pmax	pmax		
	comp=Z,19nm,0.3s						
YSS	**Yuzh-Sakhalins**	**5.30**	**295**	*e*Pn	**Pn**	**03 03 09.1**	**+0.7**
	comp=Z,19nm,0.3s						
JFR	**Furan**	**5.45**	**254**	P	**Pn**	**03 03 13.4**	**+3.0**
JFR				*e*S	**Sn**	**03 04 13.8**	**+2.0**
JWK2	**Keihoku**	**5.58**	**277**	P	**Pn**	**03 03 16.2**	**+4.0**
JAB	**Ashibetsu**	**5.59**	**258**	P	**Pn**	**03 03 16.5**	**+4.1**
JEM	**Erimo**	**5.60**	**241**	P	**Pn**	**03 03 14.7**	**+2.2**
JEM				*e*S	**Sn**	**03 04 16.3**	**+0.8**
JNBK	**Urakawa-nobuka**	**5.72**	**245**	*e*S	**Sn**	**03 04 16.5**	**-2.0**
JBT2	**Biratori 2**	**5.75**	**251**	P	**Pn**	**03 03 16.0**	**+1.5**
JEW	**Eniwo**	**6.35**	**254**	P	**Pn**	**03 03 27.1**	**+4.4**
JKB	**Kayabe**	**7.03**	**248**	P	**Pn**	**03 03 33.1**	**+1.0**
JKB				*e*S	**Sn**	**03 04 46.4**	**-4.4**
JYM2	**Yakumo 2**	**7.37**	**251**	P	**Pn**	**03 03 38.1**	**+1.4**
JSH	**Shimam**	**7.38**	**256**	P	**Pn**	**03 03 39.3**	**+2.4**
JANG	**Nango**	**7.57**	**236**	P	**Pn**	**03 03 38.2**	**-1.3**
JANG				*e*S	**Sn**	**03 04 55.4**	**-8.7**
JTM	**Tenmabayashi**	**7.59**	**240**	P	**Pn**	**03 03 39.5**	**-0.3**
JTM				*e*S	**Sn**	**03 04 57.4**	**-7.1**
JSR	**Shiriuchi**	**7.61**	**247**	P	**Pn**	**03 03 41.1**	**+1.1**
JSR				*e*S	**Sn**	**03 05 00.0**	**-4.9**
JTH	**Tanohata**	**7.65**	**232**	*e*S	**Sn**	**03 04 56.6**	**-10**
JOSM	**Okushiri--Mats**	**7.99**	**253**	P	**Pn**	**03 03 47.0**	**+1.8**
OFUJ	**Ofunato**	**8.37**	**229**	P	**Pn**	**03 03 49.0**	**-1.4**
OFUJ				*e*S	**Sn**	**03 05 15.1**	**-8.5**
JRG	**Rokugo**	**8.72**	**234**	P	**Pn**	**03 03 54.8**	**-0.5**
JRG				*e*S	**Sn**	**03 05 26.5**	**-5.9**
JIO	**Ouri**	**8.99**	**227**	P	**Pn**	**03 03 58.0**	**-1.1**
JIO				*e*S	**Sn**	**03 05 29.6**	**-9.5**
TEY	**Ternei**	**9.33**	**276**	*e*P	**Pn**	**03 04 05.0**	**+1.3**
MAJO	**Matsushiro**	**12.09**	**230**	*e*PN	**Pn**	**03 04 40.2**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MAJO	**Matsushiro**	**12.09**	**230**	*e*Pn	**Pn**	**03 04 40.2**	**-1.3**
	comp=Z,2.2nm,0.4s						
MJAR	**Matsushiro Arr**	**12.09**	**230**	P	**Pn**	**03 04 40.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=28,slow=13,SNR=4.2						
MJAR				LR	LR	03 08 58.4	
	comp=Z,52nm,19.5s,baz=130,slow=36						
EKMR	**Ekimchan**	**13.71**	**313**	*e*P	**Pn**	**03 05 04.6**	**+1.0**
YAK	**Yakutsk**	**20.76**	**333**	⇓*e*P	**P**	**03 06 33.6**	**+4.1**
YAK				pmax	pmax		
	comp=Z,31nm,1.0s						
YAK				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.2						
SSE	**Sheshan**	**26.23**	**248**	P	**P**	**03 07 21.8**	**-1.6**
SSE				AMB	AMB		
	comp=Z,23nm,0.6s,mb4.9						
SONM	**Songino Array**	**29.78**	**291**	LR	LR	03 19 49.6	
	comp=Z,31nm,19.2s,MS3.0,baz=91,slow=36						
IMA2	**Indian Mountai**	**36.68**	**35**	*e*P	**P**	**03 08 54.3**	**-0.8**
GTA	**Gaotai**	**36.95**	**279**	*e*P	**P**	**03 08 57.4**	**0.0**
GTA				AP	pP	03 09 01.0	-6.6
GTA				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.6						
COLA	**College**	**39.04**	**37**	⇓*e*P	**P**	**03 09 16.7**	**+1.7**
INK	**Inuvik**	**44.47**	**31**	P	**P**	**03 09 59.7**	**+0.3**
	comp=Z,1.5nm,0.6s,mb3.9,baz=274,slow=7.0,SNR=5.4						
INK	**Inuvik**	**44.47**	**31**	P	**P**	**03 09 59.7**	**+0.3**
MKAR	**Makanchi Array**	**45.72**	**298**	P	**P**	**03 10 08.1**	**-1.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=59,slow=10.0,SNR=4.9						
MKAR				PcP	PcP	03 11 45.6	-1.2
	comp=Z,0.5nm,0.5s,baz=73,slow=4.1,SNR=4.5						
JOF	**Joensuu**	**61.94**	**333**	*e*p	**P**	**03 12 04.3**	**-3.6**
FINES	**FINESS Array B**	**64.69**	**334**	P	**P**	**03 12 24.1**	**-2.1**
	comp=Z,0.9nm,0.6s,mb4.0,baz=52,slow=9.9,SNR=6.7						
FINES				LR	LR	03 43 43.2	
	comp=Z,23nm,20.2s,MS3.4,baz=352,slow=39						
FINES	**FINESS Array B**	**64.69**	**334**	*i* P	**P**	**03 12 24.1**	**-2.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**65.39**	**60**	P	**P**	**03 12 32.6**	**+2.0**
	comp=Z,0.6nm,0.7s,mb3.7,baz=308,slow=5.6,SNR=4.8						
NOA	**NORSAR Array B**	**69.19**	**340**	LR	LR	03 46 24.3	
	comp=Z,14nm,20.5s,MS3.2,baz=170,slow=39						
ASAR	**Alice Springs**	**69.75**	**195**	P	**P**	**03 12 59.2**	**+1.0**
	comp=Z,1.0nm,0.8s,mb3.8,baz=13,slow=6.5,SNR=10						
ASAR	**Alice Springs**	**69.75**	**195**	P	**P**	**03 12 59.2**	**+1.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**71.75**	**325**	P	**P**	**03 13 08.9**	**-1.5**
	comp=Z,0.6nm,0.4s,mb3.9,baz=38,slow=6.1,SNR=6.2						
AKASG	**Malin Array Be**	**71.75**	**325**	P	**P**	**03 13 08.9**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CLL	**Collm**	**77.14**	**334**	⇓P	**P**	**03 13 40.5**	**-1.2**
	comp=Z,logA/T=0.9,mb4.6						
CLL	**Collm**	**77.14**	**334**	⇓*i*P	**P**	**03 13 40.5**	**-1.2**
	comp=Z,5.0nm,0.7s,mb4.5						
CLL	**Collm**	**77.14**	**334**	⇓*i*P	**P**	**03 13 40.5**	**-1.2**
CLL				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
MIB	**Mutribah**	**77.59**	**300**	*e*P	**P**	**03 13 42.3**	**-1.9**
MIB				AMb	AMB	03 13 44.5	
	comp=Z,16nm,0.7s,mb5.1						
PRU	**Pruhonice**	**77.78**	**332**	*e*P	**P**	**03 13 44.5**	**-0.8**
QRN	**Al-Qurain**	**77.97**	**299**	*e*P	**P**	**03 13 45.4**	**-0.9**
QRN				AMb	AMB	03 13 46.6	
	comp=Z,24nm,0.5s,mb5.4						
RST	**Umm Al-Ruwaisa**	**78.01**	**300**	*e*P	**P**	**03 13 45.1**	**-1.5**
RST				AMb	AMB	03 13 46.6	
	comp=Z,16nm,0.7s,mb5.1						
NAY	**Al-Naaiem**	**78.03**	**299**	*e*P	**P**	**03 13 45.1**	**-1.6**
NAY				AMb	AMB	03 13 47.0	
	comp=Z,5.7nm,0.8s,mb4.6						
RDF	**Al-Radifah**	**78.07**	**299**	*e*P	**P**	**03 13 45.9**	**-1.0**
RDF				AMb	AMB	03 13 47.4	
	comp=Z,24nm,0.5s,mb5.4						
BRTR	**Keskin Array B**	**78.09**	**315**	P	**P**	**03 13 47.0**	**0.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=91,slow=3.7,SNR=7.5						
BRTR	**Keskin Array B**	**78.09**	**315**	*e*P	**P**	**03 13 46.9**	**0.0**
BRTR	**Keskin Array B**	**78.09**	**315**	P	**P**	**03 13 47.0**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KHC	**Kasperske Hory**	**78.84**	**332**	*e*P	**P**	**03 13 50.5**	**-0.6**
GERES	**GERESS Array B**	**79.05**	**332**	P	**P**	**03 13 51.0**	**-1.2**
	comp=Z,0.7nm,0.5s,mb3.8,baz=41,slow=4.9,SNR=7.1						
GERES	**GERESS Array B**	**79.05**	**332**	P	**P**	**03 13 51.0**	**-1.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KEST	**Kesra**	**92.11**	**329**	LR	LR	04 04 50.3	
	comp=Z,15nm,18.9s,MS3.5,baz=348,slow=41						
TORD	**Torodi Ar. Bea**	**115.38**	**325**	PKP	PKPdf	03 20 28.5	-1.1
	comp=Z,0.5nm,0.8s,baz=38,slow=1.2,SNR=4.6						

CSEM ***14*** *03:06:44.4±0.1, 3847N×4353E, h8km, MD3.8, Error ellipse: s-maj=1.8km s-min=1.5km az=119.0*
ISK ***14*** *03:06:44.9, 3845N×4352E, h8km, MD3.8*
ISCJB ***14*** *03:06:45.7±0.6, 3842N±004×4357E±005, h14km±3km, Error ellipse: s-maj=6.8km s-min=5.6km az=67.0*
ISC 14 03:06:46.2±0.6**, 3842N**±003×**4357E**±005**, h13km**±3km**, n23, σ1s09**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANT	**Van**	**0.15**	**280**	*i* PG	**Pg**	**03 06 49.3**	**-0.5**
VANT				*i* SG	**Sg**	**03 06 53.4**	**+1.0**
TVAN	**Van**	**0.17**	**310**	*i* P	**Pg**	**03 06 48.5**	**-1.7**
TVAN				*i* S	**Sg**	**03 06 54.6**	**+1.6**
VANB	**Van**	**0.23**	**320**	*i* PG	**Pg**	**03 06 48.4**	**-2.7**
CLDR	**Caldiran**	**0.77**	**20**	*i* PG	**Pg**	**03 06 59.5**	**-1.7**
CLDR				*i* SG	**Sg**	**03 07 11.6**	**+0.3**
HKR	**Hakkari**	**0.85**	**171**	PG	**Pg**	**03 07 02.6**	**-0.1**
HAKT	**HAKKARI**	**0.87**	**173**	*i* P	**Pg**	**03 07 04.5**	**+1.5**
CUKT	**Cukurca**	**1.17**	**179**	PN	**Pn**	**03 07 08.2**	**-0.1**
BEST	**Besiri**	**1.89**	**254**	*i* P	**Pn**	**03 07 17.4**	**-0.8**
BEST				*i* S	**Sn**	**03 07 41.7**	**-0.1**
GNI	**Garni**	**1.95**	**27**	*e*PN	**Pn**	**03 07 19.8**	**+0.8**
BNGL	**BINGOL**	**1.97**	**286**	*i* P	**Pn**	**03 07 17.3**	**-2.0**
BNGL				*i* S	**Sn**	**03 07 42.2**	**-1.6**
DIGO	**Kars**	**2.00**	**356**	*i* P	**Pn**	**03 07 20.2**	**+0.5**
DIGO				*i* S	**Sn**	**03 07 49.4**	**+4.9**
MSL	**Mosul**	**2.16**	**190**	*e*x	x	03 07 23.0	
MSL				*e*x	x	03 08 02.0	
KARS	**Kars**	**2.22**	**351**	*e*PN	**Pn**	**03 07 23.5**	**+0.8**
ERZM	**Erzurum**	**2.27**	**312**	*i* P	**Pn**	**03 07 23.9**	**+0.5**
ERZM				*i* S	**Sn**	**03 07 52.8**	**+1.6**
EZM	**Erzurum**	**2.27**	**311**	*e*PN	**Pn**	**03 07 23.2**	**-0.2**
BINT	**Bingol**	**2.46**	**282**	*e*PN	**Pn**	**03 07 25.5**	**-0.5**
MARD	**Mardin**	**2.47**	**244**	*i* P	**Pn**	**03 07 26.4**	**+0.2**
MARD				*i* S	**Sn**	**03 07 55.0**	**-1.2**
EZC	**Erzincan**	**3.21**	**296**	*e*PN	**Pn**	**03 07 41.2**	**+4.9**
PTK	**Pertek**	**3.31**	**279**	*e*PN	**Pn**	**03 07 37.8**	**+0.1**
BCA	**Borcka**	**3.37**	**334**	*e*PN	**Pn**	**03 07 38.3**	**-0.3**
ELZG	**Elazig**	**3.60**	**273**	*i* P	**Pn**	**03 07 48.0**	**+6.3**
ELZG				*i* S	**Sn**	**03 08 26.3**	**+2.2**
URFA	**Urfa**	**3.88**	**257**	*e*PN	**Pn**	**03 07 46.2**	**+0.6**
MYA	**Malataya**	**4.05**	**270**	*e*PN	**Pn**	**03 07 48.3**	**+0.5**

NEIC ***14*** *04:03:18.3, 2939S×7169W, h67km, MG3.5(GUC), After GUC.*
GUC 14 04:03:18.3±0.6**, 2939S×7169W, h67km**±34km**, ML3.5, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.94**	**67**	*e*P	Pn	04 03 36.6	+0.7
LCO				*i* S	Sn	04 03 50.9	+2.0
TLL	**Tololo Astrono**	**1.09**	**135**	⇑*i*P	Pn	04 03 38.8	+1.1
TLL				*i* S	Sn	04 03 54.3	+2.1
TLL				AML	AML	04 03 58.9	
	comp=N,1μm,0.5s						
TLL	**Tololo Astrono**	**1.09**	**135**	⇑*i*P	Pn	04 03 38.8	+1.1
TLL				*i* S	Sn	04 03 54.3	+2.1
VACH	**Vallenar**	**1.15**	**45**	*e*P	Pn	04 03 39.3	+0.8
VACH				*i* S	Sn	04 03 54.6	+1.0
VACH				AML	AML	04 04 01.3	
	comp=E,2μm,0.3s						
VACH	**Vallenar**	**1.15**	**45**	*e*P	Pn	04 03 39.3	+0.8
VACH				*i* S	Sn	04 03 54.6	+1.0
CPCH	**Copiapo**	**2.34**	**30**	*e*P	Pn	04 03 54.9	+0.4
CPCH				*i* S	Sn	04 04 23.1	+0.9
CPCH				AML	AML	04 04 25.0	
	comp=E,544nm,0.2s						
CPCH	**Copiapo**	**2.34**	**30**	*e*P	Pn	04 03 54.9	+0.4
CPCH				*i* S	Sn	04 04 23.1	+0.9

BJI ***14*** *04:03:53.8, 5550S×12430W, h10km, mB5.4, Ms5.2, Msz4.9*
ISCJB ***14*** *04:03:55.3±5.3, 556S±0.1×1245W±02, h18km±35km, mb4.5/13, MS4.9/58, Error ellipse: s-maj=25.0km s-min=19.8km az=127.2*
NEIC ***14*** *04:03:55.8±0.4, 5550S×12435W, h10km, mb4.7/11, MS5.0/51, MW5.6, Error ellipse: s-maj=19.1km s-min=16.0km az=142.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; Mrr-0.53; Mθθ1.65; Mφφ-1.12; Mrθ-0.15; Mθφ2.71; Mφr-0.01; Best double couple: Mo3.00000×10^{17} NP1:φs284.00000°, δ90.00000°, λ3.00000°. NP2:φs194.00000°, δ87.00000°, λ180.00000°. Principal axes: T 3.3100, Plg2.0000°, Azm149.0000°; N -0.5300, Plg87.0000°, Azm286.0000°; P -2.7700, Plg2.0000°, Azm58.0000°;*
HRVD ***14*** *04:03:55.8±0.1, 5576S×12436W, h23km, MW5.6/102, Centroid moment Tensor Solution. LP body waves: s95,c179;Mantle waves: s102,c261; Half duration: 1s6 Moment tensor: Scale 10^{17}Nm; Mrr-0.28±.04; Mθθ2.21±.04; Mφφ-1.93±.04; Mrθ0.29±.07; Mθφ2.78±.04; Mφr0.19±.07; Best double couple: Mo3.48200×10^{17} NP1:φs108.00000°, δ86.00000°, λ3.00000°. NP2: φs18.00000°, δ87.00000°, λ176.00000°. Principal axes: T 3.6370, Plg5.0000°, Azm333.0000°; N -0.3060, Plg85.0000°, Azm162.0000°; P -3.3270, Plg1.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
IDC ***14*** *04:03:57.6±1.1, 5603S×12497W, h0km, mb3.8/7, mb1 4.0/7, mb1mx4.0/14, mbtmp3.8/7, MS4.7/5, Ms1 4.7/5, ms1mx4.4/15 Error ellipse: s-maj=37.5km s-min=22.8km az=161.0*
ISC 14 04:03:55.9±5.1**, 556S**±01×**1244W**±02**, h15km**±29km**, n100, σ1s01**/24**, mb4.5**/13**, MS4.9**/58**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**30.25**	**132**	LR	LR	04 18 40.6	
	comp=Z,2μm,20.0s,MS4.7,baz=261,slow=29						
PMSA	**Palmer Station**	**30.25**	**132**	PFAKE		04 10 20.0	+14
PMSA				LR	LR		
	comp=Z,3μm,20.0s,MS4.9						
USHA	**Ushuaia**	**31.23**	**112**	LR	LR	04 19 21.0	
	comp=Z,2μm,21.4s,MS4.6,baz=221,slow=30						
SBA	**Scott Base**	**32.05**	**202**	PFAKE		04 10 30.0	+8.1
SBA				LR	LR		
	comp=Z,2μm,21.0s,MS4.7						
VNDA	**Vanda**	**33.10**	**202**	P	**P**	**04 10 30.7**	**-0.4**
	comp=Z,1.4nm,1.0s,mb3.9,baz=88,slow=9.4,SNR=4.8						
VNDA	**Vanda**	**33.10**	**202**	*e*P	**P**	**04 10 33.6**	**+2.5**
	comp=Z,10nm,1.4s,mb4.6						
VNDA				LR	LR		
	comp=Z,2μm,21.0s,MS4.7						
RKT	**Rikitea**	**33.32**	**342**	*e*S	**S**	**04 15 55.2**	**+2.1**
	comp=Z,549nm,27.8s						
RKT				*e*LQ		04 17 55.7	
	comp=Z,1μm,30.8s						
RKT				*e*LR	LR	04 19 23.9	
	comp=Z,7μm,28.8s,baz=169						
QSPA	**South Pole Qui**	**34.63**	**180**	*e*P	**P**	**04 10 44.6**	**+0.1**
	comp=Z,12nm,1.4s,mb4.7						
QSPA				LR	LR		
	comp=Z,1μm,22.0s,MS4.6						
TBI	**Tubuai**	**37.11**	**320**	*e*S	**S**	**04 16 50.3**	**-1.1**
	comp=Z,823nm,28.5s						
TBI				*e*LQ		04 19 27.2	
	comp=Z,2μm,24.0s						
TBI				*e*LR	LR	04 20 58.2	
	comp=Z,5μm,29.5s,baz=160						
PLCA	**Paso Flores**	**37.86**	**90**	LR	LR	04 22 47.9	
	comp=Z,1μm,19.1s,MS4.7,baz=228,slow=30						
PLCA	**Paso Flores**	**37.86**	**90**	P	**P**	**04 11 13.7**	**+1.7**
	comp=Z,7.4nm,1.1s,mb4.3						
PLCA				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
EFI	**East Falkland**	**38.20**	**113**	PFAKE		04 11 30.0	+15
EFI				LR	LR		
	comp=Z,2μm,22.0s,MS5.0						
SNZO	**South Karori**	**41.46**	**264**	PFAKE		04 11 50.0	+8.0
SNZO				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
PPT	**Papeete**	**42.48**	**323**	*e*S	**S**	**04 18 11.4**	**-0.4**
	comp=Z,1μm,26.0s						
PPT				*e*LQ		04 21 35.0	
	comp=Z,9μm,27.0s						
PPT				*e*LR	LR	04 23 41.9	
	comp=Z,6μm,26.0s,baz=164						
CFAA	**Coronel Fontan**	**45.65**	**82**	P	**P**	**04 12 21.6**	**+5.9**
	comp=Z,0.2nm,0.6s,baz=180,slow=7.1,SNR=2.9						
RAO	**Raoul Island**	**45.95**	**282**	*e*P	**P**	**04 12 18.2**	**+0.1**
	comp=Z,185nm,0.6s						
SNAA	**Sanae**	**46.65**	**158**	P	**P**	**04 12 23.7**	**0.0**
	comp=Z,0.6nm,0.9s,mb3.5,baz=237,slow=7.9,SNR=5.3						
SNAA	**Sanae**	**46.65**	**158**	*e*P	**P**	**04 12 22.8**	**-0.9**
	comp=Z,12nm,1.3s,mb4.7						
TAOE	**Nuku Hiva Isla**	**48.21**	**339**	*e*S	**S**	**04 19 34.7**	**+0.1**
	comp=Z,3μm,26.5s						
TAOE				*e*LR	LR	04 26 17.7	
	comp=Z,11μm,28.0s						
CASY	**Casey**	**51.65**	**205**	PFAKE		04 13 10.0	+8.0
CASY				LR	LR		
	comp=Z,1μm,19.0s,MS4.9						
LVC	**Limon Verde**	**52.26**	**74**	PFAKE		04 13 20.0	+13
LVC				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
TAU	**Tasmania Unive**	**55.20**	**243**	PFAKE		04 13 40.0	+12
TAU				LR	LR		
	comp=Z,3μm,20.0s,MS5.3						
CPUP	**Villa Florida**	**55.83**	**87**	P	**P**	**04 13 39.4**	**+6.9**
	comp=Z,2.1nm,1.0s,mb4.1,baz=222,slow=9.1,SNR=3.3						
CPUP				LR	LR	04 33 36.6	
	comp=Z,747nm,20.7s,MS4.8,baz=210,slow=32						
CPUP	**Villa Florida**	**55.83**	**87**	P	**P**	**04 13 38.7**	**+6.1**
	comp=Z,12nm,0.9s,mb4.9						
NNA	**Nana**	**56.97**	**59**	PFAKE		04 13 50.0	+9.3
NNA				LR	LR		
	comp=Z,981nm,21.0s,MS4.9						
MAW	**Mawson**	**57.05**	**183**	P	**P**	**04 13 40.7**	**-0.5**
	comp=Z,3.0nm,0.9s,mb4.3,baz=250,slow=3.3,SNR=7.0						
MAW	**Mawson**	**57.05**	**183**	*e*P	**P**	**04 13 40.8**	**-0.5**
	comp=Z,9.1nm,1.0s,mb4.8						
MAW				*e*		04 13 50.7	
MAW				*e*		04 13 58.1	
MAW				LR	LR		
	comp=Z,3μm,21.0s,MS5.4						
STKA	**Stephens Creek**	**66.50**	**248**	P	**P**	**04 14 47.1**	**+2.2**
	comp=Z,1.5nm,0.7s,mb4.2,baz=149,slow=10.0,SNR=4.2						
STKA	**Stephens Creek**	**66.50**	**248**	*e*P	**P**	**04 14 45.6**	**+0.7**
SAML	**Samuel**	**66.58**	**71**	*e*P	**P**	**04 14 43.5**	**-1.9**
	comp=Z,5.1nm,1.0s,mb4.5						
SAML				*e*		04 14 50.9	

SAML LR LR
comp=Z,369nm,20.0s,MS4.6
BDFB Brasilia 69.56 88 PFAKE 04 15 20.0 +16
BDFB LR LR
comp=Z,2µm,21.0s,MS5.3
ROSC El Rosal 72.89 53 LR LR 04 42 00.7
comp=Z,254nm,20.0s,MS4.5,baz=188,slow=31
CTAO Charters Tower 73.32 259 PFAKE 04 15 40.0 +13
CTAO LR LR
comp=Z,720nm,19.0s,MS5.0
ASAR Alice Springs 77.12 247 P **P** **04 15 48.5 -0.2**
comp=Z,1.5nm,0.8s,mb4.0,baz=145,slow=4.9,SNR=7.7
SDV Santo Domingo 78.13 55 PFAKE 04 16 10.0 +16
SDV LR LR
comp=Z,196nm,20.0s,MS4.4
POHA Pohakuloa 79.53 330 PFAKE 04 16 10.0 +8.0
POHA LR LR
comp=Z,1µm,22.0s,MS5.3
WRAB Tennant Creek 79.94 250 *eP* **P** **04 16 03.3 -1.0**
comp=Z,11nm,0.9s,mb4.8
WRAB LR LR
comp=Z,1µm,20.0s,MS5.3
PMG Port Moresby 81.44 266 PFAKE 04 16 20.0 +7.7
PMG LR LR
comp=Z,790nm,21.0s,MS5.0
RCBR Riachuelo 84.39 92 PFAKE 04 16 40.0 +12
RCBR LR LR
comp=Z,429nm,20.0s,MS4.8
MBWA Marble Bar 86.34 237 *eP* **P** **04 16 37.5 +0.2**
comp=Z,18nm,1.1s,mb5.2
MBWA *e* 04 16 46.7
MBWA LR LR
comp=Z,374nm,20.0s,MS4.8
SUR Sutherland 87.50 151 PFAKE 04 17 00.0 +17
SUR LR LR
comp=Z,1µm,21.0s,MS5.3
JCT Junction City 88.23 21 P **P** **04 16 46.5 0.0**
comp=Z,16nm,1.2s,mb5.1
JCT *e* 04 16 58.4
SJG San Juan 88.27 54 PFAKE 04 17 00.0 +13
SJG LR LR
comp=Z,185nm,20.0s,MS4.5
ISA Isabella 90.99 5 PFAKE 04 17 10.0 +11
ISA LR LR
comp=Z,177nm,20.0s,MS4.5
ANMO Albuquerque 91.44 15 P **P** **04 17 01.0 -0.5**
comp=Z,3.4nm,1.1s,mb4.6
ANMO LR LR
comp=Z,259nm,19.0s,MS4.7
CMB Columbia Colle 93.28 3 PFAKE 04 17 20.0 +10
CMB LR LR
comp=Z,746nm,20.0s,MS5.1
TPH Tonopah 93.46 6 PFAKE 04 17 20.0 +9.2
TPH LR LR
comp=Z,597nm,19.0s,MS5.1
MIDW Midway 94.87 315 PFAKE 04 17 30.0 +13
MIDW LR LR
comp=Z,767nm,21.0s,MS5.1
LBTB Lobatse 95.77 153 PFAKE 04 17 30.0 +8.6
LBTB LR LR
comp=Z,565nm,19.0s,MS5.1
HWUT Hardware Ranch 97.40 10 PFAKE 04 17 40.0 +11
HWUT LR LR
comp=Z,668nm,22.0s,MS5.1
TSUM Tsumeb 98.87 144 PFAKE 04 17 50.0 +15
TSUM LR LR
comp=Z,483nm,20.0s,MS5.0
NEW Newport 103.62 5 PFAKE 04 18 10.0 +13
NEW LR LR
comp=Z,426nm,20.0s,MS5.0
LSZ Lusaka 105.75 153 PFAKE 04 22 30.0 +11
LSZ LR LR
comp=Z,619nm,19.0s,MS5.2
DAV Davao City (W) 107.08 257 PFAKE 04 22 30.0 +8.8
DAV LR LR
comp=Z,1µm,19.0s,MS5.5
DBIC Dimbokro 111.92 111 PFAKE 04 22 40.0 +10
DBIC LR LR
comp=Z,306nm,21.0s,MS4.9
PMR Palmer 118.41 347 PFAKE 04 22 50.0 +7.2
PMR LR LR
comp=Z,395nm,19.0s,MS5.1
MCK McKinley 120.45 348 PFAKE 04 23 00.0 +13
MCK LR LR
comp=Z,247nm,22.0s,MS4.8
COLA College 121.43 349 PFAKE 04 23 00.0 +11
COLA LR LR
comp=Z,489nm,19.0s,MS5.2
KMBO Kilima Mbogo 121.55 158 PFAKE 04 23 00.0 +11
KMBO LR LR
comp=Z,507nm,20.0s,MS5.2
MAJO Matsushiro 123.14 287 PFAKE 04 23 00.0 +8.1
MAJO LR LR
comp=Z,275nm,21.0s,MS4.9
TATO Taipei 123.79 265 PFAKE 04 23 10.0 +17
TATO LR LR
comp=Z,276nm,19.0s,MS4.9
PALK Pallekele 127.88 212 PFAKE 04 23 10.0 +9.1
PALK LR LR
comp=Z,280nm,21.0s,MS4.9
YSS Yuzh-Sakhalins 128.22 299 PFAKE 04 23 10.0 +8.4
YSS LR LR
comp=Z,252nm,21.0s,MS4.9
NJ2 Nanjing 130.67 269 *e*PKP PKPdf 04 23 03.8 -2.4
MA2 Magadan 133.01 316 PFAKE 04 23 20.0 +9.3
MA2 LR LR
comp=Z,318nm,19.0s,MS5.0
BILL Bilibino 133.38 331 PFAKE 04 23 20.0 +8.6
BILL LR LR
comp=Z,1µm,21.0s,MS5.6
MDJ Mudanjiang 133.46 289 PKP PKPdf 04 23 12.3 +0.8
MDJ PP PP
comp=Z,44nm,4.7s
MDJ Mudanjiang 133.46 289 PFAKE 04 23 20.0 +8.5
MDJ LR LR
comp=Z,167nm,19.0s,MS4.8
KMI Kunming 134.25 248 PKP PKPdf 04 23 14.3 +1.3
KMI SKKS SKKSac 04 32 41.6 +2.1
KMI SS SS 04 43 36.4 +3.2
KMI PP PP
comp=Z,75nm,6.7s
KMI LR LR
comp=Z,253nm,47.5s,MS4.6
CN2 Changchun 135.17 285 *e*PKP PKPdf 04 23 17.8 +3.1
BJT Baijiatuau 137.85 275 PFAKE 04 23 30.0 +10
BJT LR LR
comp=Z,179nm,19.0s,MS4.8
CD2 Chengdu 138.28 254 *e*PKP PKPdf 04 23 18.6 -1.9
CD2 XPKP 04 23 24.3
CD2 PP PP 04 26 11.6 +2.0
CD2 SS SS 04 44 21.5 +0.2
CD2 PP PP
comp=Z,180nm,9.2s
CD2 LR LR
comp=N,90nm,27.6s
CD2 LR LR
comp=Z,120nm,20.4s
HHC Hu-ho-hao-te 141.02 272 *e*PKP PKPdf 04 23 22.9 -2.6
HHC PP PP 04 26 28.0 +1.5
HHC PKS 04 26 57.6
HHC SKS SKSdf 04 30 31.9 -3.2
HHC SKKS SKKSac 04 33 18.8 -0.8
HHC SS SS 04 44 54.5 +1.0
HHC LR LR
comp=N,130nm,30.4s,MS4.7
HHC LR LR
comp=E,129nm,30.4s,MS4.7
HHC LR LR
comp=Z,144nm,27.5s,MS4.6
HIA Hailar 141.63 288 PFAKE 04 23 40.0 +13
HIA LR LR
comp=Z,252nm,22.0s,MS4.9
LZH Lanzhou 142.10 260 *e*PKP PKPdf 04 23 22.3 -5.1
LZH APKP 04 23 25.3
LZH XPKP 04 23 26.9
LZH PP PP 04 26 32.8 -0.2
LZH SKKS SKKSac 04 33 21.0 -4.9
LZH PP PP
comp=Z,123nm,5.4s
LZH LR LR
comp=E,233nm,19.0s
LZH LR LR
comp=Z,341nm,20.0s,MS5.1
YAK Yakutsk 143.04 311 PFAKE 04 23 40.0 +11
YAK LR LR

comp=Z,270nm,21.0s,MS5.0
LSA Lhasa 143.89 239 PFAKE 04 23 40.0 +9.4
LSA LR LR
comp=Z,206nm,20.0s,MS4.9
JIRN Jiri 144.47 231 *e*P PKPdf 04 23 33.3 +1.7
PKI Pulchoki 144.74 230 *e*P PKPdf 04 23 33.5 +1.5
GUN Gumba 144.83 231 *e*P PKPdf 04 23 33.9 +1.7
comp=Z,57nm,1.0s
DMN Daman 144.90 229 *e*P PKPdf 04 23 32.9 +0.6
comp=Z,76nm,0.9s
RJF Les Rejaudoux 144.91 84 *e*PKIKP PKPdf 04 23 31.8 -0.5
comp=Z,14nm,0.9s
KKN Kakani 144.99 230 *e*P PKPdf 04 23 34.1 +1.6
GKN Gorkha 145.45 229 *e*P PKPbc 04 23 35.5 +2.2
comp=Z,65nm,1.2s
KOLN Koldanda 145.69 228 *e*P PKPdf 04 23 36.5 +2.8
comp=Z,36nm,0.9s
GTA Gaotai 146.70 260 PKP PKPdf 04 23 39.5 +4.1
AVF Avril sur Loir 146.82 83 *e*PKIKP PKPdf 04 23 33.4 -2.2
comp=Z,32nm,1.5s
SMF Signal de Mont 147.01 84 *e*PKIKP PKPdf 04 23 34.6 -1.3
comp=Z,26nm,1.2s
SSF Saint Saulge 147.06 83 *e*PKIKP PKPdf 04 23 34.6 -1.4
ULN Ulaanbaatar 147.86 278 PFAKE 04 23 50.0 +13
ULN LR LR
comp=Z,213nm,21.0s,MS4.9
LPG La Plagne 147.99 88 *e*PKIKP PKPdf 04 23 37.1 -0.4
comp=Z,32nm,1.3s
LPL La Plagne 147.99 87 *e*PKIKP PKPdf 04 23 37.2 -0.3
comp=Z,17nm,1.0s
SONM Songino Array 148.21 278 PKPbc PKPbc 04 23 43.7 +2.5
comp=Z,0.3nm,0.5s,baz=126,slow=2.0,SNR=3.5
HAU Haudompre 149.19 83 *e*PKIKP PKPdf 04 23 38.9 -0.6
HINF Hinteralfeld 149.37 84 *e*PKIKP PKPdf 04 23 39.8 0.0
GERES GERESS Array B 153.79 87 PKPbc PKPbc 04 23 58.5 +4.1
comp=Z,1.1nm,0.8s,baz=222,slow=1.8,SNR=4.4
CLL Collm 154.57 82 *e*PP PP 04 27 49.0 +3.1
CLL *e* 04 38 11.0
CLL *e*SS SS 04 47 54.0 +28
CLL *e*SSS 04 53 24.0
CLL Collm 154.57 82 *e*PP PP 04 27 49.0 +3.1
CLL *e*PSKS 04 38 11.0
CLL LmV 04 45 00.0
comp=Z,200nm,20.5s
CLL *e*SS SS 04 47 54.0 +28
CLL *e*SSS 04 53 24.0
WMQ Urumqi 156.38 254 PKP PKPdf 04 23 50.0 0.0
WMQ PP PP 04 27 58.0 +2.1
WMQ SKS SKSdf 04 30 53.0 -2.6
WMQ SKKS SKKSac 04 34 44.0 -1.1
WMQ SS SS 04 47 46.0 +0.3
WMQ PP PP
comp=Z,56nm,8.0s
WMQ LR LR
comp=N,367nm,20.0s,MS5.3
WMQ LR LR
comp=E,352nm,20.0s,MS5.3
WMQ LR LR
comp=Z,259nm,18.0s,MS5.1
BRTR Keskin Array B 158.48 128 PKPab PKPab 04 24 31.4 +4.0
comp=Z,0.6nm,0.9s,baz=199,slow=7.0,SNR=3.7

NEIC ***14*** *04:16:23.4,3293N×13807E,h359km,MG3.3(JMA),After JMA.*
JMA ***14*** *04:16:23.4±0.5,3293N×13807E,h359km±5km,M3.3*
ISCJB ***14*** *04:16:26.4±0.9,3316N±0.10×13804E±0.08,h338km±7km, mb3.3/2,Error ellipse: s-maj=15.6km s-min=9.6km az=153.1*
IDC ***14*** *04:16:28.3±6.5,3363N×13888E,h373km±65km,mb3.3/2, mb1 3.1/3,mb1mx2.8/18,mbtmp3.8/3,Error ellipse: s-maj=213.1km s-min=91.3km az=54.0*

ISC 14 04:16:27.6±0.9,3320N±009×13804E±007,h331km±7km, n28,σ0°81/37,mb3.3/2,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TK02	**Tokai 2**	**0.79**	**342**	P	**Pn**	**04 17 11.1**	**+0.6**
TK04	**Tokai 4**	**1.19**	**353**	P	**Pn**	**04 17 13.2**	**+1.1**
JHJ	**Hachijo jima 2**	**1.46**	**93**	S	**S**	**04 17 55.0**	**+4.7**
	12nm,0.3s,baz=83,slow=21,SNR=4.1						
JIE	**Ise**	**1.63**	**317**	P	**Pn**	**04 17 14.7**	**+0.1**
JHMK	**Hamakita**	**1.63**	**352**	P	**Pn**	**04 17 15.0**	**+0.4**
HMMJ	**Hamamatsu 2**	**1.68**	**351**	P	**Pn**	**04 17 15.4**	**+0.5**
JKN2	**Miekihoku**	**1.80**	**306**	P	**Pn**	**04 17 15.5**	**-0.2**
JWZ	**Kozaga**	**1.98**	**280**	P	**Pn**	**04 17 16.1**	**-0.8**
JNY	**Yasuok**	**2.16**	**356**	P	**Pn**	**04 17 19.1**	**+0.8**
JAO	**Obara**	**2.17**	**343**	P	**Pn**	**04 17 18.9**	**+0.5**
JOD2	**Odawara 2**	**2.24**	**23**	P	**Pn**	**04 17 20.1**	**+1.2**
JWY	**Iwaya**	**2.28**	**297**	P	**Pn**	**04 17 19.3**	**0.0**
JEG	**Eigenji**	**2.37**	**325**	P	**Pn**	**04 17 20.4**	**+0.4**
BSO3	**Boso 3**	**2.60**	**51**	P	**Pn**	**04 17 21.4**	**-0.5**
BSO3				*e*S	**S**	**04 18 04.7**	**-0.8**
BSO4	**Boso 4**	**2.61**	**46**	P	**Pn**	**04 17 21.7**	**-0.3**
BSO4				*e*S	**S**	**04 18 06.3**	**+0.6**
JGM	**Miyama**	**2.73**	**337**	P	**Pn**	**04 17 23.4**	**+0.4**
JHU	**Hanno**	**2.84**	**21**	P	**Pn**	**04 17 24.8**	**+0.8**
JHU				*e*S	**S**	**04 18 08.0**	**-1.3**
BSO1	**Boso 1**	**2.84**	**58**	P	**Pn**	**04 17 22.6**	**-1.5**
BSO1				S	**S**	**04 18 08.0**	**-1.3**
JRY	**Ryogami san**	**2.90**	**14**	P	**Pn**	**04 17 25.9**	**+1.3**
JRY				S	**S**	**04 18 11.2**	**+0.9**
JWT	**Wachi**	**3.02**	**314**	P	**Pn**	**04 17 25.5**	**-0.2**
JWT				S	**S**	**04 18 10.7**	**-1.6**
JAI	**Aioi**	**3.06**	**282**	P	**Pn**	**04 17 25.3**	**-0.8**
MJAR	**Matsushiro Arr**	**3.34**	**2**	P	**Pn**	**04 17 29.3**	**+0.5**
	1.0nm,0.3s,baz=166,slow=9.1,SNR=14						
MJAR				S	**S**	**04 18 17.9**	**0.0**
	0.3nm,0.3s,baz=64,slow=17,SNR=4.2						
MAT	**Matsushiro**	**3.34**	**2**	P	**Pn**	**04 17 29.8**	**+1.0**
MAT				S	**S**	**04 18 17.2**	**-0.7**
MAT	**Matsushiro**	**3.34**	**2**	P	**Pn**	**04 17 30.2**	**+1.4**
MAT	**Matsushiro**	**3.34**	**2**	*e*P	**Pn**	**04 17 30.0**	**+1.2**
MAT				*e*S	**S**	**04 18 17.0**	**-0.9**
JHO	**Hitachi**	**3.99**	**31**	P	**Pn**	**04 17 35.0**	**-0.4**
SONM	**Songino Array**	**27.92**	**311**	P	**P**	**04 21 48.3**	**0.0**
	2.4nm,0.6s,mb3.6,baz=120,slow=9.7,SNR=22						
MKAR	**Makanchi Array**	**43.93**	**305**	P	**P**	**04 24 01.6**	**-1.1**
	0.5nm,0.3s,mb3.0,baz=88,slow=9.3,SNR=6.4						

NEIC ***14*** *04:21:50.9,5275N×11626W,h5km,MN3.6(PGC),After PGC.*

PGC 14 04:21:50.9,5275N×11626W,h5km,MN3.6/8,1C,100km northwest of Rocky Mt. House, Alberta Northwest of Nordegg, Alberta., Alberta

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDM	**Edmonton**	**1.82**	**74**	Pn	Pn	04 22 22.5	-0.4
EDM				Sn	Sn	04 22 45.9	-0.4
EDM				Trac		04 22 49.5	
	comp=Z,550nm,0.2s						
EDM				Trac		04 22 49.5	
	comp=Z,550nm,0.2s						
EDM	**Edmonton**	**1.82**	**74**	*e*Pn	Pn	04 22 21.9	-1.0
EDM				*e*Sn	Sn	04 22 46.1	-0.2
DOWB	**Downie Slide**	**1.86**	**229**	Pn	Pn	04 22 23.3	-0.1
DOWB				Sg	Sg	04 22 49.6	-1.1
DOWB				Trac		04 22 57.0	
	comp=Z,3µm,0.4s						
DOWB	**Downie Slide**	**1.86**	**229**	Pn	Pn	04 22 23.3	-0.1
DOWB				Sg	Sg	04 22 49.6	-1.1
SLEB	**Sale Mountain**	**1.97**	**217**	Trac		04 22 54.7	
	comp=Z,312nm,0.3s						
SLEB	**Sale Mountain**	**1.97**	**217**	Pn	Pn	04 22 26.4	+1.5
SLEB				Sg	Sg	04 22 51.6	-2.5
WALA	**Waterton Lakes**	**3.98**	**157**	⇑Pn	Pn	04 22 52.3	-0.3
WALA				Pg	Pg	04 23 01.5	-5.7
WALA				Sn	Sn	04 23 37.5	-2.3
WALA				Sg	Sg	04 23 51.1	-7.8
WALA				Trac		04 23 58.5	
	comp=Z,50nm,0.2s						
WALA				Trac		04 23 58.5	
	comp=Z,50nm,0.2s						
WALA	**Waterton Lakes**	**3.98**	**157**	*e*Pn	Pn	04 22 52.1	-0.5
WALA				*e*Sn	Sn	04 23 38.2	-1.5
PNT	**Penticton**	**4.04**	**213**	Pn	Pn	04 22 52.5	-0.9
PNT				Pg	Pg	04 23 05.1	-3.2
PNT				Sg	Sg	04 23 53.6	-7.1
LLLB	**Lillooet**	**4.11**	**241**	Pn	Pn	04 22 53.6	-0.7
LLLB				Pg	Pg	04 23 05.4	-4.2
LLLB				Sg	Sg	04 23 59.0	-3.8
LLLB				Trac		04 24 07.3	
	comp=Z,100nm,0.5s						
LLLB	**Lillooet**	**4.11**	**241**	Pn	Pn	04 22 53.6	-0.7
LLLB				Pg	Pg	04 23 05.4	-4.2
LLLB				*e*Sg	Sg	04 23 59.0	-3.8
NEW	**Newport**	**4.53**	**187**	*e*Pn	Pn	04 22 59.2	-0.8
NEW				Sn	Sn	04 23 54.2	+1.1
HOPB	**Hope**	**4.68**	**226**	Pn	Pn	04 23 00.9	-1.3
HOPB				Pg	Pg	04 23 14.2	-6.4
HOPB				Sg	Sg	04 24 16.1	-5.3
HOPB				Trac		04 24 19.2	
	comp=Z,187nm,0.6s						
HOPB	**Hope**	**4.68**	**226**	*e*Pn	Pn	04 23 00.9	-1.3
HOPB				*e*Pg	Pg	04 23 14.2	-6.4
HOPB				Sg	Sg	04 24 16.1	-5.3
BMBC	**Bull Mountain**	**4.76**	**316**	Pn	Pn	04 23 02.7	-0.6
BMBC				Pg	Pg	04 23 18.4	-3.7
BMBC				Sn	Sn	04 23 55.8	-3.0
BMBC				Sg	Sg	04 24 16.6	-7.2
BMBC				Trac		04 24 20.8	
	comp=Z,80nm,0.4s						
BMBC				Trac		04 24 20.8	
	comp=Z,80nm,0.4s						
BMBC	**Bull Mountain**	**4.76**	**316**	Pn	Pn	04 23 02.7	-0.6
BMBC				*e*Pg	Pg	04 23 18.4	-3.7
BMBC				*e*Sn	Sn	04 23 55.8	-3.0
BMBC				*e*Sg	Sg	04 24 16.6	-7.2
WSLR	**Whistler**	**4.93**	**240**	Pg	Pg	04 23 19.8	-5.5
WSLR				Sg	Sg	04 24 22.2	-6.9
WSLR				Trac		04 24 30.6	
	comp=Z,43nm,0.5s						
WSLR	**Whistler**	**4.93**	**240**	*e*Pg	Pg	04 23 19.8	-5.5
WSLR				*e*Sg	Sg	04 24 22.2	-6.9
FSB	**Fort Saint Jam**	**5.11**	**293**	Pn	Pn	04 23 06.0	-2.1
FSB				Pg	Pg	04 23 23.9	-4.8
FSB				Sg	Sg	04 24 28.1	-6.8
FSB				Trac		04 24 36.1	
	comp=Z,54nm,0.7s						
FSB	**Fort Saint Jam**	**5.11**	**293**	*e*Pn	Pn	04 23 06.0	-2.1
FSB				*e*Pg	Pg	04 23 23.9	-4.8
FSB				*e*Sg	Sg	04 24 28.1	-6.8
VDB	**Vedder Mountai**	**5.25**	**227**	Pg	Pg	04 23 24.9	-6.7
VDB				Sg	Sg	04 24 33.5	-6.1
VDB				Trac		04 24 36.5	
	comp=Z,81nm,0.5s						
VDB	**Vedder Mountai**	**5.25**	**227**	*e*Pg	Pg	04 23 24.9	-6.7
VDB				*e*Sg	Sg	04 24 33.5	-6.1
HNB	**Haney**	**5.29**	**231**	Pg	Pg	04 23 27.3	-5.0
HNB				Sg	Sg	04 24 32.7	-8.2
HNB				Trac		04 24 39.2	
	comp=Z,47nm,0.5s						
HNB	**Haney**	**5.29**	**231**	*e*Pg	Pg	04 23 27.3	-5.0
HNB				*e*Sg	Sg	04 24 32.7	-8.2
WPB	**Watts Point**	**5.36**	**237**	Pg	Pg	04 23 26.9	-6.6
WPB				Sg	Sg	04 24 35.0	-7.9
WPB				Trac		04 24 39.8	
	comp=Z,54nm,0.5s						
WPB	**Watts Point**	**5.36**	**237**	*e*Pg	Pg	04 23 26.9	-6.6
WPB				*e*Sg	Sg	04 24 35.0	-7.9
BIB	**Bowen Island**	**5.56**	**236**	Pg	Pg	04 23 31.0	-6.4
BIB				Sg	Sg	04 24 42.7	-6.9
BIB				Trac		04 24 55.9	
	comp=Z,91nm,1.2s						
BIB	**Bowen Island**	**5.56**	**236**	*e*Pg	Pg	04 23 31.0	-6.4
BIB				*e*Sg	Sg	04 24 42.7	-6.9
SHB	**Sechelt**	**5.74**	**240**	Trac		04 24 55.2	
	comp=Z,50nm,0.8s						
SHB	**Sechelt**	**5.74**	**240**	Pg	Pg	04 23 34.8	-6.1
SHB				Sg	Sg	04 24 47.4	-7.7
SNB	**Saturna Island**	**5.92**	**231**	Pg	Pg	04 23 37.1	-7.3
SNB				Sg	Sg	04 24 54.5	-6.6
SNB				Trac		04 25 03.8	
	comp=Z,5.0nm,0.6s						
SNB	**Saturna Island**	**5.92**	**231**	Pg	Pg	04 23 37.1	-7.3
SNB				Sg	Sg	04 24 54.5	-6.6
GOBB	**Galiano Island**	**5.96**	**233**	Pg	Pg	04 23 37.2	-7.9
GOBB				Sg	Sg	04 24 55.7	-6.7
GOBB				Trac		04 25 00.7	
	comp=Z,17nm,0.5s						
GOBB	**Galiano Island**	**5.96**	**233**	*e*Pg	Pg	04 23 37.2	-7.9
GOBB				*e*Sg	Sg	04 24 55.7	-6.7
TXB	**Texada**	**5.98**	**242**	Pg	Pg	04 23 38.0	-7.4
TXB				Sg	Sg	04 24 54.8	-8.0
TXB				Trac		04 24 59.9	
	comp=Z,21nm,0.5s						
TXB	**Texada**	**5.98**	**242**	*e*Pg	Pg	04 23 38.0	-7.4
TXB				*e*Sg	Sg	04 24 54.8	-8.0
NLLB	**Nanaimo Lost L**	**6.02**	**237**	Pg	Pg	04 23 41.0	-5.3
NLLB				Sg	Sg	04 24 54.4	-10
NLLB				Trac		04 24 58.8	
	comp=Z,14nm,0.5s						
NLLB	**Nanaimo Lost L**	**6.02**	**237**	*e*Pg	Pg	04 23 41.0	-5.3
NLLB				*e*Sg	Sg	04 24 54.4	-10
MSO	**Missoula**	**6.12**	**165**	*e*Pn	Pn	04 23 20.3	-1.6
	7.4nm,0.4s						
MSO				*e*Sn	Sn	04 24 31.2	-1.1
PGC	**Sidney**	**6.14**	**231**	Pg	Pg	04 23 43.4	-5.2
PGC				Sg	Sg	04 24 58.1	-10
PGC				Trac		04 25 06.0	
	comp=Z,26nm,0.7s						
PGC	**Sidney**	**6.14**	**231**	*e*Pg	Pg	04 23 43.4	-5.2
PGC				*e*Sg	Sg	04 24 58.1	-10
CHMT	**Chamberlain Mo**	**6.16**	**160**	*e*Pn	Pn	04 23 21.2	-1.2
CHMT				*e*Sn	Sn	04 24 32.9	-0.4
VGZ	**Gonzales**	**6.25**	**229**	Trac		04 25 12.7	
	comp=Z,28nm,1.1s						
VGZ	**Gonzales**	**6.25**	**229**	Sg	Sg	04 25 03.7	-8.0
EGMT	**Eagleton**	**6.30**	**136**	*e*Pn	Pn	04 23 22.3	-2.1
	39nm,0.8s						
CBB	**Campbell River**	**6.32**	**248**	Pg	Pg	04 23 48.4	-3.5
CBB				Sg	Sg	04 25 05.4	-8.3
CBB				Trac		04 25 09.8	
	comp=Z,8.0nm,0.7s						
CBB	**Campbell River**	**6.32**	**248**	*e*Pg	Pg	04 23 48.4	-3.5
CBB				*e*Sg	Sg	04 25 05.4	-8.3
LZB	**Mount Lazard**	**6.35**	**232**	Pg	Pg	04 23 45.7	-6.8
LZB				Sg	Sg	04 25 07.1	-7.6
LZB				Trac		04 25 11.8	
	comp=Z,7.0nm,0.6s						
LZB	**Mount Lazard**	**6.35**	**232**	*e*Pg	Pg	04 23 45.7	-6.8
LZB				*e*Sg	Sg	04 25 07.1	-7.6
ALB	**Alberni**	**6.43**	**241**	Pg	Pg	04 23 47.3	-6.9
ALB				Sg	Sg	04 25 08.7	-8.8
ALB				Trac		04 25 15.1	
	comp=Z,14nm,0.7s						
ALB	**Alberni**	**6.43**	**241**	*e*Pg	Pg	04 23 47.3	-6.9
ALB				*e*Sg	Sg	04 25 08.7	-8.8
NCRB	**Newcastle Ridg**	**6.54**	**253**	Pg	Pg	04 23 48.0	-8.2
NCRB				Sg	Sg	04 25 13.5	-7.5
NCRB				Trac		04 25 26.0	
	comp=Z,50nm,1.2s						
NCRB	**Newcastle Ridg**	**6.54**	**253**	*e*Pg	Pg	04 23 48.0	-8.2
NCRB				*e*Sg	Sg	04 25 13.5	-7.5
PFB	**Port Renfrew**	**6.67**	**234**	Trac		04 25 36.8	
	comp=Z,14nm,0.9s						
PFB	**Port Renfrew**	**6.67**	**234**	*e*Pg	Pg	04 23 48.2	-11
PFB				*e*Sg	Sg	04 25 16.8	-8.4
HRY	**Holter Researc**	**6.69**	**153**	*e*Pn	Pn	04 23 28.4	-1.4
HRY				*e*Sn	Sn	04 24 47.8	+1.4
BTB	**Buttle Lake**	**6.69**	**244**	*e*Pn	Pn	04 23 31.9	+2.1
BTB				*e*Pg	Pg	04 23 50.2	-9.0
HAWA	**Hanford**	**6.71**	**200**	*e*Pn	Pn	04 23 28.1	-2.0
	0.5nm,0.5s						
HAWA				*e*Sn	Sn	04 24 45.4	-1.5
GDR	**Gold River**	**6.82**	**248**	Pg	Pg	04 23 51.6	-10
GDR				Sg	Sg	04 25 20.1	-10
GDR				Trac		04 25 27.7	
	comp=Z,20nm,0.9s						
GDR	**Gold River**	**6.82**	**248**	*e*Pg	Pg	04 23 51.6	-10
GDR				*e*Sg	Sg	04 25 20.1	-10
WOSB	**Woss**	**6.95**	**252**	Pg	Pg	04 23 54.9	-9.0
WOSB				Sg	Sg	04 25 25.6	-8.3
WOSB				Trac		04 25 32.2	
	comp=Z,11nm,0.7s						
WOSB	**Woss**	**6.95**	**252**	*e*Pg	Pg	04 23 54.9	-9.0
WOSB				*e*Sg	Sg	04 25 25.6	-8.3

OZB	Mount Ozzard	6.97	241	Trac		04 25 32.0	
	comp=Z,21nm,0.7s						
OZB	Mount Ozzard	6.97	241	Sg	Sg	04 25 26.3	-8.3
MAYB	Maynard	7.20	255	Pg	Pg	04 24 00.1	-8.6
MAYB				Sg	Sg	04 25 32.4	-10
MAYB				Trac		04 25 43.1	
	comp=Z,45nm,1.4s						
MAYB	Maynard	7.20	255	ePg	Pg	04 24 00.1	-8.6
MAYB				eSg	Sg	04 25 32.4	-10
FNBB	Fort Nelson	7.23	331	Pn	Pn	04 23 35.4	-1.9
FNBB				Sn	Sn	04 24 51.9	-7.8
FNBB				Trac		04 24 57.0	
	comp=Z,7.0nm,0.2s						
FNBB				Trac		04 24 57.0	
	comp=Z,7.0nm,0.2s						
FNBB				Sg	Sg	04 25 37.3	-5.7
FNBB	Fort Nelson	7.23	331	Pn	Pn	04 23 35.4	-1.9
FNBB				Sn	Sn	04 24 51.9	-7.8
FNBB				eSg	Sg	04 25 37.3	-5.7
PHC	Port Hardy	7.24	258	Trac		04 25 46.3	
	comp=Z,9.1nm,0.8s						
BBB	Bella Bella	7.27	270	Trac		04 25 43.6	
	comp=Z,9.0nm,0.5s						
BBB	Bella Bella	7.27	270	Sg	Sg	04 25 34.6	-10
BBB	Bella Bella	7.27	270	eSg	Sg	04 25 34.6	-10
HOLB	Holberg	7.68	259	Sg	Sg	04 25 44.4	-13
HOLB				Trac		04 26 09.2	
	comp=Z,8.0nm,0.6s						
BOZ	Bozeman (W)	7.73	155	ePn	Pn	04 23 42.8	-1.3
	3.4nm,0.5s						
BOZ				eSn	Sn	04 25 10.3	-1.7
DLMT	Dillon	7.78	161	ePn	Pn	04 23 42.9	-1.8
	12nm,0.7s						
DLMT				eSg	Sg	04 25 49.0	-11
BMO	Blue Mountains	7.94	185	ePn	Pn	04 23 47.2	+0.4
	4.1nm,0.9s						
BMO				eSg	Sg	04 26 01.1	-4.5
GCMT	Greycliff	8.19	146	ePn	Pn	04 23 48.6	-1.8
GCMT				eSg	Sg	04 26 10.7	-3.1
MCMT	McKenzie Canyo	8.24	163	ePn	Pn	04 23 49.7	-1.4
MCMT				eSg	Sg	04 26 06.7	-8.8
RUBB	Prince Rupert	8.49	286	Trac		04 26 20.3	
	comp=Z,17nm,0.6s						
RUBB	Prince Rupert	8.49	286	Sg	Sn	04 26 15.7	+45
QLMT	Earthquake Lak	8.54	156	ePn	Pn	04 23 51.5	-3.7
BNB	Barry Inlet	9.42	275	Sn	Sn	04 25 43.6	-10
IMW	Indian Meadow	9.54	156	ePn	Pn	04 24 11.2	+2.3
	3.3nm,0.9s						
IMW				eSn	Sn	04 26 03.6	+7.1
DLBC	Dease Lake	9.64	312	Trac		04 27 02.5	
	comp=Z,7.0nm,0.6s						
DLBC	Dease Lake	9.64	312	Sg	Sn	04 26 49.5	+50
YKW3	Yellowknife Ar	9.88	4	Pn	Pn	04 24 09.3	-4.2
YKW3				Pn	Pn	04 24 09.7	-3.8
YKW3				Sn	Sn	04 25 52.8	-12
YKW3				Sn	Sn	04 25 53.0	-12
YKW3				Sg	Sn	04 26 53.0	+48
YKW3				Sg	Sn	04 26 53.3	+49
YKW3				Trac		04 27 03.9	
	comp=Z,28nm,0.6s						
YKW3				Trac		04 27 03.9	
	comp=Z,28nm,0.6s						
YKW3				Trac		04 27 03.9	
	comp=Z,28nm,0.6s						
YKW3				Trac		04 27 03.9	
	comp=Z,28nm,0.6s						
YKW3	Yellowknife Ar	9.88	4	ePn	Pn	04 24 09.3	-4.2
YKW3				eSn	Sn	04 25 52.8	-12
YKW3				eSg	Sn	04 26 53.0	+48
LOHW	Long Hollow	9.89	155	ePn	Pn	04 24 10.6	-3.1
	2.2nm,0.8s						
RRI2	Red Ridge	9.97	159	ePn	Pn	04 24 11.8	-3.0
ULM	Lac du Bonnet	12.94	93	Pn	Pn	04 24 49.2	-6.2
ULM				Sn	Sn	04 27 02.7	-17
ULM				Trac		04 28 42.8	
	comp=Z,16nm,0.9s						
ULM				Trac		04 28 42.8	
	comp=Z,16nm,0.9s						
ULM	Lac du Bonnet	12.94	93	ePn	Pn	04 24 49.2	-6.2
ULM				eSn	Sn	04 27 02.7	-17
FCC	Fort Churchill	13.82	55	Trac		04 29 08.6	
	comp=Z,20nm,0.6s						
FCC				Trac		04 29 08.6	
	comp=Z,20nm,0.6s						

*ISCJB **14** 04:25:59.2±0.5, 3951N±002×24.13E±003, h10^{km}±5^{km}, Error ellipse: s-maj=4.2km s-min=3.7km az=114.1*
*ATH **14** 04:25:59.5, 3954N×24.10E, h43^{km}±4^{km}, MD2.7/3*
*CSEM **14** 04:25:59.9±0.2, 3948N×24.12E, h12^{km}, ML2.4, Error ellipse: s-maj=4.8km s-min=4.2km az=144.0*
*NEIC **14** 04:26:00.1, 3950N×24.15E, h7^{km}, MD2.7(ATH), ML2.6(THE), After THE.*
*THE **14** 04:26:00.1, 3950N×24.15E, h6^{km}, ML2.4*
ISC 14 04:25:59.6±0.5, **3950N**±002×**2413E**±003, **h17**^{km}±5^{km}, **n19,** σ**0^{s}95**/34, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	Alonnisos	0.38	211	ePg	Pg	04 26 07.6	+0.1
AOS				eSg	Sg	04 26 13.6	+0.8
PAIG	Paliouri	0.55	321	ePg	Pg	04 26 10.7	+0.1
PAIG				eSg	Sg	04 26 18.2	+0.2
PAIG	Paliouri	0.55	321	ePg	Pg	04 26 10.7	+0.1
PAIG				eSg	Sg	04 26 18.2	+0.2
NEO	Neokhori	0.73	255	eP	Pb	04 26 14.3	+0.5
NEO				eS	Sb	04 26 24.9	+1.4
XOR	Xorichti	0.74	260	ePg	Pg	04 26 14.4	+0.3
XOR				eSg	Sg	04 26 25.1	+1.3
XOR	Xorichti	0.74	260	ePg	Pg	04 26 14.4	+0.3
XOR				eSg	Sg	04 26 25.1	+1.2
OUR	Ouranopolis	0.84	352	ePg	Pg	04 26 15.7	-0.3
	comp=Z,3.4nm,0.2s						
OUR				eSg	Sg	04 26 28.7	+1.5
LOS	Limnos	0.85	59	ePg	Pg	04 26 16.2	0.0
	comp=Z,5.0nm,0.2s						
LOS				eSg	Sg	04 26 28.0	+0.6
LIA	Limnos Island	0.90	63	eP	Pb	04 26 17.1	+0.3
LIA				eS	Sb	04 26 29.4	+0.8
LKR	Lokris	1.22	227	eP	Pn	04 26 21.8	-0.1
LKR				eS	Sb	04 26 37.7	0.0
HORT	Hortiatis	1.35	325	ePg	Pg	04 26 25.2	-0.6
HORT				eSg	Sg	04 26 44.1	+0.8
LIT	Litokhoron	1.40	296	ePg	Pg	04 26 24.7	-1.9
LIT				eSg	Sg	04 26 43.9	-1.0
SOH	Sokhos	1.45	336	ePg	Pg	04 26 26.4	-1.2
SOH				eSg	Sg	04 26 46.9	+0.4
AGG	Agios Georgios	1.48	252	ePg	Pg	04 26 26.2	-1.9
CHOS	Chios island	1.87	126	ePb	Pb	04 26 31.6	-1.6
CHOS				eSb	Sb	04 26 55.7	-0.5
KNT	Kendrikon	1.91	331	ePb	Pb	04 26 32.9	-1.1
GRG	Griva	1.97	318	ePb	Pb	04 26 33.5	-1.5
GRG				eSb	Sb	04 26 58.9	-0.3
ALN	Alexandroupoli	2.02	46	ePn	Pn	04 26 33.9	+0.9
LKD	Levkas	2.82	255	ePn	Pn	04 26 45.5	+1.6

BJI 14 05:13:08.8, 3933N×8150E, h17^{km}**, ML3.5, Ms3.4, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	4.28	274	ePG	Pg	05 14 26.0	-4.9
KSH				eSG	Sg	05 15 17.8	-8.6
KSH				Smax			
	comp=N,84nm,0.8s						
KSH				Smax			
	comp=E,94nm,0.8s						
WMQ	Urumqi	6.46	44	ePG	Pn	05 15 05.0	+22
WMQ				S	Sn	05 16 05.0	+8.7
WMQ				Smax			
	comp=N,54nm,0.8s						
WMQ				Smax			
	comp=E,48nm,0.8s						

*ISCJB **14** 05:30:01.4±2.3, 39.1N±02×69.78E±009, h33^{km}, Error ellipse: s-maj=25.0km s-min=7.8km az=28.4*
*NNC **14** 05:30:01.6±1.2, 39.12N×69.85E, h15^{km}±7^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=7.1km s-min=4.2km az=10.0*
ISC 14 05:30:02.5±2.4, **389N**±02×**6977E**±009, **h35**^{km}, **n11,** σ**1^{s}10**/14, **8C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	4.21	7	⇑Pn	Pn	05 31 05.2	+1.1
	8.4nm,0.5s,baz=183,slow=12,SNR=70						
KK31				⇑Lg		05 32 09.4	
	20nm,0.6s,baz=206,slow=11,SNR=4.3						
AML	Almayashu	4.38	42	P	Pn	05 31 04.7	-1.8
	SNR=13						
AAK	Ala-Archa	5.15	43	P	Pn	05 31 17.9	+0.8
	SNR=7.4						
KZA	Kyzart	5.23	51	P	Pn	05 31 18.4	+0.2
	SNR=7.5						
KBK	Karagaybulak	5.41	45	P	Pn	05 31 22.0	+1.3
	SNR=17						
CHMS	Chumysh	5.54	41	P	Pn	05 31 24.5	+2.0
	SNR=6.1						
USP	Ospenovka	5.62	38	P	Pn	05 31 21.2	-2.3
	SNR=16						
TKM2	Tokmak 2	5.95	46	P	Pn	05 31 27.8	-0.3
	SNR=26						
TKM2	Tokmak 2	5.95	46	⇑Pn	Pn	05 31 26.8	-1.2
	0.8nm,0.5s						
TKM2				⇑Sn	Sn	05 32 34.6	-0.3
	0.7nm,0.5s						
AB31	Akbulak array	12.49	329	⇑Pn	Pn	05 32 57.2	-0.6
	2.1nm,0.6s,baz=136,slow=13,SNR=42						
AB31				⇑Sn	Sn	05 35 15.3	-0.3
	3.7nm,0.6s,baz=152,slow=22,SNR=7.5						
AKTO	Aktyubinsk	14.20	328	⇑Pn	Pn	05 33 20.9	-0.1
	0.1nm,0.7s						
AKTO				⇑Sn	Sn	05 35 57.6	+0.4
	0.2nm,1.3s						

*IDC **14** 05:42:00.0±5.6, 35.13N×140.46E, h57^{km}±43^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.4/19, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=59.7km s-min=26.7km az=70.0*
*NIED **14** 05:42:00, 35.10N×140.20E, h59^{km}, Mw3.9 Best double couple: M0 7.38000×10^{14} NP1: ϕs349.00000°, δ66.00000°, λ76.00000°. NP2: ϕs201.00000°, δ28.00000°, λ119.00000°.*
*ISCJB **14** 05:42:01.2±0.6, 35.13N±004×140.25E±005, h76^{km}±4^{km}, mb3.8/3, Error ellipse: s-maj=7.2km s-min=5.2km az=93.9*
*JMA **14** 05:42:01.6±0.1, 35.17N×140.25E, h72^{km}±2^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕs150.00000°, δ14.00000°, λ74.00000°. NP2: ϕs346.00000°, δ77.00000°, λ94.00000°. Principal axes: T Plg58.0000°, Azm261.0000°; N Plg4.0000°, Azm165.0000°; P Plg32.0000°, Azm73.0000°;*
JMA Felt I J1.
*NEIC **14** 05:42:01.6, 35.17N×140.25E, h72^{km}, MG3.6(JMA), After JMA.*
ISC 14 05:42:02.0±0.6, **3513N**±004×**14025E**±005, **h72**^{km}±4^{km}, **n22,** σ**0^{s}53**/40, **mb3.8**/3, **4C-9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTR	Katsuura	0.06	75	P	Pn	05 42 12.0	-0.4
KTR				S	Sn	05 42 19.7	-0.2
BSO4	Boso 4	0.16	152	⇑P	Pn	05 42 12.7	+0.1
BSO4				S	Sn	05 42 21.2	+0.8
JCN	Nagara	0.29	353	⇑P	Pn	05 42 13.3	0.0
JCN				S	Sn	05 42 20.7	-0.8
TATJ	Tateyama 2	0.31	251	⇓P	Pn	05 42 13.8	+0.4
TATJ				S	Sn	05 42 22.9	+1.1
BSO3	Boso 3	0.40	147	⇑P	Pn	05 42 13.9	-0.1
BSO3				S	Sn	05 42 22.5	-0.4
BSO1	Boso 1	0.77	128	⇑P	Pn	05 42 17.5	-0.3
BSO1				S	Sn	05 42 30.0	+0.5
JIM2	Oshima 3	0.79	239	⇓P	Pn	05 42 17.6	-0.4
JIM2				S	Sn	05 42 29.4	-0.5
JOD2	Odawara 2	0.96	278	⇓P	Pn	05 42 19.5	-0.6
JOD2				S	Sn	05 42 31.6	-1.9
JIZS	Izushimoda	1.20	250	⇓P	Pn	05 42 22.9	-0.2
JIZS				S	Sn	05 42 38.8	-0.1
JMY	Miyakejima3	1.22	210	P	Pn	05 42 23.3	-0.1
JMY				S	Sn	05 42 40.2	+0.9
JRY	Ryogami san	1.41	309	⇓P	Pn	05 42 25.6	-0.2
JRY				S	Sn	05 42 43.7	0.0
JYN	Shimob	1.44	285	⇓P	Pn	05 42 26.1	-0.1
JYN				S	Sn	05 42 44.5	+0.1
JAG	Ashikaga	1.44	334	⇓P	Pn	05 42 25.9	-0.4
SHZ3	Shizuoka 3	1.67	268	⇓P	Pn	05 42 29.8	+0.5
SHZ3				eS	Sn	05 42 49.8	-0.1
JKT	Katashina	1.82	334	P	Pn	05 42 31.2	-0.1
JKT				S	Sn	05 42 53.6	+0.1
MJAR	Matsushiro Arr	2.17	311	P	Pn	05 42 35.6	-0.4
	48nm,0.3s,baz=125,slow=20,SNR=254						
MJAR				S	Sn	05 43 02.8	+0.8
	25nm,0.3s,baz=292,slow=43,SNR=9.4						
MAJO	Matsushiro	2.17	311	⇓iPn	Pn	05 42 36.4	+0.4
MAJO				eSn	Sn	05 43 02.9	+0.9
MAT	Matsushiro	2.17	311	P	Pn	05 42 36.3	+0.3
MAT				S	Sn	05 43 02.3	+0.3
MAT	Matsushiro	2.17	311	eP	Pn	05 42 36.0	0.0
MAT				eS	Sn	05 43 02.0	0.0
MKAR	Makanchi Array	44.35	304	P	P	05 50 05.5	+0.4
	0.3nm,0.3s,mb3.5,baz=84,slow=9.3,SNR=4.3						
ASAR	Alice Springs	58.78	187	P	P	05 51 52.3	-0.4
	0.8nm,0.4s,mb4.1,baz=2.7,slow=6.7,SNR=7.8						
FINES	FINESS Array B	70.05	332	P	P	05 53 06.2	-0.1
	1.0nm,0.6s,mb3.8,baz=45,slow=8.5,SNR=4.0						

*KISR **14** 06:27:48.8±0.8, 3295N×50.40E, h33^{km}, ML3.5*
*ISCJB **14** 06:27:58.6±1.7, 3229N±004×50.02E±006, h13^{km}±13^{km}, Error ellipse: s-maj=10.3km s-min=4.4km az=71.5*
*CSEM **14** 06:27:58.1, 3238N×50.11E, h14^{km}, ML3.4, After THR*
*THR **14** 06:27:58.1±0.6, 3238N×50.11E, h14^{km}±4^{km}, ML3.4*
ISC 14 06:27:59.3±1.9, **3229N**±004×**5003E**±006, **h12**^{km}±15^{km}, **n13,** σ**0^{s}96**/20, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.06	261	ePG	Pg	06 28 19.4	-0.4
SHGR				AML	AML	06 28 42.2	
	comp=N,1μm,0.3s						
SHGR				AML	AML	06 28 47.1	
	comp=E,748nm,0.5s						
ASAO	Ashtian	2.25	360	ePG	Pn	06 28 37.4	+1.1
ASAO				eSG	Sb	06 29 06.4	-1.3
ASAO				AML	AML	06 29 12.2	
	comp=N,256nm,0.5s						
ASAO	Ashtian	2.25	360	ePg	Pn	06 28 37.4	+1.1
	SNR=90						
ASAO				eSg	Sb	06 29 06.4	-1.3
	comp=N,256nm,0.5s,SNR=90						
NASN	Na'in	2.40	77	ePN	Pn	06 28 38.1	-0.2
NASN				eSG	Sb	06 29 10.9	-0.9
UMR	Umm Al-Rimmam	3.38	217	eP	Pn	06 28 52.8	+1.0
MIB	Mutribah	3.39	224	eP	Pn	06 28 53.1	+1.2
MIB				eS	Sb	06 29 40.2	-0.1
MIB				AML	AML	06 29 40.7	
	comp=Z,60nm,0.5s						
SNGE	Sanandaj	3.58	322	ePN	Pn	06 28 55.0	+0.4
SNGE				AML	AML	06 30 04.5	
	comp=N,73nm,0.6s						
THKV	Tehran--Karaj	3.69	11	ePN	Pn	06 28 55.6	-0.4
THKV				AML	AML	06 30 10.1	
	comp=E,58nm,0.7s						
THKV				AML	AML	06 30 10.2	
	comp=N,47nm,0.6s						
KBD	Kabd	3.70	214	eP	Pn	06 28 57.4	+1.2
KBD				AML	AML	06 29 43.7	
	comp=Z,86nm,0.4s						
CHTH	Charan	3.72	14	ePN	Pn	06 28 56.5	-0.1
RST	Umm Al-Ruwaisa	3.81	224	eP	Pn	06 28 58.4	+0.7
RST				eS	Sb	06 29 51.2	-1.4
RST				AML	AML	06 29 54.5	
	comp=Z,37nm,0.6s						
NAY	Al-Naaiem	3.87	219	eP	Pn	06 28 59.5	+1.0
NAY				eS	Sb	06 29 52.4	-1.7
NAY				AML	AML	06 29 56.0	
	comp=Z,17nm,0.6s						
RDF	Al-Radifah	3.98	213	eP	Pn	06 29 00.9	+0.9
RDF				eS	Sb	06 29 56.0	-1.3
RDF				AML	AML	06 30 01.1	
	comp=Z,39nm,0.5s						

*ISCJB **14** 06:48:15.0±0.5, 3943N±003×2064E±004, h10^{km}, Error ellipse: s-maj=4.8km s-min=3.7km az=51.6*
*THE **14** 06:48:14.9, 3942N×2063E, h0^{km}, ML2.8*
*ATH **14** 06:48:15.3, 3947N×2065E, h8^{km}±4^{km}, MD3.3/6*
*NEIC **14** 06:48:15.3, 3947N×2065E, h8^{km}, MD3.3(ATH), ML2.6(THE), After ATH.*
*CSEM **14** 06:48:15.3±0.1, 3947N×2064E, h1^{km}±1^{km}, MD3.3, Error ellipse: s-maj=3.2km s-min=2.2km az=162.0*
ISC 14 06:48:15.3±0.5, **3944N**±003×**2062E**±004, **h10**^{km}, **n24,** σ**1^{s}17**/32, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.24	292	ePg	Pg	06 48 19.5	-0.8
IGT				eSg	Sg	06 48 24.4	+0.7
JAN	Janina	0.28	39	ePG	Pg	06 48 19.7	-1.3
JAN				eSG	Sg	06 48 23.7	-1.0
MEV	Metsovon	0.58	53	ePg	Pg	06 48 25.5	-1.2
	comp=Z,13nm,0.3s						
KEK	Kerkira	0.69	293	ePG	Pg	06 48 28.6	-0.2
KEK				eSB	Sb	06 48 38.9	-0.3
LSK	Leskovik	0.71	358	i Pg	Pg	06 48 28.2	-0.9
LKD	Levkas	0.73	178	ePg	Pg	06 48 28.3	-1.2
EVR	Evrytania	1.06	119	ePN	Pn	06 48 35.6	-0.6
EVR				eSB	Sb	06 48 50.0	+0.4
KZN	Kozani	1.24	45	ePB	Pb	06 48 38.5	-0.3
VLS	Valsamata	1.26	181	ePG	Pg	06 48 39.4	-0.2
AGG	Agios Georgios	1.39	107	ePg	Pg	06 48 40.1	-1.9
	comp=Z,2.5nm,0.7s						
AGG				eSg	Sg	06 49 00.8	+0.8
FNA	Florina	1.46	23	ePg	Pg	06 48 42.2	-1.2
	comp=Z,1.8nm,0.6s						
RLS	Riolos of Patr	1.53	154	ePB	Pb	06 48 44.9	+1.1
LIT	Litokhoron	1.58	65	ePg	Pg	06 48 44.2	-1.5
	comp=Z,1.7nm,0.6s						
BIA	Bitola	1.67	19	ePn	Pn	06 48 47.0	+2.5
BIA				eSn	Sn	06 49 08.3	+2.3
BIA	Bitola	1.67	19	ePn	Pn	06 48 47.0	+2.4
BIA				eSn	Sn	06 49 08.2	+2.2
OHR	Ohrid	1.68	5	ePn	Pn	06 48 49.0	+4.2
OHR				eSn	Sn	06 49 09.8	+3.5
XOR	Xorichti	1.99	91	ePn	Pn	06 48 50.1	+1.1
NEO	Neokhori	2.02	93	ePN	Pn	06 48 51.4	+2.0
HORT	Hortiatis	2.23	58	ePn	Pn	06 48 51.9	-0.4
VAY	Valandovo	2.40	38	ePn	Pn	06 48 56.7	+2.1
VAY	Valandovo	2.40	38	ePn	Pn	06 48 56.6	+2.0
PAIG	Paliouri	2.41	77	ePn	Pn	06 48 54.6	-0.2
SOH	Sokhos	2.51	56	ePn	Pn	06 48 56.5	+0.4
OUR	Ouranopolis	2.73	70	ePn	Pn	06 48 59.7	+0.4

CASC 14 07:13:47.7±3.1, **1341N×8919W, h78**^{km}±26^{km}**, MD3.9, ML2.9, 3C-4D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	El Faro	0.24	32	⇓iP	x	07 13 59.8	
SNET	Serv Nac Est T	0.28	352	⇑eP	x	07 13 56.8	
SNET				eS	x	07 14 06.0	
LCBS	La Ceiba	0.32	41	⇓iP	x	07 14 00.4	
LCBS				eS	x	07 14 09.3	
BOQS	Boqueron	0.33	345	⇑iP	x	07 14 01.0	
BOQS				eS	x	07 14 10.5	
LBRS	Las Brisas	0.35	24	⇓iP	x	07 14 01.5	
SNVI	San Vicente	0.40	60	eP	x	07 14 01.0	
SNVI				eS	x	07 14 10.8	
SNJE	San Jose	0.60	319	eP	x	07 14 03.2	
SNJE				eS	x	07 14 14.9	
RTR	El Retiro	0.65	318	eP	x	07 14 04.0	
RTR				eS	x	07 14 16.3	
RBDL	Robledal	0.84	326	⇓eP	x	07 14 06.9	
RBDL				eS	x	07 14 21.5	
VSM	San Miguel	0.90	89	eP	x	07 14 06.7	
VSM				eS	x	07 14 21.0	
BLLM	Bellamira	0.93	88	⇑eP	x	07 14 07.1	
BLLM				eS	x	07 14 21.0	
MTO2	Montecristo 2	0.99	351	eP	x	07 14 09.6	
CNCH	Conchagua	1.33	96	eP	x	07 14 11.7	
TP2	Tecpan 2	2.24	308	eP	Pn	07 14 25.0	+2.4
TP2				eS	Sn	07 14 52.7	+3.3
LEON	Leon	2.45	114	eP	Pn	07 14 25.5	-0.1
MIRN	Miramar	2.61	112	eP	Pn	07 14 27.2	-0.4
COPN	Copaltepe	2.82	115	eP	Pn	07 14 31.4	+0.9
XAVN	Gruta Xavier	3.07	114	eP	Pn	07 14 33.7	-0.2
TISN	Laguna Tiscapa	3.12	114	eP	Pn	07 14 36.3	+1.7
MGAN	Managua	3.14	113	eP	Pn	07 14 36.4	+1.6
MGAN				i		07 15 07.8	
	comp=E,46nm,0.2s						
TICN	Ticuantepe	3.20	115	eP	Pn	07 14 36.3	+0.6

*NNC **14** 07:25:42.2±11.0, 3707N×6792E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=118.4km s-min=62.1km az=30.0*
*IDC **14** 07:25:45.8±2.1, 3701N×6866E, h0^{km}, mb3.6/2, mb1 3.6/3, mb1mx3.3/20, mbtmp3.6/3, ML2.9/1, Error ellipse: s-maj=41.6km s-min=39.8km az=52.0*
*ISCJB **14** 07:25:49.5±1.2, 3745N±010×684E±02, h33^{km}, mb3.7/2, Error ellipse: s-maj=22.5km s-min=7.5km az=111.7*
ISC 14 07:25:52.2±1.1, **3742N**±010×**684E**±02, **h35**^{km}, **n11,** σ**1^{s}28**/12, **mb3.7**/2, **5C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.90	15	⇑Pn	Pn	07 27 19.1	+2.1
	1.4nm,0.4s,baz=42,slow=58,SNR=15						
KK31				⇑Lg		07 29 04.8	
	13nm,0.8s,baz=301,slow=30						
TKM2	Tokmak 2	7.77	43	⇑Pn	Pn	07 27 43.2	+0.4
	0.6nm,0.6s						
AB31	Akbulak array	13.33	335	⇑Pn	Pn	07 28 58.3	-0.5
	0.6nm,0.4s,baz=151,slow=13,SNR=16						
AB31				⇑Sn	Sn	07 31 24.7	-0.9
	0.5nm,0.6s,baz=16,slow=12,SNR=3.3						
MKAR	Makanchi Array	13.91	43	Pn	Pn	07 29 05.2	-1.4
	0.1nm,0.3s,baz=228,slow=15,SNR=4.9						
GKN	Gorkha	16.55	120	eP	Pn	07 29 42.4	+0.9
	20nm,0.5s						
KKN	Kakani	17.13	119	eP	Pn	07 29 49.6	+0.8
	32nm,0.5s						
PKI	Pulchoki	17.36	120	eP	Pn	07 29 52.1	+0.5
	23nm,0.6s						
GUN	Gumba	17.48	118	eP	Pn	07 29 52.1	-0.9
	27nm,0.7s						
JIRN	Jiri	17.85	118	eP	Pn	07 29 56.8	-0.8
	14nm,0.5s						
FINES	FINESS Array B	35.57	326	P	P	07 32 48.2	+2.2
	0.8nm,0.6s,mb3.8,baz=108,slow=12,SNR=3.9						
ASAR	Alice Springs	86.49	123	P	P	07 38 28.8	-2.5
	0.3nm,0.9s,mb3.5,baz=305,slow=4.9,SNR=4.4						

*KRSC **14** 07:45:43, 4915N×15683E, h5^{km}, ML4.1*
MOS 14 07:45:43.7±2.4, **4901N×15682E, h31**^{km}**, mb4.2**/1**, Error ellipse: s-maj=70.1km s-min=10.7km az=79.1, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.74	345	ePN	Pn	07 46 06.9	-4.8
SKR				pmax	pmax		
	comp=Z,70nm,0.5s						
SKR				pmax	pmax		
	comp=N,60nm,0.3s						
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
ALID	Alaid	2.03	337	eP	Pn	07 46 15.6	-0.2
ALID				i S	Sn	07 46 38.6	-1.5
MIPR	Malaya Ipel'ka	3.27	359	eP	Pn	07 46 35.3	+2.5
MIPR				i S	Sn	07 47 13.7	+3.1
RUS	Russkaya	3.59	17	PN	Pn	07 46 40.0	+2.8
RUS				S	Sn	07 47 21.5	+2.9
RUS	Russkaya	3.59	17	eP	Pn	07 46 40.0	+2.8
RUS				i S	Sn	07 47 21.5	+2.9
GRL	Gorelyy	3.63	12	eP	Pn	07 46 41.5	+3.7
GRL				i S	Sn	07 47 24.4	+4.8
PET	Petropavlovsk	4.18	15	PN	Pn	07 46 49.1	+3.8
PET				S	Sn	07 47 36.9	+3.8
PET	Petropavlovsk	4.18	15	P	Pn	07 46 49.1	+3.8
PET				i S	Sn	07 47 36.9	+3.8
AVH	Avacha	4.43	15	eP	Pn	07 46 53.9	+5.2
NLC	Nalytchevo	4.46	20	PN	Pn	07 46 52.4	+3.2
NLC				S	Sn	07 47 43.3	+3.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NLC	Nalytchevo	4.46	20	P	Pn	07 46 52.4	+3.2
NLC				*i* S	Sn	07 47 43.3	+3.3
SPN	Mys Shipunski	4.56	25	PN	Pn	07 46 54.2	+3.6
SPN				S	Sn	07 47 46.5	+3.9
SPN	Mys Shipunski	4.56	25	*e*P	Pn	07 46 54.2	+3.6
SPN				*i* S	Sn	07 47 46.5	+3.9
GNL	Ganaly	4.74	8	*e*P	Pn	07 46 57.6	+4.5
KII	Karymskiy	5.29	17	PN	Pn	07 47 05.1	+4.5
KII				S	Sn	07 48 05.0	+4.5
KII	Karymskiy	5.29	17	*e*P	Pn	07 47 05.1	+4.5
KII				*i* S	Sn	07 48 05.0	+4.5
MKZ	Mys Kozlova	6.33	27	PN	Pn	07 47 17.5	+2.6
MKZ	Mys Kozlova	6.33	27	*e*P	Pn	07 47 17.5	+2.6
MKZ				*i* S	Sn	07 48 26.1	0.0
KBTR	Krutoberegovo	8.08	25	PN	Pn	07 47 43.0	+4.2
KBTR	Krutoberegovo	8.08	25	P	Pn	07 47 43.0	+4.2

*MOS **14** 07:51:05.7±0.6, 4922N×15738E, h33km, mb4.2/1, Error ellipse: s-maj=57.6km s-min=10.8km az=81.5*

KRSC 14 07:50:59, 4915N×15684E, h5km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.60	343	*e*PN	Pg	07 51 33.1	+3.3
SKR				pmax	pmax		
	comp=Z,120nm,0.5s						
ALID	Alaid	1.91	335	*e*P	Pn	07 51 31.5	-0.7
ALID				*i* S	Sn	07 51 54.9	-1.7
MIPR	Malaya Ipel'ka	3.13	359	*e*P	Pn	07 51 50.7	+1.7
MIPR				*i* S	Sn	07 52 28.8	+2.1
RUS	Russkaya	3.45	17	PN	Pn	07 51 55.5	+2.1
RUS				S	Sn	07 52 37.2	+2.5
RUS	Russkaya	3.45	17	*e*P	Pn	07 51 55.5	+2.1
RUS				*i* S	Sn	07 52 37.2	+2.5
GRL	Gorelyy	3.50	12	*e*P	Pn	07 51 57.3	+3.3
GRL				*i* S	Sn	07 52 40.2	+4.5
PET	Petropavlovsk	4.04	16	PN	Pn	07 52 04.9	+3.4
PET				S	Sn	07 52 53.0	+3.7
PET	Petropavlovsk	4.04	16	*e*P	Pn	07 52 04.9	+3.4
PET				*i* S	Sn	07 52 53.0	+3.7
AVH	Avacha	4.29	15	*e*P	Pn	07 52 09.6	+4.7
NLC	Nalytchevo	4.32	20	PN	Pn	07 52 07.9	+2.5
NLC				S	Sn	07 52 58.3	+2.1
NLC	Nalytchevo	4.32	20	P	Pn	07 52 07.9	+2.5
NLC				*i* S	Sn	07 52 58.3	+2.1
SPN	Mys Shipunski	4.43	26	PN	Pn	07 52 09.8	+2.9
SPN				S	Sn	07 53 01.7	+2.9
SPN	Mys Shipunski	4.43	26	*e*P	Pn	07 52 09.8	+2.9
SPN				*i* S	Sn	07 53 01.7	+2.9
GNL	Ganaly	4.60	8	*e*P	Pn	07 52 12.6	+3.4
KII	Karymskiy	5.16	17	PN	Pn	07 52 20.7	+3.9
KII				S	Sn	07 53 19.9	+3.2
KII	Karymskiy	5.16	17	*e*P	Pn	07 52 20.7	+3.9
KII				*i* S	Sn	07 53 19.9	+3.2
MKZ	Mys Kozlova	6.20	27	PN	Pn	07 52 33.2	+2.0
MKZ	Mys Kozlova	6.20	27	*e*P	Pn	07 52 33.2	+2.0
MKZ				*i* S	Sn	07 53 42.4	-0.1
KBTR	Krutoberegovo	7.95	25	PN	Pn	07 52 59.4	+4.3
KBTR	Krutoberegovo	7.95	25	P	Pn	07 52 59.4	+4.3

JMA 14 07:59:04.1±0.2, 2468N×14159E, h186km, M4.8, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	2.01	15	P	Pn	07 59 42.0	+0.3
JHHJ				*e*S	Sn	08 00 10.8	0.0
CBIJ	Chichi jima	2.46	12	P	Pn	07 59 47.2	+0.5
CBIJ				*e*S	Sn	08 00 20.8	+1.0
JHJ2	Mitsune	8.54	350	P	Pn	08 01 05.4	+1.0
BSO1	Boso 1	9.95	357	P	Pn	08 01 22.8	-0.1
BSO3	Boso 3	10.13	355	P	Pn	08 01 24.3	-0.9
JOD2	Odawara 2	10.77	349	P	Pn	08 01 34.0	+0.6
JRY	Ryogami san	11.53	349	P	Pn	08 01 43.4	+0.1
JAG	Ashikaga	11.85	352	P	Pn	08 01 45.6	-1.8
JHO	Hitachi	11.93	356	P	Pn	08 01 46.6	-1.7

*IDC **14** 08:15:41.8±1.9, 157S×13659E, h0km, mb4.1/4, mb1 4.3/5, mb1mx4.0/12, mbtmp4.1/5, ML4.1/1, MS3.6/1, Ms1 3.6/1, ms1mx3.1/14, Error ellipse: s-maj=73.8km s-min=27.7km az=78.0*

*ISCJB **14** 08:15:45.6±1.0, 166S±010×1362E±03, h33km, mb4.4/7, MS3.6/1, Error ellipse: s-maj=41.5km s-min=13.6km az=173.7*

*NEIC **14** 08:15:46.7±0.9, 163S×13638E, h30km, mb4.5/6, Error ellipse: s-maj=37.0km s-min=12.6km az=88.0*

ISC 14 08:15:47.6±1.0, 165S±009×1363E±03, h35km, n19, σ0.75/19, mb4.4/7, MS3.6/1, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	11.63	199	*e*P	Pn	08 18 30.3	-0.8
	23nm,0.4s						
WRAB	Tennant Creek	18.27	186	*e*P	Pn	08 19 57.4	-0.8
	13nm,0.8s						
WRAB				*e*S	S	08 23 09.4	-16
WB2	Warramunga Arr	18.28	186	*e*P	Pn	08 19 54.6	-3.7
FITZ	Fitzroy Crossi	19.41	212	*e*P	Pn	08 20 12.8	+0.8
	9.3nm,0.9s						
FITZ	Fitzroy Crossi	19.41	212	P	Pn	08 20 12.1	+0.2
	0.5nm,0.3s,baz=45,slow=13,SNR=12						
AS31	Alice Springs	22.00	186	*e*P	P	08 20 38.1	-0.5
ASAR	Alice Springs	22.00	186	P	P	08 20 39.1	+0.4
	10nm,0.6s,mb4.4,baz=14,slow=11,SNR=149						
ASPA	Alice Springs	22.01	186	*e*P	P	08 20 39.1	+0.4
FORT	Forrest	30.00	194	*e*P	P	08 21 54.1	+1.2
	13nm,0.6s,mb4.8						
STKA	Stephens Creek	30.48	171	*e*P	P	08 21 57.3	+0.2
	1.7nm,0.5s,mb4.0						
STKA	Stephens Creek	30.48	171	P	P	08 21 55.9	-1.2
	3.7nm,0.8s,mb4.2,baz=350,slow=8.9,SNR=9.1						
STKA	Stephens Creek	30.48	171	*e*P	P	08 21 57.2	+0.2
SONM	Songino Array	55.76	336	LR	LR	08 47 35.4	
	comp=Z,57nm,20.1s,MS3.6,baz=78,slow=34						
TLY	Talaya	59.89	337	*e*P	P	08 25 49.1	-0.8
	3.1nm,0.3s,mb4.8						
MKAR	Makanchi Array	67.49	323	P	P	08 26 40.2	+0.2
	0.3nm,0.3s,mb3.9,baz=108,slow=9.3,SNR=4.1						
MKAR	Makanchi Array	67.49	323	P	P	08 26 40.2	+0.2
VNDA	Vanda	77.05	174	P	P	08 27 37.5	+0.5
	0.9nm,0.7s,mb3.8,baz=327,slow=5.1,SNR=7.0						
VNDA	Vanda	77.05	174	*e*P	P	08 27 37.5	+0.5
	0.9nm,0.6s,mb3.9						
QSPA	South Pole Qui	88.29	180	*e*P	P	08 28 35.7	+0.3
	5.7nm,0.9s,mb4.8						

*ATH **14** 08:25:45.7, 3806N×2693E, h35km±2km*

*NEIC **14** 08:25:46.7, 3824N×2697E, h30km, ML3.6(THE), ML3.6(ISK), After ISK.*

*CSEM **14** 08:25:46.0±0.1, 3821N×2697E, h25km, ML3.6, Error ellipse: s-maj=1.8km s-min=1.5km az=59.0*

*ISK **14** 08:25:46.8, 3824N×2698E, h30km, ML3.5*

*ISCJB **14** 08:25:46.3±0.3, 38.15N±002×2694E±003, h26km±3km, Error ellipse: s-maj=4.1km s-min=3.4km az=155.1*

*THE **14** 08:25:47.7, 3825N×2685E, h0km, ML3.6*

ISC 14 08:25:46.8±0.4, 3814N±002×2693E±003, h21km±3km, n74, σ1.06/92, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.26	20	*i* PG	Pb	08 25 52.7	-0.2
BLCB				*i* SG	Sb	08 25 56.8	-0.3
BLCB	Balcova	0.26	20	Pg	Pb	08 25 52.5	-0.4
BLCB				Sg	Sb	08 25 56.5	-0.6
BLCB	Balcova	0.26	20	Pg	Pb	08 25 52.5	-0.4
BLCB				Sg	Sb	08 25 56.5	-0.6
URLA	Izmir	0.34	310	*i* P	Pb	08 25 53.5	-0.8
URLA				*i* S	Sb	08 25 59.3	0.0
IZM	Izmir	0.37	45	*i* PG	Pb	08 25 54.8	+0.2
IZM				*i* SG	Sb	08 26 00.4	+0.4
IZM	Izmir	0.37	45	Pg	Pb	08 25 54.9	+0.2
IZM				Sg	Sb	08 26 00.9	+0.9
KDAG	Bornova	0.37	45	*i* P	Pb	08 25 54.8	0.0
KDAG				*i* S	Sb	08 26 01.9	+1.7
SMG	Samos	0.44	190	*e*PB	Pb	08 25 54.6	-1.2
SMG				*e*SB	Sb	08 26 01.1	-0.8
CHOS	Chios island	0.73	290	*e*Pg	Pb	08 26 00.2	-0.6
CHOS				*e*Sg	Sb	08 26 10.5	+0.1
AKHS	Akhisar	1.01	43	*i* P	Pb	08 26 06.1	+0.5
AKHS				*i* S	Sb	08 26 21.6	+3.1
AKS	Akhisar	1.01	43	PG	Pb	08 26 06.6	+1.0
AKS	Akhisar	1.01	43	Pg	Pb	08 26 05.2	-0.4
AKS	Akhisar	1.01	43	Pg	Pb	08 26 05.2	-0.4
BODT	Bodrum	1.12	164	PN	Pn	08 26 08.3	+1.2
BODT				SN	Sn	08 26 23.8	+2.0
BODT	Bodrum	1.12	164	Pn	Pn	08 26 08.3	+1.2
BODT				Sg	Sb	08 26 23.4	+1.9
BDRM	Kayabasi	1.15	159	*i* P	Pn	08 26 07.3	-0.2
BDRM				*i* S	Sb	08 26 22.9	+0.5
PRK	Paraskevi	1.22	335	*e*PN	Pn	08 26 09.1	+0.6
PRK				*e*SN	Sn	08 26 25.8	+1.5
YER	Yerkesik	1.47	133	PN	Pn	08 26 12.6	+0.6
DAT	Datca	1.50	160	PN	Pn	08 26 13.0	+0.6
APE	Apeiranthos	1.54	227	*e*PN	Pn	08 26 12.3	-0.7
APE				*e*SN	Sn	08 26 31.3	-1.0
DENT	Denizli	1.71	102	PN	Pn	08 26 15.0	-0.2
EZN	Ezine	1.75	345	PN	Pn	08 26 14.8	-1.0
EZN	Ezine	1.75	345	Pn	Pn	08 26 14.9	-0.9
BOZC	Bozcaada	1.83	338	*i* P	Pn	08 26 17.8	+0.9
BOZC				*i* S	Sn	08 26 45.6	+6.1
CANB	Canakkale	1.88	3	PN	Pn	08 26 16.4	-1.2
DALT	Dalyan (Mudla)	1.93	135	PN	Pn	08 26 18.7	+0.4
DALT	Dalyan (Mudla)	1.93	135	Pn	Pn	08 26 18.7	+0.4
DST	Dursunbey	1.98	42	PN	Pn	08 26 17.3	-1.6
DST	Dursunbey	1.98	42	Pn	Pn	08 26 16.4	-2.5
GADA	Gvkgeada	2.20	339	PN	Pn	08 26 21.4	-0.6
LIA	Limnos Island	2.22	323	*e*PN	Pn	08 26 23.3	+1.0
LIA				*e*SN	Sn	08 26 50.1	+1.0
LPK	Lapseki	2.23	357	PN	Pn	08 26 21.4	-1.1
LPK	Lapseki	2.23	357	Pn	Pn	08 26 21.5	-1.0
LPK	Lapseki	2.23	357	Pn	Pn	08 26 21.5	-1.0
LOS	Limnos	2.30	322	*e*Pn	Pn	08 26 24.5	+1.2
LOS	Limnos	2.30	322	P	Pn	08 26 24.8	+1.4
LOS	Limnos	2.30	322	P	Pn	08 26 24.8	+1.4
BNT	Bandirma	2.34	19	PN	Pn	08 26 22.8	-1.2
BNT	Bandirma	2.34	19	Pn	Pn	08 26 22.9	-1.1
BNT	Bandirma	2.34	19	Pn	Pn	08 26 22.9	-1.1
KCT	Karacabey	2.40	27	Pn	Pn	08 26 22.9	-1.8
KCT	Karacabey	2.40	27	Pn	Pn	08 26 22.9	-1.8
MRMT	Marmara Adasi	2.51	12	*e*PN	Pn	08 26 25.6	-0.7
KVR	Kavouri	2.52	264	*e*PN	Pn	08 26 26.0	-0.4
RKY	Sarkoy-Tekirda	2.55	4	*e*PN	Pn	08 26 25.6	-1.2
RKY	Sarkoy-Tekirda	2.55	4	Pn	Pn	08 26 25.6	-1.2
MFT	Murefte	2.66	6	*e*PN	Pn	08 26 26.5	-1.8
ENEZ	Enez	2.66	347	*e*PN	Pn	08 26 28.3	-0.1
ELL	Elmali	2.75	119	*e*PN	Pn	08 26 29.3	-0.2
ELL	Elmali	2.75	119	Pn	Pn	08 26 29.3	-0.2
ALN	Alexandroupoli	2.84	346	*e*Pn	Pn	08 26 31.7	+0.9
ALN				*e*Sn	Sn	08 27 05.6	+1.3
ISP	Isparta	2.84	95	*e*PN	Pn	08 26 31.6	+0.7
ISP	Isparta	2.84	95	Pn	Pn	08 26 31.6	+0.7
GEMT	Gemlik	2.89	37	*e*PN	Pn	08 26 30.4	-1.0
NPS	Neapolis	3.06	201	*e*PN	Pn	08 26 32.0	-1.8
YLV	Yalova	3.08	37	*e*PN	Pn	08 26 32.9	-1.2
PAIG	Paliouri	3.10	306	P	Pn	08 26 33.9	-0.4
ADVT	Abdulvahap	3.16	43	*e*PN	Pn	08 26 33.9	-1.3
ADVT	Abdulvahap	3.16	43	Pn	Pn	08 26 33.9	-1.3
OUR	Ouranopolis	3.17	315	*e*Pn	Pn	08 26 36.4	+1.1
RDO	Rodhopi	3.19	341	*e*PN	Pn	08 26 37.5	+1.9
CTT	Catalca	3.22	21	*e*PN	Pn	08 26 35.1	-0.9
CTT	Catalca	3.22	21	Pn	Pn	08 26 35.1	-0.9
ESKT	Eskisehir	3.36	65	*e*PN	Pn	08 26 37.6	-0.3
HRT	Hereke	3.42	37	*e*PN	Pn	08 26 37.6	-1.1
KLYT	Kilyos	3.51	27	*e*PN	Pn	08 26 39.0	-1.0
KDZ	Kurdzhali	3.69	342	*i* P	Pn	08 26 44.3	+1.7
EDRB	Edirne	3.71	358	*e*PN	Pn	08 26 42.7	0.0
EDRB	Edirne	3.71	358	Pn	Pn	08 26 42.7	0.0
RZN	Rozhen	3.93	335	*i* P	Pn	08 26 47.7	+1.9
KIZT	Kizilcal	3.95	78	*e*PN	Pn	08 26 46.6	+0.5
KIZT	Kizilcal	3.95	78	Pn	Pn	08 26 46.7	+0.6
KIZT	Kizilcal	3.95	78	Pn	Pn	08 26 46.7	+0.6
MMB	Musomiste	4.24	325	*i* P	Pn	08 26 51.0	+1.0

*ISCJB **14** 08:26:57.7±0.6, 3806N±002×2689E±004, h6km±5km, Error ellipse: s-maj=5.6km s-min=3.9km az=170.0*

*ATH **14** 08:26:57.4, 3805N×2702E, h34km±3km, MD3.5/3*

*CSEM **14** 08:26:57.5±0.1, 3807N×2693E, h10km, MD3.3, Error ellipse: s-maj=2.8km s-min=1.9km az=84.0*

*ISK **14** 08:26:57.3, 3804N×2695E, h7km, MD3.3, ML3.2*

ISC 14 08:26:58.6±0.5, 3808N±002×2690E±004, h12km±4km, n23, σ0.89/33, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.32	20	*i* PG	Pg	08 27 04.7	-0.4
URLA	Izmir	0.37	319	*i* P	Pg	08 27 05.5	-0.5
URLA				*i* S	Sg	08 27 10.9	0.0
SMG	Samos	0.38	188	*e*PB	Pg	08 27 06.6	+0.5
SMG				*e*SB	Sg	08 27 12.9	+1.7
IZM	Izmir	0.42	42	*i* PG	Pg	08 27 06.8	-0.2
IZM				*i* SG	Sg	08 27 12.6	0.0
KDAG	Bornova	0.43	42	*i* P	Pg	08 27 06.3	-0.8
KDAG				*i* S	Sg	08 27 13.0	+0.2
AYDN	Tasoluk	0.88	118	*i* P	Pg	08 27 15.8	+0.2
AYDN				*i* S	Sg	08 27 28.2	+1.2
BODT	Bodrum	1.07	162	PG	Pg	08 27 16.7	-2.5
AKHS	Akhisar	1.07	42	*i* P	Pb	08 27 18.3	-0.8
AKHS				*i* S	Sb	08 27 33.4	+0.4
AKS	Akhisar	1.07	42	PN	Pn	08 27 18.7	-0.7
AKS				SN	Sn	08 27 33.6	-0.6
BDRM	Kayabasi	1.10	157	*i* P	Pb	08 27 19.2	-0.4
BDRM				*i* S	Sb	08 27 36.8	+2.9
AYVA	Ayvalik	1.24	352	*i* P	Pn	08 27 22.0	+0.3
AYVA				*i* S	Sb	08 27 38.7	+0.9
PRK	Paraskevi	1.26	337	*e*PN	Pn	08 27 21.3	-0.8
PRK				*e*SN	Sn	08 27 39.2	+0.2
YER	Yerkesik	1.45	130	*e*PN	Pn	08 27 24.2	-0.4
DAT	Datca	1.45	158	*e*PN	Pn	08 27 23.3	-1.4
APE	Apeiranthos	1.49	228	*e*PN	Pn	08 27 24.3	-0.9
DENT	Denizli	1.71	100	*e*PN	Pn	08 27 27.9	-0.4
DALT	Dalyan (Mudla)	1.90	133	*e*PN	Pn	08 27 30.2	-0.7
CANB	Canakkale	1.94	4	*e*PN	Pn	08 27 32.3	+0.9
DST	Dursunbey	2.03	41	*e*PN	Pn	08 27 32.9	+0.2
LPK	Lapseki	2.29	357	*e*PN	Pn	08 27 36.2	0.0
ORLT	Orhaneli	2.50	38	*e*PN	Pn	08 27 39.9	+0.8
RKY	Sarkoy-Tekirda	2.61	5	*e*PN	Pn	08 27 42.2	+1.6
MFT	Murefte	2.72	6	*e*PN	Pn	08 27 43.1	+1.0

*ISCJB **14** 09:10:15.0±0.4, 1221S±008×1491W±009, h10km, mb4.2/27, MS3.8/19, Error ellipse: s-maj=13.7km s-min=9.3km az=73.1*

*IDC **14** 09:10:15.0±0.6, 1229S×1490W, h0km, mb4.1/20, mb1 4.2/20, mb1mx4.1/26, mbtmp4.1/20, MS3.8/19, Ms1 3.8/19, ms1mx3.7/22, Error ellipse: s-maj=22.1km s-min=13.7km az=128.0*

*NEIC **14** 09:10:16.7±0.4, 1220S×1491W, h10km, mb4.6/10, Error ellipse: s-maj=12.8km s-min=8.7km az=127.0*

*HRVD **14** 09:10:16.7±0.5, 1232S×1464W, h15km, MW4.8/53, Centroid moment Tensor Solution. LP body waves: s11,c12;Mantle waves: s53,c64; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.25±.10; $M_{\theta\theta}$-1.14±.10; $M_{\phi\phi}$0.89±.09; $M_{r\theta}$-0.79±.35; $M_{\theta\phi}$1.32±.09; $M_{\phi r}$-1.51±.31; Best double couple: $M_0$2.25400×10^{16} NP1:ϕ_s155.00000°,δ65.00000°,λ155.00000°. NP2: ϕ_s256.00000°,δ68.00000°,λ27.00000°. Principal axes: T 2.7180, Plg35.0000°, Azm117.0000°; N -0.9250, Plg55.0000°, Azm292.0000°; P -1.7910, Plg2.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 14 09:10:16.9±0.4, 1227S±008×1487W±009, h10km, n41, σ0.97/34, mb4.2/27, MS3.8/19, 1C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASCN	Ascension	4.34	7	*e*Pn	Pn	09 11 19.7	-3.2
DBIC	Dimbokro	21.29	28	P	P	09 15 03.4	-0.2
	9.0nm,0.8s,mb4.2,baz=190,slow=12,SNR=7.6						
DBIC				LR	LR	09 21 20.6	
	comp=Z,212nm,18.9s,MS3.6,baz=180,slow=31						
DBIC	Dimbokro	21.29	28	*e*P	P	09 15 03.1	-0.4
	37nm,1.2s,mb4.6						
TORD	Torodi Ar. Bea	30.13	34	P	P	09 16 27.5	+0.7
	2.0nm,0.8s,mb3.9,baz=219,slow=9.0,SNR=7.3						
TORD				LR	LR	09 26 47.4	
	comp=Z,172nm,19.0s,MS3.7,baz=215,slow=33						
BDFB	Brasilia	32.32	260	P	P	09 16 46.5	+0.4
	1.4nm,0.5s,mb4.1,baz=95,slow=9.5,SNR=2.7						
BDFB				LR	LR	09 26 48.6	
	comp=Z,172nm,21.3s,MS3.7,baz=92,slow=31						
BOSA	Boshof	40.74	120	LR	LR	09 31 37.3	
	comp=Z,331nm,18.6s,MS4.2,baz=273,slow=32						
LSZ	Lusaka	41.88	99	P	P	09 18 09.1	+1.8
	1.0nm,0.5s,mb3.7,baz=264,slow=9.2,SNR=3.5						
LSZ				LR	LR	09 32 43.2	
	comp=Z,212nm,19.2s,MS4.0,baz=289,slow=32						
CPUP	Villa Florida	42.24	244	P	P	09 18 11.4	+1.1
	0.7nm,0.6s,mb3.5,baz=130,slow=6.2,SNR=3.7						
CPUP	Villa Florida	42.24	244	*e*P	P	09 18 12.1	+1.8
	7.3nm,0.7s,mb4.4						
SIV	San Ignacio	44.89	260	P	P	09 18 31.5	0.0
	0.9nm,1.0s,mb3.6,baz=162,slow=3.2,SNR=4.3						
MDT	Midelt	45.89	12	LR	LR	09 36 23.8	
	comp=Z,136nm,19.8s,MS3.9,baz=198,slow=34						
CFAA	Coronel Fontan	52.57	240	P	P	09 19 30.4	-0.2
	0.1nm,0.5s,mb3.0,baz=82,slow=7.4,SNR=4.0						
ESDC	Sonseca Array	52.66	11	LR	LR	09 41 14.3	
	comp=Z,36nm,20.5s,MS3.4,baz=265,slow=35						
KMBO	Kilima Mbogo	52.84	82	LR	LR	09 41 54.0	
	comp=Z,74nm,18.2s,MS3.8,baz=269,slow=36						
KEST	Kesra	52.95	25	P	P	09 19 34.9	+1.5
	2.1nm,1.0s,mb4.0,baz=148,slow=7.5,SNR=4.2						
KEST				LR	LR	09 41 40.9	
	comp=Z,70nm,19.3s,MS3.7,baz=355,slow=36						
SDV	Santo Domingo	59.27	288	*e*P	P	09 20 20.2	+1.6
	7.6nm,0.9s,mb4.7						
SNAA	Sanae	59.82	176	P	P	09 20 20.3	-2.1
	1.1nm,0.9s,mb3.9,baz=344,slow=8.4,SNR=8.5						
SNAA	Sanae	59.82	176	*e*P	P	09 20 21.6	-0.9
	4.0nm,1.0s,mb4.4						
IDI	Anoyia	60.45	37	P	P	09 20 28.3	+1.5
	10nm,0.9s,mb4.8,baz=252,slow=9.6,SNR=4.3						
ROSC	El Rosal	61.50	282	P	P	09 20 33.4	-0.4
	3.9nm,0.4s,mb4.9,baz=107,slow=19,SNR=3.1						
ROSC				LR	LR	09 47 38.0	
	comp=Z,110nm,18.1s,MS4.0,baz=47,slow=36						
GERES	GERESS Array B	65.89	20	P	P	09 21 02.2	-0.6
	0.7nm,0.8s,mb3.8,baz=207,slow=5.5,SNR=6.3						
GERES				LR	LR	09 49 43.1	
	comp=Z,107nm,18.8s,MS4.1,baz=267,slow=36						
SYO	Syowa Base	66.32	161⇑	*e*P	P	09 21 04.4	-1.2
MLR	Muntele Rosu	68.27	30	P	P	09 21 17.8	-0.2
	3.6nm,0.9s,mb4.4,baz=18,slow=5.7,SNR=4.6						
BRTR	Keskin Array B	68.59	38	P	P	09 21 19.1	-0.9
	1.0nm,0.9s,mb3.8,baz=200,slow=6.6,SNR=4.6						
BRTR				LR	LR	09 51 25.2	
	comp=Z,24nm,21.1s,MS3.4,baz=358,slow=36						
AKASG	Malin Array Be	73.53	27	P	P	09 21 49.2	-0.8
	2.6nm,0.9s,mb4.2,baz=229,slow=6.6,SNR=12						
AKASG				LR	LR	09 55 12.6	
	comp=Z,38nm,20.1s,MS3.7,baz=10.0,slow=37						
AKBB	Malin Array Si	73.53	27	*e*P	P	09 21 51.3	+1.3
MAW	Mawson	74.06	157	P	P	09 21 52.7	-0.3
	1.4nm,0.8s,mb4.0,baz=308,slow=9.0,SNR=6.1						
MAW				LR	LR	09 49 09.1	
	comp=Z,138nm,18.7s,MS4.3,baz=245,slow=32						
MAW	Mawson	74.06	157	*e*P	P	09 21 52.0	-1.0
	1.8nm,0.8s,mb4.0						
HFS	Hagfors	75.71	14	P	P	09 22 02.1	-0.5
	2.6nm,0.9s,mb4.2,baz=242,slow=12,SNR=2.5						
NOA	NORSAR Array B	75.95	13	P	P	09 22 03.6	-0.3
	1.0nm,1.0s,mb3.7,baz=189,slow=10,SNR=2.2						
NOA				LR	LR	09 53 59.2	
	comp=Z,25nm,18.8s,MS3.5,baz=170,slow=34						
QSPA	South Pole Qui	77.88	180	*e*P	P	09 22 15.1	+0.3
	5.5nm,0.9s,mb4.5						
SCHQ	Schefferville	79.85	332	P	P	09 22 25.6	-0.1
	1.9nm,0.6s,mb4.2,baz=153,slow=11,SNR=3.5						
SCHQ				LR	LR	09 51 44.4	
	comp=Z,57nm,18.9s,MS3.9,baz=320,slow=31						
FINES	FINESS Array B	80.24	19	P	P	09 22 27.2	-0.6
	1.2nm,0.5s,mb4.0,baz=160,slow=6.1,SNR=10.0						
FINES				LR	LR	09 58 18.1	
	comp=Z,32nm,18.1s,MS3.7,baz=189,slow=36						
WVT	Waverly	83.80	309	*e*P	P	09 22 45.6	-0.9
	2.0nm,0.7s,mb4.4						
FVM	French Village	86.37	310	*e*P	P	09 22 59.1	-0.3
	2.1nm,0.5s,mb4.6						
CCM	Cathedral Cave	87.01	310	*e*P	P	09 23 02.3	-0.2
	7.3nm,0.9s,mb4.9						
VNDA	Vanda	90.35	179	P	P	09 23 18.6	+0.2
	0.8nm,0.9s,mb4.1,baz=358,slow=1.4,SNR=4.2						
VNDA				LR	LR	10 00 51.3	
	comp=Z,46nm,19.4s,MS3.9,baz=92,slow=34						
ARU	Arti	91.19	32	*e*P	P	09 23 26.2	+4.0
	8.7nm,0.8s,mb5.1						
ULM	Lac du Bonnet	93.66	321	LR	LR	09 57 47.9	
	comp=Z,51nm,21.2s,MS4.0,baz=36,slow=30						
ASAR	Alice Springs	133.01	139	PKP	PKPdf	09 29 33.0	+0.4
	0.7nm,1.0s,baz=230,slow=1.4,SNR=3.7						
WRA	Warramunga Arr	135.92	136	PKP	PKPdf	09 29 36.8	-1.2
	0.4nm,0.9s,baz=239,slow=1.9,SNR=3.0						

*ISCJB **14** 09:19:13.4±1.0, 1907N±005×6472W±003, h27km±6km, mb3.9/4, Error ellipse: s-maj=8.1km s-min=4.1km az=176.8*

*TRN **14** 09:19:13.6, 1892N×6477W, h21km, MD4.0*

*IDC **14** 09:19:14.9±4.3, 1893N×6468W, h43km±48km, mb3.7/4, mb1 3.9/5, mb1mx3.5/22, mbtmp4.0/5, ML2.7/1, MS2.7/1, Ms1 2.7/1, ms1mx2.5/20, Error ellipse: s-maj=46.9km s-min=21.1km az=79.0*

*NEIC **14** 09:19:15.4, 1901N×6463W, h19km, MD3.8(RSPR), After RSPR.*

*RSPR **14** 09:19:15.4, 1901N×6463W, h19km±8km, MD3.8/17, MD3.8/17*

ISC 14 09:19:14.2±1.0, 1904N±005×6472W±003, h23km±6km, n31, σ0.80/50, mb3.9/4, 8C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	0.63	170⇑	*i*P	Pb	09 19 25.9	-0.6
STVI	Saint Thomas	0.72	199⇓	*e*P	Pb	09 19 27.7	-0.2
STVI				*e*S	Sb	09 19 37.3	0.0
CULB	Culebra	0.93	219⇑	*i*P	Pb	09 19 31.1	-0.4
CULB				*e*S	Sb	09 19 43.2	-0.2
MTP	Monte Pirata	1.23	220⇑	*e*P	Pn	09 19 35.4	-0.5
MTP				*e*S	Sn	09 19 50.9	-0.9
CDVI	St. Croix	1.28	182⇑	*e*P	Pn	09 19 36.7	+0.1
CDVI				*e*S	Sn	09 19 53.0	0.0
CBYP	Canovanas	1.32	235⇓	*e*P	Pn	09 19 36.7	-0.5
CBYP				*e*S	Sn	09 19 53.9	-0.1
HUMP	Col San Antoni	1.39	230⇑	*e*P	Pn	09 19 38.0	-0.1
HUMP				*e*S	Sn	09 19 54.9	-0.9
CPD	Cerro la Pandu	1.51	229⇓	*e*P	Pn	09 19 39.8	0.0
CPD				*e*S	Sn	09 19 58.5	-0.2
SJG	San Juan	1.64	236	*e*P	Pn	09 19 41.4	-0.1
SJG				*e*S	Sn	09 20 01.6	-0.4
STMA	St. Maarten, A	1.82	123	*e*P	Pn	09 19 44.1	0.0
STMA				*e*S	Sn	09 20 05.3	-1.2
CELP	Cerrillos	2.00	242⇑	*e*P	Pn	09 19 46.9	+0.3
CELP				*e*S	Sn	09 20 11.3	+0.3
AOPR	Arecibo Observ	2.04	251⇑	*e*P	Pn	09 19 47.0	-0.1
AOPR				*e*S	Sn	09 20 12.5	+0.6
OBIP	Obispado Ponce	2.04	241	*e*P	Pn	09 19 47.4	+0.3
OBIP				*e*S	Sn	09 20 12.4	+0.4
ICM	Isla Caja Muer	2.05	237⇑	*e*P	Pn	09 19 47.9	+0.6
ICM				*e*S	Sn	09 20 12.8	+0.6
LRS	Lares	2.14	250⇓	*e*P	Pn	09 19 48.4	-0.1
LRS				*e*S	Sn	09 20 14.4	0.0
STAT	Sint Eustatius	2.26	133	*e*P	Pn	09 19 51.7	+1.6
STAT				*e*S	Sn	09 20 18.6	+1.3
AGPR	Aguadilla, PR	2.33	256⇑	*e*P	Pn	09 19 51.2	+0.1
AGPR				*e*S	Sn	09 20 18.9	-0.2
LSP	Las Mesas	2.40	250⇑	*e*P	Pn	09 19 52.7	+0.6
LSP				*e*S	Sn	09 20 21.1	+0.3
MPR	Mayaguez	2.43	251	*e*S	Sn	09 20 22.5	+0.9
MGP	Maguayo	2.47	246⇓	*e*P	Pn	09 19 53.5	+0.5
MGP				*e*S	Sn	09 20 22.4	0.0
CRPR	Cabo Rojo, PR	2.49	246⇓	*e*P	Pn	09 19 53.6	+0.3
CRPR				*e*S	Sn	09 20 24.0	+1.2
LZG	Guadaloupe-1	4.02	135	*e*P	Pn	09 20 16.4	+2.0
SCG	Saint Claude	4.17	135	*e*P	Pn	09 20 17.1	+0.7
DEG	La Desirade	4.42	127	*e*P	Pn	09 20 13.2	-6.6
BBL	Barber's Block	4.67	138	*e*P	Pn	09 20 24.2	+0.9
ROSC	El Rosal	16.93	215	P	Pn	09 23 07.9	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.6nm,0.3s,baz=284,slow=19,SNR=3.3						
ROSC				LR	LR	09 28 37.0	
	comp=Z,24nm,21.1s,baz=46,slow=33						
SIV	San Ignacio	34.99	174	P	P	09 26 02.4	-2.3
	0.8nm,0.5s,mb3.9,baz=352,slow=11,SNR=7.7						
SCHQ	Schefferville	35.77	358	P	P	09 26 10.3	-1.1
	2.2nm,0.7s,mb4.2,baz=218,slow=12,SNR=3.1						
SCHQ	Schefferville	35.77	358	P	P	09 26 10.3	-1.1
PDAR	Pinedale Array	44.49	312	P	P	09 27 23.3	-0.4
	1.1nm,0.9s,mb3.6,baz=108,slow=8.8,SNR=6.4						
PDAR				pP	pP	09 27 35.8	+5.1
	0.6nm,0.6s,baz=117,slow=8.5,SNR=4.6						
CPUP	Villa Florida	45.66	171	P	P	09 27 30.2	-2.8
	0.9nm,0.7s,mb3.8,baz=356,slow=13,SNR=3.8						

*CSEM **14** 09:19:19.4±0.5, 3872N×2893W, h5^{km}±4^{km}, MD2.9, Error ellipse: s-maj=6.1km s-min=3.6km az=59.0, After PDA*
*PDA **14** 09:19:19.4±0.5, 3872N×2893W, h5^{km}±4^{km}, MD2.9, Error ellipse: s-maj=6.1km s-min=3.6km az=59.0*
SVSA 14 09:19:19.4±0.5**, 3872N×2893W, h5^{km}±4^{km}, MD2.9, Error ellipse: s-maj=6.1km s-min=3.6km az=59.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CALA	Caldeira	0.22	128	eP	Pg	09 19 23.7	0.0
CALA				eS	Sg	09 19 26.8	+0.1
PICO	Pico	0.45	119	eP	Pg	09 19 27.2	-0.8
PICO				eS	Sg	09 19 33.5	-0.4
ROSA	Rosais	0.54	90	eP	Pg	09 19 28.8	-0.9
ROSA				eS	Sg	09 19 35.4	-1.3

JMA 14 09:28:25.2±0.8**, 4554N×15035E, h30^{km}, M4.1, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	3.95	238	P	Pn	09 29 22.6	-1.1
NEM2				eS	Sn	09 30 04.9	-4.2
JRA	Rausu	4.05	249	P	Pn	09 29 26.7	+1.5
JAK	Akkeshi	4.79	240	P	Pn	09 29 34.2	-1.1
JAR	Ashorobuto	5.22	247	P	Pn	09 29 42.5	+1.3
JOB	Onbets	5.37	243	P	Pn	09 29 43.5	+0.2
JKK2	Kamakawa 2	5.67	256	P	Pn	09 29 49.2	+1.8
JCH	Churui	5.82	242	P	Pn	09 29 49.1	-0.3
JCH				eS	Sn	09 30 51.7	-3.5
JNBK	Urakawa-nobuka	6.38	242	P	Pn	09 29 56.4	-0.7
JKB	Kayabe	7.67	245	P	Pn	09 30 13.8	-1.1
JKB				eS	Sn	09 31 34.4	-6.3
JANG	Nango	8.28	235	eS	Sn	09 31 46.3	-9.4
JIO	Ouri	9.74	227	eS	Sn	09 32 21.0	-11

*CSEM **14** 09:42:28.0, 2922N×5137E, h44^{km}, ML3.7, After THR*
*THR **14** 09:42:28.0±0.8, 2922N×5137E, h44^{km}±10^{km}, ML3.7*
*KISR **14** 09:42:29.3±1.1, 2947N×5195E, h30^{km}±999^{km}, ML3.2*
*ISCJB **14** 09:42:30.9±0.5, 2941N±006×5186E±003, h10^{km}, Error ellipse: s-maj=9.2km s-min=3.8km az=18.2*
ISC 14 09:42:32.0±0.6**, 2946N**±007×**5189E**±004**, h10^{km}, n13, σ0^{s}91**/23**, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.51	140	ePG	Pg	09 42 58.7	-2.4
GHIR				eSG	Sg	09 43 21.6	+1.0
GHIR				AML	AML	09 43 32.6	
	comp=E,1μm,0.7s						
GHIR				AML	AML	09 43 32.8	
	comp=N,631nm,0.5s						
GHIR	Ghir-Karzin	1.51	140	ePg	Pg	09 42 58.7	-2.3
	SNR=100						
GHIR				eSg	Sg	09 43 21.6	+0.9
	comp=N,631nm,0.5s,SNR=100						
NASN	Na'in	3.42	13	ePN	Pn	09 43 25.6	+0.2
QRN	Al-Qurain	3.55	259	eP	Pn	09 43 26.1	-1.0
QRN				eS	Sn	09 44 09.3	+0.2
QRN				AML	AML	09 44 11.2	
	comp=Z,82nm,0.6s						
KBD	Kabd	3.68	267	eP	Pn	09 43 28.6	-0.3
KBD				eS	Sn	09 44 12.9	+0.7
RDF	Al-Radifah	3.83	263	eP	Pn	09 43 30.6	-0.5
RDF				eS	Sn	09 44 16.2	+0.1
RDF				AML	AML	09 44 17.4	
	comp=Z,24nm,0.4s						
MIB	Mutribah	3.98	276	eP	Pn	09 43 32.7	-0.3
MIB				eS	Sn	09 44 19.6	-0.1
MIB				AML	AML	09 44 24.4	
	comp=Z,31nm,0.6s						
NAY	Al-Naaiem	4.06	268	eP	Pn	09 43 34.2	0.0
NAY				eS	Sn	09 44 22.9	+1.1
NAY				AML	AML	09 44 24.6	
	comp=Z,18nm,0.7s						
RST	Umm Al-Ruwaisa	4.27	272	eP	Pn	09 43 36.9	-0.1
RST				eS	Sn	09 44 27.0	+0.2
RST				AML	AML	09 44 30.4	
	comp=Z,37nm,0.5s						
KRBR	Kerman	4.27	82	ePn	Pn	09 43 38.3	+1.3
KRBR				SN	Sn	09 44 30.6	+3.7
KRBR				AML	AML	09 44 35.8	
	comp=E,78nm,0.4s						
KRBR	Kerman	4.27	82	ePn	Pn	09 43 38.3	+1.3
	SNR=54						
KRBR				Sn	Sn	09 44 30.6	+3.7
	comp=E,78nm,0.4s,SNR=54						
BNDS	Bandar-Abbas	4.29	118	ePN	Pn	09 43 36.9	-0.4
BNDS				AML	AML	09 44 34.3	
	comp=N,53nm,0.3s						
ASAO	Ashtian	5.32	343	ePn	Pn	09 43 48.0	-3.4

*ISCJB **14** 10:54:30.9±0.7, 3934N±003×2056E±004, h8^{km}±6^{km}, Error ellipse: s-maj=5.7km s-min=5.3km az=113.7*
*ATH **14** 10:54:30.7, 3937N×2063E, h27^{km}±3^{km}, MD3.0/4*
*CSEM **14** 10:54:30.7±0.2, 3933N×2061E, h1^{km}±1^{km}, MD3.0, Error ellipse: s-maj=4.6km s-min=3.4km az=71.0*
*NEIC **14** 10:54:30.8, 3932N×2051E, h0^{km}, MD3.0(ATH), ML2.2(THE), After THE.*
*THE **14** 10:54:30.8, 3932N×2051E, h0^{km}*
ISC 14 10:54:31.2±0.7**, 3933N**±004×**2055E**±004**, h8^{km}**±7^{km}**, n12, σ1^{s}03**/21**, 1D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.26	321	ePg	Pg	10 54 35.7	-0.7
IGT				eSg	Sg	10 54 39.6	-0.3
JAN	Janina	0.40	35	⇓iPB	Pg	10 54 37.9	-1.2
JAN				eSB	Sg	10 54 43.8	-0.6
LKD	Levkas	0.62	173	ePg	Pg	10 54 42.9	-0.3
KEK	Kerkira	0.69	304	ePN	Pg	10 54 45.0	+0.4
KEK				eSN	Sg	10 54 55.8	+2.1
MEV	Metsovon	0.70	49	ePg	Pg	10 54 43.6	-1.0
MEV				eSg	Sg	10 54 55.4	+1.7
LSK	Leskovik	0.82	3	i Pg	Pg	10 54 46.2	-0.8
LSK				i Sg	Sg	10 55 01.9	+4.2
EVR	Evrytania	1.06	112	ePN	Pn	10 54 50.5	-1.9
VLS	Valsamata	1.15	178	ePN	Pn	10 54 53.5	-0.1
VLS				eSN	Sn	10 55 10.4	+0.9
AGG	Agios Georgios	1.42	102	ePg	Pn	10 54 56.8	-0.5
AGG				eSg	Sg	10 55 18.7	+1.8
FNA	Florina	1.59	23	ePg	Pn	10 54 59.4	-0.2
FNA				eSg	Sg	10 55 22.8	+0.5
LIT	Litokhoron	1.69	62	ePb	Pb	10 55 01.7	-0.8
LIT				eSb	Sb	10 55 24.5	+0.6
GRG	Griva	2.16	41	ePn	Pn	10 55 08.4	+0.9

*CSEM **14** 11:14:01.5±0.2, 4171N×1964E, h2^{km}, ML3.2, Error ellipse: s-maj=7.8km s-min=3.6km az=52.0*
*SKO **14** 11:14:01.0, 4177N×1947E, h0^{km}*
*ISCJB **14** 11:14:02.4±0.4, 4174N±002×1959E±004, h11^{km}, Error ellipse: s-maj=4.8km s-min=2.2km az=105.5*
*PDG **14** 11:14:02.2±0.2, 4175N×1960E, h11^{km}*
*NEIC **14** 11:14:02.2, 4175N×1960E, h11^{km}, MD2.5(PDG), ML3.2(THE), After PDG.*
*THE **14** 11:14:02.2, 4169N×1938E, h2^{km}, ML3.2*
ISC 14 11:14:02.3±0.6**, 4170N**±003×**1957E**±004**, h1^{km}**±6^{km}**, n23, σ1^{s}21**/45**, 8C-3D, Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULC	Ulcinj	0.35	318	⇓iPg	Pg	11 14 08.8	-0.3
ULC				eSg	Sg	11 14 14.4	+0.7
TTG	Podgorica	0.76	343	⇑iPg	Pg	11 14 15.6	-1.4
TTG				eSg	Sg	11 14 27.7	+0.8
BUM	Brajici-Budva	0.78	321	ePg	Pg	11 14 16.6	-0.6
BUM				eSg	Sg	11 14 28.7	+1.3
PVY	Plav	0.94	19	⇑iPg	Pg	11 14 18.8	-1.6
PVY				eSg	Sg	11 14 33.0	+0.3
HCY	Herceg Novi	1.09	314	⇓iPg	Pg	11 14 21.8	-1.5
HCY				eSg	Sg	11 14 39.3	+1.9
OHR	Ohrid	1.10	122	i Pg	Pg	11 14 21.7	-1.6
OHR				eSg	Sg	11 14 38.2	+0.7
NKY	Niksic	1.19	339	⇓iPg	Pg	11 14 23.3	-1.8
NKY				eSg	Sg	11 14 41.9	+1.4
IVA	Berane	1.20	12	⇑iPg	Pg	11 14 23.9	-1.4
IVA				eSg	Sg	11 14 41.2	+0.5
TREB	Trebinje	1.36	319	P	Pn	11 14 26.4	-2.0
TREB				S	Sg	11 14 47.7	+1.7
BRY	Bratogost	1.42	328	⇑iPg	Pn	11 14 27.7	-1.5
BRY				eSg	Sg	11 14 49.7	+1.8
SKO	Skopje	1.43	78	ePn	Pn	11 14 28.5	-0.8
SKO				eSg	Sg	11 14 48.2	+0.1
SKO	Skopje	1.43	78	ePn	Pn	11 14 28.4	-0.9
SKO				eSg	Sg	11 14 48.2	+0.1
BIA	Bitola	1.49	117	ePn	Pn	11 14 30.6	+0.5
BIA				eSg	Sg	11 14 51.3	+1.2
BIA	Bitola	1.49	117	ePn	Pn	11 14 30.6	+0.5
BIA				eSg	Sg	11 14 51.3	+1.2
UPM	Unac-Piva	1.58	342	⇑iPg	Pg	11 14 30.1	-2.4
UPM				eSg	Sg	11 14 53.8	+0.8
UPM	Unac-Piva	1.58	342	⇑iPg	Pn	11 14 30.1	-1.3
UPM				eSg	Sg	11 14 53.8	+0.8
PLE	Pljevlja	1.63	356	⇑iPn	Pn	11 14 31.6	-0.5
PLE				eSn	Sb	11 14 54.7	+0.4
PLE	Pljevlja	1.63	356	⇑iPn	Pn	11 14 31.6	-0.5
FNA	Florina	1.64	123	ePb	Pb	11 14 32.1	-1.2
	comp=Z,2.6nm,0.3s						
FNA				eSb	Sb	11 14 56.5	+2.0
IGT	Igoumenitsa	2.24	165	ePn	Pn	11 14 40.2	-0.3
IGT				eSn	Sn	11 15 10.4	+1.6
GRG	Griva	2.26	108	ePn	Pn	11 14 41.1	+0.3
GRG				eSn	Sb	11 15 13.3	+1.0
MEV	Metsovon	2.29	146	ePn	Pn	11 14 42.9	+1.7
MEV				eSn	Sb	11 15 12.5	-0.7
LKD	Levkas	3.10	164	ePn	Pn	11 14 51.7	-0.7
LKD				eSn	Sn	11 15 30.1	+0.1

*NEIC **14** 11:32:19.4, 35.13S×178.87E, h278^{km}, MG4.5(WEL), After WEL.*
*WEL **14** 11:32:22.4±0.5, 35.19S×178.79E, h246^{km}±9^{km}, ML4.5/4, Error ellipse: s-maj=17.5km s-min=7.6km az=90.0*
*ISCJB **14** 11:32:23.5±1.1, 35.7S±0.1×179.1E±0.2, h285^{km}±10^{km}, mb3.6/3, Error ellipse: s-maj=34.3km s-min=12.2km az=46.7*
*IDC **14** 11:32:25.9±3.0, 35.72S×178.89E, h275^{km}±29^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.4/11, mbtmp4.1/5, Error ellipse: s-maj=54.1km s-min=39.0km az=150.0*
ISC 14 11:32:25.6±1.1**, 35.8S**±0.1×**179.0E**±0.2**, h285^{km}**±9^{km}**, n60, σ1^{s}01**/72**, mb3.6**/3**, 1D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.86	197	eP	Pn	11 33 08.5	-1.4
MXZ	Matakaoa Point	1.86	197	⇓PN	Pn	11 33 08.5	-1.3
MXZ				eSN	S	11 33 43.1	-1.9
PUZ	Puketiti	2.36	194	eP	Pn	11 33 13.9	-0.2
PUZ	Puketiti	2.36	194	PN	Pn	11 33 13.9	-0.2
PUZ				SN	S	11 33 53.1	+0.5
MWZ	Matawai	2.80	204	P	Pn	11 33 18.3	0.0
MWZ	Matawai	2.80	204	PN	Pn	11 33 18.3	+0.1
MWZ				SN	S	11 34 02.2	+2.0
URZ	Urewera	2.89	211	P	Pn	11 33 18.5	-0.6
	6.1nm,0.3s,baz=252,slow=0.7,SNR=160						
URZ				S	S	11 34 02.0	+0.2
	12nm,0.3s,baz=313,slow=1.1,SNR=3.7						
URZ	Urewera	2.89	211	P	Pn	11 33 18.5	-0.7
URZ	Urewera	2.89	211	PN	Pn	11 33 18.3	-0.9
URZ				eSN	S	11 34 02.5	+0.7
KNZ	Kokohu	3.40	197	eP	Pn	11 33 24.9	+0.5
KNZ	Kokohu	3.40	197	PN	Pn	11 33 24.9	+0.5
KNZ				eSN	S	11 34 14.4	+3.1
BKZ	Black Stump Fm	3.92	210	eP	Pn	11 33 30.4	+0.4
BKZ	Black Stump Fm	3.92	210	PN	Pn	11 33 30.3	+0.3
BKZ				SN	S	11 34 22.4	+0.9
FWVZ	Far West T-bar	4.41	217	PN	Pn	11 33 36.1	+0.4
MOVZ	Moawhango	4.43	214	PN	Pn	11 33 35.5	-0.4
PXZ	Pawanui	4.56	201	PN	Pn	11 33 37.9	+0.5
PXZ				eSN	S	11 34 37.6	+2.7
TSZ	Takapari Road	4.89	208	P	Pn	11 33 41.0	-0.2
TSZ	Takapari Road	4.89	208	PN	Pn	11 33 41.4	+0.2
BFZ	Birch Farm	5.34	203	eP	Pn	11 33 47.0	+0.4
BFZ				S	S	11 34 55.3	+3.7
BFZ	Birch Farm	5.34	203	PN	Pn	11 33 47.7	+1.1
BFZ				eSN	S	11 34 55.1	+3.5
TIWZ	Tintock	5.55	205	PN	Pn	11 33 49.5	+0.5
MRZ	Mangatainoka R	5.56	208	eP	Pn	11 33 49.0	-0.1
MRZ				S	S	11 34 57.1	+0.8
MRZ	Mangatainoka R	5.56	208	PN	Pn	11 33 48.8	-0.3
MRZ				SN	S	11 34 57.1	+0.8
KIW	Kapiti Island	6.00	211	P	Pn	11 33 53.9	-0.5
KIW	Kapiti Island	6.00	211	ePN	Pn	11 33 54.2	-0.2
MTW	Mount Morrison	6.02	206	P	Pn	11 33 54.4	-0.3
MTW	Mount Morrison	6.02	206	PN	Pn	11 33 54.4	-0.3
CAW	Cannon Point	6.14	209	P	Pn	11 33 55.6	-0.6
CAW	Cannon Point	6.14	209	PN	Pn	11 33 55.6	-0.6
PAWZ	Paruwai Farm	6.25	205	P	Pn	11 33 57.4	0.0
PAWZ	Paruwai Farm	6.25	205	PN	Pn	11 33 57.4	-0.1
MSWZ	Moikau Station	6.34	206	P	Pn	11 33 58.4	-0.2
MSWZ	Moikau Station	6.34	206	PN	Pn	11 33 58.4	-0.1
MRW	Makara Radio	6.39	210	P	Pn	11 33 59.0	-0.2
MRW	Makara Radio	6.39	210	PN	Pn	11 33 59.0	-0.2
TCW	Tory Channel	6.56	213	P	Pn	11 34 00.5	-0.7
TCW	Tory Channel	6.56	213	PN	Pn	11 34 00.5	-0.7
TUWZ	Tuamarina	6.88	213	PN	Pn	11 34 04.3	-0.9
NNZ	Nelson	6.98	217	eP	Pn	11 34 05.2	-1.2
NNZ	Nelson	6.98	217	PN	Pn	11 34 05.2	-1.2
BSWZ	Blackbirch Sta	7.14	212	P	Pn	11 34 07.7	-0.7
QRZ	Quartz Range	7.15	223	ePN	Pn	11 34 06.2	-2.3
THZ	Tophouse	7.63	217	eP	Pn	11 34 13.6	-0.8
THZ	Tophouse	7.63	217	ePN	Pn	11 34 13.5	-0.9
KHZ	Kahutara	7.86	211	eP	Pn	11 34 17.5	+0.2
KHZ	Kahutara	7.86	211	PN	Pn	11 34 17.5	+0.2
DSZ	Denniston Nort	8.18	221	ePN	Pn	11 34 21.4	+0.2
LTZ	Lake Taylor	8.71	215	PN	Pn	11 34 27.5	-0.3
MQZ	McQueen's Vall	9.29	210	eSN	S	11 36 18.7	-1.5
WVZ	Waitaha Valley	9.68	219	PN	Pn	11 34 39.1	-0.7
RPZ	Rata Peaks	10.00	215	P	Pn	11 34 44.0	+0.3
	0.5nm,0.3s,baz=345,slow=12,SNR=7.0						
RPZ				S	S	11 36 33.9	-2.4
	0.6nm,0.3s,baz=24,slow=12,SNR=4.1						
ODZ	Otahua Downs	11.22	212	PN	Pn	11 35 00.3	+1.5
STKA	Stephens Creek	31.18	266	P	P	11 38 20.9	+2.5
	1.4nm,1.0s,mb3.5,baz=80,slow=11,SNR=3.8						
STKA	Stephens Creek	31.18	266	P	P	11 38 20.9	+2.4
AS31	Alice Springs	40.64	275	eP	P	11 39 38.9	+0.6
ASAR	Alice Springs	40.64	275	P	P	11 39 39.1	+0.8
	2.8nm,0.5s,mb3.8,baz=115,slow=7.9,SNR=88						
ASPA	Alice Springs	40.64	275	eP	P	11 39 38.9	+0.6
WB2	Warramunga Arr	42.12	280	eP	P	11 39 50.1	-0.2
WRA	Warramunga Arr	42.13	280	P	P	11 39 50.3	-0.1
	3.0nm,0.7s,mb3.6,baz=118,slow=7.7,SNR=56						
FINES	FINESS Array B	149.13	335	PKPbc	PKPbc	11 51 40.2	0.0
	1.7nm,0.9s,baz=20,slow=4.4,SNR=4.2						

*LDG **14** 11:33:08.9, 4297N×0.19E, h33^{km}*
*STR **14** 11:33:12.0±0.1, 4294N×021E, h2^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
MDD 14 11:33:12.3±0.8**, 4294N×021E, h1^{km}**±6^{km}**, mbLg1.3**/1**, Error ellipse: s-maj=4.5km s-min=2.9km az=136.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EPF	Esparros	0.13	45	ePg	Pg	11 33 15.1	+0.3
EPF				eSg	Sg	11 33 16.6	+0.1
	8.8nm,0.2s						
EPF	Esparros	0.13	45	Pg	Pg	11 33 15.1	+0.3
EPF				Lg		11 33 16.6	
	4.4nm,0.2s						
LABF	Labassere	0.15	317	Pg	Pg	11 33 15.0	-0.2
LABF				Sg	Sg	11 33 17.3	+0.2
LABF	Labassere	0.15	317	Pg	Pg	11 33 15.1	-0.1
LABF				Lg		11 33 17.4	
VIEF	Viey	0.15	248	Pg	Pg	11 33 15.2	0.0
VIEF				Sg	Sg	11 33 17.4	+0.3
VIEF	Viey	0.15	248	Pg	Pg	11 33 15.2	0.0
VIEF				Lg		11 33 17.4	
EBIE	Bielsa	0.26	192	Pg	Pg	11 33 17.3	+0.1
	3.5nm,0.3s,SNR=7.9						
EBIE				Lg		11 33 20.9	
	6.3nm,0.1s,SNR=7.9						

*IDC **14** 11:58:04.1±1.1, 34.48N×80.19E, h0^{km}, mb3.5/4, mb1 3.6/6, mb1mx3.4/23, mbtmp3.5/6, ML3.6/2, MS3.5/1, Ms1 3.5/1, ms1mx2.2/26, Error ellipse: s-maj=43.6km s-min=22.3km az=52.0*
*ISCJB **14** 11:58:08.1±0.7, 34.7N±0.1×80.3E±0.2, h33^{km}, mb3.4/4, MS3.4/1, Error ellipse: s-maj=29.0km s-min=7.9km az=127.5*
ISC 14 11:58:10.4±0.7**, 34.7N**±0.1×**80.2E**±0.2**, h35^{km}, n14, σ1^{s}04**/13**, mb3.4**/4**, MS3.4**/1**, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOLN	Koldanda	7.55	156	eP	Pn	11 59 58.5	+0.6
	12nm,0.4s						
GKN	Gorkha	7.73	149	eP	Pn	12 00 00.0	-0.4
	20nm,0.4s						
KKN	Kakani	8.20	146	eP	Pn	12 00 06.2	-0.7
	12nm,0.4s						
DMN	Daman	8.28	148	eP	Pn	12 00 07.4	-0.5
	12nm,0.4s						
GUN	Gumba	8.38	143	eP	Pn	12 00 09.6	+0.2
	14nm,0.4s						
PKI	Pulchoki	8.44	146	eP	Pn	12 00 11.9	+1.7
	10nm,0.4s						
JIRN	Jiri	8.75	142	eP	Pn	12 00 15.8	+1.4
	32nm,0.3s						
MKAR	Makanchi Array	12.15	7	Pn	Pn	12 01 01.7	+0.7
	0.2nm,0.3s,baz=188,slow=14,SNR=3.3						
BVAR	Borovoye Array	19.55	342	P	Pn	12 02 35.9	-0.7
	0.3nm,0.3s,baz=153,slow=13,SNR=4.2						
AKTO	Aktyubinsk	22.49	321	P	P	12 03 08.2	+1.4
	1.1nm,0.5s,mb3.5,baz=111,slow=8.6,SNR=5.0						
BRTR	Keskin Array B	37.04	292	LR	LR	12 21 29.4	
	comp=Z,69nm,21.2s,MS3.4,baz=131,slow=38						
TORD	Torodi Ar. Bea	73.22	275	P	P	12 09 37.4	-0.4
	0.5nm,0.7s,mb3.6,baz=68,slow=4.3,SNR=3.8						
WRA	Warramunga Arr	74.87	128	P	P	12 09 45.5	-1.9
	0.1nm,0.4s,mb3.1,baz=317,slow=6.6,SNR=5.3						
ASAR	Alice Springs	77.29	131	P	P	12 09 59.9	-1.3
	0.2nm,0.5s,mb3.3,baz=318,slow=5.5,SNR=7.6						

*ISCJB **14** 12:02:42.2±0.5, 14.69N±0.08×52.17E±0.06, h10^{km}, mb4.2/22, MS3.5/18, Error ellipse: s-maj=12.7km s-min=6.8km az=139.1*
*IDC **14** 12:02:42.2±0.8, 14.65N×52.54E, h0^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.9/26, mbtmp4.0/16, ML3.4/1, MS3.5/17, Ms1 3.5/17, ms1mx3.4/33, Error ellipse: s-maj=22.1km s-min=15.8km az=114.0*
*MOS **14** 12:02:42.1±1.2, 14.62N×52.42E, h10^{km}, mb4.9/6, Error ellipse: s-maj=20.4km s-min=11.4km az=79.1*
*CSEM **14** 12:02:43.0±0.1, 14.68N×52.14E, h20^{km}, mb4.8/5, Error ellipse: s-maj=5.8km s-min=2.9km az=147.0*
*NEIC **14** 12:02:44.1±0.6, 14.64N×52.45E, h10^{km}, mb4.5/5, Error ellipse: s-maj=16.4km s-min=11.6km az=138.0*
ISC 14 12:02:44.2±0.5**, 14.69N**±0.08×**52.18E**±0.06**, h10^{km}, n50, σ1^{s}39**/43**, mb4.2**/22**, MS3.5**/18**, 3C-3D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MUKL	Al Mukalla	3.05	266	⇓iP	Pn	12 03 31.3	-1.2
MUKL				⇓e		12 03 32.0	
	baz=90,slow=11						
MUKL				i S	Sn	12 04 06.2	-2.8
MUKL				AML	AML	12 04 08.5	
	comp=N,524nm,0.4s						
LBOS		6.77	264	⇑iP	Pn	12 04 24.1	+0.5
ATD	Arta Tunnel	9.62	252	Pn	Pn	12 05 08.7	+6.1
	comp=N,3.4nm,0.3s,baz=240,slow=19,SNR=5.5						
ATD				LR	LR	12 08 07.9	
	comp=N,423nm,20.9s,baz=295,slow=33						
WSAR	Wadi Sarin	10.47	35	Pn	Pn	12 05 10.1	-4.1
	comp=N,0.3nm,0.3s,baz=224,slow=22,SNR=4.5						
KMBO	Kilima Mbogo	21.57	224	P	P	12 07 35.4	+1.5
	comp=N,1.4nm,0.5s,mb3.7,baz=36,slow=14,SNR=4.1						
KMBO				LR	LR	12 15 30.3	
	comp=N,231nm,19.3s,MS3.6,baz=100,slow=35						
KMBO	Kilima Mbogo	21.57	224	P	P	12 07 33.8	0.0
KMBO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KMBO	Kilima Mbogo	21.57	224	P	P	12 07 33.8	0.0
	comp=Z,9.9nm,1.3s,mb4.1						
KMBO				LR	LR	12 15 30.2	
KMBO	Kilima Mbogo	21.57	224	P	P	12 07 33.8	0.0
	comp=Z,10.0nm,1.3s,mb4.1						
ASF	Jabal al Asfar	22.31	324	LR	LR	12 16 46.6	
	comp=Z,85nm,20.7s,MS3.1,baz=18,slow=38						
MMAI	Mount Meron Ar	23.78	323	LR	LR	12 17 43.9	
	comp=Z,62nm,18.8s,MS3.1,baz=125,slow=38						
GNI	Garni	26.19	347	P	P	12 08 21.2	+2.3
	comp=Z,3.6nm,0.4s,mb4.3,baz=166,slow=22,SNR=5.5						
GNI				LR	LR	12 20 55.1	
	comp=Z,133nm,20.4s,MS3.5,baz=353,slow=42						
MALT	Malatya	26.49	335	eP	P	12 08 24.9	+3.3
MALT				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
MALT	Malatya	26.49	335	eP	P	12 08 24.9	+3.3
	comp=Z,6.4nm,0.9s,mb4.2						
BRTR	Keskin Array B	29.78	330	P	P	12 08 52.7	+1.8
	comp=Z,0.4nm,0.4s,mb3.5,baz=140,slow=9.7,SNR=4.2						
KIV	Kislovodsk	30.28	346	⇓iP	P	12 09 04.2	+8.8
KIV				e		12 10 12.2	
KIV				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.9						
KIV				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.9						
IDI	Anoyia	31.96	315	LR	LR	12 23 06.7	
	comp=Z,21nm,19.9s,MS2.8,baz=262,slow=38						
GKN	Gorkha	32.89	61	eP	P	12 09 18.7	+0.4
	comp=Z,26nm,0.9s,mb5.2						
DMN	Daman	33.18	62	eP	P	12 09 24.0	+3.2
KKN	Kakani	33.37	62	eP	P	12 09 23.1	+0.5
	comp=Z,35nm,0.9s,mb5.3						
KKN	Kakani	33.37	62	eP	P	12 09 23.1	+0.5
KKN				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.3						
AAK	Ala-Archa	33.83	30	i P	P	12 09 33.4	+6.9
GUN	Gumba	33.92	62	eP	P	12 09 27.7	+0.4
	comp=Z,64nm,1.0s,mb5.5						
JIRN	Jiri	34.12	62	eP	P	12 09 31.9	+2.9
AKTK	Aktyubinsk	35.97	6	P	P	12 09 44.6	-0.4
AKTK				LR	LR	12 27 50.4	
AKTK	Aktyubinsk	35.97	6	P	P	12 09 44.6	-0.4
AKTO	Aktyubinsk	35.97	6	P	P	12 09 44.6	-0.4
	comp=Z,2.7nm,0.9s,mb4.2,baz=214,slow=9.7,SNR=7.3						
AKTO				LR	LR	12 27 50.4	
	comp=Z,246nm,18.4s,MS4.0,baz=2.6,slow=42						
LSZ	Lusaka	38.06	220	P	P	12 10 05.3	+2.4
	comp=Z,1.6nm,0.7s,mb3.9,baz=14,slow=11,SNR=4.4						
LSZ				LR	LR	12 25 26.6	
	comp=Z,105nm,20.1s,MS3.6,baz=41,slow=36						
AKASG	Malin Array Be	40.44	338	P	P	12 10 22.9	+0.2
	comp=Z,0.3nm,0.3s,mb3.4,baz=143,slow=7.4,SNR=6.3						
MKAR	Makanchi Array	40.69	32	P	P	12 10 23.1	-1.6
	comp=Z,1.4nm,0.6s,mb3.8,baz=225,slow=6.7,SNR=7.4						
BVAR	Borovoye Array	40.88	17	P	P	12 10 24.9	-1.4
	comp=Z,2.1nm,0.8s,mb3.8,baz=198,slow=9.3,SNR=7.8						
CHKZ	Chkalovo	41.52	16	P	P	12 10 30.2	-1.4
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.0						
CHKZ	Chkalovo	41.52	16	P	P	12 10 30.2	-1.4
	comp=Z,4.0nm,1.1s,mb4.0						
CHKZ	Chkalovo	41.52	16	P	P	12 10 30.2	-1.4
	comp=Z,4.0nm,1.1s,mb4.0						
KURK	Kurchatov	41.81	25	⇑eP	P	12 10 40.5	+6.5
OBN	Obninsk	42.13	347	⇑eP	P	12 10 41.3	+4.8

OBN				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.8						
NVS	**Novosibirsk**	**46.76**	**24**	*e*P	**P**	**12 11 13.3**	**-0.3**
PSI	**Prapat**	**47.57**	**100**	LR	LR	12 29 17.0	
	comp=Z,67nm,19.3s,MS3.6,baz=210,slow=34						
TORD	**Torodi Ar. Bea**	**48.95**	**275**	P	**P**	**12 11 32.1**	**+1.6**
	comp=Z,0.9nm,1.2s,mb3.7,baz=277,slow=13,SNR=3.5						
TORD				LR	LR	12 32 49.8	
	comp=Z,69nm,18.7s,MS3.7,baz=55,slow=37						
CDF	**Champ du Feu**	**49.87**	**322**	*e*P	**P**	**12 11 32.1**	**-5.5**
	comp=Z,11nm,1.0s,mb4.5						
BOSA	**Boshof**	**50.31**	**211**	LR	LR	12 34 28.7	
	comp=Z,56nm,18.2s,MS3.6,baz=51,slow=38						
FINES	**FINESS Array B**	**50.32**	**344**	P	**P**	**12 11 40.4**	**-0.7**
	comp=Z,1.1nm,0.6s,mb4.1,baz=132,slow=8.5,SNR=4.2						
FINES				LR	LR	12 36 46.0	
	comp=Z,40nm,18.2s,MS3.5,baz=159,slow=40						
FINES	**FINESS Array B**	**50.32**	**344**	P	**P**	**12 11 40.3**	**-0.7**
HFS	**Hagfors**	**53.33**	**337**	LR	LR	12 36 44.0	
	comp=Z,37nm,18.3s,MS3.5,baz=134,slow=38						
NOA	**NORSAR Array B**	**54.85**	**337**	LR	LR	12 38 59.0	
	comp=Z,26nm,18.8s,MS3.3,baz=130,slow=40						
SONM	**Songino Array**	**55.43**	**42**	P	**P**	**12 12 18.6**	**-0.1**
	comp=Z,1.4nm,0.8s,mb4.0,baz=252,slow=7.9,SNR=5.0						
SONM				LR	LR	12 39 03.8	
	comp=Z,38nm,20.9s,MS3.5,baz=82,slow=40						
ARCES	**ARCESS Array B**	**57.32**	**349**	LR	LR	12 40 57.0	
	comp=Z,68nm,19.6s,MS3.8,baz=109,slow=40						
YAK	**Yakutsk**	**71.28**	**29**	*e*P	**P**	**12 14 03.0**	**-0.7**
MAW	**Mawson**	**82.43**	**176**	P	**P**	**12 15 06.2**	**-0.4**
	comp=Z,1.1nm,1.0s,mb3.8,baz=308,slow=17,SNR=3.3						
MAW				LR	LR	12 46 40.6	
	comp=Z,37nm,18.6s,MS3.8,baz=61,slow=32						
WRA	**Warramunga Arr**	**87.77**	**111**	P	**P**	**12 15 31.4**	**-2.0**
	comp=Z,0.5nm,0.6s,mb4.0,baz=302,slow=3.6,SNR=7.8						
ASAR	**Alice Springs**	**88.44**	**115**	P	**P**	**12 15 35.0**	**-1.6**
	comp=Z,1.8nm,1.1s,mb4.2,baz=286,slow=5.0,SNR=9.7						

*CSEM **14** 12:18:22.7±0.1, 3589N×3076E, h60km, MD3.6, Error ellipse: s-maj=1.8km s-min=1.5km az=109.0*
*ISCJB **14** 12:18:23.6±0.3, 3584N±003×3081E±003, h77km±9km, mb3.8/2, Error ellipse: s-maj=4.5km s-min=3.8km az=32.5*
*ISK **14** 12:18:23.0, 3581N×3079E, h66km, MD3.6, ML3.5*
*HLW **14** 12:18:24.3, 3588N×3075E, h33km, Mb3.7*
*IDC **14** 12:18:24.9±1.3, 3583N×3086E, h69km±23km, mb3.6/2, mb1 3.5/6, mb1mx3.2/21, mbtmp3.6/6, Error ellipse: s-maj=14.1km s-min=11.1km az=14.0*
*NEIC **14** 12:18:25.0±0.8, 3590N×3093E, h63km±16km, MD3.6(ISK), Error ellipse: s-maj=13.9km s-min=10.1km az=64.0*
ISC 14 12:18:25.2±0.3, **3586N**±003×**3081E**±003, **h68**km±10km, **n53**, σ**0^{s}82**/72, **mb3.8**/2, **3D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**1.04**	**353**	PN	**Pn**	**12 18 43.1**	**-1.0**
ANTB				SN	**Sn**	**12 18 58.3**	**+0.1**
ELL	**Elmali**	**1.15**	**321**	PN	**Pn**	**12 18 44.0**	**-1.4**
BCK	**Bucak**	**1.61**	**354**	PN	**Pn**	**12 18 50.5**	**-0.9**
HDMB	**Hadim**	**1.74**	**50**	PN	**Pn**	**12 18 52.6**	**-0.7**
ERMK	**Ermenek**	**1.87**	**65**	*i* P	**Pn**	**12 18 56.0**	**+1.1**
ERMK				*i* S	**Sn**	**12 19 17.6**	**0.0**
DALT	**Dalyan (Mudla)**	**1.98**	**298**	*e*PN	**Pn**	**12 18 56.0**	**-0.4**
ISP	**Isparta**	**1.99**	**353**	*e*PN	**Pn**	**12 18 56.0**	**-0.6**
TKTP	**Tekketepe**	**2.21**	**350**	*i* P	**Pn**	**12 18 59.9**	**+0.4**
TKTP				*i* S	**Sn**	**12 19 27.3**	**+1.4**
CSS	**Prodhromos**	**2.25**	**113**	*e*P	**Pn**	**12 18 57.1**	**-2.9**
CSS	**Prodhromos**	**2.25**	**113**	*e*P	**Pn**	**12 18 57.1**	**-3.0**
DNZL	**Cakiroluk**	**2.31**	**323**	*i* P	**Pn**	**12 19 01.5**	**+0.6**
DNZL				*i* S	**Sn**	**12 19 35.6**	**+7.3**
IKL	**Isikli**	**2.36**	**80**	*e*PN	**Pn**	**12 19 01.7**	**+0.1**
DENT	**Denizli**	**2.37**	**323**	*e*PN	**Pn**	**12 19 01.2**	**-0.5**
YER	**Yerkesik**	**2.40**	**303**	*e*PN	**Pn**	**12 19 02.0**	**-0.1**
KONT	**Konya--Tatoy**	**2.42**	**30**	*e*PN	**Pn**	**12 19 02.4**	**-0.1**
DAT	**Datca**	**2.75**	**289**	*e*PN	**Pn**	**12 19 06.6**	**-0.3**
MEST	**Erdemli**	**2.79**	**74**	*i* P	**Pn**	**12 19 08.7**	**+1.2**
MEST				*i* S	**Sn**	**12 19 39.9**	**-0.1**
KDHN	**Kadinhani**	**2.85**	**21**	*i* P	**Pn**	**12 19 08.5**	**+0.2**
KDHN				*i* S	**Sn**	**12 19 35.6**	**-5.9**
BDRM	**Kayabasi**	**2.97**	**295**	*i* P	**Pn**	**12 19 10.3**	**+0.5**
BDRM				*i* S	**Sn**	**12 19 45.1**	**+0.8**
BODT	**Bodrum**	**3.06**	**294**	*e*PN	**Pn**	**12 19 10.3**	**-0.9**
KIZT	**Kizilcal**	**3.13**	**15**	*e*PN	**Pn**	**12 19 12.6**	**+0.5**
MERS	**Mersin**	**3.16**	**70**	*e*PN	**Pn**	**12 19 12.6**	**+0.1**
ESKT	**Eskisehir**	**3.65**	**0**	*i* P	**Pn**	**12 19 19.3**	**+0.1**
ESKT				*i* S	**Sn**	**12 19 57.2**	**-3.9**
ESKT	**Eskisehir**	**3.65**	**0**	*e*Pn	**Pn**	**12 19 19.5**	**+0.3**
SEYT	**Eskypehyr**	**3.65**	**0**	*i* P	**Pn**	**12 19 19.3**	**+0.1**
SEYT				*i* S	**Sn**	**12 19 57.2**	**-3.9**
KARA	**Karaisali**	**3.69**	**67**	*e*PN	**Pn**	**12 19 20.0**	**+0.3**
BLCB	**Balcova**	**3.93**	**311**	*e*PN	**Pn**	**12 19 22.6**	**-0.3**
KAMT	**Kaman**	**4.19**	**32**	*e*PN	**Pn**	**12 19 27.3**	**+0.7**
KOZT	**Kozan**	**4.34**	**67**	*e*PN	**Pn**	**12 19 29.6**	**+0.9**
COBT	**Iskenderun**	**4.45**	**80**	*i* P	**Pn**	**12 19 30.6**	**+0.4**
COBT				*i* S	**Sn**	**12 20 19.7**	**-1.0**
COBT	**Iskenderun**	**4.45**	**80**	*i* P	**Pn**	**12 19 30.5**	**+0.3**
COBT				*i* S	**Sn**	**12 20 19.7**	**-1.0**
BR131	**Keskin Array S**	**4.46**	**29**	*e*P	**Pn**	**12 19 29.0**	**-1.2**
BR131	**Keskin Array S**	**4.46**	**29**	*e*P	**Pn**	**12 19 29.0**	**-1.3**
BRTR	**Keskin Array B**	**4.46**	**29**	P	**Pn**	**12 19 28.8**	**-1.4**
	0.5nm,0.3s,baz=199,slow=16,SNR=10						
BRTR				S	**Sn**	**12 20 21.9**	**+1.1**
	0.6nm,0.3s,baz=213,slow=25,SNR=5.7						
ULDT	**Uludag**	**4.47**	**343**	*i* P	**Pn**	**12 19 29.2**	**-1.3**
ULDT				*i* S	**Sn**	**12 20 20.9**	**-0.3**
MMAI	**Mount Meron Ar**	**4.74**	**125**	P	**Pn**	**12 19 33.9**	**-0.2**
	2.7nm,0.3s,baz=308,slow=12,SNR=5.1						
MMAI				S	**Sn**	**12 20 25.2**	**-2.5**
	3.4nm,0.3s,baz=306,slow=18,SNR=3.9						
SGKT	**Sivrigoynuk**	**4.81**	**11**	*i* P	**Pn**	**12 19 35.5**	**+0.6**
IDI	**Anoyia**	**4.86**	**265**	P	**Pn**	**12 19 36.8**	**+1.1**
	3.3nm,0.3s,baz=102,slow=9.2,SNR=27						
IDI				S	**Sn**	**12 20 31.5**	**+0.9**
	2.5nm,0.3s,baz=275,slow=21,SNR=6.8						
AMAG	**Maghara**	**5.58**	**158**	⇓P	**Pn**	**12 19 45.2**	**-0.3**
AMAG	**Maghara**	**5.58**	**158**	P	**Pn**	**12 19 45.2**	**-0.3**
HMAT	**Matruh**	**5.68**	**214**	P	**Pn**	**12 19 46.3**	**-0.5**
HMAT				S	**Sn**	**12 20 46.7**	**-3.9**
KOT	**Kottamia**	**5.98**	**171**	P	**Pn**	**12 19 51.5**	**+0.4**
HHAG	**Hagoal**	**5.99**	**169**	P	**Pn**	**12 19 51.5**	**+0.3**
ASF	**Jabal al Asfar**	**6.25**	**124**	P	**Pn**	**12 19 55.9**	**+1.2**
	0.8nm,0.3s,baz=264,slow=18,SNR=4.9						
ASF				S	**Sn**	**12 21 06.2**	**+1.4**
	0.1nm,0.3s,baz=28,slow=20,SNR=2.1						
GLL	**Jalalah**	**6.31**	**173**	P	**Pn**	**12 19 56.3**	**+0.8**
SLUM		**6.38**	**229**	P	**Pn**	**12 19 56.5**	**0.0**
SLUM		**6.38**	**229**	P	**Pn**	**12 19 56.5**	**0.0**
EIL	**Elat**	**7.09**	**149**	*e*P	**Pn**	**12 20 05.7**	**-0.5**
SWA1		**7.86**	**215**	⇓P	**Pn**	**12 20 16.8**	**0.0**
SWA1				S	**Sn**	**12 21 38.9**	**-5.2**
SWA2		**8.00**	**216**	⇓P	**Pn**	**12 20 18.6**	**0.0**
SWA2				S	**Sn**	**12 21 42.1**	**-5.4**
HFRF	**Wahat Farafira**	**8.94**	**194**	P	**Pn**	**12 20 31.6**	**+0.1**
FINES	**FINESS Array B**	**25.78**	**355**	P	**P**	**12 23 49.0**	**-0.6**
	0.9nm,0.6s,mb3.4,baz=152,slow=11,SNR=7.3						
ARCES	**ARCESS Array B**	**33.86**	**357**	P	**P**	**12 25 00.8**	**-0.3**
	3.3nm,0.9s,mb4.1,baz=166,slow=8.9,SNR=4.9						

*IDC **14** 12:20:14.8±7.3, 527S×14562E, h66km±56km, mb3.6/3, mb1 3.8/5, mb1mx3.5/13, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=57.1km s-min=36.1km az=22.0*
*NEIC **14** 12:20:15.4±7.5, 519S×14571E, h89km±27km, mb4.3/2, Error ellipse: s-maj=99.1km s-min=25.3km az=200.0*
*ISCJB **14** 12:20:17.2±5.0, 55S±03×1456E±02, h96km±29km, mb3.7/3, Error ellipse: s-maj=63.9km s-min=23.2km az=66.1*
ISC 14 12:20:18.1±4.8, **54S**±03×**1456E**±02, **h90**km±28km, **n11**, σ**0^{s}94**/13, **mb3.7**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.26**	**159**	P	**Pn**	**12 21 20.3**	**-0.3**
	19nm,0.3s,baz=36,slow=4.3,SNR=67						
PMG				S	**Sn**	**12 22 08.9**	**-0.1**
	33nm,0.3s,baz=124,slow=18,SNR=22						
PMG	**Port Moresby**	**4.26**	**159**	*e*Pn	**Pn**	**12 21 20.1**	**-0.5**
PMG				*e*Sn	**Sn**	**12 22 09.8**	**+0.7**
KAKA	**Kakadu**	**14.88**	**240**	*e*P	**Pn**	**12 23 45.0**	**+1.4**
	9.9nm,0.6s						
WRAB	**Tennant Creek**	**18.11**	**216**	*e*P	**Pn**	**12 24 21.5**	**-2.1**
WB2	**Warramunga Arr**	**18.12**	**216**	*e*P	**Pn**	**12 24 24.1**	**+0.4**
WRA	**Warramunga Arr**	**18.13**	**216**	P	**Pn**	**12 24 23.2**	**-0.6**
	0.4nm,0.3s,baz=39,slow=10,SNR=30						
WRA				PcP	PcP	12 28 53.1	+0.4
	0.1nm,0.3s,baz=20,slow=1.8,SNR=4.6						
AS31	**Alice Springs**	**21.36**	**211**	*e*P	**P**	**12 24 59.0**	**+0.9**
ASAR	**Alice Springs**	**21.36**	**211**	P	**P**	**12 24 57.8**	**-0.3**
	0.9nm,0.6s,mb3.3,baz=42,slow=7.8,SNR=27						
FITZ	**Fitzroy Crossi**	**23.22**	**235**	*e*P	**P**	**12 25 16.1**	**-1.1**
	7.0nm,0.5s,mb4.2						
FITZ	**Fitzroy Crossi**	**23.22**	**235**	P	**P**	**12 25 17.0**	**-0.2**
	4.4nm,0.6s,mb4.0,baz=61,slow=7.0,SNR=36						
STKA	**Stephens Creek**	**26.59**	**188**	P	**P**	**12 25 48.5**	**+0.7**
	1.0nm,0.3s,mb3.8,baz=9.6,slow=9.2,SNR=4.3						

*NEIC **14** 12:56:51.2±4.3, 1946N×6324W, h10km, MD3.7(TRN), MD3.8(RSPR), Error ellipse: s-maj=52.4km s-min=10.7km az=215.0*
*ISCJB **14** 12:56:52.0±0.9, 1938N±007×6337W±004, h10km, Error ellipse: s-maj=9.6km s-min=4.6km az=21.4*
*TRN **14** 12:56:52.6, 1940N×6328W, h33km, MD3.7*
*RSPR **14** 12:56:55.4, 1953N×6340W, h12km±21km, MD3.8/13, MD3.8/13*
ISC 14 12:56:53.4±0.9, **1932N**±007×**6336W**±004, **h10**km, **n23**, σ**0^{s}56**/40, **11C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STMA	**St. Maarten, A**	**1.29**	**169**	*e*P	**Pn**	**12 57 17.0**	**-0.6**
STMA				*e*S	**Sb**	**12 57 33.8**	**-0.6**
TBVI	**Tortola**	**1.49**	**233**	⇑*e*P	**Pn**	**12 57 20.0**	**-0.2**
TBVI				*e*S	**Sn**	**12 57 39.9**	**+0.3**
STVI	**Saint Thomas**	**1.79**	**238**	⇑*e*P	**Pn**	**12 57 24.3**	**-0.1**
STVI				*e*S	**Sn**	**12 57 47.9**	**+0.6**
CDVI	**St. Croix**	**2.05**	**221**	⇓*e*P	**Pn**	**12 57 29.0**	**+1.1**
CDVI				*e*S	**Sn**	**12 57 54.6**	**+1.0**
CULB	**Culebra**	**2.12**	**242**	⇑*e*P	**Pn**	**12 57 28.8**	**0.0**
CULB				*e*S	**Sn**	**12 57 55.1**	**-0.1**
MTP	**Monte Pirata**	**2.41**	**240**	⇑*e*P	**Pn**	**12 57 32.9**	**0.0**
MTP				*e*S	**Sn**	**12 58 02.4**	**0.0**
CBYP	**Canovanas**	**2.58**	**247**	*e*P	**Pn**	**12 57 35.1**	**-0.2**
CBYP				*e*S	**Sn**	**12 58 07.1**	**+0.4**
HUMP	**Col San Antoni**	**2.63**	**244**	*e*P	**Pn**	**12 57 35.9**	**0.0**
HUMP				*e*S	**Sn**	**12 58 07.5**	**-0.4**
CPD	**Cerro la Pandu**	**2.73**	**243**	*e*P	**Pn**	**12 57 37.7**	**+0.3**
CPD				*e*S	**Sn**	**12 58 11.1**	**+0.6**
SJG	**San Juan**	**2.90**	**246**	*e*Pn	**Pn**	**12 57 39.5**	**-0.1**
CELP	**Cerrillos**	**3.29**	**248**	⇑*e*P	**Pn**	**12 57 45.2**	**+0.2**
CELP				*e*S	**Sn**	**12 58 23.6**	**-0.6**
ICM	**Isla Caja Muer**	**3.31**	**245**	⇑*e*P	**Pn**	**12 57 46.1**	**+0.8**
ICM				*e*S	**Sn**	**12 58 25.2**	**+0.5**
OBIP	**Obispado Ponce**	**3.33**	**248**	*e*S	**Sn**	**12 58 24.6**	**-0.5**
OBIP	**Obispado Ponce**	**3.33**	**248**	⇑*e*P	**Pn**	**12 57 45.7**	**+0.2**
OBIP				*e*S	**Sn**	**12 58 29.2**	**+4.1**
AOPR	**Arecibo Observ**	**3.35**	**254**	⇑*e*P	**Pn**	**12 57 45.5**	**-0.4**
AOPR				*e*S	**Sn**	**12 58 25.4**	**-0.2**
LRS	**Lares**	**3.45**	**253**	⇓*e*P	**Pn**	**12 57 47.0**	**-0.3**
LRS				*e*S	**Sn**	**12 58 27.3**	**-0.9**
LZG	**Guadaloupe-1**	**3.50**	**154**	*e*P	**Pn**	**12 57 47.3**	**-0.6**
SCG	**Saint Claude**	**3.64**	**154**	*e*P	**Pn**	**12 57 51.2**	**+1.3**
DOG	**Dongo Capester**	**3.67**	**153**	*e*P	**Pn**	**12 57 49.5**	**-0.6**
LSP	**Las Mesas**	**3.71**	**253**	⇑*e*P	**Pn**	**12 57 51.5**	**+0.8**
LSP				*e*S	**Sn**	**12 58 33.5**	**-1.0**
MGP	**Maguayo**	**3.77**	**250**	⇑*e*P	**Pn**	**12 57 52.0**	**+0.4**
MGP				*e*S	**Sn**	**12 58 35.9**	**0.0**
CRPR	**Cabo Rojo, PR**	**3.78**	**250**	⇑*e*P	**Pn**	**12 57 51.9**	**+0.1**
CRPR				*e*S	**Sn**	**12 58 35.4**	**-1.0**
MGG	**Marie-Galante**	**3.90**	**150**	*e*P	**Pn**	**12 57 53.2**	**-0.3**

*LDG **14** 13:09:27.3±0.3, 1907N×6483W, h10km, Mb5.5/40, Ms4.6/8, Error ellipse: s-maj=12.4km s-min=7.0km az=77.0*
*CSEM **14** 13:09:29.6, 1900N×6459W, h10km, mb5.5*
*ISCJB **14** 13:09:33.4±0.5, 19.12N±003×6461W±001, h34km±5km, mb5.3/229, MS4.9/165, Error ellipse: s-maj=5.1km s-min=2.1km az=21.8*
*TRN **14** 13:09:33.7, 1953N×6405W, h76km, MD4.7*
TRN Felt in Virgin Islands and St. Martin.
*MOS **14** 13:09:33.3±1.0, 19.16N×6460W, h33km, mb5.5/102, MS4.8/63, Error ellipse: s-maj=4.8km s-min=3.6km az=56.6*
*IDC **14** 13:09:34.2±0.6, 1897N×6471W, h34km±4km, mb4.8/31, mb1 4.9/34, mb1mx4.9/37, mbtmp5.0/34, ML4.7/3, MS4.8/27, Ms1 4.8/27, ms1mx4.8/29, Error ellipse: s-maj=11.4km s-min=8.8km az=121.0*
*BJI **14** 13:09:35.0, 1900N×6460W, h21km, mB5.4, Ms5.3, Msz5.1*
*HRVD **14** 13:09:35.0±0.2, 1924N×6474W, h32km±1km, MW5.3/85, Centroid moment Tensor Solution. LP body waves: s62,c96;Mantle waves: s85,c147; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.21±.02; $M_{\theta\theta}$0.09±.01; $M_{\phi\phi}$0.12±.01; $M_{r\theta}$-0.95±.04; $M_{\theta\phi}$-0.04±.01; $M_{\phi r}$0.27±.02; Best double couple: $M_0$0.99800×10^{17} NP1:ϕ_s312.00000°, δ5.00000°, λ-64.00000°. NP2: ϕ_s107.00000°, δ85.00000°, λ-92.00000°. Principal axes: T 0.9500, Plg40.0000°, Azm199.0000°; N 0.0970, Plg2.0000°, Azm107.0000°; P -1.0470, Plg50.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **14** 13:09:35.0, 1902N×6464W, h21km, mb5.5/172, MS4.9/128, MW5.2(RSPR), After RSPR.*
NEIC Felt [IV] on Saint John and Saint Thomas; [III] at Christiansted and Frederiksted, U.S. Virgin Islands. Felt [IV] at Caguas, Ceiba, Fajardo, Guaynabo, Humacao and San Juan; [III] at Bayamon, Carolina and Juncos; [II] at Rio Grande, Puerto Rico. Felt at Canovanas, Corozal, Culebra, Ponce and Vieques, Puerto Rico and in the British Virgin Islands.
*SZGRF **14** 13:09:37.5, 1969N×6469W, h35km, mb5.4, MS4.8, Virgin Islands*
ISC 14 13:09:34.5±1.1, **1913N**±002×**6461W**±001, **h26**km±8km, **h33**km±2.4km**:pP-P, n981**, σ**0^{s}90**/897, **mb5.3**/228, **MS4.9**/165, **90C-136D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**1.77**	**235**	Pn	**Pn**	**13 10 01.7**	**-1.7**
	1μm,0.3s,baz=71,slow=13,SNR=668						
SJG				Sn	**Sn**	**13 10 22.2**	**-3.0**
	2μm,0.3s,baz=259,slow=22,SNR=16						
SJG	**San Juan**	**1.77**	**235**	*e*Pn	**Pn**	**13 10 02.0**	**-1.5**
STMA	**St. Maarten, A**	**1.79**	**127**	*e*P	**Pn**	**13 10 03.2**	**-0.5**
STMA				*e*S	**Sn**	**13 10 24.5**	**-1.0**
SABS	**Saba**	**1.99**	**139**	*e*P	**Pn**	**13 10 08.3**	**+2.0**
SABT	**Saba**	**1.99**	**139**	*e*P	**Pn**	**13 10 08.3**	**+2.0**
STAT	**Sint Eustatius**	**2.25**	**136**	*e*P	**Pn**	**13 10 10.6**	**+0.6**
STAT				*e*S	**Sn**	**13 10 38.0**	**+1.2**
CPB	**Codrington**	**3.03**	**119**	*e*P	**Pn**	**13 10 18.8**	**-2.0**
BPA	**Boggy Peak**	**3.34**	**128**	*e*P	**Pn**	**13 10 23.8**	**-1.2**
BPA				*e*S	**Sn**	**13 10 59.4**	**-4.5**
SEG	**Port Louis**	**4.01**	**132**	*e*P	**Pn**	**13 10 32.3**	**-1.9**
SEG				*e*S	**Sn**	**13 11 25.4**	**+5.0**
LZG	**Guadaloupe-1**	**4.02**	**137**	*e*P	**Pn**	**13 10 34.5**	**+0.2**
SCG	**Saint Claude**	**4.16**	**137**	*e*P	**Pn**	**13 10 36.5**	**+0.2**
DOG	**Dongo Capester**	**4.20**	**137**	*e*P	**Pn**	**13 10 37.2**	**+0.4**
DEG	**La Desirade**	**4.39**	**129**	*e*P	**Pn**	**13 10 38.3**	**-1.1**
MGG	**Marie-Galante**	**4.48**	**135**	*e*P	**Pn**	**13 10 41.1**	**+0.5**
BBL	**Barber's Block**	**4.67**	**140**	*e*P	**Pn**	**13 10 43.8**	**+0.5**
MDN	**Morne-Daniel**	**4.88**	**140**	*e*P	**Pn**	**13 10 46.4**	**+0.2**
MDN				*e*S	**Sn**	**13 11 41.0**	**-0.8**
DBCT	**Belle View Cho**	**4.95**	**140**	*e*P	**Pn**	**13 10 47.3**	**+0.2**
DSHT	**Scott's Head**	**4.97**	**141**	*e*P	**Pn**	**13 10 47.5**	**0.0**
DSHT				*e*S	**Sn**	**13 11 42.4**	**-1.7**
FDF	**Fort de France**	**5.49**	**142**	*e*P	**Pn**	**13 10 55.5**	**+1.1**
FDF				*e*S	**Sn**	**13 12 03.8**	**+7.1**
CRM	**Caravelle**	**5.61**	**140**	⇑*e*P	**Pn**	**13 10 56.4**	**+0.3**
BIM	**Bigot**	**5.70**	**143**	*e*P	**Pn**	**13 10 57.3**	**-0.2**
MVM	**Montagne Vaucl**	**5.78**	**141**	*e*P	**Pn**	**13 10 59.2**	**+0.8**
GRCU	**Cariacou**	**7.29**	**155**	*e*P	**Pn**	**13 11 21.9**	**+2.7**
GRSS	**Sisters**	**7.38**	**157**	*e*P	**Pn**	**13 11 20.4**	**0.0**
GRW	**Mount Saint Ca**	**7.49**	**157**	*e*P	**Pn**	**13 11 23.8**	**+1.8**
TPR	**Prospect**	**8.72**	**154**	*i* P	**Pn**	**13 11 41.3**	**+2.4**
PCRV	**Puerto La Cruz**	**8.90**	**180**	Pn	**Pn**	**13 11 40.4**	**-0.9**
	27nm,0.3s,baz=341,slow=3.7,SNR=46						
PCRV				Sn	**Sn**	**13 13 12.3**	**-8.5**
	7.8nm,0.3s,baz=235,slow=15,SNR=3.0						
PCRV				LR	LR	13 15 00.1	
	comp=Z,12μm,20.2s,baz=162,slow=37						
TRN	**Trinidad (W)**	**8.98**	**159**	*e*P	**Pn**	**13 11 43.6**	**+1.1**
MASC	**Masc**	**9.12**	**278**	*e*P	**Pn**	**13 11 42.1**	**-2.3**
	baz=96						
MASC				*e*S	**Sn**	**13 13 17.1**	**-9.1**
	comp=N,2.4nm,0.2s						
MASC				*e*			
	comp=E,2.7nm,0.2s						
TBH	**Brigand Hill**	**9.25**	**158**	*e*P	**Pn**	**13 11 47.2**	**+1.0**
TPP	**Pointe-a-Pierr**	**9.28**	**160**	*e*P	**Pn**	**13 11 49.5**	**+3.0**
MOAC	**Moa**	**9.85**	**281**	*e*P	**Pn**	**13 11 50.9**	**-3.5**
	baz=99						
MOAC				*e*S	**Sn**	**13 13 35.4**	**-8.8**
	comp=N,139nm,0.6s						
MOAC				*e*			
	comp=E,205nm,0.8s						
RCC	**Rio Carpintero**	**10.48**	**277**	*e*P	**Pn**	**13 11 58.2**	**-4.8**
	baz=95						
RCC				*e*S	**Sn**	**13 13 48.5**	**-11**
	comp=N,6μm,16.8s						
RCC				*e*			
	comp=E,4μm,14.7s						
HLGC	**Holguin**	**10.90**	**281**	*e*P	**Pn**	**13 11 58.2**	**-11**
	baz=104						
HLGC				*e*S	Sn	13 13 48.5	-21
	comp=N,1μm,0.8s						
HLGC				*e*			
	comp=E,210nm,1.3s						
SDV	**Santo Domingo**	**11.74**	**211**	Pn	**Pn**	**13 12 18.7**	**-1.5**
	comp=E,14nm,0.3s,baz=91,slow=9.0,SNR=28						
SDV				Sn	**Sn**	**13 14 24.0**	**-6.2**
	comp=E,7.2nm,0.3s,baz=357,slow=14,SNR=3.7						
SDV				LR	LR	13 17 14.0	
	comp=E,11μm,18.7s,baz=342,slow=40						
SDV	**Santo Domingo**	**11.74**	**211**	*e*Pn	**Pn**	**13 12 17.2**	**-2.9**
SDV				*e*Sn	**Sn**	**13 14 17.5**	**-13**
BBSR	**BB Station**	**13.19**	**360**	*e*Pn	**Pn**	**13 12 36.8**	**-3.2**
BBSR				*e*Sn	**Sn**	**13 14 46.5**	**-19**
MGV	**Manicaragua**	**14.69**	**284**	*e*P	**Pn**	**13 12 57.5**	**-2.9**
ROSC	**El Rosal**	**17.06**	**215**	Pn	**Pn**	**13 13 29.8**	**-1.3**
	comp=E,15nm,0.3s,baz=85,slow=7.5,SNR=83						
ROSC				Sn	**Sn**	**13 16 39.6**	**-0.5**
	comp=E,1.0nm,0.3s,baz=212,slow=22,SNR=2.6						
ROSC	**El Rosal**	**17.06**	**215**	*e*Pn	**Pn**	**13 13 30.3**	**-0.9**
DWPF	**Disney**	**17.80**	**303**	*e*P	**Pn**	**13 13 40.7**	**+0.3**
	comp=E,211nm,0.6s						
DWPF				*e*Sn	Sn	13 16 35.8	-22
CNNC	**Cliffs of the**	**19.89**	**326**	*e*P	**Pn**	**13 14 04.3**	**-1.3**
JTS	**JuntasAbangare**	**21.53**	**249**	P	**P**	**13 14 18.1**	**-3.4**
	comp=E,11nm,0.5s,mb4.5,baz=64,slow=8.2,SNR=8.8						
JTS				LR	LR	13 22 20.4	
	comp=E,1μm,19.9s,MS4.4,baz=70,slow=36						
CBN	**Corbin**	**22.02**	**332**	*e*P	**P**	**13 14 26.3**	**-0.4**
CBN				LR	LR		
	comp=Z,5μm,22.0s,MS4.9						
BLA	**Blacksburg**	**22.72**	**326**	*e*P	**P**	**13 14 34.4**	**+0.2**
BLA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BLA	**Blacksburg**	**22.72**	**326**	*e*P	**P**	**13 14 34.4**	**+0.2**
	comp=Z,4.0nm,1.3s						
SDMD	**Soldier's Deli**	**22.81**	**335**	*e*P	**P**	**13 14 34.6**	**-0.5**
ELN	**Prospectdale**	**22.91**	**325**	*e*P	**P**	**13 14 37.5**	**+1.3**
CPNY	**Central Park**	**23.03**	**342**	*e*P	**P**	**13 14 38.2**	**+0.7**
BRNJ	**Basking Ridge**	**23.12**	**340**	*e*P	**P**	**13 14 38.8**	**+0.4**
MVL	**Millersville**	**23.13**	**337**	*e*P	**P**	**13 14 37.8**	**-0.7**
FWV	**Forest Hill**	**23.20**	**326**	*e*P	**P**	**13 14 38.9**	**-0.4**
PAL	**Palisades**	**23.21**	**342**	*e*P	**P**	**13 14 39.3**	**-0.1**
MYNC	**Murphy**	**23.47**	**317**	PFAKE		13 14 50.0	+7.9
MYNC				LR	LR		
	comp=Z,2μm,20.0s,MS4.6						
WES	**Weston**	**23.87**	**348**	*e*P	**P**	**13 14 45.3**	**-0.5**
WES				pmax	pmax		
	comp=Z,75nm,0.6s,mb5.3						
WES				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.6						
WES	**Weston**	**23.87**	**348**	*e*P	**P**	**13 14 45.3**	**-0.5**
	comp=Z,75nm,0.6s,mb5.3						
WES				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
CPCT	**Cooper Cave**	**23.95**	**317**	*e*P	**P**	**13 14 46.5**	**0.0**
QUA2	**Belchertown**	**23.99**	**346**	*e*P	**P**	**13 14 46.3**	**-0.6**
	comp=Z,701nm,0.3s						
TZTN	**Tazewell**	**24.04**	**320**	*e*P	**P**	**13 14 47.4**	**+0.1**
HRV	**Harvard--Oak R**	**24.04**	**347**	*e*P	**P**	**13 14 47.5**	**+0.2**
HRV				pmax	pmax		
	comp=Z,98nm,0.6s,mb5.4						
HRV				MLR	MLR		
	comp=Z,3μm,20.0s,MS4.8						
HRV	**Harvard--Oak R**	**24.04**	**347**	*e*P	**P**	**13 14 47.5**	**+0.2**
	comp=Z,98nm,0.6s,mb5.4						
HRV				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
SSPA	**Standing Stone**	**24.27**	**335**	*e*P	**P**	**13 14 49.5**	**0.0**
SSPA				LR	LR		
	comp=Z,3μm,21.0s,MS4.8						
MCWV	**Mont Chateau**	**24.32**	**330**	*e*P	**P**	**13 14 50.3**	**+0.5**
MCWV				LR	LR		
	comp=Z,3μm,19.0s,MS4.8						
LRAL	**Lakeview Retre**	**24.34**	**309**	*e*P	**P**	**13 14 50.5**	**+0.4**
	comp=Z,121nm,0.9s,mb5.3						
LRAL				LR	LR		
	comp=Z,2μm,19.0s,MS4.7						
SWET	**Sewanee**	**24.75**	**315**	*e*P	**P**	**13 14 53.8**	**+0.1**
BINY	**Binghamton**	**24.94**	**340**	*e*P	**P**	**13 14 55.7**	**+0.1**
BINY				LR	LR		
	comp=Z,6μm,22.0s,MS5.1						
FFD	**Franklin Falls**	**24.98**	**348**	*e*P	**P**	**13 14 55.6**	**-0.3**
	comp=Z,233nm,0.3s,mb6.2						
HNH	**Hanover**	**25.34**	**347**	*e*P	**P**	**13 14 59.2**	**+0.1**
ACCN	**Adirondack Com**	**25.36**	**344**	*e*P	**P**	**13 14 59.5**	**+0.1**
EMMW	**East Machias**	**25.62**	**355**	*e*P	**P**	**13 15 01.9**	**+0.2**
	comp=Z,56nm,0.9s,mb5.1						
WVL	**Waterville**	**25.71**	**352**	*e*P	**P**	**13 15 03.1**	**+0.6**
	comp=Z,50nm,0.8s,mb5.1						
LBNH	**Lisbon**	**25.77**	**348**	*e*P	**P**	**13 15 03.5**	**+0.4**
LBNH				pmax	pmax		
	comp=Z,57nm,0.6s,mb5.3						
LBNH				MLR	MLR		
	comp=Z,5μm,22.0s,MS5.0						
LBNH	**Lisbon**	**25.77**	**348**	*e*P	**P**	**13 15 03.5**	**+0.4**
	comp=Z,57nm,0.6s,mb5.3						
LBNH				*e*		13 15 33.5	
LBNH				LR	LR		
	comp=Z,5μm,22.0s,MS5.0						
NCB	**Newcomb**	**26.05**	**344**	*e*P	**P**	**13 15 05.8**	**+0.2**
NCB				*e*		13 15 37.9	
NCB				LR	LR		
	comp=Z,4μm,22.0s,MS4.9						
ALLY	**Alegheny Colle**	**26.06**	**333**	*e*P	**P**	**13 15 05.7**	**0.0**
PLAL	**Pickwick Lake**	**26.09**	**312**	*e*P	**P**	**13 15 06.0**	**0.0**
	comp=Z,132nm,0.8s,mb5.5						
PLAL				LR	LR		
	comp=Z,2μm,19.0s,MS4.7						
ACSO	**Alum Creek Sta**	**26.30**	**327**	*e*P	**P**	**13 15 07.8**	**0.0**
	comp=Z,140nm,0.9s,mb5.5						
ACSO				*e*		13 15 39.9	
ACSO				LR	LR		
	comp=Z,2μm,22.0s,MS4.6						
PKME	**Peaks-Kenny Pk**	**26.35**	**353**	*e*P	**P**	**13 15 08.3**	**0.0**
PKME				*e*S	**S**	**13 19 41.9**	**+2.1**
ERPA	**Erie**	**26.38**	**334**	*e*P	**P**	**13 15 09.6**	**+1.0**
	comp=Z,19nm,0.7s,mb4.7						
ERPA				LR	LR		
	comp=Z,3μm,21.0s,MS4.8						
WVT	**Waverly**	**26.54**	**314**	*e*P	**P**	**13 15 09.4**	**-0.6**
WVT				pmax	pmax		
	comp=Z,23nm,0.4s,mb5.1						
WVT				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.7						
WVT	**Waverly**	**26.54**	**314**	*e*P	**P**	**13 15 09.4**	**-0.6**
	comp=Z,23nm,0.4s,mb5.1						
WVT				LR	LR		
	comp=Z,2μm,20.0s,MS4.7						
FRNY	**Flat Rock**	**26.70**	**346**	*e*P	**P**	**13 15 11.4**	**-0.1**
LONY	**Lake Ozonia**	**26.75**	**344**	*e*P	**P**	**13 15 11.8**	**-0.1**
LONY				*e*		13 15 48.5	
WCI	**Wyandotte Cave**	**26.79**	**320**	*e*P	**P**	**13 15 13.8**	**+1.5**
WCI				pmax	pmax		
	comp=Z,58nm,0.7s,mb5.2						
WCI				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.7						
WCI	**Wyandotte Cave**	**26.79**	**320**	*e*P	**P**	**13 15 13.8**	**+1.5**
	comp=Z,58nm,0.7s,mb5.2						
WCI				LR	LR		

comp=Z,2µm,19.0s,MS4.7
OXF Oxford 26.81 310 *e*P P 13 15 12.2 -0.3
OXF MLR MLR
comp=Z,2µm,20.0s,MS4.6
USIN University of 27.48 318 *e*P P 13 15 18.7 +0.2
SAML Samuel 27.93 177 *e*P P 13 15 19.4 -3.2
comp=Z,124nm,1.2s,mb5.4
SAML LR LR
comp=Z,4µm,20.0s,MS5.0
PARMO Parma 28.13 314 *e*P P 13 15 23.1 -1.2
AAM Ann Arbor 28.18 329 *e*P P 13 15 24.9 +0.1
AAM MLR MLR
comp=Z,3µm,22.0s,MS4.9
SADO Sadowa 28.29 338 P P 13 15 24.4 -1.3
comp=Z,33nm,0.7s,mb5.1,baz=178,slow=8.0,SNR=22
SADO LR LR 13 25 31.9
comp=Z,4µm,21.7s,MS5.0,baz=145,slow=34
SIUC Southern Illin 28.34 316 *e*P P 13 15 26.7 +0.6
CMIG Matias Romero 28.83 271 P P 13 15 27.1 -3.4
comp=Z,4.1nm,0.6s,mb4.3,baz=69,slow=7.3,SNR=6.3
CMIG LR LR 13 26 35.9
comp=Z,1µm,20.9s,MS4.6,baz=224,slow=36
UALR University of 29.09 308 *e*P P 13 15 32.4 -0.4
FVM French Village 29.29 315 *e*P P 13 15 34.2 -0.4
FVM pmax pmax
comp=Z,59nm,0.6s,mb5.5
FVM French Village 29.29 315 *e*P P 13 15 34.2 -0.4
comp=Z,60nm,0.6s,mb5.5
ATAH Atahualpa 29.30 209 P P 13 15 33.3 -1.4
comp=Z,8.7nm,0.7s,mb4.6,baz=18,slow=3.8,SNR=5.7
NATX Nacogdoches 29.80 301 *e*P P 13 15 39.9 +0.8
comp=Z,60nm,0.7s,mb5.4
NATX LR LR
comp=Z,2µm,19.0s,MS4.7
CCM Cathedral Cave 29.87 315 *e*P P 13 15 38.3 -1.5
CCM pmax pmax
comp=Z,27nm,0.5s,mb5.2
CCM MLR MLR
comp=Z,2µm,20.0s,MS4.7
CCM Cathedral Cave 29.87 315 *e*P P 13 15 38.3 -1.4
comp=Z,27nm,0.5s,mb5.2
CCM LR LR
comp=Z,2µm,20.0s,MS4.7
MIAR Mount Ida 29.92 307 *e*P P 13 15 40.5 +0.3
MIAR MLR MLR
comp=Z,2µm,19.0s,MS4.7
HKT Hockley 30.28 297 *e*P P 13 15 43.4 0.0
HKT MLR MLR
comp=Z,1µm,21.0s,MS4.5
JFWS Jewell Farm 32.09 323 *e*P P 13 15 59.2 -0.1
JFWS MLR MLR
comp=Z,3µm,22.0s,MS4.9
NNA Nana 33.19 202 *e*P P 13 16 05.3 -3.6
NNA LR LR
comp=Z,4µm,21.0s,MS5.1
JCT Junction City 33.75 296 *e*P P 13 16 12.6 -1.2
JCT MLR MLR
comp=Z,1µm,22.0s,MS4.5
WMOK Wichita Mounta 34.00 304 *e*P P 13 16 15.2 -0.8
WMOK MLR MLR
comp=Z,2µm,19.0s,MS4.8
SIV San Ignacio 35.07 174 P P 13 16 22.3 -3.0
comp=Z,54nm,0.7s,mb5.6,baz=21,slow=10,SNR=181
LPAZ La Paz 35.36 186 *e*P P 13 16 25.1 -2.7
LPAZ pmax pmax
comp=Z,26nm,0.9s
LPAZ MLR MLR
comp=Z,3µm,20.0s
LPAZ La Paz 35.36 186 *e*P P 13 16 25.1 -2.7
comp=Z,26nm,0.9s,mb5.2
LPAZ LR LR
comp=Z,3µm,20.0s,MS5.0
SCHQ Schefferville 35.68 358 P P 13 16 30.3 -0.2
comp=Z,44nm,0.6s,mb5.6,baz=175,slow=6.3,SNR=81
SCHQ LR LR 13 29 13.8
comp=Z,2µm,21.7s,MS4.7,baz=173,slow=33
SCHQ Schefferville 35.68 358 *e*P P 13 16 30.1 -0.4
comp=Z,66nm,0.8s,mb5.6
SCHQ LR LR
comp=Z,3µm,22.0s,MS5.0
EYMN Ely 36.09 329 *e*P P 13 16 32.4 -1.6
comp=Z,117nm,1.6s,mb5.6
EYMN LR LR
comp=Z,3µm,20.0s,MS5.0
AMTX Amarillo 36.33 303 *e*P P 13 16 36.3 +0.3
AMTX LR LR
comp=Z,2µm,19.0s,MS4.8
ADH Angra Heroismo 37.73 51 *e*LR LR 13 27 00.0
GDL2 Guadalupe Moun 37.91 298 *e*P P 13 16 49.5 +0.1
BDFB Brasilia 38.22 154 P P 13 16 51.4 -0.7
comp=Z,7.7nm,0.5s,mb4.7,baz=325,slow=9.1,SNR=12
BDFB LR LR 13 33 36.1
comp=Z,4µm,19.3s,MS5.2,baz=333,slow=38
PDA Ponta Delgada 38.61 53 *i* LR LR 13 27 29.0
MNTX Cornudas Mount 38.68 297 *e*P P 13 16 55.1 -0.8
MNTX LR LR
comp=Z,648nm,19.0s,MS4.5
ULM Lac du Bonnet 39.77 329 P P 13 17 02.9 -2.2
comp=Z,12nm,0.6s,mb4.8,baz=126,slow=8.9,SNR=16
ULM LR LR 13 32 39.5
comp=Z,2µm,21.6s,MS5.0,baz=111,slow=35
ULM Lac du Bonnet 39.77 329 *e*P P 13 17 03.0 -2.1
comp=Z,15nm,0.6s,mb4.9
ULM LR LR
comp=Z,3µm,22.0s,MS5.1
SDCO Great Sand Dun 40.08 306 PFAKE 13 17 20.0 +12
SDCO LR LR
comp=Z,962nm,20.0s,MS4.6
ANMO Albuquerque 40.16 302 *d i*P P 13 17 08.4 +0.1
ANMO Albuquerque 40.16 302 PFAKE 13 17 20.0 +12
ANMO LR LR
comp=Z,2µm,20.0s,MS4.9
LPM Los Pinos Moun 40.17 301 *e*P P 13 17 07.2 -1.1
Y22C IRIS PASSCAL I 40.36 300 ⇑P P 13 17 10.5 +0.6
baz=40
LENM Lemitar 40.42 300 *e*P P 13 17 10.6 +0.2
LAZ Ladron 40.59 301 *e*P P 13 17 12.1 +0.2
ISCO Idaho Springs 40.77 309 *e*P P 13 17 13.5 +0.2
ISCO pmax pmax
comp=Z,101nm,1.3s,mb5.3
ISCO MLR MLR
comp=Z,1µm,20.0s,MS4.8
ISCO Idaho Springs 40.77 309 *e*P P 13 17 13.5 +0.2
comp=Z,101nm,1.3s,mb5.3
ISCO LR LR
comp=Z,1µm,20.0s,MS4.8
PHWY Pilot Hill 41.14 312 *e*P P 13 17 16.5 +0.1
RSSD Black Hills 41.24 316 *e*P P 13 17 16.6 -0.6
RSSD MLR MLR
comp=Z,2µm,19.0s,MS4.9
SMCO Snowmass 41.59 308 *e*P P 13 17 20.3 +0.2
comp=Z,72nm,1.4s,mb5.1
LVC Limon Verde 41.70 186 P P 13 17 17.2 -3.8
comp=Z,11nm,0.5s,mb4.8,baz=2.8,slow=6.0,SNR=16
LVC Limon Verde 41.70 186 *e*P P 13 17 16.8 -4.2
LVC LR LR
comp=Z,3µm,20.0s,MS5.2
MVCO Mesa Verde 42.25 305 *e*P P 13 17 25.4 -0.2
RWWY Rawlins 42.51 311 *e*P P 13 17 28.1 +0.5
comp=Z,129nm,1.3s,mb5.5
PV01 Paradox Valley 42.52 306 *e*P P 13 17 28.5 +0.8
PV10 Paradox Valley 42.94 306 *e*P P 13 17 30.9 -0.1
TUC Tucson 43.31 297 *e*P P 13 17 34.8 +0.8
TUC pmax pmax
comp=Z,102nm,1.8s,mb5.2
TUC MLR MLR
comp=Z,928nm,20.0s,MS4.7
TUC Tucson 43.31 297 *e*P P 13 17 34.8 +0.7
comp=Z,102nm,1.8s,mb5.2
TUC LR LR
comp=Z,928nm,20.0s,MS4.7
LAO LASA Array 43.71 319 *e*P P 13 17 37.8 +0.5
comp=Z,138nm,1.3s,mb5.5
LAO LR LR
comp=Z,2µm,20.0s,MS5.0
116A Eloy 44.11 297 P P 13 17 41.4 +0.9
baz=44,SNR=8.9
EGOM La Gomera 44.12 69 P P 13 17 40.8 +0.2
comp=Z,136nm,1.7s,mb5.4
WUAZ Wupatki 44.21 302 *e*P P 13 17 42.1 +0.8
comp=Z,62nm,1.1s,mb5.2
WUAZ LR LR
comp=Z,1µm,20.0s,MS4.9
SRU San Rafael 44.24 307 *e*P P 13 17 41.2 -0.3
SRU pmax pmax
comp=Z,21nm,0.8s,mb4.9
SRU San Rafael 44.24 307 *e*P P 13 17 41.2 -0.4
comp=Z,21nm,0.8s,mb4.9
PDAR Pinedale Array 44.51 312 P P 13 17 43.6 -0.1
comp=Z,48nm,0.8s,mb5.4,baz=114,slow=8.7,SNR=317
PDAR sP sP 13 17 56.4 +1.7
comp=Z,39nm,0.7s,baz=112,slow=7.0,SNR=13
PDAR PcP PcP 13 19 26.4 -0.4
comp=Z,8.3nm,0.6s,baz=114,slow=4.6,SNR=5.8
PDAR LR LR 13 38 41.7
comp=Z,1µm,18.7s,MS4.9,baz=119,slow=39
BW06 Boulder Array 44.51 312 *e*P P 13 17 43.6 -0.1
comp=Z,96nm,1.1s,mb5.5
BW06 LR LR
comp=Z,2µm,20.0s,MS4.9
115A Sonoran Desert 44.56 297 ⇓P P 13 17 45.1 +1.0
baz=45,SNR=7.0
PMAR Madeira 44.63 63 *e*P P 13 17 46.1 +1.4
comp=Z,153nm,1.6s,mb5.6
X15A Humboldt 44.77 300 ⇓P P 13 17 46.8 +1.0
baz=45,SNR=23
TMUT Trail Mountain 44.80 307 *e*P P 13 17 45.7 -0.3
W15A Williams 44.88 301 ⇓P P 13 17 48.0 +1.3
baz=45,SNR=6.0
DAU Daniels Canyon 45.09 308 *e*P P 13 17 49.1 +0.7
Z14A Wintersburg 45.23 298 ⇑P P 13 17 50.3 +0.9
baz=45
MPU Maple Canyon 45.28 308 P P 13 17 49.7 -0.2
MPU LR LR
comp=Z,1µm,21.0s,MS4.8
X14A Yava 45.30 300 ⇓P P 13 17 51.0 +1.0
baz=45,SNR=13
Y14A Wickenburg 45.34 299 ⇓P P 13 17 51.1 +0.8
baz=45
MSU Marysvale 45.37 306 *e*P P 13 17 51.2 +0.6
TCUT Toone Canyon 45.38 309 *e*P P 13 17 49.4 -1.2
MVU Marysvale 45.40 306 PFAKE 13 18 00.0 +9.2
MVU LR LR
comp=Z,1µm,22.0s,MS4.7
LOHW Long Hollow 45.49 313 *e*P P 13 17 51.6 +0.1
comp=Z,44nm,0.7s,mb5.4
CTU Camp Tracy 45.53 309 *e*P P 13 17 51.8 0.0
W14A Seligman 45.55 301 ⇓P P 13 17 53.1 +1.1
baz=46,SNR=16
GCMT Greycliff 45.57 316 *e*P P 13 17 52.3 +0.2
REDW Red Top Meadow 45.59 312 *e*P P 13 17 52.5 +0.3
AHID Auburn Hatcher 45.59 312 *e*P P 13 17 52.5 +0.2
AHID LR LR
comp=Z,2µm,19.0s,MS5.0
NLU North Lily Min 45.60 308 *e*P P 13 17 52.9 +0.5
HWUT Hardware Ranch 45.62 310 *e*P P 13 17 52.3 -0.2
comp=Z,70nm,0.9s,mb5.6
HWUT LR LR
comp=Z,1µm,20.0s,MS4.8
MOOW Moose Ponds 45.63 313 *e*P P 13 17 52.3 -0.3
comp=Z,43nm,0.8s,mb5.4
LKWY Lake 45.65 314 *e*P P 13 17 53.1 +0.3
LKWY pmax pmax
comp=Z,25nm,0.8s,mb5.2
LKWY MLR MLR
comp=Z,3µm,19.0s,MS5.2
LKWY Lake 45.65 314 *e*P P 13 17 53.1 +0.4
comp=Z,25nm,0.8s,mb5.2
LKWY LR LR
comp=Z,3µm,19.0s,MS5.2
TPAW Teton Pass 45.70 313 *e*P P 13 17 53.5 +0.4
comp=Z,60nm,0.8s,mb5.6
FLWY Flagg Ranch 45.70 313 *e*P P 13 17 53.7 +0.5
comp=Z,45nm,0.9s,mb5.4
CPUP Villa Florida 45.74 171 P P 13 17 49.1 -4.3
comp=Z,9.5nm,0.6s,mb4.9,baz=336,slow=7.4,SNR=21
CPUP LR LR 13 37 56.0
comp=Z,816nm,18.5s,MS4.7,baz=331,slow=37
CPUP Villa Florida 45.74 171 *e*P P 13 17 49.2 -4.3
NOQ North Oquirrh 45.79 308 *e*P P 13 17 54.2 +0.4
IMW Indian Meadow 45.81 313 *e*P P 13 17 57.1 +3.0
comp=Z,31nm,0.6s,mb5.4
YNR Norris Junctio 45.88 314 *e*P P 13 17 56.3 +1.7
DCID1 Drake Creek 45.89 313 *e*P P 13 17 54.5 -0.2
YFT Old Faithful 45.91 314 *e*P P 13 17 56.7 +1.9
RRI2 Red Ridge 45.91 312 *e*P P 13 17 55.2 +0.4
Y13A Salome 46.00 299 ⇓P P 13 17 56.3 +0.7
baz=46,SNR=8.9
YMR Madison River 46.06 314 *e*P P 13 17 57.6 +1.5
comp=Z,118nm,1.2s,mb5.7
X13A Yucca 46.09 300 P P 13 17 57.0 +0.8
baz=46,SNR=11
CCUT Cedar City 46.12 304 *e*P P 13 17 57.1 +0.6
SPUT South Promonto 46.19 309 *e*P P 13 17 56.9 -0.1
W13A Hualapai Mount 46.19 301 ⇑P P 13 17 58.2 +1.2
baz=46,SNR=8.8
DUG Dugway 46.20 308 *e*P P 13 17 57.5 +0.4
DUG MLR MLR
comp=Z,1µm,20.0s,MS4.8
ARUT Antelope Range 46.22 304 *e*P P 13 17 57.6 +0.3
PDMCI Parker Dam,Lak 46.31 299 ⇓P P 13 17 58.7 +0.7
baz=46
QLMT Earthquake Lak 46.43 314 *e*P P 13 18 00.3 +1.4
EGMT Eagleton 46.44 319 *e*P P 13 17 59.1 +0.1
comp=Z,94nm,1.4s,mb5.5
EGMT LR LR
comp=Z,2µm,20.0s,MS5.0
BGU Big Grassy Mou 46.52 309 *e*P P 13 17 59.8 +0.1
HVU Hansel Valley 46.54 310 *e*P P 13 17 59.8 +0.1
Y12C Blythe 46.57 299 ⇓P P 13 18 00.7 +0.7
baz=47
GLA Glamis 46.77 298 *e*P P 13 18 02.5 +0.9
GLA Glamis 46.77 298 ⇓P P 13 18 02.6 +1.0
baz=47,SNR=10.0
BOZ Bozeman (W) 46.82 315 *e*P P 13 18 02.1 +0.1
BOZ pmax pmax
comp=Z,79nm,1.3s,mb5.5
BOZ MLR MLR
comp=Z,1µm,19.0s,MS4.9
BOZ Bozeman (W) 46.82 315 *e*P P 13 18 02.1 +0.2
comp=Z,79nm,1.3s,mb5.5
BOZ LR LR
comp=Z,1µm,19.0s,MS4.9
U12A Valley of Fire 46.88 302 ⇑P P 13 18 03.3 +0.9
baz=47
W12A Cal Nev Ari 47.01 301 ⇑P P 13 18 04.1 +0.6
baz=47
V12A Neon 47.05 301 ⇓P P 13 18 04.6 +0.8
baz=47,SNR=12
IRM Iron Mountain 47.13 299 P P 13 18 05.5 +1.2
baz=47,SNR=25
HRY Holter Researc 47.29 317 *e*P P 13 18 05.8 +0.1
EFAM Famara 47.36 68 P P 13 18 06.6 +0.4
comp=Z,290nm,1.7s,mb5.9
DLMT Dillon 47.38 315 *e*P P 13 18 07.0 +0.7
N13A Wendover, West 47.38 308 ⇓P P 13 18 06.6 +0.3
baz=47,SNR=13
SHPR Sheep Range 47.39 302 *e*P P 13 18 07.2 +0.8
MCMT McKenzie Canyo 47.39 314 *e*P P 13 18 07.1 +0.7
LRM Limekiln Ridge 47.42 315 *e*P P 13 18 07.2 +0.6
Q12A Willow Creek R 47.51 306 ⇓P P 13 18 08.2 +0.9
baz=48,SNR=6.9
U11A Corn Creek 47.56 302 ⇓P P 13 18 08.6 +0.9
baz=48
SWSC Sam W. Stewart 47.57 297 ⇑P P 13 18 08.8 +1.0
baz=48,SNR=6.0
P12A McGill 47.64 306 ⇑P P 13 18 09.0 +0.7
baz=48,SNR=20
O12A Currie 47.67 307 ⇑P P 13 18 09.1 +0.5
baz=48,SNR=23
DVTC Desert V Tower 47.81 297 ⇓P P 13 18 11.1 +1.4
baz=48
BELC Belle Mtn. 47.82 299 ⇑P P 13 18 10.7 +1.0
baz=48,SNR=8.1
TUQ Turquoise Mtn. 47.88 301 ⇑P P 13 18 11.0 +0.8
baz=48,SNR=12
TRCR Troy Canyon 47.98 305 P P 13 18 10.1 -0.9
N12A Clover Valley, 48.00 308 ⇓P P 13 18 11.5 +0.4
baz=48,SNR=20
M12A Wells 48.02 309 P P 13 18 11.7 +0.4
baz=48,SNR=47
MONP Monument Peak 48.09 297 P P 13 18 13.5 +1.6
baz=48,SNR=28
HLID Hailey 48.14 312 PFAKE 13 18 30.0 +18
HLID LR LR
comp=Z,1µm,19.0s,MS4.9
HEC Hector,Ludlow 48.16 300 ⇓P P 13 18 13.4 +1.0
baz=48
PFO Pinyon Flat Ob 48.17 298 *e*P P 13 18 12.2 -0.2
PFO pmax pmax
comp=Z,104nm,1.9s,mb5.5
PFO MLR MLR
comp=Z,673nm,20.0s,MS4.6
PFO Pinyon Flat Ob 48.17 298 *e*P P 13 18 12.2 -0.3
comp=Z,104nm,1.9s,mb5.5
PFO LR LR
comp=Z,673nm,20.0s,MS4.6
PFO Pinyon Flat Ob 48.17 298 ⇓P P 13 18 13.4 +1.0
baz=48
SHOC Shoshone 48.22 301 ⇑P P 13 18 13.6 +0.8
baz=48
CHMT Chamberlain Mo 48.28 316 *e*P P 13 18 13.5 +0.2
BAR Barrett 48.30 297 *e*P P 13 18 14.7 +1.2
P11A Circle Ranch, 48.30 306 ⇑P P 13 18 14.0 +0.6
baz=48
U10A Ash Meadows, A 48.32 302 P P 13 18 14.9 +1.3
baz=48,SNR=12
O11A Cowboy Ranch, 48.33 307 P P 13 18 14.4 +0.7
baz=48,SNR=52
N11A Elko Archery C 48.51 308 ⇓P P 13 18 15.4 +0.3
baz=48,SNR=5.8
R10A Warm Springs 48.53 305 ⇑P P 13 18 16.3 +1.1
baz=48,SNR=17
GSC Goldstone 48.59 300 *e*P P 13 18 16.7 +1.0
GSC Goldstone 48.59 300 ⇑P P 13 18 16.6 +0.9
baz=49,SNR=10.0
BBRC Big Bear Sol-O 48.60 299 ⇓P P 13 18 17.1 +1.4
baz=49
M11A Holland Ranch, 48.67 309 P P 13 18 17.0 +0.7
baz=49,SNR=28
109C Camp Elliot, M 48.67 297 ⇑P P 13 18 16.9 +0.6
baz=49
SFJD Kangerlussuaq 48.69 7 *i* P P 13 18 13.7 -2.8
SFJD *e*S S 13 25 37.4 +20
SFJD
comp=Z,830nm,19.0s
SFJD Kangerlussuaq 48.69 7 *e*P P 13 18 13.7 -2.8
SFJD *e*S S 13 25 37.4 +20
SFJD LR LR
comp=Z,830nm,19.0s,MS4.7
MSO Missoula 48.71 316 *e*P P 13 18 16.3 -0.3
MSO LR LR
comp=Z,1µm,19.0s,MS4.9
RRX Edison Barstow 48.71 300 ⇓P P 13 18 17.5 +0.9
baz=49
FURC Furnace Creek, 48.75 302 P P 13 18 18.0 +1.1
baz=49,SNR=8.7
MURC Murrieta 48.79 298 ⇓P P 13 18 18.0 +0.8
baz=49,SNR=5.8
O10A Cortez Mining, 48.99 307 ⇓P P 13 18 18.9 +0.1
baz=49
N10A Dunphy 49.07 308 ⇑P P 13 18 19.5 +0.1
baz=49
R09A Tonopah 49.12 304 ⇓P P 13 18 20.4 +0.6
baz=49,SNR=23
S09A Goldfield 49.18 304 ⇓P P 13 18 20.9 +0.7
baz=49,SNR=18
BFSC Mount Baldy St 49.21 299 ⇓P P 13 18 21.0 +0.6
baz=49
GRAC Grapevine Rang 49.21 303 P P 13 18 21.4 +0.9
baz=49,SNR=12
MPMC Manual Prospec 49.21 301 ⇑P P 13 18 21.2 +0.7
baz=49,SNR=16
TPH Tonopah 49.22 304 *e*P P 13 18 20.9 +0.4
TPH MLR MLR
comp=Z,1µm,20.0s,MS4.8
M10A I.L. Ranch, Tu 49.24 309 ⇓P P 13 18 21.2 +0.5
baz=49,SNR=8.6
Q09A Carvers 49.29 305 ⇑P P 13 18 21.6 +0.6
baz=49
DAC Darwin (Calif) 49.32 302 *e*P P 13 18 22.2 +0.9
DAC pmax pmax
comp=Z,31nm,1.0s,mb5.3
DAC MLR MLR
comp=Z,1µm,21.0s,MS5.0
DAC Darwin (Calif) 49.32 302 *e*P P 13 18 22.1 +0.9
comp=Z,31nm,1.0s,mb5.3
DAC LR LR
comp=Z,1µm,21.0s,MS5.0
LRMC Laurel Mountai 49.32 301 P P 13 18 21.9 +0.6
baz=49,SNR=8.6
P09A Austin 49.36 306 ⇑P P 13 18 22.2 +0.6
baz=49,SNR=7.3
O09A Fish Creek Ran 49.49 307 ⇑P P 13 18 23.2 +0.5
baz=50,SNR=19
EDW2 Edwards Air Fo 49.52 300 ⇓P P 13 18 23.4 +0.5
baz=50,SNR=19
MWC Mount Wilson 49.54 299 *e*P P 13 18 24.4 +1.4
BMN Battle Mountai 49.56 307 *e*P P 13 18 23.4 +0.3
BMN pmax pmax
comp=Z,36nm,0.9s,mb5.4
BMN MLR MLR
comp=Z,1µm,19.0s,MS4.8
BMN Battle Mountai 49.56 307 *e*P P 13 18 23.4 +0.2
comp=Z,36nm,0.9s,mb5.4
BMN LR LR
comp=Z,1µm,19.0s,MS4.8
BSMT Bassoo Peak 49.56 317 *e*P P 13 18 23.4 +0.2
FMP Fort Macarthur 49.70 298 ⇑P P 13 18 25.0 +0.8
baz=50
CWC Cottonwood Cre 49.72 302 ⇑P P 13 18 25.3 +0.9
baz=50
DECC Green Verdugo 49.76 299 ⇓P P 13 18 25.0 +0.3
baz=50
CIS Catalina Islan 49.78 298 ⇓P P 13 18 25.7 +0.9
baz=50,SNR=6.1
N09A Rock Creek Ran 49.85 308 ⇑P P 13 18 25.6 +0.2
baz=50,SNR=14
Q08A Gabbs 49.87 305 ⇓P P 13 18 25.5 0.0
baz=50,SNR=16
SCI San Clemente I 49.89 297 ⇓P P 13 18 26.3 +0.7
baz=50
M09A Marrel Ranch, 49.89 308 ⇓P P 13 18 26.0 +0.3
baz=50,SNR=18
R08A Mina 49.95 304 ⇑P P 13 18 26.6 +0.5
baz=50
ISA Isabella 49.98 301 *e*P P 13 18 27.3 +1.0
ISA MLR MLR
comp=Z,328nm,19.0s,MS4.4
ISA Isabella 49.98 301 ⇓P P 13 18 27.2 +0.9
baz=50,SNR=7.7
P08A Dixie Valley 50.10 306 ⇓P P 13 18 27.3 +0.1
baz=50
NVAR Mina Array Bea 50.11 304 P P 13 18 27.7 +0.4
comp=Z,5.7nm,0.8s,mb4.7,baz=86,slow=7.6,SNR=38
NVAR Mina Array Bea 50.11 304 P P 13 18 27.7 +0.4
OSI Osito Adit 50.11 299 ⇓P P 13 18 27.2 -0.1
baz=50
L09A Wilkinson Ranc 50.16 309 P P 13 18 28.3 +0.6
baz=50,SNR=30
MTUM Tungsten Hills 50.20 303 *e*P P 13 18 28.6 +0.7
ARVC Arvin 50.23 300 ⇑P P 13 18 29.1 +0.9
baz=50
O08A Rochester Mine 50.24 307 ⇑P P 13 18 28.3 0.0
baz=50
K09A Rome 50.32 310 P P 13 18 29.4 +0.4
baz=50,SNR=81
BLG Laguna Peak 50.36 299 ⇓P P 13 18 29.5 +0.3
baz=50
MLAC Mammoth Lakes 50.44 303 ⇑P P 13 18 30.6 +0.8
baz=50
BMO Blue Mountains 50.47 313 *e*P P 13 18 29.2 -0.8
BMO pmax pmax
comp=Z,54nm,1.4s,mb5.4
BMO MLR MLR
comp=Z,1µm,19.0s,MS4.9
BMO Blue Mountains 50.47 313 *e*P P 13 18 29.2 -0.8
comp=Z,54nm,1.4s,mb5.4
BMO LR LR
comp=Z,1µm,19.0s,MS4.9
VES Vestal, Richgr 50.48 301 ⇑P P 13 18 30.6 +0.5
baz=50
HELL Mitchell Peak, 50.50 302 P P 13 18 30.7 +0.5
baz=50,SNR=18
Q07A Schurz 50.56 305 ⇑P P 13 18 30.6 -0.2
baz=51
EDM Edmonton 50.56 324 *e*P P 13 18 29.5 -1.2
I09A Lost Marbles R 50.58 312 ⇓P P 13 18 30.0 -0.9
baz=51,SNR=10
M08A Happy Creek Ra 50.59 308 ⇓P P 13 18 31.3 +0.4
baz=51,SNR=41
R07C Lee Vining 50.65 304 ⇑P P 13 18 32.0 +0.6
baz=51,SNR=6.4
H09A Durkee 50.67 313 ⇑P P 13 18 31.1 -0.4
baz=51,SNR=16
L08A Fields 50.68 309 P P 13 18 32.0 +0.4
baz=51,SNR=50
P07A Fallon 50.70 306 ⇑P P 13 18 30.8 -1.0
baz=51

SNCC San Nicolas Is 50.71 298 PFAKE 13 18 50.0 +18
SNCC LR LR
comp=Z,537nm,20.0s,MS4.6
SNCC San Nicolas Is 50.71 298 ⇑P **P** **13 18 32.7 +0.8**
baz=51
O07A Toulon 50.77 307 P **P** **13 18 32.4 +0.1**
baz=51,SNR=28
KCC Kaiser Creek 50.79 303 ⇑P **P** **13 18 32.7 +0.3**
baz=51,SNR=5.8
BSC Santa Cruz Isl 50.83 299 ⇓P **P** **13 18 33.1 +0.3**
baz=51
K08A Mann Creek Ran 50.88 310 P **P** **13 18 33.0 -0.1**
baz=51,SNR=11
SBC Santa Barbara 50.92 299 ⇓P **P** **13 18 33.5 +0.1**
baz=51
N07B Gerlach 50.93 307 ⇓P **P** **13 18 33.4 -0.1**
baz=51,SNR=30
WVOR Wild Horse Val 50.94 310 *e*P **P** **13 18 33.5 -0.1**
WVOR pmax pmax
comp=Z,89nm,1.6s,mb5.5
WVOR MLR MLR
comp=Z,1μm,20.0s,MS4.9
WVOR Wild Horse Val 50.94 310 *e*P **P** **13 18 33.5 -0.1**
comp=Z,89nm,1.6s,mb5.4
WVOR LR LR
comp=Z,1μm,20.0s,MS4.9
WAKR Walker 51.00 304 *e*P **P** **13 18 35.0 +0.9**
R06C Coleville 51.01 304 ⇓P **P** **13 18 34.9 +0.7**
baz=51,SNR=15
PKM Peak Mountain 51.03 300 ⇓P **P** **13 18 34.8 +0.6**
baz=51,SNR=6.8
T06C Millerton Lake 51.08 302 ⇓P **P** **13 18 33.3 -1.3**
baz=51
I08A Drewsey 51.16 311 ⇑P **P** **13 18 34.6 -0.6**
baz=51,SNR=13
M07A Soldier Meadow 51.16 308 P **P** **13 18 35.5 +0.3**
baz=51,SNR=34
NEW Newport 51.18 317 *e*P **P** **13 18 34.8 -0.6**
NEW MLR MLR
comp=Z,2μm,19.0s
SMMC Simmler 51.20 300 ⇓P **P** **13 18 36.0 +0.5**
baz=51
H08A Prairie City 51.35 312 P **P** **13 18 36.8 +0.2**
baz=51,SNR=51
LNOR Lincton Mounta 51.36 314 P **P** **13 18 36.7 -0.1**
L07A Adell 51.39 309 P **P** **13 18 37.0 +0.1**
baz=51,SNR=27
PMAFR Mafra 51.44 55 *e*S **S** **13 26 04.5 +8.9**
PMAFR *e*LQ 13 31 56.1
PMAFR *e*LR LR 13 33 05.6
O06A Flanigan 51.49 306 ⇑P **P** **13 18 37.3 -0.4**
baz=52,SNR=10
R05C Kirkwood Meado 51.52 305 ⇓P **P** **13 18 38.5 +0.6**
baz=52,SNR=24
SDP Sudden Peak, L 51.57 299 ⇓P **P** **13 18 39.8 +1.4**
baz=52
N06A Buffalo Meadow 51.57 307 P **P** **13 18 38.0 -0.3**
baz=52,SNR=36
S05C Merced 51.60 303 ⇓P **P** **13 18 38.6 +0.1**
baz=52
PKD Parkfield 51.67 301 ⇓P **P** **13 18 38.6 -0.4**
baz=52
F08A Pendleton 51.68 314 P **P** **13 18 38.5 -0.6**
baz=52,SNR=22
CMB Columbia Colle 51.70 304 *e*P **P** **13 18 39.4 +0.1**
CMB pmax pmax
comp=Z,2.0nm,0.7s
CMB MLR MLR
comp=Z,1μm,20.0s,MS5.0
CMB Columbia Colle 51.70 304 *e*P **P** **13 18 39.4 +0.1**
comp=Z,2.3nm,0.7s
CMB LR LR
comp=Z,1μm,20.0s,MS5.0
CMB Columbia Colle 51.70 304 ⇓P **P** **13 18 39.4 +0.1**
baz=52
PTEO Sao Teotonio 51.75 57 *e*P **P** **13 18 41.1 +1.5**
comp=Z,109nm,2.1s,mb5.4
I07A Izee 51.85 311 P **P** **13 18 40.4 0.0**
baz=52,SNR=39
BEKR Beckwourth 51.86 306 ⇑P **P** **13 18 39.7 -0.8**
baz=52,SNR=10.0
U04C Hernandez Rese 51.89 302 ⇓P **P** **13 18 40.2 -0.5**
baz=52
V04C Ramage Ranch, 51.92 301 ⇓P **P** **13 18 40.0 -1.0**
baz=52
P05C Yuba Gap, Truc 51.99 305 ⇓P **P** **13 18 41.6 +0.2**
baz=52,SNR=6.0
OD2 Odessa Site #2 52.00 316 P **P** **13 18 41.1 -0.4**
LAVA Lava Cap Winer 52.04 305 ⇓P **P** **13 18 41.7 -0.2**
baz=52,SNR=12
LRV Little Rabbit 52.08 302 *e*P **P** **13 18 41.7 -0.4**
M06C Likely Place G 52.11 308 ⇓P **P** **13 18 41.2 -1.1**
baz=52,SNR=7.4
R04C Big Horse Ranc 52.15 304 ⇑P **P** **13 18 43.0 +0.4**
baz=52
K06A Valley Falls 52.17 310 ⇑P **P** **13 18 42.4 -0.4**
baz=52,SNR=6.8
J06A Christmas Vall 52.17 310 P **P** **13 18 42.3 -0.5**
baz=52,SNR=19
PTOM Tomar 52.19 54 *e*P **P** **13 18 44.0 +1.1**
comp=Z,128nm,1.6s,mb5.6
EMAZ Mazaricos 52.20 50 ⇓P **P** **13 18 43.0 0.0**
comp=Z,239nm,2.9s,mb5.6
ELFS Eagle Lake Fie 52.23 307 ⇑P **P** **13 18 42.4 -0.8**
baz=52
O05C Quincy 52.30 306 ⇑P **P** **13 18 43.6 -0.1**
baz=52
HAWA Hanford 52.32 314 *e*P **P** **13 18 43.3 -0.7**
I06A Prineville 52.33 311 ⇑P **P** **13 18 43.8 -0.1**
baz=52,SNR=24
PACP Pacheco Peak 52.34 302 ⇓P **P** **13 18 43.7 -0.3**
baz=52
S04C Ingram Canyon, 52.40 303 ⇓P **P** **13 18 45.0 +0.5**
baz=52
SAO San Andreas Ge 52.45 302 *e*P **P** **13 18 46.5 +1.7**
SAO MLR MLR
comp=Z,1μm,20.0s,MS4.9
PBEJ Beja 52.47 56 *e*P **P** **13 18 46.4 +1.4**
comp=Z,74nm,2.0s,mb5.3
L05A Lakeview 52.49 309 P **P** **13 18 45.1 -0.1**
baz=52,SNR=6.8
STS Santiago 52.49 50 P **P** **13 18 45.6 +0.4**
STS pmax pmax
comp=Z,20nm,0.9s,mb5.0
STS Santiago 52.49 50 P **P** **13 18 45.6 +0.4**
comp=Z,20nm,0.9s,mb5.0
HAST UC Hastings Re 52.51 302 ⇓P **P** **13 18 44.5 -0.8**
baz=52
Q04C Lincoln 52.55 305 ⇑P **P** **13 18 45.8 +0.3**
baz=52
M05C Lookout 52.63 308 ⇑P **P** **13 18 45.5 -0.7**
baz=53,SNR=6.1
OHCM Honcut 52.67 305 *e*P **P** **13 18 46.2 -0.3**
PVIS Viseu 52.70 53 *e*P **P** **13 18 47.9 +1.2**
comp=Z,60nm,1.7s,mb5.2
ORV Oroville 52.71 306 ⇑P **P** **13 18 46.3 -0.5**
baz=53,SNR=11
PCAB Cabril 52.72 52 *e*P **P** **13 18 47.7 +0.9**
comp=Z,54nm,1.0s,mb5.4
EGRO El Granado 52.73 57 ⇓P **P** **13 18 47.7 +0.7**
comp=Z,152nm,1.2s,mb5.8
PESTR Estremoz 52.75 55 *e*P **P** **13 18 47.5 +0.4**
comp=Z,120nm,1.3s,mb5.7
PESTR *e*S **S** **13 26 19.5 +5.9**
PESTR *e*LR LR 13 33 36.5
WENL Wente Brothers 52.75 303 ⇑P **P** **13 18 46.8 -0.3**
baz=53
WTV Waterville 52.89 316 P **P** **13 18 47.4 -0.7**
PVRL Vila Real 52.90 52 *e*P **P** **13 18 49.4 +1.3**
comp=Z,92nm,1.8s,mb5.4
PCBR Castelo Branco 52.92 54 *e*P **P** **13 18 49.3 +0.9**
comp=Z,101nm,1.4s,mb5.6
MTE Manteigas 52.93 53 *e*P **P** **13 18 48.7 +0.3**
comp=Z,80nm,1.7s,mb5.4
MTE *e*S **S** **13 26 25.7 +10**
MTE *e*LQ 13 31 01.4
MTE *e*LR LR 13 33 55.1
comp=Z,2μm,23.1s
MTE Manteigas 52.93 53 *e*P **P** **13 18 48.5 +0.2**
comp=Z,110nm,1.3s,mb5.6
J05A Fort Rock 52.96 310 ⇓P **P** **13 18 48.5 -0.2**
baz=53,SNR=15
Q03C Winters 53.02 304 ⇓P **P** **13 18 50.4 +1.3**
baz=53
BNLO Ben Lomond (Sa 53.05 302 ⇓P **P** **13 18 49.4 +0.1**
baz=53
I05A Bend 53.12 311 ⇑P **P** **13 18 50.4 +0.6**
baz=53
JRSC Jasper Ridge 53.12 303 ⇑P **P** **13 18 49.7 -0.1**
baz=53
O03C Acorn Hollow, 53.16 306 ⇑P **P** **13 18 49.9 -0.2**
baz=53
H05A Madras 53.17 312 ⇑P **P** **13 18 50.7 +0.6**
baz=53,SNR=6.5
EBAD Badajoz 53.19 56 ⇓P **P** **13 18 50.3 0.0**
comp=Z,251nm,2.7s,mb5.7
M04C Macdoel 53.20 308 ⇑P **P** **13 18 50.1 -0.3**
baz=53,SNR=8.7
TBM Table Mountain 53.20 315 P **P** **13 18 50.4 0.0**
K04A Chilquin 53.23 309 ⇓P **P** **13 18 50.9 +0.3**
baz=53,SNR=7.2
L04A Klamath Falls 53.29 309 ⇑P **P** **13 18 51.3 +0.3**
baz=53,SNR=22
CVS Carmenet Viney 53.35 304 ⇓P **P** **13 18 52.0 +0.4**
baz=53
M03C McCloud 53.35 308 ⇑P **P** **13 18 50.8 -0.7**
baz=53
TWW Teanaway 53.38 315 P **P** **13 18 52.2 +0.5**
MNRC McLaughlin Nat 53.38 305 ⇑P **P** **13 18 52.2 +0.5**
baz=53
EMIN Mina Concepcio 53.39 57 ⇓P **P** **13 18 52.0 +0.3**
comp=Z,170nm,1.7s,mb5.7
BKCOR Black Crater 53.44 311 P **P** **13 18 53.4 +1.2**
NSHM Saint Helena R 53.48 304 *e*P **P** **13 18 51.5 -0.9**
F05A White Salmon 53.54 313 P **P** **13 18 53.5 +0.6**
baz=54,SNR=15
EPON Pontenova 53.57 50 ⇓P **P** **13 18 53.0 -0.1**
comp=Z,28nm,1.0s,mb5.2
HOOD Mount Hood Mea 53.58 313 *e*P **P** **13 18 54.0 +0.8**
WDC Whiskeytown Da 53.60 307 *e*P **P** **13 18 51.2 -2.1**
WDC MLR MLR
comp=Z,498nm,20.0s,MS4.6
WDC Whiskeytown Da 53.60 307 ⇓P **P** **13 18 53.0 -0.3**
baz=54
PBRG Braganca 53.68 52 *e*P **P** **13 18 55.1 +1.2**
comp=Z,46nm,1.9s,mb5.1
ECAL Calabor 53.70 52 ⇓P **P** **13 18 54.1 0.0**
comp=Z,156nm,2.1s,mb5.6
O02C Red Bluff 53.75 306 ⇓P **P** **13 18 54.2 -0.2**
baz=54
YBH Yreka Blue Hor 53.84 308 *e*P **P** **13 18 53.8 -1.3**
YBH pmax pmax
comp=Z,26nm,0.9s
YBH MLR MLR
comp=Z,767nm,20.0s
YBH Yreka Blue Hor 53.84 308 *e*P **P** **13 18 53.8 -1.3**
comp=Z,26nm,0.9s,mb5.2
YBH LR LR
comp=Z,767nm,20.0s,MS4.8
YBH Yreka Blue Hor 53.84 308 ⇑P **P** **13 18 53.8 -1.3**
baz=54,SNR=12
H04A Detroit Lake 53.85 312 ⇑P **P** **13 18 55.0 -0.1**
baz=54,SNR=19
HOPS Hopland 53.88 305 PFAKE 13 19 10.0 +15
HOPS LR LR
comp=Z,2μm,19.0s,MS5.1
HOPS Hopland 53.88 305 ⇑P **P** **13 18 55.4 0.0**
baz=54
BORG Borgarnes 53.88 21 LR LR 13 37 02.3
comp=Z,616nm,21.5s,MS4.6,baz=216,slow=30
BORG Borgarnes 53.88 21 PFAKE 13 19 10.0 +15
BORG LR LR
comp=Z,1μm,22.0s,MS4.8
M02C Callahan 53.91 308 ⇓P **P** **13 18 54.2 -1.4**
baz=54
BROR Big Rock Looko 53.98 311 P **P** **13 18 55.4 -0.7**
ESPR Espera 53.99 58 ⇓P **P** **13 18 57.3 +1.1**
comp=Z,319nm,2.1s,mb5.9
C05A Tolt Reservoir 54.03 316 ⇓P **P** **13 18 54.5 -2.0**
baz=54
RPW Rockport 54.07 316 P **P** **13 18 55.5 -1.3**
P01C Double 8 Ranch 54.12 305 ⇑P **P** **13 18 57.8 +0.7**
baz=54
G04A Mulino 54.13 312 ⇓P **P** **13 18 56.7 -0.5**
baz=54
D05A Enumclaw 54.14 315 ⇓P **P** **13 18 55.9 -1.3**
baz=54
N02C Big Bar 54.20 307 ⇓P **P** **13 18 56.4 -1.3**
baz=54
F04A Amboy 54.21 313 ⇓P **P** **13 18 56.8 -0.9**
baz=54
J03A Ideyld Park 54.22 310 ⇓P **P** **13 18 56.5 -1.4**
baz=54
JCW Jun Creek 54.29 316 P **P** **13 18 56.5 -1.9**
EJIF Jimena Fronter 54.29 58 ⇓P **P** **13 19 00.3 +1.9**
EJIF pmax pmax
comp=Z,119nm,1.4s,mb5.6
EJIF Jimena Fronter 54.29 58 ⇓P **P** **13 19 00.3 +1.9**
comp=Z,119nm,1.4s,mb5.6
B05A Bryant 54.41 316 P **P** **13 18 57.0 -2.2**
baz=54,SNR=12
CMW Cultus Mountai 54.46 316 P **P** **13 18 57.7 -1.9**
E04A Onalaska 54.52 314 ⇓P **P** **13 18 59.0 -1.1**
baz=54
I03A Eugene 54.52 311 ⇑P **P** **13 18 59.0 -1.1**
baz=54
K02A Glendale 54.53 309 ⇓P **P** **13 18 59.4 -0.7**
baz=54
O01C Eel River Cons 54.53 306 ⇑P **P** **13 18 58.7 -1.5**
baz=54
A05A Maple Falls 54.55 317 ⇑P **P** **13 18 58.6 -1.7**
baz=55
COR Corvallis 54.62 312 PFAKE 13 19 10.0 +9.2
COR LR LR
comp=Z,684nm,21.0s,MS4.7
J02A Umpqua 54.66 310 ⇑P **P** **13 19 00.1 -1.0**
baz=55
G03A Yamhill 54.71 312 ⇑P **P** **13 19 00.9 -0.5**
baz=55
EMIJ Mijas 54.86 58 ⇓P **P** **13 19 02.7 +0.3**
comp=Z,104nm,1.4s,mb5.7
C04A Brinnon 54.89 315 ⇓P **P** **13 19 01.1 -1.6**
baz=55
A04A Legoe Bay, Lum 54.90 317 ⇑P **P** **13 19 00.5 -2.3**
baz=55
I02A Mapleton 54.92 311 ⇓P **P** **13 19 02.7 -0.3**
baz=55
EARI Arriondas 54.98 50 P **P** **13 19 02.9 -0.5**
comp=Z,251nm,3.1s
F03A Seaside 54.99 313 ⇓P **P** **13 19 03.1 -0.4**
baz=55
EADA Adamuz 55.06 56 ⇓P **P** **13 19 04.5 +0.5**
comp=Z,63nm,1.1s,mb5.6
E03A Lebam 55.09 314 ⇓P **P** **13 19 03.2 -0.9**
baz=55
KEBM Edson Butte 55.16 309 *e*P **P** **13 19 06.0 +1.3**
YKA Yellowknife Ar 55.20 334 P **P** **13 19 02.9 -2.1**
comp=Z,18nm,0.6s,mb5.3,baz=109,slow=7.4,SNR=89
YKA pP pP 13 19 15.5 +2.5
comp=Z,16nm,0.6s,baz=108,slow=7.3,SNR=11
YKA PcP PcP 13 20 04.3 -1.5
comp=Z,6.0nm,0.7s,baz=110,slow=5.3,SNR=6.1
YKA LR LR 13 41 44.2
comp=Z,2μm,20.6s,MS5.2,baz=180,slow=35
YKA Yellowknife Ar 55.20 334 ⇑*e*P **P** **13 19 02.9 -2.1**
YKA Yellowknife Ar 55.20 334 P **P** **13 19 02.9 -2.1**
YKA pP pP 13 19 15.6 +2.5
YKA PcP PcP 13 20 04.3 -1.5
YKA LR LR 13 41 44.2
YKW3 Yellowknife Ar 55.24 334 *e*P **P** **13 19 03.2 -2.0**
ELUQ Luque 55.29 57 P **P** **13 19 06.4 +0.8**
ELUQ pmax pmax
comp=Z,16nm,0.9s,mb5.0
ELUQ Luque 55.29 57 P **P** **13 19 06.4 +0.8**
comp=Z,16nm,0.9s,mb5.0
B04A Port Angeles 55.30 316 P **P** **13 19 05.0 -0.7**
baz=55,SNR=9.4
D03A Wishkah Elem. 55.32 315 ⇑P **P** **13 19 05.5 -0.4**
baz=55
ELOJ Sierra Loja 55.37 58 ⇓P **P** **13 19 07.5 +1.3**
ELOJ pmax pmax
comp=Z,21nm,0.9s,mb5.2
ELOJ Sierra Loja 55.37 58 ⇓P **P** **13 19 07.5 +1.4**
comp=Z,21nm,0.9s,mb5.2
SUMG Summit 55.51 9 *e*P **P** **13 19 07.0 -0.2**
comp=Z,46nm,0.7s,mb5.6
GUD Guadarrama 55.52 53 ⇓P **P** **13 19 07.7 +0.4**
GUD pmax pmax
comp=Z,24nm,0.7s,mb5.3
GUD Guadarrama 55.52 53 ⇓P **P** **13 19 07.7 +0.4**
comp=Z,24nm,0.7s,mb5.3
ESDC Sonseca Array 55.61 55 P **P** **13 19 08.1 +0.2**
comp=Z,21nm,0.7s,mb5.3,baz=271,slow=6.8,SNR=84
ESDC LR LR 13 37 29.1
comp=Z,771nm,21.9s,MS4.7,baz=250,slow=30
ESDC Sonseca Array 55.61 55 ⇓P **P** **13 19 08.3 +0.3**
comp=Z,49nm,0.8s,mb5.6
ESLA Sonseca Array 55.61 55 *e*P **P** **13 19 08.0 0.0**
ESLA LR LR
comp=Z,7μm,22.0s,MS5.7
ESBB Sonseca Array 55.61 55 ⇓P **P** **13 19 08.4 +0.4**
comp=Z,159nm,1.4s,mb5.9
ERON Agron 55.64 58 P **P** **13 19 09.5 +1.4**
comp=Z,18nm,0.8s,mb5.2
EGUA Guajares 55.83 58 P **P** **13 19 11.8 +2.3**
EGUA pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
EGUA Guajares 55.83 58 P **P** **13 19 11.8 +2.3**
comp=Z,2.4nm,0.6s,mb4.4
ECOG Cogollos-Vega 55.84 58 P **P** **13 19 11.3 +1.8**
ECOG pmax pmax
comp=Z,36nm,0.9s,mb5.4
ECOG Cogollos-Vega 55.84 58 P **P** **13 19 11.3 +1.7**
comp=Z,36nm,0.9s,mb5.4
C03A Quillayute Air 55.99 315 ⇓P **P** **13 19 10.9 +0.3**
baz=56
EQES Quesada 56.24 57 ⇓P **P** **13 19 13.0 +0.6**
comp=Z,213nm,2.2s,mb5.8
EALB Alboran 56.25 59 ⇓P **P** **13 19 12.9 +0.4**
comp=Z,478nm,1.9s,mb6.2
ELAN Lanestosa 56.26 50 P **P** **13 19 12.8 +0.2**
comp=Z,97nm,1.0s,mb5.8
EBER Berja 56.37 58 P **P** **13 19 14.7 +1.4**
comp=Z,247nm,1.6s,mb6.0
EVIA Vianos 56.71 56 ⇓P **P** **13 19 16.2 +0.4**
EVIA pmax pmax
comp=Z,17nm,0.6s,mb5.2
EVIA Vianos 56.71 56 ⇓P **P** **13 19 16.2 +0.5**
comp=Z,17nm,0.6s,mb5.3
ENIJ Nijar 56.92 58 ⇓P **P** **13 19 17.7 +0.4**
ENIJ pmax pmax
comp=Z,64nm,0.9s,mb5.7
ENIJ Nijar 56.92 58 ⇓P **P** **13 19 17.7 +0.5**
comp=Z,64nm,0.9s,mb5.7
ROSF Rostrenen 56.96 44 *e*P **P** **13 19 16.7 -0.9**
comp=Z,103nm,1.3s,mb5.4
ROSF Rostrenen 56.96 44 *e*P **P** **13 19 16.7 -0.9**
ROSF pmax pmax
comp=Z,52nm,1.3s,mb5.4
ROSF Rostrenen 56.96 44 *e*P **P** **13 19 16.7 -0.9**
comp=Z,52nm,1.3s,mb5.4
QUIF Quistinic 56.98 45 *e*P **P** **13 19 16.7 -0.9**
comp=Z,107nm,1.2s,mb5.4
QUIF Quistinic 56.98 45 *e*P **P** **13 19 16.7 -0.9**
QUIF pmax pmax
comp=Z,53nm,1.2s,mb5.5
QUIF Quistinic 56.98 45 *e*P **P** **13 19 16.7 -0.9**
comp=Z,53nm,1.2s,mb5.5
SGMF Saint Gilles 57.42 44 *e*P **P** **13 19 19.8 -1.0**
comp=Z,137nm,1.5s,mb5.5
SGMF Saint Gilles 57.42 44 *e*P **P** **13 19 19.8 -1.0**
SGMF pmax pmax
comp=Z,68nm,1.5s,mb5.5
SGMF Saint Gilles 57.42 44 *e*P **P** **13 19 19.8 -1.0**
comp=Z,68nm,1.5s,mb5.5
ETOB Tobarra 57.46 56 P **P** **13 19 21.9 +0.8**
comp=Z,178nm,1.6s,mb5.8
ELIZ Elizondo 57.64 51 P **P** **13 19 21.7 -0.7**
ELIZ pmax pmax
comp=Z,24nm,1.3s,mb5.1
ELIZ Elizondo 57.64 51 P **P** **13 19 21.7 -0.7**
comp=Z,24nm,1.3s,mb5.1
EALK Alkurruntz 57.66 51 P **P** **13 19 21.8 -0.7**
comp=Z,197nm,1.7s,mb5.9
EMUR La Murta 57.69 57 ⇓P **P** **13 19 23.4 +0.7**
comp=Z,151nm,0.9s,mb6.0
OSSF Osses 57.84 50 *e*P **P** **13 19 24.2 +0.4**
SJPF Ste Jean 57.86 51 *e*P **P** **13 19 23.8 -0.1**
comp=Z,110nm,0.8s,mb5.6
SJPF Ste Jean 57.86 51 *e*P **P** **13 19 23.8 -0.1**
SJPF pmax pmax
comp=Z,55nm,0.8s,mb5.6
SJPF Ste Jean 57.86 51 *e*P **P** **13 19 23.8 -0.1**
comp=Z,55nm,0.8s,mb5.6
ECHE Chera 57.92 55 P **P** **13 19 23.4 -0.9**
ECHE pmax pmax
comp=Z,57nm,1.4s,mb5.4
ECHE Chera 57.92 55 P **P** **13 19 23.4 -0.9**
comp=Z,57nm,1.4s,mb5.4
LARF Larrau 58.03 51 *e*P **P** **13 19 25.6 +0.5**
ESK Eskdalemuir 58.27 36 PFAKE 13 19 40.0 +13
ESK LR LR
comp=Z,950nm,21.0s,MS4.9
EMOS Mosqueruela 58.32 54 P **P** **13 19 27.9 +0.8**
comp=Z,348nm,2.3s,mb6.0
ESAC San Caprasio 58.36 52 P **P** **13 19 28.4 +1.1**
comp=Z,99nm,0.9s,mb5.8
REYF Montagne du Re 58.47 51 *e*P **P** **13 19 29.0 +0.9**
LCHF La Chataignera 58.47 46 *e*P **P** **13 19 28.5 +0.3**
EBEN Beniarda 58.49 56 P **P** **13 19 27.1 -1.2**
comp=Z,625nm,1.9s,mb6.3
GRR Gorron 58.57 44 *e*P **P** **13 19 27.8 -1.0**
comp=Z,105nm,1.1s,mb5.5
GRR Gorron 58.57 44 *e*P **P** **13 19 27.8 -1.0**
GRR pmax pmax
comp=Z,52nm,1.1s,mb5.5
GRR Gorron 58.57 44 *e*P **P** **13 19 27.8 -1.0**
comp=Z,52nm,1.1s,mb5.5
VIEF Viey 58.77 51 *e*P **P** **13 19 31.0 +0.8**
LABF Labassere 58.81 51 *e*P **P** **13 19 31.0 +0.5**
EBIE Bielsa 58.84 51 P **P** **13 19 31.2 +0.4**
comp=Z,34nm,0.7s,mb5.5
FLN La Foliniere 58.86 44 *e*P **P** **13 19 29.9 -0.9**
comp=Z,140nm,1.2s,mb5.6
FLN *e*R
comp=Z,576nm,18.0s
FLN La Foliniere 58.86 44 *e*P **P** **13 19 29.9 -0.9**
FLN pmax pmax
comp=Z,70nm,1.2s,mb5.6
FLN MLR MLR
comp=Z,580nm,18.0s,MS4.8
FLN La Foliniere 58.86 44 *e*P **P** **13 19 29.9 -0.9**
comp=Z,70nm,1.2s,mb5.6
FLN LR LR
comp=Z,580nm,18.0s,MS4.8
MFF Saint Martin d 58.88 47 *e*P **P** **13 19 31.3 +0.3**
comp=Z,132nm,1.2s,mb5.5
MFF Saint Martin d 58.88 47 *e*P **P** **13 19 31.3 +0.3**
MFF pmax pmax
comp=Z,66nm,1.2s,mb5.5
MFF Saint Martin d 58.88 47 *e*P **P** **13 19 31.3 +0.3**
comp=Z,66nm,1.2s,mb5.5
ERTA Horta de San J 58.94 53 P **P** **13 19 32.5 +1.1**
comp=Z,447nm,2.1s,mb6.1
EPF Esparros 59.00 51 *e*P **P** **13 19 31.7 -0.2**
comp=Z,40nm,0.6s,mb5.4
EPF Esparros 59.00 51 *e*P **P** **13 19 31.7 -0.2**
EPF pmax pmax
comp=Z,20nm,0.6s,mb5.3
EPF Esparros 59.00 51 *e*P **P** **13 19 31.7 -0.2**
comp=Z,20nm,0.6s,mb5.5
LDF La Druitiere 59.08 44 *e*P **P** **13 19 31.4 -1.0**
comp=Z,82nm,1.0s,mb5.4
LDF La Druitiere 59.08 44 *e*P **P** **13 19 31.4 -1.0**
LDF pmax pmax
comp=Z,41nm,1.0s,mb5.4
LDF La Druitiere 59.08 44 *e*P **P** **13 19 31.4 -1.0**
comp=Z,41nm,1.0s,mb5.4
LIC Lamto 59.27 94 *e*P **P** **13 19 31.9 -1.8**
comp=Z,204nm,1.7s,mb5.6
LIC *e*R
comp=Z,237nm,19.8s
LIC Lamto 59.27 94 *e*P **P** **13 19 31.9 -1.8**
comp=Z,102nm,1.7s,mb5.6
LIC LR LR
comp=Z,120nm,19.8s,MS4.0
DBIC Dimbokro 59.30 94 P **P** **13 19 33.6 -0.3**
comp=Z,15nm,0.8s,mb5.1,baz=273,slow=9.9,SNR=17
DBIC LR LR 13 41 35.1
comp=Z,1μm,20.1s,MS5.0,baz=254,slow=32
DBIC Dimbokro 59.30 94 *e*P **P** **13 19 33.6 -0.3**
DBIC pmax pmax
comp=Z,20nm,0.8s
DBIC MLR MLR
comp=Z,1μm,20.0s
DBIC Dimbokro 59.30 94 *e*P **P** **13 19 33.6 -0.3**
comp=Z,20nm,0.8s,mb5.2
DBIC LR LR
comp=Z,1μm,20.0s,MS5.0
MELF Melles 59.30 51 *e*P **P** **13 19 35.1 +1.1**
LFF La Frestale 59.38 49 *e*P **P** **13 19 33.6 -0.9**

comp=Z,200nm,1.5s,mb5.6
LFF La Frestale 59.38 49 *e*P **P 13 19 33.6 -0.9**
LFF pmax pmax
comp=Z,100nm,1.5s,mb5.6
LFF La Frestale 59.38 49 *e*P **P 13 19 33.6 -0.9**
comp=Z,100nm,1.5s,mb5.6
EPOB Poblet 59.51 53 P **P 13 19 35.9 +0.6**
comp=Z,167nm,1.7s,mb5.8
EIBI Ibiza 59.71 55 P **P 13 19 37.0 +0.2**
comp=Z,215nm,1.9s,mb5.8
PLCA Paso Flores 59.81 185 LR LR 13 48 19.3
comp=Z,2µm,20.1s,MS5.1,baz=7.5,slow=39
PLCA Paso Flores 59.81 185 *e*P **P 13 19 36.0 -1.4**
PLCA pmax pmax
comp=Z,23nm,1.1s
PLCA MLR MLR
comp=Z,2µm,20.0s
PLCA Paso Flores 59.81 185 *e*P **P 13 19 36.0 -1.4**
comp=Z,23nm,1.1s,mb5.1
PLCA LR LR
comp=Z,2µm,20.0s,MS5.1
RJF Les Rejaudoux 59.95 48 *e*P **P 13 19 37.4 -1.0**
comp=Z,39nm,0.6s,mb5.3
RJF *e*R
comp=Z,936nm,21.0s
RJF Les Rejaudoux 59.95 48 *e*P **P 13 19 37.4 -1.0**
RJF pmax pmax
comp=Z,19nm,0.6s,mb5.3
RJF MLR MLR
comp=Z,940nm,21.0s,MS4.9
RJF Les Rejaudoux 59.95 48 *e*P **P 13 19 37.4 -1.0**
comp=Z,20nm,0.6s,mb5.3
RJF LR LR
comp=Z,940nm,21.0s,MS4.9
CAF Calviac 60.32 49 *e*P **P 13 19 40.1 -0.8**
comp=Z,176nm,1.4s,mb5.6
CAF Calviac 60.32 49 *e*P **P 13 19 40.1 -0.8**
CAF pmax pmax
comp=Z,88nm,1.4s,mb5.6
CAF Calviac 60.32 49 *e*P **P 13 19 40.1 -0.8**
comp=Z,88nm,1.4s,mb5.6
MTLF Montolieu 60.38 50 *e*P **P 13 19 40.5 -0.9**
comp=Z,29nm,0.7s,mb5.1
MTLF Montolieu 60.38 50 *e*P **P 13 19 40.5 -0.9**
MTLF pmax pmax
comp=Z,15nm,0.7s,mb5.1
MTLF Montolieu 60.38 50 *e*P **P 13 19 40.5 -0.9**
comp=Z,14nm,0.7s,mb5.1
TCF Toulx Ste Croi 60.48 47 *e*P **P 13 19 40.9 -1.1**
comp=Z,55nm,0.8s,mb5.3
TCF Toulx Ste Croi 60.48 47 *e*P **P 13 19 40.9 -1.1**
TCF pmax pmax
comp=Z,27nm,0.8s,mb5.3
TCF Toulx Ste Croi 60.48 47 *e*P **P 13 19 40.9 -1.1**
comp=Z,27nm,0.8s,mb5.3
HYF Humbligny 60.82 46 *e*P **P 13 19 43.5 -0.9**
SJAF Saint Jean de 60.86 51 *e*P **P 13 19 45.0 +0.4**
EJON La Jonquera 60.87 52 P **P 13 19 43.2 -1.5**
comp=Z,157nm,1.4s,mb6.0
BGF Bois d'Agland 60.93 47 *e*P **P 13 19 43.9 -1.2**
comp=Z,129nm,1.5s,mb5.5
BGF Bois d'Agland 60.93 47 *e*P **P 13 19 43.9 -1.2**
BGF pmax pmax
comp=Z,65nm,1.5s,mb5.5
BGF Bois d'Agland 60.93 47 *e*P **P 13 19 43.9 -1.2**
comp=Z,65nm,1.5s,mb5.5
PYM Petit Puy Mans 61.01 48 *e*P **P 13 19 46.1 +0.4**
AGO Saint Agoulin 61.11 47 *e*P **P 13 19 45.9 -0.4**
LBL Lubilhac 61.17 48 *e*P **P 13 19 47.7 +1.0**
JMIC Jan Mayen 61.28 18 LR LR 13 41 02.1
comp=Z,2µm,21.8s,MS5.2,baz=242,slow=31
JMIC Jan Mayen 61.28 18 *e*P **P 13 19 43.0 -4.4**
JMIC *e*PP PP 13 22 03.4 +0.9
JMIC *e*S **S 13 28 15.5 +10**
JMIC *e*SS SS 13 32 20.0 +14
JMIC AMS AMS 13 41 38.7
comp=Z,2µm,21.7s,MS5.1
AVF Avril sur Loir 61.29 47 *e*P **P 13 19 46.1 -1.4**
comp=Z,80nm,1.2s,mb5.4
AVF Avril sur Loir 61.29 47 *e*P **P 13 19 46.1 -1.4**
AVF pmax pmax
comp=Z,40nm,1.2s,mb5.4
AVF Avril sur Loir 61.29 47 *e*P **P 13 19 46.1 -1.4**
comp=Z,40nm,1.2s,mb5.4
SSF Saint Saulge 61.41 46 *e*P **P 13 19 46.9 -1.4**
comp=Z,113nm,1.5s,mb5.5
SSF Saint Saulge 61.41 46 *e*P **P 13 19 46.9 -1.4**
SSF pmax pmax
comp=Z,57nm,1.5s,mb5.5
SSF Saint Saulge 61.41 46 *e*P **P 13 19 46.9 -1.4**
comp=Z,57nm,1.5s,mb5.5
PLDF La Plantade 61.45 48 *e*P **P 13 19 48.7 +0.1**
COLF Collangettes 61.49 48 *e*P **P 13 19 49.0 +0.1**
LASF Ste Croix 61.58 50 *e*P **P 13 19 49.2 -0.3**
comp=Z,196nm,1.4s,mb5.8
SMF Signal de Mont 61.62 47 *e*P **P 13 19 48.4 -1.4**
comp=Z,125nm,1.3s,mb5.6
SMF Signal de Mont 61.62 47 *e*P **P 13 19 48.4 -1.4**
SMF pmax pmax
comp=Z,63nm,1.3s,mb5.6
SMF Signal de Mont 61.62 47 *e*P **P 13 19 48.4 -1.4**
comp=Z,62nm,1.3s,mb5.6
LOR Lormes 61.65 46 *e*P **P 13 19 48.5 -1.5**
comp=Z,55nm,1.1s,mb5.3
LOR *e*R
comp=Z,604nm,21.2s
LOR Lormes 61.65 46 *e*P **P 13 19 48.5 -1.5**
LOR pmax pmax
comp=Z,27nm,1.1s,mb5.3
LOR MLR MLR
comp=Z,600nm,21.3s,MS4.7
LOR Lormes 61.65 46 *e*P **P 13 19 48.5 -1.5**
comp=Z,27nm,1.1s,mb5.3
LOR LR LR
comp=Z,600nm,21.3s,MS4.7
BAIF Baives 62.02 43 *e*P **P 13 19 50.8 -1.6**
comp=Z,78nm,1.4s,mb5.3
BAIF Baives 62.02 43 *e*P **P 13 19 50.8 -1.6**
BAIF pmax pmax
comp=Z,39nm,1.4s,mb5.3
BAIF Baives 62.02 43 *e*P **P 13 19 50.8 -1.6**
comp=Z,39nm,1.4s,mb5.3
DAG Danmarks Havn 62.07 11⇑ *i*P **P 13 19 49.9 -2.9**
comp=Z,12nm,0.7s,mb5.1
DAG
comp=Z,3µm,21.0s
DAG Danmarks Havn 62.07 11⇑ *e*P **P 13 19 49.9 -2.9**
DAG pmax pmax
comp=Z,12nm,0.7s,mb5.1
DAG MLR MLR
comp=Z,3µm,21.0s,MS5.5
DAG MLR MLR
comp=N,3µm,22.0s
DAG Danmarks Havn 62.07 11⇑ *e*P **P 13 19 49.9 -2.9**
comp=N,12nm,0.7s,mb5.1
DAG LR LR
comp=Z,3µm,21.0s,MS5.5
VIVF Saint-Julien-l 62.17 49 *e*P **P 13 19 53.3 -0.2**
comp=Z,358nm,1.6s,mb5.9
VIVF Saint-Julien-l 62.17 49 *e*P **P 13 19 53.3 -0.2**
VIVF pmax pmax
comp=Z,179nm,1.6s,mb6.0
VIVF Saint-Julien-l 62.17 49 *e*P **P 13 19 53.3 -0.2**
comp=Z,179nm,1.6s,mb6.0
GIVF Givet 62.41 43 *e*P **P 13 19 53.7 -1.4**
comp=Z,30nm,0.8s,mb5.2
GIVF Givet 62.41 43 *e*P **P 13 19 53.7 -1.4**
GIVF pmax pmax
comp=Z,15nm,0.8s,mb5.2
GIVF Givet 62.41 43 *e*P **P 13 19 53.7 -1.4**
comp=Z,15nm,0.8s,mb5.2
MEZF Maizieres J'vi 62.50 45 *e*P **P 13 19 54.5 -1.2**
comp=Z,140nm,1.1s,mb5.7
MEZF Maizieres J'vi 62.50 45 *e*P **P 13 19 54.5 -1.2**
comp=Z,140nm,1.1s,mb6.0
PRAF Pradon 62.53 50 *e*P **P 13 19 56.8 +0.9**
TREF Trevaresse 62.69 50 *e*P **P 13 19 57.7 +0.8**
GELF Grande-Etoile 62.73 50 *e*P **P 13 19 57.5 +0.3**
BCLA Clavier 62.74 43 P **P 13 19 57.4 +0.1**
SMRF Simiane la Rot 62.82 50 *e*P **P 13 19 57.9 +0.1**
comp=Z,226nm,1.6s,mb5.8
SMRF Simiane la Rot 62.82 50 *e*P **P 13 19 57.9 +0.1**
comp=Z,226nm,1.5s,mb6.1
BERF Bertagne 62.92 51 *e*P **P 13 19 59.2 +0.7**
PUYF Puyloubier 62.92 50 *e*P **P 13 19 58.8 +0.3**
ORIF Oris-en-Rattie 63.03 49 *e*P **P 13 19 59.2 0.0**
comp=Z,42nm,1.0s,mb5.2
ORIF *e*R
comp=Z,598nm,22.0s
ORIF Oris-en-Rattie 63.03 49 *e*P **P 13 19 59.2 0.0**
ORIF pmax pmax
comp=Z,21nm,1.0s,mb5.2
ORIF Oris-en-Rattie 63.03 49 *e*P **P 13 19 59.2 0.0**
comp=Z,21nm,1.0s,mb5.2
STOF St-Etienne Org 63.06 50 *e*P **P 13 20 00.1 +0.7**
THEF They Montfort 63.12 45 *e*P **P 13 19 59.2 -0.6**
HGN Heimansgroeve 63.15 42 *e*P **P 13 19 59.4 -0.6**
comp=Z,30nm,2.4s,mb5.0
CABF La Chapelle 63.17 47 *e*P **P 13 19 58.9 -1.2**
comp=Z,96nm,1.4s,mb5.5
CABF La Chapelle 63.17 47 *e*P **P 13 19 58.9 -1.2**
CABF pmax pmax
comp=Z,48nm,1.4s,mb5.4
CABF La Chapelle 63.17 47 *e*P **P 13 19 58.9 -1.2**
comp=Z,48nm,1.4s,mb5.4
TAVF Tavernes 63.18 50 *e*P **P 13 20 00.9 +0.7**
WLF Walferdange 63.26 43 *e*P **P 13 20 01.3 +0.6**
comp=Z,105nm,1.7s,mb5.7
HAU Haudompre 63.35 45 *e*P **P 13 19 59.7 -1.6**
comp=Z,67nm,1.4s,mb5.3
HAU *e*R
comp=Z,586nm,20.8s
HAU Haudompre 63.35 45 *e*P **P 13 19 59.7 -1.6**
HAU pmax pmax
comp=Z,33nm,1.4s,mb5.3
HAU MLR MLR
comp=Z,590nm,20.8s,MS4.7
HAU Haudompre 63.35 45 *e*P **P 13 19 59.7 -1.6**
comp=Z,34nm,1.4s,mb5.3
HAU LR LR
comp=Z,590nm,20.8s,MS4.7
ALE Alert 63.45 0 P **P 13 20 00.0 -2.0**
comp=Z,256nm,0.6s,SNR=12
LMR La Mourre 63.52 50 *e*P **P 13 20 01.4 -1.0**
comp=Z,88nm,1.3s,mb5.3
LMR La Mourre 63.52 50 *e*P **P 13 20 01.4 -1.0**
LMR pmax pmax
comp=Z,44nm,1.3s,mb5.3
LMR La Mourre 63.52 50 *e*P **P 13 20 01.4 -1.0**
comp=Z,44nm,1.3s,mb5.3
RSL Roselend 63.55 48 *e*P **P 13 20 02.6 0.0**
BNI Bardonecchia 63.59 49 *e*P **P 13 20 03.5 +0.6**
BNI pmax pmax
comp=Z,53nm,1.4s,mb5.4
BNI Bardonecchia 63.59 49 *e*P **P 13 20 03.5 +0.6**
comp=Z,54nm,1.4s,mb5.4
FRF La Foret Royal 63.61 50 *e*P **P 13 20 02.0 -1.0**
comp=Z,100nm,1.2s,mb5.4
FRF La Foret Royal 63.61 50 *e*P **P 13 20 02.0 -1.0**
FRF pmax pmax
comp=Z,50nm,1.2s,mb5.4
FRF La Foret Royal 63.61 50 *e*P **P 13 20 02.0 -1.0**
comp=Z,50nm,1.2s,mb5.4
LPL La Plagne 63.62 48 *e*P **P 13 20 02.8 -0.3**
comp=Z,18nm,0.7s,mb4.9
LPL La Plagne 63.62 48 *e*P **P 13 20 02.8 -0.3**
LPL pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
LPL La Plagne 63.62 48 *e*P **P 13 20 02.8 -0.3**
comp=Z,9.1nm,0.7s,mb4.9
LPG La Plagne 63.64 48 *e*P **P 13 20 03.0 -0.2**
comp=Z,101nm,1.3s,mb5.4
LPG La Plagne 63.64 48 *e*P **P 13 20 03.0 -0.2**
LPG pmax pmax
comp=Z,51nm,1.3s,mb5.4
LPG La Plagne 63.64 48 *e*P **P 13 20 03.0 -0.2**
comp=Z,51nm,1.3s,mb5.4
BER Bergen 63.66 31 *e*P **P 13 19 58.1 -5.2**
BER *e*S **S 13 28 38.3 +2.4**
BER AMS AMS 13 42 28.8
comp=Z,1µm,20.7s,MS5.0
TORD Torodi Ar. Bea 63.66 84 P **P 13 20 02.1 -1.2**
comp=Z,14nm,0.7s,mb5.1,baz=291,slow=6.2,SNR=49
TORD LR LR 13 46 05.7
comp=Z,2µm,18.9s,MS5.2,baz=285,slow=34
MBDF Montbardon 63.67 49 *e*P **P 13 20 03.1 -0.3**
comp=Z,61nm,1.1s,mb5.2
MBDF Montbardon 63.67 49 *e*P **P 13 20 03.1 -0.3**
MBDF pmax pmax
comp=Z,30nm,1.1s,mb5.2
MBDF Montbardon 63.67 49 *e*P **P 13 20 03.1 -0.3**
comp=Z,30nm,1.1s,mb5.2
LOMF Lomont 63.67 46 *e*P **P 13 20 02.7 -0.8**
SIT Sitka 63.68 325 PFAKE 13 20 20.0 +17
SIT LR LR
comp=Z,2µm,19.0s,MS5.3
HINF Hinteralfeld 63.69 45 *e*P **P 13 20 01.8 -1.8**
comp=Z,30nm,1.1s,mb4.9
HINF Hinteralfeld 63.69 45 *e*P **P 13 20 01.8 -1.8**
HINF pmax pmax
comp=Z,15nm,1.1s,mb4.9
HINF Hinteralfeld 63.69 45 *e*P **P 13 20 01.8 -1.8**
comp=Z,15nm,1.1s,mb4.9
WTSB Winterswijk 63.74 41 *e*P **P 13 20 04.3 +0.4**
comp=Z,46nm,1.6s,mb5.3
MOF Molkenrain 63.88 45 *e*P **P 13 20 04.0 -0.8**
ECH Echery 63.90 45 *e*P **P 13 20 03.7 -1.2**
MVIF Mont Vial 63.96 50 *e*P **P 13 20 05.5 +0.1**
CDF Champ du Feu 63.98 45 *e*P **P 13 20 04.0 -1.5**
comp=Z,28nm,0.9s,mb5.0
CDF Champ du Feu 63.98 45 *e*P **P 13 20 04.0 -1.5**
CDF pmax pmax
comp=Z,14nm,0.9s,mb5.0
CDF Champ du Feu 63.98 45 *e*P **P 13 20 04.0 -1.5**
comp=Z,14nm,0.9s,mb5.0
RSP Reno Superiore 64.00 48 *i*P **P 13 20 06.5 +0.9**
RSP pmax pmax
comp=Z,142nm,2.1s,mb5.6
RSP Reno Superiore 64.00 48 *i* Pu 13 20 06.5
comp=Z,142nm,2.1s
WLS Welschbruch 64.03 45 *e*P **P 13 20 05.1 -0.7**
BBS Basel-Blauen 64.14 46 *e*P **P 13 20 06.1 -0.4**
AUTN L'Aution 64.16 50 *e*P **P 13 20 07.4 +0.7**
SBF Sospel 64.17 50 *e*P **P 13 20 05.7 -1.0**
comp=Z,149nm,1.2s,mb5.6
SBF Sospel 64.17 50 *e*P **P 13 20 05.7 -1.0**
SBF pmax pmax
comp=Z,75nm,1.2s,mb5.6
SBF Sospel 64.17 50 *e*P **P 13 20 05.7 -1.0**
comp=Z,75nm,1.2s,mb5.6
SAOF Saorge 64.25 50 *e*P **P 13 20 07.0 -0.3**
LANF Langenberg 64.33 44 *e*P **P 13 20 07.4 -0.4**
FELD Feldberg im Sc 64.47 45 *e*P **P 13 20 07.9 -0.8**
MCGN Macugnaga 64.49 48 P **P 13 20 09.6 +0.8**
comp=Z,35nm,1.5s,mb5.2
INK Inuvik 64.60 337 *e*P **P 13 20 07.6 -2.0**
INK pmax pmax
comp=Z,31nm,0.8s
INK Inuvik 64.60 337 *e*P **P 13 20 07.6 -1.9**
comp=Z,31nm,0.8s,mb5.4
BFO Black Forest 64.68 45 *e*P **P 13 20 09.6 -0.5**
comp=Z,12nm,1.0s,mb4.9
BFO Black Forest 64.68 45 *e*P **P 13 20 09.6 -0.5**
BFO pmax pmax
comp=Z,12nm,1.0s,mb4.9
VAI Varese 65.04 48 P **P 13 20 12.2 -0.2**
MUD Monsted U'grnd 65.32 36 *i*P **P 13 20 11.8 -2.4**
comp=Z,15nm,1.0s,mb5.0
MUD *i* S S 13 28 55.4 -1.1
MUD
comp=Z,340nm,17.0s
MUD Monsted U'grnd 65.32 36 *i*P **P 13 20 11.8 -2.4**
comp=Z,15nm,1.0s,mb5.0
MUD *i* S S 13 28 55.4 -1.1
KONO Kongsberg 65.72 32 *e*P **P 13 20 16.8 0.0**
KONO *e*S S 13 29 04.3 +3.0
KONO Kongsberg 65.72 32 *e*P **P 13 20 16.8 0.0**
KONO LR LR
comp=Z,2µm,21.0s,MS5.2
UBBA Unterbreizbach 65.74 42 *e*P **P 13 20 16.4 -0.5**
comp=Z,34nm,1.7s,mb5.1
DAVA Damuels 65.75 46⇓ *i*P **P 13 20 17.1 +0.1**
comp=Z,126nm,1.8s,mb5.7,SNR=9.7
NRDL Niedersach Rie 65.79 40 *e*P **P 13 20 17.4 +0.1**
comp=Z,58nm,1.8s,mb5.3
VSL Villasalto 65.91 55 *e*P **P 13 20 18.1 +0.1**
comp=Z,89nm,1.2s,mb5.7
CLZ Clausthal 65.96 41 *e*P **P 13 20 18.9 +0.6**
comp=Z,19nm,1.1s,mb5.0
CLZ Clausthal 65.96 41 *e*P **P 13 20 18.9 +0.6**
CLZ pmax pmax
comp=Z,19nm,1.1s,mb5.0
BRMO Bormio 66.13 47 P **P 13 20 19.6 +0.2**
comp=Z,54nm,1.9s,mb5.2
KEST Kesra 66.30 59 P **P 13 20 20.7 +0.1**
comp=Z,5.9nm,0.7s,mb4.7,baz=169,slow=1.8,SNR=19
KEST LR LR 13 44 42.3
comp=Z,298nm,21.4s,MS4.5,baz=96,slow=32
DAWY Dawson 66.31 332 *e*P **P 13 20 19.9 -0.7**
NAO01 NORSAR Array S 66.43 31 PFAKE 13 20 40.0 +19
NAO01 LR LR
comp=Z,1µm,19.0s,MS5.2
GRA1 Grafenberg Arr 66.55 43 *e*P **P 13 20 21.5 -0.6**
comp=Z,22nm,1.1s,mb5.1
GRA1 *e*pP pP 13 20 31.2 +0.9
GRA1 *e*PP PP 13 23 00.9 +12
GRA1 LR LR
comp=Z,700nm,21.8s,MS4.8
GRF Grafenberg Arr 66.55 43 *e*P **P 13 20 21.5 -0.6**
comp=Z,22nm,1.1s,mb5.1
GRF *e*pP pP 13 20 31.2 +0.9
GRF *e*PP PP 13 23 00.9 +12
GRF *e*L 13 43 21.3
comp=Z,688nm,21.8s
GRF Grafenberg Arr 66.55 43 *e*P **P 13 20 21.5 -0.6**
GRF *e**PP pP 13 20 31.2 +0.9
GRF pmax pmax
comp=Z,22nm,1.1s,mb5.1
GRF MLR MLR
comp=Z,700nm,21.8s,MS4.8
GRF Grafenberg Arr 66.55 43 *e*P **P 13 20 21.5 -0.6**
GRF *e**PP pP 13 20 31.2 +0.9
GRF pmax pmax
comp=Z,22nm,1.1s,mb5.1
MOTA Moosalm 66.58 46⇓ *i*P **P 13 20 22.1 -0.3**
comp=Z,32nm,1.2s,mb5.2
MOTA Moosalm 66.58 46⇓ *i*P **P 13 20 22.1 -0.2**
MOTA pmax pmax
comp=Z,32nm,1.2s,mb5.2
MOTA Moosalm 66.58 46⇓ *i*P **P 13 20 22.1 -0.3**
comp=Z,32nm,1.2s,mb5.2
NB2 NORSAR Subarra 66.60 31 P **P 13 20 21.8 -0.6**
comp=Z,197nm,3.3s,baz=268,slow=6.5
NOA NORSAR Array B 66.60 31 P **P 13 20 21.8 -0.7**
comp=Z,3.2nm,0.6s,mb4.5,baz=269,slow=6.6,SNR=12
NOA pP pP 13 20 32.8 +2.1
comp=Z,5.7nm,1.0s,baz=268,slow=6.4,SNR=6.1
NOA LR LR 13 45 35.0
comp=Z,762nm,20.7s,MS4.9,baz=270,slow=32
NOA NORSAR Array B 66.60 31 P **P 13 20 21.8 -0.6**
NOA *PP pP 13 20 32.8 +2.2
SQTA Sankt Quirin 66.66 46⇓ *i*P **P 13 20 22.8 0.0**
comp=Z,50nm,1.4s,mb5.3
SQTA Sankt Quirin 66.66 46⇓ *i*P **P 13 20 22.8 0.0**
SQTA pmax pmax
comp=Z,50nm,1.4s,mb5.3
MOX Moxa 66.77 42 *e*P **P 13 20 23.0 -0.5**
comp=Z,74nm,2.2s,mb5.3
WTTA Wattenberg 66.95 46⇓ *i*P **P 13 20 24.3 -0.3**
comp=Z,70nm,1.7s,mb5.4
WTTA Wattenberg 66.95 46⇓ *i*P **P 13 20 24.3 -0.4**
WTTA pmax pmax
comp=Z,70nm,1.7s,mb5.4
MANZ Manzenberg 67.11 43 *e*P **P 13 20 25.8 +0.1**
comp=Z,59nm,1.4s,mb5.4
ROTZ Rotzenmuhle 67.19 43 *e*P **P 13 20 25.8 -0.4**
comp=Z,60nm,1.6s,mb5.4
WERD Werda 67.22 42 *e*P **P 13 20 25.9 -0.5**
comp=Z,44nm,1.8s,mb5.2
GUNZ Gunzen 67.23 43 *e*P **P 13 20 26.1 -0.4**
comp=Z,28nm,1.7s,mb5.0
NKC Novy Kostel 67.32 43 *e*P **P 13 20 27.4 +0.4**
NKC AMS AMS 13 42 30.0
comp=Z,1µm,23.6s
TANN Tannenbergstha 67.32 43 *e*P **P 13 20 26.1 -0.9**
comp=Z,30nm,1.5s,mb5.1
CLL Collm 67.61 42 *e*P **P 13 20 29.0 +0.1**
comp=Z,73nm,1.9s,mb5.4
CLL *e*pP pP 13 20 37.3 +0.2
CLL *e*PcP PcP 13 20 58.5 +2.7
CLL *e*PP PP 13 23 06.1 +8.1
CLL *e*PS 13 29 54.1
CLL *e*SS SS 13 33 55.2 +10
CLL *e*SSS 13 37 37.0
CLL *e*LR LR 13 40 44.0
CLL *e*L 13 44 05.4
comp=Z,1µm,22.0s
CLL Collm 67.61 42 ⇓P **P 13 20 28.2 -0.7**
comp=Z,logA/T=1.6,mb5.4
CLL *e* 13 20 42.0
CLL *e* 13 20 45.0
CLL *i* PCP PcP 13 20 54.9 -0.9
CLL *e*S S 13 29 21.0 -3.3
CLL *e*PS 13 29 49.0
CLL *e* 13 37 48.0
CLL Collm 67.61 42⇓ *i*P **P 13 20 28.2 -0.7**
comp=Z,72nm,1.9s,mb5.4
CLL *e*x x 13 20 42.0
CLL *e*x x 13 20 45.0
CLL *i* PcP PcP 13 20 54.9 -0.9
CLL *e*S S 13 29 21.0 -3.3
CLL *e*PS 13 29 49.0
CLL *e*SSSS 13 37 48.0
CLL L 14 01 00.0
comp=Z,500nm,18.5s
CLL Collm 67.61 42⇓ *i*P **P 13 20 28.2 -0.7**
CLL *e* 13 20 42.0
CLL *i* 13 20 54.9
CLL *e*S S 13 29 21.0 -3.3
CLL pmax pmax
comp=Z,5.0nm,1.9s
CLL MLR MLR
comp=Z,1µm,23.1s,MS5.0
CLL Collm 67.61 42⇓ *i*P **P 13 20 28.2 -0.7**
comp=Z,72nm,1.9s,mb5.4
CLL *e* 13 20 42.0
CLL *i* PcP PcP 13 20 54.9 -0.9
CLL *e*S S 13 29 21.0 -3.3
CLL LR LR
comp=Z,1µm,23.1s,MS5.0
WET Wettzell 67.66 44 *e*P **P 13 20 28.2 -1.0**
comp=Z,37nm,1.5s,mb5.2
WET Wettzell 67.66 44 *e*P **P 13 20 28.2 -1.0**
WET pmax pmax
comp=Z,37nm,1.5s,mb5.2
FVI Forni Avoltri 67.78 47 P **P 13 20 29.7 -0.2**
HFS Hagfors 67.80 32 P **P 13 20 29.2 -0.9**
comp=Z,1.7nm,0.6s,mb4.3,baz=0.0,slow=1.5,SNR=6.6
FBE Freiberg 67.86 42 *e*P **P 13 20 30.7 +0.3**
comp=Z,66nm,1.6s,mb5.4
KHC Kasperske Hory 68.12 44 *e*P **P 13 20 32.0 -0.1**
KHC *e*pP pP 13 20 42.5 +2.2
KHC *e*S S 13 29 33.4 +3.1
KHC AMS AMS 13 41 50.0
comp=Z,900nm,35.2s
KBA Koelnbreinsper 68.12 46⇓ *i*P **P 13 20 31.5 -0.6**
comp=Z,79nm,1.8s,mb5.5,SNR=8.8
KBA Koelnbreinsper 68.12 46⇓ *i*P **P 13 20 31.5 -0.6**
KBA pmax pmax
comp=Z,79nm,1.8s,mb5.4
PTCC Patocco-Chiusa 68.19 47 P **P 13 20 31.0 -1.5**
MENT Mentasta 68.20 331 *e*P **P 13 20 32.3 -0.3**
GEC2 GERESS Array S 68.22 44 *e*P **P 13 20 32.9 +0.2**
comp=Z,48nm,1.8s,mb5.2
GEC2 GERESS Array S 68.22 44 *e*P **P 13 20 32.9 +0.2**
GEC2 pmax pmax
comp=Z,48nm,1.8s,mb5.2
GERES GERESS Array B 68.22 44 P **P 13 20 32.1 -0.6**
comp=Z,4.1nm,0.6s,mb4.7,baz=267,slow=5.3,SNR=31
GERES LR LR 13 46 24.1
comp=Z,519nm,20.5s,MS4.8,baz=272,slow=32
BRG Berggiesshubel 68.23 42 *e*P **P 13 20 32.4 -0.4**
comp=Z,15nm,1.0s,mb5.0
BRG Berggiesshubel 68.23 42 *e*P **P 13 20 33.0 +0.2**
comp=Z,22nm,1.6s,mb5.0
BRG *e* 13 20 45.7
comp=Z,7.4nm,1.0s
BRG PP PP 13 23 01.0 -2.4
BRG S S 13 29 31.0 -0.6
BRG
comp=N,300nm,19.9s
BRG
comp=E,545nm,25.1s
BRG
comp=Z,746nm,25.9s
BRG Berggiesshubel 68.23 42 *e*P **P 13 20 33.0 +0.2**
BRG *e* 13 20 45.7
BRG 13 23 01.0

BRG S S 13 29 31.0 -0.6
BRG pmax pmax
comp=Z,3.0nm,1.6s
BRG pmax pmax
comp=Z,22nm,1.0s,mb5.1
BRG MLR MLR
comp=N,7µm,19.9s
BRG MLR MLR
comp=E,300nm,25.1s
BRG MLR MLR
comp=Z,545nm,25.9s
BRG Berggiesshubel 68.23 42 *eP* **P 13 20 33.0 +0.2**
comp=Z,22nm,1.5s,mb5.0
BRG *e* 13 20 45.7
BRG PP PP 13 23 01.0 -2.4
BRG S S 13 29 31.0 -0.6
BRG LR LR
comp=Z,750nm,25.9s,MS4.8
FIAM Fiamignano 68.44 51 P **P 13 20 33.8 -0.3**
BSD Bornholm Skovb 68.57 37 *i* P **P 13 20 33.7 -1.2**
BSD
comp=Z,550nm,20.0s
VOJS Vojsko 68.59 47 *eP* **P 13 20 34.6 -0.4**
VOY Vojsko 68.60 47 *eP* **P 13 20 33.0 -2.1**
VOY *e* 13 20 34.3
VOY *e* pP 13 20 42.3 -1.0
VOY Vojsko 68.60 47 *eP* **P 13 20 34.3 -0.8**
VOY *e* pP 13 20 42.3 -1.0
PVCC Panska Ves 68.65 42 *eP* **P 13 20 35.6 +0.2**
PVCC AMS AMS 13 43 20.0
comp=Z,1µm,24.9s
PRU Pruhonice 68.68 43 *eP* **P 13 20 35.9 +0.3**
PRU *eS* S 13 29 39.5 +2.6
PRU AMS AMS 13 43 00.0
comp=Z,1µm,26.4s
MOA Molln 68.68 45⇓ *iP* **P 13 20 34.6 -0.9**
comp=Z,96nm,2.1s,mb5.4,SNR=8.6
KBS Kingsbay 68.77 12 *eP* **P 13 20 35.1 -1.0**
KBS *ePP* PP 13 23 09.1 +1.0
KBS AMS AMS 13 49 05.2
comp=Z,502nm,22.8s,MS4.7
CEY Cerknica 69.00 47 *eP* **P 13 20 37.3 -0.2**
OBKA Obir 69.00 47⇓ *iP* **P 13 20 37.0 -0.6**
comp=Z,124nm,1.9s,mb5.5
DIV Divide 69.19 329 PFAKE
DIV LR LR 13 20 50.0 +11
comp=Z,6µm,21.0s,MS5.8
EYAK Cordova Ski Ar 69.20 329 *eP* **P 13 20 38.3 -0.5**
TREC Trest 69.35 44 *eP* **P 13 20 39.7 0.0**
TREC AMS AMS 13 42 20.0
comp=Z,900nm,34.4s
UPC Upice 69.57 42 *eP* **P 13 20 41.5 +0.4**
ARSA Arzberg 69.59 46⇓ *iP* **P 13 20 40.2 -1.0**
comp=Z,104nm,1.9s,mb5.4
BOJS Bojanci 69.60 48 *eP* **P 13 20 41.0 -0.3**
DPC Dobruska-Polom 69.78 42 *eP* **P 13 20 42.9 +0.5**
DPC *ex* x 13 30 04.3
DPC AMS AMS 13 44 00.0
comp=Z,1µm,25.1s
GOLS Golise 69.80 47 *eP* **P 13 20 42.2 -0.3**
TRO Tromso 69.98 22 *eP* **P 13 20 42.6 -1.0**
TRO *ePP* PP 13 23 19.8 +1.2
TRO *eS* S 13 29 54.6 +2.3
TRO AMS AMS 13 45 45.0
comp=Z,476nm,24.5s,MS4.7
COLA College 70.00 333 *iP* **P 13 20 42.7 -1.0**
COLA College 70.00 333 *eP* **P 13 20 42.0 -1.7**
comp=Z,26nm,0.8s,mb5.2
COLA LR LR
comp=Z,1µm,19.0s,MS5.1
BJO Bjornoya 70.05 17 AMS AMS 13 45 29.1
comp=Z,1µm,21.6s,MS5.1
VRAC Vranov 70.07 43 P **P 13 20 43.5 -0.7**
comp=Z,6.1nm,0.7s,mb4.6,baz=274,slow=6.2,SNR=17
VRAC Vranov 70.07 43⇓ *iP* **P 13 20 43.7 -0.5**
VRAC Vranov 70.07 43⇓ **P 13 20 43.7 -0.5**
VAE Valguarnera 70.09 56 LR LR 13 46 32.0
comp=Z,712nm,18.5s,MS5.0,baz=148,slow=32
SOP Sopron 70.23 45⇑ *ePcP* **P 13 20 45.2 0.0**
MCK McKinley 70.53 332 *eP* **P 13 20 44.9 -2.1**
MCK pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
MCK MLR MLR
comp=Z,1µm,21.0s,MS5.0
MCK McKinley 70.53 332 *eP* **P 13 20 44.9 -2.1**
comp=Z,5.9nm,0.5s,mb4.8
MCK LR LR
comp=Z,1µm,21.0s,MS5.0
ZST Bratislava 70.53 45 *eP* **P 13 20 46.4 -0.6**
ZST pmax pmax
comp=Z,49nm,1.4s,mb5.2
ZST Bratislava 70.53 45 *eP* **P 13 20 46.4 -0.6**
comp=Z,49nm,1.4s,mb5.2
MORC Moravsky Berou 70.63 43⇑ *iP* **P 13 20 47.5 -0.1**
MORC Moravsky Berou 70.63 43 *eP* **P 13 20 46.8 -0.8**
MORC pmax pmax
comp=Z,15nm,1.0s,mb4.9
MORC Moravsky Berou 70.63 43 *eP* **P 13 20 46.8 -0.8**
comp=Z,15nm,1.0s,mb4.9
EFI East Falkland 70.73 176 PFAKE
EFI LR LR 13 21 00.0 +12
comp=Z,1µm,20.0s,MS5.2
PMR Palmer 70.78 330 *eP* **P 13 20 47.4 -1.1**
PMR pmax pmax
comp=Z,52nm,1.7s,mb5.2
PMR MLR MLR
comp=Z,2µm,17.0s,MS5.4
PMR Palmer 70.78 330 *eP* **P 13 20 47.4 -1.1**
comp=Z,52nm,1.7s,mb5.2
PMR LR LR
comp=Z,2µm,17.0s,MS5.4
OKC Ostrava-Krasne 71.01 43 *eP* **P 13 20 50.5 +0.6**
OKC AMS AMS 13 45 00.0
comp=Z,800nm,24.9s
VYHS Vyhne 71.64 44 *eP* **P 13 20 53.3 -0.4**
VYHS pmax pmax
comp=Z,25nm,1.6s,mb4.9
VYHS Vyhne 71.64 44 *eP* **P 13 20 53.3 -0.4**
comp=Z,25nm,1.6s,mb4.9
PKSM Moragy 71.85 47⇑ *iP* **P 13 20 55.0 0.0**
PKSM Moragy 71.85 47⇑ **P 13 20 55.0 0.0**
BUD Budapest 71.92 45⇓ *e* **P 13 20 54.3 -1.1**
OJC Ojcow 72.01 42 *i* Pd **P 13 20 55.8 -0.2**
ARCES ARCESS Array B 72.29 22 P **P 13 20 56.6 -1.0**
comp=Z,10nm,0.5s,mb5.0,baz=278,slow=4.3,SNR=87
ARCES LR LR 13 46 39.9
comp=Z,612nm,21.5s,MS4.8,baz=91,slow=31
ARE0 ARCESS Array S 72.29 22 *eP* **P 13 20 55.8 -1.8**
IMA2 Indian Mountai 72.32 335 *eP* **P 13 20 56.6 -1.2**
PSZ Piszkesteto 72.43 45⇓ *e* **P 13 20 58.6 +0.2**
PSZ Piszkesteto 72.43 45⇓ *iP* **P 13 20 58.7 +0.3**
PSZ Piszkesteto 72.43 45 *eP* **P 13 20 58.3 -0.1**
PSZ pmax pmax
comp=Z,89nm,1.8s,mb5.4
PSZ Piszkesteto 72.43 45 *eP* **P 13 20 58.3 -0.1**
comp=Z,89nm,1.8s,mb5.4
NIE Niedzica 72.47 43 *eP* **P 13 21 00.1 +1.4**
KECS Kecovo 72.73 44 *eP* **P 13 21 00.5 +0.3**
KECS *e* 13 21 14.1
KECS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KECS Kecovo 72.73 44 *eP* **P 13 21 00.5 +0.3**
comp=Z,6.9nm,1.1s,mb4.5
KECS *e* 13 21 14.1
KEV Kevo 72.78 21 *eP* **P 13 20 57.8 -2.7**
comp=Z,6.6nm,0.7s,mb4.7
KEV LR LR
comp=Z,558nm,21.0s,MS4.8
KDAK Kodiak Island 72.96 326 *eP* **P 13 21 00.6 -1.0**
comp=Z,11nm,0.7s,mb4.9
KDAK LR LR
comp=Z,255nm,21.0s,MS4.5
STHS Stebnicka Huta 73.06 43 *eP* **P 13 21 02.8 +0.6**
STHS pmax pmax
comp=Z,13nm,1.2s,mb4.7
STHS Stebnicka Huta 73.06 43 *eP* **P 13 21 02.8 +0.6**
comp=Z,13nm,1.2s,mb4.7
DIVS Divcibare 73.15 49 *eP* **P 13 21 04.6 +1.9**
CRVS Cervenica-Dubn 73.29 43 *eP* **P 13 21 04.0 +0.4**
CRVS Cervenica-Dubn 73.29 43 *eP* **P 13 21 04.1 +0.5**
GRUS Gruza 73.70 49 *eP* **P 13 21 06.2 +0.2**
KAF Kangasniemi 73.72 29 *ep* **P 13 21 04.4 -1.7**
comp=Z,15nm,0.6s,mb5.1,baz=279,slow=5.5
KAF Kangasniemi 73.72 29 *eP* **P 13 21 04.4 -1.7**
KAF pmax pmax
comp=Z,15nm,0.6s,mb5.1
FINES FINESS Array B 73.73 30 P **P 13 21 05.4 -0.7**
comp=Z,8.2nm,0.6s,mb4.8,baz=263,slow=3.0,SNR=40
FINES LR LR 13 48 28.3
comp=Z,976nm,21.7s,MS5.0,baz=305,slow=32
FIA1 FINESS Array S 73.73 30 *eP* **P 13 21 05.2 -1.0**
TTA Tatalina 73.80 332 *eP* **P 13 21 04.3 -2.2**
TTA pmax pmax
comp=Z,17nm,1.0s,mb4.9
TTA Tatalina 73.80 332 *eP* **P 13 21 04.3 -2.2**
comp=Z,17nm,1.0s,mb4.9
KOLS Kolonicke sedl 73.81 43 *eP* **P 13 21 07.3 +0.7**
SVW2 Sparrevohn 73.92 330 *eP* **P 13 21 04.9 -2.3**
BZS Buzias 74.00 47⇑ *iP* **P 13 21 08.1 +0.4**
BZS Buzias 74.00 47⇑ **P 13 21 08.1 +0.4**
IGT Igoumenitsa 74.28 53 *eP* **P 13 21 10.2 +0.8**
OHR Ohrid 74.31 51 *eP* **P 13 21 09.8 +0.3**
DRGR 74.52 45⇓ *iP* **P 13 21 10.3 -0.4**
DRGR 74.52 45⇓ **P 13 21 10.2 -0.5**
SKO Skopje 74.60 51 *eP* **P 13 21 11.7 +0.5**
LKD Levkas 74.70 54 *eP* **P 13 21 12.4 +0.6**
BIA Bitola 74.71 51 *eP* **P 13 21 11.8 -0.1**
LVV L'vov 74.77 42⇓ *iP* **P 13 21 11.9 -0.3**
LVV *e* 13 21 26.3
FNA Florina 74.80 52 *eP* **P 13 21 12.8 +0.5**
GZR Gura Zlata 74.84 47⇓ *iP* **P 13 21 12.8 +0.2**
GZR Gura Zlata 74.84 47⇓ **P 13 21 12.8 +0.2**
MEV Metsovon 74.90 53 *eP* **P 13 21 14.6 +1.6**
APA Apatity 75.51 23⇓ *eP* **P 13 21 16.5 0.0**
APA *i* pP 13 21 25.7 +0.9
APA *i* 13 21 30.0
APA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
APA MLR MLR
comp=Z,400nm,17.0s,MS4.8
GRG Griva 75.52 51 *eP* **P 13 21 17.2 +0.7**
EVR Evrytania 75.53 54 *eP* **P 13 21 18.5 +1.9**
VAY Valandovo 75.57 51 *eP* **P 13 21 16.3 -0.5**
VTS Vitosha 75.75 50 *iP* **P 13 21 18.5 +0.7**
LIT Litokhoron 75.78 52 *eP* **P 13 21 17.4 -0.6**
JOF Joensuu 75.82 28 *ep* **P 13 21 15.9 -2.3**
comp=Z,3.4nm,0.5s,mb4.5
JOF Joensuu 75.82 28 *eP* **P 13 21 15.9 -2.3**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
LVZ Lovozero 75.88 23 *deP* **P 13 21 15.1 -3.5**
LVZ MLR MLR
comp=Z,299nm,17.0s,MS4.7
LVZ MLR MLR
comp=N,148nm,16.0s
LVZ Lovozero 75.88 23 PFAKE
LVZ LR LR 13 21 30.0 +11
comp=Z,504nm,22.0s,MS4.8
AGG Agios Georgios 75.91 53 *eP* **P 13 21 19.4 +0.6**
BURAR Bucovina Array 76.01 44⇑ *iP* **P 13 21 20.0 +0.7**
BURAR Bucovina Array 76.01 44⇑ **P 13 21 20.0 +0.7**
ITM Ithomi 76.02 55 *eP* **P 13 21 21.5 +2.1**
HORT Hortiatis 76.12 52 *eP* **P 13 21 20.1 +0.1**
PUL Pulkovo 76.12 31 *deP* **P 13 21 13.6 -6.4**
PUL MLR MLR
comp=Z,212nm,14.0s,MS4.6
SOH Sokhos 76.26 51 *eP* **P 13 21 21.7 +1.0**
MMB Musomiste 76.35 50 *iP* **P 13 21 23.0 +1.7**
CHGN Chignik 76.38 325 *eP* **P 13 21 21.3 -0.1**
VOIR 76.39 46⇑ *iP* **P 13 21 21.6 +0.1**
VOIR 76.39 46⇑ **P 13 21 21.6 +0.1**
PAIG Paliouri 76.71 52 *eP* **P 13 21 23.9 +0.6**
OUR Ouranopolis 76.84 52 *eP* **P 13 21 24.8 +0.7**
MGER Gerania Oros 76.86 54 *eP* **P 13 21 25.0 +0.9**
VLI Veliai 76.92 56 *eP* **P 13 21 26.0 +1.6**
HOPE Hope Point 76.99 164 PFAKE
HOPE LR LR 13 21 40.0 +15
comp=Z,2µm,21.0s,MS5.4
MLR Muntele Rosu 76.99 46 P **P 13 21 25.3 +0.4**
comp=Z,45nm,0.9s,mb5.4,baz=195,slow=3.3,SNR=66
MLR Muntele Rosu 76.99 46⇑ *iP* **P 13 21 26.0 +1.1**
MLR Muntele Rosu 76.99 46 P **P 13 21 25.3 +0.4**
MLR pmax pmax
comp=Z,45nm,0.9s
MLR Muntele Rosu 76.99 46⇑ P **P 13 21 26.0 +1.1**
KYTH Kithira 77.10 56 *eP* **P 13 21 27.0 +1.5**
PVL Pavlikeni 77.12 49 *iP* **P 13 21 26.0 +0.4**
KVR Kavouri 77.29 54 *eP* **P 13 21 27.0 +0.5**
PTL Penteli 77.31 54 *eP* **P 13 21 27.5 +0.9**
PLOR Plostina 77.39 46⇓ *iP* **P 13 21 27.1 0.0**
VRI Vrincioaia 77.43 46⇑ *iP* **P 13 21 28.5 +1.1**
VRI Vrincioaia 77.43 46⇑ **P 13 21 28.5 +1.2**
KDZ Kurdzhali 77.57 50 *iP* **P 13 21 28.0 -0.1**
LOS Limnos 77.75 52 *eP* **P 13 21 29.3 +0.2**
AKASG Malin Array Be 77.81 40 P **P 13 21 29.3 -0.2**
comp=Z,1.0nm,0.4s,baz=277,slow=4.9,SNR=35
AKASG LR LR 13 51 43.6
comp=Z,875nm,21.6s,MS5.0,baz=280,slow=32
AKBB Malin Array Si 77.81 40 *eP* **P 13 21 28.6 -0.9**
TNA Tin City 78.13 336 *eP* **P 13 21 30.8 -0.4**
comp=Z,19nm,1.1s,mb4.9
TNA LR LR
comp=Z,594nm,21.0s,MS4.9
ALN Alexandroupoli 78.22 51 *eP* **P 13 21 32.3 +0.6**
BOZC Bozcaada 78.50 52 *iP* **P 13 21 33.0 -0.3**
KIS Kishinev 78.54 44 *eP* **P 13 21 30.0 -3.5**
KIS MLR MLR
comp=N,200nm,18.0s,MS4.8
KIS MLR MLR
comp=E,300nm,18.0s,MS4.8
KIS MLR MLR
comp=Z,400nm,18.0s,MS4.8
KIS MLR MLR
comp=Z,500nm,18.0s
IDI Anoyia 78.81 57 P **P 13 21 35.8 +0.8**
comp=Z,49nm,0.8s,mb5.5,baz=308,slow=7.3,SNR=5.8
IDI LR LR 13 49 58.5
comp=Z,122nm,21.4s,MS4.2,baz=259,slow=31
CHOS Chios island 78.89 53 *eP* **P 13 21 36.2 +0.8**
TIRR Tirgusor 78.95 47⇑ *iP* **P 13 21 35.5 -0.3**
TIRR Tirgusor 78.95 47⇑ **P 13 21 35.5 -0.3**
PSN Preselentsi 79.01 48 *iP* **P 13 21 36.0 -0.1**
URLA Izmir 79.30 53 *iP* **P 13 21 38.0 +0.3**
TAOE Nuku Hiva Isla 79.42 257 *eLR* LR 13 46 48.3
comp=Z,2µm,29.8s,baz=70
ELBA Catalca 79.89 50 *iP* **P 13 21 40.3 -0.5**
KLMR Klimovskoe 80.15 29 *eP* **P 13 21 36.8 -5.5**
KLMR *eS* S 13 31 47.7 +2.3
KLMR pmax pmax
comp=Z,40nm,1.6s,mb5.1
KLMR pmax pmax
comp=Z,130nm,10.9s
RKT Rikitea 80.48 242 *eS* S 13 31 46.6 -2.3
comp=Z,426nm,30.0s
RKT *eSS* SS 13 36 59.7 -1.4
comp=Z,138nm,29.0s
RKT *eLR* LR 13 46 46.2
comp=Z,442nm,36.0s
OBN Obninsk 80.72 35⇑ *eP* **P 13 21 45.0 -0.3**
OBN *e* 13 24 45.8
OBN *eS* S 13 31 51.0 -0.4
OBN *eSS* SS 13 37 08.8 +4.2
OBN pmax pmax
comp=Z,19nm,0.5s,mb5.3
OBN Obninsk 80.72 35 *i* Pr **P 13 21 45.0 -0.3**
OBN LR LR
comp=Z,1µm,23.0s,MS5.2
MOS Moscow 81.07 34 *eP* **P 13 21 45.5 -1.7**
MOS pmax pmax
comp=Z,56nm,1.1s,mb5.4
GDZ Gediz 81.26 52 *iP* **P 13 21 48.0 -0.2**
UNV Unalaska Valle 81.55 324 PFAKE
UNV LR LR 13 22 00.0 +10
comp=Z,3µm,19.0s,MS5.7
ESKT Eskisehir 82.14 51 *iP* **P 13 21 53.0 +0.1**
TKTP Tekketepe 82.20 53 *iP* **P 13 21 53.2 0.0**
SIM Simferopol' 82.68 45 *eP* **P 13 21 56.0 +0.3**
SIM *eS* S 13 32 09.0 -2.6
SIM *ePS* 13 33 10.0
SIM pmax pmax
comp=Z,14nm,1.1s,mb4.9
SGKT Sivrigoynuk 82.68 50 *iP* **P 13 21 55.7 0.0**
ANTO Ankara 83.44 50 *eP* **P 13 22 00.1 +0.5**
ANTO pmax pmax
comp=Z,116nm,1.3s,mb5.8
ANTO MLR MLR
comp=Z,359nm,19.0s,MS4.8
ANTO Ankara 83.44 50 *eP* **P 13 22 00.1 +0.5**
comp=Z,116nm,1.3s,mb5.8
ANTO LR LR
comp=Z,359nm,19.0s,MS4.8
VRSR Storozhevoye 83.61 38 *eP* **P 13 21 59.6 -0.9**
VRSR pmax pmax
comp=Z,20nm,0.9s,mb5.2
VRSR pmax pmax
comp=N,10.0nm,0.8s
VRSR pmax pmax
comp=E,20nm,1.0s
PMSA Palmer Station 83.64 180 *eP* **P 13 21 58.9 -1.7**
comp=E,12nm,0.6s,mb5.2
ELDT Eldivan 83.69 49 *iP* **P 13 22 01.4 +0.5**
BR131 Keskin Array S 84.11 50 *eP* **P 13 22 03.0 0.0**
comp=E,16nm,0.8s,mb5.2
BR131 LR LR
comp=Z,313nm,19.0s,MS4.7
BRTR Keskin Array B 84.11 50 P **P 13 22 03.0 0.0**
comp=Z,17nm,0.9s,mb5.2,baz=277,slow=4.4,SNR=62
BRTR LR LR 13 59 03.9
comp=Z,107nm,18.4s,MS4.3,baz=293,slow=35
BRTR Keskin Array B 84.11 50 *iP* **P 13 22 03.0 0.0**
BRTR pmax pmax
comp=Z,17nm,0.9s
ANN Anapa 84.94 44 *eP* **P 13 22 05.7 -1.5**
ANN *e* 13 25 30.4
ANN *eS* S 13 32 26.4 -7.9
ANN pmax pmax
comp=Z,52nm,1.3s,mb5.5
VRHR Novokhopersk 85.06 37 *eP* **P 13 22 08.4 +0.6**
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
VRHR pmax pmax
comp=N,9.0nm,0.4s
VRHR pmax pmax
comp=E,30nm,0.8s
CSS Prodhromos 85.50 55 *eP* **P 13 22 10.7 +0.7**
comp=E,55nm,1.5s,mb5.5
BILL Bilibino 85.56 343 *eP* **P 13 22 09.3 -1.0**
BILL pmax pmax
comp=Z,141nm,1.8s,mb5.9
BILL MLR MLR
comp=Z,472nm,21.0s,MS4.9
BILL Bilibino 85.56 343 *eP* **P 13 22 09.3 -1.0**
comp=Z,141nm,1.8s,mb5.9
BILL LR LR
comp=Z,472nm,21.0s,MS4.9
GRSN GIRESUNGRSN 86.97 48 *iP* **P 13 22 17.8 +0.6**
GZT Gaziantep 87.83 51 *iP* **P 13 22 21.5 +0.1**
MALT Malatya 88.09 50 *eP* **P 13 22 23.5 +0.8**
MALT pmax pmax
comp=Z,29nm,0.6s,mb5.7
MALT Malatya 88.09 50 *eP* **P 13 22 23.5 +0.9**
comp=Z,29nm,0.6s,mb5.7
ELZG Elazig 88.42 50 *iP* **P 13 22 25.4 +1.2**
EIL Elat 88.64 59 *eP* **P 13 22 25.9 +0.7**
comp=Z,2µm,1.9s
KIV Kislovodsk 88.72 44⇑ *eP* **P 13 22 26.5 +0.8**
KIV pmax pmax
comp=Z,45nm,1.6s,mb5.5
TIXI Tiksi 88.98 356 *eP* **P 13 22 23.2 -3.7**
TIXI pmax pmax
comp=Z,37nm,1.3s,mb5.5
TIXI MLR MLR
comp=Z,865nm,21.0s,MS5.2
TIXI Tiksi 88.98 356 *i* Pr **P 13 22 25.8 -1.1**
TIXI LR LR
comp=Z,838nm,21.0s,MS5.1
TSUM Tsumeb 89.15 111 PFAKE
TSUM LR LR 13 22 40.0 +12
comp=Z,775nm,20.0s,MS5.1
ASF Jabal al Asfar 89.28 56 P **P 13 22 29.5 +1.2**
comp=Z,2.8nm,0.8s,mb4.6,baz=166,slow=1.5,SNR=14
ARU Arti 90.95 28 *eP* **P 13 22 34.2 -1.9**
ARU *e* 13 26 08.9
ARU *eS* S 13 33 02.4 -29
ARU *eSP* SP 13 34 31.7 -7.4
ARU *ePS* PS 13 34 41.9 -0.6
ARU *eSS* SS 13 39 28.1 -6.8
ARU Arti 90.95 28 *eP* **P 13 22 36.2 +0.2**
comp=Z,1.5nm,0.4s,mb4.7
PPT Papeete 91.06 252 *ePP* PP 13 26 11.9 -1.2
comp=Z,44nm,23.8s
PPT Papeete 91.06 252 *ePS* PS 13 34 43.8 +0.1
comp=Z,264nm,24.2s
PPT Papeete 91.06 252 *eSS* SS 13 39 29.4 -7.1
comp=Z,411nm,27.2s
PPT *eLR* LR 13 51 40.8
comp=Z,416nm,21.5s,baz=69
PPT Papeete 91.06 252 LR LR 13 57 01.1
comp=Z,390nm,19.8s,MS4.8,baz=79,slow=31
GNI Garni 91.78 46 P **P 13 22 40.6 +0.7**
comp=Z,4.8nm,0.4s,mb5.2,baz=172,slow=19,SNR=6.6
GNI Garni 91.78 46 P **P 13 22 40.6 +0.7**
GNI pmax pmax
comp=Z,5.0nm,0.4s
GNI Garni 91.78 46 *eP* **P 13 22 40.9 +1.0**
comp=Z,33nm,1.4s,mb5.5
GNI LR LR
comp=Z,375nm,22.0s,MS4.8
SMY Shemya 92.30 329 PFAKE
SMY LR LR 13 23 00.0 +18
comp=Z,1µm,22.0s,MS5.3
MAK Makhachkala 92.30 43 *iP* **P 13 22 44.5 +2.2**
MAK *i* S SKSac 13 33 14.5 +0.6
MAK pmax pmax
comp=Z,512nm,1.7s
MAK pmax pmax
comp=Z,2µm,3.3s
TBI Tubuai 92.89 246 *ePP* PP 13 26 25.7 -1.8
comp=Z,60nm,26.5s
TBI Tubuai 92.89 246 *eSKSac* SKSac 13 33 14.5 -2.7
comp=Z,192nm,26.0s
TBI *eSP* SP 13 34 58.5 -2.1
comp=Z,247nm,29.2s
TBI *eSS* SS 13 40 02.6 -0.1
comp=Z,113nm,28.8s
TBI *eLR* LR 13 52 39.3
comp=Z,397nm,30.0s,baz=63
AKTK Aktyubinsk 94.34 33 P **P 13 22 51.6 -0.1**
AKTO Aktyubinsk 94.34 33 P **P 13 22 51.6 -0.1**
comp=Z,6.7nm,0.9s,mb5.1,baz=309,slow=3.0,SNR=20
MA2 Magadan 96.43 343 PFAKE
MA2 LR LR 13 23 10.0 +8.8
comp=Z,879nm,22.0s,MS5.2
LSZ Lusaka 97.46 104 PFAKE
LSZ LR LR 13 23 20.0 +14
comp=Z,529nm,20.0s,MS5.0
VNA1 Neumayer--Stat 97.61 164 *eP* **P 13 23 05.3 -1.3**
VNA1 *e* pP 13 23 12.0 -3.1
VNA1 *e* pP 13 23 15.0 -0.1
VNA1 *e* 13 23 26.9
CHKZ Chkalovo 97.90 25 P **P 13 23 07.2 -0.7**
CHKZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.8
CHKZ Chkalovo 97.90 25 P **P 13 23 07.2 -0.8**
comp=Z,1.6nm,0.7s,mb4.7
LBTB Lobatse 98.05 114 PFAKE
LBTB LR LR 13 23 20.0 +11
comp=Z,328nm,20.0s,MS4.8
BRVK Borovoye 98.23 26⇑ *eP* **P 13 23 10.0 +0.6**
BRVK MLR MLR
comp=Z,687nm,22.0s,MS5.1
BVAR Borovoye Array 98.29 26 P **P 13 23 09.9 +0.3**
comp=Z,0.6nm,0.6s,mb4.3,baz=319,slow=6.3,SNR=6.9
YAK Yakutsk 98.32 353⇑ *eP* **P 13 23 09.3 -0.5**
YAK pmax pmax
comp=Z,6.0nm,0.4s,mb5.5
YAK MLR MLR
comp=Z,800nm,28.0s,MS5.1
PET Petropavlovsk 98.99 335 *eP* **P 13 23 12.5 -0.3**
PET *e* 13 33 49.2
PET *eS* S 13 34 35.6 -6.2
PET *eSS* SS 13 41 28.4 -0.9
PET pmax pmax
comp=Z,100nm,13.2s
PET smax
comp=N,100nm,32.7s
PET Petropavlovsk 98.99 335 PFAKE
PET LR LR 13 23 30.0 +17
comp=Z,663nm,20.0s,MS5.1
SNAA Sanae 99.64 164 *eP* Pdif 13 23 13.5 -2.2
SNAA *e* 13 23 21.8
SNAA *e* 13 23 24.3
SNAA *e* 13 23 26.6
SNAA *e* 13 23 33.7
SNAA Sanae 99.64 164 *eP* Pdif 13 23 13.0 -2.7

SNAA pmax pmax
comp=Z,7.0nm,0.8s
SNAA Sanae 99.64 164 *e*P Pdif 13 23 13.0 -2.7
comp=Z,7.0nm,0.8s
KMBO Kilima Mbogo 101.58 87 PFAKE 13 23 40.0 +16
KMBO LR LR
comp=Z,521nm,19.0s,MS5.1
KRAR Krasnoyarsk 102.77 13 *i* P Pdif 13 23 28.3 -1.3
KURK Kurchatov 103.30 23 PFAKE 13 23 40.0 +8.1
KURK LR LR
comp=Z,543nm,21.0s,MS5.1
AAK Ala-Archa 107.92 31 PFAKE 13 28 10.0 +10
AAK LR LR
comp=Z,81nm,19.0s,MS4.3
TLY Talaya 108.75 8 PFAKE 13 28 10.0 +8.8
TLY LR LR
comp=Z,82nm,20.0s,MS4.3
QSPA South Pole Qui 109.07 180 *e*P PKiKP 13 28 03.5 +1.7
QSPA LR LR
comp=Z,574nm,19.0s,MS5.2
YSS Yuzh-Sakhalins 109.75 340 PFAKE 13 28 20.0 +17
YSS LR LR
comp=Z,1µm,22.0s,MS5.5
HABR Khabarovsk 110.45 346 *e*P Pdif 13 23 57.2 -6.5
HIA Hailar 111.80 357 PFAKE 13 28 20.0 +13
HIA LR LR
comp=Z,884nm,19.0s,MS5.4
WMQ Urumqi 112.41 21 PDIF Pdif 13 24 16.0 +3.6
WMQ PP PP 13 29 01.0 +7.1
WMQ SKS SKSdf 13 35 18.0 -0.4
WMQ S Sdif 13 36 33.0 -0.8
WMQ SS SS 13 44 38.0 +5.7
WMQ PP PP
comp=Z,67nm,6.0s
WMQ LR LR
comp=N,495nm,18.0s,MS5.2
WMQ LR LR
comp=E,387nm,18.0s,MS5.2
WMQ LR LR
comp=Z,368nm,18.0s,MS5.0
SONM Songino Array 112.86 7 PKKPbc PKKPbc 13 38 55.3 -0.8
comp=Z,0.2nm,0.3s,baz=195,slow=3.2,SNR=2.7
MDJ Mudanjiang 115.25 349 PKP PKiKP 13 28 15.4 +1.9
MDJ PKS 13 31 52.3
MDJ SKS SKSdf 13 35 26.3 +2.4
MDJ SS SS 13 45 11.6 +1.7
MDJ PP PP
comp=Z,39nm,4.9s
MDJ LR LR
comp=N,159nm,20.4s,MS5.0
MDJ LR LR
comp=E,371nm,20.4s,MS5.0
MDJ LR LR
comp=Z,470nm,17.2s,MS5.2
MDJ Mudanjiang 115.25 349 PFAKE 13 28 30.0 +16
MDJ LR LR
comp=Z,621nm,20.0s,MS5.2
SBA Scott Base 116.32 191 PFAKE 13 28 30.0 +14
SBA LR LR
comp=Z,550nm,19.0s,MS5.2
CN2 Changchun 116.70 352 *e*PKP PKPdf 13 28 16.4 +0.1
CN2 PP PP
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,16.0s,MS5.3
CN2 LR LR
comp=E,600nm,16.0s,MS5.3
CN2 LR LR
comp=Z,600nm,16.0s,MS5.3
VNDA Vanda 117.36 190 PFAKE 13 28 30.0 +12
VNDA LR LR
comp=Z,507nm,19.0s,MS5.2
FUNA Funafuti 117.43 270 PFAKE 13 28 30.0 +12
FUNA LR LR
comp=Z,4µm,19.0s
GTA Gaotai 119.97 14 PKP PKPdf 13 28 22.3 -0.3
GTA XPKP 13 28 35.6
GTA PP PP 13 29 50.8 +3.9
GTA PKS 13 31 57.5
GTA SKS SKSdf 13 35 29.6 -3.3
GTA PP PP
comp=Z,99nm,5.3s
GTA LR LR
comp=N,732nm,22.8s,MS5.3
GTA LR LR
comp=E,306nm,19.8s,MS5.3
GTA LR LR
comp=Z,1µm,23.6s,MS5.5
HHC Hu-ho-hao-te 120.23 3 *e*PKP PKPdf 13 28 22.3 -0.8
HHC PP PP 13 29 50.9 +2.3
HHC PKS 13 31 58.3
HHC PP PP
comp=Z,125nm,6.3s
HHC LR LR
comp=N,598nm,21.4s,MS5.2
HHC LR LR
comp=E,320nm,21.8s,MS5.2
HHC LR LR
comp=Z,926nm,20.8s,MS5.4
MAJO Matsushiro 120.58 339 PFAKE 13 28 40.0 +16
MAJO LR LR
comp=Z,833nm,22.0s,MS5.3
MAT Matsushiro 120.58 339 PKP PKPdf 13 28 22.3 -1.5
MAT Matsushiro 120.58 339 *e*PKP PKPdf 13 28 22.0 -1.8
MJAR Matsushiro Arr 120.58 339 PKP PKPdf 13 28 21.8 -1.9
comp=Z,2.1nm,0.6s,baz=83,slow=1.1,SNR=19
BJT Baijiatuau 121.16 359 PFAKE 13 28 40.0 +15
BJT LR LR
comp=Z,985nm,22.0s,MS5.4
MAW Mawson 121.42 159 *e*PKP PKPdf 13 28 23.2 -2.2
comp=Z,3.8nm,0.6s
MAW Mawson 121.42 159 PKP PKPdf 13 28 22.8 -2.6
comp=Z,2.4nm,0.8s,baz=180,slow=3.3,SNR=13
MAW Mawson 121.42 159 *e*PKPdf PKPdf 13 28 22.5 -2.9
MAW *e*PKP PKPdf 13 28 23.2 -2.2
INCN Inchon 122.70 349 PFAKE 13 28 40.0 +12
INCN LR LR
comp=Z,577nm,21.0s,MS5.2
LZH Lanzhou 124.01 11 *e*PKP PKPdf 13 28 31.8 +1.5
LZH XPKP 13 28 42.3
LZH PP PP 13 30 19.5 +5.2
LZH PP PP
comp=Z,150nm,5.5s
LZH LR LR
comp=E,640nm,19.5s
LZH LR LR
comp=Z,861nm,20.0s,MS5.4
XAN Xi'an 126.77 7 PKP PKPdf 13 28 34.8 -0.8
NJ2 Nanjing 129.00 356 *e*PKP PKPdf 13 28 40.6 +0.7
NJ2 XPKP 13 28 55.0
NJ2 PP PP 13 30 53.0 +5.6
NJ2 PKS 13 32 16.0
NJ2 SKS SKSdf 13 35 47.0 -2.8
NJ2 SKKS SKKSac 13 37 40.0 -2.9
NJ2 PP PP
comp=Z,110nm,6.7s
NJ2 LR LR
comp=Z,1µm,23.1s,MS5.6
CD2 Chengdu 129.01 13 *e*PKP PKPdf 13 28 38.3 -1.6
CD2 XPKP 13 28 50.3
CD2 PKS 13 32 13.4
CD2 PP PP
comp=Z,120nm,9.2s
CD2 LR LR
comp=N,270nm,20.4s
CD2 LR LR
comp=Z,320nm,20.4s,MS5.0
SSE Sheshan 129.75 354 PKP PKPdf 13 28 41.9 +0.6
SSE PP PP 13 30 56.4 +4.1
SSE PP PP
comp=Z,34nm,8.5s
SSE LR LR
comp=N,161nm,20.4s,MS5.0
SSE LR LR
comp=E,275nm,20.4s,MS5.0
SSE LR LR
comp=Z,404nm,20.0s,MS5.1
WHN Wuhan 130.60 1 *e*PKP PKPdf 13 28 42.6 -0.3
CASY Casey 132.77 177 *e*PKP PKPdf 13 28 43.7 -3.3
CASY LR LR
comp=Z,676nm,21.0s,MS5.3
GYA Guiyang 133.90 11 PKP PKPdf 13 28 49.8 +0.7
GYA XPKP 13 29 02.0
GYA PP PP 13 31 23.5 +4.5
GYA PKS 13 32 24.8
GYA PP PP
comp=Z,120nm,7.8s
GYA LR LR
comp=N,180nm,21.4s,MS4.9
GYA LR LR
comp=E,140nm,20.8s,MS4.9
GYA LR LR
comp=Z,150nm,21.5s,MS4.7
KMI Kunming 134.32 16 PKP PKPdf 13 28 50.1 +0.2
KMI XPKP 13 29 02.0
KMI PP PP 13 31 26.0 +4.3
KMI PKS 13 32 27.8
KMI SKS SKSdf 13 35 59.4 0.0
KMI SKKS SKKSac 13 38 15.3 -0.3
KMI LR LR
comp=N,348nm,24.4s,MS5.2
KMI LR LR
comp=E,467nm,23.6s,MS5.2
KMI LR LR
comp=Z,411nm,27.8s,MS5.0
TATO Taipei 135.76 352 PFAKE 13 29 10.0 +17
TATO LR LR
comp=Z,421nm,19.0s,MS5.2
HNR Honiara 135.87 276 PFAKE 13 29 10.0 +17
HNR LR LR
comp=Z,242nm,20.0s,MS4.9
CHTO Chiang Mai 138.98 24 PFAKE 13 29 10.0 +11
CHTO LR LR
comp=Z,470nm,22.0s,MS5.2
QIZ Qiongzhong 141.69 8 PKP PKPdf 13 29 01.8 -1.7
QIZ LR LR
comp=N,362nm,22.4s
QIZ LR LR
comp=Z,645nm,21.0s,MS5.4
QIZ Qiongzhong 141.69 8 PFAKE 13 29 20.0 +17
QIZ LR LR
comp=Z,660nm,22.0s,MS5.3
RIV Riverview 144.99 238 *e*PKP PKPdf 13 29 07.7 -1.6
ARMA Armidale 145.37 244 *e*PKP PKPdf 13 29 09.7 -0.2
CNB Canberra Magne 145.96 235 *e*PKP PKPdf 13 29 10.8 -0.1
comp=Z,74nm,0.7s
PMG Port Moresby 147.78 283 PFAKE 13 29 30.0 +16
PMG LR LR
comp=Z,446nm,19.0s,MS5.3
TOO Toolangi 147.96 229 *e*PKP PKPdf 13 29 16.5 +2.2
comp=Z,24nm,0.7s
CTA Charters Tower 150.93 263 *e*PKP PKPdf 13 29 17.9 -1.1
comp=Z,11nm,0.6s
CTA Charters Tower 150.93 263 PKP PKPdf 13 29 18.0 -1.1
comp=Z,5.4nm,0.8s,baz=84,slow=4.6,SNR=5.2
CTA PKPbc PKPbc 13 29 24.1 -0.6
comp=Z,11nm,0.9s,baz=156,slow=2.2,SNR=7.3
CTA Charters Tower 150.93 263 PKIKP PKPdf 13 29 18.0 -1.0
CTA 13 29 24.1
CTA pmax pmax
comp=Z,5.0nm,0.8s
CTA pmax pmax
comp=Z,11nm,0.9s
CTAO Charters Tower 150.93 263 *e*PKIKP PKPdf 13 29 18.9 -0.1
CTAO MLR MLR
comp=Z,263nm,21.0s,MS5.0
DAV Davao City (W) 152.10 338 PFAKE 13 29 30.0 +9.2
DAV LR LR
comp=Z,542nm,22.0s,MS5.3
STKA Stephens Creek 153.24 237 *e*PKP PKPbc 13 29 28.9 -1.1
comp=Z,14nm,0.7s
STKA Stephens Creek 153.24 237 PKP PKPdf 13 29 20.8 -1.7
comp=Z,1.4nm,0.9s,baz=286,slow=17,SNR=2.6
STKA PKPbc PKPbc 13 29 29.0 -1.0
comp=Z,7.6nm,0.6s,baz=74,slow=2.0,SNR=17
STKA Stephens Creek 153.24 237 PKP PKPdf 13 29 20.8 -1.7
STKA *e*PKPbc PKPbc 13 29 28.9 -1.1
STKA PKPbc PKPbc 13 29 29.0 -1.0
WB2 Warramunga Arr 162.10 264 *e*PKP PKPdf 13 29 31.1 -2.4
WRAB Tennant Creek 162.11 264 *i* PKIKP PKPdf 13 29 37.7 +4.2
WRAB Tennant Creek 162.11 264 PFAKE 13 29 50.0 +17
WRAB LR LR
comp=Z,406nm,20.0s
WRA Warramunga Arr 162.12 264 PKP PKPdf 13 29 32.1 -1.4
comp=Z,3.7nm,0.7s,baz=55,slow=0.8,SNR=43
AS31 Alice Springs 162.18 252 *e*PKP PKPdf 13 29 30.9 -2.6
AS31 *e*PKPdf PKPdf 13 29 31.8 -1.8
ASAR Alice Springs 162.18 252 PKP PKPdf 13 29 32.3 -1.2
comp=Z,2.2nm,0.7s,baz=96,slow=1.4,SNR=42
ASAR PKPab PKPab 13 30 19.4 -1.0
comp=Z,6.3nm,0.8s,baz=118,slow=4.1,SNR=14
ASPA Alice Springs 162.18 252 *e*PKP PKPdf 13 29 30.9 -2.6
ASPA Alice Springs 162.18 252 *e*PKP PKPab 13 30 19.3 -1.1
KAKA Kakadu 162.41 289 *e*PKP PKPab 13 30 19.9 -1.5
comp=Z,9.7nm,0.6s
FITZ Fitzroy Crossi 170.23 274 *e*PKP PKPdf 13 29 38.3 -1.6
comp=Z,8.3nm,1.0s

HEL 14 13:21:37.4, 6085N×2914E, h0km, ML2.0(FIA0)**, Explosion, Baltic States - Belarus - Northwestern Russia**

IDC 14 13:34:23.9±1.7**, 692S×12089E, h0km, mb3.1**/2**, mb1 3.6**/4**, mb1mx3.4**/16**, mbtmp3.4**/4**, ML3.4**/2**, Error ellipse: s-maj=177.5km s-min=24.2km az=58.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.04**	**158**	Pn	Pn	13 37 18.0	+1.3
	0.0nm,0.3s,baz=331,slow=19,SNR=3.6						
FITZ				Sn	Sn	13 39 20.5	-11
	0.2nm,0.3s,baz=147,slow=9.3,SNR=6.1						
WRA	**Warramunga Arr**	**18.38**	**136**	P	Pn	13 38 40.8	+0.6
	0.3nm,0.3s,baz=307,slow=12,SNR=21						
WRA				S	Sn	13 42 01.2	-4.8
	0.1nm,0.3s,baz=314,slow=24,SNR=5.1						
ASAR	**Alice Springs**	**20.82**	**144**	P	P	13 39 06.4	-0.5
	0.2nm,0.5s,baz=327,slow=13,SNR=6.0						
MKAR	**Makanchi Array**	**63.51**	**331**	P	P	13 44 56.0	+0.1
	0.2nm,0.3s,baz=125,slow=9.1,SNR=2.6						

MAN 14 13:47:42.1, 1776N×12268E, h16km, mb2.6, ML4.1, MS2.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.73**	**199**	⇑*i*P	Pg	13 47 56.8	+0.4
PALP				*i* S	Sg	13 48 07.3	+1.2
PALP	**Palanan**	**0.73**	**199**	*e*P	Pg	13 47 56.0	-0.3
SGCP	**Mt. Cagua**	**0.77**	**309**	*e*P	Pb	13 47 57.0	0.0
CAUP	**Cauayan**	**1.15**	**225**	*e*P	Pn	13 48 03.9	+0.4
CAUP				*e*S	Sb	13 48 20.4	+2.2
APYP	**Conner**	**1.37**	**275**	*e*P	Pn	13 48 05.6	-1.0
APYP				*e*S	Sn	13 48 21.6	-2.8
ABRA	**Dolores**	**1.88**	**267**	*e*P	Pn	13 48 12.9	-0.5
BALP	**Baler**	**2.27**	**208**	*e*P	Pn	13 48 19.1	+0.2

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*ISCJB **14** 13:49:07.0±0.9, 209S±02×179.1W±02, h650km, mb3.5/9, Error ellipse: s-maj=33.0km s-min=16.2km az=140.0*
*IDC **14** 13:49:11.3±5.5, 2088S×179.16W, h692km±70km, mb2.8/8, mb1 3.1/8, mb1mx3.0/13, mbtmp3.9/8, Error ellipse: s-maj=31.3km s-min=30.2km az=21.0*
*NEIC **14** 13:49:11.7±0.6, 2085S×17920W, h700km, mb4.0/2, Error ellipse: s-maj=25.7km s-min=12.4km az=160.0*
ISC 14 13:49:08.5±0.9**, 210S**±02×**1790W**±02**, h650km, n18,** σ**0ˢ38**/17**, mb3.5**/9**, 2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.49**	**265**	P	**P**	**13 54 48.7**	**+0.1**
	2.2nm,0.4s,mb4.1,baz=85,slow=12,SNR=3.9						
CTA	**Charters Tower**	**32.49**	**265**	P	**P**	**13 54 48.7**	**+0.1**
CTAO	**Charters Tower**	**32.49**	**265**	*e*P	**P**	**13 54 48.9**	**+0.3**
	1.8nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**36.72**	**244**	P	**P**	**13 55 23.6**	**+0.1**
	1.5nm,0.8s,mb3.6,baz=326,slow=19,SNR=4.2						
STKA	**Stephens Creek**	**36.72**	**244**	*e*P	**P**	**13 55 23.9**	**+0.3**
AS31	**Alice Springs**	**43.47**	**257**	⇓*i*P	**P**	**13 56 17.1**	**+0.2**
ASAR	**Alice Springs**	**43.48**	**257**	P	**P**	**13 56 17.2**	**+0.3**
	2.0nm,0.5s,mb3.8,baz=92,slow=7.9,SNR=83						
ASAR				PcP	PcP	13 57 48.5	-1.1
	0.2nm,0.8s,baz=112,slow=4.4,SNR=4.2						
ASPA	**Alice Springs**	**43.48**	**257**	⇓*i*P	**P**	**13 56 17.1**	**+0.1**
WB2	**Warramunga Arr**	**43.57**	**263**	*e*P	**P**	**13 56 17.0**	**-0.7**
WRAB	**Tennant Creek**	**43.57**	**263**	*e*P	**P**	**13 56 17.3**	**-0.4**
	1.9nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**43.58**	**263**	P	**P**	**13 56 17.3**	**-0.5**
	1.1nm,0.3s,mb3.6,baz=97,slow=7.5,SNR=100						
FITZ	**Fitzroy Crossi**	**52.01**	**263**	P	**P**	**13 57 20.8**	**+0.7**
	0.7nm,0.4s,mb3.2,baz=240,slow=14,SNR=8.4						
VNDA	**Vanda**	**57.38**	**185**	P	**P**	**13 57 57.2**	**-0.1**
	0.3nm,0.5s,mb2.7,baz=343,slow=2.7,SNR=5.7						
VNDA	**Vanda**	**57.38**	**185**	P	**P**	**13 57 57.2**	**-0.1**
NVAR	**Mina Array Bea**	**82.02**	**44**	P	**P**	**14 00 22.9**	**+0.3**
	0.5nm,0.6s,mb3.2,baz=228,slow=8.0,SNR=4.4						
NVAR	**Mina Array Bea**	**82.02**	**44**	P	**P**	**14 00 22.9**	**+0.3**
PDAR	**Pinedale Array**	**89.95**	**44**	P	**P**	**14 01 00.2**	**-0.2**
	0.3nm,0.5s,mb3.4,baz=207,slow=5.0,SNR=3.8						
AKASG	**Malin Array Be**	**142.93**	**330**	PKP	PKPdf	14 07 27.1	-2.8
	1.6nm,0.4s,baz=43,slow=4.1,SNR=15						

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*NIED **14** 14:15:00, 4640N×15380E, h11km, Mw4.7 Best double couple: $M_0$1.06000×10^16 NP1:ϕ_s59.00000°, δ84.00000°, λ119.00000°. NP2:ϕ_s159.00000°, δ30.00000°, λ11.00000°.*
*SKHL **14** 14:15:47.6±0.1, 4580N×15440E, h39km±3km, mb5.3/8, mbv5.4/4, ms4.6/6, msh5.5/4*
*IDC **14** 14:15:51.9±0.5, 4653N×15330E, h0km, mb4.6/18, mb1 4.7/19, mb1mx4.7/23, mbtmp4.6/19, ML3.6/1, MS4.1/12, Ms1 4.1/12, ms1mx3.8/28, Error ellipse: s-maj=17.7km s-min=13.8km az=116.0*
*JMA **14** 14:15:52.8±0.9, 4638N×15384E, h30km, M5.1*
*BJI **14** 14:15:52.3, 4670N×15336E, h12km, mB5.0, mb4.9, Ms4.5, Msz4.3*
*NEIC **14** 14:15:54.0±0.3, 4651N×15327E, h10km, mb5.0/69, MS4.5/4, Error ellipse: s-maj=7.4km s-min=4.6km az=143.0*
*HRVD **14** 14:15:54.0±0.5, 4647N×15349E, h19km±1km, MW4.8/42, Centroid moment Tensor Solution. LP body waves: s18,c19;Mantle waves: s42,c64; Half duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}1.58±.15; $M_{\theta\theta}$-0.74±.10; $M_{\phi\phi}$-0.83±.10; $M_{r\theta}$0.58±.21; $M_{\theta\phi}$-0.97±.05; $M_{\phi r}$0.51±.20; Best double couple: $M_0$1.84100×10^16 NP1:ϕ_s221.00000°, δ33.00000°, λ86.00000°. NP2: ϕ_s46.00000°, δ57.00000°, λ93.00000°. Principal axes: T 1.7510, Plg77.0000°, Azm325.0000°; N 0.1820, Plg2.0000°, Azm225.0000°; P -1.9310, Plg12.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **14** 14:15:55.1±1.0, 4646N±004×15320E±004, h26km±7km, mb4.9/115, MS4.4/30 Error ellipse: s-maj=6.7km s-min=3.4km az=132.1*
*MOS **14** 14:15:57.8±1.0, 4653N×15313E, h46km, mb5.2/55, MS4.4/21, Error ellipse: s-maj=9.0km s-min=4.9km az=110.3*
*SZGRF **14** 14:15:59.5, 4679N×15388E, h33km, mb4.9, Kuril Islands, Russia*
ISC 14 14:15:58.5±0.4**, 4656N**±004×**15314E**±004**, h38km**±4km**, h17km**±7.3km**:pP-P, n435,** σ**1ˢ18**/446**, mb4.9**/115**, MS4.4**/30**, 84C-33D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.91**	**252**	*i* P	**Pn**	**14 16 55.5**	**-0.6**
KUR				AMB	AMB	14 16 56.2	
	4µm,2.0s						
KUR				AMB	AMB	14 16 56.2	
	230nm,0.6s						
KUR				AMB	AMB	14 16 56.2	
	190nm,0.6s						
KUR				AMB	AMB	14 16 56.2	
	1µm,0.6s						
KUR				sP		14 17 12.5	
KUR				*i* S	**Sn**	**14 17 43.2**	**+2.4**
KUR				A		14 17 58.4	
	920nm,0.8s						
KUR				A		14 17 58.4	
	1µm,0.8s						
KUR				A		14 17 59.0	
	10µm,2.0s						
KUR				A		14 17 59.0	
	4µm,2.0s						
KUR				AMS	AMS	14 18 33.0	
	5µm,14.0s						
KUR				AMS	AMS	14 18 33.0	
	5µm,14.0s						
KUR				AMS	AMS	14 18 33.0	
	6µm,14.0s						
KUR	**Kuril'sk**	**3.91**	**252**	⇓*i*PN	**Pn**	**14 16 55.5**	**-0.6**
KUR				*i* S	**Sn**	**14 17 43.2**	**+2.4**
KUR				pmax	pmax		
	comp=N,230nm,0.6s						
KUR				pmax	pmax		
	comp=E,190nm,0.6s						
KUR				pmax	pmax		
	comp=Z,1µm,0.6s						
KUR				pmax	pmax		
	comp=Z,4µm,2.0s						
KUR				smax			
	comp=N,920nm,0.8s						
KUR				smax			
	comp=E,1µm,0.8s						
KUR				smax			
	comp=N,10µm,2.0s						
KUR				smax			
	comp=E,4µm,2.0s						
KUR				MLR	MLR		
	comp=N,5µm,14.0s						
KUR				MLR	MLR		
	comp=E,5µm,14.0s						
KUR				MLR	MLR		
	comp=Z,6µm,14.0s						
SKR	**Severo-Kuril's**	**4.57**	**25**	*e*P	**Pn**	**14 17 01.2**	**-3.9**
SKR				AMB	AMB	14 17 03.0	
	comp=Z,600nm,2.0s						
SKR				AMB	AMB	14 17 03.0	
	comp=Z,110nm,1.0s						
SKR				AMB	AMB	14 17 03.0	
	comp=Z,200nm,1.0s						
SKR				AMB	AMB	14 17 03.0	
	comp=Z,270nm,1.0s						
SKR				sP		14 17 18.4	
SKR				*i* S	**Sn**	**14 17 56.5**	**-0.5**
SKR				A		14 18 19.5	
	comp=Z,480nm,0.7s						
SKR				A		14 18 19.5	
	comp=Z,320nm,0.7s						
SKR				A		14 18 19.5	
	comp=Z,200nm,0.7s						
SKR				A		14 18 20.0	
	comp=Z,2µm,2.0s						
SKR				A		14 18 20.0	
	comp=Z,2µm,2.0s						
SKR				A		14 18 20.0	
	comp=Z,1µm,2.0s						
SKR				AMS	AMS	14 19 28.0	
	comp=Z,2µm,12.0s						
SKR				AMS	AMS	14 19 28.0	
	comp=Z,2µm,12.0s						
PAU	**Pauzhetka**	**5.47**	**25**	*e*P	**Pn**	**14 17 16.7**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**5.72**	**246**	*e*P	**Pn**	**14 17 21.2**	**+0.3**
YUK				AMB	AMB	14 17 29.2	
	comp=Z,290nm,0.5s						
YUK				AMB	AMB	14 17 29.2	
	comp=Z,350nm,0.5s						
YUK				AMB	AMB	14 17 29.2	
	comp=Z,420nm,0.5s						
YUK				AMB	AMB	14 17 33.0	
	comp=Z,1µm,1.0s						
YUK				AMB	AMB	14 17 33.0	
	comp=Z,2µm,1.0s						
YUK				*e*S	**Sn**	**14 18 31.3**	**+6.0**
YUK				A		14 18 37.0	
	comp=Z,640nm,0.7s						
YUK				A		14 18 37.0	
	comp=Z,980nm,0.7s						
YUK				A		14 18 41.5	
	comp=Z,3µm,1.0s						
YUK				A		14 18 41.5	
	comp=Z,5µm,3.0s						
YUK				AMS	AMS	14 19 38.0	
	comp=Z,3µm,17.0s						
YUK				AMS	AMS	14 19 38.0	
	comp=Z,2µm,17.0s						
YUK	**Yuzh-Kuril'sk**	**5.72**	**246**	*e*PN	**Pn**	**14 17 21.2**	**+0.3**
YUK				*e*S	**Sn**	**14 18 31.3**	**+6.0**

YUK pmax pmax
comp=E,350nm,0.5s
YUK pmax pmax
comp=Z,420μm,0.5s
YUK pmax pmax
comp=N,290nm,0.4s
YUK pmax pmax
comp=N,1μm,1.0s
YUK pmax pmax
comp=Z,2μm,1.0s
YUK pmax pmax
comp=E,2μm,1.3s
YUK smax
comp=N,640nm,0.6s
YUK smax
comp=E,980nm,0.8s
YUK smax
comp=N,5μm,2.5s
YUK smax
comp=E,3μm,1.0s
YUK MLR MLR
comp=Z,2μm,18.0s
YUK MLR MLR
comp=N,3μm,16.0s
NEM2 Nemuro 2 6.14 241 P **Pn 14 17 25.5 -1.2**
NEM2 eS **Sn 14 18 33.5 -2.2**
JRA Rausu 6.24 248 P **Pn 14 17 30.0 +2.0**
JNK Nakash 6.66 246 P **Pn 14 17 35.1 +1.2**
JAK Akkeshi 6.99 242 P **Pn 14 17 37.3 -1.0**
JAK eS **Sn 14 18 54.3 -2.1**
JTKR Abashiri--Toko 7.01 252 P **Pn 14 17 40.7 +2.1**
YSS Yuzh-Sakhalins 7.14 277⇑ eP **Pn 14 17 44.9 +4.4**
YSS AMB AMB 14 17 46.8
comp=N,100nm,1.1s
YSS AMB AMB 14 17 46.8
comp=N,80nm,1.1s
YSS eS **Sn 14 19 09.7 +9.3**
YSS A 14 19 14.9
comp=N,70nm,1.0s
YSS AMS AMS 14 20 24.0
comp=N,1μm,15.0s
YSS AMS AMS 14 20 24.0
comp=N,2μm,15.0s
YSS Yuzh-Sakhalins 7.14 277⇑ ePN **Pn 14 17 44.9 +4.4**
YSS S **Sn 14 19 09.7 +9.3**
YSS pmax pmax
comp=E,100nm,1.1s
YSS pmax pmax
comp=Z,80nm,1.1s
YSS smax
comp=N,70nm,1.0s
YSS MLR MLR
comp=E,2μm,16.0s
YSS MLR MLR
comp=Z,2μm,16.0s
YSS MLR MLR
comp=N,1μm,14.0s
YSS Yuzh-Sakhalins 7.14 277 eP **Pn 14 17 44.9 +4.4**
comp=N,109nm,1.0s
JMP Maruseppu 7.36 253 P **Pn 14 17 45.8 +2.4**
PET Petropavlovsk 7.38 27 eP **Pn 14 17 42.7 -1.1**
PET AMB AMB 14 17 46.8
comp=N,100nm,13.0s
PET AMB AMB 14 17 48.0
comp=N,200nm,2.7s
PET AMB AMB 14 17 52.4
comp=N,70nm,1.4s
PET eS **Sn 14 19 01.3 -5.0**
PET A 14 19 05.7
comp=N,100nm,0.6s
PET A 14 19 12.9
comp=N,600nm,2.9s
PET A 14 19 13.4
comp=N,400nm,7.7s
PET A 14 19 18.0
comp=N,130nm,0.9s
PET A 14 19 18.1
comp=N,130nm,1.2s
PET AMS AMS 14 20 25.1
comp=N,800nm,16.0s
PET AMS AMS 14 20 27.9
comp=N,900nm,17.0s
PET Petropavlovsk 7.38 27 ePN **Pn 14 17 46.4 +2.6**
PET Petropavlovsk 7.38 27 eP **Pn 14 17 42.1 -1.6**
comp=N,51nm,0.8s
PET eS **Sn 14 19 02.6 -3.6**
JAR Ashorobuto 7.41 247 P **Pn 14 17 45.1 +1.0**
JSE Soyaes 7.55 262 P **Pn 14 17 51.3 +5.2**
JOB Onbets 7.57 244 P **Pn 14 17 46.5 +0.2**
JOB eS **Sn 14 19 10.3 -0.5**
JKK2 Kamakawa 2 7.81 254 P **Pn 14 17 52.2 +2.5**
ASAJ Asahikawa 7.82 256 Pn **Pn 14 17 53.0 +3.3**
comp=N,4.2nm,0.3s,baz=87,slow=14,SNR=86
ASAJ LR LR 14 20 45.7
comp=N,832nm,19.9s,baz=191,slow=37
ASAJ Asahikawa 7.82 256 P **Pn 14 17 53.4 +3.7**
ASAJ Asahikawa 7.82 256 PN **Pn 14 17 53.0 +3.3**
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ MLR MLR
comp=Z,833nm,19.9s
UGL Uglegorsk 7.87 293 eP **Pn 14 17 56.0 +5.6**
UGL AMB AMB 14 17 57.5
comp=Z,340nm,1.2s
UGL AMB AMB 14 18 00.0
comp=Z,800nm,8.0s
UGL AMS AMS 14 21 00.0
comp=Z,2μm,15.0s
UGL AMS AMS 14 21 00.0
comp=Z,3μm,15.0s
UGL AMS AMS 14 21 00.0
comp=Z,3μm,15.0s
JWK2 Keihoku 7.94 265 P **Pn 14 17 57.5 +6.2**
JCH Churui 8.02 244 P **Pn 14 17 52.4 0.0**
JCH eS **Sn 14 19 19.3 -2.5**
TYV Tymovskoe 8.16 306 eP **Pn 14 17 58.5 +4.1**
TYV AMB AMB 14 18 09.0
comp=Z,80nm,1.0s
TYV AMB AMB 14 18 09.0
comp=Z,50nm,1.0s
TYV AMB AMB 14 18 09.0
comp=Z,190nm,1.0s
JSS Shosan 8.22 259 P **Pn 14 17 59.6 +4.4**
JFR Furan 8.22 249 P **Pn 14 17 57.0 +1.7**
JAB Ashibetsu 8.31 252 P **Pn 14 17 59.4 +2.9**
JEM Erimo 8.48 241 P **Pn 14 17 59.2 +0.4**
JEM eS **Sn 14 19 30.2 -3.0**
JHR Hokuryu 8.54 255 P **Pn 14 18 03.1 +3.4**
JBT2 Biratori 2 8.56 248 P **Pn 14 18 00.5 +0.6**
JBT2 eS **Sn 14 19 34.9 -0.2**
JNBK Urakawa-nobuka 8.58 244 P **Pn 14 17 58.6 -1.5**
JNBK eS **Sn 14 19 33.7 -1.9**
JEW Eniwo 9.12 250 P **Pn 14 18 09.1 +1.6**
JNB Noboribetsu 9.56 249 P **Pn 14 18 14.4 +0.8**
JNB eS **Sn 14 19 58.3 -1.5**
JKB Kayabe 9.86 246 P **Pn 14 18 16.6 -1.2**
JKB eS **Sn 14 20 02.2 -5.0**
JSH Shimam 10.12 252 P **Pn 14 18 22.2 +0.9**
JYM2 Yakumo 2 10.17 249 P **Pn 14 18 22.0 +0.1**
JSR Shiriuchi 10.45 246 P **Pn 14 18 25.4 -0.3**
JANG Nango 10.46 238 P **Pn 14 18 22.3 -3.7**
JANG eS **Sn 14 20 13.6 -8.3**
JTM Tenmabayashi 10.47 241 P **Pn 14 18 24.0 -2.1**
JTM eS **Sn 14 20 15.3 -6.8**
JTH Tanohata 10.55 235 P **Pn 14 18 21.7 -5.5**
JTH eS **Sn 14 20 14.9 -9.1**
JOSM Okushiri--Mats 10.76 250 P **Pn 14 18 30.3 +0.2**
JRG Rokugo 11.62 236 P **Pn 14 18 38.7 -3.1**
TEY Ternei 11.65 268 eP **Pn 14 18 42.5 +0.4**
TEY erx rx 14 18 47.0
TEY AMS AMS 14 23 28.0
comp=Z,900nm,15.0s
TEY AMS AMS 14 23 28.0
comp=Z,1μm,15.0s
JOG2 Oga 2 11.78 240 P **Pn 14 18 41.3 -2.6**
JIO Ouri 11.88 231 P **Pn 14 18 39.6 -5.7**
JIO eS **Sn 14 20 45.4 -11**
HABR Khabarovsk 12.38 285⇑ *i* PN **Pn 14 18 57.2 +5.1**
HABR e 14 21 20.0
HABR pmax pmax
comp=Z,40nm,1.7s
HABR MLR MLR
comp=Z,2μm,15.0s
JYA Atsumi 12.69 236 P **Pn 14 18 53.7 -2.7**
MA2 Magadan 13.11 355 ePN **Pn 14 19 04.1 +1.9**

JFY Yanaizu 13.53 232 P **Pn 14 19 05.3 -2.6**
EKMR Ekimchan 14.54 304 eP **Pn 14 19 22.4 +0.7**
EKMR AMB AMB 14 19 42.6
comp=Z,35nm,0.9s
KLR Kul'dur 14.59 288 eP **Pn 14 19 22.5 +0.2**
KLR eP 14 19 22.8
KLR erx rx 14 25 36.0
KLR Kul'dur 14.59 288 eP **Pn 14 19 22.5 +0.2**
KLR MLR MLR
comp=E,1μm,15.0s
KLR MLR MLR
comp=Z,2μm,15.0s
MJAR Matsushiro Arr 14.98 233 Pn **Pn 14 19 24.1 -3.4**
comp=Z,0.3nm,0.3s,baz=26,slow=13,SNR=20
MAJO Matsushiro 14.98 233 eP **Pn 14 19 24.0 -3.5**
MAJO pmax pmax
comp=Z,41nm,0.8s
MAJO Matsushiro 14.98 233 eP **Pn 14 19 24.0 -3.5**
comp=Z,41nm,0.8s
MAT Matsushiro 14.98 233 P **Pn 14 19 23.6 -3.9**
MAT Matsushiro 14.98 233 eP **Pn 14 19 24.0 -3.5**
MAT pmax pmax
comp=Z,25nm,1.3s
MAT Matsushiro 14.98 233 eP **Pn 14 19 24.0 -3.5**
comp=Z,25nm,1.3s
VLA Vladivostok 15.45 265 *i* P **Pn 14 19 34.2 +0.6**
MDJ Mudanjiang 16.59 272 P **Pn 14 19 48.1 -0.1**
MDJ AMB AMB
comp=Z,37nm,1.0s
MDJ AMB AMB
comp=Z,249nm,8.7s
MDJ Mudanjiang 16.59 272 eP **Pn 14 19 48.0 -0.2**
comp=Z,126nm,1.5s
BMKR Bomnak 17.36 307 eP **Pn 14 20 03.0 +5.1**
BMKR AMB AMB 14 20 04.0
comp=Z,35nm,0.9s
CN2 Changchun 19.67 272 eP **Pn 14 20 22.9 -3.0**
CN2 AMB AMB
comp=Z,30nm,1.0s
CN2 LR LR
comp=N,600nm,16.0s
CN2 LR LR
comp=E,600nm,16.0s
CN2 LR LR
comp=Z,600nm,16.0s
CLNS Chul'man 20.15 311 eP **P 14 20 30.8 +1.3**
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS pmax pmax
comp=Z,20nm,1.0s
CLNS pmax pmax
comp=N,28nm,1.3s
CLNS MLR MLR
comp=E,2μm,15.0s,MS4.6
CLNS MLR MLR
comp=Z,2μm,15.0s,MS4.6
CLNS MLR MLR
comp=N,1μm,14.0s,MS4.6
YAK Yakutsk 20.49 328 eP **P 14 20 33.3 +0.2**
YAK e 14 20 52.5
YAK eS **S 14 24 23.2 +2.9**
YAK e 14 24 41.4
YAK eSS 14 24 46.4
YAK eSSS 14 25 00.0
YAK e 14 31 58.5
YAK pmax pmax
comp=Z,15nm,0.8s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=N,13nm,1.3s
YAK pmax pmax
comp=E,13nm,0.9s
YAK smax
comp=N,11nm,1.5s
YAK smax
comp=E,4.0nm,0.8s
YAK MLR MLR
comp=Z,310nm,16.0s,MS3.8
YAK MLR MLR
comp=N,355nm,15.0s,MS3.9
YAK MLR MLR
comp=E,215nm,14.0s,MS3.9
YAK Yakutsk 20.49 328 eP **P 14 20 33.0 -0.2**
comp=E,27nm,0.8s
INCN Inchon 21.60 255 eP **P 14 20 46.8 +1.8**
comp=E,58nm,0.8s,mb5.1
SNY Shenyang 21.65 268⇑ P **P 14 20 46.6 +1.0**
SNY AMB AMB
comp=Z,36nm,0.8s,mb4.8
SNY AMB AMB
comp=Z,510nm,8.5s
SNY LR LR
comp=E,408nm,12.7s
SNY LR LR
comp=Z,701nm,14.1s,MS4.2
JUR Ureshino 22.22 241 P **P 14 20 53.2 +1.5**
HIA Hailar 22.44 289 eP **P 14 20 51.9 -2.2**
HIA pmax pmax
comp=Z,16nm,1.0s
HIA Hailar 22.44 289 eP **P 14 20 51.9 -2.2**
comp=Z,16nm,1.0s,mb4.4
BILL Bilibino 22.57 13*c* iP **P 14 20 55.3 -0.1**
BILL pmax pmax
comp=Z,12nm,1.0s,mb4.3
BILL MLR MLR
comp=Z,400nm,19.0s,MS3.9
JFU Fukue jima 2 23.25 242 P **P 14 21 03.6 +1.0**
BJT Baijiatuan 27.51 270 eP **P 14 21 42.8 +1.4**
BJT pmax pmax
comp=Z,10.0nm,0.7s
BJT Baijiatuan 27.51 270 eP **P 14 21 42.8 +1.4**
comp=Z,10nm,0.7s,mb4.6
JOW Kunigami 27.83 234 P **P 14 21 44.2 0.0**
comp=Z,26nm,1.0s,mb4.8,baz=54,slow=7.3,SNR=3.6
NJ2 Nanjing 29.96 253 eP **P 14 22 03.4 +0.2**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
HHC Hu-ho-hao-te 30.32 274 eP **P 14 22 07.9 +1.5**
HHC AP pP 14 22 12.3 -4.7
HHC XP sP 14 22 15.0 -6.5
HHC PP PP 14 23 06.5 -8.7
HHC PCP PcP 14 25 08.9 +2.9
HHC S **S 14 27 05.5 +1.5**
HHC XS sS 14 27 12.8 -8.7
HHC SS SS 14 28 43.8 -30
HHC SCP ScP 14 28 49.1 +3.8
HHC PCS PcS 14 28 51.3 +1.7
HHC SCS ScS 14 32 43.8 +2.5
HHC AMB AMB
comp=Z,53nm,0.8s,mb5.3
HHC AMB AMB
comp=Z,311nm,5.0s
HHC LR LR
comp=N,552nm,16.2s,MS4.4
HHC LR LR
comp=E,287nm,14.8s,MS4.4
HHC LR LR
comp=Z,612nm,16.9s,MS4.3
ULN Ulaanbaatar 30.98 290 P **P 14 22 10.4 -1.8**
SNR=7.3
ULN Ulaanbaatar 30.98 290⇑ eP **P 14 22 12.6 +0.4**
SONM Songino Array 31.41 290 P **P 14 22 15.3 -0.7**
comp=Z,1.8nm,0.7s,mb4.0,baz=68,slow=9.1,SNR=13
SONM PcP PcP 14 25 08.4 -0.5
comp=Z,1.7nm,0.9s,baz=134,slow=2.4,SNR=5.0
SONM LR LR 14 36 10.5
comp=Z,703nm,18.3s,MS4.4,baz=54,slow=39
SONM Songino Array 31.41 290 P **P 14 22 15.3 -0.7**
SONM 14 25 08.4
TLY Talaya 32.28 298 eP **P 14 22 22.3 -1.3**
TLY pmax pmax
comp=Z,12nm,1.2s,mb4.6
TLY MLR MLR
comp=Z,847nm,15.0s,MS4.6
ZAK Zakamensk 32.77 295⇑ iP **P 14 22 27.3 -0.6**
ZAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
WHN Wuhan 33.90 256 eP **P 14 22 38.5 +0.7**
IMA2 Indian Mountai 33.95 36 eP **P 14 22 36.1 -2.1**
KDAK Kodiak Island 34.21 51 P **P 14 22 36.9 -3.5**
comp=Z,5.9nm,0.7s,mb4.6,baz=304,slow=7.5,SNR=5.3

XAN Xi'an 35.52 265 P **P 14 22 53.3 +1.6**
XAN AP pP 14 23 02.5 +0.1
XAN AMB AMB
comp=Z,13nm,1.5s,mb4.6
COLA College 36.27 38 *i* P **P 14 22 57.3 -0.9**
GTA Gaotai 39.02 279 eP **P 14 23 22.1 +0.7**
GTA AP pP 14 23 29.4 -2.7
GTA XP sP 14 23 34.3 -2.3
GTA PP PP 14 24 57.1 +5.9
GTA PPP 14 25 20.3
GTA PCP PcP 14 25 32.3 +1.2
GTA S **S 14 29 19.9 +2.1**
GTA XS sS 14 29 31.6 -4.0
GTA SS SS 14 32 02.3 -8.4
GTA AMB AMB
comp=Z,21nm,1.5s,mb4.7
GTA AMB AMB
comp=Z,303nm,6.8s
GTA LR LR
comp=N,293nm,19.0s,MS4.4
GTA LR LR
comp=E,350nm,14.5s,MS4.4
GTA LR LR
comp=Z,395nm,14.4s,MS4.4
CD2 Chengdu 40.88 265 P **P 14 23 38.5 +1.6**
CD2 AMB AMB
comp=Z,20nm,0.8s,mb4.8
GYA Guiyang 41.69 258⇑ *i* P **P 14 23 44.3 +0.8**
GYA AMB AMB
comp=Z,60nm,1.0s,mb5.2
KMI Kunming 45.23 260 ⇑P **P 14 24 13.4 +1.4**
KMI AMB AMB
comp=Z,26nm,1.1s,mb5.0
MKAR Makanchi Array 47.04 298 P **P 14 24 25.4 -0.8**
comp=Z,14nm,0.8s,mb4.9,baz=58,slow=9.2,SNR=70
MKAR Makanchi Array 47.04 298 *i* P **P 14 24 25.8 -0.5**
MKAR pmax pmax
comp=Z,14nm,0.9s
KURK Kurchatov 47.48 304 P **P 14 24 28.7 -1.1**
SNR=6.9
KURK Kurchatov 47.48 304 eP **P 14 24 28.7 -1.0**
KURK pmax pmax
comp=Z,25nm,0.8s,mb5.2
KURK Kurchatov 47.48 304 eP **P 14 24 28.7 -1.0**
comp=Z,25nm,0.8s,mb5.2
LSA Lhasa 50.30 273 P **P 14 24 54.6 +3.3**
LSA AMB AMB
comp=Z,30nm,0.8s,mb5.4
LSA Lhasa 50.30 273 eP **P 14 24 54.0 +2.7**
LSA pmax pmax
comp=Z,21nm,0.7s,mb5.3
LSA Lhasa 50.30 273 eP **P 14 24 54.0 +2.6**
comp=Z,20nm,0.7s,mb5.3
CHKZ Chkalovo 50.56 310 *i* P **P 14 24 51.0 -2.3**
CHKZ pmax pmax
comp=Z,20nm,0.8s,mb5.1
NANT Nan 50.93 255⇓ P **P 14 24 55.0 -1.0**
comp=Z,138nm,1.0s,mb5.8
BRVK Borovoye 51.03 310 P **P 14 24 56.3 -0.6**
SNR=8.4
BRVK Borovoye 51.03 310 eP **P 14 24 56.0 -0.8**
BRVK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BRVK Borovoye 51.03 310 eP **P 14 24 56.0 -0.8**
comp=Z,5.3nm,0.8s,mb4.5
YKA Yellowknife Ar 51.06 37 P **P 14 24 54.9 -2.1**
comp=Z,5.2nm,0.7s,mb4.6,baz=296,slow=7.2,SNR=9.8
YKA Yellowknife Ar 51.06 37 P **P 14 24 54.9 -2.1**
CHG Chiang Mai 52.09 257⇓ P **P 14 25 05.8 +1.0**
comp=Z,43nm,0.9s,mb5.4
CHTO Chiang Mai 52.09 257 P **P 14 25 06.9 +2.2**
SNR=6.6
CHTO Chiang Mai 52.09 257 eP **P 14 25 06.2 +1.4**
CHTO pmax pmax
comp=Z,36nm,0.9s,mb5.3
CHTO Chiang Mai 52.09 257 eP **P 14 25 06.2 +1.5**
comp=Z,36nm,0.9s,mb5.3
TKM2 Tokmak 2 53.10 296 P **P 14 25 12.7 +0.5**
SNR=6.7
TKM2 Tokmak 2 53.10 296 *i* P **P 14 25 11.4 -0.8**
TKM2 pmax pmax
comp=Z,11nm,1.0s,mb4.7
CHMS Chumysh 53.58 297 P **P 14 25 16.7 +1.0**
SNR=5.8
USP Ospennovka 53.59 297 P **P 14 25 16.4 +0.6**
SNR=19
KBK Karagaybulak 53.64 296 P **P 14 25 17.0 +0.8**
SNR=5.8
KZA Kyzart 53.77 296 P **P 14 25 18.7 +1.6**
SNR=10
AAK Ala-Archa 53.93 296 P **P 14 25 18.9 +0.6**
SNR=5.5
AAK Ala-Archa 53.93 296 P **P 14 25 17.8 -0.5**
SNR=6.7
AAK Ala-Archa 53.93 296⇑ eP **P 14 25 17.6 -0.7**
AAK pmax pmax
comp=Z,20nm,1.3s,mb4.9
AAK MLR MLR
comp=Z,600nm,20.0s,MS4.7
SVE Sverdlovsk 53.98 317 eP **P 14 25 15.8 -2.9**
SVE *e* 14 26 26.0
SVE MLR MLR
comp=N,200nm,14.0s,MS4.6
SVE MLR MLR
comp=E,300nm,14.0s,MS4.6
SVE MLR MLR
comp=Z,400nm,14.0s,MS4.6
EKS2 Erkin-Say 54.36 297 P **P 14 25 22.2 +0.7**
SNR=14
AML Almayashu 54.70 296 P **P 14 25 25.2 +1.3**
SNR=6.9
GUN Gumba 55.03 275 eP **P 14 25 28.1 +1.8**
comp=Z,44nm,0.7s,mb5.6
ARU Arti 55.16 318⇑ *i* P **P 14 25 25.6 -1.6**
ARU *e* 14 26 23.2
ARU *e* 14 27 28.5
ARU eS **S 14 33 06.7 -1.0**
ARU eSS SS 14 36 48.6 -3.4
ARU pmax pmax
comp=Z,11nm,0.8s,mb4.9
ARU MLR MLR
comp=Z,300nm,17.0s,MS4.4
ARU MLR MLR
comp=N,100nm,16.0s,MS4.3
ARU MLR MLR
comp=E,200nm,18.0s,MS4.3
ARU Arti 55.16 318 eP **P 14 25 25.3 -1.9**
comp=E,11nm,0.8s,mb5.0
KKN Kakani 55.52 275 eP **P 14 25 31.6 +1.8**
comp=E,52nm,0.7s,mb5.7
KKN Kakani 55.52 275 eP **P 14 25 31.6 +1.8**
KKN pmax pmax
comp=Z,52nm,0.7s,mb5.7
PKI Pulchoki 55.57 275 eP **P 14 25 31.8 +1.6**
comp=Z,114nm,1.3s,mb5.8
PKI Pulchoki 55.57 275 eP **P 14 25 31.8 +1.6**
PKI pmax pmax
comp=Z,114nm,1.3s,mb5.7
DMN Daman 55.76 275 eP **P 14 25 33.6 +2.1**
comp=Z,211nm,1.3s,mb6.0
GKN Gorkha 55.83 276 eP **P 14 25 33.8 +1.8**
comp=Z,146nm,1.1s,mb5.9
KK31 Karatay Array 56.10 299 *i* P **P 14 25 32.8 -1.2**
KK31 pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KOLN Koldanda 56.69 277 eP **P 14 25 40.1 +1.9**
comp=Z,131nm,1.2s,mb5.8
KEV Kevo 57.52 341 ep **P 14 25 38.6 -5.5**
comp=Z,0.9nm,0.4s,mb4.2
KEV Kevo 57.52 341 eP **P 14 25 38.6 -5.5**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
J05A Fort Rock 57.80 59⇓ P **P 14 25 47.0 +1.0**
baz=58
LGTI Lohaghat 57.92 280 eP **P 14 25 51.5 +4.6**
ARCES ARCESS Array B 58.03 341 P **P 14 25 47.0 -0.7**
comp=Z,5.4nm,0.8s,mb4.6,baz=7.8,slow=9.8,SNR=7.7
ARCES LR LR 14 53 25.2
comp=Z,197nm,20.8s,MS4.2,baz=78,slow=39
ARCES ARCESS Array B 58.03 341 P **P 14 25 47.0 -0.7**
ARCES LR LR 14 53 25.2
M04C Macdoel 58.31 61⇑ P **P 14 25 51.5 +1.9**
baz=58
I07A Izee 58.35 58⇑ P **P 14 25 51.6 +1.7**
baz=58
J06A Christmas Vall 58.46 59⇓ P **P 14 25 52.3 +1.7**

baz=58
WALA Waterton Lakes 58.55 50 *e*P P 14 25 49.9 -1.3
comp=Z,12nm,1.2s,mb4.8
O02C Red Bluff 58.69 63 ⇑P P 14 25 53.1 +0.9
baz=58
P01C Double 8 Ranch 58.77 64 ⇑P P 14 25 54.7 +2.0
baz=58
AKTO Aktyubinsk 58.86 312 *i* P P 14 25 49.8 -3.6
M05C Lookout 58.98 61 ⇑P P 14 25 56.8 +2.5
baz=59
I08A Drewsey 59.00 57 ⇓P P 14 25 56.4 +2.1
baz=59
GASB Alder Springs 59.04 64 ⇑P P 14 25 55.8 +1.1
baz=59
K08A Mann Creek Ran 59.75 58 ⇑P P 14 25 59.0 -0.6
baz=60
MSO Missoula 59.86 52 *e*P P 14 26 02.7 +2.4
comp=Z,14nm,1.3s,mb4.8
OHCM Honcut 60.00 63 *e*P P 14 26 02.2 +1.0
N06A Buffalo Meadow 60.15 61 ⇓P P 14 26 01.2 -1.1
baz=60
M07A Soldier Meadow 60.16 60 ⇑P P 14 26 02.1 -0.2
baz=60
CHMT Chamberlain Mo 60.19 52 *e*P P 14 26 01.2 -1.3
K09A Rome 60.22 58 ⇑P P 14 26 03.6 +0.9
baz=60
KLMR Klimovskoe 60.28 329 *e*P P 14 26 00.6 -2.6
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
BEKR Beckwourth 60.36 62 ⇑P P 14 26 04.7 +0.9
baz=60
M08A Happy Creek Ra 60.59 60 ⇓P P 14 26 07.1 +1.8
baz=60
O07A Toulon 61.08 61 ⇑P P 14 26 10.5 +1.8
baz=61
EGMT Eagleton 61.37 49 *e*P P 14 26 09.1 -1.5
comp=Z,29nm,1.4s,mb5.2
JOF Joensuu 61.51 334 *e*p P 14 26 05.4 -6.1
comp=Z,0.9nm,0.4s,mb4.2
JOF Joensuu 61.51 334 *e*P P 14 26 05.4 -6.1
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
HLID Hailey 61.60 56 *e*P P 14 26 11.3 -0.9
comp=Z,5.9nm,1.3s,mb4.6
R06C Coleville 61.74 63 ⇑P P 14 26 14.3 +1.1
baz=62
BOZ Bozeman (W) 61.85 52 *e*P P 14 26 13.1 -0.8
BOZ pmax pmax
comp=Z,22nm,1.3s,mb5.1
BOZ Bozeman (W) 61.85 52 *e*P P 14 26 13.1 -0.8
comp=Z,22nm,1.3s,mb5.1
S06C San Francisco 61.90 64 ⇓P P 14 26 15.0 +0.8
baz=62
O09A Fish Creek Ran 62.09 60 ⇓P P 14 26 16.8 +1.3
baz=62
R07C Lee Vining 62.26 63 ⇑P P 14 26 18.0 +1.3
baz=62
NVAR Mina Array Bea 62.51 62 P P 14 26 17.7 -0.5
comp=Z,2.8nm,0.8s,mb4.4,baz=294,slow=7.8,SNR=15
M13A Montello 63.13 57 ⇑P P 14 26 21.3 -1.0
baz=63
HELL Mitchell Peak, 63.17 64 ⇓P P 14 26 21.2 -1.5
baz=63
IMW Indian Meadow 63.34 54 *e*P P 14 26 26.7 +2.9
comp=Z,13nm,1.3s,mb4.9
R09A Tonopah 63.38 62 ⇑P P 14 26 23.1 -1.0
baz=63
O12A Currie 63.48 59 ⇑P P 14 26 25.8 +1.1
baz=63
KAF Kangasniemi 63.62 335 *e*p P 14 26 21.3 -4.3
comp=Z,17nm,0.8s,mb5.1,baz=37,slow=6.2
KAF Kangasniemi 63.62 335 *e*P P 14 26 21.3 -4.3
KAF pmax pmax
comp=Z,17nm,0.8s,mb5.1
PKM Peak Mountain 63.80 66 ⇑P P 14 26 26.9 +0.1
baz=64
CWC Cottonwood Cre 63.90 64 ⇓P P 14 26 28.5 +1.0
baz=64
GRAC Grapevine Rang 63.98 63 ⇑P P 14 26 29.1 +1.1
baz=64
FIA1 FINESS Array S 64.22 335 *e*P P 14 26 27.9 -1.6
FINES FINESS Array B 64.22 335 P P 14 26 28.2 -1.3
comp=Z,12nm,0.8s,mb5.0,baz=46,slow=8.2,SNR=43
FINES LR LR 14 57 28.6
comp=Z,248nm,18.7s,MS4.4,baz=169,slow=39
FINES FINESS Array B 64.22 335 *i* P P 14 26 28.5 -1.0
FINES pmax pmax
comp=Z,12nm,0.8s
HWUT Hardware Ranch 64.47 56 P P 14 26 32.5 +1.3
comp=Z,9.9nm,1.3s,mb4.7
MPMC Manual Prospec 64.51 64 ⇓P P 14 26 29.7 -1.8
baz=64
FURC Furnace Creek, 64.64 63 ⇓P P 14 26 31.0 -1.3
baz=64
DUG Dugway 64.66 58 P P 14 26 34.6 +2.1
comp=Z,8.7nm,1.2s,mb4.7
PDAR Pinedale Array 64.84 54 P P 14 26 32.4 -1.2
comp=Z,3.2nm,0.8s,mb4.4,baz=290,slow=2.2,SNR=18
EDW2 Edwards Air Fo 64.96 65 ⇑P P 14 26 33.9 -0.5
baz=65
U10A Ash Meadows, A 65.00 63 ⇓P P 14 26 33.7 -0.9
baz=65
OBN Obninsk 65.47 326⇓*e*P P 14 26 36.6 -1.1
OBN *e* 14 28 58.7
OBN pmax pmax
comp=Z,12nm,0.5s,mb5.2
OBN MLR MLR
comp=Z,200nm,15.0s,MS4.4
TUQ Turquoise Mtn. 65.89 63 ⇑P P 14 26 39.5 -0.9
baz=66
ULM Lac du Bonnet 66.65 41 LR LR 14 55 30.9
comp=Z,70nm,20.1s,MS3.9,baz=18,slow=36
RSSD Black Hills 66.93 50 *e*P P 14 26 45.9 -1.2
RSSD pmax pmax
comp=Z,20nm,1.3s,mb5.0
RSSD Black Hills 66.93 50 *e*P P 14 26 45.9 -1.2
comp=Z,20nm,1.3s,mb5.0
IRM Iron Mountain 67.20 64 ⇓P P 14 26 48.2 -0.6
baz=67
W14A Seligman 67.78 62 ⇓P P 14 26 51.8 -0.7
baz=68
PV10 Paradox Valley 68.06 57 *e*P P 14 26 56.8 +2.6
WRAB Tennant Creek 68.33 199 *i* P P 14 26 54.8 -1.1
WRA Warramunga Arr 68.34 199 P P 14 26 54.5 -1.5
comp=Z,6.6nm,0.9s,mb4.7,baz=17,slow=6.7,SNR=26
X14A Yava 68.39 62 ⇓P P 14 26 57.3 +1.0
baz=68
NB2 NORSAR Subarra 68.41 341 P P 14 26 55.3 -1.1
comp=Z,17nm,0.8s,mb5.1,baz=27,slow=6.5
NOA NORSAR Array B 68.41 341 P P 14 26 55.1 -1.3
comp=Z,12nm,0.8s,mb5.0,baz=28,slow=6.3,SNR=28
NOA LR LR 15 01 50.3
comp=Z,89nm,18.5s,MS4.0,baz=40,slow=40
Y14A Wickenburg 68.68 63 ⇓P P 14 26 58.9 +0.8
baz=68
X15A Humboldt 68.78 62 ⇓P P 14 26 59.3 +0.6
baz=68
FITZ Fitzroy Crossi 68.99 208 P P 14 26 59.2 -0.8
comp=Z,6.4nm,0.9s,mb4.5,baz=48,slow=6.4,SNR=10
KONO Kongsberg 70.02 341 *i* P P 14 27 07.5 +1.1
KIV Kislovodsk 70.94 314⇓*e*P P 14 27 13.8 +1.8
KIV *e*S S 14 36 16.7 -8.3
KIV pmax pmax
comp=Z,11nm,0.8s,mb4.8
KIV MLR MLR
comp=Z,500nm,15.0s,MS4.9
SUW Suwalki 71.17 331 *e*P P 14 27 12.4 -1.0
AKASG Malin Array Be 71.71 326 P P 14 27 15.6 -1.1
comp=Z,19nm,0.8s,mb5.1,baz=33,slow=6.1,SNR=92
AKASG LR LR 15 01 35.5
comp=Z,170nm,18.1s,MS4.3,baz=40,slow=38
AKASG Malin Array Be 71.71 326 *i* P P 14 27 15.6 -1.0
AKASG pmax pmax
comp=Z,19nm,0.8s
AKASG Malin Array Be 71.71 326 P P 14 27 15.6 -1.1
AKASG LR LR 15 01 35.5
AKBB Malin Array Si 71.71 326 *e*P P 14 27 15.3 -1.3
AS31 Alice Springs 72.03 199 *e*P P 14 27 18.1 -0.5
ASAR Alice Springs 72.04 199 P P 14 27 18.1 -0.5
comp=Z,5.8nm,0.8s,mb4.6,baz=11,slow=5.8,SNR=109
GNI Garni 72.67 310*c i*P P 14 27 24.3 +2.0
GNI pmax pmax
comp=Z,29nm,1.6s
GNI MLR MLR
comp=Z,300nm,17.0s
SCHQ Schefferville 73.47 23 LR LR 15 04 01.9
comp=Z,73nm,18.6s,MS4.0,baz=341,slow=39

SIM Simferopol' 74.22 320 *e*P P 14 27 31.0 -0.5
SIM *e* 14 27 52.0
SIM pmax pmax
comp=Z,19nm,1.0s,mb5.0
SIM MLR MLR
comp=Z,290nm,18.6s,MS4.6
LVV L'vov 74.36 329 *e*P P 14 27 31.1 -1.2
KIS Kishinev 74.85 324 *e*P P 14 27 33.0 -2.1
KIS MLR MLR
comp=N,300nm,16.0s
KIS MLR MLR
comp=Z,300nm,16.0s,MS4.7
KIS MLR MLR
comp=Z,400nm,16.0s
OJC Ojcow 75.49 331 *e*P P 14 27 38.6 -0.2
STHS Stebnicka Huta 75.69 330 *e*P P 14 27 39.6 -0.3
STHS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
STHS Stebnicka Huta 75.69 330 *e*P P 14 27 39.6 -0.3
comp=Z,9.4nm,0.9s,mb4.7
KOLS Kolonicke sedl 75.73 329 *e*P P 14 27 39.8 -0.4
BURAR Bucovina Array 75.75 327⇑*i*P P 14 27 40.7 +0.4
BURAR Bucovina Array 75.75 327 ⇑P P 14 27 40.7 +0.3
OKC Ostrava-Krasne 76.36 332 *e*P P 14 27 43.9 +0.1
OKC AMS AMS 15 05 00.0
comp=Z,200nm,18.3s
NRDL Niedersach Rie 76.37 338 *e*P P 14 27 43.4 -0.4
comp=Z,6.0nm,0.7s,mb4.6
UPC Upice 76.46 333 *e*P P 14 27 44.2 -0.1
DPC Dobruska-Polom 76.50 333 *e*P P 14 27 44.8 +0.2
DPC AMS AMS 15 05 40.0
comp=Z,300nm,19.0s
CFR Carcaliu 76.60 323⇓*i*P P 14 27 45.3 +0.2
CFR Carcaliu 76.60 323 ⇓P P 14 27 45.3 +0.2
VRI Vrincioaia 76.61 325⇓*i*P P 14 27 46.2 +1.0
VRI Vrincioaia 76.61 325 ⇓P P 14 27 46.2 +1.0
MORC Moravsky Berou 76.61 332⇓*i*P P 14 27 45.0 -0.2
MORC Moravsky Berou 76.61 332 ⇓P P 14 27 45.0 -0.2
CLL Collm 76.64 336 *e*P P 14 27 44.6 -0.8
comp=Z,24nm,0.9s,mb5.1
CLL Collm 76.64 336 P P 14 27 44.5 -0.9
comp=Z,logA/T=1.4,mb5.1
CLL *i* *PP pP 14 27 48.8 -8.1
CLL *i* PCP PcP 14 27 58.1 +1.4
CLL Collm 76.64 336 *i* P P 14 27 44.5 -0.9
comp=Z,24nm,0.9s,mb5.1
CLL *i* pP pP 14 27 48.8 -8.1
CLL *i* PcP PcP 14 27 58.1 +1.4
CLL Collm 76.64 336 *i* P P 14 27 44.5 -0.9
CLL *i* pP 14 27 58.1 +1.2
CLL pmax pmax
comp=Z,72nm,0.9s,mb5.6
CLL MLR MLR
comp=Z,200nm,10.9s,MS4.7
CLL Collm 76.64 336 *i* P P 14 27 44.5 -0.9
comp=Z,24nm,0.9s,mb5.1
CLL *i* pP 14 27 58.1 +1.2
CLL LR LR
comp=Z,200nm,10.9s,MS4.7
PLOR Plostina 76.65 325⇑*i*P P 14 27 46.4 +1.0
KECS Kecovo 76.74 330 *e*P P 14 27 41.9 -4.1
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS Kecovo 76.74 330 *e*P P 14 27 41.9 -4.1
comp=Z,3.2nm,0.9s,mb4.2
BRG Berggiesshubel 76.76 335 *e*P P 14 27 45.0 -1.0
comp=Z,5.0nm,0.8s,mb4.5
BRG Berggiesshubel 76.76 335 *e*P P 14 27 45.2 -0.9
comp=Z,2.9nm,0.8s,mb4.3
BRG Berggiesshubel 76.76 335 *e*P P 14 27 45.2 -0.8
BRG pmax pmax
comp=Z,1.0nm,0.8s
PVCC Panska Ves 76.88 334 *e*P P 14 27 46.8 +0.1
PVCC AMS AMS 15 05 10.0
FBE Freiberg 76.89 335 *e*P P 14 27 47.0 +0.2
comp=Z,11nm,0.8s,mb4.8
CLZ Clausthal 76.89 337 *e*P P 14 27 46.7 -0.1
comp=Z,20nm,0.9s,mb5.0
CLZ Clausthal 76.89 337 *e*P P 14 27 46.7 -0.1
CLZ pmax pmax
comp=Z,20nm,0.9s,mb5.0
TIRR Tirgusor 77.07 323⇓*i*P P 14 27 48.1 +0.3
MLR Muntele Rosu 77.23 325⇑*i*P P 14 27 49.9 +1.2
MLR Muntele Rosu 77.23 325 P P 14 27 49.5 +0.8
MLR Muntele Rosu 77.23 325 ⇑P P 14 27 49.9 +1.2
MALT Malatya 77.29 313⇑*i*P P 14 27 50.8 +1.8
MALT Malatya 77.29 313 ⇑P P 14 27 50.9 +1.8
VYHS Vyhne 77.30 331 *e*P P 14 27 48.9 -0.2
VYHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
VYHS Vyhne 77.30 331 *e*P P 14 27 48.9 -0.2
comp=Z,4.7nm,1.0s,mb4.4
VRAC Vranov 77.33 333⇑*i*P P 14 27 49.8 +0.6
VRAC Vranov 77.33 333 ⇑P P 14 27 49.8 +0.6
PRU Pruhonice 77.36 334 *e*P P 14 27 50.2 +0.8
PRU AMS AMS 15 05 40.0
comp=Z,200nm,17.0s
DRGR 77.38 328⇑*i*P P 14 27 46.4 -3.1
DRGR 77.38 328 P P 14 27 51.0 +1.4
PSZ Piszkesteto 77.43 330⇓*e*P P 14 27 50.5 +0.7
PSZ Piszkesteto 77.43 330⇑*i*P P 14 27 49.2 -0.6
PSZ Piszkesteto 77.43 330 ⇑P P 14 27 49.2 -0.6
TANN Tannenbergstha 77.59 335 *e*P P 14 27 50.2 -0.5
comp=Z,5.0nm,0.9s,mb4.4
WERD Werda 77.61 336 *e*P P 14 27 50.3 -0.5
comp=Z,4.0nm,0.9s,mb4.3
VOIR 77.62 325⇑*i*P P 14 27 51.5 +0.6
VOIR 77.62 325 ⇑P P 14 27 51.5 +0.6
MOX Moxa 77.63 336 *e*P P 14 27 50.6 -0.3
comp=Z,9.0nm,0.9s,mb4.7
GUNZ Gunzen 77.68 336 *e*P P 14 27 50.8 -0.4
comp=Z,9.0nm,0.9s,mb4.7
TREC Trest 77.69 333 AMS AMS 15 06 30.0
comp=Z,300nm,19.0s
NKC Novy Kostel 77.76 335 AMS AMS 15 05 10.0
comp=Z,200nm,15.0s
UBBA Unterbreizbach 77.91 337 *e*P P 14 27 52.9 +0.4
comp=Z,8.0nm,1.1s,mb4.6
MANZ Manzenberg 78.08 335 *e*P P 14 27 53.4 0.0
comp=Z,5.0nm,0.9s,mb4.4
ZST Bratislava 78.13 332 *e*P P 14 27 53.3 -0.4
ZST Bratislava 78.13 332 *e*P P 14 27 53.4 -0.3
ROTZ Rotzenmuhle 78.25 335 *e*P P 14 27 54.4 0.0
comp=Z,9.0nm,1.0s,mb4.7
KHC Kasperske Hory 78.41 334 *e*P P 14 27 55.0 -0.3
KHC *e*pP pP 14 27 59.0 -7.8
KHC AMS AMS 15 06 00.0
comp=Z,200nm,15.6s
BR131 Keskin Array S 78.54 317 *e*P P 14 27 56.3 +0.4
comp=Z,8.9nm,1.0s,mb4.7
BRTR Keskin Array B 78.54 317 P P 14 27 56.5 +0.5
comp=Z,7.5nm,1.0s,mb4.6,baz=66,slow=3.0,SNR=29
BRTR LR LR 15 08 16.2
comp=Z,86nm,19.3s,MS4.1,baz=212,slow=40
BRTR Keskin Array B 78.54 317 *i* P P 14 27 56.5 +0.5
BRTR pmax pmax
comp=Z,8.0nm,1.0s
GRA1 Grafenberg Arr 78.60 336 *e*P P 14 27 56.4 +0.1
comp=Z,16nm,0.9s,mb5.0
GRF Grafenberg Arr 78.60 336 *e*P P 14 27 56.4 +0.1
comp=Z,16nm,0.9s,mb5.0
GRF Grafenberg Arr 78.60 336 *e*P P 14 27 56.4 +0.1
GRF pmax pmax
comp=Z,16nm,0.9s,mb5.0
GRF Grafenberg Arr 78.60 336 *e*P P 14 27 56.4 +0.1
GRF pmax pmax
comp=Z,16nm,0.9s,mb5.0
WET Wettzell 78.61 335 *e*P P 14 27 56.2 -0.2
comp=Z,8.0nm,0.8s,mb4.7
WET Wettzell 78.61 335 *e*P P 14 27 56.2 -0.2
WET pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
GEC2 GERESS Array S 78.63 334 *e*P P 14 27 56.1 -0.4
comp=Z,4.0nm,0.9s,mb4.3
GEC2 GERESS Array S 78.63 334 *e*P P 14 27 56.1 -0.4
GEC2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
GERES GERESS Array B 78.63 334 P P 14 27 55.9 -0.6
comp=Z,3.2nm,0.8s,mb4.3,baz=33,slow=5.1,SNR=21
GERES LR LR 15 06 30.0
comp=Z,231nm,18.1s,MS4.5,baz=185,slow=39
SOP Sopron 78.76 332⇓*e*P P 14 27 58.0 +0.8
STKA Stephens Creek 78.77 190 P P 14 27 56.0 -1.2
comp=Z,1.5nm,0.9s,mb3.9,baz=355,slow=10,SNR=3.1
MIB Mutribah 78.78 301 *e*P P 14 27 58.0 +0.7

MIB AMb AMB 14 28 00.5
comp=Z,84nm,0.8s,mb5.7
BZS Buzias 78.78 328⇓*i*P P 14 27 57.2 -0.1
BZS Buzias 78.78 328 ⇓P P 14 27 57.2 -0.1
TNS Taunus Mts 78.87 338 *e*P P 14 27 57.4 -0.4
comp=Z,13nm,0.9s,mb4.9
TNS Taunus Mts 78.87 338 *e*P P 14 27 57.4 -0.4
TNS pmax pmax
comp=Z,13nm,0.9s,mb4.9
KBD Kabd 79.03 301 *e*P P 14 27 59.3 +0.6
KBD AMb AMB 14 28 02.2
comp=Z,128nm,1.1s,mb5.8
MEM Membach 79.13 339 P P 14 27 59.2 0.0
NAY Al-Naaiem 79.24 301 *e*P P 14 28 00.3 +0.5
NAY AMb AMB 14 28 03.1
comp=Z,27nm,0.9s,mb5.2
RDF Al-Radifah 79.30 301 *e*P P 14 28 00.9 +0.8
RDF AMb AMB 14 28 03.8
comp=Z,67nm,1.1s,mb5.5
PKSM Moragy 79.34 330⇑*i*P P 14 27 59.3 -1.0
PKSM Moragy 79.34 330 ⇑P P 14 27 59.3 -1.0
BCLA Clavier 79.47 340 P P 14 28 01.4 +0.3
GIVF Givet 79.88 340 *e*P P 14 28 02.5 -0.8
BAIF Baives 80.07 340 *e*P P 14 28 03.5 -0.8
comp=Z,30nm,1.2s,mb4.8
BAIF Baives 80.07 340 *e*P P 14 28 03.5 -0.8
BAIF pmax pmax
comp=Z,15nm,1.2s,mb4.8
BAIF Baives 80.07 340 *e*P P 14 28 03.5 -0.8
comp=Z,15nm,1.2s,mb4.8
PERS Pernice 80.15 332 *e*P P 14 28 04.9 +0.1
KBA Koelnbreinsper 80.31 333 *i* P P 14 28 06.5 +0.8
SNR=11
GRUS Gruza 80.59 327 *i* P P 14 28 06.1 -1.1
BFO Black Forest 80.63 337 *e*P P 14 28 06.9 -0.4
comp=Z,13nm,1.0s,mb4.8
BFO Black Forest 80.63 337 *e*P P 14 28 06.9 -0.4
BFO pmax pmax
comp=Z,13nm,1.0s,mb4.8
WTTA Wattenberg 80.67 335 *i* P P 14 28 08.2 +0.7
SNR=9.2
WTTA Wattenberg 80.67 335 *i* P P 14 28 08.2 +0.7
DIVS Divcibare 80.68 328 *i* P P 14 28 06.5 -1.1
MOTA Moosalm 80.75 335 *i* P P 14 28 08.7 +0.8
SNR=7.8
WLS Welschbruch 80.81 338 *e*P P 14 28 07.9 -0.4
CDF Champ du Feu 80.84 338⇑*i*P P 14 28 07.9 -0.5
comp=Z,23nm,1.0s,mb4.8
CDF Champ du Feu 80.84 338⇑*i*P P 14 28 07.9 -0.5
CDF pmax pmax
comp=Z,12nm,1.0s,mb4.8
CDF Champ du Feu 80.84 338⇑*i*P P 14 28 07.9 -0.5
comp=Z,12nm,1.0s,mb4.8
TAOE Nuku la Isla 80.86 113 *e*LR LR 14 52 18.7
comp=Z,531nm,23.1s
VISS Visnje 80.97 332 *i* P P 14 28 08.1 -1.1
ECH Echery 81.05 338 *e*P P 14 28 08.9 -0.7
BBLS Bajina Basta - 81.09 328 *i* P P 14 28 08.7 -1.1
BOJS Bojanci 81.10 331 *e*P P 14 28 09.4 -0.5
FELD Feldberg im Sc 81.14 337 *e*P P 14 28 09.2 -0.8
MEZF Maizieres J'vi 81.32 339⇑*i*P P 14 28 10.6 -0.4
comp=Z,36nm,1.0s,mb5.0
MEZF Maizieres J'vi 81.32 339⇑*i*P P 14 28 10.6 -0.4
comp=Z,36nm,1.0s,mb5.2
THEF They Montfort 81.34 338 *e*P P 14 28 10.2 -0.9
MOF Molkenrain 81.39 338 *e*P P 14 28 10.7 -0.7
HAU Haudompre 81.45 338⇑*i*P P 14 28 10.9 -0.8
comp=Z,38nm,1.2s,mb4.9
HAU *e*R
comp=Z,157nm,20.5s
HAU Haudompre 81.45 338⇑*i*P P 14 28 10.9 -0.8
HAU pmax pmax
comp=Z,19nm,1.2s,mb4.9
HAU MLR MLR
comp=Z,160nm,20.5s,MS4.4
HAU Haudompre 81.45 338⇑*i*P P 14 28 10.9 -0.8
comp=Z,19nm,1.2s,mb4.9
HAU LR LR
comp=Z,160nm,20.5s,MS4.4
HINF Hinteralfeld 81.50 338 *e*P P 14 28 11.0 -0.9
comp=Z,21nm,1.1s,mb4.7
HINF Hinteralfeld 81.50 338 *e*P P 14 28 11.0 -0.9
HINF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
HINF Hinteralfeld 81.50 338 *e*P P 14 28 11.0 -0.9
comp=Z,10nm,1.1s,mb4.7
LOMF Lomont 81.93 338 *e*P P 14 28 13.9 -0.3
PPT Papeete 82.03 126 *e*LR LR 14 52 50.6
comp=Z,248nm,25.0s,baz=327
PPT Papeete 82.03 126 LR LR 14 57 09.8
comp=Z,125nm,21.2s,MS4.2,baz=51,slow=30
FLN La Foliniere 82.32 343 *e*P P 14 28 15.3 -1.0
comp=Z,60nm,1.3s,mb5.1
FLN *e*R
comp=Z,168nm,17.8s
FLN La Foliniere 82.32 343 *e*P P 14 28 15.3 -1.0
FLN pmax pmax
comp=Z,30nm,1.3s,mb5.1
FLN MLR MLR
comp=Z,170nm,17.8s,MS4.5
FLN La Foliniere 82.32 343 *e*P P 14 28 15.3 -1.0
comp=Z,30nm,1.3s,mb5.1
FLN LR LR
comp=Z,170nm,17.8s,MS4.5
LDF La Druitiere 82.40 342 *e*P P 14 28 15.7 -1.0
comp=Z,7.6nm,0.9s,mb4.3
LDF La Druitiere 82.40 342 *e*P P 14 28 15.7 -1.0
LDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
LDF La Druitiere 82.40 342 *e*P P 14 28 15.7 -1.0
comp=Z,3.8nm,0.9s,mb4.3
GRR Gorron 82.75 343 *e*P P 14 28 17.8 -0.7
comp=Z,56nm,1.1s,mb5.2
GRR Gorron 82.75 343 *e*P P 14 28 17.8 -0.7
GRR pmax pmax
comp=Z,28nm,1.1s,mb5.2
GRR Gorron 82.75 343 *e*P P 14 28 17.8 -0.7
comp=Z,28nm,1.1s,mb5.2
LOR Lormes 82.76 339⇑*i*P P 14 28 17.9 -0.6
comp=Z,48nm,1.4s,mb5.0
LOR *e*R
comp=Z,169nm,18.8s
LOR Lormes 82.76 339⇑*i*P P 14 28 17.9 -0.6
LOR pmax pmax
comp=Z,24nm,1.4s,mb5.0
LOR MLR MLR
comp=Z,170nm,18.8s,MS4.4
LOR Lormes 82.76 339⇑*i*P P 14 28 17.9 -0.6
comp=Z,24nm,1.4s,mb5.0
LOR LR LR
comp=Z,170nm,18.8s,MS4.4
CABF La Chapelle 82.81 338 *e*P P 14 28 18.6 -0.2
comp=Z,9.0nm,0.8s,mb4.6
CABF La Chapelle 82.81 338 *e*P P 14 28 18.6 -0.2
CABF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
CABF La Chapelle 82.81 338 *e*P P 14 28 18.6 -0.2
comp=Z,4.5nm,0.8s,mb4.5
SSF Saint Saulge 83.04 340⇑*i*P P 14 28 19.4 -0.6
comp=Z,21nm,1.1s,mb4.8
SSF Saint Saulge 83.04 340⇑*i*P P 14 28 19.4 -0.6
SSF pmax pmax
comp=Z,11nm,1.1s,mb4.8
SSF Saint Saulge 83.04 340⇑*i*P P 14 28 19.4 -0.6
comp=Z,11nm,1.1s,mb4.8
SGMF Saint Gilles 83.21 344 *e*P P 14 28 20.2 -0.7
comp=Z,26nm,0.9s,mb5.0
SGMF Saint Gilles 83.21 344 *e*P P 14 28 20.2 -0.7
SGMF pmax pmax
comp=Z,13nm,0.9s,mb5.0
SGMF Saint Gilles 83.21 344 *e*P P 14 28 20.2 -0.7
comp=Z,13nm,0.9s,mb5.0
ROSF Rostrenen 83.27 344⇑*i*P P 14 28 20.6 -0.6
comp=Z,54nm,1.1s,mb5.2
ROSF Rostrenen 83.27 344⇑*i*P P 14 28 20.6 -0.6
ROSF pmax pmax
comp=Z,27nm,1.1s,mb5.2
ROSF Rostrenen 83.27 344⇑*i*P P 14 28 20.6 -0.6
comp=Z,27nm,1.1s,mb5.2
AVF Avril sur Loir 83.33 340⇑*i*P P 14 28 21.0 -0.5
comp=Z,37nm,1.0s,mb5.1
AVF Avril sur Loir 83.33 340⇑*i*P P 14 28 21.0 -0.5
AVF pmax pmax
comp=Z,19nm,1.0s,mb5.1
AVF Avril sur Loir 83.33 340⇑*i*P P 14 28 21.0 -0.5
comp=Z,19nm,1.0s,mb5.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SMF	Signal de Mont	83.34	339	⇑iP	P	14 28 21.2	-0.4
	comp=Z,88nm,1.1s,mb5.4						
SMF	Signal de Mont	83.34	339	⇑iP	P	14 28 21.2	-0.4
SMF				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.4						
SMF	Signal de Mont	83.34	339	⇑iP	P	14 28 21.2	-0.4
	comp=Z,44nm,1.1s,mb5.4						
LPL	La Plagne	83.65	337	⇑iP	P	14 28 23.6	+0.4
LPG	La Plagne	83.66	337	⇑iP	P	14 28 23.8	+0.6
	comp=Z,24nm,1.1s,mb5.0						
LPG	La Plagne	83.66	337	⇑iP	P	14 28 23.8	+0.6
LPG				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.9						
LPG	La Plagne	83.66	337	⇑iP	P	14 28 23.8	+0.6
	comp=Z,12nm,1.1s,mb4.9						
PLDF	La Plantade	84.03	339	eP	P	14 28 25.2	+0.1
TCF	Toulx Ste Croi	84.07	340	eP	P	14 28 24.9	-0.4
	comp=Z,17nm,1.0s,mb4.8						
TCF	Toulx Ste Croi	84.07	340	eP	P	14 28 24.9	-0.4
TCF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
TCF	Toulx Ste Croi	84.07	340	eP	P	14 28 24.9	-0.4
	comp=Z,8.6nm,1.0s,mb4.8						
AGO	Saint Agoulin	84.07	340	eP	P	14 28 25.9	+0.6
MFF	Saint Martin d	84.30	342	eP	P	14 28 26.6	+0.1
MBDF	Montbardon	84.37	337	eP	P	14 28 26.4	-0.4
	comp=Z,9.3nm,0.8s,mb4.7						
MBDF	Montbardon	84.37	337	eP	P	14 28 26.4	-0.4
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
MBDF	Montbardon	84.37	337	eP	P	14 28 26.4	-0.4
	comp=Z,4.7nm,0.8s,mb4.7						
ORIF	Oris-en-Rattie	84.43	337	⇑iP	P	14 28 27.4	+0.3
	comp=Z,26nm,0.9s,mb5.1						
ORIF				eR			
	comp=Z,149nm,20.0s						
ORIF	Oris-en-Rattie	84.43	337	⇑iP	P	14 28 27.4	+0.3
ORIF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.1						
ORIF	Oris-en-Rattie	84.43	337	⇑iP	P	14 28 27.4	+0.3
	comp=Z,13nm,0.9s,mb5.1						
VIVF	Saint-Julien-l	84.81	338	⇑iP	P	14 28 29.0	0.0
	comp=Z,20nm,1.0s,mb4.9						
VIVF	Saint-Julien-l	84.81	338	⇑iP	P	14 28 29.0	0.0
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
VIVF	Saint-Julien-l	84.81	338	⇑iP	P	14 28 29.0	0.0
	comp=Z,10nm,1.0s,mb4.9						
SBF	Sospel	84.98	336	eP	P	14 28 30.1	+0.2
	comp=Z,52nm,1.0s,mb5.3						
SBF	Sospel	84.98	336	eP	P	14 28 30.1	+0.2
SBF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.3						
SBF	Sospel	84.98	336	eP	P	14 28 30.1	+0.2
	comp=Z,26nm,1.0s,mb5.3						
RJF	Les Rejaudoux	85.16	340	eP	P	14 28 30.5	-0.3
RJF				eR			
	comp=Z,190nm,21.0s						
RJF	Les Rejaudoux	85.16	340	eP	P	14 28 30.5	-0.3
RJF				LR	LR		
	comp=Z,190nm,21.0s,MS4.5						
CAF	Calviac	85.39	340	eP	P	14 28 31.3	-0.6
	comp=Z,30nm,1.3s,mb5.0						
CAF	Calviac	85.39	340	eP	P	14 28 31.3	-0.6
CAF				pmax	pmax		
	comp=Z,15nm,1.3s,mb5.0						
CAF	Calviac	85.39	340	eP	P	14 28 31.3	-0.6
	comp=Z,15nm,1.3s,mb5.0						
SMRF	Simiane la Rot	85.39	337	eP	P	14 28 32.3	+0.4
	comp=Z,22nm,1.1s,mb4.9						
SMRF	Simiane la Rot	85.39	337	eP	P	14 28 32.3	+0.4
	comp=Z,22nm,1.1s,mb5.2						
FRF	La Foret Royal	85.48	336	⇑iP	P	14 28 31.9	-0.5
	comp=Z,68nm,1.3s,mb5.3						
FRF	La Foret Royal	85.48	336	⇑iP	P	14 28 31.9	-0.5
FRF				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.3						
FRF	La Foret Royal	85.48	336	⇑iP	P	14 28 31.9	-0.5
	comp=Z,34nm,1.3s,mb5.3						
LFF	La Frestale	85.68	341	eP	P	14 28 32.4	-1.0
	comp=Z,16nm,0.7s,mb5.0						
LFF	La Frestale	85.68	341	eP	P	14 28 32.4	-1.0
LFF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.1						
LFF	La Frestale	85.68	341	eP	P	14 28 32.4	-1.0
	comp=Z,7.9nm,0.7s,mb5.0						
LMR	La Mourre	85.73	336	eP	P	14 28 33.3	-0.3
	comp=Z,73nm,1.1s,mb5.5						
LMR	La Mourre	85.73	336	eP	P	14 28 33.3	-0.3
LMR				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.5						
LMR	La Mourre	85.73	336	eP	P	14 28 33.3	-0.3
	comp=Z,37nm,1.1s,mb5.5						
PGF	Pioggiola	85.73	334	eP	P	14 28 34.2	+0.6
	comp=Z,118nm,1.5s,mb5.6						
PGF	Pioggiola	85.73	334	eP	P	14 28 34.2	+0.6
PGF				pmax	pmax		
	comp=Z,59nm,1.5s,mb5.6						
PGF	Pioggiola	85.73	334	eP	P	14 28 34.2	+0.6
	comp=Z,59nm,1.5s,mb5.6						
LASF	Ste Croix	85.74	338	eP	P	14 28 33.3	-0.4
	comp=Z,13nm,1.2s,mb4.7						
EIL	Elat	85.82	310	eP	P	14 28 35.5	+1.4
	comp=Z,338nm,1.2s						
TBI	Tubuai	86.77	129	eLR	LR	14 55 02.0	
	comp=Z,129nm,30.2s,baz=317						
MTLF	Montolieu	86.84	339	eP	P	14 28 39.2	+0.1
SJPF	Ste Jean	87.86	342	eP	P	14 28 44.3	+0.3
ESDC	Sonseca Array	91.74	343	P	P	14 29 01.3	-0.8
	comp=Z,1.4nm,0.8s,mb4.4,baz=23,slow=3.4,SNR=6.7						
KEST	Kesra	91.84	331	LR	LR	15 15 12.0	
	comp=Z,67nm,19.5s,MS4.1,baz=340,slow=39						
RKT	Rikitea	94.88	119	eLR	LR	14 58 48.2	
	comp=Z,149nm,32.2s						
CPUP	Villa Florida	148.54	61	PKPbc	PKPbc	14 35 39.2	-2.1
	comp=Z,2.2nm,0.7s,baz=298,slow=2.6,SNR=7.3						
CPUP	Villa Florida	148.54	61	ePKPdf	PKPdf	14 35 38.2	+0.6
SNAA	Sanae	152.38	196	PKPbc	PKPbc	14 35 47.0	-3.4
	comp=Z,1.3nm,0.8s,baz=136,slow=3.5,SNR=9.0						
SNAA	Sanae	152.38	196	ePKPdf	PKPdf	14 35 47.9	+4.3
SNAA				e		14 35 49.8	
SNAA				e		14 35 55.1	
SNAA				e		14 35 58.5	
SNAA				e		14 36 02.3	
SNAA				e		14 36 06.9	
SNAA				e		14 36 13.3	
VNA1	Neumayer--Stat	154.21	194	ePKPdf	PKPdf	14 35 49.4	+3.1
VNA1				e		14 35 54.7	
VNA1				e		14 36 00.1	

*ISCJB **14** 14:26:01.0±1.8, 7782N±006×90E±05, h10km, Error ellipse: s-maj=16.6km s-min=7.0km az=136.7*
*NAO **14** 14:26:01.9±1.9, 7795N×834E, ML2.1*
*BER **14** 14:26:02.2±4.1, 7791N×824E, h1km±31km, MD2.4, ML2.9, ML2.1(NAO)*
*CSEM **14** 14:26:04.9±0.7, 7796N×990E, h10km, ML2.1, Error ellipse: s-maj=25.5km s-min=8.1km az=72.0*
ISC 14 14:26:02.8±1.9**, 7791N**±006×**91E**±06**, h10**km**, n7,** σ**1^{s}30**/12**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.18	28	Pn	Pn	14 26 24.6	-0.7
KBS				Lg		14 26 39.9	
KBS	Kingsbay	1.18	28	eP	Pb	14 26 24.6	-0.5
KBS				eS	Sb	14 26 40.0	-0.5
KBS				AML	AML	14 26 44.5	
	comp=Z,76nm,0.4s						
KBS	Kingsbay	1.18	28	Pn	Pn	14 26 24.6	-0.7
KBS				eS	Sb	14 26 40.0	-0.4
	comp=Z,76nm,0.4s,SNR=70						
SPA0	Spitsbergen Ar	1.54	76	Pn	Pn	14 26 33.1	+2.8
	baz=258,slow=9.3						
SPA0				Lg		14 26 54.9	
	baz=271,slow=22						
HSP	Hornsund	1.67	120	i Pg	Pg	14 26 33.7	-1.1
HSP				eSg	Sg	14 26 54.9	-1.6
HOPEN	Hopen	3.79	104	eP	Pn	14 27 03.1	+1.8
HOPEN				eS	Sn	14 27 47.6	+1.7
HOPEN				AML	AML	14 27 49.4	
	comp=E,200nm,0.2s						
ARA0	ARCESS Array S	9.53	143	Pn	Pn	14 28 19.7	-0.3
	baz=331,slow=12						
ARA0				Sn	Sn	14 30 01.4	-5.7

baz=354,slow=22

*ISCJB **14** 14:31:17.2±1.1, 1901N±006×6468W±004, h28km±6km, Error ellipse: s-maj=10.5km s-min=6.4km az=8.7*
*NEIC **14** 14:31:18.9, 1900N×6463W, h21km, MD3.6(RSPR), After RSPR.*
*RSPR **14** 14:31:18.9, 1900N×6463W, h21km±23km, MD3.6/15, MD3.6/15*
ISC 14 14:31:17.5±1.1**, 1899N**±006×**6470W**±004**, h21**km±7km**, n19,** σ**0^{s}56**/33**, 15C-1D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.43	127	⇑eP	Pb	14 31 26.3	-0.1
ABV	Anegada	0.43	127	eS	Sb	14 31 31.8	-0.7
TBVI	Tortola	0.58	172	⇑eP	Pb	14 31 28.9	-0.2
TBVI				eS	Sb	14 31 37.2	+0.3
STVI	Saint Thomas	0.68	202	⇓eP	Pb	14 31 30.9	+0.1
STVI				eS	Sb	14 31 40.6	+0.8
CULB	Culebra	0.91	222	⇑eP	Pb	14 31 34.2	-0.4
CULB	Culebra	0.91	222	eS	Sb	14 31 46.0	-0.2
MTP	Monte Pirata	1.21	223	⇑eP	Pn	14 31 38.8	-0.4
MTP				eS	Sn	14 31 54.5	-0.5
CDVI	St. Croix	1.23	183	⇑eP	Pn	14 31 40.0	+0.4
CDVI				eS	Sn	14 31 56.7	+1.1
CBYP	Canovanas	1.31	237	⇑eP	Pn	14 31 40.1	-0.5
CBYP				eS	Sn	14 31 56.9	-0.6
HUMP	Col San Antoni	1.38	233	⇑eP	Pn	14 31 41.5	-0.1
HUMP				eS	Sn	14 31 58.2	-1.0
CPD	Cerro la Pandu	1.50	231	⇑eP	Pn	14 31 43.1	0.0
CPD				eS	Sn	14 32 01.4	-0.7
SJG	San Juan	1.63	238	⇑eP	Pn	14 31 44.5	-0.6
SJG				eS	Sn	14 32 04.3	-1.1
CELP	Cerrillos	2.01	243	⇑eP	Pn	14 31 50.3	+0.1
CELP				eS	Sn	14 32 15.1	+0.4
ICM	Isla Caja Muer	2.05	238	⇑eP	Pn	14 31 51.2	+0.4
ICM				eS	Sn	14 32 15.5	-0.2
AOPR	Arecibo Observ	2.05	252	⇑eP	Pn	14 31 51.1	+0.3
AOPR				eS	Sn	14 32 16.3	+0.5
LSP	Las Mesas	2.41	251	⇑eP	Pn	14 31 56.7	+1.0
LSP				eS	Sn	14 32 25.0	+0.4
MGP	Maguayo	2.47	247	⇑eP	Pn	14 31 57.1	+0.5
CRPR	Cabo Rojo, PR	2.49	247	⇑eP	Pn	14 31 57.2	+0.3
CRPR				eS	Sn	14 32 27.2	+0.6
LZG	Guadaloupe-1	3.97	135	eP	Pn	14 32 22.1	+4.8
LZG				eS	Sn	14 33 03.1	-0.1

IDC 14 14:42:13.6±5.4**, 2966S**×**17789W, h0**km**, mb3.4**/2**, mb1 3.6**/2**, mb1mx3.5**/9**, mbtmp3.4**/2**, Error ellipse: s-maj=317.8km s-min=75.1km az=166.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.25	266	P	P	14 50 16.9	+0.3
	0.2nm,0.4s,baz=106,slow=7.1,SNR=13						
WRA	Warramunga Arr	44.17	271	P	P	14 50 24.2	+0.1
	0.5nm,0.9s,baz=110,slow=8.1,SNR=8.8						
FINES	FINESS Array B	144.48	340	PKP	PKPdf	15 01 50.7	-1.2
	0.9nm,0.5s,baz=59,slow=3.7,SNR=6.2						

TRN 14 15:14:54.4, 1712N×**6113W, h28**km**, MD3.6, M3.0**(FDF)**, 3C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	Boggy Peak	0.70	264	eP	Pb	15 15 11.1	+3.1
BPA				eS	Sb	15 15 20.5	+3.2
SEG	Port Louis	0.80	207	⇑eP	Pb	15 15 10.9	+1.2
DEG	La Desirade	0.80	175	⇑eP	Pb	15 15 09.4	-0.3
CPB	Codrington	0.84	308	eP	Pn	15 15 11.0	+0.6
CPB	Codrington	0.84	308	eP	Pn	15 15 12.0	+1.6
CPB				eS	Sb	15 15 25.2	+3.8
LZG	Guadaloupe-1	1.15	213	eP	Pn	15 15 16.4	+1.8
MGG	Marie-Galante	1.21	189	eP	Pn	15 15 16.6	+1.3
CRM	Caravelle	2.36	175	eP	Pn	15 15 32.9	+1.7
FDF	Fort de France	2.37	180	eP	Pn	15 15 33.5	+2.1
FDF				eS	Sn	15 16 01.8	+2.3
MVM	Montagne Vaucl	2.56	175	⇑iP	Pn	15 15 35.0	+1.1
BIM	Bigot	2.59	179	eP	Pn	15 15 36.9	+2.6

*MOS **14** 15:19:00.8±0.7, 4380N×13825E, h268km, mb3.9/6, Error ellipse: s-maj=19.1km s-min=9.3km az=99.7*
*ISCJB **14** 15:19:01.0±0.4, 4377N±003×13828E±008, h271km±5km, mb3.7/19, Error ellipse: s-maj=9.8km s-min=5.2km az=27.6*
*IDC **14** 15:19:01.9±1.0, 4380N×13823E, h260km±10km, mb3.5/12, mb1 3.7/14, mb1mx3.6/23, mbtmp4.1/14, Error ellipse: s-maj=13.2km s-min=10.2km az=79.0*
*NEIC **14** 15:19:01.1±0.7, 4383N×13831E, h256km±7km, mb4.1/9, Error ellipse: s-maj=10.5km s-min=6.2km az=89.0*
*JMA **14** 15:19:01.8±0.2, 4376N×13832E, h269km±3km, M3.1*
ISC 14 15:19:01.8±0.4**, 4377N**±004×**13826E**±009**, h264**km±5km**, n66,** σ**0^{s}79**/83**, mb3.7**/19**, 2C, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	Shakotan	1.66	104	P	Pn	15 19 42.8	+0.3
JSK				eS	S	15 20 14.9	+0.1
JOSM	Okushiri--Mats	1.91	152	P	Pn	15 19 45.1	+0.6
JOSM				eS	S	15 20 18.9	+0.5
JYG	Yagishiri	2.37	73	P	Pn	15 19 48.8	+0.1
JYG				eS	S	15 20 25.5	-0.4
JHR	Hokuryu	2.51	89	P	Pn	15 19 50.7	+0.7
JKB	Kayabe	2.77	132	P	Pn	15 19 52.5	-0.2
JKB				eS	S	15 20 32.9	-0.2
JWK2	Keihoku	3.02	58	P	Pn	15 19 56.4	+1.1
JWK2				eS	S	15 20 39.3	+1.5
ASAJ	Asahikawa	3.15	82	P	Pn	15 19 56.8	+0.2
	6.7nm,0.3s,baz=262,slow=11,SNR=92						
ASAJ				S	S	15 20 40.7	+0.5
	0.3nm,0.3s,baz=123,slow=31,SNR=7.7						
ASAJ	Asahikawa	3.15	82	P	Pn	15 19 56.8	+0.2
ASAJ				S	S	15 20 40.7	+0.5
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
JOT	Ohata	3.15	138	P	Pn	15 19 56.2	-0.5
JFR	Furan	3.21	99	P	Pn	15 19 57.7	+0.4
JFR				eS	S	15 20 41.3	-0.1
JKK2	Kamakawa 2	3.25	87	P	Pn	15 19 58.1	+0.4
JKK2				eS	S	15 20 42.5	+0.4
JSE	Soyaes	3.32	68	P	Pn	15 19 59.2	+0.7
JSE				eS	S	15 20 44.6	+1.1
JNBK	Urakawa-nobuka	3.61	113	P	Pn	15 20 01.8	+0.1
JCH	Churui	3.90	105	eS	S	15 20 50.7	-4.7
JAR	Ashorobuto	4.03	95	P	Pn	15 20 06.4	-0.1
JAR				eS	S	15 20 56.0	-2.1
JTKR	Abashiri--Toko	4.09	85	P	Pn	15 20 07.2	+0.1
JTKR				eS	S	15 20 58.1	-1.1
JANG	Nango	4.17	143	P	Pn	15 20 07.7	-0.4
JANG				eS	S	15 20 56.4	-4.5
YSS	Yuzh-Sakhalins	4.49	43	αiP	Pn	15 20 11.7	-0.1
YSS				eS	S	15 21 07.3	-0.4
YSS				pmax	pmax		
	comp=N,150nm,0.8s						
YSS				pmax	pmax		
	comp=E,120nm,0.8s						
YSS				pmax	pmax		
	comp=Z,250nm,0.8s						
YSS				smax			
	comp=N,30nm,1.0s						
YSS				smax			
	comp=E,60nm,1.0s						
YSS	Yuzh-Sakhalins	4.49	43	eP	Pn	15 20 11.7	-0.2
JMK	Ichinoseki	5.30	154	P	Pn	15 20 20.6	-1.0
JMK				eS	S	15 21 21.9	-3.6
NEM2	Nemuro 2	5.45	92	P	Pn	15 20 21.8	-1.6
NEM2				eS	S	15 21 21.5	-7.2
MAJO	Matsushiro	7.22	180	eP	Pn	15 20 45.1	-0.2
MAJO				pmax	pmax		
	comp=Z,20nm,0.8s						
MAJO	Matsushiro	7.22	180	eP	Pn	15 20 45.1	-0.2
	comp=Z,20nm,0.8s						
MAT	Matsushiro	7.22	180	P	Pn	15 20 45.0	-0.3
MAT				eS	S	15 22 08.2	-0.4
MAT	Matsushiro	7.22	180	eP	Pn	15 20 45.0	-0.3
MAT				S	S	15 22 08.0	-0.6
MAT				pmax	pmax		
	comp=Z,15nm,0.9s						
MAT	Matsushiro	7.22	180	eP	Pn	15 20 45.0	-0.3
	comp=Z,15nm,0.9s						
MAT				S	S	15 22 08.0	-0.6
MJAR	Matsushiro Arr	7.22	180	P	Pn	15 20 45.5	+0.2
	comp=Z,4.4nm,0.3s,baz=3.6,slow=12,SNR=130						
PET	Petropavlovsk	16.35	48	eP	P	15 22 31.9	-3.7
YAK	Yakutsk	18.98	348	eP	P	15 23 02.2	-1.8
YAK				eS	S	15 26 18.1	-7.0
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
YAK				smax			
	comp=N,9.0nm,1.5s						
YAK				smax			
	comp=E,11nm,1.3s						
YAK	Yakutsk	18.98	348	eP	P	15 23 01.1	-2.9
	comp=E,7.8nm,0.3s						
SONM	Songino Array	22.50	292	P	P	15 23 39.0	-0.1
	comp=E,0.3nm,0.5s,mb2.9,baz=64,slow=8.0,SNR=3.7						
MKAR	Makanchi Array	38.80	295	P	P	15 26 01.3	+0.1
	comp=E,0.3nm,0.2s,mb3.3,baz=84,slow=11,SNR=2.5						
MKAR				ScP	ScP	15 31 29.3	-0.1
	comp=E,0.3nm,0.3s,baz=46,slow=3.5,SNR=5.3						
MKAR	Makanchi Array	38.80	295	P	P	15 26 01.3	+0.1
MKAR				ScP	ScP	15 31 29.3	-0.1
KURK	Kurchatov	40.10	302	eP	P	15 26 11.9	-0.1
CHKZ	Chkalovo	44.11	308	eP	P	15 26 44.2	-0.1
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.4						
CHKZ	Chkalovo	44.11	308	eP	P	15 26 44.2	-0.1
	comp=Z,1.0nm,0.4s,mb3.4						
BVAR	Borovoye Array	44.42	307	P	P	15 26 46.8	+0.1
	comp=Z,1.0nm,0.3s,mb3.5,baz=75,slow=9.2,SNR=9.9						
BVAR				PcP	PcP	15 28 25.5	+0.1
	comp=Z,0.7nm,0.5s,baz=103,slow=4.7,SNR=4.6						
BRVK	Borovoye	44.48	307	P	P	15 26 47.2	+0.1
INK	Inuvik	49.59	29	P	P	15 27 26.2	-0.2
	comp=Z,3.4nm,0.4s,mb4.0,baz=286,slow=3.9,SNR=7.5						
KEV	Kevo	56.30	337	ep	P	15 28 13.5	-1.8
	comp=Z,1.3nm,0.4s,mb3.7						
KEV	Kevo	56.30	337	eP	P	15 28 13.5	-1.8
KEV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.6						
KAKA	Kakadu	56.46	187	eP	P	15 28 17.1	+0.7
	comp=Z,8.0nm,0.7s,mb4.3						
ARCES	ARCESS Array B	56.86	337	P	P	15 28 18.2	-0.9
	comp=Z,1.3nm,0.6s,mb3.5,baz=59,slow=10.0,SNR=8.4						
JOF	Joensuu	58.92	329	ep	P	15 28 32.7	-0.8
	comp=Z,2.3nm,0.4s,mb4.0						
JOF	Joensuu	58.92	329	eP	P	15 28 32.7	-0.8
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
KAF	Kangasniemi	61.25	330	ep	P	15 28 49.0	-0.2
	comp=Z,0.9nm,0.3s,mb3.8,baz=48,slow=6.5						
KAF	Kangasniemi	61.25	330	eP	P	15 28 49.0	-0.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
FINES	FINESS Array B	61.77	330	P	P	15 28 53.2	+0.6
	comp=Z,1.5nm,0.4s,mb3.9,baz=58,slow=7.8,SNR=16						
FINES				PcP	PcP	15 29 30.1	-1.1
	comp=Z,0.5nm,0.3s,baz=73,slow=3.6,SNR=5.6						
WRAB	Tennant Creek	63.49	184	eP	P	15 29 04.0	0.0
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
WRAB	Tennant Creek	63.49	184	eP	P	15 29 04.0	0.0
	comp=Z,3.5nm,0.6s,mb4.2						
WB2	Warramunga Arr	63.50	184	eP	P	15 29 03.6	-0.4
WRA	Warramunga Arr	63.50	184	P	P	15 29 04.1	+0.1
	comp=Z,2.0nm,0.6s,mb4.0,baz=3.3,slow=6.9,SNR=63						
WRA				PcP	PcP	15 29 39.1	+0.9
	comp=Z,1.7nm,0.6s,baz=359,slow=4.7,SNR=19						
AS31	Alice Springs	67.22	184	eP	P	15 29 29.1	+1.3
ASAR	Alice Springs	67.22	184	P	P	15 29 29.0	+1.2
	comp=Z,1.6nm,0.6s,mb3.9,baz=360,slow=5.6,SNR=46						
ASPA	Alice Springs	67.22	184	eP	P	15 29 29.1	+1.3
AKASG	Malin Array Be	67.56	319	P	P	15 29 29.5	-0.4
	comp=Z,1.3nm,0.5s,mb3.9,baz=46,slow=6.3,SNR=12						
AKASG	Malin Array Be	67.56	319	i P	P	15 29 29.5	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	67.56	319	P	P	15 29 29.5	-0.4
NVAR	Mina Array Bea	72.87	53	P	P	15 30 03.3	+1.2
	comp=Z,1.1nm,0.6s,mb3.6,baz=287,slow=7.5,SNR=12						
PDAR	Pinedale Array	74.63	45	P	P	15 30 12.4	+0.2
	comp=Z,1.3nm,0.7s,mb3.7,baz=342,slow=2.4,SNR=14						
STKA	Stephens Creek	75.34	177	eP	P	15 30 17.1	+0.8
	comp=Z,1.7nm,0.5s,mb3.9						
STKA	Stephens Creek	75.34	177	P	P	15 30 17.2	+1.0
	comp=Z,2.2nm,0.5s,mb4.0,baz=354,slow=7.0,SNR=11						
GERES	GERESS Array B	75.76	326	P	P	15 30 19.0	+0.4
	comp=Z,0.6nm,0.5s,mb3.5,baz=36,slow=5.4,SNR=5.1						
VNDA	Vanda	121.90	174	PKP	PKPdf	15 37 22.9	-1.6
	comp=Z,0.4nm,0.6s,baz=316,slow=2.0,SNR=5.4						
SNAA	Sanae	146.34	201	PKPbc	PKPbc	15 38 10.1	-1.4
	comp=Z,0.8nm,0.6s,baz=72,slow=0.7,SNR=19						
BDFB	Brasilia	151.46	13	PKPbc	PKPbc	15 38 25.1	+0.7
	comp=Z,1.0nm,0.4s,baz=200,slow=3.9,SNR=3.8						

MEX 14 15:22:48.4±0.7**, 1570N**×**9557W, h12**km±14km**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.52	278	i P	Pg	15 22 57.5	-1.1
HUIG				i S	Sg	15 23 04.8	-0.7
CMIG	Matias Romero	1.53	25	i P	Pn	15 23 11.7	-3.9
CMIG				i S	Sn	15 23 31.1	-4.4
VHO	Vista Hermosa	1.76	321	i P	Pn	15 23 15.9	-2.8
VHO				i S	Sn	15 23 36.1	-5.1
UTMO	Huajuapan	3.01	315	eP	Pn	15 23 35.1	-0.8
UTMO				i S	Sn	15 24 08.5	-3.4

*ISCJB **14** 15:24:45.4±0.8, 1034N±003×6236W±002, h10km±5km, Error ellipse: s-maj=5.1km s-min=3.7km az=136.3*
*FUNV **14** 15:24:46.6, 1042N×6227W, h9km, MW3.7*
*NEIC **14** 15:24:47.2, 1041N×6223W, h4km, MD3.5(TRN), After TRN.*
*TRN **14** 15:24:47.2, 1041N×6223W, h4km, MD3.5*
ISC 14 15:24:45.9±0.6**, 1035N**±003×**6234W**±002**, h10**km±4km**, n20,** σ**1^{s}13**/37**, 4C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.32	22	eP	Pg	15 24 51.3	-0.9
GUIV				eS	Sg	15 24 55.7	-0.8
GUNV	Guanoco	0.62	253	eP	Pg	15 24 59.0	+1.1
GUNV				eS	Sg	15 25 09.9	+3.8
TPP	Pointe-a-Pierr	0.88	92	⇑eP	Pg	15 25 02.5	-0.3
TPP				eS	Sg	15 25 15.7	+1.4
CRUV	Carupano	0.94	290	eP	Pg	15 25 03.2	-0.7
CRUV				eS	Sg	15 25 15.9	-0.2
TRN	Trinidad (W)	0.97	72	⇓eP	Pg	15 25 02.9	-1.7
TRN				eS	Sg	15 25 16.4	-0.8
TBH	Brigand Hill	1.26	84	⇑eP	Pn	15 25 09.7	+0.1
TBH				eS	Sb	15 25 25.4	-0.7
ITEV	Isla Los Testi	1.27	322	eP	Pn	15 25 08.5	-1.2
ITEV				eS	Sb	15 25 25.5	-0.7
ORIV	Oritupano	1.65	220	eP	Pn	15 25 17.5	+2.5
ORIV				eS	Sn	15 25 41.4	+5.1
TPR	Prospect	1.75	61	⇑eP	Pn	15 25 16.5	+0.2
TPR				eS	Sn	15 25 38.8	+0.1
GRW	Mount Saint Ca	1.92	20	⇑eP	Pn	15 25 19.5	+0.8
GRW				eS	Sn	15 25 43.9	+1.0
GRHS	Sauteurs	1.98	20	eP	Pn	15 25 20.9	+1.4
GRIC	Isle de Caille	2.06	21	eP	Pn	15 25 22.3	+1.7
GRIC				eS	Sn	15 25 46.2	-0.2
GRSS	Sisters	2.06	20	eP	Pn	15 25 22.1	+1.4
GRSS				eS	Sn	15 25 46.9	+0.4
GRCU	Cariacou	2.28	22	eP	Pn	15 25 24.1	+0.4
GRCU				eS	Sn	15 25 50.4	-1.5
GURV	El Guri	2.68	196	eP	Pn	15 25 29.9	+0.8
GURV				eS	Sn	15 26 01.3	-0.3
BIRV	Birongo	3.87	272	eP	Pn	15 25 46.6	+1.2
BIRV				eS	Sn	15 26 30.2	-0.7
LUEV	Luepa	4.56	169	eP	Pn	15 25 54.3	-0.7
LUEV				eS	Sn	15 26 45.6	-2.5
CAOV	Caicara del Or	4.95	233	eS	Sn	15 26 55.5	-2.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAUV	**El Baul**	**5.79**	**257**	eP	**Pn**	**15 26 12.2**	**+0.3**
BAUV				eS	**Sn**	**15 27 15.5**	**-2.9**
SDV	**Santo Domingo**	**8.30**	**261**	ePn	**Pn**	**15 26 46.6**	**+0.2**
	7.0nm,0.8s						

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*MOS **14** 15:48:53.8±0.6, 4368N×14281E, h187km, mb4.0/2, Error ellipse: s-maj=28.2km s-min=14.3km az=83.5*
*ISCJB **14** 15:48:54.2±0.4, 4366N±003×14273E±005, h185km±3km, mb3.7/6, Error ellipse: s-maj=6.2km s-min=5.2km az=65.8*
*NEIC **14** 15:48:54.9±0.8, 4366N×14279E, h178km±8km, mb3.8/2, Error ellipse: s-maj=14.5km s-min=7.9km az=119.0*
*IDC **14** 15:48:55.2±1.1, 4368N×14274E, h177km±3km, mb3.4/4, mb1 3.5/5, mb1mx3.2/21, mbtmp3.8/5, Error ellipse: s-maj=29.8km s-min=20.8km az=151.0*
*JMA **14** 15:48:55.2±0.2, 4368N×14271E, h184km±2km, M3.0*
ISC 14 15:48:55.1±0.4**, 4366N**±003×**14273E**±005**, h183**km±2km**, n37, σ0^{s}82**/59**, mb3.7**/6**, 1C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKK2	**Kamakawa 2**	**0.21**	**3**	P	**Pn**	**15 49 19.9**	**+0.6**
JKK2				eS	**Sn**	**15 49 38.2**	**+0.3**
JAB	**Ashibetsu**	**0.40**	**247**	P	**Pn**	**15 49 20.3**	**+0.5**
JAB				S	**Sn**	**15 49 39.8**	**+1.0**
ASAJ	**Asahikawa**	**0.47**	**348**	P	**Pn**	**15 49 20.4**	**+0.4**
	35nm,0.3s,baz=211,slow=4.7,SNR=534						
ASAJ				S	**Sn**	**15 49 39.2**	**0.0**
	5.9nm,0.3s,baz=58,slow=29,SNR=37						
ASAJ	**Asahikawa**	**0.47**	**348**	P	**Pn**	**15 49 20.4**	**+0.4**
ASAJ				eS	**Sn**	**15 49 39.1**	**-0.1**
ASAJ	**Asahikawa**	**0.47**	**348**	PN	**Pn**	**15 49 20.5**	**+0.5**
ASAJ				S	**Sn**	**15 49 39.3**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,35nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
JFR	**Furan**	**0.51**	**192**	P	**Pn**	**15 49 20.7**	**+0.5**
JFR				eS	**Sn**	**15 49 40.5**	**+1.0**
JMP	**Maruseppu**	**0.57**	**52**	P	**Pn**	**15 49 21.0**	**+0.5**
JMP				eS	**Sn**	**15 49 40.3**	**+0.3**
JHR	**Hokuryu**	**0.74**	**277**	P	**Pn**	**15 49 21.9**	**+0.6**
JHR				eS	**Sn**	**15 49 41.4**	**-0.1**
JAR	**Ashorobuto**	**0.84**	**115**	P	**Pn**	**15 49 22.6**	**+0.7**
JAR				S	**Sn**	**15 49 43.1**	**+0.5**
JTKR	**Abashiri--Toko**	**0.91**	**70**	P	**Pn**	**15 49 23.1**	**+0.7**
JTKR				S	**Sn**	**15 49 43.9**	**+0.5**
JCH	**Churui**	**1.14**	**156**	P	**Pn**	**15 49 23.9**	**-0.2**
JCH				S	**Sn**	**15 49 44.9**	**-1.6**
JYG	**Yagishiri**	**1.22**	**310**	P	**Pn**	**15 49 24.5**	**-0.2**
JYG				S	**Sn**	**15 49 46.5**	**-1.1**
JEW	**Eniwo**	**1.25**	**229**	P	**Pn**	**15 49 25.7**	**+0.7**
JEW				eS	**Sn**	**15 49 48.7**	**+0.7**
JSE	**Soyaes**	**1.30**	**355**	P	**Pn**	**15 49 25.5**	**0.0**
JSE				eS	**Sn**	**15 49 48.0**	**-0.9**
JNBK	**Urakawa-nobuka**	**1.38**	**179**	P	**Pn**	**15 49 26.7**	**+0.6**
JNBK				eS	**Sn**	**15 49 50.4**	**+0.3**
JAK	**Akkeshi**	**1.58**	**114**	P	**Pn**	**15 49 27.5**	**-0.5**
JAK				eS	**Sn**	**15 49 52.3**	**-1.1**
JSK	**Shakotan**	**1.67**	**260**	P	**Pn**	**15 49 29.2**	**+0.3**
JSK				S	**Sn**	**15 49 54.4**	**-0.7**
JRA	**Rausu**	**1.75**	**80**	P	**Pn**	**15 49 30.6**	**+0.9**
JRA				eS	**Sn**	**15 49 57.9**	**+1.4**
JWK2	**Keihoku**	**1.76**	**340**	P	**Pn**	**15 49 30.2**	**+0.4**
JKB	**Kayabe**	**2.17**	**216**	P	**Pn**	**15 49 34.1**	**0.0**
JKB				eS	**Sn**	**15 50 02.9**	**-1.6**
NEM2	**Nemuro 2**	**2.21**	**97**	P	**Pn**	**15 49 33.7**	**-0.9**
NEM2				eS	**Sn**	**15 50 02.5**	**-2.7**
JOT	**Ohata**	**2.59**	**209**	P	**Pn**	**15 49 38.8**	**-0.2**
JOT				eS	**Sn**	**15 50 11.2**	**-1.9**
YSS	**Yuzh-Sakhalins**	**3.29**	**0**	⇑iPN	**Pn**	**15 49 47.0**	**-0.4**
YSS				eS	**Sn**	**15 50 26.5**	**-1.7**
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				smax			
	comp=N,70nm,1.0s						
YSS				smax			
	comp=E,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**3.29**	**0**	eP	**Pn**	**15 49 47.2**	**-0.2**
MAJO	**Matsushiro**	**7.91**	**208**	ePN	**Pn**	**15 50 47.2**	**+0.1**
MJAR	**Matsushiro Arr**	**7.91**	**208**	P	**Pn**	**15 50 47.1**	**0.0**
	comp=E,0.7nm,0.3s,baz=18,slow=14,SNR=16						
MA2	**Magadan**	**16.68**	**14**	P	**Pn**	**15 52 36.5**	**-1.8**
ULN	**Ulaanbaatar**	**25.10**	**292**	eP	**P**	**15 54 03.3**	**+0.4**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
ULN	**Ulaanbaatar**	**25.10**	**292**	eP	**P**	**15 54 03.3**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.4						
SONM	**Songino Array**	**25.55**	**292**	P	**P**	**15 54 07.4**	**+0.5**
	comp=Z,2.4nm,0.8s,mb3.9,baz=85,slow=8.5,SNR=21						
IMA2	**Indian Mountai**	**40.55**	**34**	eP	**P**	**15 56 15.9**	**-0.5**
MKAR	**Makanchi Array**	**41.77**	**296**	P	**P**	**15 56 27.1**	**+0.8**
	comp=Z,0.6nm,0.4s,mb3.5,baz=66,slow=9.8,SNR=6.1						
KURK	**Kurchatov**	**42.91**	**303**	eP	**P**	**15 56 35.8**	**+0.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
KURK	**Kurchatov**	**42.91**	**303**	eP	**P**	**15 56 35.8**	**+0.3**
	comp=Z,3.0nm,0.5s,mb4.2						
INK	**Inuvik**	**48.09**	**30**	P	**P**	**15 57 16.2**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.6,baz=278,slow=4.9,SNR=3.9						
INK	**Inuvik**	**48.09**	**30**	P	**P**	**15 57 16.2**	**0.0**
PDAR	**Pinedale Array**	**72.37**	**47**	P	**P**	**16 00 01.6**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.3,baz=258,slow=3.5,SNR=4.5						

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*NEIC **14** 15:56:15.1, 1592N×9577W, h34km, MD4.5(MEX), After MEX.*
MEX 14 15:56:15.9±1.2**, 1595N**×**9580W, h27**km±12km**, MD4.5, 2C-2D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.35**	**238**	⇑iP	Pb	15 56 22.0	-1.8
HUIG				i S	Sb	15 56 27.9	-1.2
HUIG	**Huatulco**	**0.35**	**238**	⇑iP	Pb	15 56 22.0	-1.8
HUIG				i S	Sb	15 56 27.8	-1.4
VHO	**Vista Hermosa**	**1.43**	**321**	⇓iP	Pn	15 56 37.8	-2.2
VHO				i S	Sn	15 56 55.3	-2.5
VHO	**Vista Hermosa**	**1.43**	**321**	⇓iP	Pn	15 56 37.8	-2.2
VHO				i S	Sn	15 56 55.2	-2.7
OXX	**Oaxaca**	**1.43**	**322**	i P	Pn	15 56 38.0	-2.0
OXX				i S	Sn	15 56 55.0	-2.9
OXX	**Oaxaca**	**1.43**	**322**	i P	Pn	15 56 38.5	-1.5
OXX				i S	Sn	15 56 54.0	-3.9
CMIG	**Matias Romero**	**1.43**	**38**	i P	Pn	15 56 37.3	-2.8
CMIG				i S	Sn	15 56 55.0	-3.0
CMIG	**Matias Romero**	**1.43**	**38**	i P	Pn	15 56 37.2	-2.9
CMIG				i S	Sn	15 56 54.1	-3.9
TUIG	**Tuzandepetl**	**2.45**	**32**	eP	Pn	15 56 52.0	-2.1
TUIG				i S	Sn	15 57 21.3	-1.9
TUIG	**Tuzandepetl**	**2.45**	**32**	eP	Pn	15 56 52.0	-2.1
TUIG				i S	Sn	15 57 18.2	-5.0
UTMO	**Huajuapan**	**2.67**	**315**	i P	Pn	15 56 56.1	-1.0
UTMO				i S	Sn	15 57 25.9	-2.8
TPIG	**Tehuac#an**	**2.87**	**329**	eP	Pn	15 56 57.7	-2.1
TPIG				i S	Sn	15 57 30.8	-2.6
SCX	**San Cristobal**	**3.14**	**75**	i P	Pn	15 57 03.5	0.0
SCX				i S	Sn	15 57 39.0	-1.1
SCX	**San Cristobal**	**3.14**	**75**	i P	Pn	15 57 03.5	0.0
SCX				i S	Sn	15 57 41.0	+0.9
LVIG	**Laguna Verde**	**3.79**	**351**	eP	Pn	15 57 13.4	+0.9
LVIG				i S	Sn	15 57 55.8	-0.5
ACX	**Acapulco**	**4.05**	**284**	i P	Pn	15 57 13.0	-3.1
ACX				i S	Sn	15 58 03.0	+0.4
ACX	**Acapulco**	**4.05**	**284**	i P	Pn	15 57 12.5	-3.6
ACX				i S	Sn	15 57 59.0	-3.6
PPM	**Popocatepetl**	**4.10**	**319**	eP	Pn	15 57 15.0	-1.8
PPM				eP		15 57 15.1	
PPM				i S	Sn	15 58 03.2	-0.7
PPM	**Popocatepetl**	**4.10**	**319**	eP	Pn	15 57 15.0	-1.8
PPM				i S	Sn	15 58 00.9	-3.0
MEIG	**Mezcala**	**4.15**	**299**	eP	Pn	15 57 16.0	-1.4
MEIG				i S	Sn	15 58 02.8	-2.2
YAIG	**Yautepec**	**4.25**	**313**	eP	Pn	15 57 18.2	-0.7
YAIG				i S	Sn	15 58 04.8	-2.7
YAIG	**Yautepec**	**4.25**	**313**	eP	Pn	15 57 17.1	-1.8
YAIG				i S	Sn	15 58 04.1	-3.4
PLIG	**Platanillo**	**4.29**	**305**	eP	Pn	15 57 18.0	-1.3
PLIG				i S	Sn	15 58 03.8	-4.7
PLIG	**Platanillo**	**4.29**	**305**	eP	Pn	15 57 19.0	-0.3
PLIG				i S	Sn	15 58 03.5	-5.0
CAIG	**El Cayaco**	**4.42**	**285**	i P	Pn	15 57 18.6	-2.5
CAIG				i S	Sn	15 58 11.8	+0.2
CAIG	**El Cayaco**	**4.42**	**285**	i P	Pn	15 57 18.0	-3.1
CAIG				i S	Sn	15 58 11.8	+0.2
IIZ	**Mezontepec**	**4.59**	**315**	i P	Pn	15 57 21.0	-2.5
IIZ				i S	Sn	15 58 12.2	-3.8
UNM	**Universidad Na**	**4.65**	**317**	eP	Pn	15 57 25.0	+0.7
UNM				i S	Sn	15 58 19.8	+2.4
UNM	**Universidad Na**	**4.65**	**317**	eP	Pn	15 57 25.0	+0.7
UNM				i S	Sn	15 58 12.3	-5.1
SCIG		**5.33**	**55**	i P	Pn	15 57 30.5	-3.1
SCIG				i S	Sn	15 58 31.1	-3.0
MRX	**Morelia**	**6.34**	**307**	eP	Pn	15 57 45.0	-2.6
MMIG	**Aquila**	**7.58**	**289**	eP	Pn	15 58 03.6	-0.9
MMIG				i S	Sn	15 59 27.0	-2.5
SFJM	**Santa Fe**	**8.22**	**304**	eP	Pn	15 58 20.0	+6.6

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*IDC **14** 16:31:24.0±1.4, 591N×12634E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/17, mbtmp3.7/6, Error ellipse: s-maj=105.9km s-min=20.3km az=70.0*
*ISCJB **14** 16:31:27.8±2.0, 59N±02×1265E±04, h40km±22km, mb3.6/6, Error ellipse: s-maj=72.1km s-min=18.6km az=141.9*
ISC 14 16:31:28.5±6.4**, 60N**±02×**1266E**±05**, h32**km±49km**, n8, σ0^{s}98**/8**, mb3.6**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.98**	**343**	eP	**Pn**	**16 31 45.7**	**-0.4**
BUKP	**Musuan**	**2.38**	**322**	eP	**Pn**	**16 32 05.6**	**+0.3**
FITZ	**Fitzroy Crossi**	**23.97**	**182**	P	**P**	**16 36 38.8**	**-1.1**
	1.1nm,0.5s,mb3.6,baz=13,slow=14,SNR=8.9						
WRA	**Warramunga Arr**	**26.89**	**164**	P	**P**	**16 37 06.6**	**+0.1**
	0.6nm,0.5s,mb3.4,baz=342,slow=10.0,SNR=7.8						
ASAR	**Alice Springs**	**30.35**	**167**	P	**P**	**16 37 37.5**	**+0.3**
	0.3nm,0.4s,mb3.4,baz=342,slow=7.0,SNR=14						
STKA	**Stephens Creek**	**40.30**	**160**	P	**P**	**16 39 03.6**	**+0.8**
	0.9nm,0.6s,mb3.6,baz=347,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**55.61**	**324**	P	**P**	**16 41 02.0**	**+0.9**
	0.2nm,0.4s,mb3.5,baz=113,slow=9.1,SNR=2.6						
ARCES	**ARCESS Array B**	**88.27**	**340**	P	**P**	**16 44 15.8**	**-0.9**
	3.1nm,1.0s,mb4.5,baz=79,slow=4.7,SNR=4.8						

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*ISCJB **14** 16:40:43.4±0.6, 5096N±002×289W±005, h5km±5km, Error ellipse: s-maj=4.9km s-min=3.4km az=0.9*
*CSEM **14** 16:40:44.8±0.1, 51.11N×300W, h10km, ML2.5/3, Error ellipse: s-maj=2.7km s-min=2.0km az=110.0*
*LDG **14** 16:40:44.0±1.0, 5098N×435W, h2km, Ml2.5/5, Error ellipse: s-maj=22.3km s-min=13.7km az=85.0*
*NEIC **14** 16:40:45.5±0.5, 5109N×299W, h10km, ML2.5(LDG), Error ellipse: s-maj=6.4km s-min=5.0km az=147.0*
NEIC Felt at Burnam-on-Sea.
*BGS **14** 16:40:45.7±0.9, 5109N×301W, h6km±16km, ML1.9*
ISC 14 16:40:44.5±0.4**, 5102N**±002×**294W**±004**, h12**km±4km**, n30, σ0^{s}95**/53**, 3C, United Kingdom**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SWK	**Warminster**	**0.46**	**74**	⇑iP	**Pg**	**16 40 54.9**	**+1.4**
SWK	**Warminster**	**0.46**	**74**	⇑iP	**Pg**	**16 40 54.8**	**+1.3**
HEX	**Exmoor**	**0.55**	**275**	eP	**Pg**	**16 40 55.9**	**+0.8**
HGH	**Gray Hill**	**0.62**	**8**	eP	**Pg**	**16 40 56.7**	**0.0**
DYA	**Yadsworthy**	**0.86**	**227**	⇑eP	**Pg**	**16 41 02.8**	**+1.7**
DYA				eS	**Sg**	**16 41 13.5**	**+1.2**
SWN1	**Swindon**	**0.87**	**55**	eP	**Pg**	**16 41 02.0**	**+0.7**
SWN1				eS	**Sg**	**16 41 13.8**	**+1.1**
SWN1				AML	AML	16 41 15.8	
	comp=N,38nm,0.4s						
SWN1				AML	AML	16 41 19.4	
	comp=E,45nm,0.7s						
SWN1	**Swindon**	**0.87**	**55**	eP	**Pg**	**16 41 02.0**	**+0.7**
SWN1				eS	**Sg**	**16 41 13.8**	**+1.1**
HTL	**Hartland**	**0.97**	**269**	eP	**Pg**	**16 41 03.5**	**+0.2**
HTL				eP		16 41 03.5	
HTL				eS	**Sg**	**16 41 15.4**	**-0.6**
HTL				eS	**Sg**	**16 41 15.4**	**-0.6**
HTL				AML	AML	16 41 18.7	
	comp=E,17nm,0.4s						
HTL				AML	AML	16 41 19.5	
	comp=N,21nm,0.3s						
HTL	**Hartland**	**0.97**	**269**	P	**Pg**	**16 41 03.5**	**+0.2**
HTL				S	**Sg**	**16 41 15.4**	**-0.6**
HTL	**Hartland**	**0.97**	**269**	P	**Pg**	**16 41 03.5**	**+0.2**
HTL				S	**Sg**	**16 41 15.4**	**-0.6**
MCH1	**Michaelchurch**	**0.98**	**358**	eP	**Pg**	**16 41 02.8**	**-0.6**
MCH1				eS	**Sg**	**16 41 14.5**	**-1.6**
MCH1				AML	AML	16 41 14.9	
	comp=E,68nm,0.3s						
MCH1				AML	AML	16 41 15.1	
	comp=N,109nm,0.1s						
MCH1	**Michaelchurch**	**0.98**	**358**	eP	**Pg**	**16 41 02.8**	**-0.6**
MCH1				eS	**Sg**	**16 41 14.5**	**-1.6**
MCH1				AML	AML	16 41 14.9	
	comp=E,68nm,0.3s						
MCH1				AML	AML	16 41 15.1	
	comp=N,109nm,0.1s						
MCH1	**Michaelchurch**	**0.98**	**358**	eP	**Pg**	**16 41 02.8**	**-0.6**
MCH1				eS	**Sg**	**16 41 14.5**	**-1.6**
MCH1				AML	AML	16 41 14.9	
	comp=E,68nm,0.3s						
MCH1				AML	AML	16 41 15.1	
	comp=N,109nm,0.1s						
MCH1	**Michaelchurch**	**0.98**	**358**	eP	**Pg**	**16 41 02.8**	**-0.6**
	comp=N,45nm,0.7s						
MCH1				eS	**Sg**	**16 41 14.5**	**-1.6**
	comp=N,38nm,0.4s						
HSA	**Swansea**	**1.05**	**314**	eP	**Pb**	**16 41 04.1**	**-0.6**
HSA	**Swansea**	**1.05**	**314**	eP	**Pb**	**16 41 04.1**	**-0.6**
	comp=N,17nm,0.4s						
HTR	**Trewern Hill**	**1.08**	**349**	eP	**Pb**	**16 41 04.3**	**-0.8**
SSW	**Stow on the Wo**	**1.17**	**35**	eP	**Pb**	**16 41 07.0**	**+0.3**
HLM1	**Long Mynd**	**1.50**	**1**	eP	**Pn**	**16 41 11.3**	**0.0**
SKP1	**Kophill**	**1.51**	**61**	eP	**Pn**	**16 41 12.0**	**+0.6**
SKP1	**Kophill**	**1.51**	**61**	eP	**Pn**	**16 41 12.0**	**+0.6**
	comp=N,109nm,0.1s						
ROSF	**Rostrenen**	**2.70**	**185**	eSn	**Sn**	**16 41 59.6**	**-0.7**
ROSF				eSg	**Sg**	**16 42 10.6**	**-0.5**
	comp=N,4.2nm,0.3s						
ROSF	**Rostrenen**	**2.70**	**185**	eSn	**Sn**	**16 41 59.6**	**-0.7**
ROSF				eSg	**Sg**	**16 42 10.6**	**-0.5**
	comp=N,2.1nm,0.3s						
FLN	**La Foliniere**	**2.76**	**144**	ePn	**Pg**	**16 41 35.5**	**-2.0**
FLN				eSn	**Sg**	**16 42 13.6**	**+0.3**
	comp=N,5.8nm,0.3s						
SGMF	**Saint Gilles**	**2.78**	**175**	ePn	**Pn**	**16 41 29.1**	**+0.2**
SGMF				eSn	**Sn**	**16 42 03.1**	**+0.7**
SGMF				eSg	**Sg**	**16 42 14.6**	**+0.7**
	comp=N,3.5nm,0.3s						
SGMF	**Saint Gilles**	**2.78**	**175**	ePn	**Pn**	**16 41 29.1**	**+0.2**
SGMF				eSn	**Sn**	**16 42 03.1**	**+0.7**
SGMF				eSg	**Sg**	**16 42 14.6**	**+0.7**
	comp=N,1.8nm,0.3s						
LDF	**La Druitiere**	**3.04**	**142**	ePn	**Pg**	**16 41 41.1**	**-1.7**
LDF				eSn	**Sg**	**16 42 21.0**	**-1.2**
	comp=N,2.5nm,0.2s						
QUIF	**Quistinic**	**3.11**	**183**	ePn	**Pn**	**16 41 33.2**	**-0.2**
QUIF				eSn	**Sn**	**16 42 10.2**	**-0.3**
QUIF				eSg	**Sg**	**16 42 23.6**	**-0.8**
	comp=N,4.5nm,0.3s						
QUIF	**Quistinic**	**3.11**	**183**	ePn	**Pn**	**16 41 33.2**	**-0.2**
QUIF				eSn	**Sn**	**16 42 10.2**	**-0.3**
QUIF				eSg	**Sg**	**16 42 23.6**	**-0.8**
	comp=N,2.2nm,0.3s						
MFF	**Saint Martin d**	**4.79**	**156**	ePn	**Pn**	**16 41 58.3**	**+1.7**

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*ISCJB **14** 16:58:38.9±0.4, 2902S±003×7190W±005, h10km, mb4.4/11, MS3.8/12, Error ellipse: s-maj=6.2km s-min=3.6km az=22.6*
*NEIC **14** 16:58:42.2±2.7, 2904S×7170W, h18km±16km, mb4.7/5, ML4.8(GUC), Error ellipse: s-maj=14.9km s-min=5.0km az=99.0*
*GUC **14** 16:58:42.3±0.7, 2905S×7173W, h38km±3km, ML4.8*
*IDC **14** 16:58:44.6±4.1, 2903S×7175W, h35km±30km, mb4.2/8, mb1 4.2/13, mb1mx4.0/22, mbtmp4.2/13, ML4.1/4, MS3.7/14, Ms1 3.7/14, ms1mx3.5/25, Error ellipse: s-maj=31.4km s-min=17.4km az=100.0*
ISC 14 16:58:40.9±0.4**, 2905S**±003×**7179W**±005**, h10**km**, n60, σ1^{s}12**/60**, mb4.4**/11**, MS3.8**/12**, 5C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.96**	**88**	⇓eP	**Pg**	**16 58 59.1**	**-0.2**
LCO				i S	**Sg**	**16 59 12.4**	**+0.6**
VACH	**Vallenar**	**1.02**	**63**	⇓iP	**Pg**	**16 59 00.3**	**-0.4**
VACH				i S	**Sg**	**16 59 13.4**	**-0.5**
VACH				AML	AML	16 59 16.5	
	comp=N,34μm,0.4s						
VACH	**Vallenar**	**1.02**	**63**	⇓iP	**Pg**	**16 59 00.3**	**-0.4**
VACH				i S	**Sg**	**16 59 13.4**	**-0.5**
TLL	**Tololo Astrono**	**1.41**	**142**	⇑iP	**Pn**	**16 59 07.1**	**+0.5**
TLL				i S	**Sn**	**16 59 25.7**	**+0.5**
TLL				AML	AML	16 59 28.2	
	comp=N,60μm,0.7s						
TLL	**Tololo Astrono**	**1.41**	**142**	⇑iP	**Pn**	**16 59 07.1**	**+0.5**
TLL				i S	**Sn**	**16 59 25.7**	**+0.5**
CPCH	**Copiapo**	**2.11**	**37**	⇑iP	**Pn**	**16 59 15.9**	**-0.4**
CPCH				i S	**Sn**	**16 59 41.3**	**-1.3**
CPCH				AML	AML	16 59 51.5	
	comp=N,8μm,0.4s						
CPCH	**Copiapo**	**2.11**	**37**	⇑iP	**Pn**	**16 59 15.9**	**-0.4**
CPCH				i S	**Sn**	**16 59 41.3**	**-1.3**
CDCH	**Caldera**	**2.15**	**24**	eP	**Pn**	**16 59 14.4**	**-2.4**
CDCH				i S	**Sn**	**16 59 40.2**	**-3.2**
CHNG	**Los Chungos**	**2.83**	**175**	eP	**Pn**	**16 59 25.7**	**-0.5**
CHNG				i S	**Sn**	**16 59 57.8**	**-2.6**
JACH	**Jahuel**	**3.76**	**164**	eP	**Pn**	**16 59 40.0**	**+1.0**
CFAA	**Coronel Fontan**	**3.99**	**130**	Pn	**Pn**	**16 59 44.2**	**+2.1**
	comp=N,1.3nm,0.3s,baz=312,slow=12,SNR=126						
CFAA				Sn	**Sn**	**17 00 31.8**	**+2.8**
	comp=N,4.5nm,0.3s,baz=90,slow=8.0,SNR=3.5						
CFAA				Lg		17 00 45.5	
	comp=N,27nm,0.3s,baz=70,slow=5.7,SNR=6.1						
CFAA	**Coronel Fontan**	**3.99**	**130**	Pn	**Pn**	**16 59 44.2**	**+2.1**
CFAA				Sn	**Sn**	**17 00 31.8**	**+2.8**
CFAA				Lg		17 00 45.5	
PEL	**Peldehue**	**4.19**	**167**	eP	**Pn**	**16 59 44.7**	**-0.1**
PEL				i S	**Sn**	**17 00 31.7**	**-2.1**
FCH	**Farellones**	**4.45**	**164**	eP	**Pn**	**16 59 49.5**	**+1.0**
FCH				i S	**Sn**	**17 00 38.0**	**-2.3**
CLCH	**Cerro Calan**	**4.46**	**166**	eP	**Pn**	**16 59 48.8**	**+0.2**
CLCH				i S	**Sn**	**17 00 38.6**	**-2.0**
CPN1	**Cerro Paranal**	**4.58**	**16**	eP	**Pn**	**16 59 49.3**	**-0.9**
MDZ	**Mendoza**	**4.58**	**147**	eP	**Pn**	**16 59 54.7**	**+4.5**
TACH	**Talagante**	**4.64**	**171**	eP	**Pn**	**16 59 50.9**	**-0.2**
PCH	**Pirque**	**4.68**	**167**	eP	**Pn**	**16 59 52.2**	**+0.5**
CHCH	**Chadas Angostu**	**4.96**	**169**	eP	**Pn**	**16 59 55.6**	**+0.1**
CACH	**El Canelo**	**5.15**	**169**	⇓iP	**Pn**	**16 59 59.0**	**+1.0**
CICH	**Cipreses**	**5.38**	**168**	⇑iP	**Pn**	**17 00 01.4**	**+0.2**
LVC	**Limon Verde**	**6.92**	**23**	Pn	**Pn**	**17 00 22.3**	**0.0**
	comp=N,0.5nm,0.3s,baz=281,slow=7.9,SNR=21						
LVC				Lg		17 02 09.4	
	comp=N,19nm,0.3s,baz=296,slow=18,SNR=6.3						
LVC	**Limon Verde**	**6.92**	**23**	ePn	**Pn**	**17 00 22.6**	**+0.3**
LVC				Lg		17 02 09.4	
PLCA	**Paso Flores**	**11.70**	**175**	Pn	**Pn**	**17 01 27.2**	**-0.6**
	comp=N,0.3nm,0.3s,baz=359,slow=9.2,SNR=9.0						
PLCA				LR	LR	17 05 55.4	
	comp=N,581nm,18.8s,baz=355,slow=37						
PLCA	**Paso Flores**	**11.70**	**175**	eP	**Pn**	**17 01 27.1**	**-0.7**
PLCA				LR	LR	17 05 55.4	
CPUP	**Villa Florida**	**13.10**	**81**	Pn	**Pn**	**17 01 48.9**	**+1.9**
	comp=N,0.6nm,0.3s,baz=241,slow=14,SNR=5.7						
CPUP				LR	LR	17 06 31.9	
	comp=N,113nm,20.4s,baz=249,slow=36						
CPUP	**Villa Florida**	**13.10**	**81**	Pn	**Pn**	**17 01 43.6**	**-3.4**
CPUP				LR	LR	17 06 31.9	
LPAZ	**La Paz**	**13.14**	**16**	eP	**Pn**	**17 01 48.1**	**+0.4**
	comp=N,3.3nm,0.6s						
SIV	**San Ignacio**	**16.33**	**40**	Pn	**Pn**	**17 02 32.4**	**+2.2**
	comp=N,0.3nm,0.3s,baz=235,slow=11,SNR=16						
SAML	**Samuel**	**21.57**	**24**	eP	**P**	**17 03 31.2**	**+0.6**
	comp=N,8.6nm,1.0s,mb4.1						
ATAH	**Atahualpa**	**22.80**	**343**	LR	LR	17 11 00.2	
	comp=N,130nm,20.1s,MS3.4,baz=9.7,slow=32						
BDFB	**Brasilia**	**25.66**	**64**	P	**P**	**17 04 10.2**	**-0.7**
	comp=N,3.5nm,0.5s,mb4.1,baz=244,slow=12,SNR=4.5						
BDFB				LR	LR	17 15 14.0	
	comp=N,271nm,19.8s,MS3.8,baz=239,slow=39						
USHA	**Ushuaia**	**25.88**	**176**	P	**P**	**17 04 13.6**	**+0.8**
	comp=N,13nm,0.9s,mb4.5,baz=359,slow=9.4,SNR=5.6						
USHA				LR	LR	17 15 24.6	
	comp=N,462nm,19.2s,MS4.0,baz=338,slow=39						
USHA	**Ushuaia**	**25.88**	**176**	P	**P**	**17 04 13.6**	**+0.8**
USHA				LR	LR	17 15 24.6	
ROSC	**El Rosal**	**33.80**	**355**	LR	LR	17 20 15.8	
	comp=N,67nm,19.7s,MS3.4,baz=215,slow=38						
CMIG	**Matias Romero**	**51.01**	**331**	LR	LR	17 24 23.0	
	comp=N,46nm,21.2s,MS3.5,baz=19,slow=30						
VNA1	**Neumayer--Stat**	**54.16**	**158**	e	**P**	**17 08 06.5**	**+0.2**
VNA1				e	pP	17 08 08.4	-1.1
VNA1				e	pP	17 08 09.3	-0.2
SNAA	**Sanae**	**56.10**	**159**	P	**P**	**17 08 19.5**	**-0.8**
	comp=N,1.4nm,0.6s,mb4.1,baz=273,slow=11,SNR=15						
SNAA	**Sanae**	**56.10**	**159**	e	**P**	**17 08 19.4**	**-0.9**
SNAA				e	pP	17 08 21.1	-2.4
SNAA				e	pP	17 08 23.0	-0.5
SNAA				e		17 08 30.5	
SNAA				e		17 08 38.0	
SNAA	**Sanae**	**56.10**	**159**	eP	**P**	**17 08 19.4**	**-0.9**
	comp=N,15nm,1.3s,mb4.9						
RKT	**Rikitea**	**56.47**	**260**	eLR	LR	17 25 27.7	
	comp=N,56nm,24.8s						
QSPA	**South Pole Qui**	**61.17**	**180**	eP	**P**	**17 08 56.1**	**+0.5**
	comp=N,7.1nm,0.8s,mb4.8						
LPIG	**La Paz**	**64.54**	**321**	LR	LR	17 29 53.6	
	comp=N,25nm,18.3s,MS3.4,baz=218,slow=29						
TAOE	**Nuku Hiva Isla**	**66.86**	**273**	eLR	LR	17 30 37.5	
	comp=N,542nm,29.9s						
PPT	**Papeete**	**71.23**	**260**	eS	S	17 19 37.8	+20
	comp=N,62nm,30.5s						
PPT				eLR	LR	17 32 32.1	
	comp=N,59nm,21.5s						
DBIC	**Dimbokro**	**73.44**	**72**	P	**P**	**17 10 13.9**	**+0.5**
	comp=N,5.2nm,0.7s,mb4.6,baz=206,slow=5.1,SNR=6.5						
DBIC				LR	LR	17 42 41.3	
	comp=N,57nm,19.1s,MS3.9,baz=234,slow=36						
DBIC	**Dimbokro**	**73.44**	**72**	eP	**P**	**17 10 13.5**	**+0.1**
	comp=N,5.2nm,0.7s,mb4.6						
DBIC				LR	LR	17 42 41.3	
MAW	**Mawson**	**77.86**	**164**	P	**P**	**17 10 38.7**	**0.0**
	comp=N,2.5nm,0.8s,mb4.2,baz=228,slow=6.7,SNR=9.2						
MAW				LR	LR	17 48 32.5	
	comp=N,118nm,18.4s,MS4.2,baz=241,slow=38						
HWUT	**Hardware Ranch**	**79.33**	**331**	eP	**P**	**17 10 48.3**	**+1.5**
	comp=N,3.9nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**79.46**	**333**	P	**P**	**17 10 48.0**	**+0.5**
	comp=N,0.8nm,0.9s,mb3.6,baz=130,slow=4.6,SNR=6.2						
BOSA	**Boshof**	**82.20**	**118**	P	**P**	**17 11 02.1**	**0.0**
	comp=N,6.0nm,0.9s,mb4.5,baz=258,slow=5.1,SNR=5.7						
BOSA				LR	LR	17 42 17.2	
	comp=N,97nm,20.3s,MS4.2,baz=53,slow=32						
TORD	**Torodi Ar. Bea**	**82.34**	**70**	P	**P**	**17 11 03.1**	**+0.2**
	comp=N,6.2nm,0.8s,mb4.6,baz=259,slow=4.9,SNR=25						
TORD				LR	LR	17 46 48.7	
	comp=N,44nm,18.8s,MS3.9,baz=215,slow=35						
SCHQ	**Schefferville**	**83.65**	**3**	LR	LR	17 47 32.6	
	comp=N,26nm,20.1s,MS3.6,baz=112,slow=35						
KEST	**Kesra**	**99.86**	**55**	LR	LR	17 59 39.8	
	comp=N,32nm,19.1s,MS3.8,baz=270,slow=37						
ASAR	**Alice Springs**	**122.04**	**208**	PKP	PKPdf	17 17 35.6	0.0
	comp=N,0.7nm,0.7s,baz=126,slow=1.6,SNR=11						
WRA	**Warramunga Arr**	**125.15**	**210**	PKP	PKPdf	17 17 41.9	+0.3
	comp=N,1.9nm,0.6s,baz=156,slow=1.6,SNR=26						
BVAR	**Borovoye Array**	**143.40**	**38**	PKP	PKPdf	17 18 14.1	-1.5
	comp=N,0.5nm,0.6s,baz=284,slow=5.8,SNR=3.8						
AAK	**Ala-Archa**	**149.71**	**54**	ePKPbc	PKPbc	17 18 31.5	+0.6
MKAR	**Makanchi Array**	**153.14**	**42**	PKPbc	PKPbc	17 18 37.8	-1.0
	comp=N,2.4nm,0.7s,baz=329,slow=2.1,SNR=15						

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*ISCJB **14** 17:10:49.4±0.5, 48.13N±003×757E±003, h8km±10km, Error ellipse: s-maj=5.5km s-min=3.2km az=7.3*
*LEDBW **14** 17:10:49.8±0.7, 4803N±008×752E±004, h5km, ML1.3, Error ellipse: s-maj=28.0km s-min=10.0km az=10.0*
*STR **14** 17:10:50.0±0.3, 48.16N×758E, h5km±1km, Ml1.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **14** 17:10:51.0±0.7, 48.17N×754E, h2km, Md2.0/3, Ml2.1/1, Error ellipse: s-maj=11.0km s-min=5.7km az=101.0*
ISC 14 17:10:49.9±0.6**, 4813N**±003×**756E**±003**, h12**km±9km**, n14, σ0^{s}69**/24**, 2D, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECH	Echery	0.28	288	Pg	Pg	17 10 55.5	-0.2
ECH				Sg	Sg	17 10 59.6	0.0
KIZ	Kirchzarten	0.30	125⇓	*i*P*	Pg	17 10 55.2	-0.8
KIZ				*i* S*	Sg	17 10 59.0	-1.0
KIZ				PmP		17 11 01.0	
KIZ	Kirchzarten	0.30	125⇓	*i*Pg	Pg	17 10 55.2	-0.8
KIZ				*i* Sg	Sg	17 10 59.0	-1.0
WLS	Welschbruch	0.32	334	Pg	Pg	17 10 56.4	+0.1
WLS				Sg	Sg	17 11 00.7	+0.1
CDF	Champ du Feu	0.34	326	*e*Pg	Pg	17 10 56.8	0.0
CDF				*e*Sg	Sg	17 11 01.5	+0.1
MOF	Molkenrain	0.40	226	Pg	Pg	17 10 57.6	-0.2
BFO	Black Forest	0.55	68	*e*Sg	Sg	17 11 07.3	-0.7
HINF	Hinteralfeld	0.57	237	*e*Pg	Pg	17 11 02.5	+1.5
HINF				*e*Sg	Sg	17 11 08.5	0.0
HAU	Haudompre	0.82	262	*e*Pg	Pg	17 11 06.3	+0.5
HAU				*e*Sg	Sg	17 11 17.5	+1.0
LBG	Lerchenberg	0.98	56	Sg	Sg	17 11 22.7	+1.0
SISB	Singen-Schiene	1.04	115	Sg	Sg	17 11 24.2	+0.7
GUT	Gutenstein	1.04	93	Pg	Pg	17 11 09.7	-0.3
GUT				S	Sb	17 11 23.1	-0.4
GUT				Sg	Sg	17 11 24.4	+0.8
BUCH	Bad Urach	1.24	74	Sg	Sg	17 11 30.0	+0.2
MEZF	Maizieres J'vi	1.71	284	*e*Pg	Pg	17 11 21.8	-1.0
MEZF				*e*Sg	Sg	17 11 43.8	-1.3
	3.4nm,0.4s						

*NEIC **14** 17:48:58.9, 2909S×7165W, h33^{km}, ML4.0(GUC), After GUC.*

GUC 14 17:48:58.9±0.9**, 2909S×7165W, h33**^{km}±7^{km}**, ML4.0, 3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.84	85⇓	*i*P	Pn	17 49 14.6	+0.2
LCO				*i* S	Sn	17 49 27.0	+1.5
VACH	Vallenar	0.93	57⇓	*i*P	Pn	17 49 15.8	+0.2
VACH				*i* S	Sn	17 49 28.7	+0.8
VACH				AML	AML	17 49 31.1	
	comp=N,9µm,0.1s						
VACH	Vallenar	0.93	57⇓	*i*P	Pn	17 49 15.8	+0.2
VACH				*i* S	Sn	17 49 28.7	+0.8
TLL	Tololo Astrono	1.31	146	*e*P	Pn	17 49 21.9	+1.1
TLL				*i* S	Sn	17 49 40.0	+2.9
TLL				AML	AML	17 49 42.5	
	comp=N,3µm,0.5s						
TLL	Tololo Astrono	1.31	146	*e*P	Pn	17 49 21.9	+1.1
TLL				*i* S	Sn	17 49 40.0	+2.9
CPCH	Copiapo	2.07	34	*e*P	Pn	17 49 32.9	+1.6
CPCH				*i* S	Sn	17 49 58.6	+2.7
CPCH				AML	AML	17 50 02.0	
	comp=E,2µm,0.2s						
CPCH	Copiapo	2.07	34	*e*P	Pn	17 49 32.9	+1.6
CPCH				*i* S	Sn	17 49 58.6	+2.7
CDCH	Caldera	2.13	20	*e*P	Pn	17 49 30.8	-1.4
CDCH				*i* S	Sn	17 49 56.3	-1.2

*ISCJB **14** 17:52:43.5±3.0, 597S±007×15231E±008, h4^{km}±19^{km}, mb4.4/23, MS3.9/1, Error ellipse: s-maj=15.3km s-min=8.6km az=85.5*

*BJI **14** 17:52:46.5, 600S×15240E, h31^{km}, mB4.7, mb4.8, Ms4.2, Msz3.8*

*MOS **14** 17:52:47.2±0.7, 603S×15248E, h33^{km}, mb4.7/6, Error ellipse: s-maj=16.1km s-min=13.4km az=135.4*

*NEIC **14** 17:52:49.0±3.3, 604S×15239E, h32^{km}±23^{km}, mb4.6/12, Error ellipse: s-maj=12.2km s-min=8.6km az=155.0*

*IDC **14** 17:52:51.5±2.8, 608S×15229E, h50^{km}±25^{km}, mb3.9/9, mb1 4.1/11, mb1mx4.1/14, mbtmp4.3/11, ML4.0/2, Error ellipse: s-maj=23.4km s-min=19.4km az=146.0*

ISC 14 17:52:50.4±1.6**, 600S**±008×**15235E**±007**, h43**^{km}±14^{km}**, n46, σ0.96**/46**, mb4.4**/23**, MS3.9**/1**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.16	236	P	Pn	17 54 18.5	-0.2
	12nm,0.3s,baz=54,slow=9.7,SNR=48						
PMG				S	Sn	17 55 28.2	+0.4
	16nm,0.3s,baz=38,slow=16,SNR=7.2						
PMG	Port Moresby	6.16	236	*e*P	Pn	17 54 18.9	+0.2
PMG				pmax	pmax		
	comp=Z,85nm,0.8s						
PMG	Port Moresby	6.16	236	*e*P	Pn	17 54 18.9	+0.1
	comp=Z,85nm,0.8s						
HNR	Honiara	8.27	115	P	Pn	17 54 48.8	+1.1
	comp=Z,6.2nm,0.3s,baz=246,slow=1.5,SNR=4.9						
HNR	Honiara	8.27	115	P	Pn	17 54 45.1	-2.6
KAKA	Kakadu	20.73	250	*e*P	P	17 57 26.5	-0.7
	comp=Z,35nm,0.5s						
WRAB	Tennant Creek	22.31	230	*i* P	P	17 57 45.1	+1.0
WRAB	Tennant Creek	22.31	230	*e*P	P	17 57 45.1	+0.9
	comp=Z,15nm,0.8s,mb4.5						
WB2	Warramunga Arr	22.32	230	*e*P	P	17 57 45.7	+1.5
WRA	Warramunga Arr	22.33	230	P	P	17 57 44.3	0.0
	comp=Z,3.7nm,0.7s,mb3.9,baz=54,slow=9.8,SNR=34						
AS31	Alice Springs	24.97	223	*e*P	P	17 58 09.7	-0.1
ASAR	Alice Springs	24.97	223	P	P	17 58 09.8	0.0
	comp=Z,5.3nm,0.9s,mb4.1,baz=56,slow=9.6,SNR=45						
ASPA	Alice Springs	24.97	223	*e*P	P	17 58 09.7	-0.1
STKA	Stephens Creek	27.64	200	P	P	17 58 33.0	-1.0
	comp=Z,1.6nm,0.7s,mb3.8,baz=23,slow=12,SNR=4.4						
STKA	Stephens Creek	27.64	200	P	P	17 58 33.0	-1.0
FITZ	Fitzroy Crossi	28.70	243	*e*P	P	17 58 35.9	-7.5
	comp=Z,17nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	28.70	243	P	P	17 58 43.2	-0.2
	comp=Z,6.1nm,0.5s,mb4.6,baz=85,slow=5.0,SNR=51						
MBWA	Marble Bar	34.99	241	P	P	17 59 38.5	-0.1
	comp=Z,6.2nm,0.6s,mb4.7						
SSE	Sheshan	47.41	323	P	P	18 01 18.3	-2.1
SSE				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,75nm,6.1s						
NJ2	Nanjing	49.49	322	*e*P	P	18 01 34.8	-1.7
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
HHC	Hu-ho-hao-te	59.75	325	*e*P	P	18 02 54.5	+3.7
HHC				AP	pP	18 03 04.6	+1.4
HHC				XP	sP	18 03 08.5	+0.3
HHC				PCP	PcP	18 03 40.1	+2.8
HHC				PP	PP	18 05 08.8	+5.8
HHC				SCP	ScP	18 07 37.1	+2.4
HHC				PCS	PcS	18 07 40.9	+1.4
HHC				S	S	18 11 03.0	+4.2
HHC				XS	sS	18 11 19.8	+0.4
HHC				PS		18 11 22.8	
HHC				SCS	ScS	18 12 38.6	+1.0
HHC				SS	SS	18 15 00.6	+5.5
HHC				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,57nm,6.8s						
HHC				LR	LR		
	comp=N,86nm,20.2s,MS4.0						
HHC				LR	LR		
	comp=E,81nm,17.8s,MS4.0						
HHC				LR	LR		
	comp=Z,80nm,20.2s,MS3.9						
ULN	Ulaanbaatar	66.77	329⇑	*e*P	P	18 03 38.3	+1.0
ULN	Ulaanbaatar	66.77	329	*e*P	P	18 03 37.8	+0.5
	comp=Z,0.7nm,0.4s,mb4.0						
SONM	Songino Array	67.09	328	P	P	18 03 40.0	+0.7
	comp=Z,1.1nm,0.7s,mb4.0,baz=156,slow=5.1,SNR=9.0						
ZAK	Zakamensk	70.28	329	*e*P	P	18 03 59.2	0.0
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
VNDA	Vanda	71.66	178	P	P	18 04 06.8	-0.7
	comp=Z,1.1nm,0.8s,mb3.9,baz=323,slow=6.8,SNR=8.0						
VNDA	Vanda	71.66	178	*e*P	P	18 04 06.9	-0.7
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VNDA	Vanda	71.66	178	*e*P	P	18 04 06.9	-0.7
	comp=Z,1.8nm,1.0s,mb4.0						
SBA	Scott Base	72.22	177	*e*P	P	18 04 09.9	-1.0
SBA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
SBA	Scott Base	72.22	177	*e*P	P	18 04 09.8	-1.0
	comp=Z,1.9nm,1.0s,mb4.0						
BILL	Bilibino	74.51	5	*i* P	P	18 04 23.7	-0.7
BILL				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
SVW2	Sparrevohn	78.09	23	*e*P	P	18 04 46.4	+1.6
MKAR	Makanchi Array	80.93	319	P	P	18 05 00.7	+0.5
	comp=Z,1.6nm,0.9s,mb4.0,baz=98,slow=5.1,SNR=9.1						
MCK	McKinley	82.13	23	*e*P	P	18 05 06.4	-0.1
MCK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
MCK	McKinley	82.13	23	*e*P	P	18 05 06.4	-0.1
	comp=Z,11nm,1.2s,mb4.7						
COLA	College	83.12	22	*i* P	P	18 05 12.0	+0.4
COLA	College	83.12	22	*e*P	P	18 05 11.6	-0.1
	comp=Z,11nm,1.2s,mb4.8						
QSPA	South Pole Qui	83.97	180	*e*P	P	18 05 16.2	+0.2
	comp=Z,2.9nm,0.8s,mb4.5						
MAW	Mawson	84.30	203	P	P	18 05 17.9	+0.2
	comp=Z,1.0nm,0.7s,mb4.1,baz=73,slow=11,SNR=5.9						
KURK	Kurchatov	84.43	322	*e*P	P	18 05 18.2	-0.1
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8						
KURK	Kurchatov	84.43	322	*e*P	P	18 05 18.1	-0.2
	comp=Z,9.4nm,1.2s,mb4.8						
BRVK	Borovoye	89.99	323	*e*P	P	18 05 44.4	-0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.6						
BRVK	Borovoye	89.99	323	*e*P	P	18 05 44.4	-0.8
	comp=Z,2.8nm,1.0s,mb4.5						
NVAR	Mina Array Bea	93.17	52	P	P	18 06 02.4	+2.4
	comp=Z,1.1nm,0.8s,mb4.3,baz=252,slow=11,SNR=6.4						
SNAA	Sanae	100.79	188	*i* P	Pdif	18 06 38.0	+3.6
TORD	Torodi Ar. Bea	150.22	286	PKPbc	PKPbc	18 12 37.6	+0.9
	comp=Z,9.8nm,0.8s,baz=74,slow=2.6,SNR=46						

*NIED **14** 18:02:00, 2460N×12170E, h35^{km}, Mw4.0 Best double couple: M₀1.16000×10^{15} NP1:φs253.00000°, δ78.00000°, λ-76.00000°. NP2:φs23.00000°, δ19.00000°, λ-139.00000°.*

*BJI **14** 18:02:39.8, 2398N×12228E, h24^{km}, mB4.7, mb4.6, ML4.0, Ms4.2, Msz3.8*

*NEIC **14** 18:02:45.0±2.2, 2422N×12191E, h5^{km}±12^{km}, mb4.2/1, ML4.3(TAP), Error ellipse: s-maj=22.8km s-min=10.5km az=85.0*

NEIC Recorded [4 TAP] in I-lan, [3 TAP] in Hua-lien and [1 TAP] in Nan-t'ou Counties.

*IDC **14** 18:02:44.2±1.9, 2426N×12204E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.5/19, mbtmp3.5/5, MS3.4/2, Ms1 3.4/2, ms1mx3.0/15, Error ellipse: s-maj=134.6km s-min=21.3km az=63.0*

*ISCJB **14** 18:02:45.2±2.3, 242N±0.1×12176E±009, h16^{km}±17^{km}, mb3.7/6, MS3.4/2, Error ellipse: s-maj=18.2km s-min=13.0km az=42.5*

ISC 14 18:02:46.7±1.3**, 2420N**±008×**12177E**±009**, h11**^{km}±6^{km}**, n15, σ1.00**/15**, mb3.7**/6**, MS3.4**/2**, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.16	260	*e*Pn	Pg	18 02 50.7	+0.5
YHNB	Yeheng	0.59	323	*e*Pn	Pg	18 02 57.5	-0.5
TATO	Taipei	0.81	342	*e*P	Pg	18 03 01.4	-0.9
QZH	Quanzhou	2.98	285	P	Pn	18 03 34.3	+0.4
QZH				S	Sn	18 04 08.4	-1.2
QZH				Smax			
	comp=N,340nm,0.8s						
QZH				Smax			
	comp=E,280nm,0.8s						
GZH	Guangzhou	7.80	264	P	Pn	18 04 36.3	-3.8
GZH				Smax			
	comp=N,72nm,1.1s						
GZH				Smax			
	comp=E,61nm,1.0s						
NJ2	Nanjing	8.23	342	*e*P	Pn	18 04 47.8	+1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
GYA	Guiyang	13.84	283	P	Pn	18 06 04.3	+1.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				AMB	AMB		
	comp=Z,60nm,3.8s						
GYA				LR	LR		
	comp=N,570nm,10.6s						
GYA				LR	LR		
	comp=E,260nm,10.4s						
GYA				LR	LR		
	comp=Z,280nm,9.8s						
SONM	Songino Array	26.56	336	P	P	18 08 24.1	-0.4
	comp=Z,0.7nm,0.6s,mb3.4,baz=152,slow=9.4,SNR=5.4						
SONM				LR	LR	18 20 20.2	
	comp=Z,70nm,18.4s,MS3.2,baz=110,slow=40						
SONM	Songino Array	26.56	336	P	P	18 08 24.1	-0.4
SONM				LR	LR	18 20 20.2	
MKAR	Makanchi Array	38.70	316	P	P	18 10 11.4	+0.9
	comp=Z,0.4nm,0.3s,mb3.6,baz=102,slow=9.7,SNR=5.2						
WRA	Warramunga Arr	45.55	163	P	P	18 11 05.3	-1.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=345,slow=8.8,SNR=5.3						
CHKZ	Chkalovo	48.05	321	*e*P	P	18 11 24.9	-1.1
	comp=Z,1.2nm,0.6s,mb4.1						
ASAR	Alice Springs	49.02	165	P	P	18 11 33.5	0.0
	comp=Z,0.4nm,1.0s,mb3.4,baz=330,slow=7.8,SNR=4.1						
FINES	FINESS Array B	71.70	330	LR	LR	18 48 25.4	
	comp=Z,32nm,20.3s,MS3.6,baz=155,slow=38						
BRTR	Keskin Array B	73.59	307	P	P	18 14 20.2	+0.4
	comp=Z,1.4nm,0.9s,mb3.9,baz=116,slow=8.4,SNR=6.5						

GUC 14 18:05:24.8±0.7**, 3316S×7023W, h6**^{km}±4^{km}**, MD3.5, ML1.9, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FCH	Farellones	0.18	196⇑	*i*P	Pg	18 05 29.2	+0.9
FCH				*i* S	Sg	18 05 31.9	+1.2
FCH				AML	AML	18 05 32.2	
	comp=E,714nm,0.3s						
CLCH	Cerro Calan	0.35	227	*e*P	Pg	18 05 31.7	+0.1
CLCH				*i* S	Sg	18 05 37.2	+1.1
CLCH				AML	AML	18 05 41.1	
	comp=E,265nm,0.4s						
PEL	Peldehue	0.38	272	*e*P	Pg	18 05 32.5	+0.4
PEL				*i* S	Sg	18 05 37.9	+0.8
PEL				AML	AML	18 05 39.7	
	comp=E,136nm,0.3s						
PCH	Pirque	0.52	207⇑	*i*P	Pg	18 05 35.1	+0.3
PCH				*i* S	Sg	18 05 42.0	+0.5
JACH	Jahuel	0.56	327⇑	*i*P	Pg	18 05 35.6	-0.1
JACH				*i* S	Sg	18 05 43.6	+0.6
TACH	Talagante	0.77	230	*e*P	Pg	18 05 39.1	-0.5
TACH				*i* S	Sg	18 05 49.8	+0.3
CHCH	Chadas Angostu	0.85	204	*e*P	Pg	18 05 40.7	-0.4
SFDO	San Fernando	1.59	204	*e*P	Pn	18 05 52.2	-1.2

*ISCJB **14** 18:08:47.1±0.6, 4375N±004×10524W±007, h0^{km}, mb4.3/1, Error ellipse: s-maj=7.9km s-min=5.8km az=60.8*

*NEIC **14** 18:08:48.8±0.4, 4375N×10524W, h0^{km}, ML3.2, Error ellipse: s-maj=6.3km s-min=4.5km az=137.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

*IDC **14** 18:08:48.5±1.9, 4380N×10557W, h0^{km}, mb4.2/1, mb1 4.1/3, mb1mx3.6/21, mbtmp4.0/3, ML3.6/2, Error ellipse: s-maj=54.3km s-min=8.7km az=149.0*

ISC 14 18:08:48.8±0.5**, 4375N**±005×**10522W**±007**, h0**^{km}**, n33, σ0.93**/40**, mb4.3**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	66	*e*Pg	Pg	18 09 08.0	+1.3
PHWY	Pilot Hill	2.45	184	*e*P	Pn	18 09 29.7	-0.3
RWWY	Rawlins	2.52	216	*e*Pn	Pn	18 09 31.6	+0.6
RWWY				*e*Sn	Sn	18 10 01.6	-0.9
LAO	LASA Array	3.03	347	*e*Pn	Pn	18 09 36.8	-1.1
LAO				*e*S	Sn	18 10 21.2	+6.3
BW06	Boulder Array	3.32	254	*e*Pn	Pn	18 09 41.8	-0.2
PDAR	Pinedale Array	3.32	254	Pn	Pn	18 09 41.5	-0.4
	4.1nm,0.3s,baz=75,slow=16,SNR=64						
PDAR				Lg		18 10 25.7	
	6.8nm,0.3s,baz=72,slow=33,SNR=5.6						
GCMT	Greycliff	3.77	304	*e*Pn	Pn	18 09 44.5	-3.6
LOHW	Long Hollow	3.91	270	*e*Pn	Pn	18 09 50.8	+0.8
ISCO	Idaho Springs	3.95	184	*e*Pn	Pn	18 09 51.2	+0.5
ISCO				*e*Sg	Sg	18 10 50.0	-5.8
FLWY	Flagg Ranch	3.97	277	*e*Pn	Pn	18 09 51.6	+0.6
MOOW	Moose Ponds	4.00	272	*e*Pn	Pn	18 09 51.1	-0.2
SNOW	Snow King Moun	4.03	268	Pn	Pn	18 09 52.2	+0.5
YNR	Norris Junctio	4.04	286	*e*Pg	Pg	18 10 01.9	-4.4
IMW	Indian Meadow	4.14	274	*e*Pn	Pn	18 09 56.9	+3.6
TPAW	Teton Pass	4.17	268	*e*Pn	Pn	18 09 54.5	+0.8
AHID	Auburn Hatcher	4.41	259	*e*Pg	Pg	18 10 07.8	-5.4
RRI2	Red Ridge	4.45	267	*e*Pn	Pn	18 09 57.8	+0.2
SMCO	Snowmass	4.75	197	*e*Pg	Pg	18 10 13.1	-6.7
HWUT	Hardware Ranch	5.14	248	*e*Pn	Pn	18 10 06.3	-0.7
	11nm,0.6s						
TCUT	Toone Canyon	5.28	242	*e*Pn	Pn	18 10 08.0	-0.9
EGMT	Eagleton	5.32	325	*e*Pn	Pn	18 10 09.9	+0.4
	16nm,0.5s						
DAU	Daniels Canyon	5.59	236	Pn	Pn	18 10 12.0	-1.2
HVU	Hansel Valley	5.90	253	*e*Pn	Pn	18 10 16.9	-0.5
	7.3nm,0.5s						
SRU	San Rafael	6.11	223	*e*Pn	Pn	18 10 18.5	-1.8
SRU				*e*Sg	Sg	18 11 54.0	-11
PV01	Paradox Valley	6.15	205	*e*Pn	Pn	18 10 21.7	+0.8
PV01				*e*P		18 10 39.6	
TMUT	Trail Mountain	6.32	227	*e*Pn	Pn	18 10 23.0	-0.2
TMUT				Pg	Pb	18 10 41.3	+1.6
TMUT				*e*Sg	Sg	18 12 04.0	-7.8
CHMT	Chamberlain Mo	6.49	302	P	Pn	18 10 25.2	-0.3
HLID	Hailey	6.67	272	*e*Pn	Pn	18 10 29.9	+1.8
MSU	Marysvale	7.41	227	*e*Pn	Pn	18 10 37.8	-0.4
MSU				*e*Pg	Pg	18 11 03.1	-7.6
CCUT	Cedar City	8.75	228	*e*Pn	Pn	18 10 57.4	+0.9
ULM	Lac du Bonnet	9.11	41	Pn	Pn	18 11 01.0	-0.5
ULM				Lg		18 13 33.3	
ULM	Lac du Bonnet	9.11	41	Pn	Pn	18 11 01.0	-0.5
	2.1nm,0.3s,baz=234,slow=12,SNR=14						
ULM				Lg		18 13 33.3	
	0.3nm,0.3s,baz=286,slow=21,SNR=2.0						
ARCES	ARCESS Array B	61.40	18	P	P	18 19 05.3	-1.4
	2.5nm,1.0s,mb4.3,baz=339,slow=6.5,SNR=6.3						

*ISCJB **14** 18:48:22.7±0.6, 5777N±006×15243W±009, h38^{km}±4^{km}, mb4.1/20, MS3.2/3, Error ellipse: s-maj=10.0km s-min=8.0km az=2.2*

*NEIC **14** 18:48:22.2, 5751N×15235W, h23^{km}, mb4.4/6, ML3.8(AEIC), ML4.0(PMR), After AEIC.*

NEIC Felt on Kodiak.

*IDC **14** 18:48:23.9±0.6, 5785N×15247W, h28^{km}±4^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.9/22, mbtmp4.0/16, ML4.0/2, MS3.2/7, Ms1 3.2/7, ms1mx2.9/31, Error ellipse: s-maj=15.1km s-min=14.9km az=132.0*

ISC 14 18:48:23.5±0.7**, 5769N**±006×**15255W**±008**, h34**^{km}±4^{km}**, h31**^{km}±1.0^{km}**:pP-P, n60, σ0.95**/55**, mb4.1**/20**, MS3.2**/3**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	0.09	349	Pg	Pb	18 48 29.2	-0.1
	4µm,0.3s,baz=190,slow=5.1						
KDAK				Lg		18 48 34.0	
	baz=38,slow=19						
KDAK	Kodiak Island	0.09	349	P	Pb	18 48 28.6	-0.8
KDAK				S	Sb	18 48 33.9	+0.5
SEW	Seward	2.90	32	P	Pn	18 49 07.1	-0.1
SLKM	Skilak Lake	3.07	22	P	Pn	18 49 10.0	+0.6
CHGN	Chignik	3.50	249	*e*P	Pn	18 49 14.1	-1.3
FIB	Fire Island	3.69	18	P	Pn	18 49 18.7	+0.7
MID	Middleton Isla	3.69	59	P	Pn	18 49 16.7	-1.4
RC01	Rabbit Creek A	3.70	22	P	Pn	18 49 18.6	+0.5
SVW2	Sparrevohn	3.75	337	P	Pn	18 49 20.0	+1.2
PMR	Palmer	4.28	22	*e*P	Pn	18 49 29.4	+3.3
EYAK	Cordova Ski Ar	4.53	48	P	Pn	18 49 29.0	-0.5
DIV	Divide	4.88	42	P	Pn	18 49 34.5	0.0
SDPT	Sand Point	4.98	245	*e*P	Pn	18 49 34.7	-1.0
BMRM	Bremner River	5.23	48	P	Pn	18 49 38.9	-0.2
TTA	Tatalina	5.53	343	*e*P	Pn	18 49 44.0	+0.7
TRF	Thorofare Moun	5.88	10	P	Pn	18 49 48.7	+0.6
KTH	Kantishna Hill	5.93	7	P	Pn	18 49 50.0	+1.1
MCK	McKinley	6.31	15	*e*P	Pn	18 49 53.9	-0.2
	14nm,0.7s						
PNL	Peninsula	7.14	68	P	Pn	18 50 03.9	-1.5
COLA	College	7.55	15	*e*Pn	Pn	18 50 11.3	+0.3
	15nm,0.8s						
IMA2	Indian Mountai	8.42	357	*e*Pn	Pn	18 50 23.3	+0.3
SKAG	Skagway	9.17	72	*e*Pn	Pn	18 50 32.5	-0.7
WHY	Whitehorse	9.54	64	P	Pn	18 50 36.9	-1.4
DLBC	Dease Lake	11.94	77	Pn	Pn	18 51 10.8	-0.3
	0.4nm,0.3s,baz=241,slow=14,SNR=4.5						
DLBC				LR	LR	18 55 22.3	
	comp=Z,82nm,21.5s,baz=155,slow=35						
INK	Inuvik	13.63	31	LR	LR	18 57 16.5	
	comp=Z,67nm,18.1s,baz=268,slow=40						
BBB	Bella Bella	15.04	101	LR	LR	18 56 37.1	
	comp=Z,97nm,20.1s,baz=325,slow=33						
YKA	Yellowknife Ar	19.31	60	P	Pn	18 52 45.5	-1.2
	baz=271,slow=10,SNR=13						
YKA				LR	LR	19 01 06.6	
	comp=Z,32nm,18.7s,baz=310,slow=40						
YKA	Yellowknife Ar	19.31	60	P	Pn	18 52 45.5	-1.2
YKA				LR	LR	19 01 06.6	
NEW	Newport	23.07	99	LR	LR	19 00 57.4	
	comp=Z,68nm,19.2s,MS3.1,baz=182,slow=33						
YBH	Yreka Blue Hor	24.76	117	LR	LR	19 01 08.0	
	comp=Z,59nm,18.3s,MS3.1,baz=335,slow=31						
NVAR	Mina Array Bea	29.45	116	P	P	18 54 26.0	+2.1
	0.4nm,0.5s,mb3.4,baz=307,slow=9.4,SNR=3.8						
BW06	Boulder Array	30.69	100	*e*P	P	18 54 36.1	+1.2
PDAR	Pinedale Array	30.69	100	P	P	18 54 36.2	+1.4
	1.8nm,0.5s,mb4.2,baz=319,slow=4.9,SNR=14						
RSSD	Black Hills	32.71	93	*e*P	P	18 54 54.2	+1.6
	5.4nm,0.4s,mb4.8						
SRU	San Rafael	32.82	106	*e*P	P	18 54 55.7	+2.1
	3.4nm,0.8s,mb4.3						
ASAJ	Asahikawa	41.45	280	P	P	18 56 08.2	+1.4
	1.4nm,0.5s,mb3.9,baz=295,slow=19,SNR=3.6						
ASAJ				pP	pP	18 56 15.7	-1.2
	3.9nm,0.6s,baz=67,slow=5.2,SNR=5.8						
SCHQ	Schefferville	44.66	55	P	P	18 56 32.6	-0.2
	2.0nm,0.6s,mb4.1,baz=276,slow=17,SNR=4.6						
MJAR	Matsushiro Arr	49.20	276	pP	pP	18 57 17.0	-1.6
	1.4nm,0.7s,baz=36,slow=6.6,SNR=6.6						
ARCES	ARCESS Array B	53.06	1	P	P	18 57 36.5	-0.8
	1.3nm,0.6s,mb4.0,baz=11,slow=6.8,SNR=7.2						
ARCES				PcP	PcP	18 58 44.1	-1.2
	1.8nm,0.8s,baz=343,slow=5.6,SNR=3.7						
ARCES	ARCESS Array B	53.06	1	P	P	18 57 36.5	-0.8
ARCES				PcP	PcP	18 58 44.1	-1.2
SONM	Songino Array	56.36	307	P	P	18 58 01.8	+0.7
	2.4nm,0.7s,mb4.3,baz=43,slow=7.2,SNR=26						
SONM				pP	pP	18 58 11.2	-0.4
	1.9nm,0.7s,baz=39,slow=5.9,SNR=9.5						
SONM				LR	LR	19 25 48.8	
	comp=Z,32nm,18.5s,MS3.5,baz=128,slow=40						
JOF	Joensuu	59.68	358	*e*p	P	18 58 22.8	-1.6
KAF	Kangasniemi	60.52	1	*e*p	P	18 58 29.2	-1.0
	1.2nm,0.4s,mb4.4						
NOA	NORSAR Array B	60.92	9	P	P	18 58 31.3	-1.6
	0.4nm,0.5s,mb3.8,baz=344,slow=5.6,SNR=2.9						
FINES	FINESS Array B	61.20	1	P	P	18 58 34.3	-0.4
	1.5nm,0.5s,mb4.3,baz=2.6,slow=8.1,SNR=19						
BVAR	Borovoye Array	64.23	333	P	P	18 58 55.0	+0.1
	2.0nm,0.6s,mb4.3,baz=38,slow=7.6,SNR=17						
BVAR				pP	pP	18 59 03.9	-1.6
	4.2nm,0.6s,baz=29,slow=6.5,SNR=20						
MKAR	Makanchi Array	66.39	322	P	P	18 59 08.6	-0.3
	0.3nm,0.2s,mb3.9,baz=34,slow=6.0,SNR=3.7						
MKAR				pP	pP	18 59 17.9	-1.6
	0.9nm,0.4s,baz=36,slow=7.0,SNR=3.5						
AKTK	Aktyubinsk	69.34	340	P	P	18 59 27.1	-0.4
AKTK				pP	pP	18 59 36.9	-1.2
AKTO	Aktyubinsk	69.34	340	P	P	18 59 27.1	-0.4
	0.8nm,0.4s,mb4.0,baz=340,slow=2.5,SNR=5.0						
AKTO				pP	pP	18 59 36.9	-1.2
	0.9nm,0.4s,baz=343,slow=4.4,SNR=4.2						
AKASG	Malin Array Be	71.96	359	P	P	18 59 42.6	-0.8
	0.5nm,0.5s,mb3.7,baz=5.7,slow=5.5,SNR=4.8						
GERES	GERESS Array B	73.22	9	P	P	18 59 51.3	+0.4
	0.3nm,0.5s,mb3.5,baz=0.0,slow=7.3,SNR=3.6						
SSF	Saint Saulge	73.73	17	*e*P	P	18 59 53.9	-0.1
	6.6nm,0.7s,mb4.4						
SSF	Saint Saulge	73.73	17	*e*P	P	18 59 53.9	-0.1
	3.3nm,0.7s,mb4.4						
AVF	Avril sur Loir	73.97	17	*e*P	P	18 59 55.1	-0.3
	6.1nm,0.6s,mb4.4						
AVF	Avril sur Loir	73.97	17	*e*P	P	18 59 55.1	-0.3
	3.0nm,0.6s,mb4.4						
BGF	Bois d'Agland	74.12	17	*e*P	P	18 59 56.0	-0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMF	Signal de Mont	74.19	17	eP	P	18 59 56.3	-0.3
	6.3nm,0.9s,mb4.2						
SMF	Signal de Mont	74.19	17	eP	P	18 59 56.3	-0.3
	3.2nm,0.9s,mb4.2						
ESDC	Sonseca Array	79.47	24	P	P	19 00 27.4	+1.0
	1.5nm,0.7s,mb4.0,baz=341,slow=5.8,SNR=7.6						
QSPA	South Pole Qui	147.49	180	eP	PKPdf	19 08 00.9	-0.3

*CSEM **14** 18:53:12.9±0.7, 3874N×2899W, h2^{km}±5^{km}, ML1.8, Error ellipse: s-maj=7.9km s-min=5.4km az=41.0, After PDA*
*PDA **14** 18:53:12.9±0.7, 3874N×2899W, h2^{km}±5^{km}, MD2.9, ML1.8, Error ellipse: s-maj=7.9km s-min=5.4km az=41.0*
SVSA 14 18:53:12.9±0.7**, 3874N×2899W, h2**^{km}±5^{km}**, MD2.9, ML1.8, Error ellipse: s-maj=7.9km s-min=5.4km az=41.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	Cedros	0.25	116	i P	Pg	18 53 17.7	-0.1
PCED				eS	Sg	18 53 21.2	+0.1
PCED							
	49nm,0.1s						
PCED	Cedros	0.25	116	eS	Sg	18 53 21.2	+0.1
CALA	Caldeira	0.28	125	eP	Pg	18 53 17.8	-0.4
CALA				eS	Sg	18 53 21.7	-0.1
PICO	Pico	0.50	118	eP	Pg	18 53 21.9	-0.7
PICO				eS	Sg	18 53 28.6	-0.5
ROSA	Rosais	0.59	92	eS	Sg	18 53 30.5	-1.3
PMAN	Manadas	0.71	98	eS	Sg	18 53 34.0	-1.9
PMAN							
	14nm,0.2s						

MAN 14 19:37:46.8, 1102N×12473E, h10^{km}**, mb1.5, ML3.4, MS4.2, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.12	283	eP	Pg	19 37 50.6	+0.9
PLP	Palo	0.28	60	eP	Pg	19 37 53.2	+0.7
PLP				i S	Sg	19 37 57.8	+1.5
MSLP	Maasin	0.89	172	eP	Pg	19 38 04.2	+0.2
MSLP				eS	Sg	19 38 18.6	+3.0
BESP	Borongan	0.90	50	eP	Pg	19 38 04.5	+0.3
BUKP	Musuan	3.14	174	eP	Pn	19 38 37.3	+0.9

IDC 14 20:34:38.7±4.1**, 197N×9737E, h0**^{km}**, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.3**/19**, mbtmp3.4**/4**, Error ellipse: s-maj=161.7km s-min=25.8km az=61.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.30	123	P	P	20 42 35.3	+1.2
	0.3nm,0.6s,baz=301,slow=9.3,SNR=4.5						
ASAR	Alice Springs	43.73	128	P	P	20 42 45.1	-0.5
	0.2nm,0.6s,baz=300,slow=7.4,SNR=3.9						
SONM	Songino Array	46.35	8	P	P	20 43 06.6	+0.1
	0.3nm,0.4s,baz=192,slow=9.6,SNR=8.1						
MKAR	Makanchi Array	46.54	346	P	P	20 43 07.9	0.0
	0.3nm,0.4s,baz=163,slow=8.5,SNR=4.2						

IDC 14 20:40:31.9±11.0**, 620S×13050E, h105**^{km}±112^{km}**, mb3.4**/2**, mb1 3.3**/5**, mb1mx3.1**/12**, mbtmp3.5**/5**, ML3.2**/3**, Error ellipse: s-maj=110.7km s-min=32.1km az=54.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.74	201	P	Pn	20 43 30.3	+1.1
	0.2nm,0.3s,baz=25,slow=13,SNR=16						
FITZ				S	Sn	20 45 44.9	-4.4
	0.2nm,0.3s,baz=214,slow=18,SNR=6.9						
WRA	Warramunga Arr	14.16	165	P	Pn	20 43 46.3	-1.3
	0.0nm,0.3s,baz=346,slow=13,SNR=4.8						
WRA				S	Sn	20 46 15.7	-7.8
	0.2nm,0.3s,baz=332,slow=23,SNR=7.9						
ASAR	Alice Springs	17.67	170	P	Pn	20 44 31.9	+0.6
	0.2nm,0.3s,baz=347,slow=10,SNR=15						
ASAR				S	S	20 47 43.3	-4.9
	0.1nm,0.3s,baz=355,slow=26,SNR=4.2						
STKA	Stephens Creek	27.57	159	P	P	20 46 08.9	-0.1
	1.8nm,1.0s,baz=330,slow=10,SNR=5.7						
MKAR	Makanchi Array	67.84	326	P	P	20 51 19.0	+0.2
	0.3nm,0.5s,baz=116,slow=9.6,SNR=3.4						

*ISCJB **14** 20:53:01.9±0.8, 5268S±008×1403E±04, h10^{km}, mb3.9/5, MS3.6/6, Error ellipse: s-maj=32.2km s-min=11.2km az=2.4*
*IDC **14** 20:53:02.5±1.2, 5267S×14041E, h0^{km}, mb3.8/5, mb1 4.0/5, mb1mx4.0/11, mbtmp3.9/5, MS3.7/6, Ms1 3.7/6, ms1mx3.3/21, Error ellipse: s-maj=64.4km s-min=19.5km az=91.0*
*NEIC **14** 20:53:03.7±0.6, 5269S×14034E, h10^{km}, mb4.2/2, Error ellipse: s-maj=25.1km s-min=8.7km az=92.0*
ISC 14 20:53:03.6±0.8**, 5271S**±008×**1403E**±04**, h10**^{km}**, n21,** σ**0**^{s}**65**/11**, mb3.9**/5**, MS3.6**/6**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CASY	Casey	20.05	216	eP	P	20 57 36.7	-0.1
	7.3nm,0.9s						
STKA	Stephens Creek	20.84	3	P	P	20 57 46.8	+1.4
	1.4nm,0.7s,baz=140,slow=10,SNR=6.2						
STKA	Stephens Creek	20.84	3	eP	P	20 57 46.1	+0.7
RPZ	Rata Peaks	22.23	78	LR	LR	21 05 04.0	
	comp=Z,88nm,19.5s,MS3.2,baz=181,slow=33						
NWAO	Narrogin (SRO)	25.83	311	LR	LR	21 06 22.4	
	comp=Z,162nm,18.3s,MS3.6,baz=174,slow=31						
NWAO	Narrogin (SRO)	25.83	311	P	P	20 58 34.8	-0.2
VNDA	Vanda	26.14	170	P	P	20 58 37.7	-0.1
	2.5nm,1.0s,mb3.7,baz=319,slow=9.6,SNR=12						
VNDA	Vanda	26.14	170	P	P	20 58 37.7	-0.1
URZ	Urewera	29.20	75	LR	LR	21 08 23.6	
	comp=Z,79nm,19.1s,MS3.4,baz=314,slow=32						
ASAR	Alice Springs	29.41	348	P	P	20 59 07.5	+0.4
	0.6nm,0.7s,mb3.5,baz=168,slow=10,SNR=10.0						
WRA	Warramunga Arr	33.04	350	P	P	20 59 37.7	-1.3
	2.2nm,1.0s,mb4.1,baz=172,slow=7.5,SNR=7.5						
WRAB	Tennant Creek	33.04	350	P	P	20 59 39.0	-0.1
DZM	Mont Dzumac	36.57	43	LR	LR	21 11 45.2	
	comp=Z,231nm,21.1s,MS3.9,baz=198,slow=31						
QSPA	South Pole Qui	37.40	180	eP	P	21 00 16.3	-0.3
	7.5nm,1.2s,mb4.4						
MAW	Mawson	38.40	217	P	P	21 00 25.8	+0.8
	2.0nm,1.1s,mb3.8,baz=33,slow=7.6,SNR=3.6						
MAW				LR	LR	21 14 05.2	
	comp=Z,118nm,19.4s,MS3.7,baz=66,slow=33						
LSZ	Lusaka	90.76	243	LR	LR	21 41 51.3	
	comp=Z,60nm,19.0s,MS4.0,baz=224,slow=32						
FINES	FINESS Array B	144.69	311	PKP	PKPdf	21 12 38.9	-1.6
	1.9nm,0.7s,baz=336,slow=3.0,SNR=5.2						
KAF	Kangasniemi	144.77	312	ep	PKPdf	21 12 38.4	-2.3
	4.2nm,0.7s						
ARCES	ARCESS Array B	146.38	325	PKPbc	PKPbc	21 12 43.6	-1.0
	1.5nm,0.8s,baz=97,slow=3.6,SNR=4.8						
GERES	GERESS Array B	146.67	285	PKPbc	PKPbc	21 12 44.2	-1.3
	2.2nm,1.1s,baz=129,slow=1.4,SNR=4.6						
ESDC	Sonseca Array	152.36	256	PKPbc	PKPbc	21 13 00.3	+0.5
	0.2nm,0.5s,baz=139,slow=2.1,SNR=3.6						
ESDC				PKPab	PKPab	21 13 09.6	-0.2
	0.3nm,0.5s,baz=102,slow=1.4,SNR=5.5						

*NEIC **14** 21:12:40.7, 1538N×9765W, h50^{km}, MD3.9(MEX), After MEX.*
MEX 14 21:12:41.1±0.8**, 1543N×9771W, h15**^{km}**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.88	30	i P	Pn	21 13 09.0	-3.6
VHO				i S	Sn	21 13 31.8	-4.4
OXX	Oaxaca	1.89	30	eP	Pn	21 13 10.5	-2.4
OXX				i S	Sn	21 13 31.0	-5.4
UTMO	Huajuapan	2.38	358	i P	Pn	21 13 17.6	-2.0
UTMO				i S	Sn	21 13 45.7	-2.9
TPIG	Tehuac#an	2.99	6	i S	Sn	21 13 59.4	-4.1
MEIG	Mezcala	3.08	324	i P	Pn	21 13 26.6	-2.6
MEIG				i S	Sn	21 14 01.8	-4.0
CMIG	Matias Romero	3.17	58	i P	Pn	21 13 27.1	-3.4
CMIG				i S	Sn	21 14 01.6	-6.4
CMIG				i S	Sn	21 14 05.2	-2.8
CMIG	Matias Romero	3.17	58	i P	Pn	21 13 27.1	-3.4
CMIG				i S	Sn	21 14 01.6	-6.4
PLIG	Platanillo	3.41	330	i P	Pn	21 13 32.1	-1.5
PLIG				i S	Sn	21 14 11.8	-2.1
PPM	Popocatepetl	3.72	346	i S	Sn	21 14 17.2	-4.3

*IDC **14** 21:29:17.3±2.1, 726N×9249E, h0^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.7/23, mbtmp3.9/8, ML3.8/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/29, Error ellipse: s-maj=84.3km s-min=17.1km az=59.0*
*ISCJB **14** 21:29:18.2±6.7, 71N±02×922E±02, h23^{km}±47^{km}, mb3.9/8, MS3.5/4, Error ellipse: s-maj=49.6km s-min=10.7km az=101.6*
*NEIC **14** 21:29:22.0±1.5, 724N×9251E, h30^{km}, mb4.4/1, Error ellipse: s-maj=58.9km s-min=9.9km az=59.0*
ISC 14 21:29:22.2±4.3**, 71N**±02×**922E**±04**, h38**^{km}±32^{km}**, n14,** σ**0**^{s}**93**/12**, mb3.9**/8**, MS3.5**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	7.94	122	Pn	Pn	21 31 14.3	-0.8
	1.2nm,0.3s,baz=326,slow=3.6,SNR=3.6						
PSI				Sn	Sn	21 32 44.4	+0.8
	2.8nm,0.3s,baz=246,slow=23,SNR=9.5						
LSA	Lhasa	22.50	358	eP	P	21 34 19.0	+0.6
	10nm,0.7s,mb4.4						
JOW	Kunigami	39.48	56	LR	LR	21 55 51.3	
	comp=Z,67nm,18.3s,MS3.5,baz=119,slow=41						
MKAR	Makanchi Array	40.45	349	P	P	21 36 54.9	-2.1
	1.6nm,0.7s,mb3.9,baz=171,slow=8.4,SNR=5.6						
FITZ	Fitzroy Crossi	41.43	128	P	P	21 37 04.9	-0.1
	1.0nm,0.6s,mb3.6,baz=328,slow=9.5,SNR=5.7						
SONM	Songino Array	42.35	14	P	P	21 37 11.5	-1.1
	1.2nm,0.7s,mb3.6,baz=195,slow=8.7,SNR=10						
SONM				LR	LR	21 57 18.8	
	comp=Z,42nm,18.7s,MS3.4,baz=273,slow=40						
KURK	Kurchatov	44.92	348	P	P	21 37 34.1	+0.9
BVAR	Borovoye Array	49.12	343	P	P	21 38 07.8	+1.8
	0.7nm,0.7s,mb3.8,baz=140,slow=7.2,SNR=5.6						
WRA	Warramunga Arr	49.40	124	P	P	21 38 07.9	-0.3
	1.3nm,0.7s,mb4.1,baz=302,slow=8.6,SNR=9.9						
WRAB	Tennant Creek	49.41	124	eP	P	21 38 08.3	+0.2
ASAR	Alice Springs	50.92	128	P	P	21 38 19.4	-0.3
	1.2nm,0.6s,mb4.0,baz=305,slow=7.6,SNR=14						
KMBO	Kilima Mbogo	55.43	264	LR	LR	21 58 35.8	
	comp=Z,31nm,18.9s,MS3.4,baz=263,slow=32						
STKA	Stephens Creek	60.98	132	P	P	21 39 31.8	+0.1
	0.8nm,0.5s,mb4.1,baz=310,slow=7.9,SNR=3.5						
DBIC	Dimbokro	96.14	277	LR	LR	22 22 00.8	
	comp=Z,18nm,18.1s,MS3.6,baz=194,slow=33						

IDC 14 21:55:22.8±63.0**, 1454S×16526E, h0**^{km}**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/12**, mbtmp3.7**/3**, Error ellipse: s-maj=1064.0km s-min=112.2km az=64.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	27.66	227	P	P	22 01 12.2	-0.1
	0.9nm,0.4s,baz=57,slow=8.8,SNR=4.4						
WRA	Warramunga Arr	29.98	255	P	P	22 01 34.0	+1.1
	0.3nm,0.6s,baz=85,slow=9.3,SNR=4.9						
ASAR	Alice Springs	30.92	248	P	P	22 01 41.4	+0.1
	0.3nm,0.4s,baz=79,slow=9.4,SNR=5.3						

*NAO **14** 22:01:05.8±3.0, 7808N×1263E, ML2.1*
*ISCJB **14** 22:01:07.6±1.0, 7816N±006×132E±05, h10^{km}, Error ellipse: s-maj=16.5km s-min=5.0km az=123.7*
*BER **14** 22:01:09.6±1.6, 7819N×1304E, h4^{km}±11^{km}, MD2.3, ML2.5, ML2.1(NAO)*
ISC 14 22:01:08.2±1.2**, 7818N**±007×**131E**±07**, h14**^{km}±11^{km}**, n5,** σ**0**^{s}**75**/8**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPA0	Spitsbergen Ar	0.68	89	Pg	Pg	22 01 21.7	+0.2
	baz=274,slow=12						
SPA0				Lg		22 01 30.4	
	baz=266,slow=28						
KBS	Kingsbay	0.78	344	Pg	Pg	22 01 23.7	+0.3
KBS				Lg		22 01 33.6	
KBS	Kingsbay	0.78	344	eP	Pg	22 01 23.9	+0.5
KBS				eS	Sg	22 01 33.2	-0.5
KBS				AML	AML	22 01 38.8	
	comp=Z,117nm,0.2s						
HSP	Hornsund	1.29	154	ePg	Pg	22 01 32.7	-0.4
HSP				eSg	Sg	22 01 50.0	0.0
HOPEN	Hopen	3.12	117	eP	Pn	22 01 57.9	+0.9
HOPEN				eS	Sn	22 02 33.3	-0.7
HOPEN				AML	AML	22 02 50.2	
	comp=N,82nm,0.3s						

*ISCJB **14** 22:04:21.3±0.6, 5159N±004×681E±006, h0^{km}, Error ellipse: s-maj=5.6km s-min=4.9km az=97.0*
*BGR **14** 22:04:21.6±0.9, 5160N×673E, h1^{km}, ML2.0/2, Error ellipse: s-maj=14.5km s-min=6.7km az=106.0*
*BNS **14** 22:04:23.1±0.5, 5162N×697E, h1^{km}, ML1.6*
*CSEM **14** 22:04:23.6±0.1, 5159N×698E, h1^{km}, ML2.5/2, Error ellipse: s-maj=3.8km s-min=2.1km az=119.0*
*LDG **14** 22:04:24.3±0.3, 5154N×696E, h1^{km}, Ml2.5/2, Suspected Mining induced.*
*NEIC **14** 22:04:24.3, 5154N×696E, h1^{km}, ML2.5(LDG), After LDG.*
ISC 14 22:04:22.3±0.6**, 5162N**±004×**688E**±006**, h0**^{km}**, n24,** σ**1**^{s}**03**/32**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAUG	Laupendahl	0.27	172	ePg	Pg	22 04 28.3	+0.9
BUG	Bochum--Univer	0.30	126	ePg	Pg	22 04 28.0	0.0
	SNR=11						
WTSB	Winterswijk	0.35	352	ePg	Pg	22 04 29.6	+0.6
	54nm,0.4s						
HOBG	Hohbusch	0.69	156	ePg	Pg	22 04 36.0	+0.4
IBBN	Ibbenburen	0.88	38	ePg	Pg	22 04 39.9	+0.8
	SNR=3.1						
STB	Steinbach	1.02	181	ePg	Pg	22 04 42.5	+0.6
STB				eSg	Sg	22 04 57.0	+1.9
	18nm,0.4s						
HGN	Heimansgroeve	1.04	215	ePg	Pg	22 04 43.4	+1.2
	5.6nm,0.1s,baz=40						
HGN				eSg	Sg	22 04 58.5	+2.8
HGN	Heimansgroeve	1.04	215	ePg	Pg	22 04 43.4	+1.2
	5.6nm,0.1s						
HGN				eSg	Sg	22 04 58.5	+2.7
BGG	Burgeitz	1.44	168	ePg	Pg	22 04 49.0	-0.8
TNS	Taunus Mts	1.71	144	ePg	Pg	22 04 54.3	-0.7
	SNR=2.1						
TNS				eSg	Sg	22 05 17.9	+0.6
	SNR=3.0						
GIVF	Givet	2.00	222	eSg	Sg	22 05 26.2	-0.3
	8.9nm,0.3s						
GIVF	Givet	2.00	222	eSg	Sg	22 05 26.2	-0.3
	4.4nm,0.3s						
WLF	Walferdange	2.01	194	eSg	Sg	22 05 24.2	-2.6
	SNR=2.1						
BAIF	Baives	2.30	228	ePg	Pg	22 05 07.8	+1.4
BAIF				eSg	Sg	22 05 36.7	+0.4
	4.3nm,0.4s						
BAIF	Baives	2.30	228	ePn	Pn	22 05 01.6	+0.1
BAIF				ePg	Pg	22 05 07.8	+1.4
BAIF				eSg	Sg	22 05 36.7	+0.4
BAIF	Baives	2.30	228	ePg	Pg	22 05 07.8	+1.4
BAIF				eSg	Sg	22 05 36.7	+0.4
	2.2nm,0.4s						
CDF	Champ du Feu	3.22	175	ePn	Pn	22 05 13.3	-0.7
LOR	Lormes	4.78	206	ePn	Pn	22 05 34.5	-1.0
SSF	Saint Saulge	5.07	207	ePn	Pn	22 05 38.2	-1.2
AVF	Avril sur Loir	5.36	207	ePn	Pn	22 05 42.3	-1.1
SMF	Signal de Mont	5.36	203	ePn	Pn	22 05 42.4	-1.1
FLN	La Foliniere	5.53	242	ePn	Pn	22 05 45.6	-0.1
BGF	Bois d'Agland	5.71	209	ePn	Pn	22 05 47.5	-0.8
GRR	Gorron	5.94	240	ePn	Pn	22 05 51.0	-0.5

*IDC **14** 22:30:52.8±29.0, 2256S×17452W, h0^{km}, mb4.3/4, mb1 4.4/4, mb1mx4.0/12, mbtmp4.3/4, Error ellipse: s-maj=526.2km s-min=151.8km az=78.0*
*ISCJB **14** 22:30:56.9±4.4, 227S±06×1746W±05, h33^{km}, mb4.3/5, Error ellipse: s-maj=99.3km s-min=28.3km az=77.9*
*NEIC **14** 22:30:57.6±1.5, 2253S×17446W, h35^{km}, mb4.6/2, Error ellipse: s-maj=36.4km s-min=23.1km az=213.0*
ISC 14 22:30:59.3±4.3**, 228S**±05×**1746W**±05**, h35**^{km}**, n11,** σ**0**^{s}**71**/10**, mb4.3**/5**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.47	267	P	P	22 38 01.6	+0.7
	3.9nm,0.5s,mb4.6,baz=93,slow=11,SNR=7.6						
CTAO	Charters Tower	36.47	267	eP	P	22 38 01.9	+1.0
	4.2nm,0.4s,mb4.7						
TAU	Tasmania Unive	37.38	228	eP	P	22 38 08.8	+0.2
STKA	Stephens Creek	39.75	247	P	P	22 38 27.1	-1.4
	1.2nm,0.4s,mb4.0,baz=90,slow=11,SNR=4.5						
ASAR	Alice Springs	47.13	258	P	P	22 39 28.0	+0.1
	2.4nm,0.8s,mb4.2,baz=98,slow=7.8,SNR=18						
WB2	Warramunga Arr	47.45	263	eP	P	22 39 30.3	-0.1
WRAB	Tennant Creek	47.45	263	eP	P	22 39 30.4	0.0
	3.8nm,0.6s,mb4.5						
WRA	Warramunga Arr	47.46	263	P	P	22 39 30.4	-0.1
	2.4nm,0.5s,mb4.3,baz=96,slow=8.4,SNR=50						
CASY	Casey	63.31	206	P	P	22 41 25.8	+1.2
QSPA	South Pole Qui	67.33	180	P	P	22 41 50.0	-0.7
BRVK	Borovoye	122.89	319	ePKPdf	PKPdf	22 49 49.3	-2.3

MEX 14 22:31:01.1±0.7**, 1789N×9965W, h3**^{km}±9^{km}**, MD3.6, 1C, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEIG	Mezcala	0.04	39	⇑ i P	Pg	22 31 01.6	-0.5
MEIG				i S	Sg	22 31 02.8	0.0
PLIG	Platanillo	0.52	16	i P	Pg	22 31 10.7	-0.3
PLIG				i S	Sg	22 31 17.9	+0.2
ACX	Acapulco	1.05	194	i P	Pg	22 31 19.0	-2.2
ACX				i S	Sg	22 31 32.0	-2.9
IIZ	Mezontepec	1.35	17	eP	Pn	22 31 23.4	-3.4
IIZ				i S	Sg	22 31 39.6	-4.8
PPM	Popocatepetl	1.52	40	eP	Pn	22 31 26.0	-3.2
PPM				i S	Sn	22 31 49.0	-0.4
UTMO	Huajuapan	1.76	92	eP	Pn	22 31 30.5	-2.0
UTMO				i S	Sn	22 31 50.1	-5.2

*IDC **14** 22:36:53.8±1.2, 2222N×12072E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.5/20, mbtmp3.5/5, Error ellipse: s-maj=44.8km s-min=23.3km az=67.0*
*ISCJB **14** 22:36:58.5±0.9, 2222N±006×12124E±007, h33^{km}, mb3.5/4, Error ellipse: s-maj=10.3km s-min=7.6km az=47.1*
*NEIC **14** 22:36:58.6±1.0, 2231N×12082E, h35^{km}, MG3.7(JMA), Error ellipse: s-maj=27.5km s-min=14.1km az=95.0*
*NIED **14** 22:37:00, 2240N×12130E, h32^{km}, Mw3.8 Best double couple: $M_0$6.58000×10^{14} NP1:ϕ_s243.00000°, δ49.00000°, λ89.00000°. NP2:ϕ_s64.00000°, δ41.00000°, λ91.00000°.*
*JMA **14** 22:37:01.3±0.4, 2239N×12127E, h57^{km}, M3.7*
ISC 14 22:36:59.7±0.9**, 2224N**±006×**12117E**±007**, h35**^{km}**, n14,** σ**1**^{s}**37**/22**, mb3.5**/4**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	1.96	11	ePn	Pn	22 37 27.9	-2.6
NACB				eSn	Sn	22 37 55.7	+1.9
YHNB	Yeheng	2.42	4	ePn	Pn	22 37 35.1	-1.7
YHNB				eSn	Sn	22 38 06.6	+1.3
TATO	Taipei	2.74	6	ePn	Pn	22 37 41.0	-0.2
TATO				eSn	Sn	22 38 20.2	+7.2
YOJ	Yonaguni jima	2.78	37	P	Pn	22 37 42.0	+0.2
YOJ				eS	Sn	22 38 13.4	-0.7
HATJ	Hateruma jima	3.02	53	P	Pn	22 37 45.9	+0.8
HATJ				eS	Sn	22 38 17.5	-2.6
IRIF	Iriomote-Funau	3.14	48	P	Pn	22 37 47.5	+0.8
JKRS	Kuro-shima	3.28	52	P	Pn	22 37 49.3	+0.7
JKRS				eS	Sn	22 38 25.6	-0.8
JIJ	Ishigaki jima	3.46	52	P	Pn	22 37 51.7	+0.7
JIJ				eS	Sn	22 38 30.5	-0.2
JTJ	Tarama	4.03	53	P	Pn	22 37 59.7	+0.8
JTJ				eS	Sn	22 38 44.6	-0.2
MJAR	Matsushiro Arr	20.53	42	P	P	22 41 37.4	+2.4
	1.1nm,0.8s,baz=236,slow=7.5,SNR=4.4						
MKAR	Makanchi Array	39.74	318	P	P	22 44 25.7	-3.1
	0.3nm,0.3s,mb3.5,baz=112,slow=9.3,SNR=4.4						
WRA	Warramunga Arr	43.85	162	P	P	22 45 01.3	-1.2
	0.3nm,0.5s,mb3.3,baz=344,slow=9.0,SNR=4.7						
ASAR	Alice Springs	47.28	164	P	P	22 45 31.3	+1.7
	0.3nm,0.4s,mb3.6,baz=353,slow=14,SNR=4.4						
BVAR	Borovoye Array	49.17	322	P	P	22 45 41.4	-2.8
	0.4nm,0.5s,mb3.7,baz=108,slow=9.5,SNR=4.7						

*ISCJB **14** 22:37:18.8±0.3, 5377N±006×16710W±006, h96^{km}±2^{km}, mb4.1/44, Error ellipse: s-maj=11.5km s-min=4.4km az=129.1*
*NEIC **14** 22:37:19.9, 5350N×16690W, h84^{km}, mb4.2/18, After AEIC.*
NEIC Felt at Unalaska.
*IDC **14** 22:37:19.7±2.7, 5390N×16708W, h86^{km}±21^{km}, mb3.8/20, mb1 4.0/21, mb1mx3.9/27, mbtmp4.1/21, MS3.5/7, Ms1 3.5/7, ms1mx3.0/41, Error ellipse: s-maj=22.8km s-min=15.1km az=5.0*
*BJI **14** 22:37:22.8, 5350N×16690W, h83^{km}, mB5.1, mb4.7, Ms4.8, Msz4.3*
ISC 14 22:37:19.6±0.3**, 5379N**±007×**16715W**±007**, h92**^{km}±3^{km}**, h88**^{km}±6.1^{km}**:pP-P, n100,** σ**0**^{s}**91**/101**, mb4.1**/44**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCD	Okmok Cone D	0.68	238	P	Pn	22 37 35.4	-0.6
OKCD				S	Sn	22 37 47.8	-0.6
OKCE	Okmok Cone E	0.71	239	P	Pn	22 37 36.0	-0.3
OKCE				S	Sn	22 37 49.2	+0.4
AKGG	Akutan Green G	0.79	59	P	Pn	22 37 37.1	0.0
AKGG				S	Sn	22 37 50.7	+0.4
AKLV	Akutan Long Va	0.80	62	P	Pn	22 37 37.0	-0.2
AKUT	Akutan	0.88	66	P	Pn	22 37 37.4	-0.7
AKUT				S	Sn	22 37 52.5	+0.5
NIKO	Nikolski	1.31	232	P	Pn	22 37 42.7	-0.4
SPIA	Saint Paul Isl	3.82	334	P	Pn	22 38 19.3	+3.0
SDPT	Sand Point	4.18	65	P	Pn	22 38 20.5	-0.6
ATKA	Atka Island	4.55	252	P	Pn	22 38 26.2	+0.1
CHGN	Chignik	5.61	60	eP	Pn	22 38 40.2	-0.3
AMKA	Amchitka	8.60	259	ePn	Pn	22 39 22.3	+1.1
AMKA				eSn	Sn	22 41 00.8	+4.4
KDAK	Kodiak Island	9.12	58	P	Pn	22 39 26.1	-2.2
	8.2nm,0.3s,baz=243,slow=6.5,SNR=49						
KDAK				S	Sn	22 41 01.1	-8.0
	baz=115,slow=21,SNR=2.3						
KDAK	Kodiak Island	9.12	58	P	Pn	22 39 26.0	-2.3
SVW2	Sparrevohn	9.60	36	eP	Pn	22 39 36.1	+1.3
TTA	Tatalina	10.85	28	eP	Pn	22 39 53.5	+1.7
SLKM	Skilak Lake	11.37	47	ePn	Pn	22 39 58.0	-0.8
SLKM				eSn	Sn	22 42 05.6	+1.7
MID	Middleton Isla	12.74	55	eP	Pn	22 40 15.3	-2.0
DIV	Divide	13.60	49	ePn	Pn	22 40 26.6	-1.9
	60nm,0.4s						
DIV				eSn	Sn	22 42 57.9	-0.2
MCK	McKinley	13.67	36	ePn	Pn	22 40 29.6	+0.2
	6.1nm,0.7s						
IMA2	Indian Mountai	13.99	23	ePn	Pn	22 40 36.4	+2.7
DAWY	Dawson	17.47	43	eP	Pn	22 41 17.4	+0.1
SKAG	Skagway	18.28	59	eP	Pn	22 41 27.4	+0.5
DLBC	Dease Lake	21.02	62	P	P	22 42 00.0	+4.3
	9.9nm,0.5s,mb4.4,baz=254,slow=7.9,SNR=15						
DLBC				LR	LR	22 50 58.2	
	comp=Z,22nm,18.4s,baz=286,slow=39						
INK	Inuvik	21.42	34	P	P	22 41 59.1	-0.9
	20nm,0.5s,mb4.7,baz=228,slow=11,SNR=40						
INK				S	S	22 45 45.1	-7.2
	2.2nm,1.0s,baz=51,slow=29,SNR=2.5						
INK				LR	LR	22 50 45.1	
	comp=Z,26nm,19.2s,baz=173,slow=38						
YKA	Yellowknife Ar	28.30	51	P	P	22 43 02.3	-2.0
	2.4nm,0.3s,mb4.2,baz=79,slow=6.9,SNR=55						
YKA				PcP	PcP	22 46 15.4	+0.2
	0.5nm,0.4s,baz=278,slow=2.7,SNR=4.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA				ScP	ScP	22 49 47.5	-0.4
	0.7nm,0.7s,baz=290,slow=2.9,SNR=5.2						
YKA	**Yellowknife Ar**	**28.30**	**51**	P	**P**	**22 43 02.4**	**-2.0**
YKA				PcP	PcP	22 46 15.4	+0.2
YKA				ScP	ScP	22 49 47.5	-0.4
NEW	**Newport**	**31.39**	**79**	P	**P**	**22 43 31.9**	**+0.2**
	3.0nm,0.5s,mb4.3,baz=301,slow=8.4,SNR=5.0						
NEW	**Newport**	**31.39**	**79**	*e*P	**P**	**22 43 32.5**	**+0.8**
	4.7nm,0.7s,mb4.3						
YBH	**Yreka Blue Hor**	**31.69**	**94**	LR	LR	22 53 19.7	
	comp=Z,30nm,21.6s,baz=82,slow=30						
WALA	**Waterton Lakes**	**32.87**	**76**	*e*P	**P**	**22 43 45.8**	**+1.2**
	5.0nm,0.8s,mb4.4						
WALA				*e*pP	pP	22 44 04.1	-1.5
WALA				*e*sP	sP	22 44 14.1	-2.2
MSO	**Missoula**	**33.98**	**80**	*e*P	**P**	**22 43 54.9**	**+0.7**
	1.9nm,0.8s,mb4.0						
CHMT	**Chamberlain Mo**	**34.34**	**79**	*e*P	**P**	**22 43 58.3**	**+0.9**
CHMT				*e*pP	pP	22 44 16.1	-2.3
CHMT				*e*sP	sP	22 44 26.4	-2.6
NVAR	**Mina Array Bea**	**36.40**	**95**	P	**P**	**22 44 16.5**	**+1.6**
	0.2nm,0.4s,mb3.4,baz=289,slow=8.5,SNR=3.6						
PDAR	**Pinedale Array**	**38.85**	**82**	P	**P**	**22 44 36.8**	**+1.1**
	0.5nm,0.3s,mb3.8,baz=320,slow=2.5,SNR=10						
DAU	**Daniels Canyon**	**39.30**	**87**	P	**P**	**22 44 40.4**	**+1.0**
RSSD	**Black Hills**	**41.26**	**77**	*e*P	**P**	**22 44 55.9**	**+0.2**
	1.9nm,0.4s,mb4.3						
ULM	**Lac du Bonnet**	**42.31**	**65**	P	**P**	**22 45 03.8**	**-0.4**
	2.8nm,0.3s,mb4.4,baz=302,slow=10,SNR=10						
CN2	**Changchun**	**43.92**	**285**	*e*P	**P**	**22 45 24.1**	**+6.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
EYMN	**Ely**	**45.99**	**65**	*e*P	**P**	**22 45 33.5**	**-0.1**
	comp=Z,14nm,0.8s,mb4.7						
FRB	**Frobisher Bay**	**47.04**	**37**	P	**P**	**22 45 41.0**	**-0.7**
	comp=Z,8.2nm,0.3s,mb4.9,baz=304,slow=8.8,SNR=14						
ULN	**Ulaanbaatar**	**51.36**	**301**	*e*P	**P**	**22 46 14.5**	**-0.2**
	comp=Z,1.6nm,0.7s,mb4.2						
SONM	**Songino Array**	**51.72**	**301**	P	**P**	**22 46 18.9**	**+1.5**
	comp=Z,0.2nm,0.3s,mb3.6,baz=44,slow=7.1,SNR=3.5						
SONM				pP	pP	22 46 42.1	+2.4
	comp=Z,1.1nm,0.8s,baz=51,slow=8.0,SNR=6.3						
SONM				PcP	PcP	22 47 30.1	+0.5
	comp=Z,0.8nm,0.7s,baz=54,slow=2.5,SNR=3.5						
SONM				ScP	ScP	22 51 17.9	0.0
	comp=Z,0.3nm,0.4s,baz=33,slow=3.2,SNR=4.2						
SCHQ	**Schefferville**	**53.48**	**45**	P	**P**	**22 46 29.9**	**-0.4**
	comp=Z,2.3nm,0.5s,mb4.5,baz=316,slow=9.4,SNR=8.2						
SCHQ	**Schefferville**	**53.48**	**45**	P	**P**	**22 46 29.9**	**-0.4**
NJ2	**Nanjing**	**55.67**	**279**	*e*P	**P**	**22 46 55.9**	**+10**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
KEV	**Kevo**	**56.33**	**354**	*e*p	**P**	**22 46 49.8**	**-1.1**
ARCES	**ARCESS Array B**	**56.64**	**355**	P	**P**	**22 46 52.6**	**-0.4**
	comp=Z,0.5nm,0.3s,mb4.0,baz=1.8,slow=8.4,SNR=8.3						
ARCES				PcP	PcP	22 47 47.4	-0.9
	comp=Z,2.3nm,0.7s,baz=16,slow=3.9,SNR=4.8						
NCB	**Newcomb**	**57.65**	**59**	*e*P	**P**	**22 47 00.1**	**-0.1**
	comp=Z,3.3nm,0.4s,mb4.7						
SSPA	**Standing Stone**	**58.13**	**64**	*e*P	**P**	**22 47 03.5**	**-0.1**
	comp=Z,8.5nm,0.6s,mb5.0						
LZH	**Lanzhou**	**61.29**	**293**	*e*P	**P**	**22 47 33.5**	**+8.3**
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
JOF	**Joensuu**	**62.73**	**351**	*e*p	**P**	**22 47 34.3**	**-0.6**
	comp=Z,0.7nm,0.4s,mb3.9						
BVAR	**Borovoye Array**	**63.31**	**325**	P	**P**	**22 47 39.2**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.8,baz=42,slow=6.2,SNR=5.4						
MKAR	**Makanchi Array**	**63.79**	**314**	P	**P**	**22 47 42.8**	**+0.9**
	comp=Z,0.7nm,0.5s,mb3.7,baz=24,slow=4.1,SNR=4.3						
MKAR				pP	pP	22 48 06.8	+1.8
	comp=Z,0.6nm,0.4s,baz=31,slow=7.0,SNR=2.2						
MKAR	**Makanchi Array**	**63.79**	**314**	P	**P**	**22 47 42.8**	**+0.9**
MKAR				pP	pP	22 48 06.8	+1.8
KAF	**Kangasniemi**	**63.95**	**353**	*e*p	**P**	**22 47 41.9**	**-1.0**
	comp=Z,1.1nm,0.5s,mb3.9						
FINES	**FINESS Array B**	**64.63**	**353**	P	**P**	**22 47 46.5**	**-0.8**
	comp=Z,0.8nm,0.4s,mb3.9,baz=16,slow=6.2,SNR=11						
FINES				LR	LR	23 15 57.3	
	comp=Z,9.3nm,20.8s,baz=306,slow=36						
NOA	**NORSAR Array B**	**65.51**	**1**	P	**P**	**22 47 52.5**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=350,slow=6.8,SNR=2.5						
KMI	**Kunming**	**70.20**	**286**	P	**P**	**22 48 31.4**	**+9.0**
KMI				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.5						
KMI				LR	LR		
	comp=Z,54nm,28.0s						
EKA	**Eskdalemuir Ar**	**70.44**	**10**	P	**P**	**22 48 23.8**	**-0.1**
	comp=Z,0.9nm,0.4s,mb3.9,baz=341,slow=5.7,SNR=11						
RAR	**Rarotonga**	**74.96**	**173**	LR	LR	23 15 51.2	
	comp=Z,128nm,20.0s,baz=44,slow=31						
AKASG	**Malin Array Be**	**74.97**	**349**	P	**P**	**22 48 49.2**	**-1.5**
	comp=Z,0.6nm,0.4s,mb3.6,baz=10,slow=5.6,SNR=5.2						
AKASG	**Malin Array Be**	**74.97**	**349**	P	**P**	**22 48 49.2**	**-1.6**
BAIF	**Baives**	**76.27**	**6**	*e*P	**P**	**22 48 58.3**	**+0.2**
	comp=Z,4.9nm,0.6s,mb4.1						
BAIF	**Baives**	**76.27**	**6**	*e*P	**P**	**22 48 58.3**	**+0.2**
	comp=Z,2.5nm,0.6s,mb4.1						
FLN	**La Foliniere**	**77.20**	**9**	*e*P	**P**	**22 49 02.9**	**-0.5**
LDF	**La Druitiere**	**77.40**	**9**	*e*P	**P**	**22 49 04.1**	**-0.4**
	comp=Z,3.0nm,0.5s,mb4.0						
LDF	**La Druitiere**	**77.40**	**9**	*e*P	**P**	**22 49 04.1**	**-0.4**
	comp=Z,1.5nm,0.4s,mb4.1						
SGMF	**Saint Gilles**	**77.50**	**10**	*e*P	**P**	**22 49 04.9**	**-0.1**
GRR	**Gorron**	**77.53**	**9**	*e*P	**P**	**22 49 04.7**	**-0.6**
HINF	**Hinteralfeld**	**78.64**	**4**	*e*P	**P**	**22 49 10.8**	**-0.6**
LOR	**Lormes**	**79.03**	**6**	*e*P	**P**	**22 49 13.5**	**0.0**
	comp=Z,2.0nm,0.6s,mb3.8						
LOR	**Lormes**	**79.03**	**6**	*e*P	**P**	**22 49 13.5**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.8						
SSF	**Saint Saulge**	**79.21**	**6**	*e*P	**P**	**22 49 13.8**	**-0.7**
	comp=Z,4.0nm,0.5s,mb4.2						
SSF	**Saint Saulge**	**79.21**	**6**	*e*P	**P**	**22 49 13.8**	**-0.7**
	comp=Z,2.0nm,0.5s,mb4.2						
MFF	**Saint Martin d**	**79.37**	**9**	*e*P	**P**	**22 49 16.1**	**+0.7**
AVF	**Avril sur Loir**	**79.47**	**7**	*e*P	**P**	**22 49 15.1**	**-0.8**
	comp=Z,1.6nm,0.4s,mb4.0						
AVF	**Avril sur Loir**	**79.47**	**7**	*e*P	**P**	**22 49 15.1**	**-0.8**
	comp=Z,0.8nm,0.4s,mb3.9						
SMF	**Signal de Mont**	**79.65**	**6**	*e*P	**P**	**22 49 16.4**	**-0.5**
	comp=Z,3.7nm,0.6s,mb4.1						
SMF	**Signal de Mont**	**79.65**	**6**	*e*P	**P**	**22 49 16.4**	**-0.5**
	comp=Z,1.9nm,0.6s,mb4.1						
BGF	**Bois d'Agland**	**79.67**	**7**	*e*P	**P**	**22 49 16.6**	**-0.4**
TCF	**Toulx Ste Croi**	**79.89**	**7**	*e*P	**P**	**22 49 17.8**	**-0.3**
	comp=Z,1.0nm,0.4s,mb3.7						
TCF	**Toulx Ste Croi**	**79.89**	**7**	*e*P	**P**	**22 49 17.8**	**-0.3**
	comp=Z,0.1nm,0.4s,mb3.0						
LFF	**La Frestale**	**81.10**	**9**	*e*P	**P**	**22 49 25.0**	**+0.3**
	comp=Z,6.3nm,0.5s,mb4.4						
LFF	**La Frestale**	**81.10**	**9**	*e*P	**P**	**22 49 25.0**	**+0.3**
	comp=Z,3.2nm,0.5s,mb4.4						
ORIF	**Oris-en-Rattie**	**81.49**	**5**	*e*P	**P**	**22 49 27.5**	**+0.8**
MBDF	**Montbardon**	**81.72**	**4**	*e*P	**P**	**22 49 28.1**	**+0.2**
MTLF	**Montolieu**	**82.81**	**8**	*e*P	**P**	**22 49 33.9**	**+0.3**
	comp=Z,2.2nm,0.4s,mb4.0						
MTLF	**Montolieu**	**82.81**	**8**	*e*P	**P**	**22 49 33.9**	**+0.3**
	comp=Z,1.1nm,0.4s,mb4.0						
EPF	**Esparros**	**82.96**	**9**	*e*P	**P**	**22 49 36.7**	**+2.3**
	comp=Z,1.8nm,0.4s,mb3.9						
EPF	**Esparros**	**82.96**	**9**	*e*P	**P**	**22 49 36.7**	**+2.3**
	comp=Z,0.9nm,0.4s,mb4.0						
CTA	**Charters Tower**	**83.78**	**223**	LR	LR	23 21 04.7	
	comp=Z,238nm,20.5s,baz=31,slow=31						
BRTR	**Keskin Array B**	**85.15**	**344**	P	**P**	**22 49 46.4**	**+0.9**
	comp=Z,0.8nm,0.9s,mb3.6,baz=27,slow=3.5,SNR=4.0						
ESDC	**Sonseca Array**	**85.78**	**13**	P	**P**	**22 49 48.1**	**-0.5**
	comp=Z,0.2nm,0.4s,mb3.4,baz=343,slow=4.2,SNR=4.7						
WRA	**Warramunga Arr**	**88.94**	**233**	P	**P**	**22 50 03.7**	**-0.1**
	comp=Z,1.0nm,0.7s,mb4.0,baz=34,slow=5.7,SNR=8.3						
FITZ	**Fitzroy Crossi**	**91.72**	**241**	LR	LR	23 30 40.4	
	comp=Z,111nm,20.7s,baz=230,slow=35						
ASAR	**Alice Springs**	**92.33**	**232**	P	**P**	**22 50 20.0**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.9,baz=32,slow=4.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**112.65**	**12**	PKiKP	PKiKP	22 55 44.5	-0.8
	comp=Z,0.3nm,0.8s,baz=336,slow=2.8,SNR=5.4						
QSPA	**South Pole Qui**	**143.56**	**180**	*e*P	PKPdf	22 56 39.4	-4.1
TSUM	**Tsumeb**	**145.28**	**352**	PKPbc	PKPbc	22 56 46.4	0.0
	comp=Z,2.3nm,0.5s,baz=13,slow=7.2,SNR=28						
BOSA	**Boshof**	**153.25**	**335**	PKPbc	PKPbc	22 57 07.1	+0.4
	comp=Z,1.4nm,0.3s,baz=6.2,slow=2.4,SNR=15						

*ISCJB **14** 22:53:16.8±2.2, 6.1S±0.1×146.65E±0.09, h52^{km}±19^{km}, mb3.9/10, MS3.2/1, Error ellipse: s-maj=17.8km s-min=14.7km az=163.5*

*IDC **14** 22:53:17.2±5.8, 6.08S×146.59E, h35^{km}±42^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.8/12, mbtmp3.9/9, ML3.5/2, MS3.2/3, Ms1 3.2/3, ms1mx2.9/23, Error ellipse: s-maj=38.7km s-min=23.6km az=68.0*

*NEIC **14** 22:53:18.6±1.2, 6.10S×146.66E, h52^{km}±10^{km}, mb4.1/7, Error ellipse: s-maj=11.9km s-min=7.9km az=159.0*

ISC 14 22:53:19.0±1.8**, 6.1S**±0.1×**146.66E**±0.09**, h55**^{km}±16^{km}**, n25, σ0.46**/20**, mb3.9**/10**, MS3.2**/1**, 2D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.34**	**171**	Pn	**Pn**	**22 54 08.4**	**-0.2**
	13nm,0.3s,baz=13,slow=7.0,SNR=20						
PMG				Sn	**Sn**	**22 54 47.8**	**+0.9**
	14nm,0.3s,baz=31,slow=7.0,SNR=3.1						
PMG				Lg		22 55 03.4	
	30nm,0.3s,baz=358,slow=16,SNR=9.5						
HNR	**Honiara**	**13.58**	**105**	LR	LR	23 00 35.6	
	comp=Z,62nm,21.4s,baz=180,slow=32						
HNR	**Honiara**	**13.58**	**105**	Pn	**Pn**	**22 56 28.3**	**-0.4**
CTA	**Charters Tower**	**13.92**	**182**	LR	LR	23 00 14.0	
	comp=Z,88nm,21.5s,baz=42,slow=30						
KAKA	**Kakadu**	**15.49**	**244**	⇓*i*P	**Pn**	**22 56 54.5**	**+0.7**
	14nm,0.5s						
WRAB	**Tennant Creek**	**18.23**	**220**	*e*Pn	**Pn**	**22 57 27.8**	**-0.2**
	8.3nm,0.9s						
WB2	**Warramunga Arr**	**18.24**	**220**	*e*Pn	**Pn**	**22 57 27.6**	**-0.5**
WRA	**Warramunga Arr**	**18.25**	**220**	P	**Pn**	**22 57 27.3**	**-0.9**
	0.3nm,0.3s,baz=42,slow=12,SNR=18						
WRA				PcP	PcP	23 02 00.0	+1.9
	0.2nm,0.3s,baz=20,slow=1.8,SNR=8.3						
ASAR	**Alice Springs**	**21.36**	**214**	P	**P**	**22 58 01.9**	**+0.4**
	1.0nm,0.4s,mb3.5,baz=56,slow=9.1,SNR=13						
ASAR				LR	LR	23 06 52.8	
	comp=Z,115nm,20.8s,MS3.2,baz=1.2,slow=38						
FITZ	**Fitzroy Crossi**	**23.73**	**238**	⇓*i*P	**P**	**22 58 25.6**	**-0.4**
	13nm,0.9s,mb4.4						
FITZ	**Fitzroy Crossi**	**23.73**	**238**	P	**P**	**22 58 25.3**	**-0.7**
	8.4nm,0.8s,mb4.2,baz=74,slow=9.1,SNR=17						
STKA	**Stephens Creek**	**26.09**	**190**	P	**P**	**22 58 47.0**	**-0.4**
	1.5nm,0.6s,mb3.7,baz=6.3,slow=12,SNR=6.3						
STKA	**Stephens Creek**	**26.09**	**190**	P	**P**	**22 58 47.0**	**-0.4**
MBWA	**Marble Bar**	**30.07**	**238**	*e*P	**P**	**22 59 23.0**	**+0.1**
	1.7nm,0.6s,mb4.0						
SONM	**Songino Array**	**64.31**	**331**	P	**P**	**23 03 49.3**	**+0.7**
	0.4nm,0.5s,mb3.7,baz=152,slow=7.2,SNR=4.3						
CASY	**Casey**	**65.08**	**195**	*e*P	**P**	**23 03 53.7**	**0.0**
	0.7nm,0.4s,mb4.0						
VNDA	**Vanda**	**71.85**	**177**	P	**P**	**23 04 36.0**	**+0.1**
	0.6nm,0.6s,mb3.7,baz=331,slow=7.3,SNR=11						
VNDA	**Vanda**	**71.85**	**177**	*e*P	**P**	**23 04 35.9**	**0.0**
	0.9nm,0.6s,mb3.9						
MKAR	**Makanchi Array**	**77.35**	**321**	P	**P**	**23 05 08.0**	**+0.2**
	0.5nm,0.6s,mb3.6,baz=125,slow=6.2,SNR=4.7						
MAW	**Mawson**	**82.04**	**203**	P	**P**	**23 05 33.5**	**+0.3**
	0.9nm,0.6s,mb3.9,baz=79,slow=5.2,SNR=4.7						
QSPA	**South Pole Qui**	**83.88**	**180**	*e*P	**P**	**23 05 42.6**	**-0.1**
	2.0nm,0.4s,mb4.6						
TORD	**Torodi Ar. Bea**	**144.78**	**284**	PKP	PKPdf	23 12 50.2	+0.6
	3.4nm,0.7s,baz=58,slow=3.3,SNR=53						
TORD	**Torodi Ar. Bea**	**144.78**	**284**	PKP	PKPdf	23 12 50.2	+0.6
SIV	**San Ignacio**	**144.86**	**129**	PKP	PKPdf	23 12 50.2	+0.5
	3.4nm,0.6s,baz=259,slow=3.5,SNR=20						
DBIC	**Dimbokro**	**151.69**	**273**	PKPbc	PKPbc	23 13 09.3	+2.2
	4.8nm,0.6s,baz=81,slow=5.8,SNR=13						

*CSEM **14** 22:53:32.3±0.9, 38.68N×29.03W, h9^{km}±4^{km}, ML2.5, Error ellipse: s-maj=4.9km s-min=3.5km az=67.0, After PDA*

*PDA **14** 22:53:32.3±0.9, 38.68N×29.03W, h9^{km}±4^{km}, MD3.2, ML2.5, Error ellipse: s-maj=4.9km s-min=3.5km az=67.0*

SVSA 14 22:53:32.3±0.9**, 38.68N**×**29.03W, h9**^{km}±4^{km}**, MD3.2, ML2.5, Error ellipse: s-maj=4.9km s-min=3.5km az=67.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.26**	**102**	*i* P	Pg	22 53 37.0	-0.6
PCED				*e*S	Sg	22 53 40.6	-0.5
PCED							
	1μm,0.1s						
PCED	**Cedros**	**0.26**	**102**	*e*S	Sg	22 53 40.6	-0.5
CALA	**Caldeira**	**0.28**	**111**	*i* P	Pg	22 53 37.2	-0.6
PLUZ	**Luz**	**0.34**	**7**	*e*P	Pg	22 53 46.5	+7.6
PLUZ				*e*S	Sg	22 53 56.6	+13
PLUZ							
	12nm,0.2s						
HOR	**Horta**	**0.35**	**116**	*i* P	Pg	22 53 38.3	-0.9
HOR				*e*S	Sg	22 53 43.0	-0.9
PCND	**Candelaria**	**0.49**	**115**	*e*P	Pg	22 53 40.4	-1.5
PCND				*i* S	Sg	22 53 47.2	-1.2
PCND							
	154nm,0.2s						
PICO	**Pico**	**0.51**	**111**	*e*P	Pg	22 53 41.1	-1.1
PICO				*e*S	Sg	22 53 47.5	-1.3
PTEI	**Pico do Teixo**	**0.56**	**109**	*e*P	Pg	22 53 41.6	-1.6
PTEI				*i* S	Sg	22 53 48.6	-1.9
PTEI							
	148nm,0.2s						
PBOI	**Pico dos Bois**	**0.57**	**115**	*e*P	Pg	22 53 42.1	-1.2
PBOI				*e*S	Sg	22 53 49.1	-1.7
PBOI							
	117nm,0.3s						
ROSA	**Rosais**	**0.62**	**86**	*e*P	Pg	22 53 42.4	-1.9
ROSA				*e*S	Sg	22 53 49.8	-2.6
PAMA	**Santo Amaro**	**0.67**	**90**	*e*S	Sg	22 53 51.2	-2.7
PAMA							
	124nm,0.1s						
PMAN	**Manadas**	**0.74**	**94**	*e*S	Sg	22 53 52.9	-3.3
PMAN							
	132nm,0.2s						
PID	**Ribeirinha**	**0.76**	**108**	*e*P	Pg	22 53 44.2	-2.6
PIED	**Piedade**	**0.81**	**109**	*e*S	Sg	22 53 54.9	-3.6
SRBC	**Serra Branca**	**0.85**	**65**	*e*rx		22 53 51.5	
PVIA	**Vitoria**	**0.86**	**63**	*e*S	Sg	22 53 55.9	-4.1
PVIA							
	12nm,0.2s						
PGRA	**Graciosa**	**0.89**	**67**	*e*S	Sg	22 53 56.4	-4.6
PGRA							
	64nm,0.4s						
STGR	**Santa Cruz**	**0.90**	**63**	*e*S	Sg	22 53 57.0	-4.2
STGR							
	28nm,0.1s						

*CSEM **14** 22:55:36.8±0.8, 38.76N×28.99W, h6^{km}±4^{km}, ML2.1, Error ellipse: s-maj=8.0km s-min=5.7km az=64.0, After PDA*

*PDA **14** 22:55:36.8±0.8, 38.76N×28.99W, h6^{km}±4^{km}, MD3.2, ML2.1, Error ellipse: s-maj=8.0km s-min=5.7km az=64.0*

SVSA 14 22:55:36.8±0.8**, 38.76N**×**28.99W, h6**^{km}±4^{km}**, MD3.2, ML2.1, Error ellipse: s-maj=8.0km s-min=5.7km az=64.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.26**	**119**	*i* P	Pg	22 55 41.7	-0.2
PCED				*e*S	Sg	22 55 45.3	0.0
PCED							
	94nm,0.1s						
PCED	**Cedros**	**0.26**	**119**	*i* P	Pg	22 55 41.7	-0.2
PCED				*e*S	Sg	22 55 45.3	0.0
CALA	**Caldeira**	**0.28**	**127**	*e*P	Pg	22 55 41.9	-0.5
CALA				*e*S	Sg	22 55 46.0	-0.1
HOR	**Horta**	**0.36**	**129**	*e*S	Sg	22 55 47.8	-0.8
PICO	**Pico**	**0.51**	**120**	*e*P	Pg	22 55 45.7	-0.9
PICO				*e*S	Sg	22 55 52.6	-0.7
ROSA	**Rosais**	**0.59**	**93**	*e*S	Sg	22 55 53.9	-1.8

*IDC **14** 22:56:26.5±1.8, 14.83N×94.51W, h0^{km}, mb4.0/9, mb1 4.2/10, mb1mx4.0/21, mbtmp4.0/10, MS3.4/9, Ms1 3.4/9, ms1mx3.1/35, Error ellipse: s-maj=61.5km s-min=16.9km az=48.0*

*ISCJB **14** 22:56:29.1±1.1, 14.85N±0.06×94.89W±0.04, h42^{km}±9^{km}, mb4.1/14, MS3.4/9, Error ellipse: s-maj=11.0km s-min=6.9km az=26.2*

*NEIC **14** 22:56:29.9, 14.79N×94.85W, h20^{km}, mb4.1/12, MD4.5(MEX), After MEX.*

*MEX **14** 22:56:29.9±0.7, 14.79N×94.85W, h20^{km}±27^{km}, MD4.5*

ISC 14 22:56:30.1±2.2**, 14.85N**±0.05×**94.88W**±0.04**, h32**^{km}±17^{km}**, n49, σ1.26**/51**, mb4.1**/14**, MS3.4**/9**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.50**	**308**	*i* P	**Pn**	**22 56 53.6**	**-1.2**
HUIG				*i* S	**Sn**	**22 57 11.8**	**-1.4**
CMIG	**Matias Romero**	**2.23**	**360**	Pn	**Pn**	**22 57 03.7**	**-1.1**
	17nm,0.3s,baz=164,slow=11,SNR=224						
CMIG				Sn	**Sn**	**22 57 31.4**	**+0.2**
	88nm,0.3s,baz=100,slow=7.9,SNR=5.3						
CMIG	**Matias Romero**	**2.23**	**360**	*i* P	**Pn**	**22 57 03.7**	**-1.1**
CMIG				*i* S	**Sn**	**22 57 31.0**	**-0.2**
CMIG	**Matias Romero**	**2.23**	**360**	*i* P	**Pn**	**22 57 03.7**	**-1.1**
CMIG				*i* S	**Sn**	**22 57 31.0**	**-0.2**
CMIG				Sn	**Sn**	**22 57 31.4**	**+0.2**
VHO	**Vista Hermosa**	**2.84**	**321**	*i* P	**Pn**	**22 57 13.5**	**+0.3**
VHO				*i* S	**Sn**	**22 57 46.1**	**-0.3**
OXX	**Oaxaca**	**2.84**	**322**	*e*P	**Pn**	**22 57 16.0**	**+2.8**
OXX				*i* S	**Sn**	**22 57 46.0**	**-0.4**
SCX	**San Cristobal**	**2.86**	**49**	*i* P	**Pn**	**22 57 14.0**	**+0.5**
SCX				*i* S	**Sn**	**22 57 48.0**	**+1.3**
TUIG	**Tuzandepetl**	**3.19**	**8**	*i* P	**Pn**	**22 57 17.8**	**-0.2**
TUIG				*i* S	**Sn**	**22 57 54.7**	**-0.3**
UTMO	**Huajuapan**	**4.08**	**317**	*i* P	**Pn**	**22 57 30.7**	**+0.4**
UTMO				*i* S	**Sn**	**22 58 18.2**	**+1.2**
TPIG	**Tehuac#an**	**4.27**	**326**	*i* P	**Pn**	**22 57 34.2**	**+1.2**
TPIG				*i* S	**Sn**	**22 58 18.9**	**-2.8**
RBDL	**Robledal**	**5.08**	**98**	*e*P	x	22 57 51.9	
SBLS	**San Blas**	**5.19**	**101**	*e*P	x	22 57 51.8	
SNJE	**San Jose**	**5.20**	**100**	*e*P	x	22 57 51.9	
PPM	**Popocatepetl**	**5.52**	**320**	*e*P	**Pn**	**22 57 50.4**	**+0.4**
PPM				*e*P		22 57 55.0	
PPM				*i* S	**Sn**	**22 58 52.6**	**+0.2**
JCT	**Junction City**	**16.20**	**345**	*e*Pn	**Pn**	**23 00 16.6**	**+1.3**
	8.0nm,0.9s						
MNTX	**Cornudas Mount**	**19.32**	**332**	*e*P	**Pn**	**23 00 57.6**	**+3.8**
	2.6nm,0.9s						
LRAL	**Lakeview Retre**	**19.46**	**20**	*e*P	**Pn**	**23 00 53.7**	**-1.8**
	5.7nm,0.9s						
LRAL				*e*		23 01 01.2	
MIAR	**Mount Ida**	**19.64**	**3**	*e*P	**Pn**	**23 00 55.6**	**-2.0**
	10nm,0.8s						
MIAR				*e*		23 01 04.9	
WMOK	**Wichita Mounta**	**20.11**	**351**	*e*P	**P**	**23 01 01.6**	**+0.4**
	6.9nm,1.1s						
WMOK				*e*		23 01 09.0	
WVT	**Waverly**	**22.11**	**15**	P	**P**	**23 01 21.3**	**-1.4**
	5.8nm,0.8s,mb4.1						
MYNC	**Murphy**	**22.34**	**24**	*e*P	**P**	**23 01 25.6**	**+0.4**
	4.2nm,0.5s,mb4.1						
ROSC	**El Rosal**	**22.52**	**114**	P	**P**	**23 01 24.7**	**-2.4**
	2.7nm,0.4s,mb4.0,baz=104,slow=22,SNR=1.9						
ROSC	**El Rosal**	**22.52**	**114**	*e*P	**P**	**23 01 28.4**	**+1.3**
ROSC				*e*		23 01 34.0	
ANMO	**Albuquerque**	**22.57**	**335**	*e*P	**P**	**23 01 23.4**	**-4.1**
	8.2nm,0.9s,mb4.2						
SDV	**Santo Domingo**	**24.44**	**101**	P	**P**	**23 01 44.6**	**-1.3**
	5.6nm,0.8s,mb4.0,baz=9.9,slow=5.3,SNR=4.7						
SDV	**Santo Domingo**	**24.44**	**101**	P	**P**	**23 01 44.7**	**-1.2**
	3.7nm,0.6s,mb4.0						
WCI	**Wyandotte Cave**	**24.49**	**16**	*e*P	**P**	**23 01 45.2**	**-1.1**
	14nm,1.0s,mb4.3						
WCI				*e*		23 01 53.2	
PV01	**Paradox Valley**	**26.16**	**335**	*e*P	**P**	**23 02 01.2**	**-0.3**
PV10	**Paradox Valley**	**26.56**	**335**	P	**P**	**23 02 03.8**	**-1.3**
ATAH	**Atahualpa**	**27.17**	**142**	LR	LR	23 11 05.4	
	comp=Z,58nm,18.5s,MS3.2,baz=338,slow=32						
JFWS	**Jewell Farm**	**28.25**	**7**	*e*P	**P**	**23 02 20.0**	**-0.2**
PCRV	**Puerto La Cruz**	**29.87**	**95**	LR	LR	23 15 50.5	
	comp=Z,80nm,19.0s,MS3.4,baz=97,slow=39						
PDAR	**Pinedale Array**	**30.55**	**338**	P	**P**	**23 02 43.3**	**+2.6**
	1.0nm,0.9s,mb3.7,baz=131,slow=8.1,SNR=8.1						
NVAR	**Mina Array Bea**	**31.29**	**323**	P	**P**	**23 02 51.0**	**+3.8**
	0.9nm,0.6s,mb3.8,baz=159,slow=7.7,SNR=6.9						
SNOW	**Snow King Moun**	**31.59**	**338**	*e*P	**P**	**23 02 53.3**	**+3.5**
	13nm,0.8s,mb4.8						
SADO	**Sadowa**	**32.67**	**21**	LR	LR	23 15 27.8	
	comp=Z,49nm,21.8s,MS3.2,baz=281,slow=35						
HLID	**Hailey**	**33.13**	**334**	*e*P	**P**	**23 03 06.8**	**+3.5**
	2.0nm,0.7s,mb4.2						
MCMT	**McKenzie Canyo**	**33.54**	**337**	*e*P	**P**	**23 03 06.9**	**+0.1**
ULM	**Lac du Bonnet**	**35.31**	**359**	LR	LR	23 19 12.9	
	comp=Z,30nm,18.2s,MS3.1,baz=339,slow=39						
SIV	**San Ignacio**	**45.32**	**131**	P	**P**	**23 04 43.8**	**-1.3**
	1.5nm,0.6s,mb4.0,baz=308,slow=9.2,SNR=12						
SCHQ	**Schefferville**	**45.45**	**22**	LR	LR	23 24 25.3	
	comp=Z,53nm,18.1s,MS3.5,baz=174,slow=37						
YKA	**Yellowknife Ar**	**49.59**	**348**	P	**P**	**23 05 19.5**	**+1.3**
	1.3nm,0.7s,mb4.1,baz=157,slow=7.1,SNR=7.1						
YKA				LR	LR	23 26 32.6	
	comp=Z,29nm,21.9s,MS3.2,baz=270,slow=36						
INK	**Inuvik**	**58.85**	**344**	LR	LR	23 35 54.5	
	comp=Z,54nm,18.4s,MS3.7,baz=122,slow=40						
ESDC	**Sonseca Array**	**81.37**	**51**	P	**P**	**23 08 44.1**	**+0.5**
	1.4nm,0.8s,mb4.0,baz=295,slow=5.4,SNR=11						
NB2	**NORSAR Subarra**	**84.72**	**28**	P	**P**	**23 09 03.7**	**+2.8**
	comp=Z,3.8nm,0.9s,mb4.5,baz=291,slow=5.1						
NOA	**NORSAR Array B**	**84.72**	**28**	P	**P**	**23 09 03.5**	**+2.6**
	comp=Z,1.2nm,0.7s,mb4.1,baz=294,slow=5.3,SNR=5.1						
NOA				LR	LR	23 44 06.6	
	comp=Z,19nm,20.8s,MS3.5,baz=290,slow=34						
NOA	**NORSAR Array B**	**84.72**	**28**	P	**P**	**23 09 03.5**	**+2.5**
NOA				LR	LR	23 44 06.6	
DBIC	**Dimbokro**	**88.33**	**84**	LR	LR	23 39 55.0	
	comp=Z,33nm,21.7s,MS3.7,baz=78,slow=30						
TORD	**Torodi Ar. Bea**	**92.88**	**76**	P	**P**	**23 09 40.1**	**+0.3**
	comp=Z,0.0nm,4.4s,baz=303,slow=3.9,SNR=3.2						

*CSEM **14** 23:03:34.0, 31.20S×179.90E, h33^{km}, mb5.8*

*ISCJB **14** 23:04:11.7±0.4, 31.45S±0.04×179.77E±0.06, h378^{km}±4^{km}, mb4.6/40, Error ellipse: s-maj=8.5km s-min=4.7km az=52.3*

*BJI **14** 23:04:11.1, 31.40S×179.90E, h366^{km}, mB4.8, mb4.8*

*MOS **14** 23:04:12.0±2.8, 31.20S×179.69E, h378^{km}, mb4.8/10, Error ellipse: s-maj=12.7km s-min=10.7km az=82.0*

*NEIC **14** 23:04:13.1±0.6, 31.38S×179.89E, h386^{km}±5^{km}, mb4.6/23, Error ellipse: s-maj=8.9km s-min=6.6km az=114.0*

*IDC **14** 23:04:13.6±1.0, 31.21S×179.86E, h389^{km}±9^{km}, mb4.0/13, mb1 4.2/14, mb1mx4.2/15, mbtmp4.8/14, Error ellipse: s-maj=11.7km s-min=11.2km az=175.0*

ISC 14 23:04:12.2±0.4**, 31.41S**±0.04×**179.85E**±0.06**, h372**^{km}±4^{km}**, h355**^{km}±9.7^{km}**:pP-P, n337, σ1.24**/217**, mb4.6**/40**, 19C-11D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.89**	**43**	P	**Pn**	**23 05 13.1**	**+1.0**
	848nm,0.3s,baz=128,slow=3.1,SNR=37						
RAO				S	**S**	**23 05 59.6**	**-0.9**
	943nm,0.3s,baz=98,slow=22,SNR=7.2						
RAO	**Raoul Island**	**2.89**	**43**	P	**Pn**	**23 05 13.1**	**+1.0**
RAO				S	**S**	**23 05 59.6**	**-1.0**
MXZ	**Matakaoa Point**	**6.27**	**191**	PN	**Pn**	**23 05 47.6**	**+0.9**
MXZ				*e*SN	**S**	**23 07 00.0**	**-3.7**
KUZ	**Kuaotunu**	**6.33**	**212**	*e*P	**Pn**	**23 05 53.4**	**+6.0**
KUZ	**Kuaotunu**	**6.33**	**212**	PN	**Pn**	**23 05 53.4**	**+5.9**
WCZ	**Waipu Caves**	**6.44**	**224**	*e*P	**Pn**	**23 05 55.0**	**+6.3**
WCZ	**Waipu Caves**	**6.44**	**224**	PN	**Pn**	**23 05 55.0**	**+6.4**
WCZ				SN	**S**	**23 07 18.2**	**+11**
OUZ	**Omahuta**	**6.47**	**232**	P	**Pn**	**23 05 55.2**	**+6.2**
OUZ	**Omahuta**	**6.47**	**232**	PN	**Pn**	**23 05 55.2**	**+6.2**
PUZ	**Puketiti**	**6.78**	**191**	*e*P	**Pn**	**23 05 54.8**	**+2.3**
PUZ	**Puketiti**	**6.78**	**191**	PN	**Pn**	**23 05 53.2**	**+0.7**
PUZ				*e*SN	**S**	**23 07 08.4**	**-5.8**
TGRZ	**Tauranga**	**6.97**	**204**	P	**Pn**	**23 06 00.7**	**+6.0**
MARZ	**Manawahe**	**7.07**	**201**	P	**Pn**	**23 06 00.4**	**+4.6**
MWZ	**Matawai**	**7.17**	**195**	P	**Pn**	**23 05 58.3**	**+1.3**
MWZ				S	**S**	**23 07 27.2**	**+4.7**
MWZ	**Matawai**	**7.17**	**195**	PN	**Pn**	**23 05 57.7**	**+0.7**
MWZ				*e*SN	**S**	**23 07 20.7**	**-1.8**
URZ	**Urewera**	**7.20**	**197**	P	**Pn**	**23 05 57.6**	**+0.2**
	54nm,0.3s,baz=293,slow=5.1,SNR=131						
URZ				S	**S**	**23 07 22.3**	**-0.7**
	404nm,0.3s,baz=72,slow=22,SNR=18						
URZ	**Urewera**	**7.20**	**197**	P	**Pn**	**23 05 57.8**	**+0.5**
URZ	**Urewera**	**7.20**	**197**	PN	**Pn**	**23 05 57.6**	**+0.3**
URZ				*e*SN	**S**	**23 07 20.7**	**-2.3**
KARZ	**Kaharoa**	**7.24**	**203**	*e*PN	**Pn**	**23 06 01.8**	**+4.1**
KNZ	**Kokohu**	**7.80**	**193**	*e*P	**Pn**	**23 06 05.5**	**+1.2**
KNZ	**Kokohu**	**7.80**	**193**	PN	**Pn**	**23 06 05.4**	**+1.1**
KNZ				SN	**S**	**23 07 31.1**	**-4.8**
HIZ	**Hauiti**	**8.19**	**209**	*e*P	**Pn**	**23 06 12.9**	**+4.1**
HIZ	**Hauiti**	**8.19**	**209**	*e*PN	**Pn**	**23 06 12.5**	**+3.7**

BKZ Black Stump Fm 8.22 199 P Pn 23 06 09.3 +0.2
BKZ Black Stump Fm 8.22 199 eSN S 23 07 41.1 -3.6
KATZ Kakaramea 8.28 203 P Pn 23 06 13.9 +4.0
KRVZ Karewarewa 8.41 203 PN Pn 23 06 14.3 +3.0
WTVZ West Tongariro 8.44 203 P Pn 23 06 13.6 +1.8
TWVZ Taurewa 8.46 204 P Pn 23 06 15.4 +3.5
TWVZ S S 23 07 50.2 +0.3
NGZ Ngauruhoe 8.49 203 P Pn 23 06 15.5 +3.1
NGZ Ngauruhoe 8.49 203 ePN Pn 23 06 15.5 +3.1
WPVZ Whakapapa 8.54 203 P Pn 23 06 14.9 +2.0
WPVZ Whakapapa 8.54 203 PN Pn 23 06 14.8 +1.9
TUVZ Tukino 8.56 202 P Pn 23 06 14.7 +1.6
TUVZ Tukino 8.56 202 PN Pn 23 06 15.1 +2.0
FWVZ Far West T-bar 8.58 203 P Pn 23 06 14.3 +0.9
FWVZ Far West T-bar 8.58 203 PN Pn 23 06 14.3 +0.9
DRZ Dome Shelter 8.60 203 P Pn 23 06 14.6 +1.0
MOVZ Moawhango 8.66 202 P Pn 23 06 14.5 +0.2
MOVZ S S 23 07 52.7 -1.5
MOVZ Moawhango 8.66 202 SN S 23 07 52.7 -1.5
PKVZ Pokaka 8.68 204 PN Pn 23 06 12.5 -2.1
VRZ Vera Road 8.75 207 eP Pn 23 06 14.4 -1.0
VRZ Vera Road 8.75 207 PN Pn 23 06 20.1 +4.7
VRZ Vera Road 8.75 207 PN Pn 23 06 14.5 -0.9
PXZ Pawanui 8.94 195 ePN Pn 23 06 16.2 -1.5
PXZ SN S 23 07 56.5 -3.9
RAEZ Rainy Point 9.04 208 P Pn 23 06 25.3 +6.6
RAEZ Rainy Point 9.04 208 ePN Pn 23 06 15.5 -3.2
PKE Pukeiti 9.13 210 P Pn 23 06 20.0 +0.2
PKE Pukeiti 9.13 210 PN Pn 23 06 19.7 -0.1
NEZ North Egmont 9.15 209 P Pn 23 06 18.2 -1.8
TSZ Takapari Road 9.20 199 P Pn 23 06 16.7 -3.9
TSZ Takapari Road 9.20 199 ePN Pn 23 06 21.6 +1.0
TSZ Takapari Road 9.20 199 PN Pn 23 06 16.7 -3.9
NRZ Ngariki Road 9.27 210 P Pn 23 06 27.0 +5.5
BFZ Birch Farm 9.70 196 P Pn 23 06 25.8 -0.8
BFZ Birch Farm 9.70 196 ePN Pn 23 06 25.8 -0.8
MRZ Mangatainoka R 9.86 199 eP Pn 23 06 20.1 -8.3
MRZ Mangatainoka R 9.86 199 ePN Pn 23 06 27.4 -1.0
MRZ Mangatainoka R 9.86 199 PN Pn 23 06 20.0 -8.4
TIWZ Tintock 9.89 198 ePN Pn 23 06 29.5 +0.8
KIW Kapiti Island 10.24 202 ePN Pn 23 06 33.5 +0.5
MTW Mount Morrison 10.35 199 P Pn 23 06 27.2 -6.9
MTW Mount Morrison 10.35 199 ePN Pn 23 06 34.9 +0.8
CAW Cannon Point 10.42 200 P Pn 23 06 24.8 -10
CAW Cannon Point 10.42 200 ePN Pn 23 06 34.8 -0.2
TRWZ Traveller 10.52 197 ePN Pn 23 06 35.8 -0.4
DUWZ D'Urville Isla 10.53 205 ePN Pn 23 06 35.2 -1.1
PAWZ Paruwai Farm 10.57 198 P Pn 23 06 37.0 +0.2
MRW Makara Radio 10.64 202 ePN Pn 23 06 36.5 -1.2
MSWZ Moikau Station 10.65 199 P Pn 23 06 37.3 -0.5
MSWZ S S 23 08 30.0 -7.6
MSWZ Moikau Station 10.65 199 PN Pn 23 06 37.2 -0.6
MSWZ eSN S 23 08 29.9 -7.7
WEL Wellington 10.68 201 P Pn 23 06 38.8 +0.8
SNZO South Karori 10.72 201 P Pn 23 06 38.6 +0.1
SNZO South Karori 10.72 201 ePN Pn 23 06 38.6 +0.1
BHW Baring Head 10.76 200 P Pn 23 06 38.4 -0.6
TCW Tory Channel 10.77 203 P Pn 23 06 39.1 0.0
TUWZ Tuamarina 11.07 204 eSN S 23 08 40.8 -6.0
NNZ Nelson 11.09 206 P Pn 23 06 41.8 -1.1
NNZ Nelson 11.09 206 ePN Pn 23 06 41.6 -1.3
QRZ Quartz Range 11.11 210 P Pn 23 06 43.4 +0.3
QRZ Quartz Range 11.11 210 PN Pn 23 06 43.3 +0.2
BSWZ Blackbirch Sta 11.35 203 P Pn 23 06 45.6 -0.4
THZ Tophouse 11.74 206 P Pn 23 06 50.3 -0.3
THZ Tophouse 11.74 206 ePN Pn 23 06 49.2 -1.4
KHZ Kahutara 12.09 203 eP P 23 06 53.2 -0.6
KHZ Kahutara 12.09 203 ePN Pn 23 06 54.2 -1.5
DSZ Denniston Nort 12.17 210 PN Pn 23 06 55.0 -0.5
DSZ eSN S 23 09 03.5 -5.8
LTZ Lake Taylor 12.86 206 eP P 23 07 02.8 +0.5
LTZ Lake Taylor 12.86 206 ePN Pn 23 07 02.4 -1.2
MQZ McQueen's Vall 13.53 203 eP P 23 07 09.8 +0.1
MQZ McQueen's Vall 13.53 203 ePN Pn 23 07 09.8 -1.7
MQZ SN S 23 09 31.3 -5.5
WVZ Waitaha Valley 13.71 209 ePN Pn 23 07 11.8 -1.8
RPZ Rata Peaks 14.12 207 P P 23 07 16.0 -0.1
5.9nm,0.3s,baz=24,slow=2.2,SNR=25
RPZ S S 23 09 42.9 -5.7
34nm,0.3s,baz=192,slow=21,SNR=13
RPZ Rata Peaks 14.12 207 eP P 23 07 16.4 +0.3
RPZ Rata Peaks 14.12 207 ePN P 23 07 16.1 0.0
FOZ Fox Glacier 14.56 211 eP P 23 07 20.6 -0.3
FOZ Fox Glacier 14.56 211 ePN P 23 07 19.9 -1.0
LBZ Lake Benmore 15.02 208 eP P 23 07 27.6 +1.6
LBZ Lake Benmore 15.02 208 ePN P 23 07 27.4 +1.4
DZM Mont Dzumac 15.15 305 P P 23 07 30.3 +2.9
1.4nm,0.3s,baz=115,slow=12,SNR=13
JCZ Jackson Bay 15.37 212 eP P 23 07 29.4 -0.4
JCZ Jackson Bay 15.37 212 ePN P 23 07 28.5 -1.3
ODZ Otahua Downs 15.40 205 eP P 23 07 32.0 +1.9
ODZ Otahua Downs 15.40 205 ePN P 23 07 31.6 +1.5
WKZ Wanaka 15.86 209 eP P 23 07 34.8 -0.3
WKZ Wanaka 15.86 209 ePN P 23 07 33.1 -2.0
AFI Afiamalu 19.04 26 P P 23 08 07.4 -1.5
15nm,0.3s,baz=56,slow=5.8,SNR=21
AFI S S 23 11 22.0 -2.2
4.8nm,0.3s,baz=29,slow=22,SNR=4.5
AFI Afiamalu 19.04 26 eP P 23 08 07.7 -1.2
AFI pmax pmax
comp=Z,143nm,0.6s
AFI Afiamalu 19.04 26 eP P 23 08 07.7 -1.1
comp=Z,143nm,0.6s
ARMA Armidale 24.21 265⇑iP P 23 09 00.3 +3.6
ARMA eSCP ScP 23 15 27.8 -0.3
CNB Canberra Magne 25.71 253 eP P 23 09 13.3 +3.2
comp=Z,74nm,1.9s,mb4.6
CNB eSCP ScP 23 15 29.6 -2.7
TAU Tasmania Unive 28.19 237 eP P 23 09 34.7 +2.7
TAU pmax pmax
comp=Z,16nm,0.8s,mb4.3
TAU Tasmania Unive 28.19 237 eP P 23 09 34.6 +2.7
comp=Z,16nm,0.8s,mb4.3
TBI Tubuai 28.34 81 eS S 23 13 40.4 -12
comp=Z,162nm,27.5s
TBI eLR LR 23 15 17.4
comp=Z,278nm,27.8s
HNR Honiara 28.64 316 eP P 23 09 30.8 -5.2
TOO Toolangi 28.87 248 eP P 23 09 41.0 +3.0
comp=Z,12nm,1.5s,mb3.9
TOO i SCP ScP 23 15 39.3 -2.7
TOO Toolangi 28.87 248 eP P 23 09 41.0 +3.0
TOO pmax pmax
comp=Z,12nm,1.5s,mb3.9
PPT Papeete 30.93 71 eS S 23 14 23.7 -8.7
comp=Z,158nm,27.0s
PPT eLR LR 23 16 30.3
comp=Z,384nm,25.2s
CTA Charters Tower 32.17 282 eP P 23 10 08.3 +1.5
comp=Z,6.3nm,0.8s,mb3.9
CTA eSCP ScP 23 15 51.6 -1.3
CTA Charters Tower 32.17 282 P P 23 10 08.0 +1.3
comp=Z,6.7nm,0.6s,mb4.1,baz=105,slow=10,SNR=12
CTA ScP ScP 23 15 51.2 -1.7
comp=Z,13nm,0.9s,baz=117,slow=2.5,SNR=6.6
CTA Charters Tower 32.17 282 eP P 23 10 08.3 +1.5
CTA pmax pmax
comp=Z,6.0nm,0.8s
CTAO Charters Tower 32.17 282 eP P 23 10 08.0 +1.2
CTAO pmax pmax
comp=Z,112nm,1.8s,mb4.8
CTAO Charters Tower 32.17 282 eP P 23 10 08.0 +1.3
comp=Z,112nm,1.8s,mb4.8
STKA Stephens Creek 32.46 259⇑iP P 23 10 11.2 +1.9
comp=Z,10nm,0.3s,mb4.5
STKA eSCP ScP 23 15 50.2 -3.7
STKA Stephens Creek 32.46 259 P P 23 10 11.0 +1.7
comp=Z,14nm,0.3s,mb4.6,baz=89,slow=8.2,SNR=84
STKA S S 23 14 58.1 +2.0
comp=Z,4.3nm,1.0s,baz=162,slow=24,SNR=3.6
STKA ScP ScP 23 15 50.5 -3.5
comp=Z,2.3nm,0.9s,baz=35,slow=1.1,SNR=4.8
STKA Stephens Creek 32.46 259 eP P 23 10 11.3 +2.0
PMG Port Moresby 37.41 299 ScP ScP 23 16 10.7 -1.2
comp=Z,31nm,0.9s,baz=142,slow=6.7,SNR=4.7
PMG Port Moresby 37.41 299 P P 23 10 47.4 -3.7
RKT Rikitea 40.77 90 eS S 23 17 00.1 -0.8
comp=Z,165nm,28.2s
AS31 Alice Springs 41.23 269 eP P 23 11 22.3 0.0
AS31 eScP ScP 23 16 25.1 -1.6
ASAR Alice Springs 41.23 269 P P 23 11 22.4 +0.1
comp=Z,3.8nm,0.3s,mb4.0,baz=105,slow=7.3,SNR=70

ASAR ScP ScP 23 16 24.1 -2.6
comp=Z,9.4nm,0.8s,baz=122,slow=4.2,SNR=20
ASAR S S 23 17 04.8 -2.8
comp=Z,2.4nm,1.0s,baz=102,slow=14,SNR=6.3
ASPA Alice Springs 41.23 269 eP P 23 11 22.3 0.0
ASPA eSCP ScP 23 16 25.1 -1.7
WB2 Warramunga Arr 42.30 274⇑iP P 23 11 30.7 -0.1
WB2 eSCP ScP 23 16 28.9 -2.1
WRAB Tennant Creek 42.30 274 eP P 23 11 30.7 -0.2
WRAB pmax pmax
comp=Z,20nm,0.6s,mb4.4
WRAB Tennant Creek 42.30 274 eP P 23 11 30.7 -0.2
comp=Z,20nm,0.6s,mb4.4
WRA Warramunga Arr 42.31 274 P P 23 11 30.4 -0.5
comp=Z,14nm,0.4s,mb4.4,baz=112,slow=7.9,SNR=197
WRA ScP ScP 23 16 29.4 -1.7
comp=Z,16nm,1.0s,baz=114,slow=4.0,SNR=20
WRA S S 23 17 21.5 -1.9
comp=Z,2.7nm,0.9s,baz=111,slow=15,SNR=5.3
FORT Forrest 44.01 257 eP P 23 11 44.1 -0.3
comp=Z,32nm,0.4s,mb4.8
FORT eSCP ScP 23 16 34.1 -3.9
SBA Scott Base 46.91 184 eP P 23 12 09.3 +2.5
SBA pmax pmax
comp=Z,7.0nm,0.5s,mb4.2
SBA Scott Base 46.91 184 eP P 23 12 09.2 +2.4
comp=Z,6.6nm,0.5s,mb4.1
VNDA Vanda 46.92 185 P P 23 12 08.2 +1.3
comp=Z,1.4nm,0.7s,mb3.3,baz=0.9,slow=8.1,SNR=21
VNDA PcP PcP 23 13 31.7 -1.0
comp=Z,3.7nm,0.8s,baz=350,slow=2.8,SNR=7.6
VNDA ScP ScP 23 16 47.7 -2.4
comp=Z,4.7nm,0.8s,baz=344,slow=4.1,SNR=15
VNDA Vanda 46.92 185 P P 23 12 08.2 +1.3
VNDA 23 13 31.7
VNDA Vanda 46.92 185 P P 23 12 08.2 +1.3
VNDA PcP PcP 23 13 31.7 -1.0
VNDA ScP ScP 23 16 47.7 -2.4
KAKA Kakadu 47.31 282 eP P 23 12 09.0 -0.9
comp=Z,8.3nm,0.4s,mb4.3
FITZ Fitzroy Crossi 50.53 272⇑iP P 23 12 34.0 0.0
comp=Z,13nm,0.6s,mb4.3
FITZ eSCP ScP 23 17 04.2 -1.3
FITZ Fitzroy Crossi 50.53 272 P P 23 12 34.1 +0.1
comp=Z,6.9nm,0.5s,mb4.1,baz=150,slow=8.0,SNR=54
FITZ ScP ScP 23 17 03.6 -1.9
comp=Z,26nm,1.0s,baz=141,slow=5.0,SNR=16
FITZ S S 23 19 18.5 -0.5
comp=Z,2.8nm,1.1s,baz=262,slow=22,SNR=4.6
KLBR Kellerberrin 52.28 252 eP P 23 12 45.5 -1.4
comp=Z,41nm,1.1s,mb4.7
KLBR eSCP ScP 23 17 09.1 -4.0
CASY Casey 53.39 208⇑iP P 23 12 54.2 -0.7
MBWA Marble Bar 54.29 265 eP P 23 13 01.1 -0.2
comp=Z,4.2nm,0.3s,mb4.2
QSPA South Pole Qui 58.71 180 eP P 23 13 33.7 +1.6
comp=Z,110nm,0.9s,mb5.3
MAW Mawson 70.71 201 eP P 23 14 48.0 -0.8
comp=Z,3.2nm,0.7s,mb4.2
MAW Mawson 70.71 201 P P 23 14 48.0 -0.8
comp=Z,4.8nm,0.8s,mb4.3,baz=120,slow=7.3,SNR=13
MAW Mawson 70.71 201 eP P 23 14 46.7 -2.1
MAW pmax pmax
comp=Z,8.0nm,0.9s
MAW Mawson 70.71 201 eP P 23 14 46.7 -2.2
comp=Z,7.5nm,0.9s,mb4.4
PMSA Palmer Station 72.10 156 P P 23 14 57.8 +0.8
PMSA Palmer Station 72.10 156 eP P 23 14 57.6 +0.6
comp=Z,16nm,1.0s,mb4.7
SYO Syowa Base 75.71 194⇑eP P 23 15 16.4 -1.3
SYO Syowa Base 75.71 194⇑ePcP PcP 23 15 28.2 -0.4
USHA Ushuaia 76.12 146 P P 23 15 20.7 +0.7
comp=Z,14nm,1.1s,mb4.6,baz=304,slow=6.3,SNR=3.2
SNAA Sanae 77.19 179 eP P 23 15 25.7 -0.3
SNAA e 23 15 27.1
SNAA e 23 15 29.4
SNAA e 23 15 34.6
SNAA e 23 16 56.2
SNAA e 23 17 38.7
SNAA Sanae 77.19 179 eP P 23 15 26.0 0.0
SNAA e*PP pP 23 16 53.1 +3.5
SNAA pmax pmax
comp=Z,36nm,0.9s
SNAA Sanae 77.19 179 eP P 23 15 26.0 0.0
comp=Z,36nm,0.9s,mb5.1
SNAA epP pP 23 16 53.1 +3.5
NVL N'lazarevskaya 77.76 184⇑iP P 23 15 28.7 -0.4
NVL pmax pmax
comp=Z,32nm,1.0s,mb5.0
NVL pmax pmax
comp=N,19nm,1.1s
NVL pmax pmax
comp=E,4.0nm,0.8s
MJAR Matsushiro Arr 78.04 327 P P 23 15 29.2 -1.4
comp=E,1.9nm,0.4s,mb4.2,baz=158,slow=4.6,SNR=19
MAJO Matsushiro 78.04 327 eP P 23 15 28.7 -1.9
MAT Matsushiro 78.04 327 P P 23 15 28.8 -1.8
MAT Matsushiro 78.04 327 eP P 23 15 29.0 -1.6
VNA1 Neumayer--Stat 78.07 177 eP P 23 15 31.3 +0.5
VNA1 e 23 15 35.5
VNA1 e 23 15 37.9
VNA1 e 23 17 02.5
PLCA Paso Flores 83.16 134 P P 23 15 59.0 +1.5
comp=E,9.9nm,1.0s,mb4.6,baz=252,slow=6.4,SNR=8.7
PLCA Paso Flores 83.16 134 P P 23 15 59.0 +1.5
YSS Yuzh-Sakhalins 84.87 335d iP P 23 16 06.3 +0.3
YSS pmax pmax
comp=Z,12nm,0.3s,mb5.2
YSS Yuzh-Sakhalins 84.87 335 eP P 23 16 05.5 -0.5
comp=Z,28nm,0.4s,mb5.5
NJ2 Nanjing 85.51 312 eP P 23 16 11.3 +2.1
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
PET Petropavlovsk 86.08 347 eP P 23 16 10.9 -1.0
PET pmax pmax
comp=Z,12nm,0.5s,mb5.0
WHN Wuhan 87.49 308 eP P 23 16 19.0 +0.4
PFO Pinyon Flat Ob 88.25 48 eP P 23 16 22.5 +0.3
PFO pmax pmax
comp=Z,19nm,1.3s,mb4.8
PFO Pinyon Flat Ob 88.25 48 eP P 23 16 22.5 +0.3
comp=Z,19nm,1.3s,mb4.8
ISA Isabella 88.32 46 eP P 23 16 22.8 +0.3
ISA pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
ISA Isabella 88.32 46 eP P 23 16 22.8 +0.3
comp=Z,4.0nm,0.6s,mb4.4
MDJ Mudanjiang 88.43 327 P P 23 16 23.3 +0.2
CMB Columbia Colle 88.75 43 eP P 23 16 24.1 -0.4
CMB pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
CMB Columbia Colle 88.75 43 eP P 23 16 24.1 -0.4
comp=Z,7.1nm,0.9s,mb4.5
HABR Khabarovsk 89.04 332 eP P 23 16 25.6 -0.3
HABR eS SKSac 23 26 15.4 -4.0
CN2 Changchun 89.84 324 eP P 23 16 29.3 -0.3
CN2 AMB AMB
comp=Z,20nm,1.1s,mb5.0
YBH Yreka Blue Hor 89.97 39 P P 23 16 30.7 +0.5
comp=Z,10nm,1.2s,mb4.6,baz=194,slow=7.2,SNR=4.2
NVAR Mina Array Bea 90.23 44 P P 23 16 31.4 0.0
comp=Z,3.0nm,0.9s,mb4.2,baz=220,slow=7.4,SNR=16
NVAR Mina Array Bea 90.23 44 P P 23 16 31.4 0.0
GYA Guiyang 90.46 301⇑iP P 23 16 32.3 -0.2
GYA AP pP 23 17 54.8 -4.1
GYA PP PP 23 20 12.9 -0.1
GYA SKS 23 26 27.8
GYA S S 23 26 52.5 -2.3
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,80nm,3.9s
TPH Tonopah 90.65 45 eP P 23 16 33.1 -0.2
TPH pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
TPH Tonopah 90.65 45 eP P 23 16 33.1 -0.3
comp=Z,5.1nm,0.6s,mb4.6
ENH Enshi 90.66 305 eP P 23 16 34.0 +0.6
comp=Z,3.0nm,0.2s,mb4.9
KMI Kunming 92.64 298 P P 23 16 43.8 +1.3
KMI AMB AMB
comp=Z,7.0nm,1.1s,mb4.6
CD2 Chengdu 95.07 303 eP P 23 16 50.8 -2.8
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9

CD2 AMB AMB
comp=Z,40nm,8.2s
HHC Hu-ho-hao-te 95.62 315 eP P 23 16 59.4 +3.3
HHC AP pP 23 18 22.0 -0.8
HHC XP sP 23 18 57.5 -3.7
HHC PP PP 23 20 56.9 +4.0
HHC SKS 23 26 59.8
HHC S S 23 27 43.3 +3.3
HHC PS PS 23 29 52.9 +4.0
HHC XS sS 23 30 08.5 -6.8
HHC SS SS 23 34 24.5 +5.9
HHC AMB AMB
comp=Z,15nm,1.1s,mb5.0
HHC AMB AMB
comp=Z,79nm,7.4s
PV10 Paradox Valley 95.91 48 eP P 23 16 59.2 +1.8
LZH Lanzhou 97.85 307 eP P 23 17 10.5 +4.3
LZH AMB AMB
comp=Z,10.0nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,47nm,5.0s
PDAR Pinedale Array 98.14 45 P P 23 17 06.8 -0.6
comp=Z,0.4nm,0.7s,mb3.8,baz=183,slow=2.7,SNR=4.1
INK Inuvik 105.25 16 PKiKP PKiKP 23 21 48.9 -2.2
YKA Yellowknife Ar 107.15 26 PKiKP PKiKP 23 21 52.1 -2.4
comp=Z,0.6nm,0.4s,baz=254,slow=1.6,SNR=18
MKAR Makanchi Array 117.00 310 PKP PKPdf 23 22 11.8 -1.5
comp=Z,1.5nm,0.4s,baz=51,slow=0.2,SNR=15
MKAR Makanchi Array 117.00 310 PKP PKPdf 23 22 11.8 -1.5
NVS Novosibirsk 118.68 319 ePKiKP PKPdf 23 22 12.9 -3.6
SADO Sadowa 118.70 53 PKP PKPdf 23 22 14.6 -1.9
comp=Z,11nm,1.1s,baz=225,slow=2.9,SNR=6.2
KURK Kurchatov 120.41 314⇓iPKiKP PKPdf 23 22 17.6 -2.2
AAK Ala-Archa 121.13 304⇑iPKiKP PKPdf 23 22 20.3 -0.9
PKME Peaks-Kenny Pk 125.60 54 ePKPdf PKPdf 23 22 28.6 -1.2
BRVK Borovoye 125.89 315 ePKiKP PKPdf 23 22 29.0 -1.3
ZRNK Zerenda 126.65 315 PKHKP 23 22 13.4
SCHQ Schefferville 128.22 43 PKP PKPdf 23 22 32.8 -2.0
comp=Z,1.9nm,0.3s,baz=313,slow=3.2,SNR=13
KMBO Kilima Mbogo 131.99 235 PKP PKPdf 23 22 42.9 +0.9
comp=Z,1.7nm,0.9s,baz=83,slow=8.1,SNR=4.8
KMBO SKPbc SKPbc 23 25 31.1 -1.4
comp=Z,9.8nm,0.9s,baz=107,slow=2.5,SNR=23
SPB4 Spitsbergen Ar 132.56 355 ePKPdf PKPdf 23 22 42.1 -0.9
ARU Arti 132.68 320 iPKiKP PKPdf 23 22 40.8 -2.4
ARU Arti 132.68 320 ePKPdf PKPdf 23 22 41.9 -1.3
KEV Kevo 138.67 346 epkp PKPdf 23 22 43.7 -11
ARCES ARCESS Array B 139.16 347 PKhKP 23 22 45.0
comp=Z,1.6nm,0.4s,baz=24,slow=1.7,SNR=22
KTK1 Kautokeino 140.04 347 eP PKPdf 23 22 49.7 -7.2
KTK1 AMb AMB 23 22 57.6
comp=Z,24nm,1.4s
KLMR Klimovskoe 140.75 330 i PKHKP 23 22 49.4
KLMR pmax pmax
comp=Z,20nm,1.6s
DGRG David-gareji 142.40 298 P PKPdf 23 22 57.5 -3.6
JOF Joensuu 142.84 337 epkp PKPdf 23 22 55.3 -6.2
MTA Mtatsminda 142.83 299 P PKPdf 23 22 56.7 -5.1
TBLG Delisi 142.87 299 P PKPdf 23 22 58.7 -3.2
GNI Garni 142.88 296 ePKiKP PKPdf 23 22 58.7 -3.2
ZEI Tsey 143.45 301 ePKiKP PKPdf 23 23 01.7 -1.2
ZEI e 23 26 21.2
ONI Oni 143.79 300 P PKPdf 23 23 01.6 -1.9
MOS Moscow 144.08 324 ePKHKP 23 22 59.0
MOS pmax pmax
comp=Z,200nm,1.9s
MOS pmax pmax
comp=Z,111nm,1.8s
MOR8 Moi Rana 144.10 350 eP PKPdf 23 22 59.9 -4.1
MOR8 AMb AMB 23 23 02.7
comp=Z,53nm,1.6s
KIV Kislovodsk 144.24 303 i PKiKP PKPdf 23 23 02.9 -1.4
KIV Kislovodsk 144.24 303 ePKPbc PKPdf 23 23 02.8 -1.5
CHVG Ch'k'valeri 144.79 301 P PKPdf 23 23 06.3 +1.0
VOR Voronezh 144.81 317 ePKiKP PKPdf 23 23 03.8 -1.5
VOR pmax pmax
comp=Z,280nm,1.2s
KAF Kangasniemi 144.84 339 epkp PKPdf 23 23 02.0 -3.3
OBN Obninsk 144.91 323⇑iPKiKP PKPdf 23 23 04.0 -1.4
OBN e 23 26 28.2
OBN eSS SS 23 44 41.3 -4.2
OBN pmax pmax
comp=Z,130nm,0.8s
OBN Obninsk 144.91 323 ePKP PKPdf 23 23 04.2 -1.2
VRSR Storozhevoye 144.99 316d iPKiKP PKPdf 23 23 04.5 -1.1
VRSR pmax pmax
comp=Z,110nm,1.1s
VRSR pmax pmax
comp=N,20nm,0.8s
VRSR pmax pmax
comp=E,60nm,0.8s
PUL Pulkovo 145.10 333⇓iPKiKP PKPdf 23 23 05.2 -0.6
FIA1 FINESS Array S 145.42 338 ePKPdf PKPdf 23 23 05.1 -1.2
FINES FINESS Array B 145.42 338 PKPbc PKPbc 23 23 05.0 -2.1
comp=E,54nm,0.4s,baz=51,slow=4.3,SNR=1041
NSS Namsos 146.00 351 eP PKPdf 23 23 05.2 -2.1
VSU Vasula 147.35 334d iPKP2 PKPab 23 23 10.8 -4.8
MALT Malatya 147.78 293⇓iP PKPdf 23 23 14.1 +3.8
MALT Malatya 147.78 293 ePKPdf PKPdf 23 23 09.9 -0.3
MALT ePKPbc PKPbc 23 23 13.4 -0.3
ANN Anapa 147.84 305 i PKiKP PKPdf 23 23 11.0 +0.6
ANN pmax pmax
comp=Z,71nm,1.1s
DOMB Dombas 148.77 352 eP PKPdf 23 23 14.3 +2.4
DOMB AMb AMB 23 23 17.3
comp=Z,28nm,1.4s
NB2 NORSAR Subarra149.43 349 PKPa PKPbc 23 23 15.8 -2.0
comp=Z,71nm,1.2s,baz=15,slow=2.6
NB2 NORSAR Subarra149.43 349 PKPa PKPbc 23 23 15.8 -2.0
baz=15,slow=2.6
NOA NORSAR Array B149.43 349 PKP PKPdf 23 23 10.8 -2.2
comp=Z,1.0nm,0.4s,baz=15,slow=4.0,SNR=19
NOA PKPbc PKPbc 23 23 15.8 -2.0
comp=Z,9.9nm,0.4s,baz=17,slow=4.1,SNR=48
NOA NORSAR Array B149.43 349 PKP PKPdf 23 23 10.8 -2.2
NOA PKPbc PKPbc 23 23 15.8 -2.0
NAO01 NORSAR Array S149.66 349 ePKPbc PKPbc 23 23 16.6 -1.8
NAO01 ePKPab PKPab 23 23 22.8 -2.2
EIL Elat 149.79 276 ePKPbc PKPbc 23 23 18.1 -0.6
SIM Simferopol' 150.10 307 i PKHKP PKPbc 23 23 19.0 -0.4
SIM e 23 23 26.0
SIM pmax pmax
comp=Z,17nm,0.7s
AKASG Malin Array Be 150.93 320 PKP PKPdf 23 23 12.5 -2.8
comp=Z,0.4nm,0.4s,baz=49,slow=1.3,SNR=6.5
AKASG PKPbc PKPbc 23 23 19.8 -1.6
comp=Z,8.4nm,0.4s,baz=47,slow=3.2,SNR=79
AKASG PKPab PKPab 23 23 28.1 -2.2
comp=Z,4.1nm,0.3s,baz=51,slow=4.7,SNR=17
AKBB Malin Array Si 150.93 320 ePKiKP PKPdf 23 23 20.2 +4.9
KONO Kongsberg 151.00 350⇑iPKiKP PKPdf 23 23 19.9 +4.5
KONO Kongsberg 151.00 350 ePKPbc PKPbc 23 23 19.9 -1.6
BR131 Keskin Array S 151.42 296 ePKPbc PKPbc 23 23 21.7 -0.7
BRTR Keskin Array B 151.42 296 PKP PKPdf 23 23 14.2 -1.8
comp=Z,2.0nm,1.2s,baz=193,slow=5.1,SNR=6.8
BRTR PKPbc PKPbc 23 23 21.4 -1.0
comp=Z,12nm,0.5s,baz=143,slow=3.9,SNR=124
BRTR PKPab PKPab 23 23 31.4 -1.0
comp=Z,2.6nm,0.7s,baz=198,slow=12,SNR=5.4
BLS5 Blagio 151.63 353 eP PKPbc 23 23 22.1 -0.8
CSS Prodhromos 151.83 286 ePKPbc PKPbc 23 23 23.0 -0.4
SUW Suwalki 151.88 330 ePKP PKPbc 23 23 22.0 -1.5
ANTO Ankara 152.05 297⇑iP PKPbc 23 23 23.9 0.0
ANTO Ankara 152.05 297 P PKPbc 23 23 23.9 0.0
SNR=7.9
ANTO Ankara 152.05 297 ⇑P PKPbc 23 23 23.9 0.0
WAR Warsaw 154.05 329 ePKP PKPbc 23 23 27.6 -0.6
VRI Vrincioaia 154.67 312⇑iP PKPab 23 23 46.0 -0.2
VRI Vrincioaia 154.67 312 ⇑P PKPab 23 23 46.0 -0.1
PLOR Plostina 154.73 312⇓iP PKPab 23 23 46.7 +0.3
BURAR Bucovina Array 154.77 317⇓iP PKPbc 23 23 30.2 +0.5
BURAR Bucovina Array 154.77 317 ⇓P PKPbc 23 23 30.2 +0.4
GKP Gorka Klasztor 154.78 335 ePKP PKPab 23 23 45.6 -1.0
KWP Kalwaria 155.00 323 ePKP PKPdf 23 23 30.2 +9.1
DBIC Dimbokro 155.00 169 PKPab PKPab 23 23 48.7 +1.1
comp=Z,7.8nm,0.9s,baz=179,slow=4.5,SNR=4.2
MLR Muntele Rosu 155.33 312⇑iP PKPab 23 23 48.9 -0.1
MLR Muntele Rosu 155.33 312 ⇑P PKPab 23 23 48.9 -0.1
KOLS Kolonicke sedl 155.65 322 ePKP PKPab 23 23 48.8 -1.6
STHS Stebnicka Huta 155.87 324 ePKP PKPab 23 23 49.0 -2.3
CRVS Cervenica-Dubn 156.09 323 ePKP PKPab 23 23 51.6 -0.7
DRGR 156.65 318⇓iP PKPab 23 23 54.7 0.0
KECS Kecovo 156.85 323 ePKP PKPab 23 23 53.9 -1.7

OKC	Ostrava-Krasne	157.04	329	ePKPAB	PKPab	23 23 55.6	-0.8
KSP	Ksiaz	157.06	333	ePKP	PKPab	23 23 55.8	-0.7
MORC	Moravsky Berou	157.36	329	⇑iP	PKPab	23 23 57.0	-0.7
DPC	Dobruska-Polom	157.44	332	ePKPAB	PKPab	23 23 57.3	-0.8
UPC	Upice	157.44	332	ePKPAB	PKPab	23 23 57.5	-0.6
VYHS	Vyhne	157.67	325	ePKP	PKPdf	23 23 23.1	-1.5
VYHS				e		23 23 58.4	
CLL	Collm	157.87	338	ePKPab	PKPab	23 23 58.6	-1.3
CLL	Collm	157.87	338	i PKPab	PKPab	23 23 58.6	-1.3
	comp=Z,15nm,0.6s						
CLL	Collm	157.87	338	i PKP2	PKPab	23 23 58.6	-1.3
CLL				pmax	pmax		
	comp=Z,24nm,0.6s						
BRG	Berggiesshubel	157.91	336	ePKPab	PKPab	23 23 59.4	-0.8
BRG	Berggiesshubel	157.91	336	eP	PKPab	23 23 59.5	-0.7
	comp=Z,7.5nm,0.9s						
BRG	Berggiesshubel	157.91	336	ePKP2	PKPab	23 23 59.5	-0.7
BRG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BZS	Buzias	157.93	316	⇓iP	PKPab	23 23 59.3	-0.9
PVCC	Panska Ves	157.97	334	ePKPAB	PKPab	23 23 59.8	-0.6
FBE	Freiberg	158.08	337	ePKPab	PKPab	23 23 59.9	-1.0
CLZ	Clausthal	158.16	342	ePKPab	PKPab	23 24 00.1	-1.1
PRU	Pruhonice	158.42	334	ePKPAB	PKPab	23 24 01.5	-0.9
TREC	Trest	158.60	331	ePKPAB	PKPab	23 24 02.4	-0.7
TANN	Tannenbergstha	158.81	337	ePKPab	PKPab	23 24 03.0	-1.0
WERD	Werda	158.83	338	ePKPab	PKPab	23 24 01.5	-2.6
MOX	Moxa	158.88	339	ePKPab	PKPab	23 24 03.5	-0.8
MOX	Moxa	158.88	339	e(P)	PKPab	23 24 03.4	-0.9
GUNZ	Gunzen	158.89	337	ePKPab	PKPab	23 24 03.7	-0.7
NKC	Novy Kostel	158.97	337	ePKPAB	PKPab	23 24 04.6	-0.1
MANZ	Manzenberg	159.29	337	ePKPab	PKPab	23 24 05.6	-0.6
ROTZ	Rotzenmuhle	159.45	337	ePKPab	PKPab	23 24 06.3	-0.5
KHC	Kasperske Hory	159.49	334	ePKPAB	PKPab	23 24 06.4	-0.6
GERES	GERESS Array B	159.67	333	PKPab	PKPab	23 24 06.9	-0.9
	comp=Z,1.7nm,0.5s,baz=43,slow=6.7,SNR=12						
WET	Wettzell	159.74	335	ePKPab	PKPab	23 24 05.1	-3.0
GRF	Grafenberg Arr	159.84	338	ePKPab	PKPab	23 24 07.9	-0.6
PERS	Pernice	160.77	327	i PKPdf	PKPab	23 24 12.3	-0.3
GIVF	Givet	160.95	350	ePKP2	PKPab	23 24 11.9	-1.5
BAIF	Baives	161.08	351	ePKP2	PKPab	23 24 12.2	-1.8
FUR	Furstenfeldbru	161.13	336	ePKPab	PKPab	23 24 13.6	-0.6
PDKS	Podkum	161.24	326	ePKPdf	PKPab	23 24 14.4	-0.2
TORD	Torodi Ar. Bea	161.75	186	PKP	PKPdf	23 23 29.1	-0.1
	comp=Z,5.0nm,1.0s,baz=298,slow=1.3,SNR=21						
TORD				PKPab	PKPab	23 24 17.1	+0.2
	comp=Z,8.5nm,0.8s,baz=177,slow=3.7,SNR=20						
BFO	Black Forest	161.91	342	ePKPab	PKPab	23 24 16.3	-1.3
CDF	Champ du Feu	162.10	344	ePKP2	PKPab	23 24 16.9	-1.5
	comp=Z,6.8nm,0.8s						
MEZF	Maizieres J'vi	162.47	348	ePKP2	PKPab	23 24 18.5	-1.6
	comp=Z,8.2nm,0.5s						
FLN	La Foliniere	162.66	1	ePKP2	PKPab	23 24 18.8	-2.1
HAU	Haudompre	162.69	345	ePKP2	PKPab	23 24 19.4	-1.7
	comp=Z,8.7nm,0.6s						
LDF	La Druitiere	162.83	360	ePKP2	PKPab	23 24 18.8	-2.9
SGMF	Saint Gilles	163.07	6	ePKP2	PKPab	23 24 21.0	-1.7
QUIF	Quistinic	163.35	7	ePKP2	PKPab	23 24 22.0	-1.9
LOR	Lormes	163.86	350	ePKP2	PKPab	23 24 25.3	-0.9
	comp=Z,2.3nm,0.5s						
HYF	Humbligny	164.01	353	ePKP2	PKPab	23 24 25.4	-1.5
CABF	La Chapelle	164.07	344	ePKP2	PKPab	23 24 25.8	-1.3
SSF	Saint Saulge	164.11	351	ePKP2	PKPab	23 24 25.7	-1.6
	comp=Z,8.5nm,0.6s						
AVF	Avril sur Loir	164.40	351	ePKP2	PKPab	23 24 26.7	-1.9
	comp=Z,8.0nm,0.6s						
SMF	Signal de Mont	164.47	350	ePKP2	PKPab	23 24 27.3	-1.6
	comp=Z,17nm,0.8s						
BGF	Bois d'Agland	164.69	352	ePKP2	PKPab	23 24 28.1	-1.8
MFF	Saint Martin d	164.82	360	ePKP2	PKPab	23 24 28.7	-1.7
	comp=Z,5.7nm,0.7s						
LPL	La Plagne	164.93	341	ePKP2	PKPab	23 24 30.4	-0.5
	comp=Z,8.6nm,0.8s						
LPG	La Plagne	164.94	341	ePKP2	PKPab	23 24 30.6	-0.3
	comp=Z,9.4nm,0.6s						
TCF	Toulx Ste Croi	165.03	354	ePKP2	PKPab	23 24 28.9	-2.4
	comp=Z,4.3nm,0.8s						
ORIF	Oris-en-Rattie	165.71	342	ePKP2	PKPab	23 24 33.6	-0.7
	comp=Z,11nm,0.7s						
VIVF	Saint-Julien-l	166.05	346	ePKP2	PKPab	23 24 34.0	-1.8
	comp=Z,5.7nm,0.7s						
LFF	La Frestale	166.47	357	ePKP2	PKPab	23 24 35.8	-1.9
MTLF	Montolieu	167.94	352	ePKP2	PKPab	23 24 42.8	-1.4
	comp=Z,4.1nm,0.6s						
ESDC	Sonseca Array	171.19	20	PKP	PKPdf	23 23 35.9	-0.5
	comp=Z,3.4nm,1.1s,baz=359,slow=3.6,SNR=13						
ESDC				PKPab	PKPab	23 24 56.6	-2.0
	comp=Z,0.3nm,0.5s,baz=326,slow=4.3,SNR=5.8						

*MOS **14** 23:41:12.9±2.9, 5652N×12103E, h10km, mb4.3/2, Error ellipse: s-maj=14.0km s-min=12.4km az=68.5*

BYKL 14 23:41:12.0±0.4**, 5665N**×**12120E, h7**km±26km**, 3C-3D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNR	Khani	0.72	293	ePg	Pg	23 41 25.3	-0.6
KHNR				eSg	Sg	23 41 34.5	-0.9
CRS	Chara	1.63	280	⇑iPg	Pg	23 41 41.5	-1.8
CRS				Pmax		23 41 44.4	
	822nm,0.8s						
CRS				eSg	Sg	23 42 03.0	-1.5
CRS				Smax		23 42 09.4	
	3μm,1.4s						
CRS	Chara	1.63	280	eP	Pn	23 41 41.9	+0.8
CRS				e		23 42 03.0	
CRS				pmax	pmax		
	comp=Z,828nm,0.6s						
CRS				smax			
	comp=E,2μm,1.0s						
CLNS	Chul'man	2.04	83	⇓iPg	Pg	23 41 48.5	-2.7
CLNS				e		23 41 50.0	
CLNS				eSg	Sg	23 42 16.7	-1.0
CLNS	Chul'man	2.04	83	eP	Pn	23 41 48.9	+2.1
CLNS				e		23 42 17.0	
CLNS				pmax	pmax		
	comp=N,24nm,0.2s						
CLNS				pmax	pmax		
	comp=E,58nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,59nm,0.2s						
CLNS				smax			
	comp=N,274nm,0.2s						
CLNS				smax			
	comp=Z,226nm,0.3s						
CLNS				smax			
	comp=E,691nm,0.4s						
TUP	Tupik	2.34	198	⇓iPg	Pg	23 41 53.1	-3.7
	comp=E,148nm,1.2s						
TUP				⇓iPg	Pg	23 41 53.1	-3.7
	comp=E,70nm,1.2s						
TUP				⇑iPg	Pg	23 41 53.1	-3.7
	comp=E,171nm,1.2s						
TUP				Pmax		23 41 55.9	
	comp=E,557nm,0.6s						
TUP				eSg	Sg	23 42 23.5	-3.7
TUP				Smax		23 42 25.3	
	comp=E,3μm,1.0s						
TUP	Tupik	2.34	198	eP	Pn	23 41 51.0	+0.1
TUP				eS	Sn	23 42 19.5	-0.3
TUP				pmax	pmax		
	comp=Z,560nm,0.6s						
TUP				smax			
	comp=E,3μm,1.0s						
TNDR	Tynda	2.49	126	e	Pn	23 41 54.0	+1.1
TNDR				e		23 41 56.8	
TNDR				eSg	Sg	23 42 29.4	-2.6
ALDR	Aldan	3.00	47	e	Pn	23 42 03.4	+3.5
ALDR				e		23 42 37.6	
ALDR				eSg	Sg	23 42 44.2	-4.1
KROS	Kirovskiy	3.96	122	ePn	Pn	23 42 10.6	-2.5
KROS				⇑iPg	Pg	23 42 22.0	-5.9
KROS				eSg	Sg	23 43 11.6	-7.6
BOD	Bodaibo	4.08	290	e	Pn	23 42 20.2	+5.4
BOD				ePg	Pg	23 42 23.4	-6.8
BOD				Pmax		23 42 33.8	
	comp=E,36nm,0.7s						
BOD				eSg	Sg	23 43 16.0	-7.1
BOD				Smax		23 43 27.4	
	comp=E,445nm,0.8s						
BOD	Bodaibo	4.08	290	eP	Pn	23 42 27.8	+13
SVKR	Severomuysk	4.28	266	ePg	Pg	23 42 28.4	-5.6
SVKR				Pmax		23 42 31.8	
	comp=E,103nm,1.0s						
SVKR				eSn	Sn	23 43 06.8	-0.9
SVKR				eSg	Sg	23 43 23.6	-5.9
SVKR				Smax		23 43 33.5	
	comp=E,1μm,1.0s						
SVKR	Severomuysk	4.28	266	eP	Pn	23 42 28.7	+11
SVKR				eS	Sn	23 43 07.4	-0.3
UKT	Uakit	4.40	258	ePn	Pn	23 42 20.8	+1.6
UKT				ePg	Pg	23 42 31.1	-5.2
UKT				e		23 42 33.5	
UKT				max		23 42 34.7	
	comp=E,85nm,0.8s						
UKT				eSg	Sg	23 43 28.1	-5.2
UKT				Smax		23 43 32.7	
	comp=E,456nm,1.0s						
UKT	Uakit	4.40	258	eP	Pn	23 42 30.1	+11
UKT				pmax	pmax		
	comp=Z,64nm,0.6s						
YOA	Uoyan	5.29	268	eSg	Sg	23 43 56.7	-5.2
YOA				Smax		23 44 14.9	
	comp=Z,3μm,1.6s						
KMO	Kumora	5.63	266	ePn	Pn	23 42 37.3	+1.3
KMO				ePg	Pg	23 42 53.5	-6.3
KMO				Pmax		23 43 12.1	
	comp=Z,26nm,0.6s						
KMO				eSg	Sg	23 44 06.5	-6.1
KMO				Smax		23 44 16.0	
	comp=Z,807nm,1.0s						
KMO	Kumora	5.63	266	eP	Pn	23 42 35.6	-0.4
KMO				eS	Sn	23 43 40.1	-0.8
KMO				pmax	pmax		
	comp=Z,13nm,0.5s						
KMO				smax			
	comp=N,807nm,1.0s						
YLYR	Ulyunkhan	5.94	257	ePn	Pn	23 42 41.8	+1.5
YLYR				ePg	Pg	23 42 58.9	-6.9
YLYR				Pmax		23 43 07.4	
	comp=N,25nm,1.1s						
YLYR				eSg	Sg	23 44 15.9	-6.8
YLYR				Smax		23 44 25.1	
	comp=N,673nm,1.1s						
YLYR	Ulyunkhan	5.94	257	eP	Pn	23 42 59.2	+19
YLYR				pmax	pmax		
	comp=Z,25nm,1.0s						
NIZ	Nizh Angarsk	6.56	267	ePg	Pg	23 43 10.3	-7.4
NIZ				Pmax		23 43 15.0	
	comp=Z,18nm,0.8s						
NIZ				eSg	Sg	23 44 34.8	-7.9
NIZ				Smax		23 44 44.9	
	comp=Z,225nm,1.5s						
NIZ	Nizh Angarsk	6.56	267	eP	Pn	23 42 52.2	+3.3
NIZ				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK	Yakutsk	6.92	35	eP	Pn	23 42 55.5	+1.7
YAK				e		23 44 11.1	
YAK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.3s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.4s						
YAK				smax			
	comp=N,19nm,0.6s						
YAK				smax			
	comp=Z,8.0nm,0.3s						
YAK				smax			
	comp=E,33nm,1.2s						
YAK				smax			
	comp=E,142nm,0.5s						
YAK				smax			
	comp=N,174nm,0.6s						
YAK				smax			
	comp=Z,83nm,0.6s						
YAK				pmax	pmax		
	comp=Z,19nm,7.4s						
SYVR	Suvo	7.08	250	e	Pn	23 43 00.4	+4.4
SYVR				ePg	Pg	23 43 18.1	-10
SYVR				Pmax		23 43 32.6	
	comp=Z,13nm,1.4s						
SYVR				eSn	Sn	23 44 12.4	-4.4
SYVR				eSg	Sg	23 44 49.0	-10
SYVR				Smax		23 45 06.4	
	comp=Z,329nm,1.2s						
OGRR	Ongureny	8.35	255	e	Pn	23 43 17.4	+3.9
OGRR				ePg	Pn	23 43 43.3	+30
OGRR				Pmax		23 43 52.5	
	comp=Z,2.0nm,0.8s						
OGRR				eSg	Sn	23 45 32.0	+44
OGRR				Smax		23 45 48.3	
	comp=Z,98nm,1.4s						
KPC	Khapcheranga	8.74	221	ePn	Pn	23 43 19.1	+0.3
KPC				max		23 43 21.7	
	comp=Z,17nm,0.8s						
KPC				e		23 45 08.4	
KPC				eSg	Sn	23 45 41.3	+44
KPC				Smax		23 45 47.1	
	comp=Z,252nm,1.4s						
KPC	Khapcheranga	8.74	221	eP	Pn	23 43 18.2	-0.6
KPC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TRG	Tyrgan	9.44	252	e	Sx	23 45 46.6	
TRG				eSg	Sn	23 46 06.2	+52
TRG				Smax		23 46 18.6	
	comp=Z,43nm,1.7s						
KLR	Kul'dur	9.78	135	eP	Pn	23 43 31.8	-1.2
KLR				e		23 45 27.1	
BTMB	Babushkin	10.28	248	eSg	Sn	23 46 31.3	+56
BTMB				Smax		23 46 47.3	
	comp=Z,167nm,0.9s						
TIXI	Tiksi	15.40	9	eP	Pn	23 44 47.4	-2.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NVS	Novosibirsk	21.27	281	eP	P	23 45 55.1	-3.8
FINES	FINESS Array B	44.98	317	i P	P	23 49 29.1	+1.3
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	56.72	293	i P	P	23 50 59.0	+2.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*ISCJB **14** 23:48:48.5±1.5, 38.15N±006×20.18E±009, h10km, Error ellipse: s-maj=11.2km s-min=7.0km az=113.6*
*ATH **14** 23:48:49.8, 3822N×2032E, h8km, MD3.3/3*
*CSEM **14** 23:48:49.2±0.2, 38.14N×2024E, h2km, MD3.3, Error ellipse: s-maj=4.1km s-min=1.7km az=50.0*
*NEIC **14** 23:48:51.0, 3827N×2020E, h0km, MD3.3(ATH), After THE.*
*THE **14** 23:48:51.0, 3827N×2020E, h0km*

ISC 14 23:48:49.1±1.6**, 3814N**±006×**2022E**±009**, h10**km**, n12, σ1s09**/18**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.30	82	ePG	Pg	23 48 54.6	-0.4
VLS				eSG	Sg	23 48 58.1	-0.9
LKD	Levkas	0.66	31	ePg	Pg	23 49 00.8	-1.1
LKD				eSg	Sg	23 49 10.1	-0.5
RLS	Riolos of Patr	0.99	94	ePB	Pb	23 49 07.3	-1.0
IGT	Igoumenitsa	1.40	4	ePg	Pg	23 49 15.0	-0.9
IGT				eSg	Sg	23 49 33.3	-0.7
EVR	Evrytania	1.47	58	ePB	Pb	23 49 15.4	-1.1
SRN	Sarande	1.75	355	i Sg	Sg	23 49 51.6	+6.3
MEV	Metsovon	1.82	25	ePb	Pb	23 49 21.0	-1.6
	comp=Z,1.5nm,0.4s						
MEV				eSb	Sb	23 49 46.1	+0.7
AGG	Agios Georgios	1.88	61	ePb	Pb	23 49 24.1	+0.7
AGG				eSb	Sb	23 49 48.0	+1.0
XOR	Xorichti	2.63	61	ePn	Pn	23 49 33.7	+2.1
LIT	Litokhoron	2.64	41	ePn	Pn	23 49 31.8	+0.1
LIT				eSn	Sn	23 50 05.3	+1.5
FNA	Florina	2.79	18	ePn	Pn	23 49 35.8	+2.0
GRG	Griva	3.28	30	ePn	Pn	23 49 41.3	+0.7

*ISCJB **14** 23:53:42.3±0.8, 4587N±003×273E±006, h6km, Error ellipse: s-maj=6.5km s-min=3.6km az=140.5*
*LDG **14** 23:53:42.7±0.3, 4583N×268E, h6km, Md2.0/3, Ml1.8/4, Error ellipse: s-maj=4.2km s-min=2.3km az=168.0*
*STR **14** 23:53:44.4±1.1, 4582N×285E, h5km±1km, Ml1.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 14 23:53:42.4±0.9**, 4584N**±003×**271E**±007**, h16**km±8km**, n11, σ0s55**/18**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYM	Petit Puy Mans	0.22	113	Pg	Pg	23 53 47.1	-0.4
PYM				Sg	Sg	23 53 50.2	-0.8
AGO	Saint Agoulin	0.36	54	Pg	Pg	23 53 50.0	+0.1
TCF	Toulx Ste Croi	0.57	322	ePg	Pg	23 53 53.6	-0.1
TCF				eSg	Sg	23 54 01.1	-0.2
	1.3nm,0.2s						
PLDF	La Plantade	0.65	78	Pg	Pg	23 53 55.6	+0.5
LBL	Lubilhac	0.71	148	Pg	Pg	23 53 57.8	+1.5
LBL				Sg	Sg	23 54 05.3	-0.5
BGF	Bois d'Agland	0.73	7	ePg	Pg	23 53 56.8	+0.2
BGF				eSg	Sg	23 54 07.0	+0.8
	4.8nm,0.3s						
AVF	Avril sur Loir	1.05	25	ePg	Pg	23 54 02.7	0.0
AVF				eSg	Sg	23 54 16.5	0.0
	1.0nm,0.2s						
SMF	Signal de Mont	1.12	44	eSg	Sg	23 54 19.6	+0.8
	3.0nm,0.3s						
SSF	Saint Saulge	1.34	24	ePg	Pg	23 54 08.1	-0.1
SSF				eSg	Sg	23 54 25.4	-0.3
	2.5nm,0.3s						
HYF	Humbligny	1.43	358	eSn	Sn	23 54 25.7	-0.5
LOR	Lormes	1.63	29	ePg	Pg	23 54 13.4	-0.4
LOR				eSg	Sg	23 54 34.5	-0.6
	1.1nm,0.2s						

*ISCJB **15** 00:15:48.6±0.5, 40.10N±002×1974E±003, h2km±3km, Error ellipse: s-maj=3.6km s-min=2.9km az=178.3*
*NEIC **15** 00:15:48.7, 40.11N×1963E, h19km, MD3.6(ATH), ML3.2(THE), After ATH.*
*CSEM **15** 00:15:48.9±0.1, 40.13N×1968E, h0km, MD3.6, Error ellipse: s-maj=1.9km s-min=1.7km az=168.0*
*TIR **15** 00:15:48.8, 40.13N×1981E, h11km, Ml3.2*
*ATH **15** 00:15:48.7, 40.11N×1963E, h19km±1km, MD3.6/7*
*SKO **15** 00:15:48.9, 4000N×1969E, h12km*
*THE **15** 00:15:50.9, 40.11N×1986E, h1km, ML3.2*

ISC 15 00:15:49.2±0.5**, 4012N**±002×**1973E**±003**, h2**km±3km**, n62, σ0s90**/104**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.28	51	i Pg	Pg	00 15 53.8	-0.8
TPE				i Sg	Sg	00 15 57.4	-0.9
SRN	Sarande	0.32	138	i Pg	Pg	00 15 55.0	-0.4
SRN				i Sg	Sg	00 16 01.1	+1.6
VLO	Vlora	0.39	333	i Pg	Pg	00 15 57.3	+0.6
VLO				i Sg	Sg	00 16 06.8	+5.0
KEK	Kerkira	0.41	172	ePB	Pg	00 15 57.1	0.0
KEK				eSB	Sg	00 16 03.4	+1.0
LSK	Leskovik	0.67	87	i Pg	Pg	00 16 01.3	-0.8
LSK				i Sg	Sg	00 16 12.7	+1.9
IGT	Igoumenitsa	0.75	141	ePg	Pg	00 16 02.9	-0.8
IGT				eSg	Sg	00 16 13.3	0.0
IGT	Igoumenitsa	0.75	141	P	Pg	00 16 02.8	-0.8
IGT				S	Sg	00 16 13.3	0.0
JAN	Janina	0.98	118	ePN	Pn	00 16 08.5	-1.5
JAN				eSN	Sn	00 16 22.4	-2.1
MEV	Metsovon	1.20	106	ePg	Pg	00 16 11.9	-0.4
MEV				eSg	Sg	00 16 27.1	-0.8
MEV	Metsovon	1.20	106	ePg	Pg	00 16 11.9	-0.4
MEV				eSg	Sg	00 16 27.1	-0.8
TIR	Tirane	1.23	5	ePg	Pg	00 16 13.4	+0.5
TIR				eSg	Sg	00 16 31.9	+3.1
TIR	Tirane	1.23	5	P	Pg	00 16 13.6	+0.7
TIR				S	Sg	00 16 31.6	+2.8
LCI	Lecce	1.25	280	Pn	Pn	00 16 12.9	-0.9
LCI				Sn	Sn	00 16 30.5	-0.7
OHR	Ohrid	1.28	39	ePg	Pg	00 16 13.9	0.0
OHR				eSg	Sg	00 16 31.9	+1.4
OHR	Ohrid	1.28	39	ePn	Pn	00 16 13.9	-0.2
OHR				eSn	Sn	00 16 33.2	+1.2
OHR	Ohrid	1.28	39	P	Pg	00 16 13.9	0.0
OHR				S	Sg	00 16 30.2	-0.4
OHR	Ohrid	1.28	39	ePg	Pg	00 16 13.9	0.0
OHR				eSg	Sg	00 16 31.9	+1.4
OHR				eSn	Sn	00 16 33.2	+1.2
FNA	Florina	1.42	62	ePg	Pg	00 16 15.3	-1.3
BIA	Bitola	1.51	53	ePg	Pg	00 16 16.5	-1.8
BIA				eSg	Sg	00 16 37.4	-0.5
BIA	Bitola	1.51	53	i Pn	Pn	00 16 16.5	-0.9
BIA				eSg	Sg	00 16 38.7	+0.8
BIA	Bitola	1.51	53	i Pn	Pn	00 16 16.4	-0.9
BIA				eSg	Sg	00 16 37.3	-0.6
KZN	Kozani	1.58	83	ePN	Pn	00 16 18.2	0.0
KZN				eSN	Sn	00 16 41.4	+2.2
LKD	Levkas	1.58	153	ePg	Pg	00 16 18.5	-1.1
LKD				eSg	Sg	00 16 39.7	-0.4
LKD	Levkas	1.58	153	P	Pn	00 16 18.5	+0.2
LKD				S	Sg	00 16 39.7	-0.4
EVR	Evrytania	2.01	126	ePN	Pn	00 16 25.4	+1.2
EVR				eSN	Sn	00 16 50.8	+0.9
VLS	Valsamata	2.05	161	ePN	Pn	00 16 25.2	+0.5
VLS				eSN	Sn	00 16 51.0	+0.1
LIT	Litokhoron	2.12	90	ePn	Pn	00 16 26.1	+0.4
LIT				eSn	Sn	00 16 52.0	-0.6
LIT	Litokhoron	2.12	90	P	Pn	00 16 26.1	+0.4
LIT				S	Sn	00 16 52.9	+0.3
GRG	Griva	2.21	67	P	Pn	00 16 27.4	+0.6
GRG	Griva	2.21	67	P	Pn	00 16 27.4	+0.6
SKO	Skopje	2.26	34	ePn	Pn	00 16 27.9	+0.3
SKO	Skopje	2.26	34	P	Pn	00 16 27.7	+0.1
AGG	Agios Georgios	2.29	118	ePn	Pn	00 16 28.6	+0.6
AGG				eSn	Sn	00 16 56.3	-0.5
AGG	Agios Georgios	2.29	118	P	Pn	00 16 28.7	+0.7
AGG				S	Sn	00 16 55.8	-1.0
SG1	Sgolgore (BA)	2.43	288	ePn	Pn	00 16 29.2	-0.8
STIP	Stip	2.44	49	ePn	Pn	00 16 30.0	-0.1
STIP				eSn	Sn	00 17 00.5	0.0
STIP	Stip	2.44	49	i Pn	Pn	00 16 30.1	+0.1
RLS	Riolos of Patr	2.46	146	ePN	Pn	00 16 30.8	+0.4
VAY	Valandovo	2.47	60	ePn	Pn	00 16 30.1	-0.4
VAY				eSn	Sn	00 17 00.8	-0.5
VAY	Valandovo	2.47	60	P	Pn	00 16 30.1	-0.4
VAY				S	Sn	00 17 00.2	-1.1
VAY	Valandovo	2.47	60	ePn	Pn	00 16 30.1	-0.4
VAY				S	Sn	00 17 00.2	-1.1
VAY				eSn	Sn	00 17 00.8	-0.5
THE	Thessaloniki	2.53	77	P	Pn	00 16 32.0	+0.7
THE	Thessaloniki	2.53	77	P	Pn	00 16 32.0	+0.7
HORT	Hortiatis	2.62	78	ePn	Pn	00 16 32.0	-0.6
HORT				eSn	Sn	00 17 04.9	-0.1
XOR	Xorichti	2.78	105	ePn	Pn	00 16 34.9	+0.2
SOH	Sokhos	2.86	75	ePn	Pn	00 16 36.1	+0.3
SOH				eSn	Sn	00 17 10.7	0.0
PLG	Polygyros	2.86	84	ePN	Pn	00 16 36.2	+0.4
PAIG	Paliouri	3.04	92	ePn	Pn	00 16 37.9	-0.5
PAIG				eSn	Sn	00 17 14.7	-0.6
PAIG	Paliouri	3.04	92	P	Pn	00 16 37.9	-0.5
PAIG				S	Sn	00 17 14.1	-1.2
SLCN	Sala Consilina	3.14	276	Pn	Pn	00 16 39.6	-0.1
OUR	Ouranopolis	3.27	85	ePn	Pn	00 16 42.0	+0.6
OUR	Ouranopolis	3.27	85	P	Pn	00 16 42.0	+0.6
OUR				S	Sn	00 17 18.8	-2.1
OUR	Ouranopolis	3.27	85	ePn	Pn	00 16 42.0	+0.6
OUR				S	Sn	00 17 18.8	-2.1
AOS	Alonnisos	3.34	105	ePn	Pn	00 16 42.8	+0.3
MMB	Musomiste	3.37	63	ePn	Pn	00 16 43.5	+0.6
MMB				eSn	Sn	00 17 23.3	-0.2
SOI	Samo	3.51	236	Pn	Pn	00 16 44.3	-0.5
VTS	Vitosha	3.60	46	ePn	Pn	00 16 46.9	+0.8
VTS	Vitosha	3.60	46	ePn	Pn	00 16 46.8	+0.7
ALN	Alexandroupoli	4.88	79	ePn	Pn	00 17 03.5	-0.1
CHOS	Chios island	5.21	107	ePn	Pn	00 17 08.9	+0.8
APE	Apeiranthos	5.47	122	ePn	Pn	00 17 12.6	+0.9
KARN	Karanos	5.76	143	ePn	Pn	00 17 18.1	+2.3

*IDC **15** 00:30:25.8±5.6, 2784N×8547E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.6/22, mbtmp3.9/6, ML3.9/1, Error ellipse: s-maj=107.9km s-min=43.7km az=167.0*

ISCJB ***15*** *00:30:41.3±1.5, 296N±02×851E±03, h33km, mb3.8/5, Error ellipse: s-maj=40.6km s-min=15.9km az=53.5*
ISC 15 00:30:43.4±1.5**, 296N**±02×**852E**±03**, h35**km**, n8,** σ1^{s}10/9, **mb3.8**/5**, 1D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JBP	Jabalpur	7.90	217	⇓iP	Pn	00 32 36.1	+0.3
JBP				iS	Sn	00 34 11.7	+7.8
MKAR	Makanchi Array	17.32	353	P	Pn	00 34 50.4	+8.0
	0.4nm,0.3s,baz=171,slow=11,SNR=18						
ZAL	Zalesovo	24.33	359	P	P	00 36 00.2	+2.5
	1.2nm,0.3s,mb3.8,baz=302,slow=4.9,SNR=3.7						
SONM	Songino Array	24.49	36	P	P	00 35 58.6	-0.6
	1.0nm,0.6s,mb3.4,baz=220,slow=9.9,SNR=10						
JOF	Joensuu	47.78	330	ep	P	00 39 16.9	-0.2
FINES	FINESS Array B	49.76	327	P	P	00 39 32.6	+0.3
	1.3nm,0.6s,mb4.2,baz=100,slow=7.8,SNR=12						
ARCES	ARCESS Array B	52.07	337	P	P	00 39 49.8	+0.1
	0.9nm,0.6s,mb3.9,baz=108,slow=8.3,SNR=9.2						
NOA	NORSAR Array B	56.88	326	P	P	00 40 22.8	-1.9
	0.2nm,0.4s,mb3.5,baz=77,slow=8.1,SNR=2.8						

IDC ***15*** *00:58:41.7±2.4, 004N×12305E, h160km±21km, mb3.4/7, mb1 3.6/8, mb1mx3.5/17, mbtmp3.9/8, Error ellipse: s-maj=52.0km s-min=13.6km az=74.0*
ISCJB ***15*** *00:58:43.4±2.5, 00S±01×1228E±02, h195km±28km, mb3.7/9, Error ellipse: s-maj=40.5km s-min=12.2km az=139.4*
NEIC ***15*** *00:58:43.4±2.1, 002S×12290E, h178km±25km, mb4.1/2, Error ellipse: s-maj=30.7km s-min=8.8km az=72.0*
ISC 15 00:58:44.1±2.7**, 00S**±01×**1229E**±03**, h185**km±31km**, n14,** σ0^{s}70/14**, mb3.7**/9**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	8.97	312	ePn	Pn	01 00 50.1	+0.1
FITZ	Fitzroy Crossi	18.16	171	P	P	01 02 42.9	+0.3
	0.5nm,0.3s,baz=0.5,slow=6.2,SNR=14						
MBWA	Marble Bar	21.22	188	eP	P	01 03 14.0	-1.3
	3.2nm,0.6s,mb3.8						
WRAB	Tennant Creek	22.76	151	eP	P	01 03 30.6	+0.3
	9.0nm,0.9s,mb4.2						
WRA	Warramunga Arr	22.76	151	P	P	01 03 29.9	-0.5
	3.7nm,0.8s,mb3.9,baz=335,slow=10,SNR=12						
WRA				ScP	ScP	01 10 39.4	+3.4
	0.7nm,0.6s,baz=332,slow=2.6,SNR=3.7						
WB2	Warramunga Arr	22.76	151	eP	P	01 03 31.3	+0.9
ASAR	Alice Springs	25.82	156	P	P	01 03 59.2	+1.0
	0.9nm,0.6s,mb3.6,baz=346,slow=14,SNR=8.0						
ASAR				PcP	PcP	01 07 23.4	+0.9
	0.5nm,0.3s,baz=345,slow=1.9,SNR=6.2						
ASAR				ScP	ScP	01 10 48.4	+3.9
	1.0nm,0.5s,baz=341,slow=2.8,SNR=14						
STKA	Stephens Creek	36.29	153	P	P	01 05 29.5	-0.2
	4.0nm,0.8s,mb4.1,baz=338,slow=9.4,SNR=6.1						
STKA	Stephens Creek	36.29	153	P	P	01 05 29.5	-0.2
MJAR	Matsushiro Arr	39.08	20	P	P	01 05 52.0	-1.1
	1.2nm,0.9s,mb3.5,baz=172,slow=11,SNR=4.6						
SONM	Songino Array	49.78	346	P	P	01 07 18.1	+0.2
	0.3nm,0.5s,mb3.2,baz=165,slow=8.9,SNR=3.3						
MKAR	Makanchi Array	58.57	328	P	P	01 08 22.0	+0.7
	0.6nm,0.4s,mb3.8,baz=124,slow=10,SNR=5.0						
MKAR	Makanchi Array	58.57	328	P	P	01 08 22.0	+0.7
VNDA	Vanda	80.23	172	P	P	01 10 33.6	-0.4
	0.6nm,0.6s,mb3.4,baz=320,slow=7.4,SNR=8.3						

CSEM ***15*** *01:03:51.9±0.1, 3925N×4277E, h40km, MD3.5, Error ellipse: s-maj=3.2km s-min=2.1km az=42.0*
ISK ***15*** *01:03:52.5, 3925N×4275E, h49km, MD3.5*
ISCJB ***15*** *01:03:53.1±0.9, 3925N±005×4276E±008, h48km±37km, Error ellipse: s-maj=10.3km s-min=8.7km az=143.5*
ISC 15 01:03:51.1±0.7**, 3929N**±005×**4271E**±005**, h5**km±9km**, n14,** σ0^{s}61/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.87	142	PG	Pg	01 04 08.7	+0.9
TVAN	Van	0.94	144	iP	Pg	01 04 08.9	-0.1
TVAN				iS	Sg	01 04 20.9	-0.2
CLDR	Caldiran	0.95	98	PG	Pg	01 04 09.1	-0.2
CLDR				SG	Sg	01 04 22.4	+0.7
VANT	Van	1.00	147	ePG	Pg	01 04 09.3	-0.9
ERZM	Erzurum	1.21	301	iP	Pg	01 04 13.8	-0.4
ERZM				iS	Sg	01 04 35.2	+5.4
EZM	Erzurum	1.21	301	ePN	Pn	01 04 14.4	-0.2
DIGO	Kars	1.24	24	iP	Pg	01 04 15.1	+0.3
KARS	Kars	1.36	13	ePN	Pn	01 04 16.5	-0.1
BTMT	Batman	1.45	221	ePN	Pn	01 04 19.4	+1.5
GNI	Garni	1.79	61	ePN	Pn	01 04 22.1	-0.5
CUKT	Cukurca	2.16	161	ePN	Pn	01 04 26.7	-1.0
EZC	Erzincan	2.28	283	ePN	Pg	01 04 34.6	-0.2
BCA	Borcka	2.31	339	ePN	Pn	01 04 29.9	+0.2
PTK	Pertek	2.61	262	ePN	Pn	01 04 34.2	+0.3

CSEM ***15*** *01:11:38.0±0.8, 3870N×2904W, h10km±3km, ML2.3, Error ellipse: s-maj=6.2km s-min=4.3km az=34.0, After PDA*
PDA ***15*** *01:11:38.0±0.8, 3870N×2904W, h10km±3km, MD3.1, ML2.3, Error ellipse: s-maj=6.2km s-min=4.3km az=34.0*
SVSA 15 01:11:38.0±0.8**, 3870N×2904W, h10**km±3km**, MD3.1, ML2.3, Error ellipse: s-maj=6.2km s-min=4.3km az=34.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	Cedros	0.28	104	iP	Pg	01 11 43.0	-0.5
PCED				eS	Sg	01 11 46.7	-0.6
PCED							
	598nm,0.1s						
PCED	Cedros	0.28	104	eS	Sg	01 11 46.7	-0.6
CALA	Caldeira	0.29	113	eP	Pg	01 11 43.2	-0.6
CALA				eS	Sg	01 11 47.4	-0.3
HOR	Horta	0.37	117	eP	Pg	01 11 44.3	-0.9
HOR				eS	Sg	01 11 49.0	-1.1
PCND	Candelaria	0.51	116	eP	Pg	01 11 46.6	-1.3
PCND				eS	Sg	01 11 53.2	-1.4
PCND							
	68nm,0.2s						
PICO	Pico	0.52	112	eP	Pg	01 11 47.2	-1.0
PICO				eS	Sg	01 11 53.6	-1.4
PTEI	Pico do Teixo	0.57	110	eP	Pg	01 11 47.5	-1.6
PTEI				eS	Sg	01 11 54.9	-1.8
PTEI							
	124nm,0.5s						
PBOI	Pico dos Bois	0.58	116	eP	Pg	01 11 47.4	-1.9
PBOI				eS	Sg	01 11 54.8	-2.2
PBOI							
	60nm,0.3s						
ROSA	Rosais	0.63	88	eP	Pg	01 11 48.4	-1.8
ROSA				eS	Sg	01 11 55.6	-2.8
PAMA	Santo Amaro	0.68	91	eS	Sg	01 11 57.4	-2.5
PAMA							
	36nm,0.1s						
PMAN	Manadas	0.75	95	eS	Sg	01 11 58.7	-3.6
PMAN							
	55nm,0.3s						
PID	Ribeirinha	0.77	109	eP	Pg	01 11 50.2	-2.6
PID				eS	Sg	01 11 59.3	-3.5

LDG ***15*** *01:30:21.3±0.2, 1899N×6498W, h10km, Mb4.8/19, Ms3.5/8, Error ellipse: s-maj=12.6km s-min=7.1km az=91.0*
ISCJB ***15*** *01:30:27.6±0.1, 1908N±001×6465W±001, h33km, mb4.7/114, MS3.8/22, Error ellipse: s-maj=2.2km s-min=1.9km az=57.5*
TRN ***15*** *01:30:27.4, 1889N×6476W, h19km, MD4.8*
TRN Felt (IV) in Virgin Islands and PR.
MOS ***15*** *01:30:27.2±1.1, 1910N×6463W, h33km, mb4.9/50, Error ellipse: s-maj=6.0km s-min=5.3km az=67.9*
BJI ***15*** *01:30:29.9, 1900N×6470W, h6km, mB5.4, Ms5.0, Msz4.8*
NEIC ***15*** *01:30:30.0, 1901N×6473W, h7km, mb4.8/91, MD4.5(RSPR), MD5.0(TRN), After RSPR.*
NEIC Felt [III] on Saint John and Saint Thomas, U.S. Virgin Islands. Felt on Tortola, British Virgin Islands. Felt at Caguas, Carolina, Ceiba, Corozal, Fajardo, Guaynabo, Humacao, Rio Grande and San Juan, Puerto Rico.
IDC ***15*** *01:30:29.4±1.4, 1902N×6472W, h47km±14km, mb4.2/21, mb1 4.4/24, mb1mx4.4/26, mbtmp4.5/24, ML4.1/3, MS3.9/20, Ms1 3.9/20, ms1mx3.7/27, Error ellipse: s-maj=12.3km s-min=9.3km az=151.0*
RSPR ***15*** *01:30:30.0, 1901N×6473W, h7km±5km, MD4.5/16, MD4.5/16*
SZGRF ***15*** *01:30:30.1, 1923N×6463W, h29km, mb4.8, Virgin Islands*
ISC 15 01:30:28.1±0.7**, 1907N**±002×**6469W**±001**, h21**km±5km**, h30**km±1.6km**: pP-P, n435,** σ1^{s}03/473**, mb4.7**/113**, MS3.8**/22**, 66C-59D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.48	134	⇑eP	Pb	01 30 36.5	-1.3
TBVI	Tortola	0.65	174	⇓eP	Pb	01 30 38.9	-1.8
CULB	Culebra	0.97	216	⇓eP	Pb	01 30 45.4	-0.9
CULB				eS	Sb	01 30 57.5	-1.2
MTP	Monte Pirata	1.26	220	⇑eP	Pn	01 30 48.8	-1.6
MTP				eS	Sn	01 31 05.6	-1.1
CDVI	St. Croix	1.31	183	⇑eP	Pn	01 30 50.6	-0.4
CDVI				eS	Sn	01 31 07.1	-0.8
CBYP	Canovanas	1.36	235	⇑eP	Pn	01 30 50.9	-0.9
CBYP				eS	Sn	01 31 08.1	-1.0
HUMP	Col San Antoni	1.43	230	⇑eP	Pn	01 30 51.5	-1.2
HUMP				eS	Sn	01 31 09.9	-1.0
CPD	Cerro la Pandu	1.55	229	⇓eP	Pn	01 30 54.3	0.0
CPD				eS	Sn	01 31 13.2	-0.6
SJG	San Juan	1.68	236	⇓eP	Pn	01 30 55.9	-0.3
SJG	San Juan	1.68	236	eS	Sn	01 31 16.3	-0.7
SJG	San Juan	1.68	236	P	Pn	01 30 55.6	-0.5
	452nm,0.3s,baz=66,slow=11,SNR=260						
SJG				S	Sn	01 31 15.6	-1.4
	2µm,0.3s,baz=61,slow=19,SNR=39						
SJG				LR	LR	01 31 26.5	
	comp=Z,992nm,18.3s,baz=90,slow=35						
SJG	San Juan	1.68	236	⇓eP	Pn	01 30 55.9	-0.3
SJG				eS	Sn	01 31 16.3	-0.7
STMA	St. Maarten, A	1.81	124	eP	Pn	01 30 58.4	+0.3
SABS	Saba	1.99	136	eP	Pn	01 31 00.2	-0.3
SABS				eS	Sn	01 31 27.6	+2.9
SABT	Saba	1.99	136	eP	Pn	01 31 00.2	-0.3
SABT				eS	Sn	01 31 27.6	+2.9
CELP	Cerrillos	2.04	241	⇓iP	Pn	01 31 01.5	+0.3
AOPR	Arecibo Observ	2.08	250	⇑eP	Pn	01 31 01.4	-0.3
AOPR				eS	Sn	01 31 26.6	-0.3
OBIP	Obispado Ponce	2.08	241	⇑eP	Pn	01 31 01.7	0.0
OBIP				eS	Sn	01 31 26.2	-0.8
ICM	Isla Caja Muer	2.09	236	⇓eP	Pn	01 31 02.3	+0.5
ICM				eS	Sn	01 31 26.9	-0.3
LRS	Lares	2.18	250	⇓eP	Pn	01 31 02.8	-0.3
STAT	Sint Eustatius	2.26	134	eP	Pn	01 31 05.7	+1.6
STAT				eS	Sn	01 31 34.6	+3.3
AGPR	Aguadilla, PR	2.37	256	⇓iP	Pn	01 31 05.8	+0.2
AGPR				eS	Sn	01 31 33.1	-0.9
LSP	Las Mesas	2.44	249	⇑eP	Pn	01 31 06.7	+0.1
MPR	Mayaguez	2.47	250	⇑eP	Pn	01 31 08.0	+0.9
MPR				eS	Sn	01 31 36.2	-0.4
MGP	Maguayo	2.50	246	⇑eP	Pn	01 31 07.2	-0.4
CRPR	Cabo Rojo, PR	2.52	246	⇑eP	Pn	01 31 07.5	-0.3
CRPR				eS	Sn	01 31 36.6	-1.2
CPB	Codrington	3.07	117	eP	Pn	01 31 17.3	+2.0
CPB				eS	Sn	01 31 52.8	+1.4
BPA	Boggy Peak	3.36	126	eP	Pn	01 31 19.1	-0.3
BPA				eS	Sn	01 31 57.9	-0.8
BPA	Boggy Peak	3.36	126	eP	Pn	01 31 19.0	-0.4
BPA				eS	Sn	01 31 57.9	-0.8
LZG	Guadaloupe-1	4.03	136	eP	Pn	01 31 29.1	+0.7
LZG				eS	Sn	01 32 13.3	-1.6
SEG	Port Louis	4.03	131	eP	Pn	01 31 27.7	-0.8
SCG	Saint Claude	4.17	136	eP	Pn	01 31 31.0	+0.6
PHG	Guadaloupe-2	4.21	136	⇑eP	Pn	01 31 31.9	+1.0
DOG	Dongo Capester	4.21	135	eP	Pn	01 31 31.3	+0.3
TBG	Guadaloupe-3	4.32	137	eP	Pn	01 31 32.8	+0.3
MGG	Marie-Galante	4.49	134	eP	Pn	01 31 37.3	+2.4
DWS	Wesley	4.75	137	eP	Pn	01 31 39.6	+1.2
DWS				eS	Sn	01 32 33.6	+0.9
MDN	Morne-Daniel	4.88	139	eP	Pn	01 31 41.2	+1.0
DBCT	Belle View Cho	4.95	139	eP	Pn	01 31 41.5	+0.3
DSHT	Scott's Head	4.97	140	eP	Pn	01 31 42.4	+0.9
DSHT				eS	Sn	01 32 39.2	+0.9
FDF	Fort de France	5.48	141	eP	Pn	01 31 49.1	+0.6
CRM	Caravelle	5.61	139	eP	Pn	01 31 51.1	+0.9
BIM	Bigot	5.70	142	eP	Pn	01 31 51.8	+0.4
GRW	Mount Saint Ca	7.46	157	eP	Pn	01 32 16.9	+1.2
TPR	Prospect	8.70	154	eP	Pn	01 32 33.5	+0.8
BOT	Bacolet	8.74	153	eP	Pn	01 32 35.9	+2.7
PCRV	Puerto La Cruz	8.84	180	P	Pn	01 32 34.0	-0.5
	15nm,0.3s,baz=312,slow=2.8,SNR=34						
PCRV				S	Sn	01 34 06.3	-7.1
	7.4nm,0.3s,baz=349,slow=5.2,SNR=3.4						
PCRV				LR	LR	01 35 53.7	
	comp=Z,947nm,19.3s,baz=169,slow=37						
TRN	Trinidad (W)	8.95	159	⇑eP	Pn	01 32 38.0	+1.9
MASC	Masc	9.06	279	ePG	Pn	01 32 35.7	-1.8
	baz=96						
MASC				eSG	Sn	01 34 11.0	-7.8
	comp=N,1.9nm,0.5s						
MASC				e			
	comp=E,2.7nm,0.6s						
TBH	Brigand Hill	9.22	157	eP	Pn	01 32 41.2	+1.4
TPP	Pointe-a-Pierr	9.24	160	eP	Pn	01 32 42.8	+2.7
MOAC	Moa	9.79	281	eP	Pn	01 32 45.4	-2.2
MOAC				eS	Sn	01 34 26.8	-10
	comp=N,49nm,0.6s						
MOAC				e			
	comp=E,28nm,0.6s						
RCC	Rio Carpintero	10.42	277	eP	Pn	01 32 54.9	-1.3
RCC				eS	Sn	01 34 39.9	-12
	comp=N,446nm,23.0s						
RCC				e			
	comp=E,580nm,20.9s						
HLGC	Holguin	10.84	282	eP	Pn	01 33 00.8	-1.2
HLGC				eS	Sn	01 34 53.4	-9.2
	comp=N,362nm,2.5s						
HLGC				e			
	comp=E,352nm,0.8s						
SDV	Santo Domingo	11.64	210	P	Pn	01 33 13.0	0.0
	comp=E,0.6nm,0.3s,baz=28,slow=9.4,SNR=8.5						
SDV				S	Sn	01 35 21.0	-1.3
	comp=E,7.5nm,0.3s,baz=25,slow=17,SNR=5.4						
SDV				LR	LR	01 37 49.0	
	comp=E,683nm,21.6s,baz=5.3,slow=38						
SDV	Santo Domingo	11.64	210	ePn	Pn	01 33 14.8	+1.9
SDV				eSn	Sn	01 35 11.4	-11
BBSR	BB Station	13.25	360	ePn	Pn	01 33 32.2	-2.7
BBSR				eSn	Sn	01 35 41.2	-20
MGV	Manicaragua	14.63	285	eP	Pn	01 34 02.7	+9.0
ROSC	El Rosal	16.97	215	P	Pn	01 34 24.8	+0.7
	comp=E,5.3nm,0.3s,baz=87,slow=7.1,SNR=58						
ROSC				S	Sn	01 37 36.8	+4.8
	comp=E,0.8nm,0.3s,baz=107,slow=19,SNR=3.3						
DWPF	Disney	17.77	304	ePn	Pn	01 34 35.5	+1.4
	comp=E,111nm,1.1s						
DWPF				eSn	Sn	01 37 39.4	-12
CNNC	Cliffs of the	19.90	327	eP	Pn	01 35 06.8	+7.0
CNNC				eS	Sn	01 38 26.5	-16
JTS	JuntasAbangare	21.43	249	P	P	01 35 12.9	-1.8
	comp=E,13nm,0.8s,mb4.3,baz=82,slow=9.9,SNR=7.8						
JTS				S	S	01 39 09.0	-2.4
	comp=E,2.7nm,0.3s,baz=329,slow=21,SNR=11						
JTS				LR	LR	01 43 26.4	
	comp=E,122nm,19.8s,MS3.3,baz=182,slow=36						
JTS	JuntasAbangare	21.43	249	P	P	01 35 12.9	-1.8
JTS				S	S	01 39 09.0	-2.5
CBN	Corbin	22.04	333	eP	P	01 35 22.9	+1.8
CBN				eS	S	01 39 17.0	-6.2
BLA	Blacksburg	22.73	326	eP	P	01 35 28.4	-0.1
BLA				e		01 39 23.7	
BLA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
BLA	Blacksburg	22.73	326	eP	P	01 35 28.4	-0.1
	comp=Z,4.1nm,0.6s,mb4.0						
BLA				ePcP	PcP	01 39 23.6	+3.5
SDMD	Soldier's Deli	22.83	335	eP	P	01 35 28.8	-0.8
SDMD				ePcP	PcP	01 39 14.5	-5.8
SDMD				eS	S	01 39 35.3	-2.7
ELN	Prospectdale	22.91	325	eP	P	01 35 32.0	+1.5
ELN				e		01 35 49.5	
ELN				eS	S	01 39 19.9	-19
BRNJ	Basking Ridge	23.15	341	eP	P	01 35 37.7	+4.7
BRNJ				e		01 35 53.9	
BRNJ				eS	S	01 39 38.3	-4.8
MVL	Millersville	23.15	337	eP	P	01 35 33.2	+0.2
MVL				eS	S	01 39 43.9	+0.7
FWV	Forest Hill	23.21	326	eP	P	01 35 30.8	-2.8
FWV				e		01 35 52.9	
FWV				ePcP	PcP	01 39 33.5	+12
FWV				eS	S	01 39 44.3	+0.2
PAL	Palisades	23.25	342	P	P	01 35 34.4	+0.4
PAL				pmax	pmax		
	comp=Z,37nm,0.5s,mb5.1						
PAL	Palisades	23.25	342	P	P	01 35 34.4	+0.4
	comp=Z,37nm,0.5s,mb5.1						
PAL				e		01 35 54.5	
MYNC	Murphy	23.46	317	eP	P	01 35 36.5	+0.2
MYNC				e		01 39 17.5	
MYNC				eS	S	01 39 50.1	+1.9
MYNC				pmax	pmax		
	comp=Z,25nm,0.6s,mb4.8						
MYNC	Murphy	23.46	317	eP	P	01 35 36.5	+0.2
	comp=Z,25nm,0.6s,mb4.8						
MYNC				ePcP	PcP	01 39 17.5	-4.2
MYNC				eS	S	01 39 50.1	+1.9
WES	Weston	23.92	348	eP	P	01 35 37.0	-3.4
WES				eS	S	01 39 53.7	-1.9
WES				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
WES	Weston	23.92	348	eP	P	01 35 37.0	-3.4
	comp=Z,20nm,1.0s,mb4.5						
WES				e		01 36 02.5	
WES				eS	S	01 39 53.6	-2.0
CPCT	Cooper Cave	23.95	317	eP	P	01 35 41.0	+0.3
CPCT				e		01 36 05.1	
CPCT				eS	S	01 40 01.4	+5.3
TZTN	Tazewell	24.03	320	eP	P	01 35 41.3	-0.2
TZTN				e		01 36 04.0	
TZTN				eS	S	01 40 03.5	+6.0
QUA2	Belchertown	24.04	346	eS	S	01 40 05.8	+8.3
HRV	Harvard--Oak R	24.08	347	eP	P	01 35 42.2	+0.3
HRV				eS	S	01 40 01.9	+3.6
HRV				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.7						
HRV	Harvard--Oak R	24.08	347	eP	P	01 35 42.2	+0.3
	comp=Z,21nm,0.6s,mb4.8						
HRV				e		01 36 04.0	
HRV				eS	S	01 40 01.9	+3.6
SSPA	Standing Stone	24.30	335	eP	P	01 35 44.0	+0.1
	comp=Z,17nm,1.3s,mb4.3						
SSPA				e		01 36 04.8	
SSPA				eS	S	01 39 51.6	-10
LRAL	Lakeview Retre	24.32	309	eP	P	01 35 44.6	+0.5
MCWV	Mont Chateau	24.33	331	eP	P	01 35 44.0	-0.2
	comp=Z,25nm,0.7s,mb4.8						
MCWV				e		01 36 08.6	
MCWV				eS	S	01 40 05.3	+3.0
SWET	Sewanee	24.74	315	eP	P	01 35 48.3	+0.4
SWET				e		01 36 17.1	
SWET				eS	S	01 40 16.9	+8.1
BINY	Binghamton	24.98	340	eP	P	01 35 49.3	-0.8
	comp=Z,17nm,0.6s,mb4.8						
BINY				e		01 36 16.5	
BINY				eS	S	01 40 19.6	+6.9
FFD	Franklin Falls	25.03	348	eP	P	01 35 51.9	+1.3
	comp=Z,72nm,0.3s,mb5.7						
FFD				e		01 36 17.8	
FFD				eS	S	01 40 17.0	+3.5
HNH	Hanover	25.38	347	P	P	01 35 55.7	+1.9
	comp=Z,1.8nm,0.7s,mb3.7						
HNH				e		01 36 22.1	
HNH				eS	S	01 40 24.4	+5.3
ACCN	Adirondack Com	25.40	345	eP	P	01 35 54.4	+0.5
ACCN				e		01 36 23.2	
ACCN				eS	S	01 40 23.9	+4.5
LBNH	Lisbon	25.82	348	eP	P	01 35 54.6	-3.2
LBNH				e		01 36 30.4	
LBNH				pmax	pmax		
	comp=Z,40nm,1.9s,mb4.6						
LBNH	Lisbon	25.82	348	eP	P	01 35 54.6	-3.1
	comp=Z,40nm,1.9s,mb4.6						
LBNH				e		01 36 30.4	
LBNH				S	S	01 40 37.3	+11
PLAL	Pickwick Lake	26.08	312	eP	P	01 36 00.1	0.0
	comp=Z,31nm,0.9s,mb4.8						
PLAL				eS	S	01 40 37.3	+7.1
ACSO	Alum Creek Sta	26.31	327	eP	P	01 36 02.3	+0.1
	comp=Z,8.5nm,1.0s,mb4.2						
ACSO				e		01 36 32.1	
ACSO				eS	S	01 40 54.4	+21
WVT	Waverly	26.53	315	eP	P	01 36 03.9	-0.2
WVT				e		01 36 40.9	
WVT				eS	S	01 40 43.5	+6.3
WVT				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.4						
WVT	Waverly	26.53	315	eP	P	01 36 03.9	-0.3
	comp=Z,9.3nm,0.7s,mb4.4						
WVT				e		01 36 40.9	
WVT				eS	S	01 40 43.5	+6.2
WCI	Wyandotte Cave	26.79	320	eP	P	01 36 07.3	+0.8
WCI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
WCI	Wyandotte Cave	26.79	320	eP	P	01 36 07.3	+0.8
	comp=Z,7.1nm,0.8s,mb4.2						
OXF	Oxford	26.80	310	eP	P	01 36 06.8	+0.2
OXF				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.2						
OXF	Oxford	26.80	310	eP	P	01 36 06.8	+0.2
	comp=Z,70nm,1.0s,mb5.1						
USIN	University of	27.48	318	eP	P	01 36 12.3	-0.4
	comp=Z,19nm,0.7s,mb4.7						
SAML	Samuel	27.88	177	eP	P	01 36 14.3	-1.9
	comp=Z,10.0nm,0.7s,mb4.5						
SADO	Sadowa	28.32	338	P	P	01 36 17.7	-2.5
	comp=Z,6.6nm,0.7s,mb4.4,baz=170,slow=5.7,SNR=4.7						
SADO				LR	LR	01 46 34.6	
	comp=Z,363nm,20.2s,MS4.0,baz=341,slow=34						
CMIG	Matias Romero	28.75	271	P	P	01 36 20.2	-3.8
	comp=Z,1.8nm,0.8s,mb3.9,baz=77,slow=11,SNR=4.4						
FVM	French Village	29.28	315	eP	P	01 36 28.2	-0.5
FVM				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
FVM	French Village	29.28	315	eP	P	01 36 28.2	-0.6
	comp=Z,5.2nm,0.6s,mb4.4						
CCM	Cathedral Cave	29.86	315	eP	P	01 36 33.2	-0.7
CCM				e		01 39 36.1	
CCM				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
CCM	Cathedral Cave	29.86	315	eP	P	01 36 33.2	-0.7
	comp=Z,6.6nm,0.6s,mb4.5						
CCM				ePcP	PcP	01 39 36.1	-0.6
MIAR	Mount Ida	29.90	307	eP	P	01 36 31.8	-2.4
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
MIAR	Mount Ida	29.90	307	eP	P	01 36 31.8	-2.4
	comp=Z,6.1nm,0.9s,mb4.3						
NNA	Nana	33.10	202	eP	P	01 36 59.0	-3.3
	comp=Z,25nm,0.6s,mb5.3						
WMOK	Wichita Mounta	33.98	304	eP	P	01 37 09.1	-0.9
WMOK				e		01 38 27.9	
WMOK				e		01 39 47.9	
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
WMOK	Wichita Mounta	33.98	304	eP	P	01 37 09.1	-0.9
	comp=Z,5.4nm,0.6s,mb4.7						
WMOK				ePP	PP	01 38 27.9	+0.9
WMOK				ePcP	PcP	01 39 47.9	0.0
KSU1	Kansas State U	34.04	313	eP	P	01 37 09.1	-1.5
LPAZ	La Paz	35.29	186	P	P	01 37 21.3	-0.1
	comp=Z,2.0nm,0.5s,mb4.3,baz=37,slow=6.6,SNR=9.7						
LPAZ				LR	LR	01 52 46.5	
	comp=Z,215nm,19.0s,MS3.9,baz=67,slow=38						
LPAZ	La Paz	35.29	186	eP	P	01 37 15.0	-6.4
LPAZ				PP	PP	01 38 52.1	+10
SCHQ	Schefferville	35.74	358	P	P	01 37 24.7	-0.5
	comp=Z,18nm,0.9s,mb5.0,baz=192,slow=6.2,SNR=12						
SCHQ				LR	LR	01 50 06.4	
	comp=Z,121nm,20.7s,MS3.6,baz=209,slow=33						
BDFB	Brasilia	38.20	153	P	P	01 37 45.7	-0.4
	comp=Z,2.3nm,0.4s,mb4.2,baz=309,slow=14,SNR=5.6						
BDFB				LR	LR	01 54 30.2	
	comp=Z,354nm,19.4s,MS4.2,baz=326,slow=38						
MNTX	Cornudas Mount	38.64	297	eP	P	01 37 49.1	-0.7
	comp=Z,3.9nm,0.6s,mb4.3						
MNTX				ePcP	PcP	01 40 00.5	-1.3
ULM	Lac du Bonnet	39.79	329	P	P	01 37 56.5	-2.9
	comp=Z,3.3nm,0.6s,mb4.2,baz=145,slow=6.0,SNR=5.4						
ULM				LR	LR	01 53 20.8	
	comp=Z,268nm,20.4s,MS4.1,baz=126,slow=34						

ANMO **Albuquerque** 40.12 302*c iP* P 01 38 03.3 +1.1
ANMO **Albuquerque** 40.12 302 *e*P P 01 38 02.8 +0.6
comp=Z,3.6nm,0.8s,mb4.2
LPM **Los Pinos Moun** 40.13 301 *e*P P 01 38 02.8 +0.5
LAZ **Ladron** 40.56 301 *e*P P 01 38 06.4 +0.5
ISCO **Idaho Springs** 40.75 309 *e*P P 01 38 08.3 +0.9
ISCO *e* 01 40 16.6
ISCO pmax pmax
comp=Z,19nm,1.0s,mb4.7
ISCO **Idaho Springs** 40.75 309 *e*P P 01 38 08.3 +0.9
comp=Z,19nm,1.0s,mb4.7
ISCO *e*PcP PcP 01 40 16.6 +8.1
PHWY **Pilot Hill** 41.13 312 *e*P P 01 38 10.9 +0.3
RSSD **Black Hills** 41.23 316 *e*P P 01 38 11.3 -0.1
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
RSSD **Black Hills** 41.23 316 *e*P P 01 38 11.2 -0.1
comp=Z,3.8nm,0.8s,mb4.1
SMCO **Snowmass** 41.56 308 *e*P P 01 38 14.7 +0.5
comp=Z,19nm,1.2s,mb4.6
PV01 **Paradox Valley** 42.50 306 *e*P P 01 38 22.3 +0.6
PV01 *e*PcP PcP 01 40 15.4 +1.1
RWWY **Rawlins** 42.50 311 *e*P P 01 38 21.9 +0.1
comp=Z,40nm,1.1s,mb5.0
TUC **Tucson** 43.27 297 *e*P P 01 38 29.1 +1.1
TUC pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
TUC **Tucson** 43.27 297 *e*P P 01 38 29.1 +1.1
comp=Z,8.8nm,1.1s,mb4.4
116A **Eloy** 44.07 297 ⇓P P 01 38 34.9 +0.4
baz=44,SNR=5.5
WUAZ **Wupatki** 44.18 302 *e*P P 01 38 35.7 +0.4
comp=Z,8.5nm,0.8s,mb4.5
WUAZ *e*PP PP 01 40 19.9 +1.5
WUAZ *e*ScP ScP 01 44 17.7 +7.2
SRU **San Rafael** 44.22 307 *e*P P 01 38 33.9 -1.7
SRU pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
SRU **San Rafael** 44.22 307 *e*P P 01 38 33.9 -1.7
comp=Z,3.3nm,0.6s,mb4.2
PDAR **Pinedale Array** 44.49 312 P P 01 38 37.8 0.0
comp=Z,22nm,0.9s,mb4.9,baz=116,slow=8.7,SNR=142
PDAR PcP PcP 01 40 19.6 -1.4
comp=Z,5.9nm,0.8s,baz=110,slow=5.0,SNR=7.8
PDAR LR LR 01 59 05.2
comp=Z,171nm,18.7s,MS4.0,baz=124,slow=39
115A **Sonoran Desert** 44.52 297 ⇓P P 01 38 39.2 +1.1
baz=44
X15A **Humboldt** 44.73 300 P P 01 38 41.1 +1.4
baz=45,SNR=8.2
TMUT **Trail Mountain** 44.77 307 *e*P P 01 38 40.1 0.0
TMUT *e*PcP PcP 01 40 21.2 -0.8
W15A **Williams** 44.85 301 ⇑P P 01 38 42.1 +1.4
baz=45
DAU **Daniels Canyon** 45.07 308 *e*P P 01 38 43.6 +1.1
DAU *e* 01 40 23.5
Z14A **Wintersburg** 45.19 298 ⇓P P 01 38 44.6 +1.2
baz=45
X14A **Yava** 45.27 300 ⇓P P 01 38 45.2 +1.2
baz=45,SNR=9.0
Y14A **Wickenburg** 45.30 299 P P 01 38 45.4 +1.1
baz=45,SNR=7.2
MSU **Marysvale** 45.35 306 *e*P P 01 38 45.7 +1.1
MSU *e* 01 40 25.0
MSU *e* 01 40 37.9
TCUT **Toone Canyon** 45.36 309 *e*P P 01 38 45.1 +0.4
LOHW **Long Hollow** 45.48 313 *e*P P 01 38 45.8 +0.1
comp=Z,7.4nm,0.6s,mb4.7
LOHW *e*PcP PcP 01 40 24.3 -0.1
W14A **Seligman** 45.52 301 ⇑P P 01 38 48.0 +2.0
baz=46
SNOW **Snow King Moun** 45.54 313 *e*P P 01 38 46.8 +0.7
comp=Z,44nm,1.2s,mb5.3
GCMT **Greycliff** 45.56 316 *e*P P 01 38 46.3 0.0
GCMT *e*PcP PcP 01 40 25.8 +1.1
REDW **Red Top Meadow** 45.58 313 *e*P P 01 38 46.8 +0.4
comp=Z,44nm,1.2s,mb5.3
REDW *e*PP PP 01 40 36.8 +3.6
AHID **Auburn Hatcher** 45.58 312 *e*P P 01 38 46.8 +0.4
comp=Z,22nm,0.9s,mb5.1
HWUT **Hardware Ranch** 45.60 310 *e*P P 01 38 46.6 0.0
comp=Z,17nm,0.9s,mb5.0
HWUT *e*PP PP 01 40 36.8 +3.3
MOOW **Moose Ponds** 45.62 313 *e*P P 01 38 46.5 -0.2
comp=Z,18nm,0.9s,mb5.0
MOOW *e*PP PP 01 40 36.5 +2.8
TPAW **Teton Pass** 45.68 313 *e*P P 01 38 47.4 +0.1
comp=Z,20nm,0.8s,mb5.1
TPAW *e*PP PP 01 40 38.4 +4.0
CPUP **Villa Florida** 45.69 171 P P 01 38 43.4 -3.9
comp=Z,9.1nm,0.7s,mb4.8,baz=336,slow=7.8,SNR=33
CPUP LR LR 01 59 09.1
comp=Z,77nm,19.7s,MS3.6,baz=347,slow=38
CPUP **Villa Florida** 45.69 171 *e*P P 01 38 43.3 -4.0
CPUP *e*PcP PcP 01 40 26.4 +1.3
FLWY **Flagg Ranch** 45.69 314 *e*P P 01 38 47.0 -0.4
comp=Z,11nm,0.8s,mb4.8
FLWY *e*PP PP 01 40 36.8 +2.4
IMW **Indian Meadow** 45.80 313 *e*P P 01 38 51.5 +3.3
comp=Z,6.3nm,0.6s,mb4.7
IMW *e*PcP PcP 01 40 28.9 +3.3
IMW *e*PP PP 01 40 41.6 +6.0
RRI2 **Red Ridge** 45.90 312 *e*P P 01 38 49.3 +0.3
comp=Z,18nm,1.1s,mb4.9
RRI2 *e*PcP PcP 01 40 26.2 +0.3
RRI2 *e*PP PP 01 40 40.4 +3.7
X13A **Yucca** 46.05 300 ⇑P P 01 38 51.4 +1.2
baz=46
W13A **Hualapai Mount** 46.16 301 ⇑P P 01 38 52.2 +1.2
baz=46
SPUT **South Promonto** 46.17 309 *e*P P 01 38 47.6 -3.5
SPUT *e*PcP PcP 01 40 26.1 -0.7
DUG **Dugway** 46.18 308 *e*P P 01 38 51.6 +0.4
DUG pmax pmax
comp=Z,13nm,1.2s,mb4.7
DUG **Dugway** 46.18 308 *e*P P 01 38 51.6 +0.4
comp=Z,12nm,1.2s,mb4.7
PDMCI **Parker Dam,Lak** 46.27 299 ⇑P P 01 38 52.9 +1.0
baz=46
QLMT **Earthquake Lak** 46.42 314 *e*P P 01 38 54.5 +1.4
EGMT **Eagleton** 46.44 319 *e*P P 01 38 53.4 +0.2
comp=Z,20nm,1.3s,mb4.9
EGMT *e*PcP PcP 01 40 26.7 -1.1
BGU **Big Grassy Mou** 46.50 309 *e*P P 01 38 54.0 +0.2
BGU *e*PcP PcP 01 40 28.2 +0.2
HVU **Hansel Valley** 46.52 310 *e*P P 01 38 53.9 0.0
HVU *e* 01 40 31.4
HVU *e* 01 40 46.8
HVU pmax pmax
comp=Z,21nm,1.1s,mb5.0
HVU **Hansel Valley** 46.52 310 *e*P P 01 38 53.9 +0.1
comp=Z,21nm,1.1s,mb5.0
HVU *e*PcP PcP 01 40 31.4 +3.4
HVU *e*PP PP 01 40 46.8 +3.6
Y12C **Blythe** 46.54 299 ⇑P P 01 38 55.2 +1.2
baz=46
GLA **Glamis** 46.73 298 ⇓P P 01 38 56.7 +1.1
baz=47,SNR=5.1
BOZ **Bozeman (W)** 46.81 315 *e*P P 01 38 56.4 +0.3
BOZ pmax pmax
comp=Z,20nm,1.3s,mb4.9
BOZ **Bozeman (W)** 46.81 315 *e*P P 01 38 56.4 +0.3
comp=Z,20nm,1.3s,mb4.9
W12A **Cal Nev Ari** 46.98 301 ⇓P P 01 38 58.3 +0.8
baz=47
V12A **Nelson** 47.02 301 ⇑P P 01 38 58.8 +1.1
baz=47
IRM **Iron Mountain** 47.09 299 P P 01 38 59.7 +1.3
baz=47,SNR=11
HRY **Holter Researc** 47.29 317 *e*P P 01 39 00.3 +0.4
N13A **Wendover, West** 47.36 308 ⇑P P 01 39 01.0 +0.6
baz=47
DLMT **Dillon** 47.37 315 *e*P P 01 39 01.4 +0.8
comp=Z,33nm,1.2s,mb5.1
MCMT **McKenzie Canyo** 47.38 314 *e*P P 01 39 01.5 +0.9
Q12A **Willow Creek R** 47.48 306 ⇓P P 01 39 02.4 +1.0
baz=48
SWSC **Sam W. Stewart** 47.53 297 ⇓P P 01 39 02.8 +1.0
baz=48
GMRC **Granite Mounta** 47.57 300 ⇑P P 01 39 03.1 +1.0
baz=48
P12A **McGill** 47.62 306 ⇑P P 01 39 03.3 +0.8
baz=48,SNR=5.5
O12A **Currie** 47.64 307 ⇓P P 01 39 03.0 +0.4
baz=48
DVTC **Desert V Tower** 47.77 297 ⇓P P 01 39 05.1 +1.5
baz=48
BELC **Belle Mtn.** 47.78 299 ⇓P P 01 39 04.9 +1.2
baz=48
TUQ **Turquoise Mtn.** 47.85 301 ⇑P P 01 39 05.2 +1.0
baz=48
N12A **Clover Valley,** 47.98 308 ⇑P P 01 39 05.4 +0.1
baz=48,SNR=6.1
M12A **Wells** 48.00 309 ⇑P P 01 39 05.7 +0.3
baz=48,SNR=9.6
MONP **Monument Peak** 48.06 297 P P 01 39 07.6 +1.8
baz=48,SNR=7.4
HEC **Hector,Ludlow** 48.12 300 ⇑P P 01 39 07.5 +1.2
baz=48
HLID **Hailey** 48.13 312 *e*P P 01 39 06.6 +0.2
comp=Z,25nm,1.4s,mb5.0
HLID *e*PcP PcP 01 40 34.2 +0.5
PFO **Pinyon Flat Ob** 48.13 298 ⇓P P 01 39 07.2 +0.8
baz=48
SHOC **Shoshone** 48.19 301 ⇓P P 01 39 07.9 +1.0
baz=48
CHMT **Chamberlain Mo** 48.28 316 *e*P P 01 39 07.8 +0.3
P11A **Circle Ranch,** 48.28 306 ⇑P P 01 39 08.4 +0.8
baz=48
U10A **Ash Meadows, A** 48.28 302 ⇑P P 01 39 08.9 +1.3
baz=48
O11A **Cowboy Ranch,** 48.30 307 ⇓P P 01 39 08.5 +0.7
baz=48
N11A **Elko Archery C** 48.49 308 ⇓P P 01 39 09.6 +0.4
baz=48
R10A **Warm Springs** 48.50 305 ⇑P P 01 39 10.2 +0.9
baz=48
GSC **Goldstone** 48.56 301 ⇓P P 01 39 10.6 +0.9
baz=48
109C **Camp Elliot, M** 48.63 297 ⇑P P 01 39 10.8 +0.5
baz=49
M11A **Holland Ranch,** 48.65 309 P P 01 39 11.2 +0.8
baz=49,SNR=13
MURC **Murrieta** 48.75 298 ⇑P P 01 39 11.9 +0.7
baz=49
P10A **Eureka** 48.83 306 ⇓P P 01 39 12.5 +0.7
baz=49
O10A **Cortez Mining,** 48.97 307 ⇑P P 01 39 13.4 +0.5
baz=49
R09A **Tonopah** 49.10 304 ⇑P P 01 39 14.6 +0.8
baz=49
S09A **Goldfield** 49.15 304 P P 01 39 14.9 +0.7
baz=49,SNR=8.1
BFSC **Mount Baldy St** 49.17 299 ⇑P P 01 39 15.5 +1.0
baz=49
GRAC **Grapevine Rang** 49.18 303 ⇓P P 01 39 15.1 +0.6
baz=49
MPMC **Manual Prospec** 49.18 301 ⇓P P 01 39 14.8 +0.3
baz=49
M10A **I.L. Ranch, Tu** 49.22 309 ⇑P P 01 39 15.3 +0.5
baz=49
LRMC **Laurel Mountai** 49.29 301 ⇓P P 01 39 15.8 +0.5
baz=49
O09A **Fish Creek Ran** 49.47 307 P P 01 39 17.4 +0.7
baz=49,SNR=11
EDW2 **Edwards Air Fo** 49.49 300 ⇓P P 01 39 17.7 +0.8
baz=49
BMN **Battle Mountai** 49.53 307 *e*P P 01 39 17.8 +0.6
BMN pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BMN **Battle Mountai** 49.53 307 *e*P P 01 39 17.8 +0.6
comp=Z,8.5nm,1.0s,mb4.7
CWC **Cottonwood Cre** 49.69 302 ⇑P P 01 39 20.0 +1.6
baz=50
N09A **Rock Creek Ran** 49.83 308 ⇓P P 01 39 19.7 +0.3
baz=50,SNR=5.1
Q08A **Gabbs** 49.85 305 ⇑P P 01 39 19.6 0.0
baz=50
SCI **San Clemente I** 49.85 297 ⇓P P 01 39 20.4 +0.8
baz=50
M09A **Marrel Ranch,** 49.87 308 ⇓P P 01 39 20.3 +0.6
baz=50
NVAR **Mina Array Bea** 50.08 304 P P 01 39 20.5 -0.8
comp=Z,2.4nm,0.7s,mb4.3,baz=89,slow=7.4,SNR=14
NVAR **Mina Array Bea** 50.08 304 P P 01 39 20.5 -0.8
L09A **Wilkinson Ranc** 50.14 309 P P 01 39 22.4 +0.6
baz=50,SNR=7.8
N08A **GE Springer Mi** 50.28 308 ⇑P P 01 39 23.2 +0.4
baz=50,SNR=6.4
K09A **Rome** 50.30 310 P P 01 39 23.6 +0.5
baz=50,SNR=13
VES **Vestal, Richgr** 50.45 301 ⇓P P 01 39 24.8 +0.6
baz=50
BMO **Blue Mountains** 50.45 313 *e*P P 01 39 22.8 -1.4
BMO pmax pmax
comp=Z,12nm,1.4s,mb4.7
BMO **Blue Mountains** 50.45 313 *e*P P 01 39 22.8 -1.3
comp=Z,12nm,1.4s,mb4.8
HELL **Mitchell Peak,** 50.47 302 ⇑P P 01 39 24.9 +0.6
baz=50
M08A **Happy Creek Ra** 50.56 308 P P 01 39 25.6 +0.6
baz=50,SNR=12
I09A **Lost Marbles R** 50.57 312 ⇑P P 01 39 25.1 +0.1
baz=50
RCTC **Rector, Farmer** 50.61 302 ⇓P P 01 39 25.5 +0.1
baz=51
H09A **Durkee** 50.66 313 ⇑P P 01 39 25.4 -0.3
baz=51
L08A **Fields** 50.66 309 ⇑P P 01 39 26.2 +0.4
baz=51,SNR=9.3
O07A **Toulon** 50.75 307 ⇓P P 01 39 26.1 -0.3
baz=51,SNR=5.9
K08A **Mann Creek Ran** 50.86 310 ⇓P P 01 39 27.1 -0.1
baz=51
WVOR **Wild Horse Val** 50.92 310 *e*P P 01 39 27.5 -0.2
WVOR *e* 01 40 43.5
WVOR pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
WVOR **Wild Horse Val** 50.92 310 *e*P P 01 39 27.5 -0.2
comp=Z,7.2nm,1.1s,mb4.5
WVOR *e*PcP PcP 01 40 43.5 -0.4
R06C **Coleville** 50.99 304 ⇓P P 01 39 29.2 +1.0
baz=51
PKM **Peak Mountain** 50.99 300 ⇓P P 01 39 29.3 +1.1
baz=51
M07A **Soldier Meadow** 51.14 308 ⇑P P 01 39 29.7 +0.3
baz=51,SNR=9.8
SMMC **Simmler** 51.16 300 ⇑P P 01 39 30.4 +0.9
baz=51
NEW **Newport** 51.18 317 *e*P P 01 39 28.9 -0.7
NEW pmax pmax
comp=Z,31nm,1.0s
NEW **Newport** 51.18 317 *e*P P 01 39 28.9 -0.7
comp=Z,31nm,1.0s,mb5.2
S06C **San Francisco** 51.23 304 ⇓P P 01 39 30.6 +0.6
baz=51
H08A **Prairie City** 51.33 312 ⇑P P 01 39 30.9 +0.1
baz=51,SNR=25
L07A **Adell** 51.37 309 ⇑P P 01 39 31.2 +0.1
baz=51
R05C **Kirkwood Meado** 51.49 305 ⇓P P 01 39 32.7 +0.7
baz=52
N06A **Buffalo Meadow** 51.55 307 ⇑P P 01 39 32.0 -0.4
baz=52,SNR=8.5
F08A **Pendleton** 51.67 314 ⇑P P 01 39 32.6 -0.8
baz=52
I07A **Izee** 51.84 311 P P 01 39 34.7 +0.2
baz=52,SNR=12
P05C **Yuba Gap, Truc** 51.97 305 ⇓P P 01 39 35.6 +0.1
baz=52
LAVA **Lava Cap Winer** 52.01 305 ⇓P P 01 39 35.9 0.0
baz=52
M06C **Likely Place G** 52.09 308 ⇓P P 01 39 36.2 -0.3
baz=52
I06A **Prineville** 52.31 311 ⇑P P 01 39 38.1 0.0
baz=52,SNR=5.9
ORV **Oroville** 52.68 306 ⇓P P 01 39 41.0 +0.1
baz=53
J05A **Fort Rock** 52.94 310 ⇓P P 01 39 43.0 +0.2
baz=53
M04C **Macdoel** 53.18 308 ⇑P P 01 39 44.5 0.0
baz=53
K04A **Chilquin** 53.21 309 ⇓P P 01 39 44.7 0.0
baz=53
L04A **Klamath Falls** 53.27 309 ⇓P P 01 39 45.2 0.0
baz=53,SNR=6.5
F05A **White Salmon** 53.53 313 ⇓P P 01 39 47.4 +0.3
baz=54,SNR=5.9
FARB **Farallon Islan** 53.71 303 ⇑P P 01 39 49.7 +1.2
baz=54
O02C **Red Bluff** 53.73 306 ⇑P P 01 39 46.8 -1.7
baz=54
YBH **Yreka Blue Hor** 53.82 308 ⇑P P 01 39 47.8 -1.4
baz=54,SNR=5.0
M02C **Callahan** 53.89 308 ⇑P P 01 39 48.4 -1.3
baz=54
ESPR **Espera** 54.09 58 P P 01 39 51.4 +0.1
comp=Z,27nm,1.2s,mb5.0
F04A **Amboy** 54.20 313 ⇑P P 01 39 49.8 -2.1
baz=54
EJIF **Jimena Fronter** 54.39 58 P P 01 39 54.1 +0.7
EJIF pmax pmax
comp=Z,12nm,1.0s,mb4.8
EJIF **Jimena Fronter** 54.39 58 P P 01 39 54.1 +0.8
comp=Z,12nm,1.0s,mb4.8
I03A **Eugene** 54.51 311 ⇑P P 01 39 53.5 -0.7
baz=54
G03A **Yamhill** 54.70 312 ⇓P P 01 39 56.5 +0.9
baz=55
YKA **Yellowknife Ar** 55.22 334 P P 01 39 57.1 -2.3
comp=Z,4.2nm,0.6s,mb4.6,baz=110,slow=7.5,SNR=17
YKA PcP PcP 01 40 57.3 -2.9
comp=Z,2.5nm,0.7s,baz=109,slow=5.9,SNR=5.5
YKA LR LR 02 02 05.0
comp=Z,143nm,21.2s,MS4.0,baz=120,slow=34
YKA **Yellowknife Ar** 55.22 334 P P 01 39 57.1 -2.3
YKA 01 40 57.3
YKA **Yellowknife Ar** 55.22 334 P P 01 39 57.1 -2.3
YKA PcP PcP 01 40 57.3 -2.9
YKA LR LR 02 02 05.0
ELOJ **Sierra Loja** 55.47 58 P P 01 40 01.9 +0.7
ELOJ pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ELOJ **Sierra Loja** 55.47 58 P P 01 40 01.9 +0.8
comp=Z,5.5nm,0.7s,mb4.7
SUMG **Summit** 55.58 9 *e*P P 01 40 01.8 -0.3
comp=Z,21nm,1.0s,mb5.1
GUD **Guadarrama** 55.62 53 P P 01 40 02.0 -0.3
GUD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
GUD **Guadarrama** 55.62 53 P P 01 40 02.0 -0.3
comp=Z,5.6nm,0.8s,mb4.7
ESDC **Sonseca Array** 55.71 55 P P 01 40 02.3 -0.6
comp=Z,6.3nm,0.8s,mb4.7,baz=268,slow=6.9,SNR=39
ESDC LR LR 01 58 20.1
comp=Z,45nm,20.2s,MS3.5,baz=235,slow=30
ESDC **Sonseca Array** 55.71 55 P P 01 40 02.7 -0.2
comp=Z,9.5nm,0.8s,mb4.9
ESLA **Sonseca Array** 55.71 55 *e*P P 01 40 03.1 +0.2
comp=Z,2.3nm,1.1s,mb4.1
ESLA *e* 01 40 14.7
EBAN **Banos Encina** 55.78 56 P P 01 40 03.4 -0.1
EBAN pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
EBAN **Banos Encina** 55.78 56 P P 01 40 03.4 -0.1
comp=Z,9.4nm,1.0s,mb4.8
ECOG **Cogollos-Vega** 55.94 57 P P 01 40 05.0 +0.5
ECOG pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ECOG **Cogollos-Vega** 55.94 57 P P 01 40 05.0 +0.5
comp=Z,4.5nm,0.8s,mb4.5
ELAN **Lanestosa** 56.36 50 P P 01 40 06.6 -1.0
comp=Z,13nm,1.0s,mb4.9
EVIA **Vianos** 56.81 56 P P 01 40 11.5 +0.8
EVIA pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
EVIA **Vianos** 56.81 56 P P 01 40 11.5 +0.8
comp=Z,4.8nm,0.6s,mb4.7
ENIJ **Nijar** 57.02 58 P P 01 40 12.6 +0.4
ENIJ pmax pmax
comp=Z,11nm,0.8s,mb4.9
ENIJ **Nijar** 57.02 58 P P 01 40 12.6 +0.4
comp=Z,11nm,0.8s,mb5.0
ROSF **Rostrenen** 57.06 44 *e*P P 01 40 11.5 -1.0
QUIF **Quistinic** 57.07 45 *e*P P 01 40 11.5 -1.1
SGMF **Saint Gilles** 57.52 44 *e*P P 01 40 14.7 -1.1
EMUR **La Murta** 57.79 57 P P 01 40 17.4 -0.3
comp=Z,27nm,0.9s,mb5.3
SJPF **Ste Jean** 57.96 51 *e*P P 01 40 18.6 -0.3
comp=Z,45nm,1.2s,mb5.1
SJPF **Ste Jean** 57.96 51 *e*P P 01 40 18.6 -0.3
SJPF pmax pmax
comp=Z,23nm,1.2s,mb5.1
SJPF **Ste Jean** 57.96 51 *e*P P 01 40 18.6 -0.3
comp=Z,23nm,1.2s,mb5.1
EBEN **Beniarda** 58.59 56 P P 01 40 25.0 +1.7
comp=Z,76nm,1.9s,mb5.4
GRR **Gorron** 58.66 44 *e*P P 01 40 22.7 -1.1
comp=Z,36nm,1.2s,mb5.0
GRR **Gorron** 58.66 44 *e*P P 01 40 22.7 -1.1
GRR pmax pmax
comp=Z,18nm,1.2s,mb5.0
GRR **Gorron** 58.66 44 *e*P P 01 40 22.7 -1.1
comp=Z,18nm,1.2s,mb5.0
EBIE **Bielsa** 58.94 51 P P 01 40 25.8 +0.1
comp=Z,16nm,1.7s,mb4.8
FLN **La Foliniere** 58.95 44 *e*P P 01 40 24.8 -1.0
comp=Z,28nm,1.2s,mb4.9
FLN *e*R
comp=Z,72nm,18.2s
FLN **La Foliniere** 58.95 44 *e*P P 01 40 24.8 -1.0
FLN pmax pmax
comp=Z,14nm,1.2s,mb4.9
FLN MLR MLR
comp=Z,70nm,18.3s,MS3.8
FLN **La Foliniere** 58.95 44 *e*P P 01 40 24.8 -1.0
comp=Z,14nm,1.2s,mb4.9
FLN LR LR
comp=Z,70nm,18.3s,MS3.8
MFF **Saint Martin d** 58.97 47 *e*P P 01 40 26.1 +0.2
EPF **Esparros** 59.10 51 *e*P P 01 40 26.5 -0.3
comp=Z,30nm,1.1s,mb4.9
EPF **Esparros** 59.10 51 *e*P P 01 40 26.5 -0.3
EPF pmax pmax
comp=Z,15nm,1.1s,mb4.9
EPF **Esparros** 59.10 51 *e*P P 01 40 26.5 -0.3
comp=Z,15nm,1.1s,mb4.9
LDF **La Druitiere** 59.17 44 *e*P P 01 40 26.3 -1.0
comp=Z,9.8nm,0.9s,mb4.5
LDF **La Druitiere** 59.17 44 *e*P P 01 40 26.3 -1.0
LDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
LDF **La Druitiere** 59.17 44 *e*P P 01 40 26.3 -1.0
comp=Z,4.9nm,0.9s,mb4.5
DBIC **Dimbokro** 59.37 94 P P 01 40 27.1 -1.6
comp=Z,2.4nm,0.6s,mb4.4,baz=246,slow=4.9,SNR=4.9
DBIC LR LR 02 03 24.3
comp=Z,105nm,18.9s,MS4.0,baz=260,slow=33
LFF **La Frestale** 59.48 49 *e*P P 01 40 28.5 -0.9
PLCA **Paso Flores** 59.74 185 *e*P P 01 40 29.7 -1.5
PLCA *e* 01 41 17.2
RJF **Les Rejaudoux** 60.05 48 *e*P P 01 40 32.2 -1.1
comp=Z,18nm,0.9s,mb4.8
RJF *e*R
comp=Z,51nm,19.2s
RJF **Les Rejaudoux** 60.05 48 *e*P P 01 40 32.2 -1.1
RJF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
RJF MLR MLR
comp=Z,50nm,19.3s,MS3.7
RJF **Les Rejaudoux** 60.05 48 *e*P P 01 40 32.2 -1.1
comp=Z,8.8nm,0.9s,mb4.8
RJF LR LR
comp=Z,50nm,19.3s,MS3.7
CAF **Calviac** 60.42 49 *e*P P 01 40 34.9 -1.0
comp=Z,12nm,0.9s,mb4.6
CAF **Calviac** 60.42 49 *e*P P 01 40 34.9 -1.0
CAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
CAF **Calviac** 60.42 49 *e*P P 01 40 34.9 -1.0
comp=Z,6.3nm,0.9s,mb4.7
MTLF **Montolieu** 60.48 50 *e*P P 01 40 35.2 -1.1
comp=Z,10nm,1.0s,mb4.5
MTLF **Montolieu** 60.48 50 *e*P P 01 40 35.2 -1.1
MTLF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
MTLF **Montolieu** 60.48 50 *e*P P 01 40 35.2 -1.1
comp=Z,5.2nm,1.0s,mb4.5
TCF **Toulx Ste Croi** 60.58 47 *e*P P 01 40 35.8 -1.2
comp=Z,13nm,0.9s,mb4.8
TCF **Toulx Ste Croi** 60.58 47 *e*P P 01 40 35.8 -1.2
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
TCF **Toulx Ste Croi** 60.58 47 *e*P P 01 40 35.8 -1.2
comp=Z,6.4nm,0.9s,mb4.8
EJON **La Jonquera** 60.97 51 P P 01 40 38.5 -1.1
comp=Z,25nm,1.4s,mb5.1
JMIC **Jan Mayen** 61.36 18 LR LR 02 01 43.1
comp=Z,108nm,21.3s,MS4.0,baz=280,slow=30
AVF **Avril sur Loir** 61.39 47 *e*P P 01 40 41.0 -1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,19nm,1.2s,mb4.8						
AVF	**Avril sur Loir**	**61.39**	**47**	eP	**P**	**01 40 41.0**	**-1.5**
AVF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
AVF	**Avril sur Loir**	**61.39**	**47**	eP	**P**	**01 40 41.0**	**-1.5**
	comp=Z,9.6nm,1.2s,mb4.8						
SSF	**Saint Saulge**	**61.50**	**46**	eP	**P**	**01 40 41.7**	**-1.6**
	comp=Z,12nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**61.50**	**46**	eP	**P**	**01 40 41.7**	**-1.6**
SSF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**61.50**	**46**	eP	**P**	**01 40 41.7**	**-1.6**
	comp=Z,5.8nm,1.0s,mb4.7						
LASF	**Ste Croix**	**61.68**	**50**	eP	**P**	**01 40 44.1**	**-0.4**
	comp=Z,36nm,1.3s,mb5.0						
SMF	**Signal de Mont**	**61.72**	**47**	eP	**P**	**01 40 43.4**	**-1.3**
	comp=Z,15nm,1.1s,mb4.7						
SMF	**Signal de Mont**	**61.72**	**47**	eP	**P**	**01 40 43.4**	**-1.3**
SMF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.7						
SMF	**Signal de Mont**	**61.72**	**47**	eP	**P**	**01 40 43.4**	**-1.3**
	comp=Z,7.4nm,1.1s,mb4.7						
LOR	**Lormes**	**61.75**	**46**	eP	**P**	**01 40 43.3**	**-1.6**
	comp=Z,11nm,0.9s,mb4.7						
LOR				eR			
	comp=Z,46nm,18.2s						
LOR	**Lormes**	**61.75**	**46**	eP	**P**	**01 40 43.3**	**-1.6**
LOR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
LOR				MLR	MLR		
	comp=Z,50nm,18.3s,MS3.7						
LOR	**Lormes**	**61.75**	**46**	eP	**P**	**01 40 43.3**	**-1.6**
	comp=Z,5.3nm,0.9s,mb4.7						
LOR				LR	LR		
	comp=Z,50nm,18.3s,MS3.7						
VIVF	**Saint-Julien-l**	**62.27**	**49**	eP	**P**	**01 40 48.3**	**-0.1**
	comp=Z,32nm,1.1s,mb5.0						
VIVF	**Saint-Julien-l**	**62.27**	**49**	eP	**P**	**01 40 48.3**	**-0.1**
VIVF				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.1						
VIVF	**Saint-Julien-l**	**62.27**	**49**	eP	**P**	**01 40 48.3**	**-0.1**
	comp=Z,16nm,1.1s,mb5.1						
MEZF	**Maizieres J'vi**	**62.60**	**45**	eP	**P**	**01 40 49.3**	**-1.3**
	comp=Z,22nm,0.9s,mb5.0						
MEZF	**Maizieres J'vi**	**62.60**	**45**	eP	**P**	**01 40 49.3**	**-1.3**
	comp=Z,22nm,0.9s,mb5.3						
SMRF	**Simiane la Rot**	**62.92**	**50**	eP	**P**	**01 40 52.6**	**-0.2**
ORIF	**Oris-en-Rattie**	**63.13**	**49**	eP	**P**	**01 40 54.1**	**0.0**
ORIF				eR			
	comp=Z,49nm,19.5s						
HAU	**Haudompre**	**63.45**	**45**	eP	**P**	**01 40 54.7**	**-1.6**
HAU				eR			
	comp=Z,30nm,22.0s						
HAU	**Haudompre**	**63.45**	**45**	eP	**P**	**01 40 54.7**	**-1.6**
HAU				LR	LR		
	comp=Z,30nm,22.0s,MS3.4						
LMR	**La Mourre**	**63.62**	**50**	eP	**P**	**01 40 56.0**	**-1.4**
FRF	**La Foret Royal**	**63.71**	**50**	eP	**P**	**01 40 57.7**	**-0.3**
LPL	**La Plagne**	**63.72**	**48**	eP	**P**	**01 40 57.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**63.74**	**84**	P	**P**	**01 40 57.3**	**-0.9**
	comp=Z,5.5nm,0.8s,mb4.6,baz=273,slow=5.1,SNR=28						
TORD				LR	LR	02 06 58.2	
	comp=Z,156nm,19.0s,MS4.2,baz=280,slow=34						
MBDF	**Montbardon**	**63.77**	**49**	eP	**P**	**01 40 58.0**	**-0.4**
INK	**Inuvik**	**64.63**	**337**	eP	**P**	**01 41 01.5**	**-2.5**
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
INK	**Inuvik**	**64.63**	**337**	eP	**P**	**01 41 01.5**	**-2.6**
	comp=Z,6.4nm,0.8s,mb4.7						
DAWY	**Dawson**	**66.34**	**332**	eP	**P**	**01 41 13.1**	**-2.0**
KEST	**Kesra**	**66.40**	**59**	P	**P**	**01 41 15.0**	**-0.5**
	comp=Z,0.9nm,0.7s,mb3.9,baz=270,slow=6.1,SNR=4.1						
GRA1	**Grafenberg Arr**	**66.65**	**43**	eP	**P**	**01 41 16.2**	**-0.9**
	comp=Z,9.0nm,1.4s,mb4.6						
GRA1				epP	pP	01 41 24.4	+0.5
GRF	**Grafenberg Arr**	**66.65**	**43**	eP	**P**	**01 41 16.2**	**-0.9**
	comp=Z,9.0nm,1.4s,mb4.6						
GRF				epP	pP	01 41 24.4	+0.5
GRF	**Grafenberg Arr**	**66.65**	**43**	eP	**P**	**01 41 16.2**	**-0.9**
GRF				e*PP	pP	01 41 24.4	+0.5
GRF				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
GRF	**Grafenberg Arr**	**66.65**	**43**	eP	**P**	**01 41 16.2**	**-0.9**
GRF				e*PP	pP	01 41 24.4	+0.5
GRF				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.6						
NB2	**NORSAR Subarra**	**66.69**	**31**	P	**P**	**01 41 16.3**	**-1.0**
	comp=Z,2.7nm,0.9s,mb4.3,baz=268,slow=6.9						
NOA	**NORSAR Array B**	**66.69**	**31**	P	**P**	**01 41 16.2**	**-1.1**
	comp=Z,0.9nm,0.8s,mb3.9,baz=267,slow=6.5,SNR=3.2						
NOA				LR	LR	02 05 37.2	
	comp=Z,39nm,19.6s,MS3.6,baz=275,slow=32						
HFS	**Hagfors**	**67.89**	**32**	LR	LR	02 06 35.0	
	comp=Z,91nm,19.5s,MS4.0,baz=305,slow=32						
KHC	**Kasperske Hory**	**68.22**	**44**	eP	**P**	**01 41 26.0**	**-1.0**
KHC	**Kasperske Hory**	**68.22**	**44**	i P	**P**	**01 41 26.2**	**-0.8**
GERES	**GERESS Array B**	**68.32**	**44**	P	**P**	**01 41 24.8**	**-2.8**
	comp=Z,0.6nm,0.6s,mb3.8,baz=282,slow=6.7,SNR=6.5						
COLA	**College**	**70.02**	**333**	i P	**P**	**01 41 37.7**	**-0.5**
VYHS	**Vyhne**	**71.74**	**44**	e	**P**	**01 41 47.8**	**-0.8**
PKSM	**Moragy**	**71.95**	**47**⇑	iP	**P**	**01 41 48.9**	**-1.0**
PKSM	**Moragy**	**71.95**	**47**	⇑P	**P**	**01 41 48.9**	**-1.0**
IMA2	**Indian Mountai**	**72.35**	**335**	eP	**P**	**01 41 50.3**	**-1.9**
ARCES	**ARCESS Array B**	**72.38**	**22**	P	**P**	**01 41 49.3**	**-3.1**
	comp=Z,4.2nm,0.8s,mb4.4,baz=294,slow=3.9,SNR=14						
ARCES				LR	LR	02 07 10.3	
	comp=Z,45nm,21.9s,MS3.7,baz=216,slow=30						
STHS	**Stebnicka Huta**	**73.16**	**43**	eP	**P**	**01 41 53.5**	**-3.6**
STHS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
STHS	**Stebnicka Huta**	**73.16**	**43**	eP	**P**	**01 41 53.5**	**-3.6**
	comp=Z,2.0nm,0.9s,mb4.0						
CRVS	**Cervenica-Dubn**	**73.39**	**43**	e	**P**	**01 41 58.6**	**+0.1**
KAF	**Kangasniemi**	**73.81**	**29**	ep	**P**	**01 41 58.6**	**-2.3**
	comp=Z,2.4nm,0.6s,mb4.3						
KAF	**Kangasniemi**	**73.81**	**29**	eP	**P**	**01 41 58.6**	**-2.3**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
FINES	**FINESS Array B**	**73.82**	**30**	P	**P**	**01 41 58.5**	**-2.4**
	comp=Z,1.7nm,0.6s,mb4.1,baz=267,slow=4.0,SNR=9.2						
FINES				LR	LR	02 09 31.1	
	comp=Z,42nm,20.9s,MS3.7,baz=344,slow=32						
SVW2	**Sparrevohn**	**73.94**	**330**	P	**P**	**01 41 59.5**	**-2.2**
BZS	**Buzias**	**74.10**	**47**⇑	iP	**P**	**01 42 02.3**	**-0.3**
BZS	**Buzias**	**74.10**	**47**	⇑P	**P**	**01 42 02.4**	**-0.2**
DRGR		**74.61**	**45**⇓	iP	**P**	**01 42 04.9**	**-0.7**
DRGR		**74.61**	**45**	⇓P	**P**	**01 42 04.9**	**-0.7**
VTS	**Vitosha**	**75.85**	**50**⇓	iP	**P**	**01 42 12.7**	**0.0**
VTS	**Vitosha**	**75.85**	**50**	⇓P	**P**	**01 42 12.7**	**0.0**
JOF	**Joensuu**	**75.91**	**28**	ep	**P**	**01 42 06.2**	**-6.9**
BURAR	**Bucovina Array**	**76.11**	**44**⇓	iP	**P**	**01 42 14.6**	**+0.4**
BURAR	**Bucovina Array**	**76.11**	**44**	⇓P	**P**	**01 42 14.6**	**+0.4**
MLR	**Muntele Rosu**	**77.09**	**46**⇓	iP	**P**	**01 42 20.6**	**+0.8**
MLR	**Muntele Rosu**	**77.09**	**46**	⇓P	**P**	**01 42 20.6**	**+0.9**
AKASG	**Malin Array Be**	**77.91**	**40**	P	**P**	**01 42 21.7**	**-2.6**
	comp=Z,1.6nm,0.9s,mb4.0,baz=270,slow=5.8,SNR=7.9						
AKASG	**Malin Array Be**	**77.91**	**40**	P	**P**	**01 42 21.7**	**-2.6**
OBN	**Obninsk**	**80.81**	**35**⇑	eP	**P**	**01 42 39.4**	**-0.8**
OBN				e		01 42 49.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
BR131	**Keskin Array S**	**84.20**	**50**	eP	**P**	**01 42 57.4**	**-0.4**
	comp=Z,5.5nm,0.8s,mb4.7						
BR131				e		01 43 10.7	
BRTR	**Keskin Array B**	**84.20**	**50**	P	**P**	**01 42 57.3**	**-0.5**
	comp=Z,6.1nm,0.9s,mb4.8,baz=269,slow=4.1,SNR=33						
ANN	**Anapa**	**85.03**	**44**	eP	**P**	**01 43 10.1**	**+8.1**
ANN				i *PP	pP	01 43 20.0	+11
ANN				e		01 53 34.2	
ANN				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
MALT	**Malatya**	**88.19**	**50**⇑	iP	**P**	**01 43 18.0**	**+0.5**
MALT	**Malatya**	**88.19**	**50**	⇑P	**P**	**01 43 18.1**	**+0.6**
KIV	**Kislovodsk**	**88.82**	**44**	i P	**P**	**01 43 18.3**	**-2.1**
KIV				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.2						
TIXI	**Tiksi**	**89.04**	**356**	i P	**P**	**01 43 28.2**	**+6.7**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.9						
PPT	**Papeete**	**90.97**	**252**	LR	LR	02 17 05.7	
	comp=Z,68nm,20.2s,MS4.1,baz=18,slow=31						
AKTK	**Aktyubinsk**	**94.43**	**33**	P	**P**	**01 43 45.3**	**-1.1**
AKTO	**Aktyubinsk**	**94.43**	**33**	P	**P**	**01 43 45.3**	**-1.1**
	comp=Z,1.4nm,0.7s,mb4.5,baz=284,slow=5.2,SNR=8.6						
SNAA	**Sanae**	**99.61**	**164**	eP	Pdif	01 44 07.5	-2.3
SNAA				e		01 44 08.9	
SNAA				e		01 44 09.9	
SNAA				e		01 44 17.1	
SNAA	**Sanae**	**99.61**	**164**⇓	eP	Pdif	01 44 08.4	-1.4
SNAA	**Sanae**	**99.61**	**164**	eP	Pdif	01 44 08.3	-1.5
	comp=Z,4.3nm,0.9s						
SONM	**Songino Array**	**112.93**	**7**	PKKPbc	PKKPbc	01 59 54.1	+3.8
	comp=Z,0.8nm,0.7s,baz=170,slow=4.2,SNR=6.0						
MDJ	**Mudanjiang**	**115.30**	**349**	PKP	PKPdf	01 49 12.5	+4.6
MDJ				PP	PP		
	comp=Z,62nm,5.1s						
CN2	**Changchun**	**116.76**	**352**	ePKP	PKPdf	01 49 15.8	+5.0
MJAR	**Matsushiro Arr**	**120.61**	**339**	PKP	PKPdf	01 49 16.5	-1.6
	comp=Z,0.7nm,0.7s,baz=101,slow=0.9,SNR=4.3						
MJAR	**Matsushiro Arr**	**120.61**	**339**	PKP	PKPdf	01 49 16.5	-1.6
MAW	**Mawson**	**121.39**	**159**	PKP	PKPdf	01 49 14.5	-5.1
	comp=Z,0.5nm,0.5s,baz=102,slow=3.4,SNR=4.3						
LZH	**Lanzhou**	**124.09**	**11**	ePKP	PKPdf	01 49 24.9	+0.1
LZH				XPKP		01 49 29.8	
NJ2	**Nanjing**	**129.06**	**356**	ePKP	PKPdf	01 49 34.9	+0.6
ARMA	**Armidale**	**145.27**	**244**	eP	PKPbc	01 50 03.7	-0.2
CNB	**Canberra Magne**	**145.86**	**235**	eP	PKPdf	01 50 05.0	-0.1
	comp=Z,38nm,0.9s						
TOO	**Toolangi**	**147.86**	**229**	eP	PKPdf	01 50 09.6	+1.1
	comp=Z,8.8nm,0.8s						
STKA	**Stephens Creek**	**153.14**	**237**⇑	iP	PKPbc	01 50 23.1	-1.0
	comp=Z,5.5nm,0.9s						
STKA	**Stephens Creek**	**153.14**	**237**	PKPbc	PKPbc	01 50 22.8	-1.3
	comp=Z,5.6nm,0.8s,baz=78,slow=1.8,SNR=10.0						
WRA	**Warramunga Arr**	**162.03**	**264**	PKP	PKPdf	01 50 26.0	-1.8
	comp=Z,0.4nm,0.3s,baz=53,slow=0.2,SNR=5.6						
WRA				PKPab	PKPab	01 51 12.9	-1.2
	comp=Z,1.7nm,0.7s,baz=85,slow=4.3,SNR=5.9						
ASAR	**Alice Springs**	**162.09**	**252**	PKP	PKPdf	01 50 25.9	-1.9
	comp=Z,2.2nm,0.9s,baz=134,slow=1.5,SNR=14						
ASAR				PKPab	PKPab	01 51 12.9	-1.4
	comp=Z,5.3nm,0.8s,baz=109,slow=4.4,SNR=24						
ASPA	**Alice Springs**	**162.09**	**252**	eP	PKPab	01 51 13.1	-1.2

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*TRN **15** 01:35:02.9, 19.16N×6326W, h10km*
*ISCJB **15** 01:35:05.5±1.0, 1936N±007×6325W±004, h33km, Error ellipse: s-maj=9.8km s-min=4.2km az=32.8*
*NEIC **15** 01:35:06.0, 1938N×63.17W, h26km, MD3.7(RSPR), After RSPR.*
*RSPR **15** 01:35:06.0, 1938N×63.17W, h26km±18km, MD3.7/9, MD3.7/9*

ISC 15 01:35:05.4±1.4, **193N**±01×**6327W**±005, **h13**km±14km, **n24**, σ**0.59**/41, **15C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	**Anegada**	**1.14**	**243**⇑	eP	**Pb**	**01 35 26.4**	**-0.4**
ABV				eS	**Sb**	**01 35 41.8**	**+0.2**
TBVI	**Tortola**	**1.53**	**237**⇑	eP	**Pn**	**01 35 31.6**	**-0.8**
TBVI				eS	**Sn**	**01 35 51.7**	**-0.4**
SABS	**Saba**	**1.63**	**179**	eP	**Pn**	**01 35 34.7**	**+0.9**
SABT	**Saba**	**1.63**	**179**	e	**Pn**	**01 35 34.7**	**+0.9**
STAT	**Sint Eustatius**	**1.77**	**171**	e	**Sn**	**01 35 58.5**	**+0.3**
CDVI	**St. Croix**	**2.06**	**224**⇑	eP	**Pn**	**01 35 39.6**	**-0.2**
CDVI				eS	**Sn**	**01 36 05.2**	**-0.2**
CULB	**Culebra**	**2.16**	**243**⇑	eP	**Pn**	**01 35 40.9**	**-0.2**
CULB				eS	**Sn**	**01 36 07.3**	**-0.4**
MTP	**Monte Pirata**	**2.45**	**242**⇑	eP	**Pn**	**01 35 44.6**	**-0.5**
MTP				eS	**Sn**	**01 36 15.3**	**+0.4**
BPA	**Boggy Peak**	**2.58**	**148**	e	**Sn**	**01 36 16.9**	**-1.1**
CBYP	**Canovanas**	**2.64**	**249**⇑	eP	**Pn**	**01 35 47.6**	**-0.1**
HUMP	**Col San Antoni**	**2.69**	**246**⇑	eP	**Pn**	**01 35 47.9**	**-0.5**
HUMP				eS	**Sn**	**01 36 20.6**	**-0.1**
CPD	**Cerro la Pandu**	**2.79**	**245**⇑	eP	**Pn**	**01 35 49.6**	**-0.2**
CPD				eS	**Sn**	**01 36 23.3**	**+0.1**
SJG	**San Juan**	**2.96**	**248**⇑	eP	**Pn**	**01 35 52.0**	**-0.1**
SJG				eS	**Sn**	**01 36 27.6**	**+0.1**
CELP	**Cerrillos**	**3.35**	**250**⇓	eP	**Pn**	**01 35 57.4**	**0.0**
CELP				eS	**Sn**	**01 36 37.6**	**+0.5**
ICM	**Isla Caja Muer**	**3.37**	**247**⇑	eP	**Pn**	**01 35 58.1**	**+0.3**
ICM				eS	**Sn**	**01 36 38.2**	**+0.7**
OBIP	**Obispado Ponce**	**3.39**	**250**⇑	eP	**Pn**	**01 35 57.9**	**-0.1**
OBIP				eS	**Sn**	**01 36 38.0**	**0.0**
LZG	**Guadaloupe-1**	**3.41**	**155**	eP	**Pn**	**01 36 00.0**	**+1.7**
LZG				eS	**Sn**	**01 36 37.0**	**-1.6**
AOPR	**Arecibo Observ**	**3.42**	**255**⇑	eP	**Pn**	**01 35 57.9**	**-0.6**
AOPR				eS	**Sn**	**01 36 39.2**	**+0.3**
LRS	**Lares**	**3.52**	**255**⇑	eP	**Pn**	**01 35 59.6**	**-0.2**
DEG	**La Desirade**	**3.61**	**144**	eP	**Pn**	**01 36 02.4**	**+1.5**
AGPR	**Aguadilla, PR**	**3.72**	**258**⇑	eP	**Pn**	**01 36 02.1**	**-0.5**
AGPR				eS	**Sn**	**01 36 46.6**	**+0.3**
LSP	**Las Mesas**	**3.77**	**254**	eP	**Pn**	**01 36 02.9**	**-0.4**
LSP				eS	**Sn**	**01 36 48.0**	**+0.5**
MGP	**Maguayo**	**3.83**	**252**⇑	eP	**Pn**	**01 36 04.0**	**0.0**
MGP				eS	**Sn**	**01 36 49.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**3.85**	**252**	eP	**Pn**	**01 36 04.0**	**-0.3**
CRPR				eS	**Sn**	**01 36 49.4**	**0.0**

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*NEIC **15** 01:45:59.4, 1590N×9767W, h20km, MD4.1(MEX), After MEX.*

MEX 15 01:45:59.9±1.0, **1591N**×**9765W**, **h17**km±46km, **MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.45**	**37**	i P	Pn	01 46 22.8	-2.6
VHO				i S	Sn	01 46 39.0	-4.9
VHO	**Vista Hermosa**	**1.45**	**37**	i P	Pn	01 46 08.6	-17
VHO				i P		01 46 22.8	
VHO				i S	Sn	01 46 39.0	-4.9
OXX	**Oaxaca**	**1.46**	**37**	eP	Pn	01 46 23.0	-2.5
OXX				i S	Sn	01 46 39.0	-5.3
HUIG	**Huatulco**	**1.49**	**95**	i P	Pn	01 46 21.8	-4.1
HUIG				i S	Sn	01 46 40.4	-4.6
HUIG	**Huatulco**	**1.49**	**95**	i P	Pn	01 45 59.9	-26
HUIG				i P		01 46 21.8	
HUIG				i S	Sn	01 46 40.4	-4.6
UTMO	**Huajuapan**	**1.91**	**356**	i P	Pn	01 46 28.3	-3.4
UTMO				i S	Sn	01 46 49.9	-5.5
TPIG	**Tehuac#an**	**2.51**	**6**	i P	Pn	01 46 37.0	-2.9
TPIG				i S	Sn	01 47 05.3	-4.8
MEIG	**Mezcala**	**2.75**	**317**	i P	Pn	01 46 45.8	+2.6
MEIG				i S	Sn	01 47 12.8	-3.3
CAIG	**El Cayaco**	**2.75**	**295**	i S	Sn	01 46 23.8	-52
CAIG				i P		01 46 38.2	
CAIG				i S	Sn	01 47 13.0	-3.2
CMIG	**Matias Romero**	**2.90**	**66**	eP	Pn	01 46 44.0	-1.3
CMIG				i S	Sn	01 47 16.1	-3.6
PLIG	**Platanillo**	**3.04**	**325**	i S	Sn	01 46 35.6	-48
PLIG				i P		01 46 45.7	
PLIG				i S	Sn	01 47 19.7	-3.5
PPM	**Popocatepetl**	**3.27**	**344**	i P	Pn	01 46 41.4	-9.0
PPM				i S	Sn	01 47 29.5	+0.6
PPM	**Popocatepetl**	**3.27**	**344**	i P	Pn	01 46 41.0	-9.4
PPM				i S	Sn	01 47 29.5	+0.6

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*HLW **15** 02:24:51.7, 3703N×3075E, h33km, Mb3.6*
*ISCJB **15** 02:24:52.3±0.5, 3702N±004×3094E±004, h108km±7km, Error ellipse: s-maj=6.9km s-min=5.0km az=20.1*
*CSEM **15** 02:24:52.1±0.1, 37.17N×3096E, h80km, MD3.4, Error ellipse: s-maj=2.0km s-min=1.2km az=167.0*
*ISK **15** 02:24:53.4, 37.11N×3097E, h89km, MD3.4*

ISC 15 02:24:53.6±0.5, **3703N**±004×**3095E**±004, **h97**km±7km, **n39**, σ**1.04**/52, **3C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.27**	**242**	PG	**Pn**	**02 25 07.2**	**-0.5**
ANTB				SG	**Sn**	**02 25 17.1**	**-1.1**
BCK	**Bucak**	**0.52**	**327**	PG	**Pn**	**02 25 09.0**	**-0.2**
ELL	**Elmali**	**0.88**	**252**	PG	**Pn**	**02 25 13.4**	**+0.9**
ISP	**Isparta**	**0.89**	**337**	PG	**Pn**	**02 25 11.9**	**-0.7**
ISP				SG	**Sn**	**02 25 25.4**	**-1.4**
TKTP	**Tekketepe**	**1.13**	**334**	i P	**Pn**	**02 25 14.8**	**-0.4**
TKTP				i S	**Sn**	**02 25 32.0**	**+0.5**
TKTP	**Tekketepe**	**1.13**	**334**	i P	**Pn**	**02 25 14.8**	**-0.4**
TKTP				i S	**Sn**	**02 25 32.0**	**+0.5**
HDMB	**Hadim**	**1.23**	**92**	PN	**Pn**	**02 25 17.4**	**+0.9**
KONT	**Konya--Tatoy**	**1.45**	**50**	PN	**Pn**	**02 25 18.6**	**-0.5**
ERMK	**Ermenek**	**1.62**	**103**	i P	**Pn**	**02 25 22.5**	**+1.3**
ERMK				i S	**Sn**	**02 25 43.8**	**+1.6**
DNZL	**Cakiroluk**	**1.65**	**294**	i P	**Pn**	**02 25 22.1**	**+0.6**
DNZL				i S	**Sn**	**02 25 43.6**	**+0.7**
DENT	**Denizli**	**1.69**	**296**	PN	**Pn**	**02 25 22.4**	**+0.4**
KDHN	**Kadinhani**	**1.76**	**31**	i P	**Pn**	**02 25 22.1**	**-0.8**
KDHN				i S	**Sn**	**02 25 43.9**	**-1.3**
DALT	**Dalyan (Mudla)**	**1.87**	**263**	PN	**Pn**	**02 25 25.5**	**+1.2**
KIZT	**Kizilcal**	**1.99**	**21**	PN	**Pn**	**02 25 25.0**	**-0.9**
YER	**Yerkesik**	**2.13**	**274**	PN	**Pn**	**02 25 28.8**	**+1.1**
IKL	**Isikli**	**2.34**	**109**	PN	**Pn**	**02 25 31.6**	**+1.1**
ESKT	**Eskisehir**	**2.49**	**358**	PN	**Pn**	**02 25 31.7**	**-0.8**
ESKT	**Eskisehir**	**2.49**	**358**	i P	**Pn**	**02 25 31.4**	**-1.1**
ESKT				i S	**Sn**	**02 25 57.7**	**-4.6**
SEYT	**Eskypehyr**	**2.49**	**358**	i P	**Pn**	**02 25 31.4**	**-1.1**
SEYT				i S	**Sn**	**02 25 57.7**	**-4.6**
AYDN	**Tasoluk**	**2.52**	**285**	i P	**Pn**	**02 25 33.5**	**+0.6**
AYDN				i S	**Sn**	**02 26 04.3**	**+1.2**
MEST	**Erdemli**	**2.60**	**99**	i P	**Pn**	**02 25 35.8**	**+1.8**
MEST				i S	**Sn**	**02 26 01.2**	**-3.8**
DAT	**Datca**	**2.72**	**265**	ePN	**Pn**	**02 25 36.4**	**+0.9**
CSS	**Prodhromos**	**2.82**	**136**	ePN	**Pn**	**02 25 38.8**	**+1.9**
MERS	**Mersin**	**2.87**	**92**	ePN	**Pn**	**02 25 37.9**	**+0.4**
BODT	**Bodrum**	**2.91**	**272**	ePN	**Pn**	**02 25 39.2**	**+1.2**
KAMT	**Kaman**	**3.20**	**42**	ePN	**Pn**	**02 25 41.5**	**-0.4**
IZM	**Izmir**	**3.23**	**296**	ePN	**Pn**	**02 25 42.7**	**+0.4**
AMAG	**Maghara**	**6.64**	**163**	P	**Pn**	**02 26 28.7**	**+0.2**
KOT	**Kottamia**	**7.12**	**174**	P	**Pn**	**02 26 34.9**	**-0.2**
KOT	**Kottamia**	**7.12**	**174**	P	**Pn**	**02 26 34.8**	**-0.2**
SLUM		**7.28**	**222**	P	**Pn**	**02 26 34.8**	**-2.4**
SUZ		**7.34**	**167**	⇓P	**Pn**	**02 26 37.5**	**-0.5**
HSAF	**As Saff**	**7.40**	**176**	⇓P	**Pn**	**02 26 38.6**	**-0.3**
GLL	**Jalalah**	**7.46**	**175**	P	**Pn**	**02 26 38.9**	**-0.7**
AWBH		**8.85**	**192**	⇑P	**Pn**	**02 26 57.3**	**-1.3**
AWBH				S	**Sn**	**02 28 29.7**	**-6.8**
SWA1		**8.90**	**211**	⇓P	**Pn**	**02 26 57.9**	**-1.4**
SWA2		**9.02**	**212**	⇑P	**Pn**	**02 26 59.5**	**-1.4**
SWA2				S	**Sn**	**02 28 33.3**	**-7.4**
SWA2		**9.02**	**212**	P	**Pn**	**02 26 59.5**	**-1.4**
HFRF	**Wahat Farafira**	**10.10**	**194**	⇑P	**Pn**	**02 27 14.2**	**-1.3**

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*IDC **15** 02:31:24.6±2.3, 4.12S×15368E, h360km±21km, mb3.5/8, mb1 3.7/10, mb1mx3.6/16, mbtmp4.3/10, Error ellipse: s-maj=26.7km s-min=15.0km az=111.0*
*ISCJB **15** 02:31:27.0±3.3, 42S±0.1×1535E±03, h393km±26km, mb3.9/12, Error ellipse: s-maj=40.9km s-min=22.9km az=168.8*
*NEIC **15** 02:31:28.5±2.3, 4.16S×15344E, h396km±19km, mb4.2/6, Error ellipse: s-maj=24.0km s-min=15.3km az=81.0*

ISC 15 02:31:26.5±3.2, **42S**±01×**1536E**±02, **h380**km±25km, **n23**, σ**0.63**/20, **mb3.8**/12, **1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.26**	**231**	P	**Pn**	**02 33 23.7**	**-0.4**
	5.3nm,0.3s,baz=23,slow=8.5,SNR=15						
CTA	**Charters Tower**	**17.36**	**204**	P	**P**	**02 35 06.5**	**+1.4**
	1.0nm,0.3s,baz=28,slow=10,SNR=12						
CTAO	**Charters Tower**	**17.36**	**204**	eP	**P**	**02 35 08.3**	**+3.2**
	14nm,0.7s						
KAKA	**Kakadu**	**22.59**	**247**	eP	**P**	**02 35 55.6**	**-0.3**
	3.3nm,0.3s,mb4.0						
WRAB	**Tennant Creek**	**24.45**	**229**	eP	**P**	**02 36 12.6**	**-0.1**
	7.4nm,0.6s,mb4.1						
WB2	**Warramunga Arr**	**24.46**	**229**⇓	iP	**P**	**02 36 12.9**	**+0.2**
WRA	**Warramunga Arr**	**24.47**	**229**	P	**P**	**02 36 13.1**	**+0.4**
	4.7nm,0.5s,mb4.0,baz=53,slow=9.4,SNR=25						
AS31	**Alice Springs**	**27.16**	**223**	eP	**P**	**02 36 36.7**	**0.0**
ASAR	**Alice Springs**	**27.16**	**223**	P	**P**	**02 36 36.8**	**+0.1**
	7.0nm,0.3s,mb4.3,baz=55,slow=8.8,SNR=92						
ASAR				S	**S**	**02 40 51.1**	**+4.2**
	0.9nm,0.5s,baz=54,slow=15,SNR=8.2						
ASPA	**Alice Springs**	**27.16**	**223**	eP	**P**	**02 36 36.7**	**0.0**
STKA	**Stephens Creek**	**29.77**	**201**	P	**P**	**02 37 00.1**	**+0.4**
	0.8nm,0.3s,mb3.4,baz=344,slow=21,SNR=3.1						
FITZ	**Fitzroy Crossi**	**30.68**	**241**	eP	**P**	**02 37 06.9**	**-0.7**
	1.8nm,0.3s,mb3.8						
FITZ	**Fitzroy Crossi**	**30.68**	**241**	P	**P**	**02 37 07.0**	**-0.6**
	1.1nm,0.3s,mb3.6,baz=60,slow=9.9,SNR=19						
MBWA	**Marble Bar**	**36.99**	**240**	P	**P**	**02 38 00.9**	**-0.4**
	1.4nm,0.4s,mb3.5						
SONM	**Songino Array**	**66.26**	**327**	P	**P**	**02 41 35.6**	**+0.5**
	0.7nm,0.4s,mb3.7,baz=147,slow=6.7,SNR=5.2						
CASY	**Casey**	**68.84**	**197**	eP	**P**	**02 41 49.8**	**-1.3**
	2.5nm,0.4s,mb4.3						
VNDA	**Vanda**	**73.41**	**178**	P	**P**	**02 42 18.1**	**-0.1**
	0.4nm,0.7s,mb3.2,baz=322,slow=4.1,SNR=5.3						
MKAR	**Makanchi Array**	**80.42**	**319**	P	**P**	**02 42 57.1**	**+0.3**
	0.8nm,0.4s,mb3.8,baz=95,slow=7.5,SNR=6.4						
MAW	**Mawson**	**86.45**	**203**	P	**P**	**02 43 27.1**	**-0.1**
	1.1nm,0.5s,mb4.0,baz=43,slow=2.2,SNR=7.4						
GERES	**GERESS Array B**	**123.97**	**329**	PKP	PKPdf	02 49 41.0	+0.9
	0.4nm,0.5s,baz=69,slow=1.9,SNR=4.0						
BDFB	**Brasilia**	**150.89**	**133**	PKPbc	PKPbc	02 50 35.8	+1.1
	2.5nm,0.5s,baz=202,slow=3.0,SNR=5.1						
TORD	**Torodi Ar. Bea**	**150.90**	**290**	PKPbc	PKPbc	02 50 35.7	+1.0
	1.1nm,0.4s,baz=51,slow=1.8,SNR=6.7						
TORD	**Torodi Ar. Bea**	**150.90**	**290**	PKPbc	PKPbc	02 50 35.7	+1.0

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*ISCJB **15** 02:47:48.7±0.9, 55.1S±02×1244W±03, h10km, mb4.2/8, Error ellipse: s-maj=34.6km s-min=19.0km az=105.8*
*IDC **15** 02:47:49.1±1.1, 55.15S×12448W, h0km, mb4.1/4, mb1 4.3/4, mb1mx4.0/14, mbtmp4.1/4, Error ellipse: s-maj=54.4km s-min=29.4km az=161.0*
*NEIC **15** 02:47:50.3±0.7, 5498S×12449W, h10km, mb4.0/5, Error ellipse: s-maj=29.4km s-min=16.2km az=142.0*

ISC 15 02:47:50.6±0.9, **551S**±02×**1245W**±03, **h10**km, **n12**, σ**1.03**/9, **mb4.2**/8, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	**32.44**	**202**	P	**P**	**02 54 22.5**	**+1.7**
	2.5nm,1.0s,mb4.0						
VNDA	**Vanda**	**33.49**	**202**	P	**P**	**02 54 29.4**	**-0.6**
	0.6nm,0.9s,mb3.5,baz=97,slow=4.7,SNR=3.2						
VNDA	**Vanda**	**33.49**	**202**	eP	**P**	**02 54 29.7**	**-0.3**
	1.2nm,0.9s,mb3.8						
CASY	**Casey**	**52.03**	**205**	P	**P**	**02 56 59.3**	**-1.0**
	0.6nm,0.6s,mb3.7						
LPAZ	**La Paz**	**57.73**	**71**	P	**P**	**02 57 43.0**	**+1.4**
	1.6nm,0.9s,mb4.0,baz=180,slow=7.1,SNR=4.5						
DZM	**Mont Dzumac**	**60.26**	**274**	P	**P**	**02 57 59.6**	**+0.5**
	4.5nm,0.8s,mb4.5,baz=123,slow=8.9,SNR=3.1						
SAML	**Samuel**	**66.48**	**71**	eP	**P**	**02 58 39.0**	**-1.3**
	1.4nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**80.06**	**250**	P	**P**	**03 00 00.6**	**+0.2**
	3.9nm,0.9s,mb4.3,baz=146,slow=4.8,SNR=4.5						
MBWA	**Marble Bar**	**86.54**	**237**	eP	**P**	**03 00 33.0**	**-0.9**
	8.8nm,1.1s,mb4.9						
DAWY	**Dawson**	**119.40**	**353**	eP	Pdif	03 03 00.6	-1.7
SONM	**Songino Array**	**148.11**	**278**	PKPbc	PKPbc	03 07 34.8	-1.7
	0.9nm,0.9s,baz=132,slow=4.3,SNR=4.4						
GERES	**GERESS Array B**	**153.81**	**86**	PKPbc	PKPbc	03 07 48.3	-1.7
	0.5nm,0.7s,baz=213,slow=4.5,SNR=2.9						

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*IDC **15** 02:48:55.8±0.7, 570S×13063E, h0km, mb4.6/12, mb1 4.7/15, mb1mx4.6/19, mbtmp4.7/15, ML5.0/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/28, Error ellipse: s-maj=36.7km s-min=13.0km az=74.0*
*ISCJB **15** 02:48:58.1±0.4, 576S±004×1309E±0.1, h33km, mb4.9/33, Error ellipse: s-maj=18.0km s-min=4.4km az=148.7*
*BJI **15** 02:48:58.7, 580S×13080E, h41km, mB5.1, mb4.9, Ms4.8, Msz4.6*
*NEIC **15** 02:49:00.8±0.4, 574S×13073E, h35km, mb5.2/18, Error ellipse: s-maj=18.2km s-min=6.0km az=72.0*
*MOS **15** 02:49:00.5±1.3, 578S×13071E, h52km, mb5.0/8, Error ellipse: s-maj=26.4km s-min=8.8km az=113.0*

ISC 15 02:49:00.5±0.4, **573S**±005×**1309E**±01, **h35**km, **n74**, σ**0.89**/80, **mb4.9**/33, **5C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.09**	**168**	eP	**Pn**	**02 50 45.2**	**+3.5**
	94nm,0.2s						
KAKA				eS	**Sn**	**02 52 00.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**13.34**	**202**	eP	**Pn**	**02 52 05.9**	**-1.4**
	32nm,0.6s						
FITZ				eS	**Sn**	**02 54 25.1**	**-9.2**
FITZ	**Fitzroy Crossi**	**13.34**	**202**	Pn	**Pn**	**02 52 05.3**	**-2.0**
	8.4nm,0.3s,baz=34,slow=12,SNR=136						
FITZ				Sn	**Sn**	**02 54 27.6**	**-6.7**
	3.5nm,0.3s,baz=212,slow=19,SNR=5.3						
WRAB	**Tennant Creek**	**14.50**	**167**	eP	**Pn**	**02 52 21.9**	**-1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRAB				*e*		02 54 54.9	
WRAB				pmax	pmax		
	comp=Z,44nm,0.5s						
WRAB	**Tennant Creek**	**14.50**	**167**	*e*Pn	**Pn**	**02 52 21.9**	**-1.3**
	comp=Z,44nm,0.5s						
WRAB				*e*Sn	**Sn**	**02 54 54.9**	**-7.7**
WRA	**Warramunga Arr**	**14.51**	**167**	Pn	**Pn**	**02 52 21.7**	**-1.5**
	comp=Z,5.9nm,0.3s,baz=344,slow=14,SNR=67						
WRA				Sn	**Sn**	**02 54 54.1**	**-8.6**
	comp=Z,9.0nm,0.3s,baz=346,slow=22,SNR=7.8						
WB2	**Warramunga Arr**	**14.51**	**167**	*e*P	**Pn**	**02 52 21.7**	**-1.6**
WB2				*e*S	**Sn**	**02 54 54.4**	**-8.4**
WB2	**Warramunga Arr**	**14.51**	**167**	*e*Pn	**Pn**	**02 52 21.7**	**-1.6**
WB2				*e*Sn	**Sn**	**02 54 55.7**	**-7.1**
PMG	**Port Moresby**	**16.48**	**104**	LR	LR	02 59 26.8	
	comp=Z,107nm,18.6s,baz=251,slow=38						
AS31	**Alice Springs**	**18.06**	**171**	*e*Pn	**Pn**	**02 53 09.7**	**+1.2**
AS31				*e*Sn	**Sn**	**02 56 22.7**	**-6.2**
ASAR	**Alice Springs**	**18.06**	**171**	P	**Pn**	**02 53 09.9**	**+1.4**
	comp=Z,7.3nm,0.3s,baz=344,slow=7.9,SNR=120						
ASAR				S	**S**	**02 56 20.7**	**-13**
	comp=Z,3.3nm,0.3s,baz=349,slow=24,SNR=11						
ASPA	**Alice Springs**	**18.06**	**171**	*e*P	**Pn**	**02 53 10.2**	**+1.6**
ASPA				*e*S	**S**	**02 56 19.8**	**-14**
KKM	**Kota Kinabalu**	**18.79**	**308**	P	**Pn**	**02 53 18.5**	**+1.2**
KKM	**Kota Kinabalu**	**18.79**	**308**	*e*P	**Pn**	**02 53 18.7**	**+1.3**
MBWA	**Marble Bar**	**18.80**	**214**	*e*P	**Pn**	**02 53 18.2**	**+0.7**
	comp=Z,13nm,0.5s						
CTA	**Charters Tower**	**20.62**	**135**	*e*P	**P**	**02 53 41.9**	**+5.2**
	comp=Z,6.0nm,0.8s						
CTA	**Charters Tower**	**20.62**	**135**	P	**P**	**02 53 41.1**	**+4.4**
	comp=Z,6.5nm,0.7s,baz=305,slow=12,SNR=6.2						
CTA				LR	LR	03 02 28.8	
	comp=Z,97nm,19.4s,baz=43,slow=39						
CTA	**Charters Tower**	**20.62**	**135**	*e*P	**P**	**02 53 41.9**	**+5.2**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSM	**Kuching**	**21.81**	**289**	*e*P	**P**	**02 53 42.3**	**-7.2**
FORT	**Forrest**	**25.07**	**186**	*e*P	**P**	**02 54 20.8**	**-0.7**
	comp=Z,45nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**27.86**	**160**	*e*P	**P**	**02 54 48.5**	**+1.8**
	comp=Z,3.0nm,0.3s,mb4.4						
STKA	**Stephens Creek**	**27.86**	**160**	P	**P**	**02 54 48.7**	**+2.0**
	comp=Z,4.1nm,0.3s,mb4.5,baz=335,slow=8.1,SNR=29						
STKA	**Stephens Creek**	**27.86**	**160**	*e*P	**P**	**02 54 48.6**	**+1.9**
KLBR	**Kellerberrin**	**28.54**	**204**	*e*P	**P**	**02 54 53.9**	**+1.1**
	comp=Z,19nm,0.6s,mb5.0						
NWAO	**Narrogin (SRO)**	**29.92**	**204**	P	**P**	**02 55 05.8**	**+0.8**
	comp=Z,17nm,0.9s,mb4.7,baz=175,slow=6.0,SNR=8.9						
NWAO	**Narrogin (SRO)**	**29.92**	**204**	*e*P	**P**	**02 55 06.3**	**+1.3**
NWAO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NWAO	**Narrogin (SRO)**	**29.92**	**204**	*e*P	**P**	**02 55 06.3**	**+1.2**
	comp=Z,3.7nm,0.4s,mb4.5						
JOW	**Kunigami**	**32.47**	**356**	P	**P**	**02 55 29.1**	**+1.7**
	comp=Z,19nm,0.7s,mb5.0,baz=123,slow=7.4,SNR=4.2						
GYA	**Guiyang**	**39.72**	**325**⇑	*i*P	**P**	**02 56 29.5**	**+0.1**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
CHTO	**Chiang Mai**	**39.86**	**308**	*e*P	**P**	**02 56 30.6**	**0.0**
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
CHTO	**Chiang Mai**	**39.86**	**308**	*e*P	**P**	**02 56 30.6**	**-0.1**
	comp=Z,11nm,0.9s,mb4.6						
XAN	**Xi'an**	**44.70**	**334**	P	**P**	**02 57 09.3**	**-0.7**
XAN				AP	pP	02 57 16.8	-3.6
XAN				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.7						
BJT	**Baijiatuau**	**47.51**	**345**	*e*P	**P**	**02 57 32.1**	**-0.1**
BJT				pmax	pmax		
	comp=Z,21nm,0.6s						
BJT	**Baijiatuau**	**47.51**	**345**	*e*P	**P**	**02 57 32.1**	**-0.1**
	comp=Z,22nm,0.6s,mb5.3						
BJI	**Beijing**	**47.53**	**345**	P	**P**	**02 57 32.1**	**-0.2**
BJI				AMB	AMB		
	comp=Z,32nm,0.6s,mb5.5						
LSA	**Lhasa**	**51.95**	**315**	*e*P	**P**	**02 58 06.3**	**+0.4**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
LSA	**Lhasa**	**51.95**	**315**	*e*P	**P**	**02 58 06.3**	**+0.4**
	comp=Z,8.9nm,0.4s,mb5.0						
GTA	**Gaotai**	**53.33**	**330**	*e*P	**P**	**02 58 16.6**	**+0.5**
GTA				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.4						
JIRN	**Jiri**	**54.48**	**310**	*e*P	**P**	**02 58 24.5**	**0.0**
	comp=Z,17nm,0.3s,mb5.5						
GUN	**Gumba**	**54.84**	**310**	*e*P	**P**	**02 58 27.0**	**-0.1**
	comp=Z,46nm,0.5s,mb5.8						
PKI	**Pulchoki**	**55.03**	**309**	*e*P	**P**	**02 58 28.1**	**-0.4**
	comp=Z,34nm,0.8s,mb5.5						
PKI	**Pulchoki**	**55.03**	**309**	*e*P	**P**	**02 58 28.1**	**-0.4**
PKI				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.4						
KKN	**Kakani**	**55.24**	**310**	*e*P	**P**	**02 58 29.7**	**-0.3**
	comp=Z,26nm,0.5s,mb5.5						
KKN	**Kakani**	**55.24**	**310**	*e*P	**P**	**02 58 29.7**	**-0.3**
KKN				pmax	pmax		
	comp=Z,27nm,0.5s,mb5.5						
DMN	**Daman**	**55.28**	**309**	*e*P	**P**	**02 58 30.2**	**-0.1**
	comp=Z,26nm,0.5s,mb5.5						
GKN	**Gorkha**	**55.84**	**309**	*e*P	**P**	**02 58 33.8**	**-0.5**
	comp=Z,42nm,0.3s,mb6.0						
KOLN	**Koldanda**	**56.53**	**309**	*e*P	**P**	**02 58 39.1**	**-0.1**
	comp=Z,40nm,0.6s,mb5.6						
ULN	**Ulaanbaatar**	**57.36**	**341**⇑	*i*P	**P**	**02 58 45.8**	**+0.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
ULN	**Ulaanbaatar**	**57.36**	**341**⇑	*i*P	**P**	**02 58 45.8**	**+0.6**
	comp=Z,6.0nm,0.6s,mb4.8						
SONM	**Songino Array**	**57.55**	**341**	P	**P**	**02 58 47.1**	**+0.6**
	comp=Z,4.6nm,0.6s,mb4.7,baz=161,slow=6.8,SNR=37						
ZAK	**Zakamensk**	**60.79**	**340**	*e*P	**P**	**02 59 08.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2						
WMQ	**Urumqi**	**62.86**	**326**	*e*P	**P**	**02 59 23.0**	**+0.2**
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.1						
MKAR	**Makanchi Array**	**67.69**	**326**	P	**P**	**02 59 53.9**	**-0.2**
	comp=Z,17nm,0.4s,mb5.4,baz=105,slow=8.0,SNR=130						
AAK	**Ala-Archa**	**70.19**	**319**	*e*P	**P**	**03 00 09.2**	**-0.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
AAK	**Ala-Archa**	**70.19**	**319**	*e*P	**P**	**03 00 09.2**	**-0.4**
	comp=Z,4.8nm,0.5s,mb4.7						
ZAL	**Zalesovo**	**70.87**	**333**	P	**P**	**03 00 12.9**	**-0.9**
	comp=Z,3.7nm,0.3s,mb4.7,baz=354,slow=6.1,SNR=8.0						
KURK	**Kurchatov**	**71.93**	**328**	P	**P**	**03 00 19.6**	**-0.6**
	comp=Z,58nm,0.4s,mb5.9,SNR=7.3						
KURK	**Kurchatov**	**71.93**	**328**⇑	*e*P	**P**	**03 00 19.7**	**-0.5**
KURK				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
KURK	**Kurchatov**	**71.93**	**328**⇑	*e*P	**P**	**03 00 19.7**	**-0.5**
	comp=Z,22nm,1.4s,mb4.9						
VNDA	**Vanda**	**73.59**	**173**	P	**P**	**03 00 30.5**	**+0.5**
	comp=Z,0.7nm,0.5s,mb3.9,baz=324,slow=6.7,SNR=12						
WSAR	**Wadi Sarin**	**76.16**	**296**	P	**P**	**03 00 45.4**	**+0.5**
	comp=Z,4.0nm,0.8s,mb4.4,baz=158,slow=14,SNR=5.3						
MAW	**Mawson**	**76.47**	**201**	P	**P**	**03 00 47.1**	**+0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=69,slow=8.6,SNR=3.5						
MAW	**Mawson**	**76.47**	**201**	*e*P	**P**	**03 00 47.3**	**+0.7**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MAW	**Mawson**	**76.47**	**201**	*e*P	**P**	**03 00 47.3**	**+0.7**
	comp=Z,0.8nm,0.5s,mb3.9						
BVAR	**Borovoye Array**	**77.50**	**327**	P	**P**	**03 00 51.8**	**-0.6**
	comp=Z,4.1nm,0.7s,mb4.5,baz=132,slow=6.6,SNR=23						
BRVK	**Borovoye**	**77.57**	**327**	*e*P	**P**	**03 00 52.1**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
BRVK	**Borovoye**	**77.57**	**327**	*e*P	**P**	**03 00 52.1**	**-0.7**
	comp=Z,5.4nm,1.0s,mb4.4						
ZRNK	**Zerenda**	**78.21**	**327**	*e*P	**P**	**03 00 38.6**	**-18**
AKTK	**Aktyubinsk**	**83.65**	**322**	P	**P**	**03 01 24.9**	**-0.5**
AKTO	**Aktyubinsk**	**83.65**	**322**	P	**P**	**03 01 24.9**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.4,baz=113,slow=8.7,SNR=9.8						
ARU	**Arti**	**85.13**	**328**	*e*P	**P**	**03 01 31.3**	**-1.6**
TORD	**Torodi Ar. Bea**	**129.47**	**282**	PKP	PKPdf	03 08 05.5	+0.1
	comp=Z,0.5nm,0.6s,baz=91,slow=1.5,SNR=10						
CPUP	**Villa Florida**	**147.14**	**166**	PKPbc	PKPbc	03 08 40.2	+0.4
	comp=Z,0.6nm,0.5s,baz=54,slow=5.1,SNR=3.1						
LPAZ	**La Paz**	**151.11**	**139**	PKPbc	PKPbc	03 08 52.0	+2.2
	comp=Z,1.2nm,0.6s,baz=200,slow=4.2,SNR=9.0						

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*NIED **15** 02:52:00, 2950N×14260E, h17km, Mw4.8 Best double couple: M0 1.58000×10^16 NP1: φs159.00000°, δ81.00000°, λ-76.00000°. NP2: φs281.00000°, δ17.00000°, λ-148.00000°.*

*MOS **15** 02:52:48.7±0.8, 2932N×14196E, h33km, mb5.0/27, Error ellipse: s-maj=13.4km s-min=5.9km az=113.9*

*ISCJB **15** 02:52:48.1±1.0, 2943N±003×14186E±004, h20km±6km, mb4.6/69, MS4.2/9, Error ellipse: s-maj=5.8km s-min=4.6km az=109.0*

*BJI **15** 02:52:49.4, 2937N×14209E, h46km, mB4.8, mb4.6, Ms4.3, Msz4.1*

*IDC **15** 02:52:51.0±2.8, 2931N×14197E, h37km±23km, mb4.2/21, mb1 4.4/24, mb1mx4.3/29, mbtmp4.5/24, ML4.1/3, MS4.0/4, Ms1 4.0/4, ms1mx3.5/42, Error ellipse: s-maj=18.4km s-min=12.6km az=76.0*

*NEIC **15** 02:52:51.4±0.2, 2933N×14187E, h35km, mb4.7/31, MW4.7(NIED), Error ellipse: s-maj=7.1km s-min=5.8km az=181.0*

ISC 15 02:52:50.4±1.0**, 2936N**±003×**14187E**±004**, h27**km±7km**, h34**km±1.0km**: pP-P, n176,** σ1§**17**/195**, mb4.6**/69**, MS4.2**/9**, 4C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.27**	**173**	Pn	**Pn**	**02 53 26.2**	**0.0**
	35nm,0.3s,baz=270,slow=20,SNR=3.1						
CBIJ				Sn	**Sn**	**02 53 50.1**	**-3.1**
	85nm,0.3s,baz=74,slow=22,SNR=6.5						
JHJ	**Hachijo jima 2**	**4.15**	**335**	Pn	**Pn**	**02 53 52.2**	**+0.2**
	23nm,0.3s,baz=44,slow=21,SNR=7.6						
JHJ				Sn	**Sn**	**02 54 40.9**	**+1.2**
	40nm,0.3s,baz=72,slow=20,SNR=3.3						
JHJ				LR	LR	02 55 34.8	
	comp=Z,2μm,18.6s,baz=86,slow=39						
BSO1	**Boso 1**	**5.33**	**352**	P	**Pn**	**02 54 07.5**	**-0.7**
BSO1				*e*S	**Sn**	**02 55 06.8**	**-1.9**
BSO3	**Boso 3**	**5.55**	**348**	P	**Pn**	**02 54 11.2**	**0.0**
BSO4	**Boso 4**	**5.76**	**347**	P	**Pn**	**02 54 14.2**	**+0.1**
JOD2	**Odawara 2**	**6.34**	**339**	P	**Pn**	**02 54 22.9**	**+0.8**
JHMK	**Hamakita**	**6.46**	**328**	P	**Pn**	**02 54 25.6**	**+1.8**
HMMJ	**Hamamatsu 2**	**6.51**	**328**	P	**Pn**	**02 54 24.4**	**-0.1**
JHU	**Hanno**	**6.83**	**342**	P	**Pn**	**02 54 27.8**	**-1.0**
JHU				*e*S	**Sn**	**02 55 44.0**	**-1.7**
JNY	**Yasuok**	**6.88**	**331**	P	**Pn**	**02 54 32.5**	**+3.1**
JYT	**Yasato**	**6.99**	**349**	P	**Pn**	**02 54 29.6**	**-1.4**
JRY	**Ryogami san**	**7.09**	**340**	P	**Pn**	**02 54 33.3**	**+0.9**
JRY				*e*S	**Sn**	**02 55 51.3**	**-0.8**
JHO	**Hitachi**	**7.31**	**352**	P	**Pn**	**02 54 33.1**	**-2.3**
JHO				*e*S	**Sn**	**02 55 52.0**	**-5.5**
JAG	**Ashikaga**	**7.33**	**345**	P	**Pn**	**02 54 34.5**	**-1.2**
MJAR	**Matsushiro Arr**	**7.79**	**338**	Pn	**Pn**	**02 54 42.0**	**0.0**
	8.1nm,0.3s,baz=140,slow=14,SNR=62						
MJAR				Sn	**Sn**	**02 56 10.9**	**+1.5**
	1.0nm,0.3s,baz=171,slow=16,SNR=4.9						
MAJO	**Matsushiro**	**7.80**	**338**	*e*P	**Pn**	**02 54 42.5**	**+0.4**
MAT	**Matsushiro**	**7.80**	**338**	P	**Pn**	**02 54 43.1**	**+1.0**
MAT				S	**Sn**	**02 56 10.6**	**+1.2**
MAT	**Matsushiro**	**7.80**	**338**	P	**Pn**	**02 54 43.0**	**+0.9**
MAT				*e*S	**Sn**	**02 56 10.2**	**+0.8**
MAT	**Matsushiro**	**7.80**	**338**	*e*P	**Pn**	**02 54 43.0**	**+0.9**
MAT				*e*S	**Sn**	**02 56 11.0**	**+1.6**
MAT				pmax	pmax		
	comp=Z,16nm,0.7s						
MAT	**Matsushiro**	**7.80**	**338**	*e*P	**Pn**	**02 54 43.0**	**+0.9**
	comp=Z,16nm,0.7s						
MAT				*e*S	**Sn**	**02 56 11.0**	**+1.6**
JFK	**Kawauchi**	**8.03**	**354**	P	**Pn**	**02 54 42.2**	**-3.0**
JFK				*e*S	**Sn**	**02 56 07.2**	**-7.9**
JMK	**Ichinoseki**	**9.58**	**357**	P	**Pn**	**02 55 04.0**	**-2.6**
JMK				*e*S	**Sn**	**02 56 42.6**	**-11**
JOW	**Kunigami**	**12.27**	**261**	LR	LR	02 59 57.9	
	comp=Z,2μm,20.9s,baz=286,slow=35						
ASAJ	**Asahikawa**	**14.74**	**2**	Pn	**Pn**	**02 56 13.7**	**-3.4**
	comp=Z,1.1nm,0.3s,baz=188,slow=12,SNR=7.6						
ASAJ				LR	LR	03 03 23.4	
	comp=Z,351nm,18.1s,baz=344,slow=43						
ASAJ	**Asahikawa**	**14.74**	**2**	P	**Pn**	**02 56 13.7**	**-3.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,351nm,18.2s						
INCN	**Inchon**	**15.07**	**306**	*e*Pn	**Pn**	**02 56 27.6**	**+6.1**
VLA	**Vladivostok**	**15.90**	**332**	P	**Pn**	**02 56 32.0**	**-0.3**
VLA				pmax	pmax		
	comp=Z,22nm,0.7s						
VLA				MLR	MLR		
	comp=Z,1μm,20.0s						
GUMO	**Guam**	**15.94**	**169**	LR	LR	03 01 26.8	
	comp=Z,350nm,21.9s,baz=191,slow=32						
YSS	**Yuzh-Sakhalins**	**17.58**	**2**	*e*P	**Pn**	**02 56 51.9**	**-1.5**
YSS				*e*		03 00 14.0	
YSS				MLR	MLR		
	comp=N,400nm,17.0s						
YSS				MLR	MLR		
	comp=E,400nm,17.0s						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
YSS	**Yuzh-Sakhalins**	**17.58**	**2**	*e*Pn	**Pn**	**02 56 52.7**	**-0.7**
	comp=Z,11nm,0.4s						
SSE	**Sheshan**	**17.96**	**281**	P	**Pn**	**02 56 58.5**	**+0.3**
SSE				AP	pP	02 57 08.8	+3.0
SSE				S	**Sn**	**03 00 16.8**	**-0.9**
SSE				AMB	AMB		
	comp=Z,31nm,0.8s						
SSE				AMB	AMB		
	comp=Z,187nm,9.1s						
SSE				LR	LR		
	comp=N,274nm,20.3s						
SSE				LR	LR		
	comp=E,332nm,20.3s						
SSE				LR	LR		
	comp=Z,400nm,18.4s						
MDJ	**Mudanjiang**	**18.08**	**331**	P	**Pn**	**02 57 00.8**	**+1.2**
MDJ				AP	pP	02 57 09.0	+1.9
MDJ				XP	sP	02 57 13.1	+2.6
MDJ				S	**Sn**	**03 00 23.0**	**+2.5**
MDJ				PCP	PcP	03 01 35.3	+2.3
MDJ				PCS	PcS	03 05 11.1	+1.6
MDJ				AMB	AMB		
	comp=Z,23nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,148nm,5.7s						
MDJ				LR	LR		
	comp=N,176nm,19.3s						
MDJ				LR	LR		
	comp=E,351nm,17.6s						
MDJ				LR	LR		
	comp=Z,477nm,17.6s						
MDJ	**Mudanjiang**	**18.08**	**331**	*e*Pn	**Pn**	**02 56 59.4**	**-0.2**
	comp=Z,12nm,0.6s						
TATO	**Taipei**	**18.65**	**261**	*e*P	**Pn**	**02 57 07.0**	**+0.4**
	comp=Z,146nm,1.1s						
NACB	**Ninganchiao**	**18.82**	**259**	*e*P	**Pn**	**02 57 07.9**	**-0.8**
YHNB	**Yeheng**	**18.85**	**260**	*e*P	**Pn**	**02 57 10.4**	**+1.5**
CN2	**Changchun**	**19.48**	**322**	*e*P	**Pn**	**02 57 15.8**	**-0.8**
CN2				*e*AP	pP	02 57 28.4	+5.9
CN2				*e*S	**Sn**	**03 00 47.1**	**-7.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,15.0s						
CN2				LR	LR		
	comp=E,500nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s						
HABR	**Khabarovsk**	**19.79**	**346**	*e*P	**Pn**	**02 57 21.1**	**+0.8**
HABR				*e*S	**Sn**	**03 01 02.3**	**+0.4**
NJ2	**Nanjing**	**19.97**	**284**	*e*P	**Pn**	**02 57 24.4**	**+2.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
KLR	**Kul'dur**	**21.30**	**342**	*e*P	**P**	**02 57 32.4**	**-2.5**
KLR				pmax	pmax		
	comp=Z,40nm,1.8s,mb4.5						
BJT	**Baijiatuau**	**23.58**	**304**	*e*P	**P**	**02 57 57.8**	**-1.2**
BJT				pmax	pmax		
	comp=Z,12nm,0.7s						
BJT	**Baijiatuau**	**23.58**	**304**	*e*P	**P**	**02 57 57.8**	**-1.2**
	comp=Z,12nm,0.7s,mb4.5						
HIA	**Hailar**	**26.07**	**326**	*e*P	**P**	**02 58 22.4**	**+0.8**
HIA				pmax	pmax		
	comp=Z,48nm,1.0s						
HIA	**Hailar**	**26.07**	**326**	*e*P	**P**	**02 58 22.4**	**+0.7**
	comp=Z,48nm,1.0s,mb5.0						
PET	**Petropavlovsk**	**26.67**	**23**	*e*P	**P**	**02 58 26.8**	**-0.2**
PET				*e*S	**S**	**03 02 57.1**	**-3.5**
PET				MLR	MLR		
	comp=Z,200nm,17.0s,MS3.7						
HHC	**Hu-ho-hao-te**	**27.19**	**303**	*e*P	**P**	**02 58 33.1**	**+1.4**
HHC				AP	pP	02 58 42.6	+3.0
HHC				XP	sP	02 58 46.6	+3.7
HHC				PP		02 59 20.3	
HHC				S	**S**	**03 03 07.3**	**-1.4**
HHC				XS	sS	03 03 22.8	+1.0
HHC				SS		03 04 24.6	
HHC				SCP	ScP	03 05 29.5	-0.5
HHC				PCS	PcS	03 05 33.0	-0.1
HHC				SCS	ScS	03 09 20.0	-1.3
HHC				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.2						
HHC				AMB	AMB		
	comp=Z,120nm,5.4s						
HHC				LR	LR		
	comp=N,410nm,18.0s,MS4.3						
HHC				LR	LR		
	comp=E,706nm,17.1s,MS4.3						
HHC				LR	LR		
	comp=Z,841nm,17.1s,MS4.4						
XAN	**Xi'an**	**28.35**	**288**	P	**P**	**02 58 40.8**	**-1.3**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.2						
GYA	**Guiyang**	**31.18**	**273**⇑	*i*P	**P**	**02 59 07.3**	**+0.2**
GYA				AP	pP	02 59 16.8	+1.7
GYA				XP	sP	02 59 20.8	+2.4
GYA				PP	PP	03 00 08.8	-8.9
GYA				PPP		03 00 23.6	
GYA				S	**S**	**03 04 07.1**	**-4.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA				LR	LR		
	comp=N,240nm,16.2s,MS4.1						
GYA				LR	LR		
	comp=E,250nm,16.0s,MS4.1						
GYA				LR	LR		
	comp=Z,270nm,15.8s,MS4.0						
ULN	**Ulaanbaatar**	**32.52**	**314**	*e*P	**P**	**02 59 19.8**	**+0.9**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ULN	**Ulaanbaatar**	**32.52**	**314**	*e*P	**P**	**02 59 19.8**	**+0.9**
	comp=Z,9.2nm,0.9s,mb4.7						
LZH	**Lanzhou**	**32.54**	**292**	*e*P	**P**	**02 59 24.0**	**+4.9**
LZH				AP	pP	02 59 34.0	+7.0
LZH				XP	sP	02 59 36.5	+6.2
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,73nm,4.8s						
LZH				LR	LR		
	comp=E,359nm,14.0s						
LZH				LR	LR		
	comp=Z,610nm,14.9s,MS4.4						
CD2	**Chengdu**	**32.90**	**282**	*e*P	**P**	**02 59 22.4**	**+0.2**
CD2				AP	pP	02 59 32.0	+1.8
CD2				XP	sP	02 59 35.9	+2.4
CD2				PP	PP	03 00 32.4	-4.4
CD2				S	**S**	**03 04 36.1**	**-2.2**
CD2				SS	SS	03 06 35.4	-25
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,360nm,14.4s						
CD2				LR	LR		
	comp=Z,110nm,19.2s,MS3.6						
SONM	**Songino Array**	**32.92**	**314**	P	**P**	**02 59 22.5**	**+0.1**
	comp=Z,4.9nm,0.7s,mb4.6,baz=120,slow=7.4,SNR=16						
KMI	**Kunming**	**34.94**	**273**	P	**P**	**02 59 41.8**	**+1.9**
KMI				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
ZAK	**Zakamensk**	**35.75**	**317**	*e*P	**P**	**02 59 47.7**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s						
GTA	**Gaotai**	**35.85**	**298**	*e*P	**P**	**02 59 47.6**	**-0.2**
GTA				AP	pP	02 59 55.3	-0.5
GTA				PP	PP	03 01 09.5	+0.1
GTA				PCP	PcP	03 02 15.0	+0.2
GTA				S	**S**	**03 05 21.6**	**-2.3**
GTA				SCP	ScP	03 05 57.1	-2.0
GTA				PCS	PcS	03 05 59.0	-3.2
GTA				SS	SS	03 07 46.9	-14
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.4						
GTA				AMB	AMB		
	comp=Z,76nm,6.8s						
GTA				LR	LR		
	comp=N,176nm,21.7s,MS3.9						
GTA				LR	LR		
	comp=E,132nm,21.3s,MS3.9						
GTA				LR	LR		
	comp=Z,267nm,21.7s,MS4.0						
TLY	**Talaya**	**36.03**	**319**⇑	*i*P	**P**	**02 59 50.2**	**+0.8**
TLY				*e*		03 01 12.7	
TLY				*e*S	**S**	**03 05 27.9**	**+1.2**
TLY				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
TLY				MLR	MLR		
	comp=Z,794nm,14.0s,MS4.6						
TLY	**Talaya**	**36.03**	**319**	*e*P	**P**	**02 59 50.3**	**+0.9**
MOY	**Mondy**	**37.56**	**318**	*e*P	**P**	**03 00 03.8**	**+1.4**
CHTO	**Chiang Mai**	**40.38**	**265**	*e*P	**P**	**03 00 26.4**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,2μm,2.9s						
CHTO	**Chiang Mai**	**40.38**	**265**	*e*P	**P**	**03 00 26.4**	**+0.4**
	comp=Z,2μm,2.9s						
BILL	**Bilibino**	**41.32**	**14**	*e*P	**P**	**03 00 35.6**	**+1.9**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
WMQ	**Urumqi**	**45.06**	**304**	*e*P	**P**	**03 01 06.0**	**+2.1**
WMQ				AP	pP	03 01 16.0	+3.9
WMQ				XP	sP	03 01 20.0	+4.7
WMQ				PP	PP	03 02 52.0	+2.6
WMQ				S	**S**	**03 07 42.0**	**+0.8**
WMQ				SS	SS	03 10 55.0	-8.7
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,157nm,12.0s,MS4.3						
WMQ				LR	LR		
	comp=E,175nm,12.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,198nm,12.0s,MS4.3						
ZAL	**Zalesovo**	**47.63**	**318**	P	**P**	**03 01 23.6**	**-0.5**
	comp=Z,8.3nm,0.9s,mb4.8,baz=17,slow=7.8,SNR=21						
PSI	**Prapat**	**48.56**	**245**	P	**P**	**03 01 32.3**	**+1.1**
	comp=Z,5.9nm,0.7s,mb4.7,baz=48,slow=14,SNR=3.6						
NVS	**Novosibirsk**	**48.65**	**319**	*e*P	**P**	**03 01 31.4**	**-0.6**
NVS				pmax	pmax		
	comp=E,46nm,1.4s						
NVS				pmax	pmax		
	comp=Z,45nm,1.4s,mb5.3						
MKAR	**Makanchi Array**	**48.85**	**308**	P	**P**	**03 01 33.5**	**0.0**
	comp=Z,7.4nm,0.8s,mb4.8,baz=83,slow=10,SNR=13						
MKAR	**Makanchi Array**	**48.85**	**308**	*i* P	**P**	**03 01 33.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	**Makanchi Array**	**48.85**	**308**	P	**P**	**03 01 33.5**	**0.0**
WRAB	**Tennant Creek**	**49.54**	**189**	*e*P	**P**	**03 01 37.5**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
WRAB	**Tennant Creek**	**49.54**	**189**	*e*P	**P**	**03 01 37.5**	**-1.3**
	comp=Z,19nm,0.9s,mb5.1						
WB2	**Warramunga Arr**	**49.55**	**189**	*e*P	**P**	**03 01 37.9**	**-0.9**
WRA	**Warramunga Arr**	**49.55**	**189**	P	**P**	**03 01 37.6**	**-1.3**
	comp=Z,5.1nm,0.8s,mb4.6,baz=12,slow=8.3,SNR=9.1						
KURK	**Kurchatov**	**51.22**	**313**	*e*P	**P**	**03 01 51.0**	**-0.5**
ASAR	**Alice Springs**	**53.27**	**189**	P	**P**	**03 02 05.2**	**-1.5**
	comp=Z,1.0nm,0.6s,mb3.9,baz=11,slow=8.4,SNR=4.4						
AAK	**Ala-Archa**	**54.76**	**303**	*i* P	**P**	**03 02 17.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**56.21**	**316**	P	**P**	**03 02 28.1**	**0.0**
	comp=Z,20nm,0.8s,mb5.2,baz=94,slow=8.9,SNR=54						
BRVK	**Borovoye**	**56.27**	**316**	*e*P	**P**	**03 02 28.8**	**+0.3**
ZRNK	**Zerenda**	**57.05**	**316**	*e*P	**P**	**03 02 17.3**	**-17**
DAWY	**Dawson**	**59.13**	**30**	*e*P	**P**	**03 02 47.8**	**-0.8**
INK	**Inuvik**	**61.10**	**25**	P	**P**	**03 03 01.7**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.7nm,0.5s,mb4.0,baz=342,slow=7.8,SNR=3.9						
SVE	**Sverdlovsk**	**61.28**	**322**	*e*P	**P**	**03 03 00.0**	**-3.3**
SVE				*e*S	**S**	**03 11 23.0**	**+1.3**
SVE				MLR	MLR		
	comp=N,300nm,14.0s,MS4.7						
SVE				MLR	MLR		
	comp=E,200nm,14.0s,MS4.7						
SVE				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.8						
ARU	**Arti**	**62.48**	**322**	⇑*i*P	**P**	**03 03 11.1**	**-0.3**
ARU				*e*		03 03 49.7	
ARU				*e*		03 05 24.5	
ARU				*e*PPP		03 06 56.5	
ARU				*e*S	**S**	**03 11 35.3**	**-1.6**
ARU				*e*SS	SS	03 15 37.1	-3.9
ARU				*e*SSS		03 18 32.2	
ARU				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.2						
ARU	**Arti**	**62.48**	**322**	*e*P	**P**	**03 03 11.3**	**0.0**
AKTK	**Aktyubinsk**	**64.23**	**315**	P	**P**	**03 03 22.9**	**0.0**
AKTO	**Aktyubinsk**	**64.23**	**315**	P	**P**	**03 03 22.9**	**0.0**
	comp=Z,4.4nm,0.6s,mb4.7,baz=98,slow=7.1,SNR=18						
DLBC	**Dease Lake**	**64.53**	**36**	P	**P**	**03 03 23.9**	**-1.0**
	comp=Z,1.9nm,0.9s,mb4.1,baz=243,slow=8.7,SNR=3.4						
DLBC	**Dease Lake**	**64.53**	**36**	P	**P**	**03 03 23.9**	**-1.0**
YKA	**Yellowknife Ar**	**70.29**	**29**	P	**P**	**03 03 59.1**	**-2.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=299,slow=6.3,SNR=2.8						
KLMR	**Klimovskoe**	**70.50**	**330**	*e*P	**P**	**03 04 00.9**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.5						
KEV	**Kevo**	**70.76**	**340**	*e*p	**P**	**03 04 02.7**	**-1.5**
	comp=Z,9.0nm,0.9s,mb4.7						
KEV	**Kevo**	**70.76**	**340**	*e*P	**P**	**03 04 02.7**	**-1.5**
KEV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ARCES	**ARCESS Array B**	**71.32**	**341**	P	**P**	**03 04 07.3**	**-0.3**
	comp=Z,5.2nm,0.8s,mb4.5,baz=43,slow=13,SNR=8.4						
JOF	**Joensuu**	**72.94**	**333**	*e*p	**P**	**03 04 16.1**	**-1.2**
	comp=Z,10nm,0.9s,mb4.8						
JOF	**Joensuu**	**72.94**	**333**	*e*P	**P**	**03 04 16.1**	**-1.2**
JOF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
OBN	**Obninsk**	**74.52**	**325**	*e*P	**P**	**03 04 25.2**	**-1.4**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
VRSR	**Storozhevoye**	**75.01**	**321**	*e*P	**P**	**03 04 29.3**	**-0.1**
VRSR				pmax	pmax		
	comp=N,9.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KAF	**Kangasniemi**	**75.32**	**334**	*e*p	**P**	**03 04 29.3**	**-1.9**
	comp=Z,3.9nm,0.5s,mb4.6,baz=53,slow=5.4						
KAF	**Kangasniemi**	**75.32**	**334**	*e*P	**P**	**03 04 29.3**	**-1.9**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
NEW	**Newport**	**75.43**	**43**	*e*P	**P**	**03 04 30.2**	**-1.6**
NEW				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NEW	**Newport**	**75.43**	**43**	*e*P	**P**	**03 04 30.2**	**-1.6**
	comp=Z,10nm,1.2s,mb4.6						
FINES	**FINESS Array B**	**75.80**	**333**	P	**P**	**03 04 33.6**	**-0.4**
	comp=Z,4.0nm,0.7s,mb4.4,baz=77,slow=5.0,SNR=16						
ZEI	**Tsey**	**76.06**	**311**	*e*P	**P**	**03 04 35.5**	**+0.1**
ZEI				*e**PP	pP	03 04 45.9	+1.9
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb5.0						
KIV	**Kislovodsk**	**76.31**	**313**	*i* P	**P**	**03 04 38.2**	**+1.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
KIV	**Kislovodsk**	**76.31**	**313**	*e*P	**P**	**03 04 38.3**	**+1.5**
GNI	**Garni**	**76.69**	**309**	*e*P	**P**	**03 04 39.2**	**+0.2**
GNI				pmax	pmax		
	comp=Z,38nm,1.4s						
GNI	**Garni**	**76.69**	**309**	*e*P	**P**	**03 04 39.2**	**+0.2**
	comp=Z,38nm,1.4s,mb5.1						
OHCM	**Honcut**	**76.72**	**52**	*e*P	**P**	**03 04 40.3**	**+1.1**
WALA	**Waterton Lakes**	**76.92**	**41**	*e*P	**P**	**03 04 40.3**	**0.0**
	comp=Z,9.3nm,1.0s,mb4.7						
BMO	**Blue Mountains**	**76.92**	**46**	*e*P	**P**	**03 04 39.7**	**-0.6**
	comp=Z,3.9nm,0.9s,mb4.3						
BSMT	**Bassoo Peak**	**77.00**	**42**	*e*P	**P**	**03 04 45.1**	**+4.4**
PAHR	**Pah Rah Range**	**77.99**	**51**	*e*P	**P**	**03 04 47.4**	**+1.1**
	comp=Z,9.6nm,1.1s,mb4.6						
CMB	**Columbia Colle**	**78.08**	**53**	*e*P	**P**	**03 04 46.3**	**-0.5**
CMB				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
CMB	**Columbia Colle**	**78.08**	**53**	*e*P	**P**	**03 04 46.3**	**-0.5**
	comp=Z,7.7nm,1.0s,mb4.6						
SUMG	**Summit**	**78.34**	**0**	*e*P	**P**	**03 04 48.6**	**+0.4**
	comp=Z,17nm,1.1s,mb4.9						
CHMT	**Chamberlain Mo**	**78.38**	**43**	*e*P	**P**	**03 04 48.0**	**-0.4**
WAKR	**Walker**	**78.52**	**52**	*e*P	**P**	**03 04 50.8**	**+1.6**
ANN	**Anapa**	**79.19**	**315**	*e*P	**P**	**03 04 52.1**	**-0.8**
ANN				*i* *PP	pP	03 05 03.0	+1.5
ANN				*i*		03 07 50.6	
ANN				*e*S	S	03 14 47.7	-3.3
ANN				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
HRY	**Holter Researc**	**79.32**	**42**	*e*P	**P**	**03 04 53.5**	**-0.1**
NVAR	**Mina Array Bea**	**79.34**	**52**	P	**P**	**03 04 53.6**	**-0.1**
	comp=Z,4.2nm,0.8s,mb4.4,baz=289,slow=5.0,SNR=13						
HLID	**Hailey**	**79.37**	**46**	*e*P	**P**	**03 04 53.9**	**0.0**
	comp=Z,3.4nm,0.9s,mb4.3						
LRM	**Limekiln Ridge**	**79.41**	**43**	*e*P	**P**	**03 04 54.1**	**0.0**
DLMT	**Dillon**	**79.56**	**44**	*e*P	**P**	**03 04 59.0**	**+4.1**
	comp=Z,8.0nm,1.1s,mb4.6						
MTUM	**Tungsten Hills**	**79.68**	**53**	*e*P	**P**	**03 04 56.4**	**+0.8**
EGMT	**Eagleton**	**79.81**	**40**	*e*P	**P**	**03 04 59.3**	**+3.0**
	comp=Z,8.0nm,1.1s,mb4.6						
BOZ	**Bozeman (W)**	**79.99**	**43**	*e*P	**P**	**03 04 56.9**	**-0.4**
QLMT	**Earthquake Lak**	**80.55**	**44**	*e*P	**P**	**03 04 59.9**	**-0.3**
AKASG	**Malin Array Be**	**80.64**	**324**	P	**P**	**03 05 00.1**	**-0.6**
	comp=Z,2.6nm,0.7s,mb4.3,baz=46,slow=5.6,SNR=16						
AKBB	**Malin Array Si**	**80.64**	**324**	*e*P	**P**	**03 05 00.1**	**-0.6**
HFS	**Hagfors**	**81.25**	**337**	P	**P**	**03 05 02.3**	**-1.7**
	comp=Z,3.1nm,0.8s,mb4.3,baz=88,slow=5.0,SNR=16						
IMW	**Indian Meadow**	**81.34**	**44**	*e*P	**P**	**03 05 08.6**	**+4.1**
	comp=Z,8.0nm,0.9s,mb4.7						
FLWY	**Flagg Ranch**	**81.39**	**44**	*e*P	**P**	**03 05 10.1**	**+5.4**
	comp=Z,17nm,1.2s,mb4.9						
RRI2	**Red Ridge**	**81.40**	**45**	*e*P	**P**	**03 05 05.5**	**+0.7**
NB2	**NORSAR Subarra**	**81.42**	**338**	P	**P**	**03 05 03.7**	**-1.2**
	comp=Z,5.2nm,0.9s,mb4.5,baz=38,slow=5.3						
NOA	**NORSAR Array B**	**81.42**	**338**	P	**P**	**03 05 03.6**	**-1.2**
	comp=Z,4.3nm,0.8s,mb4.4,baz=40,slow=5.2,SNR=8.1						
MOOW	**Moose Ponds**	**81.54**	**44**	*e*P	**P**	**03 05 07.2**	**+1.7**
TPAW	**Teton Pass**	**81.55**	**45**	*e*P	**P**	**03 05 06.3**	**+0.7**
	comp=Z,6.0nm,0.9s,mb4.5						
SUW	**Suwalki**	**81.58**	**328**	*e*P	**P**	**03 05 05.4**	**-0.3**
REDW	**Red Top Meadow**	**81.68**	**45**	*e*P	**P**	**03 05 07.5**	**+1.3**
LOHW	**Long Hollow**	**81.70**	**44**	*e*P	**P**	**03 05 08.0**	**+1.7**
MALT	**Malatya**	**81.87**	**309**	*e*P	**P**	**03 05 08.2**	**+1.0**
MALT				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MALT	**Malatya**	**81.87**	**309**	*e*P	**P**	**03 05 08.2**	**+1.0**
	comp=Z,4.3nm,0.9s,mb4.4						
GSC	**Goldstone**	**81.93**	**54**	*e*P	**P**	**03 05 10.9**	**+3.3**
DUG	**Dugway**	**82.13**	**48**	*e*P	**P**	**03 05 07.7**	**-0.9**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
DUG	**Dugway**	**82.13**	**48**	*e*P	**P**	**03 05 07.7**	**-0.9**
	comp=Z,9.0nm,1.1s,mb4.6						
HWUT	**Hardware Ranch**	**82.18**	**47**	*e*P	**P**	**03 05 09.6**	**+0.7**
	comp=Z,12nm,1.0s,mb4.8						
SHPR	**Sheep Range**	**82.47**	**52**	*e*P	**P**	**03 05 11.6**	**+1.2**
TCUT	**Toone Canyon**	**82.54**	**47**	*e*P	**P**	**03 05 14.7**	**+3.9**
BW06	**Boulder Array**	**82.80**	**45**	*e*P	**P**	**03 05 13.1**	**+1.0**
PDAR	**Pinedale Array**	**82.80**	**45**	P	**P**	**03 05 11.7**	**-0.5**
	comp=Z,3.1nm,0.9s,mb4.3,baz=299,slow=2.7,SNR=12						
ARUT	**Antelope Range**	**82.98**	**51**	*e*P	**P**	**03 05 12.6**	**-0.4**
DAU	**Daniels Canyon**	**83.02**	**47**	*e*P	**P**	**03 05 17.9**	**+4.6**
PFO	**Pinyon Flat Ob**	**83.03**	**55**	*e*P	**P**	**03 05 15.2**	**+1.9**
PFO				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
PFO	**Pinyon Flat Ob**	**83.03**	**55**	*e*P	**P**	**03 05 15.2**	**+1.9**
	comp=Z,9.5nm,1.1s,mb4.7						
CCUT	**Cedar City**	**83.15**	**51**	*e*P	**P**	**03 05 14.3**	**+0.3**
MSU	**Marysvale**	**83.44**	**49**	*e*P	**P**	**03 05 19.7**	**+4.3**
SRU	**San Rafael**	**84.20**	**48**	*e*P	**P**	**03 05 22.0**	**+2.7**
BR131	**Keskin Array S**	**84.27**	**313**	*e*P	**P**	**03 05 20.4**	**+0.8**
	comp=Z,7.5nm,0.8s,mb4.9						
BRTR	**Keskin Array B**	**84.27**	**313**	P	**P**	**03 05 19.6**	**0.0**
	comp=Z,8.7nm,0.9s,mb4.9,baz=99,slow=3.1,SNR=38						
RWWY	**Rawlins**	**84.85**	**45**	*e*P	**P**	**03 05 25.5**	**+2.9**
MLR	**Muntele Rosu**	**85.52**	**321**	P	**P**	**03 05 25.9**	**-0.1**
	comp=Z,3.7nm,0.9s,mb4.6,baz=176,slow=11,SNR=3.8						
PV10	**Paradox Valley**	**85.57**	**48**	*e*P	**P**	**03 05 26.8**	**+0.6**
WUAZ	**Wupatki**	**85.59**	**52**	*e*P	**P**	**03 05 26.4**	**+0.1**
	comp=Z,12nm,1.0s,mb5.1						
PV01	**Paradox Valley**	**86.01**	**48**	*e*P	**P**	**03 05 26.5**	**-1.9**
ASF	**Jabal al Asfar**	**86.15**	**305**	P	**P**	**03 05 29.5**	**+0.4**
	comp=Z,2.9nm,0.8s,mb4.5,baz=278,slow=7.1,SNR=4.7						
SMCO	**Snowmass**	**86.44**	**47**	*e*P	**P**	**03 05 30.4**	**-0.2**
	comp=Z,12nm,1.1s,mb5.0						
ISCO	**Idaho Springs**	**86.93**	**45**	*e*P	**P**	**03 05 34.9**	**+2.0**
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.6						
ISCO	**Idaho Springs**	**86.93**	**45**	*e*P	**P**	**03 05 34.9**	**+2.0**
	comp=Z,4.2nm,1.1s,mb4.6						
ANMO	**Albuquerque**	**89.23**	**50**	⇑*e*P	**P**	**03 05 47.8**	**+3.9**
WMOK	**Wichita Mounta**	**94.34**	**46**	*e*P	**P**	**03 06 06.8**	**-0.7**
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
WMOK	**Wichita Mounta**	**94.34**	**46**	*e*P	**P**	**03 06 06.8**	**-0.7**
	comp=Z,4.5nm,0.9s,mb4.9						
TORD	**Torodi Ar. Bea**	**122.88**	**312**	PKP	PKPdf	03 11 43.4	-0.6
	comp=Z,0.4nm,0.7s,baz=46,slow=4.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**122.88**	**312**	PKP	PKPdf	03 11 43.4	-0.6
SAML	**Samuel**	**148.95**	**54**	*e*PKPdf	PKPdf	03 12 33.9	+2.2
LPAZ	**La Paz**	**149.54**	**71**	PKPbc	PKPbc	03 12 38.0	+0.8
	comp=Z,2.7nm,0.9s,baz=291,slow=5.6,SNR=8.4						
LVC	**Limon Verde**	**151.58**	**84**	*e*PKPdf	PKPdf	03 12 37.1	+1.3

IDC ***15*** *03:02:05.7±2.5, 103N×9698E, h0km, mb4.4/9, mb1 4.4/10, mb1mx4.1/24, mbtmp4.4/10, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.9/40, Error ellipse: s-maj=57.5km s-min=29.6km az=166.0*
BJI ***15*** *03:02:06.2, 097N×9742E, h18km, mB5.3, mb4.6*
ISCJB ***15*** *03:02:07.4±3.3, 08N±02×972E±0.1, h37km±25km, mb4.6/19, Error ellipse: s-maj=32.1km s-min=15.8km az=76.4*
NEIC ***15*** *03:02:09.3±0.9, 084N×9721E, h30km, mb5.1/5, Error ellipse: s-maj=17.6km s-min=14.7km az=191.0*
MOS ***15*** *03:02:10.8±1.3, 126N×9693E, h33km, mb4.0/1, Error ellipse: s-maj=23.8km s-min=15.0km az=95.6*
ISC 15 03:02:09.7±3.2**, 08N**±02×**973E**±01**, h37**km±24km**,**
h22km±3.2km**:pP-P, n30,** σ**1§02**/29**, mb4.6**/19**, 1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.58**	**40**	Pn	**Pn**	**03 02 48.8**	**-0.2**
	17nm,0.3s,baz=250,slow=8.7,SNR=63						
PSI				LR	LR	03 03 38.5	
	comp=Z,310nm,21.4s,baz=286,slow=36						
KULM	**Kulim**	**5.59**	**37**	*e*P	**Pn**	**03 03 29.6**	**-0.7**
PCI	**Palu**	**22.62**	**94**	P	**P**	**03 07 07.9**	**+0.7**
	1µm,0.9s						
KMI	**Kunming**	**24.75**	**12**	P	**P**	**03 07 28.8**	**+1.1**
KMI				AMB	AMB		
	comp=Z,29nm,1.3s,mb4.7						
GYA	**Guiyang**	**27.06**	**19**	⇓*i*P	**P**	**03 07 48.1**	**-0.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
JIRN	**Jiri**	**28.75**	**339**	*e*P	**P**	**03 08 04.3**	**+0.6**
	comp=Z,16nm,0.5s,mb5.0						
PKI	**Pulchoki**	**28.95**	**338**	*e*P	**P**	**03 08 06.8**	**+1.3**
GUN	**Gumba**	**29.09**	**339**	*e*P	**P**	**03 08 07.5**	**+0.8**
	comp=Z,29nm,0.6s,mb5.2						
DMN	**Daman**	**29.10**	**337**	*e*P	**P**	**03 08 07.4**	**+0.6**
KKN	**Kakani**	**29.20**	**338**	*e*P	**P**	**03 08 08.3**	**+0.6**
GKN	**Gorkha**	**29.64**	**337**	*e*P	**P**	**03 08 12.3**	**+0.8**
	comp=Z,43nm,1.1s,mb5.1						
KOLN	**Koldanda**	**29.85**	**335**	*e*P	**P**	**03 08 14.6**	**+1.2**
	comp=Z,17nm,0.5s,mb5.0						
XAN	**Xi'an**	**34.82**	**17**	P	**P**	**03 08 55.8**	**-1.1**
XAN				AP	pP	03 09 02.1	-5.3
XAN				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.8						
GTA	**Gaotai**	**38.50**	**3**	*e*P	**P**	**03 09 27.6**	**-0.7**
GTA				AP	pP	03 09 35.5	-3.3
GTA				XP	sP	03 09 38.8	-4.4
GTA				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.2						
JOW	**Kunigami**	**39.46**	**46**	P	**P**	**03 09 37.4**	**+1.1**
	comp=Z,17nm,0.5s,mb5.0,baz=206,slow=6.2,SNR=4.9						
SONM	**Songino Array**	**47.51**	**8**	P	**P**	**03 10 41.6**	**+0.4**
	comp=Z,4.4nm,0.8s,mb4.6,baz=188,slow=9.3,SNR=30						
MKAR	**Makanchi Array**	**47.65**	**346**	P	**P**	**03 10 42.3**	**+0.1**
	comp=Z,3.0nm,0.5s,mb4.6,baz=161,slow=8.1,SNR=25						
ZAK	**Zakamensk**	**49.66**	**5**	*e*P	**P**	**03 10 49.9**	**-7.8**
ZAK				*e*		03 10 55.2	
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
STKA	**Stephens Creek**	**53.03**	**132**	*e*P	**P**	**03 11 22.9**	**0.0**
STKA				*e*pP	pP	03 11 29.8	-4.0
ZAL	**Zalesovo**	**53.96**	**351**	P	**P**	**03 11 28.4**	**-1.3**
	comp=Z,6.9nm,0.4s,mb4.9,baz=319,slow=4.2,SNR=11						
ZAL	**Zalesovo**	**53.96**	**351**	P	**P**	**03 11 28.4**	**-1.3**
KLR	**Kul'dur**	**56.58**	**26**	*e*P	**P**	**03 11 45.8**	**-2.8**
BVAR	**Borovoye Array**	**56.65**	**341**	P	**P**	**03 11 48.9**	**-0.2**
	comp=Z,4.1nm,0.7s,mb4.6,baz=138,slow=9.7,SNR=19						
AKTK	**Aktyubinsk**	**59.62**	**332**	P	**P**	**03 12 08.4**	**-1.5**
AKTO	**Aktyubinsk**	**59.62**	**332**	P	**P**	**03 12 08.4**	**-1.5**
	comp=Z,1.3nm,0.5s,mb4.3,baz=108,slow=8.0,SNR=7.6						
BRTR	**Keskin Array B**	**69.44**	**312**	P	**P**	**03 13 12.6**	**-1.5**
	comp=Z,0.3nm,0.4s,mb3.6,baz=148,slow=5.7,SNR=4.0						
FINES	**FINESS Array B**	**80.39**	**333**	P	**P**	**03 14 16.9**	**-0.4**
	comp=Z,2.5nm,0.9s,mb4.2,baz=201,slow=11,SNR=4.7						
SMY	**Shemya**	**81.39**	**37**	P	**P**	**03 14 25.8**	**+3.2**
	comp=Z,163nm,1.8s,mb5.7						
ARCES	**ARCESS Array B**	**82.94**	**340**	P	**P**	**03 14 31.2**	**+0.5**
	comp=Z,1.9nm,0.9s,mb4.1,baz=100,slow=5.0,SNR=5.6						
CPUP	**Villa Florida**	**144.76**	**222**	PKP	PKPdf	03 21 46.3	+3.8
	comp=Z,0.7nm,0.5s,baz=4.0,slow=3.0,SNR=3.1						

SZGRF ***15*** *03:05:06.9, 485S×12933E, h39km, mb5.2, Banda Sea*
HRVD ***15*** *03:05:10.0±0.1, 473S×12686E, h12km, MW5.8/109, Centroid moment Tensor Solution. LP body waves: s93,c191;Mantle waves: s109,c337; Half duration: 1§9 Moment tensor: Scale 10^17Nm; Mrr3.95±.06; Mθθ-6.05±.04; Mφφ2.10±.07; Mrθ2.99±.12; Mθφ-0.82±.04; Mφr-0.47±.17; Best double couple: M0 5.93000×10^17 NP1:φs246.00000°,δ32.00000°,λ63.00000°. NP2: φs97.00000°,δ62.00000°,λ106.00000°. Principal axes: T 4.9350, Plg69.0000°, Azm41.0000°; N 1.9890, Plg14.0000°, Azm270.0000°; P -6.9250, Plg15.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
BJI ***15*** *03:05:10.0, 470S×12670E, h10km, mB6.2, mb6.1, Ms5.5, Msz5.3*
NEIC ***15*** *03:05:11.0±0.1, 467S×12673E, h16km, mb6.1/43, ME5.8, MS5.3/111, MW5.9, Error ellipse: s-maj=5.3km s-min=3.6km az=65.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^17Nm; Mrr6.33; Mθθ-6.40; Mφφ0.07; Mrθ4.06; Mθφ1.03; Mφr-1.28; Best double couple: M0 7.70000×10^17 NP1:φs104.00000°,δ62.00000°, λ95.00000°. NP2:φs274.00000°,δ29.00000°,λ81.00000°. Principal axes: T 7.6300, Plg73.0000°, Azm25.0000°; N 0.1800, Plg4.0000°, Azm281.0000°; P -7.8200, Plg17.0000°, Azm190.0000°; Broadband fault plane solution: P waves. NP1:φs285.00000°,δ25.00000°, λ90.00000°. NP2:φs105.00000°,δ65.00000°,λ90.00000°. Principal axes: T Plg70.0000°, Azm15.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm195.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
ISCJB ***15*** *03:05:11.7±0.1, 464S±002×12681E±003, h30km, mb6.1/151, MS5.3/174 Error ellipse: s-maj=3.9km s-min=3.0km az=152.5*
MOS ***15*** *03:05:12.8±1.0, 453S×12671E, h33km, mb6.4/51, MS5.2/49, Error ellipse: s-maj=8.9km s-min=4.8km az=112.3*
IDC ***15*** *03:05:16.0±3.1, 465S×12678E, h53km±27km, mb5.5/34, mb1 5.4/34, mb1mx5.4/34, mbtmp5.7/34, ML6.0/1, MS5.2/24, Ms1 5.2/24, ms1mx5.1/31, Error ellipse: s-maj=12.5km s-min=7.9km az=63.0*
ISC 15 03:05:14.0±0.1**, 464S**±002×**12685E**±003**, h32**km**,**
h32km±1.6km**:pP-P, n827,** σ**1§21**/437**, mb6.1**/151**, MS5.3**/174**, 164C-72D, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.64**	**55**	P	**Pn**	**03 05 37.6**	**-3.0**
	10µm,1.6s						
SWI	**Sorong**	**5.79**	**50**	P	**Pn**	**03 06 36.9**	**-0.6**
	11µm,1.4s						
WSI	**Waingapu**	**8.20**	**232**	P	**Pn**	**03 07 12.4**	**+1.7**
	4µm,1.3s						
KAKA	**Kakadu**	**9.73**	**146**	*e*P	**Pn**	**03 07 29.1**	**-2.6**
	188nm,0.6s						
DAV	**Davao City (W)**	**11.70**	**354**	*e*P	**Pn**	**03 08 00.0**	**+1.3**
DAV	**Davao City (W)**	**11.70**	**354**	P	**Pn**	**03 08 00.4**	**+1.8**
	SNR=18						
DAV	**Davao City (W)**	**11.70**	**354**	*e*Pn	**Pn**	**03 08 00.1**	**+1.4**
	836nm,0.9s						
CTBH	**Cotabato--PC H**	**12.07**	**348**	⇓*e*P	**Pn**	**03 08 04.8**	**+1.2**
TSM	**Tawau**	**12.62**	**315**	P	**Pn**	**03 08 12.3**	**+1.1**
NBBI	**Negara**	**12.70**	**252**	P	**Pn**	**03 08 15.6**	**+3.3**
	817nm,1.5s						
KMMI	**Kalianget**	**13.04**	**259**	P	**Pn**	**03 08 20.1**	**+3.2**
	252nm,1.8s						
CGP	**Cagayan de Oro**	**13.19**	**351**	⇓*e*P	**Pn**	**03 08 20.8**	**+1.9**
	2929µm,1.0s						
FITZ	**Fitzroy Crossi**	**13.43**	**185**	⇓*i*P	**Pn**	**03 08 16.5**	**-5.8**
	545nm,1.5s						
FITZ				*e*S	**Sn**	**03 10 49.3**	**-1.1**
FITZ	**Fitzroy Crossi**	**13.43**	**185**	P	**Pn**	**03 08 16.5**	**-5.7**
	3.4nm,0.3s,baz=18,slow=14,SNR=103						
FITZ				S	**Sn**	**03 10 53.1**	**+2.8**
	1.9nm,0.3s,baz=76,slow=9.4,SNR=4.4						
FITZ				LR	LR	03 14 12.5	
	comp=Z,16µm,18.3s,baz=6.8,slow=40						
DCPH	**Dipolog City**	**13.59**	**345**	*e*P	**Pn**	**03 08 29.1**	**+4.6**
SNPH	**Sibulan**	**14.35**	**345**	⇑*e*P	**Pn**	**03 08 36.5**	**+1.7**
SCPH	**Surigao**	**14.39**	**355**	⇓*e*P	**Pn**	**03 08 35.4**	**0.0**
TBP	**Tagbilaran**	**14.55**	**348**	*e*P	**Pn**	**03 08 37.0**	**-0.5**
KRKI	**Karangkates**	**14.73**	**256**	P	**Pn**	**03 08 43.6**	**+3.6**
	2µm,2.5s						
KKM	**Kota Kinabalu**	**15.02**	**315**	P	**Pn**	**03 08 46.9**	**+3.1**
KKM	**Kota Kinabalu**	**15.02**	**315**	⇑*i*Pn	**Pn**	**03 08 46.1**	**+2.3**
LLP	**Lapu-Lapu**	**15.13**	**349**	*e*P	**Pn**	**03 08 44.2**	**-1.1**
PLP	**Palo**	**15.81**	**353**	*e*P	**Pn**	**03 08 54.8**	**+0.7**
PPR	**Puerto Princes**	**16.45**	**331**	⇑*i*P	**Pn**	**03 09 02.2**	**-0.1**
RCP	**Roxas**	**16.61**	**346**	⇑*e*P	**Pn**	**03 09 06.3**	**+2.1**
WRAB	**Tennant Creek**	**16.86**	**155**	⇓*i*P	**Pn**	**03 09 01.3**	**-6.2**
WRAB	**Tennant Creek**	**16.86**	**155**	*e*Pn	**Pn**	**03 09 01.1**	**-6.4**
WRA	**Warramunga Arr**	**16.87**	**155**	P	**Pn**	**03 09 01.0**	**-6.5**
	3.2nm,0.3s,baz=322,slow=13,SNR=122						
WRA				S	**Sn**	**03 12 19.3**	**+5.4**
	baz=320,slow=22,SNR=6.0						
WRA				LR	LR	03 15 46.3	
	comp=Z,11µm,20.0s,baz=340,slow=37						
WRA	**Warramunga Arr**	**16.87**	**155**	P	**Pn**	**03 09 01.1**	**-6.5**
WRA				S	**Sn**	**03 12 19.3**	**+5.3**
WB2	**Warramunga Arr**	**16.87**	**155**	*e*P	**Pn**	**03 09 01.0**	**-6.6**
WB2				*e*		03 09 09.9	
WB2				*e*S	**Sn**	**03 12 17.3**	**+3.2**
BJII	**Banjamegara**	**17.26**	**260**	P	**Pn**	**03 09 13.7**	**+1.3**
	1µm,2.0s						
BJII	**Banjamegara**	**17.26**	**260**	⇓*i*P	**Pn**	**03 09 15.3**	**+2.9**
KSM	**Kuching**	**17.61**	**290**	⇑*e*Pn	**Pn**	**03 09 18.4**	**+1.6**
MBWA	**Marble Bar**	**17.82**	**202**	P	**Pn**	**03 09 16.8**	**-2.5**
	SNR=41						
MBWA	**Marble Bar**	**17.82**	**202**	*e*Pn	**Pn**	**03 09 16.2**	**-3.1**
	4µm,2.6s						
PVCP	**Virac**	**18.32**	**352**	⇑*e*P	**Pn**	**03 09 25.8**	**+0.3**
JCJI	**Jatiwangi**	**18.59**	**263**	P	**Pn**	**03 09 30.8**	**+2.0**
	1µm,1.8s						
GQP	**Guinayangan**	**18.94**	**347**	⇑*e*P	**Pn**	**03 09 38.7**	**+5.7**
PGP	**Puerto Galera**	**18.95**	**342**	⇓*i*P	**Pn**	**03 09 36.0**	**+2.8**
LEM	**Lembang**	**19.26**	**263**	P	**Pn**	**03 09 37.5**	**+0.6**
	640nm,2.1s						
TGY	**Tagaytay City**	**19.52**	**343**	⇑*e*P	**Pn**	**03 09 38.7**	**-1.4**
TGY	**Tagaytay City**	**19.52**	**343**	P	**Pn**	**03 09 40.5**	**+0.4**
	46nm,0.3s,baz=188,slow=3.9,SNR=63						
CBJI	**Citeko**	**19.99**	**264**	P	**Pn**	**03 09 44.2**	**-1.3**
	1µm,2.2s						
AS31	**Alice Springs**	**20.10**	**161**	*e*P	**P**	**03 09 45.3**	**+0.4**
ASPA	**Alice Springs**	**20.10**	**161**	*e*P	**P**	**03 09 45.3**	**+0.4**
ASAR	**Alice Springs**	**20.10**	**161**	P	**P**	**03 09 45.4**	**+0.5**
	272nm,0.7s,baz=339,slow=11,SNR=564						
ASAR				S	**S**	**03 13 27.9**	**-1.1**
	16nm,0.7s,baz=342,slow=15,SNR=3.3						
ASAR				LR	LR	03 17 59.8	
	comp=Z,18µm,20.0s,MS5.4,baz=340,slow=38						
ASAR	**Alice Springs**	**20.10**	**161**	P	**P**	**03 09 45.4**	**+0.5**
ASAR				S	**S**	**03 13 27.9**	**-1.1**
SBJI	**Serang**	**20.68**	**265**	P	**P**	**03 09 51.7**	**+0.5**
	849nm,1.9s						
PMG	**Port Moresby**	**20.70**	**104**	P	**P**	**03 09 50.7**	**-0.7**
	271nm,0.9s,baz=314,slow=6.1,SNR=9.8						
PMG	**Port Moresby**	**20.70**	**104**	P	**P**	**03 09 50.7**	**-0.7**
PMG				pmax	pmax		
	comp=Z,271nm,1.0s						
PMG	**Port Moresby**	**20.70**	**104**	*e*P	**P**	**03 09 50.3**	**-1.0**
	comp=Z,940nm,1.1s						
PCPH	**Palayan**	**20.87**	**344**	⇑*e*P	**P**	**03 09 53.2**	**0.0**
BCPH	**Baguio City Da**	**21.79**	**344**	⇑*e*P	**P**	**03 10 04.4**	**+1.3**
	comp=Z,117µm,25.0s						
KLI	**Kotabumi**	**21.92**	**269**	P	**P**	**03 10 06.5**	**+2.0**
	comp=Z,387nm,2.6s,mb5.4						
CVP	**Callao Caves**	**22.75**	**348**	⇑*e*P	**P**	**03 10 13.9**	**+0.6**
	comp=Z,120µm,1.0s						
CTA	**Charters Tower**	**24.34**	**131**	*e*P	**P**	**03 10 29.7**	**+0.9**
	comp=Z,521nm,1.2s,mb5.8						
CTA				*e*S	**S**	**03 14 48.1**	**+2.1**
CTA	**Charters Tower**	**24.34**	**131**	P	**P**	**03 10 29.3**	**+0.5**
	comp=Z,570nm,1.1s,mb5.9,baz=309,slow=11,SNR=166						
CTA				LR	LR	03 20 05.1	
	comp=Z,10µm,19.4s,MS5.3,baz=308,slow=36						
CTA	**Charters Tower**	**24.34**	**131**	*e*P	**P**	**03 10 29.7**	**+0.9**
CTA				*e*S	**S**	**03 14 48.1**	**+2.1**
CTA				pmax	pmax		
	comp=Z,521nm,1.2s						
CTAO	**Charters Tower**	**24.34**	**131**	P	**P**	**03 10 30.0**	**+1.2**
CTAO				S	**S**	**03 14 48.9**	**+2.8**
CTAO	**Charters Tower**	**24.34**	**131**	*e*P	**P**	**03 10 29.3**	**+0.5**
CTAO				LR	LR		
	comp=Z,11µm,21.0s,MS5.3						
KGM	**Kluang**	**24.43**	**285**	P	**P**	**03 10 32.5**	**+2.9**
GUMO	**Guam**	**25.45**	**44**	P	**P**	**03 10 39.0**	**+0.1**
	comp=Z,259nm,0.9s,mb5.7,baz=212,slow=4.7,SNR=24						
GUMO				LR	LR	03 20 41.7	
	comp=Z,2µm,18.3s,MS4.7,baz=222,slow=36						
FORT	**Forrest**	**26.02**	**178**	⇑*i*P	**P**	**03 10 44.1**	**0.0**
	comp=Z,98nm,0.5s,mb5.6						
FORT				*e*S	**S**	**03 15 15.2**	**+2.4**
PPI	**Padang Panjang**	**26.75**	**278**	P	**P**	**03 10 50.7**	**+0.1**
	comp=Z,581nm,1.4s,mb5.9						
IPM	**Ipoh**	**27.34**	**289**	P	**P**	**03 10 58.6**	**+2.7**
KULM	**Kulim**	**27.97**	**290**	⇑*i*P	**P**	**03 11 02.6**	**+1.0**
KLBR	**Kellerberrin**	**28.14**	**197**	*e*P	**P**	**03 11 02.7**	**-0.4**
	comp=Z,238nm,1.3s,mb5.7						
PSI	**Prapat**	**28.87**	**284**	P	**P**	**03 11 10.2**	**+0.6**
	comp=Z,435nm,1.0s,mb6.1,baz=127,slow=4.7,SNR=152						
QIZ	**Qiongzhong**	**28.88**	**325**	P	**P**	**03 11 10.6**	**+1.0**
QIZ				XP	sP	03 11 17.9	-5.0
QIZ				S	**S**	**03 16 01.4**	**+3.6**
QIZ				XS	sS	03 16 11.8	-1.4
QIZ				AMB	AMB		
	comp=Z,136nm,1.6s,mb5.4						
QIZ				AMB	AMB		
	comp=Z,2µm,8.9s						
QIZ				LR	LR		
	comp=N,3µm,11.1s						
QIZ				LR	LR		
	comp=Z,3µm,16.7s						
QIZ	**Qiongzhong**	**28.88**	**325**	⇑*i*P	**P**	**03 11 10.6**	**+0.9**
	comp=Z,144nm,1.1s,mb5.6						
MUN	**Mundaring**	**28.97**	**199**	*e*P	**P**	**03 11 15.6**	**+5.1**
NACB	**Ninganchiao**	**29.09**	**350**	⇑*i*P	**P**	**03 11 10.4**	**-1.2**
UBT	**Ubonrachathani**	**29.30**	**313**	P	**P**	**03 11 09.0**	**-4.4**
	comp=Z,743nm,0.8s,mb6.5						
TSI	**Tuntungan**	**29.40**	**285**	P	**P**	**03 11 15.1**	**+0.8**
	comp=Z,596nm,1.4s,mb6.1						
HKC	**Hong Kong**	**29.51**	**336**	⇑*i*P	**P**	**03 11 16.0**	**+0.7**
NWAO	**Narrogin (SRO)**	**29.54**	**197**	P	**P**	**03 11 16.2**	**+0.7**
	comp=Z,28nm,1.0s,baz=76,slow=13,SNR=5.5						
NWAO				LR	LR	03 25 29.5	
	comp=Z,10µm,18.1s,MS5.5,baz=11,slow=41						
NWAO	**Narrogin (SRO)**	**29.54**	**197**	P	**P**	**03 11 16.2**	**+0.7**
NWAO				LR	LR	03 25 29.4	
YHNB	**Yeheng**	**29.62**	**350**	⇑*i*P	**P**	**03 11 15.6**	**-0.6**

TATO	Taipei	29.90	350	P	P	03 11 18.3	-0.4
	SNR=9.1						
TATO	Taipei	29.90	350	eP	P	03 11 18.4	-0.3
	comp=Z,456nm,1.3s,mb6.0						
STKA	Stephens Creek	30.42	155	eP	P	03 11 23.4	+0.1
	comp=Z,74nm,1.3s,mb5.2						
STKA				eS	S	03 16 24.6	+2.6
STKA	Stephens Creek	30.42	155	P	P	03 11 23.5	+0.2
	comp=Z,81nm,1.0s,mb5.4,baz=325,slow=8.8,SNR=71						
STKA				LR	LR	03 24 27.8	
	comp=Z,6µm,18.6s,MS5.3,baz=328,slow=38						
STKA	Stephens Creek	30.42	155	eP	P	03 11 23.4	+0.1
	comp=Z,74nm,1.3s,mb5.2						
STKA				eS	S	03 16 24.6	+2.6
QZH	Quanzhou	30.48	345⇑	iP	P	03 11 25.3	+1.4
QZH				S	S	03 16 24.9	+1.9
QZH				AMB	AMB		
	comp=Z,2µm,1.2s,mb6.6						
QZH				LR	LR		
	comp=N,3µm,9.7s						
QZH				LR	LR		
	comp=E,2µm,9.2s						
QZH				LR	LR		
	comp=Z,18µm,28.7s,MS5.6						
GZH	Guangzhou	30.55	335	P	P	03 11 29.3	+4.8
GZH				S	S	03 16 34.8	+11
GZH				AMB	AMB		
	comp=Z,674nm,1.1s,mb6.4						
GZH				LR	LR		
	comp=N,4µm,18.0s,MS5.2						
GZH				LR	LR		
	comp=E,3µm,16.8s,MS5.2						
GZH				LR	LR		
	comp=Z,8µm,21.8s,MS5.3						
JOW	Kunigami	31.32	2	P	P	03 11 32.4	+1.1
	comp=Z,440nm,1.0s,mb6.2,baz=186,slow=8.4,SNR=49						
JOW				LR	LR	03 23 24.9	
	comp=Z,6µm,20.1s,MS5.2,baz=171,slow=35						
KKTK	Khon Kaen	31.61	312	⇑P	P	03 11 35.0	+1.2
	comp=Z,2µm,1.0s,mb6.9						
NNT	Nongplab	31.93	303	P	P	03 11 38.2	+1.6
ADE	Adelaide	32.11	161⇓	iP	P	03 11 39.3	+1.1
BSI	Banda Aceh	33.08	287	P	P	03 11 45.5	-1.2
	comp=Z,276nm,1.8s,mb5.9						
HNR	Honiara	33.17	100	P	P	03 11 47.5	0.0
	comp=Z,101nm,0.5s,mb6.0,baz=263,slow=9.1,SNR=9.7						
HNR				LR	LR	03 26 14.3	
	comp=Z,4µm,18.0s,MS5.1,baz=359,slow=38						
HNR	Honiara	33.17	100	P	P	03 11 47.9	+0.4
HNR				pmax	pmax		
	comp=Z,500nm,1.3s,mb6.3						
NST	Nakhon Sawan	33.27	308	⇓P	P	03 11 50.0	+1.6
	comp=Z,167nm,1.4s,mb5.8						
ARMA	Armidale	34.69	140	eP	P	03 12 01.7	+1.1
ARMA				eS	S	03 17 31.4	+3.0
NANT	Nan	34.73	313	⇑P	P	03 12 02.0	+1.0
	comp=Z,2µm,0.4s						
CBIJ	Chichi jima	34.86	24	P	P	03 12 02.3	+0.2
	comp=Z,746nm,1.0s,mb6.6,baz=303,slow=22,SNR=9.0						
CBIJ				LR	LR	03 25 44.5	
	comp=Z,3µm,20.4s,MS5.0,baz=160,slow=35						
SSE	Sheshan	35.95	352	P	P	03 12 12.3	+0.8
SSE				AP	pP	03 12 23.4	+2.5
SSE				PP	PP	03 13 35.5	+2.1
SSE				S	S	03 17 51.4	+3.7
SSE				AMB	AMB		
	comp=Z,230nm,1.2s,mb6.0						
SSE				AMB	AMB		
	comp=Z,1µm,6.2s						
SSE				LR	LR		
	comp=N,2µm,20.0s,MS5.1						
SSE				LR	LR		
	comp=E,2µm,20.0s,MS5.1						
SSE				LR	LR		
	comp=Z,3µm,26.5s						
CHTO	Chiang Mai	36.04	311	⇑P	P	03 12 14.0	+1.7
	SNR=38						
CHTO	Chiang Mai	36.04	311⇑	iP	P	03 12 13.6	+1.3
CHTO				e		03 14 37.3	
CHTO				pmax	pmax		
	comp=Z,201nm,0.8s,mb6.1						
CHTO				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.1						
CHTO	Chiang Mai	36.04	311⇑	iP	P	03 12 13.6	+1.4
	comp=Z,204nm,0.8s,mb6.1						
CHTO				ePcP	PcP	03 14 37.2	-0.9
CHTO				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
CHRT	Chiangrai	36.08	313	⇑P	P	03 12 14.0	+1.4
	comp=Z,921nm,0.8s,mb6.8						
GYA	Guiyang	36.58	329⇑	iP	P	03 12 18.9	+2.0
GYA				AP	pP	03 12 26.4	+0.1
GYA				XP	sP	03 12 29.8	-0.4
GYA				PP	PP	03 13 41.8	+1.4
GYA				PPP		03 14 01.6	
GYA				S	S	03 17 58.8	+1.4
GYA				SCP	ScP	03 18 27.5	+3.6
GYA				SS	SS	03 20 21.1	-17
GYA				SCS	ScS	03 22 32.3	+1.8
GYA				AMB	AMB		
	comp=Z,610nm,1.0s,mb6.4						
GYA				AMB	AMB		
	comp=Z,2µm,5.1s						
GYA				LR	LR		
	comp=N,4µm,18.8s,MS5.3						
GYA				LR	LR		
	comp=E,3µm,16.8s,MS5.3						
GYA				LR	LR		
	comp=Z,2µm,10.2s						
RIV	Riverview	36.80	145	eP	P	03 12 20.9	+2.1
CNB	Canberra Magne	36.94	149	eP	P	03 12 21.5	+1.6
	comp=Z,193nm,1.3s,mb5.8						
TOO	Toolangi	36.94	155	eP	P	03 12 21.0	+1.0
	comp=Z,62nm,1.4s,mb5.2						
TOO				eS	S	03 18 06.5	+3.6
TOO	Toolangi	36.94	155	eP	P	03 12 21.0	+1.0
TOO				eS	S	03 18 06.5	+3.6
TOO				pmax	pmax		
	comp=Z,62nm,1.4s,mb5.2						
WHN	Wuhan	36.97	342⇑	iP	P	03 12 21.4	+1.2
WHN				S	S	03 18 08.0	+4.6
WHN				AMB	AMB		
	comp=Z,2µm,1.0s,mb6.8						
WHN				LR	LR		
	comp=Z,8µm,27.2s,MS5.4						
NJ2	Nanjing	37.27	349	eP	P	03 12 23.9	+1.1
KMI	Kunming	37.74	323	⇑P	P	03 12 29.6	+2.9
KMI				AP	pP	03 12 35.3	-0.9
KMI				XP	sP	03 12 38.0	-2.1
KMI				PP	PP	03 13 58.3	+5.1
KMI				PPP		03 14 19.6	
KMI				PCP	PcP	03 14 45.5	+2.2
KMI				S	S	03 18 18.5	+3.4
KMI				XS	sS	03 18 29.3	-1.3
KMI				SS	SS	03 20 53.8	-7.6
KMI				SSS		03 21 25.8	
KMI				SCS	ScS	03 22 37.6	+0.5
KMI				AMB	AMB		
	comp=Z,467nm,1.3s,mb6.1						
KMI				AMB	AMB		
	comp=Z,3µm,3.8s						
KMI				LR	LR		
	comp=N,2µm,24.1s						
KMI				LR	LR		
	comp=E,3µm,16.1s						
KMI				LR	LR		
	comp=Z,4µm,33.5s						
ENH	Enshi	38.49	335	PFAKE		03 12 40.0	+6.9
ENH				LR	LR		
	comp=Z,36nm,22.0s						
JHJ	Hachijo jima 2	39.50	17	LR	LR	03 27 02.3	
	comp=Z,2µm,19.3s,MS5.1,baz=227,slow=33						
TIA	Tai'an	41.65	348	⇑P	P	03 12 59.0	-0.2
TIA				AMB	AMB		
	comp=Z,193nm,1.0s,mb5.7						
TIA				AMB	AMB		
	comp=Z,1µm,4.0s						
TIA				LR	LR		
	comp=N,1µm,10.0s,MS5.1						
TIA				LR	LR		
	comp=E,516nm,11.0s,MS5.1						
CD2	Chengdu	41.67	330⇓	iP	P	03 13 00.3	+0.9
CD2				AP	pP	03 13 11.3	+2.3
CD2				PP	PP	03 14 40.8	+4.8
CD2				PCP	PcP	03 14 56.5	+0.7
CD2				SCP	ScP	03 18 42.4	-1.1
CD2				PCS	PcS	03 18 47.0	-0.2
CD2				S	S	03 19 14.9	+0.9
CD2				XS	sS	03 19 32.3	+2.6
CD2				SS	SS	03 22 16.3	-3.6
CD2				SCS	ScS	03 22 57.8	-2.4
CD2				AMB	AMB		
	comp=Z,390nm,1.0s,mb6.0						
CD2				AMB	AMB		
	comp=Z,1µm,8.4s						
CD2				LR	LR		
	comp=E,1µm,13.2s						
CD2				LR	LR		
	comp=Z,2µm,15.6s,MS5.1						
INCN	Inchon	41.91	360	P	P	03 13 02.3	+0.9
	SNR=45						
INCN	Inchon	41.91	360	eP	P	03 13 02.1	+0.8
	comp=Z,326nm,1.1s,mb5.9						
INCN				LR	LR		
	comp=Z,4µm,20.0s,MS5.3						
XAN	Xi'an	42.04	338	P	P	03 13 02.8	+0.4
XAN				AP	pP	03 13 12.9	+0.9
XAN				S	S	03 19 20.3	+0.9
XAN				SS	SS	03 22 28.1	+0.9
XAN				AMB	AMB		
	comp=Z,554nm,1.2s,mb6.1						
XAN				LR	LR		
	comp=E,2µm,21.1s						
XAN				LR	LR		
	comp=Z,3µm,25.7s,MS5.1						
DZM	Mont Dzumac	42.05	118	P	P	03 13 03.4	+0.8
	comp=Z,85nm,1.1s,mb5.3,baz=317,slow=6.4,SNR=36						
MAJO	Matsushiro	42.32	14	eP	P	03 13 04.5	-0.3
MAJO				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.2						
MAT	Matsushiro	42.32	14	P	P	03 13 04.3	-0.5
MAT				S	S	03 19 21.0	-2.6
MAT	Matsushiro	42.32	14	eP	P	03 13 04.0	-0.8
MAT				eS	S	03 19 22.0	-1.6
MAT				pmax	pmax		
	comp=Z,365nm,1.3s,mb5.8						
MAT				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.2						
MAT	Matsushiro	42.32	14	eP	P	03 13 04.0	-0.8
	comp=Z,365nm,1.3s,mb5.8						
MAT				eS	S	03 19 22.0	-1.6
MAT				LR	LR		
	comp=Z,4µm,22.0s,MS5.2						
MJAR	Matsushiro Arr	42.32	14	P	P	03 13 04.2	-0.5
	comp=Z,139nm,1.0s,mb5.5,baz=186,slow=8.9,SNR=169						
MJAR				LR	LR	03 27 48.6	
	comp=Z,3µm,20.0s,MS5.2,baz=215,slow=32						
MJAR	Matsushiro Arr	42.32	14	P	P	03 13 04.2	-0.5
MJAR				LR	LR	03 27 48.6	
IMP	Imphal	43.36	314	iP	P	03 13 13.0	-0.2
IMP				ix	x	03 19 50.0	
DL2	Dalian	43.60	354	iPR	P	03 13 15.5	+0.4
DL2				eS	S	03 19 40.0	-2.3
DL2				AMB	AMB		
	comp=Z,188nm,1.0s,mb5.8						
DL2				AMB	AMB		
	comp=Z,1µm,5.0s						
DL2				LR	LR		
	comp=N,2µm,15.0s,MS5.3						
DL2				LR	LR		
	comp=E,2µm,15.0s,MS5.3						
SHL	Shillong	45.31	313	eP	P	03 13 28.1	-0.6
SHL				AMb	AMB	03 13 36.0	
	comp=Z,4µm,2.6s,mb6.7						
BJT	Baijiatuau	45.51	348⇑	iP	P	03 13 30.2	-0.2
BJT				e		03 15 09.1	
BJT				pmax	pmax		
	comp=Z,815nm,1.2s						
BJT				MLR	MLR		
	comp=Z,3µm,19.0s						
BJT	Baijiatuau	45.51	348⇑	iP	P	03 13 30.2	-0.2
	comp=Z,815nm,1.2s,mb6.5						
BJT				ePcP	PcP	03 15 09.1	+0.3
BJT				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
BJI	Beijing	45.53	349	P	P	03 13 30.4	-0.1
BJI				S	S	03 20 03.6	-6.8
BJI				AMB	AMB		
	comp=Z,567nm,1.2s,mb6.4						
BJI				LR	LR		
	comp=N,2µm,33.8s						
BJI				LR	LR		
	comp=E,2µm,18.4s						
BJI				LR	LR		
	comp=Z,6µm,38.5s,MS5.3						
WAKE	Wake Island	45.82	57	eP	P	03 13 33.7	+1.0
LZH	Lanzhou	45.89	334	eP	P	03 13 35.1	+1.8
LZH				AP	pP	03 13 41.3	-1.7
LZH				XP	sP	03 13 44.5	-2.3
LZH				PP	PP	03 15 23.1	+1.9
LZH				eS	S	03 20 18.3	+2.8
LZH				XS	sS	03 20 26.0	-5.4
LZH				SS	SS	03 23 38.0	-2.4
LZH				AMB	AMB		
	comp=Z,1µm,1.3s,mb6.6						
LZH				AMB	AMB		
	comp=Z,4µm,4.0s						
LZH				LR	LR		
	comp=N,3µm,13.8s						
LZH				LR	LR		
	comp=Z,5µm,15.9s,MS5.6						
CAL	Calcutta	46.34	307	eP	P	03 13 34.2	-2.7
CAL				eP		03 13 34.3	
CAL				eS	S	03 20 23.0	+1.0
SNY	Shenyang	46.34	357	⇑P	P	03 13 36.4	-0.5
SNY				S	S	03 20 21.5	-0.5
SNY				SCS	ScS	03 23 34.3	+4.6
SNY				AMB	AMB		
	comp=Z,202nm,1.1s,mb6.0						
SNY				LR	LR		
	comp=N,4µm,19.8s,MS5.4						
SNY				LR	LR		
	comp=E,2µm,19.8s,MS5.4						
SNY				LR	LR		
	comp=Z,4µm,27.3s						
BWNR	Bhubaneshwar	47.32	303	ex	x	03 13 23.0	
HHC	Hu-ho-hao-te	47.39	344	eP	P	03 13 44.8	-0.3
HHC				AP	pP	03 13 54.8	+0.1
HHC				XP	sP	03 13 58.8	+0.2
HHC				PCP	PcP	03 15 15.0	-0.4
HHC				PP	PP	03 15 35.8	-0.6
HHC				SCP	ScP	03 19 05.6	-1.4
HHC				PCS	PcS	03 19 07.9	-2.8
HHC				S	S	03 20 37.6	+0.6
HHC				XS	sS	03 20 53.4	+0.6
HHC				SCS	ScS	03 23 33.1	-3.4
HHC				SS	SS	03 23 59.6	-5.1
HHC				AMB	AMB		
	comp=Z,276nm,1.2s,mb6.1						
HHC				AMB	AMB		
	comp=Z,2µm,9.5s						
HHC				LR	LR		
	comp=N,2µm,18.6s,MS5.2						
HHC				LR	LR		
	comp=E,1µm,21.0s,MS5.2						
HHC				LR	LR		
	comp=Z,4µm,24.5s,MS5.3						
PALK	Pallekele	47.55	284	eP	P	03 13 46.3	-0.1
	comp=Z,238nm,1.8s,mb5.9						
PALK				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
BTO	Baotou	47.60	343	eP	P	03 13 45.5	-1.2
BTO				S	S	03 20 33.4	-6.6
VLA	Vladivostok	47.76	5d	iP	P	03 13 48.8	+0.9
VLA				i		03 15 17.8	
VLA				e		03 15 37.7	
VLA				eS	S	03 20 41.6	-0.6
VLA				pmax	pmax		
	comp=Z,786nm,1.3s,mb6.6						
VLA				MLR	MLR		
	comp=Z,1µm,17.6s,MS5.0						
VLA	Vladivostok	47.76	5	iPr	P	03 13 48.0	+0.1
CN2	Changchun	48.23	359	⇑P	P	03 13 50.9	-0.7
CN2				eAP	pP	03 13 58.4	-2.9
CN2				PP	PP	03 15 43.6	-0.5
CN2				eS	S	03 20 50.3	+1.3
CN2				SS	SS	03 24 15.5	-3.0
CN2				AMB	AMB		
	comp=Z,80nm,1.6s,mb5.5						
CN2				LR	LR		
	comp=N,2µm,20.0s,MS5.1						
CN2				LR	LR		
	comp=E,1µm,20.0s,MS5.1						
CN2				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
LSA	Lhasa	48.34	317	P	P	03 13 52.9	+0.4
LSA				AP	pP	03 14 03.1	+1.0
LSA				XP	sP	03 14 06.5	+0.5
LSA				PCP	PcP	03 15 16.1	-2.7
LSA				PP	PP	03 15 46.6	+1.5
LSA				SCP	ScP	03 19 10.3	-0.7
LSA				PCS	PcS	03 19 13.8	-0.9
LSA				S	S	03 20 53.8	+3.3
LSA				SCS	ScS	03 23 43.5	+0.6
LSA				AMB	AMB		
	comp=Z,260nm,0.9s,mb6.3						
LSA				AMB	AMB		
	comp=Z,2µm,4.7s						
LSA				LR	LR		
	comp=N,1µm,25.7s						
LSA				LR	LR		
	comp=E,2µm,20.1s						
LSA				LR	LR		
	comp=Z,3µm,21.2s,MS5.3						
LSA	Lhasa	48.34	317	iP	P	03 13 54.4	+1.9
LSA				pmax	pmax		
	comp=Z,212nm,0.8s,mb6.2						
LSA				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.9						
LSA	Lhasa	48.34	317	iP	P	03 13 54.4	+2.0
	comp=Z,212nm,0.8s,mb6.2						
LSA				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
VIS	Vishakhapatnam	48.35	299	eP	P	03 13 51.6	-1.0
VIS				iPP	PP	03 15 45.3	+0.1
VIS				AMS	AMS	03 25 58.4	
	comp=N,2µm,17.2s						
VIS				AMS	AMS	03 38 04.9	
	comp=Z,2µm,16.8s,MS5.2						
ERM	Erimo	48.75	16	PFAKE		03 14 10.0	+14
ERM				LR	LR		
	comp=Z,22nm,22.0s						
BOK	Bokaro	48.91	307	eP	P	03 13 56.1	-0.8
BOK				AMb	AMB	03 14 00.1	
	comp=Z,116nm,1.8s,mb5.6						
BOK				AMS	AMS	03 32 24.8	
	comp=N,1µm,11.7s						
MDJ	Mudanjiang	49.09	3	P	P	03 13 59.0	+0.8
MDJ				AP	pP	03 14 05.3	-2.6
MDJ				XP	sP	03 14 08.0	-3.8
MDJ				PP	PP	03 15 51.0	-1.0
MDJ				SCP	ScP	03 19 15.6	+1.4
MDJ				PCS	PcS	03 19 18.4	+0.5
MDJ				S	S	03 21 04.6	+3.5
MDJ				XS	sS	03 21 15.4	-1.6
MDJ				SCS	ScS	03 23 49.8	+1.9
MDJ				AMB	AMB		
	comp=Z,714nm,1.1s,mb6.6						
MDJ				AMB	AMB		
	comp=Z,2µm,4.2s						
MDJ				LR	LR		
	comp=N,4µm,25.5s,MS5.3						
MDJ				LR	LR		
	comp=E,1µm,22.3s,MS5.3						
MDJ				LR	LR		
	comp=Z,5µm,23.9s,MS5.4						
MDJ	Mudanjiang	49.09	3⇑	iP	P	03 13 58.5	+0.3
	comp=Z,831nm,1.1s,mb6.7						
MDJ				LR	LR		
	comp=Z,3µm,22.0s,MS5.3						
MDRS	Chennai	49.52	291	ex	P	03 14 01.9	+0.4
MDRS				AMS	AMS	03 38 02.8	
	comp=Z,2µm,14.2s,MS5.2						
GTA	Gaotai	50.43	333⇑	iP	P	03 14 09.3	+0.9
GTA				AP	pP	03 14 16.8	-1.3
GTA				XP	sP	03 14 20.1	-1.8
GTA				PCP	PcP	03 15 26.3	-0.1
GTA				PP	PP	03 16 06.5	+2.3
GTA				PPP		03 17 05.4	
GTA				SCP	ScP	03 19 19.4	-0.5
GTA				PCS	PcS	03 19 22.1	-1.5
GTA				S	S	03 21 22.8	+3.0
GTA				PS		03 21 33.5	
GTA				XS	sS	03 21 35.4	-0.3
GTA				SCS	ScS	03 23 56.3	-0.7
GTA				SS	SS	03 24 55.0	+1.2
GTA				AMB	AMB		
	comp=Z,366nm,1.3s,mb6.2						
GTA				AMB	AMB		
	comp=Z,2µm,8.0s						
GTA				LR	LR		
	comp=N,2µm,18.6s,MS5.3						
GTA				LR	LR		
	comp=E,2µm,20.5s,MS5.3						
GTA				LR	LR		
	comp=Z,3µm,23.6s,MS5.3						
ASAJ	Asahikawa	50.56	15	P	P	03 14 10.3	+0.9
	comp=Z,336nm,1.1s,mb6.2,baz=237,slow=15,SNR=133						
ASAJ				LR	LR	03 35 38.4	
	comp=Z,3µm,20.1s,MS5.2,baz=195,slow=36						
ASAJ	Asahikawa	50.56	15	P	P	03 14 10.3	+0.9
ASAJ				pmax	pmax		
	comp=Z,336nm,1.1s						
ASAJ				MLR	MLR		
	comp=Z,2µm,20.1s						
JIRN	Jiri	50.69	312	eP	P	03 14 11.2	+0.9
	comp=Z,1µm,1.5s,mb6.6						
GUN	Gumba	51.05	312	eP	P	03 14 14.0	+0.9
	comp=Z,736nm,1.0s,mb6.6						
BLSP	Bilaspur	51.20	303	eP	P	03 14 15.0	+0.8
PKI	Pulchoki	51.22	311	eP	P	03 14 14.7	+0.3
	comp=Z,632nm,1.4s,mb6.4						
PKI	Pulchoki	51.22	311	eP	P	03 14 14.7	+0.3
PKI				pmax	pmax		
	comp=Z,632nm,1.4s,mb6.3						
YUK	Yuzh-Kuril'sk	51.39	17⇑	iP	P	03 14 16.0	+0.4
YUK				eS	S	03 21 30.0	-3.0
YUK				eSSS		03 26 48.0	
YUK				pmax	pmax		
	comp=Z,4µm,2.0s,mb7.0						
YUK				pmax	pmax		
	comp=N,5µm,3.0s						
YUK				pmax	pmax		
	comp=E,2µm,2.0s						
YUK				pmax	pmax		
	comp=Z,980nm,1.0s,mb6.7						
YUK				smax			
	comp=E,2µm,2.0s						
YUK				smax			
	comp=N,3µm,3.0s						
KKN	Kakani	51.44	311	eP	P	03 14 16.4	+0.4
	comp=N,495nm,1.1s,mb6.4						
KKN	Kakani	51.44	311	eP	P	03 14 16.4	+0.4
KKN				pmax	pmax		
	comp=Z,495nm,1.1s,mb6.3						
TRD	Trivandrum	51.44	285	eP	P	03 14 14.5	-1.5
TRD				AMb	AMB	03 14 17.1	
	comp=Z,86nm,0.8s,mb5.8						
TRD				AMS	AMS	03 38 44.1	
	comp=Z,2µm,17.6s,MS5.3						
TRD				AMS	AMS	03 38 45.6	
	comp=E,2µm,15.3s						
DMN	Daman	51.47	311	eP	P	03 14 16.8	+0.6
	comp=E,664nm,1.1s,mb6.5						
GKN	Gorkha	52.03	311	eP	P	03 14 20.6	+0.2
	comp=E,704nm,1.1s,mb6.5						
FUNA	Funafuti	52.11	97⇓	eP	P	03 14 22.5	+1.5
	comp=E,2µm,1.8s,mb6.7						
FUNA				LR	LR		
	comp=Z,6µm,19.0s,MS5.6						
HYB	Hyderabad	52.47	296⇑	iP	P	03 14 23.0	-0.7
	comp=Z,280nm,1.0s,mb6.2						
HYB				ePP	PP	03 16 26.0	+3.4
HYB				eS	S	03 21 48.0	+0.1
HYB				eScS	ScS	03 24 12.0	+0.9
HYB				eSS	SS	03 25 24.0	-2.0
KOLN	Koldanda	52.70	310	eP	P	03 14 26.0	+0.7
	comp=Z,1µm,1.2s,mb6.7						
YSS	Yuzh-Sakhalins	53.26	14α	iP	P	03 14 29.8	+0.3
YSS				e		03 14 41.3	
YSS				e		03 15 33.0	
YSS				eS	S	03 22 00.0	+1.3
YSS				ePS		03 22 13.0	
YSS				e		03 24 08.0	
YSS				eSS	SS	03 25 30.0	-8.5

YSS pmax pmax
comp=Z,260nm,1.2s,mb6.0
YSS pmax pmax
comp=N,110nm,1.0s
YSS pmax pmax
comp=E,70nm,1.1s
YSS pmax pmax
comp=Z,2μm,8.0s
YSS MLR MLR
comp=Z,1μm,19.0s,MS4.9
YSS MLR MLR
comp=N,1μm,17.0s,MS5.1
YSS MLR MLR
comp=E,1μm,17.0s,MS5.1
YSS Yuzh-Sakhalins 53.26 14 *e*P **P 03 14 29.9 +0.4**
comp=E,210nm,1.3s,mb5.9
HABR Khabarovsk 53.38 7⇑*i*P **P 03 14 31.4 +1.0**
HABR pmax pmax
comp=Z,823nm,1.8s,mb6.4
NGP Nagpur 53.41 301 *e*P **P 03 14 28.4 -2.1**
NGP AMb AMB 03 15 27.2
comp=Z,415nm,1.3s,mb6.2
NGP *ex* x 03 21 49.7
JBP Jabalpur 53.44 303⇑*e*P **P 03 14 30.2 -0.6**
JBP *i* S **S 03 22 03.9 +2.9**
KLR Kul'dur 53.82 4*d i*P **P 03 14 30.5 -3.1**
KLR *e*S **S 03 22 03.0 -3.2**
KLR pmax pmax
comp=E,78nm,1.8s
KLR pmax pmax
comp=Z,460nm,1.8s,mb6.1
KLR pmax pmax
comp=Z,2μm,8.0s
HIA Hailar 54.04 354⇑*i*P **P 03 14 35.4 +0.2**
HIA LR LR
comp=Z,4μm,20.0s,MS5.4
DGAR Diego Garcia 54.14 264 PFAKE 03 14 50.0 +14
DGAR LR LR
comp=Z,3μm,20.0s,MS5.4
MNGI Mangalore 54.55 289 *i* P **P 03 14 38.4 -0.6**
MNGI *i* P 03 14 38.4
MNGI *i* x x 03 22 21.1
MNGI *ex* x 03 41 58.7
comp=Z,2μm,18.2s
LATR Latur 54.59 296 *ex* **P 03 14 35.1 -4.1**
AKL Akola 55.00 299 *e*P **P 03 14 41.8 -0.3**
AKL AMb AMB 03 14 43.4
comp=Z,685nm,0.7s,mb6.8
AKL *e*PP PP 03 16 44.8 -0.6
ULN Ulaanbaatar 55.10 344 P **P 03 14 43.6 +0.7**
SNR=242
ULN Ulaanbaatar 55.10 344*c i*P **P 03 14 43.4 +0.5**
ULN Ulaanbaatar 55.10 344⇑*i*P **P 03 14 43.5 +0.6**
SONM Songino Array 55.26 343 P **P 03 14 44.3 +0.2**
comp=Z,197nm,1.0s,mb6.1,baz=166,slow=5.5,SNR=468
SONM LR LR 03 38 57.5
comp=Z,2μm,20.2s,MS5.2,baz=161,slow=37
LGTI Lohaghat 56.09 310 *i* P **P 03 14 51.5 +1.5**
KAD Karad 56.38 294 *e*P **P 03 14 51.6 -0.5**
KAD AMb AMB 03 14 53.6
comp=Z,193nm,1.3s,mb6.0
KAD AMS AMS 03 42 01.8
comp=Z,1μm,18.5s,MS5.1
CIT Chita 57.57 350 *e*P **P 03 15 00.7 +0.2**
CIT *e* 03 15 06.7
CIT *e* 03 15 16.6
CIT *e* 03 17 08.5
CIT *e* 03 22 54.3
CIT pmax pmax
comp=Z,638nm,1.9s,mb6.3
NDI New Delhi 58.07 308 *e*P **P 03 15 02.5 -1.5**
NDI AMb AMB 03 15 04.2
comp=Z,255nm,2.0s,mb5.9
ZAK Zakamensk 58.46 343⇓*i*P **P 03 15 06.4 -0.3**
ZAK pmax pmax
comp=Z,72nm,1.2s,mb5.6
AJM Ajmer 59.22 304 *i* P **P 03 15 11.0 -1.0**
SMLA Simla 59.22 310 *e*P **P 03 15 11.8 -0.2**
SMLA AMb AMB 03 15 13.8
comp=Z,767nm,1.3s,mb6.6
TLY Talaya 59.50 343 P **P 03 15 14.3 +0.4**
SNR=33
TLY Talaya 59.50 343*c i*P **P 03 15 13.9 -0.1**
TLY *e*PPP 03 18 47.0
TLY *e*S **S 03 23 21.4 +0.1**
TLY pmax pmax
comp=Z,171nm,1.2s,mb6.0
TLY MLR MLR
comp=Z,1μm,16.0s,MS5.2
TLY Talaya 59.50 343 *e*P **P 03 15 14.2 +0.2**
SDNR Sundarnagar 59.55 311 *e*P **P 03 15 14.5 +0.2**
WMQ Urumqi 59.73 328⇑*i*P **P 03 15 16.0 +0.4**
WMQ AP pP 03 15 28.0 +2.6
WMQ PP PP 03 17 30.0 +2.5
WMQ S **S 03 23 22.0 -2.3**
WMQ SS SS 03 27 19.0 -1.4
WMQ AMB AMB
comp=Z,425nm,1.0s,mb6.4
WMQ AMB AMB
comp=Z,3μm,5.0s
WMQ LR LR
comp=N,2μm,15.0s,MS5.6
WMQ LR LR
comp=E,2μm,15.0s,MS5.6
WMQ LR LR
comp=Z,2μm,15.0s,MS5.5
IRK Irkutsk 59.83 344⇑*i*P **P 03 15 16.0 -0.2**
IRK pmax pmax
comp=Z,396nm,1.9s,mb6.1
BHK Bhakra 59.93 310 *ex* **P 03 15 19.5 +2.6**
MOY Mondy 60.28 342 *e*P **P 03 15 19.6 +0.3**
MOY pmax pmax
comp=Z,589nm,3.4s
SKR Severo-Kuril's 60.58 21 *e*P **P 03 15 13.5 -7.9**
SKR *e*PPP 03 19 02.0
SKR *e*S **S 03 23 36.0 +0.8**
SKR *e*SS SS 03 27 34.0 +0.3
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.2
SKR pmax pmax
comp=N,1μm,4.0s
SKR pmax pmax
comp=E,2μm,4.0s
SKR pmax pmax
comp=Z,3μm,4.0s
SKR smax
comp=N,2μm,14.0s
SKR smax
comp=E,2μm,14.0s
SKR MLR MLR
comp=E,1μm,14.0s,MS5.2
SKR MLR MLR
comp=Z,1μm,14.0s,MS5.2
SKR MLR MLR
comp=N,900nm,18.0s,MS5.2
DLH Dalhousie 60.78 311 *e*P **P 03 15 22.0 -0.7**
AFI Afiamalu 61.12 103 P **P 03 15 26.4 +1.4**
comp=N,215nm,1.0s,mb6.2,baz=242,slow=3.5,SNR=16
AFI Afiamalu 61.12 103 P **P 03 15 27.0 +2.0**
AFI pmax pmax
comp=Z,520nm,1.2s,mb6.5
AFI Afiamalu 61.12 103 P **P 03 15 26.4 +1.4**
AFI LR LR
comp=Z,1μm,19.0s,MS5.0
CLNS Chul'man 61.29 359 *e*P **P 03 15 26.9 +0.7**
CLNS *e* 03 16 14.1
CLNS pmax pmax
comp=Z,151nm,1.1s,mb6.0
CLNS pmax pmax
comp=N,76nm,1.0s
CLNS pmax pmax
comp=E,29nm,0.8s
CASY Casey 62.58 187⇑*i*P **P 03 15 34.4 -0.5**
comp=E,75nm,1.1s,mb5.7
CASY LR LR
comp=Z,4μm,19.0s,MS5.6
DRV Dumont d'Urvil 62.59 174 P **P 03 15 34.0 -0.9**
DRV S **S 03 24 01.0 +0.4**
DRV SS SS 03 28 05.0 -0.1
DRV R 03 35 00.0
MIDW Midway 62.81 55 PFAKE 03 15 50.0 +14
MIDW LR LR
comp=Z,2μm,21.0s,MS5.2

BOD Bodaibo 63.12 352⇓*i*P **P 03 15 38.3 -0.1**
BOD pmax pmax
comp=Z,1μm,1.2s,mb6.9
PET Petropavlovsk 63.41 21⇑*i*P **P 03 15 41.2 +0.9**
PET *e*PP PP 03 17 58.2 -1.7
PET *e*S **S 03 24 14.0 +3.1**
PET pmax pmax
comp=Z,511nm,1.2s,mb6.5
PET Petropavlovsk 63.41 21 *e*P **P 03 15 41.3 +1.0**
PET LR LR
comp=Z,1μm,19.0s,MS5.0
KSH Kashi 64.18 318 P **P 03 15 45.3 -0.1**
KSH AP pP 03 15 56.3 +0.9
KSH XP sP 03 16 00.5 +1.4
KSH PCP PcP 03 16 21.5 +1.3
KSH PP PP 03 18 09.3 +2.6
KSH PPP 03 19 40.8
KSH SCP 03 20 20.0
KSH PCS 03 20 23.5
KSH S **S 03 24 17.8 -2.7**
KSH XS sS 03 24 35.3 -1.6
KSH SCS ScS 03 25 33.0 -4.0
KSH AMB AMB
comp=Z,551nm,1.2s,mb6.5
KSH AMB AMB
comp=Z,3μm,4.1s
KSH LR LR
comp=N,2μm,6.9s
KSH LR LR
comp=E,2μm,8.9s
KSH LR LR
comp=Z,4μm,27.7s,MS5.5
MKAR Makanchi Array 64.56 328 P **P 03 15 47.6 -0.3**
comp=Z,152nm,0.9s,mb6.0,baz=115,slow=8.2,SNR=448
MKAR Makanchi Array 64.56 328⇑*e*P **P 03 15 47.5 -0.4**
AAA Alma-Ata 65.54 322 *e*P **P 03 15 54.0 -0.3**
AAA *e*S S 03 24 40.7 +3.5
AAA pmax pmax
comp=Z,2μm,3.5s
AAA smax
comp=E,2μm,10.4s
KZA Kyzart 65.97 320 P **P 03 15 58.1 +1.0**
SNR=60
MIR Mirnyy 66.11 194*d i*P **P 03 16 00.0 +2.1**
MIR *e*SSS 03 29 04.0
MIR pmax pmax
comp=Z,800nm,2.5s,mb6.3
MIR pmax pmax
comp=Z,2μm,8.0s
TKM2 Tokmak 2 66.19 321 P **P 03 15 58.7 +0.3**
SNR=34
TKM2 Tokmak 2 66.19 321 *i* P **P 03 15 58.6 +0.1**
TKM2 pmax pmax
comp=Z,275nm,1.7s,mb6.0
KBK Karagaybulak 66.46 321 P **P 03 16 00.8 +0.6**
SNR=35
UCH Uchtor 66.51 320 P **P 03 16 01.6 +1.0**
SNR=18
YAK Yakutsk 66.52 1*c i*P **P 03 16 00.6 0.0**
YAK *e**PP pP 03 16 10.1 -0.4
YAK *e* 03 16 29.2
YAK *e* 03 18 32.3
YAK *i* S S 03 24 49.4 +0.3
YAK *i* 03 25 52.5
YAK *e*SS SS 03 29 00.6 -5.7
YAK pmax pmax
comp=Z,489nm,1.0s,mb6.5
YAK pmax pmax
comp=N,261nm,1.3s
YAK pmax pmax
comp=E,80nm,1.1s
YAK pmax pmax
comp=Z,18nm,0.8s,mb5.2
YAK pmax pmax
comp=N,17nm,0.9s
YAK pmax pmax
comp=E,17nm,1.4s
YAK smax
comp=E,18nm,1.5s
YAK smax
comp=N,22nm,1.9s
YAK Yakutsk 66.52 1⇑*i*P **P 03 16 00.5 -0.1**
KRAR Krasnoyarsk 66.56 340⇓*e*P **P 03 16 00.3 -0.6**
KRAR pmax pmax
comp=Z,247nm,1.5s,mb6.0
AAK Ala-Archa 66.73 320 P **P 03 16 02.5 +0.5**
SNR=32
AAK Ala-Archa 66.73 320 P **P 03 16 01.5 -0.4**
SNR=35
AAK P 03 16 01.7
SNR=46
AAK Ala-Archa 66.73 320*c i*P **P 03 16 01.2 -0.7**
AAK pmax pmax
comp=Z,191nm,1.1s,mb6.0
AAK Ala-Archa 66.73 320⇑*i*P **P 03 16 01.3 -0.6**
AAK LR LR
comp=Z,2μm,22.0s,MS5.3
CHMS Chumysh 66.76 321 P **P 03 16 01.8 -0.3**
SNR=18
FRU Bishkek 66.76 321⇑*i*P **P 03 16 02.0 -0.1**
FRU pmax pmax
comp=Z,370nm,2.0s,mb6.1
MA2 Magadan 66.76 13*c i*P **P 03 16 03.0 +0.9**
MA2 *e* 03 16 34.0
MA2 *e*S S 03 24 52.4 +0.3
MA2 pmax pmax
comp=N,300nm,1.1s
MA2 pmax pmax
comp=E,90nm,1.1s
MA2 pmax pmax
comp=Z,700nm,1.1s,mb6.6
MA2 MLR MLR
comp=Z,2μm,17.9s,MS5.3
MA2 Magadan 66.76 13⇑*i*P **P 03 16 02.9 +0.8**
MA2 LR LR
comp=Z,2μm,22.0s,MS5.2
AML Almayashu 66.99 320 P **P 03 16 04.3 +0.7**
SNR=56
USP Ospenovka 67.06 321 P **P 03 16 03.7 -0.3**
SNR=112
EKS2 Erkin-Say 67.20 320 P **P 03 16 05.2 +0.3**
SNR=46
ZAL Zalesovo 68.11 335 P **P 03 16 09.5 -1.1**
comp=Z,128nm,1.1s,mb5.9,baz=351,slow=5.5,SNR=188
ZAL LR LR 03 47 26.5
comp=Z,1μm,20.2s,MS5.1,baz=336,slow=37
ZAL Zalesovo 68.11 335 P **P 03 16 09.5 -1.1**
ZAL LR LR 03 47 26.5
KURK Kurchatov 68.90 329 P **P 03 16 14.8 -0.8**
comp=Z,2μm,1.1s,mb7.0
KURK Kurchatov 68.90 329⇑P **P 03 16 14.9 -0.7**
SNR=151
KURK Kurchatov 68.90 329*c i*P **P 03 16 14.7 -0.9**
KURK pmax pmax
comp=Z,281nm,1.1s,mb6.1
NVS Novosibirsk 69.40 335⇑*i*P **P 03 16 16.9 -1.8**
NVS *e* 03 18 53.0
NVS *e*S S 03 25 19.7 -3.8
NVS pmax pmax
comp=N,320nm,1.5s
NVS pmax pmax
comp=Z,470nm,1.5s,mb6.2
NVS pmax pmax
comp=E,290nm,1.4s
NVS pmax pmax
comp=Z,270nm,2.4s,mb5.8
NVS pmax pmax
comp=N,140nm,1.7s
NVS pmax pmax
comp=E,160nm,2.1s
NVS smax
comp=E,113nm,2.0s
KK31 Karatay Array 69.52 319 *i* P **P 03 16 18.6 -0.8**
KK31 pmax pmax
comp=Z,253nm,1.4s,mb6.0
SMY Shemya 69.65 28 *e*P **P 03 16 21.0 +0.8**
SMY pmax pmax
comp=Z,2μm,2.1s,mb6.6
SMY MLR MLR
comp=Z,2μm,22.0s,MS5.2
SMY Shemya 69.65 28 *e*P **P 03 16 21.0 +0.8**
comp=Z,2μm,2.1s,mb6.6
SMY LR LR
comp=Z,2μm,22.0s,MS5.2
AMKA Amchitka 71.45 32⇑*i*P **P 03 16 31.3 +0.1**
AMKA *e*PP PP 03 19 09.8 -0.1

WBK Wadi Bani Khal 71.57 296⇓P **P 03 16 31.9 -0.1**
SNR=5.7
WSAR Wadi Sarin 72.02 296 P **P 03 16 34.0 -0.7**
comp=Z,51nm,1.2s,mb5.3,baz=100,slow=6.4,SNR=12
WSAR LR LR 03 51 23.8
comp=Z,1μm,20.1s,MS5.2,baz=188,slow=38
JMDO Jabal Madar 72.30 295 P **P 03 16 36.4 +0.1**
SNR=8.3
SMDO Samad 72.50 296 P **P 03 16 37.3 -0.2**
SNR=9.0
BIDO Bidbid 72.54 296 P **P 03 16 37.7 0.0**
SNR=16
HOQ Hoqain 73.28 296 P **P 03 16 41.9 -0.2**
SNR=21
ARQ Araqi 73.94 296 P **P 03 16 45.5 -0.5**
SNR=6.9
BVAR Borovoye Array 74.42 328 P **P 03 16 47.8 -1.0**
comp=Z,123nm,1.0s,mb5.8,baz=134,slow=6.4,SNR=324
BRVK Borovoye 74.49 328⇑P **P 03 16 48.3 -0.9**
SNR=120
BRVK Borovoye 74.49 328⇑*i*P **P 03 16 48.1 -1.1**
BRVK LR LR
comp=Z,1μm,20.0s,MS5.1
ASHO Ashiyiah 74.64 297 ⇑P **P 03 16 49.4 -0.6**
SNR=15
BANOM Banah 74.70 298 ⇑P **P 03 16 49.8 -0.6**
SNR=10
VNDA Vanda 75.16 173 P **P 03 16 52.2 -0.9**
VNDA Vanda 75.16 173 P **P 03 16 52.3 -0.8**
comp=Z,16nm,1.0s,baz=319,slow=5.9,SNR=49
VNDA LR LR 03 49 31.9
comp=Z,4μm,18.8s,MS5.8,baz=345,slow=35
MAW Mawson 76.01 201 P **P 03 16 57.8 -0.1**
comp=Z,34nm,1.2s,mb5.2,baz=65,slow=7.9,SNR=42
MAW PKPPKP 03 44 18.4
comp=Z,6.7nm,1.2s,baz=270,slow=3.3,SNR=6.5
MAW LR LR 03 45 29.0
comp=Z,2μm,21.1s,MS5.4,baz=58,slow=32
SBA Scott Base 76.08 172⇑*i*P **P 03 16 58.6 +0.2**
SBA pmax pmax
comp=Z,76nm,1.3s,mb5.5
SBA Scott Base 76.08 172⇑*i*P **P 03 16 58.5 +0.2**
comp=Z,76nm,1.3s,mb5.5
TIXI Tiksi 76.16 1 *i* P **P 03 16 57.7 -1.1**
TIXI pmax pmax
comp=Z,188nm,1.1s,mb5.9
BILL Bilibino 77.58 14*c i*P **P 03 17 06.2 -0.6**
BILL pmax pmax
comp=Z,36nm,0.9s,mb5.3
BILL Bilibino 77.58 14⇑*i*P **P 03 17 06.3 -0.5**
BILL LR LR
comp=Z,2μm,22.0s,MS5.3
HON Honolulu 77.93 67 *e*P **P 03 17 10.2 +1.5**
KIP Kipapa 77.93 67 PFAKE 03 17 20.0 +11
KIP LR LR
comp=Z,814nm,19.0s,MS5.1
NIKO Nikolski 78.61 34⇑*i*P **P 03 17 12.2 -0.3**
AB31 Akbulak array 78.73 322⇑*e*P **P 03 17 12.0 -1.2**
OPO Ambohidratompo 78.75 252 P **P 03 17 13.5 +0.2**
comp=Z,36nm,1.1s,mb5.2,baz=76,slow=5.2,SNR=20
SPIA Saint Paul Isl 79.64 30 *e*P **P 03 17 19.2 +1.1**
AKTK Aktyubinsk 80.31 323 P **P 03 17 20.8 -1.0**
AKTO Aktyubinsk 80.31 323 P **P 03 17 20.8 -1.0**
comp=Z,84nm,1.0s,mb5.6,baz=108,slow=6.2,SNR=210
AKTO Aktyubinsk 80.31 323 *i* P **P 03 17 20.7 -1.0**
AKTO pmax pmax
comp=Z,58nm,1.5s,mb5.3
AKUT Akutan 80.75 33 *e*P **P 03 17 24.1 0.0**
comp=Z,4μm,2.8s,mb6.9
AKUT LR LR
comp=Z,1μm,21.0s,MS5.1
SVE Sverdlovsk 81.15 329*α i*P **P 03 17 23.1 -3.1**
SVE *e*S S 03 27 24.0 -10
SVE *e*PS 03 28 13.0
SVE pmax pmax
comp=Z,620nm,2.0s,mb6.2
SVE MLR MLR
comp=N,400nm,14.0s,MS5.1
SVE MLR MLR
comp=E,400nm,14.0s,MS5.1
SVE MLR MLR
comp=Z,500nm,14.0s,MS5.0
ARU Arti 82.07 329⇑*i*P **P 03 17 29.5 -1.6**
ARU *e* 03 20 38.7
ARU *e*PPP 03 22 25.6
ARU *e*S S 03 27 42.1 -1.3
ARU *e*SS SS 03 32 59.9 -3.0
ARU *e*SSS 03 36 29.4
ARU pmax pmax
comp=Z,304nm,1.3s,mb6.1
ARU Arti 82.07 329⇑*i*P **P 03 17 29.3 -1.8**
ARU LR LR
comp=Z,888nm,22.0s,MS5.1
TBI Tubuai 82.39 113 *e*S S 03 27 44.3 -2.4
comp=Z,1μm,24.2s
TBI *e*LQ 03 39 45.5
comp=Z,856nm,36.5s
TBI *e*LR LR 03 43 22.9
comp=Z,1μm,28.8s
PAE Paea 82.49 107 *e*P **P 03 17 35.6 +2.3**
comp=Z,206nm,1.2s,mb5.9
PPT Papeete 82.50 107 *e*P **P 03 17 35.7 +2.4**
comp=Z,84nm,1.3s,mb5.5
PPT Papeete 82.50 107 *e*S S 03 27 47.1 -0.7
comp=Z,2μm,23.2s
PPT *e*LQ 03 39 46.2
comp=Z,3μm,29.0s
PPT *e*LR LR 03 43 17.3
comp=Z,729nm,23.0s
PPT Papeete 82.50 107 P **P 03 17 34.3 +1.0**
comp=Z,50nm,0.2s,mb6.1,baz=172,slow=19,SNR=4.8
QRN Al-Qurain 82.56 300 *e*P **P 03 17 32.7 -0.9**
QRN AMb AMB 03 17 35.1
comp=Z,254nm,1.3s,mb6.1
TVO Taravao 82.80 107 *e*P **P 03 17 37.4 +2.5**
comp=Z,197nm,1.3s,mb6.0
KBD Kabd 82.82 300 *e*P **P 03 17 33.8 -1.3**
KBD AMb AMB 03 17 36.6
comp=Z,526nm,1.3s,mb6.4
RDF Al-Radifah 82.91 300 *e*P **P 03 17 34.3 -1.2**
RDF AMb AMB 03 17 36.9
comp=Z,225nm,1.3s,mb6.0
LBOS 82.98 285⇑*e*P **P 03 17 36.1 +0.3**
NAY Al-Naaiem 83.22 300 *e*P **P 03 17 35.8 -1.3**
NAY AMb AMB 03 17 38.3
comp=Z,123nm,1.1s,mb5.8
MIB Mutribah 83.23 301 *e*P **P 03 17 36.0 -1.1**
MIB AMb AMB 03 17 38.4
comp=Z,297nm,1.0s,mb6.3
RST Umm Al-Ruwaisa 83.47 300 *e*P **P 03 17 37.0 -1.4**
RST AMb AMB 03 17 39.4
comp=Z,330nm,0.9s,mb6.3
SOKR Solikamsk 84.04 331*c i*P **P 03 17 40.1 -1.2**
SOKR 03 20 54.8
SOKR S S 03 28 04.7 +1.3
SOKR pmax pmax
comp=Z,400nm,1.2s,mb6.4
SOKR MLR MLR
comp=Z,1μm,22.0s,MS5.2
SDPT Sand Point 84.05 33 *e*P **P 03 17 41.5 +0.1**
comp=Z,4μm,2.1s
SDPT LR LR
comp=Z,1μm,22.0s,MS5.2
TNA Tin City 84.22 22⇑*i*P **P 03 17 42.5 +0.2**
comp=Z,107nm,1.3s,mb5.8
PMOR Pomariorio Ree 84.24 105 *e*P **P 03 17 44.8 +2.5**
comp=Z,174nm,1.3s,mb6.0
VAH Vaihoa 84.48 105 *e*P **P 03 17 45.7 +2.2**
comp=Z,178nm,1.5s,mb6.0
SYO Syowa Base 84.71 201⇓*e*P **P 03 17 43.3 -1.4**
ATD Arta Tunnel 85.06 282 P **P 03 17 46.7 +0.2**
comp=Z,16nm,0.8s,mb5.2,baz=280,slow=18,SNR=4.3
ATD Arta Tunnel 85.06 282 P **P 03 17 46.7 +0.2**
QSPA South Pole Qui 85.32 180 *e*P **P 03 17 47.3 -0.4**
comp=Z,86nm,1.2s,mb5.8
MAK Makhachkala 85.37 314*c i*P **P 03 17 48.3 +0.3**
MAK *i* S S 03 28 10.1 -6.5
MAK pmax pmax
comp=Z,426nm,1.5s,mb6.3
MAK pmax pmax
comp=Z,2μm,3.8s
MAK smax
comp=N,816nm,1.1s
MAK smax
comp=E,719nm,1.6s
CHGN Chignik 85.44 33 *e*P **P 03 17 48.3 0.0**

BHD Baghdad 86.24 304 *i* x x 03 17 49.0
BHD *e*x x 03 21 10.0
BHD *e*x x 03 28 20.0
DGRG David-gareji 86.67 312 P **P 03 17 55.3 +0.9**
DGRG S S 03 28 34.9 +5.5
GNI Garni 86.95 311 P **P 03 17 56.1 +0.3**
comp=E,67nm,1.1s,mb5.8,baz=160,slow=13,SNR=36
GNI Garni 86.95 311 P **P 03 17 56.5 +0.7**
SNR=44
GNI Garni 86.95 311*c i*P **P 03 17 56.1 +0.3**
GNI pmax pmax
comp=Z,212nm,1.6s
GNI Garni 86.95 311 P **P 03 17 56.1 +0.3**
GNI LR LR
comp=Z,771nm,22.0s,MS5.1
MTA Mtatsminda 87.14 312 P **P 03 17 56.7 0.0**
MTA S S 03 28 33.3 -0.6
TBLG Delisi 87.19 312 *e*P **P 03 17 56.9 0.0**
TBLG Delisi 87.19 312 P **P 03 17 56.9 0.0**
MSL Mosul 87.70 307 *e*x x 03 18 01.0
MSL *e*x x 03 21 22.0
MSL *e*x x 03 24 06.0
TVAN Van 87.74 309 *i* P **P 03 17 58.9 -0.7**
ZEI Tsey 87.96 313 *e*P **P 03 18 01.0 +0.4**
ZEI *e* 03 21 24.9
ZEI pmax pmax
comp=Z,153nm,1.1s,mb6.1
DIGO Kars 88.02 311 *i* P **P 03 17 60.0 -1.0**
SVW2 Sparrevohn 88.05 28 *e*P **P 03 18 01.4 +0.3**
DESE Dese 88.16 281 *e*P **P 03 18 04.0 +2.4**
ONI Oni 88.26 313 P **P 03 18 02.4 +0.3**
ONI S S 03 28 44.2 -0.3
TTA Tatalina 88.28 27 *e*P **P 03 18 02.1 0.0**
TTA pmax pmax
comp=Z,338nm,1.5s,mb6.3
TTA Tatalina 88.28 27 *e*P **P 03 18 02.1 0.0**
comp=Z,338nm,1.5s,mb6.3
KDAK Kodiak Island 88.87 32 P **P 03 18 05.2 +0.3**
comp=Z,338nm,1.1s,mb6.6,baz=235,slow=2.2,SNR=46
KDAK Kodiak Island 88.87 32 *e*P **P 03 18 04.8 -0.1**
comp=Z,583nm,1.3s,mb6.8
KDAK LR LR
comp=Z,377nm,22.0s,MS4.8
KIV Kislovodsk 88.99 314 ⇑P **P 03 18 05.1 -0.4**
SNR=14
KIV Kislovodsk 88.99 314*c i*P **P 03 18 05.0 -0.5**
KIV pmax pmax
comp=Z,44nm,0.9s,mb5.8
ERZM Erzurum 89.48 310 *i* P **P 03 18 08.4 +0.6**
KMBO Kilima Mbogo 89.51 269 P **P 03 18 08.4 +0.4**
comp=Z,29nm,1.2s,mb5.5,baz=36,slow=7.0,SNR=18
KMBO LR LR 03 54 36.0
comp=Z,2µm,19.5s,MS5.5,baz=95,slow=33
KMBO Kilima Mbogo 89.51 269 P **P 03 18 09.4 +1.4**
SNR=16
KMBO Kilima Mbogo 89.51 269 *i* P **P 03 18 09.5 +1.6**
KMBO pmax pmax
comp=Z,29nm,1.3s
BNGL BINGOL 89.55 309 *i* P **P 03 18 07.7 -0.4**
MARD Mardin 89.66 307 *i* P **P 03 18 07.9 -0.8**
IMA2 Indian Mountai 89.94 24 *e*P **P 03 18 09.4 -0.6**
SLKM Skilak Lake 90.52 29 *e*P **P 03 18 11.8 -0.9**
VRHR Novokhopersk 90.58 321 *e*P **P 03 18 11.6 -1.3**
VRHR pmax pmax
comp=Z,150nm,1.2s,mb6.2
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,140nm,1.7s
KELT Kelkit 91.12 310 *i* P **P 03 18 14.5 -0.9**
ELZG Elazig 91.19 308 *i* P **P 03 18 15.1 -0.7**
PMR Palmer 91.20 28 *e*P **P 03 18 14.7 -1.1**
PMR pmax pmax
comp=Z,343nm,1.6s,mb6.4
PMR MLR MLR
comp=Z,1µm,23.0s,MS5.3
PMR Palmer 91.20 28 *e*P **P 03 18 14.7 -1.1**
comp=Z,343nm,1.6s,mb6.4
PMR LR LR
comp=Z,1µm,23.0s,MS5.3
MCK McKinley 91.56 26⇑*i*P **P 03 18 16.2 -1.3**
MCK pmax pmax
comp=Z,188nm,1.5s,mb6.2
MCK MLR MLR
comp=Z,348nm,21.0s,MS4.8
MCK McKinley 91.56 26⇑*i*P **P 03 18 16.2 -1.3**
comp=Z,188nm,1.5s,mb6.2
MCK LR LR
comp=Z,348nm,21.0s,MS4.8
MALT Malatya 91.61 308 ⇑P **P 03 18 18.9 +1.2**
ATAB Bozova 91.65 307 *i* P **P 03 18 16.9 -1.0**
GRSN GIRESUNGRSN 91.94 311 *i* P **P 03 18 17.3 -1.9**
VRSR Storozhevoye 92.11 321*c i*P **P 03 18 18.1 -2.0**
VRSR pmax pmax
comp=N,10.0nm,1.1s
VRSR pmax pmax
comp=Z,110nm,1.1s,mb6.1
VRSR pmax pmax
comp=E,80nm,1.2s
VOR Voronezh 92.15 322 *e*P **P 03 18 18.0 -2.2**
VOR pmax pmax
comp=E,250nm,1.5s
VOR pmax pmax
comp=Z,300nm,1.5s,mb6.4
COLA College 92.17 25⇑*i*P **P 03 18 18.6 -1.7**
COLA LR LR
comp=Z,676nm,20.0s,MS5.1
GZT Gaziantep 92.22 307 *i* P **P 03 18 19.7 -0.8**
TAOE Nuku Hiva Isla 92.25 99 *e*PP PP 03 21 58.0 -3.2
comp=Z,359nm,27.4s
TAOE Nuku Hiva Isla 92.25 99 *e*PS PS 03 30 33.3 -2.4
comp=Z,991nm,26.4s
TAOE Nuku Hiva Isla 92.25 99 *e*SS SS 03 35 25.8 -5.9
comp=Z,3µm,24.9s
TAOE *e*LR LR 03 47 52.7
comp=Z,3µm,25.0s
MID Middleton Isla 92.33 31 *e*P **P 03 18 22.1 +1.0**
ASF Jabal al Asfar 92.40 302 P **P 03 18 21.6 +0.2**
comp=Z,10.0nm,1.0s,mb5.1,baz=318,slow=1.0,SNR=24
KLMR Klimovskoe 92.72 331 *e*P **P 03 18 19.9 -2.9**
KLMR *e* 03 21 59.0
KLMR *e*S SKSac 03 28 50.6 -3.6
KLMR pmax pmax
comp=Z,110nm,1.5s,mb6.1
KLMR pmax pmax
comp=Z,280nm,12.6s
EYAK Cordova Ski Ar 92.72 30⇑*i*P **P 03 18 22.5 -0.3**
ANN Anapa 92.82 315*c i*P **P 03 18 20.9 -2.4**
ANN *i* *PP pP 03 18 31.9 -1.7
ANN *e* 03 22 02.0
ANN *e* 03 28 51.7
ANN *e*SS SS 03 35 47.2 +7.2
ANN pmax pmax
comp=Z,87nm,1.2s,mb6.1
ANN Anapa 92.82 315 *e*P **P 03 18 20.8 -2.5**
MOS Moscow 93.36 325 *e*P **P 03 18 21.7 -4.1**
MOS *e* 03 22 07.7
MOS *e*PPP 03 24 10.4
MOS *e*S S 03 29 23.9 -7.4
MOS pmax pmax
comp=Z,400nm,2.5s,mb6.4
MOS pmax pmax
comp=Z,124nm,1.6s,mb6.1
MOS MLR MLR
comp=Z,1µm,23.0s,MS5.3
NVL N'lazarevskaya 93.66 198*c i*P **P 03 18 26.6 -0.6**
NVL *e*PPP 03 24 18.9
NVL *i* S SKSac 03 28 58.6 -0.8
NVL *i* 03 29 34.5
NVL *i* PS PS 03 30 55.4 +4.1
NVL *e*SSS 03 39 36.6
NVL pmax pmax
comp=Z,21nm,1.9s,mb5.2
NVL pmax pmax
comp=N,14nm,1.2s
NVL pmax pmax
comp=E,11nm,1.4s
NVL pmax pmax
comp=Z,3µm,18.7s
MENT Mentasta 93.84 27 *e*P **P 03 18 28.2 +0.2**
EIL Elat 93.92 299⇑*i*P **P 03 18 27.6 -0.8**
comp=Z,1µm,1.9s,mb7.1
OBN Obninsk 93.94 325*c i*P **P 03 18 26.2 -2.2**
OBN *i* 03 18 41.8
OBN *i* 03 22 18.8
OBN *i* 03 29 04.1
OBN *i* PS PS 03 30 55.1 +0.8
OBN *e*SS SS 03 35 55.2 -0.7
OBN pmax pmax
comp=Z,135nm,1.6s,mb6.1
OBN MLR MLR
comp=Z,2µm,37.0s,MS5.3
OBN Obninsk 93.94 325⇑*i*P **P 03 18 26.3 -2.1**
OBN LR LR
comp=Z,2µm,37.0s,MS5.3
AVNT Avonos 94.43 308 *i* P **P 03 18 28.4 -2.4**
BOYT Boyabat 94.50 311 *i* P **P 03 18 28.8 -2.2**
MEST Erdemli 94.91 306 *i* P **P 03 18 31.2 -1.7**
LVZ Lovozero 95.10 338⇓*e*P **P 03 18 31.3 -2.5**
LVZ *e* 03 22 19.1
LVZ *e* 03 29 06.7
LVZ *e* 03 29 33.0
LVZ *e*PS PS 03 31 08.3 +1.2
LVZ *e*SP SP 03 31 09.3 +6.3
LVZ *e*SS SS 03 36 19.6 +7.1
LVZ pmax pmax
comp=E,9.0nm,1.0s
LVZ pmax pmax
comp=Z,29nm,1.0s,mb5.7
LVZ Lovozero 95.10 338 PFAKE 03 18 40.0 +6.2
LVZ LR LR
comp=Z,1µm,22.0s,MS5.3
SIM Simferopol' 95.19 315*c i*P **P 03 18 33.0 -1.2**
SIM *e* 03 22 29.0
SIM *e* 03 29 09.0
SIM *e*S S 03 29 49.0 +1.8
SIM *e*SS SS 03 36 09.0 -4.7
SIM pmax pmax
comp=Z,29nm,1.2s,mb5.6
SIM Simferopol' 95.19 315 *e*P **P 03 18 32.9 -1.3**
BR131 Keskin Array S 95.41 309 *e*P **P 03 18 33.1 -2.1**
comp=Z,4.0nm,0.8s
BR131 *e*PP PP 03 22 20.2 -5.7
BR131 LR LR
comp=Z,539nm,22.0s,MS5.0
BRTR Keskin Array B 95.41 309 P **P 03 18 33.2 -1.9**
comp=Z,5.5nm,1.0s,baz=113,slow=3.2,SNR=24
BRTR PP PP 03 22 20.0 -5.9
comp=Z,5.2nm,1.1s,baz=116,slow=5.7,SNR=5.3
BRTR PKKPbc PKKPbc 03 35 28.3 +1.2
comp=Z,1.0nm,0.9s,baz=194,slow=4.7,SNR=4.5
BRTR LR LR 04 08 07.5
comp=Z,508nm,21.0s,MS5.0,baz=292,slow=40
BRTR Keskin Array B 95.41 309 P **P 03 18 33.3 -1.9**
BRTR 03 22 20.0
APA Apatity 95.58 337⇑*i*P **P 03 18 33.0 -3.0**
APA *i* 03 22 26.0
APA *i* 03 29 11.0
APA *i* S S 03 29 43.0 -7.6
APA *e*PS PS 03 31 11.0 -1.4
APA *i* PPS 03 31 57.0
APA *e*SS SS 03 36 18.0 -1.3
APA pmax pmax
comp=Z,64nm,1.5s,mb5.8
BALT Daday 95.64 311 *i* P **P 03 18 34.7 -1.6**
RKT Rikitea 95.69 114 *e*LQ 03 45 24.2
comp=Z,1µm,32.8s
RKT Rikitea 95.69 114 *e*PS PS 03 31 11.7 -1.9
comp=Z,352nm,30.5s
RKT Rikitea 95.69 114 *e*SS SS 03 36 17.9 -2.9
comp=Z,296nm,25.8s
RKT *e*LR LR 03 49 29.0
comp=Z,725nm,22.5s
ERMK Ermenek 95.90 306 *i* P **P 03 18 33.4 -4.0**
ANTO Ankara 96.06 309 PFAKE 03 18 50.0 +12
ANTO LR LR
comp=Z,577nm,21.0s,MS5.0
LSZ Lusaka 97.11 254 P **P 03 18 41.7 -1.2**
comp=Z,27nm,1.0s,mb5.6,baz=108,slow=4.1,SNR=34
LSZ PP PP 03 22 36.8 -2.3
comp=Z,9.3nm,1.1s,baz=82,slow=9.0,SNR=6.3
LSZ Lusaka 97.11 254 ⇑P **P 03 18 43.9 +0.9**
SNR=5.7
LSZ Lusaka 97.11 254 P **P 03 18 41.7 -1.2**
LSZ PP PP 03 22 36.8 -2.3
LSZ LR LR
comp=Z,2µm,20.0s,MS5.5
SNAA Sanae 97.19 194 *e*Pdiff **P 03 18 43.0 -0.3**
SNAA *e* 03 18 50.4
SNAA *e* pP 03 18 52.7 -0.9
SNAA *e* 03 19 02.0
SNAA Sanae 97.19 194 *e*PKiKP PP 03 22 42.5 +2.8
SNAA *e* 03 22 45.5
SNAA *e* 03 22 58.0
SNAA Sanae 97.19 194⇑*i*P **P 03 18 43.1 -0.2**
SNAA pmax pmax
comp=Z,33nm,1.5s
SNAA Sanae 97.19 194⇑*i*P **P 03 18 43.1 -0.2**
comp=Z,33nm,1.5s,mb5.5
SNAA *e*PP PP 03 22 34.8 -4.8
PUL Pulkovo 97.28 330*ce*P **P 03 18 40.6 -3.1**
PUL *e* 03 22 38.6
PUL *e*PPP 03 24 46.3
PUL *e* 03 29 55.4
PUL *e*SP SP 03 31 24.7 -2.2
PUL *e*PS PS 03 31 27.6 -3.4
PUL MLR MLR
comp=Z,811nm,17.0s,MS5.3
ESKT Eskisehir 97.56 309 *i* P **P 03 18 42.2 -2.8**
KEV Kevo 97.74 340 PFAKE 03 18 50.0 +4.2
KEV LR LR
comp=Z,1µm,20.0s,MS5.4
INK Inuvik 97.85 22 LR LR 04 05 36.2
comp=Z,446nm,19.9s,MS5.0,baz=252,slow=37
BOSA Boshof 97.92 240 P **P 03 18 45.2 -1.3**
comp=Z,24nm,1.1s,mb5.7,baz=102,slow=7.2,SNR=11
BOSA LR LR 03 58 44.4
comp=Z,1µm,19.3s,MS5.5,baz=95,slow=33
BOSA Boshof 97.92 240 P **P 03 18 45.2 -1.3**
BOSA LR LR 03 58 44.4
SKAG Skagway 97.95 31 *e*P **P 03 18 47.6 +0.9**
comp=Z,158nm,1.6s,mb6.3
SKAG LR LR
comp=Z,1µm,23.0s,MS5.4
SIT Sitka 98.13 33 *e*P **P 03 18 47.4 -0.1**
SIT pmax pmax
comp=Z,106nm,1.5s,mb6.2
SIT MLR MLR
comp=Z,600nm,22.0s,MS5.0
SIT Sitka 98.13 33 *e*P **P 03 18 47.4 -0.1**
comp=Z,106nm,1.5s,mb6.2
SIT LR LR
comp=Z,600nm,22.0s,MS5.0
LBTB Lobatse 98.20 244 PFAKE 03 19 00.0 +12
LBTB LR LR
comp=Z,1µm,20.0s,MS5.4
ARCES ARCESS Array B 98.29 340 P **P 03 18 45.8 -2.4**
comp=Z,35nm,1.0s,mb5.9,baz=72,slow=4.0,SNR=43
ARCES PKKPbc PKKPbc 03 35 15.8 -3.4
comp=Z,1.9nm,0.7s,baz=54,slow=23,SNR=4.3
ARCES LR LR 04 08 50.4
comp=Z,1µm,20.3s,MS5.3,baz=79,slow=39
ARE0 ARCESS Array S 98.29 340 *e*P **P 03 18 45.6 -2.6**
AKASG Malin Array Be 98.41 320 P **P 03 18 46.6 -2.1**
comp=Z,6.9nm,0.8s,mb5.2,baz=77,slow=3.8,SNR=66
AKASG PP PP 03 22 43.9 -5.1
comp=Z,1.0nm,0.7s,baz=65,slow=7.1,SNR=4.1
AKBB Malin Array Si 98.41 320⇑*i*P **P 03 18 46.4 -2.4**
SPB4 Spitsbergen Ar 98.66 349⇑*i*P **P 03 18 48.1 -1.8**
KIS Kishinev 98.86 317 *e*P **P 03 18 47.0 -3.8**
KIS *e* 03 29 24.0
KIS *e*S S 03 30 12.0 -6.6
KIS *e*PS PS 03 31 47.0 -1.0
KIS *e*PPS 03 32 30.0
KIS *e*SS SS 03 37 16.0 +11
KIS MLR MLR
comp=Z,1µm,20.0s,MS5.4
KIS MLR MLR
comp=N,700nm,22.0s,MS5.3
KIS MLR MLR
comp=E,900nm,20.0s,MS5.3
KIS MLR MLR
comp=Z,1µm,22.0s
MNK Minsk 99.00 324 *e*P **P 03 18 45.0 -6.4**
VNA1 Neumayer--Stat 99.19 194 *e*Pdiff **P 03 18 51.0 -1.2**
VNA1 *e* pP 03 19 01.8 -0.8
VNA1 Neumayer--Stat 99.19 194 *e*PKiKP PP 03 23 02.0 +7.1
VNA1 *e* 03 23 05.7
VNA1 *e* 03 23 17.5
VNA1 *e* 03 23 23.7
FINES FINESS Array B 99.21 331 P **P 03 18 48.8 -3.6**
comp=Z,2.6nm,0.9s,baz=104,slow=8.0,SNR=5.1
FINES PP PP 03 22 42.5 -13
comp=Z,6.0nm,1.0s,baz=77,slow=8.4,SNR=5.0
FINES LR LR 04 05 54.0
comp=Z,709nm,21.8s,MS5.1,baz=277,slow=37
FINES FINESS Array B 99.21 331 *i* P **P 03 18 49.9 -2.4**
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 99.21 331 P **P 03 18 48.8 -3.6**
FINES PP PP 03 22 42.5 -13
FINES LR LR 04 05 54.0
KBS Kingsbay 99.21 350 *e*P **P 03 18 50.0 -2.4**
KBS AMb AMB 03 18 53.3
comp=Z,31nm,2.0s,mb5.5
KBS *e*PP PP 03 22 55.2 +0.1
KBS *i* 03 31 56.1
KBS AMS AMS 04 03 58.2
comp=Z,773nm,23.5s,MS5.1
KBS Kingsbay 99.21 350⇑*e*P **P 03 18 50.4 -1.9**
KBS LR LR
comp=Z,2µm,22.0s,MS5.5
VSU Vasula 99.23 328 *i* P **P 03 18 51.0 -1.4**
TIRR Tirgusor 99.26 314⇑*i*P **P 03 18 50.9 -1.7**
TIRR Tirgusor 99.26 314 ⇑P **P 03 18 50.9 -1.7**
CFR Carcaliu 99.42 315⇓*i*P **P 03 18 53.0 -0.3**
AKHS Akhisar 99.93 309 *i* P Pdif 03 18 53.4 -2.2
VRI Vrincioaia 100.37 316⇑*i*P Pdif 03 18 56.8 -0.7
TRO Tromso 100.53 340 *e*P Pdif 03 18 55.4 -2.9
TRO *e* 03 26 47.2
TRO *i* 03 32 09.9
TRO AMS AMS 04 14 05.3
comp=Z,912nm,15.5s,MS5.4
MLR Muntele Rosu 100.94 315 P Pdif 03 18 59.1 -1.0
comp=Z,12nm,1.1s,baz=30,slow=3.4,SNR=25
MLR PP PP 03 23 00.3 -8.0
comp=Z,30nm,1.3s,baz=73,slow=4.8,SNR=4.7
MLR Muntele Rosu 100.94 315⇓*i*P Pdif 03 18 59.4 -0.6
MLR Muntele Rosu 100.94 315 P Pdif 03 18 59.1 -0.9
MLR pmax pmax
comp=Z,12nm,1.1s
MLR pmax pmax
comp=Z,30nm,1.3s
MLR Muntele Rosu 100.94 315 ⇓P Pdif 03 18 59.4 -0.7
BOZC Bozcaada 101.25 310 *i* P Pdif 03 18 56.9 -4.5
BURAR Bucovina Array 101.26 317⇑*i*P Pdif 03 19 00.9 -0.5
BURAR Bucovina Array 101.26 317 ⇑P Pdif 03 19 00.9 -0.5
SUW Suwalki 101.77 324 *e*P Pdif 03 19 02.1 -1.6
SUW *e*PP PP 03 23 18.2 +3.7
SUW *e*SKS 03 29 49.5
SUW *e*PS PS 03 32 24.2 +5.0
SUW L 04 08 58.9
comp=Z,1.0nm,24.7s
SUW Suwalki 101.77 324 *e*P Pdif 03 19 02.1 -1.6
SUW *e* 03 23 18.2
SUW *e*PS PS 03 32 24.2 +5.0
SUW Suwalki 101.77 324 *e*P Pdif 03 19 02.1 -1.6
SUW *e*PP PP 03 23 18.2 +3.7
SUW *e*SKS 03 29 49.5
SUW *e*PS PS 03 32 24.2 +5.0
LVV L'vov 101.80 320 *e*P Pdif 03 19 02.6 -1.3
KWP Kalwaria 102.68 320 *e*P Pdif 03 19 07.0 -0.8
KWP *e*PP PP 03 23 22.8 +1.5
KWP L 04 05 40.7
comp=Z,1.1nm,26.6s
KWP Kalwaria 102.68 320 *e*P Pdif 03 19 07.0 -0.8
KWP *e*PP PP 03 23 22.8 +1.5
DRGR 103.05 317⇑*i*P Pdif 03 19 08.9 -0.5
DRGR 103.05 317 ⇑P Pdif 03 19 08.9 -0.5
KOLS Kolonicke sedl 103.06 319 *e*PDIFF Pdif 03 19 09.6 +0.2
KOLS *e* 03 19 23.6
KOLS *e*PP PP 03 23 22.7 -1.5
VTS Vitosha 103.17 313⇓*i*P Pdif 03 19 08.4 -1.6
VTS Vitosha 103.17 313 ⇓P Pdif 03 19 08.4 -1.6
WAR Warsaw 103.33 323 *e*P Pdif 03 19 10.6 -0.1
WAR *e*PP PP 03 23 32.3 +6.1
WAR *e*SKS 03 29 49.3
WAR *e*SP SP 03 32 44.7 +13
WAR L 04 05 39.5
comp=Z,1.1nm,28.8s
WAR Warsaw 103.33 323 *e*P Pdif 03 19 10.6 -0.1
WAR *e* 03 23 32.3
WAR *e* 03 29 49.3
WAR MLR MLR
comp=Z,1µm,28.8s,MS5.2
CRVS Cervenica-Dubn 103.59 319 *e*PDIFF Pdif 03 19 11.7 -0.1
CRVS *e* 03 19 30.0
CRVS *e*PP PP 03 23 21.8 -6.4
CRVS *e* 03 35 04.4
CRVS *e* 03 35 24.7
STHS Stebnicka Huta 103.65 320 *e*PDIFF Pdif 03 19 11.3 -0.8
STHS *e* 03 22 48.8
BZS Buzias 103.95 316⇑*i*P Pdif 03 19 12.4 -1.0
BZS Buzias 103.95 316 ⇑P Pdif 03 19 12.4 -1.0
NIE Niedzica 104.25 320 *e*P Pdif 03 19 14.6 -0.2
NIE *e*PP PP 03 23 29.3 -3.8
KECS Kecovo 104.29 319 *e*PDIFF Pdif 03 19 13.7 -1.2
KECS *e* 03 19 30.0
KECS *e*PP PP 03 23 33.7 +0.3
KECS *e* 03 35 05.9
KECS *e* 03 35 22.1
KECS Kecovo 104.29 319 *e*P Pdif 03 19 13.7 -1.2
KECS *e* 03 23 33.7
KECS Kecovo 104.29 319 *e*Pdif Pdif 03 19 13.7 -1.2
KECS *e* 03 19 30.0
KECS *e*PP PP 03 23 33.7 +0.3
KECS *e* 03 35 05.9
KECS *e* 03 35 22.2
OJC Ojcow 104.44 321 *e*P Pdif 03 19 14.8 -0.8
OJC *e* 03 29 52.3
OJC *e*S Sdif 03 30 59.3 -6.0
OJC MLR MLR
comp=Z,4µm,23.8s,MS5.9
OJC Ojcow 104.44 321 *e*P Pdif 03 19 14.8 -0.8
OJC *e*PP PP 03 23 27.7 -6.8
OJC *e*SKSac SKSac 03 29 52.3 -0.9
OJC *e*S Sdif 03 30 59.3 -6.0
OJC *e*SS SS 03 38 07.3 -16
OJC LR LR
comp=Z,4µm,23.8s,MS5.9
PSZ Piszkesteto 104.78 318⇓*e*sP 03 19 17.1
PSZ Piszkesteto 104.78 318 P Pdif 03 19 17.4 +0.3
VYHS Vyhne 105.37 319 *e*PDIFF Pdif 03 19 18.0 -1.7
VYHS *e*PP PP 03 23 42.8 +1.4
VYHS *e* 03 34 55.6
VYHS *e* 03 35 17.5
VYHS Vyhne 105.37 319 *e*P Pdif 03 19 18.0 -1.7
VYHS *e* 03 23 42.8
GKP Gorka Klasztor 105.38 324 *e*P Pdif 03 19 19.5 -0.3
GKP *e*PP PP 03 23 44.0 +2.5
HFS Hagfors 105.41 331 Pdiff Pdif 03 19 18.1 -1.8
comp=Z,4.1nm,0.9s,baz=116,slow=3.4,SNR=5.4
RAC Raciborz 105.48 321 *e*P Pdif 03 19 20.3 +0.1
RAC MLR MLR
comp=Z,1µm,22.6s,MS5.3
DAG Danmarks Havn 105.51 352⇓*i*P Pdif 03 19 18.2 -2.2
comp=Z,7.5nm,0.8s
DAG Danmarks Havn 105.51 352⇓*e*P Pdif 03 19 18.2 -2.2
DAG pmax pmax
comp=Z,8.0nm,0.8s
DAG Danmarks Havn 105.51 352⇓*e*P Pdif 03 19 18.2 -2.2
comp=Z,7.5nm,0.8s
OKC Ostrava-Krasne 105.56 320 *e*PDIF Pdif 03 19 20.6 0.0
OKC *e*SDIF Sdif 03 31 13.1 -1.5
OKC *e*PS PS 03 32 55.1 -3.9
OKC *e*PKKP PKKPbc 03 34 58.5 +0.4
OKC *e*x x 03 39 08.5
OKC AMS AMS 04 10 10.0
comp=Z,400nm,17.6s
OKC Ostrava-Krasne 105.56 320 *i* P Pdif 03 19 20.6 0.0
OKC *e*S Sdif 03 31 13.1 -1.5
OKC *e*PS PS 03 32 55.1 -3.9
OKC MLR MLR
comp=Z,400nm,17.6s,MS5.0
OKC Ostrava-Krasne 105.56 320 *e*Pdif Pdif 03 19 20.6 0.0
OKC *e*Sdif Sdif 03 31 13.1 -1.5
OKC *e*PS PS 03 32 55.1 -3.9
OKC *e*SS SS 03 39 08.5 +30
PKSM Moragy 105.91 317 P Pdif 03 19 22.1 0.0
MORC Moravsky Berou 105.95 320 P Pdif 03 19 22.8 +0.5
BSD Bornholm Skovb 106.25 326 *i* P PP 03 23 49.3 +1.5

BSD
comp=Z,760nm,22.0s
NB2 NORSAR Subarra 106.27 333 PP PP 03 23 48.0 0.0
comp=Z,72nm,2.0s,baz=69,slow=7.4
NB2 NORSAR Subarra 106.27 333 PP PP 03 23 48.0 0.0
baz=69,slow=7.4
NOA NORSAR Array B 106.27 333 Pdiff Pdiff 03 19 20.4 -3.3
comp=Z,1.7nm,0.8s,baz=71,slow=4.4,SNR=4.1
NOA PKiKP PKiKP 03 23 32.5 -2.6
comp=Z,2.4nm,0.9s,baz=71,slow=5.8,SNR=4.2
NOA NORSAR Array B 106.27 333 Pdif Pdif 03 19 20.4 -3.3
NOA PKPdf PKiKP 03 23 32.5 -2.6
NAO01 NORSAR Array S 106.49 333 PFAKE 03 23 40.0 +4.5
NAO01 LR LR
comp=Z,1μm,21.0s,MS5.5
KSP Ksiaz 106.50 322 *e*P Pdif 03 19 24.4 -0.4
KSP *e*PP PP 03 23 45.6 -4.2
KSP *e*SKS SKSac 03 30 02.5 0.0
KSP *e*SP SP 03 33 01.4 -3.4
KSP *e* 03 34 22.6
KSP Ksiaz 106.50 322 *e*Pdif Pdif 03 19 23.4 -1.4
KSP *e*PP PP 03 23 41.0 -8.8
KSP *e*Sdif Sdif 03 31 22.4 -0.1
KSP *e*SP SP 03 33 06.5 +1.7
KSP *e*SS SS 03 39 00.0 +8.9
KSP LR LR
comp=Z,2μm,25.7s,MS5.5
ZST Bratislava 106.56 319 *e*PDIFF Pdif 03 19 23.8 -1.2
ZST *e*PP PP 03 23 50.3 +0.1
DPC Dobruska-Polom 106.60 321 *e*PDIF Pdif 03 19 25.3 +0.1
DPC *e*PP PP 03 23 48.1 -2.4
DPC *e*SDIF Sdif 03 31 23.2 -0.1
DPC *e*PS PS 03 33 10.0 +0.2
DPC *e*x x 03 34 09.2
DPC *e*PKKP PKKPbc 03 34 56.9 +2.0
DPC *e*SS SS 03 39 01.7 +9.4
DPC AMS AMS 04 11 30.0
comp=Z,1μm,22.8s
DPC Dobruska-Polom 106.60 321 *i* P Pdif 03 19 25.3 +0.1
DPC *e* 03 23 48.1
DPC *e*PS PS 03 33 10.0 +0.2
DPC *e* 03 34 09.2
DPC *e*SS SS 03 39 01.7 +9.4
DPC MLR MLR
comp=Z,1μm,22.8s,MS5.3
DPC Dobruska-Polom 106.60 321 *e*Pdif Pdif 03 19 25.3 +0.1
DPC *e*PP PP 03 23 48.1 -2.4
DPC *e*Sdif Sdif 03 31 23.2 -0.1
DPC *e*PS PS 03 33 10.0 +0.2
DPC *e* 03 34 09.2
DPC *e*SS SS 03 39 01.7 +9.4
DPC LR LR
comp=Z,1μm,22.8s,MS5.3
VRAC Vranov 106.66 320 P Pdif 03 19 26.4 +0.9
UPC Upice 106.75 321 *e*PDIF Pdif 03 19 26.1 +0.2
UPC *e*PP PP 03 23 48.2 -3.4
UPC Upice 106.75 321 *i* P Pdif 03 19 26.1 +0.2
UPC *e* 03 23 48.2
YKA Yellowknife Ar 107.00 25 Pdiff Pdif 03 19 25.8 -1.1
comp=Z,7.1nm,1.1s,baz=295,slow=4.7,SNR=10
YKA PKiKP PKiKP 03 23 35.6 -0.8
comp=Z,2.2nm,0.8s,baz=305,slow=2.1,SNR=5.1
YKA PKKPbc PKKPbc 03 34 53.4 -0.2
comp=Z,2.9nm,0.9s,baz=101,slow=3.6,SNR=6.8
YKA Yellowknife Ar 107.00 25 Pdif Pdif 03 19 25.8 -1.1
YKA PKPdf PKiKP 03 23 35.6 -0.8
YKA PKKPbc PKKPbc 03 34 53.4 -0.2
COR Corvallis 107.34 45 PFAKE 03 23 50.0 +13
COR LR LR
comp=Z,1μm,22.0s,MS5.5
TREC Trest 107.37 320 *e*PDIF Pdif 03 19 28.2 -0.4
TREC *ex* x 03 24 05.3
TREC *e*SDIF Sdif 03 31 32.2 +2.5
TREC *e*PS PS 03 33 19.3 +1.6
TREC *e*PKKP PKKPbc 03 34 54.2 +1.7
TREC *e*SS SS 03 39 13.3 +11
TREC AMS AMS 04 14 40.0
comp=Z,900nm,22.0s
TREC Trest 107.37 320 *i* P Pdif 03 19 28.2 -0.4
TREC *e* 03 24 05.3
TREC *e*PS PS 03 33 19.3 +1.6
TREC *e*SS SS 03 39 13.3 +11
TREC MLR MLR
comp=Z,900nm,22.0s,MS5.3
COP Copenhagen 107.44 327 *i* P Pdif 03 19 34.4 +5.5
COP *i* 03 23 59.0
COP *i* 03 26 57.4
COP *e* 03 33 15.1
COP
comp=Z,430nm,20.0s
COP Copenhagen 107.44 327 *e*P Pdif 03 19 34.4 +5.5
COP *i* 03 23 59.0
COP *e* 03 33 15.1
COP MLR MLR
comp=Z,440nm,20.0s,MS5.0
KONO Kongsberg 107.52 332 *e*P Pdif 03 19 32.5 +3.3
KONO *i* 03 33 14.7
KONO Kongsberg 107.52 332 *e*P Pdif 03 19 32.5 +3.3
KONO LR LR
comp=Z,919nm,21.0s,MS5.3
PVCC Panska Ves 107.64 322 *e*PDIF Pdif 03 19 29.7 -0.1
PVCC *e*PP PP 03 24 03.0 +4.9
PVCC *e*PKKP PKKPbc 03 34 53.2 +1.6
PVCC AMS AMS 04 08 20.0
comp=Z,1μm,30.3s
PVCC Panska Ves 107.64 322 *i* P Pdif 03 19 29.7 -0.1
PVCC *e* 03 24 03.0
PVCC MLR MLR
comp=Z,1μm,30.3s,MS5.2
PVCC Panska Ves 107.64 322 *e*Pdif Pdif 03 19 29.7 -0.1
PVCC *e*PP PP 03 24 03.0 +4.9
PVCC LR LR
comp=Z,1μm,30.3s,MS5.2
PRU Pruhonice 107.80 321 *e*PDIF Pdif 03 19 30.1 -0.4
PRU *e*PP PP 03 24 00.8 +1.6
PRU *e*SDIF Sdif 03 31 35.4 +2.1
PRU *e*PS PS 03 33 22.6 +0.5
PRU *ex* x 03 34 24.8
PRU *e*PKKP PKKPbc 03 35 07.6 +16
PRU *ex* x 03 39 23.2
PRU AMS AMS 04 08 20.0
comp=Z,900nm,19.6s
PRU Pruhonice 107.80 321 *e*P Pdif 03 19 30.1 -0.4
PRU *e* 03 24 00.8
PRU *e*PS PS 03 33 22.6 +0.5
PRU *e* 03 34 24.8
PRU *e*SS SS 03 39 23.2 +15
PRU MLR MLR
comp=Z,900nm,19.6s,MS5.3
PRU Pruhonice 107.80 321 *e*Pdif Pdif 03 19 30.1 -0.4
PRU *e*PP PP 03 24 00.8 +1.6
PRU *e*Sdif Sdif 03 31 35.4 +2.1
PRU *e*PS PS 03 33 22.6 +0.5
PRU *e* 03 34 24.8
PRU *e*SS SS 03 39 23.2 +15
PRU LR LR
comp=Z,900nm,19.6s,MS5.3
PRA Prague 107.84 321 PP PP 03 24 04.0 +4.4
BRG Berggiesshubel 107.94 322 *e*Pdiff Pdif 03 19 30.4 -0.8
BRG *e*PP PP 03 24 05.5 +5.2
BRG Berggiesshubel 107.94 322 *e*PDIF Pdif 03 19 30.5 -0.7
comp=Z,19nm,1.8s
BRG *e* 03 22 41.4
comp=Z,10nm,1.6s
BRG PP PP 03 24 05.0 +4.7
BRG SKS SKSac 03 30 03.9 -4.9
comp=Z,7.4nm,1.7s
BRG *i* S Sdif 03 31 36.0 +1.5
BRG *i* PKKP PKKPbc 03 35 06.5 +16
comp=Z,9.9nm,1.6s
BRG
comp=N,441nm,19.0s
BRG
comp=E,347nm,18.1s
BRG
comp=Z,485nm,19.0s
BRG Berggiesshubel 107.94 322 *e*P Pdif 03 19 30.5 -0.7
BRG 03 24 05.0
BRG 03 30 03.8
BRG pmax pmax
comp=Z,19nm,1.8s
BRG pmax pmax
comp=Z,10.0nm,1.6s
BRG pmax pmax
comp=N,7.0nm,1.7s
BRG pmax pmax
comp=Z,10.0nm,1.6s
BRG MLR MLR
comp=N,441nm,19.0s,MS5.2
BRG MLR MLR
comp=E,347nm,18.1s,MS5.2
BRG MLR MLR
comp=Z,485nm,19.0s,MS5.1
BRG Berggiesshubel 107.94 322 *e*Pdif Pdif 03 19 30.5 -0.7
comp=Z,19nm,1.8s
BRG *e* 03 22 41.4
BRG PP PP 03 24 05.0 +4.7
BRG SKS SKSac 03 30 03.9 -4.9
BRG *i* S Sdif 03 31 36.0 +1.5
BRG *i* PKKP PKKPbc 03 35 06.5 +16
BRG LR LR
comp=Z,490nm,19.0s,MS5.1
JMIC Jan Mayen 107.96 346 *e*P Pdif 03 19 33.5 +2.2
JMIC *i* 03 33 26.4
DOBS Dobrina 108.08 317 *e*PP PP 03 24 04.4 +3.0
PERS Pernice 108.22 318 *e*PP PP 03 24 07.0 +4.7
BOJS Bojanci 108.37 316 *e*PP PP 03 24 05.1 +1.7
CLL Collm 108.39 323 *e*Pdiff Pdif 03 19 32.2 -1.0
CLL *ep*Pdiff 03 19 42.5
CLL *e*PKiKP PKiKP 03 23 39.5 +0.4
CLL *e* 03 23 51.5
CLL *e*PP PP 03 24 09.6 +6.0
CLL *e*PPP 03 26 16.2
CLL *e*Sdiff Sdif 03 31 36.8 -1.4
CLL *e*PS PS 03 33 35.0 +6.8
CLL *e*PPS 03 34 29.8
CLL *e*PKKPdf PKKPdf 03 35 04.1 +0.6
CLL *e*SS SS 03 39 29.3 +13
CLL *e*SSS 03 43 36.8
CLL *e*LR LR 03 57 51.4
CLL *e*L 04 22 17.3
comp=Z,1μm,18.0s
CLL Collm 108.39 323 *i* PDIF Pdif 03 19 32.3 -0.9
CLL *i* 03 19 42.9
CLL *e* 03 22 44.0
CLL *i* 03 23 38.6
CLL *i* 03 23 50.7
CLL *i* PP PP 03 24 06.4 +2.8
CLL *e*PPP 03 26 21.0
CLL *e* 03 31 42.0
CLL *e*PS PS 03 33 00.0 +1.8
CLL *e*PPS 03 34 32.0
CLL *i* PKKP PKKPbc 03 35 03.8 +15
CLL *e*SS SS 03 39 30.0 +13
CLL *e*SSS 03 43 42.0
CLL Collm 108.39 323 *i* Pdif Pdif 03 19 32.3 -0.9
comp=Z,12nm,1.6s
CLL *i* x x 03 19 42.9
CLL LmV 03 21 00.0
comp=Z,1μm,18.4s
CLL *ex* x 03 22 44.0
CLL *i* PKiKP PKiKP 03 23 38.6 -0.5
CLL *i* x x 03 23 50.7
comp=Z,39nm,1.8s
CLL *i* PP PP 03 24 06.4 +2.8
CLL *e*PPP 03 26 21.0
CLL *e*Sdif Sdif 03 31 42.0 +3.8
CLL *e*PS PS 03 33 00.0 +1.8
CLL *e*PPS 03 34 32.0
CLL *i* PKKPdf PKKPdf 03 35 03.8 +0.3
comp=Z,17nm,1.3s
CLL *e*SS SS 03 39 30.0 +13
CLL *e*SSS 03 43 42.0
CLL Collm 108.39 323 *i* P Pdif 03 19 32.3 -0.9
CLL pmax pmax
comp=Z,15nm,1.6s
CLL pmax pmax
comp=Z,12nm,1.8s
CLL pmax pmax
comp=Z,39nm,1.3s
CLL MLR MLR
comp=Z,1μm,18.4s,MS5.5
CLL Collm 108.39 323 *i* Pdif Pdif 03 19 32.3 -0.9
comp=Z,12nm,1.6s
CLL *i* 03 19 42.9
CLL *i* PKP PKiKP 03 23 38.6 -0.5
CLL *i* PP 03 23 50.7
CLL *e*SKS SKSac 03 29 47.0 -24
CLL *e*Sdif Sdif 03 31 42.0 +3.8
CLL *i* PKKP PKKPbc 03 35 03.8 +15
CLL LR LR
comp=Z,1μm,18.4s,MS5.5
HOPS Hopland 108.48 51 PFAKE 03 23 50.0 +11
HOPS LR LR
comp=Z,792nm,19.0s,MS5.3
O02C Red Bluff 108.50 49 ⇑P PKiKP 03 23 39.4 +0.1
baz=109
GEC2 GERESS Array S 108.62 320 *e*Pdiff Pdif 03 19 33.0 -1.2
GEC2 *e*PP PP 03 24 09.5 +4.3
GERES GERESS Array B 108.62 320 Pdiff Pdif 03 19 33.4 -0.8
comp=Z,2.5nm,1.1s,baz=45,slow=4.5,SNR=7.6
GERES PKiKP PKiKP 03 23 38.1 -1.4
comp=Z,2.3nm,0.9s,baz=52,slow=2.2,SNR=5.9
GERES PP PP 03 24 04.2 -1.1
comp=Z,5.6nm,1.0s,baz=71,slow=6.2,SNR=5.5
GERES PKKPbc PKKPbc 03 34 48.3 -0.2
comp=Z,0.7nm,0.8s,baz=185,slow=9.9,SNR=3.1
GERES GERESS Array B 108.62 320 P Pdif 03 19 33.4 -0.8
GERES 03 24 04.2
WDC Whiskeytown Da 108.62 49 ⇓P PKiKP 03 23 39.6 +0.1
baz=109
KHC Kasperske Hory 108.62 320 *e*PDIF Pdif 03 19 34.1 -0.1
KHC *ex* x 03 22 53.0
KHC *e*PP PP 03 24 05.8 +0.5
KHC *ex* x 03 24 12.5
KHC *e*SDIF Sdif 03 31 42.6 +2.5
KHC *e*PS PS 03 33 37.5 +7.0
KHC *ex* x 03 34 22.1
KHC *e*PKKP PKKPbc 03 35 03.3 +15
KHC *ex* x 03 39 37.1
KHC AMS AMS 04 07 40.0
comp=Z,800nm,24.5s
KHC Kasperske Hory 108.62 320 *e*P Pdif 03 19 34.1 -0.1
KHC *e* 03 24 05.8
KHC *e* 03 34 22.1
KHC *e*SS SS 03 39 37.1 +17
KHC MLR MLR
comp=Z,800nm,24.5s,MS5.2
KHC Kasperske Hory 108.62 320 *e*Pdif Pdif 03 19 34.1 -0.1
KHC *e* 03 22 53.0
KHC *e*PP PP 03 24 05.8 +0.5
KHC *e* 03 24 12.5
KHC *e*Sdif Sdif 03 31 42.6 +2.5
KHC *e*PS PS 03 33 37.5 +7.0
KHC *e* 03 34 22.1
KHC *e*SS SS 03 39 37.1 +17
KHC LR LR
comp=Z,800nm,24.5s,MS5.2
MUD Monsted U'grnd 108.90 329 *i* P Pdif 03 19 38.2 +2.8
MUD *i* 03 24 09.3
MUD *i* 03 30 20.1
MUD *i* 03 33 23.5
MUD
comp=Z,750nm,21.0s
MUD Monsted U'grnd 108.90 329 *e*P Pdif 03 19 38.2 +2.8
MUD *i* 03 24 09.3
MUD *i* 03 30 20.1
MUD *i* 03 33 23.5
MUD MLR MLR
comp=Z,760nm,21.0s,MS5.2
MUD Monsted U'grnd 108.90 329 *e*P Pdif 03 19 38.2 +2.8
MUD *i* 03 24 09.3
MUD *i* 03 30 20.1
MUD *i* 03 33 23.5
TANN Tannenbergstha 108.97 322 *e*Pdiff Pdif 03 19 35.4 -0.4
TANN *e*PP PP 03 24 12.9 +5.1
MNRC McLaughlin Nat 108.98 51 ⇑P PKiKP 03 23 41.5 +1.4
baz=109
NKC Novy Kostel 109.03 322 *e*PDIF Pdif 03 19 36.0 0.0
NKC *e*PP PP 03 24 11.9 +3.7
NKC *e*PKKP PKKPbc 03 35 02.4 +15
NKC AMS AMS 04 13 10.0
comp=Z,900nm,19.1s
NKC Novy Kostel 109.03 322 *i* P Pdif 03 19 36.0 0.0
NKC *e* 03 24 11.9
NKC MLR MLR
comp=Z,900nm,19.1s,MS5.4
NKC Novy Kostel 109.03 322 *e*Pdif Pdif 03 19 36.0 0.0
NKC *e*PP PP 03 24 11.9 +3.7
J05A Fort Rock 109.06 46 ⇑P PKiKP 03 23 41.7 +1.3
baz=109
WET Wettzell 109.06 321 *e*Pdiff Pdif 03 19 35.6 -0.5
WET *e*PP PP 03 24 13.3 +4.8
BSEG Bad Segeberg 109.16 326 *e*Pdiff Pdif 03 19 35.4 -1.2
BSEG *e*PP PP 03 24 12.0 +2.9
BER Bergen 109.18 333 *e*P Pdif 03 19 40.7 +4.0
BER *e*PP PP 03 24 10.1 +0.8
BER AMS AMS 04 12 50.3
comp=Z,696nm,19.2s,MS5.2
MANZ Manzenberg 109.31 322 *e*Pdiff Pdif 03 19 37.7 +0.4
MANZ *e*PP PP 03 24 15.4 +5.1
ROTZ Rotzenmuhle 109.31 321 *e*Pdiff Pdif 03 19 37.2 -0.1
ROTZ *e*PP PP 03 24 15.2 +4.9
MOX Moxa 109.42 322 *e*Pdiff Pdif 03 19 37.5 -0.3
MOX *e*PP PP 03 24 16.1 +5.0
MOX Moxa 109.42 322 *e*(P) Pdif 03 19 37.6 -0.2
MOX
comp=Z,600nm,20.0s
HAWA Hanford 109.53 42 PFAKE 03 23 50.0 +8.8
HAWA LR LR
comp=Z,701nm,21.0s,MS5.2
I06A Prineville 109.64 45 ⇑P PKiKP 03 23 42.7 +1.3
baz=110
NRDL Niedersach Rie 109.75 325 *e*Pdiff Pdif 03 19 37.7 -1.5
NRDL *e*PP PP 03 24 17.0 +3.6
J06A Christmas Vall 109.84 46 ⇓P PKiKP 03 23 43.4 +1.6
baz=110
K06A Valley Falls 109.87 46 ⇓P PKiKP 03 23 42.9 +1.1
baz=110
GRA1 Grafenberg Arr 109.95 321 *e*Pdif Pdif 03 19 40.3 +0.2
GRA1 *e*PP PP 03 24 19.7 +4.8
GRA1 *e* 03 33 48.6
GRA1 *e* 03 34 40.6
GRF Grafenberg Arr 109.95 321 *e*Pdiff Pdif 03 19 40.3 +0.2
GRF *e*PP PP 03 24 19.7 +4.8
GRF *e* 03 33 48.6
GRF *e* 03 34 40.6
GRF eL 04 14 00.6
comp=E,644nm,22.0s
GRF Grafenberg Arr 109.95 321 *e*P Pdif 03 19 40.3 +0.2
GRF *e* 03 24 19.7
GRF *e* 03 34 40.6
GRF Grafenberg Arr 109.95 321 *e*P Pdif 03 19 40.3 +0.2
GRF *e* 03 24 19.7
GRF *e* 03 34 40.6
GRF Grafenberg Arr 109.95 321 *e*Pdif Pdif 03 19 40.3 +0.2
GRF *e*PP PP 03 24 19.7 +4.8
GRF *e* 03 33 48.6
GRF *e* 03 34 40.6
HAST UC Hastings Re 110.09 53 ⇓P PKiKP 03 23 42.8 +0.6
baz=110
I07A Izee 110.11 45 ⇓P PKiKP 03 23 42.6 +0.3
baz=110
F08A Pendleton 110.19 43 ⇑P PKiKP 03 23 42.8 +0.3
baz=110
P05C Yuba Gap, Truc 110.31 50 ⇑P PKiKP 03 23 44.0 +1.3
baz=110
UBBA Unterbreizbach 110.35 323 *e*Pdiff Pdif 03 19 40.9 -1.0
UBBA *e*PP PP 03 24 22.4 +4.6
FUR Furstenfeldbru 110.35 320 *e*Pdiff Pdif 03 19 41.1 -0.8
FUR *e*PP PP 03 24 21.2 +3.4
WTTA Wattenberg 110.37 319 ⇓*i*P PKiKP 03 23 41.2 -1.6
comp=E,11nm,0.9s
BEKR Beckwourth 110.39 49 ⇓P PKiKP 03 23 43.4 +0.6
baz=110
V03C Hunter Liggett 110.40 53 ⇑P PKiKP 03 23 44.2 +1.4
baz=110
H08A Prairie City 110.59 44 ⇓P PKiKP 03 23 43.0 -0.2
baz=111
N06A Buffalo Meadow 110.61 48 ⇓P PKiKP 03 23 43.3 +0.1
baz=111
NEW Newport 110.61 40 PFAKE 03 23 50.0 +6.8
NEW LR LR
comp=Z,1μm,21.0s,MS5.4
SQTA Sankt Quirin 110.66 319 ⇓*i*P PKiKP 03 23 42.7 -0.6
comp=Z,23nm,1.4s
MOTA Moosalm 110.70 319 ⇓*i*P PKiKP 03 23 42.5 -0.9
comp=Z,17nm,1.2s
U04C Hernandez Rese 110.71 53 ⇑P PKiKP 03 23 45.5 +2.1
baz=111
CMB Columbia Colle 110.72 51 *e*PKIKP PKiKP 03 23 44.2 +0.8
CMB MLR MLR
comp=Z,1μm,22.0s,MS5.4
CMB Columbia Colle 110.72 51 ⇑P PKiKP 03 23 44.6 +1.1
baz=111
R05C Kirkwood Meado 110.84 50 ⇑P PKiKP 03 23 43.3 -0.4
baz=111
M07A Soldier Meadow 110.96 47 ⇓P PKiKP 03 23 44.5 +0.6
baz=111
PKD Parkfield 110.97 53 ⇓P PKiKP 03 23 45.3 +1.4
baz=111
K08A Mann Creek Ran 111.15 46 ⇓P PKiKP 03 23 45.6 +1.3
baz=111
PAHR Pah Rah Range 111.16 49 *e*PKPdf PKiKP 03 23 45.0 +0.7
PAHR *e*PKKPab PKKPab 03 34 51.2 +0.9
IBBN Ibbenburen 111.17 325 *e*Pdiff Pdif 03 19 45.1 -0.4
IBBN *e*PP PP 03 24 26.9 +3.2
S06C San Francisco 111.17 51 ⇑P PKiKP 03 23 44.9 +0.6
baz=111
I09A Lost Marbles R 111.37 44 ⇓P PKiKP 03 23 45.3 +0.6
baz=111
L08A Fields 111.38 46 ⇑P PKiKP 03 23 46.5 +1.8
baz=112
BMO Blue Mountains 111.44 43 PFAKE 03 24 00.0 +15
BMO LR LR
comp=Z,621nm,21.0s,MS5.2
T06C Millerton Lake 111.44 52 ⇑P PKiKP 03 23 45.9 +1.1
baz=112
O07A Toulon 111.45 49 ⇑P PKiKP 03 23 45.7 +0.8
baz=112
TNS Taunus Mts 111.48 323 *e*Pdiff Pdif 03 19 47.4 +0.5
TNS *e*PP PP 03 24 30.7 +4.8
STU Stuttgart 111.49 321 *e*Pdiff Pdif 03 19 45.9 -1.1
STU *e*PP PP 03 24 29.9 +3.9
DAVA Damuels 111.51 319 ⇑*i*P PKiKP 03 23 44.3 -0.7
comp=Z,9.0nm,1.0s
M08A Happy Creek Ra 111.53 47 ⇑P PKiKP 03 23 46.6 +1.6
baz=112
KCC Kaiser Creek 111.69 52 ⇓P PKiKP 03 23 46.4 +1.1
baz=112
K09A Rome 111.70 46 ⇓P PKiKP 03 23 46.9 +1.6
baz=112
PKM Peak Mountain 111.73 54 ⇑P PKiKP 03 23 47.0 +1.6
baz=112
BUG Bochum--Univer 111.76 324 *e*Pdiff Pdif 03 19 47.4 -0.7
BUG *e*PP PP 03 24 31.2 +3.3
N08A GE Springer Mi 111.86 48 ⇓P PKiKP 03 23 46.2 +0.6
baz=112
L09A Wilkinson Ranc 111.91 46 ⇑P PKiKP 03 23 46.8 +1.1
baz=112
HELL Mitchell Peak, 112.04 52 ⇑P PKiKP 03 23 47.1 +1.1
baz=112
VES Vestal, Richgr 112.16 53 ⇑P PKiKP 03 23 46.0 -0.1
baz=112
BFO Black Forest 112.18 321 *e*Pdiff Pdif 03 19 49.7 -0.3
BFO *e*PP PP 03 24 34.7 +3.8
NVAR Mina Array Bea 112.25 50 Pdiff Pdif 03 19 53.0 +2.7
comp=Z,1.0nm,0.9s,baz=269,slow=4.2,SNR=6.0
NVAR PKiKP PKiKP 03 23 47.5 +1.2
comp=Z,2.1nm,0.9s,baz=295,slow=0.7,SNR=4.2
NVAR PP PP 03 24 29.4 -2.1
comp=Z,8.3nm,1.1s,baz=273,slow=6.0,SNR=9.8
NVAR PKKPbc PKKPbc 03 34 38.5 +1.8
comp=Z,1.8nm,0.8s,baz=127,slow=4.4,SNR=9.8
MTUM Tungsten Hills 112.27 52 *e*PKPdf PKiKP 03 23 48.1 +1.7
BMN Battle Mountai 112.62 48 PFAKE 03 24 00.0 +13
BMN LR LR
comp=Z,726nm,20.0s,MS5.3
ISA Isabella 112.67 53 PFAKE 03 24 00.0 +13
ISA LR LR
comp=Z,163nm,20.0s,MS4.6
ISA Isabella 112.67 53 ⇓P PKiKP 03 23 47.5 +0.4
baz=113
O09A Fish Creek Ran 112.70 48 ⇓P PKiKP 03 23 48.3 +1.1
baz=113
WLF Walferdange 113.06 323 *e*Pdiff Pdif 03 19 53.3 -0.6
WLF *e*PP PP 03 24 41.9 +4.7
MSO Missoula 113.10 41 *e*PKPdf PKiKP 03 23 47.4 -0.6
MSO LR LR
comp=Z,506nm,21.0s,MS5.1
EDW2 Edwards Air Fo 113.21 54 ⇑P PKiKP 03 23 49.5 +1.4

baz=113
S09A Goldfield 113.23 51 ⇓P PKiKP 03 23 49.6 +1.3
baz=113
R09A Tonopah 113.24 50 ⇑P PKiKP 03 23 50.3 +2.1
baz=113
DAC Darwin (Calif) 113.25 53 PFAKE 03 24 00.0 +12
DAC LR LR
comp=Z,729nm,20.0s,MS5.3
GRAC Grapevine Rang 113.28 52 ⇓P PKiKP 03 23 50.2 +1.9
baz=113
HINF Hinteralfeld 113.28 321 *e*PKIKP PKiKP 03 23 47.0 -1.3
comp=Z,23nm,1.1s
MPMC Manual Prospec 113.38 53 ⇑P PKiKP 03 23 49.1 +0.6
baz=114
M11A Holland Ranch, 113.42 47 ⇑P PKiKP 03 23 49.9 +1.3
baz=114
PGF Pioggiola 113.47 315 *e*PKIKP PKiKP 03 23 48.0 -0.7
CHMT Chamberlain Mo 113.52 40 *e*PKPdf PKiKP 03 23 48.6 -0.1
CHMT *e*PP PP 03 24 39.6 -0.9
CHMT *e*PKKPbc PKKPbc 03 34 33.7 +1.2
CHMT *e*PKKPab PKKPab 03 34 41.1 +1.1
HAU Haudompre 113.54 321 ⇑*i*PKIKP PKiKP 03 23 47.8 -1.0
comp=Z,21nm,1.0s
HAU *e*R
comp=Z,894nm,21.2s
HAU Haudompre 113.54 321 *i*PKPdf PKiKP 03 23 47.8 -1.0
HAU LR LR
comp=Z,890nm,21.3s,MS5.3
BFSC Mount Baldy St 113.60 55 ⇓P PKiKP 03 23 49.1 +0.1
baz=114
GIVF Givet 113.70 323 *e*PKIKP PKiKP 03 23 48.6 -0.5
FURC Furnace Creek, 113.79 52 ⇓P PKiKP 03 23 51.1 +1.8
baz=114
HLID Hailey 113.80 44 *e*Pdif Pdif 03 19 59.1 +1.9
HLID *e*PKPdf PKiKP 03 23 50.4 +1.1
HLID *e*PKKPbc PKKPbc 03 34 33.0 +1.4
HLID *e*PKKPab PKKPab 03 34 39.2 +0.5
HLID LR LR
comp=Z,643nm,20.0s,MS5.2
O11A Cowboy Ranch, 113.85 48 ⇓P PKiKP 03 23 51.2 +1.8
baz=114
ELK Elko 114.00 47 PFAKE 03 24 00.0 +10
ELK LR LR
comp=Z,1μm,21.0s,MS5.5
M12A Wells 114.06 47 ⇓P PKiKP 03 23 50.9 +1.1
baz=114
BAIF Baives 114.08 324 *e*PKIKP PKiKP 03 23 49.2 -0.6
comp=Z,63nm,1.6s
GSC Goldstone 114.08 53 ⇓P PKiKP 03 23 51.0 +1.1
baz=114
N12A Clover Valley, 114.12 47 ⇓P PKiKP 03 23 51.7 +1.8
baz=114
LPG La Plagne 114.12 318 *e*PKIKP PKiKP 03 23 49.5 -0.4
comp=Z,28nm,1.1s
LPL La Plagne 114.13 318 *e*PKIKP PKiKP 03 23 49.4 -0.5
comp=Z,26nm,1.2s
MEZF Maizieres J'vi 114.17 322 *e*PKIKP PKiKP 03 23 49.3 -0.7
CABF La Chapelle 114.19 320 ⇑*i*PKIKP PKiKP 03 23 49.6 -0.4
comp=Z,30nm,1.0s
U10A Ash Meadows, A 114.22 52 ⇓P PKiKP 03 23 53.2 +3.1
baz=114
TRCR Troy Canyon 114.35 50 *e*PKPdf PKiKP 03 23 51.5 +1.2
TRCR *e*PKKPbc PKKPbc 03 34 31.0 +1.3
TRCR *e*PKKPab PKKPab 03 34 37.4 +1.1
DLMT Dillon 114.47 42 *e*PKPdf PKiKP 03 23 51.0 +0.4
DLMT *e*PKKPbc PKKPbc 03 34 30.6 +1.4
DLMT *e*PKKPab PKKPab 03 34 36.6 +0.9
MCMT McKenzie Canyo 114.48 42 *e*PKPdf PKiKP 03 23 51.6 +1.0
MCMT *e*PKKPbc PKKPbc 03 34 29.9 +0.7
MCMT *e*PKKPab PKKPab 03 34 36.5 +0.8
O12A Currie 114.49 48 ⇓P PKiKP 03 23 51.5 +0.8
baz=115
P12A McGill 114.58 49 ⇑P PKiKP 03 23 51.9 +1.1
baz=115
M13A Montello 114.61 46 ⇑P PKiKP 03 23 51.4 +0.6
baz=115
PFO Pinyon Flat Ob 114.71 55 *e*PKIKP PKiKP 03 23 52.2 +1.2
PFO MLR MLR
comp=Z,1μm,21.0s,MS5.6
PFO Pinyon Flat Ob 114.71 55 ⇓P PKiKP 03 23 52.9 +1.9
baz=115
FRF La Foret Royal 114.82 316 ⇑*i*PKIKP PKiKP 03 23 50.5 -0.8
comp=Z,51nm,1.2s
MONP Monument Peak 114.87 56 ⇓P PKiKP 03 23 53.7 +2.3
baz=115
ORIF Oris-en-Rattie 114.90 318 ⇑*i*PKIKP PKiKP 03 23 50.8 -0.6
comp=Z,16nm,1.0s
ORIF *e*R
comp=Z,866nm,21.2s
KEST Kesra 114.92 307 PKP PKiKP 03 23 51.2 -0.2
comp=Z,2.1nm,1.0s,baz=321,slow=7.2,SNR=4.9
KEST PP PP 03 24 43.6 -6.7
comp=Z,11nm,1.1s,baz=307,slow=5.9,SNR=6.1
LMR La Mourre 114.98 316 ⇑*i*PKIKP PKiKP 03 23 50.9 -0.7
BELC Belle Mtn. 115.00 55 ⇑P PKiKP 03 23 52.7 +1.1
baz=115
BOZ Bozeman (W) 115.01 41 *e*PKIKP PKiKP 03 23 51.9 +0.3
BOZ *e* 03 24 50.1
BOZ MLR MLR
comp=Z,595nm,20.0s,MS5.2
GMRC Granite Mounta 115.11 54 ⇑P PKiKP 03 23 52.9 +1.1
baz=115
DVTC Desert V Tower 115.18 56 ⇑P PKiKP 03 23 51.8 -0.1
baz=115
EGMT Eagleton 115.33 38 *e*PKPdf PKPdf 03 23 51.9 -0.3
EGMT *e*PKKPbc PKKPbc 03 34 27.3 +1.0
EGMT LR LR
comp=Z,885nm,22.0s,MS5.3
LOR Lormes 115.37 321 ⇑*i*PKIKP PKPdf 03 23 51.5 -0.8
comp=Z,38nm,1.3s
LOR *e*R
comp=Z,902nm,20.5s
LOR Lormes 115.37 321 ⇑*i*PKPdf PKPdf 03 23 51.5 -0.8
LOR LR LR
comp=Z,900nm,20.5s,MS5.4
SWSC Sam W. Stewart 115.38 56 ⇓P PKiKP 03 23 53.7 +1.4
baz=116
SMRF Simiane la Rot 115.42 317 ⇑*i*PKIKP PKPdf 03 23 52.2 -0.2
comp=Z,32nm,1.1s
QLMT Earthquake Lak 115.43 42 *e*Pdif Pdif 03 20 05.2 +0.7
QLMT *e*PKPdf PKPdf 03 23 53.9 +1.4
QLMT *e*PKKPbc PKKPbc 03 34 28.4 +2.4
HVU Hansel Valley 115.49 46 *e*PKIKP PKPdf 03 23 53.5 +1.0
V12A Nelson 115.54 53 ⇓P PKPdf 03 23 54.2 +1.6
baz=116
BGU Big Grassy Mou 115.56 47 *e*PKPdf PKPdf 03 23 53.4 +0.7
BGU *e*PKPab PKKPab 03 34 31.0 0.0
EKA Eskdalemuir Ar 115.60 331 PP PP 03 24 51.8 -3.4
comp=Z,6.8nm,1.0s,baz=54,slow=7.6,SNR=4.3
SMF Signal de Mont 115.62 320 *e*PKIKP PKPdf 03 23 51.8 -1.0
comp=Z,34nm,1.4s
U12A Valley of Fire 115.62 52 ⇓P PKPdf 03 23 54.4 +1.6
baz=116
ESK Eskdalemuir 115.64 331 PFAKE 03 24 00.0 +7.2
ESK LR LR
comp=Z,713nm,21.0s,MS5.3
IRM Iron Mountain 115.65 54 ⇑P PKPdf 03 23 54.2 +1.4
baz=116
SSF Saint Saulge 115.67 321 ⇑*i*PKIKP PKPdf 03 23 52.1 -0.8
comp=Z,36nm,1.1s
VIVF Saint-Julien-l 115.73 318 ⇑*i*PKIKP PKPdf 03 23 52.3 -0.7
comp=Z,11nm,0.9s
YMR Madison River 115.79 42 ⇑*e*PKPdf PKPdf 03 23 54.4 +1.3
YMR *e*PKKPab PKKPab 03 34 31.0 +1.1
BORG Borgarnes 115.84 345 PFAKE 03 24 00.0 +6.8
BORG LR LR
comp=Z,1μm,19.0s,MS5.5
SPUT South Promonto 115.86 46 *e*Pdif Pdif 03 20 06.7 +0.3
SPUT *e*PKPdf PKPdf 03 23 53.1 -0.2
SPUT *e*PKKPab PKKPab 03 34 29.3 -0.3
AVF Avril sur Loir 115.88 320 *e*PKIKP PKPdf 03 23 52.2 -1.1
comp=Z,19nm,1.1s
DUG Dugway 115.93 47 *e*PKPdf PKPdf 03 23 54.2 +0.8
DUG *e*PKKPbc PKKPbc 03 34 25.3 +1.0
DUG *e*PKKPab PKKPab 03 34 29.7 +0.4
DUG LR LR
comp=Z,759nm,20.0s,MS5.3
YFT Old Faithful 115.96 42 *e*PKPdf PKPdf 03 23 55.5 +2.1
YFT *e*PKKPbc PKKPbc 03 34 26.8 +2.6
YNR Norris Junctio 115.97 42 *e*PKPdf PKPdf 03 23 51.3 -2.2
RRI2 Red Ridge 116.00 44 *e*PKPdf PKPdf 03 23 54.1 +0.6
IMW Indian Meadow 116.08 43 *e*PKPdf PKPdf 03 23 57.6 +4.0
IMW *e*PKKPbc PKKPbc 03 34 28.2 +4.4
IMW *e*PKKPab PKKPab 03 34 31.8 +3.1
HYF Humbligny 116.14 321 *e*PKIKP PKPdf 03 23 53.3 -0.5

GLA Glamis 116.15 55 ⇓P PKPdf 03 23 54.7 +0.9
baz=116
FLWY Flagg Ranch 116.18 43 *e*PKPdf PKPdf 03 23 55.3 +1.5
LKWY Lake 116.21 42 PFAKE 03 24 00.0 +6.1
LKWY LR LR
comp=Z,765nm,20.0s,MS5.3
TPAW Teton Pass 116.21 43 *e*PKPdf PKPdf 03 23 55.0 +1.1
TPAW *e*PKKPbc PKKPbc 03 34 25.4 +2.1
TPAW *e*PKKPab PKKPab 03 34 28.6 +0.6
GCMT Greycliff 116.24 41 *e*PKPdf PKPdf 03 23 54.4 +0.4
GCMT *e*PKKPbc PKKPbc 03 34 24.6 +1.4
GCMT *e*PKKPab PKKPab 03 34 28.9 +1.0
Y12C Blythe 116.25 55 ⇑P PKPdf 03 23 55.4 +1.3
baz=116
CCUT Cedar City 116.25 50 *e*PKPdf PKPdf 03 23 55.5 +1.5
CCUT *e*PKKPbc PKKPbc 03 34 24.8 +1.7
CCUT *e*PKKPab PKKPab 03 34 29.1 +1.2
MOOW Moose Ponds 116.26 43 *e*PKPdf PKPdf 03 23 54.5 +0.5
MOOW *e*PP PP 03 24 58.7 -1.1
MOOW *e*PKKPbc PKKPbc 03 34 24.0 +0.9
MOOW *e*PKKPab PKKPab 03 34 27.9 +0.1
BGF Bois d'Agland 116.29 320 ⇑*i*PKIKP PKPdf 03 23 53.5 -0.6
comp=Z,40nm,1.0s
NOQ North Oquirrh 116.30 47 *e*PKPdf PKPdf 03 23 53.4 -0.7
NOQ *e*PKKPab PKKPab 03 34 28.2 +0.6
REDW Red Top Meadow 116.32 43 *e*PKPdf PKPdf 03 23 55.1 +1.0
REDW *e*PKKPab PKKPab 03 34 27.6 +0.1
AHID Auburn Hatcher 116.35 44 PFAKE 03 24 00.0 +5.8
AHID LR LR
comp=Z,507nm,19.0s,MS5.2
SNOW Snow King Moun 116.35 43 *e*PKPdf PKPdf 03 23 55.5 +1.2
SNOW *e*PKKPab PKKPab 03 34 28.0 +0.5
HWUT Hardware Ranch 116.40 46 *e*PKPdf PKPdf 03 23 53.9 -0.4
HWUT *e*PKKPbc PKKPbc 03 34 22.1 -0.4
HWUT *e*PKKPab PKKPab 03 34 26.9 -0.4
HWUT LR LR
comp=Z,940nm,21.0s,MS5.4
LOHW Long Hollow 116.41 43 *e*PKPdf PKPdf 03 23 55.2 +0.9
LOHW *e*PP PP 03 24 59.5 -1.3
LOHW *e*PKKPbc PKKPbc 03 34 23.6 +1.0
PDMCI Parker Dam,Lak 116.44 54 ⇓P PKPdf 03 23 56.2 +1.8
baz=116
W13A Hualapai Mount 116.46 53 ⇑P PKPdf 03 23 57.0 +2.6
baz=116
NLU North Lily Min 116.54 47 *e*PKPdf PKPdf 03 23 55.6 +1.0
NLU *e*PKKPab PKKPab 03 34 27.3 +0.7
LASF Ste Croix 116.55 317 ⇑*i*PKIKP PKPdf 03 23 54.1 -0.5
comp=Z,27nm,1.2s
X13A Yucca 116.62 54 ⇓P PKPdf 03 23 55.8 +1.1
baz=117
TCUT Toone Canyon 116.67 46 *e*PKPdf PKPdf 03 23 55.9 +1.1
TCUT *e*PKKPbc PKKPbc 03 34 22.0 +0.3
TCF Toulx Ste Croi 116.80 320 *e*PKIKP PKPdf 03 23 54.4 -0.7
comp=Z,61nm,1.3s
Y13A Salome 116.80 54 ⇑P PKPdf 03 23 56.4 +1.3
baz=117
MPU Maple Canyon 116.85 47 *e*PKPdf PKPdf 03 23 56.3 +1.1
MPU *e*PKKPab PKKPab 03 34 25.6 +0.4
MPU LR LR
comp=Z,3μm,22.0s,MS5.8
MVU Marysvale 116.86 49 PFAKE 03 24 10.0 +15
MVU LR LR
comp=Z,741nm,21.0s,MS5.3
MSU Marysvale 116.89 49 *e*PKPdf PKPdf 03 23 56.8 +1.6
MSU *e*PKKPbc PKKPbc 03 34 22.8 +1.9
MSU *e*PKKPab PKKPab 03 34 26.3 +1.2
DAU Daniels Canyon 117.00 47 *e*PKPdf PKPdf 03 23 56.7 +1.3
DAU *e*PKKPbc PKKPbc 03 34 22.2 +1.7
DAU *e*PKKPab PKKPab 03 34 26.1 +1.5
W14A Seligman 117.07 53 ⇓P PKPdf 03 23 58.1 +2.6
baz=117
LDF La Druitiere 117.27 323 *e*PKIKP PKPdf 03 23 55.1 -0.9
comp=Z,21nm,1.2s
TMUT Trail Mountain 117.38 48 *e*PKPdf PKPdf 03 23 57.6 +1.5
TMUT *e*PKKPab PKKPab 03 34 23.2 +0.3
X14A Yava 117.40 54 ⇓P PKPdf 03 23 57.3 +1.1
baz=118
FLN La Foliniere 117.40 324 *e*PKIKP PKPdf 03 23 55.3 -0.9
FLN *e*R
comp=Z,1μm,20.8s
FLN La Foliniere 117.40 324 *e*PKPdf PKPdf 03 23 55.3 -0.9
FLN LR LR
comp=Z,1μm,20.8s,MS5.4
BW06 Boulder Array 117.42 44 PFAKE 03 24 10.0 +14
BW06 LR LR
comp=Z,859nm,22.0s,MS5.3
PDAR Pinedale Array 117.42 44 PKP PKPdf 03 23 56.1 -0.2
comp=Z,11nm,1.2s,baz=222,slow=2.0,SNR=31
PDAR PKKPbc PKKPbc 03 34 19.5 +0.5
comp=Z,8.6nm,1.0s,baz=116,slow=5.1,SNR=19
CAF Calviac 117.42 319 *e*PKIKP PKPdf 03 23 56.0 -0.3
comp=Z,45nm,1.3s
Y14A Wickenburg 117.44 54 ⇑P PKPdf 03 23 57.6 +1.3
baz=118
Z14A Wintersburg 117.62 55 ⇑P PKPdf 03 23 58.0 +1.3
baz=118
RJF Les Rejaudoux 117.63 319 *e*PKIKP PKPdf 03 23 56.2 -0.5
comp=Z,75nm,1.6s
RJF *e*R
comp=Z,842nm,21.8s
RJF Les Rejaudoux 117.63 319 *e*PKPdf PKPdf 03 23 56.2 -0.5
RJF LR LR
comp=Z,840nm,21.8s,MS5.3
W15A Williams 117.72 53 ⇑P PKPdf 03 23 59.1 +2.3
baz=118
GRR Gorron 117.80 323 ⇑*i*PKIKP PKPdf 03 23 56.2 -0.8
comp=Z,35nm,1.2s
X15A Humboldt 117.92 53 ⇑P PKPdf 03 23 59.0 +1.8
baz=118
MTLF Montolieu 117.92 317 ⇑*i*PKIKP PKPdf 03 23 56.5 -0.7
comp=Z,31nm,1.1s
SRU San Rafael 117.94 48 *e*PKIKP PKPdf 03 23 58.2 +0.9
SRU *e* 03 25 11.3
SRU San Rafael 117.94 48 *e*PKPdf PKPdf 03 23 58.2 +0.9
SRU PP PP 03 25 11.3 -0.2
SRU *e*PKKPbc PKKPbc 03 34 18.0 +0.9
LAO LASA Array 118.07 39 PFAKE 03 24 10.0 +12
LAO LR LR
comp=Z,978nm,22.0s,MS5.4
MFF Saint Martin d 118.15 321 ⇑*i*PKIKP PKPdf 03 23 57.8 +0.1
comp=Z,24nm,1.0s
LFF La Frestale 118.28 319 *e*PKIKP PKPdf 03 23 57.6 -0.3
comp=Z,52nm,1.3s
WUAZ Wupatki 118.34 52 *e*PKPdf PKPdf 03 23 59.5 +1.5
WUAZ *e*PKKPbc PKKPbc 03 34 17.7 +2.0
WUAZ *e*PKKPab PKKPab 03 34 20.4 +1.7
115A Sonoran Desert 118.36 55 ⇓P PKPdf 03 23 59.9 +1.8
baz=118
116A Eloy 118.83 55 ⇓P PKPdf 03 24 00.8 +1.8
baz=119
SGMF Saint Gilles 118.86 324 *e*PKIKP PKPdf 03 23 58.1 -0.9
PV10 Paradox Valley 119.28 48 *e*PKPdf PKPdf 03 24 01.5 +1.6
PV10 *e*PKKPab PKKPab 03 34 16.0 +1.4
EPF Esparros 119.31 317 ⇑*i*PKIKP PKPdf 03 23 59.3 -0.6
comp=Z,26nm,1.4s
QUIF Quistinic 119.38 324 *e*PKIKP PKPdf 03 23 59.2 -0.8
comp=Z,104nm,1.6s
RWWY Rawlins 119.43 44 *e*PKPdf PKPdf 03 24 00.5 +0.4
TUC Tucson 119.64 55 PKPdf PKPdf 03 24 01.6 +1.1
TUC PP PP 03 25 22.9 -0.4
TUC Tucson 119.64 55 *e*PKPdf PKPdf 03 24 01.5 +0.9
TUC *e*PKKPab PKKPab 03 34 14.6 +1.5
HOPE Hope Point 119.66 191 PFAKE 03 24 10.0 +9.4
HOPE LR LR
comp=Z,3μm,21.0s,MS5.9
PV01 Paradox Valley 119.70 48 *e*PKPdf PKPdf 03 24 01.7 +1.0
PV01 *e*PKKPab PKKPab 03 34 12.2 -0.5
FRB Frobisher Bay 119.96 8 PKP PKPdf 03 23 59.6 -1.5
comp=Z,24nm,1.0s,baz=231,slow=3.1,SNR=3.1
MVCO Mesa Verde 120.06 49 *e*PKPdf PKPdf 03 24 02.2 +0.9
MVCO *e*PKKPab PKKPab 03 34 11.0 -0.2
SJPF Ste Jean 120.33 318 *e*PKIKP PKPdf 03 24 01.9 +0.1
comp=Z,13nm,1.1s
SMCO Snowmass 120.52 47 *e*PKPdf PKPdf 03 24 03.5 +1.3
SMCO *e*PP PP 03 25 29.9 +0.6
RSSD Black Hills 120.57 40 *e*PKPdf PKPdf 03 24 01.6 -0.7
RSSD *e*PKKPab PKKPab 03 34 08.5 -0.5
PHWY Pilot Hill 120.80 44 *e*PKPdf PKPdf 03 24 02.9 +0.2
PHWY *e*PKKPab PKKPab 03 34 07.8 -0.2
ISCO Idaho Springs 121.27 46 *e*PKIKP PKPdf 03 24 04.7 +1.0
ISCO *e* 03 25 36.0
ISCO MLR MLR
comp=Z,1μm,21.0s,MS5.5
LAZ Ladron 121.99 52 *e*PKPdf PKPdf 03 24 07.0 +1.9

LAZ *e*PKKPab PKKPab 03 34 03.3 +0.5
ULM Lac du Bonnet 122.12 31 PKP PKPdf 03 24 04.2 -1.1
comp=Z,18nm,1.0s,baz=307,slow=3.6,SNR=16
ULM PP PP 03 25 37.9 -2.4
comp=Z,11nm,1.2s,baz=302,slow=8.4,SNR=3.5
LENM Lemitar 122.19 52 *e*PKPdf PKPdf 03 24 07.1 +1.7
LENM *e*PKKPab PKKPab 03 34 03.1 +1.1
Y22C IRIS PASSCAL I 122.26 52 ⇓P PKPdf 03 24 07.8 +2.2
baz=122
ANMO Albuquerque 122.35 51 *e*PKIKP PKPdf 03 24 07.0 +1.3
ANMO *e* 03 25 41.1
ANMO MLR MLR
comp=Z,656nm,19.0s
ANMO Albuquerque 122.35 51 *e*PKPdf PKPdf 03 24 07.0 +1.2
ANMO *e*PP PP 03 25 41.1 -0.6
ANMO *e*PKKPab PKKPab 03 33 59.9 -1.5
ANMO LR LR
comp=Z,656nm,19.0s,MS5.3
LPM Los Pinos Moun 122.42 52 *e*PKPdf PKPdf 03 24 07.5 +1.7
ESDC Sonseca Array 123.64 315 PKP PKPdf 03 24 07.6 -0.6
comp=Z,0.2nm,0.4s,baz=91,slow=20,SNR=4.1
ESDC PP PP 03 25 46.6 -3.8
comp=Z,5.1nm,1.0s,baz=62,slow=6.8,SNR=8.1
ESDC PKKPbc PKKPbc 03 33 58.5 +2.8
comp=Z,2.8nm,0.9s,baz=260,slow=3.8,SNR=13
ESDC SKKPbc 03 37 50.1
comp=Z,4.8nm,1.3s,baz=246,slow=4.0,SNR=5.6
ESLA Sonseca Array 123.64 315 *e*PKPdf PKPdf 03 24 08.1 -0.1
ESLA LR LR
comp=Z,3μm,20.0s,MS5.9
EFI East Falkland 123.75 176 PFAKE 03 24 20.0 +12
EFI LR LR
comp=Z,2μm,21.0s,MS5.8
MNTX Cornudas Mount 124.22 55 *e*PKPdf PKPdf 03 24 10.2 +0.9
MNTX *e*PP PP 03 25 56.9 +2.5
MNTX LR LR
comp=Z,1μm,21.0s,MS5.5
TOA0 Torodi Ar. Sit 125.26 283 *e*PKPdf PKPdf 03 24 10.9 -0.4
TORD Torodi Ar. Bea 125.26 283 PKP PKPdf 03 24 11.1 -0.2
comp=Z,17nm,1.0s,baz=51,slow=2.0,SNR=50
TORD PKKPbc 03 33 51.8
comp=Z,4.5nm,1.1s,baz=262,slow=1.4,SNR=8.6
TORD SKKPbc 03 37 33.8
comp=Z,2.8nm,1.1s,baz=218,slow=5.8,SNR=4.0
PCAB Cabril 125.44 319 *e*PKP PKPdf 03 24 11.0 -0.7
PVRL Vila Real 125.45 319 *e*PKP PKPdf 03 24 12.2 +0.5
MTE Manteigas 125.76 318 *e*PKP PKPdf 03 24 12.0 -0.3
MTE Manteigas 125.76 318 *e*PP PP 03 26 03.2 -1.5
MTE Manteigas 125.76 318 *e*LR LR 04 07 02.8
comp=Z,588nm,21.0s
EYMN Ely 125.81 31 PFAKE 03 24 20.0 +7.6
EYMN LR LR
comp=Z,13μm,22.0s
PVIS Viseu 125.85 318 *e*PKP PKPdf 03 24 12.4 0.0
PCBR Castelo Branco 125.98 317 *e*PKP PKPdf 03 24 12.4 -0.3
PESTR Estremoz 126.52 316 *e*PKP PKPdf 03 24 14.0 +0.3
PESTR Estremoz 126.52 316 *e*PP PP 03 26 10.8 +1.1
PTOM Tomar 126.72 317 *e*PKP PKPdf 03 24 14.2 +0.1
MDT Midelt 126.81 308 PKP PKPdf 03 24 14.8 +0.5
comp=Z,9.2nm,1.1s,baz=67,slow=1.6,SNR=10
PBEJ Beja 127.10 315 *e*PKP PKPdf 03 24 15.3 +0.5
KSU1 Kansas State U 127.84 43 *e*PKPdf PKPdf 03 24 16.6 +0.3
WMOK Wichita Mounta 128.29 49 *e*PKIKP PKPdf 03 24 17.3 +0.2
SCHQ Schefferville 128.75 10 PKP PKPdf 03 24 17.0 -1.0
comp=Z,22nm,1.1s,baz=16,slow=4.3,SNR=9.4
ZAIG Zacatecas 129.01 64 *i*P PKPdf 03 24 20.5 +2.1
JCT Junction City 129.14 54 *e*PKIKP PKPdf 03 24 19.5 +0.8
JCT MLR MLR
comp=Z,817nm,19.0s,MS5.4
JFWS Jewell Farm 129.69 35 *e*PKIKP PKPdf 03 24 19.7 -0.1
JFWS MLR MLR
comp=Z,889nm,21.0s,MS5.4
DBIC Dimbokro 131.91 275 PKP PKPdf 03 24 23.3 -0.7
comp=Z,5.8nm,0.7s,baz=179,slow=1.8,SNR=9.9
DBIC Dimbokro 131.91 275 PKP PKPdf 03 24 23.3 -0.7
DBIC LR LR
comp=Z,903nm,21.0s,MS5.5
CCM Cathedral Cave 131.96 41 *e*PKIKP PKPdf 03 24 24.3 +0.2
CCM MLR MLR
comp=Z,654nm,22.0s,MS5.3
LIC Lamto 132.08 274 *e*PKIKP PKPdf 03 24 25.2 +0.9
comp=Z,51nm,1.1s
LIC *e*R
comp=Z,134nm,21.8s
LIC Lamto 132.08 274 *e*PKPdf PKPdf 03 24 25.2 +0.9
LIC LR LR
comp=Z,70nm,21.8s,MS4.3
PLCA Paso Flores 132.11 162 *e*PKIKP PKPdf 03 24 25.3 +0.9
PLCA MLR MLR
comp=Z,1μm,20.0s
MIAR Mount Ida 132.20 46 *e*PKIKP PKPdf 03 24 25.3 +0.8
MIAR MLR MLR
comp=Z,1μm,20.0s,MS5.5
HKT Hockley 132.52 53 *e*PKIKP PKPdf 03 24 22.9 -2.2
HKT MLR MLR
comp=Z,681nm,20.0s,MS5.4
FVM French Village 132.53 41 *e*PKIKP PKPdf 03 24 25.5 +0.4
NATX Nacogdoches 132.68 50 *e*PKPdf PKPdf 03 24 27.4 +2.0
NATX LR LR
comp=Z,769nm,20.0s,MS5.4
UALR University of 132.97 45 *e*PKPdf PKPdf 03 24 26.5 +0.5
AAM Ann Arbor 133.71 31 PFAKE 03 24 40.0 +13
AAM LR LR
comp=Z,749nm,21.0s,MS5.4
SADO Sadowa 134.00 26 PKP PKPdf 03 24 27.4 -0.5
comp=Z,18nm,0.9s,baz=297,slow=3.1,SNR=6.9
BLO Bloomington 134.24 37 *e*PKIKP PKPdf 03 24 28.5 +0.2
USIN University of 134.30 39 *e*PKPdf PKPdf 03 24 29.8 +1.3
WCI Wyandotte Cave 134.98 37 *e*PKPdf PKPdf 03 24 30.9 +1.2
WCI *e*PP PP 03 26 58.4 -6.0
WCI *e*SKPdf SKPdf 03 27 59.1 -3.3
OXF Oxford 135.16 44 *e*PKIKP PKPdf 03 24 29.5 -0.6
OXF MLR MLR
comp=Z,790nm,21.0s,MS5.4
WVT Waverly 135.30 41 *e*PKIKP PKPdf 03 24 30.8 +0.5
ACSO Alum Creek Sta 135.53 33 *e*PKPdf PKPdf 03 24 30.1 -0.7
ACSO *e*PP PP 03 27 06.3 -1.7
ACSO LR LR
comp=Z,653nm,20.0s,MS5.3
ERPA Erie 135.68 29 PFAKE 03 24 40.0 +9.0
ERPA LR LR
comp=Z,655nm,21.0s,MS5.3
PLAL Pickwick Lake 135.80 42 *e*PKPdf PKPdf 03 24 31.3 0.0
PLAL LR LR
comp=Z,923nm,20.0s,MS5.5
LONY Lake Ozonia 135.96 22 *e*PKPdf PKPdf 03 24 31.5 -0.1
FRNY Flat Rock 136.14 21 *e*PKPdf PKPdf 03 24 30.7 -1.2
NCB Newcomb 136.65 22 *e*PKPpre 03 24 24.0
NCB *e*PKPdf PKPdf 03 24 32.5 -0.3
NCB LR LR
comp=Z,1μm,22.0s,MS5.5
MIV Mineville/With 136.82 22 *e*PKKPdf PKKPdf 03 34 10.2 +0.6
SWET Sewanee 137.08 41 *e*PKPdf PKPdf 03 24 33.6 0.0
LBNH Lisbon 137.24 20 PFAKE 03 24 40.0 +6.1
LBNH LR LR
comp=Z,1μm,22.0s,MS5.7
ACCN Adirondack Com 137.36 22 *e*PKPdf PKPdf 03 24 33.6 -0.5
BINY Binghamton 137.42 25 *e*PKPdf PKPdf 03 24 33.8 -0.5
BINY LR LR
comp=Z,714nm,21.0s,MS5.4
MCWV Mont Chateau 137.61 31 *e*PKPpre 03 24 26.0
MCWV *e*PKPdf PKPdf 03 24 36.4 +1.8
MCWV LR LR
comp=Z,1μm,21.0s,MS5.6
LRAL Lakeview Retre 137.65 44 PFAKE 03 24 50.0 +15
LRAL LR LR
comp=Z,902nm,22.0s,MS5.5
SSPA Standing Stone 137.82 28 *e*PKPpre 03 24 24.1
SSPA *e*PKPdf PKPdf 03 24 35.5 +0.5
CPCT Cooper Cave 137.84 39 *e*PKPdf PKPdf 03 24 35.2 +0.2
MYNC Murphy 138.32 39 *e*PKIKP PKPdf 03 24 36.3 +0.4
MYNC MLR MLR
comp=Z,800nm,21.0s,MS5.4
FWV Forest Hill 138.61 34 *e*PKPpre 03 24 26.8
FWV *e*PKPdf PKPdf 03 24 36.5 0.0
HRV Harvard--Oak R 138.89 21 PFAKE 03 24 50.0 +13
HRV LR LR
comp=Z,918nm,22.0s,MS5.5
ELN Prospectdale 138.89 34 *e*PKPpre 03 24 27.4
ELN *e*PKPdf PKPdf 03 24 37.4 +0.4
MVL Millersville 139.04 27 *e*PKPdf PKPdf 03 24 38.2 +1.0
BLA Blacksburg 139.09 34 *e*PKIKP PKPdf 03 24 37.3 0.0
BLA MLR MLR
comp=Z,49nm,20.0s,MS4.2

SDMD	Soldier's Deli	139.28	29	ePKPdf	PKPdf	03 24 37.2	-0.5
SDMD				ePP	PP	03 27 34.6	+3.2
ASCN	Ascension	139.34	252	PFAKE		03 24 50.0	+12
ASCN				LR	LR		
	comp=Z,727nm,19.0s,MS5.4						
CBN	Corbin	139.96	30	ePKPdf	PKPdf	03 24 38.0	-0.9
CBN				LR	LR		
	comp=Z,899nm,21.0s,MS5.5						
CNNC	Cliffs of the	141.92	34	ePKPdf	PKPdf	03 24 37.2	-5.2
DWPF	Disney	144.39	46	ePKPdf	PKPdf	03 24 46.0	-0.8
DWPF				LR	LR		
	comp=Z,855nm,21.0s,MS5.5						
BOA	Boaco	146.90	74	eP	PKPdf	03 24 51.8	+0.7
BOA				i		03 24 58.3	
	baz=295,slow=3.0						
CEN1	Los Morros	147.55	150	eP	PKPdf	03 24 54.0	+1.8
MGV	Manicaragua	148.75	54	eP	PKPdf	03 24 57.4	+3.2
LVC	Limon Verde	148.84	151	ePKPdf	PKPdf	03 24 57.4	+3.1
LVC				ePKPab	PKPab	03 25 00.5	-1.6
LVC				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
CPUP	Villa Florida	148.95	173	PKP	PKPdf	03 24 55.1	+0.6
	comp=Z,65nm,1.1s,baz=146,slow=0.9,SNR=16						
CPUP				PKPbc	PKPbc	03 24 59.3	+0.8
	comp=Z,128nm,1.1s,baz=357,slow=0.7,SNR=17						
CPUP	Villa Florida	148.95	173	PKP	PKPdf	03 24 55.1	+0.7
CPUP				PKPbc	PKPbc	03 24 59.3	+0.8
CPUP				LR	LR		
	comp=Z,296nm,19.0s,MS5.1						
BBSR	BB Station	150.37	20	ePKPdf	PKPdf	03 24 57.0	+0.2
BBSR				ePKPab	PKPab	03 25 09.8	+1.4
BBSR				LR	LR		
	comp=Z,771nm,22.0s,MS5.5						
NNA	Nana	151.22	125	ePKPdf	PKPdf	03 24 59.0	+0.9
NNA				ePKPbc	PKPbc	03 25 05.2	+1.2
NNA				LR	LR		
	comp=Z,914nm,19.0s,MS5.6						
CAM4	Nova Friburgo	151.24	201	eP	PKPdf	03 24 57.0	-1.1
CAM4				i		03 25 00.3	
CAM4				i		03 25 05.6	
CAM4				i		03 25 08.7	
CAM4				i		03 25 11.4	
CAM4				i		03 25 14.2	
CAM4				i		03 25 31.0	
HLGC	Holguin	152.50	52	eP	PKPdf	03 25 00.1	+0.2
RCC	Rio Carpintero	153.26	53	eP	PKPdf	03 25 01.5	+0.5
LPAZ	La Paz	154.46	145	PKPdf	PKPdf	03 25 05.2	+2.4
LPAZ				PKPab	PKPab	03 25 29.2	+3.6
LPAZ	La Paz	154.46	145	PKP	PKPdf	03 25 05.4	+2.6
	comp=Z,33nm,1.3s,baz=40,slow=0.9,SNR=48						
LPAZ				PKPab	PKPab	03 25 29.0	+3.4
	comp=Z,108nm,1.1s,baz=169,slow=1.7,SNR=23						
LPAZ	La Paz	154.46	145	PKP	PKPdf	03 25 05.4	+2.6
LPAZ				PKPab	PKPab	03 25 29.0	+3.4
LPAZ				LR	LR		
	comp=Z,813nm,21.0s,MS5.5						
ROSC	El Rosal	158.89	89	PKP	PKPdf	03 25 10.6	+2.1
	comp=Z,33nm,1.1s,baz=147,slow=1.6,SNR=35						
BDFB	Brasilia	159.22	194	PKP	PKPdf	03 25 09.6	+0.7
	comp=Z,7.7nm,1.0s,baz=148,slow=1.8,SNR=6.6						
BDFB				PKPab	PKPab	03 25 46.4	+0.3
	comp=Z,27nm,1.2s,baz=96,slow=3.2,SNR=9.3						
BDFB				PP	PP	03 29 25.4	-1.7
	comp=Z,12nm,1.1s,baz=112,slow=2.0,SNR=5.3						
BDFB	Brasilia	159.22	194	PKP	PKPdf	03 25 09.6	+0.7
BDFB				PKPab	PKPab	03 25 46.4	+0.3
BDFB				PP	PP	03 29 25.4	-1.7
BDFB				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
RCBR	Riachuelo	159.88	239	ePKPdf	PKPdf	03 25 09.1	-0.6
RCBR				ePKPab	PKPab	03 25 50.2	+1.3
SJG	San Juan	161.54	43	PKPdf	PKPdf	03 25 11.5	+0.1
SJG				PKPab	PKPab	03 25 56.9	+0.8
SJG				PP	PP	03 29 37.6	-2.0
SJG	San Juan	161.54	43	ePKPdf	PKPdf	03 25 11.0	-0.4
SJG				ePKPab	PKPab	03 25 57.3	+1.1
SDV	Santo Domingo	162.13	75	PKPdf	PKPdf	03 25 12.7	+0.7
SDV				PKPab	PKPab	03 26 01.2	+2.4
SDV				PP	PP	03 29 42.7	0.0
SDV	Santo Domingo	162.13	75	PKPab	PKPab	03 26 00.9	+2.1
	baz=309,slow=4.9						
SDV	Santo Domingo	162.13	75	ePKPdf	PKPdf	03 25 12.7	+0.6
SDV				ePKPab	PKPab	03 26 01.0	+2.2
SDV				ePP	PP	03 29 42.9	+0.2
SAML	Samuel	163.20	143	PKPdf	PKPdf	03 25 14.5	+1.4
SAML				PKPab	PKPab	03 25 56.8	-6.7
SAML	Samuel	163.20	143	ePKPdf	PKPdf	03 25 14.2	+1.1
SAML				ePKPab	PKPab	03 26 04.5	+1.1
PCRV	Puerto La Cruz	167.35	64	PKP	PKPdf	03 25 14.9	-1.7
	comp=Z,31nm,1.1s,baz=355,slow=3.2,SNR=5.5						

*IDC **15** 03:10:12.5±1.1, 462S×12662E, h0km, mb4.5/6, mb1 4.6/7, mb1mx4.4/16, mbtmp4.5/7, Error ellipse: s-maj=63.8km s-min=18.8km az=76.0*
*ISCJB **15** 03:10:13.3±6.6, 46S±01×1267E±02, h18km±53km, mb4.4/5, Error ellipse: s-maj=27.8km s-min=12.9km az=123.6*
*NEIC **15** 03:10:14.9±5.8, 458S×12669E, h16km±38km, mb4.7/2, Error ellipse: s-maj=19.2km s-min=9.4km az=63.0*
ISC 15 03:10:14.6±8.3**, 459S**±010×**1267E**±01**, h11**km±56km**, n14,** σ0^s**82**/10**, mb4.4**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	14.86	315	Pn	Pn	03 13 44.5	-0.1
WRA	Warramunga Arr	16.99	155	Pn	Pn	03 14 11.0	-1.2
	baz=325,slow=14,SNR=2.5						
MBWA	Marble Bar	17.80	202	ePn	Pn	03 14 22.8	+0.6
	102nm,1.6s						
ASAR	Alice Springs	20.20	160	P	P	03 14 50.3	+0.9
	14nm,0.6s,baz=344,slow=13,SNR=4.3						
PMG	Port Moresby	20.88	104	P	P	03 14 57.3	+0.6
	31nm,0.9s						
STKA	Stephens Creek	30.54	154	P	P	03 16 27.2	-0.7
	7.2nm,0.7s,mb4.6,baz=319,slow=10,SNR=3.2						
MJAR	Matsushiro Arr	42.31	14	P	P	03 18 07.4	-1.0
	2.8nm,0.9s,mb3.9,baz=190,slow=8.8,SNR=3.9						
ASAJ	Asahikawa	50.56	15	P	P	03 19 14.1	+1.0
	5.7nm,0.8s,mb4.5,baz=216,slow=8.7,SNR=4.3						
SONM	Songino Array	55.16	343	P	P	03 19 47.9	+0.8
	4.4nm,0.9s,mb4.5,baz=158,slow=6.4,SNR=3.9						
MKAR	Makanchi Array	64.43	328	P	P	03 20 50.0	-0.9
	5.1nm,0.8s,mb4.6,baz=116,slow=5.6,SNR=4.1						
SFJD	Kangerlussuaq	117.68	359	i P	Pdif	03 25 10.3	-8.1
SFJD				i		03 27 30.7	
SFJD				e		03 31 55.7	
SFJD				i		03 34 54.8	
SFJD							
	comp=Z,470nm,21.0s						
SFJD	Kangerlussuaq	117.68	359	eP	Pdif	03 25 10.3	-8.1
SFJD				i		03 27 30.7	
SFJD				e		03 31 55.7	
SFJD				i		03 34 54.8	
CPUP	Villa Florida	149.02	173	PKPbc	PKPbc	03 30 02.9	+0.2
	comp=Z,2.9nm,0.7s,baz=157,slow=1.8,SNR=4.4						
CPUP	Villa Florida	149.02	173	PKPbc	PKPbc	03 30 02.9	+0.2

IDC 15 03:14:20.7±1.5**, 478S**×**12628E, h0**km**, mb3.9**/3**, mb1 4.1**/4**, mb1mx3.9**/15**, mbtmp4.0**/4**, ML3.6**/1**, Error ellipse: s-maj=127.3km s-min=26.0km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.99	153	Pn	Pn	03 18 20.2	+0.4
	0.2nm,0.3s,baz=331,slow=12,SNR=5.2						
ASAR	Alice Springs	20.17	159	P	P	03 18 56.8	+0.2
	4.2nm,0.7s,baz=342,slow=11,SNR=4.4						
SONM	Songino Array	55.23	344	P	P	03 23 55.4	0.0
	0.8nm,0.8s,baz=148,slow=8.4,SNR=4.3						
MKAR	Makanchi Array	64.37	328	P	P	03 24 58.7	+0.3
	1.5nm,0.7s,baz=116,slow=8.2,SNR=5.4						

*IDC **15** 03:18:48.5±1.6, 475S×12648E, h0km, mb4.1/3, mb1 4.2/5, mb1mx3.8/17, mbtmp4.1/5, ML3.6/2, Error ellipse: s-maj=100.4km s-min=24.7km az=66.0*
*ISCJB **15** 03:18:51.5±1.3, 49S±02×1263E±03, h33km, mb4.3/3, Error ellipse: s-maj=41.0km s-min=17.5km az=129.1*
*NEIC **15** 03:18:53.9±1.1, 487S×12633E, h35km, mb4.6/2, Error ellipse: s-maj=33.0km s-min=14.3km az=65.0*
ISC 15 03:18:54.1±1.3**, 49S**±02×**1263E**±03**, h35**km**, n10,** σ0^s**64**/10**, mb4.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.17	183	Pn	Pn	03 21 57.8	-0.8
	0.2nm,0.3s,baz=20,slow=13,SNR=3.8						
WRAB	Tennant Creek	16.90	153	ePn	Pn	03 22 48.0	+0.2
	7.1nm,0.6s						
WRA	Warramunga Arr	16.90	153	Pn	Pn	03 22 47.3	-0.5
	0.3nm,0.3s,baz=332,slow=12,SNR=7.4						
AS31	Alice Springs	20.07	159	eP	P	03 23 25.0	+0.6
ASAR	Alice Springs	20.07	159	P	P	03 23 25.3	+0.9
	9.3nm,0.6s,baz=343,slow=12,SNR=51						
NWAO	Narrogin (SRO)	29.18	196	eP	P	03 24 52.8	+0.6
	80nm,1.5s,mb5.2						
STKA	Stephens Creek	30.45	154	P	P	03 25 02.5	-0.9
	1.4nm,0.8s,mb3.8,baz=327,slow=12,SNR=5.8						
STKA	Stephens Creek	30.45	154	P	P	03 25 02.5	-0.9
MKAR	Makanchi Array	64.47	328	P	P	03 29 26.9	-0.1
	0.7nm,0.6s,mb3.9,baz=122,slow=7.6,SNR=4.8						
MKAR	Makanchi Array	64.47	328	P	P	03 29 26.9	-0.1

*IDC **15** 03:31:07.9±1.5, 481S×12602E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/16, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=144.4km s-min=24.7km az=73.0*
*ISCJB **15** 03:31:09.1±0.8, 481S±0.10×1268E±02, h33km, mb4.0/4, Error ellipse: s-maj=25.0km s-min=11.9km az=142.0*
*NEIC **15** 03:31:11.4±0.7, 482S×12677E, h35km, mb4.4/3, Error ellipse: s-maj=22.6km s-min=11.0km az=71.0*
ISC 15 03:31:11.6±0.8**, 482S**±009×**1268E**±02**, h35**km**, n11,** σ1^s**16**/11**, mb4.0**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.24	185	Pn	Pn	03 34 16.5	-0.6
	0.2nm,0.3s,baz=324,slow=20,SNR=6.8						
WRAB	Tennant Creek	16.74	154	Pn	Pn	03 35 03.1	-0.2
	5.2nm,0.7s						
WRA	Warramunga Arr	16.75	154	P	Pn	03 35 02.5	-0.9
	0.1nm,0.3s,baz=332,slow=12,SNR=4.1						
AS31	Alice Springs	19.96	160	P	Pn	03 35 41.4	-1.1
ASAR	Alice Springs	19.96	160	P	Pn	03 35 45.0	+2.5
	3.1nm,0.7s,baz=344,slow=12,SNR=23						
PMG	Port Moresby	20.75	104	eP	P	03 35 49.6	+0.4
	18nm,0.9s						
NWAO	Narrogin (SRO)	29.34	196	eP	P	03 37 12.5	+1.4
	12nm,0.8s,mb4.7						
SONM	Songino Array	55.41	343	P	P	03 40 43.4	+1.0
	0.2nm,0.6s,mb3.4,baz=167,slow=6.4,SNR=3.6						
MKAR	Makanchi Array	64.66	328	P	P	03 41 45.9	+0.1
	0.8nm,0.7s,mb3.8,baz=132,slow=7.6,SNR=4.5						
ZAL	Zalesovo	68.23	335	P	P	03 42 06.8	-1.9
	0.9nm,0.3s,mb4.3,baz=149,slow=7.0,SNR=5.7						
ZAL	Zalesovo	68.23	335	P	P	03 42 06.8	-1.9

*BJI **15** 03:35:40.2, 575S×12739E, h35km, mB5.4, mb4.6*
*IDC **15** 03:35:45.9±0.9, 460S×12675E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/17, mbtmp4.2/8, Error ellipse: s-maj=55.7km s-min=19.5km az=73.0*
*ISCJB **15** 03:35:47.4±0.5, 486S±007×1269E±0.1, h33km, mb4.3/10, Error ellipse: s-maj=19.6km s-min=8.2km az=145.0*
*NEIC **15** 03:35:49.3±0.6, 483S×12697E, h35km, mb4.6/2, Error ellipse: s-maj=24.0km s-min=9.6km az=64.0*
ISC 15 03:35:50.0±0.5**, 482S**±007×**1269E**±01**, h35**km**, n24,** σ1^s**29**/22**, mb4.3**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.25	185	eP	Pn	03 38 54.8	-0.8
	8.8nm,0.8s						
FITZ	Fitzroy Crossi	13.25	185	Pn	Pn	03 38 54.8	-0.8
	0.4nm,0.3s,baz=27,slow=11,SNR=12						
WRAB	Tennant Creek	16.69	155	ePn	Pn	03 39 39.5	-1.6
	15nm,0.8s						
WRA	Warramunga Arr	16.70	155	Pn	Pn	03 39 39.6	-1.6
	0.3nm,0.3s,baz=324,slow=14,SNR=12						
WB2	Warramunga Arr	16.70	155	eP	Pn	03 39 39.7	-1.6
KSM	Kuching	17.69	290	ePn	Pn	03 39 53.6	+0.1
AS31	Alice Springs	19.92	161	eP	Pn	03 40 23.1	+2.6
ASPA	Alice Springs	19.92	161	eP	Pn	03 40 23.1	+2.6
ASAR	Alice Springs	19.93	161	P	Pn	03 40 22.9	+2.3
	13nm,0.7s,baz=341,slow=11,SNR=62						
NWAO	Narrogin (SRO)	29.37	197	eP	P	03 41 49.5	-0.2
	53nm,1.4s,mb5.1						
STKA	Stephens Creek	30.25	155	P	P	03 42 00.1	+2.6
	1.6nm,0.5s,mb4.0,baz=325,slow=11,SNR=4.0						
STKA	Stephens Creek	30.25	155	eP	P	03 42 00.6	+3.1
XAN	Xi'an	42.21	338	P	P	03 43 40.0	+0.5
XAN				AP	pP	03 43 45.8	-4.0
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
MJAR	Matsushiro Arr	42.49	14	P	P	03 43 40.7	-1.1
	comp=Z,1.2nm,0.9s,mb3.5,baz=177,slow=9.2,SNR=4.3						
MDJ	Mudanjiang	49.28	3	P	P	03 44 36.3	+1.0
MDJ				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.7						
ASAJ	Asahikawa	50.73	15	P	P	03 44 46.9	+0.5
	comp=Z,2.1nm,0.6s,mb4.2,baz=242,slow=12,SNR=5.2						
SONM	Songino Array	55.44	343	P	P	03 45 20.6	-0.4
	comp=Z,2.1nm,0.9s,mb4.2,baz=155,slow=5.2,SNR=5.8						
MKAR	Makanchi Array	64.72	328	P	P	03 46 24.8	+0.1
	comp=Z,2.1nm,0.7s,mb4.3,baz=119,slow=7.1,SNR=12						
MKAR	Makanchi Array	64.72	328	P	P	03 46 24.8	+0.1
ZAL	Zalesovo	68.28	335	P	P	03 46 46.7	-0.7
	comp=Z,1.1nm,0.5s,mb4.2,baz=6.1,slow=7.3,SNR=3.4						
ZAL	Zalesovo	68.28	335	P	P	03 46 46.7	-0.7
BVAR	Borovoye Array	74.58	329	P	P	03 47 24.8	-0.5
	comp=Z,1.4nm,0.9s,mb3.9,baz=146,slow=8.2,SNR=6.1						
CPUP	Villa Florida	148.76	173	PKPbc	PKPbc	03 55 36.7	+3.0
	comp=Z,0.9nm,0.6s,baz=90,slow=2.1,SNR=4.6						
CPUP	Villa Florida	148.76	173	PKPbc	PKPbc	03 55 36.7	+3.0

*NEIC **15** 03:40:55.1, 3263S×70.15W, h105km, MG3.4(GUC), After GUC.*
GUC 15 03:40:55.1±0.7**, 3263S**×**7015W, h105**km±3km**, MD3.5, ML3.4, 10C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	0.38	262 ⇓	iP	Pn	03 41 11.1	+0.5
JACH				i S	Sn	03 41 23.5	+1.2
PEL	Peldehue	0.68	221 ⇓	iP	Pn	03 41 13.0	+0.2
PEL				i S	Sn	03 41 26.8	+0.7
PEL				AML	AML	03 41 28.2	
	comp=E,2µm,0.4s						
PEL	Peldehue	0.68	221 ⇓	iP	Pn	03 41 13.0	+0.2
PEL				i S	Sn	03 41 26.8	+0.7
FCH	Farellones	0.71	190 ⇓	iP	Pn	03 41 13.8	+0.8
FCH				i S	Sn	03 41 28.1	+1.6
FCH				AML	AML	03 41 28.7	
	comp=E,3µm,0.2s						
ROCH	El Roble	0.80	245 ⇓	iP	Pn	03 41 14.4	+0.5
ROCH				i S	Sn	03 41 29.1	+1.1
CLCH	Cerro Calan	0.83	203 ⇑	iP	Pn	03 41 14.6	+0.4
CLCH				i S	Sn	03 41 29.5	+1.0
CLCH				AML	AML	03 41 31.9	
	comp=N,1µm,0.3s						
CLCH				AML	AML	03 41 32.1	
	comp=E,1µm,0.3s						
DSCH	Colegio Aleman	0.84	205 ⇑	iP	Pn	03 41 14.0	-0.3
DSCH				i S	Sn	03 41 29.1	+0.3
LACH	Colegio Las Am	0.88	201	eP	Pn	03 41 13.8	-0.8
LACH				i S	Sn	03 41 29.6	+0.3
SAN	Santiago	0.93	207 ⇑	iP	Pn	03 41 15.4	+0.3
SAN				i S	Sn	03 41 30.9	+0.7
SAN				AML	AML	03 41 31.5	
	comp=N,1µm,0.3s						
SAN	Santiago	0.93	207 ⇑	iP	Pn	03 41 15.4	+0.3
SAN				i S	Sn	03 41 30.9	+0.7
PCH	Pirque	1.03	197 ⇑	iP	Pn	03 41 16.8	+0.5
PCH				i S	Sn	03 41 33.2	+1.1
MDZ	Mendoza	1.12	103	eP	Pn	03 41 18.0	+0.8
MDZ				e		03 41 26.0	
MDZ				eS	Sn	03 41 35.7	+1.8
TACH	Talagante	1.22	213	eP	Pn	03 41 18.4	+0.1
TACH				i S	Sn	03 41 36.5	+0.7
IHA	Instituto Hidr	1.32	252 ⇑	iP	Pn	03 41 19.1	-0.3
IHA				i S	Sn	03 41 38.2	+0.4
CHNG	Los Chungos	1.36	303 ⇑	iP	Pn	03 41 20.4	+0.4
CHNG				i S	Sn	03 41 39.6	+0.8
CHNG				AML	AML	03 41 44.6	
	comp=N,309nm,0.5s						
CHCH	Chadas Angostu	1.37	198 ⇑	iP	Pn	03 41 20.6	+0.5
CHCH				i S	Sn	03 41 39.7	+0.9
LCCH	Las Cruces	1.46	234 ⇑	iP	Pn	03 41 21.2	+0.1
LCCH				i S	Sn	03 41 41.1	+0.3
CACH	El Canelo	1.53	194	eP	Pn	03 41 22.9	+1.0
CICH	Cipreses	1.70	188 ⇑	iP	Pn	03 41 25.1	+1.0
CICH				i S	Sn	03 41 47.5	+1.3
TLL	Tololo Astrono	2.52	347	eP	Pn	03 41 35.9	+1.3
TLL				i S	Sn	03 42 06.3	+1.4
TLL				AML	AML	03 42 07.8	
	comp=N,220nm,0.7s						
TLL	Tololo Astrono	2.52	347	eP	Pn	03 41 35.9	+1.3
TLL				i S	Sn	03 42 06.3	+1.4

*IDC **15** 03:52:39.8±2.0, 487S×126.12E, h0km, mb3.6/2, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, ML3.1/2, Error ellipse: s-maj=136.3km s-min=27.4km az=68.0*
*ISCJB **15** 03:52:42.5±1.4, 5.1S±02×1258E±03, h33km, mb3.6/1, Error ellipse: s-maj=47.2km s-min=14.3km az=113.5*
*NEIC **15** 03:52:44.0±1.1, 501S×12585E, h30km, mb3.7/1, Error ellipse: s-maj=38.8km s-min=11.9km az=58.0*
ISC 15 03:52:44.9±1.4**, 50S**±02×**1259E**±03**, h35**km**, n6,** σ0^s**84**/6**, mb3.6**/1**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.00	181	Pn	Pn	03 55 47.4	+0.4
	0.1nm,0.3s,baz=3.5,slow=19,SNR=5.3						
WRAB	Tennant Creek	16.98	152	ePn	Pn	03 56 39.3	-0.2
	5.1nm,0.8s						
WRA	Warramunga Arr	16.98	152	Pn	Pn	03 56 38.7	-0.9
	0.1nm,0.3s,baz=332,slow=12,SNR=2.4						
ASAR	Alice Springs	20.10	158	P	P	03 57 16.1	+0.7
	2.0nm,0.7s,baz=343,slow=12,SNR=24						
KULM	Kulim	27.17	292	eP	P	03 58 24.3	-0.6
MKAR	Makanchi Array	64.35	328	P	P	04 03 17.6	+0.5
	0.2nm,0.3s,mb3.6,baz=120,slow=7.2,SNR=3.6						

*ISCJB **15** 03:59:46.2±3.0, 469S±008×1269E±0.1, h15km±22km, mb4.3/15, MS4.0/3, Error ellipse: s-maj=20.5km s-min=8.8km az=116.6*
*IDC **15** 03:59:46.7±0.7, 454S×12671E, h0km, mb4.3/11, mb1 4.5/11, mb1mx4.3/19, mbtmp4.3/11, MS4.0/2, Ms1 4.0/2, ms1mx3.5/17, Error ellipse: s-maj=38.4km s-min=14.8km az=62.0*
*BJI **15** 03:59:49.8, 470S×12670E, h20km, mB5.1, mb4.4, Ms4.5, Msz4.2*
*NEIC **15** 03:59:51.8±0.6, 465S×12675E, h35km, mb4.8/7, Error ellipse: s-maj=18.1km s-min=9.7km az=63.0*
ISC 15 03:59:52.2±3.0**, 470S**±008×**1267E**±01**, h34**km±22km**, h22**km±3.9km**:pP-P, n37,** σ1^s**42**/37**, mb4.3**/15**, MS4.0**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	9.76	145	eP	Pn	04 02 07.3	-2.9
	34nm,0.5s						
FITZ	Fitzroy Crossi	13.36	184	eP	Pn	04 02 57.0	-2.4
	10nm,0.6s						
FITZ				eS	Sn	04 05 18.6	-8.1
FITZ	Fitzroy Crossi	13.36	184	Pn	Pn	04 02 56.4	-3.0
	0.8nm,0.3s,baz=23,slow=10.0,SNR=18						
FITZ				Sn	Sn	04 05 18.5	-8.1
	0.3nm,0.3s,baz=92,slow=19,SNR=4.2						
KKM	Kota Kinabalu	14.96	315	Pn	Pn	04 03 20.4	-0.7
WRAB	Tennant Creek	16.87	154	ePn	Pn	04 03 41.4	-4.2
	168nm,0.9s						
WRAB				eSn	Sn	04 06 39.0	-13
WRA	Warramunga Arr	16.87	155	Pn	Pn	04 03 41.2	-4.4
	1.2nm,0.3s,baz=328,slow=14,SNR=41						
WB2	Warramunga Arr	16.88	155	eP	Pn	04 03 41.2	-4.5
WB2				e		04 03 47.8	
KSM	Kuching	17.50	290	Pn	Pn	04 03 55.1	+1.6
MBWA	Marble Bar	17.71	202	ePn	Pn	04 03 56.8	+0.7
	11nm,0.8s						
AS31	Alice Springs	20.09	160	eP	P	04 04 23.9	+1.1
ASPA	Alice Springs	20.09	160	eP	P	04 04 23.9	+1.1
ASAR	Alice Springs	20.09	160	P	P	04 04 23.9	+1.1
	69nm,0.7s,baz=341,slow=11,SNR=356						
PMG	Port Moresby	20.81	104	P	P	04 04 31.8	+1.1
	40nm,0.7s,baz=260,slow=5.6,SNR=8.7						
CTA	Charters Tower	24.41	130	eP	P	04 05 08.5	+1.1
	39nm,1.1s,mb4.8						
CTA	Charters Tower	24.41	130	P	P	04 05 08.7	+1.3
	53nm,1.0s,mb4.9,baz=313,slow=12,SNR=28						
CTAO	Charters Tower	24.41	130	eP	P	04 05 08.4	+1.0
	102nm,1.3s,mb5.1						
PSI	Prapat	28.75	284	LR	LR	04 19 16.0	
	comp=Z,475nm,18.4s,MS4.1,baz=256,slow=41						
STKA	Stephens Creek	30.43	154	eP	P	04 06 01.9	+0.5
	5.3nm,0.6s,mb4.5						
STKA	Stephens Creek	30.43	154	P	P	04 06 02.0	+0.6
	6.5nm,0.6s,mb4.5,baz=323,slow=10,SNR=18						
JOW	Kunigami	31.38	3	LR	LR	04 19 45.5	
	comp=Z,151nm,18.5s,MS3.7,baz=138,slow=38						
XAN	Xi'an	42.04	338	P	P	04 07 40.9	+0.5
XAN				AP	pP	04 07 49.8	-0.6
XAN				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.1						
MJAR	Matsushiro Arr	42.41	14	P	P	04 07 40.1	-3.3
	comp=Z,1.4nm,1.0s,mb3.5,baz=171,slow=16,SNR=3.9						
LZH	Lanzhou	45.88	334	eP	P	04 08 14.1	+2.8
LZH				AP	pP	04 08 18.9	-2.4
LZH				XP	sP	04 08 21.3	-4.0
LZH				AMB	AMB		
	comp=Z,21nm,1.4s,mb4.9						
MDJ	Mudanjiang	49.16	3	P	P	04 08 37.5	+0.8
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,106nm,5.6s						
GTA	Gaotai	50.42	333	eP	P	04 08 48.3	+2.0
GTA				AP	pP	04 08 53.8	-2.7
GTA				XP	sP	04 08 57.0	-3.4
GTA				PCP	PcP	04 10 09.4	+5.1
GTA				PP	PP	04 10 43.0	+0.9
GTA				PPP		04 11 39.6	
GTA				S	S	04 15 56.3	-1.2
GTA				SS	SS	04 19 24.6	-6.9
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.4						
GTA				AMB	AMB		
	comp=Z,180nm,7.2s						
GTA				LR	LR		
	comp=N,124nm,13.7s,MS4.4						
GTA				LR	LR		
	comp=E,204nm,14.1s,MS4.4						
GTA				LR	LR		
	comp=Z,186nm,14.5s,MS4.2						
SONM	Songino Array	55.28	343	P	P	04 09 20.3	-1.9
	comp=Z,0.7nm,0.6s,mb3.9,baz=158,slow=5.7,SNR=3.5						
MKAR	Makanchi Array	64.54	328	P	P	04 10 25.4	-0.4
	comp=Z,2.1nm,0.9s,mb4.2,baz=128,slow=7.6,SNR=9.7						
ZAL	Zalesovo	68.11	335	P	P	04 10 47.7	-0.9
	comp=Z,1.2nm,0.4s,mb4.3,baz=240,slow=12,SNR=3.7						
ZAL	Zalesovo	68.11	335	P	P	04 10 47.7	-1.0
KURK	Kurchatov	68.88	330	eP	P	04 10 52.4	-1.1
	comp=Z,7.6nm,1.0s,mb4.6						
BVAR	Borovoye Array	74.40	329	P	P	04 11 25.7	-0.9
	comp=Z,1.5nm,0.8s,mb4.0,baz=132,slow=6.6,SNR=6.4						
VNDA	Vanda	75.12	173	P	P	04 11 29.4	-1.4
	comp=Z,0.6nm,0.8s,mb3.6,baz=315,slow=5.0,SNR=4.9						
AKTK	Aktyubinsk	80.27	323	P	P	04 11 60.0	+0.4
AKTO	Aktyubinsk	80.27	323	P	P	04 11 60.0	+0.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=117,slow=7.5,SNR=3.7						
QSPA	South Pole Qui	85.26	180	eP	P	04 12 30.4	+5.0
	comp=Z,9.0nm,1.2s,mb4.8						
CPUP	Villa Florida	148.91	173	PKPbc	PKPbc	04 19 37.7	+1.3
	comp=Z,2.6nm,0.8s,baz=181,slow=3.9,SNR=2.8						
CPUP	Villa Florida	148.91	173	PKPbc	PKPbc	04 19 37.7	+1.3

*TRN **15** 04:16:23.0, 1889N×6297W, h44km*
*ISCJB **15** 04:16:24.3±1.8, 192N±04×63.1W±02, h75km±29km, Error ellipse: s-maj=68.3km s-min=16.1km az=145.2*
*RSPR **15** 04:16:25.9, 1909N×6309W, h68km±3km, MD3.7/4, MD3.7/4*
ISC 15 04:16:25.2±1.8**, 190N**±04×**630W**±02**, h59**km±43km**, n10,**

σ0s26/17, 9C, Leeward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	Anegada	1.26	259	eS	Sn	04 17 02.6	-0.1
TBVI	Tortola	1.61	250⇑	eP	Pn	04 16 51.2	0.0
TBVI				eS	Sn	04 17 11.3	+0.3
STVI	Saint Thomas	1.94	252⇑	eP	Pn	04 16 55.8	0.0
STVI				eS	Sn	04 17 19.1	0.0
CULB	Culebra	2.29	254⇑	eP	Pn	04 16 60.0	-0.5
MTP	Monte Pirata	2.56	251⇑	eP	Pn	04 17 04.4	+0.1
MTP				eS	Sn	04 17 34.0	-0.2
CBYP	Canovanas	2.78	256⇑	eP	Pn	04 17 07.2	0.0
CBYP				eS	Sn	04 17 39.5	0.0
HUMP	Col San Antoni	2.81	253⇑	eP	Pn	04 17 07.3	-0.3
HUMP				eS	Sn	04 17 40.5	+0.2
AOPR	Arecibo Observ	3.59	261⇑	eP	Pn	04 17 18.6	+0.3
LSP	Las Mesas	3.94	259⇑	eP	Pn	04 17 23.7	+0.6
LSP				eS	Sn	04 18 07.9	0.0
CRPR	Cabo Rojo, PR	4.00	257⇑	eP	Pn	04 17 23.7	-0.2
CRPR				eS	Sn	04 18 09.2	-0.2

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*ISCJB **15** 04:17:45.8±0.7, 25.60S±0.03×68.89W±0.10, h79km±13km, mb3.9/5, Error ellipse: s-maj=14.5km s-min=4.4km az=11.6*

*IDC **15** 04:17:47.6±1.4, 25.56S×68.60W, h69km±15km, mb3.7/5, mb1 3.8/9, mb1mx3.6/20, mbtmp4.1/9, Error ellipse: s-maj=35.2km s-min=10.4km az=89.0*

*NEIC **15** 04:17:47.1, 25.59S×69.10W, h80km, mb3.7/1, After GUC.*

*GUC **15** 04:17:47.1±0.7, 25.59S×69.10W, h80km, ML3.9*

ISC 15 04:17:47.5±0.6, **25.58S**±0.03×**68.98W**±0.09, **h79**km±11km, **n21**, σ1s04/30, **mb3.9**/5, **3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	1.61	306	eP	Pn	04 18 14.5	+0.4
CPN1				iS	Sn	04 18 34.2	-0.1
CPN1				AML	AML	04 18 42.3	
	comp=N,2μm,0.4s						
CDCH	Caldera	2.23	228⇑	iP	Pn	04 18 21.6	-0.9
CDCH				iS	Sn	04 18 48.1	-1.0
CDCH				AML	AML	04 18 54.4	
	comp=E,823nm,0.5s						
CDCH	Caldera	2.23	228⇑	iP	Pn	04 18 21.6	-0.9
CDCH				iS	Sn	04 18 48.1	-1.0
ANCH	Antofagasta	2.30	325	iP	Pn	04 18 24.8	+1.4
ANCH				iS	Sn	04 18 51.8	+1.1
CEN1	Los Morros	2.45	333⇓	iP	Pn	04 18 24.0	-1.3
CEN1				iS	Sn	04 18 51.7	-2.7
CEN1				AML	AML	04 18 57.3	
	comp=E,1μm,0.7s						
LVC	Limon Verde	2.95	1	P	Pn	04 18 33.9	+1.7
	comp=E,52nm,0.3s,baz=178,slow=8.6,SNR=450						
LVC				S	Sn	04 19 06.9	+0.3
	comp=E,66nm,0.3s,baz=1.7,slow=22,SNR=10						
VACH	Vallenar	3.38	208	eP	Pn	04 18 37.7	-0.3
VACH				iS	Sn	04 19 17.0	0.0
LCO	Las Campanas	3.75	204⇑	iP	Pn	04 18 43.1	+0.2
LCO				iS	Sn	04 19 26.4	+0.5
TLL	Tololo Astrono	4.85	199	eP	Pn	04 18 57.9	-0.1
TLL				eS	Sn	04 19 53.0	+0.2
CFAA	Coronel Fontan	6.04	174	P	Pn	04 19 16.0	+1.8
	comp=E,0.6nm,0.3s,baz=352,slow=14,SNR=71						
CFAA				S	Sn	04 20 21.4	-0.5
	comp=E,0.6nm,0.3s,baz=256,slow=23,SNR=6.5						
CFAA	Coronel Fontan	6.04	174	P	Pn	04 19 16.0	+1.8
CFAA				S	Sn	04 20 21.4	-0.5
LPAZ	La Paz	9.28	5	P	Pn	04 19 58.8	+0.4
	comp=E,0.4nm,0.3s,baz=173,slow=5.2,SNR=14						
SIV	San Ignacio	12.06	39	P	Pn	04 20 33.5	-2.9
	comp=E,2.3nm,0.3s,baz=247,slow=10,SNR=46						
SAML	Samuel	17.43	19	ePn	Pn	04 21 45.2	-0.2
	comp=E,5.2nm,1.1s						
BDFB	Brasilia	21.94	67	P	P	04 22 31.4	-3.1
	comp=E,1.1nm,0.4s,mb3.5,baz=222,slow=15,SNR=2.8						
SNAA	Sanae	58.47	160	P	P	04 27 34.9	-0.4
	comp=E,0.2nm,0.5s,mb3.4,baz=302,slow=9.4,SNR=14						
DBIC	Dimbokro	70.00	72	P	P	04 28 51.3	+0.7
	comp=E,7.5nm,1.1s,mb4.4,baz=251,slow=12,SNR=3.8						
TORD	Torodi Ar. Bea	78.80	70	P	P	04 29 41.9	+0.1
	comp=E,1.6nm,0.6s,mb4.0,baz=261,slow=5.3,SNR=31						
MAW	Mawson	80.46	163	P	P	04 29 51.0	+0.4
	comp=E,2.0nm,0.9s,mb4.0,baz=219,slow=6.9,SNR=6.3						
ZAL	Zalesovo	145.62	28	PKPbc	PKPbc	04 37 17.1	+0.1
	comp=E,2.5nm,0.4s,baz=248,slow=1.3,SNR=5.2						
MKAR	Makanchi Array	148.88	40	PKPbc	PKPbc	04 37 25.6	-0.5
	comp=E,3.3nm,0.6s,baz=314,slow=2.5,SNR=29						

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*CSEM **15** 04:28:44.3±0.1, 39.46N×39.78E, h2km, MD3.6, Error ellipse: s-maj=1.7km s-min=1.3km az=179.0*

*ISK **15** 04:28:44.1, 39.47N×39.76E, h5km, MD3.6*

*ISCJB **15** 04:28:45.6±0.4, 39.45N±0.04×39.78E±0.04, h5km, Error ellipse: s-maj=5.2km s-min=4.2km az=133.7*

ISC 15 04:28:46.4±0.8, **39.44N**±0.04×**39.81E**±0.04, **h6**km±7km, **n26**, σ0s89/32, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.31	1	iPG	Pg	04 28 52.9	+0.4
PTK	Pertek	0.63	211	PG	Pg	04 28 57.6	-1.0
PTK				SG	Sg	04 29 07.5	+0.6
ELZG	Elazig	1.14	215	iP	Pg	04 29 05.7	-2.5
ELZG				iS	Sg	04 29 25.1	+2.1
BNGL	BINGOL	1.15	114	iP	Pg	04 29 07.8	-0.7
BNGL				iS	Sg	04 29 31.2	+7.8
EZM	Erzurum	1.29	68	PN	Pn	04 29 10.2	-0.8
ERZM	Erzurum	1.29	68	iP	Pn	04 29 10.1	-0.9
ERZM				iS	Sg	04 29 31.2	+3.3
MYA	Malataya	1.55	225	PN	Pn	04 29 13.0	-1.6
DIY	Diyarbakir	1.57	168	PN	Pn	04 29 14.7	-0.2
BTMT	Batman	1.81	133	PN	Pn	04 29 17.5	-0.6
GRSN	GIRESUNGRSN	1.90	322	iP	Pn	04 29 15.2	-4.2
BEST	Besiri	1.92	143	iP	Pn	04 29 20.6	+0.9
BEST				iS	Sn	04 29 53.3	+9.2
URFA	Urfa	2.14	202	PN	Pn	04 29 22.8	+0.1
SVSK	Karacayir	2.22	283	PN	Pn	04 29 23.5	-0.3
SVST	Sivas	2.23	280	iP	Pn	04 29 24.2	+0.2
SVST				iS	Sn	04 29 52.2	+0.3
BCA	Borcka	2.44	34	ePN	Pn	04 29 26.4	-0.4
TOKT	Tokat	2.66	290	ePN	Pn	04 29 29.3	-0.6
GAZ	Gaziantep	3.05	223	ePN	Pn	04 29 35.3	+0.1
BNN	Bunyan	3.14	261	ePN	Pn	04 29 36.2	-0.2
CLDR	Caldiran	3.20	94	ePN	Pn	04 29 38.2	+0.9
YOZ	Yozgat	3.48	275	ePN	Pn	04 29 41.1	0.0
KOZT	Kozan	3.69	239	ePN	Pn	04 29 44.2	+0.2
GNI	Garni	3.87	78	ePN	Pn	04 29 47.6	+1.2
CORM	Corum	4.06	282	ePN	Pn	04 29 49.4	+0.3
DIKM	Dikmen	4.11	304	ePN	Pn	04 29 49.9	+0.1
KARA	Karaisali	4.32	241	ePN	Pn	04 29 53.3	+0.6
TOS	Tosya	4.71	292	ePN	Pn	04 29 58.5	+0.5

IDC 15 04:38:08.1±2.0, **4.82S**×**126.28E**, **h0**km, **mb3.7**/2, **mb1 3.9**/4, **mb1mx3.7**/17, **mbtmp3.8**/4, **ML3.6**/2, **Error ellipse: s-maj=135.3km s-min=26.3km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.22	183	Pn	Pn	04 41 16.8	-0.2
	0.2nm,0.3s,baz=19,slow=14,SNR=8.2						
WRA	Warramunga Arr	16.96	153	Pn	Pn	04 42 04.8	-1.8
	0.2nm,0.3s,baz=328,slow=14,SNR=8.2						
ASAR	Alice Springs	20.13	159	P	P	04 42 45.0	+1.4
	2.7nm,0.6s,baz=344,slow=12,SNR=31						
MKAR	Makanchi Array	64.41	328	P	P	04 48 46.1	+0.1
	0.6nm,0.6s,baz=135,slow=8.5,SNR=5.4						

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*IDC **15** 05:19:12.5±1.7, 4.83S×126.27E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/16, mbtmp4.0/4, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/28, Error ellipse: s-maj=139.7km s-min=25.5km az=73.0*

NEIC 15 05:19:17.3±0.8, **4.97S**×**126.08E**, **h35**km, **mb4.0**/1, **Error ellipse: s-maj=42.8km s-min=11.0km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.06	182	Pn	Pn	05 22 20.2	0.0
	0.2nm,0.3s,baz=18,slow=23,SNR=8.0						
FITZ				LR	LR	05 27 43.7	
	comp=Z,84nm,19.1s,baz=137,slow=39						
WRAB	Tennant Creek	16.91	152	eP	Pn	05 23 11.5	+0.4
	12nm,0.9s						
WRA	Warramunga Arr	16.91	152	Pn	Pn	05 23 06.8	-4.4
	0.1nm,0.3s,baz=333,slow=12,SNR=4.9						
WB2	Warramunga Arr	16.92	152	eP	Pn	05 23 11.6	+0.3
AS31	Alice Springs	20.06	159	eP	P	05 23 46.9	-0.6
ASAR	Alice Springs	20.06	159	P	P	05 23 48.5	+1.1
	10nm,0.6s,baz=343,slow=12,SNR=100						
SONM	Songino Array	55.36	344	P	P	05 28 47.3	-0.5
	0.3nm,0.4s,baz=161,slow=6.8,SNR=4.2						
MKAR	Makanchi Array	64.43	328	P	P	05 29 50.9	+0.9
	0.7nm,0.6s,baz=124,slow=8.1,SNR=8.2						

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*NEIC **15** 05:43:21.0±0.1, 9.27S×150.48E, h10km, mb5.9/48, MS5.3/132, MW5.7, Error ellipse: s-maj=6.2km s-min=5.5km az=120.0, Moment Tensor Solution. s16 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.05; $M_{\theta\theta}$4.06; $M_{\phi\phi}$0.00; $M_{r\theta}$0.47; $M_{\theta\phi}$0.84; $M_{\phi r}$-0.53; Best double couple: $M_0$4.20000×10^{17} NP1:ϕ_s267.00000°, δ48.00000°, λ-78.00000°. NP2:ϕ_s70.00000°, δ43.00000°, λ-103.00000°. Principal axes: T 4.2400, Plg3.0000°, Azm349.0000°; N -0.0800, Plg9.0000°, Azm79.0000°; P -4.1600, Plg81.0000°, Azm243.0000°;*

NEIC Felt at Alotau.

*BJI **15** 05:43:20.2, 9.68S×151.30E, h60km, mB5.9, mb5.4, Ms5.4, Msz5.2*

*HRVD **15** 05:43:21.0±0.1, 9.34S×150.74E, h12km, MW5.7/104, Centroid moment Tensor Solution. LP body waves: s87,c164; Mantle waves: s104,c305; Half duration: 1s7 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.38±.04; $M_{\theta\theta}$3.76±.03; $M_{\phi\phi}$-0.37±.04; $M_{r\theta}$-0.14±.10; $M_{\theta\phi}$1.14±.03; $M_{\phi r}$-1.61±.13; Best double couple: $M_0$4.09400×10^{17} NP1:ϕ_s278.00000°, δ46.00000°, λ-56.00000°. NP2: ϕ_s53.00000°, δ54.00000°, λ-120.00000°. Principal axes: T 4.0940, Plg4.0000°, Azm164.0000°; N 0.0020, Plg24.0000°, Azm72.0000°; P -4.0940, Plg66.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **15** 05:43:21.0±2.9, 9.27S×150.77E, h13km±17km, mb5.2/15, mb1 5.2/18, mb1mx5.2/19, mbtmp5.3/18, ML4.3/3, MS5.2/21, Ms1 5.2/21, ms1mx5.0/25 Error ellipse: s-maj=11.4km s-min=10.0km az=116.0*

*MOS **15** 05:43:23.5±1.1, 9.26S×150.43E, h33km, mb6.0/34, MS5.3/36, Error ellipse: s-maj=7.9km s-min=5.9km az=88.7*

*ISCJB **15** 05:43:26.8±0.1, 9.35S±0.03×150.30E±0.02, h62km, mb5.6/103, Error ellipse: s-maj=4.1km s-min=3.4km az=169.8*

*SZGRF **15** 05:43:46.2, 7.10S×149.32E, h33km, mb5.4, New Britain, Papua New Guinea, region*

ISC 15 05:43:28.7±0.1, **9.37S**±0.03×**150.36E**±0.02, **h64**km±2.1km**:pP-P, n771**, σ1s02/444, **mb5.6**/103, **117C-111D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.15	269	Pn	Pn	05 44 15.4	-0.6
PMG	Port Moresby	3.15	269	Pn	Pn	05 44 15.4	-0.6
	31nm,0.3s,baz=89,slow=6.6,SNR=71						
PMG				Sn	Sn	05 45 07.6	+15
	184nm,0.3s,baz=320,slow=21,SNR=9.2						
PMG				LR	LR	05 45 52.5	
	comp=Z,71μm,18.1s,baz=96,slow=42						
PMG	Port Moresby	3.15	269	ePn	Pn	05 44 15.3	-0.7
PMG				eSn	Sn	05 45 03.9	+12
HNR	Honiara	9.46	91	Pn	Pn	05 45 39.1	-3.1
	11nm,0.3s,baz=260,slow=5.9,SNR=3.3						
HNR				LR	LR	05 48 34.1	
	comp=Z,14μm,20.7s,baz=183,slow=35						
HNR	Honiara	9.46	91	eP	Pn	05 45 37.7	-4.6
HNR				pmax	pmax		
	comp=Z,1μm,1.1s						
HNR	Honiara	9.46	91	ePn	Pn	05 45 37.7	-4.6
	comp=Z,1μm,1.1s						
HNR				LR	LR	05 48 34.1	
CTA	Charters Tower	11.37	200	eP	Pn	05 46 08.1	-0.2
	comp=Z,56nm,1.0s						
CTA				eS	Sn	05 48 22.7	+9.0
CTA	Charters Tower	11.37	200	Pn	Pn	05 46 07.9	-0.4
	comp=Z,2.4nm,0.3s,baz=31,slow=15,SNR=16						
CTA				Sn	Sn	05 48 11.1	-2.6
	comp=Z,0.9nm,0.3s,baz=117,slow=24,SNR=2.9						
CTA				LR	LR	05 50 03.3	
	comp=Z,7μm,19.8s,baz=21,slow=35						
CTA	Charters Tower	11.37	200	eP	Pn	05 46 08.1	-0.2
CTA				eS	Sn	05 48 22.7	+9.0
CTA				pmax	pmax		
	comp=Z,56nm,1.0s						
CTAO	Charters Tower	11.37	200	eP	Pn	05 46 08.7	+0.4
KAKA	Kakadu	17.89	258	eP	Pn	05 47 33.1	0.0
	comp=Z,578nm,1.1s						
WRAB	Tennant Creek	18.69	234	ePn	Pn	05 47 42.8	0.0
WRAB				eSn	Sn	05 51 11.1	-0.1
WB2	Warramunga Arr	18.70	234⇓	iP	Pn	05 47 42.8	0.0
WB2				eS	S	05 51 24.2	+13
WRA	Warramunga Arr	18.71	234	P	Pn	05 47 42.0	-1.0
	comp=Z,1.9nm,0.3s,baz=59,slow=11,SNR=150						
WRA				S	S	05 51 21.6	+10
	comp=Z,0.3nm,0.3s,baz=49,slow=24,SNR=2.9						
WRA				LR	LR	05 54 01.2	
	comp=Z,3μm,19.5s,baz=60,slow=34						
WRA				P3KPbc		06 22 18.8	
	baz=212,slow=3.0,SNR=4.9						
WRA	Warramunga Arr	18.71	234	P	Pn	05 47 42.0	-1.0
WRA				S	S	05 51 21.6	+10
WRA				LR	LR	05 54 01.2	
DZM	Mont Dzumac	19.96	131	P	Pn	05 47 53.3	-4.5
	comp=Z,1.7nm,0.3s,baz=339,slow=9.5,SNR=29						
DZM				LR	LR	05 54 05.4	
	comp=Z,17μm,21.3s,baz=315,slow=33						
ARMA	Armidale	20.98	177	eP	P	05 48 05.4	-1.2
ARMA				eS	S	05 52 05.4	+8.7
AS31	Alice Springs	21.20	226	eP	P	05 48 10.0	+1.0
ASAR	Alice Springs	21.20	226	P	P	05 48 09.9	+0.9
	comp=Z,147nm,1.1s,mb5.2,baz=62,slow=9.4,SNR=272						
ASAR				S	S	05 52 09.9	+8.8
	comp=Z,7.0nm,0.9s,baz=46,slow=24,SNR=2.9						
ASAR				LR	LR	05 56 26.0	
	comp=Z,6μm,18.1s,baz=56,slow=36						
ASAR	Alice Springs	21.20	226	P	P	05 48 09.9	+0.9
ASAR				S	S	05 52 09.9	+8.8
ASPA	Alice Springs	21.20	226	eP	P	05 48 10.0	+1.0
GUMO	Guam	23.45	346	P	P	05 48 30.1	-2.2
	comp=Z,118nm,0.9s,mb5.3,baz=163,slow=5.9,SNR=6.7						
GUMO				LR	LR	05 55 51.8	
	comp=Z,6μm,21.0s,baz=143,slow=32						
STKA	Stephens Creek	23.83	199⇓	iP	P	05 48 34.7	-1.1
	comp=Z,107nm,1.0s,mb5.2						
STKA	Stephens Creek	23.83	199	P	P	05 48 34.8	-1.0
	comp=Z,36nm,0.8s,mb4.9,baz=18,slow=11,SNR=39						
STKA				S	S	05 52 51.7	+4.6
	comp=Z,6.8nm,1.0s,baz=346,slow=19,SNR=1.4						
STKA				LR	LR	05 57 17.0	
	comp=Z,8μm,21.5s,baz=13,slow=35						
RIV	Riverview	24.36	178	eP	P	05 48 40.5	-0.2
FITZ	Fitzroy Crossi	25.50	247	eP	P	05 48 51.9	+0.8
	comp=Z,323nm,0.9s,mb5.9						
FITZ				eS	S	05 53 27.6	+14
FITZ	Fitzroy Crossi	25.50	247	P	P	05 48 52.2	+1.1
	comp=Z,216nm,1.0s,mb5.6,baz=83,slow=9.2,SNR=177						
FITZ				S	S	05 53 26.1	+12
	comp=Z,8.5nm,1.0s,baz=223,slow=18,SNR=1.8						
FITZ				LR	LR	05 58 03.6	
	comp=Z,4μm,18.2s,baz=75,slow=34						
CNB	Canberra Magne	25.84	182⇓	iP	P	05 48 53.5	-0.6
	comp=Z,172nm,1.3s,mb5.4						
TOO	Toolangi	28.42	188	eP	P	05 49 16.7	-0.6
	comp=Z,32nm,1.3s,mb4.8						
TOO				eS	S	05 54 16.1	+16
TOO	Toolangi	28.42	188	eP	P	05 49 16.7	-0.6
TOO				pmax	pmax		
	comp=Z,33nm,1.3s,mb4.8						
FUNA	Funafuti	28.50	91	eP	P	05 49 17.2	-0.8
FUNA				ePcP	PcP	05 52 31.2	+2.9
DAV	Davao City (W)	29.60	303	PFAKE		05 49 40.0	+12
DAV				LR	LR		
	comp=Z,3μm,20.0s						
FORT	Forrest	29.75	221	eP	P	05 49 29.3	+0.2
	comp=Z,180nm,1.5s,mb5.6						
MBWA	Marble Bar	31.72	245	P	P	05 49 47.9	+1.6
	SNR=15						
MBWA	Marble Bar	31.72	245	eP	P	05 49 47.4	+1.0
	comp=Z,219nm,1.3s,mb5.8						
MBWA				LR	LR		
	comp=Z,6μm,19.0s						
SNPH	Sibulan	32.78	304	eP	P	05 49 56.0	+0.3
TAU	Tasmania Unive	33.52	184	eP	P	05 50 02.4	+0.3
	comp=Z,139nm,1.3s,mb5.7						
TAU				LR	LR		
	comp=Z,12μm,20.0s						
RCP	Roxas	34.44	307⇓	eP	P	05 50 10.4	+0.4
TSM	Tawau	35.10	291	P	P	05 50 17.1	+1.2
RAO	Raoul Island	35.70	128	P	P	05 50 18.5	-2.4
	comp=Z,1μm,1.1s,baz=10,slow=0.6,SNR=16						
RAO				LR	LR	06 02 17.8	
	comp=Z,3μm,19.7s,baz=301,slow=32						
RAO	Raoul Island	35.70	128	eP	P	05 50 20.8	-0.1
RAO				pmax	pmax		
	comp=Z,3μm,1.3s						
RAO	Raoul Island	35.70	128	eP	P	05 50 20.8	-0.1
	comp=Z,3μm,1.3s						
RAO				LR	LR	06 02 17.8	
KKM	Kota Kinabalu	37.31	293	P	P	05 50 35.7	+1.0
KKM	Kota Kinabalu	37.31	293	eP	P	05 50 34.9	+0.3
AFI	Afiamalu	37.33	101	LR	LR	06 02 28.8	
	comp=Z,2μm,21.4s,baz=274,slow=31						
AFI	Afiamalu	37.33	101	PFAKE		05 50 40.0	+5.1
AFI				LR	LR		
	comp=Z,1μm,20.0s						
TGY	Tagaytay City	37.36	308	P	P	05 50 36.7	+1.6
	comp=Z,589nm,0.9s,baz=169,slow=3.6,SNR=8.3						
KLBR	Kellerberrin	37.46	229⇓	iP	P	05 50 36.3	+0.4
	comp=Z,66nm,0.7s,mb5.6						
URZ	Urewera	37.50	144	P	P	05 50 33.6	-2.6
	comp=Z,30nm,0.8s,mb5.2,baz=356,slow=4.9,SNR=9.0						
URZ				LR	LR	06 03 45.3	
	comp=Z,7μm,21.0s,baz=125,slow=33						
SNZO	South Karori	38.41	150	PFAKE		05 50 50.0	+6.1
SNZO				LR	LR		
	comp=Z,5μm,21.0s						
NWAO	Narrogin (SRO)	38.50	228	LR	LR	06 07 07.6	
	comp=Z,7μm,18.2s,baz=57,slow=37						
NWAO	Narrogin (SRO)	38.50	228	P	P	05 50 43.7	-1.0
NWAO				pmax	pmax		
	comp=Z,170nm,1.5s						
NWAO	Narrogin (SRO)	38.50	228	eP	P	05 50 42.2	-2.5
	comp=Z,167nm,1.5s,mb5.5						
NWAO				LR	LR		
	comp=Z,6μm,19.0s						
RPZ	Rata Peaks	38.67	156	P	P	05 50 45.0	-1.2
	comp=Z,10nm,0.7s,mb4.7,baz=46,slow=9.4,SNR=5.5						
RPZ				LR	LR	06 04 25.1	
	comp=Z,9μm,20.8s,baz=326,slow=33						
MUN	Mundaring	38.80	230	eP	P	05 50 48.1	+0.9
CVP	Callao Caves	38.96	314	eP	P	05 50 48.0	-0.5
	comp=Z,15μm,1.0s						
BCPH	Baguio City Da	39.02	311⇑	eP	P	05 50 48.9	-0.1
	comp=Z,667μm,50.0s						
KSM	Kuching	41.32	283	eP	P	05 51 09.4	+1.4
JOW	Kunigami	41.88	330	P	P	05 51 12.5	-0.1
	comp=Z,192nm,0.9s,mb5.7,baz=151,slow=8.7,SNR=22						
JOW				LR	LR	06 06 42.2	
	comp=Z,5μm,19.3s,baz=336,slow=33						
NACB	Ninganchiao	43.59	320	eP	P	05 51 25.8	-0.6
YHNB	Yeheng	44.09	321	eP	P	05 51 30.6	+0.2
TATO	Taipei	44.24	321	P	P	05 51 35.0	+3.4
	SNR=7.6						
TATO	Taipei	44.24	321	eP	P	05 51 31.7	+0.1
QZH	Quanzhou	46.06	318⇑	iP	P	05 51 48.8	+2.7
QZH				S	S	05 58 32.4	+5.5
QZH				AMB	AMB		
	comp=Z,230nm,1.1s,mb6.0						
QZH				AMB	AMB		
	comp=Z,2μm,3.8s						
QZH				LR	LR		
	comp=N,2μm,14.5s						
QZH				LR	LR		
	comp=E,780nm,11.6s						
QZH				LR	LR		
	comp=Z,9μm,34.5s						
MJAR	Matsushiro Arr	47.07	347	P	P	05 51 52.0	-2.0
	comp=Z,22nm,0.9s,mb5.1,baz=168,slow=9.0,SNR=44						
MJAR				LR	LR	06 09 06.0	
	comp=Z,2μm,20.2s,baz=180,slow=33						
MAJO	Matsushiro	47.07	347	eP	P	05 51 52.2	-1.8
	comp=Z,138nm,1.2s,mb5.8						
MAJO				LR	LR		
	comp=Z,2μm,21.0s						
MAT	Matsushiro	47.07	347	P	P	05 51 52.0	-2.0
MAT				S	S	05 58 42.0	+0.7
MAT	Matsushiro	47.07	347	eP	P	05 51 52.0	-2.0
MAT				eS	S	05 58 42.0	+0.7
MAT				pmax	pmax		
	comp=Z,318nm,1.8s,mb6.0						
MAT				MLR	MLR		
	comp=Z,2μm,22.0s						
MAT	Matsushiro	47.07	347	eP	P	05 51 52.0	-2.0
	comp=Z,318nm,1.8s,mb6.0						
MAT				eS	S	05 58 42.0	+0.7
MAT				LR	LR		
	comp=Z,2μm,22.0s						
KGM	Kluang	48.20	281	P	P	05 52 04.8	+2.0
GZH	Guangzhou	48.50	312	P	P	05 52 07.9	+2.8
GZH				S	S	05 59 08.5	+6.9
GZH				LR	LR		
	comp=N,953nm,16.5s						
GZH				LR	LR		
	comp=E,730nm,16.2s						
GZH				LR	LR		
	comp=Z,2μm,18.7s						
MIDW	Midway	48.68	39	PFAKE		05 52 20.0	+14
MIDW				LR	LR		
	comp=Z,2μm,21.0s						
QIZ	Qiongzhong	48.90	305	P	P	05 52 11.4	+3.3
QIZ				AP	pP	05 52 27.8	+3.3
QIZ				XP	sP	05 52 35.1	+3.3
QIZ				PP	PP	05 54 03.3	+1.4
QIZ				S	S	05 59 09.6	+2.4
QIZ				XS	sS	05 59 36.9	+2.0
QIZ				AMB	AMB		
	comp=Z,77nm,1.2s,mb5.6						
QIZ				AMB	AMB		
	comp=Z,670nm,11.1s						
QIZ				LR	LR		
	comp=E,867nm,24.4s						
QIZ				LR	LR		
	comp=Z,2μm,27.9s						
QIZ	Qiongzhong	48.90	305	PFAKE		05 52 20.0	+12
QIZ				LR	LR		
	comp=Z,1μm,20.0s						
SSE	Sheshan	49.00	326	P	P	05 52 10.6	+1.7
SSE				AP	pP	05 52 28.3	+3.0
SSE				PCP	PcP	05 53 33.1	+1.1
SSE				S	S	05 59 10.9	+2.4
SSE				XS	sS	05 59 41.6	+5.3
SSE				SS	SS	06 02 44.8	+4.8
SSE				AMB	AMB		
	comp=Z,62nm,1.2s,mb5.5						
SSE				AMB	AMB		
	comp=Z,601nm,8.4s						
SSE				LR	LR		
	comp=N,2μm,23.0s						
SSE				LR	LR		
	comp=E,2μm,23.0s						
SSE				LR	LR		
	comp=Z,3μm,20.6s						
RAR	Rarotonga	49.34	110	P	P	05 52 07.9	-3.6
	comp=Z,34nm,1.1s,mb5.3,baz=243,slow=9.3,SNR=4.9						
RAR				LR	LR	06 09 17.9	
	comp=Z,1μm,21.3s,baz=271,slow=32						
NJ2	Nanjing	51.02	325	eP	P	05 52 24.5	+0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
IPM	Ipoh	51.05	284	P	P	05 52 26.3	+1.9
INCN	Inchon	51.63	336	P	P	05 52 28.3	-0.5
	SNR=20						
INCN	Inchon	51.63	336	eP	P	05 52 28.3	-0.5
	comp=Z,64nm,0.8s,mb5.6						
INCN				LR	LR		
	comp=Z,2μm,21.0s						
KULM	Kulim	51.63	284	eP	P	05 52 29.3	+0.5
SNG	Songkhla	52.21	287	P	P	05 52 37.0	+3.9

comp=Z,202nm,0.8s,mb6.1
WHN Wuhan 52.63 320 P P 05 52 35.0 -1.2
WHN S **S** **06 00 00.3 +1.5**
WHN LR LR
comp=Z,4μm,23.1s
KKTK Khon Kaen 53.52 298 P **P** **05 52 43.5 +0.8**
comp=Z,370nm,0.5s,mb6.6
ASAJ Asahikawa 53.69 353 P **P** **05 52 43.4 -0.6**
comp=Z,20nm,0.9s,mb5.0,baz=234,slow=15,SNR=17
DL2 Dalian 54.97 333 P **P** **05 52 52.5 -0.7**
DL2 S **S** **06 00 26.0 -4.3**
DL2 AMB AMB
comp=Z,45nm,1.0s,mb5.5
DL2 LR LR
comp=N,2μm,16.0s
TIA Tai'an 55.08 327 ⇓P **P** **05 52 52.5 -1.5**
GYA Guiyang 55.39 311 ⇑*i*P **P** **05 52 56.4 +0.1**
GYA XP sP 05 53 19.4 -0.8
GYA PP PP 05 55 05.1 +4.6
GYA SCP ScP 05 57 43.6 -5.6
GYA S **S** **06 00 44.6 +8.6**
GYA AMB AMB
comp=Z,40nm,1.2s,mb5.3
GYA AMB AMB
comp=Z,420nm,6.3s
GYA LR LR
comp=N,800nm,17.1s
GYA LR LR
comp=E,1μm,19.7s
GYA LR LR
comp=Z,1μm,18.2s
NST Nakhon Sawan 55.61 296 ⇓P **P** **05 52 59.0 +1.1**
ENH Enshi 55.63 317 PFAKE 05 53 10.0 +12
ENH LR LR
comp=Z,125nm,22.0s
YSS Yuzh-Sakhalins 56.47 354*ce*P **P** **05 53 04.0 0.0**
YSS *e**PP pP 05 53 21.0 +0.2
YSS *e* 05 54 00.0
YSS *e*PPP 05 56 23.0
YSS *e*S **S** **06 00 55.0 +4.6**
YSS *e*PS 06 01 12.0
YSS *e*SS SS 06 04 36.0 -2.3
SNY Shenyang 56.56 336 ⇓P **P** **05 53 03.5 -1.2**
SNY S **S** **06 00 57.1 +5.5**
SNY SS SS 06 04 41.0 +1.3
SNY AMB AMB
comp=Z,22nm,0.6s,mb5.4
SNY LR LR
comp=N,2μm,23.1s
SNY LR LR
comp=E,2μm,21.9s
SNY LR LR
comp=Z,3μm,22.2s
MDJ Mudanjiang 56.92 342 P **P** **05 53 06.1 -1.1**
MDJ AP pP 05 53 21.8 -2.1
MDJ XP sP 05 53 29.1 -2.0
MDJ PP PP 05 55 12.6 -1.6
MDJ SCP ScP 05 57 55.5 -0.4
MDJ PCS PcS 05 58 02.4 -0.4
MDJ S **S** **06 01 00.1 +3.8**
MDJ XS sS 06 01 22.3 -2.3
MDJ SCS ScS 06 02 49.8 -0.9
MDJ AMB AMB
comp=Z,47nm,1.8s,mb5.2
MDJ AMB AMB
comp=Z,510nm,5.7s
MDJ LR LR
comp=N,2μm,28.5s
MDJ LR LR
comp=E,1μm,28.5s
MDJ LR LR
comp=Z,3μm,30.4s
MDJ Mudanjiang 56.92 342 *e*P **P** **05 53 05.7 -1.4**
comp=Z,114nm,1.5s,mb5.7
MDJ LR LR
comp=Z,2μm,20.0s
CN2 Changchun 57.55 339 *e*P **P** **05 53 10.4 -1.2**
CN2 *e*AP pP 05 53 29.8 +1.4
CN2 PP PP 05 55 20.9 +1.1
CN2 PPP 05 56 43.9
CN2 *e*S **S** **06 01 02.1 -2.5**
CN2 SS SS 06 04 55.1 -0.2
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.1
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,2μm,20.0s
CN2 LR LR
comp=E,1μm,20.0s
CN2 LR LR
comp=Z,2μm,21.0s
CHRT Chiangrai 57.64 301 ⇑P **P** **05 53 15.0 +2.7**
DRV Dumont d'Urvil 57.65 185 P **P** **05 53 11.0 -1.4**
DRV S **S** **06 01 13.0 +7.0**
DRV SS SS 06 05 00.0 +3.1
DRV R 06 11 00.0
KMI Kunming 57.67 308 P **P** **05 53 14.4 +1.9**
KMI AP pP 05 53 33.1 +3.8
KMI XP sP 05 53 39.8 +3.3
KMI PCP PcP 05 54 06.8 +1.9
KMI PP PP 05 55 20.9 0.0
KMI PPP 05 56 43.9
KMI SCP ScP 05 57 59.3 0.0
KMI S **S** **06 01 05.4 -0.8**
KMI XS sS 06 01 35.3 +0.7
KMI SCS ScS 06 02 54.1 -2.1
KMI AMB AMB
comp=Z,54nm,1.4s,mb5.4
KMI AMB AMB
comp=Z,875nm,5.4s
KMI LR LR
comp=N,975nm,21.1s
KMI LR LR
comp=E,997nm,22.0s
KMI LR LR
comp=Z,2μm,28.6s
CM31 Chiang Mai Arr 57.77 299 PFAKE 05 53 30.0 +17
CM31 LR LR
comp=Z,766nm,20.0s
CHG Chiang Mai 57.91 299 ⇑P **P** **05 53 18.4 +4.2**
comp=Z,29nm,0.9s,mb5.3
CHTO Chiang Mai 57.91 299 P **P** **05 53 15.5 +1.4**
SNR=6.7
CHTO Chiang Mai 57.91 299 *e*P **P** **05 53 14.7 +0.5**
comp=Z,26nm,0.9s,mb5.2
CHTO LR LR
comp=Z,732nm,19.0s
XAN Xi'an 58.38 320 P **P** **05 53 16.8 -0.6**
XAN S **S** **06 01 18.5 +3.1**
XAN SS SS 06 05 16.0 +7.7
XAN AMB AMB
comp=Z,33nm,1.4s,mb5.2
XAN AMB AMB
comp=Z,522nm,6.3s
XAN LR LR
comp=E,887nm,27.8s
XAN LR LR
comp=Z,2μm,35.3s
BJT Baijiatuau 58.44 330 *e*P **P** **05 53 16.8 -1.1**
BJT pmax pmax
comp=Z,132nm,1.6s
BJT MLR MLR
comp=Z,3μm,20.0s
BJT Baijiatuau 58.44 330 *e*P **P** **05 53 16.8 -1.1**
comp=Z,132nm,1.6s,mb5.7
BJT LR LR
comp=Z,3μm,20.0s
BJI Beijing 58.45 330 P **P** **05 53 16.6 -1.4**
BJI S **S** **06 01 17.1 +0.7**
BJI AMB AMB
comp=Z,57nm,1.8s,mb5.3
BJI LR LR
comp=N,2μm,24.7s
BJI LR LR
comp=E,1μm,23.4s
BJI LR LR
comp=Z,4μm,33.5s
PAE Paea 58.78 105 *e*P **P** **05 53 21.9 +1.7**
comp=Z,307nm,1.4s,mb6.1
PPT Papeete 58.79 105 *e*P **P** **05 53 22.0 +1.7**
comp=Z,121nm,1.5s,mb5.7
PPT Papeete 58.79 105 *e*S **S** **06 01 21.8 +1.1**
comp=Z,2μm,32.2s
PPT *e*LQ 06 08 15.2
comp=Z,12μm,32.2s
PPT *e*LR LR 06 10 51.4
comp=Z,4μm,29.5s
PPT Papeete 58.79 105 LR LR 06 12 52.0
comp=Z,931nm,18.1s,baz=270,slow=30
TBI Tubuai 59.02 112 *e*S **S** **06 01 24.1 +0.3**
comp=Z,2μm,33.0s
TBI *e*SS SS 06 05 24.7 +6.3
comp=Z,368nm,24.8s
TBI *e*LQ 06 08 26.1
comp=Z,7μm,31.8s
TBI *e*LR LR 06 10 48.8
comp=Z,2μm,35.2s
HABR Khabarovsk 59.15 348 ⇑*i*P **P** **05 53 22.6 -0.2**
HABR *e*S **S** **06 01 27.0 +1.6**
HABR pmax pmax
comp=Z,215nm,2.8s,mb5.7
HABR MLR MLR
comp=Z,431nm,16.8s
KIP Kipapa 59.20 58 PFAKE 05 53 30.0 +6.9
KIP LR LR
comp=Z,1μm,19.0s
CD2 Chengdu 59.99 314 *e*P **P** **05 53 28.6 0.0**
CD2 AP pP 05 53 46.3 +0.9
CD2 XP sP 05 53 54.1 +1.5
CD2 PCP PcP 05 54 13.8 -0.3
CD2 PP PP 05 55 43.4 +2.0
CD2 SCP ScP 05 58 06.6 -2.9
CD2 PCS PcS 05 58 14.8 -1.6
CD2 S **S** **06 01 34.1 -2.1**
CD2 XS sS 06 02 04.3 -0.4
CD2 SCS ScS 06 03 08.6 -4.7
CD2 AMB AMB
comp=Z,80nm,1.3s,mb5.6
CD2 AMB AMB
comp=Z,500nm,5.9s
CD2 LR LR
comp=E,710nm,19.2s
CD2 LR LR
comp=Z,670nm,20.4s
SKR Severo-Kuril's 60.01 4 *e*S **S** **06 01 37.0 +0.6**
SKR *e*PS 06 01 56.0
SKR smax
comp=N,2μm,12.0s
SKR smax
comp=E,2μm,12.0s
SKR MLR MLR
comp=N,1μm,20.0s
SKR MLR MLR
comp=E,2μm,20.0s
SKR MLR MLR
comp=Z,2μm,20.0s
PMOR Pomariorio Ree 60.47 102 *e*P **P** **05 53 33.7 +1.9**
comp=Z,183nm,1.5s,mb5.9
KLR Kul'dur 60.59 346 *e*P **P** **05 53 27.8 -4.9**
KLR *e*S **S** **06 01 45.5 +1.6**
KLR *e*SS SS 06 05 41.0 -2.0
KLR pmax pmax
comp=E,83nm,2.4s
KLR pmax pmax
comp=Z,240nm,2.4s,mb5.9
KLR pmax pmax
comp=Z,1μm,9.0s
POHA Pohakuloa 60.62 61 PFAKE 05 53 40.0 +7.1
POHA LR LR
comp=Z,2μm,20.0s
VAH Vaihoa 60.71 102 *e*P **P** **05 53 35.3 +1.8**
comp=Z,163nm,1.3s,mb6.0
HHC Hu-ho-hao-te 61.43 327 *e*P **P** **05 53 37.8 -0.6**
HHC AP pP 05 53 53.9 -1.4
HHC XP sP 05 54 00.9 -1.6
HHC PCP PcP 05 54 18.6 -1.3
HHC PP PP 05 55 55.8 +1.6
HHC SCP ScP 05 58 14.0 -1.9
HHC PCS PcS 05 58 20.0 -2.9
HHC S **S** **06 01 53.5 -1.1**
HHC PS 06 02 20.0
HHC XS sS 06 02 21.3 -2.0
HHC SCS ScS 06 03 19.8 -4.3
HHC SS SS 06 05 56.9 +0.7
HHC AMB AMB
comp=Z,22nm,1.7s,mb5.0
HHC AMB AMB
comp=Z,904nm,5.4s
HHC LR LR
comp=N,1μm,21.8s
HHC LR LR
comp=E,2μm,19.6s
HHC LR LR
comp=Z,3μm,20.6s
BTO Baotou 62.10 326 *e*P **P** **05 53 41.3 -1.6**
PET Petropavlovsk 62.55 6*c i*P **P** **05 53 45.4 -0.4**
PET *e* 05 54 25.1
PET *i*S **S** **06 02 10.5 +1.8**
PET *e* 06 03 32.6
PET *e*SS SS 06 06 14.3 +0.7
PET *e*SSS 06 08 57.3
PET pmax pmax
comp=Z,600nm,12.6s
PET pmax pmax
comp=Z,700nm,13.5s
PET pmax pmax
comp=Z,47nm,1.0s,mb5.6
PET pmax pmax
comp=Z,46nm,1.1s,mb5.5
PET smax
comp=E,700nm,15.3s
PET smax
comp=E,500nm,10.3s
PET MLR MLR
comp=Z,700nm,16.0s
PET smax
comp=N,45nm,0.8s
PET smax
comp=E,28nm,0.5s
PET Petropavlovsk 62.55 6 PFAKE 05 54 00.0 +14
PET LR LR
comp=Z,2μm,21.0s
LZH Lanzhou 62.91 319 *e*P **P** **05 53 49.3 +1.0**
LZH PP PP 05 56 10.3 +3.1
LZH *e*S **S** **06 02 14.0 +0.7**
LZH SS SS 06 06 23.0 +3.6
LZH AMB AMB
comp=Z,12nm,1.2s,mb4.9
LZH LR LR
comp=N,1μm,16.0s
LZH LR LR
comp=Z,2μm,17.5s
CASY Casey 62.97 197 ⇓*i*P **P** **05 53 47.7 -0.9**
CASY LR LR
comp=Z,2μm,20.0s
HIA Hailar 64.27 338*d i*P **P** **05 53 56.1 -1.1**
HIA Hailar 64.27 338 ⇓*i*P **P** **05 53 56.1 -1.1**
comp=Z,69nm,0.9s,mb5.7
HIA LR LR
comp=Z,2μm,21.0s
SMY Shemya 65.10 16 *e*P **P** **05 54 02.9 +0.3**
SMY pmax pmax
comp=Z,417nm,2.2s,mb6.1
SMY MLR MLR
comp=Z,2μm,20.0s
SMY Shemya 65.10 16 *e*P **P** **05 54 02.9 +0.3**
comp=Z,416nm,2.2s,mb6.1
SMY LR LR
comp=Z,2μm,20.0s
GTA Gaotai 67.44 320 ⇓P **P** **05 54 18.1 +0.5**
GTA AP pP 05 54 34.5 -0.3
GTA XP sP 05 54 41.9 0.0
GTA PCP PcP 05 54 44.1 -0.5
GTA PP PP 05 56 49.1 +2.3
GTA PPP 05 58 28.0
GTA SCP 05 58 41.5
GTA PCS 05 58 48.3
GTA S S 06 03 08.4 -0.3
GTA XS sS 06 03 36.3 -1.4
GTA PS 06 03 41.8
GTA SCS ScS 06 04 06.4 -3.7
GTA SS SS 06 07 31.5 +1.7
GTA AMB AMB
comp=Z,24nm,1.4s,mb5.0
GTA AMB AMB
comp=Z,1μm,6.0s
GTA LR LR
comp=N,664nm,19.0s
GTA LR LR
comp=E,894nm,21.3s
GTA LR LR
comp=Z,1μm,22.8s
VNDA Vanda 68.40 177 P **P** **05 54 22.5 -1.1**
VNDA Vanda 68.40 177 P **P** **05 54 22.5 -1.1**
comp=Z,11nm,0.9s,mb4.9,baz=334,slow=7.1,SNR=42
VNDA LR LR 06 22 19.0
VNDA comp=Z,2μm,18.4s,baz=351,slow=34 PKPPKP 06 22 37.4
comp=Z,4.7nm,1.4s,baz=235,slow=1.6,SNR=5.2
VNDA Vanda 68.40 177 *e*P **P** **05 54 22.5 -1.1**
TAOE Nuku Hiva Isla 68.51 96 *e*LQ 06 12 05.3
comp=Z,10μm,30.5s
TAOE *e*LR LR 06 15 12.5
comp=Z,5μm,28.6s,baz=271
ULN Ulaanbaatar 68.65 330 ⇓P **P** **05 54 25.2 0.0**
SNR=58
ULN Ulaanbaatar 68.65 330⇑*e*P **P** **05 54 25.1 -0.1**
ULN Ulaanbaatar 68.65 330 *e*P **P** **05 54 25.0 -0.2**
MA2 Magadan 68.71 0 *e*P **P** **05 54 22.1 -3.5**
MA2 *e* pP 05 54 43.7 +0.9
MA2 S S 06 03 22.2 -1.6
MA2 *e* 06 03 55.4
MA2 pmax pmax
comp=Z,90nm,1.3s,mb5.5
MA2 MLR MLR
comp=Z,2μm,18.7s
MA2 Magadan 68.71 0 PFAKE 05 54 40.0 +14
MA2 LR LR
comp=Z,2μm,22.0s
MIR Mirnyy 68.82 201*d i*P **P** **05 54 27.5 +1.3**
MIR *e* pP 05 54 44.0 +0.6
MIR *e*S 06 04 07.0
MIR pmax pmax
comp=Z,600nm,2.0s,mb6.2
MIR pmax pmax
comp=Z,1μm,4.0s
MIR MLR MLR
comp=Z,5μm,20.0s
MIR MLR MLR
comp=N,1μm,17.0s
MIR MLR MLR
comp=E,1μm,18.0s
CIT Chita 68.83 337 *e*P **P** **05 54 26.0 -0.3**
CIT *e* 05 54 50.2
CIT pmax pmax
comp=Z,246nm,2.0s,mb5.8
LSA Lhasa 68.91 307 P **P** **05 54 27.8 +1.0**
LSA AMB AMB
comp=Z,60nm,1.1s,mb5.4
LSA Lhasa 68.91 307⇓*e*P **P** **05 54 28.0 +1.2**
LSA pmax pmax
comp=Z,115nm,1.3s,mb5.7
LSA MLR MLR
comp=Z,821nm,22.0s
LSA Lhasa 68.91 307⇓*e*P **P** **05 54 28.0 +1.2**
comp=Z,115nm,1.3s,mb5.7
LSA LR LR
comp=Z,821nm,22.0s
SONM Songino Array 68.95 330 P **P** **05 54 26.9 -0.2**
comp=Z,79nm,1.1s,mb5.6,baz=142,slow=4.5,SNR=208
SONM PKP2bc 06 22 38.6
comp=Z,8.8nm,1.1s,baz=273,slow=2.1,SNR=16
SONM LR LR 06 24 50.4
comp=Z,2μm,19.5s,baz=134,slow=36
SONM Songino Array 68.95 330 P **P** **05 54 26.9 -0.2**
SONM ⇑*e* 06 22 38.6
SONM LR LR 06 24 50.4
SBA Scott Base 68.99 176 *e*P **P** **05 54 26.6 -0.7**
SBA LR LR
comp=Z,988nm,19.0s
CLNS Chul'man 69.23 345 *e*P **P** **05 54 27.9 -0.9**
CLNS *e* 05 54 50.0
CLNS *e* 05 57 06.0
CLNS *e*PPP 05 58 39.8
CLNS *e*S S 06 03 37.5 +7.5
CLNS *e*SS SS 06 07 59.6 +2.2
CLNS pmax pmax
comp=N,36nm,1.0s
CLNS pmax pmax
comp=Z,42nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,20nm,0.9s
CLNS pmax pmax
comp=Z,11nm,0.9s,mb4.8
CLNS pmax pmax
comp=N,16nm,0.7s
CLNS pmax pmax
comp=E,8.0nm,0.7s
CLNS smax
comp=N,1μm,13.2s
CLNS smax
comp=Z,597nm,13.6s
CLNS smax
comp=E,535nm,11.6s
CLNS MLR MLR
comp=N,500nm,15.0s
CLNS MLR MLR
comp=E,300nm,15.0s
CLNS MLR MLR
comp=Z,600nm,15.0s
PALK Pallekele 71.33 281 PFAKE 05 54 50.0 +8.4
PALK LR LR
comp=Z,880nm,20.0s
JIRN Jiri 72.13 303 *e*P **P** **05 54 47.4 +1.0**
comp=Z,180nm,1.4s,mb5.8
ZAK Zakamensk 72.18 330⇑*i*P **P** **05 54 46.0 -0.7**
ZAK pmax pmax
comp=Z,72nm,1.3s,mb5.4
RKT Rikitea 72.34 111 *e*P **P** **05 54 49.3 +1.6**
comp=Z,146nm,1.3s,mb5.7
RKT Rikitea 72.34 111 *e*S S 06 04 07.3 +1.2
comp=Z,776nm,30.0s
RKT *e*SS SS 06 08 43.3 -1.9
comp=Z,429nm,32.8s
RKT *e*LQ 06 13 28.8
comp=Z,2μm,31.5s
RKT *e*LR LR 06 16 59.2
comp=Z,2μm,32.8s
GUN Gumba 72.48 303 *e*P **P** **05 54 48.8 +0.3**
comp=Z,93nm,0.8s,mb5.8
PKI Pulchoki 72.75 303 *e*P **P** **05 54 50.4 +0.3**
comp=Z,193nm,1.4s,mb5.8
PKI Pulchoki 72.75 303 *e*P **P** **05 54 50.4 +0.3**
PKI pmax pmax
comp=Z,193nm,1.4s,mb5.8
TLY Talaya 72.86 332 P **P** **05 54 50.7 0.0**
SNR=14
TLY Talaya 72.86 332*d i*P **P** **05 54 49.9 -0.8**
TLY *e* pP 05 55 04.1 -4.0
TLY *e* 05 57 27.4
TLY *e*S S 06 04 11.3 -0.7
TLY pmax pmax
comp=Z,84nm,1.7s,mb5.4
TLY Talaya 72.86 332 *e*P **P** **05 54 48.0 -2.7**
TLY LR LR
comp=Z,2μm,21.0s
KKN Kakani 72.93 303 *e*P **P** **05 54 51.2 0.0**
comp=Z,68nm,0.9s,mb5.6
KKN Kakani 72.93 303 *e*P **P** **05 54 51.2 0.0**
KKN pmax pmax
comp=Z,68nm,0.9s,mb5.6
IRK Irkutsk 72.94 332 *e*P **P** **05 54 48.8 -2.4**
IRK pmax pmax
comp=Z,173nm,2.2s,mb5.6
YAK Yakutsk 72.98 350 *e*P **P** **05 54 49.4 -2.0**
YAK *e**PP pP 05 54 57.5 -11
YAK *e* pP 05 55 05.5 -3.3
YAK *e* 05 57 30.3
YAK *e*PPP 05 59 15.1
YAK *e*S S 06 04 16.1 +2.7
YAK *e* 06 04 39.3
YAK *e*SS SS 06 08 58.5 +3.6
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK pmax pmax
comp=Z,22nm,1.2s,mb5.0
YAK pmax pmax
comp=Z,11nm,1.5s,mb4.6
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK smax

comp=E,154nm,7.5s
YAK smax
comp=N,103nm,6.8s
DMN Daman 73.02 303 *e*P **P** 05 54 52.1 +0.4
comp=N,291nm,1.3s,mb6.1
BOD Bodaibo 73.22 341 *e*P **P** 05 54 50.2 -2.6
BOD pmax pmax
comp=Z,38nm,2.1s,mb5.0
GKN Gorkha 73.54 303 *e*P **P** 05 54 54.7 -0.1
comp=Z,246nm,1.4s,mb5.9
MOY Mondy 74.11 331 *e*P **P** 05 54 57.7 -0.4
MOY pmax pmax
comp=Z,264nm,2.6s,mb5.7
KOLN Koldanda 74.33 302 *e*P **P** 05 54 59.4 +0.1
comp=Z,233nm,1.5s,mb5.9
HYB Hyderabad 75.75 291 *i* P **P** 05 55 10.0 +2.5
HYB *e* 05 55 12.5
HYB *e*S S 06 04 50.0 +5.6
SDPT Sand Point 76.36 26 *e*P **P** 05 55 13.7 +2.7
WMQ Urumqi 77.50 319 P **P** 05 55 17.5 +0.1
WMQ AP pP 05 55 38.0 +3.1
WMQ PP PP 05 58 15.0 +2.3
WMQ S S 06 05 01.0 -2.4
WMQ SKS 06 05 19.0
WMQ SCS ScS 06 05 26.0 -4.2
comp=Z,65nm,1.2s,mb5.4
WMQ AMB AMB
comp=Z,425nm,6.0s
WMQ LR LR
comp=N,985nm,18.0s
WMQ LR LR
comp=E,879nm,18.0s
WMQ LR LR
comp=Z,1μm,18.0s
LGTI Lohaghat 77.66 303 *ex* x 05 55 24.0
CHGN Chignik 77.86 26 *e*P **P** 05 55 21.1 +1.7
BILL Bilibino 78.04 6*d i*P **P** 05 55 18.5 -1.9
BILL pmax pmax
comp=Z,29nm,1.0s,mb5.2
BILL Bilibino 78.04 6 *e*P **P** 05 55 18.6 -1.8
comp=Z,180nm,1.6s,mb5.8
BILL LR LR
comp=Z,945nm,21.0s
KALG Kalgarh 78.91 303 *ex* x 05 55 02.2
AGRA Agra 78.93 300 *e*P **P** 05 55 24.5 -0.8
ASOR Ausora 79.51 302 *e*P **P** 05 55 26.5 -2.0
KLP Kalpa 79.93 304 *e*P **P** 05 55 30.6 -0.1
KLP AMb AMB 05 55 37.1
comp=Z,101nm,1.6s,mb5.5
SONA Sohna 79.95 301 *e*P **P** 05 55 30.5 -0.4
AYAN Aya Nagar 79.98 301 *e*P **P** 05 55 30.3 -0.7
KUDL Kundal 80.43 301 *e*P **P** 05 55 33.2 -0.2
KUDL AMb AMB 05 55 38.7
comp=Z,67nm,1.6s,mb5.3
MAW Mawson 80.45 203 P **P** 05 55 33.6 0.0
comp=Z,53nm,0.9s,mb5.5,baz=88,slow=6.6,SNR=53
MAW LR LR 06 28 21.9
comp=Z,2μm,21.9s,baz=85,slow=34
MAW Mawson 80.45 203 *e*P **P** 05 55 33.4 -0.1
comp=Z,45nm,0.9s,mb5.4
MAW LR LR
comp=Z,4μm,22.0s
QSPA South Pole Qui 80.62 180⇓*i*P **P** 05 55 33.8 -0.7
comp=Z,142nm,1.0s,mb5.8
QSPA LR LR
comp=Z,2μm,20.0s
TNA Tin City 80.83 16 *e*P **P** 05 55 35.8 +0.3
KHET Khetri 80.99 300 *e*P **P** 05 55 36.7 +0.2
KHET AMb AMB 05 55 42.8
comp=Z,87nm,1.6s,mb5.4
KDAK Kodiak Island 81.32 27 *e*P **P** 05 55 38.8 +0.7
KDAK LR LR
comp=Z,444nm,22.0s
AJM Ajmer 81.57 299 *i* x x 05 55 47.0
SVW2 Sparrevohn 81.95 23 *e*P **P** 05 55 39.8 -1.7
TIXI Tiksi 82.10 353 *e*P **P** 05 55 39.5 -2.8
TIXI *e*S S 06 05 48.3 -3.6
TIXI pmax pmax
comp=Z,47nm,1.3s,mb5.3
TIXI MLR MLR
comp=Z,845nm,18.0s
TIXI Tiksi 82.10 353 *e*P **P** 05 55 41.2 -1.1
MKAR Makanchi Array 82.19 320 P **P** 05 55 42.3 -0.5
comp=Z,19nm,0.9s,mb5.0,baz=108,slow=6.6,SNR=82
MKAR PKKPbc PKKPbc 06 14 09.3 -1.1
comp=Z,0.6nm,0.8s,baz=327,slow=2.4,SNR=3.3
MKAR PKPPKP 06 22 14.2
comp=Z,1.1nm,0.9s,baz=267,slow=2.2,SNR=4.0
MKAR Makanchi Array 82.19 320 P **P** 05 55 42.3 -0.5
MKAR PKKPbc PKKPbc 06 14 09.3 -1.1
MKAR P'P' 06 22 14.2
TTA Tatalina 82.88 22 *e*P **P** 05 55 44.2 -2.1
TTA pP 05 55 58.2 -5.8
TTA Tatalina 82.88 22 *e*P **P** 05 55 44.5 -1.8
SLKM Skilak Lake 83.81 25 P **P** 05 55 48.7 -2.4
SLKM Skilak Lake 83.81 25 *e*P **P** 05 55 48.4 -2.7
KSH Kashi 84.08 311 P **P** 05 55 54.1 +1.6
KSH AP pP 05 56 09.0 -1.2
KSH XP sP 05 56 15.8 -1.4
KSH AMB AMB
comp=Z,53nm,1.1s,mb5.6
KSH AMB AMB
comp=Z,720nm,3.7s
KSH LR LR
comp=N,402nm,4.5s
KSH LR LR
comp=E,976nm,6.7s
PMR Palmer 84.82 25 *e*P **P** 05 55 53.3 -2.9
PMR pmax pmax
comp=Z,120nm,1.6s,mb5.8
PMR Palmer 84.82 25 *e*P **P** 05 55 56.1 -0.1
comp=Z,291nm,2.4s,mb6.0
PMR LR LR
comp=Z,2μm,21.0s
NVS Novosibirsk 84.83 328 *e*P **P** 05 55 54.1 -2.2
NVS *e*S S 06 06 24.9 +5.4
NVS pmax pmax
comp=Z,223nm,1.9s,mb6.0
NVS pmax pmax
comp=N,95nm,1.8s
NVS pmax pmax
comp=E,108nm,1.7s
NVS smax
comp=E,395nm,2.8s
KZA Kyzart 85.36 314 P **P** 05 55 59.6 +0.6
SNR=28
TKM2 Tokmak 2 85.36 315 P **P** 05 55 58.7 -0.2
SNR=18
IMA2 Indian Mountai 85.54 20 *e*P **P** 05 55 57.6 -2.2
KBK Karagaybulak 85.74 314 P **P** 05 56 01.2 +0.3
SNR=8.8
KURK Kurchatov 85.88 323 P **P** 05 56 00.2 -1.3
comp=E,177nm,1.9s,mb6.0,SNR=18
KURK Kurchatov 85.88 323⇓P **P** 05 56 00.4 -1.1
SNR=42
KURK Kurchatov 85.88 323⇑*e*P **P** 05 55 59.9 -1.6
KURK Kurchatov 85.88 323 *e*P **P** 05 56 00.3 -1.3
comp=E,291nm,2.1s,mb6.1
KURK LR LR
comp=Z,1μm,22.0s
CHMS Chumysh 85.98 315 P **P** 05 56 01.3 -0.7
SNR=19
MCK McKinley 85.98 23 *e*P **P** 05 55 59.2 -2.8
MCK LR LR
comp=Z,599nm,20.0s
FRU Bishkek 86.03 314 *e*P **P** 05 56 02.0 -0.2
FRU *e* pP 05 56 20.0 0.0
FRU pmax pmax
comp=Z,180nm,1.8s,mb6.0
AAK Ala-Archa 86.06 314 P **P** 05 56 02.5 +0.1
SNR=13
AAK Ala-Archa 86.06 314 PFAKE 05 56 10.0 +7.6
AAK LR LR
comp=Z,905nm,19.0s
USP Ospenovka 86.23 315 P **P** 05 56 02.9 -0.4
SNR=30
AML Almayashu 86.48 314 P **P** 05 56 05.4 +0.9
SNR=15
EKS2 Erkin-Say 86.57 314 P **P** 05 56 05.4 +0.5
SNR=22
COLA College 86.97 22*d i*P **P** 05 56 02.9 -3.9
COLA College 86.97 22 *e*P **P** 05 56 03.4 -3.5
comp=Z,74nm,1.3s,mb5.8
COLA LR LR
comp=Z,938nm,19.0s

SYO Syowa Base 88.58 200⇑*e*P **P** 05 56 13.2 -1.4
SYO Syowa Base 88.58 200⇓*e*P **P** 05 56 16.4 +1.9
SIT Sitka 89.41 32 *e*P **P** 05 56 19.3 +0.9
SIT Sitka 89.41 32 *e*P **P** 05 56 19.9 +1.5
comp=Z,286nm,2.5s,mb6.2
SIT LR LR
comp=Z,2μm,21.0s
DAWY Dawson 89.92 24 *e*P **P** 05 56 19.4 -1.4
SKAG Skagway 90.16 29 *e*P **P** 05 56 23.3 +1.4
comp=Z,76nm,1.7s,mb5.8
SKAG LR LR
comp=Z,2μm,22.0s
BRVK Borovoye 91.50 324 P **P** 05 56 26.5 -1.7
SNR=8.2
BRVK Borovoye 91.50 324 *e*P **P** 05 56 26.0 -2.2
BRVK *e* 06 00 08.2
BRVK Borovoye 91.50 324 *e*P **P** 05 56 26.0 -2.2
BRVK *e*PP PP 06 00 08.2 +1.4
BRVK LR LR
comp=Z,864nm,19.0s
JCC Jacoby Creek 92.75 49⇓P **P** 05 56 36.0 +2.1
baz=93
KIPM Iron Peak 93.00 50 *e*P **P** 05 56 38.4 +3.3
FARB Farallon Islan 93.02 52⇓P **P** 05 56 33.6 -1.6
baz=93
P01C Double 8 Ranch 93.05 51⇓P **P** 05 56 34.3 -1.0
baz=93
HOPS Hopland 93.17 51 *e*P **P** 05 56 37.3 +1.4
comp=Z,177nm,1.8s,mb6.2
HOPS *e* pP 05 56 55.9 +2.1
HOPS LR LR
comp=Z,1μm,22.0s
HOPS Hopland 93.17 51⇑P **P** 05 56 36.4 +0.5
baz=93
MCCM Marconi Confer 93.18 52 *e*P **P** 05 56 31.7 -4.3
MCCM Marconi Confer 93.18 52⇑P **P** 05 56 35.3 -0.7
baz=93
N02C Big Bar 93.29 49⇑P **P** 05 56 35.5 -0.9
baz=93
H02A Toledo 93.43 45⇑P **P** 05 56 36.6 -0.5
baz=93
NSHM Saint Helena R 93.45 52 *e*P **P** 05 56 36.9 -0.3
CVS Carmenet Viney 93.54 52⇑P **P** 05 56 37.3 -0.3
baz=94
GASB Alder Springs 93.55 51⇓P **P** 05 56 37.1 -0.5
baz=94
INK Inuvik 93.56 21 *e*P **P** 05 56 36.2 -1.5
INK *e* pP 05 56 51.7 -3.9
INK pmax pmax
comp=Z,110nm,2.1s
INK Inuvik 93.56 21 *e*P **P** 05 56 36.2 -1.5
comp=Z,114nm,2.1s,mb5.9
INK *e* pP 05 56 51.7 -3.9
JRSC Jasper Ridge 93.57 53⇑P **P** 05 56 38.3 +0.6
baz=94
BNLO Ben Lomond (Sa 93.58 53⇑P **P** 05 56 37.8 +0.1
baz=94,SNR=8.9
O02C Red Bluff 93.58 50⇑P **P** 05 56 38.3 +0.6
baz=94
MNRC McLaughlin Nat 93.64 51⇑P **P** 05 56 38.1 +0.1
baz=94
M02C Callahan 93.72 49⇓P **P** 05 56 38.4 -0.1
baz=94
WDC Whiskeytown Da 93.83 50 *e*P **P** 05 56 39.5 +0.6
WDC pmax pmax
comp=Z,115nm,1.8s,mb6.0
WDC Whiskeytown Da 93.83 50 *e*P **P** 05 56 39.5 +0.6
comp=Z,115nm,1.8s,mb6.0
WDC Whiskeytown Da 93.83 50⇑P **P** 05 56 38.9 0.0
baz=94,SNR=11
YBH Yreka Blue Hor 93.88 49 *e*P **P** 05 56 41.6 +2.4
YBH *e*PP pP 05 57 00.6 +3.5
YBH pmax pmax
comp=Z,56nm,1.6s
YBH Yreka Blue Hor 93.88 49 *e*P **P** 05 56 41.6 +2.4
comp=Z,56nm,1.6s,mb5.8
YBH *e* pP 05 57 00.2 +3.1
YBH Yreka Blue Hor 93.88 49⇑P **P** 05 56 39.0 -0.2
baz=94
COR Corvallis 93.91 46 PFAKE 05 56 50.0 +11
COR LR LR
comp=Z,2μm,20.0s
Q03C Winters 93.93 52⇑P **P** 05 56 38.7 -0.7
baz=94
F03A Seaside 93.94 44⇓P **P** 05 56 38.5 -0.9
baz=94
BDM Black Diamond 93.94 52⇑P **P** 05 56 38.2 -1.3
baz=94
J03A Ideyld Park 93.95 47⇓P **P** 05 56 38.5 -1.0
baz=94
HAST UC Hastings Re 93.96 54⇓P **P** 05 56 37.9 -1.6
baz=94,SNR=14
WENL Wente Brothers 93.98 53⇓P **P** 05 56 38.3 -1.3
baz=94
SAO San Andreas Ge 94.10 54 *e*P **P** 05 56 41.7 +1.6
SAO pmax pmax
comp=Z,68nm,1.5s,mb5.9
SAO MLR MLR
comp=Z,883nm,19.0s
SAO San Andreas Ge 94.10 54 *e*P **P** 05 56 41.6 +1.5
comp=Z,68nm,1.5s,mb5.9
SAO *e*pP pP 05 57 03.7 +5.6
SAO LR LR
comp=Z,883nm,19.0s
O03C Acorn Hollow, 94.12 50⇑P **P** 05 56 40.0 -0.3
baz=94
V03C Hunter Liggett 94.16 54⇑P **P** 05 56 41.6 +1.2
baz=94,SNR=12
SUTB Sutter Butte 94.20 51⇑P **P** 05 56 40.1 -0.5
baz=94
M03C McCloud 94.25 49⇓P **P** 05 56 40.4 -0.4
baz=94,SNR=7.6
PACP Pacheco Peak 94.26 53⇑P **P** 05 56 40.9 0.0
baz=94,SNR=10
S04C Ingram Canyon, 94.30 53⇓P **P** 05 56 41.8 +0.7
baz=94,SNR=13
LRV Little Rabbit 94.39 54 *e*P **P** 05 56 43.1 +1.6
V04C Ramage Ranch, 94.39 55⇓P **P** 05 56 42.8 +1.3
baz=94,SNR=6.0
OHCM Honcut 94.44 51 *e*P **P** 05 56 40.6 -1.1
Q04C Lincoln 94.45 52⇓P **P** 05 56 41.5 -0.3
baz=94
ORV Oroville 94.47 51⇓P **P** 05 56 41.4 -0.4
baz=94,SNR=17
M04C Macdoel 94.53 49⇑P **P** 05 56 41.6 -0.5
baz=94
SDP Sudden Peak, L 94.54 56⇓P **P** 05 56 43.0 +0.8
baz=94
L04A Klamath Falls 94.55 48⇑P **P** 05 56 42.2 0.0
baz=94
U04C Hernandez Rese 94.57 54⇑P **P** 05 56 42.8 +0.5
baz=94,SNR=18
G04A Mulino 94.58 45⇑P **P** 05 56 41.5 -0.9
baz=94
E04A Onalaska 94.62 44⇓P **P** 05 56 42.5 0.0
baz=94
C04A Brinnon 94.62 43⇑P **P** 05 56 41.7 -0.9
baz=94
D04A Dobbs Creek Ra 94.64 43⇓P **P** 05 56 42.7 +0.1
baz=95
HATC Hat Creek Radi 94.68 50⇑P **P** 05 56 42.4 -0.4
baz=95
PKD Parkfield 94.70 54⇓P **P** 05 56 43.0 +0.1
baz=95,SNR=21
H04A Detroit Lake 94.71 46⇑P **P** 05 56 42.2 -0.8
baz=95,SNR=7.6
R04C Big Horse Ranc 94.71 52⇑P **P** 05 56 42.5 -0.4
baz=95
F04A Amboy 94.73 44⇓P **P** 05 56 42.0 -1.1
baz=95
T05C Eagle Field, D 94.73 54⇑P **P** 05 56 43.1 +0.1
baz=95
K04A Chilquin 94.73 48⇓P **P** 05 56 42.5 -0.5
baz=95
O04C Chester 94.89 50⇓P **P** 05 56 43.4 -0.3
baz=95,SNR=10
PTRM Twissleman Ran 94.93 55 *e*P **P** 05 56 43.8 -0.2
LAVA Lava Cap Winer 94.94 52⇓P **P** 05 56 44.5 +0.5
baz=95,SNR=12
A04A Legoe Bay, Lum 94.95 42⇓P **P** 05 56 43.7 -0.4
baz=95
O05C Quincy 94.97 50⇓P **P** 05 56 43.9 -0.2
baz=95
M05C Lookout 94.99 49⇓P **P** 05 56 43.7 -0.6
baz=95
SMMC Simmler 95.05 55⇑P **P** 05 56 46.0 +1.5
baz=95

S05C Merced 95.06 53⇑P **P** 05 56 44.1 -0.5
baz=95
U05C Westside ANR, 95.09 54⇑P **P** 05 56 45.3 +0.6
baz=95
CMB Columbia Colle 95.11 52 *e*P **P** 05 56 44.2 -0.6
comp=Z,120nm,1.6s,mb6.1
CMB LR LR
comp=Z,959nm,21.0s
CMB Columbia Colle 95.11 52⇓P **P** 05 56 45.1 +0.3
baz=95,SNR=14
P05C Yuba Gap, Truc 95.11 51⇑P **P** 05 56 45.1 +0.3
baz=95,SNR=16
PKM Peak Mountain 95.14 56⇓P **P** 05 56 45.9 +0.9
baz=95,SNR=7.6
SNCC San Nicolas Is 95.16 57 PFAKE 05 57 00.0 +15
SNCC LR LR
comp=Z,1μm,19.0s
SNCC San Nicolas Is 95.16 57⇓P **P** 05 56 44.8 -0.2
baz=95
BSC Santa Cruz Isl 95.17 57⇑P **P** 05 56 45.3 +0.3
baz=95
J05A Fort Rock 95.19 47⇑P **P** 05 56 44.7 -0.5
baz=95,SNR=14
ELFS Eagle Lake Fie 95.20 50⇓P **P** 05 56 45.5 +0.3
baz=95
D05A Enumclaw 95.20 43⇓P **P** 05 56 45.1 -0.1
baz=95
V05C Boulder Hill, 95.20 55⇓P **P** 05 56 45.7 +0.5
baz=95
B05A Bryant 95.28 42⇓P **P** 05 56 45.4 -0.2
baz=95
I05A Bend 95.29 46⇓P **P** 05 56 45.1 -0.5
baz=95
NVL N'lazarevskaya 95.31 193*d i*P **P** 05 56 43.8 -1.9
NVL *e*S SKSac 06 07 17.5 +1.5
NVL *i* PS PS 06 09 24.7 +3.0
NVL *e*SSS 06 18 16.1
NVL pmax pmax
comp=Z,61nm,1.4s,mb5.8
NVL pmax pmax
comp=N,33nm,1.6s
NVL pmax pmax
comp=E,18nm,1.6s
NVL MLR MLR
comp=Z,3μm,16.0s
L05A Lakeview 95.31 48⇓P **P** 05 56 45.8 +0.1
baz=95
BEKR Beckwourth 95.38 51⇑P **P** 05 56 45.7 -0.4
baz=95,SNR=30
H05A Madras 95.38 46⇓P **P** 05 56 45.7 -0.4
baz=95
F05A White Salmon 95.39 45⇓P **P** 05 56 45.5 -0.6
baz=95
A05A Maple Falls 95.39 41⇓P **P** 05 56 45.4 -0.7
baz=95
R05C Kirkwood Meado 95.44 52 P **P** 05 56 46.0 -0.3
baz=95,SNR=35
M06C Likely Place G 95.47 49⇑P **P** 05 56 46.1 -0.4
baz=95,SNR=7.2
C05A Tolt Reservoir 95.47 43⇓P **P** 05 56 45.7 -0.8
baz=95
T06C Millerton Lake 95.51 54⇓P **P** 05 56 46.3 -0.3
baz=95,SNR=8.8
S06C San Francisco 95.51 53 P **P** 05 56 46.2 -0.4
baz=95,SNR=25
BLG Laguna Peak 95.66 56⇓P **P** 05 56 48.4 +1.1
baz=96
P06A Stead Airport, 95.71 51⇓P **P** 05 56 48.0 +0.5
baz=96
WCN Washoe City 95.77 51⇑P **P** 05 56 48.0 +0.3
baz=96,SNR=16
RCTC Rector, Farmer 95.79 54⇓P **P** 05 56 48.1 +0.2
baz=96
O06A Flanigan 95.82 50⇓P **P** 05 56 48.0 -0.1
baz=96,SNR=12
K06A Valley Falls 95.84 48⇑P **P** 05 56 47.9 -0.2
baz=96
KCC Kaiser Creek 95.86 53⇑P **P** 05 56 48.0 -0.2
baz=96,SNR=7.3
VES Vestal, Richgr 95.86 55⇑P **P** 05 56 48.3 +0.1
baz=96
N06A Buffalo Meadow 95.89 50⇑P **P** 05 56 48.2 -0.2
baz=96,SNR=14
R06C Coleville 95.91 52⇓P **P** 05 56 49.1 +0.7
baz=96,SNR=15
WAKR Walker 95.92 52 *e*P **P** 05 56 48.0 -0.4
J06A Christmas Vall 95.97 47⇑P **P** 05 56 48.4 -0.3
baz=96,SNR=13
ARVC Arvin 95.98 55⇓P **P** 05 56 50.0 +1.3
baz=96
OSI Osito Adit 96.00 56⇑P **P** 05 56 49.2 +0.4
baz=96
HELL Mitchell Peak, 96.01 54⇓P **P** 05 56 49.0 +0.1
baz=96,SNR=20
I06A Prineville 96.01 47⇑P **P** 05 56 49.0 +0.1
baz=96,SNR=11
PAHR Pah Rah Range 96.10 51 *e*P **P** 05 56 48.4 -0.9
comp=Z,114nm,1.7s,mb6.0
CIS Catalina Islan 96.11 57⇑P **P** 05 56 49.8 +0.4
baz=96
R07C Lee Vining 96.17 53⇑P **P** 05 56 50.1 +0.4
baz=96
FMP Fort Macarthur 96.24 57⇑P **P** 05 56 50.2 +0.2
baz=96
DECC Green Verdugo 96.28 56⇓P **P** 05 56 50.1 0.0
baz=96
MLAC Mammoth Lakes 96.28 53⇑P **P** 05 56 50.7 +0.6
baz=96
ISA Isabella 96.33 55 *e*P **P** 05 56 48.7 -1.6
ISA pmax pmax
comp=Z,52nm,1.8s,mb5.7
ISA MLR MLR
comp=Z,205nm,20.0s
ISA Isabella 96.33 55 *e*P **P** 05 56 48.7 -1.6
comp=Z,52nm,1.8s,mb5.7
ISA LR LR
comp=Z,205nm,20.0s
ISA Isabella 96.33 55⇓P **P** 05 56 50.6 +0.2
baz=96
L07A Adell 96.42 49⇑P **P** 05 56 50.9 +0.2
baz=96,SNR=14
Q07A Schurz 96.46 52⇑P **P** 05 56 51.2 +0.3
baz=96
MTUM Tungsten Hills 96.46 53 *e*P **P** 05 56 50.3 -0.6
P07A Fallon 96.46 51⇓P **P** 05 56 51.2 +0.2
baz=96
M07A Soldier Meadow 96.47 49⇑P **P** 05 56 50.8 -0.2
baz=96,SNR=10.0
MWC Mount Wilson 96.50 56 *e*P **P** 05 56 53.6 +2.5
I07A Izee 96.54 47⇑P **P** 05 56 51.5 +0.2
baz=96,SNR=11
O07A Toulon 96.55 50⇓P **P** 05 56 51.5 +0.2
baz=96,SNR=5.9
EDW2 Edwards Air Fo 96.63 56⇑P **P** 05 56 52.6 +0.9
baz=96,SNR=7.5
TIN Tinemaha 96.69 54⇑P **P** 05 56 53.1 +1.2
baz=97
CWC Cottonwood Cre 96.74 54⇓P **P** 05 56 52.4 +0.2
baz=97
HAWA Hanford 96.78 44 *e*P **P** 05 56 51.0 -1.3
comp=Z,4.0nm,1.6s,mb4.6
HAWA LR LR
comp=Z,73nm,20.0s
NVAR Mina Array Bea 96.79 52 P **P** 05 56 51.7 -0.7
comp=Z,18nm,1.2s,mb5.4,baz=252,slow=4.0,SNR=22
BFSC Mount Baldy St 96.83 56⇓P **P** 05 56 53.9 +1.3
baz=97
R08A Mina 96.93 52⇓P **P** 05 56 53.3 +0.2
baz=97
LRMC Laurel Mountai 96.94 55⇓P **P** 05 56 54.4 +1.3
baz=97
M08A Happy Creek Ra 97.06 49⇑P **P** 05 56 53.9 +0.2
baz=97
P08A Dixie Valley 97.10 51⇑P **P** 05 56 54.7 +0.8
baz=97
O08A Rochester Mine 97.11 50⇓P **P** 05 56 54.2 +0.3
baz=97
K08A Mann Creek Ran 97.12 48⇓P **P** 05 56 54.2 +0.3
baz=97
Q08A Gabbs 97.13 52⇓P **P** 05 56 54.0 +0.1
baz=97,SNR=14
109C Camp Elliot, M 97.13 58⇓P **P** 05 56 54.9 +0.9
baz=97
MURC Murrieta 97.13 57⇑P **P** 05 56 54.1 +0.1
baz=97
MPMC Manual Prospec 97.17 55⇑P **P** 05 56 54.9 +0.7
baz=97,SNR=13
L08A Fields 97.17 48⇓P **P** 05 56 54.2 +0.1

baz=97
N08A GE Springer Mi 97.18 50 ⇑P P 05 56 54.5 +0.3
baz=97,SNR=11
H08A Prairie City 97.18 46 ⇑P P 05 56 53.0 -1.2
baz=97
I08A Drewsey 97.19 47 ⇑P P 05 56 53.7 -0.6
baz=97
SNAA Sanae 97.20 188 ⇓*i*P P 05 56 52.8 -1.5
SNAA *e* 05 56 56.4
SNAA *e* 05 56 59.6
SNAA *e* pP 05 57 06.9 -5.3
SNAA *e* 05 57 24.4
SNAA *e* 06 00 48.4
SNAA *e* 06 00 52.6
SNAA *e* 06 01 04.2
SNAA *e* 06 01 27.0
SNAA Sanae 97.20 188 *i*P P 05 56 52.5 -1.8
SNAA Sanae 97.20 188 *e*P P 05 56 52.8 -1.4
comp=Z,36nm,1.3s,mb5.6
F08A Pendleton 97.24 45 ⇑P P 05 56 54.0 -0.5
baz=97
GRAC Grapevine Rang 97.37 54 ⇓P P 05 56 56.1 +1.0
baz=97,SNR=8.8
BBRC Big Bear Sol-O 97.44 57 ⇓P P 05 56 56.2 +0.8
baz=97
RRX Edison Barstow 97.44 56 ⇑P P 05 56 55.6 +0.3
baz=97
S09A Goldfield 97.56 53 ⇑P P 05 56 56.6 +0.7
baz=98,SNR=15
TPH Tonopah 97.60 53 *e*P P 05 56 57.6 +1.5
TPH pmax pmax
comp=Z,46nm,1.6s,mb5.8
TPH MLR MLR
comp=Z,869nm,21.0s
TPH Tonopah 97.60 53 *e*P P 05 56 57.6 +1.6
comp=Z,46nm,1.6s,mb5.8
TPH LR LR
comp=Z,869nm,21.0s
GSC Goldstone 97.64 56 *e*P P 05 56 59.1 +2.8
GSC Goldstone 97.64 56 ⇑P P 05 56 56.4 +0.2
baz=98
N09A Rock Creek Ran 97.65 50 ⇓P P 05 56 56.8 +0.5
baz=98
L09A Wilkinson Ranc 97.66 49 ⇓P P 05 56 56.6 +0.3
baz=98
K09A Rome 97.68 48 ⇑P P 05 56 56.5 0.0
baz=98,SNR=9.3
MONP Monument Peak 97.71 58 ⇑P P 05 56 57.2 +0.7
baz=98
Q09A Carvers 97.71 52 ⇑P P 05 56 56.8 +0.3
baz=98
FURC Furnace Creek, 97.72 54 ⇑P P 05 56 56.9 +0.2
baz=98
R09A Tonopah 97.73 53 ⇑P P 05 56 57.1 +0.5
baz=98,SNR=17
PFO Pinyon Flat Ob 97.75 57 PFAKE 05 57 10.0 +13
PFO LR LR
comp=Z,711nm,19.0s
PFO Pinyon Flat Ob 97.75 57 ⇓P P 05 56 55.2 -1.5
baz=98
M09A Marrel Ranch, 97.76 49 ⇓P P 05 56 56.5 -0.3
baz=98
I09A Lost Marbles R 97.79 47 ⇑P P 05 56 56.5 -0.4
baz=98
P09A Austin 97.81 51 ⇑P P 05 56 57.2 +0.1
baz=98
O09A Fish Creek Ran 97.83 51 ⇓P P 05 56 58.2 +1.1
baz=98,SNR=13
BMN Battle Mountai 97.83 50 *e*P P 05 56 59.4 +2.3
comp=Z,100nm,2.0s,mb6.0
BMN LR LR
comp=Z,957nm,21.0s
H09A Durkee 97.91 46 ⇓P P 05 56 56.9 -0.6
baz=98
HEC Hector,Ludlow 97.98 56 ⇑P P 05 56 57.8 0.0
baz=98
SHOC Shoshone 98.13 55 ⇓P P 05 56 58.3 -0.2
baz=98
U10A Ash Meadows, A 98.14 54 ⇓P P 05 56 58.7 +0.2
baz=98
BELC Belle Mtn. 98.17 57 ⇑P P 05 56 59.5 +0.9
baz=98
BMO Blue Mountains 98.18 46 *e*P P 05 56 58.7 0.0
BMO *e* pP 05 57 15.9 -0.7
BMO pmax pmax
comp=Z,57nm,1.8s,mb5.8
BMO Blue Mountains 98.18 46 *e*P P 05 56 58.7 0.0
comp=Z,56nm,1.8s,mb5.8
BMO LR LR
comp=Z,866nm,20.0s
SWSC Sam W. Stewart 98.23 58 ⇑P P 05 56 59.9 +1.0
baz=98
R10A Warm Springs 98.34 53 ⇑P P 05 56 59.5 +0.1
baz=98
O10A Cortez Mining, 98.37 51 ⇑P P 05 56 59.9 +0.3
baz=98
TUQ Turquoise Mtn. 98.37 55 ⇑P P 05 57 00.4 +0.9
baz=98
N10A Dunphy 98.40 50 ⇑P P 05 56 59.8 +0.1
baz=98
M10A I.L. Ranch, Tu 98.45 49 ⇓P P 05 57 00.3 +0.4
baz=98
GMRC Granite Mounta 98.53 56 ⇑P P 05 57 01.4 +1.2
baz=98
NEW Newport 98.59 42 *e*P P 05 56 58.7 -1.8
comp=Z,38nm,1.4s,mb5.7
NEW LR LR
comp=Z,2μm,20.0s
ARU Arti 98.72 326 *e*P P 05 56 57.3 -3.8
ARU *e* 06 00 56.8
ARU *e*S SKSac 06 07 28.0 -5.6
ARU *e*PS PS 06 09 48.5 -10
ARU *e*SS SS 06 15 06.6 -5.8
ARU Arti 98.72 326 *e*PP PP 06 01 04.8 +2.1
ARU LR LR
comp=Z,1μm,22.0s
VNA1 Neumayer--Stat 98.85 187 ⇑*i*P P 05 57 00.9 -0.8
VNA1 *e* 05 57 04.9
VNA1 *e* 05 57 08.0
VNA1 *e* pP 05 57 16.4 -3.2
VNA1 *e* 05 57 31.4
VNA1 *e* 06 01 01.0
VNA1 *e* 06 01 04.4
VNA1 *e* 06 01 17.2
VNA1 *e* 06 01 31.1
P11A Circle Ranch, 98.88 51 ⇓P P 05 57 02.7 +0.9
baz=99
IRM Iron Mountain 98.89 57 ⇑P P 05 57 02.4 +0.5
baz=99
U11A Corn Creek 98.90 55 ⇓P P 05 57 02.4 +0.5
baz=99
N11A Elko Archery C 98.99 50 ⇓P P 05 57 02.8 +0.5
baz=99
O11A Cowboy Ranch, 99.00 51 ⇓P P 05 57 02.6 +0.2
baz=99
M11A Holland Ranch, 99.00 49 ⇑P P 05 57 02.7 +0.4
baz=99
GLA Glamis 99.05 58 ⇑P P 05 57 03.9 +1.3
baz=99
SHPR Sheep Range 99.09 54 *e*P P 05 57 05.1 +2.3
V12A Nelson 99.27 55 ⇓P P 05 57 04.5 +0.9
baz=99
ELK Elko 99.36 50 PFAKE 05 57 10.0 +6.0
ELK LR LR
comp=Z,878nm,20.0s
N12A Clover Valley, 99.52 50 ⇑P Pdif 05 57 05.4 +0.8
baz=99
P12A McGill 99.52 51 ⇓P Pdif 05 57 05.2 +0.5
baz=99
Q12A Willow Creek R 99.55 52 ⇓P Pdif 05 57 05.4 +0.6
baz=99
U12A Valley of Fire 99.58 55 ⇑P Pdif 05 57 05.6 +0.6
baz=100
M12A Wells 99.66 49 ⇑P Pdif 05 57 06.3 +1.0
baz=100
O12A Currie 99.70 51 ⇑P Pdif 05 57 06.1 +0.6
baz=100
W13A Hualapai Mount 100.01 56 ⇓P Pdif 05 57 08.3 +1.5
baz=100
BSMT Bassoo Peak 100.12 43 *e*Pdif Pdif 05 57 08.5 +1.2
N13A Wendover, West 100.16 50 ⇑P Pdif 05 57 08.4 +0.9
baz=100
HLID Hailey 100.16 47 *e*Pdif Pdif 05 57 06.5 -1.0
HLID LR LR
comp=Z,1μm,21.0s
ARUT Antelope Range 100.55 53 *e*P Pdif 05 57 09.1 -0.2

MSO Missoula 100.65 44 PFAKE 05 57 20.0 +10
MSO LR LR
comp=Z,548nm,20.0s
W14A Seligman 100.67 56 ⇑P Pdif 05 57 10.9 +1.2
baz=101
CHMT Chamberlain Mo 101.13 44 *e*Pdif Pdif 05 57 13.0 +1.2
DUG Dugway 101.18 51 *e*Pdif Pdif 05 57 16.9 +4.8
DUG LR LR
comp=Z,930nm,22.0s
EDM Edmonton 101.20 38 *e*P Pdif 05 57 13.7 +1.6
115A Sonoran Desert 101.21 58 ⇑P Pdif 05 57 13.6 +1.5
baz=101
X15A Humboldt 101.32 57 ⇑P Pdif 05 57 14.1 +1.5
baz=101
W15A Williams 101.33 56 ⇑P Pdif 05 57 13.9 +1.2
baz=101
MCMT McKenzie Canyo 101.34 46 *e*P Pdif 05 57 13.3 +0.5
DLMT Dillon 101.54 46 *e*Pdif Pdif 05 57 14.7 +1.1
MVU Marysvale 101.56 53 PFAKE 05 57 20.0 +6.3
MVU LR LR
comp=Z,1μm,21.0s
MSU Marysvale 101.59 53 *e*P Pdif 05 57 17.0 +3.1
MSU *e* 06 01 20.6
LRM Limekiln Ridge 101.65 45 *e*Pdif Pdif 05 57 15.9 +1.8
PMSA Palmer Station 101.70 166 PFAKE 05 57 30.0 +16
PMSA LR LR
comp=Z,945nm,20.0s
HWUT Hardware Ranch 102.18 49 *e*PP PP 06 01 29.5 +0.5
HWUT LR LR
comp=Z,599nm,19.0s
BOZ Bozeman (W) 102.22 45 *e*Pdif Pdif 05 57 18.3 +1.6
BOZ LR LR
comp=Z,525nm,20.0s
QLMT Earthquake Lak 102.35 46 *e*P Pdif 05 57 19.5 +2.2
DAU Daniels Canyon 102.38 51 *e*P Pdif 05 57 20.7 +3.3
DAU *e* 06 01 29.4
TMUT Trail Mountain 102.38 52 *e*Pdif Pdif 05 57 20.9 +3.6
RRI2 Red Ridge 102.41 48 *e*Pdif Pdif 05 57 20.0 +2.5
AHID Auburn Hatcher 102.55 48 PFAKE 05 57 30.0 +12
AHID LR LR
comp=Z,2μm,20.0s
TPAW Teton Pass 102.68 48 *e*Pdif Pdif 05 57 20.7 +2.0
MOOW Moose Ponds 102.83 47 *e*Pdif Pdif 05 57 21.1 +1.7
SRU San Rafael 102.90 52 *e*P Pdif 05 57 25.3 +5.6
SRU *e* 06 01 34.3
LOHW Long Hollow 102.93 47 *e*Pdif Pdif 05 57 22.8 +3.0
LKWY Lake 103.08 46 PFAKE 05 57 30.0 +9.5
LKWY LR LR
comp=Z,1μm,21.0s
EGMT Eagleton 103.51 43 *e*Pdif Pdif 05 57 26.4 +4.0
EGMT LR LR
comp=Z,950nm,20.0s
BW06 Boulder Array 103.69 48 *e*Pdif Pdif 05 57 24.9 +1.7
BW06 LR LR
comp=Z,2μm,20.0s
PDAR Pinedale Array 103.69 48 Pdiff Pdif 05 57 21.2 -2.0
comp=Z,1.2nm,1.1s,baz=252,slow=4.4,SNR=6.3
PDAR PP PP 06 01 41.6 +1.3
comp=Z,0.6nm,0.9s,baz=254,slow=5.5,SNR=4.2
PDAR PKKPbc PKKPbc 06 13 34.5 +20
comp=Z,0.7nm,0.9s,baz=94,slow=2.2,SNR=6.0
SMCO Snowmass 105.66 52 *e*P Pdif 05 57 31.7 -0.3
comp=Z,7.0nm,1.3s
LAO LASA Array 105.96 44 PFAKE 06 02 00.0 +15
LAO LR LR
comp=Z,1μm,22.0s
ANMO Albuquerque 106.09 56 *e*PKPdf PKiKP 06 01 48.1 +2.5
ANMO LR LR
comp=Z,744nm,19.0s
ISCO Idaho Springs 106.70 51 PFAKE 06 02 00.0 +13
ISCO LR LR
comp=Z,1μm,20.0s
SDCO Great Sand Dun 106.84 53 PFAKE 06 02 00.0 +13
SDCO LR LR
comp=Z,769nm,20.0s
MNTX Cornudas Mount 106.97 60 *e*PKPdf PKiKP 06 01 47.3 +0.1
MNTX LR LR
comp=Z,1μm,19.0s
KBS Kingsbay 107.54 352 *e*PP PP 06 01 56.2 -12
KBS *i* 06 11 53.6
KBS *e*SS SS 06 17 17.7 +3.9
KBS Kingsbay 107.54 352 PFAKE 06 02 00.0 +12
KBS LR LR
comp=Z,534nm,20.0s
RSSD Black Hills 107.66 47 *e*Pdif Pdif 05 57 42.9 +2.1
RSSD LR LR
comp=Z,2μm,21.0s
GNI Garni 107.90 309 PFAKE 06 02 00.0 +11
GNI LR LR
comp=Z,555nm,22.0s
LVZ Lovozero 108.16 339 PFAKE 06 02 00.0 +11
LVZ LR LR
comp=Z,555nm,20.0s
KIV Kislovodsk 109.16 313 PFAKE 06 02 00.0 +8.7
KIV LR LR
comp=Z,666nm,21.0s
KEV Kevo 109.90 342 PFAKE 06 02 00.0 +7.3
KEV LR LR
comp=Z,684nm,21.0s
OBN Obninsk 111.16 326 *i* PKIKP PKiKP 06 01 54.8 -0.2
OBN pmax pmax
comp=Z,8.0nm,1.4s
OBN MLR MLR
comp=Z,2μm,24.0s
OBN Obninsk 111.16 326 PFAKE 06 02 10.0 +15
OBN LR LR
comp=Z,1μm,20.0s
JCT Junction City 111.76 61 *e*PKIKP PKiKP 06 01 55.6 -0.6
JCT MLR MLR
comp=Z,865nm,19.0s
TRO Tromso 112.34 344 *e*PP PP 06 02 37.1 -6.2
TRO *i* 06 12 13.9
TRO AMS AMS 06 51 44.6
comp=Z,965nm,21.8s
WMOK Wichita Mounta 112.41 56 *e*PKIKP PKiKP 06 01 56.1 -1.3
KMBO Kilima Mbogo 112.58 265 *e*PKIKP PKiKP 06 01 58.9 +1.2
KMBO MLR MLR
comp=Z,699nm,21.0s
EFI East Falkland 114.45 161 PFAKE 06 02 10.0 +8.7
EFI LR LR
comp=Z,892nm,20.0s
BOSA Boshof 114.95 233 PFAKE 06 02 20.0 +18
BOSA LR LR
comp=Z,2μm,19.0s
HKT Hockley 115.22 61 PFAKE 06 02 10.0 +7.2
HKT LR LR
comp=Z,2μm,20.0s
EYMN Ely 115.64 41 PFAKE 06 02 20.0 +16
EYMN LR LR
comp=Z,2μm,22.0s
NATX Nacogdoches 116.09 59 PFAKE 06 02 20.0 +16
NATX LR LR
comp=Z,838nm,21.0s
LBTB Lobatse 116.26 236 PFAKE 06 02 20.0 +15
LBTB LR LR
comp=Z,1μm,21.0s
HOPE Hope Point 116.33 176 PFAKE 06 02 20.0 +15
HOPE LR LR
comp=Z,934nm,19.0s
BR131 Keskin Array S 116.43 310 PFAKE 06 02 20.0 +15
BR131 LR LR
comp=Z,345nm,22.0s
BRTR Keskin Array B 116.43 310 PKP PKPdf 06 02 03.3 -1.8
comp=Z,1.5nm,0.9s,baz=4.3,slow=5.0,SNR=7.3
BRTR PP PP 06 03 13.8 +1.5
comp=Z,0.4nm,0.4s,baz=96,slow=8.8,SNR=2.6
BRTR PKKPbc PKKPbc 06 12 34.9 +1.5
comp=Z,2.3nm,1.1s,baz=353,slow=5.0,SNR=8.1
BRTR Keskin Array B 116.43 310 PKIKP PKPdf 06 02 03.3 -1.8
BRTR 06 03 13.8
SUR Sutherland 116.45 227 PFAKE 06 02 20.0 +15
SUR LR LR
comp=Z,2μm,20.0s
AKASG Malin Array Be 116.69 322 PKP PKPdf 06 02 03.9 -1.7
comp=Z,0.4nm,0.3s,baz=65,slow=2.2,SNR=10
AKASG PP PP 06 03 13.6 -0.6
comp=Z,3.6nm,1.0s,baz=58,slow=6.8,SNR=11
AKASG PKKPbc PKKPbc 06 12 33.2 +0.8
comp=Z,0.2nm,0.3s,baz=257,slow=4.9,SNR=12
AKASG Malin Array Be 116.69 322 PKIKP PKPdf 06 02 03.9 -1.7
AKASG 06 03 13.6
MIAR Mount Ida 116.70 56 *e*PKIKP PKPdf 06 02 05.2 -0.4
MIAR MLR MLR
comp=Z,1μm,20.0s
JMIC Jan Mayen 117.03 352 *e*PP PP 06 03 13.6 -2.9

JMIC AMS AMS 06 46 43.5
comp=Z,200nm,23.7s
ANTO Ankara 117.04 310 PFAKE 06 02 20.0 +14
ANTO LR LR
comp=Z,344nm,20.0s
PLCA Paso Flores 117.50 146 PFAKE 06 02 20.0 +13
PLCA LR LR
comp=Z,988nm,20.0s
UALR University of 117.67 56 *e*PKPdf PKPdf 06 02 07.0 -0.6
LSZ Lusaka 117.69 247 PFAKE 06 02 20.0 +12
LSZ LR LR
comp=Z,960nm,20.0s
JFWS Jewell Farm 117.75 46 PFAKE 06 02 20.0 +12
JFWS LR LR
comp=Z,1μm,21.0s
CCM Cathedral Cave 118.02 52 *e*PKIKP PKPdf 06 02 08.1 -0.1
CCM MLR MLR
comp=Z,707nm,19.0s
KIS Kishinev 118.11 319 *e*PKIKP PKPdf 06 02 08.0 -0.4
KIS *e* 06 03 22.0
KIS MLR MLR
comp=N,400nm,20.0s
KIS MLR MLR
comp=E,6μm,20.0s
KIS MLR MLR
comp=Z,700nm,20.0s
KIS MLR MLR
comp=Z,1μm,22.0s
SUW Suwalki 118.84 328 *e*PKP PKPdf 06 02 02.1 -7.7
SUW *e*PP PP 06 03 30.5 +1.5
SUW L 06 49 03.0
comp=Z,1.5nm,28.0s
SUW Suwalki 118.84 328 *e*PKIKP PKPdf 06 02 02.1 -7.7
SUW *e* 06 03 30.5
OXF Oxford 120.10 56 PFAKE 06 02 20.0 +7.8
OXF LR LR
comp=Z,923nm,20.0s
BURAR Bucovina Array 120.22 320 ⇑*i*P PKPdf 06 02 15.7 +3.3
BURAR Bucovina Array 120.22 320 ⇑P PKPdf 06 02 15.7 +3.3
NB2 NORSAR Subarra 120.30 338 PKPd PKPdf 06 02 11.3 -1.3
comp=Z,4.6nm,1.1s,baz=44,slow=1.9
NB2 NORSAR Subarra 120.30 338 PKPd PKPdf 06 02 11.3 -1.3
baz=44,slow=1.9
NOA NORSAR Array B 120.30 338 PKP PKPdf 06 02 10.1 -2.5
comp=Z,2.7nm,0.8s,baz=53,slow=1.8,SNR=4.2
NOA PKKPbc PKKPbc 06 12 21.3 +1.9
comp=Z,3.2nm,1.0s,baz=222,slow=3.6,SNR=3.5
MLR Muntele Rosu 120.48 318 ⇓*i*P PKPdf 06 02 15.2 +2.3
MLR Muntele Rosu 120.48 318 PKIKP PKPdf 06 02 15.3 +2.4
MLR Muntele Rosu 120.48 318 ⇓P PKPdf 06 02 15.2 +2.3
NAO01 NORSAR Array S 120.55 338 PFAKE 06 02 20.0 +7.0
NAO01 LR LR
comp=Z,1μm,21.0s
USIN University of 120.81 51 *e*PKPdf PKPdf 06 02 14.2 +0.6
VOIR 121.09 318 ⇓*i*P PKPdf 06 02 14.9 +0.8
VOIR 121.09 318 ⇓P PKPdf 06 02 14.8 +0.8
PLAL Pickwick Lake 121.10 55 PFAKE 06 02 30.0 +16
PLAL LR LR
comp=Z,835nm,21.0s
KOLS Kolonicke sedl 121.53 322 *e*PKP PKPdf 06 02 14.7 -0.2
WCI Wyandotte Cave 121.80 51 *e*PKPdf PKPdf 06 02 13.1 -2.3
WCI *e*pPKPdf pPKPdf 06 02 31.7 -2.3
KONO Kongsberg 121.83 338 *e*PP PP 06 03 48.0 -1.5
KONO *i* 06 15 03.5
KONO AMS AMS 06 59 22.9
comp=Z,10μm,20.5s
KONO Kongsberg 121.83 338 PFAKE 06 02 30.0 +14
KONO LR LR
comp=Z,1μm,20.0s
STHS Stebnicka Huta 121.94 323 *e*PKP PKPdf 06 02 15.4 -0.3
CRVS Cervenica-Dubn 122.03 323 *e*PKP PKPdf 06 02 15.4 -0.5
DRGR 122.11 320 ⇑*i*P PKPdf 06 02 14.3 -1.8
DRGR 122.11 320 ⇓*i*P PKPdf 06 02 15.8 -0.3
DRGR 122.11 320 ⇑P PKPdf 06 02 14.3 -1.8
GKP Gorka Klasztor 122.30 329 *e*PKP PKPdf 06 02 19.0 +2.6
GKP L 06 53 55.1
comp=Z,2.3nm,24.2s
LRAL Lakeview Retre 122.34 57 *e*PKPdf PKPdf 06 02 15.0 -1.5
LRAL LR LR
comp=Z,1μm,19.0s
OJC Ojcow 122.42 325 *e*PKIKP PKPdf 06 02 15.5 -1.1
OJC *e* 06 03 53.6
NIE Niedzica 122.48 324 *e*PKP PKPdf 06 02 16.8 0.0
AAM Ann Arbor 122.59 45 PFAKE 06 02 30.0 +13
AAM LR LR
comp=Z,877nm,20.0s
SWET Sewanee 122.77 54 *e*PKPdf PKPdf 06 02 17.2 -0.1
KECS Kecovo 122.79 323 *e*PKP PKPdf 06 02 19.6 +2.2
BER Bergen 122.82 340 *e*PP PP 06 03 56.5 +0.4
BER AMS AMS 06 58 13.1
comp=Z,691nm,20.2s
BZS Buzias 123.27 319 ⇓*i*P PKPdf 06 02 17.2 -1.1
BZS Buzias 123.27 319 ⇓P PKPdf 06 02 17.2 -1.1
VTS Vitosha 123.30 315 ⇓*i*P PKPdf 06 02 20.6 +2.3
VTS Vitosha 123.30 315 ⇓P PKPdf 06 02 20.6 +2.3
PSZ Piszkesteto 123.39 322 *e*pPKP/D PKPdf 06 02 21.3 +2.8
PSZ Piszkesteto 123.39 322 ⇑*i*P PKPdf 06 02 18.1 -0.4
PSZ Piszkesteto 123.39 322 PKIKP PKPdf 06 02 17.0 -1.5
PSZ Piszkesteto 123.39 322 ⇑P PKPdf 06 02 18.1 -0.4
PSZ *e*P 06 02 21.3
OKC Ostrava-Krasne 123.54 325 *e*PKPdf PKPdf 06 02 21.1 +2.3
OKC AMS AMS 06 54 50.0
comp=Z,1μm,25.0s
ACSO Alum Creek Sta 123.72 48 *e*PKPdf PKPdf 06 02 20.4 +1.3
ACSO LR LR
comp=Z,803nm,20.0s
VYHS Vyhne 123.77 323 *e*PKP PKPdf 06 02 21.4 +2.2
VYHS *e*PP PP 06 03 58.3 -4.3
CPCT Cooper Cave 123.84 54 *e*PKPdf PKPdf 06 02 18.3 -1.1
MORC Moravsky Berou 123.91 325 ⇑*i*P PKPdf 06 02 19.4 -0.1
MORC Moravsky Berou 123.91 325 PKIKP PKPdf 06 02 18.8 -0.7
MORC Moravsky Berou 123.91 325 ⇑P PKPdf 06 02 19.4 -0.1
KSP Ksiaz 124.06 327 *e*PKP PKPdf 06 02 22.6 +2.8
KSP *e*PP PP 06 04 05.2 +0.6
KSP L 06 51 03.2
comp=Z,2.5nm,28.4s
KSP Ksiaz 124.06 327 *e*PKIKP PKPdf 06 02 16.1 -3.7
KSP *e* 06 04 04.7
KSP Ksiaz 124.06 327 *e*PKPdf PKPdf 06 02 16.1 -3.7
KSP *e*PP PP 06 04 04.7 +0.1
KSP *e*PS PS 06 14 27.4 +24
KSP LR LR
comp=Z,3μm,28.5s
MYNC Murphy 124.24 54 *e*PKIKP PKPdf 06 02 18.7 -1.4
MYNC MLR MLR
comp=Z,733nm,20.0s
DPC Dobruska-Polom 124.30 326 *e*PKPdf PKPdf 06 02 20.1 -0.2
DPC *e*SP SP 06 13 57.2 -0.7
DPC AMS AMS 06 56 50.0
comp=Z,1μm,20.6s
UPC Upice 124.39 326 *e*PKPdf PKPdf 06 02 20.4 0.0
UPC *e*pPKP pPKPdf 06 02 23.4 -16
UPC *e*PP PP 06 04 09.9 +3.1
BORG Borgarnes 124.40 356 PFAKE 06 02 30.0 +10
BORG LR LR
comp=Z,674nm,19.0s
VRAC Vranov 124.68 325 PKIKP PKPdf 06 02 23.9 +2.9
PKSM Moragy 124.91 321 ⇑*i*P PKPdf 06 02 20.8 -0.6
PKSM Moragy 124.91 321 ⇑P PKPdf 06 02 20.8 -0.6
ZST Bratislava 124.93 324 *e*PKP PKPdf 06 02 24.1 +2.6
PVCC Panska Ves 125.16 327 *e*PKPdf PKPdf 06 02 21.9 0.0
PVCC *e*pPKP pPKPdf 06 02 25.2 -15
PVCC *e*PP PP 06 04 17.5 +5.6
PVCC AMS AMS 06 52 20.0
comp=Z,2μm,32.0s
ERPA Erie 125.21 45 PFAKE 06 02 30.0 +8.0
ERPA LR LR
comp=Z,962nm,20.0s
BSEG Bad Segeberg 125.28 332 *e*PKPdf PKPdf 06 02 20.7 -1.4
BSEG *e*PP PP 06 04 12.7 0.0
BRG Berggiesshubel 125.31 328 *e*PKPdf PKPdf 06 02 21.6 -0.6
BRG *e*PP PP 06 04 12.8 -0.1
BRG Berggiesshubel 125.31 328 *e*PKP PKPdf 06 02 21.4 -0.7
comp=Z,7.8nm,1.2s
BRG *e* 06 02 25.2
comp=Z,68nm,2.0s
BRG PP PP 06 04 11.0 -1.9
BRG *e*PKKP 06 12 45.0
comp=Z,2.1nm,1.2s
BRG *e* 06 14 06.0
BRG *e* 06 16 00.2
comp=Z,7.2nm,1.6s
BRG SS SS 06 21 12.0 +6.4

BRG
comp=N,169nm,18.2s
BRG
comp=E,782nm,25.1s
BRG
comp=Z,522nm,20.0s
BRG Berggiesshubel 125.31 328 ePKIKP PKPdf 06 02 21.4 -0.8
BRG 06 04 11.0
BRG e 06 14 06.0
BRG SS SS 06 21 12.0 +6.4
BRG pmax pmax
comp=Z,10.0nm,1.2s
BRG pmax pmax
comp=Z,8.0nm,2.0s
BRG pmax pmax
comp=Z,68nm,1.2s
BRG pmax pmax
comp=Z,2.0nm,1.6s
BRG MLR MLR
comp=N,7µm,18.2s
BRG MLR MLR
comp=E,169nm,25.1s
BRG MLR MLR
comp=Z,782nm,20.0s
BRG Berggiesshubel 125.31 328 ePKP PKPdf 06 02 21.4 -0.7
BRG e 06 02 25.2
BRG PP PP 06 04 11.0 -1.9
BRG ePKKP 06 12 45.0
BRG e 06 14 06.0
BRG e 06 16 00.2
BRG SS SS 06 21 12.0 +6.4
BRG LR LR
comp=Z,520nm,20.0s
TREC Trest 125.31 325 ePKPdf PKPdf 06 02 21.8 -0.4
TREC epPKP pPKPdf 06 02 24.6 -16
TREC AMS AMS 06 57 30.0
comp=Z,1µm,20.7s
PRU Pruhonice 125.47 326 ePKPdf PKPdf 06 02 23.5 +1.0
PRU epPKP pPKPdf 06 02 25.5 -16
PRU ex x 06 04 26.9
PRU eSP SP 06 14 10.5 +2.4
PRU AMS AMS 06 57 00.0
comp=Z,1µm,22.2s
TSUM Tsumeb 125.48 238 PFAKE 06 02 40.0 +17
TSUM LR LR
comp=Z,1µm,19.0s
CLL Collm 125.56 328 ePKPpre 06 02 21.9
CLL ePKPdf PKPdf 06 02 25.4 +2.8
comp=Z,36nm,1.5s
CLL ePP PP 06 04 15.9 +1.4
CLL ePPP 06 06 51.7
CLL ePPPP 06 08 47.0
CLL ePS PS 06 14 12.7 -3.7
CLL ePPS 06 15 38.0
CLL eSS SS 06 21 07.0 -1.7
CLL eSSS 06 26 01.5
CLL eLR LR 06 44 23.7
CLL eL 06 57 09.8
comp=Z,2µm,22.0s
CLL Collm 125.56 328 ePKIKP PKPdf 06 02 21.0 -1.6
comp=Z,logA/T=1.0
CLL *i* *PPKP 06 02 24.9
CLL ePP PP 06 04 16.0 +1.5
CLL ePPP 06 06 54.0
CLL e 06 08 48.0
CLL ePS PS 06 14 15.0 -1.4
CLL ePPS 06 15 48.0
CLL e 06 19 18.0
CLL eSS SS 06 21 12.0 +3.3
CLL e 06 24 06.0
CLL Collm 125.56 328 ePKPdf PKPdf 06 02 21.0 -1.6
comp=Z,15nm,1.6s
CLL *i* pPKPdf pPKPdf 06 02 24.9 -16
comp=Z,35nm,1.5s
CLL ePP PP 06 04 16.0 +1.5
CLL ePPP 06 06 54.0
CLL ePPPP 06 08 48.0
CLL ePS PS 06 14 15.0 -1.4
CLL ex x 06 14 48.0
CLL ePPS 06 15 48.0
CLL e(PPPrev) 06 19 18.0
CLL eSS SS 06 21 12.0 +3.3
CLL ex x 06 24 06.0
CLL e(SSS) 06 26 36.0
CLL Collm 125.56 328 *i* PKIKP PKPdf 06 02 24.9 +2.3
CLL e 06 04 16.0
CLL pmax pmax
comp=Z,17nm,1.5s
CLL MLR MLR
comp=Z,2µm,17.2s
CLL Collm 125.56 328 *i* PKP PKPdf 06 02 24.9 +2.3
CLL ePP PP 06 04 16.0 +1.5
CLL LR LR
comp=Z,2µm,17.2s
FBE Freiberg 125.59 328 ePKPdf PKPdf 06 02 22.2 -0.5
SCHQ Schefferville 125.92 26 PFAKE 06 02 30.0 +6.6
SCHQ LR LR
comp=Z,2µm,22.0s
FWV Forest Hill 126.14 50 ePKPdf PKPdf 06 02 25.4 +1.7
MCWV Mont Chateau 126.19 47 PFAKE 06 02 40.0 +16
MCWV LR LR
comp=Z,1µm,20.0s
NRDL Niedersach Rie 126.29 331 ePKPdf PKPdf 06 02 21.8 -2.2
NRDL ePP PP 06 04 19.6 +0.2
ELN Prospectdale 126.30 50 ePKPdf PKPdf 06 02 25.9 +1.8
ELN ePP PP 06 04 17.6 -1.9
TANN Tannenbergstha 126.35 328 ePKPdf PKPdf 06 02 23.8 -0.4
TANN ePP PP 06 04 20.2 +0.4
WERD Werda 126.41 328 ePKPdf PKPdf 06 02 23.4 -0.9
GUNZ Gunzen 126.44 328 ePKPdf PKPdf 06 02 23.9 -0.4
NKC Novy Kostel 126.46 328 ePKPdf PKPdf 06 02 24.1 -0.3
NKC AMS AMS 06 59 30.0
comp=Z,1µm,19.3s
KHC Kasperske Hory 126.46 326 ePKPdf PKPdf 06 02 23.6 -0.8
KHC epPKP pPKPdf 06 02 27.4 -16
KHC ePP PP 06 04 24.1 +3.6
KHC eSP SP 06 14 21.8 +5.0
KHC eSKKP 06 15 41.5
KHC ex x 06 15 54.5
KHC AMS AMS 06 53 40.0
comp=Z,2µm,23.9s
KHC Kasperske Hory 126.46 326 ePKP PKPdf 06 02 23.6 -0.8
KHC e 06 02 27.4
KHC ePP PP 06 04 24.1 +3.6
KHC ePS PS 06 14 21.8 -2.5
KHC LR LR
comp=Z,2µm,23.9s
WERN Wernitzgruen 126.46 328 ePKPdf PKPdf 06 02 24.1 -0.3
GEC2 GERESS Array S 126.55 326 ePKPdf PKPdf 06 02 24.0 -0.5
GEC2 ePP PP 06 04 20.6 -0.5
GERES GERESS Array B 126.55 326 PKP PKPdf 06 02 23.6 -0.9
comp=Z,2.9nm,0.8s,baz=80,slow=1.6,SNR=14
BLA Blacksburg 126.55 50 ePKIKP PKPdf 06 02 23.1 -1.5
BLA MLR MLR
comp=Z,57nm,19.0s
MOX Moxa 126.65 328 ePKPdf PKPdf 06 02 23.1 -1.6
MOX ePP PP 06 04 21.7 -0.1
MOX Moxa 126.65 328 eP PKPdf 06 02 24.2 -0.6
comp=Z,45nm,1.9s
MOX e 06 04 21.0
MOX
comp=Z,900nm,19.0s
MOX Moxa 126.65 328 ePKIKP PKPdf 06 02 24.2 -0.6
MOX e 06 04 21.0
MOX pmax pmax
comp=Z,1.0nm,1.9s
MOX MLR MLR
comp=Z,45µm,19.0s
MANZ Manzenberg 126.78 328 ePKPdf PKPdf 06 02 24.6 -0.4
MANZ ePP PP 06 04 22.8 +0.2
WET Wettzell 126.84 326 ePKPdf PKPdf 06 02 24.8 -0.3
WET ePP PP 06 04 22.8 -0.2
ROTZ Rotzenmuhle 126.85 327 ePKPdf PKPdf 06 02 23.5 -1.6
ROTZ ePP PP 06 04 23.6 +0.5
DOBS Dobrina 126.90 322 ePKPdf PKPdf 06 02 27.7 +2.5
SSPA Standing Stone 127.23 45 PFAKE 06 02 40.0 +14
SSPA LR LR
comp=Z,733nm,20.0s
BOJS Bojanci 127.34 321 ePKPdf PKPdf 06 02 25.5 -0.6
BOJS e 06 02 29.0
UBBA Unterbreizbach 127.37 329 ePKPdf PKPdf 06 02 25.4 -0.7
UBBA ePP PP 06 04 26.8 +0.2
GRA1 Grafenberg Arr 127.42 328 ePKPdf PKPdf 06 02 25.9 -0.3
GRA1 ePP PP 06 04 27.0 +0.2
GRA1 eSdif Sdif 06 11 50.3 -35
GRA1 eSP SP 06 13 43.2 -42
GRA1 eSS SS 06 21 23.1 -8.9
GRA1 LR LR
comp=Z,900nm,21.8s
GRF Grafenberg Arr 127.42 328 ePKPdf PKPdf 06 02 25.9 -0.3
GRF ePP PP 06 04 27.0 +0.2
GRF eSdiff Sdif 06 11 50.3 -35
GRF eSP SP 06 13 43.2 -42
GRF eSS SS 06 21 23.1 -8.9
GRF eL 06 58 40.4
comp=Z,902nm,21.8s
GRF Grafenberg Arr 127.42 328 ePKIKP PKPdf 06 02 25.9 -0.3
GRF e 06 04 27.0
GRF MLR MLR
comp=Z,600nm,21.8s
GRF Grafenberg Arr 127.42 328 ePKIKP PKPdf 06 02 25.9 -0.3
GRF e 06 04 27.0
GRF MLR MLR
comp=Z,900nm,21.8s
VISS Visnje 127.45 322 ePKPdf PKPdf 06 02 25.9 -0.4
IBBN Ibbenburen 127.51 332 ePP PP 06 04 27.5 0.0
LONY Lake Ozonia 127.74 40 ePKPdf PKPdf 06 02 25.6 -1.2
VOY Vojsko 127.91 323 ePKPdf PKPdf 06 02 28.2 +1.1
VOY e 06 02 38.8
BINY Binghamton 127.91 43 PFAKE 06 02 40.0 +13
BINY LR LR
comp=Z,2µm,22.0s
DWPF Disney 127.95 62 PFAKE 06 02 40.0 +13
DWPF LR LR
comp=Z,681nm,20.0s
FUR Furstenfeldbru 128.26 326 ePP PP 06 04 32.3 -0.1
NCB Newcomb 128.27 40 ePKPdf PKPdf 06 02 29.5 +1.7
NCB LR LR
comp=Z,1µm,20.0s
BUG Bochum--Univer 128.31 331 ePP PP 06 04 32.8 +0.1
CBN Corbin 128.50 48 PFAKE 06 02 40.0 +12
CBN LR LR
comp=Z,2µm,20.0s
NNA Nana 128.52 113 PKP PKPdf 06 02 28.5 +0.2
comp=Z,35nm,1.2s,baz=12,slow=3.3,SNR=3.9
NNA Nana 128.52 113 PKP PKPdf 06 02 28.5 +0.2
NNA LR LR
comp=Z,907nm,19.0s
TNS Taunus Mts 128.52 330 ePKPdf PKPdf 06 02 27.9 -0.4
TNS ePP PP 06 04 34.8 +0.7
MVL Millersville 128.56 46 ePKPdf PKPdf 06 02 27.5 -0.9
WTTA Wattenberg 128.57 325 *i* P PKPdf 06 02 27.9 -0.5
comp=Z,71nm,1.5s,SNR=21
WTTA Wattenberg 128.57 325 *i* P PKPdf 06 02 27.9 -0.5
ATAH Atahualpa 128.78 107 PKP PKPdf 06 02 29.9 +1.1
comp=Z,13nm,1.0s,baz=160,slow=6.6,SNR=16
STU Stuttgart 129.03 328 ePKPdf PKPdf 06 02 29.8 +0.5
STU ePP PP 06 04 38.0 +0.6
STU Stuttgart 129.03 328 PKIKP PKPdf 06 02 21.3 -8.0
CNNC Cliffs of the 129.11 52 ePKPdf PKPdf 06 02 32.3 +2.9
CTI Castel Tesino 129.23 324 PKIKP PKPdf 06 02 29.3 -0.4
DAVA Damuels 129.54 326 *i* *iP* PKPdf 06 02 28.3 -2.0
comp=Z,33nm,1.2s,SNR=6.6
LBNH Lisbon 129.58 39 PFAKE 06 02 40.0 +10
LBNH LR LR
comp=Z,1µm,20.0s
ESK Eskdalemuir 129.62 341 PFAKE 06 02 40.0 +10
ESK LR LR
comp=Z,717nm,21.0s
LANF Langenberg 129.63 329 PKP PKPdf 06 02 29.7 -0.7
CING Cingoli 129.66 320 PKP PKPdf 06 02 29.8 -0.7
BRMO Bormio 129.73 325 PKP PKPdf 06 02 28.5 -2.1
BFO Black Forest 129.76 328 ePKPdf PKPdf 06 02 30.2 -0.5
BFO ePP PP 06 04 42.3 +0.1
RNI2 Rionero Sannit 129.83 318 PKP PKPdf 06 02 33.7 +2.9
WLF Walferdange 130.02 330 ePKPdf PKPdf 06 02 30.6 -0.6
WLF ePP PP 06 04 44.3 +0.4
WLF Walferdange 130.02 330 ePKPdf PKPdf 06 02 31.9 +0.7
SOI Samo 130.03 312 PKIKP PKPdf 06 02 34.8 +3.6
SDI San Donato 130.06 318 PKIKP PKPdf 06 02 29.3 -1.9
LVC Limon Verde 130.10 130 ePKPdf PKPdf 06 02 32.1 +0.8
LVC LR LR
comp=Z,1µm,19.0s
MGV Manicaragua 130.14 69 eP PKPdf 06 02 35.2 +3.8
BADI Badiali 130.20 321 PKP PKPdf 06 02 34.4 +2.9
FELD Feldberg im Sc 130.21 327 PKP PKPdf 06 02 30.1 -1.4
WLS Welschbruch 130.22 328 PKP PKPdf 06 02 30.4 -1.1
SFI Santa Sofia 130.24 321 PKIKP PKPdf 06 02 32.3 +0.7
CDF Champ du Feu 130.26 328 ePKIKP PKPdf 06 02 30.9 -0.7
comp=Z,132nm,1.9s
TUE Stuetta 130.31 325 PKP PKPdf 06 02 29.4 -2.3
GIVF Givet 130.36 331 ePKIKP PKPdf 06 02 31.6 -0.2
comp=Z,312nm,1.9s
ECH Echery 130.44 328 PKP PKPdf 06 02 31.0 -1.0
BAIF Baives 130.68 332 ePKIKP PKPdf 06 02 32.1 -0.3
comp=Z,98nm,1.6s
HRV Harvard--Oak R 130.68 41 PFAKE 06 02 40.0 +7.6
HRV LR LR
comp=Z,1µm,21.0s
MOF Molkenrain 130.68 328 PKP PKPdf 06 02 31.4 -1.0
BBS Basel-Blauen 130.73 327 PKIKP PKPdf 06 02 31.4 -1.1
HINF Hinteralfeld 130.85 328 ePKIKP PKPdf 06 02 32.0 -0.7
comp=Z,224nm,1.8s
WES Weston 130.90 41 PFAKE 06 02 40.0 +7.2
WES LR LR
comp=Z,783nm,20.0s
HAU Haudompre 131.00 328 ePKIKP PKPdf 06 02 32.4 -0.6
comp=Z,174nm,1.8s
HAU eR
comp=Z,2µm,22.8s
HAU Haudompre 131.00 328 ePKPdf PKPdf 06 02 32.4 -0.6
HAU LR LR
comp=Z,2µm,22.8s
THEF They Montfort 131.04 329 PKP PKPdf 06 02 32.5 -0.6
LOMF Lomont 131.16 328 PKP PKPdf 06 02 33.2 -0.1
MEZF Maizieres J'vi 131.33 330 ePKIKP PKPdf 06 02 33.6 0.0
comp=Z,283nm,1.8s
MCGN Macugnaga 131.38 325 PKP PKPdf 06 02 33.6 -0.1
CABF La Chapelle 132.02 327 ePKIKP PKPdf 06 02 35.0 +0.1
comp=Z,312nm,1.9s
LPL La Plagne 132.35 326 ePKIKP PKPdf 06 02 35.7 +0.1
comp=Z,43nm,1.4s
LPG La Plagne 132.35 326 ePKIKP PKPdf 06 02 35.9 +0.3
comp=Z,111nm,1.9s
BNI Bardonecchia 132.66 325 ePKIKP PKPdf 06 02 40.1 +3.9
PGF Pioggiola 132.73 321 ePKIKP PKPdf 06 02 35.9 -0.4
LOR Lormes 132.75 329 ePKIKP PKPdf 06 02 36.2 -0.1
comp=Z,136nm,1.8s
LOR eR
comp=Z,2µm,20.0s
LOR Lormes 132.75 329 ePKPdf PKPdf 06 02 36.2 -0.1
LOR LR LR
comp=Z,2µm,20.0s
MBDF Montbardon 132.80 325 ePKIKP PKPdf 06 02 36.2 -0.2
comp=Z,88nm,1.8s
SSF Saint Saulge 133.07 329 ePKIKP PKPdf 06 02 36.8 -0.1
comp=Z,170nm,1.9s
SMF Signal de Mont 133.18 329 ePKIKP PKPdf 06 02 36.8 -0.3
comp=Z,180nm,1.8s
ORIF Oris-en-Rattie 133.19 326 ePKIKP PKPdf 06 02 36.9 -0.3
comp=Z,40nm,1.3s
ORIF eR
comp=Z,1µm,22.0s
AVF Avril sur Loir 133.33 329 ePKIKP PKPdf 06 02 37.1 -0.3
comp=Z,81nm,1.7s
FRF La Foret Royal 133.57 324 ePKIKP PKPdf 06 02 37.8 -0.1
comp=Z,199nm,1.7s
LDF La Druitiere 133.71 333 ePKIKP PKPdf 06 02 37.9 -0.2
comp=Z,108nm,1.7s
PLDF La Plantade 133.74 328 PKP PKPdf 06 02 36.6 -1.6
BGF Bois d'Agland 133.74 329 ePKIKP PKPdf 06 02 38.2 0.0
comp=Z,123nm,1.6s
FLN La Foliniere 133.74 333 ePKIKP PKPdf 06 02 37.8 -0.4
FLN eR
comp=Z,2µm,21.0s
FLN La Foliniere 133.74 333 ePKPdf PKPdf 06 02 37.8 -0.4
FLN LR LR
comp=Z,2µm,21.0s
LMR La Mourre 133.79 323 ePKIKP PKPdf 06 02 37.9 -0.4
comp=Z,125nm,1.8s
VIVF Saint-Julien-l 133.90 326 ePKIKP PKPdf 06 02 38.3 -0.2
comp=Z,96nm,1.7s
SMRF Simiane la Rot 133.94 325 ePKIKP PKPdf 06 02 38.6 0.0
comp=Z,49nm,1.2s
LPAZ La Paz 134.17 124 PKPdf PKPdf 06 02 39.8 +0.8
LPAZ La Paz 134.17 124 PKP PKPdf 06 02 40.1 +1.1
comp=Z,9.2nm,1.0s,baz=247,slow=4.3,SNR=26
LPAZ PP PP 06 05 09.3 -1.3
comp=Z,10nm,1.3s,baz=226,slow=2.5,SNR=5.2
LPAZ La Paz 134.17 124 PKP PKPdf 06 02 40.1 +1.1
LPAZ PP PP 06 05 09.3 -1.3
LPAZ LR LR
comp=Z,508nm,21.0s
GRR Gorron 134.19 333 ePKIKP PKPdf 06 02 39.0 0.0
comp=Z,184nm,1.9s
PYM Petit Puy Mans 134.20 328 PKP PKPdf 06 02 39.2 +0.1
TCF Toulx Ste Croi 134.25 329 ePKIKP PKPdf 06 02 39.1 0.0
LBL Lubilhac 134.42 328 PKP PKPdf 06 02 39.8 +0.3
LASF Ste Croix 134.84 326 ePKIKP PKPdf 06 02 40.3 0.0
MFF Saint Martin d 135.18 331 ePKIKP PKPdf 06 02 41.9 +1.0
comp=Z,76nm,1.7s
CAF Calviac 135.25 328 ePKIKP PKPdf 06 02 41.4 +0.4
comp=Z,109nm,1.9s
ROSF Rostrenen 135.26 335 ePKIKP PKPdf 06 02 40.6 -0.4
comp=Z,68nm,1.5s
RJF Les Rejaudoux 135.28 329 ePKIKP PKPdf 06 02 41.5 +0.4
RJF eR
comp=Z,1µm,22.2s
RJF Les Rejaudoux 135.28 329 ePKPdf PKPdf 06 02 41.5 +0.4
RJF LR LR
comp=Z,1µm,22.3s
ROSC El Rosal 135.46 93 PKP PKPdf 06 02 42.4 +1.0
comp=Z,10nm,0.9s,baz=106,slow=13,SNR=12
ROSC El Rosal 135.46 93 ePKPdf PKPdf 06 02 41.9 +0.4
CPUP Villa Florida 135.47 144 PKP PKPdf 06 02 41.1 -0.3
comp=Z,2.9nm,0.7s,baz=282,slow=1.5,SNR=8.1
CPUP PP PP 06 05 17.8 -0.9
comp=Z,12nm,1.2s,baz=221,slow=3.6,SNR=5.7
CPUP Villa Florida 135.47 144 ePKPdf PKPdf 06 02 41.3 -0.1
CPUP LR LR
comp=Z,264nm,21.0s
KEST Kesra 135.90 313 PP PP 06 05 22.8 +1.3
comp=Z,1.2nm,0.8s,baz=177,slow=10,SNR=6.2
LFF La Frestale 135.93 329 ePKIKP PKPdf 06 02 42.8 +0.5
MTLF Montolieu 136.22 326 ePKIKP PKPdf 06 02 43.4 +0.6
comp=Z,34nm,1.4s
EPF Esparros 137.45 327 ePKIKP PKPdf 06 02 44.9 -0.2
comp=Z,1nm,1.2s
SDV Santo Domingo 139.54 87 PKP PKPdf 06 02 49.4 +0.4
comp=Z,29nm,1.0s,baz=273,slow=3.8,SNR=16
SDV Santo Domingo 139.54 87 ePKPdf PKPdf 06 02 46.3 -2.6
SDV PKP PKPdf 06 02 49.4 +0.4
SDV LR LR
comp=Z,294nm,20.0s
SIV San Ignacio 139.96 129 PKhKP 06 02 43.6
comp=Z,3.5nm,1.1s,baz=267,slow=5.9,SNR=2.1
SIV PP PP 06 05 47.5 +0.8
comp=Z,1.8nm,1.0s,baz=204,slow=8.1,SNR=3.6
BBSR BB Station 140.33 50 PFAKE 06 03 00.0 +10
BBSR LR LR
comp=Z,633nm,20.0s
SAML Samuel 141.97 118 ePKPdf PKPdf 06 02 48.8 -4.5
SAML LR LR
comp=Z,519nm,22.0s
ESDC Sonseca Array 142.11 327 PKhKP 06 02 48.1
comp=Z,1.5nm,0.8s,baz=18,slow=3.4,SNR=8.7
ESDC PP PP 06 05 58.2 -1.6
comp=Z,2.5nm,0.9s,baz=35,slow=7.3,SNR=6.3
ESLA Sonseca Array 142.11 327 ePKPdf PKPdf 06 02 52.7 -0.9
ESLA LR LR
comp=Z,5µm,22.0s
PVRL Vila Real 142.77 332 ePKP PKPdf 06 02 53.1 -1.6
PVIS Viseu 143.30 332 ePKP PKPdf 06 02 55.0 -0.7
MTE Manteigas 143.38 331 ePKP PKPdf 06 02 53.4 -2.4
MTE Manteigas 143.38 331 ePP PP 06 06 11.7 +4.2
MTE Manteigas 143.38 331 ePP PP 06 06 12.3 +4.8
MTE Manteigas 143.38 331 eLR LR 06 52 25.5
comp=Z,2µm,20.2s
MTE Manteigas 143.38 331 ePKPdf PKPdf 06 02 55.9 +0.1
SJG San Juan 143.55 72 PKP PKPdf 06 02 53.8 -2.3
comp=Z,30nm,1.0s,baz=31,slow=3.3,SNR=6.2
SJG San Juan 143.55 72 ePKPdf PKPdf 06 02 54.2 -1.9
SJG LR LR
comp=Z,470nm,20.0s
ECOG Cogollos-Vega 143.57 324 PKIKP PKPdf 06 02 53.0 -3.1
ELUQ Luque 143.77 325 PKHKP 06 02 52.8
PCBR Castelo Branco 143.79 331 ePKP PKPdf 06 02 53.6 -2.9
ELOJ Sierra Loja 144.00 324 PKHKP 06 02 52.8
EBAD Badajoz 144.39 329 P PKPdf 06 02 55.1 -2.5
PTOM Tomar 144.41 331 ePKP PKPdf 06 02 55.8 -1.8
PESTR Estremoz 144.59 330 ePKP PKPdf 06 02 56.1 -1.8
PESTR Estremoz 144.59 330 ePP PP 06 06 08.3 -6.4
PESTR Estremoz 144.59 330 eLQ 06 46 16.1
PESTR eLR LR 06 53 21.2
EMIJ Mijas 144.76 324 P PKPdf 06 02 54.7 -3.5
EMIN Mina Concepcio 144.95 327 P PKPdf 06 02 56.5 -2.1
ESPR Espera 145.16 326 P PKPbc 06 02 57.4 -1.2
EJIF Jimena Fronter 145.24 325 PKP2 PKPab 06 02 57.6 -1.4
PLOU Loures 145.34 331 ePKP PKPdf 06 02 58.9 -0.3
PMAFR Mafra 145.35 332 ePKP PKPdf 06 02 59.1 -0.1
PMAFR Mafra 145.35 332 eLR LR 06 54 22.8
PBEJ Beja 145.38 329 ePKP PKPdf 06 02 59.1 -0.2
LIS Lisbon 145.47 331 eP PKPdf 06 02 58.1 -1.3
PCRV Puerto La Cruz 145.52 86 PKPbc PKPbc 06 02 57.6 -2.1
comp=Z,66nm,1.2s,baz=7.7,slow=3.1,SNR=25
EGRO El Granado 145.55 328 P PKPdf 06 02 58.5 -1.1
CAM4 Nova Friburgo 146.03 158 *i* PKPdf 06 03 00.9 +0.5
CAM4 *i* 06 03 04.6
CAM4 *i* 06 03 09.4
CAM4 *i* 06 03 22.1
CAM4 Nova Friburgo 146.03 158 *i* *iP* PKPdf 06 03 00.7 +0.3
CAM4 *i* 06 03 04.5
CAM4 *i* 06 03 09.3
CAM4 *i* 06 03 22.0
PTEO Sao Teotonio 146.18 329 ePKP PKPdf 06 03 01.0 +0.3
MORF Marmelete 146.33 329 eP PKPdf 06 03 03.0 +2.1
MORF Marmelete 146.33 329 eP PKPdf 06 03 03.0 +2.1
CPB Codrington 147.69 72 eP PKPdf 06 03 05.2 +2.0
BPA Boggy Peak 147.76 73 eP PKPdf 06 03 04.6 +1.3
LZG Guadaloupe-1 147.98 75 eP PKPdf 06 03 04.7 +1.1
TBG Guadaloupe-3 148.14 75 eP PKPbc 06 03 06.7 -0.5
MGG Marie-Galante 148.44 75 eP PKPbc 06 03 07.2 -0.8
DEG La Desirade 148.63 74 eP PKPbc 06 03 08.7 +0.2
TRN Trinidad (W) 148.71 85 *i* *iP* pPKPdf 06 03 19.3 -4.1
FDF Fort de France 148.75 77 eP PKPbc 06 03 08.9 +0.1
TORD Torodi Ar. Bea 149.05 280 PKPbc PKPbc 06 03 10.2 +0.7
comp=Z,50nm,0.8s,baz=33,slow=1.7,SNR=102
TORD SKKPbc 06 14 16.3
comp=Z,3.2nm,1.3s,baz=276,slow=3.3,SNR=3.8
BDFB Brasilia 149.21 144 PKPbc PKPbc 06 03 09.3 -0.6
comp=Z,47nm,0.9s,baz=238,slow=1.6,SNR=23
BDFB Brasilia 149.21 144 PFAKE 06 03 20.0 +14
BDFB LR LR
comp=Z,2µm,22.0s
BAO Brasilia Array 149.22 144 PKPdf PKPbc 06 03 10.0 0.0
PMPS Porto Santo 153.41 334 ePKP PKPdf 06 03 14.5 +2.4
PMAR Madeira 153.95 335 ePKP PKPdf 06 03 16.8 +4.0
DBIC Dimbokro 155.31 266 PKPbc PKPdf 06 03 25.4 +11
comp=Z,9.4nm,1.1s,baz=352,slow=4.0,SNR=4.1
DBIC Dimbokro 155.31 266 PFAKE 06 03 30.0 +15
DBIC LR LR
comp=Z,720nm,20.0s
ASCN Ascension 157.04 222 PFAKE 06 03 30.0 +13
ASCN LR LR
comp=Z,997nm,19.0s
RCBR Riachuelo 163.67 157 PFAKE 06 03 40.0 +16
RCBR LR LR
comp=Z,729nm,20.0s

IDC ***15*** *05:59:22.8E 1.4, 938S×1508 1E, h0km, mb3.9/5, mb1 4.1/7, mb1mx4.0/12, mbtmp4.0/7, ML3.4/2, Error ellipse: s-maj=38.0km s-min=22.1km az=111.0*

NEIC ***15*** *05:59:24.9E 1.1, 936S×1507 3E, h10km, mb3.8/1, Error ellipse: s-maj=23.0km s-min=12.9km az=110.0*

ISCJB ***15*** *05:59:26.9E 1.5, 94S 0.1×1506 1E 0.2, h33km, mb3.9/5, Error ellipse: s-maj=29.3km s-min=16.8km az=41.5*

ISC 15 05:59:29.1E 1.5, 94S 0.1×1506E 0.2, h35km, n11, σ0s 41/9, mb3.9/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.42**	**269**	Pn	**Pn**	**06 00 19.7**	**-0.1**
	5.6nm,0.3s,baz=126,slow=4.6,SNR=7.9						
WRAB	**Tennant Creek**	**18.90**	**234**	*eP*	**Pn**	**06 03 47.0**	**-0.4**
	3.9nm,0.6s						
WRA	**Warramunga Arr**	**18.91**	**234**	P	**Pn**	**06 03 47.2**	**-0.3**
	0.3nm,0.3s,baz=60,slow=11,SNR=13						
ASAR	**Alice Springs**	**21.38**	**226**	P	**P**	**06 04 14.5**	**+1.0**
	3.2nm,0.9s,mb3.7,baz=51,slow=10.0,SNR=12						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	23.90	199	P	P	06 04 39.2	-0.4
	1.2nm,0.7s,mb3.5,baz=15,slow=15,SNR=2.1						
STKA	Stephens Creek	23.90	199	P	P	06 04 39.2	-0.4
FITZ	Fitzroy Crossi	25.74	248	P	P	06 04 56.4	+0.1
	4.4nm,0.6s,mb4.2,baz=77,slow=9.9,SNR=10						
MJAR	Matsushiro Arr	47.14	346	P	P	06 07 57.9	+0.1
	1.3nm,0.9s,mb3.9,baz=172,slow=12,SNR=4.7						
SONM	Songino Array	69.09	330	P	P	06 10 31.4	-0.1
	1.7nm,0.7s,mb4.1,baz=150,slow=4.2,SNR=9.8						
BDFB	Brasilia	149.04	143	PKPbc	PKPbc	06 19 12.9	-0.5
	2.3nm,0.8s,baz=208,slow=5.3,SNR=3.5						
TORD	Torodi Ar. Bea	149.31	280	PKPbc	PKPbc	06 19 14.4	+0.4
	2.5nm,0.6s,baz=63,slow=2.7,SNR=22						

CSEM 15 06:07:59.4±0.9, 3873N×2902W, h6^{km}±3^{km}, ML1.6, Error ellipse: s-maj=8.4km s-min=6.3km az=48.0, After PDA
PDA 15 06:07:59.4±0.9, 3873N×2902W, h6^{km}±3^{km}, MD2.9, ML1.6, Error ellipse: s-maj=8.4km s-min=6.3km az=48.0
SVSA 15 06:07:59.4±0.9, 3873N×2902W, h6^{km}±3^{km}, MD2.9, ML1.6, Error ellipse: s-maj=8.4km s-min=6.3km az=48.0, Azores Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCED	Cedros	0.27	111	i P	Pg	06 08 04.4	-0.2
PCED				eS	Sg	06 08 08.1	0.0
PCED							
	142nm,0.1s						
PCED	Cedros	0.27	111	eS	Sg	06 08 08.1	0.0
CALA	Caldeira	0.29	120	eP	Pg	06 08 04.5	-0.5
CALA				eS	Sg	06 08 08.7	-0.1
HOR	Horta	0.36	123	eP	Pg	06 08 05.7	-0.7
HOR				eS	Sg	06 08 10.6	-0.6
PCND	Candelaria	0.51	120	eS	Sg	06 08 14.6	-1.1
PCND							
	16nm,0.1s						
PICO	Pico	0.52	116	eP	Pg	06 08 08.6	-0.7
PICO				eS	Sg	06 08 15.2	-0.9
PTEI	Pico do Teixo	0.57	114	eS	Sg	06 08 16.8	-0.9
PTEI							
	17nm,0.1s						
PBOI	Pico dos Bois	0.58	120	eS	Sg	06 08 16.4	-1.7
PBOI							
	15nm,0.1s						
ROSA	Rosais	0.61	90	eS	Sg	06 08 17.1	-1.9
PID	Ribeirinha	0.76	112	erx		06 08 11.9	

IDC 15 06:14:41.1±1.2, 2803N×14158E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.8/18, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=60.9km s-min=13.9km az=63.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.07	150	Pg	Pg	06 15 01.8	+0.1
	15nm,0.3s,baz=285,slow=22,SNR=3.0						
MJAR	Matsushiro Arr	8.95	342	Pn	Pn	06 16 49.2	-2.4
	0.9nm,0.3s,baz=154,slow=11,SNR=9.8						
SONM	Songino Array	33.67	316	P	P	06 21 24.2	+0.6
	0.5nm,0.6s,baz=108,slow=4.8,SNR=5.2						
WB2	Warramunga Arr	48.20	189	eP	P	06 23 22.3	-1.0
WRA	Warramunga Arr	48.20	189	P	P	06 23 22.5	-0.8
	2.6nm,0.7s,baz=13,slow=8.6,SNR=15						
MKAR	Makanchi Array	49.47	309	P	P	06 23 33.3	+0.3
	0.5nm,0.6s,baz=96,slow=7.7,SNR=4.8						
ASAR	Alice Springs	51.92	189	P	P	06 23 52.3	+0.8
	0.2nm,0.6s,baz=4.3,slow=6.3,SNR=4.6						
FINES	FINESS Array B	76.88	334	P	P	06 26 35.4	+0.4
	0.9nm,0.5s,baz=93,slow=3.8,SNR=6.0						
BRTR	Keskin Array B	84.98	313	P	P	06 27 18.1	-0.1
	0.9nm,0.8s,baz=94,slow=5.8,SNR=4.3						

ISCJB 15 06:48:22.6±0.3, 3189S±003×7087W±006, h105^{km}±4^{km}, mb4.2/13, Error ellipse: s-maj=8.4km s-min=4.6km az=5.8
NEIC 15 06:48:22.9, 3190S×7085W, h103^{km}, mb4.4/6, After GUC.
GUC 15 06:48:22.9±0.8, 3190S×7085W, h103^{km}±4^{km}, ML4.8
IDC 15 06:48:25.7±2.9, 3179S×7067W, h109^{km}±23^{km}, mb3.8/9, mb1 4.0/12, mb1mx3.9/17, mbtmp4.2/12, Error ellipse: s-maj=28.2km s-min=16.3km az=83.0
ISC 15 06:48:23.6±0.3, 3189S±003×7085W±006, h98^{km}±4^{km}, n55, σ0^{s}68/67, mb4.2/13, 14C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.55	271	⇑iP	Pn	06 48 40.0	+0.4
CHNG				i S	Sn	06 48 52.0	+0.5
CHNG				AML	AML	06 48 53.5	
	comp=E,24μm,0.4s						
JACH	Jahuel	0.82	164	⇑iP	Pn	06 48 42.0	+0.1
ROCH	El Roble	1.09	187	⇑iP	Pn	06 48 44.8	0.0
PEL	Peldehue	1.26	174	⇑iP	Pn	06 48 46.8	0.0
PEL				i S	Sn	06 49 04.5	+0.1
PEL				AML	AML	06 49 05.9	
	comp=E,46μm,0.3s						
PEL	Peldehue	1.26	174	⇑iP	Pn	06 48 46.8	0.0
PEL				i S	Sn	06 49 04.5	+0.1
IHA	Instituto Hidr	1.31	210	⇓iP	Pn	06 48 47.2	-0.2
IHA				i S	Sn	06 49 05.2	-0.3
FCH	Farellones	1.51	162	⇓iP	Pn	06 48 50.7	+0.9
FCH				i S	Sn	06 49 11.3	+1.5
FCH				AML	AML	06 49 12.6	
	comp=E,16μm,0.3s						
DSCH	Colegio Aleman	1.52	171	eP	Pn	06 48 49.5	-0.5
DSCH				i S	Sn	06 49 10.0	0.0
CLCH	Cerro Calan	1.52	170	⇓iP	Pn	06 48 50.2	+0.1
CLCH				i S	Sn	06 49 10.5	+0.4
CLCH				AML	AML	06 49 12.2	
	comp=N,10μm,0.5s						
CLCH				AML	AML	06 49 12.7	
	comp=N,12μm,0.5s						
SAN	Santiago	1.57	174	⇑iP	Pn	06 48 50.6	+0.1
SAN				i S	Sn	06 49 11.1	+0.1
SAN				AML	AML	06 49 13.0	
	comp=E,9μm,0.5s						
SAN	Santiago	1.57	174	⇑iP	Pn	06 48 50.6	+0.1
SAN				i S	Sn	06 49 11.1	+0.1
LACH	Colegio Las Am	1.58	170	eP	Pn	06 48 50.4	-0.4
LACH				i S	Sn	06 49 11.4	+0.1
LCCH	Las Cruces	1.69	201	⇑iP	Pn	06 48 52.0	-0.1
TLL	Tololo Astrono	1.72	1	⇓iP	Pn	06 48 52.7	+0.2
TLL				AML	AML	06 49 17.7	
	comp=E,21μm,0.4s						
PCH	Pirque	1.75	171	⇑iP	Pn	06 48 52.9	+0.1
TACH	Talagante	1.76	182	⇑iP	Pn	06 48 52.9	-0.1
CHCH	Chadas Angostu	2.04	175	⇑iP	Pn	06 48 56.6	-0.1
CACH	El Canelo	2.23	175	⇓iP	Pn	06 48 59.5	+0.5
CFAA	Coronel Fontan	2.25	83	P	Pn	06 48 59.6	+0.3
	comp=E,20nm,0.3s,baz=248,slow=10,SNR=1363						
CFAA				S	Sn	06 49 26.4	-0.2
	comp=E,38nm,0.3s,baz=33,slow=18,SNR=139						
CICH	Cipreses	2.45	172	⇑iP	Pn	06 49 02.5	+0.5
CICH				i S	Sn	06 49 31.7	+0.3
SFDO	San Fernando	2.72	183	⇑iP	Pn	06 49 05.6	0.0
NICH	Los Niches	3.12	186	eP	Pn	06 49 10.6	-0.3
VACH	Vallenar	3.31	1	eP	Pn	06 49 13.0	-0.4
VACH				eS	Sn	06 49 51.4	-0.4
TALC	Talca	3.56	190	eP	Pn	06 49 16.5	-0.3
TALC				i S	Sn	06 49 57.0	-0.9
TALC				AML	AML	06 49 59.3	
	comp=E,3μm,0.4s						
TALC	Talca	3.56	190	eP	Pn	06 49 16.5	-0.3
TALC				i S	Sn	06 49 57.0	-0.9
LNCH	Linares	4.00	189	⇑iP	Pn	06 49 21.6	-1.1
LNCH				i S	Sn	06 50 07.1	-1.3
PLCA	Paso Flores	8.83	178	P	Pn	06 50 26.0	-2.3
	comp=E,0.2nm,0.3s,baz=344,slow=13,SNR=5.2						
PLCA	Paso Flores	8.83	178	ePn	Pn	06 50 27.5	-0.8
LVC	Limon Verde	9.40	11	P	Pn	06 50 29.2	-6.9
	comp=E,2.0nm,0.3s,baz=158,slow=19,SNR=20						
CPUP	Villa Florida	13.05	68	P	Pn	06 51 19.2	-6.0
	comp=E,0.6nm,0.3s,baz=227,slow=14,SNR=7.6						
CPUP	Villa Florida	13.05	68	ePn	Pn	06 51 20.1	-5.1
LPAZ	La Paz	15.73	10	P	Pn	06 51 59.5	-0.1
	comp=E,1.3nm,0.3s,baz=186,slow=8.0,SNR=68						
LPAZ	La Paz	15.73	10	eP	Pn	06 52 00.4	+0.9
	comp=E,8.3nm,0.6s						
SIV	San Ignacio	18.16	32	P	Pn	06 52 27.1	-2.2
	comp=E,2.5nm,0.3s,baz=227,slow=12,SNR=75						
USHA	Ushuaia	23.00	176	P	P	06 53 21.5	+1.6
	comp=E,19nm,0.9s,mb4.4,baz=322,slow=6.6,SNR=5.5						
SAML	Samuel	23.91	19	eP	P	06 53 28.0	-0.4
	comp=E,4.6nm,0.5s,mb4.1						
BDFB	Brasilia	26.34	57	P	P	06 53 49.0	-1.3
	comp=E,6.2nm,0.9s,mb4.0,baz=218,slow=7.0,SNR=5.6						
BDFB	Brasilia	26.34	57	eP	P	06 53 49.2	-1.2
	comp=E,7.0nm,0.7s,mb4.2						
ROSC	El Rosal	36.69	354	P	P	06 55 25.6	+4.6
	comp=E,2.2nm,0.4s,mb4.4,baz=100,slow=12,SNR=3.6						
SDV	Santo Domingo	40.55	0	P	P	06 55 53.7	+0.5
	comp=E,3.7nm,0.8s,mb4.2,baz=239,slow=3.0,SNR=3.8						
PCRV	Puerto La Cruz	42.25	9	P	P	06 56 07.4	+0.3
	comp=E,3.4nm,0.5s,mb4.3,baz=191,slow=3.2,SNR=4.3						
SNAA	Sanae	53.17	158	P	P	06 57 31.8	+0.4
	comp=E,1.4nm,0.6s,mb4.2,baz=275,slow=7.7,SNR=34						
SNAA	Sanae	53.17	158	e	P	06 57 31.7	+0.2
SNAA				e		06 57 33.0	
SNAA				e		06 57 40.0	
SNAA	Sanae	53.17	158	eP	P	06 57 31.1	-0.3
	comp=E,3.3nm,0.6s,mb4.5						
SWET	Sewanee	68.24	347	eP	P	06 59 13.9	+0.2
OXF	Oxford	68.32	344	eP	P	06 59 14.6	+0.3
	comp=E,8.3nm,0.6s,mb4.7						
WVT	Waverly	69.51	345	eP	P	06 59 21.9	+0.2
	comp=E,6.2nm,0.5s,mb4.7						
MAW	Mawson	74.91	163	pP	pP	07 00 11.8	-7.1
	comp=E,1.4nm,0.5s,baz=203,slow=8.5,SNR=6.2						
BOSA	Boshof	80.16	117	pP	pP	07 00 41.1	-7.3
	comp=E,1.7nm,0.5s,baz=255,slow=5.0,SNR=7.2						
PDAR	Pinedale Array	82.35	332	P	P	07 00 34.1	-0.5
	comp=E,0.2nm,0.4s,mb3.3,baz=134,slow=2.6,SNR=3.7						
TORD	Torodi Ar. Bea	82.55	70	P	P	07 00 35.8	+0.2
	comp=E,0.8nm,0.5s,mb3.8,baz=274,slow=5.3,SNR=16						
NVAR	Mina Array Bea	82.74	324	P	P	07 00 38.5	+1.9
	comp=E,0.7nm,0.7s,mb3.6,baz=155,slow=6.7,SNR=6.8						
ULM	Lac du Bonnet	84.73	344	P	P	07 00 46.9	+0.1
	comp=E,2.8nm,1.0s,mb4.1,baz=106,slow=6.3,SNR=3.2						
BVAR	Borovoye Array	145.05	41	PKP	PKPdf	07 07 49.7	+0.3
	comp=E,3.4nm,0.5s,baz=304,slow=2.2,SNR=17						
MKAR	Makanchi Array	154.61	46	PKPab	PKPab	07 08 28.3	+0.3
	comp=E,1.0nm,0.5s,baz=291,slow=3.9,SNR=9.3						

ISCJB 15 06:55:45.9±9.6, 19N±0.1×1282E±03, h121^{km}±96^{km}, mb4.2/11, Error ellipse: s-maj=42.8km s-min=20.8km az=162.7
NEIC 15 06:55:45.4±0.5, 186N×12833E, mb4.6/3, Error ellipse: s-maj=30.2km s-min=7.8km az=78.0
IDC 15 06:55:46.2±1.0, 189N×12850E, h108^{km}±9^{km}, mb3.7/9, mb1 3.8/9, mb1mx3.6/16, mbtmp4.1/9, Error ellipse: s-maj=49.9km s-min=11.9km az=74.0
ISC 15 06:55:48.6±7.5, 18N±01×1284E±03, h132^{km}±77^{km}, h100^{km}±7.6^{km}:pP-P, n17, σ0^{s}81/17, mb4.1/11, Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.98	188	P	P	07 00 10.3	-0.3
	1.5nm,0.9s,baz=355,slow=11,SNR=3.8						
WRAB	Tennant Creek	22.41	165	eP	P	07 00 36.5	+0.1
	4.1nm,0.5s,mb4.1						
WRA	Warramunga Arr	22.42	165	P	P	07 00 36.0	-0.5
	1.8nm,0.5s,mb3.8,baz=344,slow=11,SNR=28						
WRA				pP		07 00 56.4	
	1.2nm,0.6s,baz=342,slow=11,SNR=3.6						
WB2	Warramunga Arr	22.42	165	eP	P	07 00 36.4	0.0
MBWA	Marble Bar	24.35	200	eP	P	07 00 53.1	-1.0
ASAR	Alice Springs	25.91	168	P	P	07 01 10.2	+2.0
	0.5nm,0.3s,mb3.7,baz=342,slow=12,SNR=9.0						
ASAR				pP	pP	07 01 31.9	-4.4
	2.7nm,0.9s,baz=347,slow=12,SNR=9.8						
ASAR				PcP	PcP	07 04 34.6	+1.1
	0.5nm,0.6s,baz=352,slow=2.4,SNR=6.0						
MJAR	Matsushiro Arr	35.73	14	P	P	07 02 33.4	-1.0
	1.2nm,0.6s,mb3.7,baz=189,slow=8.5,SNR=5.2						
MJAR	Matsushiro Arr	35.73	14	P	P	07 02 33.4	-1.0
STKA	Stephens Creek	35.80	161	P	P	07 02 35.1	+0.1
	2.1nm,0.6s,mb4.0,baz=317,slow=8.5,SNR=8.4						
STKA	Stephens Creek	35.80	161	eP	P	07 02 35.0	0.0
ULN	Ulaanbaatar	49.42	341	eP	P	07 04 25.7	+0.7
	9.2nm,1.0s,mb4.4						
SONM	Songino Array	49.61	341	P	P	07 04 27.2	+0.9
	2.9nm,0.6s,mb4.1,baz=152,slow=7.9,SNR=15						
MKAR	Makanchi Array	60.03	325	P	P	07 05 42.0	+0.7
	4.1nm,0.5s,mb4.5,baz=118,slow=8.5,SNR=56						
MKAR				pP	pP	07 06 08.9	-4.1
	0.5nm,0.4s,baz=119,slow=7.9,SNR=2.3						
KURK	Kurchatov	64.21	327	eP	P	07 06 08.9	-0.3
	8.0nm,0.6s,mb4.7						
KURK				epP	pP	07 06 29.9	-11
BVAR	Borovoye Array	69.79	327	P	P	07 06 44.5	0.0
	0.8nm,0.4s,mb3.8,baz=134,slow=8.5,SNR=7.5						
ARCES	ARCESS Array B	92.78	340	P	P	07 08 44.7	-1.3
	1.3nm,0.7s,mb4.2,baz=87,slow=6.7,SNR=5.5						
ARCES	ARCESS Array B	92.78	340	P	P	07 08 44.7	-1.3

ISCJB 15 07:05:28.9±1.1, 1069N±007×6126W±005, h21^{km}, Error ellipse: s-maj=11.9km s-min=5.6km az=59.7
TRN 15 07:05:29.0, 1059N×6131W, h21^{km}, MD2.9
FUNV 15 07:05:31.3, 1078N×6141W, h5^{km}, MW2.5
ISC 15 07:05:28.0±1.6, 1080N±008×6128W±005, h4^{km}±9^{km}, n7, σ0^{s}98/14, Trinidad

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.20	219	eP	Pg	07 05 33.1	+1.3
TRN				eS	Sg	07 05 36.3	+1.9
TBH	Brigand Hill	0.38	147	eP	Pg	07 05 34.6	-0.7
TBH				eS	Sg	07 05 40.1	0.0
TPP	Pointe-a-Pierr	0.51	200	eP	Pg	07 05 36.2	-1.6
TPP				eS	Sg	07 05 43.9	-0.6
GUIV	Guiria	0.94	261	eP	Pg	07 05 45.8	-0.3
GUIV				eS	Sg	07 05 57.2	-1.1
GUNV	Guanoco	1.76	249	eP	Pn	07 06 00.4	+1.2
GUNV				eS	Sn	07 06 22.2	+0.2
ITEV	Isla Los Testi	1.90	287	eP	Pn	07 06 02.2	+1.0
ITEV				eS	Sn	07 06 25.4	-0.2
CRUV	Carupano	1.93	266	eP	Pn	07 06 01.9	+0.3
CRUV				eS	Sn	07 06 25.0	-1.3

IDC 15 08:01:04.9±0.9, 1551N×98.14W, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.1/26, mbtmp4.1/11, ML3.5/1, MS3.6/8, Ms1 3.6/8, ms1mx3.2/37, Error ellipse: s-maj=30.4km s-min=16.3km az=54.0
NEIC 15 08:01:07.3, 1544N×9830W, h35^{km}, mb4.3/26, MD4.4(MEX), After MEX.
MEX 15 08:01:07.4±0.9, 1547N×9833W, h33^{km}±999^{km}, MD4.4
ISCJB 15 08:01:08.0±1.4, 1571N±004×98.14W±003, h15^{km}±10^{km}, mb4.2/26, MS3.6/7, Error ellipse: s-maj=6.5km s-min=4.7km az=3.3
ISC 15 08:01:09.2±1.7, 1573N±004×9808W±003, h14^{km}±11^{km}, n203, σ0^{s}84/227, mb4.2/26, MS3.6/7, 59C-51D, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.86	44	i P	Pn	08 01 40.6	0.0
VHO				i S	Sn	08 02 05.5	+1.7
OXX	Oaxaca	1.87	44	i P	Pn	08 01 41.0	+0.2
OXX				i S	Sn	08 02 06.0	+1.8
OXX	Oaxaca	1.87	44	i P	Pn	08 01 41.5	+0.7
OXX				i S	Sn	08 02 06.0	+1.8
HUIG	Huatulco	1.90	89	i P	Pn	08 01 39.1	-2.1
HUIG				i S	Sn	08 02 03.7	-1.3
HUIG	Huatulco	1.90	89	i P	Pn	08 01 38.8	-2.4
HUIG				i S	Sn	08 02 01.9	-3.0
UTMO	Huajuapan	2.10	7	i P	Pn	08 01 43.7	-0.3
UTMO				i S	Sn	08 02 10.3	+0.4
CAIG	El Cayaco	2.47	302	i P	Pn	08 01 43.6	-5.4
CAIG				i S	Sn	08 02 08.9	-10
CAIG	El Cayaco	2.47	302	i P	Pn	08 01 43.6	-5.4
CAIG				i S	Sn	08 02 08.5	-10
MEIG	Mezcala	2.63	326	eP	Pn	08 01 47.3	-4.0
MEIG				i S	Sn	08 02 18.7	-4.3
TPIG	Tehuac#an	2.76	14	i P	Pn	08 01 53.1	+0.1
TPIG				i S	Sn	08 02 26.8	+0.7
PLIG	Platanillo	2.97	333	eP	Pn	08 01 53.0	-3.0
PLIG				i S	Sn	08 02 28.0	-3.3
PLIG	Platanillo	2.97	333	i P	Pn	08 01 54.4	-1.5
PLIG				i S	Sn	08 02 28.0	-3.3
YAIG	Yautepec	3.25	343	i P	Pn	08 01 58.3	-1.4
YAIG				i S	Sn	08 02 36.3	-1.9
YAIG	Yautepec	3.25	343	i P	Pn	08 01 59.1	-0.6
YAIG				i S	Sn	08 02 36.3	-1.9
CMIG	Matias Romero	3.35	66	Pn	Pn	08 02 00.2	-1.0
	4.4nm,0.3s,baz=251,slow=9.7,SNR=33						
CMIG				Sn	Sn	08 02 42.4	+1.6
	24nm,0.3s,baz=287,slow=12,SNR=6.1						
CMIG	Matias Romero	3.35	66	i P	Pn	08 02 00.2	-1.0
CMIG				i S	Sn	08 02 42.0	+1.3
CMIG	Matias Romero	3.35	66	i P	Pn	08 01 59.2	-1.9
CMIG				i S	Sn	08 02 40.4	-0.4
PPM	Popocatepetl	3.35	351	eP	Pn	08 02 00.5	-0.7
PPM				eP		08 02 04.0	
PPM				i S	Sn	08 02 40.2	-0.6
PPM	Popocatepetl	3.35	351	i P	Pn	08 02 01.1	-0.1
PPM				i S	Sn	08 02 40.2	-0.6
IIZ	Mezontepec	3.61	342	eP	Pn	08 02 01.8	-2.9
IIZ				i S	Sn	08 02 44.5	-2.6
UNM	Universidad Na	3.73	344	i P	Pn	08 02 05.8	-0.5
UNM				i P		08 02 07.7	
UNM				eP		08 02 08.0	
UNM				i S	Sn	08 02 48.0	-2.0
UNM				i S	Sn	08 02 49.1	-0.9
UNM				i S	Sn	08 02 52.5	+2.6
UNM	Universidad Na	3.73	344	eP	Pn	08 02 08.0	+1.7
ZIIG	Zihuatanejo	3.74	300	eP	Pn	08 02 00.6	-5.9
ZIIG				i S	Sn	08 02 40.1	-10
ZIIG	Zihuatanejo	3.74	300	i P	Pn	08 02 02.2	-4.2
ZIIG				i S	Sn	08 02 40.1	-10
MOIG	Morelia	4.91	323	eP	Pn	08 02 18.6	-4.1
MOIG				i S	Sn	08 03 15.0	-4.3
MOIG	Morelia	4.91	323	i P	Pn	08 02 22.0	-0.7
MOIG				i S	Sn	08 03 15.0	-4.3
MRX	Morelia	4.94	324	eP	Pn	08 02 22.0	-0.9
JTS	JuntasAbangare	13.89	111	Pn	Pn	08 04 27.8	+2.2
	0.5nm,0.3s,baz=282,slow=14,SNR=3.9						
JTS				Sn	Sn	08 06 58.2	-1.3
	0.4nm,0.3s,baz=0.0,slow=20,SNR=2.5						
JTS				LR	LR	08 08 37.0	
	comp=Z,142nm,21.0s,baz=313,slow=33						
JCT	Junction City	14.76	354	ePn	Pn	08 04 38.0	+0.5
	6.7nm,0.7s						
MNTX	Cornudas Mount	17.23	339	eP	Pn	08 05 10.8	+1.4
	8.5nm,1.2s						
WMOK	Wichita Mounta	18.93	358	eP	Pn	08 05 29.4	-0.9
	2.7nm,0.6s						
MIAR	Mount Ida	19.17	11	eP	Pn	08 05 33.6	+0.4
	5.0nm,0.7s						
LENM	Lemitar	20.03	338	eP	P	08 05 42.0	+0.4
LPM	Los Pinos Moun	20.04	339	eP	P	08 05 46.0	+4.3
TUC	Tucson	20.14	327	eP	P	08 05 44.4	+1.5
	4.8nm,0.8s						
OXF	Oxford	20.26	21	eP	P	08 05 42.8	-1.4
	31nm,1.2s						
LAZ	Ladron	20.30	338	eP	P	08 05 46.2	+1.6
ANMO	Albuquerque	20.56	340	P	P	08 05 48.9	+1.4
	7.9nm,0.9s,baz=152,slow=11,SNR=37						
ANMO				LR	LR	08 14 26.7	
	comp=Z,369nm,19.4s,MS3.8,baz=83,slow=39						
ANMO	Albuquerque	20.56	340	eP	P	08 05 48.7	+1.2
	10.0nm,1.0s						
116A	Eloy	20.82	326	⇑P	P	08 05 50.3	0.0
	baz=21						
PLAL	Pickwick Lake	21.17	23	eP	P	08 05 54.1	+0.1
	8.4nm,1.0s,mb4.0						
115A	Sonoran Desert	21.21	325	⇓P	P	08 05 54.4	-0.1
	baz=21						
Z14A	Wintersburg	22.11	325	⇓P	P	08 06 04.5	+0.4
	baz=22,SNR=9.9						
SWET	Sewanee	22.25	27	eP	P	08 06 06.0	+0.5
WVT	Waverly	22.28	22	eP	P	08 06 05.6	-0.3
	6.3nm,0.6s,mb4.2						
Y14A	Wickenburg	22.58	326	⇑P	P	08 06 09.0	0.0
	baz=23,SNR=8.5						
X15A	Humboldt	22.60	328	⇓P	P	08 06 08.7	-0.6
	baz=23						
X14A	Yava	22.92	327	⇓P	P	08 06 12.1	-0.6
	baz=23						
GLA	Glamis	22.96	322	⇑P	P	08 06 13.5	+0.4
	baz=23,SNR=7.5						
MYNC	Murphy	22.97	30	eP	P	08 06 13.6	+0.3
	11nm,0.6s,mb4.5						
WUAZ	Wupatki	23.01	331	eP	P	08 06 14.8	+1.1
	27nm,0.9s,mb4.7						
CCM	Cathedral Cave	23.04	14	eP	P	08 06 14.8	+0.9
	6.3nm,0.6s,mb4.2						
W15A	Williams	23.16	329	⇑P	P	08 06 14.5	-0.8
	baz=23						
FVM	French Village	23.17	16	eP	P	08 06 13.0	-2.4
	6.1nm,0.8s,mb4.1						
Y12C	Blythe	23.28	323	⇓P	P	08 06 16.3	-0.2
	baz=23						
MVCO	Mesa Verde	23.30	339	eP	P	08 06 17.8	+1.1
KSU1	Kansas State U	23.32	3	eP	P	08 06 14.4	-2.4
PDMCI	Parker Dam,Lak	23.47	325	⇓P	P	08 06 18.1	-0.4
	baz=24						
SWSC	Sam W. Stewart	23.47	320	⇑P	P	08 06 18.3	-0.3
	baz=24						
DVTC	Desert V Tower	23.48	319	⇓P	P	08 06 18.5	-0.1
	baz=24						
X13A	Yucca	23.52	326	⇑P	P	08 06 19.0	0.0
	baz=24,SNR=9.6						
W14A	Seligman	23.60	328	⇓P	P	08 06 19.7	-0.1
	baz=24,SNR=8.7						
MONP	Monument Peak	23.83	319	⇑P	P	08 06 21.8	0.0
	baz=24						
W13A	Hualapai Mount	23.93	327	⇑P	P	08 06 22.3	-0.4
	baz=24,SNR=6.4						
IRM	Iron Mountain	23.94	323	⇓P	P	08 06 23.1	+0.3
	baz=24,SNR=8.0						
PV01	Paradox Valley	24.16	339	eP	P	08 06 25.7	+0.9
BELC	Belle Mtn.	24.32	322	⇓P	P	08 06 26.1	-0.3
	baz=24						
PFO	Pinyon Flat Ob	24.33	320	⇑P	P	08 06 26.8	+0.4
	baz=24						
TZTN	Tazewell	24.43	29	eP	P	08 06 30.2	+2.9
PV10	Paradox Valley	24.53	339	eP	P	08 06 28.3	0.0
W12A	Cal Nev Ari	24.61	325	⇓P	P	08 06 28.3	-0.7
	baz=25						
SMCO	Snowmass	24.62	343	eP	P	08 06 30.4	+1.3
	11nm,0.9s,mb4.4						
GMRC	Granite Mounta	24.67	323	⇑P	P	08 06 29.6	+0.1
	baz=25,SNR=8.1						
MURC	Murrieta	24.79	319	⇑P	P	08 06 31.4	+0.8
	baz=25						
ISCO	Idaho Springs	24.86	346	eP	P	08 06 32.4	+1.1
	17nm,0.9s,mb4.6						
V12A	Nelson	24.92	326	⇑P	P	08 06 32.1	+0.3
	baz=25,SNR=10						
HEC	Hector,Ludlow	25.10	323	⇑P	P	08 06 33.8	+0.4
	baz=25,SNR=8.6						
U12A	Valley of Fire	25.29	328	⇑P	P	08 06 35.4	+0.2
	baz=26						
TUQ	Turquoise Mtn.	25.30	324	⇑P	P	08 06 35.7	+0.5
	baz=26,SNR=10						
CCUT	Cedar City	25.59	331	eP	P	08 06 39.1	+1.2
GSC	Goldstone	25.71	323	⇓P	P	08 06 38.3	-0.6
	baz=26						
SRU	San Rafael	25.72	337	eP	P	08 06 38.6	-0.5
	5.9nm,1.0s,mb4.1						
ARUT	Antelope Range	25.82	331	eP	P	08 06 40.7	+0.7
SHOC	Shoshone	25.83	324	⇑P	P	08 06 39.3	-0.7
	baz=26						
MSU	Marysvale	25.86	334	eP	P	08 06 40.8	+0.5
DECC	Green Verdugo	25.92	319	⇓P	P	08 06 40.9	-0.1
	baz=26						
SNCC	San Nicolas Is	26.08	316	⇑P	P	08 06 42.8	+0.5
	baz=26						
EDW2	Edwards Air Fo	26.12	321	⇓P	P	08 06 42.4	-0.3
	baz=26						
TMUT	Trail Mountain	26.14	336	eP	P	08 06 43.8	+0.9
U10A	Ash Meadows, A	26.23	325	⇑P	P	08 06 43.6	-0.2
	baz=26						
LRMC	Laurel Mountai	26.35	322	⇓P	P	08 06 44.9	+0.2
	baz=26						
OSI	Osito Adit	26.41	319	⇓P	P	08 06 45.9	+0.7
	baz=26						
MPMC	Manual Prospec	26.63	323	⇑P	P	08 06 47.4	+0.1
	baz=27						
ARVC	Arvin	26.80	320	⇑P	P	08 06 48.7	-0.2
	baz=27						
ISA	Isabella	26.94	321	⇓P	P	08 06 49.8	-0.3
	baz=27						
DAU	Daniels Canyon	27.13	338	eP	P	08 06 51.4	-0.4
CWC	Cottonwood Cre	27.24	323	⇓P	P	08 06 52.2	-0.5
	baz=27						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKM	Peak Mountain	27.28	318	⇑P	P	08 06 53.5	+0.3
	baz=27						
VES	Vestal, Richgr	27.43	321	⇑P	P	08 06 54.3	-0.1
	baz=28						
Q12A	Willow Creek R	27.48	331	⇑P	P	08 06 54.0	-0.9
	baz=28						
SDP	Sudden Peak, L	27.52	317	⇑P	P	08 06 56.1	+0.8
	baz=28						
R10A	Warm Springs	27.61	328	⇑P	P	08 06 55.9	-0.3
	baz=28						
SMMC	Simmler	27.66	319	⇑P	P	08 06 56.6	+0.1
	baz=28						
S09A	Goldfield	27.68	326	⇑P	P	08 06 56.7	0.0
	baz=28						
RCTC	Rector, Farmer	27.84	321	⇑P	P	08 06 57.9	-0.2
	baz=28						
P12A	McGill	27.86	331	⇓P	P	08 06 57.3	-1.1
	baz=28						
HELL	Mitchell Peak,	27.96	322	⇑P	P	08 06 59.0	-0.2
	baz=28,SNR=6.5						
R09A	Tonopah	27.98	327	⇑P	P	08 06 58.7	-0.7
	baz=28						
V04C	Ramage Ranch,	28.41	318	⇓P	P	08 07 03.9	+0.6
	baz=28						
O12A	Currie	28.43	333	⇓P	P	08 07 02.9	-0.5
	baz=29						
MLAC	Mammoth Lakes	28.50	324	⇓P	P	08 07 03.9	-0.2
	baz=29						
KCC	Kaiser Creek	28.57	323	⇓P	P	08 07 04.5	-0.2
	baz=29						
T06C	Millerton Lake	28.58	322	⇑P	P	08 07 05.0	+0.2
	baz=29						
R08A	Mina	28.61	326	⇑P	P	08 07 04.9	-0.1
	baz=29						
N13A	Wendover, West	28.68	334	⇑P	P	08 07 05.2	-0.4
	baz=29						
PDAR	Pinedale Array	28.68	342	P	P	08 07 06.0	+0.3
	2.1nm,0.9s,mb3.9,baz=139,slow=7.3,SNR=12						
O11A	Cowboy Ranch,	28.73	331	⇓P	P	08 07 05.5	-0.6
	baz=29						
NVAR	Mina Array Bea	28.77	326	P	P	08 07 07.6	+1.1
	3.0nm,0.9s,mb4.0,baz=140,slow=9.8,SNR=18						
U04C	Hernandez Rese	28.82	320	⇓P	P	08 07 06.9	+0.1
	baz=29						
V03C	Hunter Liggett	28.89	319	⇓P	P	08 07 08.0	+0.5
	baz=29						
Q08A	Gabbs	28.89	327	⇑P	P	08 07 07.2	-0.3
	baz=29,SNR=6.1						
N12A	Clover Valley,	29.03	333	⇑P	P	08 07 08.9	+0.1
	baz=29,SNR=6.2						
M13A	Montello	29.08	335	⇓P	P	08 07 09.3	+0.1
	baz=29,SNR=16						
T05C	Eagle Field, D	29.09	321	⇓P	P	08 07 10.6	+1.3
	baz=29						
S05C	Merced	29.18	322	⇑P	P	08 07 10.2	+0.1
	baz=29						
S06C	San Francisco	29.25	323	⇓P	P	08 07 10.8	+0.1
	baz=29						
HAST	UC Hastings Re	29.31	319	⇓P	P	08 07 11.8	+0.5
	baz=29						
N11A	Elko Archery C	29.32	332	⇓P	P	08 07 10.8	-0.5
	baz=30						
M12A	Wells	29.44	334	⇑P	P	08 07 11.9	-0.5
	baz=30,SNR=8.0						
R06C	Coleville	29.47	324	⇓P	P	08 07 13.1	+0.4
	baz=30						
O09A	Fish Creek Ran	29.49	329	⇑P	P	08 07 13.1	+0.2
	baz=30,SNR=5.2						
N10A	Dunphy	29.59	331	⇓P	P	08 07 14.0	+0.3
	baz=30						
REDW	Red Top Meadow	29.62	341	eP	P	08 07 14.1	+0.1
	12nm,1.3s,mb4.5						
CMB	Columbia Colle	29.67	323	⇓P	P	08 07 14.2	-0.3
	baz=30						
TPAW	Teton Pass	29.76	341	eP	P	08 07 15.8	+0.5
	7.3nm,1.1s,mb4.3						
LOHW	Long Hollow	29.77	342	eP	P	08 07 15.3	0.0
	10.0nm,1.2s,mb4.4						
M11A	Holland Ranch,	29.83	333	⇓P	P	08 07 16.1	+0.2
	baz=30,SNR=8.9						
ATAH	Atahualpa	29.84	138	LR	LR	08 16 37.5	
	comp=Z,150nm,21.7s,MS3.6,baz=120,slow=31						
R05C	Kirkwood Meado	29.95	324	⇑P	P	08 07 17.6	+0.7
	baz=30						
IMW	Indian Meadow	30.13	341	eP	P	08 07 22.2	+3.7
	2.0nm,0.7s,mb4.0						
R04C	Big Horse Ranc	30.14	322	⇑P	P	08 07 19.4	+0.8
	baz=30						
N09A	Rock Creek Ran	30.18	330	⇓P	P	08 07 19.2	+0.3
	baz=30						
WCN	Washoe City	30.19	325	⇑P	P	08 07 19.6	+0.6
	baz=30						
M10A	I.L. Ranch, Tu	30.24	332	⇑P	P	08 07 19.4	-0.1
	baz=30						
O07A	Toulon	30.34	327	⇑P	P	08 07 20.0	-0.3
	baz=30						
LAVA	Lava Cap Winer	30.36	323	⇑P	P	08 07 20.4	-0.2
	baz=30						
N08A	GE Springer Mi	30.42	329	⇓P	P	08 07 21.1	0.0
	baz=31						
M09A	Marrel Ranch,	30.59	331	⇑P	P	08 07 22.3	-0.3
	baz=31						
P05C	Yuba Gap, Truc	30.66	324	⇑P	P	08 07 23.7	+0.5
	baz=31						
Q04C	Lincoln	30.79	323	⇓P	P	08 07 24.9	+0.6
	baz=31						
O06A	Flanigan	30.84	326	⇓P	P	08 07 25.0	+0.2
	baz=31						
BEKR	Beckwourth	30.92	325	⇓P	P	08 07 25.0	-0.5
	baz=31						
FARB	Farallon Islan	31.03	320	⇑P	P	08 07 27.3	+0.8
	baz=31						
HLID	Hailey	31.04	337	eP	P	08 07 26.3	-0.2
	2.0nm,0.8s,mb4.0						
M08A	Happy Creek Ra	31.05	330	⇑P	P	08 07 26.3	-0.3
	baz=31						
L09A	Wilkinson Ranc	31.15	331	⇓P	P	08 07 27.5	0.0
	baz=31						
N06A	Buffalo Meadow	31.27	327	P	P	08 07 29.2	+0.7
	baz=32,SNR=6.2						
ORV	Oroville	31.34	324	⇑P	P	08 07 29.6	+0.4
	baz=32						
M07A	Soldier Meadow	31.40	329	⇓P	P	08 07 29.1	-0.6
	baz=32						
MNRC	McLaughlin Nat	31.44	322	⇓P	P	08 07 30.8	+0.7
	baz=32						
GCMT	Greycliff	31.50	344	eP	P	08 07 31.0	+0.4
MCMT	McKenzie Canyo	31.57	340	eP	P	08 07 33.0	+1.7
L08A	Fields	31.60	331	⇓P	P	08 07 31.2	-0.3
	baz=32						
O04C	Chester	31.63	325	⇑P	P	08 07 31.9	+0.1
	baz=32						
ELFS	Eagle Lake Fie	31.65	326	⇓P	P	08 07 32.5	+0.7
	baz=32						
K09A	Rome	31.71	332	P	P	08 07 33.2	+0.7
	baz=32,SNR=13						
M06C	Likely Place G	31.93	327	⇑P	P	08 07 35.0	+0.6
	baz=32						
L07A	Adell	31.95	329	⇓P	P	08 07 35.1	+0.6
	baz=32						
DLMT	Dillon	31.96	341	eP	P	08 07 35.3	+0.6
	17nm,1.1s,mb4.8						
K08A	Mann Creek Ran	32.09	331	P	P	08 07 36.5	+0.7
	baz=32,SNR=6.1						
GASB	Alder Springs	32.10	323	⇑P	P	08 07 37.1	+1.2
	baz=32						
M05C	Lookout	32.39	327	⇓P	P	08 07 38.6	+0.2
	baz=33						
L05A	Lakeview	32.72	328	⇑P	P	08 07 41.7	+0.4
	baz=33						
I09A	Lost Marbles R	32.73	333	⇑P	P	08 07 41.4	0.0
	baz=33						
HRY	Holter Researc	32.94	342	eP	P	08 07 43.5	+0.2
I08A	Drewsey	33.05	332	⇑P	P	08 07 44.1	-0.1
	baz=33						
H09A	Durkee	33.26	334	P	P	08 07 45.9	-0.1
	baz=34,SNR=6.2						
YBH	Yreka Blue Hor	33.49	326	P	P	08 07 46.4	-1.7
	1.7nm,0.8s,mb4.1,baz=226,slow=9.6,SNR=3.7						
CHMT	Chamberlain Mo	33.55	341	eP	P	08 07 48.3	-0.3
H08A	Prairie City	33.57	333	P	P	08 07 48.8	0.0
	baz=34,SNR=5.7						
I07A	Izee	33.60	332	⇑P	P	08 07 48.7	-0.3
	baz=34						
MSO	Missoula	33.70	340	eP	P	08 07 49.7	-0.2
	2.2nm,0.8s,mb4.1						
ULM	Lac du Bonnet	34.47	3	P	P	08 07 55.8	-0.8
	4.7nm,0.9s,mb4.4,baz=194,slow=10.0,SNR=4.9						
ULM				LR	LR	08 25 34.5	
	comp=Z,29nm,19.6s,MS3.0,baz=56,slow=42						
I05A	Bend	34.49	330	⇓P	P	08 07 56.2	-0.5
	baz=35						
H04A	Detroit Lake	35.32	330	⇑P	P	08 08 03.5	-0.4
	baz=36						
WALA	Waterton Lakes	35.67	342	eP	P	08 08 06.8	-0.1
	6.7nm,1.0s,mb4.5						
F05A	White Salmon	35.87	332	⇑P	P	08 08 08.6	0.0
	baz=36						
NEW	Newport	36.02	338	P	P	08 08 09.7	-0.2
	3.3nm,0.7s,mb4.4,baz=144,slow=8.3,SNR=5.8						
NEW				LR	LR	08 24 38.1	
	comp=Z,175nm,18.4s,MS3.9,baz=180,slow=39						
D05A	Enumclaw	37.10	333	⇓P	P	08 08 19.4	+0.2
	baz=37						
C05A	Tolt Reservoir	37.36	334	⇓P	P	08 08 20.9	-0.4
	baz=38						
A05A	Maple Falls	38.54	335	⇑P	P	08 08 30.4	-0.9
	baz=39						
A04A	Legoe Bay, Lum	38.59	334	⇓P	P	08 08 31.0	-0.7
	baz=39						
EDM	Edmonton	39.29	346	eP	P	08 08 37.1	-0.5
SAML	Samuel	42.38	123	eP	P	08 08 59.6	-3.4
LPAZ	La Paz	43.43	136	P	P	08 09 10.7	-0.9
	1.2nm,0.7s,mb3.7,baz=334,slow=8.2,SNR=7.8						
LPAZ				LR	LR	08 26 18.9	
	comp=Z,101nm,21.7s,MS3.7,baz=278,slow=35						
LPAZ	La Paz	43.43	136	eP	P	08 09 10.1	-1.5
	4.7nm,1.4s,mb4.0						
YKA	Yellowknife Ar	48.14	350	P	P	08 09 47.1	-1.6
	2.3nm,0.8s,mb4.2,baz=156,slow=7.0,SNR=6.0						
SIV	San Ignacio	48.25	129	P	P	08 09 47.2	-2.4
	1.3nm,0.9s,mb4.0,baz=305,slow=11,SNR=6.9						
INK	Inuvik	57.19	345	P	P	08 10 54.7	-1.1
	2.9nm,0.7s,mb4.4,baz=142,slow=4.0,SNR=8.9						
INK				LR	LR	08 37 33.9	
	comp=Z,96nm,20.5s,MS3.9,baz=180,slow=38						
INK	Inuvik	57.19	345	eP	P	08 10 54.2	-1.5
	3.2nm,0.7s,mb4.5						
INK				epP	pP	08 11 03.7	+3.5
HFS	Hagfors	86.88	28	LR	LR	08 52 05.1	
	comp=Z,28nm,18.6s,MS3.7,baz=222,slow=35						
WRA	Warramunga Arr	130.08	257	PKP	PKPdf	08 20 16.2	-2.4
	1.3nm,0.8s,baz=82,slow=2.2,SNR=11						
ASAR	Alice Springs	130.64	252	PKP	PKPdf	08 20 16.4	-3.3
	0.8nm,0.9s,baz=76,slow=2.2,SNR=4.2						

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*MOS **15** 08:04:41.6±0.7, 5656N×16403E, h11^{km}, mb4.0/1, Error ellipse: s-maj=37.5km s-min=11.2km az=58.7*
*ISCJB **15** 08:04:42.7±1.3, 5652N±006×16395E±009, h11^{km}±10^{km}, mb3.6/3, Error ellipse: s-maj=10.0km s-min=7.5km az=48.5*
*KRSC **15** 08:04:42, 5654N×16391E, h16^{km}, ML4.2*
*IDC **15** 08:04:43.1±11.0, 5615N×16404E, h0^{km}, mb3.6/3, mb1 4.0/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=848.3km s-min=36.1km az=140.0*
ISC 15 08:04:43.6±1.2**, 5657N**±006×**16388E**±008**, h10**^{km}±6^{km}**, n31, σ1^{s}19**/49**, mb3.6**/3**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.70	239	PN	Pg	08 04 56.5	-0.6
KBTR				S	Sg	08 05 06.9	+0.7
KBTR	Krutoberegovo	0.70	239	eP	Pg	08 04 56.5	-0.6
KBTR				i S	Sg	08 05 06.9	+0.7
SMKR	Semkarok	1.34	271	eP	Pn	08 05 06.8	-1.5
SMKR				i S	Sb	08 05 23.8	-2.1
BDR	Baidarnaya	1.48	271	eP	Pn	08 05 08.9	-1.4
BDR				i S	Sn	08 05 28.1	-1.6
CIRR	Tsirk	1.81	257	eP	Pn	08 05 14.6	-0.2
CIRR				i S	Sn	08 05 38.3	+0.6
KLY	Klyuchi	1.81	263	PN	Pn	08 05 12.3	-2.6
KLY				S	Sn	08 05 33.9	-4.0
KLY	Klyuchi	1.81	263	eP	Pn	08 05 12.3	-2.6
KLY				i S	Sn	08 05 33.9	-4.0
KRSR	Krestovskiy	1.88	260	eP	Pn	08 05 15.2	-0.6
KRSR				i S	Sn	08 05 39.0	-0.6
KPT	Kopyto	2.13	255	eP	Pn	08 05 19.5	+0.2
KPT				i S	Sn	08 05 46.9	+1.1
KMNR	Kamenistaya	2.20	250	eP	Pn	08 05 21.3	+1.1
KMNR				i S	Sn	08 05 49.7	+2.3
KOZR	Kozyr	2.28	259	PN	Pn	08 05 22.2	+0.9
KOZR				S	Sn	08 05 51.3	+1.9
KOZ	Kozyrevsk	2.29	259	eP	Pn	08 05 22.2	+0.7
KOZ				i S	Sn	08 05 51.3	+1.5
SRDR	Sredinnyy	2.33	265	eP	Pn	08 05 21.8	-0.2
SRDR				i S	Sn	08 05 50.6	0.0
MKZ	Mys Kozlova	2.36	212	PN	Pn	08 05 21.5	-1.0
MKZ				S	Sn	08 05 50.1	-1.4
MKZ	Mys Kozlova	2.36	212	eP	Pn	08 05 21.5	-1.0
MKZ				i S	Sn	08 05 50.1	-1.4
KII	Karymskiy	3.59	227	PN	Pn	08 05 40.6	+1.3
KII	Karymskiy	3.59	227	eP	Pn	08 05 40.6	+1.3
SPN	Mys Shipunski	4.14	214	PN	Pn	08 05 46.4	-0.4
SPN	Mys Shipunski	4.14	214	P	Pn	08 05 46.4	-0.4
SPN				i S	Sn	08 06 32.6	-2.7
NLC	Nalytchevo	4.30	219	PN	Pn	08 05 49.4	+0.3
NLC	Nalytchevo	4.30	219	eP	Pn	08 05 49.4	+0.3
NLC				i S	Sn	08 06 38.2	-1.1
AVH	Avacha	4.45	224	eP	Pn	08 05 52.0	+0.8
GNL	Ganaly	4.46	232	eP	Pn	08 05 52.4	+1.0
PET	Petropavlovsk	4.67	223	PN	Pn	08 05 55.3	+1.1
PET	Petropavlovsk	4.67	223	eP	Pn	08 05 55.3	+1.1
PET				i S	Sn	08 06 49.3	+0.9
RUS	Russkaya	5.20	219	PN	Pn	08 06 01.7	+0.3
RUS	Russkaya	5.20	219	eP	Pn	08 06 01.7	+0.3
PDAR	Pinedale Array	53.99	65	P	P	08 14 09.4	+1.7
	0.4nm,0.6s,mb3.5,baz=336,slow=3.3,SNR=4.6						
WRA	Warramunga Arr	80.18	208	P	P	08 16 53.0	-1.1
	0.4nm,0.6s,mb3.5,baz=14,slow=5.6,SNR=4.7						
ASAR	Alice Springs	83.85	207	P	P	08 17 12.8	-0.6
	0.7nm,1.0s,mb3.8,baz=24,slow=4.3,SNR=4.0						
ASAR	Alice Springs	83.85	207	P	P	08 17 12.9	-0.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						

IDC 15 08:13:11.1±2.2**, 924S**×**15068E, h0**^{km}**, mb3.4**/2**, mb1 3.6**/4**, mb1mx3.5**/12**, mbtmp3.5**/4**, ML2.7**/2**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.3**/16**, Error ellipse: s-maj=40.6km s-min=25.0km az=158.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.48	267	Pn	Pn	08 14 05.4	-1.0
	1.0nm,0.3s,baz=114,slow=20,SNR=2.8						
PMG				Pg	Pg	08 14 15.5	-2.1
	7.1nm,0.3s,baz=54,slow=4.0,SNR=17						
PMG				Lg		08 15 01.9	
	6.1nm,0.3s,baz=163,slow=20,SNR=5.3						
PMG				LR	LR	08 15 34.5	
	comp=Z,158nm,20.7s,baz=52,slow=41						
WRA	Warramunga Arr	19.04	234	P	Pn	08 17 34.7	-0.6
	0.1nm,0.3s,baz=59,slow=11,SNR=6.3						
ASAR	Alice Springs	21.52	226	P	P	08 18 02.0	+0.5
	1.2nm,0.8s,baz=62,slow=9.9,SNR=7.0						
SONM	Songino Array	69.01	330	P	P	08 24 18.6	+0.3
	0.7nm,0.7s,baz=126,slow=7.3,SNR=5.6						

IDC 15 08:14:30.2±26.0**, 2059S**×**17295W, h0**^{km}**, mb4.2**/4**, mb1 4.3**/4**, mb1mx3.9**/15**, mbtmp4.2**/4**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.6**/23**, Error ellipse: s-maj=494.5km s-min=155.5km az=75.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.19	263	P	P	08 21 52.9	+1.4
	4.1nm,0.4s,baz=89,slow=10,SNR=8.2						
STKA	Stephens Creek	42.03	245	P	P	08 22 22.1	-1.3
	0.6nm,0.4s,baz=95,slow=12,SNR=5.9						
ASAR	Alice Springs	49.10	256	P	P	08 23 19.6	+0.2
	1.5nm,0.7s,baz=101,slow=6.8,SNR=19						
WRA	Warramunga Arr	49.27	261	P	P	08 23 21.5	+0.8
	0.9nm,0.3s,baz=92,slow=8.4,SNR=64						
WRA				LR	LR	08 43 14.8	
	comp=Z,71nm,19.6s,baz=230,slow=35						

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*ISCJB **15** 08:20:17.2±1.0, 3333N±004×14130E±008, h33^{km}, mb4.0/2, Error ellipse: s-maj=10.3km s-min=6.1km az=26.6*
*JMA **15** 08:20:18.7±0.3, 3342N×14120E, h63^{km}, M3.1*
*IDC **15** 08:20:19.9±1.4, 3270N×13884E, h0^{km}, mb3.8/2, mb1 3.9/3, mb1mx3.5/20, mbtmp3.7/3, ML3.1/1, Error ellipse: s-maj=30.1km s-min=16.9km az=127.0*
ISC 15 08:20:19.0±1.0**, 3335N**±004×**14125E**±008**, h35**^{km}**, n14, σ0^{s}61**/20**, mb4.0**/2**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.22	259	P	Pn	08 20 39.9	+0.3
JHJ2				S	Sn	08 20 54.5	-0.4
JHJ	Hachijo jima 2	1.25	260	Pn	Pn	08 20 40.3	+0.4
	43nm,0.3s,baz=241,slow=19,SNR=30						
JHJ				Sn	Sn	08 20 55.0	-0.5
	126nm,0.3s,baz=60,slow=23,SNR=18						
BSO1	Boso 1	1.32	350	P	Pn	08 20 40.2	-0.7
BSO1				S	Sn	08 20 57.0	-0.2
BSO2	Boso 2	1.46	344	S	Sn	08 21 00.1	-0.5
BSO3	Boso 3	1.57	337	P	Pn	08 20 44.0	-0.4
BSO3				S	Sn	08 21 03.6	+0.1
BSO4	Boso 4	1.80	335	P	Pn	08 20 47.5	0.0
JIZS	Izushimoda	2.40	305	P	Pn	08 20 55.6	-0.1
JOD2	Odawara 2	2.62	317	P	Pn	08 20 58.1	-0.6
JRY	Ryogami san	3.29	325	P	Pn	08 21 07.8	-0.2
JAG	Ashikaga	3.40	335	P	Pn	08 21 09.7	+0.2
MJAR	Matsushiro Arr	4.05	323	Pn	Pn	08 21 19.5	+1.1
	1.3nm,0.3s,baz=154,slow=13,SNR=17						
MJAR				Sn	Sn	08 22 03.7	-0.9
	1.0nm,0.3s,baz=224,slow=8.4,SNR=3.9						
MAT	Matsushiro	4.05	323	P	Pn	08 21 19.5	+1.1
MAT				S	Sn	08 22 05.9	+1.3
WRA	Warramunga Arr	53.40	188	P	P	08 29 34.5	-0.6
	1.4nm,0.4s,mb4.3,baz=5.4,slow=7.6,SNR=55						
ASAR	Alice Springs	57.13	188	P	P	08 30 02.5	+0.5
	0.4nm,0.6s,mb3.6,baz=17,slow=12,SNR=7.0						

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*ISCJB **15** 08:37:35.2±0.7, 5277S±008×1604E±02, h10^{km}, mb3.9/6, MS3.8/7, Error ellipse: s-maj=16.5km s-min=7.5km az=79.4*
*IDC **15** 08:37:35.8±1.5, 5291S×16002E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.9/11, mbtmp3.8/6, ML4.3/1, MS3.8/8, Ms1 3.8/8, ms1mx3.5/24, Error ellipse: s-maj=43.8km s-min=21.8km az=79.0*
*NEIC **15** 08:37:36.8±0.6, 5288S×16016E, h10^{km}, mb4.2/2, Error ellipse: s-maj=16.6km s-min=9.5km az=126.0*
ISC 15 08:37:36.8±0.7**, 5285S**±008×**1603E**±02**, h10**^{km}**, n26, σ1^{s}41**/27**, mb3.9**/6**, MS3.8**/7**, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ	The Paps	7.82	43	PN	Pn	08 39 30.3	-0.2
APZ				eSN	Sn	08 40 53.3	-5.8
SYZ	Scrubby Hill	8.54	46	PN	Pn	08 39 40.6	+0.1
SYZ				SN	Sn	08 41 10.1	-6.7
WHZ	Wether Hill Ro	8.57	39	eP	Pn	08 39 40.9	0.0
WHZ	Wether Hill Ro	8.57	39	ePN	Pn	08 39 40.6	-0.3
WHZ				eSN	Sn	08 41 13.5	-4.1
MLZ	Mavora Lakes	9.12	38	eP	Pn	08 39 49.3	+0.9
MLZ	Mavora Lakes	9.12	38	PN	Pn	08 39 49.3	+0.9
TUZ	Tuapeka	9.21	45	eP	Pn	08 39 50.3	+0.7
TUZ	Tuapeka	9.21	45	PN	Pn	08 39 50.3	+0.7
TUZ				SN	Sn	08 41 27.8	-5.4
EAZ	Earnscleugh	9.65	41	PN	Pn	08 39 57.6	+1.8
EAZ				eSN	Sn	08 41 40.5	-3.7
ODZ	Otahua Downs	10.36	45	eP	Pn	08 40 06.2	+0.8
ODZ	Otahua Downs	10.36	45	PN	Pn	08 40 05.6	+0.2
RPZ	Rata Peaks	11.61	42	Pn	Pn	08 40 25.0	+2.5
	2.1nm,0.3s,baz=215,slow=4.8,SNR=14						
RPZ				Sn	Sn	08 42 26.9	-5.3
	1.3nm,0.3s,baz=24,slow=19,SNR=4.7						
RPZ				LR	LR	08 43 55.9	
	comp=Z,519nm,18.6s,baz=29,slow=32						
RPZ	Rata Peaks	11.61	42	Pn	Pn	08 40 25.0	+2.5
RPZ				Sn	Sn	08 42 26.9	-5.3
VNDA	Vanda	24.78	179	P	P	08 42 58.3	-0.4
	1.2nm,0.9s,mb3.4,baz=350,slow=9.1,SNR=9.9						
VNDA				LR	LR	08 50 27.5	
	comp=Z,247nm,21.2s,MS3.7,baz=356,slow=31						
VNDA	Vanda	24.78	179	eP	P	08 42 58.0	-0.7
	6.6nm,1.4s,mb4.0						
STKA	Stephens Creek	24.95	320	P	P	08 43 02.0	+1.8
	1.9nm,0.9s,mb3.6,baz=165,slow=16,SNR=3.0						
DZM	Mont Dzumac	31.09	11	LR	LR	08 52 43.0	
	comp=Z,229nm,20.4s,MS3.8,baz=203,slow=29						
CTA	Charters Tower	34.46	336	LR	LR	08 56 59.9	
	comp=Z,156nm,20.1s,MS3.7,baz=269,slow=34						
ASAR	Alice Springs	35.35	315	P	P	08 44 31.9	-0.4
	2.3nm,1.1s,mb4.0,baz=144,slow=8.0,SNR=6.5						
QSPA	South Pole Qui	37.27	180	eP	P	08 44 49.0	+0.3
	5.1nm,0.9s,mb4.3						
WRA	Warramunga Arr	38.49	319	P	P	08 44 57.5	-1.6
	0.5nm,0.6s,mb3.4,baz=152,slow=7.4,SNR=5.6						
HNR	Honiara	43.30	360	LR	LR	09 00 50.0	
	comp=Z,150nm,18.9s,MS3.9,baz=344,slow=32						
MAW	Mawson	45.21	212	P	P	08 45 53.0	-1.1
	3.9nm,1.1s,mb4.2,baz=139,slow=10,SNR=3.8						
MAW				LR	LR	09 02 22.7	
	comp=Z,109nm,21.6s,MS3.8,baz=104,slow=33						
PPT	Papeete	52.47	67	LR	LR	09 04 27.5	
	comp=Z,75nm,20.7s,MS3.7,baz=143,slow=31						
BOSA	Boshof	89.91	218	LR	LR	09 23 04.4	
	comp=Z,64nm,20.2s,MS4.0,baz=357,slow=30						
TMUT	Trail Mountain	119.30	63	ePKPdf	PKPdf	08 56 24.6	-1.6

DHMR 15 08:38:38.9±0.3**, 1365N**×**5095E, h8**^{km}±59^{km}**, ML3.9, 1C-1D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	Al Mukalla	2.03	294	⇓iP	Pn	08 39 14.6	+1.3
MUKL				i S	Sn	08 39 42.5	+3.6
MUKL				AML	AML	08 39 45.3	
	comp=N,1μm,0.2s						
LBOS		5.55	273	⇑iP	Pn	08 40 03.9	+2.2
TRBA	At Turbah	6.67	267	i P	Pn	08 40 18.9	+1.8

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*ISCJB **15** 08:55:38.5±1.6, 1121S±007×12440E±008, h109^{km}±18^{km}, mb3.4/1, Error ellipse: s-maj=14.6km s-min=11.1km az=113.1*
*NEIC **15** 08:55:39.4±3.1, 1119S×12439E, h104^{km}±34^{km}, mb4.7/3, Error ellipse: s-maj=29.6km s-min=25.6km az=99.0*
*IDC **15** 08:55:40.6±8.2, 1128S×12441E, h121^{km}±97^{km}, mb3.3/1, mb1 3.9/4, mb1mx3.5/13, mbtmp4.1/4, ML4.1/3, Error ellipse: s-maj=68.4km s-min=44.6km az=19.0*
ISC 15 08:55:43.2±2.0**, 1138S**±010×**12450E**±009**, h149**^{km}±23^{km}**, n10, σ1^{s}35**/19**, mb3.3**/1**, 1D, South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	6.78	171	eP	Pn	08 57 18.9	-1.3
	7.4nm,0.3s						
FITZ				e		08 57 26.6	
FITZ				eS	Sn	08 58 37.1	+0.9
FITZ	Fitzroy Crossi	6.78	171	P	Pn	08 57 19.1	-1.1
	2.1nm,0.3s,baz=8.9,slow=10,SNR=36						
FITZ				S	Sn	08 58 36.6	+0.4
	6.8nm,0.3s,baz=131,slow=11,SNR=12						
KAKA	Kakadu	7.88	100	eP	Pn	08 57 33.5	-1.5
	5.1nm,0.3s						
KAKA				eS	Sn	08 59 04.5	+1.7
WRA	Warramunga Arr	12.73	133	P	Pn	08 58 38.1	-0.8
	1.0nm,0.3s,baz=303,slow=14,SNR=85						
WRA				S	Sn	09 00 59.7	0.0
	2.9nm,0.3s,baz=316,slow=23,SNR=12						
WRAB	Tennant Creek	12.74	133	ePn	Pn	08 58 38.5	-0.4
	12nm,0.6s						
WRAB				eSn	Sn	09 00 58.9	-0.9
WB2	Warramunga Arr	12.74	133	⇓iP	Pn	08 58 38.5	-0.6
WB2				eS	Sn	09 00 59.2	-0.7
ASPA	Alice Springs	15.15	145	eP	Pn	08 59 11.9	+2.5
ASPA				eS	S	09 01 57.6	-5.8
AS31	Alice Springs	15.15	145	eP	Pn	08 59 11.9	+2.4
AS31				eS	S	09 01 57.6	-5.8
ASAR	Alice Springs	15.15	145	P	Pn	08 59 11.9	+2.5
	1.4nm,0.3s,baz=320,slow=12,SNR=116						
ASAR				S	S	09 01 59.7	-3.8
	1.0nm,0.3s,baz=306,slow=21,SNR=7.5						
MKAR	Makanchi Array	69.11	330	P	P	09 06 32.8	-0.3

0.3nm,0.5s,mb3.3,baz=130,slow=6.3,SNR=3.7

IDC 15 09:03:54.8±1.3**,156N**×**12649E,h0**^{km}**,mb3.6**/4**,mb1 3.7**/5**, mb1mx3.6**/15**,mbtmp3.5**/5**,Error ellipse: s-maj=103.4km s-min=19.1km az=72.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.56**	**182**	P	Pn	09 08 23.4	-1.8
	baz=22,slow=19,SNR=1.9						
WRA	**Warramunga Arr**	**22.72**	**161**	P	P	09 08 57.6	-0.5
	1.2nm,0.4s,baz=339,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.09**	**164**	P	P	09 09 31.4	+1.3
	0.8nm,0.5s,baz=346,slow=12,SNR=12						
SONM	**Songino Array**	**49.27**	**342**	P	P	09 12 44.6	-0.6
	0.2nm,0.5s,baz=166,slow=6.7,SNR=2.4						
MKAR	**Makanchi Array**	**59.20**	**326**	P	P	09 13 58.3	+0.7
	0.8nm,0.6s,baz=120,slow=8.0,SNR=5.8						

IDC 15 09:05:58.2±12.0**,479S**×**12669E,h93**^{km}±123^{km}**,mb3.4**/4**, mb1 3.5**/5**,mb1mx3.4**/15**,mbtmp3.7**/5**,ML2.9**/1**,Error ellipse: s-maj=168.7km s-min=32.7km az=67.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.80**	**154**	P	Pn	09 09 47.7	+0.1
	0.0nm,0.3s,baz=329,slow=12,SNR=3.5						
ASAR	**Alice Springs**	**20.02**	**160**	P	P	09 10 24.0	+0.5
	2.6nm,0.6s,baz=344,slow=12,SNR=20						
STKA	**Stephens Creek**	**30.36**	**154**	P	P	09 12 01.1	+0.1
	2.1nm,0.8s,baz=326,slow=15,SNR=2.5						
SONM	**Songino Array**	**55.35**	**344**	P	P	09 15 22.5	+0.1
	0.4nm,0.6s,baz=178,slow=6.8,SNR=3.1						
MKAR	**Makanchi Array**	**64.60**	**328**	P	P	09 16 25.8	+0.1
	0.2nm,0.4s,baz=122,slow=5.2,SNR=3.3						

IDC 15 09:07:58.8±2.3**,582S**×**13047E,h0**^{km}**,mb4.1**/1**,mb1 4.0**/4**, mb1mx3.6**/12**,mbtmp3.8**/4**,ML3.7**/3**,Error ellipse: s-maj=95.6km s-min=29.0km az=78.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.08**	**201**	Pn	Pn	09 11 07.4	+1.6
	0.3nm,0.3s,baz=36,slow=13,SNR=15						
FITZ				Sn	Sn	09 13 18.0	-14
	0.2nm,0.3s,baz=122,slow=15,SNR=4.8						
WRA	**Warramunga Arr**	**14.53**	**165**	Pn	Pn	09 11 24.6	-1.0
	0.2nm,0.3s,baz=347,slow=13,SNR=12						
WRA				Sn	Sn	09 13 54.0	-13
	0.7nm,0.3s,baz=333,slow=22,SNR=12						
ASAR	**Alice Springs**	**18.05**	**170**	Pn	Pn	09 12 10.9	0.0
	0.4nm,0.3s,baz=350,slow=10,SNR=16						
ASAR				Sn	Sn	09 15 20.4	-12
	0.1nm,0.3s,baz=359,slow=27,SNR=4.2						
MKAR	**Makanchi Array**	**67.51**	**326**	P	P	09 18 56.8	+0.2
	0.9nm,0.4s,baz=114,slow=7.2,SNR=14						

*TRN **15** 09:11:38.8, 1925N×6327W, h47^{km}, MD3.7*
*ISCJB **15** 09:11:39.3±0.8, 1932N±006×6332W±003, h33^{km}±10^{km}, mb3.8/6, MS3.5/5, Error ellipse: s-maj=9.5km s-min=4.2km az=15.1*
*NEIC **15** 09:11:41.8, 1883N×6280W, h5^{km}, MD3.6(TRN), After TRN.*
*RSPR **15** 09:11:41.2, 1947N×6337W, h25^{km}±28^{km}*
*IDC **15** 09:11:42.7±4.4, 1919N×6337W, h47^{km}±47^{km}, mb3.5/6, mb1 3.8/9, mb1mx3.5/23, mbtmp3.9/9, ML4.0/3, MS3.5/7, Ms1 3.5/7, ms1mx3.1/23, Error ellipse: s-maj=35.5km s-min=22.3km az=57.0*
ISC 15 09:11:40.6±1.4**,1926N**±004×**6330W**±003**,h30**^{km}±12^{km}**, n43,**σ**0^{s}93**/65**,mb3.8**/6**,MS3.5**/5**,12C-4D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**1.10**	**242⇓**	*e*P	**Pn**	**09 11 59.7**	**-0.2**
STMA	**St. Maarten, A**	**1.22**	**171**	*e*P	**Pn**	**09 12 01.5**	**-0.1**
STMA				*e*S	**Sn**	**09 12 16.5**	**-0.5**
TBVI	**Tortola**	**1.50**	**236⇓**	*e*P	**Pn**	**09 12 04.7**	**-0.6**
TBVI				*e*S	**Sn**	**09 12 24.0**	**+0.1**
SABS	**Saba**	**1.63**	**178**	*e*P	**Pn**	**09 12 08.6**	**+1.5**
SABS				*e*S	**Sn**	**09 12 33.0**	**+5.9**
SABT	**Saba**	**1.63**	**178**	*e*P	**Pn**	**09 12 08.6**	**+1.5**
SABT				*e*S	**Sn**	**09 12 33.0**	**+5.9**
STAT	**Sint Eustatius**	**1.78**	**170**	*e*P	**Pn**	**09 12 09.7**	**+0.5**
STAT				*e*S	**Sn**	**09 12 32.2**	**+1.4**
STAT	**Sint Eustatius**	**1.78**	**170**	*e*P	**Pn**	**09 12 09.7**	**+0.5**
STAT				*e*S	**Sn**	**09 12 23.9**	**-6.9**
STVI	**Saint Thomas**	**1.80**	**240**	*e*P	**Pn**	**09 12 09.3**	**-0.3**
STVI				*e*S	**Sn**	**09 12 31.8**	**+0.4**
CDVI	**St. Croix**	**2.04**	**223⇑**	*e*P	**Pn**	**09 12 13.3**	**+0.4**
CDVI				*e*S	**Sn**	**09 12 39.3**	**+2.0**
CULB	**Culebra**	**2.13**	**243**	*e*P	**Pn**	**09 12 13.6**	**-0.4**
CULB				*e*S	**Sn**	**09 12 38.8**	**-0.7**
MTP	**Monte Pirata**	**2.42**	**242⇑**	*e*P	**Pn**	**09 12 18.1**	**0.0**
MTP				*e*S	**Sn**	**09 12 47.0**	**+0.3**
BPA	**Boggy Peak**	**2.59**	**148**	*e*P	**Pn**	**09 12 20.2**	**-0.2**
BPA				*e*S	**Sn**	**09 12 48.4**	**-2.5**
BPA	**Boggy Peak**	**2.59**	**148**	*e*P	**Pn**	**09 12 20.2**	**-0.2**
BPA				*e*S	**Sn**	**09 12 46.8**	**-4.1**
CBYP	**Canovanas**	**2.61**	**248⇓**	*e*P	**Pn**	**09 12 20.5**	**-0.2**
CBYP				*e*S	**Sn**	**09 12 51.5**	**+0.2**
HUMP	**Col San Antoni**	**2.66**	**246⇑**	*e*P	**Pn**	**09 12 21.1**	**-0.2**
HUMP				*e*S	**Sn**	**09 12 52.5**	**0.0**
CPD	**Cerro la Pandu**	**2.76**	**244⇑**	*e*P	**Pn**	**09 12 22.9**	**+0.2**
CPD				*e*S	**Sn**	**09 12 55.4**	**+0.4**
SJG	**San Juan**	**2.93**	**248**	P	**Pn**	**09 12 25.0**	**-0.1**
	17nm,0.3s,baz=188,slow=23,SNR=20						
SJG				S	**Sn**	**09 12 59.2**	**0.0**
	35nm,0.3s,baz=90,slow=22,SNR=5.7						
SJG	**San Juan**	**2.93**	**248⇑**	*e*P	**Pn**	**09 12 24.9**	**-0.2**
SJG				*e*S	**Sn**	**09 12 59.6**	**+0.4**
SEG	**Port Louis**	**3.31**	**149**	*e*P	**Pn**	**09 12 29.2**	**-1.2**
ICM	**Isla Caja Muer**	**3.34**	**247⇑**	*e*P	**Pn**	**09 12 31.2**	**+0.5**
OBIP	**Obispado Ponce**	**3.35**	**249⇑**	*e*P	**Pn**	**09 12 30.9**	**0.0**
OBIP				*e*S	**Sn**	**09 13 08.9**	**-0.8**
AOPR	**Arecibo Observ**	**3.39**	**255⇑**	*e*P	**Pn**	**09 12 30.8**	**-0.6**
AOPR				*e*S	**Sn**	**09 13 09.3**	**-1.3**
LZG	**Guadaloupe-1**	**3.42**	**155**	*e*P	**Pn**	**09 12 31.6**	**-0.3**
LRS	**Lares**	**3.49**	**255⇑**	*e*P	**Pn**	**09 12 32.1**	**-0.7**
LRS				*e*S	**Sn**	**09 13 11.8**	**-1.2**
PHG	**Guadaloupe-2**	**3.59**	**154**	*e*P	**Pn**	**09 12 34.0**	**-0.2**
DEG	**La Desirade**	**3.62**	**143**	*e*P	**Pn**	**09 12 31.7**	**-2.9**
DEG				*e*S	**Sn**	**09 13 13.3**	**-3.0**
AGPR	**Aguadilla, PR**	**3.69**	**258⇑**	*e*P	**Pn**	**09 12 35.1**	**-0.4**
AGPR				*e*S	**Sn**	**09 13 16.6**	**-1.3**
TBG	**Guadaloupe-3**	**3.73**	**155**	*e*P	**Pn**	**09 12 36.5**	**+0.3**
LSP	**Las Mesas**	**3.74**	**254⇑**	*e*P	**Pn**	**09 12 36.3**	**+0.1**
LSP				*e*S	**Sn**	**09 13 19.4**	**+0.1**
MGP	**Maguayo**	**3.80**	**252⇓**	*e*P	**Pn**	**09 12 37.2**	**+0.2**
MGP				*e*S	**Sn**	**09 13 21.0**	**+0.4**
CRPR	**Cabo Rojo, PR**	**3.82**	**252⇑**	*e*P	**Pn**	**09 12 37.4**	**+0.2**
CRPR				*e*S	**Sn**	**09 13 20.9**	**-0.1**
BBL	**Barber's Block**	**4.10**	**154**	*e*P	**Pn**	**09 12 40.6**	**-0.5**
PCRV	**Puerto La Cruz**	**9.12**	**188**	LR	LR	09 17 33.8	
	comp=Z,221nm,19.0s,baz=132,slow=39						
SDV	**Santo Domingo**	**12.52**	**216**	P	**Pn**	**09 14 39.2**	**+2.6**
	0.6nm,0.3s,baz=69,slow=9.0,SNR=10						
SDV				LR	LR	09 19 42.5	
	comp=Z,147nm,18.6s,baz=72,slow=39						
ROSC	**El Rosal**	**17.90**	**218**	P	**Pn**	**09 15 49.7**	**+2.5**
	1.0nm,0.3s,baz=105,slow=19,SNR=5.5						
JTS	**JuntasAbangare**	**22.73**	**250**	LR	LR	09 25 21.3	
	comp=Z,68nm,20.0s,MS3.1,baz=302,slow=36						
LPAZ	**La Paz**	**35.64**	**188**	P	**P**	**09 18 35.2**	**-0.5**
	1.4nm,0.8s,mb3.9,baz=14,slow=10,SNR=4.5						
LPAZ				LR	LR	09 34 37.1	
	comp=Z,71nm,18.6s,MS3.5,baz=90,slow=39						
ULM	**Lac du Bonnet**	**40.32**	**328**	P	**P**	**09 19 13.4**	**-1.7**
	2.6nm,0.8s,mb4.0,baz=134,slow=11,SNR=4.0						
PDAR	**Pinedale Array**	**45.35**	**312**	P	**P**	**09 19 57.6**	**+1.7**
	0.4nm,0.7s,mb3.4,baz=97,slow=12,SNR=4.5						
CPUP	**Villa Florida**	**45.68**	**172**	LR	LR	09 39 58.3	
	comp=Z,47nm,19.1s,MS3.5,baz=158,slow=37						
YKA	**Yellowknife Ar**	**55.63**	**334**	P	**P**	**09 21 13.8**	**+0.2**
	1.0nm,0.6s,mb4.0,baz=100,slow=7.4,SNR=6.3						
YKA				LR	LR	09 43 58.6	
	comp=Z,36nm,18.5s,MS3.5,baz=270,slow=35						
TORD	**Torodi Ar. Bea**	**62.42**	**85**	P	**P**	**09 22 01.3**	**+0.7**
	0.7nm,0.8s,mb3.9,baz=283,slow=6.0,SNR=4.6						
TORD				LR	LR	09 47 02.7	
	comp=Z,63nm,19.0s,MS3.8,baz=235,slow=34						
ARCES	**ARCESS Array B**	**71.72**	**22**	P	**P**	**09 23 01.3**	**+1.6**
	0.4nm,0.5s,mb3.6,baz=280,slow=5.4,SNR=5.1						

*ISCJB **15** 09:12:55.8±1.1, 1937N±006×6336W±004, h10^{km}, Error ellipse: s-maj=9.1km s-min=5.6km az=33.9*
*NEIC **15** 09:12:58.8, 1950N×6336W, h12^{km}, MD3.9(RSPR), After RSPR.*
*RSPR **15** 09:12:58.8, 1950N×6336W, h12^{km}±28^{km}, MD3.9/15, MD3.9/15*
ISC 15 09:12:56.7±1.1**,1933N**±007×**6334W**±005**,h10**^{km}**,n22,** σ**0^{s}77**/42**,16C-1D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**1.11**	**238⇑**	*e*P	**Pb**	**09 13 18.0**	**0.0**
ABV				*e*S	**Sb**	**09 13 34.3**	**+1.7**
STMA	**St. Maarten, A**	**1.29**	**170**	*e*P	**Pn**	**09 13 19.7**	**-1.1**
STMA				*e*S	**Sb**	**09 13 34.9**	**-2.9**
TBVI	**Tortola**	**1.51**	**234**	*e*P	**Pn**	**09 13 23.2**	**-0.6**
TBVI				*e*S	**Sn**	**09 13 43.4**	**-0.2**
TBVI	**Tortola**	**1.51**	**234⇑**	*e*P	**Pn**	**09 13 23.2**	**-0.6**
TBVI				*e*S	**Sn**	**09 13 43.4**	**-0.2**
SABT	**Saba**	**1.70**	**177**	*e*P	**Pn**	**09 13 26.5**	**+0.1**
SABT				*e*S	**Sn**	**09 13 49.1**	**+1.0**
STVI	**Saint Thomas**	**1.81**	**238⇑**	*e*P	**Pn**	**09 13 28.1**	**+0.1**
STVI				*e*S	**Sn**	**09 13 50.4**	**-0.7**
CDVI	**St. Croix**	**2.07**	**221⇑**	*e*P	**Pn**	**09 13 31.6**	**+0.1**
CDVI				*e*S	**Sn**	**09 13 59.1**	**+1.7**
CULB	**Culebra**	**2.13**	**241⇑**	*e*P	**Pn**	**09 13 32.2**	**-0.2**
CULB				*e*S	**Sn**	**09 13 58.3**	**-0.6**
MTP	**Monte Pirata**	**2.43**	**240⇑**	*e*P	**Pn**	**09 13 36.2**	**-0.3**
MTP				*e*S	**Sn**	**09 14 07.2**	**+1.0**
CBYP	**Canovanas**	**2.61**	**247⇑**	*e*P	**Pn**	**09 13 39.6**	**+0.7**
CBYP				*e*S	**Sn**	**09 14 10.1**	**-0.5**
HUMP	**Col San Antoni**	**2.66**	**244**	*e*P	**Pn**	**09 13 39.4**	**-0.2**
HUMP				*e*S	**Sn**	**09 14 11.2**	**-0.7**
CPD	**Cerro la Pandu**	**2.76**	**243⇑**	*e*P	**Pn**	**09 13 41.9**	**+0.9**
CPD				*e*S	**Sn**	**09 14 15.3**	**+0.9**
ICM	**Isla Caja Muer**	**3.34**	**245**	*e*S	**Sn**	**09 14 29.3**	**+0.6**
ICM	**Isla Caja Muer**	**3.34**	**245⇑**	*e*P	**Pn**	**09 13 49.4**	**+0.4**
ICM				*e*S	**Sg**	**09 14 49.3**	**+5.3**
ICM	**Isla Caja Muer**	**3.34**	**245⇑**	*e*P	**Pn**	**09 13 49.4**	**+0.4**
ICM				*e*S	**Sn**	**09 14 29.3**	**+0.6**
OBIP	**Obispado Ponce**	**3.35**	**248⇑**	*e*P	**Pn**	**09 13 49.3**	**+0.2**
OBIP				*e*S	**Sn**	**09 14 28.0**	**-1.0**
AOPR	**Arecibo Observ**	**3.38**	**254⇑**	*e*P	**Pn**	**09 13 49.2**	**-0.3**
AOPR				*e*S	**Sn**	**09 14 28.9**	**-0.8**
LRS	**Lares**	**3.48**	**253⇑**	*e*P	**Pn**	**09 13 51.3**	**+0.4**
AGPR	**Aguadilla, PR**	**3.67**	**257⇑**	*e*P	**Pn**	**09 13 54.0**	**+0.4**
AGPR				*e*S	**Sn**	**09 14 36.6**	**-0.4**
LSP	**Las Mesas**	**3.73**	**253⇑**	*e*P	**Pn**	**09 13 54.9**	**+0.5**
LSP				*e*S	**Sn**	**09 14 37.8**	**-0.6**
MGP	**Maguayo**	**3.79**	**250⇑**	*e*P	**Pn**	**09 13 55.7**	**+0.5**
MGP				*e*S	**Sn**	**09 14 39.1**	**-0.8**
CRPR	**Cabo Rojo, PR**	**3.81**	**250⇓**	*e*P	**Pn**	**09 13 55.9**	**+0.4**
CRPR				*e*S	**Sn**	**09 14 39.4**	**-0.9**

IDC 15 09:17:03.5±42.0**,2797S**×**6213E,h0**^{km}**,mb3.6**/3**, mb1 3.9**/3**,mb1mx3.4**/20**,mbtmp3.6**/3**,Error ellipse: s-maj=1118.0km s-min=59.5km az=134.0,Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**63.90**	**104**	P	P	09 27 38.5	+0.4
	0.8nm,0.8s,baz=246,slow=6.1,SNR=7.4						
VNDA	**Vanda**	**64.98**	**166**	P	P	09 27 44.7	-0.5
	0.3nm,0.7s,baz=258,slow=5.9,SNR=3.3						
WRA	**Warramunga Arr**	**65.64**	**100**	P	P	09 27 50.0	+0.6
	0.8nm,0.8s,baz=248,slow=5.9,SNR=9.4						

*ISCJB **15** 10:36:11.8±1.1, 570S±02×147E±, h10^{km}, mb4.1/5, MS3.6/7, Error ellipse: s-maj=106.4km s-min=15.6km az=159.1*
*IDC **15** 10:36:12.1±1.6, 5706S×14694E, h0^{km}, mb4.0/4, mb1 4.3/4, mb1mx4.1/10, mbtmp4.1/4, MS3.7/7, Ms1 3.7/7, ms1mx3.5/20, Error ellipse: s-maj=199.7km s-min=24.5km az=78.0*
*NEIC **15** 10:36:13.9±0.8, 5706S×14644E, h10^{km}, mb4.3/3, Error ellipse: s-maj=82.6km s-min=12.0km az=80.0*
ISC 15 10:36:13.5±1.1**,570S**±02×**147E**±**,h10**^{km}**,n17,**σ**0^{s}53**/10**, mb4.1**/5**,MS3.6**/7**,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	**Toolangi**	**19.45**	**356**	*e*P	**Pn**	**10 40 41.1**	**-0.3**
	4.0nm,0.8s						
RPZ	**Rata Peaks**	**20.07**	**59**	LR	LR	10 46 20.6	
	comp=Z,220nm,18.9s,MS3.5,baz=201,slow=30						
VNDA	**Vanda**	**21.25**	**171**	P	**P**	**10 40 59.7**	**0.0**
	0.9nm,0.9s,mb3.1,baz=331,slow=12,SNR=5.5						
VNDA				LR	LR	10 48 22.7	
	comp=Z,132nm,18.9s,MS3.4,baz=342,slow=34						
VNDA	**Vanda**	**21.25**	**171**	P	**P**	**10 40 59.7**	**0.0**
VNDA				LR	LR	10 48 22.7	
STKA	**Stephens Creek**	**25.40**	**349**	*e*P	**P**	**10 41 41.4**	**+0.4**
	5.1nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**25.40**	**349**	P	**P**	**10 41 42.2**	**+1.2**
	6.5nm,0.7s,mb4.3,baz=168,slow=11,SNR=18						
URZ	**Urewera**	**27.18**	**59**	LR	LR	10 51 10.0	
	comp=Z,181nm,18.6s,MS3.7,baz=159,slow=33						
ASAR	**Alice Springs**	**34.66**	**338**	P	**P**	**10 43 03.5**	**+0.5**
	2.4nm,0.9s,mb4.1,baz=165,slow=9.6,SNR=26						
ASAR				PcP	PcP	10 45 35.9	-1.2
	0.8nm,0.9s,baz=166,slow=3.0,SNR=5.2						
ASAR				LR	LR	10 56 08.0	
	comp=Z,86nm,21.9s,MS3.5,baz=355,slow=34						
MAW	**Mawson**	**37.46**	**219**	LR	LR	10 58 41.4	
	comp=Z,104nm,18.7s,MS3.7,baz=63,slow=36						
WB2	**Warramunga Arr**	**38.19**	**340**	*e*P	**P**	**10 43 33.0**	**-0.2**
WB2	**Warramunga Arr**	**38.19**	**340**	*e*P	**P**	**10 43 32.9**	**-0.3**
WRA	**Warramunga Arr**	**38.20**	**340**	P	**P**	**10 43 33.4**	**+0.2**
	5.0nm,0.6s,mb4.4,baz=167,slow=7.6,SNR=87						
WRAB	**Tennant Creek**	**38.20**	**340**	*e*P	**P**	**10 43 32.5**	**-0.8**
	11nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**42.03**	**329**	LR	LR	11 00 25.5	
	comp=Z,89nm,19.3s,MS3.7,baz=282,slow=35						
PMG	**Port Moresby**	**47.46**	**360**	LR	LR	11 04 04.5	
	comp=Z,130nm,18.4s,MS3.9,baz=207,slow=35						
ARCES	**ARCESS Array B**	**152.19**	**320**	PKPbc	PKPbc	10 56 06.8	-2.5
	1.2nm,0.9s,baz=114,slow=5.4,SNR=4.5						
ARCES	**ARCESS Array B**	**152.19**	**320**	PKPbc	PKPbc	10 56 06.8	-2.5

*CSEM **15** 10:46:33.7±0.1, 4303N×006W, h5^{km}, ML2.0, Error ellipse: s-maj=1.3km s-min=0.5km az=122.0*
*STR **15** 10:46:33.9±0.1, 4303N×005W, h2^{km}±1^{km}, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **15** 10:46:33.6±0.0, 4303N×006W, h4^{km}, Md1.7/1, Error ellipse: s-maj=0.6km s-min=0.2km az=121.0*
MDD 15 10:46:34.0±1.2**,4303N**×**005W,h6**^{km}±10^{km}**,mbLg1.2**/2**, Error ellipse: s-maj=10.7km s-min=4.1km az=116.0, PRXIMO,Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.09**	**77**	Pg	Pg	10 46 35.9	-0.2
LABF				Sg	Sg	10 46 37.5	0.0
LABF	**Labassere**	**0.09**	**77**	Pg	Pg	10 46 36.0	-0.1
LABF				Lg		10 46 37.5	
VIEF	**Viey**	**0.15**	**160**	Pg	Pg	10 46 37.0	-0.1
VIEF				Sg	Sg	10 46 39.3	+0.1
VIEF	**Viey**	**0.15**	**160**	Pg	Pg	10 46 37.0	-0.1
VIEF				Lg		10 46 39.3	
EPF	**Esparros**	**0.28**	**89**	*e*Pg	Pg	10 46 39.4	-0.2
EPF				*e*Sg	Sg	10 46 43.4	+0.1
	3.5nm,0.2s						
EPF	**Esparros**	**0.28**	**89**	*e*Pg	Pg	10 46 39.4	-0.2
EPF				*e*Sg	Sg	10 46 43.4	+0.1
	1.8nm,0.2s						
EBIE	**Bielsa**	**0.37**	**158**	Pg	Pg	10 46 40.9	-0.3
	2.1nm,0.3s,SNR=16						
EBIE				Lg		10 46 45.9	
	5.0nm,0.2s,SNR=22						
ESAC	**San Caprasio**	**1.34**	**194**	Lg		10 47 17.8	
	2.0nm,0.2s,SNR=7.9						

*IDC **15** 10:48:21.6±0.5, 5121N×17932E, h0^{km}, mb4.6/29, mb1 4.7/30, mb1mx4.7/34, mbtmp4.6/30, ML5.2/1, MS3.8/14, Ms1 3.8/14, ms1mx3.5/40, Error ellipse: s-maj=16.2km s-min=11.3km az=152.0*
*NEIC **15** 10:48:25.0, 5100N×17926E, h18^{km}, mb4.7/53, ML4.6(AEIC), After AEIC.*
*ISCJB **15** 10:48:26.9±0.5, 5122N±005×17929E±003, h44^{km}±4^{km}, mb4.7/105, MS3.9/28, Error ellipse: s-maj=8.2km s-min=3.0km az=12.8*
*MOS **15** 10:48:26.8±0.9, 5120N×17929E, h44^{km}, mb4.9/45, MS4.0/8, Error ellipse: s-maj=7.9km s-min=6.1km az=90.4*
*BJI **15** 10:48:29.9, 5160N×17879E, h55^{km}, mB4.9, mb4.9, Ms4.6, Msz4.2*
ISC 15 10:48:28.6±0.5**,5127N**±005×**17928E**±003**,h45**^{km}±4^{km}**, h56**^{km}±1.7^{km}**:pP-P,n442,**σ**0^{s}75**/436**,mb4.7**/105**,MS3.9**/28**, 70C-66D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.11**	**9**	P	**Pn**	**10 48 33.4**	**-2.5**
AMKA				S	**Sn**	**10 48 39.8**	**-1.1**
SMY	**Shemya**	**3.52**	**297**	P	**Pn**	**10 49 20.8**	**+0.1**
ATKA	**Atka Island**	**4.16**	**75**	P	**Pn**	**10 49 29.1**	**-0.5**
NIKO	**Nikolski**	**7.50**	**72**	P	**Pn**	**10 50 16.0**	**+0.6**
OKCE	**Okmok Cone E**	**7.99**	**69**	P	**Pn**	**10 50 24.1**	**+2.0**
OKCD	**Okmok Cone D**	**8.02**	**69**	P	**Pn**	**10 50 23.9**	**+1.4**
SPIA	**Saint Paul Isl**	**8.52**	**42**	P	**Pn**	**10 50 33.0**	**+3.7**
SPIA				*e*Sn	**Sn**	**10 52 03.9**	**-0.2**
SDPT	**Sand Point**	**12.76**	**63**	*e*P	**Pn**	**10 51 25.8**	**-1.6**
	54nm,0.4s						
PET	**Petropavlovsk**	**12.78**	**286**	*e*P	**Pn**	**10 51 31.6**	**+4.0**
PET				*e*S	**Sn**	**10 53 55.5**	**+7.0**
PET				pmax	pmax		
	comp=Z,24nm,0.9s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
CHGN	**Chignik**	**14.09**	**60**	*e*P	**Pn**	**10 51 43.1**	**-2.3**
TNA	**Tin City**	**15.77**	**20**	*e*P	**Pn**	**10 52 11.3**	**+3.9**
SVW2	**Sparrevohn**	**16.99**	**45**	*e*P	**Pn**	**10 52 23.3**	**+0.4**
KDAK	**Kodiak Island**	**17.50**	**57**	P	**Pn**	**10 52 25.2**	**-3.9**
	comp=Z,9.0nm,0.3s,baz=266,slow=4.9,SNR=43						
KDAK	**Kodiak Island**	**17.50**	**57**	*e*Pn	**Pn**	**10 52 25.4**	**-3.8**
TTA	**Tatalina**	**17.65**	**39**	*e*P	**Pn**	**10 52 32.2**	**+1.2**
BILL	**Bilibino**	**17.98**	**344**	*e*P	**Pn**	**10 52 37.5**	**+2.3**
BILL				pmax	pmax		
	comp=Z,16nm,0.8s						
BILL	**Bilibino**	**17.98**	**344**	*e*P	**Pn**	**10 52 37.5**	**+2.4**
	comp=Z,16nm,0.8s						
MA2	**Magadan**	**18.07**	**308**	*e*P	**Pn**	**10 52 37.3**	**+1.1**
MA2				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SLKM	**Skilak Lake**	**19.27**	**50**	*e*P	**Pn**	**10 52 51.6**	**+0.9**
PMR	**Palmer**	**20.08**	**47**	*e*P	**P**	**10 52 58.6**	**+0.4**
PMR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
PMR				MLR	MLR		
	comp=Z,300nm,17.0s,MS3.7						
PMR	**Palmer**	**20.08**	**47**	*e*P	**P**	**10 52 58.6**	**+0.4**
	comp=Z,4.6nm,0.4s						
PMR				LR	LR		
	comp=Z,300nm,17.0s,MS3.7						
IMA2	**Indian Mountai**	**20.18**	**33**	*e*P	**P**	**10 53 00.0**	**+0.8**
DIV	**Divide**	**21.54**	**49**	*e*Pn	**P**	**10 53 13.3**	**-0.6**
COLA	**College**	**21.75**	**39**	*e*P	**P**	**10 53 16.5**	**+0.4**
COLA				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.6						
COLA	**College**	**21.75**	**39**	*e*P	**P**	**10 53 16.5**	**+0.4**
	comp=Z,18nm,0.7s,mb4.6						
MENT	**Mentasta**	**22.88**	**45**	*e*P	**P**	**10 53 27.5**	**-0.6**
YSS	**Yuzh-Sakhalins**	**24.12**	**274⇑**	*e*P	**P**	**10 53 41.0**	**+0.9**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
YSS	**Yuzh-Sakhalins**	**24.12**	**274**	*e*P	**P**	**10 53 40.8**	**+0.6**
	comp=Z,21nm,0.8s,mb4.6						
DAWY	**Dawson**	**25.01**	**43**	*e*P	**P**	**10 53 47.2**	**-1.0**
ASAJ	**Asahikawa**	**25.50**	**268**	P	**P**	**10 53 53.1**	**+0.5**
	comp=Z,57nm,0.9s,mb5.1,baz=46,slow=7.4,SNR=37						
ASAJ				LR	LR	11 02 26.5	
	comp=Z,114nm,19.1s,MS3.4,baz=331,slow=33						
ASAJ	**Asahikawa**	**25.50**	**268**	P	**P**	**10 53 53.2**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,57nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,114nm,19.1s						
INK	**Inuvik**	**28.24**	**35**	P	**P**	**10 54 16.7**	**-0.6**
	comp=Z,2.8nm,0.4s,mb4.2,baz=274,slow=10,SNR=19						
INK				PcP	PcP	10 57 29.2	-0.6
	comp=Z,1.6nm,0.5s,baz=34,slow=1.8,SNR=5.4						
INK	**Inuvik**	**28.24**	**35**	P	**P**	**10 54 16.7**	**-0.6**
INK						10 57 29.3	
INK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**28.24**	**35**	*e*P	**P**	**10 54 16.8**	**-0.5**
	comp=Z,22nm,1.0s,mb4.8						
HABR	**Khabarovsk**	**28.32**	**282**	*e*P	**P**	**10 54 18.3**	**+0.3**
HABR				S	**S**	**10 59 05.3**	**+4.0**
HABR				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
YAK	**Yakutsk**	**28.58**	**311⇑**	*e*P	**P**	**10 54 19.6**	**-0.7**
YAK				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.8						
DLBC	**Dease Lake**	**29.42**	**56**	P	**P**	**10 54 28.6**	**+0.8**
	comp=Z,1.1nm,0.6s,mb3.8,baz=280,slow=14,SNR=2.9						
MJAR	**Matsushiro Arr**	**32.58**	**259**	P	**P**	**10 54 55.3**	**-0.2**
	comp=Z,2.4nm,0.8s,mb4.2,baz=53,slow=9.2,SNR=8.8						
MJAR				PcP	PcP	10 57 41.2	0.0
	comp=Z,1.9nm,1.0s,baz=112,slow=5.7,SNR=4.7						
MJAR				LR	LR	11 07 45.4	
	comp=Z,117nm,18.0s,MS3.6,baz=65,slow=36						
MJAR	**Matsushiro Arr**	**32.58**	**259**	P	**P**	**10 54 55.3**	**-0.3**
MJAR						10 57 41.2	
MAJO	**Matsushiro**	**32.58**	**259**	*e*P	**P**	**10 54 55.9**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
MAJO	**Matsushiro**	**32.58**	**259**	*e*P	**P**	**10 54 55.9**	**+0.3**
	comp=Z,15nm,1.1s,mb4.8						
MAT	**Matsushiro**	**32.58**	**259**	P	**P**	**10 54 55.5**	**-0.1**
MAT	**Matsushiro**	**32.58**	**259**	*e*P	**P**	**10 54 56.0**	**+0.4**
MAT				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
MAT	**Matsushiro**	**32.58**	**259**	*e*P	**P**	**10 54 56.0**	**+0.4**
	comp=Z,15nm,1.1s,mb4.8						
MDJ	**Mudanjiang**	**33.40**	**278**	P	**P**	**10 55 01.9**	**-0.8**
MDJ				AP	pP	10 55 14.9	+0.2
MDJ				XP	sP	10 55 21.1	+1.0
MDJ				PP	PP	10 56 17.8	-1.0
MDJ				S	**S**	**11 00 20.3**	**-0.4**
MDJ				XS	sS	11 00 41.0	+0.2
MDJ				SCP	ScP	11 01 23.3	-0.9
MDJ				PCS	PcS	11 01 29.0	-0.1
MDJ				SCS	ScS	11 05 24.1	-1.0
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,79nm,5.7s						
MDJ				LR	LR		
	comp=N,28nm,18.7s,MS3.5						
MDJ				LR	LR		
	comp=E,93nm,20.6s,MS3.5						
MDJ				LR	LR		
	comp=Z,118nm,19.2s,MS3.6						
YKW3	**Yellowknife Ar**	**36.16**	**46**	*e*P	**P**	**10 55 25.8**	**-0.8**
YKA	**Yellowknife Ar**	**36.18**	**46**	P	**P**	**10 55 25.6**	**-1.1**
	comp=Z,7.8nm,0.6s,mb4.8,baz=281,slow=7.6,SNR=44						
YKA				PcP	PcP	10 57 50.9	-0.6
	comp=Z,1.4nm,0.5s,baz=287,slow=3.0,SNR=5.8						
YKA				ScP	ScP	11 01 35.7	+1.6
	comp=Z,0.9nm,0.6s,baz=293,slow=3.3,SNR=5.6						
YKA				LR	LR	11 11 43.0	
	comp=Z,197nm,19.2s,MS3.9,baz=270,slow=39						
YKA	**Yellowknife Ar**	**36.18**	**46**	P	**P**	**10 55 25.6**	**-1.1**
YKA						10 57 50.9	
YKA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA				pmax	pmax		
	comp=N,1.0nm,0.6s						

YKA MLR MLR
comp=Z,197nm,19.2s
YKA Yellowknife Ar 36.18 46 P **P** **10 55 25.6 -1.1**
YKA PcP PcP 10 57 50.9 -0.6
YKA ScP ScP 11 01 35.7 +1.6
YKA LR LR 11 11 43.0
CN2 Changchun 36.38 280 *e*P **P** **10 55 28.8 +0.4**
CN2 *e*XP sP 10 55 51.1 +5.2
CN2 *e*S **S** **11 01 04.0 -2.6**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,19.0s,MS4.1
CN2 LR LR
comp=E,200nm,19.0s,MS4.1
CN2 LR LR
comp=Z,200nm,19.0s,MS3.9
A05A Maple Falls 36.79 70 ⇑P **P** **10 55 32.4 +0.4**
baz=37
C04A Brinnon 36.85 72 ⇓P **P** **10 55 32.9 +0.5**
baz=37
E03A Lebam 37.05 74 ⇑P **P** **10 55 34.2 0.0**
baz=37
BOD Bodaibo 37.07 306 *e*P **P** **10 55 33.5 -0.8**
BOD pmax pmax
comp=Z,24nm,0.7s,mb5.1
B05A Bryant 37.12 71 ⇑P **P** **10 55 34.9 +0.2**
baz=37,SNR=5.1
HTW Haystack Looko 37.53 71 P **P** **10 55 38.8 +0.6**
E04A Onalaska 37.53 74 ⇑P **P** **10 55 38.1 -0.1**
baz=38
C05A Tolt Reservoir 37.62 72 ⇑P **P** **10 55 39.0 0.0**
baz=38,SNR=8.1
D05A Enumclaw 37.69 72 ⇓P **P** **10 55 40.5 +1.0**
baz=38,SNR=7.2
F04A Amboy 38.04 75 ⇓P **P** **10 55 43.0 +0.4**
baz=38,SNR=5.6
G04A Mulino 38.37 76 ⇑P **P** **10 55 44.9 -0.4**
baz=38
J02A Umpqua 38.66 79 ⇑P **P** **10 55 48.1 +0.3**
baz=39
EBG Ellensburg 38.67 72 P **P** **10 55 48.4 +0.5**
H04A Detroit Lake 38.82 76 ⇓P **P** **10 55 49.4 +0.3**
baz=39,SNR=6.6
BROR Big Rock Looko 38.87 77 P **P** **10 55 50.7 +1.2**
J03A Ideyld Park 39.03 78 ⇓P **P** **10 55 51.9 +1.0**
baz=39
L02A Cave Junction 39.30 80 ⇑P **P** **10 55 53.3 +0.2**
baz=39
MDW Midway 39.30 72 P **P** **10 55 53.7 +0.6**
WAH2 Wahluke Slope 39.35 72 P **P** **10 55 53.6 +0.2**
H05A Madras 39.42 76 ⇓P **P** **10 55 54.0 0.0**
baz=39
SNIWA Snively Ranch 39.44 72 P **P** **10 55 54.5 +0.3**
CIT Chita 39.53 298 *e*P **P** **10 55 55.1 +0.1**
OD2 Odessa Site #2 39.54 70 P **P** **10 55 54.6 -0.4**
HAWA Hanford 39.55 72 *e*P **P** **10 55 55.5 +0.3**
comp=Z,1.5nm,0.6s,mb3.9
WRD Warden 39.57 72 P **P** **10 55 54.7 -0.7**
I05A Bend 39.65 76 ⇓P **P** **10 55 55.3 -0.7**
baz=40
EDM Edmonton 39.91 60 *e*P **P** **10 55 57.1 -1.1**
NEW Newport 40.05 68 *e*P **P** **10 55 58.8 -0.5**
NEW pmax pmax
comp=Z,9.0nm,0.6s
NEW Newport 40.05 68 *e*P **P** **10 55 58.8 -0.5**
comp=Z,9.0nm,0.6s,mb4.7
YBH Yreka Blue Hor 40.09 80 *e*P **P** **10 56 01.6 +2.0**
YBH pmax pmax
comp=Z,18nm,1.4s
YBH Yreka Blue Hor 40.09 80 *e*P **P** **10 56 01.6 +1.9**
comp=Z,18nm,1.4s,mb4.6
YBH Yreka Blue Hor 40.09 80 ⇑P **P** **10 55 59.4 -0.3**
baz=40
J05A Fort Rock 40.14 77 ⇑P **P** **10 55 59.9 -0.1**
baz=40
K04A Chilquin 40.20 79 ⇓P **P** **10 56 00.2 -0.4**
baz=40
N02C Big Bar 40.24 82 ⇓P **P** **10 56 00.8 -0.1**
baz=40
F08A Pendleton 40.30 73 ⇑P **P** **10 56 01.3 -0.1**
baz=40
O01C Eel River Cons 40.31 83 ⇓P **P** **10 56 01.5 0.0**
baz=40
L04A Klamath Falls 40.35 79 ⇓P **P** **10 56 00.9 -0.9**
baz=40
I06A Prineville 40.41 76 ⇑P **P** **10 56 02.2 -0.1**
baz=40
M04C Macdoel 40.60 80 ⇑P **P** **10 56 04.3 +0.4**
baz=40,SNR=5.0
M03C McCloud 40.71 81 ⇑P **P** **10 56 05.2 +0.4**
baz=41
I07A Izee 40.77 75 ⇑P **P** **10 56 05.4 +0.1**
baz=41,SNR=7.7
J06A Christmas Vall 40.82 77 P **P** **10 56 06.8 +1.1**
baz=41,SNR=6.1
WDC Whiskeytown Da 40.85 82 ⇑P **P** **10 56 06.3 +0.3**
baz=41
O02C Red Bluff 40.93 82 ⇓P **P** **10 56 07.3 +0.7**
baz=41
K06A Valley Falls 41.01 77 ⇑P **P** **10 56 07.5 +0.3**
baz=41
H08A Prairie City 41.04 74 ⇓P **P** **10 56 07.0 -0.5**
baz=41
L05A Lakeview 41.07 79 ⇑P **P** **10 56 07.3 -0.4**
baz=41
M05C Lookout 41.27 80 ⇓P **P** **10 56 09.8 +0.4**
baz=41,SNR=8.6
HATC Hat Creek Radi 41.38 81 ⇓P **P** **10 56 11.1 +0.8**
baz=41
I08A Drewsey 41.43 75 ⇓P **P** **10 56 09.9 -0.7**
baz=41,SNR=7.1
WALA Waterton Lakes 41.52 66 *e*P **P** **10 56 10.7 -0.7**
comp=Z,9.7nm,0.8s,mb4.5
H09A Durkee 41.57 73 P **P** **10 56 12.4 +0.6**
baz=42,SNR=6.3
BSMT Bassoo Peak 41.62 68 *e*P **P** **10 56 11.9 -0.3**
BMO Blue Mountains 41.68 73 *e*P **P** **10 56 12.9 +0.2**
M06C Likely Place G 41.77 80 ⇓P **P** **10 56 14.1 +0.6**
baz=42
I09A Lost Marbles R 41.90 74 ⇓P **P** **10 56 14.2 -0.3**
baz=42
O04C Chester 41.91 81 ⇑P **P** **10 56 14.7 +0.1**
baz=42,SNR=6.4
MNRC McLaughlin Nat 41.91 84 ⇓P **P** **10 56 15.3 +0.7**
baz=42
L07A Adell 42.01 78 ⇑P **P** **10 56 16.1 +0.7**
baz=42,SNR=7.0
ORV Oroville 42.10 82 ⇓P **P** **10 56 15.1 -1.0**
baz=42
K08A Mann Creek Ran 42.13 76 ⇓P **P** **10 56 16.7 +0.3**
baz=42,SNR=9.6
WVOR Wild Horse Val 42.20 77 *e*P **P** **10 56 16.8 -0.2**
WVOR *e**PP pP 10 56 29.6 +0.3
WVOR *e**SP sP 10 56 35.0 +0.4
WVOR pmax pmax
comp=Z,12nm,0.9s,mb4.5
WVOR Wild Horse Val 42.20 77 *e*P **P** **10 56 16.8 -0.2**
comp=Z,12nm,0.9s,mb4.5
WVOR *ep*P pP 10 56 29.6 +0.3
WVOR *es*P sP 10 56 35.0 +0.4
O05C Quincy 42.22 81 ⇓P **P** **10 56 17.0 -0.1**
baz=42,SNR=5.3
OHCM Honcut 42.24 82 *e*P **P** **10 56 17.1 -0.1**
N06A Buffalo Meadow 42.43 80 P **P** **10 56 19.4 +0.5**
baz=42,SNR=10
M07A Soldier Meadow 42.47 78 ⇓P **P** **10 56 20.0 +0.9**
baz=42,SNR=27
L08A Fields 42.52 77 P **P** **10 56 20.4 +0.9**
baz=42,SNR=9.5
K09A Rome 42.61 76 ⇑P **P** **10 56 20.6 +0.3**
baz=42
BEKR Beckwourth 42.62 81 ⇓P **P** **10 56 20.5 +0.1**
baz=42,SNR=6.9
MSO Missoula 42.63 69 *e*P **P** **10 56 20.1 -0.4**
O06A Flanigan 42.78 80 ⇑P **P** **10 56 21.8 +0.1**
baz=43,SNR=5.4
P05C Yuba Gap, Truc 42.80 82 ⇑P **P** **10 56 21.9 +0.1**
baz=43
M08A Happy Creek Ra 42.92 78 ⇓P **P** **10 56 22.2 -0.7**
baz=43
CHMT Chamberlain Mo 42.99 68 *e*P **P** **10 56 22.7 -0.7**
P06A Stead Airport, 43.02 81 ⇓P **P** **10 56 22.8 -0.8**
baz=43
L09A Wilkinson Ranc 43.03 77 ⇑P **P** **10 56 24.2 +0.5**
baz=43,SNR=10
LAVA Lava Cap Winer 43.05 83 ⇑P **P** **10 56 23.0 -0.9**
baz=43
PAHR Pah Rah Range 43.32 81 *e*P **P** **10 56 26.8 +0.7**
WCN Washoe City 43.33 81 ⇑P **P** **10 56 26.7 +0.5**
baz=43
O07A Toulon 43.37 80 ⇓P **P** **10 56 26.3 -0.1**
baz=43,SNR=8.2
N08A GE Springer Mi 43.46 79 ⇑P **P** **10 56 27.4 +0.2**
baz=43,SNR=12
R05C Kirkwood Meado 43.49 82 ⇓P **P** **10 56 27.3 -0.2**
baz=43
M09A Marrel Ranch, 43.51 77 ⇓P **P** **10 56 28.0 +0.4**
baz=43
CMB Columbia Colle 43.71 83 *e*P **P** **10 56 30.2 +1.0**
CMB Columbia Colle 43.71 83 ⇑P **P** **10 56 30.0 +0.9**
baz=44
P07A Fallon 43.73 80 ⇑P **P** **10 56 29.9 +0.5**
baz=44
PACP Pacheco Peak 43.78 85 ⇓P **P** **10 56 29.2 -0.5**
baz=44
N09A Rock Creek Ran 43.79 78 ⇓P **P** **10 56 30.3 +0.4**
baz=44,SNR=6.8
HRY Holter Researc 43.93 68 *e*P **P** **10 56 30.4 -0.5**
R06C Coleville 43.99 82 ⇓P **P** **10 56 30.8 -0.6**
baz=44,SNR=6.2
HAST UC Hastings Re 44.00 86 ⇓P **P** **10 56 30.5 -1.0**
baz=44,SNR=6.2
M10A I.L. Ranch, Tu 44.01 77 ⇓P **P** **10 56 32.0 +0.5**
baz=44,SNR=9.7
WAKR Walker 44.01 82 *e*P **P** **10 56 32.3 +0.7**
LRM Limekiln Ridge 44.05 69 *e*P **P** **10 56 31.5 -0.4**
HLID Hailey 44.13 73 *e*P **P** **10 56 32.8 +0.2**
comp=Z,14nm,0.9s,mb4.7
P08A Dixie Valley 44.14 80 ⇓P **P** **10 56 33.8 +1.2**
baz=44
S06C San Francisco 44.14 83 P **P** **10 56 32.9 +0.3**
baz=44,SNR=12
Q07A Schurz 44.14 81 ⇓P **P** **10 56 33.4 +0.7**
baz=44
S05C Merced 44.17 84 ⇑P **P** **10 56 32.6 -0.3**
baz=44
DLMT Dillon 44.21 70 *e*P **P** **10 56 33.2 0.0**
BMN Battle Mountai 44.23 78 *e*P **P** **10 56 34.1 +0.8**
BMN pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
BMN Battle Mountai 44.23 78 *e*P **P** **10 56 34.1 +0.8**
comp=Z,7.0nm,0.8s,mb4.5
MCMT McKenzie Canyo 44.36 71 *e*P **P** **10 56 34.2 -0.2**
MCMT *ep*P pP 10 56 47.8 +1.0
MCMT *es*P sP 10 56 56.2 +4.2
O09A Fish Creek Ran 44.40 79 ⇑P **P** **10 56 35.1 +0.4**
baz=44,SNR=8.8
EGMT Eagleton 44.42 65 *e*P **P** **10 56 34.3 -0.6**
comp=Z,11nm,0.8s,mb4.6
V03C Hunter Liggett 44.43 86 ⇓P **P** **10 56 35.5 +0.5**
baz=44
N10A Dunphy 44.50 78 ⇑P **P** **10 56 35.5 0.0**
baz=44
U04C Hernandez Rese 44.50 85 ⇓P **P** **10 56 35.8 +0.3**
baz=44
M11A Holland Ranch, 44.52 76 ⇓P **P** **10 56 36.1 +0.5**
baz=44,SNR=9.0
BOZ Bozeman (W) 44.62 69 *e*P **P** **10 56 36.2 -0.3**
BOZ pmax pmax
comp=Z,15nm,0.8s,mb4.9
BOZ Bozeman (W) 44.62 69 *e*P **P** **10 56 36.2 -0.3**
comp=Z,15nm,0.8s,mb4.9
Q08A Gabbs 44.73 81 ⇓P **P** **10 56 37.7 +0.3**
baz=45,SNR=8.7
O10A Cortez Mining, 44.76 78 ⇑P **P** **10 56 38.4 +0.8**
baz=45,SNR=6.2
NVAR Mina Array Bea 44.76 81 P **P** **10 56 38.2 +0.6**
comp=Z,3.8nm,0.8s,mb4.3,baz=278,slow=10,SNR=35
NVAR PcP PcP 10 58 20.2 +1.0
comp=Z,1.8nm,0.8s,baz=266,slow=6.3,SNR=4.2
NVAR Mina Array Bea 44.76 81 P **P** **10 56 38.2 +0.6**
NVAR PcP PcP 10 58 20.2 +1.0
T06C Millerton Lake 44.77 84 ⇓P **P** **10 56 36.7 -0.9**
baz=45,SNR=7.1
P09A Austin 44.80 79 ⇓P **P** **10 56 38.3 +0.3**
baz=45,SNR=5.3
KCC Kaiser Creek 44.81 83 ⇑P **P** **10 56 38.0 0.0**
baz=45,SNR=5.5
V04C Ramage Ranch, 44.90 86 ⇑P **P** **10 56 38.4 -0.4**
baz=45
N11A Elko Archery C 44.91 77 ⇓P **P** **10 56 39.0 +0.2**
baz=45
PKD Parkfield 44.91 86 ⇓P **P** **10 56 38.7 -0.1**
baz=45
MLAC Mammoth Lakes 44.92 83 ⇑P **P** **10 56 38.9 0.0**
baz=45
R08A Mina 44.93 81 ⇑P **P** **10 56 39.2 +0.3**
baz=45
M12A Wells 45.06 76 ⇑P **P** **10 56 40.0 0.0**
baz=45,SNR=5.5
TLY Talaya 45.10 302 *e*P **P** **10 56 40.9 +0.6**
TLY *e*S **S** **11 03 27.0 +11**
TLY pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
TLY MLR MLR
comp=Z,208nm,17.0s,MS4.1
TLY Talaya 45.10 302 *e*P **P** **10 56 41.0 +0.7**
QLMT Earthquake Lak 45.19 70 *e*P **P** **10 56 41.1 +0.1**
Q09A Carvers 45.21 80 ⇓P **P** **10 56 41.3 +0.1**
baz=45
ULN Ulaanbaatar 45.22 295 *d*iP **P** **10 56 42.2 +0.9**
ULN Ulaanbaatar 45.22 295 *e*P **P** **10 56 41.9 +0.7**
comp=Z,8.3nm,0.8s,mb4.6
ELK Elko 45.26 77 *e*P **P** **10 56 42.4 +0.8**
ELK pmax pmax
comp=Z,12nm,0.8s
ELK Elko 45.26 77 *e*P **P** **10 56 42.4 +0.9**
comp=Z,12nm,0.8s,mb4.8
MTUM Tungsten Hills 45.26 83 *e*P **P** **10 56 42.5 +0.9**
PTRM Twissleman Ran 45.30 86 *e*P **P** **10 56 42.2 +0.3**
N12A Clover Valley, 45.32 76 ⇑P **P** **10 56 42.0 0.0**
baz=45,SNR=14
O11A Cowboy Ranch, 45.37 78 ⇓P **P** **10 56 42.8 +0.4**
baz=45,SNR=9.8
HELL Mitchell Peak, 45.40 84 ⇑P **P** **10 56 42.0 -0.7**
baz=45,SNR=15
RCTC Rector, Farmer 45.50 84 ⇑P **P** **10 56 43.6 +0.2**
baz=45
M13A Montello 45.55 75 P **P** **10 56 44.2 +0.3**
baz=46,SNR=11
SONM Songino Array 45.61 296 P **P** **10 56 45.3 +0.9**
comp=Z,5.8nm,0.6s,mb4.7,baz=62,slow=8.8,SNR=46
SONM LR LR 11 17 30.8
comp=Z,212nm,18.7s,MS4.1,baz=57,slow=38
R09A Tonopah 45.64 81 P **P** **10 56 44.8 +0.1**
baz=46,SNR=38
P11A Circle Ranch, 45.66 78 ⇑P **P** **10 56 45.1 +0.4**
baz=46
SMMC Simmler 45.66 86 ⇓P **P** **10 56 43.9 -0.8**
baz=46
TIN Tiemaha 45.66 83 ⇓P **P** **10 56 44.9 +0.2**
baz=46
YNR Norris Junctio 45.70 69 *e*P **P** **10 56 46.3 +1.2**
YFT Old Faithful 45.76 70 *e*P **P** **10 56 46.6 +1.1**
N13A Wendover, West 45.82 76 P **P** **10 56 46.4 +0.4**
baz=46,SNR=5.5
O12A Currie 45.84 77 P **P** **10 56 46.6 +0.4**
baz=46,SNR=28
S09A Goldfield 45.87 81 ⇑P **P** **10 56 46.2 -0.2**
baz=46
VES Vestal, Richgr 45.90 85 ⇑P **P** **10 56 46.5 -0.1**
baz=46
LKWY Lake 45.95 69 *e*P **P** **10 56 48.5 +1.5**
ZAK Zakamensk 45.97 300 *e*P **P** **10 56 47.9 +0.7**
ZAK *e* 10 58 23.7
ZAK pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
IMW Indian Meadow 46.01 71 *e*P **P** **10 56 51.1 +3.6**
comp=Z,14nm,0.9s,mb4.9
PKM Peak Mountain 46.04 86 ⇓P **P** **10 56 47.8 +0.1**
baz=46
FLWY Flagg Ranch 46.05 70 *e*P **P** **10 56 48.5 +0.7**
R10A Warm Springs 46.09 80 P **P** **10 56 48.2 +0.1**
baz=46,SNR=9.2
RRI2 Red Ridge 46.10 71 *e*P **P** **10 56 48.8 +0.6**
CWC Cottonwood Cre 46.14 83 ⇑P **P** **10 56 48.7 +0.2**
baz=46
HVU Hansel Valley 46.14 74 *e*P **P** **10 56 49.0 +0.5**
MOOW Moose Ponds 46.21 71 *e*P **P** **10 56 49.1 0.0**
P12A McGill 46.23 78 P **P** **10 56 49.5 +0.3**
baz=46,SNR=12
GRAC Grapevine Rang 46.23 82 ⇓P **P** **10 56 49.7 +0.5**
baz=46
TPAW Teton Pass 46.24 71 *e*P **P** **10 56 50.0 +0.7**
comp=Z,8.2nm,0.7s,mb4.8
SNOW Snow King Moun 46.37 71 *e*P **P** **10 56 50.9 +0.5**
comp=Z,8.0nm,0.6s,mb4.8
REDW Red Top Meadow 46.37 71 *e*P **P** **10 56 51.0 +0.6**
comp=Z,5.4nm,0.8s,mb4.5
LOHW Long Hollow 46.37 71 *e*P **P** **10 56 50.9 +0.5**
comp=Z,6.1nm,0.7s,mb4.6
ISA Isabella 46.39 84 *e*P **P** **10 56 50.0 -0.5**
ISA Isabella 46.39 84 ⇑P **P** **10 56 48.8 -1.6**
baz=46
BGU Big Grassy Mou 46.50 75 *e*P **P** **10 56 47.7 -3.6**
Q12A Willow Creek R 46.54 78 ⇓P **P** **10 56 51.5 -0.1**
baz=46,SNR=7.7
HHC Hu-ho-hao-te 46.55 285 *e*P **P** **10 56 52.8 +1.0**
HHC AP pP 10 57 08.4 +4.2
HHC XP sP 10 57 15.4 +6.0
HHC PCP PcP 10 58 27.3 +1.9
HHC PP PP 10 58 42.5 +0.9
HHC SCP ScP 11 02 14.6 -0.6
HHC PCS PcS 11 02 20.3 +0.1
HHC S **S** **11 03 35.3 -1.9**
HHC XS sS 11 04 02.4 +4.5
HHC SCS ScS 11 06 39.4 -3.4
HHC SS SS 11 06 54.6 -8.9
HHC AMB AMB
comp=Z,25nm,1.4s,mb5.0
HHC AMB AMB
comp=Z,79nm,5.9s
HHC LR LR
comp=N,101nm,20.9s,MS3.9
HHC LR LR
comp=E,82nm,19.9s,MS3.9
HHC LR LR
comp=Z,105nm,21.8s,MS3.8
AHID Auburn Hatcher 46.57 72 *e*P **P** **10 56 51.9 0.0**
comp=Z,9.2nm,0.6s,mb4.9
BSC Santa Cruz Isl 46.74 87 ⇓P **P** **10 56 51.7 -1.5**
baz=47
MPMC Manual Prospec 46.75 83 P **P** **10 56 53.3 +0.1**
baz=47,SNR=8.2
SSE Sheshan 46.79 268 P **P** **10 56 53.4 -0.2**
SSE AMB AMB
comp=Z,29nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,168nm,6.0s
FURC Furnace Creek, 46.88 82 ⇑P **P** **10 56 54.7 +0.4**
baz=47
HWUT Hardware Ranch 46.98 73 *e*P **P** **10 56 55.2 +0.2**
comp=Z,7.6nm,0.9s,mb4.6
BLG Laguna Peak 47.02 87 ⇑P **P** **10 56 54.6 -0.8**
baz=47
DUG Dugway 47.07 76 *e*P **P** **10 56 56.4 +0.6**
DUG pmax pmax
comp=Z,12nm,0.9s,mb4.8
DUG Dugway 47.07 76 *e*P **P** **10 56 56.4 +0.6**
comp=Z,12nm,0.9s,mb4.8
LAO LASA Array 47.16 65 *e*P **P** **10 56 56.2 -0.3**
comp=Z,8.4nm,0.7s,mb4.8
EDW2 Edwards Air Fo 47.19 85 ⇑P **P** **10 56 55.7 -1.0**
baz=47
U10A Ash Meadows, A 47.24 82 ⇑P **P** **10 56 57.8 +0.6**
baz=47
TCUT Toone Canyon 47.36 74 *e*P **P** **10 56 58.4 +0.3**
CTU Camp Tracy 47.41 75 *e*P **P** **10 56 58.6 +0.1**
BW06 Boulder Array 47.49 71 *e*P **P** **10 56 58.8 -0.2**
PDAR Pinedale Array 47.49 71 P **P** **10 56 58.9 -0.2**
comp=Z,26nm,0.7s,mb5.3,baz=301,slow=3.7,SNR=250
PDAR LR LR 11 14 31.1
comp=Z,66nm,20.3s,MS3.6,baz=144,slow=33
MWC Mount Wilson 47.58 86 *e*P **P** **10 56 59.9 +0.2**
SHOC Shoshone 47.60 83 P **P** **10 56 59.9 -0.1**
baz=48,SNR=10
NJ2 Nanjing 47.61 270 *e*P **P** **10 57 01.8 +1.8**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
GSC Goldstone 47.66 84 *e*P **P** **10 57 00.3 -0.1**
GSC Goldstone 47.66 84 P **P** **10 57 00.4 0.0**
baz=48,SNR=7.9
NLU North Lily Min 47.66 76 *e*P **P** **10 57 00.8 +0.4**
BFSC Mount Baldy St 47.82 85 ⇑P **P** **10 57 01.5 -0.1**
baz=48
DAU Daniels Canyon 47.88 75 *e*P **P** **10 57 03.3 +1.2**
MPU Maple Canyon 47.90 75 *e*P **P** **10 57 02.7 +0.5**
SCI San Clemente I 48.09 87 ⇓P **P** **10 57 02.2 -1.5**
baz=48
TUQ Turquoise Mtn. 48.12 83 ⇓P **P** **10 57 03.1 -0.9**
baz=48
KRAR Krasnoyarsk 48.25 311 *e*P **P** **10 57 04.8 -0.1**
KRAR pmax pmax
comp=Z,74nm,1.0s,mb5.7
HEC Hector,Ludlow 48.26 84 ⇑P **P** **10 57 04.7 -0.3**
baz=48
BBRC Big Bear Sol-O 48.26 85 ⇑P **P** **10 57 04.7 -0.3**
baz=48
U12A Valley of Fire 48.35 81 ⇑P **P** **10 57 05.5 -0.2**
baz=48
CCUT Cedar City 48.37 79 *e*P **P** **10 57 06.4 +0.5**
MSU Marysvale 48.49 77 *e*P **P** **10 57 07.4 +0.6**
MURC Murrieta 48.52 86 ⇓P **P** **10 57 06.5 -0.6**
baz=48
TMUT Trail Mountain 48.60 76 *e*P **P** **10 57 08.7 +1.1**
V12A Nelson 48.61 82 ⇑P **P** **10 57 07.2 -0.4**
baz=48
W12A Cal Nev Ari 48.87 82 ⇑P **P** **10 57 09.2 -0.5**
baz=49
PFO Pinyon Flat Ob 48.98 85 ⇓P **P** **10 57 10.0 -0.6**
baz=49
BELC Belle Mtn. 49.01 84 ⇓P **P** **10 57 10.3 -0.5**
baz=49
109C Camp Elliot, M 49.05 86 ⇓P **P** **10 57 10.5 -0.6**
baz=49
SRU San Rafael 49.13 75 *e*P **P** **10 57 12.2 +0.5**
NEE2 Needles Airpor 49.37 83 ⇓P **P** **10 57 12.6 -0.9**
baz=49
IRM Iron Mountain 49.44 84 ⇓P **P** **10 57 13.1 -0.9**
baz=49
BAR Barrett 49.47 86 *e*P **P** **10 57 14.1 -0.2**
MONP Monument Peak 49.48 86 ⇓P **P** **10 57 13.4 -1.0**
baz=49
RWWY Rawlins 49.53 71 *e*P **P** **10 57 14.2 -0.6**
W13A Hualapai Mount 49.61 82 ⇑P **P** **10 57 15.4 0.0**
baz=50
DVTC Desert V Tower 49.84 86 ⇑P **P** **10 57 16.7 -0.4**
baz=50
PDMCI Parker Dam,Lak 49.98 83 ⇑P **P** **10 57 17.6 -0.5**
baz=50
X13A Yucca 49.98 82 ⇓P **P** **10 57 17.5 -0.7**
baz=50
W14A Seligman 50.04 81 P **P** **10 57 18.9 +0.3**
baz=50,SNR=7.8
Y12C Blythe 50.10 84 ⇑P **P** **10 57 18.3 -0.7**
baz=50
GLA Glamis 50.37 84 *e*P **P** **10 57 21.0 -0.1**
GLA Glamis 50.37 84 P **P** **10 57 21.1 0.0**
baz=50,SNR=5.3
SPB4 Spitsbergen Ar 50.39 355 *e*P **P** **10 57 20.8 -0.5**
PV10 Paradox Valley 50.49 75 *e*P **P** **10 57 22.3 +0.3**
W15A Williams 50.56 81 ⇑P **P** **10 57 22.8 +0.2**
baz=50
X14A Yava 50.64 82 P **P** **10 57 23.2 0.0**
baz=50,SNR=6.0
ULM Lac du Bonnet 50.75 56 P **P** **10 57 22.1 -1.8**
comp=Z,1.8nm,0.5s,mb4.3,baz=312,slow=7.9,SNR=8.7
ULM LR LR 11 19 02.6
comp=Z,107nm,19.6s,MS3.9,baz=296,slow=36
WUAZ Wupatki 50.90 80 *e*P **P** **10 57 25.4 +0.3**
comp=Z,8.0nm,0.6s,mb4.8
Y14A Wickenburg 50.92 82 ⇓P **P** **10 57 24.8 -0.5**
baz=51
PV01 Paradox Valley 50.93 75 *e*P **P** **10 57 25.4 0.0**
X15A Humboldt 51.04 81 ⇓P **P** **10 57 26.1 0.0**
baz=51,SNR=6.5
SMCO Snowmass 51.23 73 *e*P **P** **10 57 27.9 +0.2**
comp=Z,4.0nm,0.6s,mb4.5
MVCO Mesa Verde 51.57 76 *e*P **P** **10 57 30.0 -0.1**
MVCO *ep*P pP 10 57 44.1 +1.4
MVCO *es*P sP 10 57 52.3 +4.4
ISCO Idaho Springs 51.65 72 *e*P **P** **10 57 31.4 +0.6**
ISCO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ISCO Idaho Springs 51.65 72 *e*P **P** **10 57 31.4 +0.7**

comp=Z,6.3nm,0.8s,mb4.6
115A Sonoran Desert 52.23 83 ⇓P **P 10 57 35.0 -0.1**
baz=52
XAN Xi'an 52.49 280 P **P 10 57 36.8 -0.2**
XAN AMB AMB
comp=Z,12nm,0.9s,mb4.8
116A Eloy 52.65 83 ⇑P **P 10 57 37.0 -1.1**
baz=53
ZAL Zalesovo 53.24 313 P **P 10 57 42.0 -0.5**
comp=Z,2.8nm,0.4s,mb4.5,baz=73,slow=5.1,SNR=6.8
TUC Tucson 53.39 82 *e*P **P 10 57 43.0 -0.6**
SUMG Summit 53.69 13 *e*P **P 10 57 45.6 -0.2**
LAZ Ladron 54.24 78 *e*P **P 10 57 50.6 +0.8**
LZH Lanzhou 54.25 285 *e*P **P 10 57 51.3 +1.4**
LZH AP pP 10 58 04.8 +2.2
LZH XP sP 10 58 10.3 +2.5
LZH AMB AMB
comp=Z,20nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,95nm,4.8s
ANMO Albuquerque 54.29 77 *e*P **P 10 57 50.6 +0.4**
GTA Gaotai 54.48 291 ⇑P **P 10 57 52.3 +0.7**
GTA AP pP 10 58 06.6 +2.4
GTA XP sP 10 58 12.6 +3.2
GTA PCP PcP 10 58 54.1 -0.5
GTA PP PP 10 59 56.6 +2.6
GTA PPP 11 01 10.8
GTA SCP ScP 11 02 48.5 -0.7
GTA PCS PcS 11 02 53.1 -1.1
GTA S **S 11 05 27.5 +0.3**
GTA AMB AMB
comp=Z,15nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,68nm,5.7s
GTA LR LR
comp=N,124nm,16.0s,MS4.3
GTA LR LR
comp=E,170nm,16.7s,MS4.3
GTA LR LR
comp=Z,166nm,16.7s,MS4.2
MNTX Cornudas Mount 57.16 79 *e*P **P 10 58 10.9 +0.1**
CD2 Chengdu 57.81 280 *e*P **P 10 58 14.0 -1.3**
CD2 AP pP 10 58 30.0 +1.9
CD2 XP sP 10 58 37.0 +3.7
CD2 PP PP 11 00 24.0 +0.2
CD2 XS sS 11 06 33.5 +0.8
CD2 SS SS 11 09 58.5 -4.0
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CD2 AMB AMB
comp=Z,30nm,5.6s
CD2 LR LR
comp=E,60nm,14.4s
CD2 LR LR
comp=Z,40nm,13.2s,MS3.7
ARCES ARCESS Array B 57.98 349 P **P 10 58 15.3 -1.3**
comp=Z,2.4nm,0.8s,mb4.3,baz=26,slow=7.1,SNR=12
ARCES PcP PcP 10 59 06.8 -1.4
comp=Z,1.9nm,0.9s,baz=26,slow=6.5,SNR=3.7
ARCES LR LR 11 25 07.9
comp=Z,51nm,18.4s,MS3.7,baz=279,slow=38
ARCES ARCESS Array B 57.98 349 P **P 10 58 15.3 -1.3**
ARCES 10 59 06.8
ARCES ARCESS Array B 57.98 349 P **P 10 58 15.3 -1.3**
ARCES PcP PcP 10 59 06.8 -1.4
ARCES LR LR 11 25 07.9
KURK Kurchatov 58.21 313⇑ *e*P **P 10 58 18.2 0.0**
KURK Kurchatov 58.21 313 *e*P **P 10 58 17.8 -0.4**
WMQ Urumqi 58.38 302 *e*P **P 10 58 21.0 +1.7**
WMQ AP pP 10 58 37.0 +4.9
WMQ XP sP 10 58 44.0 +6.7
WMQ PP PP 11 00 32.0 +3.2
WMQ S **S 11 06 18.0 -0.8**
WMQ SCS ScS 11 08 01.0 -4.2
WMQ AMB AMB
comp=Z,19nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,121nm,5.0s
WMQ LR LR
comp=N,189nm,15.0s,MS4.4
WMQ LR LR
comp=E,132nm,15.0s,MS4.4
WMQ LR LR
comp=Z,199nm,15.0s,MS4.3
JFWS Jewell Farm 58.40 60 *e*P **P 10 58 19.2 -0.2**
WMOK Wichita Mounta 59.08 72 *e*P **P 10 58 24.0 -0.2**
GYA Guiyang 59.13 275 P **P 10 58 25.0 +0.5**
GYA AP pP 10 58 41.1 +3.8
GYA XP sP 10 58 48.5 +6.0
GYA PP PP 11 00 36.4 +0.9
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
GYA AMB AMB
comp=Z,70nm,3.9s
GYA LR LR
comp=N,280nm,18.7s,MS4.5
GYA LR LR
comp=E,210nm,18.4s,MS4.5
GYA LR LR
comp=Z,280nm,19.0s,MS4.4
MKAR Makanchi Array 59.15 307 P **P 10 58 24.2 -0.4**
comp=Z,7.1nm,0.5s,mb4.9,baz=52,slow=6.5,SNR=79
CHKZ Chkalovo 59.62 319 *e*P **P 10 58 27.9 0.0**
CHKZ *e**PP pP 10 58 42.1 +1.4
CHKZ pmax pmax
comp=Z,19nm,0.8s,mb5.2
CHKZ Chkalovo 59.62 319 *e*P **P 10 58 27.9 0.0**
comp=Z,18nm,0.8s,mb5.2
CHKZ *e*pP pP 10 58 42.0 +1.4
BVAR Borovoye Array 60.18 319 P **P 10 58 32.3 +0.5**
comp=Z,33nm,0.7s,mb5.5,baz=51,slow=7.4,SNR=167
BRVK Borovoye 60.20 319 *e*P **P 10 58 32.1 +0.2**
SCHQ Schefferville 60.83 37 P **P 10 58 35.2 -1.0**
comp=Z,5.1nm,0.6s,mb4.8,baz=277,slow=5.7,SNR=9.6
SVE Sverdlovsk 61.03 327 *e*P **P 10 58 38.0 +0.5**
SVE *e* 10 59 19.0
SVE MLR MLR
comp=N,100nm,14.0s,MS4.3
SVE MLR MLR
comp=E,100nm,14.0s,MS4.3
SVE MLR MLR
comp=Z,200nm,14.0s,MS4.4
CCM Cathedral Cave 61.18 64 *e*P **P 10 58 36.6 -1.9**
CCM pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
CCM Cathedral Cave 61.18 64 *e*P **P 10 58 36.6 -1.9**
comp=Z,3.4nm,0.6s,mb4.7
FVM French Village 61.69 64 *e*P **P 10 58 40.8 -1.2**
FVM pmax pmax
comp=Z,5.0nm,0.4s,mb5.0
FVM French Village 61.69 64 *e*P **P 10 58 40.8 -1.2**
comp=Z,4.8nm,0.4s,mb5.0
ARU Arti 62.05 327⇑ *i*P **P 10 58 44.3 -0.1**
ARU *e* 10 59 23.0
ARU *e* 11 00 59.6
ARU *e*S **S 11 07 08.0 +2.1**
ARU *e*SS SS 11 11 09.3 +0.3
ARU pmax pmax
comp=Z,11nm,0.7s,mb5.1
ARU Arti 62.05 327 *e*P **P 10 58 44.4 -0.1**
MIAR Mount Ida 62.29 69 *e*P **P 10 58 45.8 -0.2**
KMI Kunming 62.54 277 P **P 10 58 50.8 +3.1**
KMI AMB AMB
comp=Z,5.0nm,0.5s,mb4.9
HNR Honiara 62.73 202 LR LR 11 19 50.0
comp=Z,109nm,21.5s,MS4.0,baz=359,slow=30
JOF Joensuu 63.38 344 *e*p **P 10 58 50.8 -2.5**
comp=Z,3.1nm,0.4s,mb4.8
JOF Joensuu 63.38 344 *e*P **P 10 58 50.8 -2.5**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
WVT Waverly 64.47 64 *e*P **P 10 59 00.0 -0.4**
WVT pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
WVT Waverly 64.47 64 *e*P **P 10 59 00.0 -0.4**
comp=Z,5.0nm,0.7s,mb4.7
OXF Oxford 64.73 66 *e*P **P 10 59 01.7 -0.4**
KAF Kangasniemi 64.94 346 *e*p **P 10 59 00.2 -3.3**
baz=15,slow=5.8
PLAL Pickwick Lake 65.15 65 *e*P **P 10 59 03.5 -1.3**
TKM2 Tokmak 2 65.24 308 *i*P **P 10 59 05.2 -0.3**
TKM2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
FINES FINESS Array B 65.61 346 P **P 10 59 06.2 -1.6**
comp=Z,1.5nm,0.6s,mb4.2,baz=20,slow=6.1,SNR=7.3
FINES LR LR 11 29 13.5
comp=Z,40nm,21.0s,MS3.6,baz=353,slow=37
FINES FINESS Array B 65.61 346 P **P 10 59 06.2 -1.6**
FINES LR LR 11 29 13.5
AAK Ala-Archa 66.00 309⇑ *e*P **P 10 59 10.1 -0.2**
AAK pmax pmax
comp=Z,12nm,1.1s,mb4.8
AAK Ala-Archa 66.00 309 *e*P **P 10 59 09.9 -0.4**
SWET Sewanee 66.19 63 *e*P **P 10 59 10.9 -0.6**
AKTK Aktyubinsk 67.06 324 P **P 10 59 17.4 +0.2**
AKTO Aktyubinsk 67.06 324 P **P 10 59 17.4 +0.2**
comp=Z,33nm,0.8s,mb5.4,baz=49,slow=6.7,SNR=100
AKTO Aktyubinsk 67.06 324 *i*P **P 10 59 17.4 +0.2**
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MYNC Murphy 67.30 62 *e*P **P 10 59 18.0 -0.7**
MYNC pmax pmax
comp=Z,12nm,1.0s,mb4.9
MYNC Murphy 67.30 62 *e*P **P 10 59 17.9 -0.7**
comp=Z,12nm,1.0s,mb4.9
KK31 Karatay Array 67.56 311 *i*P **P 10 59 20.7 +0.4**
KK31 pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
NB2 NORSAR Subarra 67.63 354 P **P 10 59 19.8 -0.9**
comp=Z,8.3nm,0.7s,mb4.9,baz=6.3,slow=6.5
NOA NORSAR Array B 67.63 354 P **P 10 59 19.9 -0.8**
comp=Z,7.8nm,0.8s,mb4.8,baz=8.5,slow=6.3,SNR=24
HFS Hagfors 68.34 352 P **P 10 59 23.7 -1.5**
comp=Z,3.4nm,0.5s,mb4.6,baz=45,slow=4.4,SNR=12
TAOE Nuku Hiva Isla 69.36 137 *e*LR LR 11 20 20.3
comp=Z,562nm,24.9s
OBN Obninsk 69.53 338 *e*P **P 10 59 32.7 +0.1**
OBN pmax pmax
comp=Z,18nm,1.1s,mb4.9
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.4
GUN Gumba 70.77 291 *e*P **P 10 59 41.5 +1.3**
comp=Z,116nm,0.9s
JIRN Jiri 70.78 290 *e*P **P 10 59 41.5 +1.3**
comp=Z,74nm,0.8s,mb5.7
KKN Kakani 71.21 291 *e*P **P 10 59 43.7 +0.8**
comp=Z,46nm,0.7s,mb5.5
KKN Kakani 71.21 291 *e*P **P 10 59 43.7 +0.8**
KKN pmax pmax
comp=Z,46nm,0.7s,mb5.5
PKI Pulchoki 71.30 291 *e*P **P 10 59 44.2 +0.8**
GKN Gorkha 71.43 292 *e*P **P 10 59 45.1 +0.9**
comp=Z,78nm,1.0s,mb5.6
DMN Daman 71.45 291 *e*P **P 10 59 45.4 +1.1**
comp=Z,39nm,0.9s,mb5.3
KOLN Koldanda 72.21 292 *e*P **P 10 59 49.7 +0.9**
comp=Z,34nm,0.9s,mb5.3
EKA Eskdalemuir Ar 73.75 1 P **P 10 59 57.5 -0.5**
comp=Z,4.9nm,0.8s,mb4.5,baz=358,slow=5.8,SNR=15
PPT Papeete 73.77 149 *e*LR LR 11 22 18.7
comp=Z,105nm,22.2s,baz=337
PPT Papeete 73.77 149 LR LR 11 27 41.6
comp=Z,14nm,19.2s,MS3.2,baz=316,slow=32
AKASG Malin Array Be 75.27 341 P **P 11 00 05.6 -1.2**
comp=Z,3.9nm,0.5s,mb4.6,baz=21,slow=5.7,SNR=11
AKASG LR LR 11 37 04.4
comp=Z,74nm,20.6s,MS4.0,baz=240,slow=39
AKASG Malin Array Be 75.27 341 P **P 11 00 05.6 -1.2**
AKASG LR LR 11 37 04.4
AKBB Malin Array Si 75.27 341 *e*P **P 11 00 05.9 -0.9**
KAKA Kakadu 75.57 227 *e*P **P 11 00 07.1 -1.4**
comp=Z,13nm,0.7s,mb5.0
CTA Charters Tower 76.74 212 P **P 11 00 13.3 -1.8**
comp=Z,6.0nm,0.8s,mb4.5,baz=49,slow=6.7,SNR=4.9
CTA LR LR 11 33 12.1
comp=Z,112nm,19.4s,MS4.2,baz=224,slow=35
CTA Charters Tower 76.74 212 P **P 11 00 13.3 -1.8**
CTA LR LR 11 33 12.1
BAIF Baives 78.96 357 *e*P **P 11 00 27.4 -0.1**
comp=Z,12nm,1.0s,mb4.5
BAIF Baives 78.96 357 *e*P **P 11 00 27.4 -0.1**
BAIF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BAIF Baives 78.96 357 *e*P **P 11 00 27.4 -0.1**
comp=Z,6.1nm,1.0s,mb4.5
TBI Tubuai 79.23 151 *e*LR LR 11 24 57.0
comp=Z,167nm,22.8s,baz=342
GERES GERESS Array B 79.50 350 P **P 11 00 28.8 -1.6**
comp=Z,0.7nm,0.6s,mb3.8,baz=18,slow=5.6,SNR=3.7
FLN La Foliniere 80.35 360 *e*P **P 11 00 34.4 -0.6**
comp=Z,16nm,0.9s,mb4.7
FLN *e*R
comp=Z,52nm,22.5s
FLN La Foliniere 80.35 360 *e*P **P 11 00 34.4 -0.6**
FLN pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
FLN MLR MLR
comp=Z,50nm,22.5s,MS3.8
FLN La Foliniere 80.35 360 *e*P **P 11 00 34.4 -0.6**
comp=Z,8.3nm,0.9s,mb4.7
FLN LR LR
comp=Z,50nm,22.5s,MS3.8
CDF Champ du Feu 80.46 355 *e*P **P 11 00 35.2 -0.4**
comp=Z,1.5nm,0.5s,mb3.9
CDF Champ du Feu 80.46 355 *e*P **P 11 00 35.2 -0.4**
CDF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
CDF Champ du Feu 80.46 355 *e*P **P 11 00 35.2 -0.4**
comp=Z,0.8nm,0.5s,mb3.9
LDF La Druitiere 80.51 360 *e*P **P 11 00 35.4 -0.5**
comp=Z,8.4nm,0.6s,mb4.6
LDF La Druitiere 80.51 360 *e*P **P 11 00 35.4 -0.5**
LDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LDF La Druitiere 80.51 360 *e*P **P 11 00 35.4 -0.5**
comp=Z,4.2nm,0.6s,mb4.5
GRR Gorron 80.72 0 *e*P **P 11 00 36.7 -0.3**
comp=Z,17nm,0.8s,mb4.8
GRR Gorron 80.72 0 *e*P **P 11 00 36.7 -0.3**
GRR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
GRR Gorron 80.72 0 *e*P **P 11 00 36.7 -0.3**
comp=Z,8.4nm,0.8s,mb4.7
ROSF Rostrenen 80.75 2 *e*P **P 11 00 36.5 -0.7**
SGMF Saint Gilles 80.84 1 *e*P **P 11 00 37.5 -0.2**
comp=Z,17nm,0.8s,mb4.7
SGMF Saint Gilles 80.84 1 *e*P **P 11 00 37.5 -0.2**
SGMF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SGMF Saint Gilles 80.84 1 *e*P **P 11 00 37.5 -0.2**
comp=Z,8.5nm,0.8s,mb4.7
MLR Muntele Rosu 80.90 341 P **P 11 00 38.6 +0.6**
comp=Z,3.4nm,0.6s,mb4.5,baz=253,slow=5.1,SNR=5.4
HINF Hinteralfeld 81.08 355 *e*P **P 11 00 38.2 -0.7**
comp=Z,2.9nm,0.7s,mb4.0
HINF Hinteralfeld 81.08 355 *e*P **P 11 00 38.2 -0.7**
HINF pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
HINF Hinteralfeld 81.08 355 *e*P **P 11 00 38.2 -0.7**
comp=Z,1.5nm,0.6s,mb4.1
WRA Warramunga Arr 81.11 222 P **P 11 00 37.2 -1.9**
comp=Z,4.1nm,0.8s,mb4.4,baz=31,slow=5.9,SNR=31
KBA Koelnbreinsper 81.29 350⇑ *i*P **P 11 00 40.4 +0.4**
comp=Z,8.9nm,0.9s,mb4.7
KBA Koelnbreinsper 81.29 350⇑ *i*P **P 11 00 40.4 +0.4**
KBA pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LOR Lormes 81.76 357 *e*P **P 11 00 42.2 -0.3**
LOR *e*R
comp=Z,61nm,19.5s
LOR Lormes 81.76 357 *e*P **P 11 00 42.2 -0.3**
LOR LR LR
comp=Z,60nm,19.5s,MS4.0
PSI Prapat 81.78 264 P **P 11 00 42.6 -0.1**
comp=Z,6.7nm,0.9s,mb4.6,baz=8.0,slow=6.8,SNR=3.5
SSF Saint Saulge 81.98 357 *e*P **P 11 00 43.4 -0.3**
comp=Z,5.4nm,0.8s,mb4.3
SSF Saint Saulge 81.98 357 *e*P **P 11 00 43.4 -0.3**
SSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
SSF Saint Saulge 81.98 357 *e*P **P 11 00 43.4 -0.3**
comp=Z,2.7nm,0.8s,mb4.2
AVF Avril sur Loir 82.26 357 *e*P **P 11 00 45.1 0.0**
comp=Z,3.9nm,0.8s,mb4.1
AVF Avril sur Loir 82.26 357 *e*P **P 11 00 45.1 0.0**
AVF pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
AVF Avril sur Loir 82.26 357 *e*P **P 11 00 45.1 0.0**
comp=Z,2.0nm,0.8s,mb4.1
SMF Signal de Mont 82.39 357 *e*P **P 11 00 45.5 -0.3**
comp=Z,4.8nm,0.7s,mb4.2
SMF Signal de Mont 82.39 357 *e*P **P 11 00 45.5 -0.3**
SMF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
SMF Signal de Mont 82.39 357 *e*P **P 11 00 45.5 -0.3**
comp=Z,2.4nm,0.7s,mb4.2
BGF Bois d'Agland 82.50 358 *e*P **P 11 00 46.2 -0.2**
MFF Saint Martin d 82.51 360 *e*P **P 11 00 47.3 +0.9**
comp=Z,7.8nm,0.8s,mb4.5
MFF Saint Martin d 82.51 360 *e*P **P 11 00 47.3 +0.9**
MFF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
MFF Saint Martin d 82.51 360 *e*P **P 11 00 47.3 +0.9**
comp=Z,3.9nm,0.8s,mb4.5
TCF Toulx Ste Croi 82.79 358 *e*P **P 11 00 47.6 -0.3**
HYB Hyderabad 83.11 289 *i*P **P 11 00 49.5 -0.1**
FITZ Fitzroy Crossi 83.46 230 P **P 11 00 50.8 -0.6**
comp=Z,4.2nm,0.8s,mb4.5,baz=142,slow=0.8,SNR=14
RJF Les Rejaudoux 83.79 358 *e*P **P 11 00 53.1 +0.1**
comp=Z,3.5nm,0.6s,mb4.4
RJF *e*R
comp=Z,50nm,20.2s
RJF Les Rejaudoux 83.79 358 *e*P **P 11 00 53.1 +0.1**
RJF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
RJF MLR MLR
comp=Z,50nm,20.3s,MS3.9
RJF Les Rejaudoux 83.79 358 *e*P **P 11 00 53.1 +0.1**
comp=Z,1.8nm,0.6s,mb4.4
RJF LR LR
comp=Z,50nm,20.3s,MS3.9
CAF Calviac 84.15 358 *e*P **P 11 00 55.1 +0.2**
LFF La Frestale 84.16 359 *e*P **P 11 00 54.9 -0.1**
RKT Rikitea 84.27 138 *e*LR LR 11 27 26.4
comp=Z,93nm,23.8s,baz=324
BRTR Keskin Array B 84.53 334 P **P 11 00 57.4 +0.6**
comp=Z,4.3nm,0.7s,mb4.7,baz=50,slow=3.1,SNR=24
BRTR LR LR 11 45 12.4
comp=Z,39nm,18.6s,MS3.8,baz=282,slow=40
BRTR Keskin Array B 84.53 334 *i*P **P 11 00 57.4 +0.6**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
ASAR Alice Springs 84.60 221 P **P 11 00 56.0 -1.2**
comp=Z,2.5nm,0.8s,mb4.4,baz=28,slow=4.7,SNR=20
ASAR LR LR 11 41 46.5
comp=Z,77nm,18.1s,MS4.1,baz=2.4,slow=38
LASF Ste Croix 84.95 357 *e*P **P 11 00 59.0 +0.1**
SMRF Simiane la Rot 84.98 355 *e*P **P 11 00 59.9 +0.8**
comp=Z,10nm,0.8s,mb4.7
SMRF Simiane la Rot 84.98 355 *e*P **P 11 00 59.9 +0.8**
comp=Z,10nm,0.8s,mb5.0
FRF La Foret Royal 85.33 355 *e*P **P 11 01 00.7 -0.1**
LMR La Mourre 85.57 355 *e*P **P 11 01 01.3 -0.7**
MTLF Montolieu 85.73 358 *e*P **P 11 01 03.1 +0.3**
ESDC Sonseca Array 89.39 2 P **P 11 01 18.8 -1.6**
comp=Z,0.2nm,0.4s,mb3.8,baz=354,slow=3.9,SNR=6.2
TORD Torodi Ar. Bea 115.82 357 PKP PKPdf 11 07 05.1 -1.0
comp=Z,0.5nm,0.5s,baz=356,slow=2.6,SNR=9.4
DBIC Dimbokro 122.18 5 PKP PKPdf 11 07 17.9 -0.4
comp=Z,2.5nm,0.6s,baz=93,slow=3.8,SNR=7.5
DBIC Dimbokro 122.18 5 PKIKP PKPdf 11 07 17.9 -0.5
DBIC pmax pmax
comp=Z,3.0nm,0.6s
VNDA Vanda 128.98 185 PKP PKPdf 11 07 29.8 -1.5
comp=Z,0.3nm,0.7s,baz=323,slow=3.9,SNR=4.2
TSUM Tsumeb 144.88 329 *e*PKPdf PKPdf 11 08 00.5 -0.1
MAW Mawson 145.66 217 *e*P PKPdf 11 07 59.1 -2.9
comp=Z,2.2nm,0.8s
MAW Mawson 145.66 217 PKPbc PKPbc 11 08 00.2 -2.2
comp=Z,2.7nm,0.8s,baz=110,slow=5.6,SNR=14
MAW Mawson 145.66 217 PKP2 PKPab 11 08 00.2 -2.5
MAW pmax pmax
comp=Z,3.0nm,0.8s
LBTB Lobatse 146.93 312 *e*PKP2 PKPab 11 08 06.8 -0.8
BOSA Boshof 150.13 309 PKPbc PKPbc 11 08 14.6 +0.2
comp=Z,9.0nm,0.7s,baz=48,slow=1.9,SNR=18
BOSA Boshof 150.13 309 PKIKP PKPbc 11 08 14.6 +0.2
BOSA pmax pmax
comp=Z,9.0nm,0.7s

MAN 15 10:53:59.2, 1753N×11969E, h33km, mb3.1, ML4.4, MS4.5, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**1.19**	**48**⇑	*i*P		Pn	10 54 19.3	-0.2
PIP				*e*S		Sn	10 54 34.5	-0.1
BCPH	**Baguio City Da**	**1.42**	**143**⇓	*e*P		Pn	10 54 22.9	+0.2
BCPH				*i*S		Sn	10 54 40.1	-0.1
CVP	**Callao Caves**	**2.04**	**85**	*e*P		Pn	10 54 23.0	-8.2

BJI ***15*** *11:47:26.4, 51.10N×179.30E, h17km, mB4.9, mb4.6, Ms4.5, Msz4.5*
IDC ***15*** *11:47:29.0±0.7, 5121N×17932E, h0km, mb4.3/19, mb1 4.5/20, mb1mx4.3/28, mbtmp4.4/20, ML5.0/1, MS3.6/3, Ms1 3.5/3, ms1mx3.1/30, Error ellipse: s-maj=20.9km s-min=13.9km az=165.0*
NEIC ***15*** *11:47:32.7, 5105N×17928E, h18km, mb4.6/25, ML4.1(AEIC), After AEIC.*
ISCJB ***15*** *11:47:33.6±0.3, 5165N±005×17934E±005, h28km, mb4.5/61, MS3.7/4, Error ellipse: s-maj=7.7km s-min=4.6km az=175.1*
MOS ***15*** *11:47:34.3±1.1, 5126N×179.35E, h47km, mb4.8/20, Error ellipse: s-maj=12.4km s-min=8.0km az=99.7*

ISC 15 11:47:35.1±0.3, 5159N±006×17935E±005, h29km, h29km±4.0km; pP-P, n125, σ0.90/121, mb4.5/61, MS3.7/4, 3C-2D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.21**	**189**	P		**Pb**	**11 47 40.2**	**-1.2**
AMKA				S		**Sb**	**11 47 46.2**	**+0.5**
SMY	**Shemya**	**3.43**	**291**	P		**Pn**	**11 48 29.5**	**+2.9**
ATKA	**Atka Island**	**4.04**	**79**	P		**Pn**	**11 48 36.7**	**+1.7**
SPIA	**Saint Paul Isl**	**8.25**	**43**	P		**Pn**	**11 49 39.7**	**+6.9**
CHGN	**Chignik**	**13.89**	**61**	*e*P		**Pn**	**11 50 50.1**	**+0.2**
KDAK	**Kodiak Island**	**17.28**	**58**	P		**Pn**	**11 51 33.0**	**-1.2**
	5.0nm,0.3s,baz=271,slow=6.2,SNR=19							
TTA	**Tatalina**	**17.37**	**40**	*e*P		**Pn**	**11 51 39.3**	**+4.0**
BILL	**Bilibino**	**17.69**	**344**	*e*P		**Pn**	**11 51 44.7**	**+5.5**
BILL				pmax	pmax			
comp=Z,6.0nm,1.0s								
COLA	**College**	**21.47**	**39**	*d*P		**P**	**11 52 23.9**	**+2.8**
COLA	**College**	**21.47**	**39**	*e*P		**P**	**11 52 23.7**	**+2.6**
comp=Z,6.9nm,0.7s,mb4.1								
YSS	**Yuzh-Sakhalins**	**24.15**	**273**⇑	*e*P		**P**	**11 52 49.6**	**+1.0**
YSS				pmax	pmax			
comp=Z,14nm,0.9s,mb4.4								
YSS	**Yuzh-Sakhalins**	**24.15**	**273**	*e*P		**P**	**11 52 48.6**	**+0.1**
comp=Z,5.9nm,0.6s,mb4.2								
DAWY	**Dawson**	**24.75**	**44**	*e*P		**P**	**11 52 54.4**	**+0.4**
DAWY				*ep*P			11 53 01.7	
DAWY				*es*P		sP	11 53 05.5	-0.6
ASAJ	**Asahikawa**	**25.56**	**268**	P		**P**	**11 53 00.3**	**-1.0**
comp=Z,23nm,0.8s,mb4.7,baz=28,slow=4.7,SNR=23								
ASAJ				LR	LR		12 01 33.8	
comp=Z,66nm,19.7s,MS3.2,baz=141,slow=33								
ASAJ	**Asahikawa**	**25.56**	**268**	P		**P**	**11 53 00.4**	**-0.9**
ASAJ				pmax	pmax			
comp=Z,23nm,0.8s								
ASAJ				MLR	MLR			
comp=Z,66nm,19.7s								
INK	**Inuvik**	**27.95**	**36**	P		**P**	**11 53 24.2**	**+1.3**
comp=Z,4.5nm,0.6s,mb4.3,baz=156,slow=2.1,SNR=14								
HABR	**Khabarovsk**	**28.30**	**281**	*e*P		**P**	**11 53 26.0**	**0.0**
HABR				*e*S		**S**	**11 58 12.5**	**+2.0**
YAK	**Yakutsk**	**28.41**	**311**	*e*P		**P**	**11 53 27.6**	**+0.6**
YAK				pmax	pmax			
comp=Z,8.0nm,0.6s,mb4.5								
KLR	**Kul'dur**	**30.01**	**285**	*e*P		**P**	**11 53 37.0**	**-4.2**
MDJ	**Mudanjiang**	**33.40**	**278**	P		**P**	**11 54 09.1**	**-1.9**
MDJ				AP	pP		11 54 12.3	-7.3
MDJ				AMB	AMB			
comp=Z,5.0nm,0.9s,mb4.4								
MDJ				AMB	AMB			
comp=Z,32nm,5.2s								
YKA	**Yellowknife Ar**	**35.92**	**46**	P		**P**	**11 54 33.1**	**+0.3**
comp=Z,3.8nm,0.6s,mb4.5,baz=281,slow=7.8,SNR=26								
YKA				ScP	ScP		12 00 43.8	+0.4
comp=Z,0.7nm,0.7s,baz=296,slow=3.4,SNR=3.6								
CN2	**Changchun**	**36.37**	**279**	*e*P		**P**	**11 54 37.1**	**+0.5**
BOD	**Bodaibo**	**36.92**	**306**	*e*P		**P**	**11 54 40.2**	**-1.1**
HAWA	**Hanford**	**39.41**	**73**	*e*P		**P**	**11 55 02.6**	**+0.3**
comp=Z,0.8nm,0.9s,mb3.5								

EDM	**Edmonton**	**39.71**	**60**	*e*P	**P**	**11 55 04.2**	**-0.6**
NEW	**Newport**	**39.89**	**69**	*e*P	**P**	**11 55 06.0**	**-0.2**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NEW	**Newport**	**39.89**	**69**	*e*P	**P**	**11 55 06.0**	**-0.3**
	comp=Z,4.1nm,0.6s,mb4.3						
BMO	**Blue Mountains**	**41.55**	**73**	*e*P	**P**	**11 55 20.2**	**+0.3**
	comp=Z,3.6nm,1.0s,mb4.0						
BMO				*e*pP	pP	11 55 29.8	+1.2
BMO				*e*sP	sP	11 55 33.5	+1.3
WVOR	**Wild Horse Val**	**42.09**	**77**	*e*P	**P**	**11 55 24.7**	**+0.4**
WVOR				*e**PP	pP	11 55 34.0	+0.9
WVOR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
WVOR	**Wild Horse Val**	**42.09**	**77**	*e*P	**P**	**11 55 24.7**	**+0.4**
	comp=Z,4.9nm,0.9s,mb4.1						
WVOR				*e*pP	pP	11 55 34.0	+0.9
HRY	**Holter Researc**	**43.76**	**68**	*e*P	**P**	**11 55 37.5**	**-0.5**
HRY				*e*pP	pP	11 55 47.6	+0.9
HRY				*e*sP	sP	11 55 51.2	+0.9
HLID	**Hailey**	**43.99**	**73**	*e*P	**P**	**11 55 39.6**	**-0.1**
	comp=Z,5.4nm,0.9s,mb4.3						
MCMT	**McKenzie Canyo**	**44.21**	**71**	*e*P	**P**	**11 55 41.2**	**-0.2**
EGMT	**Eagleton**	**44.25**	**65**	*e*P	**P**	**11 55 41.0**	**-0.8**
	comp=Z,3.6nm,0.8s,mb4.2						
BOZ	**Bozeman (W)**	**44.46**	**69**	*e*P	**P**	**11 55 43.2**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
BOZ	**Bozeman (W)**	**44.46**	**69**	*e*P	**P**	**11 55 43.2**	**-0.3**
	comp=Z,9.1nm,1.0s,mb4.5						
NVAR	**Mina Array Bea**	**44.67**	**82**	P	**P**	**11 55 45.2**	**0.0**
	comp=Z,1.3nm,0.7s,mb3.9,baz=278,slow=10,SNR=15						
NVAR	**Mina Array Bea**	**44.67**	**82**	P	**P**	**11 55 45.2**	**0.0**
TLY	**Talaya**	**44.97**	**301**	*e*P	**P**	**11 55 48.1**	**+0.5**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
QLMT	**Earthquake Lak**	**45.04**	**70**	*e*P	**P**	**11 55 47.9**	**-0.2**
ULN	**Ulaanbaatar**	**45.13**	**295⇑**	*e*P	**P**	**11 55 49.4**	**+0.6**
SONM	**Songino Array**	**45.52**	**295**	P	**P**	**11 55 52.2**	**+0.3**
	comp=Z,2.8nm,0.7s,mb4.3,baz=60,slow=9.0,SNR=18						
SONM				LR	LR	12 16 29.9	
	comp=Z,92nm,19.3s,MS3.7,baz=46,slow=38						
ZAK	**Zakamensk**	**45.85**	**300**	*e*P	**P**	**11 55 54.5**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
IMW	**Indian Meadow**	**45.86**	**71**	*e*P	**P**	**11 55 58.2**	**+3.6**
	comp=Z,6.0nm,0.9s,mb4.5						
RRI2	**Red Ridge**	**45.96**	**72**	*e*P	**P**	**11 55 56.8**	**+1.4**
	comp=Z,5.9nm,0.6s,mb4.7						
RRI2				*e*pP	pP	11 56 06.6	+2.4
RRI2				*e*sP	sP	11 56 10.1	+2.4
TPAW	**Teton Pass**	**46.09**	**71**	*e*P	**P**	**11 55 57.1**	**+0.6**
	comp=Z,2.7nm,0.7s,mb4.3						
DUG	**Dugway**	**46.95**	**76**	*e*P	**P**	**11 56 03.3**	**+0.2**
DUG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
DUG	**Dugway**	**46.95**	**76**	*e*P	**P**	**11 56 03.3**	**+0.2**
	comp=Z,4.1nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**47.34**	**71**	P	**P**	**11 56 06.0**	**-0.3**
	comp=Z,11nm,0.7s,mb4.9,baz=303,slow=3.8,SNR=105						
CCUT	**Cedar City**	**48.26**	**79**	*e*P	**P**	**11 56 13.5**	**+0.2**
TMUT	**Trail Mountain**	**48.47**	**76**	*e*P	**P**	**11 56 15.7**	**+0.7**
SRU	**San Rafael**	**49.00**	**76**	*e*P	**P**	**11 56 20.7**	**+1.6**
SRU				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
SRU	**San Rafael**	**49.00**	**76**	*e*P	**P**	**11 56 20.7**	**+1.7**
	comp=Z,3.1nm,0.5s,mb4.6						
PV10	**Paradox Valley**	**50.37**	**76**	*e*P	**P**	**11 56 30.0**	**+0.6**
ULM	**Lac du Bonnet**	**50.53**	**56**	P	**P**	**11 56 30.2**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.9,baz=284,slow=12,SNR=2.5						
ULM				LR	LR	12 17 57.8	
	comp=Z,61nm,18.4s,MS3.6,baz=245,slow=36						
ULM	**Lac du Bonnet**	**50.53**	**56**	P	**P**	**11 56 30.2**	**-0.5**
ULM				LR	LR	12 17 57.8	
ISCO	**Idaho Springs**	**51.51**	**72**	*e*P	**P**	**11 56 38.6**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
ISCO	**Idaho Springs**	**51.51**	**72**	*e*P	**P**	**11 56 38.6**	**+0.6**
	comp=Z,3.1nm,1.1s,mb4.2						
ZAL	**Zalesovo**	**53.06**	**312**	P	**P**	**11 56 48.5**	**-1.1**
	comp=Z,1.2nm,0.5s,mb4.1,baz=53,slow=6.9,SNR=4.8						
SUMG	**Summit**	**53.37**	**13**	*e*P	**P**	**11 56 53.1**	**+1.3**
	comp=Z,11nm,1.0s,mb4.7						
LZH	**Lanzhou**	**54.21**	**285**	*e*P	**P**	**11 56 58.5**	**+0.5**
LZH				AP	pP	11 57 01.5	-5.5
LZH				XP	sP	11 57 03.0	-7.5
LZH				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.8						
GTA	**Gaotai**	**54.41**	**290**	*e*P	**P**	**11 56 59.8**	**+0.4**
GTA				AP	pP	11 57 05.0	-3.4
GTA				XP	sP	11 57 08.3	-3.6
GTA				PP	PP	11 59 04.8	+3.2
GTA				PPP		12 00 14.6	
GTA				S	**S**	**12 04 36.6**	**+0.6**
GTA				SS	SS	12 08 18.9	+0.5
GTA				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.5						
GTA				AMB	AMB		
	comp=Z,65nm,5.7s						
GTA				LR	LR		
	comp=N,76nm,14.5s,MS4.2						
GTA				LR	LR		
	comp=E,126nm,16.0s,MS4.2						
GTA				LR	LR		
	comp=Z,114nm,15.6s,MS4.0						
ARCES	**ARCESS Array B**	**57.68**	**349**	P	**P**	**11 57 22.1**	**-0.7**
	comp=Z,1.9nm,0.8s,mb4.2,baz=29,slow=8.3,SNR=6.2						
KURK	**Kurchatov**	**58.03**	**313**	*e*P	**P**	**11 57 25.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KURK	**Kurchatov**	**58.03**	**313**	*e*P	**P**	**11 57 25.7**	**+0.4**
	comp=Z,5.1nm,0.6s,mb4.7						
WMOK	**Wichita Mounta**	**58.94**	**72**	*e*P	**P**	**11 57 31.3**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
WMOK	**Wichita Mounta**	**58.94**	**72**	*e*P	**P**	**11 57 31.2**	**-0.3**
	comp=Z,2.7nm,0.9s,mb4.3						
MKAR	**Makanchi Array**	**58.99**	**307**	P	**P**	**11 57 31.4**	**-0.5**
	comp=Z,5.6nm,0.8s,mb4.6,baz=51,slow=6.0,SNR=27						
CHKZ	**Chkalovo**	**59.41**	**319**	*e*P	**P**	**11 57 35.3**	**+0.5**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
CHKZ	**Chkalovo**	**59.41**	**319**	*e*P	**P**	**11 57 35.3**	**+0.5**
	comp=Z,5.8nm,0.7s,mb4.7						
BVAR	**Borovoye Array**	**59.98**	**319**	P	**P**	**11 57 39.5**	**+0.7**
	comp=Z,14nm,0.7s,mb5.1,baz=51,slow=7.6,SNR=75						
BRVK	**Borovoye**	**59.99**	**319**	*e*P	**P**	**11 57 39.7**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
BRVK	**Borovoye**	**59.99**	**319**	*e*P	**P**	**11 57 39.7**	**+0.8**
	comp=Z,6.9nm,0.7s,mb4.8						
ARU	**Arti**	**61.81**	**327⇓**	*i*P	**P**	**11 57 51.7**	**+0.5**
ARU				*e*		11 58 30.4	
ARU				*e*PPP		12 01 41.5	
ARU				*e*S	**S**	**12 06 14.6**	**+2.0**
ARU				*e*SS	SS	12 10 15.7	+1.0
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
ARU	**Arti**	**61.81**	**327**	*e*P	**P**	**11 57 51.5**	**+0.3**
	comp=Z,3.3nm,0.4s,mb4.8						
KMI	**Kunming**	**62.55**	**276**	P	**P**	**11 57 57.5**	**+1.3**
KMI				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb5.0						
PLAL	**Pickwick Lake**	**64.97**	**65**	*e*P	**P**	**11 58 11.0**	**-1.1**
	comp=Z,8.0nm,0.6s,mb4.9						
FINES	**FINESS Array B**	**65.31**	**346**	P	**P**	**11 58 13.3**	**-1.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=57,slow=7.0,SNR=3.4						
AAK	**Ala-Archa**	**65.84**	**309**	*e*P	**P**	**11 58 17.6**	**-0.1**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
AKTK	**Aktyubinsk**	**66.84**	**324**	P	**P**	**11 58 24.9**	**+0.8**
AKTO	**Aktyubinsk**	**66.84**	**324**	P	**P**	**11 58 24.9**	**+0.8**
	comp=Z,11nm,0.7s,mb5.0,baz=48,slow=6.3,SNR=43						
NB2	**NORSAR Subarra**	**67.32**	**354**	P	**P**	**11 58 26.9**	**-0.3**
	comp=Z,1.7nm,0.6s,mb4.2,baz=6.5,slow=6.2						
NOA	**NORSAR Array B**	**67.32**	**354**	P	**P**	**11 58 27.3**	**+0.1**
	comp=Z,2.4nm,0.6s,mb4.4,baz=8.4,slow=6.2,SNR=9.2						
HFS	**Hagfors**	**68.03**	**352**	P	**P**	**11 58 30.8**	**-0.9**
	comp=Z,2.1nm,0.7s,mb4.3,baz=346,slow=3.7,SNR=5.9						
GUN	**Gumba**	**70.70**	**291**	*e*P	**P**	**11 58 49.0**	**+0.8**
	comp=Z,38nm,0.7s,mb5.4						
JIRN	**Jiri**	**70.71**	**290**	*e*P	**P**	**11 58 48.8**	**+0.6**
	comp=Z,33nm,0.8s,mb5.3						
KKN	**Kakani**	**71.14**	**291**	*e*P	**P**	**11 58 51.1**	**+0.2**
	comp=Z,31nm,0.9s,mb5.2						
PKI	**Pulchoki**	**71.23**	**291**	*e*P	**P**	**11 58 51.9**	**+0.5**
GKN	**Gorkha**	**71.36**	**292**	*e*P	**P**	**11 58 52.1**	**-0.1**
	comp=Z,34nm,1.0s,mb5.2						
DMN	**Daman**	**71.38**	**291**	*e*P	**P**	**11 58 52.0**	**-0.3**
	comp=Z,5.5nm,0.2s,mb5.1						
KOLN	**Koldanda**	**72.13**	**292**	*e*P	**P**	**11 58 56.8**	**0.0**
	comp=Z,10nm,0.7s,mb4.8						
PPT	**Papeete**	**74.02**	**149**	*e*LR	LR	12 21 29.8	
	comp=Z,75nm,23.2s,baz=357						
AKASG	**Malin Array Be**	**74.98**	**341**	P	**P**	**11 59 12.9**	**-0.7**
	comp=Z,1.6nm,0.5s,mb4.2,baz=22,slow=6.1,SNR=7.2						
TBI	**Tubuai**	**79.48**	**151**	*e*LR	LR	12 24 00.8	
	comp=Z,88nm,23.2s						
FLN	**La Foliniere**	**80.03**	**360**	*e*P	**P**	**11 59 40.3**	**-1.5**
LDF	**La Druitiere**	**80.20**	**360**	*e*P	**P**	**11 59 41.2**	**-1.5**
	comp=Z,11nm,0.9s,mb4.5						
LDF	**La Druitiere**	**80.20**	**360**	*e*P	**P**	**11 59 41.2**	**-1.5**
LDF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LDF	**La Druitiere**	**80.20**	**360**	*e*P	**P**	**11 59 41.2**	**-1.5**
	comp=Z,5.6nm,0.9s,mb4.5						
GRR	**Gorron**	**80.40**	**0**	*e*P	**P**	**11 59 42.6**	**-1.2**
	comp=Z,24nm,1.0s,mb4.8						
GRR	**Gorron**	**80.40**	**0**	*e*P	**P**	**11 59 42.6**	**-1.2**
GRR				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
GRR	**Gorron**	**80.40**	**0**	*e*P	**P**	**11 59 42.6**	**-1.2**
	comp=Z,12nm,1.0s,mb4.8						
SGMF	**Saint Gilles**	**80.52**	**1**	*e*P	**P**	**11 59 42.7**	**-1.7**
	comp=Z,13nm,0.8s,mb4.6						
SGMF	**Saint Gilles**	**80.52**	**1**	*e*P	**P**	**11 59 42.7**	**-1.7**
SGMF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
SGMF	**Saint Gilles**	**80.52**	**1**	*e*P	**P**	**11 59 42.7**	**-1.7**
	comp=Z,6.3nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**81.38**	**222**	P	**P**	**11 59 44.4**	**-4.6**
	comp=Z,1.4nm,0.7s,mb4.0,baz=34,slow=6.2,SNR=13						
SSF	**Saint Saulge**	**81.67**	**357**	*e*P	**P**	**11 59 49.8**	**-0.7**
AVF	**Avril sur Loir**	**81.94**	**357**	*e*P	**P**	**11 59 50.6**	**-1.4**
	comp=Z,20nm,1.4s,mb4.5						
AVF	**Avril sur Loir**	**81.94**	**357**	*e*P	**P**	**11 59 50.6**	**-1.4**
AVF				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
AVF	**Avril sur Loir**	**81.94**	**357**	*e*P	**P**	**11 59 50.6**	**-1.4**
	comp=Z,10nm,1.4s,mb4.6						
SMF	**Signal de Mont**	**82.07**	**357**	*e*P	**P**	**11 59 51.4**	**-1.3**
TCF	**Toulx Ste Croi**	**82.47**	**358**	*e*P	**P**	**11 59 53.5**	**-1.3**
LPL	**La Plagne**	**83.07**	**355**	*e*P	**P**	**11 59 57.7**	**-0.1**
ORIF	**Oris-en-Rattie**	**83.71**	**355**	*e*P	**P**	**12 00 00.8**	**-0.3**
CAF	**Calviac**	**83.84**	**358**	*e*P	**P**	**12 00 01.0**	**-0.8**
BRTR	**Keskin Array B**	**84.26**	**334**	P	**P**	**12 00 04.3**	**+0.4**
	comp=Z,1.9nm,0.7s,mb4.3,baz=54,slow=2.4,SNR=11						
BRTR	**Keskin Array B**	**84.26**	**334⇑**	*e*P	**P**	**12 00 04.4**	**+0.4**
RKT	**Rikitea**	**84.48**	**139**	*e*LR	LR	12 26 21.3	
	comp=Z,66nm,25.2s						
SMRF	**Simiane la Rot**	**84.66**	**355**	*e*P	**P**	**12 00 05.7**	**-0.3**
	comp=Z,18nm,1.1s,mb4.8						
ASAR	**Alice Springs**	**84.87**	**221**	P	**P**	**12 00 03.5**	**-3.6**
	comp=Z,0.8nm,0.8s,mb3.9,baz=24,slow=5.7,SNR=9.2						
FRF	**La Foret Royal**	**85.02**	**355**	*e*P	**P**	**12 00 07.2**	**-0.6**
	comp=Z,36nm,1.3s,mb5.0						
TSUM	**Tsumeb**	**144.64**	**329**	PKP	PKPdf	12 07 07.2	-1.6
	comp=Z,7.5nm,0.9s,baz=66,slow=9.0,SNR=4.9						
MAW	**Mawson**	**145.94**	**218**	PKPbc	PKPbc	12 07 08.2	-3.5
	comp=Z,1.2nm,0.7s,baz=82,slow=10,SNR=7.1						
MAW	**Mawson**	**145.94**	**218**	PKP2	PKPab	12 07 08.2	-4.1
MAW				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BOSA	**Boshof**	**149.97**	**310**	PKPbc	PKPbc	12 07 21.2	-1.4
	comp=Z,4.7nm,0.7s,baz=338,slow=3.9,SNR=9.3						
BOSA	**Boshof**	**149.97**	**310**	PKIKP	PKPdf	12 07 21.2	+3.5
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						

IDC 15 11:56:12.5±9.4**,1955S**×**17462W,h59**km±73km**,mb3.3**/3**, mb1 3.7**/4**,mb1mx3.4**/15**,mbtmp3.7**/4**,ML2.0**/1**,Error ellipse: s-maj=124.3km s-min=24.3km az=145.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.24**	**26**	P	Pn	11 57 41.7	-0.2
	1.9nm,0.3s,baz=350,slow=16,SNR=3.5						
AFI				S	Sn	11 58 53.1	+1.4
	3.9nm,0.3s,baz=80,slow=21,SNR=4.1						
ASAR	**Alice Springs**	**47.83**	**255**	P	P	12 04 44.5	+0.4
	0.6nm,0.7s,baz=97,slow=7.6,SNR=9.5						
WRA	**Warramunga Arr**	**47.88**	**260**	P	P	12 04 45.0	+0.4
	0.3nm,0.4s,baz=97,slow=7.5,SNR=7.7						
NVAR	**Mina Array Bea**	**78.18**	**42**	P	P	12 08 05.9	+0.4
	0.2nm,0.4s,baz=212,slow=7.5,SNR=4.8						

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*CSEM **15** 12:19:48.6±0.8,3875N×2893W,h0km±11km,ML1.6,Error ellipse: s-maj=13.6km s-min=3.8km az=87.0,After PDA*

*PDA **15** 12:19:48.6±0.8,3875N×2893W,h0km±11km,MD3.0, ML1.6,Error ellipse: s-maj=13.6km s-min=3.8km az=87.0*

SVSA 15 12:19:48.6±0.8**,3875N**×**2893W,h0**km±11km**,MD3.0, ML1.6,Error ellipse: s-maj=13.6km s-min=3.8km az=87.0,Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.25**	**134**	*e*P	Pg	12 19 53.4	+0.1
CALA				*e*S	Sg	12 19 57.1	+0.6
HOR	**Horta**	**0.32**	**134**	*e*P	Pg	12 19 54.5	-0.3
HOR				*e*S	Sg	12 19 59.1	+0.1
PCND	**Candelaria**	**0.46**	**128**	*e*S	Sg	12 20 03.3	-0.1
PCND							
	21nm,0.1s						
PICO	**Pico**	**0.47**	**122**	*e*P	Pg	12 19 57.3	-0.2
PICO				*e*S	Sg	12 20 04.0	+0.4
PTEI	**Pico do Teixo**	**0.52**	**120**	*e*S	Sg	12 20 05.6	+0.4
PTEI							
	28nm,0.2s						
PBOI	**Pico dos Bois**	**0.54**	**126**	*e*P	Pg	12 19 58.4	-0.5
PBOI				*e*S	Sg	12 20 05.6	-0.2
PBOI							
	21nm,0.2s						
ROSA	**Rosais**	**0.54**	**93**	*e*P	Pg	12 19 58.4	-0.5
ROSA				*e*S	Sg	12 20 05.2	-0.7

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*CSEM **15** 12:24:17.1±0.5,3708N×2441W,h0km,ML2.2,Error ellipse: s-maj=4.6km s-min=2.5km az=96.0,After PDA*

*PDA **15** 12:24:17.1±0.5,3708N×2441W,h0km,MD2.8,ML2.2, Error ellipse: s-maj=4.6km s-min=2.5km az=96.0*

SVSA 15 12:24:17.1±0.5**,3708N**×**2441W,h0**km**,MD2.8,ML2.2, Error ellipse: s-maj=4.6km s-min=2.5km az=96.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.53**	**262**	*e*P	Pg	12 24 26.6	-0.7
PSMN				*e*S	Sg	12 24 34.0	-0.3
MIRA	**Miradouro**	**0.99**	**316**	*e*P	Pg	12 24 33.5	-2.6
PCNG	**Congro**	**1.05**	**311**	*e*S	Sg	12 24 47.0	-3.7
PCNG							
	17nm,0.1s						
PFAD	**Fenais da Ajud**	**1.05**	**316**	*e*S	Sg	12 24 46.8	-4.2
VIF	**Vila Franca**	**1.06**	**309**	*e*S	Sg	12 24 47.0	-4.1
VIF							
	30nm,0.2s						
MESC	**Monte Escuro**	**1.09**	**311**	*e*S	Sg	12 24 48.1	-4.1
LFA	**Lagoa do Fogo**	**1.10**	**309**	*e*P	Pg	12 24 34.8	-3.5
CML	**Cha da Macela**	**1.14**	**308**	*e*P	Pg	12 24 35.6	-3.4
CML				*e*S	Sg	12 24 49.3	-4.5
FAC	**Faja de Cima**	**1.21**	**305**	*e*S	Sg	12 24 51.0	-5.0

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*BGS **15** 12:26:13.3±1.5,5057N×17868E,h20km,mb5.4*

*IDC **15** 12:26:13.7±0.4,5126N×17922E,h0km,mb5.0/31, mb1 5.1/32,mb1mx5.1/34,mbtmp5.0/32,ML5.5/1,MS5.0/37, Ms1 5.0/37,ms1mx4.9/41,Error ellipse: s-maj=15.3km s-min=9.1km az=154.0*

*BJI **15** 12:26:16.8,5127N×17937E,h42km,mB5.6,mb5.5,Ms5.3, Msz5.1*

*ISCJB **15** 12:26:17.2±0.4,5122N±003×17922E±002,h31km±2km, mb5.3/244,MS5.2/223,Error ellipse: s-maj=4.8km s-min=1.8km az=11.3*

*NEIC **15** 12:26:17.4,5109N×17926E,h20km,mb5.3/139, MS5.2/155,MW5.5,ML5.5(AEIC),Moment Tensor Solution.*

s69 Moment tensor: Scale 10^17Nm; Mrr1.30; Mθθ-1.11; Mφφ-0.19; Mrθ1.58; Mθφ-0.48; Mφr0.84; Best double couple: M0 2.20000×10^17 NP1:φs63.00000°,δ72.00000°, λ87.00000°. NP2:φs251.00000°,δ18.00000°,λ98.00000°. Principal axes: T 2.2200, Plg63.0000°, Azm329.0000°; N 0.0100, Plg2.0000°, Azm64.0000°; P -2.2200, Plg27.0000°, Azm155.0000°; After AEIC.

*HRVD **15** 12:26:17.4±0.1,5109N×17925E,h22km,MW5.7/98, Centroid moment Tensor Solution. LP body waves: s92,c178;Mantle waves: s98,c264; Half duration: 1s6 Moment tensor: Scale 10^17Nm; Mrr2.81±.04; Mθθ-2.85±.03; Mφφ0.03±.03; Mrθ2.31±.07; Mθφ-0.56±.02; Mφr1.04±.06; Best double couple: M0 3.84000×10^17 NP1:φs269.00000°,δ25.00000°,λ107.00000°. NP2: φs70.00000°,δ66.00000°,λ82.00000°. Principal axes: T 3.8040, Plg68.0000°, Azm325.0000°; N 0.0700, Plg7.0000°, Azm74.0000°; P -3.8750, Plg20.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **15** 12:26:18.6±0.9,5126N×17925E,h42km,mb5.5/119, MS5.1/45 Error ellipse: s-maj=6.6km s-min=3.9km az=94.5*

*SZGRF **15** 12:26:21.4,5167N×17796W,h33km,mb5.1,MS5.1, Andreanof Islands, Aleutian Islands, United States*

ISC 15 12:26:19.9±0.3**,5133N**±003×**17922E**±002**,h39**km±2km**, h45**km±2.8km**:pP-P,n1051,**σ**0s88**/1157**,mb5.3**/244**, MS5.2**/223**,254C-182D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.07**	**46**	P	**Pn**	**12 26 24.4**	**-1.9**
AMKA				S	**Sn**	**12 26 29.3**	**-1.4**
SMY	**Shemya**	**3.46**	**296**	P	**Pn**	**12 27 12.6**	**+1.4**
SMY				S	**Sn**	**12 27 55.9**	**+4.9**
SMY	**Shemya**	**3.46**	**296**	P	**Pn**	**12 27 12.6**	**+1.4**
SMY				S	**Sn**	**12 27 55.9**	**+4.9**
SMY				*e*Sn	**Sn**	**12 27 57.9**	**+6.9**
NIKO	**Nikolski**	**7.52**	**73**	*e*Pn	**Pn**	**12 28 07.3**	**+0.3**
NIKO				*e*Sn	**Sn**	**12 29 27.4**	**-3.7**
OKCD	**Okmok Cone D**	**8.04**	**70**	P	**Pn**	**12 28 16.1**	**+2.1**
SPIA	**Saint Paul Isl**	**8.50**	**42**	P	**Pn**	**12 28 24.0**	**+3.6**
SPIA				S	**Sn**	**12 30 00.3**	**+5.2**
AKLV	**Akutan Long Va**	**9.43**	**67**	P	**Pn**	**12 28 35.3**	**+2.1**
AKUT	**Akutan**	**9.53**	**67**	*e*Pn	**Pn**	**12 28 36.2**	**+1.7**
AKUT				*e*Sn	**Sn**	**12 30 33.4**	**+13**
PET	**Petropavlovsk**	**12.73**	**286α**	*i*P	**Pn**	**12 29 20.2**	**+1.8**
PET				*e*S	**Sn**	**12 31 41.5**	**+2.7**
PET				pmax	pmax		
	comp=Z,1μm,5.4s						
PET				pmax	pmax		
	comp=Z,2μm,13.8s						
PET				pmax	pmax		
	comp=Z,90nm,0.9s						
PET				smax			
	comp=N,99nm,0.6s						
PET				smax			
	comp=E,89nm,0.6s						
PET				MLR	MLR		
	comp=Z,6μm,17.0s						
PET				MLR	MLR		
	comp=Z,6μm,16.0s						
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
PET	**Petropavlovsk**	**12.73**	**286**	*e*Pn	**Pn**	**12 29 20.1**	**+1.7**
SDPT	**Sand Point**	**12.77**	**64**	*e*P	**Pn**	**12 29 18.8**	**-0.1**
	comp=Z,133nm,0.6s						
CHGN	**Chignik**	**14.09**	**61**	*e*P	**Pn**	**12 29 35.6**	**-1.3**
SKR	**Severo-Kuril's**	**14.55**	**277**	*e*P	**Pn**	**12 29 40.0**	**-3.1**
SKR				pmax	pmax		
	comp=N,1μm,10.0s						
SKR				pmax	pmax		
	comp=Z,3μm,10.0s						
SKR				pmax	pmax		
	comp=Z,220nm,1.0s						
SKR				pmax	pmax		
	comp=N,640nm,1.5s						
SKR				MLR	MLR		
	comp=E,6μm,20.0s						
SKR				MLR	MLR		
	comp=Z,6μm,20.0s						
SKR				MLR	MLR		
	comp=N,6μm,16.0s						
TNA	**Tin City**	**15.72**	**20**	*e*P	**Pn**	**12 30 02.7**	**+4.2**
SVW2	**Sparrevohn**	**16.98**	**45**	*e*P	**Pn**	**12 30 16.4**	**+2.0**
KDAK	**Kodiak Island**	**17.50**	**57**	P	**Pn**	**12 30 17.6**	**-3.2**
	comp=N,17nm,0.3s,baz=227,slow=6.5,SNR=53						
KDAK				S	**S**	**12 33 28.0**	**-13**
	comp=N,0.9nm,0.3s,baz=20,slow=12,SNR=3.8						
KDAK	**Kodiak Island**	**17.50**	**57**	*e*Pn	**Pn**	**12 30 17.5**	**-3.3**
TTA	**Tatalina**	**17.63**	**39**	*e*P	**Pn**	**12 30 24.0**	**+1.5**
TTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TTA	**Tatalina**	**17.63**	**39**	*e*P	**Pn**	**12 30 24.0**	**+1.5**
	comp=Z,5.0nm,1.3s						
BILL	**Bilibino**	**17.92**	**344*c***	*i*P	**Pn**	**12 30 28.7**	**+2.7**
BILL				pmax	pmax		
	comp=Z,135nm,1.0s						
BILL				MLR	MLR		
	comp=Z,7μm,16.0s						
BILL	**Bilibino**	**17.92**	**344**	*e*P	**Pn**	**12 30 25.6**	**-0.5**
	comp=Z,192nm,0.9s						
MA2	**Magadan**	**18.00**	**308⇑**	*e*P	**Pn**	**12 30 28.6**	**+1.5**
MA2				pmax	pmax		
	comp=Z,24nm,1.2s						
MA2	**Magadan**	**18.00**	**308**	*e*P	**Pn**	**12 30 28.3**	**+1.2**
SLKM	**Skilak Lake**	**19.27**	**50**	*e*P	**Pn**	**12 30 43.1**	**+0.8**
PMR	**Palmer**	**20.07**	**47**	P	**P**	**12 30 49.3**	**-0.6**
PMR				pmax	pmax		
	comp=Z,44nm,0.8s						
PMR	**Palmer**	**20.07**	**47**	*e*P	**P**	**12 30 49.0**	**-0.9**
	comp=Z,28nm,0.8s						
PMR				LR	LR		
	comp=Z,8μm,18.0s,MS5.1						
IMA2	**Indian Mountai**	**20.15**	**33**	*e*P	**P**	**12 30 51.6**	**+0.9**
MCK	**McKinley**	**20.85**	**41**	*e*P	**P**	**12 30 58.7**	**+0.3**
MCK				*e**PP		12 31 12.3	
MCK	**McKinley**	**20.85**	**41**	*e*P	**P**	**12 30 58.7**	**+0.3**
MCK				*e*pP		12 31 12.3	
MCK				LR	LR		
	comp=Z,4μm,19.0s,MS4.8						
EYAK	**Cordova Ski Ar**	**21.43**	**51**	*e*P	**P**	**12 31 03.8**	**-0.8**
DIV	**Divide**	**21.53**	**49**	*e*P	**P**	**12 31 04.8**	**-0.8**
DIV				LR	LR		
	comp=Z,17μm,21.0s,MS5.4						
COLA	**College**	**21.72**	**39**	P	**P**	**12 31 07.0**	**-0.7**
COLA				pmax	pmax		
	comp=Z,130nm,0.9s,mb5.4						
COLA	**College**	**21.72**	**39**	*e*P	**P**	**12 31 06.9**	**-0.8**
	comp=Z,128nm,0.9s,mb5.3						
COLA				LR	LR		
	comp=Z,4μm,19.0s,MS4.8						
MENT	**Mentasta**	**22.86**	**45**	*e*P	**P**	**12 31 19.2**	**-0.6**
MIDW	**Midway**	**23.23**	**172**	PFAKE		12 31 30.0	+6.3
MIDW				LR	LR		
	comp=Z,4μm,20.0s,MS4.9						
YUK	**Yuzh-Kuril'sk**	**23.46**	**265⇑**	*i*P	**P**	**12 31 25.0**	**-0.9**
YUK				*e*PPP		12 32 10.1	
YUK				*e*S	**S**	**12 35 37.0**	**+0.6**
YUK				*e*SS		12 36 43.0	
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				pmax	pmax		
	comp=N,5μm,2.0s						
YUK				pmax	pmax		
	comp=E,5μm,2.0s						
YUK				pmax	pmax		
	comp=Z,270nm,0.7s,mb5.8						
YUK				smax			
	comp=N,5μm,3.0s						
YUK				smax			
	comp=E,2μm,3.0s						
YSS	**Yuzh-Sakhalins**	**24.09**	**274α**	*e*P	**P**	**12 31 32.3**	**+0.6**
YSS				*e**PP		12 31 43.0	
YSS				*e**SP	sP	12 31 52.8	+5.7
YSS				*e*		12 32 07.0	
YSS				*e*PPP		12 32 21.0	
YSS				*e*		12 35 06.0	
YSS				*e*S	**S**	**12 35 48.0**	**+1.4**
YSS				*e*		12 36 06.0	
YSS				SSS		12 36 57.0	
YSS				pmax	pmax		
	comp=N,40nm,0.9s						

YSS pmax pmax
comp=Z,90nm,0.9s,mb5.2
YSS pmax pmax
comp=E,110nm,1.0s
YSS MLR MLR
comp=Z,4µm,18.0s,MS4.9
YSS MLR MLR
comp=N,2µm,13.0s,MS4.9
YSS MLR MLR
comp=E,3µm,18.0s,MS4.9
YSS Yuzh-Sakhalins 24.09 274 *e*P **P 12 31 32.4 +0.7**
comp=E,54nm,0.6s,mb5.2
YSS LR LR
comp=Z,5µm,20.0s,MS5.0
DAWY Dawson 25.00 43 *e*P **P 12 31 39.0 -0.9**
ASAJ Asahikawa 25.46 268 P **P 12 31 44.9 +0.7**
comp=Z,217nm,0.8s,mb5.7,baz=62,slow=5.8,SNR=99
ASAJ LR LR 12 41 42.1
comp=Z,3µm,19.9s,MS4.8,baz=78,slow=36
ASAJ Asahikawa 25.46 268 P **P 12 31 44.9 +0.7**
ASAJ pmax pmax
comp=Z,217nm,0.8s
ASAJ MLR MLR
comp=Z,3µm,19.9s
ERM Erimo 26.20 263 PFAKE 12 32 00.0 +9.1
ERM LR LR
comp=Z,17nm,20.0s
SKAG Skagway 26.59 54 *e*P **P 12 31 53.3 -1.1**
comp=Z,34nm,1.6s,mb4.6
SKAG LR LR
comp=Z,7µm,20.0s,MS5.2
SIT Sitka 26.79 60 PFAKE 12 32 10.0 +14
SIT LR LR
comp=Z,8µm,21.0s,MS5.2
INK Inuvik 28.22 35 P **P 12 32 08.9 -0.1**
comp=Z,22nm,0.9s,mb4.8,baz=249,slow=8.5,SNR=45
INK PcP PcP 12 35 21.9 +0.1
comp=Z,8.6nm,0.8s,baz=218,slow=3.1,SNR=4.0
INK ScP ScP 12 38 58.5 -1.3
comp=Z,6.6nm,0.9s,baz=94,slow=24,SNR=10
INK LR LR 12 45 13.6
comp=Z,3µm,19.4s,MS5.0,baz=247,slow=40
INK Inuvik 28.22 35 P **P 12 32 08.9 -0.1**
INK 12 35 21.9
INK pmax pmax
comp=Z,22nm,0.9s
INK pmax pmax
comp=Z,9.0nm,0.8s
INK pmax pmax
comp=N,7.0nm,0.9s
INK MLR MLR
comp=Z,3µm,19.5s
INK Inuvik 28.22 35 *e*P **P 12 32 08.8 -0.2**
comp=Z,104nm,1.0s,mb5.4
INK *e*ScP ScP 12 39 01.6 +1.9
HABR Khabarovsk 28.27 282 ⇑*i*P **P 12 32 10.2 +0.7**
HABR *e* 12 33 10.8
HABR *e*S **S 12 36 56.0 +3.1**
HABR pmax pmax
comp=Z,38nm,0.8s,mb5.1
HABR MLR MLR
comp=Z,1µm,17.2s,MS4.6
YAK Yakutsk 28.52 311 *e*P **P 12 32 11.1 -0.6**
YAK *e**PP pP 12 32 20.2 -2.2
YAK *e*PPP 12 33 06.6
YAK *e* 12 35 26.2
YAK *e*S **S 12 36 52.5 -4.3**
YAK *e* 12 42 53.5
YAK pmax pmax
comp=Z,40nm,0.8s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,26nm,1.3s
YAK pmax pmax
comp=Z,25nm,1.0s,mb4.9
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=E,24nm,1.1s
YAK smax
comp=E,14nm,1.2s
YAK smax
comp=N,17nm,1.3s
YAK MLR MLR
comp=Z,3µm,14.0s,MS5.0
YAK MLR MLR
comp=N,2µm,16.0s,MS5.0
YAK MLR MLR
comp=E,2µm,15.0s,MS5.0
YAK Yakutsk 28.52 311 *e*P **P 12 32 11.2 -0.5**
comp=E,74nm,0.8s,mb5.5
YAK LR LR
comp=Z,6µm,19.0s,MS5.2
DLBC Dease Lake 29.42 56 P **P 12 32 20.0 +0.4**
comp=Z,3.5nm,0.8s,baz=292,slow=12,SNR=6.1
DLBC LR LR 12 44 18.5
comp=Z,6µm,21.2s,MS5.2,baz=275,slow=37
DLBC Dease Lake 29.42 56 P **P 12 32 20.0 +0.4**
DLBC LR LR 12 44 18.5
KLR Kul'dur 30.00 285 ⇓*i*P **P 12 32 22.2 -2.6**
KLR *e* 12 33 18.0
KLR *e*S **S 12 37 21.0 +1.0**
KLR pmax pmax
comp=E,100nm,1.0s
KLR pmax pmax
comp=Z,180nm,1.0s,mb5.8
KLR MLR MLR
comp=E,2µm,14.0s
KLR MLR MLR
comp=Z,2µm,14.0s,MS4.9
TIXI Tiksi 30.07 331 ⇓*i*P **P 12 32 26.0 +0.6**
TIXI pmax pmax
comp=Z,20nm,1.0s,mb4.8
CLNS Chul'man 31.61 302 *e*P **P 12 32 37.8 -1.2**
CLNS *e*PPP 12 33 44.0
CLNS *e* 12 35 33.9
CLNS *e*S **S 12 37 37.1 -8.2**
CLNS pmax pmax
comp=N,15nm,0.9s
CLNS pmax pmax
comp=E,14nm,0.9s
CLNS pmax pmax
comp=Z,16nm,0.9s,mb4.8
CLNS pmax pmax
comp=N,20nm,1.0s
CLNS pmax pmax
comp=Z,19nm,1.0s,mb4.9
CLNS pmax pmax
comp=E,16nm,0.8s
CLNS smax
comp=N,12nm,1.2s
CLNS smax
comp=Z,8.0nm,0.8s
CLNS smax
comp=E,11nm,1.0s
CLNS MLR MLR
comp=Z,5µm,17.0s,MS5.3
CLNS MLR MLR
comp=N,4µm,16.0s,MS5.3
CLNS MLR MLR
comp=E,4µm,17.0s,MS5.3
BBB Bella Bella 32.02 67 P **P 12 32 43.2 +0.6**
comp=E,23nm,1.0s,mb5.0,baz=262,slow=13
BBB LR LR 12 44 12.3
comp=E,2µm,19.8s,MS4.7,baz=292,slow=34
BBB Bella Bella 32.02 67 P **P 12 32 43.2 +0.6**
BBB LR LR 12 44 12.2
MAJO Matsushiro 32.55 259 *e*P **P 12 32 47.9 +0.6**
comp=E,39nm,1.0s,mb5.3
MAJO LR LR
comp=Z,2µm,20.0s,MS4.9
MAT Matsushiro 32.55 259 P **P 12 32 47.5 +0.2**
MAT *S* **S 12 38 00.0 0.0**
MAT Matsushiro 32.55 259 *e*P **P 12 32 48.0 +0.7**
MAT *e*S **S 12 38 01.0 +1.0**
MAT pmax pmax
comp=Z,31nm,1.0s,mb5.2
MAT MLR MLR
comp=Z,2µm,20.0s,MS4.9
MAT Matsushiro 32.55 259 *e*P **P 12 32 48.0 +0.7**
comp=Z,31nm,1.0s,mb5.2
MAT *e*S **S 12 38 01.0 +1.0**
MAT LR LR
comp=Z,2µm,20.0s,MS4.9
MJAR Matsushiro Arr 32.55 259 P **P 12 32 47.8 +0.5**
comp=Z,9.6nm,0.9s,mb4.7,baz=53,slow=7.8,SNR=29
MJAR PcP PcP 12 35 32.9 -0.3
comp=Z,7.9nm,1.0s,baz=41,slow=1.6,SNR=11
MJAR ScP ScP 12 39 15.4 +1.5
comp=Z,3.1nm,0.9s,baz=48,slow=3.3,SNR=6.8
MJAR LR LR 12 43 58.9
comp=Z,2µm,21.0s,MS4.9,baz=60,slow=33
MJAR Matsushiro Arr 32.55 259 P **P 12 32 47.8 +0.5**
MJAR 12 35 32.9
MDJ Mudanjiang 33.35 278 P **P 12 32 53.8 -0.5**
MDJ AP pP 12 33 02.5 -2.6
MDJ XP sP 12 33 06.4 -3.4
MDJ PP PP 12 34 09.0 -1.1
MDJ S **S 12 38 13.4 +1.0**
MDJ XS sS 12 38 27.3 -3.1
MDJ AMB AMB
comp=Z,33nm,0.8s,mb5.3
MDJ AMB AMB
comp=Z,469nm,10.3s
MDJ LR LR
comp=N,427nm,17.9s,MS5.0
MDJ LR LR
comp=E,2µm,19.1s,MS5.0
MDJ LR LR
comp=Z,3µm,19.1s,MS5.0
MDJ Mudanjiang 33.35 278 *e*P **P 12 32 53.0 -1.3**
comp=Z,35nm,0.9s,mb5.3
MDJ LR LR
comp=Z,4µm,20.0s,MS5.2
WAKE Wake Island 33.48 202 PFAKE 12 33 10.0 +15
WAKE LR LR
comp=Z,4µm,20.0s,MS5.1
JHJ Hachijo jima 2 33.89 253 LR LR 12 43 50.5
comp=Z,1µm,21.9s,MS4.6,baz=101,slow=31
KIP Kipapa 34.73 141 PFAKE 12 33 20.0 +14
KIP LR LR
comp=Z,4µm,22.0s,MS5.1
OTR Olympics--Tyee 35.88 72 P **P 12 33 17.5 +1.4**
OOW Octopus West 36.13 73 P **P 12 33 19.8 +1.6**
YKW3 Yellowknife Ar 36.15 46 *e*P **P 12 33 17.2 -1.2**
YKA Yellowknife Ar 36.16 46 P **P 12 33 17.5 -1.0**
comp=Z,26nm,0.7s,mb5.3,baz=281,slow=7.7,SNR=94
YKA PcP PcP 12 35 43.3 -0.2
comp=Z,13nm,0.9s,baz=294,slow=3.1,SNR=8.7
YKA ScP ScP 12 39 27.9 +1.2
comp=Z,4.1nm,0.6s,baz=283,slow=3.6,SNR=14
YKA LR LR 12 49 35.5
comp=Z,6µm,19.0s,MS5.4,baz=280,slow=39
YKA Yellowknife Ar 36.16 46 P **P 12 33 17.5 -1.0**
YKA 12 35 43.4
YKA Yellowknife Ar 36.16 46 P **P 12 33 17.5 -1.0**
YKA PcP PcP 12 35 43.4 -0.2
YKA ScP ScP 12 39 27.9 +1.2
YKA LR LR 12 49 35.5
CN2 Changchun 36.33 280 *e*P **P 12 33 20.0 0.0**
CN2 PP PP 12 34 43.6 +0.6
CN2 *e*S **S 12 38 56.3 -2.0**
CN2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,3µm,19.0s,MS5.2
CN2 LR LR
comp=E,2µm,19.0s,MS5.2
CN2 LR LR
comp=Z,4µm,21.0s,MS5.2
B04A Port Angeles 36.39 72 ⇓P **P 12 33 21.1 +0.6**
baz=36,SNR=7.2
B04A ⇑S **S 12 39 01.0 +1.8**
baz=36
A04A Legoe Bay, Lum 36.57 71 ⇑S **S 12 39 02.1 +0.2**
baz=36
D03A Wishkah Elem. 36.67 74 ⇑P **P 12 33 24.0 +1.2**
baz=37
A05A Maple Falls 36.81 70 ⇑P **P 12 33 24.3 +0.3**
baz=37,SNR=11
A05A ⇑S **S 12 39 04.2 -1.4**
baz=37
C04A Brinnon 36.87 72 ⇑P **P 12 33 25.3 +0.8**
baz=37
C04A ⇓S **S 12 39 06.4 0.0**
baz=37
CBIJ Chichi jima 36.94 243 LR LR 12 45 34.9
comp=Z,2µm,21.7s,MS4.8,baz=108,slow=32
BOD Bodaibo 37.01 306 *e*P **P 12 33 25.5 -0.2**
BOD pmax pmax
comp=Z,89nm,0.8s,mb5.7
E03A Lebam 37.07 74 ⇑P **P 12 33 26.9 +0.7**
baz=37,SNR=11
E03A ⇓S **S 12 39 10.8 +1.3**
baz=37
B05A Bryant 37.13 71 P **P 12 33 27.4 +0.6**
baz=37,SNR=31
B05A ⇑S **S 12 39 10.6 +0.1**
baz=37
HIA Hailar 37.15 291 *e*P **P 12 33 26.5 -0.4**
HIA pmax pmax
comp=Z,32nm,0.6s
HIA MLR MLR
comp=Z,3µm,19.0s
HIA Hailar 37.15 291 *e*P **P 12 33 26.5 -0.4**
comp=Z,32nm,0.6s,mb5.3
HIA LR LR
comp=Z,3µm,19.0s,MS5.2
POHA Pohakuloa 37.24 138 PFAKE 12 33 40.0 +12
POHA LR LR
comp=Z,4µm,19.0s,MS5.2
D04A Dobbs Creek Ra 37.25 73 ⇓P **P 12 33 28.8 +1.0**
baz=37
D04A ⇑S **S 12 39 14.8 +2.5**
baz=37
F03A Seaside 37.37 75 ⇓P **P 12 33 29.4 +0.6**
baz=37
F03A ⇓S **S 12 39 15.7 +1.6**
baz=37
E04A Onalaska 37.55 74 ⇑P **P 12 33 30.5 +0.2**
baz=37
E04A ⇑S **S 12 39 19.2 +2.3**
baz=37
C05A Tolt Reservoir 37.64 72 P **P 12 33 31.5 +0.4**
baz=38,SNR=22
C05A ⇓S **S 12 39 18.1 -0.1**
baz=38
D05A Enumclaw 37.70 73 P **P 12 33 32.8 +1.2**
baz=38,SNR=34
D05A ⇓S **S 12 39 19.6 +0.4**
baz=38
G03A Yamhill 37.85 76 ⇑P **P 12 33 33.4 +0.6**
baz=38
G03A ⇑S **S 12 39 22.5 +1.1**
baz=38
FMW Mount Fremont 38.02 73 P **P 12 33 34.8 +0.5**
LON Longmire 38.02 73 P **P 12 33 34.8 +0.5**
F04A Amboy 38.06 75 ⇑P **P 12 33 34.9 +0.3**
baz=38,SNR=19
F04A ⇑S **S 12 39 25.7 +1.2**
baz=38
PNT Penticton 38.11 68 P **P 12 33 34.2 -0.8**
I02A Mapleton 38.19 78 ⇓P **P 12 33 35.9 +0.2**
baz=38
I02A ⇓S **S 12 39 29.4 +2.9**
baz=38
COR Corvallis 38.21 77 *e*P **P 12 33 37.3 +1.4**
COR *e**PP pP 12 33 50.0 +3.2
COR Corvallis 38.21 77 *e*P **P 12 33 37.3 +1.4**
COR *e*pP pP 12 33 50.0 +3.1
COR LR LR
comp=Z,2µm,21.0s,MS5.0
G04A Mulino 38.39 76 ⇓P **P 12 33 37.9 +0.5**
baz=38,SNR=9.8
G04A ⇓S **S 12 39 29.9 +0.3**
baz=38
KEBM Edson Butte 38.48 80 *e*P **P 12 33 39.7 +1.5**
I03A Eugene 38.54 78 ⇓P **P 12 33 39.3 +0.6**
baz=38
I03A ⇓S **S 12 39 32.9 +1.0**
baz=38
SNY Shenyang 38.56 278 ⇑P **P 12 33 39.4 +0.6**
SNY S **S 12 39 38.3 +6.3**
SNY AMB AMB
comp=Z,53nm,0.7s,mb5.4
SNY LR LR
comp=N,2µm,17.1s
SNY LR LR
comp=E,2µm,23.7s
SNY LR LR
comp=Z,3µm,21.1s,MS5.0
F05A White Salmon 38.66 74 ⇓P **P 12 33 39.9 +0.2**
baz=39,SNR=8.2
F05A ⇑S **S 12 39 35.0 +1.4**
baz=39
J02A Umpqua 38.69 79 ⇓P **P 12 33 40.7 +0.9**
baz=39,SNR=8.8
J02A ⇑S **S 12 39 35.0 +1.0**
baz=39
EBG Ellensburg 38.69 72 P **P 12 33 40.0 +0.1**
H04A Detroit Lake 38.84 76 ⇑P **P 12 33 41.6 +0.4**
baz=39,SNR=33
H04A ⇑S **S 12 39 36.8 +0.6**
baz=39
BROR Big Rock Looko 38.89 77 P **P 12 33 42.6 +1.0**
VFP Flag Point 38.95 75 P **P 12 33 42.7 +0.6**
J03A Ideyld Park 39.06 78 ⇓P **P 12 33 44.0 +1.0**
baz=39,SNR=28
J03A ⇑S **S 12 39 40.9 +1.3**
baz=39
K02A Glendale 39.06 80 ⇑P **P 12 33 43.9 +0.9**
baz=39
K02A ⇑S **S 12 39 41.3 +1.7**
baz=39
M01C Crescent City 39.18 81 ⇓S **S 12 39 42.2 +0.8**
baz=39
INCN Inchon 39.19 270 P **P 12 33 45.6 +1.5**
SNR=10
INCN Inchon 39.19 270 *e*P **P 12 33 45.5 +1.4**
comp=Z,78nm,1.0s,mb5.4
INCN LR LR
comp=Z,849nm,19.0s,MS4.6
L02A Cave Junction 39.33 80 P **P 12 33 47.0 +1.8**
baz=39,SNR=6.1
L02A ⇓S **S 12 39 44.5 +0.8**
baz=39
H05A Madras 39.44 76 ⇑P **P 12 33 46.8 +0.6**
baz=39,SNR=14
H05A ⇑S **S 12 39 46.6 +1.2**
baz=39
CIT Chita 39.47 298 *e*P **P 12 33 47.0 +0.6**
CIT pmax pmax
comp=Z,229nm,2.2s,mb5.5
KRMB Red Mountain 39.49 81 *e*P **P 12 33 48.1 +1.4**
HAWA Hanford 39.56 72 *e*P **P 12 33 47.1 -0.2**
HAWA LR LR
comp=Z,128nm,20.0s
I05A Bend 39.67 76 ⇑P **P 12 33 49.0 +0.8**
baz=40
I05A ⇑S **S 12 39 51.7 +2.9**
baz=40
JCC Jacoby Creek 39.82 82 ⇓S **S 12 39 53.1 +2.1**
baz=40
EDM Edmonton 39.92 60 *e*P **P 12 33 48.8 -1.4**
EDM *e**PP pP 12 34 03.8 +2.6
KHMM Horse Mountain 39.97 82 *e*P **P 12 33 52.1 +1.6**
NEW Newport 40.06 68 P **P 12 33 50.6 -0.7**
comp=Z,31nm,0.8s,mb5.1,baz=297,slow=8.1
NEW LR LR 12 49 22.3
comp=Z,2µm,19.8s,MS4.9,baz=39,slow=35
NEW Newport 40.06 68 P **P 12 33 50.7 -0.7**
NEW pmax pmax
comp=Z,31nm,0.8s
NEW MLR MLR
comp=Z,2µm,19.8s
NEW Newport 40.06 68 *e*P **P 12 33 50.8 -0.6**
comp=Z,32nm,0.8s,mb5.1
NEW LR LR
comp=Z,2µm,19.0s,MS5.0
YBH Yreka Blue Hor 40.12 80 P **P 12 33 52.6 +0.8**
comp=Z,22nm,1.0s,mb4.8,baz=328,slow=5.0,SNR=3.1
YBH LR LR 12 47 13.3
comp=Z,3µm,21.7s,MS5.1,baz=299,slow=31
YBH Yreka Blue Hor 40.12 80 *e*P **P 12 33 53.4 +1.6**
YBH LR LR
comp=Z,3µm,22.0s,MS5.1
YBH Yreka Blue Hor 40.12 80 ⇑P **P 12 33 52.7 +0.9**
baz=40,SNR=19
YBH ⇑S **S 12 39 57.1 +1.6**
baz=40
J05A Fort Rock 40.16 77 ⇓P **P 12 33 53.3 +1.1**
baz=40,SNR=36
J05A ⇓S **S 12 39 57.2 +1.0**
baz=40
M02C Callahan 40.22 81 ⇑P **P 12 33 53.7 +1.0**
baz=40,SNR=7.8
M02C ⇑S **S 12 40 00.3 +3.3**
baz=40
K04A Chilquin 40.23 79 ⇓P **P 12 33 53.8 +1.0**
baz=40,SNR=9.9
K04A ⇓S **S 12 40 00.5 +3.3**
baz=40
N02C Big Bar 40.26 82 ⇓P **P 12 33 54.0 +0.9**
baz=40,SNR=12
N02C ⇓S **S 12 40 01.5 +3.9**
baz=40
RES Resolute Bay 40.30 24 *e*P **P 12 33 54.2 +0.9**
RES pmax pmax
comp=Z,53nm,1.1s,mb5.2
RES Resolute Bay 40.30 24 *e*P **P 12 33 54.2 +0.9**
comp=Z,53nm,1.2s,mb5.1
F08A Pendleton 40.32 73 ⇓P **P 12 33 53.7 +0.2**
baz=40,SNR=17
F08A ⇑S **S 12 39 58.0 -0.6**
baz=40
O01C Eel River Cons 40.34 83 ⇑P **P 12 33 54.8 +1.1**
baz=40
L04A Klamath Falls 40.37 79 ⇓P **P 12 33 54.2 +0.3**
baz=40,SNR=6.6
L04A ⇓S **S 12 40 00.7 +1.4**
baz=40
I06A Prineville 40.43 76 ⇓P **P 12 33 55.0 +0.6**
baz=40,SNR=15
I06A ⇑S **S 12 40 00.4 +0.2**
baz=40
HOG Hogback Mounta 40.45 79 P **P 12 33 56.4 +1.8**
LHEM Herd Peak 40.48 80 P **P 12 33 56.1 +1.3**
M04C Macdoel 40.63 80 ⇓P **P 12 33 56.9 +0.9**
baz=40,SNR=23
M04C ⇓S **S 12 40 00.4 -2.7**
baz=40
M03C McCloud 40.74 81 ⇑P **P 12 33 57.6 +0.6**
baz=41
M03C ⇑S **S 12 40 05.5 +0.8**
baz=41
I07A Izee 40.79 75 P **P 12 33 57.9 +0.6**
baz=41,SNR=54
I07A ⇑S **S 12 40 05.2 -0.3**
baz=41
J06A Christmas Vall 40.84 77 P **P 12 33 58.6 +0.8**
baz=41,SNR=33
J06A ⇓S **S 12 40 07.0 +0.7**
baz=41
WDC Whiskeytown Da 40.88 82 P **P 12 33 59.1 +1.0**
WDC pmax pmax
comp=Z,29nm,1.0s,mb4.9
WDC Whiskeytown Da 40.88 82 *e*P **P 12 33 58.7 +0.6**
WDC LR LR
comp=Z,1µm,20.0s,MS4.8
WDC Whiskeytown Da 40.88 82 ⇓P **P 12 33 58.6 +0.5**
baz=41,SNR=14
WDC ⇓S **S 12 40 08.5 +1.6**
baz=41
O02C Red Bluff 40.96 82 ⇑P **P 12 33 59.6 +0.8**
baz=41,SNR=10
O02C ⇑S **S 12 40 11.0 +3.0**
baz=41
P01C Double 8 Ranch 41.03 84 ⇓P **P 12 33 59.7 +0.3**
baz=41
P01C ⇑S **S 12 40 10.6 +1.5**
baz=41
K06A Valley Falls 41.03 77 ⇓P **P 12 33 59.8 +0.4**
baz=41,SNR=9.1
K06A ⇓S **S 12 40 09.9 +0.8**
baz=41
H08A Prairie City 41.06 74 P **P 12 33 59.5 -0.1**
baz=41,SNR=24
H08A ⇓S **S 12 40 07.5 -2.0**
baz=41
L05A Lakeview 41.10 79 ⇓P **P 12 34 00.8 +0.9**
baz=41,SNR=26
L05A ⇑S **S 12 40 11.8 +1.7**
baz=41
M05C Lookout 41.30 80 ⇑P **P 12 34 02.1 +0.6**
baz=41,SNR=15
M05C ⇑S **S 12 40 15.3 +2.2**
baz=41
GASB Alder Springs 41.31 83 ⇑P **P 12 34 02.4 +0.7**

baz=41
GASB ⇑S S 12 40 13.8 +0.6
baz=41
HATC Hat Creek Radi 41.41 81 P P 12 34 03.3 +0.8
baz=41,SNR=23
HATC ⇓S S 12 40 16.6 +1.9
baz=41
I08A Drewsey 41.45 75 P P 12 34 03.2 +0.4
baz=41,SNR=31
I08A ⇑S S 12 40 16.3 +1.0
baz=41
DL2 Dalian 41.46 276 P P 12 34 04.3 +1.4
DL2 S S 12 40 14.0 -1.4
DL2 AMB AMB
comp=Z,31nm,0.9s,mb4.9
DL2 AMB AMB
comp=Z,457nm,5.0s
DL2 LR LR
comp=N,2μm,16.0s,MS5.0
DL2 LR LR
comp=E,556nm,16.0s,MS5.0
HOPS Hopland 41.48 84 *e*P P 12 34 04.2 +1.1
HOPS LR LR
comp=Z,4μm,20.0s,MS5.2
HOPS Hopland 41.48 84 ⇑P P 12 34 03.3 +0.3
baz=41
WALA Waterton Lakes 41.53 66 *e*P P 12 34 02.8 -0.6
comp=Z,76nm,1.0s,mb5.3
WALA *e*PcP PcP 12 36 01.8 +1.4
O03C Acorn Hollow, 41.53 82 ⇓P P 12 34 03.3 -0.2
baz=41
O03C ⇑S S 12 40 17.6 +1.0
baz=41
H09A Durkee 41.59 74 ⇓P P 12 34 04.1 +0.2
baz=42,SNR=10
H09A ⇑S S 12 40 17.9 +0.6
baz=42
BSMT Bassoo Peak 41.63 68 *e*P P 12 34 03.6 -0.6
BMO Blue Mountains 41.70 73 *e*P P 12 34 04.5 -0.4
comp=Z,61nm,1.0s,mb5.2
BMO *e*ScP ScP 12 39 55.9 +7.9
BMO LR LR
comp=Z,1μm,19.0s,MS4.8
M06C Likely Place G 41.80 80 ⇑P P 12 34 06.3 +0.6
baz=42,SNR=14
M06C ⇑S S 12 40 20.3 -0.1
baz=42
I09A Lost Marbles R 41.92 74 ⇓P P 12 34 06.5 -0.1
baz=42,SNR=12
I09A ⇑S S 12 40 22.4 +0.2
baz=42
O04C Chester 41.93 81 ⇑P P 12 34 07.4 +0.6
baz=42,SNR=18
O04C ⇓S S 12 40 22.3 -0.2
baz=42
MNRC McLaughlin Nat 41.94 84 ⇑P P 12 34 07.3 +0.4
baz=42,SNR=5.5
MNRC ⇓S S 12 40 25.1 +2.5
baz=42
ELFS Eagle Lake Fie 41.98 80 ⇑P P 12 34 07.7 +0.6
baz=42
ELFS ⇑S S 12 40 23.6 +0.5
baz=42
L07A Adell 42.03 78 ⇓P P 12 34 08.2 +0.7
baz=42,SNR=52
L07A ⇓S S 12 40 24.6 +0.7
baz=42
NSHM Saint Helena R 42.06 84 *e*P P 12 34 07.9 +0.2
MCCM Marconi Confer 42.11 85 ⇑P P 12 34 07.7 -0.5
baz=42
ORV Oroville 42.13 82 ⇓P P 12 34 07.7 -0.6
baz=42
ORV ⇓S S 12 40 26.2 +0.8
baz=42
SUTB Sutter Butte 42.14 83 ⇓P P 12 34 07.8 -0.6
baz=42
SUTB ⇑S S 12 40 25.8 +0.2
baz=42
K08A Mann Creek Ran 42.15 76 P P 12 34 09.2 +0.6
baz=42,SNR=45
K08A ⇑S S 12 40 26.1 +0.5
baz=42
WVOR Wild Horse Val 42.23 77 P P 12 34 09.5 +0.4
WVOR pmax pmax
comp=Z,62nm,1.0s,mb5.2
WVOR Wild Horse Val 42.23 77 *e*P P 12 34 09.2 +0.1
comp=Z,62nm,1.0s,mb5.2
WVOR LR LR
comp=Z,3μm,22.0s,MS5.2
O05C Quincy 42.25 81 ⇑P P 12 34 09.6 +0.3
baz=42,SNR=16
O05C ⇓S S 12 40 27.6 +0.6
baz=42
CVS Carmenet Viney 42.26 84 ⇓P P 12 34 08.8 -0.6
baz=42
OHCM Honcut 42.27 83 *e*P P 12 34 09.6 +0.1
Q03C Winters 42.36 84 ⇑P P 12 34 10.7 +0.5
baz=42
N06A Buffalo Meadow 42.46 80 P P 12 34 11.7 +0.7
baz=42,SNR=52
N06A ⇑S S 12 40 31.8 +1.6
baz=42
M07A Soldier Meadow 42.49 78 ⇓P P 12 34 12.1 +0.7
baz=42,SNR=128
M07A ⇑S S 12 40 31.7 +0.9
baz=42
L08A Fields 42.54 77 ⇑P P 12 34 11.8 0.0
baz=42,SNR=33
L08A ⇓S S 12 40 30.7 -0.7
baz=42
Q04C Lincoln 42.63 83 ⇑P P 12 34 12.0 -0.4
baz=42
Q04C ⇑S S 12 40 33.0 +0.3
baz=42
K09A Rome 42.63 76 ⇓P P 12 34 12.5 0.0
baz=42,SNR=25
K09A ⇑S S 12 40 31.0 -1.8
baz=42
MSO Missoula 42.65 69 *e*P P 12 34 11.5 -1.1
MSO LR LR
comp=Z,822nm,20.0s,MS4.6
BEKR Beckwourth 42.65 81 ⇓P P 12 34 12.4 -0.2
baz=42,SNR=27
BEKR ⇓S S 12 40 31.9 -1.2
baz=42
O06A Flanigan 42.80 80 ⇑P P 12 34 14.0 +0.1
baz=43,SNR=11
O06A ⇑S S 12 40 33.6 -1.7
baz=43
P05C Yuba Gap, Truc 42.83 82 ⇑P P 12 34 13.9 -0.1
baz=43,SNR=16
P05C ⇑S S 12 40 35.6 0.0
baz=43
BDM Black Diamond 42.86 84 ⇑S S 12 40 35.3 -0.8
baz=43
ALE Alert 42.89 10 P P 12 34 14.2 -0.3
comp=Z,362nm,1.2s,mb6.0,SNR=18
M08A Happy Creek Ra 42.95 78 ⇑P P 12 34 15.6 +0.6
baz=43,SNR=46
M08A ⇑S S 12 40 37.7 +0.3
baz=43
JRSC Jasper Ridge 42.97 85 ⇑P P 12 34 15.0 -0.2
baz=43
CHMT Chamberlain Mo 43.01 68 *e*P P 12 34 14.4 -1.0
CHMT *e*pP pP 12 34 30.0 +3.5
P06A Stead Airport, 43.05 81 ⇑P P 12 34 16.0 +0.2
baz=43
P06A ⇑S S 12 40 37.9 -1.0
baz=43
L09A Wilkinson Ranc 43.05 77 P P 12 34 16.4 +0.5
baz=43,SNR=32
L09A ⇓S S 12 40 37.7 -1.3
baz=43
LAVA Lava Cap Winer 43.08 83 ⇓P P 12 34 15.8 -0.2
baz=43,SNR=22
LAVA ⇓S S 12 40 39.0 -0.3
baz=43
WENL Wente Brothers 43.14 85 ⇑P P 12 34 16.3 -0.2
baz=43
WENL ⇓S S 12 40 43.1 +3.0
baz=43
BNLO Ben Lomond (Sa 43.18 86 ⇓P P 12 34 16.7 -0.2
baz=43
BNLO ⇓S S 12 40 42.0 +1.3
baz=43
R04C Big Horse Ranc 43.26 83 ⇓P P 12 34 17.1 -0.4
baz=43
R04C ⇑S S 12 40 41.8 -0.1
baz=43
PAHR Pah Rah Range 43.35 81 *e*P P 12 34 18.9 +0.7
comp=Z,76nm,1.2s,mb5.3
WCN Washoe City 43.36 81 ⇓P P 12 34 18.7 +0.3
baz=43,SNR=18
WCN ⇑S S 12 40 45.1 +1.6
baz=43
O07A Toulon 43.39 80 P P 12 34 19.2 +0.6
baz=43,SNR=48
O07A ⇑S S 12 40 44.5 +0.6
baz=43
S04C Ingram Canyon, 43.48 85 ⇑P P 12 34 18.9 -0.4
baz=43
S04C ⇑S S 12 40 45.9 +0.8
baz=43
N08A GE Springer Mi 43.48 79 P P 12 34 19.8 +0.4
baz=43,SNR=36
N08A ⇓S S 12 40 45.3 0.0
baz=43
R05C Kirkwood Meado 43.52 82 ⇓P P 12 34 19.4 -0.2
baz=43,SNR=28
R05C ⇑S S 12 40 46.4 +0.5
baz=43
M09A Marrel Ranch, 43.53 77 ⇓P P 12 34 19.8 +0.1
baz=43,SNR=20
M09A ⇓S S 12 40 45.7 -0.2
baz=43
CMB Columbia Colle 43.74 83 *e*P P 12 34 21.9 +0.5
CMB LR LR
comp=Z,4μm,22.0s,MS5.2
CMB Columbia Colle 43.74 83 ⇓P P 12 34 21.2 -0.1
baz=44,SNR=26
CMB ⇓S S 12 40 49.9 +1.0
baz=44
P07A Fallon 43.76 80 ⇓P P 12 34 21.5 0.0
baz=44
P07A ⇓S S 12 40 49.7 +0.5
baz=44
O08A Rochester Mine 43.76 79 ⇓P P 12 34 21.8 +0.2
baz=44
PACP Pacheco Peak 43.81 85 ⇑P P 12 34 22.1 +0.2
baz=44,SNR=8.6
PACP ⇓S S 12 40 50.4 +0.4
baz=44
N09A Rock Creek Ran 43.82 78 ⇑P P 12 34 22.2 +0.2
baz=44,SNR=28
N09A ⇑S S 12 40 49.4 -0.8
baz=44
SAO San Andreas Ge 43.86 85 *e*P P 12 34 22.8 +0.4
SAO LR LR
comp=Z,2μm,19.0s,MS5.0
HRY Holter Researc 43.94 68 *e*P P 12 34 22.3 -0.7
R06C Coleville 44.02 82 ⇓P P 12 34 23.9 +0.2
baz=44,SNR=22
R06C ⇓S S 12 40 55.0 +2.0
baz=44
M10A I.L. Ranch, Tu 44.03 77 ⇑P P 12 34 24.0 +0.3
baz=44,SNR=20
M10A ⇓S S 12 40 52.1 -1.2
baz=44
HAST UC Hastings Re 44.03 86 ⇓P P 12 34 23.1 -0.6
baz=44,SNR=17
HAST ⇓S S 12 40 52.6 -0.6
baz=44
WAKR Walker 44.04 82 *e*P P 12 34 24.5 +0.7
LRM Limekiln Ridge 44.06 69 *e*P P 12 34 23.2 -0.7
HLID Hailey 44.15 73 *e*P P 12 34 24.5 -0.2
comp=Z,120nm,1.1s,mb5.5
HLID LR LR
comp=Z,2μm,22.0s,MS4.9
P08A Dixie Valley 44.16 80 ⇓P P 12 34 25.1 +0.3
baz=44,SNR=11
BJI Beijing 44.17 281 P P 12 34 26.1 +1.3
BJI S S 12 40 55.5 +0.3
BJI AMB AMB
comp=Z,59nm,0.7s,mb5.4
BJI LR LR
comp=N,2μm,21.1s,MS5.2
BJI LR LR
comp=E,2μm,20.6s,MS5.2
BJI LR LR
comp=Z,2μm,28.2s
S06C San Francisco 44.17 83 P P 12 34 24.7 -0.1
baz=44,SNR=66
S06C ⇓S S 12 40 56.2 +1.0
baz=44
Q07A Schurz 44.17 81 ⇓P P 12 34 24.5 -0.3
baz=44
BJT Baijiatuau 44.18 281 *e*P P 12 34 25.5 +0.6
BJT pmax pmax
comp=Z,99nm,1.0s
BJT MLR MLR
comp=Z,4μm,20.0s
BJT Baijiatuau 44.18 281 *e*P P 12 34 25.5 +0.6
comp=Z,99nm,1.0s,mb5.5
BJT LR LR
comp=Z,4μm,20.0s,MS5.3
S05C Merced 44.20 84 ⇑P P 12 34 24.2 -0.8
baz=44,SNR=16
S05C ⇓S S 12 40 56.8 +1.2
baz=44
DLMT Dillon 44.23 70 *e*P P 12 34 24.9 -0.3
DLMT *e*ScP ScP 12 40 01.1 +2.9
BMN Battle Mountai 44.25 78 P P 12 34 26.2 +0.7
BMN pmax pmax
comp=Z,39nm,0.9s,mb5.1
BMN Battle Mountai 44.25 78 *e*P P 12 34 26.0 +0.5
BMN LR LR
comp=Z,3μm,21.0s,MS5.1
T05C Eagle Field, D 44.26 85 ⇑P P 12 34 25.5 -0.1
baz=44
LRV Little Rabbit 44.34 86 *e*P P 12 34 27.2 +1.0
MCMT McKenzie Canyo 44.37 71 *e*P P 12 34 25.7 -0.8
IRK Irkutsk 44.42 302 ⇑/*e*P P 12 34 26.0 -0.8
IRK 12 36 10.0
IRK pmax pmax
comp=Z,85nm,2.5s,mb5.0
O09A Fish Creek Ran 44.43 79 ⇑P P 12 34 27.1 +0.3
baz=44,SNR=36
O09A ⇓S S 12 40 59.8 +0.8
baz=44
EGMT Eagleton 44.43 65 *e*P P 12 34 26.1 -0.9
EGMT LR LR
comp=Z,2μm,20.0s,MS5.0
V03C Hunter Liggett 44.46 86 ⇑P P 12 34 26.8 -0.4
baz=44,SNR=9.7
N10A Dunphy 44.52 78 ⇓P P 12 34 27.8 +0.2
baz=44
N10A ⇑S S 12 40 59.7 -0.7
baz=44
U04C Hernandez Rese 44.53 85 ⇑P P 12 34 27.6 -0.1
baz=44,SNR=14
U04C ⇓S S 12 41 00.4 -0.1
baz=44
R07C Lee Vining 44.54 82 ⇑P P 12 34 28.0 +0.2
baz=44,SNR=13
R07C ⇑S S 12 41 01.5 +0.9
baz=44
M11A Holland Ranch, 44.54 76 ⇓P P 12 34 28.0 +0.2
baz=44,SNR=38
M11A ⇓S S 12 41 00.4 -0.3
baz=44
BOZ Bozeman (W) 44.64 69 *e*P P 12 34 28.2 -0.3
comp=Z,122nm,1.2s,mb5.6
BOZ LR LR
comp=Z,1μm,19.0s,MS4.9
Q08A Gabbs 44.76 81 ⇑P P 12 34 29.3 -0.3
baz=45,SNR=30
Q08A ⇑S S 12 41 04.7 +0.9
baz=45
O10A Cortez Mining, 44.78 78 ⇑P P 12 34 29.9 +0.2
baz=45,SNR=22
O10A ⇑S S 12 41 03.1 -1.0
baz=45
NVAR Mina Array Bea 44.79 81 P P 12 34 30.1 +0.3
comp=Z,21nm,1.0s,mb4.9,baz=302,slow=6.3,SNR=76
NVAR ScP ScP 12 40 00.0 -0.5
comp=Z,1.1nm,0.8s,baz=268,slow=7.0,SNR=5.3
T06C Millerton Lake 44.80 84 ⇓P P 12 34 29.1 -0.7
baz=45,SNR=16
T06C ⇓S S 12 41 05.8 +1.5
baz=45
P09A Austin 44.83 79 ⇓P P 12 34 30.1 0.0
baz=45,SNR=23
P09A ⇓S S 12 41 05.3 +0.5
baz=45
KCC Kaiser Creek 44.84 83 ⇑P P 12 34 29.9 -0.2
baz=45,SNR=20
KCC ⇑S S 12 41 05.8 +0.8
baz=45
N11A Elko Archery C 44.94 77 ⇓P P 12 34 31.0 +0.1
baz=45,SNR=8.3
N11A ⇑S S 12 41 05.4 -1.0
baz=45
V04C Ramage Ranch, 44.94 86 ⇑P P 12 34 30.8 -0.2
baz=45,SNR=11
V04C ⇓S S 12 41 06.4 0.0
baz=45
PKD Parkfield 44.95 86 ⇑P P 12 34 31.0 0.0
baz=45,SNR=19
PKD ⇓S S 12 41 07.0 +0.5
baz=45
MLAC Mammoth Lakes 44.95 83 ⇓P P 12 34 31.4 +0.3
baz=45,SNR=8.1
MLAC ⇓S S 12 41 06.7 +0.1
baz=45
U05C Westside ANR, 44.96 85 ⇑P P 12 34 31.2 +0.1
baz=45
R08A Mina 44.96 81 ⇑P P 12 34 31.1 0.0
baz=45,SNR=12
R08A ⇑S S 12 41 06.3 -0.4
baz=45
TLY Talaya 45.04 302 ⇑P P 12 34 32.4 +0.7
SNR=7.7
TLY Talaya 45.04 302 ⇑/*e*P P 12 34 32.0 +0.3
TLY pmax pmax
comp=Z,46nm,1.0s,mb5.3
TLY Talaya 45.04 302 *e*P P 12 34 32.4 +0.7
TLY LR LR
comp=Z,7μm,22.0s,MS5.6
M12A Wells 45.08 76 ⇓P P 12 34 32.2 +0.1
baz=45,SNR=35
M12A ⇓S S 12 41 08.0 -0.5
baz=45
ULN Ulaanbaatar 45.16 295 P P 12 34 34.0 +1.3
SNR=22
ULN Ulaanbaatar 45.16 295 *c i*P P 12 34 33.7 +0.9
ULN Ulaanbaatar 45.16 295 *e*P P 12 34 33.7 +0.9
comp=Z,57nm,1.0s,mb5.4
ULN LR LR
comp=Z,6μm,19.0s,MS5.6
QLMT Earthquake Lak 45.21 70 *e*P P 12 34 32.9 -0.2
Q09A Carvers 45.24 80 ⇓P P 12 34 33.5 +0.2
baz=45,SNR=9.6
Q09A ⇑S S 12 41 10.4 -0.3
baz=45
ELK Elko 45.28 77 *e*P P 12 34 34.2 +0.6
comp=Z,31nm,0.8s,mb5.2
ELK LR LR
comp=Z,2μm,22.0s,MS5.1
MTUM Tungsten Hills 45.29 83 *e*P P 12 34 34.3 +0.5
PTRM Twissleman Ran 45.34 86 *e*P P 12 34 33.9 -0.2
N12A Clover Valley, 45.34 76 ⇑P P 12 34 34.3 +0.1
baz=45,SNR=25
N12A ⇑S S 12 41 10.5 -1.7
baz=45
JOW Kunigami 45.34 257 P P 12 34 34.4 +0.2
comp=Z,46nm,0.9s,mb5.3,baz=77,slow=6.1,SNR=9.0
JOW LR LR 12 50 33.5
comp=Z,903nm,21.3s,MS4.7,baz=283,slow=32
O11A Cowboy Ranch, 45.39 78 ⇓P P 12 34 34.5 0.0
baz=45,SNR=14
O11A ⇑S S 12 41 13.6 +0.7
baz=45
V05C Boulder Hill, 45.40 85 ⇓P P 12 34 34.6 0.0
baz=45
HELL Mitchell Peak, 45.43 84 ⇓P P 12 34 34.0 -0.9
baz=45,SNR=40
HELL ⇓S S 12 41 12.7 -0.8
baz=45
RCTC Rector, Farmer 45.53 84 ⇓P P 12 34 35.3 -0.4
baz=45
RCTC ⇓S S 12 41 14.0 -0.9
baz=45
SONM Songino Array 45.55 296 P P 12 34 36.9 +1.0
comp=Z,25nm,0.6s,mb5.3,baz=64,slow=7.9,SNR=181
SONM ScP ScP 12 40 04.4 +0.7
comp=Z,1.6nm,0.9s,baz=79,slow=2.6,SNR=3.7
SONM LR LR 12 55 31.6
comp=Z,7μm,18.1s,MS5.6,baz=55,slow=39
SONM Songino Array 45.55 296 P P 12 34 36.9 +1.0
SONM ScP ScP 12 40 04.4 +0.7
SONM LR LR 12 55 31.6
M13A Montello 45.57 75 ⇓P P 12 34 35.9 -0.1
baz=45,SNR=5.5
M13A ⇑S S 12 41 13.7 -1.8
baz=45
YMR Madison River 45.57 70 *e*P P 12 34 35.9 -0.1
comp=Z,167nm,1.1s,mb5.9
YMR LR LR
comp=Z,1μm,19.0s,MS4.9
R09A Tonopah 45.67 81 P P 12 34 36.5 -0.3
baz=46,SNR=98
R09A ⇑S S 12 41 17.1 +0.1
baz=46
TPH Tonopah 45.68 81 *e*P P 12 34 37.8 +1.0
comp=Z,88nm,1.3s,mb5.5
TPH LR LR
comp=Z,2μm,20.0s,MS5.1
P11A Circle Ranch, 45.68 78 ⇑P P 12 34 36.8 -0.1
baz=46,SNR=14
P11A ⇑S S 12 41 17.8 +0.6
baz=46
TIN Tinemaha 45.69 83 ⇑P P 12 34 36.5 -0.4
baz=46,SNR=7.3
TIN ⇓S S 12 41 17.6 +0.4
baz=46
SMMC Simmler 45.69 86 ⇓P P 12 34 36.6 -0.3
baz=46,SNR=6.9
GCMT Greycliff 45.70 68 *e*P P 12 34 36.8 -0.2
YNR Norris Junctio 45.71 69 *e*P P 12 34 39.8 +2.7
YFT Old Faithful 45.77 70 *e*P P 12 34 38.7 +1.1
N13A Wendover, West 45.85 76 ⇓P P 12 34 37.9 -0.2
baz=46,SNR=13
N13A ⇑S S 12 41 19.6 +0.1
baz=46
SDP Sudden Peak, L 45.85 87 ⇓P P 12 34 37.9 -0.3
baz=46
O12A Currie 45.87 77 ⇓P P 12 34 37.8 -0.5
baz=46,SNR=107
O12A ⇑S S 12 41 19.3 -0.5
baz=46
S09A Goldfield 45.90 81 ⇓P P 12 34 38.0 -0.5
baz=46,SNR=28
S09A ⇓S S 12 41 21.2 +1.0
baz=46
ZAK Zakamensk 45.91 300 *e*P P 12 34 34.0 -4.7
ZAK pmax pmax
comp=Z,25nm,1.5s,mb4.9
VES Vestal, Richgr 45.93 85 P P 12 34 38.1 -0.6
baz=46,SNR=16
TIA Tai'an 45.94 276 ⇑P P 12 34 39.0 +0.1
TIA S S 12 41 25.0 +4.2
TIA AMB AMB
comp=Z,72nm,1.0s,mb5.6
TIA LR LR
comp=N,400nm,16.0s,MS4.8
TIA LR LR
comp=E,797nm,15.0s,MS4.8
LKWY Lake 45.96 69 *e*P P 12 34 40.7 +1.6
LKWY LR LR
comp=Z,1μm,20.0s,MS4.9
IMW Indian Meadow 46.03 71 *e*P P 12 34 42.9 +3.3
IMW *e*ScP ScP 12 40 14.5 +8.8
DCID1 Drake Creek 46.06 71 *e*P P 12 34 41.0 +1.2
FLWY Flagg Ranch 46.06 70 *e*P P 12 34 40.3 +0.5
PKM Peak Mountain 46.07 86 ⇑P P 12 34 39.7 -0.2
baz=46,SNR=11
PKM ⇓S S 12 41 23.4 +0.7
baz=46
R10A Warm Springs 46.12 80 ⇑P P 12 34 39.6 -0.6
baz=46
R10A ⇓S S 12 41 23.5 +0.1
baz=46
RRI2 Red Ridge 46.12 71 *e*P P 12 34 43.0 +2.7
HVU Hansel Valley 46.16 74 P P 12 34 41.0 +0.3
HVU pmax pmax
comp=Z,59nm,0.9s,mb5.5
HVU Hansel Valley 46.16 74 *e*P P 12 34 41.4 +0.7
CWC Cottonwood Cre 46.17 83 ⇓P P 12 34 40.4 -0.3
baz=46,SNR=9.2
CWC ⇓S S 12 41 25.2 +1.0
baz=46
MOOW Moose Ponds 46.23 71 *e*P P 12 34 41.2 0.0
comp=Z,32nm,1.0s,mb5.2

P12A McGill 46.25 78 ⇑P P 12 34 41.2 -0.2
baz=46,SNR=32
P12A ⇑S **S** **12 41 23.2 -2.1**
baz=46
TPAW Teton Pass 46.26 71 *e*P **P 12 34 41.5 +0.1**
comp=Z,53nm,1.0s,mb5.4
GRAC Grapevine Rang 46.26 82 ⇑P **P 12 34 41.1 -0.3**
baz=46,SNR=10
GRAC ⇓S **S** **12 41 25.5 +0.1**
baz=46
SNOW Snow King Moun 46.39 71 *e*P **P 12 34 43.4 +0.9**
comp=Z,75nm,1.1s,mb5.5
REDW Red Top Meadow 46.39 71 *e*P **P 12 34 42.4 -0.1**
comp=Z,82nm,1.3s,mb5.5
LOHW Long Hollow 46.39 71 *e*P **P 12 34 42.5 +0.1**
comp=Z,34nm,1.0s,mb5.2
ISA Isabella 46.42 84 *e*P **P 12 34 41.7 -1.0**
ISA MLR MLR
comp=Z,453nm,19.0s,MS4.4
ISA Isabella 46.42 84 ⇓P **P 12 34 41.4 -1.2**
baz=46,SNR=13
ISA ⇓S **S** **12 41 25.7 -2.0**
baz=46
HHC Hu-ho-hao-te 46.50 285 *e*P **P 12 34 44.3 +1.0**
HHC PCP PcP 12 36 18.9 +1.6
HHC PP PP 12 36 34.0 +1.1
HHC SCP ScP 12 40 06.3 -1.3
HHC PCS PcS 12 40 12.3 +0.3
HHC S **S** **12 41 31.0 +2.1**
HHC SCS ScS 12 44 31.3 -3.8
HHC SS SS 12 44 45.4 -10
HHC AMB AMB
comp=Z,103nm,1.0s,mb5.7
HHC AMB AMB
comp=Z,773nm,9.0s
HHC LR LR
comp=N,2μm,16.5s,MS5.3
HHC LR LR
comp=E,2μm,18.2s,MS5.3
HHC LR LR
comp=Z,1μm,22.2s,MS4.8
BGU Big Grassy Mou 46.52 75 *e*P **P 12 34 44.0 +0.6**
ARVC Arvin 46.54 85 ⇑P **P 12 34 42.3 -1.3**
baz=46
ARVC ⇓S **S** **12 41 28.9 -0.5**
baz=46
Q12A Willow Creek R 46.56 78 ⇑P **P 12 34 43.4 -0.4**
baz=46,SNR=26
Q12A ⇓S **S** **12 41 28.0 -1.8**
baz=46
DAC Darwin (Calif) 46.58 83 PFAKE 12 35 00.0 +16
DAC LR LR
comp=Z,2μm,21.0s,MS5.1
AHID Auburn Hatcher 46.59 72 *e*P **P 12 34 44.2 +0.3**
AHID LR LR
comp=Z,2μm,20.0s,MS5.0
SPUT South Promonto 46.64 74 *e*P **P 12 34 44.6 +0.2**
GUMO Guam 46.73 229 P **P 12 34 44.0 -1.1**
comp=Z,13nm,0.4s,mb5.3,baz=197,slow=19,SNR=2.4
GUMO LR LR 12 52 06.9
comp=Z,1μm,18.4s,MS4.9,baz=33,slow=33
SSE Sheshan 46.75 268 P **P 12 34 45.8 +0.5**
SSE PP PP 12 36 35.1 -0.4
SSE S **S** **12 41 29.0 -3.5**
SSE AMB AMB
comp=Z,70nm,0.9s,mb5.6
SSE AMB AMB
comp=Z,563nm,7.4s
SSE LR LR
comp=N,784nm,23.8s,MS4.7
SSE LR LR
comp=E,496nm,23.9s,MS4.7
SSE LR LR
comp=Z,911nm,22.5s,MS4.7
BSC Santa Cruz Isl 46.77 87 ⇓P **P 12 34 44.5 -1.0**
baz=47
MPMC Manual Prospec 46.78 83 ⇑P **P 12 34 44.9 -0.6**
baz=47,SNR=33
MPMC ⇑S **S** **12 41 33.2 +0.4**
baz=47
FURC Furnace Creek, 46.91 82 ⇓P **P 12 34 46.1 -0.4**
baz=47,SNR=42
FURC ⇓S **S** **12 41 32.9 -1.9**
baz=47
OSI Osito Adit 46.94 86 ⇑S **S** **12 41 33.9 -1.2**
baz=47
HWUT Hardware Ranch 46.99 73 *e*P **P 12 34 47.0 -0.2**
comp=Z,62nm,1.1s,mb5.5
HWUT LR LR
comp=Z,2μm,20.0s,MS5.0
LRMC Laurel Mountai 47.03 84 P **P 12 34 46.7 -0.7**
baz=47,SNR=9.3
LRMC ⇑S **S** **12 41 36.6 +0.1**
baz=47
BLG Laguna Peak 47.05 87 ⇑P **P 12 34 47.0 -0.6**
baz=47,SNR=8.7
BLG ⇑S **S** **12 41 37.1 +0.3**
baz=47
DUG Dugway 47.09 76 *e*P **P 12 34 48.2 +0.3**
comp=Z,62nm,0.9s,mb5.5
DUG LR LR
comp=Z,1μm,21.0s,MS4.9
LAO LASA Array 47.17 65 *e*P **P 12 34 48.3 -0.2**
comp=Z,48nm,1.0s,mb5.4
LAO LR LR
comp=Z,3μm,20.0s,MS5.2
EDW2 Edwards Air Fo 47.23 85 ⇑P **P 12 34 48.6 -0.4**
baz=47,SNR=15
EDW2 ⇑S **S** **12 41 38.0 -1.2**
baz=47
NOQ North Oquirrh 47.23 75 *e*P **P 12 34 49.7 +0.7**
U10A Ash Meadows, A 47.27 82 ⇑P **P 12 34 49.4 0.0**
baz=47,SNR=24
U10A ⇑S **S** **12 41 39.5 -0.4**
baz=47
SNCC San Nicolas Is 47.33 88 PFAKE 12 35 00.0 +10
SNCC LR LR
comp=Z,2μm,20.0s,MS5.2
SNCC San Nicolas Is 47.33 88 ⇑P **P 12 34 49.3 -0.5**
baz=47
TCUT Toone Canyon 47.38 74 *e*P **P 12 34 51.0 +0.8**
CTU Camp Tracy 47.43 75 *e*P **P 12 34 51.2 +0.7**
BW06 Boulder Array 47.51 71 *e*P **P 12 34 50.4 -0.8**
BW06 *e*ScP ScP 12 40 24.4 +13
BW06 LR LR
comp=Z,2μm,22.0s,MS5.0
PDAR Pinedale Array 47.51 71 P **P 12 34 50.5 -0.6**
comp=Z,124nm,1.0s,mb5.9,baz=300,slow=3.1,SNR=460
PDAR LR LR 12 52 25.0
comp=Z,2μm,21.7s,MS4.9,baz=315,slow=33
NJ2 Nanjing 47.57 270 *e*P **P 12 34 51.4 -0.2**
NJ2 AP pP 12 35 01.3 -1.6
NJ2 AMB AMB
comp=Z,50nm,0.6s,mb5.7
NJ2 AMB AMB
comp=Z,1μm,5.4s
NJ2 LR LR
comp=N,2μm,13.8s,MS5.5
NJ2 LR LR
comp=E,3μm,15.1s,MS5.5
NJ2 LR LR
comp=Z,3μm,17.0s,MS5.4
BTO Baotou 47.59 285 *e*P **P 12 34 52.8 +1.0**
MWC Mount Wilson 47.61 86 *e*P **P 12 34 51.8 -0.1**
SHOC Shoshone 47.63 83 ⇓P **P 12 34 51.7 -0.4**
baz=48,SNR=24
SHOC ⇓S **S** **12 41 45.1 0.0**
baz=48
NLU North Lily Min 47.69 76 *e*P **P 12 34 52.7 +0.1**
GSC Goldstone 47.69 84 *e*P **P 12 34 52.8 +0.2**
GSC Goldstone 47.69 84 ⇓P **P 12 34 51.9 -0.6**
baz=48,SNR=36
GSC ⇓S **S** **12 41 44.5 -1.3**
baz=48
RRX Edison Barstow 47.84 84 ⇑P **P 12 34 52.6 -1.2**
baz=48
RRX ⇑S **S** **12 41 47.6 -0.4**
baz=48
BFSC Mount Baldy St 47.85 85 ⇓P **P 12 34 53.2 -0.6**
baz=48,SNR=18
BFSC ⇓S **S** **12 41 47.1 -1.0**
baz=48
U11A Corn Creek 47.86 82 ⇑P **P 12 34 52.5 -1.4**
baz=48
U11A ⇓S **S** **12 41 47.3 -0.9**
baz=48
DAU Daniels Canyon 47.90 75 *e*P **P 12 34 55.5 +1.3**
DAU *e**PP pP 12 35 07.5 +2.1
MPU Maple Canyon 47.92 75 *e*P **P 12 34 55.4 +1.1**
MPU LR LR
comp=Z,3μm,21.0s,MS5.3
CIS Catalina Islan 47.93 87 ⇑S **S** **12 41 50.0 +0.7**
baz=48
SHPR Sheep Range 47.94 81 *e*P **P 12 34 54.7 +0.2**
TUQ Turquoise Mtn. 48.15 83 ⇓P **P 12 34 55.6 -0.6**
baz=48,SNR=10
TUQ ⇓S **S** **12 41 50.5 -1.9**
baz=48
KRAR Krasnoyarsk 48.19 311 *e*P **P 12 34 56.3 -0.1**
KRAR pmax pmax
comp=Z,276nm,1.0s,mb6.2
ARUT Antelope Range 48.19 79 P **P 12 34 56.5 0.0**
HEC Hector,Ludlow 48.29 84 ⇑P **P 12 34 56.8 -0.5**
baz=48
HEC ⇓S **S** **12 41 52.0 -2.4**
baz=48
BBRC Big Bear Sol-O 48.30 85 ⇓P **P 12 34 56.8 -0.5**
baz=48
BBRC ⇓S **S** **12 41 53.4 -1.0**
baz=48
U12A Valley of Fire 48.38 81 ⇓P **P 12 34 57.5 -0.4**
baz=48,SNR=7.5
U12A ⇓S **S** **12 41 56.0 +0.5**
baz=48
CCUT Cedar City 48.39 79 *e*P **P 12 34 57.6 -0.3**
MVU Marysvale 48.50 77 PFAKE 12 35 10.0 +11
MVU LR LR
comp=Z,2μm,20.0s,MS5.2
MSU Marysvale 48.52 77 *e*P **P 12 34 59.5 +0.5**
MSU *e*ScP ScP 12 40 18.0 +1.9
MURC Murrieta 48.56 86 ⇓P **P 12 34 58.3 -1.0**
baz=48
MURC ⇑S **S** **12 41 57.3 -0.8**
baz=48
TMUT Trail Mountain 48.62 76 *e*P **P 12 35 00.3 +0.6**
V12A Nelson 48.63 82 ⇑P **P 12 34 59.0 -0.9**
baz=48,SNR=13
V12A ⇓S **S** **12 41 58.4 -0.8**
baz=48
W12A Cal Nev Ari 48.90 82 ⇓P **P 12 35 01.2 -0.7**
baz=49
W12A ⇑S **S** **12 42 02.8 -0.1**
baz=49
PFO Pinyon Flat Ob 49.02 85 *e*P **P 12 35 02.6 -0.2**
comp=Z,25nm,1.0s,mb5.2
PFO LR LR
comp=Z,2μm,22.0s,MS5.1
PFO Pinyon Flat Ob 49.02 85 ⇓P **P 12 35 01.8 -1.0**
baz=49,SNR=11
PFO ⇓S **S** **12 42 01.7 -2.9**
baz=49
BELC Belle Mtn. 49.04 84 P **P 12 35 01.9 -1.1**
baz=49,SNR=21
BELC ⇑S **S** **12 42 03.4 -1.6**
baz=49
109C Camp Elliot, M 49.09 86 ⇓P **P 12 35 02.4 -1.0**
baz=49
109C ⇑S **S** **12 42 05.5 -0.1**
baz=49
SRU San Rafael 49.15 75 *e*P **P 12 35 04.3 +0.5**
NEE2 Needles Airpor 49.40 83 ⇓P **P 12 35 04.9 -0.9**
baz=49
IRM Iron Mountain 49.47 84 P **P 12 35 05.8 -0.5**
baz=49,SNR=24
IRM ⇓S **S** **12 42 09.5 -1.4**
baz=49
BAR Barrett 49.50 86 *e*P **P 12 35 06.0 -0.4**
MONP Monument Peak 49.52 86 ⇓P **P 12 35 05.8 -0.8**
baz=49,SNR=9.8
MONP ⇓S **S** **12 42 11.1 -0.4**
baz=49
RWWY Rawlins 49.55 71 *e*P **P 12 35 06.2 -0.6**
W13A Hualapai Mount 49.64 82 ⇑P **P 12 35 06.8 -0.8**
baz=50,SNR=36
W13A ⇓S **S** **12 42 13.6 +0.3**
baz=50
KBS Kingsbay 49.78 357 *e*P **P 12 35 07.2 -1.5**
KBS AMb AMB 12 35 11.7
comp=Z,43nm,1.4s,mb5.3
KBS *e*PP PP 12 37 06.3 +2.8
KBS *e*S **S** **12 42 21.1 +5.8**
KBS AMS AMS 12 57 48.1
comp=Z,1μm,17.7s,MS5.0
KBS Kingsbay 49.78 357 *e*P **P 12 35 09.1 +0.4**
KBS LR LR
comp=Z,1μm,17.7s,MS5.0
DVTC Desert V Tower 49.87 86 ⇓P **P 12 35 08.1 -1.2**
baz=50,SNR=6.3
SWSC Sam W. Stewart 49.87 85 ⇑P **P 12 35 08.1 -1.2**
baz=50
RSSD Black Hills 49.92 66 *e*P **P 12 35 09.0 -0.8**
RSSD LR LR
comp=Z,1μm,19.0s,MS5.0
PDMCI Parker Dam,Lak 50.01 83 ⇓P **P 12 35 09.5 -0.8**
baz=50,SNR=13
PDMCI ⇑S **S** **12 42 18.2 -0.2**
baz=50
X13A Yucca 50.01 82 ⇑P **P 12 35 09.2 -1.1**
baz=50,SNR=24
X13A ⇓S **S** **12 42 19.2 +0.8**
baz=50
W14A Seligman 50.06 81 ⇓P **P 12 35 09.8 -1.0**
baz=50,SNR=24
W14A ⇑S **S** **12 42 18.3 -0.9**
baz=50
Y12C Blythe 50.13 84 ⇑P **P 12 35 10.5 -0.8**
baz=50,SNR=14
Y12C ⇓S **S** **12 42 18.7 -1.4**
baz=50
GLA Glamis 50.40 84 *e*P **P 12 35 13.0 -0.3**
GLA Glamis 50.40 84 ⇑P **P 12 35 12.5 -0.8**
baz=50,SNR=16
GLA ⇓S **S** **12 42 21.7 -2.3**
baz=50
PV10 Paradox Valley 50.51 75 *e*P **P 12 35 14.2 0.0**
W15A Williams 50.59 81 ⇑P **P 12 35 14.2 -0.5**
baz=50,SNR=14
W15A ⇓S **S** **12 42 27.0 +0.4**
baz=50
X14A Yava 50.67 82 ⇓P **P 12 35 14.7 -0.7**
baz=50,SNR=26
X14A ⇑S **S** **12 42 26.6 -1.1**
baz=50
ULM Lac du Bonnet 50.74 56 P **P 12 35 14.8 -1.1**
comp=Z,6.3nm,0.7s,mb4.6,baz=294,slow=8.6,SNR=10.0
ULM PcP PcP 12 36 31.8 -0.8
comp=Z,12nm,0.9s,baz=317,slow=6.8,SNR=4.4
ULM LR LR 12 56 55.9
comp=Z,3μm,20.6s,MS5.2,baz=310,slow=36
ULM Lac du Bonnet 50.74 56 P **P 12 35 14.8 -1.1**
ULM PcP PcP 12 36 31.8 -0.8
ULM LR LR 12 56 55.9
PHWY Pilot Hill 50.82 70 *e*P **P 12 35 15.9 -0.6**
TATO Taipei 50.88 262 PFAKE 12 35 30.0 +13
TATO LR LR
comp=Z,2μm,22.0s,MS5.0
WUAZ Wupatki 50.92 80 *e*P **P 12 35 17.4 +0.2**
WUAZ *e*pP pP 12 35 31.8 +3.2
WUAZ LR LR
comp=Z,4μm,19.0s,MS5.4
Y14A Wickenburg 50.95 82 ⇑P **P 12 35 16.5 -1.0**
baz=51,SNR=15
Y14A ⇓S **S** **12 42 31.5 0.0**
baz=51
X15A Humboldt 51.06 81 P **P 12 35 18.1 -0.2**
baz=51,SNR=27
X15A ⇓S **S** **12 42 34.3 +1.2**
baz=51
YHNB Yeheng 51.17 261 *e*P **P 12 35 18.1 -1.0**
SMCO Snowmass 51.25 73 *e*P **P 12 35 18.8 -1.0**
comp=Z,19nm,0.8s,mb5.1
Z14A Wintersburg 51.37 83 ⇓P **P 12 35 19.6 -1.0**
baz=51
Z14A ⇑S **S** **12 42 35.6 -1.7**
baz=51
WHN Wuhan 51.42 272 P **P 12 35 21.1 +0.1**
WHN S **S** **12 42 31.0 -7.0**
WHN LR LR
comp=Z,3μm,16.9s,MS5.3
DAG Danmarks Havn 51.67 5⇓*i*P **P 12 35 22.1 -0.7**
comp=Z,19nm,0.6s,mb5.2
DAG
comp=Z,5μm,20.0s
DAG Danmarks Havn 51.67 5⇓*e*P **P 12 35 22.1 -0.7**
DAG pmax pmax
comp=Z,19nm,0.6s,mb5.2
DAG MLR MLR
comp=N,4μm,20.0s,MS5.5
DAG MLR MLR
comp=Z,5μm,20.0s,MS5.5
DAG MLR MLR
comp=E,2μm,18.0s,MS5.5
DAG Danmarks Havn 51.67 5⇓*e*P **P 12 35 22.1 -0.7**
DAG LR LR
comp=Z,5μm,20.0s,MS5.5
ISCO Idaho Springs 51.67 72 *e*P **P 12 35 23.2 +0.4**
comp=Z,50nm,1.0s,mb5.4
ISCO LR LR
comp=Z,2μm,20.0s,MS5.0
115A Sonoran Desert 52.26 83 ⇓P **P 12 35 26.7 -0.5**
baz=52,SNR=11
115A ⇓S **S** **12 42 48.3 -1.2**
baz=52
XAN Xi'an 52.45 280 P **P 12 35 28.5 -0.1**
XAN AP pP 12 35 36.8 -3.2
XAN PP PP 12 37 24.8 -2.8
XAN S **S** **12 42 49.8 -2.3**
XAN AMB AMB
comp=Z,54nm,0.9s,mb5.5
XAN LR LR
comp=E,1μm,21.0s
XAN LR LR
comp=Z,2μm,21.0s,MS5.1
116A Eloy 52.68 83 ⇓P **P 12 35 29.3 -1.0**
baz=52
116A ⇑S **S** **12 42 55.2 -0.1**
baz=52
QZH Quanzhou 52.70 264⇓*i*P **P 12 35 32.0 +1.5**
QZH AP pP 12 35 43.8 +1.9
QZH S **S** **12 43 02.8 +7.2**
QZH AMB AMB
comp=Z,100nm,0.9s,mb5.8
QZH LR LR
comp=N,2μm,21.7s
QZH LR LR
comp=E,840nm,13.8s
QZH LR LR
comp=Z,2μm,19.4s,MS5.2
SDCO Great Sand Dun 53.06 74 PFAKE 12 35 50.0 +17
SDCO LR LR
comp=Z,2μm,20.0s,MS5.1
ZAL Zalesovo 53.17 313 P **P 12 35 33.4 -0.6**
comp=Z,13nm,0.5s,mb5.1,baz=55,slow=7.5,SNR=40
ZAL LR LR 13 00 31.6
comp=Z,4μm,18.8s,MS5.5,baz=60,slow=39
ZAL Zalesovo 53.17 313 P **P 12 35 33.4 -0.6**
ZAL LR LR 13 00 31.6
NVS Novosibirsk 53.32 314⇑*i*P **P 12 35 34.9 -0.2**
NVS *e*S **S** **12 43 05.6 +1.6**
NVS *e* 12 45 22.4
NVS pmax pmax
comp=N,51nm,1.7s
NVS pmax pmax
comp=E,90nm,1.7s
NVS pmax pmax
comp=Z,133nm,1.7s,mb5.6
NVS pmax pmax
comp=N,12nm,1.0s
NVS pmax pmax
comp=Z,21nm,1.0s,mb5.0
NVS pmax pmax
comp=E,16nm,1.4s
NVS smax
comp=N,53nm,2.0s
TUC Tucson 53.42 82 *e*P **P 12 35 35.3 -0.6**
comp=N,38nm,1.4s,mb5.1
TUC LR LR
comp=Z,1μm,19.0s,MS4.9
SUMG Summit 53.64 13 *e*P **P 12 35 37.3 -0.1**
LZH Lanzhou 54.20 285 *e*P **P 12 35 43.0 +1.5**
LZH AP pP 12 35 56.0 +3.1
LZH PP PP 12 37 46.0 +2.6
LZH AMB AMB
comp=Z,153nm,1.5s,mb5.7
LZH AMB AMB
comp=Z,602nm,4.6s
LZH LR LR
comp=E,2μm,15.4s
LZH LR LR
comp=Z,3μm,17.2s,MS5.4
LAZ Ladron 54.27 78 *e*P **P 12 35 42.3 +0.3**
ANMO Albuquerque 54.31 77 P **P 12 35 42.5 +0.1**
comp=Z,10nm,0.9s,mb4.7,baz=311,slow=11
ANMO Albuquerque 54.31 77 P **P 12 35 42.5 +0.2**
ANMO pmax pmax
comp=Z,10.0nm,0.9s
ANMO Albuquerque 54.31 77 *e*P **P 12 35 42.8 +0.4**
ANMO LR LR
comp=Z,2μm,22.0s,MS5.1
GTA Gaotai 54.43 291 ⇑P **P 12 35 44.1 +0.9**
GTA AP pP 12 35 56.0 +1.5
GTA XP sP 12 35 59.6 +0.5
GTA PCP PcP 12 36 46.5 0.0
GTA PP PP 12 37 48.0 +2.5
GTA PPP 12 39 00.3
GTA SCP ScP 12 40 40.8 -0.8
GTA PCS PcS 12 40 44.1 -1.9
GTA AMB AMB
comp=Z,57nm,1.0s,mb5.5
GTA AMB AMB
comp=Z,691nm,9.1s
GTA LR LR
comp=N,2μm,17.5s,MS5.4
GTA LR LR
comp=E,2μm,18.2s,MS5.4
GTA LR LR
comp=Z,2μm,21.3s,MS5.2
EYMN Ely 54.43 56 *e*P **P 12 35 42.0 -1.2**
comp=Z,27nm,1.0s,mb5.1
EYMN LR LR
comp=Z,2μm,20.0s,MS5.2
LENM Lemitar 54.52 78 *e*P **P 12 35 44.8 +0.9**
Y22C IRIS PASSCAL I 54.62 78 ⇑P **P 12 35 43.9 -0.6**
baz=54
Y22C ⇑S **S** **12 43 20.8 -0.8**
baz=54
LPM Los Pinos Moun 54.64 78 *e*P **P 12 35 45.4 +0.7**
SFJD Kangerlussuaq 56.15 21 *i*P **P 12 35 53.0 -2.6**
SFJD *i*S **S** **12 43 39.9 -2.2**
SFJD *i* 12 44 06.6
SFJD
comp=Z,1μm,19.0s
MNTX Cornudas Mount 57.18 79 *e*P **P 12 36 02.7 -0.2**
comp=Z,33nm,1.0s,mb5.3
MNTX LR LR
comp=Z,1μm,19.0s,MS5.0
GZH Guangzhou 57.33 267 P **P 12 35 59.1 -4.9**
GZH S **S** **12 43 52.3 -5.3**
GZH LR LR
comp=N,501nm,16.5s,MS4.8
GZH LR LR
comp=E,477nm,19.0s,MS4.8
GZH LR LR
comp=Z,948nm,20.8s,MS4.9
KSU1 Kansas State U 57.41 67 *e*P **P 12 36 04.3 -0.2**
GDL2 Guadalupe Moun 57.46 78 *e*P **P 12 36 05.2 +0.3**
KEV Kevo 57.54 349 *e*P **P 12 36 04.5 -0.9**
comp=Z,3.3nm,0.4s,mb4.7
KEV LR LR
comp=Z,2μm,22.0s,MS5.2
CD2 Chengdu 57.77 280⇓*i*P **P 12 36 06.8 -0.2**
CD2 AP pP 12 36 22.8 +4.3
CD2 PCP PcP 12 36 58.8 -0.6
CD2 PP PP 12 38 16.8 +1.5
CD2 SCP ScP 12 40 51.9 -4.4
CD2 PCS PcS 12 40 58.5 -2.2
CD2 S **S** **12 43 58.8 -4.5**
CD2 XS sS 12 44 27.0 +4.7
CD2 SCS ScS 12 45 46.8 -6.6
CD2 SS SS 12 47 51.9 -2.2
CD2 AMB AMB
comp=Z,20nm,1.0s,mb5.1
CD2 AMB AMB
comp=Z,290nm,9.8s
CD2 LR LR
comp=E,890nm,18.0s
CD2 LR LR
comp=Z,790nm,22.8s,MS4.8
JMIC Jan Mayen 57.87 3 *e*P **P 12 36 06.6 -1.1**

JMIC ePP PP 12 38 14.5 -1.6
JMIC eSS SS 12 48 02.1 +6.4
JMIC AMS AMS 13 02 16.2
comp=Z,609nm,20.0s,MS4.7
ARCES ARCESS Array B 57.92 349 P **P** **12 36 06.8 -1.3**
comp=Z,13nm,0.9s,mb5.0,baz=25,slow=8.0,SNR=30
ARCES LR LR 13 02 40.8
comp=Z,1μm,19.8s,MS5.1,baz=357,slow=38
ARE0 ARCESS Array S 57.92 349 eP **P** **12 36 07.4 -0.7**
KURK Kurchatov 58.15 313 P **P** **12 36 10.1 +0.4**
comp=Z,720nm,0.6s,SNR=70
KURK Kurchatov 58.15 313 P **P** **12 36 10.2 +0.5**
SNR=30
KURK Kurchatov 58.15 313⇑ eP **P** **12 36 09.8 +0.1**
KURK Kurchatov 58.15 313 eP **P** **12 36 09.7 0.0**
KURK LR LR
comp=Z,4μm,19.0s,MS5.6
LVZ Lovozero 58.18 345 eP **P** **12 36 08.3 -1.6**
LVZ e 12 39 44.1
LVZ eS **S** **12 44 06.8 -1.9**
LVZ pmax pmax
comp=N,9.0nm,1.1s
LVZ pmax pmax
comp=Z,44nm,1.1s,mb5.4
LVZ pmax pmax
comp=E,7.0nm,0.9s
LVZ smax
comp=N,167nm,2.9s
LVZ MLR MLR
comp=Z,2μm,19.0s,MS5.3
LVZ MLR MLR
comp=N,1μm,20.0s,MS5.1
LVZ MLR MLR
comp=E,548nm,18.0s,MS5.1
LVZ Lovozero 58.18 345 PFAKE 12 36 20.0 +10
LVZ LR LR
comp=Z,2μm,20.0s,MS5.2
WMQ Urumqi 58.32 302 P **P** **12 36 11.5 +0.6**
WMQ AP pP 12 36 27.5 +5.2
WMQ PP PP 12 38 22.5 +2.3
WMQ S **S** **12 44 08.0 -2.5**
WMQ SCS ScS 12 45 52.0 -5.4
WMQ SS SS 12 48 03.0 +0.2
WMQ AMB AMB
comp=Z,65nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,374nm,5.0s
WMQ LR LR
comp=N,6μm,15.0s,MS5.9
WMQ LR LR
comp=E,4μm,15.0s,MS5.9
WMQ LR LR
comp=Z,6μm,15.0s,MS5.8
JFWS Jewell Farm 58.40 60 P **P** **12 36 10.4 -1.0**
JFWS pmax pmax
comp=Z,53nm,1.0s,mb5.5
JFWS Jewell Farm 58.40 60 eP **P** **12 36 10.3 -1.1**
JFWS LR LR
comp=Z,3μm,22.0s,MS5.4
TRO Tromso 58.49 352 eP **P** **12 36 06.9 -5.2**
TRO eS **S** **12 44 18.7 +5.8**
TRO eSS SS 12 48 14.0 +8.5
TRO AMS AMS 13 02 39.9
comp=Z,1μm,24.6s,MS4.9
KTK1 Kautokeino 58.67 350 eP **P** **12 36 12.8 -0.6**
KTK1 AMb AMB 12 36 15.8
comp=Z,67nm,1.4s,mb5.5
KTK1 Kautokeino 58.67 350 eP **P** **12 36 12.8 -0.6**
comp=Z,67nm,1.4s,mb5.5
APA Apatity 58.68 345⇑ eP **P** **12 36 11.0 -2.4**
APA i 12 37 03.0
APA ePPP 12 39 57.0
APA eS **S** **12 44 16.0 +0.8**
APA ePS 12 44 34.0
APA pmax pmax
comp=Z,500nm,8.0s
APA MLR MLR
comp=Z,3μm,18.0s,MS5.4
MKAR Makanchi Array 59.09 307 P **P** **12 36 15.8 -0.5**
comp=Z,33nm,0.6s,mb5.6,baz=51,slow=6.6,SNR=252
GYA Guiyang 59.09 275⇑ iP **P** **12 36 15.8 -0.4**
GYA AP pP 12 36 28.4 +0.7
GYA XP sP 12 36 33.8 +1.6
GYA PP PP 12 38 29.8 +2.8
GYA SCP ScP 12 40 57.4 -4.8
GYA S **S** **12 44 21.3 +0.7**
GYA SS SS 12 48 19.6 +4.7
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.5
GYA AMB AMB
comp=Z,520nm,8.7s
GYA LR LR
comp=N,970nm,19.7s,MS5.0
GYA LR LR
comp=E,670nm,18.7s,MS5.0
GYA LR LR
comp=Z,870nm,21.0s,MS4.9
WMOK Wichita Mounta 59.10 72 eP **P** **12 36 15.8 -0.5**
WMOK LR LR
comp=Z,2μm,19.0s,MS5.2
TGY Tagaytay City 59.43 253 P **P** **12 36 18.9 +0.3**
comp=Z,159nm,0.3s,baz=229,slow=17,SNR=5.2
CHKZ Chkalovo 59.55 319 *i* P **P** **12 36 19.6 +0.2**
CHKZ pmax pmax
comp=Z,128nm,1.3s,mb5.8
CHKZ Chkalovo 59.55 319 eP **P** **12 36 19.5 +0.1**
FUNA Funafuti 59.61 180 PFAKE 12 36 30.0 +10
FUNA LR LR
comp=Z,5μm,20.0s,MS5.7
SOKR Solikamsk 60.07 330 *c* iP **P** **12 36 24.5 +1.5**
SOKR S sS 12 44 53.3 +1.1
SOKR pmax pmax
comp=Z,50nm,1.1s,mb5.5
SOKR MLR MLR
comp=Z,2μm,18.0s,MS5.4
BVAR Borovoye Array 60.12 319 LR LR 13 04 02.2
comp=Z,7μm,21.5s,MS5.7,baz=319,slow=38
BRVK Borovoye 60.14 319⇑ iP **P** **12 36 24.2 +0.8**
SNR=57
BRVK Borovoye 60.14 319 eP **P** **12 36 23.9 +0.5**
BRVK LR LR
comp=Z,4μm,21.0s,MS5.6
SCHQ Schefferville 60.81 37 P **P** **12 36 27.2 -0.8**
comp=Z,31nm,0.9s,mb5.4,baz=322,slow=7.6,SNR=19
SCHQ LR LR 13 05 01.8
comp=Z,1μm,18.7s,MS5.2,baz=321,slow=38
SVE Sverdlovsk 60.96 326⇑ eP **P** **12 36 29.2 +0.1**
SVE e pP 12 36 39.0 -1.6
SVE e 12 40 18.0
SVE e 12 44 46.0
SVE e 12 45 04.0
SVE eS ScS 12 46 18.0 +1.0
SVE pmax pmax
comp=Z,275nm,2.8s,mb5.9
SVE MLR MLR
comp=N,2μm,16.0s,MS5.5
SVE MLR MLR
comp=E,1μm,16.0s,MS5.5
SVE MLR MLR
comp=Z,3μm,16.0s,MS5.5
CCM Cathedral Cave 61.19 64 eP **P** **12 36 28.3 -2.3**
comp=Z,11nm,0.6s,mb5.2
CCM LR LR
comp=Z,1μm,20.0s,MS5.0
JCT Junction City 61.45 76 eP **P** **12 36 32.0 -0.4**
comp=Z,44nm,1.1s,mb5.5
JCT LR LR
comp=Z,3μm,21.0s,MS5.4
FVM French Village 61.70 64 eP **P** **12 36 32.9 -1.1**
FVM pmax pmax
comp=Z,13nm,0.5s,mb5.3
FVM French Village 61.70 64 eP **P** **12 36 32.9 -1.2**
comp=Z,13nm,0.5s,mb5.3
ARU Arti 61.98 327⇑ iP **P** **12 36 36.4 +0.4**
ARU e 12 37 14.6
ARU e 12 38 50.6
ARU eS **S** **12 45 00.0 +2.5**
ARU eSS SS 12 48 57.6 -2.7
ARU eSSS 12 51 46.2
ARU pmax pmax
comp=Z,99nm,1.3s,mb5.8
ARU MLR MLR
comp=Z,4μm,20.5s,MS5.5
ARU MLR MLR
comp=N,2μm,19.0s,MS5.5
ARU MLR MLR
comp=E,3μm,19.0s,MS5.5
ARU Arti 61.98 327 eP **P** **12 36 36.1 +0.1**
ARU LR LR
comp=Z,3μm,20.0s,MS5.5
MOR8 Moi Rana 62.26 353 eP **P** **12 36 35.5 -2.3**
MIAR Mount Ida 62.31 69 eP **P** **12 36 37.4 -0.8**
MIAR LR LR
comp=Z,1μm,19.0s,MS5.0
AAM Ann Arbor 62.33 56 PFAKE 12 36 50.0 +12
AAM LR LR
comp=Z,2μm,21.0s,MS5.2
DAV Davao City (W) 62.33 244 PFAKE 12 36 50.0 +12
DAV LR LR
comp=Z,2μm,21.0s,MS5.2
KMI Kunming 62.50 276 P **P** **12 36 40.1 +0.7**
KMI AP pP 12 36 53.0 +2.0
KMI XP sP 12 36 57.3 +1.8
KMI PCP PcP 12 37 19.9 +1.5
KMI PP PP 12 38 58.0 +0.9
KMI PPP 12 40 29.3
KMI PCS PcS 12 41 21.8 +0.1
KMI AMB AMB
comp=Z,16nm,1.4s,mb5.0
KMI AMB AMB
comp=Z,487nm,3.9s
KMI LR LR
comp=N,1μm,18.3s,MS5.1
KMI LR LR
comp=E,814nm,19.8s,MS5.1
KMI LR LR
comp=Z,1μm,22.0s,MS5.0
QIZ Qiongzhong 62.52 266 P **P** **12 36 40.8 +1.2**
QIZ XP sP 12 36 57.3 +1.7
QIZ PP PP 12 39 00.9 +3.6
QIZ S **S** **12 45 03.6 -0.7**
QIZ XS sS 12 45 22.9 -0.5
QIZ PS 12 45 24.8
QIZ SCS ScS 12 46 23.6 -5.2
QIZ SS SS 12 49 08.3 -0.4
QIZ AMB AMB
comp=Z,24nm,1.8s,mb5.0
QIZ AMB AMB
comp=Z,549nm,10.5s
QIZ LR LR
comp=N,590nm,19.4s
QIZ LR LR
comp=Z,693nm,19.4s,MS4.8
QIZ Qiongzhong 62.52 266 PFAKE 12 36 50.0 +10
QIZ LR LR
comp=Z,701nm,21.0s,MS4.8
SIUC Southern Illin 62.56 63 eP **P** **12 36 39.3 -0.6**
HNR Honiara 62.77 201 LR LR 13 01 10.0
comp=Z,2μm,18.5s,MS5.2,baz=0.2,slow=33
HNR Honiara 62.77 201 PFAKE 12 36 50.0 +8.8
HNR LR LR
comp=Z,1μm,20.0s,MS5.2
UALR University of 62.86 68 eP **P** **12 36 41.8 0.0**
comp=Z,30nm,0.9s,mb5.4
BLO Bloomington 63.02 60 eP **P** **12 36 42.5 -0.4**
BORG Borgarnes 63.17 10 PFAKE 12 37 00.0 +16
BORG LR LR
comp=Z,1μm,22.0s,MS5.1
USIN University of 63.25 62 eP **P** **12 36 44.1 -0.4**
JOF Joensuu 63.32 344 ep **P** **12 36 42.3 -2.6**
comp=Z,14nm,0.5s,mb5.4
JOF Joensuu 63.32 344 eP **P** **12 36 42.3 -2.6**
JOF pmax pmax
comp=Z,14nm,0.5s,mb5.3
KLMR Klimovskoe 63.59 339 eP **P** **12 36 45.9 -0.8**
KLMR pmax pmax
comp=Z,20nm,1.0s,mb5.1
KLMR MLR MLR
comp=Z,4μm,23.0s,MS5.5
NATX Nacogdoches 63.64 72 eP **P** **12 36 47.6 +0.6**
NATX LR LR
comp=Z,2μm,20.0s,MS5.2
WCI Wyandotte Cave 63.82 61 eP **P** **12 36 47.6 -0.6**
comp=Z,34nm,0.9s,mb5.4
WCI LR LR
comp=Z,2μm,19.0s,MS5.2
NSS Namsos 64.06 354 AMS AMS 13 05 07.3
comp=Z,983nm,17.9s,MS5.0
ACSO Alum Creek Sta 64.17 57 eP **P** **12 36 49.7 -0.8**
ACSO LR LR
comp=Z,1μm,21.0s,MS5.2
HKT Hockley 64.23 74 eP **P** **12 36 51.7 +0.8**
comp=Z,79nm,1.3s,mb5.6
HKT LR LR
comp=Z,2μm,19.0s,MS5.2
ERPA Erie 64.35 54 PFAKE 12 37 00.0 +8.3
ERPA LR LR
comp=Z,2μm,21.0s,MS5.4
WVT Waverly 64.47 64 P **P** **12 36 51.7 -0.8**
WVT pmax pmax
comp=Z,14nm,0.8s,mb5.0
WVT Waverly 64.47 64 eP **P** **12 36 51.2 -1.3**
comp=Z,14nm,0.8s,mb5.1
WVT LR LR
comp=Z,2μm,20.0s,MS5.2
OXF Oxford 64.74 66 eP **P** **12 36 53.5 -0.7**
OXF LR LR
comp=Z,1μm,20.0s,MS5.1
KAF Kangasniemi 64.88 346 ep **P** **12 36 53.1 -2.0**
comp=Z,9.8nm,0.5s,mb5.1
KAF Kangasniemi 64.88 346 eP **P** **12 36 53.1 -2.0**
KAF pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
PLAL Pickwick Lake 65.16 65 eP **P** **12 36 55.5 -1.5**
PLAL LR LR
comp=Z,854nm,21.0s,MS4.9
TKM2 Tokmak 2 65.18 308 P **P** **12 36 58.1 +1.0**
SNR=28
TKM2 Tokmak 2 65.18 308 *i* P **P** **12 36 58.1 +1.0**
TKM2 pmax pmax
comp=Z,48nm,0.9s,mb5.5
ZAIG Zacatecas 65.30 84 eP **P** **12 36 58.3 +0.5**
ULHL Ulahol 65.36 307 P **P** **12 36 60.0 +1.8**
SNR=7.4
AFI Afiamalu 65.43 170 LR LR 12 59 12.7
comp=Z,1μm,20.8s,MS5.0,baz=98,slow=30
AFI Afiamalu 65.43 170 PFAKE 12 37 10.0 +11
AFI LR LR
comp=Z,2μm,19.0s,MS5.3
USP Ospenovka 65.46 309 P **P** **12 36 60.0 +1.1**
SNR=85
CHMS Chumysh 65.54 309 P **P** **12 37 00.3 +1.0**
SNR=17
FIA1 FINESS Array S 65.55 346 eP **P** **12 36 58.0 -1.5**
FINES FINESS Array B 65.55 346 P **P** **12 36 58.1 -1.3**
comp=Z,9.3nm,0.7s,mb4.9,baz=24,slow=7.9,SNR=30
FINES LR LR 13 06 33.1
comp=Z,1μm,21.3s,MS5.0,baz=7.6,slow=37
FINES FINESS Array B 65.55 346 *i* P **P** **12 36 58.0 -1.5**
FINES pmax pmax
comp=Z,9.0nm,0.7s
KBK Karagaybulak 65.69 308 P **P** **12 37 01.9 +1.5**
SNR=20
FRU Bishkek 65.72 309 *i* P **P** **12 37 02.0 +1.4**
FRU e pP 12 37 12.0 -0.2
FRU pmax pmax
comp=Z,200nm,2.0s,mb5.8
FRU MLR MLR
comp=Z,3μm,18.0s,MS5.5
NCB Newcomb 65.82 49 PFAKE 12 37 10.0 +8.8
NCB LR LR
comp=Z,2μm,20.0s,MS5.3
AAK Ala-Archa 65.93 309 P **P** **12 37 02.9 +1.0**
SNR=20
AAK Ala-Archa 65.93 309 P **P** **12 37 02.4 +0.5**
SNR=26
AAK Ala-Archa 65.93 309 *c* iP **P** **12 37 01.4 -0.5**
AAK pmax pmax
comp=Z,54nm,1.0s,mb5.5
AAK Ala-Archa 65.93 309 eP **P** **12 37 02.0 +0.1**
AAK LR LR
comp=Z,3μm,20.0s,MS5.5
KZA Kyzart 65.98 308 P **P** **12 37 03.6 +1.4**
SNR=23
SWET Sewanee 66.20 63 eP **P** **12 37 02.6 -1.0**
MCWV Mont Chateau 66.23 56 PFAKE 12 37 20.0 +16
MCWV LR LR
comp=Z,2μm,19.0s,MS5.3
EKS2 Erkin-Say 66.26 309 P **P** **12 37 05.3 +1.3**
SNR=50
LSA Lhasa 66.28 288 P **P** **12 37 06.4 +2.2**
BINY Binghamton 66.29 52 eP **P** **12 37 03.6 -0.7**
comp=Z,31nm,1.0s,mb5.3
BINY LR LR
comp=Z,3μm,21.0s,MS5.5
PUL Pulkovo 66.44 343 *c* eP **P** **12 37 00.4 -4.8**
PUL e 12 39 28.9
PUL MLR MLR
comp=Z,96nm,14.0s,MS4.2
PECR Pechory 66.50 335 eP **P** **12 37 05.3 -0.2**
PECR pmax pmax
comp=Z,400nm,1.2s,mb6.3
PECR pmax pmax
comp=Z,500nm,9.0s
PECR MLR MLR
comp=Z,2μm,17.0s,MS5.3
SSPA Standing Stone 66.51 54 eP **P** **12 37 04.0 -1.6**
SSPA LR LR
comp=Z,2μm,20.0s,MS5.4
ACCN Adirondack Com 66.53 49 eP **P** **12 37 04.3 -1.4**
PMG Port Moresby 66.53 215 LR LR 13 04 02.5
comp=Z,1μm,19.7s,MS5.2,baz=40,slow=34
PMG Port Moresby 66.53 215 PFAKE 12 37 20.0 +14
PMG LR LR
comp=Z,1μm,19.0s,MS5.2
TZTN Tazewell 66.55 61 eP **P** **12 37 05.9 +0.1**
LBNH Lisbon 66.69 48 PFAKE 12 37 20.0 +13
LBNH LR LR
comp=Z,4μm,20.0s,MS5.6
AML Almayashu 66.70 309 P **P** **12 37 08.6 +1.8**
SNR=14
CPCT Cooper Cave 66.81 62 eP **P** **12 37 06.9 -0.6**
LRAL Lakeview Retre 67.19 65 eP **P** **12 37 09.0 -0.9**
comp=Z,21nm,0.9s,mb5.2
LRAL LR LR
comp=Z,1μm,20.0s,MS5.0
FWV Forest Hill 67.26 58 eP **P** **12 37 10.3 0.0**
MYNC Murphy 67.31 62 eP **P** **12 37 10.0 -0.7**
comp=Z,22nm,0.8s,mb5.2
MYNC LR LR
comp=Z,2μm,19.0s,MS5.4
KK31 Karatay Array 67.49 311 *i* P **P** **12 37 12.3 +0.4**
KK31 pmax pmax
comp=Z,58nm,0.6s,mb5.8
NB2 NORSAR Subarra 67.57 354 P **P** **12 37 11.5 -0.9**
comp=Z,136nm,1.4s,mb5.8,baz=9.2,slow=6.5
NOA NORSAR Array B 67.57 354 P **P** **12 37 11.6 -0.8**
comp=Z,45nm,0.9s,mb5.5,baz=8.0,slow=6.3,SNR=73
NOA LR LR 13 08 09.8
comp=Z,725nm,18.8s,MS4.9,baz=0.0,slow=37
NOA NORSAR Array B 67.57 354 P **P** **12 37 11.6 -0.8**
NOA LR LR 13 08 09.8
BLA Blacksburg 67.74 58 P **P** **12 37 13.3 -0.1**
BLA pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
BLA Blacksburg 67.74 58 eP **P** **12 37 12.8 -0.7**
comp=Z,1.5nm,0.9s
BLA LR LR
comp=Z,178nm,21.0s,MS4.3
NAO01 NORSAR Array S 67.79 354 eP **P** **12 37 13.3 -0.4**
NAO01 LR LR
comp=Z,1μm,19.0s,MS5.2
HRV Harvard--Oak R 68.20 49 PFAKE 12 37 30.0 +14
HRV LR LR
comp=Z,2μm,19.0s,MS5.3
CHRT Chiangrai 68.20 275⇑ P **P** **12 37 17.0 +0.7**
comp=Z,184nm,0.6s,mb6.3
WES Weston 68.40 49 PFAKE 12 37 30.0 +12
WES LR LR
comp=Z,2μm,19.0s,MS5.2
BER Bergen 68.53 357 eP **P** **12 37 15.3 -3.1**
BER eS S 12 46 23.0 +5.1
BER AMS AMS 13 04 35.2
comp=Z,346nm,24.1s,MS4.5
CBN Corbin 68.59 55 PFAKE 12 37 30.0 +11
CBN LR LR
comp=Z,3μm,19.0s,MS5.6
MOS Moscow 68.65 338 eP **P** **12 37 17.4 -1.7**
MOS *i* 12 37 48.0
MOS pmax pmax
comp=Z,100nm,0.8s,mb5.8
MOS pmax pmax
comp=Z,78nm,0.7s,mb5.8
MOS MLR MLR
comp=N,4μm,18.0s,MS5.7
MOS MLR MLR
comp=E,1μm,18.0s,MS5.7
MOS MLR MLR
comp=Z,4μm,18.0s,MS5.7
LRW Lerwick 68.89 0 eP **P** **12 37 20.1 -0.5**
LRW Lerwick 68.89 0 eP **P** **12 37 20.1 -0.5**
KONO Kongsberg 69.06 354 eP **P** **12 37 20.8 -0.9**
KONO eS S 12 46 28.2 +4.2
KONO Kongsberg 69.06 354 eP **P** **12 37 21.6 -0.1**
comp=Z,52nm,0.9s,mb5.5
KONO LR LR
comp=Z,1μm,19.0s,MS5.1
TAOE Nuku Hiva Isla 69.42 137 eS S 12 46 29.0 +0.7
comp=Z,7μm,27.4s
TAOE eLQ 12 55 31.7
comp=Z,6μm,35.0s
TAOE eLR LR 12 58 21.2
comp=Z,12μm,23.3s,baz=344
OBN Obninsk 69.47 338⇑ iP **P** **12 37 23.4 -0.8**
OBN eS S 12 46 31.5 +2.7
OBN eSS SS 12 50 54.0 -2.6
OBN pmax pmax
comp=Z,49nm,1.0s,mb5.4
OBN MLR MLR
comp=Z,5μm,18.0s,MS5.8
OBN Obninsk 69.47 338 eP **P** **12 37 23.6 -0.6**
comp=Z,26nm,0.5s,mb5.4
OBN LR LR
comp=Z,5μm,19.0s,MS5.8
CHG Chiang Mai 69.51 275⇓ P **P** **12 37 25.2 +0.7**
comp=Z,35nm,0.9s,mb5.3
CHTO Chiang Mai 69.51 275 P **P** **12 37 24.6 +0.2**
SNR=18
CHTO Chiang Mai 69.51 275 P **P** **12 37 24.5 0.0**
CHTO pmax pmax
comp=Z,17nm,0.8s,mb5.0
CHTO Chiang Mai 69.51 275 eP **P** **12 37 24.4 -0.1**
comp=Z,17nm,0.8s,mb5.0
CHTO LR LR
comp=Z,801nm,20.0s,MS5.0
CM31 Chiang Mai Arr 69.78 274 PFAKE 12 37 40.0 +14
CM31 LR LR
comp=Z,606nm,19.0s,MS4.9
OBR Brabster 70.40 1 eP **P** **12 37 29.8 -0.2**
OBR Brabster 70.40 1 eP **P** **12 37 29.8 -0.2**
ORE Reay 70.46 2 eP **P** **12 37 29.9 -0.4**
ORE Reay 70.46 2 eP **P** **12 37 29.9 -0.4**
MLA1 Latheron 70.71 1 eP **P** **12 37 31.8 0.0**
MLA1 Latheron 70.71 1 eP **P** **12 37 31.8 0.0**
GUN Gumba 70.72 291 eP **P** **12 37 33.2 +1.3**
comp=Z,444nm,0.9s
JIRN Jiri 70.72 290 eP **P** **12 37 33.3 +1.4**
comp=Z,317nm,0.8s,mb6.3
MVH1 Achvaich 71.07 2 eP **P** **12 37 34.0 0.0**
MVH1 Achvaich 71.07 2 eP **P** **12 37 34.0 0.0**
KKN Kakani 71.16 291 eP **P** **12 37 35.6 +1.1**
comp=Z,189nm,0.7s,mb6.1
KKN Kakani 71.16 291 eP **P** **12 37 35.6 +1.1**
KKN pmax pmax
comp=Z,189nm,0.7s,mb6.1
PKI Pulchoki 71.25 291 eP **P** **12 37 36.0 +0.9**
comp=Z,102nm,0.6s,mb5.9
PKI Pulchoki 71.25 291 eP **P** **12 37 36.0 +0.9**
PKI pmax pmax
comp=Z,102nm,0.6s,mb5.9
GKN Gorkha 71.38 292 eP **P** **12 37 36.7 +0.9**
comp=Z,170nm,0.7s,mb6.1
DMN Daman 71.40 291 eP **P** **12 37 37.1 +1.1**
comp=Z,179nm,0.9s,mb6.0
MCD Coleburn Disti 71.43 1⇑ eP **P** **12 37 35.7 -0.5**
MCD Coleburn Disti 71.43 1⇑ eP **P** **12 37 35.7 -0.5**
KSK Scoval 71.46 3 eP **P** **12 37 36.0 -0.3**
KSK Scoval 71.46 3 eP **P** **12 37 36.0 -0.3**
KAC Achnashellach 71.47 3 eP **P** **12 37 36.6 +0.2**
KAC Achnashellach 71.47 3 eP **P** **12 37 36.6 +0.2**
KPL Plockton 71.62 3 eP **P** **12 37 37.5 +0.2**
KPL Plockton 71.62 3 eP **P** **12 37 37.5 +0.2**
KSB Sheil Bridge 71.76 3⇑ eP **P** **12 37 38.4 +0.2**
KSB Sheil Bridge 71.76 3⇑ eP **P** **12 37 38.4 +0.2**
MNK Minsk 71.87 343 eP **P** **12 37 37.0 -1.8**
KAR1 Arisaig 72.04 3⇑ eP **P** **12 37 39.5 -0.3**

KAR1 Arisaig 72.04 3⇑ eP P 12 37 39.5 -0.3
KOLN Koldanda 72.15 292 eP P 12 37 41.4 +0.9
comp=Z,117nm,0.9s,mb5.8
MUD Monsted U'grnd 72.27 354 i P P 12 37 42.2 +1.0
comp=Z,50nm,1.1s,mb5.4
MUD i 12 52 26.7
MUD
comp=Z,990nm,18.0s
MUD Monsted U'grnd 72.27 354 i P P 12 37 42.2 +1.0
MUD pmax pmax
comp=Z,50nm,1.1s,mb5.4
MUD MLR MLR
comp=Z,1µm,18.0s,MS5.1
MUD Monsted U'grnd 72.27 354 i P P 12 37 42.2 +1.0
comp=Z,50nm,1.1s,mb5.4
MUD i 12 52 26.7
COP Copenhagen 72.79 352 i P P 12 37 45.4 +1.1
comp=Z,28nm,0.9s,mb5.2
COP e 12 47 17.4
COP i 12 52 12.3
COP
comp=Z,510nm,19.0s
COP Copenhagen 72.79 352 i P P 12 37 45.4 +1.1
COP pmax pmax
comp=Z,28nm,0.9s,mb5.2
COP MLR MLR
comp=Z,510nm,19.0s,MS4.8
EAB Aberfoyle 72.81 2⇑ eP P 12 37 43.8 -0.7
EAB Aberfoyle 72.81 2⇑ eP P 12 37 43.8 -0.7
PCOU Corrie 73.02 2 eP P 12 37 45.9 +0.2
PCOU Corrie 73.02 2 eP P 12 37 45.9 +0.2
SDNR Sundarnagar 73.07 299 eP P 12 37 47.0 +1.0
ESY Stoneypath 73.11 1 eP P 12 37 46.0 -0.3
ESY Stoneypath 73.11 1 eP P 12 37 46.0 -0.3
BSD Bornholm Skovb 73.12 351 i P P 12 37 45.6 -0.7
comp=Z,89nm,1.3s,mb5.5
BSD i 12 47 41.1
BSD i 12 56 12.9
BSD
comp=Z,1µm,19.0s
BSD Bornholm Skovb 73.12 351 i P P 12 37 45.6 -0.7
BSD i 12 47 41.1
BSD pmax pmax
comp=Z,89nm,1.3s,mb5.5
BSD MLR MLR
comp=Z,1µm,19.0s,MS5.2
BSD Bornholm Skovb 73.12 351 i P P 12 37 45.6 -0.7
comp=Z,89nm,1.3s,mb5.5
BSD i 12 47 41.1
BSD i 12 56 12.9
SUW Suwalki 73.13 345 eP P 12 37 45.6 -0.7
SUW L 13 08 55.1
comp=Z,1.9nm,24.7s
EAU Auchinoon 73.17 2⇑ eP P 12 37 46.3 -0.2
EAU Auchinoon 73.17 2⇑ eP P 12 37 46.3 -0.2
PGBU Glenifferbraes 73.19 2 eP P 12 37 46.3 -0.4
PGBU Glenifferbraes 73.19 2 eP P 12 37 46.3 -0.4
EBL Broad Law 73.25 1⇑ eP P 12 37 47.1 0.0
EBL Broad Law 73.25 1⇑ eP P 12 37 47.1 0.0
ESK Eskdalemuir 73.71 1 eP P 12 37 49.5 -0.2
ESK Eskdalemuir 73.71 1 eP P 12 37 49.5 -0.2
ESK Eskdalemuir 73.71 1 eP P 12 37 50.0 +0.3
comp=Z,43nm,1.0s,mb5.3
ESK LR LR
comp=Z,699nm,20.0s,MS4.9
BWH Wardlaw 73.84 2 eP P 12 37 49.2 -1.2
BWH Wardlaw 73.84 2 eP P 12 37 49.2 -1.2
PPT Papeete 73.84 149 eS S 12 47 19.8 +0.6
comp=Z,2µm,27.5s
PPT eSS SS 12 51 59.6 -4.0
comp=Z,714nm,24.5s
PPT eLQ 12 56 40.7
comp=Z,2µm,31.0s
PPT eLR LR 13 00 27.9
comp=Z,4µm,25.0s,baz=343
PPT Papeete 73.84 149 LR LR 13 04 32.1
comp=Z,1µm,19.1s,MS5.3,baz=328,slow=31
GCL Cushendall 73.87 3⇑ eP P 12 37 50.0 -0.7
GCL Cushendall 73.87 3⇑ eP P 12 37 50.0 -0.7
BHH Howats Hill 73.93 1 eP P 12 37 50.6 -0.4
BHH Howats Hill 73.93 1 eP P 12 37 50.6 -0.4
DZM Mont Dzumac 73.94 192 P P 12 37 47.5 -3.5
comp=Z,5.2nm,1.0s,mb4.4,baz=156,slow=20,SNR=1.9
DWPF Disney 74.04 65 PFAKE 12 38 00.0 +8.3
DWPF LR LR
comp=Z,1µm,21.0s,MS5.1
GAL1 Galloway 74.13 2 eP P 12 37 51.5 -0.7
GAL1 Galloway 74.13 2 eP P 12 37 51.5 -0.7
BBO1 Bothel 74.29 1⇑ eP P 12 37 53.2 +0.1
BBO1 Bothel 74.29 1⇑ eP P 12 37 53.2 +0.1
BSEG Bad Segeberg 74.70 353 eP P 12 37 55.7 +0.2
comp=Z,53nm,1.1s,mb5.4
BSEG Bad Segeberg 74.70 353 eP P 12 37 55.7 +0.2
BSEG pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
NDI New Delhi 75.10 297 eP P 12 37 57.0 -0.8
AKASG Malin Array Be 75.20 341 P P 12 37 57.4 -1.0
comp=Z,9.9nm,0.4s,mb5.1,baz=22,slow=5.9,SNR=64
AKASG LR LR 13 14 55.7
comp=Z,2µm,20.1s,MS5.5,baz=10.0,slow=39
AKASG Malin Array Be 75.20 341 i P P 12 37 57.4 -1.0
AKASG pmax pmax
comp=Z,10.0nm,0.4s
AKASG Malin Array Be 75.20 341 P P 12 37 57.4 -1.0
AKASG LR LR 13 14 55.7
AKBB Malin Array Si 75.20 341 P P 12 37 57.5 -0.9
AKBB Malin Array Si 75.20 341 eP P 12 37 57.4 -1.0
LHO Holmfirth 75.50 1 eP P 12 37 59.9 -0.2
LHO Holmfirth 75.50 1 eP P 12 37 59.9 -0.2
DCN Croghan 75.56 4 eP P 12 37 57.4 -3.1
KAKA Kakadu 75.58 227 eP P 12 37 58.4 -2.2
comp=Z,27nm,0.7s,mb5.3
DLF Lyons Farm 75.64 4 eP P 12 37 57.9 -3.0
DSB Dublin 75.69 3 eP P 12 38 01.3 +0.1
comp=Z,50nm,1.0s,mb5.4
KSM Kuching 75.78 254 eP P 12 38 01.9 +0.1
SBD1 Bryn Du 76.12 2⇑ eP P 12 38 03.8 +0.1
SBD1 Bryn Du 76.12 2⇑ eP P 12 38 03.8 +0.1
NRDL Niedersach Rie 76.15 353 eP P 12 38 04.5 +0.7
comp=Z,33nm,1.3s,mb5.1
IBBN Ibbenburen 76.49 355 eP P 12 38 06.0 +0.2
comp=Z,68nm,1.1s,mb5.5
HLM1 Long Mynd 76.51 1 eP P 12 38 05.8 0.0
HLM1 AMb AMB 12 38 09.0
comp=Z,39nm,2.4s,mb4.9
HLM1 Long Mynd 76.51 1 eP P 12 38 05.8 0.0
HLM1 AMb AMB 12 38 09.0
comp=Z,39nm,2.4s,mb4.9
CTA Charters Tower 76.77 212 eP P 12 38 05.2 -2.1
comp=Z,9.6nm,0.8s,mb4.8
CTA Charters Tower 76.77 212 P P 12 38 05.5 -1.8
comp=Z,7.6nm,0.8s,mb4.7,baz=0.2,slow=7.3,SNR=5.4
CTA LR LR 13 06 38.6
comp=Z,497nm,20.2s,MS4.8,baz=19,slow=32
CTAO Charters Tower 76.77 212 eP P 12 38 05.9 -1.4
CTAO LR LR
comp=Z,789nm,20.0s,MS5.0
GOF Gofitskoye 76.80 330 eP P 12 38 05.0 -2.5
GOF pmax pmax
comp=Z,200nm,1.0s,mb6.0
WTSB Winterswijk 76.88 355⇑ eP P 12 38 07.3 -0.7
comp=Z,61nm,1.7s,mb5.3
HTR Trewern Hill 76.95 2⇑ eP P 12 38 07.7 -0.6
HTR AMb AMB 12 38 10.5
comp=Z,99nm,1.4s,mb5.6
HTR Trewern Hill 76.95 2⇑ eP P 12 38 07.7 -0.6
HTR AMb AMB 12 38 10.5
comp=Z,99nm,1.4s,mb5.6
HAE Alders End 77.00 1⇑ eP P 12 38 08.0 -0.6
HAE AMb AMB 12 38 11.0
comp=Z,98nm,1.3s,mb5.6
HAE Alders End 77.00 1⇑ eP P 12 38 08.0 -0.6
HAE AMb AMB 12 38 11.0
comp=Z,98nm,1.3s,mb5.6
MCH1 Michaelchurch 77.03 1⇑ eP P 12 38 08.2 -0.6
MCH1 Michaelchurch 77.03 1⇑ eP P 12 38 08.2 -0.6
LVV L'vov 77.04 344 eP P 12 38 07.4 -1.4
LVV e 12 38 13.5
CLL Collm 77.08 351 i⇑ iP P 12 38 08.6 -0.5
comp=Z,18nm,1.4s,mb4.8
CLL eSP sP 12 38 26.6 +1.3
CLL ePP PP 12 40 56.6 -6.2
CLL ePPP 12 42 43.9
CLL eS S 12 47 58.5 +3.5
CLL eScS ScS 12 48 20.2 -3.0
CLL ePS 12 48 45.6
CLL e(SS) 12 53 27.1
CLL eSSS 12 56 29.8
CLL eSSSS 12 58 37.4
CLL eLR LR 13 03 34.8
CLL eL 13 15 05.0
comp=Z,1µm,20.0s
CLL Collm 77.08 351 P P 12 38 09.0 -0.1
CLL e 12 38 13.0
CLL e 12 38 27.0
CLL ePP PP 12 41 00.0 -2.8
CLL ePPP 12 43 00.0
CLL eS S 12 47 59.0 +4.0
CLL eSCS ScS 12 48 20.0 -3.2
CLL ePS 12 48 45.0
CLL eSS SS 12 53 18.0 +25
CLL eSSS 12 56 18.0
CLL Collm 77.08 351 eP P 12 38 09.0 -0.1
CLL Collm 77.08 351 eP P 12 38 09.0 -0.1
CLL ePIp 12 38 13.0
comp=Z,400nm,13.3s
CLL epPcP 12 38 27.0
CLL ex x 12 40 00.0
CLL ePP PP 12 41 00.0 -2.8
CLL ePPP 12 43 00.0
CLL eS S 12 47 59.0 +4.0
CLL eScS ScS 12 48 20.0 -3.2
CLL ePS 12 48 45.0
CLL eSS SS 12 53 18.0 +25
CLL eSSS 12 56 18.0
CLL Collm 77.08 351 eP P 12 38 09.0 -0.1
CLL esP sP 12 38 27.0 +1.7
CLL eS S 12 47 59.0 +4.0
CLL eScS ScS 12 48 20.0 -3.2
CLL LR LR
comp=Z,1µm,19.7s,MS5.2
GTTG Gyttingen 77.10 353 eP P 12 38 09.5 +0.3
comp=Z,24nm,1.1s,mb5.0
MAK Makhachkala 77.16 326 i P P 12 38 07.6 -1.9
MAK i 12 41 03.8
MAK i PPP 12 42 51.0
MAK i S S 12 47 55.6 -0.3
MAK i 12 48 22.0
MAK pmax pmax
comp=Z,194nm,1.0s,mb6.0
MAK pmax pmax
comp=Z,1µm,2.7s
MAK smax
comp=N,980nm,2.8s
MAK smax
comp=E,561nm,1.7s
MAK MLR MLR
comp=Z,5µm,18.0s,MS5.9
KSP Ksiaz 77.18 349 eP P 12 38 09.5 -0.1
KSP eS 12 48 10.0
KSP esS 12 48 39.7
KSP L 13 09 49.5
comp=Z,1.6nm,26.9s
KSP Ksiaz 77.18 349 eP P 12 38 08.6 -1.0
KSP eS 12 48 18.4
KSP Ksiaz 77.18 349 eP P 12 38 08.6 -1.0
KSP eS S 12 48 18.4 +22
KSP eSS SS 12 53 33.8 +40
KSP LR LR
comp=Z,2µm,26.9s,MS5.3
OJC Ojcow 77.33 347⇑ iP P 12 38 10.5 0.0
OJC eS S 12 47 56.3 -1.4
OJC MLR MLR
comp=Z,10µm,17.8s,MS6.2
BUG Bochum--Univer 77.38 355 eP P 12 38 11.3 +0.5
comp=Z,22nm,1.0s,mb5.0
HGH Gray Hill 77.40 1⇑ eP P 12 38 10.2 -0.7
HGH AMb AMB 12 38 13.1
comp=Z,121nm,1.3s,mb5.7
HGH Gray Hill 77.40 1⇑ eP P 12 38 10.2 -0.7
HGH AMb AMB 12 38 13.1
comp=Z,121nm,1.3s,mb5.7
BRG Berggiesshubel 77.41 351 eP P 12 38 10.3 -0.6
comp=Z,10.0nm,1.0s,mb4.7
BRG Berggiesshubel 77.41 351 eP P 12 38 10.6 -0.3
comp=Z,5.8nm,1.0s,mb4.5
BRG S 12 48 12.0
BRG SS SS 12 53 12.0 +14
BRG
comp=N,888nm,19.6s
BRG
comp=E,453nm,18.8s
BRG
comp=Z,865nm,20.8s
BRG Berggiesshubel 77.41 351 eP P 12 38 10.6 -0.3
BRG S sS 12 48 12.0 -6.3
BRG pmax pmax
comp=Z,2.0nm,1.0s
BRG MLR MLR
comp=N,6µm,19.6s,MS5.9
BRG MLR MLR
comp=E,888nm,18.8s,MS5.9
BRG MLR MLR
comp=Z,453nm,20.8s,MS4.8
FBE Freiberg 77.42 351 eP P 12 38 11.4 +0.4
comp=Z,15nm,1.0s,mb4.9
KWP Kalwaria 77.44 345 eP P 12 38 11.6 +0.5
KWP L 13 11 59.0
comp=Z,3.1nm,24.0s
UPC Upice 77.54 349 eP P 12 38 12.1 +0.4
DPC Dobruska-Polom 77.66 349 eP P 12 38 12.4 +0.1
DPC eS 12 48 11.4
DPC eSS SS 12 53 18.1 +17
DPC AMS AMS 13 20 10.0
comp=Z,1µm,18.4s
DPC Dobruska-Polom 77.66 349 eP P 12 38 12.4 +0.1
DPC eS S 12 48 11.4 +10
DPC MLR MLR
comp=Z,1µm,18.4s,MS5.3
PVCC Panska Ves 77.69 350 eP P 12 38 12.7 +0.2
PVCC AMS AMS 13 15 40.0
comp=Z,2µm,19.9s
UBBA Unterbreizbach 77.82 353 eP P 12 38 13.4 +0.2
comp=Z,23nm,1.6s,mb4.9
MOX Moxa 77.86 352 e(P) P 12 38 12.7 -0.7
MOX
comp=Z,700nm,23.0s
STHS Stebnicka Huta 77.89 345 eP P 12 38 14.3 +0.7
STHS pmax pmax
comp=Z,11nm,1.0s,mb4.7
STHS Stebnicka Huta 77.89 345 eP P 12 38 14.3 +0.7
comp=Z,11nm,1.0s,mb4.7
KIV Kislovodsk 77.89 329c iP P 12 38 13.5 -0.1
KIV pmax pmax
comp=Z,36nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,900nm,21.0s,MS5.1
KIV Kislovodsk 77.89 329 eP P 12 38 15.1 +1.5
comp=Z,32nm,0.9s,mb5.2
KIV LR LR
comp=Z,2µm,19.0s,MS5.4
OKC Ostrava-Krasne 77.93 348 eP P 12 38 14.2 +0.4
OKC AMS AMS 13 18 50.0
comp=Z,2µm,15.9s
WERD Werda 77.99 351 eP P 12 38 13.6 -0.6
comp=Z,19nm,1.4s,mb4.8
TANN Tannenbergstha 78.01 351 eP P 12 38 14.1 -0.2
comp=Z,10.0nm,1.2s,mb4.6
MORC Moravsky Berou 78.07 348⇑ iP P 12 38 13.8 -0.8
MORC Moravsky Berou 78.07 348 P P 12 38 14.8 +0.2
MORC pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MORC Moravsky Berou 78.07 348 eP P 12 38 14.6 0.0
comp=Z,7.5nm,1.0s,mb4.6
GUNZ Gunzen 78.07 351 eP P 12 38 14.3 -0.3
comp=Z,11nm,0.9s,mb4.8
HGN Heimansgroeve 78.13 356⇑ eP P 12 38 14.9 -0.1
comp=Z,42nm,1.1s,mb5.3
HGN ePPP 12 43 02.3
HGN eS S 12 47 38.4 -28
HGN eSS SS 12 53 12.1 +3.6
WERN Wernitzgruen 78.15 351 eP P 12 38 14.7 -0.3
comp=Z,18nm,0.9s,mb5.0
KOLS Kolonicke sedl 78.19 345 eP P 12 38 15.5 +0.2
NKC Novy Kostel 78.19 351 eP P 12 38 15.1 -0.2
NKC AMS AMS 13 20 20.0
comp=Z,1µm,17.4s
PRU Pruhonice 78.22 350 eP P 12 38 15.4 0.0
PRU eS S 12 48 06.4 -1.0
PRU eSS SS 12 53 26.0 +16
PRU AMS AMS 13 16 10.0
comp=Z,1µm,19.3s
PRU Pruhonice 78.22 350 eP P 12 38 15.4 0.0
PRU eS S 12 48 06.4 -1.0
PRU MLR MLR
comp=Z,1µm,19.3s,MS5.2
AJM Ajmer 78.24 298 iP P 12 38 15.0 -0.6
MEM Membach 78.28 356 P P 12 38 15.5 -0.3
CRVS Cervenica-Dubn 78.35 345 eP P 12 38 15.7 -0.5
SNF Seneffe 78.45 357 P P 12 38 16.6 -0.1
MANZ Manzenberg 78.47 352 eP P 12 38 16.8 0.0
comp=Z,8.0nm,1.0s,mb4.6
BCLA Clavier 78.50 356 P P 12 38 16.7 -0.3
TNS Taunus Mts 78.52 354 eP P 12 38 17.3 +0.2
comp=Z,15nm,0.9s,mb4.9
TNS Taunus Mts 78.52 354 eP P 12 38 17.3 +0.2
TNS pmax pmax
comp=Z,30nm,0.9s,mb5.2
ZEI Tsey 78.56 328 eP P 12 38 17.8 +0.5
ZEI pmax pmax
comp=Z,58nm,0.8s,mb5.6
LIKS Likavka 78.57 347 eP P 12 38 16.0 -1.4
LIKS pmax pmax
comp=Z,21nm,0.6s,mb5.2
LIKS Likavka 78.57 347 eP P 12 38 16.0 -1.4
comp=Z,21nm,0.6s,mb5.2
VRAC Vranov 78.65 349⇑ iP P 12 38 18.2 +0.4
VRAC Vranov 78.65 349 P P 12 38 18.6 +0.8
VRAC Vranov 78.65 349 ⇑P P 12 38 18.2 +0.4
ROTZ Rotzenmuhle 78.68 351 eP P 12 38 18.1 +0.1
comp=Z,14nm,1.2s,mb4.8
KULM Kulim 78.75 264 eP P 12 38 17.9 -0.4
CCA1 Carnmenellis 78.79 3 eP P 12 38 18.1 -0.5
CCA1 Carnmenellis 78.79 3 eP P 12 38 18.1 -0.5
TREC Trest 78.80 349 eP P 12 38 18.9 +0.3
TREC AMS AMS 13 20 00.0
comp=Z,1µm,16.9s
KIS Kishinev 78.80 340 eP P 12 38 16.0 -2.6
KIS e 12 38 32.0
KIS e 12 43 10.0
KIS eS S 12 48 12.0 -1.6
KIS e 12 48 35.0
KIS ePS 12 49 12.0
KIS MLR MLR
comp=Z,4µm,16.0s,MS5.8
KIS MLR MLR
comp=N,2µm,18.0s,MS5.5
KIS MLR MLR
comp=E,1µm,17.0s,MS5.5
KIS MLR MLR
comp=Z,4µm,20.0s
CPZ Penzance 78.81 3 eP P 12 38 18.2 -0.5
CPZ AMb AMB 12 38 21.0
comp=Z,65nm,1.3s,mb5.4
CPZ Penzance 78.81 3 eP P 12 38 18.2 -0.5
CPZ AMb AMB 12 38 21.0
comp=Z,65nm,1.3s,mb5.4
GIVF Givet 78.84 356 eP P 12 38 18.1 -0.7
comp=Z,56nm,1.1s,mb5.1
GIVF Givet 78.84 356 eP P 12 38 18.1 -0.7
GIVF pmax pmax
comp=Z,28nm,1.1s,mb5.1
GIVF Givet 78.84 356 eP P 12 38 18.1 -0.7
comp=Z,28nm,1.1s,mb5.1
GRA1 Grafenberg Arr 78.84 352 eP P 12 38 18.9 0.0
comp=Z,26nm,0.8s,mb5.2
GRA1 LR LR
comp=Z,900nm,21.6s,MS5.1
GRF Grafenberg Arr 78.84 352 eP P 12 38 18.9 0.0
comp=Z,26nm,0.8s,mb5.2
GRF eL 13 15 48.4
GRF Grafenberg Arr 78.84 352 eP P 12 38 18.9 0.0
GRF pmax pmax
comp=Z,1.0nm,0.8s
GRF MLR MLR
comp=Z,26µm,21.6s
GRF Grafenberg Arr 78.84 352 eP P 12 38 18.9 0.0
GRF pmax pmax
comp=Z,26nm,0.8s,mb5.2
GRF MLR MLR
comp=Z,900nm,21.6s,MS5.1
DOU Dourbes 78.85 356 P P 12 38 18.5 -0.4
ONI Oni 78.88 328 P P 12 38 20.0 +1.0
CGW Gweek 78.88 3 eP P 12 38 19.2 +0.1
CGW Gweek 78.88 3 eP P 12 38 19.2 +0.1
CMA1 Manaccan 78.90 3 eP P 12 38 17.6 -1.6
CMA1 Manaccan 78.90 3 eP P 12 38 17.6 -1.6
BAIF Baives 78.90 357 eP P 12 38 18.8 -0.4
comp=Z,88nm,1.2s,mb5.3
BAIF Baives 78.90 357 eP P 12 38 18.8 -0.4
BAIF pmax pmax
comp=Z,44nm,1.2s,mb5.3
BAIF Baives 78.90 357 eP P 12 38 18.8 -0.4
comp=Z,44nm,1.2s,mb5.3
KECS Kecovo 78.91 346 eP P 12 38 19.4 +0.1
KECS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KECS Kecovo 78.91 346 eP P 12 38 19.4 +0.1
comp=Z,7.0nm,1.0s,mb4.5
BURAR Bucovina Array 78.94 342⇑ iP P 12 38 19.4 0.0
BURAR Bucovina Array 78.94 342 ⇑P P 12 38 19.4 0.0
VYHS Vyhne 79.15 347 eP P 12 38 20.9 +0.4
VYHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
VYHS Vyhne 79.15 347 eP P 12 38 20.9 +0.4
comp=Z,8.3nm,1.1s,mb4.6
KHC Kasperske Hory 79.17 350 eP P 12 38 21.0 +0.3
KHC eS S 12 48 19.6 +2.0
KHC eSS SS 12 53 37.6 +13
KHC AMS AMS 13 16 30.0
comp=Z,2µm,20.0s
KHC Kasperske Hory 79.17 350 eP P 12 38 21.0 +0.3
KHC eS S 12 48 19.6 +2.0
KHC MLR MLR
comp=Z,2µm,20.0s,MS5.4
TBLG Delisi 79.20 327 eP P 12 38 22.0 +1.2
TBLG Delisi 79.20 327 P P 12 38 22.1 +1.2
WLF Walferdange 79.21 355 eP P 12 38 21.2 +0.3
comp=Z,28nm,1.4s,mb5.0
WLF Walferdange 79.21 355 P P 12 38 21.7 +0.8
WLF Walferdange 79.21 355 P P 12 38 21.8 +0.9
WLF pmax pmax
comp=Z,19nm,1.1s,mb4.9
WLF Walferdange 79.21 355 eP P 12 38 21.6 +0.8
comp=Z,18nm,1.1s,mb4.9
MTA Mtatsminda 79.22 327 P P 12 38 22.1 +1.1
WET Wettzell 79.23 351 eP P 12 38 20.6 -0.4
comp=Z,10.0nm,1.3s,mb4.6
WET Wettzell 79.23 351 eP P 12 38 20.6 -0.4
WET pmax pmax
comp=Z,12nm,1.3s,mb4.7
DGRG David-gareji 79.23 327 P P 12 38 21.9 +0.9
TBI Tubuai 79.29 151 eS S 12 48 18.0 -0.9
comp=Z,694nm,32.8s
TBI eSS SS 12 53 26.3 +0.2
comp=Z,497nm,25.8s
TBI eLQ 12 58 38.3
comp=Z,642nm,37.2s
TBI eLR LR 13 02 49.4
comp=Z,4µm,22.5s,baz=336
GEC2 GERESS Array S 79.44 350 eP P 12 38 21.4 -0.7
comp=Z,8.0nm,1.0s,mb4.6
GEC2 GERESS Array S 79.44 350 P P 12 38 22.2 +0.1
GERES GERESS Array B 79.44 350 P P 12 38 21.6 -0.5
comp=Z,2.3nm,0.6s,mb4.3,baz=20,slow=4.3,SNR=13
GERES LR LR 13 17 18.2
comp=Z,2µm,20.8s,MS5.4,baz=45,slow=38
SIM Simferopol' 79.47 336 eP P 12 38 22.0 -0.3
SIM eS S 12 48 36.0 +15
SIM pmax pmax
comp=Z,150nm,10.9s
BBSR BB Station 79.55 51 PFAKE 12 38 30.0 +7.3
BBSR LR LR
comp=Z,1µm,19.0s,MS5.3
PSZ Piszkesteto 79.56 346‖ eP P 12 38 24.3 +1.5
PSZ Piszkesteto 79.56 346⇑ iP P 12 38 24.4 +1.6
PSZ Piszkesteto 79.56 346 eP P 12 38 24.0 +1.3
ZST Bratislava 79.68 348 eP P 12 38 24.8 +1.4
comp=Z,19nm,1.0s,mb5.0
ZST LR LR
comp=Z,2µm,18.5s,MS5.4
LANF Langenberg 79.80 354 eP P 12 38 24.2 +0.1
DRGR 80.19 344⇑ iP P 12 38 26.7 +0.5

DRGR 80.19 344 P P 12 38 27.4 +1.2
DRGR 80.19 344 ⇑P P 12 38 26.7 +0.5
SOP Sopron 80.25 348⇑eP P 12 38 27.5 +1.0
RAO Raoul Island 80.27 177 PFAKE 12 38 40.0 +13
RAO LR LR
comp=Z,2µm,19.0s,MS5.4
FLN La Foliniere 80.29 360 eP P 12 38 25.7 -1.0
comp=Z,100nm,1.2s,mb5.3
FLN eR
comp=Z,958nm,21.5s
FLN La Foliniere 80.29 360 eP P 12 38 25.7 -1.0
FLN pmax pmax
comp=Z,50nm,1.2s,mb5.3
FLN MLR MLR
comp=Z,960nm,21.5s,MS5.1
FLN La Foliniere 80.29 360 eP P 12 38 25.7 -1.0
comp=Z,50nm,1.2s,mb5.3
FLN LR LR
comp=Z,960nm,21.5s,MS5.1
VRI Vrincioaia 80.32 341⇑iP P 12 38 26.7 -0.2
VRI Vrincioaia 80.32 341 ⇑P P 12 38 26.7 -0.2
PLOR Plostina 80.35 341⇑iP P 12 38 28.1 +1.1
PLOR Plostina 80.35 341 ⇑P P 12 38 28.2 +1.2
CDF Champ du Feu 80.40 355 eP P 12 38 26.4 -0.9
comp=Z,18nm,0.9s,mb4.7
CDF Champ du Feu 80.40 355 eP P 12 38 26.4 -0.9
CDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CDF Champ du Feu 80.40 355 eP P 12 38 26.4 -0.9
comp=Z,9.0nm,0.9s,mb4.7
BFO Black Forest 80.42 354 eP P 12 38 26.6 -0.8
comp=Z,14nm,0.9s,mb4.9
BFO Black Forest 80.42 354 eP P 12 38 26.6 -0.8
BFO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
MEZF Maizieres J'vi 80.42 356 eP P 12 38 26.9 -0.6
comp=Z,52nm,1.1s,mb5.1
MEZF Maizieres J'vi 80.42 356 eP P 12 38 26.9 -0.6
comp=Z,52nm,1.1s,mb5.4
LDF La Druitiere 80.46 360 eP P 12 38 26.4 -1.2
comp=Z,51nm,0.8s,mb5.2
LDF La Druitiere 80.46 360 eP P 12 38 26.4 -1.2
LDF pmax pmax
comp=Z,25nm,0.8s,mb5.2
LDF La Druitiere 80.46 360 eP P 12 38 26.4 -1.2
comp=Z,26nm,0.8s,mb5.2
GNI Garni 80.61 326 eP P 12 38 30.7 +2.2
comp=Z,32nm,0.9s,mb5.2
GNI LR LR
comp=Z,3µm,19.0s,MS5.7
THEF They Montfort 80.66 355 eP P 12 38 28.2 -0.5
GRR Gorron 80.67 0 eP P 12 38 27.8 -0.9
comp=Z,50nm,0.7s,mb5.2
GRR Gorron 80.67 0 eP P 12 38 27.8 -0.9
GRR pmax pmax
comp=Z,25nm,0.7s,mb5.2
GRR Gorron 80.67 0 eP P 12 38 27.8 -0.9
comp=Z,25nm,0.7s,mb5.2
CFR Carcaliu 80.68 340⇑iP P 12 38 29.7 +0.9
CFR Carcaliu 80.68 340 P P 12 38 30.3 +1.5
CFR Carcaliu 80.68 340 ⇑P P 12 38 29.7 +0.9
ROSF Rostrenen 80.69 2 eP P 12 38 28.1 -0.8
comp=Z,71nm,1.1s,mb5.2
ROSF Rostrenen 80.69 2 eP P 12 38 28.1 -0.8
ROSF pmax pmax
comp=Z,36nm,1.1s,mb5.2
ROSF Rostrenen 80.69 2 eP P 12 38 28.1 -0.8
comp=Z,36nm,1.1s,mb5.2
SGMF Saint Gilles 80.79 1 eP P 12 38 28.6 -0.8
comp=Z,69nm,0.8s,mb5.3
SGMF Saint Gilles 80.79 1 eP P 12 38 28.6 -0.8
SGMF pmax pmax
comp=Z,35nm,0.8s,mb5.3
SGMF Saint Gilles 80.79 1 eP P 12 38 28.6 -0.8
comp=Z,34nm,0.8s,mb5.3
ARSA Arzberg 80.81 349⇑iP P 12 38 30.2 +0.7
comp=Z,132nm,3.6s,SNR=10
MLR Muntele Rosu 80.84 341⇑iP P 12 38 31.2 +1.5
MLR Muntele Rosu 80.84 341 ⇑P P 12 38 31.2 +1.5
FELD Feldberg im Sc 80.89 354 eP P 12 38 29.9 0.0
HINF Hinteralfeld 81.02 355 eP P 12 38 29.7 -0.9
comp=Z,23nm,1.1s,mb4.7
HINF Hinteralfeld 81.02 355 eP P 12 38 29.7 -0.9
HINF pmax pmax
comp=Z,11nm,1.1s,mb4.7
HINF Hinteralfeld 81.02 355 eP P 12 38 29.7 -0.9
comp=Z,11nm,1.1s,mb4.7
VOIR 81.06 342⇑iP P 12 38 31.5 +0.6
WRAB Tennant Creek 81.11 222 P P 12 38 29.3 -1.8
WRAB pmax pmax
comp=Z,16nm,0.9s,mb5.0
WRAB Tennant Creek 81.11 222 eP P 12 38 28.8 -2.3
WRAB LR LR
comp=Z,927nm,20.0s,MS5.1
QUIF Quistinic 81.11 2 eP P 12 38 30.6 -0.5
comp=Z,80nm,1.3s,mb5.2
QUIF Quistinic 81.11 2 eP P 12 38 30.6 -0.5
QUIF pmax pmax
comp=Z,40nm,1.3s,mb5.2
QUIF Quistinic 81.11 2 eP P 12 38 30.6 -0.5
comp=Z,40nm,1.3s,mb5.2
WB2 Warramunga Arr 81.12 222 eP P 12 38 28.8 -2.4
WB2 Warramunga Arr 81.12 222 eP P 12 38 28.8 -2.4
WRA Warramunga Arr 81.13 222 P P 12 38 29.4 -1.8
comp=Z,10nm,0.8s,mb4.8,baz=33,slow=6.3,SNR=68
WRA PKKPbc PKKPbc 12 57 05.9 -1.2
comp=Z,0.5nm,0.7s,baz=211,slow=3.7,SNR=10
WRA LR LR 13 12 49.9
comp=Z,651nm,19.7s,MS5.0,baz=40,slow=34
WRA Warramunga Arr 81.13 222 iP P 12 38 29.3 -1.9
WRA pmax pmax
comp=Z,10.0nm,0.8s
WATA Walderalm 81.14 352 iP P 12 38 31.5 +0.2
comp=Z,30nm,1.2s,mb5.1,SNR=10
WATA Walderalm 81.14 352 iP P 12 38 31.5 +0.2
WATA pmax pmax
comp=Z,30nm,1.2s,mb5.1
MOTA Moosalm 81.18 352 iP P 12 38 31.9 +0.4
comp=Z,28nm,1.2s,mb5.1,SNR=10.0
MOTA Moosalm 81.18 352 iP P 12 38 31.9 +0.4
MOTA pmax pmax
comp=Z,28nm,1.2s,mb5.1
WTTA Wattenberg 81.21 351⇑iP P 12 38 31.7 +0.1
comp=Z,58nm,1.4s,mb5.3,SNR=20
WTTA Wattenberg 81.21 351⇑iP P 12 38 31.7 0.0
WTTA pmax pmax
comp=Z,58nm,1.4s,mb5.3
KBA Koelnbreinsper 81.22 350 iP P 12 38 32.2 +0.5
comp=Z,74nm,1.4s,mb5.4,SNR=30
KBA Koelnbreinsper 81.22 350 iP P 12 38 32.2 +0.5
KBA pmax pmax
comp=Z,74nm,1.4s,mb5.4
SQTA Sankt Quirin 81.29 352⇓iP P 12 38 32.4 +0.3
comp=Z,32nm,1.3s,mb5.1,SNR=11
SQTA Sankt Quirin 81.29 352⇓iP P 12 38 32.4 +0.3
SQTA pmax pmax
comp=Z,32nm,1.3s,mb5.1
TIRR Tirgusor 81.30 339⇑iP P 12 38 32.6 +0.5
TIRR Tirgusor 81.30 339 P P 12 38 32.2 +0.1
TIRR Tirgusor 81.30 339 ⇑P P 12 38 32.6 +0.5
DAVA Damuels 81.34 353⇓iP P 12 38 32.0 -0.3
comp=Z,147nm,3.6s
PKSM Moragy 81.41 346⇑eP P 12 38 32.6 -0.1
PERS Pernice 81.46 349 eP P 12 38 32.9 -0.1
LOMF Lomont 81.48 355 eP P 12 38 33.2 +0.1
BZS Buzias 81.52 344⇓iP P 12 38 33.5 +0.2
BZS Buzias 81.52 344 ⇓P P 12 38 33.5 +0.2
GZR Gura Zlata 81.53 343⇑iP P 12 38 33.8 +0.4
GZR Gura Zlata 81.53 343 ⇑P P 12 38 33.8 +0.5
OBKA Obir 81.65 349⇑iP P 12 38 34.5 +0.5
comp=Z,67nm,2.0s,mb5.2,SNR=12
LOR Lormes 81.70 357 eP P 12 38 33.7 -0.6
comp=Z,21nm,0.8s,mb4.8
LOR eR
comp=Z,1µm,20.8s
LOR Lormes 81.70 357 eP P 12 38 33.7 -0.6
LOR pmax pmax
comp=Z,11nm,0.8s,mb4.8
LOR MLR MLR
comp=Z,1µm,20.8s,MS5.3
LOR Lormes 81.70 357 eP P 12 38 33.7 -0.6
comp=Z,11nm,0.8s,mb4.8
LOR LR LR
comp=Z,1µm,20.8s,MS5.3
HYF Humbligny 81.74 358 eP P 12 38 34.3 -0.2
PSI Prapat 81.75 264 P P 12 38 34.6 +0.1
comp=Z,27nm,0.7s,mb5.3,baz=7.3,slow=3.6,SNR=19
PSI LR LR 13 20 21.7
comp=Z,480nm,18.7s,MS4.9,baz=268,slow=40
FVI Forni Avoltri 81.76 351 P P 12 38 34.7 +0.1
FVI pmax pmax
comp=Z,25nm,1.4s,mb5.0
FVI Forni Avoltri 81.76 351 P P 12 38 34.7 +0.1
comp=Z,25nm,1.4s,mb5.0
PTCC Patocco-Chiusa 81.89 350 P P 12 38 35.0 -0.2
comp=Z,16nm,0.9s,mb4.9
SSF Saint Saulge 81.92 357 eP P 12 38 34.9 -0.5
comp=Z,19nm,0.8s,mb4.8
SSF Saint Saulge 81.92 357 eP P 12 38 34.9 -0.5
SSF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SSF Saint Saulge 81.92 357 eP P 12 38 34.9 -0.5
comp=Z,9.6nm,0.8s,mb4.8
GMNA Gemona 82.03 350 P P 12 38 35.6 -0.4
comp=Z,146nm,0.8s,mb6.0
PDKS Podkum 82.04 349 eP P 12 38 36.3 +0.2
BRMO Bormio 82.10 352 P P 12 38 37.3 +0.9
comp=Z,27nm,1.3s,mb5.0
TUE Stuetta 82.19 353 P P 12 38 37.7 +0.9
AVF Avril sur Loir 82.20 357 eP P 12 38 36.2 -0.7
comp=Z,53nm,1.1s,mb5.1
AVF Avril sur Loir 82.20 357 eP P 12 38 36.2 -0.7
AVF pmax pmax
comp=Z,27nm,1.1s,mb5.1
AVF Avril sur Loir 82.20 357 eP P 12 38 36.2 -0.7
comp=Z,26nm,1.1s,mb5.1
CABF La Chapelle 82.26 355 eP P 12 38 36.9 -0.3
comp=Z,36nm,1.1s,mb4.9
CABF La Chapelle 82.26 355 eP P 12 38 36.9 -0.3
CABF pmax pmax
comp=Z,18nm,1.1s,mb4.9
CABF La Chapelle 82.26 355 eP P 12 38 36.9 -0.3
comp=Z,18nm,1.1s,mb4.9
VISS Visnje 82.31 349 eP P 12 38 36.4 -1.1
SMF Signal de Mont 82.33 357 eP P 12 38 36.9 -0.6
comp=Z,40nm,0.8s,mb5.1
SMF Signal de Mont 82.33 357 eP P 12 38 36.9 -0.6
SMF pmax pmax
comp=Z,20nm,0.8s,mb5.1
SMF Signal de Mont 82.33 357 eP P 12 38 36.9 -0.6
comp=Z,20nm,0.8s,mb5.1
LCHF La Chataignera 82.38 360 eP P 12 38 38.8 +1.0
CTI Castel Tesino 82.41 351 P P 12 38 38.1 +0.1
CTI pmax pmax
comp=Z,11nm,0.8s,mb4.8
CTI Castel Tesino 82.41 351 P P 12 38 38.1 +0.1
comp=Z,11nm,0.8s,mb4.8
BGF Bois d'Agland 82.45 357 eP P 12 38 37.7 -0.5
comp=Z,41nm,1.1s,mb5.0
BGF Bois d'Agland 82.45 357 eP P 12 38 37.7 -0.5
BGF pmax pmax
comp=Z,21nm,1.1s,mb5.0
BGF Bois d'Agland 82.45 357 eP P 12 38 37.7 -0.5
comp=Z,21nm,1.1s,mb5.0
MFF Saint Martin d 82.45 360 eP P 12 38 38.4 +0.2
comp=Z,40nm,0.9s,mb5.0
MFF Saint Martin d 82.45 360 eP P 12 38 38.4 +0.2
MFF pmax pmax
comp=Z,20nm,0.9s,mb5.0
MFF Saint Martin d 82.45 360 eP P 12 38 38.4 +0.2
comp=Z,20nm,0.9s,mb5.0
MABI Malga Bissina 82.51 352 P P 12 38 38.7 +0.2
BOJS Bojanci 82.56 349 eP P 12 38 38.0 -0.7
TCF Toulx Ste Croi 82.73 358 eP P 12 38 38.8 -0.8
comp=Z,82nm,1.6s,mb5.2
TCF Toulx Ste Croi 82.73 358 eP P 12 38 38.8 -0.8
TCF pmax pmax
comp=Z,41nm,1.6s,mb5.2
TCF Toulx Ste Croi 82.73 358 eP P 12 38 38.8 -0.8
comp=Z,41nm,1.6s,mb5.2
MCGN Macugnaga 82.80 354 P P 12 38 41.1 +1.1
comp=Z,21nm,1.1s,mb5.1
VAI Varese 82.84 353 P P 12 38 39.4 -0.8
VAI pmax pmax
comp=Z,34nm,1.1s,mb5.3
VAI Varese 82.84 353 P P 12 38 39.4 -0.8
comp=Z,34nm,1.1s,mb5.3
AGO Saint Agoulin 82.94 357 eP P 12 38 41.4 +0.7
PLDF La Plantade 83.01 357 eP P 12 38 41.1 0.0
HYB Hyderabad 83.06 289 iP P 12 38 41.0 -0.4
comp=Z,100nm,1.0s,mb5.8
HYB eSKS 12 49 00.0
PYM Petit Puy Mans 83.25 357 eP P 12 38 42.4 +0.1
DIVS Divcibare 83.26 345⇑iP P 12 38 41.7 -0.7
LPL La Plagne 83.32 355 eP P 12 38 43.0 +0.3
comp=Z,17nm,0.8s,mb4.8
LPL La Plagne 83.32 355 eP P 12 38 43.0 +0.3
LPL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LPL La Plagne 83.32 355 eP P 12 38 43.0 +0.3
comp=Z,8.7nm,0.8s,mb4.8
LPG La Plagne 83.34 355 eP P 12 38 43.5 +0.7
comp=Z,38nm,1.0s,mb5.1
LPG La Plagne 83.34 355 eP P 12 38 43.5 +0.7
LPG pmax pmax
comp=Z,19nm,1.0s,mb5.1
LPG La Plagne 83.34 355 eP P 12 38 43.5 +0.7
comp=Z,19nm,1.0s,mb5.1
GRUS Gruza 83.35 345 eP P 12 38 42.4 -0.5
FITZ Fitzroy Crossi 83.46 230 eP P 12 38 41.9 -1.5
comp=Z,18nm,0.9s,mb5.1
FITZ Fitzroy Crossi 83.46 230 P P 12 38 42.3 -1.2
comp=Z,8.8nm,0.7s,mb4.9,baz=28,slow=3.6,SNR=23
BBLS Bajina Basta - 83.58 345 eP P 12 38 44.8 +0.8
RSP Reno Superiore 83.65 354 P P 12 38 44.7 +0.3
RJF Les Rejaudoux 83.73 358 eP P 12 38 45.2 +0.4
comp=Z,24nm,0.9s,mb5.0
RJF eR
comp=Z,1µm,23.0s
RJF Les Rejaudoux 83.73 358 eP P 12 38 45.2 +0.4
RJF pmax pmax
comp=Z,12nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,1µm,23.0s,MS5.2
RJF Les Rejaudoux 83.73 358 eP P 12 38 45.2 +0.4
comp=Z,12nm,0.9s,mb5.0
RJF LR LR
comp=Z,1µm,23.0s,MS5.2
LBL Lubilhac 83.76 357 eP P 12 38 45.0 +0.1
BNI Bardonecchia 83.78 355 eP P 12 38 46.1 +1.0
BNI pmax pmax
comp=Z,21nm,0.8s,mb5.3
BNI Bardonecchia 83.78 355 eP P 12 38 46.1 +1.0
comp=Z,21nm,0.8s,mb5.3
BOB Bobbio (Coli) 83.88 353 P P 12 38 46.3 +0.8
BOB pmax pmax
comp=Z,51nm,0.6s,mb5.8
BOB Bobbio (Coli) 83.88 353 P P 12 38 46.3 +0.8
comp=Z,50nm,0.6s,mb5.8
ORIF Oris-en-Rattie 83.96 355 eP P 12 38 46.2 +0.2
comp=Z,39nm,1.1s,mb5.1
ORIF eR
comp=Z,735nm,21.0s
ORIF Oris-en-Rattie 83.96 355 eP P 12 38 46.2 +0.2
ORIF pmax pmax
comp=Z,19nm,1.1s,mb5.1
ORIF Oris-en-Rattie 83.96 355 eP P 12 38 46.2 +0.2
comp=Z,19nm,1.1s,mb5.2
VIVF Saint-Julien-l 84.08 356 eP P 12 38 46.3 -0.3
comp=Z,30nm,1.1s,mb5.0
VIVF Saint-Julien-l 84.08 356 eP P 12 38 46.3 -0.3
VIVF pmax pmax
comp=Z,15nm,1.1s,mb5.0
VIVF Saint-Julien-l 84.08 356 eP P 12 38 46.3 -0.3
comp=Z,15nm,1.1s,mb5.0
CAF Calviac 84.10 358 eP P 12 38 46.3 -0.4
comp=Z,49nm,1.2s,mb5.2
CAF Calviac 84.10 358 eP P 12 38 46.3 -0.4
CAF pmax pmax
comp=Z,24nm,1.2s,mb5.2
CAF Calviac 84.10 358 eP P 12 38 46.3 -0.4
comp=Z,24nm,1.2s,mb5.2
MBDF Montbardon 84.10 355 eP P 12 38 46.7 0.0
comp=Z,15nm,0.6s,mb5.0
MBDF Montbardon 84.10 355 eP P 12 38 46.7 0.0
MBDF pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
MBDF Montbardon 84.10 355 eP P 12 38 46.7 0.0
comp=Z,7.6nm,0.6s,mb5.0
LFF La Frestale 84.11 359 eP P 12 38 46.1 -0.6
comp=Z,40nm,0.8s,mb5.3
LFF La Frestale 84.11 359 eP P 12 38 46.1 -0.6
LFF pmax pmax
comp=Z,20nm,0.8s,mb5.3
LFF La Frestale 84.11 359 eP P 12 38 46.1 -0.6
comp=Z,20nm,0.8s,mb5.3
VTS Vitosha 84.16 342⇑iP P 12 38 47.2 +0.2
VTS Vitosha 84.16 342 ⇑P P 12 38 47.2 +0.2
FNVD Fontana Vidola 84.33 351 P P 12 38 49.2 +1.4
RKT Rikitea 84.34 138 eLQ 13 01 07.3
comp=Z,539nm,31.2s
RKT Rikitea 84.34 138 ePP PP 12 42 04.0 +1.0
comp=Z,90nm,31.0s
RKT Rikitea 84.34 138 eS S 12 49 10.2 -0.7
comp=Z,492nm,34.2s
RKT eSS SS 12 54 40.4 -0.7
comp=Z,483nm,26.5s
RKT eLR LR 13 05 21.7
comp=Z,3µm,24.2s,baz=331
MALT Malatya 84.36 330⇑iP P 12 38 49.6 +1.6
MALT Malatya 84.36 330 eP P 12 38 49.3 +1.3
MALT pmax pmax
comp=Z,39nm,1.2s,mb5.4
MALT Malatya 84.36 330 eP P 12 38 49.2 +1.3
comp=Z,40nm,1.3s,mb5.4
BR131 Keskin Array S 84.46 334 eP P 12 38 49.1 +0.5
BR131 LR LR
comp=Z,782nm,19.0s,MS5.1
BRTR Keskin Array B 84.46 334 P P 12 38 49.0 +0.5
comp=Z,16nm,0.7s,mb5.2,baz=55,slow=2.8,SNR=63
BRTR LR LR 13 22 45.0
comp=Z,969nm,19.7s,MS5.2,baz=190,slow=40
BRTR Keskin Array B 84.46 334 iP P 12 38 49.0 +0.5
BRTR pmax pmax
comp=Z,16nm,0.7s
ANTO Ankara 84.56 335⇑iP P 12 38 49.7 +0.7
ANTO Ankara 84.56 335 P P 12 38 50.5 +1.5
SNR=5.5
ANTO Ankara 84.56 335 eP P 12 38 50.6 +1.6
ANTO pmax pmax
comp=Z,11nm,0.9s,mb5.0
ANTO Ankara 84.56 335 ⇑P P 12 38 49.7 +0.7
ANTO LR LR
comp=Z,960nm,21.0s,MS5.2
AS31 Alice Springs 84.62 221 eP P 12 38 48.3 -1.0
ASAR Alice Springs 84.62 221 P P 12 38 48.4 -0.9
comp=Z,5.9nm,0.7s,mb4.8,baz=25,slow=5.3,SNR=39
ASAR PKKPbc PKKPbc 12 56 58.9 -0.2
comp=Z,0.2nm,0.6s,baz=210,slow=3.1,SNR=5.1
ASAR LR LR 13 12 56.4
comp=Z,773nm,19.2s,MS5.1,baz=25,slow=33
MSL Mosul 84.64 326 ex x 12 38 53.0
TOUF Mont Tournerai 84.78 354 eP P 12 38 50.7 +0.6
LASF Ste Croix 84.89 357 eP P 12 38 50.3 -0.4
comp=Z,39nm,1.1s,mb5.2
CING Cingoli 84.90 350 P P 12 38 51.5 +0.8
MVIF Mont Vial 84.91 354 eP P 12 38 51.4 +0.6
SMRF Simiane la Rot 84.92 355 eP P 12 38 51.1 +0.3
comp=Z,87nm,1.1s,mb5.5
SMRF Simiane la Rot 84.92 355 eP P 12 38 51.1 +0.3
comp=Z,87nm,1.1s,mb5.8
SBF Sospel 84.92 354 eP P 12 38 50.2 -0.6
comp=Z,127nm,1.1s,mb5.7
SBF Sospel 84.92 354 eP P 12 38 50.2 -0.6
SBF pmax pmax
comp=Z,63nm,1.1s,mb5.7
SBF Sospel 84.92 354 eP P 12 38 50.2 -0.6
comp=Z,63nm,1.1s,mb5.7
POO Poona 84.94 293⇑ix x 12 38 47.0
comp=Z,50nm,1.0s
ARMA Armidale 84.95 204 eP P 12 38 50.7 -0.3
VILF Villemus 85.03 355 eP P 12 38 52.6 +1.2
PRAF Pradon 85.11 356 eP P 12 38 52.9 +1.1
TAVF Tavernes 85.25 355 eP P 12 38 53.4 +0.9
FRF La Foret Royal 85.27 355 eP P 12 38 51.8 -0.8
comp=Z,55nm,1.0s,mb5.3
FRF La Foret Royal 85.27 355 eP P 12 38 51.8 -0.8
FRF pmax pmax
comp=Z,27nm,1.0s,mb5.3
FRF La Foret Royal 85.27 355 eP P 12 38 51.8 -0.8
comp=Z,28nm,1.0s,mb5.3
TREF Trevaresse 85.28 356 eP P 12 38 53.7 +1.1
PUYF Puyloubier 85.35 355 eP P 12 38 53.9 +0.9
LMR La Mourre 85.51 355 eP P 12 38 53.2 -0.6
comp=Z,49nm,1.0s,mb5.4
LMR La Mourre 85.51 355 eP P 12 38 53.2 -0.6
LMR pmax pmax
comp=Z,25nm,1.0s,mb5.4
LMR La Mourre 85.51 355 eP P 12 38 53.2 -0.6
comp=Z,25nm,1.0s,mb5.4
GELF Grande-Etoile 85.52 355 eP P 12 38 54.7 +0.9
BERF Bertagne 85.57 355 eP P 12 38 55.0 +0.9
MTLF Montolieu 85.68 358 eP P 12 38 54.1 -0.5
KAD Karad 85.71 292 eP P 12 38 55.2 +0.4
SJPF Ste Jean 85.94 0 eP P 12 38 55.8 -0.1
comp=Z,16nm,0.8s,mb5.0
SJPF Ste Jean 85.94 0 eP P 12 38 55.8 -0.1
SJPF pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
SJPF Ste Jean 85.94 0 eP P 12 38 55.8 -0.1
comp=Z,7.9nm,0.8s,mb5.0
EPF Esparros 86.02 359 eP P 12 38 55.1 -1.2
PGF Pioggiola 86.12 353 eP P 12 38 56.1 -0.7
comp=Z,110nm,1.2s,mb5.7
PGF Pioggiola 86.12 353 eP P 12 38 56.1 -0.7
PGF pmax pmax
comp=Z,55nm,1.2s,mb5.7
PGF Pioggiola 86.12 353 eP P 12 38 56.1 -0.7
comp=Z,55nm,1.2s,mb5.7
PVRL Vila Real 87.58 5 eP P 12 39 03.7 -0.2
comp=Z,22nm,1.3s,mb5.2
PVIS Viseu 88.13 5 eP P 12 39 06.1 -0.4
PTCN Pitcairn Islan 88.15 135 PFAKE 12 39 20.0 +13
PTCN LR LR
comp=Z,3µm,19.0s,MS5.7
MTE Manteigas 88.46 5 eP P 12 39 07.8 -0.3
comp=Z,20nm,1.0s,mb5.3
MTE Manteigas 88.46 5 eP P 12 39 08.0 -0.1
comp=Z,11nm,0.8s,mb5.1
MIB Mutribah 88.80 320 eP P 12 39 09.2 -0.4
MIB AMb AMB 12 39 11.7
comp=Z,262nm,0.8s
UMR Umm Al-Rimmam 88.86 319 eP P 12 39 09.2 -0.8
UMR AMb AMB 12 39 11.9
comp=Z,121nm,0.9s,mb6.2
MBWA Marble Bar 88.97 234 eP P 12 39 09.3 -1.2
comp=Z,11nm,0.9s,mb5.2
MBWA LR LR
comp=Z,277nm,20.0s,MS4.7
CSS Prodhromos 89.00 333 eP P 12 39 10.8 +0.2
comp=Z,14nm,0.4s,mb5.6
PCBR Castelo Branco 89.02 5 eP P 12 39 10.5 -0.2
PTOM Tomar 89.19 6 eP P 12 39 11.3 -0.2
KBD Kabd 89.20 319 eP P 12 39 11.3 -0.3
KBD AMb AMB 12 39 13.7
comp=Z,356nm,0.8s
STKA Stephens Creek 89.22 211 eP P 12 39 10.6 -1.1
comp=Z,7.2nm,1.0s,mb5.0
STKA Stephens Creek 89.22 211 P P 12 39 10.1 -1.6
comp=Z,4.2nm,0.8s,mb4.8,baz=338,slow=9.4,SNR=7.8
STKA LR LR 13 17 10.3
comp=Z,1µm,18.6s,MS5.4,baz=21,slow=34
NAY Al-Naaiem 89.33 319 eP P 12 39 11.4 -0.7
NAY AMb AMB 12 39 14.1
comp=Z,80nm,0.9s,mb6.0
ESDC Sonseca Array 89.33 2 P P 12 39 11.6 -0.6
comp=Z,3.1nm,0.8s,mb4.7,baz=352,slow=4.4,SNR=22
ESDC LR LR 13 20 20.9
comp=Z,622nm,20.5s,MS5.0,baz=0.0,slow=36
ESLA Sonseca Array 89.33 2 eP P 12 39 11.9 -0.3
ESLA LR LR
comp=Z,4µm,20.0s,MS5.9
RDF Al-Radifah 89.48 319 eP P 12 39 12.4 -0.5
RDF AMb AMB 12 39 15.4
comp=Z,188nm,0.8s
PALK Pallekele 89.67 281 PFAKE 12 39 30.0 +16
PALK LR LR
comp=Z,520nm,20.0s,MS5.0
ARQ Araqi 90.28 309 ⇑P P 12 39 16.7 +0.1
SNR=6.9
JMDO Jabal Madar 90.31 308 P P 12 39 17.2 +0.4
SNR=5.8
BSY Bisya 90.44 308 ⇓P P 12 39 17.3 -0.1
SNR=5.5
SJG San Juan 90.47 60 eP P 12 39 17.7 +0.2
SJG LR LR
comp=Z,926nm,19.0s,MS5.2
TRD Trivandrum 90.99 285⇑eP P 12 39 18.1 -1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNZO	South Karori	92.34	183	PFAKE		12 39 40.0	+14
SNZO				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
KEST	Kesra	92.86	352	P	P	12 39 27.4	-1.1
	comp=Z,3.6nm,0.9s,mb4.8,baz=312,slow=1.8,SNR=6.8						
KEST				LR	LR	13 29 49.4	
	comp=Z,318nm,18.1s,MS4.8,baz=184,slow=41						
SDV	Santo Domingo	95.40	69	eP	P	12 39 40.8	+0.6
	comp=Z,13nm,0.9s,mb5.3						
SDV				LR	LR		
	comp=Z,325nm,20.0s,MS4.8						
ROSC	El Rosal	96.41	74	LR	LR	13 21 59.1	
	comp=Z,274nm,20.8s,MS4.7,baz=355,slow=35						
NWAO	Narrogin (SRO)	99.98	229	LR	LR	13 24 58.2	
	comp=Z,463nm,20.0s,MS5.0,baz=195,slow=35						
NNA	Nana	107.97	87	PFAKE		12 45 00.0	+17
NNA				LR	LR		
	comp=Z,671nm,19.0s,MS5.2						
SAML	Samuel	114.05	73	PFAKE		12 45 10.0	+15
SAML				LR	LR		
	comp=Z,403nm,21.0s,MS5.0						
TORD	Torodi Ar. Bea	115.76	357	PKiKP	PKiKP	12 44 56.8	-1.3
	comp=Z,1.8nm,0.5s,baz=3.4,slow=2.2,SNR=20						
TORD				PKKPab	PKKPab	12 55 31.5	-3.6
	comp=Z,1.3nm,0.7s,baz=188,slow=4.0,SNR=4.6						
TORD	Torodi Ar. Bea	115.76	357	PKPdf	PKPdf	12 44 56.8	-1.3
TORD				PKKPab	PKKPab	12 55 31.5	-3.6
LPAZ	La Paz	116.69	83	PFAKE		12 45 10.0	+10
LPAZ				LR	LR		
	comp=Z,521nm,22.0s,MS5.1						
KMBO	Kilima Mbogo	120.62	314	PKP	PKPdf	12 45 07.2	-0.2
	comp=Z,6.6nm,1.0s,baz=22,slow=5.5,SNR=7.9						
KMBO	Kilima Mbogo	120.62	314	P	PKPdf	12 45 09.2	+1.8
	SNR=6.4						
KMBO	Kilima Mbogo	120.62	314	PKIKP	PKPdf	12 45 07.2	-0.2
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMBO	Kilima Mbogo	120.62	314	ePKPdf	PKPdf	12 45 09.0	+1.6
KMBO				LR	LR		
	comp=Z,2μm,21.0s,MS5.6						
DBIC	Dimbokro	122.13	5	PKP	PKPdf	12 45 10.1	-0.3
	comp=Z,5.2nm,0.5s,baz=339,slow=3.7,SNR=23						
DBIC	Dimbokro	122.13	5	PKP	PKPdf	12 45 10.1	-0.3
DBIC				LR	LR		
	comp=Z,790nm,19.0s,MS5.4						
LIC	Lamto	122.56	5	ePKIKP	PKPdf	12 45 10.0	-1.2
LIC				eR			
	comp=Z,368nm,21.8s						
LIC	Lamto	122.56	5	ePKPdf	PKPdf	12 45 10.0	-1.2
LIC				LR	LR		
	comp=Z,180nm,21.8s,MS4.7						
RCBR	Riachuelo	126.09	45	PFAKE		12 45 30.0	+12
RCBR				LR	LR		
	comp=Z,616nm,19.0s,MS5.3						
BDFB	Brasilia	128.25	64	PKP	PKPdf	12 45 21.8	-0.3
	comp=Z,7.2nm,1.0s,baz=3.1,slow=5.5,SNR=5.3						
BDFB	Brasilia	128.25	64	PKP	PKPdf	12 45 21.8	-0.3
BDFB				LR	LR		
	comp=Z,1μm,21.0s,MS5.6						
CASY	Casey	128.30	209	PFAKE		12 45 30.0	+7.8
CASY				LR	LR		
	comp=Z,754nm,21.0s,MS5.3						
VNDA	Vanda	129.03	185	PKP	PKPdf	12 45 21.6	-1.9
	comp=Z,1.7nm,0.9s,baz=295,slow=3.0,SNR=8.7						
VNDA	Vanda	129.03	185	PKP	PKPdf	12 45 21.6	-1.9
VNDA				LR	LR		
	comp=Z,540nm,21.0s,MS5.2						
SBA	Scott Base	129.14	183	ePKPdf	PKPdf	12 45 22.3	-1.5
SBA				LR	LR		
	comp=Z,762nm,21.0s,MS5.4						
CPUP	Villa Florida	130.84	82	PKP	PKPdf	12 45 25.3	-1.7
	comp=Z,3.1nm,0.7s,baz=7.7,slow=2.6,SNR=8.3						
CPUP	Villa Florida	130.84	82	PKIKP	PKPdf	12 45 25.3	-1.7
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CPUP	Villa Florida	130.84	82	ePKPdf	PKPdf	12 45 26.7	-0.3
PLCA	Paso Flores	132.15	106	PFAKE		12 45 40.0	+11
PLCA				LR	LR		
	comp=Z,743nm,20.0s,MS5.4						
ASCN	Ascension	135.31	19	PFAKE		12 45 50.0	+15
ASCN				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
LSZ	Lusaka	137.19	317	PFAKE		12 45 50.0	+11
LSZ				LR	LR		
	comp=Z,984nm,21.0s,MS5.5						
QSPA	South Pole Qui	141.08	180	eP	PKPdf	12 45 40.4	-5.6
QSPA				LR	LR		
	comp=Z,815nm,19.0s,MS5.5						
TSUM	Tsumeb	144.82	329	ePKPdf	PKPdf	12 45 52.5	-0.1
TSUM				LR	LR		
	comp=Z,1μm,21.0s,MS5.6						
EFI	East Falkland	145.13	114	PFAKE		12 46 00.0	+7.3
EFI				LR	LR		
	comp=Z,924nm,20.0s,MS5.5						
PMSA	Palmer Station	145.54	137	PFAKE		12 46 00.0	+6.2
PMSA				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
MAW	Mawson	145.68	218	eP	PKPdf	12 45 51.6	-2.5
	comp=Z,14nm,1.2s						
MAW	Mawson	145.68	218	PKPbc	PKPbc	12 45 52.1	-2.4
	comp=Z,8.8nm,0.7s,baz=85,slow=4.4,SNR=35						
MAW	Mawson	145.68	218	eP	PKPdf	12 45 51.6	-2.5
MAW				LR	LR		
	comp=Z,824nm,20.0s,MS5.5						
LBTB	Lobatse	146.87	312	PKPdf	PKPdf	12 45 58.1	+2.1
LBTB	Lobatse	146.87	312	ePKPdf	PKPdf	12 45 56.8	+0.7
LBTB				LR	LR		
	comp=Z,682nm,20.0s,MS5.4						
BOSA	Boshof	150.07	309	PKPbc	PKPbc	12 46 06.1	-0.2
	comp=Z,40nm,0.8s,baz=56,slow=1.9,SNR=44						
BOSA	Boshof	150.07	309	PKIKP	PKPbc	12 46 06.1	-0.2
BOSA				pmax	pmax		
	comp=Z,40nm,0.8s						
BOSA	Boshof	150.07	309	ePKPdf	PKPbc	12 46 06.6	+0.2
BOSA				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
SUR	Sutherland	155.32	312	PFAKE		12 46 20.0	+11
SUR				LR	LR		
	comp=Z,1μm,19.0s,MS5.8						
HOPE	Hope Point	158.36	112	PFAKE		12 46 20.0	+7.1
HOPE				LR	LR		
	comp=Z,926nm,20.0s,MS5.6						
SNAA	Sanae	159.56	178	PKP	PKPdf	12 46 10.9	-3.4
	comp=Z,0.8nm,1.0s,baz=155,slow=10,SNR=5.2						
SNAA	Sanae	159.56	178	ePKPdf	PKPdf	12 46 10.7	-3.6
SNAA				e		12 47 00.1	
VNA1	Neumayer--Stat	160.31	173	ePKPdf	PKPdf	12 46 19.2	+4.1
VNA1				e		12 47 12.0	
VNA1				e		12 47 18.3	
VNA1				e		12 47 31.5	

*IDC **15** 12:32:26.4±1.0, 5124N×17937E, h0^{km}, mb4.2/12, mb1 4.4/13, mb1mx4.1/25, mbtmp4.2/13, ML4.6/1, Error ellipse: s-maj=31.9km s-min=17.3km az=177.0*

*NEIC **15** 12:32:30.5±2.6, 5100N×17926E, h29^{km}±15^{km}, ML4.1(AEIC), Error ellipse: s-maj=28.1km s-min=11.4km az=182.0*

*ISCJB **15** 12:32:31.2±1.0, 512N±0.1×17940E±009, h42^{km}±6^{km}, mb4.3/17, MS5.0/2, Error ellipse: s-maj=19.4km s-min=8.3km az=156.5*

*BJI **15** 12:32:31.5, 5100N×17930E, h28^{km}, mB4.4, mb4.5, Ms5.0, Msz4.7*

ISC 15 12:32:30.8±1.4**, 511N**±01×**17935E**±009**, h29**^{km}±7^{km}**, n31, σ1§38**/34**, mb4.3**/17**, MS5.0**/2**, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.30	354	P	Pb	12 32 37.5	-0.7
AMKA				S	Sb	12 32 43.1	-0.1
SMY	Shemya	3.65	299	P	Pn	12 33 27.4	+2.1
ATKA	Atka Island	4.18	72	P	Pn	12 33 33.9	+1.3
SPIA	Saint Paul Isl	8.64	41	ePn	Pn	12 34 37.0	+3.2
SPIA				eSn	Sn	12 36 11.0	+0.8
KDAK	Kodiak Island	17.56	57	P	Pn	12 36 31.1	-2.4
	2.2nm,0.3s,baz=259,slow=5.1,SNR=7.6						
IMA2	Indian Mountai	20.32	32	eP	P	12 37 05.6	+1.1
ASAJ	Asahikawa	25.54	269	P	P	12 37 58.1	+1.2
	6.5nm,0.7s,mb4.3,baz=75,slow=9.5,SNR=8.7						
MDJ	Mudanjiang	33.47	279	P	P	12 39 11.9	+4.5
MDJ				AP	pP	12 39 15.0	-0.9
MDJ				PP	PP	12 40 27.5	+4.2
MDJ				S	S	12 44 34.3	+7.1
MDJ				XS	sS	12 44 39.4	-1.8
MDJ				SCP	ScP	12 45 37.3	+6.8
MDJ				PCS	PcS	12 45 38.6	+4.8
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.6						
MDJ				LR	LR		
	comp=N,552nm,15.7s,MS4.4						
MDJ				LR	LR		
	comp=E,156nm,13.1s,MS4.4						
MDJ				LR	LR		
	comp=Z,518nm,15.7s,MS4.3						
YKA	Yellowknife Ar	36.28	46	ScP	ScP	12 45 39.8	-0.8
	comp=Z,1.1nm,0.6s,baz=294,slow=3.1,SNR=4.3						
CN2	Changchun	36.46	280	eP	P	12 39 36.8	+3.7
NEW	Newport	40.08	68	P	P	12 40 02.6	-1.0
	comp=Z,3.4nm,0.6s,mb4.2,baz=300,slow=7.0,SNR=3.5						
MCMT	McKenzie Canyo	44.38	70	eP	P	12 40 38.7	+0.1
NVAR	Mina Array Bea	44.75	81	P	P	12 40 41.9	+0.3
	comp=Z,1.3nm,0.8s,mb3.8,baz=283,slow=10,SNR=4.0						
SONM	Songino Array	45.74	296	P	P	12 40 50.0	+0.5
	comp=Z,1.1nm,0.6s,mb4.0,baz=66,slow=8.7,SNR=3.7						
PDAR	Pinedale Array	47.51	71	P	P	12 41 03.5	+0.1
	comp=Z,5.2nm,0.7s,mb4.7,baz=305,slow=4.1,SNR=13						
NJ2	Nanjing	47.65	271	eP	P	12 41 11.8	+7.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
TMUT	Trail Mountain	48.60	76	eP	P	12 41 13.9	+2.2
LZH	Lanzhou	54.34	285	eP	P	12 41 59.8	+5.1
LZH				AP	pP	12 42 03.0	-0.6
LZH				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
GTA	Gaotai	54.59	291	eP	P	12 41 57.3	+0.8
GTA				PP	PP	12 44 01.6	+2.6
GTA				S	S	12 49 35.1	+0.9
GTA				SS	SS	12 53 17.1	0.0
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb4.2						
GTA				AMB	AMB		
	comp=Z,91nm,6.8s						
GTA				LR	LR		
	comp=N,2μm,16.4s,MS5.6						
GTA				LR	LR		
	comp=E,3μm,15.6s,MS5.6						
GTA				LR	LR		
	comp=Z,4μm,15.2s,MS5.6						
ARCES	ARCESS Array B	58.19	349	P	P	12 42 20.1	-2.0
	comp=Z,1.3nm,0.7s,mb4.1,baz=12,slow=8.8,SNR=6.2						
MKAR	Makanchi Array	59.30	308	P	P	12 42 28.6	-1.4
	comp=Z,1.5nm,0.5s,mb4.3,baz=44,slow=6.5,SNR=10						
BVAR	Borovoye Array	60.36	319	P	P	12 42 36.5	-0.7
	comp=Z,4.5nm,0.6s,mb4.7,baz=48,slow=6.4,SNR=11						
KMI	Kunming	62.61	277	P	P	12 42 59.6	+7.2
KMI				AMB	AMB		
	comp=Z,3.0nm,0.5s,mb4.7						
PLAL	Pickwick Lake	65.19	65	eP	P	12 43 08.8	-0.6
FINES	FINESS Array B	65.81	346	P	P	12 43 10.2	-3.2
	comp=Z,2.2nm,0.9s,mb4.2,baz=16,slow=8.7,SNR=3.9						
CPCT	Cooper Cave	66.86	62	eP	P	12 43 25.9	+5.8
NOA	NORSAR Array B	67.83	354	P	P	12 43 24.5	-1.7
	comp=Z,1.2nm,0.6s,mb4.1,baz=7.9,slow=6.4,SNR=3.9						
NOA	NORSAR Array B	67.83	354	P	P	12 43 24.5	-1.7
AKASG	Malin Array Be	75.47	341	P	P	12 44 10.3	-1.9
	comp=Z,0.7nm,0.4s,mb4.0,baz=21,slow=6.5,SNR=4.3						
AKASG	Malin Array Be	75.47	341	P	P	12 44 10.3	-1.9
WRA	Warramunga Arr	81.00	222	P	P	12 44 41.7	-1.1
	comp=Z,1.5nm,0.7s,mb4.0,baz=35,slow=6.3,SNR=5.0						

*CSEM **15** 13:01:30.8±0.1, 37.10N×54.49E, h12^{km}, ML3.5, Error ellipse: s-maj=5.8km s-min=1.8km az=159.0*

*ISCJB **15** 13:01:31.9±1.4, 3704N±008×5456E±006, h10^{km}±9^{km}, Error ellipse: s-maj=14.9km s-min=5.9km az=131.3*

*THR **15** 13:01:32.1±0.6, 3663N×5457E, h14^{km}±9^{km}, ML3.5*

*TEH **15** 13:01:32.2, 3709N×5450E, h2^{km}, Mn3.7*

ISC 15 13:01:32.8±1.5**, 3709N**±008×**5452E**±006**, h11**^{km}±10^{km}**, n23, σ0§73**/30**, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IKIA	Kiasar	1.11	218	eSg	Sg	13 02 09.0	+0.4
ISHM	Shahmirzad	1.62	218	ePn	Pn	13 02 01.4	+0.1
ISHM				eSn	Sn	13 02 23.2	+1.0
IANJ	Anjiloo	1.69	197	ePn	Pn	13 02 02.2	-0.1
IFIR	Firoozkooh	2.03	225	ePn	Pn	13 02 06.8	-0.2
IFIR				eSn	Sn	13 02 33.6	+1.3
ILAS	Lasjerd	2.12	217	ePn	Pn	13 02 08.5	+0.3
IDMV	Damavand	2.51	234	ePn	Pn	13 02 13.8	+0.2
IDMV	Damavand	2.51	234	ePg	Pn	13 02 15.3	+1.7
DAMV	Damavand	2.52	235	ePg	Pn	13 02 14.2	+0.5
DAMV				eSG	Sn	13 02 45.4	+1.0
DAMV				AML	AML	13 02 52.5	
	comp=E,251nm,0.6s						
DAMV				AML	AML	13 03 00.9	
	comp=N,206nm,0.4s						
DAMV	Damavand	2.52	235	ePg	Pn	13 02 14.2	+0.5
	SNR=90						
DAMV				eSg	Sn	13 02 45.4	+1.0
	SNR=90						
ISHV	Shirvan	2.57	79	ePn	Pn	13 02 14.9	+0.5
IAFJ	Afjeh	2.58	242	ePn	Pn	13 02 14.8	+0.3
IAFJ				eSn	Sn	13 02 45.1	-0.7
ISFR	Esferayen	2.78	90	ePn	Pn	13 02 17.9	+0.6
CHTH	Charan	2.98	248	ePN	Pn	13 02 19.8	-0.2
IVRN	Varamin	3.08	228	ePn	Pn	13 02 20.8	-0.6
THKV	Tehran--Karaj	3.16	249	ePN	Pn	13 02 22.2	-0.3
THKV				eSG	Sb	13 03 07.9	+0.4
THKV				AML	AML	13 03 13.4	
	comp=N,178nm,0.4s						
THKV				AML	AML	13 03 15.2	
	comp=E,135nm,0.5s						
ISFB	Sefidab	3.30	215	ePg	Pn	13 02 23.2	-1.3
ISFB	Sefidab	3.30	215	ePn	Pn	13 02 23.6	-0.9
ISFB				eSn	Sn	13 03 02.0	-1.7
ASAO	Ashtian	4.45	237	ePn	Pn	13 02 39.0	-1.2
IKLH	Kalahroud	4.47	213	ePn	Pn	13 02 40.0	-0.5
IMYA	Miamay	4.55	98	ePn	Pn	13 02 41.5	-0.1
IPIR	Pirpir	5.31	215	ePn	Pn	13 02 51.4	-0.7
IMEH	Mehriz	5.69	179	ePn	Pn	13 02 57.7	+0.5
IPAR	Pars	7.33	190	ePn	Pn	13 03 19.4	-0.4

*CSEM **15** 13:03:28.6±0.9, 3874N×2896W, h6^{km}±6^{km}, ML1.4, Error ellipse: s-maj=11.1km s-min=5.6km az=70.0, After PDA*

*PDA **15** 13:03:28.6±0.9, 3874N×2896W, h6^{km}±6^{km}, MD3.0, ML1.4, Error ellipse: s-maj=11.1km s-min=5.6km az=70.0*

SVSA 15 13:03:28.6±0.9**, 3874N**×**2896W, h6**^{km}±6^{km}**, MD3.0, ML1.4, Error ellipse: s-maj=11.1km s-min=5.6km az=70.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CALA	Caldeira	0.25	127	eP	Pg	13 03 33.5	-0.1
CALA				eS	Sg	13 03 36.8	-0.1
PCND	Candelaria	0.47	124	eS	Sg	13 03 42.8	-1.0
PCND							
	16nm,0.1s						
PICO	Pico	0.48	119	eP	Pg	13 03 36.9	-0.9
PICO				eS	Sg	13 03 43.5	-0.6
PTEI	Pico do Teixo	0.53	117	eS	Sg	13 03 44.2	-1.5
PTEI							
	9.1nm,0.1s						
ROSA	Rosais	0.56	91	eP	Pg	13 03 37.9	-1.5
ROSA				eS	Sg	13 03 45.3	-1.4

MAN 15 13:20:16.3, 1350N×**12154E, h3**^{km}**, mb2.1, ML3.8, MS2.7, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.57	270	eP	Pg	13 20 27.8	+0.6

*CSEM **15** 13:33:12.1±0.9, 3874N×29.14W, h3^{km}±6^{km}, ML2.5, Error ellipse: s-maj=10.9km s-min=6.0km az=55.0, After PDA*

*PDA **15** 13:33:12.1±0.9, 3874N×29.14W, h3^{km}±6^{km}, MD3.0, ML2.5, Error ellipse: s-maj=10.9km s-min=6.0km az=55.0*

SVSA 15 13:33:12.1±0.9**, 3874N**×**2914W, h3**^{km}±6^{km}**, MD3.0, ML2.5, Error ellipse: s-maj=10.9km s-min=6.0km az=55.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CALA	Caldeira	0.38	115	eS	Sg	13 33 24.1	-0.1
HOR	Horta	0.45	118	eP	Pg	13 33 20.1	-0.7
HOR				eS	Sg	13 33 25.9	-0.7
PCND	Candelaria	0.59	117	eS	Sg	13 33 30.1	-1.1
PCND							
	118nm,0.1s						
PICO	Pico	0.61	113	eP	Pg	13 33 22.9	-0.9
PICO				eS	Sg	13 33 30.7	-0.9
PTEI	Pico do Teixo	0.66	111	eS	Sg	13 33 31.6	-1.7
PTEI							
	127nm,0.4s						
PBOI	Pico dos Bois	0.67	117	eS	Sg	13 33 32.3	-1.4
PBOI							
	110nm,0.2s						
ROSA	Rosais	0.70	91	eP	Pg	13 33 23.6	-2.0
ROSA				eS	Sg	13 33 32.6	-2.1
PAMA	Santo Amaro	0.75	94	eS	Sg	13 33 34.4	-1.9
PAMA							
	88nm,0.1s						

*CSEM **15** 13:34:17.1±1.0, 3875N×2900W, h5^{km}±7^{km}, ML1.5, Error ellipse: s-maj=10.5km s-min=5.6km az=69.0, After PDA*

*PDA **15** 13:34:17.1±1.0, 3875N×2900W, h5^{km}±7^{km}, MD2.9, ML1.5, Error ellipse: s-maj=10.5km s-min=5.6km az=69.0*

SVSA 15 13:34:17.1±1.0**, 3875N**×**2900W, h5**^{km}±7^{km}**, MD2.9, ML1.5, Error ellipse: s-maj=10.5km s-min=5.6km az=69.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CALA	Caldeira	0.29	126	eS	Sg	13 34 26.6	0.0
HOR	Horta	0.37	128	eP	Pg	13 34 23.5	-0.7
HOR				eS	Sg	13 34 28.4	-0.7
PCND	Candelaria	0.51	124	eS	Sg	13 34 32.5	-1.0
PCND							
	24nm,0.1s						
PICO	Pico	0.52	119	eP	Pg	13 34 26.5	-0.6
PICO				eS	Sg	13 34 32.8	-1.0
PTEI	Pico do Teixo	0.57	117	eS	Sg	13 34 34.7	-0.7
PTEI							
	9.4nm,0.1s						
ROSA	Rosais	0.60	93	eP	Pg	13 34 27.1	-1.4
ROSA				eS	Sg	13 34 34.6	-1.7

*CSEM **15** 13:34:44.0±1.2, 3870N×2900W, h4^{km}±6^{km}, ML2.5, Error ellipse: s-maj=8.5km s-min=4.5km az=71.0, After PDA*

*PDA **15** 13:34:44.0±1.2, 3870N×2900W, h4^{km}±6^{km}, MD3.0, ML2.5, Error ellipse: s-maj=8.5km s-min=4.5km az=71.0*

SVSA 15 13:34:44.0±1.2**, 3870N**×**2900W, h4**^{km}±6^{km}**, MD3.0, ML2.5, Error ellipse: s-maj=8.5km s-min=4.5km az=71.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CALA	Caldeira	0.26	118	eP	Pg	13 34 48.9	-0.1
PLUZ	Luz	0.31	3	eS	Sg	13 35 08.1	+14
PLUZ							
	36nm,0.2s						
HOR	Horta	0.34	121	eP	Pg	13 34 50.0	-0.5
HOR				eS	Sg	13 34 54.7	-0.2
PCND	Candelaria	0.48	119	eP	Pg	13 34 52.3	-0.9
PCND				eS	Sg	13 34 58.7	-0.7
PCND							
	304nm,0.1s						
PICO	Pico	0.49	114	eP	Pg	13 34 52.9	-0.5
PICO				eS	Sg	13 34 59.4	-0.4
PTEI	Pico do Teixo	0.54	112	eP	Pg	13 34 53.3	-1.1
PTEI				eS	Sg	13 35 00.3	-1.2
PTEI							
	294nm,0.3s						
PBOI	Pico dos Bois	0.56	119	eP	Pg	13 34 53.8	-0.9
PBOI				eS	Sg	13 35 00.9	-1.0
PBOI							
	163nm,0.1s						
ROSA	Rosais	0.59	88	eP	Pg	13 34 54.0	-1.3
ROSA				eS	Sg	13 35 01.2	-1.8
PAMA	Santo Amaro	0.64	92	i S	Sg	13 35 03.1	-1.5
PAMA							
	282nm,0.2s						
PMAN	Manadas	0.71	95	eP	Pg	13 34 55.6	-2.1
PMAN				eS	Sg	13 35 04.5	-2.5
PMAN							
	251nm,0.2s						
PMAN	Manadas	0.71	95	eP	Pg	13 34 55.6	-2.1
PMAN				eS	Sg	13 35 04.5	-2.5
PID	Ribeirinha	0.73	110	eP	Pg	13 34 56.1	-2.0
PID				eS	Sg	13 35 05.1	-2.5
PIED	Piedade	0.79	111	eP	Pg	13 34 57.2	-2.0
SRBC	Serra Branca	0.82	66	erx		13 35 01.2	
PVIA	Vitoria	0.82	63	eS	Sg	13 35 07.2	-3.3
PVIA							
	16nm,0.1s						
STGR	Santa Cruz	0.86	64	eS	Sg	13 35 08.7	-3.0
STGR							
	79nm,0.1s						
ASBA	Santa Barbara	1.31	89	erx		13 35 23.1	
PPAD	Pico dos Padre	1.34	90	eS	Sg	13 35 19.9	-7.1
PPAD							
	21nm,0.2s						
PBIS	Biscoitos	1.36	87	eS	Sg	13 35 20.7	-7.2
PVNV	Vila Nova	1.44	87	eS	Sb	13 35 23.0	-7.1
PVNV							
	12nm,0.1s						
PFAV	Pico das Favas	1.50	89	eS	Sn	13 35 24.3	-7.3
PFAV							
	21nm,0.2s						

NEIC 15 13:38:32.7, 5107N×**17924E, h18**^{km}**, ML3.6**(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.31	7	P	Pg	13 38 40.1	+0.6
AMKA				ePg	Pg	13 38 40.2	+0.7
AMKA				eSg	Sg	13 38 45.6	+1.5
SMY	Shemya	3.59	300	P	Pn	13 39 28.5	+1.1
ATKA	Atka Island	4.25	72	P	Pn	13 39 36.8	+0.4
IMA2	Indian Mountai	20.36	32	eP	P	13 43 07.2	-0.9

IDC 15 13:45:51.5±2.1**, 1834N**×**14800E, h0**^{km}**, mb3.6**/6**, mb1 3.8**/7**, mb1mx3.7**/18**, mbtmp3.7**/7**, ML4.1**/1**, Error ellipse: s-maj=86.5km s-min=20.5km az=93.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.60	213	Pn	Pn	13 47 14.8	-1.3
	5.1nm,0.3s,baz=26,slow=23,SNR=2.5						
GUMO				Sn	Sn	13 48 14.4	-6.7
	4.3nm,0.3s,baz=171,slow=22,SNR=2.3						
WRA	Warramunga Arr	40.34	200	P	P	13 53 31.1	+0.4
	0.3nm,0.4s,baz=27,slow=8.7,SNR=10						
FITZ	Fitzroy Crossi	42.36	212	P	P	13 53 46.4	-1.0
	1.2nm,0.9s,baz=261,slow=12,SNR=7.9						
ASAR	Alice Springs	43.96	199	P	P	13 54 01.9	+1.6
	0.2nm,0.4s,baz=21,slow=7.4,SNR=8.0						
SONM	Songino Array	44.80	321	P	P	13 54 07.2	+0.2
	0.2nm,0.4s,baz=144,slow=10,SNR=3.4						
ARCES	ARCESS Array B	83.49	343	P	P	13 58 20.1	-1.0
	0.3nm,0.5s,baz=202,slow=36,SNR=3.2						
JOF	Joensuu	85.25	336	ep	P	13 58 30.8	+0.7
	0.5nm,0.4s						
FINES	FINESS Array B	88.11	336	P	P	13 58 44.7	+0.7
	0.7nm,0.7s,baz=77,slow=6.3,SNR=3.7						

*NNC **15** 14:42:33.7±2.0, 44.19N×74.66E, h0^{km}, mb2.6, mpv2.4, Error ellipse: s-maj=17.6km s-min=11.1km az=21.0*

*ISCJB **15** 14:42:34.0±0.8, 4428N±005×7468E±006, h10^{km}, Error ellipse: s-maj=7.8km s-min=5.6km az=106.5*

*KNET **15** 14:42:35.0±0.6, 44.11N×74.62E, h12^{km}±2^{km}, ml1.9, Error ellipse: s-maj=3.6km s-min=2.6km az=10.0*

ISC 15 14:42:35.3±0.8**, 4420N**±005×**7463E**±006**, h10**^{km}**, n9, σ1§13**/17**, 13C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
USP	Ospenovka	0.94	186	⇑P	Pg	14 42 51.2	-2.2
	8.9nm,0.2s,SNR=9.1						
USP				⇓S	Sg	14 43 04.1	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	13nm,0.2s						
TKM2	Tokmak 2	1.46	151	⇑P	Pn	14 43 01.3	-0.5
	11nm,0.3s,SNR=20						
TKM2				⇑S	Sn	14 43 21.0	+0.1
	11nm,0.1s						
TKM2	Tokmak 2	1.46	151	⇑P	Pn	14 43 00.5	-1.3
	0.5nm,0.5s						
TKM2				⇑S	Sn	14 43 20.4	-0.5
	0.5nm,0.4s						
KBK	Karagaybulak	1.56	171	⇑P	Pn	14 43 03.1	-0.1
	9.5nm,0.2s,SNR=10						
KBK				⇑S	Sn	14 43 24.8	+1.4
	20nm,0.2s						
EKS2	Erkin-Say	1.66	202	⇓P	Pn	14 43 04.1	-0.4
	6.5nm,0.2s,SNR=34						
EKS2				⇓S	Sn	14 43 26.8	+1.0
	15nm,0.2s						
AML	Almayashu	2.18	199	P	Pn	14 43 13.3	+1.6
	9.8nm,0.2s,SNR=5.9						
AML				⇑S	Sn	14 43 42.9	+4.2
	21nm,0.4s						
ULHL	Ulahol	2.28	148	P	Pn	14 43 15.1	+2.0
	SNR=11						
KK31	Karatay Array	3.19	251	⇑Pg	Pb	14 43 32.3	+0.3
	1.3nm,0.4s,baz=67,slow=17,SNR=13						
KK31				⇑Sn	Sb	14 44 10.3	-0.6
	1.3nm,0.5s						
KK31				⇑Lg		14 44 16.2	
	1.6nm,0.5s,baz=109,slow=53,SNR=7.9						
MK09	Makanchi Array	5.96	62	⇑Pn	Pn	14 44 03.3	-0.2
	0.3nm,0.5s,baz=241,slow=13						
MK09				⇑Sn	Sn	14 45 11.5	-0.4
	0.7nm,0.6s,baz=240,slow=25						
MK09				⇓Lg		14 45 46.3	
	0.8nm,0.7s,baz=240,slow=29						

*NEIC **15** 14:44:46.4±0.5, 33°68S×179°02W, h10km, mb4.9/12, Error ellipse: s-maj=12.6km s-min=7.6km az=119.0*
*HRVD **15** 14:44:46.4±0.4, 33°76S×179°17W, h12km±6km, MW5.2/54, Centroid moment Tensor Solution. LP body waves: s18,c21;Mantle waves: s54,c75; Half duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr-0.64±.18; Mθθ-0.07±.14; Mφφ0.70±.16; Mrθ-2.11±1.34; Mθφ0.42±.14; Mφr-6.84±4.23; Best double couple: M0 7.19900×10^16 NP1:φs217.00000°,δ3.00000°,λ-71.00000°. NP2: φs17.00000°,δ87.00000°,λ-91.00000°. Principal axes: T 7.3190, Plg42.0000°, Azm108.0000°; N -0.2390, Plg1.0000°, Azm17.0000°; P -7.0800, Plg48.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **15** 14:44:52.0±2.8, 33°67S×179°66W, h33km, mb5.1/7 Error ellipse: s-maj=17.0km s-min=12.8km az=101.9*
*ISCJB **15** 14:44:53.4±0.9, 34°27S±0°04×179°37W±0°07, h74km±7km, mb4.7/19, Error ellipse: s-maj=10.4km s-min=6.9km az=30.6*
*IDC **15** 14:44:57.1±2.7, 33°70S×179°28W, h89km±23km, mb4.2/10, mb1 4.3/10, mb1mx4.3/14, mbtmp4.5/10, MS4.4/23, Ms1 4.4/23, ms1mx4.3/33, Error ellipse: s-maj=19.8km s-min=14.4km az=18.0*

ISC 15 14:44:52.1±1.0, 34°07S±0°05×179°33W±0°08, h44km±8km, n166, σ1s51/146, mb4.8/19, MS4.5/21, 1C-2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.98	208	eP	Pn	14 45 52.3	+1.6
MXZ	Matakaoa Point	3.98	208	PN	Pn	14 45 52.2	+1.6
MXZ				SN	Sn	14 46 41.5	+5.4
PUZ	Puketiti	4.45	205	eP	Pn	14 45 58.7	+1.6
PUZ	Puketiti	4.45	205	PN	Pn	14 45 58.6	+1.6
PUZ				SN	Sn	14 46 53.5	+5.9
KUZ	Kuaotunu	4.85	235	eP	Pn	14 46 06.9	+4.4
KUZ	Kuaotunu	4.85	235	PN	Pn	14 46 06.6	+4.1
RAO	Raoul Island	4.95	14	P	Pn	14 45 56.8	-7.1
	99nm,0.3s,baz=108,slow=18,SNR=5.3						
RAO				S	Sn	14 46 53.7	-6.1
	104nm,0.3s,baz=89,slow=22,SNR=3.4						
RAO	Raoul Island	4.95	14	ePn	Pn	14 45 56.8	-7.1
RAO				eSn	Sn	14 46 51.7	-8.1
MWZ	Matawai	4.96	210	eP	Pn	14 46 06.0	+1.9
MWZ	Matawai	4.96	210	PN	Pn	14 46 05.0	+0.9
MWZ				SN	Sn	14 47 07.5	+7.4
MARZ	Manawahe	5.08	219	P	Pn	14 46 09.0	+3.3
MARZ	Manawahe	5.08	219	PN	Pn	14 46 08.6	+2.9
URZ	Urewera	5.08	214	P	Pn	14 46 09.3	+3.5
	22nm,0.3s,baz=32,slow=4.9,SNR=100						
URZ				S	Sn	14 47 09.4	+6.3
	67nm,0.3s,baz=139,slow=20,SNR=6.5						
URZ	Urewera	5.08	214	eP	Pn	14 46 07.5	+1.8
URZ	Urewera	5.08	214	PN	Pn	14 46 06.7	+1.0
URZ				SN	Sn	14 47 06.0	+2.9
TGRZ	Tauranga	5.12	223	P	Pn	14 46 09.7	+3.5
TGRZ	Tauranga	5.12	223	PN	Pn	14 46 09.7	+3.5
EDRZ	Edgecumbe	5.14	217	SN	Sn	14 47 13.5	+9.0
OTAZ	Otara	5.50	237	PN	Pn	14 46 17.2	+5.8
KNZ	Kokohu	5.50	205	eP	Pn	14 46 12.6	+1.1
KNZ	Kokohu	5.50	205	PN	Pn	14 46 12.1	+0.6
WCZ	Waipu Caves	5.52	248	eP	Pn	14 46 15.9	+4.1
WCZ	Waipu Caves	5.52	248	PN	Pn	14 46 15.9	+4.2
KAAZ	Kauri Point	5.60	239	P	Pn	14 46 18.8	+6.0
KAAZ	Kauri Point	5.60	239	PN	Pn	14 46 18.8	+6.0
WTAZ	Waiatarua	5.74	238	eP	Pn	14 46 20.5	+5.8
WTAZ	Waiatarua	5.74	238	PN	Pn	14 46 20.6	+5.8
OUZ	Omahuta	5.95	257	eP	Pn	14 46 20.8	+3.2
OUZ	Omahuta	5.95	257	PN	Pn	14 46 20.8	+3.2
OUZ				SN	Sn	14 47 26.8	+2.4
BKZ	Black Stump Fm	6.10	212	eP	Pn	14 46 20.5	+0.8
BKZ	Black Stump Fm	6.10	212	PN	Pn	14 46 20.2	+0.5
HIZ	Hauiti	6.46	225	P	Pn	14 46 29.0	+4.3
HIZ	Hauiti	6.46	225	PN	Pn	14 46 26.9	+2.2
OTVZ	Oturere	6.49	217	PN	Pn	14 46 26.8	+1.7
NGZ	Ngauruhoe	6.53	217	P	Pn	14 46 28.5	+2.9
MOVZ	Moawhango	6.63	215	P	Pn	14 46 28.2	+1.2
PXZ	Pawanui	6.69	206	PN	Pn	14 46 27.2	-0.6
PXZ				SN	Sn	14 47 42.2	-0.5
TSZ	Takapari Road	7.07	211	P	Pn	14 46 32.9	-0.1
TSZ	Takapari Road	7.07	211	PN	Pn	14 46 32.9	-0.1
TSZ				SN	Sn	14 47 53.1	+1.1
WAZ	Wanganui	7.28	217	eP	Pn	14 46 38.0	+2.1
WAZ	Wanganui	7.28	217	PN	Pn	14 46 37.7	+1.8
BFZ	Birch Farm	7.48	207	eP	Pn	14 46 37.1	-1.6
BFZ	Birch Farm	7.48	207	PN	Pn	14 46 37.0	-1.6
TIWZ	Tintock	7.71	208	eSN	Sn	14 48 07.6	0.0
MRZ	Mangatainoka R	7.73	210	P	Pn	14 46 41.0	-1.1
MRZ				S	Sn	14 48 07.5	-0.8
MRZ	Mangatainoka R	7.73	210	ePN	Pn	14 46 40.5	-1.6
MRZ				SN	Sn	14 48 06.6	-1.7
MTW	Mount Morrison	8.18	209	PN	Pn	14 46 46.4	-1.8
MTW				SN	Sn	14 48 17.5	-1.9
KIW	Kapiti Island	8.18	212	P	Pn	14 46 46.6	-1.7
KIW				S	Sn	14 48 20.2	+0.8
KIW	Kapiti Island	8.18	212	PN	Pn	14 46 46.6	-1.7
KIW				eSN	Sn	14 48 16.2	-3.2
CAW	Cannon Point	8.32	211	P	Pn	14 46 48.7	-1.4
CAW	Cannon Point	8.32	211	PN	Pn	14 46 48.5	-1.6
CAW				SN	Sn	14 48 21.5	-1.2
MRW	Makara Radio	8.57	212	P	Pn	14 46 54.3	+0.7
SNZO	South Karori	8.64	211	ePn	Pn	14 46 54.2	-0.3
TCW	Tory Channel	8.75	214	P	Pn	14 46 56.2	+0.1
TUWZ	Tuamarina	9.08	214	PN	Pn	14 46 59.2	-1.3
TUWZ				SN	Sn	14 48 39.2	-2.1
NNZ	Nelson	9.19	217	eP	Pn	14 47 00.5	-1.5
NNZ	Nelson	9.19	217	PN	Pn	14 47 00.2	-1.8
NNZ				SN	Sn	14 48 42.8	-1.1
BSWZ	Blackbirch Sta	9.33	213	P	Pn	14 47 03.8	-0.2
QRZ	Quartz Range	9.35	221	eP	Pn	14 47 02.6	-1.6
QRZ	Quartz Range	9.35	221	PN	Pn	14 47 01.5	-2.7
QRZ				SN	Sn	14 48 47.1	-0.9
THZ	Tophouse	9.83	216	eP	Pn	14 47 07.8	-3.0
THZ	Tophouse	9.83	216	PN	Pn	14 47 07.8	-3.1
THZ				SN	Sn	14 48 57.6	-2.2
KHZ	Kahutara	10.04	212	eP	Pn	14 47 12.8	-1.0
KHZ	Kahutara	10.04	212	PN	Pn	14 47 12.8	-1.0
DSZ	Denniston Nort	10.38	220	PN	Pn	14 47 14.6	-3.8
LTZ	Lake Taylor	10.91	215	eP	Pn	14 47 21.3	-4.3
LTZ	Lake Taylor	10.91	215	PN	Pn	14 47 21.3	-4.3
RPZ	Rata Peaks	12.20	215	P	Pn	14 47 39.6	-3.6
	2.8nm,0.3s,baz=114,slow=0.3,SNR=10						
RPZ				S	Sn	14 49 51.2	-6.5
	3.3nm,0.3s,baz=0.6,slow=21,SNR=9.0						
RPZ				LR	LR	14 52 58.6	
	comp=Z,1µm,18.3s,baz=46,slow=38						
RPZ	Rata Peaks	12.20	215	P	Pn	14 47 39.6	-3.6
RPZ				S	Sn	14 49 51.2	-6.5
RPZ				LR	LR	14 52 58.6	
ODZ	Otahua Downs	13.41	212	eP	Pn	14 47 54.6	-5.1
DZM	Mont Dzumac	17.31	310	S	S	14 52 00.9	-8.4
	0.5nm,0.3s,baz=304,slow=20,SNR=3.6						
DZM				LR	LR	14 54 12.0	
	comp=Z,3µm,19.3s,baz=156,slow=32						
RAR	Rarotonga	21.49	58	LR	LR	14 55 49.4	
	comp=Z,729nm,18.6s,MS4.1,baz=233,slow=31						
ARMA	Armidale	24.80	270	eP	P	14 50 13.7	+3.8
TBI	Tubuai	28.19	76	eLR	LR	14 57 33.2	
	2µm,27.8s,baz=240						
HNR	Honiara	31.04	317	P	P	14 51 04.3	-1.4
	92nm,0.7s,mb5.7,baz=258,slow=3.5,SNR=7.1						
HNR				LR	LR	15 01 20.3	
	comp=Z,524nm,21.4s,MS4.2,baz=179,slow=32						
HNR	Honiara	31.04	317	eP	P	14 51 03.2	-2.5
HNR				pmax	pmax		
	comp=Z,85nm,0.9s,mb5.6						
HNR	Honiara	31.04	317	eP	P	14 51 03.2	-2.5
	comp=Z,85nm,0.9s,mb5.6						
PPT	Papeete	31.26	66	eLR	LR	14 58 54.7	
	comp=Z,2µm,26.5s,baz=230						
PPT	Papeete	31.26	66	LR	LR	15 00 12.5	
	comp=Z,648nm,18.9s,MS4.3,baz=220,slow=30						
STKA	Stephens Creek	32.73	263	eP	P	14 51 21.6	+1.1
	comp=Z,5.7nm,1.5s,mb4.3						
STKA	Stephens Creek	32.73	263	P	P	14 51 22.0	+1.5
	comp=Z,7.5nm,1.1s,mb4.5,baz=107,slow=18,SNR=6.8						
STKA				LR	LR	15 04 13.0	
	comp=Z,1µm,18.2s,MS4.7,baz=279,slow=35						
CTA	Charters Tower	33.49	286	eP	P	14 51 28.0	+0.8
	comp=Z,11nm,0.6s,mb5.0						
CTA	Charters Tower	33.49	286	P	P	14 51 28.4	+1.2
	comp=Z,15nm,0.8s,mb5.0,baz=114,slow=11,SNR=18						
CTA				LR	LR	15 04 23.3	
	comp=Z,461nm,18.3s,MS4.2,baz=138,slow=35						
CTA	Charters Tower	33.49	286	eP	P	14 51 28.0	+0.8
CTA				pmax	pmax		
	comp=Z,11nm,0.6s						
CTAO	Charters Tower	33.49	286	eP	P	14 51 27.9	+0.7
CTAO				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
CTAO	Charters Tower	33.49	286	eP	P	14 51 27.9	+0.7
	comp=Z,21nm,0.9s,mb5.1						
PMG	Port Moresby	39.34	301	P	P	14 52 17.0	0.0
	comp=Z,17nm,0.7s,mb4.9,baz=197,slow=3.8,SNR=6.5						
PMG				LR	LR	15 06 10.2	
	comp=Z,1µm,19.7s,MS4.7,baz=104,slow=32						
PMG	Port Moresby	39.34	301	eP	P	14 52 15.7	-1.3
RKT	Rikitea	40.17	86	eLR	LR	15 03 10.7	
	comp=Z,2µm,27.0s,baz=246						
AS31	Alice Springs	41.94	272	eP	P	14 52 38.5	0.0
AS31				eS	S	14 58 50.7	-3.1
ASAR	Alice Springs	41.94	272	P	P	14 52 39.1	+0.7
	comp=Z,7.9nm,0.8s,mb4.4,baz=112,slow=6.9,SNR=66						
ASAR				S	S	14 58 53.6	-0.2
	comp=Z,1.3nm,1.0s,baz=115,slow=14,SNR=5.1						
ASAR				LR	LR	15 08 50.8	
	comp=Z,792nm,19.1s,MS4.6,baz=167,slow=34						
ASAR	Alice Springs	41.94	272	P	P	14 52 39.2	+0.7
ASAR				S	S	14 58 53.6	-0.2
ASPA	Alice Springs	41.94	272	eP	P	14 52 38.5	0.0
ASPA				eS	S	14 58 50.7	-3.2
WB2	Warramunga Arr	43.25	277	eP	P	14 52 48.8	-0.3
WB2				eS	S	14 59 09.8	-3.3
WRAB	Tennant Creek	43.26	277	eP	P	14 52 47.7	-1.5
WRAB	Tennant Creek	43.26	277	eP	P	14 52 48.6	-0.5
	comp=Z,18nm,0.8s,mb4.9						
WRA	Warramunga Arr	43.26	277	P	P	14 52 48.9	-0.3
	comp=Z,15nm,0.8s,mb4.8,baz=115,slow=8.5,SNR=144						
WRA				S	S	14 59 09.8	-3.5
	comp=Z,2.2nm,1.0s,baz=113,slow=15,SNR=6.0						
WRA				LR	LR	15 09 55.5	
	comp=Z,495nm,20.5s,MS4.4,baz=105,slow=35						
WRA	Warramunga Arr	43.26	277	P	P	14 52 48.9	-0.3
WRA				S	S	14 59 09.8	-3.5
TAOE	Nuku Hiva Isla	43.85	64	eLR	LR	15 04 44.9	
	comp=Z,2µm,25.1s						
FORT	Forrest	44.13	259	eP	P	14 52 56.9	+0.6
	comp=Z,20nm,0.7s,mb5.0						
SBA	Scott Base	44.31	184	eP	P	14 53 02.5	+4.9
SBA				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
SBA	Scott Base	44.31	184	eP	P	14 53 02.5	+4.9
	comp=Z,15nm,1.1s,mb4.6						
VNDA	Vanda	44.34	186	P	P	14 53 01.9	+3.9
	comp=Z,0.9nm,0.8s,baz=8.8,slow=9.5,SNR=5.2						
VNDA				LR	LR	15 07 42.1	
	comp=Z,197nm,20.2s,baz=25,slow=30						
VNDA	Vanda	44.34	186	eP	P	14 53 01.9	+4.0
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNDA	Vanda	44.34	186	eP	P	14 53 01.9	+4.0
	comp=Z,3.8nm,1.0s,mb4.1						
KAKA	Kakadu	48.59	284	eP	P	14 53 30.5	-0.7
	comp=Z,4.7nm,0.4s,mb4.9						
FITZ	Fitzroy Crossi	51.34	273	eP	P	14 53 50.9	-1.2
	comp=Z,10nm,0.8s,mb4.8						
FITZ	Fitzroy Crossi	51.34	273	P	P	14 53 52.3	+0.2
	comp=Z,7.3nm,0.8s,mb4.6,baz=119,slow=13,SNR=21						
FITZ				LR	LR	15 15 28.6	
	comp=Z,712nm,18.0s,MS4.7,baz=114,slow=36						
CASY	Casey	51.39	209	eP	P	14 53 52.9	+0.5
NWAO	Narrogin (SRO)	52.13	252	LR	LR	15 12 11.3	
	comp=Z,338nm,19.3s,MS4.4,baz=56,slow=31						
QSPA	South Pole Qui	56.05	180	eP	P	14 54 29.6	+3.0
	comp=Z,17nm,0.9s,mb5.1						
MIR	Mirnyy	58.36	208	eP	P	14 54 45.0	+2.1
MIR				pmax	pmax		
	comp=Z,200nm,1.2s						
GUMO	Guam	58.37	318	LR	LR	15 15 05.4	
	comp=Z,244nm,20.6s,MS4.3,baz=156,slow=31						
RPN	Rapa Nui	59.60	104	LR	LR	15 13 49.9	
	comp=Z,396nm,18.8s,MS4.6,baz=185,slow=29						
MAW	Mawson	68.49	201	eP	P	14 55 51.7	+1.9
	comp=Z,8.2nm,0.9s,mb4.8						
MAW	Mawson	68.49	201	P	P	14 55 51.0	+1.2
	comp=Z,3.3nm,0.6s,mb4.6,baz=125,slow=8.0,SNR=22						
MAW				LR	LR	15 24 39.5	
	comp=Z,259nm,19.9s,MS4.5,baz=307,slow=35						
MAW	Mawson	68.49	201	eP	P	14 55 51.7	+1.9
MAW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PMSA	Palmer Station	69.40	156	LR	LR	15 20 15.5	
	comp=Z,182nm,19.6s,MS4.3,baz=238,slow=30						
SYO	Syowa Base	73.30	194	⇓eP	P	14 56 20.0	+1.0
USHA	Ushuaia	73.53	146	LR	LR	15 20 01.0	
	comp=Z,472nm,18.8s,MS4.8,baz=200,slow=28						
SNAA	Sanae	74.53	179	LR	LR	15 25 11.3	
	comp=Z,94nm,20.4s,MS4.1,baz=205,slow=32						
SNAA	Sanae	74.53	179	eP	P	14 56 27.4	+1.2
SNAA				e		14 56 30.1	
SNAA				e		14 56 33.4	
SNAA				e	pP	14 56 40.7	+1.6
SNAA				e		14 56 43.3	
SNAA				e		14 56 46.5	
SNAA				e		14 56 55.3	
SNAA				e		14 57 06.7	
SNAA	Sanae	74.53	179	eP	P	14 56 26.5	+0.3
SNAA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SNAA	Sanae	74.53	179	eP	P	14 56 26.5	+0.3
	comp=Z,10nm,0.8s,mb4.8						
VNA1	Neumayer--Stat	75.38	177	eP	P	14 56 34.1	+3.0
VNA1				e		14 56 37.0	
VNA1				e	pP	14 56 46.4	+2.4
VNA1				e		14 56 52.3	
VNA1				e		14 57 09.1	
JHJ	Hachijo jima 2	77.09	326	LR	LR	15 28 57.3	
	comp=Z,238nm,19.4s,MS4.5,baz=327,slow=34						
MJAR	Matsushiro Arr	80.64	327	P	P	14 56 57.6	-2.6
	comp=Z,2.0nm,0.9s,mb4.0,baz=165,slow=5.9,SNR=4.4						
ASAJ	Asahikawa	85.19	334	LR	LR	15 28 36.5	
	comp=Z,311nm,20.8s,MS4.7,baz=162,slow=31						
YSS	Yuzh-Sakhalins	87.57	335	eP	P	14 57 36.1	+0.6
YSS				pmax	pmax		
	comp=Z,24nm,2.5s,mb5.0						
PET	Petropavlovsk	88.82	347	eP	P	14 57 46.2	+4.8
PET				pmax	pmax		
	comp=Z,25nm,1.7s,mb5.3						
NVAR	Mina Array Bea	91.68	43	P	P	14 57 52.5	-2.2
	comp=Z,1.0nm,0.9s,mb4.2,baz=205,slow=5.8,SNR=6.6						
CPUP	Villa Florida	98.56	130	LR	LR	15 34 48.0	
	comp=Z,318nm,21.9s,MS4.8,baz=211,slow=30						
PDAR	Pinedale Array	99.54	44	LR	LR	15 37 40.2	
	comp=Z,170nm,18.9s,MS4.6,baz=239,slow=32						
KURK	Kurchatov	122.72	312	⇑iPKIKP	PKPdf	15 03 39.7	-3.4
KURK	Kurchatov	122.72	312	ePKPdf	PKPdf	15 03 40.8	-2.3
ARU	Arti	135.13	318	i PKIKP	PKPdf	15 04 05.7	-0.9
ARU				e		15 06 39.5	
ARCES	ARCESS Array B	141.90	346	PKhKP		15 04 15.3	
	comp=Z,3.5nm,0.9s,baz=56,slow=1.9,SNR=10						
KLMR	Klimovskoe	143.39	329	i PKIKP	PKPdf	15 04 24.3	+2.6
KLMR				e		15 07 36.2	
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
JOF	Joensuu	145.35	336	ep	PKPbc	15 04 21.0	-4.0
MOS	Moscow	146.62	322	ePKP2	PKPab	15 04 28.5	-1.5
VOR	Voronezh	147.19	314	PKP2	PKPab	15 04 30.0	-2.2
VOR				pmax	pmax		
	comp=Z,70nm,1.7s						
OBN	Obninsk	147.43	321	⇓iPKIKP	PKPdf	15 04 28.6	0.0
OBN				i		15 04 41.4	
OBN				pmax	pmax		
	comp=Z,41nm,2.2s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.7						
KAF	Kangasniemi	147.56	338	ep	PKPdf	15 04 28.8	0.0
	comp=Z,3.1nm,0.4s						
KAF	Kangasniemi	147.56	338	ePKIKP	PKPdf	15 04 28.8	0.0
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
FIA1	FINESS Array S	148.13	337	ePKPbc	PKPbc	15 04 31.2	-1.9
FINES	FINESS Array B	148.14	337	PKPbc	PKPbc	15 04 30.4	-2.7
	comp=Z,12nm,0.7s,baz=87,slow=4.0,SNR=27						
MALT	Malatya	149.38	289	PKP2	PKPbc	15 04 36.4	+0.2
LIC	Lamto	151.80	168	ePKIKP	PKPbc	15 04 44.6	+2.7
	comp=Z,24nm,0.6s						
NB2	NORSAR Subarra	152.16	349	PKPa	PKPdf	15 04 40.1	+4.0
	comp=Z,12nm,0.8s,baz=18,slow=2.6						
NOA	NORSAR Array B	152.16	349	PKPbc	PKPbc	15 04 40.7	-2.1
	comp=Z,5.5nm,0.8s,baz=19,slow=4.7,SNR=28						
NOA	NORSAR Array B	152.16	349	PKPbc	PKPbc	15 04 40.7	-2.1
DBIC	Dimbokro	152.26	168	PKPbc	PKPbc	15 04 43.6	+0.6
	comp=Z,5.4nm,0.6s,baz=188,slow=3.9,SNR=6.3						
NAO01	NORSAR Array S	152.40	349	ePKPbc	PKPbc	15 04 41.3	-2.0
BR131	Keskin Array S	153.13	292	PKPbc	PKPbc	15 04 44.7	-0.2
BRTR	Keskin Array B	153.13	292	PKPbc	PKPbc	15 04 42.7	-2.2
	comp=Z,2.1nm,0.7s,baz=139,slow=2.6,SNR=8.8						
BRTR				PKPab	PKPab	15 04 56.6	0.0
	comp=Z,4.0nm,0.8s,baz=132,slow=3.7,SNR=9.8						
AKASG	Malin Array Be	153.38	317	PKPbc	PKPbc	15 04 43.5	-2.0
	comp=Z,2.8nm,0.6s,baz=60,slow=2.6,SNR=15						
AKASG				PKPab	PKPab	15 04 56.2	-1.5
	comp=Z,3.7nm,0.8s,baz=56,slow=2.5,SNR=4.3						
AKASG	Malin Array Be	153.38	317	PKPbc	PKPbc	15 04 43.5	-2.0
AKASG				PKPab	PKPab	15 04 56.2	-1.5
TORD	Torodi Ar. Bea	159.15	183	PKP	PKPdf	15 04 47.2	+1.8
	comp=Z,1.3nm,1.0s,baz=246,slow=1.4,SNR=3.4						
TORD				PKPab	PKPab	15 05 22.3	-0.2
	comp=Z,2.1nm,0.9s,baz=188,slow=1.4,SNR=4.7						
CLL	Collm	160.58	336	ePKP2	PKPab	15 05 29.0	+0.3
BRG	Berggiesshubel	160.61	334	e(P)	PKPdf	15 04 49.0	+2.0
	comp=Z,3.9nm,1.3s						
BRG				e		15 05 39.5	
	comp=Z,4.9nm,1.2s						
BRG	Berggiesshubel	160.61	334	ePKIKP	PKPdf	15 04 49.0	+1.9
BRG				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KHC	Kasperske Hory	162.16	331	ePKPdf	PKPdf	15 04 50.0	+1.3
GERES	GERESS Array B	162.34	331	PKP	PKPdf	15 04 47.7	-1.1
	comp=Z,0.3nm,0.8s,baz=349,slow=1.0,SNR=3.8						
SSF	Saint Saulge	166.84	351	ePKIKP	pPKPdf	15 05 06.1	-0.4
TCF	Toulx Ste Croi	167.74	355	ePKIKP	pPKPdf	15 05 05.8	-1.4
ESDC	Sonseca Array	173.28	32	PKP	PKPdf	15 04 56.8	+0.3
	comp=Z,0.1nm,0.2s,baz=9.5,slow=1.6,SNR=3.2						

*NEIC **15** 15:02:39.7, 18°99N×64°40W, h27km, MD3.6(RSPR), After RSPR.*

RSPR 15 15:02:39.7, 18°99N×64°40W, h27km±10km, MD3.6/13, MD3.6/13, 13C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.27	167	⇑eP	Pb	15 02 46.2	-0.2
TBVI	Tortola	0.61	199	⇑eP	Pb	15 02 49.9	-2.0
STVI	Saint Thomas	0.83	220	⇓eP	Pb	15 02 52.9	-2.7
STVI				eS	Sb	15 03 03.5	-2.9
CULB	Culebra	1.11	233	⇓eP	Pn	15 02 56.7	-2.8
CULB	Culebra	1.11	233	eS	Sn	15 03 10.2	-3.8
CDVI	St. Croix	1.28	196	⇑eP	Pn	15 03 00.8	-1.1
CDVI				eS	Sn	15 03 16.3	-1.9
MTP	Monte Pirata	1.42	231	⇓eP	Pn	15 03 01.3	-2.4
MTP				eS	Sn	15 03 18.2	-3.3
CBYP	Canovanas	1.56	243	⇑eP	Pn	15 03 03.0	-2.7
CBYP				eS	Sn	15 03 22.4	-2.6
HUMP	Col San Antoni	1.62	239	⇑eP	Pn	15 03 04.1	-2.4
HUMP				eS	Sn	15 03 23.6	-2.8
CPD	Cerro la Pandu	1.73	237	⇑eP	Pn	15 03 06.1	-1.8
CPD				eS	Sn	15 03 27.1	-1.9
SJG	San Juan	1.88	243	⇑eP	Pn	15 03 08.0	-2.1
SJG				eS	Sn	15 03 31.0	-1.9
CELP	Cerrillos	2.26	247	⇑eP	Pn	15 03 14.3	-1.1
ICM	Isla Caja Muer	2.29	242	⇑eP	Pn	15 03 14.5	-1.3
ICM	Isla Caja Muer	2.29	242	eS	Sn	15 03 42.1	-1.0
AOPR	Arecibo Observ	2.32	254	⇑eP	Pn	15 03 14.4	-1.8
AOPR				eS	Sn	15 03 42.5	-1.3
LRS	Lares	2.42	254	⇑eP	Pn	15 03 16.2	-1.4
LRS				eS	Sn	15 03 44.2	-2.1
LSP	Las Mesas	2.68	253	⇑eP	Pn	15 03 19.8	-1.2
LSP				eS	Sn	15 03 50.3	-2.2
MGP	Maguayo	2.74	249	⇑eP	Pn	15 03 20.5	-1.3
MGP				eS	Sn	15 03 52.0	-2.0
CRPR	Cabo Rojo, PR	2.75	250	⇓eP	Pn	15 03 20.7	-1.4
CRPR				eS	Sn	15 03 52.4	-2.1

*ISCJB **15** 15:06:20.3±0.7, 24°00S±0°06×66°60W±0°08, h200km, mb3.9/1, Error ellipse: s-maj=11.0km s-min=7.8km az=129.9*
*IDC **15** 15:06:21.4±0.9, 23°93S×66°67W, h202km±13km, mb3.8/1, mb1 3.6/7, mb1mx3.3/20, mbtmp4.1/7, Error ellipse: s-maj=16.8km s-min=14.3km az=117.0*
*NEIC **15** 15:06:21.5±0.7, 23°98S×66°66W, h205km±10km, mb3.9/2, Error ellipse: s-maj=13.9km s-min=10.6km az=106.0*

ISC 15 15:06:21.6±0.7, 23°96S±0°06×66°62W±0°08, h200km, n15, σ0s89/19, mb3.9/1, 1C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.50	302	P	Pn	15 07 06.7	+1.3
	51nm,0.3s,baz=129,slow=5.9,SNR=449						
LVC				S	Sn	15 07 39.3	-0.3
	38nm,0.3s,baz=286,slow=23,SNR=18						
LVC	Limon Verde	2.50	302	⇑iPn	Pn	15 07 06.5	+1.1
LVC				S	Sn	15 07 39.3	-0.3
LVC				eSn	Sn	15 07 40.4	+0.7
CFAA	Coronel Fontan	7.75	190	P	Pn	15 08 10.2	-1.3
	0.2nm,0.3s,baz=28,slow=14,SNR=7.7						
CFAA				S	Sn	15 09 32.0	-6.9
	0.4nm,0.3s,baz=268,slow=19,SNR=9.1						
LPAZ	La Paz	7.76	349	P	Pn	15 08 12.0	+0.2
	0.7nm,0.3s,baz=134,slow=8.5,SNR=14						
LPAZ				S	Sn	15 09 38.5	-0.9
	0.2nm,0.3s,baz=353,slow=24,SNR=2.7						
LPAZ	La Paz	7.76	349	eP	Pn	15 08 12.8	+1.0
LPAZ				S	Sn	15 09 38.5	-0.9
CPUP	Villa Florida	8.74	108	P	Pn	15 08 24.1	-0.4
	0.6nm,0.3s,baz=270,slow=10,SNR=9.5						
CPUP	Villa Florida	8.74	108	eP	Pn	15 08 25.3	+0.8
	5.1nm,0.6s						
SIV	San Ignacio	9.49	34	P	Pn	15 08 33.2	-1.1
	0.9nm,0.3s,baz=216,slow=14,SNR=11						
PLCA	Paso Flores	17.05	190	P	P	15 10 07.7	+0.7
	0.5nm,0.3s,baz=1.4,slow=12,SNR=9.4						
PLCA	Paso Flores	17.05	190	eP	P	15 10 06.6	-0.3
	2.0nm,0.6s						
BDFB	Brasilia	19.35	68	P	P	15 10 32.9	+0.9
	1.7nm,0.3s,baz=249,slow=11,SNR=20						
BDFB	Brasilia	19.35	68	eP	P	15 10 33.4	+1.4
TORD	Torodi Ar. Bea	76.23	69	P	P	15 17 48.0	0.0
	1.3nm,0.4s,mb3.9,baz=261,slow=6.2,SNR=18						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ASAR	**Alice Springs**	**128.63**	**204**	PKP	PKPdf	15 25 04.2	-0.6
	0.5nm,0.7s,baz=137,slow=1.5,SNR=7.8						
WRA	**Warramunga Arr**	**131.82**	**207**	PKP	PKPdf	15 25 11.6	+0.7
	0.3nm,0.5s,baz=153,slow=2.0,SNR=13						

*STR **15** 15:08:51.0±0.1, 4305N×021W, h2km±1km, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **15** 15:08:51.0±0.0, 4305N×020W, h2km, Md2.0/2, Ml1.8/3, Error ellipse: s-maj=1.5km s-min=0.6km az=1.0*
MDD 15 15:08:51.1±0.3**, 4305N×020W, h10km±1km, mbLg0.9**/9**, Error ellipse: s-maj=4.6km s-min=1.9km az=11.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REYF	**Montagne du Re**	**0.14**	**279**	Pg	Pg	15 08 54.0	-0.3
REYF				Lg		15 08 56.5	
LABF	**Labassere**	**0.20**	**90**	Pg	Pg	15 08 55.1	-0.3
LABF				Sg	Sg	15 08 58.4	+0.2
LABF	**Labassere**	**0.20**	**90**	Pg	Pg	15 08 55.2	-0.2
LABF				Lg		15 08 58.4	
VIEF	**Viey**	**0.23**	**135**	Pg	Pg	15 08 55.7	-0.2
VIEF				Sg	Sg	15 08 59.1	-0.1
VIEF	**Viey**	**0.23**	**135**	Pg	Pg	15 08 55.8	-0.2
VIEF				Lg		15 08 59.1	
FDAF	**Les Forges d'A**	**0.35**	**230**	Pg	Pg	15 08 57.8	-0.3
FDAF				Lg		15 09 02.8	
ATE	**Arette**	**0.37**	**276**	Pg	Pg	15 08 57.9	-0.5
ATE				Sg	Sg	15 09 02.8	-0.5
ATE	**Arette**	**0.37**	**276**	Pg	Pg	15 08 57.8	-0.6
ATE				Lg		15 09 03.1	
EPF	**Esparros**	**0.40**	**92**	*e*Pg	Pg	15 08 58.6	-0.4
EPF				*e*Sg	Sg	15 09 04.0	-0.2
	2.8nm,0.2s						
EPF	**Esparros**	**0.40**	**92**	Pg	Pg	15 08 58.6	-0.4
EPF				Lg		15 09 04.0	
	1.4nm,0.2s						
EBIE	**Bielsa**	**0.44**	**145**	Pg	Pg	15 08 59.6	-0.2
	0.6nm,0.3s,SNR=12						
EBIE				Lg		15 09 05.3	
	2.9nm,0.1s,SNR=24						
LARF	**Larrau**	**0.58**	**269**	Pg	Pg	15 09 02.0	-0.3
LARF				Sg	Sg	15 09 09.8	-0.1
LARF	**Larrau**	**0.58**	**269**	Pg	Pg	15 09 02.2	-0.1
LARF				Lg		15 09 09.9	
SJPF	**Ste Jean**	**0.75**	**275**	*e*Pg	Pg	15 09 05.2	-0.5
SJPF				*e*Sg	Sg	15 09 14.9	-0.6
	1.6nm,0.2s						
SJPF	**Ste Jean**	**0.75**	**275**	Pg	Pg	15 09 05.2	-0.5
SJPF				Lg		15 09 14.9	
	0.8nm,0.2s						
EALK	**Alkurruntz**	**0.97**	**281**	Pg	Pg	15 09 09.1	-0.7
	0.4nm,0.2s,SNR=7.9						
EALK				Lg		15 09 22.9	
	1.3nm,0.2s,SNR=7.9						
ELIZ	**Elizondo**	**0.98**	**277**	Pg	Pg	15 09 10.2	+0.2
	0.4nm,0.2s,SNR=7.9						
ELIZ				Lg		15 09 22.3	
	0.5nm,0.1s,SNR=7.9						
MTLF	**Montolieu**	**1.79**	**80**	*e*Pg	Pg	15 09 24.6	-0.9
MTLF				*e*Sg	Sg	15 09 47.4	-1.4
	0.5nm,0.2s						
MTLF	**Montolieu**	**1.79**	**80**	Pg	Pg	15 09 24.6	-0.9
MTLF				Lg		15 09 47.4	
	0.2nm,0.2s						
EPOB	**Poblet**	**1.94**	**150**	Lg		15 09 52.8	
	0.6nm,0.2s,SNR=7.9						
CAF	**Calviac**	**2.49**	**40**	*e*Sg	Sg	15 10 09.3	-1.8
	1.2nm,0.2s						
CAF	**Calviac**	**2.49**	**40**	Lg		15 10 09.3	
	0.6nm,0.2s						
RJF	**Les Rejaudoux**	**2.57**	**28**	*e*Sg	Sg	15 10 11.8	-2.0
	0.9nm,0.2s						
RJF	**Les Rejaudoux**	**2.57**	**28**	Lg		15 10 11.8	
	0.4nm,0.2s						

IDC 15 15:11:38.1±25.0**, 1899S×17119E, h251km±119km, mb2.8**/3**, mb1 3.1**/4**, mb1mx2.9**/12**, mbtmp3.5**/4**, Error ellipse: s-maj=340.3km s-min=32.0km az=36.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.40**	**235**	P	Pn	15 12 58.8	+0.1
	0.7nm,0.3s,baz=168,slow=14,SNR=7.2						
WRA	**Warramunga Arr**	**34.71**	**262**	P	P	15 18 03.7	-0.6
	0.4nm,1.1s,baz=96,slow=8.4,SNR=4.6						
ASAR	**Alice Springs**	**34.97**	**256**	P	P	15 18 07.3	+0.8
	0.7nm,0.5s,baz=81,slow=8.7,SNR=31						
VNDA	**Vanda**	**58.74**	**182**	P	P	15 21 09.3	-0.5
	0.5nm,0.8s,baz=4.5,slow=6.0,SNR=5.8						

*NIED **15** 15:13:00, 4390N×14780E, h89km, Mw4.0 Best double couple: M0 9.48000×10^14 NP1:φs257.00000°, δ56.00000°, λ-94.00000°. NP2:φs84.00000°, δ34.00000°, λ-84.00000°.*
*MOS **15** 15:13:43.2±1.4, 44.16N×14786E, h98km, mb4.4/7, Error ellipse: s-maj=18.0km s-min=10.2km az=109.5*
*ISCJB **15** 15:13:44.8±0.9, 4403N±006×14769E±010, h112km±7km, mb4.0/17, Error ellipse: s-maj=12.5km s-min=9.5km az=67.3*
*JMA **15** 15:13:45.8±0.2, 4388N×14781E, h73km, M4.2*
*NEIC **15** 15:13:47.6±2.0, 44.17N×14763E, h117km±16km, mb4.3/5, Error ellipse: s-maj=17.1km s-min=13.9km az=146.0*
*IDC **15** 15:13:48.1±3.2, 44.12N×14767E, h122km±29km, mb3.7/11, mb1 3.8/12, mb1mx3.7/20, mbtmp4.0/12, Error ellipse: s-maj=21.1km s-min=17.4km az=95.0*
ISC 15 15:13:46.1±0.9**, 4405N**±006**×14766E**±010**, h108km**±7km**, n52, σ1s22**/65**, mb4.0**/17**, 1C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.20**	**7***j*	*i*PN	**Pn**	**15 14 02.8**	**-6.4**
KUR				*i* S	**Sn**	**15 14 18.3**	**-8.5**
KUR				pmax	pmax		
	comp=Z,2μm,1.0s						
KUR				pmax	pmax		
	comp=N,140nm,0.5s						
KUR				pmax	pmax		
	comp=E,170nm,0.5s						
KUR				pmax	pmax		
	comp=Z,460nm,0.5s						
KUR				smax			
	comp=N,6μm,1.5s						
KUR				smax			
	comp=E,4μm,1.5s						
KUR				smax			
	comp=N,2μm,0.5s						
KUR				smax			
	comp=E,1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.30**	**270**⇓	*i*PN	**Pn**	**15 14 08.6**	**-1.8**
YUK				*i* S	**Sn**	**15 14 27.0**	**-1.9**
YUK				pmax	pmax		
	comp=Z,770nm,0.3s						
YUK				pmax	pmax		
	comp=E,280nm,0.3s						
YUK				smax			
	comp=N,6μm,1.0s						
YUK				smax			
	comp=E,3μm,1.0s						
YUK				smax			
	comp=N,7μm,0.3s						
YUK				smax			
	comp=E,2μm,0.3s						
NEM2	**Nemuro 2**	**1.55**	**245**	P	**Pn**	**15 14 12.3**	**-1.1**
NEM2				*e*S	**Sn**	**15 14 32.6**	**-1.5**
JRA	**Rausu**	**1.84**	**268**	P	**Pn**	**15 14 17.4**	**+0.5**
JRA				*e*S	**Sn**	**15 14 41.5**	**+1.1**
JNK	**Nakash**	**2.18**	**259**	P	**Pn**	**15 14 21.3**	**0.0**
JNK				*e*S	**Sn**	**15 14 48.3**	**+0.1**
JAK	**Akkeshi**	**2.40**	**245**	P	**Pn**	**15 14 23.7**	**-0.4**
JAK				*e*S	**Sn**	**15 14 52.2**	**-1.1**
JTKR	**Abashiri--Toko**	**2.71**	**270**	P	**Pn**	**15 14 29.1**	**+0.9**
JAR	**Ashorobuto**	**2.92**	**257**	P	**Pn**	**15 14 32.0**	**+1.0**
JAR				*e*S	**Sn**	**15 15 06.8**	**+1.2**
JCH	**Churui**	**3.45**	**247**	P	**Pn**	**15 14 38.3**	**+0.3**
JCH				*e*S	**Sn**	**15 15 17.3**	**-0.8**
JKK2	**Kamakawa 2**	**3.55**	**269**	P	**Pn**	**15 14 41.1**	**+1.7**
JKK2				*e*S	**Sn**	**15 15 24.1**	**+3.5**
ASAJ	**Asahikawa**	**3.65**	**273**	P	**Pn**	**15 14 42.4**	**+1.7**
	comp=E,2.9nm,0.3s,baz=76,slow=17,SNR=42						
ASAJ	**Asahikawa**	**3.65**	**273**	PN	**Pn**	**15 14 42.4**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JSE	**Soyaes**	**3.75**	**286**	P	**Pn**	**15 14 42.9**	**+0.9**
JSE				*e*S	**Sn**	**15 15 25.5**	**+0.3**
JFR	**Furan**	**3.79**	**258**	P	**Pn**	**15 14 44.5**	**+2.0**
JNBK	**Urakawa-nobuka**	**4.00**	**246**	P	**Pn**	**15 14 45.5**	**+0.1**
JNBK				*e*S	**Sn**	**15 15 30.3**	**-1.1**
JWK2	**Keihoku**	**4.30**	**289**	P	**Pn**	**15 14 51.7**	**+2.3**
YSS	**Yuzh-Sakhalins**	**4.51**	**312**	*e*PN	**Pn**	**15 14 52.3**	**0.0**
JKB	**Kayabe**	**5.32**	**248**	P	**Pn**	**15 15 03.7**	**+0.5**
JKB				*e*S	**Sn**	**15 16 00.9**	**-2.4**
JOT	**Ohata**	**5.55**	**244**	P	**Pn**	**15 15 05.9**	**-0.4**
JOT				*e*S	**Sn**	**15 16 05.0**	**-3.8**
MA2	**Magadan**	**15.67**	**6**	*e*P	**Pn**	**15 17 19.9**	**-0.8**
MA2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MA2	**Magadan**	**15.67**	**6**	*e*P	**Pn**	**15 17 19.9**	**-0.8**
	comp=Z,2.6nm,0.6s						
YAK	**Yakutsk**	**20.88**	**336**	*e*P	**P**	**15 18 17.1**	**-2.3**
YAK				pmax	pmax		
	comp=Z,16nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.7s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.5s						
ULN	**Ulaanbaatar**	**28.26**	**292**	*e*P	**P**	**15 19 29.8**	**+0.9**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**28.26**	**292**	*e*P	**P**	**15 19 29.8**	**+0.8**
	comp=Z,3.4nm,0.6s,mb4.0						
SONM	**Songino Array**	**28.70**	**292**	P	**P**	**15 19 34.6**	**+1.7**
	comp=Z,2.2nm,0.6s,mb4.0,baz=84,slow=8.2,SNR=20						
ZAK	**Zakamensk**	**30.44**	**298**	*e*P	**P**	**15 19 53.9**	**+5.7**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
IMA2	**Indian Mountai**	**38.23**	**34**	*e*P	**P**	**15 20 55.9**	**+0.6**
KURK	**Kurchatov**	**45.67**	**304**	*e*P	**P**	**15 21 56.4**	**+0.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
KURK	**Kurchatov**	**45.67**	**304**	*e*P	**P**	**15 21 56.4**	**+0.5**
	comp=Z,2.8nm,0.4s,mb4.3						
INK	**Inuvik**	**45.96**	**30**	P	**P**	**15 21 59.0**	**+0.9**
	comp=Z,2.0nm,0.3s,mb4.3,baz=266,slow=3.4,SNR=6.9						
INK	**Inuvik**	**45.96**	**30**	P	**P**	**15 21 59.1**	**+1.0**
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK	**Inuvik**	**45.96**	**30**	*e*P	**P**	**15 21 59.0**	**+0.9**
ARU	**Arti**	**54.38**	**317**	*e*P	**P**	**15 22 59.6**	**-2.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
ARU	**Arti**	**54.38**	**317**	*e*P	**P**	**15 22 59.6**	**-2.1**
	comp=Z,2.8nm,0.5s,mb4.5						
KEV	**Kevo**	**58.57**	**339**	*e*p	**P**	**15 23 28.6**	**-2.7**
	comp=Z,1.4nm,0.3s,mb4.5						
KEV	**Kevo**	**58.57**	**339**	*e*P	**P**	**15 23 28.6**	**-2.7**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ARCES	**ARCESS Array B**	**59.10**	**340**	P	**P**	**15 23 34.0**	**-1.0**
	comp=Z,1.1nm,0.4s,mb4.3,baz=43,slow=7.8,SNR=22						
ARCES	**ARCESS Array B**	**59.10**	**340**	P	**P**	**15 23 34.0**	**-1.0**
JOF	**Joensuu**	**62.00**	**332**	*e*p	**P**	**15 23 52.8**	**-1.9**
	comp=Z,1.7nm,0.4s,mb4.4						
JOF	**Joensuu**	**62.00**	**332**	*e*P	**P**	**15 23 52.8**	**-1.9**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
KAF	**Kangasniemi**	**64.22**	**334**	*e*p	**P**	**15 24 07.8**	**-1.5**
FINES	**FINESS Array B**	**64.78**	**333**	P	**P**	**15 24 12.2**	**-0.8**
	comp=Z,3.6nm,0.6s,mb4.4,baz=47,slow=7.7,SNR=25						
WRA	**Warramunga Arr**	**64.83**	**194**	P	**P**	**15 24 14.4**	**+1.0**
	comp=Z,0.9nm,0.9s,mb3.6,baz=8.9,slow=6.8,SNR=7.3						
NVAR	**Mina Array Bea**	**67.11**	**58**	P	**P**	**15 24 27.7**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.6,baz=284,slow=9.0,SNR=6.8						
ASAR	**Alice Springs**	**68.55**	**194**	P	**P**	**15 24 38.0**	**+1.0**
	comp=Z,0.4nm,0.8s,mb3.3,baz=16,slow=5.8,SNR=6.2						
PDAR	**Pinedale Array**	**69.44**	**50**	P	**P**	**15 24 43.0**	**+0.6**
	comp=Z,0.2nm,0.3s,mb3.4,baz=328,slow=3.2,SNR=3.6						
NB2	**NORSAR Subarra**	**69.46**	**339**	P	**P**	**15 24 42.5**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.0,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.46**	**339**	P	**P**	**15 24 42.7**	**+0.1**
	comp=Z,1.7nm,0.5s,mb4.1,baz=31,slow=6.3,SNR=9.6						
NOA	**NORSAR Array B**	**69.46**	**339**	P	**P**	**15 24 42.7**	**+0.1**
AKASG	**Malin Array Be**	**71.56**	**324**	P	**P**	**15 24 55.1**	**-0.2**
	comp=Z,0.8nm,0.3s,mb4.0,baz=38,slow=6.2,SNR=7.4						
KHC	**Kasperske Hory**	**78.88**	**331**	*e*P	**P**	**15 25 39.0**	**+1.7**
GERES	**GERESS Array B**	**79.08**	**331**	P	**P**	**15 25 37.9**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.8,baz=33,slow=5.4,SNR=7.3						

*NEIC **15** 15:27:39.8, 3469S×7231W, h24km, ML2.9(GUC), After GUC.*
GUC 15 15:27:39.8±0.7**, 3469S×7231W, h24km**±4km**, MD3.5, ML2.9, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.90**	**142**	*e*P	Pb	15 27 56.2	-0.5
TALC				*i* S	Sb	15 28 08.4	0.0
TALC				AML	AML	15 28 11.6	
	comp=E,940nm,0.2s						
TALC	**Talca**	**0.90**	**142**	*e*P	Pb	15 27 56.2	-0.5
TALC				*i* S	Sb	15 28 08.4	0.0
NICH	**Los Niches**	**0.94**	**110**	*e*P	Pb	15 27 56.6	-0.9
NICH				*i* S	Sb	15 28 09.7	+0.1
SFDO	**San Fernando**	**1.07**	**87**	*e*P	Pn	15 27 58.5	-0.8
SFDO				*i* S	Sb	15 28 12.9	-0.3
LCCH	**Las Cruces**	**1.35**	**27**	*e*P	Pn	15 28 02.0	-1.2
LCCH				*e*S	Sn	15 28 20.0	-0.3
CACH	**El Canelo**	**1.52**	**69**⇑	*i*P	Pn	15 28 06.3	+0.9
CACH				*e*S	Sn	15 28 26.9	+2.5
TACH	**Talagante**	**1.53**	**48**	*i* P	Pn	15 28 05.6	0.0
CHCH	**Chadas Angostu**	**1.56**	**62**	*e*P	Pn	15 28 06.4	+0.4
CICH	**Cipreses**	**1.60**	**77**⇑	*i*P	Pn	15 28 07.4	+0.9
CICH				*i* S	Sn	15 28 28.0	+1.6
PCH	**Pirque**	**1.83**	**55**	*i* P	Pn	15 28 10.9	+1.2
PCH				*e*S	Sn	15 28 34.7	+2.7
CLCH	**Cerro Calan**	**1.95**	**49**	*e*P	Pn	15 28 12.5	+1.1
CLCH				*i* S	Sn	15 28 38.2	+3.1
CLCH				AML	AML	15 28 46.1	
	comp=N,119nm,0.7s						
PEL	**Peldehue**	**2.05**	**42**	*e*P	Pn	15 28 14.5	+1.8
PEL				*i* S	Sn	15 28 41.4	+4.0
PEL				AML	AML	15 28 50.2	
	comp=N,177nm,0.6s						
PEL	**Peldehue**	**2.05**	**42**	*e*P	Pn	15 28 14.5	+1.8
PEL				S	Sn	15 28 41.4	+4.0
FCH	**Farellones**	**2.15**	**52**	*e*P	Pn	15 28 16.2	+2.1
FCH				*i* S	Sn	15 28 43.6	+3.5
FCH				AML	AML	15 28 47.8	
	comp=N,83nm,0.2s						

*ISCJB **15** 15:31:21.0±0.5, 684N±005×7299W±006, h169km±5km, mb3.5/4, Error ellipse: s-maj=10.1km s-min=6.6km az=75.4*
*IDC **15** 15:31:21.7±0.7, 671N×7290W, h162km±7km, mb3.4/4, mb1 3.7/6, mb1mx3.3/21, mbtmp4.0/6, MS3.6/1, Ms1 3.6/1, ms1mx2.4/22, Error ellipse: s-maj=28.3km s-min=7.3km az=132.0*
*FUNV **15** 15:31:21.5, 677N×73.15W, h168km, MW4.2*
*NEIC **15** 15:31:22.1±0.7, 669N×7293W, h168km±7km, mb3.4/1, Error ellipse: s-maj=14.4km s-min=11.2km az=112.0*
ISC 15 15:31:22.0±0.5**, 682N**±005**×7298W**±005**, h162km**±5km**, n34, σ0s90**/38**, mb3.5**/4**, 14C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.23**	**32**⇑	*i*P	**Pn**	**15 31 50.8**	**+0.9**
CAPV				*e*S	**Sn**	**15 32 11.9**	**+0.7**
ROSC	**El Rosal**	**2.37**	**215**	P	**Pn**	**15 32 02.6**	**+0.4**
	212nm,0.3s,baz=92,slow=22,SNR=566						
ROSC				S	**Sn**	**15 32 33.0**	**-0.2**
	296nm,0.3s,baz=92,slow=16,SNR=17						
ROSC	**El Rosal**	**2.37**	**215**⇑	*i*Pn	**Pn**	**15 32 02.3**	**+0.1**
ROSC				*e*Sn	**Sn**	**15 32 31.7**	**-1.5**
SOCV	**Socops**	**2.56**	**55**⇑	*i*P	**Pn**	**15 32 05.8**	**+1.4**
SOCV				*e*S	**Sn**	**15 32 37.4**	**+0.3**
VIGV	**El Vigia**	**2.56**	**38**⇑	*i*P	**Pn**	**15 32 05.4**	**+0.9**
VIGV				*e*S	**Sn**	**15 32 36.8**	**-0.6**
SDV	**Santo Domingo**	**3.10**	**48**	P	**Pn**	**15 32 12.3**	**+1.2**
	36nm,0.3s,baz=219,slow=3.5,SNR=154						
SDV				S	**Sn**	**15 32 49.7**	**+0.6**
	132nm,0.3s,baz=71,slow=21,SNR=47						
SDV	**Santo Domingo**	**3.10**	**48**	*e*Pn	**Pn**	**15 32 12.2**	**+1.1**
SDV				*e*Sn	**Sn**	**15 32 49.5**	**+0.4**
ELOV	**Elorza**	**3.47**	**87**	*e*P	**Pn**	**15 32 17.2**	**+1.4**
ELOV				*e*S	**Sn**	**15 32 57.9**	**+0.3**
VIRV	**Villa del Rosa**	**3.70**	**9**⇑	*i*P	**Pn**	**15 32 17.5**	**-1.2**
VIRV				*e*S	**Sn**	**15 33 00.3**	**-2.5**
QARV	**Quebrada Arrib**	**4.15**	**36**⇑	*i*P	**Pn**	**15 32 25.2**	**+0.7**
QARV				*e*S	**Sn**	**15 33 11.7**	**-1.4**
SANV	**Sanarito**	**4.32**	**52**⇑	*e*P	**Pn**	**15 32 27.2**	**+0.5**
CURV	**Curarigua**	**4.35**	**43**⇑	*i*P	**Pn**	**15 32 27.6**	**+0.4**
DABV	**Dabajuro**	**4.68**	**29**⇑	*i*P	**Pn**	**15 32 31.8**	**+0.4**
TEPV	**Terepaima**	**4.87**	**50**⇑	*i*P	**Pn**	**15 32 34.5**	**+0.5**
SIQV	**Siquisique**	**4.92**	**39**⇑	*i*P	**Pn**	**15 32 34.6**	**0.0**
BAUV	**El Baul**	**5.32**	**66**⇑	*i*P	**Pn**	**15 32 39.1**	**-0.8**
IMOV	**Isla Los Monje**	**5.87**	**20**	*e*P	**Pn**	**15 32 46.4**	**-0.7**
MONV	**Montecano**	**5.90**	**30**	*e*P	**Pn**	**15 32 46.7**	**-0.8**
TURV	**Turiamo**	**6.23**	**54**⇑	*e*P	**Pn**	**15 32 51.3**	**-0.5**
CAOV	**Caicara del Or**	**6.62**	**85**⇑	*e*P	**Pn**	**15 32 55.8**	**-1.3**
MERV	**Las Mercedes**	**7.04**	**70**	*e*P	**Pn**	**15 33 02.1**	**-0.5**
BIRV	**Birongo**	**7.56**	**61**	*e*P	**Pn**	**15 33 08.8**	**-0.7**
CUPV	**Cœpira**	**7.80**	**65**	*e*P	**Pn**	**15 33 12.1**	**-0.6**
SAML	**Samuel**	**18.46**	**148**	*e*Pn	**Pn**	**15 35 25.9**	**-1.5**
	0.9nm,0.5s						
SCHQ	**Schefferville**	**48.13**	**5**	P	**P**	**15 39 46.6**	**+1.2**
	4.6nm,0.6s,mb4.3,baz=174,slow=6.1,SNR=9.5						
PDAR	**Pinedale Array**	**48.16**	**324**	P	**P**	**15 39 46.1**	**+0.4**
	0.5nm,0.6s,mb3.4,baz=128,slow=9.8,SNR=3.8						
NVAR	**Mina Array Bea**	**51.58**	**315**	P	**P**	**15 40 12.4**	**+0.9**
	0.4nm,0.6s,mb3.2,baz=137,slow=5.9,SNR=4.7						
YBH	**Yreka Blue Hor**	**56.04**	**316**	LR	LR	16 08 42.3	
	comp=Z,53nm,18.3s,baz=64,slow=40						
TORD	**Torodi Ar. Bea**	**73.60**	**78**	P	**P**	**15 42 37.4**	**0.0**
	0.1nm,0.3s,mb3.0,baz=284,slow=6.7,SNR=4.3						
AS31	**Alice Springs**	**149.23**	**234**	*e*P	PKPbc	15 50 51.4	+0.1
ASAR	**Alice Springs**	**149.23**	**234**	PKPbc	PKPbc	15 50 51.5	+0.2
	0.5nm,0.5s,baz=120,slow=3.5,SNR=21						
ASPA	**Alice Springs**	**149.23**	**234**	*e*P	PKPbc	15 50 51.4	+0.1
WB2	**Warramunga Arr**	**150.45**	**241**	*e*P	PKPbc	15 50 54.7	+0.4
WRA	**Warramunga Arr**	**150.46**	**241**	PKPbc	PKPbc	15 50 54.8	+0.5
	0.7nm,0.4s,baz=107,slow=2.7,SNR=43						

*IDC **15** 15:56:09.9±0.9, 51.18N×17937E, h0km, mb4.1/13, mb1 4.2/14, mb1mx4.0/25, mbtmp4.1/14, MS3.3/2, Ms1 3.3/2, ms1mx2.7/36, Error ellipse: s-maj=26.0km s-min=16.4km az=161.0*
*BJI **15** 15:56:11.3, 52.16N×17978E, h22km, mB4.8, mb4.6, Ms4.3, Msz4.2*
*NEIC **15** 15:56:14.9±1.2, 51.18N×17932E, h33km±7km, mb4.4/6, ML3.8(AEIC), Error ellipse: s-maj=16.4km s-min=8.2km az=178.0*
*ISCJB **15** 15:56:15.2±0.7, 513N±01×17939E±009, h44km±4km, mb4.2/23, MS3.4/3, Error ellipse: s-maj=22.0km s-min=8.9km az=163.2*
ISC 15 15:56:16.2±0.7**, 513N**±01**×17938E**±009**, h39km**±4km**, h5km**±6.5km**:pP-P, n34, σ1s12**/36**, mb4.2**/23**, MS3.4**/3**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.08**	**324**	P	**Pn**	**15 56 21.3**	**-1.4**
AMKA				S	**Sn**	**15 56 27.2**	**+0.1**
SMY	**Shemya**	**3.56**	**296**	*e*P	**Pn**	**15 57 01.3**	**-7.5**
ATKA	**Atka Island**	**4.09**	**75**	P	**Pn**	**15 57 17.8**	**+1.6**
KDAK	**Kodiak Island**	**17.42**	**57**	P	**Pn**	**16 00 14.4**	**-1.7**
	baz=266,slow=6.2						
IMA2	**Indian Mountai**	**20.11**	**33**	*e*P	**P**	**16 00 48.2**	**+1.7**
ASAJ	**Asahikawa**	**25.56**	**268**	P	**P**	**16 01 41.6**	**+0.3**
	10.0nm,0.8s,mb4.4,baz=48,slow=9.0,SNR=13						
ASAJ				LR	LR	16 11 17.0	
	comp=Z,45nm,18.9s,MS3.0,baz=349,slow=36						
INK	**Inuvik**	**28.17**	**35**	P	**P**	**16 02 04.6**	**-0.2**
	0.6nm,0.4s,mb3.5,baz=268,slow=9.5,SNR=2.6						
INK	**Inuvik**	**28.17**	**35**	P	**P**	**16 02 04.8**	**-0.1**
MDJ	**Mudanjiang**	**33.45**	**278**	P	**P**	**16 02 51.9**	**+0.5**
MDJ				AP	pP	16 02 54.9	-7.4
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.6s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,81nm,4.7s						
YKA	**Yellowknife Ar**	**36.10**	**46**	P	**P**	**16 03 13.9**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.1,baz=280,slow=7.8,SNR=6.2						
YKA	**Yellowknife Ar**	**36.10**	**46**	P	**P**	**16 03 13.9**	**-0.3**
CN2	**Changchun**	**36.44**	**280**	*e*P	**P**	**16 03 19.1**	**+2.0**
HLID	**Hailey**	**44.06**	**73**	*e*P	**P**	**16 04 20.6**	**+0.5**
	comp=Z,1.0nm,0.4s,mb3.9						
MCMT	**McKenzie Canyo**	**44.28**	**71**	*e*P	**P**	**16 04 22.3**	**+0.3**
NVAR	**Mina Array Bea**	**44.69**	**81**	P	**P**	**16 04 25.9**	**+0.6**
	comp=Z,0.4nm,0.7s,mb3.4,baz=294,slow=6.0,SNR=5.1						
ULN	**Ulaanbaatar**	**45.26**	**295**	*e*P	**P**	**16 04 30.3**	**+0.5**
	comp=Z,1.4nm,0.6s,mb4.0						
SONM	**Songino Array**	**45.65**	**296**	P	**P**	**16 04 33.6**	**+0.7**
	comp=Z,1.2nm,0.6s,mb4.0,baz=66,slow=8.8,SNR=13						
SONM				LR	LR	16 25 18.8	
	comp=Z,46nm,18.9s,MS3.4,baz=160,slow=38						
BW06	**Boulder Array**	**47.41**	**71**	*e*P	**P**	**16 04 46.6**	**-0.1**
	comp=Z,4.7nm,0.8s,mb4.5						
PDAR	**Pinedale Array**	**47.42**	**71**	P	**P**	**16 04 47.1**	**+0.5**
	comp=Z,4.0nm,0.7s,mb4.5,baz=311,slow=4.0,SNR=38						
NJ2	**Nanjing**	**47.67**	**270**	*e*P	**P**	**16 04 51.3**	**+2.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
LZH	**Lanzhou**	**54.30**	**285**	*e*P	**P**	**16 05 40.6**	**+2.1**
LZH				AP	pP	16 05 43.5	-6.4
LZH				XP	sP	16 05 45.3	-9.2
LZH				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
GTA	**Gaotai**	**54.53**	**291**	*e*P	**P**	**16 05 39.0**	**-1.1**
GTA				AP	pP	16 05 43.6	-8.0
GTA				PP	PP	16 07 43.3	+0.7
GTA				PPP		16 08 53.5	
GTA				S	**S**	**16 13 15.3**	**-1.2**
GTA				SS	SS	16 16 56.8	-2.5
GTA				AMB	AMB		
	comp=Z,2.0nm,1.2s,mb4.0						
GTA				AMB	AMB		
	comp=Z,76nm,5.7s						
GTA				LR	LR		
	comp=N,61nm,16.0s,MS4.0						
GTA				LR	LR		
	comp=E,69nm,12.9s,MS4.0						
GTA				LR	LR		
	comp=Z,56nm,16.0s,MS3.7						
ARCES	**ARCESS Array B**	**57.96**	**349**	P	**P**	**16 06 03.8**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.7,baz=27,slow=8.2,SNR=3.7						
KURK	**Kurchatov**	**58.23**	**313**	*e*P	**P**	**16 06 06.4**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.4						
CHKZ	**Chkalovo**	**59.63**	**319**	*e*P	**P**	**16 06 15.8**	**-0.3**
	comp=Z,7.4nm,1.3s,mb4.6						
BVAR	**Borovoye Array**	**60.20**	**319**	P	**P**	**16 06 20.3**	**+0.2**
	comp=Z,5.2nm,0.7s,mb4.7,baz=50,slow=6.9,SNR=37						
BRVK	**Borovoye**	**60.21**	**319**	*e*P	**P**	**16 06 20.4**	**+0.2**
	comp=Z,2.8nm,0.6s,mb4.5						
FINES	**FINESS Array B**	**65.59**	**346**	P	**P**	**16 06 54.9**	**-1.1**
	comp=Z,2.2nm,0.9s,mb4.2,baz=352,slow=6.6,SNR=2.9						
FINES	**FINESS Array B**	**65.59**	**346**	P	**P**	**16 06 54.9**	**-1.1**
NB2	**NORSAR Subarra**	**67.60**	**354**	P	**P**	**16 07 08.1**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.9,baz=7.4,slow=6.2						
NOA	**NORSAR Array B**	**67.60**	**354**	P	**P**	**16 07 07.8**	**-1.0**
	comp=Z,1.4nm,0.7s,mb4.1,baz=6.8,slow=6.1,SNR=4.6						
HFS	**Hagfors**	**68.31**	**352**	P	**P**	**16 07 12.0**	**-1.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=49,slow=4.5,SNR=4.7						
WRA	**Warramunga Arr**	**81.18**	**222**	P	**P**	**16 08 25.5**	**-2.2**
	comp=Z,0.6nm,0.8s,mb3.6,baz=36,slow=6.5,SNR=5.8						
ASAR	**Alice Springs**	**84.67**	**221**	P	**P**	**16 08 44.0**	**-1.9**
	comp=Z,0.5nm,0.8s,mb3.7,baz=23,slow=5.7,SNR=6.3						

*ISCJB **15** 16:01:43.6±0.8, 3728S±005×1776E±01, h198km±4km, mb3.7/4, Error ellipse: s-maj=13.4km s-min=8.7km az=167.2*
*IDC **15** 16:01:43.9±1.5, 3747S×17782E, h196km±10km, mb3.5/3, mb1 3.7/4, mb1mx3.4/12, mbtmp4.1/4, Error ellipse: s-maj=44.1km s-min=25.8km az=134.0*
*NEIC **15** 16:01:44.0, 3692S×17759E, h166km, mb4.1/1, After WEL.*
*WEL **15** 16:01:44.3±0.4, 3688S×17759E, h158km±4km, ML4.5/23, Error ellipse: s-maj=2.3km s-min=2.2km az=0.0*
ISC 15 16:01:44.6±0.8**, 3730S**±006**×1776E**±01**, h194km**±4km**, n81, σ1s34**/88**, mb3.7**/4**, 3C-1D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.62**	**116**	*e*P	**Pn**	**16 02 09.0**	**-2.5**
MXZ	**Matakaoa Point**	**0.62**	**116**	PN	**Pn**	**16 02 09.0**	**-2.5**
PUZ	**Puketiti**	**0.94**	**146**	P	**Pn**	**16 02 12.8**	**-0.4**
PUZ				S	**Sn**	**16 02 34.6**	**-0.8**
PUZ	**Puketiti**	**0.94**	**146**	PN	**Pn**	**16 02 12.6**	**-0.7**
PUZ				SN	**Sn**	**16 02 34.2**	**-1.2**
MARZ	**Manawahe**	**1.01**	**227**	P	**Pn**	**16 02 13.1**	**-0.6**
MARZ	**Manawahe**	**1.01**	**227**	PN	**Pn**	**16 02 13.1**	**-0.6**
URZ	**Urewera**	**1.04**	**202**	P	**Pn**	**16 02 13.6**	**-0.3**
	74nm,0.3s,baz=12,slow=3.8,SNR=752						
URZ				S	**Sn**	**16 02 35.9**	**-0.8**
	46nm,0.3s,baz=342,slow=20,SNR=7.4						
URZ	**Urewera**	**1.04**	**202**	P	**Pn**	**16 02 13.6**	**-0.3**
URZ	**Urewera**	**1.04**	**202**	⇑PN	**Pn**	**16 02 13.6**	**-0.3**
URZ				SN	**Sn**	**16 02 36.0**	**-0.6**
MWZ	**Matawai**	**1.04**	**183**	P	**Pn**	**16 02 14.1**	**+0.1**
MWZ				S	**Sn**	**16 02 37.3**	**+0.6**
MWZ	**Matawai**	**1.04**	**183**	⇑PN	**Pn**	**16 02 14.1**	**+0.1**
MWZ				SN	**Sn**	**16 02 36.9**	**+0.2**
KARZ	**Kaharoa**	**1.30**	**236**	PN	**Pn**	**16 02 15.6**	**-0.4**
KUZ	**Kuaotunu**	**1.60**	**289**	P	**Pn**	**16 02 14.3**	**-4.3**
KUZ	**Kuaotunu**	**1.60**	**289**	⇓PN	**Pn**	**16 02 14.3**	**-4.4**
KNZ	**Kokohu**	**1.72**	**178**	⇑PN	**Pn**	**16 02 21.1**	**+1.3**
KNZ				SN	**Sn**	**16 02 49.1**	**+2.0**
WHTZ	**Whakaora**	**1.89**	**223**	P	**Pn**	**16 02 23.2**	**+1.8**
WHTZ	**Whakaora**	**1.89**	**223**	PN	**Pn**	**16 02 23.2**	**+1.8**
BKZ	**Black Stump Fm**	**2.06**	**205**	P	**Pn**	**16 02 24.2**	**+0.9**
BKZ	**Black Stump Fm**	**2.06**	**205**	PN	**Pn**	**16 02 24.2**	**+1.0**
BKZ				SN	**Sn**	**16 02 55.4**	**+2.1**
RATZ	**Rangitukua**	**2.13**	**222**	P	**Pn**	**16 02 25.4**	**+1.4**
RATZ	**Rangitukua**	**2.13**	**222**	PN	**Pn**	**16 02 25.2**	**+1.2**
OTAZ	**Otara**	**2.17**	**278**	P	**Pn**	**16 02 22.1**	**-2.3**
OTAZ	**Otara**	**2.17**	**278**	PN	**Pn**	**16 02 22.1**	**-2.2**
MTAZ	**Motutapu**	**2.21**	**282**	P	**Pn**	**16 02 22.1**	**-2.8**
MTAZ	**Motutapu**	**2.21**	**282**	PN	**Pn**	**16 02 22.1**	**-2.8**
KATZ	**Kakaramea**	**2.25**	**221**	P	**Pn**	**16 02 26.7**	**+1.4**
KATZ	**Kakaramea**	**2.25**	**221**	PN	**Pn**	**16 02 26.7**	**+1.4**
KAAZ	**Kauri Point**	**2.36**	**281**	P	**Pn**	**16 02 24.4**	**-2.1**
KAAZ	**Kauri Point**	**2.36**	**281**	PN	**Pn**	**16 02 24.4**	**-2.1**
KRVZ	**Karewarewa**	**2.37**	**220**	PN	**Pn**	**16 02 28.2**	**+1.6**
WTVZ	**West Tongariro**	**2.41**	**220**	P	**Pn**	**16 02 28.4**	**+1.3**
WTAZ	**Waiatarua**	**2.44**	**278**	P	**Pn**	**16 02 25.4**	**-2.0**
WTAZ	**Waiatarua**	**2.44**	**278**	PN	**Pn**	**16 02 25.4**	**-2.0**
NGZ	**Ngauruhoe**	**2.45**	**219**	P	**Pn**	**16 02 29.1**	**+1.6**
TWVZ	**Taurewa**	**2.46**	**223**	P	**Pn**	**16 02 28.9**	**+1.3**
HIZ	**Hauiti**	**2.49**	**240**	P	**Pn**	**16 02 29.2**	**+1.3**
TUVZ	**Tukino**	**2.50**	**217**	P	**Pn**	**16 02 29.3**	**+1.3**
WPVZ	**Whakapapa**	**2.50**	**220**	P	**Pn**	**16 02 29.7**	**+1.6**
MOVZ	**Moawhango**	**2.56**	**214**	P	**Pn**	**16 02 29.3**	**+0.6**
VRZ	**Vera Road**	**2.89**	**230**	*e*P	**Pn**	**16 02 34.4**	**+1.8**
TSZ	**Takapari Road**	**3.04**	**204**	P	**Pn**	**16 02 34.9**	**+0.5**
WAZ	**Wanganui**	**3.20**	**219**	P	**Pn**	**16 02 37.6**	**+1.3**
NEZ	**North Egmont**	**3.39**	**233**	P	**Pn**	**16 02 41.2**	**+2.6**
PKE	**Pukeiti**	**3.42**	**235**	P	**Pn**	**16 02 41.0**	**+2.1**
NRZ	**Ngariki Road**	**3.53**	**234**	P	**Pn**	**16 02 42.7**	**+2.4**
BFZ	**Birch Farm**	**3.54**	**197**	P	**Pn**	**16 02 41.0**	**+0.6**
MRZ	**Mangatainoka R**	**3.71**	**204**	P	**Pn**	**16 02 42.6**	**+0.1**
OUZ	**Omahuta**	**3.84**	**301**	*e*P	**Pn**	**16 02 39.3**	**-4.8**
KIW	**Kapiti Island**	**4.13**	**210**	P	**Pn**	**16 02 47.5**	**-0.3**
MTW	**Mount Morrison**	**4.19**	**202**	P	**Pn**	**16 02 48.1**	**-0.4**
CAW	**Cannon Point**	**4.29**	**207**	P	**Pn**	**16 02 49.3**	**-0.4**
PAWZ	**Paruwai Farm**	**4.42**	**202**	P	**Pn**	**16 02 51.1**	**-0.2**
MSWZ	**Moikau Station**	**4.50**	**203**	P	**Pn**	**16 02 52.0**	**-0.4**
MRW	**Makara Radio**	**4.53**	**209**	P	**Pn**	**16 02 52.1**	**-0.7**
WEL	**Wellington**	**4.55**	**208**	P	**Pn**	**16 02 52.5**	**-0.6**
SNZO	**South Karori**	**4.59**	**208**	P	**Pn**	**16 02 52.9**	**-0.7**
BHW	**Baring Head**	**4.62**	**206**	P	**Pn**	**16 02 53.2**	**-0.8**
TCW	**Tory Channel**	**4.69**	**212**	P	**Pn**	**16 02 53.8**	**-1.0**
NNZ	**Nelson**	**5.11**	**219**	P	**Pn**	**16 02 59.1**	**-1.1**
BSWZ	**Blackbirch Sta**	**5.27**	**212**	P	**Pn**	**16 03 01.6**	**-0.7**
QRZ	**Quartz Range**	**5.29**	**227**	*e*P	**Pn**	**16 03 00.8**	**-1.8**
THZ	**Tophouse**	**5.75**	**218**	*e*P	**Pn**	**16 03 07.3**	**-1.2**
KHZ	**Kahutara**	**5.99**	**210**	P	**Pn**	**16 03 10.8**	**-0.8**
LTZ	**Lake Taylor**	**6.84**	**215**	P	**Pn**	**16 03 21.0**	**-1.6**
CRLZ	**Canterbury Las**	**7.33**	**210**	*e*P	**Pn**	**16 03 27.4**	**-1.7**
MQZ	**McQueen's Vall**	**7.43**	**209**	P	**Pn**	**16 03 28.2**	**-2.2**
RPZ	**Rata Peaks**	**8.12**	**216**	P	**Pn**	**16 03 38.8**	**-0.6**
	1.7nm,0.3s,baz=4.8,slow=17,SNR=13						
RPZ				S	**Sn**	**16 05 07.0**	**-3.6**
	5.7nm,0.3s,baz=335,slow=23,SNR=16						
FOZ	**Fox Glacier**	**8.69**	**221**	*e*P	**Pn**	**16 03 45.0**	**-1.8**
LBZ	**Lake Benmore**	**9.04**	**216**	*e*P	**Pn**	**16 03 49.9**	**-1.4**
ODZ	**Otahua Downs**	**9.35**	**212**	*e*P	**Pn**	**16 03 54.1**	**-1.3**
JCZ	**Jackson Bay**	**9.53**	**222**	*e*P	**Pn**	**16 03 55.3**	**-2.5**
AS31	**Alice Springs**	**39.69**	**277**	*e*P	**P**	**16 08 59.2**	**+1.3**
ASAR	**Alice Springs**	**39.69**	**277**	P	**P**	**16 08 59.0**	**+1.2**
	2.3nm,0.7s,mb3.7,baz=122,slow=7.9,SNR=44						
ASPA	**Alice Springs**	**39.69**	**277**	*e*P	**P**	**16 08 59.2**	**+1.3**
WB2	**Warramunga Arr**	**41.32**	**283**	*e*P	**P**	**16 09 11.9**	**+0.7**
WRAB	**Tennant Creek**	**41.33**	**283**	*e*P	**P**	**16 09 11.6**	**+0.3**
	3.8nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**41.33**	**283**	P	**P**	**16 09 11.9**	**+0.6**
	1.4nm,0.5s,mb3.6,baz=120,slow=7.9,SNR=16						
FITZ	**Fitzroy Crossi**	**49.18**	**278**	P	**P**	**16 10 14.3**	**+1.4**
	1.9nm,0.9s,mb3.4,baz=165,slow=10,SNR=5.2						
QSPA	**South Pole Qui**	**52.83**	**180**	*e*P	**P**	**16 10 47.1**	**+7.0**
FINES	**FINESS Array B**	**149.99**	**333**	PKPbc	PKPbc	16 21 10.0	-2.0
	1.2nm,0.8s,baz=90,slow=4.2,SNR=4.9						
FINES				PKPab	PKPab	16 21 15.8	-2.6
	3.1nm,1.0s,baz=64,slow=4.4,SNR=4.2						
FINES	**FINESS Array B**	**149.99**	**333**	PKPbc	PKPbc	16 21 10.0	-2.0
FINES				PKPab	PKPab	16 21 15.8	-2.6

LJU ***15*** *16:14:50.7, 4631N×1333E, h19km, ML1.8*
CSEM ***15*** *16:14:50.5±0.1, 4631N×1332E, h20km, ML2.6/3, Error ellipse: s-maj=1.6km s-min=0.9km az=15.0*
ROM ***15*** *16:14:50.4±0.8, 4634N×1338E, h7km±5km, Md2.3/4, Ml1.5/2, Error ellipse: s-maj=9.9km s-min=3.8km az=29.0*
ISCJB ***15*** *16:14:51.0±0.3, 4633N±002×1335E±002, h13km, Error ellipse: s-maj=3.1km s-min=1.9km az=33.0*
VIE ***15*** *16:14:51.8±0.4, 4633N×1344E, h13km±3km, ML1.8/2, Error ellipse: s-maj=2.5km s-min=1.3km az=54.0 8 km W of Bovec*
ISC 15 16:14:51.3±0.5**, 4632N**±002×**1333E**±002**, h17**km±4km**, n31, σ0ˢ69**/59**, 9C-5D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMNA	**Gemona**	**0.08**	**239**	Pg	**Pg**	**16 14 55.0**	**+0.4**
GMNA				Sg	**Sg**	**16 14 56.8**	**0.0**
BAD	**Bernadia**	**0.10**	**219**	⇓*i*Pg	**Pg**	**16 14 54.3**	**-0.5**
BAD				*i* Sg	**Sg**	**16 14 56.5**	**-0.6**
ROBS	**Robic**	**0.14**	**120**	⇑*i*Pg	**Pg**	**16 14 54.8**	**-0.4**
ROBS				*i* Sg	**Sg**	**16 14 57.3**	**-0.6**
ROBS							
	comp=Z,65nm,0.1s						
ROBS	**Robic**	**0.14**	**120**	Pg	**Pg**	**16 14 54.8**	**-0.5**
ROBS				*i* Sg	**Sg**	**16 14 57.3**	**-0.7**
	comp=Z,65nm,0.1s						
BOO	**Bordano**	**0.16**	**272**	⇑*i*Pg	**Pg**	**16 14 55.2**	**-0.4**
BUA	**Buia**	**0.17**	**236**	⇑*i*Pg	**Pg**	**16 14 55.3**	**-0.4**
BUA				*i* Sg	**Sg**	**16 14 58.5**	**-0.3**
COLI	**Coloredo**	**0.18**	**170**	⇑*i*Pg	**Pg**	**16 14 56.1**	**+0.2**
COLI				*i* Sg	**Sg**	**16 14 59.4**	**+0.4**
MPRI	**Monte Prat**	**0.25**	**253**	⇑*i*Pg	**Pg**	**16 14 56.5**	**-0.4**
MPRI				*i* Sg	**Sg**	**16 15 00.7**	**0.0**
DRE	**Drenchia**	**0.26**	**123**	⇓*i*Pg	**Pg**	**16 14 56.7**	**-0.3**
DRE				*i* Sg	**Sg**	**16 15 01.0**	**+0.1**
PLRO	**Paularo**	**0.27**	**331**	⇓*i*Pg	**Pg**	**16 14 57.3**	**+0.1**
PLRO				*i* Sg	**Sg**	**16 15 01.5**	**+0.3**
CADS	**Cadrg**	**0.29**	**107**	*i* Pg	**Pg**	**16 14 57.2**	**-0.4**
CADS				*i* Sg	**Sg**	**16 15 02.2**	**+0.3**
CADS							
	comp=Z,50nm,0.1s						
CADS	**Cadrg**	**0.29**	**107**	*i* Pg	**Pg**	**16 14 57.2**	**-0.4**
CADS				*i* Sg	**Sg**	**16 15 02.2**	**+0.3**
	comp=Z,50nm,0.1s						
ZOU	**Zoufplan**	**0.35**	**314**	⇓*i*Pg	**Pg**	**16 14 58.7**	**+0.1**
ZOU				*i* Sg	**Sg**	**16 15 04.2**	**+0.7**
GORS	**Gorjuse**	**0.46**	**90**	*i* Pg	**Pg**	**16 15 00.1**	**-0.4**
GORS				*e*Sg	**Sg**	**16 15 07.4**	**+0.6**
GORS							
	comp=Z,15nm,0.1s						
GORS	**Gorjuse**	**0.46**	**90**	*i* Pg	**Pg**	**16 15 00.2**	**-0.4**
GORS				*e*Sg	**Sg**	**16 15 07.4**	**+0.6**
	comp=Z,15nm,0.1s						
FVI	**Forni Avoltri**	**0.47**	**307**	Pg	**Pg**	**16 15 00.6**	**-0.3**
FVI				Sg	**Sg**	**16 15 07.7**	**+0.4**
	comp=Z,49nm,0.4s						
VOJS	**Vojsko**	**0.48**	**126**	*e*Pg	**Pg**	**16 15 00.3**	**-0.6**
VOJS				*e*Sg	**Sg**	**16 15 08.1**	**+0.8**
MLNI	**Malnisio**	**0.53**	**252**	⇑*i*Pg	**Pg**	**16 15 01.4**	**-0.4**
MLNI				*i* Sg	**Sg**	**16 15 10.1**	**+1.1**
JAVS	**Javornik**	**0.66**	**129**	*i* Pg	**Pg**	**16 15 03.5**	**-0.8**
JAVS				*i* Sg	**Sg**	**16 15 14.4**	**+1.3**
JAVS							
	comp=Z,19nm,0.2s						
JAVS	**Javornik**	**0.66**	**129**	*i* Pg	**Pg**	**16 15 03.5**	**-0.8**
JAVS				*i* Sg	**Sg**	**16 15 14.4**	**+1.3**
	comp=Z,19nm,0.2s						
TRI	**Trieste**	**0.68**	**154**	Pg	**Pg**	**16 15 03.9**	**-0.7**
TRI				Sg	**Sg**	**16 15 14.2**	**+0.6**
	comp=Z,12nm,0.2s						
KBA	**Koelnbreinsper**	**0.76**	**1**	⇓*i*Pg	**Pg**	**16 15 06.8**	**+0.6**
KBA				⇑*i*Sg	**Sg**	**16 15 17.2**	**+0.8**
	comp=Z,4.2nm,0.2s						
OBKA	**Obir**	**0.86**	**77**	⇑*i*Pg	**Pg**	**16 15 07.5**	**-0.6**
OBKA				⇑*i*Sg	**Sg**	**16 15 18.1**	**-1.4**
	comp=Z,10.0nm,0.2s						
LJU	**Ljubljana**	**0.87**	**108**	*e*Sg	**Sg**	**16 15 21.1**	**+1.3**
CEY	**Cerknica**	**0.95**	**127**	*i* Pg	**Pg**	**16 15 08.7**	**-1.1**
CEY				*i* Sg	**Sg**	**16 15 24.7**	**+2.3**
VISS	**Visnje**	**1.17**	**115**	*e*Pg	**Pg**	**16 15 13.6**	**-0.3**
VISS				*e*Sg	**Sg**	**16 15 29.8**	**+0.7**
PDKS	**Podkum**	**1.18**	**102**	*e*Pg	**Pg**	**16 15 13.2**	**-1.0**
PDKS				*e*Sg	**Sg**	**16 15 30.9**	**+1.2**
CTI	**Castel Tesino**	**1.20**	**258**	Pg	**Pg**	**16 15 14.4**	**-0.1**
CTI				Sg	**Sg**	**16 15 30.7**	**+0.5**
	comp=Z,23nm,0.4s						
PERS	**Pernice**	**1.27**	**75**	*i* Pg	**Pg**	**16 15 15.4**	**-0.5**
PERS				*e*Sg	**Sg**	**16 15 32.5**	**0.0**
LEGS	**Legarje**	**1.43**	**104**	*i* Pg	**Pg**	**16 15 18.0**	**-0.9**
BOJS	**Bojanci**	**1.57**	**121**	*i* Pg	**Pg**	**16 15 20.7**	**-0.8**
BOJS				*e*Sg	**Sg**	**16 15 41.6**	**-0.2**

IDC ***15*** *16:33:03.7±1.3, 1169N×9171E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.7/4, Error ellipse: s-maj=57.5km s-min=23.9km az=51.0*
ISCJB ***15*** *16:33:06.6±1.0, 116N±02×917E±03, h33km, mb4.0/7, Error ellipse: s-maj=48.0km s-min=14.2km az=110.4*
NEIC ***15*** *16:33:08.3±0.7, 1169N×9175E, h30km, mb4.2/3, Error ellipse: s-maj=33.8km s-min=10.4km az=55.0*
ISC 15 16:33:09.4±1.0**, 117N**±02×**918E**±03**, h35**km**, n11, σ0ˢ21**/10**, mb4.0**/7**, 1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.96**	**94**	⇑*e*P	x	16 33 05.7	
PBA				*e*S	x	16 33 21.3	
PBA				*e*x	x	16 33 21.8	
	comp=E,15μm,0.4s						
PBA				*e*x	x	16 33 22.0	
	comp=N,4μm,0.3s						
SONM	**Songino Array**	**38.03**	**16**	P	**P**	**16 40 24.1**	**-0.1**
	comp=N,0.5nm,0.4s,mb3.6,baz=199,slow=9.0,SNR=4.8						
FITZ	**Fitzroy Crossi**	**44.68**	**131**	*e*P	**P**	**16 41 18.3**	**-0.5**
	comp=N,3.4nm,1.1s,mb4.1						
CHKZ	**Chkalovo**	**45.11**	**342**	*e*P	**P**	**16 41 22.4**	**+0.2**
	comp=N,0.7nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**52.41**	**127**	P	**P**	**16 42 18.2**	**0.0**
	comp=N,1.5nm,0.3s,mb4.3,baz=301,slow=10.0,SNR=94						
WRAB	**Tennant Creek**	**52.41**	**127**	*e*P	**P**	**16 42 18.2**	**0.0**
	comp=N,4.7nm,0.3s,mb4.9						
WB2	**Warramunga Arr**	**52.42**	**127**	*e*P	**P**	**16 42 18.3**	**0.0**
ASPA	**Alice Springs**	**54.17**	**131**	*e*P	**P**	**16 42 31.5**	**+0.3**
AS31	**Alice Springs**	**54.18**	**131**	*e*P	**P**	**16 42 31.5**	**+0.2**
ASAR	**Alice Springs**	**54.18**	**131**	P	**P**	**16 42 31.4**	**+0.1**
	comp=N,0.4nm,0.4s,mb3.7,baz=309,slow=7.1,SNR=34						
BRTR	**Keskin Array B**	**58.17**	**310**	P	**P**	**16 42 59.6**	**-0.1**
	comp=N,0.3nm,0.5s,mb3.6,baz=118,slow=12,SNR=2.4						

ISCJB ***15*** *17:18:32.5±1.6, 97S±02×1513E±0.1, h33km, mb3.6/3, Error ellipse: s-maj=25.4km s-min=16.5km az=21.2*
IDC ***15*** *17:18:33.1±2.4, 930S×15067E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.7/11, mbtmp3.7/5, ML3.1/2, Error ellipse: s-maj=62.7km s-min=29.1km az=122.0*
NEIC ***15*** *17:18:34.3±1.8, 926S×15073E, h10km, mb3.8/1, Error ellipse: s-maj=38.0km s-min=21.3km az=119.0*
ISC 15 17:18:34.7±1.8**, 97S**±02×**1513E**±02**, h35**km**, n10, σ0ˢ50**/11**, mb3.6**/3**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.06**	**274**	Pn	**Pn**	**17 19 29.6**	**-4.7**
	5.2nm,0.3s,baz=74,slow=13,SNR=13						
PMG				Sn	**Sn**	**17 20 20.7**	**+0.1**
	baz=347,slow=17,SNR=1.8						
PMG	**Port Moresby**	**4.06**	**274**	*e*P	**Pn**	**17 19 29.4**	**-4.9**
PMG				*e*S	**Sn**	**17 20 24.9**	**+4.3**
WRAB	**Tennant Creek**	**19.24**	**236**	P	**Pn**	**17 22 56.2**	**-0.8**
	5.6nm,0.9s						
WB2	**Warramunga Arr**	**19.24**	**236**	*e*P	**Pn**	**17 22 57.2**	**+0.1**
WRA	**Warramunga Arr**	**19.25**	**236**	P	**Pn**	**17 22 57.1**	**-0.1**
	0.1nm,0.3s,baz=59,slow=11,SNR=11						
AS31	**Alice Springs**	**21.63**	**228**	*e*P	**P**	**17 23 26.5**	**+4.7**
ASAR	**Alice Springs**	**21.63**	**228**	P	**P**	**17 23 22.6**	**+0.8**
	1.0nm,1.0s,mb3.2,baz=49,slow=11,SNR=6.0						
FITZ	**Fitzroy Crossi**	**26.21**	**249**	P	**P**	**17 24 06.0**	**-0.2**
	1.6nm,0.8s,mb3.6,baz=72,slow=9.6,SNR=5.1						
SONM	**Songino Array**	**69.69**	**330**	P	**P**	**17 29 40.8**	**0.0**
	1.3nm,0.8s,mb3.9,baz=148,slow=5.1,SNR=10						
TORD	**Torodi Ar. Bea**	**149.99**	**279**	PKPbc	PKPbc	17 38 24.7	+3.4
	1.2nm,0.7s,baz=76,slow=2.3,SNR=9.3						

CSEM ***15*** *17:31:36.3±0.9, 3875N×2897W, h5km, ML1.8, Error ellipse: s-maj=7.0km s-min=4.8km az=75.0, After PDA*
PDA ***15*** *17:31:36.3±0.9, 3875N×2897W, h5km, MD3.0, ML1.8, Error ellipse: s-maj=7.0km s-min=4.8km az=75.0*
SVSA 15 17:31:36.3±0.9**, 3875N**×**2897W, h5**km**, MD3.0, ML1.8, Error ellipse: s-maj=7.0km s-min=4.8km az=75.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.27**	**129**	*e*P	Pg	17 31 41.2	-0.4
CALA				*e*S	Sg	17 31 45.0	-0.2
HOR	**Horta**	**0.35**	**130**	*e*P	Pg	17 31 42.3	-0.8
HOR				*e*S	Sg	17 31 47.2	-0.5
PICO	**Pico**	**0.50**	**120**	*e*P	Pg	17 31 45.1	-0.8
PICO				*e*S	Sg	17 31 51.7	-0.6
PTEI	**Pico do Teixo**	**0.55**	**118**	*e*S	Sg	17 31 52.8	-1.1
PTEI							
	32nm,0.2s						
PBOI	**Pico dos Bois**	**0.56**	**124**	*e*S	Sg	17 31 53.8	-0.7
PBOI							
	16nm,0.1s						
ROSA	**Rosais**	**0.57**	**93**	*e*P	Pg	17 31 46.2	-1.1
ROSA				*e*S	Sg	17 31 53.1	-1.6
PMAN	**Manadas**	**0.70**	**100**	*e*S	Sg	17 31 56.7	-2.2
PMAN							
	32nm,0.1s						
PID	**Ribeirinha**	**0.74**	**115**	*e*P	Pg	17 31 48.7	-1.7
PID				*e*S	Sg	17 31 57.3	-2.7

CSEM ***15*** *17:37:04.4±0.3, 3847N×1560E, h139km±3km, ML3.6/3, Error ellipse: s-maj=4.8km s-min=4.0km az=11.0*
ISCJB ***15*** *17:37:05.2±0.4, 3844N±004×1566E±004, h140km, Error ellipse: s-maj=6.2km s-min=4.4km az=118.0*
NEIC ***15*** *17:37:05.4, 3843N×1555E, h140km, MD2.7(ROM), After ROM.*
ROM ***15*** *17:37:05.4±0.3, 3843N×1555E, h140km±5km, Md2.7/16, Ml2.7/9, Error ellipse: s-maj=5.1km s-min=3.6km az=33.0*
THE ***15*** *17:37:09.1, 3848N×1594E, h105km*
ISC 15 17:37:06.2±0.8**, 3846N**±004×**1563E**±005**, h135**km±6km**, n28, σ0ˢ78**/41**, 9D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSRU	**Castanea**	**0.22**	**207**	⇓*i*Pg	**Pn**	**17 37 24.2**	**-0.5**
MSRU				Sg	**Sn**	**17 37 37.8**	**-1.0**
	399nm,0.3s						
MSI	**Messina ING**	**0.26**	**194**	Pg	**Pn**	**17 37 24.4**	**-0.5**
	491nm,0.2s						
MTTG	**Motta San Giov**	**0.46**	**174**	⇓*i*Pg	**Pn**	**17 37 26.1**	**+0.4**
	77nm,0.2s						
SOI	**Samo**	**0.51**	**139**	⇓*i*Pg	**Pn**	**17 37 26.3**	**+0.4**
SOI				Sg	**Sn**	**17 37 40.9**	**+0.1**
	336nm,0.4s						
MMME	**Mongiuffi-Meli**	**0.60**	**210**	⇓*i*Pg	**Pn**	**17 37 26.7**	**+0.2**
MMME				Sg	**Sn**	**17 37 42.3**	**+0.5**
PLAC	**Placanica**	**0.63**	**90**	⇓*i*Pg	**Pn**	**17 37 27.5**	**+0.8**
PLAC				Sg	**Sn**	**17 37 42.9**	**+0.7**
SLNA	**Salina**	**0.64**	**280**	Pg	**Pn**	**17 37 26.8**	**+0.1**
	71nm,0.2s						
GRI	**Girifalco**	**0.72**	**59**	Pg	**Pn**	**17 37 28.2**	**+0.9**
GRI				Sg	**Sn**	**17 37 43.8**	**+0.6**
	54nm,0.1s						
IFIL	**Filicudi I Eol**	**0.84**	**278**	Pg	**Pn**	**17 37 27.8**	**-0.5**
SERS	**Sersale**	**1.01**	**55**	⇓*i*Pg	**Pn**	**17 37 30.7**	**+1.0**
HAGA	**Augusta**	**1.23**	**198**	Pg	**Pn**	**17 37 30.7**	**-1.1**
HVZN	**Vizzini**	**1.47**	**210**	Pg	**Pn**	**17 37 34.0**	**-0.3**
CUC	**Castrocucco**	**1.54**	**5**	⇓*i*Pg	**Pn**	**17 37 35.1**	**0.0**
CUC				Sg	**Sn**	**17 37 57.0**	**-0.2**
	51nm,0.3s						
HAVL	**Avola**	**1.55**	**195**	Pg	**Pn**	**17 37 34.2**	**-1.0**
SCHR	**S. Chirico Rap**	**1.77**	**11**	Pg	**Pn**	**17 37 38.3**	**+0.5**
	15nm,0.6s						
CMPR	**Campora**	**1.88**	**352**	⇓Pg	**Pn**	**17 37 39.4**	**+0.4**
	15nm,0.7s						
SLCN	**Sala Consilina**	**1.93**	**360**	Pg	**Pn**	**17 37 39.9**	**+0.3**
	40nm,0.5s						
CDRU	**Civita di Ruta**	**2.05**	**353**	⇓Pg	**Pn**	**17 37 41.7**	**+0.7**
	43nm,1.7s						
MIGL	**Miglionico**	**2.23**	**16**	Pg	**Pn**	**17 37 42.8**	**-0.5**
MIGL				Sg	**Sn**	**17 38 11.4**	**-0.4**
	88nm,0.3s						
SG1	**Sgolgore (BA)**	**2.51**	**18**	*e*Pn	**Pn**	**17 37 45.5**	**-1.3**
PE1	**Pezze di Greco**	**2.72**	**30**	*e*Pn	**Pn**	**17 37 47.6**	**-1.9**
IGT	**Igoumenitsa**	**3.81**	**72**	*e*Pn	**Pn**	**17 38 03.8**	**+0.2**
IGT				*e*Sn	**Sn**	**17 38 46.8**	**-1.3**
LKD	**Levkas**	**3.94**	**85**	*e*Pn	**Pn**	**17 38 05.7**	**+0.4**
LKD				*e*Sn	**Sn**	**17 38 49.6**	**-1.5**
MEV	**Metsovon**	**4.55**	**71**	*e*Pn	**Pn**	**17 38 15.0**	**+1.7**
MEV				*e*Sn	**Sn**	**17 39 05.4**	**-0.2**
FNA	**Florina**	**5.01**	**61**	*e*Pn	**Pn**	**17 38 20.6**	**+1.2**
FNA				*e*Sn	**Sn**	**17 39 16.1**	**-0.3**
AGG	**Agios Georgios**	**5.27**	**82**	*e*Pn	**Pn**	**17 38 23.9**	**+1.0**
AGG				*e*Sn	**Sn**	**17 39 22.3**	**-0.4**
XOR	**Xorichti**	**5.96**	**79**	*e*Pn	**Pn**	**17 38 32.9**	**+0.6**
PAIG	**Paliouri**	**6.42**	**74**	*e*Pn	**Pn**	**17 38 39.3**	**+0.9**
PAIG				*e*Sn	**Sn**	**17 39 49.8**	**-0.7**

IDC ***15*** *17:45:33.5±0.6, 2258S×17525W, h0km, mb4.6/12, mb1 4.7/13, mb1mx4.7/16, mbtmp4.6/13, ML5.1/2, MS3.9/10, Ms1 3.9/10, ms1mx3.7/23, Error ellipse: s-maj=25.8km s-min=15.0km az=110.0*
NEIC ***15*** *17:45:34.6±0.2, 2258S×17527W, h10km, mb4.9/29, MS4.3/4, Error ellipse: s-maj=9.7km s-min=5.7km az=126.0*
BJI ***15*** *17:45:34.6, 2260S×17530W, h10km, mB5.5, mb5.3, Ms4.6, Msz4.8*
ISCJB ***15*** *17:45:37.0±0.3, 2263S±005×17534W±007, h33km, mb5.0/47, MS4.4/21, Error ellipse: s-maj=9.3km s-min=6.4km az=58.5*
MOS ***15*** *17:45:42.5±3.0, 2267S×17642W, h33km, mb5.3/15, Error ellipse: s-maj=13.4km s-min=10.7km az=95.9*
ISC 15 17:45:33.4±4.4**, 2258S**±006×**17521W**±008**, h1**km±26km**, n176, σ1ˢ03**/107**, mb5.0**/47**, MS4.4**/21**, 21C-17D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.08**	**200**	Pn	**Pn**	**17 47 18.7**	**+0.6**
	142nm,0.3s,baz=76,slow=22,SNR=5.7						
RAO				Sn	**Sn**	**17 48 30.8**	**-8.4**
	14nm,0.3s,baz=259,slow=22,SNR=1.9						
AFI	**Afiamalu**	**9.22**	**21**	Pn	**Pn**	**17 47 41.9**	**-5.5**
	7.5nm,0.3s,baz=220,slow=17,SNR=6.9						
AFI				Sn	**Sn**	**17 49 16.7**	**-15**
	3.5nm,0.3s,baz=262,slow=19,SNR=2.3						
AFI	**Afiamalu**	**9.22**	**21**	*e*Pn	**Pn**	**17 47 42.7**	**-4.8**
RAR	**Rarotonga**	**14.39**	**87**	Pn	**Pn**	**17 48 48.6**	**-10**
	6.2nm,0.3s,baz=252,slow=11,SNR=11						
RAR				Sn	Sn	17 51 11.9	-27
	2.4nm,0.3s,baz=80,slow=16,SNR=3.1						
RAR				LR	LR	17 52 11.3	
	comp=Z,72nm,20.1s,baz=269,slow=28						
URZ	**Urewera**	**16.96**	**201**	Pn	**Pn**	**17 49 32.4**	**+0.4**
	1.5nm,0.3s,baz=351,slow=4.3,SNR=10						
URZ				Sn	**Sn**	**17 52 22.7**	**-18**
	1.1nm,0.3s,baz=175,slow=16,SNR=6.9						
DZM	**Mont Dzumac**	**16.98**	**268**	Pn	**Pn**	**17 49 38.3**	**+6.1**
	0.9nm,0.3s,baz=66,slow=17,SNR=15						
DZM				LR	LR	17 54 33.5	
	comp=Z,335nm,20.9s,baz=317,slow=32						
SNZO	**South Karori**	**20.52**	**202**	*e*Pn	**P**	**17 50 14.7**	**+1.7**
TBI	**Tubuai**	**23.71**	**97**	*e*LQ		17 55 07.0	
	363nm,26.2s						
TBI				*e*LR	LR	17 56 18.6	
	529nm,28.0s,baz=271						
RPZ	**Rata Peaks**	**23.95**	**205**	P	**P**	**17 50 48.0**	**-1.1**
	11nm,0.7s,mb4.5,baz=39,slow=1.6,SNR=8.8						
PPT	**Papeete**	**24.57**	**83**	*e*LQ		17 55 39.2	
	448nm,24.0s						
PPT				*e*LR	LR	17 56 44.7	
	530nm,24.8s,baz=253						
PPT	**Papeete**	**24.57**	**83**	LR	LR	17 58 20.7	
	comp=Z,299nm,21.5s,MS3.8,baz=265,slow=31						
HNR	**Honiara**	**27.16**	**295**	LR	LR	18 00 47.4	
	comp=Z,212nm,18.0s,MS3.8,baz=179,slow=34						
ARMA	**Armidale**	**30.61**	**248**	*e*P	**P**	**17 51 49.3**	**+0.4**
CNB	**Canberra Magne**	**33.32**	**240**	*e*P	**P**	**17 52 13.4**	**+0.7**
	11nm,1.2s,mb4.7						
CTA	**Charters Tower**	**35.92**	**267**	*e*P	**P**	**17 52 35.6**	**+0.4**
	10nm,0.6s,mb4.8						
CTA	**Charters Tower**	**35.92**	**267**	*e*P	**P**	**17 52 35.6**	**+0.4**
CTA				pmax	pmax		
	comp=Z,11nm,0.6s						
CTAO	**Charters Tower**	**35.92**	**267**	*e*P	**P**	**17 52 35.5**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.0						
CTAO				MLR	MLR		
	comp=Z,381nm,19.0s,MS4.2						
CTAO	**Charters Tower**	**35.92**	**267**	*e*P	**P**	**17 52 35.5**	**+0.3**
	comp=Z,24nm,0.9s,mb5.0						
CTAO				LR	LR		
	comp=Z,381nm,19.0s,MS4.2						
TOO	**Toolangi**	**36.86**	**237**	*e*P	**P**	**17 52 43.3**	**0.0**
	comp=Z,6.9nm,1.0s,mb4.3						
TOO	**Toolangi**	**36.86**	**237**	*e*P	**P**	**17 52 43.3**	**0.0**
TOO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
RKT	**Rikitea**	**37.00**	**99**	*e*S	**S**	**17 58 31.4**	**+0.6**
	comp=Z,56nm,27.2s						
RKT				*e*LR	LR	18 02 29.0	
	comp=Z,325nm,27.8s						
STKA	**Stephens Creek**	**39.30**	**247**	⇑*i*P	**P**	**17 53 03.1**	**-0.7**
	comp=Z,3.2nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**39.30**	**247**	P	**P**	**17 53 03.0**	**-0.8**
	comp=Z,3.0nm,0.5s,mb4.2,baz=102,slow=12,SNR=22						
STKA				LR	LR	18 08 31.5	
	comp=Z,441nm,18.9s,MS4.3,baz=31,slow=35						
AS31	**Alice Springs**	**46.61**	**258**	*e*P	**P**	**17 54 02.5**	**-0.6**
ASPA	**Alice Springs**	**46.61**	**258**	*e*P	**P**	**17 54 02.5**	**-0.6**
WB2	**Warramunga Arr**	**46.90**	**263**	⇓*i*P	**P**	**17 54 04.6**	**-0.8**
WRAB	**Tennant Creek**	**46.91**	**263**	*e*P	**P**	**17 54 01.7**	**-3.7**
WRAB	**Tennant Creek**	**46.91**	**263**	*e*P	**P**	**17 54 04.2**	**-1.2**
	comp=Z,12nm,0.7s,mb5.1						
WRAB				LR	LR		
	comp=Z,395nm,19.4s,MS4.4						
WRA	**Warramunga Arr**	**46.91**	**263**	P	**P**	**17 54 04.6**	**-0.9**
	comp=Z,9.7nm,0.6s,mb5.1,baz=103,slow=7.8,SNR=131						
WRA				PcP	PcP	17 55 38.3	+0.1
	comp=Z,2.5nm,1.0s,baz=91,slow=3.5,SNR=5.1						
KAKA	**Kakadu**	**50.63**	**272**	⇑*i*P	**P**	**17 54 33.2**	**-0.8**
	comp=Z,10.0nm,0.6s,mb4.9						
FORT	**Forrest**	**50.89**	**248**	*e*P	**P**	**17 54 35.0**	**-1.0**
	comp=Z,43nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**55.34**	**263**	*e*P	**P**	**17 55 08.3**	**-0.5**
	comp=Z,9.3nm,0.9s,mb4.8						
SBA	**Scott Base**	**56.00**	**185**	*e*P	**P**	**17 55 15.2**	**+1.7**
SBA				*e*		17 55 27.4	
SBA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
SBA				MLR	MLR		
	comp=Z,219nm,20.1s,MS4.2						
SBA	**Scott Base**	**56.00**	**185**	*e*Pn	**P**	**17 55 15.2**	**+1.6**
	comp=Z,7.8nm,0.8s,mb4.8						

SBA *e* 17 55 27.4
SBA LR LR
comp=Z,219nm,20.1s,MS4.2
VNDA Vanda 56.10 186 P **P** **17 55 15.0 +0.7**
comp=Z,2.5nm,0.9s,mb4.3,baz=3.4,slow=6.9,SNR=17
VNDA LR LR 18 16 11.4
comp=Z,70nm,19.0s,MS3.8,baz=19,slow=33
VNDA Vanda 56.10 186 P **P** **17 55 15.0 +0.7**
VNDA pmax pmax
comp=Z,3.0nm,0.9s
VNDA MLR MLR
comp=Z,70nm,19.0s
VNDA Vanda 56.10 186 *e*P **P** **17 55 14.7 +0.5**
comp=Z,2.9nm,0.9s,mb4.3
KLBR Kellerberrin 59.55 246 *e*P **P** **17 55 37.7 -0.8**
comp=Z,25nm,0.8s,mb5.3
NWAO Narrogin (SRO) 59.78 244 *e*P **P** **17 55 38.9 -1.2**
MBWA Marble Bar 59.95 258 *e*P **P** **17 55 40.1 -1.2**
comp=Z,9.1nm,0.7s,mb4.9
MUN Mundaring 60.79 245 *e*P **P** **17 55 46.9 -0.1**
CASY Casey 63.22 206 *e*P **P** **17 56 03.7 +0.4**
QSPA South Pole Qui 67.50 180 *e*P **P** **17 56 31.1 0.0**
MIR Mirnyy 70.22 205*d* *i*P **P** **17 56 50.0 +2.0**
MIR pmax pmax
comp=Z,120nm,1.5s,mb5.8
KKM Kota Kinabalu 72.79 284 *e*P **P** **17 57 03.8 +0.2**
MJAR Matsushiro Arr 73.42 322 P **P** **17 57 07.4 +0.1**
comp=Z,7.5nm,0.7s,mb4.9,baz=154,slow=5.5,SNR=35
MAJO Matsushiro 73.42 322 *e*P **P** **17 57 06.3 -1.0**
MAJO pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
MAJO Matsushiro 73.42 322 *e*P **P** **17 57 06.3 -1.0**
comp=Z,8.7nm,0.8s,mb4.9
MAT Matsushiro 73.42 322 P **P** **17 57 07.2 -0.1**
MAT Matsushiro 73.42 322 *e*P **P** **17 57 07.0 -0.3**
MAT pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
MAT Matsushiro 73.42 322 *e*P **P** **17 57 07.0 -0.3**
comp=Z,6.0nm,0.8s,mb4.8
KSM Kuching 76.26 277 *e*P **P** **17 57 22.7 -1.0**
ASAJ Asahikawa 76.80 330 P **P** **17 57 28.6 +1.9**
comp=Z,29nm,0.9s,mb5.4,baz=213,slow=9.1,SNR=31
ASAJ Asahikawa 76.80 330 P **P** **17 57 28.6 +1.9**
ASAJ pmax pmax
comp=Z,29nm,0.9s
YSS Yuzh-Sakhalins 78.92 332⇑*e*P **P** **17 57 39.6 +1.0**
YSS *e* 17 57 51.2
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 78.92 332 *e*P **P** **17 57 39.4 +0.8**
comp=Z,38nm,1.0s,mb5.4
ISA Isabella 78.97 44 *e*P **P** **17 57 38.1 -0.8**
comp=Z,16nm,1.5s,mb4.8
CMB Columbia Colle 79.27 41 *e*P **P** **17 57 39.7 -0.8**
comp=Z,6.9nm,0.9s,mb4.7
CMB *e* 17 57 52.6
CMB LR LR
comp=Z,316nm,19.0s,MS4.7
GLA Glamis 79.84 48 P **P** **17 57 44.4 +0.8**
MAW Mawson 80.48 199 *e*P **P** **17 57 47.3 +0.2**
comp=Z,7.4nm,0.9s,mb4.6
MAW Mawson 80.48 199 P **P** **17 57 47.3 +0.3**
comp=Z,11nm,0.9s,mb4.8,baz=124,slow=6.5,SNR=32
MAW Mawson 80.48 199 *e*P **P** **17 57 47.3 +0.2**
MAW pmax pmax
comp=Z,7.0nm,0.9s
NVAR Mina Array Bea 80.79 42 P **P** **17 57 49.4 +0.7**
comp=Z,2.1nm,0.8s,mb4.2,baz=213,slow=7.6,SNR=14
KDAK Kodiak Island 82.26 12 P **P** **17 57 56.1 -0.3**
comp=Z,11nm,1.0s,mb5.0,baz=196,slow=7.4,SNR=3.4
WVOR Wild Horse Val 83.09 38 *e*P **P** **17 58 00.3 -0.5**
comp=Z,11nm,1.2s,mb5.0
WVOR *e* 17 58 12.8
NJ2 Nanjing 83.20 309 *e*P **P** **17 58 02.3 +0.9**
NJ2 AP 17 58 10.3
NJ2 S S 18 08 19.0 -3.5
NJ2 XS sS 18 08 32.0 +9.0
NJ2 AMB AMB
comp=Z,30nm,0.6s,mb5.7
NJ2 AMB AMB
comp=Z,410nm,4.9s
NJ2 LR LR
comp=Z,2μm,27.4s,MS5.4
HABR Khabarovsk 83.54 329⇑*i*P **P** **17 58 04.1 +1.0**
HABR pmax pmax
comp=Z,55nm,1.6s,mb5.5
MDJ Mudanjiang 83.71 324 P **P** **17 58 05.4 +1.4**
MDJ AP 17 58 12.1
MDJ XP sP 17 58 14.6 +10
MDJ PP PP 18 01 18.5 +1.8
MDJ S S 18 08 28.6 +0.9
MDJ XS sS 18 08 39.9 +12
MDJ AMB AMB
comp=Z,22nm,0.9s,mb5.4
MDJ LR LR
comp=N,46nm,17.7s,MS4.0
MDJ LR LR
comp=E,34nm,19.1s,MS4.0
MDJ LR LR
comp=Z,83nm,19.1s,MS4.1
MDJ Mudanjiang 83.71 324 *e*P **P** **17 58 05.5 +1.4**
comp=Z,22nm,1.0s,mb5.3
MSU Marysvale 84.72 45 *e*P **P** **17 58 09.7 +0.6**
MSU *e* 17 58 22.3
SYO Syowa Base 85.26 192⇑*e*P **P** **17 58 10.6 -1.3**
CN2 Changchun 85.53 321 *e*P **P** **17 58 14.4 +1.2**
CN2 *e*XP sP 17 58 25.5 +12
CN2 AMB AMB
comp=Z,20nm,0.9s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
KLR Kul'dur 85.64 328 *e*P **P** **17 58 12.0 -1.7**
SNAA Sanae 85.86 178 LR LR 18 33 22.4
comp=Z,62nm,18.8s,MS4.0,baz=205,slow=33
SNAA Sanae 85.86 178 *e*P **P** **17 58 13.3 -1.5**
SNAA *e* 17 58 16.4
SNAA *e* 17 58 20.5
SNAA *e* 17 58 22.6
SNAA *e* 17 58 25.9
SNAA *e* 17 58 33.9
SNAA Sanae 85.86 178⇑*e*P **P** **17 58 14.0 -0.8**
SNAA Sanae 85.86 178 *e*P **P** **17 58 13.0 -1.8**
comp=Z,11nm,0.9s,mb5.0
MNTX Cornudas Mount 85.87 53 *e*P **P** **17 58 14.9 0.0**
comp=Z,6.3nm,1.1s,mb4.7
MA2 Magadan 86.49 343 *e*P **P** **17 58 19.0 +1.1**
TTA Tatalina 86.57 9 *e*P **P** **17 58 18.1 -0.2**
TTA pmax pmax
comp=Z,18nm,1.3s,mb5.1
TTA Tatalina 86.57 9 *e*P **P** **17 58 18.1 -0.2**
comp=Z,18nm,1.3s,mb5.2
VNA1 Neumayer--Stati 86.57 176 *e*P **P** **17 58 17.8 -0.6**
VNA1 *e* 17 58 19.6
VNA1 *e* 17 58 26.2
VNA1 *e* 17 58 29.0
VNA1 *e* 17 58 42.0
KULM Kulim 86.62 277 P **P** **17 58 19.1 +0.6**
ANMO Albuquerque 86.70 50⇑*e*P **P** **17 58 26.6 +7.6**
MAIT Maitri 86.77 182 *e*P **P** **17 58 18.2 -1.1**
MCK McKinley 88.46 11 *e*P **P** **17 58 25.8 -1.6**
PDAR Pinedale Array 88.72 42 P **P** **17 58 27.4 -1.3**
comp=Z,0.4nm,0.7s,mb3.8,baz=218,slow=5.7,SNR=2.7
PDAR LR LR 18 36 07.7
comp=Z,102nm,18.5s,MS4.3,baz=141,slow=34
BJT Baijiatuau 89.18 314 *e*P **P** **17 58 31.2 +0.4**
BJT pmax pmax
comp=Z,11nm,0.7s
BJT Baijiatuau 89.18 314 *e*P **P** **17 58 31.2 +0.3**
comp=Z,12nm,0.7s,mb5.2
COLA College 89.70 11 *e*P **P** **17 58 32.2 -1.0**
COLA pmax pmax
comp=Z,15nm,0.9s,mb5.2
COLA College 89.70 11 *e*P **P** **17 58 32.2 -1.0**
comp=Z,15nm,0.9s,mb5.2
WALA Waterton Lakes 89.74 35 *e*P **P** **17 58 32.7 -0.8**
comp=Z,6.1nm,1.1s,mb4.7
GYA Guiyang 89.92 299⇑*i*P **P** **17 58 35.9 +1.6**
GYA AP 17 58 43.9
GYA XP sP 17 58 47.1 +12
GYA PP PP 18 02 11.4 +4.5
GYA SKS 18 09 03.1
GYA S S 18 09 25.0 -2.9
GYA AMB AMB
comp=Z,20nm,0.7s,mb5.5
GYA AMB AMB
comp=Z,110nm,4.6s
GYA LR LR
comp=N,340nm,19.7s,MS4.9
GYA LR LR
comp=E,270nm,20.4s,MS4.9
DAWY Dawson 90.76 15 *e*P **P** **17 58 38.1 -0.1**
DAWY *e* 17 58 49.8
BILL Bilibino 91.38 353 *i* P **P** **17 58 44.1 +3.0**
XAN Xi'an 91.45 306 P **P** **17 58 42.9 +1.5**
XAN AMB AMB
comp=Z,36nm,0.9s,mb5.7
HIA Hailar 91.89 324 *e*P **P** **17 58 44.1 +0.6**
KMI Kunming 92.60 296⇑P **P** **17 58 49.3 +2.6**
KMI AP 17 58 57.0
KMI XP sP 17 59 01.4 +14
KMI PP PP 18 02 30.3 +2.3
KMI S S 18 09 50.1 -2.1
KMI SS SS 18 16 05.1 +1.3
KMI AMB AMB
comp=Z,18nm,0.8s,mb5.5
KMI AMB AMB
comp=Z,95nm,4.4s
KMI LR LR
comp=Z,47nm,17.2s,MS4.0
HHC Hu-ho-hao-te 92.66 313 *e*P **P** **17 58 47.9 +0.9**
HHC AP 17 58 55.9
HHC XP sP 17 58 59.1 +12
HHC PP PP 18 02 33.0 +4.5
HHC S S 18 09 48.8 -4.0
HHC XS sS 18 10 02.8 +10
HHC AMB AMB
comp=Z,23nm,1.3s,mb5.5
HHC AMB AMB
comp=Z,83nm,6.5s
HHC LR LR
comp=N,115nm,28.5s,MS4.4
HHC LR LR
comp=E,166nm,28.5s,MS4.4
HHC LR LR
comp=Z,110nm,31.3s,MS4.1
CHTO Chiang Mai 93.38 289 *e*P **P** **17 58 52.0 +1.7**
CHTO pmax pmax
comp=Z,4.0nm,0.6s,mb5.0
CHTO Chiang Mai 93.38 289 *e*P **P** **17 58 52.0 +1.7**
comp=Z,3.9nm,0.6s,mb5.0
CD2 Chengdu 94.09 302 *e*P **P** **17 58 52.0 -1.6**
CD2 AP 17 58 59.8
CD2 XP sP 17 59 03.4 +9.4
CD2 PP PP 18 02 41.6 +1.9
CD2 SKS 18 09 23.8
CD2 S S 18 09 58.8 -6.6
CD2 XS sS 18 10 12.3 +6.4
CD2 PS PS 18 11 22.3 +2.7
CD2 SS SS 18 16 23.8 -1.4
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,30nm,8.9s
CD2 LR LR
comp=N,80nm,18.0s
CD2 LR LR
comp=Z,200nm,14.4s,MS4.7
YAK Yakutsk 95.01 337⇑*e*P **P** **17 58 57.9 +0.1**
YAK pmax pmax
comp=Z,12nm,1.2s,mb5.2
YAK Yakutsk 95.01 337 *e*P **P** **17 58 55.8 -2.1**
comp=Z,12nm,1.0s,mb5.3
INK Inuvik 95.61 14 P **P** **17 58 58.9 -1.7**
comp=Z,1.6nm,0.9s,mb4.5,baz=207,slow=4.5,SNR=3.5
INK Inuvik 95.61 14 *e*P **P** **17 58 59.3 -1.3**
LZH Lanzhou 96.09 306 *e*P **P** **17 59 04.0 +1.3**
LZH AP 17 59 10.6
LZH XP sP 17 59 14.0 +11
LZH PP PP 18 02 59.0 +3.7
LZH SKS 18 09 38.0
LZH *e*S S 18 10 18.0 -4.8
LZH SS SS 18 16 55.1 +1.5
LZH AMB AMB
comp=Z,13nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,70nm,5.0s
LZH LR LR
comp=Z,725nm,20.0s,MS5.2
ULN Ulaanbaatar 98.63 318 *e*P **P** **17 59 13.7 -0.5**
LPAZ La Paz 98.88 112 LR LR 18 32 29.9
comp=Z,30nm,19.4s,MS3.8,baz=126,slow=28
SONM Songino Array 99.02 318 P **P** **17 59 16.2 +0.2**
comp=Z,0.4nm,0.6s,mb4.3,baz=107,slow=5.0,SNR=5.1
SONM LR LR 18 45 34.4
comp=Z,67nm,18.2s,MS4.2,baz=152,slow=36
GTA Gaotai 100.29 308 *e*P Pdif 17 59 22.3 +0.7
GTA AP 17 59 30.3
GTA XP 17 59 33.5
GTA PP PP 18 03 30.9 +3.4
GTA PPP 18 05 38.5
GTA SKS 18 09 57.3
GTA S Sdif 18 10 51.5 -7.0
GTA XS 18 11 04.9
GTA PS PS 18 12 27.8 +0.7
GTA AMB AMB
comp=Z,4.0nm,1.4s
GTA AMB AMB
comp=Z,70nm,4.9s
GTA LR LR
comp=N,68nm,14.5s,MS4.6
GTA LR LR
comp=E,130nm,14.8s,MS4.6
GTA LR LR
comp=Z,142nm,20.1s
KURK Kurchatov 117.28 317⇑*i*PKIKP PKPdf 18 04 18.3 -2.3
CHKZ Chkalovo 122.14 320 *e*PKIKP PKPdf 18 04 28.0 -1.9
ARU Arti 128.38 325 *i* PKIKP PKPdf 18 04 39.6 -2.2
ARU *e* 18 06 45.5
ARCES ARCESS Array B 131.41 350 PKP PKPdf 18 04 46.4 -1.2
comp=Z,2.4nm,0.7s,baz=18,slow=1.1,SNR=10
FINES FINESS Array B 138.47 345 PKP PKPdf 18 05 02.4 +1.6
comp=Z,1.8nm,0.8s,baz=88,slow=4.8,SNR=5.8
ANN Anapa 145.30 318 *i* PKHKP 18 05 10.6
ANN *e* 18 11 52.1
ANN pmax pmax
comp=Z,95nm,1.7s
SUW Suwalki 145.67 341 *e*PKP PKPdf 18 05 14.1 +0.5
AKASG Malin Array Be 146.07 332 PKPbc PKPbc 18 05 14.2 -0.9
comp=Z,12nm,0.7s,baz=41,slow=4.0,SNR=89
AKBB Malin Array Si 146.07 332 *e*PKHKP 18 05 13.9
SIM Simferopol' 147.25 320*c* *i*PKIKP PKPdf 18 05 19.0 +2.7
SIM *e* 18 05 32.0
SIM pmax pmax
comp=Z,21nm,0.7s
MALT Malatya 147.25 306⇓*i*P PKPbc 18 05 19.9 +1.4
MALT Malatya 147.25 306 *e*PKPbc PKPbc 18 05 17.3 -1.2
OJC Ojcow 150.00 341 *e*PKPdf PKPdf 18 05 25.0 +4.3
OJC *e*PKPbc PKPbc 18 05 29.3 +3.6
OJC *e*PKPab PKPab 18 05 36.3 +4.9
BURAR Bucovina Array 150.13 332⇓*i*P PKPbc 18 05 27.0 +1.0
BR131 Keskin Array S 150.15 312 *e*PKPbc PKPbc 18 05 25.9 -0.2
BRTR Keskin Array B 150.15 312 PKPbc PKPbc 18 05 26.1 0.0
comp=Z,6.2nm,0.8s,baz=130,slow=3.9,SNR=35
STHS Stebnicka Huta 150.23 338 *e*PKP PKPbc 18 05 26.9 +0.7
KOLS Kolonicke sedl 150.26 336 *e*PKP PKPbc 18 05 26.8 +0.5
KOLS *e* 18 05 35.0
KOLS Kolonicke sedl 150.26 336 *e*PKP PKPbc 18 05 26.8 +0.5
KOLS *e* 18 05 35.1
KSP Ksiaz 150.39 345 *e*PKP PKPbc 18 05 27.4 +0.8
KSP Ksiaz 150.39 345 *i* PKIKP PKPbc 18 05 26.7 +0.1
KSP Ksiaz 150.39 345 *e*PKPdf PKPbc 18 05 26.7 +0.1
CFR Carcaliu 150.47 325⇓*i*P PKPbc 18 05 27.3 +0.5
NIE Niedzica 150.54 339 *e*PKP PKPbc 18 05 27.5 +0.6
CRVS Cervenica-Dubn 150.59 337 *e*PKP PKPbc 18 05 27.1 0.0
CLL Collm 150.62 349 *e*PKIKP PKPdf 18 05 18.0 -3.7
CLL *i* PKP1 PKPbc 18 05 27.0 -0.1
CLL *i* *PKP2 18 05 39.2
CLL Collm 150.62 349 *e*(PKPdf) PKPdf 18 05 18.0 -3.7
CLL ⇑*i*PKPbc PKPbc 18 05 27.0 -0.1
comp=Z,17nm,1.0s
CLL ⇓*i*PKPab pKPab 18 05 39.2 +5.0
comp=Z,20nm,1.0s
CLL Collm 150.62 349⇑*e*PKIKP PKPdf 18 05 18.0 -3.7
CLL *i* 18 05 27.0
CLL *i* 18 05 39.2
CLL pmax pmax
comp=Z,35nm,1.0s
CLL pmax pmax
comp=Z,17nm,1.0s
CLL Collm 150.62 349 ⇓*i*PKP PKPdf 18 05 18.0 -3.7
CLL ⇑*i*PKPbc PKPbc 18 05 27.0 -0.1
CLL ⇓*i*PKPab PKPab 18 05 39.2 +0.1
ANTO Ankara 150.67 312⇓*i*P PKPbc 18 05 27.6 +0.3
ANTO Ankara 150.67 312 *e*PKPbc PKPbc 18 05 27.1 -0.2
BHL Bhannes 150.67 299 *e*P PKPbc 18 05 27.8 +0.6
VRI Vrincioaia 150.71 328⇓*i*P PKPbc 18 05 27.6 +0.2
PLOR Plostina 150.76 328⇓*i*P PKPbc 18 05 27.4 -0.1
UPC Upice 150.77 345⇑*e*PKPB PKPbc 18 05 27.4 -0.1
UPC *e*PKPAB PKPab 18 05 34.4 -0.1
UPC *e*pPKP pPKPdf 18 05 40.3 +18
TIRR Tirgusor 150.79 324⇓*i*P PKPbc 18 05 28.0 +0.4
OKC Ostrava-Krasne 150.83 342⇑*e*PKPB PKPbc 18 05 27.9 +0.3
OKC *e*PKPAB PKPab 18 05 33.2 -1.6
OKC *e*pPKP pPKPdf 18 05 40.3 +18
DPC Dobruska-Polom 150.84 345⇑*e*PKPB PKPbc 18 05 28.0 +0.3
DPC *e*PKPAB PKPab 18 05 35.9 +1.1
DPC *ex* x 18 05 48.6
DPC Dobruska-Polom 150.84 345 *e*PKIKP PKPbc 18 05 28.0 +0.3
DPC *e* 18 05 35.9
BRG Berggiesshubel 150.87 348 *e*PKP PKPbc 18 05 27.8 +0.1
comp=Z,7.5nm,0.9s
BRG *e* 18 05 40.1
comp=Z,6.0nm,0.8s
BRG *e* 18 11 02.2
comp=Z,4.1nm,1.3s
BRG *e* 18 12 03.8
comp=Z,2.4nm,1.1s
BRG
comp=N,31nm,13.9s
BRG
comp=E,24nm,17.7s
BRG
comp=Z,62nm,17.1s
BRG Berggiesshubel 150.87 348 *e*PKIKP PKPbc 18 05 27.8 +0.1
BRG *e* 18 05 40.1
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG pmax pmax
comp=Z,8.0nm,0.8s
BRG pmax pmax
comp=Z,6.0nm,1.3s
BRG pmax pmax
comp=Z,4.0nm,1.2s
BRG MLR MLR
comp=N,2μm,13.9s,MS6.1
BRG MLR MLR
comp=E,31nm,17.7s,MS6.1
BRG MLR MLR
comp=Z,24nm,17.1s,MS4.1
MORC Moravsky Berou 151.05 343⇓*i*P PKPbc 18 05 28.5 +0.3
MORC Moravsky Berou 151.05 343 *e*PKPbc PKPbc 18 05 28.0 -0.2
PVCC Panska Ves 151.07 347⇑*e*PKPB PKPbc 18 05 28.6 +0.4
PVCC *e*pPKP 18 05 40.9
PVCC *ex* x 18 05 49.7
PVCC Panska Ves 151.07 347 *e*PKIKP PKPbc 18 05 28.6 +0.4
PVCC *e* 18 05 40.9
KECS Kecovo 151.28 338 *e*PKP PKPbc 18 05 29.6 +0.9
KECS *e* 18 05 37.8
MLR Muntele Rosu 151.36 328⇓*i*P PKPbc 18 05 28.3 -0.6
PRU Pruhonice 151.59 347⇑*e*PKPB PKPbc 18 05 29.2 -0.2
PRU *e*PKPAB PKPab 18 05 41.3 +3.4
VYHS Vyhne 151.82 340 *e*PKP PKPbc 18 05 30.1 +0.2
VYHS *e* 18 05 39.7
VOIR 151.83 329⇓*i*P PKPbc 18 05 30.8 +0.8
DRGR 151.84 333⇓*i*P PKPbc 18 05 30.3 +0.3
EIL Elat 152.07 291 *e*PKPbc PKPbc 18 05 30.4 -0.1
GRA1 Grafenberg Arr 152.47 351 *e*PKP PKPab 18 05 41.2 -0.4
GRF Grafenberg Arr 152.47 351 *e*PKP PKPab 18 05 41.2 -0.4
GRF Grafenberg Arr 152.47 351 *e*PKP PKPab 18 05 41.3 -0.3
KHC Kasperske Hory 152.60 347⇑*e*PKPB PKPbc 18 05 31.9 +0.2
KHC *e*PKPAB PKPab 18 05 42.7 +0.5
KHC *ex* x 18 05 56.0
KHC Kasperske Hory 152.60 347 *e*PKIKP PKPbc 18 05 31.9 +0.2
KHC *e* 18 05 42.7
GERES GERESS Array B 152.85 347 PKP PKPdf 18 05 26.8 +1.8
comp=Z,0.1nm,0.3s,baz=66,slow=24,SNR=2.8
GERES PKPbc PKPbc 18 05 32.3 0.0
comp=Z,1.5nm,0.8s,baz=48,slow=2.0,SNR=11
BZS Buzias 153.23 333⇓*i*P PKPbc 18 05 33.2 +0.1
PKSM Moragy 153.88 338⇓*i*P PKPbc 18 05 33.8 -0.7
AVF Avril sur Loir 155.82 2 *e*PKP2 PKPab 18 05 54.5 -1.3
comp=Z,19nm,1.2s
SMF Signal de Mont 155.98 2 *e*PKP2 PKPab 18 05 55.3 -1.2
comp=Z,26nm,1.2s
ESDC Sonseca Array 161.40 22 PKPab PKPab 18 06 19.3 -0.8
comp=Z,0.7nm,0.7s,baz=334,slow=3.1,SNR=6.1
KEST Kesra 166.31 344 PKPab PKPab 18 06 42.6 +1.0
comp=Z,1.3nm,0.6s,baz=246,slow=6.7,SNR=4.2
TORD Torodi Ar. Bea 170.17 162 PKP PKPdf 18 05 42.0 -1.0
comp=Z,1.0nm,1.0s,baz=239,slow=0.8,SNR=3.8
TORD PKPab PKPab 18 06 59.8 +1.1
comp=Z,1.6nm,0.7s,baz=194,slow=3.5,SNR=7.9

KRSC ***15*** *17:48:05, 6090N×16727E, h5km, ML4.2*
IDC ***15*** *17:48:08.7±1.1, 6082N×16500E, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.8/19, mbtmp3.7/7, Error ellipse: s-maj=37.4km s-min=22.4km az=167.0*
MOS ***15*** *17:48:09.1±1.8, 6103N×16531E, h9km, mb4.3/2, Error ellipse: s-maj=36.0km s-min=13.4km az=85.4*
ISCJB ***15*** *17:48:13.1±3.0, 6096N±006×1654E±02, h32km±23km, mb3.8/11, Error ellipse: s-maj=15.7km s-min=8.8km az=34.2*
NEIC ***15*** *17:48:15.9±1.8, 6084N×16536E, h44km±18km, mb4.1/4, Error ellipse: s-maj=20.2km s-min=10.8km az=179.0*
ISC 15 17:48:13.7±2.7, 6104N±005×1654E±02, h24km±21km, n25, σ0893/27, mb3.8/11, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMKR	**Semkarok**	**4.91**	**206**	*e*P		**Pn**	**17 49 25.6**	**-0.4**
BDR	**Baidarnaya**	**4.99**	**208**	*e*P		**Pn**	**17 49 28.3**	**+1.3**
KBTR	**Krutoberegovo**	**5.03**	**197**	PN		**Pn**	**17 49 25.7**	**-1.9**
KBTR	**Krutoberegovo**	**5.03**	**197**	*e*P		**Pn**	**17 49 25.7**	**-1.9**
KBTR				*i* S		**Sn**	**17 50 24.4**	**-0.5**
ZLN	**Zelenaya**	**5.58**	**208**	*e*P		**Pn**	**17 49 35.6**	**+0.4**
KMNR	**Kamenistaya**	**5.95**	**209**	*e*P		**Pn**	**17 49 40.2**	**0.0**
MKZ	**Mys Kozlova**	**6.79**	**198**	PN		**Pn**	**17 49 51.2**	**-0.5**
MKZ	**Mys Kozlova**	**6.79**	**198**	*e*P		**Pn**	**17 49 51.2**	**-0.5**
MKZ				*i* S		**Sn**	**17 51 08.2**	**0.0**
BILL	**Bilibino**	**7.04**	**3**	*e*PN		**Pn**	**17 49 53.3**	**-1.9**
BILL				pmax	pmax			
comp=Z,3.0nm,0.6s								
MA2	**Magadan**	**7.42**	**265**	*e*PN		**Pn**	**17 50 00.9**	**+0.5**
GNL	**Ganaly**	**8.39**	**212**	*e*P		**Pn**	**17 50 15.6**	**+1.9**
INK	**Inuvik**	**26.04**	**48**	P		**P**	**17 53 46.0**	**+1.0**
comp=Z,1.4nm,0.5s,mb3.7,baz=285,slow=7.3,SNR=7.6								
INK	**Inuvik**	**26.04**	**48**	P		**P**	**17 53 46.0**	**+1.0**
SONM	**Songino Array**	**35.48**	**276**	P		**P**	**17 55 03.8**	**-4.5**
comp=Z,0.2nm,0.9s,mb3.1,baz=38,slow=9.5,SNR=2.4								
KURK	**Kurchatov**	**46.24**	**299**	*e*P		**P**	**17 56 37.3**	**+0.4**
KURK				pmax	pmax			
comp=Z,3.0nm,0.8s,mb4.3								
KURK	**Kurchatov**	**46.24**	**299**	*e*P		**P**	**17 56 37.3**	**+0.4**
comp=Z,2.9nm,0.8s,mb4.3								
CHKZ	**Chkalovo**	**47.32**	**306**	P		**P**	**17 56 45.4**	**+0.1**
CHKZ				pmax	pmax			
comp=Z,1.0nm,0.8s,mb3.8								
CHKZ	**Chkalovo**	**47.32**	**306**	P		**P**	**17 56 45.4**	**+0.1**
comp=Z,1.1nm,0.8s,mb3.8								
NVAR	**Mina Array Bea**	**50.85**	**80**	P		**P**	**17 57 12.4**	**+0.1**
comp=Z,0.3nm,0.5s,mb3.4,baz=308,slow=7.8,SNR=3.7								
BW06	**Boulder Array**	**51.53**	**70**	*e*P		**P**	**17 57 18.6**	**+1.1**
comp=Z,1.4nm,0.8s,mb3.9								
PDAR	**Pinedale Array**	**51.53**	**70**	P		**P**	**17 57 17.5**	**0.0**
comp=Z,1.7nm,0.6s,mb4.2,baz=340,slow=3.9,SNR=17								
MVU	**Marysvale**	**53.68**	**75**	*e*P		**P**	**17 57 33.4**	**0.0**
comp=Z,5.6nm,1.3s,mb4.3								
NOA	**NORSAR Array B**	**56.65**	**345**	P		**P**	**17 57 55.0**	**+0.2**
comp=Z,0.7nm,0.6s,mb3.9,baz=14,slow=7.3,SNR=2.4								
GERES	**GERESS Array B**	**68.12**	**340**	P		**P**	**17 59 11.4**	**-0.2**
comp=Z,0.4nm,0.7s,mb3.6,baz=17,slow=5.6,SNR=4.0								
WRA	**Warramunga Arr**	**84.49**	**209**	P		**P**	**18 00 42.7**	**-1.8**
comp=Z,0.9nm,0.9s,mb3.9,baz=13,slow=5.7,SNR=5.7								

NIED ***15*** *18:10:00, 4380N×13920E, h240km, Mw4.1 Best double couple: M0 1.66000×10^15 NP1:φs341.00000°, δ55.00000°, λ-48.00000°. NP2:φs103.00000°, δ53.00000°, λ-134.00000°.*
SZGRF ***15*** *18:10:14.2, 4237N×14388E, h33km, mb4.4, Hokkaido,*

Japan, region
MOS ***15*** *18:10:50.7±1.1, 43.92N×139.14E, h236^{km}, mb4.2/19, Error ellipse: s-maj=11.7km s-min=6.3km az=108.1*
IDC ***15*** *18:10:51.0±1.0, 43.86N×138.99E, h225^{km}±10^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.7/22, mbtmp4.3/14, Error ellipse: s-maj=14.4km s-min=12.0km az=96.0*
ISCJB ***15*** *18:10:51.1±0.2, 43.85N±0.03×139.10E±0.05, h240^{km}±3^{km}, mb4.2/47, Error ellipse: s-maj=6.4km s-min=4.8km az=58.4*
BJI ***15*** *18:10:51.9, 44.33N×139.23E, h251^{km}, mB4.2, mb4.2*
NEIC ***15*** *18:10:51.6±0.6, 43.86N×139.12E, h232^{km}±6^{km}, mb4.3/31, Error ellipse: s-maj=7.7km s-min=6.0km az=115.0*
JMA ***15*** *18:10:52.2±0.3, 43.79N×139.16E, h240^{km}±3^{km}, M4.1*
ISC 15 18:10:52.0±0.2**, 43.83N**±0.04×**139.14E**±0.06**, h239**^{km}±3^{km}**, n143, σ0^{s}95**/162**, mb4.2**/47**, 9C-22D, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK	Shakotan	1.08	116	⇓P	Pn	18 11 26.4	+0.2
JSH	Shimam	1.36	151	⇓P	Pn	18 11 28.2	+0.1
JSH				eS	S	18 11 55.9	-0.6
JYG	Yagishiri	1.75	69	⇓P	Pn	18 11 31.1	-0.1
JYG				eS	S	18 12 01.9	-0.2
JOSM	Okushiri--Mats	1.76	172	⇓P	Pn	18 11 31.8	+0.5
JOSM				eS	S	18 12 02.4	+0.1
JHR	Hokuryu	1.87	92	⇓P	Pn	18 11 32.9	+0.6
JEW	Eniwo	1.95	120	⇓P	Pn	18 11 33.7	+0.7
JKB	Kayabe	2.39	144	⇓P	Pn	18 11 37.0	-0.2
JWK2	Keihoku	2.47	52	⇑P	Pn	18 11 39.2	+1.1
JWK2				eS	S	18 12 15.7	+1.3
ASAJ	Asahikawa	2.51	82	P	Pn	18 11 38.8	+0.3
	21nm,0.3s,baz=270,slow=8.7,SNR=250						
ASAJ				S	S	18 12 14.4	-0.8
	4.4nm,0.3s,baz=1.8,slow=33,SNR=6.6						
ASAJ	Asahikawa	2.51	82	PN	Pn	18 11 38.8	+0.3
ASAJ				S	S	18 12 14.4	-0.8
ASAJ				pmax	pmax		
	comp=Z,21nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
JFR	Furan	2.60	104	⇓P	Pn	18 11 39.6	+0.2
JFR				eS	S	18 12 17.4	+0.6
JKK2	Kamakawa 2	2.61	88	⇓P	Pn	18 11 40.0	+0.5
JKK2				eS	S	18 12 18.2	+1.2
JSE	Soyaes	2.71	64	⇑P	Pn	18 11 41.6	+1.0
JSE				eS	S	18 12 20.1	+1.1
JOT	Ohata	2.82	149	⇓P	Pn	18 11 41.0	-0.8
JNBK	Urakawa-nobuka	3.07	119	P	Pn	18 11 44.0	-0.4
JCH	Churui	3.31	110	P	Pn	18 11 45.5	-1.7
JCH				eS	S	18 12 27.0	-4.0
JAR	Ashorobuto	3.41	97	⇓P	Pn	18 11 48.3	0.0
JAR				eS	S	18 12 33.0	+0.2
JTKR	Abashiri--Toko	3.45	86	⇓P	Pn	18 11 49.1	+0.3
JTKR				eS	S	18 12 33.9	+0.2
JANG	Nango	3.88	152	P	Pn	18 11 52.3	-1.5
JANG				eS	S	18 12 38.2	-4.5
YSS	Yuzh-Sakhalins	4.03	38	⇑ePN	Pn	18 11 55.2	-0.4
YSS				eS	S	18 12 44.9	-1.1
YSS				pmax	pmax		
	comp=Z,210nm,1.1s						
YSS				pmax	pmax		
	comp=N,120nm,1.0s						
YSS				pmax	pmax		
	comp=E,70nm,1.0s						
YSS				smax			
	comp=N,110nm,1.1s						
YSS	Yuzh-Sakhalins	4.03	38	⇑iPn	Pn	18 11 55.8	+0.2
JAK	Akkeshi	4.13	100	P	Pn	18 11 55.3	-1.5
JAK				eS	S	18 12 44.4	-3.8
JRA	Rausu	4.33	86	P	Pn	18 12 00.1	+1.0
HABR	Khabarovsk	5.45	330	⇓iPN	Pn	18 12 12.6	-0.3
HABR				eS	S	18 13 13.2	-4.1
HABR				pmax	pmax		
	comp=Z,46nm,1.3s						
MDJ	Mudanjiang	6.91	280	Pn	Pn	18 12 31.5	+0.3
MAJO	Matsushiro	7.31	186	ePN	Pn	18 12 35.6	-0.8
MAJO				pmax	pmax		
	comp=Z,26nm,0.7s						
MAJO	Matsushiro	7.31	186	ePn	Pn	18 12 35.5	-0.9
	comp=Z,26nm,0.7s						
MAT	Matsushiro	7.31	186	P	Pn	18 12 36.2	-0.2
MAT				S	S	18 13 58.6	-1.6
MAT	Matsushiro	7.31	186	ePN	Pn	18 12 36.0	-0.4
MAT				eS	S	18 13 59.0	-1.2
MAT				pmax	pmax		
	comp=Z,17nm,0.8s						
MAT	Matsushiro	7.31	186	eP	Pn	18 12 36.0	-0.4
	comp=Z,17nm,0.8s						
MAT				eS	S	18 13 59.0	-1.2
MJAR	Matsushiro Arr	7.31	186	P	Pn	18 12 36.5	+0.1
	comp=Z,3.9nm,0.3s,baz=0.2,slow=13,SNR=75						
KLR	Kul'dur	7.43	319	ePN	Pn	18 12 34.0	-3.9
KLR				pmax	pmax		
	comp=Z,28nm,1.4s						
JHJ	Hachijo jima 2	10.70	177	P	Pn	18 13 16.1	-3.3
	comp=Z,19nm,0.3s,baz=242,slow=17,SNR=4.5						
JHJ				S	S	18 15 08.3	-11
	comp=Z,19nm,0.3s,baz=85,slow=23,SNR=6.6						
SKR	Severo-Kuril's	13.40	53	ePN	Pn	18 13 50.1	-2.9
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
HIA	Hailar	14.40	299	eP	Pn	18 14 05.2	-0.1
HIA				pmax	pmax		
	comp=Z,12nm,0.7s						
HIA	Hailar	14.40	299	ePn	Pn	18 14 05.2	-0.1
	comp=Z,12nm,0.7s						
MA2	Magadan	17.29	20	eP	P	18 14 36.6	-0.9
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	Magadan	17.29	20	eP	P	18 14 36.6	-0.9
	comp=Z,10nm,0.7s						
SSE	Sheshan	19.05	234	P	P	18 15 04.6	+8.2
SSE				AMB	AMB		
	comp=Z,23nm,0.7s						
SSE				AMB	AMB		
	comp=Z,133nm,4.9s						
SSE				LR	LR		
	comp=N,26nm,18.6s						
SSE				LR	LR		
	comp=E,37nm,18.6s						
SSE				LR	LR		
	comp=Z,38nm,20.5s						
YAK	Yakutsk	19.07	346	eP	P	18 14 54.5	-2.2
YAK				eS	S	18 18 14.1	-5.9
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				smax			
	comp=N,12nm,1.4s						
YAK				smax			
	comp=E,12nm,1.2s						
YAK	Yakutsk	19.07	346	eP	P	18 14 53.8	-2.9
	comp=E,19nm,0.8s						
ULN	Ulaanbaatar	22.62	292	⇑eP	P	18 15 31.4	-1.0
ULN	Ulaanbaatar	22.62	292	eP	P	18 15 31.3	-1.2
	comp=E,4.4nm,0.6s,mb4.2						
SONM	Songino Array	23.07	292	P	P	18 15 35.7	-0.8
	comp=E,2.8nm,0.5s,mb4.1,baz=81,slow=8.6,SNR=49						
SONM				ScP	ScP	18 22 33.4	+0.6
	comp=E,0.7nm,0.9s,baz=176,slow=2.9,SNR=5.4						
TLY	Talaya	24.93	301	eP	P	18 15 52.0	-1.3
TLY				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
TLY	Talaya	24.93	301	eP	P	18 15 52.0	-1.3
	comp=Z,5.5nm,0.9s,mb4.2						
ZAK	Zakamensk	25.09	298	eP	P	18 15 54.1	-0.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
BILL	Bilibino	28.16	21	eP	P	18 16 20.9	-1.2
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.2						
GTA	Gaotai	29.53	275	eP	P	18 16 35.8	+1.5
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.2						
QIZ	Qiongzhong	34.84	234	eP	P	18 17 18.6	-1.8
	comp=Z,37nm,1.3s,mb4.8						
KMI	Kunming	34.97	250	P	P	18 17 23.3	+1.8
KMI				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb3.7						
KMI				LR	LR		
	comp=Z,32nm,31.2s						
WMQ	Urumqi	36.62	288	eP	P	18 17 35.0	-0.5
WMQ				AP	pP	18 18 27.0	+2.9
WMQ				PP	PP	18 19 08.0	+3.8
WMQ				S	S	18 22 59.0	-1.2
WMQ				XS	sS	18 24 30.0	+3.0
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,10.0nm,5.0s						
WMQ				LR	LR		
	comp=N,39nm,12.0s						
WMQ				LR	LR		
	comp=E,28nm,11.0s						
WMQ				LR	LR		
	comp=Z,27nm,10.0s						
LSA	Lhasa	40.40	266	eP	P	18 18 08.9	+2.1
LSA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
LSA	Lhasa	40.40	266	eP	P	18 18 08.9	+2.1
	comp=Z,2.9nm,0.5s,mb4.0						
KURK	Kurchatov	40.62	302	⇑eP	P	18 18 08.6	0.0
KURK	Kurchatov	40.62	302	⇓iP	P	18 18 08.5	-0.1
	comp=Z,38nm,0.6s,mb5.0						
KDAK	Kodiak Island	43.43	46	P	P	18 18 32.3	+1.0
	comp=Z,3.5nm,0.4s,mb4.1,baz=350,slow=3.6,SNR=6.3						
CHKZ	Chkalovo	44.58	308	⇓iP	P	18 18 40.2	-0.2
CHKZ				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.6						
CHKZ	Chkalovo	44.58	308	⇓iP	P	18 18 40.2	-0.2
	comp=Z,24nm,0.8s,mb4.6						
BRVK	Borovoye	44.95	307	⇓iP	P	18 18 43.6	+0.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
BRVK	Borovoye	44.95	307	⇓iP	P	18 18 43.6	+0.3
	comp=Z,4.5nm,0.6s,mb4.0						
GUN	Gumba	45.22	268	eP	P	18 18 47.1	+1.7
	comp=Z,57nm,0.5s,mb5.2						
KKN	Kakani	45.72	268	eP	P	18 18 50.7	+1.4
	comp=Z,26nm,0.6s,mb4.7						
KKN	Kakani	45.72	268	eP	P	18 18 50.7	+1.4
KKN				pmax	pmax		
	comp=Z,26nm,0.6s,mb4.7						
PKI	Pulchoki	45.75	268	eP	P	18 18 50.8	+1.2
DMN	Daman	45.95	268	eP	P	18 18 52.3	+1.2
	comp=Z,17nm,0.5s,mb4.6						
AAK	Ala-Archa	46.02	292	eP	P	18 18 51.1	-0.6
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
AAK	Ala-Archa	46.02	292	eP	P	18 18 51.1	-0.6
	comp=Z,5.5nm,0.7s,mb4.0						
GKN	Gorkha	46.06	269	eP	P	18 18 52.9	+0.9
KOLN	Koldanda	46.95	269	eP	P	18 19 00.3	+1.5
	comp=Z,28nm,0.5s,mb4.9						
SVE	Sverdlovsk	49.02	314	eP	P	18 19 13.9	-0.8
SVE				pmax	pmax		
	comp=Z,40nm,1.3s,mb4.6						
INK	Inuvik	49.23	29	P	P	18 19 16.5	+0.2
	comp=Z,3.6nm,0.3s,mb4.2,baz=299,slow=6.8,SNR=27						
ARU	Arti	50.24	315	⇓iP	P	18 19 23.8	-0.1
ARU				e	pP	18 20 16.5	+1.0
ARU				e		18 20 35.5	
ARU				e		18 21 17.7	
ARU				ePPP		18 22 28.8	
ARU				eS	S	18 26 14.7	-2.7
ARU				eSS	SS	18 29 53.2	-0.7
ARU				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.1						
ARU	Arti	50.24	315	eP	P	18 19 23.7	-0.2
	comp=Z,2.9nm,0.5s,mb3.9						
KULM	Kulim	51.15	233	eP	P	18 19 32.5	+1.8
KEV	Kevo	56.50	337	ep	P	18 20 08.1	-1.2
ARCES	ARCESS Array B	57.05	337	P	P	18 20 12.3	-0.8
	comp=Z,1.0nm,0.5s,mb3.7,baz=43,slow=8.6,SNR=16						
ARCES				PcP	PcP	18 21 05.4	+0.2
	comp=Z,2.0nm,0.8s,baz=81,slow=2.8,SNR=4.7						
JOF	Joensuu	59.20	330	ep	P	18 20 26.4	-1.6
	comp=Z,12nm,0.4s,mb4.9						
JOF	Joensuu	59.20	330	eP	P	18 20 26.4	-1.6
JOF				pmax	pmax		
	comp=Z,12nm,0.4s,mb4.9						
KAF	Kangasniemi	61.51	330	ep	P	18 20 41.4	-2.2
	comp=Z,9.0nm,0.5s,mb4.7						
KAF	Kangasniemi	61.51	330	eP	P	18 20 41.4	-2.2
KAF				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
FINES	FINESS Array B	62.03	330	P	P	18 20 46.5	-0.5
	comp=Z,8.3nm,0.5s,mb4.6,baz=60,slow=7.4,SNR=100						
FINES				PcP	PcP	18 21 24.6	-0.6
	comp=Z,1.2nm,0.3s,baz=69,slow=3.9,SNR=7.6						
WRA	Warramunga Arr	63.61	185	P	P	18 20 57.7	+0.3
	comp=Z,0.7nm,0.3s,mb3.8,baz=0.3,slow=6.8,SNR=48						
WRA				PcP	PcP	18 21 32.6	+1.0
	comp=Z,0.8nm,0.5s,baz=358,slow=4.6,SNR=13						
WRA	Warramunga Arr	63.61	185	i P	P	18 20 57.7	+0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SUMG	Summit	63.89	359	eP	P	18 20 59.9	+0.6
	comp=Z,7.3nm,0.8s,mb4.4						
KIV	Kislovodsk	65.26	308	⇑eP	P	18 21 09.7	+1.6
KIV				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.6						
KIV	Kislovodsk	65.26	308	eP	P	18 21 07.9	-0.2
	comp=Z,9.5nm,0.7s,mb4.5						
NB2	NORSAR Subarra	67.28	335	P	P	18 21 20.1	-0.8
	comp=Z,6.7nm,0.8s,mb4.3,baz=39,slow=6.5						
NOA	NORSAR Array B	67.28	335	P	P	18 21 20.4	-0.5
	comp=Z,4.7nm,0.7s,mb4.2,baz=39,slow=6.3,SNR=19						
AKASG	Malin Array Be	67.93	320	P	P	18 21 24.1	-0.9
	comp=Z,2.9nm,0.5s,mb4.1,baz=45,slow=6.3,SNR=14						
AKASG	Malin Array Be	67.93	320	i P	P	18 21 24.7	-0.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MALT	Malatya	71.33	305	eP	P	18 21 46.6	+0.9
MALT				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
MALT	Malatya	71.33	305	eP	P	18 21 46.6	+0.9
	comp=Z,2.6nm,0.9s,mb3.9						
BRTR	Keskin Array B	73.14	309	P	P	18 21 57.0	+0.6
	comp=Z,0.8nm,0.6s,mb3.5,baz=80,slow=4.1,SNR=5.6						
BRTR	Keskin Array B	73.14	309	⇑eP	P	18 21 57.0	+0.6
MORC	Moravsky Berou	73.77	325	eP	P	18 21 59.9	-0.1
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
MORC	Moravsky Berou	73.77	325	eP	P	18 21 59.9	-0.2
	comp=Z,3.0nm,0.7s,mb4.0						
DPC	Dobruska-Polom	73.83	326	eP	P	18 22 01.5	+1.1
DPC				AMS	AMS	19 22 30.0	
PDAR	Pinedale Array	74.14	45	P	P	18 22 03.5	+1.2
	comp=Z,0.7nm,0.6s,mb3.5,baz=108,slow=0.5,SNR=6.3						
CLL	Collm	74.38	328	⇓P	P	18 22 03.8	+0.2
	comp=Z,logA/T=0.8,mb4.2						
CLL	Collm	74.38	328	⇓iP	P	18 22 03.8	+0.2
	comp=Z,5.0nm,0.8s,mb4.2						
CLL	Collm	74.38	328	⇓iP	P	18 22 03.8	+0.2
CLL				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
PVCC	Panska Ves	74.39	327	eP	P	18 22 04.6	+1.0
ULM	Lac du Bonnet	74.77	33	P	P	18 22 05.3	-0.5
	comp=Z,1.5nm,0.5s,mb3.9,baz=323,slow=8.5,SNR=4.8						
ULM	Lac du Bonnet	74.77	33	P	P	18 22 05.3	-0.5
PRU	Pruhonice	74.83	327	eP	P	18 22 06.8	+0.7
PRU				AMS	AMS	19 17 10.0	
	comp=Z,100nm,12.7s						
TREC	Trest	74.99	326	AMS	AMS	19 22 50.0	
	comp=Z,100nm,15.6s						
NKC	Novy Kostel	75.45	328	AMS	AMS	19 22 10.0	
KHC	Kasperske Hory	75.89	327	eP	P	18 22 13.1	+0.9
KHC				AMS	AMS	19 19 30.0	
	comp=Z,100nm,20.6s						
KHC	Kasperske Hory	75.89	327	⇑eP	P	18 22 13.2	+1.1
GERES	GERESS Array B	76.06	326	P	P	18 22 13.6	+0.4
	comp=Z,1.0nm,0.6s,mb3.6,baz=37,slow=5.5,SNR=11						
GRA1	Grafenberg Arr	76.36	328	eP	P	18 22 15.5	+0.7
	comp=Z,4.0nm,1.0s,mb4.0						
GRF	Grafenberg Arr	76.36	328	eP	P	18 22 15.5	+0.7
	comp=Z,4.0nm,1.0s,mb4.0						
GRF	Grafenberg Arr	76.36	328	eP	P	18 22 15.5	+0.7
GRF				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.4						
CDF	Champ du Feu	78.89	330	eP	P	18 22 28.7	0.0
HINF	Hinteralfeld	79.54	330	eP	P	18 22 32.4	+0.1
LOR	Lormes	81.08	331	eP	P	18 22 40.1	-0.4
	comp=Z,5.2nm,0.6s,mb4.1						
LOR	Lormes	81.08	331	eP	P	18 22 40.1	-0.4
LOR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
LOR	Lormes	81.08	331	eP	P	18 22 40.1	-0.4
	comp=Z,2.6nm,0.6s,mb4.0						
SSF	Saint Saulge	81.38	331	eP	P	18 22 41.8	-0.2
	comp=Z,1.6nm,0.4s,mb3.7						
SSF	Saint Saulge	81.38	331	eP	P	18 22 41.8	-0.2
SSF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
SSF	Saint Saulge	81.38	331	eP	P	18 22 41.8	-0.2
	comp=Z,0.8nm,0.4s,mb3.7						
LPL	La Plagne	81.52	328	eP	P	18 22 43.2	+0.4
LPG	La Plagne	81.53	328	eP	P	18 22 43.3	+0.5
	comp=Z,2.0nm,0.4s,mb3.8						
LPG	La Plagne	81.53	328	eP	P	18 22 43.3	+0.5
LPG				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
LPG	La Plagne	81.53	328	eP	P	18 22 43.3	+0.5
	comp=Z,1.0nm,0.4s,mb3.8						
SMF	Signal de Mont	81.62	331	eP	P	18 22 43.2	-0.1
	comp=Z,4.4nm,0.7s,mb3.9						
AVF	Avril sur Loir	81.67	331	eP	P	18 22 43.4	-0.1
	comp=Z,7.9nm,0.7s,mb4.2						
AVF	Avril sur Loir	81.67	331	eP	P	18 22 43.4	-0.1
AVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
AVF	Avril sur Loir	81.67	331	eP	P	18 22 43.4	-0.1
	comp=Z,4.0nm,0.7s,mb4.2						
GRR	Gorron	81.67	334	eP	P	18 22 43.2	-0.4
BGF	Bois d'Agland	82.05	331	eP	P	18 22 45.0	-0.5
MBDF	Montbardon	82.17	328	eP	P	18 22 46.0	-0.1
	comp=Z,2.5nm,0.4s,mb3.9						
SGMF	Saint Gilles	82.31	335	eP	P	18 22 46.3	-0.6
ORIF	Oris-en-Rattie	82.35	329	eP	P	18 22 47.2	+0.1
	comp=Z,2.9nm,0.6s,mb3.8						
ORIF	Oris-en-Rattie	82.35	329	eP	P	18 22 47.2	+0.1
ORIF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
ORIF	Oris-en-Rattie	82.35	329	eP	P	18 22 47.2	+0.1
	comp=Z,1.5nm,0.6s,mb3.8						
TCF	Toulx Ste Croi	82.50	331	eP	P	18 22 47.8	-0.1
VIVF	Saint-Julien-l	82.85	329	eP	P	18 22 49.8	+0.1
	comp=Z,2.8nm,0.6s,mb3.9						
VIVF	Saint-Julien-l	82.85	329	eP	P	18 22 49.8	+0.1
VIVF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
VIVF	Saint-Julien-l	82.85	329	eP	P	18 22 49.8	+0.1
	comp=Z,1.4nm,0.6s,mb3.9						
MAW	Mawson	124.86	207	PKP	PKPdf	18 29 23.1	-0.2
	comp=Z,1.3nm,1.0s,baz=308,slow=7.4,SNR=3.8						
SNAA	Sanae	146.62	201	PKPbc	PKPbc	18 30 03.5	-1.8
	comp=Z,0.6nm,0.5s,baz=194,slow=9.0,SNR=8.2						

KNET ***15*** *18:58:21.8±0.3, 42.60N×75.09E, h17^{km}±2^{km}, ml2.9, Error ellipse: s-maj=2.3km s-min=2.1km az=166.0*
ISCJB ***15*** *18:58:23.1±0.4, 42.62N±0.03×75.10E±0.03, h15^{km}±6^{km}, Error ellipse: s-maj=4.8km s-min=4.3km az=9.3*
NNC ***15*** *18:58:23.3±0.8, 42.72N×75.03E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=15.6km s-min=3.4km az=163.0*
ISC 15 18:58:23.2±0.4**, 42.60N**±0.03×**75.10E**±0.03**, h4**^{km}±5^{km}**, n19, σ0^{s}90**/34**, 21C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.12	297	P	Pg	18 58 26.0	+0.3
	2µm,0.2s,SNR=3775						
KBK				⇑S	Sg	18 58 28.3	+1.0
	15µm,0.4s						
AAK	Ala-Archa	0.45	274	⇑P	Pg	18 58 31.8	0.0
	163nm,0.2s,SNR=82						
AAK				⇑S	Sg	18 58 38.0	+0.4
	611nm,0.3s						
CHMS	Chumysh	0.47	328	P	Pg	18 58 32.3	-0.1
	316nm,0.2s,SNR=231						
CHMS				⇑S	Sg	18 58 38.9	+0.5
	458nm,0.1s						
TKM2	Tokmak 2	0.49	49	P	Pg	18 58 32.3	-0.3
	193nm,0.2s,SNR=192						
TKM2				⇑S	Sg	18 58 39.0	+0.1
	583nm,0.2s						
TKM2	Tokmak 2	0.49	49	⇓P	Pg	18 58 32.3	-0.3
	3.7nm,0.3s						
TKM2				⇓S	Sg	18 58 39.0	+0.1
	24nm,0.3s						
KZA	Kyzart	0.53	168	⇓P	Pg	18 58 33.5	+0.1
	457nm,0.2s,SNR=34						
KZA				⇓S	Sg	18 58 41.0	+0.6
	1µm,0.2s						
UCH	Uchtor	0.57	229	⇓P	Pg	18 58 33.9	-0.2
	50nm,0.1s,SNR=42						
UCH				⇑S	Sg	18 58 42.0	+0.4
	207nm,0.2s						
USP	Ospenovka	0.80	327	⇓P	Pg	18 58 38.0	-0.5
	168nm,0.2s,SNR=313						
USP				⇑S	Sg	18 58 48.9	0.0
	216nm,0.2s						
ULHL	Ulahol	0.92	112	⇑P	Pg	18 58 40.0	-0.8
	49nm,0.1s,SNR=9.3						
ULHL				⇓S	Sg	18 58 52.4	-0.4
	166nm,0.2s						
EKS2	Erkin-Say	0.98	274	⇓P	Pg	18 58 41.9	0.0
	40nm,0.1s,SNR=170						
EKS2				⇑S	Sg	18 58 55.4	+0.8
	82nm,0.1s						
AML	Almayashu	1.14	246	⇓P	Pg	18 58 44.5	-0.6
	48nm,0.2s,SNR=22						
AML				⇑S	Sg	18 58 59.5	-0.3
	205nm,0.3s						
KNDC	Almaty	1.50	65	⇓P	Pn	18 58 51.4	+0.5
	27nm,0.2s						
KNDC				⇑S	Sn	18 59 12.1	+1.1
	276nm,0.3s						
KK31	Karatay Array	3.41	280	⇑Pn	Pn	18 59 18.7	+1.5
	0.6nm,0.3s,baz=95,slow=12,SNR=411						
KK31				⇓Pg	Pg	18 59 27.1	-1.4
	3.8nm,0.2s,baz=338,slow=27,SNR=63						
KK31				⇑Lg		19 00 08.0	
	12nm,0.3s,baz=125,slow=71,SNR=12						
MK05	Makanchi Array	6.62	48	⇓Pn	Pn	19 00 02.9	+1.6
	3.6nm,0.6s						
MK05				⇑Lg		19 01 47.8	
	4.9nm,0.7s						
KURK	Kurchatov	8.47	15	Pn	Pn	19 00 26.9	+0.2
KURK				⇓Sn	Sn	19 02 04.1	+1.4
	2.4nm,0.8s						
KURK				⇑Lg		19 02 49.0	
	21nm,1.1s						
VOSK	Vostochnaya	10.50	346	⇑Pn	Pn	19 00 52.6	-1.9
	6.2nm,2.2s						
VOSK				⇑Lg		19 03 50.2	
	8.8nm,1.1s						
BVA0	Borovoye Array	10.90	345	Pn	Pn	19 00 58.4	-1.6
	0.4nm,1.2s,baz=150,slow=13,SNR=6.7						
BVA0				⇓Lg		19 04 10.8	
	2.0nm,0.9s						
CHKZ	Chkalovo	11.48	346	⇑Pn	Pn	19 01 05.6	-2.3
	1.0nm,0.7s						
CHKZ				⇑Lg		19 04 27.7	
	5.7nm,0.8s						
AB31	Akbulak array	12.46	307	⇑Pn	Pn	19 01 21.0	-0.3
	0.6nm,0.5s,baz=116,slow=12,SNR=17						
AB31				⇑Sn	Sn	19 03 34.2	-6.4
	1.0nm,0.7s						

ISCJB ***15*** *19:08:49.7±0.5, 35.13N±0.03×27.10E±0.06, h5^{km}, Error ellipse: s-maj=6.7km s-min=4.0km az=37.5*
HLW ***15*** *19:08:49.5, 35.50N×27.27E, h33^{km}, Mb3.2*
CSEM ***15*** *19:08:49.9±0.1, 35.14N×27.14E, h5^{km}, MD3.5, Error ellipse: s-maj=4.3km s-min=2.6km az=109.0*
NEIC ***15*** *19:08:50.4, 35.22N×27.10E, h20^{km}, MD3.5(ATH), After ATH.*
ATH ***15*** *19:08:50.4, 35.22N×27.10E, h20^{km}±2^{km}, MD3.5/8*
ISC 15 19:08:51.0±1.2**, 35.18N**±0.03×**27.07E**±0.06**, h6**^{km}±8^{km}**, n17, σ0^{s}75**/23**, 2C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.38	12	⇓iPB	Pg	19 08 57.5	-0.8
KARP				eSB	Sg	19 09 02.8	-0.4
XRY	Khrisi	1.17	255	ePN	Pn	19 09 13.0	-0.8
NPS	Neapolis	1.19	275	ePN	Pn	19 09 13.7	-0.5
NPS				eSN	Sn	19 09 30.2	-0.6
ARG	Arkhangelos	1.35	39	ePN	Pn	19 09 15.6	-0.8
ARG				eSN	Sn	19 09 33.1	-1.5
DAT	Datca	1.60	15	PN	Pn	19 09 19.3	-0.6

BODT	**Bodrum**	**1.89**	**6**	ePN	**Pn**	**19 09 24.2**	**+0.4**
BODT				eSN	**Sn**	**19 09 48.9**	**+0.9**
DALT	**Dalyan (Mudla)**	**2.04**	**38**	ePN	**Pn**	**19 09 26.2**	**+0.4**
YER	**Yerkesik**	**2.19**	**26**	ePN	**Pn**	**19 09 28.9**	**+1.0**
APE	**Apeiranthos**	**2.26**	**327**	ePN	**Pn**	**19 09 29.4**	**+0.5**
VAM	**Vamos**	**2.36**	**276**	ePN	**Pn**	**19 09 30.5**	**+0.3**
GVD	**Gavdhos**	**2.47**	**263**	ePN	**Pn**	**19 09 32.0**	**+0.2**
DENT	**Denizli**	**3.02**	**31**	eP	**Pn**	**19 09 40.4**	**+1.0**
VLI	**Veliai**	**3.69**	**296**	ePN	**Pn**	**19 09 49.0**	**+0.5**
HMAT	**Matruh**	**4.07**	**180**	P	**Pn**	**19 09 54.0**	**+0.2**
HMAT				S	**Sn**	**19 10 41.4**	**-0.3**
SWA1		**6.01**	**191**	⇑P	**Pn**	**19 10 21.2**	**+0.8**
SWA1				S	**Sn**	**19 11 28.2**	**-1.3**
SWA2		**6.07**	**193**	⇑eP	**Pn**	**19 10 22.4**	**+1.1**
HFRF	**Wahat Farafira**	**8.07**	**172**	eP	**Pn**	**19 10 49.1**	**+0.4**

MAN 15 19:18:12.7, 813N×12153E, h37km, mb2.6, ML4.1, MS5.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**1.08**	**108**	⇓iP	Pn	19 18 31.4	0.0
IPIL				iS	Sn	19 18 43.8	-1.3

*NEIC **15** 19:49:45.0±1.1, 7835N×760E, h10km, mb4.1/4, Error ellipse: s-maj=17.2km s-min=13.8km az=167.0*
*ISCJB **15** 19:49:45.4±0.8, 78.19N±006×84E±03, h10km, mb3.9/7, MS3.1/1, Error ellipse: s-maj=9.5km s-min=7.9km az=53.2*
*CSEM **15** 19:49:45.5±0.4, 7837N×788E, h10km, ML2.9, Error ellipse: s-maj=11.0km s-min=9.9km az=10.0*
*BER **15** 19:49:45.6±3.7, 7837N×785E, h10km, MD2.7, ML3.6, ML2.9(NAO)*
*NAO **15** 19:49:46.5±3.2, 7835N×865E, ML2.9*
*IDC **15** 19:49:47.8±5.4, 7830N×956E, h0km, mb3.7/3, mb1 3.6/4, mb1mx3.3/20, mbtmp3.6/4, ML2.9/1, MS3.2/1, Ms1 3.1/1, ms1mx2.3/29, Error ellipse: s-maj=101.3km s-min=20.5km az=81.0*
ISC 15 19:49:47.1±0.8**, 7823N**±007×**87E**±03**, h10km, n28, σ1.09**/40**, mb3.9**/7**, MS3.1**/1**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**0.94**	**41**	Pg	**Pg**	**19 50 03.2**	**-2.2**
KBS				Lg		19 50 14.6	
KBS	**Kingsbay**	**0.94**	**41**	⇑iP	**Pg**	**19 50 03.2**	**-2.1**
KBS				e		19 50 10.4	
KBS				eSg	**Sg**	**19 50 14.5**	**-3.1**
KBS				AML	AML	19 50 17.0	
	comp=Z,1μm,0.3s						
KBS	**Kingsbay**	**0.94**	**41**	ePg	**Pg**	**19 50 03.1**	**-2.2**
KBS				eSg	**Sg**	**19 50 10.6**	**-7.0**
KBS	**Kingsbay**	**0.94**	**41**	Pg	**Pg**	**19 50 03.2**	**-2.1**
KBS				eSg	**Sg**	**19 50 14.5**	**-3.1**
	SNR=95						
SPB4	**Spitsbergen Ar**	**1.56**	**88**	ePn	**Pn**	**19 50 15.1**	**+0.1**
SPB4				eSn	**Sn**	**19 50 36.5**	**+1.2**
SPB4	**Spitsbergen Ar**	**1.56**	**88**	ePn	**Pn**	**19 50 15.1**	**+0.1**
SPB4				eSn	**Sn**	**19 50 36.5**	**+1.2**
SPA0	**Spitsbergen Ar**	**1.57**	**88**	Pn	**Pn**	**19 50 15.1**	**+0.1**
	baz=261,slow=12						
SPA0				Sn	**Sn**	**19 50 37.4**	**+2.0**
	baz=277,slow=22						
HSP	**Hornsund**	**1.92**	**127**	P	**Pn**	**19 50 19.1**	**-0.7**
HSP	**Hornsund**	**1.92**	**127**	P	**Pn**	**19 50 19.7**	**-0.1**
HSP				S	**Sn**	**19 50 43.6**	**-0.3**
HOPEN	**Hopen**	**3.96**	**108**	eP	**Pn**	**19 50 47.2**	**-0.7**
HOPEN				eS	**Sn**	**19 51 32.3**	**-2.1**
HOPEN				AML	AML	19 51 35.1	
	comp=N,422nm,0.4s						
KEV	**Kevo**	**9.82**	**140**	ePn	**Pn**	**19 52 10.4**	**+2.0**
KEV				eSn	**Sn**	**19 53 51.3**	**-7.3**
KEV	**Kevo**	**9.82**	**140**	ePn	**Pn**	**19 52 10.4**	**+2.0**
KEV				eSn	**Sn**	**19 53 51.3**	**-7.3**
ARA0	**ARCESS Array S**	**9.84**	**144**	Pn	**Pn**	**19 52 08.3**	**-0.3**
	baz=344,slow=14						
ARA0				Sn	**Sn**	**19 53 53.9**	**-5.2**
	baz=342,slow=22						
ARCES	**ARCESS Array B**	**9.84**	**144**	Pn	**Pn**	**19 52 07.2**	**-1.3**
	comp=N,0.2nm,0.3s,baz=341,slow=11,SNR=14						
ARCES				Sn	**Sn**	**19 53 54.1**	**-4.9**
	comp=N,0.3nm,0.3s,baz=345,slow=21,SNR=4.2						
ARCES	**ARCESS Array B**	**9.84**	**144**	Pn	**Pn**	**19 52 07.2**	**-1.4**
ARCES				Sn	**Sn**	**19 53 54.1**	**-4.9**
SUMG	**Summit**	**12.77**	**269**	ePn	**Pn**	**19 52 42.6**	**-6.2**
SUMG	**Summit**	**12.77**	**269**	ePn	**Pn**	**19 52 42.6**	**-6.2**
ARU	**Arti**	**27.46**	**113**	P	**P**	**19 55 38.6**	**+5.4**
	comp=N,2.6nm,0.7s,mb3.9						
ARU	**Arti**	**27.46**	**113**	P	**P**	**19 55 38.7**	**+5.4**
	comp=N,2.6nm,0.7s,mb3.9						
CHKZ	**Chkalovo**	**32.41**	**102**	eP	**P**	**19 56 17.5**	**+0.4**
	comp=N,2.7nm,1.0s,mb4.0						
BVAR	**Borovoye Array**	**32.98**	**102**	P	**P**	**19 56 23.1**	**+1.0**
	comp=N,0.8nm,0.6s,mb3.8,baz=327,slow=11,SNR=4.0						
SCHQ	**Schefferville**	**34.12**	**273**	LR	LR	20 09 58.7	
	comp=N,38nm,21.9s,MS3.1,baz=52,slow=35						
COLA	**College**	**36.43**	**343**	eP	**P**	**19 56 51.9**	**0.0**
	comp=N,3.8nm,0.5s,mb4.6						
KURK	**Kurchatov**	**36.84**	**95**	eP	**P**	**19 56 55.5**	**+0.2**
	comp=N,2.0nm,0.7s,mb4.1						
KURK	**Kurchatov**	**36.84**	**95**	eP	**P**	**19 56 55.5**	**+0.1**
MKAR	**Makanchi Array**	**41.32**	**94**	P	**P**	**19 57 33.8**	**+0.9**
	comp=N,2.0nm,0.8s,mb3.8,baz=342,slow=6.6,SNR=8.6						
SONM	**Songino Array**	**45.19**	**70**	P	**P**	**19 58 03.7**	**-0.4**
	comp=N,0.3nm,0.6s,mb3.3,baz=330,slow=8.5,SNR=3.4						
HRV	**Harvard--Oak R**	**46.81**	**271**	eP	**P**	**19 58 17.2**	**+0.3**
	comp=N,98nm,1.3s						

*IDC **15** 19:56:32.9±4.2, 5129N×17930E, h28km±28km, mb4.2/20, mb1 4.3/21, mb1mx4.3/25, mbtmp4.4/21, ML4.8/1, MS3.8/22, Ms1 3.8/22, ms1mx3.7/34, Error ellipse: s-maj=22.5km s-min=12.9km az=167.0*
*BJI **15** 19:56:32.0, 5167N×17885E, h17km, mB4.9, mb4.7, Ms4.3, Msz4.0*
*ISCJB **15** 19:56:33.5±0.6, 5128N±008×17931E±005, h45km±4km, mb4.6/79, MS3.9/32, Error ellipse: s-maj=12.7km s-min=4.9km az=175.5*
*MOS **15** 19:56:33.3±1.0, 5123N×17931E, h46km, mb4.9/25, Error ellipse: s-maj=11.7km s-min=6.9km az=102.5*
*NEIC **15** 19:56:34.6±0.7, 5128N×17931E, h42km±5km, mb4.6/41, MS4.0/1, ML4.2(AEIC), Error ellipse: s-maj=9.9km s-min=4.3km az=180.0*
ISC 15 19:56:34.8±0.6**, 5132N**±007×**17929E**±005**, h43km**±4km**, h45km**±1.4km**:pP-P, n186, σ0.99**/177**, mb4.6**/79**, MS3.9**/32**, 9C-9D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.06**	**5**	P	**Pn**	**19 56 39.7**	**-2.0**
AMKA				S	**Sn**	**19 56 46.1**	**-0.4**
SMY	**Shemya**	**3.50**	**296**	P	**Pn**	**19 57 28.4**	**+1.6**
ATKA	**Atka Island**	**4.14**	**75**	P	**Pn**	**19 57 35.9**	**+0.4**
AKUT	**Akutan**	**9.49**	**67**	ePn	**Pn**	**19 58 51.3**	**+2.4**
PET	**Petropavlovsk**	**12.78**	**286**	eP	**Pn**	**19 59 39.2**	**+5.3**
PET				eS	**Sn**	**20 02 02.5**	**+7.8**
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
KDAK	**Kodiak Island**	**17.46**	**57**	P	**Pn**	**20 00 33.3**	**-1.8**
	comp=Z,3.0nm,0.3s,baz=260,slow=5.9,SNR=16						
KDAK	**Kodiak Island**	**17.46**	**57**	ePn	**Pn**	**20 00 32.1**	**-2.9**
	comp=Z,11nm,0.6s						
TTA	**Tatalina**	**17.60**	**39**	eP	**Pn**	**20 00 38.9**	**+2.1**
TTA				pmax	pmax		
	comp=Z,62nm,1.4s						
TTA	**Tatalina**	**17.60**	**39**	ePn	**Pn**	**20 00 38.9**	**+2.1**
	comp=Z,62nm,1.4s						
BILL	**Bilibino**	**17.94**	**344**	eP	**Pn**	**20 00 42.5**	**+1.5**
BILL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SLKM	**Skilak Lake**	**19.23**	**50**	eP	**Pn**	**20 00 53.0**	**-3.6**
IMA2	**Indian Mountai**	**20.13**	**33**	eP	**P**	**20 01 06.4**	**+1.3**
COLA	**College**	**21.70**	**39**	eP	**P**	**20 01 23.3**	**+1.3**
COLA	**College**	**21.70**	**39**	eP	**P**	**20 01 22.1**	**0.0**
	comp=Z,9.7nm,0.7s,mb4.3						
YSS	**Yuzh-Sakhalins**	**24.13**	**274**	eP	**P**	**20 01 46.7**	**+0.1**
YSS	**Yuzh-Sakhalins**	**24.13**	**274**	eP	**P**	**20 01 46.9**	**+0.3**
	comp=Z,19nm,0.9s,mb4.5						
DAWY	**Dawson**	**24.97**	**43**	eP	**P**	**20 01 53.2**	**-1.0**
ASAJ	**Asahikawa**	**25.51**	**268**	P	**P**	**20 01 59.8**	**+0.6**
	comp=Z,34nm,0.8s,mb4.9,baz=52,slow=6.5,SNR=27						
ASAJ				LR	LR	20 11 33.7	
	comp=Z,77nm,18.5s,MS3.3,baz=338,slow=35						
ASAJ	**Asahikawa**	**25.51**	**268**	P	**P**	**20 01 59.8**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,34nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,77nm,18.5s						
INK	**Inuvik**	**28.20**	**35**	LR	LR	20 14 00.6	
	comp=Z,130nm,18.9s,MS3.5,baz=128,slow=37						
INK	**Inuvik**	**28.20**	**35**	eP	**P**	**20 02 23.6**	**+0.3**
INK				pmax	pmax		
	comp=Z,12nm,0.9s						
INK	**Inuvik**	**28.20**	**35**	eP	**P**	**20 02 23.6**	**+0.3**
	comp=Z,12nm,0.9s,mb4.5						
HABR	**Khabarovsk**	**28.32**	**282**	P	**P**	**20 02 23.9**	**-0.5**
HABR				eS	**S**	**20 07 08.0**	**+0.1**
YAK	**Yakutsk**	**28.56**	**311**	⇑eP	**P**	**20 02 25.4**	**-1.1**
YAK				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.7						
DLBC	**Dease Lake**	**29.39**	**56**	LR	LR	20 15 04.3	
	comp=Z,251nm,20.4s,MS3.8,baz=283,slow=38						
KLR	**Kul'dur**	**30.04**	**285**	eP	**P**	**20 02 36.7**	**-3.0**
KLR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
MJAR	**Matsushiro Arr**	**32.60**	**259**	P	**P**	**20 03 02.5**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.7,baz=56,slow=7.7,SNR=4.1						
MDJ	**Mudanjiang**	**33.40**	**278**	P	**P**	**20 03 08.5**	**-0.7**
MDJ				AP	pP	20 03 19.5	-1.3
MDJ				XP	sP	20 03 24.5	-1.5
MDJ				PP	PP	20 04 24.1	-1.1
MDJ				PCP	PcP	20 05 49.8	-0.1
MDJ				S	**S**	**20 08 26.9**	**-0.4**
MDJ				SCP	ScP	20 09 30.8	0.0
MDJ				PCS	PcS	20 09 35.5	-0.1
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,82nm,4.8s						
MDJ				LR	LR		
	comp=N,12nm,16.4s,MS3.4						
MDJ				LR	LR		
	comp=E,59nm,19.1s,MS3.4						
MDJ				LR	LR		
	comp=Z,85nm,20.4s,MS3.5						
YKA	**Yellowknife Ar**	**36.14**	**46**	P	**P**	**20 03 32.4**	**-0.3**
	comp=Z,3.1nm,0.6s,mb4.4,baz=281,slow=7.9,SNR=12						
YKA				ScP	ScP	20 09 42.1	+1.4
	comp=Z,1.7nm,0.7s,baz=292,slow=3.3,SNR=3.8						
YKA				LR	LR	20 19 51.1	
	comp=Z,331nm,18.9s,MS4.1,baz=270,slow=39						
YKA	**Yellowknife Ar**	**36.14**	**46**	P	**P**	**20 03 32.4**	**-0.3**
YKA				ScP	ScP	20 09 42.1	+1.4
YKA				LR	LR	20 19 51.1	
CN2	**Changchun**	**36.38**	**280**	eP	**P**	**20 03 35.3**	**+0.4**
CN2				eAP	pP	20 03 47.4	+0.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				LR	LR		
	comp=N,200nm,17.0s,MS4.1						
CN2				LR	LR		
	comp=E,200nm,17.0s,MS4.1						
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS3.9						
HIA	**Hailar**	**37.19**	**291**	eP	**P**	**20 03 41.4**	**-0.4**
HIA	**Hailar**	**37.19**	**291**	eP	**P**	**20 03 41.1**	**-0.6**
	comp=Z,16nm,1.3s,mb4.7						
HAWA	**Hanford**	**39.52**	**72**	eP	**P**	**20 04 01.3**	**0.0**
	comp=Z,0.7nm,0.9s,mb3.4						
NEW	**Newport**	**40.02**	**69**	P	**P**	**20 04 05.4**	**-0.1**
	comp=Z,5.2nm,0.7s,mb4.4,baz=288,slow=10,SNR=3.7						
YBH	**Yreka Blue Hor**	**40.07**	**80**	P	**P**	**20 04 08.6**	**+2.7**
	comp=Z,3.4nm,0.9s,mb4.1,baz=178,slow=4.1,SNR=7.0						
YBH	**Yreka Blue Hor**	**40.07**	**80**	P	**P**	**20 04 08.6**	**+2.7**
YBH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YBH	**Yreka Blue Hor**	**40.07**	**80**	eP	**P**	**20 04 08.3**	**+2.4**
	comp=Z,11nm,1.4s,mb4.4						
WALA	**Waterton Lakes**	**41.49**	**66**	eP	**P**	**20 04 16.5**	**-1.1**
	comp=Z,6.8nm,1.1s,mb4.2						
BMO	**Blue Mountains**	**41.66**	**73**	eP	**P**	**20 04 19.0**	**0.0**
	comp=Z,3.3nm,0.9s,mb4.0						
WVOR	**Wild Horse Val**	**42.18**	**77**	eP	**P**	**20 04 23.3**	**0.0**
WVOR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
WVOR	**Wild Horse Val**	**42.18**	**77**	eP	**P**	**20 04 23.3**	**+0.1**
	comp=Z,8.4nm,0.9s,mb4.4						
MSO	**Missoula**	**42.61**	**69**	eP	**P**	**20 04 27.0**	**+0.2**
	comp=Z,3.6nm,0.9s,mb4.1						
HLID	**Hailey**	**44.10**	**73**	eP	**P**	**20 04 39.0**	**+0.2**
	comp=Z,5.8nm,0.9s,mb4.3						
BOZ	**Bozeman (W)**	**44.59**	**69**	eP	**P**	**20 04 41.3**	**-1.4**
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
BOZ	**Bozeman (W)**	**44.59**	**69**	ePn	**P**	**20 04 41.3**	**-1.4**
	comp=Z,6.6nm,0.7s,mb4.6						
NVAR	**Mina Array Bea**	**44.74**	**81**	P	**P**	**20 04 45.0**	**+1.0**
	comp=Z,2.4nm,0.9s,mb4.0,baz=304,slow=7.1,SNR=7.1						
TLY	**Talaya**	**45.08**	**302**	eP	**P**	**20 04 46.9**	**+0.3**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**45.21**	**295**	⇑eP	**P**	**20 04 48.3**	**+0.7**
ULN	**Ulaanbaatar**	**45.21**	**295**	eP	**P**	**20 04 48.1**	**+0.5**
	comp=Z,4.7nm,0.7s,mb4.4						
MTUM	**Tungsten Hills**	**45.25**	**83**	eP	**P**	**20 04 48.4**	**+0.4**
SONM	**Songino Array**	**45.60**	**296**	P	**P**	**20 04 51.5**	**+0.9**
	comp=Z,4.2nm,0.7s,mb4.5,baz=63,slow=8.5,SNR=48						
SONM				LR	LR	20 25 29.3	
	comp=Z,136nm,19.2s,MS3.9,baz=50,slow=38						
ZAK	**Zakamensk**	**45.95**	**300**	eP	**P**	**20 04 53.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
RRI2	**Red Ridge**	**46.08**	**71**	eP	**P**	**20 04 54.8**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.7						
BGU	**Big Grassy Mou**	**46.47**	**75**	eP	**P**	**20 04 59.0**	**+1.5**
TRCR	**Troy Canyon**	**46.48**	**80**	P	**P**	**20 04 57.7**	**+0.1**
MOY	**Mondy**	**46.50**	**303**	eP	**P**	**20 04 57.9**	**+0.2**
HHC	**Hu-ho-hao-te**	**46.55**	**285**	eP	**P**	**20 04 58.9**	**+0.7**
HHC				PCP	PcP	20 06 33.4	+1.5
HHC				PP	PP	20 06 48.5	+0.5
HHC				SCP	ScP	20 10 20.3	-1.5
HHC				PCS	PcS	20 10 25.9	-0.7
HHC				S	**S**	**20 11 41.8**	**-2.0**
HHC				SCS	ScS	20 14 45.8	-3.6
HHC				SS	SS	20 14 59.1	-11
HHC				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
HHC				AMB	AMB		
	comp=Z,58nm,8.2s						
HHC				LR	LR		
	comp=N,65nm,22.8s,MS3.7						
HHC				LR	LR		
	comp=E,79nm,21.8s,MS3.7						
HHC				LR	LR		
	comp=Z,76nm,21.8s,MS3.6						
SSE	**Sheshan**	**46.80**	**268**	P	**P**	**20 04 59.3**	**-0.8**
SSE				AMB	AMB		
	comp=Z,35nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,82nm,4.6s						
HWUT	**Hardware Ranch**	**46.95**	**74**	eP	**P**	**20 05 00.8**	**-0.6**
	comp=Z,4.8nm,1.0s,mb4.4						
DUG	**Dugway**	**47.05**	**76**	P	**P**	**20 05 02.3**	**+0.2**
DUG				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
DUG	**Dugway**	**47.05**	**76**	P	**P**	**20 05 02.3**	**+0.3**
	comp=Z,13nm,1.1s,mb4.8						
PDAR	**Pinedale Array**	**47.46**	**71**	P	**P**	**20 05 05.3**	**+0.1**
	comp=Z,10nm,0.8s,mb4.8,baz=312,slow=3.7,SNR=77						
NJ2	**Nanjing**	**47.62**	**270**	eP	**P**	**20 05 08.4**	**+1.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,210nm,12.0s						
NJ2				LR	LR		
	comp=N,2μm,18.9s,MS5.2						
NJ2				LR	LR		
	comp=E,2μm,22.9s,MS5.2						
NJ2				LR	LR		
	comp=Z,1μm,25.2s,MS4.7						
KRAR	**Krasnoyarsk**	**48.22**	**311**	eP	**P**	**20 05 09.8**	**-1.4**
KRAR				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.5						
KRAR				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.8						
CCUT	**Cedar City**	**48.35**	**79**	P	**P**	**20 05 11.5**	**-0.6**
MSU	**Marysvale**	**48.47**	**77**	eP	**P**	**20 05 14.3**	**+1.2**
TMUT	**Trail Mountain**	**48.57**	**76**	eP	**P**	**20 05 14.5**	**+0.6**
ULM	**Lac du Bonnet**	**50.71**	**56**	P	**P**	**20 05 30.8**	**+0.7**
	comp=Z,1.0nm,0.4s,mb4.1,baz=301,slow=12,SNR=2.9						
ULM				LR	LR	20 27 19.0	
	comp=Z,97nm,18.7s,MS3.8,baz=180,slow=36						
NVS	**Novosibirsk**	**53.36**	**314**	iP	**P**	**20 05 49.2**	**-0.6**
NVS				pmax	pmax		
	comp=N,3.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
SUMG	**Summit**	**53.63**	**13**	eP	**P**	**20 05 52.4**	**+0.5**
	comp=Z,12nm,0.9s,mb4.8						
FRB	**Frobisher Bay**	**53.69**	**31**	LR	LR	20 28 46.0	
	comp=Z,159nm,18.0s,MS4.1,baz=344,slow=36						
LZH	**Lanzhou**	**54.25**	**285**	eP	**P**	**20 05 57.0**	**+0.7**
LZH				AP	pP	20 06 10.0	+1.4
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,120nm,5.0s						
ANMO	**Albuquerque**	**54.27**	**77**	⇑eP	**P**	**20 05 56.9**	**+0.4**
GTA	**Gaotai**	**54.47**	**291**	P	**P**	**20 05 58.8**	**+0.8**
GTA				AP	pP	20 06 10.3	+0.1
GTA				PCP	PcP	20 07 03.6	+2.5
GTA				PP	PP	20 08 02.4	+2.0
GTA				PPP		20 09 14.6	
GTA				SCP	ScP	20 10 56.6	+0.8
GTA				S	**S**	**20 13 35.0**	**+1.3**
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,82nm,6.5s						
GTA				LR	LR		
	comp=N,94nm,13.7s,MS4.2						
GTA				LR	LR		
	comp=E,122nm,16.7s,MS4.2						
GTA				LR	LR		
	comp=Z,135nm,14.4s,MS4.2						
MNTX	**Cornudas Mount**	**57.14**	**79**	eP	**P**	**20 06 16.1**	**-1.0**
	comp=Z,5.4nm,1.1s,mb4.5						
CD2	**Chengdu**	**57.81**	**280**	eP	**P**	**20 06 20.5**	**-1.3**
CD2				AP	pP	20 06 33.3	-0.9
CD2				XP	sP	20 06 38.5	-0.6
CD2				PP	PP	20 08 30.5	+0.3
CD2				S	**S**	**20 14 14.0**	**-4.0**
CD2				XS	sS	20 14 35.5	-3.1
CD2				SS	SS	20 18 06.0	-3.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,80nm,13.2s						
CD2				LR	LR		
	comp=Z,40nm,12.0s,MS3.8						
JMIC	**Jan Mayen**	**57.87**	**3**	LR	LR	20 30 38.3	
	comp=Z,31nm,19.0s,MS3.4,baz=288,slow=35						
ARCES	**ARCESS Array B**	**57.94**	**349**	P	**P**	**20 06 21.6**	**-1.0**
	comp=Z,1.6nm,0.7s,mb4.2,baz=20,slow=7.8,SNR=5.7						
ARCES				LR	LR	20 36 45.9	
	comp=Z,84nm,18.1s,MS3.9,baz=186,slow=42						
KURK	**Kurchatov**	**58.19**	**313**	⇑eP	**P**	**20 06 24.5**	**+0.1**
KURK	**Kurchatov**	**58.19**	**313**	eP	**P**	**20 06 24.4**	**0.0**
	comp=Z,14nm,0.8s,mb5.0						
WMQ	**Urumqi**	**58.36**	**302**	P	**P**	**20 06 27.0**	**+1.3**
WMQ				PP	PP	20 08 38.0	+2.9
WMQ				S	**S**	**20 14 25.0**	**-0.2**
WMQ				SCS	ScS	20 16 09.0	-2.8
WMQ				SS	SS	20 18 19.0	+1.3
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,121nm,5.0s						
WMQ				LR	LR		
	comp=N,187nm,15.0s,MS4.4						
WMQ				LR	LR		
	comp=E,124nm,15.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,176nm,14.0s,MS4.3						
MKAR	**Makanchi Array**	**59.13**	**307**	P	**P**	**20 06 30.5**	**-0.4**
	comp=Z,4.4nm,0.5s,mb4.7,baz=52,slow=6.7,SNR=44						
MKAR	**Makanchi Array**	**59.13**	**307**	⇑eP	**P**	**20 06 30.5**	**-0.5**
MKAR	**Makanchi Array**	**59.13**	**307**	P	**P**	**20 06 30.5**	**-0.4**
LPIG	**La Paz**	**59.43**	**89**	LR	LR	20 27 13.1	
	comp=Z,54nm,18.4s,MS3.7,baz=126,slow=31						
CHKZ	**Chkalovo**	**59.59**	**319**	eP	**P**	**20 06 33.6**	**-0.5**
CHKZ				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
CHKZ	**Chkalovo**	**59.59**	**319**	eP	**P**	**20 06 33.6**	**-0.5**
	comp=Z,12nm,0.8s,mb5.0						
BVAR	**Borovoye Array**	**60.15**	**319**	P	**P**	**20 06 38.6**	**+0.6**
	comp=Z,24nm,0.7s,mb5.3,baz=50,slow=7.9,SNR=104						
BVAR				LR	LR	20 34 18.1	
	comp=Z,211nm,21.5s,MS4.2,baz=138,slow=38						
BRVK	**Borovoye**	**60.17**	**319**	eP	**P**	**20 06 38.1**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
BRVK	**Borovoye**	**60.17**	**319**	eP	**P**	**20 06 38.1**	**-0.1**
	comp=Z,15nm,0.8s,mb5.1						
SCHQ	**Schefferville**	**60.78**	**37**	P	**P**	**20 06 41.5**	**-0.9**
	comp=Z,4.9nm,0.8s,mb4.7,baz=295,slow=6.8,SNR=3.9						
SVE	**Sverdlovsk**	**60.99**	**327**	eP	**P**	**20 06 43.8**	**+0.1**
SVE				pmax	pmax		
	comp=Z,20nm,2.0s,mb4.9						
ARU	**Arti**	**62.01**	**327**	⇑iP	**P**	**20 06 50.6**	**0.0**
ARU				e		20 07 06.0	
ARU				ePPP		20 10 37.4	
ARU				eS	**S**	**20 15 14.6**	**+2.6**
ARU				eSS	SS	20 19 13.2	-1.8
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
ARU				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.0						
ARU				MLR	MLR		
	comp=N,50nm,19.0s,MS4.0						
ARU				MLR	MLR		
	comp=E,80nm,18.5s,MS4.0						
ARU	**Arti**	**62.01**	**327**	eP	**P**	**20 06 50.4**	**-0.3**
	comp=E,8.5nm,0.6s,mb5.0						
MIAR	**Mount Ida**	**62.26**	**69**	eP	**P**	**20 06 51.6**	**-0.7**
MIAR				e		20 07 11.1	
MIAR				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
MIAR	**Mount Ida**	**62.26**	**69**	eP	**P**	**20 06 51.6**	**-0.7**
	comp=Z,17nm,1.2s,mb5.1						
MIAR				e		20 07 11.1	
KMI	**Kunming**	**62.55**	**277**	P	**P**	**20 06 57.3**	**+3.1**
KMI				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.3						
SADO	**Sadowa**	**62.82**	**52**	LR	LR	20 36 58.0	
	comp=Z,74nm,18.6s,MS3.9,baz=285,slow=39						
BORG	**Borgarnes**	**63.17**	**10**	LR	LR	20 33 13.1	
	comp=Z,52nm,19.0s,MS3.7,baz=18,slow=35						
JOF	**Joensuu**	**63.34**	**344**	ep	**P**	**20 06 57.6**	**-1.9**
	comp=Z,3.4nm,0.7s,mb4.6						
JOF	**Joensuu**	**63.34**	**344**	eP	**P**	**20 06 57.6**	**-1.9**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
KAF	**Kangasniemi**	**64.89**	**346**	ep	**P**	**20 07 06.6**	**-3.1**
	comp=Z,0.6nm,0.3s,mb4.1						
KAF	**Kangasniemi**	**64.89**	**346**	eP	**P**	**20 07 06.6**	**-3.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**65.57**	**346**	P	**P**	**20 07 12.7**	**-1.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=32,slow=7.5,SNR=6.4						
FINES				LR	LR	20 40 57.0	
	comp=Z,48nm,18.6s,MS3.7,baz=177,slow=41						
FINES	**FINESS Array B**	**65.57**	**346**	P	**P**	**20 07 12.7**	**-1.3**
FINES				LR	LR	20 40 57.0	
AAK	**Ala-Archa**	**65.97**	**309**	⇑eP	**P**	**20 07 16.3**	**-0.4**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
AAK	**Ala-Archa**	**65.97**	**309**	eP	**P**	**20 07 14.5**	**-2.1**
	comp=Z,3.2nm,0.6s,mb4.5						
LSA	**Lhasa**	**66.33**	**288**	P	**P**	**20 07 20.3**	**+1.4**
LSA	**Lhasa**	**66.33**	**288**	eP	**P**	**20 07 20.5**	**+1.6**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
LSA	**Lhasa**	**66.33**	**288**	eP	**P**	**20 07 20.5**	**+1.6**
	comp=Z,6.4nm,0.8s,mb4.7						
AKTO	**Aktyubinsk**	**67.03**	**324**	LR	LR	20 38 26.9	
	comp=Z,71nm,21.3s,MS3.9,baz=232,slow=38						
NB2	**NORSAR Subarra**	**67.58**	**354**	P	**P**	**20 07 26.1**	**-0.8**

	comp=Z,7.0nm,0.8s,mb4.7,baz=6.4,slow=6.2						
NOA	NORSAR Array B	67.58	354	P	P	20 07 26.3	-0.6
	comp=Z,6.0nm,0.8s,mb4.7,baz=8.0,slow=6.3,SNR=18						
NOA				LR	LR	20 38 17.5	
	comp=Z,28nm,19.9s,MS3.5,baz=345,slow=37						
OBN	Obninsk	69.49	338	⇑eP	P	20 07 37.9	-0.9
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
GUN	Gumba	70.76	291	eP	P	20 07 47.8	+1.2
	comp=Z,46nm,0.7s,mb5.5						
KKN	Kakani	71.20	291	eP	P	20 07 50.2	+0.9
	comp=Z,28nm,0.7s,mb5.3						
KKN	Kakani	71.20	291	eP	P	20 07 50.2	+0.9
KKN				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.3						
PKI	Pulchoki	71.29	291	eP	P	20 07 50.6	+0.8
	comp=Z,14nm,0.5s,mb5.1						
PKI	Pulchoki	71.29	291	eP	P	20 07 50.6	+0.8
PKI				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
GKN	Gorkha	71.42	292	eP	P	20 07 51.2	+0.6
	comp=Z,29nm,0.7s,mb5.3						
DMN	Daman	71.44	291	eP	P	20 07 51.8	+1.1
	comp=Z,26nm,0.9s,mb5.2						
KOLN	Koldanda	72.20	292	eP	P	20 07 55.5	+0.3
	comp=Z,14nm,0.9s,mb4.9						
PPT	Papeete	73.81	149	eLR	LR	20 30 26.6	
	comp=Z,171nm,25.5s,baz=342						
PPT	Papeete	73.81	149	LR	LR	20 34 26.0	
	comp=Z,139nm,18.5s,MS4.3,baz=5.1,slow=31						
CMIG	Matias Romero	74.27	82	LR	LR	20 41 42.3	
	comp=Z,29nm,20.0s,MS3.6,baz=208,slow=36						
AKASG	Malin Array Be	75.22	341	P	P	20 08 12.2	-0.8
	comp=Z,1.9nm,0.4s,mb4.3,baz=20,slow=6.3,SNR=11						
AKASG				LR	LR	20 45 12.2	
	comp=Z,75nm,19.9s,MS4.0,baz=70,slow=39						
AKASG	Malin Array Be	75.22	341	P	P	20 08 12.2	-0.8
AKASG				LR	LR	20 45 12.2	
KIV	Kislovodsk	77.92	330	eP	P	20 08 28.8	+0.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
GIVF	Givet	78.84	356	eP	P	20 08 33.0	-0.3
BAIF	Baives	78.91	357	eP	P	20 08 33.6	-0.1
BURAR	Bucovina Array	78.96	342	⇓iP	P	20 08 34.4	+0.4
BURAR	Bucovina Array	78.96	342	⇓P	P	20 08 34.4	+0.5
TBI	Tubuai	79.27	151	eLR	LR	20 32 59.2	
	comp=Z,215nm,24.2s,baz=339						
GERES	GERESS Array B	79.45	350	P	P	20 08 34.6	-2.0
	comp=Z,0.5nm,0.7s,mb3.6,baz=35,slow=4.9,SNR=5.4						
GERES				LR	LR	20 48 59.1	
	comp=Z,54nm,18.4s,MS3.9,baz=11,slow=40						
MEZF	Maizieres J'vi	80.44	356	eP	P	20 08 41.7	-0.2
LDF	La Druitiere	80.46	360	eP	P	20 08 41.4	-0.7
GRR	Gorron	80.67	0	eP	P	20 08 42.7	-0.5
	comp=Z,16nm,0.9s,mb4.7						
GRR	Gorron	80.67	0	eP	P	20 08 42.7	-0.5
GRR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
GRR	Gorron	80.67	0	eP	P	20 08 42.7	-0.5
	comp=Z,7.9nm,0.9s,mb4.6						
ROSF	Rostrenen	80.70	2	eP	P	20 08 43.0	-0.4
	comp=Z,7.1nm,0.8s,mb4.4						
ROSF	Rostrenen	80.70	2	eP	P	20 08 43.0	-0.4
ROSF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ROSF	Rostrenen	80.70	2	eP	P	20 08 43.0	-0.4
	comp=Z,3.5nm,0.8s,mb4.3						
SGMF	Saint Gilles	80.79	1	eP	P	20 08 43.5	-0.4
	comp=Z,8.0nm,0.7s,mb4.5						
SGMF	Saint Gilles	80.79	1	eP	P	20 08 43.5	-0.4
SGMF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
SGMF	Saint Gilles	80.79	1	eP	P	20 08 43.5	-0.4
	comp=Z,4.0nm,0.7s,mb4.5						
MLR	Muntele Rosu	80.86	341	⇓iP	P	20 08 45.7	+1.5
MLR	Muntele Rosu	80.86	341	⇓P	P	20 08 45.7	+1.5
WRA	Warramunga Arr	81.15	222	P	P	20 08 43.7	-2.1
	comp=Z,0.9nm,0.8s,mb3.8,baz=31,slow=6.0,SNR=9.7						
TIRR	Tirgusor	81.32	339	⇓iP	P	20 08 46.9	+0.2
BZS	Buzias	81.54	344	⇓iP	P	20 08 48.1	+0.3
BZS	Buzias	81.54	344	⇓P	P	20 08 48.1	+0.3
GZR	Gura Zlata	81.55	344	⇓iP	P	20 08 46.8	-1.1
GZR	Gura Zlata	81.55	344	⇓P	P	20 08 46.8	-1.1
LOR	Lormes	81.71	357	eP	P	20 08 48.2	-0.5
LOR				eR			
	comp=Z,55nm,19.5s						
LOR	Lormes	81.71	357	eP	P	20 08 48.2	-0.5
LOR				LR	LR		
	comp=Z,60nm,19.5s,MS4.0						
SSF	Saint Saulge	81.93	357	eP	P	20 08 49.5	-0.4
AVF	Avril sur Loir	82.21	357	eP	P	20 08 50.9	-0.4
CABF	La Chapelle	82.27	355	eP	P	20 08 51.6	-0.1
SMF	Signal de Mont	82.34	357	eP	P	20 08 51.6	-0.4
	comp=Z,4.1nm,0.8s,mb4.1						
SMF	Signal de Mont	82.34	357	eP	P	20 08 51.6	-0.4
SMF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
SMF	Signal de Mont	82.34	357	eP	P	20 08 51.6	-0.4
	comp=Z,2.0nm,0.8s,mb4.1						
MFF	Saint Martin d	82.46	360	eP	P	20 08 53.4	+0.8
	comp=Z,7.4nm,0.9s,mb4.3						
MFF	Saint Martin d	82.46	360	eP	P	20 08 53.4	+0.8
MFF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MFF	Saint Martin d	82.46	360	eP	P	20 08 53.4	+0.8
	comp=Z,3.7nm,0.9s,mb4.3						
LPG	La Plagne	83.35	355	eP	P	20 08 59.0	+1.7
ORIF	Oris-en-Rattie	83.97	355	eP	P	20 09 01.0	+0.5
ORIF				eR			
	comp=Z,29nm,18.5s						
LFF	La Frestale	84.11	359	eP	P	20 09 00.9	-0.3
	comp=Z,10nm,0.9s,mb4.7						
LFF	La Frestale	84.11	359	eP	P	20 09 00.9	-0.3
LFF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
LFF	La Frestale	84.11	359	eP	P	20 09 00.9	-0.3
	comp=Z,5.3nm,0.9s,mb4.7						
RKT	Rikitea	84.30	139	eLR	LR	20 35 20.8	
	comp=Z,115nm,25.5s,baz=331						
BR131	Keskin Array S	84.49	334	eP	P	20 09 03.1	+0.1
	comp=Z,3.2nm,0.8s,mb4.5						
BRTR	Keskin Array B	84.49	334	P	P	20 09 03.7	+0.6
	comp=Z,2.9nm,0.7s,mb4.5,baz=37,slow=3.0,SNR=18						
BRTR				LR	LR	20 47 34.9	
	comp=Z,38nm,19.6s,MS3.8,baz=83,slow=36						
BRTR	Keskin Array B	84.49	334	⇑eP	P	20 09 03.7	+0.6
ASAR	Alice Springs	84.65	221	P	P	20 09 03.0	-0.9
	comp=Z,1.1nm,1.0s,mb3.9,baz=24,slow=5.2,SNR=4.8						
ASAR				LR	LR	20 41 42.5	
	comp=Z,109nm,21.1s,MS4.2,baz=171,slow=32						
SMRF	Simiane la Rot	84.93	355	eP	P	20 09 05.9	+0.6
	comp=Z,12nm,1.0s,mb4.7						
SMRF	Simiane la Rot	84.93	355	eP	P	20 09 05.9	+0.6
	comp=Z,12nm,1.0s,mb5.0						
SBF	Sospel	84.93	354	eP	P	20 09 05.0	-0.3
MTLF	Montolieu	85.69	358	eP	P	20 09 08.9	-0.2
EPF	Esparros	86.03	359	eP	P	20 09 09.6	-1.1
ESDC	Sonseca Array	89.34	3	P	P	20 09 25.2	-1.4
	comp=Z,0.4nm,0.6s,mb3.9,baz=353,slow=4.8,SNR=5.1						
DBIC	Dimbokro	122.13	5	PKP	PKPdf	20 15 24.8	+0.1
	comp=Z,3.7nm,1.1s,baz=56,slow=3.6,SNR=5.0						
TSUM	Tsumeb	144.85	329	PKP	PKPdf	20 16 06.7	-0.4
	comp=Z,6.4nm,1.0s,baz=39,slow=4.6,SNR=5.3						
MAW	Mawson	145.71	218	PKPbc	PKPbc	20 16 11.0	+2.1
	comp=Z,2.7nm,1.0s,baz=100,slow=4.6,SNR=4.4						
BOSA	Boshof	150.11	309	PKPbc	PKPbc	20 16 20.9	+0.1
	comp=Z,4.8nm,0.8s,baz=239,slow=0.1,SNR=6.9						
BOSA				PKPab	PKPab	20 16 26.7	-0.1
	comp=Z,5.1nm,0.7s,baz=159,slow=2.3,SNR=6.1						
BOSA	Boshof	150.11	309	PKPbc	PKPbc	20 16 20.9	+0.1
BOSA				PKPab	PKPab	20 16 26.7	-0.1

*ISCJB **15** 20:18:12.7±2.0, 7827N±006×84E±06, h10km, Error ellipse: s-maj=16.8km s-min=8.1km az=2.9*
*CSEM **15** 20:18:13.1±0.1, 7842N×696E, h30km, ML2.4, Error ellipse: s-maj=3.6km s-min=1.7km az=95.0*
*BER **15** 20:18:14.3±2.6, 7834N×793E, h10km, MD2.6, ML3.1, ML2.4(NAO)*
*NAO **15** 20:18:15.6±3.0, 7833N×890E, ML2.4*
ISC 15 20:18:14.5±2.1, 7831N±006×87E±06, h10km, n8, σ0s79/15, 1C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	0.89	45	Pg	Pg	20 18 31.6	-0.2
KBS				Lg		20 18 43.0	
KBS	Kingsbay	0.89	45	⇑iP	Pg	20 18 31.6	-0.1
KBS				e		20 18 38.9	
KBS				eS	Sg	20 18 42.8	-0.5
KBS				AML	AML	20 18 45.6	
	comp=Z,334nm,0.2s						
KBS	Kingsbay	0.89	45	Pg	Pg	20 18 31.6	-0.1
KBS				eS	Sg	20 18 42.8	-0.6
	comp=Z,334nm,0.2s,SNR=70						
SPA0	Spitsbergen Ar	1.58	91	Pn	Pn	20 18 43.6	+1.0
	baz=276,slow=12						
SPA0				Sn	Sn	20 19 04.7	+1.6
	baz=270,slow=18						
HSP	Hornsund	1.97	128	P	Pn	20 18 47.7	-0.3
HSP				S	Sn	20 19 12.5	-0.2
HOPEN	Hopen	3.99	109	eP	Pn	20 19 15.7	0.0
HOPEN				eS	Sn	20 20 01.4	-1.3
HOPEN				AML	AML	20 20 03.3	
	comp=E,193nm,0.3s						
ARA0	ARCESS Array S	9.90	144	Pn	Pn	20 20 36.9	-0.1
	baz=329,slow=11						
ARA0				Sn	Sn	20 22 22.1	-6.1
	baz=336,slow=22						
ARA0	ARCESS Array S	9.90	144	Pn	Pn	20 20 36.9	0.0
	SNR=3.6						
ARA0				Sn	Sn	20 22 22.0	-6.1

*MDD **15** 20:40:12.3±1.9, 3672N×972W, h37km±25km, mb3.9/11, Error ellipse: s-maj=18.6km s-min=10.0km az=51.0, PRXIMO*
*IGIL **15** 20:40:14.0, 3680N×960W, h15km, ML2.0*
INMG 15 20:40:13.3±1.0, 3680N×959W, h15km±3km, ML2.1, 1C-1D, Error ellipse: s-maj=4.6km s-min=2.1km az=65.0, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	Marmelete	0.91	56	eP	Pb	20 40 30.1	-0.7
MORF				eS	Sb	20 40 41.8	-0.9
MORF				eS	Sb	20 40 41.8	-0.9
MORF				AML	AML	20 40 43.8	
	comp=N,38nm,0.1s						
MORF	Marmelete	0.91	56	eP	Pb	20 40 30.1	-0.7
MORF				eS	Sb	20 40 41.8	-0.9
PTEO	Sao Teotonio	1.02	43	eP	Pb	20 40 31.6	-1.1
PTEO				eS	Sb	20 40 45.1	-0.8
PTEO							
	comp=N,14nm,0.1s						
PLML	Palmela	1.84	17	eSn	Sn	20 41 04.9	-2.4
EGRO	El Granado	1.84	66	P	Pn	20 40 42.6	-1.7
	comp=N,1.8nm,0.1s,SNR=6.5						
EGRO				S	Sn	20 41 04.8	-2.6
	comp=N,4.0nm,0.1s,SNR=8.9						
PBEJ	Beja	1.84	48	ePn	Pn	20 40 42.5	-1.9
PBEJ				eSn	Sn	20 41 04.8	-2.7
PBEJ							
	comp=N,4.8nm,0.1s						
PLOU	Loures	2.11	9	e-		20 40 46.1	
PLOU	Loures	2.11	9	ePn	Pn	20 40 46.1	-2.0
PLOU				eSn	Sn	20 41 11.4	-2.7
PLOU							
	comp=N,14nm,0.1s						
PMAFR	Mafra	2.17	6	ePn	Pn	20 40 46.8	-2.1
PMAFR				eSn	Sn	20 41 12.3	-3.2
EMIN	Mina Concepcio	2.52	67	P	Pn	20 40 51.6	-2.2
	comp=N,2.2nm,0.1s,SNR=37						
EMIN				S	Sn	20 41 20.5	-3.7
	comp=N,1.4nm,0.1s,SNR=5.8						
PESTR	Estremoz	2.60	37	ePn	Pn	20 40 52.7	-2.2
PESTR				eSn	Sn	20 41 22.9	-3.4
EBAD	Badajoz	2.83	46	⇑P	Pn	20 40 55.7	-2.2
	comp=N,2.8nm,0.1s,SNR=18						
EBAD				S	Sn	20 41 28.3	-3.5
	comp=N,6.7nm,0.1s						
PTOM	Tomar	2.96	18	eSn	Sn	20 41 31.4	-3.8
PTOM							
	comp=N,6.8nm,0.3s						
PTOM	Tomar	2.96	18	S	Sn	20 41 31.4	-3.8
	comp=N,3.4nm,0.3s						
ESPR	Espera	3.00	88	P	Pn	20 40 58.3	-2.0
	comp=N,1.9nm,0.1s,SNR=8.9						
ESPR				S	Sn	20 41 32.3	-3.8
	comp=N,32nm,0.2s						
MTE	Manteigas	3.94	23	eSn	Sn	20 41 54.8	-4.4
MTE							
	comp=N,3.0nm,0.2s						
MTE	Manteigas	3.94	23	S	Sn	20 41 54.8	-4.4
	comp=N,1.5nm,0.2s						
PVIS	Viseu	4.13	18	eSn	Sn	20 41 59.7	-4.2
PVIS							
	comp=N,4.3nm,0.2s						
PVIS	Viseu	4.13	18	S	Sn	20 41 59.7	-4.2
	comp=N,2.2nm,0.2s						
EADA	Adamuz	4.22	70	P	Pn	20 41 15.3	-1.8
	comp=N,1.2nm,0.2s,SNR=11						
EADA				S	Sn	20 42 01.6	-4.5
	comp=N,2.4nm,0.2s,SNR=5.8						
PVRL	Vila Real	4.70	18	eSn	Sn	20 42 12.6	-5.4
PVRL							
	comp=N,5.5nm,0.2s						
PVRL	Vila Real	4.70	18	S	Sn	20 42 12.6	-5.4
	comp=N,2.8nm,0.2s						
EQUE	Quentar	4.94	83	P	Pn	20 41 25.7	-1.3
	comp=N,0.2nm,0.1s,SNR=4.0						
EQUE				S	Sn	20 42 19.5	-4.4
	comp=N,1.6nm,0.4s,SNR=7.9						
PCAB	Cabril	5.05	13	eSn	Sn	20 42 21.8	-4.9
PCAB							
	comp=N,8.5nm,0.3s						
PCAB	Cabril	5.05	13	S	Sn	20 42 21.8	-4.9
	comp=N,4.2nm,0.3s						
ESDC	Sonseca Array	5.28	55	P	Pn	20 41 29.7	-1.9
	comp=N,2.1nm,0.1s,baz=240,slow=14,SNR=20						
ESDC				S	Sn	20 42 26.8	-5.4
	comp=N,1.3nm,0.2s,baz=242,slow=23,SNR=4.0						
EQES	Quesada	5.30	77	P	Pn	20 41 30.0	-1.9
	comp=N,0.1nm,0.1s,SNR=7.9						
EQES				S	Sn	20 42 27.8	-4.8
	comp=N,2.3nm,0.2s,SNR=7.9						
ECAL	Calabor	5.59	22	S	Sn	20 42 33.5	-6.5
	comp=N,2.6nm,0.2s,SNR=7.9						
GUD	Guadarrama	5.73	46	⇓P	Pn	20 41 36.1	-1.7
	comp=N,0.8nm,0.2s,SNR=18						
GUD				S	Sn	20 42 38.0	-5.3
	comp=N,0.5nm,0.2s						
EMAZ	Mazaricos	6.16	4	P	Pn	20 41 40.3	-3.4
	comp=N,0.5nm,0.1s,SNR=7.9						
EMAZ				S	Sn	20 42 45.3	-8.6
	comp=N,1.7nm,0.2s,SNR=7.9						
ETOB	Tobarra	6.64	71	P	Pn	20 41 47.8	-2.5
	comp=N,0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	20 42 58.9	-6.8
	comp=N,0.5nm,0.1s,SNR=7.9						

IDC 15 20:53:04.6±4.0, 440S×10163E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/17, mbtmp3.7/4, Error ellipse: s-maj=178.0km s-min=24.6km az=59.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.54	125	P	P	21 00 11.9	0.0
	0.4nm,0.4s,baz=298,slow=7.9,SNR=6.4						
STKA	Stephens Creek	46.35	131	P	P	21 01 33.1	+0.7
	1.4nm,0.7s,baz=293,slow=9.2,SNR=4.0						
SONM	Songino Array	52.19	4	P	P	21 02 17.4	+0.3
	0.9nm,0.8s,baz=184,slow=9.2,SNR=9.4						
MKAR	Makanchi Array	53.77	344	P	P	21 02 28.6	-0.2
	0.3nm,0.4s,baz=150,slow=8.0,SNR=5.2						

IDC 15 20:55:46.3±4.8, 261S×13914E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.4/10, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=193.5km s-min=29.9km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.86	195	P	Pn	20 59 56.2	+0.1
	0.1nm,0.3s,baz=17,slow=13,SNR=8.1						
ASAR	Alice Springs	21.54	193	P	P	21 00 37.5	+0.4
	0.6nm,0.6s,baz=25,slow=9.8,SNR=3.8						
MKAR	Makanchi Array	69.97	322	P	P	21 06 59.7	+0.2
	0.4nm,0.6s,baz=109,slow=6.6,SNR=5.0						

*ISCJB **15** 21:10:47.2±0.5, 680N±005×7296W±005, h175km±4km, mb4.0/17, Error ellipse: s-maj=7.8km s-min=7.1km az=89.7*
*IDC **15** 21:10:47.8±0.6, 673N×7296W, h166km±6km, mb3.6/9, mb1 3.8/12, mb1mx3.6/23, mbtmp4.1/12, Error ellipse: s-maj=14.0km s-min=7.2km az=130.0*
*FUNV **15** 21:10:47.0, 670N×73.17W, h172km, MW4.3*
*NEIC **15** 21:10:48.2±0.6, 675N×7298W, h171km±6km, mb4.1/11, Error ellipse: s-maj=9.1km s-min=7.3km az=71.0*
*BJI **15** 21:10:48.2, 680N×7300W, h170km, mB5.1*
ISC 15 21:10:48.3±0.5, 681N±005×7297W±004, h168km±4km, n51, σ0s85/57, mb4.0/17, 13C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.23	32	⇑iP	Pn	21 11 17.3	+0.6
CAPV				eS	Sn	21 11 39.3	+0.8
ROSC	El Rosal	2.37	215	P	Pn	21 11 29.0	+0.3
	127nm,0.3s,baz=341,slow=2.3,SNR=148						
ROSC				S	Sn	21 11 59.2	-0.8
	249nm,0.3s,baz=110,slow=20,SNR=11						
ROSC	El Rosal	2.37	215	ePn	Pn	21 11 28.8	+0.1
ROSC				eSn	Sn	21 11 53.1	-6.9
SOCV	Socops	2.56	55	⇑iP	Pn	21 11 32.1	+1.2
SOCV				eS	Sn	21 12 04.1	+0.2
VIGV	El Vigia	2.57	38	⇑iP	Pn	21 11 31.6	+0.5
VIGV				eS	Sn	21 12 04.6	+0.4
SDV	Santo Domingo	3.10	48	P	Pn	21 11 38.8	+1.2
	121nm,0.3s,baz=244,slow=8.1,SNR=325						
SDV				S	Sn	21 12 16.8	+0.9
	55nm,0.3s,baz=260,slow=23,SNR=12						
SDV	Santo Domingo	3.10	48	⇑iPn	Pn	21 11 38.5	+0.9
SDV				eS	Sn	21 12 13.5	-2.4
ELOV	Elorza	3.47	87	eP	Pn	21 11 43.0	+0.8
ELOV				eS	Sn	21 12 24.1	0.0
VIRV	Villa del Rosa	3.71	9	⇑iP	Pn	21 11 44.1	-1.1
VIRV				eS	Sn	21 12 27.5	-2.1
QARV	Quebrada Arrib	4.15	35	⇑iP	Pn	21 11 51.7	+0.8
SANV	Sanarito	4.32	52	⇑iP	Pn	21 11 53.6	+0.4
CURV	Curarigua	4.36	43	⇑iP	Pn	21 11 54.0	+0.4
DABV	Dabajuro	4.69	29	eP	Pn	21 11 58.3	+0.4
TEPV	Terepaima	4.88	50	⇑iP	Pn	21 12 00.9	+0.5
SIQV	Siquisique	4.93	39	⇑iP	Pn	21 12 01.0	-0.1
BAUV	El Baul	5.32	66	⇑iP	Pn	21 12 05.3	-0.9
BAUV				eS	Sn	21 13 04.9	-2.3
IMOV	Isla Los Monje	5.88	20	eP	Pn	21 12 12.9	-0.6
JACV	Jacura	5.90	44	eP	Pn	21 12 13.4	-0.4
MONV	Montecano	5.91	30	eP	Pn	21 12 13.3	-0.5
TURV	Turiamo	6.23	54	eP	Pn	21 12 18.2	+0.1
CAOV	Caicara del Or	6.62	85	⇑iP	Pn	21 12 21.6	-1.6
MERV	Las Mercedes	7.04	69	eP	Pn	21 12 28.1	-0.8
BIRV	Birongo	7.56	61	⇑iP	Pn	21 12 35.0	-0.7
CUPV	Cœpira	7.80	65	eP	Pn	21 12 38.4	-0.5
PCRV	Puerto La Cruz	8.89	67	P	Pn	21 12 53.4	0.0
	1.1nm,0.3s,baz=183,slow=8.5,SNR=3.9						
PCRV				S	Sn	21 14 34.6	+2.2
	0.8nm,0.3s,baz=353,slow=23,SNR=3.3						
SAML	Samuel	18.45	148	⇓eP	P	21 14 51.5	+0.4
	4.4nm,0.7s						
SAML				epP		21 15 17.2	
LPAZ	La Paz	23.45	168	P	P	21 15 42.1	-0.3
	1.5nm,0.7s,mb3.5,baz=328,slow=18,SNR=5.9						
LPAZ	La Paz	23.45	168	eP	P	21 15 42.1	-0.3
	5.8nm,1.3s,mb3.9						
LPAZ				epP		21 16 15.5	
SIV	San Ignacio	25.54	153	P	P	21 16 00.7	-0.7
	0.7nm,0.4s,mb3.7,baz=309,slow=8.2,SNR=6.4						
WVT	Waverly	32.20	337	eP	P	21 17 01.3	+0.9
	6.2nm,0.6s,mb4.5						
WMOK	Wichita Mounta	36.58	323	eP	P	21 17 36.8	-1.3
	2.6nm,0.7s,mb4.0						
MNTX	Cornudas Mount	39.09	314	eP	P	21 17 59.4	+0.3
	3.3nm,0.8s,mb4.0						
ULM	Lac du Bonnet	47.34	340	P	P	21 19 05.0	-0.2
	4.4nm,0.6s,mb4.3,baz=139,slow=8.7,SNR=8.7						
SCHQ	Schefferville	48.14	5	P	P	21 19 12.3	+1.0
	5.2nm,0.9s,mb4.2,baz=124,slow=7.7,SNR=5.5						
SCHQ	Schefferville	48.14	5	eP	P	21 19 12.8	+1.5
	5.7nm,0.7s,mb4.3						
PDAR	Pinedale Array	48.17	324	P	P	21 19 11.9	+0.3
	1.0nm,0.6s,mb3.6,baz=127,slow=9.0,SNR=9.1						
HWUT	Hardware Ranch	48.70	321	eP	P	21 19 14.4	-1.3
	2.9nm,0.8s,mb4.0						
BGU	Big Grassy Mou	49.25	320	eP	P	21 19 20.5	+0.8
HLID	Hailey	51.54	322	P	P	21 19 37.8	+0.9
	1.7nm,0.8s,mb3.7						
NVAR	Mina Array Bea	51.60	315	P	P	21 19 37.3	-0.1
	0.6nm,0.7s,mb3.3,baz=141,slow=5.8,SNR=5.3						
FCC	Fort Churchill	54.31	347	P	P	21 19 57.1	-0.2
	40nm,1.3s,mb5.0						
YKA	Yellowknife Ar	63.32	340	P	P	21 20 59.1	-0.3
	2.6nm,0.6s,mb4.3,baz=134,slow=6.6,SNR=18						
DBIC	Dimbokro	67.59	86	P	P	21 21 26.9	+0.2
	1.8nm,0.7s,mb3.9,baz=124,slow=13,SNR=2.8						
SUMG	Summit	68.97	11	eP	P	21 21 36.4	+1.0
	6.6nm,0.7s,mb4.5						
INK	Inuvik	73.09	340	eP	P	21 21 60.0	-0.2
	2.1nm,0.7s,mb4.0						
TORD	Torodi Ar. Bea	73.59	78	P	P	21 22 02.8	-0.2
	0.4nm,1.0s,mb3.1,baz=270,slow=4.4,SNR=4.3						
MDJ	Mudanjiang	124.92	340	PKP	PKPdf	21 29 28.3	0.0
MDJ				PP	PP		
	comp=Z,94nm,5.7s						
WMQ	Urumqi	126.65	17	ePKP	PKPdf	21 29 32.0	+0.4
HHC	Hu-ho-hao-te	132.39	355	ePKP	PKPdf	21 29 43.0	+0.5
HHC				XPKP		21 30 42.3	
HHC				PP	PP	21 32 11.3	+3.8
HHC				PKS		21 33 17.5	
HHC				SKS	SKSdf	21 36 36.6	-1.5
HHC				SKKS	SKKSac	21 38 44.4	-2.5
HHC				SS	SS	21 49 33.3	+0.5
HHC				PP	PP		
	comp=Z,84nm,4.9s						
HHC				LR	LR		
	comp=N,91nm,39.8s						
HHC				LR	LR		
	comp=E,80nm,37.0s						
HHC				LR	LR		
	comp=Z,111nm,40.8s						
ASAR	Alice Springs	149.23	234	PKPbc	PKPbc	21 30 17.4	+0.4
	comp=Z,1.4nm,0.7s,baz=118,slow=3.3,SNR=14						
WRA	Warramunga Arr	150.46	241	PKPbc	PKPbc	21 30 20.7	+0.7
	comp=Z,1.2nm,0.5s,baz=109,slow=2.6,SNR=33						

*THE **15** 21:13:56.0, 4084N×2081E, h2km, ML2.7*
*SKO **15** 21:13:56.7, 4090N×2083E, h8km, M0.9, ML1.2*
CSEM 15 21:13:55.3±0.2, 4085N×2076E, h5km, ML1.2, Error ellipse: s-maj=4.9km s-min=2.4km az=93.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.23	175	i Pg	Pg	21 13 59.7	-0.1
KBN				i Sg	Sg	21 14 04.5	+1.7
OHR	Ohrid	0.26	7	ePg	Pg	21 14 00.9	+0.5
OHR				eSg	Sg	21 14 05.4	+1.6
OHR	Ohrid	0.26	7	i Pg	Pg	21 14 00.7	+0.3
OHR				i Sg	Sg	21 14 05.3	+1.5
OHR				eLg		21 14 05.8	
	comp=E,68nm,0.3s						
OHR				eLg		21 14 05.9	
	comp=N,37nm,0.3s						
OHR	Ohrid	0.26	7	i Pg	Pg	21 14 00.7	+0.3
OHR				eSg	Sg	21 14 05.4	+1.6
BIA	Bitola	0.46	69	i Pg	Pg	21 14 03.8	-0.4
BIA				i Sg	Sg	21 14 10.5	+0.4
BIA				eLg		21 14 10.6	
	comp=E,21nm,0.5s						
BIA				eLg		21 14 10.8	
	comp=N,19nm,0.3s						
BIA	Bitola	0.46	69	ePg	Pg	21 14 03.9	-0.2
BIA				eSg	Sg	21 14 10.4	+0.3
FNA	Florina	0.47	98	ePg	Pg	21 14 04.5	+0.1
	comp=N,5.9nm,0.3s						
FNA				eSg	Sg	21 14 10.6	0.0
MEV	Metsovon	1.12	161	ePg	Pg	21 14 16.6	-0.3

*ISCJB **15** 21:17:29.5±0.8, 4003N±004×2049E±005, h9km±6km, Error ellipse: s-maj=7.1km s-min=5.7km az=95.8*
*THE **15** 21:17:30.8, 4001N×2051E, h2km*
*NEIC **15** 21:17:31.0, 3997N×2056E, h15km, After ATH.*
*ATH **15** 21:17:31.0, 3997N×2056E, h15km±2km*
*SKO **15** 21:17:41.0, 3962N×2014E, h0km*
ISC 15 21:17:30.3±0.7, **4004N**±004×**2054E**±005, **h7**km±7km, **n14**, σ**0.78**/19, **1C, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAN	Janina	0.45	148	⇑iPB	Pg	21 17 38.5	-0.5
JAN				eSB	Sg	21 17 44.2	-0.6
IGT	Igoumenitsa	0.53	198	ePg	Pg	21 17 40.0	-0.5
IGT				eSg	Sg	21 17 47.8	+0.4
MEV	Metsovon	0.58	115	ePg	Pg	21 17 42.2	+0.7
	comp=Z,10.0nm,0.2s						
MEV				eSg	Sg	21 17 50.6	+1.4
KEK	Kerkira	0.66	241	ePB	Pb	21 17 43.2	-0.9
KEK				eSN	Sg	21 17 52.6	+1.1
KZN	Kozani	0.98	74	ePN	Pn	21 17 50.0	-0.5
FNA	Florina	0.98	40	ePg	Pg	21 17 49.8	+0.6
OHR	Ohrid	1.09	10	ePg	Pg	21 17 51.3	-0.1
LKD	Levkas	1.33	176	ePg	Pg	21 17 54.7	-1.1
EVR	Evrytania	1.49	138	ePN	Pn	21 17 57.4	-0.1
LIT	Litokhoron	1.50	87	ePg	Pg	21 17 58.1	-0.9
GRG	Griva	1.69	56	ePb	Pb	21 18 01.3	-0.5
AGG	Agios Georgios	1.71	126	ePb	Pb	21 18 01.4	-0.7
AGG				eSb	Sb	21 18 24.0	+0.1
VLS	Valsamata	1.85	179	ePN	Pn	21 18 03.9	+1.3
PAIG	Paliouri	2.41	92	ePn	Pn	21 18 11.2	+0.9

*NEIC **15** 21:17:47.0, 1939N×6285W, h26km, MD3.7(RSPR), After RSPR.*
*RSPR **15** 21:17:47.0, 1939N×6285W, h26km±26km*
TRN 15 21:17:43.8, 1915N×6272W, h35km, 6C, Leeward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CULB	Culebra	2.61	252	⇑eP	Pn	21 18 25.0	+1.5
CULB				eS	Sn	21 18 55.0	+1.0
MTP	Monte Pirata	2.89	249	⇑eP	Pn	21 18 29.5	+2.2
MTP				eS	Sn	21 19 03.0	+2.1
CBYP	Canovanas	3.10	254	⇑eP	Pn	21 18 31.8	+1.6
CBYP				eS	Sn	21 19 07.5	+1.5
AOPR	Arecibo Observ	3.90	259	⇑eP	Pn	21 18 43.7	+2.5
LSP	Las Mesas	4.25	258	⇑eP	Pn	21 18 48.5	+2.4
LSP				eS	Sn	21 19 35.5	+1.0
CRPR	Cabo Rojo, PR	4.32	256	⇑eP	Pn	21 18 48.8	+1.9

*ISCJB **15** 21:17:52.3±0.5, 4009N±002×2052E±004, h2km, Error ellipse: s-maj=4.2km s-min=2.8km az=54.3*
*THE **15** 21:17:52.1, 4013N×2039E, h2km, ML2.9*
*NEIC **15** 21:17:54.2, 3989N×2058E, h31km, MD3.3(ATH), ML2.9(THE), After ATH.*
*CSEM **15** 21:17:54.0±0.1, 4000N×2061E, h10km, MD3.3, Error ellipse: s-maj=2.6km s-min=1.4km az=145.0*
*ATH **15** 21:17:54.2, 3989N×2058E, h31km, MD3.3/6*
ISC 15 21:17:53.1±0.6, **4009N**±002×**2055E**±004, **h1**km±5km, **n32**, σ**1.08**/53, **1C, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAN	Janina	0.49	152	⇑iPB	Pg	21 18 01.9	-0.5
JAN				eSB	Sg	21 18 07.8	-0.9
IGT	Igoumenitsa	0.58	197	ePg	Pg	21 18 03.5	-0.7
IGT				eSg	Sg	21 18 11.9	+0.2
MEV	Metsovon	0.60	120	P	Pg	21 18 05.6	+1.0
MEV				S	Sg	21 18 14.9	+2.5
MEV	Metsovon	0.60	120	P	Pg	21 18 05.6	+1.0
MEV				S	Sg	21 18 14.9	+2.5
KEK	Kerkira	0.69	238	ePN	Pg	21 18 06.8	+0.5
KEK				eSN	Sg	21 18 16.8	+1.6
FNA	Florina	0.94	42	P	Pg	21 18 09.6	-1.5
FNA				S	Sg	21 18 23.3	0.0
FNA	Florina	0.94	42	P	Pg	21 18 09.6	-1.5
FNA				S	Sg	21 18 23.3	0.0
KZN	Kozani	0.96	76	ePN	Pn	21 18 13.4	-0.4
KZN				eSN	Sn	21 18 27.7	-0.4
OHR	Ohrid	1.04	10	ePg	Pg	21 18 10.1	-3.0
OHR	Ohrid	1.04	10	ePn	Pg	21 18 09.3	-3.8
OHR				eSn	Sn	21 18 31.9	+1.8
OHR	Ohrid	1.04	10	ePn	Pg	21 18 09.2	-3.9
OHR	Ohrid	1.04	10	ePg	Pg	21 18 10.1	-3.0
OHR				eSn	Sn	21 18 31.9	+1.8
BIA	Bitola	1.10	32	ePg	Pg	21 18 12.9	-1.3
BIA				eSg	Sg	21 18 30.4	+1.8
BIA	Bitola	1.10	32	ePn	Pn	21 18 11.2	-4.5
BIA				eSn	Sn	21 18 32.5	+0.8
BIA	Bitola	1.10	32	P	Pg	21 18 12.9	-1.3
BIA				S	Sg	21 18 28.5	-0.1
BIA	Bitola	1.10	32	ePg	Pg	21 18 12.9	-1.4
BIA				S	Sg	21 18 28.5	-0.1
BIA				eSg	Sg	21 18 30.4	+1.8
LKD	Levkas	1.38	177	ePg	Pg	21 18 18.5	-1.0
LKD				eSg	Sg	21 18 38.5	+1.1
LIT	Litokhoron	1.49	89	ePg	Pn	21 18 20.7	-0.3
LIT				eSg	Sg	21 18 42.3	+1.4
LIT	Litokhoron	1.49	89	P	Pn	21 18 20.7	-0.3
LIT				S	Sg	21 18 42.8	+1.9
LIT	Litokhoron	1.49	89	ePg	Pg	21 18 20.7	-0.9
LIT				eSg	Sg	21 18 42.3	+1.4
LIT				S	Sg	21 18 42.8	+1.9
EVR	Evrytania	1.52	140	ePN	Pn	21 18 19.2	-2.3
GRG	Griva	1.66	58	ePb	Pn	21 18 22.7	-0.6
AGG	Agios Georgios	1.74	127	ePb	Pn	21 18 24.5	0.0
AGG				eSb	Sb	21 18 48.7	+0.5
LCI	Lecce	1.88	278	Pn	Pg	21 18 29.8	+0.6
VLS	Valsamata	1.91	179	ePN	Pn	21 18 24.0	-2.8
THE	Thessaloniki	1.92	73	P	Pn	21 18 27.3	+0.3
THE	Thessaloniki	1.92	73	P	Pn	21 18 27.3	+0.3
HORT	Hortiatis	2.01	74	ePn	Pn	21 18 28.3	0.0
XOR	Xorichti	2.16	109	ePn	Pn	21 18 30.6	+0.3
PLG	Polygyros	2.23	82	ePN	Pn	21 18 31.5	+0.2
PAIG	Paliouri	2.41	93	ePn	Pn	21 18 33.7	0.0
OUR	Ouranopolis	2.64	83	ePn	Pn	21 18 37.1	+0.2

RSPR 15 21:25:06.9, 1886N×6509W, h2km±2km, **6C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CULB	Culebra	0.61	200	⇑eP	Pg	21 25 18.9	+0.2
CULB	Culebra	0.61	200	eS	Sg	21 25 28.1	+1.5
CULB	Culebra	0.61	200	⇑eP	Pg	21 25 18.8	+0.1
CULB	Culebra	0.61	200	eS	Sg	21 25 28.5	+1.9
MTP	Monte Pirata	0.88	210	⇑eP	Pg	21 25 23.1	-0.6
MTP	Monte Pirata	0.88	210	eS	Sg	21 25 35.5	+0.4
MTP	Monte Pirata	0.88	210	⇑eP	Pg	21 25 23.1	-0.6
MTP	Monte Pirata	0.88	210	eS	Sg	21 25 35.6	+0.6
CBYP	Canovanas	0.94	232	⇑eP	Pg	21 25 23.9	-1.0
CBYP	Canovanas	0.94	232	eS	Sg	21 25 36.4	-0.6
CBYP	Canovanas	0.94	232	⇑eP	Pg	21 25 24.1	-0.8
CBYP	Canovanas	0.94	232	eS	Sg	21 25 37.1	+0.1

*NEIC **15** 21:45:47.4, 1828N×6862W, h165km, MD3.8(RSPR), After RSPR.*
RSPR 15 21:45:47.4, 1828N×6862W, h165km±1km, **MD3.8**/12, **MD3.8**/12, **13C, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.45	82	⇑eP	Pn	21 46 17.4	-0.1
AGPR				eS	Sn	21 46 41.3	+0.5
LSP	Las Mesas	1.47	94	⇑eP	Pn	21 46 17.9	+0.1
LSP				eS	Sn	21 46 41.4	+0.3
CRPR	Cabo Rojo, PR	1.47	101	⇑eP	Pn	21 46 17.6	-0.2
CRPR				eS	Sn	21 46 41.6	+0.5
MGP	Maguayo	1.48	100	⇑eP	Pn	21 46 17.7	-0.2
MGP				eS	Sn	21 46 41.8	+0.4
LRS	Lares	1.69	89	⇑eP	Pn	21 46 20.4	+0.3
LRS				eS	Sn	21 46 45.6	+0.4
AOPR	Arecibo Observ	1.78	88	eS	Sn	21 46 47.2	+0.3
AOPR	Arecibo Observ	1.78	88	⇑eP	Pn	21 46 21.2	+0.2
AOPR				eS	Sn	21 46 57.2	+10
OBIP	Obispado Ponce	1.93	97	⇑eP	Pn	21 46 22.9	+0.3
OBIP				eS	Sn	21 46 50.5	+0.7
ICM	Isla Caja Muer	2.04	101	⇑eP	Pn	21 46 24.1	+0.2
ICM				eS	Sn	21 46 52.7	+0.7
SJG	San Juan	2.36	94	ePn	Pn	21 46 26.5	-1.0
SJG				eSn	Sn	21 47 01.8	+3.2
CPD	Cerro la Pandu	2.59	95	⇑eP	Pn	21 46 30.9	+0.6
CPD				eS	Sn	21 47 04.0	+0.6
CBYP	Canovanas	2.63	90	⇑eP	Pn	21 46 31.1	+0.3
CBYP				eS	Sn	21 47 05.5	+1.1
HUMP	Col San Antoni	2.64	93	⇑eP	Pn	21 46 31.4	+0.5
HUMP				eS	Sn	21 47 05.6	+1.0
MTP	Monte Pirata	2.92	93	⇑eP	Pn	21 46 34.9	+0.6
MTP				eS	Sn	21 47 11.7	+0.9
CULB	Culebra	3.13	89	⇑eP	Pn	21 46 37.5	+0.6
CULB	Culebra	3.13	89	eS	Sn	21 47 17.4	+2.0

*CNRM **15** 08:46:09.5, 3535N×476W, h30km, MD3.1*
*CSEM **15** 21:46:01.5±0.1, 3579N×473W, h94km±1km, MD3.1, Error ellipse: s-maj=1.5km s-min=1.3km az=111.0*
*INMG **15** 21:46:02.7±1.6, 3568N×475W, h66km±8km, ML2.7, Error ellipse: s-maj=6.4km s-min=5.3km az=3.0*
*ISCJB **15** 21:46:02.1±0.4, 3588N±003×481W±003, h101km±4km, Error ellipse: s-maj=4.2km s-min=3.4km az=25.9*
*MDD **15** 21:46:03.9±0.5, 3580N×473W, h89km±7km, mb2.7/35, Error ellipse: s-maj=4.5km s-min=4.2km az=122.0, PRXIMO*
*NEIC **15** 21:46:04.5, 3583N×472W, h86km, MG3.0(MDD), After MDD.*
*SFS **15** 21:46:04.0, 3583N×473W, h60km, ML3.0*
ISC 15 21:46:03.2±0.4, **3587N**±002×**479W**±003, **h93**km±5km, **n110**, σ**1.22**/191, **12C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMIJ	Mijas	0.69	1	⇑P	Pn	21 46 19.8	-0.2
	7.6nm,0.1s,SNR=18						
EMIJ				S	Sn	21 46 32.2	-0.2
	22nm,0.1s,SNR=17						
EMIJ	Mijas	0.69	1	⇑P	Pn	21 46 19.8	-0.2
EMIJ				S	Sn	21 46 31.6	-0.8
EMIJ	Mijas	0.69	1	P	Pn	21 46 19.8	-0.1
	7.6nm,0.1s,SNR=18						
EMIJ				S	Sn	21 46 31.6	-0.8
	22nm,0.1s,SNR=17						
REAL	Reales	0.70	331	P	Pn	21 46 21.9	+1.8
REAL				S	Sn	21 46 32.4	-0.1
REAL	Reales	0.70	331	eP	Pn	21 46 21.9	+1.9
REAL				eS	Sn	21 46 32.4	-0.1
EJIF	Jimena Fronter	0.80	317	⇑P	Pn	21 46 23.2	+2.2
	13nm,0.2s,SNR=18						
EJIF				S	Sn	21 46 35.5	+1.2
	6.7nm,0.2s,SNR=6.6						
EJIF	Jimena Fronter	0.80	317	⇑P	Pn	21 46 23.2	+2.2
EJIF				S	Sn	21 46 35.8	+1.5
EJIF	Jimena Fronter	0.80	317	P	Pn	21 46 23.2	+2.2
	13nm,0.2s,SNR=18						
EJIF				S	Sn	21 46 35.8	+1.5
	6.7nm,0.2s,SNR=6.6						
MAL	Malaga	0.91	20	eP	Pn	21 46 21.9	-0.2
MAL				eS	Sn	21 46 36.3	0.0
MPAL	Palemas	0.94	133	iP	Pn	21 46 21.0	-1.5
MPAL				iS	Sn	21 46 33.0	-4.0
CNIL	Conil	1.14	296	S	Sn	21 46 47.0	+6.1
LIJA	Lijar	1.15	334	⇑P	Pn	21 46 27.0	+2.2
LIJA				S	Sn	21 46 41.0	-0.1
LIJA	Lijar	1.15	334	iP	Pn	21 46 27.0	+2.2
LIJA				eS	Sn	21 46 41.0	0.0
TOU	Touzarine	1.24	137	iP	Pn	21 46 25.0	-0.9
TOU				iS	Sn	21 46 36.0	-7.1
RSA	Sarsar	1.31	221	iP	Pn	21 46 27.0	+0.3
RSA				iS	Sn	21 46 38.0	-6.5
ESPR	Espera	1.32	319	⇑P	Pn	21 46 28.4	+1.5
	10nm,0.3s,SNR=18						
ESPR				S	Sn	21 46 45.4	+0.7
	28nm,0.2s,SNR=13						
ESPR	Espera	1.32	319	P	Pn	21 46 28.4	+1.5
	10nm,0.3s,SNR=18						
ESPR				S	Sn	21 46 45.4	+0.7
	28nm,0.2s,SNR=13						
GIBL	Gibalbin	1.35	315	S	Sn	21 46 47.0	+1.6
GIBL	Gibalbin	1.35	315	eS	Sn	21 46 47.0	+1.6
ELOJ	Sierra Loja	1.37	22	P	Pn	21 46 28.8	+1.2
	5.8nm,0.2s,SNR=18						
ELOJ				S	Sn	21 46 46.6	+0.7
	1.8nm,0.1s						
EGUA	Guajares	1.38	45	P	Pn	21 46 27.0	-0.6
	2.9nm,0.1s,SNR=7.9						
EGUA				S	Sn	21 46 44.6	-1.4
	5.2nm,0.2s,SNR=7.9						
EGUA	Guajares	1.38	45	P	Pn	21 46 26.7	-0.8
EGUA				S	Sn	21 46 44.6	-1.4
EGUA	Guajares	1.38	45	P	Pn	21 46 26.7	-0.9
	2.9nm,0.1s,SNR=7.9						
EGUA				S	Sn	21 46 44.6	-1.4
	5.2nm,0.2s,SNR=7.9						
ERON	Agron	1.39	34	P	Pn	21 46 27.5	-0.3
	5.3nm,0.1s,SNR=9.4						
ECOG	Cogollos-Vega	1.71	35	P	Pn	21 46 33.7	+1.8
	5.8nm,0.2s,SNR=8.5						
ECOG				S	Sn	21 46 53.8	+0.3
	1.4nm,0.1s,SNR=7.9						
ECOG	Cogollos-Vega	1.71	35	P	Pn	21 46 33.9	+2.1
ECOG				S	Sn	21 46 53.8	+0.3
ECOG	Cogollos-Vega	1.71	35	P	Pn	21 46 33.9	+2.1
	5.8nm,0.2s,SNR=8.5						
ECOG				S	Sn	21 46 53.8	+0.3
	1.4nm,0.1s,SNR=7.9						
EQUE	Quentar	1.72	39	P	Pn	21 46 32.9	+1.0
	2.1nm,0.1s,SNR=41						
EQUE				S	Sn	21 46 53.5	-0.1
	0.6nm,0.1s,SNR=6.8						
ELUQ	Luque	1.74	14	⇑P	Pn	21 46 33.4	+1.3
	20nm,0.2s,SNR=18						
ELUQ				S	Sn	21 46 54.1	0.0
	26nm,0.1s,SNR=7.9						
EBER	Berja	1.84	56	⇑P	Pn	21 46 33.0	-0.4
	11nm,0.2s,SNR=18						
EBER				S	Sn	21 46 55.2	-1.3
	1.1nm,0.1s						
EBER	Berja	1.84	56	P	Pn	21 46 33.0	-0.5
	11nm,0.2s,SNR=18						
EBER				S	Sn	21 46 55.2	-1.3
	1.1nm,0.1s						
TZK	Tazeka	1.85	164	iP	Pn	21 46 32.0	-1.5
TZK				iS	Sn	21 46 46.0	-11
EADA	Adamuz	2.30	4	⇑P	Pn	21 46 40.3	+0.9
	7.9nm,0.1s,SNR=18						
EADA				S	Sn	21 47 05.8	-1.3
	26nm,0.1s,SNR=22						
EADA	Adamuz	2.30	4	P	Pn	21 46 40.3	+0.9
	7.9nm,0.1s,SNR=18						
EADA				S	Sn	21 47 05.8	-1.3
	26nm,0.1s,SNR=22						
ENIJ	Nijar	2.35	61	P	Pn	21 46 39.7	-0.5
	1.5nm,0.1s,SNR=7.3						
EQES	Quesada	2.37	35	⇑P	Pn	21 46 41.3	+0.9
	8.3nm,0.2s,SNR=18						
EQES				S	Sn	21 47 08.6	-0.3
	18nm,0.1s,SNR=25						
EQES	Quesada	2.37	35	P	Pn	21 46 41.3	+0.9
	8.3nm,0.2s,SNR=18						
EQES				S	Sn	21 47 08.6	-0.2
	18nm,0.1s,SNR=25						
EMIN	Mina Concepcio	2.42	322	⇑P	Pn	21 46 41.8	+0.7
	4.5nm,0.1s,SNR=18						
EMIN				S	Sn	21 47 09.2	-0.9
	20nm,0.1s,SNR=35						
EMIN	Mina Concepcio	2.42	322	⇑P	Pn	21 46 41.8	+0.7
EMIN				S	Sn	21 47 09.2	-0.9
EMIN	Mina Concepcio	2.42	322	P	Pn	21 46 41.8	+0.7
	4.5nm,0.1s,SNR=18						
EMIN				S	Sn	21 47 09.2	-0.9
	20nm,0.1s,SNR=35						
MIF	Mishlifen	2.48	189	P	Pn	21 46 40.0	-1.9
MIF				S	Sn	21 47 03.0	-8.6
MIF				P		21 47 07.0	
MIF				S	Sn	21 47 09.0	-2.6
MIF	Mishlifen	2.48	189	iP	Pn	21 46 40.0	-1.9
MIF				iS	Sn	21 47 09.0	-2.6
ERIP	Rio Piedras	2.49	308	P	Pn	21 46 42.5	+0.6
	4.9nm,0.1s,SNR=7.9						
ERIP				S	Sn	21 47 10.8	-0.8
	83nm,0.1s,SNR=7.9						
EHUE	Huescar	2.62	42	P	Pn	21 46 44.5	+0.8
	0.7nm,0.2s,SNR=5.2						
EHUE				S	Sn	21 47 14.4	-0.4
	1.3nm,0.1s,SNR=8.6						
EHUE	Huescar	2.62	42	P	Pn	21 46 44.5	+0.8
EHUE				S	Sn	21 47 14.6	-0.2
EHUE	Huescar	2.62	42	P	Pn	21 46 44.5	+0.8
	0.7nm,0.2s,SNR=5.2						
EHUE				S	Sn	21 47 14.6	-0.2
	1.3nm,0.1s,SNR=8.6						
EGRO	El Granado	2.73	308	P	Pn	21 46 45.6	+0.5
	3.4nm,0.1s,SNR=28						
EGRO				S	Sn	21 47 16.6	-0.8
	32nm,0.2s,SNR=24						
EGRO	El Granado	2.73	308	P	Pn	21 46 45.7	+0.5
EGRO				S	Sn	21 47 16.6	-0.8
	32nm,0.2s,SNR=24						
CZD	Col de Zad	2.84	184	P	Pn	21 46 45.0	-1.7
CZD				S	Sn	21 47 12.0	-8.1
CZD	Col de Zad	2.84	184	iP	Pn	21 46 45.0	-1.7
PBEJ	Beja	3.27	312	eP	Pn	21 46 53.2	+0.8
PBEJ				eS	Sn	21 47 29.3	-1.1
PBEJ							
	14nm,0.2s						
PBEJ	Beja	3.27	312	eP	Pn	21 46 53.2	+0.8
PBEJ				eS	Sn	21 47 29.3	-1.1
	14nm,0.2s						
EVIA	Vianos	3.31	33	P	Pn	21 46 53.3	+0.3
	3.2nm,0.1s,SNR=14						
EVIA				S	Sn	21 47 29.4	-1.9
	5.0nm,0.1s,SNR=22						
EBAD	Badajoz	3.38	329	P	Pn	21 46 54.8	+0.9
	3.7nm,0.1s,SNR=18						
EBAD				S	Sn	21 47 32.2	-0.8
	24nm,0.1s,SNR=17						
EBAD	Badajoz	3.38	329	P	Pn	21 46 54.8	+0.9
	3.7nm,0.1s,SNR=18						
EBAD				S	Sn	21 47 32.2	-0.9
	24nm,0.1s,SNR=17						
EMUR	La Murta	3.46	54	P	Pn	21 46 55.1	+0.1
	0.1nm,0.2s,SNR=6.4						
EMUR	La Murta	3.46	54	P	Pn	21 46 55.4	+0.4
EMUR	La Murta	3.46	54	P	Pn	21 46 55.4	+0.4
	0.1nm,0.2s,SNR=6.4						
PTEO	Sao Teotonio	3.58	299	eP	Pn	21 46 57.3	+0.7
PTEO				eS	Sn	21 47 36.6	-1.2
PTEO							
	13nm,0.4s						
PTEO	Sao Teotonio	3.58	299	eP	Pn	21 46 57.3	+0.7
PTEO				eS	Sn	21 47 36.6	-1.2
	13nm,0.4s						
PESTR	Estremoz	3.73	324	eP	Pn	21 46 59.7	+1.1
PESTR				eS	Sn	21 47 40.4	-1.1
PESTR							
	12nm,0.2s						
PESTR	Estremoz	3.73	324	eP	Pn	21 46 59.7	+1.1
PESTR				eS	Sn	21 47 40.4	-1.1
	12nm,0.2s						
ETOB	Tobarra	3.79	42	P	Pn	21 46 59.6	+0.2
	5.8nm,0.1s,SNR=76						
ETOB				S	Sn	21 47 41.0	-1.9
	1.1nm,0.1s,SNR=7.9						
ETOB	Tobarra	3.79	42	P	Pn	21 46 59.6	+0.2
	5.8nm,0.1s,SNR=76						
ETOB				S	Sn	21 47 41.0	-1.9
	1.1nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	3.85	10	P	Pn	21 47 00.5	+0.3
	0.6nm,0.1s,baz=186,slow=12,SNR=12						
ESDC				S	Sn	21 47 42.1	-2.4
	8.0nm,0.1s,baz=189,slow=22,SNR=104						
ESDC	Sonseca Array	3.85	10	P	Pn	21 47 00.5	+0.2
	0.6nm,0.1s,SNR=12						
ESDC				S	Sn	21 47 42.1	-2.4
	8.0nm,0.1s,SNR=104						
PLOU	Loures	4.60	312	S	Sn	21 48 01.5	-1.0
PLOU							
	6.7nm,0.2s						
PLOU	Loures	4.60	312	S	Sn	21 48 01.5	-1.0
	6.7nm,0.2s						
EBEN	Beniarda	4.61	51	P	Pn	21 47 10.8	+0.3
	0.1nm,0.1s,SNR=7.9						
EBEN	Beniarda	4.61	51	P	Pn	21 47 10.8	+0.3
	0.1nm,0.1s,SNR=7.9						
PTOM	Tomar	4.71	324	eP	Pn	21 47 13.2	+1.2
PTOM				S	Sn	21 48 04.0	-1.4
PTOM							
	12nm,0.1s						
PMAFR	Mafra	4.72	312	S	Sn	21 48 04.3	-1.2
GUD	Guadarrama	4.79	6	P	Pn	21 47 13.7	+0.7
	0.1nm,0.2s,SNR=12						
GUD				S	Sn	21 48 04.9	-2.4
	1.1nm,0.1s,SNR=4.0						
ECHE	Chera	4.79	38	P	Pn	21 47 13.1	+0.1
	0.2nm,0.1s,SNR=6.5						
MTE	Manteigas	5.01	335	S	Sn	21 48 11.1	-1.6
MTE							
	8.6nm,0.6s						
MTE	Manteigas	5.01	335	S	Sn	21 48 11.1	-1.6
	8.6nm,0.6s						
PVIS	Viseu	5.42	334	eP	Pn	21 47 22.7	+1.2
PVIS				S	Sn	21 48 21.7	-0.8
PVIS							
	5.7nm,0.1s						
CIA	Chichaoua	5.42	219	P	Pn	21 47 21.0	-0.6
CIA				S	Sn	21 48 15.0	-7.6
CIA	Chichaoua	5.42	219	iP	Pn	21 47 21.0	-0.6
EMOS	Mosqueruela	5.63	36	P	Pn	21 47 25.4	+1.0
	0.6nm,0.1s,SNR=12						
EMOS				S	Sn	21 48 23.8	-3.8
	0.9nm,0.3s						
EMOS	Mosqueruela	5.63	36	P	Pn	21 47 25.9	+1.6
EMOS				S	Sn	21 48 23.6	-4.1
EMOS	Mosqueruela	5.63	36	P	Pn	21 47 26.0	+1.6
PVRL	Vila Real	5.86	338	eP	Pn	21 47 29.1	+1.5
PVRL				eS	Sn	21 48 31.1	-2.2
PVRL							
	17nm,0.2s						
PTO	Porto	6.05	332	S	Sn	21 48 36.8	-1.1
ECAL	Calabor	6.25	347	P	Pn	21 47 34.0	+1.2
	0.4nm,0.1s,SNR=7.9						
ECAL				S	Sn	21 48 38.9	-3.9
	0.7nm,0.1s,SNR=5.1						
ECAL	Calabor	6.25	347	P	Pn	21 47 34.0	+1.2
	0.4nm,0.1s,SNR=7.9						
ERTA	Horta de San J	6.47	37	P	Pn	21 47 36.1	+0.2
	0.1nm,0.1s,SNR=7.9						
ERTA				S	Sn	21 48 44.2	-4.1
	0.2nm,0.1s,SNR=4.0						
ERTA	Horta de San J	6.47	37	P	Pn	21 47 36.1	+0.2
	0.1nm,0.1s,SNR=7.9						
ESAC	San Caprasio	6.74	29	P	Pn	21 47 40.4	+0.9
	0.6nm,0.1s,SNR=7.9						
ESAC				S	Sn	21 48 51.1	-3.7
	0.8nm,0.1s,SNR=7.9						
ESAC	San Caprasio	6.74	29	P	Pn	21 47 40.4	+0.9
ESAC				S	Sn	21 48 51.7	-3.2
ESAC	San Caprasio	6.74	29	P	Pn	21 47 40.4	+0.8
	0.6nm,0.1s,SNR=7.9						
ELAN	Lanestosa	7.42	8	P	Pn	21 47 50.6	+1.8
	0.5nm,0.1s,SNR=16						
ELAN				S	Sn	21 49 06.6	-4.9
	0.4nm,0.1s						
ELAN	Lanestosa	7.42	8	P	Pn	21 47 50.6	+1.8
ELAN				S	Sn	21 49 05.3	-6.1
ELAN	Lanestosa	7.42	8	P	Pn	21 47 50.6	+1.8
	0.5nm,0.1s,SNR=16						
EARI	Arriondas	7.43	358	P	Pn	21 47 50.5	+1.7
	0.2nm,0.1s,SNR=6.1						
EARI				S	Sn	21 49 07.0	-4.5
	0.0nm,0.1s,SNR=5.5						
EARI	Arriondas	7.43	358	P	Pn	21 47 50.8	+1.9
EARI				S	Sn	21 49 07.0	-4.5
EARI	Arriondas	7.43	358	P	Pn	21 47 50.8	+1.9
	0.2nm,0.1s,SNR=6.1						
EPON	Pontenova	7.66	347	S	Sn	21 49 12.7	-4.6
	0.2nm,0.1s,SNR=7.9						
ELIZ	Elizondo	7.70	18	P	Pn	21 47 54.6	+2.0
	1.5nm,0.2s,SNR=14						
ELIZ				S	Sn	21 49 13.1	-5.2
	0.2nm,0.1s						
ELIZ	Elizondo	7.70	18	P	Pn	21 47 55.3	+2.6
ELIZ				S	Sn	21 49 13.1	-5.2
ELIZ	Elizondo	7.70	18	P	Pn	21 47 55.3	+2.7
	1.5nm,0.2s,SNR=14						
EALK	Alkurruntz	7.76	18	P	Pn	21 47 54.7	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.3nm,0.2s,SNR=21						
EALK				S	**Sn**	**21 49 15.7**	**-4.0**
	0.1nm,0.1s,SNR=6.7						
EALK	**Alkurruntz**	**7.76**	**18**	P	**Pn**	**21 47 56.1**	**+2.7**
EALK				S	**Sn**	**21 49 15.7**	**-4.0**
EALK	**Alkurruntz**	**7.76**	**18**	P	**Pn**	**21 47 56.1**	**+2.7**
	2.3nm,0.2s,SNR=21						
EMAZ	**Mazaricos**	**7.77**	**337**	P	**Pn**	**21 47 54.9**	**+1.3**
	0.0nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**21 49 16.2**	**-3.7**
	1.1nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**7.77**	**337**	P	**Pn**	**21 47 53.5**	**-0.1**
EMAZ				S	**Sn**	**21 49 16.2**	**-3.7**
EMAZ	**Mazaricos**	**7.77**	**337**	P	**Pn**	**21 47 53.5**	**-0.1**
	SNR=7.9						
EBIE	**Bielsa**	**7.80**	**28**	P	**Pn**	**21 47 54.8**	**+0.8**
	0.1nm,0.1s,SNR=7.9						
EBIE				S	**Sn**	**21 49 16.7**	**-3.9**
	0.1nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**7.80**	**28**	P	**Pn**	**21 47 54.8**	**+0.8**
EBIE				S	**Sn**	**21 49 17.3**	**-3.4**
EBIE	**Bielsa**	**7.80**	**28**	P	**Pn**	**21 47 54.8**	**+0.8**
	0.1nm,0.1s,SNR=7.9						

*NNC **15** 21:55:57.4±18.0, 4396N×8465E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=105.2km s-min=22.6km az=118.0*
BJI 15 21:56:01.6, 4394N×8441E, h16km, ML2.9, 2C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.38**	**92**	*e*PG	Pg	21 56 44.0	-3.2
WMQ				S	Sn	21 57 10.6	+1.9
WMQ				Smax			
	comp=N,98nm,0.6s						
WMQ				Smax			
	comp=E,127nm,0.5s						
MK05	**Makanchi Array**	**3.22**	**333**	⇑Pg	Pg	21 56 59.2	-4.2
	comp=E,3.9nm,0.6s,baz=154,slow=17						
MK05				⇓Lg		21 57 41.8	
	comp=E,16nm,0.5s,baz=144,slow=29						
TKM2	**Tokmak 2**	**6.50**	**264**	Lg		21 59 29.3	
KURK	**Kurchatov**	**7.83**	**332**	⇑Lg		22 00 09.4	
	comp=E,5.6nm,0.7s						

*CRAAG **15** 22:10:44.1, 3523N×120W, Ml3.1*
*ISCJB **15** 22:10:48.8±0.8, 3552N±005×135W±004, h10km, Error ellipse: s-maj=7.3km s-min=5.0km az=12.8*
*MDD **15** 22:10:48.8±1.8, 3526N×134W, h25km±34km, mb3.5/14, Error ellipse: s-maj=29.5km s-min=9.7km az=169.0, PRXIMO*
*NEIC **15** 22:10:49.2, 3550N×132W, h0km, MG3.4(MDD), After MDD.*
*CSEM **15** 22:10:49.1±0.2, 3541N×126W, h35km, mb3.4/9, Error ellipse: s-maj=4.1km s-min=2.7km az=16.0*
ISC 15 22:10:49.4±0.8, **3550N**±005×**135W**±004, **h10km, n44,** σ**1s11**/71, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ODZI	**Dziouia**	**0.23**	**154**	P	**Pg**	**22 10 47.0**	**-7.2**
OTSS	**Djebel Tessala**	**0.50**	**115**	P	**Pg**	**22 10 51.0**	**-8.3**
USTO	**Oran**	**0.69**	**70**	P	**Pg**	**22 11 04.0**	**+1.1**
ODJA	**Bouhanifia**	**1.00**	**99**	P	**Pg**	**22 11 09.0**	**+0.4**
ENIJ	**Nijar**	**1.63**	**335**	P	**Pn**	**22 11 17.1**	**-1.0**
	4.9nm,0.3s,SNR=13						
ENIJ				S	**Sn**	**22 11 38.9**	**-0.2**
	14nm,0.2s						
EBER	**Berja**	**1.87**	**319**	P	**Pn**	**22 11 20.3**	**-1.2**
	2.6nm,0.2s,SNR=9.6						
EBER				S	**Sn**	**22 11 46.0**	**+0.9**
	4.0nm,0.3s,SNR=5.7						
EBER	**Berja**	**1.87**	**319**	P	**Pn**	**22 11 20.1**	**-1.3**
EBER				S	**Sn**	**22 11 46.4**	**+1.3**
EBER	**Berja**	**1.87**	**319**	P	**Pn**	**22 11 20.1**	**-1.4**
	2.6nm,0.2s,SNR=9.6						
EBER				S	**Sn**	**22 11 46.4**	**+1.2**
	4.0nm,0.3s,SNR=5.7						
EGUA	**Guajares**	**2.23**	**307**	P	**Pn**	**22 11 25.8**	**-0.7**
	0.4nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**22 11 52.8**	**-1.3**
	0.4nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.34**	**2**	P	**Pn**	**22 11 27.0**	**-0.9**
	1.7nm,0.2s,SNR=10						
EMUR				S	**Sn**	**22 11 56.0**	**-0.8**
	4.1nm,0.4s,SNR=7.9						
EMUR	**La Murta**	**2.34**	**2**	P	**Pn**	**22 11 26.5**	**-1.5**
EMUR				S	**Sn**	**22 11 55.4**	**-1.4**
EMUR	**La Murta**	**2.34**	**2**	P	**Pn**	**22 11 26.5**	**-1.5**
	1.7nm,0.2s,SNR=10						
EMUR				S	**Sn**	**22 11 55.4**	**-1.4**
	4.1nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**2.40**	**316**	P	**Pn**	**22 11 28.7**	**0.0**
	2.7nm,0.4s,SNR=11						
EQUE				S	**Sn**	**22 11 58.1**	**0.0**
	3.7nm,0.4s,SNR=6.2						
ERON	**Agron**	**2.50**	**308**	P	**Pn**	**22 11 29.9**	**-0.3**
ERON				S	**Sn**	**22 12 01.7**	**+1.1**
ERON	**Agron**	**2.50**	**308**	P	**Pn**	**22 11 29.9**	**-0.2**
	1.1nm,0.2s,SNR=7.9						
ERON				S	**Sn**	**22 12 01.7**	**+1.1**
	2.5nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**2.52**	**337**	P	**Pn**	**22 11 30.0**	**-0.4**
	0.9nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**22 12 00.7**	**-0.5**
	4.3nm,0.6s,SNR=4.0						
EQES	**Quesada**	**2.68**	**330**	P	**Pn**	**22 11 33.6**	**+1.0**
	1.4nm,0.1s,SNR=23						
EQES				S	**Sn**	**22 12 07.9**	**+2.7**
	2.7nm,0.7s,SNR=7.8						
EQES	**Quesada**	**2.68**	**330**	P	**Pn**	**22 11 33.9**	**+1.2**
EQES				S	**Sn**	**22 12 08.6**	**+3.3**
EQES	**Quesada**	**2.68**	**330**	P	**Pn**	**22 11 33.9**	**+1.2**
	1.4nm,0.1s,SNR=23						
ELOJ	**Sierra Loja**	**2.80**	**307**	P	**Pn**	**22 11 35.0**	**+0.7**
ELOJ	**Sierra Loja**	**2.80**	**307**	P	**Pn**	**22 11 35.0**	**+0.8**
	2.7nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**2.97**	**292**	P	**Pn**	**22 11 33.5**	**-3.2**
	2.5nm,0.3s,SNR=6.0						
EMIJ				S	**Sn**	**22 12 08.9**	**-3.4**
	8.8nm,0.5s						
ETOB	**Tobarra**	**3.15**	**357**	P	**Pn**	**22 11 39.3**	**+0.3**
	3.7nm,0.2s,SNR=24						
ETOB				S	**Sn**	**22 12 15.8**	**-0.8**
	1.2nm,0.2s						
ETOB	**Tobarra**	**3.15**	**357**	P	**Pn**	**22 11 39.3**	**+0.3**
	3.7nm,0.2s,SNR=24						
ETOB				S	**Sn**	**22 12 15.9**	**-0.7**
	1.2nm,0.2s						
EVIA	**Vianos**	**3.27**	**344**	P	**Pn**	**22 11 42.3**	**+1.6**
	3.4nm,0.3s,SNR=7.9						
EVIA				S	**Sn**	**22 12 19.6**	**0.0**
	7.9nm,0.5s,SNR=4.6						
EVIA	**Vianos**	**3.27**	**344**	P	**Pn**	**22 11 42.3**	**+1.6**
EVIA				S	**Sn**	**22 12 20.8**	**+1.2**
EVIA	**Vianos**	**3.27**	**344**	P	**Pn**	**22 11 42.3**	**+1.6**
	3.4nm,0.3s,SNR=7.9						
EVIA				S	**Sn**	**22 12 20.8**	**+1.2**
	7.9nm,0.5s,SNR=4.6						
EBEN	**Beniarda**	**3.33**	**15**	P	**Pn**	**22 11 41.9**	**+0.4**
	1.3nm,0.3s,SNR=7.9						
EBEN				S	**Sn**	**22 12 20.5**	**-0.5**
	4.1nm,0.7s,SNR=7.9						
EBEN	**Beniarda**	**3.33**	**15**	P	**Pn**	**22 11 41.1**	**-0.4**
EBEN				S	**Sn**	**22 12 20.6**	**-0.5**
EBEN	**Beniarda**	**3.33**	**15**	P	**Pn**	**22 11 41.1**	**-0.4**
	1.3nm,0.3s,SNR=7.9						
EBEN				S	**Sn**	**22 12 20.5**	**-0.5**
	4.1nm,0.7s,SNR=7.9						
EJIF	**Jimena Fronter**	**3.47**	**287**	P	**Pn**	**22 11 44.9**	**+1.4**
EJIF				S	**Sn**	**22 12 25.2**	**+0.5**
EJIF	**Jimena Fronter**	**3.47**	**287**	P	**Pn**	**22 11 44.9**	**+1.4**
	0.7nm,0.3s,SNR=7.9						
EJIF				S	**Sn**	**22 12 25.2**	**+0.5**
	16nm,1.4s,SNR=7.9						
EADA	**Adamuz**	**3.71**	**317**	P	**Pn**	**22 11 47.6**	**+0.7**
EADA				S	**Sn**	**22 12 33.3**	**+2.7**
EADA	**Adamuz**	**3.71**	**317**	P	**Pn**	**22 11 47.6**	**+0.8**
	0.7nm,0.3s,SNR=4.7						
EADA				S	**Sn**	**22 12 33.3**	**+2.7**
	2.6nm,0.6s						
EIBI	**Ibiza**	**4.13**	**31**	P	**Pn**	**22 11 52.1**	**-0.5**
	1.2nm,0.1s,SNR=4.0						
EIBI	**Ibiza**	**4.13**	**31**	P	**Pn**	**22 11 52.1**	**-0.4**
ESDC	**Sonseca Array**	**4.66**	**334**	P	**Pn**	**22 11 59.3**	**-0.5**
	0.4nm,0.2s,baz=151,slow=13,SNR=4.0						
ESDC	**Sonseca Array**	**4.66**	**334**	P	**Pn**	**22 11 59.3**	**-0.5**
EMIN	**Mina Concepcio**	**4.84**	**299**	P	**Pn**	**22 12 00.8**	**-1.6**
	0.1nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.84**	**299**	P	**Pn**	**22 12 00.8**	**-1.5**
EMOS	**Mosqueruela**	**4.91**	**8**	P	**Pn**	**22 12 04.4**	**+1.2**
EMOS	**Mosqueruela**	**4.91**	**8**	P	**Pn**	**22 12 04.4**	**+1.1**
EBAD	**Badajoz**	**5.57**	**307**	P	**Pn**	**22 12 11.1**	**-1.3**
EBAD	**Badajoz**	**5.57**	**307**	P	**Pn**	**22 12 11.1**	**-1.3**

KRSC 15 22:25:56, 4926N×15651E, h31km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.73**	**339**	*e*P	Pn	22 26 24.8	+0.9
ALID				*i* S	Sn	22 26 45.7	+0.9
RUS	**Russkaya**	**3.42**	**21**	*e*P	Pn	22 26 50.3	+3.1
RUS				*i* S	Sn	22 27 29.2	+2.5
GRL	**Gorelyy**	**3.44**	**16**	*e*P	Pn	22 26 52.0	+4.5
GRL				*i* S	Sn	22 27 31.6	+4.4
AVH	**Avacha**	**4.25**	**18**	*e*P	Pn	22 27 03.0	+4.5
NLC	**Nalytchevo**	**4.30**	**23**	*e*P	Pn	22 27 03.0	+3.7
NLC				*i* S	Sn	22 27 50.3	+1.9
SPN	**Mys Shipunski**	**4.43**	**29**	*e*P	Pn	22 27 05.0	+3.9
SPN				*i* S	Sn	22 27 54.7	+3.1
GNL	**Ganaly**	**4.53**	**11**	*e*P	Pn	22 27 07.4	+5.0
KBTR	**Krutoberegovo**	**7.94**	**26**	*e*P	Pn	22 27 53.8	+4.6

*IDC **15** 22:53:21.9±1.7, 5169N×17936E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/23, mbtmp3.9/8, ML4.2/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/24, Error ellipse: s-maj=61.1km s-min=19.8km az=179.0*
*BJI **15** 22:53:23.2, 5120N×17930E, h22km, mB4.9, mb4.7, Ms4.4, Msz4.2*
*ISCJB **15** 22:53:25.4±0.9, 513N±0.1×17936E±0.10, h43km±5km, mb4.1/15, MS3.5/6, Error ellipse: s-maj=25.0km s-min=9.3km az=162.5*
*NEIC **15** 22:53:25.3±1.9, 51.17N×17933E, h32km±9km, mb4.2/5, ML3.7(AEIC), Error ellipse: s-maj=26.6km s-min=10.0km az=175.0*
ISC 15 22:53:26.5±1.0, **513N**±01×**17932E**±010, **h38km**±5km, **n30,** σ**1s07**/29, **mb4.1**/15, **MS3.5**/6, **Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.12**	**354**	P	**Pn**	**22 53 31.3**	**-1.7**
AMKA				S	**Sn**	**22 53 37.4**	**0.0**
SMY	**Shemya**	**3.55**	**297**	P	**Pn**	**22 54 20.3**	**+1.2**
ATKA	**Atka Island**	**4.14**	**74**	P	**Pn**	**22 54 27.7**	**+0.6**
KDAK	**Kodiak Island**	**17.48**	**57**	P	**Pn**	**22 57 23.4**	**-3.8**
	0.8nm,0.3s,baz=200,slow=6.3,SNR=7.3						
KDAK	**Kodiak Island**	**17.48**	**57**	P	**Pn**	**22 57 23.4**	**-3.8**
TTA	**Tatalina**	**17.64**	**39**	*e*Pn	**Pn**	**22 57 30.8**	**+1.6**
	19nm,1.4s						
PMR	**Palmer**	**20.07**	**47**	P	**P**	**22 57 57.0**	**+0.4**
IMA2	**Indian Mountai**	**20.17**	**32**	*e*P	**P**	**22 57 58.6**	**+1.0**
DAWY	**Dawson**	**25.00**	**43**	P	**P**	**22 58 46.4**	**-0.3**
ASAJ	**Asahikawa**	**25.52**	**268**	P	**P**	**22 58 51.9**	**+0.5**
	8.1nm,0.9s,mb4.2,baz=126,slow=0.5,SNR=7.1						
MDJ	**Mudanjiang**	**33.43**	**278**	P	**P**	**23 00 02.9**	**+1.3**
MDJ				AP	pP	23 00 05.9	-6.3
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,64nm,4.3s						
YKA	**Yellowknife Ar**	**36.17**	**46**	LR	LR	23 16 52.0	
	comp=Z,90nm,18.9s,MS3.6,baz=270,slow=39						
CN2	**Changchun**	**36.41**	**280**	*e*P	**P**	**23 00 30.1**	**+2.8**
NVAR	**Mina Array Bea**	**44.74**	**81**	P	**P**	**23 01 36.4**	**+0.4**
	comp=Z,0.2nm,0.4s,mb3.3,baz=304,slow=6.5,SNR=3.8						
ULN	**Ulaanbaatar**	**45.25**	**295**	*e*P	**P**	**23 01 40.2**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.8						
SONM	**Songino Array**	**45.64**	**296**	P	**P**	**23 01 42.9**	**-0.3**
	comp=Z,0.8nm,0.8s,mb3.7,baz=59,slow=7.2,SNR=5.9						
SONM				LR	LR	23 22 12.1	
	comp=Z,48nm,18.5s,MS3.5,baz=52,slow=38						
PDAR	**Pinedale Array**	**47.47**	**71**	P	**P**	**23 01 56.9**	**-0.6**
	comp=Z,1.6nm,0.8s,mb4.0,baz=315,slow=4.5,SNR=15						
NJ2	**Nanjing**	**47.63**	**270**	*e*P	**P**	**23 02 02.3**	**+3.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
ULM	**Lac du Bonnet**	**50.73**	**56**	LR	LR	23 23 11.6	
	comp=Z,32nm,18.1s,MS3.4,baz=237,slow=36						
LZH	**Lanzhou**	**54.28**	**285**	*e*P	**P**	**23 02 49.8**	**+1.0**
LZH				AP	pP	23 02 54.5	-5.4
LZH				XP	sP	23 02 58.1	-6.3
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,68nm,4.5s						
GTA	**Gaotai**	**54.51**	**291**	*e*P	**P**	**23 02 49.4**	**-1.1**
GTA				PP	PP	23 04 53.9	+1.0
GTA				PPP		23 06 04.6	
GTA				SCP	ScP	23 07 48.6	-0.2
GTA				S	**S**	**23 10 26.6**	**-0.3**
GTA				SS	SS	23 14 07.5	-2.1
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb4.2						
GTA				AMB	AMB		
	comp=Z,39nm,4.6s						
GTA				LR	LR		
	comp=N,76nm,14.5s,MS4.0						
GTA				LR	LR		
	comp=E,61nm,11.8s,MS4.0						
GTA				LR	LR		
	comp=Z,86nm,12.9s,MS4.0						
ARCES	**ARCESS Array B**	**58.00**	**349**	LR	LR	23 32 18.5	
	comp=Z,27nm,19.1s,MS3.4,baz=47,slow=41						
KURK	**Kurchatov**	**58.24**	**313**	*e*P	**P**	**23 03 15.7**	**-1.3**
	comp=Z,1.6nm,0.5s,mb4.3						
MKAR	**Makanchi Array**	**59.18**	**307**	P	**P**	**23 03 22.2**	**-1.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=56,slow=7.2,SNR=6.6						
CHKZ	**Chkalovo**	**59.64**	**319**	*e*P	**P**	**23 03 26.4**	**-0.4**
	comp=Z,2.2nm,0.7s,mb4.3						
BRVK	**Borovoye**	**60.23**	**319**	*e*P	**P**	**23 03 30.4**	**-0.4**
	comp=Z,1.7nm,0.8s,mb4.1						
NB2	**NORSAR Subarra**	**67.65**	**354**	P	**P**	**23 04 18.1**	**-1.4**
	comp=Z,0.6nm,0.6s,mb3.8,baz=10,slow=6.5						
NOA	**NORSAR Array B**	**67.65**	**354**	P	**P**	**23 04 17.1**	**-2.4**
	comp=Z,1.7nm,0.9s,mb4.1,baz=9.9,slow=6.4,SNR=4.7						
WRAB	**Tennant Creek**	**81.11**	**222**	P	**P**	**23 05 37.1**	**-0.7**
BRTR	**Keskin Array B**	**84.55**	**334**	P	**P**	**23 05 55.5**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.8,baz=270,slow=2.5,SNR=3.8						
BRTR				LR	LR	23 47 30.9	
	comp=Z,18nm,19.1s,MS3.5,baz=82,slow=39						

*MOS **15** 23:53:39.3±0.9, 2094S×17623W, h91km, mb6.1/33, MS5.1/15, Error ellipse: s-maj=7.8km s-min=5.8km az=56.4*
*SZGRF **15** 23:53:44.4, 2254S×17579W, h160km, Tonga Islands region*
*ISCJB **15** 23:53:45.7±0.1, 2132S±002×17625W±003, h159km, mb5.9/93, Error ellipse: s-maj=4.3km s-min=2.1km az=67.5*
*NEIC **15** 23:53:46.8±0.1, 21.19S×17625W, h154km, mb5.9/54, ME6.3, MW6.1, Error ellipse: s-maj=5.0km s-min=3.0km az=144.0, Moment Tensor Solution. s61 Moment tensor: Scale 10^18Nm; Mrr-0.12; Mθθ0.34; Mφφ-0.23; Mrθ-0.17; Mθφ1.14; Mφr-1.69; Best double couple: Mo2.10000×10^18 NP1:φs8.00000°, δ88.00000°, λ-125.00000°. NP2: φs275.00000°, δ35.00000°, λ-3.00000°. Principal axes: T 2.0500, Plg34.0000°, Azm127.0000°; N 0.0400, Plg35.0000°, Azm9.0000°; P -2.0900, Plg37.0000°, Azm248.0000°; Broadband fault plane solution: P waves. NP1:φs195.00000°, δ5.00000°, λ-90.00000°. NP2: φs15.00000°, δ85.00000°, λ-90.00000°. Principal axes: T Plg40.0000°, Azm105.0000°; N Plg0.0000°, Azm0.0000°; P Plg50.0000°, Azm285.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Neiafu and Nuku'alofa, Tonga.
*IDC **15** 23:53:47.5±0.3, 2108S×17628W, h156km±2km, mb5.7/27, mb1 5.7/27, mb1mx5.7/27, mbtmp6.1/27, MS5.0/14, Ms1 5.0/14, ms1mx4.7/26 Error ellipse: s-maj=8.8km s-min=7.3km az=157.0*
*BGS **15** 23:53:47.0±2.8, 21.19S×17625W, h158km, mb5.9(NEIC)*
*HRVD **15** 23:53:47.2±0.1, 21.18S×17570W, h162km, MW6.1/109, Centroid moment Tensor Solution. LP body waves: s109,c261; Mantle waves: s108,c387; Half duration: 2s8 Moment tensor: Scale 10^18Nm; Mrr0.06±.01; Mθθ0.21±.01; Mφφ-0.26±.01; Mrθ-0.28±.01; Mθφ0.63±.01; Mφr-1.74±.01; Best double couple: Mo1.88600×10^18 NP1:φs281.00000°, δ21.00000°, λ3.00000°. NP2:φs189.00000°, δ89.00000°, λ111.00000°. Principal axes: T 1.8820, Plg42.0000°, Azm119.0000°; N 0.0080, Plg21.0000°, Azm8.0000°; P -1.8900, Plg40.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*CRAAG **16** 23:53:46.7, 21.13S×17629W, Mb6.1*
ISC 15 23:53:47.4±0.1, **2136S**±002×**17621W**±003, **h161km, h161km**±.8km**:pP-P, n1487,** σ**0s94**/622, **mb5.9**/92, **285C-298D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.01**	**191**	P	**Pn**	**23 55 41.1**	**+0.2**
	267nm,0.3s,baz=90,slow=23,SNR=12						
RAO				S	**Sn**	**23 57 11.2**	**+0.8**
	1μm,0.3s,baz=241,slow=22,SNR=21						
RAO	**Raoul Island**	**8.01**	**191**	*e*Pn	**Pn**	**23 55 41.4**	**+0.5**
RAO				*e*Sn	**Sn**	**23 57 13.1**	**+2.8**
AFI	**Afiamalu**	**8.52**	**30**	P	**Pn**	**23 55 36.7**	**-11**
	230nm,0.3s,baz=105,slow=0.6,SNR=112						
AFI				S	Sn	23 57 00.2	-22
	376nm,0.3s,baz=57,slow=22,SNR=10						
FUNA	**Funafuti**	**13.50**	**340**	⇓*e*Pn	**Pn**	**23 56 51.6**	**-1.0**
	2μm,1.1s						
FUNA				*e*		23 57 30.4	
BKM	**Butte a Klehm**	**15.11**	**281**	⇓*i*P	**Pn**	**23 57 18.1**	**+5.4**
RAR	**Rarotonga**	**15.32**	**92**	P	**Pn**	**23 57 10.6**	**-4.7**
	17nm,0.3s,baz=254,slow=8.8,SNR=43						
RAR				S	**S**	**23 59 50.9**	**-15**
	36nm,0.3s,baz=111,slow=19,SNR=6.0						
DZM	**Mont Dzumac**	**16.14**	**264**	*e*P	**Pn**	**23 57 30.9**	**+5.6**
DZM	**Mont Dzumac**	**16.14**	**264**	P	**Pn**	**23 57 29.6**	**+4.3**
	43nm,0.3s,baz=82,slow=16,SNR=553						
DZM				S	**S**	**00 00 35.0**	**+10**
	0.6nm,0.3s,baz=142,slow=20,SNR=3.5						
DZM				ScP	ScP	00 05 32.3	+2.7
	0.3nm,0.3s,baz=55,slow=15,SNR=6.5						
DZM	**Mont Dzumac**	**16.14**	**264**	*e*P	**Pn**	**23 57 30.9**	**+5.6**
OUZ	**Omahuta**	**16.46**	**211**	PN	**Pn**	**23 57 32.2**	**+3.1**
WCZ	**Waipu Caves**	**16.72**	**208**	PN	**Pn**	**23 57 34.7**	**+2.5**
MXZ	**Matakaoa Point**	**16.84**	**195**	*e*PN	**Pn**	**23 57 30.9**	**-2.8**
MTAZ	**Motutapu**	**17.21**	**205**	PN	**Pn**	**23 57 40.0**	**+1.8**
PUZ	**Puketiti**	**17.33**	**195**	*e*PN	**Pn**	**23 57 37.4**	**-2.2**
OTAZ	**Otara**	**17.35**	**204**	PN	**Pn**	**23 57 40.7**	**+0.9**
MKAZ	**Moumakai**	**17.40**	**204**	PN	**Pn**	**23 57 42.0**	**+1.6**
WTAZ	**Waiatarua**	**17.47**	**205**	PN	**Pn**	**23 57 43.0**	**+1.8**
MWZ	**Matawai**	**17.77**	**196**	*e*PN	**Pn**	**23 57 40.9**	**-3.8**
EDRZ	**Edgecumbe**	**17.77**	**199**	*e*PN	**Pn**	**23 57 43.5**	**-1.4**
URZ	**Urewera**	**17.81**	**197**	P	**Pn**	**23 57 43.4**	**-1.8**
	177nm,0.3s,baz=7.6,slow=5.4,SNR=183						
URZ				S	**S**	**00 00 50.0**	**-10**
	38nm,0.3s,baz=113,slow=23,SNR=6.7						
URZ				ScP	ScP	00 05 35.5	+2.5
	0.8nm,0.3s,baz=314,slow=2.7,SNR=6.2						
URZ	**Urewera**	**17.81**	**197**	*e*PN	**Pn**	**23 57 40.5**	**-4.8**
KNZ	**Kokohu**	**18.38**	**195**	*e*PN	**Pn**	**23 57 51.3**	**-0.6**
HIZ	**Hauiti**	**18.75**	**202**	PN	**Pn**	**23 57 56.1**	**-0.2**
HIZ				SN	**S**	**00 01 24.3**	**+5.3**
RATZ	**Rangitukua**	**18.77**	**200**	PN	**Pn**	**23 57 55.3**	**-1.2**
BKZ	**Black Stump Fm**	**18.83**	**198**	*e*PN	**Pn**	**23 57 52.4**	**-4.8**
KATZ	**Kakaramea**	**18.89**	**200**	PN	**Pn**	**23 57 56.3**	**-1.7**
WTVZ	**West Tongariro**	**19.05**	**200**	*e*PN	**Pn**	**23 57 56.8**	**-3.0**
TWVZ	**Taurewa**	**19.06**	**200**	PN	**Pn**	**23 57 57.2**	**-2.7**
OTVZ	**Oturere**	**19.07**	**200**	PN	**Pn**	**23 57 56.2**	**-3.8**
NGZ	**Ngauruhoe**	**19.10**	**200**	*e*PN	**Pn**	**23 57 57.7**	**-2.7**
TUVZ	**Tukino**	**19.17**	**200**	PN	**Pn**	**23 57 57.3**	**-3.9**
DRZ	**Dome Shelter**	**19.20**	**200**	PN	**Pn**	**23 57 58.9**	**-2.7**
WNVZ	**Wahianoa**	**19.24**	**200**	*e*PN	**Pn**	**23 57 57.2**	**-4.8**
WNVZ				SN	**S**	**00 01 22.4**	**-6.2**
MOVZ	**Moawhango**	**19.27**	**199**	*e*PN	**Pn**	**23 57 57.3**	**-5.0**
PKVZ	**Pokaka**	**19.29**	**200**	PN	**Pn**	**23 57 57.8**	**-4.8**
VRZ	**Vera Road**	**19.34**	**202**	*e*PN	**P**	**23 57 59.8**	**-0.5**
PXZ	**Pawanui**	**19.53**	**196**	*e*PN	**P**	**23 58 01.3**	**-1.2**
RAEZ	**Rainy Point**	**19.61**	**202**	PN	**P**	**23 58 07.2**	**+3.9**
PKE	**Pukeiti**	**19.67**	**203**	*e*PN	**P**	**23 58 07.0**	**+3.0**
NEZ	**North Egmont**	**19.70**	**203**	PN	**P**	**23 58 07.4**	**+3.2**
NWEZ	**Newall Road**	**19.79**	**203**	PN	**P**	**23 58 08.4**	**+3.2**
TSZ	**Takapari Road**	**19.81**	**198**	*e*PN	**P**	**23 58 03.5**	**-1.9**
TSZ				SN	**S**	**00 01 34.6**	**-5.2**
NRZ	**Ngariki Road**	**19.82**	**203**	PN	**P**	**23 58 08.0**	**+2.5**
WAZ	**Wanganui**	**19.83**	**200**	*e*PN	**P**	**23 58 04.1**	**-1.6**
BFZ	**Birch Farm**	**20.30**	**197**	PN	**P**	**23 58 08.7**	**-2.0**
BFZ				SN	**S**	**00 01 40.9**	**-8.6**
MRZ	**Mangatainoka R**	**20.47**	**198**	*e*PN	**P**	**23 58 09.2**	**-3.4**
TIWZ	**Tintock**	**20.49**	**197**	PN	**P**	**23 58 12.4**	**-0.3**
TIWZ				SN	**S**	**00 01 46.6**	**-6.6**
KIW	**Kapiti Island**	**20.86**	**199**	*e*PN	**P**	**23 58 14.0**	**-2.6**
MTW	**Mount Morrison**	**20.95**	**198**	*e*PN	**P**	**23 58 15.9**	**-1.8**
CAW	**Cannon Point**	**21.04**	**199**	*e*PN	**P**	**23 58 16.3**	**-2.2**
DUWZ	**D'Urville Isla**	**21.12**	**201**	*e*PN	**P**	**23 58 16.8**	**-2.6**
TRWZ	**Traveller**	**21.13**	**197**	*e*PN	**P**	**23 58 18.6**	**-0.9**
PAWZ	**Paruwai Farm**	**21.18**	**198**	*e*PN	**P**	**23 58 18.9**	**-1.2**
MRW	**Makara Radio**	**21.26**	**199**	*e*PN	**P**	**23 58 18.6**	**-2.3**
MSWZ	**Moikau Station**	**21.27**	**198**	*e*PN	**P**	**23 58 18.9**	**-2.1**
MSWZ				SN	**S**	**00 02 03.2**	**-4.8**
SNZO	**South Karori**	**21.33**	**199**	*e*P	**P**	**23 58 20.6**	**-1.0**
	681nm,0.7s,mb6.1						
SNZO	**South Karori**	**21.33**	**199**	*e*PN	**P**	**23 58 19.8**	**-1.9**
TCW	**Tory Channel**	**21.38**	**200**	PN	**P**	**23 58 19.7**	**-2.4**
QRZ	**Quartz Range**	**21.64**	**204**	PN	**P**	**23 58 23.7**	**-1.3**
NNZ	**Nelson**	**21.68**	**202**	PN	**P**	**23 58 23.2**	**-2.1**
NNZ				SN	**S**	**00 02 11.9**	**-2.9**
NNZ				ScP	ScP	00 05 42.2	+0.3
TUWZ	**Tuamarina**	**21.68**	**200**	*e*PN	**P**	**23 58 22.3**	**-3.0**
KHZ	**Kahutara**	**22.70**	**200**	PN	**P**	**23 58 33.6**	**-1.7**
DSZ	**Denniston Nort**	**22.71**	**204**	PN	**P**	**23 58 34.4**	**-1.1**
LTZ	**Lake Taylor**	**23.45**	**202**	PN	**P**	**23 58 40.7**	**-1.5**
MQZ	**McQueen's Vall**	**24.14**	**200**	PN	**P**	**23 58 49.0**	**+0.5**
MQZ				SN	**S**	**00 02 57.7**	**+3.0**
WVZ	**Waitaha Valley**	**24.25**	**204**	PN	**P**	**23 58 50.4**	**+0.9**
WVZ				ScP	ScP	00 05 49.6	+0.9
RPZ	**Rata Peaks**	**24.69**	**203**	P	**P**	**23 58 55.1**	**+1.6**
	1μm,0.5s,mb6.6,baz=16,slow=2.0,SNR=193						
RPZ				S	**S**	**00 03 09.0**	**+5.6**
	35nm,0.7s,baz=287,slow=22,SNR=5.6						
RPZ				ScP	ScP	00 05 52.1	+2.1
	113nm,0.9s,baz=28,slow=0.8,SNR=7.1						
RPZ				LR	LR	00 08 36.8	
	comp=Z,1μm,20.0s,baz=208,slow=36						
RPZ				ScS	ScS	00 09 40.3	+2.2
	30nm,1.1s,baz=107,slow=23,SNR=10.0						
RPZ	**Rata Peaks**	**24.69**	**203**	PN	**P**	**23 58 54.4**	**+0.9**
TBI	**Tubuai**	**24.80**	**100**	⇑*i*P	**P**	**23 58 53.8**	**-0.7**
	6μm,1.2s,mb7.0						
FOZ	**Fox Glacier**	**25.07**	**205**	PN	**P**	**23 58 56.8**	**-0.1**
FOZ				SN	**S**	**00 03 05.9**	**-3.5**
PAE	**Paea**	**25.35**	**86**	⇑*i*P	**P**	**23 58 57.9**	**-1.6**
	3μm,1.1s,mb6.7						
PPT	**Papeete**	**25.38**	**86**	⇑*i*P	**P**	**23 58 58.3**	**-1.4**
	2μm,1.2s,mb6.6						
PPT	**Papeete**	**25.38**	**86**	P	**P**	**23 58 58.3**	**-1.4**
	2μm,1.1s,mb6.5,baz=233,slow=3.7,SNR=74						
PPT				ScP	ScP	00 05 53.1	+1.2
	73nm,1.0s,baz=202,slow=17,SNR=3.7						
PPT				PKKP		00 25 16.1	
	169nm,0.4s,baz=100,slow=8.8,SNR=4.1						
LBZ	**Lake Benmore**	**25.59**	**203**	PN	**P**	**23 59 01.4**	**-0.2**
TVO	**Taravao**	**25.63**	**87**	⇑*i*P	**P**	**23 59 00.5**	**-1.5**
	4μm,1.3s,mb6.8						
HNR	**Honiara**	**25.82**	**294**	P	**P**	**23 59 03.0**	**-0.7**
	690nm,0.8s,mb6.3,baz=253,slow=3.4,SNR=21						
HNR				ScP	ScP	00 05 54.4	+1.2
	40nm,0.3s,baz=283,slow=10.0,SNR=5.0						
HNR				LR	LR	00 06 21.0	
	comp=Z,3μm,19.5s,baz=177,slow=29						
JCZ	**Jackson Bay**	**25.86**	**205**	PN	**P**	**23 59 04.7**	**+0.6**
JCZ				ScP	ScP	00 05 56.3	+3.0
ODZ	**Otahua Downs**	**25.99**	**202**	PN	**P**	**23 59 06.3**	**+1.1**
EAZ	**Earnscleugh**	**26.63**	**203**	PN	**P**	**23 59 12.3**	**+1.4**
TUZ	**Tuapeka**	**27.14**	**202**	PN	**P**	**23 59 18.2**	**+2.7**
PMOR	**Pomariorio Ree**	**27.60**	**82**	⇑*i*P	**P**	**23 59 17.7**	**-1.9**
	1μm,1.4s,mb6.4						

WHZ **Wether Hill Ro** 27.70 204 PN P 23 59 21.3 +0.8
VAH **Vaihoa** 27.78 82⇑*iP* P 23 59 19.0 -2.2
634nm,1.3s,mb6.2
SYZ **Scrubby Hill** 27.81 202 PN P 23 59 23.3 +1.8
ARMA **Armidale** 30.23 246⇓*iP* P 23 59 45.2 +2.3
ARMA *eS* S 00 04 34.0 +3.6
ARMA *es*S sS 00 05 35.0 +5.2
ARMA *e*SCP ScP 00 06 11.9 +5.1
ARMA **Armidale** 30.23 246⇓*iP* P 23 59 45.2 +2.3
ARMA *eS* S 00 04 34.0 +3.6
ARMA *es*S sS 00 05 35.0 +5.2
ARMA *e*SCP ScP 00 06 11.9 +5.1
RIV **Riverview** 31.34 240 *eP* P 23 59 55.6 +2.9
CNB **Canberra Magne** 33.16 238 *eP* P 00 00 10.3 +1.8
CNB *e*SCP ScP 00 06 21.8 +5.1
CTA **Charters Tower** 35.08 265⇓*iP* P 00 00 26.1 +1.0
CTA *e*PCP PcP 00 02 55.6 +2.5
CTA *eS* S 00 05 43.6 -2.0
CTA *e*SCP ScP 00 06 28.9 +5.3
CTA *es*S sS 00 06 49.0 +3.4
CTA **Charters Tower** 35.08 265 S S 00 05 45.5 -0.1
6.9nm,0.8s,baz=31,slow=19,SNR=3.4
CTA ScP ScP 00 06 26.9 +3.3
149nm,1.0s,baz=92,slow=2.4,SNR=29
CTA LR LR 00 11 33.8
comp=Z,5μm,21.3s,baz=96,slow=30
CTA **Charters Tower** 35.08 265⇓*iP* P 00 00 26.1 +1.0
CTA *e* 00 02 55.6
CTA *eS* S 00 05 43.6 -2.0
CTAO **Charters Tower** 35.08 265 P P 00 00 26.6 +1.5
CTAO pP pP 00 01 03.6 +4.4
CTAO PnPn 00 01 58.4
CTAO PcP PcP 00 02 55.4 +2.2
CTAO ScP ScP 00 06 28.2 +4.6
CTAO ScS ScS 00 10 31.6 +3.8
CTAO **Charters Tower** 35.08 265⇓*iP* P 00 00 26.4 +1.3
CTAO *i* *PP pP 00 01 03.2 +4.0
CTAO pmax pmax
comp=Z,452nm,0.7s,mb6.2
CTAO **Charters Tower** 35.08 265⇓*iP* P 00 00 26.4 +1.3
comp=Z,452nm,0.7s,mb6.2
CTAO *i* pP pP 00 01 03.2 +3.9
CTAO *es*P sP 00 01 19.0 +1.5
CTAO *e*PP PP 00 01 57.3 +9.3
CTAO *e*ScP ScP 00 06 27.6 +4.0
TOO **Toolangi** 36.77 235⇓*iP* P 00 00 40.8 +1.4
TOO *e*SCP ScP 00 06 33.5 +3.7
PMG **Port Moresby** 37.17 283 P P 00 00 42.7 0.0
comp=Z,2μm,1.0s,mb6.6,baz=91,slow=6.0,SNR=148
PMG pP pP 00 01 16.9 -0.3
comp=Z,150nm,0.9s,baz=210,slow=6.5,SNR=1.0
PMG S S 00 06 16.0 -1.4
comp=Z,24nm,1.1s,baz=355,slow=23,SNR=6.5
PMG ScP ScP 00 06 34.6 +3.3
comp=Z,79nm,1.1s,baz=44,slow=2.4,SNR=11
PMG LR LR 00 13 50.2
comp=Z,7μm,19.6s,baz=116,slow=32
PMG **Port Moresby** 37.17 283 P P 00 00 42.7 -0.1
PMG *PP pP 00 01 16.9 -0.3
PMG S S 00 06 16.0 -1.3
PMG pmax pmax
comp=Z,150nm,0.9s
PMG smax
comp=N,24nm,1.1s
PMG pmax pmax
comp=N,79nm,1.1s
PMG **Port Moresby** 37.17 283⇓*iP* P 00 00 43.4 +0.6
comp=N,2μm,0.9s,mb6.7
PMG *es*P pP 00 01 17.9 +0.7
PMG *es*P sP 00 01 36.5 +1.0
PMG *e*PP PP 00 02 15.6 +4.8
PMG *eS* S 00 06 18.1 +0.7
PMG *e*ScP ScP 00 06 33.8 +2.6
TAU **Tasmania Unive** 37.22 226 *eP* P 00 00 44.8 +1.6
TAU pmax pmax
comp=Z,210nm,0.6s,mb5.9
TAU **Tasmania Unive** 37.22 226⇓*iP* P 00 00 45.1 +1.9
comp=Z,211nm,0.6s,mb6.0
RKT **Rikitea** 38.12 101⇑*iP* P 00 00 50.2 -0.6
comp=Z,700nm,1.3s,mb6.1
RKT *ep*P pP 00 01 23.7 -1.6
comp=Z,1μm,1.9s
STKA **Stephens Creek** 38.94 245 *eP* P 00 00 58.4 +0.8
STKA *e*PCP PcP 00 03 07.8 +2.9
STKA *e*SCP ScP 00 06 42.7 +4.7
STKA **Stephens Creek** 38.94 245 P P 00 00 58.9 +1.3
comp=Z,247nm,0.5s,mb6.1,baz=92,slow=10.0,SNR=396
STKA PcP PcP 00 03 07.7 +2.8
comp=Z,71nm,0.7s,baz=84,slow=5.8,SNR=4.1
STKA ScP ScP 00 06 40.7 +2.7
comp=Z,32nm,0.9s,baz=358,slow=1.0,SNR=5.8
ADE **Adelaide** 41.66 241 *eP* P 00 01 20.9 +0.9
PTCN **Pitcairn Islan** 42.38 104 *eP* P 00 01 32.3 +6.5
comp=Z,2μm,1.5s,mb6.5
PTCN *ep*P pP 00 02 08.5 +7.4
WAKE **Wake Island** 43.73 336 *eP* P 00 01 35.0 -1.6
KKH **Kailua Kona** 45.29 27 *eP* P 00 01 52.3 +3.3
KKH **Kailua Kona** 45.29 27 *eP* P 00 01 48.4 -0.6
AS31 **Alice Springs** 45.96 257⇓*iP* P 00 01 54.9 +0.6
AS31 *ep*P pP 00 02 32.7 +2.7
AS31 sP sP 00 02 47.4 -0.5
AS31 *e*PcP PcP 00 03 29.7 +1.3
AS31 *e*ScP ScP 00 07 10.0 +3.8
AS31 *eS* S 00 08 34.0 +7.3
ASAR **Alice Springs** 45.96 257 P P 00 01 55.0 +0.7
comp=Z,559nm,0.8s,mb6.2,baz=90,slow=8.1,SNR=970
ASAR pP pP 00 02 31.2 +1.3
comp=Z,44nm,0.9s,baz=97,slow=7.7,SNR=0.9
ASAR PcP PcP 00 03 29.6 +1.3
comp=Z,81nm,0.6s,baz=104,slow=3.8,SNR=11
ASAR ScP ScP 00 07 08.9 +2.7
comp=Z,16nm,1.0s,baz=101,slow=3.9,SNR=5.0
ASAR S S 00 08 24.6 -2.2
comp=Z,17nm,0.8s,baz=96,slow=16,SNR=7.7
ASAR PKiKP PKiKP 00 10 24.2 +0.2
comp=Z,1.5nm,0.5s,baz=123,slow=1.8,SNR=4.3
ASAR ScS ScS 00 11 34.9 +1.9
comp=Z,11nm,1.1s,baz=98,slow=7.0,SNR=8.4
ASAR LR LR 00 18 54.5
comp=Z,3μm,18.4s,baz=125,slow=33
ASAR P4KPbc 00 39 44.0
comp=Z,0.4nm,0.4s,baz=105,slow=4.5,SNR=8.0
ASAR **Alice Springs** 45.96 257 P P 00 01 55.0 +0.7
ASAR *PP pP 00 02 31.3 +1.3
ASAR 00 03 29.7
ASAR S S 00 08 24.6 -2.2
ASAR **Alice Springs** 45.96 257 P P 00 01 55.0 +0.7
ASAR pP pP 00 02 31.2 +1.3
ASAR PcP PcP 00 03 29.6 +1.3
ASAR ScP ScP 00 07 08.9 +2.7
ASAR S S 00 08 24.6 -2.2
ASPA **Alice Springs** 45.97 257 *eP* P 00 01 54.9 +0.6
KIP **Kipapa** 46.08 24 *eP* P 00 01 54.2 -1.0
KIP pmax pmax
comp=Z,330nm,1.1s,mb5.9
KIP **Kipapa** 46.08 24 *eP* P 00 01 54.2 -1.0
comp=Z,200nm,0.9s,mb5.8
KIP *ep*P pP 00 02 30.3 -0.6
WB2 **Warramunga Arr** 46.14 262 *eP* P 00 01 55.6 0.0
WB2 *e*SCP ScP 00 07 11.7 +4.7
WB2 *eS* S 00 08 26.7 -2.6
WRAB **Tennant Creek** 46.14 262⇓*iP* P 00 01 55.5 -0.2
WRAB *e* 00 03 31.1
WRAB *e* 00 03 50.3
WRAB pmax pmax
comp=Z,829nm,0.9s,mb6.4
WRAB **Tennant Creek** 46.14 262⇓*iP* P 00 01 55.5 -0.1
comp=Z,566nm,0.9s,mb6.2
WRAB *ep*P pP 00 02 33.7 +2.3
WRAB *es*P sP 00 02 48.6 -0.7
WRAB *e*PcP PcP 00 03 31.1 +2.1
WRAB *e*PP PP 00 03 50.2 +3.7
WRAB *e*ScP ScP 00 07 09.4 +2.4
WRAB *eS* S 00 08 23.6 -5.7
WRA **Warramunga Arr** 46.15 262 P P 00 01 55.4 -0.3
comp=Z,336nm,0.7s,mb6.1,baz=97,slow=5.1,SNR=1075
WRA pP pP 00 02 31.7 +0.3
comp=Z,29nm,0.9s,baz=101,slow=8.2,SNR=0.8
WRA PcP PcP 00 03 30.2 +1.2
comp=Z,71nm,0.9s,baz=96,slow=4.1,SNR=5.8
WRA ScP ScP 00 07 09.5 +2.5
comp=Z,49nm,0.9s,baz=95,slow=4.0,SNR=20
WRA S S 00 08 24.2 -5.3
comp=Z,5.7nm,1.1s,baz=94,slow=11,SNR=3.0
WRA PKiKP PKiKP 00 10 24.5 +0.2
comp=Z,2.1nm,0.8s,baz=58,slow=0.6,SNR=5.4
WRA ScS ScS 00 11 30.5 -3.8
comp=Z,7.1nm,1.1s,baz=126,slow=6.7,SNR=5.5
WRA P4KPbc 00 39 43.1
comp=Z,0.7nm,0.9s,baz=104,slow=3.6,SNR=4.9
WRA **Warramunga Arr** 46.15 262 P P 00 01 55.4 -0.3
WRA *PP pP 00 02 31.7 +0.3
WRA 00 03 30.2
WRA **Warramunga Arr** 46.15 262 P P 00 01 55.4 -0.3
WRA pP pP 00 02 31.7 +0.3
WRA PcP PcP 00 03 30.2 +1.2
WRA ScP ScP 00 07 09.5 +2.5
WRA S S 00 08 24.2 -5.3
GUMO **Guam** 51.64 309 P P 00 02 37.8 +0.3
comp=Z,1μm,1.0s,mb6.6,baz=174,slow=6.1,SNR=53
GUMO ScP ScP 00 07 31.7 +1.3
comp=Z,135nm,0.9s,baz=141,slow=0.9,SNR=10
DRV **Dumont d'Urvil** 53.12 200 P P 00 02 42.0 -6.4
DRV S S 00 10 00.0 -6.3
FITZ **Fitzroy Crossi** 54.58 263⇓*iP* P 00 02 59.5 +0.5
FITZ *eS* S 00 10 26.0 +0.1
FITZ **Fitzroy Crossi** 54.58 263 S S 00 10 24.1 -1.8
comp=Z,3.1nm,0.9s,baz=268,slow=20,SNR=7.8
SBA **Scott Base** 57.14 184⇑*iP* P 00 03 21.6 +4.4
SBA pmax pmax
comp=Z,152nm,0.9s,mb5.8
SBA **Scott Base** 57.14 184⇑*iP* P 00 03 21.6 +4.3
comp=Z,152nm,0.9s,mb5.8
VNDA **Vanda** 57.22 186 P P 00 03 20.7 +3.0
comp=Z,23nm,0.8s,mb5.1,baz=357,slow=8.6,SNR=168
VNDA **Vanda** 57.22 186⇑*iP* P 00 03 20.5 +2.7
VNDA *e**PP pP 00 03 51.3 -3.6
VNDA *e* 00 04 11.1
VNDA *eS* S 00 11 11.3 +10
VNDA **Vanda** 57.22 186⇑*iP* P 00 03 20.5 +2.8
VNDA *ep*P pP 00 03 51.3 -3.6
VNDA *e*PcP PcP 00 04 11.1 +0.7
VNDA *e*ScP ScP 00 07 48.2 -6.6
VNDA *eS* S 00 11 11.3 +10
KLBR **Kellerberrin** 59.22 245⇓*iP* P 00 03 31.7 +0.1
MBWA **Marble Bar** 59.30 257⇓*iP* P 00 03 32.1 -0.1
comp=Z,258nm,0.6s,mb6.2
MBWA *ep*P pP 00 04 08.8 -0.9
MBWA *e*PcP PcP 00 04 19.4 +0.7
MBWA *es*P sP 00 04 28.5 +1.3
MBWA *e*PP PP 00 05 38.6 -6.4
NWAO **Narrogin (SRO)** 59.49 244 *eP* P 00 03 33.9 +0.4
NWAO pmax pmax
comp=Z,140nm,1.0s
NWAO **Narrogin (SRO)** 59.49 244 *eP* P 00 03 33.9 +0.3
comp=Z,143nm,0.9s,mb5.8
MUN **Mundaring** 60.47 245 *eP* P 00 03 40.7 +0.5
RPN **Rapa Nui** 60.62 110 P P 00 03 42.7 +1.5
comp=Z,207nm,0.9s,mb6.0,baz=281,slow=3.5,SNR=13
RPN PcP PcP 00 04 26.9 +3.0
comp=Z,171nm,1.0s,baz=262,slow=4.2,SNR=4.6
RPN LR LR 00 23 18.4
comp=Z,1μm,21.8s,baz=257,slow=29
RPN **Rapa Nui** 60.62 110 *eP* P 00 03 42.9 +1.6
RPN *e*PcP PcP 00 04 26.7 +2.8
RPN *e*PP PP 00 06 04.2 +7.5
CBIJ **Chichi jima** 62.79 318 LR LR 00 26 42.3
comp=Z,1μm,18.7s,baz=139,slow=32
DAV **Davao City (W)** 63.70 290 *eP* P 00 04 03.5 +1.7
comp=Z,274nm,0.4s,mb6.4
CASY **Casey** 63.91 206 *eP* P 00 04 04.9 +1.8
CASY *eS* S 00 12 29.9 +4.0
CASY *es*S sS 00 13 32.8 +1.2
BUKP **Musuan** 64.53 290 *eP* P 00 04 08.6 +1.4
BUTP **Butuan** 64.56 292 *eP* P 00 04 08.4 +1.1
SCPH **Surigao** 65.06 292⇑*eP* P 00 04 11.6 +1.0
comp=Z,170μm,84.0s
CGP **Cagayan de Oro** 65.12 291⇓*iP* P 00 04 05.2 -5.8
comp=Z,1234μm,5.0s
MSLP **Maasin** 65.78 292 *eP* P 00 04 16.2 +1.1
MSLP *eS* pP 00 04 54.8 +1.5
PAGZ **Pagadian** 65.99 289 *eP* P 00 04 18.2 +1.7
TBP **Tagbilaran** 66.43 291 *eP* P 00 04 19.3 0.0
OCLP **Ormoc** 66.43 293 *eP* P 00 04 20.1 +0.8
GUIM **Jordan** 67.97 292 *eP* P 00 04 28.1 -0.9
QSPA **South Pole Qui** 68.72 180⇑*iP* P 00 04 35.9 +2.2
comp=Z,191nm,0.9s,mb5.8
PALP **Palanan** 71.24 298 *eP* P 00 04 57.8 +8.8
KKM **Kota Kinabalu** 71.60 284 P P 00 04 52.3 +1.2
MJAR **Matsushiro Arr** 71.89 323 P P 00 04 51.5 -1.4
comp=Z,126nm,0.9s,mb5.7,baz=158,slow=5.6,SNR=258
MJAR LR LR 00 29 47.2
comp=Z,609nm,20.6s,baz=160,slow=30
MAJO **Matsushiro** 71.90 323⇓*iP* P 00 04 51.6 -1.4
MAJO *e* 00 05 09.9
MAJO **Matsushiro** 71.90 323⇓*iP* P 00 04 51.6 -1.4
MAJO *e*PcP PcP 00 05 09.9 -0.9
MAJO *ep*P pP 00 05 30.5 -1.2
MAJO *es*P sP 00 05 47.6 -1.3
MAT **Matsushiro** 71.90 323 P P 00 04 50.9 -2.1
MAT S S 00 13 44.0 -17
MAT **Matsushiro** 71.90 323 *eP* P 00 04 51.0 -2.0
MAT pmax pmax
comp=Z,572nm,1.5s,mb6.1
MAT **Matsushiro** 71.90 323 *eP* P 00 04 51.0 -2.0
comp=Z,572nm,1.5s,mb6.1
MAT *eS* S 00 13 45.0 -16
CVP **Callao Caves** 72.05 298⇑*eP* P 00 04 54.4 +0.5
comp=Z,20μm,1.0s
APYP **Conner** 72.61 298 *eP* P 00 04 57.8 +0.6
BOLP **Bolinao** 73.00 296 *eP* P 00 05 00.1 +0.7
YUK **Yuzh-Kuril'sk** 73.77 332⇓*iP* P 00 05 02.7 -1.3
YUK *eS* S 00 14 19.0 -2.9
YUK pmax pmax
comp=Z,2μm,2.8s,mb6.5
YUK pmax pmax
comp=N,2μm,4.0s
YUK pmax pmax
comp=E,2μm,2.0s
YUK smax
comp=E,2μm,9.0s
YUK smax
comp=N,3μm,10.0s
SMY **Shemya** 74.25 354 *eP* P 00 05 05.2 -1.6
ASAJ **Asahikawa** 75.28 331 P P 00 05 11.9 -0.8
comp=N,156nm,0.9s,mb5.7,baz=209,slow=8.5,SNR=74
ASAJ **Asahikawa** 75.28 331 P P 00 05 11.9 -0.8
ASAJ pmax pmax
comp=Z,156nm,0.9s
AKUT **Akutan** 75.71 6⇓*eP* P 00 05 12.9 -2.3
comp=Z,240nm,1.0s,mb5.8
AKUT *ep*P pP 00 05 53.4 -0.9
AKUT *es*P sP 00 06 08.3 -3.1
SKR **Severo-Kuril's** 75.77 342 *i* P P 00 05 10.0 -5.5
SKR *eS* S 00 14 37.0 -7.1
SKR pmax pmax
comp=Z,2μm,4.0s
YHNB **Yeheng** 75.97 304⇓*iP* P 00 05 15.7 -0.9
YHNB *e*PcP PcP 00 05 27.6 -0.7
YHNB *ep*P pP 00 05 55.1 -0.7
YHNB *es*P sP 00 06 14.5 +1.6
YHNB *e*PP PP 00 08 08.8 -0.4
TATO **Taipei** 76.05 304⇓*eP* P 00 05 16.0 -1.0
comp=Z,461nm,1.2s,mb6.0
TATO *ep*P pP 00 05 56.6 +0.3
TATO *es*P sP 00 06 12.2 -1.1
TATO PP PP 00 08 09.9 +0.1
SNCC **San Nicolas Is** 76.61 46 S S 00 14 56.9 +3.6
baz=77
BSC **Santa Cruz Isl** 76.99 45⇑P P 00 05 22.5 +0.2
baz=77,SNR=27
BSC ⇓S S 00 15 00.4 +3.0
baz=77
SCI **San Clemente I** 77.11 47⇓P P 00 05 23.0 0.0
baz=77,SNR=18
SCI ⇑S S 00 15 01.6 +2.8
baz=77
FARB **Farallon Islan** 77.15 41⇓P P 00 05 23.0 -0.2
baz=77,SNR=17
FARB ⇑S S 00 15 01.2 +2.1
baz=77
V04C **Ramage Ranch,** 77.18 43⇓P P 00 05 23.7 +0.3
baz=77,SNR=84
V04C ⇑S S 00 15 01.7 +2.3
baz=77
V03C **Hunter Liggett** 77.19 43 P P 00 05 24.0 +0.5
baz=77,SNR=62
V03C ⇓S S 00 15 03.0 +3.5
baz=77
SBC **Santa Barbara** 77.20 45⇓P P 00 05 23.7 +0.2
baz=77,SNR=10
SBC ⇑S S 00 15 03.6 +3.9
baz=77
HAST **UC Hastings Re** 77.21 42 P P 00 05 24.1 +0.5
baz=77,SNR=164
HAST ⇓S S 00 15 02.7 +2.9
baz=77
PET **Petropavlovsk** 77.22 345*de*P P 00 05 21.6 -2.0
PET *i* S S 00 14 54.6 -5.3
PET *e* 00 15 18.3
PET *e*PS 00 15 56.6
PET *e**SS sS 00 16 08.1 +0.2
PET *es*S sS 00 19 59.8 -1.3
PET pmax pmax
comp=Z,1μm,2.2s,mb6.1
PET pmax pmax
comp=Z,245nm,1.3s,mb5.7
PET pmax pmax
comp=Z,600nm,18.0s
PET pmax pmax
comp=Z,97nm,1.4s,mb5.2
PET pmax pmax
comp=Z,200nm,3.0s
PET pmax pmax
comp=Z,900nm,2.6s,mb5.9
PET smax
comp=E,2μm,10.2s
PET smax
comp=N,1μm,8.7s
PET smax
comp=E,2μm,19.4s
PET smax
comp=N,1μm,21.2s
PET MLR MLR
comp=Z,500nm,14.0s
PET MLR MLR
comp=Z,600nm,17.0s
PET **Petropavlovsk** 77.22 345 *ePr* P 00 05 21.6 -2.0
comp=Z,245nm,1.3s,mb5.7
PET *i* S S 00 14 54.6 -5.3
PET *e* 00 15 18.3
PET *e*PS 00 15 56.6
PET *es*S sS 00 16 08.1 +0.2
PET *e*SS SS 00 19 59.8 -1.3
PET LR LR
comp=Z,500nm,14.0s
BNLO **Ben Lomond (Sa** 77.29 42⇓P P 00 05 24.0 0.0
baz=77,SNR=32
BNLO ⇓S S 00 15 03.4 +2.7
baz=77
PKM **Peak Mountain** 77.41 45 P P 00 05 25.2 +0.6
baz=78,SNR=112
PKM ⇓S S 00 15 04.8 +2.9
baz=78
YSS **Yuzh-Sakhalins** 77.41 333*k* *i*P P 00 05 23.8 -0.9
YSS *e* 00 05 47.0
YSS *e* 00 08 21.0
YSS *e*PPP 00 10 06.0
YSS *i* S S 00 15 00.0 -2.0
YSS *e* 00 15 23.0
YSS *e**SS sS 00 16 06.0 -4.1
YSS *i* PS 00 16 16.0
YSS pmax pmax
comp=Z,250nm,1.0s,mb5.8
YSS pmax pmax
comp=N,100nm,1.2s
YSS pmax pmax
comp=E,150nm,1.2s
YSS pmax pmax
comp=Z,1μm,5.0s
YSS smax
comp=N,2μm,10.0s
YSS smax
comp=E,1μm,10.0s
YSS MLR MLR
comp=Z,500nm,17.0s
YSS MLR MLR
comp=N,400nm,16.0s
YSS **Yuzh-Sakhalins** 77.41 333 *i* Pdr P 00 05 23.8 -0.9
comp=N,250nm,1.0s,mb5.8
YSS *e* 00 05 47.0
YSS *e* 00 08 21.0
YSS *e*PPP 00 10 06.0
YSS *i* S S 00 15 00.0 -2.0
YSS *e* 00 15 23.0
YSS *es*S sS 00 16 06.0 -4.1
YSS *i* PS 00 16 16.0
YSS LR LR
comp=Z,500nm,17.0s
JRSC **Jasper Ridge** 77.43 41⇓P P 00 05 24.9 +0.1
baz=78,SNR=19
JRSC ⇓S S 00 15 04.1 +2.0
baz=78
SAC **San Andreas** 77.43 41 *eP* P 00 05 25.4 +0.6
SAC *e*PcP PcP 00 05 34.8 +0.3
SAC *ep*P pP 00 06 06.4 +2.3
SAC *es*P sP 00 06 19.9 -1.3
BLG **Laguna Peak** 77.43 46⇑P P 00 05 24.5 -0.3
baz=78,SNR=9.8
BLG ⇓S S 00 15 04.2 +2.0
baz=78
CIS **Catalina Islan** 77.46 46⇑P P 00 05 24.6 -0.3
baz=78,SNR=16
CIS ⇓S S 00 15 04.7 +2.2
baz=78
MCCM **Marconi Confer** 77.51 40⇑*iP* P 00 05 24.9 -0.3
comp=Z,116nm,1.0s,mb5.5
MCCM *e*PcP PcP 00 05 33.2 -1.7
MCCM *ep*P pP 00 06 03.7 -0.9
MCCM *es*P sP 00 06 22.0 +0.4
MCCM *e*PP PP 00 08 20.9 -1.2
MCCM **Marconi Confer** 77.51 40⇓P P 00 05 25.1 -0.1
baz=78,SNR=7.7
MCCM ⇑S S 00 15 05.1 +2.1
baz=78
SAO **San Andreas Ge** 77.51 42⇑*iP* P 00 05 25.1 -0.2
SAO *e* 00 05 33.2
SAO pmax pmax
comp=Z,365nm,0.9s,mb6.0
SAO **San Andreas Ge** 77.51 42⇑*iP* P 00 05 25.1 -0.2
comp=Z,369nm,0.9s,mb6.0
SAO *e*PcP PcP 00 05 33.2 -1.7
SAO *ep*P pP 00 06 04.0 -0.6
SAO *es*P sP 00 06 21.9 +0.3
SMMC **Simmler** 77.54 44⇓P P 00 05 26.0 +0.5
baz=78,SNR=62
SMMC ⇑S S 00 15 06.2 +2.9
baz=78
SDPT **Sand Point** 77.57 9⇓*iP* P 00 05 24.0 -1.6
SDPT *ep*P pP 00 06 03.7 -1.2
SDPT *es*P sP 00 06 18.1 -3.8
SDPT PP PP 00 08 22.6 0.0
LRV **Little Rabbit** 77.57 43⇓*iP* P 00 05 26.5 +0.9
LRV *e*PcP PcP 00 05 34.7 -0.5
LRV *ep*P pP 00 06 06.5 +1.6
LRV *es*P sP 00 06 21.0 -1.0
PKD **Parkfield** 77.58 43 P P 00 05 25.7 +0.1
baz=78,SNR=110
PKD ⇑S S 00 15 07.1 +3.3
baz=78
PTRM **Twissleman Ran** 77.61 44⇓*iP* P 00 05 26.9 +1.0
U04C **Hernandez Rese** 77.68 43⇓P P 00 05 26.9 +0.6
baz=78,SNR=215
U04C ⇓S S 00 15 09.3 +4.4
baz=78
FMP **Fort Macarthur** 77.72 46⇓P P 00 05 26.4 +0.1
baz=78
FMP ⇓S S 00 15 07.4 +2.2
baz=78
PACP **Pacheco Peak** 77.77 42 P P 00 05 27.2 +0.6
baz=78,SNR=97
PACP ⇑S S 00 15 08.6 +2.8
baz=78
WENL **Wente Brothers** 77.86 41⇓P P 00 05 27.5 +0.3
baz=78,SNR=12
WENL ⇓S S 00 15 09.9 +3.1
baz=78
CVS **Carmenet Viney** 77.89 40⇑P P 00 05 27.1 -0.3
baz=78,SNR=28

CVS ⇓S S 00 15 08.7 +1.6
baz=78
NSHM Saint Helena R 77.91 40⇑*i*P P 00 05 27.3 -0.1
NSHM *e*PcP PcP 00 05 37.2 +0.5
NSHM *ep*P pP 00 06 06.6 -0.2
NSHM *es*P sP 00 06 23.7 -0.2
HOPS Hopland 77.94 40⇑*i*P P 00 05 27.4 -0.2
comp=Z,364nm,1.1s,mb5.9
HOPS *e*PcP PcP 00 05 36.8 0.0
HOPS *ep*P pP 00 06 06.5 -0.4
HOPS *es*P sP 00 06 24.2 +0.2
HOPS Hopland 77.94 40 ⇑P P 00 05 27.7 +0.1
baz=78,SNR=24
HOPS ⇓S S 00 15 10.3 +2.7
baz=78
V05C Boulder Hill, 77.94 44 ⇓P P 00 05 28.4 +0.7
baz=78,SNR=16
V05C ⇓S S 00 15 10.6 +2.9
baz=78
OSI Osito Adit 77.96 45 ⇑P P 00 05 27.8 +0.1
baz=78,SNR=12
OSI ⇑S S 00 15 11.0 +3.2
baz=78
BDM Black Diamond 78.00 41 ⇓P P 00 05 28.2 +0.2
baz=78,SNR=8.2
BDM ⇑S S 00 15 10.5 +2.2
baz=78
DECC Green Verdugo 78.01 46 ⇓P P 00 05 27.5 -0.5
baz=78,SNR=8.4
DECC ⇑S S 00 15 10.9 +2.6
baz=78
109C Camp Elliot, M 78.05 48 ⇓P P 00 05 27.8 -0.4
baz=78,SNR=9.3
109C ⇓S S 00 15 11.5 +2.7
baz=78
S04C Ingram Canyon, 78.05 42 ⇓P P 00 05 28.3 +0.1
baz=78,SNR=134
S04C ⇓S S 00 15 11.8 +3.0
baz=78
T05C Eagle Field, D 78.08 42 ⇑P P 00 05 28.9 +0.5
baz=78,SNR=11
T05C ⇑S S 00 15 14.1 +4.9
baz=78
U05C Westside ANR, 78.09 43 ⇑P P 00 05 28.5 0.0
baz=78
U05C ⇑S S 00 15 14.6 +5.4
baz=78
P01C Double 8 Ranch 78.09 39 ⇑P P 00 05 28.3 -0.2
baz=78,SNR=18
P01C ⇓S S 00 15 11.3 +2.0
baz=78
MWC Mount Wilson 78.17 46 *e*P P 00 05 28.9 0.0
ARVC Arvin 78.20 45 ⇓P P 00 05 29.1 0.0
baz=78,SNR=46
ARVC ⇑S S 00 15 13.4 +3.1
baz=78
BAR Barrett 78.23 48 *e*P P 00 05 29.2 0.0
KIPM Iron Peak 78.23 39⇑P P 00 05 29.3 +0.1
KIPM *ep*P pP 00 06 12.7 +4.1
MNRC McLaughlin Nat 78.24 40 ⇓P P 00 05 29.7 +0.4
baz=78,SNR=96
MNRC ⇓S S 00 15 14.1 +3.3
baz=78
O01C Eel River Cons 78.25 38 ⇓P P 00 05 29.7 +0.4
baz=78,SNR=36
O01C ⇑S S 00 15 14.0 +3.1
baz=78
Q03C Winters 78.34 40 ⇑P P 00 05 30.6 +0.7
baz=78,SNR=23
Q03C ⇓S S 00 15 17.3 +5.3
baz=78
SPIA Saint Paul Isl 78.39 3 *e*P P 00 05 28.8 -1.2
MURC Murrieta 78.39 47 ⇓P P 00 05 30.0 -0.1
baz=78,SNR=29
MURC ⇑S S 00 15 15.6 +3.2
baz=78
LPIG La Paz 78.41 58 P P 00 05 29.6 -0.6
comp=Z,114nm,0.7s,mb5.6,baz=38,slow=0.6,SNR=22
LPIG *p*P pP 00 06 08.5 -1.1
comp=Z,29nm,0.3s,baz=326,slow=3.6,SNR=1.9
LPIG LR LR 00 32 44.9
comp=Z,687nm,19.6s,baz=154,slow=30
BFSC Mount Baldy St 78.45 46 ⇓P P 00 05 30.1 -0.3
baz=79,SNR=65
BFSC ⇓S S 00 15 15.6 +2.5
baz=79
VES Vestal, Richgr 78.46 44 ⇓P P 00 05 30.2 -0.3
baz=79,SNR=79
VES ⇓S S 00 15 15.7 +2.6
baz=79
MONP Monument Peak 78.52 48 P P 00 05 31.1 +0.3
baz=79,SNR=91
MONP ⇑S S 00 15 17.2 +3.4
baz=79
GASB Alder Springs 78.57 39 P P 00 05 32.1 +1.0
baz=79,SNR=59
GASB ⇑S S 00 15 18.2 +3.8
baz=79
JCC Jacoby Creek 78.57 38 ⇓P P 00 05 31.3 +0.2
baz=79,SNR=8.1
JCC ⇑S S 00 15 17.2 +2.8
baz=79
S05C Merced 78.58 42 ⇓P P 00 05 30.8 -0.3
baz=79,SNR=68
S05C ⇑S S 00 15 17.3 +2.9
baz=79
EDW2 Edwards Air Fo 78.60 45 P P 00 05 31.4 +0.1
baz=79,SNR=163
EDW2 ⇑S S 00 15 17.2 +2.5
baz=79
DVTC Desert V Tower 78.61 48 P P 00 05 31.4 +0.1
baz=79,SNR=55
DVTC ⇑S S 00 15 17.8 +3.0
baz=79
RCTC Rector, Farmer 78.64 44 ⇓P P 00 05 30.8 -0.6
baz=79,SNR=12
RCTC ⇓S S 00 15 16.6 +1.5
baz=79
ISA Isabella 78.75 45⇑*i*P P 00 05 32.2 +0.1
ISA *e* 00 05 40.9
ISA *e**PP pP 00 06 10.8 -0.7
ISA *e* 00 08 25.5
ISA Isabella 78.75 45⇑*i*P P 00 05 32.2 +0.2
ISA *e*PcP PcP 00 05 40.9 +0.6
ISA *ep*P pP 00 06 10.8 -0.7
ISA *es*P sP 00 06 28.1 -0.4
ISA *e*PP PP 00 08 25.5 -7.0
ISA Isabella 78.75 45 P P 00 05 32.3 +0.2
baz=79,SNR=169
ISA ⇓S S 00 15 19.5 +3.2
baz=79
T06C Millerton Lake 78.76 43 P P 00 05 31.8 -0.3
baz=79,SNR=195
T06C ⇑S S 00 15 18.8 +2.4
baz=79
R04C Big Horse Ranc 78.76 41 ⇑P P 00 05 31.3 -0.8
baz=79,SNR=8.3
R04C ⇓S S 00 15 18.3 +1.9
baz=79
KHMM Horse Mountain 78.78 38⇑*i*P P 00 05 32.6 +0.3
KHMM *ep*P pP 00 06 11.3 -0.3
KHMM *es*P sP 00 06 29.1 +0.4
KHMM *e*PP PP 00 08 40.8 +8.0
SUTB Sutter Butte 78.86 40 ⇑P P 00 05 31.9 -0.7
baz=79,SNR=26
SUTB ⇑S S 00 15 19.3 +1.9
baz=79
Q04C Lincoln 78.86 41 ⇓P P 00 05 32.2 -0.5
baz=79,SNR=7.6
Q04C ⇓S S 00 15 19.7 +2.3
baz=79
O02C Red Bluff 78.87 39 ⇓P P 00 05 33.1 +0.4
baz=79,SNR=108
O02C ⇑S S 00 15 20.2 +2.6
baz=79
PFO Pinyon Flat Ob 78.91 47 *e*P P 00 05 32.9 0.0
PFO Pinyon Flat Ob 78.91 47⇑*i*P P 00 05 32.9 -0.1
PFO *e*PcP PcP 00 05 40.8 -0.2
PFO *ep*P pP 00 06 10.9 -1.4
PFO *es*P sP 00 06 28.1 -1.3
PFO *e*PP PP 00 08 10.8 -23
PFO Pinyon Flat Ob 78.91 47 P P 00 05 33.0 +0.1
baz=79,SNR=51
PFO ⇑S S 00 15 21.7 +3.8
baz=79
BBRC Big Bear Sol-O 78.96 47 ⇓P P 00 05 33.5 +0.2
baz=79
BBRC ⇑S S 00 15 21.9 +3.4
baz=79
CMB Columbia Colle 78.97 42⇑*i*P P 00 05 32.9 -0.3
CMB *e**PP pP 00 06 11.4 -1.3
CMB *e* 00 08 31.6
comp=Z,346nm,1.0s,mb5.9
CMB Columbia Colle 78.97 42⇑*i*P P 00 05 32.9 -0.4
comp=Z,338nm,1.0s,mb5.9
CMB *ep*P pP 00 06 11.4 -1.3
CMB *es*P sP 00 06 28.8 -0.9
CMB *e*PP PP 00 08 31.6 -2.6
CMB Columbia Colle 78.97 42 P P 00 05 33.0 -0.2
baz=79,SNR=276
CMB ⇓S S 00 15 21.1 +2.6
baz=79
SWSC Sam W. Stewart 78.98 48 ⇑P P 00 05 33.2 -0.1
baz=79,SNR=36
SWSC ⇓S S 00 15 21.6 +2.9
baz=79
N02C Big Bar 78.99 38 P P 00 05 33.5 +0.1
baz=79,SNR=55
N02C ⇑S S 00 15 21.3 +2.5
baz=79
HELL Mitchell Peak, 79.00 43 P P 00 05 33.0 -0.4
baz=79,SNR=254
HELL ⇓S S 00 15 20.8 +1.9
baz=79
KRMB Red Mountain 79.11 37⇑*i*P P 00 05 34.3 +0.3
KRMB *e*PcP PcP 00 05 42.2 +0.3
KRMB *ep*P pP 00 06 13.4 0.0
KRMB *es*P sP 00 06 31.5 +1.1
KRMB *e*PP PP 00 08 40.1 +4.7
OHCM Honcut 79.11 40 *e*P P 00 05 33.8 -0.2
OHCM *e*PcP PcP 00 05 41.0 -0.8
OHCM *ep*P pP 00 06 14.6 +1.1
OHCM *es*P sP 00 06 30.1 -0.4
LRMC Laurel Mountai 79.15 45 ⇑P P 00 05 34.4 +0.1
baz=79,SNR=78
LRMC ⇑S S 00 15 25.2 +4.7
baz=79
LAVA Lava Cap Winer 79.19 41 P P 00 05 34.2 -0.3
baz=79,SNR=58
LAVA ⇑S S 00 15 24.0 +3.1
baz=79
KCC Kaiser Creek 79.20 43 P P 00 05 34.7 +0.2
baz=79,SNR=136
KCC ⇓S S 00 15 24.2 +3.1
baz=79
O03C Acorn Hollow, 79.20 39 ⇓P P 00 05 34.3 -0.2
baz=79,SNR=12
O03C ⇑S S 00 15 23.2 +2.2
baz=79
M01C Crescent City 79.20 37 ⇓P P 00 05 35.0 +0.5
baz=79,SNR=14
M01C ⇓S S 00 15 24.1 +3.0
baz=79
S06C San Francisco 79.21 42 P P 00 05 34.3 -0.2
baz=79,SNR=136
S06C ⇓S S 00 15 23.9 +2.9
baz=79
ORV Oroville 79.23 40 P P 00 05 34.3 -0.4
baz=79,SNR=139
ORV ⇓S S 00 15 23.1 +1.7
baz=79
RRX Edison Barstow 79.27 46 ⇑P P 00 05 34.8 0.0
baz=79,SNR=13
RRX ⇓S S 00 15 24.1 +2.4
baz=79
WDC Whiskeytown Da 79.28 39⇑*i*P P 00 05 34.4 -0.5
WDC *e* 00 05 42.7
WDC pmax pmax
comp=Z,406nm,1.2s,mb5.9
WDC Whiskeytown Da 79.28 39⇑*i*P P 00 05 34.4 -0.5
comp=Z,410nm,1.2s,mb5.9
WDC *e*PcP PcP 00 05 42.7 +0.1
WDC *ep*P pP 00 06 13.5 -0.9
WDC *es*P sP 00 06 31.3 -0.1
WDC Whiskeytown Da 79.28 39 P P 00 05 34.9 0.0
baz=79,SNR=139
WDC ⇑S S 00 15 23.5 +1.7
baz=79
KBO Bosley Butte 79.39 37⇑*i*P P 00 05 35.6 +0.1
KBO *ep*P pP 00 06 13.8 -1.2
KBO *es*P sP 00 06 32.2 +0.2
KBO *e*PP PP 00 08 41.1 +3.4
BELC Belle Mtn. 79.44 47 P P 00 05 36.0 +0.2
baz=80,SNR=158
BELC ⇓S S 00 15 26.4 +2.9
baz=80
CWC Cottonwood Cre 79.47 44 ⇓P P 00 05 36.1 +0.1
baz=80,SNR=20
CWC ⇓S S 00 15 27.0 +3.1
baz=80
INCN Inchon 79.47 317⇓*i*P P 00 05 35.9 -0.1
comp=Z,134nm,1.0s,mb5.5
INCN *ep*P pP 00 06 14.1 -1.4
INCN *es*P sP 00 06 29.8 -2.7
R05C Kirkwood Meado 79.57 41 P P 00 05 36.6 +0.1
baz=80,SNR=126
R05C ⇓S S 00 15 28.3 +3.4
baz=80
P05C Yuba Gap, Truc 79.62 41 P P 00 05 36.8 +0.1
baz=80,SNR=127
P05C ⇑S S 00 15 28.2 +2.8
baz=80
M02C Callahan 79.62 38 ⇓P P 00 05 37.1 +0.3
baz=80,SNR=119
M02C ⇑S S 00 15 28.1 +2.6
baz=80
MPMC Manual Prospec 79.63 45 P P 00 05 37.1 +0.3
baz=80,SNR=384
MPMC ⇑S S 00 15 29.6 +4.1
baz=80
GSC Goldstone 79.64 46 *e*P P 00 05 36.9 0.0
GSC Goldstone 79.64 46⇓*i*P P 00 05 36.9 0.0
GSC *ep*P pP 00 06 15.2 -1.2
GSC *es*P sP 00 06 32.7 -0.7
GSC Goldstone 79.64 46 P P 00 05 37.0 +0.1
baz=80,SNR=208
GSC ⇑S S 00 15 28.6 +3.0
baz=80
DAC Darwin (Calif) 79.69 45⇑*i*P P 00 05 37.1 0.0
DAC *e**PP pP 00 06 15.6 -1.1
DAC pmax pmax
comp=Z,376nm,1.5s,mb5.8
DAC Darwin (Calif) 79.69 45⇑*i*P P 00 05 37.0 -0.1
comp=Z,376nm,1.5s,mb5.8
DAC *ep*P pP 00 06 15.6 -1.1
DAC *es*P sP 00 06 33.3 -0.3
DAC *e*PP PP 00 09 05.9 +26
HEC Hector,Ludlow 79.69 46 P P 00 05 37.1 0.0
baz=80,SNR=334
HEC ⇑S S 00 15 28.5 +2.4
baz=80
MLAC Mammoth Lakes 79.69 43 ⇓P P 00 05 37.6 +0.5
baz=80,SNR=7.2
MLAC ⇑S S 00 15 31.6 +5.4
baz=80
L02A Cave Junction 79.70 37 ⇓P P 00 05 37.4 +0.2
baz=80,SNR=9.3
L02A ⇓S S 00 15 29.5 +3.2
baz=80
MTUM Tungsten Hills 79.70 43⇑*i*P P 00 05 37.6 +0.4
MTUM *ep*P pP 00 06 18.7 +2.0
GLA Glamis 79.72 49⇑*i*P P 00 05 37.6 +0.3
GLA *e**PP pP 00 06 14.8 -2.0
GLA Glamis 79.72 49⇑*i*P P 00 05 37.6 +0.3
GLA *ep*P pP 00 06 14.8 -2.0
GLA *es*P sP 00 06 33.3 -0.5
GLA Glamis 79.72 49 P P 00 05 37.7 +0.4
baz=80,SNR=131
GLA ⇓S S 00 15 29.5 +3.1
baz=80
TIN Tinemaha 79.73 44 ⇓P P 00 05 37.7 +0.3
baz=80,SNR=54
TIN ⇑S S 00 15 30.9 +4.3
baz=80
KEBM Edson Butte 79.76 36⇑*i*P P 00 05 37.5 -0.1
KEBM *ep*P pP 00 06 16.2 -0.9
KEBM *es*P sP 00 06 30.9 -3.2
R07C Lee Vining 79.83 42 P P 00 05 38.2 +0.3
baz=80,SNR=190
R07C ⇓S S 00 15 31.6 +3.9
baz=80
PMSA Palmer Station 79.84 156 P P 00 05 39.5 +1.6
baz=268,slow=3.1
O05C Quincy 79.84 40 ⇑P P 00 05 37.9 -0.1
baz=80,SNR=49
O05C ⇓S S 00 15 29.4 +1.6
baz=80
WAKR Walker 79.84 42 *e*P P 00 05 38.3 +0.3
R06C Coleville 79.84 42 P P 00 05 38.4 +0.4
baz=80,SNR=183
R06C ⇑S S 00 15 31.6 +3.8
baz=80
YBH Yreka Blue Hor 79.92 38 P P 00 05 38.7 +0.2
comp=Z,215nm,0.8s,mb5.8,baz=199,slow=1.4,SNR=278
YBH pP pP 00 06 16.5 -1.5
comp=Z,58nm,1.0s,baz=315,slow=4.2,SNR=1.7
YBH LR LR 00 33 00.8
comp=Z,708nm,20.4s,baz=236,slow=30
YBH Yreka Blue Hor 79.92 38⇑*i*P P 00 05 38.7 +0.3
YBH *e* 00 05 48.1
YBH *PP pP 00 06 16.5 -1.4
YBH Yreka Blue Hor 79.92 38⇑*i*P P 00 05 38.7 +0.2
YBH *e*PcP PcP 00 05 48.1 +2.7
YBH pP pP 00 06 16.4 -1.5
YBH *ep*P pP 00 06 17.3 -0.6
YBH *es*P sP 00 06 35.2 +0.3
YBH LR LR 00 33 00.8
YBH Yreka Blue Hor 79.92 38 ⇓P P 00 05 38.8 +0.3
baz=80,SNR=146
YBH ⇓S S 00 15 30.6 +2.0
baz=80
M03C McCloud 79.97 38 ⇑P P 00 05 38.5 -0.2
baz=80,SNR=111
M03C ⇑S S 00 15 31.0 +2.0
baz=80
O04C Chester 79.97 40 ⇑P P 00 05 38.6 -0.1
baz=80,SNR=34
O04C ⇑S S 00 15 30.5 +1.5
baz=80
HATC Hat Creek Radi 80.06 39 ⇑P P 00 05 39.1 0.0
baz=80,SNR=93
HATC ⇑S S 00 15 32.5 +2.5
baz=80
GMRC Granite Mounta 80.11 47 P P 00 05 39.5 +0.1
baz=80,SNR=169
GMRC ⇓S S 00 15 33.3 +2.7
baz=80
IRM Iron Mountain 80.11 47 ⇓P P 00 05 39.7 +0.2
baz=80,SNR=237
IRM ⇓S S 00 15 33.8 +3.2
baz=80
BEKR Beckwourth 80.12 40 ⇓P P 00 05 39.5 0.0
baz=80,SNR=30
BEKR ⇓S S 00 15 32.7 +2.1
baz=80
WCN Washoe City 80.13 41 ⇓P P 00 05 39.9 +0.3
baz=80,SNR=60
WCN ⇑S S 00 15 34.3 +3.5
baz=80
K02A Glendale 80.16 36 ⇓P P 00 05 39.7 0.0
baz=80,SNR=26
K02A ⇓S S 00 15 33.7 +2.6
baz=80
GRAC Grapevine Rang 80.25 44 ⇓P P 00 05 40.6 +0.4
baz=80,SNR=101
GRAC ⇑S S 00 15 35.9 +3.8
baz=80
FURC Furnace Creek, 80.28 45 ⇑P P 00 05 40.2 -0.1
baz=80,SNR=41
FURC ⇓S S 00 15 35.5 +3.2
baz=80
P06A Stead Airport, 80.28 41 ⇓P P 00 05 40.4 +0.1
baz=80,SNR=15
P06A ⇑S S 00 15 35.5 +3.1
baz=80
TUQ Turquoise Mtn. 80.31 46 P P 00 05 40.7 +0.2
baz=80,SNR=172
TUQ ⇓S S 00 15 36.7 +4.1
baz=80
Y12C Blythe 80.31 48 ⇑P P 00 05 40.6 +0.1
baz=80,SNR=91
Y12C ⇓S S 00 15 36.4 +3.6
baz=80
SHOC Shoshone 80.33 45 ⇑P P 00 05 40.5 -0.1
baz=80,SNR=84
SHOC ⇓S S 00 15 36.7 +3.8
baz=80
ELFS Eagle Lake Fie 80.36 40 ⇓P P 00 05 40.9 +0.1
baz=80
ELFS ⇑S S 00 15 35.5 +2.3
baz=80
M04C Macdoel 80.45 38 ⇑P P 00 05 41.3 +0.1
baz=81,SNR=96
M04C ⇓S S 00 15 36.3 +2.1
baz=81
Q07A Schurz 80.50 42 ⇓P P 00 05 41.6 +0.1
baz=81,SNR=8.5
Q07A ⇑S S 00 15 38.5 +3.9
baz=81
NVAR Mina Array Bea 80.51 42 P P 00 05 41.6 +0.1
comp=Z,121nm,0.8s,mb5.6,baz=214,slow=7.0,SNR=630
NVAR pP pP 00 06 20.6 -0.5
comp=Z,79nm,1.0s,baz=212,slow=7.4,SNR=5.2
NVAR S S 00 15 38.8 +4.1
comp=Z,0.2nm,0.3s,baz=234,slow=5.1,SNR=2.5
NVAR PKPPKP 00 32 20.1
comp=Z,2.5nm,0.9s,baz=71,slow=3.4,SNR=3.8
J02A Umpqua 80.51 36 ⇓P P 00 05 41.4 -0.2
baz=81,SNR=30
J02A ⇑S S 00 15 37.9 +3.2
baz=81
HKC Hong Kong 80.56 298 *e*P P 00 05 40.0 -1.8
CJM Chamela 80.57 65⇑*i*P P 00 05 41.3 -0.6
CJM *i*P 00 05 41.6
R08A Mina 80.58 43 ⇑P P 00 05 41.8 -0.1
baz=81,SNR=13
R08A ⇓S S 00 15 39.3 +3.8
baz=81
M05C Lookout 80.58 39 P P 00 05 42.0 +0.1
baz=81,SNR=149
M05C ⇑S S 00 15 37.5 +1.9
baz=81
U10A Ash Meadows, A 80.60 45 ⇓P P 00 05 42.3 +0.3
baz=81,SNR=81
U10A ⇑S S 00 15 40.1 +4.5
baz=81
PAHR Pah Rah Range 80.61 41⇑*i*P P 00 05 42.0 -0.1
comp=Z,258nm,1.0s,mb5.8
PAHR *ep*P pP 00 06 20.5 -1.2
PAHR *es*P sP 00 06 39.7 +1.0
PAHR *e*PP PP 00 08 44.9 -2.9
O06A Flanigan 80.62 40 P P 00 05 42.2 +0.1
baz=81,SNR=230
O06A ⇓S S 00 15 38.0 +2.1
baz=81
L04A Klamath Falls 80.67 38 ⇓P P 00 05 42.4 0.0
baz=81,SNR=75
L04A ⇓S S 00 15 38.6 +2.1
baz=81
S09A Goldfield 80.77 44 P P 00 05 42.8 -0.2
baz=81,SNR=86
S09A ⇓S S 00 15 40.4 +3.0
baz=81
I02A Mapleton 80.79 35 ⇓P P 00 05 43.1 +0.1
baz=81,SNR=24
I02A ⇑S S 00 15 39.4 +1.8
baz=81
P07A Fallon 80.81 41 ⇑P P 00 05 43.1 -0.1
baz=81,SNR=8.8
P07A ⇑S S 00 15 41.4 +3.5
baz=81
NEE2 Needles Airpor 80.81 47 ⇑P P 00 05 43.4 +0.2
baz=81,SNR=23
NEE2 ⇑S S 00 15 41.4 +3.5
baz=81
HOG Hogback Mounta 80.82 38 P P 00 05 43.4 +0.2
Y13A Salome 80.83 48 ⇑P P 00 05 43.8 +0.5
baz=81,SNR=48
Y13A ⇓S S 00 15 42.0 +3.9
baz=81
J03A Ideyld Park 80.85 36 P P 00 05 43.5 +0.1
baz=81,SNR=32
J03A ⇓S S 00 15 41.5 +3.2
baz=81
M06C Likely Place G 80.88 39 ⇑P P 00 05 43.6 +0.1
baz=81,SNR=132
M06C ⇑S S 00 15 41.8 +3.2
baz=81
PDMCI Parker Dam,Lak 80.88 48 P P 00 05 43.9 +0.3
baz=81,SNR=105

PDMCI ⇓S S 00 15 42.1 +3.5
baz=81
W12A Cal Nev Ari 80.94 47 ⇓P **P 00 05 44.3 +0.5**
baz=81,SNR=22
W12A ⇓S S 00 15 43.7 +4.5
baz=81
N06A Buffalo Meadow 80.98 40 P **P 00 05 44.0 -0.1**
baz=81,SNR=246
N06A ⇑S S 00 15 41.4 +1.8
baz=81
TPH Tonopah 80.98 43⇑*i*P **P 00 05 44.1 0.0**
TPH *e**PP pP 00 06 22.3 -1.4
TPH pmax pmax
comp=Z,270nm,1.1s,mb5.8
TPH Tonopah 80.98 43⇑*i*P **P 00 05 44.1 +0.1**
comp=Z,270nm,1.1s,mb5.8
TPH *e*pP pP 00 06 22.3 -1.4
TPH *e*sP sP 00 06 41.1 +0.4
Q08A Gabbs 81.00 42 P **P 00 05 44.1 0.0**
baz=81,SNR=60
Q08A ⇓S S 00 15 43.1 +3.3
baz=81
K04A Chilquin 81.05 37 ⇓P **P 00 05 44.4 -0.1**
baz=81,SNR=11
K04A ⇑S S 00 15 42.5 +2.2
baz=81
I03A Eugene 81.07 36 ⇓P **P 00 05 44.5 -0.1**
baz=81,SNR=14
I03A ⇓S S 00 15 42.4 +1.9
baz=81
MAIG Mazatlaan 81.10 61⇑*i*P **P 00 05 44.5 -0.1**
H02A Toledo 81.15 35⇑P **P 00 05 45.6 +0.6**
baz=81,SNR=5.5
R09A Tonopah 81.17 43 P **P 00 05 45.0 -0.1**
baz=81,SNR=174
R09A ⇓S S 00 15 45.2 +3.5
baz=81
V12A Nelson 81.19 46 P **P 00 05 45.6 +0.4**
baz=81,SNR=113
V12A ⇑S S 00 15 46.6 +4.8
baz=81
O07A Toulon 81.19 41 P **P 00 05 45.2 0.0**
baz=81,SNR=353
O07A ⇓S S 00 15 43.9 +2.1
baz=81
L05A Lakeview 81.20 38 ⇓P **P 00 05 45.7 +0.4**
baz=81,SNR=132
L05A ⇓S S 00 15 45.2 +3.3
baz=81
Z14A Wintersburg 81.21 49 P **P 00 05 45.6 +0.4**
baz=81,SNR=104
Z14A ⇑S S 00 15 46.1 +4.1
baz=81
U11A Corn Creek 81.23 45 ⇓P **P 00 05 45.6 +0.2**
baz=81,SNR=18
U11A ⇓S S 00 15 46.3 +4.1
baz=81
X13A Yucca 81.26 48 ⇓P **P 00 05 45.8 +0.3**
baz=81,SNR=228
X13A ⇓S S 00 15 46.1 +3.6
baz=81
KDAK Kodiak Island 81.27 13 P **P 00 05 44.5 -1.0**
comp=Z,117nm,0.7s,mb5.6,baz=204,slow=2.0,SNR=88
KDAK *e*PcP PcP 00 05 51.2 -0.1
KDAK *e*pP pP 00 06 24.6 -0.6
KDAK pP pP 00 06 23.8 -1.5
comp=Z,16nm,0.7s,baz=174,slow=17,SNR=0.5
KDAK S S 00 15 39.5 -3.1
comp=Z,3.7nm,0.9s,baz=113,slow=23,SNR=6.2
KDAK Kodiak Island 81.27 13⇑*e*P **P 00 05 44.5 -1.1**
MAW Mawson 81.33 199 *e*P **P 00 05 44.5 -1.4**
MAW *e*PCP PcP 00 05 48.1 -3.5
MAW *e*S S 00 15 45.9 +2.7
MAW *e*sS sS 00 16 52.0 +0.1
MAW Mawson 81.33 199 P **P 00 05 47.5 +1.7**
comp=Z,112nm,0.6s,mb5.7,baz=131,slow=6.6,SNR=298
MAW pP pP 00 06 26.8 +1.3
comp=Z,46nm,0.8s,baz=114,slow=1.5,SNR=2.5
MAW S S 00 15 43.7 +0.5
comp=Z,6.2nm,1.1s,baz=266,slow=20,SNR=6.5
MAW LR LR 00 38 58.0
comp=Z,693nm,18.4s,baz=300,slow=33
MAW Mawson 81.33 199 P **P 00 05 47.5 +1.6**
MAW S S 00 15 43.7 +0.5
MAW pmax pmax
comp=Z,112nm,0.6s
MAW pmax pmax
comp=Z,47nm,0.8s
MAW smax
comp=N,6.0nm,1.1s
MAW Mawson 81.33 199 *e*P **P 00 05 44.5 -1.4**
MAW P 00 05 47.5
MAW *e*PcP PcP 00 05 48.1 -3.5
MAW pP pP 00 06 26.8 +1.3
MAW S S 00 15 43.7 +0.5
MAW *e*S S 00 15 45.9 +2.7
MAW *e*sS sS 00 16 52.0 +0.1
MAW LR LR 00 38 58.0
115A Sonoran Desert 81.36 50⇑P **P 00 05 46.3 +0.2**
baz=82,SNR=37
115A ⇑S S 00 15 47.0 +3.4
baz=82
P08A Dixie Valley 81.40 42 ⇓P **P 00 05 46.5 +0.2**
baz=82,SNR=19
P08A ⇑S S 00 15 48.0 +4.0
baz=82
SHPR Sheep Range 81.42 45 *e*P **P 00 05 46.7 +0.4**
Q09A Carvers 81.45 43⇑P **P 00 05 46.7 +0.1**
baz=82,SNR=28
Q09A ⇓S S 00 15 47.8 +3.3
baz=82
COR Corvallis 81.46 35⇑*e*P **P 00 05 46.5 -0.1**
COR *e**PP pP 00 06 25.4 -0.9
COR Corvallis 81.46 35⇑*e*P **P 00 05 46.5 -0.1**
COR *e*pP pP 00 06 25.4 -0.9
COR *e*sP sP 00 06 42.0 -1.2
Y14A Wickenburg 81.48 49⇑P **P 00 05 46.8 +0.2**
baz=82,SNR=203
Y14A ⇓S S 00 15 49.6 +4.9
baz=82
W13A Hualapai Mount 81.50 47 P **P 00 05 47.3 +0.5**
baz=82,SNR=234
W13A ⇓S S 00 15 49.1 +4.1
baz=82
HBO Huckleberry Mo 81.51 36 P **P 00 05 46.7 -0.2**
116A Eloy 81.67 50⇑P **P 00 05 48.0 +0.4**
baz=82,SNR=61
116A ⇑S S 00 15 50.1 +3.4
baz=82
R10A Warm Springs 81.69 43 P **P 00 05 48.4 +0.6**
baz=82,SNR=239
R10A ⇑S S 00 15 51.3 +4.3
baz=82
O08A Rochester Mine 81.71 41 ⇓P **P 00 05 47.9 0.0**
baz=82,SNR=5.3
O08A ⇑S S 00 15 49.1 +2.0
baz=82
J05A Fort Rock 81.75 37 ⇓P **P 00 05 48.3 +0.1**
baz=82,SNR=277
J05A ⇓S S 00 15 49.7 +2.1
baz=82
U12A Valley of Fire 81.79 46 P **P 00 05 48.9 +0.6**
baz=82,SNR=150
U12A ⇓S S 00 15 52.0 +4.0
baz=82
X14A Yava 81.84 48 P **P 00 05 49.3 +0.7**
baz=82,SNR=262
X14A ⇑S S 00 15 53.4 +4.9
baz=82
KGM Kluang 81.86 275 P **P 00 05 50.9 +2.1**
P09A Austin 81.90 42 ⇓P **P 00 05 48.9 0.0**
baz=82,SNR=14
P09A ⇓S S 00 15 51.7 +2.6
baz=82
WIFE Three Sisters- 81.93 36 P **P 00 05 49.1 0.0**
G03A Yamhill 81.95 35⇑P **P 00 05 49.1 0.0**
baz=82,SNR=17
G03A ⇓S S 00 15 51.2 +1.5
baz=82
K06A Valley Falls 82.01 38 P **P 00 05 49.6 +0.1**
baz=82,SNR=238
K06A ⇑S S 00 15 52.7 +2.5
baz=82
HABR Khabarovsk 82.02 330⇓*i*P **P 00 05 49.8 +0.3**
HABR *e*S S 00 15 51.0 +0.7
HABR pmax pmax
comp=Z,1μm,2.4s,mb6.0
HABR pmax pmax
comp=Z,777nm,1.2s,mb6.2
L07A Adell 82.05 39 P **P 00 05 50.0 +0.3**
baz=82,SNR=139
L07A ⇓S S 00 15 54.2 +3.5
baz=82
W14A Seligman 82.11 48 P **P 00 05 51.0 +1.0**
baz=82,SNR=427
W14A ⇑S S 00 15 56.7 +5.4
baz=82
H04A Detroit Lake 82.13 36 P **P 00 05 49.6 -0.5**
baz=82,SNR=67
H04A ⇑S S 00 15 51.6 +0.1
baz=82
TRCR Troy Canyon 82.19 44⇑*i*P **P 00 05 50.1 -0.3**
TRCR *e*pP pP 00 06 29.1 -1.0
TRCR *e*sP sP 00 06 48.0 +0.9
TRCR *e*PP PP 00 08 57.8 -3.0
TUC Tucson 82.20 51⇑P **P 00 05 51.0 +0.6**
TUC *e**PP pP 00 06 27.9 -2.3
TUC Tucson 82.20 51⇑*i*P **P 00 05 51.0 +0.5**
TUC *e*pP pP 00 06 27.9 -2.2
TUC *e*sP sP 00 06 47.5 +0.4
F03A Seaside 82.21 34⇑P **P 00 05 50.4 -0.1**
baz=82,SNR=11
F03A ⇓S S 00 15 53.8 +1.5
baz=82
O09A Fish Creek Ran 82.23 42 P **P 00 05 50.5 -0.2**
baz=82,SNR=158
O09A ⇑S S 00 15 55.0 +2.5
baz=82
M08A Happy Creek Ra 82.28 40 P **P 00 05 51.1 +0.3**
baz=82,SNR=165
M08A ⇑S S 00 15 55.6 +2.6
baz=82
I05A Bend 82.30 36⇑P **P 00 05 51.0 +0.1**
baz=82,SNR=27
I05A ⇑S S 00 15 54.0 +0.9
baz=82
X15A Humboldt 82.31 49 P **P 00 05 51.8 +0.8**
baz=82,SNR=208
X15A ⇑S S 00 15 58.7 +5.4
baz=82
G04A Mulino 82.31 35⇑P **P 00 05 50.7 -0.4**
baz=82,SNR=42
G04A ⇑S S 00 15 54.6 +1.4
baz=82
J06A Christmas Vall 82.35 38 P **P 00 05 50.9 -0.4**
baz=82,SNR=224
J06A ⇓S S 00 15 55.4 +1.8
baz=82
P10A Eureka 82.36 42 ⇓P **P 00 05 51.2 -0.1**
baz=82,SNR=42
P10A ⇓S S 00 15 56.0 +2.2
baz=82
BMN Battle Mountai 82.37 41⇑*i*P **P 00 05 51.3 0.0**
BMN *e**PP pP 00 06 29.9 -1.2
BMN *e* 00 09 00.2
BMN pmax pmax
comp=Z,445nm,1.2s,mb6.0
BMN Battle Mountai 82.37 41⇑*i*P **P 00 05 51.3 0.0**
comp=Z,445nm,1.2s,mb6.0
BMN *e*pP pP 00 06 29.9 -1.2
BMN *e*sP sP 00 06 49.1 +1.1
BMN *e*PP PP 00 09 00.2 -2.2
N09A Rock Creek Ran 82.43 41⇑P **P 00 05 51.7 0.0**
baz=82,SNR=109
N09A ⇑S S 00 15 56.9 +2.3
baz=82
USHA Ushuaia 82.49 146 P **P 00 05 53.3 +1.3**
comp=Z,90nm,0.9s,mb5.4,baz=220,slow=6.7,SNR=28
E03A Lebam 82.62 34⇑P **P 00 05 52.6 -0.1**
baz=83,SNR=28
E03A ⇑S S 00 15 58.3 +1.8
baz=83
H05A Madras 82.63 36 ⇓P **P 00 05 52.4 -0.2**
baz=83,SNR=36
H05A ⇓S S 00 15 57.8 +1.3
baz=83
W15A Williams 82.66 48 P **P 00 05 53.8 +1.0**
baz=83,SNR=71
W15A ⇑S S 00 16 02.9 +6.1
baz=83
SFJM Santa Fe 82.70 65 *i*P **P 00 05 53.5 +0.5**
WVOR Wild Horse Val 82.72 39 P **P 00 05 53.0 -0.1**
WVOR pmax pmax
comp=Z,400nm,1.1s,mb6.1
WVOR Wild Horse Val 82.72 39 P **P 00 05 53.1 0.0**
O10A Cortez Mining, 82.73 42 P **P 00 05 53.3 +0.1**
baz=83,SNR=72
O10A ⇓S S 00 16 00.1 +2.5
baz=83
L08A Fields 82.75 39 P **P 00 05 53.4 +0.1**
baz=83,SNR=306
L08A ⇑S S 00 15 59.8 +2.1
baz=83
I06A Prineville 82.75 37 P **P 00 05 53.5 +0.3**
baz=83,SNR=303
I06A ⇓S S 00 16 00.2 +2.5
baz=83
P11A Circle Ranch, 82.77 43⇑P **P 00 05 53.4 0.0**
baz=83,SNR=22
P11A ⇓S S 00 16 00.6 +2.7
baz=83
ZIIG Zihuatanejo 82.81 68⇑*i*P **P 00 05 53.9 +0.3**
F04A Amboy 82.81 35 P **P 00 05 53.3 -0.3**
baz=83,SNR=62
F04A ⇑S S 00 15 59.1 +0.7
baz=83
M09A Marrel Ranch, 82.82 40⇑P **P 00 05 53.8 +0.1**
baz=83,SNR=166
M09A ⇓S S 00 16 00.5 +2.1
baz=83
D03A Wishkah Elem. 82.89 33⇑P **P 00 05 54.5 +0.4**
baz=83,SNR=12
D03A ⇓S S 00 16 01.7 +2.5
baz=83
G05A Wamic 82.96 36 ⇓P **P 00 05 54.2 -0.2**
baz=83,SNR=17
G05A ⇓S S 00 16 01.3 +1.4
baz=83
N10A Dunphy 82.98 41 ⇓P **P 00 05 54.5 0.0**
baz=83,SNR=37
N10A ⇓S S 00 16 02.2 +2.2
baz=83
K08A Mann Creek Ran 82.99 39⇑P **P 00 05 54.6 +0.1**
baz=83,SNR=363
K08A ⇑S S 00 16 02.5 +2.3
baz=83
L09A Wilkinson Ranc 83.04 40 P **P 00 05 54.9 +0.1**
baz=83,SNR=112
L09A ⇓S S 00 16 02.9 +2.2
baz=83
C03A Quillayute Air 83.05 32⇑P **P 00 05 55.3 +0.5**
baz=83,SNR=13
Q12A Willow Creek R 83.07 44⇑P **P 00 05 55.2 +0.2**
baz=83,SNR=33
Q12A ⇓S S 00 16 03.2 +2.3
baz=83
E04A Onalaska 83.09 34 ⇓P **P 00 05 55.3 +0.3**
baz=83,SNR=20
E04A ⇑S S 00 16 02.8 +1.7
baz=83
O11A Cowboy Ranch, 83.17 42⇑P **P 00 05 55.7 +0.2**
baz=83
O11A ⇑S S 00 16 04.1 +2.1
baz=83
CCUT Cedar City 83.20 45⇑*i*P **P 00 05 56.3 +0.7**
CCUT *e*pP pP 00 06 34.9 -0.5
CCUT *e*sP sP 00 06 54.3 +1.9
CCUT *e*PP PP 00 09 05.3 -3.8
I07A Izee 83.23 37 P **P 00 05 55.9 +0.1**
baz=83,SNR=203
I07A ⇓S S 00 16 04.3 +1.7
baz=83
OTR Olympics--Tyee 83.26 32 P **P 00 05 56.6 +0.7**
P12A McGill 83.26 43 P **P 00 05 56.0 +0.1**
baz=83,SNR=166
P12A ⇑S S 00 16 04.8 +1.8
baz=83
ARUT Antelope Range 83.28 45⇑*i*P **P 00 05 55.9 -0.1**
ARUT *e*PcP PcP 00 06 00.5 +0.4
ARUT *e*pP pP 00 06 34.1 -1.7
F05A White Salmon 83.29 35 P **P 00 05 55.9 -0.2**
baz=83,SNR=66
F05A ⇑S S 00 16 04.2 +1.0
baz=83
D04A Dobbs Creek Ra 83.39 34⇑P **P 00 05 57.1 +0.5**
baz=84,SNR=7.2
D04A ⇑S S 00 16 05.9 +1.8
baz=84
K09A Rome 83.42 39 P **P 00 05 56.6 -0.1**
baz=84,SNR=511
K09A ⇑S S 00 16 06.5 +2.0
baz=84
M10A I.L. Ranch, Tu 83.43 41 P **P 00 05 57.2 +0.4**
baz=84,SNR=208
M10A ⇓S S 00 16 07.2 +2.6
baz=84
WUAZ Wupatki 83.45 48⇑*i*P **P 00 05 57.4 +0.5**
WUAZ *e*pP pP 00 06 37.1 +0.4
WUAZ *e*sP sP 00 06 53.8 +0.1
WUAZ *e*PP PP 00 09 05.9 -5.3
N11A Elko Archery C 83.51 42⇑P **P 00 05 57.2 0.0**
baz=84,SNR=44
N11A ⇓S S 00 16 07.5 +2.0
baz=84
E05A Randle 83.57 34 ⇓P **P 00 05 57.1 -0.4**
baz=84
E05A ⇑S S 00 16 06.3 +0.3
baz=84
CAIG El Cayaco 83.62 69⇑*i*P **P 00 05 57.7 -0.1**
B04A Port Angeles 83.66 32 P **P 00 05 58.0 +0.1**
baz=84,SNR=24
B04A ⇓S S 00 16 08.2 +1.3
baz=84
I08A Drewsey 83.66 38 ⇓P **P 00 05 57.8 -0.2**
baz=84,SNR=73
I08A ⇑S S 00 16 08.6 +1.7
baz=84
LON Longmire 83.67 34 *e*P **P 00 05 57.4 -0.6**
LON Longmire 83.67 34 P **P 00 05 57.2 -0.8**
ELK Elko 83.78 42 *e*P **P 00 05 58.6 0.0**
O12A Currie 83.82 43 P **P 00 05 58.8 0.0**
baz=84,SNR=202
O12A ⇓S S 00 16 10.1 +1.6
baz=84
M11A Holland Ranch, 83.83 41 P **P 00 05 59.2 +0.4**
baz=84,SNR=211
M11A ⇑S S 00 16 11.2 +2.6
baz=84
SVW2 Sparrevohn 83.83 10⇑*i*P **P 00 05 56.9 -1.9**
SVW2 *e*pP pP 00 06 38.0 -0.8
D05A Enumclaw 83.86 34⇑P **P 00 05 59.1 +0.1**
baz=84,SNR=72
D05A ⇓S S 00 16 09.8 +0.9
baz=84
MOIG Morelia 83.92 66⇑*i*P **P 00 05 59.3 0.0**
N12A Clover Valley, 83.97 42 P **P 00 05 59.4 -0.1**
baz=84,SNR=295
N12A ⇓S S 00 16 11.5 +1.6
baz=84
H08A Prairie City 83.97 37 P **P 00 05 59.2 -0.3**
baz=84,SNR=80
H08A ⇓S S 00 16 11.6 +1.6
baz=84
ZAIG Zacatecas 84.08 63⇑*i*P **P 00 06 00.5 +0.4**
KLR Kul'dur 84.12 329⇑*i*P **P 00 05 56.3 -4.0**
KLR *e* pP 00 06 34.5 -5.7
KLR *e*S S 00 16 04.5 -7.0
KLR *e* 00 17 22.0
KLR pmax pmax
comp=Z,240nm,1.8s,mb5.6
KLR pmax pmax
comp=E,600nm,6.5s
KLR pmax pmax
comp=Z,2μm,6.5s
I09A Lost Marbles R 84.17 38 P **P 00 06 00.1 -0.4**
baz=84,SNR=69
I09A ⇑S S 00 16 12.6 +0.6
baz=84
SLKM Skilak Lake 84.26 13⇑*i*P **P 00 05 59.5 -1.5**
SLKM *e*pP pP 00 06 40.0 -0.9
SLKM *e*sP sP 00 07 00.6 +2.7
C05A Tolt Reservoir 84.34 34 ⇓P **P 00 06 01.0 -0.4**
baz=84,SNR=119
C05A ⇓S S 00 16 13.1 -0.6
baz=84
M12A Wells 84.36 42 P **P 00 06 01.5 0.0**
baz=84,SNR=281
M12A ⇑S S 00 16 15.0 +1.1
baz=84
N13A Wendover, West 84.49 42 ⇓P **P 00 06 02.2 0.0**
baz=85,SNR=120
N13A ⇓S S 00 16 16.5 +1.3
baz=85
A04A Legoe Bay, Lum 84.49 32⇑P **P 00 06 02.1 0.0**
baz=85,SNR=124
A04A ⇑S S 00 16 14.9 -0.3
baz=85
B05A Bryant 84.50 33 ⇓P **P 00 06 01.9 -0.3**
baz=85,SNR=94
B05A ⇑S S 00 16 13.7 -1.6
baz=85
MSU Marysvale 84.50 45 *e*P **P 00 06 03.0 +0.8**
MSU Marysvale 84.50 45⇑*i*P **P 00 06 03.0 +0.8**
MSU *e*pP pP 00 06 42.4 +0.2
H09A Durkee 84.63 38 ⇓P **P 00 06 02.7 -0.2**
baz=85,SNR=53
H09A ⇑S S 00 16 17.6 +1.0
baz=85
HAWA Hanford 84.65 36⇑*i*P **P 00 06 02.7 -0.3**
HAWA *e*pP pP 00 06 42.1 -0.9
HAWA *e*sP sP 00 06 58.5 -1.3
HAWA *e*PP PP 00 09 17.7 -3.3
F08A Pendleton 84.70 36 ⇓P **P 00 06 03.0 -0.2**
baz=85
F08A ⇑S S 00 16 17.5 +0.3
baz=85
M13A Montello 84.80 42 P **P 00 06 03.6 -0.1**
baz=85,SNR=392
M13A ⇑S S 00 16 18.9 +0.7
baz=85
CRAG Craig 84.83 23⇑*i*P **P 00 06 03.5 -0.4**
comp=Z,97nm,0.9s,mb5.5
CRAG *e*pP pP 00 06 42.9 -0.9
CRAG *e*sP sP 00 07 01.1 +0.4
PLIG Platanillo 84.83 68⇑*i*P **P 00 06 04.4 +0.5**
IPM Ipoh 84.90 277 P **P 00 06 06.5 +2.3**
BMO Blue Mountains 84.95 38⇑*i*P **P 00 06 03.9 -0.5**
BMO *e*pP pP 00 06 43.3 -1.4
BMO *e*sP sP 00 07 03.4 +2.1
BMO *e*PP PP 00 09 18.6 -4.8
A05A Maple Falls 84.99 32⇑P **P 00 06 03.9 -0.7**
baz=85,SNR=12
A05A ⇑S S 00 16 19.3 -0.7
baz=85
DUG Dugway 85.00 43 *e*P **P 00 06 04.4 -0.3**
DUG Dugway 85.00 43⇑*i*P **P 00 06 04.4 -0.4**
DUG *e*PcP PcP 00 06 07.4 -0.3
DUG *e*pP pP 00 06 43.6 -1.1
DUG *e*sP sP 00 07 02.2 +0.6
DUG *e*PP PP 00 09 20.2 -3.6
MA2 Magadan 85.06 344 *e*P **P 00 06 03.7 -1.3**
MA2 *e*S S 00 16 13.2 -7.6
MA2 *e* 00 17 30.7
MA2 pmax pmax
comp=Z,300nm,0.9s,mb6.0
MA2 Magadan 85.06 344 *e*P **P 00 06 03.7 -1.3**
MA2 *e*S S 00 16 13.2 -7.6
MA2 *e* 00 17 30.7
BGU Big Grassy Mou 85.27 43⇑*i*P **P 00 06 05.5 -0.6**
BGU *e*PcP PcP 00 06 09.2 +0.3
BGU *e*pP pP 00 06 45.1 -0.9
BGU *e*sP sP 00 07 04.7 +1.7
BGU *e*PP PP 00 09 22.6 -3.4
EYAK Cordova Ski Ar 85.28 15⇑*i*P **P 00 06 05.0 -1.1**
EYAK *e*pP pP 00 06 45.2 -0.8
EYAK *e*sP sP 00 06 59.3 -3.7
EYAK *e*PP PP 00 09 29.4 +3.5
SIT Sitka 85.30 21⇑*i*P **P 00 06 05.1 -1.1**
SIT *e*pP pP 00 06 44.9 -1.3
NLU North Lily Min 85.35 44⇑*i*P **P 00 06 06.1 -0.4**
NLU *e*pP pP 00 06 45.7 -0.8
NLU *e*sP sP 00 07 05.1 +1.7
NLU *e*PP PP 00 09 24.1 -2.5
YAIG Yautepec 85.40 68⇑*i*P **P 00 06 07.6 +0.9**
PMR Palmer 85.47 13⇑*i*P **P 00 06 05.6 -1.4**
PMR pmax pmax
comp=Z,116nm,0.8s,mb5.7
PMR Palmer 85.47 13⇑*i*P **P 00 06 05.6 -1.5**
comp=Z,116nm,0.8s,mb5.7

PMR ePP pP 00 06 45.4 -1.7
TTA Tatalina 85.51 9 eP **P 00 06 06.0 -1.2**
TTA ePP pP 00 06 47.3 +0.1
TMUT Trail Mountain 85.56 45 eP **P 00 06 08.2 +0.8**
MPU Maple Canyon 85.67 44 eP **P 00 06 08.8 +0.8**
NOQ North Oquirrh 85.70 43 eP **P 00 06 07.3 -0.9**
OD2 Odessa Site #2 85.71 35 P **P 00 06 07.9 -0.3**
SPUT South Promonto 85.84 43 eP **P 00 06 08.4 -0.5**
PPM Popocatepetl 85.87 68⇑ iP **P 00 06 10.3 +1.3**
Y22C IRIS PASSCAL I 85.88 51 ⇓P **P 00 06 10.1 +1.0**
baz=86,SNR=10.0
LAZ Ladron 85.88 51 eP **P 00 06 09.9 +0.8**
LAZ ePP pP 00 06 52.0 +2.9
LAZ ePP PP 00 09 29.1 -1.9
LENM Lemitar 85.89 51 eP **P 00 06 09.7 +0.6**
MNTX Cornudas Mount 85.89 54 eP **P 00 06 09.3 +0.2**
HLID Hailey 85.89 40 eP **P 00 06 12.4 +3.3**
HVU Hansel Valley 85.90 42⇑ iP **P 00 06 08.6 -0.5**
HVU pmax pmax
comp=Z,102nm,0.9s,mb5.5
HVU Hansel Valley 85.90 42⇑ iP **P 00 06 08.6 -0.6**
comp=Z,102nm,0.9s,mb5.5
HVU ePP pP 00 06 48.8 -0.4
HVU eSP sP 00 07 05.1 -0.9
SRU San Rafael 85.92 45 eP **P 00 06 09.4 +0.2**
CTU Camp Tracy 85.96 43 eP **P 00 06 09.8 +0.4**
DAU Daniels Canyon 86.12 44 eP **P 00 06 10.3 0.0**
LPM Los Pinos Moun 86.21 51 eP **P 00 06 11.2 +0.6**
LPM ePP pP 00 06 53.4 +2.6
LPM ePP PP 00 09 29.4 -4.1
PSI Prapat 86.23 274 PP PP 00 09 32.1 -1.7
comp=Z,28nm,1.0s,baz=112,slow=7.4,SNR=4.4
SYO Syowa Base 86.26 192⇓ eP **P 00 06 10.4 -0.5**
SNG Songkhla 86.28 279 P **P 00 06 14.0 +3.0**
comp=Z,426nm,1.0s,mb6.1
TCUT Toone Canyon 86.40 43 eP **P 00 06 11.9 +0.3**
PV10 Paradox Valley 86.53 47 eP **P 00 06 12.5 +0.2**
PV10 ePP pP 00 06 55.4 +3.0
PV10 eSP sP 00 07 10.2 +1.0
HVUT Hardware Ranch 86.56 43 eP **P 00 06 11.7 -0.7**
ANMO Albuquerque 86.64 51 P **P 00 06 12.9 +0.2**
comp=Z,80nm,0.8s,mb5.6,baz=237,slow=4.6,SNR=208
ANMO pP pP 00 06 51.2 -1.7
comp=Z,17nm,0.9s,baz=232,slow=6.9,SNR=0.8
ANMO Albuquerque 86.64 51 P **P 00 06 13.0 +0.2**
ANMO *PP pP 00 06 51.2 -1.7
ANMO pmax pmax
comp=Z,80nm,0.8s
ANMO pmax pmax
comp=Z,17nm,0.9s
ANMO Albuquerque 86.64 51 eP **P 00 06 12.9 +0.1**
comp=Z,151nm,1.0s,mb5.8
VHO Vista Hermosa 86.72 70⇑ iP **P 00 06 14.1 +0.9**
PV01 Paradox Valley 86.73 47 eP **P 00 06 13.4 +0.2**
PV01 ePP pP 00 06 52.8 -0.5
PV01 eSP sP 00 07 11.8 +1.6
OXX Oaxaca 86.73 70⇑ iP **P 00 06 15.0 +1.8**
HUIG Huatulco 86.76 72⇑ iP **P 00 06 13.8 +0.4**
GDL2 Guadalupe Moun 86.89 54 eP **P 00 06 14.5 +0.5**
NEW Newport 87.09 35 P **P 00 06 14.2 -0.7**
comp=Z,79nm,0.9s,mb5.6,baz=228,slow=4.0,SNR=91
NEW pP pP 00 06 53.2 -1.9
comp=Z,22nm,1.0s,baz=234,slow=4.4,SNR=1.7
NEW Newport 87.09 35 P **P 00 06 14.3 -0.7**
NEW *PP pP 00 06 53.3 -1.8
NEW pmax pmax
comp=Z,79nm,0.9s
NEW pmax pmax
comp=Z,23nm,1.0s
NEW Newport 87.09 35 eP **P 00 06 14.0 -0.9**
SNAA Sanae 87.11 178 e **P 00 06 15.5 +0.5**
SNAA e 00 06 16.2
SNAA e 00 06 17.5
SNAA e 00 06 22.4
SNAA e 00 06 27.3
SNAA e 00 06 29.9
SNAA e pP 00 06 57.1 +1.9
SNAA e pP 00 06 59.7 +4.5
SNAA e 00 07 03.3
SNAA Sanae 87.11 178 c iP **P 00 06 15.5 +0.5**
SKAG Skagway 87.21 20⇑ iP **P 00 06 15.5 0.0**
comp=Z,202nm,1.3s,mb5.8
SKAG epP pP 00 06 56.1 +0.4
PLCA Paso Flores 87.47 133 P **P 00 06 18.3 +1.5**
PLCA Paso Flores 87.47 133⇑ iP **P 00 06 18.0 +1.2**
PLCA pmax pmax
comp=Z,271nm,1.4s
PLCA Paso Flores 87.47 133⇑ iP **P 00 06 18.0 +1.3**
comp=Z,271nm,1.4s,mb5.9
PLCA ePP pP 00 06 58.2 +1.3
PLCA eSP sP 00 07 13.8 0.0
PLCA ePP PP 00 09 40.0 -3.6
AHID Auburn Hatcher 87.48 42 eP **P 00 06 17.1 +0.3**
MCMT McKenzie Canyo 87.53 40 eP **P 00 06 17.5 +0.5**
MCMT ePP pP 00 06 58.0 +0.8
MCMT eSP sP 00 07 16.6 +2.5
MCMT ePP PP 00 09 41.3 -2.8
RRI2 Red Ridge 87.65 41 eP **P 00 06 16.9 -0.7**
KKTK Khon Kaen 87.75 288 ⇑P **P 00 06 20.3 +2.2**
comp=Z,802nm,0.6s,mb6.7
VNA1 Neumayer--Stat 87.85 176 e **P 00 06 20.2 +1.6**
VNA1 e 00 06 21.7
VNA1 e 00 06 23.1
VNA1 e 00 06 26.3
VNA1 e 00 06 28.1
VNA1 e 00 06 31.3
VNA1 e pP 00 07 00.7 +1.9
VNA1 e pP 00 07 03.1 +4.3
VNA1 e 00 07 06.2
DCID1 Drake Creek 87.86 41 eP **P 00 06 19.2 +0.6**
REDW Red Top Meadow 87.95 42 eP **P 00 06 18.8 -0.3**
comp=Z,121nm,1.1s,mb5.6
TPAW Teton Pass 87.95 41 eP **P 00 06 19.0 0.0**
NVL N'lazarevskaya 87.95 183⇓ iP **P 00 06 18.7 -0.4**
NVL *i* S S 00 16 47.7 -1.0
NVL eP S PS 00 18 08.8 -3.4
NVL eSSS 00 26 27.6
NVL pmax pmax
comp=Z,102nm,1.7s,mb5.4
NVL MLR MLR
comp=Z,2μm,20.3s
DLMT Dillon 87.97 39 eP **P 00 06 18.9 -0.3**
comp=Z,144nm,1.0s,mb5.8
MSO Missoula 88.01 37 eP **P 00 06 18.2 -1.1**
LVIG Laguna Verde 88.04 68⇑ iP **P 00 06 19.5 0.0**
SNOW Snow King Moun 88.06 42 eP **P 00 06 20.1 +0.5**
comp=Z,111nm,0.9s,mb5.7
BSMT Bassoo Peak 88.12 36 eP **P 00 06 19.6 -0.2**
IMW Indian Meadow 88.18 41 eP **P 00 06 23.0 +2.9**
comp=Z,104nm,1.0s,mb5.6
DLBC Dease Lake 88.19 22 P **P 00 06 20.0 -0.2**
comp=Z,54nm,0.8s,mb5.4,baz=234,slow=4.7,SNR=100
DLBC pP pP 00 06 58.9 -1.6
comp=Z,22nm,0.8s,baz=154,slow=14,SNR=1.5
MOOW Moose Ponds 88.22 41 eP **P 00 06 19.4 -1.0**
LOHW Long Hollow 88.23 41 eP **P 00 06 20.1 -0.3**
LRM Limekiln Ridge 88.31 39 eP **P 00 06 20.3 -0.5**
SMCO Snowmass 88.33 47⇑ iP **P 00 06 20.8 0.0**
comp=Z,154nm,1.2s,mb5.7
SMCO epP pP 00 07 00.6 -0.5
SMCO eSP sP 00 07 20.0 +2.1
SMCO ePP PP 00 09 48.1 -2.4
CMIG Matias Romero 88.35 71 P **P 00 06 21.6 +0.7**
comp=Z,81nm,0.8s,mb5.6,baz=254,slow=4.6,SNR=129
CMIG pP pP 00 07 00.5 -0.8
comp=Z,16nm,0.8s,baz=252,slow=5.9,SNR=1.8
CMIG LR LR 00 38 38.1
comp=Z,861nm,18.1s,baz=251,slow=30
QLMT Earthquake Lak 88.38 40 eP **P 00 06 21.5 +0.5**
FLWY Flagg Ranch 88.42 41⇑ iP **P 00 06 21.4 +0.1**
comp=Z,149nm,1.0s,mb5.8
FLWY epP pP 00 06 59.9 -1.6
FLWY eSP sP 00 07 17.0 -1.4
BW06 Boulder Array 88.44 43 eP **P 00 06 20.7 -0.7**
PDAR Pinedale Array 88.44 43 P **P 00 06 21.1 -0.3**
comp=Z,50nm,0.9s,mb5.3,baz=204,slow=3.3,SNR=138
PDAR pP pP 00 06 58.9 -2.8
comp=Z,11nm,0.9s,baz=243,slow=1.8,SNR=1.7
PDAR PKPPKP 00 31 59.0
comp=Z,0.5nm,0.8s,baz=143,slow=3.2,SNR=3.6
PDAR LR LR 00 38 34.1
comp=Z,548nm,20.3s,baz=245,slow=30
CHMT Chamberlain Mo 88.45 38 eP **P 00 06 20.6 -0.8**

YFT Old Faithful 88.53 41 eP **P 00 06 23.7 +1.9**
YMR Madison River 88.57 40⇑ iP **P 00 06 22.5 +0.5**
comp=Z,128nm,0.9s,mb5.8
YMR epP pP 00 07 02.2 -0.1
YMR eSP sP 00 07 19.1 0.0
COLA College 88.69 12 c iP **P 00 06 20.6 -1.9**
BOZ Bozeman (W) 88.70 39 eP **P 00 06 21.7 -0.9**
YNR Norris Junctio 88.77 40 eP **P 00 06 24.3 +1.4**
IMA2 Indian Mountai 88.81 9 eP **P 00 06 21.6 -1.5**
NNT Nongplab 89.10 284 P **P 00 06 27.6 +3.2**
TUIG Tuzandepetl 89.12 70⇑ iP **P 00 06 25.6 +1.1**
HRY Holter Researc 89.16 38 eP **P 00 06 24.8 +0.1**
WALA Waterton Lakes 89.29 36 eP **P 00 06 24.8 -0.6**
RWWY Rawlins 89.41 44 eP **P 00 06 25.6 -0.3**
comp=Z,171nm,1.1s,mb5.9
EFI East Falkland 89.45 147 eP **P 00 06 27.4 +1.3**
ISCO Idaho Springs 89.55 47 eP **P 00 06 27.0 +0.4**
JCT Junction City 89.63 57 eP **P 00 06 26.4 -0.5**
DAWY Dawson 89.83 15 eP **P 00 06 27.0 -0.8**
NST Nakhon Sawan 89.89 287 P **P 00 06 30.0 +1.9**
KVTX Kingsville 89.94 60⇑ iP **P 00 06 29.6 +1.2**
comp=Z,96nm,0.6s,mb5.9
KVTX epP pP 00 07 09.0 +0.3
KVTX eSP sP 00 07 26.8 +1.3
KVTX ePP PP 00 10 02.6 -0.7
GCMT Greycliff 89.94 40 eP **P 00 06 28.2 -0.1**
BILL Bilibino 90.06 353 K P **P 00 06 28.0 -0.9**
BILL e 00 10 00.4
BILL e 00 16 43.3
BILL i 00 17 04.1
BILL ePS PS 00 18 20.1 -15
BILL ePPS 00 19 02.4
BILL eSS SS 00 23 09.2 -1.3
BILL e 00 26 53.2
BILL pmax pmax
comp=Z,256nm,2.5s,mb5.7
BILL Bilibino 90.06 353 i Pdr **P 00 06 28.0 -0.9**
comp=Z,256nm,2.5s,mb5.7
BILL e 00 10 00.4
BILL e 00 16 43.3
BILL i 00 17 04.1
BILL ePS PS 00 18 20.1 -15
BILL ePPS 00 19 02.4
BILL eSS SS 00 23 09.2 -1.3
BILL e 00 26 53.2
HIA Hailar 90.36 324⇓ iP **P 00 06 29.6 -0.7**
HIA pmax pmax
comp=Z,53nm,0.9s
HIA Hailar 90.36 324⇓ iP **P 00 06 29.6 -0.8**
comp=Z,53nm,0.9s,mb5.5
HIA epP pP 00 07 13.1 +2.4
HIA eSP sP 00 07 29.6 +2.1
PHWY Pilot Hill 90.37 45 eP **P 00 06 30.4 0.0**
FCH Farellones 90.92 126 eP **P 00 06 33.5 +0.6**
EGMT Eagleton 91.05 38 eP **P 00 06 33.1 -0.4**
CHRT Chiangrai 91.77 291 ⇑P **P 00 06 39.0 +2.2**
comp=Z,618nm,0.9s,mb6.6
TLL Tololo Astrono 91.91 123 eP **P 00 06 33.6 -3.9**
EDM Edmonton 91.92 32 eP **P 00 06 36.6 -1.0**
CHG Chiang Mai 92.11 289 ⇑P **P 00 06 40.8 +2.4**
CHG Chiang Mai 92.11 289 ⇑P **P 00 06 40.8 +2.4**
comp=Z,122nm,1.1s,mb5.8
WMOK Wichita Mounta 92.19 54⇑ iP **P 00 06 37.6 -1.2**
WMOK pmax pmax
comp=Z,129nm,1.2s,mb5.8
WMOK Wichita Mounta 92.19 54⇑ i P **P 00 06 37.6 -1.2**
comp=Z,129nm,1.2s,mb5.8
WMOK epP pP 00 07 18.7 -0.5
WMOK eSP sP 00 07 36.5 +0.6
LAO LASA Array 92.46 40 eP **P 00 06 40.7 +0.6**
YAK Yakutsk 93.53 337 eP **P 00 06 42.5 -2.5**
YAK e 00 10 24.3
YAK eS S 00 17 15.1 -24
YAK pmax pmax
comp=Z,81nm,0.9s,mb5.8
YAK pmax pmax
comp=N,19nm,1.2s
YAK pmax pmax
comp=E,36nm,1.7s
YAK pmax pmax
comp=Z,11nm,0.9s,mb5.0
YAK pmax pmax
comp=N,6.0nm,1.2s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK smax
comp=N,33nm,1.6s
YAK smax
comp=Z,7.0nm,1.3s
YAK smax
comp=E,20nm,1.4s
YAK Yakutsk 93.53 337 eP **P 00 06 42.5 -2.5**
comp=E,81nm,0.9s,mb5.8
YAK e 00 10 24.3
YAK eS S 00 17 15.1 -24
NATX Nacogdoches 94.18 58 eP **P 00 06 48.6 +0.7**
NNA Nana 94.23 105 eP **P 00 06 49.5 +1.3**
INK Inuvik 94.67 15 P **P 00 06 48.5 -1.7**
comp=E,67nm,0.9s,mb5.9,baz=212,slow=4.7,SNR=124
INK pP pP 00 07 28.4 -2.2
comp=E,20nm,1.0s,baz=241,slow=3.8,SNR=2.1
INK Inuvik 94.67 15 eP **P 00 06 48.5 -1.7**
ATAH Atahualpa 94.70 99 P **P 00 06 53.5 +3.2**
comp=E,29nm,1.0s,mb5.5,baz=251,slow=4.3,SNR=18
ATAH pP pP 00 07 32.1 +1.4
comp=E,15nm,1.0s,baz=161,slow=16,SNR=2.2
CIT Chita 95.16 324 eP **P 00 06 51.4 -1.0**
CIT e 00 10 41.0
CIT pmax pmax
comp=Z,181nm,2.1s,mb5.9
KSU1 Kansas State U 95.53 50⇑ iP **P 00 06 53.5 -0.6**
comp=Z,80nm,0.7s,mb6.2
KSU1 epP pP 00 07 33.2 -1.3
KSU1 ePP PP 00 10 48.8 +1.7
MIAR Mount Ida 96.07 55 eP **P 00 06 56.4 -0.2**
MIAR Mount Ida 96.07 55 epP pP 00 07 34.0 -3.1
MIAR eSP sP 00 07 59.2 +5.4
YKA Yellowknife Ar 96.59 24 P **P 00 06 57.6 -1.3**
comp=Z,33nm,0.8s,mb5.7,baz=241,slow=4.5,SNR=86
YKA pP pP 00 07 37.1 -2.3
comp=Z,11nm,0.9s,baz=238,slow=4.2,SNR=2.0
YKA PP PP 00 10 52.7 -2.6
comp=Z,2.7nm,0.9s,baz=230,slow=7.8,SNR=4.0
YKA PKiKP PKiKP 00 11 33.9 -1.3
comp=Z,2.0nm,0.7s,baz=256,slow=1.1,SNR=6.3
YKA PKKP PKKPbc 00 23 42.3 +0.6
comp=Z,1.9nm,0.5s,baz=43,slow=2.2,SNR=12
YKA LR LR 00 47 07.4
comp=Z,251nm,18.1s,baz=270,slow=33
YKA Yellowknife Ar 96.59 24 P **P 00 06 57.6 -1.3**
YKA pP pP 00 07 37.1 -2.3
YKA PP PP 00 10 52.7 -2.6
YKW3 Yellowknife Ar 96.63 24 eP **P 00 06 58.1 -1.0**
LVC Limon Verde 96.76 117 P **P 00 07 02.9 +3.2**
comp=Z,43nm,1.1s,mb5.7,baz=252,slow=3.2,SNR=19
LVC pP pP 00 07 43.1 +2.9
comp=Z,15nm,0.9s,baz=136,slow=1.0,SNR=2.8
UALR University of 97.09 56 eP **P 00 07 01.3 +0.1**
ULN Ulaanbaatar 97.11 319⇑ eP **P 00 07 00.3 -1.0**
SONM Songino Array 97.50 318 P **P 00 07 02.0 -1.0**
comp=Z,7.2nm,0.8s,mb5.0,baz=129,slow=4.1,SNR=40
SONM PP PP 00 10 53.7 -8.5
comp=Z,6.2nm,1.1s,baz=130,slow=5.8,SNR=4.4
SONM PKKP PKKPbc 00 23 40.7 +1.5
comp=Z,3.1nm,0.8s,baz=280,slow=4.2,SNR=6.2
BOD Bodaibo 97.67 330 eP **P 00 07 01.7 -2.1**
BOD pmax pmax
comp=Z,17nm,1.9s,mb5.2
OXF Oxford 99.27 57 P Pdif 00 07 11.0 0.0
OXF pmax pmax
comp=Z,53nm,1.2s,mb5.8
OXF Oxford 99.27 57 ePdif Pdif 00 07 10.1 -0.9
comp=Z,53nm,1.3s
FVM French Village 99.65 53 eP Pdif 00 07 11.3 -1.3
TIXI Tiksi 100.00 345 eP Pdif 00 07 11.7 -2.5
TIXI e*SS Sdif 00 18 40.3 +5.5
TIXI pmax pmax
comp=Z,26nm,0.9s
TIXI pmax pmax
comp=N,5.0nm,1.0s
TIXI pmax pmax
comp=E,41nm,0.9s
TIXI pmax pmax
comp=Z,55nm,1.1s

TIXI MLR MLR
comp=Z,444nm,21.0s
LPAZ La Paz 100.19 112 Pdiff Pdif 00 07 17.8 +2.8
LPAZ La Paz 100.19 112 P Pdif 00 07 18.7 +3.7
comp=Z,20nm,1.0s,baz=260,slow=2.8,SNR=52
LPAZ PP PP 00 11 21.9 -0.8
comp=Z,11nm,1.1s,baz=251,slow=6.8,SNR=8.2
LPAZ La Paz 100.19 112 P Pdif 00 07 18.7 +3.7
LPAZ PP PP 00 11 21.9 -0.8
ULM Lac du Bonnet 100.20 40 P Pdif 00 07 13.7 -1.4
comp=Z,9.6nm,0.9s,baz=252,slow=5.3,SNR=12
ZAK Zakamensk 100.36 320 eP Pdif 00 07 13.3 -2.5
ZAK pmax pmax
comp=Z,6.0nm,2.0s
ZAK pmax pmax
comp=Z,7.0nm,2.2s
ZAK pmax pmax
comp=Z,13nm,2.0s
SIUC Southern Illin 100.47 54 ePdif Pdif 00 07 17.6 +1.4
TLY Talaya 100.60 321 eP Pdif 00 07 13.2 -3.7
TLY e 00 17 40.4
TLY eS Sdif 00 18 40.6 +0.8
TLY ePS PS 00 20 12.2 -18
TLY ePPS 00 21 07.8
TLY pmax pmax
comp=Z,12nm,1.8s
LRAL Lakeview Retre 100.70 59 ePdif Pdif 00 07 16.2 -1.1
comp=Z,12nm,1.1s
WVT Waverly 101.02 56 eP Pdif 00 07 18.0 -0.7
WVT e 00 11 26.2
WVT pmax pmax
comp=Z,9.0nm,0.9s
WVT Waverly 101.02 56 ePdif Pdif 00 07 18.0 -0.7
comp=Z,8.7nm,0.9s
WVT ePP PP 00 11 26.2 -2.8
JFWS Jewell Farm 101.38 48 P Pdif 00 07 20.5 +0.2
JFWS pmax pmax
comp=Z,27nm,0.8s
JFWS Jewell Farm 101.38 48 ePdif Pdif 00 07 20.4 +0.1
comp=Z,26nm,0.8s
EYMN Ely 102.14 43 ePdif Pdif 00 07 23.1 -0.5
SWET Sewanee 102.21 57 ePdif Pdif 00 07 23.2 -0.8
CAL Calcutta 102.71 289 ex x 00 11 02.5
CAL ex x 00 15 11.1
ROSC El Rosal 102.80 90 PP PP 00 11 42.0 -0.4
comp=Z,3.0nm,0.4s,baz=74,slow=23,SNR=7.1
ROSC El Rosal 102.80 90 Pdif Pdif 00 07 28.6 +2.0
CPCT Cooper Cave 103.38 57 ePdif Pdif 00 07 31.3 +2.1
MYNC Murphy 103.58 57 P Pdif 00 07 32.9 +2.8
MYNC pmax pmax
comp=Z,18nm,1.2s
MYNC Murphy 103.58 57 ePdif Pdif 00 07 28.8 -1.3
comp=Z,16nm,1.2s
CPUP Villa Florida 104.14 126 Pdiff Pdif 00 07 36.5 +4.0
comp=Z,0.7nm,0.5s,baz=208,slow=2.5,SNR=4.9
CPUP PP PP 00 11 49.4 -2.9
comp=Z,7.3nm,1.1s,baz=217,slow=7.0,SNR=5.2
ACSO Alum Creek Sta 105.84 53 ePP PP 00 12 01.8 -3.1
SIV San Ignacio 106.36 115 Pdiff Pdif 00 07 44.3 +1.8
comp=Z,1.7nm,0.8s,baz=286,slow=4.9,SNR=8.4
SIV PP PP 00 12 06.4 -2.3
comp=Z,14nm,1.2s,baz=243,slow=9.9,SNR=9.0
HLGC Holguin 106.37 74 eP PP 00 12 06.6 -2.2
GUN Gumba 106.39 294 eP PKiKP 00 11 53.7 +0.8
PKI Pulchoki 106.70 294 eP PKiKP 00 11 54.1 +0.6
comp=Z,66nm,1.0s
KKN Kakani 106.87 294 eP PKiKP 00 11 54.4 +0.6
comp=Z,78nm,1.0s
DMN Daman 106.97 293 eP PKiKP 00 11 54.7 +0.7
MDRS Chennai 107.11 278 ex x 00 12 16.0
MDRS ex x 00 13 19.0
GKN Gorkha 107.47 294 eP PKiKP 00 11 55.0 0.0
comp=Z,26nm,0.7s
SDV Santo Domingo 107.63 87 PKiKP PKiKP 00 11 55.0 -0.2
comp=Z,4.7nm,0.7s,baz=325,slow=3.5,SNR=4.5
SDV PP PP 00 12 18.3 +0.4
comp=Z,8.1nm,1.0s,baz=273,slow=7.9,SNR=9.2
SDV Santo Domingo 107.63 87 ePKiKP PKiKP 00 11 55.4 +0.1
SDV ePP PP 00 12 18.2 +0.2
SDV PP PP 00 12 18.3 +0.4
SAML Samuel 107.71 107 ePdif Pdif 00 07 51.7 +3.2
comp=Z,4.0nm,1.1s
SAML ePP PP 00 12 17.9 -0.6
MCWV Mont Chateau 108.05 54 PKiKP PKiKP 00 11 55.9 -0.2
ALLY Alegheny Colle 108.27 52 ePKiKP PKiKP 00 11 56.0 -0.5
ALLY ePP PP 00 12 17.0 -5.6
KOLN Koldanda 108.30 293 eP PKiKP 00 11 56.6 +0.1
SADO Sadowa 109.62 49 PKiKP PKiKP 00 11 57.4 -1.5
comp=Z,18nm,1.2s,baz=257,slow=7.4,SNR=3.3
SADO Sadowa 109.62 49 PKPdf PKiKP 00 11 57.4 -1.6
SSPA Standing Stone 109.72 53 PP PP 00 12 28.2 -4.9
HYB Hyderabad 109.98 281 i PKP PKiKP 00 12 01.0 +1.4
HYB ePP PP 00 12 40.0 +5.0
HYB eSKS SKSac 00 18 24.0 +1.4
HYB e 00 19 20.0
HYB eSP SP 00 21 48.0 +0.8
HYB e 00 23 04.0
MKAR Makanchi Array 113.00 313 Pdiff Pdif 00 08 10.7 -1.3
comp=Z,0.4nm,0.3s,baz=86,slow=5.9,SNR=5.5
MKAR PKiKP PKiKP 00 12 04.3 -1.1
comp=Z,12nm,0.6s,baz=84,slow=0.9,SNR=39
MKAR PP PP 00 12 50.9 -5.7
comp=Z,9.8nm,0.9s,baz=79,slow=6.3,SNR=5.2
MKAR SKP 00 15 26.3
comp=Z,23nm,1.2s,baz=66,slow=3.0,SNR=8.2
MKAR Makanchi Array 113.00 313 P Pdif 00 08 10.7 -1.3
MKAR e 00 12 04.3
MKAR e 00 15 26.3
NVS Novosibirsk 113.21 322 i PKiKP PKiKP 00 12 04.5 -1.3
NVS i 00 18 34.4
NVS pmax pmax
comp=N,15nm,1.4s
NVS pmax pmax
comp=Z,48nm,1.4s
NVS pmax pmax
comp=E,29nm,1.5s
SJG San Juan 114.58 79 PKP PKiKP 00 12 08.1 -0.3
comp=E,41nm,1.0s,baz=265,slow=3.1,SNR=7.2
KURK Kurchatov 115.76 317 ePKiKP PKPdf 00 12 09.7 -1.0
AJM Ajmer 115.76 290 i P PKPdf 00 12 11.0 +0.3
PKME Peaks-Kenny Pk 116.61 49 ePKPdf PKPdf 00 12 11.8 -0.5
PKME epPKPdf pPKPdf 00 12 52.2 -2.4
FRB Frobisher Bay 116.75 28 PKP PKPdf 00 12 10.9 -1.7
comp=E,17nm,0.7s,baz=316,slow=1.2,SNR=9.1
BDFB Brasilia 117.28 122 PKP PKPdf 00 12 14.2 +0.6
comp=E,9.7nm,0.8s,baz=152,slow=1.6,SNR=11
BDFB PKKPbc PKKPbc 00 22 39.5 +2.0
comp=E,9.0nm,0.7s,baz=72,slow=4.0,SNR=11
CAM4 Nova Friburgo 117.30 131⇑ iP PKPdf 00 12 14.7 +1.1
CAM4 *i* 00 12 16.4
CAM4 *i* 00 12 26.5
TKM2 Tokmak 2 117.36 308 P PKPdf 00 12 14.1 +0.3
SNR=11
KZA Kyzart 117.54 307 P PKPdf 00 12 16.5 +2.4
SNR=5.5
KBK Karagaybulak 117.81 308 P PKPdf 00 12 15.2 +0.6
SNR=15
CHMS Chumysh 117.98 308 P PKPdf 00 12 15.2 +0.2
SNR=20
FRU Bishkek 118.07 308 i PKIKP PKPdf 00 12 16.0 +0.9
FRU e 00 18 56.0
FRU pmax pmax
comp=Z,180nm,1.6s
UCH Uchtor 118.10 307 P PKPdf 00 12 16.6 +1.4
SNR=7.6
AAK Ala-Archa 118.14 308 P PKPdf 00 12 15.5 +0.2
SNR=8.2
AAK Ala-Archa 118.14 308 ePKPdf PKPdf 00 12 14.6 -0.7
USP Ospenovka 118.18 309 P PKPdf 00 12 15.4 +0.1
SNR=21
SCHQ Schefferville 118.31 38 PKP PKPdf 00 12 14.0 -1.6
comp=Z,11nm,0.9s,baz=340,slow=4.0,SNR=8.6
EKS2 Erkin-Say 118.67 308 P PKPdf 00 12 17.0 +0.7
SNR=20
AML Almayashu 118.70 307 P PKPdf 00 12 17.5 +1.2
SNR=30
CHKZ Chkalovo 120.62 321 ePKPdf PKPdf 00 12 18.6 -1.4
CHKZ e 00 12 57.9
BVAR Borovoye Array 120.81 320 PKP PKPdf 00 12 19.5 -0.9
comp=Z,32nm,0.4s,baz=131,slow=1.4,SNR=186
BVAR SKP 00 15 41.3
comp=Z,36nm,1.1s,baz=108,slow=3.4,SNR=8.6
BVAR Borovoye Array 120.81 320 PKPdf PKPdf 00 12 19.5 -0.9
BRVK Borovoye 120.87 320 ePKIKP PKPdf 00 12 19.8 -0.7
OPO Ambohidratompo 121.87 230 PKP PKPdf 00 12 24.4 +2.0

comp=Z,32nm,0.8s,baz=149,slow=1.5,SNR=35
KBS Kingsbay 122.25 358 *e*PKPdf PKPdf 00 12 22.5 -0.6
KBS *ep*PKPdf pPKPdf 00 13 08.2 +2.7
KBS *e*PP PP 00 13 56.4 -4.3
SPB4 Spitsbergen Ar 122.81 357 *e*PKPdf PKPdf 00 12 23.4 -0.8
SPB4 *ep*PKPdf pPKPdf 00 13 03.9 -2.6
SPB4 *e*PP PP 00 14 00.5 -4.0
SFJD Kangerlussuaq 123.10 22 PKP PKPdf 00 12 23.4 -1.4
comp=Z,34nm,0.5s,baz=170,slow=1.2,SNR=9.1
SFJD Kangerlussuaq 123.10 22 *i* P PKPdf 00 12 23.4 -1.4
comp=Z,38nm,0.6s
SFJD Kangerlussuaq 123.10 22 *i* PKIKP PKPdf 00 12 23.4 -1.4
SFJD pmax pmax
comp=Z,38nm,0.6s
DAG Danmarks Havn 123.42 6⇑ *i*P PKPdf 00 12 23.7 -1.7
comp=Z,28nm,0.8s
DAG Danmarks Havn 123.42 6⇑ *i*PKIKP PKPdf 00 12 23.7 -1.7
DAG pmax pmax
comp=Z,28nm,0.8s
SUMG Summit 123.58 14 *e*PKPdf PKPdf 00 12 25.6 -0.1
SUMG *ep*PKPdf pPKPdf 00 13 07.9 0.0
SUMG *e*SKPdf SKPdf 00 15 47.8 +1.9
SUR Sutherland 124.14 197 PKP PKPdf 00 12 28.3 +1.5
comp=Z,79nm,0.9s,baz=128,slow=2.4,SNR=30
SVE Sverdlovsk 125.64 326 *e*PKIKP PKPdf 00 12 27.0 -2.7
SVE *e* 00 13 00.0
SVE *e* 00 19 22.0
SVE pmax pmax
comp=Z,240nm,1.8s
SVE MLR MLR
comp=N,300nm,15.0s
SVE MLR MLR
comp=E,300nm,15.0s
SVE MLR MLR
comp=Z,400nm,15.0s
BOSA Boshof 126.18 203 PKP PKPdf 00 12 32.5 +1.9
comp=Z,40nm,0.9s,baz=129,slow=2.7,SNR=41
SOKR Solikamsk 126.67 330*d* *i*PKIKP PKPdf 00 12 31.3 -0.3
SOKR pmax pmax
comp=Z,130nm,0.9s
ARU Arti 126.85 325 *i* PKIKP PKPdf 00 12 31.5 -0.5
ARU *e* 00 19 20.9
ARU *e*PS PS 00 24 23.1 -14
ARU Arti 126.85 325 *i* PKPdf PKPdf 00 12 31.5 -0.5
ARU *e* 00 19 20.9
ARU *e*PS PS 00 24 23.1 -14
ARU LR LR
comp=Z,600nm,20.0s
LBTB Lobatse 129.27 206 PKP PKPdf 00 12 38.3 +1.7
comp=Z,13nm,0.6s,baz=166,slow=5.0,SNR=5.6
LBTB SKPbc 00 15 47.1
comp=Z,19nm,1.0s,baz=154,slow=5.6,SNR=6.5
KEV Kevo 129.61 350 *e*PKP 00 12 23.3
KEV *e*PKPdf PKPdf 00 12 36.0 -1.2
KEV *ep*PKPdf pPKPdf 00 13 18.7 -0.8
LVZ Lovozero 129.64 345⇓ PKIKP PKPdf 00 12 36.7 -0.6
LVZ *e* 00 19 29.5
JMIC Jan Mayen 129.83 5 PKP PKPdf 00 12 37.0 -0.6
comp=Z,41nm,0.8s,baz=135,slow=5.2,SNR=7.7
JMIC SKPbc 00 15 46.8
comp=Z,14nm,0.7s,baz=131,slow=9.1,SNR=3.2
SMDO Samad 129.98 283 P PKPdf 00 12 40.5 +2.6
SNR=18
BIDO Bidbid 129.98 283 P PKPdf 00 12 40.4 +2.5
SNR=15
ARCES ARCESS Array B 130.05 350 PKP PKPdf 00 12 37.3 -0.8
comp=Z,35nm,0.7s,baz=27,slow=0.7,SNR=65
ARCES *p*PKP pPKPdf 00 13 18.9 -1.5
comp=Z,5.5nm,0.5s,baz=66,slow=3.1,SNR=1.1
ARCES SKPbc SKPbc 00 15 46.2 +0.4
comp=Z,53nm,1.0s,baz=23,slow=4.0,SNR=15
ARE0 ARCESS Array S 130.05 350 *e*PKPdf PKPdf 00 12 37.2 -0.8
ARE0 *ep*PKPdf pPKPdf 00 13 21.2 +0.9
ARE0 *e*PP PP 00 14 48.8 -3.5
APA Apatity 130.19 346⇑ *i*PKIKP PKPdf 00 12 36.8 -1.5
APA *e* 00 14 48.0
APA *i* 00 19 32.0
APA pmax pmax
comp=Z,30nm,0.8s
APA MLR MLR
comp=Z,500nm,19.0s
BSY Bisya 130.71 282⇑ P PKPdf 00 12 40.8 +1.5
SNR=16
HOQ Hoqain 130.73 283 P PKPdf 00 12 41.2 +1.9
SNR=14
TRO Tromso 130.86 353 *e*P PKPdf 00 12 38.2 -1.4
KTK1 Kautokeino 130.88 351 *e*P PKPdf 00 12 38.3 -1.3
KTK1 AMb AMB 00 12 41.5
comp=Z,62nm,2.0s
ARQ Araqi 131.41 283 P PKPdf 00 12 42.4 +1.8
SNR=10
BANOM Banah 131.94 286⇓ P PKPdf 00 12 41.9 +0.3
SNR=6.2
HATD Hatta, Dubai 131.97 285⇑ P PKPdf 00 12 43.2 +1.5
SNR=46
ASHO Ashiyiah 132.02 284 P PKPdf 00 12 43.6 +1.8
SNR=24
RCBR Riachuelo 132.62 120 *e*PKPdf PKPdf 00 12 44.1 +1.2
RCBR *ep*PKPdf pPKPdf 00 13 25.5 +0.3
WHFO Wadi Hawf 132.96 275 P PKPdf 00 12 46.1 +2.5
SNR=7.1
ABTO Aybut 133.27 274⇑ P PKPdf 00 12 46.0 +1.9
SNR=5.2
KLMR Klimovskoe 133.33 337 *i* PKHKP 00 12 35.3
KLMR pmax pmax
comp=Z,100nm,1.9s
BORG Borgarnes 133.56 15 SKPbc SKPbc 00 15 58.9 +0.6
comp=Z,46nm,1.2s,baz=55,slow=2.7,SNR=4.4
PECR Pechory 134.17 330 *e*PKIKP PKPdf 00 12 44.7 -1.1
PECR *e* 00 19 44.0
PECR pmax pmax
comp=Z,270nm,2.0s
PECR pmax pmax
comp=Z,400nm,2.0s
JOF Joensuu 134.45 343 *e*pkp 00 12 34.3
MOR8 Moi Rana 134.67 354 *e*P PKPdf 00 12 40.2 -6.6
MOR8 AMb AMB 00 12 47.4
comp=Z,22nm,0.9s
KAF Kangasniemi 136.42 345 *e*pkp 00 12 36.3
LSZ Lusaka 136.43 215 PKHKP 00 12 39.8
comp=Z,4.1nm,0.6s,baz=125,slow=1.8,SNR=7.6
LSZ PKP PKPdf 00 12 52.4 +2.3
comp=Z,30nm,0.8s,baz=140,slow=1.6,SNR=34
LSZ PP PP 00 15 33.1 +0.2
comp=Z,8.4nm,1.0s,baz=142,slow=4.8,SNR=5.5
LSZ SKPbc SKPbc 00 16 10.3 +2.9
comp=Z,12nm,1.0s,baz=126,slow=4.5,SNR=4.4
LSZ Lusaka 136.43 215 PKHKP 00 12 39.8
LSZ 00 12 52.4
LSZ 00 13 33.1
FIA1 FINESS Array S 137.05 344 PKP 00 12 38.4
FINES FINESS Array B 137.05 344 PKhKP 00 12 37.7
comp=Z,3.0nm,0.4s,baz=60,slow=3.4,SNR=36
FINES PKP PKPdf 00 12 50.1 -1.0
comp=Z,30nm,0.8s,baz=66,slow=3.4,SNR=24
FINES PP PP 00 15 32.5 -4.2
comp=Z,16nm,1.0s,baz=32,slow=7.6,SNR=7.5
FINES SKPbc SKPbc 00 16 10.3 +1.1
comp=Z,122nm,1.0s,baz=62,slow=4.5,SNR=34
FINES FINESS Array B 137.05 344 PKHKP 00 12 37.7
FINES 00 12 50.2
FINES 00 15 32.6
FINES FINESS Array B 137.05 344 PKP 00 12 37.7
FINES PKP PKPdf 00 12 50.1 -1.0
FINES PP PP 00 15 32.5 -4.2
FINES SKPbc SKPbc 00 16 10.3 +1.1
PUL Pulkovo 137.25 341*c* *i*PKIKP PKPdf 00 12 48.0 -3.6
MOS Moscow 137.44 332⇑ *i*PKIKP PKPdf 00 12 50.9 -1.0
MOS pmax pmax
comp=Z,200nm,2.0s
MOS pmax pmax
comp=Z,88nm,1.2s
TSUM Tsumeb 137.49 199 PKhKP 00 12 43.4
comp=Z,4.3nm,0.9s,baz=325,slow=17,SNR=4.7
TSUM PKP PKPdf 00 12 53.5 +1.5
comp=Z,34nm,1.0s,baz=141,slow=3.1,SNR=14
TSUM PP PP 00 15 41.2 +1.7
comp=Z,8.4nm,0.8s,baz=126,slow=8.5,SNR=7.7
TSUM SKP 00 16 13.6
comp=Z,44nm,1.0s,baz=136,slow=2.1,SNR=6.0
TSUM Tsumeb 137.49 199 PKP PKPdf 00 12 43.4 -8.6
TSUM PKP PKPdf 00 12 53.5 +1.5
TSUM PP PP 00 15 41.2 +1.7
TSUM SKP 00 16 13.6
MAK Makhachkala 137.77 311 *i* PKIKP PKPdf 00 12 49.6 -2.9
MAK *i* SS SS 00 33 43.7 +6.1
VRHR Novokhopersk 138.18 325 *e*PKIKP PKPdf 00 12 53.1 -0.2
VRHR pmax pmax
comp=Z,20nm,0.6s
VRHR pmax pmax
comp=N,3.0nm,0.3s
VRHR pmax pmax
comp=E,20nm,0.7s
OBN Obninsk 138.30 332*k* *i*PKHKP 00 12 44.5
OBN *i* 00 12 53.4
OBN *i* 00 15 39.4
OBN *e* 00 28 02.8
OBN pmax pmax
comp=Z,34nm,0.9s
OBN pmax pmax
comp=Z,204nm,1.7s
OBN MLR MLR
comp=Z,400nm,21.0s
OBN Obninsk 138.30 332 *i* PKPdr 00 12 44.5
OBN *i* 00 12 53.4
OBN *i* 00 15 39.4
OBN *e* 00 28 02.8
OBN LR LR
comp=Z,400nm,21.0s
DOMB Dombas 139.18 356 *e*P 00 12 44.8
VRSR Storozhevoye 139.41 326 *i* PKHKP 00 12 45.6
VRSR *e* 00 15 48.8
VRSR pmax pmax
comp=Z,20nm,0.9s
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,10.0nm,0.7s
QRN Al-Qurain 139.53 290 *e*P PKPdf 00 12 49.1 -6.7
QRN AMb AMB 00 13 03.2
comp=Z,463nm,1.7s
UMR Umm Al-Rimmam 139.70 291 *e*P PKPdf 00 12 52.0 -4.1
UMR AML AML 00 13 01.5
comp=Z,64nm,0.4s
RDF Al-Radifah 139.86 290 *e*P PKPdf 00 12 48.8 -7.6
RDF AMb AMB 00 13 02.0
comp=Z,452nm,1.2s
NB2 NORSAR Subarra 140.01 354 PKPa 00 12 46.9
comp=Z,22nm,0.8s,baz=17,slow=2.6
NB2 NORSAR Subarra 140.01 354 PKPa 00 12 46.9
comp=Z,22nm,0.8s,baz=17,slow=2.6
NOA NORSAR Array B 140.01 354 PKhKP 00 12 47.2
comp=Z,6.0nm,0.8s,baz=358,slow=2.4,SNR=20
NOA SKP 00 16 19.0
comp=Z,81nm,1.0s,baz=15,slow=4.5,SNR=23
NOA NORSAR Array B 140.01 354 PKP PKPdf 00 12 47.2 -9.4
NOA SKP 00 16 19.0
TBLG Delisi 140.09 310 P PKPdf 00 12 50.7 -6.1
TBLG S 00 16 21.6
NAY Al-Naaiem 140.12 290 *e*P PKPdf 00 12 48.7 -8.1
NAY AMb AMB 00 13 01.6
comp=Z,145nm,1.2s
NAO01 NORSAR Array S 140.23 355 PKPdf PKPdf 00 12 49.0 -8.1
NAO01 *e*SKP 00 16 19.3
RST Umm Al-Ruwaisa 140.33 291 *e*P PKPdf 00 12 50.6 -6.6
RST AMb AMB 00 13 02.4
comp=Z,314nm,1.0s
ZEI Tsey 140.35 312 *e*PKIKP PKPdf 00 13 00.4 +3.2
KMBO Kilima Mbogo 140.40 240 PKhKP 00 12 52.7
comp=Z,18nm,0.8s,baz=76,slow=4.5,SNR=30
KMBO SKPbc SKPbc 00 16 22.2 +3.7
comp=Z,42nm,1.2s,baz=80,slow=3.6,SNR=11
KMBO Kilima Mbogo 140.40 240⇑ P PKPdf 00 12 52.7 -4.6
SNR=12
KMBO Kilima Mbogo 140.40 240 PKP PKPdf 00 12 52.7 -4.6
KMBO SKPbc SKPbc 00 16 22.2 +3.7
GNI Garni 140.55 308 *e*P PKPdf 00 12 50.6 -7.0
GNI Garni 140.55 308⇑ *i*PKP PKPdf 00 12 51.5 -6.1
HFS Hagfors 140.63 352 SKPbc SKPbc 00 16 20.2 +1.1
comp=Z,80nm,1.0s,baz=17,slow=1.5,SNR=28
ONI Oni 140.73 312 P PKPdf 00 12 52.3 -5.6
ONI S 00 16 23.6
KIV Kislovodsk 140.75 314*c* PKHKP 00 12 53.1
KIV *i* 00 12 58.7
KIV *e* 00 28 10.1
KIV pmax pmax
comp=Z,11nm,0.7s
KIV pmax pmax
comp=Z,111nm,1.4s
KIV MLR MLR
comp=Z,400nm,18.0s
KIV Kislovodsk 140.75 314⇑ *e*PKP PKPdf 00 12 53.1 -4.8
KIV *i* 00 12 58.7
KIV *e* 00 28 10.1
KIV LR LR
comp=Z,400nm,18.0s
ATD Arta Tunnel 141.39 262 SKPbc SKPbc 00 16 24.8 +3.7
comp=Z,70nm,1.1s,baz=144,slow=1.9,SNR=11
CLDR Caldiran 141.44 306 *e*P PKPdf 00 12 53.9 -5.3
DIGO Kars 141.48 309 *i* P PKPdf 00 12 56.8 -2.4
KONO Kongsberg 141.52 355 PKPdf PKPdf 00 12 52.4 -7.0
KONO *ep*PKPdf pPKPdf 00 13 38.6 -3.1
KARS Kars 141.62 309 *e*P PKPdf 00 12 53.4 -6.2
BLS5 Blasjo 141.92 358 *e*P PKPdf 00 12 54.4 -5.6
BLS5 AMb AMB 00 13 00.5
comp=Z,58nm,1.5s
HKR Hakkari 141.97 304 *e*P PKPdf 00 12 56.2 -3.9
VANB Van 141.98 306 *e*P PKPdf 00 12 53.4 -6.8
CUKT Cukurca 142.15 304 P PKPdf 00 12 54.5 -6.0
MNK Minsk 142.25 337 *e*PKHKP 00 12 55.0
MNK pmax pmax
comp=Z,460nm,0.8s
BHD Baghdad 142.26 297 *ex* x 00 12 53.0
BHD *i* x x 00 16 23.0
BHD *i* x x 00 16 27.0
BHD *ex* x 00 19 33.0
BHD *ex* x 00 22 43.0
BCA Borcka 142.40 311 *e*P PKPdf 00 12 54.0 -6.9
MSL Mosul 142.77 302 *i* x x 00 12 59.5
MSL *i* x x 00 16 29.5
ERZM Erzurum 143.10 309 *i* P PKPdf 00 12 59.5 -2.6
EZM Erzurum 143.10 309 *e*P PKPdf 00 12 58.7 -3.5
KAC Achnashellach 143.29 8 *e*P PKPdf 00 12 56.4 -6.1
KAC Achnashellach 143.29 8 *e*P PKPdf 00 12 56.4 -6.1
KPL Plockton 143.40 9 *e*P PKPdf 00 12 57.4 -5.3
KPL Plockton 143.40 9 *e*P PKPdf 00 12 57.4 -5.3
MCD Coleburn Disti 143.45 6 *e*P PKPdf 00 12 57.3 -5.4
MCD Coleburn Disti 143.45 6 *e*P PKPdf 00 12 57.3 -5.4
BTMT Batman 143.53 306 *e*P PKPdf 00 13 00.9 -2.0
BNGL BINGOL 143.56 307 *i* P PKPdf 00 13 02.4 -0.6
ANN Anapa 143.78 318*d* *i*PKHKP 00 13 00.0
ANN *e* 00 16 27.0
ANN *e*PPP 00 19 27.1
ANN pmax pmax
comp=Z,215nm,0.9s
DESE Dese 144.20 259 *e*P PKPdf 00 13 05.0 +1.0
SUW Suwalki 144.22 340 *e*PKP PKPdf 00 13 01.1 -3.0
SUW *e*PKIKP PKIKP 00 13 02.4 -5.3
SUW *ep*PKP pPKPdf 00 13 46.0 -0.4
SUW *e*PP PP 00 16 29.9 +9.5
SUW *e*SKKS SKKSac 00 22 54.9 -2.4
SUW L 01 03 01.6
comp=Z,1.1nm,35.3s
SUW Suwalki 144.22 340 *e*PKP PKPdf 00 13 01.1 -3.0
SUW *e*PKPdf PKPdf 00 13 02.4 -1.7
SUW *ep*PKP pPKPdf 00 13 46.0 -0.4
SUW *e*PP PP 00 16 29.9 +9.5
SUW *e*SKKS SKKSac 00 22 54.9 -2.4
EZC Erzincan 144.28 309 P PKPdf 00 13 04.7 +0.5
MARD Mardin 144.31 305 *i* P PKPdf 00 13 02.9 -1.3
KELT Kelkit 144.54 310 *i* P PKPdf 00 13 03.3 -1.3
AKASG Malin Array Be 144.56 332 PKP PKPdf 00 13 02.2 -2.5
comp=Z,317nm,0.5s,baz=41,slow=4.4,SNR=958
AKASG pPKP pPKPdf 00 13 45.2 -1.8
comp=Z,14nm,0.5s,baz=38,slow=3.6,SNR=1.1
AKASG SKPbc SKPbc 00 16 30.4 +1.6
comp=Z,39nm,0.9s,baz=33,slow=2.2,SNR=12
AKASG Malin Array Be 144.56 332 PKPdf PKPdf 00 13 02.2 -2.5
AKASG *e* 00 16 30.4
AKBB Malin Array Si 144.56 332 *e*PKIKP PKPdf 00 13 02.3 -2.4
AKBB *e* 00 16 30.8
DIY Diyarbakir 144.56 306 P PKPdf 00 13 03.4 -1.3
EAB Aberfoyle 144.69 8 *e*P PKPdf 00 13 01.6 -3.3
EAB Aberfoyle 144.69 8 *e*P PKPdf 00 13 01.6 -3.3
MUD Monsted U'grnd 144.72 355⇓ *i*P PKPdf 00 13 03.8 -1.2
comp=Z,173nm,0.8s
MUD *i* 00 34 59.2
MUD Monsted U'grnd 144.72 355⇓ *i*PKIKP PKPdf 00 13 03.8 -1.2
MUD *i* 00 34 59.2
MUD pmax pmax
comp=Z,170nm,0.8s
PTK Pertek 144.87 308 *e*P PKPdf 00 13 05.2 0.0
GRSN GIRESUNGRSN 144.94 312 *i* P PKPdf 00 13 03.8 -1.6
PGBU Glenifferbraes 145.04 8 *e*P PKPbc 00 13 02.4 -2.9
PGBU Glenifferbraes 145.04 8 *e*P PKPbc 00 13 02.4 -2.9
EDI Edinburgh 145.09 7 *e*P PKPbc 00 13 04.1 -1.3
EDI Edinburgh 145.09 7 *e*P PKPbc 00 13 04.1 -1.3
COP Copenhagen 145.12 351⇓ *i*P PKPbc 00 13 04.9 -0.6
comp=Z,114nm,0.7s
COP Copenhagen 145.12 351⇓ *i*PKIKP PKPdf 00 13 04.9 -0.7
COP pmax pmax
comp=Z,110nm,0.7s
EAU Auchinoon 145.14 7 *e*P PKPbc 00 13 02.3 -3.3
EAU Auchinoon 145.14 7 *e*P PKPbc 00 13 02.3 -3.3
ESY Stoneypath 145.16 6 *e*P PKPbc 00 13 02.6 -3.0
ESY Stoneypath 145.16 6 *e*P PKPbc 00 13 02.6 -3.0
EBL Broad Law 145.25 7 *e*P PKPdf 00 13 01.7 -4.2
EBL Broad Law 145.25 7 *e*P PKPdf 00 13 01.7 -4.2
BSD Bornholm Skovb 145.27 349⇓ *i*P PKPdf 00 13 05.3 -0.6
comp=Z,268nm,0.7s
BSD *i* 00 13 45.2
BSD *i* 00 16 03.3
BSD *i* 00 27 36.8
BSD *e* 00 29 56.5
BSD Bornholm Skovb 145.27 349⇓ *i*PKIKP PKPdf 00 13 05.3 -0.6
BSD pmax pmax
comp=Z,270nm,0.7s
ELZG Elazig 145.31 307 *i* P PKPdf 00 13 07.5 +1.6
GMK Mull of Kintyr 145.34 9 *e*P PKPdf 00 13 03.9 -2.1
GMK Mull of Kintyr 145.34 9 *e*P PKPdf 00 13 03.9 -2.1
GCL Cushendall 145.51 10 *e*P PKPdf 00 13 04.7 -1.6
GCL Cushendall 145.51 10 *e*P PKPdf 00 13 04.7 -1.6
ESK Eskdalemuir 145.68 7 *e*P PKPdf 00 13 04.3 -2.3
ESK Eskdalemuir 145.68 7 *e*P PKPdf 00 13 04.3 -2.3
ESK Eskdalemuir 145.68 7 *e*PKPdf PKPdf 00 13 05.6 -1.1
ESK *ep*PKPdf pPKPdf 00 13 48.8 -0.1
ESK *es*PKPdf PKPdf 00 14 04.2
SIM Simferopol' 145.72 320*d* *i*PKIKP PKPdf 00 13 07.0 +0.3
SIM *i* 00 16 33.0
SIM pmax pmax
comp=Z,890nm,0.9s
SIM pmax pmax
comp=Z,100nm,6.9s
URFA Urfa 145.76 306 *e*P PKPdf 00 13 07.5 +0.7
BWH Wardlaw 145.77 8 *e*P PKPdf 00 13 02.5 -4.2
BWH Wardlaw 145.77 8 *e*P PKPdf 00 13 02.5 -4.2
MYA Malataya 145.78 307 *e*P PKPdf 00 13 08.1 +1.3
MALT Malataya 145.78 307⇓ *i*P PKPdf 00 13 08.8 +2.0
MALT Malataya 145.78 307⇓ P PKPdf 00 13 08.8 +2.0
ASCN Ascension 145.87 147 *e*PKP PKPdf 00 13 09.0 +2.0
ASCN *ep*PKPdf pPKPdf 00 13 52.3 +3.0
BHH Howats Hill 145.90 7 P PKPdf 00 13 05.7 -1.3
BHH Howats Hill 145.90 7 *e*P PKPdf 00 13 02.0 -5.0
BHH *e*P 00 13 05.7
BHH Howats Hill 145.90 7 *e*P PKPdf 00 13 02.0 -5.0
BHH *e*P 00 13 05.7
GAL1 Galloway 145.93 9 *e*P PKPdf 00 13 05.5 -1.6
GAL1 Galloway 145.93 9 *e*P PKPdf 00 13 05.5 -1.6
RGN Rugen 146.08 350 PKP PKPdf 00 13 07.9 +0.6
ATAB Bozova 146.15 306 *i* P PKPdf 00 13 09.5 +2.1
SVSK Karacayir 146.23 311 *e*P PKPdf 00 13 07.6 +0.1
SVST Sivas 146.32 311 *i* P PKPdf 00 13 10.1 +2.4
GMM Mts of Mourne 146.34 10 *e*P PKPdf 00 13 07.4 -0.4
GMM Mts of Mourne 146.34 10 *e*P PKPdf 00 13 07.4 -0.4
TOKT Tokat 146.38 312 *e*P PKPdf 00 13 09.6 +1.8
KVT Kavak 146.40 313 *e*P PKPdf 00 13 08.1 +0.2
WAR Warsaw 146.41 341 *e*PKP PKPdf 00 13 10.1 +2.3
WAR *e*PKiKP PKiKP 00 13 11.7 -0.5
WAR *e*PP PP 00 16 35.7 +2.3
WAR *e*SKKS SKKSac 00 23 09.6 -0.7
WAR *e*P 00 35 10.8
WAR *e*SS 00 36 22.7
WAR L 01 06 32.8
comp=Z,0.6nm,34.2s
WAR Warsaw 146.41 341 *e*PKP2 PKPab 00 13 10.1 -0.5
WAR *e* 00 16 35.7
CKE Keswick 146.41 7 *e*P PKPdf 00 13 07.4 -0.5
CKE Keswick 146.41 7 *e*P PKPdf 00 13 07.4 -0.5
XDE Dent Fell 146.44 8 *e*P PKPdf 00 13 06.6 -1.3
XDE Dent Fell 146.44 8 *e*P PKPdf 00 13 06.6 -1.3
GKP Gorka Klasztor 146.51 345 *e*PKP PKPdf 00 13 08.0 0.0
GKP *e*PKiKP PKiKP 00 13 09.8 -2.6
GKP *ep*PKP pPKPdf 00 13 50.4 0.0
GKP *e*PP PP 00 16 35.5 +1.5
GKP *e*SKKS SKKSac 00 23 09.6 -0.7
GKP *e* 00 35 10.8
GKP *e*SS 00 36 18.8
GKP L 01 05 50.6
comp=Z,0.8nm,33.1s
GKP Gorka Klasztor 146.51 345 *e*PKIKP PKPdf 00 13 08.0 0.0
GKP *i* 00 13 09.8
GKP *e* 00 16 35.5
GKP *e*SS 00 36 18.8
GIM North Isle of 146.52 9 *e*P PKPdf 00 13 07.6 -0.5
GIM North Isle of 146.52 9 *e*P PKPdf 00 13 07.6 -0.5
WIM Isle of Man 146.63 9 *e*P PKPdf 00 13 07.1 -1.1
WIM Isle of Man 146.63 9 *e*P PKPdf 00 13 07.1 -1.1
CDU1 Dunnerdale 146.65 7 *e*P PKPdf 00 13 08.1 -0.2
CDU1 Dunnerdale 146.65 7 *e*P PKPdf 00 13 08.1 -0.2
DIKM Dikmen 146.68 315 P PKPdf 00 13 08.6 +0.3
GZT Gaziantep 146.74 306 *i* P PKPdf 00 13 10.0 +1.6
PLL Luz 146.89 51 *e*PKP PKPdf 00 13 13.0 +4.3
LWH Whinny Nab 146.90 5 *e*P PKPdf 00 13 08.1 -0.6
LWH Whinny Nab 146.90 5 *e*P PKPdf 00 13 08.1 -0.6
DCN Croghan 146.96 12 *e*P PKPdf 00 13 06.5 -2.3
DCN Croghan 146.96 12⇓ *i*P pPKPdf 00 13 52.8 +1.7
BOYT Boyabat 147.02 314 *i* P PKPdf 00 13 10.2 +1.3
GAZ Gaziantep 147.07 306 *e*P PKPdf 00 13 10.3 +1.4
BYBT Boyabat 147.09 315 *e*P PKPdf 00 13 12.0 +3.0
BSEG Bad Segeberg 147.10 353 *e*PKPdf PKPdf 00 13 08.9 -0.1
BSEG Bad Segeberg 147.10 353 *e*PKIKP PKPdf 00 13 08.9 -0.1
DLF Lyons Farm 147.15 11 *e*P PKPdf 00 13 06.8 -2.3
DLF Lyons Farm 147.15 11⇓ *i*P pPKPdf 00 13 53.5 +2.1
DSB Dublin 147.22 11 *e*PKPdf PKPdf 00 13 08.7 -0.5
DSB *e*PKPbc PKPbc 00 13 11.4 -0.3
DSB *ep*PKPdf pPKPdf 00 13 53.3 +1.7
CALA Caldeira 147.25 51 *e*PKP PKPbc 00 13 12.5 +0.7
HOR Horta 147.32 51 *e*PKP PKPbc 00 13 13.0 +1.0
BZK Bozkurt 147.35 316 P PKPdf 00 13 09.6 +0.2
KIS Kishinev 147.36 328*d* *i*PKIKP PKPdf 00 13 10.0 +0.6
KIS pmax pmax
comp=Z,3μm,2.0s
LVV L'vov 147.39 335 *e*PKIKP PKPdf 00 13 09.8 +0.3
LVV *i* 00 13 12.3
WCB1 Church Bay 147.40 9 *e*P PKPdf 00 13 07.6 -1.9
WCB1 Church Bay 147.40 9 *e*P PKPdf 00 13 07.6 -1.9
CTKT Corum 147.46 313 *i* P PKPdf 00 13 12.1 +2.5
PCND Candelaria 147.47 51 *e*PKP PKPbc 00 13 13.3 +0.9
BNN Bunyan 147.47 310 P PKPdf 00 13 10.7 +1.1
PICO Pico 147.48 51 *e*PKP PKPbc 00 13 13.0 +0.6
WLF1 Llynfaes 147.51 9 *e*P PKPdf 00 13 08.7 -1.0
WLF1 Llynfaes 147.51 9 *e*P PKPdf 00 13 08.7 -1.0
YRC Rhoscolyn 147.52 9 *e*P PKPdf 00 13 05.6 -4.1
YRC Rhoscolyn 147.52 9 *e*P PKPdf 00 13 05.6 -4.1
YOZ Yozgat 147.52 311 *e*P PKPbc 00 13 13.0 +0.4
PVIA Vitoria 147.53 50 *e*PKP PKPbc 00 13 13.1 +0.5
ROSA Rosais 147.53 51 *e*PKP PKPbc 00 13 13.3 +0.7
PTEI Pico do Teixo 147.53 51 *e*PKP PKPbc 00 13 13.3 +0.7
PBOI Pico dos Bois 147.54 51 *e*PKP PKPbc 00 13 13.5 +0.9
SRBC Serra Branca 147.55 50 *e*PKP PKPbc 00 13 13.2 +0.6
STGR Santa Cruz 147.56 50 *e*PKP PKPbc 00 13 13.1 +0.5
LHO Holmfirth 147.57 6 *e*P PKPdf 00 13 08.8 -1.1
LHO Holmfirth 147.57 6 *e*P PKPdf 00 13 08.8 -1.1
VAL Valentia 147.58 16 *e*P PKPdf 00 13 09.4 -0.4
PAMA Santo Amaro 147.59 51 *e*PKP PKPbc 00 13 13.6 +0.9
PGRA Graciosa 147.59 50 *e*PKP PKPbc 00 13 12.8 +0.1
WPM1 Penmaenmawr 147.61 9 *e*P PKPdf 00 13 09.6 -0.2
WPM1 Penmaenmawr 147.61 9 *e*P PKPdf 00 13 09.6 -0.2
PMAN Manadas 147.68 51 *e*PKP PKPbc 00 13 13.7 +0.8
PID Ribeirinha 147.73 51 *e*PKP PKPbc 00 13 14.1 +1.0
CORM Corum 147.77 313 *e*P PKPdf 00 13 11.0 +0.9
TOS Tosya 147.79 314 *e*P PKPdf 00 13 11.9 +1.8
IAS Iasi 147.84 329⇓ *i*P PKPbc 00 13 14.1 +0.7
IAS Iasi 147.84 329 P PKPbc 00 13 14.1 +0.7
BALT Daday 147.96 316 *i* P PKPdf 00 13 11.4 +0.9
RUE Ruedersdorf 147.99 348 *e*PKPdf PKPdf 00 13 10.7 +0.2
RUE *e*PKPbc PKPbc 00 13 13.7 -0.1
RUE Ruedersdorf 147.99 348 *e*PKPdf PKPdf 00 13 10.9 +0.4
RUE *e*PKPbc PKPbc 00 13 14.0 +0.2

RUE ep PKPdf pPKPdf 00 13 57.0 +4.2
KOZT Kozan 148.00 307 eP PKPdf 00 13 11.3 +0.8
COBT Iskenderun 148.01 305 i P PKPdf 00 13 11.5 +1.0
SBD1 Bryn Du 148.04 8 eP PKPdf 00 13 09.9 -0.6
SBD1 Bryn Du 148.04 8 eP PKPdf 00 13 09.9 -0.6
KWP Kalwaria 148.04 337 ePKP PKPdf 00 13 10.4 -0.2
KWP ePKiKP PKiKP 00 13 14.4 -1.2
KWP epPKP pPKPdf 00 13 57.6 +4.7
KWP eSKKS SKKSac 00 23 17.4 -1.4
KWP eSS 00 36 27.0
KWP L 01 06 05.6
comp=Z,0.9nm,35.9s
KWP Kalwaria 148.04 337 ePKIKP PKPdf 00 13 10.4 -0.2
KWP i 00 13 14.4
KWP eSS 00 36 27.0
KWP Kalwaria 148.04 337 ePKP PKPdf 00 13 10.4 -0.2
KWP ePKPdf PKPdf 00 13 10.9 +0.3
KWP ePKPbc PKPbc 00 13 14.2 +0.3
KWP ePKPdf PKPdf 00 13 14.4 +3.8
KWP epPKP pPKPdf 00 13 57.6 +4.7
KWP ePP PP 00 16 40.0 -3.0
KWP eSKKS SKKSac 00 23 17.4 -1.4
KWP eSS 00 36 27.0
ASBA Santa Barbara 148.19 50 ePKP PKPbc 00 13 15.6 +1.3
CDAG Cicekdag 148.19 312 i P PKPdf 00 13 11.0 +0.1
CEYT Ceyhan 148.22 306 eP PKPdf 00 13 11.4 +0.6
PBIS Biscoitos 148.22 50 ePKP PKPbc 00 13 15.7 +1.3
PPAD Pico dos Padre 148.22 50 ePKP PKPbc 00 13 14.9 +0.5
HTY Hatay 148.22 305 eP PKPbc 00 13 14.8 +0.4
CANT Cankiri 148.26 314 eP PKPdf 00 13 13.0 +2.1
PVNV Vila Nova 148.29 50 ePKP PKPbc 00 13 16.0 +1.4
PFAV Pico das Favas 148.36 50 ePKP PKPbc 00 13 16.4 +1.7
ABA1 Baconsthorpe 148.46 3 eP PKPdf 00 13 11.8 +0.5
ABA1 Baconsthorpe 148.46 3 eP PKPdf 00 13 11.8 +0.5
HLM1 Long Mynd 148.47 8 eP PKPdf 00 13 10.4 -0.9
HLM1 Long Mynd 148.47 8 eP PKPdf 00 13 10.4 -0.9
AWI1 Witton 148.53 3 eP PKPdf 00 13 14.6 +3.3
AWI1 Witton 148.53 3 eP PKPdf 00 13 14.6 +3.3
NRDL Niedersach Rie 148.54 353 ePKPdf PKPdf 00 13 12.0 +0.6
OJC Ojcow 148.55 340 ePKIKP PKPdf 00 13 11.2 -0.2
OJC e 00 16 40.0
OJC eSS SS 00 35 38.2 -3.3
OJC Ojcow 148.55 340 ePKPdf PKPdf 00 13 11.2 -0.2
OJC ePP PP 00 16 40.0 -5.9
OJC eSS SS 00 35 38.2 -3.3
OJC LR LR
comp=Z,2µm,22.1s
SAFT Safranbolu 148.57 316 eP PKPdf 00 13 11.4 0.0
BURAR Bucovina Array 148.62 332 ⇓iP PKPdf 00 13 12.4 +0.9
BURAR Bucovina Array 148.62 332 ⇓P PKPdf 00 13 12.4 +0.9
KARA Karaisali 148.65 307 eP PKPdf 00 13 11.4 -0.1
BR131 Keskin Array S 148.65 312 ePKPdf PKPdf 00 13 12.1 +0.5
BR131 ePKPbc PKPbc 00 13 16.0 +0.5
BR131 eSKP 00 16 39.7
BRTR Keskin Array B 148.65 312 PKP PKPdf 00 13 11.7 +0.1
comp=Z,94nm,0.6s,baz=49,slow=1.3,SNR=103
BRTR PKPbc PKPbc 00 13 15.7 +0.2
comp=Z,243nm,0.7s,baz=144,slow=4.0,SNR=610
BRTR pPKPbc pPKPbc 00 13 57.6 +0.1
comp=Z,29nm,0.9s,baz=147,slow=7.3,SNR=0.8
BRTR SKPbc SKPbc 00 16 39.5 +1.6
comp=Z,12nm,0.9s,baz=128,slow=2.0,SNR=3.8
BRTR Keskin Array B 148.65 312 PKIKP PKPdf 00 13 11.7 +0.1
BRTR 00 13 15.7
KRTS Karatas 148.66 306 eP PKPdf 00 13 14.5 +2.9
ASF Jabal al Asfar 148.66 297 PKP PKPdf 00 13 12.3 +0.7
comp=Z,328nm,0.8s,baz=344,slow=1.2,SNR=45
ASF PKPbc PKPbc 00 13 16.6 +1.1
comp=Z,328nm,0.8s,baz=325,slow=1.1,SNR=307
AEU East Anglia Un 148.73 3 eP PKPdf 00 13 12.4 +0.7
AEU East Anglia Un 148.73 3 eP PKPdf 00 13 12.4 +0.7
KAMT Kaman 148.76 312 eP PKPdf 00 13 12.6 +0.9
HTR Trewern Hill 148.85 8 eP PKPdf 00 13 10.8 -1.0
HTR Trewern Hill 148.85 8 eP PKPdf 00 13 10.8 -1.0
CFR Carcaliu 148.94 326 ⇓iP PKPdf 00 13 13.9 +1.9
CFR Carcaliu 148.94 326 ⇓P PKPdf 00 13 13.9 +1.9
IBBN Ibbenburen 148.95 355 ePKPdf PKPdf 00 13 12.3 +0.2
IBBN ePKPbc PKPbc 00 13 16.3 +0.1
IBBN ePKPab PKPab 00 13 20.3 -0.5
MCH1 Michaelchurch 148.96 8 eP PKPdf 00 13 11.0 -1.0
MCH1 Michaelchurch 148.96 8 eP PKPdf 00 13 11.0 -1.0
KSP Ksiaz 148.98 345 ePKP PKPdf 00 13 12.9 +0.8
KSP ePKiKP PKiKP 00 13 17.0 -0.5
KSP e 00 13 21.6
KSP epPKPdf pPKPdf 00 13 53.7 -0.8
KSP epPKPbc pPKPbc 00 13 56.9 -1.4
KSP epPKPab pPKPab 00 14 00.6 -1.2
KSP ePP PP 00 16 43.1 -5.3
KSP eSKKS SKKSac 00 23 24.7 +0.7
KSP e 00 35 39.3
KSP eSS 00 36 50.2
KSP L 01 05 06.0
comp=Z,2.2nm,39.7s
KSP Ksiaz 148.98 345 ePKP PKPdf 00 13 12.4 +0.3
KSP ePKPdf PKPbc 00 13 17.0 +0.7
KSP eSS SS 00 35 44.3 -2.0
APAE Packway 149.06 3 eP PKPdf 00 13 15.3 +3.0
APAE Packway 149.06 3 eP PKPdf 00 13 15.3 +3.0
NIE Niedzica 149.07 339 ePKPdf PKPdf 00 13 13.1 +0.9
NIE e 00 13 17.5
NIE Niedzica 149.07 339 ePKPdf PKPdf 00 13 13.1 +0.9
NIE e 00 13 17.5
RAC Raciborz 149.15 342 ePKPdf PKPdf 00 13 13.0 +0.6
RAC ePKPbc PKPbc 00 13 17.4 +0.7
RAC ePKPab PKPab 00 13 22.6 +1.0
ANTO Ankara 149.16 313 eP PKPdf 00 13 11.9 -0.5
ANTO Ankara 149.16 313 PKPdf PKPdf 00 13 12.9 +0.5
ANTO PKPbc PKPbc 00 13 17.4 +0.6
ANTO pPKPdf pPKPdf 00 13 59.5 +4.7
ANTO Ankara 149.16 313 ⇓iP PKPdf 00 13 13.3 +0.9
VRI Vrincioaia 149.19 328 ⇓iP PKPdf 00 13 13.1 +0.7
VRI Vrincioaia 149.19 328 ⇓iP PKPdf 00 13 13.1 +0.7
VRI Vrincioaia 149.19 328 ⇓P PKPdf 00 13 13.2 +0.7
MERS Mersin 149.19 307 eP PKPdf 00 13 11.2 -1.2
PLOR Plostina 149.24 328 ⇑iP PKPbc 00 13 17.2 +0.2
CLL Collm 149.25 349 ePKPdf PKPdf 00 13 12.7 +0.2
comp=Z,48nm,1.0s
CLL i PKPbc PKPbc 00 13 17.0 0.0
comp=Z,506nm,0.8s
CLL ePKPab PKPab 00 13 21.5 -0.5
comp=Z,212nm,1.0s
CLL epPKPdf pPKPdf 00 13 56.6 +1.7
CLL epPKPbc pPKPbc 00 13 59.4 +0.4
CLL epPKPab pPKPab 00 14 01.9 -1.0
CLL eSKPbc 00 14 15.2
CLL eSKPdf SKPdf 00 16 30.2 -0.9
CLL ePKSdf 00 16 46.0
CLL ePP PP 00 16 53.7 +3.7
CLL epPP 00 17 31.2
CLL eSKKSac SKKSac 00 23 22.3 -3.2
CLL eSS SS 00 35 45.0 -4.4
CLL eSSS 00 36 52.1
CLL eSSS 00 41 24.3
CLL eSSSS 00 42 26.1
CLL eSSSS 00 45 33.7
CLL eLR LR 01 04 19.1
CLL eL 01 22 54.6
comp=Z,364nm,22.0s
CLL Collm 149.25 349 i PKIKP PKPdf 00 13 12.9 +0.4
comp=Z,logA/T=1.7
CLL i PKP1 PKPbc 00 13 17.5 +0.5
CLL i PKP2 PKPab 00 13 21.5 -0.5
CLL i 00 13 25.2
CLL e*PPKP 00 13 57.0
CLL i *PPKP2 00 14 01.7
CLL i 00 14 08.1
CLL e 00 16 26.0
CLL i PKS 00 16 46.0
CLL ePP PP 00 16 53.0 +3.0
CLL e 00 23 25.0
CLL e 00 24 39.0
CLL e 00 28 08.0
CLL e 00 33 22.0
CLL eSS SS 00 35 42.0 -7.4
CLL e 00 36 39.0
CLL e 00 37 49.0
CLL eSSS 00 41 32.0
CLL e 00 42 24.0
CLL e 00 45 26.0
CLL e 00 46 18.0
CLL e 00 49 16.0
CLL Collm 149.25 349 i PKPdf PKPdf 00 13 12.9 +0.4
comp=Z,47nm,1.0s
⇓iPKPbc PKPbc 00 13 17.5 +0.5
CLL comp=Z,497nm,0.8s
i PKPab PKPab 00 13 21.5 -0.5
CLL comp=Z,210nm,1.0s
CLL i x x 00 13 25.2
CLL epPKPbc pPKPbc 00 13 57.0 -2.0
CLL i pPKPab pPKPab 00 14 01.7 -1.2
CLL i sPKPdf 00 14 08.1
CLL eSKPdf SKPdf 00 16 26.0 -5.1
CLL i PKSdf 00 16 46.0
comp=Z,100nm,1.6s
CLL ePP PP 00 16 53.0 +3.0
CLL eSKKSac SKKSac 00 23 25.0 -0.5
CLL ex x 00 24 39.0
CLL esSKSP 00 28 08.0
CLL ex x 00 33 22.0
CLL eSS SS 00 35 42.0 -7.4
CLL eSPS 00 36 39.0
CLL ex x 00 37 49.0
CLL eSSS 00 41 32.0
CLL eSSSS 00 42 24.0
CLL eSSSS 00 45 26.0
CLL eSSSS 00 46 16.0
CLL ePSPSrev 00 46 16.0
CLL LmV 01 08 00.0
comp=Z,500nm,20.6s
CLL Collm 149.25 349 ⇓iPKIKP PKPdf 00 13 12.9 +0.4
CLL i 00 13 17.5
CLL i 00 16 46.0
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL pmax pmax
comp=Z,47nm,0.8s
CLL pmax pmax
comp=Z,497nm,1.0s
CLL pmax pmax
comp=Z,210nm,1.6s
CLL MLR MLR
comp=Z,500nm,20.6s
CLL Collm 149.25 349 i PKP PKPdf 00 13 12.9 +0.4
CLL ⇓iPKP PKPbc 00 13 17.5 +0.5
CLL i PKP PKPab 00 13 21.5 -0.5
CLL i pPKP pPKPdf 00 14 01.7 +6.8
CLL i PKS 00 16 46.0
CLL eSKKS SKKSac 00 23 25.0 -0.5
CLL LR LR
comp=Z,500nm,20.6s
BHL Bhannes 149.26 301 eP PKPdf 00 13 13.4 +0.8
TIRR Tirgusor 149.27 324 ⇓iP PKPdf 00 13 13.1 +0.5
TIRR Tirgusor 149.27 324 ⇓iP PKPbc 00 13 17.6 +0.6
TIRR Tirgusor 149.27 324 P PKPdf 00 13 13.1 +0.6
TIRR ⇓P PKPbc 00 13 17.6 +0.6
SGKT Sivrigoynuk 149.31 315 i P PKPdf 00 13 13.4 +0.7
KDZE Karadeniz Ereo 149.33 317 eP PKPdf 00 13 10.5 -2.2
HGH Gray Hill 149.34 8 eP PKPdf 00 13 11.7 -1.0
HGH Gray Hill 149.34 8 eP PKPdf 00 13 11.7 -1.0
UPC Upice 149.36 345 ePKPDF PKPdf 00 13 13.0 +0.3
UPC ⇑ePKPB PKPbc 00 13 17.9 +0.7
UPC ePKPAB PKPab 00 13 23.4 +1.0
UPC Upice 149.36 345 ePKIKP PKPdf 00 13 13.0 +0.3
UPC e 00 13 17.9
WTSB Winterswijk 149.36 356 ePKiKP PKiKP 00 13 12.2 -6.1
WTSB ePKPpre 00 13 17.0
comp=Z,428nm,0.7s
HARR Harsova 149.37 325 ⇓iP PKPbc 00 13 17.2 -0.1
HARR Harsova 149.37 325 P PKPdf 00 13 13.5 +0.8
HARR ⇓P PKPbc 00 13 17.2 -0.1
OKC Ostrava-Krasne 149.39 342 ePKPDF PKPdf 00 13 12.7 0.0
OKC ⇑ePKPB PKPbc 00 13 17.9 +0.6
OKC ePKPAB PKPab 00 13 23.4 +0.8
OKC eSS SS 00 35 39.7 -11
OKC ex x 00 36 57.8
OKC ex x 00 42 24.3
OKC ex x 00 55 38.5
OKC Ostrava-Krasne 149.39 342 ePKIKP PKPdf 00 13 12.7 0.0
OKC e 00 13 17.9
OKC Ostrava-Krasne 149.39 342 ePKP PKPdf 00 13 12.7 0.0
OKC e 00 13 17.9
OKC e 00 13 23.4
OKC eSS SS 00 35 39.7 -11
OKC e 00 36 57.8
OKC e 00 42 24.3
DPC Dobruska-Polom 149.42 344 ePKPDF PKPdf 00 13 13.4 +0.6
DPC ⇑ePKPB PKPbc 00 13 18.0 +0.6
DPC ePKPAB PKPab 00 13 24.1 +1.4
DPC eSS SS 00 35 39.3 -12
DPC ex x 00 36 57.3
DPC ex x 00 42 28.7
DPC ex x 00 55 45.9
DPC ex x 01 04 22.2
DPC Dobruska-Polom 149.42 344 ePKIKP PKPdf 00 13 13.4 +0.6
DPC e 00 13 18.0
DPC Dobruska-Polom 149.42 344 ePKP PKPdf 00 13 13.4 +0.6
DPC e 00 13 18.0
DPC e 00 13 24.1
DPC eSS SS 00 35 39.3 -12
DPC e 00 36 57.3
DPC e 00 42 28.7
SKP1 Kophill 149.48 6 eP PKPdf 00 13 12.2 -0.7
SKP1 Kophill 149.48 6 eP PKPdf 00 13 12.2 -0.7
BRG Berggiesshubel 149.48 347 ePKPdf PKPdf 00 13 12.9 0.0
BRG ePKPbc PKPbc 00 13 17.9 +0.3
BRG Berggiesshubel 149.48 347 i PKP PKPdf 00 13 13.7 +0.8
comp=Z,38nm,1.0s
BRG Berggiesshubel 149.48 347 i PKP PKPbc 00 13 17.8 +0.3
comp=Z,161nm,0.9s
BRG Berggiesshubel 149.48 347 i PKP PKPab 00 13 23.0 0.0
comp=Z,165nm,1.2s
BRG i pPKP pPKPdf 00 13 57.8 +2.5
comp=Z,166nm,1.9s
BRG i sPKP 00 14 15.1
comp=Z,33nm,1.0s
BRG ePKS 00 16 43.7
comp=Z,33nm,1.6s
BRG e 00 20 21.2
comp=Z,12nm,1.6s
BRG eSKKS SKKSac 00 23 27.8 +1.0
comp=Z,8.2nm,1.7s
BRG i 00 24 40.0
BRG SS SS 00 35 44.0 -7.9
BRG
comp=N,346nm,28.8s
BRG
comp=E,366nm,22.8s
BRG
comp=Z,312nm,20.2s
BRG Berggiesshubel 149.48 347 i PKIKP PKPdf 00 13 13.7 +0.8
BRG e 00 20 21.2
BRG pmax pmax
comp=Z,2.0nm,1.0s
BRG pmax pmax
comp=Z,38nm,0.9s
BRG pmax pmax
comp=Z,161nm,1.2s
BRG pmax pmax
comp=Z,165nm,1.9s
BRG pmax pmax
comp=N,166nm,1.0s
BRG pmax pmax
comp=Z,33nm,1.6s
BRG pmax pmax
comp=Z,33nm,1.6s
BRG pmax pmax
comp=N,12nm,1.7s
BRG MLR MLR
comp=N,8µm,28.8s
BRG MLR MLR
comp=E,346nm,22.8s
BRG MLR MLR
comp=Z,366nm,20.2s
BRG Berggiesshubel 149.48 347 i PKP PKPdf 00 13 13.7 +0.8
BRG i PKP PKPbc 00 13 17.8 +0.3
BRG i PKP PKPab 00 13 23.0 0.0
BRG i pPKP pPKPdf 00 13 57.8 +2.5
BRG i sPKP 00 14 15.1
BRG ePKS 00 16 43.7
BRG e 00 20 21.2
BRG eSKKS SKKSac 00 23 27.8 +1.0
BRG i 00 24 40.0
BRG SS SS 00 35 44.0 -7.9
BRG LR LR
comp=Z,310nm,20.2s
GTTG Gvttingen 149.49 352 ePKPdf PKPdf 00 13 12.9 0.0
GTTG ePKPbc PKPbc 00 13 17.7 +0.1
FBE Freiberg 149.55 348 ePKPdf PKPdf 00 13 13.4 +0.4
FBE ePKPbc PKPbc 00 13 18.2 +0.5
CVD Cernavoda 149.57 324 ⇓iP PKPbc 00 13 19.7 +1.9
CVD Cernavoda 149.57 324 P PKPbc 00 13 19.7 +1.9
MEST Erdemli 149.57 307 i P PKPdf 00 13 13.8 +0.8
SWN1 Swindon 149.59 7 eP PKPdf 00 13 13.3 +0.3
SWN1 Swindon 149.59 7 eP PKPdf 00 13 13.3 +0.3
MORC Moravsky Berou 149.62 342 ⇓iP PKPdf 00 13 13.7 +0.6
MORC Moravsky Berou 149.62 342 P PKPdf 00 13 13.3 +0.2
PVCC Panska Ves 149.68 346 ePKPDF PKPdf 00 13 13.7 +0.5
PVCC ⇑ePKPB PKPbc 00 13 18.8 +0.8
PVCC eSS SS 00 35 49.1 -5.0
PVCC ex x 00 36 56.5
PVCC ex x 00 42 41.3
PVCC Panska Ves 149.68 346 ePKHKP PKPdf 00 13 13.7 +0.5
PVCC e 00 13 18.8
PVCC eSS SS 00 35 49.1 -5.0
PVCC e 00 36 56.5
ISR Istrita 149.81 327 ⇓iP PKPbc 00 13 19.2 +0.9
ISR Istrita 149.81 327 P PKPbc 00 13 19.2 +0.8
MLR Muntele Rosu 149.84 328 PKP PKPdf 00 13 13.1 -0.4
comp=Z,50nm,1.1s,baz=33,slow=3.1,SNR=20
MLR PKPbc PKPbc 00 13 18.8 +0.4
comp=Z,238nm,1.0s,baz=22,slow=2.5,SNR=134
MLR Muntele Rosu 149.84 328 ⇓iP PKPdf 00 13 14.7 +1.2
MLR Muntele Rosu 149.84 328 PKIKP PKPdf 00 13 13.1 -0.4
MLR pmax pmax
comp=Z,50nm,1.1s
MLR pmax pmax
comp=Z,238nm,1.0s
MLR Muntele Rosu 149.84 328 ⇓P PKPdf 00 13 14.7 +1.2
BUG Bochum--Univer 149.85 356 ePKPdf PKPdf 00 13 13.6 +0.1
BUG ePKPbc PKPbc 00 13 18.3 -0.1
CML Cha da Macela 149.85 51 ePKP PKPdf 00 13 15.1 +1.6
PVER Pico Vermelho 149.87 51 ePKP PKPdf 00 13 16.6 +3.1
PMAT Coroa da Mata 149.89 51 ePKP PKPdf 00 13 17.4 +3.9
SWK Warminster 149.89 8 eP PKPdf 00 13 13.6 0.0
SWK Warminster 149.89 8 eP PKPdf 00 13 13.6 0.0
LFA Lagoa do Fogo 149.90 51 ePKP PKPdf 00 13 16.2 +2.6
MESC Monte Escuro 149.92 51 ePKP PKPdf 00 13 16.5 +2.9
MDU Mudurnu 149.92 315 eP PKPbc 00 13 19.1 +0.4
HENT Hendek 149.94 316 i P PKPdf 00 13 14.6 +1.0
VIF Vila Franca 149.94 51 ePKP PKPdf 00 13 16.7 +3.1
PCNG Congro 149.97 51 ePKP PKPdf 00 13 16.6 +2.9
PFAD Fenais da Ajud 149.99 50 ePKP PKPdf 00 13 17.5 +3.8
FRA1 Furnas 150.00 51 ePKP PKPdf 00 13 17.2 +3.5
MIRA Miradouro 150.04 50 ePKP PKPbc 00 13 19.9 +1.0
IKL Isikli 150.05 306 eP PKPdf 00 13 13.5 -0.3
MOX Moxa 150.13 350 ePKPdf PKPdf 00 13 13.6 -0.3
MOX ePKPbc PKPbc 00 13 19.2 +0.1
MOX Moxa 150.13 350 i P PKPdf 00 13 13.9 0.0
MOX e 00 13 19.5
comp=Z,237nm,0.9s
MOX
comp=Z,100nm,20.0s
PRA Prague 150.13 346 PKPDF PKPdf 00 13 14.0 +0.1
PRA ⇑PKPB PKPbc 00 13 20.0 +0.9
PRA PKPAB PKPab 00 13 27.0 +1.4
PRA ex x 00 14 02.0
PRA ex x 00 15 19.0
PRU Pruhonice 150.19 346 ePKPDF PKPdf 00 13 14.0 0.0
PRU ⇑ePKPB PKPbc 00 13 19.9 +0.6
PRU ePKPAB PKPab 00 13 26.5 +0.6
PRU eSS SS 00 35 52.4 -7.4
PRU ex x 00 37 04.0
PRU ex x 00 42 38.4
PRU ex x 00 56 05.3
PRU ex x 01 05 14.3
PRU Pruhonice 150.19 346 ePKIKP PKPdf 00 13 14.0 0.0
PRU e 00 37 04.0
PRU Pruhonice 150.19 346 ePKP PKPdf 00 13 14.0 0.0
PRU e 00 13 19.9
PRU e 00 13 26.5
PRU eSS SS 00 35 52.4 -7.4
PRU e 00 37 04.0
PRU e 00 42 38.4
UBBA Unterbreizbach 150.19 352 ePKPdf PKPdf 00 13 13.7 -0.3
UBBA ePKPbc PKPbc 00 13 19.0 -0.3
UBBA ePKPab PKPab 00 13 25.2 -0.7
WERD Werda 150.20 349 ePKPdf PKPdf 00 13 13.8 -0.2
WERD ePKPbc PKPbc 00 13 19.7 +0.4
TANN Tannenbergstha 150.21 349 ePKPdf PKPdf 00 13 14.1 +0.1
TANN ePKPbc PKPbc 00 13 19.4 +0.1
KIZT Kizilcal 150.25 312 eP PKPdf 00 13 14.6 +0.5
CSA1 St Austell 150.26 11 eP PKPdf 00 13 13.6 -0.5
CSA1 St Austell 150.26 11 eP PKPdf 00 13 13.6 -0.5
GUNZ Gunzen 150.28 349 ePKPdf PKPdf 00 13 14.3 +0.1
GUNZ ePKPbc PKPbc 00 13 20.0 +0.5
VRAC Vranov 150.31 343 PKP PKPdf 00 13 14.0 -0.2
comp=Z,12nm,0.9s,baz=111,slow=1.3,SNR=18
VRAC PKPbc PKPbc 00 13 20.2 +0.6
comp=Z,78nm,0.8s,baz=30,slow=2.3,SNR=62
VRAC PKPab PKPab 00 13 26.2 -0.2
comp=Z,190nm,1.0s,baz=16,slow=4.9,SNR=29
VRAC pPKPbc pPKPbc 00 13 59.7 -1.9
comp=Z,27nm,0.9s,baz=80,slow=19,SNR=1.1
VRAC Vranov 150.31 343 ⇓iP PKPdf 00 13 15.4 +1.2
VRAC Vranov 150.31 343 PKIKP PKPdf 00 13 14.0 -0.2
VRAC 00 13 26.2
VRAC pmax pmax
comp=Z,12nm,0.9s
VRAC pmax pmax
comp=Z,78nm,0.8s
VRAC pmax pmax
comp=Z,190nm,1.0s
VRAC pmax pmax
comp=Z,27nm,0.9s
VRAC Vranov 150.31 343 P PKPdf 00 13 14.7 +0.5
VOIR 150.32 329 ⇓iP PKPdf 00 13 15.8 +1.6
CPZ Penzance 150.32 12 eP PKPdf 00 13 13.5 -0.7
CPZ Penzance 150.32 12 eP PKPdf 00 13 13.5 -0.7
DRGR 150.34 333 ⇓iP PKPdf 00 13 15.3 +1.1
DRGR 150.34 333 ⇓P PKPdf 00 13 15.2 +1.0
KONT Konya--Tatoy 150.34 310 eP PKPdf 00 13 13.8 -0.5
CCA1 Carnmenellis 150.36 12 eP PKPdf 00 13 13.2 -1.0
CCA1 Carnmenellis 150.36 12 eP PKPdf 00 13 13.2 -1.0
NKC Novy Kostel 150.38 349 ePKPDF PKPdf 00 13 14.6 +0.3
NKC ⇑ePKPB PKPbc 00 13 20.1 +0.4
NKC ePKPAB PKPab 00 13 27.2 +0.5
NKC eSS SS 00 35 52.7 -9.2
NKC ex x 00 37 02.0
NKC ex x 00 42 43.3
NKC ex x 00 56 07.6
NKC Novy Kostel 150.38 349 ePKHKP 00 13 14.6
NKC e 00 37 02.0
NKC Novy Kostel 150.38 349 ePKP PKPdf 00 13 14.6 +0.3
NKC e 00 13 20.1
NKC e 00 13 27.2
NKC eSS SS 00 35 52.7 -9.2
NKC e 00 37 02.0
NKC e 00 42 43.3
CRQ2 Rosemanowes 2 150.39 12 eP PKPdf 00 13 14.6 +0.3
CRQ2 Rosemanowes 2 150.39 12 eP PKPdf 00 13 14.6 +0.3
CGW Gweek 150.44 12 eP PKPdf 00 13 14.0 -0.4
CGW Gweek 150.44 12 eP PKPdf 00 13 14.0 -0.4
MTUR Matau 150.46 329 ⇓iP PKPbc 00 13 20.2 +0.3
MTUR Matau 150.46 329 P PKPbc 00 13 20.5 +0.6
CMA1 Manaccan 150.48 12 eP PKPdf 00 13 14.0 -0.5
CMA1 Manaccan 150.48 12 eP PKPdf 00 13 14.0 -0.5
PSZ Piszkesteto 150.50 338 ⇓ePKP/p PKPbc 00 13 20.6 +0.6
PSZ Piszkesteto 150.50 338 ⇓iP PKPdf 00 13 15.5 +1.0
PSZ Piszkesteto 150.50 338 P PKPdf 00 13 15.1 +0.6
CGH1 Goonhilly 150.50 12 eP PKPdf 00 13 14.0 -0.5
CGH1 Goonhilly 150.50 12 eP PKPdf 00 13 14.0 -0.5
PSMN Pico do Norte, 150.52 52 ePKP PKPdf 00 13 16.9 +2.4
BEBN Eben Emael 150.58 358 PKP PKPdf 00 13 14.5 -0.1
BEBN PKPbc PKPbc 00 13 19.8 -0.4
GPA Golpazari 150.60 316 eP PKPbc 00 13 20.4 +0.2
HGN Heimansgroeve 150.60 357 ePKiKP PKiKP 00 13 14.2 -6.7
HGN ePKPpre 00 13 20.0
comp=Z,190nm,0.9s
HGN ePKPab PKPab 00 13 26.3 -1.3
BUC1 Bucharest 150.60 326 ⇓iP PKPbc 00 13 20.3 +0.1
BUC1 Bucharest 150.60 326 P PKPbc 00 13 20.3 0.0
TREC Trest 150.61 344 ePKPDF PKPdf 00 13 15.0 +0.3
TREC ⇑ePKPB PKPbc 00 13 20.8 +0.5
TREC ePKPAB PKPab 00 13 28.2 +0.6
TREC eSS SS 00 35 54.0 -10

TREC ex x 00 37 09.7
TREC ex x 00 42 48.2
TREC ex x 00 56 18.0
TREC ex x 01 05 56.2
TREC Trest 150.61 344 ePKIKP PKPdf 00 13 15.0 +0.3
TREC e 00 37 09.7
UCC Uccle 150.61 359 PKPbc PKPbc 00 13 20.4 +0.1
PRD Provadia 150.64 323 i P PKPdf 00 13 15.9 +1.2
ESKT Eskisehir 150.64 314 eP PKPdf 00 13 15.1 +0.4
ESKT Eskisehir 150.64 314 i P PKPdf 00 13 15.5 +0.8
HDMB Hadim 150.66 308 eP PKPbc 00 13 19.9 -0.5
MANZ Manzenberg 150.68 349 ePKPdf PKPdf 00 13 14.8 0.0
MANZ ePKPbc PKPbc 00 13 20.8 +0.4
HRT Hereke 150.72 317 eP PKPbc 00 13 19.6 -0.9
MEM Membach 150.75 357 PKP PKPdf 00 13 15.0 +0.1
MEM PKPbc PKPbc 00 13 20.4 -0.2
EIL Elat 150.76 293 ePKPdf PKPdf 00 13 16.1 +1.2
EIL ePKPbc PKPbc 00 13 22.0 +1.4
CSS Prodhromos 150.77 304 P PKPdf 00 13 14.9 0.0
comp=Z,7.3nm,0.8s
CSS Prodhromos 150.77 304 eP PKPdf 00 13 15.0 +0.1
MAMC Mammari 150.78 304 ⇑P PKPdf 00 13 15.8 +0.9
MAMC Mammari 150.78 304 ⇑i P PKPdf 00 13 15.8 +0.9
KLYT Kilyos 150.87 319 eP PKPdf 00 13 15.3 +0.2
ROTZ Rotzenmuhle 150.87 349 ePKPdf PKPdf 00 13 15.1 0.0
ROTZ ePKPbc PKPbc 00 13 21.2 +0.3
ADVT Abdulvahap 150.89 317 eP PKPdf 00 13 15.1 0.0
SNF Seneffe 150.90 359 PKP PKPdf 00 13 14.5 -0.6
SNF PKPbc PKPbc 00 13 20.2 -0.8
TNS Taunus Mts 150.96 354 ePKPdf PKPdf 00 13 15.4 +0.2
TNS ePKPbc PKPbc 00 13 21.4 +0.3
TNS Taunus Mts 150.96 354 ePKPdf PKPdf 00 13 15.4 +0.2
TNS ePKPbc PKPbc 00 13 21.4 +0.3
ISK Istanbul-Kandi 150.97 318 eP PKPdf 00 13 11.0 -4.3
BCLA Clavier 150.97 358 PKP PKPdf 00 13 15.2 0.0
BCLA PKPbc PKPbc 00 13 20.6 -0.5
YLV Yalova 151.05 317 eP PKPdf 00 13 14.1 -1.2
GRA1 Grafenberg Arr 151.12 350 ePKPdf PKPdf 00 13 15.9 +0.5
GRA1 ePKPbc PKPbc 00 13 21.7 +0.3
GRA1 ePKPab PKPab 00 13 29.1 -0.6
GRA1 epPKPbc pPKPbc 00 14 03.4 -0.1
GRA1 ePP PP 00 16 51.0 -10
GRA1 epPP 00 17 54.1
GRF Grafenberg Arr 151.12 350 ePKPdf PKPdf 00 13 15.9 +0.5
GRF ePKPbc PKPbc 00 13 21.7 +0.3
GRF ePKPab PKPab 00 13 29.1 -0.6
GRF epPKPbc pPKPbc 00 14 03.4 -0.1
GRF ePP PP 00 16 51.0 -10
GRF epPP 00 17 54.1
GRF Grafenberg Arr 151.12 350 ePKIKP PKPdf 00 13 15.9 +0.5
GRF e 00 13 29.1
GRF Grafenberg Arr 151.12 350 ePKP PKPdf 00 13 15.9 +0.5
GRF ePKP PKPbc 00 13 21.7 +0.3
GRF ePKP PKPab 00 13 29.1 -0.6
GRF pPKPbc pPKPbc 00 14 03.4 -0.1
GRF ePP PP 00 16 51.0 -10
GRF epPP 00 17 54.1
BUD Budapest 151.17 338 ⇓ePKP/p PKPbc 00 13 22.1 +0.5
KHC Kasperske Hory 151.21 347 ePKPDF PKPdf 00 13 15.7 +0.1
KHC ⇑ePKPB PKPbc 00 13 22.4 +0.7
KHC ePKPAB PKPab 00 13 30.9 +0.8
KHC eSS SS 00 35 59.8 -11
KHC ex x 00 37 15.6
KHC ex x 00 42 55.4
KHC ex x 00 56 33.6
KHC ex x 01 06 39.0
KHC Kasperske Hory 151.21 347 ePKIKP PKPdf 00 13 15.7 +0.1
KHC e 00 37 15.6
KHC Kasperske Hory 151.21 347 ePKP PKPdf 00 13 15.7 +0.1
KHC e 00 13 22.4
KHC e 00 13 30.9
KHC eSS SS 00 35 59.8 -11
KHC e 00 37 15.6
KHC e 00 42 55.4
GEMT Gemlik 151.24 317 eP PKPdf 00 13 14.7 -0.9
ALFC Alevga 151.26 305 P PKPdf 00 13 15.3 -0.4
comp=Z,11nm,0.9s
GIVF Givet 151.30 359 ePKIKP PKPdf 00 13 15.6 -0.1
CTT Catalca 151.31 319 eP PKPbc 00 13 21.8 -0.1
ELBA Catalca 151.31 319 i P PKPbc 00 13 22.4 +0.5
DOU Dourbes 151.31 359 PKP PKPbc 00 13 15.4 -0.3
DOU PKPbc PKPbc 00 13 21.1 -0.8
WET Wettzell 151.34 348 ePKPdf PKPdf 00 13 15.8 0.0
WET ePKPbc PKPbc 00 13 22.2 +0.2
WET ePKPab PKPab 00 13 30.2 -0.5
WET epPKPbc pPKPbc 00 14 03.3 -0.7
WET Wettzell 151.34 348 ePKPdf PKPdf 00 13 15.8 0.0
WET ePKPbc PKPbc 00 13 22.2 +0.2
WET ePKPab PKPab 00 13 30.2 -0.5
WET epPKPbc pPKPbc 00 14 03.3 -0.7
BAIF Baives 151.35 359 ePKIKP PKPdf 00 13 15.8 0.0
comp=Z,55nm,1.2s
ALT Altintas 151.37 314 eP PKPbc 00 13 23.2 +1.1
GZR Gura Zlata 151.40 331 ⇓iP PKPdf 00 13 16.2 +0.3
GZR Gura Zlata 151.40 331 ⇓i P PKPbc 00 13 22.6 +0.5
GZR Gura Zlata 151.40 331 P PKPdf 00 13 16.2 +0.3
GZR ⇓P 00 13 22.6
ZIMR 151.43 326 ⇓iP PKPbc 00 13 22.6 +0.4
ZIMR 151.43 326 P PKPbc 00 13 22.6 +0.5
ULDT Uludag 151.44 317 i P PKPdf 00 13 17.0 +1.1
GEC2 GERESS Array S 151.45 346 ePKPdf PKPdf 00 13 15.9 -0.1
GEC2 ePKPbc PKPbc 00 13 22.2 0.0
GEC2 GERESS Array S 151.45 346 ePKPdf PKPdf 00 13 15.9 -0.1
GEC2 ePKPbc PKPbc 00 13 22.2 0.0
GERES GERESS Array B 151.45 346 PKP PKPdf 00 13 16.1 +0.1
comp=Z,15nm,0.8s,baz=70,slow=1.6,SNR=121
GERES PKPbc PKPbc 00 13 22.5 +0.3
comp=Z,82nm,0.8s,baz=29,slow=2.2,SNR=148
GERES pPKPbc pPKPbc 00 14 02.5 -1.8
comp=Z,18nm,0.9s,baz=20,slow=3.1,SNR=1.3
TOD Tromm 151.53 353 PKIKP PKPdf 00 13 16.5 +0.4
JMB Yambol 151.57 323 eP PKPdf 00 13 15.9 -0.2
JMB Yambol 151.57 323 i P PKPdf 00 13 16.6 +0.5
RUP Ruppelstein 151.60 356 PKIKP PKPdf 00 13 16.5 +0.3
ORLT Orhaneli 151.64 317 eP PKPbc 00 13 23.5 +0.9
ISP Isparta 151.69 311 eP PKPdf 00 13 14.9 -1.4
ISP Isparta 151.69 311 eP PKPdf 00 13 15.7 -0.6
ISP Isparta 151.69 311 ⇓iP PKPbc 00 13 22.4 -0.4
WLF Walferdange 151.69 357 ePKPdf PKPdf 00 13 16.8 +0.5
WLF ePKPbc PKPbc 00 13 23.4 +0.6
WLF epPKPbc pPKPbc 00 14 05.5 +0.6
WLF Walferdange 151.69 357 PKP PKPdf 00 13 17.2 +0.9
WLF PKPbc PKPbc 00 13 23.3 +0.6
WLF Walferdange 151.69 357 ePKPdf PKPdf 00 13 17.4 +1.0
WLF ePKPbc PKPbc 00 13 23.6 +0.9
WLF epPKPdf pPKPdf 00 14 05.0 +6.3
WLF ePP PP 00 17 06.7 +2.7
TKTP Tekketepe 151.73 312 i P PKPdf 00 13 21.6 +2.2
BZS Buzias 151.73 333 ⇓iP PKPdf 00 13 16.6 +0.2
BZS Buzias 151.73 333 ⇓P PKPdf 00 13 16.6 +0.2
CRAR CRAIOVA 151.74 329 ⇓iP PKPbc 00 13 24.0 +1.1
PVL Pavlikeni 151.75 325 i P PKPdf 00 13 14.7 -1.7
CONA Conrad Observa 151.76 343 ⇓iPKPdf PKPdf 00 13 16.4 0.0
comp=Z,470nm,2.2s,SNR=19
CONA Conrad Observa 151.76 343 PKPbc 00 13 23.5 +0.6
comp=Z,470nm,2.2s
CONA 00 13 33.6
comp=Z,396nm,1.7s
SOP Sopron 151.79 342 ⇓ePKP/F PKPbc 00 13 23.6 +0.6
BCK Bucak 151.81 311 eP PKPbc 00 13 22.1 -0.9
EDRB Edirne 151.88 322 eP PKPbc 00 13 22.2 -0.9
ANTB Antalya 152.01 309 eP PKPbc 00 13 22.3 -1.2
DST Dursunbey 152.06 316 P PKPbc 00 13 24.2 +0.6
DJES Djerdap 152.10 331 i PKP PKPbc 00 13 23.1 -0.6
MRMT Marmara Adasi 152.14 319 eP PKPdf 00 13 21.9 +4.9
MFT Murefte 152.22 320 eP PKPdf 00 13 14.5 -2.6
LANF Langenberg 152.25 354 PKIKP PKPdf 00 13 17.6 +0.5
MOA Molln 152.25 345 ⇑iP PKPdf 00 13 16.8 -0.4
comp=Z,37nm,1.3s,SNR=24
MOA Molln 152.25 345 ⇓i PKPbc 00 13 24.3 +0.3
comp=Z,394nm,2.8s
MOA Molln 152.25 345 ⇓i PKPab 00 13 35.0 +0.5
comp=Z,434nm,1.6s
MOA Molln 152.25 345 PKPdf 00 13 24.3 +7.2
comp=Z,394nm,2.8s
MOA 00 13 35.0
comp=Z,434nm,1.6s
MOA Molln 152.25 345 ⇑iP PKPdf 00 13 16.8 -0.4
MOA i 00 13 24.3
MOA i 00 13 35.0
STU Stuttgart 152.31 352 ePKPdf PKPdf 00 13 17.8 +0.6
STU ePKPbc PKPbc 00 13 24.4 +0.3
STU ePKPab PKPab 00 13 34.2 -0.5
STU Stuttgart 152.31 352 ePKIKP PKPdf 00 13 17.6 +0.4
STU e 00 13 34.3
STU Stuttgart 152.31 352 ePKPdf PKPdf 00 13 17.6 +0.3
STU ePKPbc PKPbc 00 13 24.4 +0.2
STU ePKPab PKPab 00 13 34.3 -0.4
STU eSKPdf SKPdf 00 16 34.8 -0.5
RKY Sarkoy-Tekirda 152.34 319 eP PKPdf 00 13 18.7 +1.4
PKSM Moragy 152.40 337 ⇓iP PKPdf 00 13 17.4 0.0
PKSM Moragy 152.40 337 P PKPdf 00 13 17.4 0.0
DIM Dimitrovgrad 152.44 323 i P PKPdf 00 13 17.8 +0.4
FLN La Foliniere 152.44 6 ePKIKP PKPdf 00 13 17.2 -0.2
comp=Z,145nm,1.1s
FLN eR
comp=Z,456nm,22.8s
FLN La Foliniere 152.44 6 ePKPdf PKPdf 00 13 17.2 -0.2
FLN LR LR
comp=Z,460nm,22.8s
ARSA Arzberg 152.47 343 i P PKPdf 00 13 17.2 -0.2
comp=Z,53nm,1.7s,SNR=11
ARSA Arzberg 152.47 343 ⇓i PKPbc 00 13 24.6 +0.1
comp=Z,414nm,2.5s
ARSA Arzberg 152.47 343 ⇑i PKPab 00 13 36.0 +0.6
comp=Z,498nm,2.0s
ARSA Arzberg 152.47 343 PKPbc 00 13 24.6 +0.1
comp=Z,414nm,2.5s
ARSA 00 13 36.0
comp=Z,498nm,2.0s
ARSA Arzberg 152.47 343 i P PKPdf 00 13 17.2 -0.2
ARSA i 00 13 24.6
ARSA i 00 13 36.0
ROSF Rostrenen 152.49 10 ePKIKP PKPdf 00 13 17.1 -0.4
FUR Furstenfeldbru 152.58 349 ePKPdf PKPdf 00 13 17.9 +0.3
FUR ePKPbc PKPbc 00 13 24.8 0.0
FUR ePKPab PKPab 00 13 35.8 -0.1
FUR epPKPbc pPKPbc 00 14 06.7 -0.2
FUR Furstenfeldbru 152.58 349 ePKPdf PKPdf 00 13 17.9 +0.3
FUR ePKPbc PKPbc 00 13 24.8 0.0
FUR ePKPab PKPab 00 13 35.8 -0.1
FUR epPKPbc pPKPbc 00 14 06.7 -0.2
ELL Elmali 152.62 310 eP PKPbc 00 13 25.3 +0.5
LDF La Druitiere 152.64 6 ePKIKP PKPdf 00 13 17.3 -0.4
comp=Z,96nm,1.1s
STR Strasbourg 152.65 354 PKIKP PKPdf 00 13 18.2 +0.5
SGMF Saint Gilles 152.68 9 ePKIKP PKPdf 00 13 17.3 -0.5
comp=Z,56nm,1.0s
DENT Denizli 152.76 312 P PKPbc 00 13 26.7 +1.6
KDZ Kurdzhali 152.76 323 i P PKPdf 00 13 17.4 -0.5
GRR Gorron 152.77 7 ePKIKP PKPdf 00 13 17.7 -0.2
comp=Z,40nm,1.0s
LPK Lapseki 152.79 319 eP PKPbc 00 13 24.3 -0.9
CANB Canakkale 152.81 318 P PKPdf 00 13 16.8 -1.1
PGB Panagyurishte 152.83 326 i P PKPdf 00 13 18.1 +0.1
BFO Black Forest 152.84 353 ePKPdf PKPdf 00 13 18.1 +0.1
BFO ePKPbc PKPbc 00 13 25.2 -0.1
BFO ePKPab PKPab 00 13 36.3 -0.7
BFO epPKPbc pPKPbc 00 14 08.1 +0.6
BFO Black Forest 152.84 353 ePKPdf PKPdf 00 13 18.1 +0.1
BFO ePKPbc PKPbc 00 13 25.2 -0.1
BFO ePKPab PKPab 00 13 36.3 -0.7
BFO epPKPbc pPKPbc 00 14 08.1 +0.6
WLS Welschbruch 152.85 355 PKIKP PKPdf 00 13 18.9 +0.9
PLD Plovdiv 152.85 324 eP PKPdf 00 13 16.9 -1.2
BEO Belgrade 152.86 333 i PKP PKPdf 00 13 18.6 +0.5
CDF Champ du Feu 152.86 355 ePKIKP PKPdf 00 13 17.6 -0.4
comp=Z,22nm,1.3s
ALN Alexandroupoli 152.89 321 eP PKPdf 00 13 16.6 -1.4
MEZF Maizieres J'vi 152.90 358 ePKIKP PKPdf 00 13 18.3 +0.2
comp=Z,132nm,1.1s
QUIF Quistinic 152.91 10 ePKIKP PKPdf 00 13 17.8 -0.3
comp=Z,81nm,1.4s
ENEZ Enez 152.93 321 eP PKPdf 00 13 17.2 -0.9
SVIS Svilajnac 152.95 332 ⇓iPKP PKPdf 00 13 17.9 -0.3
BOLS Boljevac 152.98 330 ePKP PKPdf 00 13 17.6 -0.6
AKHS Akhisar 152.99 316 i P PKPbc 00 13 26.6 +0.9
AKS Akhisar 152.99 316 eP PKPbc 00 13 25.9 +0.2
KOGS Kog 152.99 341 ePKPdf PKPdf 00 13 17.8 -0.5
SPAK Spaichingen-Ko 153.01 353 PKP PKPdf 00 13 20.4 +2.1
RDO Rodhopi 153.03 322 eP PKPdf 00 13 18.0 -0.3
RDO Rodhopi 153.03 322 eP PKPdf 00 13 17.2 -1.1
ECH Echery 153.06 355 PKIKP PKPdf 00 13 18.9 +0.6
KSL Kastellorizon 153.12 309 eP PKPdf 00 13 22.5 +4.1
RZN Rozhen 153.13 324 i P PKPdf 00 13 16.3 -2.1
THEF They Montfort 153.13 357 PKIKP PKPdf 00 13 18.7 +0.3
KBA Koelnbreinsper 153.19 345 ⇑iP PKPdf 00 13 17.9 -0.6
comp=Z,52nm,1.4s,SNR=22
KBA Koelnbreinsper 153.19 345 ⇓i PKPbc 00 13 25.9 -0.2
comp=Z,189nm,1.7s
KBA Koelnbreinsper 153.19 345 ⇓i PKPab 00 13 38.6 +0.2
comp=Z,290nm,1.3s
KBA Koelnbreinsper 153.19 345 PKPbc 00 13 25.9 -0.2
comp=Z,189nm,1.7s
KBA 00 13 38.6
comp=Z,290nm,1.3s
KBA Koelnbreinsper 153.19 345 ⇑iP PKPdf 00 13 17.9 -0.6
KBA i 00 13 25.9
KBA i 00 13 38.6
GROS Grobnik 153.20 342 ePKPdf PKPdf 00 13 18.3 -0.2
VTS Vitosha 153.30 327 eP PKPdf 00 13 17.3 -1.4
VTS Vitosha 153.30 327 i P PKPdf 00 13 18.2 -0.5
VTS Vitosha 153.30 327 ⇓iP PKPdf 00 13 18.9 +0.2
FELD Feldberg im Sc 153.32 354 eP PKPdf 00 13 18.4 -0.3
WATA Walderalm 153.33 348 ⇓iP PKPdf 00 13 18.5 -0.3
comp=Z,21nm,1.0s,SNR=6.8
WATA Walderalm 153.33 348 ⇓i PKPbc 00 13 26.5 +0.2
comp=Z,32nm,0.8s
WATA Walderalm 153.33 348 ⇑i PKPab 00 13 39.1 +0.1
comp=Z,148nm,1.3s
WATA Walderalm 153.33 348 PKPbc 00 13 26.5 +0.2
comp=Z,32nm,0.8s
WATA 00 13 39.1
comp=Z,148nm,1.3s
WATA Walderalm 153.33 348 ⇓iP PKPdf 00 13 18.5 -0.3
WATA i 00 13 26.6
WATA i 00 13 39.1
HAU Haudompre 153.33 356 ePKIKP PKPdf 00 13 18.4 -0.3
comp=Z,54nm,1.4s
HAU eR
comp=Z,492nm,22.5s
HAU Haudompre 153.33 356 ePKPdf PKPdf 00 13 18.4 -0.3
HAU LR LR
comp=Z,490nm,22.5s
EZN Ezine 153.38 319 eP PKPbc 00 13 26.9 +0.4
WTTA Wattenberg 153.38 348 ⇑iP PKPdf 00 13 18.9 +0.1
comp=Z,180nm,2.2s,SNR=17
WTTA Wattenberg 153.38 348 ⇓i PKPbc 00 13 26.9 +0.4
comp=Z,495nm,2.6s
WTTA Wattenberg 153.38 348 ⇓i PKPab 00 13 39.7 +0.4
comp=Z,272nm,1.6s
WTTA Wattenberg 153.38 348 PKPbc 00 13 26.9 +0.4
comp=Z,495nm,2.6s
WTTA 00 13 39.7
comp=Z,272nm,1.6s
WTTA Wattenberg 153.38 348 ⇑iP PKPdf 00 13 18.9 +0.1
WTTA i 00 13 26.9
WTTA i 00 13 39.7
MOTA Moosalm 153.41 349 ⇓iP PKPdf 00 13 18.4 -0.5
comp=Z,49nm,1.2s,SNR=30
MOTA Moosalm 153.41 349 ⇓i PKPbc 00 13 26.6 0.0
comp=Z,66nm,1.0s
MOTA Moosalm 153.41 349 ⇓i PKPab 00 13 39.3 0.0
comp=Z,120nm,1.1s
MOTA Moosalm 153.41 349 PKPbc 00 13 26.6 0.0
comp=Z,66nm,1.0s
MOTA 00 13 39.3
comp=Z,120nm,1.1s
MOTA Moosalm 153.41 349 ⇓iP PKPdf 00 13 18.4 -0.5
MOTA i 00 13 26.6
MOTA i 00 13 39.3
GADA Gvkgeada 153.42 320 eP PKPbc 00 13 25.0 -1.6
OBKA Obir 153.42 343 ⇑iP PKPdf 00 13 18.2 -0.7
comp=Z,28nm,1.3s,SNR=8.3
OBKA Obir 153.42 343 ⇓i PKPbc 00 13 26.2 -0.4
comp=Z,208nm,2.3s
OBKA Obir 153.42 343 ⇑i PKPab 00 13 39.4 0.0
comp=Z,138nm,1.0s
OBKA Obir 153.42 343 PKPbc 00 13 26.2 -0.4
comp=Z,208nm,2.3s
OBKA 00 13 39.4
comp=Z,138nm,1.0s
OBKA Obir 153.42 343 ⇑iP PKPdf 00 13 18.2 -0.7
OBKA i 00 13 26.2
OBKA i 00 13 39.4
MOF Molkenrain 153.43 355 PKIKP PKPdf 00 13 18.7 -0.2
HINF Hinteralfeld 153.49 355 ePKIKP PKPdf 00 13 18.6 -0.3
comp=Z,18nm,1.0s
GRUS Gruza 153.50 332 i PKP PKPdf 00 13 18.6 -0.4
SQTA Sankt Quirin 153.51 349 ⇓iP PKPdf 00 13 19.2 +0.2
comp=Z,50nm,1.2s,SNR=13
SQTA Sankt Quirin 153.51 349 ⇓i PKPbc 00 13 27.2 +0.4
comp=Z,35nm,0.9s
SQTA Sankt Quirin 153.51 349 ⇑i PKPab 00 13 39.9 +0.1
comp=Z,89nm,1.1s
SQTA Sankt Quirin 153.51 349 PKPbc 00 13 27.2 +0.4
comp=Z,35nm,0.9s
SQTA 00 13 39.9
comp=Z,89nm,1.1s
SQTA Sankt Quirin 153.51 349 ⇓iP PKPdf 00 13 19.2 +0.2
SQTA i 00 13 27.2
SQTA i 00 13 39.9
DALT Dalyan (Mudla) 153.51 311 eP PKPbc 00 13 26.4 -0.4
YER Yerkesik 153.58 312 eP PKPbc 00 13 26.1 -0.9
IZM Izmir 153.61 315 eP PKPbc 00 13 25.0 -2.0
DIVS Divcibare 153.64 333 i PKP PKPdf 00 13 19.4 +0.2
DIVS Divcibare 153.64 333 eP PKPdf 00 13 19.9 -2.2
DAVA Damuels 153.66 351 i P PKPdf 00 13 19.9 +0.7
comp=Z,48nm,1.6s,SNR=9.2
DAVA Damuels 153.66 351 ⇑i PKPbc 00 13 27.7 +0.6
comp=Z,133nm,1.3s
DAVA Damuels 153.66 351 ⇑i PKPab 00 13 40.7 +0.3
comp=Z,141nm,1.2s
DAVA Damuels 153.66 351 PKPbc 00 13 27.7 +0.6
comp=Z,133nm,1.3s
DAVA 00 13 40.7
comp=Z,141nm,1.2s
DAVA Damuels 153.66 351 i P PKPdf 00 13 19.9 +0.7
DAVA i 00 13 27.7
DAVA i 00 13 40.7
MMB Musomiste 153.74 325 eP PKPdf 00 13 17.2 -2.1
MMB Musomiste 153.74 325 i P PKPdf 00 13 18.5 -0.8
BLCB Balcova 153.76 315 eP PKPdf 00 13 18.1 -1.2
PRK Paraskevi 153.76 318 eP PKPdf 00 13 18.2 -1.1
BBS Basel-Blauen 153.78 354 PKIKP PKPdf 00 13 19.5 +0.1
NVR Nevrokopi 153.83 324 eP PKPdf 00 13 17.0 -2.4
LJU Ljubljana 153.86 343 i PKPdf PKPdf 00 13 19.6 +0.1
LJU ePKPbc PKPbc 00 13 27.8 +0.2
LJU ePKPab PKPab 00 13 40.8 -0.4
LJU epPKPdf pPKPdf 00 14 03.2 +1.3
LJU epPKPbc pPKPbc 00 14 12.1 +2.4
LJU epPKPab pPKPab 00 14 24.7 +2.7
LJU eSKKSac SKKSac 00 23 47.6 -3.1
LJU Ljubljana 153.86 343 i PKIKP PKPdf 00 13 19.6 +0.1
LJU e 00 13 40.8
KKB Krupnik 153.88 326 i P PKPdf 00 13 19.7 +0.2
LOMF Lomont 153.95 355 PKIKP PKPdf 00 13 19.8 +0.2
GMNA Gemona 153.97 345 ePKPu PKPdf 00 13 19.0 -0.6
LIA Limnos Island 154.03 320 eP PKPdf 00 13 18.5 -1.2
LOS Limnos 154.07 320 eP PKPdf 00 13 17.5 -2.3
BBLS Bajina Basta - 154.07 334 i PKP PKPdf 00 13 14.6 -5.2
HYF Humbligny 154.13 2 ePKIKP PKPdf 00 13 20.2 +0.3
ARG Arkhangelos 154.14 310 eP PKPdf 00 13 24.9 +5.0
BOJS Bojanci 154.14 341 ePKPdf PKPdf 00 13 20.1 +0.2
BOJS i PKPbc PKPbc 00 13 28.7 +0.6
BOJS ePKPab PKPab 00 13 42.5 0.0
BOJS epPKPdf pPKPdf 00 14 03.6 +1.3
LOR Lormes 154.15 360 ePKIKP PKPdf 00 13 20.0 +0.1
comp=Z,116nm,1.2s
LOR eR
comp=Z,510nm,20.0s
LOR Lormes 154.15 360 ePKPdf PKPdf 00 13 20.0 +0.1
LOR LR LR
comp=Z,510nm,20.0s
APPI Appiano 154.22 348 PKP PKPdf 00 13 19.0 -1.0
SMG Samos 154.27 314 eP PKPdf 00 13 20.9 +0.8
DAT Datca 154.27 312 eP PKPbc 00 13 27.2 -1.2
BODT Bodrum 154.29 313 eP PKPbc 00 13 26.6 -1.9
SSF Saint Saulge 154.35 0 ePKIKP PKPdf 00 13 20.2 0.0
comp=Z,105nm,1.1s
TRI Trieste 154.37 344 PKIKP PKPdf 00 13 20.2 0.0
CHOS Chios island 154.40 316 eP PKPdf 00 13 17.6 -2.7
OUR Ouranopolis 154.45 322 eP PKPdf 00 13 19.1 -1.2
SOH Sokhos 154.47 324 eP PKPdf 00 13 18.3 -2.0
STIP Stip 154.47 327 eP PKPdf 00 13 19.1 -1.3
STIP Stip 154.47 327 ePKP PKPdf 00 13 20.0 -0.3
PLE Pljevlja 154.52 333 ⇓iPKP PKPdf 00 13 20.9 +0.5
TUE Stuetta 154.54 351 PKP PKPdf 00 13 20.6 +0.2
VAY Valandovo 154.54 326 eP PKPdf 00 13 19.0 -1.4
VAY Valandovo 154.54 326 ePKP PKPdf 00 13 19.3 -1.1
CTI Castel Tesino 154.55 347 i PKIKP PKPdf 00 13 20.4 0.0
CTI Castel Tesino 154.55 347 i PKPu PKPdf 00 13 20.4 0.0
MFF Saint Martin d 154.61 6 ePKIKP PKPdf 00 13 21.2 +0.7
comp=Z,35nm,0.9s
AVF Avril sur Loir 154.62 1 ePKIKP PKPdf 00 13 20.2 -0.3
comp=Z,46nm,1.1s
SKO Skopje 154.64 328 eP PKPdf 00 13 20.6 0.0
SKO Skopje 154.64 328 ePKP PKPdf 00 13 21.1 +0.5
IVA Berane 154.66 332 ⇓iPKP PKPdf 00 13 20.4 -0.2
PLG Polygyros 154.73 323 eP PKPdf 00 13 18.4 -2.3
CABF La Chapelle 154.74 356 ePKIKP PKPdf 00 13 21.3 +0.6
comp=Z,114nm,1.1s
MABI Malga Bissina 154.76 349 PKP PKPdf 00 13 20.3 -0.4
HORT Hortiatis 154.77 324 eP PKPdf 00 13 19.5 -1.3
SMF Signal de Mont 154.77 360 ePKIKP PKPdf 00 13 20.5 -0.3
comp=Z,92nm,1.3s
THE Thessaloniki 154.82 324 eP PKPdf 00 13 19.7 -1.1
UPM Unac-Piva 154.82 333 ⇓iPKP PKPdf 00 13 20.5 -0.3
BGF Bois d'Agland 154.85 2 ePKIKP PKPdf 00 13 20.9 0.0
comp=Z,95nm,1.1s
PVY Plav 154.85 331 ⇓iPKP PKPdf 00 13 20.9 +0.1
GRG Griva 154.89 325 eP PKPdf 00 13 20.3 -0.7
PAIG Paliouri 154.89 322 eP PKPdf 00 13 19.7 -1.2
TCF Toulx Ste Croi 155.10 3 ePKIKP PKPdf 00 13 21.1 -0.1
comp=Z,100nm,1.1s
NKY Niksic 155.10 333 ⇓iPKP PKPdf 00 13 21.0 -0.2
NVLJ Novalja 155.11 341 i P PKPdf 00 13 20.6 -0.6
KARP Karpathos 155.14 310 eP PKPdf 00 13 30.5 +9.2
BRY Bratogost 155.22 333 ⇓iPKP PKPdf 00 13 21.3 0.0
AOS Alonnisos 155.27 320 eP PKPdf 00 13 20.6 -0.8
TTG Podgorica 155.30 332 ⇓iPKP PKPdf 00 13 21.2 -0.2
AGO Saint Agoulin 155.36 1 PKP PKPdf 00 13 22.0 +0.4
BIA Bitola 155.41 327 eP PKPdf 00 13 20.6 -1.0
BIA Bitola 155.41 327 ePKP PKPdf 00 13 20.5 -1.1
LIT Litokhoron 155.44 324 eP PKPdf 00 13 20.9 -0.8
PLDF La Plantade 155.45 0 PKIKP PKPdf 00 13 22.2 +0.5
XOR Xorichti 155.55 322 eP PKPdf 00 13 21.2 -0.6
FNA Florina 155.55 326 eP PKPdf 00 13 21.4 -0.4
BUM Brajici-Budva 155.56 332 ⇓iPKP PKPdf 00 13 22.2 +0.4
NEO Neokhori 155.57 321 eP PKPdf 00 13 20.4 -1.4
OHR Ohrid 155.60 328 eP PKPdf 00 13 21.2 -0.7
OHR Ohrid 155.60 328 ePKP PKPdf 00 13 21.4 -0.4
HCY Herceg Novi 155.62 333 ⇓iPKP PKPdf 00 13 21.6 -0.3
PYM Petit Puy Mans 155.66 1 PKIKP PKPdf 00 13 22.7 +0.7
ULC Ulcinj 155.68 331 ⇓iPKP PKPdf 00 13 21.9 -0.1
KZN Kozani 155.69 325 eP PKPdf 00 13 21.2 -0.8
LPL La Plagne 155.78 355 ePKIKP PKPdf 00 13 22.8 +0.7
comp=Z,30nm,0.9s
LPG La Plagne 155.80 355 ePKIKP PKPdf 00 13 22.9 +0.8
comp=Z,34nm,0.9s
TIR Tirane 155.88 329 eP PKPdf 00 13 21.3 -0.9
EMAZ Mazaricos 155.96 23 PKP PKPdf 00 13 23.1 +0.7
PTL Penteli 155.99 318 eP PKPdf 00 13 31.5 +9.1
RJF Les Rejaudoux 156.04 4 ePKIKP PKPdf 00 13 22.4 -0.1
comp=Z,69nm,1.2s
RJF eR
comp=Z,519nm,22.5s
RJF Les Rejaudoux 156.04 4 ePKPdf PKPdf 00 13 22.4 -0.1
RJF LR LR
comp=Z,520nm,22.5s
ATH Athens Observa 156.13 318 eP PKPdf 00 13 22.0 -0.6
LKR Lokris 156.13 320 eP PKPdf 00 13 20.6 -2.0
STS Santiago 156.17 23 ⇓PKIKP PKPdf 00 13 23.5 +0.9
KVR Kavouri 156.18 318 eP PKPdf 00 13 31.0 +8.4
LBL Lubilhac 156.18 1 PKIKP PKPdf 00 13 23.8 +1.2
BOB Bobbio (Coli) 156.19 350 PKIKP PKPdf 00 13 22.1 -0.6
BNI Bardonecchia 156.25 355 ePKIKP PKPdf 00 13 23.8 +1.1
BNI e 00 13 52.1
EPON Pontenova 156.26 20 PKP PKPdf 00 13 23.0 +0.2
AGG Agios Georgios 156.27 322 eP PKPdf 00 13 21.9 -0.8
LFF La Frestale 156.34 5 ePKIKP PKPdf 00 13 22.8 -0.1
comp=Z,26nm,0.9s
MEV Metsovon 156.35 325 eP PKPdf 00 13 22.0 -0.9
NPS Neapolis 156.39 311 eP PKPdf 00 13 31.4 +8.5
MGER Gerania Oros 156.40 319 eP PKPdf 00 13 33.0 +10
NAIG Nisos Aigina 156.40 318 eP PKPdf 00 13 32.5 +10
ORIF Oris-en-Rattie 156.44 356 ePKIKP PKPdf 00 13 23.4 +0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,64nm,1.0s						
ORIF				eR			
	comp=Z,477nm,23.0s						
CAF	Calviac	156.45	3	ePKIKP	PKPdf	00 13 23.2	+0.2
	comp=Z,68nm,1.3s						
FNVD	Fontana Vidola	156.45	347	PKP	PKPdf	00 13 23.5	+0.5
XRY	Khrisi	156.52	310	eP	PKPdf	00 13 22.5	-0.6
VIVF	Saint-Julien-l	156.55	358	ePKIKP	PKPdf	00 13 23.5	+0.4
	comp=Z,118nm,1.3s						
MBDF	Montbardon	156.56	355	ePKIKP	PKPdf	00 13 23.5	+0.4
	comp=Z,73nm,1.0s						
VLC	Villacollemand	156.61	348	ePKPdf	PKPdf	00 13 22.3	-0.9
EVR	Evrytania	156.64	323	eP	PKPdf	00 13 22.4	-0.8
JAN	Janina	156.65	325	eP	PKPdf	00 13 23.3	+0.1
CING	Cingoli	156.68	342	PKP	PKPdf	00 13 23.8	+0.5
DOI	San Damiano	156.74	354	PKIKP	PKPdf	00 13 21.3	-2.1
EZAM	Zamans	156.76	24	PKIKP	PKPdf	00 13 24.1	+0.7
BADI	Badiali	156.81	344	PKP	PKPdf	00 13 23.1	-0.4
EARI	Arriondas	156.86	17	PKP	PKPdf	00 13 23.9	+0.4
IDI	Anoyia	156.88	311	PKP	PKPdf	00 13 24.3	+0.8
	comp=Z,36nm,0.9s,baz=72,slow=2.0,SNR=16						
FIN	Finale Ligure	156.92	352	i PKIKP	PKPdf	00 13 23.1	-0.5
FIN	Finale Ligure	156.92	352	i PKPr	PKPdf	00 13 23.1	-0.5
PII	Pisa	157.00	347	i PKIKP	PKPdf	00 13 22.3	-1.4
PII	Pisa	157.00	347	i PKPr	PKPdf	00 13 22.3	-1.4
IGT	Igoumenitsa	157.01	326	eP	PKPdf	00 13 22.1	-1.7
SIVA	Sivas	157.08	311	eP	PKPdf	00 13 23.7	-0.1
CSNT	Castellina Chi	157.08	346	PKP	PKPdf	00 13 22.6	-1.2
KEK	Kerkira	157.16	327	eP	PKPdf	00 13 24.3	+0.4
SAOF	Saorge	157.22	353	PKIKP	PKPdf	00 13 22.8	-1.2
AUTN	L'Aution	157.22	353	PKIKP	PKPdf	00 13 23.8	-0.2
TOUF	Mont Tournerai	157.22	354	PKIKP	PKPdf	00 13 24.3	+0.3
FGMS	Monte Sant'Ang	157.26	336	i PKPu	PKPdf	00 13 24.0	0.0
VAM	Vamos	157.30	312	eP	PKPdf	00 13 22.0	-2.1
VAM	Vamos	157.30	312	eP	PKPdf	00 13 23.2	-0.9
LASF	Ste Croix	157.34	360	ePKIKP	PKPdf	00 13 24.7	+0.6
	comp=Z,101nm,1.1s						
MVIF	Mont Vial	157.35	354	PKIKP	PKPdf	00 13 23.5	-0.6
SBF	Sospel	157.35	353	ePKIKP	PKPdf	00 13 23.9	-0.2
	comp=Z,110nm,1.0s						
STOF	St-Etienne Org	157.35	356	PKP	PKPdf	00 13 24.5	+0.4
ELAN	Lanestosa	157.37	14	PKP	PKPdf	00 13 24.9	+0.8
VLI	Veliai	157.38	317	eP	PKPdf	00 13 24.9	+0.7
PCAB	Cabril	157.39	24	ePKPdf	PKPdf	00 13 24.6	+0.4
PCAB	Cabril	157.39	24	ePKPab	PKPab	00 13 55.9	-0.5
SMRF	Simiane la Rot	157.39	357	ePKIKP	PKPdf	00 13 24.9	+0.7
	comp=Z,78nm,1.0s						
RLS	Riolos of Patr	157.42	321	eP	PKPdf	00 13 24.7	+0.5
LKD	Levkas	157.44	324	eP	PKPdf	00 13 22.1	-2.1
KARN	Karanos	157.49	313	eP	PKPdf	00 13 23.8	-0.5
VILF	Villemus	157.51	356	PKP	PKPdf	00 13 25.2	+0.9
AQU	L'Aquila	157.56	341	i PKIKP	PKPdf	00 13 25.6	+1.2
AQU	L'Aquila	157.56	341	i PKPu	PKPdf	00 13 25.6	+1.2
KYTH	Kithira	157.58	316	eP	PKPdf	00 13 27.0	+2.6
PRAF	Pradon	157.59	357	PKP	PKPdf	00 13 25.4	+1.0
ECAL	Calabor	157.64	21	PKP	PKPdf	00 13 24.4	-0.1
PTO	Porto	157.66	25	ePKPab	PKPab	00 13 57.2	-0.4
TAVF	Tavernes	157.72	356	PKP	PKPdf	00 13 25.4	+0.8
ITM	Ithomi	157.73	319	eP	PKPab	00 13 56.3	-1.6
FRF	La Foret Royal	157.73	355	ePKIKP	PKPdf	00 13 24.4	-0.2
	comp=Z,99nm,1.2s						
EALK	Alkurruntz	157.75	10	PKP	PKPdf	00 13 25.6	+0.9
ELIZ	Elizondo	157.80	10	PKIKP	PKPdf	00 13 25.9	+1.2
VLS	Valsamata	157.84	323	eP	PKPdf	00 13 22.8	-2.0
PVRL	Vila Real	157.88	24	ePKPdf	PKPdf	00 13 25.9	+1.1
PVRL	Vila Real	157.88	24	ePKPab	PKPab	00 13 58.2	-0.3
SJPF	Ste Jean	157.90	10	ePKIKP	PKPdf	00 13 25.5	+0.7
	comp=Z,55nm,1.2s						
MIDA	Miranda	157.93	339	i PKPr	PKPdf	00 13 24.9	0.0
LMR	La Mourre	157.97	355	ePKIKP	PKPdf	00 13 24.8	-0.1
	comp=Z,57nm,0.9s						
GELF	Grande-Etoile	157.99	357	PKP	PKPdf	00 13 24.5	-0.4
ATE	Arette	158.01	9	PKP	PKPdf	00 13 26.0	+1.0
LARF	Larrau	158.01	9	PKP	PKPdf	00 13 25.9	+0.9
MTLF	Montolieu	158.04	3	ePKIKP	PKPdf	00 13 25.2	+0.2
	comp=Z,65nm,1.2s						
BERF	Bertagne	158.05	356	PKP	PKPdf	00 13 25.8	+0.8
CERT	Cerreto	158.06	341	PKP	PKPdf	00 13 24.5	-0.5
EPF	Esparros	158.19	7	ePKIKP	PKPdf	00 13 25.7	+0.5
	comp=Z,33nm,1.0s						
TOLF	Tolfa	158.23	343	PKP	PKPdf	00 13 25.4	+0.2
PVIS	Viseu	158.30	25	ePKPdf	PKPdf	00 13 25.8	+0.5
PVIS	Viseu	158.30	25	ePKPab	PKPab	00 14 00.1	-0.2
PMAR	Madeira	158.40	54	ePKPdf	PKPdf	00 13 26.8	+1.4
PMAR	Madeira	158.40	54	ePKPab	PKPab	00 14 01.1	+0.3
RESF	Ens	158.41	7	PKP	PKPdf	00 13 26.9	+1.5
PGF	Pioggiola	158.42	349	ePKIKP	PKPdf	00 13 25.3	-0.2
	comp=Z,114nm,1.2s						
EBIE	Bielsa	158.51	7	PKP	PKPdf	00 13 26.9	+1.4
PMPS	Porto Santo	158.68	53	ePKPdf	PKPdf	00 13 27.5	+1.7
PMPS	Porto Santo	158.68	53	ePKPab	PKPab	00 14 01.1	-0.9
MTE	Manteigas	158.70	24	ePKPdf	PKPdf	00 13 26.6	+0.8
MTE	Manteigas	158.70	24	ePKPab	PKPab	00 14 01.3	-0.8
MTE	Manteigas	158.70	24	eSS	SS	00 37 32.6	+0.5
MTE	Manteigas	158.70	24	ePKPab	PKPab	00 14 01.6	-0.5
PTOM	Tomar	159.02	27	ePKPdf	PKPdf	00 13 27.1	+0.9
PTOM	Tomar	159.02	27	ePKPab	PKPab	00 14 03.2	-0.3
EHIG	Higuera	159.16	66	PKP	PKPdf	00 13 29.2	+2.9
PMAFR	Mafra	159.17	30	ePKPdf	PKPdf	00 13 26.9	+0.6
PMAFR	Mafra	159.17	30	ePKPab	PKPab	00 14 03.9	-0.3
PMAFR	Mafra	159.17	30	eSS	SS	00 37 39.4	+2.4
CHIE	El Hierro	159.23	68	PKP	PKPdf	00 13 29.2	+2.8
PLOU	Loures	159.29	30	ePKPdf	PKPdf	00 13 27.3	+0.8
PLOU	Loures	159.29	30	ePKPab	PKPab	00 14 04.4	-0.3
ESAC	San Caprasio	159.38	9	PKP	PKPdf	00 13 28.2	+1.6
GUD	Guadarrama	159.62	18	⇓PKIKP	PKPdf	00 13 28.6	+1.7
EPOB	Poblet	159.93	6	PKP	PKPdf	00 13 28.6	+1.4
PESTR	Estremoz	159.99	27	ePKPdf	PKPdf	00 13 27.9	+0.6
PESTR	Estremoz	159.99	27	ePKPab	PKPab	00 14 07.3	-0.4
PESTR	Estremoz	159.99	27	eSS	SS	00 37 45.4	-0.2
ERTA	Horta de San J	160.24	8	PKP	PKPdf	00 13 28.5	+0.9
SOI	Samo	160.26	330	PKIKP	PKPdf	00 13 28.3	+0.7
CCAN	Las Canadas	160.27	66	PKP	PKPdf	00 13 30.1	+2.5
EBAD	Badajoz	160.32	26	PKP	PKPdf	00 13 28.4	+0.7
PTEO	Sao Teotonio	160.56	31	ePKPdf	PKPdf	00 13 29.6	+1.7
PTEO	Sao Teotonio	160.56	31	ePKPab	PKPab	00 14 10.0	-0.2
PBEJ	Beja	160.57	29	ePKPdf	PKPdf	00 13 28.8	+0.9
PBEJ	Beja	160.57	29	ePKPab	PKPab	00 14 09.8	-0.5
ESDC	Sonseca Array	160.57	18	PKP	PKPdf	00 13 28.5	+0.6
	comp=Z,16nm,0.9s,baz=348,slow=2.7,SNR=85						
ESDC				PKPab	PKPab	00 14 09.7	-0.5
	comp=Z,34nm,0.7s,baz=352,slow=2.2,SNR=4.2						
ESDC				pPKPab	pPKPab	00 14 50.7	-0.2
	comp=Z,5.9nm,0.8s,baz=337,slow=3.7,SNR=1.5						
ESDC				PP	PP	00 17 48.4	-4.7
	comp=Z,1.4nm,0.8s,baz=312,slow=4.0,SNR=3.6						
ESDC	Sonseca Array	160.57	18	PKP	PKPdf	00 13 29.1	+1.2
ESLA	Sonseca Array	160.57	18	ePKPdf	PKPdf	00 13 28.7	+0.8
ESLA				ePKP	PKPab	00 14 09.9	-0.3
ESLA				ePP	PP	00 17 50.1	-3.0
EGRO	El Granado	161.15	29	PKP	PKPdf	00 13 29.8	+1.2
EMIN	Mina Concepcio	161.31	27	PKP	PKPdf	00 13 29.8	+1.1
ECHE	Chera	161.37	12	PKIKP	PKPdf	00 13 30.7	+1.9
VAE	Valguarnera	161.49	333	PKP	PKPdf	00 13 29.1	+0.2
	comp=Z,2.6nm,0.4s,baz=91,slow=23,SNR=2.1						
VAE	Valguarnera	161.49	333	PKP	PKPdf	00 13 29.1	+0.2
HVZN	Vizzini	161.60	331	PKP	PKPdf	00 13 31.4	+2.4
EADA	Adamuz	161.75	22	PKP	PKPdf	00 13 30.4	+1.2
EVIA	Vianos	161.94	16	PKIKP	PKPdf	00 13 31.0	+1.6
CFTV	Fuerteventura	162.33	63	PKP	PKPdf	00 13 31.3	+1.6
ELUQ	Luque	162.41	22	PKIKP	PKPdf	00 13 31.2	+1.4
ESPR	Espera	162.41	26	PKP	PKPdf	00 13 31.4	+1.6
EQES	Quesada	162.57	18	PKP	PKPdf	00 13 30.7	+0.8
EHUE	Huescar	162.69	17	PKIKP	PKPdf	00 13 31.2	+1.1
LIC	Lamto	162.70	149	ePKIKP	PKPdf	00 13 31.0	+0.9
	comp=Z,305nm,1.3s						
LIC				eR			
	comp=Z,142nm,20.2s						
LIC	Lamto	162.70	149	ePKPdf	PKPdf	00 13 31.0	+0.9
LIC				LR	LR		
	comp=Z,70nm,20.2s						
ELOJ	Sierra Loja	162.82	22	PKIKP	PKPdf	00 13 31.1	+0.9
ECOG	Cogollos-Vega	162.90	20	PKIKP	PKPdf	00 13 30.9	+0.6
EJIF	Jimena Fronter	162.93	26	PKIKP	PKPdf	00 13 32.2	+1.9
ERON	Agron	163.05	21	PKP	PKPdf	00 13 31.0	+0.5
DBIC	Dimbokro	163.17	149	PKP	PKPdf	00 13 31.6	+1.0
	comp=Z,41nm,0.9s,baz=172,slow=1.1,SNR=27						
DBIC				PKPab	PKPab	00 14 23.4	+1.8
	comp=Z,16nm,0.9s,baz=237,slow=3.6,SNR=4.9						
DBIC				pPKPab	pPKPab	00 15 02.9	+0.6
	comp=Z,15nm,0.9s,baz=173,slow=6.4,SNR=2.3						
DBIC	Dimbokro	163.17	149	PKIKP	PKPdf	00 13 31.6	+1.0
DBIC						00 14 23.4	
DBIC	Dimbokro	163.17	149	PKP	PKPdf	00 13 31.6	+1.0
DBIC				PKPab	PKPab	00 14 23.4	+1.8
DBIC				pPKPab	pPKPab	00 15 02.9	+0.6
EGUA	Guajares	163.30	21	PKIKP	PKPdf	00 13 31.4	+0.7
ENIJ	Nijar	163.59	17	PKIKP	PKPdf	00 13 32.3	+1.3
CAEH	'Ain El Ouahch	164.40	351	P	PKPdf	00 13 32.0	+0.3
CMAH	Djebel Manchou	164.46	349	P	PKPdf	00 13 27.0	-4.7
DFRA	Djebel Bou Aff	164.76	354	P	PKPdf	00 13 34.5	+2.5
CKFL	Kef-Lekhel	164.79	351	P	PKPdf	00 13 34.0	+2.0
KEST	Kesra	164.88	342	PKP	PKPdf	00 13 32.4	+0.3
	comp=Z,7.7nm,0.9s,baz=239,slow=2.3,SNR=17						
KEST				PKPab	PKPab	00 14 28.7	-0.4
	comp=Z,58nm,1.1s,baz=300,slow=1.4,SNR=40						
CASM	Ain Smara	164.96	352	P	PKPdf	00 13 33.0	+0.8
EBNR	Beni Rached	164.99	7	P	PKPdf	00 13 34.0	+1.8
ECHA	Ech Chlef	165.11	8	P	PKPdf	00 13 34.5	+2.2
SET	Setif	165.14	355	P	PKPdf	00 13 34.0	+1.7
CTEI	Djebel Teioual	165.17	352	P	PKPdf	00 13 33.5	+1.1
EMHD	Djebel Mahouad	165.19	3	P	PKPdf	00 13 33.0	+0.6
EANR	'Ain N'Sour	165.27	9	P	PKPdf	00 13 34.5	+2.1
CMER	Merouana	165.67	353	P	PKPdf	00 13 29.0	-3.8
ETRT	Tiaret	165.85	8	P	PKPdf	00 13 35.0	+2.1
MDT	Midelt	166.36	31	PKP	PKPdf	00 13 34.6	+1.3
	comp=Z,27nm,1.0s,baz=60,slow=0.4						
MDT				PKPab	PKPab	00 14 36.0	+0.3
	comp=Z,105nm,0.9s,baz=326,slow=6.4,SNR=33						
MDT				pPKPab	pPKPab	00 15 14.3	-2.0
	comp=Z,24nm,1.1s,baz=242,slow=5.9,SNR=1.5						
TOA0	Torodi Ar. Sit	171.59	166	ePKPdf	PKPdf	00 13 36.9	+0.3
TOA0				epPKPdf	pPKPdf	00 14 19.9	+0.7
TOA0				ePKPab	PKPab	00 15 01.0	+2.1
TOA0				ePP	PP	00 18 50.2	+0.2
TORD	Torodi Ar. Bea	171.59	166	PKP	PKPdf	00 13 36.5	-0.1
	comp=Z,28nm,0.9s,baz=322,slow=0.9,SNR=101						
TORD				pPKP	pPKPdf	00 14 20.2	+1.0
	comp=Z,9.0nm,1.2s,baz=144,slow=1.2,SNR=1.5						
TORD				PKPab	PKPab	00 15 00.9	+2.0
	comp=Z,34nm,0.8s,baz=201,slow=2.6,SNR=23						
TORD				pPKPab	pPKPab	00 15 41.6	+2.1
	comp=Z,16nm,0.9s,baz=182,slow=3.1,SNR=2.8						
TORD				PP	PP	00 18 49.2	-0.7
	comp=Z,13nm,1.1s,baz=156,slow=4.9,SNR=4.6						
TORD	Torodi Ar. Bea	171.59	166	PKP	PKPdf	00 13 36.5	-0.1
TORD				pPKP	pPKPdf	00 14 20.2	+1.0
TORD				PKPab	PKPab	00 15 00.9	+2.0
TORD				pPKPab	pPKPab	00 15 41.6	+2.1
TORD				PP	PP	00 18 49.2	-0.7

*CSEM **16** 00:12:03.1, 4409N×4233E, h118km, mb3.9, After OBN*
MOS 16 00:12:03.9±0.1**, 4409N×4233E, h118**km**, mb3.9**/1**, Error ellipse: s-maj=51.8km s-min=12.1km az=133.9, Western Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DIGR	Digorskoe uzhe	1.50	142	eP	Pn	00 12 32.1	+1.0
DIGR				i S	Sn	00 12 55.5	+3.6
KMSR	Komsomolskaya	1.59	116	i P	Pn	00 12 33.2	+0.9
KMSR				i S	Sn	00 12 57.6	+3.7
KORR	Kora	1.61	128	i P	Pn	00 12 33.4	+0.9
KORR				i S	Sn	00 12 57.8	+3.5
ARNR	Ardon	1.68	122	eP	Pn	00 12 34.1	+0.8
ARNR				i S	Sn	00 12 59.1	+3.4
ZEI	Tsey	1.75	138	eP	Pn	00 12 34.6	+0.5
ZEI				eS	Sn	00 13 00.0	+2.9
BTKR	Batakoyurt	1.76	113	eP	Pn	00 12 35.1	+0.8
BTKR				eS	Sn	00 13 00.7	+3.3
TRKR	Terskaya	1.78	101	i P	Pn	00 12 35.3	+0.8
TRKR				i S	Sn	00 13 01.0	+3.2
LACR	Lac	1.91	131	eP	Pn	00 12 36.7	+0.6
LACR				eS	Sn	00 13 03.5	+2.8
VLKR	Vladikavkaz	2.00	121	i P	Pn	00 12 37.8	+0.6
VLKR				eS	Sn	00 13 05.4	+2.7

*CSEM **16** 00:22:54.3±0.3, 4837N×664E, h2km, ML1.4, Error ellipse: s-maj=5.9km s-min=3.2km az=152.0*
*LDG **16** 00:22:54.3±0.1, 4832N×668E, h10km, Md2.3/3, Error ellipse: s-maj=1.8km s-min=0.7km az=140.0*
STR 16 00:22:53.9±0.6**, 4840N×669E, h10**km±1km**, Ml1.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECH	Echery	0.36	120	Pg	Pg	00 23 02.1	+1.0
ECH				Sg	Sg	00 23 05.8	-0.1
CDF	Champ du Feu	0.39	88	ePg	Pg	00 23 02.4	+0.8
CDF				eSg	Sg	00 23 07.9	+1.1
	8.5nm,0.2s						
CDF	Champ du Feu	0.39	88	ePg	Pg	00 23 02.4	+0.8
CDF				eSg	Sg	00 23 07.9	+1.1
	4.2nm,0.2s						
WLS	Welschbruch	0.44	88	Pg	Pg	00 23 03.3	+0.7
WLS				Sg	Sg	00 23 08.8	+0.4
HAU	Haudompre	0.46	210	ePg	Pg	00 23 01.9	-0.9
HAU				eSg	Sg	00 23 07.0	-1.9
	2.6nm,0.2s						
HAU	Haudompre	0.46	210	ePg	Pg	00 23 01.9	-0.9
HAU				eSg	Sg	00 23 07.0	-1.9
	1.3nm,0.2s						
THEF	They Montfort	0.50	250	Pg	Pg	00 23 03.1	-0.6
HINF	Hinteralfeld	0.59	169	ePg	Pg	00 23 04.4	-1.0
HINF				eSg	Sg	00 23 11.1	-2.1
	3.6nm,0.2s						
HINF	Hinteralfeld	0.59	169	ePg	Pg	00 23 04.4	-1.0
MOF	Molkenrain	0.62	151	Pg	Pg	00 23 06.4	+0.4
MOF				Sg	Sg	00 23 15.1	+0.9

*ISCJB **16** 00:33:02.9±0.8, 867N±005×6183W±004, h10km, Error ellipse: s-maj=8.2km s-min=3.6km az=98.6*
*TRN **16** 00:33:02.9, 873N×6174W, h3km, MD4.0, M3.9(CAR)*
*FUNV **16** 00:33:03.3, 867N×6165W, h5km, MW3.8*
*NEIC **16** 00:33:05.2, 874N×6183W, h109km, MD4.0(TRN), After TRN.*
ISC 16 00:33:03.7±1.5**, 874N**±005×**6179W**±005**, h4**km±12km**, n42, σ1s.04**/73**, 3C, Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPA	Siparia	1.43	11	eP	Pn	00 33 29.3	-1.0
SIPA				eS	Sb	00 33 49.3	0.0
SIPA	Siparia	1.43	11	eP	Pn	00 33 31.6	+1.3
SIPA				eS	Sb	00 33 49.3	0.0
ALNG	Atlantic LNG	1.44	4	eP	Pn	00 33 30.8	+0.3
ALNG				eS	Sb	00 33 50.4	+0.7
ALNG	Atlantic LNG	1.44	4	eP	Pn	00 33 32.2	+1.7
ALNG				eS	Sb	00 33 50.4	+0.7
TPP	Pointe-a-Pierr	1.60	12	eP	Pn	00 33 32.5	-0.2
TPP				eS	Sn	00 33 54.7	+0.8
GURV	El Guri	1.61	233	⇑eP	Pn	00 33 33.7	+0.9
GURV				eS	Sn	00 33 55.6	+1.6
GURV	El Guri	1.61	233	⇑eP	Pn	00 33 33.8	+0.9
GURV				eS	Sn	00 33 55.6	+1.6
ORIV	Oritupano	1.63	282	eP	Pn	00 33 34.0	+0.8
ORIV				eS	Sn	00 33 57.9	+3.3
ORIV	Oritupano	1.63	282	eP	Pn	00 33 33.8	+0.6
ORIV				eS	Sn	00 33 57.9	+3.3
GUNV	Guanoco	1.82	321	eP	Pn	00 33 36.4	+0.7
GUNV				eS	Sn	00 34 01.1	+2.0
GUNV	Guanoco	1.82	321	eP	Pn	00 33 36.3	+0.6
GUNV				eS	Sn	00 34 01.1	+2.0
TBH	Brigand Hill	1.88	22	eP	Pn	00 33 37.1	+0.6
TBH				eS	Sn	00 34 00.5	-0.2
TRN	Trinidad (W)	1.94	11	eP	Pn	00 33 36.9	-0.4
TRN				eS	Sn	00 34 01.5	-0.6
GUIV	Guiria	1.94	347	eP	Pn	00 33 37.1	-0.4
GUIV				eS	Sn	00 34 03.4	+1.1
TCE	Chacachacare	1.95	1	eP	Pn	00 33 37.5	0.0
TCE				eS	Sn	00 34 02.5	+0.1
TCE	Chacachacare	1.95	1	eP	Pn	00 33 37.5	0.0
TCE				eS	Sn	00 34 01.3	-1.1
TPR	Prospect	2.63	22	⇑iP	Pn	00 33 46.8	-0.1
TPR				eS	Sn	00 34 16.7	-2.6
BOT	Bacolet	2.64	24	eP	Pn	00 33 46.7	-0.3
PRGV	PARIAGUAN	2.82	271	eP	Pn	00 33 50.0	+0.5
PRGV				eS	Sn	00 34 25.2	+1.2
PRGV	PARIAGUAN	2.82	271	eP	Pn	00 33 49.2	-0.3
PRGV				eS	Sn	00 34 25.2	+1.2
ITEV	Isla Los Testi	2.92	333	eS	Sn	00 34 26.9	+0.6
PCRV	Puerto La Cruz	3.15	297	eP	Pn	00 33 54.6	+0.5
PCRV				eS	Sn	00 34 31.5	-0.6
PCRV	Puerto La Cruz	3.15	297	eP	Pn	00 33 55.5	+1.5
PCRV				eS	Sn	00 34 31.5	-0.6
CUPV	Cœpira	4.16	289	eP	Pn	00 34 08.2	+0.3
CUPV				eS	Sn	00 34 56.3	-0.6
CUPV	Cœpira	4.16	289	eP	Pn	00 34 08.6	+0.7
CUPV				eS	Sn	00 34 56.9	-0.1
MERV	Las Mercedes	4.48	277	eP	Pn	00 34 12.7	+0.3
MERV				eS	Sn	00 35 02.9	-2.1
MERV	Las Mercedes	4.48	277	eP	Pn	00 34 12.8	+0.5
MERV				eS	Sn	00 35 02.9	-2.1
CAOV	Caicara del Or	4.70	253	eP	Pn	00 34 14.1	-1.3
BIRV	Birongo	4.74	292	eP	Pn	00 34 16.3	+0.3
BIRV				eS	Sn	00 35 09.6	-1.8
BIRV	Birongo	4.74	292	eP	Pn	00 34 16.9	+1.0
BIRV				eS	Sn	00 35 09.6	-1.8
ORCV	Isla La Orchil	5.30	306	eP	Pn	00 34 22.9	-0.7
ORCV	Isla La Orchil	5.30	306	eP	Pn	00 34 22.1	-1.5
BAUV	El Baul	6.18	272	eP	Pn	00 34 35.0	-0.7
BAUV				eS	Sn	00 35 43.3	-3.5
BAUV	El Baul	6.18	272	eP	Pn	00 34 34.4	-1.3
BAUV				eS	Sn	00 35 43.0	-3.8
TURV	Turiamo	6.20	286	eP	Pn	00 34 36.0	0.0
TURV				eS	Sn	00 35 43.4	-4.0
TURV	Turiamo	6.20	286	eP	Pn	00 34 36.1	+0.1
TURV				eS	Sn	00 35 43.4	-4.0
TEPV	Terepaima	7.41	280	eP	Pn	00 34 51.7	-0.8
SANV	Sanarito	7.69	276	eP	Pn	00 34 55.5	-0.9
SANV	Sanarito	7.69	276	eP	Pn	00 34 57.5	+1.1
CURV	Curarigua	8.16	280	eP	Pn	00 35 01.9	-1.0
CURV	Curarigua	8.16	280	eP	Pn	00 35 03.1	+0.2
MONV	Montecano	8.66	292	eP	Pn	00 35 07.8	-1.9

*IDC **16** 00:39:57.6±4.0, 248S×14047E, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.7/10, mbtmp3.9/3, MS3.6/1, Ms1 3.6/1, ms1mx2.8/22, Error ellipse: s-maj=143.0km s-min=31.9km az=88.0*
*ISCJB **16** 00:40:00.4±1.3, 27S±01×1406E±02, h33km, mb3.5/2, Error ellipse: s-maj=26.4km s-min=13.9km az=49.3*
*NEIC **16** 00:40:02.6±1.1, 265S×14051E, h35km, mb3.6/1, Error ellipse: s-maj=22.9km s-min=17.1km az=120.0*
ISC 16 00:40:02.9±1.3**, 27S**±01×**1405E**±02**, h35**km**, n7, σ0s.69**/7**, mb3.5**/2**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	9.42	136	LR	LR	00 46 01.2	
	comp=Z,328nm,18.5s,baz=40,slow=38						
WRAB	Tennant Creek	18.20	199	ePn	Pn	00 44 12.1	-0.5
	2.1nm,0.5s						
WB2	Warramunga Arr	18.20	199	ePn	Pn	00 44 12.4	-0.3
WRA	Warramunga Arr	18.21	199	P	Pn	00 44 12.2	-0.5
	0.3nm,0.3s,baz=21,slow=12,SNR=13						
WRA				S	S	00 47 31.6	-7.7
	0.1nm,0.3s,baz=26,slow=23,SNR=3.9						
HNR	Honiara	20.46	110	P	P	00 44 37.3	-0.1
ASAR	Alice Springs	21.84	196	P	P	00 44 53.8	+1.6
	0.9nm,0.5s,mb3.5,baz=26,slow=9.7,SNR=11						
MKAR	Makanchi Array	70.84	322	P	P	00 51 15.9	-0.1
	0.3nm,0.4s,mb3.6,baz=106,slow=7.5,SNR=1.5						

CASC 16 00:45:57.6±3.4**, 1402N×9185W, h20**km±18km**, MD3.7, 1C-2D, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TP2	Tecpan 2	1.11	47	⇑eP	Pn	00 46 18.8	+0.9
TP2				eS	Sb	00 46 33.4	+1.4
RBDL	Robledal	2.10	87	eP	x	00 46 53.7	
RBDL				eS	x	00 47 19.4	
RTR	El Retiro	2.15	93	eP	x	00 46 54.3	
RTR				eS	x	00 47 23.7	
SBLS	San Blas	2.17	94	⇓eP	x	00 46 54.5	
SBLS				eS	x	00 47 23.1	
MTO2	Montecristo 2	2.44	81	eP	x	00 46 56.8	
MTO2				eS	x	00 47 28.9	
LFRS	El Faro	2.74	98	⇓eP	x	00 47 02.5	
LFRS				eS	x	00 47 35.2	
LBRS	Las Brisas	2.74	96	eP	x	00 47 02.0	
LBRS				eS	x	00 47 34.8	
LCBS	La Ceiba	2.81	97	eP	x	00 47 01.8	
LCBS				eS	x	00 47 37.1	
SNVI	San Vicente	2.96	98	eP	x	00 47 05.5	
SNVI				eS	x	00 47 41.9	
VSM	San Miguel	3.53	99	eP	x	00 47 14.6	
VSM				eS	x	00 47 56.1	

*ISCJB **16** 01:07:05.7±1.0, 15N±02×985E±02, h33km, mb4.0/10, Error ellipse: s-maj=31.2km s-min=13.1km az=89.9*
*NEIC **16** 01:07:07.7±0.8, 145N×9853E, h35km, mb4.0/4, Error ellipse: s-maj=25.6km s-min=9.6km az=47.0*
*IDC **16** 01:07:25.4±21.0, 175N×9905E, h190km±200km, mb3.5/6, mb1 3.6/6, mb1mx3.2/20, mbtmp4.0/6, Error ellipse: s-maj=115.5km s-min=20.4km az=58.0*
ISC 16 01:07:07.8±1.0**, 15N**±02×**985E**±02**, h35**km**, n13, σ0s.50**/13**, mb4.0**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	18.27	75	P	Pn	01 11 18.7	+0.3
WRA	Warramunga Arr	41.09	123	P	P	01 14 48.2	+0.1
	2.7nm,0.4s,mb4.2,baz=306,slow=9.1,SNR=48						
WRAB	Tennant Creek	41.09	123	eP	P	01 14 48.4	+0.2
	4.9nm,0.3s,mb4.6						
WB2	Warramunga Arr	41.10	123	eP	P	01 14 47.9	-0.3
SONM	Songino Array	46.70	7	P	P	01 15 32.9	-0.3
	0.6nm,0.4s,mb3.9,baz=187,slow=9.3,SNR=5.1						
ULN	Ulaanbaatar	46.82	8	eP	P	01 15 33.1	-1.1
	0.7nm,0.4s,mb3.9						
MKAR	Makanchi Array	47.32	345	P	P	01 15 39.0	+1.0
	0.4nm,0.3s,mb3.9,baz=153,slow=8.3,SNR=3.2						
MKAR	Makanchi Array	47.32	345	P	P	01 15 39.0	+1.0
KURK	Kurchatov	51.89	344	eP	P	01 16 13.2	+0.4
	1.0nm,0.6s,mb3.9						
BVAR	Borovoye Array	56.44	340	P	P	01 16 46.0	+0.1
	0.7nm,0.5s,mb4.0,baz=146,slow=8.1,SNR=5.4						
CHKZ	Chkalovo	56.91	341	eP	P	01 16 49.6	+0.4
	0.7nm,0.5s,mb4.0						
FINES	FINESS Array B	80.37	332	P	P	01 19 14.9	-0.6
	0.9nm,0.8s,mb3.7,baz=132,slow=6.2,SNR=4.9						
ARCES	ARCESS Array B	82.73	340	P	P	01 19 27.9	-0.1
	3.0nm,1.1s,mb4.2,baz=55,slow=3.4,SNR=4.1						

*ISCJB **16** 01:08:33.5±0.5, 3995N±002×2404E±003, h13km±4km, Error ellipse: s-maj=4.4km s-min=4.0km az=142.3*
*ATH **16** 01:08:33.5, 4001N×2400E, h33km, MD2.9/3*
*CSEM **16** 01:08:34.4±0.2, 3994N×2403E, h20km, MD2.9, Error ellipse: s-maj=3.2km s-min=3.1km az=28.0*
*THE **16** 01:08:34.3, 3995N×2404E, h12km*
ISC 16 01:08:34.1±0.5**, 3995N**±002×**2404E**±003**, h14**km±4km**, n17, σ0s.70**/29**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAIG	Paliouri	0.28	265	ePg	Pg	01 08 40.0	+0.1
PAIG				eSg	Sg	01 08 44.5	+0.5
OUR	Ouranopolis	0.39	353	ePg	Pg	01 08 42.4	+0.6
OUR				eSg	Sg	01 08 47.9	+0.8
PLG	Polygyros	0.62	313	ePN	Pg	01 08 45.1	-1.1
PLG				eSN	Sg	01 08 53.3	-1.2
AOS	Alonnisos	0.79	189	ePg	Pg	01 08 48.7	-0.7
AOS				eSg	Sg	01 09 00.4	+0.7
LOS	Limnos	0.80	91	ePg	Pg	01 08 49.8	+0.2
LOS				eSg	Sg	01 09 00.4	+0.3
XOR	Xorichti	0.88	229	ePg	Pg	01 08 51.1	0.0
XOR				eSg	Sg	01 09 03.6	+1.0
LIA	Limnos Island	0.88	93	ePN	Pn	01 08 51.2	-0.8
NEO	Neokhori	0.90	225	ePN	Pn	01 08 51.2	-1.1
HORT	Hortiatis	0.97	312	ePg	Pg	01 08 52.3	-0.5
HORT				eSg	Sg	01 09 05.8	+0.3
SOH	Sokhos	1.02	329	ePg	Pg	01 08 53.5	-0.2
SOH				eSg	Sg	01 09 07.4	+0.5
THE	Thessaloniki	1.07	310	ePg	Pg	01 08 54.0	-0.7
THE				eSg	Sg	01 09 09.3	+0.6
LIT	Litokhoron	1.20	278	ePg	Pg	01 08 55.8	-1.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIT				eSg	Sg	01 09 12.8	-0.1
GRG	Griva	1.61	309	ePg	Pn	01 09 02.0	+0.1
GRG	Griva	1.61	309	ePg	Pn	01 09 02.0	0.0
AGG	Agios Georgios	1.62	236	ePg	Pn	01 09 02.0	-0.1
AGG				eSg	Sn	01 09 23.7	+1.0
MMB	Musomiste	1.65	352	ePb	Pn	01 09 02.8	+0.2
MMB				eSb	Sn	01 09 24.8	+1.1
ALN	Alexandroupoli	1.80	58	ePb	Pn	01 09 04.3	-0.3

*ISCJB **16** 01:08:51.9±1.0, 3328N±004×14099E±009, h64km±9km, mb3.7/2, Error ellipse: s-maj=12.2km s-min=7.1km az=18.6*
*IDC **16** 01:08:51.8±1.4, 3270N×13896E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.5/19, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=33.8km s-min=16.4km az=127.0*
*NEIC **16** 01:08:52.3, 3332N×14099E, h63km, MG3.2(JMA), After JMA.*
*JMA **16** 01:08:52.2±0.2, 3332N×14099E, h63km, M3.2*
ISC 16 01:08:52.7±1.1**, 3327N**±005×**14101E**±009**, h50**km±13km**, n18,** σ1^{s}07/30**, mb3.7**/2**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.01	261	P	Pn	01 09 10.7	+0.1
JHJ2				S	Sn	01 09 24.2	+0.4
JHJ	Hachijo jima 2	1.04	262	Pn	Pn	01 09 11.1	+0.1
	112nm,0.3s,baz=34,slow=14,SNR=46						
JHJ				Sn	Sn	01 09 24.1	-0.2
	147nm,0.3s,baz=273,slow=24,SNR=17						
BSO1	Boso 1	1.38	359	P	Pn	01 09 15.1	-0.5
BSO1				eS	Sn	01 09 32.8	0.0
JMY	Miyakejima3	1.48	303	P	Pn	01 09 16.5	-0.5
BSO3	Boso 3	1.58	345	P	Pn	01 09 17.7	-0.7
BSO3				eS	Sn	01 09 37.6	-0.1
JIM2	Oshima 3	1.95	318	P	Pn	01 09 23.0	-0.4
JIM2				eS	Sn	01 09 45.0	-1.7
JIZS	Izushimoda	2.29	310	P	Pn	01 09 28.4	+0.4
JIZS				eS	Sn	01 09 54.6	-0.3
JOD2	Odawara 2	2.55	322	P	Pn	01 09 30.3	-1.2
JOD2				eS	Sn	01 09 59.6	-1.7
JYN	Shimob	3.02	318	P	Pn	01 09 39.0	+1.0
JRY	Ryogami san	3.25	328	P	Pn	01 09 41.4	+0.3
MJAR	Matsushiro Arr	4.00	326	Pn	Pn	01 09 52.9	+1.5
	1.4nm,0.3s,baz=162,slow=12,SNR=10						
MJAR				Sn	Sn	01 10 39.0	+2.0
	0.6nm,0.3s,baz=37,slow=27,SNR=5.0						
MJAR	Matsushiro Arr	4.00	326	Pn	Pn	01 09 52.9	+1.5
MJAR				Sn	Sn	01 10 39.0	+2.0
MAJO	Matsushiro	4.00	326	ePn	Pn	01 09 49.5	-2.0
MAJO				eSn	Sn	01 10 37.3	+0.3
MAT	Matsushiro	4.00	326	P	Pn	01 09 53.6	+2.2
MAT				S	Sn	01 10 39.0	+2.0
MAT	Matsushiro	4.00	326	P	Pn	01 09 54.0	+2.6
MAT				eS	Sn	01 10 39.0	+2.0
LSA	Lhasa	42.35	279	P	P	01 16 40.3	-1.5
WRA	Warramunga Arr	53.29	188	P	P	01 18 06.9	+0.4
	0.5nm,0.5s,mb3.8,baz=2.5,slow=7.6,SNR=13						
ASAR	Alice Springs	57.02	188	P	P	01 18 33.7	+0.4
	0.3nm,0.4s,mb3.7,baz=4.4,slow=7.1,SNR=4.4						

*ISCJB **16** 01:56:52.4±1.4, 4398N±005×748E±006, h10km±7km, Error ellipse: s-maj=8.6km s-min=7.7km az=158.9*
*LDG **16** 01:56:52.3±0.5, 4394N×759E, h9km, Md2.3/2, Ml2.2/2, Error ellipse: s-maj=8.0km s-min=6.8km az=76.0*
*STR **16** 01:56:53.3±0.6, 4400N×748E, h6km±1km, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 16 01:56:53.3±1.3**, 4398N**±005×**748E**±006**, h5**km±10km**, n9,** σ**0^{s}52**/18**, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUTN	L'Aution	0.04	296	Pg	Pg	01 56 54.1	-0.4
AUTN				Sg	Sg	01 56 54.7	-0.6
SAOF	Saorge	0.06	81	Pg	Pg	01 56 54.9	+0.2
SAOF				Sg	Sg	01 56 56.2	+0.6
SBF	Sospel	0.12	196	ePg	Pg	01 56 55.7	0.0
SBF				eSg	Sg	01 56 57.5	+0.1
	148nm,0.2s						
LUCF	Luceram	0.13	229	Pg	Pg	01 56 55.7	-0.2
LUCF				Sg	Sg	01 56 57.9	+0.2
TOUF	Mont Tournerai	0.17	282	Pg	Pg	01 56 56.5	-0.2
TOUF				Sg	Sg	01 56 58.9	-0.1
MVIF	Mont Vial	0.25	251	Pg	Pg	01 56 58.1	-0.1
MVIF				Sg	Sg	01 57 02.2	+0.7
FRF	La Foret Royal	0.73	236	ePg	Pg	01 57 07.1	-0.3
FRF				eSg	Sg	01 57 17.0	+0.1
	4.3nm,0.2s						
LMR	La Mourre	0.95	228	ePg	Pg	01 57 11.0	-0.6
LMR				eSg	Sg	01 57 23.6	-0.4
	9.9nm,0.3s						
SMRF	Simiane la Rot	1.38	271	ePg	Pg	01 57 19.1	-0.6
SMRF				eSg	Sg	01 57 39.1	+1.6
	2.9nm,0.2s						

*ISCJB **16** 01:57:47.6±0.3, 1350N±003×12039E±005, h72km±4km, mb4.3/20, Error ellipse: s-maj=8.1km s-min=4.8km az=172.5*
*MAN **16** 01:57:47.4, 1357N×12032E, h58km, mb2.8, ML4.2, MS3.7*
*NEIC **16** 01:57:48.7±0.4, 1356N×12057E, mb4.5/8, Error ellipse: s-maj=10.4km s-min=7.2km az=64.0*
*IDC **16** 01:57:50.3±1.9, 1361N×12073E, h87km±20km, mb3.7/9, mb1 3.8/9, mb1mx3.6/19, mbtmp4.0/9, Error ellipse: s-maj=83.1km s-min=14.4km az=68.0*
ISC 16 01:57:48.7±0.3**, 1351N**±003×**12043E**±005**, h64**km±4km**, n41,** σ1^s**05**/49**, mb4.3**/20**, 1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.28	322	eP	Pn	01 57 58.2	-0.9
LUBP				eS	Sn	01 58 05.5	-1.2
TGY	Tagaytay City	0.77	40	⇑iP	Pn	01 58 05.9	+1.9
TGY				i S	Sn	01 58 18.1	+2.8
TGY	Tagaytay City	0.77	40	P	Pn	01 58 05.7	+1.7
	2µm,0.3s,baz=232,slow=2.3,SNR=89						
TGY				S	Sn	01 58 18.0	+2.7
	2µm,0.3s,baz=354,slow=22,SNR=42						
BOAC	Boac	1.38	92	eP	Pn	01 58 11.9	+0.1
BUSP	Coron	1.51	188	eP	Pn	01 58 14.1	+0.5
BUSP				eS	Sn	01 58 32.3	-0.1
OTRP	Odiongan	1.93	126	eP	Pn	01 58 20.4	+1.2
OTRP				eS	Sn	01 58 43.3	+0.9
PCPH	Palayan	2.14	18	⇓eP	Pn	01 58 21.6	-0.5
PCPH				eS	Sn	01 58 46.7	-0.9
ENPP	El Nido	2.49	203	eP	Pn	01 58 27.0	+0.2
ENPP				eS	Sn	01 58 54.6	-1.4
CUYO	Cuyo Island	2.70	168	eP	Pn	01 58 30.1	+0.3
CUYO				eS	Sn	01 59 00.3	-1.0
TATO	Taipei	11.45	5	P	Pn	02 00 28.6	-0.7
QIZ	Qiongzhong	11.55	300	ePn	Pn	02 00 31.1	+0.5
MAJO	Matsushiro	27.93	32	eP	P	02 03 29.4	-3.3
	1.8nm,0.4s,mb4.0						
LSA	Lhasa	31.50	305	P	P	02 04 06.3	+2.0
MDJ	Mudanjiang	31.98	12	eP	P	02 04 05.6	-2.9
	4.3nm,0.3s,mb4.8						
MBWA	Marble Bar	34.46	181	eP	P	02 04 30.7	+0.6
	1.7nm,0.4s,mb4.3						
JIRN	Jiri	34.87	299	eP	P	02 04 34.8	+1.1
	13nm,0.5s,mb5.1						
GUN	Gumba	35.21	299	eP	P	02 04 37.5	+0.9
PKI	Pulchoki	35.51	299	eP	P	02 04 40.0	+0.8
	9.3nm,0.5s,mb5.0						
KKN	Kakani	35.68	299	eP	P	02 04 41.3	+0.6
DMN	Daman	35.78	299	eP	P	02 04 42.6	+1.1
WRAB	Tennant Creek	35.94	157	eP	P	02 04 42.8	-0.1
	1.4nm,0.4s,mb4.2						
WRA	Warramunga Arr	35.95	157	P	P	02 04 42.5	-0.5
	1.0nm,0.5s,mb4.0,baz=335,slow=9.7,SNR=14						
WRA				pP	pP	02 04 60.0	+1.2
	1.9nm,0.6s,baz=334,slow=9.8,SNR=12						
WB2	Warramunga Arr	35.95	157	eP	P	02 04 42.7	-0.3
ULN	Ulaanbaatar	36.02	345	eP	P	02 04 43.8	+0.2
	3.5nm,0.4s,mb4.6						
SONM	Songino Array	36.17	344	P	P	02 04 44.9	0.0
	4.8nm,0.6s,mb4.6,baz=164,slow=10,SNR=39						
GKN	Gorkha	36.29	299	eP	P	02 04 46.1	+0.3
	7.1nm,0.5s,mb4.8						
KOLN	Koldanda	37.11	298	eP	P	02 04 54.1	+1.3
ASAR	Alice Springs	39.23	160	P	P	02 05 10.8	+0.2
	1.0nm,0.4s,mb3.9,baz=338,slow=6.8,SNR=14						
ASAR				pP	pP	02 05 28.1	+1.4
	1.4nm,0.6s,baz=340,slow=7.5,SNR=8.8						
TLY	Talaya	40.41	344	P	P	02 05 19.6	-0.8
MKAR	Makanchi Array	46.03	324	P	P	02 06 06.6	+0.8
	1.1nm,0.6s,mb4.0,baz=130,slow=8.8,SNR=12						
MKAR	Makanchi Array	46.03	324	P	P	02 06 06.6	+0.8
KURK	Kurchatov	50.20	327	eP	P	02 06 38.3	+0.4
	16nm,0.8s,mb5.1						
BVAR	Borovoye Array	55.78	326	P	P	02 07 19.3	+0.3
	2.8nm,0.7s,mb4.4,baz=119,slow=8.8,SNR=18						
BRVK	Borovoye	55.85	326	eP	P	02 07 20.1	+0.6
	4.9nm,1.0s,mb4.5						
CHKZ	Chkalovo	55.95	327	eP	P	02 07 20.1	-0.1
	2.6nm,0.6s,mb4.4						
BRTR	Keskin Array B	79.06	308	P	P	02 09 45.5	-0.4
	0.4nm,0.6s,mb3.5,baz=48,slow=3.7,SNR=3.8						
ARCES	ARCESS Array B	79.17	339	P	P	02 09 45.2	-1.3
	1.2nm,0.5s,mb4.1,baz=79,slow=6.9,SNR=12						
ARCES	ARCESS Array B	79.17	339	P	P	02 09 45.2	-1.3
FINES	FINESS Array B	80.32	331	P	P	02 09 51.3	-1.4
	0.5nm,0.6s,mb3.6,baz=64,slow=4.4,SNR=4.7						
INK	Inuvik	83.37	21	P	P	02 10 06.5	-2.2
NOA	NORSAR Array B	87.31	333	P	P	02 10 26.1	-2.3
	0.5nm,0.6s,mb4.0,baz=67,slow=4.8,SNR=3.3						

*IDC **16** 03:03:42.9±1.2, 248S×13998E, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.9/11, mbtmp3.9/5, ML4.4/1, MS3.7/6, Ms1 3.7/6, ms1mx3.2/26, Error ellipse: s-maj=48.1km s-min=26.6km az=93.0*
*NEIC **16** 03:03:43.9±0.8, 248S×14000E, h10km, mb4.1/2, Error ellipse: s-maj=28.4km s-min=13.1km az=108.0*
*ISCJB **16** 03:03:48.2±1.4, 27S±0.1×1396E±03, h33km, mb3.7/3, MS3.8/5, Error ellipse: s-maj=40.5km s-min=14.2km az=15.4*
ISC 16 03:03:49.1±1.5**, 26S**±01×**1399E**±03**, h35**km**, n21,** σ**0^{s}90**/13**, mb3.7**/3**, MS3.8**/5**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.46	216	eP	Pn	03 06 43.4	-0.5
	19nm,0.4s						
WRAB	Tennant Creek	18.07	197	eP	Pn	03 07 56.7	-0.6
	21nm,0.9s						
WB2	Warramunga Arr	18.08	197	eP	Pn	03 07 56.6	-0.8
WRA	Warramunga Arr	18.08	197	P	Pn	03 07 56.4	-1.0
	1.2nm,0.3s,baz=20,slow=11,SNR=46						
WRA				S	S	03 11 11.6	-11
	0.2nm,0.3s,baz=15,slow=22,SNR=4.5						
CTA	Charters Tower	18.49	161	LR	LR	03 15 58.5	
	comp=Z,249nm,19.1s,baz=45,slow=40						
FITZ	Fitzroy Crossi	20.80	221	eP	P	03 08 28.1	+0.9
	3.2nm,0.4s						
FITZ	Fitzroy Crossi	20.80	221	P	P	03 08 27.7	+0.5
	1.5nm,0.5s,baz=70,slow=18,SNR=13						
AS31	Alice Springs	21.74	195	eP	P	03 08 37.8	+0.5
ASAR	Alice Springs	21.74	195	P	P	03 08 38.0	+0.7
	2.8nm,0.5s,mb3.9,baz=29,slow=12,SNR=18						
ASPA	Alice Springs	21.74	195	eP	P	03 08 39.8	+2.4
STKA	Stephens Creek	29.19	177	LR	LR	03 22 18.5	
	comp=Z,125nm,20.5s,MS3.5,baz=190,slow=38						
SONM	Songino Array	58.10	334	LR	LR	03 38 48.6	
	comp=Z,59nm,18.1s,MS3.7,baz=148,slow=36						
MKAR	Makanchi Array	70.39	322	P	P	03 14 59.3	-0.2
	0.4nm,0.4s,mb3.7,baz=92,slow=9.4,SNR=6.5						
PPT	Papeete	70.69	108	LR	LR	03 41 03.5	
	comp=Z,66nm,19.6s,MS3.9,baz=152,slow=32						
VNDA	Vanda	75.81	175	P	P	03 15 30.9	-0.5
	0.4nm,0.9s,mb3.4,baz=328,slow=4.5,SNR=3.7						
VNDA	Vanda	75.81	175	P	P	03 15 30.9	-0.5
AKTO	Aktyubinsk	86.78	321	LR	LR	03 59 35.0	
	comp=Z,22nm,20.0s,MS3.5,baz=328,slow=39						
YBH	Yreka Blue Hor	97.25	48	LR	LR	03 52 44.2	
	comp=Z,71nm,19.6s,MS4.2,baz=352,slow=30						
DBIC	Dimbokro	144.61	278	PKP	PKPdf	03 23 20.1	-1.7
	2.1nm,0.4s,baz=64,slow=4.4,SNR=19						
LPAZ	La Paz	146.58	125	PKPbc	PKPbc	03 23 27.6	+0.9
	1.7nm,1.0s,baz=279,slow=2.6,SNR=6.5						
CPUP	Villa Florida	146.80	151	PKPbc	PKPbc	03 23 27.1	-0.3
	1.8nm,0.8s,baz=257,slow=1.7,SNR=3.0						

MAN 16 03:08:27.3, 1030N×12508E, h30km, mb1.9, ML3.7, MS0.5, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.27	233	eP	Pb	03 08 35.8	+1.5
MSLP				eS	Sb	03 08 43.0	+3.9
SCPH	Surigao	0.65	141	⇓eP	Pb	03 08 40.6	+0.4
PLP	Palo	0.87	354	eP	Pn	03 08 43.3	-0.1
PLP				eS	Sn	03 08 55.6	+0.5
OCLP	Ormoc	0.88	329	eP	Pn	03 08 45.7	+2.1
OCLP				eS	Sn	03 09 01.6	+6.2
BUTP	Butuan	1.42	158	eP	Pn	03 08 51.1	0.0

*IDC **16** 03:24:18.7±3.5, 291S×14161E, h0km, mb3.2/2, mb1 3.7/3, mb1mx3.5/12, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=122.4km s-min=51.0km az=128.0*
*ISCJB **16** 03:24:21.4±2.1, 30S±0.1×1418E±03, h33km, mb3.5/3, Error ellipse: s-maj=45.4km s-min=16.5km az=174.2*
*NEIC **16** 03:24:22.7±1.0, 294S×14183E, h35km, mb3.9/2, Error ellipse: s-maj=28.2km s-min=13.9km az=100.0*
ISC 16 03:24:23.1±2.1**, 30S**±01×**1419E**±03**, h35**km**, n11,** σ**0^{s}62**/10**, mb3.5**/3**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	13.44	223	eP	Pn	03 27 30.8	-0.4
	7.5nm,0.6s						
WRAB	Tennant Creek	18.38	203	eP	Pn	03 28 35.4	+0.4
	5.9nm,0.8s						
WB2	Warramunga Arr	18.39	203	eP	Pn	03 28 35.1	0.0
WB2	Warramunga Arr	18.39	203	eP	Pn	03 28 35.8	+0.7
WRA	Warramunga Arr	18.39	203	P	Pn	03 28 34.9	-0.3
	0.4nm,0.3s,baz=23,slow=12,SNR=26						
FITZ	Fitzroy Crossi	21.88	226	P	P	03 29 11.9	-0.9
	0.8nm,0.6s,mb3.3,baz=70,slow=11,SNR=3.7						
AS31	Alice Springs	21.96	200	eP	P	03 29 14.0	+0.3
ASAR	Alice Springs	21.96	200	P	P	03 29 14.1	+0.4
	0.5nm,0.5s,mb3.2,baz=26,slow=10.0,SNR=4.3						
KKM	Kota Kinabalu	27.14	289	eP	P	03 30 04.0	+1.1
CHKZ	Chkalovo	81.41	325	eP	P	03 36 35.6	-0.7
	1.1nm,0.8s,mb3.8						
LPAZ	La Paz	144.71	124	PKP	PKPdf	03 43 59.0	+3.0
	0.9nm,0.6s,baz=270,slow=2.0,SNR=5.1						

IDC 16 03:30:13.4±1.8**, 2539N×14226E, h0**km**, mb3.9**/5**, mb1 4.0**/5**, mb1mx3.7**/18**, mbtmp3.9**/5**, Error ellipse: s-maj=79.3km s-min=20.3km az=88.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.70	358	Pn	Pn	03 30 45.4	+1.1
	89nm,0.3s,baz=106,slow=19,SNR=8.6						
CBIJ				Sn	Sn	03 31 08.7	+1.8
	24nm,0.3s,baz=287,slow=19,SNR=5.4						
SONM	Songino Array	36.01	318	P	P	03 37 17.1	+0.9
	0.3nm,0.5s,baz=127,slow=8.4,SNR=3.8						
WRA	Warramunga Arr	45.71	190	P	P	03 38 36.8	+0.6
	0.8nm,0.4s,baz=9.0,slow=8.6,SNR=27						
BVAR	Borovoye Array	59.35	318	P	P	03 40 17.4	+0.1
	1.6nm,0.5s,baz=89,slow=7.2,SNR=13						
FINES	FINESS Array B	79.51	334	P	P	03 42 21.2	-0.7
	0.5nm,0.4s,baz=74,slow=5.9,SNR=10						
NOA	NORSAR Array B	85.22	338	P	P	03 42 50.4	-1.4
	0.9nm,0.9s,baz=43,slow=4.8,SNR=2.4						

*NEIC **16** 03:45:37.2, 3801S×17622E, h181km, MG3.8(WEL), After WEL.*
WEL 16 03:45:37.2±0.3**, 3804S×17623E, h182**km±3km**, ML3.7**/16**, 1D, Error ellipse: s-maj=3.3km s-min=3.3km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	Manawahe	0.36	82	P	Pn	03 46 01.9	+0.2
MARZ	Manawahe	0.36	82	PN	Pn	03 46 01.9	+0.2
URZ	Urewera	0.73	108	P	Pn	03 46 03.1	-0.3
URZ	Urewera	0.73	108	PN	Pn	03 46 03.1	-0.3
URZ				SN	Sn	03 46 23.4	-0.2
MWZ	Matawai	1.07	107	P	Pn	03 46 05.7	+0.1
MWZ	Matawai	1.07	107	PN	Pn	03 46 05.5	-0.1
MWZ				SN	Sn	03 46 28.1	+0.6
BKZ	Black Stump Fm	1.15	170	P	Pn	03 46 06.4	+0.1
BKZ				S	Sn	03 46 28.8	+0.2
BKZ	Black Stump Fm	1.15	170	⇓PN	Pn	03 46 06.4	+0.2
BKZ				SN	Sn	03 46 28.5	-0.1
TWVZ	Taurewa	1.20	211	P	Pn	03 46 07.1	+0.4
TWVZ	Taurewa	1.20	211	PN	Pn	03 46 07.1	+0.4
NGZ	Ngauruhoe	1.24	203	P	Pn	03 46 07.6	+0.6
NGZ	Ngauruhoe	1.24	203	PN	Pn	03 46 07.5	+0.5
TUVZ	Tukino	1.31	200	P	Pn	03 46 08.0	+0.4
TUVZ	Tukino	1.31	200	PN	Pn	03 46 07.9	+0.3
WNVZ	Wahianoa	1.38	201	P	Pn	03 46 08.5	+0.3
WNVZ	Wahianoa	1.38	201	PN	Pn	03 46 08.5	+0.2
MOVZ	Moawhango	1.42	195	P	Pn	03 46 08.5	-0.1
MOVZ	Moawhango	1.42	195	PN	Pn	03 46 08.4	-0.2
MOVZ				SN	Sn	03 46 32.2	-0.6
KNZ	Kokohu	1.50	131	P	Pn	03 46 09.8	+0.4
KNZ	Kokohu	1.50	131	PN	Pn	03 46 09.7	+0.3
PUZ	Puketiti	1.60	92	SN	Sn	03 46 35.8	-0.2
MXZ	Matakaoa Point	1.71	75	P	Pn	03 46 11.1	-0.3
MXZ	Matakaoa Point	1.71	75	PN	Pn	03 46 10.9	-0.5
TSZ	Takapari Road	2.03	186	P	Pn	03 46 14.2	-0.5
TSZ	Takapari Road	2.03	186	PN	Pn	03 46 14.2	-0.5
PXZ	Pawanui	2.05	166	PN	Pn	03 46 14.7	-0.3
PXZ				SN	Sn	03 46 43.5	-0.8
BFZ	Birch Farm	2.64	180	eP	Pn	03 46 20.3	-1.3
BFZ	Birch Farm	2.64	180	PN	Pn	03 46 20.1	-1.5
MRZ	Mangatainoka R	2.67	191	eP	Pn	03 46 20.3	-1.7
MRZ	Mangatainoka R	2.67	191	PN	Pn	03 46 20.3	-1.7
MRZ				SN	Sn	03 46 54.0	-2.8
TIWZ	Tintock	2.75	185	ePN	Pn	03 46 21.5	-1.5
TIWZ				SN	Sn	03 46 55.9	-2.5
KIW	Kapiti Island	3.00	199	P	Pn	03 46 23.6	-2.3
KIW	Kapiti Island	3.00	199	PN	Pn	03 46 23.5	-2.4
MTW	Mount Morrison	3.17	190	P	Pn	03 46 25.5	-2.5
MTW	Mount Morrison	3.17	190	PN	Pn	03 46 25.4	-2.6
CAW	Cannon Point	3.19	196	P	Pn	03 46 26.0	-2.3
CAW	Cannon Point	3.19	196	PN	Pn	03 46 25.8	-2.5
PAWZ	Paruwai Farm	3.40	190	P	Pn	03 46 28.1	-2.7
PAWZ	Paruwai Farm	3.40	190	PN	Pn	03 46 27.9	-2.9
PAWZ				SN	Sn	03 47 09.0	-3.6
MRW	Makara Radio	3.40	200	P	Pn	03 46 28.2	-2.6
MRW	Makara Radio	3.40	200	PN	Pn	03 46 28.1	-2.7
MSWZ	Moikau Station	3.46	192	PN	Pn	03 46 28.5	-3.0
MSWZ				SN	Sn	03 47 09.0	-5.0
TCW	Tory Channel	3.51	205	PN	Pn	03 46 29.4	-2.8
TCW				SN	Sn	03 47 11.1	-4.0
NNZ	Nelson	3.86	214	ePN	Pn	03 46 32.8	-3.8
NNZ				SN	Sn	03 47 19.5	-3.6
THZ	Tophouse	4.51	213	ePN	Pn	03 46 41.3	-3.6
THZ				SN	Sn	03 47 33.4	-4.5
KHZ	Kahutara	4.83	204	PN	Pn	03 46 45.6	-3.4
KHZ				SN	Sn	03 47 40.9	-4.5
LTZ	Lake Taylor	5.62	211	ePN	Pn	03 46 55.1	-4.1
MQZ	McQueen's Vall	6.28	204	SN	Sn	03 48 10.8	-8.4

IDC 16 03:54:56.9±8.2**, 1700S×16820E, h212**km±64km**, mb3.8**/3**, mb1 3.9**/4**, mb1mx3.4**/13**, mbtmp4.3**/4**, Error ellipse: s-maj=126.4km s-min=69.3km az=96.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.31	198	eP	Pn	03 56 15.0	-0.4
DZM	Mont Dzumac	5.31	198	P	Pn	03 56 15.3	-0.1
	2.7nm,0.3s,baz=20,slow=16,SNR=22						
DZM				S	S	03 57 18.3	+0.8
	baz=104,slow=19,SNR=1.6						
STKA	Stephens Creek	28.29	234	P	P	04 00 31.0	+0.5
	1.7nm,0.3s,baz=49,slow=8.0,SNR=6.6						
WRA	Warramunga Arr	32.22	259	P	P	04 01 05.2	+0.1
	0.3nm,0.3s,baz=94,slow=9.2,SNR=23						
ASAR	Alice Springs	32.78	253	P	P	04 01 10.2	+0.3
	8.3nm,0.6s,baz=80,slow=9.1,SNR=86						

*ISCJB **16** 04:16:39.7±0.2, 4832N±001×775E±002, h13km±2km, Error ellipse: s-maj=2.3km s-min=1.8km az=165.4*
*BGR **16** 04:16:40.9±0.2, 4834N×782E, h10km, ML2.1/6, Error ellipse: s-maj=3.3km s-min=2.2km az=160.0*
*NEIC **16** 04:16:40.8, 4831N×775E, h10km, ML2.2(SZGRF), ML2.3(LEDBW), ML2.3(STR), ML2.8(LDG), After STR.*
*CSEM **16** 04:16:40.8±0.1, 4830N×776E, h20km, ML2.8/18, Error ellipse: s-maj=1.3km s-min=0.8km az=1.0*
*STR **16** 04:16:40.8±0.2, 4831N×775E, h10km±1km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **16** 04:16:41.0±0.1, 4830N×777E, h15km, Md2.9/3, Ml2.8/18, Error ellipse: s-maj=1.7km s-min=1.1km az=167.0*
*LEDBW **16** 04:16:41.2±0.1, 48289N±0007×7788E±0006, h10km±3km, ML2.3, Error ellipse: s-maj=2.4km s-min=2.2km az=173.0*
*ZUR **16** 04:16:41.3, 4826N×774E, h10km±2km, ML2.1/10*
ISC 16 04:16:40.1±0.2**, 4831N**±001×**774E**±001**, h19**km±2km**, n119,** σ**0^{s}97**/191**, 11C-13D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIBD	Limburg	0.18	211	ePg	Pg	04 16 45.6	+0.8
	SNR=18						
LIBD				⇑iP*	Pg	04 16 45.7	+0.9
LIBD	Limburg	0.18	211	⇑iP	Pg	04 16 45.7	+0.9
LIBD	Limburg	0.18	211	⇑iPg	Pg	04 16 45.7	+0.9
LIBD	Limburg	0.18	211	Pg	Pg	04 16 45.5	+0.7
OFBG	Offenburg	0.21	48	⇑ePg	Pg	04 16 45.5	+0.3
OFBG				Sg	Sg	04 16 48.5	-0.2
WLS	Welschbruch	0.28	293	ePg	Pg	04 16 47.4	+1.1
	SNR=27						
WLS				⇓iP*	Pg	04 16 47.5	+1.2
WLS	Welschbruch	0.28	293	Pg	Pg	04 16 47.4	+1.1
WLS				Sg	Sg	04 16 50.8	+0.2
WLS	Welschbruch	0.28	293	⇓iPg	Pg	04 16 47.5	+1.2
FBB	Freiburg im Br	0.31	166	P*	Pg	04 16 47.5	+0.6
FBB				S*	Sg	04 16 51.5	0.0
FBB	Freiburg im Br	0.31	166	P	Pg	04 16 47.5	+0.6
FBB				S	Sg	04 16 51.5	0.0
CDF	Champ du Feu	0.33	289	ePg	Pg	04 16 48.1	+1.0
CDF				eSg	Sg	04 16 53.0	+1.1
	43nm,0.3s						
CDF	Champ du Feu	0.33	289	ePg	Pg	04 16 48.1	+1.0
CDF				eSg	Sg	04 16 53.0	+1.1
	22nm,0.3s						
KIZ	Kirchzarten	0.37	161	⇓iP*	Pg	04 16 48.1	+0.2
KIZ				i S*	Sg	04 16 52.7	-0.4
KIZ	Kirchzarten	0.37	161	⇓iP	Pg	04 16 48.1	+0.2
KIZ				i S	Sg	04 16 52.7	-0.4
BFO	Black Forest	0.39	86	i P*	Pb	04 16 48.5	0.0
BFO				i S*	Sb	04 16 53.4	-0.8
BFO	Black Forest	0.39	86	ePg	Pg	04 16 48.2	-0.1
BFO				eSg	Sg	04 16 53.3	-0.5
ECH	Echery	0.40	257	P*	Pb	04 16 49.4	+0.8
ECH				S*	Sb	04 16 54.9	+0.6
ECH	Echery	0.40	257	Pg	Pb	04 16 49.4	+0.8
ECH				Sg	Sg	04 16 54.8	+0.8
FELD	Feldberg im Sc	0.47	158	⇓iP*	Pb	04 16 50.0	+0.3
FELD				i S*	Sb	04 16 55.8	-0.4
FELD	Feldberg im Sc	0.47	158	⇓iP	Pg	04 16 50.0	+0.4
FELD				i S	Sg	04 16 55.8	-0.1
FELD	Feldberg im Sc	0.47	158	Pg	Pg	04 16 49.8	+0.2
FELD				Sg	Sg	04 16 55.8	-0.1
MOF	Molkenrain	0.61	222	Pg	Pg	04 16 52.9	+0.7
MOF				Sg	Sg	04 17 02.1	+1.7
MOF	Molkenrain	0.61	222	⇑Pg	Pg	04 16 53.1	+0.9
LANF	Langenberg	0.68	4	Pg	Pg	04 16 54.5	+1.1
LANF				Sg	Sg	04 17 03.1	+0.6
LANF	Langenberg	0.68	4	Pg	Pg	04 16 54.6	+1.2
SPAK	Spaichingen-Ko	0.73	106	⇓iP*	Pb	04 16 54.8	+0.6
SPAK	Spaichingen-Ko	0.73	106	⇓iP	Pb	04 16 54.8	+0.6
SPAK	Spaichingen-Ko	0.73	106	Pg	Pg	04 16 54.7	+0.3
SLE	Schleitheim	0.74	137	⇓iPg	Pg	04 16 54.8	+0.2
	134nm,0.5s						
HINF	Hinteralfeld	0.77	231	ePg	Pg	04 16 55.5	+0.3
HINF				eSg	Sg	04 17 05.9	+0.5
	36nm,0.2s						
HINF	Hinteralfeld	0.77	231	ePg	Pg	04 16 55.5	+0.3
HINF				eSg	Sg	04 17 05.9	+0.5
	18nm,0.2s						
LBG	Lerchenberg	0.79	63	⇑P*	Pg	04 16 55.6	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LBG				⇑PmP		04 16 56.0	
LBG				S*	Sb	04 17 05.7	+0.2
LBG	Lerchenberg	0.79	63	⇑P	Pg	04 16 55.6	+0.1
LBG				S	Sb	04 17 05.7	+0.2
LBG	Lerchenberg	0.79	63	⇑Pg	Pg	04 16 55.6	+0.1
LBG				Sg	Sb	04 17 05.7	+0.2
LBG	Lerchenberg	0.79	63	⇑PmP		04 16 56.0	
SULZ	Sulz-Cheisache	0.82	162	i Sg	Pb	04 16 56.4	+0.7
	196nm,0.3s						
SULZ	Sulz-Cheisache	0.82	162	⇓iPg	Sb	04 17 07.1	+0.7
	196nm,0.3s						
MSS	Messtetten	0.83	98	⇑ePg	Pg	04 16 56.5	+0.3
MSS				eSg	Sg	04 17 07.3	+0.1
BHBD	Braunhartsberg	0.85	94	⇓iPg	Pg	04 16 56.9	+0.3
BHBD				eSg	Sg	04 17 07.8	0.0
BBS	Basel-Blauen	0.86	191	⇑P*	Pg	04 16 57.5	+0.7
BBS	Basel-Blauen	0.86	191	P	Pb	04 16 57.5	+1.1
BBS	Basel-Blauen	0.86	191	⇑Pg	Pg	04 16 57.5	+0.7
BBS	Basel-Blauen	0.86	191	Pg	Pg	04 16 57.4	+0.6
TRULL	Truellikon	0.91	136	⇑iP	Pb	04 16 58.8	+1.5
	103nm,0.4s						
TRULL				eSg	Sg	04 17 10.9	+1.0
	103nm,0.4s						
TUBL	Tuebingen-Lenn	0.92	76	Pg	Pg	04 16 59.0	+1.0
TUBL				Sg	Sg	04 17 10.9	+0.7
TUBL	Tuebingen-Lenn	0.92	76	Pg	Pg	04 16 59.0	+1.0
TUBL				Sg	Sg	04 17 10.9	+0.7
GUT	Gutenstein	0.95	104	⇑iP	Pb	04 16 58.0	+0.1
GUT				i Pg	Pg	04 16 58.8	+0.2
GUT				Sn	Sn	04 17 10.2	-1.3
GUT				Sg	Sg	04 17 11.1	0.0
GUT	Gutenstein	0.95	104	i Pg	Pg	04 16 58.8	+0.2
GUT				Sn	Sn	04 17 10.2	-1.3
GUT	Gutenstein	0.95	104	⇑iPn	Pb	04 16 58.0	+0.1
GUT				Sn	Sn	04 17 10.2	-1.3
GUT	Gutenstein	0.95	104	i P	Pg	04 16 58.8	+0.2
GUT				Sx	Sx	04 17 11.1	
GUT	Gutenstein	0.95	104	P	Pb	04 16 58.0	0.0
GUT	Gutenstein	0.95	104	Pg	Pg	04 16 58.8	+0.2
GUT				Sn	Sn	04 17 10.2	-1.3
GUT				Sg	Sg	04 17 11.1	0.0
BALST	Balsthal	0.97	182	i Pn	Pn	04 16 58.6	-0.1
	205nm,0.2s						
BOURR	Bourrignon	0.98	201	⇓iPn	Pn	04 16 59.9	+1.1
	147nm,0.6s						
HAU	Haudompre	0.98	253	ePg	Pg	04 16 59.8	+0.7
HAU				eSg	Sg	04 17 12.5	+0.5
	78nm,0.2s						
HAU	Haudompre	0.98	253	ePg	Pg	04 16 59.8	+0.7
HAU				eSg	Sg	04 17 12.5	+0.5
	39nm,0.2s						
STEIN	Stein am Rhein	0.99	130	eP	Pb	04 16 59.5	+0.8
	56nm,0.3s						
SISB	Singen-Schiene	1.03	127	⇓P	Pb	04 17 00.1	+0.7
SISB				Pg	Pg	04 17 00.5	+0.4
SISB				Sg	Sg	04 17 14.1	+0.5
SISB	Singen-Schiene	1.03	127	P	Pg	04 17 00.5	+0.4
SISB	Singen-Schiene	1.03	127	Pg	Pg	04 17 00.5	+0.4
SISB				Sg	Sg	04 17 14.1	+0.5
KTD	Kalmit	1.04	12	ePg	Pg	04 16 59.5	-0.8
	SNR=1.3						
STU	Stuttgart	1.07	64	ePg	Pg	04 17 00.7	-0.2
	SNR=2.4						
STU				eSg	Sg	04 17 13.3	-1.7
	SNR=2.5						
STU	Stuttgart	1.07	64	ePg	Pg	04 16 59.1	-1.8
STU				eSg	Sg	04 17 14.7	-0.3
LOMF	Lomont	1.14	213	Pg	Pg	04 17 03.2	+1.1
LOMF	Lomont	1.14	213	Pg	Pg	04 17 02.0	-0.1
THEF	They Montfort	1.18	267	ePg	Pg	04 17 03.4	+0.6
	SNR=4.4						
THEF				Sg	Sg	04 17 19.0	+0.8
THEF	They Montfort	1.18	267	S	Sg	04 17 19.0	+0.8
THEF	They Montfort	1.18	267	Pg	Pg	04 17 03.3	+0.5
THEF				Sg	Sg	04 17 18.9	+0.7
SWS	Schriesheim-Wi	1.34	28	P	Pn	04 17 02.7	-1.1
SWS				Sg	Sg	04 17 24.3	+0.9
RUP	Ruppelstein	1.47	342	ePg	Pg	04 17 09.1	+0.7
	SNR=2.3						
RFYF	Reffroy	1.54	283	ePg	Pg	04 17 10.4	+0.6
RFYF				eSg	Sg	04 17 30.9	+1.0
	23nm,0.2s						
RFYF	Reffroy	1.54	283	ePg	Pg	04 17 10.4	+0.6
RFYF				eSg	Sg	04 17 30.9	+1.0
	11nm,0.2s						
ABH	Alteburg	1.58	355	ePn	Pn	04 17 09.3	+2.2
	SNR=0.5						
ABH				ePg	Pg	04 17 10.8	+0.2
	SNR=3.8						
SIND	Sindeldorf	1.61	49	Pg	Pg	04 17 09.9	-1.2
SIND				Sg	Sg	04 17 32.2	0.0
HDH	Heidenheim-Cha	1.67	79	Sg	Sg	04 17 32.5	-1.3
PLONS	Plons	1.68	138	ePn	Pn	04 17 09.2	+0.8
	22nm,1.2s						
UBR	Ueberruh	1.71	111	Pg	Pg	04 17 13.3	+0.3
UBR				S	Sn	04 17 29.4	-0.9
UBR				Sg	Sg	04 17 34.8	-0.5
WLF	Walferdange	1.71	323	ePn	Pn	04 17 12.1	+3.1
	SNR=1.2						
WLF				ePg	Pg	04 17 13.6	+0.5
	SNR=4.0						
WLF				eSg	Sg	04 17 34.1	-1.4
	SNR=2.4						
MEZF	Maizieres J'vi	1.80	277	eSg	Sg	04 17 37.2	-1.0
	14nm,0.3s						
MEZF	Maizieres J'vi	1.80	277	eSg	Sg	04 17 37.2	-1.0
	6.8nm,0.3s						
SFTF	Sexfontaines	1.81	268	ePg	Pg	04 17 15.2	+0.3
SFTF				eSg	Sg	04 17 38.8	+0.4
	22nm,0.2s						
SFTF	Sexfontaines	1.81	268	ePg	Pg	04 17 15.2	+0.3
SFTF				eSg	Sg	04 17 38.8	+0.4
	11nm,0.2s						
TNS	Taunus Mts	1.97	13	ePg	Pg	04 17 18.0	0.0
	SNR=1.5						
TNS				eSg	Sg	04 17 43.3	-0.4
	SNR=3.8						
CABF	La Chapelle	2.03	214	ePg	Pg	04 17 19.2	0.0
CABF				eSg	Sg	04 17 45.5	-0.1
	4.8nm,0.3s						
CABF	La Chapelle	2.03	214	ePn	Pn	04 17 13.2	-0.2
CABF				ePg	Pg	04 17 19.2	0.0
CABF				eSg	Sg	04 17 45.5	-0.1
CABF	La Chapelle	2.03	214	ePg	Pg	04 17 19.2	0.0
CABF				eSg	Sg	04 17 45.5	-0.1
	2.4nm,0.3s						
DAVOX	Davos	2.10	136	i Pn	Pn	04 17 15.9	+1.6
	19nm,0.4s						
FUR	Furstenfeldbru	2.37	92	eSg	Sg	04 17 55.6	-0.7
	SNR=3.0						
GRF	Grafenberg Arr	2.68	58	eSg	Sg	04 18 03.4	-2.8
	SNR=3.4						
LOR	Lormes	2.82	250	ePg	Pg	04 17 34.0	-0.1
LOR				eSg	Sg	04 18 09.2	-1.4
	9.4nm,0.2s						
LOR	Lormes	2.82	250	ePg	Pg	04 17 34.0	-0.1
LOR				eSg	Sg	04 18 09.2	-1.4
	4.7nm,0.2s						
LPG	La Plagne	2.89	194	eSg	Sg	04 18 12.3	-0.7
	1.1nm,0.2s						
LPG	La Plagne	2.89	194	eSg	Sg	04 18 12.3	-0.7
	0.6nm,0.2s						
BAIF	Baives	2.91	308	ePn	Pn	04 17 25.7	+0.3
SSF	Saint Saulge	3.12	248	ePg	Pg	04 17 39.6	-0.3
SSF				eSg	Sg	04 18 18.2	-2.1
	3.8nm,0.2s						
SSF	Saint Saulge	3.12	248	ePg	Pg	04 17 39.6	-0.3
SSF				eSg	Sg	04 18 18.2	-2.1
	1.9nm,0.2s						
SMF	Signal de Mont	3.12	239	ePg	Pg	04 17 39.8	-0.2
SMF				eSg	Sg	04 18 19.4	-1.1
	9.7nm,0.2s						
SMF	Signal de Mont	3.12	239	ePg	Pg	04 17 39.8	-0.2
SMF				eSg	Sg	04 18 19.4	-1.1
	4.8nm,0.2s						
AVF	Avril sur Loir	3.34	245	ePg	Pg	04 17 43.7	-0.3
AVF				eSg	Sg	04 18 25.1	-2.2
	3.2nm,0.3s						
AVF	Avril sur Loir	3.34	245	ePg	Pg	04 17 43.7	-0.3
AVF				eSg	Sg	04 18 25.1	-2.2
	1.6nm,0.3s						
MOX	Moxa	3.44	46	eSg	Sg	04 18 26.8	-3.9
	SNR=1.9						
WET	Wettzell	3.50	74	eSg	Sg	04 18 29.1	-3.5
	SNR=3.5						
HYF	Humbligny	3.59	255	eSg	Sg	04 18 33.9	-1.6
ORIF	Oris-en-Rattie	3.62	201	eSg	Sg	04 18 35.0	-1.5
	0.9nm,0.2s						
ORIF	Oris-en-Rattie	3.62	201	eSg	Sg	04 18 35.0	-1.5
	0.4nm,0.2s						
GUNZ	Gunzen	3.64	54	eSg	Sg	04 18 32.2	-4.8
	SNR=2.2						
WERD	Werda	3.67	53	eSg	Sg	04 18 34.1	-4.0
	SNR=2.0						
TANN	Tannenbergstha	3.74	54	eSg	Sg	04 18 38.3	-1.8
	SNR=3.0						
BGF	Bois d'Agland	3.75	244	ePg	Pg	04 17 51.3	-0.7
BGF				eSg	Sg	04 18 38.6	-2.1
	13nm,0.4s						
BGF	Bois d'Agland	3.75	244	ePg	Pg	04 17 51.3	-0.7
BGF				eSg	Sg	04 18 38.6	-2.1
	6.5nm,0.4s						
GEC2	GERESS Array S	4.00	80	eSg	Sg	04 18 44.8	-3.5
	SNR=3.9						
VIVF	Saint-Julien-l	4.05	213	eSg	Sg	04 18 48.6	-1.5
	0.9nm,0.2s						
VIVF	Saint-Julien-l	4.05	213	eSg	Sg	04 18 48.6	-1.5
	0.4nm,0.2s						
TCF	Toulx Ste Croi	4.27	244	ePg	Pg	04 18 00.6	-1.3
TCF				eSg	Sg	04 18 53.9	-3.3
	1.8nm,0.2s						
TCF	Toulx Ste Croi	4.27	244	ePg	Pg	04 18 00.6	-1.3
TCF				eSg	Sg	04 18 53.9	-3.3
	0.9nm,0.2s						
CAF	Calviac	5.17	231	eSg	Sg	04 19 23.5	-2.5
	0.8nm,0.2s						
CAF	Calviac	5.17	231	eSg	Sg	04 19 23.5	-2.5
	0.4nm,0.2s						
LDF	La Druitiere	5.24	276	eSg	Sg	04 19 25.2	-3.1
	1.4nm,0.3s						
LDF	La Druitiere	5.24	276	eSg	Sg	04 19 25.2	-3.1
	0.7nm,0.3s						

*IDC **16** 04:17:12.1±0.9, 7.47N×78.08W, h0^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.8/21, mbtmp3.8/7, ML4.7/1, MS3.1/4, Ms1 3.2/4, ms1mx2.9/25, Error ellipse: s-maj=27.2km s-min=19.7km az=36.0*

*CASC **16** 04:17:15.0±1.6, 7.57N×77.85W, h21^{km}±18^{km}, MD4.4, mb3.9(NEIC)*

*ISCJB **16** 04:17:17.2±0.8, 7.59N±0.06×77.90W±0.04, h47^{km}±8^{km}, mb3.8/14, MS2.9/1, Error ellipse: s-maj=10.5km s-min=5.9km az=36.5*

*NEIC **16** 04:17:19.1±2.3, 7.61N×77.86W, h52^{km}±24^{km}, mb3.9/9, Error ellipse: s-maj=23.6km s-min=9.7km az=68.0*

ISC 16 04:17:18.6±0.8**, 7.60N**±0.06×**77.92W**±0.04**, h39**^{km}±8^{km}**, n31, σ1^{s}24**/31**, mb3.8**/14**, MS2.9**/1**, 2C-1D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UPD1	Univ de Panama	0.95	354	eS	Sn	04 17 47.0	-0.7
UPA	Univ. de Panam	2.11	311	⇑iP	Pn	04 17 49.7	-1.7
UPA				eS	Sn	04 18 17.1	+0.8
ACH	Altos	2.25	298	⇑eP	Pn	04 17 53.3	-0.1
ACH				eS	Sn	04 18 21.5	+1.6
AZU	Azuero	2.34	275	⇓eP	Pn	04 17 53.5	-1.1
AZU				eS	Sn	04 18 22.3	+0.2
ROSC	El Rosal	4.49	127	Pn	Pn	04 18 26.7	+2.6
	7.3nm,0.3s,baz=309,slow=4.9,SNR=30						
ROSC				Lg		04 19 25.0	
	2.8nm,0.3s,baz=342,slow=22,SNR=3.8						
ROSC				LR	LR	04 20 16.9	
	comp=Z,188nm,19.4s,baz=348,slow=40						
ROSC	El Rosal	4.49	127	ePn	Pn	04 18 24.4	+0.2
SDV	Santo Domingo	7.32	79	Pn	Pn	04 19 04.6	+1.6
	20nm,0.3s,baz=264,slow=9.1,SNR=21						
SDV				Sn	Sn	04 20 27.9	+3.0
	14nm,0.3s,baz=322,slow=23,SNR=6.2						
SDV	Santo Domingo	7.32	79	ePn	Pn	04 19 04.2	+1.2
	67nm,0.6s						
SDV				eSn	Sn	04 20 28.8	+4.0
PCRV	Puerto La Cruz	13.37	78	Pn	Pn	04 20 25.2	-0.6
	3.5nm,0.3s,baz=240,slow=5.5,SNR=15						
ATAH	Atahualpa	14.51	182	LR	LR	04 26 10.7	
	comp=Z,81nm,21.4s,baz=108,slow=37						
SJG	San Juan	15.51	47	Pn	Pn	04 20 51.7	-2.7
	4.8nm,0.3s,baz=230,slow=13,SNR=12						
SJG	San Juan	15.51	47	ePn	Pn	04 20 51.7	-2.7
	13nm,0.4s						
CMIG	Matias Romero	19.05	301	LR	LR	04 30 03.1	
	comp=Z,84nm,19.5s,baz=17,slow=41						
SAML	Samuel	22.04	138	eP	P	04 22 08.5	-1.3
	4.2nm,1.0s,mb3.8						
LPAZ	La Paz	25.64	158	LR	LR	04 34 38.5	
	comp=Z,40nm,20.2s,MS2.9,baz=181,slow=41						
LPAZ	La Paz	25.64	158	eP	P	04 22 46.5	+2.1
	1.7nm,1.0s,mb3.5						
SIV	San Ignacio	28.77	145	P	P	04 23 11.0	-1.6
	1.0nm,0.6s,mb3.8,baz=318,slow=13,SNR=5.8						
CCM	Cathedral Cave	32.63	340	eP	P	04 23 46.4	-0.3
	5.4nm,0.6s,mb4.7						
WMOK	Wichita Mounta	33.13	328	eP	P	04 23 51.2	+0.2
	0.8nm,0.7s,mb3.8						
ANMO	Albuquerque	37.79	320	P	P	04 24 33.9	+2.9
	0.4nm,0.5s,mb3.4,baz=110,slow=12,SNR=3.4						
PDAR	Pinedale Array	44.73	327	P	P	04 25 28.0	0.0
	0.5nm,0.8s,mb3.4,baz=115,slow=10.0,SNR=4.8						
ULM	Lac du Bonnet	45.08	344	P	P	04 25 29.9	-0.8
	1.8nm,0.7s,mb4.0,baz=146,slow=11,SNR=2.7						
ULM	Lac du Bonnet	45.08	344	eP	P	04 25 29.6	-1.2
	3.0nm,0.8s,mb4.2						
HWUT	Hardware Ranch	45.10	324	eP	P	04 25 31.9	+0.9
	1.2nm,0.6s,mb3.9						
MOOW	Moose Ponds	46.03	327	eP	P	04 25 38.4	0.0
	1.0nm,0.6s,mb3.9						
NVAR	Mina Array Bea	47.59	316	P	P	04 25 49.5	-1.1
	0.1nm,0.3s,mb3.3,baz=95,slow=10.0,SNR=3.6						
HLID	Hailey	47.97	324	eP	P	04 25 53.6	+0.2
	0.9nm,0.8s,mb3.9						
PLCA	Paso Flores	48.57	173	P	P	04 25 57.0	-1.0
	2.0nm,1.0s,mb4.1,baz=343,slow=9.9,SNR=3.3						
TORD	Torodi Ar. Bea	78.24	78	P	P	04 29 15.9	+1.6
	0.4nm,0.6s,mb3.5,baz=291,slow=6.2,SNR=13						
ASAR	Alice Springs	145.56	239	PKPbc	PKPbc	04 36 51.8	-1.0
	0.8nm,0.8s,baz=129,slow=5.0,SNR=4.8						
WRA	Warramunga Arr	146.43	245	PKPbc	PKPbc	04 36 54.7	-0.7
	0.6nm,0.8s,baz=103,slow=2.7,SNR=5.9						

*ISCJB **16** 04:17:53.8±2.1, 19.8S±0.8×178.3W±0.4, h600^{km}, mb4.0/8, Error ellipse: s-maj=121.8km s-min=14.3km az=127.9*

*IDC **16** 04:17:53.6±6.6, 20.47S×177.92W, h603^{km}±74^{km}, mb3.3/5, mb1 3.6/5, mb1mx3.2/12, mbtmp4.3/5, Error ellipse: s-maj=213.5km s-min=31.5km az=157.0*

*NEIC **16** 04:17:56.6±4.4, 20.02S×178.24W, h627^{km}±48^{km}, mb4.1/4, Error ellipse: s-maj=100.0km s-min=21.2km az=154.0*

ISC 16 04:17:55.9±2.0**, 19.5S**±0.8×**178.4W**±0.5**, h600**^{km}**, n16, σ0^{s}32**/12**, mb4.0**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	33.20	263	P	P	04 23 45.2	+0.6
	5.8nm,0.6s,mb4.4,baz=76,slow=12,SNR=5.8						
CTA	Charters Tower	33.20	263	P	P	04 23 45.2	+0.6
CTAO	Charters Tower	33.20	263	eP	P	04 23 44.8	+0.2
	6.7nm,0.7s,mb4.4						
WRAB	Tennant Creek	44.34	261	eP	P	04 25 14.0	-0.1
	6.2nm,0.8s,mb4.2						
WRA	Warramunga Arr	44.35	261	P	P	04 25 14.5	+0.4
	2.4nm,0.3s,mb4.2,baz=99,slow=8.5,SNR=17						
AS31	Alice Springs	44.36	256	eP	P	04 25 13.9	-0.4
ASAR	Alice Springs	44.36	256	P	P	04 25 14.2	-0.1
	9.1nm,0.8s,mb4.3,baz=90,slow=8.2,SNR=36						
MBWA	Marble Bar	57.68	257	eP	P	04 26 50.0	-0.3
	9.7nm,0.9s,mb3.9						
NVAR	Mina Array Bea	80.57	44	P	P	04 29 06.9	0.0
	1.7nm,0.9s,mb3.5,baz=231,slow=8.7,SNR=5.5						
CCUT	Cedar City	83.41	47	eP	P	04 29 21.7	+0.5
COLA	College	87.31	13	eP	P	04 29 39.6	-0.4
	2.4nm,0.7s,mb4.0						
PDAR	Pinedale Array	88.51	43	P	P	04 29 45.4	-0.1
	0.7nm,0.8s,mb3.6,baz=222,slow=2.0,SNR=6.4						
AKASG	Malin Array Be	141.94	331	PKP	PKPdf	04 36 17.8	-2.5
	1.2nm,0.5s,baz=41,slow=4.4,SNR=9.6						
BRTR	Keskin Array B	145.86	313	PKPbc	PKPbc	04 36 30.8	+1.8
	1.0nm,0.7s,baz=127,slow=3.9,SNR=4.1						
CLL	Collm	146.99	347	i PKPbc	PKPbc	04 36 33.5	+1.4
	comp=Z,5.0nm,0.6s						
GERES	GERESS Array B	149.12	344	PKPbc	PKPbc	04 36 36.4	-1.1
	comp=Z,0.6nm,0.7s,baz=56,slow=2.4,SNR=5.5						

IDC 16 04:19:17.2±4.3**, 2.59S**×**139.61E, h0**^{km}**, mb3.5**/2**, mb1 4.0**/3**, mb1mx3.6**/10**, mbtmp3.7**/3**, ML4.0**/1**, Error ellipse: s-maj=167.4km s-min=30.1km az=89.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	12.31	215	eP	Pn	04 22 15.9	+2.2
	8.4nm,0.6s						
WB2	Warramunga Arr	18.00	196	eP	Pn	04 23 30.3	+1.5
WRA	Warramunga Arr	18.00	196	P	Pn	04 23 29.8	+1.0
	0.5nm,0.3s,baz=18,slow=13,SNR=26						
WRA				S	Sn	04 26 46.2	-4.0
	0.1nm,0.3s,baz=15,slow=22,SNR=2.8						
ASAR	Alice Springs	21.67	194	P	P	04 24 09.7	+0.3
	1.4nm,0.6s,baz=28,slow=11,SNR=14						
MKAR	Makanchi Array	70.24	322	P	P	04 30 32.0	0.0
	0.4nm,0.5s,baz=104,slow=6.1,SNR=3.5						

*ISCJB **16** 04:31:58.5±0.6, 35.10N±0.02×3.86W±0.04, h14^{km}±4^{km}, Error ellipse: s-maj=5.7km s-min=3.1km az=28.5*

*MDD **16** 04:31:58.9±0.8, 35.09N×3.82W, h2^{km}±8^{km}, mb3.5/13, Error ellipse: s-maj=7.0km s-min=3.9km az=103.0, PRXIMO*

*CSEM **16** 04:31:58.3±0.2, 35.04N×3.67W, h15^{km}, MD3.3, Error ellipse: s-maj=6.0km s-min=3.4km az=108.0*

*CNRM **16** 04:31:59.6, 35.05N×3.70W, h1^{km}, MD3.3*

*INMG **16** 04:32:00.8±1.0, 35.26N×3.92W, h0^{km}, ML2.4, Error ellipse: s-maj=6.8km s-min=3.4km az=165.0*

ISC 16 04:31:58.7±0.5**, 35.09N**±0.02×**3.82W**±0.04**, h11**^{km}±4^{km}**, n46, σ1^{s}27**/82**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOU	Touzarine	0.14	156	P	Pg	04 32 01.0	-1.1
TOU				S	Sg	04 32 03.0	-1.4
TOU	Touzarine	0.14	156	i P	Pg	04 32 01.0	-1.1
MPAL	Palemas	0.16	324	i P	Pg	04 32 04.0	+1.6
ZAI	Zaio	0.89	98	i P	Pg	04 32 15.0	-1.0
ZAI				i S	Sg	04 32 24.0	-3.6
TZK	Tazeka	1.05	197	i P	Pb	04 32 19.0	+0.2
TZK				i S	Sg	04 32 32.0	-0.5
EALB	Alboran	1.06	37	S	Sg	04 32 32.3	-0.7
	42nm,0.2s,SNR=4.0						
EMIJ	Mijas	1.66	333	P	Pn	04 32 26.5	-1.3
	3.4nm,0.2s,SNR=7.8						
EMIJ				S	Sn	04 32 48.2	-0.8
	9.4nm,0.2s,SNR=6.5						
EMIJ	Mijas	1.66	333	P	Pn	04 32 26.5	-1.2
	3.4nm,0.2s,SNR=7.8						
EMIJ				S	Sn	04 32 46.9	-2.1
	9.4nm,0.2s,SNR=6.5						
RSA	Sarsar	1.66	263	i P	Pn	04 32 30.0	+2.2
RSA				i S	Sn	04 32 52.0	+2.9
EGUA	Guajares	1.75	7	P	Pn	04 32 28.7	-0.3
	0.9nm,0.2s,SNR=7.9						
EGUA				S	Sn	04 32 51.9	+0.7
	1.5nm,0.2s,SNR=7.9						
EGUA	Guajares	1.75	7	P	Pn	04 32 28.7	-0.3
	0.9nm,0.2s,SNR=7.9						
EGUA				S	Sn	04 32 49.9	-1.4
	1.5nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	1.90	316	P	Pn	04 32 30.6	-0.6
	3.0nm,0.3s,SNR=7.9						
EJIF	Jimena Fronter	1.90	316	P	Pn	04 32 32.8	+1.7
	3.0nm,0.3s,SNR=7.9						
ERON	Agron	1.92	0	P	Pn	04 32 32.4	+1.1
	3.6nm,0.3s,SNR=7.9						
ERON				S	Sn	04 32 54.9	-0.6
	2.2nm,0.2s,SNR=7.9						
ERON	Agron	1.92	0	P	Pn	04 32 32.4	+1.0
	3.6nm,0.3s,SNR=7.9						
ERON				S	Sn	04 32 56.5	+1.0
	2.2nm,0.2s,SNR=7.9						
EBER	Berja	1.95	23	P	Pn	04 32 32.4	+0.6
	3.3nm,0.3s,SNR=6.3						
EBER				S	Sn	04 32 57.1	+0.8
	8.4nm,0.3s,SNR=6.0						
EBER	Berja	1.95	23	P	Pn	04 32 32.4	+0.6
	3.3nm,0.3s,SNR=6.3						
EBER				S	Sn	04 32 57.1	+0.8
	8.4nm,0.3s,SNR=6.0						
MIF	Mishlifen	2.04	215	i P	Pn	04 32 34.0	+0.9
MIF				i S	Sn	04 32 58.0	-0.5
ELOJ	Sierra Loja	2.07	353	P	Pn	04 32 33.6	+0.2
	2.1nm,0.2s,SNR=7.9						
ELOJ				S	Sn	04 32 58.6	-0.5
	5.2nm,0.5s,SNR=7.9						
ELOJ	Sierra Loja	2.07	353	P	Pn	04 32 34.3	+0.9
	2.1nm,0.2s,SNR=7.9						
ELOJ				S	Sn	04 32 58.8	-0.3
	5.2nm,0.5s,SNR=7.9						
EQUE	Quentar	2.13	8	P	Pn	04 32 34.6	+0.4
	4.5nm,0.3s,SNR=8.2						
EQUE				S	Sn	04 33 00.3	-0.3
	2.7nm,0.3s,SNR=9.2						
EQUE	Quentar	2.13	8	P	Pn	04 32 35.4	+1.2
	4.5nm,0.3s,SNR=8.2						
EQUE				S	Sn	04 33 00.3	-0.4
	2.7nm,0.3s,SNR=9.2						
CZD	Col de Zad	2.29	207	i P	Pn	04 32 38.0	+1.5
CZD				i S	Sn	04 33 05.0	+0.4
ESPR	Espera	2.42	318	P	Pn	04 32 37.3	-0.9
	7.1nm,0.5s,SNR=7.9						
ESPR				S	Sn	04 33 06.8	-1.0
	8.6nm,0.3s,SNR=7.9						
ESPR	Espera	2.42	318	P	Pn	04 32 39.1	+0.9
	7.1nm,0.5s,SNR=7.9						
ESPR				S	Sn	04 33 07.9	+0.1
	8.6nm,0.3s,SNR=7.9						
EQES	Quesada	2.77	12	P	Pn	04 32 44.6	+1.6
	1.2nm,0.1s,SNR=9.9						
EQES				S	Sn	04 33 19.0	+2.6
	5.8nm,0.3s						
EQES	Quesada	2.77	12	P	Pn	04 32 45.2	+2.2
	1.2nm,0.1s,SNR=9.9						
EQES				S	Sn	04 33 19.0	+2.5
	5.8nm,0.3s						
ZFT	Errachidia	3.08	188	eP	Pn	04 32 47.0	-0.3
ZFT				i S	Sn	04 33 22.0	-2.2
KIB	El Ksiba	3.12	217	i P	Pn	04 32 49.0	+1.2
KIB				i S	Sn	04 33 25.0	0.0
EADA	Adamuz	3.13	349	P	Pn	04 32 49.0	+1.1
	3.7nm,0.4s,SNR=6.0						
EADA				S	Sn	04 33 24.2	-1.0
	2.4nm,0.3s,SNR=7.9						
EADA	Adamuz	3.13	349	P	Pn	04 32 49.0	+1.1
	3.7nm,0.4s,SNR=6.0						
EADA				S	Sn	04 33 25.3	0.0
	2.4nm,0.3s,SNR=7.9						
EMUR	La Murta	3.44	36	S	Sn	04 33 31.5	-1.6
	6.6nm,0.5s,SNR=7.9						
EMUR	La Murta	3.44	36	S	Sn	04 33 31.5	-1.6
	6.6nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	3.52	320	P	Pn	04 32 52.7	-0.7
	0.7nm,0.1s,SNR=13						
EMIN				S	Sn	04 33 32.0	-3.0
	1.6nm,0.2s						
EMIN	Mina Concepcio	3.52	320	P	Pn	04 32 52.7	-0.7
	0.7nm,0.1s,SNR=13						
EGRO	El Granado	3.83	311	P	Pn	04 32 56.9	-0.7
	1.2nm,0.2s,SNR=12						
EGRO				S	Sn	04 33 39.2	-3.3
	3.4nm,0.2s,SNR=5.2						
ETOB	Tobarra	3.99	27	P	Pn	04 33 01.3	+1.5
	1.7nm,0.3s,SNR=7.2						
ETOB				S	Sn	04 33 45.5	-0.9
	0.6nm,0.3s						
ETOB	Tobarra	3.99	27	P	Pn	04 33 01.3	+1.5
	1.7nm,0.3s,SNR=7.2						
ETOB				S	Sn	04 33 47.1	+0.6
	0.6nm,0.3s						
PBEJ	Beja	4.38	313	ePn	Pn	04 33 05.6	+0.5
PBEJ				eSn	Sn	04 33 53.0	-3.1
EBAD	Badajoz	4.46	326	P	Pn	04 33 06.3	0.0
	1.8nm,0.2s,SNR=8.0						
EBAD				S	Sn	04 33 55.8	-2.4
	5.9nm,0.2s						
ESDC	Sonseca Array	4.57	359	P	Pn	04 33 09.6	+1.8
	1.6nm,0.3s,baz=179,slow=13,SNR=4.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTEO	**Sao Teotonio**	**4.65**	**303**	*e*Pn	**Pn**	**04 33 09.3**	**+0.4**
PTEO				*e*Sn	**Sn**	**04 34 00.9**	**-2.0**
PTEO							
	4.9nm,1.0s						
PTEO	**Sao Teotonio**	**4.65**	**303**	*e*Pn	**Pn**	**04 33 09.3**	**+0.4**
PTEO				*e*Sn	**Sn**	**04 34 00.9**	**-2.0**
PESTR	**Estremoz**	**4.82**	**322**	*e*Pn	**Pn**	**04 33 12.5**	**+1.2**
PESTR				*e*Sn	**Sn**	**04 34 04.7**	**-2.4**
PTOM	**Tomar**	**5.81**	**322**	*e*Pn	**Pn**	**04 33 25.3**	**+0.5**
PVRL	**Vila Real**	**6.89**	**335**	*e*Pn	**Pn**	**04 33 40.3**	**+0.6**
PVRL				*e*Sn	**Sn**	**04 34 54.0**	**-4.0**

IDC 16 04:37:31.8±6.8**,2264S**×**17529W,h0**km**,mb3.9**/2**, mb1 4.2**/2**,mb1mx3.7**/13**,mbtmp3.9**/2**,Error ellipse: s-maj=291.0km s-min=58.9km az=147.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.52**	**258**	P	P	04 46 01.4	+0.5
	2.0nm,0.8s,baz=94,slow=8.0,SNR=14						
WRA	**Warramunga Arr**	**46.83**	**263**	P	P	04 46 03.5	+0.2
	0.8nm,0.6s,baz=103,slow=7.9,SNR=7.8						
AKASG	**Malin Array Be**	**146.09**	**332**	PKPbc	PKPbc	04 57 12.6	-1.1
	0.6nm,0.6s,baz=43,slow=4.1,SNR=5.2						

*NEIC **16** 05:15:57.9,1571N×9639W,h20km,MD3.8(MEX),After MEX.*
MEX 16 05:15:57.5±0.6**,1568N×9640W,h20**km±23km**,MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.29**	**73**	*i* P	Pb	05 16 03.2	-0.8
HUIG				*i* S	Sb	05 16 07.1	-1.4
VHO	**Vista Hermosa**	**1.42**	**347**	*i* P	Pn	05 16 19.2	-2.9
VHO				*i* S	Sn	05 16 36.1	-4.1
OXX	**Oaxaca**	**1.42**	**347**	*i* P	Pn	05 16 19.0	-3.2
OXX				*i* S	Sn	05 16 37.0	-3.4
CMIG	**Matias Romero**	**2.02**	**46**	*i* P	Pn	05 16 28.2	-2.2
CMIG				*i* S	Sn	05 16 51.0	-4.0
UTMO	**Huajuapan**	**2.52**	**328**	*e*P	Pn	05 16 34.9	-2.5
UTMO				*i* S	Sn	05 17 04.7	-2.8
TPIG	**Tehuac#an**	**2.87**	**341**	*i* P	Pn	05 16 39.9	-2.3
TPIG				*i* S	Sn	05 17 13.3	-2.8
PPM	**Popocatepetl**	**3.98**	**328**	*e*P	Pn	05 17 00.8	+3.5
PPM				*i* S	Sn	05 17 40.5	-2.9

*ISCJB **16** 05:16:18.2±0.3,193S±004×7811W±005,h10km,mb4.3/33, MS3.8/6,Error ellipse: s-maj=8.2km s-min=4.9km az=128.2*
*IGQ **16** 05:16:20.4,172S×7812W,h12km±3km,Mb4.7,Ms4.6, Error ellipse: s-maj=6.5km s-min=2.5km az=67.7*
*IDC **16** 05:16:23.1±3.9,175S×7793W,h33km±30km,mb3.9/9, mb1 4.0/14,mb1mx3.9/25,mbtmp4.1/14,ML4.1/4,MS3.3/8, Ms1 3.3/8,ms1mx3.1/26,Error ellipse: s-maj=23.3km s-min=14.0km az=78.0*
*NEIC **16** 05:16:24.8±1.0,178S×7797W,h45km±10km,mb4.4/27, MD4.7(IGQ),Error ellipse: s-maj=9.6km s-min=5.2km az=69.0*
NEIC Felt at Banos.
*BJI **16** 05:16:24.7,180S×7800W,h44km,mB5.0,Ms5.0,Msz4.5*
ISC 16 05:16:21.1±0.3**,178S**±004×**7808W**±005**,h10**km**,n136, σ0.99**/130**,mb4.3**/33**,MS3.8**/6**,37C-31D,Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULBA	**Ulba**	**0.46**	**314**	⇓P	**Pg**	**05 16 28.5**	**-1.6**
RETU	**Refugio**	**0.49**	**311**	⇑P	**Pg**	**05 16 28.6**	**-2.0**
RUN5	**Runtun**	**0.50**	**316**	⇓P	**Pg**	**05 16 29.0**	**-1.8**
CUSU	**Cusua**	**0.52**	**309**	⇓P	**Pg**	**05 16 29.2**	**-2.1**
JUIV	**Juive**	**0.52**	**312**	⇓P	**Pg**	**05 16 29.1**	**-2.1**
TAMB	**Tambo**	**1.11**	**345**	⇑P	**Pb**	**05 16 41.1**	**-1.3**
CAMI	**Rancho Maria**	**1.17**	**339**	⇑P	**Pb**	**05 16 42.3**	**-1.1**
VC1	**Cotopaxi 1**	**1.17**	**344**	⇑P	**Pb**	**05 16 42.3**	**-1.2**
NAS1	**Nasa**	**1.20**	**341**	⇑P	**Pn**	**05 16 43.0**	**-1.0**
ANTI	**Antisana**	**1.32**	**356**	⇑P	**Pn**	**05 16 44.5**	**-1.1**
JUA2	**San Juan 2**	**1.64**	**341**	⇑P	**Pn**	**05 16 50.6**	**+0.6**
GGP	**Refugio Guagua**	**1.67**	**342**	⇑P	**Pn**	**05 16 51.2**	**+0.8**
TERV	**Terraza Guagua**	**1.67**	**342**	⇑P	**Pn**	**05 16 51.4**	**+0.9**
PINO	**Pino**	**1.69**	**342**	⇑P	**Pn**	**05 16 51.6**	**+0.9**
YANA	**Yana**	**1.72**	**343**	⇑P	**Pn**	**05 16 51.9**	**+0.8**
LAV3	**Lava3-Reventad**	**1.73**	**15**	⇓P	**Pn**	**05 16 51.6**	**+0.5**
CONE	**Cono NE Rev Vo**	**1.75**	**14**	⇑P	**Pn**	**05 16 52.0**	**+0.5**
CAYR	**Refugio Cayamb**	**1.78**	**2**	⇑P	**Pn**	**05 16 53.2**	**+1.3**
CAYA	**Cayambe**	**1.84**	**3**	⇑P	**Pn**	**05 16 54.0**	**+1.3**
COTA	**Cotacachi**	**2.11**	**353**	P	**Pn**	**05 17 00.1**	**+3.6**
MAG1	**Magdalena**	**2.39**	**315**	⇑P	**Pb**	**05 17 01.7**	**-2.6**
MAG1				S	**Sb**	**05 17 36.2**	**+2.3**
ATAH	**Atahualpa**	**5.20**	**183**	Pn	**Pn**	**05 17 41.3**	**+2.3**
	14nm,0.3s,baz=7.0,slow=8.0,SNR=61						
ATAH				Sn	**Sn**	**05 18 44.4**	**+5.4**
	7.9nm,0.3s,baz=281,slow=22,SNR=11						
ATAH				LR	LR	05 19 39.0	
	comp=Z,155nm,19.6s,baz=172,slow=36						
ROSC	**El Rosal**	**7.58**	**30**	Pn	**Pn**	**05 18 10.8**	**-0.8**
	0.3nm,0.3s,baz=90,slow=20,SNR=3.6						
ROSC				Lg		05 20 20.5	
	11nm,0.3s,baz=101,slow=19,SNR=2.9						
ROSC				LR	LR	05 21 04.9	
	comp=Z,95nm,18.7s,baz=98,slow=38						
ROSC	**El Rosal**	**7.58**	**30**	*e*Pn	**Pn**	**05 18 12.5**	**+0.9**
NNA	**Nana**	**10.22**	**173**	Pn	**Pn**	**05 18 46.8**	**-1.0**
	3.5nm,0.3s,baz=337,slow=13,SNR=9.0						
NNA				Sn	**Sn**	**05 20 34.4**	**-8.1**
	2.0nm,0.3s,baz=272,slow=18,SNR=2.8						
NNA	**Nana**	**10.22**	**173**	*e*Pn	**Pn**	**05 18 47.4**	**-0.5**
	44nm,0.6s						
SDV	**Santo Domingo**	**12.93**	**35**	Lg		05 23 09.8	
	2.2nm,0.3s,baz=246,slow=20,SNR=2.3						
SDV				LR	LR	05 24 49.6	
	comp=Z,106nm,20.8s,baz=329,slow=40						
SAML	**Samuel**	**16.45**	**116**	*e*Pn	**Pn**	**05 20 05.8**	**-6.2**
	0.7nm,2.3s						
LPAZ	**La Paz**	**17.43**	**146**	P	**Pn**	**05 20 23.3**	**-1.1**
	0.2nm,0.3s,baz=335,slow=16,SNR=11						
LPAZ	**La Paz**	**17.43**	**146**	*e*Pn	**Pn**	**05 20 25.9**	**+1.5**
	5.9nm,0.9s						
PCRV	**Puerto La Cruz**	**17.89**	**48**	P	**Pn**	**05 20 29.6**	**-0.4**
	0.4nm,0.3s,baz=337,slow=13,SNR=2.1						
PCRV				Lg		05 25 45.4	
	0.5nm,0.3s,baz=219,slow=16,SNR=3.1						
PCRV				LR	LR	05 28 06.4	
	comp=Z,185nm,18.5s,baz=88,slow=40						
SIV	**San Ignacio**	**21.92**	**131**	P	**P**	**05 21 12.3**	**-2.2**
	1.9nm,0.4s,mb3.9,baz=325,slow=9.8,SNR=23						
SIV				Lg		05 27 54.2	
	6.8nm,0.9s,baz=254,slow=23,SNR=3.0						
LVC	**Limon Verde**	**22.55**	**157**	P	**P**	**05 21 23.2**	**+2.0**
	2.6nm,0.7s,mb3.8,baz=27,slow=9.0,SNR=2.6						
LVC				LR	LR	05 31 31.0	
	comp=Z,91nm,19.1s,MS3.2,baz=313,slow=40						
LVC	**Limon Verde**	**22.55**	**157**	*e*P	**P**	**05 21 22.6**	**+1.4**
	9.9nm,0.8s,mb4.3						
SJG	**San Juan**	**22.99**	**30**	P	**P**	**05 21 27.0**	**+1.1**
	16nm,0.7s,mb4.6,baz=260,slow=3.7,SNR=6.2						
SJG				LR	LR	05 31 04.5	
	comp=Z,76nm,21.5s,MS3.1,baz=90,slow=38						
SJG	**San Juan**	**22.99**	**30**	*e*P	**P**	**05 21 26.8**	**+0.9**
	11nm,0.7s,mb4.4						
CMIG	**Matias Romero**	**25.02**	**319**	P	**P**	**05 21 45.9**	**+0.6**
	3.8nm,0.8s,mb4.0,baz=125,slow=8.1,SNR=4.2						
CPUP	**Villa Florida**	**31.53**	**143**	LR	LR	05 36 56.9	
	comp=Z,90nm,20.2s,MS3.4,baz=282,slow=39						
BDFB	**Brasilia**	**32.68**	**117**	P	**P**	**05 22 52.8**	**-0.7**
	2.0nm,0.7s,mb4.2,baz=320,slow=8.3,SNR=3.4						
BDFB				LR	LR	05 36 56.3	
	comp=Z,115nm,20.1s,MS3.6,baz=341,slow=38						
PLCA	**Paso Flores**	**39.37**	**171**	P	**P**	**05 23 49.6**	**-1.2**
	2.2nm,0.8s,mb3.9,baz=307,slow=12,SNR=3.8						
PLCA	**Paso Flores**	**39.37**	**171**	*e*P	**P**	**05 23 50.2**	**-0.5**
	4.3nm,1.0s,mb4.1						
WMOK	**Wichita Mounta**	**41.19**	**334**	*e*P	**P**	**05 24 05.0**	**-0.8**
	5.2nm,1.3s,mb4.0						
MNTX	**Cornudas Mount**	**42.18**	**324**	*e*P	**P**	**05 24 13.7**	**-0.2**
	2.4nm,1.1s,mb3.7						
LAZ	**Ladron**	**45.16**	**325**	*e*P	**P**	**05 24 38.6**	**+0.7**
ANMO	**Albuquerque**	**45.18**	**327**	*e*P	**P**	**05 24 38.8**	**+0.7**
	7.2nm,1.0s,mb4.5						
TUC	**Tucson**	**45.91**	**320**	*e*P	**P**	**05 24 44.3**	**+0.4**
	2.3nm,0.8s,mb4.2						
116A	**Eloy**	**46.66**	**320**	⇑P	**P**	**05 24 50.1**	**+0.3**
	baz=47						
115A	**Sonoran Desert**	**47.09**	**320**	⇓P	**P**	**05 24 53.7**	**+0.6**
	baz=47						
X15A	**Humboldt**	**48.25**	**322**	⇓P	**P**	**05 25 03.2**	**+1.0**
	baz=48						
Y14A	**Wickenburg**	**48.38**	**320**	⇓P	**P**	**05 25 03.5**	**+0.4**
	baz=49						
W13A	**Hualapai Mount**	**49.68**	**321**	⇑P	**P**	**05 25 14.1**	**+1.0**
	baz=50						
IRM	**Iron Mountain**	**49.90**	**319**	⇑P	**P**	**05 25 15.8**	**+1.0**
	baz=50						
BELC	**Belle Mtn.**	**50.36**	**318**	⇑P	**P**	**05 25 19.2**	**+0.9**
	baz=51						
GMRC	**Granite Mounta**	**50.61**	**319**	⇑P	**P**	**05 25 20.8**	**+0.6**
	baz=51						
V12A	**Nelson**	**50.69**	**321**	⇓P	**P**	**05 25 21.6**	**+0.8**
	baz=51						
MURC	**Murrieta**	**50.93**	**317**	⇓P	**P**	**05 25 23.4**	**+0.9**
	baz=51						
RSSD	**Black Hills**	**51.25**	**336**	*e*P	**P**	**05 25 25.1**	**+0.2**
	1.9nm,0.6s,mb4.2						
GSC	**Goldstone**	**51.68**	**319**	⇓P	**P**	**05 25 29.4**	**+1.3**
	baz=52						
SHOC	**Shoshone**	**51.70**	**320**	⇑P	**P**	**05 25 29.2**	**+0.9**
	baz=52						
EDW2	**Edwards Air Fo**	**52.21**	**318**	⇓P	**P**	**05 25 32.6**	**+0.5**
	baz=52						
LRMC	**Laurel Mountai**	**52.36**	**319**	⇓P	**P**	**05 25 34.2**	**+1.0**
	baz=52						
FURC	**Furnace Creek,**	**52.42**	**320**	⇑P	**P**	**05 25 35.2**	**+1.5**
	baz=53						
DUG	**Dugway**	**52.45**	**327**	*e*P	**P**	**05 25 34.2**	**+0.3**
	3.0nm,0.8s,mb4.3						
BW06	**Boulder Array**	**52.63**	**331**	*e*P	**P**	**05 25 34.5**	**-0.8**
	1.0nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**52.63**	**331**	P	**P**	**05 25 34.4**	**-0.9**
	0.8nm,0.8s,mb3.7,baz=115,slow=10,SNR=8.3						
PDAR				PcP	PcP	05 26 43.9	-1.3
	0.6nm,0.8s,baz=131,slow=6.8,SNR=4.4						
HWUT	**Hardware Ranch**	**52.78**	**329**	*e*P	**P**	**05 25 36.1**	**-0.3**
	7.0nm,0.8s,mb4.6						
HWUT				*e*PcP	PcP	05 26 44.6	-1.3
Q12A	**Willow Creek R**	**52.81**	**324**	⇓P	**P**	**05 25 37.4**	**+0.8**
	baz=53						
ISA	**Isabella**	**52.98**	**319**	⇑P	**P**	**05 25 37.9**	**0.0**
	baz=53						
P12A	**McGill**	**53.15**	**325**	⇓P	**P**	**05 25 39.5**	**+0.4**
	baz=53						
S09A	**Goldfield**	**53.42**	**321**	⇑P	**P**	**05 25 41.6**	**+0.5**
	baz=54						
R09A	**Tonopah**	**53.65**	**322**	⇑P	**P**	**05 25 43.1**	**+0.4**
	baz=54						
REDW	**Red Top Meadow**	**53.71**	**331**	*e*P	**P**	**05 25 42.9**	**-0.3**
	21nm,1.7s,mb4.8						
SNOW	**Snow King Moun**	**53.73**	**331**	*e*P	**P**	**05 25 43.2**	**-0.2**
	3.4nm,0.6s,mb4.5						
LOHW	**Long Hollow**	**53.77**	**331**	*e*P	**P**	**05 25 43.2**	**-0.5**
	14nm,1.6s,mb4.6						
TPAW	**Teton Pass**	**53.85**	**331**	*e*P	**P**	**05 25 44.2**	**-0.1**
	2.1nm,0.6s,mb4.2						
RRI2	**Red Ridge**	**53.93**	**330**	*e*P	**P**	**05 25 45.0**	**+0.2**
	3.8nm,0.8s,mb4.4						
MOOW	**Moose Ponds**	**53.94**	**331**	*e*P	**P**	**05 25 44.5**	**-0.4**
	2.2nm,0.8s,mb4.1						
M13A	**Montello**	**54.00**	**327**	⇓P	**P**	**05 25 45.3**	**-0.1**
	baz=54						
O11A	**Cowboy Ranch,**	**54.01**	**325**	⇑P	**P**	**05 25 46.2**	**+0.8**
	baz=54						
ULM	**Lac du Bonnet**	**54.03**	**346**	P	**P**	**05 25 42.8**	**-2.8**
	1.9nm,0.5s,mb4.3,baz=145,slow=8.6,SNR=4.1						
ULM	**Lac du Bonnet**	**54.03**	**346**	*e*P	**P**	**05 25 42.8**	**-2.7**
	3.4nm,0.6s,mb4.5						
IMW	**Indian Meadow**	**54.15**	**331**	*e*P	**P**	**05 25 49.2**	**+2.8**
	5.3nm,0.9s,mb4.5						
FLWY	**Flagg Ranch**	**54.17**	**331**	*e*P	**P**	**05 25 46.7**	**+0.1**
	16nm,1.4s,mb4.8						
Q08A	**Gabbs**	**54.56**	**322**	⇓P	**P**	**05 25 49.5**	**+0.1**
	baz=55						
O10A	**Cortez Mining,**	**54.61**	**324**	⇓P	**P**	**05 25 50.5**	**+0.8**
	baz=55						
U04C	**Hernandez Rese**	**54.92**	**318**	⇓P	**P**	**05 25 51.9**	**-0.1**
	baz=55						
O09A	**Fish Creek Ran**	**54.93**	**324**	⇑P	**P**	**05 25 52.6**	**+0.5**
	baz=55						
GCMT	**Greycliff**	**54.99**	**333**	*e*P	**P**	**05 25 52.3**	**-0.2**
QLMT	**Earthquake Lak**	**55.08**	**332**	*e*P	**P**	**05 25 53.6**	**+0.4**
HLID	**Hailey**	**55.65**	**329**	*e*P	**P**	**05 25 57.5**	**+0.2**
	1.9nm,0.8s,mb4.2						
MCMT	**McKenzie Canyo**	**55.76**	**331**	*e*P	**P**	**05 25 58.4**	**+0.4**
BOZ	**Bozeman (W)**	**55.78**	**332**	*e*P	**P**	**05 25 57.4**	**-0.8**
	7.3nm,0.8s,mb4.8						
L09A	**Wilkinson Ranc**	**56.40**	**325**	⇑P	**P**	**05 26 02.7**	**+0.1**
	baz=57						
O06A	**Flanigan**	**56.52**	**322**	⇑P	**P**	**05 26 03.5**	**0.0**
	baz=57						
BEKR	**Beckwourth**	**56.66**	**322**	P	**P**	**05 26 05.1**	**+0.5**
	baz=57,SNR=5.7						
K09A	**Rome**	**56.87**	**326**	⇑P	**P**	**05 26 06.0**	**0.0**
	baz=57,SNR=22						
N06A	**Buffalo Meadow**	**56.87**	**323**	P	**P**	**05 26 06.4**	**+0.4**
	baz=57,SNR=7.7						
L08A	**Fields**	**56.89**	**325**	⇑P	**P**	**05 26 06.0**	**-0.2**
	baz=57,SNR=7.2						
O05C	**Quincy**	**57.07**	**321**	⇓P	**P**	**05 26 07.8**	**+0.4**
	baz=57						
SCHQ	**Schefferville**	**57.17**	**8**	P	**P**	**05 26 07.0**	**-1.2**
	1.6nm,0.6s,mb4.2,baz=207,slow=9.0,SNR=3.6						
ORV	**Oroville**	**57.20**	**321**	P	**P**	**05 26 09.3**	**+1.0**
	baz=57,SNR=7.6						
WVOR	**Wild Horse Val**	**57.21**	**325**	*e*P	**P**	**05 26 08.1**	**-0.4**
	8.2nm,1.0s,mb4.7						
K08A	**Mann Creek Ran**	**57.32**	**325**	⇑P	**P**	**05 26 09.2**	**0.0**
	baz=58,SNR=10						
L07A	**Adell**	**57.36**	**324**	⇓P	**P**	**05 26 09.9**	**+0.5**
	baz=58,SNR=5.2						
M06C	**Likely Place G**	**57.54**	**323**	⇑P	**P**	**05 26 08.7**	**-2.1**
	baz=58						
I09A	**Lost Marbles R**	**57.71**	**327**	⇑P	**P**	**05 26 12.0**	**+0.1**
	baz=58						
HATC	**Hat Creek Radi**	**57.91**	**322**	⇓P	**P**	**05 26 13.3**	**0.0**
	baz=58						
M05C	**Lookout**	**58.03**	**323**	P	**P**	**05 26 14.4**	**+0.2**
	baz=58,SNR=8.3						
L05A	**Lakeview**	**58.26**	**324**	⇓P	**P**	**05 26 15.1**	**-0.7**
	baz=58						
WDC	**Whiskeytown Da**	**58.44**	**321**	⇓P	**P**	**05 26 14.9**	**-2.2**
	baz=59						
H08A	**Prairie City**	**58.57**	**327**	⇓P	**P**	**05 26 18.5**	**+0.5**
	baz=59,SNR=5.1						
M03C	**McCloud**	**58.58**	**322**	⇓P	**P**	**05 26 17.7**	**-0.3**
	baz=59						
J06A	**Christmas Vall**	**58.59**	**325**	⇓P	**P**	**05 26 18.2**	**+0.1**
	baz=59						
M04C	**Macdoel**	**58.70**	**323**	⇑P	**P**	**05 26 18.2**	**-0.7**
	baz=59,SNR=5.5						
I07A	**Izee**	**58.75**	**326**	P	**P**	**05 26 19.6**	**+0.4**
	baz=59,SNR=5.9						
N02C	**Big Bar**	**59.05**	**321**	⇓P	**P**	**05 26 21.8**	**+0.5**
	baz=59						
I06A	**Prineville**	**59.06**	**326**	⇓P	**P**	**05 26 22.0**	**+0.6**
	baz=59,SNR=7.4						
YBH	**Yreka Blue Hor**	**59.20**	**322**	⇑P	**P**	**05 26 21.6**	**-0.8**
	baz=59						
J05A	**Fort Rock**	**59.24**	**324**	P	**P**	**05 26 23.0**	**+0.4**
	baz=59,SNR=6.3						
K02A	**Glendale**	**60.27**	**323**	⇓P	**P**	**05 26 29.6**	**-0.1**
	baz=60						
NEW	**Newport**	**60.28**	**331**	*e*P	**P**	**05 26 28.9**	**-0.9**
	4.2nm,0.9s,mb4.5						
G05A	**Wamic**	**60.48**	**326**	⇓P	**P**	**05 26 32.2**	**+1.0**
	baz=61						
J02A	**Umpqua**	**60.66**	**323**	⇑P	**P**	**05 26 31.9**	**-0.5**
	baz=61						
EDM	**Edmonton**	**62.22**	**337**	*e*P	**P**	**05 26 41.2**	**-1.7**
DBIC	**Dimbokro**	**73.56**	**83**	P	**P**	**05 27 52.7**	**-1.6**
	4.3nm,1.0s,mb4.3,baz=243,slow=2.3,SNR=3.3						
DBIC	**Dimbokro**	**73.56**	**83**	P	**P**	**05 27 52.7**	**-1.6**
INK	**Inuvik**	**79.50**	**342**	*e*P	**P**	**05 28 26.6**	**-1.3**
	2.8nm,0.8s,mb4.2						
TORD	**Torodi Ar. Bea**	**80.45**	**76**	P	**P**	**05 28 31.0**	**-2.1**
	0.7nm,0.7s,mb3.7,baz=280,slow=6.0,SNR=14						
QSPA	**South Pole Qui**	**88.29**	**180**	*e*P	**P**	**05 29 11.3**	**-1.5**
	7.3nm,0.9s,mb4.9						
MDJ	**Mudanjiang**	**130.82**	**334**	PKP	PKPdf	05 35 31.6	-1.0
MDJ				PP	PP		
	comp=Z,61nm,4.1s						
SONM	**Songino Array**	**133.96**	**356**	PKP	PKPdf	05 35 38.0	-0.6
	comp=Z,0.4nm,0.6s,baz=1.8,slow=2.3,SNR=4.0						
HHC	**Hu-ho-hao-te**	**140.14**	**349**	*e*PKP	PKPdf	05 35 48.0	-2.0
HHC				XPKP		05 36 02.4	
HHC				PP	PP	05 38 49.0	+1.9
HHC				PKS		05 39 22.5	
HHC				SKS	SKSdf	05 42 52.8	-7.5
HHC				SS	SS	05 57 05.0	-4.8
HHC				PP	PP		
	comp=Z,73nm,7.7s						
HHC				LR	LR		
	comp=N,140nm,36.0s,MS4.6						
HHC				LR	LR		
	comp=E,102nm,33.2s,MS4.6						
HHC				LR	LR		
	comp=Z,85nm,37.0s,MS4.2						
WRA	**Warramunga Arr**	**141.57**	**234**	PKhKP		05 35 45.4	
	comp=Z,0.4nm,0.7s,baz=122,slow=2.9,SNR=6.5						
WRA				PKP	PKPdf	05 35 52.1	-0.4
	comp=Z,1.1nm,0.8s,baz=134,slow=1.5,SNR=6.3						
LZH	**Lanzhou**	**145.81**	**357**	*e*PKP	PKPdf	05 35 59.4	-0.6
LZH				APKP		05 36 10.3	
LZH				XPKP		05 36 13.9	
LZH				LR	LR		
	comp=E,139nm,18.3s						
LZH				LR	LR		
	comp=Z,195nm,20.2s,MS4.9						
NJ2	**Nanjing**	**145.92**	**334**	*e*PKP	PKPdf	05 35 59.4	-0.8
CD2	**Chengdu**	**150.97**	**357**	*e*PKP	PKPdf	05 36 04.3	-4.1

*BJI **16** 05:47:35.4,2386N×12179E,h10km,mB4.4,mb4.4,ML4.1, Ms4.2,Msz4.0*
*IDC **16** 05:47:37.0±2.1,2423N×12205E,h0km,mb3.6/5, mb1 3.7/5,mb1mx3.6/20,mbtmp3.6/5,Error ellipse: s-maj=137.2km s-min=26.7km az=64.0*
*NEIC **16** 05:47:38.8±0.8,2422N×12187E,h10km,mb4.2/1, ML4.4(TAP),Error ellipse: s-maj=14.5km s-min=10.1km az=69.0*
NEIC Recorded [4 TAP] in I-lan, [3 TAP] in Hua-lien and [1 TAP] in Nan-t'ou Counties.
*JMA **16** 05:47:38.6±0.2,2459N×12157E,h82km,M3.4*
*ISCJB **16** 05:47:39.9±0.6,2422N±005×12170E±003,h23km±4km, mb3.7/7,Error ellipse: s-maj=8.3km s-min=4.4km az=37.0*
ISC 16 05:47:40.1±0.6**,2423N**±004×**12175E**±003**,h11**km±4km**, n20,σ0.92**/30**,mb3.7**/7**,1C,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.16**	**248**	*e*Pg	**Pg**	**05 47 44.0**	**+0.3**
NACB				*e*Sg	**Sg**	**05 47 47.2**	**+2.0**
YHNB	**Yeheng**	**0.56**	**322**	*e*Pg	**Pg**	**05 47 50.7**	**-0.2**
YHNB				*e*Sg	**Sg**	**05 47 57.6**	**-0.4**
TATO	**Taipei**	**0.78**	**342**	*e*Pg	**Pg**	**05 47 54.2**	**-1.0**
TATO				*e*Sg	**Sg**	**05 48 05.1**	**-0.1**
YOJ	**Yonaguni jima**	**1.17**	**79**	P	**Pb**	**05 48 01.8**	**-0.5**
YOJ				*e*S	**Sb**	**05 48 19.6**	**+2.1**
IRIF	**Iriomote-Funau**	**1.81**	**86**	P	**Pn**	**05 48 10.7**	**-0.5**
IRIF				*e*S	**Sn**	**05 48 34.9**	**+0.8**
HATJ	**Hateruma jima**	**1.88**	**95**	P	**Pn**	**05 48 12.3**	**+0.1**
JKRS	**Kuro-shima**	**2.06**	**89**	P	**Pn**	**05 48 14.8**	**+0.1**
JKRS				*e*S	**Sn**	**05 48 41.2**	**+0.9**
JIJ	**Ishigaki jima**	**2.18**	**86**	P	**Pn**	**05 48 15.9**	**-0.5**
JIJ				*e*S	**Sn**	**05 48 43.0**	**-0.4**
JTJ	**Tarama**	**2.72**	**81**	P	**Pn**	**05 48 22.8**	**-0.9**
JTJ				*e*S	**Sn**	**05 48 55.7**	**-0.9**
QZH	**Quanzhou**	**2.96**	**284**	⇑*i*P	**Pn**	**05 48 27.6**	**+0.5**
QZH				S	**Sn**	**05 49 02.1**	**-0.6**
QZH				Smax			
	comp=N,580nm,0.9s						
QZH				Smax			
	comp=E,260nm,0.6s						
GZH	**Guangzhou**	**7.79**	**263**	P	**Pn**	**05 49 27.6**	**-5.9**
GZH				Smax			
	comp=N,84nm,1.2s						
GZH				Smax			
	comp=E,78nm,1.0s						
NJ2	**Nanjing**	**8.20**	**342**	*e*P	**Pn**	**05 49 39.3**	**+0.3**
NJ2				AP		05 49 42.4	
NJ2				XP		05 49 45.3	
NJ2				S	**Sn**	**05 51 13.3**	**+1.7**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,60nm,3.5s						
NJ2				Smax			
	comp=N,80nm,0.5s						
NJ2				Smax			
	comp=E,60nm,0.8s						
NJ2				LR	LR		
	comp=N,760nm,7.0s						
NJ2				LR	LR		
	comp=E,820nm,14.2s						
NJ2				LR	LR		
	comp=Z,1μm,12.6s						
LZH	**Lanzhou**	**19.44**	**312**	*e*P	**Pn**	**05 52 12.3**	**+4.5**
LZH				AP	pP	05 52 16.5	+6.8
LZH				XP	sP	05 52 19.6	+8.5
LZH				AMB	AMB		
	comp=Z,22nm,1.3s						
GTA	**Gaotai**	**23.92**	**314**	*e*P	**P**	**05 52 56.4**	**+2.3**
GTA				AP		05 53 00.5	
GTA				XP	sP	05 53 03.6	+4.9
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb3.8						
SONM	**Songino Array**	**26.53**	**336**	P	**P**	**05 53 17.2**	**-0.6**
	comp=Z,0.8nm,0.7s,mb3.4,baz=149,slow=8.1,SNR=5.2						
MKAR	**Makanchi Array**	**38.66**	**316**	P	**P**	**05 55 04.4**	**+0.7**
	comp=Z,0.7nm,0.7s,mb3.5,baz=101,slow=10,SNR=6.0						
WRA	**Warramunga Arr**	**45.59**	**163**	P	**P**	**05 55 58.3**	**-1.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=344,slow=8.7,SNR=4.5						
BVAR	**Borovoye Array**	**47.97**	**321**	P	**P**	**05 56 18.3**	**-0.6**
	comp=Z,0.5nm,0.5s,mb3.8,baz=126,slow=7.3,SNR=2.7						
CHKZ	**Chkalovo**	**48.02**	**321**	*e*P	**P**	**05 56 18.3**	**-1.0**
	comp=Z,1.5nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**73.56**	**307**	P	**P**	**05 59 13.4**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=90,slow=7.4,SNR=4.7						

*NEIC **16** 05:51:59.0,3286S×7036W,h97km,MG4.0(GUC),After GUC.*
GUC 16 05:51:59.0±0.6**,3286S×7036W,h97**km±2km**,MD4.0, ML4.0,9C-4D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.27**	**312**	⇑*i*P	Pn	05 52 13.3	+0.2
JACH				*i* S	Sn	05 52 24.3	+0.7
PEL	**Peldehue**	**0.40**	**224**	⇑*i*P	Pn	05 52 14.1	+0.3
PEL				*i* S	Sn	05 52 25.6	+0.8
PEL				AML	AML	05 52 26.1	
	comp=N,21μm,0.3s						
PEL	**Peldehue**	**0.40**	**224**	⇑*i*P	Pn	05 52 14.1	+0.3
PEL				*i* S	Sn	05 52 25.6	+0.8
FCH	**Farellones**	**0.47**	**173**	⇓*i*P	Pn	05 52 15.0	+0.7
FCH				AML	AML	05 52 28.6	
	comp=N,6μm,0.4s						
CLCH	**Cerro Calan**	**0.56**	**196**	⇓*i*P	Pn	05 52 15.3	+0.4
CLCH				*i* S	Sn	05 52 27.7	+1.0
CLCH				AML	AML	05 52 28.6	
	comp=N,5μm,0.2s						
ROCH	**El Roble**	**0.56**	**258**	⇑*i*P	Pn	05 52 15.5	+0.5
ROCH				*i* S	Sn	05 52 28.0	+1.1
DSCH	**Colegio Aleman**	**0.57**	**198**	⇓*i*P	Pn	05 52 14.6	-0.4
DSCH				*i* S	Sn	05 52 27.0	+0.1
SAN	**Santiago**	**0.65**	**203**	⇑*i*P	Pn	05 52 16.0	+0.4
SAN				*i* S	Sn	05 52 29.0	+0.9
PCH	**Pirque**	**0.77**	**190**	⇑*i*P	Pn	05 52 17.3	+0.5
PCH				*i* S	Sn	05 52 30.7	+0.6
TACH	**Talagante**	**0.93**	**211**	⇑*i*P	Pn	05 52 18.7	+0.3
TACH				*i* S	Sn	05 52 33.7	+0.7
IHA	**Instituto Hidr**	**1.09**	**261**	*e*P	Pn	05 52 20.1	-0.1
CHCH	**Chadas Angostu**	**1.10**	**193**	⇓*i*P	Pn	05 52 20.7	+0.4
LCCH	**Las Cruces**	**1.19**	**239**	⇑*i*P	Pn	05 52 21.7	+0.4
LCCH				*i* S	Sn	05 52 38.3	+0.1
MDZ	**Mendoza**	**1.27**	**92**	*e*P	Pn	05 52 24.6	+2.3
MDZ				*e*S	Sn	05 52 46.6	+6.8
CACH	**El Canelo**	**1.27**	**189**	⇑*i*P	Pn	05 52 23.3	+1.0
CACH				*i* S	Sn	05 52 41.9	+2.0
CHNG	**Los Chungos**	**1.37**	**315**	*e*P	Pn	05 52 23.9	+0.4
CHNG				*i* S	Sn	05 52 42.6	+0.6
CICH	**Cipreses**	**1.46**	**182**	*e*P	Pn	05 52 25.0	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFDO	San Fernando	1.83	197	eP	Pn	05 52 29.1	-0.1
TLL	Tololo Astrono	2.71	352	eP	Pn	05 52 41.9	+1.2
TLL				i S	Sn	05 53 14.4	+1.5
TLL				AML	AML	05 53 21.1	
	comp=N,397nm,0.6s						
TLL	Tololo Astrono	2.71	352	eP	Pn	05 52 41.9	+1.2
TLL				i S	Sn	05 53 14.4	+1.5
LCO	Las Campanas	3.85	356	eP	Pn	05 52 55.5	-0.5
LCO				i S	Sn	05 53 38.7	-1.5

*NEIC **16** 05:56:45.3, 3665S×7228W, h74km, MG4.1(GUC), After GUC.*

GUC 16 05:56:45.3±0.8, 3665S×7228W, h74km±5km, ML4.1, 7C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCHI	Chillan	0.17	75	⇑iP	Pn	05 56 56.2	0.0
CCHI				i S	Sn	05 57 04.7	+0.4
CCHI				AML	AML	05 57 06.1	
	comp=E,12μm,0.9s						
CCHI	Chillan	0.17	75	⇑iP	Pn	05 56 56.2	0.0
CCHI				i S	Sn	05 57 04.7	+0.4
LNCH	Linares	0.97	35	eP	Pn	05 57 03.8	+0.2
LNCH				i S	Sn	05 57 18.0	+0.8
LNCH				AML	AML	05 57 23.2	
	comp=E,2μm,0.5s						
LNCH	Linares	0.97	35	eP	Pn	05 57 03.8	+0.2
LNCH				i S	Sn	05 57 18.0	+0.8
TALC	Talca	1.35	23	⇑iP	Pn	05 57 09.0	+0.5
TALC				i S	Sn	05 57 26.2	+0.4
TALC				AML	AML	05 57 29.2	
	comp=N,5μm,0.0s						
TALC	Talca	1.35	23	⇑iP	Pn	05 57 09.0	+0.5
TALC				i S	Sn	05 57 26.2	+0.4
NICH	Los Niches	1.85	28	eP	Pn	05 57 15.3	+0.3
TMU	Temuco	2.10	187	⇓iP	Pn	05 57 19.0	+0.6
TMU				i S	Sn	05 57 43.9	+0.4
SFDO	San Fernando	2.27	27	i P	Pn	05 57 20.6	-0.2
SFDO				i S	Sn	05 57 48.2	+0.4
CICH	Cipreses	2.77	34	eP	Pn	05 57 28.2	+0.8
CACH	El Canelo	2.87	29	eP	Pn	05 57 28.4	-0.4
CHCH	Chadas Angostu	3.02	27	⇓iP	Pn	05 57 30.7	0.0
TACH	Talagante	3.18	21	⇓iP	Pn	05 57 32.4	-0.6
LCCH	Las Cruces	3.22	11	eP	Pn	05 57 31.1	-2.4
VLCH	Valdivia	3.25	193	⇑iP	Pn	05 57 29.6	-4.2
VLCH				i S	Sn	05 58 07.0	-4.3
VLCH				AML	AML	05 58 13.7	
	comp=N,1μm,0.1s						
VLCH	Valdivia	3.25	193	⇑iP	Pn	05 57 29.6	-4.2
VLCH				i S	Sn	05 58 07.0	-4.3
DSCH	Colegio Aleman	3.53	24	eP	Pn	05 57 36.9	-0.9
CLCH	Cerro Calan	3.54	24	⇑eP	Pn	05 57 37.9	0.0
CLCH				i S	Sn	05 58 18.3	-0.3
CLCH				AML	AML	05 58 40.5	
	comp=N,228nm,0.7s						
FCH	Farellones	3.69	27	eP	Pn	05 57 40.1	+0.2
FCH				i S	Sn	05 58 21.9	-0.3
PEL	Peldehue	3.73	21	⇓iP	Pn	05 57 40.1	-0.4
PEL				i S	Sn	05 58 22.7	-0.6
ROCH	El Roble	3.81	16	i P	Pn	05 57 40.6	-0.9
JACH	Jahuel	4.19	20	eP	Pn	05 57 46.0	-0.8
PLCA	Paso Flores	4.30	162	ePn	Pn	05 57 50.8	+2.6

*ISCJB **16** 06:09:57.6±2.1, 07N±02×998E±03, h127km±16km, mb4.0/6, Error ellipse: s-maj=55.8km s-min=19.2km az=109.3*
*IDC **16** 06:09:58.1±3.0, 059N×9969E, h124km±16km, mb3.7/5, mb1 3.8/6, mb1mx3.4/19, mbtmp4.0/6, Error ellipse: s-maj=88.6km s-min=16.1km az=57.0*
*NEIC **16** 06:09:59.4±1.8, 076N×9993E, h129km±14km, mb4.1/1, Error ellipse: s-maj=41.4km s-min=14.9km az=56.0*

ISC 16 06:09:58.6±2.2, 07N±02×998E±03, h123km±16km, n8, σ0.67/9, mb4.0/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.25	337	P	Pn	06 10 36.0	+0.8
	11nm,0.3s,baz=180,slow=9.7,SNR=40						
PSI				S	Sn	06 11 03.0	-0.3
	4.3nm,0.3s,baz=259,slow=23,SNR=14						
KULM	Kulim	4.63	11	ePn	Pn	06 11 06.0	-0.5
WRA	Warramunga Arr	39.59	123	P	P	06 17 17.4	-0.5
	0.9nm,0.5s,mb3.8,baz=305,slow=9.1,SNR=16						
WRAB	Tennant Creek	39.60	123	eP	P	06 17 18.5	+0.6
	2.3nm,0.6s,mb4.2						
ASAR	Alice Springs	41.05	128	P	P	06 17 29.7	-0.2
	1.2nm,1.0s,mb3.7,baz=297,slow=8.3,SNR=6.7						
SONM	Songino Array	47.28	6	P	P	06 18 20.9	+1.4
	1.7nm,0.5s,mb4.0,baz=188,slow=10,SNR=13						
MKAR	Makanchi Array	48.38	344	P	P	06 18 27.6	-0.3
	2.3nm,0.4s,mb4.4,baz=152,slow=8.2,SNR=33						
ARCES	ARCESS Array B	83.87	340	P	P	06 22 13.7	-0.8
	1.1nm,0.7s,mb3.8,baz=101,slow=4.9,SNR=6.7						

*NEIC **16** 06:29:28.6, 3150S×7172W, h30km, ML2.9(GUC), After GUC.*

GUC 16 06:29:28.6±1.0, 3150S×7172W, h30km±3km, MD3.9, ML2.9, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.43	153	⇑iP	Pb	06 29 38.0	+0.1
CHNG				i S	Sb	06 29 43.9	-0.3
JACH	Jahuel	1.52	141	i P	Pn	06 29 55.0	+1.4
JACH				i S	Sn	06 30 14.9	+2.5
TLL	Tololo Astrono	1.55	31	eP	Pn	06 29 56.1	+2.1
TLL				i S	Sn	06 30 16.2	+3.1
TLL				AML	AML	06 30 19.0	
	comp=N,224nm,0.3s						
TLL	Tololo Astrono	1.55	31	eP	Pn	06 29 56.1	+2.1
TLL				i S	Sn	06 30 16.2	+3.1
ROCH	El Roble	1.59	158	i P	Pn	06 29 55.8	+1.2
PEL	Peldehue	1.86	152	eP	Pn	06 30 00.9	+2.5
PEL				i S	Sn	06 30 23.9	+3.1
PEL				AML	AML	06 30 32.0	
	comp=N,172nm,0.8s						
PEL	Peldehue	1.86	152	P	Pn	06 30 00.9	+2.5
PEL				i S	Sn	06 30 23.9	+3.1
CLCH	Cerro Calan	2.14	152	eP	Pn	06 30 04.8	+2.6
CLCH				i S	Sn	06 30 31.6	+3.8
CLCH				AML	AML	06 30 39.2	
	comp=N,136nm,0.5s						
FCH	Farellones	2.19	147	eP	Pn	06 30 05.4	+2.5
FCH				i S	Sn	06 30 32.5	+3.6
FCH				AML	AML	06 30 36.7	
	comp=E,68nm,0.4s						
LCO	Las Campanas	2.63	20	eP	Pn	06 30 10.8	+1.8
LCO				i S	Sn	06 30 43.0	+3.0

CASC 16 06:32:36.0±2.7, 1296N×8915W, h31km±10km, MD4.1, ML3.5, 4C-7D, Off coast of central America

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.72	354	⇓eP	x	06 32 49.5	
BOQS	Boqueron	0.78	351	⇑iP	x	06 33 13.2	
BOQS				eS	x	06 33 24.1	
VSM	San Miguel	0.97	61	⇑eP	x	06 33 16.3	
VSM				eS	x	06 33 30.0	
SBLS	San Blas	0.99	332	⇓eP	x	06 33 15.7	
SBLS				eS	x	06 33 31.5	
SNJE	San Jose	1.00	334	⇓eP	x	06 33 15.9	
SNJE				eS	x	06 33 32.9	
BLLM	Bellamira	1.01	62	⇓eP	x	06 33 16.6	
BLLM				eS	x	06 33 31.1	
RBDL	Robledal	1.26	336	⇓iP	x	06 33 19.9	
RBDL				eS	x	06 33 36.2	
CNCH	Conchagua	1.32	76	⇓eP	x	06 33 20.9	
CNCH				eS	x	06 33 38.2	
MTO2	Montecristo 2	1.44	352	⇑eP	x	06 33 22.1	
MTO2				eS	x	06 33 40.8	
CRIN	San Cristobal	2.06	97	eP	Pn	06 33 08.7	+0.2
CRIN				eS	Sn	06 33 36.2	+3.1
LEON	Leon	2.27	104	eP	Pn	06 33 10.9	-0.4
LEON				eS	Sn	06 33 37.8	-0.4
MIRN	Miramar	2.44	102	eP	Pn	06 33 13.6	0.0
CNGN	Cerro Negro	2.44	101	eP	Pn	06 33 13.9	+0.3
CNGN				eS	Sn	06 33 41.7	-0.6
TP2	Tecpan 2	2.56	315	⇑eP	Pn	06 33 16.4	+1.0
TP2				eS	Sn	06 33 48.2	+2.7
MOMJ	Momotombo	2.61	102	eP	Pn	06 33 16.4	+0.4
COPN	Copaltepe	2.62	107	eP	Pn	06 33 16.0	-0.1
COPN				eS	Sn	06 33 46.1	-0.6
APYN	Apoyeque	2.83	105	⇓eP	Pn	06 33 19.5	+0.5
APYN				eS	Sn	06 33 55.0	+3.1
XAVN	Gruta Xavier	2.87	106	eP	Pn	06 33 19.7	+0.1
TISN	Laguna Tiscapa	2.93	106	eP	Pn	06 33 21.2	+0.9
MGAN	Managua	2.95	106	eP	Pn	06 33 20.7	+0.1
MGAN				i		06 33 55.7	
	comp=N,255nm,0.3s						
TICN	Ticuantepe	3.00	108	eP	Pn	06 33 22.1	+0.8
BOA	Boaco	3.38	98	eP	Pn	06 33 26.7	+0.1
VCR	Vista de Mar	4.45	129	eP	Pn	06 33 41.9	+0.6
JCR	Jicaral	5.02	128	eP	Pn	06 33 50.2	+1.0
CGA2	Cerro Gallo 2	5.45	122	eP	Pn	06 33 57.1	+2.1
PRS1	Puriscal	5.59	121	eP	Pn	06 33 59.1	+2.1
PRS1				eS	Sn	06 35 02.4	+2.3
LCR2	La Lucha 2	5.98	122	eP	Pn	06 34 04.3	+2.1
LCR2				eS	Sn	06 35 09.8	+0.1
BUS	Buena Vista	6.28	122	eP	Pn	06 34 08.8	+2.4

*ISCJB **16** 07:19:15.8±0.5, 1028S±006×10793E±007, h10km, mb4.5/29, MS3.8/8, Error ellipse: s-maj=10.2km s-min=7.2km az=109.5*
*NEIC **16** 07:19:17.3±0.6, 10.11S×10802E, h10km, mb4.6/5, Error ellipse: s-maj=18.0km s-min=8.7km az=52.0*
*MOS **16** 07:19:19.2±1.7, 1030S×10799E, h33km, mb4.7/9, Error ellipse: s-maj=21.1km s-min=11.3km az=111.5*
*BJI **16** 07:19:19.6, 981S×10793E, h10km, mB5.1, mb4.7, Ms4.4, Msz4.5*
*IDC **16** 07:19:21.5±1.0, 10.17S×10802E, h38km±7km, mb4.0/9, mb1 4.2/10, mb1mx4.0/17, mbtmp4.2/10, ML4.4/1, MS3.8/9, Ms1 3.8/9, ms1mx3.5/31, Error ellipse: s-maj=31.7km s-min=14.8km az=52.0*

ISC 16 07:19:16.4±2.6, 1026S±006×10791E±007, h2km±16km, n57, σ1.36/59, mb4.5/29, MS3.8/8, 5C-3D, South of Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	3.41	32	P	Pn	07 20 07.9	-2.8
	119nm,1.1s						
BJII	Banjamegara	3.41	32	⇓iP	Pn	07 20 08.7	-2.0
BJII				i S	Sn	07 20 44.8	-7.0
BJII	Banjamegara	3.41	32	⇓iP	Pn	07 20 10.1	-0.6
BJII				i S	Sn	07 20 52.0	+0.2
LEM	Lembang	3.43	355	P	Pn	07 20 09.5	-1.4
	699nm,1.1s						
JCJI	Jatiwangi	3.77	6	P	Pn	07 20 11.2	-4.3
	928nm,0.9s						
KRKI	Karangkates	4.95	65	P	Pn	07 20 31.8	0.0
	1μm,0.8s						
NBBI	Negara	6.89	75	P	Pn	07 21 00.3	+1.9
	863nm,0.9s						
KSI	Kapahiang	8.42	321	P	Pn	07 21 28.9	+9.4
	140nm,1.1s						
KKM	Kota Kinabalu	18.19	27	ePn	Pn	07 23 27.2	-2.9
FITZ	Fitzroy Crossi	18.86	116	eP	Pn	07 23 39.0	+0.7
	28nm,0.9s						
FITZ	Fitzroy Crossi	18.86	116	P	Pn	07 23 38.7	+0.3
	0.9nm,0.3s,baz=290,slow=9.1,SNR=27						
FITZ				S	Sn	07 26 50.1	-20
	0.3nm,0.3s,baz=354,slow=10,SNR=3.6						
FITZ				LR	LR	07 29 29.0	
	comp=Z,138nm,19.6s,baz=304,slow=32						
NWAO	Narrogin (SRO)	24.14	161	LR	LR	07 33 59.8	
	comp=Z,174nm,18.5s,MS3.6,baz=144,slow=36						
KAKA	Kakadu	24.16	98	eP	P	07 24 33.1	-0.9
	11nm,0.6s,mb4.5						
WRA	Warramunga Arr	27.23	114	P	P	07 25 01.1	-0.7
	4.0nm,0.5s,mb4.2,baz=288,slow=11,SNR=34						
WRAB	Tennant Creek	27.24	114	eP	P	07 25 01.0	-0.9
WRAB				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.5						
WRAB	Tennant Creek	27.24	114	eP	P	07 25 01.0	-0.9
	comp=Z,20nm,1.2s,mb4.5						
WB2	Warramunga Arr	27.25	114	eP	P	07 25 01.0	-0.9
ASAR	Alice Springs	28.14	122	P	P	07 25 10.1	+0.1
	comp=Z,4.7nm,0.9s,mb4.1,baz=303,slow=9.8,SNR=20						
ASAR				Sn	S	07 30 37.7	+42
	comp=Z,0.5nm,0.7s,baz=306,slow=24,SNR=4.9						
ASAR				LR	LR	07 36 47.9	
	comp=Z,160nm,18.7s,MS3.6,baz=79,slow=37						
QIZ	Qiongzhong	29.17	4	P	P	07 25 19.1	0.0
QIZ				S	S	07 30 10.6	-1.5
QIZ				AMB	AMB		
	comp=Z,30nm,1.9s,mb4.7						
QIZ				LR	LR		
	comp=E,371nm,16.3s						
STKA	Stephens Creek	37.84	130	eP	P	07 26 34.9	+0.4
	comp=E,10nm,0.9s,mb4.6						
STKA	Stephens Creek	37.84	130	P	P	07 26 35.2	+0.8
	comp=E,12nm,0.6s,mb4.8,baz=303,slow=7.5,SNR=36						
STKA				LR	LR	07 41 14.5	
	comp=E,161nm,18.2s,MS3.9,baz=211,slow=35						
JOW	Kunigami	41.84	28	LR	LR	07 44 57.2	
	comp=E,62nm,21.6s,MS3.5,baz=198,slow=37						
LSA	Lhasa	42.89	338	eP	P	07 27 15.5	-0.8
LSA				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.6						
LSA	Lhasa	42.89	338	eP	P	07 27 15.5	-0.8
	comp=Z,5.1nm,0.4s,mb4.6						
SSE	Sheshan	43.05	17	eP	P	07 27 19.8	+2.2
SSE				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,51nm,4.2s						
NJ2	Nanjing	43.36	14	eP	P	07 27 22.3	+2.2
NJ2				PP	PP	07 29 06.1	+5.4
NJ2				S	S	07 33 48.0	-0.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,270nm,6.8s						
NJ2				LR	LR		
	comp=N,560nm,36.6s						
NJ2				LR	LR		
	comp=E,230nm,14.8s						
NJ2				LR	LR		
	comp=Z,450nm,15.2s						
XAN	Xi'an	44.07	1	P	P	07 27 25.4	-0.4
XAN				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.4						
LZH	Lanzhou	46.26	355	eP	P	07 27 44.5	+1.3
LZH				AMB	AMB		
	comp=Z,21nm,1.1s,mb5.0						
GTA	Gaotai	49.99	352	eP	P	07 28 12.3	+0.2
GTA				AP		07 28 19.6	
GTA				XP	sP	07 28 24.6	+12
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.3						
SNY	Shenyang	53.80	14	eP	P	07 28 43.0	+2.5
SNY				AMB	AMB		
	comp=Z,9.0nm,0.3s,mb5.2						
MJAR	Matsushiro Arr	54.59	30	P	P	07 28 44.7	-1.6
	comp=Z,1.0nm,0.7s,mb4.0,baz=198,slow=9.1,SNR=4.7						
MJAR				pP		07 28 55.1	
	comp=Z,3.8nm,1.0s,baz=208,slow=7.6,SNR=6.5						
MJAR				LR	LR	07 50 52.5	
	comp=Z,59nm,19.2s,MS3.7,baz=205,slow=35						
MJAR	Matsushiro Arr	54.59	30	P	P	07 28 44.7	-1.6
MJAR				*PP		07 28 55.2	
MJAR	Matsushiro Arr	54.59	30	P	P	07 28 44.7	-1.6
MJAR				pP		07 28 55.1	
MJAR				LR	LR	07 50 52.5	
SONM	Songino Array	57.85	359	P	P	07 29 08.6	-0.9
	comp=Z,2.1nm,0.6s,mb4.4,baz=176,slow=8.6,SNR=15						
SONM				pP		07 29 21.1	
	comp=Z,3.9nm,0.8s,baz=171,slow=7.7,SNR=10						
SONM				LR	LR	07 55 06.8	
	comp=Z,95nm,21.9s,MS3.9,baz=159,slow=37						
SONM	Songino Array	57.85	359	P	P	07 29 08.6	-1.0
SONM				*PP		07 29 21.1	
ULN	Ulaanbaatar	57.87	359	⇑iP	P	07 29 10.9	+1.2
ZAK	Zakamensk	60.52	357	eP	P	07 29 24.2	-3.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.1						
AAK	Ala-Archa	60.87	332	⇑eP	P	07 29 33.0	+2.6
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.5						
MK31	Makanchi Array	61.24	340	P	P	07 29 33.4	+0.4
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1						
MKAR	Makanchi Array	61.24	340	P	P	07 29 32.6	-0.4
	comp=Z,1.8nm,0.5s,mb4.5,baz=145,slow=6.7,SNR=19						
MKAR	Makanchi Array	61.24	340	i P	P	07 29 33.4	+0.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KLR	Kul'dur	62.84	17	eP	P	07 29 41.8	-1.9
YSS	Yuzh-Sakhalins	64.89	26	⇑eP	P	07 29 59.0	+1.8
YSS				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.7						
ZAL	Zalesovo	66.89	345	i P	P	07 30 13.6	+3.5
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VNDA	Vanda	72.61	169	P	P	07 30 44.2	-1.1
	comp=Z,0.4nm,0.7s,mb3.4,baz=266,slow=7.8,SNR=2.8						
VNDA				LR	LR	07 58 16.3	
	comp=Z,72nm,18.4s,MS4.0,baz=40,slow=32						
AB31	Akbulak array	72.66	329	i P	P	07 30 44.3	-1.3
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
SVE	Sverdlovsk	77.33	336	eP	P	07 31 13.2	+0.6
SVE				e		07 31 22.8	
MA2	Magadan	77.60	21	⇑eP	P	07 31 15.5	+1.4
MA2				pmax	pmax		
	comp=Z,58nm,2.5s,mb5.1						
ARU	Arti	77.93	334	⇓iP	P	07 31 13.3	-2.7
ARU				e		07 31 24.2	
ARU				eS	S	07 41 03.8	-6.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
TIXI	Tiksi	82.92	7c	iP	P	07 31 44.7	+1.9
TIXI				pmax	pmax		
	comp=Z,29nm,1.7s,mb5.0						
BRTR	Keskin Array B	84.66	312	P	P	07 31 50.9	-0.8
	comp=Z,1.0nm,0.6s,mb4.1,baz=102,slow=5.7,SNR=6.6						
BRTR				pP		07 32 03.5	
	comp=Z,2.7nm,1.0s,baz=144,slow=4.6,SNR=5.3						
OBN	Obninsk	87.93	327	eP	P	07 32 08.1	+0.3
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.3						
BILL	Bilibino	88.27	19	P	P	07 32 11.0	+1.6
BILL				ePS		07 44 00.1	
KLMR	Klimovskoe	88.68	333	eP	P	07 32 09.4	-1.9
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.9						
AKASG	Malin Array Be	90.79	321	P	P	07 32 21.8	+0.5
	comp=Z,0.2nm,0.3s,mb3.9,baz=113,slow=1.4,SNR=3.2						
AKASG	Malin Array Be	90.79	321	P	P	07 32 21.8	+0.5
PPT	Papeete	98.65	110	LR	LR	08 16 56.6	
	comp=Z,100nm,18.1s,MS4.3,baz=139,slow=35						

IDC 16 07:41:27.8±1.7, 482S×12624E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/16, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=145.8km s-min=26.3km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.21	182	Pn	Pn	07 44 36.4	-0.3
	0.2nm,0.3s,baz=9.7,slow=17,SNR=7.1						
WRA	Warramunga Arr	16.98	153	Pn	Pn	07 45 20.9	-5.7
	0.1nm,0.3s,baz=322,slow=14,SNR=6.1						
ASAR	Alice Springs	20.14	159	P	P	07 46 03.9	+0.5
	2.7nm,0.9s,baz=342,slow=12,SNR=27						
SONM	Songino Array	55.26	344	P	P	07 51 02.7	-0.1
	0.3nm,0.5s,baz=164,slow=7.5,SNR=2.4						
MKAR	Makanchi Array	64.39	328	P	P	07 52 05.9	+0.3
	0.4nm,0.4s,baz=144,slow=5.4,SNR=3.6						

IDC 16 07:45:01.9±2.7, 912S×10905E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.7/4, Error ellipse: s-maj=120.1km s-min=25.7km az=53.0, South of Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.70	117	P	P	07 50 43.1	+0.4
	1.1nm,0.8s,baz=288,slow=11,SNR=5.5						
STKA	Stephens Creek	37.72	132	P	P	07 52 19.3	+0.1
	2.2nm,0.7s,baz=308,slow=16,SNR=3.4						
SONM	Songino Array	56.75	358	P	P	07 54 48.6	+1.1
	0.3nm,0.5s,baz=185,slow=7.1,SNR=2.3						
MKAR	Makanchi Array	60.57	339	P	P	07 55 13.6	-0.6
	0.4nm,0.5s,baz=134,slow=7.6,SNR=4.8						

*BJI **16** 08:00:05.1, 1342N×56.14E, h22km, mB5.0, mb4.8, Ms4.8, Msz4.6*
*STR **16** 08:00:09.9±0.0, 1337N×56.10E, Mb4.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*IDC **16** 08:00:10.4±0.5, 14.14N×5689E, h0km, mb4.5/24, mb1 4.6/25, mb1mx4.6/27, mbtmp4.5/25, ML3.9/1, MS4.1/22, Ms1 4.1/22, ms1mx4.1/26, Error ellipse: s-maj=13.5km s-min=12.7km az=76.0*
*ISCJB **16** 08:00:11.8±0.2, 1409N±004×5674E±002, h22km, mb5.0/148, MS4.2/45, Error ellipse: s-maj=5.7km s-min=3.4km az=18.1*
*CSEM **16** 08:00:11.4±0.1, 1394N×5663E, h22km, mb5.1/78, Ms3.7, Error ellipse: s-maj=4.3km s-min=1.9km az=26.0*
*NEIC **16** 08:00:13.8±0.2, 1408N×5675E, mb5.1/86, Error ellipse: s-maj=6.5km s-min=4.3km az=23.0*
*HRVD **16** 08:00:13.9±0.2, 1406N×5683E, h12km, MW5.0/77, Centroid moment Tensor Solution. LP body waves: s40,c51;Mantle waves: s77,c134; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.84±.09; $M_{\theta\theta}$3.01±.09; $M_{\phi\phi}$0.82±.10; $M_{r\theta}$0.93±.27; $M_{\theta\phi}$-1.90±.08; $M_{\phi r}$-1.49±.30; Best double couple: $M_0$4.35100×10^{16} NP1:ϕ_s108.00000°,δ35.00000°,λ-109.00000°. NP2: ϕ_s311.00000°,δ57.00000°,λ-77.00000°. Principal axes: T 4.4070, Plg11.0000°, Azm32.0000°; N -0.1160, Plg11.0000°, Azm124.0000°; P -4.2950, Plg75.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **16** 08:00:14.0±1.1, 14.18N×5672E, h33km, mb5.3/64, MS4.1/11 Error ellipse: s-maj=7.2km s-min=3.4km az=118.1*
*SZGRF **16** 08:00:22.6, 1378N×5406E, h25km, mb4.9, MS3.8, Socotra region*

ISC 16 08:00:14.3±0.2, 1411N±004×5676E±002, h23km, h23km±.4km:pP-P, n541, σ1.06/468, mb5.0/148, MS4.2/45, 43C-70D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHAO	Shalim	4.04	344	⇓P	Pn	08 01 13.2	-1.5
	SNR=39						
ABTO	Aybut	4.64	314	⇑P	Pn	08 01 22.6	-0.3
	SNR=8.3						
WHFO	Wadi Hawf	4.76	323	⇓P	Pn	08 01 24.8	+0.3
	SNR=6.6						
SMDO	Samad	8.99	8	⇓P	Pn	08 02 23.0	+0.4
	SNR=15						
ARQ	Araqi	9.18	359	⇓P	Pn	08 02 25.1	-0.1
	SNR=14						
WSAR	Wadi Sarin	9.25	11	Pn	Pn	08 02 25.8	-0.4
	1.3nm,0.3s,baz=184,slow=11,SNR=16						
WSAR				LR	LR	08 05 44.8	
	comp=Z,4μm,20.5s,baz=185,slow=36						
BIDO	Bidbid	9.45	8	⇑P	Pn	08 02 29.4	+0.5
ASHO	Ashiyiah	10.54	356	⇑P	Pn	08 02 43.4	-0.5
HATD	Hatta, Dubai	10.68	357	⇑P	Pn	08 02 45.6	-0.2
ATD	Arta Tunnel	13.81	261	LR	LR	08 07 29.5	
	comp=Z,1μm,18.2s,baz=335,slow=32						
RDF	Al-Radifah	17.04	331	eP	Pn	08 04 08.1	-2.9
RDF				AMb	AMB	08 04 11.6	
	comp=Z,132nm,0.7s						
KBD	Kabd	17.19	332	eP	Pn	08 04 09.9	-2.9
KBD				AMb	AMB	08 04 13.9	
	comp=Z,554nm,1.4s						
NAY	Al-Naaiem	17.46	331	eP	Pn	08 04 12.9	-3.3
NAY				AMb	AMB	08 04 17.5	
	comp=Z,44nm,1.1s						
RST	Umm Al-Ruwaisa	17.78	331	eP	Pn	08 04 16.6	-3.6
RST				AMb	AMB	08 04 20.9	
	comp=Z,174nm,1.1s						
JASL	Jaisalmer	18.36	44	eP	Pn	08 04 24.4	-2.9
TRD	Trivandrum	20.56	104	⇓ix	x	08 02 28.1	
TRD				i x	x	08 08 14.1	
AJM	Ajmer	20.77	51	eP	P	08 04 51.8	-1.7

HYB Hyderabad 21.23 78 *i* P P 08 04 58.0 -0.4
HYB *e*S S 08 08 52.5 -0.7
HYB Hyderabad 21.23 78 *e*P P 08 04 58.0 -0.4
BHPL Bhopal 21.56 62 *e*P P 08 05 02.8 +0.8
BHD Baghdad 22.15 332 *e*x x 08 05 04.0
BHD *e*x x 08 09 15.0
KHET Khetri 22.51 49 *e*P P 08 05 11.3 -0.9
KHET AMb AMB 08 05 21.5
comp=Z,79nm,1.7s,mb4.9
RTK Rohtak 23.49 48 *e*P P 08 05 21.6 -0.9
RTK AMb AMB 08 05 30.9
comp=Z,89nm,0.2s,mb5.9
AGRA Agra 23.68 53 *e*P P 08 05 23.4 -0.8
AGRA AMb AMB 08 05 33.7
comp=Z,41nm,0.5s,mb5.1
AYAN Aya Nagar 23.71 50 *e*P P 08 05 24.3 -0.1
ABKT Ailbek 23.76 3 P P 08 05 24.9 0.0
comp=Z,124nm,0.9s,mb5.3,SNR=5.1
NDI New Delhi 23.88 49 *e*P P 08 05 24.0 -2.1
KKR Kurukshetra 24.32 46 *e*P P 08 05 30.6 +0.6
KMBO Kilima Mbogo 24.55 233 P P 08 05 34.5 +2.4
comp=Z,6.0nm,0.6s,mb4.3,baz=47,slow=14,SNR=16
KMBO LR LR 08 15 50.6
comp=Z,1µm,18.6s,MS4.4,baz=52,slow=38
KMBO Kilima Mbogo 24.55 233 P P 08 05 34.5 +2.3
EIL Elat 25.41 311 *e*P P 08 05 41.9 +1.9
comp=Z,485nm,1.3s,mb5.9
ASF Jabal al Asfar 25.55 318 P P 08 05 42.5 +1.3
comp=Z,13nm,0.9s,mb4.5,baz=7.3,slow=3.8,SNR=20
ASF LR LR 08 16 19.3
comp=Z,347nm,18.9s,MS3.9,baz=358,slow=38
KLP Kalpa 26.24 45 *e*P P 08 05 48.4 +0.9
KLP AMb AMB 08 06 03.1
comp=Z,40nm,1.3s,mb4.8
JOSI Joshimath 26.61 48 *e*x x 08 05 31.7
JOSI AMb AMB 08 05 38.1
comp=Z,132nm,1.0s,mb5.4
MMAI Mount Meron Ar 27.06 318 P P 08 05 56.4 +1.5
comp=Z,3.4nm,0.7s,mb4.0,baz=110,slow=6.7,SNR=6.5
MMAI PcP PcP 08 09 17.1 +1.4
comp=Z,0.5nm,0.3s,baz=122,slow=8.9,SNR=4.7
MMAI LR LR 08 16 40.4
comp=Z,178nm,18.3s,MS3.7,baz=135,slow=36
MARD Mardin 27.15 331 *i* P P 08 05 56.9 +1.2
GNI Garni 28.00 340 P P 08 06 04.9 +1.5
comp=Z,20nm,0.8s,mb4.8,baz=163,slow=4.5,SNR=8.8
GNI LR LR 08 18 16.1
comp=Z,215nm,19.8s,MS3.7,baz=283,slow=39
GNI Garni 28.00 340 ⇓P P 08 06 05.7 +2.3
SNR=14
GNI Garni 28.00 340 *e*P P 08 06 05.6 +2.3
GNI pmax pmax
comp=Z,29nm,1.0s
GNI Garni 28.00 340 *e*P P 08 06 05.6 +2.3
comp=Z,29nm,1.0s,mb4.9
GNI Garni 28.00 340 *e*P P 08 06 05.6 +2.3
comp=Z,29nm,1.0s,mb4.9
KOLN Koldanda 28.43 57 *e*P P 08 06 08.5 +1.3
comp=Z,53nm,1.3s,mb5.0
GZT Gaziantep 28.78 327 *i* P P 08 06 12.7 +2.4
MALT Malatya 29.07 329 *e*P P 08 06 15.7 +2.9
MALT pmax pmax
comp=Z,16nm,1.2s,mb4.6
MALT Malatya 29.07 329 *e*P P 08 06 15.7 +2.8
comp=Z,16nm,1.2s,mb4.6
MALT Malatya 29.07 329 *e*P P 08 06 15.7 +2.9
comp=Z,16nm,1.2s,mb4.6
GKN Gorkha 29.37 57 *e*P P 08 06 17.2 +1.7
comp=Z,29nm,1.0s,mb4.9
DMN Daman 29.61 59 *e*P P 08 06 18.4 +0.8
KKN Kakani 29.82 58 *e*P P 08 06 20.8 +1.3
MAK Makhachkala 29.84 346 *e*P P 08 06 21.7 +2.1
PKI Pulchoki 29.85 59 *e*P P 08 06 20.6 +0.9
KELT Kelkit 30.14 333 *i* P P 08 06 24.6 +2.2
GUN Gumba 30.36 58 *e*P P 08 06 25.5 +1.3
comp=Z,94nm,1.2s,mb5.4
KSH Kashi 30.43 30 *e*P P 08 06 26.6 +1.7
KSH *e*AP pP 08 06 33.6 +1.8
KSH *e*XP sP 08 06 37.3 +2.6
KSH *e*PP PP 08 07 25.4 -8.3
KSH PPP 08 07 41.1
KSH S S 08 11 25.1 +0.6
KSH *e*SCP ScP 08 13 05.6 +0.5
KSH SCS ScS 08 17 00.8 -0.3
KSH AMB AMB
comp=Z,15nm,0.6s,mb4.9
KSH AMB AMB
comp=Z,246nm,3.7s
KSH LR LR
comp=N,278nm,4.5s
KSH LR LR
comp=E,380nm,6.6s
KSH LR LR
comp=Z,1µm,18.3s,MS4.6
JIRN Jiri 30.53 59 *e*P P 08 06 26.7 +1.0
ZEI Tsey 30.64 341 *e*P P 08 06 28.9 +2.2
ZEI *e**PP pP 08 06 35.6 +2.0
ZEI *e* 08 07 24.8
ZEI pmax pmax
comp=Z,16nm,0.5s,mb5.1
ZEI Tsey 30.64 341 *e*P P 08 06 28.9 +2.2
comp=Z,16nm,0.5s,mb5.1
AVNT Avonos 31.28 326 *i* P P 08 06 34.5 +2.1
KIV Kislovodsk 32.09 341κ*e*P P 08 06 40.9 +1.4
KIV *e* pP 08 06 46.0 -0.4
KIV 08 07 55.0
KIV *e* 08 09 29.7
KIV *e*S S 08 11 48.3 -2.1
KIV pmax pmax
comp=Z,50nm,1.2s,mb5.2
KIV MLR MLR
comp=Z,400nm,22.0s,MS4.1
KIV Kislovodsk 32.09 341 *e*P P 08 06 41.1 +1.5
comp=Z,36nm,0.9s,mb5.2
KIV Kislovodsk 32.09 341 P P 08 06 41.1 +1.6
SNR=6.4
AAK Ala-Archa 32.28 25 *e*P P 08 06 43.2 +2.0
AAK *e**PP pP 08 06 50.1 +2.0
AAK pmax pmax
comp=Z,15nm,1.1s,mb4.7
AAK Ala-Archa 32.28 25 *e*P P 08 06 43.2 +2.0
comp=Z,15nm,1.1s,mb4.7
AAK *e*pP pP 08 06 50.1 +2.0
AAK Ala-Archa 32.28 25 *e*P P 08 06 43.2 +2.0
comp=Z,15nm,1.1s,mb4.7
AAK *e*pP pP 08 06 50.1 +2.0
FRU Bishkek 32.50 25 *e*P P 08 06 50.0 +6.9
FRU pmax pmax
comp=Z,90nm,1.9s,mb5.3
BR131 Keskin Array S 32.61 326 *e*P P 08 06 45.3 +1.2
comp=Z,1.8nm,0.7s,mb4.1
BR131 *e*pP pP 08 06 52.9 +1.9
BR131 *e*PcP PcP 08 09 30.8 +0.8
BR131 Keskin Array S 32.61 326 *e*P P 08 06 45.3 +1.2
comp=Z,1.8nm,0.7s,mb4.1
BR131 *e*pP pP 08 06 52.9 +1.9
BRTR Keskin Array B 32.61 326 P P 08 06 45.2 +1.2
comp=Z,6.6nm,1.2s,mb4.5,baz=142,slow=11,SNR=16
BRTR PcP PcP 08 09 30.8 +0.8
comp=Z,1.6nm,0.8s,baz=150,slow=3.8,SNR=4.6
BRTR LR LR 08 21 45.7
comp=Z,375nm,19.3s,MS4.1,baz=126,slow=40
BRTR Keskin Array B 32.61 326 P P 08 06 45.3 +1.2
BRTR 08 09 30.8
BRTR Keskin Array B 32.61 326 P P 08 06 45.2 +1.1
BRTR Keskin Array B 32.61 326 PcP PcP 08 09 30.8 +0.8
KDHN Kadinhani 32.65 323 *i* P P 08 06 48.1 +3.7
BOYT Boyabat 33.19 329 *i* P P 08 06 48.8 -0.3
ESKT Eskisehir 34.05 323 *i* P P 08 06 57.6 +1.0
SEYT Eskypehyr 34.05 323 *i* P P 08 06 57.6 +1.0
SGKT Sivrigoynuk 34.07 325 *i* P P 08 06 58.2 +1.4
ANN Anapa 34.73 336 *e*P P 08 07 08.6 +6.1
ANN *e*S S 08 12 39.0 +7.7
ANN pmax pmax
comp=Z,31nm,0.9s,mb5.2
ANN MLR MLR
comp=N,182nm,15.0s,MS4.3
ANN MLR MLR
comp=E,409nm,15.0s,MS4.3
ANN MLR MLR
comp=Z,248nm,15.0s,MS4.1
HENT Hendek 34.89 325 *i* P P 08 07 04.8 +0.9
AB31 Akbulak array 35.15 4 *i* P P 08 07 06.0 -0.1
AB31 pmax pmax
comp=Z,6.0nm,0.9s,mb4.5

SIM Simferopol’ 36.26 332 *e*P P 08 07 16.9 +1.3
SIM *e*S S 08 12 57.0 +2.2
SIM pmax pmax
comp=Z,30nm,0.9s,mb5.2
TIRR Tirgusor 38.69 327 *e*P P 08 07 36.9 +0.6
TIRR *e* 08 09 03.4
VRHR Novokhopersk 38.87 345 *e*P P 08 07 38.2 +0.4
VRHR pmax pmax
comp=Z,40nm,0.5s,mb5.4
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.4s
MKAR Makanchi Array 38.97 28 P P 08 07 39.2 +0.7
comp=E,4.6nm,0.7s,mb4.3,baz=213,slow=7.8,SNR=18
MKAR PcP PcP 08 09 48.0 -0.7
comp=E,2.2nm,0.9s,baz=253,slow=3.7,SNR=4.5
MKAR Makanchi Array 38.97 28⇑*e*P P 08 07 39.2 +0.7
MKAR Makanchi Array 38.97 28 PcP PcP 08 09 48.0 -0.7
HARR Harsova 39.10 327 P P 08 07 41.0 +1.3
VRSR Storozhevoye 39.64 343*d* *i*P P 08 07 44.0 -0.2
VRSR pmax pmax
comp=Z,60nm,0.8s,mb5.4
VRSR pmax pmax
comp=N,80nm,0.9s
VRSR pmax pmax
comp=E,60nm,0.9s
WMQ Urumqi 39.69 36 *e*P P 08 07 46.0 +1.4
WMQ XP sP 08 07 55.0 +0.6
WMQ PP PP 08 09 21.0 +5.1
WMQ S S 08 13 49.0 +2.2
WMQ AMB AMB
comp=Z,25nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,112nm,5.0s
WMQ LR LR
comp=N,351nm,12.0s,MS4.6
WMQ LR LR
comp=E,458nm,12.0s,MS4.6
WMQ LR LR
comp=Z,312nm,12.0s,MS4.4
VOR Voronezh 40.10 343 *e*P P 08 07 47.7 -0.3
VOR pmax pmax
comp=Z,70nm,1.0s,mb5.3
VOR pmax pmax
comp=N,100nm,1.2s
VOSK Vostochnaya 40.15 13 P P 08 07 48.4 -0.1
VOSK pmax pmax
comp=Z,8.0nm,1.4s,mb4.3
VAY Valandovo 40.20 319 *e*P P 08 07 49.0 +0.1
VAY Valandovo 40.20 319 *e*P P 08 07 48.9 +0.1
KIS Kishinev 40.25 330 *e*P P 08 07 48.0 -1.2
KIS *e* pP 08 07 54.0 -2.3
KIS *e* 08 09 23.0
BVA0 Borovoye Array 40.31 13 P P 08 07 49.7 0.0
BVA0 pmax pmax
comp=Z,2.0nm,1.6s
VTS Vitosha 40.50 321⇓*i*P P 08 07 52.6 +1.3
VTS Vitosha 40.50 321 P P 08 07 52.9 +1.5
VRI Vrincioaia 40.52 327⇓*i*P P 08 07 53.1 +1.6
VRI Vrincioaia 40.52 327 P P 08 07 53.4 +1.9
PLOR Plostina 40.55 327⇓*i*P P 08 07 54.9 +3.2
KURK Kurchatov 40.59 21⇑*i*P P 08 07 52.7 +0.7
KURK Kurchatov 40.59 21 *e*P P 08 07 52.7 +0.6
KURK *e*PP PP 08 09 33.1 +7.5
KURK Kurchatov 40.59 21 *e*P P 08 07 52.7 +0.7
KURK Kurchatov 40.59 21 *e*PP PP 08 09 33.1 +7.5
LSZ Lusaka 40.63 225 P P 08 07 53.9 +1.4
comp=Z,1.1nm,0.4s,mb3.9,baz=73,slow=6.9,SNR=3.8
MLR Muntele Rosu 40.69 326⇓*i*P P 08 07 55.3 +2.4
MLR Muntele Rosu 40.69 326 P P 08 07 55.6 +2.7
CHKZ Chkalovo 40.96 13 *e*P P 08 07 55.5 +0.4
CHKZ *e**PP pP 08 08 01.1 -1.1
CHKZ *e* 08 09 55.1
CHKZ pmax pmax
comp=Z,19nm,1.2s,mb4.6
CHKZ Chkalovo 40.96 13 *e*P P 08 07 55.5 +0.4
comp=Z,19nm,1.2s,mb4.6
CHKZ *e*pP pP 08 08 01.1 -1.0
CHKZ *e*PcP PcP 08 09 55.1 0.0
CHKZ Chkalovo 40.96 13 *e*P P 08 07 55.5 +0.4
comp=Z,19nm,1.2s,mb4.6
CHKZ *e*pP pP 08 08 01.1 -1.1
VOIR 41.14 326⇑*i*P P 08 07 57.9 +1.3
SKO Skopje 41.26 319 *e*P P 08 07 58.4 +0.8
ARU Arti 42.26 1 *e*P P 08 08 05.8 +0.1
ARU Arti 42.26 1 *e*P P 08 08 06.1 +0.3
comp=Z,16nm,1.2s,mb4.5
ARU *e*pP pP 08 08 12.6 -0.2
ARU *e*PcP PcP 08 09 59.7 +0.3
ARU Arti 42.26 1 *e*P P 08 08 06.1 +0.4
comp=Z,16nm,1.2s,mb4.5
ARU *e*pP pP 08 08 12.6 -0.2
GZR Gura Zlata 42.38 324⇓*i*P P 08 08 07.8 +1.1
BURAR Bucovina Array 42.46 328⇓*i*P P 08 08 08.6 +1.2
SVE Sverdlovsk 42.74 3 *e*P P 08 08 09.0 -0.6
SVE MLR MLR
comp=N,400nm,14.0s,MS4.5
SVE MLR MLR
comp=E,200nm,14.0s,MS4.5
SVE MLR MLR
comp=Z,400nm,14.0s,MS4.5
AKASG Malin Array Be 42.78 334 P P 08 08 09.7 -0.3
comp=Z,11nm,0.8s,mb4.7,baz=137,slow=7.4,SNR=51
AKASG PcP PcP 08 10 00.0 -1.1
comp=Z,0.3nm,0.3s,baz=146,slow=1.9,SNR=4.1
AKASG Malin Array Be 42.78 334 PcP PcP 08 10 00.0 -1.1
AKBB Malin Array Si 42.78 334 *e*P P 08 08 09.8 -0.2
PSI Prapat 43.11 101 P P 08 08 13.2 +0.6
comp=Z,8.1nm,0.6s,mb4.7,baz=321,slow=5.6,SNR=5.8
BZS Buzias 43.17 324⇓*i*P P 08 08 14.5 +1.4
BZS Buzias 43.17 324 P P 08 08 13.4 +0.2
BZS Buzias 43.17 324 P P 08 08 13.4 +0.3
DRGR 43.25 326⇓*i*P P 08 08 15.3 +1.5
DRGR 43.25 326 P P 08 08 15.1 +1.2
DIVS Divcibare 43.29 321⇓*i*P P 08 08 14.3 +0.2
BBLS Bajina Basta - 43.52 320 *e*P P 08 08 17.0 +1.0
OBN Obninsk 43.83 343*d* *i*P P 08 08 18.4 -0.1
OBN *i* 08 08 30.1
OBN *e* 08 10 01.9
OBN S S 08 14 46.0 -2.0
OBN *e*SS SS 08 18 15.3 +11
OBN pmax pmax
comp=Z,62nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.0
MOS Moscow 44.10 345 *e*P P 08 08 19.9 -0.7
MOS *i* pP 08 08 26.4 -1.3
MOS *i* 08 08 31.9
MOS *e* 08 10 00.9
MOS *e* 08 10 11.8
MOS *e*S S 08 14 44.7 -7.2
MOS pmax pmax
comp=Z,100nm,1.2s,mb5.4
MOS pmax pmax
comp=Z,102nm,1.0s,mb5.5
KMI Kunming 44.48 68 P P 08 08 23.6 -0.1
KMI AP pP 08 08 29.8 -1.0
KMI XP sP 08 08 32.3 -1.3
KMI PP PP 08 10 08.6 +1.0
KMI PPP 08 10 47.1
KMI S S 08 14 56.4 -1.1
KMI AMB AMB
comp=Z,13nm,0.8s,mb4.7
KMI AMB AMB
comp=Z,94nm,4.6s
KMI LR LR
comp=N,221nm,18.1s,MS4.4
KMI LR LR
comp=E,343nm,20.3s,MS4.4
KMI LR LR
comp=Z,417nm,22.5s,MS4.3
LVV L’vov 44.50 330⇑*i*P P 08 08 24.3 +0.4
KOLS Kolonicke sedl 44.81 328 *e*P P 08 08 27.9 +1.6
KWP Kalwaria 45.03 329 *e*P P 08 08 28.8 +0.7
KWP *e* pP 08 08 35.3 +0.1
CRVS Cervenica-Dubn 45.21 328 *e*P P 08 08 30.4 +0.9
PKSM Moragy 45.23 323⇓*i*P P 08 08 30.2 +0.6
PKSM Moragy 45.23 323⇓*e*P P 08 08 30.2 +0.6
GTA Gaotai 45.38 48 *e*P P 08 08 31.3 +0.5
GTA AP pP 08 08 39.8 +1.9
GTA XP sP 08 08 44.3 +3.6
GTA PP PP 08 10 16.3 -0.8

GTA PPP 08 10 59.8
GTA S S 08 15 10.3 -0.2
GTA AMB AMB
comp=Z,3.0nm,1.0s,mb4.1
GTA AMB AMB
comp=Z,71nm,7.6s
GTA LR LR
comp=N,251nm,19.0s,MS4.5
GTA LR LR
comp=E,530nm,20.2s,MS4.5
GTA LR LR
comp=Z,672nm,22.4s,MS4.5
SOKR Solikamsk 45.38 0*c* *i*P P 08 08 31.9 +1.0
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.0
SOKR MLR MLR
comp=Z,410nm,20.0s,MS4.4
ZAL Zalesovo 45.44 23 P P 08 08 30.4 -0.8
comp=Z,3.6nm,0.8s,mb4.2,baz=250,slow=7.8,SNR=14
ZAL Zalesovo 45.44 23 *i* P P 08 08 31.6 +0.3
ZAL pmax pmax
comp=Z,4.0nm,0.8s
PSZ Piszkesteto 45.47 326⇓*i*P P 08 08 31.7 +0.2
PSZ Piszkesteto 45.47 326 *e*P P 08 08 31.6 +0.1
PSZ pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
PSZ Piszkesteto 45.47 326 *e*P P 08 08 31.6 +0.1
comp=Z,10nm,0.9s,mb4.7
KECS Kecovo 45.47 326 *e*P P 08 08 32.0 +0.4
KECS pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
KECS Kecovo 45.47 326 *e*P P 08 08 32.0 +0.4
comp=Z,5.8nm,0.8s,mb4.5
NVS Novosibirsk 45.58 21 *i* P P 08 08 31.9 -0.5
NVS *e* 08 10 24.4
NVS pmax pmax
comp=Z,18nm,1.1s,mb4.9
NVS pmax pmax
comp=N,13nm,1.5s
NVS pmax pmax
comp=E,9.0nm,1.1s
STHS Stebnicka Huta 45.64 328 *e*P P 08 08 34.2 +1.3
PKSG 46.01 324⇑*i*P P 08 08 36.7 +0.9
NIE Niedzica 46.12 327 *e*P P 08 08 37.7 +1.0
CD2 Chengdu 46.17 61 *e*P P 08 08 35.8 -1.2
CD2 AP pP 08 08 41.8 -2.3
CD2 XP sP 08 08 44.8 -2.1
CD2 PP PP 08 10 23.9 -1.6
CD2 S S 08 15 19.8 -2.0
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,30nm,5.6s
CD2 LR LR
comp=E,160nm,20.4s
CD2 LR LR
comp=Z,220nm,18.0s,MS4.2
MNK Minsk 46.21 337 *e*P P 08 08 34.0 -3.4
VYHS Vyhne 46.38 326 *e*P P 08 08 38.8 +0.1
VYHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
VYHS Vyhne 46.38 326 *e*P P 08 08 38.8 +0.1
comp=Z,7.7nm,1.1s,mb4.5
LIKS Likavka 46.55 326 *e*P P 08 08 43.0 +3.0
LIKS pmax pmax
comp=Z,22nm,0.9s,mb5.1
LIKS Likavka 46.55 326 *e*P P 08 08 43.0 +3.0
comp=Z,22nm,0.9s,mb5.1
KOGS Kog 46.76 322 *e*P P 08 08 42.0 +0.3
OJC Ojcow 46.87 328 *e*P P 08 08 42.2 -0.4
BOJS Bojanci 46.91 320 *i* P P 08 08 43.3 +0.5
ZST Bratislava 47.17 324 *e*P P 08 08 44.8 -0.2
comp=Z,16nm,0.8s,mb5.0
ZST LR LR
comp=Z,100nm,17.6s,MS3.8
SOP Sopron 47.22 324⇑*e*P P 08 08 46.0 +0.7
VISS Visnje 47.31 321 *e*P P 08 08 46.2 +0.2
PDKS Podkum 47.33 321 *i* P P 08 08 46.6 +0.4
LZH Lanzhou 47.38 54 *e*P P 08 08 49.3 +2.8
LZH AP pP 08 08 53.5 -0.1
LZH XP sP 08 08 58.4 +2.0
LZH PP PP 08 10 39.8 +2.1
LZH *e*S S 08 15 41.3 +2.2
LZH *e*SS SS 08 19 03.3 -3.5
LZH AMB AMB
comp=Z,29nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,112nm,6.9s
LZH LR LR
comp=N,878nm,14.8s
LZH LR LR
comp=Z,1µm,18.2s,MS4.9
SNTG Esanatoglia 47.41 317 P P 08 08 47.6 +0.9
OKC Ostrava-Krasne 47.51 327 *e*P P 08 08 48.0 +0.4
OKC *e*pP pP 08 08 54.5 -0.2
OKC AMS AMS 08 32 20.0
comp=Z,200nm,18.9s
OKC Ostrava-Krasne 47.51 327 *e*P P 08 08 48.0 +0.4
OKC *e*pP pP 08 08 54.5 -0.2
PERS Pernice 47.54 322 *i* P P 08 08 47.9 +0.1
KEST Kesra 47.55 306 P P 08 08 48.5 +0.7
comp=Z,2.5nm,0.9s,mb4.2,baz=95,slow=12,SNR=6.2
KEST LR LR 08 29 38.3
comp=Z,54nm,18.9s,MS3.5,baz=354,slow=37
ARSA Arzberg 47.60 323⇓*i*P P 08 08 48.7 +0.4
comp=Z,64nm,2.1s,mb5.3
LJU Ljubljana 47.61 321 *e*P P 08 08 49.0 +0.6
LJU *e*pP pP 08 08 55.5 0.0
FSSB Fossombrone 47.69 317 *i* Pr P 08 08 50.3 +1.3
comp=Z,32nm,0.7s,mb5.5
SUW Suwalki 47.73 334 *e*P P 08 08 49.6 +0.3
SUW *e* pP 08 08 55.9 -0.5
SUW L 08 33 29.1
comp=Z,0.2nm,23.3s
SUW Suwalki 47.73 334 *e*P P 08 08 49.6 +0.3
SUW *e* pP 08 08 55.9 -0.5
CONA Conrad Observa 47.74 323⇓*i*P P 08 08 49.6 +0.2
comp=Z,32nm,1.0s,mb5.3
MORC Moravsky Berou 47.80 326 *e*P P 08 08 49.8 0.0
MORC *e**PP pP 08 08 56.6 -0.3
MORC pmax pmax
comp=Z,26nm,0.9s,mb5.3
MORC Moravsky Berou 47.80 326 *e*P P 08 08 49.8 -0.1
comp=Z,26nm,0.9s,mb5.3
MORC *e*pP pP 08 08 56.6 -0.3
MORC Moravsky Berou 47.80 326 *e*P P 08 08 49.8 0.0
comp=Z,26nm,0.9s,mb5.3
MORC *e*pP pP 08 08 56.6 -0.3
OBKA Obir 47.82 321⇑*i*P P 08 08 50.2 +0.2
comp=Z,29nm,1.4s,mb5.1
VRAC Vranov 48.06 325 *e*P P 08 08 51.8 0.0
KLMR Klimovskoe 48.33 349 *e*P P 08 08 52.8 -1.1
KLMR pmax pmax
comp=Z,80nm,1.5s,mb5.5
SFI Santa Sofia 48.39 317 *i* P P 08 08 55.7 +1.3
SFI pmax pmax
comp=Z,24nm,0.8s,mb5.3
SFI Santa Sofia 48.39 317 *i* Pr P 08 08 55.7 +1.3
comp=Z,24nm,0.8s,mb5.3
PTCC Patocco-Chiusa 48.50 321 *i* Pr P 08 08 55.0 -0.2
comp=Z,14nm,0.6s,mb5.2
MOA Molln 48.63 323⇓*i*P P 08 08 56.3 0.0
comp=Z,22nm,1.2s,mb5.0
TREC Trest 48.66 325 *e*P P 08 08 56.4 -0.1
TREC *e*pP pP 08 09 03.4 -0.2
TREC AMS AMS 08 33 00.0
comp=Z,200nm,19.3s
DPC Dobruska-Polom 48.77 326 *e*P P 08 08 57.5 +0.2
DPC *e*pP pP 08 09 04.3 -0.1
DPC AMS AMS 08 33 00.0
comp=Z,200nm,14.5s
DPC Dobruska-Polom 48.77 326 *e*P P 08 08 57.5 +0.2
DPC *e*pP pP 08 09 04.3 -0.1
SEI Scarperia 48.78 317 *i* Pr P 08 08 59.4 +2.0
comp=Z,94nm,0.8s,mb5.9
KBA Koelnbreinsper 48.82 321⇓*i*P P 08 08 57.5 -0.2
comp=Z,45nm,1.8s,mb5.2
KBA Koelnbreinsper 48.82 321⇓*i*P P 08 08 57.5 -0.2
KBA pmax pmax
comp=Z,45nm,1.8s,mb5.2
UPC Upice 49.02 326 *e*P P 08 08 59.4 +0.1
UPC *e*pP pP 08 09 06.2 -0.2
KSP Ksiaz 49.06 327 *e*P P 08 08 59.5 0.0
KSP *e* pP 08 09 05.9 -0.8
KSP L 08 31 47.2

comp=Z,0.3nm,22.5s
KSP Ksiaz 49.06 327⇑ *e*P P **08 08 59.7 +0.2**
KSP *e*pP pP 08 09 06.1 -0.6
GSCL Gusciola 49.40 317 P P **08 09 03.0 +0.9**
CTI Castel Tesino 49.41 319 P P **08 09 02.1 -0.1**
CTI pmax pmax
comp=Z,14nm,0.8s,mb5.0
CTI Castel Tesino 49.41 319 P P **08 09 02.1 -0.1**
comp=Z,14nm,0.8s,mb5.0
GEC2 GERESS Array S 49.45 324 *e*P P **08 09 01.4 -1.1**
comp=Z,16nm,1.9s,mb4.7
GEC2 GERESS Array S 49.45 324 *e*P P **08 09 01.4 -1.1**
GEC2 pmax pmax
comp=Z,8.0nm,1.9s,mb4.4
GERES GERESS Array B 49.45 324 P P **08 09 01.5 -1.0**
comp=Z,2.0nm,0.7s,mb4.3,baz=123,slow=6.8,SNR=15
GERES LR LR 08 32 14.5
comp=Z,125nm,20.8s,MS3.9,baz=102,slow=39
ERBM Eremo 49.55 317 P P **08 09 04.5 +1.3**
PRU Pruhonice 49.55 325 *e*P P **08 09 03.2 -0.1**
PRU *e*pP pP 08 09 09.5 -0.9
PRU AMS AMS 08 32 50.0
comp=Z,200nm,16.5s
PRU Pruhonice 49.55 325 *e*P P **08 09 03.2 -0.1**
PRU *e*pP pP 08 09 09.5 -0.9
VSU Vasula 49.64 340 *d i*P P **08 09 03.5 -0.5**
KHC Kasperske Hory 49.66 324 *e*P P **08 09 03.4 -0.7**
KHC *e*pP pP 08 09 10.2 -1.0
KHC AMS AMS 08 32 50.0
comp=Z,100nm,17.2s
KHC Kasperske Hory 49.66 324 *e*P P **08 09 03.4 -0.7**
KHC *e*pP pP 08 09 10.2 -1.0
PVCC Panska Ves 49.82 326 *e*P P **08 09 05.3 0.0**
PVCC *e*pP pP 08 09 12.0 -0.4
PVCC AMS AMS 08 33 30.0
comp=Z,200nm,14.1s
PVCC Panska Ves 49.82 326 *e*P P **08 09 05.3 0.0**
PVCC *e*pP pP 08 09 12.0 -0.4
PGF Pioggiola 49.82 314 *e*P P **08 09 04.6 -0.8**
comp=Z,101nm,1.2s,mb5.4
PGF Pioggiola 49.82 314 *e*P P **08 09 04.6 -0.8**
PGF pmax pmax
comp=Z,51nm,1.2s,mb5.4
PGF Pioggiola 49.82 314 *e*P P **08 09 04.6 -0.8**
comp=Z,50nm,1.2s,mb5.4
WTTA Wattenberg 49.94 321⇑ *i*P P **08 09 05.7 -0.5**
comp=Z,49nm,1.4s,mb5.3
WTTA Wattenberg 49.94 321⇑ *i*P P **08 09 05.7 -0.5**
WTTA pmax pmax
comp=Z,49nm,1.4s,mb5.3
SQTA Sankt Quirin 50.18 321⇓ *i*P P **08 09 07.5 -0.6**
comp=Z,9.1nm,0.7s,mb4.9
SQTA Sankt Quirin 50.18 321⇓ *i*P P **08 09 07.5 -0.6**
SQTA pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
MOTA Moosalm 50.30 321⇓ *i*P P **08 09 08.0 -0.9**
comp=Z,16nm,0.9s,mb5.0
MOTA Moosalm 50.30 321⇓ *i*P P **08 09 08.0 -1.0**
MOTA pmax pmax
comp=Z,16nm,0.9s,mb5.0
BRG Berggiesshubel 50.34 326 *e*P P **08 09 08.9 -0.3**
comp=Z,11nm,0.9s,mb4.9
BRG Berggiesshubel 50.34 326 *i* P P **08 09 08.8 -0.5**
comp=Z,6.7nm,0.9s,mb4.7
BRG *i* pP 08 09 15.4 -0.9
comp=Z,7.1nm,1.1s
BRG Berggiesshubel 50.34 326 *i* P P **08 09 08.8 -0.4**
BRG *i* pP 08 09 15.4 -1.0
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
BRG pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
BRG Berggiesshubel 50.34 326 *i* P P **08 09 08.8 -0.5**
comp=Z,6.7nm,0.9s,mb4.7
BRG *i* pP 08 09 15.4 -0.9
FBE Freiberg 50.68 326 *e*P P **08 09 11.5 -0.3**
FBE *e*pP pP 08 09 18.3 -0.7
ROTZ Rotzenmuhle 50.75 324 *e*P P **08 09 11.8 -0.6**
NKC Novy Kostel 50.84 325 *e*P P **08 09 12.8 -0.2**
NKC *e*pP pP 08 09 20.0 -0.2
MANZ Manzenberg 50.91 324 *e*P P **08 09 13.1 -0.5**
TANN Tannenbergstha 50.92 325 *e*P P **08 09 13.3 -0.3**
QIZ Qiongzhong 50.96 77 P P **08 09 13.6 -0.3**
QIZ AP pP 08 09 21.9 +0.8
QIZ XP sP 08 09 24.6 +0.7
QIZ S **S** **08 16 29.5 0.0**
QIZ XS sS 08 16 41.9 +0.7
QIZ AMB AMB
comp=Z,16nm,1.5s,mb4.7
QIZ LR LR
comp=Z,323nm,41.3s,MS4.0
GUNZ Gunzen 50.97 325 *e*P P **08 09 13.7 -0.3**
XAN Xi'an 51.01 58 P P **08 09 13.5 -0.8**
XAN AMB AMB
comp=Z,8.0nm,1.0s,mb4.6
WERD Werda 51.02 325 *e*P P **08 09 14.4 0.0**
WERD *e*pP pP 08 09 20.7 -0.9
DAVA Damuels 51.03 320⇑ *i*P P **08 09 13.6 -0.9**
comp=Z,40nm,1.6s,mb5.1
CLL Collm 51.07 326 *e*P P **08 09 14.5 -0.2**
comp=Z,46nm,1.6s,mb5.2
CLL Collm 51.07 326 ⇓P P **08 09 14.3 -0.4**
comp=Z,logA/T=1.5,mb5.2
CLL *i* *PP pP 08 09 20.9 -1.0
CLL *e*SP sP 08 09 25.0 +0.3
CLL *e*S **S** **08 16 30.0 -0.9**
CLL *e*SSS 08 21 30.0
CLL Collm 51.07 326 ⇓*i*P P **08 09 14.3 -0.4**
comp=Z,46nm,1.6s,mb5.2
CLL *i* pP pP 08 09 20.9 -1.0
CLL *e*SP sP 08 09 25.0 +0.3
CLL *e*S **S** **08 16 30.0 -0.9**
CLL *e*SSS 08 21 30.0
CLL Collm 51.07 326 ⇓*i*P P **08 09 14.3 -0.4**
CLL *i* pP pP 08 09 20.9 -1.0
CLL *e*S **S** **08 16 30.0 -0.9**
CLL pmax pmax
comp=Z,100nm,1.6s,mb5.5
CLL MLR MLR
comp=Z,200nm,14.1s,MS4.3
CLL Collm 51.07 326 ⇓*i*P P **08 09 14.3 -0.4**
comp=Z,46nm,1.6s,mb5.2
CLL *i* pP pP 08 09 20.9 -1.0
CLL *e*S **S** **08 16 30.0 -0.9**
CLL LR LR
comp=Z,200nm,14.1s,MS4.3
VAI Varese 51.17 318 *i* P P **08 09 14.9 -0.7**
VAI Varese 51.17 318 *i* Pu 08 09 14.9
RUE Ruedersdorf 51.26 328 *e*P P **08 09 16.6 +0.4**
GRA1 Grafenberg Arr 51.28 324 *e*P P **08 09 15.4 -1.0**
comp=Z,26nm,0.7s,mb5.3
GRA1 *e*pP pP 08 09 21.8 -1.7
GRA1 LR LR
comp=Z,100nm,21.1s,MS3.8
GRA1 Grafenberg Arr 51.28 324 *e*P P **08 09 15.4 -1.0**
comp=Z,26nm,0.7s,mb5.3
GRA1 *e*pP pP 08 09 21.8 -1.7
GRF Grafenberg Arr 51.28 324 *e*P P **08 09 15.4 -1.0**
comp=Z,26nm,0.7s,mb5.3
GRF *e*pP pP 08 09 21.8 -1.7
GRF *e*L 08 33 31.9
comp=Z,101nm,21.1s
GRF Grafenberg Arr 51.28 324 *e*P P **08 09 15.4 -1.0**
GRF *e**PP pP 08 09 21.8 -1.7
GRF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
GRF MLR MLR
comp=Z,26µm,21.1s
GRF Grafenberg Arr 51.28 324 *e*P P **08 09 15.4 -1.0**
GRF *e**PP pP 08 09 21.8 -1.7
GRF pmax pmax
comp=Z,26nm,0.7s,mb5.3
GRF MLR MLR
comp=Z,100nm,21.1s,MS3.8
GRF Grafenberg Arr 51.28 324 *e*P P **08 09 15.4 -1.0**
comp=Z,26nm,0.7s,mb5.3
GRF *e*pP pP 08 09 21.8 -1.7
SBF Sospel 51.34 315 *e*P P **08 09 16.3 -0.5**
comp=Z,48nm,0.9s,mb5.1
SBF Sospel 51.34 315 *e*P P **08 09 16.3 -0.5**
SBF pmax pmax
comp=Z,24nm,0.9s,mb5.1
SBF Sospel 51.34 315 *e*P P **08 09 16.3 -0.5**
comp=Z,24nm,0.9s,mb5.1
MOY Mondy 51.50 34 *e*P P **08 09 21.4 +3.4**
MOX Moxa 51.51 325 *e*P P **08 09 17.8 -0.2**
comp=Z,15nm,0.9s,mb4.9
MOX *e*pP pP 08 09 23.9 -1.3
MOX Moxa 51.51 325 *e*P P **08 09 17.5 -0.5**
comp=Z,20nm,0.9s,mb5.0
MOX *e* pP 08 09 24.1 -1.1
MOX
comp=Z,100nm,18.0s
FRF La Foret Royal 51.79 315 *e*P P **08 09 19.6 -0.5**
LMR La Mourre 51.81 314 *e*P P **08 09 19.8 -0.5**
comp=Z,66nm,1.1s,mb5.2
LMR La Mourre 51.81 314 *e*P P **08 09 19.8 -0.5**
LMR pmax pmax
comp=Z,33nm,1.1s,mb5.2
LMR La Mourre 51.81 314 *e*P P **08 09 19.8 -0.5**
comp=Z,33nm,1.1s,mb5.2
JOF Joensuu 51.95 346 *e*p P **08 09 20.1 -1.3**
comp=Z,13nm,0.8s,mb4.9
MBDF Montbardon 52.08 316 *e*P P **08 09 21.4 -0.9**
comp=Z,18nm,0.7s,mb4.8
MBDF Montbardon 52.08 316 *e*P P **08 09 21.4 -0.9**
MBDF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
MBDF Montbardon 52.08 316 *e*P P **08 09 21.4 -0.9**
comp=Z,9.0nm,0.7s,mb4.8
ZAK Zakamensk 52.16 36 *e*P P **08 09 23.1 +0.2**
ZAK *e* 08 10 33.8
ZAK pmax pmax
comp=Z,3.0nm,1.9s,mb3.9
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
FIA1 FINESS Array S 52.17 342 *e*P P **08 09 22.7 -0.3**
FIA1 *e*pP pP 08 09 29.0 -1.1
FIA1 FINESS Array S 52.17 342 *e*P P **08 09 22.7 -0.3**
FIA1 *e*pP pP 08 09 29.0 -1.2
FINES FINESS Array B 52.17 342 P P **08 09 22.1 -0.8**
comp=Z,22nm,1.0s,mb5.1,baz=133,slow=10,SNR=40
FINES LR LR 08 34 03.5
comp=Z,147nm,21.9s,MS4.0,baz=297,slow=39
FINES FINESS Array B 52.17 342 *i* P P **08 09 22.5 -0.5**
FINES pmax pmax
comp=Z,23nm,1.0s
FINES FINESS Array B 52.17 342 P P **08 09 22.1 -0.9**
BOSA Boshof 52.27 216 P P **08 09 25.5 +1.8**
comp=Z,3.6nm,0.6s,mb4.5,baz=45,slow=8.0,SNR=11
BOSA LR LR 08 31 15.9
comp=Z,361nm,20.7s,MS4.4,baz=27,slow=36
BOSA Boshof 52.27 216 P P **08 09 25.5 +1.8**
BOSA LR LR 08 31 15.9
LPG La Plagne 52.36 317 *e*P P **08 09 23.5 -0.9**
comp=Z,53nm,0.9s,mb5.2
LPG La Plagne 52.36 317 *e*P P **08 09 23.5 -0.9**
LPG pmax pmax
comp=Z,26nm,0.9s,mb5.2
LPG La Plagne 52.36 317 *e*P P **08 09 23.5 -0.9**
comp=Z,26nm,0.9s,mb5.2
LPL La Plagne 52.38 317 *e*P P **08 09 23.7 -0.8**
comp=Z,46nm,0.8s,mb5.2
LPL La Plagne 52.38 317 *e*P P **08 09 23.7 -0.8**
LPL pmax pmax
comp=Z,23nm,0.8s,mb5.2
LPL La Plagne 52.38 317 *e*P P **08 09 23.7 -0.8**
comp=Z,23nm,0.8s,mb5.2
BFO Black Forest 52.41 321 *e*P P **08 09 23.4 -1.4**
comp=Z,18nm,1.1s,mb4.9
BFO *e*pP pP 08 09 30.9 -1.1
BFO Black Forest 52.41 321 *e*P P **08 09 23.4 -1.4**
BFO *e**PP pP 08 09 30.9 -1.1
BFO pmax pmax
comp=Z,14nm,1.1s,mb4.8
FELD Feldberg im Sc 52.43 320 *e*P P **08 09 24.0 -0.9**
UBBA Unterbreizbach 52.49 324 *e*P P **08 09 24.7 -0.7**
RSL Roselend 52.51 317 *e*P P **08 09 24.6 -0.9**
BBS Basel-Blauen 52.58 320 *e*P P **08 09 25.7 -0.3**
KAF Kangasniemi 52.63 343 *e*p P **08 09 24.9 -1.5**
GTTG Gyttingen 52.85 325 *e*P P **08 09 28.1 +0.1**
TLY Talaya 52.96 35⇑ *i*P P **08 09 31.2 +2.4**
SONM Songino Array 52.96 40 P P **08 09 28.9 0.0**
comp=Z,2.7nm,0.9s,mb4.2,baz=235,slow=8.3,SNR=18
SONM PcP PcP 08 10 37.2 -0.3
comp=Z,1.8nm,0.8s,baz=242,slow=4.5,SNR=6.3
SONM LR LR 08 33 37.9
comp=Z,273nm,20.2s,MS4.3,baz=243,slow=38
SONM Songino Array 52.96 40 P P **08 09 28.9 +0.1**
SONM 08 10 37.2
SONM Songino Array 52.96 40 PcP PcP 08 10 37.2 -0.3
MOF Molkenrain 52.96 320 *e*P P **08 09 27.8 -1.1**
LOMF Lomont 52.97 319 *e*P P **08 09 31.9 +3.0**
WLS Welschbruch 53.04 321 *e*P P **08 09 28.8 -0.7**
ECH Echery 53.09 320 *e*P P **08 09 30.1 +0.3**
CDF Champ du Feu 53.09 321 *e*P P **08 09 28.6 -1.2**
comp=Z,31nm,0.9s,mb4.9
CDF Champ du Feu 53.09 321 *e*P P **08 09 28.6 -1.2**
CDF pmax pmax
comp=Z,15nm,0.9s,mb4.9
CDF Champ du Feu 53.09 321 *e*P P **08 09 28.6 -1.2**
comp=Z,15nm,0.9s,mb4.9
TNS Taunus Mts 53.12 323 *e*P P **08 09 28.9 -1.1**
comp=Z,13nm,1.1s,mb4.8
TNS *e*pP pP 08 09 36.5 -0.7
TNS Taunus Mts 53.12 323 *e*P P **08 09 28.9 -1.1**
TNS *e**PP pP 08 09 36.5 -0.7
TNS pmax pmax
comp=Z,15nm,1.1s,mb4.8
HINF Hinteralfeld 53.13 320 *e*P P **08 09 28.5 -1.6**
comp=Z,11nm,0.9s,mb4.5
HINF Hinteralfeld 53.13 320 *e*P P **08 09 28.5 -1.6**
HINF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
HINF Hinteralfeld 53.13 320 *e*P P **08 09 28.5 -1.6**
comp=Z,5.5nm,0.9s,mb4.5
CABF La Chapelle 53.18 318 *e*P P **08 09 29.9 -0.5**
comp=Z,94nm,1.2s,mb5.3
CABF La Chapelle 53.18 318 *e*P P **08 09 29.9 -0.5**
CABF pmax pmax
comp=Z,47nm,1.2s,mb5.3
CABF La Chapelle 53.18 318 *e*P P **08 09 29.9 -0.5**
comp=Z,47nm,1.2s,mb5.3
NRDL Niedersach Rie 53.21 326 *e*P P **08 09 30.9 +0.2**
ULN Ulaanbaatar 53.38 40⇓ *e*P P **08 09 31.8 -0.1**
OG05 Jujurieux 53.39 317 *e*P P **08 09 31.2 -0.8**
TOA0 Torodi Ar. Sit 53.42 276 *e*P P **08 09 33.4 +1.2**
TOA0 *e*PcP PcP 08 10 39.3 +0.1
TOA0 Torodi Ar. Sit 53.42 276 *e*P P **08 09 33.4 +1.2**
TOA0 Torodi Ar. Sit 53.42 276 *e*PcP PcP 08 10 39.3 +0.1
TORD Torodi Ar. Bea 53.42 276 P P **08 09 33.4 +1.1**
comp=Z,8.9nm,0.9s,mb4.7,baz=84,slow=6.6,SNR=44
TORD LR LR 08 30 57.5
comp=Z,149nm,19.9s,MS4.0,baz=105,slow=34
HAU Haudompre 53.51 320 *e*P P **08 09 31.3 -1.6**
HAU *e*R
comp=Z,98nm,21.5s
HAU Haudompre 53.51 320 *e*P P **08 09 31.3 -1.6**
HAU LR LR
comp=Z,100nm,21.5s,MS3.8
VIVF Saint-Julien-l 53.54 316 *e*P P **08 09 32.1 -1.0**
comp=Z,46nm,1.3s,mb4.9
VIVF Saint-Julien-l 53.54 316 *e*P P **08 09 32.1 -1.0**
VIVF pmax pmax
comp=Z,23nm,1.3s,mb5.0
VIVF Saint-Julien-l 53.54 316 *e*P P **08 09 32.1 -1.0**
comp=Z,23nm,1.3s,mb4.9
BSEG Bad Segeberg 53.80 328 *e*P P **08 09 35.6 +0.6**
comp=Z,10.0nm,0.9s,mb4.8
BSEG Bad Segeberg 53.80 328 *e*P P **08 09 35.6 +0.6**
BSEG pmax pmax
comp=Z,53nm,0.9s,mb5.5
LASF Ste Croix 53.87 315 *e*P P **08 09 34.7 -0.8**
comp=Z,68nm,1.4s,mb5.1
LASF Ste Croix 53.87 315 *e*P P **08 09 34.7 -0.8**
comp=Z,34nm,1.4s,mb5.1
ETRT Tiaret 53.91 304 P P **08 09 37.5 +1.7**
EANR 'Ain N'Sour 54.15 304 P P **08 09 36.0 -1.6**
WLF Walferdange 54.25 322 *e*P P **08 09 37.5 -0.8**
WLF Walferdange 54.25 322 *e*P P **08 09 37.8 -0.5**
WLF pmax pmax
comp=Z,17nm,0.9s,mb5.0
WLF Walferdange 54.25 322 *e*P P **08 09 37.8 -0.5**
comp=Z,17nm,0.9s,mb5.0
WLF Walferdange 54.25 322 *e*P P **08 09 37.8 -0.5**
comp=Z,17nm,0.9s,mb5.0
BUG Bochum--Univer 54.31 324 *e*P P **08 09 38.6 -0.2**
comp=Z,23nm,1.1s,mb5.0
KSM Kuching 54.37 98 *e*P P **08 09 39.6 +0.4**
KSM Kuching 54.37 98 *e*P P **08 09 39.6 +0.4**
HHC Hu-ho-hao-te 54.40 50 *e*P P **08 09 41.1 +1.7**
HHC AP pP 08 09 47.3 +0.7
HHC XP sP 08 09 50.0 +0.6
HHC PP PP 08 11 44.8 +3.3
HHC SCP ScP 08 14 40.5 +0.7
HHC PCS PcS 08 14 43.3 +0.8
HHC S **S** **08 17 16.9 +0.4**
HHC PS 08 17 29.9
HHC SCS ScS 08 19 26.0 -1.3
HHC AMB AMB
comp=Z,18nm,1.4s,mb4.8
HHC AMB AMB
comp=Z,80nm,6.0s
HHC LR LR
comp=N,365nm,19.8s,MS4.7
HHC LR LR
comp=E,578nm,18.2s,MS4.7
HHC LR LR
comp=Z,704nm,20.8s,MS4.7
MEZF Maizieres J'vi 54.50 320 *e*P P **08 09 39.4 -0.7**
comp=Z,53nm,0.8s,mb5.2
MEZF Maizieres J'vi 54.50 320 *e*P P **08 09 39.4 -0.7**
comp=Z,26nm,0.8s,mb5.2
PLDF La Plantade 54.59 317 *e*P P **08 09 40.7 0.0**
LBL Lubilhac 54.62 316 *e*P P **08 09 41.8 +0.8**
SMF Signal de Mont 54.65 318 *e*P P **08 09 39.9 -1.3**
comp=Z,25nm,1.1s,mb4.9
SMF Signal de Mont 54.65 318 *e*P P **08 09 39.9 -1.3**
SMF pmax pmax
comp=Z,13nm,1.0s,mb4.9
SMF Signal de Mont 54.65 318 *e*P P **08 09 39.9 -1.3**
comp=Z,13nm,1.1s,mb4.9
MTLF Montolieu 54.81 313 *e*P P **08 09 41.4 -1.0**
comp=Z,48nm,1.5s,mb5.0
MTLF Montolieu 54.81 313 *e*P P **08 09 41.4 -1.0**
MTLF pmax pmax
comp=Z,24nm,1.5s,mb5.0
MTLF Montolieu 54.81 313 *e*P P **08 09 41.4 -1.0**
comp=Z,24nm,1.5s,mb5.0
LOR Lormes 54.84 318 *e*P P **08 09 41.6 -1.0**
comp=Z,54nm,1.0s,mb5.2
LOR *e*R
comp=Z,123nm,22.0s
LOR Lormes 54.84 318 *e*P P **08 09 41.6 -1.0**
LOR pmax pmax
comp=Z,27nm,1.0s,mb5.2
LOR MLR MLR
comp=Z,120nm,22.0s,MS3.9
LOR Lormes 54.84 318 *e*P P **08 09 41.6 -1.0**
comp=Z,27nm,1.0s,mb5.2
LOR LR LR
comp=Z,120nm,22.0s,MS3.9
PYM Petit Puy Mans 54.93 316 *e*P P **08 09 43.7 +0.5**
SSF Saint Saulge 55.00 318 *e*P P **08 09 42.6 -1.1**
comp=Z,31nm,0.8s,mb5.1
SSF Saint Saulge 55.00 318 *e*P P **08 09 42.6 -1.1**
SSF pmax pmax
comp=Z,16nm,0.8s,mb5.1
SSF Saint Saulge 55.00 318 *e*P P **08 09 42.6 -1.1**
comp=Z,16nm,0.8s,mb5.1
AVF Avril sur Loir 55.02 318 *e*P P **08 09 42.5 -1.3**
comp=Z,21nm,0.9s,mb4.9
AVF Avril sur Loir 55.02 318 *e*P P **08 09 42.5 -1.3**
AVF pmax pmax
comp=Z,11nm,0.9s,mb4.9
AVF Avril sur Loir 55.02 318 *e*P P **08 09 42.5 -1.3**
comp=Z,11nm,0.9s,mb4.9
GIVF Givet 55.22 322 *e*P P **08 09 44.5 -0.8**
BGF Bois d'Agland 55.28 317 *e*P P **08 09 45.0 -0.7**
comp=Z,60nm,0.9s,mb5.3
BGF Bois d'Agland 55.28 317 *e*P P **08 09 45.0 -0.7**
BGF pmax pmax
comp=Z,30nm,0.9s,mb5.3
BGF Bois d'Agland 55.28 317 *e*P P **08 09 45.0 -0.7**
comp=Z,30nm,0.9s,mb5.3
CAF Calviac 55.34 315 *e*P P **08 09 45.1 -1.1**
comp=Z,8.4nm,0.8s,mb4.5
CAF Calviac 55.34 315 *e*P P **08 09 45.1 -1.1**
CAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CAF Calviac 55.34 315 *e*P P **08 09 45.1 -1.1**
comp=Z,4.2nm,0.8s,mb4.5
DOU Dourbes 55.35 322 P P **08 09 45.9 -0.4**
BAIF Baives 55.57 322 *e*P P **08 09 47.1 -0.7**
comp=Z,50nm,0.8s,mb5.3
BAIF Baives 55.57 322 *e*P P **08 09 47.1 -0.7**
BAIF pmax pmax
comp=Z,25nm,0.8s,mb5.3
BAIF Baives 55.57 322 *e*P P **08 09 47.1 -0.7**
comp=Z,25nm,0.8s,mb5.3
TCF Toulx Ste Croi 55.62 317 *e*P P **08 09 47.3 -0.9**
comp=Z,13nm,0.8s,mb4.7
TCF Toulx Ste Croi 55.62 317 *e*P P **08 09 47.3 -0.9**
TCF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
TCF Toulx Ste Croi 55.62 317 *e*P P **08 09 47.3 -0.9**
comp=Z,6.6nm,0.8s,mb4.7
RJF Les Rejaudoux 55.81 315 *e*P P **08 09 48.7 -0.9**
RJF *e*R
comp=Z,186nm,22.0s
RJF Les Rejaudoux 55.81 315 *e*P P **08 09 48.7 -0.9**
RJF LR LR
comp=Z,190nm,22.0s,MS4.1
EBIE Bielsa 56.14 312 P P **08 09 51.3 -0.6**
comp=Z,9.9nm,0.5s,mb5.1
EBIE Bielsa 56.14 312 P P **08 09 51.3 -0.6**
comp=Z,9.9nm,0.5s,mb5.1
LFF La Frestale 56.25 315 *e*P P **08 09 51.7 -1.0**
ECHE Chera 56.36 308 P P **08 09 52.9 -0.6**
ECHE pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
ECHE Chera 56.36 308 P P **08 09 52.9 -0.6**
comp=Z,5.9nm,0.6s,mb4.8
KONO Kongsberg 57.07 334⇓ *e*P P **08 09 58.3 -0.2**
NB2 NORSAR Subarra 57.16 336 P P **08 09 57.6 -1.6**
comp=Z,23nm,1.2s,mb5.1,baz=122,slow=7.9
NOA NORSAR Array B 57.16 336 P P **08 09 57.6 -1.6**
comp=Z,3.0nm,0.9s,mb4.3,baz=120,slow=7.6,SNR=5.5
NOA LR LR 08 39 23.7
comp=Z,79nm,19.0s,MS3.8,baz=90,slow=41
NAO01 NORSAR Array S 57.18 335 *e*P P **08 09 58.3 -1.0**
comp=Z,32nm,1.2s,mb5.2
NAO01 NORSAR Array S 57.18 335 *e*P P **08 09 58.3 -1.0**
comp=Z,32nm,1.2s,mb5.2
SJPF Ste Jean 57.21 312 *e*P P **08 09 58.8 -0.7**
comp=Z,35nm,1.0s,mb5.1
SJPF Ste Jean 57.21 312 *e*P P **08 09 58.8 -0.7**
SJPF pmax pmax
comp=Z,18nm,1.0s,mb5.1
SJPF Ste Jean 57.21 312 *e*P P **08 09 58.8 -0.7**
comp=Z,18nm,1.0s,mb5.1
MFF Saint Martin d 57.27 317 *e*P P **08 09 59.6 -0.4**
comp=Z,24nm,1.1s,mb4.9
MFF Saint Martin d 57.27 317 *e*P P **08 09 59.6 -0.4**
MFF pmax pmax
comp=Z,12nm,1.0s,mb4.9
MFF Saint Martin d 57.27 317 *e*P P **08 09 59.6 -0.4**
comp=Z,12nm,1.1s,mb4.9
EVIA Vianos 57.39 307 P P **08 10 00.8 0.0**
EVIA pmax pmax
comp=Z,17nm,0.6s,mb5.2
EVIA Vianos 57.39 307 P P **08 10 00.8 0.0**
comp=Z,17nm,0.6s,mb5.3
EBER Berja 57.47 305 P P **08 10 01.2 -0.2**
comp=Z,91nm,1.2s,mb5.7
EBER Berja 57.47 305 P P **08 10 01.2 -0.2**
comp=Z,91nm,1.2s,mb5.7
LDF La Druitiere 57.79 319 *e*P P **08 10 02.2 -1.4**
comp=Z,54nm,0.9s,mb5.3
LDF La Druitiere 57.79 319 *e*P P **08 10 02.2 -1.4**
LDF pmax pmax
comp=Z,27nm,0.9s,mb5.3
LDF La Druitiere 57.79 319 *e*P P **08 10 02.2 -1.4**
comp=Z,27nm,0.9s,mb5.3
FLN La Foliniere 58.06 319 *e*P P **08 10 04.0 -1.5**
comp=Z,72nm,1.2s,mb5.3
FLN *e*R
comp=Z,122nm,20.0s
FLN La Foliniere 58.06 319 *e*P P **08 10 04.0 -1.5**
FLN pmax pmax
comp=Z,36nm,1.2s,mb5.3
FLN MLR MLR
comp=Z,120nm,20.0s,MS4.0
FLN La Foliniere 58.06 319 *e*P P **08 10 04.0 -1.5**
comp=Z,36nm,1.2s,mb5.3
FLN LR LR
comp=Z,120nm,20.0s,MS4.0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEV	Kevo	58.65	348	ep	P	08 10 07.8	-1.8
	comp=Z,11nm,0.8s,mb5.0						
KEV	Kevo	58.65	348	eP	P	08 10 07.8	-1.8
KEV				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
ESDC	Sonseca Array	58.66	308	P	P	08 10 08.8	-0.8
	comp=Z,7.8nm,0.8s,mb4.8,baz=84,slow=6.4,SNR=27						
ESDC				LR	LR	08 37 44.9	
	comp=Z,44nm,18.5s,MS3.6,baz=155,slow=38						
ESDC	Sonseca Array	58.66	308	P	P	08 10 09.2	-0.4
	comp=Z,7.8nm,0.5s,mb5.0						
ESDC	Sonseca Array	58.66	308	P	P	08 10 09.2	-0.5
	comp=Z,7.8nm,0.5s,mb5.0						
ESLA	Sonseca Array	58.66	308	eP	P	08 10 09.7	0.0
	comp=Z,1.6nm,0.7s,mb4.2						
ESLA				epP	pP	08 10 16.0	-0.9
ESLA	Sonseca Array	58.66	308	eP	P	08 10 09.7	0.0
	comp=Z,1.6nm,0.7s,mb4.2						
ESLA				epP	pP	08 10 16.0	-0.9
CIT	Chita	58.75	37	eP	P	08 10 10.3	0.0
CIT				e	pP	08 10 17.6	0.0
ARCES	ARCESS Array B	58.77	348	P	P	08 10 09.3	-1.1
	comp=Z,7.8nm,0.8s,mb4.8,baz=146,slow=6.9,SNR=21						
ARCES				LR	LR	08 38 30.4	
	comp=Z,202nm,19.2s,MS4.3,baz=130,slow=39						
EMIJ	Mijas	58.94	304	P	P	08 10 10.2	-1.4
	comp=Z,17nm,0.9s,mb5.1						
EMIJ	Mijas	58.94	304	P	P	08 10 10.2	-1.4
	comp=Z,17nm,0.9s,mb5.1						
EADA	Adamuz	58.95	306	P	P	08 10 10.7	-1.0
	comp=Z,9.3nm,0.8s,mb4.9						
EADA	Adamuz	58.95	306	P	P	08 10 10.7	-1.0
	comp=Z,9.3nm,0.8s,mb4.9						
NJ2	Nanjing	59.10	61	eP	P	08 10 15.9	+3.1
NJ2				AP	pP	08 10 22.0	+2.0
NJ2				XP	sP	08 10 24.8	+2.0
NJ2				PP	PP	08 12 28.5	+5.1
NJ2				S	S	08 18 22.0	+3.5
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,360nm,3.6s						
NJ2				LR	LR		
	comp=N,3μm,21.3s						
NJ2				LR	LR		
	comp=E,1μm,20.7s						
NJ2				LR	LR		
	comp=Z,470nm,25.9s,MS4.5						
SGMF	Saint Gilles	59.27	318	eP	P	08 10 12.2	-1.7
	comp=Z,50nm,1.0s,mb5.2						
SGMF	Saint Gilles	59.27	318	eP	P	08 10 12.2	-1.7
SGMF				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
SGMF	Saint Gilles	59.27	318	eP	P	08 10 12.2	-1.7
	comp=Z,25nm,1.0s,mb5.2						
ROSF	Rostrenen	59.75	318	eP	P	08 10 15.3	-2.0
ESPR	Espera	59.83	305	P	P	08 10 16.5	-1.3
	comp=Z,28nm,0.8s,mb5.3						
ESPR	Espera	59.83	305	P	P	08 10 16.5	-1.3
	comp=Z,28nm,0.8s,mb5.3						
EMIN	Mina Concepcio	60.55	306	P	P	08 10 21.3	-1.5
	comp=Z,7.9nm,0.7s,mb5.0						
EMIN	Mina Concepcio	60.55	306	P	P	08 10 21.3	-1.5
	comp=Z,7.9nm,0.7s,mb5.0						
DBIC	Dimbokro	60.92	270	P	P	08 10 26.4	+1.2
	comp=Z,7.7nm,0.9s,mb4.8,baz=73,slow=3.2,SNR=6.9						
DBIC	Dimbokro	60.92	270	P	P	08 10 26.4	+1.2
SSE	Sheshan	61.07	62	eP	P	08 10 24.8	-1.4
SSE				AP	pP	08 10 30.9	-2.6
SSE				XP	sP	08 10 33.3	-3.0
SSE				PCP	PcP	08 11 09.9	+0.7
SSE				PP	PP	08 12 39.8	-1.0
SSE				S	S	08 18 40.0	-3.8
SSE				SCS	ScS	08 20 15.6	-0.4
SSE				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,46nm,4.9s						
SSE				LR	LR		
	comp=N,41nm,24.5s,MS4.0						
SSE				LR	LR		
	comp=E,129nm,24.6s,MS4.0						
SSE				LR	LR		
	comp=Z,166nm,25.3s,MS4.1						
LIC	Lamto	61.18	269	eP	P	08 10 27.5	+0.5
	comp=Z,24nm,0.7s,mb5.1						
LIC	Lamto	61.18	269	eP	P	08 10 27.5	+0.5
	comp=Z,12nm,0.7s,mb5.1						
EPON	Pontenova	61.51	312	P	P	08 10 29.2	0.0
	comp=Z,14nm,0.7s,mb5.2						
EPON	Pontenova	61.51	312	P	P	08 10 29.2	-0.1
	comp=Z,14nm,0.7s,mb5.2						
HIA	Hailar	61.85	41	⇑eP	P	08 10 32.0	+0.5
SNY	Shenyang	63.49	50	eP	P	08 10 45.4	+2.9
SNY				S	S	08 19 18.4	+4.1
SNY				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb5.0						
SNY				AMB	AMB		
	comp=Z,165nm,12.7s						
SNY				LR	LR		
	comp=N,263nm,22.1s						
SNY				LR	LR		
	comp=Z,217nm,35.3s						
CN2	Changchun	65.01	48	eP	P	08 10 52.5	0.0
CN2				eXP	sP	08 11 02.5	0.0
CN2				eS	S	08 19 32.1	-1.1
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,200nm,18.0s,MS4.4						
MDJ	Mudanjiang	68.03	47	P	P	08 11 11.6	-0.1
MDJ				AP	pP	08 11 18.1	-1.0
MDJ				XP	sP	08 11 20.6	-1.2
MDJ				PP	PP	08 13 41.3	-0.6
MDJ				S	S	08 20 10.4	+0.6
MDJ				SCS	ScS	08 21 08.8	-0.6
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,105nm,4.9s						
MDJ				LR	LR		
	comp=N,123nm,23.6s,MS4.1						
MDJ				LR	LR		
	comp=E,54nm,23.6s,MS4.1						
MDJ				LR	LR		
	comp=Z,116nm,18.6s,MS4.1						
YAK	Yakutsk	69.64	29	⇓eP	P	08 11 20.6	-1.1
YAK				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2						
KLR	Kul'dur	69.66	42	eP	P	08 11 17.2	-4.7
HABR	Khabarovsk	71.83	43	eP	P	08 11 33.8	-1.3
HABR				eS	S	08 20 51.9	-2.4
HABR				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
DAG	Danmarks Havn	73.03	347	⇑iP	P	08 11 41.3	-0.9
	comp=Z,2.7nm,0.6s,mb4.3						
DAG	Danmarks Havn	73.03	347	⇑iP	P	08 11 41.3	-0.9
DAG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MAJO	Matsushiro	74.94	56	eP	P	08 11 53.1	-0.3
MAJO				e*PP	pP	08 12 00.5	-0.3
MAJO				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
MAJO	Matsushiro	74.94	56	eP	P	08 11 53.1	-0.4
	comp=Z,18nm,1.3s,mb4.8						
MAJO				epP	pP	08 12 00.5	-0.3
MAJO	Matsushiro	74.94	56	eP	P	08 11 53.1	-0.3
	comp=Z,18nm,1.3s,mb4.8						
MAJO				epP	pP	08 12 00.5	-0.3
MAT	Matsushiro	74.94	56	P	P	08 11 52.8	-0.6
MAT	Matsushiro	74.94	56	P	P	08 11 53.0	-0.4
MJAR	Matsushiro Arr	74.94	56	P	P	08 11 52.4	-1.1
	comp=Z,3.0nm,0.8s,mb4.2,baz=275,slow=6.0,SNR=11						
MJAR				LR	LR	08 49 15.9	
	comp=Z,156nm,19.0s,MS4.3,baz=285,slow=39						
MJAR	Matsushiro Arr	74.94	56	P	P	08 11 52.4	-1.1
MJAR				LR	LR	08 49 15.9	
FITZ	Fitzroy Crossi	75.06	113	eP	P	08 11 52.8	-1.3
	comp=Z,23nm,0.8s,mb5.2						
JHJ	Hachijo jima 2	76.66	59	LR	LR	08 44 56.9	
	comp=Z,227nm,18.5s,MS4.5,baz=311,slow=35						
YSS	Yuzh-Sakhalins	77.12	45	eP	P	08 12 05.0	-0.8
YSS				eS	S	08 21 51.0	-2.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ASAJ	Asahikawa	77.36	47	LR	LR	08 46 46.1	
	comp=Z,156nm,21.8s,MS4.3,baz=346,slow=36						
SUMG	Summit	78.21	342	eP	P	08 12 12.3	+0.4
	comp=Z,14nm,1.2s,mb4.8						
SUMG	Summit	78.21	342	eP	P	08 12 12.3	+0.4
	comp=Z,14nm,1.2s,mb4.8						
KAKA	Kakadu	79.56	106	eP	P	08 12 18.5	-0.8
	comp=Z,21nm,0.9s,mb5.1						
MAW	Mawson	81.61	178	P	P	08 12 30.4	+0.1
	comp=Z,7.4nm,1.0s,mb4.6,baz=343,slow=6.5,SNR=18						
MAW				LR	LR	08 43 13.3	
	comp=Z,178nm,18.6s,MS4.5,baz=148,slow=32						
MAW	Mawson	81.61	178	eP	P	08 12 30.7	+0.4
MAW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAW	Mawson	81.61	178	eP	P	08 12 30.7	+0.4
	comp=Z,6.5nm,1.0s,mb4.5						
WRA	Warramunga Arr	83.44	112	P	P	08 12 39.1	-0.7
	comp=Z,13nm,0.8s,mb5.0,baz=299,slow=4.2,SNR=82						
WRAB	Tennant Creek	83.45	112	P	P	08 12 37.5	-2.4
	comp=Z,137nm,0.7s,SNR=14						
WRAB	Tennant Creek	83.45	112	eP	P	08 12 38.7	-1.2
WRAB				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1						
WRAB	Tennant Creek	83.45	112	eP	P	08 12 38.7	-1.1
	comp=Z,13nm,0.7s,mb5.1						
WRAB	Tennant Creek	83.45	112	eP	P	08 12 38.7	-1.2
	comp=Z,13nm,0.7s,mb5.1						
WB2	Warramunga Arr	83.45	112	eP	P	08 12 39.0	-0.9
SYO	Syowa Base	83.80	186	⇑eP	P	08 12 42.0	+0.3
SYO	Syowa Base	83.80	186	⇑esP	sP	08 12 50.3	-1.6
BILL	Bilibino	84.11	21	⇑eP	P	08 12 43.7	+0.4
BILL				e	pP	08 12 50.0	-0.8
BILL				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.1						
BILL				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.5						
ASPA	Alice Springs	84.18	116	eP	P	08 12 42.8	-0.9
ASAR	Alice Springs	84.19	116	P	P	08 12 42.8	-0.9
	comp=Z,9.4nm,0.7s,mb5.0,baz=291,slow=4.8,SNR=111						
ASAR				LR	LR	08 42 53.4	
	comp=Z,144nm,19.7s,MS4.4,baz=353,slow=30						
AS31	Alice Springs	84.19	116	eP	P	08 12 42.8	-0.9
STKA	Stephens Creek	93.03	122	LR	LR	08 52 09.4	
	comp=Z,134nm,19.1s,MS4.4,baz=25,slow=34						
SNAA	Sanae	94.27	196	⇓eP	P	08 13 33.1	+1.5
IMA2	Indian Mountai	96.89	12	eP	P	08 13 43.5	-0.1
IMA2	Indian Mountai	96.89	12	eP	P	08 13 43.5	-0.1
COLA	College	99.07	10	eP	P	08 13 48.6	-4.8
COLA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb5.3						
COLA	College	99.07	10	eP	P	08 13 48.6	-4.8
	comp=Z,4.6nm,0.5s,mb5.3						
COLA	College	99.07	10	eP	P	08 13 48.6	-4.8
	comp=Z,4.6nm,0.5s,mb5.3						
DLMT	Dillon	120.03	351	ePKPdf	PKPdf	08 19 03.8	+0.8
DLMT	Dillon	120.03	351	ePKIKP	PKPdf	08 19 03.8	+0.8
MOOW	Moose Ponds	121.30	349	ePKPdf	PKPdf	08 19 06.5	+1.0
MOOW	Moose Ponds	121.30	349	ePKIKP	PKPdf	08 19 06.5	+1.1
SNOW	Snow King Moun	121.58	349	ePKPdf	PKPdf	08 19 07.4	+1.5
SNOW	Snow King Moun	121.58	349	ePKIKP	PKPdf	08 19 07.4	+1.4
TPAW	Teton Pass	121.59	350	ePKPdf	PKPdf	08 19 07.5	+1.5
TPAW				esPKPdf		08 19 18.9	
TPAW	Teton Pass	121.59	350	ePKIKP	PKPdf	08 19 07.5	+1.5
REDW	Red Top Meadow	121.70	349	ePKPdf	PKPdf	08 19 07.3	+1.2
REDW	Red Top Meadow	121.70	349	ePKIKP	PKPdf	08 19 07.3	+1.1
RRI2	Red Ridge	121.79	350	ePKPdf	PKPdf	08 19 07.4	+1.1
I09A	Lost Marbles R	121.98	355	⇓P	PKPdf	08 19 07.0	+0.2
	baz=122						
PDAR	Pinedale Array	122.03	348	PKP	PKPdf	08 19 06.8	-0.1
	comp=Z,2.4nm,0.7s,baz=46,slow=2.7,SNR=28						
PDAR				PKKPbc	PKKPbc	08 29 03.6	-0.1
	comp=Z,0.4nm,0.6s,baz=188,slow=4.3,SNR=4.7						
BW06	Boulder Array	122.03	348	ePKPdf	PKPdf	08 19 07.1	+0.3
BW06	Boulder Array	122.03	348	ePKIKP	PKPdf	08 19 07.1	+0.3
J06A	Christmas Vall	122.85	357	⇑P	PKPdf	08 19 09.0	+0.6
	baz=123						
J05A	Fort Rock	122.86	358	⇓P	PKPdf	08 19 09.3	+0.8
	baz=123						
K09A	Rome	123.25	355	⇓P	PKPdf	08 19 10.2	+1.0
	baz=123						
K08A	Mann Creek Ran	123.28	356	⇑P	PKPdf	08 19 09.8	+0.6
	baz=123						
K06A	Valley Falls	123.31	357	⇓P	PKPdf	08 19 09.6	+0.3
	baz=123						
HWUT	Hardware Ranch	123.53	350	ePKPdf	PKPdf	08 19 10.6	+0.9
HWUT				epPKPdf	pPKPdf	08 19 17.6	+0.2
HWUT	Hardware Ranch	123.53	350	ePKIKP	PKPdf	08 19 10.6	+0.9
L08A	Fields	123.80	356	⇑P	PKPdf	08 19 11.0	+0.8
	baz=124						
L09A	Wilkinson Ranc	123.92	355	⇑P	PKPdf	08 19 11.3	+0.8
	baz=124						
TCUT	Toone Canyon	123.97	349	ePKPdf	PKPdf	08 19 11.7	+1.1
MIAR	Mount Ida	124.00	330	ePKIKP	PKPdf	08 19 11.6	+1.0
M13A	Montello	124.18	352	⇑P	PKPdf	08 19 11.8	+0.8
	baz=124						
M10A	I.L. Ranch, Tu	124.31	354	⇓P	PKPdf	08 19 12.6	+1.5
	baz=124						
M11A	Holland Ranch,	124.31	353	⇑P	PKPdf	08 19 12.5	+1.3
	baz=124						
M02C	Callahan	124.78	360	⇓P	PKPdf	08 19 12.6	+0.6
	baz=124						
N12A	Clover Valley,	124.80	352	⇑P	PKPdf	08 19 13.2	+1.1
	baz=124						
DUG	Dugway	125.11	350	ePKIKP	PKPdf	08 19 13.4	+0.7
N06A	Buffalo Meadow	125.33	357	⇓P	PKPdf	08 19 13.4	+0.3
	baz=125						
N02C	Big Bar	125.35	0	⇓P	PKPdf	08 19 14.1	+0.9
	baz=125						
O11A	Cowboy Ranch,	125.58	353	⇓P	PKPdf	08 19 14.0	+0.4
	baz=125						
O09A	Fish Creek Ran	125.71	354	⇓P	PKPdf	08 19 14.8	+0.9
	baz=126						
SRU	San Rafael	125.74	348	ePKIKP	PKPdf	08 19 14.6	+0.7
O07A	Toulon	125.86	356	⇑P	PKPdf	08 19 16.0	+1.8
	baz=126						
P12A	McGill	126.14	352	⇑P	PKPdf	08 19 15.8	+1.1
	baz=126						
WMOK	Wichita Mounta	126.15	335	ePKIKP	PKPdf	08 19 14.8	+0.1
WMOK				e		08 19 21.9	
Q12A	Willow Creek R	126.55	352	⇑P	PKPdf	08 19 16.6	+1.2
	baz=126						
P05C	Yuba Gap, Truc	126.81	357	⇓P	PKPdf	08 19 18.1	+2.1
	baz=127						
LPAZ	La Paz	126.91	260	PKP	PKPdf	08 19 17.2	+1.0
	comp=Z,0.9nm,0.6s,baz=230,slow=15,SNR=4.8						
SUTB	Sutter Butte	126.93	359	⇓P	PKPdf	08 19 17.2	+1.0
	baz=127						
PLCA	Paso Flores	127.18	229	PKP	PKPdf	08 19 17.1	+0.5
	comp=Z,2.9nm,0.8s,baz=142,slow=1.8,SNR=10						
MNRC	McLaughlin Nat	127.29	359	⇓P	PKPdf	08 19 18.4	+1.5
	baz=127						
LAVA	Lava Cap Winer	127.36	358	⇓P	PKPdf	08 19 18.4	+1.3
	baz=127						
R05C	Kirkwood Meado	127.39	357	⇓P	PKPdf	08 19 18.6	+1.5
	baz=127						
R10A	Warm Springs	127.48	353	⇓P	PKPdf	08 19 18.7	+1.4
	baz=127						
R06C	Coleville	127.53	356	⇓P	PKPdf	08 19 19.4	+2.1
	baz=127						
NVAR	Mina Array Bea	127.54	355	PKP	PKPdf	08 19 18.5	+1.2
	comp=Z,4.6nm,0.8s,baz=70,slow=1.5,SNR=32						
NVAR	Mina Array Bea	127.54	355	PKP	PKPdf	08 19 18.5	+1.2
R09A	Tonopah	127.61	354	⇑P	PKPdf	08 19 18.7	+1.2
	baz=127						
CMB	Columbia Colle	128.07	357	⇓P	PKPdf	08 19 19.0	+0.6
	baz=128						
S09A	Goldfield	128.14	354	⇓P	PKPdf	08 19 20.1	+1.6
	baz=128						
S06C	San Francisco	128.19	357	⇓P	PKPdf	08 19 20.2	+1.6
	baz=128						
T06C	Millerton Lake	129.05	356	⇑P	PKPdf	08 19 21.6	+1.3
	baz=129						
U10A	Ash Meadows, A	129.33	353	⇓P	PKPdf	08 19 22.7	+1.9
	baz=129						
HELL	Mitchell Peak,	129.33	356	⇑P	PKPdf	08 19 22.4	+1.6
	baz=129						
FURC	Furnace Creek,	129.34	353	⇓P	PKPdf	08 19 22.6	+1.9
	baz=129						
LAZ	Ladron	129.39	343	ePKPdf	PKPdf	08 19 22.3	+1.4
CWC	Cottonwood Cre	129.49	355	⇓P	PKPdf	08 19 23.1	+2.0
	baz=129						
DAC	Darwin (Calif)	129.61	354	ePKIKP	PKPdf	08 19 23.1	+1.8
U04C	Hernandez Rese	129.75	357	⇑P	PKPdf	08 19 23.9	+2.3
	baz=130						
HAST	UC Hastings Re	129.75	358	⇓P	PKPdf	08 19 23.8	+2.2
	baz=130						
V12A	Nelson	129.81	351	⇓P	PKPdf	08 19 23.8	+2.1
	baz=130						
MPMC	Manual Prospec	129.81	354	⇓P	PKPdf	08 19 23.3	+1.6
	baz=130						
SHOC	Shoshone	129.83	353	⇓P	PKPdf	08 19 24.3	+2.6
	baz=130						
W14A	Seligman	130.01	349	⇓P	PKPdf	08 19 24.3	+2.2
	baz=130						
JCT	Junction City	130.26	333	ePKIKP	PKPdf	08 19 24.0	+1.5
W13A	Hualapai Mount	130.27	350	⇑P	PKPdf	08 19 24.0	+1.5
	baz=130						
V04C	Ramage Ranch,	130.48	357	⇓P	PKPdf	08 19 25.0	+2.0
	baz=130						
GSC	Goldstone	130.49	353	⇓P	PKPdf	08 19 25.0	+2.0
	baz=130						
X15A	Humboldt	130.56	348	⇑P	PKPdf	08 19 25.3	+2.2
	baz=130						
X13A	Yucca	130.75	350	⇑P	PKPdf	08 19 25.6	+2.1
	baz=130						
GMRC	Granite Mounta	130.85	352	⇑P	PKPdf	08 19 26.2	+2.6
	baz=131						
Y14A	Wickenburg	131.24	349	⇑P	PKPdf	08 19 26.6	+2.2
	baz=131						
MNTX	Cornudas Mount	131.34	340	ePKPdf	PKPdf	08 19 25.7	+1.1
IRM	Iron Mountain	131.39	351	⇑P	PKPdf	08 19 26.6	+1.9
	baz=131						

IDC 16 08:18:01.6±5.4, 2005S×16455E, h0^{km}, mb4.3/3, mb1 4.5/3, mb1mx3.9/10, mbtmp4.3/3, ML2.6/1, Error ellipse: s-maj=126.5km s-min=29.9km az=27.0, New Caledonia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.68	139	eP	Pn	08 18 46.3	+0.2
DZM	Mont Dzumac	2.68	139	Pn	Pn	08 18 46.2	+0.2
	1.1nm,0.3s,baz=340,slow=21,SNR=23						
STKA	Stephens Creek	23.71	236	P	P	08 23 15.2	-0.1
	2.1nm,0.7s,baz=77,slow=9.9,SNR=5.7						
WRA	Warramunga Arr	28.37	265	P	P	08 23 57.5	+0.1
	0.6nm,0.3s,baz=94,slow=8.2,SNR=53						
ASAR	Alice Springs	28.64	257	P	P	08 24 00.5	+0.6
	7.9nm,0.6s,baz=83,slow=8.9,SNR=126						

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*IDC **16** 08:33:32.9±5.4, 1781S×17861W, h602^{km}±66^{km}, mb3.3/6, mb1 3.6/7, mb1mx3.3/13, mbtmp4.3/7, Error ellipse: s-maj=50.3km s-min=26.5km az=144.0*
*NEIC **16** 08:33:34.1±3.8, 1797S×17859W, h624^{km}±49^{km}, mb4.3/3, Error ellipse: s-maj=29.1km s-min=19.5km az=183.0*
*ISCJB **16** 08:33:36.8±3.4, 182S±03×1787W±02, h687^{km}±50^{km}, mb4.0/10, Error ellipse: s-maj=37.9km s-min=24.9km az=169.7*
ISC 16 08:33:37.2±3.5, 181S±03×1786W±02, h667^{km}±53^{km}, n18, σ0^{s}45/17, mb4.0/10, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.61	252	P	P	08 36 39.6	+0.3
	0.2nm,0.3s,baz=65,slow=18,SNR=3.8						
SNZO	South Karori	23.82	193	eP	P	08 38 01.6	-0.4
	44nm,1.0s,mb4.8						
STKA	Stephens Creek	38.39	241	P	P	08 40 05.4	+0.6
	11nm,1.0s,mb4.2,baz=83,slow=9.1,SNR=9.0						
STKA	Stephens Creek	38.39	241	eP	P	08 40 04.3	-0.5
WB2	Warramunga Arr	44.42	260	eP	P	08 40 51.5	-0.4
WRAB	Tennant Creek	44.43	260	eP	P	08 40 51.3	-0.6
	2.8nm,0.5s,mb3.9						
WRA	Warramunga Arr	44.44	260	P	P	08 40 51.6	-0.4
	2.9nm,0.5s,mb3.9,baz=92,slow=7.4,SNR=113						
AS31	Alice Springs	44.58	254	⇓iP	P	08 40 53.4	+0.3
ASAR	Alice Springs	44.58	254	P	P	08 40 53.5	+0.4
	19nm,0.6s,mb4.6,baz=88,slow=8.5,SNR=317						
ASAR				PcP	PcP	08 42 22.8	+2.1
	0.9nm,0.6s,baz=107,slow=3.7,SNR=4.7						
ASPA	Alice Springs	44.58	254	⇓iP	P	08 40 53.4	+0.3
KAKA	Kakadu	47.42	269	eP	P	08 41 14.6	+0.2
	7.4nm,0.4s,mb4.4						
MBWA	Marble Bar	57.87	256	eP	P	08 42 28.5	+0.4
	35nm,1.7s,mb4.2						
MJAR	Matsushiro Arr	67.97	324	P	P	08 43 31.7	-0.7
	1.1nm,0.5s,mb3.5,baz=141,slow=5.5,SNR=5.9						
MJAR	Matsushiro Arr	67.97	324	P	P	08 43 31.7	-0.7
NVAR	Mina Array Bea	79.68	44	P	P	08 44 38.7	+0.7
	0.5nm,0.7s,mb3.1,baz=225,slow=8.5,SNR=5.9						
NVAR	Mina Array Bea	79.68	44	P	P	08 44 38.7	+0.7
PDAR	Pinedale Array	87.61	43	P	P	08 45 16.6	-0.3
	0.6nm,0.7s,mb3.3,baz=234,slow=4.1,SNR=5.4						
BRTR	Keskin Array B	144.81	314	PKP	PKPdf	08 52 03.0	+2.7
	0.6nm,0.5s,baz=130,slow=1.9,SNR=3.9						

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*ISCJB **16** 09:09:06.6±0.4, 3344N±004×5685E±004, h10^{km}, Error ellipse: s-maj=5.7km s-min=4.4km az=177.2*
*THR **16** 09:09:06.0±0.9, 3340N×5695E, h16^{km}, ML4.3*
*NEIC **16** 09:09:07.6, 3338N×5689E, h5^{km}, ML4.3(THR), MN4.3(TEH), After TEH.*
*CSEM **16** 09:09:07.0±0.1, 3340N×5689E, h20^{km}, ML4.3, Error ellipse: s-maj=1.9km s-min=1.4km az=176.0*
*TEH **16** 09:09:07.6, 3338N×5689E, h4^{km}, Mn4.3*
ISC 16 09:09:07.7±0.4, 3341N±004×5688E±004, h10^{km}, n51, σ0^{s}79/60, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITEG		1.65	108	ePn	Pn	09 09 36.2	-0.5
IKOO		2.04	118	ePn	Pn	09 09 42.2	+0.1
IBAF	Bafgh	2.13	212	ePn	Pn	09 09 43.5	+0.3
IBAF	Bafgh	2.13	212	Pn	Pn	09 09 43.4	+0.2
ICHK	Chekchek	2.38	241	ePn	Pn	09 09 47.0	+0.3
ICHK	Chekchek	2.38	241	Pn	Pn	09 09 46.9	+0.2
IDAH		2.60	104	ePn	Pn	09 09 49.8	+0.1
IMEH	Mehriz	2.78	224	ePn	Pn	09 09 52.5	+0.3
ISAD	Sadrabad	3.08	242	ePn	Pn	09 09 57.5	+1.2
ISAD				eSn	Sn	09 10 32.6	-0.6
ISAD	Sadrabad	3.08	242	Pn	Pn	09 09 57.4	+1.1
ISAD				Sn	Sn	09 10 32.5	-0.7
IANJ	Anjiloo	3.19	311	ePn	Pn	09 09 58.3	+0.4
IANJ	Anjiloo	3.19	311	Pn	Pn	09 09 58.2	+0.3
IMOG	Moghan	3.37	36	ePn	Pn	09 10 00.3	0.0
KRBR	Kerman	3.42	182	ePN	Pn	09 10 01.4	+0.4
KRBR				AML	AML	09 11 06.8	
	comp=E,680nm,0.6s						
KRBR				AML	AML	09 11 07.5	
	comp=N,781nm,0.6s						
KRBR	Kerman	3.42	182	ePn	Pn	09 10 01.0	0.0
NASN	Na'in	3.47	261	ePN	Pn	09 10 02.7	+1.0
NASN				AML	AML	09 11 04.4	
	comp=N,302nm,0.5s						
NASN	Na'in	3.47	261	ePn	Pn	09 10 02.0	+0.3
IPAY	Payeh	3.50	29	ePn	Pn	09 10 02.6	+0.5
IPAY	Payeh	3.50	29	Pn	Pn	09 10 02.5	+0.4
IKRD	Kardeh	3.61	21	ePn	Pn	09 10 09.5	+5.8
ISFR	Esferayen	3.74	14	ePn	Pn	09 10 02.8	-2.6
ILAS	Lasjerd	3.79	302	ePn	Pn	09 10 06.8	+0.7
ILAS	Lasjerd	3.79	302	Pn	Pn	09 10 06.7	+0.6
ISHM	Shahmirzad	3.80	310	ePn	Pn	09 10 07.3	+1.1
ISHM	Shahmirzad	3.80	310	Pn	Pn	09 10 07.2	+1.0
IZEF	Zefreh	3.85	264	ePn	Pn	09 10 07.0	+0.1
IZEF				ePn	Pb	09 10 14.4	-1.2
IZEF				eSn	Sn	09 10 51.3	-0.9
IZEF	Zefreh	3.85	264	Pn	Pn	09 10 06.9	0.0
IZEF				Sn	Sn	09 10 51.3	-0.9
IMYA	Miamay	3.95	41	ePn	Pn	09 10 08.3	0.0
ISFB	Sefidab	3.97	285	ePn	Pn	09 10 08.5	-0.1
IFIR	Firoozkooh	4.07	304	ePn	Pn	09 10 09.9	0.0
IGAR	Garneh	4.11	255	ePn	Pn	09 10 11.6	+1.1
MRVT	Maraveh tapeh	4.29	352	ePN	Pn	09 10 13.6	+0.6
IKLH	Kalahroud	4.43	270	ePn	Pn	09 10 14.9	-0.1
IDMV	Damavand	4.55	300	ePn	Pn	09 10 13.8	-2.7
IDMV				ePn	Pn	09 10 17.0	+0.5
IDMV				eSn	Sn	09 11 08.1	-1.3
IDMV	Damavand	4.55	300	Pn	Pn	09 10 16.9	+0.4
IDMV				Sn	Sn	09 11 08.0	-1.4
IDMV	Damavand	4.55	300	ePn	Pn	09 10 17.0	+0.5
IDMV				eSn	Sn	09 11 08.1	-1.3

IVRN Varamin 4.55 292 ePn Pn 09 10 16.7 +0.2
DAMV Damavand 4.61 300 ePN Pn 09 10 18.3 +0.9
DAMV AML AML 09 11 43.5
comp=E,243nm,0.5s
DAMV Damavand 4.61 300 ePn Pn 09 10 18.0 +0.6
IAFJ Afjeh 4.91 301 ePn Pn 09 10 21.5 +0.1
ZHSF Zahedan 5.04 138 ePN Pn 09 10 22.0 -1.3
IPIR Pirpir 5.08 263 ePn Pn 09 10 23.8 0.0
IPIR Pirpir 5.08 263 Pn Pn 09 10 23.7 -0.1
CHTH Charan 5.35 299 ePN Pn 09 10 28.4 +0.8
CHTH Charan 5.35 299 ePn Pn 09 10 28.0 +0.4
THKV Tehran--Karaj 5.54 298 ePN Pn 09 10 30.8 +0.7
THKV Tehran--Karaj 5.54 298 ePn Pn 09 10 30.0 -0.1
IMHD Mahdasht 5.60 296 ePn Pn 09 10 31.0 0.0
ASAO Ashtian 5.80 283 ePN Pn 09 10 34.1 +0.4
ASAO Ashtian 5.80 283 ePn Pn 09 10 34.0 +0.2
IRAZ Razeghan 6.08 291 ePn Pb 09 10 51.2 -2.4

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*IDC **16** 09:15:27.2±0.5, 7.75S×106.89E, h0km, mb4.5/16, mb1 4.6/16, mb1mx4.5/19, mbtmp4.5/16, MS3.7/9, Ms1 3.7/9, ms1mx3.4/26, Error ellipse: s-maj=21.5km s-min=13.1km az=56.0*
*NEIC **16** 09:15:28.5±0.3, 7.85S×106.82E, h10km, mb4.6/13, Error ellipse: s-maj=12.2km s-min=6.0km az=47.0*
NEIC Felt [III] at Pangandaran and Sindangbarang.
*BJI **16** 09:15:28.4, 7.90S×106.80E, h10km, mB5.0, mb4.7, Ms4.5, Msz4.2*
*MOS **16** 09:15:31.2±1.2, 7.48S×107.17E, h33km, mb5.0/18, Error ellipse: s-maj=15.7km s-min=8.3km az=116.2*
*ISCJB **16** 09:15:37.3±0.7, 7.74S±0.06×107.05E±0.06, h95km±5km, mb4.5/45, Error ellipse: s-maj=11.2km s-min=6.3km az=89.5*
ISC 16 09:15:38.3±0.7**, 7.76S**±0.06×**107.01E**±0.06**, h87**km±5km**, n129, σ1.08**/105**, mb4.5**/45**, 16C-6D, Jawa**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LEM Lembang 1.10 33 P Pn 09 15 59.4 +0.4
7μm,0.8s
CBJI Citeko 1.34 353 P Pn 09 15 58.1 -3.8
16μm,0.5s
TNG Tangerang 1.62 347 P Pn 09 16 06.1 +0.7
3μm,1.1s
JCJI Jatiwangi 1.77 45 P Pn 09 16 06.9 -0.5
2μm,1.0s
SBJI Serang 1.85 332 P Pn 09 16 07.8 -0.6
5μm,1.1s
BJII Banjamegara 2.71 81 P Pn 09 16 20.0 +0.2
187nm,0.6s
BJII Banjamegara 2.71 81⇓iP Pn 09 16 20.2 +0.4
BJII iS Sn 09 16 56.8 +5.1
KLI Kotabumi 3.59 323 P Pn 09 16 31.4 -0.3
722nm,0.8s
KRKI Karangkates 5.40 95 P Pn 09 16 59.2 +2.8
535nm,0.7s
KSI Kapahiang 6.00 313 P Pn 09 17 02.4 -2.1
574nm,1.0s
PPI Padang Panjang 9.80 317 P Pn 09 17 56.8 +0.5
46nm,0.6s
KKM Kota Kinabalu 16.50 34 ePn Pn 09 19 25.1 +0.7
MBWA Marble Bar 18.12 139 eP Pn 09 19 41.0 -3.1
32nm,0.6s
FITZ Fitzroy Crossi 20.84 121⇑iP P 09 20 12.6 -0.3
17nm,0.6s
FITZ Fitzroy Crossi 20.84 121 P P 09 20 13.2 +0.3
8.2nm,0.9s,baz=280,slow=5.6,SNR=18
FITZ S S 09 23 51.1 -9.4
2.7nm,0.8s,baz=336,slow=20,SNR=3.0
FITZ LR LR 09 27 46.4
comp=Z,153nm,19.3s,baz=277,slow=35
KAKA Kakadu 25.49 103 eP P 09 20 57.9 -0.5
17nm,0.7s,mb4.6
NWAO Narrogin (SRO) 26.78 161 LR LR 09 30 35.5
comp=Z,233nm,19.1s,baz=168,slow=34
WRA Warramunga Arr 29.11 117 P P 09 21 30.7 0.0
7.2nm,0.7s,mb4.4,baz=288,slow=11,SNR=58
WRA Sn S 09 27 12.0 +56
0.3nm,0.5s,baz=292,slow=24,SNR=4.0
WRA LR LR 09 34 00.7
comp=Z,91nm,20.1s,baz=245,slow=38
WRAB Tennant Creek 29.11 117 eP P 09 21 31.0 +0.2
WRAB pmax pmax
comp=Z,19nm,1.0s,mb4.7
WRAB Tennant Creek 29.11 117 eP P 09 21 30.9 +0.2
comp=Z,19nm,1.0s,mb4.7
WB2 Warramunga Arr 29.12 117⇑iP P 09 21 30.9 +0.1
ASPA Alice Springs 30.24 125⇑iP P 09 21 41.3 +0.6
AS31 Alice Springs 30.25 125⇑iP P 09 21 41.3 +0.5
ASAR Alice Springs 30.25 125 P P 09 21 41.0 +0.2
comp=Z,6.6nm,0.9s,mb4.2,baz=302,slow=8.6,SNR=30
ASAR PcP PcP 09 24 40.0 +0.6
comp=Z,1.5nm,1.0s,baz=293,slow=3.8,SNR=4.9
ASAR Sn S 09 27 40.5 +66
comp=Z,1.4nm,0.8s,baz=300,slow=22,SNR=4.3
ASAR LR LR 09 33 18.9
comp=Z,172nm,20.1s,baz=356,slow=35
ASAR Alice Springs 30.25 125 P P 09 21 41.0 +0.2
ASAR 09 24 40.1
KMI Kunming 32.95 353 P P 09 22 06.4 +1.9
KMI AP pP 09 22 10.5 -14
KMI XP sP 09 22 13.3 -21
KMI PP PP 09 23 20.0 -0.5
KMI PPP 09 23 35.1
KMI S S 09 27 28.0 +12
KMI XS sS 09 27 32.3 -19
KMI AMB AMB
comp=Z,7.0nm,0.8s,mb4.5
KMI AMB AMB
comp=Z,71nm,4.2s
KMI LR LR
comp=N,142nm,16.0s
KMI LR LR
comp=E,129nm,16.5s
KMI LR LR
comp=Z,101nm,19.1s
CD2 Chengdu 38.57 356 eP P 09 22 53.4 +0.8
CD2 AP pP 09 22 58.8 -14
CD2 XP sP 09 23 01.5 -22
CD2 PP PP 09 24 27.8 +5.4
CD2 S S 09 28 52.4 +10
CD2 XS sS 09 29 00.3 -17
CD2 SS SS 09 31 35.9 +0.7
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CD2 LR LR
comp=E,80nm,12.0s
CD2 LR LR
comp=Z,50nm,9.6s
PMG Port Moresby 39.72 95 LR LR 09 42 49.8
comp=Z,88nm,19.1s,baz=209,slow=41
CTA Charters Tower 39.90 112 eP P 09 23 04.1 +0.5
comp=Z,7.3nm,0.9s,mb4.5
CTA Charters Tower 39.90 112 P P 09 23 04.4 +0.8
comp=Z,9.0nm,0.9s,mb4.6,baz=280,slow=13,SNR=5.7
CTA LR LR 09 39 37.9
comp=Z,124nm,19.8s,baz=232,slow=36
CTA Charters Tower 39.90 112 P P 09 23 04.4 +0.8
CTA pmax pmax
comp=Z,9.0nm,0.9s
CTA MLR MLR
comp=Z,125nm,19.8s
CTAO Charters Tower 39.90 112 eP P 09 23 04.3 +0.7
CTAO pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
CTAO Charters Tower 39.90 112 eP P 09 23 04.3 +0.7
comp=Z,10.0nm,0.9s,mb4.7
STKA Stephens Creek 40.13 131 P P 09 23 06.0 +0.4
comp=Z,3.5nm,0.5s,mb4.4,baz=313,slow=11,SNR=6.8
STKA LR LR 09 39 00.0
comp=Z,131nm,18.6s,baz=336,slow=35
STKA Stephens Creek 40.13 131 eP P 09 23 05.4 -0.1
SSE Sheshan 40.95 19 eP P 09 23 10.0 -2.3
SSE AMB AMB
comp=Z,23nm,0.6s,mb5.2
SSE AMB AMB
comp=Z,105nm,4.5s
NJ2 Nanjing 41.17 15 eP P 09 23 15.3 +1.2
NJ2 AP pP 09 23 19.8 -15
NJ2 XP sP 09 23 22.3 -22
NJ2 PP PP 09 24 54.4 +3.8
NJ2 S S 09 29 31.0 +10
NJ2 XS sS 09 29 38.0 -18
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.2
NJ2 AMB AMB
comp=Z,240nm,4.4s
NJ2 LR LR
comp=N,480nm,26.3s
NJ2 LR LR
comp=E,260nm,14.3s
NJ2 LR LR
comp=Z,400nm,13.6s
HHC Hu-ho-hao-te 48.55 5 eP P 09 24 17.0 +4.4
HHC AP pP 09 24 21.5 -12
HHC PCP PcP 09 25 41.3 +4.1
HHC PP PP 09 26 10.8 +4.7
HHC SCP ScP 09 29 34.4 +10
HHC PCS PcS 09 29 36.3 +3.0
HHC S S 09 31 19.9 +12
HHC XS sS 09 31 27.4 -16
HHC SCS ScS 09 34 05.9 +9.3
HHC SS SS 09 34 46.3 +7.9
HHC AMB AMB
comp=Z,15nm,1.3s,mb4.8
HHC LR LR
comp=N,72nm,24.7s
HHC LR LR
comp=E,114nm,21.8s
HHC LR LR
comp=Z,73nm,24.7s
SNY Shenyang 51.63 16 eP P 09 24 35.1 -0.8
SNY AMB AMB
comp=Z,7.0nm,0.5s,mb5.0
MJAR Matsushiro Arr 52.90 32 P P 09 24 43.9 -1.4
comp=Z,1.3nm,0.8s,mb4.0,baz=209,slow=8.3,SNR=6.6
MJAR PcP PcP 09 25 55.1 +1.8
comp=Z,1.9nm,0.7s,baz=209,slow=4.4,SNR=5.4
CN2 Changchun 53.97 16 eP P 09 24 52.9 -0.2
WMQ Urumqi 54.24 343 eP P 09 24 56.0 +0.9
WMQ XP sP 09 25 03.0 -23
WMQ PP PP 09 26 59.0 +1.3
WMQ S S 09 32 32.0 +6.2
WMQ SS SS 09 36 14.0 +5.2
WMQ LR LR
comp=N,54nm,15.0s
WMQ LR LR
comp=E,68nm,14.0s
WMQ LR LR
comp=Z,34nm,14.0s
SONM Songino Array 55.35 359 P P 09 25 04.2 +1.1
comp=Z,1.6nm,0.7s,mb4.2,baz=173,slow=8.2,SNR=14
SONM PcP PcP 09 26 03.6 +1.0
comp=Z,6.0nm,0.8s,baz=180,slow=3.3,SNR=17
ULN Ulaanbaatar 55.38 0 P P 09 25 02.9 -0.4
ULN pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
ULN Ulaanbaatar 55.38 0 P P 09 25 02.9 -0.4
comp=Z,3.1nm,0.8s,mb4.4
MDJ Mudanjiang 55.97 19 P P 09 25 09.9 +2.3
MDJ AP pP 09 25 13.3 -16
MDJ PP PP 09 27 15.5 +2.4
MDJ SCP ScP 09 30 05.8 +10
MDJ PCS PcS 09 30 07.3 +1.8
MDJ S S 09 33 01.9 +13
MDJ XS sS 09 33 07.1 -19
MDJ SCS ScS 09 34 59.3 +11
MDJ AMB AMB
comp=Z,4.0nm,0.9s,mb4.5
MDJ AMB AMB
comp=Z,65nm,5.1s
MDJ LR LR
comp=N,25nm,19.1s
MDJ LR LR
comp=E,8.0nm,25.4s
MDJ LR LR
comp=Z,28nm,17.5s
AAK Ala-Archa 58.25 332⇑eP P 09 25 24.0 +0.3
AAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.1
MK31 Makanchi Array 58.60 340 P P 09 25 25.2 -0.9
MK31 pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
MKAR Makanchi Array 58.60 340 P P 09 25 24.6 -1.4
comp=Z,3.7nm,0.6s,mb4.6,baz=154,slow=7.4,SNR=23
TLY Talaya 59.27 358⇓eP P 09 25 29.4 -1.3
KLR Kul'dur 60.74 18 eP P 09 25 37.8 -3.0
HABR Khabarovsk 61.19 21 eP P 09 25 39.6 -4.2
HABR eS S 09 33 54.3 -2.3
HABR pmax pmax
comp=Z,13nm,0.7s,mb5.1
YSS Yuzh-Sakhalins 63.04 27d iP P 09 25 54.8 -1.4
YSS pmax pmax
comp=Z,29nm,1.7s,mb4.9
KURK Kurchatov 63.21 340 eP P 09 25 57.4 +0.1
KURK pmax pmax
comp=Z,14nm,0.9s,mb4.9
KURK Kurchatov 63.21 340 eP P 09 25 57.4 +0.1
comp=Z,14nm,0.9s,mb4.9
ZAL Zalesovo 64.26 346 P P 09 26 04.4 +0.2
comp=Z,1.4nm,0.4s,mb4.2,baz=35,slow=5.0,SNR=4.4
MAW Mawson 66.65 197⇑iP P 09 26 18.2 -1.4
comp=Z,2.5nm,0.6s,mb4.2
MAW Mawson 66.65 197 P P 09 26 18.5 -1.1
comp=Z,4.4nm,0.9s,mb4.3,baz=34,slow=5.8,SNR=18
MAW Mawson 66.65 197 P P 09 26 18.5 -1.1
MAW pmax pmax
comp=Z,4.0nm,0.9s
VOSK Vostochnaya 67.61 337 P P 09 26 25.7 +0.1
VOSK pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
BVA0 Borovoye Array 68.07 337 i P P 09 26 28.8 +0.3
BVA0 pmax pmax
comp=Z,1.0nm,0.7s,mb3.8
BVAR Borovoye Array 68.07 337 LR LR 09 58 28.0
comp=Z,40nm,18.2s,baz=162,slow=38
BRVK Borovoye 68.13 337 eP P 09 26 29.5 +0.6
BRVK pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
BRVK Borovoye 68.13 337 eP P 09 26 29.4 +0.5
comp=Z,5.5nm,0.6s,mb4.6
CHKZ Chkalovo 68.48 338 eP P 09 26 31.7 +0.6
CHKZ e pP 09 26 54.4 +0.9
CHKZ pmax pmax
comp=Z,23nm,0.5s,mb5.3
CHKZ Chkalovo 68.48 338 eP P 09 26 31.7 +0.5
comp=Z,23nm,0.5s,mb5.3
CHKZ ePcP PcP 09 26 54.4 -1.4
KMBO Kilima Mbogo 69.80 272 P P 09 26 41.0 +1.7
comp=Z,2.2nm,0.8s,mb4.1,baz=187,slow=8.1,SNR=5.9
KMBO Kilima Mbogo 69.80 272 P P 09 26 41.0 +1.7
AB31 Akbulak array 70.07 329 i P P 09 26 41.1 +0.2
AB31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
YAK Yakutsk 71.77 11⇓eP P 09 26 50.2 -1.0
YAK pmax pmax
comp=Z,19nm,0.6s,mb5.1
AKTO Aktyubinsk 71.78 329 P P 09 26 51.2 -0.1
AKTO pmax pmax
comp=Z,2.0nm,1.5s,mb3.7
SYO Syowa Base 74.80 200⇑eP P 09 27 07.6 -1.4
VNDA Vanda 75.22 169 P P 09 27 10.5 -1.0
comp=Z,4.6nm,0.9s,mb4.2,baz=307,slow=5.3,SNR=32
VNDA Vanda 75.22 169 eP P 09 27 10.5 -1.0
VNDA pmax pmax
comp=Z,6.0nm,1.0s
VNDA Vanda 75.22 169 eP P 09 27 10.4 -1.0
comp=Z,5.5nm,1.0s,mb4.2
ARU Arti 75.31 335⇑iP P 09 27 12.2 +0.3
ARU i *PP pP 09 27 28.8 -5.9
ARU pmax pmax
comp=Z,22nm,1.7s,mb4.6
MA2 Magadan 75.59 21⇑eP P 09 27 11.3 -2.3
MA2 pmax pmax
comp=Z,42nm,1.7s,mb4.9
KIV Kislovodsk 77.45 318ceP P 09 27 24.4 +0.3
KIV e 09 27 37.0
KIV pmax pmax
comp=Z,15nm,1.2s,mb4.6
BR131 Keskin Array S 82.34 312 eP P 09 27 51.2 +0.8
comp=Z,1.1nm,0.5s,mb3.9
BRTR Keskin Array B 82.34 312 P P 09 27 50.7 +0.3
comp=Z,5.3nm,0.8s,mb4.4,baz=132,slow=7.0,SNR=28
VRSR Storozhevoye 82.47 324 eP P 09 27 51.2 +0.1
VRSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
VRSR pmax pmax
comp=N,5.0nm,1.0s
VRSR pmax pmax
comp=E,20nm,0.9s
SIM Simferopol' 83.54 317 eP P 09 27 58.1 +1.5
SIM pmax pmax
comp=Z,14nm,0.7s,mb4.9
OBN Obninsk 85.36 327⇑eP P 09 28 06.3 +0.5
OBN pmax pmax
comp=Z,28nm,1.2s,mb5.1
KLMR Klimovskoe 86.06 333 eP P 09 28 06.0 -3.3
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
BILL Bilibino 86.20 19⇑eP P 09 28 06.2 -3.8
BILL pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
TIRR Tirgusor 87.33 315⇑iP P 09 28 16.1 +0.6
TIRR Tirgusor 87.33 315 eP P 09 28 16.2 +0.7
CFR Carcaliu 87.68 316⇓iP P 09 28 18.5 +1.3
AKASG Malin Array Be 88.29 322 P P 09 28 19.4 -0.6
comp=Z,1.1nm,0.5s,mb4.1,baz=87,slow=4.8,SNR=9.8
VRI Vrincioaia 88.80 316⇑iP P 09 28 24.4 +2.0
SNAA Sanae 88.81 197 eP P 09 28 22.7 +0.2
SNAA e 09 28 23.9
SNAA e pP 09 28 44.8 -1.0
SNAA Sanae 88.81 197⇓iP P 09 28 22.8 +0.3
MLR Muntele Rosu 89.26 316⇑iP P 09 28 25.8 +1.2
BURAR Bucovina Array 90.18 318⇑iP P 09 28 29.5 +0.6
JOF Joensuu 90.41 334 ep P 09 28 29.2 -0.8
VNA1 Neumayer--Stat 90.84 198 eP P 09 28 32.3 +0.4
VNA1 e 09 28 33.4
VNA1 e 09 28 48.4
VNA1 e pP 09 28 54.8 -0.5
FINES FINESS Array B 92.44 332 P P 09 28 39.0 -0.3
comp=Z,2.8nm,0.8s,mb4.5,baz=122,slow=9.3,SNR=7.0
FINES LR LR 10 13 58.4
comp=Z,30nm,18.0s,baz=200,slow=38
KAF Kangasniemi 92.47 332 ep P 09 28 37.8 -1.7
ARCES ARCESS Array B 94.25 340 P P 09 28 47.4 -0.3
comp=Z,1.7nm,0.6s,mb4.5,baz=77,slow=5.5,SNR=9.2
NVAR Mina Array Bea 129.07 46 PKP PKPdf 09 34 39.0 +2.9
comp=Z,0.7nm,0.7s,baz=303,slow=1.9,SNR=7.0
PLCA Paso Flores 131.70 182 PKP PKPdf 09 34 42.9 +1.9
comp=Z,0.7nm,0.7s,baz=190,slow=6.1,SNR=4.0
PLCA Paso Flores 131.70 182 PKIKP PKPdf 09 34 42.9 +1.9
PLCA pmax pmax
comp=Z,1.0nm,0.7s
PDAR Pinedale Array 132.59 37 PKP PKPdf 09 34 42.7 0.0
comp=Z,0.4nm,0.7s,baz=5.7,slow=1.5,SNR=4.2
PV10 Paradox Valley 135.45 41 ePKPdf PKPdf 09 34 49.9 +1.8
PV01 Paradox Valley 135.89 41 ePKPdf PKPdf 09 34 52.2 +3.3
CPUP Villa Florida 142.86 204 PKhKP 09 34 59.0
comp=Z,1.2nm,0.5s,baz=68,slow=2.1,SNR=4.6
CPUP Villa Florida 142.86 204 i PKHKP 09 34 59.0
CPUP pmax pmax
comp=Z,1.0nm,0.5s
WMOK Wichita Mounta 144.18 38 ePKIKP PKPdf 09 35 03.9 0.0
ACCN Adirondack Com 144.51 1 ePKPdf PKPdf 09 35 04.1 -0.4
BINY Binghamton 145.60 4 ePKPdf PKPdf 09 35 07.6 +1.2
CCM Cathedral Cave 145.61 26 ePKIKP PKPdf 09 35 07.7 +1.3
BDFB Brasilia 146.05 227 PKPbc PKPbc 09 35 10.3 +2.2
comp=Z,9.6nm,0.7s,baz=123,slow=2.1,SNR=12
BDFB Brasilia 146.05 227 PKP2 PKPab 09 35 10.3 +1.5
BDFB pmax pmax
comp=Z,10.0nm,0.7s
JCT Junction City 146.22 44 ePKPdf PKPdf 09 35 09.4 +1.9
JCT ePKPbc PKPbc 09 35 11.1 +2.5
JCT ePKPab PKPab 09 35 12.3 +2.8
BLO Bloomington 146.44 19 ePKP2 PKPab 09 35 09.1 -1.2
ACSO Alum Creek Sta 146.45 14 ePKPdf PKPdf 09 35 10.2 +2.4
MIAR Mount Ida 147.29 32 ePKPdf PKPdf 09 35 11.0 +1.7
MIAR ePKPbc PKPbc 09 35 13.5 +1.8
MIAR ePKPab PKPab 09 35 16.1 +2.4
WCI Wyandotte Cave 147.37 20 ePKPdf PKPdf 09 35 11.2 +1.8
WCI ePKPbc PKPbc 09 35 13.2 +1.3
MCWV Mont Chateau 147.65 10 ePKPbc PKPbc 09 35 14.2 +1.5
WVT Waverly 148.67 24 ePKP2 PKPab 09 35 16.8 -2.4
HKT Hockley 149.23 41 ePKP2 PKPab 09 35 19.9 -1.6
OXF Oxford 149.38 27 ePKP2 PKPab 09 35 18.6 -3.5
PLAL Pickwick Lake 149.56 25 ePKPbc PKPbc 09 35 18.2 +0.7
PLAL ePKPab PKPab 09 35 25.7 +2.9
TZTN Tazewell 149.77 17 ePKPdf PKPdf 09 35 14.6 +1.4
TZTN ePKPbc PKPbc 09 35 19.7 +1.6
TZTN ePKPab PKPab 09 35 25.6 +1.9
SWET Sewanee 150.20 22 ePKPbc PKPbc 09 35 19.8 +0.7
SWET ePKPab PKPab 09 35 26.4 +1.0
CPCT Cooper Cave 150.48 19 ePKPbc PKPbc 09 35 21.4 +1.6
CPCT ePKPab PKPab 09 35 28.3 +1.7
MYNC Murphy 150.95 19 ePKIKP PKPbc 09 35 22.5 +1.6
MYNC e 09 35 29.6
LPAZ La Paz 155.63 191 PKPbc PKPdf 09 35 32.1 +10
comp=Z,0.9nm,0.7s,baz=190,slow=6.1,SNR=4.2
LPAZ PKPab PKPab 09 35 50.4 +2.0
comp=Z,0.9nm,0.6s,baz=146,slow=3.6,SNR=4.9
LPAZ La Paz 155.63 191 PKIKP PKPdf 09 35 32.1 +10
LPAZ 09 35 50.4
LPAZ pmax pmax
comp=Z,1.0nm,0.7s
LPAZ pmax pmax
comp=Z,1.0nm,0.6s

IDC 16 09:18:19.8±1.1**, 60.49N**×**44.46W, h0**km**, mb3.7**/5**, mb1 3.9**/7**, mb1mx3.6**/23**, mbtmp3.8**/7**, ML3.2**/2**, Error ellipse: s-maj=32.1km s-min=19.8km az=170.0, Western Kalaallit Nunaat**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SFJD Kangerlussuaq 7.08 340 Pn Pn 09 20 04.6 0.0
1.3nm,0.3s,baz=149,slow=12,SNR=3.1
SFJD Sn Sn 09 21 22.4 -3.3
6.8nm,0.3s,baz=182,slow=12,SNR=4.6
SFJD Lg 09 21 53.3
12nm,0.3s,baz=232,slow=19,SNR=12
BORG Borgarnes 11.44 58 Pn Pn 09 21 06.6 +2.3
0.7nm,0.3s,baz=252,slow=8.9,SNR=3.4
SCHQ Schefferville 13.21 255 Pn Pn 09 21 27.2 -1.4
0.7nm,0.3s,baz=76,slow=18,SNR=13
SCHQ Sn Sn 09 23 46.3 -10
0.9nm,0.3s,baz=144,slow=19,SNR=3.2
ARCES ARCESS Array B 29.19 43 P P 09 24 21.7 -1.2
2.4nm,0.9s,baz=294,slow=9.8,SNR=6.7
PDAR Pinedale Array 42.15 276 P P 09 26 13.6 -0.4
0.2nm,0.4s,baz=41,slow=6.0,SNR=4.3
BRTR Keskin Array B 50.82 77 P P 09 27 23.4 +1.4
0.7nm,0.7s,baz=304,slow=5.3,SNR=3.4
TORD Torodi Ar. Bea 57.97 124 P P 09 28 13.0 -1.0
0.6nm,0.6s,baz=330,slow=7.0,SNR=8.1
MKAR Makanchi Array 64.68 38 P P 09 28 58.6 -0.9
0.6nm,0.5s,baz=343,slow=6.2,SNR=5.1

CASC 16 09:18:54.8±2.6**, 13.61N**×**90.58W, h60**km±51km**, MD3.6, 5C-4D, Near coast of Guatemala**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TER Terranova 0.70 352 eP Pn 09 19 09.2 +0.1
TER eS Sn 09 19 20.3 +0.8
PCG Pacaya 0.78 358 eP Pn 09 19 11.0 +1.0
FUG Fuego 3 0.88 343⇓eP Pn 09 19 12.0 +0.7
FUG eS Sn 09 19 25.8 +2.5
RTR El Retiro 0.95 72⇓eP x 09 19 36.1
RTR eS x 09 19 50.2
SBLS San Blas 0.96 76⇑eP x 09 19 35.8
SBLS eS x 09 19 49.5
SNJE San Jose 0.98 74⇓eP x 09 19 36.3
SNJE eS x 09 19 51.8
RBDL Robledal 1.00 60 eP x 09 19 37.1
RBDL eS x 09 19 51.9
JAT Jato 1.25 305⇑eP Pn 09 19 16.9 +0.8
TP2 Tecpan 2 1.25 340⇓eP Pn 09 19 16.9 +0.8
TP2 eS Sn 09 19 34.1 +2.1
BOQS Boqueron 1.27 84 eP x 09 19 40.4
BOQS eS x 09 19 57.2
LFU La Fuente 1.43 84⇑eP x 09 19 43.0
LFU eS x 09 20 01.3
LFRS El Faro 1.48 89 eP x 09 19 43.7
LFRS eS x 09 20 02.2
LBRS Las Brisas 1.50 85⇑eP x 09 19 44.5
LBRS eS x 09 20 05.6
LCBS La Ceiba 1.56 88 eP x 09 19 44.3
LCBS eS x 09 20 05.0
SNVI San Vicente 1.69 90⇑eP x 09 19 47.8
SNVI eS x 09 20 08.0

IDC **16** *09:18:54.0±1.0, 6046N×4441W, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.8/24, mbtmp3.9/9, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.0/29, Error ellipse: s-maj=31.3km s-min=17.0km az=168.0*
ISCJB **16** *09:18:55.2±4.1, 6061N±008×447W±0.1, h18^{km}±31^{km}, mb3.9/9, Error ellipse: s-maj=13.8km s-min=12.1km az=161.5*
NEIC **16** *09:18:55.6±0.7, 6039N×4455W, h10^{km}, mb4.3/2, Error ellipse: s-maj=20.2km s-min=10.2km az=163.0*
ISC 16 09:18:58.8±4.0**, 6055N**±008×**446W**±01**, h32**^{km}±30^{km}**, n16, σ1^{s}09**/19**, mb3.9**/9**, Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	7.00	340	Pn	Pn	09 20 37.7	-1.2
	2.7nm,0.3s,baz=143,slow=9.1,SNR=4.3						
SFJD				Lg		09 22 28.4	
	20nm,0.3s,baz=223,slow=17,SNR=11						
SFJD	Kangerlussuaq	7.00	340	*i* P	Pn	09 20 39.2	+0.3
SFJD				*i* S	Sn	09 21 56.8	-0.5
BORG	Borgarnes	11.47	59	Pn	Pn	09 21 42.6	+2.4
	1.5nm,0.3s,baz=249,slow=6.7,SNR=6.2						
SCHQ	Schefferville	13.16	254	Pn	Pn	09 22 02.1	-1.1
	1.2nm,0.3s,baz=52,slow=12,SNR=8.1						
SCHQ				Sn	Sn	09 24 21.2	-7.2
	2.6nm,0.3s,baz=186,slow=16,SNR=7.0						
SCHQ	Schefferville	13.16	254	Pn	Pn	09 22 02.1	-1.1
SCHQ				Sn	Sn	09 24 21.2	-7.2
ARCES	ARCESS Array B	29.20	43	P	P	09 24 56.4	-0.8
	1.8nm,0.5s,mb4.1,baz=279,slow=8.0,SNR=12						
ARCES	ARCESS Array B	29.20	43	P	P	09 24 56.4	-0.8
FINES	FINESS Array B	32.76	57	P	P	09 25 28.8	+0.2
	1.2nm,0.7s,mb3.9,baz=278,slow=3.8,SNR=3.1						
FINES				LR	LR	09 37 08.9	
	comp=Z,24nm,21.0s,baz=141,slow=34						
AKASG	Malin Array Be	40.67	70	P	P	09 26 34.7	-1.3
	0.7nm,0.6s,mb3.5,baz=314,slow=8.2,SNR=3.5						
AKASG	Malin Array Be	40.67	70	P	P	09 26 34.7	-1.3
PDAR	Pinedale Array	42.08	275	P	P	09 26 47.3	-0.2
	0.5nm,0.6s,mb3.3,baz=54,slow=8.2,SNR=6.2						
MNTX	Cornudas Mount	48.68	262	*e*P	P	09 27 40.4	+0.5
	1.5nm,0.8s,mb4.1						
NVAR	Mina Array Bea	49.68	279	P	P	09 27 49.0	+1.6
	0.4nm,0.6s,mb3.6,baz=42,slow=4.8,SNR=4.2						
DAC	Darwin (Calif)	51.02	276	*e*P	P	09 27 58.9	+1.3
	2.9nm,0.5s,mb4.5						
TORD	Torodi Ar. Bea	58.06	124	P	P	09 28 47.3	-1.4
	1.0nm,0.6s,mb4.0,baz=335,slow=6.1,SNR=9.2						
MKAR	Makanchi Array	64.67	37	P	P	09 29 33.9	+0.5
	1.2nm,0.5s,mb4.2,baz=353,slow=5.3,SNR=8.1						

IDC **16** *09:32:48.1±4.4, 2.12S×13673E, h0^{km}, mb3.7/2, mb1 4.0/4, mb1mx3.7/13, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=86.0km s-min=61.7km az=138.0*
NEIC 16 09:32:55.7±3.2**, 240S**×**13675E, h35**^{km}**, mb3.8**/1**, Error ellipse: s-maj=52.7km s-min=39.0km az=130.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	11.10	202	*e*P	Pn	09 35 31.7	-0.1
	9.6nm,0.5s						
WRAB	Tennant Creek	17.58	188	*e*Pn	Pn	09 36 58.1	+0.2
	4.2nm,0.6s						
WB2	Warramunga Arr	17.59	187	*e*P	Pn	09 36 58.7	+0.7
WRA	Warramunga Arr	17.59	188	P	Pn	09 36 56.5	-1.5
	0.2nm,0.3s,baz=8.5,slow=13,SNR=17						
WRA				S	S	09 40 10.4	-9.1
	0.1nm,0.3s,baz=0.5,slow=23,SNR=4.4						
FITZ	Fitzroy Crossi	19.03	214	P	Pn	09 37 15.0	-0.6
	0.2nm,0.3s,baz=53,slow=14,SNR=9.0						
FITZ				S	S	09 40 38.6	-10
	0.0nm,0.3s,baz=204,slow=20,SNR=2.2						
AS31	Alice Springs	21.32	187	*e*P	P	09 37 41.0	+1.6
ASAR	Alice Springs	21.32	187	P	P	09 37 40.4	+1.0
	4.5nm,0.7s,baz=12,slow=12,SNR=48						
ASPA	Alice Springs	21.32	187	*e*P	P	09 37 41.0	+1.6
VNDA	Vanda	76.26	175	P	P	09 44 39.7	-1.0
	0.4nm,0.7s,baz=336,slow=6.8,SNR=5.5						

TRN **16** *09:40:37.5, 19.19N×6323W, h103^{km}, MD3.6*
ISCJB **16** *09:40:38.1±1.3, 193N±0.1×6326W±006, h104^{km}±15^{km}, Error ellipse: s-maj=21.7km s-min=5.4km az=39.0*
NEIC **16** *09:40:39.5, 1907N×6327W, h116^{km}, MD3.8(RSPR), After RSPR.*
RSPR **16** *09:40:39.5, 1907N×6327W, h116^{km}±2^{km}, MD3.8/9, MD3.8/9*
ISC 16 09:40:39.3±1.2**, 193N**±01×**6325W**±005**, h88**^{km}±19^{km}**, n19, σ0^{s}88**/35**, 14C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	1.16	243	⇑*e*P	Pn	09 41 01.8	+1.2
ABV				*e*S	Sn	09 41 18.7	+1.9
STMA	St. Maarten, A	1.22	174	*e*P	Pn	09 41 00.1	-1.3
STMA				*e*S	Sn	09 41 15.7	-2.4
TBVI	Tortola	1.54	237	⇑*e*P	Pn	09 41 04.6	-0.9
TBVI				*e*S	Sn	09 41 26.5	+1.2
SABT	Saba	1.63	180	*e*P	Pn	09 41 06.4	-0.3
SABT				*e*S	Sn	09 41 26.9	-0.4
STAT	Sint Eustatius	1.78	172	*e*P	Pn	09 41 10.9	+2.4
STAT				*e*S	Sn	09 41 31.9	+1.2
STVI	Saint Thomas	1.86	241	⇑*e*P	Pn	09 41 09.0	-0.5
STVI				*e*S	Sn	09 41 32.0	-0.6
CULB	Culebra	2.19	245	⇑*e*P	Pn	09 41 13.1	-0.8
CULB				*e*S	Sn	09 41 39.6	-0.8
MTP	Monte Pirata	2.48	242	⇑*e*P	Pn	09 41 17.4	-0.3
MTP				*e*S	Sn	09 41 46.7	-0.6
BPA	Boggy Peak	2.57	149	*e*	Pn	09 41 29.4	+10
BPA				*e*S	Sn	09 41 48.5	-1.0
CBYP	Canovanas	2.66	249	⇑*e*P	Pn	09 41 20.1	-0.2
CBYP				*e*S	Sn	09 41 51.3	-0.4
HUMP	Col San Antoni	2.71	246	⇑*e*P	Pn	09 41 20.4	-0.4
HUMP				*e*S	Sn	09 41 52.7	0.0
CPD	Cerro la Pandu	2.81	245	⇑*e*P	Pn	09 41 22.1	-0.1
CPD				*e*S	Sn	09 41 55.1	0.0
ICM	Isla Caja Muer	3.39	247	⇑*e*P	Pn	09 41 29.8	-0.3
LZG	Guadaloupe-1	3.41	155	*e*P	Pn	09 41 31.4	+1.2
LZG				*e*S	Sn	09 42 10.7	+1.0
AOPR	Arecibo Observ	3.44	255	⇑*e*P	Pn	09 41 30.5	-0.2
AOPR				*e*S	Sn	09 42 10.5	0.0
LRS	Lares	3.54	255	⇑*e*P	Pn	09 41 32.2	+0.1
LRS				*e*S	Sn	09 42 13.7	+0.8
AGPR	Aguadilla, PR	3.74	258	⇑*e*P	Pn	09 41 34.7	-0.1
MGP	Maguayo	3.85	252	⇑*e*P	Pn	09 41 36.7	+0.4
CRPR	Cabo Rojo, PR	3.87	252	⇑*e*P	Pn	09 41 36.7	+0.2
CRPR				*e*S	Sn	09 42 21.2	+0.3

NEIC **16** *09:57:05.4, 1903N×6467W, h56^{km}, MD3.4(RSPR), After RSPR.*
RSPR 16 09:57:05.4, 1903N×**6467W, h56**^{km}±6^{km}**, MD3.4**/9**,** **MD3.4**/9**, 21C-4D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.44	133	⇑*e*P	Pn	09 57 15.3	-1.1
ABV	Anegada	0.44	133	*e*S	Sn	09 57 23.9	-0.4
TBVI	Tortola	0.61	175	⇑*e*P	Pn	09 57 17.9	-0.5
TBVI	Tortola	0.61	175	*e*S	Sn	09 57 26.5	-1.2
TBVI	Tortola	0.61	175	⇑*e*P	Pn	09 57 18.0	-0.4
TBVI				*e*S	Sn	09 57 28.0	+0.2
TBVI	Tortola	0.61	175	⇑*e*P	Pn	09 57 17.9	-0.5
TBVI				*e*S	Sn	09 57 26.5	-1.2
TBVI				*e*S	Sn	09 57 28.0	+0.2
STVI	Saint Thomas	0.73	201	⇓*e*P	Pn	09 57 19.2	-0.6
STVI	Saint Thomas	0.73	201	*e*S	Sn	09 57 30.2	0.0
STVI	Saint Thomas	0.73	201	⇑*e*P	Pn	09 57 19.3	-0.4
STVI				*e*S	Sn	09 57 31.0	+0.8
STVI	Saint Thomas	0.73	201	⇑*e*P	Pn	09 57 19.3	-0.4
STVI				*e*S	Sn	09 57 30.2	0.0
STVI				*e*S	Sn	09 57 31.0	+0.8
CULB	Culebra	0.96	218	⇑*e*P	Pn	09 57 21.4	-1.3
CULB	Culebra	0.96	218	*e*S	Sn	09 57 34.7	-0.8
CULB	Culebra	0.96	218	⇑*e*P	Pn	09 57 21.7	-1.0
CULB	Culebra	0.96	218	*e*S	Sn	09 57 37.0	+1.5
MTP	Monte Pirata	1.25	222	⇑*e*P	Pn	09 57 26.3	-0.3
MTP	Monte Pirata	1.25	222	*e*S	Sn	09 57 41.3	-1.1
MTP	Monte Pirata	1.25	222	⇓*e*P	Pn	09 57 26.7	+0.1
MTP	Monte Pirata	1.25	222	*e*S	Sn	09 57 44.5	+2.1
MTP	Monte Pirata	1.25	222	⇓*e*P	Pn	09 57 26.7	+0.1
MTP				*e*S	Sn	09 57 41.3	-1.1
MTP				*e*S	Sn	09 57 44.5	+2.1
CBYP	Canovanas	1.35	236	⇑*e*P	Pn	09 57 26.9	-1.0
CBYP	Canovanas	1.35	236	*e*S	Sn	09 57 43.6	-1.3
CBYP	Canovanas	1.35	236	⇑*e*P	Pn	09 57 27.1	-0.8
CBYP	Canovanas	1.35	236	⇑*e*P	Pn	09 57 27.1	-0.8
CBYP				*e*S	Sn	09 57 43.6	-1.3
HUMP	Col San Antoni	1.42	232	⇑*e*P	Pn	09 57 28.5	-0.4
HUMP	Col San Antoni	1.42	232	*e*S	Sn	09 57 45.7	-0.9
HUMP	Col San Antoni	1.42	232	⇑*e*P	Pn	09 57 28.8	-0.2
HUMP	Col San Antoni	1.42	232	⇑*e*P	Pn	09 57 28.8	-0.2
HUMP				*e*S	Sn	09 57 45.7	-0.9
HUMP				*e*S	Sn	09 57 52.3	+5.7
CPD	Cerro la Pandu	1.54	230	⇓*e*P	Pn	09 57 29.0	-1.4
CPD				*e*S	Sn	09 57 49.4	0.0
AOPR	Arecibo Observ	2.09	251	⇑*e*P	Pn	09 57 37.6	-0.3
AOPR	Arecibo Observ	2.09	251	*e*S	Sn	09 58 02.2	-0.5
AOPR	Arecibo Observ	2.09	251	⇑*e*P	Pn	09 57 37.8	-0.1
AOPR	Arecibo Observ	2.09	251	*e*S	Sn	09 58 04.8	+2.1
AOPR	Arecibo Observ	2.09	251	⇑*e*P	Pn	09 57 37.8	-0.1
AOPR				*e*S	Sn	09 58 02.2	-0.5
AOPR				*e*S	Sn	09 58 04.8	+2.1
CRPR	Cabo Rojo, PR	2.53	247	⇑*e*P	Pn	09 57 43.5	-0.4
CRPR	Cabo Rojo, PR	2.53	247	*e*S	Sn	09 58 12.9	-0.6
CRPR	Cabo Rojo, PR	2.53	247	⇑*e*P	Pn	09 57 44.2	+0.2
CRPR	Cabo Rojo, PR	2.53	247	⇑*e*P	Pn	09 57 44.2	+0.2
CRPR				*e*S	Sn	09 58 12.9	-0.6

ISCJB **16** *10:12:54.0±2.0, 56S±0.1×1470E±0.1, h144^{km}±17^{km}, mb3.9/3, Error ellipse: s-maj=25.0km s-min=16.2km az=106.6*
NEIC **16** *10:12:54.5±3.3, 542S×14706E, h155^{km}±24^{km}, mb4.2/4, Error ellipse: s-maj=42.7km s-min=16.0km az=170.0*
IDC **16** *10:12:58.8±2.5, 591S×147.16E, h179^{km}±17^{km}, mb3.6/3, mb1 3.9/6, mb1mx3.5/15, mbtmp4.4/6, MS3.3/1, Ms1 3.2/1, ms1mx2.6/15, Error ellipse: s-maj=32.5km s-min=19.0km az=134.0*
ISC 16 10:12:58.5±1.8**, 59S**±01×**1471E**±01**, h174**^{km}±14^{km}**, n15, σ0^{s}79**/17**, mb3.9**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.54	180	P	Pn	10 13 53.0	-0.5
	28nm,0.3s,baz=7.1,slow=8.1,SNR=91						
PMG				S	Sn	10 14 36.3	0.0
	10nm,0.3s,baz=339,slow=22,SNR=4.3						
HNR	Honiara	13.18	106	P	Pn	10 15 59.2	+0.2
	9.8nm,0.3s,baz=171,slow=0.5,SNR=4.4						
CTA	Charters Tower	14.18	183	P	Pn	10 16 15.9	+4.3
	0.5nm,0.3s,baz=29,slow=22,SNR=7.6						
KAKA	Kakadu	16.03	244	*e*P	Pn	10 16 33.2	-1.1
	4.2nm,0.3s						
WRAB	Tennant Creek	18.73	220	*e*P	P	10 17 04.8	+0.9
	15nm,0.6s						
WB2	Warramunga Arr	18.73	220	*e*P	P	10 17 04.4	+0.5
WRA	Warramunga Arr	18.74	220	P	P	10 17 04.7	+0.7
	1.6nm,0.3s,baz=48,slow=12,SNR=94						
WRA				S	S	10 20 27.0	-1.1
	0.0nm,0.3s,baz=48,slow=18,SNR=5.2						
AS31	Alice Springs	21.82	214	*e*P	P	10 17 37.3	+0.4
ASAR	Alice Springs	21.82	214	P	P	10 17 37.5	+0.6
	9.3nm,0.8s,mb4.2,baz=49,slow=8.4,SNR=117						
ASAR				S	S	10 21 27.1	+1.0
	2.1nm,1.1s,baz=41,slow=18,SNR=3.1						
ASPA	Alice Springs	21.83	214	*e*P	P	10 17 37.4	+0.4
FITZ	Fitzroy Crossi	24.27	238	*e*P	P	10 18 00.0	+0.5
	3.3nm,0.4s,mb4.2						
FITZ	Fitzroy Crossi	24.27	238	P	P	10 17 58.9	-0.6
	2.7nm,0.6s,mb3.9,baz=67,slow=10,SNR=17						
STKA	Stephens Creek	26.41	191	LR	LR	10 28 46.6	
	comp=Z,69nm,21.2s,baz=20,slow=36						
VNDA	Vanda	72.06	177	P	P	10 24 02.0	-1.5
	0.6nm,0.8s,mb3.4,baz=324,slow=5.3,SNR=5.2						
VNDA	Vanda	72.06	177	*e*P	P	10 24 01.7	-1.7
	0.4nm,0.6s,mb3.3						

IDC **16** *10:38:02.9±2.4, 604S×13048E, h0^{km}, mb4.6/1, mb1 4.7/4, mb1mx4.1/13, mbtmp4.5/4, ML4.4/3, Error ellipse: s-maj=111.1km s-min=26.9km az=77.0*
NEIC **16** *10:38:04.9±1.2, 604S×13060E, h15^{km}, mb4.0/1, Error ellipse: s-maj=23.3km s-min=12.6km az=67.0*
ISCJB **16** *10:38:05.9±1.4, 62S±0.1×1306E±02, h33^{km}, mb4.6/1, Error ellipse: s-maj=28.5km s-min=12.5km az=130.2*
ISC 16 10:38:08.0±1.4**, 61S**±01×**1306E**±02**, h35**^{km}**, n11, σ0^{s}51**/12**, mb4.6**/1**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.80	165	*e*P	Pn	10 39 50.8	+5.5
	66nm,0.6s						
KAKA				*e*S	Sn	10 41 00.9	-0.6
FITZ	Fitzroy Crossi	12.87	202	*e*P	Pn	10 41 07.9	-0.5
	13nm,0.2s						
FITZ				*e*S	Sx	10 43 20.2	
FITZ	Fitzroy Crossi	12.87	202	Pn	Pn	10 41 08.2	-0.2
	3.1nm,0.3s,baz=32,slow=12,SNR=131						
FITZ				Sn	Sx	10 43 19.0	
	1.0nm,0.3s,baz=60,slow=18,SNR=4.7						
WRAB	Tennant Creek	14.21	166	*e*Pn	Pn	10 41 27.5	+0.8
	9.9nm,0.6s						
WRAB				*e*Sn	Sx	10 43 50.4	
WRA	Warramunga Arr	14.22	166	Pn	Pn	10 41 26.2	-0.6
	1.6nm,0.3s,baz=339,slow=14,SNR=36						
WRA				Sn	Sx	10 43 51.2	
	2.7nm,0.3s,baz=340,slow=22,SNR=7.9						
WB2	Warramunga Arr	14.22	166	*e*P	Pn	10 41 26.3	-0.5
WB2				*e*S	Sx	10 43 54.6	
AS31	Alice Springs	17.74	170	*e*P	Pn	10 42 12.6	+0.5
AS31				*e*S	Sx	10 45 14.6	
ASAR	Alice Springs	17.74	170	P	Pn	10 42 12.7	+0.5
	0.9nm,0.3s,baz=346,slow=9.7,SNR=50						
ASAR				S	Sx	10 45 14.3	
	0.5nm,0.3s,baz=346,slow=24,SNR=5.8						
ASPA	Alice Springs	17.74	170	*e*P	Pn	10 42 12.6	+0.4
ASPA				*e*S	S	10 45 14.6	-20
MBWA	Marble Bar	18.30	214	*e*P	Pn	10 42 19.3	+0.2
	4.9nm,0.4s						
MKAR	Makanchi Array	67.82	326	P	P	10 49 02.0	-0.4
	2.4nm,0.4s,mb4.6,baz=119,slow=8.0,SNR=18						

ISCJB **16** *11:21:54.2±0.6, 4352N±005×1390E±0.1, h263^{km}±6^{km}, mb3.5/6, Error ellipse: s-maj=14.1km s-min=8.2km az=32.9*
IDC **16** *11:21:54.6±1.9, 4360N×13889E, h250^{km}±18^{km}, mb3.3/6, mb1 3.5/7, mb1mx3.1/23, mbtmp3.9/7, Error ellipse: s-maj=33.5km s-min=13.3km az=101.0*
JMA **16** *11:21:54.3±0.2, 4360N×13893E, h255^{km}±2^{km}, M2.9*
ISC 16 11:21:55.1±0.6**, 4352N**±006×**1391E**±01**, h258**^{km}±6^{km}**, n23, σ0^{s}81**/31**, mb3.5**/6**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	Shakotan	1.04	98	P	Pn	11 22 30.8	-0.3
JSK				*e*S	S	11 22 59.1	-0.4
JOSM	Okushiri--Mats	1.46	168	P	Pn	11 22 34.0	+0.2
JOSM				*e*S	S	11 23 04.8	+0.4
JYG	Yagishiri	1.93	61	P	Pn	11 22 36.8	-0.8
JHR	Hokuryu	1.94	82	P	Pn	11 22 37.9	+0.2
JKB	Kayabe	2.18	138	P	Pn	11 22 39.9	+0.1
JKB				*e*S	S	11 23 15.5	+0.4
JOT	Ohata	2.59	145	P	Pn	11 22 44.0	+0.3
ASAJ	Asahikawa	2.63	76	P	Pn	11 22 44.1	0.0
	1.1nm,0.3s,baz=272,slow=6.9,SNR=13						
JKK2	Kamakawa 2	2.69	81	P	Pn	11 22 45.1	+0.3
JKK2				*e*S	S	11 23 25.1	+0.9
JWK2	Keihoku	2.71	47	P	Pn	11 22 45.2	+0.2
JSE	Soyaes	2.91	59	P	Pn	11 22 47.1	0.0
JNBK	Urakawa-nobuka	2.98	113	P	Pn	11 22 49.1	+1.3
JNBK				*e*S	S	11 23 29.6	+0.1
JCH	Churui	3.27	104	*e*S	S	11 23 32.5	-2.9
JAR	Ashorobuto	3.44	92	P	Pn	11 22 53.4	+0.6
JAR				*e*S	S	11 23 38.9	+0.3
JANG	Nango	3.63	149	P	Pn	11 22 55.0	0.0
JANG				*e*S	S	11 23 39.8	-2.8
JMK	Ichinoseki	4.84	160	P	Pn	11 23 09.3	+0.2
JMK				*e*S	S	11 24 07.3	-0.9
NEM2	Nemuro 2	4.87	89	*e*S	S	11 24 04.0	-4.8
MJAR	Matsushiro Arr	7.00	186	P	Pn	11 23 36.5	+0.7
	0.5nm,0.3s,baz=1.2,slow=14,SNR=11						
INK	Inuvik	49.52	29	P	P	11 30 19.4	-0.4
	2.4nm,0.3s,mb4.0,baz=280,slow=6.2,SNR=37						
ARCES	ARCESS Array B	57.32	337	P	P	11 31 14.5	-1.7
	0.8nm,0.5s,mb3.4,baz=52,slow=8.4,SNR=5.9						
FINES	FINESS Array B	62.28	330	P	P	11 31 49.3	-0.6
	0.8nm,0.5s,mb3.6,baz=30,slow=13,SNR=3.9						
WRA	Warramunga Arr	63.29	185	P	P	11 31 57.0	+0.4
	0.6nm,0.3s,mb3.7,baz=1.0,slow=6.9,SNR=31						
WRA				PcP	PcP	11 32 32.1	+0.8
	0.2nm,0.4s,baz=0.2,slow=4.6,SNR=4.9						
ASAR	Alice Springs	67.02	185	P	P	11 32 21.5	+1.1
	0.6nm,0.8s,mb3.4,baz=2.8,slow=5.7,SNR=7.3						
PDAR	Pinedale Array	74.40	45	P	P	11 33 05.3	+0.5
	0.3nm,0.6s,mb3.1,baz=336,slow=3.3,SNR=3.5						

MAN 16 11:24:51.4, 1353N×**12033E, h33**^{km}**, mb2.3, ML3.9, MS3.5, 1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.22	337	*e*P	Pb	11 24 59.1	+0.9
LUBP				*e*S	Sb	11 25 05.3	+2.5
PGP	Puerto Galera	0.60	93	*e*P	Pn	11 25 03.9	+0.2
TGY	Tagaytay City	0.82	46	⇓*i*P	Pn	11 25 07.2	+0.6
TGY				*i* S	Sn	11 25 18.4	+0.9
BOAC	Boac	1.47	93	*e*P	Pn	11 25 15.6	0.0
BUSP	Coron	1.52	185	*e*P	Pn	11 25 17.4	+1.1
BUSP				*e*S	Sn	11 25 35.9	+0.9
ENPP	El Nido	2.48	201	*e*P	Pn	11 25 30.5	+1.1
ENPP				*e*S	Sn	11 25 58.9	+0.4

CSEM **16** *11:31:52.2, 3448N×2446E, h24^{km}, MD3.5/4, After ATH*
ATH 16 11:31:52.2, 3448N×**2446E, h24**^{km}**, MD3.5**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.47	319	*e*PB	Pb	11 32 02.0	+0.1
VAM	Vamos	0.95	347	*e*PN	Pn	11 32 10.5	+0.5
XRY	Khrisi	1.09	68	*e*PN	Pn	11 32 12.9	+0.9
NPS	Neapolis	1.23	50	*e*PN	Pn	11 32 15.6	+1.8

NEIC 16 11:39:43.6, 6321N×**15128W, h3**^{km}**, ML3.3**(AEIC)**, ML3.8**(PMR)**, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTH	Kantishna Hill	0.38	25	P	Pg	11 39 50.8	0.0
KTH				S	Sg	11 39 56.7	+1.0
TRF	Thorofare Moun	0.51	61	P	Pg	11 39 53.7	+0.4
TRF				S	Sg	11 40 01.4	+1.6
MCK	McKinley	1.17	63	P	Pg	11 40 05.4	-0.7
GHO	Glory Hole Cre	1.81	142	P	Pn	11 40 15.5	-0.1
PMR	Palmer	1.91	148	P	Pn	11 40 16.5	-0.5
FIB	Fire Island	2.12	165	P	Pn	11 40 21.5	+1.6
TTA	Tatalina	2.17	265	*e*P	Pn	11 40 19.3	-1.3
COLA	College	2.25	41	P	Pn	11 40 20.1	-1.5
RC01	Rabbit Creek A	2.25	161	P	Pn	11 40 22.0	+0.3
SLKM	Skilak Lake	2.76	169	P	Pn	11 40 29.2	+0.5
GCSA	Galena City Sc	2.91	304	P	Pn	11 40 31.2	+0.5
SVW2	Sparrevohn	2.93	225	P	Pn	11 40 31.4	+0.4
IMA2	Indian Mountai	3.05	341	*e*P	Pn	11 40 31.6	-1.0
SEW	Seward	3.24	164	P	Pn	11 40 35.9	+0.6
DIV	Divide	3.32	127	P	Pn	11 40 36.7	+0.3
MENT	Mentasta	3.45	91	*e*P	Pn	11 40 39.5	+1.3
EYAK	Cordova Ski Ar	3.74	133	P	Pn	11 40 43.1	+0.9
COLD	Coldfoot	4.06	6	P	Pn	11 40 46.3	-0.2
DAWY	Dawson	5.37	76	P	Pn	11 41 04.2	-0.3

ATH **16** *11:42:27.6, 4045N×1962E, h32^{km}±20^{km}, MD3.4/4*
TIR **16** *11:42:29.9, 4002N×1964E, h1^{km}, Ml3.1*
CSEM **16** *11:42:31.9±0.6, 40.11N×1952E, h8^{km}, ML3.1, Error ellipse: s-maj=12.6km s-min=5.9km az=86.0*
ISCJB **16** *11:42:31.2±0.8, 40.10N±003×1960E±006, h10^{km}, Error ellipse: s-maj=6.8km s-min=3.8km az=2.1*
NEIC **16** *11:42:32.8, 40.10N×1963E, h0^{km}, ML3.1(THE), After THE.*
THE **16** *11:42:32.9, 40.10N×1963E, h0^{km}, ML3.1*
ISC 16 11:42:32.2±0.9**, 4009N**±003×**1958E**±007**, h10**^{km}**, n22, σ1^{s}33**/33**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	Kerkira	0.41	156	*e*PN	Pg	11 42 42.5	+2.2
LSK	Leskovik	0.78	86	*i* Pg	Pg	11 42 44.9	-2.4
LSK				*i* Sg	Sg	11 42 54.8	-2.7
IGT	Igoumenitsa	0.81	134	*e*Pg	Pg	11 42 46.8	-0.9
IGT				*e*Sg	Sg	11 42 59.0	+0.8
JAN	Janina	1.07	114	*e*PN	Pn	11 42 50.7	-2.5
TIR	Tirane	1.27	10	*e*Pg	Pg	11 42 56.4	-0.2
TIR				*e*Sg	Sg	11 43 14.7	+1.5
TIR	Tirane	1.27	10	*i* Pg	Pg	11 42 56.4	-0.2
TIR	Tirane	1.27	10	*e*Pg	Pg	11 42 56.4	-0.2
TIR				*e*Sg	Sg	11 43 14.6	+1.5
MEV	Metsovon	1.30	103	*e*Pg	Pg	11 42 56.8	-0.4
MEV				*e*Sg	Sg	11 43 15.1	+1.0
OHR	Ohrid	1.38	42	*e*Pg	Pg	11 42 57.7	-0.9
OHR				*e*Sg	Sg	11 43 17.9	+1.5
FNA	Florina	1.53	63	*e*Pg	Pg	11 42 59.8	-1.8
FNA				*e*Sg	Sg	11 43 21.5	0.0
LKD	Levkas	1.61	149	*e*Pg	Pg	11 43 02.1	-1.1
LKD				*e*Sg	Sg	11 43 23.6	-0.5
BIA	Bitola	1.62	55	*e*Pg	Pg	11 43 01.3	-1.9
BIA				*e*Sg	Sg	11 43 23.5	-0.8
KZN	Kozani	1.69	82	*e*PB	Pn	11 42 55.9	-5.9
VLS	Valsamata	2.07	157	*e*PN	Pn	11 43 06.5	-0.5
EVR	Evrytania	2.08	124	*e*PN	Pn	11 43 05.7	-1.5
LIT	Litokhoron	2.23	89	*e*Pn	Pn	11 43 10.2	+1.0
LIT				*e*Sn	Sn	11 43 38.4	+1.6
AGG	Agios Georgios	2.38	116	*e*Pn	Pn	11 43 12.5	+1.3
AGG				*e*Sn	Sn	11 43 42.3	+1.9
HORT	Hortiatis	2.73	78	*e*Pn	Pn	11 43 17.5	+1.4
XOR	Xorichti	2.88	103	*e*Pn	Pn	11 43 19.0	+0.9
PAIG	Paliouri	3.15	92	P	Pn	11 43 21.8	0.0
PAIG	Paliouri	3.15	92	P	Pn	11 43 21.8	-0.1
AOS	Alonnisos	3.44	104	*e*Pn	Pn	11 43 26.9	+1.0

ISCJB **16** *11:42:43.6±1.1, 3853N±006×1418E±0.1, h60^{km}±8^{km}, mb3.4/2, Error ellipse: s-maj=19.3km s-min=6.4km az=44.7*
JMA **16** *11:42:45.2±0.1, 3854N×14172E, h53^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s195.00000°, δ23.00000°, λ97.00000°. NP2: ϕ_s8.00000°, δ67.00000°, λ87.00000°. Principal axes: T Plg68.0000°, Azm272.0000°; N Plg3.0000°, Azm9.0000°; P Plg22.0000°, Azm100.0000°;*
JMA Felt II J1.
IDC **16** *11:42:45.8±3.1, 3857N×14183E, h68^{km}±31^{km}, mb3.1/2, mb1 3.3/4, mb1mx3.0/22, mbtmp3.3/4, ML3.0/2 Error ellipse: s-maj=50.4km s-min=19.3km az=106.0*
ISC 16 11:42:45.0±1.1**, 3852N**±006×**1418E**±01**, h52**^{km}±9^{km}**, n12, σ0^{s}69**/19**, mb3.4**/2**, 1C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.33	258	⇓P	Pn	11 42 54.6	+0.1
JIO				S	Sn	11 43 01.0	-0.3
OFUJ	Ofunato	0.56	353	⇑P	Pn	11 42 57.1	+0.1
OFUJ				S	Sn	11 43 05.4	-0.3
JMK	Ichinoseki	0.60	316	⇓P	Pn	11 42 57.7	+0.2
JMK				S	Sn	11 43 06.3	-0.2
JOU	Okura	0.87	260	⇓P	Pn	11 43 00.8	-0.2
JOU				S	Sn	11 43 12.5	-0.3
JMM	Marumori	1.00	229	⇓P	Pn	11 43 02.3	-0.5
JMM				S	Sn	11 43 15.2	-0.7
JOM	Ohasama	1.01	339	⇓P	Pn	11 43 03.0	+0.1
JOM				S	Sn	11 43 16.2	+0.1
JYK	Kaneyama	1.16	290	⇓P	Pn	11 43 04.9	0.0
MAT	Matsushiro	3.45	236	P	Pn	11 43 37.8	+1.7
MJAR	Matsushiro Arr	3.45	236	P	Pn	11 43 38.0	+1.9
	1.1nm,0.3s,baz=34,slow=13,SNR=25						
ASAJ	Asahikawa	5.62	6	P	Pn	11 44 05.2	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	0.5nm,0.3s,baz=52,slow=26,SNR=4.2						
ASAJ				S	Sn	11 45 09.9	+0.7
	0.3nm,0.3s,baz=168,slow=12,SNR=2.0						
MKAR	Makanchi Array	43.58	301	P	P	11 50 43.3	-0.5
	0.2nm,0.4s,mb3.2,baz=90,slow=8.6,SNR=2.2						
WRA	Warramunga Arr	58.57	188	P	P	11 52 35.5	-0.8
	0.5nm,0.9s,mb3.5,baz=7.8,slow=7.7,SNR=4.6						
WRA				pP	pP	11 52 49.4	-1.1
	0.4nm,0.8s,baz=4.8,slow=7.2,SNR=4.7						

IDC 16 12:20:57.1±28.0, 1794S×17536W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/14, mbtmp4.1/4, Error ellipse: s-maj=563.0km s-min=151.4km az=88.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.16	242	P	P	12 28 43.8	+0.6
	3.0nm,0.8s,baz=87,slow=12,SNR=4.3						
WB2	Warramunga Arr	47.46	259	eP	P	12 29 34.2	+0.6
WRA	Warramunga Arr	47.48	259	P	P	12 29 34.3	+0.6
	0.9nm,0.4s,baz=98,slow=7.6,SNR=70						
ASAR	Alice Springs	47.57	254	P	P	12 29 34.8	+0.3
	1.4nm,0.4s,baz=86,slow=8.1,SNR=29						
ASPA	Alice Springs	47.57	254	eP	P	12 29 36.0	+1.5
FITZ	Fitzroy Crossi	55.88	260	eP	P	12 30 36.9	+0.4
	2.0nm,0.6s						
FITZ	Fitzroy Crossi	55.88	260	P	P	12 30 36.6	0.0
	0.8nm,0.4s,baz=125,slow=5.1,SNR=19						

NEIC 16 12:47:05.5, 1641N×9464W, h79km, MD3.7(MEX), After MEX.

MEX 16 12:47:05.5±0.6, 1641N×9464W, h79km±10km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.72	341	i P	Pn	12 47 20.1	-1.2
CMIG				i S	Sn	12 47 31.4	-1.6
HUIG	Huatulco	1.55	246	i P	Pn	12 47 29.9	-1.5
HUIG				i S	Sn	12 47 49.3	-1.6
TUIG	Tuzandepetl	1.63	7	i P	Pn	12 47 30.7	-1.7
TUIG				i S	Sn	12 47 50.6	-2.2
OXX	Oaxaca	2.11	289	i P	Pn	12 47 38.0	-0.8
OXX				i S	Sn	12 48 04.0	-0.1
VHO	Vista Hermosa	2.11	289	i P	Pn	12 47 38.4	-0.5
VHO				i S	Sn	12 48 02.6	-1.6
TPIG	Tehuac#an	3.28	308	eP	Pn	12 48 00.7	+6.1
TPIG				i S	Sn	12 48 30.9	-1.6
UTMO	Huajuapan	3.34	296	i P	Pn	12 47 55.2	-0.2
UTMO				i S	Sn	12 48 32.0	-2.0

MAN 16 12:53:48.7, 1350N×12144E, h15km, mb1.8, ML3.6, MS4.3, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOAC	Boac	0.39	96	eP	Pg	12 53 57.2	+0.6
BOAC				eS	Sg	12 54 04.3	+2.3
PGP	Puerto Galera	0.48	270	eP	Pg	12 53 58.4	+0.3
LUBP	Lubang	1.19	281	eP	Pn	12 54 09.6	-1.1
LUBP				eS	Sb	12 54 25.2	-0.9
BUSP	Coron	1.92	219	eP	Pn	12 54 21.7	+0.9
BUSP				eS	Sn	12 54 45.4	+0.6

CSEM 16 13:06:52.6, 3645N×5439E, h14km, ML3.7, After THR

THR 16 13:06:52.6±1.0, 3645N×5439E, h14km±6km, ML3.7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	1.82	48	ePg	Pg	13 07 25.6	-2.0
MRVT				AML	AML	13 07 57.5	
	comp=E,5μm,0.3s						
MRVT				AML	AML	13 07 57.9	
	comp=N,5μm,0.1s						
DAMV	Damavand	2.12	248	ePG	Pg	13 07 31.2	-2.1
DAMV				eSG	Sg	13 07 59.0	-1.8
DAMV				AML	AML	13 08 00.3	
	comp=E,187nm,0.3s						
DAMV				AML	AML	13 08 03.2	
	comp=N,158nm,0.2s						
DAMV	Damavand	2.12	248	ePg	Pg	13 07 31.2	-2.1
	SNR=90						
DAMV				eSg	Sg	13 07 59.0	-1.8
	comp=N,158nm,0.2s,SNR=90						
CHTH	Charan	2.69	259	ePN	Pn	13 07 37.9	+2.4
CHTH				AML	AML	13 08 12.7	
	comp=N,54nm,0.6s						
THKV	Tehran--Karaj	2.89	260	ePN	Pn	13 07 40.5	+2.4
THKV				Sn	Sn	13 08 15.5	+2.9
THKV				AML	AML	13 08 21.9	
	comp=E,202nm,0.3s						
THKV				AML	AML	13 08 24.0	
	comp=N,224nm,0.4s						
THKV	Tehran--Karaj	2.89	260	ePn	Pn	13 07 40.5	+2.4
	SNR=52						
THKV				Sn	Sn	13 08 15.5	+2.9
	comp=N,224nm,0.4s,SNR=52						
NASN	Na'in	3.87	200	ePn	Pn	13 07 54.1	+2.5

NIED 16 13:10:00, 3060N×13130E, h26km, Mw4.0 Best double couple: M₀1.28000×10¹⁵ NP1:φs198.00000°, δ57.00000°, λ-85.00000°. NP2:φs9.00000°, δ34.00000°, λ-98.00000°.
ISCJB 16 13:10:59.1±0.6, 3065N±004×13128E±007, h50km±5km, mb4.0/18, MS3.3/1, Error ellipse: s-maj=10.8km s-min=6.3km az=46.1
JMA 16 13:10:59.2±0.1, 3063N×13133E, h35km±1km, M4.1
JMA Felt I J1.
NEIC 16 13:10:59.3, 3063N×13133E, h35km, mb4.4/6, After JMA.
IDC 16 13:11:00.8±2.5, 3076N×131.16E, h46km±24km, mb3.7/13, mb1 3.9/16, mb1mx3.8/25, mbtmp3.9/16, ML3.4/3, MS3.3/2, Ms1 3.3/2, ms1mx2.6/24, Error ellipse: s-maj=22.3km s-min=14.0km az=80.0

ISC 16 13:11:00.5±0.6, 3067N±004×13122E±007, h44km±4km, n33, σ0.84/38, mb4.0/18, MS3.3/1, 3C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	Tanegashima 3	0.20	265	⇑P	Pn	13 11 07.0	-1.2
JTN				S	Sn	13 11 12.8	-0.8
JTSR	Tashiro 2	0.55	333	⇑P	Pn	13 11 11.6	-0.5
JTSR				S	Sn	13 11 20.6	+0.3
JNAR	Kushima--Naru	0.85	3	⇓P	Pn	13 11 15.8	-0.2
JKC	Kuchinoerabu	0.91	257	⇑P	Pn	13 11 17.2	+0.4
JKC				eS	Sn	13 11 30.6	+1.9
JSU	Suzuyama	1.06	322	P	Pn	13 11 19.0	+0.2
JTZ	Takazaki	1.23	355	⇓P	Pn	13 11 21.6	+0.4
JTZ				eS	Sn	13 11 38.2	+1.6
JNN	Nakanoshima	1.43	235	P	Pn	13 11 24.6	+0.7
JZO	Okuchi	1.56	340	⇓P	Pn	13 11 26.0	+0.3
JTSN	Tsuno	1.59	9	P	Pn	13 11 25.7	-0.4
JOW	Kunigami	4.62	215	P	Pn	13 12 08.2	+0.6
	3.5nm,0.3s,baz=96,slow=19,SNR=8.3						
JOW				S	Sn	13 12 58.0	-2.0
	11nm,0.3s,baz=85,slow=29,SNR=10						
MAJO	Matsushiro	8.26	43	ePn	Pn	13 12 57.7	0.0
MJAR	Matsushiro Arr	8.26	43	P	Pn	13 12 58.0	+0.3
	0.8nm,0.3s,baz=247,slow=14,SNR=10						
ASAJ	Asahikawa	16.16	31	P	Pn	13 14 43.6	-0.7
	0.2nm,0.3s,baz=246,slow=29,SNR=2.9						
ASAJ				LR	LR	13 21 07.3	
	comp=Z,68nm,18.1s,baz=210,slow=38						
ULN	Ulaanbaatar	25.23	320	eP	P	13 16 22.6	+0.5
	1.4nm,0.5s,mb3.8						
SONM	Songino Array	25.58	319	P	P	13 16 24.8	-0.6
	0.7nm,0.5s,mb3.4,baz=132,slow=9.6,SNR=5.7						
SONM				LR	LR	13 26 57.1	
	comp=Z,75nm,18.1s,MS3.3,baz=185,slow=38						
MKAR	Makanchi Array	40.73	307	P	P	13 18 36.4	-0.6
	0.3nm,0.6s,mb3.1,baz=87,slow=12,SNR=2.6						
CHKZ	Chkalovo	48.73	316	eP	P	13 19 39.5	-1.1
	0.8nm,0.4s,mb4.1						
BVAR	Borovoye Array	48.84	316	P	P	13 19 41.2	-0.2
	1.5nm,0.3s,mb4.5,baz=93,slow=9.3,SNR=7.3						
BRVK	Borovoye	48.90	316	eP	P	13 19 41.9	-0.1
	2.0nm,0.3s,mb4.6						
BRVK				epP	pP	13 19 47.9	-6.4
ZRNK	Zerenda	49.67	315	eP	P	13 19 47.3	-0.6
	1.4nm,0.6s,mb4.2						
WRAB	Tennant Creek	50.40	176	eP	P	13 19 53.7	+0.3
	4.7nm,0.6s,mb4.7						
WB2	Warramunga Arr	50.41	176	eP	P	13 19 54.0	+0.6
WRA	Warramunga Arr	50.41	176	P	P	13 19 53.7	+0.3
	2.7nm,0.7s,mb4.4,baz=354,slow=8.3,SNR=34						
ASAR	Alice Springs	54.09	177	P	P	13 20 22.1	+1.4
	1.2nm,0.5s,mb4.1,baz=10,slow=13,SNR=39						
STKA	Stephens Creek	62.98	170	eP	P	13 21 23.6	+1.0
	3.1nm,0.6s,mb4.6						
STKA	Stephens Creek	62.98	170	P	P	13 21 23.4	+0.8
	3.7nm,0.6s,mb4.7,baz=340,slow=5.6,SNR=12						
INK	Inuvik	63.78	24	P	P	13 21 28.1	+0.2
	1.7nm,0.9s,mb4.1,baz=341,slow=10,SNR=4.9						
FINES	FINESS Array B	70.30	330	P	P	13 22 07.4	-1.9
	1.0nm,0.5s,mb4.0,baz=57,slow=7.0,SNR=5.8						
AKASG	Malin Array Be	73.86	320	P	P	13 22 29.7	-0.9
	1.2nm,0.4s,mb4.2,baz=55,slow=6.1,SNR=4.6						
BRTR	Keskin Array B	76.38	308	P	P	13 22 45.9	+0.8
	1.0nm,0.8s,mb3.8,baz=79,slow=7.5,SNR=6.5						
NOA	NORSAR Array B	76.48	334	P	P	13 22 45.1	-0.5
	0.5nm,0.4s,mb3.8,baz=49,slow=5.5,SNR=3.3						
NVAR	Mina Array Bea	85.56	48	P	P	13 23 35.0	+1.0
	0.5nm,0.7s,mb3.8,baz=284,slow=8.0,SNR=4.2						
PDAR	Pinedale Array	88.07	40	P	P	13 23 45.6	-0.6
	0.2nm,0.4s,mb3.7,baz=325,slow=1.1,SNR=3.4						

ISCJB 16 13:21:23.9±1.0, 3485S±008×1790E±0.1, h168km±8km, mb4.3/12, Error ellipse: s-maj=15.2km s-min=12.3km az=135.5
NEIC 16 13:21:23.7±1.6, 3481S×179.18E, h168km±12km, mb4.6/7, Error ellipse: s-maj=21.3km s-min=12.6km az=222.0
IDC 16 13:21:26.5±2.0, 3479S×17894E, h190km±17km, mb3.9/6, mb1 4.1/8, mb1mx4.0/12, mbtmp4.4/8, Error ellipse: s-maj=19.2km s-min=17.6km az=79.0

ISC 16 13:21:24.4±1.1, 3483S±008×1790E±01, h161km±9km, n141, σ1.12/86, mb4.3/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.79	192	P	Pn	13 22 10.1	+0.6
MXZ	Matakaoa Point	2.79	192	PN	Pn	13 22 09.9	+0.4
MXZ				SN	Sn	13 22 44.2	-0.3
MXZ				SN	Sn	13 22 45.5	+1.0
PUZ	Puketiti	3.29	191	PN	Pn	13 22 15.9	0.0
PUZ				SN	Sn	13 22 55.9	+0.1
KUZ	Kuaotunu	3.30	234	eP	Pn	13 22 18.6	+2.7
KUZ	Kuaotunu	3.30	234	PN	Pn	13 22 18.6	+2.7
MARZ	Manawahe	3.68	210	P	Pn	13 22 22.0	+1.3
MARZ	Manawahe	3.68	210	PN	Pn	13 22 21.9	+1.2
MWZ	Matawai	3.70	199	P	Pn	13 22 21.1	+0.1
MWZ	Matawai	3.70	199	PN	Pn	13 22 21.1	+0.1
URZ	Urewera	3.75	204	P	Pn	13 22 23.1	+1.4
	72nm,0.3s,baz=19,slow=3.9,SNR=233						
URZ				S	Sn	13 23 06.2	-0.1
	84nm,0.3s,baz=205,slow=21,SNR=16						
URZ	Urewera	3.75	204	P	Pn	13 22 21.5	-0.2
URZ	Urewera	3.75	204	PN	Pn	13 22 21.2	-0.5
KARZ	Kaharoa	3.90	214	PN	Pn	13 22 25.1	+1.5
KNZ	Kokohu	4.32	194	P	Pn	13 22 27.7	-1.4
KNZ	Kokohu	4.32	194	PN	Pn	13 22 27.4	-1.7
OUZ	Omahuta	4.47	263	eP	Px	13 22 33.4	
OUZ	Omahuta	4.47	263	PN	Px	13 22 33.8	
WHTZ	Whakaora	4.55	212	P	Pn	13 22 33.8	+1.7
WHTZ	Whakaora	4.55	212	PN	Pn	13 22 33.4	+1.3
HATZ	Hinemaiaia	4.69	209	P	Pn	13 22 33.6	-0.2
HATZ	Hinemaiaia	4.69	209	ePN	Pn	13 22 33.5	-0.3
BKZ	Black Stump Fm	4.78	204	eP	Pn	13 22 34.1	-1.0
BKZ	Black Stump Fm	4.78	204	PN	Pn	13 22 33.5	-1.5
KATZ	Kakaramea	4.92	212	P	Pn	13 22 37.9	+0.9
KATZ	Kakaramea	4.92	212	ePN	Pn	13 22 37.4	+0.4
HIZ	Hauiti	4.97	221	P	Pn	13 22 40.0	+2.4
HIZ	Hauiti	4.97	221	PN	Pn	13 22 39.8	+2.1
KRVZ	Karewarewa	5.05	212	ePN	Pn	13 22 38.2	-0.4
WTVZ	West Tongariro	5.08	212	P	Pn	13 22 38.7	-0.4
WTVZ	West Tongariro	5.08	212	PN	Pn	13 22 38.5	-0.6
OTVZ	Oturere	5.09	211	PN	Pn	13 22 38.3	-0.9
TWVZ	Taurewa	5.12	213	P	Pn	13 22 39.2	-0.3
TWVZ	Taurewa	5.12	213	ePN	Pn	13 22 39.0	-0.5
NGZ	Ngauruhoe	5.13	211	P	Pn	13 22 39.1	-0.6
NGZ	Ngauruhoe	5.13	211	PN	Pn	13 22 38.8	-0.9
WPVZ	Whakapapa	5.18	212	P	Pn	13 22 40.9	+0.6
TUVZ	Tukino	5.18	210	ePN	Pn	13 22 39.5	-0.9
FWVZ	Far West T-bar	5.22	211	PN	Pn	13 22 39.6	-1.2
DRZ	Dome Shelter	5.23	211	P	Pn	13 22 41.6	+0.6
DRZ	Dome Shelter	5.23	211	PN	Pn	13 22 40.5	-0.4
TRVZ	Turoa	5.26	211	ePN	Pn	13 22 41.3	0.0
MOVZ	Moawhango	5.26	209	P	Pn	13 22 39.3	-2.1
MOVZ	Moawhango	5.26	209	ePN	Pn	13 22 39.0	-2.4
MTVZ	Mangateitei	5.36	211	ePN	Pn	13 22 41.4	-1.3
PXZ	Pawanui	5.47	198	ePN	Pn	13 22 40.4	-3.7
VRZ	Vera Road	5.48	217	P	Pn	13 22 46.5	+2.2
TSZ	Takapari Road	5.76	204	P	Pn	13 22 44.9	-3.1
TSZ	Takapari Road	5.76	204	ePN	Pn	13 22 44.4	-3.6
WAZ	Wanganui	5.88	212	P	Pn	13 22 48.1	-1.4
WAZ	Wanganui	5.88	212	ePN	Pn	13 22 47.7	-1.8
NEZ	North Egmont	5.93	220	P	Pn	13 22 51.9	+1.7
NEZ	North Egmont	5.93	220	ePN	Pn	13 22 51.6	+1.4
BFZ	Birch Farm	6.24	200	eP	Px	13 22 50.8	
BFZ	Birch Farm	6.24	200	ePN	Px	13 22 50.8	
MRZ	Mangatainoka R	6.43	204	eP	Px	13 22 52.9	
MRZ	Mangatainoka R	6.43	204	PN	Px	13 22 52.3	
TIWZ	Tintock	6.43	202	ePN	Px	13 22 53.6	
TIWZ				eSN	Sx	13 24 03.5	
KIW	Kapiti Island	6.84	207	P	Px	13 22 58.3	
KIW	Kapiti Island	6.84	207	ePN	Px	13 22 58.1	
MTW	Mount Morrison	6.90	203	P	Px	13 22 58.6	
MTW	Mount Morrison	6.90	203	ePN	Px	13 22 58.2	
CAW	Cannon Point	7.00	205	P	Px	13 22 59.8	
CAW	Cannon Point	7.00	205	ePN	Px	13 22 59.7	
TRWZ	Traveller	7.07	201	ePN	Px	13 23 01.2	
PAWZ	Paruwai Farm	7.13	202	P	Px	13 23 01.6	
PAWZ	Paruwai Farm	7.13	202	ePN	Px	13 23 01.0	
DUWZ	D'Urville Isla	7.20	213	ePN	Px	13 23 02.7	
MSWZ	Moikau Station	7.21	203	P	Px	13 23 02.7	
MSWZ	Moikau Station	7.21	203	ePN	Px	13 23 02.5	
MRW	Makara Radio	7.24	207	P	Px	13 23 03.6	
MRW	Makara Radio	7.24	207	ePN	Px	13 23 02.5	
WEL	Wellington	7.26	206	P	Px	13 23 03.6	
WEL	Wellington	7.26	206	ePN	Px	13 23 03.3	
SNZO	South Karori	7.31	207	P	Px	13 23 03.6	
SNZO	South Karori	7.31	207	ePN	Px	13 23 03.4	
BHW	Baring Head	7.34	205	P	Px	13 23 04.3	
BHW	Baring Head	7.34	205	ePN	Px	13 23 04.1	
TCW	Tory Channel	7.39	209	P	Px	13 23 04.9	
TCW	Tory Channel	7.39	209	ePN	Px	13 23 04.5	
TUWZ	Tuamarina	7.71	210	ePN	Px	13 23 08.4	
NNZ	Nelson	7.78	213	P	Px	13 23 10.1	
NNZ	Nelson	7.78	213	PN	Px	13 23 10.0	
QRZ	Quartz Range	7.89	219	P	Px	13 23 11.7	
QRZ	Quartz Range	7.89	219	ePN	Px	13 23 12.2	
BSWZ	Blackbirch Sta	7.97	209	P	Px	13 23 13.2	
BSWZ	Blackbirch Sta	7.97	209	ePN	Px	13 23 12.7	
THZ	Tophouse	8.43	213	eP	Px	13 23 18.2	
THZ	Tophouse	8.43	213	ePN	Px	13 23 18.0	
KHZ	Kahutara	8.70	208	P	Px	13 23 21.7	
KHZ	Kahutara	8.70	208	ePN	Px	13 23 21.4	
DSZ	Denniston Nort	8.94	217	eP	Px	13 23 26.0	
DSZ	Denniston Nort	8.94	217	ePN	Px	13 23 25.2	
LTZ	Lake Taylor	9.53	212	eP	Px	13 23 32.2	
LTZ	Lake Taylor	9.53	212	ePN	Px	13 23 31.8	
CRLZ	Canterbury Las	10.04	208	eP	Px	13 23 38.5	
CRLZ	Canterbury Las	10.04	208	ePN	Px	13 23 38.0	
MQZ	McQueen's Vall	10.14	207	eP	Px	13 23 39.3	
MQZ	McQueen's Vall	10.14	207	ePN	Px	13 23 38.9	
WVZ	Waitaha Valley	10.46	216	ePN	Px	13 23 44.9	
RPZ	Rata Peaks	10.81	212	P	Pn	13 23 49.1	-5.6
	1.7nm,0.3s,baz=163,slow=20,SNR=15						
RPZ				S	Sn	13 25 41.9	-12
	3.7nm,0.3s,baz=18,slow=20,SNR=11						
RPZ	Rata Peaks	10.81	212	eP	Pn	13 23 49.2	-5.6
RPZ	Rata Peaks	10.81	212	ePN	Pn	13 23 49.0	-5.8
RPZ				SN	Sn	13 25 42.8	-12
FOZ	Fox Glacier	11.33	217	eP	Pn	13 23 55.0	-6.6
FOZ	Fox Glacier	11.33	217	ePN	Pn	13 23 54.6	-7.0
ODZ	Otahua Downs	12.05	210	eP	Pn	13 24 05.3	-5.7
ODZ	Otahua Downs	12.05	210	ePN	Pn	13 24 04.8	-6.2
JCZ	Jackson Bay	12.16	218	eP	Pn	13 24 06.9	-5.5
JCZ	Jackson Bay	12.16	218	ePN	Pn	13 24 06.6	-5.8
WKZ	Wanaka	12.59	215	eP	Pn	13 24 11.8	-6.1
DZM	Mont Dzumac	16.83	316	P	Pn	13 25 10.8	+0.2
	0.3nm,0.3s,baz=93,slow=12,SNR=4.5						
AFI	Afiamalu	22.43	24	P	P	13 26 09.1	-0.7
	18nm,0.5s,mb4.7,baz=0.7,slow=20,SNR=6.7						
AFI	Afiamalu	22.43	24	eP	P	13 26 09.5	-0.3
	22nm,0.6s,mb4.8						
STKA	Stephens Creek	31.29	265	P	P	13 27 32.8	+3.6
	1.8nm,0.6s,mb4.0,baz=102,slow=11,SNR=7.0						
AS31	Alice Springs	40.61	273	eP	P	13 28 47.8	-0.6
ASAR	Alice Springs	40.61	273	P	P	13 28 47.6	-0.8
	3.2nm,0.4s,mb4.3,baz=115,slow=7.8,SNR=70						
ASAR				ScP	ScP	13 34 14.8	-6.7
	0.5nm,0.6s,baz=113,slow=4.0,SNR=6.6						
ASPA	Alice Springs	40.61	273	eP	P	13 28 47.9	-0.5
ASPA				e		13 28 51.1	
WB2	Warramunga Arr	42.01	279	eP	P	13 28 59.0	-0.7
WB2				e		13 29 03.4	
WRAB	Tennant Creek	42.01	279	eP	P	13 28 59.0	-0.7
	7.2nm,0.4s,mb4.7						
WRA	Warramunga Arr	42.02	279	P	P	13 28 59.2	-0.7
	4.8nm,0.5s,mb4.4,baz=118,slow=7.7,SNR=36						
FORT	Forrest	42.66	261	eP	P	13 29 07.2	+2.1
	20nm,0.7s,mb4.8						
VNDA	Vanda	43.45	185	P	P	13 29 12.6	+1.2
	0.5nm,0.6s,mb3.4,baz=350,slow=8.8,SNR=3.6						
KLBR	Kellerberrin	50.67	255	eP	P	13 30 07.6	+0.3
	10nm,0.6s,mb4.6						
MUN	Mundaring	51.76	254	eP	P	13 30 15.9	+0.5
QSPA	South Pole Qui	55.29	180	eP	P	13 30 42.5	+1.4
	12nm,0.4s,mb5.0						
MAW	Mawson	67.28	202	P	P	13 32 00.4	-1.3
	0.6nm,0.3s,mb3.8,baz=140,slow=4.0,SNR=11						
MAW				PcP	PcP	13 32 26.0	-2.2
	1.1nm,0.5s,baz=90,slow=4.0,SNR=4.2						
MAW	Mawson	67.28	202	eP	P	13 32 00.4	-1.3
	0.8nm,0.4s,mb3.9						
MAW				ePcP	PcP	13 32 27.3	-0.9
MAW				ePP	PP	13 34 30.6	-1.3
PLCA	Paso Flores	81.29	134	P	P	13 33 23.1	+0.4
	1.5nm,0.8s,mb3.7,baz=243,slow=9.2,SNR=4.5						
PLCA	Paso Flores	81.29	134	eP	P	13 33 23.5	+0.9
	1.6nm,0.7s,mb3.8						
NVAR	Mina Array Bea	93.17	44	P	P	13 34 20.9	+0.6
	0.4nm,0.6s,mb3.8,baz=226,slow=7.2,SNR=3.2						
MKAR	Makanchi Array	118.65	309	PKP	PKPdf	13 39 50.0	-3.3
	0.7nm,0.5s,baz=112,slow=1.3,SNR=4.5						
JOF	Joensuu	145.47	334	epkp	PKPdf	13 40 39.5	-3.7
KAF	Kangasniemi	147.74	336	epkp	PKPdf	13 40 42.5	-4.5
FINES	FINESS Array B	148.29	335	PKPbc	PKPbc	13 40 48.5	-3.1
	6.2nm,0.6s,baz=43,slow=4.6,SNR=38						
DBIC	Dimbokro	151.75	172	PKPbc	PKPbc	13 40 59.7	-0.1
	5.3nm,0.9s,baz=297,slow=4.1,SNR=6.5						
DBIC	Dimbokro	151.75	172	PKPbc	PKPbc	13 40 59.7	-0.1
BR131	Keskin Array S	152.14	290	ePKPbc	PKPbc	13 40 58.7	-2.0
BRTR	Keskin Array B	152.14	290	PKPbc	PKPbc	13 40 58.2	-2.5
	2.7nm,0.5s,baz=142,slow=3.5,SNR=14						
NB2	NORSAR Subarra	152.63	347	PKPa	PKPbc	13 40 58.6	-3.2
	comp=Z,1.8nm,0.6s,baz=21,slow=2.3						
NOA	NORSAR Array B	152.63	347	PKPbc	PKPbc	13 40 58.8	-3.0
	comp=Z,2.6nm,0.7s,baz=29,slow=2.0,SNR=11						
AKASG	Malin Array Be	152.99	315	PKPbc	PKPbc	13 40 59.6	-3.0
	comp=Z,1.4nm,0.5s,baz=79,slow=2.0,SNR=4.2						
TORD	Torodi Ar. Bea	158.28	187	PKP	PKPdf	13 41 01.2	-1.0
	comp=Z,1.1nm,0.9s,baz=170,slow=2.6,SNR=4.7						
TORD				PKPab	PKPab	13 41 36.1	-1.1
	comp=Z,1.3nm,0.6s,baz=166,slow=4.5,SNR=12						

ISCJB 16 13:31:34.8±0.7, 77.11N±004×202E±03, h10km, Error ellipse: s-maj=9.2km s-min=4.2km az=125.6
CSEM 16 13:31:36.5±0.5, 77.10N×20.17E, h20km, ML3.3, Error ellipse: s-maj=14.6km s-min=6.2km az=59.0
NAO 16 13:31:37.8±1.9, 77.11N×1979E, h9km±11km, ML3.0
HEL 16 13:31:38.2±0.8, 7706N×1968E, h10km, ML3.0, MD2.7(BER), ML3.3(BER)
BER 16 13:31:39.9±2.5, 77.10N×1930E, h7km, MD2.7, ML3.3, ML3.0(NAO)

ISC 16 13:31:37.4±0.9, 7706N±004×192E±03, h6km±8km, n20, σ0.93/36, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSP	Hornsund	0.82	268	ePg	Pg	13 31 55.7	+2.5
HSP				i Sg	Sg	13 32 10.5	+6.6
SPA0	Spitsbergen Ar	1.28	333	eP	Pn	13 32 01.4	-0.3
SPA0				ePN	Pg	13 32 02.9	+0.9
SPA0				eSG	Sg	13 32 19.0	+0.4
SPA0	Spitsbergen Ar	1.28	333	Pn	Pn	13 32 01.4	-0.3
	baz=147,slow=22						
SPA0				Pg	Pg	13 32 02.9	+0.9
	baz=145,slow=22						
SPA0				Lg		13 32 19.0	
	baz=138,slow=37						
SPA0	Spitsbergen Ar	1.28	333	Pg	Pg	13 32 02.8	+0.9
	SNR=93						
HOPEN	Hopen	1.45	109	eP	Pn	13 32 04.5	+0.5
HOPEN				eS	Sn	13 32 24.0	+0.7
HOPEN				AML	AML	13 32 26.1	
	comp=N,2μm,0.4s						
KBS	Kingsbay	2.41	325	Pn	Pn	13 32 17.2	-0.1
KBS				Pg	Pg	13 32 22.0	-1.6
KBS				Lg		13 32 54.0	
KBS	Kingsbay	2.41	325	eP	Pn	13 32 17.2	-0.1
KBS				eSG	Sg	13 32 54.2	-0.7
KBS				AML	AML	13 33 00.3	
	comp=Z,126nm,0.6s						
KBS	Kingsbay	2.41	325	Pg	Pg	13 32 22.0	-1.6
KBS				eSg	Sg	13 32 54.2	-0.7
	SNR=92						
BJO	Bjornoya	2.57	180	ePg	Pg	13 32 26.1	-0.4
BJO				eS	Sn	13 32 50.9	0.0
BJO1	Bjornoya	2.57	181	ePG	Pg	13 32 26.1	-0.5
BJO1				eS	Sn	13 32 50.9	-0.1
KEV	Kevo	7.66	159	eP	Pn	13 33 30.6	+1.1
KEV				MPN		13 33 33.5	
	comp=Z,0.9nm,0.2s						
KEV				eS	Sn	13 34 48.2	-8.4
KEV	Kevo	7.66	159	P	Pn	13 33 30.5	+1.1
	comp=Z,0.9nm,0.2s						
ARA0	ARCESS Array S	7.77	163	Pn	Pn	13 33 31.0	+0.1
	baz=354,slow=11						
ARA0				Sn	Sn	13 34 51.0	-8.2
	baz=2.0,slow=22						
ARA0	ARCESS Array S	7.77	163	eP	Pn	13 33 31.0	+0.1
ARA0				eS	Sn	13 34 51.0	-8.2
KIF	Kilpisjarvi	8.11	176	eP	Pn	13 33 36.1	+0.5
KIF				MPN		13 33 40.0	
	comp=Z,0.8nm,0.2s						
KIF				eS	Sn	13 34 58.2	-9.4
KIF	Kilpisjarvi	8.11	176	P	Pn	13 33 36.0	+0.4
	comp=Z,0.8nm,0.2s						
SGF	Sodankyl	9.91	163	eS	Sn	13 35 41.2	-10
KU4	Liikasenvaara	11.20	158	eP	Pn	13 34 17.1	-0.8
KU4				MPN		13 34 21.5	
	comp=Z,0.4nm,0.2s						
KU4				eS	Sn	13 36 11.3	-12
KU4	Liikasenvaara	11.20	158	P	Pn	13 34 17.1	-0.8
	comp=Z,0.4nm,0.2s						
MSF	Maaselka	11.60	160	eP	Pn	13 34 21.6	-1.8
MSF				eS	Sn	13 36 20.4	-13

JMA 16 14:35:53.5±0.6, 4556N×15157E, h30km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.71	244	P	Pn	14 37 01.5	-1.0
NEM2				eS	Sn	14 37 51.7	-4.4
JRA	Rausu	4.87	253	P	Pn	14 37 06.9	+2.2
JNK	Nakash	5.28	250	P	Pn	14 37 11.2	+0.9
JNK				eS	Sn	14 38 07.2	-2.9
JAK	Akkeshi	5.56	245	P	Pn	14 37 13.3	-0.9
JAK				eS	Sn	14 38 12.7	-4.3
JTKR	Abashiri--Toko	5.68	256	P	Pn	14 37 18.2	+2.4
JAR	Ashorobuto	6.03	251	P	Pn	14 37 21.9	+1.3
JAR				eS	Sn	14 38 27.2	-1.3
JMP	Maruseppu	6.05	258	P	Pn	14 37 23.7	+2.9
JCH	Churui	6.60	246	P	Pn	14 37 28.4	-0.1
JCH				eS	Sn	14 38 38.4	-4.3
JKB	Kayabe	8.47	248	P	Pn	14 37 53.5	-0.6
JKB				eS	Sn	14 39 21.8	-6.8
JANG	Nango	9.01	238	eS	Sn	14 39 31.4	-10

BJI **16** *14:46:57.7, 0.11S×125.61E, h37km, mB5.0, mb4.9, Ms4.6, Msz4.2*
NEIC **16** *14:46:59.5±0.2, 0.45N×125.40E, h10km, mb5.0/45, Error ellipse: s-maj=7.2km s-min=3.8km az=70.0*
NEIC Felt [III] at Bitung and [II] at Manado, Indonesia.
MOS **16** *14:47:02.7±0.9, 0.45N×125.36E, h47km, mb5.3/36, Error ellipse: s-maj=12.1km s-min=6.1km az=113.6*
ISCJB **16** *14:47:06.4±0.5, 0.39N±0.03×125.45E±0.04, h82km±5km, mb4.9/97, Error ellipse: s-maj=6.6km s-min=3.9km az=136.8*
IDC **16** *14:47:06.0±1.9, 0.35N×125.42E, h61km±15km, mb4.5/21, mb1 4.5/22, mb1mx4.5/24, mbtmp4.8/22, MS3.7/8, Ms1 3.7/8, ms1mx3.3/25, Error ellipse: s-maj=18.8km s-min=8.3km az=68.0*
ISC 16 14:47:08.5±0.5**, 0.37N**±0.03×**125.47E**±0.04**, h85**km±4km**, h83**km±6.9km**: pP-P, n218,** σ1.14/219**, mb4.9**/97**, 16C-9D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	4.87	146	P	Pn	14 48 16.9	-2.3
	424nm,0.8s						
PCI	Palu	5.77	257	P	Pn	14 48 29.4	-2.1
	408nm,1.1s						
SWI	Sorong	5.92	102	P	Pn	14 48 32.1	-1.5
	189nm,0.8s						
MATI	Mati	6.58	7	eP	Pn	14 48 43.4	+0.8
DAV	Davao City (W)	6.66	1	Pn	Pn	14 48 37.3	-6.3
DAV				eSn	Sn	14 50 10.5	+13
CTBH	Cotabato--PC H	6.91	350	⇓iP	Pn	14 48 46.7	-0.4
BUKP	Musuan	7.47	357	eP	Pn	14 48 56.1	+1.4
PAGZ	Pagadian	7.71	344	eP	Pn	14 48 57.0	-1.0
IPIL	Ipil	7.91	339	⇓iP	Pn	14 49 00.1	-0.6
IPIL	Ipil	7.91	339	eP	Pn	14 49 00.1	-0.6
TSM	Tawau	8.53	297	P	Pn	14 49 08.6	-0.5
BUTP	Butuan	8.54	1	eP	Pn	14 49 10.7	+1.4
SCPH	Surigao	9.35	0	⇓eP	Pn	14 49 21.5	+1.2
BAKI	Biak	10.75	98	P	Pn	14 49 39.4	0.0
	135nm,1.4s						
KKM	Kota Kinabalu	10.82	302	P	Pn	14 49 42.7	+2.4
KKM	Kota Kinabalu	10.82	302	ePn	Pn	14 49 41.9	+1.6
BATP	Bataraza	11.33	318	eP	Pn	14 49 47.8	+0.5
ENPP	El Nido	12.32	331	eP	Pn	14 50 01.4	+0.7
BUSP	Coron	12.68	336	eP	Pn	14 50 06.8	+1.2
LUBP	Lubang	14.25	339	eP	Pn	14 50 30.7	+4.6
TGY	Tagaytay City	14.36	342	P	Pn	14 50 31.5	+3.9
	7.6nm,0.3s,baz=139,slow=9.3,SNR=4.7						
KAKA	Kakadu	14.72	152	eP	Pn	14 50 28.7	-3.5
	32nm,0.6s						
KSM	Kuching	15.19	274	⇑ePn	Pn	14 50 41.9	+3.7
KRKI	Karangkates	15.49	237	P	Pn	14 50 47.8	+5.8
	334nm,1.1s						
BALP	Baler	15.75	346	eP	Pn	14 50 46.9	+1.6
CAUP	Cauayan	16.85	348	eP	Pn	14 50 59.6	+0.7
CAUP				eS	pP	14 51 13.8	-2.4
BJII	Banjamegara	17.48	244	P	Pn	14 51 08.6	+2.0
	86nm,1.7s						
ABRA	Dolores	17.80	345	eP	Pn	14 51 09.1	-1.4
APYP	Conner	17.87	347	eP	Pn	14 51 10.8	-0.6
FITZ	Fitzroy Crossi	18.36	179	eP	Pn	14 51 16.3	-0.9
	14nm,0.9s						
FITZ	Fitzroy Crossi	18.36	179	P	Pn	14 51 15.9	-1.4
	0.2nm,0.3s,baz=22,slow=6.4,SNR=11						
JCJI	Jatiwangi	18.46	248	P	Pn	14 51 20.6	+2.1
	190nm,1.1s						
LEM	Lembang	19.19	248	P	Pn	14 51 26.0	-1.1
	94nm,0.8s						
CBJI	Citeko	19.77	250	P	Pn	14 51 31.7	-2.2
	163nm,1.0s						
WRAB	Tennant Creek	21.98	157	P	P	14 51 54.0	-1.3
	444nm,0.6s,mb6.0,SNR=39						
WRAB	Tennant Creek	21.98	157	eP	P	14 51 54.0	-1.3
WRAB				e		14 55 52.2	
WRAB				eS	S	14 55 56.6	+3.6
WRAB				pmax	pmax		
	comp=Z,69nm,0.7s,mb5.1						
WRAB	Tennant Creek	21.98	157	eP	P	14 51 54.0	-1.3
	comp=Z,69nm,0.7s,mb5.1						
WRAB				ePcP	PcP	14 55 52.2	+1.4
WRAB				eS	S	14 55 56.5	+3.6
WRA	Warramunga Arr	21.98	157	P	P	14 51 54.1	-1.3
	comp=Z,42nm,0.6s,mb4.9,baz=338,slow=10,SNR=288						
WRA				S	S	14 55 51.6	-1.4
	comp=Z,3.7nm,0.9s,baz=339,slow=16,SNR=4.4						
WB2	Warramunga Arr	21.99	157	⇓iP	P	14 51 54.1	-1.3
WB2				eS	S	14 55 49.5	-3.6
MBWA	Marble Bar	22.12	194	eP	P	14 51 55.6	-1.2
	comp=Z,7.2nm,0.6s,mb4.2						
MBWA				eS	S	14 56 02.6	+7.2
PMG	Port Moresby	23.68	115	P	P	14 52 13.1	+0.8
	comp=Z,7.5nm,0.6s,mb4.2,baz=294,slow=12,SNR=3.6						
PMG	Port Moresby	23.68	115	⇑eP	P	14 52 14.1	+1.8
QIZ	Qiongzhong	24.06	321	eP	P	14 52 13.8	-1.8
	comp=Z,47nm,1.4s,mb4.6						
YHNB	Yeheng	24.48	351	eP	P	14 52 17.4	-2.1
IPM	Ipoh	24.75	280	P	pP	14 52 39.7	-1.6
PPI	Padang Panjang	25.08	268	P	P	14 52 26.0	+1.0
	comp=Z,40nm,1.1s,mb4.8						
KULM	Kulim	25.25	282	eP	P	14 52 25.8	-0.8
AS31	Alice Springs	25.26	162	⇓iP	P	14 52 27.3	+0.7
AS31				eS	S	14 56 46.4	+0.3
ASPA	Alice Springs	25.26	162	⇓iP	P	14 52 27.3	+0.7
ASPA				eS	S	14 56 46.4	+0.3
ASAR	Alice Springs	25.26	162	P	P	14 52 27.3	+0.7
	comp=Z,32nm,0.8s,mb4.8,baz=334,slow=6.8,SNR=225						
ASAR				PcP	PcP	14 55 60.0	+2.2
	comp=Z,2.2nm,0.5s,baz=348,slow=2.0,SNR=7.4						
ASAR				S	S	14 56 46.9	+0.8
	comp=Z,1.9nm,1.0s,baz=358,slow=23,SNR=4.3						
ASAR				ScP	ScP	14 59 33.6	+4.4
	comp=Z,2.0nm,0.8s,baz=339,slow=2.7,SNR=8.1						
ASAR	Alice Springs	25.26	162	P	P	14 52 27.3	+0.7
ASAR						14 56 00.0	
ASAR				S	S	14 56 46.9	+0.8
JOW	Kunigami	26.45	6	P	P	14 52 36.7	-0.6
	comp=Z,53nm,0.9s,mb5.0,baz=215,slow=6.7,SNR=8.9						
JOW				LR	LR	15 03 02.0	
	comp=Z,93nm,19.1s,baz=282,slow=36						
PSI	Prapat	26.64	275	P	P	14 52 38.4	-0.6
	comp=Z,13nm,0.7s,mb4.6,baz=94,slow=6.9,SNR=13						
PSI				LR	LR	15 02 11.8	
	comp=Z,210nm,20.8s,baz=260,slow=34						
NANT	Nan	30.43	308	⇑P	P	14 53 14.0	+1.2
	comp=Z,125nm,0.4s,mb5.9						
SSE	Sheshan	30.82	353	eP	P	14 53 15.3	-0.9
SSE				AP	pP	14 53 24.4	-11
SSE				XP	sP	14 53 27.8	-18
SSE				PP	PP	14 54 24.8	-2.4
SSE				PCP	PcP	14 56 11.8	+0.4
SSE				S	S	14 58 16.8	+3.2
SSE				XS	sS	14 58 33.6	-14
SSE				SCS	ScS	15 03 49.8	+6.6
SSE				AMB	AMB		
	comp=Z,36nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,63nm,5.3s						
SSE				LR	LR		
	comp=Z,101nm,27.4s						
FORT	Forrest	31.08	176	eP	P	14 53 19.0	+0.6
	comp=Z,21nm,0.7s,mb5.0						
GYA	Guiyang	31.63	327	⇑iP	P	14 53 23.8	+0.5
GYA				PP	PP	14 54 34.0	-2.2
GYA				PPP		14 54 38.8	
GYA				S	S	14 58 24.4	-1.8
GYA				SCP	ScP	14 59 47.3	-1.8
GYA				SCS	ScS	15 03 43.8	-3.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,110nm,4.2s						
GYA				LR	LR		
	comp=N,490nm,17.4s						
GYA				LR	LR		
	comp=E,380nm,17.0s						
GYA				LR	LR		
	comp=Z,400nm,16.8s						
CHG	Chiang Mai	31.83	307	⇑P	P	14 53 25.4	+0.3
	comp=Z,18nm,1.0s,mb4.8						
CHTO	Chiang Mai	31.83	307	eP	P	14 53 25.0	-0.1
CHTO				pmax	pmax		
	comp=Z,38nm,1.4s,mb4.9						
CHTO	Chiang Mai	31.83	307	eP	P	14 53 25.0	-0.1
	comp=Z,38nm,1.4s,mb4.9						
NJ2	Nanjing	32.12	349	eP	P	14 53 27.5	-0.1
NJ2				PP	PP	14 54 37.8	-3.8
NJ2				S	S	14 58 31.0	-2.9
NJ2				XS	sS	14 58 57.0	-11
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,350nm,4.5s						
NJ2				LR	LR		
	comp=N,550nm,34.7s						
NJ2				LR	LR		
	comp=E,330nm,14.1s						
NJ2				LR	LR		
	comp=Z,480nm,15.4s						
KLBR	Kellerberrin	32.62	192	eP	P	14 53 33.4	+1.4
	comp=Z,14nm,1.0s,mb4.8						
KMI	Kunming	32.98	320	P	P	14 53 36.8	+1.6
KMI				PP	PP	14 54 50.5	-0.7
KMI				S	S	14 58 48.1	+0.9
KMI				SS	SS	15 00 54.9	-18
KMI				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.8						
KMI				LR	LR		
	comp=Z,136nm,34.9s						
MUN	Mundaring	33.34	194	eP	P	14 53 38.8	+0.5
STKA	Stephens Creek	35.52	156	eP	P	14 53 57.8	+0.7
	comp=Z,11nm,0.8s,mb4.8						
STKA	Stephens Creek	35.52	156	P	P	14 53 58.0	+0.9
	comp=Z,14nm,0.8s,mb5.0,baz=318,slow=9.4,SNR=19						
HNR	Honiara	35.69	107	P	P	14 53 58.7	+0.2
	comp=Z,40nm,0.8s,mb5.4,baz=286,slow=5.8,SNR=3.7						
CD2	Chengdu	36.70	328	eP	P	14 54 06.6	-0.5
CD2				PP	PP	14 55 34.6	+2.4
CD2				S	S	14 59 44.1	-0.2
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
CD2				LR	LR		
	comp=E,80nm,15.6s						
CD2				LR	LR		
	comp=Z,80nm,15.6s						
XAN	Xi'an	36.91	337	P	P	14 54 07.6	-1.3
XAN				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.5						
MJAR	Matsushiro Arr	37.88	17	P	P	14 54 16.9	-0.2
	comp=Z,13nm,0.7s,mb4.9,baz=192,slow=8.2,SNR=45						
MJAR				PcP	PcP	14 56 33.3	+1.6
	comp=Z,1.7nm,0.7s,baz=174,slow=2.1,SNR=5.2						
MJAR				LR	LR	15 09 26.6	
	comp=Z,55nm,19.9s,baz=195,slow=35						
MJAR	Matsushiro Arr	37.88	17	P	P	14 54 16.9	-0.2
MJAR						14 56 33.3	
MAJO	Matsushiro	37.88	17	eP	P	14 54 16.3	-0.8
MAJO				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
MAJO	Matsushiro	37.88	17	eP	P	14 54 16.3	-0.9
	comp=Z,15nm,0.6s,mb5.0						
MAT	Matsushiro	37.88	17	P	P	14 54 16.7	-0.4
MAT	Matsushiro	37.88	17	eP	P	14 54 17.0	-0.1
MAT				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.9						
MAT	Matsushiro	37.88	17	eP	P	14 54 17.0	-0.1
	comp=Z,24nm,1.1s,mb4.9						
ARMA	Armidale	39.46	143	eP	P	14 54 30.8	+0.5
BJT	Baijiatuau	40.36	349	eP	P	14 54 35.5	-2.3
BJT				pmax	pmax		
	comp=Z,17nm,0.8s						
BJT	Baijiatuau	40.36	349	eP	P	14 54 35.5	-2.3
	comp=Z,17nm,0.8s,mb4.9						
BJI	Beijing	40.38	349	P	P	14 54 35.6	-2.3
LZH	Lanzhou	40.82	333	eP	P	14 54 43.5	+1.9
LZH				PP	PP	14 56 22.5	+5.3
LZH				eS	S	15 00 48.8	+2.5
LZH				eSS	SS	15 03 49.8	-0.6
LZH				AMB	AMB		
	comp=Z,25nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,134nm,6.3s						
LZH				LR	LR		
	comp=N,597nm,14.2s						
LZH				LR	LR		
	comp=Z,936nm,17.8s						
SNY	Shenyang	41.30	358	⇑P	P	14 54 45.9	+0.4
SNY				AMB	AMB		
	comp=Z,33nm,0.7s,mb5.3						
CNB	Canberra Magne	41.93	150	eP	P	14 54 52.6	+2.0
	comp=Z,9.1nm,1.0s,mb4.5						
HHC	Hu-ho-hao-te	42.22	344	eP	P	14 54 55.8	+2.8
HHC				PP	PP	14 56 38.4	+6.1
HHC				PCP	PcP	14 56 47.9	+2.3
HHC				SCP	ScP	15 00 28.5	+0.1
HHC				PCS	PcS	15 00 38.8	+1.3
HHC				S	S	15 01 10.5	+3.5
HHC				SS	SS	15 04 15.8	-2.2
HHC				SCS	ScS	15 04 45.3	-1.2
HHC				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,75nm,9.8s						
HHC				LR	LR		
	comp=N,116nm,21.8s						
HHC				LR	LR		
	comp=E,102nm,22.8s						
HHC				LR	LR		
	comp=Z,66nm,23.7s						
CN2	Changchun	43.24	360	eP	P	14 55 04.8	+3.5
LSA	Lhasa	43.80	315	eP	P	14 55 06.4	+0.7
LSA				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.8						
LSA	Lhasa	43.80	315	eP	P	14 55 06.4	+0.6
	comp=Z,11nm,0.6s,mb4.8						
MDJ	Mudanjiang	44.21	4	P	P	14 55 10.3	+1.3
MDJ				PP	PP	14 56 54.3	+0.8
MDJ				SCP	ScP	15 00 38.9	+2.4
MDJ				PCS	PcS	15 00 46.6	+1.0
MDJ				SCS	ScS	15 05 00.8	+1.9
MDJ				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,47nm,3.8s						
MDJ				LR	LR		
	comp=Z,41nm,19.8s						
MDJ	Mudanjiang	44.21	4	eP	P	14 55 07.9	-1.1
	comp=Z,13nm,0.8s,mb4.7						
GTA	Gaotai	45.38	332	eP	P	14 55 18.3	0.0
GTA				PCP	PcP	14 56 58.3	+2.0
GTA				PP	PP	14 57 07.1	+1.2
GTA				SCP	ScP	15 00 45.5	+4.2
GTA				S	S	15 01 52.8	-0.2
GTA				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.6						
GTA				AMB	AMB		
	comp=Z,51nm,6.1s						
GTA				LR	LR		
	comp=N,50nm,14.1s						
GTA				LR	LR		
	comp=E,51nm,16.0s						
GTA				LR	LR		
	comp=Z,66nm,14.1s						
JIRN	Jiri	46.40	309	eP	P	14 55 27.3	+0.9
	comp=Z,32nm,0.5s,mb5.3						
GUN	Gumba	46.76	309	eP	P	14 55 30.1	+0.9
	comp=Z,90nm,0.7s,mb5.6						
PKI	Pulchoki	46.97	309	eP	P	14 55 30.9	+0.1
KKN	Kakani	47.17	309	eP	P	14 55 32.9	+0.5
	comp=Z,30nm,0.7s,mb5.1						
KKN	Kakani	47.17	309	eP	P	14 55 32.9	+0.5
KKN				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
DMN	Daman	47.22	308	eP	P	14 55 32.9	+0.2
	comp=Z,44nm,0.9s,mb5.2						
GKN	Gorkha	47.77	309	eP	P	14 55 37.5	+0.5
	comp=Z,61nm,0.9s,mb5.5						
KOLN	Koldanda	48.48	308	eP	P	14 55 43.1	+0.6
	comp=Z,91nm,0.6s,mb5.8						
HABR	Khabarovsk	48.63	8	⇑iP	P	14 55 44.5	+0.9
HABR				eS	S	15 02 46.4	+7.2
HABR				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
YSS	Yuzh-Sakhalins	48.80	16	⇑eP	P	14 55 45.0	+0.1
YSS				e	pP	14 56 07.0	+1.3
YSS				pmax	pmax		
	comp=Z,20nm,0.4s,mb5.4						
YSS	Yuzh-Sakhalins	48.80	16	eP	P	14 55 45.4	+0.5
	comp=Z,18nm,0.8s,mb5.0						
HIA	Hailar	48.96	355	eP	P	14 55 46.4	+0.3
HIA				e		14 57 10.2	
HIA				pmax	pmax		
	comp=Z,25nm,1.3s						
HIA	Hailar	48.96	355	eP	P	14 55 46.4	+0.2
	comp=Z,25nm,1.3s,mb5.0						
HIA				ePcP	PcP	14 57 10.2	+1.1
KLR	Kul'dur	48.97	5	eP	P	14 55 42.9	-3.3
HYB	Hyderabad	49.15	293	iP	P	14 55 47.5	-0.1
HYB	Hyderabad	49.15	293	eP	P	14 55 47.0	-0.6
ULN	Ulaanbaatar	49.94	344	eP	P	14 55 53.2	-0.4
ULN				e		14 57 13.6	
ULN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
ULN	Ulaanbaatar	49.94	344	eP	P	14 55 53.2	-0.3
	comp=Z,3.3nm,0.5s,mb4.5						
ULN				ePcP	PcP	14 57 13.6	+1.0
SONM	Songino Array	50.09	343	P	P	14 55 54.6	-0.2
	comp=Z,2.5nm,0.5s,mb4.4,baz=158,slow=8.3,SNR=20						
SONM				PcP	PcP	14 57 14.2	+1.0
	comp=Z,1.8nm,0.6s,baz=162,slow=4.3,SNR=4.8						
SONM				ScP	ScP	15 01 04.9	+3.7
	comp=Z,0.5nm,0.9s,baz=151,slow=3.3,SNR=3.1						
SONM				LR	LR	15 19 12.9	
	comp=Z,58nm,20.7s,baz=162,slow=38						
SONM	Songino Array	50.09	343	P	P	14 55 54.6	-0.2
SONM						14 57 14.2	
SONM	Songino Array	50.09	343	P	P	14 55 54.6	-0.2
SONM				PcP	PcP	14 57 14.2	+1.0
SONM				ScP	ScP	15 01 04.9	+3.7
SONM				LR	LR	15 19 12.9	
ZAK	Zakamensk	53.29	342	eP	P	14 56 17.7	-0.8
ZAK				e		14 57 25.9	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
TLY	Talaya	54.34	343	⇑iP	P	14 56 26.2	0.0
TLY	Talaya	54.34	343	eP	P	14 56 26.3	+0.1
	comp=Z,6.9nm,0.7s,mb4.8						
WMQ	Urumqi	54.79	327	eP	P	14 56 31.0	+1.6
WMQ				PP	PP	14 58 36.0	+3.1
WMQ				S	S	15 04 03.0	-0.7
WMQ				SCS	ScS	15 06 08.0	-2.5
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,74nm,14.0s						
WMQ				LR	LR		
	comp=E,86nm,14.0s						
WMQ				LR	LR		
	comp=Z,89nm,15.0s						
BOD	Bodaibo	58.00	353	eP	P	14 56 52.6	+0.3
BOD				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.5						
PET	Petropavlovsk	59.29	23	⇑eP	P	14 57 00.8	-0.4
PET				pmax	pmax		
	comp=Z,31nm,1.6s,mb5.1						
MK31	Makanchi Array	59.62	327	P	P	14 57 02.7	-0.8
MK31				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.3						
MKAR	Makanchi Array	59.62	327	P	P	14 57 03.0	-0.5
	comp=Z,18nm,0.5s,mb5.3,baz=121,slow=7.5,SNR=130						
MKAR				PcP	PcP	14 57 50.4	+0.5
	comp=Z,5.9nm,0.6s,baz=121,slow=5.2,SNR=6.2						
MKAR				ScP	ScP	15 01 45.9	+3.0
	comp=Z,0.6nm,0.6s,baz=119,slow=4.4,SNR=4.2						
MKAR	Makanchi Array	59.62	327	P	P	14 57 03.0	-0.5
MKAR						14 57 50.4	
MKAR	Makanchi Array	59.62	327	P	P	14 57 03.0	-0.5
MKAR				PcP	PcP	14 57 50.4	+0.5
MKAR				ScP	ScP	15 01 45.9	+3.0
RPZ	Rata Peaks	59.80	143	P	P	14 57 05.9	+1.2
	comp=Z,5.6nm,0.8s,mb4.6,baz=254,slow=7.4,SNR=3.2						
URZ	Urewera	61.02	135	P	P	14 57 13.7	+0.7
	comp=Z,7.9nm,1.0s,mb4.7,baz=288,slow=3.2,SNR=4.2						
YAK	Yakutsk	61.59	2	eP	P	14 57 16.1	-0.7
YAK				pmax	pmax		
	comp=N,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK	Yakutsk	61.59	2	eP	P	14 57 16.7	-0.1
	comp=E,70nm,0.7s,mb5.8						
AAK	Ala-Archa	62.03	320	⇑iP	P	14 57 20.6	+0.8
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
AAK	Ala-Archa	62.03	320	eP	P	14 57 20.0	+0.2
	comp=Z,16nm,1.3s,mb4.9						
MA2	Magadan	62.25	14	eP	P	14 57 22.6	+1.3
MA2				e		14 57 31.4	
MA2				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.4						
MA2	Magadan	62.25	14	eP	P	14 57 22.6	+1.3
	comp=Z,34nm,0.8s,mb5.4						
MA2				e		14 57 31.4	
ZAL	Zalesovo	63.02	334	P	P	14 57 25.4	-1.0
	comp=Z,5.8nm,0.6s,mb4.7,baz=343,slow=6.2,SNR=25						
NVS	Novosibirsk	64.31	334	eP	P	14 57 33.0	-1.9
NVS				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8						
NVS				pmax	pmax		
	comp=N,15nm,1.4s						
NVS				pmax	pmax		
	comp=E,28nm,1.5s						
KK31	Karatay Array	64.85	319	iP	P	14 57 38.1	-0.3
KK31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
KKAR	Karatay Array	64.85	319	P	P	14 57 38.1	-0.3
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
CASY	Casey	67.36	186	P	P	14 57 55.1	+0.7
	comp=Z,3.8nm,0.9s,mb4.2						
VOSK	Vostochnaya	69.00	328	P	P	14 58 03.6	-1.1
VOSK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
BVA0	Borovoye Array	69.46	328	P	P	14 58 07.5	0.0
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BVAR	Borovoye Array	69.46	328	LR	LR	15 28 59.7	
	comp=Z,30nm,18.9s,baz=143,slow=36						
BRVK	Borovoye	69.53	328	eP	P	14 58 06.4	-1.6
BRVK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.8						
BRVK	Borovoye	69.53	328	eP	P	14 58 06.4	-1.5
	comp=Z,19nm,1.1s,mb4.8						
CHKZ	Chkalovo	69.65	329	eP	P	14 58 07.8	-1.0
CHKZ				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.0						
CHKZ	Chkalovo	69.65	329	eP	P	14 58 07.8	-1.0
	comp=Z,25nm,1.1s,mb5.0						
ZRNK	Zerenda	70.16	328	P	P	14 58 11.2	-0.6
ZRNK				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.9						
ZRNK	Zerenda	70.16	328	eP	P	14 58 10.9	-0.9
	comp=Z,22nm,0.7s,mb5.1						
TIXI	Tiksi	71.20	1	⇑eP	P	14 58 17.8	-0.4
TIXI				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.7						
BILL	Bilibino	73.10	15	⇓eP	P	14 58 30.7	+1.2
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s,mb4.2						
AB31	Akbulak array	73.96	322	P	P	14 58 34.1	-0.4
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
SVE	Sverdlovsk	76.16	329	eP	P	14 58 45.8	-1.4
SVE				e	pP	14 59 04.0	-5.5
SVE				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.0						
ARU	Arti	77.10	328	P	P	14 58 52.8	+0.3
	comp=Z,126nm,0.8s,mb5.7,SNR=5.7						
ARU	Arti	77.10	328	⇑iP	P	14 58 51.6	-0.9
ARU				e		14 59 01.8	
ARU				e		15 01 45.0	
ARU				eS	S	15 08 38.5	+3.9
ARU				eSS	SS	15 13 35.6	+2.2
ARU				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.8						
ARU	Arti	77.10	328	eP	P	14 58 51.4	-1.0
	comp=Z,18nm,0.8s,mb4.9						
UMR	Umm Al-Rimmam	79.16	300	eP	P	14 59 04.0	+0.1
UMR				AMb	AMB	14 59 06.9	
	comp=Z,31nm,0.8s,mb5.2						
RDF	Al-Radifah	79.24	299	eP	P	14 59 04.2	-0.2
RDF				AMb	AMB	14 59 07.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,32nm,0.8s,mb5.2						
MIB	Mutribah	79.51	300	eP	P	14 59 05.5	-0.3
MIB				AMb	AMB	14 59 08.7	
	comp=Z,34nm,0.8s,mb5.2						
NAY	Al-Naaiem	79.54	300	eP	P	14 59 06.0	0.0
NAY				AML	AML	14 59 08.0	
	comp=Z,8.6nm,0.6s						
MAW	Mawson	80.19	200	eP	P	14 59 10.9	+1.5
	comp=Z,3.1nm,0.7s,mb4.2						
MAW	Mawson	80.19	200	P	P	14 59 10.4	+1.0
	comp=Z,2.7nm,0.8s,mb4.1,baz=57,slow=5.5,SNR=15						
MAW	Mawson	80.19	200	P	P	14 59 10.4	+1.0
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VNDA	Vanda	80.28	172	P	P	14 59 10.8	+0.9
	comp=Z,1.1nm,0.8s,baz=308,slow=5.9,SNR=10						
VNDA	Vanda	80.28	172	P	P	14 59 10.8	+0.9
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	80.28	172	eP	P	14 59 10.0	+0.1
	comp=Z,2.0nm,0.8s,mb4.0						
SBA	Scott Base	81.21	172	P	P	14 59 16.1	+1.2
SBA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
SBA	Scott Base	81.21	172	P	P	14 59 16.1	+1.3
	comp=Z,2.3nm,0.8s,mb4.1						
GNI	Garni	82.66	310	P	P	14 59 25.7	+3.2
GNI				pmax	pmax		
	comp=Z,17nm,0.9s						
GNI	Garni	82.66	310	P	P	14 59 25.7	+3.2
	comp=Z,17nm,0.9s,mb4.9						
ZEI	Tsey	83.55	313	eP	P	14 59 27.8	+0.7
ZEI				e		15 02 37.2	
ZEI				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
SVW2	Sparrevohn	84.34	29	eP	P	14 59 31.8	+0.7
TTA	Tatalina	84.45	27	eP	P	14 59 32.9	+1.3
TTA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
TTA	Tatalina	84.45	27	eP	P	14 59 32.9	+1.2
	comp=Z,13nm,1.0s,mb4.7						
KIV	Kislovodsk	84.53	314	⇓P	P	14 59 33.0	+0.9
KIV				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
KIV	Kislovodsk	84.53	314	P	P	14 59 32.6	+0.6
	comp=Z,13nm,0.7s,mb5.0						
KDAK	Kodiak Island	85.39	32	P	P	14 59 38.0	+1.7
	comp=Z,13nm,0.7s,mb5.0,baz=247,slow=6.6,SNR=15						
KDAK	Kodiak Island	85.39	32	eP	P	14 59 37.5	+1.2
	comp=Z,18nm,0.8s,mb5.0						
VRHR	Novokhopersk	85.83	321	eP	P	14 59 38.9	+0.3
VRHR				pmax	pmax		
	comp=Z,100nm,0.6s,mb5.9						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.3s						
VRHR				pmax	pmax		
	comp=E,20nm,0.5s						
SLKM	Skilak Lake	86.87	30	eP	P	14 59 43.4	-0.2
VRSR	Storozhevoye	87.37	321	eP	P	14 59 45.8	-0.3
VRSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VRSR				pmax	pmax		
	comp=E,9.0nm,0.7s						
MALT	Malatya	87.44	308	eP	P	14 59 47.9	+1.5
MALT				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
MALT	Malatya	87.44	308	eP	P	14 59 47.9	+1.5
	comp=Z,28nm,1.4s,mb5.0						
PMR	Palmer	87.48	28	eP	P	14 59 47.2	+0.6
PMR				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
PMR	Palmer	87.48	28	eP	P	14 59 47.2	+0.6
	comp=Z,4.6nm,0.6s,mb4.6						
KLMR	Klimovskoe	87.69	331	eP	P	14 59 46.6	-1.0
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
KMBO	Kilima Mbogo	88.22	269	P	P	14 59 52.4	+2.3
	comp=Z,12nm,0.8s,mb5.0,baz=58,slow=7.6,SNR=30						
KMBO				LR	LR	15 36 43.8	
	comp=Z,79nm,19.5s,baz=88,slow=34						
KMBO	Kilima Mbogo	88.22	269	eP	P	14 59 52.5	+2.4
KMBO				pmax	pmax		
	comp=Z,20nm,1.1s						
KMBO	Kilima Mbogo	88.22	269	eP	P	14 59 52.5	+2.4
	comp=Z,20nm,1.1s,mb5.1						
COLA	College	88.25	25	eP	P	14 59 50.9	+0.7
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
COLA	College	88.25	25	eP	P	14 59 50.9	+0.6
	comp=Z,4.3nm,0.8s,mb4.5						
ANN	Anapa	88.34	315	eP	P	14 59 50.0	-0.7
ANN				pmax	pmax		
	comp=Z,42nm,0.7s,mb5.6						
OBN	Obninsk	89.06	325α	eP	P	14 59 53.5	-0.6
OBN				e	pP	15 00 17.2	+0.3
OBN				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
EIL	Elat	90.27	300	eP	P	14 59 58.1	-1.6
	comp=Z,108nm,0.7s						
SIM	Simferopol'	90.70	315	eP	P	15 00 01.3	-0.4
SIM				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.2						
BR131	Keskin Array S	91.17	310	eP	P	15 00 03.3	-0.6
	comp=Z,2.1nm,0.6s,mb4.4						
BRTR	Keskin Array B	91.17	310	P	P	15 00 03.8	-0.1
	comp=Z,2.3nm,0.7s,mb4.4,baz=116,slow=6.6,SNR=12						
JOF	Joensuu	91.57	333	ep	P	15 00 03.9	-1.8
	comp=Z,4.5nm,0.6s,mb4.9						
DAWY	Dawson	91.93	26	eP	P	15 00 08.2	+0.8
ARCES	ARCESS Array B	93.14	340	P	P	15 00 11.8	-1.1
	comp=Z,3.0nm,0.6s,mb4.8,baz=91,slow=5.8,SNR=14						
ARCES				LR	LR	15 44 29.0	
	comp=Z,32nm,20.5s,baz=111,slow=37						
SPB4	Spitsbergen Ar	93.51	349	eP	P	15 00 11.7	-3.0
AKASG	Malin Array Be	93.68	321	P	P	15 00 14.5	-0.9
	comp=Z,1.7nm,0.6s,mb4.6,baz=68,slow=4.4,SNR=8.5						
AKASG	Malin Array Be	93.68	321	P	P	15 00 14.5	-0.9
KAF	Kangasniemi	93.97	332	ep	P	15 00 14.9	-1.9
	comp=Z,1.9nm,0.4s,mb4.8						
KAF	Kangasniemi	93.97	332	eP	P	15 00 14.9	-1.9
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.8						
FINES	FINESS Array B	94.17	332	P	P	15 00 16.2	-1.5
	comp=Z,0.9nm,0.5s,mb4.4,baz=90,slow=3.8,SNR=7.0						
VSU	Vasula	94.26	329c	iP	P	15 00 13.9	-4.2
BOSA	Boshof	99.14	241	LR	LR	15 42 02.4	
	comp=Z,88nm,21.4s,baz=164,slow=33						
NB2	NORSAR Subarra	101.20	333	P	Pdif	15 00 48.0	-1.4
	comp=Z,2.8nm,1.2s,baz=69,slow=4.6						
NOA	NORSAR Array B	101.20	333	P	Pdif	15 00 48.2	-1.2
	comp=Z,0.9nm,0.8s,baz=67,slow=4.6,SNR=3.5						
NOA	NORSAR Array B	101.20	333	P	Pdif	15 00 48.2	-1.2
ULM	Lac du Bonnet	118.49	29	PKP	PKPdf	15 05 47.1	+0.9
	comp=Z,1.7nm,0.5s,baz=292,slow=4.2,SNR=5.2						
ANMO	Albuquerque	120.19	48	⇓iPKIKP	PKPdf	15 05 52.8	+3.3
MNTX	Cornudas Mount	122.33	51	ePKPdf	PKPdf	15 05 55.7	+2.1
TORD	Torodi Ar. Bea	122.69	286	PKP	PKPdf	15 05 56.2	+1.9
	comp=Z,3.5nm,0.7s,baz=66,slow=1.8,SNR=24						
TORD	Torodi Ar. Bea	122.69	286	PKP	PKPdf	15 05 56.2	+1.9
SCHQ	Schefferville	124.06	9	PKP	PKPdf	15 05 58.2	+1.3
	comp=Z,3.8nm,0.6s,baz=270,slow=1.6,SNR=6.8						
SCHQ	Schefferville	124.06	9	PKP	PKPdf	15 05 58.2	+1.3
JCT	Junction City	127.18	50	ePKIKP	PKPdf	15 06 06.0	+3.1
DBIC	Dimbokro	129.94	279	PKP	PKPdf	15 06 10.9	+2.8
	comp=Z,4.9nm,1.0s,baz=121,slow=3.9,SNR=4.2						
DBIC	Dimbokro	129.94	279	ePKPdf	PKPdf	15 06 09.1	+0.9
HRV	Harvard--Oak R	134.65	18	ePKHKP		15 06 09.1	
CPUP	Villa Florida	154.05	174	PKPbc	PKPbc	15 06 59.8	+1.6
	comp=Z,1.0nm,0.6s,baz=124,slow=4.0,SNR=6.6						
LPAZ	La Paz	159.27	140	PKP	PKPdf	15 06 59.9	+3.1
	comp=Z,0.5nm,0.3s,baz=236,slow=3.6,SNR=7.2						
LPAZ				PKPab	PKPab	15 07 37.6	+3.2
	comp=Z,0.8nm,0.6s,baz=290,slow=2.0,SNR=3.0						

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*ISCJB **16** 14:52:19.3±2.1, 4.9S±0.1×153.31E±0.07, h63km±18km, mb4.1/15, Error ellipse: s-maj=17.6km s-min=12.1km az=160.0*

*IDC **16** 14:52:21.9±3.1, 4.98S×153.31E, h70km±27km, mb3.8/10, mb1 4.0/12, mb1mx3.9/17, mbtmp4.2/12, MS3.7/1, Ms1 3.6/1, ms1mx2.8/19, Error ellipse: s-maj=20.6km s-min=19.3km az=38.0*

*NEIC **16** 14:52:22.1±1.3, 4.94S×153.34E, h76km±11km, mb4.2/6, Error ellipse: s-maj=11.5km s-min=9.9km az=188.0*

ISC 16 14:52:22.3±1.7**, 5.0S**±0.1×**153.33E**±0.07**, h75**km±15km**, n24,** σ**0.63**/25**, mb4.0**/15**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.56	234	P	Pn	14 54 09.7	0.0
	2.3nm,0.3s,baz=45,slow=11,SNR=7.1						
PMG				S	Sn	14 55 33.6	-0.3
	4.1nm,0.3s,baz=96,slow=15,SNR=9.5						
PMG	Port Moresby	7.56	234	eP	Pn	14 54 10.2	+0.5
PMG				S	Sn	14 55 33.6	-0.3
HNR	Honiara	7.93	125	P	Pn	14 54 14.8	+0.1
	6.9nm,0.3s,baz=275,slow=3.7,SNR=5.4						
DZM	Mont Dzumac	21.23	144	P	P	14 57 01.3	-0.7
	2.8nm,0.5s,mb3.8,baz=151,slow=19,SNR=8.6						
WRAB	Tennant Creek	23.73	229	eP	P	14 57 27.5	+0.1
	4.9nm,0.7s,mb4.0						
WB2	Warramunga Arr	23.74	229	eP	P	14 57 27.4	-0.1
WRA	Warramunga Arr	23.75	229	P	P	14 57 27.1	-0.5
	3.1nm,0.7s,mb3.8,baz=54,slow=9.2,SNR=12						
WRA				PcP	PcP	15 01 10.5	+1.0
	1.1nm,0.7s,baz=45,slow=1.6,SNR=57						
ASAR	Alice Springs	26.40	223	P	P	14 57 52.2	+0.5
	1.2nm,0.7s,mb3.4,baz=59,slow=9.3,SNR=6.3						
STKA	Stephens Creek	28.96	201	P	P	14 58 14.8	+0.3
	3.5nm,0.9s,mb4.0,baz=15,slow=12,SNR=3.3						
STKA				LR	LR	15 09 03.6	
	comp=Z,167nm,21.8s,baz=20,slow=35						
STKA	Stephens Creek	28.96	201	eP	P	14 58 15.1	+0.6
STKA				LR	LR	15 09 03.6	
FITZ	Fitzroy Crossi	30.06	242	P	P	14 58 23.8	-0.4
	2.4nm,0.6s,mb4.0,baz=87,slow=13,SNR=9.2						
MBWA	Marble Bar	36.36	241	eP	P	14 59 19.3	+0.3
ULN	Ulaanbaatar	66.40	328	eP	P	15 03 03.6	+0.3
	1.0nm,0.6s,mb3.8						
SONM	Songino Array	66.73	328	P	P	15 03 06.1	+0.7
	1.0nm,0.4s,mb4.0,baz=142,slow=6.0,SNR=12						
VNDA	Vanda	72.66	178	P	P	15 03 42.2	+0.4
	1.3nm,0.6s,mb4.0,baz=327,slow=6.8,SNR=10						
VNDA	Vanda	72.66	178	eP	P	15 03 41.8	0.0
	2.3nm,0.9s,mb4.0						
SBA	Scott Base	73.20	177	eP	P	15 03 46.3	+1.3
	2.8nm,0.9s,mb4.1						
MKAR	Makanchi Array	80.79	319	P	P	15 04 28.2	+0.6
	1.8nm,0.8s,mb3.9,baz=92,slow=6.6,SNR=10						
MKAR	Makanchi Array	80.79	319	P	P	15 04 28.2	+0.6
ZAL	Zalesovo	81.58	326	P	P	15 04 31.5	-0.3
	1.0nm,0.6s,mb3.8,baz=330,slow=16,SNR=3.9						
QSPA	South Pole Qui	85.01	180	eP	P	15 04 49.6	+0.2
	6.4nm,0.7s,mb4.7						
MAW	Mawson	85.64	203	P	P	15 04 51.4	-1.1
	1.2nm,0.5s,mb4.1,baz=80,slow=5.6,SNR=8.6						
CHKZ	Chkalovo	89.64	324	eP	P	15 05 10.2	-1.6
	1.9nm,0.9s,mb4.2						
TORD	Torodi Ar. Bea	150.86	288	PKPbc	PKPbc	15 12 07.0	+0.9
	4.7nm,0.7s,baz=52,slow=1.8,SNR=46						

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*ISCJB **16** 15:05:18.7±0.2, 46.112N±0.010×7.06E±0.02, h8km, Error ellipse: s-maj=1.8km s-min=1.4km az=174.3*

*ROM **16** 15:05:19.9±0.2, 46.06N×7.10E, h5km±2km, Md3.0/13, Ml2.5/5, Error ellipse: s-maj=2.7km s-min=2.0km az=148.0*

*NEIC **16** 15:05:20.1, 46.08N×7.10E, h7km, ML2.8(SZGRF), ML2.8(ZUR), ML3.0(STR), ML3.3(LDG), After ZUR.*

*CSEM **16** 15:05:20.3±0.1, 46.05N×7.11E, h8km, ML3.4/21, Error ellipse: s-maj=1.3km s-min=0.9km az=97.0*

*ZUR **16** 15:05:20.3, 46.08N×7.10E, h2km±2km, ML2.7/10*

*LDG **16** 15:05:20.6±0.1, 46.07N×7.12E, h2km, Md2.9/2, Ml3.3/22, Error ellipse: s-maj=1.2km s-min=0.9km az=115.0*

*VIE **16** 15:05:20.7±0.3, 45.92N×7.38E, h8km, mb2.3/1, ML3.5/1, Error ellipse: s-maj=7.0km s-min=0.9km az=131.0 31 km SE of Martigny*

*STR **16** 15:05:21.1±0.4, 46.09N×7.07E, h10km±1km, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*BGR **16** 15:05:22.0±1.3, 46.11N×7.11E, h10km, ML3.2/10, Error ellipse: s-maj=14.5km s-min=7.8km az=7.0*

ISC 16 15:05:19.6±0.2**, 46.084N**±0.009×**7.07E**±0.02**, h6**km±2km**, n152,** σ**0.92**/262**, 8C-7D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALAN	Lac Salanfe	0.09	311	eSg	Sg	15 05 22.8	-0.2
	5μm,0.1s						
SALAN	Lac Salanfe	0.09	311	⇓iPg	Sg	15 05 24.4	+1.4
	5μm,0.1s						
SALAN	Lac Salanfe	0.09	311	⇓iPg	Sg	15 05 24.4	+1.4
	5μm,0.1s						
EMV	Vieux Emosson	0.12	260	⇓iPg	Pg	15 05 23.2	+1.0
EMV				Sg	Sg	15 05 25.1	+1.2
EMV	Vieux Emosson	0.12	260	⇓iPg	Pg	15 05 23.3	+1.1
	13μm,0.2s						
EMV				i Sg	Sg	15 05 25.2	+1.3
	13μm,0.2s						
GRYON	Gryon	0.17	9	⇑iPg	Pg	15 05 23.9	+0.9
	2μm,0.3s						
DIX	Grande Dixence	0.24	91	i Sg	Pg	15 05 24.8	+0.6
	2μm,0.2s						
DIX	Grande Dixence	0.24	91	⇓iPg	Pg	15 05 25.1	+0.9
	2μm,0.2s						
DIX	Grande Dixence	0.24	91	⇓iPg	Pg	15 05 25.1	+0.9
	2μm,0.2s						
DIX				Sg	Sg	15 05 28.3	+0.9
AIGLE	Aigle	0.27	342	⇑iPg	Pg	15 05 25.3	+0.4
	2μm,0.2s						
AIGLE				i Sg	Sg	15 05 25.8	-2.7
	2μm,0.2s						
MRGE	Morge	0.31	181	⇑iPg	Pg	15 05 26.6	+0.9
MRGE				Sg	Sg	15 05 31.1	+1.3
	713nm,0.2s						
SENIN	Lac Senin	0.32	29	eSg	Pg	15 05 26.5	+0.7
	2μm,0.2s						
SENIN	Lac Senin	0.32	29	⇑iPg	Sg	15 05 29.6	-0.5
	2μm,0.2s						
SENIN	Lac Senin	0.32	29	⇑iPg	Sg	15 05 29.6	-0.5
	2μm,0.2s						
OG01	Vacheresse	0.37	312	Pg	Pg	15 05 27.9	+1.2
OG01				Sg	Sg	15 05 33.1	+1.6
LKBD	Leukerbad	0.49	52	ePg	Pg	15 05 31.3	+2.2
	589nm,0.5s						
RSL	Roselend	0.50	218	Pg	Pg	15 05 30.0	+0.7
RSL				Sg	Sg	15 05 36.5	+0.6
LPL	La Plagne	0.61	203	ePg	Pg	15 05 31.8	+0.4
LPL				eSg	Sg	15 05 39.8	+0.4
	118nm,0.2s						
LPL	La Plagne	0.61	203	ePg	Pg	15 05 31.8	+0.4
LPL				eSg	Sg	15 05 39.8	+0.4
	59nm,0.2s						
MMK	Mattmark	0.62	93	ePg	Pg	15 05 29.5	-2.1
	277nm,0.2s						
MMK	Mattmark	0.62	93	Pg	Pg	15 05 31.7	+0.1
LPG	La Plagne	0.63	201	ePn	Pg	15 05 35.4	+3.7
LPG				eSg	Sg	15 05 40.8	+1.0
	146nm,0.2s						
LPG	La Plagne	0.63	201	ePg	Pg	15 05 32.2	+0.5
LPG				ePn	Pg	15 05 35.4	+3.7
LPG				eSg	Sg	15 05 40.8	+1.0
LPG	La Plagne	0.63	201	ePn	Pg	15 05 35.4	+3.7
LPG				eSg	Sg	15 05 40.8	+1.0
	73nm,0.2s						
LSD	Ceresole Reale	0.63	175	P	Pg	15 05 32.2	+0.5
LSD				S	Sg	15 05 40.4	+0.5
MCGN	Macugnaga	0.65	101	Pg	Pg	15 05 32.2	+0.1
	50nm,0.2s						
WIMIS	Wimmis	0.70	33	⇑iPg	Pg	15 05 31.5	-1.5
	513nm,0.4s						
ORX	Oropa	0.78	125	P	Pg	15 05 34.4	-0.2
ORX				S	Sg	15 05 44.7	0.0
ORO	Oropa	0.78	125	Pg	Pg	15 05 34.8	+0.2
ORO				Sg	Sg	15 05 45.0	+0.2
	234nm,0.2s						
CABF	La Chapelle	0.86	308	ePg	Pg	15 05 37.3	+1.2
CABF				eSg	Sg	15 05 49.2	+1.9
CABF				eSn	Sn	15 05 51.5	+0.4
	287nm,0.3s						
CABF	La Chapelle	0.86	308	ePg	Pg	15 05 37.3	+1.2
CABF				eSg	Sg	15 05 49.2	+1.9
CABF				eSn	Sn	15 05 51.5	+0.4
	143nm,0.3s						
RSP	Reno Superiore	0.94	172	Pg	Pg	15 05 37.8	+0.1
	111nm,0.2s						
RSP				S	Sg	15 05 49.4	-0.5
BRANT	Les Verrieres	0.95	334	⇑iPg	Pg	15 05 33.6	-4.2
	616nm,0.7s						
BNI	Bardonecchia	1.07	195	Pg	Pg	15 05 40.0	-0.1
	40nm,0.4s						
BNI	Bardonecchia	1.07	195	eP	Pg	15 05 39.8	-0.3
BNI				Pg	Pg	15 05 40.0	-0.1
OG05	Jujurieux	1.12	268	Pg	Pg	15 05 42.1	+0.9
RRL	Cesana Torines	1.18	190	P	Pg	15 05 42.1	-0.1
RRL				S	Sg	15 05 56.6	-1.0
VAI	Varese	1.20	100	Pg	Pg	15 05 42.2	-0.5
	27nm,0.2s						
LOMF	Lomont	1.28	353	Pg	Pg	15 05 44.7	+0.6
MBDF	Montbardon	1.37	189	ePn	Pn	15 05 45.2	-0.1
MBDF				eSg	Sg	15 06 03.6	-0.1
	77nm,0.5s						
MBDF	Montbardon	1.37	189	ePn	Pn	15 05 45.2	-0.1
MBDF				eSg	Sg	15 06 03.6	-0.1
	38nm,0.5s						
MUGIO	Muggio	1.38	96	Pg	Pg	15 05 45.6	-0.5
BBS	Basel-Blauen	1.41	12	Pg	Pg	15 05 47.6	+0.9
BBS				Sg	Sg	15 06 06.8	+1.8
ORIF	Oris-en-Rattie	1.44	216	ePg	Pg	15 05 47.3	+0.2
ORIF				eSn	Sn	15 06 04.6	-0.7
ORIF				eSg	Sg	15 06 06.5	+0.8
	168nm,0.3s						
ORIF	Oris-en-Rattie	1.44	216	ePg	Pg	15 05 47.3	+0.2
ORIF				eSn	Sn	15 06 04.6	-0.7
ORIF				eSg	Sg	15 06 06.5	+0.8
	84nm,0.3s						
PZZ	Prazzo	1.58	179	P	Pn	15 05 49.1	+1.0
DOI	San Damiano	1.58	175	Pg	Pg	15 05 48.8	-1.2
	21nm,0.2s						
TUE	Stuetta	1.62	75	Pg	Pg	15 05 50.2	-0.5
	63nm,0.3s						
HINF	Hinteralfeld	1.74	355	ePg	Pg	15 05 52.8	-0.2
HINF				eSn	Sn	15 06 12.3	-0.5
HINF				eSg	Sg	15 06 15.6	+0.1
	35nm,0.2s						
HINF	Hinteralfeld	1.74	355	ePn	Pn	15 05 50.2	-0.1
HINF				ePg	Pg	15 05 52.8	-0.2
HINF				eSn	Sn	15 06 12.3	-0.5
HINF				eSg	Sg	15 06 15.6	+0.1
HINF	Hinteralfeld	1.74	355	ePg	Pg	15 05 52.8	-0.2
HINF				eSn	Sn	15 06 12.3	-0.5
HINF				eSg	Sg	15 06 15.6	+0.1
	18nm,0.2s						
MOF	Molkenrain	1.77	1	Pg	Pg	15 05 53.8	+0.3
MOF	Molkenrain	1.77	1	Pn	Pn	15 05 50.7	0.0
MOF				Pg	Pg	15 05 53.8	+0.3
MOF	Molkenrain	1.77	1	Pg	Pg	15 05 53.8	+0.3
STV	Sta Anna Valdi	1.85	174	P	Pn	15 05 51.9	+0.1
PCP	Pian Castagno	1.86	145	P	Pn	15 05 52.5	+0.6
MDI	Monti di Nese	1.87	99	Pg	Pg	15 05 53.7	-1.7
	44nm,0.5s						
ENR	Entracque	1.87	172	P	Pn	15 05 52.8	+0.7
ROB	Roburent	1.88	162	P	Pn	15 05 54.0	+1.8
FELD	Feldberg im Sc	1.90	19	Pn	Pn	15 05 52.1	-0.5
FELD				Pg	Pg	15 05 56.0	-0.1
FELD	Feldberg im Sc	1.90	19	Pg	Pg	15 05 56.0	-0.1
HAU	Haudompre	1.98	346	ePg	Pg	15 05 57.7	+0.1
HAU				eSg	Sg	15 06 23.0	-0.4
	55nm,0.2s						
HAU	Haudompre	1.98	346	ePn	Pn	15 05 53.6	-0.1
HAU				ePg	Pg	15 05 57.7	+0.1
HAU				eSg	Sg	15 06 23.0	-0.4
HAU	Haudompre	1.98	346	ePg	Pg	15 05 57.7	+0.1
HAU				eSg	Sg	15 06 23.0	-0.4
	27nm,0.2s						
FIN	Finale Ligure	2.04	156	Pg	Pg	15 05 56.8	-1.9
	28nm,0.6s						
FIN	Finale Ligure	2.04	156	P	Pn	15 05 55.5	+1.1
FIN	Finale Ligure	2.04	156	Pg	Pg	15 05 56.8	-1.9
	28nm,0.6s						
VIVF	Saint-Julien-l	2.09	235	ePg	Pg	15 05 59.5	-0.1
VIVF				eSg	Sg	15 06 26.1	-0.6
	192nm,0.3s						
VIVF	Saint-Julien-l	2.09	235	ePn	Pn	15 05 55.6	+0.5
VIVF				ePg	Pg	15 05 59.5	-0.1
VIVF				eSg	Sg	15 06 26.1	-0.6
VIVF	Saint-Julien-l	2.09	235	ePg	Pg	15 05 59.5	-0.1
VIVF				eSg	Sg	15 06 26.1	-0.6
	96nm,0.3s						
ECH	Echery	2.13	2	Pn	Pn	15 05 55.4	-0.3
SBF	Sospel	2.23	173	ePg	Pg	15 06 01.7	-0.7
SBF				eSg	Sg	15 06 30.5	-0.9
	43nm,0.3s						
SBF	Sospel	2.23	173	ePn	Pn	15 05 57.3	+0.2
SBF				ePg	Pg	15 06 01.7	-0.7
SBF				eSg	Sg	15 06 30.5	-0.9
SBF	Sospel	2.23	173	ePg	Pg	15 06 01.7	-0.7
SBF				eSg	Sg	15 06 30.5	-0.9
	22nm,0.3s						
THEF	They Montfort	2.27	341	Pg	Pg	15 06 03.2	+0.1
THEF	They Montfort	2.27	341	Pn	Pn	15 05 58.2	+0.6
THEF				Pg	Pg	15 06 03.2	+0.1
THEF	They Montfort	2.27	341	Pg	Pg	15 06 03.2	+0.1
DAVA	Damuels	2.28	57	⇓iPg	Pg	15 06 03.2	0.0
DAVA				⇑iSg	Sg	15 06 33.4	+0.7
	comp=Z,43nm,0.4s						
SMF	Signal de Mont	2.31	285	ePg	Pg	15 06 04.4	+0.6
SMF				eSg	Sg	15 06 33.6	-0.1
	34nm,0.2s						
SMF	Signal de Mont	2.31	285	ePn	Pn	15 05 58.9	+0.8
SMF				ePg	Pg	15 06 04.4	+0.6
SMF				eSg	Sg	15 06 33.6	-0.1
SMF	Signal de Mont	2.31	285	ePg	Pg	15 06 04.4	+0.6
SMF				eSg	Sg	15 06 33.6	-0.1
	17nm,0.2s						
CDF	Champ du Feu	2.33	3	ePg	Pg	15 06 04.2	-0.1
CDF	Champ du Feu	2.33	3	ePn	Pn	15 05 58.2	-0.3
CDF				ePg	Pg	15 06 04.2	-0.1
CDF	Champ du Feu	2.33	3	ePg	Pg	15 06 04.2	-0.1
WLS	Welschbruch	2.34	5	Pn	Pn	15 05 58.3	-0.2
SMRF	Simiane la Rot	2.36	207	ePn	Pn	15 05 59.5	+0.7
BFO	Black Forest	2.41	20	ePn	Pn	15 05 58.5	-1.0
BFO				ePg	Pg	15 06 05.1	-0.5
BFO				eSg	Sg	15 06 36.2	-0.7
BFO	Black Forest	2.41	20	ePn	Pn	15 05 58.4	-1.1
BFO				ePg	Pg	15 06 05.1	-0.6
BFO				ePg	Pg	15 06 06.7	+1.0
BFO				eSg	Sg	15 06 35.9	-1.0
BFO				eSg	Sg	15 06 36.2	-0.7
PLDF	La Plantade	2.41	269	Pn	Pn	15 06 00.1	+0.6
LOR	Lormes	2.51	299	ePg	Pg	15 06 07.2	-0.5
LOR				eSn	Sn	15 06 30.3	-1.5
LOR				eSg	Sg	15 06 40.1	-0.1
	24nm,0.2s						
LOR	Lormes	2.51	299	ePn	Pn	15 06 01.6	+0.7
LOR				ePg	Pg	15 06 07.2	-0.5
LOR				eSn	Sn	15 06 30.3	-1.5
LOR				eSg	Sg	15 06 40.1	-0.1
LOR	Lormes	2.51	299	ePg	Pg	15 06 07.2	-0.5
LOR				eSn	Sn	15 06 30.3	-1.5
LOR				eSg	Sg	15 06 40.1	-0.1
	12nm,0.2s						
FRF	La Foret Royal	2.54	187	ePg	Pg	15 06 06.6	-1.7
FRF				eSg	Sg	15 06 40.2	-1.0
	9.9nm,0.2s						
FRF	La Foret Royal	2.54	187	ePg	Pg	15 06 06.6	-1.7
FRF				eSg	Sg	15 06 40.2	-1.0
	4.9nm,0.2s						
SSF	Saint Saulge	2.65	293	ePg	Pg	15 06 10.3	0.0
SSF				eSn	Sn	15 06 34.8	-0.4
SSF				eSg	Sg	15 06 44.8	+0.2
	34nm,0.3s						
SSF	Saint Saulge	2.65	293	ePn	Pn	15 06 03.6	+0.8
SSF				ePg	Pg	15 06 10.3	0.0
SSF				eSn	Sn	15 06 34.8	-0.4
SSF				eSg	Sg	15 06 44.8	+0.2
SSF	Saint Saulge	2.65	293	ePg	Pg	15 06 10.3	0.0
SSF				eSn	Sn	15 06 34.8	-0.4
SSF				eSg	Sg	15 06 44.8	+0.2
	17nm,0.3s						
AVF	Avril sur Loir	2.67	287	ePg	Pg	15 06 10.0	-0.7
AVF				eSn	Sn	15 06 34.2	-1.5
AVF				eSg	Sg	15 06 45.2	-0.1
	22nm,0.3s						
AVF	Avril sur Loir	2.67	287	ePn	Pn	15 06 03.9	+0.8
AVF				ePg	Pg	15 06 10.0	-0.7
AVF				eSn	Sn	15 06 34.2	-1.5
AVF				eSg	Sg	15 06 45.2	-0.1
AVF	Avril sur Loir	2.67	287	ePg	Pg	15 06 10.0	-0.7
AVF				eSn	Sn	15 06 34.2	-1.5
AVF				eSg	Sg	15 06 45.2	-0.1

	11nm,0.3s						
AGO	Saint Agoulin	2.74	271	Pn	Pn	15 06 04.7	+0.6
LMR	La Mourre	2.78	189	ePg	Pg	15 06 10.8	-2.0
LMR	La Mourre	2.78	189	ePn	Pn	15 06 04.4	-0.2
LMR				ePg	Pg	15 06 10.8	-2.0
LMR	La Mourre	2.78	189	ePg	Pg	15 06 10.8	-2.0
MEZF	Maizieres J'vi	2.78	331	ePg	Pg	15 06 12.8	-0.1
MEZF				eSn	Sn	15 06 37.2	-1.3
MEZF				eSg	Sg	15 06 48.6	-0.4
	47nm,0.3s						
MEZF	Maizieres J'vi	2.78	331	ePg	Pg	15 06 12.8	-0.1
MEZF				eSn	Sn	15 06 37.2	-1.3
MEZF				eSg	Sg	15 06 48.6	-0.4
	23nm,0.3s						
LBL	Lubilhac	2.81	254	Pn	Pn	15 06 06.4	+1.3
PYM	Petit Puy Mans	2.86	265	Pg	Pg	15 06 14.4	+0.1
PYM	Petit Puy Mans	2.86	265	Pn	Pn	15 06 06.8	+1.1
PYM				Pg	Pg	15 06 14.4	+0.1
PYM	Petit Puy Mans	2.86	265	Pg	Pg	15 06 14.4	+0.1
BGF	Bois d'Agland	2.97	281	ePn	Pn	15 06 07.9	+0.7
BGF				eSg	Sg	15 06 54.3	-0.6
	25nm,0.3s						
BGF	Bois d'Agland	2.97	281	ePn	Pn	15 06 07.9	+0.7
BGF				eSg	Sg	15 06 54.3	-0.6
	12nm,0.3s						
LASF	Ste Croix	3.04	230	ePg	Pg	15 06 17.1	-0.7
LASF				eSg	Sg	15 06 53.9	-3.2
	34nm,0.4s						
LASF	Ste Croix	3.04	230	ePn	Pn	15 06 09.0	+0.9
LASF				ePg	Pg	15 06 17.1	-0.7
LASF				eSg	Sg	15 06 53.9	-3.2
LASF	Ste Croix	3.04	230	ePg	Pg	15 06 17.1	-0.7
LASF				eSg	Sg	15 06 53.9	-3.2
	17nm,0.4s						
STU	Stuttgart	3.05	27	eSg	Sg	15 06 56.9	-0.7
HYF	Humbligny	3.27	293	ePn	Pn	15 06 13.3	+1.9
HYF				eSg	Sg	15 07 04.2	-0.5
TCF	Toulx Ste Croi	3.38	275	ePg	Pg	15 06 21.9	-2.5
TCF				eSn	Sn	15 06 52.1	-1.3
TCF	Toulx Ste Croi	3.38	275	ePn	Pn	15 06 13.6	+0.7
TCF				ePg	Pg	15 06 21.9	-2.5
TCF				eSn	Sn	15 06 52.1	-1.3
TCF	Toulx Ste Croi	3.38	275	ePg	Pg	15 06 21.9	-2.5
TCF				eSn	Sn	15 06 52.1	-1.3
FUR	Furstenfeldbru	3.55	53	eSg	Sg	15 07 14.4	+0.9
WLF	Walferdange	3.64	351	ePg	Pg	15 06 28.6	-0.6
WLF				eSg	Sg	15 07 17.1	+0.7
WLF	Walferdange	3.64	351	Pg	Pg	15 06 28.6	-0.7
WLF				Sg	Sg	15 07 17.1	+0.7
CAF	Calviac	3.71	254	ePn	Pn	15 06 17.8	+0.5
PGF	Pioggiola	3.80	158	ePn	Pn	15 06 17.8	-0.8
RJF	Les Rejaudoux	3.97	261	eSg	Sg	15 07 26.3	-0.8
	6.8nm,0.3s						
RJF	Les Rejaudoux	3.97	261	eSg	Sg	15 07 26.3	-0.8
	3.4nm,0.3s						
TNS	Taunus Mts	4.24	12	eSg	Sg	15 07 35.4	-0.5
DOU	Dourbes	4.34	338	P	Pn	15 06 27.1	+1.0
MTLF	Montolieu	4.42	233	ePg	Pg	15 06 42.8	-1.4
MTLF				eSg	Sg	15 07 40.3	-1.1
	10nm,0.4s						
MTLF	Montolieu	4.42	233	ePn	Pn	15 06 26.9	-0.2
MTLF				ePg	Pg	15 06 42.8	-1.4
MTLF				eSg	Sg	15 07 40.3	-1.1
MTLF	Montolieu	4.42	233	ePg	Pg	15 06 42.8	-1.4
MTLF				eSg	Sg	15 07 40.3	-1.1
	5.2nm,0.4s						
BAIF	Baives	4.42	335	ePn	Pn	15 06 27.2	+0.1
GRA1	Grafenberg Arr	4.56	36	Sg	Sg	15 07 45.8	-0.3
GRF	Grafenberg Arr	4.56	36	eSg	Sg	15 07 45.8	-0.4
WET	Wettzell	4.98	50	eSg	Sg	15 07 57.9	-1.5
WET	Wettzell	4.98	50	Sg	Sg	15 07 57.9	-1.6
MFF	Saint Martin d	5.03	279	ePn	Pn	15 06 37.5	+2.0
GEC2	GERESS Array S	5.28	56	eSg	Sg	15 08 08.9	-0.1
MOX	Moxa	5.48	32	eSg	Sg	15 08 15.8	+0.4
LDF	La Druitiere	5.50	300	eSg	Sg	15 08 13.9	-2.2
	4.1nm,0.3s						
LDF	La Druitiere	5.50	300	eSg	Sg	15 08 13.9	-2.2
	2.0nm,0.3s						
TANN	Tannenbergstha	5.63	38	eSg	Sg	15 08 20.2	-0.2
EPF	Esparros	5.70	240	eSg	Sg	15 08 20.3	-2.2
	6.7nm,0.3s						
EPF	Esparros	5.70	240	eSg	Sg	15 08 20.3	-2.2
	3.3nm,0.3s						
FLN	La Foliniere	5.78	300	eSg	Sg	15 08 22.5	-2.8
	3.3nm,0.3s						
FLN	La Foliniere	5.78	300	eSg	Sg	15 08 22.5	-2.8
	1.6nm,0.3s						
GRR	Gorron	5.87	296	ePn	Pn	15 06 47.3	+0.2
CLL	Collm	6.54	35	eSG	Sg	15 08 48.0	-1.4
CLL				i L		15 08 58.7	
BRG	Berggiesshubel	6.62	41	SG	Sg	15 08 51.8	-0.3
	1.8nm,0.7s						
QUIF	Quistinic	7.24	288	ePn	Pn	15 07 05.6	-0.3
ROSF	Rostrenen	7.40	291	ePn	Pn	15 07 08.0	-0.1

IDC ***16*** *15:55:26.6±0.9, 2942N×6776E, h0^{km}, mb3.6/10, mb1 3.9/11, mb1mx3.7/25, mbtmp3.7/11, ML4.2/1, MS3.2/2, Ms1 3.3/2, ms1mx2.6/30, Error ellipse: s-maj=25.4km s-min=19.4km az=53.0*

BJI ***16*** *15:55:28.1, 2940N×6790E, h20^{km}, Ms3.8, Msz3.7*

NEIC ***16*** *15:55:29.1±0.6, 2938N×6789E, h20^{km}, mb3.8/2, Error ellipse: s-maj=13.6km s-min=7.8km az=195.0*

ISCJB ***16*** *15:55:32.2±1.2, 2940N±005×6809E±006, h66^{km}±13^{km}, mb3.6/11, Error ellipse: s-maj=9.6km s-min=7.1km az=100.6*

ISC 16 15:55:32.0±0.9**, 2937N**±004×**6792E**±005**, h46**^{km}±11^{km}**, n41,** σ**1^{s}17**/51**, mb3.7**/11**, MS3.2**/2**, 1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JASL	Jaisalmer	3.59	132	eP	Pn	15 56 24.7	-0.4
SBDP	Sheikh Budin	3.83	40	⇓P	Pn	15 56 28.8	+0.4
SBDP				S	Sn	15 57 15.0	+2.9
THW	Thamme Wali	4.73	43	P	Pn	15 56 40.2	-0.6
THW				S	Sn	15 57 38.0	+3.7
SARP	Sargodha	4.82	57	P	Pn	15 56 42.6	+0.7
CEP	Cherat	5.59	36	P	Pn	15 56 52.1	-0.5
CEP				S	Sn	15 57 54.0	-1.5
CHCP	Chirah Chowk	6.25	45	P	Pn	15 57 01.2	-0.4
AJM	Ajmer	6.61	114	eP	Pn	15 57 07.9	+1.5
AJM				eS	Sn	15 58 20.6	+0.2
AJM				AML	AML	15 58 37.5	
	comp=E,60nm,0.5s						
AJM				AML	AML	15 58 38.3	
	comp=N,55nm,0.7s						
KHET	Khetri	7.04	99	eP	Pn	15 57 13.9	+1.4
KHET				eS	Sn	15 58 30.5	-0.7
DLH	Dalhousie	7.59	63	eS	Sn	15 58 44.0	-0.8
KKR	Kurukshetra	7.76	83	AML	AML	15 58 35.0	
	comp=Z,79nm,0.4s						
SDNR	Sundarnagar	8.09	73	eP	Pn	15 57 28.0	+1.1
SDNR				eS	Sn	15 58 56.5	-0.5
SONA	Sohna	8.11	96	eP	Pn	15 57 28.1	+1.0
SONA				eS	Sn	15 58 55.5	-2.0
SONA				AML	AML	15 59 02.7	
	comp=E,44nm,0.4s						
SONA				AML	AML	15 59 03.1	
	comp=N,71nm,0.2s						
NDI	New Delhi	8.16	93	eP	Pn	15 57 31.2	+3.3
NDI				eS	Sn	15 58 57.5	-1.3
SMLA	Simla	8.19	75	eP	Pn	15 57 30.1	+2.0
SMLA				eS	Sn	15 58 59.1	-0.2
SMLA				AML	AML	15 59 14.2	
	comp=E,70nm,0.4s						
SMLA				AML	AML	15 59 14.7	
	comp=N,82nm,0.5s						
KLP	Kalpa	9.17	74	eP	Pn	15 57 42.5	+0.8
WSAR	Wadi Sarin	10.33	236	Pn	Pn	15 57 55.6	-1.9
	comp=N,1.9nm,0.3s,baz=64,slow=7.5,SNR=45						
WSAR				Sn	Sn	15 59 42.0	-10
BHPL	Bhopal	10.48	123	eP	Pn	15 58 00.8	+1.3
BHPL				eS	Sn	15 59 50.4	-5.1
BHPL				AML	AML	16 00 31.5	
	comp=N,14nm,0.8s						
BHPL				AML	AML	16 00 31.5	
	comp=E,14nm,0.7s						
KOLN	Koldanda	13.87	93	eP	Pn	15 58 42.9	-2.9
	comp=E,8.4nm,0.5s						
GKN	Gorkha	14.73	91	eP	Pn	15 58 56.5	-0.9
GKN				eS	Sn	16 01 32.4	-7.0
DMN	Daman	15.21	92	eP	Pn	15 59 03.6	-0.1
KKN	Kakani	15.33	92	eP	Pn	15 59 04.4	-0.8
PKI	Pulchoki	15.48	92	eP	Pn	15 59 06.2	-1.0
GUN	Gumba	15.83	91	eP	Pn	15 59 11.4	-0.3
LSA	Lhasa	20.21	83	P	P	16 00 08.0	+5.0
LSA	Lhasa	20.21	83	P	P	16 00 06.4	+3.4
	comp=E,2.8nm,0.5s						
MKAR	Makanchi Array	20.69	29	P	P	16 00 08.5	+0.4
	comp=E,0.5nm,0.4s,baz=212,slow=9.7,SNR=5.5						
MKAR	Makanchi Array	20.69	29	P	P	16 00 08.5	+0.4
AKTK	Aktyubinsk	22.33	343	P	P	16 00 25.7	0.0
AKTO	Aktyubinsk	22.33	343	P	P	16 00 25.7	0.0
	comp=E,2.9nm,0.7s,mb3.8,baz=62,slow=10						
ZRNK	Zerenda	23.57	2	eP	P	16 00 38.0	-0.4
	comp=E,2.9nm,1.0s,mb3.7						
BVAR	Borovoye Array	23.70	4	P	P	16 00 38.9	-0.7
	comp=E,0.6nm,0.4s,mb3.4,baz=168,slow=7.6,SNR=6.8						
ZAL	Zalesovo	27.45	22	P	P	16 01 18.3	+4.7
	comp=E,0.8nm,0.4s,mb3.6,baz=259,slow=4.3,SNR=3.7						
ZAL	Zalesovo	27.45	22	P	P	16 01 18.3	+4.7
SONM	Songino Array	34.81	47	LR	LR	16 18 27.4	
	comp=E,49nm,20.7s,MS3.2,baz=64,slow=40						
AKASG	Malin Array Be	35.92	317	P	P	16 02 27.4	-0.5
	comp=E,0.5nm,0.4s,mb3.8,baz=106,slow=7.0,SNR=6.6						
GERES	GERESS Array B	45.30	311	P	P	16 03 45.9	+0.7
	comp=E,0.4nm,0.4s,mb3.6,baz=107,slow=6.7,SNR=3.4						
ARCES	ARCESS Array B	46.89	341	P	P	16 03 57.6	-0.1
	comp=E,0.6nm,0.4s,mb3.9,baz=127,slow=8.1,SNR=10						
NOA	NORSAR Array B	48.74	327	P	P	16 04 11.2	-0.8
	comp=E,0.7nm,0.9s,mb3.7,baz=102,slow=7.2,SNR=2.6						
NOA				LR	LR	16 26 08.3	
	comp=E,22nm,18.8s,MS3.2,baz=185,slow=38						
TORD	Torodi Ar. Bea	63.06	270	P	P	16 05 54.4	-0.1
	comp=E,1.3nm,0.9s,mb4.0,baz=62,slow=6.3,SNR=5.9						
WRA	Warramunga Arr	80.61	119	P	P	16 07 42.1	+2.4
	comp=E,0.4nm,0.4s,mb3.7,baz=322,slow=4.8,SNR=15						
ASAR	Alice Springs	82.47	122	P	P	16 07 52.5	+2.9
	comp=E,0.6nm,0.5s,mb3.8,baz=308,slow=5.1,SNR=13						

ISCJB ***16*** *16:16:58.9±0.9, 47.15N±0.06×9.13E±0.06, h5^{km}±11^{km}, Error ellipse: s-maj=10.0km s-min=5.1km az=128.9*

VIE ***16*** *16:16:59.9±0.4, 47.14N×9.19E, h7^{km}±2^{km}, mb1.0/1, ML2.6/3, Error ellipse: s-maj=2.8km s-min=1.6km az=101.0   15 km ENE of Glarus*

ZUR ***16*** *16:16:59.3, 47.14N×9.19E, h-3^{km}±2^{km}, ML1.6/5*

CSEM ***16*** *16:16:59.0±0.1, 47.13N×9.10E, h8^{km}, ML1.6/5, Error ellipse: s-maj=2.4km s-min=1.5km az=117.0*

ISC 16 16:16:59.3±0.9**, 4714N**±006×**911E**±006**, h7**^{km}±10^{km}**, n13,** σ**0^{s}51**/24**, 11C-3D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLONS	Plons	0.20	116	⇑iPg	Pg	16 17 03.2	-0.2
	268nm,0.4s						
PLONS				eSg	Sg	16 17 06.1	-0.1
	268nm,0.4s						
LLS	Linth-Limmern	0.30	193	eSg	Sg	16 17 08.5	-0.6
	120nm,0.3s						
LIENZ	Alp Oberkamor	0.31	59	ePg	Pg	16 17 05.4	+0.1
	187nm,0.6s						
MUO	Muotathal	0.36	242	i Sg	Sg	16 17 10.3	-0.9
	455nm,0.5s						
MUO	Muotathal	0.36	242	⇑iPg	Sg	16 17 15.7	+4.5
	455nm,0.5s						
BNALP	Bannalp	0.54	241	ePg	Pg	16 17 10.9	+1.2
	58nm,0.4s						
BNALP				eSg	Sg	16 17 11.5	-5.3
	58nm,0.4s						
DAVA	Damuels	0.55	74	⇑iPg	Pg	16 17 09.9	+0.1
DAVA				⇑iSg	Sg	16 17 16.1	-0.8
DAVOX	Davos	0.64	124	ePg	Pg	16 17 12.1	+0.5
	65nm,0.4s						
DAVOX				i Sg	Sg	16 17 20.3	+0.4
	65nm,0.4s						
MOTA	Moosalm	1.37	81	⇑iPn	Pn	16 17 24.7	-0.2
MOTA				⇑iPg	Pg	16 17 25.5	-0.2
MOTA	Moosalm	1.37	81	⇑iPn	Pn	16 17 24.7	-0.2
MOTA				⇑iPg	Pg	16 17 25.5	-0.2
MOTA				⇓iSg	Sg	16 17 44.0	+0.5
	23nm,0.3s						
MOTA	Moosalm	1.37	81	Pg	Pg	16 17 25.5	-0.2
MOTA				Sg	Sg	16 17 44.0	+0.5
SQTA	Sankt Quirin	1.43	86	⇑iPn	Pn	16 17 25.5	-0.2
SQTA				⇓iPg	Pg	16 17 26.6	-0.2
SQTA	Sankt Quirin	1.43	86	⇑iPn	Pn	16 17 25.5	-0.2
SQTA				⇓iPg	Pg	16 17 26.6	-0.2
SQTA				⇑iSg	Sg	16 17 45.7	+0.3
	12nm,0.2s						

ISCJB ***16*** *16:41:28.8±0.6, 23.13S±0.05×66.40W±0.08, h211^{km}±7^{km}, mb3.8/9, Error ellipse: s-maj=11.4km s-min=8.8km az=169.9*

IDC ***16*** *16:41:29.4±0.9, 23.10S×66.40W, h204^{km}±9^{km}, mb3.5/5, mb1 3.8/12, mb1mx3.6/21, mbtmp4.2/12, Error ellipse: s-maj=13.6km s-min=13.0km az=90.0*

NEIC ***16*** *16:41:29.5±0.6, 23.09S×66.43W, h205^{km}±6^{km}, mb4.1/7, Error ellipse: s-maj=9.9km s-min=8.0km az=85.0*

ISC 16 16:41:29.9±0.6**, 2312S**±005×**6642W**±007**, h206**^{km}±7^{km}**, n31,** σ**0^{s}94**/33**, mb3.8**/9**, 1C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.35	282	P	Pn	16 42 13.5	+1.0
	110nm,0.3s,baz=92,slow=6.5,SNR=748						
LVC				S	Sn	16 42 46.0	+0.2
	47nm,0.3s,baz=253,slow=20,SNR=22						
LVC	Limon Verde	2.35	282	⇑iPn	Pn	16 42 13.3	+0.9
LVC				eSn	Sn	16 42 45.7	0.0
LPAZ	La Paz	6.98	346	P	Pn	16 43 11.2	+1.3
	3.2nm,0.3s,baz=148,slow=8.2,SNR=90						
LPAZ				S	Sn	16 44 29.7	+0.4
	0.7nm,0.3s,baz=270,slow=25,SNR=6.4						
LPAZ	La Paz	6.98	346	⇓ePn	Pn	16 43 10.8	+1.0
LPAZ				eSn	Sn	16 44 29.5	+0.2
ARE	Arequipa	8.16	323	eP	Pn	16 43 23.0	-2.1
ARE				eS	Sn	16 44 52.0	-5.2
CFAA	Coronel Fontan	8.61	190	P	Pn	16 43 29.8	-1.2
	0.6nm,0.3s,baz=25,slow=12,SNR=62						
CFAA				S	Sn	16 45 00.9	-6.9
	0.7nm,0.3s,baz=260,slow=14,SNR=8.5						
SIV	San Ignacio	8.69	36	P	Pn	16 43 31.5	-0.6
	3.3nm,0.3s,baz=219,slow=12,SNR=66						
SIV				S	Sn	16 44 57.2	-13
	0.3nm,0.3s,baz=234,slow=19,SNR=4.9						
CPUP	Villa Florida	8.86	113	P	Pn	16 43 34.0	-0.2
	1.0nm,0.3s,baz=271,slow=11,SNR=14						
CPUP	Villa Florida	8.86	113	ePn	Pn	16 43 33.6	-0.6
SAML	Samuel	14.42	13	eP	Pn	16 44 44.1	-0.6
	3.7nm,0.9s						
PLCA	Paso Flores	17.91	190	P	P	16 45 24.9	+0.6
	1.3nm,0.3s,baz=6.1,slow=12,SNR=27						
PLCA	Paso Flores	17.91	190	eP	P	16 45 24.3	+0.1
	6.8nm,0.6s						
BDFB	Brasilia	18.87	70	P	P	16 45 35.9	+1.2
	2.5nm,0.3s,baz=249,slow=10,SNR=23						
BDFB	Brasilia	18.87	70	eP	P	16 45 35.6	+0.9
	18nm,0.6s						
BAO	Brasilia Array	18.90	70	P	P	16 45 36.5	+1.6
SDV	Santo Domingo	32.07	352	eP	P	16 47 35.6	-1.8
	1.9nm,0.5s,mb3.9						
SNAA	Sanae	60.01	161	eP	P	16 51 15.1	+0.3
	2.4nm,0.6s,mb4.0						
DBIC	Dimbokro	67.02	72	P	P	16 51 59.1	-1.5
	2.3nm,0.6s,mb4.0,baz=233,slow=11,SNR=5.0						
DBIC	Dimbokro	67.02	72	eP	P	16 51 59.9	-0.7
QSPA	South Pole Qui	67.09	180	eP	P	16 52 01.9	+0.8
	7.2nm,0.5s,mb4.6						
TORD	Torodi Ar. Bea	75.75	69	P	P	16 52 52.1	-0.7
	1.1nm,0.4s,mb3.9,baz=266,slow=6.1,SNR=20						
PDAR	Pinedale Array	76.67	329	P	P	16 52 58.0	-0.1
	0.7nm,0.6s,mb3.5,baz=138,slow=7.3,SNR=5.2						
NVAR	Mina Array Bea	78.19	321	P	P	16 53 06.8	+0.3
	0.2nm,0.6s,mb2.9,baz=159,slow=4.2,SNR=3.7						
HLID	Hailey	79.64	327	eP	P	16 53 15.3	+0.9
	0.6nm,0.4s,mb3.6						
MCMT	McKenzie Canyo	79.79	328	eP	P	16 53 15.8	+0.6
MAW	Mawson	82.12	163	P	P	16 53 27.0	-0.4
	1.3nm,0.9s,mb3.6,baz=243,slow=6.4,SNR=6.2						
ASAR	Alice Springs	129.48	204	PKP	PKPdf	17 00 13.9	0.0
	0.6nm,0.8s,baz=130,slow=1.9,SNR=7.9						
WRA	Warramunga Arr	132.66	207	PKP	PKPdf	17 00 20.1	+0.1
	0.5nm,0.5s,baz=157,slow=1.7,SNR=14						
ZAL	Zalesovo	142.36	28	PKP	PKPdf	17 00 38.5	+0.7
	0.5nm,0.3s,baz=120,slow=3.7,SNR=3.2						
MKAR	Makanchi Array	145.50	39	PKPbc	PKPbc	17 00 43.5	-0.4
	1.3nm,0.4s,baz=356,slow=3.3,SNR=28						
SONM	Songino Array	154.67	11	PKPbc	PKPbc	17 01 05.0	-1.3
	0.5nm,0.9s,baz=354,slow=3.0,SNR=3.6						
SONM				PKPab	PKPab	17 01 22.3	+0.3
	0.3nm,0.7s,baz=343,slow=4.5,SNR=2.8						

IDC 16 16:45:51.1±59.0**, 2327S**×**17636W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.7**/13**, mbtmp3.8**/3**, MS4.2**/3**, Ms1 4.2**/3**, ms1mx3.4**/23**, Error ellipse: s-maj=1094.0km s-min=174.5km az=87.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.05	248	P	P	16 53 11.0	-0.2
	2.1nm,0.9s,baz=72,slow=9.6,SNR=2.6						
ASAR	Alice Springs	45.43	259	P	P	16 54 11.8	+0.2
	0.3nm,0.4s,baz=93,slow=7.6,SNR=15						
WRA	Warramunga Arr	45.78	264	P	P	16 54 15.1	+0.6
	0.5nm,0.3s,baz=102,slow=8.2,SNR=38						
YBH	Yreka Blue Hor	81.52	38	LR	LR	17 26 41.6	
	comp=Z,144nm,19.6s,baz=308,slow=30						
BBB	Bella Bella	86.13	27	LR	LR	17 27 24.9	
	comp=Z,135nm,20.6s,baz=215,slow=29						
DLBC	Dease Lake	90.01	22	LR	LR	17 31 27.9	
	comp=Z,101nm,18.9s,baz=287,slow=30						

ISCJB ***16*** *16:53:47.5±0.3, 5892S±0.04×1493E±0.1, h10^{km}, mb5.0/32, MS5.6/75, Error ellipse: s-maj=8.5km s-min=5.5km az=17.5*

IDC ***16*** *16:53:48.1±0.5, 5889S×14926E, h0^{km}, mb4.7/14, mb1 4.8/15, mb1mx4.7/17, mbtmp4.7/15, ML3.6/1, MS5.6/12, Ms1 5.5/12, ms1mx5.5/14, Error ellipse: s-maj=20.4km s-min=13.0km az=93.0*

NEIC ***16*** *16:53:49.4±0.2, 5889S×149.15E, h10^{km}, mb5.1/24, MS5.6/57, MW5.9, Error ellipse: s-maj=8.9km s-min=6.5km az=86.0, Moment Tensor Solution.   s5   Moment tensor: Scale 10^{17}Nm; M_{rr}0.98; $M_{\theta\theta}$3.82; $M_{\phi\phi}$-4.79; $M_{r\theta}$0.94; $M_{\theta\phi}$-7.82; $M_{\phi r}$-2.84;   Best double couple: $M_0$9.40000×10^{17} NP1:ϕ_s166.00000°, δ86.00000°, λ19.00000°.   NP2: ϕ_s75.00000°, δ71.00000°, λ176.00000°.   Principal axes: T 9.0800, Plg16.0000°, Azm32.0000°; N 0.6900, Plg71.0000°, Azm177.0000°; P -9.7800, Plg11.0000°, Azm299.0000°;*

BJI ***16*** *16:53:49.4, 5890S×14920E, h10^{km}, mB5.6, mb5.4, Ms5.7, Msz5.5*

HRVD ***16*** *16:53:49.4±0.1, 5877S×14873E, h14^{km}, MW5.9/103, Centroid moment Tensor Solution.   LP body waves: s97,c197;Mantle waves: s103,c331;   Half duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.01±.01; $M_{\theta\theta}$0.54±.01; $M_{\phi\phi}$-0.52±.01; $M_{r\theta}$-0.08±.02; $M_{\theta\phi}$-0.83±.01; $M_{\phi r}$0.09±.02;   Best double couple: $M_0$0.99500×10^{18} NP1:ϕ_s254.00000°, δ84.00000°, λ177.00000°.   NP2: ϕ_s344.00000°, δ87.00000°, λ6.00000°.   Principal axes: T 1.0050, Plg6.0000°, Azm209.0000°; N -0.0200, Plg83.0000°, Azm8.0000°; P -0.9850, Plg2.0000°, Azm119.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***16*** *16:53:51.3±3.2, 5883S×14908E, h10^{km}, mb5.3/15, MS5.6/20 Error ellipse: s-maj=23.9km s-min=8.9km az=89.1*

ISC 16 16:53:49.0±0.3**, 5899S**±004×**14906E**±010**, h10**^{km}**, (h15**^{km}±1.4^{km}**:pP-P), n261,** σ**1^{s}15**/98**, mb5.0**/32**, MS5.6**/75**, 26C-11D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	7.06	55	eP	Pn	16 55 30.1	-2.2
MCQ				eS	Sn	16 56 33.2	-19
DRV	Dumont d'Urvil	8.74	204	P	Pn	16 55 55.0	-0.4
DRV				R		16 58 00.0	
TAU	Tasmania Unive	16.13	355	P	Pn	16 57 39.3	+3.5
	750nm,0.9s,SNR=7.0						
TAU	Tasmania Unive	16.13	355	eP	Pn	16 57 38.9	+3.1
TAU				pmax	pmax		
	comp=Z,127nm,0.9s						
TAU	Tasmania Unive	16.13	355	ePn	Pn	16 57 38.9	+3.1
	comp=Z,127nm,0.9s						
CASY	Casey	18.87	231	eP	Pn	16 58 10.5	+0.6
CASY				eS	Sn	17 01 40.1	-0.9
VNDA	Vanda	19.12	172	P	Pn	16 58 11.2	-1.7
	comp=Z,0.2nm,0.3s,baz=337,slow=13,SNR=47						
VNDA				LR	LR	17 05 00.2	
	comp=Z,10μm,21.1s,baz=341,slow=35						
VNDA	Vanda	19.12	172	⇑eP	Pn	16 58 10.0	-2.8
	comp=Z,107nm,1.3s						
SBA	Scott Base	19.85	169	⇑eP	Pn	16 58 19.8	-1.8
SBA				pmax	pmax		
	comp=Z,295nm,1.9s						
SBA	Scott Base	19.85	169	⇑eP	Pn	16 58 19.8	-1.8
	comp=Z,295nm,1.9s						
RPZ	Rata Peaks	20.40	51	P	P	16 58 26.1	+0.1
	comp=Z,17nm,1.0s,baz=125,slow=7.6,SNR=4.8						
RPZ				LR	LR	17 04 56.2	
	comp=Z,37μm,18.5s,MS5.8,baz=204,slow=33						
TOO	Toolangi	21.55	352	eP	P	16 58 39.9	+1.4
	comp=Z,67nm,1.2s,mb5.0						
TOO				eS	S	17 02 37.9	+0.6
TOO	Toolangi	21.55	352	eP	P	16 58 39.9	+1.4
TOO				eS	S	17 02 37.9	+0.6
TOO				pmax	pmax		
	comp=Z,67nm,1.2s,mb5.0						
CNB	Canberra Magne	23.68	1	eP	P	16 59 02.7	+1.8
	comp=Z,58nm,1.2s,mb4.9						
SNZO	South Karori	23.90	54	PFAKE		16 59 10.0	+7.1
SNZO				LR	LR		
	comp=Z,44μm,19.0s,MS6.0						
MIR	Mirnyy	25.87	230	eP	P	16 59 26.0	+5.2
MIR				e		17 00 10.0	
MIR				eSS		17 05 16.0	
MIR				pmax	pmax		
	comp=Z,380nm,1.5s,mb5.7						
MIR				pmax	pmax		
	comp=Z,1μm,13.0s						
MIR				MLR	MLR		
	comp=Z,12μm,18.0s,MS5.5						
MIR				MLR	MLR		
	comp=N,4μm,17.0s,MS5.2						
MIR				MLR	MLR		
	comp=E,5μm,17.0s,MS5.2						
URZ	Urewera	27.46	53	P	P	16 59 33.7	-1.5
	comp=E,26nm,1.0s,mb4.7,baz=266,slow=4.4,SNR=8.6						
URZ				LR	LR	17 09 54.0	
	comp=E,24μm,18.1s,MS5.8,baz=211,slow=35						
STKA	Stephens Creek	27.57	346	eP	P	16 59 35.3	-0.9
	comp=E,20nm,1.4s,mb4.6						
STKA				eS	S	17 04 22.0	+4.5
STKA	Stephens Creek	27.57	346	P	P	16 59 36.0	-0.1
	comp=E,15nm,1.1s,mb4.5,baz=138,slow=5.6,SNR=6.0						
STKA				LR	LR	17 08 23.5	
	comp=E,6μm,19.9s,MS5.2,baz=175,slow=32						
QSPA	South Pole Qui	31.11	180	eP	P	17 00 08.4	+0.8
	comp=E,28nm,1.0s,mb5.0						
FORT	Forrest	31.61	324	eP	P	17 00 10.0	-1.9
	comp=E,36nm,0.6s,mb5.4						
NWAO	Narrogin (SRO)	33.61	307	LR	LR	17 10 47.8	
	comp=E,17μm,18.8s,MS5.8,baz=142,slow=30						
NWAO	Narrogin (SRO)	33.61	307	eP	P	17 00 30.2	+0.8
NWAO				MLR	MLR		
	comp=Z,15μm,20.0s						
KLBR	Kellerberrin	34.56	309	eP	P	17 00 38.0	+0.3
	comp=Z,78nm,1.5s,mb5.4						
MUN	Mundaring	34.86	306	eP	P	17 00 44.8	+4.5
MUN				eS	S	17 06 18.0	+6.8
MAW	Mawson	36.55	220	⇑iP	P	17 00 56.3	+1.5
	comp=Z,8.7nm,1.1s,mb4.5						
MAW				eS	S	17 06 46.8	+10
MAW	Mawson	36.55	220	P	P	17 00 55.8	+1.0
	comp=Z,13nm,1.1s,mb4.7,baz=126,slow=8.9,SNR=19						
MAW				LR	LR	17 16 05.6	
	comp=Z,15μm,18.2s,MS5.8,baz=104,slow=36						
MAW	Mawson	36.55	220	⇑iP	P	17 00 56.3	+1.5
MAW				eS	S	17 06 46.8	+10
MAW				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ASAR	Alice Springs	36.90	336	P	P	17 00 57.0	-0.8
	comp=Z,9.5nm,0.9s,mb4.6,baz=164,slow=8.4,SNR=30						
ASAR				PcP	PcP	17 03 19.6	+0.4

comp=Z,2.9nm,0.9s,baz=158,slow=3.1,SNR=5.9
ASAR LR LR 17 13 41.1
comp=Z,9µm,19.5s,MS5.5,baz=172,slow=32
ASAR Alice Springs 36.90 336 P **P** **17 00 57.0 -0.7**
ASAR 17 03 19.6
ASPA Alice Springs 36.90 336 *e*P **P** **17 00 57.0 -0.7**
ASPA *e*S **S** **17 06 43.9 +1.4**
AS31 Alice Springs 36.90 336 *e*P **P** **17 00 57.0 -0.8**
AS31 *e*S **S** **17 06 43.9 +1.4**
RAO Raoul Island 37.32 52 PFAKE 17 01 10.0 +8.7
RAO LR LR
comp=Z,14µm,20.0s,MS5.8
CTA Charters Tower 38.90 356 *e*P **P** **17 01 13.6 -1.1**
comp=Z,20nm,0.9s,mb4.8
CTA *e*S **S** **17 07 17.9 +5.0**
CTA Charters Tower 38.90 356 P **P** **17 01 15.5 +0.8**
comp=Z,20nm,0.9s,mb4.8,baz=168,slow=9.7,SNR=7.3
CTA Charters Tower 38.90 356 *e*P **P** **17 01 13.6 -1.1**
CTA *e*S **S** **17 07 17.9 +5.0**
CTA pmax pmax
comp=Z,20nm,0.9s
CTAO Charters Tower 38.90 356 *e*P **P** **17 01 15.1 +0.4**
CTAO pmax pmax
comp=Z,45nm,1.0s,mb5.2
CTAO MLR MLR
comp=Z,20µm,20.0s,MS5.9
CTAO Charters Tower 38.90 356 *e*P **P** **17 01 15.1 +0.4**
comp=Z,45nm,1.0s,mb5.2
CTAO LR LR
comp=Z,20µm,20.0s,MS5.9
DZM Mont Dzumac 38.92 26 P **P** **17 01 13.5 -1.3**
comp=Z,8.8nm,0.8s,mb4.5,baz=292,slow=11,SNR=3.9
WB2 Warramunga Arr 40.43 338 ⇓*i*P **P** **17 01 25.8 -1.6**
WRA Warramunga Arr 40.43 338 P **P** **17 01 26.1 -1.3**
comp=Z,20nm,1.0s,mb4.8,baz=166,slow=7.3,SNR=27
WRA PcP PcP 17 03 30.8 +0.5
comp=Z,1.7nm,0.6s,baz=163,slow=2.8,SNR=4.8
WRA LR LR 17 16 01.2
comp=Z,9µm,19.8s,MS5.6,baz=160,slow=33
WRA Warramunga Arr 40.43 338 P **P** **17 01 26.1 -1.3**
WRA 17 03 30.8
WRAB Tennant Creek 40.44 338 P **P** **17 01 26.0 -1.5**
comp=Z,276nm,1.0s,mb5.9,SNR=8.9
WRAB Tennant Creek 40.44 338 *e*P **P** **17 01 26.2 -1.3**
WRAB pmax pmax
comp=Z,106nm,1.2s,mb5.5
WRAB MLR MLR
comp=Z,12µm,21.0s,MS5.7
WRAB Tennant Creek 40.44 338 *e*P **P** **17 01 26.2 -1.2**
comp=Z,106nm,1.2s,mb5.5
WRAB LR LR
comp=Z,12µm,21.0s,MS5.7
SYO Syowa Base 42.62 210 ⇓*e*P **P** **17 01 45.0 -0.4**
SYO Syowa Base 42.62 210 ⇑*es*P sP 17 01 49.6 -0.2
MBWA Marble Bar 43.25 318 *e*P **P** **17 01 49.9 -0.6**
comp=Z,102nm,1.3s,mb5.4
MBWA LR LR
comp=Z,21µm,20.0s,MS6.0
FITZ Fitzroy Crossi 44.26 327 ⇓*i*P **P** **17 01 58.3 -0.3**
comp=Z,39nm,1.0s,mb5.1
FITZ *e*S **S** **17 08 32.9 +0.6**
FITZ Fitzroy Crossi 44.26 327 P **P** **17 01 58.3 -0.4**
comp=Z,18nm,1.1s,mb4.7,baz=168,slow=14,SNR=13
NVL N'lazarevskaya 47.06 198 *d*iP **P** **17 02 21.4 +0.6**
NVL *e*S **S** **17 09 17.2 +4.5**
NVL pmax pmax
comp=Z,67nm,1.1s,mb5.5
NVL MLR MLR
comp=Z,19µm,20.6s,MS6.0
KAKA Kakadu 47.84 338 *e*P **P** **17 02 25.8 -1.0**
comp=Z,20nm,0.8s,mb5.2
SNAA Sanae 48.16 192 P **P** **17 02 29.9 +0.6**
comp=Z,20nm,1.1s,mb5.0,baz=168,slow=9.0,SNR=30
SNAA Sanae 48.16 192 ⇑*i* **P** **17 02 29.4 +0.1**
SNAA *e* 17 02 34.9
SNAA *e* 17 02 38.3
SNAA *e* 17 02 40.1
SNAA *e* 17 02 42.9
SNAA *e* 17 02 48.0
SNAA *e* 17 02 52.6
SNAA *e* 17 02 54.5
SNAA *e* 17 05 26.1
SNAA *e* 17 05 29.3
SNAA *e* 17 05 37.4
SNAA *e* 17 05 43.4
SNAA *e* 17 06 14.9
SNAA Sanae 48.16 192 *c*iP **P** **17 02 29.5 +0.2**
SNAA Sanae 48.16 192 ⇑*e*P **P** **17 02 28.3 -1.1**
comp=Z,48nm,1.0s,mb5.5
PMG Port Moresby 49.49 358 *c*iP **P** **17 02 42.5 +3.0**
PMG Port Moresby 49.49 358 PFAKE 17 02 50.0 +10
PMG LR LR
comp=Z,10µm,21.0s,MS5.8
VNA1 Neumayer--Stat 49.66 190 ⇑*i* **P** **17 02 41.5 +0.7**
VNA1 *e* 17 02 46.5
VNA1 *e* 17 02 57.5
VNA1 *e* 17 03 07.3
VNA1 *e* 17 03 11.6
VNA1 *e* 17 05 26.2
VNA1 *e* 17 05 31.3
HNR Honiara 50.13 14 PFAKE 17 03 00.0 +16
HNR LR LR
comp=Z,11µm,22.0s,MS5.8
RAR Rarotonga 52.36 67 PFAKE 17 03 10.0 +8.9
RAR LR LR
comp=Z,1.0nm,20.0s
AFI Afiamalu 53.54 50 PFAKE 17 03 20.0 +10
AFI LR LR
comp=Z,2µm,19.0s,MS5.2
PMSA Palmer Station 54.05 163 PFAKE 17 03 30.0 +16
PMSA LR LR
comp=Z,3µm,19.0s,MS5.4
TBI Tubuai 55.64 78 *e*S **S** **17 11 13.1 +2.0**
comp=Z,3µm,28.2s
TBI *e*SS SS 17 14 59.2 +3.0
comp=Z,2µm,32.5s
TBI *e*LR LR 17 19 37.8
comp=Z,5µm,28.0s,baz=210
PPT Papeete 60.44 74 *e*S **S** **17 12 15.3 +1.4**
comp=Z,3µm,26.0s
PPT *e*SS SS 17 16 15.0 +3.4
comp=Z,3µm,26.2s
PPT *e*LQ 17 19 16.9
comp=Z,6µm,25.8s
PPT *e*LR LR 17 21 49.2
comp=Z,5µm,23.2s,baz=208
PPT Papeete 60.44 74 LR LR 17 24 01.3
comp=Z,3µm,21.9s,MS5.3,baz=219,slow=30
RKT Rikitea 63.28 91 *e*S **S** **17 12 50.7 +0.8**
comp=Z,3µm,31.0s
RKT *e*LQ 17 20 22.2
comp=Z,6µm,35.2s
RKT *e*LR LR 17 22 54.4
comp=Z,5µm,28.5s,baz=212
EFI East Falkland 67.52 162 PFAKE 17 05 00.0 +15
EFI LR LR
comp=Z,3µm,20.0s,MS5.5
KSM Kuching 67.55 317 *e*P **P** **17 04 44.9 -0.6**
DAV Davao City (W) 68.48 335 PFAKE 17 05 00.0 +8.6
DAV LR LR
comp=Z,2µm,20.0s,MS5.4
KKM Kota Kinabalu 69.93 325 *e*P **P** **17 05 01.3 +0.9**
TAOE Nuku Hiva Isla 72.59 78 eLQ 17 23 47.0
comp=Z,16µm,28.9s
TAOE *e*LR LR 17 27 23.5
comp=Z,8µm,23.0s,baz=229
KULM Kulim 74.69 309 *e*P **P** **17 05 27.0 -1.8**
PLCA Paso Flores 75.35 150 P **P** **17 05 33.0 +0.5**
comp=Z,2.5nm,0.9s,mb4.1,baz=232,slow=8.3,SNR=5.0
PLCA Paso Flores 75.35 150 *e*P **P** **17 05 33.1 +0.5**
PLCA pmax pmax
comp=Z,17nm,1.3s
PLCA MLR MLR
comp=Z,2µm,22.0s
PLCA Paso Flores 75.35 150 *e*P **P** **17 05 33.1 +0.5**
comp=Z,17nm,1.3s,mb4.8
PLCA LR LR
comp=Z,2µm,22.0s,MS5.5
DGAR Diego Garcia 76.78 278 PFAKE 17 05 50.0 +9.2
DGAR LR LR
comp=Z,3µm,19.0s,MS5.6
SUR Sutherland 79.36 223 P **P** **17 05 54.9 -0.1**
comp=Z,68nm,1.4s,mb5.4
SUR LR LR
comp=Z,2µm,21.0s,MS5.5

BOSA Boshof 81.12 228 P **P** **17 06 06.1 +1.5**
comp=Z,7.5nm,1.1s,mb4.5,baz=173,slow=8.1,SNR=3.2
BOSA LR LR 17 37 55.8
comp=Z,3µm,18.9s,MS5.6,baz=157,slow=33
BOSA Boshof 81.12 228 *e*P **P** **17 06 05.1 +0.5**
BOSA pmax pmax
comp=Z,11nm,1.1s,mb4.7
BOSA MLR MLR
comp=Z,4µm,22.0s,MS5.7
BOSA Boshof 81.12 228 *e*P **P** **17 06 05.1 +0.5**
comp=Z,11nm,1.1s,mb4.7
BOSA LR LR
comp=Z,4µm,22.0s,MS5.7
QIZ Qiongzhong 84.13 323 P **P** **17 06 21.3 +1.1**
QIZ AP pP 17 06 26.6 +3.1
QIZ XP sP 17 06 28.9 +4.2
QIZ PP PP 17 09 37.9 +3.6
QIZ S S 17 16 43.8 -1.2
QIZ XS sS 17 16 57.8 +7.3
QIZ AMB AMB
comp=Z,24nm,1.8s,mb5.0
QIZ AMB AMB
comp=Z,172nm,3.6s
QIZ LR LR
comp=N,1µm,26.5s,MS5.5
QIZ LR LR
comp=E,2µm,25.2s,MS5.5
QIZ LR LR
comp=Z,2µm,27.9s,MS5.4
QIZ Qiongzhong 84.13 323 PFAKE 17 06 30.0 +10
QIZ LR LR
comp=Z,2µm,20.0s,MS5.4
LBTB Lobatse 84.22 230 *e*P **P** **17 06 21.5 +0.8**
LBTB pmax pmax
comp=Z,16nm,1.1s,mb5.1
LBTB MLR MLR
comp=Z,3µm,21.0s,MS5.7
LBTB Lobatse 84.22 230 *e*P **P** **17 06 21.5 +0.9**
comp=Z,16nm,1.1s,mb5.0
LBTB LR LR
comp=Z,3µm,21.0s,MS5.7
PALK Pallekele 85.30 292 PFAKE 17 06 40.0 +14
PALK LR LR
comp=Z,2µm,20.0s,MS5.5
YHNB Yeheng 86.44 335 P **P** **17 06 31.4 -0.3**
TATO Taipei 86.71 335 PFAKE 17 06 40.0 +6.9
TATO LR LR
comp=Z,2µm,20.0s,MS5.6
CM31 Chiang Mai Arr 87.36 313 PFAKE 17 06 50.0 +14
CM31 LR LR
comp=Z,4µm,20.0s,MS5.8
CHTO Chiang Mai 87.69 313 *e*P **P** **17 06 37.6 -0.2**
CHTO pmax pmax
comp=Z,15nm,1.0s,mb5.2
CHTO Chiang Mai 87.69 313 *e*P **P** **17 06 37.6 -0.2**
comp=Z,15nm,1.0s,mb5.2
POHA Pohakuloa 90.61 51 PFAKE 17 07 00.0 +8.5
POHA LR LR
comp=Z,2µm,22.0s,MS5.6
MIDW Midway 91.24 29 PFAKE 17 07 00.0 +5.5
MIDW LR LR
comp=Z,5µm,20.0s,MS5.9
LSZ Lusaka 91.86 236 P **P** **17 06 58.0 +0.6**
LSZ pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
LSZ MLR MLR
comp=Z,3µm,19.0s,MS5.8
LSZ Lusaka 91.86 236 PFAKE 17 07 10.0 +13
LSZ LR LR
comp=Z,3µm,19.0s,MS5.8
KMI Kunming 92.12 319 P **P** **17 07 01.3 +2.7**
KMI AP pP 17 07 04.5 +2.6
KMI XP sP 17 07 05.8 +2.7
KMI PP PP 17 10 44.1 +5.7
KMI PPP 17 12 45.9
KMI SKS 17 17 33.0
KMI S S 17 18 01.8 +0.8
KMI SS SS 17 24 15.8 +5.6
KMI AMB AMB
comp=Z,8.0nm,2.0s,mb4.7
KMI AMB AMB
comp=Z,181nm,5.6s
KMI LR LR
comp=N,2µm,27.2s,MS5.6
KMI LR LR
comp=E,835nm,22.8s,MS5.6
KMI LR LR
comp=Z,4µm,26.3s,MS5.7
CPUP Villa Florida 92.23 156 P **P** **17 06 58.8 -0.3**
comp=Z,0.4nm,0.4s,mb4.1,baz=190,slow=8.9,SNR=3.7
CPUP Villa Florida 92.23 156 P **P** **17 06 59.1 0.0**
CPUP pmax pmax
comp=Z,14nm,1.1s
CPUP Villa Florida 92.23 156 P **P** **17 06 58.8 -0.3**
CPUP LR LR
comp=Z,154nm,21.0s
TSUM Tsumeb 92.55 225 PFAKE 17 07 10.0 +9.5
TSUM LR LR
comp=Z,3µm,19.0s,MS5.8
LVC Limon Verde 92.88 145 P **P** **17 07 02.4 +0.4**
comp=Z,11nm,1.1s,mb5.2
NJ2 Nanjing 94.12 335 *e*P **P** **17 07 07.9 +0.1**
NJ2 AP pP 17 07 12.8 +1.7
NJ2 XP sP 17 07 14.9 +2.6
NJ2 PP PP 17 10 56.9 +2.8
NJ2 S S 17 18 15.0 -3.7
NJ2 AMB AMB
comp=Z,40nm,1.0s,mb5.8
NJ2 AMB AMB
comp=Z,320nm,3.6s
NJ2 LR LR
comp=N,3µm,19.1s,MS6.0
NJ2 LR LR
comp=E,5µm,21.0s,MS6.0
NJ2 LR LR
comp=Z,5µm,21.3s,MS5.9
ENH Enshi 94.81 326 PFAKE 17 07 20.0 +9.1
ENH LR LR
comp=Z,161nm,22.0s,MS4.5
MJAR Matsushiro Arr 95.60 351 LR LR 17 47 49.4
comp=Z,2µm,21.7s,MS5.4,baz=180,slow=34
MAJO Matsushiro 95.60 351 PFAKE 17 07 30.0 +15
MAJO LR LR
comp=Z,2µm,20.0s,MS5.5
MAT Matsushiro 95.60 351 S S 17 18 33.0 +1.4
CD2 Chengdu 97.14 322 *e*P **P** **17 07 21.9 +0.4**
CD2 AP pP 17 07 26.8 +1.9
CD2 XP sP 17 07 28.9 +2.8
CD2 PP PP 17 11 21.6 +4.1
CD2 SKS 17 17 57.5
CD2 S S 17 18 42.3 -2.5
CD2 XS sS 17 18 50.4 0.0
CD2 PS PS 17 20 11.8 +4.5
CD2 SS SS 17 25 24.8 +3.1
CD2 AMB AMB
comp=Z,20nm,0.9s,mb5.5
CD2 AMB AMB
comp=Z,80nm,9.6s
CD2 LR LR
comp=N,1µm,24.0s
CD2 LR LR
comp=Z,1µm,24.0s,MS5.3
LPAZ La Paz 99.08 144 P **P** **17 07 31.0 +0.8**
comp=Z,1.1nm,0.9s,mb4.4,baz=130,slow=4.3,SNR=3.7
LPAZ LR LR 17 45 20.8
comp=Z,826nm,20.6s,MS5.2,baz=166,slow=31
LPAZ La Paz 99.08 144 *e*P **P** **17 07 32.4 +2.2**
LPAZ pmax pmax
comp=Z,2.0nm,0.9s
LPAZ La Paz 99.08 144 *e*Pdif **P** **17 07 32.4 +2.1**
comp=Z,1.8nm,0.9s,mb4.6
KMBO Kilima Mbogo 100.11 251 PFAKE 17 07 50.0 +15
KMBO LR LR
comp=Z,824nm,21.0s,MS5.2
DL2 Dalian 100.17 339 *e*P Pdif 17 07 32.9 -2.2
DL2 PP PP 17 11 43.1 +2.4
DL2 S Sdif 17 19 05.9 -4.5
DL2 SS SS 17 26 08.4 +4.2
DL2 AMB AMB
comp=Z,10.0nm,0.9s
DL2 LR LR
comp=N,620nm,21.1s,MS5.2
DL2 LR LR
comp=E,510nm,20.8s,MS5.2
DL2 LR LR

comp=Z,980nm,21.1s,MS5.3
LSA Lhasa 100.51 311 PFAKE 17 07 50.0 +13
LSA LR LR
comp=Z,1µm,22.0s,MS5.4
BJT Baijiatuan 102.36 335 PFAKE 17 08 00.0 +15
BJT LR LR
comp=Z,3µm,20.0s,MS5.9
MDJ Mudanjiang 104.48 346 PFAKE 17 08 00.0 +5.7
MDJ LR LR
comp=Z,1µm,19.0s,MS5.4
YSS Yuzh-Sakhalins 105.70 356 PFAKE 17 12 20.0 +7.3
YSS LR LR
comp=Z,2µm,20.0s,MS5.7
HIA Hailar 110.53 340 PFAKE 17 12 30.0 +8.3
HIA LR LR
comp=Z,2µm,21.0s,MS5.5
ULN Ulaanbaatar 111.92 331 ⇓*i*PKIKP PKiKP 17 12 28.8 +4.5
ULN Ulaanbaatar 111.92 331 PFAKE 17 12 40.0 +16
ULN LR LR
comp=Z,2µm,20.0s,MS5.6
SONM Songino Array 112.06 330 PP PP 17 13 09.5 +1.1
comp=Z,1.0nm,1.1s,baz=163,slow=5.2,SNR=3.6
TLY Talaya 116.30 330 PFAKE 17 12 40.0 +7.3
TLY LR LR
comp=Z,2µm,21.0s,MS5.7
MA2 Magadan 118.23 1 ⇑*i*PKIKP PKPdf 17 12 41.8 +5.4
MA2 MLR MLR
comp=Z,800nm,19.0s,MS5.4
MA2 Magadan 118.23 1 PFAKE 17 12 50.0 +14
MA2 LR LR
comp=Z,776nm,19.0s,MS5.3
AAK Ala-Archa 118.40 306 ⇓*i*PKIKP PKPdf 17 12 40.4 +3.7
AAK Ala-Archa 118.40 306 PFAKE 17 12 50.0 +13
AAK LR LR
comp=Z,2µm,21.0s,MS5.6
MKAR Makanchi Array 118.77 314 PKP PKPdf 17 12 36.8 -0.6
comp=Z,0.4nm,0.6s,baz=157,slow=4.7,SNR=3.6
ISA Isabella 120.98 72 PFAKE 17 12 50.0 +8.3
ISA LR LR
comp=Z,406nm,22.0s,MS5.0
YAK Yakutsk 121.61 349 *d*iPKIKP PKPdf 17 12 46.0 +3.1
YAK MLR MLR
comp=Z,1µm,20.0s,MS5.6
YAK Yakutsk 121.61 349 PFAKE 17 12 50.0 +7.1
YAK LR LR
comp=Z,1µm,20.0s,MS5.5
CMB Columbia Colle 121.93 68 PFAKE 17 12 50.0 +6.5
CMB LR LR
comp=Z,2µm,19.0s,MS5.7
NVAR Mina Array Bea 123.25 70 PKP PKPdf 17 12 46.7 +0.6
comp=Z,0.2nm,0.4s,baz=194,slow=1.9,SNR=2.5
NVAR Mina Array Bea 123.25 70 PKP PKPdf 17 12 46.7 +0.6
TPH Tonopah 123.50 71 PFAKE 17 13 00.0 +13
TPH LR LR
comp=Z,985nm,20.0s,MS5.5
YBH Yreka Blue Hor 123.73 64 PKP PKPdf 17 12 47.0 0.0
comp=Z,1.1nm,0.6s,baz=63,slow=1.0,SNR=3.1
ZAL Zalesovo 123.84 320 PKP PKPdf 17 12 46.9 -0.3
comp=Z,0.5nm,0.3s,baz=169,slow=5.2,SNR=2.6
DBIC Dimbokro 124.10 212 PFAKE 17 13 00.0 +12
DBIC LR LR
comp=Z,1µm,21.0s,MS5.6
MNTX Cornudas Mount 124.45 85 *e*PKPdf PKPdf 17 12 49.1 +0.7
WVOR Wild Horse Val 126.19 66 *e*PKIKP PKPdf 17 12 52.3 +0.6
MSU Marysvale 126.33 74 *e*PKIKP PKPdf 17 12 53.6 +1.7
ANMO Albuquerque 126.46 81 ⇑*i*PKIKP PKPdf 17 12 59.5 +7.3
ANMO Albuquerque 126.46 81 PFAKE 17 13 00.0 +7.8
ANMO LR LR
comp=Z,1µm,21.0s,MS5.6
BILL Bilibino 127.34 8 *i* PKIKP PKPdf 17 12 59.0 +5.1
BILL MLR MLR
comp=Z,800nm,20.0s,MS5.4
BILL Bilibino 127.34 8 PFAKE 17 13 00.0 +6.1
BILL LR LR
comp=Z,1µm,21.0s,MS5.5
SRU San Rafael 127.61 75 *e*PKIKP PKPdf 17 12 55.5 +1.1
TOA0 Torodi Ar. Sit 128.18 222 *e*PKPdf PKPdf 17 12 57.2 +1.7
TORD Torodi Ar. Bea 128.18 222 PKP PKPdf 17 12 55.4 -0.1
comp=Z,2.1nm,1.0s,baz=145,slow=1.3,SNR=6.0
TORD Torodi Ar. Bea 128.18 222 PKP PKPdf 17 12 55.4 -0.1
BRVK Borovoye 128.41 311 *e*PKIKP PKPdf 17 12 56.4 +0.5
BRVK MLR MLR
comp=Z,1µm,21.0s,MS5.6
CHKZ Chkalovo 128.75 312 *e*PKIKP PKPdf 17 12 56.1 -0.5
ZRNK Zerenda 128.83 310 *e*PKIKP PKPdf 17 12 56.2 -0.5
HWUT Hardware Ranch 128.99 72 PKPdf PKPdf 17 12 55.8 -1.2
HWUT LR LR
comp=Z,2µm,19.0s,MS5.8
SDCO Great Sand Dun 129.11 80 PFAKE 17 13 10.0 +13
SDCO LR LR
comp=Z,1µm,19.0s,MS5.7
PMR Palmer 129.37 33 PFAKE 17 13 10.0 +12
PMR LR LR
comp=Z,4µm,22.0s,MS6.0
WMOK Wichita Mounta 130.25 88 *e*PKIKP PKPdf 17 12 59.1 -0.3
GNI Garni 130.36 283 PFAKE 17 13 10.0 +10
GNI LR LR
comp=Z,2µm,21.0s,MS5.8
NEW Newport 131.26 62 PFAKE 17 13 10.0 +8.7
NEW LR LR
comp=Z,2µm,19.0s,MS5.8
COLA College 132.34 31 PFAKE 17 13 10.0 +6.6
COLA LR LR
comp=Z,2µm,20.0s,MS5.9
KIV Kislovodsk 134.20 285 *i* PKIKP PKPdf 17 13 14.0 +7.1
KIV 17 15 46.0
KIV *e*PS PS 17 25 59.9 +2.1
KIV *e*PPS 17 27 49.6
KIV *e*SS SS 17 33 25.0 -2.0
KIV pmax pmax
comp=Z,14nm,1.3s
KIV MLR MLR
comp=Z,600nm,19.0s,MS5.3
KIV Kislovodsk 134.20 285 PFAKE 17 13 20.0 +13
KIV LR LR
comp=Z,834nm,21.0s,MS5.4
RSSD Black Hills 134.58 75 *e*PKIKP PKPdf 17 13 07.2 -0.4
RSSD MLR MLR
comp=Z,2µm,19.0s,MS5.9
ARU Arti 135.55 308 *e*PKIKP PKPdf 17 13 12.9 +3.5
ARU MLR MLR
comp=Z,1µm,21.0s,MS5.7
ARU Arti 135.55 308 PFAKE 17 13 20.0 +11
ARU LR LR
comp=Z,1µm,21.0s,MS5.7
BRTR Keskin Array B 135.72 274 PKP PKPdf 17 13 09.4 -0.3
comp=Z,0.3nm,0.3s,baz=104,slow=2.5,SNR=2.7
BR131 Keskin Array S 135.72 274 PFAKE 17 13 20.0 +10
BR131 LR LR
comp=Z,1µm,20.0s,MS5.5
INK Inuvik 138.78 33 PKP PKPdf 17 13 13.1 -2.3
comp=Z,2.4nm,0.9s,baz=159,slow=6.7,SNR=2.3
INK Inuvik 138.78 33 PKP PKPdf 17 13 13.1 -2.3
YKA Yellowknife Ar 141.65 48 PKP PKPdf 17 13 19.9 -0.7
comp=Z,1.7nm,1.0s,baz=239,slow=2.4,SNR=2.8
ULM Lac du Bonnet 142.82 74 PKhKP 17 13 14.6
comp=Z,1.0nm,0.5s,baz=310,slow=1.7,SNR=2.7
ULM PKP PKPdf 17 13 21.2 -1.5
comp=Z,4.4nm,1.0s,baz=252,slow=6.4,SNR=2.3
KIS Kishinev 143.34 278 *e*PKIKP 17 13 38.0
KIS *e* 17 20 40.0
KIS MLR MLR
comp=Z,800nm,22.0s,MS5.4
KIS MLR MLR
comp=Z,600nm,22.0s
EYMN Ely 143.56 80 *e*PKPdf PKPdf 17 13 22.1 -1.8
VRI Vrincioaia 143.66 275 ⇑*i*P PKPdf 17 13 27.8 +3.7
VRI Vrincioaia 143.66 275 ⇑P PKPdf 17 13 27.8 +3.7
MLR Muntele Rosu 143.81 274 PKP PKPdf 17 13 23.3 -1.1
comp=Z,3.9nm,0.8s,baz=119,slow=1.7,SNR=7.5
MLR Muntele Rosu 143.81 274 ⇑*i*P PKPdf 17 13 23.6 -0.8
MLR Muntele Rosu 143.81 274 PKIKP PKPdf 17 13 23.8 -0.6
MLR Muntele Rosu 143.81 274 ⇑P PKPdf 17 13 23.6 -0.8
MOS Moscow 144.34 295 *e*PKIKP PKPdf 17 13 23.9 -1.4
OBN Obninsk 144.49 294 *de*PKIKP PKPdf 17 13 24.2 -1.4
OBN *i* 17 13 29.5
OBN *e*SSS 17 41 02.6
OBN pmax pmax
comp=Z,26nm,1.2s
OBN pmax pmax
comp=Z,88nm,1.5s
KEST Kesra 144.96 246 PKPbc PKPdf 17 13 27.3 +0.9
comp=Z,11nm,1.1s,baz=248,slow=1.6,SNR=7.4
SDMD Soldier's Deli 145.10 104 *e*PKPdf PKPdf 17 13 24.3 -2.3
GZR Gura Zlata 145.38 271 PKHKP 17 13 28.1

SSPA	**Standing Stone**	**145.49 101**	*e*PKPdf	PKPdf	17 13 26.1	-1.2
AKASG	**Malin Array Be**	**145.49 283**	PKPbc	PKPbc	17 13 26.2	-1.2
	comp=Z,2.8nm,0.7s,baz=99,slow=2.5,SNR=16					
AKASG	**Malin Array Be**	**145.49 283**	PKPbc	PKPbc	17 13 26.2	-1.2
AKBB	**Malin Array Si**	**145.49 283**	*e*PKHKP		17 13 25.9	
BURAR	**Bucovina Array**	**145.59 276**	⇓*i*P	PKPdf	17 13 29.5	+2.0
BURAR	**Bucovina Array**	**145.59 276**	⇓P	PKPdf	17 13 29.5	+2.0
DIVS	**Divcibare**	**145.93 267**	⇑*i*PKP	PKPdf	17 13 29.4	+1.3
BBLS	**Bajina Basta -**	**146.07 266**	*e*PKP		17 13 41.6	
BZS	**Buzias**	**146.13 270**	⇑*i*P	PKPdf	17 13 29.9	+1.5
BZS	**Buzias**	**146.13 270**	⇑P	PKPdf	17 13 29.9	+1.5
DRGR		**146.35 273**	⇑*i*P	PKPdf	17 13 31.1	+2.3
LVV	**L'vov**	**147.59 278**	⇓*i*PKP2	PKPab	17 13 35.7	0.0
SADO	**Sadowa**	**147.81 95**	PKPbc	PKPbc	17 13 32.5	-1.6
	comp=Z,6.5nm,0.7s,baz=249,slow=5.6,SNR=6.8					
SADO	**Sadowa**	**147.81 95**	PKPbc	PKPbc	17 13 32.5	-1.6
KOLS	**Kolonicke sedl**	**147.95 276**	*e*PKP	PKPab	17 13 37.6	+0.5
PKSM	**Moragy**	**148.07 269**	⇑*i*P	PKPbc	17 13 35.8	+1.0
PKSM	**Moragy**	**148.07 269**	⇑P	PKPbc	17 13 35.8	+1.0
CRVS	**Cervenica-Dubn**	**148.35 275**	*e*PKP	PKPab	17 13 40.2	+1.5
MNK	**Minsk**	**148.37 288**	*e*PKHKP		17 13 25.0	
MDT	**Midelt**	**148.46 226**	PKPbc	PKPbc	17 13 36.0	+0.2
	comp=Z,4.2nm,0.8s,baz=246,slow=6.9,SNR=3.9					
PSZ	**Piszkesteto**	**148.54 272**	*e*pPKP/A		17 13 45.7	
PSZ	**Piszkesteto**	**148.54 272**	⇑*i*P	PKPdf	17 13 36.1	+3.7
PSZ	**Piszkesteto**	**148.54 272**	*e*PKPbc	PKPbc	17 13 36.0	0.0
KECS	**Kecovo**	**148.59 273**	*e*PKP	PKPbc	17 13 38.8	+2.6
KECS			*e*		17 13 46.1	
BUD	**Budapest**	**148.71 271**	*e*pPKP/A	PKPbc	17 13 47.3	+11
STHS	**Stebnicka Huta**	**148.78 275**	*e*PKP	PKPbc	17 13 45.7	+9.0
VYHS	**Vyhne**	**149.45 272**	*e*PKP	PKPbc	17 13 39.2	+0.9
LONY	**Lake Ozonia**	**150.05 99**	*e*PKPbc	PKPbc	17 13 37.8	-2.0
ZST	**Bratislava**	**150.16 270**	*e*PKP	PKPab	17 13 49.6	+3.5
SUW	**Suwalki**	**150.42 284**	*e*PKIKP	PKPdf	17 13 38.0	+2.6
PGF	**Pioggiola**	**150.43 254**	*e*PKP2	PKPbc	17 13 42.2	+1.5
	comp=Z,168nm,1.5s					
JOF	**Joensuu**	**150.57 304**	*e*p	PKPbc	17 13 41.8	+0.8
	comp=Z,11nm,0.8s					
OKC	**Ostrava-Krasne**	**150.63 274**	*e*PKPab	PKPbc	17 13 41.9	+0.7
OKC			*e*x	x	17 18 06.8	
OKC			*e*x	x	17 37 25.2	
OKC			*e*x	x	17 43 30.1	
OKC			*e*x	x	17 55 18.3	
OKC			*e*x	x	17 59 08.4	
OKC			AMS	AMS	18 29 10.0	
	comp=Z,800nm,20.8s					
OKC	**Ostrava-Krasne**	**150.63 274**	*e*PKIKP	PKPbc	17 13 41.9	+0.7
OKC			*e*SS	SS	17 37 25.2	+48
OKC	**Ostrava-Krasne**	**150.63 274**	*e*PKP	PKPbc	17 13 41.9	+0.7
OKC			*e*PP	PP	17 18 06.8	+49
OKC			*e*SS	SS	17 37 25.2	+48
OKC			*e*		17 43 30.1	
VSU	**Vasula**	**150.84 294**	*i* PKIKP	PKPbc	17 13 43.7	+2.0
MORC	**Moravsky Berou**	**150.91 273**	⇑*i*P	PKPbc	17 13 44.2	+2.3
MORC	**Moravsky Berou**	**150.91 273**	*e*PKPbc	PKPbc	17 13 43.8	+2.0
APA	**Apatity**	**151.16 314**	⇑*i*PKIKP	PKPbc	17 13 45.0	+2.6
APA			pmax	pmax		
	comp=Z,25nm,1.2s					
TREC	**Trest**	**151.68 271**	*e*PKPbc	PKPbc	17 13 46.0	+2.4
TREC			AMS	AMS	18 31 10.0	
	comp=Z,1μm,25.4s					
DPC	**Dobruska-Polom**	**151.88 273**	*e*PKPab	PKPab	17 13 51.5	-1.7
DPC			*e*SS	SS	17 36 55.3	+4.0
DPC			*e*SKSSKS		17 43 22.5	
DPC			*e*x	x	17 54 26.3	
DPC			*e*x	x	17 58 33.8	
DPC			AMS	AMS	18 31 10.0	
	comp=Z,1μm,21.4s					
DPC	**Dobruska-Polom**	**151.88 273**	*e*PKIKP	PKPab	17 13 51.5	-1.7
DPC			*e*SS	SS	17 36 55.3	+4.0
DPC	**Dobruska-Polom**	**151.88 273**	*e*PKP	PKPab	17 13 51.5	-1.7
DPC			*e*SS	SS	17 36 55.3	+4.0
DPC			*e*		17 43 22.5	
UPC	**Upice**	**152.14 273**	*e*PKPbc	PKPbc	17 13 47.1	+2.4
GERES	**GERESS Array B**	**152.33 268**	PKPbc	PKPbc	17 13 46.7	+1.6
	comp=Z,2.7nm,0.9s,baz=145,slow=2.4,SNR=12					
GERES			PKPab	PKPab	17 13 53.5	-1.6
	comp=Z,4.2nm,0.9s,baz=182,slow=2.5,SNR=10					
FIA1	**FINESS Array S**	**152.34 300**	*e*PKPdf	PKPdf	17 13 37.4	-1.0
FIA1			*e*PKPbc	PKPbc	17 13 46.6	+1.5
FINES	**FINESS Array B**	**152.34 300**	PKPbc	PKPbc	17 13 44.9	-0.2
	comp=Z,10nm,0.8s,baz=88,slow=2.6,SNR=15					
FINES	**FINESS Array B**	**152.34 300**	PKPbc	PKPbc	17 13 44.9	-0.2
KAF	**Kangasniemi**	**152.47 301**	*e*p	PKPbc	17 13 45.6	+0.2
	comp=Z,5.8nm,0.7s					
KHC	**Kasperske Hory**	**152.57 269**	*e*PKPab	PKPab	17 13 53.9	-2.2
KHC			*e*x	x	17 18 09.2	
KHC			*e*SS	SS	17 37 01.4	+2.6
KHC			*e*x	x	17 43 26.4	
KHC			*e*x	x	17 54 36.5	
KHC			*e*x	x	17 58 35.8	
KHC			AMS	AMS	18 26 50.0	
	comp=Z,1μm,22.6s					
KHC	**Kasperske Hory**	**152.57 269**	*e*PKIKP	PKPab	17 13 53.9	-2.2
KHC			*e*SS	SS	17 37 01.4	+2.6
KHC	**Kasperske Hory**	**152.57 269**	*e*PKP	PKPab	17 13 53.9	-2.2
KHC			*e*PP	PP	17 18 09.2	+41
KHC			*e*SS	SS	17 37 01.4	+2.6
KHC			*e*		17 43 26.4	
PRU	**Pruhonice**	**152.59 271**	*e*PKPab	PKPab	17 13 55.4	-0.8
PRU			*e*PP	PP	17 18 07.1	+38
PRU			*e*SS	SS	17 37 01.2	+2.1
PRU			*e*x	x	17 43 26.3	
PRU			*e*x	x	17 54 32.5	
PRU			*e*x	x	17 58 47.6	
PRU			AMS	AMS	18 24 10.0	
	comp=Z,900nm,20.1s					
PRU	**Pruhonice**	**152.59 271**	*e*PKIKP	PKPab	17 13 55.4	-0.8
PRU			*e*SS	SS	17 37 01.2	+2.1
PRU	**Pruhonice**	**152.59 271**	*e*PKP	PKPab	17 13 55.4	-0.8
PRU			*e*PP	PP	17 18 07.1	+38
PRU			*e*SS	SS	17 37 01.2	+2.1
PRU			*e*		17 43 26.3	
PVCC	**Panska Ves**	**152.90 272**	*e*PKPab	PKPab	17 13 57.4	-0.1
PVCC			AMS	AMS	18 28 30.0	
	comp=Z,900nm,19.4s					
MBDF	**Montbardon**	**153.12 255**	*e*PKP2	PKPdf	17 13 42.8	+3.3
	comp=Z,47nm,1.2s					
BRG	**Berggiesshubel**	**153.42 272**	*e*PKP	pPKPbc	17 13 51.6	+0.7
	comp=Z,2.6nm,0.9s					
BRG			SS	SS	17 37 10.0	+1.8
BRG						
	comp=N,478nm,27.9s					
BRG						
	comp=E,139nm,20.0s					
BRG						
	comp=Z,797nm,18.6s					
BRG	**Berggiesshubel**	**153.42 272**	*e*PKIKP	pPKPbc	17 13 51.6	+0.7
BRG			SS	SS	17 37 10.0	+1.8
BRG			pmax	pmax		
	comp=Z,2.0nm,1.0s					
BRG			MLR	MLR		
	comp=N,3μm,27.9s					
BRG			MLR	MLR		
	comp=E,478nm,20.0s					
BRG			MLR	MLR		
	comp=Z,139nm,18.6s					
LPG	**La Plagne**	**153.68 256**	*e*PKP2	PKPbc	17 13 49.2	+1.1
	comp=Z,37nm,1.4s					
LPL	**La Plagne**	**153.70 256**	*e*PKP2	PKPbc	17 13 49.4	+1.3
	comp=Z,62nm,1.5s					
ORIF	**Oris-en-Rattie**	**153.70 254**	*e*PKP2	PKPdf	17 13 44.2	+3.9
NKC	**Novy Kostel**	**153.82 270**	*e*PKPab	PKPab	17 14 03.2	+1.8
NKC			*e*x	x	17 18 21.1	
NKC			*e*SS	SS	17 37 19.4	+6.9
NKC			*e*x	x	17 42 52.6	
NKC			*e*x	x	17 54 31.3	
NKC			*e*x	x	17 59 10.5	
NKC			AMS	AMS	18 26 00.0	
	comp=Z,1μm,23.7s					
NKC	**Novy Kostel**	**153.82 270**	*e*PKP2	PKPab	17 14 03.2	+1.8
NKC			*e*SS	SS	17 37 19.4	+6.9
NKC	**Novy Kostel**	**153.82 270**	*e*PKP	PKPab	17 14 03.2	+1.8
NKC			*e*PP	PP	17 18 21.1	+46
NKC			*e*SS	SS	17 37 19.4	+6.9
NKC			*e*		17 42 52.6	
GRA1	**Grafenberg Arr**	**154.13 268**	*e*PKP	PKPbc	17 13 50.7	+1.6
GRF	**Grafenberg Arr**	**154.13 268**	*e*PKIKP	PKPbc	17 13 50.7	+1.6
CLL	**Collm**	**154.16 272**	*e*PKP2	PKPab	17 14 02.0	-0.8
CLL			*i*		17 14 12.6	
CLL			*i*		17 14 28.6	
CLL			*e*		17 18 30.0	
CLL			*e*PPP		17 21 13.0	
CLL			*e*		17 24 32.0	
CLL			*e*		17 28 02.0	
CLL			*e*PPS		17 30 52.0	
CLL			*e*		17 32 41.0	
CLL			*e*SS	SS	17 37 20.0	+3.8
CLL			*e*		17 38 03.0	
CLL			*e*		17 43 58.0	
CLL	**Collm**	**154.16 272**	*e*PKPab	PKPab	17 14 02.0	-0.8
CLL			*i* x	x	17 14 12.6	
	comp=Z,20nm,1.3s					
CLL			*i* x	x	17 14 28.6	
CLL			*e*x	x	17 18 30.0	
CLL			*e*PPP		17 21 13.0	
CLL			*e*SKKSac	SKKSac	17 24 32.0	+4.2
CLL			*e*PSKS		17 28 02.0	
CLL			*e*PPS		17 30 52.0	
CLL			*e*x	x	17 32 41.0	
CLL			*e*SS	SS	17 37 20.0	+3.8
CLL			*e*PSS		17 38 03.0	
CLL			*e*x	x	17 42 30.0	
CLL			*e*x	x	17 43 58.0	
CLL			*e*x	x	17 50 24.0	
CLL			*e*x	x	17 54 06.0	
CLL	**Collm**	**154.16 272**	*i* PKP2	PKPab	17 14 12.6	+10
CLL			*e*SS	SS	17 37 20.0	+3.8
CLL			pmax	pmax		
	comp=Z,46nm,1.3s					
CLL			MLR	MLR		
	comp=Z,1μm,17.4s,MS5.8					
ESDC	**Sonseca Array**	**154.18 233**	PKPbc	PKPbc	17 13 51.0	+1.8
	comp=Z,0.2nm,0.3s,baz=225,slow=0.8,SNR=4.6					
ESDC			PKPab	PKPab	17 14 02.8	-0.1
	comp=Z,3.5nm,0.8s,baz=159,slow=1.4,SNR=6.7					
ESLA	**Sonseca Array**	**154.18 233**	PFAKE		17 13 50.0	+9.0
ESLA			LR	LR		
	comp=Z,6μm,20.0s,MS6.4					
ARCES	**ARCESS Array B**	**154.35 317**	PKPbc	PKPbc	17 13 49.4	-0.1
	comp=Z,1.2nm,0.7s,baz=133,slow=3.8,SNR=2.7					
ARCES			PKPab	PKPab	17 14 00.5	-3.1
	comp=Z,1.4nm,0.5s,baz=91,slow=4.9,SNR=7.7					
CABF	**La Chapelle**	**154.78 257**	*e*PKP2	PKPbc	17 13 48.5	-1.9
	comp=Z,61nm,1.4s					
BSD	**Bornholm Skovb**	**155.15 281**	*i*	PP	17 17 34.6	-8.4
BSD			*i*	SS	17 37 27.8	+0.8
BSD						
	comp=Z,840nm,20.0s					
KBS	**Kingsbay**	**155.88 341**	*e*	PKPdf	17 13 53.2	+10
KBS			AMS	AMS	18 17 11.1	
	comp=Z,509nm,26.4s,MS5.2					
TRO	**Tromso**	**156.66 317**	*e*SS	SS	17 37 42.5	-0.8
TRO			AMS	AMS	18 23 23.2	
	comp=Z,1μm,21.2s,MS5.7					
NOA	**NORSAR Array B**	**159.09 294**	PKPab	PKPab	17 14 25.2	+1.2
	comp=Z,1.5nm,0.9s,baz=101,slow=4.9,SNR=3.4					
KONO	**Kongsberg**	**159.52 289**	*e*	SKPdf	17 17 13.6	-6.6
KONO			*e*SS	SS	17 38 15.2	+1.4
BER	**Bergen**	**161.78 290**	*e*PP	PP	17 18 19.7	+0.4
BER			*e*SS	SS	17 38 37.7	+0.2
BER			AMS	AMS	18 26 05.5	
	comp=Z,1μm,20.5s					

*ISCJB **16** 17:07:53.0±0.3, 4371N±002×1009E±002, h5km±2km, Error ellipse: s-maj=3.4km s-min=2.4km az=143.6*
*CSEM **16** 17:07:53.7±0.1, 4376N×1025E, h10km, ML2.9/11, Error ellipse: s-maj=1.5km s-min=1.1km az=158.0*
*NEIC **16** 17:07:54.2, 4377N×10.17E, h5km, ML2.5(ROM), ML2.9(LDG), After ROM.*
*ROM **16** 17:07:54.2±0.2, 4377N×10.17E, h5km, Md3.0/18, Ml2.5/9, Error ellipse: s-maj=2.4km s-min=2.0km az=59.0*
*GEN **16** 17:07:55.0, 4376N×1021E, h10km, ML2.0*
*LDG **16** 17:07:55.6±0.1, 4367N×1021E, h10km, Ml2.9/16, Error ellipse: s-maj=4.5km s-min=2.6km az=2.0*
*PRU **16** 17:07:56.7, 4392N×1023E, h0km*
*VIE **16** 17:07:58.9±0.9, 4391N×1025E, h10km, mb2.6/3, ML2.8/5, Error ellipse: s-maj=8.7km s-min=5.4km az=134.0 82 km WNW of Florenz*
ISC 16 17:07:54.1±0.3**, 4371N**±002×**1013E**±002**, h8**km±2km**, n87,** σ**1**§**15**/154**, 11C-3D, Central Italy**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PII	**Pisa**	**0.29 87**	⇓*i*Pg	**Pg**	**17 08 00.2**	**+0.5**
PII			Sg	**Sg**	**17 08 03.9**	**+0.4**
GROG	**Isola di Gorgo**	**0.33 212**	Pg	**Pg**	**17 08 03.1**	**+2.5**
GROG			Sg	**Sg**	**17 08 09.3**	**+4.3**
	552nm,0.5s					
VINC	**Vinca**	**0.43 2**	P	**Pg**	**17 08 02.3**	**-0.2**
VLC	**Villacollemand**	**0.49 22**	⇑*i*Pg	**Pg**	**17 08 03.0**	**-0.5**
VLC			Sg	**Sg**	**17 08 09.0**	**-0.9**
	241nm,0.7s					
VLC	**Villacollemand**	**0.49 22**	*e*Pg	**Pg**	**17 08 02.9**	**-0.6**
VLC			Sg	**Sg**	**17 08 09.0**	**-0.9**
VLC	**Villacollemand**	**0.49 22**	*e*Pg	**Pg**	**17 08 02.9**	**-0.6**
VLC			Sg	**Sg**	**17 08 09.0**	**-0.9**
	241nm,0.7s					
BDI	**Bagni Di Lucca**	**0.49 43**	⇑*i*Pg	**Pg**	**17 08 02.9**	**-0.7**
	501nm,0.7s					
SARO	**Sassorosso**	**0.52 22**	P	**Pg**	**17 08 03.4**	**-0.7**
BACM		**0.57 356**	P	**Pg**	**17 08 05.0**	**-0.1**
VALM		**0.65 7**	P	**Pg**	**17 08 06.2**	**-0.4**
PZZT	**Monte Pizzetto**	**0.68 51**	Pg	**Pg**	**17 08 06.6**	**-0.5**
PZZT			Sg	**Sg**	**17 08 14.8**	**-1.1**
	698nm,0.2s					
CODM		**0.71 344**	P	**Pg**	**17 08 07.2**	**-0.6**
CODM			S	**Sg**	**17 08 16.1**	**-1.0**
GSCL	**Gusciola**	**0.72 27**	⇑*i*Pg	**Pg**	**17 08 07.7**	**-0.3**
GSCL			Sg	**Sg**	**17 08 18.7**	**+1.3**
	60nm,0.3s					
ERBM	**Eremo**	**0.74 16**	⇑*i*Pg	**Pg**	**17 08 08.2**	**-0.1**
ERBM			Sg	**Sg**	**17 08 18.4**	**+0.4**
	306nm,0.8s					
GRAM		**0.78 357**	P	**Pg**	**17 08 09.1**	**-0.1**
GRAM			S	**Sg**	**17 08 18.2**	**-1.2**
SC2M	**Scurtabr**	**0.82 328**	P	**Pg**	**17 08 09.9**	**+0.1**
GRFL	**Gerfalco**	**0.83 132**	Pg	**Pg**	**17 08 11.2**	**+1.1**
	47nm,0.6s					
CSNT	**Castellina Chi**	**0.88 105**	Pg	**Pg**	**17 08 11.1**	**+0.2**
	119nm,0.5s					
ZCCA	**Zocca**	**0.89 43**	Pg	**Pg**	**17 08 12.2**	**+1.1**
	19nm,0.7s					
SEI	**Scarperia**	**0.95 68**	Pg	**Pg**	**17 08 11.8**	**-0.6**
	539nm,0.3s					
BOB	**Bobbio (Coli)**	**1.17 335**	Pg	**Pg**	**17 08 16.5**	**0.0**
BOB			Sg	**Sg**	**17 08 32.7**	**+1.0**
	253nm,0.6s					
SFI	**Santa Sofia**	**1.26 80**	Pg	**Pg**	**17 08 17.4**	**-0.8**
SFI			Sg	**Sg**	**17 08 34.7**	**+0.1**
	74nm,0.4s					
CRE	**Caprese Michel**	**1.32 93**	Pg	**Pg**	**17 08 19.4**	**-0.1**
	54nm,0.4s					
PCP	**Pian Castagno**	**1.41 307**	P	**Pn**	**17 08 20.2**	**0.0**
PGF	**Pioggiola**	**1.43 216**	*e*Pg	**Pg**	**17 08 21.1**	**-0.3**
PGF			*e*Sg	**Sg**	**17 08 39.1**	**-0.8**
	18nm,0.3s					
PGF	**Pioggiola**	**1.43 216**	*e*Pn	**Pn**	**17 08 19.8**	**-0.5**
PGF			*e*Pg	**Pg**	**17 08 21.1**	**-0.3**
PGF			*e*Sg	**Sg**	**17 08 39.1**	**-0.8**
PGF	**Pioggiola**	**1.43 216**	*e*Pg	**Pg**	**17 08 21.1**	**-0.3**
PGF			*e*Sg	**Sg**	**17 08 39.1**	**-0.8**
	8.9nm,0.3s					
FIN	**Finale Ligure**	**1.48 290**	Pg	**Pg**	**17 08 20.9**	**-1.5**
	36nm,0.4s					
FIN	**Finale Ligure**	**1.48 290**	P	**Pn**	**17 08 20.1**	**-0.9**
FIN	**Finale Ligure**	**1.48 290**	Pg	**Pg**	**17 08 20.9**	**-1.5**
	36nm,0.4s					
RORO		**1.55 286**	P	**Pn**	**17 08 21.6**	**-0.4**
ROB	**Roburent**	**1.73 291**	P	**Pn**	**17 08 24.4**	**-0.2**
FSSB	**Fossombrone**	**1.92 90**	Pg	**Pg**	**17 08 28.3**	**-2.6**
	30nm,0.4s					
SBF	**Sospel**	**1.96 275**	*e*Pg	**Pg**	**17 08 31.1**	**-0.6**
SBF			*e*Sn	**Sn**	**17 08 51.4**	**-1.1**
	112nm,0.6s					
SBF	**Sospel**	**1.96 275**	*e*Pn	**Pn**	**17 08 28.3**	**+0.6**
SBF			*e*Pg	**Pg**	**17 08 31.1**	**-0.6**
SBF			*e*Sn	**Sn**	**17 08 51.4**	**-1.1**
SBF	**Sospel**	**1.96 275**	*e*Pg	**Pg**	**17 08 31.1**	**-0.6**
SBF			*e*Sn	**Sn**	**17 08 51.4**	**-1.1**
	56nm,0.6s					
SNTG	**Esanatoglia**	**2.09 102**	Pg	**Pg**	**17 08 29.8**	**-4.5**
	37nm,0.8s					
PZZ	**Prazzo**	**2.32 291**	P	**Pn**	**17 08 32.3**	**-0.4**
FRF	**La Foret Royal**	**2.53 268**	*e*Pg	**Pg**	**17 08 42.4**	**-0.3**
FRF			*e*Sn	**Sn**	**17 09 05.4**	**-1.3**
	17nm,0.3s					
FRF	**La Foret Royal**	**2.53 268**	*e*Pn	**Pn**	**17 08 35.5**	**-0.1**
FRF			*e*Pg	**Pg**	**17 08 42.4**	**-0.3**
FRF			*e*Sn	**Sn**	**17 09 05.4**	**-1.3**
FRF	**La Foret Royal**	**2.53 268**	*e*Pg	**Pg**	**17 08 42.4**	**-0.3**
FRF			*e*Sn	**Sn**	**17 09 05.4**	**-1.3**
	8.6nm,0.3s					
CTI	**Castel Tesino**	**2.58 24**	Pg	**Pg**	**17 08 37.1**	**-6.4**
	11nm,0.2s					
MBDF	**Montbardon**	**2.62 294**	*e*Pg	**Pg**	**17 08 44.7**	**+0.3**
MBDF			*e*Sn	**Sn**	**17 09 08.7**	**-0.1**
MBDF			*e*Sg	**Sg**	**17 09 19.0**	**+0.7**
	11nm,0.4s					
MBDF	**Montbardon**	**2.62 294**	*e*Pn	**Pn**	**17 08 37.1**	**+0.3**
MBDF			*e*Pg	**Pg**	**17 08 44.7**	**+0.3**
MBDF			*e*Sn	**Sn**	**17 09 08.7**	**-0.1**
MBDF			*e*Sg	**Sg**	**17 09 19.0**	**+0.7**
MBDF	**Montbardon**	**2.62 294**	*e*Pg	**Pg**	**17 08 44.7**	**+0.3**
MBDF			*e*Sn	**Sn**	**17 09 08.7**	**-0.1**
MBDF			*e*Sg	**Sg**	**17 09 19.0**	**+0.7**
	5.7nm,0.4s					
LMR	**La Mourre**	**2.66 263**	*e*Pg	**Pg**	**17 08 43.9**	**-1.2**
LMR			*e*Sn	**Sn**	**17 09 08.6**	**-1.2**
	6.7nm,0.2s					
LMR	**La Mourre**	**2.66 263**	*e*Pn	**Pn**	**17 08 37.4**	**+0.1**
LMR			*e*Pg	**Pg**	**17 08 43.9**	**-1.2**
LMR			*e*Sn	**Sn**	**17 09 08.6**	**-1.2**
LMR	**La Mourre**	**2.66 263**	*e*Pg	**Pg**	**17 08 43.9**	**-1.2**
LMR			*e*Sn	**Sn**	**17 09 08.6**	**-1.2**
	3.3nm,0.2s					
TUE	**Stuetta**	**2.82 349**	Pg	**Pn**	**17 08 41.2**	**+1.7**
	16nm,0.7s					
LPG	**La Plagne**	**3.00 308**	*e*Pg	**Pg**	**17 08 50.5**	**-1.2**
LPG			*e*Sg	**Sg**	**17 09 32.0**	**+1.4**
	14nm,0.5s					
LPG	**La Plagne**	**3.00 308**	*e*Pn	**Pn**	**17 08 43.6**	**+1.5**
LPG			*e*Pg	**Pg**	**17 08 50.5**	**-1.2**
LPG			*e*Sg	**Sg**	**17 09 32.0**	**+1.4**
LPG	**La Plagne**	**3.00 308**	*e*Pg	**Pg**	**17 08 50.5**	**-1.2**
LPG			*e*Sg	**Sg**	**17 09 32.0**	**+1.4**
	6.9nm,0.5s					
LPL	**La Plagne**	**3.03 308**	*e*Pg	**Pg**	**17 08 51.4**	**-0.7**
LPL			*e*Sg	**Sg**	**17 09 32.5**	**+1.2**
	4.4nm,0.3s					
LPL	**La Plagne**	**3.03 308**	*e*Pn	**Pn**	**17 08 44.0**	**+1.6**
LPL			*e*Pg	**Pg**	**17 08 51.4**	**-0.7**
LPL			*e*Sg	**Sg**	**17 09 32.5**	**+1.2**
LPL	**La Plagne**	**3.03 308**	*e*Pg	**Pg**	**17 08 51.4**	**-0.7**
LPL			*e*Sg	**Sg**	**17 09 32.5**	**+1.2**
	2.2nm,0.3s					
ORIF	**Oris-en-Rattie**	**3.28 293**	*e*Pg	**Pg**	**17 08 56.2**	**-0.8**
ORIF			*e*Sg	**Sg**	**17 09 40.7**	**+1.1**
	9.2nm,0.4s					
ORIF	**Oris-en-Rattie**	**3.28 293**	*e*Pn	**Pn**	**17 08 48.2**	**+2.3**
ORIF			*e*Pg	**Pg**	**17 08 56.2**	**-0.8**
ORIF			*e*Sg	**Sg**	**17 09 40.7**	**+1.1**
ORIF	**Oris-en-Rattie**	**3.28 293**	*e*Pg	**Pg**	**17 08 56.2**	**-0.8**
ORIF			*e*Sg	**Sg**	**17 09 40.7**	**+1.1**
	4.6nm,0.4s					
SMRF	**Simiane la Rot**	**3.31 276**	*e*Pg	**Pg**	**17 08 57.4**	**-0.1**
SMRF			*e*Sg	**Sg**	**17 09 41.4**	**+1.1**
	10nm,0.5s					
SMRF	**Simiane la Rot**	**3.31 276**	*e*Pn	**Pn**	**17 08 47.9**	**+1.7**
SMRF			*e*Pg	**Pg**	**17 08 57.4**	**-0.1**
SMRF			*e*Sg	**Sg**	**17 09 41.4**	**+1.1**
SMRF	**Simiane la Rot**	**3.31 276**	*e*Pg	**Pg**	**17 08 57.4**	**-0.1**
SMRF			*e*Sg	**Sg**	**17 09 41.4**	**+1.1**
	5.2nm,0.5s					
VOJS	**Vojsko**	**3.54 48**	*i* Pn	**Pn**	**17 08 49.4**	**+0.1**
VOJS			*i* Sn	**Sn**	**17 09 29.4**	**-2.0**
JAVS	**Javornik**	**3.55 51**	*e*Sn	**Sn**	**17 09 29.5**	**-2.2**
DAVA	**Damuels**	**3.58 357**	⇓*i*Pn	**Pn**	**17 08 53.4**	**+3.4**
DAVA			⇑*i*Sn	**Sn**	**17 09 34.1**	**+1.6**
SQTA	**Sankt Quirin**	**3.59 12**	⇓*i*Pn	**Pn**	**17 08 52.4**	**+2.2**
SQTA			⇑*i*Sn	**Sn**	**17 09 33.2**	**+0.4**
MOTA	**Moosalm**	**3.70 10**	⇑*i*Pn	**Pn**	**17 08 54.0**	**+2.4**
MOTA			⇑*i*Sn	**Sn**	**17 09 35.6**	**+0.2**
WTTA	**Wattenberg**	**3.71 16**	⇑*i*Pn	**Pn**	**17 08 53.3**	**+1.6**
KBA	**Koelnbreinsper**	**4.06 33**	⇑*i*Pn	**Pn**	**17 08 58.4**	**+1.9**
KBA			⇑*i*Sn	**Sn**	**17 09 44.4**	**+0.1**
CABF	**La Chapelle**	**4.08 317**	*e*Pn	**Pn**	**17 08 58.4**	**+1.6**
VIVF	**Saint-Julien-l**	**4.08 288**	*e*Pn	**Pn**	**17 08 58.4**	**+1.5**
VIVF			*e*Sn	**Sn**	**17 09 42.5**	**-2.4**
	1.6nm,0.3s					
VIVF	**Saint-Julien-l**	**4.08 288**	*e*Pn	**Pn**	**17 08 58.4**	**+1.5**
VIVF			*e*Sn	**Sn**	**17 09 42.5**	**-2.4**
	0.8nm,0.3s					
LASF	**Ste Croix**	**4.55 277**	*e*Pn	**Pn**	**17 09 03.8**	**+0.5**
LASF			*e*Sn	**Sn**	**17 09 53.8**	**-2.6**
	6.7nm,0.6s					
LASF	**Ste Croix**	**4.55 277**	*e*Pn	**Pn**	**17 09 03.8**	**+0.5**
LASF			*e*Sn	**Sn**	**17 09 53.8**	**-2.6**
	3.3nm,0.6s					
HINF	**Hinteralfeld**	**4.71 332**	*e*Pn	**Pn**	**17 09 06.4**	**+1.0**
HINF			*e*Sn	**Sn**	**17 09 58.8**	**-1.4**
	5.3nm,0.4s					
HINF	**Hinteralfeld**	**4.71 332**	*e*Pn	**Pn**	**17 09 06.4**	**+1.0**
HINF			*e*Sn	**Sn**	**17 09 58.8**	**-1.4**
	2.7nm,0.4s					
HAU	**Haudompre**	**5.04 330**	*e*Sn	**Sn**	**17 10 06.4**	**-2.2**
	7.3nm,0.3s					
HAU	**Haudompre**	**5.04 330**	*e*Sn	**Sn**	**17 10 06.4**	**-2.2**
	3.7nm,0.3s					
CDF	**Champ du Feu**	**5.11 338**	*e*Pn	**Pn**	**17 09 11.2**	**+0.2**
CDF			*e*Sn	**Sn**	**17 10 07.1**	**-3.0**
	2.9nm,0.4s					
CDF	**Champ du Feu**	**5.11 338**	*e*Pn	**Pn**	**17 09 11.2**	**+0.2**
CDF			*e*Sn	**Sn**	**17 10 07.1**	**-3.0**
	1.5nm,0.4s					
SMF	**Signal de Mont**	**5.33 306**	*e*Pn	**Pn**	**17 09 15.2**	**+1.2**
SMF			*e*Sn	**Sn**	**17 10 13.2**	**-2.4**
	2.1nm,0.3s					
SMF	**Signal de Mont**	**5.33 306**	*e*Pn	**Pn**	**17 09 15.2**	**+1.2**
SMF			*e*Sn	**Sn**	**17 10 13.2**	**-2.4**
	1.0nm,0.3s					
LOR	**Lormes**	**5.67 311**	*e*Pn	**Pn**	**17 09 19.5**	**+0.9**
SSF	**Saint Saulge**	**5.75 308**	*e*Pn	**Pn**	**17 09 20.3**	**+0.6**
MTLF	**Montolieu**	**5.77 269**	*e*Pn	**Pn**	**17 09 19.8**	**-0.2**
BGF	**Bois d'Agland**	**5.89 301**	*e*Pn	**Pn**	**17 09 23.4**	**+1.7**
KHC	**Kasperske Hory**	**5.92 22**	*e*PN	**Pn**	**17 09 21.8**	**-0.4**
KHC			*e*SN	**Sn**	**17 10 25.7**	**-4.5**
EPF	**Esparros**	**7.17 268**	*e*Pg	**Pg**	**17 10 09.0**	**-2.4**

*CSEM **16** 17:10:39.4±0.4, 3463N×553W, h10km, MD2.9, Error ellipse: s-maj=22.5km s-min=6.9km az=78.0*
*CNRM **16** 17:10:43.2, 3440N×544W, h0km, MD2.9*
*INMG **16** 17:10:43.0±0.9, 3474N×567W, h0km, ML2.0, Error ellipse: s-maj=8.0km s-min=6.8km az=50.0*
MDD 16 17:10:43.5±0.5**, 3454N**×**549W, h38**km±13km**, mb3.8**/4**, Error ellipse: s-maj=12.6km s-min=4.6km az=66.0, PRXIMO, Morocco**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSA	**Sarsar**	**0.44 321**	*e*P	Pn	17 10 53.0	-0.4
RSA			*i* S	Sn	17 11 00.0	-0.2
TSY	**Tnine Yamani**	**0.92 335**	*i* P	Pn	17 11 03.0	+3.0
TSY			*i* S	Sn	17 11 18.0	+6.0
MIF	**Mishlifen**	**1.15 169**	*i* P	Pn	17 11 01.0	-2.0
MIF			*i* S	Sn	17 11 16.0	-1.5
TZK	**Tazeka**	**1.17 112**	P	Pn	17 11 03.0	-0.4
TZK			S	Sn	17 11 18.0	-0.1
CZD	**Col de Zad**	**1.54 166**	*i* P	Pn	17 11 08.5	0.0
CZD			*i* S	Sn	17 11 28.0	+0.7
KIB	**El Ksiba**	**2.01 193**	P	Pn	17 11 16.0	+1.1
KIB			S	Sn	17 11 40.0	+1.2
KIB	**El Ksiba**	**2.01 193**	*e*P	Pn	17 11 16.0	+1.1
EMIN	**Mina Concepcio**	**3.36 344**	P	Pn	17 11 31.9	-1.7
	0.5nm,0.1s,SNR=9.6					
EMIN			S	Sn	17 12 09.2	-3.0
	0.5nm,0.1s,SNR=7.9					
EMIN	**Mina Concepcio**	**3.36 344**	P	Pn	17 11 31.9	-1.7
	0.5nm,0.1s,SNR=9.6					
EMIN			S	Sn	17 12 09.2	-3.0
	0.5nm,0.1s,SNR=7.9					
EGRO	**El Granado**	**3.40 332**	P	Pn	17 11 32.3	-1.8
	1.2nm,0.1s,SNR=6.1					
EGRO			S	Sn	17 12 09.6	-3.5
	2.3nm,0.1s,SNR=7.9					

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGRO	El Granado	3.40	332	P	Pn	17 11 32.3	-1.8
	1.2nm,0.1s,SNR=6.1						
EGRO				S	Sn	17 12 10.2	-2.9
	2.3nm,0.1s,SNR=7.9						
EADA	Adamuz	3.70	11	P	Pn	17 11 38.1	-0.1
	0.5nm,0.2s,SNR=7.9						
EADA				S	Sn	17 12 18.4	-2.1
	1.6nm,0.1s,SNR=7.9						
EADA	Adamuz	3.70	11	P	Pn	17 11 38.1	0.0
	0.5nm,0.2s,SNR=7.9						
EADA				S	Sn	17 12 19.2	-1.3
	1.6nm,0.1s,SNR=7.9						
PBEJ	Beja	3.98	332	eS	Sn	17 12 25.1	-2.3
PTEO	Sao Teotonio	3.99	320	eS	Sn	17 12 24.0	-3.6
EBAD	Badajoz	4.39	344	P	Pn	17 11 47.1	-0.5
	1.8nm,0.2s,SNR=7.7						
EBAD				S	Sn	17 12 34.8	-2.7
	2.1nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.39	344	P	Pn	17 11 47.1	-0.5
	1.8nm,0.2s,SNR=7.7						
EBAD				S	Sn	17 12 34.8	-2.6
	2.1nm,0.1s,SNR=7.9						
PESTR	Estremoz	4.64	339	eP	Pn	17 11 50.8	-0.3
PESTR				eS	Sn	17 12 39.9	-3.8
PCBR	Castelo Branco	5.53	344	eP	Pn	17 12 02.4	-0.9
PCBR				eS	Sn	17 13 01.3	-4.3

*GEN **16** 17:15:04.7, 4374N×1023E, h2^{km}, ML1.0*
*CSEM **16** 17:15:04.1±0.2, 4379N×1014E, h25^{km}, MD2.5/3, Error ellipse: s-maj=7.0km s-min=2.7km az=120.0*
*ISCJB **16** 17:15:05.1±0.8, 4377N±004×1019E±010, h11^{km}±8^{km}, Error ellipse: s-maj=12.2km s-min=5.2km az=41.6*
*ROM **16** 17:15:05.0±0.1, 4375N×1020E, h10^{km}, Md2.5/3, Ml1.7/3, Error ellipse: s-maj=3.4km s-min=0.6km az=56.0*
ISC 16 17:15:05.2±0.9, **4378N**±004×**1018E**±009, **h16**^{km}±8^{km}, **n9**, σ**0^{s}31**/15, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VINC	Vinca	0.37	357	P	Pg	17 15 12.5	-0.3
VINC				S	Sg	17 15 18.0	+0.1
GROG	Isola di Gorgo	0.41	211	Pg	Pg	17 15 13.5	0.0
GROG				Sg	Sg	17 15 19.3	+0.2
	63nm,0.2s						
BDI	Bagni Di Lucca	0.42	46	Pg	Pg	17 15 14.0	+0.3
	35nm,0.5s						
SARO	Sassorosso	0.44	21	P	Pg	17 15 13.6	-0.5
SARO				S	Sg	17 15 19.8	-0.3
BACM		0.51	351	P	Pg	17 15 15.3	-0.1
BACM				S	Sg	17 15 22.4	+0.2
PZZT	Monte Pizzetto	0.61	54	Pg	Pg	17 15 16.9	-0.3
	47nm,0.5s						
GSCL	Gusciola	0.65	27	Pg	Pg	17 15 17.9	0.0
GSCL				Sg	Sg	17 15 27.3	+0.8
	155nm,2.2s						
CODM		0.66	339	P	Pg	17 15 17.9	-0.3
GRAM		0.72	354	P	Pb	17 15 19.4	0.0
GRAM				S	Sb	17 15 29.1	+0.1

*LDG **16** 17:16:34.2±0.3, 4424N×1011E, h10^{km}, Ml2.6/10, Error ellipse: s-maj=4.7km s-min=3.0km az=103.0*
*CSEM **16** 17:16:36.9±0.2, 4372N×1007E, h10^{km}, ML2.7/5, Error ellipse: s-maj=4.6km s-min=3.3km az=178.0*
*GEN **16** 17:16:39.8, 4376N×1019E, h8^{km}, ML2.0*
*NEIC **16** 17:16:39.5, 4377N×1019E, h6^{km}, ML2.5(ROM), ML2.6(LDG), After ROM.*
*VIE **16** 17:16:43.7±1.1, 4388N×1033E, h10^{km}, mb2.4/1, ML2.6/3, Error ellipse: s-maj=18.2km s-min=7.5km az=98.0 75 km W of Florenz*
ROM 16 17:16:39.5±0.4, **4377N**×**1019E**, **h6**^{km}±4^{km}, **Md2.8**/17, **Ml2.5**/6, **6C-2D, Error ellipse: s-maj=3.4km s-min=3.2km az=85.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PII	Pisa	0.25	102	Pg	Pg	17 16 45.1	+0.7
PII				Sg	Sg	17 16 48.8	+1.1
VINC	Vinca	0.37	356	P	Sg	17 16 47.2	-4.3
GROG	Isola di Gorgo	0.41	212	Pg	Pg	17 16 48.1	+0.7
GROG				Sg	Sg	17 16 54.0	+1.3
	363nm,0.2s						
VLC	Villacollemand	0.41	20	Pg	Pg	17 16 47.9	+0.4
VLC				Sg	Sg	17 16 53.8	+0.9
	128nm,0.4s						
BDI	Bagni Di Lucca	0.41	45	Pg	Pg	17 16 47.7	+0.2
BDI				Sg	Sg	17 16 54.0	+1.1
	304nm,0.3s						
SARO	Sassorosso	0.44	20	P	Pg	17 16 48.3	+0.3
SARO				S	Sg	17 16 54.3	+0.6
BACM		0.51	351	P	Sg	17 16 49.9	-6.2
VALM		0.58	4	P	Pg	17 16 51.1	+0.5
PZZT	Monte Pizzetto	0.60	53	Pg	Pg	17 16 51.5	+0.4
	414nm,0.3s						
GSCL	Gusciola	0.65	26	⇑iPg	Pg	17 16 52.6	+0.7
GSCL				Sg	Sg	17 17 01.9	+1.6
	41nm,0.3s						
CODM		0.66	339	P	Sg	17 16 52.1	-8.8
ERBM	Eremo	0.67	14	⇑iPg	Pg	17 16 53.1	+0.8
	57nm,0.2s						
GRAM		0.72	353	P	Pg	17 16 53.8	+0.4
FNVD	Fontana Vidola	0.78	59	Pg	Pg	17 16 55.1	+0.6
	230nm,0.5s						
SC2M	Scurtabr	0.79	323	P	Sg	17 16 54.7	-10
ZCCA	Zocca	0.81	44	Pg	Pg	17 16 57.1	+2.0
GRFL	Gerfalco	0.85	137	Pg	Pg	17 16 56.1	+0.3
	16nm,0.4s						
CSNT	Castellina Chi	0.86	110	Pg	Pg	17 16 56.3	+0.4
	48nm,0.4s						
SEI	Scarperia	0.89	71	Pg	Pg	17 16 56.9	+0.3
SEI				Sg	Sg	17 17 10.1	+2.0
	334nm,0.3s						
BOB	Bobbio (Coli)	1.13	332	Pg	Sg	17 17 01.5	-14
	131nm,0.5s						
SFI	Santa Sofia	1.21	83	Pg	Pg	17 17 02.4	-0.3
SFI				Sg	Sg	17 17 19.6	+1.3
	36nm,0.4s						
CRE	Caprese Michel	1.29	96	Pg	Pg	17 17 04.7	+0.5
	28nm,0.4s						
FIN	Finale Ligure	1.49	288	Pg	Sn	17 17 08.8	-18
	18nm,0.3s						
PGF	Pioggiola	1.50	216	ePg	Pg	17 17 07.7	-0.6
PGF				eSn	Sn	17 17 27.9	+1.1
PGF				eSg	Sg	17 17 32.8	+5.0
	20nm,0.4s						
PGF	Pioggiola	1.50	216	ePn	Pn	17 17 05.2	-1.7
PGF				ePg	Pg	17 17 07.7	-0.6
PGF				eSn	Sn	17 17 27.9	+1.1
PGF				eSg	Sg	17 17 32.8	+5.0
PGF	Pioggiola	1.50	216	ePg	Pg	17 17 07.7	-0.6
SBF	Sospel	2.00	274	ePg	Pg	17 17 10.4	-7.3
SBF				eSn	Sn	17 17 29.7	-9.3
SBF				eSg	Sg	17 17 35.8	-7.8
	30nm,0.5s						
SBF	Sospel	2.00	274	ePg	Pg	17 17 10.4	-7.3
SBF				eSn	Sn	17 17 29.7	-9.3
SBF				eSg	Sg	17 17 35.8	-7.8
	15nm,0.5s						
CTI	Castel Tesino	2.50	24	Pg	Pg	17 17 22.2	-5.2
	9.0nm,0.2s						
FRF	La Foret Royal	2.58	266	ePg	Pg	17 17 20.8	-8.1
FRF				eSg	Sg	17 17 54.9	-7.4
	3.5nm,0.2s						
FRF	La Foret Royal	2.58	266	ePg	Pg	17 17 20.8	-8.1
FRF				eSg	Sg	17 17 54.9	-7.4
	1.8nm,0.2s						
MBDF	Montbardon	2.63	292	eSg	Sg	17 17 51.7	-12
	3.0nm,0.3s						
LMR	La Mourre	2.71	262	ePg	Pg	17 17 25.1	-6.3
LMR				eSn	Sn	17 17 48.9	-7.7
LMR				eSg	Sg	17 18 00.2	-6.4
	2.5nm,0.2s						
LMR	La Mourre	2.71	262	ePg	Pg	17 17 25.1	-6.3
LMR				eSn	Sn	17 17 48.9	-7.7
LMR				eSg	Sg	17 18 00.2	-6.4
	1.2nm,0.2s						
LPG	La Plagne	3.00	306	eSg	Sg	17 17 59.0	-17
	2.2nm,0.3s						
LPL	La Plagne	3.02	306	ePg	Pg	17 17 24.7	-13
ORIF	Oris-en-Rattie	3.30	292	ePg	Pg	17 17 31.5	-11
ORIF				eSn	Sn	17 17 57.1	-14
ORIF				eSg	Sg	17 18 11.5	-14
	3.9nm,0.3s						
SMRF	Simiane la Rot	3.34	275	ePg	Pg	17 17 34.1	-9.4
SMRF				eSn	Sn	17 18 00.8	-11
SMRF				eSg	Sg	17 18 16.9	-10
	1.8nm,0.2s						
DAVA	Damuels	3.52	357	⇑iPn	Pn	17 17 38.1	+3.4
DAVA				⇑iSn	Sn	17 18 18.9	+2.3
SQTA	Sankt Quirin	3.52	11	⇑iPn	Pn	17 17 37.1	+2.4
SQTA				⇓iSn	Sn	17 18 18.6	+2.0
MOTA	Moosalm	3.63	10	⇓iPn	Pn	17 17 38.7	+2.5
MOTA				⇑iSn	Sn	17 18 21.2	+1.9
CABF	La Chapelle	4.06	316	eSn	Sn	17 18 11.3	-19
LASF	Ste Croix	4.58	276	ePg	Pg	17 17 56.8	-11
LASF				eSn	Sn	17 18 30.4	-12
	5.3nm,0.6s						
LASF	Ste Croix	4.58	276	ePn	Pn	17 17 40.8	-8.5
LASF				ePg	Pg	17 17 56.8	-11
LASF				eSn	Sn	17 18 30.4	-12
LASF	Ste Croix	4.58	276	ePn	Pn	17 17 40.8	-8.5
LASF				eSn	Sn	17 18 30.4	-12
	2.7nm,0.6s						
HINF	Hinteralfeld	4.67	331	ePg	Pg	17 17 51.7	-17
HAU	Haudompre	5.01	329	ePg	Pg	17 17 58.4	-17
HAU				eSn	Sn	17 18 32.7	-21
CDF	Champ du Feu	5.06	337	ePg	Pg	17 17 58.0	-18
CDF				eSn	Sn	17 18 33.5	-21
LOR	Lormes	5.66	310	eSn	Sn	17 18 50.1	-19
SSF	Saint Saulge	5.74	307	eSn	Sn	17 18 52.9	-18
MTLF	Montolieu	5.81	268	eSn	Sn	17 19 01.2	-12
	2.5nm,0.2s						
MTLF	Montolieu	5.81	268	eSn	Sn	17 19 01.2	-12
	1.2nm,0.2s						
CAF	Calviac	5.94	284	eSn	Sn	17 19 01.7	-15
EPF	Esparros	7.21	267	ePn	Pn	17 18 17.1	-8.3
BAIF	Baives	7.50	329	ePn	Pn	17 18 15.4	-14
BAIF				eSn	Sn	17 19 32.3	-22

*LDG **16** 17:27:25.4±0.6, 4424N×1023E, h2^{km}, Ml2.3/3, Error ellipse: s-maj=10.8km s-min=5.5km az=91.0*
*CSEM **16** 17:27:31.3±0.1, 4378N×1019E, h12^{km}, MD2.8/16, Error ellipse: s-maj=1.4km s-min=1.1km az=43.0*
*ISCJB **16** 17:27:31.3±0.4, 4374N±002×1014E±003, h7^{km}±3^{km}, Error ellipse: s-maj=4.2km s-min=4.0km az=175.4*
*GEN **16** 17:27:32.1, 4375N×1022E, h8^{km}, ML2.0*
*ROM **16** 17:27:32.4±0.2, 4376N×1021E, h10^{km}, Md2.8/16, Ml2.3/8, Error ellipse: s-maj=3.7km s-min=3.3km az=23.0*
*VIE **16** 17:27:35.8±0.7, 4390N×1028E, h10^{km}, mb2.4/3, ML2.7/5, Error ellipse: s-maj=9.0km s-min=4.7km az=123.0 79 km W of Florenz*
ISC 16 17:27:31.7±0.5, **4374N**±002×**1012E**±003, **h2**^{km}±4^{km}, **n48**, σ**1^{s}04**/65, **4C-4D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PII	Pisa	0.29	92	Pg	Pg	17 27 37.3	0.0
PII				Sg	Sg	17 27 40.8	-0.3
GROG	Isola di Gorgo	0.35	209	Pg	Pg	17 27 40.2	+1.7
	289nm,0.2s						
VINC	Vinca	0.41	3	P	Pg	17 27 39.6	+0.1
VINC				S	Sg	17 27 45.4	+0.6
VLC	Villacollemand	0.47	24	Pg	Pg	17 27 40.3	-0.3
	139nm,0.3s						
BDI	Bagni Di Lucca	0.47	46	Pg	Pg	17 27 40.1	-0.7
BDI				Sg	Sg	17 27 46.1	-0.9
	317nm,0.3s						
SARO	Sassorosso	0.49	24	P	Pg	17 27 40.6	-0.6
BACM		0.55	356	P	Pg	17 27 42.2	0.0
BACM				S	Sg	17 27 49.7	+0.5
VALM		0.62	8	P	Pg	17 27 43.5	-0.1
PZZT	Monte Pizzetto	0.66	53	Pg	Pg	17 27 43.8	-0.7
CODM		0.69	343	P	Pg	17 27 44.4	-0.5
CODM				S	Sg	17 27 53.5	-0.3
GSCL	Gusciola	0.70	28	Pg	Pg	17 27 45.0	-0.2
	74nm,0.4s						
ERBM	Eremo	0.71	17	Pg	Pg	17 27 45.4	0.0
	166nm,0.6s						
GRAM		0.76	357	P	Pg	17 27 46.2	-0.1
GRAM				S	Sg	17 27 55.6	-0.5
SC2M	Scurtabr	0.79	328	P	Pg	17 27 47.2	+0.3
SC2M				S	Sg	17 27 57.5	+0.3
FNVD	Fontana Vidola	0.84	59	Pg	Pg	17 27 48.9	+1.0
	315nm,0.7s						
GRFL	Gerfalco	0.85	133	Pg	Pg	17 27 48.3	+0.2
	27nm,0.6s						
ZCCA	Zocca	0.87	45	Pg	Pg	17 27 49.4	+1.0
	10.0nm,0.5s						
CSNT	Castellina Chi	0.89	107	Pg	Pg	17 27 48.6	-0.1
	152nm,1.1s						
SEI	Scarperia	0.95	70	Pg	Pg	17 27 49.2	-0.7
	411nm,0.4s						
BOB	Bobbio (Coli)	1.14	335	Pg	Pg	17 27 53.9	+0.3
	193nm,0.6s						
SFI	Santa Sofia	1.26	82	Pg	Pg	17 27 54.8	-1.1
SFI				Sg	Sg	17 28 12.2	0.0
	31nm,0.3s						
CRE	Caprese Michel	1.33	94	Pg	Pg	17 27 56.7	-0.5
	30nm,0.5s						
PGF	Pioggiola	1.44	215	ePn	Pn	17 27 58.1	-0.7
PGF	Pioggiola	1.44	215	ePg	Pg	17 28 00.6	+1.2
PGF	Pioggiola	1.44	215	ePg	Pg	17 28 00.6	+1.2
FIN	Finale Ligure	1.46	290	Pg	Pg	17 28 00.5	+0.7
	73nm,0.9s						
SBF	Sospel	1.95	275	ePg	Pn	17 28 04.2	-1.6
DOI	San Damiano	2.21	291	Pg	Pg	17 28 10.6	-3.5
	7.0nm,0.3s						
FRF	La Foret Royal	2.53	267	ePg	Pn	17 28 13.3	-0.5
CTI	Castel Tesino	2.56	25	Pg	Pn	17 28 13.9	-0.2
MBDF	Montbardon	2.61	294	ePg	Pn	17 28 13.9	-0.9
MBDF				eSg	Sn	17 28 45.0	-2.0
	1.9nm,0.3s						
LMR	La Mourre	2.66	263	ePn	Pn	17 28 11.8	-3.7
LMR	La Mourre	2.66	263	ePg	Pg	17 28 17.9	-4.8
LMR				eSn	Sn	17 28 41.7	-6.6
	3.2nm,0.3s						
LMR	La Mourre	2.66	263	ePg	Pg	17 28 17.9	-4.8
LMR				eSn	Sn	17 28 41.7	-6.6
	1.6nm,0.3s						
LPG	La Plagne	2.98	307	ePg	Pn	17 28 18.3	-1.7
LPL	La Plagne	3.01	308	ePg	Pn	17 28 17.6	-2.7
ORIF	Oris-en-Rattie	3.27	293	ePg	Pn	17 28 25.1	+1.2
SMRF	Simiane la Rot	3.30	276	ePg	Pn	17 28 26.8	+2.5
SMRF				eSn	Sn	17 28 53.8	-10
	1.8nm,0.3s						
SMRF	Simiane la Rot	3.30	276	ePg	Pn	17 28 26.8	+2.5
SMRF				eSn	Sn	17 28 53.8	-10
	0.9nm,0.3s						
DAVA	Damuels	3.56	357	⇑iPn	Pn	17 28 29.2	+1.4
DAVA				⇑iSn	Sn	17 29 11.3	+0.8
SQTA	Sankt Quirin	3.57	12	⇓iPn	Pn	17 28 29.1	+1.0
SQTA				⇑iSn	Sn	17 29 10.4	-0.3
SQTA	Sankt Quirin	3.57	12	Pn	Pn	17 28 29.0	+1.0
SQTA				Sn	Sn	17 29 10.4	-0.4
MOTA	Moosalm	3.68	10	⇓iPn	Pn	17 28 30.8	+1.2
MOTA				⇓iSn	Sn	17 29 12.5	-0.9
WTTA	Wattenberg	3.69	16	⇑iPn	Pn	17 28 30.9	+1.3
KBA	Koelnbreinsper	4.04	33	⇓iPn	Pn	17 28 35.4	+0.9
HINF	Hinteralfeld	4.68	332	ePg	Pn	17 28 44.5	+1.2
HAU	Haudompre	5.02	330	ePg	Pn	17 28 51.2	+3.2
CDF	Champ du Feu	5.08	338	ePg	Pn	17 28 50.8	+2.0

*LDG **16** 17:51:40.1±0.4, 4423N×1012E, h2^{km}, Ml2.5/8, Error ellipse: s-maj=6.9km s-min=3.8km az=38.0*
*GEN **16** 17:51:45.5, 4374N×1020E, h6^{km}, ML2.0*
*CSEM **16** 17:51:45.0±0.1, 4379N×1020E, h20^{km}, MD2.4/8, Error ellipse: s-maj=2.7km s-min=2.1km az=126.0*
*NEIC **16** 17:51:45.8, 4378N×1021E, h10^{km}, ML2.0(ROM), ML2.5(LDG), After ROM.*
ROM 16 17:51:45.8±0.3, **4378N**×**1021E**, **h10**^{km}, **Md2.4**/8, **Ml2.0**/6, **1D, Error ellipse: s-maj=4.8km s-min=3.5km az=76.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PII	Pisa	0.24	104	⇓iPg	Pg	17 51 50.9	+0.3
PII				Sg	Sg	17 51 54.6	+0.7
	147nm,0.2s						
VINC	Vinca	0.36	354	P	Pg	17 51 53.3	+0.3
VINC				S	Sg	17 51 58.7	+0.8
BDI	Bagni Di Lucca	0.40	45	Pg	Pg	17 51 53.8	+0.2
BDI				Sg	Sg	17 51 59.7	+0.8
	145nm,0.3s						
VLC	Villacollemand	0.40	19	Pg	Pg	17 51 53.9	+0.2
	55nm,0.5s						
GROG	Isola di Gorgo	0.42	213	Pg	Sg	17 51 53.9	-5.7
	85nm,0.2s						
SARO	Sassorosso	0.43	19	P	Pg	17 51 54.3	+0.1
BACM		0.51	349	P	Pg	17 51 55.9	+0.2
VALM		0.57	3	P	Pg	17 51 57.2	+0.3
PZZT	Monte Pizzetto	0.59	53	Pg	Pg	17 51 57.6	+0.4
PZZT				Sg	Sg	17 52 05.9	+1.0
	225nm,0.3s						
GSCL	Gusciola	0.63	25	Pg	Pg	17 51 58.5	+0.4
	12nm,0.2s						
ERBM	Eremo	0.66	13	Pg	Pg	17 51 59.2	+0.7
	93nm,1.1s						
CODM		0.66	337	P	Pg	17 51 58.3	-0.3
GRAM		0.72	352	P	Pg	17 52 00.0	+0.3
SC2M	Scurtabr	0.79	322	P	Pg	17 52 00.9	-0.2
SC2M				S	Sg	17 52 11.4	0.0
GRFL	Gerfalco	0.84	138	Pg	Pg	17 52 03.2	+1.2
	11nm,0.8s						
CSNT	Castellina Chi	0.84	111	Pg	Pg	17 52 02.4	+0.3
	44nm,1.0s						
PGF	Pioggiola	1.52	216	ePg	Pg	17 52 14.2	-0.7
PGF				eSn	Sn	17 52 34.6	+1.9
	4.8nm,0.3s						
PGF	Pioggiola	1.52	216	ePn	Pn	17 52 11.8	-1.2
PGF				ePg	Pg	17 52 14.2	-0.7
PGF				eSn	Sn	17 52 34.6	+1.9
PGF	Pioggiola	1.52	216	ePg	Pg	17 52 14.2	-0.7
SBF	Sospel	2.01	273	eSn	Sn	17 52 36.3	-8.6
SBF				eSg	Sg	17 52 42.6	-7.8
	16nm,0.6s						
FRF	La Foret Royal	2.59	266	ePg	Pn	17 52 27.6	-0.2
FRF				eSn	Sn	17 52 50.9	-8.5
	3.2nm,0.3s						
FRF				eSg	Sg	17 53 01.5	-7.6
FRF	La Foret Royal	2.59	266	ePg	Pn	17 52 27.6	-0.2
FRF				eSn	Sn	17 52 50.9	-8.5
	1.6nm,0.3s						
FRF				eSg	Sg	17 53 01.5	-7.6
MBDF	Montbardon	2.65	292	eSg	Sb	17 52 58.4	-7.4
	1.7nm,0.3s						
LMR	La Mourre	2.73	262	ePg	Pn	17 52 32.9	+3.3
LMR				eSn	Sn	17 52 55.5	-7.1
	5.8nm,0.4s						
LMR	La Mourre	2.73	262	ePn	Pn	17 52 23.2	-6.4
LMR				ePg	Pg	17 52 32.9	-5.1
LMR				eSn	Sn	17 52 55.5	-7.1
LMR	La Mourre	2.73	262	ePg	Pn	17 52 32.9	+3.3
LMR				eSn	Sn	17 52 55.5	-7.1
ORIF	Oris-en-Rattie	3.31	292	ePg	Pn	17 52 38.1	+0.5
ORIF				eSn	Sn	17 53 03.8	-13
	1.1nm,0.4s						
SMRF	Simiane la Rot	3.36	275	ePg	Pn	17 52 40.7	+2.4
SMRF				eSg	Sg	17 53 23.6	-10
	8.1nm,0.5s						
CAF	Calviac	5.95	284	eSn	Sn	17 54 08.3	-14
	6.9nm,0.5s						

MAN 16 18:06:44.7, 1566N×12186E, h11^{km}, mb3.5, ML4.7, MS2.1, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.29	287	eP	Pg	18 06 51.1	+0.6
BALP				eS	Sg	18 06 58.3	+3.9
PCPH	Palayan	0.74	263	⇓eP	Pg	18 06 59.6	+0.5
PCPH				i S	Sg	18 07 12.2	+3.3
POLP	Polilio Island	0.93	175	eP	Pg	18 07 01.8	-0.8
POLP				eS	Sg	18 07 17.2	+2.5
CAUP	Cauayan	1.28	358	eP	Pn	18 07 07.3	-1.2
CAUP				eS	Sb	18 07 27.9	+2.7
PALP	Palanan	1.50	21	eP	Pn	18 07 09.2	-2.3
PALP				eS	Sn	18 07 36.5	+5.5
LQP	Lukban	1.57	192	eP	Pn	18 07 19.6	+7.2
GQP	Guinayangan	1.83	162	⇑eP	Pn	18 07 16.1	+0.1
GQP				i S	Sn	18 07 41.5	+2.2
ABRA	Dolores	2.27	331	eP	Pn	18 07 23.6	+1.5
ABRA				eS	Sn	18 07 55.6	+5.6
APYP	Conner	2.27	345	eP	Pn	18 07 22.0	-0.1
APYP				eS	Sn	18 07 53.4	+3.3

MAN 16 18:12:41.2, 1563N×12207E, h6^{km}, mb3.3, ML4.6, MS4.6, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.48	283	eP	Pg	18 12 48.4	-2.1
BALP				eS	Sg	18 12 55.4	-1.5
POLP	Polilio Island	0.91	188	eP	Pg	18 12 58.7	+0.1
POLP				eS	Sg	18 13 14.5	+4.0
PCPH	Palayan	0.94	266	⇓eP	Pg	18 12 56.6	-2.6
PCPH				i S	Sg	18 13 10.0	-1.4
CAUP	Cauayan	1.32	350	eP	Pn	18 13 04.6	-1.6
CAUP				eS	Sb	18 13 24.6	+0.9
PALP	Palanan	1.46	14	⇓iP	Pn	18 13 06.2	-1.9
PALP				i S	Sn	18 13 33.1	+5.5
PALP	Palanan	1.46	14	eP	Pn	18 13 06.5	-1.6
PALP				eS	Sn	18 13 35.2	+7.6
BOLP	Bolinao	2.20	290	eP	Pn	18 13 18.0	-0.3
APYP	Conner	2.35	341	eP	Pn	18 13 19.8	-0.6
APYP				eS	Sn	18 13 50.8	+1.2
ABRA	Dolores	2.39	327	eP	Pn	18 13 21.7	+0.8
ABRA				eS	Sn	18 13 53.9	+3.5

MAN 16 18:22:40.8, 899N×12568E, h10^{km}, mb2.8, ML4.2, MS4.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.07	251	eP	Pg	18 22 43.5	+0.6
BUTP				eS	Sg	18 22 47.4	+3.0
SCPH	Surigao	0.81	346	⇓eP	Pg	18 22 56.4	0.0
BUKP	Musuan	1.26	209	eP	Pn	18 23 02.7	-1.7
BUKP				eS	Sb	18 23 22.6	+1.6

*MOS **16** 18:35:52.5±1.0, 2401N×14220E, h42^{km}, mb4.8/22, Error ellipse: s-maj=16.5km s-min=6.1km az=110.9*
*BJI **16** 18:35:54.6, 24.18N×14199E, h35^{km}, mB4.7, mb4.6, Ms4.3, Msz4.0*
*NEIC **16** 18:35:56.1±1.2, 2404N×14224E, h57^{km}±10^{km}, mb4.7/20, Error ellipse: s-maj=12.0km s-min=6.2km az=81.0*
*ISCJB **16** 18:35:57.8±0.9, 2406N±004×14225E±008, h90^{km}±7^{km}, mb4.5/62, Error ellipse: s-maj=12.1km s-min=7.1km az=162.2*
*IDC **16** 18:35:58.5±1.7, 2402N×14205E, h79^{km}±16^{km}, mb4.0/20, mb1 4.2/23, mb1mx4.2/27, mbtmp4.5/23, Error ellipse: s-maj=23.7km s-min=10.3km az=83.0*
*JMA **16** 18:35:58.2±0.2, 2431N×14139E, h0^{km}, M5.8*
ISC 16 18:35:59.7±0.8, **2413N**±004×**14232E**±008, **h92**^{km}±6^{km}, **n136**, σ**1^{s}22**/141, **mb4.5**/62, **10C-3D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	2.50	357	P	Pn	18 36 39.9	+1.4
JHHJ				eS	Sn	18 37 10.6	+2.3
CBIJ	Chichi jima	2.96	358	P	Pn	18 36 46.5	+1.8
	557nm,0.3s,baz=237,slow=6.3,SNR=75						
CBIJ				S	Sn	18 37 20.4	+0.9
	843nm,0.3s,baz=279,slow=22,SNR=14						
CBIJ	Chichi jima	2.96	358	P	Pn	18 36 46.5	+1.8
JHJ2	Mitsune	9.22	347	P	Pn	18 38 09.8	0.0
JHJ	Hachijo jima 2	9.23	347	P	Pn	18 38 09.8	-0.1
	70nm,0.3s,baz=84,slow=20,SNR=28						
JHJ				S	Sn	18 39 47.5	-4.5
	6.5nm,0.3s,baz=248,slow=22,SNR=1.9						
JKO	Kozu shima	10.40	345	P	Pn	18 38 26.1	+0.2
BSO1	Boso 1	10.56	354	P	Pn	18 38 26.8	-1.2
GUMO	Guam	10.75	167	P	Pn	18 38 34.4	+3.8
	3.9nm,0.3s,baz=177,slow=5.4,SNR=6.4						
JWZ	Kozaga	11.01	330	P	Pn	18 38 37.0	+2.9
JIE	Ise	11.34	336	P	Pn	18 38 40.2	+1.6
HMMJ	Hamamatsu 2	11.42	341	P	Pn	18 38 39.9	+0.3
JOD2	Odawara 2	11.45	347	P	Pn	18 38 39.0	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SHZ3	Shizuoka 3	11.47	343	P	Pn	18 38 40.4	0.0
JYN	Shimob	11.80	345	P	Pn	18 38 44.2	-0.6
JNY	Yasuok	11.84	342	P	Pn	18 38 45.4	0.0
JTO	Tosashimizu	12.07	318	P	Pn	18 38 52.0	+3.6
JRY	Ryogami san	12.21	347	P	Pn	18 38 48.8	-1.6
JRY				eS	Sn	18 41 01.9	-2.6
JAG	Ashikaga	12.51	349	P	Pn	18 38 51.3	-3.0
JGM	Miyama	12.51	338	P	Pn	18 38 55.0	+0.7
JWT	Wachi	12.63	333	P	Pn	18 38 57.2	+1.2
JNG	Nsakai	12.77	344	P	Pn	18 38 56.6	-1.1
JGN	Niukaw	12.81	341	P	Pn	18 38 57.6	-0.6
MJAR	Matsushiro Arr	12.87	345	P	Pn	18 38 57.0	-2.1
	7.8nm,0.3s,baz=160,slow=10,SNR=135						
MAJO	Matsushiro	12.87	345	eP	Pn	18 38 56.5	-2.6
MAJO				pmax	pmax		
	comp=Z,45nm,0.7s						
MAJO	Matsushiro	12.87	345	eP	Pn	18 38 56.5	-2.7
	comp=Z,45nm,0.7s						
MAT	Matsushiro	12.87	345	P	Pn	18 38 56.8	-2.3
MAT	Matsushiro	12.87	345	P	Pn	18 38 57.0	-2.1
MAT	Matsushiro	12.87	345	eP	Pn	18 38 57.0	-2.1
MAT				pmax	pmax		
	comp=Z,28nm,0.8s						
MAT	Matsushiro	12.87	345	eP	Pn	18 38 57.0	-2.1
	comp=Z,28nm,0.8s						
JKT	Katashina	12.87	349	P	Pn	18 38 55.9	-3.2
JKG	Kaga	13.17	338	P	Pn	18 39 03.2	+0.2
JJN	Nakama	13.42	346	P	Pn	18 39 04.1	-2.2
JHS	Saijyo	13.46	326	P	Pn	18 39 08.5	+1.6
JJH	Hakui	13.62	341	P	Pn	18 39 08.1	-0.8
JSD	Sado	14.29	347	P	Pn	18 39 14.1	-3.6
JMK	Ichinoseki	14.81	357	P	Pn	18 39 23.2	-1.1
JMK				eS	Sn	18 42 00.9	-6.6
JTKR	Abashiri--Toko	19.84	3	P	Pn	18 40 26.9	+1.3
ASAJ	Asahikawa	19.94	1	P	Pn	18 40 27.1	+0.4
	comp=Z,15nm,0.8s,baz=226,slow=9.6,SNR=22						
SSE	Sheshan	19.95	295	eP	Pn	18 40 19.1	-7.8
SSE				AMB	AMB		
	comp=Z,15nm,0.7s						
SSE				AMB	AMB		
	comp=Z,38nm,3.6s						
NJ2	Nanjing	22.12	296	eP	P	18 40 44.8	-2.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.4						
YSS	Yuzh-Sakhalins	22.78	1	⇑eP	P	18 40 55.0	+0.4
YSS				e		18 41 04.0	
YSS				i		18 41 07.8	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.4						
YSS				pmax	pmax		
	comp=N,160nm,1.0s						
YSS				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.2						
YSS	Yuzh-Sakhalins	22.78	1	eP	P	18 40 55.6	+1.1
	comp=Z,85nm,0.6s,mb5.2						
MDJ	Mudanjiang	22.93	336	P	P	18 40 56.5	+0.5
MDJ				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,55nm,4.0s						
MDJ	Mudanjiang	22.93	336	eP	P	18 40 56.4	+0.4
	comp=Z,5.8nm,0.5s,mb4.2						
SNY	Shenyang	23.55	323	⇑P	P	18 41 00.9	-0.8
SNY				AP		18 41 10.3	
SNY				XP	sP	18 41 14.0	-18
SNY				S	S	18 45 03.3	-5.5
SNY				XS	sS	18 45 18.5	-26
SNY				AMB	AMB		
	comp=Z,40nm,0.9s,mb4.8						
SNY				AMB	AMB		
	comp=Z,147nm,14.4s						
CN2	Changchun	24.02	329	eP	P	18 41 07.4	+1.5
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
HABR	Khabarovsk	24.97	348	⇓iP	P	18 41 16.7	+2.1
HABR				pmax	pmax		
	comp=Z,68nm,1.2s,mb5.0						
KLR	Kul'dur	26.40	344	eP	P	18 41 25.8	-1.7
KLR				pmax	pmax		
	comp=E,43nm,1.2s						
KLR				pmax	pmax		
	comp=Z,48nm,1.2s,mb4.8						
XAN	Xi'an	30.70	296	P	P	18 42 06.3	+0.6
XAN				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
GYA	Guiyang	32.26	282	⇑iP	P	18 42 21.3	+1.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
ULN	Ulaanbaatar	36.60	319	eP	P	18 42 56.0	-0.9
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
ULN	Ulaanbaatar	36.60	319	eP	P	18 42 56.0	-0.9
	comp=Z,6.6nm,0.9s,mb4.6						
SONM	Songino Array	36.98	319	P	P	18 42 59.2	-0.9
	comp=Z,5.5nm,0.9s,mb4.5,baz=126,slow=7.8,SNR=22						
SONM				PcP	PcP	18 45 19.2	-0.1
	comp=Z,1.2nm,0.8s,baz=76,slow=1.6,SNR=5.9						
KAKA	Kakadu	37.86	196	eP	P	18 43 12.5	+5.0
	comp=Z,6.5nm,1.0s,mb4.4						
GTA	Gaotai	38.84	303	eP	P	18 43 16.0	+0.2
GTA				AP	pP	18 43 28.3	-8.9
GTA				XP	sP	18 43 33.8	-14
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.3						
YAK	Yakutsk	38.85	351	eP	P	18 43 16.3	+0.4
YAK				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.0						
YAK				pmax	pmax		
	comp=N,13nm,1.4s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
YAK	Yakutsk	38.85	351	eP	P	18 43 16.6	+0.8
	comp=E,41nm,0.8s,mb5.3						
BOD	Bodaibo	39.30	336	eP	P	18 43 17.8	-1.8
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
ZAK	Zakamensk	39.95	321	⇑iP	P	18 43 24.0	-1.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
CTA	Charters Tower	44.11	175	P	P	18 43 58.1	-0.7
	comp=Z,5.7nm,1.0s,mb4.2,baz=303,slow=9.2,SNR=5.7						
CTAO	Charters Tower	44.11	175	eP	P	18 43 58.2	-0.6
CTAO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
CTAO	Charters Tower	44.11	175	eP	P	18 43 58.2	-0.6
	comp=Z,3.3nm,0.6s,mb4.2						
WRAB	Tennant Creek	44.47	191	eP	P	18 44 00.8	-0.9
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
WRAB	Tennant Creek	44.47	191	eP	P	18 44 00.8	-0.9
	comp=Z,8.2nm,0.5s,mb4.7						
WB2	Warramunga Arr	44.48	191	eP	P	18 44 00.6	-1.2
WRA	Warramunga Arr	44.48	191	P	P	18 44 00.9	-0.9
	comp=Z,2.8nm,0.4s,mb4.3,baz=12,slow=8.1,SNR=72						
FITZ	Fitzroy Crossi	45.01	203	eP	P	18 44 05.3	-0.7
	comp=Z,4.6nm,1.0s,mb4.2						
FITZ	Fitzroy Crossi	45.01	203	P	P	18 44 04.9	-1.0
	comp=Z,1.3nm,0.7s,mb3.8,baz=57,slow=17,SNR=5.2						
LSA	Lhasa	45.67	289	eP	P	18 44 14.1	+3.0
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
LSA	Lhasa	45.67	289	eP	P	18 44 14.1	+3.0
	comp=Z,6.8nm,0.6s,mb4.5						
BILL	Bilibino	46.32	12	⇑eP	P	18 44 18.6	+2.3
BILL				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.5						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s						
KRAR	Krasnoyarsk	47.94	325	⇑eP	P	18 44 28.1	-0.8
KRAR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
TIXI	Tiksi	48.17	354	⇑eP	P	18 44 29.7	-0.9
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.6						
AS31	Alice Springs	48.20	190	eP	P	18 44 30.6	-0.3
ASAR	Alice Springs	48.20	190	P	P	18 44 29.5	-1.4
	comp=Z,0.8nm,0.5s,mb3.8,baz=12,slow=10,SNR=27						
ASPA	Alice Springs	48.20	190	eP	P	18 44 30.6	-0.3
GUN	Gumba	50.49	287	eP	P	18 44 50.7	+2.4
	comp=Z,28nm,0.4s,mb5.5						
PKI	Pulchoki	50.95	287	eP	P	18 44 53.4	+1.6
	comp=Z,16nm,0.5s,mb5.3						
PKI	Pulchoki	50.95	287	eP	P	18 44 53.4	+1.6
PKI				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.3						
KKN	Kakani	51.03	287	eP	P	18 44 53.5	+1.2
DMN	Daman	51.21	287	eP	P	18 44 55.5	+1.8
	comp=Z,18nm,0.6s,mb5.3						
GKN	Gorkha	51.55	287	eP	P	18 44 57.9	+1.6
	comp=Z,49nm,0.8s,mb5.6						
DZM	Mont Dzumac	51.56	151	P	P	18 44 57.0	+0.7
	comp=Z,5.6nm,1.0s,mb4.5,baz=109,slow=16,SNR=6.4						
ZAL	Zalesovo	51.84	321	P	P	18 44 57.8	-0.5
	comp=Z,1.9nm,0.5s,mb4.4,baz=355,slow=5.3,SNR=6.9						
ZAL				PcP	PcP	18 46 10.4	+0.3
	comp=Z,0.9nm,0.3s,baz=33,slow=3.1,SNR=3.5						
MK31	Makanchi Array	52.49	311	P	P	18 45 03.1	-0.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MKAR	Makanchi Array	52.49	311	P	P	18 45 03.4	+0.2
	comp=Z,3.2nm,0.5s,mb4.7,baz=82,slow=8.9,SNR=36						
KOLN	Koldanda	52.50	287	eP	P	18 45 04.7	+1.4
	comp=Z,42nm,0.8s,mb5.5						
STKA	Stephens Creek	55.69	181	P	P	18 45 25.9	-0.5
	comp=Z,1.3nm,0.4s,mb4.3,baz=0.0,slow=9.1,SNR=4.8						
IMA2	Indian Mountai	57.69	26	eP	P	18 45 43.5	+2.9
VOSK	Vostochnaya	59.97	318	P	P	18 45 55.9	-0.5
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
CHKZ	Chkalovo	60.18	319	eP	P	18 45 57.2	-0.6
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
CHKZ	Chkalovo	60.18	319	eP	P	18 45 57.2	-0.6
	comp=Z,4.2nm,0.6s,mb4.7						
BVA0	Borovoye Array	60.32	319	iP	P	18 45 58.7	-0.1
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BRVK	Borovoye	60.39	319	eP	P	18 45 59.5	+0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
BRVK	Borovoye	60.39	319	eP	P	18 45 59.5	+0.2
	comp=Z,2.9nm,0.6s,mb4.5						
KK31	Karatay Array	60.94	307	iP	P	18 46 03.4	+0.4
KK31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
KKAR	Karatay Array	60.94	307	iP	P	18 46 03.4	+0.4
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ZRNK	Zerenda	61.16	319	eP	P	18 46 04.3	-0.2
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ZRNK	Zerenda	61.16	319	eP	P	18 46 04.3	-0.2
	comp=Z,2.8nm,0.8s,mb4.3						
INK	Inuvik	65.68	24	P	P	18 46 35.6	+1.4
	comp=Z,1.2nm,0.4s,mb4.0,baz=270,slow=1.0,SNR=4.2						
ARU	Arti	66.85	323	⇓iP	P	18 46 41.3	-0.4
ARU				e		18 49 06.0	
ARU				eS	S	18 55 36.9	+10
ARU				eSS	SS	18 59 52.0	+5.2
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
ARU	Arti	66.85	323	eP	P	18 46 41.1	-0.7
	comp=Z,7.9nm,0.8s,mb4.6						
AB31	Akbulak array	67.26	315	iP	P	18 46 44.2	-0.2
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
YKA	Yellowknife Ar	74.69	28	P	P	18 47 30.7	+1.5
	comp=Z,1.0nm,0.6s,mb3.7,baz=292,slow=6.1,SNR=4.3						
YKA	Yellowknife Ar	74.69	28	iP	P	18 47 30.7	+1.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KEV	Kevo	75.82	341	ep	P	18 47 35.1	-0.6
	comp=Z,8.6nm,0.6s,mb4.7						
KEV	Kevo	75.82	341	eP	P	18 47 35.1	-0.6
KEV				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
ARCES	ARCESS Array B	76.38	341	P	P	18 47 39.7	+0.8
	comp=Z,6.9nm,0.5s,mb4.6,baz=73,slow=8.5,SNR=55						
ARCES	ARCESS Array B	76.38	341	P	P	18 47 39.7	+0.8
ARE0	ARCESS Array S	76.38	341	eP	P	18 47 38.9	0.0
JOF	Joensuu	77.79	334	ep	P	18 47 46.1	-0.7
	comp=Z,6.7nm,0.6s,mb4.5						
OBN	Obninsk	79.04	326	P	P	18 47 54.0	+0.3
KIV	Kislovodsk	80.17	314	⇑iP	P	18 47 56.0	-3.8
KIV				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.3						
KAF	Kangasniemi	80.19	335	ep	P	18 47 59.2	-0.8
FINES	FINESS Array B	80.66	334	P	P	18 48 01.9	-0.5
	comp=Z,2.5nm,0.4s,mb4.4,baz=68,slow=5.1,SNR=49						
FINES	FINESS Array B	80.66	334	iP	P	18 48 02.5	+0.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
NVAR	Mina Array Bea	82.26	51	P	P	18 48 12.8	+1.9
	comp=Z,0.9nm,0.5s,mb3.9,baz=329,slow=5.5,SNR=5.9						
NVAR	Mina Array Bea	82.26	51	P	P	18 48 12.8	+1.9
MIB	Mutribah	82.41	299	eP	P	18 48 12.1	+0.4
MIB				AMb	AMB	18 48 13.6	
	comp=Z,30nm,0.9s,mb5.1						
RDF	Al-Radifah	82.59	298	eP	P	18 48 12.8	+0.2
RDF				AMb	AMB	18 48 14.4	
	comp=Z,18nm,0.7s,mb5.0						
NAY	Al-Naaiem	82.71	299	eP	P	18 48 12.8	-0.5
NAY				AMb	AMB	18 48 15.1	
	comp=Z,8.2nm,0.6s,mb4.7						
RST	Umm Al-Ruwaisa	82.80	299	eP	P	18 48 13.7	0.0
RST				AMb	AMB	18 48 15.3	
	comp=Z,11nm,0.6s,mb4.8						
AKASG	Malin Array Be	85.08	324	P	P	18 48 25.0	-0.3
	comp=Z,1.5nm,0.3s,mb4.3,baz=52,slow=5.1,SNR=22						
MALT	Malatya	85.50	310	P	P	18 48 29.0	+1.6
MALT				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MALT	Malatya	85.50	310	P	P	18 48 29.0	+1.6
	comp=Z,3.2nm,0.8s,mb4.3						
NB2	NORSAR Subarra	86.41	338	P	P	18 48 30.9	-0.9
	comp=Z,6.4nm,0.9s,mb4.5,baz=44,slow=5.1						
NOA	NORSAR Array B	86.41	338	P	P	18 48 31.1	-0.7
	comp=Z,5.7nm,1.0s,mb4.5,baz=46,slow=4.6,SNR=10						
KONO	Kongsberg	87.97	338	c iP	P	18 48 36.0	-3.4
BR131	Keskin Array S	88.11	313	eP	P	18 48 40.2	+0.2
	comp=Z,2.7nm,0.8s,mb4.3						
BRTR	Keskin Array B	88.11	313	P	P	18 48 40.3	+0.3
	comp=Z,2.8nm,0.8s,mb4.3,baz=104,slow=4.4,SNR=15						
BRTR	Keskin Array B	88.11	313	iP	P	18 48 40.2	+0.2
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MMAI	Mount Meron Ar	90.17	306	P	P	18 48 49.4	-0.3
	comp=Z,2.5nm,0.5s,mb4.6,baz=67,slow=11,SNR=6.0						
ANMO	Albuquerque	92.29	50	⇓eP	P	18 48 58.2	-1.3
KHC	Kasperske Hory	93.96	329	⇑eP	P	18 49 07.3	+0.1
GERES	GERESS Array B	94.10	329	P	P	18 49 07.8	-0.1
	comp=Z,0.5nm,0.5s,mb4.1,baz=11,slow=2.7,SNR=7.0						
LPAZ	La Paz	150.43	80	ePKIKP	PKPdf	18 55 38.6	+3.5

BJI ***16*** *18:38:57.0,29.16S×6132E,h25km,mB6.1,mb5.5,Ms5.5, Msz5.2*

MOS ***16*** *18:38:58.8±0.9,2871S×6175E,h10km,mb5.9/90, MS5.4/56,Error ellipse: s-maj=10.0km s-min=4.0km az=110.3*

IDC ***16*** *18:38:58.4±0.3,2884S×6173E,h0km,mb5.2/36, mb1 5.3/37,mb1mx5.2/40,mbtmp5.2/37,ML5.1/1,MS5.3/35, Ms1 5.3/35,ms1mx5.2/37,Error ellipse: s-maj=14.3km s-min=10.1km az=47.0*

ISCJB ***16*** *18:38:58.4±0.1,2883S±003×6177E±003,h10km, mb5.6/222,MS5.3/166,Error ellipse: s-maj=4.8km s-min=3.9km az=53.7*

NEIC ***16*** *18:38:59.3±0.1,2882S×6174E,h7km,mb5.6/129,ME5.6, MS5.4/101,MW5.7,Error ellipse: s-maj=5.6km s-min=3.8km az=218.0,Moment Tensor Solution. s18 Moment tensor: Scale 10^17Nm; Mrr-4.60; Mθθ4.41; Mφφ0.19; Mrθ1.54; Mθφ0.36; Mφr0.24; Best double couple: Mo4.80000×10^17 NP1:φs264.00000°,δ55.00000°, λ-91.00000°. NP2:φs86.00000°,δ35.00000°,λ-88.00000°. Principal axes: T 4.7000, Plg10.0000°, Azm355.0000°; N 0.1600, Plg1.0000°, Azm265.0000°; P -4.8600, Plg80.0000°, Azm168.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

HRVD ***16*** *18:39:00.4±0.1,2885S×6154E,h12km,MW5.9/104, Centroid moment Tensor Solution. LP body waves: s98,c196;Mantle waves: s104,c338; Half duration: 2.1s Moment tensor: Scale 10^18Nm; Mrr-0.80±.01; Mθθ0.76±.01; Mφφ0.04±.01; Mrθ0.10±.02; Mθφ0.24±.01; Mφr0.07±.02; Best double couple: Mo0.82900×10^18 NP1:φs76.00000°,δ41.00000°,λ-85.00000°. NP2: φs250.00000°,δ49.00000°,λ-94.00000°. Principal axes: T 0.8420, Plg4.0000°, Azm343.0000°; N -0.0270, Plg3.0000°, Azm253.0000°; P -0.8150, Plg85.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

CRAAG ***16*** *18:39:02.1,2881S×6168E,Mb5.8*

SZGRF ***16*** *18:39:13.1,2728S×5959E,h33km,mb5.8,MS5.1,South Indian Ocean*

ISC 16 18:38:60.0±0.1,**2885S**±003×**6167E**±003,**h10km, (h17km**±1.6km**:pP-P),n1028,**σ0.91/737,**mb5.6**/222, **MS5.3**/166,**119C-158D,Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	Ambohidratompo	16.73	305	Pn	Pn	18 42 54.7	+0.2
	7.2nm,0.3s,baz=124,slow=13,SNR=58						
OPO				Sn	Sn	18 45 47.6	-13
	7.3nm,0.3s,baz=347,slow=19,SNR=4.4						
DGAR	Diego Garcia	23.62	28	eP	P	18 44 06.7	-4.6
DGAR				pmax	pmax		
	comp=Z,616nm,1.2s,mb5.9						
DGAR				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.0						
DGAR	Diego Garcia	23.62	28	eP	P	18 44 06.7	-4.6
	comp=Z,616nm,1.2s,mb5.9						
DGAR				LR	LR		
	comp=Z,5µm,20.0s,MS5.0						
BOSA	Boshof	31.86	261	P	P	18 45 24.9	-0.1
	comp=Z,82nm,0.9s,mb5.6,baz=108,slow=8.4,SNR=78						
BOSA				PcP	PcP	18 48 16.9	+1.1
	comp=Z,6.8nm,0.9s,baz=117,slow=1.3,SNR=4.7						
BOSA				LR	LR	18 56 33.3	
	comp=Z,3µm,18.8s,MS5.0,baz=101,slow=33						
BOSA	Boshof	31.86	261	P	P	18 45 25.0	-0.1
BOSA						18 48 16.9	
LBTB	Lobatse	32.31	268	P	P	18 45 29.2	+0.1
LBTB	Lobatse	32.31	268	eP	P	18 45 29.0	-0.1
LBTB				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.2						
LBTB				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.8						
LBTB	Lobatse	32.31	268	eP	P	18 45 29.0	-0.1
	comp=Z,44nm,1.1s,mb5.2						
LBTB				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
LSZ	Lusaka	33.71	286	LR	LR	18 57 42.4	
	comp=Z,3µm,18.4s,MS5.1,baz=120,slow=33						
LSZ	Lusaka	33.71	286	P	P	18 45 42.7	+1.3
	SNR=20						
LSZ	Lusaka	33.71	286	eP	P	18 45 41.8	+0.5
LSZ				pmax	pmax		
	comp=Z,122nm,1.0s,mb5.8						
LSZ				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.1						
LSZ	Lusaka	33.71	286	eP	P	18 45 41.8	+0.5
	comp=Z,122nm,1.0s,mb5.8						
LSZ				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
SUR	Sutherland	35.19	254	P	P	18 45 54.8	+0.6
	comp=Z,15nm,0.7s,mb5.0,baz=109,slow=8.4,SNR=20						
SUR	Sutherland	35.19	254	eP	P	18 45 54.5	+0.4
	comp=Z,117nm,1.5s,mb5.6						
SUR				LR	LR		
	comp=Z,4µm,21.0s,MS5.1						
KMBO	Kilima Mbogo	36.10	315	P	P	18 46 03.1	+1.2
	comp=Z,20nm,1.0s,mb5.0,baz=131,slow=8.3,SNR=13						
KMBO				PcP	PcP	18 48 29.6	+1.7
	comp=Z,4.6nm,1.0s,baz=52,slow=3.7,SNR=5.6						
KMBO				LR	LR	18 57 49.5	
	comp=Z,8µm,21.0s,MS5.4,baz=121,slow=31						
KMBO	Kilima Mbogo	36.10	315	P	P	18 46 03.2	+1.3
KMBO						18 48 29.6	
MAW	Mawson	38.79	179	⇓iP	P	18 46 25.0	+0.3
	comp=Z,43nm,1.3s,mb5.0						
MAW				ePCP	PcP	18 48 36.7	+0.6
MAW				eS	S	18 52 20.9	-1.3
MAW	Mawson	38.79	179	P	P	18 46 25.2	+0.5
	comp=Z,36nm,1.0s,mb5.0,baz=1.9,slow=9.4,SNR=60						
MAW				PcP	PcP	18 48 36.2	+0.1
	comp=Z,12nm,0.9s,baz=342,slow=5.5,SNR=4.2						
MAW				LR	LR	18 59 12.2	
	comp=Z,7µm,18.6s,MS5.5,baz=342,slow=31						
MAW	Mawson	38.79	179	⇓eP	P	18 46 24.9	+0.2
MAW				e		18 47 58.2	
MAW				eS	S	18 52 22.2	0.0
MAW				pmax	pmax		
	comp=Z,160nm,1.4s						
TRD	Trivandrum	39.96	24	eP	P	18 46 35.2	+0.7
TRD				AMb	AMB	18 46 42.5	
	comp=Z,164nm,1.8s,mb5.5						
TRD				ex	x	18 52 44.7	
PALK	Pallekele	40.33	30	eP	P	18 46 38.5	+1.0
	comp=Z,65nm,1.4s,mb5.2						
PALK				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
MBAR	Mbarara	40.76	308	⇓iP	P	18 46 44.9	+3.8
TSUM	Tsumeb	41.20	273	eP	P	18 46 44.7	0.0
	comp=Z,41nm,1.0s,mb5.0						
TSUM				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
SYO	Syowa Base	42.21	192	⇑eP	P	18 46 52.4	-0.6
SYO	Syowa Base	42.21	192	⇑iP	pP	18 47 03.8	+7.6
MIR	Mirnyy	42.29	162	d iP	P	18 46 55.0	+1.3
MIR				eSSS		18 53 18.0	
MIR				pmax	pmax		
	comp=Z,900nm,2.0s,mb6.0						
MIR				pmax	pmax		
	comp=Z,2µm,4.0s						
MIR				MLR	MLR		
	comp=Z,13µm,22.0s,MS5.8						
MNGI	Mangalore	43.44	19	iP	P	18 47 03.1	+0.1
MNGI				eP		18 47 03.1	
MNGI				iS	S	18 53 31.1	-0.3
ATD	Arta Tunnel	44.07	333	P	P	18 47 09.3	+1.3
	comp=Z,14nm,0.8s,mb4.7,baz=138,slow=4.9,SNR=3.5						
ATD				LR	LR	19 01 58.4	
	comp=Z,6µm,21.6s,MS5.5,baz=152,slow=31						
DESE	Dese	45.08	329	eP	P	18 47 19.2	+3.1
DESE				eS	S	18 54 00.3	+5.2
MUN	Mundaring	46.72	108	eP	P	18 47 29.7	+0.6
MUN				ePCP	PcP	18 49 03.0	+0.5
MUN				eS	S	18 54 23.0	+4.2
NWAO	Narrogin (SRO)	47.40	110	PFAKE		18 47 40.0	+5.6
NWAO				LR	LR		
	comp=Z,4µm,22.0s,MS5.3						
KAD	Karad	47.45	16	eP	P	18 47 36.4	+1.6
KAD				AMb	AMB	18 47 40.7	
	comp=Z,174nm,1.1s,mb5.9						
KAD				eS	S	18 54 29.5	+0.3
KAD				eS	S	18 54 30.5	+1.3
CASY	Casey	47.74	156	eP	P	18 47 37.6	+0.5
KLBR	Kellerberrin	48.09	108	⇓iP	P	18 47 39.5	-0.3
	comp=Z,108nm,1.8s,mb5.6						
KLBR				ePCP	PcP	18 49 08.0	+0.6
POO	Poona	48.55	15	⇓iP	P	18 47 41.0	-2.3
	comp=Z,180nm,1.0s,mb6.1						
POO				iS	S	18 54 44.0	-0.7
POO				ex	x	18 59 30.5	
HYB	Hyderabad	48.80	22	iP	P	18 47 45.0	-0.2
	comp=Z,180nm,1.0s,mb6.1						
HYB				eS	S	18 54 48.0	-0.3
HYB				LR	LR	19 02 52.0	
	comp=Z,10nm,24.0s						
HYB	Hyderabad	48.80	22	eP	P	18 47 45.0	-0.2
HYB				eS	S	18 54 48.0	-0.3
HYB				pmax	pmax		
	comp=Z,180nm,1.0s,mb6.1						
HYB	Hyderabad	48.80	22	eP	P	18 47 45.0	-0.2
	comp=Z,180nm,1.0s,mb6.1						
HYB				eS	S	18 54 48.0	-0.3
LATR	Latur	49.14	19	eP	P	18 47 49.0	+1.2
NVL	N'lazarevskaya	50.18	199	⇑iP	P	18 47 55.4	-0.4
NVL				e		18 49 51.8	
NVL				ePPP		18 50 53.0	
NVL				iS	S	18 55 12.9	+5.3
NVL				eSS	SS	18 58 33.4	-7.5
NVL				pmax	pmax		
	comp=Z,126nm,1.6s,mb5.7						
NVL				MLR	MLR		
	comp=Z,3µm,19.5s,MS5.4						
IPM	Ipoh	50.28	55	P	P	18 47 59.1	+2.6
KGM	Kluang	50.33	60	P	P	18 47 59.7	+2.8
KULM	Kulim	50.57	54	eP	P	18 47 57.8	-0.9
VIS	Vishakhapatnam	50.81	27	eP	P	18 48 02.0	+1.5

VIS AMb AMB 18 48 03.5
comp=Z,84nm,1.3s,mb5.5
VIS *ex* x 18 55 19.1
AKL Akola 51.44 18 *eP* **P 18 48 05.4 +0.2**
AKL AMb AMB 18 48 08.7
comp=Z,140nm,1.2s,mb5.8
BSY Bisya 51.47 355 ⇓P **P 18 48 06.4 +0.9**
SNR=20
SMDO Samad 51.72 356 ⇓P **P 18 48 08.8 +1.4**
SNR=23
WSAR Wadi Sarin 51.87 356 P **P 18 48 07.8 -0.6**
comp=Z,44nm,1.0s,mb5.3,baz=153,slow=5.3,SNR=15
SNG Songkhla 51.87 52 P **P 18 48 09.0 +0.5**
ARQ Araqi 52.12 354 ⇓P **P 18 48 10.9 +0.6**
SNR=21
HOQ Hoqain 52.29 355 ⇑P **P 18 48 12.2 +0.6**
SNR=30
NGP Nagpur 52.46 21 *eP* **P 18 48 08.8 -4.0**
NGP AMb AMB 18 48 20.8
comp=Z,82nm,1.8s,mb5.4
NGP *eS* **S 18 55 35.5 -3.5**
NGP *ex* x 19 06 04.7
comp=Z,6μm,23.2s
MBWA Marble Bar 52.74 96 ⇑P **P 18 48 15.6 +0.7**
SNR=6.4
MBWA Marble Bar 52.74 96 *eP* **P 18 48 13.1 -1.8**
comp=Z,143nm,1.4s,mb5.7
MBWA *ePcP* PcP 18 49 22.9 -1.6
MBWA LR LR
comp=Z,2μm,20.0s,MS5.1
SNAA Sanae 54.92 200 P **P 18 48 30.0 -0.9**
comp=Z,7.6nm,0.9s,mb4.7,baz=81,slow=5.7,SNR=30
SNAA Sanae 54.92 200 ⇑*iP* **P 18 48 29.7 -1.2**
SNAA *e* pP 18 48 34.1 +0.1
SNAA *e* 18 48 36.0
SNAA *e* 18 48 39.1
SNAA *e* 18 48 47.0
SNAA *e* 18 50 31.7
SNAA *e* 18 50 42.7
SNAA *e* 18 50 55.7
SNAA Sanae 54.92 200 *iP* **P 18 48 30.1 -0.8**
SNAA Sanae 54.92 200 *eP* **P 18 48 29.5 -1.4**
comp=Z,72nm,1.1s,mb5.6
KSM Kuching 55.44 66⇓*eP* **P 18 48 34.9 +0.3**
JASL Jaisalmer 56.16 10 *eP* **P 18 48 39.0 -0.8**
AJM Ajmer 56.40 14 *iP* **P 18 48 42.0 +0.5**
AJM *eP* 18 48 42.5
AJM AMb AMB 18 48 45.5
comp=Z,99nm,1.2s,mb5.7
AJM *eS* **S 18 56 31.8 -0.5**
VNA1 Neumayer--Stat 56.44 202 ⇑*iP* **P 18 48 42.4 +0.6**
VNA1 *e* pP 18 48 45.4 +0.4
VNA1 *e* 18 48 47.5
VNA1 *e* 18 48 51.9
VNA1 *e* 18 48 57.3
VNA1 *e* 18 50 58.4
FORT Forrest 56.85 110 *eP* **P 18 48 45.3 +0.6**
comp=Z,67nm,1.0s,mb5.6
NST Nakhon Sawan 57.80 45 P **P 18 48 51.8 +0.4**
AGRA Agra 57.90 17 *eP* **P 18 48 52.6 +0.4**
AGRA AMb AMB 18 48 57.0
comp=Z,87nm,0.5s,mb6.0
KHET Khetri 58.19 15 *eP* **P 18 48 54.6 +0.5**
KHET AMb AMB 18 48 58.9
comp=Z,79nm,0.8s,mb5.8
AYAN Aya Nagar 58.89 16 *eP* **P 18 48 57.9 -1.2**
FITZ Fitzroy Crossi 59.04 95 *eP* **P 18 49 00.0 -0.1**
comp=Z,127nm,1.1s,mb5.9
FITZ *eS* **S 18 57 12.0 +5.2**
FITZ Fitzroy Crossi 59.04 95 P **P 18 49 00.3 +0.2**
comp=Z,71nm,1.0s,mb5.7,baz=250,slow=6.6,SNR=72
NDI New Delhi 59.11 16 *eP* **P 18 49 00.1 -0.5**
NDI AMb AMB 18 49 05.8
comp=Z,63nm,1.5s,mb5.4
CM31 Chiang Mai Arr 59.23 42 PFAKE 18 49 10.0 +8.6
CM31 LR LR
comp=Z,2μm,22.0s,MS5.2
DRV Dumont d'Urvil 59.28 153 P **P 18 49 00.0 -1.7**
DRV Dumont d'Urvil 59.28 153 PP PP 18 51 10.0 -2.6
DRV S **S 18 57 08.0 -1.9**
DRV SS SS 19 01 03.0 -1.4
DRV R 19 07 00.0
CHG Chiang Mai 59.51 42 P **P 18 49 04.8 +1.5**
comp=Z,37nm,1.2s,mb5.3
CHTO Chiang Mai 59.51 42 P **P 18 49 04.0 +0.7**
SNR=12
CHTO Chiang Mai 59.51 42⇓*iP* **P 18 49 03.2 -0.1**
CHTO pmax pmax
comp=Z,43nm,1.2s,mb5.3
CHTO MLR MLR
comp=Z,2μm,22.0s,MS5.1
CHTO Chiang Mai 59.51 42⇓*iP* **P 18 49 03.2 -0.1**
comp=Z,44nm,1.2s,mb5.4
CHTO LR LR
comp=Z,2μm,22.0s,MS5.1
KOLN Koldanda 60.09 22 *eP* **P 18 49 07.1 -0.2**
comp=Z,574nm,1.5s,mb6.4
DMN Daman 60.46 24 *eP* **P 18 49 09.9 0.0**
comp=Z,289nm,1.3s,mb6.1
PKI Pulchoki 60.53 24 *eP* **P 18 49 09.6 -0.8**
comp=Z,257nm,1.5s,mb6.1
PKI Pulchoki 60.53 24 *eP* **P 18 49 09.6 -0.8**
PKI pmax pmax
comp=Z,257nm,1.5s,mb6.1
NANT Nan 60.54 43 ⇓P **P 18 49 11.0 +0.6**
comp=Z,350nm,0.4s
GKN Gorkha 60.66 23 *eP* **P 18 49 10.9 -0.3**
comp=Z,327nm,1.1s,mb6.4
KKN Kakani 60.69 24 *eP* **P 18 49 10.6 -0.8**
comp=Z,148nm,1.0s,mb6.1
KKN Kakani 60.69 24 *eP* **P 18 49 10.6 -0.8**
KKN pmax pmax
comp=Z,148nm,1.0s,mb6.1
GUN Gumba 61.01 25 *eP* **P 18 49 13.9 +0.3**
comp=Z,321nm,1.2s,mb6.3
QSPA South Pole Qui 61.31 180 *eP* **P 18 49 15.2 -0.4**
comp=Z,227nm,1.1s,mb6.2
QSPA LR LR
comp=Z,6μm,22.0s,MS5.7
SMLA Simla 61.44 15 *eP* **P 18 49 16.1 -0.5**
SMLA AMb AMB 18 49 18.2
comp=Z,156nm,1.7s,mb5.8
BHK Bhakra 61.55 14 *eP* **P 18 49 17.0 -0.3**
KLP Kalpa 62.08 16 *eP* **P 18 49 21.1 +0.2**
KLP AMb AMB 18 49 27.9
comp=Z,201nm,1.3s,mb6.1
KKM Kota Kinabalu 62.88 66 P **P 18 49 27.0 +0.8**
KKM Kota Kinabalu 62.88 66⇓*eP* **P 18 49 25.4 -0.7**
EIL Elat 63.54 334 ⇑*iP* **P 18 49 32.2 +1.6**
comp=Z,676nm,1.2s,mb6.5
BHD Baghdad 63.92 344 *ex* x 18 49 32.0
BHD *ex* x 18 50 02.0
BHD *ex* x 18 58 08.0
BHD *ex* x 18 58 31.0
ASPA Alice Springs 64.08 104 *eP* **P 18 49 33.8 -0.3**
ASAR Alice Springs 64.08 104 P **P 18 49 33.9 -0.2**
comp=Z,40nm,0.9s,mb5.4,baz=244,slow=5.7,SNR=102
ASAR LR LR 19 13 49.7
comp=Z,2μm,18.8s,MS5.2,baz=254,slow=33
ASAR PKPPKP 19 18 22.4
comp=Z,1.8nm,1.0s,baz=43,slow=2.3,SNR=4.4
AS31 Alice Springs 64.09 104 *eP* **P 18 49 33.8 -0.4**
VNDA Vanda 64.23 166 P **P 18 49 34.9 -0.2**
comp=Z,44nm,0.9s,mb5.5,baz=261,slow=7.3,SNR=195
VNDA LR LR 19 15 33.8
comp=Z,6μm,18.4s,MS5.8,baz=244,slow=34
VNDA PKPPKP 19 18 18.5
comp=Z,0.9nm,0.9s,baz=290,slow=2.5,SNR=4.5
VNDA Vanda 64.23 166 P **P 18 49 34.9 -0.2**
VNDA pmax pmax
comp=Z,44nm,0.9s
VNDA MLR MLR
comp=Z,6μm,18.4s
VNDA pmax pmax
comp=Z,1.0nm,0.9s
VNDA Vanda 64.23 166⇓*iP* **P 18 49 34.6 -0.5**
comp=Z,57nm,1.0s,mb5.5
VNDA LR LR
comp=Z,6μm,19.0s,MS5.8
LSA Lhasa 64.67 28 P **P 18 49 40.0 +2.0**
LSA AMB AMB
comp=Z,40nm,2.2s,mb5.1
LSA Lhasa 64.67 28 *eP* **P 18 49 38.5 +0.5**
LSA pmax pmax
comp=Z,245nm,1.7s,mb6.0
LSA MLR MLR
comp=Z,2μm,20.0s,MS5.2
LSA Lhasa 64.67 28 *eP* **P 18 49 38.5 +0.6**
comp=Z,245nm,1.7s,mb6.0
LSA LR LR
comp=Z,2μm,20.0s,MS5.2
ASF Jabal al Asfar 65.09 337 P **P 18 49 42.1 +1.4**
comp=Z,22nm,1.0s,mb5.2,baz=17,slow=3.2,SNR=13
ASF LR LR 19 13 35.1
comp=Z,1μm,21.1s,MS5.1,baz=196,slow=32
SBA Scott Base 65.12 167⇓*eP* **P 18 49 41.6 +0.7**
SBA *e* 18 52 04.2
SBA pmax pmax
comp=Z,43nm,0.8s,mb5.5
SBA MLR MLR
comp=Z,6μm,20.0s,MS5.8
SBA Scott Base 65.12 167⇓*eP* **P 18 49 41.6 +0.7**
comp=Z,43nm,0.8s,mb5.5
SBA *eP* PP 18 52 04.2 +0.1
SBA LR LR
comp=Z,6μm,20.0s,MS5.8
BATP Bataraza 65.77 64 *eP* **P 18 49 44.5 -0.7**
WRA Warramunga Arr 65.88 100 P **P 18 49 45.7 -0.1**
comp=Z,78nm,1.1s,mb5.7,baz=248,slow=5.5,SNR=92
WRA LR LR 19 14 36.6
comp=Z,3μm,19.6s,MS5.4,baz=240,slow=32
WRA PKP2bc 19 18 24.2
comp=Z,6.2nm,1.0s,baz=70,slow=2.7,SNR=15
WRA Warramunga Arr 65.88 100 P **P 18 49 45.7 -0.1**
WRA LR LR 19 14 36.6
WRA ⇑*e* 19 18 24.2
WB2 Warramunga Arr 65.89 100⇓*iP* **P 18 49 45.2 -0.7**
WRAB Tennant Creek 65.89 100 P **P 18 49 46.3 +0.4**
comp=Z,660nm,1.2s,mb6.5,SNR=31
WRAB Tennant Creek 65.89 100 *eP* **P 18 49 45.8 -0.1**
WRAB pmax pmax
comp=Z,344nm,1.4s,mb6.2
WRAB MLR MLR
comp=Z,3μm,20.0s,MS5.5
WRAB Tennant Creek 65.89 100 *eP* **P 18 49 45.8 -0.2**
comp=Z,240nm,1.4s,mb6.0
WRAB LR LR
comp=Z,3μm,20.0s,MS5.5
MMAI Mount Meron Ar 66.38 336 P **P 18 49 50.1 +1.1**
comp=Z,20nm,0.9s,mb5.2,baz=148,slow=8.4,SNR=17
MMAI LR LR 19 14 51.4
comp=Z,2μm,21.1s,MS5.2,baz=170,slow=32
ABKT Ailbek 66.51 357 P **P 18 49 48.2 -1.7**
comp=Z,204nm,0.9s,mb6.2,SNR=12
ABKT Ailbek 66.51 357 P **P 18 49 48.2 -1.7**
QIZ Qiongzhong 66.55 50 P **P 18 49 50.0 -0.1**
QIZ S S 18 58 41.3 +0.3
QIZ SS SS 19 02 57.4 -0.7
QIZ AMB AMB
comp=Z,17nm,1.4s,mb4.9
QIZ AMB AMB
comp=Z,682nm,8.2s
QIZ LR LR
comp=N,1μm,22.1s
QIZ LR LR
comp=Z,1μm,39.4s
QIZ Qiongzhong 66.55 50 PFAKE 18 50 00.0 +10
QIZ LR LR
comp=Z,1μm,22.0s,MS5.0
KMI Kunming 66.61 40 P **P 18 49 50.9 +0.4**
KMI PCP PcP 18 50 18.8 -1.0
KMI PP PP 18 52 21.0 +3.8
KMI PPP 18 53 57.5
KMI SCP 18 54 21.0
KMI PCS 18 54 22.3
KMI S S 18 58 44.0 +2.2
KMI SKS 18 59 44.3
KMI SCS ScS 18 59 45.3 -2.3
KMI SS SS 19 03 05.1 +6.0
KMI SSS 19 06 02.9
KMI AMB AMB
comp=Z,36nm,2.0s,mb5.1
KMI AMB AMB
comp=Z,1μm,4.9s
KMI LR LR
comp=N,1μm,20.8s,MS5.1
KMI LR LR
comp=E,478nm,16.4s,MS5.1
KMI LR LR
comp=Z,807nm,17.5s,MS5.0
BHL Bhannes 67.09 337 *eP* **P 18 49 54.5 +0.9**
MSL Mosul 67.11 344 *ex* x 18 49 58.0
MSL *ex* x 18 58 51.0
KAKA Kakadu 67.24 92 *eP* **P 18 49 54.3 -0.2**
comp=Z,74nm,1.1s,mb5.6
STKA Stephens Creek 67.49 115 *eP* **P 18 49 56.4 +0.3**
comp=Z,10nm,0.9s,mb4.9
STKA *eS* S 18 58 54.9 +2.5
STKA Stephens Creek 67.49 115 P **P 18 49 55.3 -0.8**
comp=Z,11nm,0.7s,mb5.0,baz=274,slow=4.5,SNR=13
STKA LR LR 19 15 43.9
comp=Z,2μm,18.1s,MS5.3,baz=242,slow=33
STKA PKPPKP 19 18 21.9
comp=Z,4.4nm,0.8s,baz=41,slow=5.4,SNR=3.7
CUKT Cukurca 67.90 345 *eP* **P 18 49 59.4 +0.7**
TAU Tasmania Unive 68.00 128 PFAKE 18 50 10.0 +11
TAU LR LR
comp=Z,2μm,21.0s,MS5.4
HKR Hakkari 68.18 345 *eP* **P 18 50 01.2 +0.7**
ENPP El Nido 68.49 63 *eP* **P 18 50 03.2 +0.8**
TOO Toolangi 68.50 122⇓*iP* **P 18 50 03.6 +1.1**
comp=Z,18nm,1.3s,mb4.8
TOO Toolangi 68.50 122⇓*iP* **P 18 50 03.6 +1.1**
TOO pmax pmax
comp=Z,18nm,1.3s,mb4.8
MARD Mardin 68.67 342 *iP* **P 18 50 03.8 +0.3**
CSS Prodhromos 68.88 335 *eP* **P 18 50 05.2 +0.4**
IPIL Ipil 69.01 68 *eP* **P 18 50 06.1 +0.5**
BEST Besiri 69.08 343 *iP* **P 18 50 07.0 +0.9**
TVAN Van 69.17 345 *iP* **P 18 50 11.1 +4.5**
VANB Van 69.23 345 *eP* **P 18 50 07.1 +0.1**
KSH Kashi 69.31 12 P **P 18 50 08.0 +0.5**
KSH AP pP 18 50 12.5 +1.8
KSH PCP PcP 18 50 31.5 +0.5
KSH PP PP 18 52 42.1 +1.6
KSH S S 18 59 11.1 -2.9
KSH SCS ScS 19 00 04.5 -4.1
KSH SS SS 19 03 39.6 -1.1
KSH AMB AMB
comp=Z,149nm,1.1s,mb5.8
KSH AMB AMB
comp=Z,1μm,4.2s
KSH LR LR
comp=N,7μm,19.6s
KSH LR LR
comp=E,4μm,13.1s
KSH LR LR
comp=Z,9μm,22.7s,MS6.0
URFA Urfa 69.33 341 *eP* **P 18 50 09.5 +1.8**
CUYO Cuyo Island 69.53 64 *eP* **P 18 50 09.9 +1.0**
GAZ Gaziantep 69.57 339 *eP* **P 18 50 10.6 +1.5**
BUSP Coron 69.58 63 *eP* **P 18 50 11.8 +2.7**
GZT Gaziantep 69.63 340 *eP* **P 18 50 10.0 +0.6**
CLDR Caldiran 69.64 345 *eP* **P 18 50 10.9 +1.4**
PAGZ Pagadian 69.71 68 *eP* **P 18 50 10.7 +0.8**
CEYT Ceyhan 69.89 338 *eP* **P 18 50 11.7 +0.6**
IKL Isikli 69.89 336 *eP* **P 18 50 10.8 -0.3**
GYA Guiyang 69.91 42⇑*iP* **P 18 50 10.8 -0.4**
GYA PP PP 18 52 47.0 +1.2
GYA S S 18 59 17.6 -3.5
GYA AMB AMB
comp=Z,60nm,1.1s,mb5.4
GYA AMB AMB
comp=Z,800nm,5.7s
GYA LR LR
comp=N,1μm,18.9s,MS5.3
GYA LR LR
comp=E,870nm,19.4s,MS5.3
GYA LR LR
comp=Z,790nm,19.0s,MS5.0
MEST Erdemli 70.04 337 *iP* **P 18 50 12.7 +0.6**
MERS Mersin 70.17 337 *eP* **P 18 50 13.8 +1.0**
MALT Malatya 70.26 341⇑*iP* **P 18 50 14.3 +1.0**
MALT Malatya 70.26 341⇓*iP* **P 18 50 14.1 +0.8**
MALT pmax pmax
comp=Z,27nm,1.1s,mb5.1
MALT Malatya 70.26 341⇓*iP* **P 18 50 14.1 +0.7**
comp=Z,27nm,1.1s,mb5.1
ELZG Elazig 70.27 341 *iP* **P 18 50 17.4 +4.0**
KOZT Kozan 70.29 338 *eP* **P 18 50 13.0 -0.5**
KARA Karaisali 70.34 338 *eP* **P 18 50 13.0 -0.8**
GNI Garni 70.43 346 *eP* **P 18 50 15.4 +1.1**
GNI Garni 70.43 346 P **P 18 50 16.1 +1.7**
comp=Z,28nm,0.8s,mb5.2,baz=120,slow=1.3,SNR=11
GNI LR LR 19 18 29.3
comp=Z,3μm,21.2s,MS5.5,baz=334,slow=34
GNI Garni 70.43 346*c iP* **P 18 50 14.5 +0.1**
GNI pmax pmax
comp=Z,87nm,1.3s
GNI Garni 70.43 346⇓*eP* **P 18 50 14.9 +0.6**
comp=Z,184nm,1.4s,mb5.8
GNI LR LR
comp=Z,3μm,21.0s,MS5.5
PTK Pertek 70.53 342 *eP* **P 18 50 15.0 0.0**
ERMK Ermenek 70.53 336 *iP* **P 18 50 16.6 +1.6**
LUBP Lubang 70.65 62 *eP* **P 18 50 16.4 +0.7**
ERZM Erzurum 70.96 344 *iP* **P 18 50 19.7 +2.1**
EZM Erzurum 70.96 344 *eP* **P 18 50 20.3 +2.7**
HDMB Hadim 70.97 336 *eP* **P 18 50 18.3 +0.6**
DAV Davao City (W) 71.08 70 PFAKE 18 50 30.0 +12
DAV LR LR
comp=Z,656nm,20.0s,MS4.9
BUKP Musuan 71.10 69 *eP* **P 18 50 18.8 +0.4**
EZC Erzincan 71.21 342 *eP* **P 18 50 21.2 +2.1**
OTRP Odiongan 71.22 64 *eP* **P 18 50 20.5 +1.3**
TOA0 Torodi Ar. Sit 71.39 297⇓*eP* **P 18 50 19.9 -0.4**
TORD Torodi Ar. Bea 71.39 297 P **P 18 50 20.2 -0.1**
comp=Z,14nm,0.9s,mb4.9,baz=114,slow=5.4,SNR=62
TORD PKPPKP 19 18 18.4
comp=Z,0.9nm,1.0s,baz=224,slow=6.2,SNR=3.6
TORD LR LR 19 20 19.9
comp=Z,7μm,21.3s,MS5.9,baz=120,slow=35
TORD Torodi Ar. Bea 71.39 297 P **P 18 50 20.2 -0.1**
TORD P'P' 19 18 18.4
TORD LR LR 19 20 19.9
AKAS Kas 71.42 333 *iP* **P 18 50 19.9 -0.5**
AML Almayashu 71.49 9 P **P 18 50 21.6 +0.8**
SNR=13
BNN Bunyan 71.53 339 *eP* **P 18 50 21.4 +0.3**
DGRG Davíd-gareji 71.55 347 P **P 18 50 21.5 +0.3**
DGRG S S 18 59 44.1 +3.9
HOPE Hope Point 71.59 218 PFAKE 18 50 30.0 +8.6
HOPE LR LR
comp=Z,1μm,19.0s,MS5.2
CD2 Chengdu 71.69 37 *eP* **P 18 50 21.1 -0.9**
CD2 AP pP 18 50 25.8 +0.5
CD2 PCP PcP 18 50 39.9 -1.2
CD2 S S 18 59 40.3 -1.5
CD2 SCS ScS 19 00 22.8 -4.6
CD2 SS SS 19 04 19.1 +1.8
CD2 AMB AMB
comp=Z,50nm,1.1s,mb5.4
CD2 AMB AMB
comp=Z,750nm,4.3s
CD2 LR LR
comp=N,540nm,24.0s
CD2 LR LR
comp=Z,750nm,26.4s,MS4.8
GZH Guangzhou 71.71 50 P **P 18 50 23.3 +1.2**
GZH S S 18 59 44.3 +2.3
GZH LR LR
comp=N,621nm,20.5s,MS5.1
GZH LR LR
comp=E,625nm,15.9s,MS5.1
GZH LR LR
comp=Z,2μm,29.2s
AVNT Avonos 71.79 338 *iP* **P 18 50 22.8 +0.2**
KONT Konya--Tatoy 71.89 336 *eP* **P 18 50 23.6 +0.3**
MTA Mtatsminda 71.90 347 P **P 18 50 23.2 -0.1**
MTA S S 18 59 47.5 +3.2
TBLG Delisi 71.95 347 *eP* **P 18 50 24.7 +1.1**
TBLG Delisi 71.95 347 P **P 18 50 24.8 +1.2**
EKS2 Erkin-Say 72.02 9 P **P 18 50 25.0 +1.0**
SNR=30
KK31 Karatay Array 72.06 7 *iP* **P 18 50 24.4 +0.2**
KKAR Karatay Array 72.06 7 *iP* **P 18 50 24.4 +0.2**
KKAR pmax pmax
comp=Z,158nm,1.2s,mb5.8
AAK Ala-Archa 72.10 10 P **P 18 50 25.3 +0.8**
SNR=11
AAK Ala-Archa 72.10 10 *eP* **P 18 50 24.3 -0.2**
AAK pmax pmax
comp=Z,142nm,1.4s,mb5.7
AAK MLR MLR
comp=Z,2μm,22.0s,MS5.2
AAK Ala-Archa 72.10 10 *eP* **P 18 50 24.3 -0.2**
comp=Z,142nm,1.4s,mb5.7
AAK LR LR
comp=Z,2μm,22.0s,MS5.2
SVSK Karacayir 72.16 340 *eP* **P 18 50 25.4 +0.5**
BUTP Butuan 72.16 69 *eP* **P 18 50 24.4 -0.5**
KBK Karagaybulak 72.19 10 P **P 18 50 25.8 +0.8**
SNR=13
MSLP Maasin 72.20 67 *eP* **P 18 50 24.1 -1.0**
CNB Canberra Magne 72.23 121 *eP* **P 18 50 26.2 +0.9**
comp=Z,52nm,1.6s,mb5.2
FRU Bishkek 72.31 10 *eP* **P 18 50 26.0 +0.2**
FRU *eS* S 18 59 48.0 -1.0
FRU pmax pmax
comp=Z,2μm,7.0s
BCA Borcka 72.36 344 *eP* **P 18 50 26.2 +0.1**
ISP Isparta 72.48 335 *eP* **P 18 50 24.2 -2.5**
ISP Isparta 72.48 335 *eP* **P 18 50 25.3 -1.4**
KDHN Kadinhani 72.49 336 *iP* **P 18 50 25.9 -0.9**
CHMS Chumysh 72.50 10 P **P 18 50 26.9 0.0**
SNR=10
OCLP Ormoc 72.52 66 *eP* **P 18 50 27.6 +0.7**
TKM2 Tokmak 2 72.55 11 P **P 18 50 28.0 +0.8**
SNR=14
TKM2 Tokmak 2 72.55 11 *iP* **P 18 50 26.9 -0.3**
IDI Anoyia 72.62 329 P **P 18 50 29.1 +1.5**
comp=Z,36nm,1.1s,mb5.2,baz=146,slow=12,SNR=6.5
IDI LR LR 19 22 02.7
comp=Z,833nm,18.5s,MS5.0,baz=130,slow=36
IDI Anoyia 72.62 329 P **P 18 50 29.1 +1.5**
IDI LR LR 19 22 02.7
MAK Makhachkala 72.63 349 *eP* **P 18 50 29.7 +2.0**
MAK *i* 18 50 48.8
MAK *iS* S 18 59 55.3 +2.7
MAK *e* 19 00 32.6
MAK pmax pmax
comp=Z,475nm,1.7s,mb6.2
MAK pmax pmax
comp=Z,2μm,3.5s
MAK smax
comp=N,7μm,11.1s
MAK smax
comp=E,4μm,7.0s
MAK MLR MLR
comp=Z,2μm,16.0s,MS5.4
KAMT Kaman 72.70 338 *eP* **P 18 50 29.5 +1.4**
CDAG Cicekdag 72.71 338 *iP* **P 18 50 28.1 -0.1**
USP Ospenovka 72.72 10 P **P 18 50 28.2 0.0**
SNR=32
GRSN GIRESUNGRSN 72.73 342 *iP* **P 18 50 29.4 +1.1**
YER Yerkesik 72.73 333 *eP* **P 18 50 29.8 +1.5**
KIZT Kizilcal 72.89 336 *eP* **P 18 50 29.5 +0.3**
LIC Lamto 72.94 287⇓*iP* **P 18 50 30.3 +0.8**
comp=Z,68nm,1.0s,mb5.2
LIC Lamto 72.94 287⇓*iP* **P 18 50 30.3 +0.8**
comp=Z,34nm,1.0s,mb5.2
ONI Oni 73.03 346 P **P 18 50 30.4 +0.3**
ONI S S 18 59 59.3 +2.2
DBIC Dimbokro 73.04 288 P **P 18 50 30.8 +0.7**
DBIC pS 19 00 02.5
DBIC Dimbokro 73.04 288 P **P 18 50 30.8 +0.7**
comp=Z,25nm,0.9s,mb5.1,baz=111,slow=7.5,SNR=18
DBIC LR LR 19 19 58.8
comp=Z,1μm,20.2s,MS5.3,baz=110,slow=34
DBIC Dimbokro 73.04 288⇓*eP* **P 18 50 30.8 +0.7**
DBIC pmax pmax
comp=Z,27nm,0.9s
DBIC MLR MLR
comp=Z,2μm,21.0s
DBIC Dimbokro 73.04 288⇓*eP* **P 18 50 30.8 +0.7**
comp=Z,27nm,0.9s,mb5.2
DBIC LR LR
comp=Z,2μm,21.0s,MS5.2
BR131 Keskin Array S 73.04 338 *eP* **P 18 50 29.3 -0.8**
comp=Z,23nm,0.9s,mb5.1
BR131 LR LR
comp=Z,936nm,20.0s,MS5.1
BRTR Keskin Array B 73.04 338 P **P 18 50 30.3 +0.2**
comp=Z,19nm,0.9s,mb5.0,baz=164,slow=6.4,SNR=31
BRTR LR LR 19 19 00.3

comp=Z,1µm,21.8s,MS5.1,baz=145,slow=33
BODT Bodrum 73.07 332 *e*P **P 18 50 30.5 +0.2**
ZEI Tsey 73.12 346 *e*P **P 18 50 33.0 +2.5**
ZEI *e* 18 50 45.7
ZEI *e* 18 53 13.7
AAA Alma-Ata 73.12 12 *i* P **P 18 50 32.1 +1.5**
AAA *i* S S 18 59 58.5 +0.3
AAA pmax pmax
comp=Z,2µm,4.5s
AAA smax
comp=Z,2µm,5.4s
AAA MLR MLR
comp=Z,3µm,19.9s,MS5.6
CORM Corum 73.13 339 *e*P **P 18 50 30.8 +0.2**
ABRA Dolores 73.40 59 *e*P **P 18 50 34.2 +2.0**
ANTO Ankara 73.46 337 *e*P **P 18 50 32.6 +0.1**
ANTO Ankara 73.46 337⇓ *i*P **P 18 50 32.5 0.0**
ANTO Ankara 73.46 337 P **P 18 50 33.8 +1.3**
SNR=12
ANTO Ankara 73.46 337 *e*P **P 18 50 33.2 +0.7**
ANTO pmax pmax
comp=Z,33nm,1.0s,mb5.2
ANTO MLR MLR
comp=Z,1µm,19.0s,MS5.2
ANTO Ankara 73.46 337 *e*P **P 18 50 33.1 +0.6**
comp=Z,33nm,1.0s,mb5.2
ANTO LR LR
comp=Z,1µm,19.0s,MS5.2
KVT Kavak 73.52 340 *e*P **P 18 50 33.4 +0.5**
PVCP Virac 73.62 64 *e*P **P 18 50 33.1 -0.4**
ELDT Eldivan 73.80 338 *i* P **P 18 50 34.9 +0.3**
ESKT Eskisehir 73.83 336 *e*P **P 18 50 34.7 0.0**
ESKT Eskisehir 73.83 336 *i* P **P 18 50 34.7 0.0**
CANT Cankiri 73.84 338 *e*P **P 18 50 37.4 +2.6**
APYP Conner 73.93 59 *e*P **P 18 50 35.8 +0.5**
APYP Conner 73.93 59 *e*P **P 18 50 35.8 +0.5**
GDZ Gediz 73.96 334 *i* P **P 18 50 35.5 0.0**
ASCN Ascension 74.00 270 PFAKE 18 50 50.0 +14
ASCN LR LR
comp=Z,1µm,19.0s,MS5.3
TOS Tosya 74.10 339 *e*P **P 18 50 36.7 +0.4**
BOYT Boyabat 74.17 339 *i* P **P 18 50 36.9 +0.2**
IZM Izmir 74.23 333 *e*P **P 18 50 38.0 +1.0**
DIKM Dikmen 74.27 340 *e*P **P 18 50 35.4 -1.9**
BLCB Balcova 74.31 332 *e*P **P 18 50 38.0 +0.5**
SGKT Sivrigoynuk 74.34 337 *i* P **P 18 50 37.7 0.0**
ENH Enshi 74.40 42 PFAKE 18 50 50.0 +12
ENH LR LR
comp=Z,123nm,22.0s
AKHS Akhisar 74.42 333 *i* P **P 18 50 38.3 +0.2**
KIV Kislovodsk 74.51 346ĸ *i*P **P 18 50 38.7 0.0**
KIV *i* pP 18 50 43.5 +1.5
KIV *e* 18 50 53.8
KIV *i* S S 19 00 14.5 +0.7
KIV *e* 19 00 47.7
KIV *e* 19 01 07.4
KIV pmax pmax
comp=Z,76nm,2.4s,mb5.2
KIV Kislovodsk 74.51 346 *e*P **P 18 50 38.7 0.0**
comp=Z,35nm,0.8s,mb5.3
KIV LR LR
comp=Z,4µm,21.0s,MS5.7
SAFT Safranbolu 74.72 338 P **P 18 50 40.0 +0.1**
BALT Daday 74.76 338 *i* P **P 18 50 42.3 +2.1**
BZK Bozkurt 74.94 339 *e*P **P 18 50 41.3 +0.1**
ADVT Abdulvahap 75.04 335 *e*P **P 18 50 40.7 -1.1**
KDZE Karadeniz Ereo 75.21 337 *e*P **P 18 50 42.0 -0.8**
GEMT Gemlik 75.24 335 *e*P **P 18 50 43.3 +0.4**
YLV Yalova 75.29 335 *e*P **P 18 50 44.0 +0.8**
GOF Gofitskoye 75.49 346 *e*P **P 18 50 45.0 +0.6**
CANB Canakkale 75.69 333 *e*P **P 18 50 47.2 +1.7**
LZH Lanzhou 75.81 34 ⇓P **P 18 50 46.8 +0.6**
LZH AP pP 18 51 00.3 +11
LZH XP sP 18 51 01.5 +11
LZH PP PP 18 53 38.8 +2.7
LZH PPP 18 55 25.8
LZH S S 19 00 26.3 -2.0
LZH SKS 19 00 51.6
LZH PS 19 01 07.8
LZH SS SS 19 05 23.8 +3.7
LZH AMB AMB
comp=Z,121nm,1.3s,mb5.7
LZH AMB AMB
comp=Z,1µm,7.6s
LZH LR LR
comp=N,2µm,14.5s
LZH LR LR
comp=Z,4µm,18.9s,MS5.7
ISK Istanbul-Kandi 75.84 335 *e*P **P 18 50 43.3 -3.1**
ARMA Armidale 75.97 117⇓ *i*P **P 18 50 48.4 +1.3**
MRMT Marmara Adasi 75.99 334 *e*P **P 18 50 47.2 0.0**
KLYT Kilyos 76.01 335 *e*P **P 18 50 46.6 -0.7**
CTA Charters Tower 76.01 105 *e*P **P 18 50 48.3 +0.9**
comp=Z,35nm,1.2s,mb5.2
CTA *e*S S 19 00 32.9 +2.4
CTA *e*SS SS 19 05 32.1 +8.9
CTA Charters Tower 76.01 105 P **P 18 50 47.9 +0.6**
comp=Z,46nm,1.1s,mb5.3,baz=255,slow=5.5,SNR=11
CTA Charters Tower 76.01 105 *e*P **P 18 50 48.3 +0.9**
CTA *e*S S 19 00 32.9 +2.4
CTA *e*SS SS 19 05 32.1 +8.9
CTA pmax pmax
comp=Z,35nm,1.2s
CTAO Charters Tower 76.01 105 P **P 18 50 47.7 +0.3**
CTAO *e* 18 51 06.3
CTAO pmax pmax
comp=Z,110nm,1.3s,mb5.6
CTAO Charters Tower 76.01 105 *e*P **P 18 50 47.1 -0.2**
comp=Z,114nm,1.4s,mb5.6
CTAO LR LR
comp=Z,3µm,19.0s,MS5.7
ELBA Catalca 76.14 335 *i* P **P 18 50 46.9 -1.2**
WMQ Urumqi 76.15 19 P **P 18 50 47.0 -1.1**
WMQ PP PP 18 53 39.0 0.0
WMQ S S 19 00 29.0 -3.0
WMQ SCS ScS 19 00 58.0 -5.1
WMQ SS SS 19 05 24.0 -1.2
WMQ AMB AMB
comp=Z,45nm,1.2s,mb5.3
WMQ AMB AMB
comp=Z,345nm,6.0s
WMQ LR LR
comp=N,4µm,15.0s,MS6.0
WMQ LR LR
comp=E,3µm,15.0s,MS6.0
WMQ LR LR
comp=Z,4µm,16.0s,MS5.9
RKY Sarkoy-Tekirda 76.22 334 *e*P **P 18 50 48.6 0.0**
MFT Murefte 76.27 334 *e*P **P 18 50 47.2 -1.6**
QZH Quanzhou 76.50 51 P **P 18 50 51.4 +1.3**
QZH S S 19 00 39.4 +3.5
QZH AMB AMB
comp=Z,2µm,6.4s
QZH LR LR
comp=N,2µm,19.2s,MS5.8
QZH LR LR
comp=E,4µm,24.0s,MS5.8
QZH LR LR
comp=Z,3µm,26.6s,MS5.4
ANN Anapa 76.56 343 *e*P **P 18 50 49.8 -0.7**
ANN *e* 18 50 58.4
ANN *e* 18 53 39.1
ANN *e*S S 19 00 35.3 -1.3
ANN *e* 19 00 59.9
ANN pmax pmax
comp=Z,85nm,1.4s,mb5.5
ANN MLR MLR
comp=N,2µm,18.0s,MS5.4
ANN MLR MLR
comp=E,851nm,18.0s,MS5.4
ANN MLR MLR
comp=Z,1µm,18.0s,MS5.2
GTA Gaotai 76.64 29⇓ *i*P **P 18 50 51.3 +0.4**
GTA AP pP 18 50 55.8 +1.6
GTA XP sP 18 50 58.5 +3.1
GTA PP PP 18 53 45.8 +2.6
GTA PPP 18 55 30.8
GTA S S 19 00 35.8 -1.7
GTA XS sS 19 00 47.1 +4.2
GTA SKS 19 00 55.5
GTA PS 19 01 16.0
GTA SS SS 19 05 31.3 -1.5
GTA AMB AMB
comp=Z,65nm,1.0s,mb5.5
GTA AMB AMB
comp=Z,1µm,3.8s
GTA LR LR
comp=N,724nm,20.1s,MS5.1
GTA LR LR
comp=E,702nm,19.8s,MS5.1
GTA LR LR
comp=Z,2µm,26.2s
ENEZ Enez 76.67 333 *e*P **P 18 50 50.5 -0.5**
XOR Xorichti 76.75 330 *e*P **P 18 50 50.7 -0.8**
AGG Agios Georgios 76.85 330 *e*P **P 18 50 50.7 -1.4**
ALN Alexandroupoli 76.85 333 *e*P **P 18 50 51.1 -1.0**
XAN Xi'an 76.88 39 P **P 18 50 51.8 -0.5**
XAN S S 19 00 36.3 -3.7
XAN AMB AMB
comp=Z,62nm,1.4s,mb5.3
XAN AMB AMB
comp=Z,786nm,7.3s
XAN LR LR
comp=N,326nm,27.3s
XAN LR LR
comp=E,269nm,21.9s
XAN LR LR
comp=Z,945nm,29.3s,MS4.9
PAIG Paliouri 77.01 331 *e*P **P 18 50 50.9 -2.1**
OUR Ouranopolis 77.22 331 *e*P **P 18 50 54.5 +0.3**
LKD Levkas 77.35 328 *e*P **P 18 50 55.0 +0.1**
EDRB Edirne 77.39 334 *e*P **P 18 50 55.4 +0.3**
WHN Wuhan 77.52 45 *e*P **P 18 50 55.4 -0.4**
MK31 Makanchi Array 77.56 14 P **P 18 50 55.2 -0.9**
MK31 pmax pmax
comp=Z,572nm,1.9s,mb6.2
MKAR Makanchi Array 77.56 14 P **P 18 50 55.5 -0.6**
comp=Z,20nm,0.8s,mb5.1,baz=190,slow=4.9,SNR=70
MKAR PKKPbc PKKPbc 19 09 60.0 +0.4
comp=Z,0.5nm,0.7s,baz=41,slow=3.9,SNR=4.6
SIM Simferopol' 77.62 340*d* *i*P **P 18 50 56.4 0.0**
SIM *i* 18 51 06.0
SIM *e* 18 53 51.0
SIM *i* S S 19 00 47.7 -0.4
SIM pmax pmax
comp=Z,54nm,0.9s,mb5.5
SIM pmax pmax
comp=Z,300nm,15.7s
SIM MLR MLR
comp=Z,660nm,15.9s,MS5.1
PMSA Palmer Station 77.63 201 PFAKE 18 51 10.0 +14
PMSA LR LR
comp=Z,4µm,20.0s,MS5.7
LIT Litokhoron 77.66 330 *e*P **P 18 50 55.8 -0.9**
KDZ Kurdzhali 77.74 333 *e*P **P 18 50 57.0 -0.1**
AB31 Akbulak array 77.76 359 *i* P **P 18 50 56.7 -0.5**
AB31 pmax pmax
comp=Z,564nm,1.6s,mb6.2
AB31 Akbulak array 77.76 359⇑ *e*P **P 18 50 56.8 -0.4**
HORT Hortiatis 77.81 331 *e*P **P 18 50 56.5 -1.0**
SOH Sokhos 77.89 331 *e*P **P 18 50 56.1 -1.9**
THE Thessaloniki 77.90 331 *e*P **P 18 50 56.7 -1.2**
MEV Metsovon 77.96 329 *e*P **P 18 50 59.1 +0.8**
JMB Yambol 77.98 334 *e*P **P 18 50 57.0 -1.4**
JMB Yambol 77.98 334 *e*P **P 18 50 58.0 -0.4**
NACB Ninganchiao 78.11 54 *e*P **P 18 50 58.5 -0.7**
IGT Igoumenitsa 78.17 329 *e*P **P 18 50 59.3 -0.1**
MMB Musomiste 78.37 332 *e*P **P 18 50 58.6 -2.0**
MMB Musomiste 78.37 332 *i* P **P 18 51 01.0 +0.4**
GRG Griva 78.41 331 *e*P **P 18 50 59.8 -1.0**
PLD Plovdiv 78.41 333 *e*P **P 18 50 58.9 -1.9**
TATO Taipei 78.53 53 PFAKE 18 51 10.0 +8.5
TATO LR LR
comp=Z,1µm,22.0s,MS5.1
VAY Valandovo 78.63 331 *e*P **P 18 51 00.2 -1.9**
VAY Valandovo 78.63 331 *e*P **P 18 51 00.9 -1.2**
FNA Florina 78.71 330 *e*P **P 18 51 01.1 -1.4**
SSY Sortino 78.88 324 P **P 18 51 03.5 +0.1**
AKTK Aktyubinsk 79.00 358 P **P 18 51 03.5 -0.5**
AKTK LR LR 19 25 10.2
AKTO Aktyubinsk 79.00 358 P **P 18 51 03.5 -0.5**
comp=Z,26nm,0.8s,mb5.2,baz=182,slow=4.0,SNR=42
AKTO LR LR 19 25 10.2
comp=Z,2µm,20.2s,MS5.4,baz=176,slow=35
AKTO Aktyubinsk 79.00 358 P **P 18 51 03.3 -0.7**
AKTO pmax pmax
comp=Z,22nm,1.4s,mb4.9
TIRR Tirgusor 79.03 336⇓ *i*P **P 18 51 03.7 -0.5**
TIRR Tirgusor 79.03 336 P **P 18 51 04.3 +0.1**
TIRR Tirgusor 79.03 336 *e*P **P 18 51 03.4 -0.9**
comp=Z,57nm,0.9s,mb5.5
SOI Samo 79.07 325 P **P 18 51 04.5 0.0**
PVL Pavlikeni 79.10 334 *e*P **P 18 51 03.0 -1.6**
OHR Ohrid 79.23 330 *e*P **P 18 51 04.6 -0.7**
HARR Harsova 79.40 336 P **P 18 51 06.8 +0.5**
VTS Vitosha 79.42 332 *e*P **P 18 51 04.8 -1.6**
VTS Vitosha 79.42 332 *e*P **P 18 51 05.0 -1.4**
VTS Vitosha 79.42 332⇓ *i*P **P 18 51 05.9 -0.5**
VTS Vitosha 79.42 332 P **P 18 51 06.1 -0.3**
ZIMR 79.46 334 P **P 18 51 07.1 +0.5**
VAE Valguarnera 79.46 324 LR LR 19 30 44.7
comp=Z,2µm,18.5s,MS5.4,baz=271,slow=39
SKO Skopje 79.65 331 *e*P **P 18 51 05.5 -2.2**
SKO Skopje 79.65 331 *e*P **P 18 51 07.6 -0.1**
CFR Carcaliu 79.75 337⇑ *i*P **P 18 51 07.7 -0.5**
CFR Carcaliu 79.75 337 P **P 18 51 08.5 +0.3**
CFR Carcaliu 79.75 337⇑ P **P 18 51 07.7 -0.4**
TIR Tirane 79.84 329 *e*P **P 18 51 08.7 0.0**
ISR Istrita 80.27 336 P **P 18 51 12.8 +1.8**
MLR Muntele Rosu 80.80 335 P **P 18 51 13.6 -0.3**
comp=Z,25nm,1.0s,mb5.1,baz=156,slow=4.2,SNR=19
MLR LR LR 19 26 35.6
comp=Z,2µm,18.2s,MS5.5,baz=332,slow=35
MLR Muntele Rosu 80.80 335⇓ *i*P **P 18 51 13.6 -0.2**
MLR Muntele Rosu 80.80 335 P **P 18 51 14.2 +0.4**
MLR Muntele Rosu 80.80 335⇓ P **P 18 51 13.6 -0.2**
VRI Vrincioaia 80.84 336⇑ *i*P **P 18 51 14.1 0.0**
VRI Vrincioaia 80.84 336 P **P 18 51 14.2 +0.1**
VRI Vrincioaia 80.84 336⇑ P **P 18 51 14.1 +0.1**
SNX Sinaia 80.85 335 P **P 18 51 14.0 -0.1**
PLOR Plostina 80.86 336⇑ *i*P **P 18 51 13.8 -0.3**
KEST Kesra 80.96 319 P **P 18 51 15.9 +1.2**
comp=Z,8.2nm,0.9s,mb4.7,baz=298,slow=0.3,SNR=11
KEST LR LR 19 26 40.2
comp=Z,2µm,20.1s,MS5.4,baz=250,slow=35
SLCN Sala Consilina 81.06 326 P **P 18 51 14.5 -0.7**
VOIR 81.09 335⇓ *i*P **P 18 51 14.5 -0.9**
VOIR 81.09 335⇓ P **P 18 51 14.5 -0.8**
KIS Kishinev 81.11 338*d* *i*P **P 18 51 14.0 -1.5**
KIS *e* 18 54 26.0
KIS *i* S S 19 01 20.0 -5.2
KIS pmax pmax
comp=Z,1µm,4.0s
KIS smax
comp=N,3µm,20.0s
KIS MLR MLR
comp=Z,600nm,20.0s,MS5.0
KIS MLR MLR
comp=Z,900nm,20.0s
NJ2 Nanjing 81.36 46 *e*P **P 18 51 16.3 -0.5**
NJ2 AP pP 18 51 20.9 +0.8
NJ2 XP sP 18 51 23.3 +2.0
NJ2 PP PP 18 54 24.1 +1.6
NJ2 S S 19 01 25.0 -2.7
NJ2 AMB AMB
comp=Z,60nm,0.8s,mb5.6
NJ2 AMB AMB
comp=Z,840nm,4.1s
NJ2 LR LR
comp=N,2µm,28.6s
NJ2 LR LR
comp=E,2µm,34.6s
NJ2 LR LR
comp=Z,2µm,30.0s,MS5.2
GRUS Gruza 81.52 331 *e*P **P 18 51 16.7 -1.0**
VRHR Novokhopersk 81.54 347 *e*P **P 18 51 17.0 -0.7**
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.5
VRHR pmax pmax
comp=N,40nm,1.2s
VRHR pmax pmax
comp=E,30nm,0.8s
PMG Port Moresby 81.60 96 P **P 18 51 19.4 +1.3**
comp=E,135nm,1.1s,mb5.8,baz=272,slow=5.1,SNR=11
PMG Port Moresby 81.60 96 *e*P **P 18 51 18.3 +0.2**
PMG pmax pmax
comp=Z,227nm,1.3s
PMG MLR MLR
comp=Z,2µm,19.0s
PMG Port Moresby 81.60 96 *e*P **P 18 51 18.3 +0.3**
comp=Z,227nm,1.3s,mb5.9
PMG LR LR
comp=Z,2µm,19.0s,MS5.4
VOSK Vostochnaya 81.63 6 P **P 18 51 16.9 -1.3**
VOSK pmax pmax
comp=Z,75nm,1.6s,mb5.4
SVIS Svilajnac 81.64 332 *e*P **P 18 51 17.6 -0.7**
ZRNK Zerenda 81.70 4 P **P 18 51 17.7 -0.9**
ZRNK pmax pmax
comp=Z,18nm,1.0s,mb5.0
ZRNK Zerenda 81.70 4 *e*P **P 18 51 17.5 -1.1**
comp=Z,47nm,0.9s,mb5.4
BVA0 Borovoye Array 81.88 5 *i* P **P 18 51 18.9 -0.6**
BVA0 pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BVAR Borovoye Array 81.88 5 P **P 18 51 18.8 -0.7**
comp=Z,29nm,0.7s,mb5.3,baz=170,slow=7.0,SNR=74
BVAR PKKPbc PKKPbc 19 09 46.9 -3.0
comp=Z,0.7nm,0.5s,baz=276,slow=40,SNR=4.0
BRVK Borovoye 81.90 5 *e*P **P 18 51 18.9 -0.8**
BRVK pmax pmax
comp=Z,38nm,0.9s,mb5.3
BRVK MLR MLR
comp=Z,1µm,20.0s,MS5.3
BRVK Borovoye 81.90 5 *e*P **P 18 51 18.9 -0.8**
comp=Z,60nm,0.9s,mb5.5
BRVK LR LR
comp=Z,2µm,20.0s,MS5.5
GZR Gura Zlata 81.92 333 P **P 18 51 19.6 -0.2**
DIVS Divcibare 82.00 331⇓ *i*P **P 18 51 19.6 -0.6**
DIVS Divcibare 82.00 331 *e*P **P 18 51 20.4 +0.2**
VRSR Storozhevoye 82.14 346*d* *i*P **P 18 51 19.9 -1.0**
VRSR *e* pP 18 51 24.6 +0.4
VRSR *e*S S 19 01 33.1 -2.7
VRSR pmax pmax
comp=N,30nm,0.9s
VRSR pmax pmax
comp=Z,40nm,0.9s,mb5.3
VRSR pmax pmax
comp=E,10.0nm,1.1s
VRSR smax
comp=N,1µm,6.3s
VRSR smax
comp=Z,400nm,7.6s
VRSR smax
comp=E,490nm,5.1s
VRSR MLR MLR
comp=Z,2µm,20.0s,MS5.5
VRSR MLR MLR
comp=N,2µm,21.0s,MS5.5
VRSR MLR MLR
comp=E,1µm,19.0s,MS5.5
SSE Sheshan 82.23 48 ⇓P **P 18 51 21.3 -0.1**
SSE AP pP 18 51 29.6 +4.9
SSE XP sP 18 51 33.4 +7.5
SSE PP PP 18 54 29.0 -0.7
SSE S S 19 01 31.0 -5.8
SSE XS sS 19 01 47.0 +4.7
SSE AMB AMB
comp=Z,70nm,0.7s,mb5.7
SSE AMB AMB
comp=Z,747nm,6.6s
SSE LR LR
comp=N,255nm,22.4s,MS5.0
SSE LR LR
comp=E,702nm,22.4s,MS5.0
SSE LR LR
comp=Z,791nm,19.0s,MS5.1
CHKZ Chkalovo 82.54 5⇓ *e*P **P 18 51 21.8 -1.2**
CHKZ *e* 18 54 37.4
CHKZ pmax pmax
comp=Z,70nm,1.2s,mb5.6
CHKZ Chkalovo 82.54 5⇓ *e*P **P 18 51 21.8 -1.2**
comp=Z,70nm,1.2s,mb5.6
CHKZ *e*PP PP 18 54 37.4 +5.1
BZS Buzias 82.57 333⇓ *i*P **P 18 51 23.0 -0.1**
BZS Buzias 82.57 333⇓ P **P 18 51 23.0 -0.1**
VOR Voronezh 82.63 346 *e*P **P 18 51 22.5 -1.0**
VOR *e* 18 51 31.0
VOR pmax pmax
comp=N,130nm,1.4s
VOR pmax pmax
comp=Z,120nm,1.4s,mb5.7
CMAH Djebel Manchou 82.69 319 P **P 18 51 25.0 +1.2**
MIDA Miranda 82.69 326 P **P 18 51 23.1 -0.7**
BURAR Bucovina Array 82.88 336⇓ *i*P **P 18 51 25.0 +0.2**
BURAR Bucovina Array 82.88 336⇓ P **P 18 51 25.0 +0.2**
CKFL Kef-Lekhel 82.94 318 P **P 18 51 27.0 +1.9**
CASM Ain Smara 82.98 318 P **P 18 51 30.0 +4.7**
TIA Tai'an 83.11 42⇓ P **P 18 51 25.8 -0.1**
TIA S S 19 01 41.0 -4.7
TIA AMB AMB
comp=Z,65nm,1.1s,mb5.6
TIA LR LR
comp=N,417nm,17.0s
DRGR 83.11 334⇑ *i*P **P 18 51 25.5 -0.5**
DRGR 83.11 334 P **P 18 51 25.9 -0.1**
DRGR 83.11 334⇑ P **P 18 51 25.5 -0.5**
RPZ Rata Peaks 83.14 136 P **P 18 51 27.6 +1.5**
comp=N,11nm,1.0s,mb4.8,baz=178,slow=5.0,SNR=5.9
RPZ LR LR 19 19 51.6
comp=N,4µm,21.4s,MS5.8,baz=234,slow=30
HHC Hu-ho-hao-te 83.34 36 *e*P **P 18 51 27.3 +0.2**
HHC AP pP 18 51 32.1 +1.6
HHC XP sP 18 51 34.3 +2.6
HHC PP PP 18 54 41.3 +2.5
HHC SKS 19 01 45.5
HHC S S 19 01 48.0 0.0
HHC SS SS 19 07 16.3 +3.3
HHC AMB AMB
comp=Z,51nm,1.0s,mb5.5
HHC AMB AMB
comp=Z,2µm,4.7s
HHC LR LR
comp=N,826nm,22.2s,MS5.2
HHC LR LR
comp=E,668nm,22.0s,MS5.2
HHC LR LR
comp=Z,1µm,27.4s
CKHR Kef el Ahmar 83.39 317 P **P 18 51 36.0 +8.6**
DFRA Djebel Bou Aff 83.54 318 P **P 18 51 32.0 +3.8**
CERT Cerreto 83.55 326 P **P 18 51 27.2 -1.0**
AQU L'Aquila 83.65 326 P **P 18 51 32.7 +4.0**
AQU pmax pmax
comp=Z,35nm,1.0s,mb5.4
AQU L'Aquila 83.65 326 P **P 18 51 23.2 -5.5**
comp=Z,42nm,1.0s,mb5.5
MTCE Montecelio 83.72 326 P **P 18 51 29.2 +0.1**
EFI East Falkland 84.00 213 PFAKE 18 51 40.0 +9.5
EFI LR LR
comp=Z,2µm,20.0s,MS5.4
AKASG Malin Array Be 84.24 340 P **P 18 51 30.9 -0.8**
comp=Z,13nm,0.7s,mb5.2,baz=161,slow=4.3,SNR=62
AKASG PP PP 18 54 40.5 -5.7
comp=Z,1.0nm,0.6s,baz=147,slow=8.3,SNR=4.4
AKASG Malin Array Be 84.24 340 P **P 18 51 30.9 -0.8**
AKASG PP PP 18 54 40.5 -5.7
AKBB Malin Array Si 84.24 340 P **P 18 51 31.1 -0.7**
AKBB Malin Array Si 84.24 340 *e*P **P 18 51 30.7 -1.0**
PKSM Moragy 84.26 332⇓ *i*P **P 18 51 31.2 -0.7**
PKSN Moragy 84.26 332⇓ P **P 18 51 31.2 -0.7**
PKSN Nyarlorinc 84.31 333 *e*P **P 18 51 36.5 +4.4**
UZH Uzhgorod 84.80 335 *e*P **P 18 51 34.0 -0.6**
UZH *e*S S 19 01 51.0 -12
UZH MLR MLR
comp=Z,540nm,14.0s,MS5.1
ZAL Zalesovo 84.84 13 P **P 18 51 34.6 -0.2**
comp=Z,89nm,0.9s,mb5.9,baz=271,slow=3.6,SNR=215
ZAL LR LR 19 26 43.3
comp=Z,2µm,20.5s,MS5.5,baz=259,slow=34
ZAL Zalesovo 84.84 13 P **P 18 51 34.6 -0.2**
ZAL LR LR 19 26 43.3
ARU Arti 84.98 358 P **P 18 51 35.8 +0.3**
comp=Z,667nm,1.5s,mb6.5,SNR=31
ARU Arti 84.98 358⇓ *i*P **P 18 51 35.1 -0.4**
ARU *e* 18 54 53.0
ARU *e*PPP 18 56 43.3
ARU *e*S S 19 01 56.6 -7.9
ARU *e*SSS 19 11 02.8
ARU pmax pmax
comp=Z,202nm,1.5s,mb6.0
ARU Arti 84.98 358 *e*P **P 18 51 34.8 -0.7**

comp=Z,307nm,1.4s,mb6.2
ARU LR LR

comp=Z,2µm,20.0s,MS5.4
KOLS Kolonicke sedl 85.05 335 *eP* **P 18 51 35.6 -0.3**
KOLS pmax pmax

comp=Z,17nm,1.6s,mb4.9
KOLS Kolonicke sedl 85.05 335 *eP* **P 18 51 35.6 -0.3**
comp=Z,17nm,1.6s,mb4.9
KOLS *eS* S 19 01 57.0 -8.2
BUD Budapest 85.13 333⇑ *ePcP* PcP 18 51 35.1 -4.3
PSZ Piszkesteto 85.13 333⇓ *ePcP* PcP 18 51 35.2 -4.2
PSZ Piszkesteto 85.13 333⇓ *iP* **P 18 51 34.1 -2.1**
PSZ Piszkesteto 85.13 333 P **P 18 51 35.2 -1.0**
PSZ pmax pmax

comp=Z,21nm,1.2s,mb5.1
PSZ Piszkesteto 85.13 333 *eP* **P 18 51 34.1 -2.1**
comp=Z,21nm,1.2s,mb5.2
LVV L'vov 85.17 337⇓ *iP* **P 18 51 35.3 -1.1**
LVV *iS* S 19 01 57.5 -8.8
LVV *iPS* 19 02 58.3
LVV MLR MLR

comp=Z,800nm,20.0s,MS5.1
LVV MLR MLR

comp=N,600nm,19.0s
BJT Baijiatuau 85.19 39 PFAKE 18 51 50.0 +13
BJT LR LR

comp=Z,1µm,21.0s,MS5.3
BJI Beijing 85.21 39 P **P 18 51 35.8 -0.8**
BJI S S 19 01 58.6 -8.2
BJI AMB AMB

comp=Z,37nm,2.2s,mb5.1
BJI LR LR

comp=N,643nm,22.5s,MS5.1
BJI LR LR

comp=E,716nm,22.5s,MS5.1
BJI LR LR

comp=Z,920nm,29.4s
PKSG 85.31 332 *eP* **P 18 51 36.5 -0.6**
CRVS Cervenica-Dubn 85.33 335 *eP* **P 18 51 36.6 -0.6**
CRVS *eS* S 19 01 59.1 -8.8
SVE Sverdlovsk 85.34 359⇓ *iP* **P 18 51 36.2 -1.1**
SVE *eS* S 19 02 00.0 -8.0
SVE *ePS* 19 03 00.0
SVE *eSS* SS 19 07 40.0 -2.5
SVE pmax pmax

comp=Z,525nm,2.8s,mb6.2
SVE MLR MLR

comp=N,1µm,16.0s,MS5.5
SVE MLR MLR

comp=E,300nm,16.0s,MS5.5
SVE MLR MLR

comp=Z,1µm,16.0s,MS5.5
KECS Kecovo 85.36 334 *eP* **P 18 51 36.8 -0.6**
KECS *eSP* SP 18 51 41.1 -0.8
KECS *e* 18 51 47.5
KECS Kecovo 85.36 334 *eS* S 19 02 06.7 -1.5
KECS Kecovo 85.36 334 *eP* **P 18 51 36.8 -0.6**
KECS pmax pmax

comp=Z,10.0nm,1.0s,mb4.9
KECS Kecovo 85.36 334 *eP* **P 18 51 36.8 -0.6**
comp=Z,9.6nm,1.0s,mb4.9
KECS *e* pP 18 51 41.1 +0.4
KECS *e* 18 51 47.5
KECS *eS* S 19 02 06.7 -1.5
NVS Novosibirsk 85.39 12⇓ *iP* **P 18 51 36.9 -0.6**
NVS *eS* S 19 01 57.6 -11
NVS pmax pmax

comp=Z,372nm,1.6s,mb6.3
NVS pmax pmax

comp=N,235nm,1.7s
NVS smax

comp=N,132nm,2.8s
KWP Kalwaria 85.48 336 *eP* **P 18 51 37.4 -0.6**
comp=Z,0.8nm,4.1s
KWP *ePcP* PcP 18 51 41.4 +0.4
KWP *epP* pP 18 51 47.4 +6.1
KWP *ePP* PP 18 55 04.9 +8.7
KWP *eSKS* 19 02 01.4
KWP *eS* S 19 02 10.8 +1.4
KWP L 19 20 58.5

comp=Z,4.0nm,44.1s
KWP Kalwaria 85.48 336 *eP* **P 18 51 37.4 -0.6**
KWP *e* pP 18 51 41.4 +0.1
KWP *e* 19 02 01.4
KWP *eS* S 19 02 10.8 +1.4
KWP pmax pmax

comp=Z,800nm,4.1s
KWP MLR MLR

comp=Z,4µm,44.1s,MS5.5
KWP Kalwaria 85.48 336 *eP* **P 18 51 37.4 -0.6**
KWP *ePcP* PcP 18 51 41.4 +0.4
KWP *epP* pP 18 51 47.4 +6.1
KWP *ePP* PP 18 55 04.9 +8.7
KWP *eSKS* 19 02 01.4
KWP *eS* S 19 02 10.8 +1.4
CSNT Castellina Chi 85.51 326 P **P 18 51 37.6 -0.6**
PDKS Podkum 85.72 329 *eP* **P 18 51 37.1 -2.1**
GROS Grobnik 85.81 330 *eP* **P 18 51 38.9 -0.7**
STHS Stebnicka Huta 85.83 335 *eP* **P 18 51 39.7 -0.1**
STHS *e* pP 18 51 42.8 -0.3
STHS pmax pmax

comp=Z,8.0nm,1.1s,mb4.9
STHS Stebnicka Huta 85.83 335 *eP* **P 18 51 39.7 -0.1**
comp=Z,7.6nm,1.1s,mb4.8
STHS *e* pP 18 51 42.8 -0.3
PGF Pioggiola 86.00 324 *eP* **P 18 51 40.2 -0.4**
comp=Z,86nm,1.4s,mb5.5
PGF Pioggiola 86.00 324 *eP* **P 18 51 40.2 -0.4**
PGF pmax pmax

comp=Z,43nm,1.4s,mb5.5
PGF Pioggiola 86.00 324 *eP* **P 18 51 40.2 -0.4**
comp=Z,43nm,1.4s,mb5.5
VYHS Vyhne 86.01 333 *eP* **P 18 51 39.8 -0.8**
VYHS *eS* S 19 02 03.0 -12
FNVD Fontana Vidola 86.11 326 P **P 18 51 41.3 +0.2**
PECH Pechory 86.14 350*c iP* **P 18 51 40.0 -1.2**
PECR *eS* S 19 02 01.0 -15
PECR *e* 19 02 13.0
PECR pmax pmax

comp=Z,2µm,1.6s
PECR pmax pmax

comp=Z,1µm,6.0s
PECR smax

comp=N,700nm,4.0s
PECR MLR MLR

comp=Z,1µm,17.0s,MS5.3
PECR MLR MLR

comp=E,400nm,20.0s,MS5.0
PECR MLR MLR

comp=N,500nm,17.0s,MS5.0
VOJS Vojsko 86.20 329 *i* P **P 18 51 40.6 -0.9**
SONM Songino Array 86.26 28 P **P 18 51 41.5 -0.4**
comp=N,44nm,1.0s,mb5.6,baz=212,slow=3.3,SNR=106
SONM PKKPbc PKKPbc 19 09 40.7 +0.9
comp=N,0.7nm,0.8s,baz=22,slow=0.6,SNR=6.5
SONM LR LR 19 28 19.7

comp=N,976nm,22.0s,MS5.2,baz=230,slow=34
SOP Sopron 86.30 331⇓ *ePcP* PcP 18 51 41.5 -3.1
OBN Obninsk 86.36 346*k iP* **P 18 51 42.1 -0.2**
OBN *i* pP 18 51 46.2 +0.5
OBN *i* 18 51 50.1
OBN *i* S S 19 02 05.9 -12
OBN *ePS* 19 03 09.3
OBN pmax pmax

comp=Z,107nm,1.0s,mb6.0
OBN MLR MLR

comp=Z,2µm,18.0s,MS5.5
OBN Obninsk 86.36 346 *i* Pr **P 18 51 41.0 -1.3**
OBN LR LR

comp=Z,2µm,20.0s,MS5.5
ARSA Arzberg 86.41 331 *i* P **P 18 51 42.3 -0.3**
comp=Z,854nm,4.2s,SNR=7.3
ZST Bratislava 86.48 332 *eP* **P 18 51 42.3 -0.6**
ZST *e* pP 18 51 46.4 +0.1
ZST pmax pmax

comp=Z,23nm,1.1s,mb5.3
ZST Bratislava 86.48 332 *eP* **P 18 51 42.3 -0.6**
comp=Z,23nm,1.1s,mb5.3
ZST *e* pP 18 51 46.4 +0.1
ZST *e* 18 51 54.4
ULN Ulaanbaatar 86.56 29 *eP* **P 18 51 42.4 -0.9**
ULN pmax pmax

comp=Z,64nm,1.0s,mb5.8
ULN MLR MLR

comp=Z,867nm,21.0s,MS5.1
ULN Ulaanbaatar 86.56 29 *eP* **P 18 51 42.4 -0.9**
comp=Z,64nm,1.0s,mb5.8
ULN LR LR

comp=Z,867nm,21.0s,MS5.1
SMOL Smolenice 86.59 332 *eP* **P 18 51 44.6 +1.1**
MOS Moscow 86.72 347*k iP* **P 18 51 44.2 +0.1**
MOS *i* pP 18 51 48.7 +1.3
MOS *i* S S 19 02 03.8 -18
MOS *i* 19 02 20.8
MOS pmax pmax

comp=Z,1µm,3.0s
MOS pmax pmax

comp=Z,229nm,2.2s,mb6.0
MOS MLR MLR

comp=N,2µm,21.0s
MOS MLR MLR

comp=Z,3µm,21.0s,MS5.6
PTCC Patocco-Chiusa 86.72 329 *i* Pr **P 18 51 43.4 -0.7**
SNZO South Karori 86.73 136 PFAKE 18 51 50.0 +5.8
SNZO LR LR

comp=Z,2µm,20.0s,MS5.6
CONA Conrad Observa 86.79 331⇓ *iP* **P 18 51 44.1 -0.4**
comp=Z,321nm,2.5s,mb6.1,SNR=26
OJC Ojcow 87.03 335⇓ *iP* **P 18 51 44.6 -1.0**
OJC *epP* pP 18 51 54.2 +5.2
OJC *ePP* PP 18 55 12.3 +3.5
OJC *eSKSac* SKSac 19 02 09.4 -3.5
OJC *eS* S 19 02 22.9 -1.7
OJC LR LR

comp=Z,7µm,21.6s,MS6.0
KBA Koelnbreinsper 87.23 329⇑ *iP* **P 18 51 45.0 -1.6**
comp=Z,541nm,3.7s,SNR=10
KBA Koelnbreinsper 87.23 329⇑ *iP* **P 18 51 45.0 -1.6**
KBA pmax pmax

comp=Z,541nm,3.7s
CTI Castel Tesino 87.24 328 P **P 18 51 46.7 0.0**
comp=Z,174nm,1.8s,mb6.0
MOY Mondy 87.30 23 *eP* **P 18 51 46.7 -0.2**
MOY pmax pmax

comp=Z,176nm,4.1s
OKC Ostrava-Krasne 87.36 333 *eP* **P 18 51 46.2 -1.0**
OKC *eSKS* 19 02 11.8
OKC AMS AMS 19 31 20.0
OKC Ostrava-Krasne 87.36 333 *eP* **P 18 51 46.2 -1.0**
OKC *eSKS* 19 02 11.8
MOA Molln 87.41 330 *i* P **P 18 51 47.2 -0.3**
comp=Z,1µm,4.4s,SNR=20
MORC Moravsky Berou 87.55 333⇓ *iP* **P 18 51 47.3 -0.8**
MORC Moravsky Berou 87.55 333 P **P 18 51 47.2 -0.9**
MORC pmax pmax

comp=Z,110nm,1.9s,mb5.8
MORC Moravsky Berou 87.55 333 *eP* **P 18 51 47.0 -1.1**
comp=Z,112nm,1.9s,mb5.9
VRAC Vranov 87.56 332⇓ *iP* **P 18 51 47.8 -0.4**
VRAC Vranov 87.56 332 P **P 18 51 48.1 -0.1**
DL2 Dalian 87.56 43 P **P 18 51 48.3 +0.1**
DL2 S S 19 02 28.8 -0.9
DL2 AMB AMB

comp=Z,30nm,0.9s,mb5.5
DL2 AMB AMB

comp=Z,440nm,6.0s
DL2 LR LR

comp=N,310nm,16.5s,MS4.9
DL2 LR LR

comp=E,250nm,15.6s,MS4.9
DL2 LR LR

comp=Z,360nm,16.9s,MS4.8
SBF Sospel 87.74 324 *eP* **P 18 51 48.6 -0.5**
comp=Z,127nm,1.1s,mb5.8
SBF Sospel 87.74 324 *eP* **P 18 51 48.6 -0.5**
SBF pmax pmax

comp=Z,64nm,1.1s,mb5.8
SBF Sospel 87.74 324 *eP* **P 18 51 48.6 -0.5**
comp=Z,64nm,1.1s,mb5.8
APPI Appiano 87.76 328 P **P 18 51 48.5 -0.6**
SAOF Saorge 87.77 324 *eP* **P 18 51 49.6 +0.4**
MABI Malga Bissina 87.78 327 *i* Pr **P 18 51 49.3 0.0**
MDT Midelt 87.81 310 LR LR 19 29 27.3
comp=Z,3µm,20.7s,MS5.7,baz=135,slow=34
AUTN L'Aution 87.84 324 *eP* **P 18 51 49.3 -0.2**
LMR La Mourre 87.85 323 *eP* **P 18 51 49.3 -0.3**
comp=Z,98nm,1.3s,mb5.6
LMR La Mourre 87.85 323 *eP* **P 18 51 49.3 -0.3**
LMR pmax pmax

comp=Z,49nm,1.3s,mb5.6
LMR La Mourre 87.85 323 *eP* **P 18 51 49.3 -0.3**
comp=Z,49nm,1.3s,mb5.6
FRF La Foret Royal 87.94 323 *eP* **P 18 51 49.7 -0.3**
comp=Z,105nm,1.1s,mb5.7
FRF La Foret Royal 87.94 323 *eP* **P 18 51 49.7 -0.3**
FRF pmax pmax

comp=Z,52nm,1.1s,mb5.7
FRF La Foret Royal 87.94 323 *eP* **P 18 51 49.7 -0.3**
comp=Z,52nm,1.1s,mb5.7
TOUF Mont Tournerai 87.94 324 *eP* **P 18 51 50.7 +0.7**
TREC Trest 88.00 332 *eP* **P 18 51 49.4 -0.9**
TREC *eSKS* 19 02 17.1
TREC AMS AMS 19 33 30.0
TREC Trest 88.00 332 *eP* **P 18 51 49.4 -0.9**
TREC *e* 19 02 17.1
WTTA Wattenberg 88.15 329⇓ *iP* **P 18 51 50.9 -0.1**
comp=Z,1µm,4.4s,SNR=21
WTTA Wattenberg 88.15 329⇓ *iP* **P 18 51 50.9 -0.1**
WTTA pmax pmax

comp=Z,1µm,4.4s
WTTA Wattenberg 88.15 329⇓ *iP* **P 18 51 50.9 -0.1**
comp=Z,1µm,4.4s
SOKR Solikamsk 88.18 358*d iP* **P 18 51 51.2 +0.1**
SOKR S SKSac 19 02 17.6 -2.3
SOKR pmax pmax

comp=Z,190nm,1.1s,mb6.2
SOKR MLR MLR

comp=Z,2µm,16.0s,MS5.5
WATA Walderalm 88.23 329⇑ *iP* **P 18 51 50.7 -0.6**
comp=Z,132nm,2.0s,mb5.8,SNR=8.4
WATA Walderalm 88.23 329⇑ *iP* **P 18 51 50.7 -0.7**
WATA pmax pmax

comp=Z,132nm,2.0s,mb5.8
WAR Warsaw 88.24 336 *eP* **P 18 51 52.0 +0.6**
WAR *ePcP* PcP 18 51 54.9 +1.8
WAR *epP* pP 18 52 01.5 +6.7
WAR *eS* S 19 02 36.6 +0.5
WAR L 19 22 07.0

comp=Z,2.1nm,42.4s
WAR Warsaw 88.24 336 *eP* **P 18 51 52.0 +0.6**
WAR *e* pP 18 51 54.9 +0.1
WAR *eS* S 19 02 36.6 +0.5
WAR MLR MLR

comp=Z,2µm,42.4s,MS5.2
TLY Talaya 88.25 25 *eP* **P 18 51 51.1 -0.4**
TLY *e* 18 55 15.7
TLY *eS* SKSac 19 02 22.8 +2.5
TLY *ePS* 19 03 41.5
TLY *eSS* SS 19 08 17.7 -7.5
TLY pmax pmax

comp=Z,23nm,1.3s,mb5.2
TLY Talaya 88.25 25 *i* Pr **P 18 51 50.6 -0.9**
TLY LR LR

comp=Z,2µm,22.0s,MS5.5
BERF Bertagne 88.27 323 *eP* **P 18 51 53.1 +1.5**
TAVF Tavernes 88.29 323 *eP* **P 18 51 53.4 +1.7**
SQTA Sankt Quirin 88.31 328⇑ *iP* **P 18 51 51.6 -0.2**
comp=Z,72nm,1.4s,mb5.7,SNR=17
SQTA Sankt Quirin 88.31 328⇑ *iP* **P 18 51 51.6 -0.2**
SQTA pmax pmax

comp=Z,72nm,1.4s,mb5.7
GEC2 GERESS Array S 88.41 331 *eP* **P 18 51 51.1 -1.2**
comp=Z,52nm,1.6s,mb5.5
GEC2 GERESS Array S 88.41 331 *eP* **P 18 51 51.1 -1.2**
GEC2 pmax pmax

comp=Z,16nm,1.6s,mb5.0
GERES GERESS Array B 88.41 331 P **P 18 51 51.4 -0.9**
comp=Z,4.3nm,0.7s,mb4.8,baz=141,slow=4.5,SNR=36
PUYF Puyloubier 88.42 323 *eP* **P 18 54.0 +1.7**
MOTA Moosalm 88.45 328 *i* P **P 18 51 52.2 -0.2**
comp=Z,188nm,2.1s,mb6.0,SNR=23
MOTA Moosalm 88.45 328 *i* P **P 18 51 52.2 -0.2**
MOTA pmax pmax

comp=Z,188nm,2.1s,mb6.0
GELF Grande-Etoile 88.46 323 *eP* **P 18 51 53.8 +1.3**
DPC Dobruska-Polom 88.49 333 *eP* **P 18 51 52.2 -0.4**
DPC *eSKS* 19 02 21.0
DPC AMS AMS 19 24 40.0
DPC Dobruska-Polom 88.49 333 *eP* **P 18 51 52.2 -0.4**
DPC *eSKS* 19 02 21.0
KRAR Krasnoyarsk 88.61 17⇑ *iP* **P 18 51 52.2 -1.0**
KRAR pmax pmax

comp=Z,79nm,2.5s,mb5.6
KRAR MLR MLR

comp=Z,700nm,16.0s,MS5.2
STOF St-Etienne Org 88.63 323 *eP* **P 18 51 54.0 +0.7**
VILF Villemus 88.63 323 *eP* **P 18 51 54.9 +1.6**
TUE Stuetta 88.64 327 *i* Pr **P 18 51 52.9 -0.4**
TREF Trevaresse 88.65 323 *eP* **P 18 51 53.6 +0.2**
EMUR La Murta 88.68 315 P **P 18 51 54.9 +1.3**
comp=Z,29nm,1.4s,mb5.4
KHC Kasperske Hory 88.68 331 *eP* **P 18 51 52.2 -1.3**
KHC *eSKS* 19 02 19.4
KHC AMS AMS 19 31 00.0
KHC Kasperske Hory 88.68 331 *eP* **P 18 51 52.2 -1.3**
KHC *eSKS* 19 02 19.4
MBDF Montbardon 88.69 324 *eP* **P 18 51 53.7 +0.2**
comp=Z,176nm,1.0s,mb6.0
MBDF Montbardon 88.69 324 *eP* **P 18 51 53.7 +0.2**
MBDF pmax pmax

comp=Z,88nm,1.0s,mb6.0
MBDF Montbardon 88.69 324 *eP* **P 18 51 53.7 +0.2**
comp=Z,88nm,1.0s,mb6.0
UPC Upice 88.73 333 *eP* **P 18 51 53.7 -0.1**
UPC *eSKS* 19 02 24.1
SMRF Simiane la Rot 88.79 323 *eP* **P 18 51 54.8 +0.8**
comp=Z,202nm,1.3s,mb6.0
SMRF Simiane la Rot 88.79 323 *eP* **P 18 51 54.8 +0.8**
comp=Z,202nm,1.3s,mb6.3
KSP Ksiaz 88.88 333 *eP* **P 18 51 54.4 -0.1**
comp=Z,1.2nm,3.2s
KSP *ePcP* PcP 18 51 58.7 +2.7
KSP *epP* pP 18 52 03.3 +5.5
KSP *ePP* PP 18 55 29.3 +5.6
KSP *eSKS* 19 02 25.7
KSP *eS* S 19 02 44.0 +1.8
KSP L 19 22 38.2

comp=Z,5.6nm,45.0s
KSP Ksiaz 88.88 333⇓ *eP* **P 18 51 54.4 -0.1**
KSP *e* 19 02 25.4
KSP MLR MLR

comp=Z,6µm,45.1s,MS5.7
KSP Ksiaz 88.88 333⇓ *eP* **P 18 51 54.4 -0.1**
KSP *eSKS* 19 02 25.4
KSP *eSS* SS 19 08 48.2 +14
KSP LR LR

comp=Z,6µm,45.1s,MS5.7
PRAF Pradon 88.88 323 *eP* **P 18 51 55.1 +0.6**
PRU Pruhonice 88.93 332 *eP* **P 18 51 54.2 -0.5**
PRU *eSKS* 19 02 22.2
PRU AMS AMS 19 34 10.0
PRU Pruhonice 88.93 332 *eP* **P 18 51 54.2 -0.5**
PRU *eSKS* 19 02 22.2
IRK Irkutsk 88.94 25⇓ *iP* **P 18 51 53.4 -1.3**
IRK *e* 18 55 31.9
IRK *eS* S 19 02 42.7 0.0
IRK pmax pmax

comp=Z,107nm,2.6s,mb5.7
BNI Bardonecchia 88.96 324 P **P 18 51 54.6 -0.2**
BNI pmax pmax

comp=Z,30nm,0.9s,mb5.6
BNI Bardonecchia 88.96 324 *eP* **P 18 51 53.9 -0.9**
comp=Z,30nm,0.8s,mb5.7
FUR Furstenfeldbru 88.98 329 *eP* **P 18 51 54.8 -0.1**
comp=Z,301nm,1.0s,mb6.6
FUR Furstenfeldbru 88.98 329 *eP* **P 18 51 54.8 -0.1**
FUR pmax pmax

comp=Z,6.0nm,1.0s,mb4.9
DAVA Damuels 88.98 328 *i* P **P 18 51 55.0 0.0**
comp=Z,1µm,4.5s,SNR=53
SUW Suwalki 88.98 338 *eP* **P 18 51 54.4 -0.5**
comp=Z,0.9nm,3.0s
SUW *epP* pP 18 52 04.3 +6.0
SUW *eSKS* 19 02 23.0
SUW *eS* S 19 02 42.8 -0.3
SUW Suwalki 88.98 338 *eP* **P 18 51 54.4 -0.5**
SUW *e* 19 02 23.0
SUW *eS* S 19 02 42.8 -0.3
SUW pmax pmax

comp=Z,900nm,3.0s
WET Wettzell 89.00 330 *eP* **P 18 51 53.8 -1.2**
comp=Z,46nm,1.4s,mb5.6
WET Wettzell 89.00 330 *eP* **P 18 51 53.8 -1.2**
WET pmax pmax

comp=Z,10.0nm,1.4s,mb5.0
PRA Prague 89.04 332 P **P 18 51 55.0 -0.2**
EBER Berja 89.13 314 P **P 18 51 57.7 +2.1**
comp=Z,91nm,1.0s,mb6.1
EJON La Jonquera 89.21 321 P **P 18 51 56.6 +0.6**
comp=Z,19nm,0.9s,mb5.4
LPG La Plagne 89.23 325 *eP* **P 18 51 55.4 -0.7**
comp=Z,45nm,0.9s,mb5.5
LPG La Plagne 89.23 325 *eP* **P 18 51 55.4 -0.7**
LPG pmax pmax

comp=Z,23nm,0.9s,mb5.5
LPG La Plagne 89.23 325 *eP* **P 18 51 55.4 -0.7**
comp=Z,22nm,0.9s,mb5.5
LPL La Plagne 89.25 325 *eP* **P 18 51 55.4 -0.8**
comp=Z,64nm,1.1s,mb5.6
LPL La Plagne 89.25 325 *eP* **P 18 51 55.4 -0.8**
LPL pmax pmax

comp=Z,32nm,1.1s,mb5.6
LPL La Plagne 89.25 325 *eP* **P 18 51 55.4 -0.8**
comp=Z,32nm,1.1s,mb5.6
ORIF Oris-en-Rattie 89.28 324 *eP* **P 18 51 56.3 0.0**
comp=Z,64nm,0.9s,mb5.7
ORIF *eR* 19 02 21.0

comp=Z,1µm,21.0s
ORIF Oris-en-Rattie 89.28 324 *eP* **P 18 51 56.3 0.0**
ORIF pmax pmax

comp=Z,32nm,0.9s,mb5.7
ORIF Oris-en-Rattie 89.28 324 *eP* **P 18 51 56.3 0.0**
comp=Z,32nm,0.9s,mb5.7
PVCC Panska Ves 89.33 332 *eP* **P 18 51 56.6 0.0**
PVCC *eSKS* 19 02 27.1
PVCC AMS AMS 19 34 00.0
PVCC Panska Ves 89.33 332 *eP* **P 18 51 56.6 0.0**
PVCC *eSKS* 19 02 27.1
ETOB Tobarra 89.37 316 P **P 18 51 57.8 +1.0**
comp=Z,17nm,1.1s,mb5.3
RSL Roselend 89.43 325 *eP* **P 18 51 58.3 +1.3**
FILF Fillols 89.47 321 *eP* **P 18 51 57.9 +0.7**
EHUE Huescar 89.50 314 P **P 18 51 58.4 +1.0**
EHUE pmax pmax

comp=Z,21nm,0.9s,mb5.5
EHUE Huescar 89.50 314 P **P 18 51 58.4 +1.0**
comp=Z,21nm,0.9s,mb5.5
EPOB Poblet 89.52 319 P **P 18 51 57.9 +0.4**
comp=Z,24nm,1.7s,mb5.2
ECHE Chera 89.61 317 P **P 18 51 59.9 +2.0**
ECHE pmax pmax

comp=Z,36nm,1.1s,mb5.6
ECHE Chera 89.61 317 P **P 18 51 59.9 +2.0**
comp=Z,36nm,1.1s,mb5.6
ERTA Horta de San J 89.70 318 P **P 18 52 00.7 +2.4**
comp=Z,28nm,1.2s,mb5.5
INCN Inchon 89.74 46 PFAKE 18 52 10.0 +12
INCN LR LR

comp=Z,696nm,19.0s,MS5.1
ROTZ Rotzenmuhle 89.75 330 *eP* **P 18 51 58.1 -0.5**
comp=Z,110nm,1.8s,mb5.9
LASF Ste Croix 89.77 322 *eP* **P 18 51 58.7 +0.1**
comp=Z,90nm,1.1s,mb5.7
ERON Agron 89.79 313 P **P 18 52 00.3 +1.6**
comp=Z,11nm,0.7s,mb5.3
ECOG Cogollos-Vega 89.79 314 P **P 18 52 00.0 +1.3**
ECOG pmax pmax

comp=Z,14nm,1.0s,mb5.2
ECOG Cogollos-Vega 89.79 314 P **P 18 51 60.0 +1.3**
comp=Z,14nm,1.0s,mb5.2
EMOS Mosqueruela 89.80 318 P **P 18 52 00.6 +1.9**
comp=Z,18nm,0.9s,mb5.4
EQES Quesada 89.80 314 P **P 18 51 59.3 +0.5**
comp=Z,38nm,1.0s,mb5.7
OG01 Vacheresse 89.84 325 *eP* **P 18 51 59.2 +0.2**
BRG Berggiesshubel 89.86 332 *eP* **P 18 51 58.8 -0.2**
comp=Z,162nm,1.6s,mb6.1
BRG Berggiesshubel 89.86 332 *i* P **P 18 51 59.1 0.0**
comp=Z,40nm,1.4s,mb5.6
BRG *i* PCP PcP 18 52 02.9 +2.6

comp=Z,96nm,1.6s
BRG *i* 18 57 23.0

comp=Z,12nm,1.8s

BRG e 19 00 15.8
comp=Z,2.8nm,1.1s
BRG SKS 19 02 29.0
BRG e 19 03 24.1
comp=Z,0.9nm,0.5s
BRG SS SS 19 08 14.0 -34
BRG
comp=N,543nm,25.7s
BRG
comp=E,113nm,19.0s
BRG
comp=Z,661nm,24.8s
BRG Berggiesshubel 89.86 332 *i* P **P 18 51 59.1 +0.1**
BRG *i* pP 18 52 02.9 +0.5
BRG 19 02 29.0
BRG pmax pmax
comp=Z,1.0nm,1.4s
BRG pmax pmax
comp=Z,40nm,1.7s,mb5.5
BRG pmax pmax
comp=Z,96nm,1.8s,mb5.8
BRG pmax pmax
comp=Z,12nm,1.1s,mb5.1
BRG pmax pmax
comp=Z,3.0nm,0.5s,mb4.9
BRG MLR MLR
comp=N,900nm,25.7s
BRG MLR MLR
comp=E,543nm,19.0s
BRG MLR MLR
comp=Z,113nm,24.8s
BRG Berggiesshubel 89.86 332 *i* P **P 18 51 59.1 0.0**
comp=Z,40nm,1.4s,mb5.5
BRG *i* PcP PcP 18 52 02.9 +2.6
BRG *i* 18 57 23.0
BRG *e* 19 00 15.8
BRG SKS SKSac 19 02 29.0 -0.8
BRG *e* 19 03 24.1
BRG SS SS 19 08 14.0 -34
BRG LR LR
comp=Z,660nm,24.8s,MS5.0
VIVF Saint-Julien-l 89.86 323 *e*P **P 18 51 58.8 -0.2**
comp=Z,110nm,1.3s,mb5.7
VIVF Saint-Julien-l 89.86 323 *e*P **P 18 51 58.8 -0.2**
VIVF pmax pmax
comp=Z,55nm,1.3s,mb5.7
VIVF Saint-Julien-l 89.86 323 *e*P **P 18 51 58.8 -0.2**
comp=Z,55nm,1.3s,mb5.7
EVIA Vianos 89.95 315 P **P 18 52 00.7 +1.2**
EVIA pmax pmax
comp=Z,31nm,0.8s,mb5.7
EVIA Vianos 89.95 315 P **P 18 52 00.7 +1.2**
comp=Z,31nm,0.8s,mb5.7
MANZ Manzenberg 89.96 331 *e*P **P 18 51 59.0 -0.5**
comp=Z,57nm,1.2s,mb5.8
NKC Novy Kostel 90.00 331 *e*P **P 18 52 00.3 +0.6**
NKC *e*SKS 19 02 30.8
NKC AMS AMS 19 31 50.0
NKC Novy Kostel 90.00 331 *e*P **P 18 52 00.3 +0.6**
NKC *e*SKS 19 02 30.8
URZ Urewera 90.04 135 LR LR 19 25 04.1
comp=Z,3µm,21.0s,MS5.6,baz=36,slow=31
SPAK Spaichingen-Ko 90.08 328 *e*P **P 18 52 00.2 +0.1**
GRA1 Grafenberg Arr 90.13 330 *e*P **P 18 51 59.9 -0.4**
comp=Z,209nm,1.6s,mb6.2
GRA1 *e*S S 19 02 48.1 -5.7
GRA1 LR LR
comp=Z,900nm,21.7s,MS5.2
GRF Grafenberg Arr 90.13 330 *e*P **P 18 51 59.9 -0.4**
comp=Z,209nm,1.6s,mb6.2
GRF *e*S S 19 02 48.1 -5.7
GRF *e*L 19 30 53.1
comp=Z,855nm,21.7s
GRF Grafenberg Arr 90.13 330 *e*P **P 18 51 59.9 -0.4**
GRF *e*S S 19 02 48.1 -5.7
GRF pmax pmax
comp=Z,209nm,1.6s,mb6.2
GRF MLR MLR
comp=Z,900nm,21.7s,MS5.2
TANN Tannenbergstha 90.13 331 *e*P **P 18 52 00.3 0.0**
comp=Z,107nm,1.5s,mb6.0
FBE Freiberg 90.13 332 *e*P **P 18 52 00.2 -0.1**
comp=Z,221nm,1.8s,mb6.2
GUNZ Gunzen 90.14 331 *e*P **P 18 52 00.5 +0.1**
comp=Z,258nm,1.7s,mb6.3
MTLF Montolieu 90.17 321 *e*P **P 18 52 00.5 0.0**
comp=Z,88nm,1.4s,mb5.6
MTLF Montolieu 90.17 321 *e*P **P 18 52 00.5 0.0**
MTLF pmax pmax
comp=Z,44nm,1.4s,mb5.6
MTLF Montolieu 90.17 321 *e*P **P 18 52 00.5 0.0**
comp=Z,44nm,1.4s,mb5.6
WERD Werda 90.22 331 *e*P **P 18 52 00.7 0.0**
comp=Z,159nm,1.7s,mb6.1
BBS Basel-Blauen 90.23 327 *e*P **P 18 52 00.7 -0.1**
OG05 Jujurieux 90.26 325 *e*P **P 18 52 01.4 +0.5**
FELD Feldberg im Sc 90.29 327 *e*P **P 18 52 01.2 +0.2**
CABF La Chapelle 90.34 325 *e*P **P 18 52 00.9 -0.4**
comp=Z,181nm,1.4s,mb5.9
CABF La Chapelle 90.34 325 *e*P **P 18 52 00.9 -0.4**
CABF pmax pmax
comp=Z,91nm,1.4s,mb5.9
CABF La Chapelle 90.34 325 *e*P **P 18 52 00.9 -0.4**
comp=Z,90nm,1.4s,mb5.9
STU Stuttgart 90.37 328 *e*P **P 18 52 00.9 -0.5**
comp=Z,35nm,0.9s,mb5.7
STU Stuttgart 90.37 328 P **P 18 52 01.8 +0.4**
STU pmax pmax
comp=Z,58nm,1.1s,mb5.8
STU Stuttgart 90.37 328 *e*P **P 18 52 00.2 -1.2**
comp=Z,58nm,1.1s,mb5.8
GKP Gorka Klasztor 90.43 335 *e*P **P 18 52 01.7 0.0**
comp=Z,1.0nm,3.5s
GKP *e*PcP PcP 18 52 05.9 +3.1
GKP *e*PP PP 18 55 42.6 +6.6
GKP *e*SKS 19 02 30.7
GKP *e*SKS 19 02 32.5
GKP *e*S S 19 02 55.8 -0.8
GKP Gorka Klasztor 90.43 335 *e*P **P 18 52 01.7 0.0**
GKP *e* pP 18 52 05.9 +0.8
GKP *e* 18 55 42.6
GKP *e* 19 02 30.7
GKP *e*S S 19 02 55.8 -0.8
BFO Black Forest 90.45 328 *e*P **P 18 52 01.4 -0.4**
comp=Z,112nm,1.7s,mb5.9
BFO Black Forest 90.45 328 *e*P **P 18 52 01.4 -0.4**
BFO pmax pmax
comp=Z,18nm,1.7s,mb5.1
LOMF Lomont 90.48 326 *e*P **P 18 52 02.5 +0.5**
EJIF Jimena Fronter 90.53 312 P **P 18 52 03.3 +1.1**
EJIF pmax pmax
comp=Z,41nm,1.1s,mb5.7
EJIF Jimena Fronter 90.53 312 P **P 18 52 03.2 +1.1**
comp=Z,41nm,1.1s,mb5.7
CLL Collm 90.57 332 ⇓*i*P **P 18 52 02.4 0.0**
comp=Z,66nm,1.5s,mb5.7
CLL *e* pP 18 52 07.1 +1.4
comp=Z,230nm,2.1s
CLL *e*PP PP 18 55 43.2 +6.0
CLL *e*SKSac SKSac 19 02 32.3 -1.7
CLL *e*S S 19 02 57.3 -0.6
CLL *e*PS PS 19 04 08.5 +2.6
CLL *e*PPS 19 04 36.0
CLL *e*SS SS 19 09 02.3 +3.4
CLL *e*SSS 19 12 41.0
CLL *e*LR LR 19 22 33.7
CLL *e*L 19 27 52.1
comp=Z,619nm,20.0s
CLL Collm 90.57 332 ⇓P **P 18 52 02.0 -0.4**
comp=Z,logA/T=1.6,mb5.7
CLL *i* *SP sP 18 52 07.1 +0.2
CLL *e* 18 52 35.0
CLL *e* 19 02 33.0
CLL *e*S S 19 02 57.0 -0.9
CLL *e*PS PS 19 04 08.0 +2.1
CLL *e*PPS 19 04 32.0
CLL *e*SS SS 19 09 05.0 +6.1
CLL *e*SSS 19 12 30.0
CLL Collm 90.57 332 ⇓*i*P **P 18 52 02.0 -0.4**
comp=Z,645nm,1.5s,mb5.7
CLL *i* (sP) sP 18 52 07.1 +0.2
comp=Z,224nm,2.0s
CLL *e*x x 18 52 35.0
CLL *e*SKSac SKSac 19 02 33.0 -1.0
CLL *e*S S 19 02 57.0 -0.9
comp=N,1µm,11.1s
CLL *e*S S 19 02 57.0 -0.9
comp=E,900nm,12.9s
CLL *e*PS PS 19 04 08.0 +2.1
CLL *e*PPS 19 04 32.0
CLL *e*SS SS 19 09 05.0 +6.1
CLL *e*x x 19 11 54.0
CLL *e*SSS 19 12 30.0
CLL Collm 90.57 332 ⇓*i*P **P 18 52 02.0 -0.4**
CLL *i* 18 52 07.1
CLL *e* 19 02 33.0
CLL *e*S S 19 02 57.0 -0.9
CLL pmax pmax
comp=Z,20nm,1.5s,mb5.2
CLL MLR MLR
comp=Z,1µm,26.7s,MS5.2
CLL Collm 90.57 332 ⇓*i*P **P 18 52 02.0 -0.4**
comp=Z,65nm,1.5s,mb5.7
CLL *i* 18 52 07.1
CLL *e* 18 52 35.0
CLL *e*SKS 19 02 33.0
CLL *e*S S 19 02 57.0 -0.9
CLL LR LR
comp=Z,1µm,26.7s,MS5.2
SNY Shenyang 90.58 41 ⇑P **P 18 51 58.8 -3.6**
SNY AP pP 18 52 12.0 +6.2
SNY XP sP 18 52 15.6 +8.7
SNY PP PP 18 55 32.9 -4.3
SNY SKS 19 02 25.3
SNY AMB AMB
comp=Z,825nm,4.9s
SNY LR LR
comp=N,420nm,21.6s,MS5.1
SNY LR LR
comp=E,557nm,20.6s,MS5.1
SNY LR LR
comp=Z,783nm,40.2s
ESAC San Caprasio 90.65 319 P **P 18 52 03.5 +0.7**
comp=Z,20nm,0.9s,mb5.5
MOX Moxa 90.66 331 *e*P **P 18 52 02.6 -0.2**
comp=Z,58nm,1.3s,mb5.8
MOX Moxa 90.66 331 *e*P **P 18 52 02.4 -0.4**
comp=Z,85nm,1.6s,mb5.8
MOX
comp=Z,300nm,19.0s
LIBD Limburg 90.67 327 *e*P **P 18 52 02.9 +0.1**
MELF Melles 90.68 320 *e*P **P 18 52 03.3 +0.4**
MOF Molkenrain 90.69 327 *e*P **P 18 52 02.5 -0.4**
HINF Hinteralfeld 90.80 327 *e*P **P 18 52 02.3 -1.1**
comp=Z,114nm,1.5s,mb5.7
HINF Hinteralfeld 90.80 327 *e*P **P 18 52 02.3 -1.1**
HINF pmax pmax
comp=Z,57nm,1.5s,mb5.7
HINF Hinteralfeld 90.80 327 *e*P **P 18 52 02.3 -1.1**
comp=Z,57nm,1.5s,mb5.7
LBL Lubilhac 90.86 323 *e*P **P 18 52 02.3 -1.4**
RESF Ens 90.88 320 *e*P **P 18 52 05.1 +1.3**
EBIE Bielsa 90.91 320 P **P 18 52 05.3 +1.3**
comp=Z,7.0nm,1.0s,mb5.0
ECH Echery 90.93 327 *e*P **P 18 52 03.7 -0.3**
EADA Adamuz 90.97 314 P **P 18 52 05.0 +0.8**
comp=Z,22nm,1.0s,mb5.4
WLS Welschbruch 90.97 327 *e*P **P 18 52 04.0 -0.2**
CDF Champ du Feu 91.01 327 *e*P **P 18 52 03.4 -1.0**
comp=Z,114nm,1.6s,mb5.6
CDF Champ du Feu 91.01 327 *e*P **P 18 52 03.4 -1.0**
CDF pmax pmax
comp=Z,57nm,1.6s,mb5.7
CDF Champ du Feu 91.01 327 *e*P **P 18 52 03.4 -1.0**
comp=Z,57nm,1.6s,mb5.7
SFS San Fernando 91.02 312 P **P 18 52 10.6 +6.2**
EPF Esparros 91.02 320 *e*P **P 18 52 04.4 0.0**
comp=Z,142nm,1.8s,mb5.7
EPF Esparros 91.02 320 *e*P **P 18 52 04.4 0.0**
EPF pmax pmax
comp=Z,71nm,1.8s,mb5.7
EPF Esparros 91.02 320 *e*P **P 18 52 04.4 0.0**
comp=Z,71nm,1.8s,mb5.7
ESPR Espera 91.02 312 P **P 18 52 05.0 +0.5**
comp=Z,14nm,0.8s,mb5.3
RUE Ruedersdorf 91.14 333 *e*P **P 18 52 04.6 -0.4**
comp=Z,70nm,1.1s,mb5.9
TOD Tromm 91.15 329 *e*P **P 18 52 05.2 +0.2**
PLDF La Plantade 91.16 324 *e*P **P 18 52 05.5 +0.4**
LANF Langenberg 91.16 328 *e*P **P 18 52 05.1 0.0**
HAU Haudompre 91.17 326 *e*P **P 18 52 04.3 -0.9**
comp=Z,200nm,1.7s,mb5.9
HAU *e*R
comp=Z,818nm,20.8s
HAU Haudompre 91.17 326 *e*P **P 18 52 04.3 -0.9**
HAU pmax pmax
comp=Z,100nm,1.7s,mb5.9
HAU MLR MLR
comp=Z,820nm,20.8s,MS5.2
HAU Haudompre 91.17 326 *e*P **P 18 52 04.3 -0.9**
comp=Z,100nm,1.7s,mb5.9
HAU LR LR
comp=Z,820nm,20.8s,MS5.2
KLMR Klimovskoe 91.19 349 *d*P **P 18 52 04.2 -1.0**
KLMR *e* 18 55 38.0
KLMR *e*S SKSac 19 02 32.9 -4.6
KLMR pmax pmax
comp=Z,220nm,1.5s,mb6.3
KLMR pmax pmax
comp=Z,200nm,7.3s
CAF Calviac 91.29 322 *e*P **P 18 52 05.8 +0.1**
comp=Z,172nm,1.6s,mb5.8
CAF Calviac 91.29 322 *e*P **P 18 52 05.8 +0.1**
CAF pmax pmax
comp=Z,86nm,1.6s,mb5.8
CAF Calviac 91.29 322 *e*P **P 18 52 05.8 +0.1**
comp=Z,86nm,1.6s,mb5.8
PYM Petit Puy Mans 91.33 323 *e*P **P 18 52 06.5 +0.6**
ETSF Etsaut 91.44 319 *e*P **P 18 52 05.5 -0.9**
comp=Z,66nm,1.4s,mb5.5
ETSF Etsaut 91.44 319 *e*P **P 18 52 05.5 -0.9**
ETSF pmax pmax
comp=Z,33nm,1.4s,mb5.5
ETSF Etsaut 91.44 319 *e*P **P 18 52 05.5 -0.9**
comp=Z,33nm,1.4s,mb5.5
AGO Saint Agoulin 91.47 324 *e*P **P 18 52 11.2 +4.7**
ESDC Sonseca Array 91.48 315 P **P 18 52 06.4 -0.2**
comp=Z,27nm,0.9s,mb5.6,baz=110,slow=3.7,SNR=51
ESDC LR LR 19 30 44.7
comp=Z,997nm,20.2s,MS5.2,baz=110,slow=34
ESDC Sonseca Array 91.48 315 P **P 18 52 07.8 +1.2**
comp=Z,26nm,0.6s,mb5.7
ESDC pP pP 18 52 17.6 +7.7
ESLA Sonseca Array 91.48 315⇓*e*P **P 18 52 07.2 +0.6**
comp=Z,23nm,1.2s,mb5.4
ESLA LR LR
comp=Z,7µm,20.0s,MS6.1
UBBA Unterbreizbach 91.49 330 *e*P **P 18 52 06.3 -0.3**
comp=Z,61nm,1.7s,mb5.7
SMF Signal de Mont 91.50 324 *e*P **P 18 52 05.8 -0.9**
comp=Z,88nm,1.5s,mb5.6
SMF Signal de Mont 91.50 324 *e*P **P 18 52 05.8 -0.9**
SMF pmax pmax
comp=Z,44nm,1.5s,mb5.6
SMF Signal de Mont 91.50 324 *e*P **P 18 52 05.8 -0.9**
comp=Z,44nm,1.5s,mb5.6
THEF They Montfort 91.50 326 *e*P **P 18 52 06.6 -0.1**
VERF Verneugheol 91.61 323 *e*P **P 18 52 07.9 +0.7**
DZM Mont Dzumac 91.61 116 LR LR 19 25 52.1
comp=Z,810nm,21.2s,MS5.1,baz=60,slow=31
VSU Vasula 91.74 342⇓*i*P **P 18 52 08.4 +0.6**
TNS Taunus Mts 91.75 329 *e*P **P 18 52 07.6 -0.2**
comp=Z,71nm,1.9s,mb5.7
TNS Taunus Mts 91.75 329 *e*P **P 18 52 07.6 -0.2**
TNS pmax pmax
comp=Z,13nm,1.9s,mb4.9
RJF Les Rejaudoux 91.83 322 *e*P **P 18 52 08.0 -0.2**
comp=Z,292nm,1.9s,mb6.0
RJF *e*R
comp=Z,2µm,22.5s
RJF Les Rejaudoux 91.83 322 *e*P **P 18 52 08.0 -0.2**
RJF pmax pmax
comp=Z,146nm,1.9s,mb6.0
RJF MLR MLR
comp=Z,2µm,22.5s,MS5.5
RJF Les Rejaudoux 91.83 322 *e*P **P 18 52 08.0 -0.2**
comp=Z,146nm,1.9s,mb6.0
RJF LR LR
comp=Z,2µm,22.5s,MS5.5
AVF Avril sur Loir 91.84 324 *e*P **P 18 52 07.5 -0.8**
comp=Z,103nm,1.6s,mb5.6
AVF Avril sur Loir 91.84 324 *e*P **P 18 52 07.5 -0.8**
AVF pmax pmax
comp=Z,51nm,1.6s,mb5.6
AVF Avril sur Loir 91.84 324 *e*P **P 18 52 07.5 -0.8**
comp=Z,51nm,1.6s,mb5.6
LOR Lormes 91.90 325 *e*P **P 18 52 07.9 -0.6**
comp=Z,166nm,1.6s,mb5.8
LOR *e*R
comp=Z,864nm,21.5s
LOR Lormes 91.90 325 *e*P **P 18 52 07.9 -0.6**
LOR pmax pmax
comp=Z,83nm,1.6s,mb5.8
LOR MLR MLR
comp=Z,860nm,21.5s,MS5.2
LOR Lormes 91.90 325 *e*P **P 18 52 07.9 -0.6**
comp=Z,83nm,1.6s,mb5.8
LOR LR LR
comp=Z,860nm,21.5s,MS5.2
SSF Saint Saulge 91.94 324 *e*P **P 18 52 08.0 -0.7**
comp=Z,137nm,1.7s,mb5.7
SSF Saint Saulge 91.94 324 *e*P **P 18 52 08.0 -0.7**
SSF pmax pmax
comp=Z,69nm,1.7s,mb5.7
SSF Saint Saulge 91.94 324 *e*P **P 18 52 08.0 -0.7**
comp=Z,68nm,1.7s,mb5.7
BGF Bois d'Agland 91.95 324 *e*P **P 18 52 08.5 -0.3**
SJPF Ste Jean 91.96 319 *e*P **P 18 52 09.2 +0.4**
comp=Z,122nm,1.3s,mb5.8
SJPF Ste Jean 91.96 319 *e*P **P 18 52 09.2 +0.4**
SJPF pmax pmax
comp=Z,61nm,1.3s,mb5.8
SJPF Ste Jean 91.96 319 *e*P **P 18 52 09.2 +0.4**
comp=Z,61nm,1.3s,mb5.8
PUL Pulkovo 92.00 345 *de*P **P 18 52 00.7 -8.3**
PUL *e* 19 02 37.2
PUL *e*SP SP 19 04 25.7 +5.3
PUL *e*PS PS 19 04 28.6 +6.9
PUL MLR MLR
comp=Z,1µm,19.0s,MS5.4
LFF La Frestale 92.02 322 *e*P **P 18 52 09.0 -0.1**
comp=Z,275nm,1.9s,mb6.0
LFF La Frestale 92.02 322 *e*P **P 18 52 09.0 -0.1**
LFF pmax pmax
comp=Z,138nm,1.9s,mb6.0
LFF La Frestale 92.02 322 *e*P **P 18 52 09.0 -0.1**
comp=Z,138nm,1.9s,mb6.0
GTTG Gvttingen 92.03 331 *e*P **P 18 52 08.9 -0.2**
comp=Z,16nm,1.1s,mb5.3
EMIN Mina Concepcio 92.07 313 P **P 18 52 09.4 +0.1**
comp=Z,17nm,0.9s,mb5.4
TCF Toulx Ste Croi 92.10 323 *e*P **P 18 52 09.2 -0.3**
comp=Z,171nm,1.7s,mb5.8
TCF Toulx Ste Croi 92.10 323 *e*P **P 18 52 09.2 -0.3**
TCF pmax pmax
comp=Z,85nm,1.7s,mb5.8
TCF Toulx Ste Croi 92.10 323 *e*P **P 18 52 09.2 -0.3**
comp=Z,85nm,1.7s,mb5.8
MEZF Maizieres J'vi 92.14 326 *e*P **P 18 52 09.1 -0.6**
comp=Z,106nm,1.4s,mb5.7
MEZF Maizieres J'vi 92.14 326 *e*P **P 18 52 09.1 -0.6**
comp=Z,106nm,1.4s,mb6.0
ELIZ Elizondo 92.16 319 P **P 18 52 10.8 +1.0**
ELIZ pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
ELIZ Elizondo 92.16 319 P **P 18 52 10.8 +1.0**
comp=Z,5.0nm,0.6s,mb5.0
GUD Guadarrama 92.18 316 P **P 18 52 11.0 +1.2**
GUD pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
GUD Guadarrama 92.18 316 P **P 18 52 11.0 +1.2**
comp=Z,10nm,0.9s,mb5.2
WLF Walferdange 92.41 328 *e*P **P 18 52 10.2 -0.7**
comp=Z,33nm,1.2s,mb5.5
WLF Walferdange 92.41 328 P **P 18 52 10.7 -0.2**
WLF pmax pmax
comp=Z,25nm,1.1s,mb5.5
WLF Walferdange 92.41 328 *e*P **P 18 52 10.1 -0.8**
comp=Z,25nm,1.1s,mb5.5
CIT Chita 92.45 29 *e*P **P 18 52 10.3 -0.8**
CIT pmax pmax
comp=Z,145nm,2.5s,mb5.9
NRDL Niedersach Rie 92.66 331 *e*P **P 18 52 12.8 +0.8**
comp=Z,35nm,1.5s,mb5.6
HNR Honiara 92.66 102 P **P 18 52 12.2 +0.2**
comp=Z,47nm,0.7s,mb6.0,baz=266,slow=3.7,SNR=4.3
HNR LR LR 19 29 23.7
comp=Z,2µm,20.1s,MS5.5,baz=183,slow=33
EBAD Badajoz 92.86 313 P **P 18 52 13.1 +0.1**
comp=Z,10nm,0.8s,mb5.3
CN2 Changchun 92.89 41 *e*P **P 18 52 11.4 -1.7**
CN2 *e*S S 19 03 14.9 -3.9
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,20.0s,MS5.1
CN2 LR LR
comp=E,500nm,20.0s,MS5.1
CN2 LR LR
comp=Z,700nm,19.0s,MS5.1
PBEJ Beja 93.00 312 *e*P **P 18 52 15.2 +1.6**
comp=Z,40nm,1.2s,mb5.7
BUG Bochum--Univer 93.14 329 *e*P **P 18 52 13.8 -0.4**
comp=Z,22nm,1.2s,mb5.5
PESTR Estremoz 93.29 313 *e*P **P 18 52 16.8 +1.8**
comp=Z,43nm,1.3s,mb5.7
PESTR Estremoz 93.29 313 *e*S S 19 03 26.9 +4.5
PESTR Estremoz 93.29 313 *e*LQ 19 18 50.8
PESTR *e*LR LR 19 25 03.1
GIVF Givet 93.34 327 *e*P **P 18 52 14.6 -0.6**
comp=Z,122nm,1.3s,mb5.9
GIVF Givet 93.34 327 *e*P **P 18 52 14.6 -0.6**
GIVF pmax pmax
comp=Z,61nm,1.3s,mb5.9
GIVF Givet 93.34 327 *e*P **P 18 52 14.6 -0.6**
comp=Z,61nm,1.3s,mb5.9
HIA Hailar 93.37 34 *e*P **P 18 52 14.5 -0.8**
HIA Hailar 93.37 34 *e*Pr 18 52 14.5
HIA LR LR
comp=Z,978nm,22.0s,MS5.2
IBBN Ibbenburen 93.53 330 *e*P **P 18 52 15.5 -0.6**
comp=Z,21nm,0.6s,mb5.7
MFF Saint Martin d 93.55 322 *e*P **P 18 52 14.8 -1.4**
comp=Z,115nm,1.4s,mb5.8
MFF Saint Martin d 93.55 322 *e*P **P 18 52 14.8 -1.4**
MFF pmax pmax
comp=Z,57nm,1.4s,mb5.8
MFF Saint Martin d 93.55 322 *e*P **P 18 52 14.8 -1.4**
comp=Z,58nm,1.4s,mb5.8
BAIF Baives 93.61 327 *e*P **P 18 52 15.8 -0.6**
comp=Z,98nm,1.4s,mb5.7
BAIF Baives 93.61 327 *e*P **P 18 52 15.8 -0.6**
BAIF pmax pmax
comp=Z,49nm,1.4s,mb5.7
BAIF Baives 93.61 327 *e*P **P 18 52 15.8 -0.6**
comp=Z,49nm,1.4s,mb5.7
BSEG Bad Segeberg 93.62 332 *e*P **P 18 52 15.8 -0.7**
comp=Z,38nm,1.1s,mb5.7
BSEG Bad Segeberg 93.62 332 *e*P **P 18 52 15.8 -0.7**
BSEG pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
PCBR Castelo Branco 93.78 314 *e*P **P 18 52 18.1 +0.9**
RCBR Riachuelo 93.82 261 PFAKE 18 52 30.0 +13
RCBR LR LR
comp=Z,797nm,21.0s,MS5.2
FINES FINESS Array B 94.48 344 P **P 18 52 18.2 -2.2**
comp=Z,6.1nm,0.9s,mb5.0,baz=173,slow=3.3,SNR=7.8
FINES PP PP 18 56 08.7 +0.8
comp=Z,5.2nm,0.8s,baz=131,slow=1.1,SNR=9.6
FINES LR LR 19 35 48.6
comp=Z,900nm,18.5s,MS5.3,baz=316,slow=36
FINES FINESS Array B 94.48 344 P **P 18 52 18.2 -2.2**
FINES 18 56 08.7
JOF Joensuu 94.61 347 *ep* **P 18 52 18.1 -2.9**
comp=Z,20nm,0.9s,mb5.5
LDF La Druitiere 94.80 324 *e*P **P 18 52 20.9 -1.0**
comp=Z,180nm,1.8s,mb5.9
LDF La Druitiere 94.80 324 *e*P **P 18 52 20.9 -1.0**
LDF pmax pmax
comp=Z,90nm,1.8s,mb5.9
LDF La Druitiere 94.80 324 *e*P **P 18 52 20.9 -1.0**
comp=Z,90nm,1.8s,mb5.9
MENF Mencas 94.92 327 *e*P **P 18 52 22.8 +0.4**
KAF Kangasniemi 95.00 344 *ep* **P 18 52 20.6 -2.2**
comp=Z,16nm,0.9s,mb5.5
KAF Kangasniemi 95.00 344 *e*P **P 18 52 20.6 -2.2**

KAF pmax pmax
comp=Z,16nm,0.9s,mb5.5
GRR Gorron 95.05 324 *e*P **P 18 52 21.9 -1.1**
comp=Z,206nm,1.9s,mb5.9
GRR Gorron 95.05 324 *e*P **P 18 52 21.9 -1.1**
GRR pmax pmax
comp=Z,103nm,1.9s,mb5.9
GRR Gorron 95.05 324 *e*P **P 18 52 21.9 -1.1**
comp=Z,103nm,1.9s,mb5.9
FLN La Foliniere 95.09 324 *e*P **P 18 52 22.2 -1.0**
comp=Z,87nm,1.4s,mb5.7
FLN *e*R
comp=Z,1µm,22.0s
FLN La Foliniere 95.09 324 *e*P **P 18 52 22.2 -1.0**
FLN pmax pmax
comp=Z,43nm,1.4s,mb5.7
FLN MLR MLR
comp=Z,1µm,22.0s,MS5.3
FLN La Foliniere 95.09 324 *e*P **P 18 52 22.2 -1.0**
comp=Z,43nm,1.4s,mb5.7
FLN LR LR
comp=Z,1µm,22.0s,MS5.3
MDJ Mudanjiang 95.77 42 P **P 18 52 27.0 +0.7**
MDJ AP pP 18 52 30.3 +0.7
MDJ PP PP 18 56 18.3 +0.4
MDJ S S 19 03 45.4 +1.4
MDJ XS sS 19 03 51.1 +1.5
MDJ SS SS 19 10 16.6 +3.3
MDJ AMB AMB
comp=Z,9.0nm,0.9s,mb5.2
MDJ AMB AMB
comp=Z,164nm,5.2s
MDJ LR LR
comp=N,345nm,32.6s
MDJ LR LR
comp=E,705nm,27.0s
MDJ LR LR
comp=Z,967nm,27.9s,MS5.1
MDJ Mudanjiang 95.77 42 PFAKE 18 52 40.0 +14
MDJ LR LR
comp=Z,689nm,20.0s,MS5.1
BOD Bodaibo 96.81 25 *e*P **P 18 52 28.2 -2.8**
BOD pmax pmax
comp=Z,8.0nm,1.5s,mb4.9
MAJO Matsushiro 96.89 52 PFAKE 18 52 40.0 +8.6
MAJO LR LR
comp=Z,738nm,20.0s,MS5.2
MAT Matsushiro 96.89 52 P **P 18 52 30.3 -1.1**
MAT Matsushiro 96.89 52 P **P 18 52 30.0 -1.4**
MJAR Matsushiro Arr 96.89 52 P **P 18 52 29.9 -1.5**
comp=Z,2.7nm,0.9s,mb4.7,baz=232,slow=5.5,SNR=6.1
MJAR LR LR 19 30 27.6
comp=Z,273nm,21.0s,MS4.7,baz=250,slow=32
HFS Hagfors 96.98 338 LR LR 19 36 16.5
comp=Z,1µm,20.5s,MS5.3,baz=120,slow=35
PLCA Paso Flores 97.82 215 LR LR 19 30 08.1
comp=Z,650nm,20.6s,MS5.1,baz=126,slow=31
PLCA Paso Flores 97.82 215 PFAKE 18 52 50.0 +14
PLCA LR LR
comp=Z,1µm,19.0s,MS5.5
KONO Kongsberg 98.03 336 PFAKE 18 52 50.0 +13
KONO LR LR
comp=Z,562nm,20.0s,MS5.0
NAO01 NORSAR Array S 98.45 337 PFAKE 18 52 50.0 +12
NAO01 LR LR
comp=Z,1µm,21.0s,MS5.4
NOA NORSAR Array B 98.48 338 P **P 18 52 37.3 -1.3**
comp=Z,0.4nm,0.7s,baz=77,slow=5.8,SNR=2.8
NOA PP PP 18 56 41.9 +3.1
comp=Z,1.0nm,0.8s,baz=123,slow=8.1,SNR=4.2
NOA LR LR 19 38 17.4
comp=Z,787nm,18.9s,MS5.2,baz=140,slow=36
NOA NORSAR Array B 98.48 338 P **P 18 52 37.3 -1.3**
NOA 18 56 41.9
LVZ Lovozero 98.54 350 *de*P **P 18 52 34.3 -4.5**
LVZ *e* 18 56 46.8
LVZ *e*PPP 18 58 42.9
LVZ *e* 19 03 09.8
LVZ *e*SP SP 19 05 30.0 -2.2
LVZ *e*PS PS 19 05 31.9 -1.6
LVZ Lovozero 98.54 350 PFAKE 18 52 50.0 +11
LVZ LR LR
comp=Z,1µm,19.0s,MS5.4
BDFB Brasilia 98.98 247 LR LR 19 28 36.4
comp=Z,998nm,20.4s,MS5.3,baz=304,slow=30
BDFB Brasilia 98.98 247 PFAKE 18 52 50.0 +9.2
BDFB LR LR
comp=Z,2µm,21.0s,MS5.5
KLR Kul'dur 99.58 39 *e*P **P 18 52 38.8 -4.7**
CPUP Villa Florida 99.79 233 LR LR 19 28 41.3
comp=Z,548nm,21.4s,MS5.0,baz=120,slow=30
ESK Eskdalemuir 100.42 328 PFAKE 18 53 00.0 +13
ESK LR LR
comp=Z,717nm,21.0s,MS5.2
HABR Khabarovsk 101.03 41 *e*P Pdif 18 52 47.5 -2.4
HABR *e*S SKSac 19 03 24.0 -5.2
KEV Kevo 101.47 348 *e*p PP 18 57 02.5 +1.0
comp=Z,28nm,1.0s
KEV Kevo 101.47 348 PFAKE 18 53 00.0 +8.1
KEV LR LR
comp=Z,1µm,22.0s,MS5.5
ARCES ARCESS Array B 101.55 348 P Pdif 18 52 51.1 -1.1
comp=Z,5.9nm,0.8s,baz=171,slow=8.2,SNR=8.1
ARCES PP PP 18 57 02.2 0.0
comp=Z,4.7nm,0.8s,baz=286,slow=3.6,SNR=7.0
ARCES ARCESS Array B 101.55 348 P Pdif 18 52 51.1 -1.1
ARCES PP PP 18 57 02.2 0.0
ERM Erimo 102.90 49 PFAKE 18 53 10.0 +12
ERM LR LR
comp=Z,19nm,22.0s
YSS Yuzh-Sakhalins 104.86 44 *e*P Pdif 18 53 03.0 -4.0
YSS *e* 18 57 29.0
YSS *e* 19 03 48.0
YSS *e*S Sdif 19 04 48.0 -13
YSS *e*PPS 19 07 28.0
YSS *e*SS SS 19 12 12.0 -8.1
YSS Yuzh-Sakhalins 104.86 44 PFAKE 18 53 20.0 +13
YSS LR LR
comp=Z,481nm,20.0s,MS5.0
YAK Yakutsk 105.57 27 PFAKE 18 57 30.0 +6.6
YAK LR LR
comp=Z,698nm,22.0s,MS5.2
FUNA Funafuti 109.29 112 PFAKE 18 57 40.0 +10
FUNA LR LR
comp=Z,6µm,19.0s,MS6.2
TIXI Tiksi 110.34 18 PFAKE 18 57 40.0 +7.7
TIXI LR LR
comp=Z,1µm,22.0s,MS5.4
KBS Kingsbay 111.18 351 PFAKE 18 57 40.0 +6.1
KBS LR LR
comp=Z,1µm,19.0s,MS5.5
AFI Afiamalu 113.12 122 PFAKE 18 57 50.0 +12
AFI LR LR
comp=Z,884nm,19.0s,MS5.4
LPAZ La Paz 113.93 234 PFAKE 18 57 50.0 +11
LPAZ LR LR
comp=Z,508nm,21.0s,MS5.1
MA2 Magadan 113.96 34 PFAKE 18 57 50.0 +11
MA2 LR LR
comp=Z,778nm,21.0s,MS5.3
SAML Samuel 114.91 243 PFAKE 18 57 50.0 +9.0
SAML LR LR
comp=Z,1µm,22.0s,MS5.5
PET Petropavlovsk 116.55 42 PFAKE 18 57 50.0 +5.8
PET LR LR
comp=Z,656nm,20.0s,MS5.2
TBI Tubuai 120.07 147 *e*LQ 19 29 27.2
comp=Z,672nm,30.0s
TBI Tubuai 120.07 147 *e*PP PP 18 59 07.6 -7.9
comp=Z,177nm,27.0s
TBI Tubuai 120.07 147 *e*PS PS 19 09 08.2 +2.9
comp=Z,665nm,26.0s
TBI Tubuai 120.07 147 *e*SS SS 19 15 42.8 +0.8
comp=Z,2µm,31.0s
TBI *e*LR LR 19 34 37.5
comp=Z,2µm,28.2s
BILL Bilibino 121.86 25 *i* PKIKP PKPdf 18 57 54.0 -0.4
BILL *e*PS PS 19 09 23.3 +2.0
BILL *e*SS SS 19 16 08.9 +3.9
BILL SSS 19 20 28.0
BILL pmax pmax
comp=Z,27nm,1.9s
BILL MLR MLR
comp=Z,800nm,19.0s,MS5.4
BILL Bilibino 121.86 25 ⇑*i* PKP PKPdf 18 57 53.9 -0.5
BILL LR LR
comp=Z,893nm,22.0s,MS5.4
NNA Nana 122.96 231 *e*PKPdf PKPdf 18 57 55.7 -0.8
NNA LR LR
comp=Z,633nm,21.0s,MS5.2
PPT Papeete 124.85 143 *e*PP PP 18 59 33.5 -14
comp=Z,216nm,29.0s
PPT Papeete 124.85 143 *e*PS PS 19 09 42.5 -5.2
comp=Z,613nm,25.8s
PPT Papeete 124.85 143 *e*SS SS 19 16 43.9 +1.0
comp=Z,5µm,28.5s
PPT *e*LR LR 19 36 54.0
comp=Z,3µm,27.2s,baz=215
RKT Rikitea 125.90 161 *e*LQ 19 31 53.6
comp=Z,529nm,38.0s
RKT Rikitea 125.90 161 *e*PP PP 18 59 43.5 -11
comp=Z,156nm,27.5s
RKT Rikitea 125.90 161 *e*SS SS 19 16 56.0 -0.1
comp=Z,1µm,31.8s
RKT *e*LR LR 19 37 27.8
comp=Z,4µm,38.5s,baz=191
AMKA Amchitka 128.98 46 *e*PKPdf PKPdf 18 58 08.0 0.0
SJG San Juan 131.29 269 PFAKE 18 58 20.0 +7.6
SJG LR LR
comp=Z,489nm,22.0s,MS5.2
BBSR BB Station 134.10 288 PFAKE 18 58 30.0 +12
BBSR LR LR
comp=Z,801nm,21.0s,MS5.4
IMA2 Indian Mountai 136.89 20 *e*P PKPdf 18 58 22.7 -0.2
TAOE Nuku Hiva Isla 137.01 147 *e*LR LR 19 42 09.6
comp=Z,3µm,24.9s
TTA Tatalina 138.11 25 *e*PKIKP PKPdf 18 58 20.7 -4.4
COLA College 139.46 19 ⇓*i* P PKPdf 18 58 26.3 -1.3
COLA LR LR
comp=Z,783nm,22.0s,MS5.4
WES Weston 139.96 303 PFAKE 18 58 40.0 +11
WES LR LR
comp=Z,824nm,21.0s,MS5.5
HRV Harvard--Oak R 140.13 303 PFAKE 18 58 40.0 +11
HRV LR LR
comp=Z,1µm,21.0s,MS5.6
LBNH Lisbon 140.22 306 PFAKE 18 58 40.0 +11
LBNH LR LR
comp=Z,1µm,20.0s,MS5.7
FRNY Flat Rock 141.32 307 *e*PKPpre 18 58 18.8
FRNY *e*PKPdf PKPdf 18 58 31.3 +0.3
PMR Palmer 141.43 23 *e*PKIKP PKPdf 18 58 33.0 +1.8
PMR MLR MLR
comp=Z,900nm,21.0s,MS5.5
NCB Newcomb 141.90 305 *e*PKPpre 18 58 25.0
NCB LR LR
comp=Z,1µm,21.0s,MS5.7
LONY Lake Ozonia 142.05 307 *e*PKPpre 18 58 25.3
LONY *e*PKPdf PKPdf 18 58 30.9 -1.4
DAWY Dawson 142.29 15 *e*PKPpre 18 58 27.1
KDAK Kodiak Island 142.54 30 *e*PKPpre 18 58 30.1
KDAK LR LR
comp=Z,245nm,22.0s,MS4.9
BINY Binghamton 143.42 303 *e*PKPpre 18 58 31.1
BINY LR LR
comp=Z,2µm,21.0s,MS5.8
KIP Kipapa 143.45 92 PFAKE 18 58 50.0 +15
KIP LR LR
comp=Z,499nm,22.0s,MS5.2
MVL Millersville 143.93 299 *e*PKPpre 18 58 32.8
SDMD Soldier's Deli 144.35 298 *e*PKPdf PKPdf 18 58 34.7 -1.6
CBN Corbin 144.84 296 *e*PKPdf PKPdf 18 58 35.7 -1.4
CBN LR LR
comp=Z,928nm,20.0s,MS5.5
MGV Manicaragua 144.85 268 *e*P PKPdf 18 58 37.3 +0.1
SSPA Standing Stone 145.03 301 PFAKE 18 58 50.0 +13
SSPA LR LR
comp=Z,303nm,22.0s,MS5.0
FCC Fort Churchill 145.74 338 PKIKP PKPdf 18 58 38.6 -0.1
FCC Fort Churchill 145.74 338 *e*PKPdf PKPdf 18 58 38.3 -0.5
YKA Yellowknife Ar 146.26 357 PKPbc PKPbc 18 58 39.3 -1.4
comp=Z,74nm,0.9s,baz=353,slow=3.5,SNR=84
YKA Yellowknife Ar 146.26 357 PKP2 PKPab 18 58 39.3 -2.2
YKA pmax pmax
comp=Z,74nm,0.9s
ERPA Erie 146.37 304 *e*PKPdf PKPdf 18 58 39.9 +0.1
ERPA LR LR
comp=Z,2µm,21.0s,MS5.8
ALLY Alegheny Colle 146.57 303 *e*PKPdf PKPdf 18 58 40.2 +0.1
MCWV Mont Chateau 146.64 299 *e*PKPdf PKPdf 18 58 40.5 +0.2
MCWV LR LR
comp=Z,1µm,21.0s,MS5.7
SKAG Skagway 147.26 16 *e*PKPbc PKPbc 18 58 42.3 -1.3
BLA Blacksburg 147.31 295 *e*PKIKP PKPdf 18 58 41.4 0.0
BLA *e* 18 58 44.0
BLA MLR MLR
comp=Z,72nm,21.0s,MS4.4
ELN Prospectdale 147.58 295 *e*PKPdf PKPdf 18 58 40.9 -0.9
ELN *e*PKPbc PKPbc 18 58 44.5 0.0
FWV Forest Hill 147.60 295 *e*PKPdf PKPdf 18 58 41.6 -0.2
FWV *e*PKPbc PKPbc 18 58 44.4 -0.1
DWPF Disney 147.64 278 *e*PKPdf PKPdf 18 58 41.9 -0.1
DWPF *e*PKPbc PKPbc 18 58 44.7 +0.1
DWPF LR LR
comp=Z,328nm,20.0s,MS5.1
SOR Soroa 147.72 267 *e*P PKPdf 18 58 45.6 +3.5
ACSO Alum Creek Sta 148.94 301 *e*PKPdf PKPdf 18 58 43.4 -0.6
ACSO *e*PKPbc PKPbc 18 58 47.7 -0.3
ACSO *e*PKPab PKPab 18 58 52.3 +0.3
ACSO LR LR
comp=Z,1µm,20.0s,MS5.8
AAM Ann Arbor 148.99 305 PFAKE 18 58 50.0 +5.9
AAM LR LR
comp=Z,1µm,22.0s,MS5.7
SIT Sitka 149.36 18 *e*PKIKP PKPdf 18 58 44.9 +0.2
SIT MLR MLR
comp=Z,1µm,21.0s,MS5.7
TZTN Tazewell 149.86 294 *e*PKPdf PKPdf 18 58 45.8 +0.3
TZTN *e*PKPbc PKPbc 18 58 50.4 +0.1
MYNC Murphy 150.43 291 *e*PKIKP PKPdf 18 58 47.6 +1.2
MYNC *e* 18 58 52.0
CPCT Cooper Cave 150.73 292 *e*PKP PKPdf 18 58 49.1 +2.2
CPCT *e*PKPbc PKPbc 18 58 52.7 +0.3
BLO Bloomington 151.82 300 *e*PKIKP PKPbc 18 58 53.9 -1.0
WCI Wyandotte Cave 151.82 298 *e*PKIKP PKPdf 18 58 47.4 -1.1
WCI *e* 18 58 54.2
WCI *e* 18 59 03.7
WCI MLR MLR
comp=Z,175nm,19.0s,MS4.9
EYMN Ely 151.84 320 *e*PKPdf PKPdf 18 58 47.8 -0.8
EYMN *e*PKPbc PKPbc 18 58 54.7 -0.3
EYMN *e*PKPab PKPab 18 59 03.2 -0.8
EYMN LR LR
comp=Z,14µm,21.0s
SWET Sewanee 151.89 291 *e*PKPbc PKPbc 18 58 55.0 -0.1
ULM Lac du Bonnet 152.69 328 PKP PKPdf 18 58 48.2 -1.6
comp=Z,43nm,0.9s,baz=352,slow=2.5,SNR=5.5
ULM *e*PKPbc PKPbc 18 58 55.3 -1.6
comp=Z,43nm,0.9s,baz=45,slow=2.7,SNR=41
ULM Lac du Bonnet 152.69 328 *e*PKPdf PKPdf 18 58 47.6 -2.2
ULM *e*PKPbc PKPbc 18 58 55.2 -1.7
ULM *e*PKPab PKPab 18 59 05.8 -1.8
LRAL Lakeview Retre 152.86 287 PFAKE 18 59 00.0 +10
LRAL LR LR
comp=Z,1µm,21.0s,MS5.7
USIN University of 152.94 298 *e*PKPdf PKPdf 18 58 48.7 -1.5
USIN *e*PKPbc PKPbc 18 58 56.6 -0.8
WVT Waverly 153.34 294 *e*PKIKP PKPdf 18 58 50.1 -0.7
WVT *e* 18 58 57.7
WVT MLR MLR
comp=Z,928nm,22.0s,MS5.5
JFWS Jewell Farm 153.42 309 *e*PKIKP PKPdf 18 58 51.1 +0.2
JFWS *e* 18 58 57.3
JFWS MLR MLR
comp=Z,1µm,21.0s,MS5.8
PLAL Pickwick Lake 153.66 291 *e*PKPdf PKPdf 18 58 50.0 -1.3
PLAL *e*PKPbc PKPbc 18 58 58.4 -0.7
PLAL LR LR
comp=Z,1µm,21.0s,MS5.7
OXF Oxford 154.80 290 PFAKE 18 59 00.0 +7.2
OXF LR LR
comp=Z,1µm,22.0s,MS5.7
FVM French Village 155.07 299 *e*PKPdf PKPdf 18 58 52.6 -0.6
FVM *e*PKPbc PKPdf 18 59 02.0 +8.8
CCM Cathedral Cave 155.68 299 *e*PKPdf PKPdf 18 58 52.2 -1.9
CCM *e*PKPdif 18 59 02.4
CCM LR LR
comp=Z,289nm,22.0s,MS5.1
HBAR Harrisburg 155.70 293 *e*PKPab PKPab 18 59 20.5 +0.1
MIAR Mount Ida 158.21 291 *e*PKIKP PKPdf 18 58 56.8 -0.5
MIAR *e* 18 59 31.4
MIAR MLR MLR
comp=Z,1µm,21.0s,MS5.7
NATX Nacogdoches 159.37 284 PFAKE 18 59 10.0 +11
NATX LR LR
comp=Z,1µm,21.0s,MS5.7
EGMT Eagleton 159.73 343 *e*PKPdf PKPdf 18 58 58.6 -0.5
EGMT *e*PKPab PKPab 18 59 37.2 -0.6
EGMT LR LR
comp=Z,851nm,19.0s,MS5.6
LAO LASA Array 159.82 335 PFAKE 18 59 10.0 +11
LAO LR LR
comp=Z,1µm,20.0s,MS5.8
C03A Quillayute Air 160.33 13 ⇑PKP PKPab 18 59 39.8 -0.6
baz=160
HKT Hockley 160.37 279 PFAKE 18 59 10.0 +10
HKT LR LR
comp=Z,176nm,19.0s
B05A Bryant 160.40 8 ⇓PKP PKPab 18 59 40.4 -0.3
baz=160
B04A Port Angeles 160.41 10 ⇓PKP PKPab 18 59 40.8 +0.1
baz=160
JCW Jim Creek 160.48 7 P PKPab 18 59 40.6 -0.5
NEW Newport 160.59 358 PFAKE 18 59 10.0 +10
NEW LR LR
comp=Z,1µm,21.0s
HDW Hoodsport 160.87 10 P PKPab 18 59 43.4 +0.7
RSSD Black Hills 160.96 327 *e*PKIKP PKPdf 18 58 59.7 -0.7
RSSD *e* 18 59 43.0
RSSD MLR MLR
comp=Z,613nm,21.0s
C05A Tolt Reservoir 161.00 7 ⇑PKP PKPab 18 59 42.8 -0.5
baz=161
D03A Wishkah Elem. 161.27 12 ⇑PKP PKPab 18 59 45.1 +0.6
baz=161
D05A Enumclaw 161.47 8 ⇓PKP PKPab 18 59 45.8 +0.5
baz=161
EPH Ephrata 161.50 3 P PKPab 18 59 44.9 -0.6
CHMT Chamberlain Mo 161.53 349 *e*PKPdf PKPdf 18 58 59.6 -1.4
CHMT *e*PKPab PKPab 18 59 45.2 -0.4
CHMT *e*PP PP 19 03 26.8 -2.1
TBM Table Mountain 161.62 5 P PKPab 18 59 45.8 -0.3
MSO Missoula 161.72 350 *e*PKPdf PKPdf 18 59 00.1 -1.1
MSO *e*PKPab PKPab 18 59 46.1 -0.4
MSO *e*PP PP 19 03 29.1 -0.8
MSO LR LR
comp=Z,743nm,19.0s
E03A Lebam 161.86 12 ⇓PKP PKPab 18 59 46.4 -0.7
baz=162
E05A Randle 162.11 8 ⇓PKP PKPab 18 59 47.6 -0.6
baz=162
MXC Moxie City 162.23 4 P PKPab 18 59 48.7 -0.1
TDL Tradedollar La 162.26 9 P PKPab 18 59 48.8 0.0
WMOK Wichita Mounta 162.38 294 *e*PKIKP PKPdf 18 58 58.0 -3.9
WMOK *e* 18 59 01.9
WMOK *e* 18 59 49.6
WMOK *e* 19 03 31.6
WMOK MLR MLR
comp=Z,1µm,20.0s
F03A Seaside 162.46 12 ⇓PKP PKPab 18 59 50.0 +0.3
baz=162
HAWA Hanford 162.46 3 PFAKE 18 59 10.0 +8.0
HAWA LR LR
comp=Z,946nm,20.0s
LVP Lakeview Peak 162.51 9 P PKPab 18 59 50.3 +0.4
MTMW Mount Mitchell 162.58 9 P PKPab 18 59 50.5 +0.2
F04A Amboy 162.64 10 ⇑PKP PKPab 18 59 50.7 +0.2
baz=163
F05A White Salmon 162.81 7 ⇓PKP PKPab 18 59 50.7 -0.5
baz=163
DLMT Dillon 162.90 346 *e*PKPdf PKPdf 18 59 02.6 +0.2
DLMT *e*PKPab PKPab 18 59 51.4 -0.3
DLMT *e*PP PP 19 03 35.1 -1.1
F08A Pendleton 163.08 1 ⇑PKP PKPab 18 59 52.3 -0.2
baz=163
LKWY Lake 163.09 340 PFAKE 18 59 10.0 +7.4
LKWY LR LR
comp=Z,1µm,22.0s
QLMT Earthquake Lak 163.13 343 *e*PKPdf PKPdf 18 59 03.3 +0.7
QLMT *e*PKPab PKPab 18 59 52.5 -0.1
QLMT *e*PP PP 19 03 35.6 -1.8
YMR Madison River 163.16 342 PFAKE 18 59 10.0 +7.3
YMR LR LR
comp=Z,888nm,19.0s
G04A Mulino 163.34 10 ⇑PKP PKPab 18 59 53.3 -0.3
baz=163
VFP Flag Point 163.37 8 P PKPab 18 59 53.8 0.0
G05A Wamic 163.47 7 ⇓PKP PKPab 18 59 54.4 +0.3
baz=163
PHWY Pilot Hill 163.73 323 *e*PKPdf PKPdf 18 59 02.4 -0.8
PHWY *e*PKPab PKPab 18 59 55.5 +0.2
PHWY *e*PP PP 19 03 40.0 -0.6
COR Corvallis 163.80 13 PFAKE 18 59 10.0 +6.7
COR LR LR
comp=Z,272nm,21.0s
JCT Junction City 163.81 280 *e*PKIKP PKPdf 18 59 03.9 +0.6
JCT *e* 18 59 54.8
JCT *e* 19 03 39.6
JCT MLR MLR
comp=Z,1µm,20.0s
IMW Indian Meadow 163.86 340 *e*PKPdf PKPdf 18 59 05.6 +2.3
IMW *e*PKPab PKPab 18 59 59.5 +3.7
IMW *e*PP PP 19 03 45.0 +3.7
H04A Detroit Lake 163.90 10 ⇑P PKPdf 18 59 02.2 -1.1
baz=164
H04A ⇑PKP PKPab 18 59 55.0 -1.1
baz=164
MOOW Moose Ponds 163.93 340 *e*PKPdf PKPdf 18 59 03.2 -0.2
MOOW *e*PKPab PKPab 18 59 57.2 +1.1
MOOW *e*PP PP 19 03 40.4 -1.3
LOHW Long Hollow 164.01 339 *e*PKPdf PKPdf 18 59 02.2 -1.3
LOHW *e*PKPab PKPab 18 59 57.1 +0.6
LOHW *e*PP PP 19 03 35.4 -6.7
TPAW Teton Pass 164.23 340 *e*PKPdf PKPdf 18 59 03.9 +0.3
TPAW *e*PKPab PKPab 18 59 58.5 +1.0
TPAW *e*PP PP 19 03 39.1 -4.2
REDW Red Top Meadow 164.32 339 *e*PKPdf PKPdf 18 59 02.0 -1.7
REDW *e*PKPab PKPab 18 59 58.7 +0.8
REDW *e*PP PP 19 03 41.4 -2.3
H08A Prairie City 164.36 1 ⇓PKP PKPab 18 59 58.9 +0.8
baz=164
I03A Eugene 164.39 13 ⇓PKP PKPab 18 59 58.3 +0.1
baz=164
BW06 Boulder Array 164.41 335 PFAKE 18 59 10.0 +6.2
BW06 LR LR
comp=Z,2µm,20.0s
PDAR Pinedale Array 164.41 335 PKP PKPdf 18 59 03.4 -0.4
comp=Z,7.6nm,1.0s,baz=126,slow=2.0,SNR=39
PDAR PKPab PKPab 18 59 57.8 -0.5
comp=Z,12nm,0.9s,baz=60,slow=3.7,SNR=16
RRI2 Red Ridge 164.47 341 *e*PKPdf PKPdf 18 59 02.8 -1.0
RRI2 *e*PKPab PKPab 18 59 59.5 +0.9
RRI2 *e*PP PP 19 03 43.4 -1.1
I07A Izee 164.77 3 ⇓P PKPdf 18 59 03.8 -0.3
baz=165
I07A ⇓PKP PKPab 19 00 00.1 +0.2
baz=165
I06A Prineville 164.86 5 ⇑PKP PKPab 19 00 00.4 +0.2
baz=165
ISCO Idaho Springs 164.86 320 *e*PKIKP PKPdf 18 59 03.8 -0.4
ISCO *e* 18 59 59.7
ISCO *e* 19 03 46.4
ISCO MLR MLR
comp=Z,2µm,22.0s
I09A Lost Marbles R 164.90 358 ⇓PKP PKPab 19 00 00.0 -0.4
baz=165
J02A Umpqua 164.91 15 ⇑PKP PKPab 19 00 00.3 -0.1
baz=165
I08A Drewsey 164.97 1 ⇑PKP PKPab 19 00 01.0 +0.3
baz=165
HLID Hailey 164.98 349 *e*PKPdf PKPdf 18 59 04.7 +0.4
HLID *e*PKPab PKPab 19 00 01.0 +0.2
HLID *e*PP PP 19 03 47.1 -0.1
HLID LR LR
comp=Z,1µm,21.0s
J03A Ideyld Park 165.03 13 ⇑P PKPdf 18 59 04.9 +0.5
baz=165
J03A ⇑PKP PKPab 19 00 01.4 +0.4
baz=165
J05A Fort Rock 165.40 8 ⇑P PKPdf 18 59 04.4 -0.3
baz=165
J05A ⇓PKP PKPab 19 00 02.5 -0.1
baz=165

K02A	Glendale	165.50	15	⇑P	PKPdf	18 59 04.6	-0.1
	baz=165						
K02A				⇓PKP	PKPab	19 00 02.1	-1.0
	baz=165						
J06A	Christmas Vall	165.55	5	⇓PKP	PKPab	19 00 02.6	-0.7
	baz=166						
K06A	Valley Falls	165.99	6	⇑P	PKPdf	18 59 04.9	-0.3
	baz=166						
K06A				⇓PKP	PKPab	19 00 04.0	-1.3
	baz=166						
SMCO	Snowmass	166.06	321	ePKPdf	PKPdf	18 59 05.1	-0.1
SMCO				ePKPab	PKPab	19 00 05.7	+0.2
SDCO	Great Sand Dun	166.09	313	PFAKE		18 59 20.0	+15
SDCO				LR	LR		
	comp=Z,2µm,22.0s						
HWUT	Hardware Ranch	166.13	338	ePKPdf	PKPdf	18 59 04.0	-1.2
HWUT				ePKPab	PKPab	19 00 06.0	+0.1
HWUT				ePP	PP	19 03 52.1	-1.0
HWUT				LR	LR		
	comp=Z,1µm,21.0s						
K08A	Mann Creek Ran	166.15	0	⇓P	PKPdf	18 59 05.3	+0.1
	baz=166						
K08A				⇓PKP	PKPab	19 00 06.0	+0.1
	baz=166						
K09A	Rome	166.17	358	⇑P	PKPdf	18 59 05.7	+0.4
	baz=166						
K09A				⇓PKP	PKPab	19 00 06.2	+0.2
	baz=166						
WVOR	Wild Horse Val	166.44	1	ePKPdf	PKPdf	18 59 06.2	+0.7
WVOR				ePKPab	PKPab	19 00 07.2	0.0
WVOR				ePP	PP	19 03 52.6	-2.1
WVOR				LR	LR		
	comp=Z,993nm,21.0s						
YBH	Yreka Blue Hor	166.66	14	PFAKE		18 59 20.0	+14
YBH				LR	LR		
	comp=Z,2µm,20.0s						
YBH	Yreka Blue Hor	166.66	14	⇓P	PKPdf	18 59 04.9	-0.7
	baz=167						
YBH				⇑PKP	PKPab	19 00 07.7	-0.5
	baz=167						
L05A	Lakeview	166.67	8	⇑P	PKPdf	18 59 06.4	+0.7
	baz=167						
L05A				⇑PKP	PKPab	19 00 07.9	-0.4
	baz=167						
L08A	Fields	166.69	0	⇑P	PKPdf	18 59 06.2	+0.6
	baz=167						
L08A				⇓PKP	PKPab	19 00 08.7	+0.4
	baz=167						
M04C	Macdoel	166.78	12	⇓PKP	PKPab	19 00 08.7	0.0
	baz=167						
L07A	Adell	166.83	3	⇑P	PKPdf	18 59 05.7	-0.1
	baz=167						
L07A				⇑PKP	PKPab	19 00 09.4	+0.5
	baz=167						
L09A	Wilkinson Ranc	166.85	358	⇓PKP	PKPab	19 00 09.9	+0.9
	baz=167						
M02C	Callahan	166.95	15	⇓P	PKPdf	18 59 05.8	-0.1
	baz=167						
M02C				⇑PKP	PKPab	19 00 09.3	-0.1
	baz=167						
M13A	Montello	167.06	346	⇑PKP	PKPab	19 00 11.0	+1.1
	baz=167						
DAU	Daniels Canyon	167.08	335	ePKIKP	PKPdf	18 59 06.3	+0.3
DAU				e		19 00 09.9	
DAU	Daniels Canyon	167.08	335	ePKPdf	PKPdf	18 59 06.3	+0.3
DAU				ePKPab	PKPab	19 00 09.9	-0.1
DAU				ePP	PP	19 03 49.5	-8.6
BGU	Big Grassy Mou	167.19	342	ePKPdf	PKPdf	18 59 06.7	+0.7
BGU				ePKPab	PKPab	19 00 11.3	+0.7
BGU				ePP	PP	19 03 58.7	+0.1
M05C	Lookout	167.31	10	⇑PKP	PKPab	19 00 10.9	-0.2
	baz=167						
N02C	Big Bar	167.38	18	⇓P	PKPdf	18 59 06.6	+0.4
	baz=167						
N02C				⇑PKP	PKPab	19 00 13.0	+1.6
	baz=167						
M08A	Happy Creek Ra	167.43	0	⇑P	PKPdf	18 59 06.5	+0.3
	baz=167						
M08A				⇑PKP	PKPab	19 00 11.5	-0.1
	baz=167						
M09A	Marrel Ranch,	167.43	357	⇑PKP	PKPab	19 00 12.4	+0.8
	baz=167						
M06C	Likely Place G	167.55	8	⇑P	PKPdf	18 59 06.6	+0.3
	baz=168						
M06C				⇑PKP	PKPab	19 00 12.8	+0.7
	baz=168						
N13A	Wendover, West	167.55	345	⇑PKP	PKPab	19 00 14.0	+1.8
	baz=168						
MPU	Maple Canyon	167.57	335	PFAKE		18 59 20.0	+14
MPU				LR	LR		
	comp=Z,2µm,19.0s						
PV01	Paradox Valley	167.68	321	ePKPdf	PKPdf	18 59 07.4	+1.0
PV01				ePKPab	PKPab	19 00 10.6	-2.1
N12A	Clover Valley,	167.72	348	⇓P	PKPdf	18 59 06.9	+0.4
	baz=168						
N12A				⇑PKP	PKPab	19 00 14.1	+1.2
	baz=168						
PV10	Paradox Valley	167.75	323	ePKPdf	PKPdf	18 59 07.9	+1.4
PV10				ePKPab	PKPab	19 00 13.7	+0.7
HATC	Hat Creek Radi	167.79	11	⇑P	PKPdf	18 59 06.6	+0.1
	baz=168						
WDC	Whiskeytown Da	167.80	15	ePKIKP	PKPdf	18 59 04.3	-2.2
WDC				e		19 00 11.4	
WDC				e		19 03 56.0	
WDC				MLR	MLR		
	comp=Z,1µm,20.0s						
WDC	Whiskeytown Da	167.80	15	⇓P	PKPdf	18 59 05.8	-0.7
	baz=168						
DUG	Dugway	167.81	340	ePKPdf	PKPdf	18 59 06.0	-0.5
DUG				ePKPab	PKPab	19 00 13.7	+0.5
DUG				ePP	PP	19 04 01.0	-0.8
DUG				LR	LR		
	comp=Z,2µm,20.0s						
SRU	San Rafael	167.89	330	ePKIKP	PKPdf	18 59 07.3	+0.7
SRU				e		19 00 13.0	
SRU	San Rafael	167.89	330	ePKPdf	PKPdf	18 59 07.3	+0.7
SRU				ePKPab	PKPab	19 00 13.0	-0.6
SRU				ePP	PP	19 03 52.6	-10
N09A	Rock Creek Ran	168.00	357	⇓P	PKPdf	18 59 07.1	+0.4
	baz=168						
N09A				⇓PKP	PKPab	19 00 15.4	+1.2
	baz=168						
TMUT	Trail Mountain	168.03	332	ePKPdf	PKPdf	18 59 07.6	+0.9
N06A	Buffalo Meadow	168.06	6	⇑P	PKPdf	18 59 05.8	-0.8
	baz=168						
N06A				⇑PKP	PKPab	19 00 14.6	+0.2
	baz=168						
N08A	GE Springer Mi	168.09	359	⇓P	PKPdf	18 59 07.3	+0.6
	baz=168						
N08A				⇓PKP	PKPab	19 00 14.7	+0.1
	baz=168						
O02C	Red Bluff	168.12	17	⇑P	PKPdf	18 59 07.3	+0.6
	baz=168						
O02C				⇑PKP	PKPab	19 00 15.5	+0.8
	baz=168						
ANMO	Albuquerque	168.23	304	ePKIKP	PKPdf	18 59 07.2	+0.4
ANMO				e		19 00 15.7	
ANMO				e		19 04 02.2	
O12A	Currie	168.23	346	⇓P	PKPdf	18 59 07.4	+0.6
	baz=168						
O12A				⇓PKP	PKPab	19 00 16.7	+1.5
	baz=168						
BMN	Battle Mountai	168.41	356	PFAKE		18 59 20.0	+13
BMN				LR	LR		
	comp=Z,1µm,21.0s						
MNTX	Cornudas Mount	168.45	287	ePKPdf	PKPdf	18 59 06.8	-0.1
MNTX				LR	LR		
	comp=Z,1µm,21.0s						
O10A	Cortez Mining,	168.49	353	⇑P	PKPdf	18 59 07.3	+0.3
	baz=168						
O10A				⇓PKP	PKPab	19 00 17.0	+0.7
	baz=168						
O11A	Cowboy Ranch,	168.53	350	⇑P	PKPdf	18 59 08.1	+1.1
	baz=168						
O11A				⇑PKP	PKPab	19 00 17.7	+1.2
	baz=168						
GASB	Alder Springs	168.63	17	⇑P	PKPdf	18 59 07.3	+0.3
	baz=169						
LPM	Los Pinos Moun	168.64	302	ePKPdf	PKPdf	18 59 08.1	+1.1
O06A	Flanigan	168.64	6	⇑PKP	PKPab	19 00 17.3	+0.3
	baz=169						
O09A	Fish Creek Ran	168.67	356	⇓P	PKPdf	18 59 08.0	+0.9
	baz=169						
O09A				⇑PKP	PKPab	19 00 18.1	+1.0
	baz=169						
O07A	Toulon	168.70	2	⇓P	PKPdf	18 59 07.6	+0.4
	baz=169						
O07A				⇓PKP	PKPab	19 00 18.1	+0.9
	baz=169						
BEKR	Beckwourth	168.88	8	⇑PKP	PKPab	19 00 17.4	-0.6
	baz=169						
LENM	Lemitar	168.96	302	ePKPdf	PKPdf	18 59 08.5	+1.2
LENM				ePKPab	PKPab	19 00 18.9	+0.6
LAZ	Ladron	168.97	303	ePKPdf	PKPdf	18 59 08.9	+1.6
LAZ				ePKPab	PKPab	19 00 19.7	+1.3
LAZ				ePP	PP	19 04 08.0	+0.3
ORV	Oroville	169.00	13	⇓PKP	PKPab	19 00 18.1	-0.4
	baz=169						
P12A	McGill	169.03	346	⇓PKP	PKPab	19 00 19.4	+0.8
	baz=169						
MSU	Marysvale	169.09	334	ePKPdf	PKPdf	18 59 08.8	+1.4
MSU				ePKPab	PKPab	19 00 19.3	+0.4
MSU				ePP	PP	19 04 10.2	+2.0
MVU	Marysvale	169.11	334	PFAKE		18 59 20.0	+13
MVU				LR	LR		
	comp=Z,1µm,22.0s						
HOPS	Hopland	169.14	20	PFAKE		18 59 20.0	+13
HOPS				LR	LR		
	comp=Z,2µm,20.0s						
HOPS	Hopland	169.14	20	⇑PKP	PKPab	19 00 19.6	+0.5
	baz=169						
Q12A	Willow Creek R	169.43	345	⇓PKP	PKPab	19 00 21.6	+1.2
	baz=169						
LAVA	Lava Cap Winer	169.92	11	⇓PKP	PKPab	19 00 23.0	+0.4
	baz=170						
Q08A	Gabbs	170.01	358	⇑PKP	PKPab	19 00 23.1	+0.1
	baz=170						
R05C	Kirkwood Meado	170.06	8	⇑P	PKPdf	18 59 08.2	+0.3
	baz=170						
R05C				⇑PKP	PKPab	19 00 23.2	0.0
	baz=170						
R06C	Coleville	170.31	5	⇓PKP	PKPab	19 00 25.0	+0.7
	baz=170						
CCUT	Cedar City	170.38	336	ePKPdf	PKPdf	18 59 09.9	+1.8
CCUT				ePKPab	PKPab	19 00 25.8	+1.2
CCUT				ePP	PP	19 04 15.9	+1.2
NVAR	Mina Array Bea	170.44	360	PKP	PKPdf	18 59 09.2	+1.0
	comp=Z,2.1nm,0.8s,baz=120,slow=1.6,SNR=11						
NVAR				PKPab	PKPab	19 00 25.6	+0.7
	comp=Z,10nm,0.8s,baz=302,slow=3.9,SNR=15						
NVAR				PP	PP	19 04 14.7	-0.4
	comp=Z,3.8nm,1.1s,baz=26,slow=6.4,SNR=4.4						
R09A	Tonopah	170.57	354	⇓P	PKPdf	18 59 08.7	+0.5
	baz=170						
R09A				⇑PKP	PKPab	19 00 26.3	+0.7
	baz=170						
CMB	Columbia Colle	170.68	10	PFAKE		18 59 20.0	+12
CMB				LR	LR		
	comp=Z,1µm,20.0s						
CMB	Columbia Colle	170.68	10	⇑P	PKPdf	18 59 08.8	+0.5
	baz=171						
CMB				⇑PKP	PKPab	19 00 25.8	-0.1
	baz=171						
TPH	Tonopah	170.75	355	PFAKE		18 59 20.0	+12
TPH				LR	LR		
	comp=Z,1µm,21.0s						
R07C	Lee Vining	170.76	4	⇓P	PKPdf	18 59 09.4	+1.1
	baz=171						
R07C				⇑PKP	PKPab	19 00 27.2	+0.8
	baz=171						
S06C	San Francisco	170.90	8	⇑P	PKPdf	18 59 09.7	+1.3
	baz=171						
S06C				⇑PKP	PKPab	19 00 26.1	-0.9
	baz=171						
S09A	Goldfield	171.10	354	⇑P	PKPdf	18 59 09.8	+1.3
	baz=171						
S09A				⇓PKP	PKPab	19 00 29.2	+1.4
	baz=171						
WUAZ	Wupatki	171.12	320	ePKPdf	PKPdf	18 59 09.7	+1.2
WUAZ				ePKPab	PKPab	19 00 28.8	+0.8
WUAZ				ePP	PP	19 04 20.9	+2.4
WUAZ				LR	LR		
	comp=Z,2µm,22.0s						
KCC	Kaiser Creek	171.51	5	⇑P	PKPdf	18 59 09.5	+0.8
	baz=171						
KCC				⇑PKP	PKPab	19 00 30.4	+0.8
	baz=171						
MTUM	Tungsten Hills	171.51	1	ePKPdf	PKPdf	18 59 10.5	+1.8
MTUM				ePKPab	PKPab	19 00 30.4	+0.7
MTUM				ePP	PP	19 04 20.3	-0.2
SAO	San Andreas Ge	171.68	18	PFAKE		18 59 20.0	+11
SAO				LR	LR		
	comp=Z,1µm,20.0s						
T06C	Millerton Lake	171.78	8	⇑P	PKPdf	18 59 09.2	+0.3
	baz=172						
T06C				⇑PKP	PKPab	19 00 31.0	+0.2
	baz=172						
U12A	Valley of Fire	171.79	338	⇑PKP	PKPab	19 00 32.0	+1.1
	baz=172						
W15A	Williams	171.86	322	⇓PKP	PKPab	19 00 33.3	+2.1
	baz=172						
HAST	UC Hastings Re	172.00	19	⇓P	PKPdf	18 59 10.6	+1.6
	baz=172						
HAST				⇓PKP	PKPab	19 00 32.4	+0.5
	baz=172						
HELL	Mitchell Peak,	172.17	4	⇑P	PKPdf	18 59 09.2	+0.2
	baz=172						
HELL				⇓PKP	PKPab	19 00 32.6	+0.1
	baz=172						
W14A	Seligman	172.25	326	⇓P	PKPdf	18 59 10.5	+1.5
	baz=172						
W14A				⇑PKP	PKPab	19 00 34.5	+1.5
	baz=172						
U10A	Ash Meadows, A	172.26	348	⇓P	PKPdf	18 59 10.4	+1.3
	baz=172						
U10A				⇑PKP	PKPab	19 00 34.1	+1.1
	baz=172						
FURC	Furnace Creek,	172.30	351	⇓P	PKPdf	18 59 10.1	+1.0
	baz=172						
FURC				⇑PKP	PKPab	19 00 34.6	+1.5
	baz=172						
X15A	Humboldt	172.35	319	⇑P	PKPdf	18 59 10.9	+1.8
	baz=172						
X15A				⇓PKP	PKPab	19 00 33.7	+0.3
	baz=172						
V12A	Nelson	172.54	338	⇓P	PKPdf	18 59 10.7	+1.5
	baz=172						
V12A				⇑PKP	PKPab	19 00 35.4	+1.2
	baz=172						
DAC	Darwin (Calif)	172.57	355	ePKPdf	PKPdf	18 59 10.1	+0.9
DAC				ePKPab	PKPab	19 00 34.8	+0.4
DAC				ePP	PP	19 04 24.3	-1.3
DAC				LR	LR		
	comp=Z,1µm,19.0s						
TUC	Tucson	172.64	300	ePKIKP	PKPdf	18 59 10.7	+1.5
TUC				e		19 00 35.3	
TUC				MLR	MLR		
	comp=Z,1µm,20.0s						
W13A	Hualapai Mount	172.72	330	⇑P	PKPdf	18 59 11.9	+2.6
	baz=173						
W13A				⇑PKP	PKPab	19 00 35.6	+0.6
	baz=173						
X14A	Yava	172.73	322	⇑P	PKPdf	18 59 10.4	+1.2
	baz=173						
X14A				⇑PKP	PKPab	19 00 35.5	+0.4
	baz=173						
MPMC	Manual Prospec	172.77	355	⇓P	PKPdf	18 59 10.4	+1.2
	baz=173						
MPMC				⇓PKP	PKPab	19 00 35.3	0.0
	baz=173						
X13A	Yucca	173.11	327	⇑P	PKPdf	18 59 11.1	+1.7
	baz=173						
X13A				⇓PKP	PKPab	19 00 37.2	+0.5
	baz=173						
TUQ	Turquoise Mtn.	173.12	343	⇑P	PKPdf	18 59 10.9	+1.5
	baz=173						
Y14A	Wickenburg	173.19	319	⇓P	PKPdf	18 59 10.3	+0.9
	baz=173						
Y14A				⇓PKP	PKPab	19 00 37.1	0.0
	baz=173						
ISA	Isabella	173.20	1	PFAKE		18 59 20.0	+11
ISA				LR	LR		
	comp=Z,376nm,20.0s						
LRMC	Laurel Mountai	173.37	355	⇓P	PKPdf	18 59 11.0	+1.5
	baz=173						
GSC	Goldstone	173.44	349	⇑P	PKPdf	18 59 11.0	+1.5
	baz=173						
GSC				⇓PKP	PKPab	19 00 39.4	+1.2
	baz=173						
PDMCI	Parker Dam,Lak	173.50	328	⇑PKP	PKPab	19 00 39.4	+1.0
	baz=174						
115A	Sonoran Desert	173.50	308	⇓P	PKPdf	18 59 11.2	+1.7
	baz=174						
115A				⇓PKP	PKPab	19 00 40.3	+1.8
	baz=174						
Y13A	Salome	173.73	323	⇑PKP	PKPab	19 00 40.3	+0.8
	baz=174						
HEC	Hector,Ludlow	173.80	345	⇑P	PKPdf	18 59 12.0	+2.3
	baz=174						
HEC				⇑PKP	PKPab	19 00 40.8	+1.0
	baz=174						
EDW2	Edwards Air Fo	173.98	357	⇓P	PKPdf	18 59 10.1	+0.4
	baz=174						
EDW2				⇓PKP	PKPab	19 00 41.5	+0.9
	baz=174						
IRM	Iron Mountain	174.05	334	⇑P	PKPdf	18 59 11.1	+1.4
	baz=174						
IRM				⇓PKP	PKPab	19 00 42.0	+1.1
	baz=174						
Y12C	Blythe	174.13	327	⇓P	PKPdf	18 59 11.9	+2.2
	baz=174						
Y12C				⇑PKP	PKPab	19 00 42.2	+0.9
	baz=174						
BELC	Belle Mtn.	174.49	339	⇓P	PKPdf	18 59 11.7	+1.8
	baz=174						
BELC				⇑PKP	PKPab	19 00 43.9	+1.0
	baz=174						
GLA	Glamis	174.84	325	⇑P	PKPdf	18 59 11.7	+1.7
	baz=175						
GLA				⇓PKP	PKPab	19 00 44.2	-0.3
	baz=175						
PFO	Pinyon Flat Ob	174.99	342	ePKPdf	PKPdf	18 59 12.0	+2.0
PFO				ePKPab	PKPab	19 00 46.4	+1.3
PFO				ePP	PP	19 04 37.4	-0.1
PFO				LR	LR		
	comp=Z,2µm,21.0s						
PFO	Pinyon Flat Ob	174.99	342	⇑PKP	PKPab	19 00 45.8	+0.7
	baz=175						
MURC	Murrieta	175.16	349	⇑PKP	PKPab	19 00 47.2	+1.3
	baz=175						
SWSC	Sam W. Stewart	175.38	333	⇑P	PKPdf	18 59 12.0	+1.8
	baz=175						
CIS	Catalina Islan	175.46	1	⇑P	PKPdf	18 59 12.5	+2.3
	baz=175						
SNCC	San Nicolas Is	175.50	13	PFAKE		18 59 20.0	+10
SNCC				LR	LR		
	comp=Z,1µm,19.0s						
MONP	Monument Peak	175.65	338	⇑P	PKPdf	18 59 12.6	+2.3
	baz=176						
MONP				⇓PKP	PKPab	19 00 48.9	+0.8
	baz=176						

IDC ***16*** *18:56:37.6±0.6, 3844N×2386E, h0km, mb4.2/14, mb1 4.2/20, mb1mx4.1/29, mbtmp4.1/20, ML3.6/7, MS3.0/1, Ms1 3.0/1, ms1mx2.9/37, Error ellipse: s-maj=14.5km s-min=11.0km az=109.0*
NEIC ***16*** *18:56:38.6, 3846N×2395E, h26km, mb4.0/4, ML4.0(PDG), ML4.0(THE), ML4.1(ATH), After ATH.*
NEIC Felt at Ambelakia, Athens, Korydallos, Nea Ionia, Nea Smirni, Psikhikon and Voula.
ATH ***16*** *18:56:38.6, 3846N×2395E, h26km±1km, MD4.2/15, ML4.1*
CSEM ***16*** *18:56:39.4, 3849N×2387E, h20km, ML4.5*
PDG ***16*** *18:56:39.9±0.6, 3849N×2390E, h20km±2km*
ISCJB ***16*** *18:56:39.0±0.3, 3849N±001×2390E±002, h20km±3km, mb4.3/21, Error ellipse: s-maj=2.4km s-min=1.9km az=69.0*
BJI ***16*** *18:56:40.6, 3850N×2400E, h26km, mb4.0*
MOS ***16*** *18:56:40.1±1.1, 3848N×2399E, h30km, mb4.4/8, Error ellipse: s-maj=5.4km s-min=3.1km az=111.9*
THE ***16*** *18:56:40.9, 3854N×2400E, h15km, ML4.1*
ROM ***16*** *18:56:42.8±0.8, 3853N×2361E, h10km, Md3.3/11, Ml3.8/1, Error ellipse: s-maj=11.4km s-min=6.3km az=69.0*
SKO ***16*** *18:56:43.2, 3876N×2374E, h0km*
ISC 16 18:56:39.8±0.4**, 3849N**±001×**2394E**±002**, h11**km±2km**,**
n290, σ1§17/344**, mb4.3**/21**, 26C-15D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	Penteli	0.45	187	ePB	Pg	18 56 48.0	-0.6
ATH	Athens Observa	0.55	199	⇑iPN	Pg	18 56 49.7	-0.8
ATH				eSN	Sg	18 56 56.6	-1.1
AOS	Alonnisos	0.68	356	ePg	Pg	18 56 53.4	+0.5
KVR	Kavouri	0.68	191	ePN	Pg	18 56 51.5	-1.4
MGER	Gerania Oros	0.74	227	ePN	Pg	18 56 52.7	-1.3
LKR	Lokris	0.75	282	ePN	Pn	18 56 52.9	-3.4
LKR				eSN	Sg	18 57 04.0	-0.2
NAIG	Nisos Aigina	0.81	206	ePN	Pg	18 56 54.5	-1.0
NEO	Neokhori	0.98	326	ePN	Pn	18 56 58.6	-0.9
NEO				eSN	Sn	18 57 11.9	-1.5
XOR	Xorichti	1.05	327	ePg	Pb	18 56 59.8	-0.1
XOR				eSg	Sg	18 57 13.4	-0.2
XOR	Xorichti	1.05	327	P	Pb	18 56 59.8	-0.1
XOR				S	Sb	18 57 13.2	-0.3
XOR	Xorichti	1.05	327	ePg	Pg	18 56 59.8	-0.2
XOR				eSg	Sg	18 57 13.4	-0.2
AGG	Agios Georgios	1.36	293	ePg	Pg	18 57 04.2	-1.8
	comp=Z,32nm,0.5s						
AGG				eSg	Sg	18 57 24.4	+0.7
PAIG	Paliouri	1.45	352	ePg	Pg	18 57 05.2	-2.3
PAIG				eSg	Sg	18 57 23.9	-2.5
CHOS	Chios island	1.67	93	ePb	Pb	18 57 08.7	-1.7
CHOS				eSb	Sb	18 57 28.5	-2.9
LOS	Limnos	1.69	31	ePb	Pb	18 57 08.8	-2.0
	comp=Z,30nm,0.1s						
LIA	Limnos Island	1.70	34	⇑iPN	Pn	18 57 08.8	-0.6
LIA				eSN	Sn	18 57 31.6	+0.5
EVR	Evrytania	1.72	285	⇓iPN	Pn	18 57 09.6	0.0
EVR				eSN	Sn	18 57 31.6	+0.1
OUR	Ouranopolis	1.84	1	ePb	Pb	18 57 11.0	-2.4
APE	Apeiranthos	1.90	138	ePb	Pb	18 57 11.4	-3.1
APE				eSb	Sb	18 57 35.5	-2.7
APE	Apeiranthos	1.90	138	ePN	Pn	18 57 11.3	-0.8
APE				eSN	Sn	18 57 34.4	-1.6
APE	Apeiranthos	1.90	138	⇓iP	Pn	18 57 11.4	-0.7
PLG	Polygyros	1.92	349	⇑iPB	Pb	18 57 12.0	-2.7
PLG				eSN	Sn	18 57 35.0	-1.4
VLI	Veliai	1.94	204	ePB	Pb	18 57 11.3	-3.8
VLI				eSN	Sn	18 57 35.0	-2.0
LIT	Litokhoron	1.96	325	ePb	Pn	18 57 12.5	-0.4
	comp=Z,13nm,0.3s						
LIT				eSb	Sb	18 57 38.4	-1.5
LIT	Litokhoron	1.96	325	P	Pn	18 57 12.5	-0.4
LIT				S	Sn	18 57 39.2	+1.8
LIT	Litokhoron	1.96	325	ePb	Pb	18 57 12.5	-2.9
	13nm,0.3s						
LIT				eSb	Sb	18 57 38.3	-1.5
PRK	Paraskevi	1.97	67	ePB	Pb	18 57 12.5	-3.1
PRK				eSN	Sn	18 57 37.0	-0.7
RLS	Riolos of Patr	1.99	258	ePN	Pn	18 57 13.2	-0.1
RLS				eSN	Sn	18 57 38.1	-0.1
ITM	Ithomi	2.06	231	ePB	Pb	18 57 14.4	-2.8
ITM				eSN	Sn	18 57 39.1	-0.9
HORT	Hortiatis	2.20	343	ePn	Pn	18 57 16.1	-0.1
HORT				eSn	Sn	18 57 42.4	-0.9
THE	Thessaloniki	2.26	341	ePn	Pn	18 57 16.9	-0.2
	comp=Z,8.3nm,0.5s						
THE				eSn	Sn	18 57 43.0	-1.9
THE	Thessaloniki	2.26	341	ePn	Pn	18 57 16.9	-0.2
	8.3nm,0.5s						
THE				eSn	Sn	18 57 43.0	-2.0
GADA	Gvkgeada	2.28	41	PN	Pn	18 57 22.5	+5.2
EZN	Ezine	2.28	54	PN	Pn	18 57 18.1	+0.7
SOH	Sokhos	2.37	349	ePn	Pn	18 57 18.9	+0.4
SMG	Samos	2.42	108	ePB	Pn	18 57 19.1	-0.1
BLCB	Balcova	2.44	92	PN	Pn	18 57 20.3	+0.8
SANT	Santorini	2.44	150	ePn	Pn	18 57 18.8	-0.7
SANT				eSn	Sn	18 57 50.5	+1.2
SANT	Santorini	2.44	150	P	Pn	18 57 17.9	-1.6
SANT	Santorini	2.44	150	P	Pn	18 57 17.9	-1.6
SANT	Santorini	2.44	150	ePn	Pn	18 57 18.8	-0.7
KZN	Kozani	2.47	318	ePN	Pn	18 57 20.4	+0.5
MEV	Metsovon	2.47	302	ePn	Pn	18 57 21.0	+1.1
	comp=Z,17nm,0.4s						
LKD	Levkas	2.58	276	ePn	Pn	18 57 22.3	+0.8
LKD				eSn	Sn	18 57 55.2	+2.4
IZM	Izmir	2.61	91	PN	Pn	18 57 22.7	+0.8
VLS	Valsamata	2.65	264	ePN	Pn	18 57 22.9	+0.5
JAN	Janina	2.67	297	ePB	Pb	18 57 23.5	-4.0
GRG	Griva	2.73	335	ePn	Pn	18 57 23.4	-0.1
GRG				eSn	Sn	18 57 54.5	-2.0
GRG	Griva	2.73	335	P	Pn	18 57 23.4	-0.1
GRG				S	Sn	18 57 54.3	-2.1
KNT	Kendrikon	2.78	344	ePn	Pn	18 57 26.4	+2.2

comp=Z,16nm,0.5s
ENEZ Enez 2.82 37 PN Pn 18 57 22.7 -2.0
NVR Nevrokopi 2.85 359⇑*i*PN Pn 18 57 25.0 -0.2
CANB Canakkale 2.86 57 PN Pn 18 57 26.2 +0.9
LPK Lapseki 2.88 48 PN Pn 18 57 25.6 0.0
ALN Alexandroupoli 2.90 33 *e*Pn Pn 18 57 24.6 -1.2
comp=Z,7.3nm,1.2s
RDO Rodhopi 2.92 24⇑*i*PN Pn 18 57 25.4 -0.7
IGT Igoumenitsa 2.99 291 *e*Pn Pn 18 57 28.6 +1.5
VAY Valandovo 3.01 340 *e*Pn Pn 18 57 27.5 +0.1
VAY Valandovo 3.01 340 *e*Pn Pn 18 57 27.8 +0.4
VAY *e*Sn Sn 18 58 01.1 -2.4
VAY Valandovo 3.01 340 *e*Pn Pn 18 57 27.7 +0.3
VAY *e*Sn Sn 18 58 01.0 -2.4
FNA Florina 3.02 320 *e*Pn Pn 18 57 28.1 +0.6
comp=Z,4.9nm,0.8s
FNA *e*Sn Sn 18 58 03.0 -0.7
BODT Bodrum 3.03 117 *e*PN Pn 18 57 28.5 +0.9
AKS Akhisar 3.06 82 *e*PN Pn 18 57 30.8 +2.8
VAM Vamos 3.09 176 *e*PN Pn 18 57 28.0 -0.4
MMB Musomiste 3.10 357 *e*Pn Pn 18 57 28.0 -0.5
MMB *e*Sn Sn 18 58 05.1 -0.3
BIA Bitola 3.23 322 *e*Pn Pn 18 57 30.7 +0.4
BIA *e*Sn Sn 18 58 07.6 -1.1
BIA Bitola 3.23 322 *e*Pn Pn 18 57 30.3 0.0
BIA *e*Sn Sn 18 58 06.3 -2.5
IDI Anoyia 3.29 166 Pn Pn 18 57 30.1 -1.0
9.1nm,0.3s,baz=350,slow=14,SNR=44
IDI Sn Sn 18 58 09.7 -0.6
29nm,0.3s,baz=294,slow=19,SNR=7.0
IDI LR LR 18 58 32.7
comp=Z,259nm,20.2s,baz=151,slow=35
IDI Anoyia 3.29 166 Pn Pn 18 57 30.1 -1.0
IDI Sn Sn 18 58 09.7 -0.6
IDI LR LR 18 58 32.7
IDI Anoyia 3.29 166 Pn Pn 18 57 30.1 -1.1
IDI Sn Sn 18 58 09.7 -0.5
RKY Sarkoy-Tekirda 3.33 48 *e*PN Pn 18 57 32.0 +0.3
DAT Datca 3.38 120 *e*PN Pn 18 57 32.0 -0.5
KEK Kerkira 3.44 292⇓*i*PN Pn 18 57 34.6 +1.3
MFT Murefte 3.45 47 *e*PN Pn 18 57 33.7 +0.3
STIP Stip 3.47 338 *e*Pn Pn 18 57 33.5 -0.2
STIP Stip 3.47 338 *e*Pn Pn 18 57 34.4 +0.8
STIP *e*Sn Sn 18 58 12.5 -2.2
STIP Stip 3.47 338 *e*Pn Pn 18 57 34.3 +0.7
STIP *e*Sn Sn 18 58 12.4 -2.2
NPS Neapolis 3.49 157 *e*PN Pn 18 57 33.5 -0.5
MRMT Marmara Adasi 3.53 52 *e*PN Pn 18 57 35.4 +1.0
EDC Edincik 3.56 57 *e*PN Pn 18 57 36.0 +1.1
OHR Ohrid 3.56 318 *e*Pn Pn 18 57 34.8 -0.1
OHR *e*Sn Sn 18 58 15.9 -1.0
OHR Ohrid 3.56 318 *e*Pn Pn 18 57 35.7 +0.8
OHR *e*Sn Sn 18 58 14.5 -2.4
OHR Ohrid 3.56 318 *e*Pn Pn 18 57 34.8 -0.1
OHR *e*Sn Sn 18 58 14.5 -2.4
PLD Plovdiv 3.66 9 *e*Pn Pn 18 57 36.9 +0.7
PLD *e*Sn Sn 18 58 19.8 +0.6
YER Yerkesik 3.70 110 *e*PN Pn 18 57 37.2 +0.4
EDRB Edirne 3.98 32 *e*PN Pn 18 57 38.3 -2.4
DENT Denizli 4.08 99 *e*PN Pn 18 57 41.8 -0.3
DALT Dalyan (Mudla) 4.11 113 *e*PN Pn 18 57 42.9 +0.5
VTS Vitosha 4.13 353 *e*Pn Pn 18 57 44.0 +1.3
VTS Vitosha 4.13 353⇑*i*P Pn 18 57 43.7 +1.0
ORLT Orhaneli 4.15 67 *e*PN Pn 18 57 44.7 +1.7
TIR Tirane 4.23 314 *e*Pn Pn 18 57 45.6 +1.5
JMB Yambol 4.45 26 *e*Pn Pn 18 57 46.7 -0.4
JMB Yambol 4.45 26 P Pn 18 57 46.8 -0.3
SCTE Santa Cesarea 4.53 292 Pn Pn 18 57 48.7 +0.5
107nm,0.6s
YLV Yalova 4.68 62 *e*PN Pn 18 57 52.2 +1.8
ISK Istanbul-Kandi 4.71 55 *e*PN Pn 18 57 51.0 +0.3
ALT Altintas 4.86 81 *e*PN Pn 18 57 54.5 +1.8
LCI Lecce 4.87 294 Pn Pn 18 57 53.3 +0.4
62nm,0.7s
ULC Ulcinj 4.99 315⇑*i*Pn Pn 18 57 55.8 +1.3
ULC *e*Sn Sn 18 58 51.4 -0.7
HRT Hereke 5.00 60 *e*PN Pn 18 57 56.8 +2.2
ELL Elmali 5.05 108 *e*PN Pn 18 57 56.8 +1.4
PVY Plav 5.09 325⇑*i*Pn Pn 18 57 57.3 +1.3
PVY *e*Sn Sn 18 58 53.8 -0.8
ISP Isparta 5.22 95⇓*e*P Pn 18 57 55.6 -2.1
TTG Podgorica 5.31 319⇑*i*Pn Pn 18 57 59.8 +0.8
TTG *e*Sn Sn 18 58 59.7 -0.3
IVA Berane 5.34 326⇑*i*Pn Pn 18 58 00.2 +0.8
IVA *e*Sn Sn 18 59 00.0 -0.9
BUM Brajici-Budva 5.41 316⇑*i*Pn Pn 18 58 01.5 +1.2
BUM *e*Sn Sn 18 59 01.8 -0.7
ESKT Eskisehir 5.48 77 *e*PN Pn 18 58 03.0 +1.7
ANTB Antalya 5.56 105 *e*PN Pn 18 58 03.7 +1.4
SERS Sersale 5.69 278 Pn Pn 18 58 04.3 +0.1
62nm,0.7s
NKY Niksic 5.72 321⇑*i*Pn Pn 18 58 05.5 +0.9
NKY *e*Sn Sn 18 59 08.7 -1.5
HCY Herceg Novi 5.73 315⇑*i*Pn Pn 18 58 04.9 +0.3
HCY *e*Sn Sn 18 59 09.6 -0.7
PLAC Placanica 5.88 272 Pn Pn 18 58 07.6 +0.7
26nm,0.8s
GRUS Gruza 5.91 337 *e*Pn Pn 18 58 10.4 +3.2
PLE Pljevlja 5.93 326⇑*i*Pn Pn 18 58 08.0 +0.6
PLE *e*Sn Sn 18 59 14.3 -1.1
BRY Bratogost 6.01 319⇑*i*Pn Pn 18 59 09.1 +0.4
BRY *e*Sn Sn 18 59 15.9 -1.5
ORI Oriolo Calabro 6.02 287 Pn Pn 18 58 09.1 +0.4
UPM Unac-Piva 6.05 323⇑*i*Pn Pn 18 58 09.5 +0.3
UPM *e*Sn Sn 18 59 17.0 -1.4
AMUR Altamura 6.15 295 Pn Pn 18 58 10.5 0.0
77nm,0.9s
MIGL Miglionico 6.17 292 Pn Pn 18 58 11.1 +0.4
505nm,1.3s
SOI Samo 6.22 269 Pn Pn 18 58 11.2 -0.2
SOI Sn Sn 18 59 17.2 -5.2
52nm,1.0s
KIZT Kizilcal 6.23 84 *e*P Pn 18 58 13.4 +1.8
SCHR S. Chirico Rap 6.33 288 Pn Pn 18 58 13.7 +0.8
45nm,0.6s
DIVS Divcibare 6.34 333 *e*Pn Pn 18 58 15.5 +2.4
DIVS Divcibare 6.34 333 *e*Pn Pn 18 58 15.3 +2.2
CUC Castrocucco 6.48 286 Pn Pn 18 58 16.1 +1.1
139nm,0.9s
MTTG Motta San Giov 6.51 268 Pn Pn 18 58 15.1 -0.3
59nm,0.6s
PALZ Palazzo San Ge 6.62 294 Pn Pn 18 58 17.3 +0.4
147nm,0.9s
SLCN Sala Consilina 6.70 289 Pn Pn 18 58 19.1 +1.0
154nm,0.6s
TIRR Tirgusor 6.84 28⇓*i*P Pn 18 58 20.0 0.0
TIRR Tirgusor 6.84 28 ⇓P Pn 18 58 20.0 +0.1
MMME Mongiuffi-Meli 6.86 268 Pn Pn 18 58 20.0 -0.2
43nm,0.8s
HARR Harsova 6.88 25⇑*i*P Pn 18 58 19.6 -0.9
HARR Harsova 6.88 25 ⇑P Pn 18 58 19.6 -0.9
MRLC Muro Lucano 6.90 292 Pn Pn 18 58 21.3 +0.5
46nm,0.9s
FGMS Monte Sant'Ang 6.91 300 Pn Pn 18 58 20.6 -0.3
120nm,0.9s
CMPR Campora 6.93 288 Pn Pn 18 58 22.4 +1.2
51nm,0.5s
CDRU Civita di Ruta 6.97 289 Pn Pn 18 58 22.2 +0.5
49nm,0.8s
VOIR 6.99 6⇓*i*P Pn 18 58 22.7 +0.7
VOIR 6.99 6 ⇓P Pn 18 58 22.7 +0.7
FG4 Candela 7.00 295 Pn Pn 18 58 22.6 +0.5
69nm,0.7s
VPL Vulcano Piano 7.03 272 Pn Pn 18 58 21.8 -0.8
101nm,0.7s
SGRT San Giovanni R 7.07 300 Pn Pn 18 58 22.5 -0.7
SGRT Sn Sn 18 59 36.6 -6.9
114nm,0.9s
MCRV Calabrutti - M 7.14 291 Pn Pn 18 58 24.6 +0.5
52nm,0.6s
RGNG Rignano Grg 7.15 299 Pn Pn 18 58 23.4 -0.8
MLR Muntele Rosu 7.15 11 Pn Pn 18 58 25.4 +1.2
0.8nm,0.3s,baz=224,slow=7.5,SNR=12
MLR Sn Sn 18 59 44.8 -0.6
0.6nm,0.3s,baz=296,slow=23,SNR=1.8
MLR Muntele Rosu 7.15 11⇓*i*P Pn 18 58 25.0 +0.8
MLR Muntele Rosu 7.15 11 P Pn 18 58 25.4 +1.2
MLR 18 59 44.8
MLR pmax pmax
comp=Z,1.0nm,0.3s
MLR smax
comp=N,1.0nm,0.3s
MLR Muntele Rosu 7.15 11 ⇓P Pn 18 58 24.9 +0.7
SNAL S. Angelo Dei 7.15 293 Pn Pn 18 58 24.5 +0.2
comp=N,70nm,0.8s
CAFE Carife 7.17 293 Pn Pn 18 58 24.9 +0.5
comp=N,65nm,0.7s
FG5 Orsara di Pugl 7.22 295 Pn Pn 18 58 25.9 +0.7
comp=N,101nm,1.2s
FG5 Orsara di Pugl 7.22 295 P Pn 18 58 25.9 +0.7
FG5 pmax pmax
comp=Z,101nm,1.2s
MNO Monte Soro 7.30 268 Pn Pn 18 58 26.8 +0.5
comp=Z,53nm,0.5s
MNO Monte Soro 7.30 268 P Pn 18 58 26.8 +0.5
MNO pmax pmax
comp=Z,53nm,0.5s
BZS Buzias 7.32 347⇑*i*P Pn 18 58 26.7 +0.1
BZS Buzias 7.32 347 ⇑P Pn 18 58 26.7 +0.1
FGSL Fruska Gora 7.34 336 Pn Pn 18 58 30.0 +3.2
CFR Carcaliu 7.38 24⇑*i*P Pn 18 58 27.4 +0.1
CFR Carcaliu 7.38 24 ⇑P Pn 18 58 27.4 +0.1
HVZN Vizzini 7.42 263 Pn Pn 18 58 28.7 +0.8
HVZN Sn Sn 18 59 45.4 -6.6
comp=Z,352nm,0.5s
FG2 Serracapriola 7.49 299 Pn Pn 18 58 28.3 -0.6
comp=Z,166nm,0.9s
VAE Valguarnera 7.59 265 Pn Pn 18 58 30.6 +0.3
comp=Z,1.3nm,0.3s,baz=7.1,slow=3.2,SNR=4.4
VAE Sn Sn 18 59 52.0 -4.3
comp=Z,1.8nm,0.3s,baz=86,slow=14,SNR=2.3
VAE Valguarnera 7.59 265 Pn Pn 18 58 30.6 +0.3
VAE Sn Sn 18 59 52.0 -4.3
PLOR Plostina 7.62 14⇑*i*P Pn 18 58 32.2 +1.5
BR131 Keskin Array S 7.64 78 *e*P Pn 18 58 33.2 +2.3
comp=Z,1.7nm,0.6s
BR131 Keskin Array S 7.64 78 *e*P Pn 18 58 33.2 +2.2
comp=Z,1.7nm,0.6s
BRTR Keskin Array B 7.64 78 Pn Pn 18 58 32.5 +1.5
comp=Z,0.4nm,0.3s,baz=261,slow=12,SNR=12
VRI Vrincioaia 7.65 15⇓*i*P Pn 18 58 33.3 +2.2
VRI Vrincioaia 7.65 15 ⇓P Pn 18 58 33.3 +2.1
SACR S. Croce Del S 7.66 295 Pn Pn 18 58 32.3 +1.1
comp=Z,53nm,0.8s
BSSO Busso 7.79 296 Pn Pn 18 58 34.3 +1.3
comp=Z,72nm,0.7s
TRIV Trivento 7.90 297 Pn Pn 18 58 34.7 +0.2
comp=Z,106nm,1.1s
VAGA Valle Agricola 8.00 294 Pn Pn 18 58 37.1 +1.2
comp=Z,62nm,0.6s
MOCO Biccari - m.te 8.04 294 Pn Pn 18 58 27.3 -9.2
comp=Z,118nm,1.4s
MIDA Miranda 8.06 296 Pn Pn 18 58 37.6 +0.8
comp=Z,77nm,0.8s
RFI Rocamonfina 8.15 293 Pn Pn 18 58 39.6 +1.7
comp=Z,4.0nm,1.1s
RNI2 Rionero Sannit 8.16 296 Pn Pn 18 58 39.5 +1.5
comp=Z,73nm,0.9s
CERA Filignano 8.22 295 Pn Pn 18 58 40.4 +1.6
comp=Z,63nm,0.6s
SDI San Donato 8.40 296 Pn Pn 18 58 42.7 +1.3
comp=Z,5.0nm,0.4s
SDI San Donato 8.40 296 P Pn 18 58 42.7 +1.3
SDI pmax pmax
comp=Z,5.0nm,0.4s
USI Ustica 8.43 275 Pn Pn 18 58 40.8 -1.0
comp=Z,74nm,1.0s
INTR Introdacqua 8.44 298 Pn Pn 18 58 42.1 +0.2
comp=Z,32nm,0.8s
VVLD Villa Vallelon 8.59 296 Pn Pn 18 58 45.4 +1.5
comp=Z,38nm,0.9s
PKSM Moragy 8.65 335⇑*i*P Pn 18 58 46.4 +1.6
PKSM Moragy 8.65 335 ⇑P Pn 18 58 46.4 +1.6
GIUL Giuliano Di Ro 8.75 294 Pn Pn 18 58 46.8 +0.6
comp=Z,70nm,1.6s
CERT Cerreto 9.06 296 Pn Pn 18 58 51.4 +0.9
comp=Z,39nm,0.9s
BURAR Bucovina Array 9.16 5⇓*i*P Pn 18 58 53.1 +1.2
BURAR Bucovina Array 9.16 5 ⇓P Pn 18 58 53.1 +1.3
BOJS Bojanci 9.53 320 *i* Pn Pn 18 58 56.7 -0.1
SNTG Esanatoglia 9.59 303 Pn Pn 18 58 56.9 -0.8
LEGS Legarje 9.81 322 *i* Pn Pn 18 59 00.4 -0.3
VISS Visnje 9.94 320 *e*Pn Pn 18 59 02.4 -0.2
PDKS Podkum 10.05 322 *i* Pn Pn 18 59 04.1 +0.2
PERS Pernice 10.41 324 *e*Pn Pn 18 59 08.7 -0.2
VOY Vojsko 10.58 319 *e*Pn Pn 18 59 11.2 -0.1
VOY *e* 18 59 27.7
MMAI Mount Meron Ar 10.80 117 Pn Pn 18 59 13.4 -0.8
comp=Z,0.2nm,0.3s,baz=257,slow=13,SNR=3.5
ROBS Robic 10.92 318 *e*Pn Pn 18 59 15.3 -0.7
KEST Kesra 11.97 261 Pn Pn 18 59 31.5 +1.2
comp=Z,0.1nm,0.3s,baz=260,slow=7.5,SNR=3.3
GERES GERESS Array B 12.71 328 Pn Pn 18 59 40.8 +0.4
comp=Z,0.1nm,0.3s,baz=153,slow=13,SNR=3.8
AKASG Malin Array Be 12.77 15 Pn Pn 18 59 39.8 -1.3
comp=Z,0.3nm,0.3s,baz=203,slow=12,SNR=2.8
AKASG Malin Array Be 12.77 15 Pn Pn 18 59 39.8 -1.4
KHC Kasperske Hory 12.99 328 *e*P Pn 18 59 47.0 +2.8
KHC *ex* x 18 59 53.5
MBDF Montbardon 14.26 301 *e*P Pn 19 00 03.8 +2.2
comp=Z,13nm,0.8s
MBDF Montbardon 14.26 301 *e*P Pn 19 00 03.8 +2.2
MBDF pmax pmax
comp=Z,7.0nm,0.8s
MBDF Montbardon 14.26 301 *e*P Pn 19 00 03.8 +2.2
comp=Z,6.6nm,0.8s
LPG La Plagne 14.56 304 *e*P Pn 19 00 08.8 +3.2
comp=Z,18nm,0.7s
LPG La Plagne 14.56 304 *e*P Pn 19 00 08.8 +3.2
LPG pmax pmax
comp=Z,9.0nm,0.7s
LPG La Plagne 14.56 304 *e*P Pn 19 00 08.8 +3.2
comp=Z,8.9nm,0.7s
LPL La Plagne 14.57 304 *e*P Pn 19 00 08.3 +2.5
comp=Z,20nm,0.7s
LPL La Plagne 14.57 304 *e*P Pn 19 00 08.3 +2.5
LPL pmax pmax
comp=Z,10.0nm,0.7s
LPL La Plagne 14.57 304 *e*P Pn 19 00 08.3 +2.5
comp=Z,9.9nm,0.7s
ORIF Oris-en-Rattie 14.92 301 *e*P Pn 19 00 12.5 +1.9
comp=Z,5.7nm,0.7s
ORIF *e*R
comp=Z,723nm,21.2s
ORIF Oris-en-Rattie 14.92 301 *e*P Pn 19 00 12.5 +1.9
ORIF pmax pmax
comp=Z,3.0nm,0.7s
ORIF Oris-en-Rattie 14.92 301 *e*P Pn 19 00 12.5 +1.9
comp=Z,2.8nm,0.7s
CLL Collm 14.95 333 *e**PP pP 19 00 14.0 -5.7
CLL *i* PP 19 00 17.5
CLL Collm 14.95 333 *e*pP pP 19 00 14.0 -5.7
CLL *i* PP 19 00 17.5
comp=Z,6.0nm,0.7s
CLL Collm 14.95 333 *e*P Pn 19 00 03.0 -7.9
CLL *i* 19 00 17.5
KIV Kislovodsk 15.12 63⇓*i*P Pn 19 00 10.6 -2.6
KIV pmax pmax
comp=Z,4.0nm,1.0s
CABF La Chapelle 15.43 307 *e*P Pn 19 00 17.8 +0.5
comp=Z,28nm,0.8s
CABF La Chapelle 15.43 307 *e*P Pn 19 00 17.8 +0.5
CABF pmax pmax
comp=Z,14nm,0.8s
CABF La Chapelle 15.43 307 *e*P Pn 19 00 17.8 +0.5
comp=Z,14nm,0.8s
HINF Hinteralfeld 15.54 312 *e*P Pn 19 00 16.8 -1.9
CDF Champ du Feu 15.61 315 *e*P Pn 19 00 16.9 -2.8
VIVF Saint-Julien-l 15.72 300 *e*P Pn 19 00 22.4 +1.3
HAU Haudompre 15.93 312 *e*P Pn 19 00 21.1 -2.6
HAU *e*R
comp=Z,900nm,21.5s
SMF Signal de Mont 16.86 305 *e*P Pn 19 00 37.6 +1.9
comp=Z,17nm,0.9s
SMF Signal de Mont 16.86 305 *e*P Pn 19 00 37.6 +1.9
SMF pmax pmax
comp=Z,8.0nm,0.9s
SMF Signal de Mont 16.86 305 *e*P Pn 19 00 37.6 +1.9
comp=Z,8.4nm,0.9s
LOR Lormes 17.09 307 *e*P Pn 19 00 40.0 +1.4
comp=Z,24nm,1.2s
LOR *e*R
comp=Z,626nm,21.9s
LOR Lormes 17.09 307 *e*P Pn 19 00 40.0 +1.4
comp=Z,12nm,1.2s
AVF Avril sur Loir 17.23 305 *e*P Pn 19 00 42.6 +2.3
comp=Z,37nm,1.1s
AVF Avril sur Loir 17.23 305 *e*P Pn 19 00 42.6 +2.3
comp=Z,19nm,1.1s
SSF Saint Saulge 17.23 306 *e*P Pn 19 00 40.9 +0.5
comp=Z,13nm,0.9s
SSF Saint Saulge 17.23 306 *e*P Pn 19 00 40.9 +0.5
SSF pmax pmax
comp=Z,6.0nm,0.9s
SSF Saint Saulge 17.23 306 *e*P Pn 19 00 40.9 +0.5
comp=Z,6.3nm,0.9s
BGF Bois d'Agland 17.48 304 *e*P Pn 19 00 43.9 +0.5
comp=Z,30nm,0.9s
BGF Bois d'Agland 17.48 304 *e*P Pn 19 00 43.9 +0.5
BGF pmax pmax
comp=Z,15nm,0.9s
BGF Bois d'Agland 17.48 304 *e*P Pn 19 00 43.9 +0.5
comp=Z,15nm,0.9s
BAIF Baives 18.19 316 *e*P Pn 19 00 51.6 -0.6
comp=Z,14nm,0.9s
BAIF Baives 18.19 316 *e*P Pn 19 00 51.6 -0.6
comp=Z,7.0nm,0.9s
OBN Obninsk 18.69 23 ⇑P Pn 19 00 57.0 -1.3
OBN pmax pmax
comp=Z,16nm,1.7s
OBN Obninsk 18.69 23 P Pn 19 00 57.0 -1.3
comp=Z,16nm,1.7s
MFF Saint Martin d 19.45 302 *e*P Pn 19 01 07.5 0.0
VSU Vasula 20.07 4 *e*P P 19 01 12.5 -0.5
LDF La Druitiere 20.07 308 *e*P P 19 01 12.5 -0.6
comp=Z,6.5nm,0.5s
LDF La Druitiere 20.07 308 *e*P P 19 01 12.5 -0.6
comp=Z,3.2nm,0.5s
FLN La Foliniere 20.36 308 *e*P P 19 01 15.6 -0.6
comp=Z,34nm,1.0s
FLN *e*R
comp=Z,381nm,19.8s
FLN La Foliniere 20.36 308 *e*P P 19 01 15.6 -0.6
comp=Z,17nm,1.0s
GRR Gorron 20.46 307 *e*P P 19 01 16.3 -1.0
comp=Z,16nm,0.7s
RST Umm Al-Ruwaisa 21.07 108 *e*P P 19 01 24.3 +0.4
RST AMb AMB 19 01 25.8
comp=Z,31nm,1.0s,mb4.6
MIB Mutribah 21.18 107 *e*P P 19 01 25.7 +0.7
MIB AMb AMB 19 01 27.0
comp=Z,38nm,0.6s,mb4.9
NAY Al-Naaiem 21.39 109 *e*P P 19 01 27.8 +0.5
NAY AMb AMB 19 01 29.2
comp=Z,15nm,0.9s,mb4.3
ESDC Sonseca Array 21.66 282 P P 19 01 29.0 -1.2
comp=Z,9.8nm,0.8s,mb4.3,baz=76,slow=10,SNR=22
QUIF Quistinic 21.79 304 *e*P P 19 01 29.5 -2.1
comp=Z,106nm,1.1s,mb4.9
ROSF Rostrenen 21.98 305 *e*P P 19 01 31.5 -2.1
comp=Z,63nm,1.2s,mb4.6
HFS Hagfors 22.61 347 P P 19 01 39.7 -0.7
comp=Z,2.7nm,0.6s,mb3.8,baz=153,slow=13,SNR=7.3
FINES FINESS Array B 23.01 3 P P 19 01 44.6 0.0
comp=Z,3.3nm,0.9s,mb3.6,baz=169,slow=11,SNR=5.2
MDT Midelt 23.83 265 P P 19 01 52.6 -0.2
comp=Z,5.3nm,0.8s,mb4.0,baz=267,slow=5.1,SNR=5.9
NB2 NORSAR Subarra 23.93 345 P P 19 01 52.6 -1.1
comp=Z,4.8nm,0.9s,mb3.9,baz=159,slow=10
NOA NORSAR Array B 23.93 345 P P 19 01 53.3 -0.4
comp=Z,3.6nm,0.7s,mb3.9,baz=148,slow=9.6,SNR=7.6
EKA Eskdalemuir Ar 24.79 322 P P 19 02 01.2 -0.3
comp=Z,9.4nm,0.8s,mb4.4,baz=122,slow=10.0,SNR=32
ARU Arti 29.06 41 *e*P P 19 02 41.2 +1.2
TORD Torodi Ar. Bea 32.05 224 P P 19 03 05.2 -1.2
comp=Z,10nm,0.6s,mb4.8,baz=34,slow=9.2,SNR=148
DBIC Dimbokro 41.01 227 P P 19 04 21.5 -1.3
comp=Z,7.1nm,0.7s,mb4.4,baz=17,slow=8.6,SNR=15
DBIC Dimbokro 41.01 227 P P 19 04 21.5 -1.3
DBIC pmax pmax
comp=Z,7.0nm,0.7s
LIC Lamto 41.47 227 *e*P P 19 04 25.7 -0.8
comp=Z,20nm,0.5s,mb4.7
LIC Lamto 41.47 227 *e*P P 19 04 25.7 -0.8
comp=Z,9.8nm,0.5s,mb4.7
MKAR Makanchi Array 42.84 59 P P 19 04 38.1 +0.4
comp=Z,3.7nm,0.8s,mb4.2,baz=280,slow=6.9,SNR=22
MKAR Makanchi Array 42.84 59 P P 19 04 38.1 +0.4
MKAR pmax pmax
comp=Z,4.0nm,0.8s
ZAL Zalesovo 43.46 49 P P 19 04 43.4 +0.6
comp=Z,1.0nm,0.7s,mb3.6,baz=178,slow=5.1,SNR=4.6
ZAL Zalesovo 43.46 49 P P 19 04 43.4 +0.6
ZAL pmax pmax
comp=Z,1.0nm,0.7s
ZAK Zakamensk 55.31 50 *e*P P 19 06 12.4 -0.9
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.1
ZAK Zakamensk 55.31 50 *e*P P 19 06 12.4 -0.9
comp=Z,2.0nm,1.1s,mb4.1
SONM Songino Array 58.17 52 P P 19 06 33.8 +0.2
comp=Z,1.8nm,0.9s,mb4.1,baz=281,slow=8.6,SNR=9.7
SONM Songino Array 58.17 52 P P 19 06 33.8 +0.2
SONM pmax pmax
comp=Z,2.0nm,0.9s
BOSA Boshof 66.77 179 P P 19 07 30.7 -0.4
comp=Z,5.7nm,0.9s,mb4.6,baz=11,slow=7.9,SNR=6.7
BOSA Boshof 66.77 179 P P 19 07 30.7 -0.4
BOSA pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
BILL Bilibino 70.08 14 P P 19 07 44.0 -7.8
NJ2 Nanjing 74.32 61 *e*P P 19 08 16.4 -0.8
SSE Sheshan 76.49 61 *e*P P 19 08 26.3 -3.3
YSS Yuzh-Sakhalins 78.90 38 *e*P P 19 08 43.0 -0.1
YSS MLR MLR
comp=Z,400nm,18.0s
YSS Yuzh-Sakhalins 78.90 38 *e*P P 19 08 43.0 -0.1
comp=Z,400nm,18.0s
MJAR Matsushiro Arr 83.82 48 P P 19 09 09.8 +0.6
comp=Z,1.5nm,0.9s,mb4.1,baz=309,slow=6.1,SNR=5.5
MJAR Matsushiro Arr 83.82 48 P P 19 09 09.8 +0.6
MJAR pmax pmax
comp=Z,2.0nm,0.9s
PDAR Pinedale Array 88.76 328 P P 19 09 32.4 -1.1
comp=Z,0.3nm,0.7s,mb3.7,baz=15,slow=3.8,SNR=3.6
ROSC El Rosal 93.46 279 LR LR 19 49 55.1
WRA Warramunga Arr 117.87 94 PKP PKPdf 19 15 24.6 -1.7
comp=Z,0.5nm,1.0s,baz=312,slow=1.8,SNR=5.0
WRA Warramunga Arr 117.87 94 PKIKP PKPdf 19 15 24.6 -1.7
WRA pmax pmax
comp=Z,1.0nm,1.0s

ISCJB ***16*** *19:08:42.0± 1.3, 177S± 03× 1788W± 0.3, h600km, mb4.4/10, Error ellipse: s-maj=52.2km s-min=21.7km az=112.3*
IDC ***16*** *19:08:43.2± 13.0, 1751S× 17879W, h596km± 171km, mb3.8/4, mb1 4.0/4, mb1mx3.4/12, mbtmp4.8/4, Error ellipse: s-maj=123.1km s-min=52.0km az=167.0*
NEIC ***16*** *19:08:43.6± 5.1, 1772S× 17872W, h609km± 60km, mb4.4/7, Error ellipse: s-maj=44.7km s-min=29.6km az=152.0*

ISC 16 19:08:43.3±1.3, 178S±.03×1787W±.03, h600km, n18, σ0s58/16, mb4.4/10, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARMA	**Armidale**	**29.78**	**240**	*e*P	**P**	**19 14 01.5**	**-1.5**
CTAO	**Charters Tower**	**33.22**	**260**	*e*P	**P**	**19 14 32.2**	**0.0**
	5.6nm,0.9s,mb4.2						
CNB	**Canberra Magne**	**33.30**	**232**	*e*P	**P**	**19 14 33.4**	**+0.5**
	11nm,0.5s,mb4.8						
TOO	**Toolangi**	**37.05**	**231**	*e*P	**P**	**19 15 04.4**	**+0.5**
	6.9nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**38.46**	**241**	⇓*i*P	**P**	**19 15 15.8**	**+0.5**
	6.2nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**19 15 15.8**	**+0.5**
	7.0nm,0.5s,mb4.5,baz=86,slow=10,SNR=30						
WB2	**Warramunga Arr**	**44.39**	**259**	*e*P	**P**	**19 16 01.7**	**-0.2**
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**	**19 16 01.8**	**-0.2**
	4.6nm,0.5s,mb4.3,baz=95,slow=7.1,SNR=216						
AS31	**Alice Springs**	**44.58**	**254**	*e*P	**P**	**19 16 03.7**	**+0.4**
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**	**19 16 04.1**	**+0.7**
	28nm,0.5s,mb5.1,baz=87,slow=8.9,SNR=982						
ASPA	**Alice Springs**	**44.58**	**254**	*e*P	**P**	**19 16 03.7**	**+0.3**
FORT	**Forrest**	**49.83**	**245**	*e*P	**P**	**19 16 41.6**	**-1.0**
	13nm,0.6s,mb4.5						
MBWA	**Marble Bar**	**57.86**	**256**	*e*P	**P**	**19 17 39.1**	**+0.1**
	5.4nm,0.7s,mb3.8						
KLBR	**Kellerberrin**	**58.65**	**243**	*e*P	**P**	**19 17 43.9**	**-0.4**
	157nm,1.9s,mb4.8						
MUN	**Mundaring**	**59.95**	**243**	*e*P	**P**	**19 17 53.0**	**+0.1**
PDAR	**Pinedale Array**	**87.44**	**44**	P	**P**	**19 20 28.0**	**0.0**
	1.2nm,0.6s,mb3.8,baz=220,slow=3.3,SNR=13						
CLL	**Collm**	**145.30**	**347**	⇑*i*PKPbc	PKPbc	19 27 14.6	-0.3
	comp=Z,6.0nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GERES	GERESS Array B	147.44	345	PKPbc	PKPbc	19 27 19.7	-1.0
	comp=Z,0.5nm,0.8s,baz=8.5,slow=2.7,SNR=5.7						

*LDG **16** 19:09:13.1±0.7,4426N×10.15E,h10km,Ml2.7/3,Error ellipse: s-maj=12.4km s-min=6.7km az=83.0*
*CSEM **16** 19:09:18.2±0.1,4378N×10.19E,h12km±1km,ML3.7/3, Error ellipse: s-maj=1.6km s-min=1.4km az=58.0*
*NEIC **16** 19:09:18.7,4376N×1020E,h6km,ML2.6(ROM), ML2.7(LDG),After ROM.*
*ROM **16** 19:09:18.7±0.4,4376N×1020E,h6km±4km,Md2.7/17, Ml2.6/7,Error ellipse: s-maj=3.0km s-min=2.9km az=19.0*
*ISCJB **16** 19:09:18.4±0.4,4375N±002×10.16E±003,h7km±3km, Error ellipse: s-maj=3.7km s-min=3.4km az=100.4*
*GEN **16** 19:09:19.2,4376N×1022E,h8km,ML2.0*
*VIE **16** 19:09:21.7±1.0,4380N×1032E,h10km,mb2.4/1,ML2.5/4, Error ellipse: s-maj=11.2km s-min=6.6km az=123.0 75 km W of Florenz*
ISC 16 19:09:19.0±0.4,**4374N**±002×**1016E**±003,**h1**km±3km,**n54**, σ**1^{s}08**/87,**3C-8D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PII	Pisa	0.27	95	⇓iPg	Pg	19 09 24.2	+0.2
PII				Sg	Sg	19 09 27.8	+0.3
GROG	Isola di Gorgo	0.37	212	Pg	Pg	19 09 27.2	+1.1
GROG				Sg	Sg	19 09 33.1	+2.1
	280nm,0.3s						
VINC	Vinca	0.40	359	P	Pg	19 09 26.5	-0.1
VLC	Villacollemand	0.45	21	Pg	Pg	19 09 27.2	-0.3
	108nm,0.2s						
VLC	Villacollemand	0.45	21	eP	Pg	19 09 27.0	-0.5
VLC				Pg	Pg	19 09 27.2	-0.3
VLC	Villacollemand	0.45	21	eP	Pg	19 09 27.0	-0.5
VLC	Villacollemand	0.45	21	Pg	Pg	19 09 27.2	-0.3
	108nm,0.2s						
BDI	Bagni Di Lucca	0.45	45	Pg	Pg	19 09 27.1	-0.4
BDI				Sg	Sg	19 09 32.9	-0.5
	531nm,0.2s						
SARO	Sassorosso	0.47	21	P	Pg	19 09 27.6	-0.4
BACM		0.54	353	P	Pg	19 09 29.2	-0.1
BACM				S	Sg	19 09 36.8	+0.6
VALM		0.61	6	P	Pg	19 09 30.4	-0.2
PZZT	Monte Pizzetto	0.64	52	Pg	Pg	19 09 30.9	-0.3
PZZT				Sg	Sg	19 09 39.2	-0.2
	795nm,0.3s						
GSCL	Gusciola	0.68	27	⇑iPg	Pg	19 09 31.9	-0.1
	34nm,0.2s						
CODM		0.68	341	P	Pg	19 09 31.5	-0.6
CODM				S	Sg	19 09 40.7	-0.2
ERBM	Eremo	0.70	15	Pg	Pg	19 09 32.5	+0.1
	99nm,0.2s						
GRAM		0.75	355	P	Pg	19 09 33.3	0.0
GRAM				S	Sg	19 09 42.5	-0.6
SC2M	Scurtabr	0.80	326	P	Pg	19 09 34.1	-0.2
SC2M				S	Sg	19 09 44.6	-0.1
FNVD	Fontana Vidola	0.81	58	Pg	Pg	19 09 34.3	-0.3
	311nm,0.7s						
GRFL	Gerfalco	0.84	135	Pg	Pg	19 09 35.1	0.0
	20nm,0.6s						
CSNT	Castellina Chi	0.86	108	Pg	Pg	19 09 35.2	-0.3
	50nm,0.3s						
SEI	Scarperia	0.92	70	Pg	Pg	19 09 37.1	+0.5
SEI				Sg	Sg	19 09 50.2	+1.7
	339nm,0.3s						
BOB	Bobbio (Coli)	1.14	334	Pg	Pg	19 09 41.0	+0.1
BOB				Sg	Sg	19 09 56.6	+0.9
	169nm,0.5s						
SFI	Santa Sofia	1.23	82	Pg	Pg	19 09 41.5	-1.1
SFI				Sg	Sg	19 09 58.8	+0.3
	31nm,0.2s						
CRE	Caprese Michel	1.30	95	Pg	Pg	19 09 43.3	-0.7
	16nm,0.3s						
PGF	Pioggiola	1.47	216	ePg	Pg	19 09 47.5	+0.4
PGF				eSn	Sn	19 10 07.9	+1.6
PGF				eSg	Sg	19 10 13.1	+7.0
	4.8nm,0.2s						
PGF	Pioggiola	1.47	216	ePn	Pn	19 09 45.1	-1.4
PGF				ePg	Pg	19 09 47.5	+0.4
PGF				eSn	Sn	19 10 07.9	+1.6
PGF				eSg	Sg	19 10 13.1	+7.0
PGF	Pioggiola	1.47	216	ePg	Pg	19 09 47.5	+0.4
FIN	Finale Ligure	1.48	289	Pg	Pg	19 09 47.8	+0.4
	21nm,0.4s						
FIN	Finale Ligure	1.48	289	P	Pn	19 09 44.6	-2.1
FIN	Finale Ligure	1.48	289	Pg	Pg	19 09 47.8	+0.4
	21nm,0.4s						
FSSB	Fossombrone	1.90	91	Pg	Pg	19 09 52.4	-2.9
	11nm,0.3s						
SBF	Sospel	1.98	274	ePg	Pn	19 09 49.8	-3.7
SBF				eSg	Sn	19 10 15.8	-3.1
	19nm,0.3s						
SBF	Sospel	1.98	274	ePg	Pn	19 09 49.8	-3.7
SBF				eSg	Sn	19 10 15.8	-3.1
	9.6nm,0.3s						
SNTG	Esanatoglia	2.08	103	Pg	Pn	19 09 53.8	-1.1
	10.0nm,0.5s						
CTI	Castel Tesino	2.54	24	Pg	Pn	19 10 01.4	+0.2
	11nm,0.2s						
FRF	La Foret Royal	2.56	267	ePg	Pn	19 10 00.2	-1.3
LMR	La Mourre	2.69	262	ePg	Pg	19 10 04.8	-5.7
LMR				eSn	Sn	19 10 28.9	-7.5
LMR				eSg	Sg	19 10 39.9	-5.4
	2.1nm,0.2s						
LMR	La Mourre	2.69	262	ePn	Pn	19 09 57.8	-5.5
LMR				ePg	Pg	19 10 04.8	-5.7
LMR				eSn	Sn	19 10 28.9	-7.5
LMR				eSg	Sg	19 10 39.9	-5.4
LMR	La Mourre	2.69	262	ePg	Pg	19 10 04.8	-5.7
LMR				eSn	Sn	19 10 28.9	-7.5
LMR				eSg	Sg	19 10 39.9	-5.4
	1.0nm,0.2s						
BNI	Bardonecchia	2.82	299	P	Pn	19 09 58.6	-6.4
BNI	Bardonecchia	2.82	299	P	Pn	19 09 58.7	-6.4
LPL	La Plagne	3.02	307	ePg	Pn	19 10 04.6	-3.3
ORIF	Oris-en-Rattie	3.29	292	ePg	Pn	19 10 12.0	+0.5
SMRF	Simiane la Rot	3.33	276	ePg	Pn	19 10 14.0	+2.0
SMRF	Simiane la Rot	3.33	276	ePn	Pn	19 10 05.6	-6.4
SMRF				ePg	Pn	19 10 14.0	+2.0
SMRF	Simiane la Rot	3.33	276	ePg	Pn	19 10 14.0	+2.0
DAVA	Damuels	3.55	357	⇑iPn	Pn	19 10 17.0	+1.9
DAVA				⇓iSn	Sn	19 10 59.5	+1.8
SQTA	Sankt Quirin	3.55	12	⇓iPn	Pn	19 10 16.6	+1.4
SQTA				⇓iSn	Sn	19 10 58.6	+0.8
MOTA	Moosalm	3.66	10	⇓iPn	Pn	19 10 18.5	+1.9
MOTA				⇓iSn	Sn	19 11 01.6	+1.1
MOTA	Moosalm	3.66	10	⇓iPn	Pn	19 10 18.5	+1.9
MOTA				iSn	Sn	19 11 01.6	+1.1
KBA	Koelnbreinsper	4.02	33	⇑iPn	Pn	19 10 22.7	+1.1
KBA				⇓iSn	Sn	19 11 08.2	-1.0
HINF	Hinteralfeld	4.68	332	ePg	Pn	19 10 30.8	+0.1
CDF	Champ du Feu	5.08	338	ePg	Pn	19 10 35.9	-0.3
KHC	Kasperske Hory	5.88	22	ePN	Pn	19 10 46.0	-1.2
KHC				eSN	Sn	19 11 50.5	-4.7

*ISCJB **16** 19:17:25.8±0.4,4378N±003×1009E±005,h23km±7km, Error ellipse: s-maj=6.5km s-min=4.7km az=84.1*
*ROM **16** 19:17:25.2±0.2,4377N×10.17E,h1km,Md2.5/12,Ml2.2/7, Error ellipse: s-maj=2.5km s-min=1.9km az=56.0*
*CSEM **16** 19:17:26.8±0.3,4379N×1007E,h35km,ML2.7/6,Error ellipse: s-maj=8.2km s-min=4.4km az=119.0*
*LDG **16** 19:17:27.1,4375N×1030E,h30km*
ISC 16 19:17:25.8±0.4,**4376N**±003×**1015E**±005,**h20**km±5km,**n30**, σ**0^{s}75**/45,**1C-1D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PII	Pisa	0.27	98	⇓iPg	Pg	19 17 31.1	-0.9
PII				Sg	Sg	19 17 34.9	-1.3
	200nm,0.2s						
GROG	Isola di Gorgo	0.38	210	Pg	Pg	19 17 34.0	+0.1
GROG				Sg	Sg	19 17 39.8	+0.5
	218nm,0.2s						
VLC	Villacollemand	0.43	23	Pg	Pg	19 17 34.1	-0.7
	73nm,0.1s						
BDI	Bagni Di Lucca	0.44	46	Pg	Pg	19 17 34.9	0.0
	238nm,0.2s						
PZZT	Monte Pizzetto	0.63	54	Pg	Pg	19 17 37.8	-0.6
PZZT				Sg	Sg	19 17 46.5	-0.4
	302nm,0.3s						
GSCL	Gusciola	0.67	28	Pg	Pg	19 17 38.8	-0.2
GSCL				Sg	Sg	19 17 49.8	+1.8
	18nm,0.2s						
ERBM	Eremo	0.69	16	⇑iPg	Pg	19 17 39.4	+0.1
	21nm,0.2s						
FNVD	Fontana Vidola	0.81	59	Pg	Pg	19 17 41.3	-0.4
	117nm,0.7s						
GRFL	Gerfalco	0.86	135	Pg	Pg	19 17 43.6	+1.1
	8.0nm,0.5s						
CSNT	Castellina Chi	0.88	109	Pg	Pg	19 17 42.3	-0.6
	44nm,1.0s						
SEI	Scarperia	0.92	71	Pg	Pg	19 17 44.3	+0.6
SEI				Sg	Sg	19 17 57.0	+1.1
	97nm,0.2s						
BOB	Bobbio (Coli)	1.13	334	Pg	Pg	19 17 47.7	0.0
	71nm,0.5s						
SFI	Santa Sofia	1.23	83	Pg	Pg	19 17 49.1	-0.6
SFI				Sg	Sg	19 18 05.8	-0.1
	11nm,0.2s						
PGF	Pioggiola	1.48	215	ePn	Pn	19 17 51.6	+0.4
PGF	Pioggiola	1.48	215	ePg	Pn	19 17 53.6	+2.4
PGF				eSg	Sn	19 18 09.5	-0.5
	5.8nm,0.2s						
PGF	Pioggiola	1.48	215	ePg	Pn	19 17 53.6	+2.4
PGF				eSg	Sn	19 18 09.5	-0.5
	2.9nm,0.2s						
SBF	Sospel	1.97	274	ePg	Pn	19 17 58.9	+0.8
SBF				eSg	Sn	19 18 22.1	-0.1
	9.1nm,0.3s						
SBF	Sospel	1.97	274	ePg	Pn	19 17 58.9	+0.8
SBF				eSg	Sn	19 18 22.1	-0.1
	4.6nm,0.3s						
FRF	La Foret Royal	2.55	267	ePg	Pn	19 18 06.3	+0.2
FRF				eSg	Sn	19 18 36.2	-0.3
	3.9nm,0.3s						
FRF	La Foret Royal	2.55	267	ePg	Pn	19 18 06.3	+0.2
FRF				eSg	Sn	19 18 36.2	-0.3
	2.0nm,0.3s						
MBDF	Montbardon	2.62	293	ePg	Pn	19 18 07.8	+0.9
LMR	La Mourre	2.68	262	ePg	Pn	19 18 08.3	+0.4
LMR				eSg	Sn	19 18 38.3	-1.5
	2.7nm,0.2s						
LMR	La Mourre	2.68	262	ePg	Pn	19 18 08.3	+0.4
LMR				eSg	Sn	19 18 38.3	-1.5
	1.4nm,0.2s						
LPG	La Plagne	2.99	307	eSg	Sn	19 18 46.5	-0.8
	1.8nm,0.2s						
LPG	La Plagne	2.99	307	eSg	Sn	19 18 46.5	-0.8
	0.9nm,0.2s						
ORIF	Oris-en-Rattie	3.28	292	ePg	Pn	19 18 16.9	+0.9
ORIF				eSg	Sn	19 18 54.0	-0.4
SMRF	Simiane la Rot	3.32	275	ePg	Pn	19 18 17.2	+0.6
LOR	Lormes	5.64	311	ePg	Pn	19 18 48.4	-0.2
SSF	Saint Saulge	5.73	308	ePg	Pn	19 18 49.2	-0.5
MTLF	Montolieu	5.78	269	ePg	Pn	19 18 50.0	-0.5

*ISCJB **16** 19:17:47.5±0.5,3425N±001×2650E±002,h16km±4km, mb4.7/95,MS4.5/11,Error ellipse: s-maj=3.0km s-min=1.7km az=84.1*
*IDC **16** 19:17:47.8±0.7,3447N×2648E,h0km,mb4.5/18, mb1 4.5/24,mb1mx4.4/31,mbtmp4.4/24,ML4.5/5,MS4.3/1, Ms1 4.3/1,ms1mx3.2/33,Error ellipse: s-maj=17.2km s-min=13.1km az=170.0*
*HLW **16** 19:17:47.3,3462N×2653E,h33km,Mb4.2*
*CSEM **16** 19:17:48.5,34.15N×2647E,h30km,mb4.7*
*SZGRF **16** 19:17:50.8,3441N×2654E,h10km,mb4.3,Crete, Greece*
*MOS **16** 19:17:50.7±1.2,3437N×2644E,h33km,mb4.9/39, MS4.3/6,Error ellipse: s-maj=4.8km s-min=2.3km az=110.0*
*THE **16** 19:17:51.9,3424N×2667E,h32km,ML4.0*
*BJI **16** 19:17:51.7,3458N×26.17E,h52km,mB5.1,mb4.9,Ms5.0, Msz4.7*
*PDG **16** 19:17:51.1±0.2,3407N×2521E,h11km±1km*
*NIC **16** 19:17:52.8±0.3,3495N×2659E,h25km,mb4.5,ML4.1, MW3.8*
*ATH **16** 19:17:55.8,3468N×2637E,h40km±1km,MD4.4/11,ML4.2*
*NEIC **16** 19:17:55.8,3468N×2637E,h40km,mb4.5/74, MD4.4(ATH),After ATH.*
NEIC Felt at Athinai, Filothi, Nea Smirni, Voula and Zakinthos.
ISC 16 19:17:51.3±0.6,**3427N**±001×**2649E**±002,**h30**km±4km, **n558,**σ**1^{s}31**/620,**mb4.7**/95,**MS4.5**/11,**41C-51D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	Neapolis	1.23	324	eP	Pn	19 18 12.0	-0.5
NPS				eS	Sn	19 18 24.2	-3.9
KARP	Karpathos	1.39	23	⇑iP	Pn	19 18 16.2	+1.5
KARP				eS	Sn	19 18 30.4	-1.7
IDI	Anoyia	1.67	308	Pn	Pn	19 18 20.5	+2.0
	32nm,0.3s,baz=130,slow=14,SNR=120						
IDI				Sn	Sn	19 18 42.5	+3.7
	105nm,0.3s,baz=196,slow=22,SNR=11						
VAM	Vamos	2.20	302	eP	Pn	19 18 28.0	+2.2
VAM				eS	Sn	19 18 51.3	-0.8
SANT	Santorini	2.26	338	ePn	Pn	19 18 27.4	+0.7
SANT				eSn	Sn	19 18 54.9	+1.3
SANT	Santorini	2.26	338	P	Pn	19 18 27.2	+0.5
SANT				S	Sn	19 18 55.0	+1.4
ARG	Arkhangelos	2.36	34	⇑iP	Pn	19 18 30.0	+2.0
ARG				eS	Sn	19 18 56.0	0.0
DAT	Datca	2.61	20	PN	Pn	19 18 32.4	+0.9
BODT	Bodrum	2.87	13	PN	Pn	19 18 37.2	+2.2
APE	Apeiranthos	2.91	345	ePn	Pn	19 18 36.4	+0.9
APE				eSn	Sn	19 19 09.7	+0.2
APE	Apeiranthos	2.91	345	eP	Pn	19 18 35.8	+0.3
APE				eS	Sn	19 19 04.4	-5.0
APE	Apeiranthos	2.91	345	P	Pn	19 18 37.0	+1.5
APE				S	Sn	19 19 10.0	+0.6
APE	Apeiranthos	2.91	345	ePn	Pn	19 18 36.4	+0.9
APE				eS	Sn	19 19 04.4	-5.0
APE				eSn	Sn	19 19 09.7	+0.3
DALT	Dalyan (Mudla)	3.05	34	PN	Pn	19 18 39.0	+1.5
HMAT	Matruh	3.20	171	⇑P	Pn	19 18 40.0	+0.3
YER	Yerkesik	3.21	26	PN	Pn	19 18 40.9	+1.2
SMG	Samos	3.45	5	eP	Pn	19 18 42.9	-0.1
SMG				eS	Sn	19 19 18.0	-4.8
AYDN	Tasoluk	3.57	18	iP	Pn	19 18 45.5	+0.9
ELL	Elmali	3.73	47	PN	Pn	19 18 48.7	+1.9
VLI	Veliai	3.79	311	eP	Pn	19 18 48.5	+0.8
VLI				eS	Sn	19 19 28.3	-3.1
DNZL	Cakiroluk	4.00	30	iP	Pn	19 18 51.0	+0.5
DENT	Denizli	4.04	30	PN	Pn	19 18 51.5	+0.3
CHOS	Chios island	4.13	355	ePn	Pn	19 18 53.1	+0.8
CHOS				eSn	Sn	19 19 39.9	+0.4
BLCB	Balcova	4.14	6	PN	Pn	19 18 53.6	+1.2
IZM	Izmir	4.17	8	PN	Pn	19 18 53.6	+0.7
KDAG	Bornova	4.18	8	iP	Pn	19 18 53.9	+0.9
ANTB	Antalya	4.29	51	ePN	Pn	19 18 55.8	+1.2
ATH	Athens Observa	4.33	330	eP	Pn	19 18 56.4	+1.3
BCK	Bucak	4.61	45	ePN	Pn	19 19 01.1	+2.2
ITM	Ithomi	4.72	309	eP	Pn	19 19 02.2	+1.8
ITM				eS	Sn	19 19 50.9	-3.2
AKHS	Akhisar	4.73	13	iP	Pn	19 19 00.9	+0.4
ISP	Isparta	4.83	41	ePN	Pn	19 19 03.2	+1.2
ISP	Isparta	4.83	41	ePn	Pn	19 18 58.9	-3.1
ISP				P		19 19 02.6	
ISP				S	Sn	19 19 56.1	-0.8
ISP	Isparta	4.83	41	ePn	Pn	19 19 03.2	+1.2
ISP				S	Sn	19 19 56.1	-0.8
PPCY	Paphos	4.87	81	P	Pn	19 19 01.4	-1.1
TKTP	Tekketepe	4.88	38	iP	Pn	19 19 04.5	+1.9
PRK	Paraskevi	4.97	358	eP	Pn	19 19 04.5	+0.6
PRK				eS	Sn	19 19 55.7	-4.8
SWA1		5.03	188	P	Pn	19 19 05.9	+1.2
SWA1				S	Sn	19 20 02.9	+1.0
SWA2		5.08	190	⇑P	Pn	19 19 06.8	+1.3
ALFC	Alevga	5.11	78	⇑iP	Pn	19 19 04.7	-1.1
	11nm,0.4s						
ALFC				S	Sn	19 20 00.6	-3.2
LKR	Lokris	5.20	328	eP	Pn	19 19 08.2	+1.1
SZAC	Souni-Zanaja	5.30	83	P	Pn	19 19 07.9	-0.5
SZAC				S	Sn	19 20 07.2	-1.3
AOS	Alonnisos	5.33	338	ePn	Pn	19 19 10.3	+1.5
GDZ	Gediz	5.38	26	eP	Pn	19 19 10.7	+1.2
RLS	Riolos of Patr	5.55	314	eP	Pn	19 19 13.4	+1.5
RLS				eS	Sn	19 20 11.3	-3.4
HDMB	Hadim	5.58	59	ePN	Pn	19 19 14.9	+2.7
DST	Dursunbey	5.60	17	ePN	Pn	19 19 11.7	-0.8
MAMC	Mammari	5.61	79	P	Pn	19 19 12.0	-0.7
NEO	Neokhori	5.67	333	eP	Pn	19 19 15.6	+2.0
CSS	Prodhromos	5.68	81	P	Pn	19 19 12.5	-1.2
	6.9nm,0.6s						
CSS				S	Sn	19 20 15.8	-2.1
CSS	Prodhromos	5.68	81	ePn	Pn	19 19 12.1	-1.5
CSS				eSn	Sn	19 20 13.5	-4.4
CSS	Prodhromos	5.68	81	ePn	Pn	19 19 12.1	-1.6
CSS				eSn	Sn	19 20 13.5	-4.4
CSS				S	Sn	19 20 15.8	-2.1
LIA	Limnos Island	5.72	350	eP	Pn	19 19 15.5	+1.3
XOR	Xorichti	5.74	333	ePn	Pn	19 19 15.8	+1.3
AANS		5.74	132	⇓P	Pn	19 19 13.6	-0.9
ERMK	Ermenek	5.75	64	iP	Pn	19 19 15.2	+0.6
HMYD	Mayadein	5.76	139	⇑P	Pn	19 19 14.5	-0.3
HNAT	Natroun	5.80	142	⇓P	Pn	19 19 14.6	-0.7
AGG	Agios Georgios	5.81	326	ePn	Pn	19 19 17.3	+1.9
AGG				eSn	Sn	19 20 23.2	+2.3
AGG	Agios Georgios	5.81	326	P	Pn	19 19 17.4	+2.0
AGG				S	Sn	19 20 21.6	+0.7
AGG	Agios Georgios	5.81	326	ePn	Pn	19 19 17.3	+1.9
AGG				S	Sn	19 20 21.7	+0.7
SQR		5.92	136	⇑P	Pn	19 19 16.6	-0.3
GADA	Gvkgeada	5.93	356	ePN	Pn	19 19 17.5	+0.4
FYM	Al Fayyum	5.98	138	⇓P	Pn	19 19 17.9	+0.1
FYM				S	Sn	19 20 23.3	-1.8
EVR	Evrytania	5.98	322	eP	Pn	19 19 20.0	+2.3
KONT	Konya--Tatoy	6.00	51	ePN	Pn	19 19 18.6	+0.5
AYT	Al ‘Ayyat	6.03	138	P	Pn	19 19 18.6	+0.2
PAIG	Paliouri	6.08	339	ePn	Pn	19 19 20.5	+1.4
VLS	Valsamata	6.16	311	eP	Pn	19 19 22.2	+1.9
IKL	Isikli	6.21	69	ePN	Pn	19 19 21.1	+0.2
ULDT	Uludag	6.23	19	iP	Pn	19 19 21.5	+0.2
PHNC	Paralimni	6.26	81	P	Pn	19 19 22.6	+1.0
KOT	Kottamia	6.26	132	P	Pn	19 19 21.4	-0.2
AWBH		6.28	160	⇑P	Pn	19 19 22.6	+0.8
ESKT	Eskisehir	6.30	32	ePN	Pn	19 19 21.8	-0.4
ESKT	Eskisehir	6.30	32	iP	Pn	19 19 20.9	-1.3
SEYT	Eskypehyr	6.30	32	iP	Pn	19 19 20.9	-1.3
HSAF	As Saff	6.32	136	⇑P	Pn	19 19 21.9	-0.5
KIZT	Kizilcal	6.32	42	ePN	Pn	19 19 23.5	+1.0
OUR	Ouranopolis	6.38	342	ePn	Pn	19 19 25.1	+1.9
OUR	Ouranopolis	6.38	342	P	Pn	19 19 24.9	+1.7
OUR	Ouranopolis	6.38	342	ePn	Pn	19 19 25.1	+1.9
HHAG	Hagoal	6.41	131	⇑P	Pn	19 19 23.4	-0.2
HHAG				S	Sn	19 20 33.0	-2.9
GLL	Jalalah	6.44	135	⇓P	Pn	19 19 23.6	-0.5
LKD	Levkas	6.46	315	ePn	Pn	19 19 25.3	+0.9
LKD				eSn	Sn	19 20 39.4	+2.3
LKD	Levkas	6.46	315	P	Pn	19 19 25.3	+0.9
LKD				S	Sn	19 20 38.6	+1.4
LKD	Levkas	6.46	315	ePn	Pn	19 19 25.3	+0.9
LKD				S	Sn	19 20 38.6	+1.5
PLG	Polygyros	6.56	339	⇑iP	Pn	19 19 27.6	+1.8
ALN	Alexandroupoli	6.63	357	ePn	Pn	19 19 27.2	+0.5
LIT	Litokhoron	6.64	332	ePn	Pn	19 19 27.9	+1.0
LIT	Litokhoron	6.64	332	P	Pn	19 19 27.9	+1.0
LIT				S	Sn	19 20 44.1	+2.6
LIT	Litokhoron	6.64	332	ePn	Pn	19 19 27.9	+1.0
LIT				S	Sn	19 20 44.1	+2.6
MEST	Erdemli	6.66	67	iP	Pn	19 19 28.2	+1.0
AMAG	Maghara	6.73	121	⇑P	Pn	19 19 26.8	-1.2
RDO	Rodhopi	6.91	354	eP	Pn	19 19 31.9	+1.4
MEV	Metsovon	6.93	324	ePn	Pn	19 19 33.0	+2.2
MEV				eSn	Sn	19 20 51.7	+3.0
SUZ		6.96	128	P	Pn	19 19 30.0	-1.1
JAN	Janina	7.02	322	eP	Pn	19 19 35.0	+2.9
KZN	Kozani	7.11	329	eP	Pn	19 19 35.3	+2.1
ZAF		7.16	132	⇓P	Pn	19 19 33.3	-0.7
IGT	Igoumenitsa	7.21	319	ePn	Pn	19 19 34.9	+0.3
IGT	Igoumenitsa	7.21	319	P	Pn	19 19 35.2	+0.6
IGT	Igoumenitsa	7.21	319	P	Pn	19 19 35.2	+0.6
HFRF	Wahat Farafira	7.26	167	⇓P	Pn	19 19 36.1	+0.7
ZNM		7.30	130	⇑P	Pn	19 19 36.0	+0.2
NVR	Nevrokopi	7.37	344	eP	Pn	19 19 38.5	+1.6
KDZ	Kurdzhali	7.42	354	iP	Pn	19 19 39.0	+1.5
GRG	Griva	7.42	335	ePn	Pn	19 19 39.0	+1.4
ANTO	Ankara	7.53	40	P	Pn	19 19 36.6	-2.4
MMAI	Mount Meron Ar	7.54	97	Pn	Pn	19 19 37.8	-1.3
	8.3nm,0.3s,baz=282,slow=12,SNR=20						
MMAI				Sn	Sn	19 20 59.5	-4.0
	23nm,0.3s,baz=300,slow=22,SNR=8.7						
BHL	Bhannes	7.61	90	ePn	Pn	19 19 39.1	-1.0
MMB	Musomiste	7.63	344	ePn	Pn	19 19 41.8	+1.4
FNA	Florina	7.67	330	ePn	Pn	19 19 42.2	+1.2
FNA				eSn	Sn	19 21 09.1	+2.3
HNKL	Nakhl	7.68	122	P	Pn	19 19 40.1	-1.0
SGKT	Sivrigoynuk	7.70	33	iP	Pn	19 19 41.8	+0.5
BIA	Bitola	7.89	330	ePn	Pn	19 19 45.9	+1.9
BR131	Keskin Array S	7.90	44	ePn	Pn	19 19 43.9	-0.1
BR131	Keskin Array S	7.90	44	ePn	Pn	19 19 43.9	-0.2
BRTR	Keskin Array B	7.90	44	Pn	Pn	19 19 44.6	+0.6
	0.8nm,0.3s,baz=219,slow=13,SNR=56						
BRTR				Sn	Sn	19 21 10.3	-2.1
	0.2nm,0.3s,baz=42,slow=20,SNR=3.3						
BRBR	Barbar	7.92	94	⇑iP	Pn	19 19 44.1	-0.2
ARNB	Al Arnab	7.94	76	⇓iP	Pn	19 19 44.0	-0.6
HRDS	Abu Rudays	8.02	132	⇑P	Pn	19 19 45.2	-0.6
GRB	Gharib	8.04	136	⇓P	Pn	19 19 45.5	-0.5
KKB	Krupnik	8.05	342	iP	Pn	19 19 48.0	+1.8
TCHB	Talchebab	8.08	99	⇑iP	Pn	19 19 46.4	-0.1
AVNT	Avonos	8.10	54	iP	Pn	19 19 48.4	+1.5
AVNT	Avonos	8.10	54	iP	Pn	19 19 48.3	+1.4
SLNF	Slenfeh	8.10	78	⇓iP	Pn	19 19 45.9	-1.0
ASUT		8.12	146	P	Pn	19 19 47.5	+0.4
BIDA	Albida	8.14	82	⇑iP	Pn	19 19 45.9	-1.5
QASN	Qassioun	8.17	92	⇑iP	Pn	19 19 47.5	-0.3
KOZT	Kozan	8.23	64	ePN	Pn	19 19 47.5	-1.1
WRDH	Warideh	8.24	79	⇓iP	Pn	19 19 47.9	-1.0
TOTH	TOTAH	8.32	93	⇑iP	Pn	19 19 49.2	-0.7
BTCH	Batrach	8.35	75	⇑iP	Pn	19 19 49.4	-0.9
TR2		8.52	132	⇓P	Pn	19 19 51.7	-0.9
EIL	Elat	8.52	120	ePn	Pn	19 19 52.8	+0.1
	280nm,0.5s						
EIL	Elat	8.52	120	ePn	Pn	19 19 52.8	+0.2
	280nm,0.5s						
KFRA	Kufra	8.54	81	⇑iP	Pn	19 19 52.8	-0.1
HKAT	Jabal Katrina	8.59	130	⇑P	Pn	19 19 53.0	-0.6
HKAT	Jabal Katrina	8.59	130	P	Pn	19 19 53.0	-0.6
HBST	Basata	8.63	123	P	Pn	19 19 53.3	-0.9
SALA	Sala	8.69	97	⇑iP	Pn	19 19 55.5	+0.5
VTS	Vitosha	8.70	344	⇓iP	Pn	19 19 58.4	+3.3
VTS	Vitosha	8.70	344	⇓P	Pn	19 19 58.4	+3.2
VTS	Vitosha	8.70	344	iP	Pn	19 19 58.0	+2.9
BNN	Bunyan	8.81	56	ePN	Pn	19 19 55.7	-0.9
HDHB	Dhahab	8.87	126	P	Pn	19 19 56.5	-0.9
TR1		8.93	132	P	Pn	19 19 57.6	-0.7
ASF	Jabal al Asfar	8.96	101	Pn	Pn	19 19 57.5	-1.2
	1.2nm,0.3s,baz=160,slow=8.5,SNR=10						
ASF				Sn	Sn	19 21 32.1	-6.6
	1.1nm,0.3s,baz=88,slow=19,SNR=8.2						
SHRM		9.12	132	⇑P	Pn	19 20 00.6	-0.3
GAZ	Gaziantep	9.19	69	eP	Pn	19 20 00.3	-1.5
HHRG	Al Ghardaqah	9.29	137	⇓P	Pn	19 20 02.5	-0.7
SLMH	Al Salmeh	9.55	75	⇑iP	Pn	19 20 06.4	-0.4
ULC	Ulcinj	9.57	326	⇓iPn	Pn	19 20 05.6	-1.4
ULC				eSn	Sn	19 21 46.0	-7.5
PVY	Plav	9.76	330	ePn	Pn	19 20 10.2	+0.6
PVY				eSn	Sn	19 21 52.6	-5.6
JHLN	Al Jahlan	9.91	78	⇓iP	Pn	19 20 12.1	+0.5
TTG	Podgorica	9.93	327	⇓iPn	Pn	19 20 11.4	-0.6
TTG				eSn	Sn	19 21 55.4	-7.0
BUM	Brajici-Budva	9.99	326	⇓iPn	Pn	19 20 11.6	-1.3
BUM				eSn	Sn	19 21 56.5	-7.5
HSFG		10.00	138	⇓P	Pn	19 20 12.0	-0.9
IVA	Berane	10.02	331	⇓iPn	Pn	19 20 13.3	+0.1
IVA				eSn	Sn	19 21 59.3	-5.3
TIRR	Tirgusor	10.29	8	⇓iP	Pn	19 20 24.5	+7.7
TIRR	Tirgusor	10.29	8	ePn	Pn	19 20 16.2	-0.6
TIRR				⇓P		19 20 24.5	
TIRR	Tirgusor	10.29	8	ePn	Pn	19 20 16.2	-0.6
HCY	Herceg Novi	10.30	325	⇓iPn	Pn	19 20 14.9	-2.1
HCY				eSn	Sn	19 22 03.1	-8.2
VAE	Valguarnera	10.31	292	Pn	Pn	19 20 18.9	+1.7
	2.8nm,0.3s,baz=94,slow=20,SNR=10						
VAE				Sn	Sn	19 22 03.8	-8.0
	2.8nm,0.3s,baz=250,slow=3.9,SNR=4.3						
NKY	Niksic	10.35	328	⇓iPn	Pn	19 20 16.7	-1.1
NKY				eSn	Sn	19 22 05.5	-7.2
MALT	Malatya	10.45	64	⇓iP	Pn	19 20 19.0	0.0

MALT Malatya 10.45 64 *e*Pn Pn 19 20 18.1 -0.9
GRUS Gruza 10.60 337 *e*Pn Pn 19 20 20.9 -0.2
PLE Pljevlja 10.61 331 ⇓*i*Pn Pn 19 20 21.1 -0.1
PLE *e*Sn Sn 19 22 13.1 -5.8
BRY Bratogost 10.63 327 ⇓*i*Pn Pn 19 20 19.8 -1.7
BRY *e*Sn Sn 19 22 12.2 -7.2
UPM Unac-Piva 10.70 329 ⇓*i*Pn Pn 19 20 22.1 -0.5
UPM *e*Sn Sn 19 22 14.1 -7.2
SVIS Svilajnac 10.81 339 *e*Pn Pn 19 20 18.8 -5.3
HQSR 10.89 139 ⇓P Pn 19 20 25.1 0.0
DIVS Divcibare 11.03 335 *e*Pn Pn 19 20 26.8 -0.3
MLR Muntele Rosu 11.22 358 Pn Pn 19 20 26.7 -2.9
0.5nm,0.3s,baz=174,slow=4.2,SNR=4.6
MLR Muntele Rosu 11.22 358 ⇓*i*P Pn 19 20 34.7 +5.1
MLR Muntele Rosu 11.22 358 Pn Pn 19 20 26.7 -2.9
MLR ⇑P 19 20 34.9
HADB 11.34 139 P Pn 19 20 32.0 +0.7
GZR Gura Zlata 11.47 347 ⇑*i*P Pn 19 20 36.1 +3.0
GZR Gura Zlata 11.47 347 ⇑P Pn 19 20 36.1 +3.0
EMRS Mersa Alam 11.73 140 P Pn 19 20 37.5 +1.0
EMRS Mersa Alam 11.73 140 P Pn 19 20 37.5 +0.9
AAHD Abu Hadid 11.82 151 P Pn 19 20 39.3 +1.4
BZS Buzias 11.94 343 ⇓*i*P Pn 19 20 42.4 +3.0
HAGS Hagol 12.32 141 P Pn 19 20 46.0 +1.3
HKFR Khafra 12.38 159 ⇑P Pn 19 20 47.3 +1.9
AADN Adndan 12.88 159 P Pn 19 20 53.9 +1.6
PKSM Moragy 13.35 336 ⇓*i*P Pn 19 20 58.1 -0.5
PKSM Moragy 13.35 336 ⇓P Pn 19 20 58.1 -0.6
BURAR Bucovina Array 13.37 356 ⇓*i*P Pn 19 21 04.8 +5.8
BURAR Bucovina Array 13.37 356 ⇓P Pn 19 21 04.8 +5.8
ANN Anapa 13.48 35 *e*P Pn 19 21 09.4 +9.0
ANN pmax pmax
comp=Z,55nm,2.2s
KEST Kesra 14.13 281 Pn Pn 19 21 11.1 +1.7
comp=Z,0.1nm,0.3s,baz=102,slow=9.3,SNR=3.2
KEST Sn Sn 19 23 40.9 -4.3
comp=Z,0.1nm,0.3s,baz=89,slow=20,SNR=2.7
BOJS Bojanci 14.14 326 *i*Pn Pn 19 21 06.9 -2.6
BOJS *i*Sn Sn 19 23 35.0 -10
PSZ Piszkesteto 14.51 342 ⇑*i*P Pn 19 21 16.5 +2.0
PSZ Piszkesteto 14.51 342 *e*Pn Pn 19 21 13.4 -1.2
PSZ ⇑P 19 21 16.4
PSZ Piszkesteto 14.51 342 *e*P Pn 19 21 13.4 -1.1
VSL Villasalto 14.65 296 *e*Pn Pn 19 21 21.1 +4.6
PDKS Podkum 14.68 327 *e*Pn Pn 19 21 23.5 +6.7
KECS Kecovo 14.90 344 *e*P Pn 19 21 23.2 +3.4
KECS pmax pmax
comp=Z,2.0nm,0.7s
KECS Kecovo 14.90 344 *e*P Pn 19 21 23.2 +3.4
comp=Z,2.2nm,0.7s
KECS *e* 19 21 31.8
KECS *e* 19 21 42.5
KOLS Kolonicke sedl 14.99 349 *e*P Pn 19 21 23.2 +2.2
KOLS pmax pmax
comp=Z,4.0nm,0.9s
KOLS Kolonicke sedl 14.99 349 *e*P Pn 19 21 23.2 +2.2
comp=Z,4.0nm,0.9s
KOLS *e* 19 21 27.5
KOLS *e* 19 21 37.5
JAVS Javornik 14.99 324 *i*Pn Pn 19 21 18.6 -2.4
JAVS *e*Sn Sn 19 23 53.4 -13
PERS Pernice 15.07 328 *e*Pn Pn 19 21 18.7 -3.3
CRVS Cervenica-Dubn 15.10 347 *e*PN Pn 19 21 24.2 +1.8
CRVS *e*pP pP 19 21 35.5 +0.3
CRVS Cervenica-Dubn 15.10 347 *e*P Pn 19 21 24.3 +1.9
CRVS pmax pmax
comp=Z,3.0nm,0.7s
CRVS Cervenica-Dubn 15.10 347 *e*P Pn 19 21 24.3 +1.9
comp=Z,3.0nm,0.7s
CRVS *e* 19 21 35.5
CRVS Cervenica-Dubn 15.10 347 *e*P Pn 19 21 24.3 +1.9
comp=Z,3.0nm,0.7s
VOY Vojsko 15.17 325 *e*Pn Pn 19 21 21.2 -2.2
VOY *e* 19 21 27.9
VOY *e* 19 21 37.4
VOJS Vojsko 15.18 324 *i*Pn Pn 19 21 20.9 -2.6
VYHS Vyhne 15.32 340 *e*P Pn 19 21 24.8 -0.5
VYHS pmax pmax
comp=Z,4.0nm,1.0s
VYHS Vyhne 15.32 340 *e*P Pn 19 21 24.8 -0.5
comp=Z,4.4nm,1.0s
VYHS *e* 19 21 33.7
VYHS *e* 19 21 37.9
ARSA Arzberg 15.38 331 ⇑*i*P Pn 19 21 24.6 -1.5
comp=Z,6.7nm,0.6s
ARSA Arzberg 15.38 331 ⇑*i*P Pn 19 21 24.6 -1.6
comp=Z,6.7nm,0.6s
STHS Stebnicka Huta 15.63 347 *e*P Pn 19 21 33.3 +3.9
STHS *e* 19 21 39.3
STHS Stebnicka Huta 15.63 347 *e*P Pn 19 21 33.4 +4.0
STHS pmax pmax
comp=Z,6.0nm,0.8s
STHS Stebnicka Huta 15.63 347 *e*P Pn 19 21 33.4 +4.0
comp=Z,5.7nm,0.8s
STHS *e* 19 21 39.3
GNI Garni 15.67 63 Pn Pn 19 21 32.0 +2.1
comp=Z,0.9nm,0.3s,baz=4.6,slow=4.7,SNR=9.1
GNI Garni 15.67 63 *d i*P Pn 19 21 32.0 +2.1
GNI pmax pmax
comp=Z,33nm,1.0s
GNI Garni 15.67 63 *e*Pn Pn 19 21 31.5 +1.5
comp=Z,38nm,1.0s
SMOL Smolenice 15.76 337 *e*P Pn 19 21 33.4 +2.4
CONA Conrad Observa 15.80 333 ⇑*i*Pn Pn 19 21 30.5 -1.1
comp=Z,8.1nm,1.0s,SNR=7.2
NIE Niedzica 15.82 345 *e*P Pn 19 21 36.7 +4.9
KIV Kislovodsk 15.84 48 *ke*P Pn 19 21 33.8 +1.7
KIV pmax pmax
comp=Z,105nm,1.2s
KIV Kislovodsk 15.84 48 *e*Pn Pn 19 21 33.7 +1.6
comp=Z,134nm,1.1s
KIV Kislovodsk 15.84 48 P Pn 19 21 34.7 +2.6
SNR=27
VLC Villacollemand 15.89 313 *e*Pn Pn 19 21 31.0 -1.7
comp=Z,11nm,1.0s
VLC Villacollemand 15.89 313 *e*Pn Pn 19 21 31.0 -1.8
comp=Z,11nm,1.0s
PGF Pioggiola 15.99 306 *e*P Pn 19 21 32.2 -1.9
comp=Z,42nm,0.9s
PGF Pioggiola 15.99 306 *e*P Pn 19 21 32.2 -1.9
PGF pmax pmax
comp=Z,21nm,0.9s
PGF Pioggiola 15.99 306 *e*P Pn 19 21 32.2 -1.9
comp=Z,21nm,0.9s
ZEI Tsey 16.03 53 *e*P Pn 19 21 37.4 +2.8
KBA Koelnbreinsper 16.20 326 ⇓*i*P Pn 19 21 34.5 -2.1
comp=Z,1.6nm,0.5s
KBA Koelnbreinsper 16.20 326 ⇓*i*P Pn 19 21 34.5 -2.2
KBA pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 16.55 6 Pn Pn 19 21 40.0 -1.1
comp=Z,8.0nm,0.3s,baz=194,slow=11,SNR=48
AKASG Sn Sn 19 24 50.5 +6.6
baz=190,slow=22,SNR=9.9
AKASG Malin Array Be 16.55 6 Pn Pn 19 21 40.0 -1.1
AKASG Sn Sn 19 24 50.5 +6.6
AKBB Malin Array Si 16.55 6 *e*Pn Pn 19 21 38.8 -2.3
AKBB *e*Sn Sn 19 24 43.3 -0.6
AKBB Malin Array Si 16.55 6 *e*P Pn 19 21 38.8 -2.3
OJC Ojcow 16.68 345 *e*P Pn 19 21 42.0 -0.8
VRAC Vranov 16.72 337 Pn Pn 19 21 41.7 -1.6
comp=Z,0.9nm,0.3s,baz=145,slow=12,SNR=5.3
VRAC Vranov 16.72 337 ⇓*i*P Pn 19 21 41.6 -1.7
VRAC Vranov 16.72 337 P Pn 19 21 41.7 -1.6
VRAC pmax pmax
comp=Z,1.0nm,0.3s
VRAC Vranov 16.72 337 ⇓P Pn 19 21 41.6 -1.7
OKC Ostrava-Krasne 16.73 341 *e*P Pn 19 21 43.1 -0.3
MORC Moravsky Berou 16.84 340 ⇓*i*P Pn 19 21 44.0 -0.9
MORC Moravsky Berou 16.84 340 *e*Pn Pn 19 21 42.1 -2.8
comp=Z,26nm,1.2s
TREC Trest 17.08 335 *e*P Pn 19 21 49.6 +1.7
WTTA Wattenberg 17.14 324 ⇑*i*P Pn 19 21 49.7 +1.1
comp=Z,11nm,0.7s,SNR=5.9
WTTA Wattenberg 17.14 324 ⇑*i*P Pn 19 21 49.7 +1.1
WTTA pmax pmax
comp=Z,11nm,0.7s
WATA Walderalm 17.22 324 ⇑*i*P Pn 19 21 49.5 -0.1
comp=Z,13nm,0.5s
WATA Walderalm 17.22 324 ⇑*i*P Pn 19 21 49.5 -0.1
WATA pmax pmax
comp=Z,13nm,0.5s
SQTA Sankt Quirin 17.32 323 ⇑*i*P Pn 19 21 50.7 -0.2
comp=Z,9.9nm,0.4s

GEC2 GERESS Array S 17.39 331 *e*P Pn 19 21 50.2 -1.5
comp=Z,17nm,0.9s
GEC2 GERESS Array S 17.39 331 *e*P Pn 19 21 50.2 -1.5
GEC2 pmax pmax
comp=Z,52nm,0.9s
GERES GERESS Array B 17.39 331 P Pn 19 21 50.4 -1.3
comp=Z,1.0nm,0.3s,baz=145,slow=12,SNR=48
SBF Sospel 17.60 309 *e*P Pn 19 21 54.3 +0.1
comp=Z,92nm,1.2s
SBF Sospel 17.60 309 *e*P Pn 19 21 54.3 +0.1
SBF pmax pmax
comp=Z,46nm,1.2s
SBF Sospel 17.60 309 *e*P Pn 19 21 54.3 +0.1
comp=Z,46nm,1.2s
KHC Kasperske Hory 17.67 331 *e*P Pn 19 21 54.4 -0.7
KHC *e*pP pP 19 22 05.5 +1.8
DPC Dobruska-Polom 17.72 338 *e*P Pn 19 21 55.0 -0.7
FUR Furstenfeldbru 17.95 325 *e*P Pn 19 21 59.2 +0.6
comp=Z,45nm,0.9s
FUR Furstenfeldbru 17.95 325 *e*P Pn 19 21 59.2 +0.6
FUR pmax pmax
comp=Z,301nm,0.9s
UPC Upice 17.95 338 *e*P Pn 19 21 57.7 -0.9
WET Wettzell 17.96 330 *e*P Pn 19 21 57.8 -1.0
comp=Z,28nm,1.3s
WET Wettzell 17.96 330 *e*P Pn 19 21 57.8 -1.0
WET pmax pmax
comp=Z,46nm,1.3s
FRF La Foret Royal 17.98 307 *e*P Pn 19 21 56.0 -3.0
comp=Z,9.5nm,0.7s
FRF La Foret Royal 17.98 307 *e*P Pn 19 21 56.0 -3.0
FRF pmax pmax
comp=Z,5.0nm,0.7s
FRF La Foret Royal 17.98 307 *e*P Pn 19 21 56.0 -3.0
comp=Z,4.8nm,0.7s
LMR La Mourre 17.98 306 *e*P Pn 19 21 57.5 -1.5
PRU Pruhonice 18.00 334 *e*P Pn 19 21 57.3 -1.9
RST Umm Al-Ruwaisa 18.04 100 *e*P Pn 19 21 57.7 -2.0
RST AMb AMB 19 22 04.0
comp=Z,30nm,0.9s
DAVA Damuels 18.05 321 ⇑*i*P Pn 19 21 59.5 -0.3
comp=Z,18nm,0.9s
MIB Mutribah 18.22 98 *e*P Pn 19 21 59.6 -2.3
MIB AMb AMB 19 22 04.8
comp=Z,30nm,1.1s
NAY Al-Naaiem 18.33 100 *e*P Pn 19 22 02.0 -1.3
NAY AMb AMB 19 22 06.5
comp=Z,31nm,1.0s
MBDF Montbardon 18.41 310 *e*P Pn 19 22 03.3 -1.0
comp=Z,32nm,0.7s
MBDF Montbardon 18.41 310 *e*P Pn 19 22 03.3 -1.0
MBDF pmax pmax
comp=Z,16nm,0.7s
MBDF Montbardon 18.41 310 *e*P Pn 19 22 03.3 -1.0
comp=Z,16nm,0.7s
PVCC Panska Ves 18.44 335 *e*P Pn 19 22 04.8 +0.2
BNI Bardonecchia 18.63 311 *e*P Pn 19 22 06.7 -0.1
BNI pmax pmax
comp=Z,21nm,1.4s
BNI Bardonecchia 18.63 311 *e*P Pn 19 22 06.7 -0.2
comp=Z,21nm,1.4s
BNI Bardonecchia 18.63 311 *e*P Pn 19 22 06.7 -0.1
comp=Z,21nm,1.4s
ROTZ Rotzenmuhle 18.73 330 *e*P Pn 19 22 05.9 -2.1
comp=Z,6.0nm,0.8s
LPG La Plagne 18.80 313 *e*P Pn 19 22 08.0 -0.9
comp=Z,13nm,0.5s
LPG La Plagne 18.80 313 *e*P Pn 19 22 08.0 -0.9
LPG pmax pmax
comp=Z,7.0nm,0.5s
LPG La Plagne 18.80 313 *e*P Pn 19 22 08.0 -0.9
comp=Z,6.9nm,0.5s
LPL La Plagne 18.82 313 *e*P Pn 19 22 07.4 -1.8
comp=Z,12nm,0.5s
LPL La Plagne 18.82 313 *e*P Pn 19 22 07.4 -1.8
LPL pmax pmax
comp=Z,6.0nm,0.5s
LPL La Plagne 18.82 313 *e*P Pn 19 22 07.4 -1.8
comp=Z,6.1nm,0.5s
SMRF Simiane la Rot 18.86 307 *e*P Pn 19 22 07.9 -1.8
MANZ Manzenberg 18.93 330 *e*P Pn 19 22 08.3 -2.3
comp=Z,10.0nm,1.1s
BRG Bergjesshubel 18.95 335 *e*P Pn 19 22 09.9 -0.9
comp=Z,18nm,1.0s
RSL Roselend 18.97 313 *e*P Pn 19 22 10.7 -0.3
NKC Novy Kostel 18.99 331 *e*P Pn 19 22 08.9 -2.4
ORIF Oris-en-Rattie 19.07 310 *e*P Pn 19 22 10.4 -1.8
comp=Z,14nm,0.7s
ORIF Oris-en-Rattie 19.07 310 *e*P Pn 19 22 10.4 -1.8
ORIF pmax pmax
comp=Z,7.0nm,0.7s
ORIF Oris-en-Rattie 19.07 310 *e*P Pn 19 22 10.4 -1.8
comp=Z,6.9nm,0.7s
GRA1 Grafenberg Arr 19.09 328 *e*P Pn 19 22 10.9 -1.5
comp=Z,46nm,1.2s
GRF Grafenberg Arr 19.09 328 *e*P Pn 19 22 10.9 -1.5
comp=Z,46nm,1.2s
GRF Grafenberg Arr 19.09 328 *e*P Pn 19 22 10.9 -1.5
GRF pmax pmax
comp=Z,1.0nm,1.2s
GRF Grafenberg Arr 19.09 328 *e*P Pn 19 22 10.9 -1.5
GRF pmax pmax
comp=Z,46nm,1.2s
TANN Tannenbergstha 19.13 332 *e*P Pn 19 22 10.8 -2.1
comp=Z,20nm,1.1s
GUNZ Gunzen 19.14 331 *e*P Pn 19 22 11.5 -1.5
comp=Z,23nm,1.2s
FBE Freiberg 19.20 334 *e*P Pn 19 22 12.3 -1.5
comp=Z,38nm,1.0s
WERD Werda 19.22 332 *e*P Pn 19 22 11.7 -2.3
comp=Z,18nm,1.1s
OG01 Vacheresse 19.27 315 *e*P Pn 19 22 13.8 -0.7
VRSR Storozhevoye 19.29 25 *e*P Pn 19 22 12.9 -1.9
VRSR pmax pmax
comp=Z,7.0nm,0.7s
VRSR pmax pmax
comp=N,10.0nm,0.8s
VRSR pmax pmax
comp=E,9.0nm,0.9s
VRSR Storozhevoye 19.29 25 *e*P Pn 19 22 12.9 -1.9
comp=E,10.0nm,0.8s
STU Stuttgart 19.37 324 *e*P Pn 19 22 14.8 -1.0
STU pmax pmax
comp=Z,31nm,0.8s
STU Stuttgart 19.37 324 *e*P Pn 19 22 14.8 -1.0
comp=Z,31nm,0.8s
STU *e* 19 22 23.3
FELD Feldberg im Sc 19.41 320 *e*P Pn 19 22 15.2 -1.0
BBS Basel-Blauen 19.43 318 *e*P Pn 19 22 14.3 -2.2
BFO Black Forest 19.52 321 *e*P Pn 19 22 16.1 -1.5
comp=Z,17nm,0.9s
BFO Black Forest 19.52 321 *e*P Pn 19 22 16.1 -1.5
BFO pmax pmax
comp=Z,112nm,0.9s
CLL Collm 19.64 334 *e*P Pn 19 22 17.3 -1.8
comp=Z,18nm,1.1s
CLL Collm 19.64 334 ⇑P Pn 19 22 17.3 -1.8
comp=Z,logA/T=1.2
CLL *i* *PP pP 19 22 25.9 +0.4
CLL Collm 19.64 334 ⇑*i*P Pn 19 22 17.3 -1.8
comp=Z,12nm,0.7s
CLL *i* pP pP 19 22 25.9 +0.4
CLL Collm 19.64 334 ⇑*i*P Pn 19 22 17.3 -1.8
CLL pmax pmax
comp=Z,65nm,0.7s
MOX Moxa 19.65 331 *e*P Pn 19 22 18.3 -0.8
comp=Z,13nm,0.9s
MOX Moxa 19.65 331 *e*P Pn 19 22 18.0 -1.1
VOR Voronezh 19.73 24 *e*P Pn 19 22 18.0 -2.0
VOR pmax pmax
comp=Z,80nm,1.8s
VOR pmax pmax
comp=N,80nm,1.7s
VOR pmax pmax
comp=E,100nm,1.7s
VOR Voronezh 19.73 24 *e*P Pn 19 22 18.0 -2.0
comp=E,80nm,1.8s
LOMF Lomont 19.74 317 *e*P Pn 19 22 15.5 -4.7
CABF La Chapelle 19.76 315 *e*P Pn 19 22 17.7 -2.8
comp=E,41nm,0.9s
CABF La Chapelle 19.76 315 *e*P Pn 19 22 17.7 -2.8
CABF pmax pmax
comp=Z,20nm,0.9s
CABF La Chapelle 19.76 315 *e*P Pn 19 22 17.7 -2.8
comp=Z,20nm,0.9s
VIVF Saint-Julien-l 19.81 309 *e*P Pn 19 22 18.1 -3.0

comp=Z,12nm,0.8s
VIVF Saint-Julien-l 19.81 309 *e*P Pn 19 22 18.1 -3.0
VIVF pmax pmax
comp=Z,6.0nm,0.8s
VIVF Saint-Julien-l 19.81 309 *e*P Pn 19 22 18.1 -3.0
comp=Z,6.1nm,0.8s
OG05 Jujurieux 19.85 313 *e*P Pn 19 22 18.6 -3.0
MOF Molkenrain 19.86 319 *e*P Pn 19 22 20.2 -1.4
SUW Suwalki 19.88 354 *e*P Pn 19 22 19.6 -2.3
SUW L 19 28 00.2
comp=Z,1.4nm,26.6s
SUW Suwalki 19.88 354 *e*P Pn 19 22 19.6 -2.3
comp=Z,1µm,26.6s
HINF Hinteralfeld 19.99 319 *e*P Pn 19 22 20.6 -2.6
comp=Z,31nm,0.6s
HINF Hinteralfeld 19.99 319 *e*P Pn 19 22 20.6 -2.6
HINF pmax pmax
comp=Z,15nm,0.6s
HINF Hinteralfeld 19.99 319 *e*P Pn 19 22 20.6 -2.6
comp=Z,15nm,0.6s
LASF Ste Croix 20.04 306 *e*P P 19 22 25.1 +3.2
ECH Echery 20.06 320 *e*P P 19 22 22.6 +0.5
WLS Welschbruch 20.08 320 *e*P P 19 22 22.9 +0.6
VRHR Novokhopersk 20.10 29 *e*P P 19 22 22.7 +0.2
VRHR pmax pmax
comp=Z,60nm,0.6s
VRHR pmax pmax
comp=N,40nm,0.7s
VRHR pmax pmax
comp=E,40nm,0.6s
VRHR MLR MLR
comp=Z,560nm,16.0s,MS4.0
VRHR MLR MLR
comp=N,130nm,10.0s
VRHR MLR MLR
comp=E,210nm,15.0s
GKP Gorka Klasztor 20.11 344 *e*P P 19 22 21.0 -1.6
GKP L 19 23 21.8
comp=Z,3.2nm,41.4s
GKP Gorka Klasztor 20.11 344 *e*P P 19 22 21.0 -1.6
comp=Z,3µm,41.4s
CDF Champ du Feu 20.12 320 *e*P P 19 22 23.3 +0.6
comp=Z,86nm,1.0s
CDF Champ du Feu 20.12 320 *e*P P 19 22 23.3 +0.6
CDF pmax pmax
comp=Z,43nm,1.0s
CDF Champ du Feu 20.12 320 *e*P P 19 22 23.3 +0.6
comp=Z,43nm,1.0s
LANF Langenberg 20.20 322 *e*P P 19 22 24.5 +0.9
RUE Ruedersdorf 20.36 337 P P 19 22 21.4 -4.0
comp=Z,55nm,1.0s
HAU Haudompre 20.38 318 *e*P P 19 22 25.5 0.0
comp=Z,35nm,0.6s
HAU Haudompre 20.38 318 *e*P P 19 22 25.5 0.0
HAU pmax pmax
comp=Z,18nm,0.6s
HAU Haudompre 20.38 318 *e*P P 19 22 25.5 0.0
comp=Z,18nm,0.6s
THEF They Montfort 20.70 319 *e*P P 19 22 29.2 +0.1
TNS Taunus Mts 20.71 326 *e*P P 19 22 29.0 -0.2
comp=Z,34nm,1.1s
TNS Taunus Mts 20.71 326 *e*P P 19 22 29.0 -0.2
TNS pmax pmax
comp=Z,71nm,1.1s
LBL Lubilhac 20.89 309 *e*P P 19 22 32.8 +1.7
MTLF Montolieu 20.92 303 *e*P P 19 22 31.0 -0.4
PLDF La Plantade 20.96 311 *e*P P 19 22 31.6 -0.2
GTTG Gvttingen 21.01 330 *e*P P 19 22 32.5 +0.2
comp=Z,72nm,1.0s,mb5.0
SMF Signal de Mont 21.13 313 *e*P P 19 22 32.9 -0.7
comp=Z,19nm,0.7s,mb4.2
SMF Signal de Mont 21.13 313 *e*P P 19 22 32.9 -0.7
SMF pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
SMF Signal de Mont 21.13 313 *e*P P 19 22 32.9 -0.7
comp=Z,9.6nm,0.7s,mb4.2
PYM Petit Puy Mans 21.25 310 *e*P P 19 22 34.9 -0.1
MEZF Maizieres J'vi 21.37 318 *e*P P 19 22 36.2 -0.1
comp=Z,39nm,0.6s,mb4.6
MEZF Maizieres J'vi 21.37 318 *e*P P 19 22 36.2 -0.1
comp=Z,19nm,0.6s,mb4.6
LOR Lormes 21.41 314 *e*P P 19 22 35.6 -1.1
comp=Z,33nm,0.9s,mb4.4
LOR Lormes 21.41 314 *e*P P 19 22 35.6 -1.1
LOR pmax pmax
comp=Z,17nm,0.9s,mb4.4
LOR Lormes 21.41 314 *e*P P 19 22 35.6 -1.1
comp=Z,17nm,0.9s,mb4.4
WLF Walferdange 21.47 322 *e*P P 19 22 37.5 +0.2
comp=Z,45nm,1.0s,mb4.8
WLF Walferdange 21.47 322 P P 19 22 37.6 +0.3
WLF Walferdange 21.47 322 *e*P P 19 22 36.0 -1.3
WLF pmax pmax
comp=Z,37nm,0.9s,mb4.7
WLF Walferdange 21.47 322 *e*P P 19 22 36.0 -1.4
comp=Z,37nm,0.9s,mb4.7
WLF Walferdange 21.47 322 *e*P P 19 22 36.0 -1.3
comp=Z,37nm,0.9s,mb4.7
AVF Avril sur Loir 21.49 313 *e*P P 19 22 36.9 -0.7
comp=Z,5.7nm,0.4s,mb3.9
AVF Avril sur Loir 21.49 313 *e*P P 19 22 36.9 -0.7
comp=Z,2.8nm,0.4s,mb3.9
SSF Saint Saulge 21.52 313 *e*P P 19 22 36.8 -1.1
comp=Z,42nm,0.8s,mb4.6
SSF Saint Saulge 21.52 313 *e*P P 19 22 36.8 -1.1
SSF pmax pmax
comp=Z,21nm,0.8s,mb4.6
SSF Saint Saulge 21.52 313 *e*P P 19 22 36.8 -1.1
comp=Z,21nm,0.8s,mb4.6
CAF Calviac 21.55 307 *e*P P 19 22 36.7 -1.4
comp=Z,9.6nm,0.7s,mb4.0
CAF Calviac 21.55 307 *e*P P 19 22 36.7 -1.4
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
CAF Calviac 21.55 307 *e*P P 19 22 36.7 -1.4
comp=Z,4.8nm,0.7s,mb4.0
NRDL Niedersach Rie 21.68 332 *e*P P 19 22 40.4 +0.9
comp=Z,21nm,1.2s,mb4.4
BGF Bois d'Agland 21.70 312 *e*P P 19 22 40.6 +0.8
comp=Z,45nm,1.0s,mb4.6
BGF Bois d'Agland 21.70 312 *e*P P 19 22 40.6 +0.8
BGF pmax pmax
comp=Z,23nm,1.0s,mb4.6
BGF Bois d'Agland 21.70 312 *e*P P 19 22 40.6 +0.8
comp=Z,23nm,1.0s,mb4.6
TCF Toulx Ste Croi 21.98 310 *e*P P 19 22 42.0 -0.8
comp=Z,9.8nm,0.7s,mb4.1
TCF Toulx Ste Croi 21.98 310 *e*P P 19 22 42.0 -0.8
TCF pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
TCF Toulx Ste Croi 21.98 310 *e*P P 19 22 42.0 -0.8
comp=Z,4.9nm,0.7s,mb4.1
OBN Obninsk 22.00 16 ⇓*e*P P 19 22 41.3 -1.7
OBN pmax pmax
comp=Z,46nm,1.0s,mb4.9
OBN Obninsk 22.00 16 *e*P P 19 22 40.0 -3.0
comp=Z,30nm,0.6s,mb4.9
OBN Obninsk 22.00 16 *e*P P 19 22 40.0 -3.0
comp=Z,30nm,0.6s,mb4.9
RJF Les Rejaudoux 22.05 307 *e*P P 19 22 43.5 0.0
comp=Z,71nm,1.2s,mb4.7
RJF Les Rejaudoux 22.05 307 *e*P P 19 22 43.5 0.0
RJF pmax pmax
comp=Z,35nm,1.2s,mb4.7
RJF Les Rejaudoux 22.05 307 *e*P P 19 22 43.5 0.0
comp=Z,36nm,1.2s,mb4.7
MEM Membach 22.14 324 P P 19 22 44.8 +0.3
EPF Esparros 22.15 301 *e*P P 19 22 45.9 +1.3
comp=Z,5.2nm,0.7s,mb3.8
EPF Esparros 22.15 301 *e*P P 19 22 45.9 +1.3
EPF pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
EPF Esparros 22.15 301 *e*P P 19 22 45.9 +1.3
comp=Z,2.6nm,0.7s,mb3.8
BCLA Clavier 22.37 323 P P 19 22 47.8 +0.8
GIVF Givet 22.42 321 *e*P P 19 22 46.9 -0.6
comp=Z,35nm,0.7s,mb4.6
GIVF Givet 22.42 321 *e*P P 19 22 46.9 -0.6
GIVF pmax pmax
comp=Z,18nm,0.7s,mb4.6
GIVF Givet 22.42 321 *e*P P 19 22 46.9 -0.6
comp=Z,18nm,0.7s,mb4.6
LFF La Frestale 22.43 306 *e*P P 19 22 47.3 -0.3
DOU Dourbes 22.54 321 P P 19 22 48.3 -0.4
BAIF Baives 22.72 321 *e*P P 19 22 49.6 -1.0
comp=Z,120nm,1.0s,mb5.0

BAIF Baives 22.72 321 *e*P **P** **19 22 49.6 -1.0**
BAIF pmax pmax
comp=Z,60nm,1.0s,mb5.0
BAIF Baives 22.72 321 *e*P **P** **19 22 49.6 -1.0**
comp=Z,60nm,1.0s,mb5.0
BSEG Bad Segeberg 22.74 335 *e*P **P** **19 22 50.9 +0.1**
comp=Z,11nm,0.8s,mb4.3
BSEG Bad Segeberg 22.74 335 *e*P **P** **19 22 50.9 +0.1**
BSEG pmax pmax
comp=Z,38nm,0.8s,mb4.9
ETSF Etsaut 22.76 300 *e*P **P** **19 22 51.9 +0.8**
comp=Z,9.3nm,0.8s,mb4.0
ETSF Etsaut 22.76 300 *e*P **P** **19 22 51.9 +0.8**
ETSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
ETSF Etsaut 22.76 300 *e*P **P** **19 22 51.9 +0.8**
comp=Z,4.7nm,0.8s,mb4.0
MOS Moscow 22.81 16 *e*P **P** **19 22 49.8 -1.8**
MOS pmax pmax
comp=Z,49nm,1.0s,mb4.9
MOS Moscow 22.81 16 *e*P **P** **19 22 49.8 -1.8**
comp=Z,49nm,1.0s,mb4.9
SNF Seneffe 22.94 322 P **P** **19 22 53.0 0.0**
MFF Saint Martin d 23.60 309 *e*P **P** **19 23 00.4 +0.7**
comp=Z,16nm,0.6s,mb4.3
MFF Saint Martin d 23.60 309 *e*P **P** **19 23 00.4 +0.7**
MFF pmax pmax
comp=Z,8.0nm,0.6s,mb4.3
MFF Saint Martin d 23.60 309 *e*P **P** **19 23 00.4 +0.7**
comp=Z,8.1nm,0.6s,mb4.3
VSU Vasula 24.20 0*c i*P **P** **19 23 04.8 -0.4**
VSU Vasula 24.20 0 *i*P **P** **19 23 04.8 -0.4**
LDF La Druitiere 24.40 314 *e*P **P** **19 23 06.1 -0.9**
comp=Z,16nm,0.5s,mb4.4
LDF La Druitiere 24.40 314 *e*P **P** **19 23 06.1 -0.9**
LDF pmax pmax
comp=Z,8.0nm,0.5s,mb4.4
LDF La Druitiere 24.40 314 *e*P **P** **19 23 06.1 -0.9**
comp=Z,8.0nm,0.5s,mb4.4
FLN La Foliniere 24.69 314 *e*P **P** **19 23 09.2 -0.4**
comp=Z,19nm,0.5s,mb4.5
FLN La Foliniere 24.69 314 *e*P **P** **19 23 09.2 -0.4**
FLN pmax pmax
comp=Z,9.0nm,0.5s,mb4.6
FLN La Foliniere 24.69 314 *e*P **P** **19 23 09.2 -0.4**
comp=Z,9.4nm,0.5s,mb4.5
GRR Gorron 24.75 313 *e*P **P** **19 23 10.5 +0.3**
comp=Z,53nm,1.0s,mb4.7
GRR Gorron 24.75 313 *e*P **P** **19 23 10.5 +0.3**
GRR pmax pmax
comp=Z,27nm,1.0s,mb4.7
GRR Gorron 24.75 313 *e*P **P** **19 23 10.5 +0.3**
comp=Z,27nm,1.0s,mb4.7
ESDC Sonseca Array 24.86 291 P **P** **19 23 11.9 +0.7**
comp=Z,0.9nm,0.4s,mb3.6,baz=81,slow=9.2,SNR=9.5
ESLA Sonseca Array 24.86 291 *e*P **P** **19 23 11.4 +0.3**
comp=Z,2.1nm,0.9s,mb3.7
PUL Pulkovo 25.64 4 *e*P **P** **19 23 16.4 -1.8**
PUL pmax pmax
comp=Z,134nm,1.4s,mb5.3
PUL pmax pmax
comp=N,184nm,0.9s
PUL Pulkovo 25.64 4 *e*P **P** **19 23 16.4 -1.8**
comp=N,184nm,0.9s,mb5.6
SGMF Saint Gilles 25.74 312 *e*P **P** **19 23 19.1 -0.1**
comp=N,28nm,0.8s,mb4.6
SGMF Saint Gilles 25.74 312 *e*P **P** **19 23 19.1 -0.1**
SGMF pmax pmax
comp=Z,14nm,0.8s,mb4.5
SGMF Saint Gilles 25.74 312 *e*P **P** **19 23 19.1 -0.1**
comp=Z,14nm,0.8s,mb4.6
MDT Midelt 25.92 276 P **P** **19 23 21.8 +1.0**
comp=Z,2.4nm,0.7s,mb3.8,baz=77,slow=16,SNR=3.5
QUIF Quistinic 26.00 311 *e*P **P** **19 23 21.4 -0.1**
comp=Z,34nm,0.8s,mb4.6
QUIF Quistinic 26.00 311 *e*P **P** **19 23 21.4 -0.1**
QUIF pmax pmax
comp=Z,17nm,0.8s,mb4.6
QUIF Quistinic 26.00 311 *e*P **P** **19 23 21.4 -0.1**
comp=Z,17nm,0.8s,mb4.6
ROSF Rostrenen 26.22 311 *e*P **P** **19 23 22.9 -0.6**
comp=Z,30nm,0.7s,mb4.6
ROSF Rostrenen 26.22 311 *e*P **P** **19 23 22.9 -0.6**
ROSF pmax pmax
comp=Z,15nm,0.7s,mb4.6
ROSF Rostrenen 26.22 311 *e*P **P** **19 23 22.9 -0.6**
comp=Z,15nm,0.7s,mb4.6
FINES FINESS Array B 27.20 360 P **P** **19 23 30.4 -2.0**
comp=Z,6.0nm,0.6s,mb4.3,baz=158,slow=11,SNR=41
FINES FINESS Array B 27.20 360 *i*P **P** **19 23 30.6 -1.7**
FINES pmax pmax
comp=Z,6.0nm,0.6s
FIA1 FINESS Array S 27.20 360 *e*P **P** **19 23 29.0 -3.3**
HFS Hagfors 27.20 346 P **P** **19 23 30.3 -2.1**
comp=Z,5.4nm,0.7s,mb4.2,baz=134,slow=10,SNR=14
KAF Kangasniemi 27.87 360 *e*p **P** **19 23 35.6 -2.7**
comp=Z,2.7nm,0.4s,mb4.2
KAF Kangasniemi 27.87 360 *e*P **P** **19 23 35.6 -2.7**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
KLMR Klimovskoe 27.91 14 *e*P **P** **19 23 37.1 -1.6**
KLMR pmax pmax
comp=Z,30nm,1.0s,mb4.9
KLMR Klimovskoe 27.91 14 *e*P **P** **19 23 37.1 -1.6**
comp=Z,30nm,1.0s,mb4.9
AKTK Aktyubinsk 28.08 45 P **P** **19 23 39.9 -0.3**
AKTK Aktyubinsk 28.08 45 P **P** **19 23 39.8 -0.4**
AKTO Aktyubinsk 28.08 45 P **P** **19 23 39.9 -0.3**
comp=Z,7.9nm,0.9s,mb4.3,baz=258,slow=8.5,SNR=13
AKTO Aktyubinsk 28.08 45 P **P** **19 23 40.3 +0.1**
AKTO pmax pmax
comp=Z,3.0nm,1.3s,mb3.8
NAO01 NORSAR Array S 28.45 344 *e*P **P** **19 23 42.3 -1.2**
comp=Z,15nm,0.9s,mb4.6
NAO01 NORSAR Array S 28.45 344 *e*P **P** **19 23 42.3 -1.2**
comp=Z,15nm,0.9s,mb4.6
NB2 NORSAR Subarra 28.55 344 P **P** **19 23 41.8 -2.6**
comp=Z,12nm,1.2s,mb4.5,baz=153,slow=9.3
NOA NORSAR Array B 28.55 344 P **P** **19 23 42.6 -1.7**
comp=Z,1.4nm,0.7s,mb3.8,baz=166,slow=9.2,SNR=7.4
AB31 Akbulak array 28.82 49 *e*P **P** **19 23 47.1 +0.3**
AB31 pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
JOF Joensuu 28.84 5 *e*p **P** **19 23 45.0 -1.9**
EKA Eskdalemuir Ar 29.40 325 P **P** **19 23 51.4 -0.6**
comp=Z,5.7nm,0.8s,mb4.4,baz=127,slow=9.7,SNR=17
ESK Eskdalemuir 29.41 325 *e*P **P** **19 23 51.8 -0.3**
ESK pmax pmax
comp=Z,11nm,0.8s,mb4.6
ESK Eskdalemuir 29.41 325 *e*P **P** **19 23 51.8 -0.3**
comp=Z,11nm,0.8s,mb4.6
ESK Eskdalemuir 29.41 325 *e*P **P** **19 23 51.8 -0.3**
comp=Z,11nm,0.8s,mb4.6
TORD Torodi Ar. Bea 30.79 233 P **P** **19 24 06.0 +1.8**
comp=Z,3.1nm,0.6s,mb4.3,baz=38,slow=8.2,SNR=30
TORD LR LR 19 38 23.1
comp=Z,501nm,19.1s,MS4.2,baz=65,slow=40
ARU Arti 31.14 35 *e*P **P** **19 24 06.7 -0.6**
ARU *e* 19 25 03.3
ARU *e* 19 26 59.3
ARU *e*S **S** **19 29 05.4 -5.8**
ARU *e*SS SS 19 30 49.7 -35
ARU Arti 31.14 35 *e*P **P** **19 24 05.8 -1.6**
comp=Z,5.3nm,0.6s,mb4.5
ARU Arti 31.14 35 *e*P **P** **19 24 05.8 -1.5**
comp=Z,5.3nm,0.6s,mb4.5
ARU Arti 31.14 35 *e*PcP PcP 19 26 59.3 -2.7
SVE Sverdlovsk 32.33 35 *e*P **P** **19 24 17.0 -0.8**
SVE *e* 19 25 38.8
APA Apatity 33.59 5⇓ *i*P **P** **19 24 20.6 -8.2**
APA pmax pmax
comp=Z,27nm,0.7s,mb5.3
LVZ Lovozero 34.00 6⇑ *e*P **P** **19 24 30.6 -1.8**
LVZ pmax pmax
comp=Z,14nm,0.9s,mb4.9
LVZ pmax pmax
comp=N,14nm,0.8s
LVZ pmax pmax
comp=E,5.0nm,0.8s
LVZ MLR MLR
comp=Z,1μm,19.0s,MS4.6
LVZ Lovozero 34.00 6 *e*P **P** **19 24 30.6 -1.8**
comp=Z,1μm,19.0s
KK31 Karatay Array 35.14 62 *i* P **P** **19 24 43.3 +1.1**
KK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KKAR Karatay Array 35.14 62 P **P** **19 24 43.3 +1.1**
KKAR pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ARCES ARCESS Array B 35.33 359 P **P** **19 24 41.8 -2.0**
comp=Z,7.0nm,0.6s,mb4.7,baz=175,slow=8.8,SNR=28
ARE0 ARCESS Array S 35.33 359 *e*P **P** **19 24 40.4 -3.4**
ARE0 ARCESS Array S 35.33 359 *e*P **P** **19 24 40.4 -3.4**
ZRNK Zerenda 35.35 45 P **P** **19 24 44.9 +0.8**
ZRNK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
ZRNK Zerenda 35.35 45 *e*P **P** **19 24 44.5 +0.5**
comp=Z,19nm,0.8s,mb5.1
KEV Kevo 35.55 0 *e*p **P** **19 24 44.8 -0.9**
comp=Z,5.3nm,0.6s,mb4.7
KEV Kevo 35.55 0 *e*P **P** **19 24 44.8 -0.9**
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
BRVK Borovoye 36.13 45⇓ P **P** **19 24 51.9 +1.2**
SNR=5.6
BRVK Borovoye 36.13 45 *e*P **P** **19 24 51.1 +0.4**
BRVK pmax pmax
comp=Z,11nm,1.2s,mb4.7
BRVK Borovoye 36.13 45 *e*P **P** **19 24 51.1 +0.4**
comp=Z,11nm,1.2s,mb4.7
BVA0 Borovoye Array 36.18 45 *i* P **P** **19 24 52.1 +0.9**
BVA0 pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
VOSK Vostochnaya 36.47 46 P **P** **19 24 54.2 +0.6**
VOSK pmax pmax
comp=Z,14nm,1.1s,mb4.8
CHKZ Chkalovo 36.47 44 P **P** **19 24 54.6 +1.0**
CHKZ pmax pmax
comp=Z,30nm,1.2s,mb5.1
CHKZ Chkalovo 36.47 44 *e*P **P** **19 24 54.3 +0.7**
comp=Z,22nm,0.9s,mb5.1
AAK Ala-Archa 38.08 63⇓ *i*P **P** **19 25 08.3 +1.0**
AAK pmax pmax
comp=Z,29nm,1.7s,mb4.7
AAK MLR MLR
comp=Z,300nm,15.0s,MS4.2
AAK Ala-Archa 38.08 63 *e*P **P** **19 25 07.7 +0.5**
comp=Z,8.9nm,0.9s,mb4.5
DBIC Dimbokro 39.89 234 P **P** **19 25 24.3 +1.8**
comp=Z,2.4nm,0.5s,mb4.2,baz=27,slow=9.7,SNR=8.3
DBIC Dimbokro 39.89 234 *e*P **P** **19 25 24.3 +1.9**
DBIC pmax pmax
comp=Z,13nm,1.0s
DBIC Dimbokro 39.89 234 *e*P **P** **19 25 24.3 +1.9**
comp=Z,14nm,1.0s,mb4.6
MK31 Makanchi Array 43.36 56 P **P** **19 25 52.0 +1.2**
MK31 pmax pmax
comp=Z,35nm,1.3s,mb4.9
MKAR Makanchi Array 43.36 56 P **P** **19 25 51.9 +1.1**
comp=Z,8.5nm,0.7s,mb4.6,baz=266,slow=7.2,SNR=66
NVS Novosibirsk 43.96 44 *e*P **P** **19 25 56.6 +1.0**
NVS pmax pmax
comp=Z,51nm,0.9s,mb5.2
NVS pmax pmax
comp=E,26nm,0.9s
ZAL Zalesovo 44.83 46 P **P** **19 26 03.1 +0.5**
comp=E,0.0nm,0.7s,mb4.7,baz=204,slow=8.1,SNR=44
WMQ Urumqi 47.51 59 P **P** **19 26 24.0 +0.3**
WMQ PP PP 19 28 14.0 -1.2
WMQ S **S** **19 33 17.0 +0.4**
WMQ SCS ScS 19 36 15.0 -0.3
WMQ SS SS 19 36 38.0 -6.6
WMQ AMB AMB
comp=Z,65nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,421nm,5.0s
WMQ LR LR
comp=N,325nm,14.0s,MS4.6
WMQ LR LR
comp=E,258nm,14.0s,MS4.6
WMQ LR LR
comp=Z,227nm,14.0s,MS4.3
KOLN Koldanda 48.83 81 *e*P **P** **19 26 35.3 +1.4**
comp=Z,34nm,0.9s,mb5.4
LSZ Lusaka 49.29 178 P **P** **19 26 40.2 +2.8**
LSZ pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
LSZ Lusaka 49.29 178 P **P** **19 26 40.2 +2.8**
comp=Z,4.2nm,1.1s,mb4.4
KRAR Krasnoyarsk 49.45 43 *d i*P **P** **19 26 40.5 +1.8**
KRAR pmax pmax
comp=Z,51nm,1.0s,mb5.5
GKN Gorkha 49.59 81 *e*P **P** **19 26 41.1 +1.4**
comp=Z,64nm,1.0s,mb5.6
DMN Daman 50.12 81 *e*P **P** **19 26 45.4 +1.6**
comp=Z,88nm,1.0s,mb5.7
KKN Kakani 50.20 80 *e*P **P** **19 26 45.7 +1.4**
comp=Z,52nm,1.1s,mb5.5
KKN Kakani 50.20 80 *e*P **P** **19 26 45.7 +1.4**
KKN pmax pmax
comp=Z,52nm,1.1s,mb5.5
SUMG Summit 50.20 339 *e*P **P** **19 26 43.9 -0.5**
comp=Z,9.0nm,0.8s,mb4.8
SUMG Summit 50.20 339 *e*P **P** **19 26 43.9 -0.5**
comp=Z,9.0nm,0.8s,mb4.8
PKI Pulchoki 50.39 81 *e*P **P** **19 26 47.3 +1.5**
comp=Z,56nm,1.0s,mb5.6
PKI Pulchoki 50.39 81 *e*P **P** **19 26 47.3 +1.5**
PKI pmax pmax
comp=Z,56nm,1.0s,mb5.5
GUN Gumba 50.64 80 *e*P **P** **19 26 49.3 +1.6**
comp=Z,68nm,1.0s,mb5.5
LSA Lhasa 54.22 76 *e*P **P** **19 27 15.6 +1.4**
LSA pmax pmax
comp=Z,16nm,1.4s,mb4.8
LSA Lhasa 54.22 76 *e*P **P** **19 27 15.6 +1.4**
comp=Z,16nm,1.4s,mb4.8
MOY Mondy 54.81 47 *e*P **P** **19 27 20.3 +1.8**
TLY Talaya 56.41 47⇓ P **P** **19 27 32.3 +2.3**
SNR=8.4
TLY Talaya 56.41 47 *e*P **P** **19 27 32.6 +2.6**
TLY pmax pmax
comp=Z,16nm,1.0s,mb5.0
TLY Talaya 56.41 47 *e*P **P** **19 27 30.8 +0.8**
comp=Z,15nm,0.9s,mb5.0
ZAK Zakamensk 56.52 48 *e*P **P** **19 27 32.4 +1.7**
ZAK pmax pmax
comp=Z,14nm,0.9s,mb5.0
IRK Irkutsk 56.65 46 *e*P **P** **19 27 32.3 +0.6**
IRK pmax pmax
comp=Z,37nm,1.1s,mb5.3
GTA Gaotai 57.42 62 *e*P **P** **19 27 38.8 +1.7**
GTA AP pP 19 27 50.6 +4.4
GTA XP sP 19 27 55.6 +5.9
GTA PP PP 19 29 47.8 +3.2
GTA PPP 19 31 08.4
GTA S **S** **19 35 33.1 +1.0**
GTA SS SS 19 39 23.1 +1.2
GTA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GTA AMB AMB
comp=Z,131nm,4.9s
GTA LR LR
comp=N,134nm,12.5s,MS4.4
GTA LR LR
comp=E,149nm,16.0s,MS4.4
GTA LR LR
comp=Z,202nm,14.1s,MS4.4
SONM Songino Array 59.21 51 P **P** **19 27 50.9 +1.3**
comp=Z,11nm,0.8s,mb4.9,baz=286,slow=8.1,SNR=93
ULN Ulaanbaatar 59.62 50⇓ P **P** **19 27 54.3 +1.9**
SNR=8.2
ULN Ulaanbaatar 59.62 50*c i*P **P** **19 27 53.7 +1.3**
ULN Ulaanbaatar 59.62 50 *e*P **P** **19 27 53.2 +0.8**
comp=Z,18nm,0.9s,mb5.1
BOD Bodaibo 60.48 38 *e*P **P** **19 27 57.8 -0.6**
BOD pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
BOD Bodaibo 60.48 38 *e*P **P** **19 27 57.8 -0.6**
comp=Z,7.0nm,1.1s,mb4.6
LZH Lanzhou 61.61 64⇑ P **P** **19 28 08.3 +2.3**
LZH PP PP 19 30 25.3 +3.6
LZH *e*S **S** **19 36 26.3 +0.1**
LZH *e*SS SS 19 40 29.6 +2.0
LZH AMB AMB
comp=Z,23nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,106nm,7.5s
LZH LR LR
comp=N,526nm,15.4s
LZH LR LR
comp=Z,763nm,18.1s,MS4.9
CIT Chita 62.17 44 *e*P **P** **19 28 09.9 +0.1**
CIT *e* 19 28 25.6
CIT pmax pmax
comp=Z,24nm,2.2s,mb4.9
SCHQ Schefferville 64.58 320 *e*P **P** **19 28 25.8 +0.1**
comp=Z,3.9nm,0.4s,mb4.8,baz=60,slow=6.2,SNR=15
SCHQ Schefferville 64.58 320 *e*P **P** **19 28 25.7 0.0**
comp=Z,7.9nm,0.8s,mb4.8
HHC Hu-ho-hao-te 65.22 56 *e*P **P** **19 28 31.8 +1.9**
HHC PCP PcP 19 29 04.8 +2.6
HHC PP PP 19 30 56.9 +3.4
HHC PCS 19 33 07.1
HHC S S 19 37 12.1 +0.9
HHC SS SS 19 41 25.6 +1.5
HHC AMB AMB
comp=Z,21nm,1.2s,mb5.0
HHC AMB AMB
comp=Z,136nm,9.2s
HHC LR LR
comp=N,262nm,32.3s,MS4.3
HHC LR LR
comp=E,190nm,32.3s,MS4.3
HHC LR LR
comp=Z,125nm,32.2s,MS3.9
KMI Kunming 65.47 75 P **P** **19 28 32.4 +0.9**
KMI AMB AMB
comp=Z,4.0nm,0.9s,mb4.5
CM31 Chiang Mai Arr 65.58 84 *e*P **P** **19 28 32.9 +0.7**
comp=Z,12nm,1.0s,mb4.9
YAK Yakutsk 66.10 30⇓ *e*P **P** **19 28 35.4 -0.2**
YAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
YAK MLR MLR
comp=Z,300nm,21.0s,MS4.5
YAK Yakutsk 66.10 30 P **P** **19 28 34.3 -1.3**
HIA Hailar 66.88 45*c i*P **P** **19 28 42.0 +1.4**
HIA Hailar 66.88 45 *e*P **P** **19 28 41.8 +1.2**
comp=Z,37nm,1.1s,mb5.3
GYA Guiyang 67.97 72⇑ *i*P **P** **19 28 48.3 +0.8**
GYA PP PP 19 31 19.3 +1.8
GYA S S 19 37 43.3 -1.2
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
GYA AMB AMB
comp=Z,90nm,4.2s
GYA LR LR
comp=N,270nm,18.6s,MS4.7
GYA LR LR
comp=E,290nm,19.4s,MS4.7
GYA LR LR
comp=Z,240nm,19.2s,MS4.4
CN2 Changchun 72.95 48 *e*P **P** **19 29 18.8 +0.9**
KLR Kul'dur 73.72 41 *e*P **P** **19 29 20.0 -2.4**
PSI Prapat 73.92 98 P **P** **19 29 25.3 +1.7**
comp=Z,3.0nm,0.6s,mb4.4,baz=259,slow=4.5,SNR=2.8
PSI Prapat 73.92 98 P **P** **19 29 25.3 +1.7**
NJ2 Nanjing 74.52 62 *e*P **P** **19 29 29.1 +2.1**
NJ2 PP PP 19 32 17.6 +3.9
NJ2 S S 19 39 02.0 +1.8
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.3
NJ2 AMB AMB
comp=Z,810nm,4.8s
NJ2 LR LR
comp=N,2μm,28.6s,MS5.3
NJ2 LR LR
comp=E,1μm,24.6s,MS5.3
NJ2 LR LR
comp=Z,1μm,20.0s,MS5.2
MDJ Mudanjiang 75.04 46 P **P** **19 29 29.8 -0.3**
MDJ PP PP 19 32 16.3 -1.8
MDJ S S 19 39 06.6 +0.5
MDJ AMB AMB
comp=Z,4.0nm,0.9s,mb4.3
MDJ AMB AMB
comp=Z,173nm,10.7s
MDJ LR LR
comp=N,188nm,25.5s
MDJ LR LR
comp=E,61nm,17.9s
MDJ LR LR
comp=Z,201nm,20.4s
HABR Khabarovsk 75.94 41 *e*P **P** **19 29 36.1 +0.9**
HABR *e*S S 19 39 12.1 -4.0
SSE Sheshan 76.71 61 *e*P **P** **19 29 38.9 -0.7**
SSE AMB AMB
comp=Z,25nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,204nm,12.0s
CBN Corbin 79.12 309 *e*P **P** **19 29 51.4 -1.6**
comp=Z,41nm,0.6s,mb5.5
IMA2 Indian Mountai 79.99 0 *e*P **P** **19 29 57.9 +0.2**
YSS Yuzh-Sakhalins 80.95 38⇑ *e*P **P** **19 30 03.8 +0.9**
YSS pmax pmax
comp=Z,20nm,1.0s,mb5.0
YSS Yuzh-Sakhalins 80.95 38 *e*P **P** **19 30 03.7 +0.8**
comp=Z,7.0nm,0.8s,mb4.6
DAWY Dawson 81.36 354 *e*P **P** **19 30 05.3 +0.2**
MAT Matsushiro 85.10 49 P **P** **19 30 24.5 +0.2**
MAT Matsushiro 85.10 49 *e*P **P** **19 30 25.0 +0.7**
MJAR Matsushiro Arr 85.10 49 P **P** **19 30 25.3 +1.0**
comp=Z,6.2nm,0.9s,mb4.8,baz=308,slow=4.9,SNR=20
DLBC Dease Lake 85.58 348 P **P** **19 30 28.4 +1.7**
comp=Z,0.5nm,0.3s,mb4.2,baz=274,slow=19,SNR=3.1
PDAR Pinedale Array 93.44 329 P **P** **19 31 03.7 -0.2**
comp=Z,0.5nm,0.9s,mb4.0,baz=330,slow=5.1,SNR=4.6

IDC ***16*** *19:28:18.8±1.2,096N×126.10E,h0km,mb3.8/5,mb1 4.0/5, mb1mx3.8/17,mbtmp3.9/5, Error ellipse: s-maj=126.7km s-min=19.7km az=67.0*
NEIC ***16*** *19:28:20.5±0.8,073N×12566E,h10km,mb4.2/2, Error ellipse: s-maj=132.0km s-min=10.4km az=66.0*
ISCJB ***16*** *19:28:22.0±0.9,08N±04×125 6E±0.9, h33km, mb3.9/7, Error ellipse: s-maj=137.4km s-min=11.0km az=131.8*
ISC 16 19:28:24.2±0.9,07N±04×1256E±09,h35km,n11,σ0°89/11, mb3.9/7,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**22.24**	**158**	*e*P	**P**	**19 33 16.5**	**-1.3**
	5.6nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**22.25**	**158**	P	**P**	**19 33 17.3**	**-0.6**
	1.4nm,0.4s,mb3.8,baz=340,slow=11,SNR=38						
WB2	**Warramunga Arr**	**22.25**	**158**	*e*P	**P**	**19 33 17.0**	**-1.0**
AS31	**Alice Springs**	**25.55**	**162**	*e*P	**P**	**19 33 50.7**	**+1.0**
ASAR	**Alice Springs**	**25.55**	**162**	P	**P**	**19 33 50.9**	**+1.2**
	1.2nm,0.3s,mb3.9,baz=347,slow=12,SNR=36						
ASPA	**Alice Springs**	**25.55**	**162**	*e*P	**P**	**19 33 50.7**	**+1.0**
SONM	**Songino Array**	**49.80**	**343**	P	**P**	**19 37 14.1**	**+0.6**
	0.3nm,0.6s,mb3.5,baz=148,slow=6.8,SNR=4.7						
MKAR	**Makanchi Array**	**59.42**	**327**	P	**P**	**19 38 23.6**	**+0.4**
	1.0nm,0.5s,mb4.1,baz=117,slow=7.2,SNR=16						
ZRNK	**Zerenda**	**69.95**	**327**	*e*P	**P**	**19 39 32.2**	**+0.3**
	1.2nm,0.6s,mb4.0						
AKTK	**Aktyubinsk**	**75.33**	**322**	P	**P**	**19 40 03.1**	**-0.8**
AKTO	**Aktyubinsk**	**75.33**	**322**	P	**P**	**19 40 03.1**	**-0.9**
	0.6nm,0.4s,mb3.9,baz=121,slow=5.1,SNR=3.7						

ATH ***16*** *19:28:46.9,3747N×2689E,h21km±1km, MD3.7/4*
NEIC ***16*** *19:28:46.9,3747N×2689E,h21km, MD3.7(ATH), After ATH.*
ISK ***16*** *19:28:47.8,3748N×2690E,h13km, MD3.3*
ISCJB ***16*** *19:28:47.0±0.5,3745N±002×2681E±003,h4km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=114.5*
CSEM ***16*** *19:28:47.7±0.1,3748N×2691E,h8km, MD3.7, Error ellipse: s-maj=1.9km s-min=1.3km az=79.0*
THE ***16*** *19:28:50.4,3745N×2683E,h17km*
ISC 16 19:28:47.9±0.4,3744N±002×2682E±003,h6km±3km,n39, σ0°92/56,1C,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.27**	**3**⇑	*i*PB	**Pg**	**19 28 53.2**	**-0.1**
SMG				*e*SB	**Sg**	**19 28 57.0**	**+0.1**
BODT	**Bodrum**	**0.54**	**133**	*i* PG	**Pg**	**19 28 58.4**	**+0.1**
BODT				*i* SG	**Sg**	**19 29 06.3**	**+0.9**
BODT	**Bodrum**	**0.54**	**133**	*i* Sg	**Sg**	**19 29 06.3**	**+0.9**
BDRM	**Kayabasi**	**0.62**	**126**	*i* P	**Pg**	**19 29 00.0**	**+0.2**
BDRM				*i* S	**Sg**	**19 29 08.4**	**+0.5**
AYDN	**Tasoluk**	**0.87**	**75**	*i* P	**Pg**	**19 29 03.7**	**-1.0**
AYDN				*i* S	**Sg**	**19 29 15.9**	**0.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	Datca	0.93	139	PG	Pg	19 29 06.6	+0.8
DAT				SG	Sg	19 29 19.1	+1.3
URLA	Izmir	0.94	349	iP	Pg	19 29 06.0	0.0
URLA				iS	Sg	19 29 19.3	+1.2
BLCB	Balcova	0.96	10	PG	Pg	19 29 05.3	-1.1
IZM	Izmir	1.02	20	PG	Pg	19 29 06.7	-0.8
IZM				SG	Sg	19 29 20.6	-0.2
KDAG	Bornova	1.03	20	iP	Pg	19 29 06.5	-1.1
KDAG				iS	Sg	19 29 21.6	+0.6
APE	Apeiranthos	1.09	251	ePg	Pg	19 29 09.4	+0.5
APE				eSg	Sg	19 29 24.6	+1.6
APE	Apeiranthos	1.09	251	ePN	Pn	19 29 09.2	-0.5
APE				eSN	Sn	19 29 24.9	-0.2
APE	Apeiranthos	1.09	251	ePg	Pg	19 29 09.4	+0.5
APE				eSg	Sg	19 29 24.6	+1.5
CHOS	Chios island	1.13	328	ePg	Pg	19 29 09.0	-0.5
CHOS				eSg	Sg	19 29 25.3	+1.2
YER	Yerkesik	1.21	104	PN	Pn	19 29 10.8	-0.5
SANT	Santorini	1.52	226	ePg	Pg	19 29 15.1	-2.0
SANT				eSg	Sg	19 29 35.4	-1.5
DALT	Dalyan (Mudla)	1.60	114	ePN	Pn	19 29 15.7	-1.0
ARG	Arkhangelos	1.61	139	ePN	Pn	19 29 15.9	-0.9
ARG				eSN	Sn	19 29 37.7	-0.1
AKHS	Akhisar	1.64	28	iP	Pn	19 29 17.4	+0.1
AKHS				iS	Sn	19 29 41.1	+2.4
AKS	Akhisar	1.64	28	ePN	Pn	19 29 16.4	-0.9
DENT	Denizli	1.79	79	ePN	Pn	19 29 18.3	-1.0
DNZL	Cakiroluk	1.79	81	iP	Pn	19 29 19.0	-0.3
DNZL				iS	Sn	19 29 44.3	+2.0
PRK	Paraskevi	1.86	347	ePN	Pn	19 29 19.2	-1.1
PRK				eSN	Sn	19 29 44.0	-0.1
AYVA	Ayvalik	1.87	357	iP	Pn	19 29 22.2	+1.7
ZKR	Zakros	2.37	192	ePn	Pn	19 29 27.9	+0.6
ELL	Elmali	2.56	105	ePN	Pn	19 29 28.3	-1.7
DST	Dursunbey	2.59	33	ePN	Pn	19 29 29.1	-1.2
LIA	Limnos Island	2.77	333	ePN	Pn	19 29 32.4	-0.5
AOS	Alonnisos	2.89	308	ePn	Pn	19 29 34.9	+0.4
SIVA	Sivas	2.91	215	ePn	Pn	19 29 35.9	+1.1
SIVA	Sivas	2.91	215	ePn	Pn	19 29 35.8	+1.1
ISP	Isparta	2.96	81	ePn	Pn	19 29 35.4	0.0
KARN	Karanos	3.10	230	ePn	Pn	19 29 37.9	+0.6
PAIG	Paliouri	3.50	316	ePn	Pn	19 29 43.7	+0.9
ALN	Alexandroupoli	3.51	350	ePn	Pn	19 29 42.4	-0.6
OUR	Ouranopolis	3.65	323	ePn	Pn	19 29 45.1	+0.2
RDO	Rodhopi	3.84	345	ePN	Pn	19 29 47.2	-0.3
HORT	Hortiatis	4.29	319	ePn	Pn	19 29 53.8	+0.1
BR131	Keskin Array S	5.81	65	eP	Pn	19 30 15.7	+1.1
	1.9nm,0.3s						

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*NIED **16** 19:55:00,3880N×14160E,h41km,Mw4.3 Best double couple: $M_0$3.06000×10^{15} NP1:ϕ_s15.00000°,δ70.00000°, λ-74.00000°. NP2:ϕ_s156.00000°,δ26.00000°, λ-127.00000°.*

*NEIC **16** 19:55:15.0±1.4,39.11N×14262E,h10km,mb4.0/1,Error ellipse: s-maj=26.7km s-min=12.7km az=105.0*

*ISCJB **16** 19:55:25.3±0.8,3884N±005×1417E±01,h80km±4km, mb3.7/5,Error ellipse: s-maj=15.4km s-min=7.3km az=39.0*

*JMA **16** 19:55:26.7,3884N×14159E,h74km±1km,M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s37.00000°,δ14.00000°,λ123.00000°. NP2: ϕ_s184.00000°,δ78.00000°,λ82.00000°. Principal axes: T Plg56.0000°, Azm84.0000°; N Plg7.0000°, Azm185.0000°; P Plg33.0000°, Azm280.0000°;*

JMA Felt I J1.

*IDC **16** 19:55:26.8±3.0,3884N×14178E,h85km±26km,mb3.4/4, mb1 3.4/6,mb1mx3.2/21,mbtmp3.5/6 Error ellipse: s-maj=42.3km s-min=22.3km az=84.0*

ISC 16 19:55:26.4±0.8,3884N±005×1417E±01,h74km±4km,n17, σ0.79/24,mb3.7/5,7C,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.24	2	⇑P	Pn	19 55 38.1	+0.4
OFUJ				S	Sn	19 55 46.2	+0.3
JMK	Ichinoseki	0.36	288	⇑P	Pn	19 55 38.3	-0.1
JMK				S	Sn	19 55 46.7	-0.6
JIO	Ouri	0.46	212	⇑P	Pn	19 55 39.3	+0.1
JIO				S	Sn	19 55 48.3	-0.4
JOM	Ohasama	0.69	336	⇑P	Pn	19 55 41.6	+0.1
JOM				S	Sn	19 55 52.5	-0.2
JOU	Okura	0.92	239	⇑P	Pn	19 55 44.0	-0.1
JOU				S	Sn	19 55 57.1	-0.1
JYK	Kaneyama	1.02	275	⇑P	Pn	19 55 45.1	-0.2
JYK				S	Sn	19 55 59.4	0.0
JMM	Marumori	1.19	215	⇑P	Pn	19 55 47.0	-0.5
JMM				S	Sn	19 56 02.1	-1.2
MJAR	Matsushiro Arr	3.57	231	P	Pn	19 56 20.6	+1.2
	1.4nm,0.3s,baz=40,slow=12,SNR=29						
MAJO	Matsushiro	3.58	231	eP	Pn	19 56 21.2	+1.7
MAT	Matsushiro	3.58	231	P	Pn	19 56 20.9	+1.4
MAT	Matsushiro	3.58	231	eP	Pn	19 56 21.0	+1.5
ASAJ	Asahikawa	5.32	7	P	Pn	19 56 43.5	+0.3
	0.4nm,0.3s,baz=212,slow=6.5,SNR=4.3						
SONM	Songino Array	26.98	301	P	P	20 01 02.7	+1.6
	0.4nm,0.6s,mb3.1,baz=104,slow=10,SNR=3.3						
ZAL	Zalesovo	40.87	311	P	P	20 03 00.0	-1.0
	0.7nm,0.3s,mb3.9,baz=18,slow=9.6,SNR=4.3						
MKAR	Makanchi Array	43.35	301	P	P	20 03 20.7	-0.5
	2.1nm,0.7s,mb4.0,baz=72,slow=12,SNR=19						
CHKZ	Chkalovo	49.23	312	eP	P	20 04 06.1	-1.2
	0.7nm,0.4s,mb3.9						
WRA	Warramunga Arr	58.88	188	P	P	20 05 16.8	-0.7
	0.2nm,0.5s,mb3.4,baz=6.1,slow=7.4,SNR=6.9						
WRA				pP	pP	20 05 34.8	-1.7
	0.2nm,0.4s,baz=5.6,slow=7.2,SNR=5.2						

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*STR **16** 19:56:46.7±0.1,4328N×053W,h2km±1km,Ml2.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*LDG **16** 19:56:49.8±0.4,4303N×089W,h2km,Md1.9/2,Ml1.5/1, Error ellipse: s-maj=11.9km s-min=5.5km az=28.0*

MDD 16 19:56:50.5±0.3,4305N×085W,h0km,mbLg0.7/4,Error ellipse: s-maj=4.0km s-min=1.9km az=11.0,PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LARF	Larrau	0.10	262	Pg	Pg	19 56 52.1	-0.4
LARF				Lg		19 56 53.8	
ATE	Arette	0.11	72	Pg	Pg	19 56 51.3	-1.3
ATE				Sg	Sg	19 56 54.6	+0.6
ORDF	Ordiarp	0.17	338	Pg	Pg	19 56 52.6	-1.2
ORDF				Sg	Sg	19 56 57.0	+0.9
ETSF	Etsaut	0.26	126	ePn	Pg	19 56 54.1	-1.4
ETSF	Etsaut	0.26	126	ePg	Pg	19 56 55.7	+0.2
ETSF				eSg	Sg	19 56 58.8	0.0
	6.8nm,0.2s						
ETSF	Etsaut	0.26	126	Pg	Pg	19 56 55.7	+0.2
ETSF				Lg		19 56 58.8	
	3.4nm,0.2s						
SJPF	Ste Jean	0.28	282	ePg	Pg	19 56 55.1	-0.8
SJPF				eSg	Sg	19 57 00.0	+0.4
	4.0nm,0.2s						
SJPF	Ste Jean	0.28	282	Pg	Pg	19 56 55.1	-0.8
SJPF				Lg		19 57 00.0	
	2.0nm,0.2s						
EALK	Alkurruntz	0.51	289	Pg	Pg	19 57 00.8	+0.5
	0.2nm,0.1s,SNR=7.9						
EALK				Lg		19 57 07.3	
	1.5nm,0.1s,SNR=7.9						
ELIZ	Elizondo	0.51	283	Pg	Pg	19 57 00.6	+0.3
	0.3nm,0.1s,SNR=7.9						
ELIZ				Lg		19 57 07.3	
	1.9nm,0.3s,SNR=7.9						
EBIE	Bielsa	0.81	116	Pg	Pg	19 57 04.9	-1.1
	0.1nm,0.2s,SNR=7.9						
EBIE				Lg		19 57 16.1	
	0.8nm,0.2s,SNR=7.9						
EPF	Esparros	0.87	91	ePg	Pg	19 57 07.7	+0.6
EPF				eSg	Sg	19 57 19.9	+1.5
	1.2nm,0.2s						
EPF	Esparros	0.87	91	Pg	Pg	19 57 07.7	+0.6
EPF				Lg		19 57 19.9	
	0.6nm,0.2s						

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*NEIC **16** 20:04:15.6,3848N×2394E,h26km,ML3.0(ATH),After ATH.*

*ATH **16** 20:04:15.6,3848N×2394E,h26km,MD3.2/3,ML3.0*

*ISCJB **16** 20:04:17.1±0.7,3848N±002×2394E±004,h25km±6km, Error ellipse: s-maj=5.8km s-min=4.1km az=172.4*

*CSEM **16** 20:04:17.1±0.1,3846N×2395E,h20km,ML3.0,Error ellipse: s-maj=3.0km s-min=2.0km az=100.0*

*THE **16** 20:04:19.1,3855N×2396E,h24km,ML3.4*

ISC 16 20:04:16.8±0.6,3849N±002×2391E±004,h15km±4km,n24, σ0.79/37,2C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATH	Athens Observa	0.54	197	⇑iPN	Pg	20 04 26.7	-0.8
ATH				eSN	Sg	20 04 34.5	-0.2
AOS	Alonnisos	0.68	358	ePg	Pg	20 04 30.6	+0.5
AOS				eSg	Sg	20 04 40.8	+1.8
LKR	Lokris	0.73	283	ePN	Pg	20 04 30.1	-1.0
LKR				eSN	Sg	20 04 41.5	+0.7
NEO	Neokhori	0.97	327	ePN	Pn	20 04 35.0	-1.0
NEO				eSN	Sn	20 04 49.1	-0.4
XOR	Xorichti	1.04	327	ePg	Pg	20 04 36.9	0.0
XOR				eSg	Sg	20 04 50.5	+0.1
AGG	Agios Georgios	1.34	294	ePg	Pg	20 04 41.6	-1.1
AGG				eSg	Sg	20 04 59.5	-0.8
PAIG	Paliouri	1.45	353	ePg	Pn	20 04 42.4	-0.1
PAIG	Paliouri	1.45	353	ePg	Pn	20 04 42.3	-0.1
EVR	Evrytania	1.70	285	ePN	Pn	20 04 46.1	+0.2
LIA	Limnos Island	1.72	35	ePN	Pn	20 04 46.0	-0.2
OUR	Ouranopolis	1.84	2	ePb	Pn	20 04 48.1	+0.3
	comp=Z,5.0nm,0.2s						
APE	Apeiranthos	1.91	137	ePb	Pn	20 04 48.5	-0.4
APE				eSb	Sb	20 05 14.8	-0.3
APE	Apeiranthos	1.91	137	iPn	Pn	20 04 48.5	-0.4
PLG	Polygyros	1.91	349	⇑iPB	Pn	20 04 49.0	+0.1
PLG				eSN	Sn	20 05 12.2	-0.5
VLI	Veliai	1.93	204	ePN	Pn	20 04 48.8	-0.3
VLI				eSN	Sn	20 05 13.1	0.0
LIT	Litokhoron	1.95	326	ePb	Pn	20 04 49.1	-0.3
LIT				eSb	Sb	20 05 14.1	-2.0
RLS	Riolos of Patr	1.97	258	ePN	Pn	20 04 49.6	-0.1
RLS				eSN	Sn	20 05 14.8	+0.7
ITM	Ithomi	2.05	231	ePB	Pn	20 04 51.6	+0.9
ITM				eSN	Sn	20 05 16.1	+0.2
HORT	Hortiatis	2.19	344	ePn	Pn	20 04 53.1	+0.3
HORT				eSn	Sn	20 05 18.8	-0.8
LKD	Levkas	2.56	276	ePn	Pn	20 04 59.9	+2.1
GRG	Griva	2.72	335	ePn	Pn	20 05 00.6	+0.6
NVR	Nevrokopi	2.85	359	ePN	Pn	20 05 02.2	+0.4
RDO	Rodhopi	2.93	25	ePN	Pn	20 05 02.6	-0.3
IGT	Igoumenitsa	2.98	292	ePn	Pn	20 05 05.2	+1.7

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*NEIC **16** 20:04:53.8,3401S×7145W,h44km,MD3.5(GUC),After GUC.*

GUC 16 20:04:53.8±0.5,3401S×7145W,h44km±3km,MD3.5, 3C-3D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCH	Las Cruces	0.54	349	⇑iP	Pn	20 05 05.0	-0.2
LCCH				iS	Sn	20 05 14.1	+0.9
TACH	Talagante	0.55	50	⇓iP	Pn	20 05 05.7	+0.3
TACH				iS	Sn	20 05 14.7	+1.1
CHCH	Chadas Angostu	0.66	84	⇑iP	Pn	20 05 07.6	+0.7
CHCH				iS	Sn	20 05 17.3	+1.1
SFDO	San Fernando	0.70	150	⇑iP	Pn	20 05 08.0	+0.6
SFDO				iS	Sn	20 05 18.3	+1.1
CACH	El Canelo	0.71	99	⇓iP	Pn	20 05 08.7	+1.2
CACH				iS	Sn	20 05 19.9	+2.6
PCH	Pirque	0.87	64	⇓iP	Pn	20 05 10.2	+0.7
PCH				iS	Sn	20 05 22.5	+1.4
CICH	Cipreses	0.91	110	iP	Pn	20 05 10.8	+0.6
TALC	Talca	1.40	186	eP	Pn	20 05 18.0	+1.2
TALC				iS	Sn	20 05 35.6	+1.6

IDC 16 20:20:16.0±1.6,773S×12688E,h0km,mb3.4/2,mb1 3.8/4, mb1mx3.6/13,mbtmp3.6/4,ML3.7/2,Error ellipse: s-maj=188.4km s-min=29.1km az=65.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.13	150	Pn	Pn	20 23 35.5	-1.9
	0.3nm,0.3s,baz=326,slow=13,SNR=20						
WRA				Sn	Sn	20 25 59.2	-16
	1.4nm,0.3s,baz=326,slow=24,SNR=14						
ASAR	Alice Springs	17.22	158	P	Pn	20 24 19.9	+2.0
	0.4nm,0.3s,baz=338,slow=10.0,SNR=40						
ASAR				S	Sn	20 27 17.4	-13
	0.4nm,0.3s,baz=343,slow=24,SNR=7.8						
SONM	Songino Array	58.21	344	P	P	20 30 12.2	+0.3
	0.3nm,0.9s,baz=152,slow=6.5,SNR=3.0						
MKAR	Makanchi Array	67.17	328	P	P	20 31 11.8	0.0
	0.3nm,0.5s,baz=115,slow=6.3,SNR=5.1						

IDC 16 20:35:54.8±0.9,1422N×5698E,h0km,mb3.8/9,mb1 3.9/9, mb1mx3.7/20,mbtmp3.8/9,Error ellipse: s-maj=33.4km s-min=21.6km az=45.0,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	38.77	28	P	P	20 43 24.6	+3.6
	0.4nm,0.7s,baz=224,slow=7.6,SNR=4.1						
AKASG	Malin Array Be	42.76	334	P	P	20 43 54.2	+0.3
	0.2nm,0.4s,baz=139,slow=7.4,SNR=4.5						
FINES	FINESS Array B	52.12	342	P	P	20 45 07.0	+0.3
	1.5nm,0.6s,baz=137,slow=9.6,SNR=11						
SONM	Songino Array	52.74	40	P	P	20 45 11.9	+0.6
	0.5nm,1.0s,baz=197,slow=4.5,SNR=3.7						
TORD	Torodi Ar. Bea	53.62	276	P	P	20 45 18.3	+0.5
	0.7nm,0.7s,baz=60,slow=5.3,SNR=6.9						
ARCES	ARCESS Array B	58.70	348	P	P	20 45 54.0	-0.2
	2.1nm,0.8s,baz=197,slow=3.8,SNR=3.9						
ESDC	Sonseca Array	58.75	308	P	P	20 45 53.5	-1.0
	0.4nm,0.6s,baz=82,slow=6.4,SNR=5.3						
MAW	Mawson	81.71	178	P	P	20 48 16.2	+1.1
	0.8nm,0.8s,baz=333,slow=10,SNR=2.3						
WRA	Warramunga Arr	83.29	112	P	P	20 48 23.3	-0.1
	0.9nm,0.8s,baz=298,slow=4.1,SNR=7.5						
ASAR	Alice Springs	84.05	116	P	P	20 48 27.6	+0.4
	0.5nm,0.6s,baz=288,slow=4.7,SNR=13						

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*ISCJB **16** 20:55:47.0±0.3,4375N±002×10.13E±002,h10km±2km, Error ellipse: s-maj=3.5km s-min=2.0km az=137.6*

*CSEM **16** 20:55:47.6±0.1,4376N×1022E,h18km,ML3.5/5,Error ellipse: s-maj=1.4km s-min=1.0km az=164.0*

*ROM **16** 20:55:47.8±0.3,4376N×1020E,h7km±3km,Md3.0/6, Ml3.0/14,Error ellipse: s-maj=2.4km s-min=2.4km az=119.0*

*NEIC **16** 20:55:47.8,4376N×1020E,h7km,ML3.0(ROM), ML3.1(LDG),ML3.2(STR),After ROM.*

*GEN **16** 20:55:48.5,4376N×1021E,h6km,ML3.0*

*LDG **16** 20:55:49.3±0.1,4364N×10.16E,h10km,Ml3.1/13,Error ellipse: s-maj=3.9km s-min=2.6km az=179.0*

*STR **16** 20:55:50.8±0.2,4383N×991E,h10km±1km,Ml3.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*VIE **16** 20:55:51.7±0.6,4390N×1037E,h10km,mb2.6/5,ML2.9/8, Error ellipse: s-maj=4.9km s-min=4.0km az=1.0 72 km WNW of Florenz*

*PRU **16** 20:55:52.0,4402N×1030E,h0km*

ISC 16 20:55:47.6±0.3,4374N±002×1012E±002,h6km±2km,n131, σ1.14/221,9C-7D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PII	Pisa	0.29	94	⇓iPg	Pg	20 55 53.4	+0.1
PII				Sg	Sg	20 55 56.9	-0.3
GROG	Isola di Gorgo	0.36	208	Pg	Pg	20 55 56.3	+1.7
GROG				Sg	Sg	20 56 02.5	+3.2
	716nm,0.3s						
VINC	Vinca	0.40	3	P	Pg	20 55 55.8	+0.4
VLC	Villacollemand	0.46	24	Pg	Pg	20 55 56.5	0.0
VLC				Sg	Sg	20 56 02.6	+0.1
	598nm,0.2s						
VLC	Villacollemand	0.46	24	eP	Pg	20 55 56.4	-0.1
VLC				Pg	Pg	20 55 56.5	0.0
VLC				Sg	Sg	20 56 02.6	+0.1
BDI	Bagni Di Lucca	0.47	47	Pg	Pg	20 55 56.3	-0.4
BDI				Sg	Sg	20 56 02.1	-0.7
	2μm,0.2s						
SARO	Sassorosso	0.49	24	P	Pg	20 55 56.8	-0.2
BACM		0.54	356	P	Pg	20 55 58.5	+0.5
VALM		0.61	8	P	Pg	20 55 59.7	+0.3
PZZT	Monte Pizzetto	0.66	54	Pg	Pg	20 56 00.1	-0.2
PZZT				Sg	Sg	20 56 08.4	-0.5
	2μm,0.3s						
CODM		0.68	343	P	Pg	20 56 00.7	0.0
CODM				S	Sg	20 56 09.5	0.0
GSCL	Gusciola	0.69	29	⇑iPg	Pg	20 56 01.1	+0.1
	123nm,0.2s						
ERBM	Eremo	0.71	17	⇑iPg	Pg	20 56 01.7	+0.4
	383nm,0.2s						
GRAM		0.75	357	P	Pg	20 56 02.5	+0.5
GRAM				S	Sg	20 56 12.5	+0.7
SC2M	Scurtabr	0.79	328	P	Pg	20 56 03.4	+0.7
SC2M				S	Sg	20 56 13.4	+0.4
FNVD	Fontana Vidola	0.84	59	Pg	Pg	20 56 03.3	-0.4
FNVD				Sg	Sg	20 56 15.0	+0.4
	906nm,0.5s						
GRFL	Gerfalco	0.86	133	Pg	Pg	20 56 04.3	+0.1
	40nm,0.4s						
CSNT	Castellina Chi	0.89	107	Pg	Pg	20 56 04.4	-0.3
	237nm,0.9s						
SEI	Scarperia	0.94	70	Pg	Pg	20 56 05.3	-0.5
	754nm,0.3s						
BOB	Bobbio (Coli)	1.13	335	Pg	Pg	20 56 10.1	+0.7
BOB				Sg	Sg	20 56 25.9	+1.8
	1μm,1.1s						
SFI	Santa Sofia	1.26	82	Pg	Pg	20 56 10.7	-1.1
	115nm,0.5s						
CRE	Caprese Michel	1.33	95	Pg	Pg	20 56 12.6	-0.6
	44nm,0.3s						
PCP	Pian Castagno	1.39	306	P	Pn	20 56 13.2	-0.3
PGF	Pioggiola	1.45	215	ePg	Pg	20 56 14.4	-1.0
PGF				eSg	Sg	20 56 32.3	-1.9
PGF	Pioggiola	1.45	215	ePn	Pn	20 56 13.4	-0.9
PGF				ePg	Pg	20 56 14.4	-1.0
PGF				eSg	Sg	20 56 32.3	-1.9
PGF	Pioggiola	1.45	215	ePg	Pg	20 56 14.4	-1.0
PGF				eSg	Sg	20 56 32.3	-1.9
FIN	Finale Ligure	1.46	289	Pg	Pg	20 56 14.0	-1.6
	71nm,0.4s						
FIN				S	Sn	20 56 32.1	-1.8
RORO		1.53	285	P	Pn	20 56 15.1	-0.4
BADI	Badiali	1.56	98	Pg	Pg	20 56 15.3	-2.2
	133nm,1.0s						
ROB	Roburent	1.72	290	P	Pn	20 56 17.7	-0.3
MONE	Monesi	1.74	282	P	Pn	20 56 18.0	-0.4
NEGI	Negi	1.75	274	P	Pn	20 56 18.6	+0.1
SAOF	Saorge	1.87	278	P	Pn	20 56 20.3	+0.1
SALO	Salr	1.90	9	Pg	Pn	20 56 21.9	+1.4
	1μm,0.6s						
FSSB	Fossombrone	1.93	91	Pg	Pn	20 56 21.4	+0.5
	34nm,0.4s						
SBF	Sospel	1.95	274	ePg	Pg	20 56 24.7	-0.3
SBF	Sospel	1.95	274	ePn	Pn	20 56 21.3	+0.1
SBF				ePg	Pg	20 56 24.7	-0.3
SBF	Sospel	1.95	274	ePg	Pg	20 56 24.7	-0.3
AUTN	L'Aution	1.97	278	P	Pn	20 56 21.8	+0.4
ENR	Entracque	2.01	285	P	Pn	20 56 22.8	+0.7
LUCF	Luceram	2.02	275	P	Pn	20 56 22.3	+0.2
LUCF				S	Sn	20 56 47.7	+0.1
MDI	Monti di Nese	2.06	352	Pg	Pn	20 56 23.9	+1.2
	180nm,0.8s						
STV	Sta Anna Valdi	2.08	285	P	Pn	20 56 23.2	+0.2
TOUF	Mont Tournerai	2.10	278	P	Pn	20 56 23.8	+0.6
SNTG	Esanatoglia	2.11	102	Pg	Pn	20 56 22.8	-0.6
	49nm,0.8s						
DOI	San Damiano	2.21	291	Pg	Pn	20 56 24.8	0.0
	101nm,0.7s						
PZZ	Prazzo	2.31	290	P	Pn	20 56 26.1	0.0
MUGIO	Muggio	2.31	341	Pg	Pn	20 56 27.2	+1.0
MABI	Malga Bissina	2.33	7	Pg	Pn	20 56 27.6	+1.2
	18nm,0.6s						
ORX	Oropa	2.43	322	P	Pn	20 56 29.2	+1.4
RSP	Reno Superiore	2.49	305	P	Pn	20 56 29.0	+0.4
FRF	La Foret Royal	2.53	267	ePg	Pg	20 56 35.9	-0.2
FRF				eSn	Sn	20 56 58.8	-1.5
	24nm,0.3s						
FRF				eSg	Sg	20 57 09.1	+0.2
FRF	La Foret Royal	2.53	267	ePn	Pn	20 56 29.1	-0.1
FRF				ePg	Pg	20 56 35.9	-0.2
FRF				eSn	Sn	20 56 58.8	-1.5
FRF				eSg	Sg	20 57 09.1	+0.2
FRF	La Foret Royal	2.53	267	ePg	Pg	20 56 35.9	-0.2
FRF				eSn	Sn	20 56 58.8	-1.5
	12nm,0.3s						
FRF				eSg	Sg	20 57 09.1	+0.2
CTI	Castel Tesino	2.55	25	Pg	Pn	20 56 30.1	+0.6
	21nm,0.4s						
MBDF	Montbardon	2.60	293	ePg	Pg	20 56 37.8	+0.3
MBDF				eSn	Sn	20 57 01.9	-0.2
	34nm,0.5s						
MBDF				eSg	Sg	20 57 12.3	+1.1
MBDF	Montbardon	2.60	293	ePn	Pn	20 56 30.5	+0.3
MBDF				ePg	Pg	20 56 37.8	+0.3
MBDF				eSn	Sn	20 57 01.9	-0.2
MBDF				eSg	Sg	20 57 12.3	+1.1
MBDF	Montbardon	2.60	293	ePg	Pg	20 56 37.8	+0.3
MBDF				eSn	Sn	20 57 01.9	-0.2
	17nm,0.5s						
MBDF				eSg	Sg	20 57 12.3	+1.1
LMR	La Mourre	2.66	262	ePg	Pg	20 56 37.7	-0.9
LMR				eSn	Sn	20 57 02.0	-1.5
	14nm,0.4s						
LMR				eSg	Sg	20 57 13.3	+0.2
LMR	La Mourre	2.66	262	ePn	Pn	20 56 30.7	-0.3
LMR				ePg	Pg	20 56 37.7	-0.9
LMR				eSn	Sn	20 57 02.0	-1.5
LMR				eSg	Sg	20 57 13.3	+0.2
LMR	La Mourre	2.66	262	ePg	Pg	20 56 37.7	-0.9
LMR				eSn	Sn	20 57 02.0	-1.5
	7.2nm,0.4s						
LMR				eSg	Sg	20 57 13.3	+0.2
RRL	Cesana Torines	2.67	297	P	Pn	20 56 32.3	+1.2
LSD	Ceresole Reale	2.73	310	P	Pn	20 56 32.5	+0.6
TUE	Stuetta	2.79	349	Pg	Pn	20 56 34.5	+1.8
	34nm,0.6s						
BNI	Bardonecchia	2.79	299	eP	Pn	20 56 33.4	+0.5
BNI	Bardonecchia	2.79	299	eP	Pn	20 56 33.4	+0.6
APPI	Appiano	2.85	16	Pg	Pn	20 56 34.6	+1.1
	94nm,0.4s						
LPG	La Plagne	2.98	307	ePn	Pn	20 56 36.6	+1.2
LPL	La Plagne	3.00	307	ePg	Pg	20 56 45.4	+0.3
LPL	La Plagne	3.00	307	ePn	Pn	20 56 37.0	+1.3
LPL				ePg	Pg	20 56 45.4	+0.3
LPL	La Plagne	3.00	307	ePg	Pg	20 56 45.4	+0.3
DAVOX	Davos	3.04	357	Pg	Pn	20 56 38.8	+2.5
RSL	Roselend	3.16	309	P	Pn	20 56 42.4	+4.5
ORIF	Oris-en-Rattie	3.26	293	ePg	Pg	20 56 49.4	-0.8
ORIF	Oris-en-Rattie	3.26	293	ePn	Pn	20 56 41.3	+2.0
ORIF				ePg	Pg	20 56 49.4	-0.8
ORIF	Oris-en-Rattie	3.26	293	ePg	Pg	20 56 49.4	-0.8
SMRF	Simiane la Rot	3.30	276	ePg	Pg	20 56 50.5	-0.3
SMRF	Simiane la Rot	3.30	276	ePn	Pn	20 56 41.1	+1.3
SMRF				ePg	Pg	20 56 50.5	-0.3
SMRF	Simiane la Rot	3.30	276	ePg	Pg	20 56 50.5	-0.3
ROBS	Robic	3.47	43	ePn	Pn	20 56 41.3	-0.8
ROBS				eSn	Sn	20 57 21.4	-2.0
VOJS	Vojsko	3.52	48	eSn	Sn	20 57 22.0	-2.7
VOY	Vojsko	3.52	48	ePn	Pn	20 56 44.6	+1.7
VOY				eSn	Sn	20 57 22.0	-2.8
DAVA	Damuels	3.55	357	⇑iPn	Pn	20 56 45.7	+2.5
	SNR=22						
DAVA				⇓iSn	Sn	20 57 26.6	+1.1
DAVA	Damuels	3.55	357	Pn	Pn	20 56 45.7	+2.5
	21nm,5.0s						
DAVA				Sn	Sn	20 57 26.6	+1.1
SQTA	Sankt Quirin	3.56	12	⇑iPn	Pn	20 56 45.4	+2.0
SQTA				iSn	Sn	20 57 25.3	-0.5
SQTA	Sankt Quirin	3.56	12	Pn	Pn	20 56 45.4	+2.0
	27nm,8.0s						
SQTA				Sn	Sn	20 57 25.3	-0.5
MOTA	Moosalm	3.67	10	⇑iPn	Pn	20 56 47.5	+2.7
MOTA				iSn	Sn	20 57 28.3	-0.1
WTTA	Wattenberg	3.68	16	⇓iPn	Pn	20 56 46.3	+1.3
	SNR=22						
WTTA				⇓iSn	Sn	20 57 28.2	-0.5
WTTA	Wattenberg	3.68	16	Pn	Pn	20 56 46.3	+1.3
	21nm,8.0s						
WTTA				Sn	Sn	20 57 28.2	-0.5

WATA	Walderalm	3.74	15	⇓iPn	Pn	20 56 47.9	+2.1
WATA				i Sn	Sn	20 57 29.5	-0.6
WATA	Walderalm	3.74	15	Pn	Pn	20 56 47.9	+2.1
	17nm,7.0s						
WATA				Sn	Sn	20 57 29.5	-0.6
KBA	Koelnbreinsper	4.03	33	⇓iPn	Pn	20 56 50.7	+0.9
KBA				⇓iSn	Sn	20 57 36.5	-1.0
CABF	La Chapelle	4.05	317	ePg	Pg	20 57 05.2	0.0
CABF				eSn	Sn	20 57 36.5	-1.2
	9.8nm,0.5s						
CABF	La Chapelle	4.05	317	ePn	Pn	20 56 51.5	+1.5
CABF				ePg	Pg	20 57 05.2	0.0
CABF				eSn	Sn	20 57 36.5	-1.2
BOJS	Bojanci	4.06	63	ePn	Pn	20 56 52.1	+1.9
BOJS				eSn	Sn	20 57 35.1	-3.0
VIVF	Saint-Julien-l	4.07	288	ePn	Pn	20 56 51.5	+1.2
VIVF				eSn	Sn	20 57 36.7	-1.6
	3.9nm,0.3s						
VIVF				eSg	Sg	20 57 57.8	-0.5
VIVF	Saint-Julien-l	4.07	288	ePn	Pn	20 56 51.5	+1.2
VIVF				eSn	Sn	20 57 36.7	-1.6
	2.0nm,0.3s						
VIVF				eSg	Sg	20 57 57.8	-0.5
OBKA	Obir	4.18	47	⇑iPn	Pn	20 56 52.1	+0.2
OBKA				⇑iSn	Sn	20 57 39.6	-1.4
LOMF	Lomont	4.29	328	P	Pn	20 56 55.3	+1.9
FELD	Feldberg im Sc	4.39	341	P	Pn	20 56 55.7	+0.9
LASF	Ste Croix	4.54	276	ePn	Pn	20 56 57.0	+0.2
PERS	Pernice	4.56	49	ePn	Pn	20 57 00.8	+3.7
PERS				eSn	Sn	20 57 48.6	-1.9
MOF	Molkenrain	4.61	334	P	Pn	20 56 58.4	+0.6
HINF	Hinteralfeld	4.67	332	ePg	Pg	20 57 15.6	-1.6
HINF				eSn	Sn	20 57 51.6	-1.6
	7.2nm,0.3s						
HINF	Hinteralfeld	4.67	332	ePn	Pn	20 56 59.3	+0.6
HINF				ePg	Pg	20 57 15.6	-1.6
HINF				eSn	Sn	20 57 51.6	-1.6
BFO	Black Forest	4.75	345	eP	Pn	20 57 01.1	+1.3
BFO	Black Forest	4.75	345	eP	Pn	20 57 01.0	+1.2
ECH	Echery	4.93	336	P	Pn	20 57 03.0	+0.8
HAU	Haudompre	5.01	330	ePg	Pg	20 57 21.2	-2.5
HAU				eSn	Sn	20 58 00.6	-0.9
	13nm,0.3s						
HAU	Haudompre	5.01	330	ePn	Pn	20 57 04.0	+0.7
HAU				ePg	Pg	20 57 21.2	-2.5
HAU				eSn	Sn	20 58 00.6	-0.9
MOA	Molln	5.03	34	⇑iPn	Pn	20 57 04.0	+0.5
MOA				⇑iSn	Sn	20 58 00.8	-1.1
WLS	Welschbruch	5.05	339	P	Pn	20 57 04.7	+0.8
CDF	Champ du Feu	5.07	338	ePg	Pg	20 57 23.4	-1.4
CDF				eSn	Sn	20 58 00.6	-2.4
	8.2nm,0.4s						
CDF	Champ du Feu	5.07	338	ePn	Pn	20 57 04.6	+0.4
CDF				ePg	Pg	20 57 23.4	-1.4
CDF				eSn	Sn	20 58 00.6	-2.4
SMF	Signal de Mont	5.30	305	ePg	Pg	20 57 27.1	-2.1
SMF				eSn	Sn	20 58 06.5	-2.2
	8.9nm,0.5s						
SMF	Signal de Mont	5.30	305	ePn	Pn	20 57 08.5	+1.2
SMF				ePg	Pg	20 57 27.1	-2.1
SMF				eSn	Sn	20 58 06.5	-2.2
SMF	Signal de Mont	5.30	305	ePg	Pg	20 57 27.1	-2.1
SMF				eSn	Sn	20 58 06.5	-2.2
	4.4nm,0.5s						
LOR	Lormes	5.64	311	ePg	Pg	20 57 34.7	-1.0
LOR				eSn	Sn	20 58 14.7	-2.3
	3.7nm,0.3s						
LOR	Lormes	5.64	311	ePn	Pn	20 57 12.8	+0.9
LOR				ePg	Pg	20 57 34.7	-1.0
LOR				eSn	Sn	20 58 14.7	-2.3
AVF	Avril sur Loir	5.67	305	ePn	Pn	20 57 13.0	+0.7
GEC2	GERESS Array S	5.67	25	eP	Pn	20 57 11.9	-0.5
GEC2	GERESS Array S	5.67	25	eP	Pn	20 57 11.9	-0.5
SSF	Saint Saulge	5.72	308	ePn	Pn	20 57 13.5	+0.5
SSF				eSn	Sn	20 58 16.5	-2.5
	2.4nm,0.4s						
SSF				eSg	Sg	20 58 49.8	-1.5
MTLF	Montolieu	5.76	269	ePn	Pn	20 57 13.0	-0.6
MTLF				ePg	Pg	20 57 35.2	-2.8
BGF	Bois d'Agland	5.87	301	ePn	Pn	20 57 16.3	+1.3
BGF				eSn	Sn	20 58 20.1	-2.5
	12nm,0.5s						
KHC	Kasperske Hory	5.89	23	ePN	Pn	20 57 15.3	-0.2
KHC				ePG	Pg	20 57 38.5	-2.0
KHC				ex	x	20 57 49.0	
KHC				eSN	Sn	20 58 18.4	-4.9
CAF	Calviac	5.90	284	ePn	Pn	20 57 16.6	+1.1
MEZF	Maizieres J'vi	5.92	325	ePn	Pn	20 57 16.1	+0.3
TCF	Toulx Ste Croi	6.16	297	ePn	Pn	20 57 20.0	+0.9
TCF				ePg	Pg	20 57 43.6	-2.0
HYF	Humbligny	6.33	306	ePn	Pn	20 57 21.8	+0.4
HYF				ePg	Pg	20 57 47.2	-1.7
MFF	Saint Martin d	7.80	295	ePn	Pn	20 57 42.2	+0.6

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*BJI **16** 21:07:45.3, 2.65N×129.04E, h228km, mB4.6, mb4.6*
*ISCJB **16** 21:07:46.7±0.7, 2.84N±0.03×128.78E±0.06, h224km±6km, mb4.5/47, Error ellipse: s-maj=10.2km s-min=4.5km az=152.6*
*NEIC **16** 21:07:46.1±0.3, 2.83N×128.71E, mb4.9/16, Error ellipse: s-maj=12.6km s-min=5.7km az=65.0*
*IDC **16** 21:07:47.3±0.8, 2.80N×128.53E, h209km±7km, mb4.1/16, mb1 4.2/16, mb1mx4.1/21, mbtmp4.6/16, Error ellipse: s-maj=18.5km s-min=8.2km az=73.0*
*MOS **16** 21:07:50.4±0.8, 2.78N×128.67E, h262km, mb4.6/12, Error ellipse: s-maj=17.5km s-min=7.4km az=114.0*
ISC 16 21:07:47.5±0.7, **2.83N**±0.03×**128.80E**±0.06, **h215**km±6km, **h201**km±3.0km**:pP-P, n102,** σ**1.07**/111, **mb4.5**/47, **7C-6D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	Sorong	4.42	146	P	Pn	21 09 00.9	+6.0
	0.0nm,0.0s						
MATI	Mati	4.81	328	eP	Pn	21 08 59.9	0.0
MATI				eS	S	21 09 54.8	-2.2
BUKP	Musuan	6.24	324	eP	Pn	21 09 17.5	-0.6
CTBH	Cotabato--PC H	6.29	314	⇑iP	Pn	21 09 17.2	-1.5
BUTP	Butuan	6.87	333	eP	Pn	21 09 25.8	-0.3
BUTP				eS	S	21 10 44.0	-0.7
PAGZ	Pagadian	7.34	313	eP	Pn	21 09 31.5	-0.7
PCI	Palu	9.70	248	P	Pn	21 10 02.4	-0.2
	0.0nm,0.0s						
TSM	Tawau	11.00	278	P	Pn	21 10 22.3	+3.0
KKM	Kota Kinabalu	12.94	285	P	Pn	21 10 43.4	-0.4
KKM	Kota Kinabalu	12.94	285	eP	Pn	21 10 42.5	-1.3
JAY	Jayapura	13.03	114	P	Pn	21 10 52.4	+7.5
	0.0nm,0.0s						
KAKA	Kakadu	15.86	167	eP	Pn	21 11 19.7	+0.3
	33nm,0.6s						
KAKA				eS	S	21 14 08.5	-5.9
APYP	Conner	16.68	334	eP	P	21 11 30.2	+2.4
KSM	Kuching	18.52	266	eP	P	21 11 48.4	+0.5
FITZ	Fitzroy Crossi	21.03	188	eP	P	21 12 14.5	-0.2
	10nm,0.4s,mb4.7						
FITZ	Fitzroy Crossi	21.03	188	P	P	21 12 14.9	+0.2
	5.9nm,0.4s,mb4.5,baz=18,slow=11,SNR=83						
FITZ				S	S	21 15 51.4	-4.2
	4.8nm,0.9s,baz=182,slow=6.4,SNR=4.2						
BJII	Banjamegara	21.56	242	P	P	21 12 21.0	+0.8
	107nm,1.1s,mb5.3						
JCJI	Jatiwangi	22.49	246	P	P	21 12 29.5	+0.7
	204nm,0.8s						
LEM	Lembang	23.22	246	P	P	21 12 34.9	-0.5
	324nm,0.9s						
WRAB	Tennant Creek	23.27	167	⇓iP	P	21 12 36.4	+0.5
WRAB	Tennant Creek	23.27	167	eP	P	21 12 35.9	0.0
	35nm,0.6s,mb5.1						
WRA	Warramunga Arr	23.27	167	P	P	21 12 36.4	+0.5
	12nm,0.4s,mb4.8,baz=345,slow=10,SNR=105						
WRA				S	S	21 16 29.4	-2.5
	1.7nm,0.7s,baz=342,slow=14,SNR=3.7						
WRA				ScP	ScP	21 19 33.4	-0.8
	0.9nm,0.5s,baz=340,slow=2.7,SNR=6.2						
WRA	Warramunga Arr	23.27	167	P	P	21 12 36.4	+0.4
WRA				S	S	21 16 29.4	-2.6
WB2	Warramunga Arr	23.28	167	eP	P	21 12 36.0	0.0
CBJI	Citeko	23.76	247	P	P	21 12 39.9	-0.5
	241nm,0.8s						
SBJI	Serang	24.32	249	P	P	21 12 46.0	+0.6
	243nm,1.3s						
QIZ	Qiongzhong	24.56	312	P	P	21 12 48.6	+1.0
MBWA	Marble Bar	25.44	200	eP	P	21 12 55.0	-0.6
KGM	Kluang	25.47	269	P	P	21 12 56.5	+0.7
AS31	Alice Springs	26.80	170	eP	P	21 13 08.1	+0.3
AS31				eS	S	21 17 25.3	-2.4
ASAR	Alice Springs	26.80	170	P	P	21 13 08.3	+0.5
	6.9nm,0.5s,mb4.6,baz=351,slow=7.5,SNR=123						
ASAR				S	S	21 17 25.2	-2.5
	2.0nm,0.7s,baz=360,slow=25,SNR=4.9						
ASAR				ScP	ScP	21 19 43.2	-1.0
	1.2nm,0.6s,baz=341,slow=2.7,SNR=6.7						
ASAR	Alice Springs	26.80	170	P	P	21 13 08.3	+0.5
ASAR				S	S	21 17 25.2	-2.5
ASPA	Alice Springs	26.80	170	eP	P	21 13 08.1	+0.3
ASPA				eS	S	21 17 25.3	-2.4
KSI	Kapahiang	26.97	256	P	P	21 13 10.3	+1.0
	64nm,0.8s,mb5.3						
PSI	Prapat	29.84	271	P	P	21 13 34.4	-0.2
	30nm,0.9s,mb4.9,baz=85,slow=5.0,SNR=22						
NJ2	Nanjing	30.54	343	eP	P	21 13 40.8	0.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NANT	Nan	31.75	302	⇓P	P	21 13 53.0	+1.6
	comp=Z,275nm,0.4s						
CHG	Chiang Mai	33.25	301	⇓P	P	21 14 05.4	+0.9
	comp=Z,32nm,0.8s,mb4.9						
CHTO	Chiang Mai	33.25	301	eP	P	21 14 05.1	+0.6
CHTO				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.8						
CHTO	Chiang Mai	33.25	301	eP	P	21 14 05.1	+0.7
	comp=Z,24nm,0.8s,mb4.8						
FORT	Forrest	33.43	181	eP	P	21 14 05.5	-0.5
	comp=Z,40nm,0.6s,mb5.1						
KMI	Kunming	33.48	314	P	P	21 14 08.4	+2.0
KMI				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.3						
MJAR	Matsushiro Arr	34.65	13	P	P	21 14 17.7	+1.2
	comp=Z,3.3nm,0.7s,mb4.0,baz=187,slow=9.1,SNR=12						
XAN	Xi'an	36.16	331	P	P	21 14 29.6	+0.2
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
STKA	Stephens Creek	36.59	162	⇑iP	P	21 14 33.7	+0.7
	comp=Z,9.9nm,0.9s,mb4.3						
STKA	Stephens Creek	36.59	162	P	P	21 14 33.8	+0.8
	comp=Z,9.6nm,0.5s,mb4.6,baz=342,slow=7.8,SNR=60						
NWAO	Narrogin (SRO)	37.21	196	P	P	21 14 36.8	-1.4
	comp=Z,4.8nm,0.6s,mb4.2,baz=36,slow=10,SNR=5.5						
BJT	Baijiatuau	38.75	344	eP	P	21 14 51.9	+0.9
BJT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BJT	Baijiatuau	38.75	344	eP	P	21 14 51.9	+0.9
	comp=Z,7.7nm,0.7s,mb4.3						
ARMA	Armidale	39.60	148	eP	P	21 14 59.6	+1.5
LZH	Lanzhou	40.34	328	⇓P	P	21 15 05.6	+1.5
LZH				AMB	AMB		
	comp=Z,27nm,1.3s,mb4.5						
DZM	Mont Dzumac	44.34	126	P	P	21 15 39.4	+3.1
	comp=Z,4.4nm,0.4s,mb4.1,baz=293,slow=7.7,SNR=11						
LSA	Lhasa	44.58	311	P	P	21 15 40.3	+2.1
LSA	Lhasa	44.58	311	eP	P	21 15 40.2	+2.0
LSA				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.5						
LSA	Lhasa	44.58	311	eP	P	21 15 40.2	+1.9
	comp=Z,19nm,0.8s,mb4.5						
GTA	Gaotai	44.94	328	⇓iP	P	21 15 42.3	+1.3
GTA				AMB	AMB		
	comp=Z,18nm,0.8s,mb4.5						
YSS	Yuzh-Sakhalins	45.59	13	⇑eP	P	21 15 47.2	+1.0
HABR	Khabarovsk	45.79	6	eP	P	21 15 46.3	-1.4
HABR				eS	S	21 22 11.1	-3.7
GUN	Gumba	47.92	306	eP	P	21 16 05.2	+1.0
	comp=Z,118nm,0.6s,mb5.4						
PKI	Pulchoki	48.17	305	eP	P	21 16 06.3	+0.2
KKN	Kakani	48.36	305	eP	P	21 16 07.0	-0.6
	comp=Z,46nm,0.7s,mb4.9						
KKN	Kakani	48.36	305	eP	P	21 16 07.0	-0.6
KKN				pmax	pmax		
	comp=Z,46nm,0.7s,mb4.9						
DMN	Daman	48.43	305	eP	P	21 16 08.7	+0.6
	comp=Z,73nm,0.8s,mb5.0						
ULN	Ulaanbaatar	48.63	341	eP	P	21 16 10.8	+1.2
ULN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.1						
ULN	Ulaanbaatar	48.63	341	eP	P	21 16 10.8	+1.2
	comp=Z,11nm,1.0s,mb4.2						
ULN				epP	pP	21 16 55.0	-1.3
SONM	Songino Array	48.82	340	P	P	21 16 12.1	+1.0
	comp=Z,2.8nm,0.6s,mb3.7,baz=152,slow=7.7,SNR=24						
SONM				pP	pP	21 16 56.0	-1.9
	comp=Z,0.9nm,0.7s,baz=159,slow=12,SNR=2.7						
GKN	Gorkha	48.97	305	eP	P	21 16 12.3	+0.1
	comp=Z,30nm,0.8s,mb4.7						
KOLN	Koldanda	49.73	305	eP	P	21 16 18.8	+0.9
	comp=Z,136nm,0.7s,mb5.4						
HYB	Hyderabad	51.36	290	i P	P	21 16 30.0	-0.1
ZAK	Zakamensk	52.07	340	eP	P	21 16 35.7	+0.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TLY	Talaya	53.04	341	⇑iP	P	21 16 43.5	+1.0
YAK	Yakutsk	59.06	0	d iP	P	21 17 25.8	+0.7
YAK				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.8						
MK31	Makanchi Array	59.47	325	P	P	21 17 27.8	-0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
MKAR	Makanchi Array	59.47	325	P	P	21 17 28.2	+0.3
	comp=Z,6.8nm,0.5s,mb4.5,baz=115,slow=8.2,SNR=76						
MKAR				pP	pP	21 18 12.9	-3.5
	comp=Z,1.2nm,0.5s,baz=119,slow=7.6,SNR=5.9						
MKAR				ScP	ScP	21 21 51.8	-1.3
	comp=Z,0.7nm,0.6s,baz=101,slow=6.3,SNR=4.4						
MKAR	Makanchi Array	59.47	325	P	P	21 17 28.2	+0.3
MKAR				*PP	pP	21 18 13.0	-3.5
NVS	Novosibirsk	63.61	333	eP	P	21 17 54.3	-1.2
KK31	Karatay Array	65.30	317	i P	P	21 18 05.8	-0.6
KK31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
KKAR	Karatay Array	65.30	317	i P	P	21 18 05.8	-0.6
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
TIXI	Tiksi	68.72	0	⇑iP	P	21 18 29.2	+1.2
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
VOSK	Vostochnaya	68.75	326	P	P	21 18 27.0	-1.1
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
BVA0	Borovoye Array	69.20	327	i P	P	21 18 30.0	-0.9
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.7						
BVAR	Borovoye Array	69.20	327	P	P	21 18 30.6	-0.3
	comp=Z,7.1nm,0.6s,mb4.5,baz=122,slow=7.6,SNR=46						
BVAR				PcP	PcP	21 18 52.8	-0.4
	comp=Z,1.4nm,0.7s,baz=88,slow=3.6,SNR=3.6						
BVAR				pP	pP	21 19 19.9	-1.1
	comp=Z,1.5nm,0.8s,baz=134,slow=6.4,SNR=3.0						
BVAR	Borovoye Array	69.20	327	P	P	21 18 30.6	-0.3
BVAR						21 18 52.8	
BRVK	Borovoye	69.27	327	eP	P	21 18 31.0	-0.3
CHKZ	Chkalovo	69.35	327	eP	P	21 18 31.1	-0.7
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
CHKZ	Chkalovo	69.35	327	eP	P	21 18 31.1	-0.7
	comp=Z,4.3nm,0.7s,mb4.2						
CHKZ				epP	pP	21 19 19.4	-2.5
BILL	Bilibino	69.90	14	P	P	21 18 34.0	-1.2
ZRNK	Zerenda	69.93	326	eP	P	21 18 34.9	-0.5
ZRNK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
ZRNK	Zerenda	69.93	326	eP	P	21 18 34.9	-0.5
	comp=Z,13nm,0.8s,mb4.6						
ZRNK				epP	pP	21 19 20.0	-5.6
AB31	Akbulak array	74.15	321	P	P	21 18 59.8	-0.6
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
ARU	Arti	76.80	328	⇑iP	P	21 19 12.8	-2.6
ARU				e		21 22 08.7	
ARU				ePPP		21 23 57.7	
ARU				eS	S	21 28 39.0	-5.7
ARU				eSS	SS	21 33 37.1	-8.4
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
VNDA	Vanda	82.28	173	P	P	21 19 45.0	+0.1
	comp=Z,1.5nm,0.6s,mb3.8,baz=316,slow=6.1,SNR=15						
KIV	Kislovodsk	85.25	314	i P	P	21 19 58.6	-1.3
OBN	Obninsk	88.98	325	⇑eP	P	21 20 16.7	-1.1
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
JOF	Joensuu	90.91	333	ep	P	21 20 24.2	-2.6
	comp=Z,3.4nm,0.5s,mb4.5						
ARCES	ARCESS Array B	92.00	340	P	P	21 20 30.8	-1.1
	comp=Z,4.1nm,0.8s,mb4.4,baz=82,slow=5.9,SNR=19						
ARCES	ARCESS Array B	92.00	340	P	P	21 20 30.8	-1.1
BRTR	Keskin Array B	92.18	310	P	P	21 20 32.1	-0.5
	comp=Z,0.9nm,0.8s,mb3.8,baz=104,slow=5.2,SNR=5.1						
FINES	FINESS Array B	93.59	332	P	P	21 20 37.8	-1.4
	comp=Z,1.7nm,0.8s,mb4.1,baz=63,slow=5.1,SNR=5.1						
AKASG	Malin Array Be	93.89	321	P	P	21 20 38.6	-2.0
	comp=Z,0.3nm,0.3s,mb3.8,baz=68,slow=3.8,SNR=5.0						
TORD	Torodi Ar. Bea	125.16	288	PKP	PKPdf	21 26 22.8	+0.4
	comp=Z,0.5nm,0.3s,baz=50,slow=1.9,SNR=23						
LPAZ	La Paz	158.64	130	PKPab	PKPab	21 28 00.1	+4.4
	comp=Z,0.9nm,0.7s,baz=257,slow=4.4,SNR=4.1						

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*ISCJB **16** 21:34:51.3±5.8, 23.3S±0.8×180.0W±0.7, h600km, mb4.1/6, Error ellipse: s-maj=134.9km s-min=22.1km az=73.4*
*IDC **16** 21:34:52.2±17.0, 22.87S×179.68W, h633km±204km, mb3.2/5, mb1 3.4/5, mb1mx3.2/12, mbtmp4.3/5, Error ellipse: s-maj=171.4km s-min=43.7km az=46.0*
*NEIC **16** 21:34:52.8±3.8, 23.25S×180.00W, h600km, mb4.5/4, Error ellipse: s-maj=101.0km s-min=16.2km az=217.0*
ISC 16 21:34:53.0±5.8, **23.3S**±0.8×**180.0W**±0.7, **h600**km**, n13,** σ**0.28**/13, **mb4.1**/6, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	31.51	269	eP	P	21 40 27.7	+0.2
	7.0nm,0.3s,mb4.8						
CTA	Charters Tower	31.51	269	P	P	21 40 28.2	+0.7
	10nm,0.4s,mb4.8,baz=94,slow=9.9,SNR=19						
CTAO	Charters Tower	31.51	269	eP	P	21 40 27.6	+0.2
	11nm,0.4s,mb4.8						
STKA	Stephens Creek	34.96	247	P	P	21 40 56.4	0.0
	1.0nm,0.4s,mb3.8,baz=69,slow=10,SNR=4.8						
STKA	Stephens Creek	34.96	247	P	P	21 40 56.4	0.0
AS31	Alice Springs	42.16	260	eP	P	21 41 54.4	+0.1
ASAR	Alice Springs	42.16	260	P	P	21 41 54.5	+0.2
	1.9nm,0.4s,mb4.0,baz=95,slow=7.3,SNR=33						
ASPA	Alice Springs	42.16	260	eP	P	21 41 54.4	+0.1
WB2	Warramunga Arr	42.47	266	eP	P	21 41 56.5	-0.2
WRAB	Tennant Creek	42.47	266	eP	P	21 41 56.2	-0.6
	5.2nm,0.5s,mb4.3						
WRA	Warramunga Arr	42.48	266	P	P	21 41 56.8	0.0
	2.1nm,0.3s,mb4.1,baz=94,slow=8.3,SNR=117						
VNDA	Vanda	54.94	185	P	P	21 43 28.4	-0.3
	0.4nm,0.6s,baz=24,slow=5.0,SNR=6.7						
QSPA	South Pole Qui	66.74	180	eP	P	21 44 46.1	+0.3
	3.1nm,0.7s,mb3.9						

IDC 16 21:38:02.9±4.6, **19.71N**×**145.25E, h0**km**, mb3.8**/3, **mb1 4.0**/3, **mb1mx3.6**/17, **mbtmp3.8**/3, **Error ellipse: s-maj=297.1km s-min=31.8km az=90.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.83	196	P	P	21 45 47.1	+0.8
	0.6nm,0.4s,baz=18,slow=9.2,SNR=9.5						
ASAR	Alice Springs	44.51	195	P	P	21 46 15.5	-0.6
	0.3nm,0.4s,baz=13,slow=6.3,SNR=4.3						
JOF	Joensuu	82.92	335	ep	P	21 50 29.9	+0.3
FINES	FINESS Array B	85.79	335	P	P	21 50 44.0	-0.2
	0.6nm,0.4s,baz=73,slow=4.7,SNR=12						

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*ISCJB **16** 22:22:37.3±0.8, 25.81S±0.07×179.83E±0.10, h487km±10km, mb4.4/17, Error ellipse: s-maj=14.0km s-min=11.2km az=31.3*
*MOS **16** 22:22:37.8±0.7, 25.79S×179.78E, h489km, mb4.8/4, Error ellipse: s-maj=21.4km s-min=15.9km az=24.4*
*IDC **16** 22:22:38.2±1.1, 25.82S×179.80E, h478km±13km, mb3.9/7, mb1 3.8/9, mb1mx3.7/13, mbtmp4.6/9, Error ellipse: s-maj=17.8km s-min=14.2km az=167.0*
*NEIC **16** 22:22:39.1±0.8, 25.90S×179.84E, h496km±8km, mb4.5/12, Error ellipse: s-maj=10.0km s-min=9.6km az=196.0*
ISC 16 22:22:38.4±0.7, **25.89S**±0.07×**179.96E**±0.10, **h493**km±10km**, n55,** σ**0.87**/44, **mb4.4**/17, **3C-2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.85	151	P	P	22 23 56.2	+1.3
	202nm,0.3s,baz=294,slow=21,SNR=20						
RAO				S	S	22 24 57.0	-0.4
	42nm,0.3s,baz=107,slow=20,SNR=2.7						
RAO	Raoul Island	3.85	151	eP	P	22 23 56.3	+1.4
RAO				eS	S	22 24 54.0	-3.4
URZ	Urewera	12.57	190	P	P	22 25 22.0	-0.9
	1.2nm,0.3s,baz=335,slow=9.4,SNR=6.5						
URZ				S	S	22 27 38.8	+0.2
	1.3nm,0.3s,baz=252,slow=23,SNR=9.7						
DZM	Mont Dzumac	12.92	284	P	P	22 25 28.2	+1.6
	1.4nm,0.3s,baz=116,slow=16,SNR=15						
AFI	Afiamalu	14.22	35	P	P	22 25 36.8	-3.6
	3.3nm,0.3s,baz=90,slow=18,SNR=4.0						
AFI	Afiamalu	14.22	35	P	P	22 25 36.2	-4.2
RPZ	Rata Peaks	19.21	200	P	P	22 26 29.7	-0.3
	0.6nm,0.3s,baz=347,slow=14,SNR=5.2						
HNR	Honiara	25.07	307	P	P	22 27 21.4	-1.3
	42nm,0.3s,mb5.3,baz=105,slow=1.5,SNR=3.5						
ARMA	Armidale	25.35	253	⇑iP	P	22 27 27.2	+1.9
CTA	Charters Tower	31.50	274	⇓iP	P	22 28 19.7	+0.7
	14nm,0.4s,mb4.8						
CTA	Charters Tower	31.50	274	⇓iP	P	22 28 19.7	+0.7
CTA				pmax	pmax		
	comp=Z,14nm,0.4s						
CTAO	Charters Tower	31.50	274	eP	P	22 28 19.6	+0.6
CTAO				pmax	pmax		
	comp=Z,24nm,0.6s,mb4.8						
CTAO	Charters Tower	31.50	274	eP	P	22 28 19.6	+0.7
	comp=Z,24nm,0.6s,mb4.8						
TAU	Tasmania Unive	31.58	229	P	P	22 28 18.8	-0.8
STKA	Stephens Creek	33.99	251	eP	P	22 28 40.3	+0.2
	comp=Z,5.0nm,0.8s,mb4.0						
STKA	Stephens Creek	33.99	251	P	P	22 28 40.8	+0.7
	comp=Z,3.9nm,0.6s,mb4.0,baz=86,slow=9.2,SNR=11						
STKA				PcP	PcP	22 31 05.7	+1.5
	comp=Z,2.9nm,0.9s,baz=90,slow=1.0,SNR=4.1						
AS31	Alice Springs	41.71	263	⇑iP	P	22 29 43.5	+0.2
ASAR	Alice Springs	41.71	263	P	P	22 29 43.4	+0.1
	comp=Z,11nm,0.4s,mb4.6,baz=90,slow=7.3,SNR=177						
ASAR				S	S	22 35 25.1	+1.2
	comp=Z,1.6nm,0.9s,baz=90,slow=15,SNR=7.9						
ASPA	Alice Springs	41.71	263	⇑iP	P	22 29 43.5	+0.2
WB2	Warramunga Arr	42.26	268	eP	P	22 29 47.3	-0.3
WRAB	Tennant Creek	42.27	268	eP	P	22 29 47.4	-0.3
WRAB				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.7						
WRAB	Tennant Creek	42.27	268	eP	P	22 29 47.4	-0.2
	comp=Z,24nm,0.8s,mb4.7						
WRA	Warramunga Arr	42.27	268	P	P	22 29 47.3	-0.4
	comp=Z,8.2nm,0.4s,mb4.5,baz=98,slow=7.2,SNR=324						
WRA				S	S	22 35 31.8	-0.2
	comp=Z,3.5nm,1.0s,baz=97,slow=15,SNR=11						
FORT	Forrest	45.61	251	eP	P	22 30 12.3	-1.4
	comp=Z,25nm,0.6s,mb4.8						
KAKA	Kakadu	46.48	277	eP	P	22 30 19.5	-0.8
	comp=Z,28nm,0.4s,mb5.0						
FITZ	Fitzroy Crossi	50.67	267	eP	P	22 30 51.4	-0.1
	comp=Z,15nm,0.6s,mb4.5						
MIDW	Midway	53.85	3	P	P	22 31 14.8	+0.4
KLBR	Kellerberrin	54.21	249	eP	P	22 31 16.2	-0.7
	comp=Z,12nm,0.6s,mb4.4						
MBWA	Marble Bar	55.02	261	eP	P	22 31 22.1	-0.5
	comp=Z,4.6nm,0.7s,mb3.9						
CASY	Casey	58.32	206	eP	P	22 31 45.1	-0.3
	comp=Z,3.4nm,0.7s,mb3.8						
MJAR	Matsushiro Arr	73.51	326	P	P	22 33 20.2	0.0
	comp=Z,4.5nm,0.7s,mb4.1,baz=160,slow=5.7,SNR=15						
MAJO	Matsushiro	73.51	326	eP	P	22 33 20.2	-0.1
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.2						
MAJO	Matsushiro	73.51	326	eP	P	22 33 20.2	-0.1
	comp=Z,3.1nm,0.4s,mb4.2						
MAW	Mawson	75.88	201	P	P	22 33 34.3	+0.7
	comp=Z,1.4nm,0.7s,mb3.6,baz=115,slow=0.2,SNR=4.6						
YSS	Yuzh-Sakhalins	79.91	335	eP	P	22 33 56.2	+0.8
MDJ	Mudanjiang	83.89	326	eP	P	22 34 15.9	+0.2
	comp=Z,2.8nm,0.3s,mb4.3						
PLCA	Paso Flores	86.92	134	P	P	22 34 32.2	+1.9
	comp=Z,1.3nm,0.9s,mb3.7,baz=282,slow=9.3,SNR=3.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MA2	Magadan	88.48	346	P	P	22 34 37.1	-0.6
PMR	Palmer	90.67	14	eP	P	22 34 47.3	-0.5
BVAR	Borovoye Array	121.89	318	PKP	PKPdf	22 40 35.7	-0.4
	comp=Z,0.6nm,0.5s,baz=133,slow=3.9,SNR=5.0						
ZRNK	Zerenda	122.73	318	ePKIKP	PKPdf	22 40 37.3	-0.4
ARU	Arti	128.44	323	eP	Pdif	22 37 33.2	-3.3
AKTO	Aktyubinsk	129.69	315	SKPbc	SKPbc	22 43 30.2	+3.5
	comp=Z,0.8nm,0.4s,baz=90,slow=3.0,SNR=3.6						
ARCES	ARCESS Array B	133.81	348	SKPbc	SKPbc	22 43 43.4	+2.2
	comp=Z,1.6nm,0.7s,baz=38,slow=4.6,SNR=6.5						
JOF	Joensuu	137.57	339	ep	Pdif	22 38 10.4	-6.7
FINES	FINESS Array B	140.31	341	PKhKP		22 41 03.2	
	comp=Z,1.9nm,0.9s,baz=101,slow=3.9,SNR=3.8						
FINES				SKPbc	SKPbc	22 44 02.5	+2.4
	comp=Z,3.0nm,1.0s,baz=101,slow=2.8,SNR=3.9						
FINES	FINESS Array B	140.31	341	PKP	PKPdf	22 41 03.2	-7.5
FINES				SKPbc	SKPbc	22 44 02.5	+2.4
NB2	NORSAR Subarra	144.03	351	PKPa	PKPdf	22 41 15.6	-1.7
	comp=Z,6.8nm,0.9s,baz=20,slow=3.8						
NOA	NORSAR Array B	144.03	351	PKP	PKPdf	22 41 15.9	-1.3
	comp=Z,4.1nm,0.8s,baz=20,slow=2.5,SNR=15						
AKASG	Malin Array Be	146.60	326	PKPbc	PKPbc	22 41 23.6	-0.5
	comp=Z,1.4nm,0.4s,baz=47,slow=4.4,SNR=13						
ASF	Jabal al Asfar	147.21	290	PKPbc	PKPbc	22 41 27.4	+1.6
	comp=Z,3.0nm,0.6s,baz=85,slow=12,SNR=3.6						
MMAI	Mount Meron Ar	148.44	291	PKPbc	PKPbc	22 41 30.6	+1.7
	comp=Z,3.3nm,0.4s,baz=76,slow=7.0,SNR=16						
MMAI				PKPab	PKPab	22 41 35.7	+1.7
	comp=Z,2.3nm,0.6s,baz=52,slow=5.5,SNR=6.9						
BR131	Keskin Array S	148.71	305	ePKPdf	PKPdf	22 41 27.1	+2.0
BR131				ePKPbc	PKPbc	22 41 30.2	+0.6
BR131				ePKPab	PKPab	22 41 36.4	+1.2
BRTR	Keskin Array B	148.71	305	PKPbc	PKPbc	22 41 30.1	+0.6
	comp=Z,1.0nm,0.6s,baz=132,slow=2.9,SNR=7.6						
BRTR				PKPab	PKPab	22 41 35.7	+0.5
	comp=Z,2.7nm,0.8s,baz=126,slow=3.8,SNR=14						
CSS	Prodhromos	149.95	296	ePKPdf	PKPdf	22 41 28.6	+1.5
CSS				ePKPab	PKPab	22 41 41.2	+0.9

CASC 16 22:22:48.2±2.3, 1367N×9093W, h32km±21km, MD3.6, 3C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.78	7⇓	eP	Pn	22 23 03.7	+0.7
PCG	Pacaya	0.79	24	eP	Pn	22 23 04.0	+0.9
PCG				eS	Sn	22 23 14.7	+0.9
JAT	Jato	0.94	314⇑	eP	Pn	22 23 05.5	+0.4
TP2	Tecpan 2	1.11	356⇓	eP	Pn	22 23 07.7	+0.2
TP2				eS	Sn	22 23 23.1	+1.3
RTR	El Retiro	1.27	79	eP	x	22 23 14.2	
RTR				eS	x	22 23 30.9	
SBLS	San Blas	1.29	82⇑	eP	x	22 23 14.1	
SBLS				eS	x	22 23 30.9	
RBDL	Robledal	1.29	70⇓	iP	x	22 23 14.6	
RBDL				eS	x	22 23 32.1	
SNJE	San Jose	1.31	81⇓	eP	x	22 23 14.5	
SNJE				eS	x	22 23 33.0	
BOQS	Boqueron	1.61	87⇓	eP	x	22 23 18.8	
BOQS				eS	x	22 23 40.2	
MTO2	Montecristo 2	1.69	64	eP	x	22 23 19.5	
MTO2				eS	x	22 23 41.5	
LFU	La Fuente	1.77	87⇑	eP	x	22 23 21.7	
LFU				eS	x	22 23 44.9	
LFRS	El Faro	1.82	91	eP	x	22 23 21.8	
LFRS				eS	x	22 23 44.2	
SNVI	San Vicente	2.04	91	eP	x	22 23 24.9	
SNVI				eS	x	22 23 49.3	

MAN 16 22:22:55.2, 947N×12553E, h7km, mb3.4, ML4.6, MS2.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.32	353⇑	eP	Pg	22 23 02.6	+1.3
SCPH				eS	Sg	22 23 09.8	+4.3
BUTP	Butuan	0.50	169	eP	Pg	22 23 05.2	+0.3
BUTP				eS	Sg	22 23 13.7	+2.2
MSLP	Maasin	0.93	315	eP	Pg	22 23 13.2	+0.1
MSLP				eS	Sg	22 23 27.5	+2.3
CGP	Cagayan de Oro	1.30	219	eP	Pn	22 23 17.9	-1.8
CGP				i S	Sb	22 23 36.0	-0.7
BUKP	Musuan	1.64	196	eP	Pn	22 23 24.4	0.0
BUKP				eS	Sn	22 23 47.8	+1.9
TBP	Tagbilaran	1.66	278	eP	Pn	22 23 24.0	-0.6
TBP				eS	Sn	22 23 44.3	-1.8
PLP	Palo	1.77	342	eP	Pn	22 23 27.8	+1.5
PLP				eS	Sn	22 23 52.4	+3.4
PAGZ	Pagadian	2.66	233	eP	Pn	22 23 39.1	+0.6
PAGZ				eS	Sn	22 24 12.1	+1.1

ISC 16 22:31:28.2±0.9, 3659N±005×704E±02, h100km, n7, σ1.03/11, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.01	156	⇓P	Pn	22 32 15.5	+1.4
CEP				S	Sn	22 32 50.0	+0.6
CHCP	Chirah Chowk	3.73	141	P	Pn	22 32 23.2	-0.5
THW	Thamme Wali	3.94	164	⇑P	Pn	22 32 26.9	+0.4
THW				S	Sn	22 33 11.0	-0.7
SBDP	Sheikh Budin	4.29	176	P	Pn	22 32 31.9	+0.6
DRP	Derazinda	4.84	182	⇑P	Pn	22 32 39.7	+1.0
DRP				S	Sn	22 33 32.0	-1.5
SARP	Sargodha	5.01	158	P	Pn	22 32 39.7	-1.3
KK31	Karatay Array	6.50	1	Pn	Pn	22 33 02.5	+1.2
	1.4nm,0.3s,baz=181,slow=12,SNR=20						
KK31				⇓Sn	Sn	22 34 12.7	-1.3
	3.3nm,0.4s						

ISCJB 16 22:32:02.1±0.4, 3220N±004×4946E±003, h10km, mb3.9/21, MS3.2/3, Error ellipse: s-maj=6.4km s-min=3.5km az=175.6
NEIC 16 22:32:04.9, 3232N×4952E, h0km, mb4.2/8, ML3.8(THR), MN3.9(TEH), After TEH.
MOS 16 22:32:04.9±1.4, 3226N×4941E, h33km, mb4.3/8, Error ellipse: s-maj=11.2km s-min=6.3km az=120.0
TEH 16 22:32:04.9, 3232N×4952E, h0km, Mn3.9
THR 16 22:32:05.0±1.0, 3243N×4952E, h14km±10km, ML3.8
CSEM 16 22:32:05.2±0.1, 3230N×4951E, h30km, mb4.2/8, Error ellipse: s-maj=1.8km s-min=1.2km az=169.0
IDC 16 22:32:06.7±3.2, 3241N×4955E, h33km±24km, mb3.7/13, mb1 3.8/18, mb1mx3.7/27, mbtmp3.9/18, ML3.6/5, MS3.3/3, Ms1 3.3/3, ms1mx2.6/36, Error ellipse: s-maj=19.1km s-min=15.5km az=148.0

ISC 16 22:32:05.1±0.3, 3236N±003×4950E±003, h10km, n137, σ1.40/143, mb3.9/21, MS3.2/3, 11C-8D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.64	247	ePG	Pg	22 32 18.1	+0.6
SHGR				AML	AML	22 32 35.8	
	comp=E,5µm,0.2s						
SHGR				AML	AML	22 32 37.6	
	comp=N,4µm,0.8s						
SHGR	Shooshtar-Gavs	0.64	247	ePg	Pg	22 32 18.0	+0.5
IPIR	Pirpir	1.22	74	Pn	Pn	22 32 24.5	-3.6
IKLH	Kalahroud	1.99	61	Pn	Pn	22 32 38.4	-0.4
IKLH	Kalahroud	1.99	61	ePn	Pn	22 32 38.5	-0.3
ASAO	Ashtian	2.22	11	ePG	Pn	22 32 43.8	+1.9
ASAO				AML	AML	22 33 24.5	
	comp=E,726nm,0.5s						
ASAO				AML	AML	22 33 24.8	
	comp=N,694nm,0.6s						
ASAO	Ashtian	2.22	11	ePg	Pn	22 32 43.0	+1.1
IGAR	Garneh	2.29	92	ePn	Pn	22 32 41.9	-0.9
IZEF	Zefreh	2.44	77	Pn	Pn	22 32 45.6	+0.6
IZEF	Zefreh	2.44	77	ePn	Pn	22 32 45.7	+0.7
IKOM	Komasi	2.46	318	Pn	Pn	22 32 46.7	+1.5
IKOM	Komasi	2.46	318	ePn	Pn	22 32 46.8	+1.6
NASN	Na'in	2.83	80	ePn	Pn	22 32 51.5	+1.2
NASN				AML	AML	22 33 43.8	
	comp=E,251nm,0.4s						
NASN	Na'in	2.83	80	ePn	Pn	22 32 51.0	+0.8
ISFB	Sefidab	3.03	48	Pn	Pn	22 32 53.5	+0.4
ISFB	Sefidab	3.03	48	ePn	Pn	22 32 53.6	+0.5
IVIS	Veys	3.09	315	Pn	Pn	22 32 54.6	+0.7
IVIS	Veys	3.09	315	ePn	Pn	22 32 54.7	+0.8
IGHG	Ghaleghazi	3.14	309	ePn	Pn	22 32 55.5	+0.9
MIB	Mutribah	3.15	217	eP	Pn	22 32 56.8	+2.0
MIB				AML	AML	22 33 37.0	
	comp=Z,232nm,0.5s						
UMR	Umm Al-Rimmam	3.19	209	eP	Pn	22 32 56.9	+1.6
UMR				AML	AML	22 33 39.7	
	comp=Z,468nm,0.5s						
SNGE	Sanandaj	3.26	327	ePN	Pn	22 32 57.2	+1.0
SNGE				AML	AML	22 33 55.2	
	comp=N,174nm,0.7s						
SNGE	Sanandaj	3.26	327	ePn	Pn	22 32 57.0	+0.8
ILIN	Laeen	3.31	321	Pn	Pn	22 32 58.2	+1.3
ILIN	Laeen	3.31	321	ePn	Pn	22 32 58.3	+1.4
IMHD	Mahdasht	3.45	16	ePn	Pn	22 33 00.0	+1.1
KBD	Kabd	3.54	207	eP	Pn	22 33 01.9	+1.8
KBD				AML	AML	22 33 46.4	
	comp=Z,692nm,0.4s						
RST	Umm Al-Ruwaisa	3.57	218	eP	Pn	22 33 02.3	+1.8
RST				AML	AML	22 33 47.7	
	comp=Z,165nm,0.7s						
NAY	Al-Naaiem	3.66	213	eP	Pn	22 33 03.5	+1.8
NAY				AML	AML	22 33 48.3	
	comp=Z,75nm,0.5s						
THKV	Tehran--Karaj	3.72	18	ePn	Pn	22 33 03.8	+1.3
THKV				AML	AML	22 34 10.0	
	comp=E,158nm,0.3s						
THKV				AML	AML	22 34 21.9	
	comp=N,128nm,0.6s						
CHTH	Charan	3.78	20	ePn	Pn	22 33 04.4	+1.0
IDMV	Damavand	3.83	33	ePn	Pn	22 33 04.9	+0.8
DAMV	Damavand	3.85	32	ePN	Pn	22 33 05.1	+0.8
DAMV	Damavand	3.85	32	ePn	Pn	22 33 05.0	+0.7
IGZV	Gazvin	4.06	8	ePn	Pn	22 33 08.0	+0.8
ICHK	Chekchek	4.16	90	Pn	Pn	22 33 08.5	0.0
ICHK				Sn	Sn	22 33 55.9	-1.3
ICHK	Chekchek	4.16	90	ePn	Pn	22 33 08.6	+0.1
ICHK				eSn	Sn	22 33 55.9	-1.3
ILAS	Lasjerd	4.17	43	ePn	Pn	22 33 09.6	+1.0
IFIR	Firoozkooh	4.24	39	ePn	Pn	22 33 10.6	+0.9
IMEH	Mehriz	4.46	101	Pn	Pn	22 33 12.6	-0.1
IMEH	Mehriz	4.46	101	ePn	Pn	22 33 12.7	0.0
IPRN	Paran-Amol	4.49	30	Pn	Pn	22 33 15.4	+2.3
ISHM	Shahmirzad	4.66	41	ePn	Pn	22 33 16.5	+1.1
IANJ	Anjiloo	4.80	49	Pn	Pn	22 33 17.4	0.0
IANJ	Anjiloo	4.80	49	ePn	Pn	22 33 17.5	+0.1
IGLO	Galoogah	5.14	39	Pn	Pn	22 33 28.6	+6.6
IKIA	Kiasar	5.17	41	ePn	Pn	22 33 24.0	+1.6
IBAF	Bafgh	5.21	97	Pn	Pn	22 33 22.9	-0.2
IBAF	Bafgh	5.21	97	ePn	Pn	22 33 23.0	-0.1
IBST	Bostanabad	5.74	339	Pn	Pn	22 33 30.7	+0.4
GNI	Garni	8.67	335	P	Pn	22 34 11.9	+1.4
ASF	Jabal al Asfar	10.67	272	Pn	Pn	22 34 36.5	-1.5
	comp=N,1.4nm,0.3s,baz=317,slow=10,SNR=19						
ASF				Sn	Sn	22 36 30.3	-7.2
	comp=N,0.4nm,0.3s,baz=221,slow=20,SNR=2.7						
ASF				Lg		22 37 51.2	
	baz=163,slow=19,SNR=2.5						
ASF	Jabal al Asfar	10.67	272	P	Pn	22 34 36.5	-1.5
ASF						22 36 30.3	
MALT	Malatya	10.81	306	P	Pn	22 34 40.3	+0.4
MALT				e		22 36 39.0	
MALT				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MALT	Malatya	10.81	306	Pn	Pn	22 34 40.3	+0.4
	comp=Z,1.5nm,0.4s						
MALT				eSn	Sn	22 36 39.0	-2.0
MALT	Malatya	10.81	306	P	Pn	22 34 40.3	+0.4
	comp=Z,2.0nm,0.4s						
MMAI	Mount Meron Ar	11.90	277	Pn	Pn	22 34 55.1	+0.4
	comp=Z,0.4nm,0.3s,baz=92,slow=21,SNR=2.9						
WSAR	Wadi Sarin	12.16	136	Pn	Pn	22 34 55.5	-2.7
	comp=Z,1.1nm,0.3s,baz=309,slow=13,SNR=16						
WSAR				Sn	Sn	22 37 03.4	-10
	comp=Z,0.5nm,0.3s,baz=94,slow=14,SNR=4.3						
WSAR	Wadi Sarin	12.16	136	Pn	Pn	22 34 55.5	-2.7
WSAR				Sn	Sn	22 37 03.4	-10
WSAR	Wadi Sarin	12.16	136	Pn	Pn	22 34 55.5	-2.7
WSAR				Sn	Sn	22 37 03.4	-10
KIV	Kislovodsk	12.75	337	eP	Pn	22 35 08.2	+1.9
KIV	Kislovodsk	12.75	337	ePn	Pn	22 35 08.2	+1.8
EIL	Elat	12.77	262	ePn	Pn	22 35 08.1	+1.5
EIL				eSn	Sn	22 37 29.6	+0.8
EIL	Elat	12.77	262	ePn	Pn	22 35 08.1	+1.5
CSS	Prodhromos	13.72	285	ePn	Pn	22 35 15.2	-4.4
BR131	Keskin Array S	14.77	304	ePn	Pn	22 35 34.4	+0.4
BRTR	Keskin Array B	14.77	304	Pn	Pn	22 35 34.0	0.0
	comp=Z,0.0nm,0.3s,baz=128,slow=14,SNR=4.0						
AKTK	Aktyubinsk	19.13	17	P	Pn	22 36 26.8	-2.3
AKTK	Aktyubinsk	19.13	17	P	Pn	22 36 26.8	-2.3
AKTO	Aktyubinsk	19.13	17	P	Pn	22 36 26.8	-2.3
	comp=Z,0.1nm,0.3s,baz=173,slow=8.1,SNR=3.2						
IDI	Anoyia	20.64	285	P	P	22 36 45.3	+0.7
	comp=Z,58nm,0.9s,baz=76,slow=12,SNR=46						
CFR	Carcaliu	20.93	314⇑	iP	P	22 36 46.4	-1.4
CFR	Carcaliu	20.93	314	⇑P	P	22 36 46.4	-1.4
VRI	Vrincioaia	22.13	314⇓	iP	P	22 36 58.6	-2.1
VRI	Vrincioaia	22.13	314	⇓P	P	22 36 58.6	-2.1
MLR	Muntele Rosu	22.43	313	P	P	22 37 04.3	+0.4
	comp=Z,7.3nm,0.8s,mb4.2,baz=229,slow=2.0,SNR=17						
MLR	Muntele Rosu	22.43	313⇓	iP	P	22 37 06.1	+2.2
MLR	Muntele Rosu	22.43	313	P	P	22 37 04.3	+0.4
MLR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MLR	Muntele Rosu	22.43	313	⇓P	P	22 37 06.1	+2.2
VOIR		22.97	312⇓	iP	P	22 37 09.2	-0.4
VOIR		22.97	312	⇓P	P	22 37 09.2	-0.4
AKASG	Malin Array Be	23.66	327	P	P	22 37 13.2	-3.6
	comp=Z,1.0nm,0.4s,mb3.6,baz=136,slow=9.2,SNR=12						
BURAR	Bucovina Array	23.91	317⇑	iP	P	22 37 18.2	-0.8
BURAR	Bucovina Array	23.91	317	⇑P	P	22 37 18.2	-0.8
GZR	Gura Zlata	24.41	310⇑	iP	P	22 37 23.0	-0.6
GZR	Gura Zlata	24.41	310	⇑P	P	22 37 23.0	-0.6
OBN	Obninsk	24.51	342	P	P	22 37 23.7	-0.8
OBN	Obninsk	24.51	342	P	P	22 37 23.7	-0.8
ARU	Arti	24.88	12	eP	P	22 37 27.3	-0.5
ARU				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
ARU	Arti	24.88	12	eP	P	22 37 27.3	-0.5
	comp=Z,1.9nm,0.4s,mb4.0						
ARU	Arti	24.88	12	eP	P	22 37 27.3	-0.5
	comp=Z,2.0nm,0.4s,mb4.0						
ZRNK	Zerenda	24.93	29	eP	P	22 37 28.3	0.0
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
ZRNK	Zerenda	24.93	29	eP	P	22 37 28.3	-0.1
	comp=Z,2.2nm,0.7s,mb3.8						
ZRNK	Zerenda	24.93	29	eP	P	22 37 28.3	0.0
	comp=Z,2.0nm,0.7s,mb3.8						
BZS	Buzias	25.25	310⇑	iP	P	22 37 30.2	-1.0
BZS	Buzias	25.25	310	⇑P	P	22 37 30.2	-1.0
BRVK	Borovoye	25.54	30	P	P	22 37 35.9	+2.1
BVAR	Borovoye Array	25.56	30	P	P	22 37 32.8	-1.2
	comp=Z,1.8nm,0.7s,mb3.7,baz=225,slow=7.8,SNR=14						
BVAR				PcP	PcP	22 41 01.9	-3.2
	comp=Z,0.4nm,0.4s,baz=199,slow=3.4,SNR=4.1						
BVAR				ScP	ScP	22 44 39.0	-5.6
	comp=Z,0.3nm,0.6s,baz=298,slow=3.1,SNR=4.3						
BVAR				LR	LR	22 49 27.3	
	comp=Z,39nm,21.0s,MS2.9,baz=307,slow=41						
BVAR	Borovoye Array	25.56	30	P	P	22 37 32.8	-1.2
BVAR						22 41 01.9	
BVAR	Borovoye Array	25.56	30	PcP	PcP	22 41 01.9	-3.2
CHKZ	Chkalovo	26.12	29	eP	P	22 37 40.2	+1.1
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
CHKZ	Chkalovo	26.12	29	eP	P	22 37 40.2	+1.1
	comp=Z,1.0nm,0.5s,mb3.6						
KWP	Kalwaria	26.37	319	eP	P	22 37 41.0	-0.4
KWP				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.2						
KWP	Kalwaria	26.37	319	eP	P	22 37 41.0	-0.4
	comp=Z,3.0nm,0.4s,mb4.2						
KWP	Kalwaria	26.37	319	eP	P	22 37 41.0	-0.4
	comp=Z,3.0nm,0.4s,mb4.2						
PSZ	Piszkesteto	27.23	313	eP	P	22 37 49.4	+0.2
PSZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
PSZ	Piszkesteto	27.23	313	eP	P	22 37 49.4	+0.2
	comp=Z,2.5nm,0.7s,mb3.9						
PSZ	Piszkesteto	27.23	313	eP	P	22 37 49.4	+0.2
	comp=Z,2.0nm,0.7s,mb3.8						
PKSM	Moragy	27.40	309⇓	iP	P	22 37 51.2	+0.5
PKSM	Moragy	27.40	309	⇓P	P	22 37 51.2	+0.5
MKAR	Makanchi Array	28.85	50	P	P	22 38 01.5	-2.1
	comp=Z,0.2nm,0.3s,mb3.3,baz=266,slow=8.7,SNR=2.5						
GERES	GERESS Array B	31.42	312	P	P	22 38 24.8	-1.5
	comp=Z,0.5nm,0.6s,mb3.5,baz=107,slow=9.2,SNR=4.6						
SQTA	Sankt Quirin	32.59	308⇑	iP	P	22 38 34.6	-2.1
	comp=Z,2.5nm,0.4s,mb4.5						
SQTA	Sankt Quirin	32.59	308⇑	iP	P	22 38 34.6	-2.0
SQTA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
CLL	Collm	32.68	316	eP	P	22 38 39.0	+1.6
FINES	FINESS Array B	32.83	339	P	P	22 38 36.0	-2.7
	comp=Z,0.5nm,0.4s,mb3.8,baz=142,slow=7.7,SNR=5.4						
KAF	Kangasniemi	33.29	340	ep	P	22 38 40.0	-2.7
PGF	Pioggiola	33.44	299	eP	P	22 38 43.1	-1.0
DAVA	Damuels	33.49	308⇑	iP	P	22 38 42.4	-2.0
	comp=Z,4.6nm,0.8s,mb4.5						
STU	Stuttgart	34.27	311	eP	P	22 38 54.0	+2.8
MBDF	Montbardon	35.24	303	eP	P	22 38 55.5	-4.1
LPL	La Plagne	35.35	304	eP	P	22 38 58.6	-2.0
CABF	La Chapelle	35.93	306	eP	P	22 39 02.5	-3.1
	comp=Z,8.0nm,0.6s,mb4.5						
CABF	La Chapelle	35.93	306	eP	P	22 39 02.5	-3.1
CABF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
CABF	La Chapelle	35.93	306	eP	P	22 39 02.5	-3.1
	comp=Z,8.0nm,0.6s,mb4.8						
SMF	Signal de Mont	37.47	306	eP	P	22 39 17.0	-1.7
NB2	NORSAR Subarra	37.94	331	P	P	22 39 19.5	-3.2
	comp=Z,1.0nm,0.5s,mb3.8,baz=122,slow=8.6						
NOA	NORSAR Array B	37.94	331	P	P	22 39 19.6	-3.0
	comp=Z,1.0nm,0.5s,mb3.8,baz=123,slow=8.5,SNR=6.7						
NOA				LR	LR	22 54 56.6	
	comp=Z,19nm,19.2s,MS2.9,baz=200,slow=36						
ARCES	ARCESS Array B	39.59	347	P	P	22 39 34.0	-2.5
	comp=Z,2.2nm,1.0s,mb3.9,baz=124,slow=6.6,SNR=3.8						
SONM	Songino Array	45.16	53	P	P	22 40 20.5	-1.4
	comp=Z,0.4nm,0.6s,mb3.4,baz=272,slow=7.8,SNR=4.3						
TORD	Torodi Ar. Bea	47.62	258	P	P	22 40 40.1	-1.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=56,slow=7.3,SNR=32						
DBIC	Dimbokro	56.54	255	P	P	22 41 46.5	-1.1
	comp=Z,1.6nm,0.5s,mb4.3,baz=27,slow=4.5,SNR=4.5						
BOSA	Boshof	64.87	204	P	P	22 42 43.6	-0.8
	comp=Z,2.4nm,0.7s,mb4.3,baz=48,slow=7.2,SNR=6.3						
YKA	Yellowknife Ar	84.61	353	P	P	22 44 35.3	-3.4
	comp=Z,0.3nm,0.4s,mb3.7,baz=14,slow=5.4,SNR=4.6						
YKA	Yellowknife Ar	84.61	353	P	P	22 44 35.3	-3.4
ULM	Lac du Bonnet	92.22	339	LR	LR	23 27 45.3	
	comp=Z,41nm,21.0s,MS3.9,baz=31,slow=36						
EDM	Edmonton	93.47	350	eP	P	22 45 22.5	+1.6

CASC 16 22:33:55.1±2.9, 1423N×9153W, h80km±17km, MD3.5, 4C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.14	311	eP	Pn	22 34 07.8	+1.1
JAT				eS	Sn	22 34 15.4	+0.1
FUG	Fuego 3	0.70	72⇑	eP	Pn	22 34 11.4	+0.6
TP2	Tecpan 2	0.74	42⇑	eP	Pn	22 34 11.5	+0.2
TP2				eS	Sn	22 34 25.7	+2.5
PCG	Pacaya	0.91	79	eP	Pn	22 34 13.9	+0.8
PCG				eS	Sn	22 34 29.7	+3.2
SBLS	San Blas	1.89	102⇑	eP	x	22 34 29.1	
SBLS				eS	x	22 34 54.2	
SNJE	San Jose	1.90	101⇑	eP	x	22 34 29.2	
SNJE				eS	x	22 34 54.1	
LFRS	El Faro	2.47	104⇓	eP	x	22 34 37.0	
LFRS				eS	x	22 35 08.6	

SKO 16 22:36:05.0, 3995N×1959E, h0km
TIR 16 22:36:06.8, 3999N×2002E, h2km
ATH 16 22:36:07.1, 4005N×1985E, h14km±1km, MD3.7/4
CSEM 16 22:36:07.3±0.2, 4009N×1974E, h8km, MD3.7, Error ellipse: s-maj=4.1km s-min=3.1km az=170.0
ROM 16 22:36:07.8±0.5, 3987N×1999E, h10km, Md3.2/2, Ml2.9/3, Error ellipse: s-maj=6.3km s-min=3.7km az=149.0
ISCJB 16 22:36:07.8±0.3, 4003N±002×1985E±002, h10km, Error ellipse: s-maj=2.5km s-min=2.0km az=113.2
NEIC 16 22:36:07.1, 4005N×1985E, h14km, MD2.9(PDG), MD3.7(ATH), ML2.9(ROM), After ATH.
THE 16 22:36:08.4, 4000N×1991E, h0km, ML3.3
PDG 16 22:36:10.4±0.2, 3998N×2016E, h15km±1km

ISC 16 22:36:08.2±0.3, 4005N±002×1981E±002, h10km, n58, σ1.26/102, 13C, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.28	32	i Pg	Pg	22 36 12.0	-1.9
TPE				i Sg	Sg	22 36 15.8	-2.0
KEK	Kerkira	0.34	182⇑	iPG	Pg	22 36 13.6	-1.3
KEK				eSB	Sg	22 36 19.3	-0.2
IGT	Igoumenitsa	0.66	142	ePg	Pg	22 36 18.7	-2.2
IGT				eSg	Sg	22 36 26.8	-2.7
JAN	Janina	0.89	116	ePG	Pg	22 36 23.1	-2.3
SCTE	Santa Cesarea	1.03	272	Pg	Pg	22 36 29.8	+1.7
SCTE				Sg	Sg	22 36 45.9	+4.4
	237nm,0.4s						
MEV	Metsovon	1.12	103	ePg	Pg	22 36 27.9	-1.9
	comp=Z,22nm,0.4s						
MEV				eSg	Sg	22 36 44.1	-0.2
TIR	Tirane	1.29	2	Pg	Pg	22 36 34.8	+1.8
	399nm,0.6s						
TIR	Tirane	1.29	2	i Pg	Pg	22 36 34.3	+1.2
TIR	Tirane	1.29	2	ePg	Pg	22 36 34.3	+1.2
TIR				eSg	Sg	22 36 53.1	+3.2
OHR	Ohrid	1.30	35	ePg	Pg	22 36 32.1	-1.0
OHR				eSg	Sg	22 36 51.5	+1.6
OHR	Ohrid	1.30	35	ePg	Pg	22 36 32.0	-1.1
OHR				eSg	Sg	22 36 51.4	+1.4
OHR	Ohrid	1.30	35	ePg	Pg	22 36 32.1	-1.0
OHR				eSg	Sg	22 36 51.3	+1.4
LCI	Lecce	1.33	283	Pg	Pg	22 36 34.5	+0.7
LCI				Sg	Sg	22 36 55.3	+4.2
	49nm,0.3s						
FNA	Florina	1.40	58	ePg	Pn	22 36 32.9	-0.9
	comp=Z,5.6nm,0.4s						
FNA				eSg	Sg	22 36 53.5	+0.3
FNA	Florina	1.40	58	ePg	Pn	22 36 32.9	-0.9
	5.6nm,0.4s						
FNA				eSg	Sg	22 36 53.5	+0.3
LKD	Levkas	1.49	154	ePg	Pg	22 36 34.7	-2.2
LKD				eSg	Sg	22 36 54.9	-1.4
BIA	Bitola	1.50	50	ePg	Pn	22 36 34.5	-0.7
BIA				eSg	Sg	22 36 56.9	+0.4
BIA	Bitola	1.50	50	ePn	Pn	22 36 34.6	-0.6
BIA				eSn	Sn	22 36 57.6	+2.8
BIA	Bitola	1.50	50	ePg	Pn	22 36 34.5	-0.7
BIA				eSg	Sg	22 36 56.9	+0.4
BIA				eSn	Sn	22 36 57.6	+2.8
KZN	Kozani	1.52	80	ePB	Pb	22 36 35.3	-1.2
KZN				eSB	Sb	22 36 55.9	+0.1
EVR	Evrytania	1.92	126⇑	iPN	Pn	22 36 41.5	+0.6
ULC	Ulcinj	1.96	348⇑	iPn	Pg	22 36 46.4	+0.6
ULC				eSn	Sg	22 37 14.2	+3.1
ULC	Ulcinj	1.96	348⇑	iPn	Pg	22 36 46.3	+0.6
ULC				eSn	Sg	22 37 14.2	+3.1
VLS	Valsamata	1.97	162	ePN	Pn	22 36 42.3	+0.7
VLS				eSN	Sn	22 37 07.9	+1.6
PE1	Pezze di Greco	1.97	293	ePn	Pn	22 36 42.7	+1.0
LIT	Litokhoron	2.05	88	ePn	Pn	22 36 43.0	+0.2
	comp=Z,2.8nm,0.3s						
LIT				eSn	Sn	22 37 09.3	+0.8
GRG	Griva	2.17	65	ePn	Pn	22 36 44.9	+0.5
GRG				eSn	Sn	22 37 13.9	+2.6
AGG	Agios Georgios	2.20	117	ePn	Pn	22 36 45.3	+0.5
AGG				eSn	Sn	22 37 13.4	+1.3
BUM	Brajici-Budva	2.35	343⇑	iPn	Pg	22 36 51.3	-1.9
BUM				eSn	Sg	22 37 24.2	+0.5
RLS	Riolos of Patr	2.37	147	ePN	Pn	22 36 47.4	+0.3
TTG	Podgorica	2.41	350⇑	iPn	Pg	22 36 52.3	-2.1
TTG				eSn	Sg	22 37 24.7	-1.0
STIP	Stip	2.43	47	ePn	Pn	22 36 48.6	+0.6
STIP				eSn	Sn	22 37 19.8	+1.9
STIP	Stip	2.43	47	ePn	Pb	22 36 50.2	-1.9
STIP				eSn	Sg	22 37 23.9	-2.5
STIP	Stip	2.43	47	ePn	Pn	22 36 48.6	+0.6
STIP				eSn	Sg	22 37 23.8	-2.6
VAY	Valandovo	2.45	58	ePn	Pn	22 36 48.9	+0.7
VAY	Valandovo	2.45	58	ePn	Pb	22 36 52.6	+0.3
VAY				eSn	Sb	22 37 22.7	+0.1
VAY	Valandovo	2.45	58	ePn	Pb	22 36 52.6	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY				eSn	Sb	22 37 22.6	+0.1
THE	Thessaloniki	2.48	75	ePn	Pn	22 36 49.5	+0.9
SG1	Sgolgore (BA)	2.52	289	ePn	Pn	22 36 50.4	+1.3
PVY	Plav	2.54	3	⇑iPn	Pb	22 36 53.4	-0.5
PVY				eSn	Sg	22 37 26.9	-3.0
HORT	Hortiatis	2.57	77	ePn	Pn	22 36 50.2	+0.3
HCY	Herceg Novi	2.59	338	⇑iPn	Pb	22 36 54.8	+0.1
HCY				eSn	Sg	22 37 29.6	-1.8
SERS	Sersale	2.62	248	Pg	Pn	22 36 51.9	+1.3
	15nm,0.6s						
XOR	Xorichti	2.69	104	ePn	Pn	22 36 51.8	+0.2
XOR				eSn	Sn	22 37 26.1	+1.8
NEO	Neokhori	2.73	105	ePB	Pn	22 36 52.7	+0.6
PLG	Polygyros	2.80	82	ePB	Pn	22 36 53.6	+0.6
SOH	Sokhos	2.81	73	ePn	Pn	22 36 54.0	+0.9
SOH				eSn	Sn	22 37 28.1	+1.0
SOH	Sokhos	2.81	73	ePn	Pn	22 36 54.0	+0.8
SOH				eSn	Sn	22 37 28.1	+1.0
IVA	Berane	2.82	1	⇑iPn	Pb	22 36 57.0	-1.6
IVA				eSn	Sb	22 37 33.7	+0.6
NKY	Niksic	2.83	348	⇑iPn	Pb	22 36 58.4	-0.3
NKY				eSn	Sb	22 37 34.5	+1.1
LKR	Lokris	2.84	119	ePN	Pn	22 36 53.8	+0.2
PAIG	Paliouri	2.97	91	ePn	Pn	22 36 55.1	-0.3
PAIG				eSn	Sn	22 37 30.9	-0.2
BRY	Bratogost	3.00	342	⇑iPn	Pb	22 37 01.0	-0.8
BRY				eSn	Sb	22 37 39.4	+1.0
UPM	Unac-Piva	3.22	348	⇑iPn	Pb	22 37 03.7	-1.8
UPM				eSn	Sb	22 37 44.8	+0.1
AOS	Alonnisos	3.26	104	ePn	Pn	22 36 58.8	-0.6
AOS				eSn	Sn	22 37 38.7	+0.4
PLE	Pljevlja	3.29	355	⇑iPn	Pb	22 37 04.9	-1.8
PLE				eSn	Sb	22 37 45.0	-1.7
MMB	Musomiste	3.34	61	ePn	Pn	22 37 01.7	+1.2
MMB				eSn	Sn	22 37 41.3	+1.0
SOI	Samo	3.53	237	Pg	Pn	22 37 03.7	+0.6
	13nm,0.6s						

*CSEM **16** 22:59:32.8, 34.18N×24.99E, h10^{km}, MD3.5/3, After ATH*

ATH 16 22:59:32.8, 34.18N×24.99E, h10^{km}, MD3.4/3, Crete

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XRY	Khrisi	0.91	40	ePB	Pb	22 59 50.0	-0.6
NPS	Neapolis	1.20	25	ePB	Pb	22 59 55.0	-0.5
VAM	Vamos	1.39	332	ePB	Pb	22 59 59.0	+0.2

*IDC **16** 23:03:06.8±0.7, 3.59S×127.12E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.2/18, mbtmp4.1/11, ML4.2/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/28, Error ellipse: s-maj=50.5km s-min=11.8km az=70.0*

*ISCJB **16** 23:03:10.0±0.4, 3.60S±0.08×127.1E±0.2, h33^{km}, mb4.2/17, MS3.7/2, Error ellipse: s-maj=24.8km s-min=6.0km az=129.4*

*NEIC **16** 23:03:13.5±1.3, 3.63S×127.21E, h51^{km}±12^{km}, mb4.3/6, Error ellipse: s-maj=22.0km s-min=6.5km az=59.0*

*BJI **16** 23:03:13.5, 3.60S×127.20E, h51^{km}, mB4.8, mb4.7*

ISC 16 23:03:11.9±4.0, 3.61S±0.09×127.1E±0.2, h32^{km}±29^{km}, n36, σ0^s.91/34, mb4.2/16, MS3.7/2, 1C-1D, Seram

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	10.47	150	eP	Pn	23 05 39.3	-0.3
	26nm,0.6s						
FITZ	Fitzroy Crossi	14.47	186	eP	Pn	23 06 42.6	+8.3
	12nm,1.5s						
FITZ	Fitzroy Crossi	14.47	186	Pn	Pn	23 06 41.1	+6.8
	0.1nm,0.3s,baz=17,slow=11,SNR=6.4						
FITZ				LR	LR	23 12 13.8	
	comp=Z,111nm,19.9s,baz=181,slow=38						
KKM	Kota Kinabalu	14.50	311	ePn	Pn	23 06 39.1	+4.5
WRAB	Tennant Creek	17.70	157	ePn	Pn	23 07 14.9	-0.8
	22nm,0.8s						
WRAB				eSn	Sn	23 10 31.5	-0.4
WRA	Warramunga Arr	17.70	157	P	Pn	23 07 14.8	-1.0
	0.8nm,0.3s,baz=342,slow=12,SNR=39						
WRA				LR	LR	23 13 55.0	
	comp=Z,95nm,20.5s,baz=25,slow=37						
WB2	Warramunga Arr	17.70	157	eP	Pn	23 07 14.8	-1.1
AS31	Alice Springs	20.99	162	eP	P	23 07 54.7	+2.3
ASAR	Alice Springs	20.99	162	P	P	23 07 54.0	+1.6
	32nm,0.8s,baz=346,slow=12,SNR=200						
ASAR				S	S	23 11 48.0	+3.5
	1.3nm,0.9s,baz=347,slow=22,SNR=4.6						
ASAR				PcP	PcP	23 11 58.7	-0.1
	0.6nm,0.5s,baz=3.4,slow=1.8,SNR=6.3						
ASPA	Alice Springs	20.99	162	⇓iP	P	23 07 54.5	+2.1
CTA	Charters Tower	24.84	133	P	P	23 08 31.6	+0.4
	5.1nm,0.9s,mb4.1,baz=298,slow=14,SNR=3.1						
KULM	Kulim	27.86	288	P	P	23 08 58.1	-0.3
STKA	Stephens Creek	31.24	156	P	P	23 09 28.2	-0.2
	1.2nm,0.4s,mb4.1,baz=327,slow=16,SNR=2.7						
STKA				LR	LR	23 23 30.1	
	comp=Z,129nm,19.0s,MS3.6,baz=25,slow=39						
MJAR	Matsushiro Arr	41.27	14	P	P	23 10 53.1	-0.9
	2.9nm,0.7s,mb4.0,baz=191,slow=9.0,SNR=8.2						
TAU	Tasmania Unive	43.07	158	P	P	23 11 08.7	0.0
LZH	Lanzhou	45.09	333	⇑P	P	23 11 32.0	+7.1
LZH				AP	pP	23 11 40.5	+6.1
LZH				XP	sP	23 11 43.3	+5.0
LZH				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.8						
LSA	Lhasa	47.77	316	eP	P	23 11 46.4	+0.5
	comp=Z,2.8nm,0.3s,mb4.8						
MDJ	Mudanjiang	48.06	2	P	P	23 11 49.4	+1.2
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,70nm,5.2s						
SONM	Songino Array	54.36	343	P	P	23 12 36.5	+1.2
	comp=Z,1.3nm,1.0s,mb3.8,baz=162,slow=9.4,SNR=7.4						
MKAR	Makanchi Array	63.83	327	P	P	23 13 41.6	+0.6
	comp=Z,0.8nm,0.6s,mb3.9,baz=120,slow=8.4,SNR=7.1						
ZAL	Zalesovo	67.30	334	P	P	23 14 02.8	-0.6
	comp=Z,0.5nm,0.3s,mb4.0,baz=323,slow=10,SNR=2.7						
BVAR	Borovoye Array	73.68	328	P	P	23 14 42.1	-0.2
	comp=Z,0.7nm,0.7s,mb3.7,baz=120,slow=9.0,SNR=4.1						
BRVK	Borovoye	73.75	328	eP	P	23 14 42.0	-0.7
	comp=Z,1.6nm,1.0s,mb3.9						
CHKZ	Chkalovo	73.89	329	eP	P	23 14 43.2	-0.4
	comp=Z,0.5nm,0.3s,mb3.9						
ZRNK	Zerenda	74.38	328	eP	P	23 14 46.0	-0.4
	comp=Z,1.1nm,0.4s,mb4.1						
VNDA	Vanda	76.14	173	P	P	23 14 56.2	-0.4
	comp=Z,1.3nm,0.8s,mb3.9,baz=311,slow=5.6,SNR=10						
VNDA	Vanda	76.14	173	P	P	23 14 56.2	-0.4
SBA	Scott Base	77.06	172	eP	P	23 15 01.2	-0.6
AKTK	Aktyubinsk	79.65	323	P	P	23 15 15.9	-0.2
AKTO	Aktyubinsk	79.65	323	P	P	23 15 15.9	-0.2
	comp=Z,1.4nm,0.7s,mb4.0,baz=94,slow=9.3,SNR=4.9						
QSPA	South Pole Qui	86.34	180	eP	P	23 15 49.5	-1.2
	comp=Z,7.9nm,1.1s,mb4.9						
KDAK	Kodiak Island	87.88	32	LR	LR	23 53 30.0	
	comp=Z,30nm,18.4s,MS3.8,baz=281,slow=34						
MALT	Malatya	91.17	308	P	P	23 16 14.2	+0.6
GERES	GERESS Array B	107.99	320	PKiKP	PKiKP	23 21 36.1	-0.1
	comp=Z,0.4nm,0.6s,baz=17,slow=1.8,SNR=4.3						
TORD	Torodi Ar. Bea	125.27	283	PKP	PKPdf	23 22 10.3	+1.1
	comp=Z,1.2nm,1.0s,baz=78,slow=2.3,SNR=5.2						
TORD	Torodi Ar. Bea	125.27	283	PKP	PKPdf	23 22 10.3	+1.1

*IDC **16** 23:13:52.7±3.2, 35.74N×71.11E, h0^{km}, mb3.7/4, mb1 3.9/7, mb1mx3.5/24, mbtmp3.8/7, ML3.6/3, Error ellipse: s-maj=65.6km s-min=28.4km az=137.0*

*MOS **16** 23:14:05.7±0.7, 36.29N×70.99E, h99^{km}, mb3.7/1, Error ellipse: s-maj=19.5km s-min=8.9km az=98.3*

*NEIC **16** 23:14:06.7±2.1, 36.28N×71.03E, h96^{km}±25^{km}, mb3.3/2, Error ellipse: s-maj=21.7km s-min=6.7km az=62.0*

*ISCJB **16** 23:14:08.0±0.5, 36.42N±0.04×71.19E±0.08, h126^{km}±10^{km}, mb3.4/3, Error ellipse: s-maj=10.4km s-min=5.7km az=151.8*

ISC 16 23:14:09.0±0.5, 36.43N±0.03×71.18E±0.08, h121^{km}±9^{km}, n33, σ0^s.93/39, mb3.4/3, 6C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.67	167	⇓P	Pn	23 14 52.0	+1.0
CEP				S	Sn	23 15 24.0	+0.8
CHCP	Chirah Chowk	3.25	148	⇑P	Pn	23 15 00.3	+1.7
THW	Thamme Wali	3.66	173	⇑P	Pn	23 15 04.1	+0.1
SBDP	Sheikh Budin	4.13	184	P	Pn	23 15 09.5	-0.8
SARP	Sargodha	4.66	164	⇑P	Pn	23 15 16.8	-0.6
DRP	Derazinda	4.74	190	⇑P	Pn	23 15 17.7	-0.8
DLH	Dalhousie	5.54	133	eP	Pn	23 15 30.0	+0.8
DLH				eS	Sn	23 16 31.0	-0.6
KK31	Karatay Array	6.69	356	⇓P	Pn	23 15 44.6	-0.1
	11nm,0.3s,baz=177,slow=12,SNR=619						
KK31				⇑S	Sn	23 16 56.2	-3.2
	8.6nm,0.6s,baz=130,slow=7.8,SNR=8.7						
KKAR	Karatay Array	6.69	356	PN	Pn	23 15 44.6	-0.1
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.2s						
AAK	Ala-Archa	6.70	21	ePN	Pn	23 15 45.2	+0.3
AAK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
AAK	Ala-Archa	6.70	21	ePn	Pn	23 15 45.1	+0.2
	comp=Z,7.8nm,0.4s						
AAK				eSn	Sn	23 16 59.2	-0.6
MKAR	Makanchi Array	13.26	35	Pn	Pn	23 17 11.8	-0.8
	comp=Z,0.1nm,0.3s,baz=205,slow=9.5,SNR=2.8						
KOLN	Koldanda	13.60	126	eP	Pn	23 17 16.3	-0.6
	comp=Z,5.0nm,0.4s						
GKN	Gorkha	14.14	123	eP	Pn	23 17 23.6	-0.2
	comp=Z,8.3nm,0.2s						
DMN	Daman	14.71	123	eP	Pn	23 17 30.0	-1.1
KKN	Kakani	14.71	122	eP	Pn	23 17 31.0	-0.1
PKI	Pulchoki	14.94	122	eP	Pn	23 17 33.5	-0.5
	comp=Z,7.8nm,0.4s						
PKI	Pulchoki	14.94	122	eP	Pn	23 17 33.5	-0.5
PKI				pmax	pmax		
	comp=Z,8.0nm,0.4s						
AB31	Akbulak array	15.22	331	P	Pn	23 17 36.3	-1.1
	comp=Z,1.0nm,0.3s,baz=165,slow=11,SNR=70						
AB31				⇑S	S	23 20 10.1	-24
	comp=Z,3.1nm,1.0s,baz=155,slow=23,SNR=5.0						
AB31	Akbulak array	15.22	331	eP	Pn	23 17 36.2	-1.2
BVAR	Borovoye Array	16.60	358	P	Pn	23 17 55.4	+0.8
	comp=Z,0.5nm,0.3s,baz=170,slow=12,SNR=15						
BRVK	Borovoye	16.64	358	eP	Pn	23 17 55.9	+0.9
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	Borovoye	16.64	358	ePn	Pn	23 17 55.9	+0.9
	comp=Z,1.2nm,0.4s						
AKTK	Aktyubinsk	16.91	330	P	Pn	23 17 58.2	-0.1
AKTK				S	S	23 20 53.6	-13
AKTO	Aktyubinsk	16.91	330	P	Pn	23 17 58.2	-0.1
	comp=Z,0.6nm,0.3s,baz=135,slow=12,SNR=9.7						
AKTO				S	S	23 20 53.6	-13
	comp=Z,0.1nm,0.3s,baz=63,slow=9.0,SNR=2.3						
CHKZ	Chkalovo	17.25	359	eP	Pn	23 18 03.9	+1.5
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CHKZ	Chkalovo	17.25	359	ePn	Pn	23 18 03.9	+1.5
	comp=Z,0.8nm,0.4s						
ZAL	Zalesovo	19.90	24	P	P	23 18 32.5	+1.6
	comp=Z,4.0nm,0.5s,baz=246,slow=8.6,SNR=17						
TIRR	Tirgusor	33.21	297	P	P	23 20 33.7	-0.6
FINES	FINESS Array B	37.62	326	P	P	23 21 13.6	+1.6
	comp=Z,1.3nm,0.8s,mb3.8,baz=116,slow=8.7,SNR=4.4						
NB2	NORSAR Subarra	44.52	323	P	P	23 22 09.1	+0.6
	comp=Z,0.4nm,0.5s,mb3.4,baz=96,slow=7.9						
NOA	NORSAR Array B	44.52	323	P	P	23 22 09.2	+0.7
	comp=Z,0.8nm,0.7s,mb3.6,baz=97,slow=7.8,SNR=5.4						
TORD	Torodi Ar. Bea	65.86	269	P	P	23 24 40.1	-1.5
	comp=Z,0.1nm,0.4s,mb3.0,baz=52,slow=6.0,SNR=6.2						

*ISCJB **16** 23:23:47.6±0.4, 10.17S±0.05×108.48E±0.07, h10^{km}, mb4.3/17, Error ellipse: s-maj=10.1km s-min=6.2km az=132.8*

*IDC **16** 23:23:48.3±0.9, 10.13S×108.52E, h0^{km}, mb4.2/7, mb1 4.2/8, mb1mx4.0/17, mbtmp4.1/8, ML3.9/1, Error ellipse: s-maj=36.9km s-min=17.2km az=56.0*

*NEIC **16** 23:23:49.7±0.3, 10.16S×108.53E, h10^{km}, mb4.5/6, Error ellipse: s-maj=12.5km s-min=5.8km az=56.0*

*BJI **16** 23:23:49.6, 10.20S×108.50E, h10^{km}, mB4.9, mb4.8*

ISC 16 23:23:49.6±0.4, 10.18S±0.05×108.50E±0.07, h10^{km}, n38, σ0^s.92/38, mb4.3/17, 3D, South of Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	3.07	23	P	Pn	23 24 36.6	-1.6
	0.0nm,0.0s						
BJII	Banjamegara	3.07	23	⇓iP	Pn	23 24 38.0	-0.2
BJII				iS	Sn	23 25 13.5	-1.5
BJII	Banjamegara	3.07	23	⇓iP	Pn	23 24 43.6	+5.4
BJII				iS	Sn	23 25 04.2	-11
LEM	Lembang	3.44	345	P	Pn	23 24 43.5	+0.2
	0.0nm,0.0s						
JCJI	Jatiwangi	3.67	356	P	Pn	23 24 43.3	-3.1
	0.0nm,0.0s						
CBJI	Citeko	4.08	336	P	Pn	23 24 47.8	-4.2
	0.0nm,0.0s						
KRKI	Karangkates	4.39	63	P	Pn	23 24 57.2	+0.9
	0.0nm,0.0s						
KSI	Kapahiang	8.74	318	P	Pn	23 25 55.6	-0.4
	0.0nm,0.0s						
MBWA	Marble Bar	15.36	137	ePn	Pn	23 27 24.1	-2.3
	7.7nm,0.3s						
KKM	Kota Kinabalu	17.86	26	ePn	Pn	23 27 58.1	0.0
FITZ	Fitzroy Crossi	18.38	117	P	Pn	23 28 04.6	+0.1
	0.3nm,0.3s,baz=240,slow=19,SNR=12						
FITZ				S	Sn	23 31 06.3	-24
	0.1nm,0.3s,baz=127,slow=20,SNR=2.6						
WRA	Warramunga Arr	26.74	114	P	P	23 29 28.9	-0.4
	1.1nm,0.6s,mb3.6,baz=285,slow=11,SNR=10.0						
WRAB	Tennant Creek	26.75	114	eP	P	23 29 29.2	-0.1
	2.3nm,0.7s,mb3.8						
ASAR	Alice Springs	27.70	122	P	P	23 29 39.8	+1.9
	0.8nm,0.6s,mb3.5,baz=302,slow=9.6,SNR=7.6						
STKA	Stephens Creek	37.45	130	P	P	23 31 03.4	+0.3
	5.1nm,0.8s,mb4.4,baz=0.8,slow=6.7,SNR=3.9						
CTAO	Charters Tower	37.67	110	P	P	23 31 05.1	+0.2
LSA	Lhasa	43.03	338	eP	P	23 31 50.2	+0.9
	5.7nm,0.6s,mb4.5						
DMN	Daman	43.87	329	eP	P	23 31 56.7	+0.6
KKN	Kakani	43.94	330	eP	P	23 31 57.3	+0.7
	22nm,1.0s,mb4.8						
XAN	Xi'an	43.98	1	P	P	23 31 56.3	-0.6
XAN				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.6						
GKN	Gorkha	44.43	329	eP	P	23 31 59.7	-0.9
KOLN	Koldanda	44.77	328	eP	P	23 32 03.5	+0.2
	comp=Z,17nm,0.9s,mb4.9						
LZH	Lanzhou	46.23	355	eP	P	23 32 16.5	+1.7
LZH				AP	pP	23 32 24.8	+6.8
LZH				XP	sP	23 32 30.3	+11
LZH				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.0						
GTA	Gaotai	49.99	351	eP	P	23 32 46.8	+2.9
GTA				AP	pP	23 32 49.8	+2.7
GTA				XP	sP	23 32 51.9	+3.6
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.5						
CASY	Casey	56.04	179	eP	P	23 33 27.8	-0.8
SONM	Songino Array	57.79	358	P	P	23 33 40.8	-0.2
	comp=Z,2.8nm,0.6s,mb4.5,baz=176,slow=8.1,SNR=21						
MKAR	Makanchi Array	61.36	340	P	P	23 34 05.4	-0.2
	comp=Z,3.0nm,0.8s,mb4.5,baz=131,slow=6.6,SNR=13						
MAW	Mawson	64.78	198	P	P	23 34 28.6	+0.3
	comp=Z,2.1nm,0.7s,mb4.3,baz=40,slow=8.7,SNR=7.6						
ZAL	Zalesovo	66.96	345	P	P	23 34 42.9	+0.5
	comp=Z,1.7nm,0.4s,mb4.4,baz=322,slow=7.7,SNR=8.6						
BRVK	Borovoye	70.92	337	eP	P	23 35 06.4	-0.5
	comp=Z,1.6nm,0.9s,mb4.0						
CHKZ	Chkalovo	71.27	337	eP	P	23 35 08.6	-0.5
	comp=Z,4.9nm,0.7s,mb4.5						
ZRNK	Zerenda	71.34	336	eP	P	23 35 09.3	-0.2
	comp=Z,3.1nm,0.7s,mb4.3						
VNDA	Vanda	72.59	169	eP	P	23 35 17.3	+0.3
SYO	Syowa Base	73.05	201	⇓eP	P	23 35 18.8	-1.0
SBA	Scott Base	73.66	169	P	P	23 35 23.7	+0.3
QSPA	South Pole Qui	79.83	180	P	P	23 35 58.2	0.0
WMOK	Wichita Mounta	145.11	41	ePKP	PKPdf	23 43 27.6	+0.4
WVT	Waverly	150.22	27	ePKPbc	PKPbc	23 43 41.4	+0.5

*ISCJB **16** 23:39:55.2±1.0, 21.9S±0.1×179.6W±0.2, h641^{km}±24^{km}, mb3.9/8, Error ellipse: s-maj=25.8km s-min=19.8km az=164.7*

*IDC **16** 23:39:55.7±16.0, 21.78S×179.59W, h618^{km}±171^{km}, mb3.3/5, mb1 3.5/5, mb1mx3.1/13, mbtmp4.4/5, Error ellipse: s-maj=118.9km s-min=93.1km az=74.0*

*NEIC **16** 23:39:55.6±0.7, 21.82S×179.58W, h619^{km}±9^{km}, mb4.1/4, Error ellipse: s-maj=12.4km s-min=10.0km az=139.0*

ISC 16 23:39:55.9±1.0, 21.9S±0.1×179.5W±0.2, h630^{km}±23^{km}, n22, σ0^s.53/15, mb4.0/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	7.50	170	eP	P	23 41 51.8	+0.2
AFI	Afiamalu	10.77	44	eP	P	23 42 22.6	0.0
SNZO	South Karori	20.02	193	P	P	23 43 47.9	-0.5
CTA	Charters Tower	32.02	267	P	P	23 45 33.2	+0.2
	3.5nm,0.4s,mb4.3,baz=93,slow=12,SNR=7.6						
CTAO	Charters Tower	32.02	267	eP	P	23 45 33.2	+0.2
	3.1nm,0.4s,mb4.3						
PMG	Port Moresby	34.34	286	eP	P	23 45 52.0	-0.5
STKA	Stephens Creek	35.97	246	P	P	23 46 06.0	+0.1
	3.1nm,0.5s,mb4.1,baz=73,slow=14,SNR=9.3						
ASAR	Alice Springs	42.89	258	P	P	23 47 01.0	0.0
	4.2nm,0.6s,mb4.2,baz=99,slow=8.1,SNR=45						
WRAB	Tennant Creek	43.06	264	eP	P	23 47 02.1	-0.2
	6.7nm,0.8s,mb4.2						
WRA	Warramunga Arr	43.07	264	P	P	23 47 02.1	-0.3
	1.7nm,0.3s,mb4.0,baz=98,slow=7.7,SNR=17						
FITZ	Fitzroy Crossi	51.50	264	P	P	23 48 05.9	+0.7
	1.2nm,0.3s,mb3.7,baz=77,slow=10,SNR=18						
MBWA	Marble Bar	56.23	259	eP	P	23 48 38.2	0.0
	4.1nm,0.5s,mb3.9						
SBA	Scott Base	56.45	183	P	P	23 48 40.6	+0.9
NWAO	Narrogin (SRO)	56.54	244	P	P	23 48 40.9	+0.6
CASY	Casey	62.16	205	eP	P	23 49 16.3	-1.3
	0.8nm,0.5s,mb3.2						
BVAR	Borovoye Array	119.21	319	PKP	PKPdf	23 57 35.0	+0.3
	0.4nm,0.3s,baz=123,slow=2.6,SNR=4.4						
ARCES	ARCESS Array B	129.98	349	PKP	PKPdf	23 57 56.2	+0.9
	0.6nm,0.6s,baz=56,slow=2.3,SNR=3.6						
HFS	Hagfors	140.63	350	PKhKP		23 58 09.7	
	1.6nm,0.7s,baz=323,slow=4.4,SNR=5.0						
AKASG	Malin Array Be	143.49	329	PKP	PKPdf	23 58 20.2	+0.1
	0.5nm,0.4s,baz=44,slow=4.7,SNR=7.4						
AKASG	Malin Array Be	143.49	329	PKP	PKPdf	23 58 20.2	+0.1
BRTR	Keskin Array B	146.69	310	PKPbc	PKPbc	23 58 28.9	+0.4
	0.7nm,0.6s,baz=114,slow=5.1,SNR=5.3						
GERES	GERESS Array B	151.09	342	PKPbc	PKPbc	23 58 39.7	+0.6
	0.3nm,0.4s,baz=357,slow=2.7,SNR=4.4						

*ISCJB **16** 23:40:37.7±0.6, 15.38N±0.04×119.80E±0.05, h63^{km}±5^{km}, mb4.1/14, Error ellipse: s-maj=9.2km s-min=6.4km az=111.9*

*NEIC **16** 23:40:41.8±0.7, 15.50N×120.22E, h92^{km}±8^{km}, mb4.0/4, Error ellipse: s-maj=19.5km s-min=7.8km az=75.0*

*MAN **16** 23:40:41.3, 15.57N×120.08E, h16^{km}, mb3.5, ML4.7, MS1.4*

*IDC **16** 23:40:42.8±2.4, 15.52N×120.22E, h98^{km}±34^{km}, mb3.8/10, mb1 4.0/10, mb1mx3.7/23, mbtmp4.2/10, Error ellipse: s-maj=92.3km s-min=34.9km az=67.0*

ISC 16 23:40:38.7±0.7, 15.37N±0.05×119.81E±0.06, h57^{km}±6^{km}, n41, σ1^s.06/53, mb4.1/14, 3C-2D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.41	13	eP	Pn	23 40 49.0	-0.5
SCZP				eS	Sn	23 40 57.0	-0.4
BOLP	Bolinao	1.01	6	eP	Pn	23 40 56.2	-0.5
BOLP				eS	Sn	23 41 09.5	-0.6
BCPH	Baguio City Da	1.25	36	⇑iP	Pn	23 40 59.2	-0.7
BCPH				iS	Sn	23 41 16.3	+0.6
PCPH	Palayan	1.25	81	⇑eP	Pn	23 40 58.7	-1.3
PCPH				iS	Sn	23 41 14.3	-1.5
TGY	Tagaytay City	1.67	139	⇓eP	Pn	23 41 09.9	+4.3
TGY				eS	Sn	23 41 31.8	+5.8
TGY	Tagaytay City	1.67	139	P	Pn	23 41 08.6	+2.9
	161nm,0.3s,baz=246,slow=2.9,SNR=15						
TGY				S	Sn	23 41 30.8	+4.8
	442nm,0.3s,baz=102,slow=18,SNR=12						
LUBP	Lubang	1.68	165	eP	Pn	23 41 05.0	-0.9
BALP	Baler	1.74	78	eP	Pn	23 41 06.0	-0.6
BALP				eS	Sn	23 41 28.1	+0.5
POLP	Polilio Island	2.15	107	eP	Pn	23 41 12.7	+0.5
POLP				eS	Sn	23 41 39.3	+1.5
PGP	Puerto Galera	2.17	149	eP	Pn	23 41 22.0	+10
ABRA	Dolores	2.42	21	eP	Pn	23 41 16.7	+0.8
ABRA				eS	Sn	23 41 47.3	+3.0
CAUP	Cauayan	2.48	51	eP	Pn	23 41 17.6	+0.8
APYP	Conner	2.83	29	eP	Pn	23 41 22.3	+0.8
APYP				eS	Sn	23 41 56.7	+2.4
CVP	Callao Caves	3.01	40	eP	Pn	23 41 23.2	-0.8
CVP				iS	Sn	23 41 57.0	-1.8
PALP	Palanan	3.02	56	⇓iP	Pn	23 41 23.1	-0.9
PALP	Palanan	3.02	56	eP	Pn	23 41 25.0	+0.9
PALP				eS	Sn	23 42 03.6	+4.6
PVCP	Virac	4.56	112	⇑eP	Pn	23 41 46.3	+1.2
PVCP	Virac	4.56	112	eP	Pn	23 41 46.4	+1.2
NACB	Ninganchiao	8.91	11	ePn	Pn	23 42 45.1	+0.3
LSA	Lhasa	29.96	303	eP	P	23 46 44.1	+2.6
ULN	Ulaanbaatar	34.07	345	eP	P	23 47 17.3	-0.3
	1.1nm,0.5s,mb4.0						
SONM	Songino Array	34.22	344	P	P	23 47 19.1	+0.2
	1.5nm,0.5s,mb4.2,baz=165,slow=9.5,SNR=19						
WRAB	Tennant Creek	37.89	157	eP	P	23 47 49.4	-0.7
MKAR	Makanchi Array	44.18	323	P	P	23 48 43.0	+1.1
	0.6nm,0.6s,mb3.5,baz=137,slow=9.3,SNR=7.4						
BVAR	Borovoye Array	53.91	325	P	P	23 49 56.1	-0.2
	0.5nm,0.6s,mb3.6,baz=111,slow=8.1,SNR=4.8						
BVAR				PcP	PcP	23 50 59.6	-1.6
	0.6nm,0.6s,baz=129,slow=2.1,SNR=4.1						
BRVK	Borovoye	53.99	325	eP	P	23 49 57.5	+0.7
	0.8nm,0.6s,mb3.8						
CHKZ	Chkalovo	54.07	326	P	P	23 49 57.6	+0.2
ZRNK	Zerenda	54.65	325	eP	P	23 50 01.7	+0.1
	0.4nm,0.8s,mb3.5						
AKTK	Aktyubinsk	60.39	320	P	P	23 50 42.7	+0.7
AKTO	Aktyubinsk	60.39	320	P	P	23 50 42.7	+0.7
	1.3nm,0.5s,mb4.2,baz=93,slow=11,SNR=5.5						
JOF	Joensuu	75.77	332	ep	P	23 52 17.1	-1.3
ARCES	ARCESS Array B	77.22	339	P	P	23 52 26.2	-0.4
	5.2nm,0.8s,mb4.5,baz=80,slow=7.3,SNR=14						
KAF	Kangasniemi	78.18	331	ep	P	23 52 30.4	-1.6
FINES	FINESS Array B	78.41	331	P	P	23 52 32.8	-0.5
	2.1nm,0.6s,mb4.3,baz=60,slow=6.9,SNR=17						
INK	Inuvik	81.85	21	P	P	23 52 49.6	-2.1
MLR	Muntele Rosu	81.86	315	P	P	23 52 53.3	+1.5
	1.3nm,0.6s,mb4.1,baz=146,slow=23,SNR=4.8						
HFS	Hagfors	84.60	331	P	P	23 53 05.1	-0.8
	2.6nm,0.5s,mb4.6,baz=116,slow=3.4,SNR=17						
NB2	NORSAR Subarra	85.39	332	P	P	23 53 08.9	-0.9
	comp=Z,4.3nm,0.8s,mb4.6,baz=65,slow=4.8						
NOA	NORSAR Array B	85.39	332	P	P	23 53 08.9	-0.9
	comp=Z,3.1nm,0.8s,mb4.5,baz=67,slow=5.0,SNR=12						
BRG	Berggiesshubel	87.90	322	e(P)	P	23 53 22.3	+0.2
	comp=Z,4.7nm,1.4s,mb4.5						
GERES	GERESS Array B	88.80	321	P	P	23 53 26.6	+0.2
	comp=Z,0.2nm,0.3s,mb3.9,baz=62,slow=6.8,SNR=4.3						

*NEIC **16** 23:52:34.2, 16.08N×98.38W, h5^{km}, mb4.7/57, MD4.7(MEX), After MEX.*

*IDC **16** 23:52:35.6±0.6, 16.39N×98.18W, h18^{km}±3^{km}, mb4.2/18, mb1 4.4/22, mb1mx4.3/28, mbtmp4.4/22, ML4.5/4, MS3.8/16, Ms1 3.8/16, ms1mx3.7/25, Error ellipse: s-maj=15.9km s-min=11.2km az=52.0*

*MEX **16** 23:52:35.6±0.9, 16.08N×98.38W, h20^{km}±28^{km}, MD4.7*

*ISCJB **16** 23:52:36.3±1.3, 16.27N±0.04×98.15W±0.03, h33^{km}±9^{km}, mb4.6/66, MS3.9/14, Error ellipse: s-maj=6.5km s-min=3.5km az=48.3*

ISC 16 23:52:35.6±1.2, 16.32N±0.04×98.08W±0.03, h15^{km}±7^{km}, h19^{km}±2.2^{km}:pP-P, n262, σ1^s.01/276, mb4.6/66, MS3.9/14, 40C-56D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.49	60	iP	Pn	23 53 03.2	+1.3
VHO				iS	Sn	23 53 26.3	+5.2
OXX	Oaxaca	1.50	60	iP	Pn	23 53 04.0	+1.9
OXX				iS	Sn	23 53 25.5	+4.1
OXX	Oaxaca	1.50	60	iP	Pn	23 53 04.0	+1.9
OXX				iS	Sn	23 53 25.0	+3.6
UTMO	Huajuapan	1.52	10	iP	Pn	23 53 03.9	+1.5
UTMO				iS	Sn	23 53 23.9	+1.9
ACX	Acapulco	1.85	287	iP	Pn	23 53 01.0	-5.8
ACX				iS	Sn	23 53 20.0	-10

HUIG **Huatulco** 1.97 106 *eP* **Pn** 23 53 08.9 +0.4
HUIG *i S* **Sn** 23 53 32.3 -0.7
MEIG **Mezcala** 2.17 317 *eP* **Pn** 23 53 08.8 -2.5
MEIG *i S* **Sn** 23 53 34.1 -3.9
TPIG **Tehuac#an** 2.20 18 *eP* **Pn** 23 53 12.4 +0.8
TPIG *i S* **Sn** 23 53 44.0 +5.4
CAIG **El Cayaco** 2.22 289 *eP* **Pn** 23 53 07.0 -5.0
CAIG *i S* **Sn** 23 53 28.9 -10
PLIG **Platanillo** 2.47 327 *eP* **Pn** 23 53 15.1 -0.3
PLIG *i S* **Sn** 23 53 45.0 -0.4
YAIG **Yautepec** 2.70 340 *eP* **Pn** 23 53 17.9 -0.6
YAIG *i S* **Sn** 23 53 51.3 +0.3
PPM **Popocatepetl** 2.78 349 *eP* **Pn** 23 53 18.9 -0.7
PPM *eP* 23 53 20.0
PPM *i S* **Sn** 23 53 54.5 +1.5
CMIG **Matias Romero** 3.15 75 Pn **Pn** 23 53 25.6 +0.8
34nm,0.3s,baz=255,slow=11,SNR=221
CMIG Pg **Pg** 23 53 36.2 +0.1
102nm,0.3s,baz=244,slow=16,SNR=69
CMIG Lg 23 54 19.4
387nm,0.3s,baz=174,slow=23,SNR=15
CMIG LR LR 23 55 05.9
comp=Z,2µm,18.0s,baz=254,slow=46
CMIG **Matias Romero** 3.15 75 *i P* **Pn** 23 53 25.8 +1.0
CMIG *i S* **Sn** 23 54 05.2 +3.0
CMIG **Matias Romero** 3.15 75 Pn **Pn** 23 53 25.6 +0.8
CMIG *i P* 23 53 25.8
CMIG Pg **Pg** 23 53 36.2 +0.1
CMIG *i S* **Sn** 23 54 05.2 +3.0
CMIG Lg 23 54 19.4
CMIG LR LR 23 55 05.9
UNM **Universidad Na** 3.17 341 *eP* **Pn** 23 53 25.0 0.0
UNM *eP* 23 53 25.1
UNM *eP* 23 53 25.2
UNM *i S* **Sn** 23 54 02.1 -0.5
UNM *i S* **Sn** 23 54 02.2 -0.4
UNM *i S* **Sn** 23 54 03.6 +1.0
UNM **Universidad Na** 3.17 341 *eP* **Pn** 23 53 25.0 0.0
UNM *eP* 23 53 25.2
UNM *i S* **Sn** 23 54 02.1 -0.5
UNM *i S* **Sn** 23 54 02.2 -0.4
UNM *i S* **Sn** 23 54 03.6 +1.0
ZIIG **Zihuatanejo** 3.49 292 *eP* **Pn** 23 53 24.1 -5.3
ZIIG *eS* **Sn** 23 54 01.2 -9.2
LVIG **Laguna Verde** 3.73 25 *eP* **Pn** 23 53 34.8 +2.0
LVIG *i S* **Sn** 23 54 28.3 +12
TUIG **Tuzandepetl** 3.89 63 *i P* **Pn** 23 53 36.2 +1.4
MOIG **Morelia** 4.46 319 *eP* **Pn** 23 53 43.3 +0.5
MOIG *i S* **Sn** 23 54 35.2 +0.7
MRX **Morelia** 4.49 319 *eP* **Pn** 23 53 41.0 -2.1
MRX *i S* **Sn** 23 54 32.0 -3.0
SFJM **Santa Fe** 6.27 312 *i P* **Pn** 23 54 09.0 +1.3
HKT **Hockley** 13.72 8 Pn **Pn** 23 55 43.3 -6.4
LPIG **La Paz** 13.84 306 Pn **Pn** 23 55 50.7 -0.6
15nm,0.3s,baz=24,slow=4.8,SNR=4.4
JTS **JuntasAbangare** 14.11 114 Pn **Pn** 23 55 58.4 +3.5
1.1nm,0.3s,baz=329,slow=18,SNR=4.7
JTS LR LR 00 00 21.9
comp=Z,121nm,20.3s,baz=114,slow=33
JTS **JuntasAbangare** 14.11 114 *e*Pn **Pn** 23 55 58.2 +3.3
58nm,1.1s
JTS Pn **Pn** 23 55 58.4 +3.5
JTS LR LR 00 00 21.9
JCT **Junction City** 14.18 354 *e*Pn **Pn** 23 55 54.8 -1.2
23nm,0.7s
SOR **Soroa** 15.59 63 *eP* **Pn** 23 56 19.0 +4.2
NATX **Nacogdoches** 15.68 11 *eP* **Pn** 23 56 19.4 +3.4
46nm,0.9s
MNTX **Cornudas Mount** 16.69 338 *e*Pn **Pn** 23 56 28.1 -0.9
16nm,1.0s
MGV **Manicaragua** 18.03 69 *eP* **Pn** 23 56 49.0 +3.4
WMOK **Wichita Mounta** 18.35 358 *eP* **Pn** 23 56 47.5 -2.1
28nm,1.2s
MIAR **Mount Ida** 18.59 12 *eP* **Pn** 23 56 50.0 -2.6
28nm,0.8s
UALR **University of** 19.08 15 *eP* **Pn** 23 56 57.5 -1.0
14nm,0.7s
LRAL **Lakeview Retre** 19.43 29 *eP* **Pn** 23 57 01.1 -1.5
23nm,0.9s
LENM **Lemitar** 19.49 337 *eP* **Pn** 23 56 58.2 -5.1
LPM **Los Pinos Moun** 19.50 338 *eP* **Pn** 23 57 03.9 +0.5
TUC **Tucson** 19.66 326 *eP* **Pn** 23 57 04.0 -1.4
12nm,1.0s
OXF **Oxford** 19.72 22 *eP* **Pn** 23 57 04.0 -2.0
19nm,0.7s
LAZ **Ladron** 19.76 337 *eP* **Pn** 23 57 06.6 0.0
ANMO **Albuquerque** 20.02 340 P **P** 23 57 08.3 +0.5
0.9nm,0.3s,baz=157,slow=11,SNR=32
116A **Eloy** 20.35 325 ⇑P **P** 23 57 11.8 +0.4
baz=20,SNR=12
PLAL **Pickwick Lake** 20.63 24 *eP* **P** 23 57 12.9 -1.7
18nm,1.0s
115A **Sonoran Desert** 20.74 324 ⇑P **P** 23 57 16.2 +0.5
baz=21,SNR=9.6
PARMO **Parma** 21.57 18 *eP* **P** 23 57 27.4 +2.7
Z14A **Wintersburg** 21.64 324 ⇑P **P** 23 57 25.7 +0.4
baz=22,SNR=7.9
SWET **Sewanee** 21.73 28 *eP* **P** 23 57 25.2 -1.1
WVT **Waverly** 21.74 23 *eP* **P** 23 57 24.4 -2.1
62nm,0.9s,mb5.0
Y14A **Wickenburg** 22.10 325 ⇑P **P** 23 57 30.5 +0.2
baz=22,SNR=23
X15A **Humboldt** 22.11 328 ⇓P **P** 23 57 31.0 +0.6
baz=22,SNR=15
X14A **Yava** 22.44 326 ⇓P **P** 23 57 34.3 +0.3
baz=22,SNR=5.6
MYNC **Murphy** 22.46 31 *eP* **P** 23 57 33.4 -0.8
92nm,1.0s,mb5.2
Y13A **Salome** 22.46 324 ⇓P **P** 23 57 34.1 -0.1
baz=22
CCM **Cathedral Cave** 22.47 14 *eP* **P** 23 57 31.6 -2.7
35nm,0.8s,mb4.8
WUAZ **Wupatki** 22.51 331 *eP* **P** 23 57 35.8 +1.2
49nm,1.0s,mb4.9
GLA **Glamis** 22.51 321 *eP* **P** 23 57 31.7 -3.0
GLA **Glamis** 22.51 321 ⇓P **P** 23 57 34.5 -0.2
baz=23,SNR=10.0
CPCT **Cooper Cave** 22.57 30 *eP* **P** 23 57 34.6 -0.8
FVM **French Village** 22.61 16 *eP* **P** 23 57 32.6 -3.1
12nm,0.7s,mb4.4
W15A **Williams** 22.67 329 ⇑P **P** 23 57 37.3 +0.9
baz=23,SNR=14
KSU1 **Kansas State U** 22.73 3 *eP* **P** 23 57 33.7 -3.3
MVCO **Mesa Verde** 22.76 338 *eP* **P** 23 57 36.9 -0.4
Y12C **Blythe** 22.82 323 ⇓P **P** 23 57 38.0 0.0
baz=23
PDMCI **Parker Dam,Lak** 23.00 324 ⇑P **P** 23 57 40.0 +0.2
baz=23,SNR=5.4
SWSC **Sam W. Stewart** 23.03 319 ⇓P **P** 23 57 40.2 0.0
baz=23
X13A **Yucca** 23.04 325 ⇑P **P** 23 57 40.5 +0.2
baz=23
DVTC **Desert V Tower** 23.04 318 ⇓P **P** 23 57 40.8 +0.5
baz=23
W14A **Seligman** 23.11 327 ⇓P **P** 23 57 41.4 +0.4
baz=23,SNR=20
SLM **Saint Louis** 23.27 16 *eP* **P** 23 57 41.1 -1.7
13nm,0.3s,mb4.8
MONP **Monument Peak** 23.40 318 ⇓P **P** 23 57 44.1 0.0
baz=23
USIN **University of** 23.43 21 *eP* **P** 23 57 42.7 -1.7
121nm,1.1s,mb5.2
W13A **Hualapai Mount** 23.45 326 ⇑P **P** 23 57 44.7 +0.1
baz=24,SNR=13
IRM **Iron Mountain** 23.48 322 ⇓P **P** 23 57 44.8 -0.1
baz=24,SNR=8.5
NEE2 **Needles Airpor** 23.61 324 ⇑P **P** 23 57 45.9 -0.2
baz=24
PV01 **Paradox Valley** 23.61 339 *eP* **P** 23 57 46.1 -0.1
109C **Camp Elliot, M** 23.84 317 ⇓P **P** 23 57 47.9 -0.3
baz=24
BELC **Belle Mtn.** 23.87 321 P **P** 23 57 48.6 0.0
baz=24,SNR=8.1
PFO **Pinyon Flat Ob** 23.89 319 *eP* **P** 23 57 48.9 +0.1
19nm,1.4s,mb4.3
PFO **Pinyon Flat Ob** 23.89 319 ⇑P **P** 23 57 48.9 +0.1
baz=24
TZTN **Tazewell** 23.92 30 *eP* **P** 23 57 48.9 -0.1
PV10 **Paradox Valley** 23.99 338 *eP* **P** 23 57 48.3 -1.4
SMCO **Snowmass** 24.07 343 *eP* **P** 23 57 48.3 -2.1
68nm,1.4s,mb4.9
WCI **Wyandotte Cave** 24.16 23 *eP* **P** 23 57 50.2 -1.0
57nm,0.9s,mb5.0
GMRC **Granite Mounta** 24.21 323 ⇑P **P** 23 57 51.8 +0.1
baz=24,SNR=8.6

ISCO **Idaho Springs** 24.30 346 *eP* **P** 23 57 52.5 0.0
35nm,0.8s,mb4.8
V12A **Nelson** 24.44 325 ⇑P **P** 23 57 53.6 -0.2
baz=24,SNR=8.3
BBRC **Big Bear Sol-O** 24.61 320 ⇓P **P** 23 57 55.1 -0.3
baz=25
HEC **Hector,Ludlow** 24.64 322 ⇓P **P** 23 57 55.8 +0.3
9.1nm,25,SNR=10
U12A **Valley of Fire** 24.80 327 ⇓P **P** 23 57 57.4 +0.3
baz=25
TUQ **Turquoise Mtn.** 24.83 323 ⇑P **P** 23 57 57.7 +0.4
baz=25,SNR=23
BLO **Bloomington** 24.91 22 *eP* **P** 23 57 57.3 -0.8
35nm,0.8s,mb4.9
CIS **Catalina Islan** 25.01 317 ⇓P **P** 23 57 59.1 +0.1
baz=25
BFSC **Mount Baldy St** 25.06 319 ⇑P **P** 23 57 59.5 +0.1
baz=25
CCUT **Cedar City** 25.09 330 *eP* **P** 23 58 00.1 +0.4
SRU **San Rafael** 25.18 337 *eP* **P** 23 58 00.7 +0.2
8.3nm,0.7s,mb4.4
GSC **Goldstone** 25.25 322 ⇓P **P** 23 58 01.5 +0.4
baz=25,SNR=6.0
ARUT **Antelope Range** 25.32 331 *eP* **P** 23 58 02.5 +0.7
MSU **Marysvale** 25.34 333 *eP* **P** 23 58 02.9 +0.9
TMUT **Trail Mountain** 25.61 336 *eP* **P** 23 58 05.2 +0.8
EDW2 **Edwards Air Fo** 25.68 320 ⇓P **P** 23 58 05.0 -0.1
baz=26
PHWY **Pilot Hill** 25.70 347 *eP* **P** 23 58 04.4 -0.8
U10A **Ash Meadows, A** 25.76 324 ⇓P **P** 23 58 06.2 +0.4
baz=26
ELN **Prospectdale** 25.86 33 *eP* **P** 23 58 05.7 -0.9
BLG **Laguna Peak** 25.88 317 ⇓P **P** 23 58 07.1 +0.3
baz=26
BLA **Blacksburg** 26.02 34 *eP* **P** 23 58 07.4 -0.7
1.7nm,0.8s,mb3.6
FWV **Forest Hill** 26.09 32 *eP* **P** 23 58 08.2 -0.6
FURC **Furnace Creek,** 26.10 324 ⇑P **P** 23 58 09.1 +0.2
baz=26
MPMC **Manual Prospec** 26.17 322 ⇓P **P** 23 58 09.7 +0.2
baz=26
ARVC **Arvin** 26.37 319 ⇓P **P** 23 58 11.6 +0.4
baz=26
DAC **Darwin (Calif)** 26.38 323 P **P** 23 58 11.3 -0.1
18nm,1.4s,mb4.4
MPU **Maple Canyon** 26.39 336 *eP* **P** 23 58 11.7 +0.2
19nm,1.0s,mb4.6
RWWY **Rawlins** 26.48 345 *eP* **P** 23 58 13.1 +0.8
73nm,1.3s,mb5.0
ISA **Isabella** 26.49 320 ⇑P **P** 23 58 12.6 +0.2
baz=26
NLU **North Lily Min** 26.52 335 *eP* **P** 23 58 11.7 -0.9
DAU **Daniels Canyon** 26.59 337 *eP* **P** 23 58 13.9 +0.6
GRAC **Grapevine Rang** 26.76 324 ⇑P **P** 23 58 14.9 +0.1
baz=27
PKM **Peak Mountain** 26.85 318 ⇑P **P** 23 58 15.8 +0.2
baz=27
Q12A **Willow Creek R** 26.97 330 ⇓P **P** 23 58 17.0 +0.3
baz=27
VES **Vestal, Richgr** 26.98 320 ⇑P **P** 23 58 17.0 +0.2
baz=27
DUG **Dugway** 27.02 335 *eP* **P** 23 58 17.9 +0.7
13nm,0.8s,mb4.5
R10A **Warm Springs** 27.12 327 ⇓P **P** 23 58 18.7 +0.6
baz=27
S09A **Goldfield** 27.20 325 P **P** 23 58 19.3 +0.5
baz=27,SNR=6.1
ACSO **Alum Creek Sta** 27.20 26 *eP* **P** 23 58 16.9 -1.8
35nm,1.2s,mb4.8
JFWS **Jewell Farm** 27.34 13 *eP* **P** 23 58 18.5 -1.5
45nm,1.1s,mb4.9
P12A **McGill** 27.35 331 ⇑P **P** 23 58 20.6 +0.5
baz=28
RCTC **Rector, Farmer** 27.39 321 ⇑P **P** 23 58 20.5 +0.1
baz=27
R09A **Tonopah** 27.49 326 ⇓P **P** 23 58 21.4 0.0
baz=28
HELL **Mitchell Peak,** 27.50 322 ⇓P **P** 23 58 21.9 +0.4
baz=28
BGU **Big Grassy Mou** 27.73 335 *eP* **P** 23 58 24.4 +0.9
HWUT **Hardware Ranch** 27.75 338 *eP* **P** 23 58 23.7 0.0
10nm,0.8s,mb4.5
SDV **Santo Domingo** 27.76 102 P **P** 23 58 26.1 +2.3
19nm,0.8s,mb4.8,baz=323,slow=5.1,SNR=22
SDV **Santo Domingo** 27.76 102 P **P** 23 58 26.1 +2.3
O12A **Currie** 27.91 332 ⇓P **P** 23 58 25.5 +0.4
baz=28,SNR=7.9
KCC **Kaiser Creek** 28.11 322 ⇑P **P** 23 58 26.7 -0.2
baz=28
PDAR **Pinedale Array** 28.13 342 P **P** 23 58 26.9 -0.2
3.8nm,0.7s,mb4.1,baz=136,slow=9.8,SNR=40
PDAR PcP PcP 00 01 40.5 -0.6
0.7nm,0.7s,baz=115,slow=4.3,SNR=3.7
PDAR LR LR 00 10 31.0
comp=Z,392nm,18.3s,MS4.0,baz=169,slow=38
R08A **Mina** 28.13 325 ⇑P **P** 23 58 27.5 +0.4
baz=28
MCWV **Mont Chateau** 28.17 31 P **P** 23 58 26.8 -0.7
16nm,0.9s,mb4.7
RSSD **Black Hills** 28.17 351 *eP* **P** 23 58 27.8 +0.4
5.0nm,0.9s,mb4.1
O11A **Cowboy Ranch,** 28.23 331 ⇓P **P** 23 58 28.5 +0.6
baz=28
HVU **Hansel Valley** 28.35 336 *eP* **P** 23 58 29.4 +0.4
14nm,0.9s,mb4.6
Q08A **Gabbs** 28.41 326 ⇑P **P** 23 58 30.2 +0.7
baz=28,SNR=8.0
N12A **Clover Valley,** 28.52 332 ⇑P **P** 23 58 31.3 +0.7
baz=29,SNR=7.9
M13A **Montello** 28.56 334 ⇑P **P** 23 58 31.3 +0.4
baz=29,SNR=28
S05C **Merced** 28.73 321 ⇑P **P** 23 58 33.1 +0.7
baz=29
O10A **Cortez Mining,** 28.75 330 ⇓P **P** 23 58 33.2 +0.6
baz=29
S06C **San Francisco** 28.79 322 ⇓P **P** 23 58 33.0 0.0
baz=29
HAST **UC Hastings Re** 28.88 318 ⇓P **P** 23 58 33.8 +0.1
baz=29
M12A **Wells** 28.92 333 P **P** 23 58 34.8 +0.7
baz=29,SNR=9.9
O09A **Fish Creek Ran** 29.00 329 ⇓P **P** 23 58 35.3 +0.5
baz=29
R06C **Coleville** 29.00 324 ⇑P **P** 23 58 35.6 +0.7
baz=29
REDW **Red Top Meadow** 29.07 341 *eP* **P** 23 58 36.0 +0.5
41nm,1.4s,mb5.0
RRI2 **Red Ridge** 29.21 340 *eP* **P** 23 58 37.2 +0.5
7.3nm,0.8s,mb4.5
TPAW **Teton Pass** 29.21 341 *eP* **P** 23 58 37.4 +0.7
11nm,0.7s,mb4.7
LOHW **Long Hollow** 29.22 341 *eP* **P** 23 58 36.9 +0.1
11nm,0.7s,mb4.7
M11A **Holland Ranch,** 29.32 332 ⇓P **P** 23 58 38.2 +0.5
baz=30
MOOW **Moose Ponds** 29.38 341 *eP* **P** 23 58 38.4 +0.1
4.2nm,0.8s,mb4.2
DCID1 **Drake Creek** 29.38 340 P **P** 23 58 40.7 +2.5
IMW **Indian Meadow** 29.58 341 *eP* **P** 23 58 40.7 +0.8
11nm,1.0s,mb4.5
FLWY **Flagg Ranch** 29.67 341 P **P** 23 58 38.1 -2.7
9.1nm,0.9s,mb4.5
M10A **I.L. Ranch, Tu** 29.73 331 ⇓P **P** 23 58 41.9 +0.5
baz=30
WENL **Wente Brothers** 29.77 320 ⇓P **P** 23 58 42.1 +0.4
baz=30
O07A **Toulon** 29.85 327 ⇓P **P** 23 58 42.6 +0.3
baz=30
SSPA **Standing Stone** 29.89 32 *eP* **P** 23 58 42.5 -0.2
9.9nm,1.0s,mb4.5
LAVA **Lava Cap Winer** 29.90 323 ⇓P **P** 23 58 42.9 +0.1
baz=30
N08A **GE Springer Mi** 29.93 329 ⇓P **P** 23 58 43.2 +0.2
baz=30
M09A **Marrel Ranch,** 30.08 330 ⇑P **P** 23 58 45.2 +0.8
baz=30
P05C **Yuba Gap, Truc** 30.19 324 ⇓P **P** 23 58 46.2 +0.8
baz=30
ATAH **Atahualpa** 30.27 138 LR LR 00 08 24.9
comp=Z,133nm,19.6s,MS3.6,baz=174,slow=31
O06A **Flanigan** 30.36 326 ⇓P **P** 23 58 47.7 +0.8
baz=30
BEKR **Beckwourth** 30.44 325 ⇓P **P** 23 58 48.4 +0.8
baz=30
HLID **Hailey** 30.50 336 *eP* **P** 23 58 48.5 +0.4
4.9nm,0.8s,mb4.4
M08A **Happy Creek Ra** 30.55 329 ⇑P **P** 23 58 49.5 +0.9
baz=31

Q03C **Winters** 30.57 321 ⇑P **P** 23 58 49.3 +0.5
baz=31
L09A **Wilkinson Ranc** 30.65 331 P **P** 23 58 49.9 +0.5
baz=31,SNR=12
N06A **Buffalo Meadow** 30.78 327 P **P** 23 58 51.2 +0.7
baz=31,SNR=6.7
O05C **Quincy** 30.82 324 ⇑P **P** 23 58 51.9 +0.9
baz=31
SUTB **Sutter Butte** 30.82 322 ⇑P **P** 23 58 51.3 +0.4
baz=31
ORV **Oroville** 30.87 323 ⇓P **P** 23 58 52.0 +0.6
baz=31
GCMT **Greycliff** 30.94 344 *eP* **P** 23 58 52.1 +0.1
MCMT **McKenzie Canyo** 31.03 339 *eP* **P** 23 58 53.7 +0.9
L08A **Fields** 31.10 330 ⇓P **P** 23 58 53.5 +0.1
baz=31,SNR=11
K09A **Rome** 31.20 331 P **P** 23 58 55.0 +0.6
baz=31,SNR=15
BOZ **Bozeman (W)** 31.37 342 *eP* **P** 23 58 55.6 -0.1
9.9nm,1.3s,mb4.5
DLMT **Dillon** 31.42 340 *eP* **P** 23 58 55.9 -0.3
36nm,1.2s,mb5.1
WVOR **Wild Horse Val** 31.43 330 *eP* **P** 23 58 56.1 -0.2
15nm,1.0s,mb4.8
M06C **Likely Place G** 31.45 327 ⇓P **P** 23 58 57.0 +0.5
baz=32
K08A **Mann Creek Ran** 31.58 331 ⇑P **P** 23 58 58.2 +0.6
baz=32,SNR=28
L05A **Lakeview** 32.24 327 ⇓P **P** 23 59 04.0 +0.6
baz=32,SNR=6.0
HRY **Holter Researc** 32.39 342 *eP* **P** 23 59 04.5 -0.3
HRY *eS* **S** 00 04 21.0 +2.5
SADO **Sadowa** 32.55 25 P **P** 23 59 03.6 -2.5
2.8nm,0.6s,mb4.4,baz=224,slow=7.4,SNR=3.5
M04C **Macdoel** 32.58 326 ⇑P **P** 23 59 06.5 +0.1
baz=33
H09A **Durkee** 32.73 334 ⇓P **P** 23 59 07.4 -0.4
baz=33,SNR=5.2
J06A **Christmas Vall** 32.77 330 ⇓P **P** 23 59 08.2 +0.1
baz=33
L04A **Klamath Falls** 32.88 326 ⇓P **P** 23 59 08.8 -0.3
baz=33
H08A **Prairie City** 33.05 333 P **P** 23 59 10.5 -0.1
baz=33,SNR=21
I07A **Izee** 33.09 331 ⇓P **P** 23 59 10.5 -0.4
baz=33,SNR=8.3
MSO **Missoula** 33.15 340 *eP* **P** 23 59 11.4 0.0
3.0nm,0.8s,mb4.3
I06A **Prineville** 33.32 330 ⇓P **P** 23 59 12.6 -0.3
baz=33
ULM **Lac du Bonnet** 33.89 3 P **P** 23 59 16.2 -1.6
7.2nm,0.9s,mb4.6,baz=190,slow=8.4,SNR=9.6
ULM LR LR 00 14 02.3
comp=Z,135nm,21.2s,MS3.6,baz=188,slow=38
I05A **Bend** 33.99 330 ⇑P **P** 23 59 19.0 +0.3
baz=34
NCB **Newcomb** 34.18 31 *eP* **P** 23 59 22.9 +2.6
3.0nm,0.5s,mb4.5
J02A **Umpqua** 34.60 326 ⇑P **P** 23 59 24.2 +0.2
baz=35
G05A **Wamic** 34.82 331 ⇓P **P** 23 59 25.8 -0.1
baz=35
H04A **Detroit Lake** 34.82 329 ⇓P **P** 23 59 25.5 -0.4
baz=35,SNR=5.2
I03A **Eugene** 34.86 327 ⇑P **P** 23 59 26.2 -0.1
baz=35
WALA **Waterton Lakes** 35.12 342 *eP* **P** 23 59 28.4 -0.1
7.3nm,0.8s,mb4.7
F05A **White Salmon** 35.36 331 ⇓P **P** 23 59 31.2 +0.6
baz=36
NEW **Newport** 35.49 338 *eP* **P** 23 59 30.8 -0.8
5.7nm,1.0s,mb4.5
E05A **Randle** 36.01 332 ⇑P **P** 23 59 36.3 +0.2
baz=36
D05A **Enumclaw** 36.59 332 ⇓P **P** 23 59 41.3 +0.2
baz=37
E03A **Lebam** 36.84 330 ⇓P **P** 23 59 43.5 +0.2
baz=37
C05A **Tolt Reservoir** 36.84 333 ⇓P **P** 23 59 42.7 -0.6
baz=37
A04A **Legoe Bay, Lum** 38.07 333 ⇑P **P** 23 59 53.2 -0.5
baz=38
LPAZ **La Paz** 43.84 136 P **P** **00 00 43.2 +1.9**
0.3nm,0.4s,mb3.4,baz=300,slow=8.1,SNR=2.9
LPAZ pP pP 00 00 48.5 +2.7
1.9nm,0.8s,baz=318,slow=7.3,SNR=5.6
LPAZ LR LR 00 18 14.9
comp=Z,87nm,19.9s,MS3.7,baz=88,slow=35
LPAZ **La Paz** 43.84 136 P **P** **00 00 43.2 +1.9**
LPAZ pP pP 00 00 48.5 +2.7
LPAZ LR LR 00 18 14.9
SCHQ **Schefferville** 45.35 25 P **P** **00 00 52.4 -0.9**
13nm,0.9s,mb4.8,baz=230,slow=5.2,SNR=13
SCHQ LR LR 00 22 58.5
comp=Z,128nm,18.1s,MS3.9,baz=131,slow=40
SCHQ **Schefferville** 45.35 25 P **P** **00 00 52.4 -0.9**
SCHQ LR LR 00 22 58.5
YKA **Yellowknife Ar** 47.57 350 P **P** **00 01 08.5 -2.1**
4.2nm,0.9s,mb4.5,baz=158,slow=7.3,SNR=13
YKA pP pP 00 01 15.2 0.0
3.6nm,0.7s,baz=158,slow=7.4,SNR=9.1
YKA LR LR 00 23 59.0
comp=Z,82nm,18.7s,MS3.7,baz=180,slow=40
YKA **Yellowknife Ar** 47.57 350 P **P** **00 01 08.6 -2.1**
YKA pP pP 00 01 15.2 0.0
YKA LR LR 00 23 59.0
TAOE **Nuku Hiva Isla** 48.57 242 *e*LR LR 00 14 51.9
604nm,25.1s
SIV **San Ignacio** 48.62 130 P **P** **00 01 17.7 -1.0**
1.3nm,0.7s,mb4.1,baz=313,slow=13,SNR=5.4
RKT **Rikitea** 53.28 224 *e*LR LR 00 17 00.1
247nm,25.2s
INK **Inuvik** 56.63 345 *eP* **P** **00 02 17.1 -1.0**
11nm,0.9s,mb4.9
KDAK **Kodiak Island** 57.69 329 P **P** **00 02 24.9 -0.8**
1.3nm,0.5s,mb4.2,baz=97,slow=8.1,SNR=4.3
CPUP **Villa Florida** 58.02 136 P **P** **00 02 27.3 -0.6**
0.6nm,0.5s,mb3.9,baz=236,slow=5.0,SNR=4.0
CPUP pP pP 00 02 32.9 +0.3
2.2nm,0.8s,baz=264,slow=6.5,SNR=3.5
BDFB **Brasilia** 58.73 120 P **P** **00 02 34.2 +1.3**
5.4nm,0.7s,mb4.7,baz=288,slow=8.6,SNR=9.1
SVW2 **Sparrevohn** 60.35 332 *eP* **P** **00 02 42.7 -1.3**
PPT **Papeete** 60.89 239 *e*LR LR 00 20 33.9
179nm,25.5s,baz=52
PPT **Papeete** 60.89 239 LR LR 00 21 27.3
comp=Z,139nm,18.7s,MS4.1,baz=51,slow=28
TTA **Tatalina** 61.21 334 *eP* **P** **00 02 47.5 -2.4**
18nm,1.1s,mb5.1
PLCA **Paso Flores** 62.25 157 P **P** **00 02 58.6 +1.7**
5.5nm,0.9s,mb4.7,baz=341,slow=8.8,SNR=4.2
PLCA pP pP 00 03 02.6 +1.0
5.5nm,0.9s,baz=317,slow=7.9,SNR=7.6
TBI **Tubuai** 63.85 233 *e*LR LR 00 21 55.0
212nm,27.5s,baz=47
DAG **Danmarks Havn** 71.80 14 ⇓*iP* **P** **00 03 56.2 -1.4**
4.8nm,0.7s,mb4.5
EKA **Eskdalemuir Ar** 79.50 35 P **P** **00 04 41.1 -0.6**
2.4nm,0.8s,mb4.2,baz=288,slow=5.5,SNR=8.9
ESDC **Sonseca Array** 82.85 51 P **P** **00 04 59.8 +0.2**
1.4nm,0.7s,mb4.1,baz=301,slow=6.1,SNR=8.2
ETSF **Etsaut** 84.43 47 *eP* **P** **00 05 06.3 -1.3**
LFF **La Frestale** 84.72 45 *eP* **P** **00 05 07.9 -1.2**
NB2 **NORSAR Subarra** 84.86 27 P **P** **00 05 09.6 -0.2**
comp=Z,7.7nm,1.2s,mb4.7,baz=298,slow=5.3
NOA **NORSAR Array B** 84.86 27 P **P** **00 05 08.3 -1.5**
comp=Z,2.7nm,0.9s,mb4.4,baz=297,slow=5.0,SNR=7.7
NOA LR LR 00 41 52.0
comp=Z,30nm,18.1s,MS3.7,baz=295,slow=35
EPF **Esparros** 85.02 47 *eP* **P** **00 05 08.7 -1.9**
comp=Z,15nm,1.0s,mb4.8
EPF **Esparros** 85.02 47 *eP* **P** **00 05 08.7 -1.9**
comp=Z,7.3nm,1.0s,mb4.8
TCF **Toulx Ste Croi** 85.28 43 *eP* **P** **00 05 10.7 -1.2**
comp=Z,15nm,1.1s,mb4.7
TCF **Toulx Ste Croi** 85.28 43 *eP* **P** **00 05 10.7 -1.2**
comp=Z,7.4nm,1.1s,mb4.7
ARCES **ARCESS Array B** 85.72 17 P **P** **00 05 12.4 -1.7**
comp=Z,4.5nm,0.8s,mb4.7,baz=285,slow=4.8,SNR=8.4
ARCES LR LR 00 47 35.2
comp=Z,41nm,18.4s,MS3.9,baz=168,slow=38
SSF **Saint Saulge** 85.87 42 *eP* **P** **00 05 13.5 -1.4**
LOR **Lormes** 86.03 42 *eP* **P** **00 05 14.5 -1.1**
comp=Z,13nm,0.9s,mb4.9
LOR **Lormes** 86.03 42 *eP* **P** **00 05 14.5 -1.1**
comp=Z,6.4nm,0.9s,mb4.8
MTLF **Montolieu** 86.23 46 *eP* **P** **00 05 15.6 -1.0**
comp=Z,23nm,1.1s,mb5.0

MTLF	**Montolieu**	**86.23**	**46**	*e*P	**P**	**00 05 15.6**	**-1.0**
	comp=Z,11nm,1.1s,mb5.0						
HAU	**Haudompre**	**87.35**	**41**	*e*P	**P**	**00 05 21.1**	**-1.0**
	comp=Z,10nm,0.9s,mb4.8						
HAU	**Haudompre**	**87.35**	**41**	*e*P	**P**	**00 05 21.1**	**-1.0**
	comp=Z,5.2nm,0.9s,mb4.8						
FINES	**FINESS Array B**	**90.81**	**23**	P	**P**	**00 05 36.5**	**-1.9**
	comp=Z,3.1nm,0.9s,mb4.7,baz=249,slow=5.3,SNR=5.7						
FINES				LR	LR	00 47 14.7	
	comp=Z,72nm,20.1s,MS4.1,baz=177,slow=36						
DBIC	**Dimbokro**	**91.22**	**83**	LR	LR	00 41 26.3	
	comp=Z,54nm,20.3s,MS4.0,baz=328,slow=32						
GERES	**GERESS Array B**	**91.47**	**38**	P	**P**	**00 05 40.3**	**-1.2**
	comp=Z,0.3nm,0.7s,mb3.8,baz=347,slow=5.5,SNR=3.8						
GERES				LR	LR	00 46 34.8	
	comp=Z,81nm,18.9s,MS4.2,baz=178,slow=35						
TORD	**Torodi Ar. Bea**	**95.49**	**75**	LR	LR	00 45 57.9	
	comp=Z,96nm,20.3s,MS4.3,baz=150,slow=34						
AKASG	**Malin Array Be**	**98.89**	**31**	LR	LR	00 54 26.6	
	comp=Z,30nm,19.8s,MS3.8,baz=270,slow=38						
STKA	**Stephens Creek**	**124.00**	**242**	PKP	PKPdf	00 11 33.1	-0.2
	comp=Z,1.6nm,0.6s,baz=153,slow=6.8,SNR=2.5						
STKA				pPKP	pPKPdf	00 11 38.7	+0.4
	comp=Z,1.9nm,0.5s,baz=172,slow=5.3,SNR=2.3						
STKA	**Stephens Creek**	**124.00**	**242**	PKP	PKPdf	00 11 33.1	-0.2
STKA				pPKP	pPKPdf	00 11 38.7	+0.4
MAW	**Mawson**	**127.28**	**171**	PKP	PKPdf	00 11 38.9	-0.8
	comp=Z,0.7nm,0.5s,baz=90,slow=4.0,SNR=3.9						
MAW				pPKP	pPKPdf	00 11 44.8	+0.1
	comp=Z,1.8nm,0.8s,baz=255,slow=3.4,SNR=4.7						
WRA	**Warramunga Arr**	**130.22**	**257**	PKP	PKPdf	00 11 45.2	0.0
	comp=Z,0.9nm,0.8s,baz=90,slow=2.6,SNR=6.7						
WRA				pPKP	pPKPdf	00 11 51.5	+1.3
	comp=Z,2.2nm,1.0s,baz=89,slow=2.2,SNR=8.1						
ASAR	**Alice Springs**	**130.82**	**253**	PKP	PKPdf	00 11 46.8	+0.4
	comp=Z,0.4nm,0.7s,baz=106,slow=2.2,SNR=4.6						
ASAR				pPKP	pPKPdf	00 11 52.7	+1.3
	comp=Z,1.7nm,0.9s,baz=105,slow=2.6,SNR=6.3						

*BJI **17** 01:04:11.2, 1.97N×96.17E, h47km, mB4.8, mb4.9, Ms4.4, Msz4.2*
*ISCJB **17** 01:04:12.9±1.3, 2.29N±0.05×96.25E±0.07, h40km±11km, mb4.6/48, MS4.0/6, Error ellipse: s-maj=12.3km s-min=7.1km az=111.1*
*IDC **17** 01:04:12.4±0.6, 2.27N×96.22E, h23km±3km, mb4.3/14, mb1 4.4/15, mb1mx4.1/23, mbtmp4.4/15, ML4.0/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/37, Error ellipse: s-maj=27.5km s-min=10.8km az=45.0*
*MOS **17** 01:04:12.1±0.8, 2.32N×96.25E, h33km, mb4.8/12, Error ellipse: s-maj=13.8km s-min=8.4km az=104.1*
*NEIC **17** 01:04:12.8±0.3, 2.28N×96.28E, mb4.8/24, Error ellipse: s-maj=7.8km s-min=4.8km az=50.0*
ISC 17 01:04:09.2±2.4**, 2.23N**±0.05×**96.17E**±0.05**, h2km**±15km**, n84, σ1.00**/85**, mb4.6**/48**, MS4.0**/6**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**2.71**	**62**	P	**Pn**	**01 04 54.3**	**+0.6**
	1µm,1.0s						
PSI	**Prapat**	**2.81**	**78**	Pn	**Pn**	**01 04 55.2**	**0.0**
	26nm,0.3s,baz=275,slow=8.8,SNR=164						
PSI				LR	LR	01 06 14.8	
	comp=Z,620nm,18.1s,baz=57,slow=45						
PSI	**Prapat**	**2.81**	**78**	Pn	**Pn**	**01 04 55.2**	**0.0**
PSI				LR	LR	01 06 14.8	
BSI	**Banda Aceh**	**3.36**	**345**	P	**Pn**	**01 05 01.7**	**-1.0**
	244nm,0.5s						
PPI	**Padang Panjang**	**5.00**	**122**	P	**Pn**	**01 05 28.2**	**+2.9**
	60nm,0.8s						
KULM	**Kulim**	**5.41**	**56**	*e*Pn	**Pn**	**01 05 31.2**	**+0.3**
KULM				*e*Sn	**Sn**	**01 06 33.6**	**-0.1**
CHTO	**Chiang Mai**	**16.70**	**9**	*e*P	**Pn**	**01 08 03.7**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
CHTO	**Chiang Mai**	**16.70**	**9**	*e*Pn	**Pn**	**01 08 03.6**	**-0.7**
	comp=Z,4.0nm,0.4s						
KKM	**Kota Kinabalu**	**20.35**	**79**	*e*P	**P**	**01 08 47.2**	**+0.3**
QIZ	**Qiongzhong**	**21.40**	**38**	P	**P**	**01 08 58.4**	**+0.2**
QIZ				S	**S**	**01 12 58.5**	**+2.1**
QIZ				LR	LR		
	comp=N,602nm,12.5s,MS4.2						
QIZ				LR	LR		
	comp=E,335nm,13.7s,MS4.2						
QIZ				LR	LR		
	comp=Z,577nm,13.0s,MS4.2						
QIZ	**Qiongzhong**	**21.40**	**38**	*e*P	**P**	**01 08 56.9**	**-1.4**
	comp=Z,7.1nm,0.8s,mb4.0						
KMI	**Kunming**	**23.63**	**15**	P	**P**	**01 09 23.0**	**+1.2**
KMI				AMB	AMB		
	comp=Z,19nm,0.8s,mb4.6						
KMI				LR	LR		
	comp=Z,114nm,20.2s,MS3.3						
GYA	**Guiyang**	**26.11**	**22**	⇑*i*P	**P**	**01 09 43.8**	**-0.7**
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.9						
PKI	**Pulchoki**	**27.22**	**339**	*e*P	**P**	**01 09 55.4**	**+1.0**
	comp=Z,14nm,0.5s,mb4.7						
PKI	**Pulchoki**	**27.22**	**339**	*e*P	**P**	**01 09 55.4**	**+1.0**
PKI				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.8						
GUN	**Gumba**	**27.36**	**340**	*e*P	**P**	**01 09 57.2**	**+1.5**
	comp=Z,55nm,0.8s,mb5.2						
DMN	**Daman**	**27.36**	**338**	*e*P	**P**	**01 09 57.1**	**+1.4**
	comp=Z,21nm,0.6s,mb4.8						
KKN	**Kakani**	**27.46**	**339**	*e*P	**P**	**01 09 57.9**	**+1.3**
	comp=Z,54nm,0.9s,mb5.1						
KKN	**Kakani**	**27.46**	**339**	*e*P	**P**	**01 09 57.9**	**+1.3**
KKN				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.1						
LSA	**Lhasa**	**27.73**	**351**	*e*P	**P**	**01 09 59.9**	**+0.9**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
LSA	**Lhasa**	**27.73**	**351**	*e*P	**P**	**01 09 59.9**	**+0.9**
	comp=Z,5.4nm,0.6s,mb4.3						
GKN	**Gorkha**	**27.90**	**338**	*e*P	**P**	**01 10 02.1**	**+1.6**
	comp=Z,30nm,0.5s,mb5.2						
KOLN	**Koldanda**	**28.10**	**336**	*e*P	**P**	**01 10 04.0**	**+1.7**
	comp=Z,26nm,0.6s,mb5.0						
MBWA	**Marble Bar**	**32.75**	**136**	*e*P	**P**	**01 10 44.5**	**+1.1**
	comp=Z,11nm,0.9s,mb4.8						
NACB	**Ninganchiao**	**32.86**	**46**	P	**P**	**01 10 43.4**	**-1.1**
XAN	**Xi'an**	**33.81**	**19**	P	**P**	**01 10 51.1**	**-1.6**
XAN				AMB	AMB		
	comp=Z,36nm,0.9s,mb5.3						
XAN				LR	LR		
	comp=N,138nm,14.8s,MS4.1						
XAN				LR	LR		
	comp=E,255nm,15.9s,MS4.1						
XAN				LR	LR		
	comp=Z,239nm,15.1s,MS4.0						
LZH	**Lanzhou**	**34.43**	**11**	*e*P	**P**	**01 10 57.0**	**-1.1**
LZH				AMB	AMB		
	comp=Z,21nm,1.1s,mb5.0						
FITZ	**Fitzroy Crossi**	**35.37**	**126**	*e*P	**P**	**01 11 05.4**	**-0.7**
	comp=Z,7.3nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**35.37**	**126**	P	**P**	**01 11 05.5**	**-0.6**
	comp=Z,4.5nm,0.8s,mb4.5,baz=315,slow=6.4,SNR=10						
NJ2	**Nanjing**	**36.55**	**33**	*e*P	**P**	**01 11 17.8**	**+1.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
GTA	**Gaotai**	**37.15**	**5**	*e*P	**P**	**01 11 21.3**	**-0.1**
GTA				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.7						
KAKA	**Kakadu**	**38.95**	**113**	*e*P	**P**	**01 11 35.3**	**-1.3**
	comp=Z,9.4nm,0.6s,mb4.7						
HHC	**Hu-ho-hao-te**	**40.88**	**18**	*e*P	**P**	**01 11 54.4**	**+1.7**
HHC				PP	PP	01 13 32.5	+5.7
HHC				PCP	PcP	01 13 55.1	+1.7
HHC				PCS	PcS	01 17 45.1	+0.9
HHC				S	**S**	**01 18 06.1**	**+1.2**
HHC				SS	SS	01 21 03.4	-2.6
HHC				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
HHC				AMB	AMB		
	comp=Z,104nm,6.7s						
HHC				LR	LR		
	comp=N,138nm,10.9s,MS4.3						
HHC				LR	LR		
	comp=E,235nm,15.5s,MS4.3						
HHC				LR	LR		
	comp=Z,98nm,4.9s						
BJT	**Baijiatuau**	**41.77**	**23**	*e*P	**P**	**01 12 00.2**	**+0.3**
BJT				pmax	pmax		
	comp=Z,31nm,0.8s						
BJT	**Baijiatuau**	**41.77**	**23**	*e*P	**P**	**01 12 00.2**	**+0.3**
	comp=Z,31nm,0.8s,mb5.0						
BJI	**Beijing**	**41.79**	**23**	P	**P**	**01 12 00.0**	**-0.1**
WRA	**Warramunga Arr**	**43.45**	**122**	P	**P**	**01 12 13.2**	**-0.5**
	comp=Z,2.5nm,0.5s,mb4.2,baz=300,slow=9.3,SNR=14						
WRA				pP		01 12 21.4	
	comp=Z,2.4nm,0.7s,baz=301,slow=9.2,SNR=7.8						
WRAB	**Tennant Creek**	**43.46**	**122**	*e*P	**P**	**01 12 13.7**	**0.0**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**43.46**	**122**	*e*P	**P**	**01 12 13.7**	**0.0**
	comp=Z,5.1nm,0.6s,mb4.4						
FORT	**Forrest**	**44.73**	**140**	*e*P	**P**	**01 12 25.6**	**+1.8**
	comp=Z,15nm,0.9s,mb4.8						
ASAR	**Alice Springs**	**44.84**	**127**	P	**P**	**01 12 24.6**	**-0.1**
	comp=Z,1.7nm,0.5s,mb4.1,baz=300,slow=8.0,SNR=16						
ASAR				pP		01 12 32.5	
	comp=Z,1.5nm,0.6s,baz=302,slow=7.7,SNR=4.6						
ASAR				LR	LR	01 32 15.0	
	comp=Z,107nm,21.7s,MS3.7,baz=175,slow=38						
ASAR	**Alice Springs**	**44.84**	**127**	P	**P**	**01 12 24.7**	**0.0**
ASAR				*PP		01 12 32.6	
ASAR	**Alice Springs**	**44.84**	**127**	P	**P**	**01 12 24.6**	**-0.1**
ASAR				pP		01 12 32.5	
ASAR				LR	LR	01 32 15.0	
MKAR	**Makanchi Array**	**46.00**	**347**	P	**P**	**01 12 34.1**	**+0.1**
	comp=Z,5.9nm,0.4s,mb4.8,baz=158,slow=9.0,SNR=97						
SONM	**Songino Array**	**46.28**	**10**	P	**P**	**01 12 35.8**	**-0.3**
	comp=Z,3.6nm,0.4s,mb4.7,baz=189,slow=9.1,SNR=39						
SONM				PcP	PcP	01 14 12.2	+0.6
	comp=Z,2.7nm,0.6s,baz=197,slow=3.5,SNR=8.1						
ULN	**Ulaanbaatar**	**46.42**	**10**	*e*P	**P**	**01 12 36.8**	**-0.5**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
ULN	**Ulaanbaatar**	**46.42**	**10**	*e*P	**P**	**01 12 36.8**	**-0.5**
	comp=Z,7.7nm,1.1s,mb4.5						
ZAK	**Zakamensk**	**48.35**	**6**	*e*P	**P**	**01 12 52.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
TLY	**Talaya**	**49.67**	**6**	*e*P	**P**	**01 13 02.3**	**-0.2**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TLY	**Talaya**	**49.67**	**6**	*e*P	**P**	**01 13 02.3**	**-0.1**
	comp=Z,6.0nm,0.8s,mb4.7						
MDJ	**Mudanjiang**	**51.49**	**30**	P	**P**	**01 13 16.4**	**+0.3**
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,52nm,4.1s						
MDJ				LR	LR		
	comp=N,247nm,18.4s,MS4.4						
MDJ				LR	LR		
	comp=E,203nm,19.4s,MS4.4						
MDJ				LR	LR		
	comp=Z,306nm,17.9s,MS4.4						
MJAR	**Matsushiro Arr**	**51.64**	**43**	P	**P**	**01 13 16.6**	**-0.7**
	comp=Z,1.5nm,0.6s,mb4.1,baz=199,slow=7.6,SNR=6.6						
PMG	**Port Moresby**	**52.10**	**104**	P	**P**	**01 13 19.9**	**-0.8**
	comp=Z,11nm,1.0s,mb4.7,baz=278,slow=8.5,SNR=4.0						
ZAL	**Zalesovo**	**52.38**	**352**	P	**P**	**01 13 22.8**	**0.0**
	comp=Z,11nm,0.4s,mb5.1,baz=305,slow=4.8,SNR=29						
NVS	**Novosibirsk**	**53.49**	**351**	*e*P	**P**	**01 13 30.0**	**-1.0**
NVS				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
NVS				pmax	pmax		
	comp=N,6.0nm,0.9s						
STKA	**Stephens Creek**	**54.81**	**132**	P	**P**	**01 13 40.8**	**+0.1**
	comp=N,2.7nm,0.8s,mb4.3,baz=319,slow=8.8,SNR=5.9						
STKA				pP		01 13 48.1	
	comp=N,1.8nm,0.4s,baz=308,slow=9.7,SNR=2.4						
BRVK	**Borovoye**	**55.01**	**341**	*e*P	**P**	**01 13 41.8**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
BRVK	**Borovoye**	**55.01**	**341**	*e*P	**P**	**01 13 41.8**	**-0.2**
	comp=Z,2.2nm,0.5s,mb4.4						
ZRNK	**Zerenda**	**55.34**	**340**	*e*P	**P**	**01 13 43.7**	**-0.7**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ZRNK	**Zerenda**	**55.34**	**340**	*e*P	**P**	**01 13 43.7**	**-0.8**
	comp=Z,2.2nm,0.5s,mb4.4						
CHKZ	**Chkalovo**	**55.43**	**342**	*e*P	**P**	**01 13 45.0**	**-0.1**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CHKZ	**Chkalovo**	**55.43**	**342**	*e*P	**P**	**01 13 45.0**	**-0.1**
	comp=Z,10nm,0.6s,mb5.0						
BOD	**Bodaibo**	**57.20**	**11**	*e*	**P**	**01 13 55.2**	**-2.5**
BOD				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
EIL	**Elat**	**64.03**	**302**	*e*P	**P**	**01 14 46.7**	**+2.3**
	comp=Z,36nm,0.6s,mb5.6						
YAK	**Yakutsk**	**64.73**	**17**	*e*P	**P**	**01 14 47.4**	**-1.5**
YAK				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK	**Yakutsk**	**64.73**	**17**	*e*P	**P**	**01 14 47.9**	**-1.1**
	comp=E,41nm,0.8s,mb5.5						
BRTR	**Keskin Array B**	**67.66**	**312**	P	**P**	**01 15 06.8**	**-0.9**
	comp=E,1.1nm,0.8s,mb3.9,baz=126,slow=6.6,SNR=7.7						
BRTR				pP		01 15 14.7	
	comp=E,0.8nm,0.8s,baz=137,slow=5.4,SNR=4.9						
AKASG	**Malin Array Be**	**73.82**	**322**	P	**P**	**01 15 44.5**	**-0.8**
	comp=E,1.8nm,0.6s,mb4.2,baz=92,slow=5.1,SNR=8.7						
AKASG				pP		01 15 52.4	
	comp=E,1.2nm,0.5s,baz=90,slow=5.3,SNR=6.0						
JOF	**Joensuu**	**76.78**	**335**	*e*p	**P**	**01 16 01.0**	**-1.3**
	comp=E,1.7nm,0.5s,mb4.2						
JOF	**Joensuu**	**76.78**	**335**	*e*P	**P**	**01 16 01.0**	**-1.3**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
FINES	**FINESS Array B**	**78.61**	**333**	P	**P**	**01 16 12.2**	**-0.3**
	comp=Z,1.9nm,0.5s,mb4.3,baz=101,slow=5.6,SNR=20						
FINES				pP		01 16 19.4	
	comp=Z,1.7nm,0.5s,baz=98,slow=7.7,SNR=3.3						
FINES	**FINESS Array B**	**78.61**	**333**	P	**P**	**01 16 12.2**	**-0.3**
FINES				pP		01 16 19.4	
KAF	**Kangasniemi**	**78.70**	**333**	*e*p	**P**	**01 16 11.4**	**-1.6**
	comp=Z,0.9nm,0.4s,mb4.0						
KAF	**Kangasniemi**	**78.70**	**333**	*e*P	**P**	**01 16 11.4**	**-1.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
KEV	**Kevo**	**80.79**	**341**	*e*p	**P**	**01 16 16.5**	**-7.9**
	comp=Z,1.6nm,0.6s,mb4.1						
KEV	**Kevo**	**80.79**	**341**	*e*P	**P**	**01 16 16.5**	**-7.9**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ARCES	**ARCESS Array B**	**81.22**	**340**	P	**P**	**01 16 26.6**	**-0.1**
	comp=Z,2.3nm,0.4s,mb4.5,baz=95,slow=5.4,SNR=48						
ARCES				pP		01 16 33.5	
	comp=Z,1.1nm,0.4s,baz=94,slow=5.0,SNR=2.5						
ARCES	**ARCESS Array B**	**81.22**	**340**	P	**P**	**01 16 26.6**	**-0.1**
ARCES				pP		01 16 33.5	
GERES	**GERESS Array B**	**83.36**	**319**	P	**P**	**01 16 38.3**	**+0.5**
	comp=Z,1.1nm,0.9s,mb3.9,baz=114,slow=3.3,SNR=6.8						
GERES				pP		01 16 46.0	
	comp=Z,0.3nm,0.5s,baz=125,slow=3.7,SNR=3.5						
VNDA	**Vanda**	**87.03**	**169**	P	**P**	**01 16 55.8**	**-0.4**
SBA	**Scott Base**	**88.14**	**168**	P	**P**	**01 17 01.4**	**-0.1**
IMA2	**Indian Mountai**	**96.03**	**23**	*e*P	**P**	**01 17 37.6**	**-0.5**
CPUP	**Villa Florida**	**145.04**	**224**	PKPbc	PKPbc	01 23 48.9	+1.4
	comp=Z,0.9nm,0.5s,baz=127,slow=2.8,SNR=7.0						
CPUP	**Villa Florida**	**145.04**	**224**	PKPbc	PKPbc	01 23 48.9	+1.4

*ISCJB **17** 01:16:19.4±0.4, 35.97N±0.04×70.43E±0.09, h100km, mb3.7/7, Error ellipse: s-maj=11.6km s-min=4.8km az=138.1*
*IDC **17** 01:16:22.6±12.0, 35.90N×70.41E, h121km±112km, mb3.3/6, mb1 3.4/8, mb1mx3.2/23, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=70.1km s-min=40.2km az=142.0*
*NEIC **17** 01:16:22.1±2.4, 35.93N×70.44E, h116km±23km, mb3.5/3, Error ellipse: s-maj=18.2km s-min=12.7km az=215.0*
ISC 17 01:16:20.8±0.4**, 35.97N**±0.04×**70.44E**±0.10**, h100km, n28, σ0.92**/31**, mb3.7**/7**, 4C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.46**	**150**	⇑P	**Pn**	**01 16 59.6**	**+0.3**
CEP				S	**Sn**	**01 17 29.0**	**+0.2**
CHCP	**Chirah Chowk**	**3.27**	**134**	⇓P	**Pn**	**01 17 09.3**	**-0.8**
THW	**Thamme Wali**	**3.34**	**161**	⇓P	**Pn**	**01 17 11.3**	**+0.2**
SBDP	**Sheikh Budin**	**3.67**	**175**	⇓P	**Pn**	**01 17 15.8**	**+0.3**
DRP	**Derazinda**	**4.22**	**183**	⇑P	**Pn**	**01 17 23.7**	**+0.8**
SARP	**Sargodha**	**4.44**	**155**	⇑P	**Pn**	**01 17 24.3**	**-1.6**
DLH	**Dalhousie**	**5.71**	**125**	*e*P	**Sn**	**01 18 42.0**	**-5.3**
KK31	**Karatay Array**	**7.12**	**0**	⇑P	**Pn**	**01 18 01.1**	**-1.3**
	1.9nm,0.3s,baz=178,slow=12,SNR=59						
KK31				⇓S	**Sn**	**01 19 16.8**	**-4.9**
	7.7nm,0.5s,baz=193,slow=29						
AAK	**Ala-Archa**	**7.36**	**24**	Pn	**Pn**	**01 18 07.5**	**+1.9**
AB31	**Akbulak array**	**15.34**	**333**	P	**Pn**	**01 19 51.0**	**-0.8**
	0.7nm,0.3s,baz=162,slow=12,SNR=38						
AB31				⇓S	**S**	**01 22 32.2**	**-19**
	1.3nm,0.6s						
ZRNK	**Zerenda**	**17.01**	**357**	*e*P	**Pn**	**01 20 12.6**	**+0.1**
	0.8nm,0.6s						
AKTK	**Aktyubinsk**	**17.03**	**332**	P	**Pn**	**01 20 13.8**	**+1.1**
AKTO	**Aktyubinsk**	**17.03**	**332**	P	**Pn**	**01 20 13.8**	**+1.1**
	0.3nm,0.3s,baz=132,slow=12,SNR=6.0						
BVAR	**Borovoye Array**	**17.05**	**360**	P	**Pn**	**01 20 12.3**	**-0.6**
	0.3nm,0.3s,baz=161,slow=12,SNR=4.7						
BRVK	**Borovoye**	**17.09**	**360**	P	**Pn**	**01 20 11.1**	**-2.2**
CHKZ	**Chkalovo**	**17.71**	**0**	*e*P	**Pn**	**01 20 21.1**	**+0.2**
	0.9nm,0.4s						
LSA	**Lhasa**	**18.48**	**104**	P	**P**	**01 20 29.3**	**+0.5**
ZAL	**Zalesovo**	**20.57**	**25**	P	**P**	**01 20 53.0**	**+1.5**
	1.4nm,0.4s,baz=244,slow=4.9,SNR=3.5						
BRTR	**Keskin Array B**	**29.17**	**289**	P	**P**	**01 22 13.0**	**+0.4**
	0.6nm,0.9s,mb3.2,baz=78,slow=12,SNR=4.2						
TIRR	**Tirgusor**	**32.90**	**298**	*e*P	**P**	**01 22 45.9**	**+0.6**
JOF	**Joensuu**	**36.11**	**331**	*e*p	**P**	**01 23 12.8**	**-0.2**
	1.8nm,0.4s,mb4.3						
FINES	**FINESS Array B**	**37.68**	**327**	P	**P**	**01 23 26.7**	**+0.4**
	1.5nm,0.8s,mb3.9,baz=114,slow=9.2,SNR=7.2						
PSZ	**Piszkesteto**	**38.79**	**304**	*e*P	**P**	**01 23 35.5**	**-0.1**
	2.5nm,0.6s,mb4.2						
ARCES	**ARCESS Array B**	**41.47**	**338**	P	**P**	**01 23 57.1**	**-0.6**
	1.7nm,0.9s,mb3.9,baz=110,slow=7.0,SNR=6.1						
NB2	**NORSAR Subarra**	**44.53**	**323**	P	**P**	**01 24 22.0**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.5,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**44.53**	**323**	P	**P**	**01 24 21.4**	**-1.0**
	comp=Z,0.7nm,0.6s,mb3.6,baz=97,slow=7.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**65.25**	**269**	P	**P**	**01 26 51.2**	**-0.5**
	comp=Z,0.1nm,0.4s,mb3.0,baz=49,slow=6.7,SNR=6.4						
TORD	**Torodi Ar. Bea**	**65.25**	**269**	P	**P**	**01 26 51.2**	**-0.5**

*IDC **17** 01:22:41.0±0.6, 52.85N×160.32E, h0km, mb4.7/28, mb1 4.8/29, mb1mx4.8/30, mbtmp4.7/29, ML4.9/1, MS3.9/20, Ms1 3.9/20, ms1mx3.7/46, Error ellipse: s-maj=16.6km s-min=12.6km az=139.0*
*BJI **17** 01:22:43.3, 53.02N×160.40E, h36km, mB4.8, mb4.8, Ms4.4, Msz4.2*
*ISCJB **17** 01:22:44.9±0.2, 52.67N±0.03×160.33E±0.04, h38km, mb4.8/155, MS4.1/40, Error ellipse: s-maj=4.3km s-min=3.0km az=95.0*
*SZGRF **17** 01:22:44.9, 52.56N×159.84E, h33km, mb4.9, Off east coast of Kamchatka Peninsula, Russia*
*MOS **17** 01:22:45.9±1.2, 52.74N×160.13E, h43km, mb5.0/61, MS4.2/19, Error ellipse: s-maj=8.0km s-min=3.8km az=99.8*
MOS Felt (II-III) at Petropavlovsk-Kamchatskiy.
*NEIC **17** 01:22:46.4±0.2, 52.74N×160.28E, mb4.8/89, MS4.2/4, Error ellipse: s-maj=5.6km s-min=3.9km az=158.0*
NEIC Felt [III] at Petropavlovsk-Kamchatskiy.
*KRSC **17** 01:22:46, 52.79N×160.40E, h27km, ML5.2*
ISC 17 01:22:46.7±0.2**, 52.71N**±0.03×**160.28E**±0.04**, h40km, h40km**±3.0km**:pP-P, n452, σ1.01**/456**, mb4.8**/155**, MS4.1**/40**, 39C-16D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.42**	**339**	PN	**Pn**	**01 22 54.8**	**-1.6**
SPN	**Mys Shipunski**	**0.42**	**339**	*i* P	**Pn**	**01 22 54.8**	**-1.6**
NLC	**Nalytchevo**	**0.73**	**310**	PN	**Pn**	**01 23 00.3**	**-0.2**
NLC				S	**Sn**	**01 23 10.3**	**-0.2**
NLC	**Nalytchevo**	**0.73**	**310**	*e*P	**Pn**	**01 23 00.3**	**-0.2**
NLC				*i* S	**Sn**	**01 23 10.3**	**-0.2**
PET	**Petropavlovsk**	**1.03**	**288**	PN	**Pn**	**01 23 05.6**	**+0.9**
PET				S	**Sn**	**01 23 19.5**	**+1.6**
PET	**Petropavlovsk**	**1.03**	**288**	⇓*i*Pn	**Pn**	**01 23 05.1**	**+0.4**
PET				Sn	**Sn**	**01 23 24.7**	**+6.7**
PET	**Petropavlovsk**	**1.03**	**288**	*e*P	**Pn**	**01 23 05.6**	**+0.9**
PET				*i* S	**Sn**	**01 23 19.5**	**+1.6**
AVH	**Avacha**	**1.08**	**302**	*e*P	**Pn**	**01 23 06.2**	**+0.8**
RUS	**Russkaya**	**1.11**	**256**	PN	**Pn**	**01 23 06.3**	**+0.6**
RUS				S	**Sn**	**01 23 20.7**	**+0.9**
RUS	**Russkaya**	**1.11**	**256**	*e*P	**Pn**	**01 23 06.3**	**+0.6**
RUS				*i* S	**Sn**	**01 23 20.7**	**+0.9**
GRL	**Gorelyy**	**1.35**	**264**	*e*P	**Pn**	**01 23 11.0**	**+1.9**
GRL				*i* S	**Sn**	**01 23 28.9**	**+3.1**
KII	**Karymskiy**	**1.42**	**340**	PN	**Pn**	**01 23 10.4**	**+0.4**
KII	**Karymskiy**	**1.42**	**340**	P	**Pn**	**01 23 10.4**	**+0.4**
GNL	**Ganaly**	**1.72**	**306**	*e*P	**Pn**	**01 23 16.2**	**+2.1**
MKZ	**Mys Kozlova**	**2.04**	**24**	PN	**Pn**	**01 23 16.4**	**-2.2**
MKZ	**Mys Kozlova**	**2.04**	**24**	*e*P	**Pn**	**01 23 16.4**	**-2.2**
MKZ				*i* S	**Sn**	**01 23 37.9**	**-4.9**
TUMR	**Tumrok**	**2.58**	**358**	*e*P	**Pn**	**01 23 26.8**	**+0.8**
TUMR				*i* S	**Sn**	**01 23 56.7**	**+0.6**
KMNR	**Kamenistaya**	**3.06**	**360**	*e*P	**Pn**	**01 23 34.0**	**+1.5**
KPT	**Kopyto**	**3.27**	**359**	*e*P	**Pn**	**01 23 36.7**	**+1.3**
SKR	**Severo-Kuril's**	**3.29**	**234**	*e*PN	**Pn**	**01 23 33.5**	**-2.2**
SKR				*e*S	**Sn**	**01 24 11.1**	**-2.4**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
SKR				smax			
	comp=N,1µm,0.5s						
SKR				smax			
	comp=E,750nm,0.8s						
SKR				smax			
	comp=N,4µm,2.0s						
SKR				smax			
	comp=E,2µm,2.0s						
SKR				MLR	MLR		
	comp=N,3µm,14.0s						
SKR				MLR	MLR		
	comp=E,3µm,14.0s						
SKR				MLR	MLR		
	comp=Z,2µm,14.0s						
ZLN	**Zelenaya**	**3.33**	**5**	*e*P	**Pn**	**01 23 37.7**	**+1.5**
KOZ	**Kozyrevsk**	**3.37**	**356**	*e*P	**Pn**	**01 23 38.2**	**+1.5**
KOZR	**Kozyr**	**3.37**	**356**	PN	**Pn**	**01 23 38.2**	**+1.4**
CIRR	**Tsirk**	**3.43**	**4**	*e*P	**Pn**	**01 23 39.1**	**+1.5**
KRSR	**Krestovskiy**	**3.52**	**3**	*e*P	**Pn**	**01 23 40.0**	**+1.1**
KLY	**Klyuchi**	**3.62**	**3**	PN	**Pn**	**01 23 41.3**	**+1.1**
KLY				S	**Sn**	**01 24 21.3**	**-0.4**
KLY	**Klyuchi**	**3.62**	**3**	*e*P	**Pn**	**01 23 41.3**	**+1.1**
KLY				*i* S	**Sn**	**01 24 21.3**	**-0.4**
SRDR	**Sredinnyy**	**3.63**	**355**	*e*P	**Pn**	**01 23 41.3**	**+0.9**
KBTR	**Krutoberegovo**	**3.81**	**22**	PN	**Pn**	**01 23 44.5**	**+1.7**
KBTR	**Krutoberegovo**	**3.81**	**22**	*e*P	**Pn**	**01 23 44.5**	**+1.7**
BDR	**Baidarnaya**	**3.91**	**8**	*e*P	**Pn**	**01 23 45.5**	**+1.3**
SMKR	**Semkarok**	**3.94**	**10**	*e*P	**Pn**	**01 23 45.3**	**+0.6**
SMKR				*i* S	**Sn**	**01 24 28.0**	**-1.7**
SRKR	**Sorokina**	**3.99**	**7**	*e*P	**Pn**	**01 23 46.4**	**+1.1**
MA2	**Magadan**	**8.68**	**326**	⇑*i*PN	**Pn**	**01 24 51.7**	**+2.0**
MA2				pmax	pmax		
	comp=Z,30nm,1.3s						
MA2	**Magadan**	**8.68**	**326**	Pn	**Pn**	**01 24 50.2**	**+0.4**
YSS	**Yuzh-Sakhalins**	**12.68**	**250**	*e*PN	**Pn**	**01 25 47.2**	**+2.8**
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS				MLR	MLR		
	comp=N,900nm,14.0s						
YSS				MLR	MLR		
	comp=E,900nm,14.0s						
YSS	**Yuzh-Sakhalins**	**12.68**	**250**	*e*Pn	**Pn**	**01 25 46.0**	**+1.6**
ASAJ	**Asahikawa**	**14.52**	**241**	Pn	**Pn**	**01 26 09.5**	**0.0**
	comp=E,7.5nm,0.3s,baz=71,slow=14,SNR=18						
ASAJ				LR	LR	01 31 26.0	
	comp=E,218nm,19.0s,baz=1.2,slow=36						
ASAJ	**Asahikawa**	**14.52**	**241**	P	**Pn**	**01 26 09.5**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,218nm,19.0s						
BILL	**Bilibino**	**15.65**	**8** *c*	*i*P	**Pn**	**01 26 26.6**	**+2.3**
BILL				pmax	pmax		
	comp=Z,46nm,1.0s						
BILL	**Bilibino**	**15.65**	**8**	*e*Pn	**Pn**	**01 26 28.2**	**+3.9**
	comp=Z,30nm,0.8s						

HABR Khabarovsk 16.53 265 *e*P **Pn** **01 26 40.9 +5.3**
HABR pmax pmax
comp=Z,47nm,1.2s
KLR Kul'dur 18.24 270 *e*P **Pn** **01 26 54.7 -2.0**
KLR MLR MLR
comp=E,600nm,13.0s
KLR MLR MLR
comp=Z,1μm,13.0s
YAK Yakutsk 18.78 312 *e*P **Pn** **01 27 02.2 -1.0**
YAK pmax pmax
comp=Z,46nm,0.9s
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=E,24nm,1.1s
YAK MLR MLR
comp=E,278nm,17.0s
YAK MLR MLR
comp=Z,297nm,17.0s
YAK MLR MLR
comp=N,131nm,15.0s
YAK Yakutsk 18.78 312 *e*P **Pn** **01 27 02.2 -1.0**
comp=N,116nm,0.9s
CLNS Chul'man 20.67 296 *e*P **P** **01 27 22.9 -0.2**
CLNS pmax pmax
comp=Z,35nm,0.6s
CLNS pmax pmax
comp=N,14nm,0.5s
CLNS pmax pmax
comp=E,27nm,1.0s
MDJ Mudanjiang 21.69 260 P **P** **01 27 33.8 -0.3**
MDJ AP 01 27 43.8
MDJ XP sP 01 27 49.3 +0.1
MDJ S **S** **01 31 32.0 +0.2**
MDJ XS sS 01 31 47.5 -0.6
MDJ SCP ScP 01 35 08.0 +0.1
MDJ PCS PcS 01 35 12.9 +0.6
MDJ SCS ScS 01 38 52.6 +0.4
MDJ AMB AMB
comp=Z,15nm,0.8s,mb4.5
MDJ AMB AMB
comp=Z,67nm,5.2s
MDJ LR LR
comp=N,247nm,15.8s,MS3.8
MDJ LR LR
comp=E,203nm,17.0s,MS3.8
MDJ LR LR
comp=Z,306nm,17.0s,MS3.8
MDJ Mudanjiang 21.69 260 *e*P **P** **01 27 32.8 -1.3**
comp=Z,9.3nm,0.5s,mb4.5
MAJO Matsushiro 22.40 233 *e*P **P** **01 27 42.6 +1.0**
MAJO pmax pmax
comp=Z,83nm,0.7s,mb5.3
MAJO Matsushiro 22.40 233 *e*P **P** **01 27 42.6 +1.0**
comp=Z,83nm,0.7s,mb5.3
MAT Matsushiro 22.40 233 P **P** **01 27 42.3 +0.7**
MAT S **S** **01 31 50.6 +5.1**
MJAR Matsushiro Arr 22.40 233 P **P** **01 27 42.3 +0.7**
comp=Z,47nm,0.7s,mb5.0,baz=12,slow=12,SNR=48
MJAR LR LR 01 36 37.3
comp=Z,293nm,21.9s,MS3.7,baz=25,slow=37
TIXI Tiksi 23.48 336 *e*P **P** **01 27 49.6 -3.2**
TIXI *e*S **S** **01 32 07.3 +4.0**
TIXI pmax pmax
comp=Z,16nm,0.7s,mb4.6
TIXI MLR MLR
comp=Z,267nm,15.0s,MS3.8
CN2 Changchun 24.63 263 *e*P **P** **01 28 02.3 -1.0**
TTA Tatalina 24.92 49 *e*P **P** **01 28 05.9 -0.1**
TTA pmax pmax
comp=Z,17nm,1.0s,mb4.5
TTA Tatalina 24.92 49 *e*P **P** **01 28 05.9 -0.1**
comp=Z,17nm,1.0s,mb4.5
HIA Hailar 25.51 279*d i*P **P** **01 28 10.3 -1.0**
HIA Hailar 25.51 279 *e*P **P** **01 28 10.1 -1.1**
comp=Z,24nm,0.6s,mb4.9
IMA2 Indian Mountai 26.25 42 *e*P **P** **01 28 17.3 -0.7**
BOD Bodaibo 26.43 300 *e* **P** **01 28 17.0 -2.6**
SNY Shenyang 26.89 261 ⇓P **P** **01 28 26.5 +2.7**
SNY PP 01 29 10.0
SNY AMB AMB
comp=Z,13nm,0.5s,mb4.7
SNY AMB AMB
comp=Z,192nm,4.2s
SNY LR LR
comp=N,600nm,16.2s
SNY LR LR
comp=Z,578nm,16.8s,MS4.2
KDAK Kodiak Island 26.90 60 P **P** **01 28 21.1 -2.7**
comp=Z,10nm,0.9s,mb4.3,baz=355,slow=3.9,SNR=4.2
PMR Palmer 28.16 52 P **P** **01 28 34.5 -0.6**
COLA College 28.60 45⇓*i*P **P** **01 28 40.5 +1.5**
COLA College 28.60 45 *e*P **P** **01 28 39.0 0.0**
comp=Z,2.3nm,0.4s,mb4.3
BJT Baijiatuau 32.46 265 P **P** **01 29 12.7 -0.4**
ULN Ulaanbaatar 33.70 284 *e*P **P** **01 29 23.1 -0.8**
ULN pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ULN Ulaanbaatar 33.70 284 *e*P **P** **01 29 23.1 -0.8**
comp=Z,9.8nm,1.0s,mb4.7
TLY Talaya 33.97 291 *e*P **P** **01 29 26.3 0.0**
TLY *e* 01 31 02.4
TLY pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TLY MLR MLR
comp=Z,160nm,15.0s,MS3.9
TLY Talaya 33.97 291 P **P** **01 29 24.3 -2.0**
comp=Z,5.2nm,0.9s,mb4.5
SONM Songino Array 34.10 284 P **P** **01 29 27.2 -0.2**
comp=Z,4.4nm,0.5s,mb4.6,baz=64,slow=7.6,SNR=39
SONM PcP PcP 01 32 04.9 +0.8
comp=Z,4.8nm,0.7s,baz=67,slow=1.3,SNR=15
SONM LR LR 01 44 51.9
comp=Z,470nm,18.4s,MS4.2,baz=62,slow=39
SONM Songino Array 34.10 284 P **P** **01 29 27.2 -0.2**
SONM 01 32 04.9
INK Inuvik 34.11 37 P **P** **01 29 25.8 -1.7**
comp=Z,5.2nm,1.0s,mb4.4,baz=265,slow=7.7,SNR=5.5
INK Inuvik 34.11 37 P **P** **01 29 25.8 -1.7**
ZAK Zakamensk 34.73 290 *e*P **P** **01 29 33.0 +0.1**
ZAK *e* 01 32 07.0
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
HHC Hu-ho-hao-te 34.75 270 *e*P **P** **01 29 34.3 +1.2**
HHC AP pP 01 29 46.4 +2.2
HHC XP sP 01 29 51.9 +2.9
HHC PP PP 01 30 50.8 -1.5
HHC PCP PcP 01 32 09.5 +3.5
HHC S **S** **01 34 57.0 -3.6**
HHC XS sS 01 35 18.4 -0.7
HHC PCS PcS 01 35 54.8 +2.2
HHC SS SS 01 37 10.4 -22
HHC SCS ScS 01 39 50.9 -0.5
HHC AMB AMB
comp=Z,17nm,0.9s,mb5.0
HHC AMB AMB
comp=Z,76nm,6.6s
HHC LR LR
comp=N,234nm,15.7s,MS4.3
HHC LR LR
comp=E,372nm,14.5s,MS4.3
HHC LR LR
comp=Z,373nm,15.5s,MS4.2
JOW Kunigami 35.18 235 P **P** **01 29 38.1 +1.4**
comp=Z,27nm,0.5s,mb5.4,baz=38,slow=6.3,SNR=9.0
SSE Sheshan 35.61 248 P **P** **01 29 36.6 -3.9**
SSE AP pP 01 29 51.4 -0.2
SSE XP sP 01 29 58.9 +2.5
SSE PCP PcP 01 32 06.8 -1.7
SSE S **S** **01 35 06.3 -7.5**
SSE XS sS 01 35 32.5 +0.1
SSE SS SS 01 37 42.3 -7.5
SSE AMB AMB
comp=Z,29nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,173nm,10.3s
SSE LR LR
comp=N,56nm,20.6s,MS3.5
SSE LR LR
comp=E,65nm,20.6s,MS3.5
SSE LR LR
comp=Z,60nm,19.4s,MS3.4
NJ2 Nanjing 36.24 252 *e*P **P** **01 29 48.3 +2.5**
NJ2 AP pP 01 30 00.3 +3.3
NJ2 XP sP 01 30 05.8 +4.0
NJ2 PP PP 01 31 13.3 +4.6
NJ2 S **S** **01 35 25.0 +1.6**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.3
NJ2 AMB AMB
comp=Z,200nm,4.6s
NJ2 LR LR
comp=N,390nm,24.0s,MS4.3
NJ2 LR LR
comp=E,420nm,23.5s,MS4.3
NJ2 LR LR
comp=Z,540nm,24.1s,MS4.2
KRAR Krasnoyarsk 38.01 303⇑*e*P **P** **01 29 59.7 -1.1**
KRAR pmax pmax
comp=Z,36nm,0.6s,mb5.3
TATO Taipei 40.21 242 P **P** **01 30 19.7 +0.5**
LZH Lanzhou 42.45 270 *e*P **P** **01 30 37.6 0.0**
LZH AP pP 01 30 45.1 -3.8
LZH XP sP 01 30 48.3 -5.4
LZH AMB AMB
comp=Z,18nm,1.2s,mb4.6
GTA Gaotai 42.76 277 *e*P **P** **01 30 40.4 +0.3**
GTA AP pP 01 30 50.6 -0.9
GTA XP sP 01 30 56.1 -0.1
GTA PCP PcP 01 32 31.9 +0.8
GTA AMB AMB
comp=Z,12nm,0.9s,mb4.6
GTA LR LR
comp=N,240nm,16.8s,MS4.4
GTA LR LR
comp=E,255nm,13.8s,MS4.4
GTA LR LR
comp=Z,260nm,14.5s,MS4.3
ZAL Zalesovo 43.10 303 P **P** **01 30 40.9 -1.9**
comp=Z,2.4nm,0.6s,mb4.1,baz=59,slow=6.7,SNR=3.1
ZAL LR LR 01 50 25.0
comp=Z,307nm,18.8s,MS4.2,baz=64,slow=39
ZAL Zalesovo 43.10 303 P **P** **01 30 40.9 -1.9**
ZAL LR LR 01 50 25.0
YKA Yellowknife Ar 43.37 42 P **P** **01 30 43.2 -1.8**
comp=Z,1.4nm,0.8s,mb3.8,baz=303,slow=8.2,SNR=5.0
YKA Yellowknife Ar 43.37 42 P **P** **01 30 43.2 -1.8**
NVS Novosibirsk 43.43 305 *e*P **P** **01 30 44.0 -1.5**
NVS pmax pmax
comp=Z,26nm,1.1s,mb4.9
RES Resolute Bay 43.64 22 *e*P **P** **01 30 47.7 +0.5**
WMQ Urumqi 47.20 290 *e*P **P** **01 31 15.5 +0.1**
WMQ AP pP 01 31 28.0 +1.1
WMQ XP sP 01 31 33.0 +1.4
WMQ PP PP 01 33 06.0 -0.6
WMQ S **S** **01 38 04.0 -1.5**
WMQ XS sS 01 38 25.0 +0.5
WMQ SS SS 01 41 25.0 -8.0
WMQ AMB AMB
comp=Z,18nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,121nm,5.0s
WMQ LR LR
comp=N,215nm,13.0s,MS4.4
WMQ LR LR
comp=E,167nm,12.0s,MS4.4
WMQ LR LR
comp=Z,154nm,12.0s,MS4.2
KBS Kingsbay 47.27 352⇑*e*P **P** **01 31 16.0 0.0**
SPB4 Spitsbergen Ar 47.54 351 *e*P **P** **01 31 16.9 -1.1**
MK31 Makanchi Array 48.42 296 P **P** **01 31 23.0 -1.9**
MK31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
MKAR Makanchi Array 48.42 296 P **P** **01 31 23.2 -1.7**
comp=Z,11nm,0.5s,mb5.1,baz=56,slow=7.0,SNR=154
MKAR Makanchi Array 48.42 296 P **P** **01 31 23.2 -1.7**
NEW Newport 50.00 60 LR LR 01 49 54.4
comp=Z,112nm,20.6s,MS3.9,baz=355,slow=33
NEW Newport 50.00 60 P **P** **01 31 37.5 +0.5**
CHKZ Chkalovo 50.21 309 *e*P **P** **01 31 36.3 -2.2**
CHKZ pmax pmax
comp=Z,13nm,0.5s,mb5.2
CHKZ Chkalovo 50.21 309 *e*P **P** **01 31 36.2 -2.3**
comp=Z,13nm,0.5s,mb5.2
VOSK Vostochnaya 50.62 308 P **P** **01 31 39.4 -2.2**
VOSK pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BVA0 Borovoye Array 50.72 309 *i* P **P** **01 31 40.4 -2.0**
BVAR Borovoye Array 50.72 309 P **P** **01 31 40.3 -2.1**
comp=Z,11nm,0.5s,mb5.0,baz=57,slow=8.8,SNR=44
BVAR PcP PcP 01 32 58.6 -0.5
comp=Z,2.0nm,0.6s,baz=46,slow=4.3,SNR=3.8
BVAR ScP ScP 01 36 54.5 +2.5
comp=Z,1.6nm,0.9s,baz=29,slow=3.4,SNR=5.1
BVAR LR LR 01 55 16.6
comp=Z,229nm,19.3s,MS4.2,baz=2.5,slow=39
BVAR Borovoye Array 50.72 309 P **P** **01 31 40.3 -2.1**
BVAR 01 32 58.6
BRVK Borovoye 50.75 309 *e*P **P** **01 31 40.7 -1.9**
BRVK pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
BRVK Borovoye 50.75 309 *e*P **P** **01 31 40.7 -1.9**
comp=Z,9.7nm,0.6s,mb4.9
DAG Danmarks Havn 50.79 360⇑*i*P **P** **01 31 42.1 -0.8**
comp=Z,4.8nm,0.7s,mb4.5
DAG Danmarks Havn 50.79 360⇑*i*P **P** **01 31 42.1 -0.8**
DAG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KMI Kunming 50.87 260 P **P** **01 31 44.3 +0.8**
KMI AMB AMB
comp=Z,13nm,0.6s,mb5.0
YBH Yreka Blue Hor 51.05 70 LR LR 01 51 51.5
comp=Z,57nm,19.2s,MS3.6,baz=69,slow=34
WALA Waterton Lakes 51.17 57 *e*P **P** **01 31 45.1 -0.7**
comp=Z,14nm,1.3s,mb4.7
ZRNK Zerenda 51.42 309 *e*P **P** **01 31 45.7 -1.9**
ZRNK pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
ZRNK Zerenda 51.42 309 *e*P **P** **01 31 45.7 -1.9**
comp=Z,6.6nm,0.6s,mb4.7
LVZ Lovozero 53.10 337⇓*e*P **P** **01 31 59.0 -1.1**
LVZ pmax pmax
comp=N,9.0nm,0.7s
LVZ pmax pmax
comp=Z,21nm,0.7s,mb5.2
LVZ pmax pmax
comp=E,10.0nm,1.1s
LVZ MLR MLR
comp=Z,146nm,19.0s,MS4.0
LVZ MLR MLR
comp=N,94nm,17.0s
KEV Kevo 53.22 342 *e*P **P** **01 31 57.2 -3.8**
KEV pmax pmax
comp=Z,12nm,0.7s,mb4.9
KEV Kevo 53.22 342 *e*P **P** **01 31 57.2 -3.8**
comp=Z,12nm,0.7s,mb4.9
KEV *e*P 01 31 59.9
ARCES ARCESS Array B 53.69 342 P **P** **01 32 02.7 -1.8**
comp=Z,13nm,0.7s,mb5.0,baz=42,slow=9.5,SNR=43
ARCES LR LR 02 01 55.1
comp=Z,81nm,18.0s,MS3.8,baz=208,slow=44
ARCES ARCESS Array B 53.69 342 P **P** **01 32 02.7 -1.8**
ARCES LR LR 02 01 55.1
ARE0 ARCESS Array S 53.69 342 *e*P **P** **01 32 03.2 -1.2**
ARE0 *e*pP pP 01 32 13.3 -2.8
ARE0 PcP PcP 01 33 05.3 -4.9
FCC Fort Churchill 53.71 39 *e*P **P** **01 32 04.8 +0.2**
FCC pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
FCC Fort Churchill 53.71 39 *e*P **P** **01 32 04.8 +0.2**
comp=Z,3.4nm,0.5s,mb4.5
ARU Arti 53.76 318⇑*i*P **P** **01 32 03.3 -1.6**
ARU *e*PPP 01 35 10.2
ARU *e*S **S** **01 39 34.4 -2.1**
ARU *e*SS SS 01 43 21.0 +3.5
ARU pmax pmax
comp=Z,12nm,0.7s,mb4.9
ARU MLR MLR
comp=E,100nm,20.5s,MS4.0
ARU MLR MLR
comp=Z,200nm,20.5s,MS4.2
ARU MLR MLR
comp=N,100nm,21.0s,MS4.0
ARU Arti 53.76 318 *e*P **P** **01 32 03.5 -1.4**
comp=N,11nm,0.6s,mb5.0
SUMG Summit 54.33 7 *e*P **P** **01 32 08.2 -1.0**
comp=N,25nm,0.8s,mb5.2
HLID Hailey 54.47 63 *e*P **P** **01 32 10.0 -0.2**
KTK1 Kautokeino 54.56 342 *e*P **P** **01 32 08.8 -1.9**
KTK1 AMb AMB 01 32 10.5
comp=Z,32nm,0.7s,mb5.5
KTK1 Kautokeino 54.56 342 *e*P **P** **01 32 08.8 -1.9**
comp=Z,32nm,0.7s,mb5.5
LSA Lhasa 54.56 274 P **P** **01 32 12.5 +1.7**
BOZ Bozeman (W) 54.57 59 *e*P **P** **01 32 10.3 -0.5**
BOZ *e**PP pP 01 32 20.6 -1.8
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BOZ Bozeman (W) 54.57 59 *e*P **P** **01 32 10.3 -0.5**
comp=Z,2.3nm,0.8s,mb4.3
BOZ *e*pP pP 01 32 20.6 -1.8
TRO Tromso 54.76 344 *e*P **P** **01 32 11.2 -1.1**
TRO Tromso 54.76 344 *e*P **P** **01 32 11.2 -1.1**
CMB Columbia Colle 54.84 72 P **P** **01 32 12.7 -0.1**
QLMT Earthquake Lak 55.22 60 *e*P **P** **01 32 21.9 +6.3**
AAK Ala-Archa 55.35 297 *e*P **P** **01 32 14.7 -1.8**
AAK *e**PP pP 01 32 26.4 -1.7
AAK *e**SP sP 01 32 31.7 -1.1
AAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
AAK Ala-Archa 55.35 297 *e*P **P** **01 32 14.7 -1.8**
comp=Z,6.9nm,0.8s,mb4.7
AAK *e*pP pP 01 32 26.4 -1.7
AAK *e*sP sP 01 32 31.7 -1.1
FLWY Flagg Ranch 56.11 60 *e*P **P** **01 32 21.8 -0.1**
comp=Z,6.0nm,0.8s,mb4.7
IMW Indian Meadow 56.11 61 *e*P **P** **01 32 23.8 +1.9**
comp=Z,3.1nm,0.7s,mb4.5
JMIC Jan Mayen 56.35 356 LR LR 01 56 15.6
comp=Z,55nm,18.8s,MS3.7,baz=64,slow=36
LOF Lofoten 56.96 346 *e*P **P** **01 32 28.8 +0.8**
LOF AMb AMB 01 32 29.5
comp=Z,57nm,0.6s,mb5.8
LOF Lofoten 56.96 346 *e*P **P** **01 32 28.8 +0.8**
comp=Z,57nm,0.6s,mb5.8
KK31 Karatay Array 57.17 299 *i* P **P** **01 32 27.8 -1.7**
KK31 pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KKAR Karatay Array 57.17 299 P **P** **01 32 27.8 -1.7**
KKAR pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
HWUT Hardware Ranch 57.34 63 *e*P **P** **01 32 31.2 +0.5**
comp=Z,6.6nm,1.0s,mb4.6
BW06 Boulder Array 57.62 61 *e*P **P** **01 32 32.5 -0.1**
comp=Z,5.0nm,1.0s,mb4.5
PDAR Pinedale Array 57.62 61 P **P** **01 32 32.7 +0.1**
comp=Z,1.2nm,0.7s,mb4.0,baz=308,slow=2.8,SNR=11
DUG Dugway 57.64 65 *e*P **P** **01 32 35.7 +2.9**
DUG *e**PP pP 01 32 45.3 +0.8
DUG pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
DUG Dugway 57.64 65 *e*P **P** **01 32 35.7 +2.9**
comp=Z,4.4nm,1.1s,mb4.4
DUG *e*pP pP 01 32 45.3 +0.8
CHTO Chiang Mai 57.94 259 *e*P **P** **01 32 36.3 +1.5**
CHTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CHTO Chiang Mai 57.94 259 *e*P **P** **01 32 36.3 +1.4**
comp=Z,9.4nm,0.8s,mb4.9
JOF Joensuu 57.96 335 *e*p **P** **01 32 32.9 -2.1**
comp=Z,27nm,0.6s,mb5.5
JOF Joensuu 57.96 335 *e*P **P** **01 32 32.9 -2.1**
JOF pmax pmax
comp=Z,27nm,0.6s,mb5.5
AB31 Akbulak array 58.13 311 *e*P **P** **01 32 34.4 -1.8**
AB31 pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
AKTK Aktyubinsk 58.16 313 P **P** **01 32 34.8 -1.7**
AKTO Aktyubinsk 58.16 313 P **P** **01 32 34.8 -1.7**
comp=Z,3.5nm,0.4s,mb4.7,baz=64,slow=8.0,SNR=26
MOR8 Moi Rana 58.63 345 *e*P **P** **01 32 37.2 -2.5**
MOR8 AMb AMB 01 32 38.0
comp=Z,25nm,0.7s,mb5.3
MOR8 Moi Rana 58.63 345 *e*P **P** **01 32 37.2 -2.5**
comp=Z,25nm,0.7s,mb5.3
ULM Lac du Bonnet 59.01 47 P **P** **01 32 41.4 -0.9**
comp=Z,2.2nm,0.6s,mb4.4,baz=320,slow=6.3,SNR=9.9
ULM LR LR 01 59 41.3
comp=Z,64nm,19.6s,MS3.8,baz=287,slow=38
ULM Lac du Bonnet 59.01 47 P **P** **01 32 41.4 -0.9**
ULM LR LR 01 59 41.4
GUN Gumba 59.05 276 *e*P **P** **01 32 43.2 +0.6**
comp=Z,9.8nm,0.4s,mb5.2
KKN Kakani 59.50 277 *e*P **P** **01 32 45.9 +0.2**
comp=Z,20nm,0.4s,mb5.5
KKN Kakani 59.50 277 *e*P **P** **01 32 45.9 +0.2**
KKN pmax pmax
comp=Z,20nm,0.4s,mb5.5
RSSD Black Hills 59.53 56 *e*P **P** **01 32 46.0 +0.1**
RSSD *e**PP pP 01 32 57.3 -0.4
RSSD pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
RSSD Black Hills 59.53 56 *e*P **P** **01 32 46.0 0.0**
comp=Z,9.0nm,0.8s,mb4.8
RSSD *e*pP pP 01 32 57.3 -0.3
PKI Pulchoki 59.58 276 *e*P **P** **01 32 46.5 +0.2**
comp=Z,35nm,0.7s,mb5.5
PKI Pulchoki 59.58 276 *e*P **P** **01 32 46.5 +0.2**
PKI pmax pmax
comp=Z,35nm,0.7s,mb5.5
SRU San Rafael 59.66 64 *e*P **P** **01 32 47.3 +0.5**
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
SRU San Rafael 59.66 64 *e*P **P** **01 32 47.3 +0.5**
comp=Z,7.4nm,0.9s,mb4.7
GKN Gorkha 59.73 277 *e*P **P** **01 32 47.2 -0.1**
comp=Z,26nm,0.6s,mb5.4
DMN Daman 59.73 277 *e*P **P** **01 32 47.6 +0.3**
comp=Z,27nm,0.5s,mb5.5
KAF Kangasniemi 59.88 337 *e*p **P** **01 32 47.0 -1.4**
comp=Z,26nm,0.4s,mb5.6
KAF Kangasniemi 59.88 337 *e*P **P** **01 32 47.0 -1.4**
KAF pmax pmax
comp=Z,26nm,0.4s,mb5.6
FIA1 FINESS Array S 60.52 337 *e*P **P** **01 32 51.6 -1.1**
FINES FINESS Array B 60.52 337 P **P** **01 32 51.5 -1.2**
comp=Z,22nm,0.5s,mb5.5,baz=39,slow=8.6,SNR=183
FINES FINESS Array B 60.52 337 P **P** **01 32 51.5 -1.2**
KOLN Koldanda 60.52 278 *e*P **P** **01 32 52.7 0.0**
comp=Z,17nm,0.6s,mb5.4
PV10 Paradox Valley 60.99 64 P **P** **01 32 55.0 -0.9**
ISCO Idaho Springs 61.81 61 *e*P **P** **01 33 01.1 -0.4**
ISCO pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
ISCO Idaho Springs 61.81 61 *e*P **P** **01 33 01.1 -0.4**
comp=Z,4.6nm,1.0s,mb4.6
HNR Honiara 61.89 180 LR LR 01 54 13.1
comp=Z,117nm,21.7s,MS4.0,baz=180,slow=30
MOS Moscow 62.04 327 *e*P **P** **01 33 01.8 -1.2**
MOS *e* 01 33 40.7
MOS *e* 01 35 15.3
MOS pmax pmax
comp=Z,50nm,0.9s,mb5.6
MOS pmax pmax
comp=Z,42nm,0.9s,mb5.6
PMG Port Moresby 62.88 195 P **P** **01 33 08.2 -0.4**
OBN Obninsk 62.90 328*c i*P **P** **01 33 07.9 -0.8**
OBN *i**PP pP 01 33 24.4 +3.8
OBN pmax pmax
comp=Z,46nm,1.3s,mb5.5
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.3
OBN Obninsk 62.90 328 *e*P **P** **01 33 08.0 -0.7**
comp=Z,48nm,1.1s,mb5.5
VSU Vasula 62.95 335*c i*P **P** **01 33 08.7 -0.4**
NB2 NORSAR Subarra 63.95 344 P **P** **01 33 14.5 -1.1**
comp=Z,17nm,0.8s,mb5.1,baz=22,slow=6.9
NOA NORSAR Array B 63.95 344 P **P** **01 33 14.7 -0.9**
comp=Z,12nm,0.8s,mb5.0,baz=21,slow=6.6,SNR=54
NOA LR LR 02 06 59.5
comp=Z,53nm,18.8s,MS3.8,baz=50,slow=42
VRHR Novokhopersk 64.41 322 *e*P **P** **01 33 16.7 -2.0**
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.5
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.4s
VRSR Storozhevoye 65.21 324*c i*P **P** **01 33 22.8 -1.1**
VRSR pmax pmax
comp=Z,30nm,0.9s,mb5.3
VRSR pmax pmax
comp=E,40nm,1.0s
SCHQ Schefferville 65.94 28 P **P** **01 33 27.0 -1.6**
comp=E,4.9nm,0.7s,mb4.7,baz=339,slow=7.1,SNR=6.5
SCHQ Schefferville 65.94 28 P **P** **01 33 27.0 -1.6**

SUW Suwalki 67.82 334 *e*P **P 01 33 39.7 -0.9**
MNTX Cornudas Mount 67.93 67 *e*P **P 01 33 35.8 -5.5**
comp=E,4.8nm,1.1s,mb4.4
GOF Gofitskoye 68.75 317 ⇓*i*P **P 01 33 46.5 +0.1**
AKASG Malin Array Be 69.00 329 P **P 01 33 46.6 -1.3**
comp=E,16nm,0.6s,mb5.2,baz=29,slow=6.2,SNR=88
AKASG LR LR 02 07 37.1
comp=E,167nm,18.6s,MS4.3,baz=25,slow=39
WMOK Wichita Mounta 69.21 60 *e*P **P 01 33 48.8 -0.4**
WMOK pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
WMOK Wichita Mounta 69.21 60 *e*P **P 01 33 48.8 -0.4**
comp=Z,7.2nm,1.0s,mb4.6
KAKA Kakadu 69.42 209 *e*P **P 01 33 51.0 +0.5**
comp=Z,11nm,0.9s,mb4.8
KIV Kislovodsk 69.80 317 *e*P **P 01 33 52.7 -0.2**
KIV *e* 01 36 25.5
KIV pmax pmax
comp=Z,25nm,0.6s,mb5.3
KIV Kislovodsk 69.80 317 *e*P **P 01 33 52.7 -0.2**
comp=Z,25nm,0.6s,mb5.3
KIV *e*PP PP 01 36 25.5 -2.0
ZEI Tsey 70.25 315 *e*P **P 01 33 55.8 +0.1**
ZEI *e**PP pP 01 34 10.5 +2.9
ZEI pmax pmax
comp=Z,31nm,1.0s,mb5.2
ONI Oni 70.60 316 P **P 01 33 58.3 +0.5**
DGRG David-gareji 70.69 314 P **P 01 33 58.3 0.0**
TBLG Delisi 70.74 314 P **P 01 33 59.0 +0.4**
MTA Mtatsminda 70.74 314 P **P 01 33 58.9 +0.2**
BSEG Bad Segeberg 70.82 342 *e*P **P 01 33 59.3 +0.2**
comp=Z,15nm,1.0s,mb4.9
BSEG Bad Segeberg 70.82 342 *e*P **P 01 33 59.3 +0.2**
BSEG pmax pmax
comp=Z,11nm,1.0s,mb4.7
ANN Anapa 71.19 321 *e*P **P 01 34 00.0 -1.4**
ANN pmax pmax
comp=Z,36nm,1.2s,mb5.2
ANN MLR MLR
comp=Z,114nm,19.0s,MS4.2
LVV L'vov 71.34 332 ⇓*i*P **P 01 34 02.3 0.0**
LVV *e* 01 43 56.9
LVV MLR MLR
comp=Z,200nm,18.0s,MS4.4
RUE Ruedersdorf 71.49 339 *e*P **P 01 34 03.5 +0.3**
comp=Z,44nm,1.1s,mb5.3
KWP Kalwaria 71.89 333 *e*P **P 01 34 06.0 +0.4**
GNI Garni 72.02 313 P **P 01 34 07.9 +1.5**
comp=Z,7.4nm,0.5s,mb4.8,baz=334,slow=3.8,SNR=14
OJC Ojcow 72.14 335 *e*P **P 01 34 07.0 -0.1**
NRDL Niedersach Rie 72.23 341 *e*P **P 01 34 08.3 +0.7**
comp=Z,10.0nm,1.0s,mb4.7
BCA Borcka 72.31 316 *e*P **P 01 34 06.5 -1.6**
SIM Simferopol' 72.31 323 *e*P **P 01 34 08.0 -0.1**
SIM pmax pmax
comp=Z,16nm,0.8s,mb5.0
SIM MLR MLR
comp=Z,430nm,18.2s,MS4.8
KIS Kishinev 72.37 327 *e*P **P 01 34 06.0 -2.5**
KIS MLR MLR
comp=Z,300nm,17.0s,MS4.6
KIS MLR MLR
comp=Z,400nm,16.0s
KSP Ksiaz 72.44 337 *e*P **P 01 34 09.0 +0.1**
STHS Stebnicka Huta 72.49 333 *e*P **P 01 34 09.9 +0.7**
STHS pmax pmax
comp=Z,11nm,0.8s,mb4.8
STHS Stebnicka Huta 72.49 333 *e*P **P 01 34 09.9 +0.7**
comp=Z,11nm,0.8s,mb4.8
STHS *e* 01 34 17.1
IAS Iasi 72.61 328 P **P 01 34 08.9 -1.0**
KOLS Kolonicke sedl 72.64 332 *e*P **P 01 34 10.1 0.0**
KOLS *e* 01 34 16.1
KOLS Kolonicke sedl 72.64 332 *e*P **P 01 34 10.1 0.0**
KOLS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KOLS Kolonicke sedl 72.64 332 *e*P **P 01 34 10.1 0.0**
comp=Z,7.7nm,1.0s,mb4.6
KOLS *e* 01 34 16.2
NIE Niedzica 72.74 334 *e*P **P 01 34 11.1 +0.5**
CLL Collm 72.75 339 *e*P **P 01 34 10.2 -0.5**
comp=Z,25nm,1.1s,mb5.1
CLL Collm 72.75 339 P **P 01 34 10.3 -0.4**
comp=Z,logA/T=1.4,mb5.1
CLL Collm 72.75 339 *i*P **P 01 34 10.3 -0.4**
CLL pmax pmax
comp=Z,25nm,1.1s,mb5.1
CLL Collm 72.75 339 *i*P **P 01 34 10.3 -0.4**
comp=Z,25nm,1.1s,mb5.1
CLL *e* 01 34 16.0
UPC Upice 72.82 337 *e*P **P 01 34 11.6 +0.5**
IBBN Ibbenburen 72.85 343 *e*P **P 01 34 11.5 +0.2**
comp=Z,16nm,0.8s,mb5.0
DPC Dobruska-Polom 72.89 337 *e*P **P 01 34 12.4 +0.8**
comp=Z,1.6nm,0.6s,mb4.1
DPC LR LR
comp=Z,200nm,14.1s,MS4.5
CRVS Cervenica-Dubn 72.89 333 *e*P **P 01 34 11.2 -0.4**
CRVS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CRVS Cervenica-Dubn 72.89 333 *e*P **P 01 34 11.2 -0.4**
comp=Z,2.7nm,0.8s,mb4.2
OKC Ostrava-Krasne 72.92 335 *e*P **P 01 34 12.2 +0.5**
OKC AMS AMS 02 09 30.0
comp=Z,200nm,19.5s
BRG Berggiesshubel 72.96 338 *e*P **P 01 34 11.9 0.0**
comp=Z,11nm,1.1s,mb4.7
BRG Berggiesshubel 72.96 338 *e*P **P 01 34 11.8 -0.1**
comp=Z,6.4nm,1.1s,mb4.5
BRG
comp=N,53nm,15.0s
BRG
comp=E,43nm,16.6s
BRG
comp=Z,101nm,15.1s
BURAR Bucovina Array 72.97 330 ⇓*i*P **P 01 34 11.7 -0.3**
BURAR Bucovina Array 72.97 330 ⇓P **P 01 34 11.7 -0.3**
FBE Freiberg 73.04 339 *e*P **P 01 34 12.8 +0.4**
comp=Z,18nm,1.2s,mb4.9
MORC Moravsky Berou 73.12 336 ⇑*i*P **P 01 34 13.2 +0.3**
MORC Moravsky Berou 73.12 336 ⇑P **P 01 34 13.2 +0.2**
PVCC Panska Ves 73.14 338 *e*P **P 01 34 14.0 +1.0**
PVCC AMS AMS 02 12 40.0
comp=Z,200nm,12.1s
WTSB Winterswijk 73.34 343 *e*P **P 01 34 14.1 -0.2**
LIKS Likavka 73.39 335 *e*P **P 01 34 15.5 +1.0**
LIKS *e* 01 34 23.3
LIKS pmax pmax
comp=Z,11nm,0.9s,mb4.8
LIKS Likavka 73.39 335 *e*P **P 01 34 15.5 +1.0**
comp=Z,11nm,0.9s,mb4.8
LIKS *e* 01 34 23.3
KECS Kecovo 73.55 333 *e*P **P 01 34 15.8 +0.4**
KECS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KECS Kecovo 73.55 333 *e*P **P 01 34 15.8 +0.4**
comp=Z,3.8nm,0.8s,mb4.4
KECS *e* 01 34 21.4
PRU Pruhonice 73.65 338 *e*P **P 01 34 16.5 +0.5**
PRU AMS AMS 02 12 50.0
comp=Z,200nm,14.5s
MOX Moxa 73.68 340 *e*P **P 01 34 16.2 0.0**
comp=Z,10.0nm,1.2s,mb4.6
EZM Erzurum 73.69 315 *i*P **P 01 34 17.6 +1.3**
TANN Tannenbergstha 73.71 339 *e*P **P 01 34 16.9 +0.5**
comp=Z,9.0nm,1.3s,mb4.5
WERD Werda 73.72 339 *e*P **P 01 34 16.4 0.0**
comp=Z,11nm,1.2s,mb4.7
GUNZ Gunzen 73.79 339 *e*P **P 01 34 17.0 +0.2**
comp=Z,6.0nm,1.0s,mb4.5
VRAC Vranov 73.79 336 ⇑*i*P **P 01 34 17.6 +0.7**
VRAC Vranov 73.79 336 ⇑P **P 01 34 17.6 +0.7**
UBBA Unterbreizbach 73.84 341 *e*P **P 01 34 17.1 0.0**
comp=Z,19nm,1.5s,mb4.8
NKC Novy Kostel 73.89 339 *e*P **P 01 34 18.2 +0.8**
NKC AMS AMS 02 08 30.0
VYHS Vyhne 73.98 334 *e*P **P 01 34 18.4 +0.5**
VYHS *e* 01 34 40.6
VYHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VYHS Vyhne 73.98 334 *e*P **P 01 34 18.4 +0.5**
comp=Z,4.8nm,0.8s,mb4.5
VYHS *e* 01 34 24.5
VYHS *e* 01 34 40.6
TREC Trest 74.07 337 *e*P **P 01 34 19.2 +0.7**
TREC AMS AMS 02 13 10.0
comp=Z,300nm,16.4s
MANZ Manzenberg 74.19 339 *e*P **P 01 34 19.2 0.0**
comp=Z,5.0nm,1.0s,mb4.4
CFR Carcaliu 74.20 327 ⇓*i*P **P 01 34 19.2 -0.1**
CFR Carcaliu 74.20 327 ⇓P **P 01 34 19.2 -0.1**
PSZ Piszkesteto 74.22 334 ⇑*i*P **P 01 34 20.0 +0.6**
PSZ Piszkesteto 74.22 334 P **P 01 34 20.5 +1.1**
PSZ Piszkesteto 74.22 334 ⇑P **P 01 34 20.1 +0.7**
SMOL Smolenice 74.32 335 *e* **P 01 34 27.1 +7.2**
SMOL *e*P sP 01 34 36.4 -0.2
ROTZ Rotzenmuhle 74.38 339 *e*P **P 01 34 20.4 +0.1**
comp=Z,10.0nm,1.2s,mb4.6
DRGR 74.45 331 ⇓*i*P **P 01 34 21.3 +0.6**
DRGR 74.45 331 ⇓P **P 01 34 21.3 +0.6**
EZC Erzincan 74.48 316 *e*P **P 01 34 21.5 +0.6**
HKR Hakkari 74.58 312 *e*P **P 01 34 21.7 +0.3**
MLR Muntele Rosu 74.64 329 ⇓*i*P **P 01 34 22.7 +0.9**
MLR Muntele Rosu 74.64 329 P **P 01 34 22.9 +1.1**
MLR Muntele Rosu 74.64 329 ⇓P **P 01 34 22.7 +0.9**
DZM Mont Dzumac 74.65 174 LR LR 02 03 02.5
comp=Z,83nm,20.2s,MS4.0,baz=18,slow=32
HGN Heimansgroeve 74.65 343 *e*P **P 01 34 22.6 +0.7**
GRA1 Grafenberg Arr 74.66 340 *e*P **P 01 34 22.4 +0.5**
comp=Z,16nm,0.9s,mb5.0
GRF Grafenberg Arr 74.66 340 *e*P **P 01 34 22.4 +0.5**
comp=Z,16nm,0.9s,mb5.0
GRF Grafenberg Arr 74.66 340 *e*P **P 01 34 22.4 +0.5**
GRF pmax pmax
comp=Z,46nm,0.9s,mb5.4
GRF Grafenberg Arr 74.66 340 *e*P **P 01 34 22.4 +0.5**
GRF pmax pmax
comp=Z,16nm,0.9s,mb5.0
KHC Kasperske Hory 74.67 338 *e*P **P 01 34 22.5 +0.5**
KHC AMS AMS 02 13 20.0
comp=Z,200nm,15.1s
ZST Bratislava 74.70 335 *e*P **P 01 34 23.2 +1.1**
ZST pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ZST Bratislava 74.70 335 *e*P **P 01 34 23.2 +1.1**
comp=Z,8.9nm,0.9s,mb4.7
ZST *e* 01 34 29.3
TIRR Tirgusor 74.75 326 ⇑*i*P **P 01 34 22.1 -0.3**
TIRR Tirgusor 74.75 326 ⇑P **P 01 34 22.1 -0.3**
MEM Membach 74.79 343 P **P 01 34 23.0 +0.3**
WET Wettzell 74.82 338 *e*P **P 01 34 23.3 +0.5**
comp=Z,12nm,1.0s,mb4.8
WET Wettzell 74.82 338 *e*P **P 01 34 23.3 +0.5**
WET pmax pmax
comp=Z,28nm,1.0s,mb5.2
KVT Kavak 74.89 320 *e*P **P 01 34 23.2 0.0**
SNX Sinaia 74.89 329 ⇓*i*P **P 01 34 24.6 +1.3**
SNX Sinaia 74.89 329 P **P 01 34 24.6 +1.4**
CUKT Cukurca 74.91 312 P **P 01 34 23.2 -0.2**
GEC2 GERESS Array S 74.91 338 *e*P **P 01 34 23.6 +0.2**
comp=Z,8.0nm,1.0s,mb4.6
GEC2 GERESS Array S 74.91 338 *e*P **P 01 34 23.6 +0.2**
GEC2 pmax pmax
comp=Z,17nm,1.0s,mb4.9
GERES GERESS Array B 74.91 338 P **P 01 34 23.0 -0.3**
comp=Z,2.9nm,0.7s,mb4.3,baz=36,slow=5.3,SNR=31
GERES LR LR 02 09 08.2
comp=Z,92nm,20.9s,MS4.1,baz=34,slow=37
BYBT Boyabat 75.05 321 *i*P **P 01 34 24.5 +0.3**
BTMT Batman 75.06 314 *e*P **P 01 34 24.9 +0.7**
SWET Sewanee 75.25 51 *e*P **P 01 34 24.3 -1.0**
CONA Conrad Observa 75.26 336 *i*P **P 01 34 27.0 +1.6**
comp=Z,7.2nm,0.8s,mb4.7,SNR=6.9
TOKT Tokat 75.34 319 *e*P **P 01 34 26.4 +0.6**
PTK Pertek 75.38 316 *e*P **P 01 34 26.2 +0.2**
GIVF Givet 75.48 344 *e*P **P 01 34 26.2 -0.4**
SVSK Karacayir 75.50 318 *e*P **P 01 34 26.0 -0.7**
BAIF Baives 75.62 344 *e*P **P 01 34 27.3 -0.2**
comp=Z,11nm,0.7s,mb4.6
BAIF Baives 75.62 344 *e*P **P 01 34 27.3 -0.2**
BAIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BAIF Baives 75.62 344 *e*P **P 01 34 27.3 -0.2**
comp=Z,5.6nm,0.7s,mb4.6
GZR Gura Zlata 75.70 331 ⇑*i*P **P 01 34 28.8 +0.9**
GZR Gura Zlata 75.70 331 ⇑P **P 01 34 28.8 +0.9**
TOS Tosya 75.71 321 *e*P **P 01 34 27.9 0.0**
MOA Molln 75.72 337 ⇑*i*P **P 01 34 28.7 +0.8**
comp=Z,5.7nm,0.9s,mb4.5
WRAB Tennant Creek 75.77 205 *e*P **P 01 34 28.4 +0.1**
WRAB *e**PP pP 01 34 38.1 -2.2
WRAB pmax pmax
comp=Z,15nm,1.2s,mb4.8
WRAB Tennant Creek 75.77 205 *e*P **P 01 34 28.4 +0.1**
comp=Z,15nm,1.2s,mb4.8
WRAB *e*pP pP 01 34 38.1 -2.3
WB2 Warramunga Arr 75.77 205 *e*P **P 01 34 28.5 +0.2**
WRA Warramunga Arr 75.78 205 P **P 01 34 28.6 +0.2**
comp=Z,3.4nm,0.6s,mb4.5,baz=23,slow=6.2,SNR=28
BZS Buzias 75.84 331 ⇑*i*P **P 01 34 29.0 +0.3**
DIY Diyarbakir 75.86 315 *e*P **P 01 34 29.5 +0.7**
ARSA Arzberg 75.97 336 ⇑*i*P **P 01 34 30.2 +0.8**
comp=Z,20nm,1.9s,mb4.7
SAFT Safranbolu 76.04 322 *e*P **P 01 34 29.9 +0.1**
PKSM Moragy 76.13 334 ⇑*i*P **P 01 34 30.1 -0.2**
PKSM Moragy 76.13 334 ⇑P **P 01 34 30.1 -0.2**
MYA Malataya 76.26 317 *e*P **P 01 34 31.0 0.0**
MALT Malatya 76.27 317 ⇑*i*P **P 01 34 32.1 +1.0**
MALT Malatya 76.27 317 ⇑P **P 01 34 32.1 +1.0**
BFO Black Forest 76.55 341 *e*P **P 01 34 32.7 0.0**
comp=Z,6.0nm,0.9s,mb4.5
BFO Black Forest 76.55 341 *e*P **P 01 34 32.7 0.0**
BFO pmax pmax
comp=Z,17nm,0.9s,mb5.0
FITZ Fitzroy Crossi 76.64 214 *e*P **P 01 34 34.1 +0.9**
comp=Z,7.5nm,0.7s,mb4.7
KBA Koelnbreinsper 76.66 337 ⇑*i*P **P 01 34 34.5 +1.2**
comp=Z,70nm,1.8s,mb5.3,SNR=23
KBA Koelnbreinsper 76.66 337 ⇑*i*P **P 01 34 34.5 +1.2**
KBA pmax pmax
comp=Z,70nm,1.8s,mb5.3
CDF Champ du Feu 76.67 342 *e*P **P 01 34 33.4 0.0**
comp=Z,21nm,1.0s,mb4.7
CDF Champ du Feu 76.67 342 *e*P **P 01 34 33.4 0.0**
CDF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CDF Champ du Feu 76.67 342 *e*P **P 01 34 33.4 0.0**
comp=Z,11nm,1.0s,mb4.7
GROS Grobnik 76.71 336 *e*P **P 01 34 33.7 0.0**
URFA Urfa 76.84 316 *e*P **P 01 34 34.6 +0.2**
WTTA Wattenberg 76.87 339 ⇑*i*P **P 01 34 36.0 +1.5**
comp=Z,9.8nm,1.0s,mb4.7
WTTA Wattenberg 76.87 339 ⇑*i*P **P 01 34 36.0 +1.5**
WTTA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BNN Bunyan 76.87 319 *i*P **P 01 34 34.3 -0.2**
OBKA Obir 76.90 336 *i*P **P 01 34 36.3 +1.6**
comp=Z,12nm,0.8s,mb4.8,SNR=5.3
MEZF Maizieres J'vi 76.99 343 *e*P **P 01 34 35.3 +0.1**
comp=Z,9.4nm,0.6s,mb4.6
MEZF Maizieres J'vi 76.99 343 *e*P **P 01 34 35.3 +0.1**
comp=Z,9.4nm,0.6s,mb4.9
BR131 Keskin Array S 76.99 321 *e*P **P 01 34 35.3 +0.1**
comp=Z,6.4nm,0.6s,mb4.7
BR131 *e*PcP PcP 01 34 45.8 -0.3
BRTR Keskin Array B 76.99 321 P **P 01 34 35.6 +0.4**
comp=Z,7.3nm,0.6s,mb4.8,baz=64,slow=2.8,SNR=50
BRTR LR LR 02 14 29.7
comp=Z,67nm,19.2s,MS4.0,baz=205,slow=40
SQTA Sankt Quirin 77.00 339 ⇑*i*P **P 01 34 36.0 +0.7**
comp=Z,6.0nm,1.0s,mb4.5,SNR=5.0
SQTA Sankt Quirin 77.00 339 ⇑*i*P **P 01 34 36.0 +0.7**
SQTA pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
ANTO Ankara 77.19 321 ⇑*i*P **P 01 34 36.7 +0.4**
ANTO Ankara 77.19 321 ⇑P **P 01 34 36.7 +0.4**
DAVA Damuels 77.23 340 ⇑*i*P **P 01 34 36.9 +0.4**
comp=Z,13nm,1.4s,mb4.7
HAU Haudompre 77.23 342 *e*P **P 01 34 36.4 -0.2**
comp=Z,16nm,0.7s,mb4.8
HAU *e*R
comp=Z,101nm,20.5s
HAU Haudompre 77.23 342 *e*P **P 01 34 36.4 -0.2**
HAU pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
HAU MLR MLR
comp=Z,100nm,20.5s,MS4.1
HAU Haudompre 77.23 342 *e*P **P 01 34 36.4 -0.2**
comp=Z,8.1nm,0.7s,mb4.8
HAU LR LR
comp=Z,100nm,20.5s,MS4.1
GCIS Gornji Cirnik 77.24 336 *e*P **P 01 34 36.7 +0.1**
KAMT Kaman 77.27 320 *i*P **P 01 34 37.5 +0.7**
HINF Hinteralfeld 77.32 342 *e*P **P 01 34 36.7 -0.4**
comp=Z,13nm,1.0s,mb4.5
HINF Hinteralfeld 77.32 342 *e*P **P 01 34 36.7 -0.4**
HINF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
HINF Hinteralfeld 77.32 342 *e*P **P 01 34 36.7 -0.4**
comp=Z,6.5nm,1.0s,mb4.5
LJU Ljubljana 77.34 336 *e*P **P 01 34 38.0 +0.8**
FLN La Foliniere 77.59 347 *e*P **P 01 34 37.8 -0.8**
comp=Z,27nm,1.0s,mb4.8
FLN *e*R
comp=Z,66nm,20.5s
FLN La Foliniere 77.59 347 *e*P **P 01 34 37.8 -0.8**
FLN pmax pmax
comp=Z,13nm,1.0s,mb4.8
FLN MLR MLR
comp=Z,70nm,20.5s,MS4.0
FLN La Foliniere 77.59 347 *e*P **P 01 34 37.8 -0.8**
comp=Z,13nm,1.0s,mb4.8
FLN LR LR
comp=Z,70nm,20.5s,MS4.0
GAZ Gaziantep 77.75 317 *i*P **P 01 34 39.4 0.0**
PALK Pallekele 77.93 266 *e*P **P 01 34 41.3 +0.8**
GRR Gorron 78.01 347 *e*P **P 01 34 40.5 -0.4**
KOZT Kozan 78.05 318 *e*P **P 01 34 40.8 -0.4**
VTS Vitosha 78.11 329 ⇑*i*P **P 01 34 41.2 -0.2**
VTS Vitosha 78.11 329 ⇑P **P 01 34 41.2 -0.3**
ESKT Eskisehir 78.22 322 *i*P **P 01 34 42.4 +0.3**
SGMF Saint Gilles 78.36 348 *e*P **P 01 34 42.5 -0.3**
LOR Lormes 78.39 344 *e*P **P 01 34 42.8 -0.2**
comp=Z,11nm,0.7s,mb4.6
LOR *e*R
comp=Z,152nm,21.0s
LOR Lormes 78.39 344 *e*P **P 01 34 42.8 -0.2**
LOR pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LOR MLR MLR
comp=Z,150nm,21.0s,MS4.3
LOR Lormes 78.39 344 *e*P **P 01 34 42.8 -0.2**
comp=Z,5.3nm,0.7s,mb4.6
LOR LR LR
comp=Z,150nm,21.0s,MS4.3
KIZT Kizilcal 78.40 321 *i*P **P 01 34 42.6 -0.4**
KARA Karaisali 78.56 318 *e*P **P 01 34 44.1 +0.2**
WSAR Wadi Sarin 78.56 293 P **P 01 34 44.5 +0.5**
comp=Z,17nm,0.7s,mb5.1,baz=49,slow=4.5,SNR=17
WSAR Wadi Sarin 78.56 293 P **P 01 34 44.5 +0.5**
CABF La Chapelle 78.62 342 *e*P **P 01 34 44.8 +0.5**
comp=Z,32nm,1.1s,mb4.9
CABF La Chapelle 78.62 342 *e*P **P 01 34 44.8 +0.5**
CABF pmax pmax
comp=Z,16nm,1.1s,mb4.9
CABF La Chapelle 78.62 342 *e*P **P 01 34 44.8 +0.5**
comp=Z,16nm,1.1s,mb4.9
SSF Saint Saulge 78.64 344 *e*P **P 01 34 44.3 -0.1**
AVF Avril sur Loir 78.93 344 *e*P **P 01 34 45.9 -0.1**
comp=Z,21nm,1.0s,mb4.8
AVF Avril sur Loir 78.93 344 *e*P **P 01 34 45.9 -0.1**
AVF pmax pmax
comp=Z,11nm,1.0s,mb4.7
AVF Avril sur Loir 78.93 344 *e*P **P 01 34 45.9 -0.1**
comp=Z,11nm,1.0s,mb4.7
SMF Signal de Mont 78.99 344 *e*P **P 01 34 46.5 +0.2**
KONT Konya--Tatoy 79.03 321 *e*P **P 01 34 46.2 -0.3**
HTY Hatay 79.09 317 *e*P **P 01 34 46.7 -0.1**
MERS Mersin 79.11 318 *e*P **P 01 34 45.8 -1.1**
STIP Stip 79.24 329 *i*P **P 01 34 46.7 -1.0**
BGF Bois d'Agland 79.24 344 *e*P **P 01 34 47.7 0.0**
comp=Z,5.8nm,0.6s,mb4.4
BGF Bois d'Agland 79.24 344 *e*P **P 01 34 47.7 0.0**
BGF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BGF Bois d'Agland 79.24 344 *e*P **P 01 34 47.7 0.0**
comp=Z,2.9nm,0.6s,mb4.4
MIB Mutribah 79.26 305 *e*P **P 01 34 47.1 -0.7**
MIB AMb AMB 01 34 48.7
comp=Z,113nm,0.8s,mb5.8
UMR Umm Al-Rimmam 79.28 305 *e*P **P 01 34 46.8 -1.1**
UMR AMb AMB 01 34 48.0
comp=Z,76nm,0.6s,mb5.8
ASAR Alice Springs 79.45 204 P **P 01 34 49.7 +0.9**
comp=Z,3.0nm,0.6s,mb4.4,baz=14,slow=5.3,SNR=33
LPL La Plagne 79.56 341 *e*P **P 01 34 50.6 +1.2**
comp=Z,21nm,0.7s,mb4.9
LPL La Plagne 79.56 341 *e*P **P 01 34 50.6 +1.2**
LPL pmax pmax
comp=Z,11nm,0.7s,mb4.9
LPL La Plagne 79.56 341 *e*P **P 01 34 50.6 +1.2**
comp=Z,11nm,0.7s,mb4.9
LPG La Plagne 79.57 341 *e*P **P 01 34 50.8 +1.3**
comp=Z,31nm,0.7s,mb5.0
LPG La Plagne 79.57 341 *e*P **P 01 34 50.8 +1.3**
LPG pmax pmax
comp=Z,16nm,0.7s,mb5.1
LPG La Plagne 79.57 341 *e*P **P 01 34 50.8 +1.3**
comp=Z,16nm,0.7s,mb5.0
KBD Kabd 79.60 305 *e*P **P 01 34 49.4 -0.2**
KBD AMb AMB 01 34 50.0
comp=Z,178nm,0.6s
TCF Toulx Ste Croi 79.61 345 *e*P **P 01 34 49.8 +0.1**
comp=Z,32nm,1.3s,mb4.8
TCF Toulx Ste Croi 79.61 345 *e*P **P 01 34 49.8 +0.1**
TCF pmax pmax
comp=Z,16nm,1.3s,mb4.8
TCF Toulx Ste Croi 79.61 345 *e*P **P 01 34 49.8 +0.1**
comp=Z,16nm,1.3s,mb4.8
MFF Saint Martin d 79.66 346 *e*P **P 01 34 50.3 +0.3**
RST Umm Al-Ruwaisa 79.68 306 *e*P **P 01 34 49.3 -0.8**
RST AMb AMB 01 34 50.0
comp=Z,101nm,0.6s,mb5.9
NAY Al-Naaiem 79.76 305 *e*P **P 01 34 49.7 -0.8**
NAY AMb AMB 01 34 50.6
comp=Z,44nm,0.7s,mb5.5
RDF Al-Radifah 79.88 305 *e*P **P 01 34 50.7 -0.4**
RDF AMb AMB 01 34 52.5
comp=Z,120nm,1.0s,mb5.8
BNI Bardonecchia 80.01 341 *e*P **P 01 34 53.3 +1.4**
BNI *e**PP pP 01 35 02.2 -1.8
BNI pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
BNI Bardonecchia 80.01 341 *e*P **P 01 34 53.2 +1.4**
comp=Z,7.0nm,0.6s,mb4.8
BNI *e*pP pP 01 35 02.2 -1.8
BIA Bitola 80.12 330 *i*P **P 01 34 50.2 -2.3**
ORIF Oris-en-Rattie 80.29 342 *e*P **P 01 34 54.5 +1.1**
comp=Z,19nm,0.7s,mb4.8
ORIF *e*R
comp=Z,72nm,19.5s
ORIF Oris-en-Rattie 80.29 342 *e*P **P 01 34 54.5 +1.1**
ORIF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
ORIF Oris-en-Rattie 80.29 342 *e*P **P 01 34 54.5 +1.1**
comp=Z,9.5nm,0.7s,mb4.8
MBDF Montbardon 80.31 341 *e*P **P 01 34 54.8 +1.3**
comp=Z,11nm,0.7s,mb4.6
MBDF Montbardon 80.31 341 *e*P **P 01 34 54.8 +1.3**
MBDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MBDF Montbardon 80.31 341 *e*P **P 01 34 54.8 +1.3**
comp=Z,5.7nm,0.7s,mb4.6
VIVF Saint-Julien-l 80.58 343 *e*P **P 01 34 54.8 -0.1**
comp=Z,19nm,1.0s,mb4.7
VIVF Saint-Julien-l 80.58 343 *e*P **P 01 34 54.8 -0.1**
VIVF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VIVF Saint-Julien-l 80.58 343 *e*P **P 01 34 54.8 -0.1**
comp=Z,9.6nm,1.0s,mb4.7
RJF Les Rejaudoux 80.68 345 *e*P **P 01 34 55.9 +0.5**
RJF *e*R
comp=Z,112nm,21.0s
RJF Les Rejaudoux 80.68 345 *e*P **P 01 34 55.9 +0.5**
RJF LR LR
comp=Z,110nm,21.0s,MS4.2
CAF Calviac 80.96 345 *e*P **P 01 34 57.6 +0.7**
comp=Z,14nm,0.8s,mb4.6
CAF Calviac 80.96 345 *e*P **P 01 34 57.6 +0.7**
CAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CAF Calviac 80.96 345 *e*P **P 01 34 57.6 +0.7**
comp=Z,7.1nm,0.8s,mb4.7
SBF Sospel 81.00 340 *e*P **P 01 34 58.9 +1.7**
CSS Prodhromos 81.24 318 *e*P **P 01 34 58.1 -0.3**
comp=Z,20nm,0.7s,mb5.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SMRF	Simiane la Rot	81.26	342	eP	P	01 34 59.7	+1.1
PGF	Pioggiola	81.93	339	eP	P	01 35 03.5	+1.4
MMAI	Mount Meron Ar	82.06	316	P	P	01 35 02.9	+0.1
	comp=Z,15nm,0.5s,mb5.2,baz=39,slow=6.8,SNR=82						
ASF	Jabal al Asfar	82.15	314	P	P	01 35 03.8	+0.6
	comp=Z,8.3nm,0.7s,mb4.8,baz=262,slow=4.7,SNR=26						
PPT	Papeete	82.31	132	eLR	LR	02 00 49.1	
	comp=Z,146nm,25.0s,baz=327						
PPT	Papeete	82.31	132	LR	LR	02 08 12.0	
	comp=Z,131nm,18.1s,MS4.3,baz=318,slow=33						
MTLF	Montolieu	82.48	344	eP	P	01 35 05.8	+0.9
ETSF	Etsaut	83.34	346	eP	P	01 35 10.5	+1.1
	comp=Z,26nm,1.0s,mb4.9						
ETSF	Etsaut	83.34	346	eP	P	01 35 10.5	+1.1
ETSF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
ETSF	Etsaut	83.34	346	eP	P	01 35 10.5	+1.1
	comp=Z,13nm,1.0s,mb4.9						
EIL	Elat	85.14	315	eP	P	01 35 18.6	+0.1
	comp=Z,81nm,0.6s						
STKA	Stephens Creek	85.79	196	P	P	01 35 22.0	+0.2
	comp=Z,2.8nm,0.7s,mb4.6,baz=187,slow=12,SNR=4.8						
STKA				LR	LR	02 11 27.9	
	comp=Z,149nm,18.5s,MS4.4,baz=25,slow=34						
STKA	Stephens Creek	85.79	196	P	P	01 35 22.0	+0.2
STKA				LR	LR	02 11 27.9	
ESDC	Sonseca Array	86.98	348	P	P	01 35 27.3	-0.4
	comp=Z,3.9nm,0.9s,mb4.6,baz=4.8,slow=5.1,SNR=10.0						
TBI	Tubuai	87.44	135	eLR	LR	02 03 09.9	
	comp=Z,183nm,29.8s						
KEST	Kesra	88.36	337	P	P	01 35 33.9	-0.4
	comp=Z,1.5nm,0.9s,mb4.2,baz=296,slow=6.3,SNR=5.5						
KEST				LR	LR	02 19 04.5	
	comp=Z,47nm,21.4s,MS3.9,baz=304,slow=38						
RKT	Rikitea	94.06	123	eLR	LR	02 06 15.4	
	comp=Z,100nm,25.8s						
JTS	JuntasAbangare	96.32	64	P	P	01 36 11.5	+0.5
RPZ	Rata Peaks	96.49	172	LR	LR	02 13 00.6	
	comp=Z,102nm,19.3s,MS4.3,baz=30,slow=31						
TORD	Torodi Ar. Bea	111.86	337	PP	PP	01 41 53.0	-7.5
	comp=Z,2.0nm,1.1s,baz=358,slow=7.4,SNR=4.3						
LPAZ	La Paz	127.53	65	PKP	PKPdf	01 41 49.0	+1.7
	comp=Z,0.8nm,0.8s,baz=16,slow=10,SNR=3.9						
LPAZ	La Paz	127.53	65	ePKPdf	PKPdf	01 41 49.7	+2.4
BOSA	Boshof	139.16	288	PKP	PKPdf	01 42 07.5	-1.7
	comp=Z,3.3nm,1.0s,baz=349,slow=5.2,SNR=4.8						
QSPA	South Pole Qui	142.45	180	ePKPdf	PKPdf	01 42 09.2	-5.8
PLCA	Paso Flores	143.89	91	PKP	PKPdf	01 42 17.3	-0.3
	comp=Z,1.2nm,0.7s,baz=46,slow=5.3,SNR=3.6						
SUR	Sutherland	144.51	289	PKP	PKPdf	01 42 18.7	+0.1
	comp=Z,13nm,0.8s,baz=96,slow=5.3,SNR=6.2						
SYO	Syowa Base	148.45	216⇑	eP	PKPdf	01 42 21.6	-3.7

ISCJB **17** *01:40:33.1±0.6, 5268N±003×16049E±006, h15km, mb4.1/15, Error ellipse: s-maj=6.3km s-min=3.4km az=87.9*
KRSC **17** *01:40:33, 5270N×16044E, h15km, ML4.5*
IDC **17** *01:40:34.5±1.5, 5334N×15926E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.9/22, mbtmp4.0/11, ML4.2/1, Error ellipse: s-maj=36.1km s-min=22.6km az=146.0*
MOS **17** *01:40:35.9±1.5, 5293N×16002E, h52km, mb4.4/5, Error ellipse: s-maj=13.8km s-min=7.5km az=87.7*
MOS Felt (II) at Petropavlovsk-Kamchatskiy.
NEIC **17** *01:40:43.1±0.9, 5330N×15903E, h63km±9km, mb4.3/4, Error ellipse: s-maj=15.4km s-min=10.4km az=144.0*
NEIC Felt [II] at Petropavlovsk-Kamchatskiy.
ISC 17 01:40:33.6±1.2**, 5263N**±004×**16041E**±007**, h16**km±5km**, n64,** σ**1^{s}46**/82**, mb4.1**/15**, 3C-3D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.52	334	PN	Pg	01 40 43.6	-0.3
SPN				S	Sg	01 40 50.9	0.0
SPN	Mys Shipunski	0.52	334	i P	Pg	01 40 43.6	-0.3
SPN				i S	Sg	01 40 50.9	0.0
NLC	Nalytchevo	0.84	310	PN	Pg	01 40 48.9	-1.0
NLC				S	Sg	01 41 00.2	-0.8
NLC	Nalytchevo	0.84	310	eP	Pg	01 40 48.9	-1.0
NLC				i S	Sg	01 41 00.2	-0.8
PET	Petropavlovsk	1.13	291	PN	Pn	01 40 54.1	-0.7
PET	Petropavlovsk	1.13	291	eP	Pn	01 40 54.1	-0.7
PET				i S	Sb	01 41 09.0	-0.3
RUS	Russkaya	1.17	261	PN	Pn	01 40 55.8	+0.4
RUS				S	Sb	01 41 12.0	+1.5
RUS	Russkaya	1.17	261	eP	Pn	01 40 55.8	+0.4
RUS				i S	Sb	01 41 12.0	+1.5
AVH	Avacha	1.19	303	eP	Pn	01 40 55.0	-0.6
GRL	Gorelyy	1.43	268	eP	Pn	01 40 59.8	+1.0
GRL				i S	Sn	01 41 19.3	+2.0
GNL	Ganaly	1.83	307	eP	Pn	01 41 05.0	+0.7
MKZ	Mys Kozlova	2.08	22	PN	Pn	01 41 05.4	-2.5
MKZ				S	Sn	01 41 28.5	-5.0
MKZ	Mys Kozlova	2.08	22	eP	Pn	01 41 05.4	-2.5
MKZ				i S	Sn	01 41 28.5	-5.0
MIPR	Malaya Ipel'ka	2.26	262	eP	Pn	01 41 12.6	+2.3
MIPR				i S	Sn	01 41 41.4	+3.5
TUMR	Tumrok	2.66	357	eP	Pn	01 41 15.5	-0.3
TUMR				i S	Sn	01 41 46.1	-1.6
SKR	Severo-Kuril's	3.31	236	ePN	Pn	01 41 24.5	-0.2
SKR				eS	Sn	01 42 01.2	-2.5
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=N,150nm,0.5s						
KPT	Kopyto	3.34	358	eP	Pn	01 41 25.5	+0.3
ZLN	Zelenaya	3.40	4	eP	Pn	01 41 26.7	+0.7
ZLN				i S	Sn	01 42 06.7	+0.7
KOZ	Kozyrevsk	3.45	355	eP	Pn	01 41 28.0	+1.4
KOZR	Kozyr	3.45	355	PN	Pn	01 41 28.0	+1.3
CIRR	Tsirk	3.50	3	eP	Pn	01 41 27.9	+0.6
CIRR				i S	Sn	01 42 09.0	+0.6
KRSR	Krestovskiy	3.59	1	eP	Pn	01 41 29.2	+0.5
KLY	Klyuchi	3.69	2	PN	Pn	01 41 30.4	+0.4
KLY	Klyuchi	3.69	2	P	Pn	01 41 30.4	+0.4
SRDR	Sredinnyy	3.71	354	eP	Pn	01 41 30.4	+0.1
KBTR	Krutoberegovo	3.85	21	PN	Pn	01 41 33.1	+0.9
KBTR	Krutoberegovo	3.85	21	eP	Pn	01 41 33.1	+0.9
BDR	Baidarnaya	3.97	6	eP	Pn	01 41 35.4	+1.6
BDR				i S	Sn	01 42 21.8	+1.7
SMKR	Semkarok	4.01	8	eP	Pn	01 41 35.1	+0.8
SMKR				i S	Sn	01 42 20.8	-0.1
SRKR	Sorokina	4.05	6	eP	Pn	01 41 35.6	+0.6
SRKR				i S	Sn	01 42 21.9	-0.2
YSS	Yuzh-Sakhalins	12.73	251⇓	ePN	Pn	01 43 26.6	-7.3
ASAJ	Asahikawa	14.55	241	Pn	Pn	01 44 00.2	+1.4
	comp=N,1.7nm,0.3s,baz=136,slow=17,SNR=3.5						
ASAJ	Asahikawa	14.55	241	P	Pn	01 44 00.3	+1.5
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BILL	Bilibino	15.71	8⇓	eP	Pn	01 44 09.6	-4.7
BILL				pmax	pmax		
	comp=Z,9.0nm,1.7s						
YAK	Yakutsk	18.89	312⇓	eP	Pn	01 44 50.7	-3.2
YAK				pmax	pmax		
	comp=Z,12nm,0.4s						
MAJO	Matsushiro	22.41	233	P	P	01 45 32.9	+1.4
MJAR	Matsushiro Arr	22.41	233	P	P	01 45 33.4	+1.9
	comp=Z,4.0nm,0.7s,mb3.9,baz=19,slow=12,SNR=11						
HIA	Hailar	25.60	279⇑	eP	P	01 45 59.1	-3.0
EYAK	Cordova Ski Ar	29.90	53	eP	P	01 46 46.3	+5.7
ULN	Ulaanbaatar	33.79	284	P	P	01 47 10.7	-4.1
INK	Inuvik	34.12	37	eP	P	01 47 22.6	+5.0
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	Inuvik	34.12	37	eP	P	01 47 22.6	+4.9
	comp=Z,2.7nm,0.7s,mb4.3						
SONM	Songino Array	34.19	284	P	P	01 47 13.0	-5.2
	comp=Z,0.3nm,0.5s,mb3.5,baz=71,slow=9.2,SNR=3.5						
KRAR	Krasnoyarsk	38.12	303⇑	eP	P	01 47 47.8	-4.0
MKAR	Makanchi Array	48.53	296	P	P	01 49 11.8	-4.1
	comp=Z,1.2nm,0.5s,mb4.2,baz=54,slow=7.0,SNR=19						
MKAR	Makanchi Array	48.53	296	P	P	01 49 11.8	-4.1
CHKZ	Chkalovo	50.32	309	eP	P	01 49 25.1	-4.4
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
CHKZ	Chkalovo	50.32	309	eP	P	01 49 25.1	-4.5
	comp=Z,1.3nm,0.4s,mb4.3						
BVAR	Borovoye Array	50.83	309	P	P	01 49 28.9	-4.4
	comp=Z,1.3nm,0.5s,mb4.1,baz=48,slow=7.3,SNR=7.4						
ZRNK	Zerenda	51.53	309	eP	P	01 49 35.0	-3.6
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ZRNK	Zerenda	51.53	309	eP	P	01 49 35.0	-3.6
	comp=Z,0.7nm,0.4s,mb3.9						
ARCES	ARCESS Array B	53.79	342	P	P	01 49 51.1	-4.2
	comp=Z,1.0nm,0.6s,mb3.9,baz=40,slow=8.3,SNR=5.8						
ARU	Arti	53.87	318⇑	eP	P	01 49 51.1	-4.8
PDAR	Pinedale Array	57.58	61	P	P	01 50 27.6	+5.0
	comp=Z,0.4nm,0.8s,mb3.5,baz=339,slow=2.2,SNR=3.2						
JOF	Joensuu	58.07	335	ep	P	01 50 22.1	-3.9
	comp=Z,1.4nm,0.4s,mb4.3						
JOF	Joensuu	58.07	335	eP	P	01 50 22.1	-3.9
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KAF	Kangasniemi	59.98	337	ep	P	01 50 35.6	-3.7
	comp=Z,3.1nm,0.4s,mb4.7						
KAF	Kangasniemi	59.98	337	eP	P	01 50 35.6	-3.7
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
FINES	FINESS Array B	60.62	337	P	P	01 50 40.2	-3.4
	comp=Z,2.4nm,0.5s,mb4.6,baz=39,slow=9.2,SNR=25						
FINES	FINESS Array B	60.62	337	P	P	01 50 40.2	-3.4
NB2	NORSAR Subarra	64.04	344	P	P	01 51 03.4	-3.1
	comp=Z,2.2nm,1.0s,mb4.1,baz=25,slow=6.9						
NOA	NORSAR Array B	64.04	344	P	P	01 51 03.6	-2.9
	comp=Z,1.0nm,0.8s,mb3.9,baz=21,slow=6.7,SNR=4.1						
AKASG	Malin Array Be	69.11	329	P	P	01 51 35.9	-3.0
	comp=Z,1.1nm,0.5s,mb4.1,baz=31,slow=6.8,SNR=7.1						
BRTR	Keskin Array B	77.10	321	P	P	01 52 24.8	-1.4
	comp=Z,0.6nm,0.6s,mb3.7,baz=46,slow=2.5,SNR=5.8						

ISCJB **17** *02:07:27.9±1.1, 1326N±009×120.1E±0.1, h10km, mb4.1/4, Error ellipse: s-maj=21.5km s-min=10.2km az=52.5*
IDC **17** *02:07:28.2±1.5, 1328N×120.14E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/18, mbtmp4.0/3, Error ellipse: s-maj=32.7km s-min=12.4km az=118.0*
MAN **17** *02:07:31.3, 1350N×12022E, h24km, mb2.3, ML4.0, MS1.9*
NEIC **17** *02:07:35.2±0.8, 1383N×12174E, h50km, mb4.3/1, Error ellipse: s-maj=31.0km s-min=10.6km az=52.0*
ISC 17 02:07:30.0±1.0**, 1331N**±009×**1202E**±01**, h10**km**, n9,** σ**0^{s}37**/11**, mb4.1**/4**, 2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.79	76⇓	iP	Pg	02 07 45.2	-0.1
PGP				i S	Sg	02 07 47.5	-8.1
TGY	Tagaytay City	1.09	44⇓	eP	Pb	02 07 51.4	+0.5
TGY				eS	Sg	02 08 15.2	+10
TGY	Tagaytay City	1.09	44	Pg	Pg	02 07 50.6	-0.3
	290nm,0.3s,baz=209,slow=6.4,SNR=19						
TGY				Lg		02 08 04.5	
	466nm,0.3s,baz=100,slow=21,SNR=14						
WRAB	Tennant Creek	35.86	157	eP	P	02 14 29.8	-0.2
	2.2nm,0.6s,mb4.3						
WRA	Warramunga Arr	35.87	157	P	P	02 14 29.8	-0.2
	3.7nm,0.7s,mb4.4,baz=335,slow=9.6,SNR=31						
WB2	Warramunga Arr	35.87	157	eP	P	02 14 29.9	-0.2
SONM	Songino Array	36.28	344	P	P	02 14 33.5	-0.1
	0.4nm,0.5s,mb3.6,baz=157,slow=7.2,SNR=4.9						
AS31	Alice Springs	39.13	160	eP	P	02 14 58.5	+0.8
ASAR	Alice Springs	39.13	160	P	P	02 14 57.4	-0.2
	1.9nm,0.6s,mb4.0,baz=340,slow=7.0,SNR=22						

IPEC **17** *02:18:05.7±0.2, 5032N×1889E, h2km±1km, ML2.1/4, Error ellipse: s-maj=2.5km s-min=0.9km az=171.0*
CSEM **17** *02:18:06.3±0.1, 5029N×1898E, h1km, ML2.9/4, Error ellipse: s-maj=3.1km s-min=1.8km az=14.0*
PRU **17** *02:18:06.8, 5028N×1887E, h0km*
VIE **17** *02:18:09.7±0.5, 4987N×1882E, h0km, mb2.0/2, ML2.3/4, Error ellipse: s-maj=3.5km s-min=3.1km az=155.0 41 km E of Ostrava Suspected Mining induced.*
WAR 17 02:18:06.6, 5024N×1896E, ML2.7, 7D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.52	252	ePg	Pg	02 18 17.0	+0.5
RAC				eSg	Sg	02 18 24.9	+1.7
OJC	Ojcow	0.54	92	i Pgd	Pg	02 18 17.0	0.0
OJC				eSg	Sg	02 18 24.9	+0.9
OJC	Ojcow	0.54	92	ePg	Pg	02 18 16.8	-0.2
OJC				eSg	Sg	02 18 24.6	+0.6
OKC	Ostrava-Krasne	0.66	232	ePG	Pg	02 18 19.1	-0.2
OKC				eSG	Sg	02 18 28.4	+0.6
	54nm,1.0s						
OKC	Ostrava-Krasne	0.66	232	ePg	Pg	02 18 18.9	-0.4
OKC				eSg	Sg	02 18 28.4	+0.6
	54nm,1.0s						
MORC	Moravsky Berou	1.02	243⇓	iP	Pg	02 18 25.1	-1.1
MORC	Moravsky Berou	1.02	243	ePg	Pg	02 18 25.0	-1.2
MORC				eSg	Sg	02 18 37.8	-1.7
	20nm,0.3s						
LIKS	Likavka	1.20	175	ePG	Pg	02 18 29.2	-0.4
LIKS				eSG	Sg	02 18 45.5	+0.4
LIKS	Likavka	1.20	175	ePg	Pg	02 18 29.3	-0.3
LIKS				eSg	Sg	02 18 45.5	+0.4
NIE	Niedzica	1.21	133	ePg	Pg	02 18 29.2	-0.5
NIE				eSg	Sg	02 18 46.2	+0.9
JAVC	Velka Javorina	1.62	212	ePn	Pn	02 18 35.9	-0.5
JAVC				eSg	Sg	02 18 58.7	+0.1
	23nm,0.8s						
DPC	Dobruska-Polom	1.69	275	ePG	Pg	02 18 36.0	-3.0
DPC				eSG	Sg	02 18 58.3	-2.7
	32nm,0.5s						
DPC	Dobruska-Polom	1.69	275	ePn	Pn	02 18 35.7	-1.7
DPC	Dobruska-Polom	1.69	275	ePg	Pg	02 18 36.0	-3.0
DPC				eSg	Sg	02 18 57.1	-3.9
STHS	Stebnicka Huta	1.70	118	ePN	Pn	02 18 38.1	+0.6
STHS				eSN	Sn	02 19 04.8	+4.9
VYHS	Vyhne	1.75	183	ePN	Pn	02 18 36.9	-1.3
VYHS				eSN	Sn	02 18 59.7	-1.5
VRAC	Vranov	1.79	239	ePn	Pn	02 18 37.5	-1.3
VRAC				eSg	Sg	02 19 01.9	-2.4
	14nm,0.4s						
KSP	Ksiaz	1.80	290	ePg	Pg	02 18 39.8	-1.3
KSP				eSg	Sg	02 19 03.1	-1.4
KECS	Kecovo	2.03	150	ePN	Pn	02 18 40.9	-1.1
KECS				eSN	Sn	02 19 08.0	0.0
KRUC	Moravsky	2.04	236	ePn	Pn	02 18 41.3	-0.9
CRVS	Cervenica-Dubn	2.11	128	ePN	Pn	02 18 45.6	+2.4
PSZ	Piszkesteto	2.41	165⇓	iP	Pn	02 18 53.0	+5.8
KWP	Kalwaria	2.50	103	ePn	Pn	02 18 46.9	-1.6
KWP				ePg	Pg	02 18 55.5	+1.0
KWP				eSn	Sn	02 19 26.1	+6.4
KWP				eSg	Sg	02 19 34.5	+7.6
KOLS	Kolonicke sedl	2.52	120	ePN	Pn	02 18 49.5	+0.6
PRU	Pruhonice	2.85	267	ePG	Pg	02 18 57.0	-4.3
PRU				eSG	Sg	02 19 35.6	-2.7
	6.8nm,0.7s						
CONA	Conrad Observa	3.08	222⇓	iPn	Pn	02 18 55.2	-1.3
CONA			⇓	iSg	Sg	02 19 40.5	-5.1
	3.2nm,0.4s						
KHC	Kasperske Hory	3.67	254	ePN	Pn	02 19 03.6	-0.9
KHC				ePG	Pg	02 19 10.4	-6.5
KHC				eSG	Sg	02 20 02.1	-2.3
	7.8nm,0.5s						
MOA	Molln	3.91	234⇓	iSg	Sg	02 20 09.7	-2.4
	comp=Z,3.8nm,0.5s						
CLL	Collm	3.93	288	eSG	Sg	02 20 13.0	+0.2
BURAR	Bucovina Array	4.89	120⇓	iP	Pn	02 19 21.6	+0.2
BZS	Buzias	4.96	158⇓	iP	Pn	02 19 21.8	-0.6

ISCJB **17** *02:18:55.3±3.1, 47N±0.1×1275E±02, h69km±28km, mb4.2/23, Error ellipse: s-maj=40.8km s-min=10.9km az=141.9*
NEIC **17** *02:18:55.3±0.7, 458N×12709E, h50km, mb4.3/6, Error ellipse: s-maj=61.2km s-min=9.3km az=70.0*
BJI **17** *02:18:55.3, 460N×127.10E, h50km, mB4.9, mb4.6, Ms4.2, Msz3.8*
IDC **17** *02:18:58.9±11.0, 451N×12724E, h85km±108km, mb3.7/12, mb1 3.8/12, mb1mx3.7/21, mbtmp4.0/12, MS3.4/1, Ms1 3.4/1, ms1mx2.5/30, Error ellipse: s-maj=81.7km s-min=20.8km az=72.0*
ISC 17 02:18:58.1±3.1**, 47N**±01×**1275E**±02**, h78**km±29km**, n27,** σ**1^{s}18**/29**, mb4.2**/23**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.72	185	P	P	02 23 50.6	-2.7
	2.4nm,0.8s,mb3.6,baz=37,slow=15,SNR=3.5						
WRAB	Tennant Creek	25.37	165	eP	P	02 24 19.1	+1.2
	6.9nm,0.9s,mb4.1						
WRA	Warramunga Arr	25.38	165	P	P	02 24 18.3	+0.3
	5.7nm,0.9s,mb4.0,baz=344,slow=10.0,SNR=11						
WB2	Warramunga Arr	25.38	165	eP	P	02 24 19.6	+1.6
NJ2	Nanjing	28.41	344	eP	P	02 24 44.8	-0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
ASAR	Alice Springs	28.86	168	P	P	02 24 48.1	-1.0
	comp=Z,0.2nm,0.3s,mb3.2,baz=354,slow=7.4,SNR=3.5						
KMI	Kunming	31.27	313	P	P	02 25 12.3	+1.9
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
XAN	Xi'an	33.93	332	P	P	02 25 34.0	+0.4
XAN				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.4						
HHC	Hu-ho-hao-te	38.75	341	eP	P	02 26 14.5	-0.2
HHC				PCP	PcP	02 28 25.8	+1.0
HHC				S	S	02 32 04.4	-1.7
HHC				PCS	PcS	02 32 13.8	-0.5
HHC				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,70nm,5.9s						
HHC				LR	LR		
	comp=N,146nm,19.0s						
HHC				LR	LR		
	comp=E,150nm,20.2s						
HHC				LR	LR		
	comp=Z,77nm,21.4s						
STKA	Stephens Creek	38.76	161	P	P	02 26 15.1	+0.3
	comp=Z,4.6nm,0.9s,mb4.3,baz=325,slow=1.3,SNR=4.6						
STKA	Stephens Creek	38.76	161	P	P	02 26 15.1	+0.3
MDJ	Mudanjiang	39.81	2	P	P	02 26 22.4	-1.1
MDJ				SCP	ScP	02 32 14.9	+4.8
MDJ				PCS	PcS	02 32 18.6	+0.2
MDJ				S	S	02 32 24.3	+2.2
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,82nm,4.4s						
MDJ				LR	LR		
	comp=N,12nm,16.1s						
MDJ				LR	LR		
	comp=E,26nm,16.1s						
MDJ				LR	LR		
	comp=Z,31nm,19.6s						
SONM	Songino Array	46.65	341	P	P	02 27 19.6	+1.0
	comp=Z,1.1nm,0.8s,mb3.6,baz=162,slow=8.3,SNR=8.5						
SONM				LR	LR	02 48 40.4	
	comp=Z,39nm,19.7s,baz=161,slow=38						
WMQ	Urumqi	52.40	324	eP	P	02 28 04.0	+1.7
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,120nm,5.0s						
WMQ				LR	LR		
	comp=N,87nm,14.0s						
WMQ				LR	LR		
	comp=E,69nm,14.0s						
WMQ				LR	LR		
	comp=Z,58nm,13.0s						
MKAR	Makanchi Array	57.22	325	P	P	02 28 37.8	+0.6
	comp=Z,1.9nm,0.5s,mb4.3,baz=120,slow=8.1,SNR=17						
ZAL	Zalesovo	60.10	332	P	P	02 28 57.1	0.0
	comp=Z,1.3nm,0.3s,mb4.5,baz=261,slow=6.2,SNR=3.7						
BVAR	Borovoye Array	66.95	327	P	P	02 29 42.8	+0.5
	comp=Z,2.1nm,1.0s,mb3.9,baz=111,slow=8.1,SNR=5.5						
BRVK	Borovoye	67.02	327	eP	P	02 29 39.7	-3.0
	comp=Z,2.2nm,0.8s,mb4.0						
CHKZ	Chkalovo	67.10	327	eP	P	02 29 41.2	-2.0
	comp=Z,1.9nm,0.9s,mb3.9						
ZRNK	Zerenda	67.68	326	eP	P	02 29 46.6	-0.3
	comp=Z,4.4nm,0.9s,mb4.3						
AKTK	Aktyubinsk	73.39	321	P	P	02 30 21.4	-0.2
AKTO	Aktyubinsk	73.39	321	P	P	02 30 21.4	-0.2
	comp=Z,1.4nm,0.7s,mb3.9,baz=99,slow=8.2,SNR=8.8						
ARU	Arti	74.55	327	eP	P	02 30 27.7	-0.7
	comp=Z,2.6nm,0.4s,mb4.3						
ASF	Jabal al Asfar	88.05	302	P	P	02 31 40.5	+0.8
	comp=Z,1.9nm,1.0s,mb4.1,baz=89,slow=2.9,SNR=5.0						
ARCES	ARCESS Array B	89.82	340	P	P	02 31 46.3	-1.7
	comp=Z,1.2nm,0.7s,mb4.1,baz=76,slow=10,SNR=4.9						
BR131	Keskin Array S	90.01	310	eP	P	02 31 49.3	+0.4
	comp=Z,0.9nm,0.7s,mb4.0						
BRTR	Keskin Array B	90.01	310	P	P	02 31 49.2	+0.3
	comp=Z,0.7nm,0.8s,mb3.9,baz=172,slow=3.7,SNR=4.7						

CASC 17 02:34:52.8±2.5**, 1300N**×**8872W, h69**km±35km**, MD3.7, ML3.2, 3C-7D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	San Miguel	0.60	45⇓	eP	x	02 35 12.0	
VSM				eS	x	02 35 23.6	
SNVI	San Vicente	0.62	349	eP	x	02 35 11.9	
SNVI				eS	x	02 35 22.8	
BLLM	Bellamira	0.64	46	eP	x	02 35 12.1	
BLLM				eS	x	02 35 23.4	
LCBS	La Ceiba	0.70	339⇓	eP	x	02 35 12.6	
LCBS				eS	x	02 35 26.8	
LFRS	El Faro	0.71	331	eP	x	02 35 12.7	
LFRS				eS	x	02 35 23.9	
LBRS	Las Brisas	0.80	337	eP	x	02 35 14.0	
LBRS				eS	x	02 35 26.7	
LFU	La Fuente	0.84	333	eP	x	02 35 14.6	
LFU				eS	x	02 35 27.6	
SNET	Serv Nac Est T	0.85	324⇑	eP	x	02 35 09.1	
SNET				eS	x	02 35 21.6	
CNCH	Conchagua	0.90	72⇓	eP	x	02 35 15.3	
CNCH				eS	x	02 35 29.3	
BOQS	Boqueron	0.92	323⇑	eP	x	02 35 15.8	
BOQS				eS	x	02 35 29.0	
SBLS	San Blas	1.22	313⇓	eP	x	02 35 19.6	
SBLS				eS	x	02 35 36.2	
SNJE	San Jose	1.22	315	eP	x	02 35 19.5	
SNJE				eS	x	02 35 36.7	
RTR	El Retiro	1.27	315⇓	eP	x	02 35 20.4	
RTR				eS	x	02 35 37.7	
RBDL	Robledal	1.46	320	eP	x	02 35 21.6	
RBDL				eS	x	02 35 41.0	
CRIN	San Cristobal	1.65	100	eP	Pn	02 35 19.7	0.0
LEON	Leon	1.87	108	eP	Pn	02 35 23.2	+0.5
TELN	Telica	1.88	102⇓	eP	Pn	02 35 23.3	+0.5
CNGN	Cerro Negro	2.03	104	eP	Pn	02 35 24.8	0.0
CNGN				eS	Sn	02 35 49.5	+0.3
CNGN				i		02 35 55.7	
	comp=E,235nm,0.3s						
MIRN	Miramar	2.03	106	eP	Pn	02 35 25.3	+0.5
MOMJ	Momotombo	2.20	105	eP	Pn	02 35 27.9	+0.8
COPN	Copaltepe	2.23	111	eP	Pn	02 35 27.6	+0.1
COPN				eS	Sn	02 35 54.3	+0.3
APYN	Apoyeque	2.43	108	eP	Pn	02 35 31.1	+0.9
XAVN	Gruta Xavier	2.48	110⇓	eP	Pn	02 35 31.8	+0.9
MGAN	Managua	2.55	109	eS	Sn	02 36 02.2	+0.3
MGAN				i		02 36 06.0	
	comp=E,113nm,0.3s						
TICN	Ticuantepe	2.61	111⇑	eP	Pn	02 35 33.9	+1.3

ISCJB **17** *02:52:27.9±0.5, 4798N±004×772E±003, h13km±4km, Error ellipse: s-maj=6.3km s-min=3.6km az=152.4*
STR **17** *02:52:28.6±0.4, 4797N×779E, h10km±1km, Ml1.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LEDBW **17** *02:52:28.6±0.0, 4799N×777E, h13km, ML1.5, Error ellipse: s-maj=0.0km s-min=0.0km az=119.0*
LDG **17** *02:52:28.5±0.1, 4798N×774E, h10km, Md2.0/2, Ml1.9/3, Error ellipse: s-maj=2.6km s-min=2.1km az=55.0*
ISC 17 02:52:28.0±0.5**, 4797N**±004×**774E**±003**, h18**km±4km**, n16,** σ**0^{s}84**/28**, 1D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIZ	Kirchzarten	0.12	97⇓	iPg	Pg	02 52 31.7	-0.2
KIZ				i Sg	Sg	02 52 34.0	-0.5
MOF	Molkenrain	0.42	254	Pg	Pg	02 52 37.3	+0.6
MOF				Sg	Sg	02 52 45.0	+2.4
ECH	Echery	0.46	302	Pg	Pg	02 52 37.5	+0.2
WLS	Welschbruch	0.51	330	Pg	Pg	02 52 38.7	+0.4
WLS				Sg	Sg	02 52 45.2	0.0
BFO	Black Forest	0.53	47⇑	iPg	Pg	02 52 38.5	-0.2

BFO				iSg	Sg	02 52 45.7	-0.2
BFO	Black Forest	0.53	47	PmP	Pb	02 52 39.2	+0.3
BFO				SmS	Sb	02 52 47.0	+0.8
CDF	Champ du Feu	0.54	325	ePg	Pg	02 52 39.1	+0.3
CDF	Champ du Feu	0.54	325	ePn	Pb	02 52 40.9	+2.0
CDF				eSg	Sg	02 52 45.4	-0.7
	4.3nm,0.2s						
HINF	Hinteralfeld	0.62	256	ePg	Pg	02 52 40.3	+0.1
HINF	Hinteralfeld	0.62	256	ePn	Pn	02 52 42.0	+0.2
HINF				eSg	Sg	02 52 48.4	-0.1
	7.4nm,0.2s						
LOMF	Lomont	0.88	225	Pg	Pg	02 52 45.1	+0.1
GUT	Gutenstein	0.93	83	P	Pb	02 52 45.7	+0.1
GUT				S	Sb	02 52 58.0	+0.4
HAU	Haudompre	0.94	273	ePg	Pg	02 52 45.7	-0.5
HAU	Haudompre	0.94	273	ePn	Pn	02 52 46.3	+0.1
HAU				eSg	Sg	02 52 58.0	-0.5
	4.2nm,0.2s						
LBG	Lerchenberg	0.99	45	P	Pb	02 52 46.4	-0.2
LBG				Sn	Sn	02 52 58.1	-2.3
LBG				S	Sb	02 52 59.6	+0.4
LBG				SmS		02 52 59.9	
LOR	Lormes	2.72	256	ePg	Pg	02 53 19.3	-0.8
LOR				eSg	Sg	02 53 53.7	-1.7
	0.8nm,0.3s						

IDC 17 02:59:02.7±2.0, 179N×12672E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.6/16, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=113.1km s-min=24.9km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.79	183	P	Pn	03 03 34.8	-1.2
	0.1nm,0.3s,baz=3.4,slow=19,SNR=2.9						
WRA	Warramunga Arr	22.85	161	P	P	03 04 06.9	-0.5
	1.7nm,0.5s,baz=340,slow=10,SNR=34						
ASAR	Alice Springs	26.25	165	P	P	03 04 40.2	+0.8
	1.5nm,0.5s,baz=352,slow=15,SNR=12						
MKAR	Makanchi Array	59.14	326	P	P	03 09 05.4	+0.3
	0.3nm,0.4s,baz=133,slow=5.9,SNR=4.6						

IDC 17 03:14:12.1±20.0, 2577S×17909W, h456km±240km, mb3.2/4, mb1 3.3/5, mb1mx3.1/12, mbtmp4.1/5, Error ellipse: s-maj=221.2km s-min=48.7km az=60.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	Rata Peaks	19.62	202	P	P	03 18 09.6	0.0
	0.9nm,0.3s,baz=8.1,slow=7.1,SNR=7.3						
CTA	Charters Tower	32.35	273	P	P	03 20 03.5	+1.2
	5.3nm,0.9s,baz=95,slow=12,SNR=4.3						
STKA	Stephens Creek	34.84	251	P	P	03 20 23.0	-0.4
	2.4nm,0.7s,baz=109,slow=11,SNR=6.2						
ASAR	Alice Springs	42.58	262	P	P	03 21 26.6	+0.2
	0.7nm,0.4s,baz=105,slow=8.5,SNR=8.5						
WRA	Warramunga Arr	43.13	268	P	P	03 21 30.8	-0.1
	0.9nm,0.7s,baz=102,slow=8.9,SNR=12						

TRN 17 03:24:10.9, 1934N×6330W, h17km
NEIC 17 03:24:13.3, 1946N×6320W, h51km, MD3.7(RSPR), After RSPR.
RSPR 17 03:24:13.3, 1946N×6320W, h51km±16km, MD3.7/12, MD3.7/12, 12C-4D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	1.29	236	⇑eP	Pn	03 24 33.8	-1.1
TBVI	Tortola	1.69	232	⇓eP	Pn	03 24 39.2	-1.3
TBVI				eS	Sn	03 25 00.1	-0.9
STVI	Saint Thomas	1.99	237	⇑eP	Pn	03 24 43.5	-1.0
STVI				eS	Sn	03 25 07.8	-0.4
CULB	Culebra	2.31	240	⇑eP	Pn	03 24 47.9	-1.0
CULB				eS	Sn	03 25 14.8	-1.2
MTP	Monte Pirata	2.61	239	⇑eP	Pn	03 24 52.2	-0.7
MTP				eS	Sn	03 25 22.4	-1.0
CBYP	Canovanas	2.78	245	⇑eP	Pn	03 24 54.5	-0.7
CBYP				eS	Sn	03 25 26.1	-1.5
HUMP	Col San Antoni	2.83	243	⇑eP	Pn	03 24 55.4	-0.6
HUMP				eS	Sn	03 25 28.7	-0.1
CPD	Cerro la Pandu	2.94	242	⇑eP	Pn	03 24 57.5	+0.1
CPD				eS	Sn	03 25 31.0	-0.4
SJG	San Juan	3.10	245	ePn	Pn	03 24 59.1	-0.5
SJG				eSn	Sn	03 25 33.8	-1.6
CELP	Cerrillos	3.48	247	⇓eP	Pn	03 25 04.7	-0.3
ICM	Isla Caja Muer	3.51	244	⇑eP	Pn	03 25 05.2	-0.1
AOPR	Arecibo Observ	3.54	252	⇑eP	Pn	03 25 04.8	-0.9
LRS	Lares	3.64	252	⇑eP	Pn	03 25 06.5	-0.5
AGPR	Aguadilla, PR	3.83	256	⇑eP	Pn	03 25 09.7	+0.1
LSP	Las Mesas	3.89	251	⇑eP	Pn	03 25 10.8	+0.3
MGP	Maguayo	3.96	249	⇓eP	Pn	03 25 11.5	+0.1
CRPR	Cabo Rojo, PR	3.98	249	⇓eP	Pn	03 25 11.3	-0.4

NIED 17 03:45:00, 3880N×14160E, h74km, Mw4.2 Best double couple: Mo2.39000×10^15 NP1:φs173.00000°, δ66.00000°, λ80.00000°. NP2:φs18.00000°, δ26.00000°, λ112.00000°.
ISCJB 17 03:45:19.5±0.3, 3887N±003×14153E±004, h82km±2km, mb4.3/55, Error ellipse: s-maj=6.3km s-min=4.1km az=66.8
IDC 17 03:45:19.9±0.6, 3876N×14149E, h76km±5km, mb4.0/13, mb1 4.1/15, mb1mx4.0/21, mbtmp4.3/15, Error ellipse: s-maj=16.8km s-min=10.5km az=97.0
MOS 17 03:45:19.9±0.8, 3901N×14146E, h84km, mb4.4/17, Error ellipse: s-maj=11.5km s-min=8.4km az=91.7
JMA 17 03:45:20.2, 3884N×14159E, h75km±1km, M4.3 Broadband fault plane solution: P waves. NP1: φs21.00000°, δ26.00000°, λ137.00000°. NP2: φs151.00000°, δ72.00000°, λ70.00000°. Principal axes: T Plg58.0000°, Azm34.0000°; N Plg19.0000°, Azm157.0000°; P Plg25.0000°, Azm256.0000°;
JMA Felt III J1.
BJI 17 03:45:20.9, 3862N×14153E, h114km, mB4.9, mb4.7
NEIC 17 03:45:22.8±0.8, 3882N×14147E, h100km±8km, mb4.3/30, Error ellipse: s-maj=7.9km s-min=5.1km az=174.0
NEIC Recorded [3 JMA] in Iwate and Miyagi; [1 JMA] in Akita and Yamagata Prefectures.
ISC 17 03:45:20.4±0.3, 3887N±003×14155E±005, h76km±2km, h76km±2.6km:pP-P, n113, σ0s89/124, mb4.3/55, 8C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.23	23	⇑P	Pn	03 45 31.6	-0.2
OFUJ				S	Sn	03 45 39.8	-0.5
JMK	Ichinoseki	0.27	288	⇑P	Pn	03 45 31.8	-0.3
JMK				S	Sn	03 45 40.2	-0.4
JIO	Ouri	0.44	201	⇑P	Pn	03 45 32.8	-0.4
JIO				S	Sn	03 45 41.9	-0.8
JOM	Ohasama	0.64	342	⇑P	Pn	03 45 35.2	+0.1
JOM				S	Sn	03 45 46.1	+0.1
JOU	Okura	0.86	235	⇑P	Pn	03 45 37.6	+0.1
JOU				S	Sn	03 45 50.5	+0.3
JYK	Kaneyama	0.93	274	⇑P	Pn	03 45 38.7	+0.3
JYK				eS	Sn	03 45 53.0	+1.2
JMM	Marumori	1.16	211	⇑P	Pn	03 45 40.5	-0.7
JMM				eS	Sn	03 45 55.7	-1.1
JYS	Shirataka	1.33	242	⇓P	Pn	03 45 43.8	+0.5
JYS				eS	Sn	03 46 01.5	+0.9
JYA	Atsumi	1.46	260	⇓P	Pn	03 45 45.5	+0.4
JYA				eS	Sn	03 46 04.6	+0.9
JAH	Hinai	1.50	332	⇓P	Pn	03 45 46.4	+0.9
JAH				eS	Sn	03 46 04.9	+0.4
JANG	Nango	1.51	359	P	Pn	03 45 45.2	-0.4
JANG				eS	Sn	03 46 04.3	-0.3
JFK	Kawauchi	1.59	200	⇑P	Pn	03 45 46.3	-0.4
JFK				eS	Sn	03 46 05.7	-0.9
MAJO	Matsushiro	3.52	230	⇓iP	Pn	03 46 14.6	+1.9
MAT	Matsushiro	3.52	230	P	Pn	03 46 14.3	+1.6
MAT				S	Sn	03 46 54.9	+1.6
MJAR	Matsushiro Arr	3.52	230	P	Pn	03 46 14.5	+1.8
	19nm,0.3s,baz=39,slow=12,SNR=317						
ASAJ	Asahikawa	5.30	8	P	Pn	03 46 36.0	-1.0
	5.5nm,0.3s,baz=211,slow=10,SNR=30						
ASAJ	Asahikawa	5.30	8	P	Pn	03 46 36.1	-0.9
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
JHJ	Hachijo jima 2	5.91	195	P	Pn	03 46 43.0	-2.3
	comp=Z,13nm,0.3s,baz=67,slow=20,SNR=12						
JHJ				S	Sn	03 47 47.0	-4.7
	comp=Z,50nm,0.3s,baz=95,slow=23,SNR=8.1						
YUK	Yuzh-Kuril'sk	6.09	31	P		03 47 04.5	
YUK				eS	Sn	03 47 48.5	-7.6
YUK				pmax	pmax		
	comp=Z,260nm,0.5s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,2μm,0.7s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,580nm,0.5s						
YSS	Yuzh-Sakhalins	8.13	6	eP	Pn	03 47 14.7	-0.9
MDJ	Mudanjiang	10.62	307	P	Pn	03 47 53.1	+3.5
MDJ				AMB	AMB		
	comp=Z,8.0nm,0.6s						
MDJ				AMB	AMB		
	comp=Z,27nm,4.0s						
MDJ				LR	LR		
	comp=N,15nm,21.2s						
MDJ				LR	LR		
	comp=E,33nm,29.7s						
MDJ				LR	LR		
	comp=Z,67nm,26.5s						
NJ2	Nanjing	19.68	257	eP	Pn	03 49 44.8	-0.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	23.06	284	eP	P	03 50 17.8	-1.5
HHC				AP		03 50 41.0	
HHC				PP		03 50 53.1	
HHC				PCP	PcP	03 54 06.1	+0.1
HHC				S	S	03 54 14.8	-9.3
HHC				XS	sS	03 54 56.0	+2.7
HHC				SS		03 55 10.1	
HHC				SCP	ScP	03 57 32.3	-4.8
HHC				PCS	PcS	03 57 44.3	-0.8
HHC				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.1						
HHC				LR	LR		
	comp=N,94nm,19.1s						
HHC				LR	LR		
	comp=E,68nm,18.3s						
HHC				LR	LR		
	comp=Z,113nm,17.4s						
BOD	Bodaibo	26.06	326	eP	P	03 50 37.2	-9.4
BOD				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
ULN	Ulaanbaatar	26.46	301	eP	P	03 50 50.8	+0.6
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
ULN	Ulaanbaatar	26.46	301	eP	P	03 50 50.8	+0.6
	comp=Z,1.8nm,0.7s,mb3.6						
XAN	Xi'an	26.60	270	P	P	03 50 50.5	-1.0
XAN				AMB	AMB		
	comp=Z,11nm,0.6s,mb4.6						
SONM	Songino Array	26.90	301	P	P	03 50 53.7	-0.4
	comp=Z,3.1nm,0.7s,mb4.0,baz=105,slow=8.8,SNR=19						
ZAK	Zakamensk	29.25	306	eP	P	03 51 14.9	-0.2
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
LZH	Lanzhou	29.92	277	eP	P	03 51 20.8	-0.2
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.6						
GTA	Gaotai	32.17	284	eP	P	03 51 39.6	-1.2
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.2						
KMI	Kunming	35.38	259	P	P	03 52 07.9	-0.8
KMI				AP	pP	03 52 36.1	+9.3
KMI				XP	sP	03 52 49.6	+14
KMI				PP	PP	03 53 30.0	-0.3
KMI				S	S	03 57 33.6	-4.1
KMI				XS	sS	03 58 21.4	+13
KMI				SS	SS	03 59 54.1	-20
KMI				SSS		04 00 24.3	
KMI				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.7						
KMI				AMB	AMB		
	comp=Z,91nm,4.2s						
KMI				LR	LR		
	comp=N,93nm,13.8s						
KMI				LR	LR		
	comp=E,88nm,14.7s						
KMI				LR	LR		
	comp=Z,117nm,19.2s						
WMQ	Urumqi	40.14	295	eP	P	03 52 49.0	+0.2
WMQ				AP	pP	03 53 14.0	+6.8
WMQ				XP	sP	03 53 27.0	+11
WMQ				PP	PP	03 54 27.0	+4.6
WMQ				S	S	03 58 46.0	-3.7
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,104nm,5.0s						
WMQ				LR	LR		
	comp=N,42nm,12.0s						
WMQ				LR	LR		
	comp=E,53nm,14.0s						
WMQ				LR	LR		
	comp=Z,32nm,12.0s						
ZAL	Zalesovo	40.80	311	P	P	03 52 54.1	0.0
	comp=Z,4.6nm,0.5s,mb4.6,baz=25,slow=8.0,SNR=20						
NVS	Novosibirsk	41.67	312	eP	P	03 53 00.4	-1.0
NVS				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
MK31	Makanchi Array	43.26	300	P	P	03 53 12.4	-1.8
MK31				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
MKAR	Makanchi Array	43.26	300	P	P	03 53 14.2	-0.1
	comp=Z,15nm,0.7s,mb4.8,baz=85,slow=9.9,SNR=115						
KDAK	Kodiak Island	45.68	43	P	P	03 53 32.2	-1.3
	comp=Z,3.5nm,0.6s,mb4.3,baz=322,slow=4.1,SNR=5.3						
GUN	Gumba	47.11	274	eP	P	03 53 45.5	+0.8
	comp=Z,55nm,0.8s,mb5.4						
COLA	College	47.48	33	eP	P	03 53 47.4	-0.2
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
COLA	College	47.48	33	eP	P	03 53 47.4	-0.2
	comp=Z,3.4nm,0.8s,mb4.1						
KKN	Kakani	47.63	274	eP	P	03 53 49.5	+0.7
	comp=Z,29nm,0.6s,mb5.3						
KKN	Kakani	47.63	274	eP	P	03 53 49.5	+0.7
KKN				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.3						
PKI	Pulchoki	47.64	274	eP	P	03 53 49.3	+0.5
DMN	Daman	47.86	274	eP	P	03 53 51.1	+0.6
GKN	Gorkha	48.03	275	eP	P	03 53 52.3	+0.4
	comp=Z,25nm,0.8s,mb5.1						
KOLN	Koldanda	48.95	275	eP	P	03 53 58.8	-0.1
	comp=Z,10nm,0.4s,mb5.1						
CHKZ	Chkalovo	49.16	312	eP	P	03 53 59.7	-0.8
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
CHKZ	Chkalovo	49.16	312	eP	P	03 53 59.6	-0.8
	comp=Z,4.0nm,0.6s,mb4.5						
VOSK	Vostochnaya	49.16	311	P	P	03 53 59.6	-0.9
BRVK	Borovoye	49.49	311	eP	P	03 54 01.1	-1.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BRVK	Borovoye	49.49	311	eP	P	03 54 01.1	-1.9
	comp=Z,3.8nm,0.9s,mb4.3						
AAK	Ala-Archa	49.74	297	eP	P	03 54 04.2	-0.7
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
AAK	Ala-Archa	49.74	297	eP	P	03 54 04.2	-0.7
	comp=Z,4.9nm,0.6s,mb4.6						
ZRNK	Zerenda	50.27	311	eP	P	03 54 08.3	-0.6
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
ZRNK	Zerenda	50.27	311	eP	P	03 54 08.3	-0.6
	comp=Z,1.7nm,0.3s,mb4.5						
INK	Inuvik	52.71	28	P	P	03 54 26.7	-0.5
	comp=Z,4.5nm,0.5s,mb4.7,baz=300,slow=4.6,SNR=13						
INK	Inuvik	52.71	28	P	P	03 54 26.7	-0.5
AB31	Akbulak array	56.86	309	iP	P	03 54 56.4	-0.7
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WRAB	Tennant Creek	58.88	188	eP	P	03 55 09.3	-1.9
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WRAB	Tennant Creek	58.88	188	eP	P	03 55 09.3	-1.9
	comp=Z,2.4nm,0.6s,mb4.4						
WRA	Warramunga Arr	58.89	188	P	P	03 55 10.2	-1.0
	comp=Z,2.4nm,0.5s,mb4.5,baz=5.4,slow=7.1,SNR=51						
WRA				pP	pP	03 55 28.8	-2.0
	comp=Z,1.6nm,0.4s,baz=5.2,slow=7.2,SNR=7.5						
YKA	Yellowknife Ar	62.17	31	P	P	03 55 33.2	-0.4
	comp=Z,1.6nm,1.0s,mb4.0,baz=293,slow=6.4,SNR=4.1						
YKA	Yellowknife Ar	62.17	31	P	P	03 55 33.2	-0.4
ARCES	ARCESS Array B	62.33	339	P	P	03 55 34.3	-0.4
	comp=Z,1.5nm,0.8s,mb4.1,baz=61,slow=8.5,SNR=7.1						
ASAR	Alice Springs	62.61	188	P	P	03 55 36.1	-0.4
	comp=Z,1.0nm,0.6s,mb4.0,baz=2.1,slow=5.7,SNR=10						
ASAR				pP	pP	03 55 54.8	-1.4
	comp=Z,0.4nm,0.4s,baz=3.0,slow=5.2,SNR=3.8						
JOF	Joensuu	64.40	332	ep	P	03 55 47.0	-1.4
FINES	FINESS Array B	67.25	332	P	P	03 56 06.3	-0.4
	comp=Z,1.1nm,0.6s,mb3.9,baz=28,slow=8.6,SNR=6.2						
FINES				pP	pP	03 56 24.5	-2.0
	comp=Z,1.0nm,0.4s,baz=37,slow=9.6,SNR=2.7						
EDM	Edmonton	67.85	39	eP	P	03 56 09.5	-0.9
NEW	Newport	68.75	45	eP	P	03 56 16.2	+0.2
NEW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NEW	Newport	68.75	45	eP	P	03 56 16.2	+0.2
	comp=Z,1.6nm,0.7s,mb4.0						
WVOR	Wild Horse Val	71.24	50	eP	P	03 56 32.2	+0.9
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
WVOR	Wild Horse Val	71.24	50	eP	P	03 56 32.2	+0.9
	comp=Z,5.0nm,1.1s,mb4.3						
NB2	NORSAR Subarra	72.54	337	P	P	03 56 38.4	-0.7
	comp=Z,0.8nm,0.5s,mb3.8,baz=36,slow=6.5						
NOA	NORSAR Array B	72.54	337	P	P	03 56 38.6	-0.5
	comp=Z,1.5nm,0.8s,mb3.9,baz=38,slow=6.0,SNR=5.6						
NOA				pP	pP	03 56 59.0	-0.2
	comp=Z,1.1nm,0.7s,baz=39,slow=6.2,SNR=3.8						
HRY	Holter Researc	72.55	44	eP	P	03 56 39.6	+0.4
CMB	Columbia Colle	72.72	55	eP	P	03 56 40.6	+0.4
CMB				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.3						
CMB	Columbia Colle	72.72	55	eP	P	03 56 40.6	+0.4
	comp=Z,6.0nm,1.3s,mb4.3						
AKASG	Malin Array Be	72.92	322	P	P	03 56 41.0	-0.4
	comp=Z,0.6nm,0.3s,mb3.9,baz=44,slow=6.1,SNR=5.1						
AKASG	Malin Array Be	72.92	322	P	P	03 56 41.0	-0.4
DLMT	Dillon	72.97	45	eP	P	03 56 42.3	+0.7
	comp=Z,7.9nm,0.9s,mb4.5						
HLID	Hailey	73.05	48	eP	P	03 56 42.8	+0.7
	comp=Z,3.7nm,1.1s,mb4.1						
BOZ	Bozeman (W)	73.33	45	eP	P	03 56 44.2	+0.5
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
BOZ	Bozeman (W)	73.33	45	eP	P	03 56 44.2	+0.4
	comp=Z,5.5nm,0.7s,mb4.5						
GCMT	Greycliff	74.30	43	eP	P	03 56 49.9	+0.5
IMW	Indian Meadow	74.81	46	eP	P	03 56 56.6	+4.2
	comp=Z,6.4nm,0.9s,mb4.3						
RRI2	Red Ridge	74.95	46	eP	P	03 56 54.5	+1.3
	comp=Z,12nm,1.3s,mb4.5						
MOOW	Moose Ponds	75.01	46	eP	P	03 56 55.0	+1.4
	comp=Z,3.4nm,1.1s,mb4.0						
TPAW	Teton Pass	75.06	46	eP	P	03 56 55.2	+1.4
	comp=Z,1.7nm,0.7s,mb3.9						
LOHW	Long Hollow	75.18	46	eP	P	03 56 55.8	+1.3
	comp=Z,1.9nm,0.8s,mb3.9						
REDW	Red Top Meadow	75.20	46	eP	P	03 56 55.8	+1.2
	comp=Z,5.3nm,1.3s,mb4.1						
HWUT	Hardware Ranch	75.91	48	eP	P	03 56 59.5	+0.8
	comp=Z,6.6nm,1.0s,mb4.3						
DUG	Dugway	76.08	49	eP	P	03 57 00.6	+0.9
DUG				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
DUG	Dugway	76.08	49	eP	P	03 57 00.6	+1.0
	comp=Z,3.6nm,0.6s,mb4.3						
BW06	Boulder Array	76.31	46	eP	P	03 57 01.1	+0.1
	comp=Z,2.0nm,0.6s,mb4.0						
PDAR	Pinedale Array	76.31	46	P	P	03 57 01.4	+0.5
	comp=Z,3.1nm,0.6s,mb4.2,baz=284,slow=1.9,SNR=39						
PDAR				pP	pP	03 57 22.5	+1.3
	comp=Z,0.7nm,0.6s,baz=222,slow=2.0,SNR=2.5						
CCUT	Cedar City	77.42	52	eP	P	03 57 08.3	+1.1
BRTR	Keskin Array B	77.72	311	pP	pP	03 57 28.9	-0.3
	comp=Z,0.6nm,0.6s,baz=56,slow=5.5,SNR=3.6						
SRU	San Rafael	78.13	49	eP	P	03 57 11.7	+0.6
SRU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
SRU	San Rafael	78.13	49	eP	P	03 57 11.7	+0.6
	comp=Z,8.1nm,0.8s,mb4.5						
RSSD	Black Hills	78.39	42	eP	P	03 57 12.2	-0.4
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
RSSD	Black Hills	78.39	42	eP	P	03 57 12.2	-0.4
	comp=Z,2.5nm,0.4s,mb4.3						
PV10	Paradox Valley	79.49	49	eP	P	03 57 19.6	+1.1
PV01	Paradox Valley	79.92	49	eP	P	03 57 21.7	+0.8
SMCO	Snowmass	80.15	47	eP	P	03 57 23.0	+0.9
	comp=Z,3.8nm,1.1s,mb4.1						
GERES	GERESS Array B	81.22	328	pP	pP	03 57 49.2	+0.9
	comp=Z,0.1nm,0.3s,baz=35,slow=4.9,SNR=3.9						
MNTX	Cornudas Mount	86.21	52	eP	P	03 57 53.6	+0.3
	comp=Z,1.3nm,0.8s,mb3.9						
WMOK	Wichita Mounta	87.92	46	eP	P	03 58 01.2	-0.4
WMOK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
WMOK	Wichita Mounta	87.92	46	eP	P	03 58 01.1	-0.5
	comp=Z,1.1nm,0.8s,mb3.9						
LPAZ	La Paz	145.64	57	PKPbc	PKPbc	04 04 51.0	+0.8
	comp=Z,4.0nm,0.8s,baz=0.7,slow=4.0,SNR=18						
LPAZ				pPKPbc	pPKPbc	04 05 13.6	+2.0
	comp=Z,1.5nm,0.6s,baz=356,slow=5.2,SNR=3.6						
LPAZ	La Paz	145.64	57	PKP2	PKPab	04 04 51.0	+0.4
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LPAZ	La Paz	145.64	57	ePKPbc	PKPbc	04 04 50.7	+0.5
CPUP	Villa Florida	159.82	57	PKPab	PKPab	04 05 49.6	-0.2
	comp=Z,0.4nm,0.5s,baz=315,slow=7.1,SNR=3.5						

LDG 17 03:46:51.0±1.3, 4426N×1271E, h10km, Ml2.8/6, Error ellipse: s-maj=20.1km s-min=10.0km az=98.0
ISCJB 17 03:46:55.7±0.4, 4325N±002×1340E±003, h14km±3km, Error ellipse: s-maj=4.1km s-min=3.2km az=176.7
CSEM 17 03:46:55.5±0.1, 4325N×1338E, h10km, MD3.0/20, Error ellipse: s-maj=1.6km s-min=1.1km az=68.0
VIE 17 03:46:56.0±0.5, 4322N×1376E, h10km, mb2.4/4, ML2.4/5, Error ellipse: s-maj=9.2km s-min=3.1km az=100.0 130 km SE of San Marino
NEIC 17 03:46:56.0, 4326N×1338E, h5km, ML2.6(ROM), ML2.8(LDG), After ROM.
NEIC Felt [IV] at Macerata.
ROM 17 03:46:56.0±0.2, 4326N×1338E, h5km, Md3.0/20, Ml2.6/10, Error ellipse: s-maj=2.6km s-min=1.9km az=116.0
ISC 17 03:46:56.5±0.4, 4324N±002×1341E±003, h10km±3km, n44, σ1s14/73, 8C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CING	Cingoli	0.20	310	Pg	Pg	03 46 59.9	-0.9
CING				Sg	Sg	03 47 03.3	-0.4
	1μm,0.4s						
AOI	Ancona	0.34	25	Pg	Pg	03 47 03.2	0.0
AOI				Sg	Sg	03 47 08.9	+1.2
SNTG	Esanatoglia	0.34	272	⇑iPg	Pg	03 47 02.7	-0.6
SNTG				Sg	Sg	03 47 08.3	+0.4
	211nm,0.4s						
ASS	Assisi	0.58	252	Pg	Pg	03 47 07.4	-0.4
ASS				Sg	Sg	03 47 16.5	+1.0
	11nm,0.3s						
TERO	Teramo	0.64	167	Pg	Pg	03 47 09.2	+0.3
TERO				Sg	Sg	03 47 20.4	+3.2
	250nm,0.4s						
FSSB	Fossombrone	0.64	314	Pg	Pg	03 47 07.9	-1.0
FSSB				Sg	Sg	03 47 18.3	+0.9
	163nm,0.3s						
PESA	Pesaro	0.81	329	Pg	Pg	03 47 11.7	-0.4
	170nm,0.2s						
AQU	L'Aquila	0.89	180	ePg	Pg	03 47 13.0	-0.6
AQU				eSn	Sn	03 47 27.5	-0.6
AQU	L'Aquila	0.89	180	Pg	Pg	03 47 13.4	-0.3
	71nm,0.4s						
AQU				eSn	Sn	03 47 27.5	-0.6
BADI	Badiali	0.89	288	Pg	Pg	03 47 12.5	-1.2
BADI				Sg	Sg	03 47 26.0	+0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	147nm,0.4s						
FAGN	Fagnano	0.99	172	Pg	Pg	03 47 15.2	-0.3
	292nm,0.5s						
FIAM	Fiamignano	1.00	193	Pg	Pg	03 47 14.8	-0.9
	135nm,0.7s						
MNS	Montasola	1.01	212	Pg	Pg	03 47 15.1	-0.9
	177nm,0.7s						
CRE	Caprese Michel	1.13	290	Pg	Pg	03 47 18.0	-0.2
	42nm,0.6s						
INTR	Introdacqua	1.28	163	Pg	Pg	03 47 20.5	-0.7
	122nm,0.7s						
SFI	Santa Sofia	1.31	301	Pg	Pg	03 47 21.6	-0.1
	25nm,0.4s						
CERT	Cerreto	1.33	194	Pg	Pg	03 47 22.0	-0.1
	78nm,0.5s						
VVLD	Villa Vallelon	1.38	173	Pg	Pg	03 47 24.0	+1.0
	96nm,0.7s						
CSNT	Castellina Chi	1.56	279	Pg	Pg	03 47 25.8	-0.7
	37nm,0.5s						
SDI	San Donato	1.56	169	Pg	Pg	03 47 27.3	+0.8
	23nm,0.6s						
NVLJ	Novalja	1.69	38	*i* Pn	Pn	03 47 25.7	-0.4
NVLJ				*i* Sn	Sn	03 47 47.2	-0.6
NVLJ	Novalja	1.69	38	*i* Pn	Pn	03 47 25.6	-0.5
NVLJ				*i* Sn	Sn	03 47 47.2	-0.6
SEI	Scarperia	1.70	299	Pg	Pg	03 47 28.1	-1.0
	90nm,0.4s						
PGF	Pioggiola	3.31	259	*e*Pg	Pn	03 47 49.9	+1.5
PGF				*e*Sg	Sn	03 48 31.0	+3.1
	73nm,1.4s						
OBKA	Obir	3.36	14	⇑*i*Pn	Pn	03 47 49.8	+0.7
OBKA				⇑*i*Sn	Sn	03 48 28.7	-0.4
OBKA				⇑*i*Sg	Sg	03 48 47.6	+3.0
	14nm,0.7s						
OBKA	Obir	3.36	14	Pn	Pn	03 47 49.8	+0.7
OBKA				Sn	Sn	03 48 28.7	-0.4
KBA	Koelnbreinsper	3.83	359	⇑*i*Pn	Pn	03 47 56.6	+1.0
KBA				⇓*i*Sn	Sn	03 48 40.5	-0.2
SQTA	Sankt Quirin	4.27	339	⇓*i*Pn	Pn	03 48 03.8	+2.2
SQTA				⇑*i*Sn	Sn	03 48 55.3	+3.8
DAVA	Damuels	4.75	330	⇑*i*Pn	Pn	03 48 10.5	+2.4
DAVA				⇓*i*Sn	Sn	03 49 08.0	+4.7
FRF	La Foret Royal	4.94	276	*e*Pg	Pn	03 48 13.6	+2.8
FRF				*e*Sg	Sn	03 49 08.1	+0.2
CONA	Conrad Observa	4.99	19	⇑*i*Pn	Pn	03 48 09.5	-2.0
CONA				⇓*i*Sn	Sn	03 49 08.3	-0.9
MBDF	Montbardon	5.01	289	*e*Pg	Pn	03 48 09.8	-2.0
LPG	La Plagne	5.28	298	*e*Pg	Pn	03 48 14.0	-1.4
LPG				*e*Sg	Sn	03 49 12.5	-3.8
	2.6nm,0.4s						
LPG	La Plagne	5.28	298	*e*Pg	Pn	03 48 14.0	-1.4
LPG				*e*Sg	Sn	03 49 12.5	-3.8
	1.3nm,0.4s						
LPL	La Plagne	5.30	298	*e*Pg	Pn	03 48 14.4	-1.3
LPL				*e*Sg	Sn	03 49 11.6	-5.2
	2.2nm,0.4s						
ORIF	Oris-en-Rattie	5.68	290	*e*Pg	Pn	03 48 22.7	+1.8
SMRF	Simiane la Rot	5.74	280	*e*Pg	Pn	03 48 24.2	+2.5
HINF	Hinteralfeld	6.49	317	*e*Pg	Pn	03 48 31.9	-0.2
HINF				*e*Sg	Sn	03 49 39.8	-6.3
	1.3nm,0.2s						
HINF	Hinteralfeld	6.49	317	*e*Pg	Pn	03 48 31.9	-0.2
HINF				*e*Sg	Sn	03 49 39.8	-6.3
	0.6nm,0.2s						
VIVF	Saint-Julien-l	6.50	287	*e*Pg	Pn	03 48 36.7	+4.5
CDF	Champ du Feu	6.71	322	*e*Pg	Pn	03 48 35.1	0.0
CDF				*e*Sg	Sn	03 49 45.1	-6.5
	2.1nm,0.5s						
CDF	Champ du Feu	6.71	322	*e*Pg	Pn	03 48 35.1	0.0
CDF				*e*Sg	Sn	03 49 45.1	-6.5
	1.0nm,0.5s						
HAU	Haudompre	6.87	316	*e*Pg	Pn	03 48 36.7	-0.6
HAU				*e*Sg	Sn	03 49 49.6	-5.9
	5.0nm,0.5s						
HAU	Haudompre	6.87	316	*e*Pg	Pn	03 48 36.7	-0.6
HAU				*e*Sg	Sn	03 49 49.6	-5.9
	2.5nm,0.5s						

*ISCJB **17** 04:04:28.8±0.8, 7.7S±0.1×157.95E±0.09, h56km, mb3.6/8, Error ellipse: s-maj=18.5km s-min=9.1km az=69.6*
*IDC **17** 04:04:29.9±0.9, 7.58S×158.06E, h54km±7km, mb3.4/6, mb1 3.7/7, mb1mx3.6/13, mbtmp3.8/7, Error ellipse: s-maj=21.7km s-min=9.6km az=41.0*
*NEIC **17** 04:04:31.0±0.7, 7.67S×158.05E, mb3.9/2, Error ellipse: s-maj=15.6km s-min=11.7km az=223.0*
ISC 17 04:04:30.5±0.8**, 7.6S**±0.1×**158.03E**±0.09**, h58km, h58**km±3.9km**:pP-P, n10,** σ**0.82**/11**, mb3.6**/8**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.62	134	P	Pn	04 05 09.7	-0.7
	352nm,0.3s,baz=270,slow=1.4,SNR=69						
HNR				S	Sn	04 05 41.3	+0.4
	428nm,0.3s,baz=274,slow=19,SNR=8.5						
DZM	Mont Dzumac	16.50	151	P	Pn	04 08 19.2	+1.1
	0.3nm,0.3s,baz=140,slow=19,SNR=2.6						
WRAB	Tennant Creek	26.01	240	*e*P	P	04 09 57.9	-0.1
	1.3nm,0.6s,mb3.6						
WRAB				*e*pP	pP	04 10 13.2	+1.0
WRA	Warramunga Arr	26.02	240	P	P	04 09 58.3	+0.2
	1.1nm,0.8s,mb3.4,baz=65,slow=9.5,SNR=8.7						
WRA				pP	pP	04 10 13.5	+1.2
	2.8nm,0.6s,baz=65,slow=9.5,SNR=10.0						
ASAR	Alice Springs	28.11	233	P	P	04 10 17.1	+0.3
	0.2nm,0.4s,mb3.1,baz=63,slow=9.3,SNR=3.7						
ASAR				pP	pP	04 10 32.0	+0.9
	0.8nm,0.8s,baz=60,slow=8.6,SNR=3.2						
STKA	Stephens Creek	28.58	210	P	P	04 10 20.1	-0.9
	1.3nm,0.6s,mb3.9,baz=43,slow=14,SNR=3.2						
STKA				pP	pP	04 10 35.5	+0.2
	2.9nm,0.9s,baz=52,slow=12,SNR=1.9						
VNDA	Vanda	69.90	179	P	P	04 15 34.3	-1.1
	0.5nm,0.6s,mb3.6,baz=325,slow=9.4,SNR=5.3						
SONM	Songino Array	71.50	326	P	P	04 15 46.0	+0.8
	0.3nm,0.6s,mb3.4,baz=108,slow=1.8,SNR=2.9						
SONM				pP	pP	04 15 59.2	-1.8
	0.9nm,0.7s,baz=140,slow=5.3,SNR=6.3						
COLA	College	82.59	20	*e*P	P	04 16 46.1	-1.3
	0.8nm,0.4s,mb4.1						
MKAR	Makanchi Array	85.87	318	P	P	04 17 05.0	+1.0
	0.5nm,0.7s,mb3.8,baz=72,slow=4.0,SNR=3.8						
MKAR				pP	pP	04 17 18.4	-1.9
	0.7nm,0.7s,baz=92,slow=8.7,SNR=5.3						

*NEIC **17** 04:17:50.9, 35.95N×27.15E, h22km, MD3.8(ATH), After ATH.*
*ATH **17** 04:17:50.9, 35.95N×27.15E, h22km±4km, MD3.8/4*
*ISCJB **17** 04:17:52.5±0.3, 35.77N±0.02×27.23E±0.04, h41km±8km, Error ellipse: s-maj=5.4km s-min=3.9km az=18.0*
*HLW **17** 04:17:52.4, 35.75N×27.30E, h5km, Mb3.6*
*CSEM **17** 04:17:52.4±0.1, 35.77N×27.24E, h40km, MD3.8, Error ellipse: s-maj=2.0km s-min=1.6km az=46.0*
ISC 17 04:17:52.4±0.6**, 35.86N**±0.02×**27.19E**±0.03**, h16**km±4km**, n43,** σ**1.06**/58**, 9C-6D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.31	184	*e*PB	Pg	04 17 59.5	+0.5
KARP				*e*SB	Sg	04 18 05.4	+1.9
ARG	Arkhangelos	0.84	65	*e*PN	Pg	04 18 07.1	-1.6
ARG				*e*SN	Sg	04 18 19.2	-0.5
DAT	Datca	0.92	20	PG	Pg	04 18 09.0	-1.3
DAT				SG	Sg	04 18 21.4	-1.0
BODT	Bodrum	1.20	5	PN	Pn	04 18 13.3	-1.2
BDRM	Kayabasi	1.22	10	*i* P	Pn	04 18 12.8	-1.9
BDRM				*i* S	Sb	04 18 32.1	+1.6
NPS	Neapolis	1.42	246	*e*PN	Pn	04 18 17.8	+0.4
NPS				*e*SN	Sn	04 18 36.1	+0.4
DALT	Dalyan (Mudla)	1.48	52	PN	Pn	04 18 18.9	+0.6
YER	Yerkesik	1.55	34	PN	Pn	04 18 18.3	-0.9
APE	Apeiranthos	1.80	313	*e*PN	Pn	04 18 22.1	-0.6
APE				*e*SN	Sn	04 18 43.5	-1.7
SMG	Samos	1.87	351	*e*PN	Pn	04 18 22.3	-1.3
AYDN	Tasoluk	1.88	17	*i* P	Pn	04 18 25.3	+1.5
AYDN				*i* S	Sn	04 18 48.9	+1.8
AKAS	Kas	1.99	79	*i* P	Pn	04 18 26.3	+0.9
AKAS				*i* S	Sg	04 18 57.6	+1.1
GOLH	Golhisar	2.35	54	*i* P	Pn	04 18 31.8	+1.5
GOLH				*i* S	Sb	04 19 04.7	+1.6
DNZL	Cakiroluk	2.36	39	*i* P	Pn	04 18 31.6	+1.2
DNZL				*i* S	Sn	04 19 02.6	+3.7
ELL	Elmali	2.37	67	*e*PN	Pn	04 18 32.2	+1.7
DENT	Denizli	2.40	38	*e*PN	Pn	04 18 30.7	-0.2
VAM	Vamos	2.48	260	*e*PB	Pn	04 18 32.9	+0.9
AKS	Akhisar	3.05	9	*e*PN	Pn	04 18 39.5	-0.4
BCK	Bucak	3.17	59	*e*PN	Pn	04 18 43.2	+1.7
ISP	Isparta	3.32	52	*e*PN	Pn	04 18 44.9	+1.3
TKTP	Tekketepe	3.32	48	*i* P	Pb	04 18 49.7	-1.2
TKTP				*i* S	Sb	04 19 29.9	-1.0
VLI	Veliai	3.54	285	*e*PN	Pn	04 18 47.3	+0.7
KIZT	Kizilcal	4.80	50	*e*P	Pn	04 19 05.0	+1.1
CSS	Prodhromos	5.09	98	*e*Pn	Pn	04 19 05.8	-2.2
	9.0nm,0.4s						
CSS				*e*Sn	Sn	04 20 04.5	-1.9
CSS	Prodhromos	5.09	98	*e*Pn	Pn	04 19 05.8	-2.2
	9.0nm,0.4s						
CSS				*e*Sn	Sn	04 20 04.6	-1.9
SWA1		6.70	191	⇑P	Pn	04 19 30.0	0.0
SWA1				S	Sn	04 20 41.5	-4.5
SWA2		6.76	193	⇓P	Pn	04 19 30.8	-0.1
HHAG	Hagoal	7.19	144	⇑P	Pn	04 19 36.6	-0.2
HSAF	As Saff	7.23	148	⇑P	Pn	04 19 36.7	-0.6
AMAG	Maghara	7.24	134	⇑P	Pn	04 19 37.1	-0.4
GLL	Jalalah	7.33	147	⇑P	Pn	04 19 38.2	-0.5
GLL	Jalalah	7.33	147	P	Pn	04 19 38.2	-0.5
SUZ		7.65	140	⇓P	Pn	04 19 42.9	-0.2
ZNM		8.05	142	⇓P	Pn	04 19 48.2	-0.4
HNKL	Nakhl	8.22	134	⇑P	Pn	04 19 50.5	-0.4
HFRF	Wahat Farafira	8.74	173	⇓P	Pn	04 19 58.2	+0.2
GRB	Gharib	8.93	146	P	Pn	04 20 00.6	-0.1
HBST	Basata	9.19	134	⇑P	Pn	04 20 03.9	-0.2
HBST				S	Sn	04 21 40.2	-6.9
ASUT		9.22	155	P	Pn	04 20 04.4	-0.3
TR2		9.28	142	⇑P	Pn	04 20 05.3	-0.2
HKAT	Jabal Katrina	9.31	140	⇓P	Pn	04 20 05.9	0.0
HDHB	Dhahab	9.49	136	⇓P	Pn	04 20 08.3	-0.1
HHRG	Al Ghardaqah	10.19	146	⇑P	Pn	04 20 17.4	-0.5

*SOF **17** 04:27:30.1, 40.56N×23.27E, h10km, MD3.5*
*CSEM **17** 04:27:30.7±0.1, 40.58N×23.19E, h10km, ML3.6, Error ellipse: s-maj=1.8km s-min=1.6km az=24.0*
*ATH **17** 04:27:30.1, 40.57N×23.18E, h24km, MD3.9/6, ML3.9*
*ISCJB **17** 04:27:30.4±0.3, 40.54N±0.01×23.19E±0.02, h9km±2km, Error ellipse: s-maj=2.5km s-min=2.4km az=85.4*
*THE **17** 04:27:31.2, 40.55N×23.22E, h7km, ML3.6*
*NEIC **17** 04:27:31.2, 40.55N×23.22E, h7km, ML3.5(THE), ML3.9(ATH), After THE.*
ISC 17 04:27:31.1±0.3**, 40.53N**±0.01×**23.18E**±0.02**, h9**km±2km**, n85,** σ**0.94**/122**, 10C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HORT	Hortiatis	0.09	315	*e*Pg	Pg	04 27 34.1	+0.7
HORT				*e*Sg	Sg	04 27 36.0	+0.9
HORT	Hortiatis	0.09	315	*e*Pg	Pg	04 27 34.2	+0.7
HORT				*e*Sg	Sg	04 27 36.0	+0.9
THE	Thessaloniki	0.19	301	*e*Pg	Pg	04 27 35.5	+0.3
THE				*e*Sg	Sg	04 27 38.1	+0.2
PLG	Polygyros	0.26	128	⇓*i*PB	Pg	04 27 36.6	+0.3
PLG				*e*SB	Sg	04 27 40.9	+1.2
SOH	Sokhos	0.32	24	*e*Pg	Pg	04 27 37.6	+0.2
SOH				*e*Sg	Sg	04 27 42.0	+0.4
OUR	Ouranopolis	0.64	108	*e*Pg	Pg	04 27 43.4	-0.2
OUR	Ouranopolis	0.64	108	*e*Pg	Pg	04 27 43.3	-0.2
KNT	Kendrikon	0.67	341	*e*Pg	Pg	04 27 43.6	-0.3
LIT	Litokhoron	0.68	231	*e*Pg	Pg	04 27 44.6	+0.3
LIT				*e*Sg	Sg	04 27 55.0	+1.8
PAIG	Paliouri	0.71	148	*e*Pg	Pg	04 27 44.5	-0.4
PAIG				*e*Sg	Sg	04 27 54.5	+0.3
GRG	Griva	0.73	306	*e*Pg	Pg	04 27 44.1	-1.1
GRG				*e*Sg	Sg	04 27 54.8	+0.1
VAY	Valandovo	0.91	330	*e*Pg	Pg	04 27 47.8	-0.9
VAY				*e*Sg	Sg	04 28 00.3	-0.3
VAY	Valandovo	0.91	330	*e*Pg	Pg	04 27 47.7	-1.0
VAY				*e*Sg	Sg	04 27 59.3	-1.3
KZN	Kozani	1.10	259	*e*PN	Pn	04 27 51.3	-1.5
KZN				*e*SN	Sn	04 28 07.1	-1.0
MMB	Musomiste	1.13	21	*e*Pg	Pg	04 27 51.1	-1.8
MMB				*e*Sg	Sg	04 28 07.2	-0.4
MMB	Musomiste	1.13	21	*i* Pg	Pg	04 27 51.0	-1.9
XOR	Xorichti	1.17	180	*e*Pg	Pg	04 27 52.8	-0.7
XOR				*e*Sg	Sg	04 28 08.6	-0.1
NEO	Neokhori	1.23	179	*e*PN	Pn	04 27 53.8	-0.7
NEO				*e*SN	Sn	04 28 10.6	-0.5
KKB	Krupnik	1.33	357	P	Pn	04 27 55.4	-0.6
STIP	Stip	1.38	327	*e*Pg	Pg	04 27 57.8	+0.1
STIP				*e*Sg	Sg	04 28 16.3	+0.6
STIP	Stip	1.38	327	*e*Pg	Pg	04 27 57.7	0.0
STIP				*e*Sg	Sg	04 28 15.9	+0.3
FNA	Florina	1.40	281	*e*Pg	Pg	04 27 56.7	-1.2
	comp=Z,11nm,0.3s						
FNA				*e*Sg	Sg	04 28 16.2	+0.1
AOS	Alonnisos	1.46	158	*e*Pg	Pn	04 27 56.7	-1.0
BIA	Bitola	1.49	290	*e*Pg	Pn	04 27 58.0	-0.1
BIA				*e*Sg	Sg	04 28 18.3	-0.9
BIA	Bitola	1.49	290	*e*Pg	Pn	04 27 58.0	-0.2
BIA				*e*Sg	Sg	04 28 18.4	-0.7
BIA	Bitola	1.49	290	*e*Pg	Pn	04 27 58.0	-0.2
BIA				*e*Sg	Sg	04 28 18.4	-0.8
LOS	Limnos	1.57	112	*e*Pg	Pn	04 27 58.2	-1.0
	comp=Z,24nm,0.3s						
LOS				*e*Sg	Sg	04 28 19.7	-1.9
RZN	Rozhen	1.64	45	P	Pn	04 27 59.8	-0.3
AGG	Agios Georgios	1.65	204	*e*Pb	Pb	04 28 00.1	-1.6
	comp=Z,7.3nm,1.0s						
AGG				*e*Sb	Sb	04 28 21.4	-1.2
LIA	Limnos Island	1.66	112	*e*PN	Pn	04 27 59.6	-0.8
LIA				*e*SN	Sn	04 28 22.0	+0.2
MEV	Metsovon	1.67	244	*e*Pb	Pb	04 28 01.2	-0.9
	comp=Z,7.6nm,0.5s						
MEV				*e*Sb	Sb	04 28 23.0	-0.3
LKR	Lokris	1.89	184	*e*PB	Pn	04 28 03.0	-0.5
RDO	Rodhopi	1.89	70	*e*PB	Pn	04 28 02.3	-1.3
RDO				*e*SN	Sn	04 28 27.0	-0.5
OHR	Ohrid	1.90	288	*e*Pb	Pn	04 28 03.9	+0.2
OHR	Ohrid	1.90	288	*e*Pg	Pn	04 28 04.4	+0.7
OHR				*e*Sg	Sn	04 28 29.1	+1.3
OHR	Ohrid	1.90	288	*e*Pg	Pn	04 28 04.3	+0.6
OHR				*e*Sg	Sn	04 28 29.1	+1.3
EVR	Evrytania	1.93	214	⇑*i*PN	Pn	04 28 03.9	-0.3
EVR				*e*SN	Sn	04 28 29.4	+0.8
PLD	Plovdiv	1.94	36	*e*Pb	Pn	04 28 04.1	-0.2
PLD				*e*Sb	Sn	04 28 28.7	-0.2
PLD	Plovdiv	1.94	36	*e*P	Pb	04 28 07.1	+0.4
SKO	Skopje	1.95	318	*e*Pn	Pg	04 28 09.0	+0.5
JAN	Janina	1.99	245	*e*PN	Pn	04 28 04.7	-0.3
JAN				*e*SN	Sn	04 28 30.2	+0.1
KDZ	Kurdzhali	2.02	56	P	Pn	04 28 04.0	-1.4
VTS	Vitosha	2.06	1	*e*Pn	Pn	04 28 06.2	+0.3
VTS				*e*Sn	Sn	04 28 30.6	-1.1
VTS	Vitosha	2.06	1	P	Pn	04 28 06.0	+0.1
VTS				Pg	Pg	04 28 11.0	+0.4
VTS	Vitosha	2.06	1	⇑*i*P	Pn	04 28 06.2	+0.3
VTS	Vitosha	2.06	1	Pg	Pg	04 28 11.0	+0.4
VTS				*e*Sn	Sn	04 28 30.6	-1.1
GADA	Gvkgeada	2.10	98	PN	Pn	04 28 07.3	+0.8
ALN	Alexandroupoli	2.21	80	*e*Pn	Pn	04 28 06.9	-1.0
	comp=Z,3.6nm,0.5s						
ALN				*e*Sn	Sn	04 28 36.0	+0.6
ENEZ	Enez	2.27	84	PN	Pn	04 28 10.0	+1.2
DIM	Dimitrovgrad	2.33	49	P	Pn	04 28 12.5	+2.8
IGT	Igoumenitsa	2.41	246	*e*Pn	Pn	04 28 13.5	+2.8
EZN	Ezine	2.51	105	*e*PN	Pn	04 28 11.3	-0.8
ATH	Athens Observa	2.59	171	*e*PB	Pn	04 28 14.0	+0.8
ATH				*e*SN	Sn	04 28 44.2	-0.6
TIR	Tirane	2.64	289	*e*Pn	Pn	04 28 14.8	+0.8
LKD	Levkas	2.67	228	*e*Pn	Pn	04 28 16.5	+2.1
PRK	Paraskevi	2.70	117	*e*PN	Pn	04 28 15.2	+0.4
KEK	Kerkira	2.72	254	*e*PN	Pn	04 28 14.9	-0.1
LPK	Lapseki	2.73	92	*e*PN	Pn	04 28 15.4	+0.2
RLS	Riolos of Patr	2.81	209	*e*PN	Pn	04 28 16.0	-0.2
EDRB	Edirne	2.99	63	*e*PN	Pn	04 28 22.2	+3.5
CANB	Canakkale	3.01	99	*e*PN	Pn	04 28 20.4	+1.4
RKY	Sarkoy-Tekirda	3.04	86	*e*PN	Pn	04 28 20.8	+1.3
CHOS	Chios island	3.09	133	*e*Pn	Pn	04 28 20.6	+0.6
VLS	Valsamata	3.10	221	*e*PN	Pn	04 28 20.5	+0.3
PVL	Pavlikeni	3.12	30	P	Pn	04 28 20.0	-0.6
MFT	Murefte	3.13	84	*e*PN	Pn	04 28 23.0	+2.4
JMB	Yambol	3.20	52	*e*Pn	Pn	04 28 21.6	-0.1
JMB				*e*Sn	Sn	04 28 59.0	-0.9
JMB	Yambol	3.20	52	P	Pg	04 28 30.8	-1.7
JMB	Yambol	3.20	52	*e*Pn	Pn	04 28 21.5	-0.1
JMB				*e*Sn	Sn	04 28 59.0	-0.9
MRMT	Marmara Adasi	3.36	87	*e*PN	Pn	04 28 24.4	+0.6
ITM	Ithomi	3.49	197	*e*PN	Pn	04 28 26.0	+0.4
VLI	Veliai	3.81	183	*e*PN	Pn	04 28 30.3	+0.2
DIVS	Divcibare	4.28	327	*e*Pn	Pn	04 28 36.7	+0.3
YLV	Yalova	4.71	88	*e*P	Pn	04 28 44.3	+1.8
GZR	Gura Zlata	4.87	357	⇑*i*P	Pn	04 28 44.3	-0.2
GZR	Gura Zlata	4.87	357	⇑P	Pn	04 28 44.3	-0.3
VOIR		5.09	15	⇑*i*P	Pn	04 28 48.4	+0.8
VOIR		5.09	15	⇑P	Pn	04 28 48.4	+0.8
BZS	Buzias	5.21	348	⇓*i*P	Pn	04 28 48.5	-0.7
BZS	Buzias	5.21	348	⇓P	Pn	04 28 48.5	-0.7
MLR	Muntele Rosu	5.35	21	⇑*i*P	Pn	04 28 52.8	+1.6
MLR	Muntele Rosu	5.35	21	⇑P	Pn	04 28 52.8	+1.6
PLOR	Plostina	5.89	24	⇓*i*P	Pn	04 29 00.3	+1.7
PKSM	Moragy	6.57	331	⇑*i*P	Pn	04 29 08.2	+0.3
PKSM	Moragy	6.57	331	⇑P	Pn	04 29 08.2	+0.3

*NIED **17** 04:27:00, 38.30N×144.70E, h62km, Mw3.7 Best double couple: M₀4.63000×10¹⁴ NP1:φs285.00000°, δ46.00000°, λ101.00000°. NP2:φs89.00000°, δ45.00000°, λ78.00000°.*
JMA 17 04:27:59.4±0.2**, 38.26N**×**144.67E, h54km, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.49	290	P	Pn	04 28 38.6	+1.2
OFUJ				*e*S	Sn	04 29 07.8	+1.2
MIYJ	Miyakonagasawa	2.58	301	P	Pn	04 28 39.7	+1.0
MIYJ				S	Sn	04 29 09.8	+0.9
JIO	Ouri	2.62	275	P	Pn	04 28 40.6	+1.4
JIO				*e*S	Sn	04 29 10.7	+0.9
JMK	Ichinoseki	2.79	285	P	Pn	04 28 43.1	+1.5
JMK				S	Sn	04 29 15.7	+1.7
JCH	Churui	4.46	347	P	Pn	04 29 04.0	-0.5
JCH				*e*S	Sn	04 29 53.3	-1.8
JRY	Ryogami san	5.12	246	P	Pn	04 29 14.5	+1.0
JRY				S	Sn	04 30 10.3	-1.0
MAT	Matsushiro	5.42	254	P	Pn	04 29 20.2	+2.5
MAT				S	Sn	04 30 22.2	+3.5

*NEIC **17** 04:28:55.5, 17.77N×95.07W, h0km, MD3.8(MEX), After MEX.*
MEX 17 04:28:54.3±0.3**, 17.22N**×**94.94W, h111**km±6km**, MD3.8, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.14	157	*i* P	Pn	04 29 08.3	-1.3
CMIG				*i* S	Sn	04 29 19.4	-1.7
CMIG	Matias Romero	0.14	157	*i* P	Pn	04 29 08.1	-1.5
CMIG				*i* S	Sn	04 29 18.8	-2.2
OXX	Oaxaca	1.71	266	*e*P	Pn	04 29 23.0	-0.7
OXX				*i* S	Sn	04 29 45.0	-1.0
VHO	Vista Hermosa	1.72	265	*i* P	Pn	04 29 22.9	-0.9
VHO				*i* S	Sn	04 29 45.0	-1.3
VHO	Vista Hermosa	1.72	265	*i* P	Pn	04 29 22.9	-0.9
VHO				*i* S	Sn	04 29 44.6	-1.6
UTMO	Huajuapan	2.80	283	*i* P	Pn	04 29 37.3	-0.3
UTMO				*e*S	Sn	04 30 09.6	-1.4

*IDC **17** 04:28:50.0±1.0, 8.63S×108.67E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.8/18, mbtmp3.8/7, ML3.2/1, Error ellipse: s-maj=38.5km s-min=20.4km az=64.0*
*NEIC **17** 04:28:51.5±0.7, 8.64S×108.63E, h10km, mb4.3/4, Error ellipse: s-maj=29.3km s-min=12.8km az=57.0*
*ISCJB **17** 04:28:52.9±0.7, 8.6S±0.1×108.7E±0.2, h33km, mb3.8/9, Error ellipse: s-maj=30.5km s-min=13.3km az=111.1*
ISC 17 04:28:55.2±0.7**, 8.7S**±0.1×**108.6E**±0.2**, h35km, n11,** σ**0.85**/12**, mb3.8**/9**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	Marble Bar	16.39	140	*e*P	Pn	04 32 50.4	+7.9
	31nm,1.3s						
FITZ	Fitzroy Crossi	19.00	121	P	Pn	04 33 14.9	+0.3
	0.1nm,0.3s,baz=270,slow=11,SNR=4.2						
FITZ				S	S	04 36 31.4	-16
	0.1nm,0.3s,baz=268,slow=23,SNR=3.0						
WRA	Warramunga Arr	27.26	117	P	P	04 34 35.6	-0.5
	0.3nm,0.6s,mb3.0,baz=290,slow=10,SNR=3.7						
ASAR	Alice Springs	28.41	125	P	P	04 34 45.8	-0.5
	0.1nm,0.3s,mb2.9,baz=303,slow=8.7,SNR=2.8						
SONM	Songino Array	56.28	358	P	P	04 38 33.5	+1.3
	0.8nm,0.5s,mb4.0,baz=179,slow=8.4,SNR=7.4						
ULN	Ulaanbaatar	56.30	359	*e*P	P	04 38 33.5	+1.2
	1.3nm,0.6s,mb4.1						
MKAR	Makanchi Array	60.00	339	P	P	04 38 57.2	-0.9
	3.1nm,0.6s,mb4.5,baz=141,slow=7.6,SNR=28						
MAW	Mawson	66.26	197	P	P	04 39 40.4	+0.6
	1.4nm,0.6s,mb4.2,baz=40,slow=6.6,SNR=6.4						
CHKZ	Chkalovo	69.94	337	*e*P	P	04 40 01.4	-1.4
	1.7nm,0.6s,mb4.2						
ZRNK	Zerenda	70.03	336	*e*P	P	04 40 03.0	-0.4
	1.3nm,0.6s,mb4.0						
VNDA	Vanda	74.05	170	P	P	04 40 27.6	+0.2
	0.4nm,0.7s,mb3.5,baz=315,slow=8.8,SNR=4.2						

MAN 17 04:56:22.2, 14.58N×**122.38E, h1km, mb2.3, ML3.9, MS3.7, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	0.68	174	⇑*e*P	Pg	04 56 34.9	-0.3
GQP				*i* S	Sg	04 56 50.1	+6.2
LQP	Lukban	0.94	240	*e*P	Pg	04 56 47.5	+7.3

*TIF **17** 04:57:52.7, 42.57N×45.75E, h6km±3km*
*CSEM **17** 04:57:59.0, 42.11N×43.84E, h9km, mb3.8, After OBN*
MOS 17 04:57:59.5±0.1**, 42.11N**×**43.84E, h9km, mb3.8**/1**, Error ellipse: s-maj=29.1km s-min=9.8km az=78.2, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.55	328	P	Pg	04 58 25.7	+15
ONI				S	Sg	04 58 48.4	+31
ZEI	Tsey	0.66	3	*i* Pg	Pg	04 58 13.5	+1.2
ZEI				*i* Sg	Sg	04 58 25.5	+4.6
TBLG	Delisi	0.77	119	P	Pg	04 58 14.9	+0.7
TBLG				S	Sg	04 58 31.4	+7.1
TBLG	Delisi	0.77	119	*e*Pg	Pg	04 58 14.9	+0.6
TBLG				*e*Sg	Sg	04 58 31.3	+7.0
LACR	Lac	0.79	25	*i* Pg	Pg	04 58 15.5	+0.8
LACR				*i* Sg	Sg	04 58 29.1	+4.1
MTA	Mtatsminda	0.82	120	P	Pg	04 58 14.8	-0.5
MTA				S	Sg	04 58 30.9	+5.0
KORR	Kora	0.99	10	*i* Pg	Pg	04 58 18.6	+0.1
KORR				*i* Sg	Sg	04 58 34.5	+3.1
VLKR	Vladikavkaz	1.12	33	*e*Pg	Pg	04 58 20.7	-0.3
VLKR				*e*Sg	Sg	04 58 38.1	+2.5
ARNR	Ardon	1.13	16	*i* Pg	Pg	04 58 20.9	-0.2
ARNR				*i* Sg	Sg	04 58 38.3	+2.5
SNJR	Sundja	1.20	36	*i* Pg	Pg	04 58 21.9	-0.6
SNJR				*i* Sg	Sg	04 58 40.1	+2.1
KMSR	Komsomolskaya	1.30	15	*e*Pg	Pg	04 58 23.6	-0.9
KMSR				*e*Sg	Sg	04 58 43.2	+1.8
DGRG	David-gareji	1.32	119	P	Pg	04 58 16.5	-8.3
DGRG				S	Sg	04 58 33.9	-8.1

*NIED **17** 05:00:00, 29.50N×142.60E, h35km, Mw3.8 Best double couple: M₀5.76000×10¹⁴ NP1:φs245.00000°, δ75.00000°, λ-116.00000°. NP2:φs127.00000°, δ30.00000°, λ-32.00000°.*
*IDC **17** 05:00:44.7±2.8, 29.74N×143.99E, h0km, mb3.7/5, mb1 3.9/7, mb1mx3.7/20, mbtmp3.8/7, ML3.9/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/40, Error ellipse: s-maj=88.9km s-min=22.8km az=79.0*
*NEIC **17** 05:00:52.0±7.0, 29.27N×142.20E, h11km±49km, mb4.0/2, Error ellipse: s-maj=111.7km s-min=17.6km az=73.0*

JMA **17** *05:00:52.6±0.2, 2952N×14255E, h42km, M4.1*
ISCJB **17** *05:00:53.2±0.9, 2952N±005×1424E±02, h33km, mb3.9/7, Error ellipse: s-maj=30.9km s-min=4.7km az=159.7*
ISC 17 05:00:55.2±0.9, **2950N**±005×**1425E**±02, **h35**km, **n24**, σ**0^{s}92**/29, **mb3.9**/7, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.41	186	Pn	Pn	05 01 35.1	+3.1
	14nm,0.3s,baz=99,slow=23,SNR=2.8						
CBIJ	Chichi jima	2.41	186	P	Pn	05 01 31.1	-0.9
JHHJ	Haha-jima-NKT	2.87	185	P	Pn	05 01 37.8	-0.6
JHHJ				eS	Sn	05 02 11.4	-0.3
JHJ2	Mitsune	4.25	329	P	Pn	05 01 57.5	+0.1
JHJ2				eS	Sn	05 02 45.1	-0.6
BSO1	Boso 1	5.29	347	P	Pn	05 02 11.7	0.0
BSO3	Boso 3	5.54	343	P	Pn	05 02 15.5	+0.4
BSO4	Boso 4	5.76	342	P	Pn	05 02 18.8	+0.7
JOD2	Odawara 2	6.41	335	P	Pn	05 02 28.0	+0.9
JHU	Hanno	6.87	338	P	Pn	05 02 34.2	+0.8
JHU				eS	Sn	05 03 49.9	-0.5
JRY	Ryogami san	7.15	336	P	Pn	05 02 38.0	+0.7
JRY				S	Sn	05 03 57.2	-0.1
JHO	Hitachi	7.26	348	P	Pn	05 02 37.9	-0.9
JHO				eS	Sn	05 03 56.7	-3.3
JAG	Ashikaga	7.35	341	P	Pn	05 02 39.0	-1.0
JAG				eS	Sn	05 03 59.3	-2.8
MJAR	Matsushiro Arr	7.87	334	Pn	Pn	05 02 48.0	+0.9
	3.0nm,0.3s,baz=138,slow=15,SNR=16						
MJAR				LR	LR	05 06 11.3	
	comp=Z,56nm,18.8s,baz=170,slow=39						
MAJO	Matsushiro	7.88	334	ePn	Pn	05 02 47.9	+0.7
	7.8nm,0.5s						
MAT	Matsushiro	7.88	334	P	Pn	05 02 47.8	+0.6
JMK	Ichinoseki	9.48	354	eS	Sn	05 04 48.3	-6.2
ASAJ	Asahikawa	14.59	0	LR	LR	05 10 06.4	
	comp=Z,34nm,19.0s,baz=172,slow=39						
SONM	Songino Array	33.19	314	P	P	05 07 29.1	+0.7
	0.6nm,0.7s,mb3.6,baz=111,slow=8.1,SNR=4.4						
MKAR	Makanchi Array	49.16	308	P	P	05 09 39.4	-0.2
	0.5nm,0.5s,mb3.8,baz=90,slow=8.9,SNR=4.5						
WRA	Warramunga Arr	49.77	190	P	P	05 09 42.7	-1.6
	0.3nm,0.3s,mb3.8,baz=16,slow=8.9,SNR=19						
CHKZ	Chkalovo	56.26	317	eP	P	05 10 32.3	+0.2
	1.5nm,0.8s,mb4.1						
BVAR	Borovoye Array	56.45	316	P	P	05 10 33.9	+0.5
	1.1nm,0.6s,mb4.0,baz=101,slow=7.8,SNR=5.3						
ZRNK	Zerenda	57.30	316	eP	P	05 10 38.8	-0.6
	0.8nm,0.6s,mb3.9						
BRTR	Keskin Array B	84.55	313	P	P	05 13 25.9	+1.2
	0.8nm,0.8s,mb3.9,baz=40,slow=2.5,SNR=4.2						

ISCJB **17** *05:07:57.1±0.9, 665S±0.1×1666E±05, h10km, mb4.1/7, MS4.0/1, Error ellipse: s-maj=32.4km s-min=13.8km az=151.4*
IDC **17** *05:07:57.0±0.9, 6633S×16726E, h0km, mb4.1/5, mb1 4.3/6, mb1mx4.1/11, mbtmp4.0/6, ML3.6/1, MS3.7/2, Ms1 3.7/2, ms1mx3.1/24, Error ellipse: s-maj=62.0km s-min=21.8km az=53.0*
NEIC **17** *05:07:58.4±0.6, 6641S×16699E, h10km, mb4.3/3, Error ellipse: s-maj=22.4km s-min=9.6km az=76.0*
ISC 17 05:07:58.4±0.8, **664S**±01×**1669E**±05, **h10**km, **n13**, σ**0^{s}43**/10, **mb4.1**/7, **MS4.0**/1, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	11.24	186	Pn	Pn	05 10 39.5	+0.4
	0.4nm,0.3s,baz=21,slow=15,SNR=41						
VNDA				LR	LR	05 14 40.3	
	comp=Z,146nm,18.8s,baz=344,slow=36						
SBA	Scott Base	11.48	180	ePn	Pn	05 10 41.8	-0.5
	6.6nm,0.7s						
QSPA	South Pole Qui	23.64	180	eP	P	05 13 10.3	+0.4
	14nm,1.3s,mb4.2						
STKA	Stephens Creek	37.77	324	LR	LR	05 29 03.0	
	comp=Z,241nm,19.0s,MS4.0,baz=205,slow=34						
SNAA	Sanae	41.98	185	eP	P	05 15 49.4	-0.2
	4.7nm,1.0s,mb4.1						
ASAR	Alice Springs	47.57	317	P	P	05 16 34.4	+0.2
	1.7nm,0.7s,mb4.2,baz=158,slow=8.1,SNR=13						
WRA	Warramunga Arr	51.00	319	P	P	05 17 00.1	-0.3
	1.4nm,0.6s,mb4.1,baz=163,slow=7.0,SNR=8.1						
PLCA	Paso Flores	64.49	135	P	P	05 18 35.4	+0.1
	1.4nm,0.7s,mb4.1,baz=250,slow=7.3,SNR=4.5						
PLCA	Paso Flores	64.49	135	eP	P	05 18 35.1	-0.1
	2.3nm,0.9s,mb4.2						
CPUP	Villa Florida	81.64	141	P	P	05 20 16.0	-0.7
	0.9nm,0.6s,mb3.9,baz=185,slow=5.7,SNR=4.5						
LPAZ	La Paz	88.06	128	P	P	05 20 49.6	+0.6
	0.5nm,0.5s,mb4.0,baz=259,slow=10,SNR=4.9						
KEST	Kesra	146.58	214	PKPbc	PKPbc	05 27 41.2	+1.1
	1.4nm,0.9s,baz=239,slow=3.3,SNR=3.9						
ESDC	Sonseca Array	152.69	196	PKPbc	PKPbc	05 27 53.9	-1.4
	0.9nm,0.6s,baz=152,slow=1.3,SNR=5.5						

BJI **17** *05:14:29.7, 5239N×17504E, h29km, mB5.1, mb4.8, Ms4.5, Msz4.3*
ISCJB **17** *05:14:30.6±0.3, 5201N±006×17499E±005, h32km, mb4.5/58, MS3.8/20, Error ellipse: s-maj=9.0km s-min=4.6km az=170.3*
MOS **17** *05:14:30.9±1.1, 5205N×17500E, h33km, mb4.8/19, Error ellipse: s-maj=13.3km s-min=8.7km az=107.4*
IDC **17** *05:14:32.5±0.8, 5206N×17510E, h33km±4km, mb4.0/17, mb1 4.2/18, mb1mx4.1/25, mbtmp4.2/18, ML4.7/1, MS3.6/15, Ms1 3.6/15, ms1mx3.4/33, Error ellipse: s-maj=19.8km s-min=12.7km az=162.0*
NEIC **17** *05:14:32.5±0.3, 5200N×17499E, mb4.6/29, ML4.5(AEIC), Error ellipse: s-maj=9.7km s-min=5.1km az=175.0*
ISC 17 05:14:32.6±0.3, **5203N**±006×**17497E**±005, **h34**km, **h34**km±.4km**:pP-P, n123**, σ**1^{s}08**/115, **mb4.5**/58, **MS3.8**/20, **4C-3D, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.88	323	P	Pn	05 14 49.0	+0.4
SMY				S	Sn	05 15 01.9	+1.7
AMKA	Amchitka	2.77	102	P	Pn	05 15 14.8	+0.2
AMKA				S	Sn	05 15 50.2	+3.3
PET	Petropavlovsk	10.00	282	eP	Pn	05 16 55.8	+2.0
PET				eS	Sn	05 18 43.2	-1.6
PET				smax			
	comp=N,57nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
PET				smax			
	comp=E,37nm,0.4s						
PET	Petropavlovsk	10.00	282	ePn	Pn	05 16 55.2	+1.4
PET				eSn	Sn	05 18 41.3	-3.4
BILL	Bilibino	16.61	349⇓	iP	Pn	05 18 25.5	+2.8
BILL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SVW2	Sparrevohn	18.44	49	eP	Pn	05 18 46.5	+1.1
TTA	Tatalina	18.85	43	eP	Pn	05 18 52.4	+2.0
KDAK	Kodiak Island	19.39	60	P	Pn	05 18 54.5	-2.4
	comp=Z,2.2nm,0.3s,baz=266,slow=4.8,SNR=24						
KDAK	Kodiak Island	19.39	60	eP	Pn	05 18 54.3	-2.6
	comp=Z,9.1nm,0.7s						
KDAK				epP	pP	05 19 04.6	+0.1
IMA2	Indian Mountai	21.07	36	eP	P	05 19 14.4	+0.6
YSS	Yuzh-Sakhalins	21.42	269	i P	P	05 19 20.4	+2.8
YSS				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.4						
ASAJ	Asahikawa	22.89	263	LR	LR	05 26 48.8	
	comp=Z,74nm,20.1s,MS3.1,baz=164,slow=32						
COLA	College	22.89	42	eP	P	05 19 33.5	+0.2
COLA				e*PP		05 19 42.7	
COLA				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
COLA	College	22.89	42	eP	P	05 19 33.5	+0.3
	comp=Z,14nm,0.8s,mb4.4						
COLA				epP		05 19 42.7	
MENT	Mentasta	24.28	47	eP	P	05 19 49.0	+2.3
YAK	Yakutsk	26.06	310d	iP	P	05 20 02.2	-0.6
YAK				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.2						
YAK	Yakutsk	26.06	310	eP	P	05 20 02.4	-0.4
	comp=Z,55nm,0.8s,mb5.1						
DAWY	Dawson	26.34	45	eP	P	05 20 06.1	+0.7
DAWY				epP	pP	05 20 15.0	0.0
INK	Inuvik	29.20	37	P	P	05 20 30.3	-0.6
	comp=Z,1.8nm,0.7s,mb3.9,baz=301,slow=5.8,SNR=4.8						
INK				LR	LR	05 31 47.5	
	comp=Z,92nm,19.5s,MS3.4,baz=150,slow=36						
INK	Inuvik	29.20	37	eP	P	05 20 30.9	0.0
INK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
INK	Inuvik	29.20	37	eP	P	05 20 30.9	0.0
	comp=Z,9.7nm,1.0s,mb4.5						
MDJ	Mudanjiang	30.65	274	P	P	05 20 42.6	-1.1
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,30nm,4.2s						
DLBC	Dease Lake	31.22	56	P	P	05 20 47.2	-1.6
	comp=Z,0.7nm,0.7s,mb3.6,baz=250,slow=12,SNR=1.7						
DLBC	Dease Lake	31.22	56	P	P	05 20 47.2	-1.6
CN2	Changchun	33.62	276	eP	P	05 21 11.4	+1.6
BOD	Bodaibo	34.44	304	eP	P	05 21 14.7	-2.2
BOD				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
CIT	Chita	36.79	295	eP	P	05 21 37.7	+0.6
YKA	Yellowknife Ar	37.58	46	P	P	05 21 42.8	-0.9
	comp=Z,1.2nm,0.8s,mb3.7,baz=287,slow=7.2,SNR=4.6						
YKA				pP	pP	05 21 52.5	-1.1
	comp=Z,1.5nm,0.7s,baz=286,slow=7.5,SNR=6.1						
YKA				LR	LR	05 38 36.0	
	comp=Z,67nm,18.7s,MS3.5,baz=270,slow=38						
YKA	Yellowknife Ar	37.58	46	P	P	05 21 42.9	-0.8
YKA				*PP	pP	05 21 52.5	-1.1
YKA	Yellowknife Ar	37.58	46	P	P	05 21 42.9	-0.9
YKA				pP	pP	05 21 52.5	-1.1
YKA				LR	LR	05 38 36.0	
EDM	Edmonton	41.84	59	eP	P	05 22 18.4	-0.8
EDM				e*PP	pP	05 22 28.7	-0.5
ULN	Ulaanbaatar	42.46	292	eP	P	05 22 24.4	+0.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ULN	Ulaanbaatar	42.46	292	eP	P	05 22 24.4	+0.1
	comp=Z,1.9nm,0.8s,mb3.8						
SONM	Songino Array	42.85	293	P	P	05 22 28.6	+1.1
	comp=Z,3.3nm,0.7s,mb4.2,baz=59,slow=8.4,SNR=27						
SONM				pP	pP	05 22 38.3	+0.9
	comp=Z,2.1nm,0.7s,baz=61,slow=6.3,SNR=8.4						
ZAK	Zakamensk	43.26	298	eP	P	05 22 31.1	+0.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.6						
WALA	Waterton Lakes	43.63	64	P	P	05 22 33.8	0.0
	comp=Z,3.8nm,0.6s,mb4.3						
WALA				epP	pP	05 22 43.4	-0.4
HHC	Hu-ho-hao-te	43.77	281	eP	P	05 22 34.9	0.0
HHC				AP	pP	05 22 44.8	-0.1
HHC				XP	sP	05 22 48.8	-0.1
HHC				PP	PP	05 24 18.8	+1.8
HHC				PCP	PcP	05 24 22.6	+1.4
HHC				SCP	ScP	05 28 10.3	+0.1
HHC				PCS	PcS	05 28 14.1	+0.1
HHC				S	S	05 29 01.5	-1.6
HHC				XS	sS	05 29 17.9	-1.7
HHC				SS	SS	05 32 09.5	-10
HHC				SCS	ScS	05 32 29.4	-2.0
HHC				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.6						
HHC				AMB	AMB		
	comp=Z,95nm,8.0s						
HHC				LR	LR		
	comp=N,131nm,19.0s,MS4.0						
HHC				LR	LR		
	comp=E,142nm,19.0s,MS4.0						
HHC				LR	LR		
	comp=Z,111nm,19.9s,MS3.8						
SSE	Sheshan	44.17	263	P	P	05 22 38.3	+0.2
SSE				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,139nm,4.0s						
NJ2	Nanjing	44.95	266	eP	P	05 22 45.5	+1.2
NJ2				AP	pP	05 22 55.4	+1.1
NJ2				XP	sP	05 22 59.3	+0.9
NJ2				PP	PP	05 24 31.1	+1.5
NJ2				S	S	05 29 19.0	-1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,250nm,4.4s						
NJ2				LR	LR		
	comp=N,340nm,25.6s						
NJ2				LR	LR		
	comp=E,430nm,15.4s						
NJ2				LR	LR		
	comp=Z,460nm,14.5s						
KRAR	Krasnoyarsk	45.71	309⇓	iP	P	05 22 49.8	-0.5
KRAR				pmax	pmax		
	comp=Z,23nm,0.4s,mb5.5						
BOZ	Bozeman (W)	46.83	67	eP	P	05 22 57.8	-1.3
BOZ				e*PP	pP	05 23 07.8	-1.4
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BOZ	Bozeman (W)	46.83	67	eP	P	05 22 57.8	-1.3
	comp=Z,1.9nm,0.7s,mb4.1						
BOZ				epP	pP	05 23 07.8	-1.3
BW06	Boulder Array	49.75	69	eP	P	05 23 20.7	-0.9
	comp=Z,1.2nm,0.7s,mb4.0						
BW06				epP	pP	05 23 30.3	-1.4
PDAR	Pinedale Array	49.75	69	P	P	05 23 20.6	-1.0
	comp=Z,0.8nm,0.7s,mb3.9,baz=319,slow=4.9,SNR=7.1						
PDAR				pP	pP	05 23 30.6	-1.2
	comp=Z,1.4nm,0.6s,baz=320,slow=3.0,SNR=8.4						
ZAL	Zalesovo	50.73	310	P	P	05 23 28.3	-0.7
	comp=Z,1.3nm,0.4s,mb4.2,baz=82,slow=9.7,SNR=4.8						
ZAL				LR	LR	05 46 43.0	
	comp=Z,55nm,18.0s,MS3.6,baz=268,slow=38						
ZAL	Zalesovo	50.73	310	P	P	05 23 28.3	-0.8
ZAL				LR	LR	05 46 43.0	
NVS	Novosibirsk	50.91	312	eP	P	05 23 29.2	-1.2
NVS				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
NVS				pmax	pmax		
	comp=E,6.0nm,0.6s						
LZH	Lanzhou	51.47	282	eP	P	05 23 35.6	+1.0
LZH				AP	pP	05 23 45.8	+1.0
LZH				XP	sP	05 23 49.5	+0.7
LZH				PP	PP	05 25 33.3	+1.4
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,59nm,6.5s						
LZH				LR	LR		
	comp=N,325nm,14.6s						
LZH				LR	LR		
	comp=Z,447nm,17.9s,MS4.5						
GTA	Gaotai	51.70	287	eP	P	05 23 37.8	+1.5
GTA				AP	pP	05 23 48.3	+1.8
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.5						
RSSD	Black Hills	52.03	64	eP	P	05 23 38.6	-0.2
RSSD				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
RSSD	Black Hills	52.03	64	eP	P	05 23 38.6	-0.2
	comp=Z,1.4nm,0.5s,mb4.2						
ULM	Lac du Bonnet	52.50	54	P	P	05 23 42.1	-0.2
	comp=Z,0.6nm,0.4s,mb3.9,baz=315,slow=8.6,SNR=3.4						
ULM				LR	LR	05 47 31.3	
	comp=Z,58nm,18.3s,MS3.7,baz=286,slow=38						
SUMG	Summit	53.53	12	eP	P	05 23 49.8	-0.1
	comp=Z,5.7nm,0.7s,mb4.6						
SUMG				epP	pP	05 23 59.2	-0.9
CD2	Chengdu	55.05	277	eP	P	05 24 00.3	-0.6
WMQ	Urumqi	55.68	299	eP	P	05 24 06.0	+0.5
WMQ				AP	pP	05 24 16.0	+0.3
WMQ				PP	PP	05 26 12.0	+2.1
WMQ				S	S	05 31 48.0	-1.5
WMQ				SCS	ScS	05 33 49.0	-3.0
WMQ				SS	SS	05 35 33.0	-1.9
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,115nm,5.0s						
WMQ				LR	LR		
	comp=N,89nm,15.0s,MS4.1						
WMQ				LR	LR		
	comp=E,78nm,15.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,97nm,15.0s,MS4.0						
TUC	Tucson	55.92	80	eP	P	05 24 08.0	+0.8
TUC				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
TUC	Tucson	55.92	80	eP	P	05 24 08.0	+0.8
	comp=Z,1.5nm,0.8s,mb4.1						
MKAR	Makanchi Array	56.53	305	P	P	05 24 10.9	-0.6
	comp=Z,2.3nm,0.4s,mb4.6,baz=52,slow=7.9,SNR=18						
MKAR				pP	pP	05 24 20.9	-0.9
	comp=Z,2.6nm,0.7s,baz=36,slow=4.9,SNR=6.2						
ARCES	ARCESS Array B	56.71	348	P	P	05 24 11.3	-1.5
	comp=Z,1.7nm,0.6s,mb4.3,baz=35,slow=8.1,SNR=11						
ARCES				LR	LR	05 47 11.9	
	comp=Z,48nm,21.3s,MS3.6,baz=126,slow=35						
CHKZ	Chkalovo	57.26	317	eP	P	05 24 15.8	-0.9
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	57.26	317	eP	P	05 24 15.8	-0.8
	comp=Z,1.9nm,0.6s,mb4.3						
BVAR	Borovoye Array	57.81	316	P	P	05 24 20.3	-0.3
	comp=Z,3.6nm,0.4s,mb4.8,baz=56,slow=7.4,SNR=16						
BRVK	Borovoye	57.84	316	eP	P	05 24 20.6	-0.2
BRVK				e*PP	pP	05 24 29.8	-1.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
BRVK	Borovoye	57.84	316	eP	P	05 24 20.6	-0.2
	comp=Z,3.8nm,0.5s,mb4.7						
BRVK				epP	pP	05 24 29.8	-1.3
ZRNK	Zerenda	58.45	317	eP	P	05 24 24.8	-0.3
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
ZRNK	Zerenda	58.45	317	eP	P	05 24 24.8	-0.3
	comp=Z,4.3nm,0.4s,mb4.8						
MNTX	Cornudas Mount	59.62	76	eP	P	05 24 33.4	+0.2
	comp=Z,0.8nm,0.6s,mb3.9						
MNTX				epP	pP	05 24 43.3	-0.1
KMI	Kunming	59.81	273	P	P	05 24 32.8	-1.7
KMI				AP	pP	05 24 43.1	-1.7
KMI				XP	sP	05 24 48.6	-0.2
KMI				PP	PP	05 26 49.9	+3.3
KMI				S	S	05 32 40.9	-2.6
KMI				SS	SS	05 36 39.8	0.0
KMI				SSS		05 39 12.6	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
KMI				AMB	AMB		
	comp=Z,149nm,5.4s						
KMI				LR	LR		
	comp=N,135nm,15.6s,MS4.3						
KMI				LR	LR		
	comp=E,113nm,15.2s,MS4.3						
KMI				LR	LR		
	comp=Z,101nm,12.9s,MS4.1						
ARU	Arti	59.92	325⇑	iP	P	05 24 35.0	-0.3
ARU				e		05 26 44.4	
ARU				ePPP		05 28 12.5	
ARU				eS	S	05 32 42.9	-2.1
ARU				eSS	SS	05 36 35.6	-6.0
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
ARU	Arti	59.92	325	eP	P	05 24 35.2	-0.1
	comp=Z,6.1nm,0.4s,mb5.0						
WMOK	Wichita Mounta	61.36	69	eP	P	05 24 44.3	-0.7
WMOK				e*PP	pP	05 24 54.3	-1.1
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
WMOK	Wichita Mounta	61.36	69	eP	P	05 24 44.3	-0.7
	comp=Z,1.6nm,0.5s,mb4.4						
WMOK				epP	pP	05 24 54.3	-1.1
SCHQ	Schefferville	61.81	35	P	P	05 24 47.6	-0.4
	comp=Z,2.0nm,0.6s,mb4.4,baz=28,slow=2.7,SNR=5.1						
AAK	Ala-Archa	63.40	306	eP	P	05 24 58.3	-0.4
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
AAK	Ala-Archa	63.40	306	eP	P	05 24 58.3	-0.4
	comp=Z,4.6nm,0.7s,mb4.7						
FINES	FINESS Array B	64.19	344	LR	LR	05 54 14.2	
	comp=Z,40nm,21.0s,MS3.6,baz=342,slow=37						
AKTO	Aktyubinsk	64.82	321	LR	LR	05 55 07.4	
	comp=Z,59nm,19.7s,MS3.8,baz=226,slow=38						
ERPA	Erie	66.04	52	eP	P	05 25 15.6	-0.3
ERPA				epP	pP	05 25 25.9	-0.4
NB2	NORSAR Subarra	66.53	351	P	P	05 25 18.1	-1.0
	comp=Z,1.5nm,0.5s,mb4.3,baz=10.0,slow=6.5						
NOA	NORSAR Array B	66.53	351	P	P	05 25 18.4	-0.7
	comp=Z,2.4nm,0.6s,mb4.4,baz=11,slow=6.4,SNR=14						
NOA				pP	pP	05 25 27.5	-2.0
	comp=Z,1.9nm,0.6s,baz=10,slow=6.4,SNR=6.3						
NOA				LR	LR	05 54 51.5	
	comp=Z,24nm,21.0s,MS3.4,baz=350,slow=36						
NOA	NORSAR Array B	66.53	351	P	P	05 25 18.4	-0.7
NOA				*PP	pP	05 25 27.5	-2.0
VSU	Vasula	66.87	342	i P	P	05 25 20.9	-0.3
HFS	Hagfors	67.18	350	LR	LR	05 58 21.4	
	comp=Z,37nm,18.3s,MS3.6,baz=16,slow=39						
OBN	Obninsk	67.78	336⇑	eP	P	05 25 27.2	+0.2
OBN				eS	S	05 34 19.0	-3.6
OBN				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.3						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						
GUN	Gumba	67.99	287	eP	P	05 25 30.0	+1.7
	comp=Z,16nm,0.4s,mb5.4						
SSPA	Standing Stone	68.19	52	eP	P	05 25 30.8	+1.2
	comp=Z,11nm,0.7s,mb5.0						
SSPA				epP	pP	05 25 39.2	-0.8
KKN	Kakani	68.43	288	eP	P	05 25 32.1	+1.1
	comp=Z,10nm,0.5s,mb5.1						
KKN	Kakani	68.43	288	eP	P	05 25 32.1	+1.1
KKN				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.1						
PKI	Pulchoki	68.52	287	eP	P	05 25 32.1	+0.5
	comp=Z,12nm,0.6s,mb5.0						
PKI	Pulchoki	68.52	287	eP	P	05 25 32.1	+0.5
PKI				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
GKN	Gorkha	68.65	288	eP	P	05 25 33.2	+0.8
DMN	Daman	68.67	288	eP	P	05 25 32.8	+0.3
	comp=Z,16nm,0.8s,mb5.0						
KOLN	Koldanda	69.43	289	eP	P	05 25 33.5	-3.8
	comp=Z,23nm,1.2s,mb5.0						
ESK	Eskdalemuir	73.01	359	eP	P	05 25 58.2	-0.7
ESK				e*PP	pP	05 26 08.3	-1.2
ESK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ESK	Eskdalemuir	73.01	359	eP	P	05 25 58.2	-0.7
	comp=Z,4.3nm,0.6s,mb4.6						
ESK				epP	pP	05 26 08.3	-1.2
AKASG	Malin Array Be	73.61	338	P	P	05 26 02.1	-0.3
	comp=Z,0.9nm,0.3s,mb4.1,baz=24,slow=6.2,SNR=6.3						
PPT	Papeete	75.86	145	eLR	LR	05 49 01.4	
	comp=Z,107nm,23.5s						
PPT	Papeete	75.86	145	LR	LR	05 54 07.5	
	comp=Z,92nm,18.9s,MS4.1,baz=349,slow=31						
KIV	Kislovodsk	75.90	327⇑	eP	P	05 26 16.0	+0.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
CLL	Collm	75.92	348	eP	P	05 26 13.0	-2.8
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
CLL	Collm	75.92	348	eP	P	05 26 13.0	-2.8
	comp=Z,5.0nm,1.0s,mb4.4						
KWP	Kalwaria	76.01	342	eP	P	05 26 17.2	+0.9
KWP				e*PP	pP	05 26 26.5	-0.4
KWP				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
KWP	Kalwaria	76.01	342	eP	P	05 26 17.2	+0.9
	comp=Z,13nm,0.6s,mb5.0						
KWP				epP	pP	05 26 26.5	-0.4
CTAO	Charters Tower	76.07	208	eP	P	05 26 17.1	+0.5
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CTAO	Charters Tower	76.07	208	eP	P	05 26 17.1	+0.5
	comp=Z,5.1nm,0.8s,mb4.5						
VRAC	Vranov	77.38	346	LR	LR	06 04 33.4	
	comp=Z,56nm,18.1s,MS3.9,baz=14,slow=39						
GERES	GERESS Array B	78.24	347	LR	LR	06 03 21.9	
	comp=Z,34nm,19.1s,MS3.7,baz=294,slow=37						
WRAB	Tennant Creek	79.94	218⇑	eP	P	05 26 37.3	-0.8
WRA	Warramunga Arr	79.95	218	P	P	05 26 38.1	-0.1
	comp=Z,3.2nm,0.6s,mb4.4,baz=33,slow=6.5,SNR=13						
TBI	Tubuai	81.26	147	eLR	LR	05 51 31.0	
	comp=Z,120nm,26.2s						
FITZ	Fitzroy Crossi	81.95	227	P	P	05 26 49.4	+0.6
	comp=Z,2.4nm,0.6s,mb4.3,baz=44,slow=6.6,SNR=8.0						
BR131	Keskin Array S	82.62	331	eP	P	05 26 53.1	+0.7
	comp=Z,1.6nm,0.6s,mb4.2						
BRTR	Keskin Array B	82.62	331	P	P	05 26 53.0	+0.7
	comp=Z,2.2nm,0.8s,mb4.3,baz=55,slow=3.5,SNR=12						

BRTR				pP	pP	05 27 03.6	+0.6
	comp=Z,2.3nm,0.7s,baz=58,slow=2.8,SNR=7.1						
BRTR				LR	LR	06 05 04.4	
	comp=Z,26nm,20.2s,MS3.6,baz=191,slow=37						
BRTR	**Keskin Array B**	**82.62**	**331**	P	**P**	**05 26 53.0**	**+0.7**
BRTR				*PP	pP	05 27 03.6	+0.6
ASAR	**Alice Springs**	**83.50**	**217**	P	**P**	**05 26 57.4**	**+0.5**
	comp=Z,2.2nm,0.7s,mb4.3,baz=24,slow=5.6,SNR=10.0						
RKT	**Rikitea**	**86.66**	**135**	*e*LR	LR	05 54 01.9	
	comp=Z,70nm,33.0s						
STKA	**Stephens Creek**	**88.53**	**208**	LR	LR	06 08 43.5	
	comp=Z,130nm,18.4s,MS4.4,baz=205,slow=37						
LBTB	**Lobatse**	**144.39**	**307**	PKP	PKPdf	05 34 03.8	-1.4
	comp=Z,2.2nm,0.6s,baz=205,slow=3.0,SNR=6.2						
LBTB	**Lobatse**	**144.39**	**307**	*e*PKPdf	PKPdf	05 34 04.0	-1.2
MAW	**Mawson**	**144.62**	**218**	PKP	PKPdf	05 34 02.5	-3.1
	comp=Z,6.2nm,0.9s,baz=81,slow=4.7,SNR=18						
BOSA	**Boshof**	**147.53**	**304**	PKPbc	PKPbc	05 34 13.1	-0.1
	comp=Z,4.0nm,0.9s,baz=303,slow=5.9,SNR=4.4						
BOSA	**Boshof**	**147.53**	**304**	PKP2	PKPbc	05 34 13.1	-0.1
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOSA	**Boshof**	**147.53**	**304**	*e*PKPbc	PKPbc	05 34 12.9	-0.3

*IDC **17** 05:20:12.2±0.8, 0.09N×124.94E, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.1/17, mbtmp4.2/9, ML3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/23, Error ellipse: s-maj=56.7km s-min=15.0km az=71.0*
*ISCJB **17** 05:20:18.4±4.6, 0.1N±0.1×125.1E±0.2, h62km±46km, mb4.2/13, Error ellipse: s-maj=33.4km s-min=14.7km az=131.2*
*NEIC **17** 05:20:19.7±2.6, 0.09N×125.12E, h59km±26km, mb3.9/4, Error ellipse: s-maj=21.0km s-min=9.4km az=74.0*
*BJI **17** 05:20:19.7, 0.10N×125.10E, h59km, mb4.8*
ISC 17 05:20:19.9±3.7**, 0.1N**±0.1**×125.1E**±0.2**, h57**km±38km**, n21, σ0.62**/19**, mb4.2**/13**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**14.63**	**151**	*e*P	**Pn**	**05 23 43.5**	**0.0**
	9.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.07**	**178**	*e*P	**Pn**	**05 24 26.8**	**-0.1**
	4.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.07**	**178**	P	**Pn**	**05 24 26.8**	**-0.1**
	0.1nm,0.3s,baz=13,slow=13,SNR=6.6						
WRAB	**Tennant Creek**	**21.84**	**156**	*e*P	**P**	**05 25 07.0**	**-0.5**
	1.4nm,0.4s,mb3.7						
WRA	**Warramunga Arr**	**21.85**	**156**	P	**P**	**05 25 07.1**	**-0.4**
	1.9nm,0.5s,mb3.8,baz=336,slow=10,SNR=42						
WB2	**Warramunga Arr**	**21.85**	**156**	*e*P	**P**	**05 25 07.7**	**+0.1**
WB2	**Warramunga Arr**	**21.85**	**156**	*e*P	**P**	**05 25 07.5**	**-0.1**
PMG	**Port Moresby**	**23.86**	**114**	*e*P	**P**	**05 25 27.6**	**-0.3**
	23nm,0.9s,mb4.6						
AS31	**Alice Springs**	**25.09**	**161**	*e*P	**P**	**05 25 40.2**	**+1.1**
ASAR	**Alice Springs**	**25.09**	**161**	P	**P**	**05 25 39.2**	**+0.1**
	3.4nm,0.9s,mb3.9,baz=327,slow=7.1,SNR=24						
PSI	**Prapat**	**26.34**	**276**	LR	LR	05 35 18.0	
	comp=Z,107nm,19.2s,baz=239,slow=35						
STKA	**Stephens Creek**	**35.39**	**155**	P	**P**	**05 27 10.6**	**+0.5**
	2.1nm,0.5s,mb4.3,baz=336,slow=12,SNR=5.5						
MJAR	**Matsushiro Arr**	**38.25**	**17**	P	**P**	**05 27 34.8**	**+0.4**
	1.7nm,0.6s,mb3.9,baz=184,slow=8.5,SNR=4.7						
LZH	**Lanzhou**	**40.93**	**333**	*e*P	**P**	**05 27 58.1**	**+1.4**
LZH				AP	pP	05 28 09.1	-2.3
LZH				XP	sP	05 28 14.3	-3.7
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.6						
GTA	**Gaotai**	**45.48**	**332**	*e*P	**P**	**05 28 33.9**	**+0.5**
GTA				AP	pP	05 28 45.8	-2.5
GTA				XP	sP	05 28 50.9	-4.0
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**50.28**	**344**	P	**P**	**05 29 09.9**	**-0.6**
	comp=Z,1.7nm,0.5s,mb4.4,baz=153,slow=8.0,SNR=13						
MKAR	**Makanchi Array**	**59.69**	**327**	P	**P**	**05 30 17.1**	**-1.2**
	comp=Z,2.6nm,0.4s,mb4.6,baz=119,slow=7.4,SNR=17						
ZAL	**Zalesovo**	**63.14**	**335**	P	**P**	**05 30 41.6**	**-0.1**
	comp=Z,1.7nm,0.3s,mb4.6,baz=322,slow=4.5,SNR=4.3						
BVAR	**Borovoye Array**	**69.53**	**328**	P	**P**	**05 31 22.5**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.2,baz=140,slow=11,SNR=12						
BRVK	**Borovoye**	**69.60**	**328**	*e*P	**P**	**05 31 22.3**	**-0.6**
	comp=Z,1.4nm,0.6s,mb4.1						
TORD	**Torodi Ar. Bea**	**122.45**	**286**	PKP	PKPdf	05 39 09.5	+0.8
	comp=Z,0.5nm,0.6s,baz=113,slow=1.4,SNR=7.2						

*ISCJB **17** 05:26:18.6±0.4, 38.33N±0.02×20.44E±0.03, h10km, Error ellipse: s-maj=4.2km s-min=2.9km az=104.1*
*ATH **17** 05:26:18.5, 38.29N×20.40E, h12km±1km, MD3.7/8*
*NEIC **17** 05:26:18.5, 38.29N×20.40E, h12km, MD3.7(ATH), After ATH.*
*CSEM **17** 05:26:19.1±0.2, 38.33N×20.40E, h0km±1km, MD3.7, Error ellipse: s-maj=3.0km s-min=1.9km az=53.0*
*THE **17** 05:26:20.8, 38.39N×20.48E, h0km, ML3.0*
ISC 17 05:26:19.7±0.4**, 38.33N**±0.02×**20.45E**±0.03**, h10**km**, n29, σ1.06**/41**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.18**	**144**	*e*PG	**Pg**	**05 26 23.1**	**-0.6**
VLS				*e*SG	**Sg**	**05 26 26.3**	**-0.1**
LKD	**Levkas**	**0.41**	**22**	*e*Pg	**Pg**	**05 26 26.9**	**-0.9**
LKD				*e*Sg	**Sg**	**05 26 32.5**	**-0.7**
RLS	**Riolos of Patr**	**0.84**	**108**	*e*PG	**Pg**	**05 26 34.6**	**-1.4**
RLS				*e*SB	**Sg**	**05 26 47.3**	**+0.3**
IGT	**Igoumenitsa**	**1.21**	**356**	*e*Pg	**Pg**	**05 26 42.3**	**-0.6**
IGT				*e*Sg	**Sg**	**05 26 59.7**	**+1.1**
EVR	**Evrytania**	**1.21**	**61**	*e*PG	**Pg**	**05 26 42.3**	**-0.8**
JAN	**Janina**	**1.36**	**13**	*e*PB	**Pg**	**05 26 45.4**	**-0.5**
JAN				*e*SB	**Sg**	**05 27 04.1**	**+0.5**
KEK	**Kerkira**	**1.47**	**340**	*e*PG	**Pg**	**05 26 46.2**	**-1.8**
KEK				*e*SB	**Sg**	**05 27 07.3**	**+0.1**
MEV	**Metsovon**	**1.58**	**22**	*e*Pg	**Pg**	**05 26 48.8**	**-1.2**
	comp=Z,8.0nm,0.5s						
MEV				*e*Sg	**Sg**	**05 27 09.4**	**-1.1**
AGG	**Agios Georgios**	**1.62**	**64**	*e*Pg	**Pg**	**05 26 49.5**	**-1.4**
	comp=Z,3.3nm,0.6s						
AGG				*e*Sg	**Sg**	**05 27 11.3**	**-0.7**
ITM	**Ithomi**	**1.64**	**134**	*e*PB	**Pg**	**05 26 49.7**	**-1.4**
ITM				*e*SB	**Sg**	**05 27 12.1**	**-0.3**
LKR	**Lokris**	**2.02**	**80**	*e*PN	**Pn**	**05 26 54.7**	**+0.8**
XOR	**Xorichti**	**2.38**	**63**	*e*Pn	**Pn**	**05 27 00.1**	**+1.3**
XOR				*e*Sn	**Sn**	**05 27 30.8**	**+2.9**
VLI	**Veliai**	**2.55**	**128**	*e*PN	**Pn**	**05 27 02.1**	**+1.0**
FNA	**Florina**	**2.55**	**16**	*e*Pn	**Pn**	**05 27 01.9**	**+0.7**
FNA				*e*Sn	**Sn**	**05 27 34.0**	**+1.7**
LCI	**Lecce**	**2.70**	**319**	Pn	**Pn**	**05 27 02.5**	**-0.8**
AOS	**Alonnisos**	**2.81**	**72**	*e*Pn	**Pn**	**05 27 05.7**	**+1.0**
GRG	**Griva**	**3.03**	**29**	*e*Pn	**Pn**	**05 27 09.0**	**+1.3**
HORT	**Hortiatis**	**3.06**	**41**	*e*Pn	**Pn**	**05 27 09.3**	**+1.2**
GRI	**Girifalco**	**3.20**	**280**	Pn	**Pn**	**05 27 10.3**	**+0.2**
PE1	**Pezze di Greco**	**3.41**	**318**	*e*Pn	**Pn**	**05 27 11.9**	**-1.0**
SG1	**Sgolgore (BA)**	**3.85**	**312**	*e*Pn	**Pn**	**05 27 18.0**	**-1.0**
CUC	**Castrocucco**	**3.97**	**296**	Pn	**Pn**	**05 27 22.6**	**+1.9**
CDT	**Castel del Mon**	**4.24**	**312**	*e*Pn	**Pn**	**05 27 24.2**	**-0.1**
SLCN	**Sala Consilina**	**4.27**	**300**	Pn	**Pn**	**05 27 25.8**	**+1.1**
CHOS	**Chios island**	**4.40**	**88**	*e*Pn	**Pn**	**05 27 28.4**	**+1.7**
MRLC	**Muro Lucano**	**4.54**	**304**	Pn	**Pn**	**05 27 29.5**	**+1.0**
FGMS	**Monte Sant'Ang**	**4.83**	**316**	Pn	**Pn**	**05 27 32.1**	**-0.4**
RGNG	**Rignano Grg**	**5.01**	**313**	Pn	**Pn**	**05 27 34.8**	**-0.2**
NVLJ	**Novalja**	**7.51**	**328**	*i* Pn	**Pn**	**05 28 07.9**	**-1.4**
NVLJ				*i* Sn	**Sn**	**05 29 27.9**	**-6.5**

*ATH **17** 05:35:25.9, 40.53N×24.25E, h42km, MD3.2/3*
*ISCJB **17** 05:35:26.5±0.5, 40.55N±0.03×24.28E±0.04, h17km±7km, Error ellipse: s-maj=4.9km s-min=4.8km az=143.7*
*NEIC **17** 05:35:26.1, 40.56N×24.26E, h11km, MD3.2(ATH), After THE.*
*CSEM **17** 05:35:26.3±0.1, 40.54N×24.25E, h30km, ML2.4, Error ellipse: s-maj=3.3km s-min=3.0km az=171.0*
*THE **17** 05:35:26.1, 40.56N×24.26E, h10km, ML2.4*
ISC 17 05:35:25.4±0.5**, 40.55N**±0.03×**24.29E**±0.03**, h15**km±7km**, n15, σ0.92**/27**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.32**	**228**	*e*Pg	**Pg**	**05 35 32.8**	**+0.8**
OUR				*e*Sg	**Sg**	**05 35 37.1**	**+0.7**
PLG	**Polygyros**	**0.67**	**255**	*e*P	**Pb**	**05 35 38.9**	**+0.3**
PLG				*e*S	**Sb**	**05 35 48.2**	**+0.5**
SOH	**Sokhos**	**0.76**	**291**	*e*Pg	**Pg**	**05 35 39.8**	**-0.5**
SOH				*e*Sg	**Sg**	**05 35 51.1**	**+0.8**
PAIG	**Paliouri**	**0.78**	**217**	*e*Pg	**Pg**	**05 35 41.1**	**+0.7**
PAIG				*e*Sg	**Sg**	**05 35 52.0**	**+1.4**
LOS	**Limnos**	**0.86**	**135**	*e*Pg	**Pg**	**05 35 42.6**	**+0.5**
	comp=Z,4.2nm,0.2s						
LOS				*e*Sg	**Sg**	**05 35 54.3**	**+0.9**
NVR	**Nevrokopi**	**0.86**	**338**	*e*P	**Pb**	**05 35 42.8**	**+0.8**
HORT	**Hortiatis**	**0.91**	**274**	*e*Pg	**Pg**	**05 35 43.3**	**+0.4**
HORT				*e*Sg	**Sg**	**05 35 54.8**	**-0.1**
RDO	**Rodhopi**	**1.12**	**57**	*e*P	**Pn**	**05 35 46.8**	**+0.4**
MMB	**Musomiste**	**1.12**	**338**	*e*Pg	**Pg**	**05 35 46.0**	**-1.0**
MMB				*e*Sg	**Sg**	**05 36 01.5**	**-0.3**
MMB	**Musomiste**	**1.12**	**338**	*e*Pg	**Pg**	**05 35 46.0**	**-1.1**
MMB				*e*Sg	**Sg**	**05 36 01.5**	**-0.3**
KNT	**Kendrikon**	**1.22**	**301**	*e*Pg	**Pg**	**05 35 48.5**	**-0.4**
	comp=Z,2.5nm,0.3s						
KNT				*e*Sg	**Sg**	**05 36 05.7**	**+0.8**
ALN	**Alexandroupoli**	**1.38**	**75**	*e*Pg	**Pg**	**05 35 51.5**	**-0.5**
ALN				*e*Sg	**Sg**	**05 36 10.2**	**+0.3**
AOS	**Alonnisos**	**1.41**	**193**	*e*Pg	**Pg**	**05 35 50.8**	**-1.7**
AOS				*e*Sg	**Sg**	**05 36 10.1**	**-0.8**
XOR	**Xorichti**	**1.45**	**216**	*e*Pg	**Pg**	**05 35 51.8**	**-1.5**
XOR				*e*Sg	**Sg**	**05 36 11.1**	**-1.0**
GRG	**Griva**	**1.49**	**287**	*e*Pg	**Pg**	**05 35 51.3**	**-2.7**

*TRN **17** 05:40:55.6, 19.21N×63.13W, h35km*
*ISCJB **17** 05:40:56.8±1.7, 19.4N±0.2×63.3W±0.2, h54km, Error ellipse: s-maj=37.5km s-min=12.4km az=119.5*
*NEIC **17** 05:40:58.2, 19.35N×63.21W, h54km, MD3.6(RSPR), After RSPR.*
*RSPR **17** 05:40:58.2, 19.35N×63.21W, h54km±16km, MD3.6/4,*
ISC 17 05:40:57.6±1.7**, 19.2N**±0.3×**63.2W**±0.2**, h54**km**, n9, σ0.38**/17**, 8C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.61**	**239**	⇑*e*P	**Pn**	**05 41 23.3**	**-0.3**
TBVI				*e*S	**Sn**	**05 41 43.7**	**+0.5**
STVI	**Saint Thomas**	**1.93**	**243**	⇑*e*P	**Pn**	**05 41 27.6**	**-0.3**
STVI				*e*S	**Sn**	**05 41 51.3**	**+0.3**
CULB	**Culebra**	**2.26**	**246**	⇑*e*P	**Pn**	**05 41 32.1**	**-0.4**
CULB				*e*S	**Sn**	**05 41 58.4**	**-0.8**
MTP	**Monte Pirata**	**2.55**	**244**	⇑*e*P	**Pn**	**05 41 36.5**	**+0.1**
MTP				*e*S	**Sn**	**05 42 06.0**	**-0.2**
CBYP	**Canovanas**	**2.73**	**250**	⇑*e*P	**Pn**	**05 41 38.9**	**-0.1**
CBYP				*e*S	**Sn**	**05 42 10.3**	**-0.5**
HUMP	**Col San Antoni**	**2.78**	**247**	*e*P	**Pn**	**05 41 39.4**	**-0.2**
HUMP				*e*S	**Sn**	**05 42 11.9**	**+0.1**
CPD	**Cerro la Pandu**	**2.88**	**246**	⇑*e*P	**Pn**	**05 41 41.4**	**+0.5**
CPD				*e*S	**Sn**	**05 42 14.8**	**+0.5**
AOPR	**Arecibo Observ**	**3.52**	**256**	⇑*e*P	**Pn**	**05 41 50.0**	**+0.3**
CRPR	**Cabo Rojo, PR**	**3.94**	**253**	⇑*e*P	**Pn**	**05 41 56.0**	**+0.4**
CRPR				*e*S	**Sn**	**05 42 40.8**	**+0.2**

*IDC **17** 05:43:11.0±1.4, 43.13N×44.86E, h0km, mb3.9/4, mb1 3.8/6, mb1mx3.5/20, mbtmp3.8/6, ML3.8/2, MS3.4/1, Ms1 3.4/1, ms1mx2.2/37, Error ellipse: s-maj=43.7km s-min=16.5km az=142.0*
*TIF **17** 05:43:19.0, 43.26N×45.64E, h37km±1km*
*ISCJB **17** 05:43:19.9±0.3, 43.24N±0.03×45.41E±0.04, h111km±3km, mb3.8/4, Error ellipse: s-maj=5.8km s-min=4.4km az=59.1*
*MOS **17** 05:43:19.3±0.9, 43.21N×45.49E, h107km, mb3.9/1, Error ellipse: s-maj=9.5km s-min=8.6km az=43.9*
*CSEM **17** 05:43:19.5±0.1, 43.15N×45.35E, h110km, mb3.9, Error ellipse: s-maj=3.2km s-min=1.8km az=177.0*
*NNC **17** 05:43:20.6±5.5, 43.41N×46.43E, h0km, mb3.5, Error ellipse: s-maj=183.5km s-min=52.4km az=137.0*
*NEIC **17** 05:43:21.9±0.9, 43.20N×45.23E, h111km±12km, mb3.6/3, Error ellipse: s-maj=14.5km s-min=10.9km az=142.0*
ISC 17 05:43:21.0±0.3**, 43.24N**±0.03×**45.41E**±0.04**, h105**km±4km**, n61, σ1.03**/94**, mb3.8**/4**, 4C-5D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.47**	**249**	*i* P	**Pn**	**05 43 37.1**	**0.0**
SNJR				*i* S	**Sn**	**05 43 49.3**	**+0.2**
VLKR	**Vladikavkaz**	**0.57**	**251**	*i* P	**Pn**	**05 43 37.7**	**-0.1**
VLKR				*i* S	**Sn**	**05 43 50.4**	**+0.1**
TRKR	**Terskaya**	**0.69**	**315**	*i* P	**Pn**	**05 43 39.6**	**+0.8**
TRKR				*i* S	**Sn**	**05 43 53.8**	**+1.7**
KMSR	**Komsomolskaya**	**0.83**	**280**	*i* P	**Pn**	**05 43 40.1**	**+0.1**
KMSR				*i* S	**Sn**	**05 43 54.6**	**+0.3**
ARNR	**Ardon**	**0.83**	**267**	*i* P	**Pn**	**05 43 39.9**	**-0.1**
ARNR				*i* S	**Sn**	**05 43 54.2**	**-0.1**
BTLR	**Botlikh**	**0.83**	**134**	⇑*i*P	**Pn**	**05 43 36.0**	**-4.0**
BTLR				*e*S	**Sn**	**05 43 49.5**	**-4.8**
BTLR				pmax	pmax		
	comp=Z,744nm,0.2s						
LACR	**Lac**	**0.92**	**244**	*i* P	**Pn**	**05 43 40.4**	**-0.5**
LACR				*i* S	**Sn**	**05 43 55.0**	**-0.8**
PRTR	**Priterechnaya**	**0.97**	**302**	*i* P	**Pn**	**05 43 42.0**	**+0.6**
PRTR				*i* S	**Sn**	**05 43 57.8**	**+1.0**
KORR	**Kora**	**0.99**	**262**	*i* P	**Pn**	**05 43 41.4**	**-0.3**
KORR				*i* S	**Sn**	**05 43 56.8**	**-0.5**
DBC	**Dubki**	**1.06**	**101**	*i* P	**Pn**	**05 43 39.0**	**-3.4**
DBC				*e*S	**Sn**	**05 43 53.5**	**-5.1**
DBC				pmax	pmax		
	comp=Z,361nm,0.2s						
ZEI	**Tsey**	**1.20**	**248**	*i* P	**Pn**	**05 43 43.3**	**-0.7**
ZEI				*i* S	**Sn**	**05 44 00.1**	**-1.3**
BUJR	**Buynaksk**	**1.31**	**108**	⇓*i*P	**Pn**	**05 43 45.0**	**-0.2**
BUJR				*i* S	**Sn**	**05 44 03.0**	**-0.6**
BUJR				pmax	pmax		
	comp=Z,389nm,0.2s						
BUJR	**Buynaksk**	**1.31**	**108**	*i* P	**Pn**	**05 43 45.0**	**-0.2**
	comp=Z,389nm,0.2s						
BUJR				*i* S	**Sn**	**05 44 03.0**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.38**	**256**	*i* P	**Pn**	**05 43 45.5**	**-0.6**
DIGR				*i* S	**Sn**	**05 44 04.0**	**-1.1**
MAK	**Makhachkala**	**1.56**	**100**	⇓*i*P	**Pn**	**05 43 48.1**	**-0.1**
MAK				*i*		05 44 09.8	
MAK				pmax	pmax		
	comp=Z,361nm,0.2s						
MAK				smax			
	comp=N,2μm,0.4s						
MAK				smax			
	comp=E,2μm,0.3s						
MAK	**Makhachkala**	**1.56**	**100**	*i* P	**Pn**	**05 43 48.1**	**-0.1**
	comp=E,361nm,0.2s						
MAK				*i* S	**Sn**	**05 44 09.8**	**+0.9**
	comp=E,2μm,0.4s						
KUBR	**Kubataba**	**1.56**	**292**	P	**Pn**	**05 43 49.0**	**+0.8**
KUBR				S	**Sn**	**05 44 10.1**	**+1.2**
KUBR				pmax	pmax		
	comp=Z,166nm,0.2s						
KUBR				smax			
	comp=N,828nm,0.3s						
KUBR	**Kubataba**	**1.56**	**292**	P	**Pn**	**05 43 49.0**	**+0.8**
	comp=N,166nm,0.2s						
KUBR				S	**Sn**	**05 44 10.1**	**+1.2**
	comp=N,828nm,0.3s						
ONI	**Oni**	**1.58**	**246**	P	**Pn**	**05 43 49.5**	**+1.0**
ONI				S	**Sn**	**05 44 11.2**	**+1.8**
TBLG	**Delisi**	**1.59**	**198**	P	**Pn**	**05 43 48.6**	**0.0**
TBLG				S	**Sn**	**05 44 09.8**	**+0.3**
TBLG	**Delisi**	**1.59**	**198**	*e*P	**Pn**	**05 43 48.5**	**0.0**
TBLG				*e*S	**Sn**	**05 44 09.8**	**+0.3**
MTA	**Mtatsminda**	**1.61**	**197**	P	**Pn**	**05 43 48.5**	**-0.3**
MTA				S	**Sn**	**05 44 09.3**	**-0.6**
DGRG	**David-gareji**	**1.79**	**181**	P	**Pn**	**05 43 51.2**	**+0.2**
DGRG				S	**Sn**	**05 44 14.8**	**+0.9**
PYA	**Pyatigorsk**	**1.88**	**296**	P	**Pn**	**05 43 52.5**	**+0.3**
PYA				S	**Sn**	**05 44 15.5**	**-0.6**
BEYR	**Belyy Ugol+**	**2.04**	**293**	P	**Pn**	**05 43 54.5**	**+0.3**
BEYR				S	**Sn**	**05 44 18.9**	**-0.6**
BEYR				pmax	pmax		
	comp=Z,27nm,0.2s						
BEYR				smax			
	comp=N,389nm,0.4s						
BEYR	**Belyy Ugol+**	**2.04**	**293**	P	**Pn**	**05 43 54.5**	**+0.3**
	comp=N,27nm,0.2s						
BEYR				S	**Sn**	**05 44 18.9**	**-0.6**
	comp=N,389nm,0.4s						
KIV	**Kislovodsk**	**2.10**	**291**	*e*P	**Pn**	**05 43 55.1**	**0.0**
KIV				*e*		05 44 15.3	
KIV	**Kislovodsk**	**2.10**	**291**	*e*Pn	**Pn**	**05 43 55.0**	**0.0**
KIV				*e*Sn	**Sn**	**05 44 15.3**	**-5.8**
KIV	**Kislovodsk**	**2.10**	**291**	*e*Pn	**Pn**	**05 43 55.0**	**-0.1**
GOF	**Gofitskoye**	**2.50**	**318**	*e*P	**Pn**	**05 43 59.4**	**-0.8**
GOF				*i* S	**Sn**	**05 44 29.8**	**-0.4**
GOF				pmax	pmax		
	comp=Z,88nm,0.9s						
GOF				smax			
	comp=N,956nm,1.0s						
GOF	**Gofitskoye**	**2.50**	**318**	*e*P	**Pn**	**05 43 59.4**	**-0.8**
	comp=N,88nm,0.9s						
GOF				*i* S	**Sn**	**05 44 29.8**	**-0.4**
	comp=N,956nm,1.0s						
GNI	**Garni**	**3.13**	**189**	Pn	**Pn**	**05 44 08.9**	**+0.4**
	comp=N,12nm,0.3s,baz=268,slow=1.7,SNR=17						
GNI	**Garni**	**3.13**	**189**	Pn	**Pn**	**05 44 08.9**	**+0.4**
ANN	**Anapa**	**5.96**	**288**	*e*P	**Pn**	**05 44 39.9**	**-6.8**
ANN				pmax	pmax		
	comp=Z,53nm,1.4s						
AKTK	**Aktyubinsk**	**11.23**	**46**	Pn	**Pn**	**05 45 55.7**	**-2.5**
AKTK				Sn	**Sn**	**05 47 52.1**	**-10**
AKTO	**Aktyubinsk**	**11.23**	**46**	⇓P	**Pn**	**05 45 54.3**	**-4.0**
AKTO				⇓S	**Sn**	**05 47 53.7**	**-8.0**
	comp=Z,0.1nm,0.6s						
AKTO	**Aktyubinsk**	**11.23**	**46**	Pn	**Pn**	**05 45 55.7**	**-2.5**
	comp=Z,0.5nm,0.3s,baz=231,slow=13,SNR=12						
AKTO				Sn	**Sn**	**05 47 52.1**	**-10**
	comp=Z,1.2nm,0.3s,baz=110,slow=21,SNR=7.8						
AB31	**Akbulak array**	**11.72**	**54**	⇑P	**Pn**	**05 46 01.9**	**-2.8**
	comp=Z,0.7nm,0.3s,baz=242,slow=11,SNR=39						
AB31				⇓S	**Sn**	**05 48 03.6**	**-10**
	comp=Z,14nm,0.6s,baz=242,slow=24						
OBN	**Obninsk**	**13.20**	**337**	*e*P	**Pn**	**05 46 21.9**	**-2.4**
OBN				*e*S	**Sn**	**05 48 44.4**	**-5.1**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN	**Obninsk**	**13.20**	**337**	*e*P	**Pn**	**05 46 21.9**	**-2.4**
	comp=Z,6.0nm,0.7s						
ARU	**Arti**	**15.65**	**28**	*e*P	**Pn**	**05 46 59.6**	**+4.0**
ARU				*e*S	**S**	**05 49 52.1**	**-4.7**
ARU				MLR	MLR		
	comp=Z,70nm,17.0s						
ARU				MLR	MLR		
	comp=N,60nm,18.0s						
ARU				MLR	MLR		
	comp=E,50nm,22.0s						
ZRNK	**Zerenda**	**18.43**	**50**	*e*P	**P**	**05 47 29.4**	**+1.2**
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZRNK	**Zerenda**	**18.43**	**50**	*e*P	**P**	**05 47 29.4**	**+1.3**
	comp=Z,2.5nm,0.8s						
ZRNK	**Zerenda**	**18.43**	**50**	*e*P	**P**	**05 47 29.4**	**+1.2**
	comp=Z,2.5nm,0.8s						
BRVK	**Borovoye**	**19.19**	**51**	*e*P	**P**	**05 47 38.8**	**+2.3**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	**Borovoye**	**19.19**	**51**	*e*P	**P**	**05 47 38.8**	**+2.3**
	comp=Z,2.5nm,0.8s						
BRVK	**Borovoye**	**19.19**	**51**	*e*P	**P**	**05 47 38.8**	**+2.3**
	comp=Z,2.5nm,0.8s						
BVA0	**Borovoye Array**	**19.24**	**51**	P	**P**	**05 47 38.4**	**+1.4**
	baz=241,slow=8.2,SNR=4.1						
BVAR	**Borovoye Array**	**19.24**	**51**	P	**P**	**05 47 40.3**	**+3.4**
	comp=Z,0.4nm,0.3s,baz=243,slow=7.4,SNR=4.7						
BVAR	**Borovoye Array**	**19.24**	**51**	P	**P**	**05 47 38.4**	**+1.4**
	SNR=4.1						
VOSK	**Vostochnaya**	**19.48**	**52**	⇑P	**P**	**05 47 41.4**	**+1.8**
	comp=Z,0.9nm,0.7s						
CHKZ	**Chkalovo**	**19.61**	**49**	⇑P	**P**	**05 47 40.9**	**-0.1**
	comp=Z,0.8nm,0.4s						
CHKZ	**Chkalovo**	**19.61**	**49**	*e*P	**P**	**05 47 40.9**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CHKZ	**Chkalovo**	**19.61**	**49**	*e*P	**P**	**05 47 40.9**	**0.0**
	comp=Z,1.6nm,0.4s						
CHKZ	**Chkalovo**	**19.61**	**49**	*e*P	**P**	**05 47 40.9**	**0.0**
	comp=Z,1.6nm,0.4s						
FINES	**FINESS Array B**	**21.57**	**334**	P	**P**	**05 48 01.8**	**-0.3**
	comp=Z,0.8nm,0.4s,mb3.4,baz=137,slow=13,SNR=4.8						
VAE	**Valguarnera**	**24.23**	**267**	LR	LR	06 00 31.3	
	comp=Z,79nm,18.9s,baz=238,slow=44						
ARCES	**ARCESS Array B**	**28.28**	**345**	P	**P**	**05 49 04.8**	**+0.4**
	comp=Z,1.4nm,0.8s,mb3.5,baz=155,slow=11,SNR=3.1						
TORD	**Torodi Ar. Bea**	**48.02**	**245**	P	**P**	**05 51 49.1**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.7,baz=41,slow=7.6,SNR=14						
DBIC	**Dimbokro**	**57.13**	**245**	P	**P**	**05 52 56.2**	**-0.4**
	comp=Z,5.0nm,1.1s,mb4.5,baz=28,slow=8.3,SNR=3.4						
DBIC	**Dimbokro**	**57.13**	**245**	P	**P**	**05 52 56.2**	**-0.4**

*NEIC **17** 05:54:43.8, 35.30S×70.58W, h15km, ML3.6(GUC), After GUC.*
GUC 17 05:54:43.8±0.6**, 35.30S×70.58W, h15**km±2km**, MD3.8, ML3.6, 8C-12D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.61**	**299**	⇑*i*P	Pg	05 54 55.5	-0.4
NICH				*i* S	Sg	05 55 03.9	-0.1
SFDO	**San Fernando**	**0.77**	**332**	⇓*i*P	Pg	05 54 58.1	-0.7
SFDO				*i* S	Sg	05 55 09.0	0.0
TALC	**Talca**	**0.87**	**263**	⇑*i*P	Pb	05 55 00.1	-0.4
TALC				*i* S	Sb	05 55 11.8	-0.2
TALC				AML	AML	05 55 14.6	
	comp=N,4μm,0.5s						
TALC	**Talca**	**0.87**	**263**	⇑*i*P	Pb	05 55 00.1	-0.4
TALC				*i* S	Sb	05 55 11.8	-0.2
CICH	**Cipreses**	**0.98**	**8**	⇓*i*P	Pb	05 55 02.2	-0.4
CICH				*i* S	Sb	05 55 16.4	+1.0
LNCH	**Linares**	**1.00**	**236**	⇓*i*P	Pb	05 55 01.8	-1.0
LNCH				*i* S	Sb	05 55 15.9	+0.2
CACH	**El Canelo**	**1.18**	**359**	⇑*i*P	Pn	05 55 05.2	-0.5
CACH				*i* S	Sb	05 55 21.6	+0.7
CHCH	**Chadas Angostu**	**1.36**	**357**	⇓*i*P	Pn	05 55 08.6	+0.3
CHCH				*i* S	Sn	05 55 27.6	+1.6
TACH	**Talagante**	**1.67**	**350**	⇓*i*P	Pn	05 55 13.5	+1.1
TACH				*i* S	Sn	05 55 36.1	+2.6
PCH	**Pirque**	**1.68**	**2**	⇓*i*P	Pn	05 55 14.1	+1.6
PCH				*i* S	Sn	05 55 37.1	+3.4
ANTU	**Antumapu**	**1.73**	**358**	⇓*i*P	Pn	05 55 14.9	+1.7
ANTU				*i* S	Sn	05 55 38.2	+3.2
ANTU				AML	AML	05 55 45.7	
	comp=N,858nm,0.4s						
ANTU	**Antumapu**	**1.73**	**358**	⇓*i*P	Pn	05 55 14.9	+1.7
ANTU				*i* S	Sn	05 55 38.2	+3.2
CCHI	**Chillan**	**1.78**	**223**	⇓*i*P	Pn	05 55 15.5	+1.5
CCHI				*i* S	Sn	05 55 39.8	+3.4
CCHI				AML	AML	05 55 57.6	
	comp=N,650nm,0.5s						
CCHI	**Chillan**	**1.78**	**223**	⇓*i*P	Pn	05 55 15.5	+1.5
CCHI				*i* S	Sn	05 55 39.8	+3.4
RCDM	**Rinconada Maip**	**1.81**	**354**	⇑*i*P	Pn	05 55 16.0	+1.5
RCDM				*i* S	Sn	05 55 40.6	+3.4
RCDM				AML	AML	05 55 44.5	
	comp=E,833nm,0.2s						
RCDM	**Rinconada Maip**	**1.81**	**354**	⇑*i*P	Pn	05 55 16.0	+1.5
RCDM				*i* S	Sn	05 55 40.6	+3.4
SAN	**Santiago**	**1.84**	**358**	*i* P	Pn	05 55 16.6	+1.7
SAN				*i* S	Sn	05 55 41.7	+3.9
SAN				AML	AML	05 55 49.4	
	comp=E,755nm,0.5s						
SAN	**Santiago**	**1.84**	**358**	*i* P	Pn	05 55 16.6	+1.7
SAN				*i* S	Sn	05 55 41.7	+3.9
CLCH	**Cerro Calan**	**1.90**	**1**	⇑*i*P	Pn	05 55 17.7	+2.1
CLCH				*i* S	Sn	05 55 43.3	+4.1
CLCH				AML	AML	05 55 54.2	
	comp=E,937nm,0.7s						
FCH	**Farellones**	**1.98**	**7**	⇑*i*P	Pn	05 55 19.6	+2.9
FCH				*i* S	Sn	05 55 47.0	+5.7
FCH				AML	AML	05 55 54.7	
	comp=E,621nm,0.3s						
PEL	**Peldehue**	**2.15**	**358**	⇓*i*P	Pn	05 55 21.8	+2.7
PEL				*i* S	Sn	05 55 51.1	+5.6
PEL				AML	AML	05 56 00.9	
	comp=E,1μm,0.5s						
PEL	**Peldehue**	**2.15**	**358**	⇓*i*P	Pn	05 55 21.8	+2.7
PEL				*i* S	Sn	05 55 51.1	+5.6
IHA	**Instituto Hidr**	**2.43**	**338**	*i* P	Pn	05 55 25.4	+2.4
IHA				*i* S	Sn	05 55 57.4	+5.0

*ISCJB **17** 06:18:57.2±2.1, 3.4N±0.2×122.9E±0.3, h526km±26km, mb4.2/9, Error ellipse: s-maj=57.7km s-min=10.3km az=108.4*

NEIC **17** *06:18:58.2±1.3, 336N×12291E, h522km±15km, mb4.6/5, Error ellipse: s-maj=34.2km s-min=6.1km az=55.0*
IDC **17** *06:18:59.9±2.3, 329N×12284E, h547km±31km, mb3.2/6, mb1 3.3/6, mb1mx3.1/19, mbtmp4.1/6, Error ellipse: s-maj=82.8km s-min=12.4km az=67.0*
ISC 17 06:18:58.0±2.1**, 34N**±02×**1230E**±03**, h517**km±26km**, n16, σ0^{s}38**/16**, mb4.2**/9**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**7.25**	**292**	*e*P	**P**	**06 20 47.2**	**0.0**
KAKA	**Kakadu**	**18.55**	**150**	*e*P	**P**	**06 22 42.8**	**+0.4**
	8.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.51**	**173**	*e*P	**P**	**06 23 09.3**	**0.0**
	4.8nm,0.8s,mb4.2						
FITZ	**Fitzroy Crossi**	**21.51**	**173**	P	**P**	**06 23 08.5**	**-0.9**
	2.5nm,0.8s,mb3.9,baz=346,slow=8.0,SNR=5.3						
WRA	**Warramunga Arr**	**25.73**	**155**	P	**P**	**06 23 46.4**	**-0.5**
	2.9nm,0.5s,mb4.2,baz=336,slow=9.6,SNR=61						
WRA				ScP	ScP	06 29 45.8	-4.2
	0.3nm,0.6s,baz=339,slow=3.1,SNR=6.8						
WB2	**Warramunga Arr**	**25.73**	**155**	*e*P	**P**	**06 23 46.5**	**-0.4**
ASAR	**Alice Springs**	**28.92**	**159**	P	**P**	**06 24 15.0**	**+0.1**
	1.7nm,0.6s,mb3.8,baz=340,slow=7.2,SNR=18						
STKA	**Stephens Creek**	**39.28**	**155**	P	**P**	**06 25 42.7**	**+0.8**
	4.8nm,0.8s,mb4.1,baz=332,slow=9.8,SNR=5.8						
GUN	**Gumba**	**42.95**	**308**	*e*P	**P**	**06 26 11.1**	**0.0**
	30nm,0.8s,mb4.9						
PKI	**Pulchoki**	**43.17**	**308**	*e*P	**P**	**06 26 13.1**	**+0.4**
KKN	**Kakani**	**43.37**	**308**	*e*P	**P**	**06 26 14.1**	**-0.2**
	10nm,0.6s,mb4.5						
DMN	**Daman**	**43.42**	**308**	*e*P	**P**	**06 26 14.6**	**-0.1**
GKN	**Gorkha**	**43.97**	**308**	*e*P	**P**	**06 26 19.0**	**0.0**
KOLN	**Koldanda**	**44.69**	**307**	*e*P	**P**	**06 26 24.9**	**+0.3**
	17nm,0.6s,mb4.7						
SONM	**Songino Array**	**46.53**	**345**	P	**P**	**06 26 38.6**	**-0.1**
	1.9nm,0.8s,mb3.7,baz=160,slow=8.8,SNR=10						
MKAR	**Makanchi Array**	**55.76**	**327**	P	**P**	**06 27 45.1**	**-0.4**
	1.6nm,0.5s,mb3.5,baz=117,slow=8.6,SNR=13						

IDC 17 06:24:48.0±3.4**, 2047N**×**14396E, h0**km**, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.6**/19**, mbtmp3.8**/4**, Error ellipse: s-maj=191.5km s-min=32.1km az=91.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**41.25**	**194**	P	P	06 32 34.7	0.0
	0.8nm,0.7s,baz=10,slow=8.5,SNR=20						
FITZ	**Fitzroy Crossi**	**42.33**	**206**	P	P	06 32 45.3	+1.7
	1.4nm,0.6s,baz=28,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**44.95**	**193**	P	P	06 33 03.5	-1.2
	0.4nm,0.6s,baz=16,slow=7.1,SNR=7.8						
FINES	**FINESS Array B**	**84.60**	**335**	P	P	06 37 23.1	-0.1
	0.5nm,0.4s,baz=91,slow=7.0,SNR=5.1						

ISCJB **17** *06:28:44.7±0.9, 786S±007×7457W±008, h159km±16km, mb4.3/5, Error ellipse: s-maj=14.5km s-min=10.2km az=125.2*
NEIC **17** *06:28:45.6±1.3, 786S×7451W, h148km±16km, mb4.5/1, Error ellipse: s-maj=16.8km s-min=12.8km az=95.0*
IDC **17** *06:28:46.6±1.7, 796S×7472W, h177km±28km, mb3.9/3, mb1 3.7/8, mb1mx3.4/23, mbtmp4.3/8, Error ellipse: s-maj=28.6km s-min=13.0km az=68.0*
ISC 17 06:28:45.6±0.9**, 786S**±007×**7454W**±008**, h144**km±15km**, n16, σ0^{s}73**/17**, mb4.3**/5**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.92**	**282**	P	**Pn**	**06 29 45.5**	**+0.8**
	8.8nm,0.3s,baz=89,slow=7.2,SNR=147						
ATAH				S	**Sn**	**06 30 30.1**	**-0.3**
	31nm,0.3s,baz=34,slow=21,SNR=20						
NNA	**Nana**	**4.69**	**209**	P	**Pn**	**06 29 54.7**	**-0.1**
	21nm,0.3s,baz=33,slow=8.8,SNR=49						
NNA				S	**Sn**	**06 30 48.0**	**-0.6**
	37nm,0.3s,baz=222,slow=23,SNR=6.6						
LPAZ	**La Paz**	**10.46**	**144**	P	**Pn**	**06 31 12.2**	**+0.5**
	0.2nm,0.3s,baz=320,slow=9.7,SNR=12						
SAML	**Samuel**	**11.29**	**96**	*e*Pn	**Pn**	**06 31 21.2**	**-1.4**
	12nm,0.4s						
SAML				*e*Sn	**Sn**	**06 33 21.4**	**-5.9**
SIV	**San Ignacio**	**15.45**	**123**	P	**Pn**	**06 32 17.1**	**+1.3**
	0.6nm,0.3s,baz=311,slow=12,SNR=15						
SDV	**Santo Domingo**	**17.08**	**13**	P	**Pn**	**06 32 35.5**	**-0.1**
	1.5nm,0.3s,baz=259,slow=5.2,SNR=6.1						
PCRV	**Puerto La Cruz**	**20.45**	**29**	P	**P**	**06 33 12.5**	**+0.8**
	3.4nm,0.6s,baz=225,slow=4.3,SNR=3.5						
SJG	**San Juan**	**27.10**	**18**	P	**P**	**06 34 14.6**	**-0.3**
	26nm,0.5s,mb5.1,baz=190,slow=6.1,SNR=13						
PLCA	**Paso Flores**	**32.93**	**174**	P	**P**	**06 35 06.7**	**+0.4**
	0.7nm,0.4s,mb3.7,baz=302,slow=16,SNR=5.7						
PKME	**Peaks-Kenny Pk**	**53.09**	**5**	*e*P	**P**	**06 37 43.8**	**-4.3**
ISCO	**Idaho Springs**	**55.45**	**331**	*e*P	**P**	**06 38 09.7**	**+4.6**
	6.2nm,0.8s,mb4.4						
DBIC	**Dimbokro**	**70.97**	**80**	P	**P**	**06 39 47.0**	**-0.4**
	4.0nm,0.4s,mb4.5,baz=231,slow=6.1,SNR=11						
DBIC	**Dimbokro**	**70.97**	**80**	P	**P**	**06 39 47.0**	**-0.4**
TORD	**Torodi Ar. Bea**	**78.52**	**75**	P	**P**	**06 40 30.1**	**-0.7**
	1.2nm,0.4s,mb3.9,baz=260,slow=4.7,SNR=28						
WRA	**Warramunga Arr**	**140.37**	**225**	PKP	PKPdf	06 47 52.4	-5.1
	0.3nm,0.3s,baz=131,slow=2.7,SNR=23						
FITZ	**Fitzroy Crossi**	**147.41**	**218**	PKPbc	PKPbc	06 48 14.0	+1.6
	1.4nm,0.5s,baz=43,slow=2.6,SNR=10						

ISCJB **17** *06:33:45.0±0.9, 4309N±010×080W±005, h12km, Error ellipse: s-maj=14.3km s-min=4.7km az=23.9*
STR **17** *06:33:45.3±0.2, 4315N×083W, h2km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
MDD **17** *06:33:45.4±0.6, 4309N×081W, h12km±3km, mbLg0.7/5, Error ellipse: s-maj=8.4km s-min=2.7km az=10.0, PRXIMO*
LDG **17** *06:33:45.3±0.1, 4308N×080W, h10km, Md1.5/2, Error ellipse: s-maj=2.9km s-min=1.0km az=11.0*
ISC 17 06:33:45.2±1.0**, 431N**±01×**080W**±005**, h12**km**, n11, σ0^{s}22**/13**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATE	**Arette**	**0.07**	**99**	Pg	**Pg**	**06 33 47.8**	**+0.2**
ATE				Sg	**Sg**	**06 33 49.5**	**+0.1**
ATE	**Arette**	**0.07**	**99**	Pg	**Pg**	**06 33 47.8**	**+0.2**
ATE				Lg		06 33 49.5	
LARF	**Larrau**	**0.15**	**247**	Pg	**Pg**	**06 33 48.5**	**-0.2**
LARF				Sg	**Sg**	**06 33 51.1**	**-0.1**
LARF	**Larrau**	**0.15**	**247**	Pg	**Pg**	**06 33 48.6**	**-0.2**
LARF				Lg		06 33 51.1	
ETSF	**Etsaut**	**0.26**	**139**	*e*Pg	**Pg**	**06 33 50.6**	**0.0**
ETSF				*e*Sg	**Sg**	**06 33 54.6**	**+0.3**
	4.8nm,0.2s						
ETSF	**Etsaut**	**0.26**	**139**	Pg	**Pg**	**06 33 50.6**	**0.0**
ETSF				Lg		06 33 54.6	
	2.4nm,0.2s						
SJPF	**Ste Jean**	**0.31**	**273**	*e*Pg	**Pg**	**06 33 51.6**	**0.0**
SJPF				*e*Sg	**Sg**	**06 33 56.0**	**+0.2**
	4.2nm,0.3s						
SJPF	**Ste Jean**	**0.31**	**273**	Pg	**Pg**	**06 33 51.6**	**0.0**
SJPF				Lg		06 33 56.0	
	2.1nm,0.3s						
EALK	**Alkurruntz**	**0.54**	**284**	Lg		06 34 01.9	
	2.7nm,0.3s,SNR=7.9						
IUSE	**Utxeti**	**0.57**	**255**	Lg		06 34 03.2	
	0.9nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**0.80**	**120**	Pg	**Pg**	**06 34 00.2**	**-0.5**
	0.0nm,0.1s,SNR=7.9						
EBIE				Lg		06 34 10.9	
	1.0nm,0.2s,SNR=7.9						

MAN 17 06:47:28.9, 1095N×12473E, h1km**, mb3.1, ML4.4, MS1.9, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	**Palo**	**0.32**	**49**	*e*P	Pg	06 47 34.5	-0.7
PLP				*e*S	Sg	06 47 37.1	-2.2
LLP	**Lapu-Lapu**	**0.98**	**230**	*e*P	Pg	06 47 47.1	-0.7
LLP				*e*S	Sg	06 48 00.0	-0.4
TBP	**Tagbilaran**	**1.52**	**214**	*e*P	Pn	06 47 56.3	-0.9
TBP				*e*S	Sn	06 48 19.3	+1.8

IDC **17** *06:49:29.1±9.6, 3629N×7126E, h130km±87km, mb3.5/8, mb1 3.7/11, mb1mx3.5/24, mbtmp4.0/11, Error ellipse: s-maj=46.3km s-min=18.4km az=21.0*
ISCJB **17** *06:49:35.0±0.4, 3669N±003×7134E±007, h190km±6km, mb3.7/8, Error ellipse: s-maj=8.8km s-min=4.2km az=154.7*
NEIC **17** *06:49:34.4±2.3, 3664N×7121E, h164km±27km, mb4.4/8, Error ellipse: s-maj=23.5km s-min=6.6km az=65.0*
MOS **17** *06:49:35.6±1.2, 3675N×7137E, h195km, mb4.3/1, Error ellipse: s-maj=16.6km s-min=7.3km az=97.8*
NNC **17** *06:49:42.8±2.6, 3724N×7130E, h202km±21km, mb3.0, mpv4.0, Error ellipse: s-maj=23.6km s-min=15.0km az=23.0*
ISC 17 06:49:35.8±0.4**, 3669N**±003×**7134E**±007**, h183**km±6km**, n65, σ0^{s}97**/74**, mb3.7**/8**, 5C-9D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.89**	**170**	⇓P	**Pn**	**06 50 24.0**	**+0.7**
CHCP	**Chirah Chowk**	**3.41**	**152**	⇑P	**Pn**	**06 50 30.9**	**+1.4**
CHCP				S	**Sn**	**06 51 09.0**	**-2.5**
THW	**Thamme Wali**	**3.90**	**175**	⇑P	**Pn**	**06 50 36.1**	**+0.5**
SBDP	**Sheikh Budin**	**4.40**	**186**	⇓P	**Pn**	**06 50 42.0**	**0.0**
SARP	**Sargodha**	**4.88**	**167**	P	**Pn**	**06 50 47.9**	**-0.3**
DRP	**Derazinda**	**5.02**	**191**	⇑P	**Pn**	**06 50 50.2**	**+0.2**
DLH	**Dalhousie**	**5.63**	**136**	*e*P	**Pn**	**06 50 57.0**	**-0.9**
DLH				*e*P		06 52 00.0	
AML	**Almayashu**	**5.74**	**18**	P	**Pn**	**06 51 00.0**	**+0.7**
	SNR=57						
UCH	**Uchtor**	**6.06**	**23**	P	**Pn**	**06 51 04.9**	**+1.4**
	SNR=13						
EKS2	**Erkin-Say**	**6.26**	**17**	P	**Pn**	**06 51 06.6**	**+0.5**
	SNR=16						
AAK	**Ala-Archa**	**6.42**	**21**	P	**Pn**	**06 51 09.5**	**+1.3**
	SNR=10						
AAK	**Ala-Archa**	**6.42**	**21**	*e*PN	**Pn**	**06 51 07.5**	**-0.7**
AAK				*e*		06 52 20.8	
AAK				pmax	pmax		
	comp=Z,43nm,0.3s						
AAK	**Ala-Archa**	**6.42**	**21**	*e*P	**Pn**	**06 51 07.5**	**-0.7**
	comp=Z,43nm,0.3s						
AAK				*e*Sn	**Sn**	**06 52 20.8**	**-0.4**
KK31	**Karatay Array**	**6.44**	**355**	⇓P	**Pn**	**06 51 08.6**	**+0.1**
	comp=Z,20nm,0.3s,baz=170,slow=12,SNR=310						
KK31				⇓S	**Sn**	**06 52 17.1**	**-4.6**
	comp=Z,25nm,0.5s						
KKAR	**Karatay Array**	**6.44**	**355**	PN	**Pn**	**06 51 08.1**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KBK	**Karagaybulak**	**6.58**	**24**	P	**Pn**	**06 51 11.9**	**+1.6**
	SNR=12						
CHMS	**Chumysh**	**6.83**	**22**	P	**Pn**	**06 51 13.9**	**+0.3**
	SNR=14						
SDNR	**Sundarnagar**	**6.97**	**136**	*e*P	**Pn**	**06 51 15.0**	**-0.5**
SDNR				*e*S	**Sn**	**06 52 29.0**	**-5.3**
USP	**Ospenovka**	**7.01**	**19**	P	**Pn**	**06 51 15.6**	**-0.3**
	SNR=23						
TKM2	**Tokmak 2**	**7.04**	**26**	P	**Pn**	**06 51 17.2**	**+0.9**
	SNR=25						
TKM2	**Tokmak 2**	**7.04**	**26**	⇑P	**Pn**	**06 51 17.4**	**+1.0**
	comp=Z,2.3nm,0.6s						
TKM2				⇓S	**Sn**	**06 52 33.1**	**-2.7**
	comp=Z,2.6nm,0.8s						
TKM2	**Tokmak 2**	**7.04**	**26**	PN	**Pn**	**06 51 16.6**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,14nm,0.6s						
KLP	**Kalpa**	**7.70**	**130**	*e*P	**Pn**	**06 51 24.4**	**-0.6**
KLP				*e*S	**Sn**	**06 52 45.3**	**-6.2**
KLP				AML	AML	06 52 49.2	
	comp=E,204nm,0.4s						
KLP				AML	AML	06 52 51.5	
	comp=N,179nm,0.6s						
KHET	**Khetri**	**9.38**	**155**	*e*S	**Sn**	**06 53 24.5**	**-7.2**
KUDL	**Kundal**	**9.56**	**151**	*e*P	**Pn**	**06 51 48.5**	**-1.0**
KUDL				*e*S	**Sn**	**06 53 27.1**	**-8.9**
SONA	**Sohna**	**9.71**	**148**	*e*S	**Sn**	**06 53 29.6**	**-10**
MKAR	**Makanchi Array**	**12.98**	**36**	P	**Pn**	**06 52 33.5**	**0.0**
	comp=N,0.3nm,0.3s,baz=216,slow=12,SNR=5.3						
KOLN	**Koldanda**	**13.66**	**127**	*e*P	**Pn**	**06 52 40.9**	**-1.1**
	comp=N,5.6nm,0.4s						
GKN	**Gorkha**	**14.18**	**124**	*e*P	**Pn**	**06 52 49.2**	**+0.7**
KKN	**Kakani**	**14.75**	**123**	*e*P	**Pn**	**06 52 56.0**	**+0.5**
	comp=N,16nm,0.6s						
KKN	**Kakani**	**14.75**	**123**	*e*P	**Pn**	**06 52 56.0**	**+0.5**
KKN				pmax	pmax		
	comp=Z,16nm,0.6s						
DMN	**Daman**	**14.75**	**124**	*e*P	**Pn**	**06 52 55.8**	**+0.2**
	comp=Z,10nm,0.4s						
PKI	**Pulchoki**	**14.98**	**123**	*e*P	**Pn**	**06 52 59.8**	**+1.4**
	comp=Z,17nm,0.5s						
PKI	**Pulchoki**	**14.98**	**123**	*e*P	**Pn**	**06 52 59.8**	**+1.4**
PKI				pmax	pmax		
	comp=Z,17nm,0.5s						
AB31	**Akbulak array**	**15.05**	**330**	P	**Pn**	**06 52 58.1**	**-1.2**
	comp=Z,3.3nm,0.5s,baz=146,slow=12,SNR=53						
AB31				⇓S	**S**	**06 55 41.0**	**-5.8**
	comp=Z,2.2nm,0.5s						
AB31	**Akbulak array**	**15.05**	**330**	*i* P	**Pn**	**06 52 58.0**	**-1.3**
AB31				S	**S**	**06 55 34.5**	**-12**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AB31				smax			
	comp=Z,1.0nm,0.5s						
GUN	**Gumba**	**15.08**	**121**	*e*P	**Pn**	**06 53 01.1**	**+1.5**
JIRN	**Jiri**	**15.45**	**121**	*e*P	**Pn**	**06 53 05.9**	**+1.8**
VOSK	**Vostochnaya**	**16.04**	**359**	⇓P	**Pn**	**06 53 10.0**	**-1.3**
	comp=Z,4.4nm,0.7s						
VOSK	**Vostochnaya**	**16.04**	**359**	P	**Pn**	**06 53 08.4**	**-2.9**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZRNK	**Zerenda**	**16.35**	**355**	⇓P	**Pn**	**06 53 14.7**	**-0.3**
	comp=Z,4.9nm,0.6s						
ZRNK	**Zerenda**	**16.35**	**355**	*e*P	**Pn**	**06 53 14.3**	**-0.7**
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ZRNK	**Zerenda**	**16.35**	**355**	*e*P	**Pn**	**06 53 14.2**	**-0.7**
	comp=Z,7.1nm,0.6s						
BVA0	**Borovoye Array**	**16.35**	**358**	P	**Pn**	**06 53 14.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=212,slow=7.1,SNR=37						
BVAR	**Borovoye Array**	**16.35**	**358**	P	**Pn**	**06 53 15.1**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=171,slow=12,SNR=32						
BRVK	**Borovoye**	**16.39**	**358**	*e*P	**Pn**	**06 53 14.9**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**16.39**	**358**	*e*P	**Pn**	**06 53 14.9**	**-0.6**
	comp=Z,6.4nm,0.8s						
AKTK	**Aktyubinsk**	**16.76**	**329**	P	**Pn**	**06 53 20.2**	**+0.3**
AKTO	**Aktyubinsk**	**16.76**	**329**	⇓S	**S**	**06 56 19.6**	**-5.0**
	comp=Z,0.1nm,0.7s						
AKTO	**Aktyubinsk**	**16.76**	**329**	P	**Pn**	**06 53 20.2**	**+0.3**
	comp=Z,2.6nm,0.3s,baz=137,slow=10,SNR=35						
CHKZ	**Chkalovo**	**17.00**	**359**	⇑P	**Pn**	**06 53 22.2**	**-0.6**
	comp=Z,2.1nm,0.6s						
CHKZ	**Chkalovo**	**17.00**	**359**	*e*P	**Pn**	**06 53 21.9**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CHKZ	**Chkalovo**	**17.00**	**359**	*e*P	**Pn**	**06 53 21.9**	**-0.9**
	comp=Z,2.8nm,0.5s						
ZAL	**Zalesovo**	**19.62**	**24**	P	**P**	**06 53 50.5**	**+0.3**
	comp=Z,4.5nm,0.5s,baz=244,slow=7.1,SNR=15						
KIV	**Kislovodsk**	**22.94**	**297**	*e*P	**P**	**06 54 25.1**	**+1.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
AKASG	**Malin Array Be**	**33.04**	**309**	P	**P**	**06 55 54.2**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.7,baz=80,slow=7.3,SNR=4.8						
AKASG	**Malin Array Be**	**33.04**	**309**	P	**P**	**06 55 54.2**	**+0.5**
FINES	**FINESS Array B**	**37.48**	**326**	P	**P**	**06 56 32.8**	**+1.2**
	comp=Z,1.1nm,0.7s,mb3.6,baz=121,slow=18,SNR=3.4						
ARCES	**ARCESS Array B**	**41.08**	**337**	P	**P**	**06 57 02.0**	**+0.6**
	comp=Z,2.8nm,1.1s,mb3.8,baz=95,slow=8.6,SNR=5.7						
NB2	**NORSAR Subarra**	**44.40**	**323**	P	**P**	**06 57 27.6**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.4,baz=109,slow=7.9						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**06 57 28.0**	**0.0**
	comp=Z,0.5nm,0.4s,mb3.5,baz=97,slow=7.6,SNR=5.1						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**06 57 28.0**	**0.0**
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**07 00 00.9**	**-1.5**
	comp=Z,1.5nm,0.6s,mb4.0,baz=48,slow=5.9,SNR=20						
WRA	**Warramunga Arr**	**81.86**	**122**	P	**P**	**07 01 33.3**	**-1.2**
	comp=Z,0.7nm,0.5s,mb3.5,baz=323,slow=5.0,SNR=12						
ASAR	**Alice Springs**	**84.14**	**125**	P	**P**	**07 01 45.0**	**-1.2**
	comp=Z,0.9nm,0.7s,mb3.6,baz=312,slow=5.2,SNR=13						

IDC 17 06:55:32.9±2.2**, 181N**×**9668E, h0**km**, mb3.6**/4**, mb1 3.6**/5**, mb1mx3.4**/22**, mbtmp3.5**/5**, Error ellipse: s-maj=56.5km s-min=27.0km az=48.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.45**	**66**	Pn	Pn	06 56 13.9	-0.1
	0.9nm,0.3s,baz=286,slow=8.4,SNR=3.9						
WRA	**Warramunga Arr**	**42.79**	**122**	P	P	07 03 32.5	+0.3
	0.7nm,0.6s,baz=301,slow=9.0,SNR=8.3						
MKAR	**Makanchi Array**	**46.53**	**346**	P	P	07 04 01.4	-0.7
	0.6nm,0.6s,baz=160,slow=8.8,SNR=3.6						
SONM	**Songino Array**	**46.61**	**9**	P	P	07 04 03.0	+0.2
	0.3nm,0.4s,baz=201,slow=7.7,SNR=2.9						
BVAR	**Borovoye Array**	**55.51**	**341**	P	P	07 05 10.2	+0.5
	0.3nm,0.4s,baz=109,slow=7.8,SNR=2.9						

IDC **17** *07:07:04.0±1.1, 3351S×17921W, h0km, mb4.0/3, mb1 4.2/4, mb1mx4.0/13, mbtmp4.1/4, ML4.3/1, MS3.8/6, Ms1 3.8/6, ms1mx3.3/21, Error ellipse: s-maj=36.8km s-min=31.4km az=105.0*
ISC 17 07:07:06.1±2.7**, 3389S**±007×**1788W**±02**, h35**km±25km**, n36, σ1^{s}45**/27**, mb3.9**/3**, MS3.8**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.37**	**212**	PN	**Pn**	**07 08 11.3**	**+1.3**
MXZ				SN	**Sn**	**07 09 00.5**	**+0.9**
PUZ	**Puketiti**	**4.82**	**209**	PN	**Pn**	**07 08 17.6**	**+1.4**
PUZ				SN	**Sn**	**07 09 11.5**	**+0.7**
KUZ	**Kuaotunu**	**5.33**	**236**	PN	**Pn**	**07 08 26.0**	**+2.8**
MWZ	**Matawai**	**5.36**	**213**	PN	**Pn**	**07 08 23.9**	**+0.4**
MWZ				SN	**Sn**	**07 09 24.3**	**+0.4**
URZ	**Urewera**	**5.49**	**216**	Pn	**Pn**	**07 08 26.9**	**+1.5**
	9.4nm,0.3s,baz=359,slow=4.9,SNR=48						
URZ				Sn	**Sn**	**07 09 27.6**	**+0.2**
	10nm,0.3s,baz=134,slow=16,SNR=7.2						
URZ	**Urewera**	**5.49**	**216**	PN	**Pn**	**07 08 26.1**	**+0.7**
URZ				*e*SN	**Sn**	**07 09 26.5**	**-0.8**
OUZ	**Omahuta**	**6.44**	**256**	PN	**Pn**	**07 08 39.8**	**+1.4**
OUZ				SN	**Sn**	**07 09 49.6**	**-1.1**
BFZ	**Birch Farm**	**7.86**	**209**	PN	**Pn**	**07 08 55.5**	**-2.3**
TIWZ	**Tintock**	**8.09**	**210**	SN	**Sn**	**07 10 27.1**	**-4.1**
MRZ	**Mangatainoka R**	**8.12**	**212**	PN	**Pn**	**07 08 59.8**	**-1.7**
MRZ				SN	**Sn**	**07 10 27.5**	**-4.6**
KIW	**Kapiti Island**	**8.59**	**214**	SN	**Sn**	**07 10 37.5**	**-6.0**
NNZ	**Nelson**	**9.61**	**218**	SN	**Sn**	**07 10 59.9**	**-8.7**
QRZ	**Quartz Range**	**9.79**	**222**	SN	**Sn**	**07 11 05.3**	**-7.7**
THZ	**Tophouse**	**10.25**	**218**	PN	**Pn**	**07 09 27.4**	**-3.3**
THZ				SN	**Sn**	**07 11 17.2**	**-7.1**
KHZ	**Kahutara**	**10.45**	**213**	PN	**Pn**	**07 09 30.0**	**-3.3**
MQZ	**McQueen's Vall**	**11.86**	**212**	SN	Sx	07 11 51.0	
DZM	**Mont Dzumac**	**17.56**	**308**	LR	LR	07 16 30.4	
	comp=Z,205nm,18.4s,baz=85,slow=33						
TBI	**Tubuai**	**27.70**	**75**	*e*LR	LR	07 19 49.1	
	92nm,26.2s,baz=234						
PPT	**Papeete**	**30.77**	**65**	*e*LR	LR	07 21 10.3	
	86nm,25.5s,baz=227						
PPT	**Papeete**	**30.77**	**65**	LR	LR	07 23 12.2	
	comp=Z,86nm,19.6s,MS3.4,baz=252,slow=31						
STKA	**Stephens Creek**	**33.21**	**262**	LR	LR	07 26 40.6	
	comp=Z,210nm,18.8s,MS3.9,baz=23,slow=36						
RKT	**Rikitea**	**39.69**	**86**	*e*LR	LR	07 25 23.6	
	102nm,28.5s						
ASAR	**Alice Springs**	**42.40**	**271**	P	**P**	**07 14 57.5**	**+0.4**
	2.3nm,0.8s,mb3.8,baz=116,slow=7.6,SNR=14						
ASAR				LR	LR	07 30 23.5	
	comp=Z,126nm,21.6s,MS3.8,baz=0.7,slow=33						
WB2	**Warramunga Arr**	**43.69**	**276**	*e*P	**P**	**07 15 07.5**	**-0.1**
WRA	**Warramunga Arr**	**43.70**	**276**	P	**P**	**07 15 07.5**	**-0.2**
	1.3nm,0.4s,mb4.0,baz=117,slow=7.5,SNR=37						
FITZ	**Fitzroy Crossi**	**51.80**	**273**	LR	LR	07 35 52.2	
	comp=Z,119nm,18.5s,MS4.0,baz=64,slow=34						
NWAO	**Narrogin (SRO)**	**52.63**	**252**	LR	LR	07 36 58.4	
	comp=Z,134nm,19.1s,MS4.0,baz=229,slow=34						
MAW	**Mawson**	**68.83**	**201**	P	**P**	**07 18 12.2**	**+5.3**
	1.1nm,0.7s,mb3.9,baz=116,slow=6.2,SNR=4.2						
ARCES	**ARCESS Array B**	**141.84**	**346**	PKP	PKPdf	07 26 35.9	+1.9
	3.5nm,1.1s,baz=27,slow=5.7,SNR=3.7						
JOF	**Joensuu**	**145.38**	**336**	*e*p	PKPbc	07 26 39.9	-0.3
	0.8nm,0.4s						
FINES	**FINESS Array B**	**148.15**	**338**	PKPbc	PKPbc	07 26 49.0	+0.8
	1.3nm,0.5s,baz=34,slow=3.9,SNR=12						
NB2	**NORSAR Subarra**	**152.08**	**350**	PKPa	PKPbc	07 26 59.1	+1.5
	comp=Z,1.0nm,0.6s,baz=15,slow=2.5						
NOA	**NORSAR Array B**	**152.08**	**350**	PKPbc	PKPbc	07 26 58.7	+1.1
	comp=Z,0.9nm,0.8s,baz=15,slow=4.6,SNR=7.7						
BRTR	**Keskin Array B**	**153.50**	**292**	PKPbc	PKPbc	07 27 03.6	+2.8
	comp=Z,0.5nm,0.6s,baz=168,slow=3.7,SNR=3.3						
AKASG	**Malin Array Be**	**153.57**	**318**	PKPbc	PKPbc	07 27 03.6	+2.6
	comp=Z,0.2nm,0.2s,baz=56,slow=2.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**159.35**	**181**	PKPab	PKPab	07 27 42.5	+4.1
	comp=Z,0.8nm,0.8s,baz=161,slow=4.9,SNR=4.4						

IDC 17 07:25:05.6±1.7**, 419N**×**9312E, h0**km**, mb3.8**/6**, mb1 4.0**/7**, mb1mx3.7**/23**, mbtmp3.8**/7**, Error ellipse: s-maj=67.0km s-min=23.1km az=42.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.96**	**103**	Pn	Pn	07 26 35.8	+0.8
	2.8nm,0.3s,baz=304,slow=11,SNR=10						
PSI				Sn	Sn	07 27 39.5	-4.3
	0.7nm,0.3s,baz=0.0,slow=17,SNR=1.8						
MKAR	**Makanchi Array**	**43.47**	**349**	P	P	07 33 10.4	0.0
	0.4nm,0.4s,baz=153,slow=9.2,SNR=3.7						
WRA	**Warramunga Arr**	**47.06**	**122**	P	P	07 33 39.3	+0.3
	0.9nm,0.7s,baz=302,slow=9.1,SNR=6.3						
ZAL	**Zalesovo**	**50.06**	**354**	P	P	07 34 02.3	+0.3
	1.2nm,0.4s,baz=331,slow=3.3,SNR=4.0						
BVAR	**Borovoye Array**	**52.16**	**343**	P	P	07 34 17.4	-0.4
	1.0nm,0.7s,baz=128,slow=9.6,SNR=8.0						
BRTR	**Keskin Array B**	**64.10**	**312**	P	P	07 35 41.8	+0.3
	0.6nm,0.9s,baz=139,slow=9.0,SNR=3.2						
GERES	**GERESS Array B**	**79.89**	**319**	P	P	07 37 16.8	+0.6
	0.2nm,0.3s,baz=114,slow=6.5,SNR=3.8						

IDC **17** *07:25:12.8±1.4, 416N×9309E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.8/23, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=47.1km s-min=22.2km az=44.0*
NEIC **17** *07:25:17.3±0.7, 421N×9315E, h30km, mb4.3/1, Error ellipse: s-maj=20.3km s-min=9.6km az=28.0*
ISCJB **17** *07:25:18.2±4.0, 43N±02×933E±02, h52km±36km, mb4.0/8, Error ellipse: s-maj=42.6km s-min=25.1km az=102.4*
ISC 17 07:25:20.5±3.4**, 43N**±02×**933E**±02**, h53**km±31km**, n19, σ0^{s}50**/18**, mb4.0**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.82**	**105**	Pn	**Pn**	**07 26 43.9**	**-0.2**
	4.4nm,0.3s,baz=280,slow=8.9,SNR=12						
PSI	**Prapat**	**5.82**	**105**	Pn	**Pn**	**07 26 43.9**	**-0.2**
KULM	**Kulim**	**7.40**	**82**	*e*Pn	**Pn**	**07 27 06.1**	**+0.3**
NACB	**Ninganchiao**	**33.67**	**51**	*e*P	**P**	**07 31 55.5**	**-0.7**
MKAR	**Makanchi Array**	**43.38**	**349**	P	**P**	**07 33 17.8**	**+0.1**
	0.8nm,0.5s,mb3.7,baz=164,slow=7.2,SNR=6.2						
MKAR	**Makanchi Array**	**43.38**	**349**	P	**P**	**07 33 17.8**	**+0.1**
SONM	**Songino Array**	**44.80**	**13**	P	**P**	**07 33 29.8**	**+0.7**
	0.3nm,0.5s,mb3.3,baz=198,slow=9.1,SNR=3.2						
WRA	**Warramunga Arr**	**46.98**	**122**	P	**P**	**07 33 46.4**	**+0.2**
	0.9nm,0.7s,mb3.8,baz=301,slow=9.5,SNR=7.7						
WRA	**Warramunga Arr**	**46.98**	**122**	P	**P**	**07 33 46.4**	**+0.2**
ZAL	**Zalesovo**	**49.96**	**353**	P	**P**	**07 34 09.7**	**+0.6**
	2.8nm,0.4s,mb4.6,baz=344,slow=4.1,SNR=6.1						
ZAL	**Zalesovo**	**49.96**	**353**	P	**P**	**07 34 09.7**	**+0.6**
BVAR	**Borovoye Array**	**52.10**	**343**	P	**P**	**07 34 24.3**	**-0.8**
	1.7nm,0.7s,mb4.1,baz=142,slow=7.5,SNR=8.1						
BVAR	**Borovoye Array**	**52.10**	**343**	P	**P**	**07 34 24.3**	**-0.8**
CHKZ	**Chkalovo**	**52.60**	**343**	P	**P**	**07 34 28.5**	**-0.4**
	2.1nm,0.5s,mb4.3						
BRTR	**Keskin Array B**	**64.15**	**312**	P	**P**	**07 35 49.1**	**-0.2**
	0.8nm,0.6s,mb3.9,baz=139,slow=6.4,SNR=4.6						
BRTR	**Keskin Array B**	**64.15**	**312**	P	**P**	**07 35 49.1**	**-0.2**
GERES	**GERESS Array B**	**79.92**	**319**	P	**P**	**07 37 24.2**	**+0.5**
	0.6nm,0.5s,mb3.8,baz=96,slow=5.4,SNR=5.2						
GERES	**GERESS Array B**	**79.92**	**319**	P	**P**	**07 37 24.2**	**+0.5**
CPUP	**Villa Florida**	**144.37**	**229**	PKP	PKPdf	07 44 50.6	0.0
	0.4nm,0.5s,baz=135,slow=4.3,SNR=4.1						

TRN 17 07:30:31.7, 1880N×6294W, h35km
NEIC 17 07:30:34.0, 1886N×6293W, h37km, MD3.5(RSPR), After RSPR.
RSPR 17 07:30:34.0, 1886N×6293W, h37km±14km, MD3.5/5, MD3.5/5, 8C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.66**	**255⇑**	eP	Pn	07 30 59.8	-0.8
TBVI				eS	Sn	07 31 19.3	-1.3
STVI	**Saint Thomas**	**1.99**	**256⇑**	eP	Pn	07 31 04.0	-1.1
STVI				eS	Sn	07 31 27.4	-1.3
CULB	**Culebra**	**2.32**	**256**	eP	Pn	07 31 08.9	-0.8
CULB				eS	Sn	07 31 36.0	-1.1
MTP	**Monte Pirata**	**2.60**	**254⇑**	eP	Pn	07 31 12.8	-0.8
MTP				eS	Sn	07 31 43.3	-0.6
CBYP	**Canovanas**	**2.84**	**259⇑**	eP	Pn	07 31 15.7	-1.1
CBYP				eS	Sn	07 31 49.3	-0.4
HUMP	**Col San Antoni**	**2.86**	**256⇑**	eP	Pn	07 31 16.8	-0.3
HUMP	**Col San Antoni**	**2.86**	**256⇑**	eP	Pn	07 31 16.8	-0.4
HUMP				eS	Sn	07 31 49.6	-0.8
HUMP	**Col San Antoni**	**2.86**	**256⇑**	eP	Pn	07 31 16.8	-0.3
HUMP				eS	Sn	07 31 49.6	-0.8
CPD	**Cerro la Pandu**	**2.95**	**254⇑**	eP	Pn	07 31 17.8	-0.5

TIR 17 07:35:15.3, 3994N×2090E, h15km
ATH 17 07:35:16.4, 3991N×2085E, h19km, MD3.7/9
ISCJB 17 07:35:16.3±0.3, 3994N±002×2086E±002, h3km±3km, Error ellipse: s-maj=3.2km s-min=2.6km az=82.4
CSEM 17 07:35:16.6±0.1, 3994N×2083E, h2km, MD3.7, Error ellipse: s-maj=1.3km s-min=1.2km az=154.0
NEIC 17 07:35:16.4, 3991N×2085E, h19km, MD3.7(ATH), After ATH.
THE 17 07:35:17.1, 3996N×2085E, h1km, ML3.3
ISC 17 07:35:17.1±0.3, 3994N±002×2086E±002, h5km±3km, n47, σ0.89/74, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.28**	**182**	ePB	**Pg**	**07 35 21.8**	**-0.7**
JAN				eSB	**Sg**	**07 35 26.2**	**0.0**
LSK	**Leskovik**	**0.29**	**317**	i Pg	**Pg**	**07 35 22.4**	**-0.4**
LSK				i Sg	**Sg**	**07 35 27.1**	**+0.5**
MEV	**Metsovon**	**0.32**	**118**	ePg	**Pg**	**07 35 23.7**	**+0.4**
IGT	**Igoumenitsa**	**0.57**	**225**	ePg	**Pg**	**07 35 27.0**	**-1.1**
IGT				eSg	**Sg**	**07 35 37.1**	**+1.5**
SRN	**Sarande**	**0.67**	**265**	i Pg	**Pg**	**07 35 29.1**	**-0.8**
SRN				i Sg	**Sg**	**07 35 39.8**	**+1.3**
KBN	**Korca**	**0.69**	**355**	i Pg	**Pg**	**07 35 29.3**	**-1.0**
KBN				i Sg	**Sg**	**07 35 42.1**	**+2.8**
KZN	**Kozani**	**0.79**	**62**	ePN	**Pg**	**07 35 31.9**	**-0.3**
KZN				eSN	**Sg**	**07 35 44.1**	**+1.6**
KEK	**Kerkira**	**0.85**	**255**	ePN	**Pg**	**07 35 32.2**	**-1.2**
KEK				eSN	**Sg**	**07 35 44.3**	**-0.1**
FNA	**Florina**	**0.93**	**25**	ePg	**Pg**	**07 35 34.3**	**-0.7**
	comp=Z,12nm,0.4s						
FNA				eSg	**Sg**	**07 35 47.6**	**+0.5**
BIA	**Bitola**	**1.14**	**18**	ePg	**Pg**	**07 35 37.2**	**-1.7**
BIA				eSg	**Sg**	**07 35 53.6**	**-0.1**
BIA	**Bitola**	**1.14**	**18**	ePg	**Pg**	**07 35 36.4**	**-2.5**
OHR	**Ohrid**	**1.17**	**358**	ePg	**Pg**	**07 35 38.8**	**-0.8**
OHR				eSg	**Sg**	**07 35 55.1**	**+0.3**
OHR	**Ohrid**	**1.17**	**358**	ePg	**Pg**	**07 35 40.0**	**+0.3**
OHR				eSg	**Sg**	**07 35 54.7**	**-0.1**
OHR	**Ohrid**	**1.17**	**358**	ePg	**Pg**	**07 35 38.8**	**-0.8**
OHR				eSg	**Sg**	**07 35 54.7**	**-0.1**
LKD	**Levkas**	**1.24**	**188**	ePg	**Pg**	**07 35 40.3**	**-0.5**
LKD				eSg	**Sg**	**07 35 59.2**	**+2.3**
EVR	**Evrytania**	**1.25**	**144**	ePN	**Pn**	**07 35 39.9**	**-1.4**
LIT	**Litokhoron**	**1.26**	**82**	ePg	**Pg**	**07 35 40.4**	**-0.9**
	comp=Z,14nm,0.4s						
LIT				eSg	**Sg**	**07 35 59.8**	**+2.2**
AGG	**Agios Georgios**	**1.46**	**128**	ePg	**Pg**	**07 35 43.9**	**-1.1**
AGG				eSg	**Sg**	**07 36 04.9**	**+0.9**
GRG	**Griva**	**1.56**	**49**	ePg	**Pn**	**07 35 45.4**	**0.0**
GRG				eSg	**Sg**	**07 36 07.0**	**-0.1**
GRG	**Griva**	**1.56**	**49**	ePg	**Pn**	**07 35 45.4**	**0.0**
GRG				eSg	**Sg**	**07 36 06.9**	**-0.2**
THE	**Thessaloniki**	**1.75**	**66**	ePb	**Pn**	**07 35 48.3**	**+0.2**
THE				eSb	**Sb**	**07 36 11.5**	**-0.5**
VLS	**Valsamata**	**1.77**	**187**	ePN	**Pn**	**07 35 48.0**	**-0.3**
VLS				eSN	**Sn**	**07 36 11.5**	**+0.3**
HORT	**Hortiatis**	**1.84**	**68**	ePb	**Pn**	**07 35 49.2**	**0.0**
HORT				eSb	**Sb**	**07 36 13.8**	**-0.5**
HORT	**Hortiatis**	**1.84**	**68**	ePb	**Pn**	**07 35 49.2**	**0.0**
HORT				eSb	**Sb**	**07 36 13.9**	**-0.5**
VAY	**Valandovo**	**1.90**	**43**	ePb	**Pn**	**07 35 50.3**	**+0.2**
VAY				eSb	**Sb**	**07 36 15.3**	**-0.9**
VAY	**Valandovo**	**1.90**	**43**	ePn	**Pn**	**07 35 50.6**	**+0.5**
VAY	**Valandovo**	**1.90**	**43**	ePn	**Pn**	**07 35 50.6**	**+0.5**
NEO	**Neokhori**	**1.93**	**108**	ePN	**Pn**	**07 35 50.5**	**0.0**
RLS	**Riolos of Patr**	**1.94**	**166**	ePN	**Pn**	**07 35 50.3**	**-0.3**
KNT	**Kendrikon**	**1.98**	**51**	ePb	**Pn**	**07 35 50.6**	**-0.6**
KNT				eSb	**Sn**	**07 36 16.6**	**+0.3**
PLG	**Polygyros**	**2.03**	**77**	ePB	**Pn**	**07 35 51.5**	**-0.4**
LKR	**Lokris**	**2.10**	**127**	ePN	**Pn**	**07 35 52.5**	**-0.4**
SOH	**Sokhos**	**2.10**	**64**	ePn	**Pn**	**07 35 53.5**	**+0.6**
SOH				eSn	**Sn**	**07 36 20.4**	**+1.1**
LCI	**Lecce**	**2.15**	**282**	Pn	**Pn**	**07 35 54.2**	**+0.7**
PAIG	**Paliouri**	**2.17**	**89**	ePn	**Pn**	**07 35 53.4**	**-0.5**
PAIG				eSn	**Sn**	**07 36 20.9**	**-0.1**
PAIG	**Paliouri**	**2.17**	**89**	ePn	**Pn**	**07 35 53.3**	**-0.5**
PAIG				eSn	**Sn**	**07 36 20.9**	**-0.1**
OUR	**Ouranopolis**	**2.42**	**80**	ePn	**Pn**	**07 35 57.7**	**+0.4**
MMB	**Musomiste**	**2.73**	**52**	ePn	**Pn**	**07 36 00.7**	**-0.9**
MMB				eSn	**Sn**	**07 36 35.1**	**+0.1**
VTS	**Vitosha**	**3.19**	**33**	ePn	**Pn**	**07 36 08.5**	**+0.6**
SG1	**Sgolgore (BA)**	**3.32**	**287**	ePn	**Pn**	**07 36 08.6**	**-1.0**
CUC	**Castrocucco**	**3.88**	**272**	Pn	**Pn**	**07 36 18.6**	**+1.3**
GRUS	**Gruza**	**3.95**	**358**	ePn	**Pn**	**07 36 19.6**	**+1.3**
SLCN	**Sala Consilina**	**4.03**	**278**	Pn	**Pn**	**07 36 19.3**	**-0.1**
BBLS	**Bajina Basta -**	**4.08**	**345**	ePn	**Pb**	**07 36 29.2**	**-0.1**
FGMS	**Monte Sant'Ang**	**4.12**	**297**	Pn	**Pn**	**07 36 20.1**	**-0.6**
DIVS	**Divcibare**	**4.21**	**351**	ePn	**Pn**	**07 36 24.9**	**+3.0**
DIVS	**Divcibare**	**4.21**	**351**	ePn	**Pn**	**07 36 22.9**	**+1.0**

MAN 17 08:08:50.1, 1809N×12078E, h2km, mb2.1, ML3.8, MS2.1, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.28**	**326⇓**	iP	Pg	08 08 56.0	+0.4
CVP	**Callao Caves**	**1.06**	**111⇑**	iP	Pg	08 09 10.0	-0.5
CVP				i S	Sg	08 09 26.0	+1.7

MOS 17 08:29:12.0±0.8, 2894S×6161E, h10km, mb4.8/8, Error ellipse: s-maj=19.9km s-min=11.7km az=90.0
ISCJB 17 08:29:12.3±0.3, 2892S±007×6158E±008, h10km, mb4.6/36, MS4.5/7, Error ellipse: s-maj=10.2km s-min=9.8km az=87.5
IDC 17 08:29:12.3±0.5, 2888S×6157E, h0km, mb4.3/17, mb1 4.4/18, mb1mx4.3/28, mbtmp4.2/18, ML4.0/1, Error ellipse: s-maj=17.3km s-min=14.2km az=30.0
HRVD 17 08:29:13.9±0.4, 2892S×6134E, h12km, MW4.9/62, Centroid moment Tensor Solution. LP body waves: s21,c25;Mantle waves: s62,c78; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.45±.14; $M_{\theta\theta}$3.19±.13; $M_{\phi\phi}$-0.74±.17; $M_{r\theta}$-1.03±.34; $M_{\theta\phi}$0.30±.11; $M_{\phi r}$0.60±.43; Best double couple: $M_0$3.10800×10^{16} NP1:ϕ_s247.00000°,δ38.00000°,λ-119.00000°. NP2: ϕ_s102.00000°,δ57.00000°,λ-69.00000°. Principal axes: T 3.3820, Plg10.0000°, Azm177.0000°; N -0.5530, Plg18.0000°, Azm270.0000°; P -2.8340, Plg70.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 17 08:29:13.9±0.2, 2890S×6156E, h10km, mb4.6/7 Error ellipse: s-maj=7.6km s-min=6.8km az=27.0
BJI 17 08:29:13.9, 2890S×6160E, h10km, mB4.9, mb4.9, Ms4.8, Msz4.4
CSEM 17 08:29:22.9, 2747S×6181E, h33km, mb5.6
ISC 17 08:29:14.0±0.3, 2890S±007×6155E±008, h10km, (h17km±2.5km:pP-P), n81, σ0.78/64, mb4.6/36, MS4.5/7, 5C-4D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.67**	**305**	Pn	**Pn**	**08 33 07.4**	**-0.3**
	0.6nm,0.3s,baz=267,slow=14,SNR=3.7						
OPO				Sn	**Sn**	**08 36 02.4**	**-10**
	0.6nm,0.3s,baz=324,slow=17,SNR=4.3						
BOSA	**Boshof**	**31.74**	**262**	P	**P**	**08 35 38.3**	**+0.2**
	10nm,0.9s,mb4.7,baz=98,slow=9.5,SNR=13						
LBTB	**Lobatse**	**32.20**	**268**	P	**P**	**08 35 42.2**	**+0.1**
	7.0nm,0.8s,mb4.5,baz=131,slow=8.9,SNR=5.8						
MAW	**Mawson**	**38.74**	**179⇑**	iP	**P**	**08 36 38.4**	**0.0**
	3.7nm,0.7s,mb4.2						
MAW	**Mawson**	**38.74**	**179**	P	**P**	**08 36 38.6**	**+0.3**
	4.6nm,0.8s,mb4.2,baz=352,slow=9.1,SNR=16						
MAW	**Mawson**	**38.74**	**179⇑**	iP	**P**	**08 36 38.4**	**0.0**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TSUM	**Tsumeb**	**41.09**	**274**	P	**P**	**08 36 59.0**	**+1.0**
	comp=Z,2.4nm,0.8s,mb3.9,baz=240,slow=22,SNR=4.1						
SYO	**Syowa Base**	**42.14**	**192⇓**	eP	**P**	**08 37 06.1**	**-0.4**
SYO	**Syowa Base**	**42.14**	**192⇓**	epP	pP	08 37 08.8	-0.8
SNAA	**Sanae**	**54.83**	**200**	P	**P**	**08 38 43.6**	**-0.6**
	comp=Z,2.0nm,1.0s,mb4.1,baz=59,slow=6.3,SNR=9.1						
SNAA	**Sanae**	**54.83**	**200**	eP	**P**	**08 38 43.6**	**-0.7**
SNAA				e	pP	08 38 46.8	-0.7
SNAA				e		08 38 52.3	
SNAA				e		08 38 58.6	
SNAA	**Sanae**	**54.83**	**200**	eP	**P**	**08 38 43.6**	**-0.7**
SNAA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SNAA	**Sanae**	**54.83**	**200**	eP	**P**	**08 38 43.6**	**-0.7**
	comp=Z,5.3nm,1.0s,mb4.5						
FITZ	**Fitzroy Crossi**	**59.15**	**95**	P	**P**	**08 39 16.5**	**+1.6**
	comp=Z,1.4nm,0.9s,mb4.0,baz=218,slow=12,SNR=2.3						
KOLN	**Koldanda**	**60.18**	**23**	eP	**P**	**08 39 21.8**	**-0.2**
	comp=Z,14nm,0.4s,mb5.3						
DMN	**Daman**	**60.55**	**24**	eP	**P**	**08 39 24.1**	**-0.4**
GKN	**Gorkha**	**60.74**	**23**	eP	**P**	**08 39 25.7**	**-0.1**
	comp=Z,19nm,0.4s,mb5.6						
KKN	**Kakani**	**60.78**	**24**	eP	**P**	**08 39 25.9**	**-0.2**
	comp=Z,74nm,1.4s,mb5.6						
KKN	**Kakani**	**60.78**	**24**	eP	**P**	**08 39 25.9**	**-0.2**
KKN				pmax	pmax		
	comp=Z,74nm,1.4s,mb5.6						
GUN	**Gumba**	**61.10**	**25**	eP	**P**	**08 39 28.7**	**+0.4**
	comp=Z,146nm,1.5s						
ASAR	**Alice Springs**	**64.18**	**104**	P	**P**	**08 39 48.3**	**-0.5**
	comp=Z,1.8nm,0.7s,mb4.2,baz=247,slow=6.2,SNR=18						
VNDA	**Vanda**	**64.21**	**166**	P	**P**	**08 39 48.5**	**-0.5**
	comp=Z,1.4nm,0.7s,mb4.1,baz=266,slow=7.0,SNR=10						
LSA	**Lhasa**	**64.76**	**28**	eP	**P**	**08 39 53.4**	**+0.8**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
LSA	**Lhasa**	**64.76**	**28**	eP	**P**	**08 39 53.4**	**+0.8**
	comp=Z,3.2nm,0.4s,mb4.7						
WRA	**Warramunga Arr**	**65.98**	**100**	P	**P**	**08 40 00.0**	**-0.5**
	comp=Z,2.1nm,0.9s,mb4.2,baz=247,slow=5.7,SNR=12						
KMI	**Kunming**	**66.72**	**41**	P	**P**	**08 40 09.1**	**+3.8**
KMI				AP	pP	08 40 12.4	+3.9
KMI				XP	sP	08 40 13.8	+4.1
KMI				PP	PP	08 42 36.1	+3.9
KMI				S	S	08 48 59.4	+2.2
KMI				SS	SS	08 53 18.3	+3.5
KMI				SSS		08 56 20.8	
KMI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.7						
KMI				AMB	AMB		
	comp=Z,41nm,3.2s						
KMI				LR	LR		
	comp=N,171nm,19.0s						
KMI				LR	LR		
	comp=E,117nm,24.5s						
KMI				LR	LR		
	comp=Z,154nm,18.4s,MS4.2						
STKA	**Stephens Creek**	**67.57**	**115**	P	**P**	**08 40 10.6**	**0.0**
	comp=Z,2.7nm,1.0s,mb4.2,baz=283,slow=14,SNR=3.0						
TORD	**Torodi Ar. Bea**	**71.32**	**297**	P	**P**	**08 40 34.0**	**+0.2**
	comp=Z,3.6nm,0.8s,mb4.4,baz=109,slow=5.2,SNR=20						
CD2	**Chengdu**	**71.79**	**37**	eP	**P**	**08 40 37.4**	**+0.7**
AAK	**Ala-Archa**	**72.17**	**10⇑**	eP	**P**	**08 40 37.7**	**-1.2**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
BRTR	**Keskin Array B**	**73.05**	**338**	P	**P**	**08 40 44.1**	**0.0**
	comp=Z,1.0nm,0.8s,mb3.8,baz=169,slow=7.1,SNR=6.9						
BRTR	**Keskin Array B**	**73.05**	**338⇑**	eP	**P**	**08 40 44.2**	**0.0**
LZH	**Lanzhou**	**75.91**	**34**	eP	**P**	**08 41 07.8**	**+7.0**
LZH				AP	pP	08 41 15.0	+11
LZH				AMB	AMB		
	comp=Z,24nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,89nm,4.5s						
LZH				LR	LR		
	comp=E,286nm,13.9s						
LZH				LR	LR		
	comp=Z,349nm,17.6s,MS4.7						
WMQ	**Urumqi**	**76.23**	**19**	eP	**P**	**08 41 03.0**	**+0.4**
WMQ				XP	sP	08 41 10.0	+2.9
WMQ				PP	PP	08 43 56.0	+2.3
WMQ				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.9						
WMQ				LR	LR		
	comp=N,197nm,15.0s,MS4.6						
WMQ				LR	LR		
	comp=E,138nm,14.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,214nm,15.0s,MS4.6						
GTA	**Gaotai**	**76.74**	**30**	eP	**P**	**08 41 05.8**	**+0.3**
GTA				AP	pP	08 41 13.6	+4.8
GTA				XP	sP	08 41 18.5	+8.5
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
XAN	**Xi'an**	**76.98**	**39**	P	**P**	**08 41 05.9**	**-1.0**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.5						
MKAR	**Makanchi Array**	**77.64**	**14**	P	**P**	**08 41 10.3**	**-0.3**
	comp=Z,3.3nm,0.7s,mb4.4,baz=193,slow=5.0,SNR=21						
MKAR	**Makanchi Array**	**77.64**	**14⇑**	eP	**P**	**08 41 10.3**	**-0.3**
NJ2	**Nanjing**	**81.47**	**46**	eP	**P**	**08 41 32.1**	**+0.7**
NJ2				AP	pP	08 41 36.8	+2.1
NJ2				XP	sP	08 41 39.1	+3.2
NJ2				PP	PP	08 44 40.8	+3.3
NJ2				S	S	08 51 40.0	-3.0
NJ2				XS	sS	08 51 51.0	+2.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				LR	LR		
	comp=N,490nm,13.8s,MS5.1						
NJ2				LR	LR		
	comp=E,230nm,10.8s,MS5.1						
NJ2				LR	LR		
	comp=Z,170nm,17.0s						
ZRNK	**Zerenda**	**81.76**	**5**	eP	**P**	**08 41 32.1**	**-0.8**
ZRNK				e		08 41 38.7	
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
ZRNK	**Zerenda**	**81.76**	**5**	eP	**P**	**08 41 32.1**	**-0.9**
	comp=Z,4.3nm,0.7s,mb4.5						
ZRNK				ePcP	PcP	08 41 38.7	0.0
BRVK	**Borovoye**	**81.96**	**5**	eP	**P**	**08 41 33.4**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
BRVK	**Borovoye**	**81.96**	**5**	eP	**P**	**08 41 33.4**	**-0.6**
	comp=Z,6.3nm,1.4s,mb4.3						
CHKZ	**Chkalovo**	**82.60**	**5**	eP	**P**	**08 41 36.4**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**82.60**	**5**	eP	**P**	**08 41 36.4**	**-0.9**
	comp=Z,2.7nm,0.8s,mb4.3						
HHC	**Hu-ho-hao-te**	**83.44**	**36**	eP	**P**	**08 41 43.0**	**+1.3**
HHC				AP	pP	08 41 47.8	+2.8
HHC				XP	sP	08 41 50.1	+3.9
HHC				PP	PP	08 44 58.5	+4.8
HHC				SKS		08 52 01.5	
HHC				S	S	08 52 04.3	+1.2
HHC				XS	sS	08 52 12.0	+3.4
HHC				PS		08 52 59.8	
HHC				SS	SS	08 57 34.6	+6.0
HHC				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.7						
HHC				LR	LR		
	comp=N,136nm,30.4s,MS4.2						
HHC				LR	LR		
	comp=E,84nm,27.5s,MS4.2						
HHC				LR	LR		
	comp=Z,105nm,30.4s,MS4.0						
ZAL	**Zalesovo**	**84.91**	**14**	P	**P**	**08 41 48.9**	**-0.3**
	comp=Z,8.0nm,0.9s,mb4.9,baz=272,slow=5.1,SNR=24						
ARU	**Arti**	**85.02**	**358**	eP	**P**	**08 41 49.1**	**-0.7**
ARU				e		08 45 03.4	
ARU				eS	S	08 52 08.8	-10
SVE	**Sverdlovsk**	**85.39**	**359**	eP	**P**	**08 41 51.0**	**-0.6**
SVE				pmax	pmax		
	comp=Z,70nm,2.6s,mb5.3						
NVS	**Novosibirsk**	**85.46**	**12**	eP	**P**	**08 41 51.1**	**-0.8**
NVS				pmax	pmax		
	comp=Z,50nm,2.1s,mb5.3						
NVS				pmax	pmax		
	comp=N,24nm,1.9s						
SONM	**Songino Array**	**86.35**	**28**	P	**P**	**08 41 56.1**	**-0.3**
	comp=N,0.8nm,0.7s,mb4.0,baz=212,slow=5.2,SNR=7.2						
OBN	**Obninsk**	**86.38**	**346d**	iP	**P**	**08 41 56.4**	**-0.1**
OBN				e		08 42 03.6	
OBN				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.3						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.2						
ULN	**Ulaanbaatar**	**86.65**	**29⇓**	eP	**P**	**08 41 58.7**	**+0.9**
MOS	**Moscow**	**86.74**	**347**	eP	**P**	**08 41 55.3**	**-3.0**
GERES	**GERESS Array B**	**88.40**	**331**	P	**P**	**08 42 05.2**	**-1.0**
	comp=Z,0.3nm,0.3s,mb4.0,baz=145,slow=4.9,SNR=4.4						
DPC	**Dobruska-Polom**	**88.48**	**333**	eP	**P**	**08 42 09.1**	**+2.5**
KHC	**Kasperske Hory**	**88.67**	**331**	eP	**P**	**08 42 07.4**	**-0.1**
UPC	**Upice**	**88.73**	**333**	eP	**P**	**08 42 08.5**	**+0.7**
PRU	**Pruhonice**	**88.92**	**332**	eP	**P**	**08 42 09.3**	**+0.6**
PVCC	**Panska Ves**	**89.33**	**332**	eP	**P**	**08 42 10.7**	**+0.1**
NKC	**Novy Kostel**	**89.99**	**331**	eP	**P**	**08 42 14.1**	**+0.4**
CLL	**Collm**	**90.56**	**332**	eP	**P**	**08 42 16.0**	**-0.4**
ESDC	**Sonseca Array**	**91.44**	**315**	P	**P**	**08 42 21.4**	**+0.9**
	comp=Z,0.4nm,0.3s,mb4.2,baz=111,slow=2.6,SNR=6.5						
MDJ	**Mudanjiang**	**95.88**	**42**	P	**P**	**08 42 41.8**	**+1.0**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.8						
MDJ				LR	LR		
	comp=N,31nm,19.8s,MS4.0						
MDJ				LR	LR		
	comp=E,50nm,21.4s,MS4.0						
MDJ				LR	LR		
	comp=Z,78nm,18.3s,MS4.2						
TBI	**Tubuai**	**120.09**	**147**	eLR	LR	09 25 19.4	
	comp=Z,153nm,35.5s						
BILL	**Bilibino**	**121.96**	**25**	ePKIKP	PKPdf	08 48 10.1	+1.5
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PPT	**Papeete**	**124.88**	**143**	eLR	LR	09 27 35.6	
	comp=Z,100nm,23.0s						
RKT	**Rikitea**	**125.89**	**161**	eLR	LR	09 28 09.5	
	comp=Z,159nm,25.5s						
SSPA	**Standing Stone**	**144.96**	**300**	ePKPdf	PKPdf	08 48 50.3	-1.1
YKA	**Yellowknife Ar**	**146.31**	**357**	PKPbc	PKPbc	08 48 53.2	-1.6
	comp=Z,6.0nm,0.9s,baz=358,slow=3.5,SNR=12						
ELN	**Prospectdale**	**147.50**	**295**	ePKPbc	PKPbc	08 48 58.0	-0.3
ELN				ePKPab	PKPab	08 49 00.3	0.0
EYMN	**Ely**	**151.81**	**320**	ePKPbc	PKPbc	08 49 08.1	-0.8
ULM	**Lac du Bonnet**	**152.67**	**328**	PKPbc	PKPbc	08 49 09.5	-1.4
	comp=Z,5.5nm,0.8s,baz=53,slow=1.9,SNR=7.7						
EDM	**Edmonton**	**155.41**	**353**	ePKPbc	PKPdf	08 49 15.8	+8.1
EDM				ePKPab	PKPab	08 49 32.8	-0.4
DLMT	**Dillon**	**162.92**	**346**	ePKPab	PKPab	08 50 05.4	-0.4
MOOW	**Moose Ponds**	**163.94**	**339**	ePKPab	PKPab	08 50 11.0	+0.7
LOHW	**Long Hollow**	**164.02**	**339**	ePKPab	PKPab	08 50 11.2	+0.6
TPAW	**Teton Pass**	**164.24**	**340**	ePKPab	PKPab	08 50 12.4	+0.8
PDAR	**Pinedale Array**	**164.41**	**335**	PKP	PKPdf	08 49 16.9	-0.9
	comp=Z,0.4nm,0.8s,baz=183,slow=1.8,SNR=4.2						
PDAR				PKPab	PKPab	08 50 11.7	-0.7
	comp=Z,1.7nm,0.8s,baz=50,slow=3.9,SNR=17						
RRI2	**Red Ridge**	**164.48**	**340**	ePKPab	PKPab	08 50 13.4	+0.8
NVAR	**Mina Array Bea**	**170.49**	**359**	PKPab	PKPab	08 50 39.9	+0.7
	comp=Z,0.6nm,0.7s,baz=349,slow=3.8,SNR=5.5						

IDC 17 08:34:37.5±0.5, 2890S×6156E, h0km, mb4.1/15, mb1 4.2/16, mb1mx4.1/26, mbtmp4.1/16, ML3.2/1, Error ellipse: s-maj=20.3km s-min=15.4km az=41.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.68**	**305**	Pn	Pn	08 38 32.3	-0.4
	0.1nm,0.3s,baz=60,slow=13,SNR=2.4						
OPO				Sn	Sn	08 41 32.4	-6.2
	0.2nm,0.3s,baz=88,slow=23,SNR=3.3						
BOSA	**Boshof**	**31.75**	**262**	P	P	08 41 03.6	+0.3
	2.7nm,0.7s,baz=97,slow=11,SNR=4.8						
LSZ	**Lusaka**	**33.63**	**287**	P	P	08 41 20.7	+1.0
	9.3nm,0.7s,baz=119,slow=7.8,SNR=19						
MAW	**Mawson**	**38.74**	**179**	P	P	08 42 04.4	+1.0
	2.5nm,0.9s,baz=287,slow=11,SNR=5.4						
SNAA	**Sanae**	**54.83**	**200**	P	P	08 44 07.4	-2.0
	0.5nm,0.8s,baz=1.3,slow=2.2,SNR=3.7						
ASAR	**Alice Springs**	**64.17**	**104**	P	P	08 45 13.6	-0.2
	1.3nm,0.8s,baz=240,slow=6.4,SNR=11						
VNDA	**Vanda**	**64.20**	**166**	P	P	08 45 14.4	+0.3
	0.5nm,0.6s,baz=314,slow=6.3,SNR=3.9						
WRA	**Warramunga Arr**	**65.97**	**100**	P	P	08 45 25.8	+0.2
	1.3nm,0.9s,baz=247,slow=5.9,SNR=12						
STKA	**Stephens Creek**	**67.56**	**115**	P	P	08 45 36.0	+0.3
	2.8nm,0.9s,baz=236,slow=3.6,SNR=2.4						
TORD	**Torodi Ar. Bea**	**71.33**	**297**	P	P	08 45 59.1	+0.1
	1.7nm,0.8s,baz=124,slow=4.4,SNR=9.6						
BRTR	**Keskin Array B**	**73.06**	**338**	P	P	08 46 09.6	+0.2
	0.6nm,0.5s,baz=163,slow=8.8,SNR=4.7						
MKAR	**Makanchi Array**	**77.64**	**14**	P	P	08 46 35.8	0.0
	3.0nm,0.8s,baz=191,slow=5.8,SNR=17						
AKASG	**Malin Array Be**	**84.26**	**340**	P	P	08 47 10.6	-0.4
	1.4nm,0.6s,baz=165,slow=4.4,SNR=12						
ZAL	**Zalesovo**	**84.92**	**14**	P	P	08 47 14.5	+0.1
	3.4nm,0.7s,baz=277,slow=5.9,SNR=20						
SONM	**Songino Array**	**86.35**	**28**	P	P	08 47 21.6	+0.1
	1.4nm,1.1s,baz=220,slow=4.4,SNR=5.8						
GERES	**GERESS Array B**	**88.41**	**331**	P	P	08 47 29.6	-1.9
	0.2nm,0.3s,baz=190,slow=4.1,SNR=3.9						
YKA	**Yellowknife Ar**	**146.31**	**357**	PKPbc	PKPbc	08 54 19.0	-1.1
	3.9nm,0.9s,baz=351,slow=3.8,SNR=8.7						
ULM	**Lac du Bonnet**	**152.68**	**328**	PKPbc	PKPbc	08 54 35.1	-1.1
	3.6nm,0.9s,baz=90,slow=3.6,SNR=3.5						
PDAR	**Pinedale Array**	**164.42**	**335**	PKP	PKPdf	08 54 43.1	+0.1
	0.3nm,0.8s,baz=43,slow=2.8,SNR=3.7						
PDAR				PKPab	PKPab	08 55 37.5	-0.1
	1.1nm,0.8s,baz=44,slow=4.5,SNR=9.9						
NVAR	**Mina Array Bea**	**170.50**	**359**	PKPab	PKPab	08 56 05.6	+1.2
	0.4nm,0.5s,baz=356,slow=2.9,SNR=4.2						

ISCJB 17 08:38:15.9±0.3, 2895S±006×6168E±007, h10km, mb4.8/50, MS4.3/34, Error ellipse: s-maj=9.1km s-min=8.0km az=143.7
IDC 17 08:38:15.9±0.5, 2885S×6164E, h0km, mb4.3/19, mb1 4.4/20, mb1mx4.3/29, mbtmp4.3/20, ML3.8/1, MS4.2/32, Ms1 4.2/32, ms1mx4.1/39, Error ellipse: s-maj=17.3km s-min=13.6km az=24.0
MOS 17 08:38:15.9±0.9, 2893S×6165E, h10km, mb5.4/18, Error ellipse: s-maj=15.6km s-min=8.7km az=98.9
NEIC 17 08:38:17.7±0.3, 2889S×6163E, h10km, mb5.4/17, Error ellipse: s-maj=8.3km s-min=7.6km az=11.0
HRVD 17 08:38:17.7±0.3, 2890S×6137E, h18km, MW5.0/71, Centroid moment Tensor Solution. LP body waves: s27,c32;Mantle waves: s71,c101; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.88±.26; $M_{\theta\theta}$4.19±.18; $M_{\phi\phi}$0.69±.17; $M_{r\theta}$-0.77±.37; $M_{\theta\phi}$0.16±.12; $M_{\phi r}$0.13±.47; Best double couple: $M_0$4.60500×10^{16} NP1:ϕ_s266.00000°,δ40.00000°,λ-93.00000°. NP2: ϕ_s89.00000°,δ50.00000°,λ-88.00000°. Principal axes: T 4.2610, Plg5.0000°, Azm178.0000°; N 0.6920, Plg2.0000°, Azm268.0000°; P -4.9490, Plg85.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
BJI 17 08:38:20.4, 2821S×6174E, h14km, mB5.1, mb4.9, Ms5.0, Msz4.8
SZGRF 17 08:38:27.3, 2751S×6031E, h23km, mb5.4, South Indian Ocean
ISC 17 08:38:17.6±0.3, 2892S±006×6162E±007, h10km, (h19km±.8km:pP-P), n160, σ0.79/94, mb4.8/50, MS4.3/34, 23C-19D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.74**	**305**	Pn	**Pn**	**08 42 12.6**	**+0.5**

0.4nm,0.3s,baz=123,slow=16,SNR=2.2
OPO Sn **Sn** **08 45 08.9 -9.1**
0.9nm,0.3s,baz=58,slow=4.7,SNR=4.0
BOSA Boshof 31.80 262 P **P** **08 44 42.2 0.0**
13nm,1.0s,mb4.7,baz=93,slow=9.0,SNR=9.4
BOSA LR LR 08 54 47.5
comp=Z,276nm,20.4s,MS3.9,baz=150,slow=31
BOSA Boshof 31.80 262 P **P** **08 44 42.2 0.0**
BOSA LR LR 08 54 47.5
LBTB Lobatse 32.27 268 P **P** **08 44 45.2 -1.1**
4.1nm,0.8s,mb4.3,baz=118,slow=10,SNR=6.9
LBTB LR LR 08 54 40.7
comp=Z,248nm,21.9s,MS3.9,baz=118,slow=30
LBTB Lobatse 32.27 268 P **P** **08 44 45.2 -1.1**
LBTB LR LR 08 54 40.7
LSZ Lusaka 33.69 287 P **P** **08 44 59.3 +0.5**
24nm,0.9s,mb5.2,baz=125,slow=8.5,SNR=36
LSZ LR LR 08 56 22.2
comp=Z,331nm,21.3s,MS4.0,baz=144,slow=32
SUR Sutherland 35.13 254 LR LR 08 57 25.5
comp=Z,426nm,19.8s,MS4.2,baz=64,slow=33
KMBO Kilima Mbogo 36.12 316 LR LR 08 57 42.2
comp=Z,699nm,18.7s,MS4.5,baz=99,slow=32
MAW Mawson 38.72 179 P **P** **08 45 42.6 +0.8**
1.4nm,0.3s,mb4.1,baz=12,slow=8.6,SNR=8.0
MAW LR LR 08 58 28.0
comp=Z,758nm,18.3s,MS4.5,baz=46,slow=31
TSUM Tsumeb 41.16 273 P **P** **08 46 03.2 +1.1**
8.2nm,1.0s,mb4.3,baz=233,slow=22,SNR=7.3
TSUM LR LR 09 01 13.0
comp=Z,214nm,18.9s,MS4.0,baz=138,slow=33
TSUM Tsumeb 41.16 273 P **P** **08 46 03.2 +1.1**
TSUM LR LR 09 01 13.0
SYO Syowa Base 42.14 192⇓ *eP* **P** **08 46 09.6 -0.4**
MIR Mirnyy 42.24 162 *eP* **P** **08 46 10.0 -0.9**
MIR pmax pmax
comp=Z,220nm,1.8s,mb5.5
ATD Arta Tunnel 44.11 333 LR LR 09 01 34.1
comp=Z,698nm,19.6s,MS4.6,baz=176,slow=32
NWAO Narrogin (SRO) 47.41 110 LR LR 09 01 44.5
comp=Z,274nm,21.0s,MS4.2,baz=271,slow=30
PSI Prapat 47.68 55 LR LR 09 02 54.2
comp=Z,222nm,18.1s,MS4.2,baz=203,slow=31
POO Poona 48.62 16 *ex* x 08 46 21.0
SNAA Sanae 54.84 200 P **P** **08 47 48.3 +0.5**
comp=Z,1.4nm,0.9s,mb4.0,baz=77,slow=7.2,SNR=8.7
SNAA LR LR 09 06 28.4
comp=Z,134nm,18.3s,MS4.0,baz=23,slow=31
SNAA Sanae 54.84 200⇓ *iP* **P** **08 47 49.9 +2.0**
SNAA *e* pP 08 47 53.7 +2.6
SNAA *e* 08 47 56.8
SNAA *e* 08 47 58.6
VNA1 Neumayer--Stat 56.36 202⇓ *iP* **P** **08 47 58.1 -0.7**
VNA1 *e* pP 08 48 02.6 +0.6
VNA1 *e* 08 48 07.0
VNA1 *e* 08 48 09.7
FITZ Fitzroy Crossi 59.08 95 P **P** **08 48 19.0 +1.1**
comp=Z,2.5nm,1.1s,mb4.2,baz=194,slow=9.7,SNR=4.7
FITZ LR LR 09 08 34.6
comp=Z,92nm,20.4s,MS3.9,baz=146,slow=31
DRV Dumont d'Urvil 59.23 153 S **S** **08 56 23.0 -3.9**
KOLN Koldanda 60.17 22 *eP* **P** **08 48 25.2 -0.2**
comp=Z,100nm,1.5s,mb5.6
DMN Daman 60.54 24 *eP* **P** **08 48 28.7 +0.7**
comp=Z,59nm,1.2s,mb5.6
PKI Pulchoki 60.61 24 *eP* **P** **08 48 28.9 +0.4**
GKN Gorkha 60.73 23 *eP* **P** **08 48 29.9 +0.6**
comp=Z,115nm,1.4s,mb5.8
KKN Kakani 60.77 24 *eP* **P** **08 48 30.3 +0.8**
comp=Z,144nm,1.7s,mb5.8
KKN Kakani 60.77 24 *eP* **P** **08 48 30.3 +0.8**
KKN pmax pmax
comp=Z,144nm,1.7s,mb5.8
GUN Gumba 61.09 25 *eP* **P** **08 48 32.8 +1.0**
comp=Z,102nm,1.3s,mb5.8
ASAR Alice Springs 64.11 104 P **P** **08 48 51.8 -0.1**
comp=Z,1.3nm,0.6s,mb4.1,baz=246,slow=6.1,SNR=20
ASAR LR LR 09 11 33.2
comp=Z,174nm,21.6s,MS4.2,baz=188,slow=31
VNDA Vanda 64.17 166 P **P** **08 48 52.6 +0.2**
comp=Z,0.9nm,0.7s,mb3.9,baz=272,slow=5.8,SNR=5.4
VNDA LR LR 09 14 59.8
comp=Z,676nm,18.6s,MS4.9,baz=243,slow=34
LSA Lhasa 64.75 28 *eP* **P** **08 48 56.6 +0.5**
LSA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LSA Lhasa 64.75 28 *eP* **P** **08 48 56.6 +0.5**
comp=Z,9.8nm,0.9s,mb4.8
WRA Warramunga Arr 65.91 100 P **P** **08 49 04.0 +0.4**
comp=Z,1.1nm,0.6s,mb4.1,baz=246,slow=5.5,SNR=18
WRA LR LR 09 13 07.3
comp=Z,266nm,21.3s,MS4.4,baz=185,slow=32
WRAB Tennant Creek 65.92 100 *iP* **P** **08 49 03.4 -0.3**
STKA Stephens Creek 67.50 115 P **P** **08 49 13.2 -0.6**
comp=Z,1.2nm,0.6s,mb4.1,baz=218,slow=10,SNR=4.2
STKA LR LR 09 12 31.6
comp=Z,192nm,18.6s,MS4.3,baz=208,slow=30
TORD Torodi Ar. Bea 71.38 297 P **P** **08 49 38.0 +0.2**
comp=Z,4.5nm,0.9s,mb4.4,baz=113,slow=5.4,SNR=19
TORD LR LR 09 20 24.4
comp=Z,703nm,19.3s,MS4.9,baz=130,slow=35
AAK Ala-Archa 72.17 10⇓ *iP* **P** **08 49 41.4 -1.1**
AAK pmax pmax
comp=Z,31nm,2.1s,mb4.9
AAK Ala-Archa 72.17 10 *eP* **P** **08 49 42.0 -0.5**
comp=Z,54nm,1.8s,mb5.2
FRU Bishkek 72.39 10 P **P** **08 49 44.0 +0.2**
FRU pmax pmax
comp=Z,60nm,2.0s,mb5.2
DBIC Dimbokro 73.02 288 LR LR 09 18 57.4
comp=Z,113nm,21.6s,MS4.1,baz=104,slow=33
BRTR Keskin Array B 73.09 338 P **P** **08 49 47.9 -0.1**
comp=Z,1.5nm,0.9s,mb3.9,baz=175,slow=7.1,SNR=9.5
BRTR LR LR 09 20 33.0
comp=Z,113nm,19.2s,MS4.2,baz=146,slow=35
KIV Kislovodsk 74.56 346 *eP* **P** **08 49 57.2 +0.6**
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LZH Lanzhou 75.89 34 *eP* **P** **08 50 04.5 +0.3**
LZH AP pP 08 50 10.1 +2.6
LZH XP sP 08 50 13.5 +4.8
LZH AMB AMB
comp=Z,25nm,1.4s,mb5.0
LZH AMB AMB
comp=Z,99nm,4.5s
LZH LR LR
comp=E,341nm,14.2s
LZH LR LR
comp=Z,413nm,17.8s,MS4.8
CTA Charters Tower 76.03 105 LR LR 09 21 13.0
comp=Z,208nm,20.6s,MS4.4,baz=225,slow=34
WMQ Urumqi 76.22 19 *eP* **P** **08 50 07.0 +0.8**
WMQ AMB AMB
comp=Z,18nm,1.0s,mb5.0
ANN Anapa 76.61 343 *eP* **P** **08 50 07.9 -0.4**
ANN pmax pmax
comp=Z,41nm,1.3s,mb5.2
ANN MLR MLR
comp=Z,204nm,20.0s,MS4.4
GTA Gaotai 76.72 29 *eP* **P** **08 50 10.3 +1.3**
GTA AP pP 08 50 15.3 +3.0
GTA XP sP 08 50 17.6 +4.1
GTA AMB AMB
comp=Z,14nm,1.3s,mb4.7
MKAR Makanchi Array 77.64 14 P **P** **08 50 13.4 -0.7**
comp=Z,4.2nm,0.9s,mb4.4,baz=218,slow=7.1,SNR=20
KURK Kurchatov 80.69 11 P **P** **08 50 30.2 -0.6**
comp=Z,78nm,1.2s,mb5.5,SNR=7.5
KEST Kesra 80.98 319 LR LR 09 27 51.5
comp=Z,172nm,18.2s,MS4.4,baz=281,slow=37
GRUS Gruza 81.56 331 *eP* **P** **08 50 34.8 -0.6**
PMG Port Moresby 81.64 96 LR LR 09 24 15.6
comp=Z,108nm,19.6s,MS4.2,baz=157,slow=34
ZRNK Zerenda 81.77 5 *eP* **P** **08 50 35.4 -1.2**
ZRNK *e* 08 50 42.1
ZRNK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ZRNK Zerenda 81.77 5 *eP* **P** **08 50 35.4 -1.1**
comp=Z,4.8nm,0.8s,mb4.5
ZRNK *e*PcP PcP 08 50 42.1 -0.2
BRVK Borovoye 81.97 5 *eP* **P** **08 50 36.3 -1.3**
BRVK pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
BRVK Borovoye 81.97 5 *eP* **P** **08 50 36.3 -1.3**
comp=Z,7.2nm,1.3s,mb4.4
DIVS Divcibare 82.04 331 *eP* **P** **08 50 36.9 -1.0**
VRSR Storozhevoye 82.20 346 *eP* **P** **08 50 38.5 -0.3**
VRSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,10.0nm,0.9s
SSE Sheshan 82.31 48 P **P** **08 50 38.3 -1.1**
SSE AMB AMB
comp=Z,29nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,147nm,4.1s
BTO Baotou 82.45 35 *eP* **P** **08 50 45.6 +5.5**
CHKZ Chkalovo 82.61 5 *eP* **P** **08 50 40.3 -0.7**
CHKZ *e* 08 50 46.0
CHKZ pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
CHKZ Chkalovo 82.61 5 *eP* **P** **08 50 40.3 -0.7**
comp=Z,10nm,1.2s,mb4.7
CHKZ *e*PcP PcP 08 50 46.0 0.0
AKASG Malin Array Be 84.29 340 P **P** **08 50 49.2 -0.4**
comp=Z,3.5nm,0.9s,mb4.5,baz=164,slow=4.3,SNR=23
AKASG LR LR 09 29 11.9
comp=Z,78nm,18.4s,MS4.1,baz=155,slow=36
AKASG Malin Array Be 84.29 340 *iP* **P** **08 50 49.2 -0.4**
AKASG pmax pmax
comp=Z,4.0nm,0.9s
AKASG Malin Array Be 84.29 340 P **P** **08 50 49.2 -0.4**
AKASG LR LR 09 29 11.9
ZAL Zalesovo 84.92 14 P **P** **08 50 52.3 -0.5**
comp=Z,8.1nm,0.9s,mb4.8,baz=272,slow=5.0,SNR=35
ZAL LR LR 09 25 60.0
comp=Z,227nm,21.0s,MS4.5,baz=258,slow=34
ARU Arti 85.04 358⇓ *iP* **P** **08 50 52.3 -1.1**
ARU *e* 08 54 07.6
ARU *e*S S 09 01 12.4 -10
ARU *e*SS SS 09 06 51.8 -4.0
ARU pmax pmax
comp=Z,20nm,1.1s,mb5.2
ARU Arti 85.04 358 *eP* **P** **08 50 52.6 -0.8**
comp=Z,84nm,1.8s,mb5.6
KOLS Kolonicke sedl 85.10 335 *eP* **P** **08 50 52.8 -0.9**
KOLS *e* 08 51 03.4
CRVS Cervenica-Dubn 85.37 335 *eP* **P** **08 50 54.0 -1.1**
KECS Kecovo 85.40 334 *eP* **P** **08 50 54.1 -1.1**
KECS *e* 08 51 00.9
NVS Novosibirsk 85.46 12 *eP* **P** **08 50 55.3 -0.2**
NVS pmax pmax
comp=N,36nm,1.6s
NVS pmax pmax
comp=Z,45nm,1.6s,mb5.3
VYHS Vyhne 86.05 333 *eP* **P** **08 50 55.6 -2.8**
SONM Songino Array 86.34 28 P **P** **08 51 00.6 +0.8**
comp=Z,3.0nm,1.0s,mb4.5,baz=210,slow=4.5,SNR=16
SONM LR LR 09 29 01.0
comp=Z,139nm,18.3s,MS4.4,baz=242,slow=35
OBN Obninsk 86.41 346*c iP* **P** **08 51 00.5 +0.3**
OBN *e* 08 51 06.4
OBN *e* 08 54 19.5
OBN *e*S S 09 01 26.1 -10
OBN pmax pmax
comp=Z,79nm,1.9s,mb5.6
ULN Ulaanbaatar 86.64 29⇓ *eP* **P** **08 51 01.8 +0.5**
ULN Ulaanbaatar 86.64 29 *eP* **P** **08 51 01.4 +0.1**
comp=Z,21nm,1.8s,mb5.1
MOS Moscow 86.77 347 *eP* **P** **08 51 01.9 -0.1**
MOS pmax pmax
comp=Z,200nm,2.0s,mb6.0
MOS pmax pmax
comp=Z,149nm,1.8s,mb5.9
ZAK Zakamensk 87.14 25 *eP* **P** **08 51 02.7 -1.1**
ZAK pmax pmax
comp=Z,2.0nm,2.1s,mb4.0
OKC Ostrava-Krasne 87.40 334 *eP* **P** **08 51 05.9 +0.9**
OKC *ep*P pP 08 51 12.2 +3.8
OKC AMS AMS 09 31 00.0
OKC Ostrava-Krasne 87.40 334 *eP* **P** **08 51 05.9 +0.9**
OKC *ep*P pP 08 51 12.2 +3.8
MORC Moravsky Berou 87.59 333 *eP* **P** **08 51 05.5 -0.4**
MORC pmax pmax
comp=Z,23nm,1.7s,mb5.1
MORC Moravsky Berou 87.59 333 *eP* **P** **08 51 05.5 -0.4**
comp=Z,23nm,1.7s,mb5.1
TREC Trest 88.04 332 AMS AMS 09 32 50.0
comp=Z,200nm,20.9s
SOKR Solikamsk 88.24 358*c iP* **P** **08 51 09.8 +0.8**
SOKR pmax pmax
comp=Z,30nm,1.4s,mb5.3
GERES GERESS Array B 88.45 331 P **P** **08 51 09.6 -0.4**
comp=Z,0.4nm,0.4s,mb4.0,baz=166,slow=6.7,SNR=4.1
GERES LR LR 09 30 08.7
comp=Z,86nm,21.3s,MS4.1,baz=94,slow=35
DPC Dobruska-Polom 88.53 333 *eP* **P** **08 51 10.8 +0.4**
DPC *ep*P pP 08 51 17.0 +3.3
DPC AMS AMS 09 24 00.0
DPC Dobruska-Polom 88.53 333 *eP* **P** **08 51 10.8 +0.4**
DPC *ep*P pP 08 51 17.0 +3.3
KHC Kasperske Hory 88.72 331 *eP* **P** **08 51 11.0 -0.3**
KHC *ep*P pP 08 51 17.1 +2.5
KHC *ex* x 08 51 23.5
KHC AMS AMS 09 29 20.0
comp=Z,100nm,27.7s
UPC Upice 88.77 333 *eP* **P** **08 51 13.0 +1.5**
UPC *ep*P pP 08 51 19.3 +4.4
PRU Pruhonice 88.97 332 *eP* **P** **08 51 13.1 +0.6**
PRU *ep*P pP 08 51 18.9 +3.1
PRU AMS AMS 09 24 40.0
comp=Z,100nm,24.0s
PVCC Panska Ves 89.37 332 *eP* **P** **08 51 15.1 +0.7**
PVCC *ep*P pP 08 51 21.2 +3.5
NKC Novy Kostel 90.04 331 *eP* **P** **08 51 18.7 +1.2**
NKC *ep*P pP 08 51 24.4 +3.6
GRA1 Grafenberg Arr 90.16 330 *eP* **P** **08 51 17.5 -0.6**
comp=Z,36nm,1.8s,mb5.4
GRA1 *ep*P pP 08 51 24.2 +2.8
GRF Grafenberg Arr 90.16 330 *eP* **P** **08 51 17.5 -0.6**
comp=Z,36nm,1.8s,mb5.4
GRF *ep*P pP 08 51 24.2 +2.8
GRF Grafenberg Arr 90.16 330 *eP* **P** **08 51 17.5 -0.6**
GRF *e**PP pP 08 51 24.2 +2.8
GRF pmax pmax
comp=Z,16nm,1.8s,mb5.0
GRF Grafenberg Arr 90.16 330 *eP* **P** **08 51 17.5 -0.6**
GRF *e**PP pP 08 51 24.2 +2.8
GRF pmax pmax
comp=Z,36nm,1.8s,mb5.4
CLL Collm 90.61 332 P **P** **08 51 20.4 +0.3**
comp=Z,logA/T=1.4,mb5.5
CLL *i* *SP sP 08 51 27.2 +2.5
CLL Collm 90.61 332 *iP* **P** **08 51 20.4 +0.3**
comp=Z,49nm,2.0s,mb5.5
CLL *i* (sP) sP 08 51 27.2 +2.5
comp=Z,45nm,1.8s
CLL Collm 90.61 332 *iP* **P** **08 51 20.4 +0.3**
CLL *i* 08 51 27.2
CLL pmax pmax
comp=Z,49nm,2.0s,mb5.5
MOX Moxa 90.70 331 *eP* **P** **08 51 21.1 +0.5**
comp=Z,39nm,1.9s,mb5.4
MOX *e* 08 51 27.1
MOX Moxa 90.70 331 *eP* **P** **08 51 21.1 +0.5**
MOX *e* 08 51 27.1
MOX pmax pmax
comp=Z,18nm,1.9s,mb5.1
ESDC Sonseca Array 91.50 315 P **P** **08 51 25.5 +1.2**
comp=Z,0.2nm,0.3s,mb4.0,baz=122,slow=6.0,SNR=7.3
ESDC LR LR 09 34 37.8
comp=Z,85nm,18.4s,MS4.2,baz=155,slow=37
HNR Honiara 92.69 102 LR LR 09 27 23.7
comp=Z,92nm,19.6s,MS4.2,baz=179,slow=32
MJAR Matsushiro Arr 96.97 52 LR LR 09 35 48.6
comp=Z,82nm,18.0s,MS4.2,baz=230,slow=36
NOA NORSAR Array B 98.53 338 LR LR 09 37 22.3
comp=Z,86nm,18.9s,MS4.3,baz=135,slow=36
BDFB Brasilia 98.92 247 LR LR 09 31 25.1
comp=Z,105nm,19.8s,MS4.3,baz=210,slow=32
CPUP Villa Florida 99.71 233 LR LR 09 30 19.3
comp=Z,105nm,20.7s,MS4.3,baz=300,slow=31
DAWY Dawson 142.36 15 *e*PKPdf PKPdf 08 57 50.0 -0.4
SSPA Standing Stone 145.03 300 *e*PKPbc PKPbc 08 57 54.1 -0.4
YKA Yellowknife Ar 146.33 357 PKPbc PKPbc 08 57 56.2 -2.3
comp=Z,6.7nm,0.9s,baz=357,slow=3.4,SNR=13
YKA Yellowknife Ar 146.33 357 PKPbc PKPbc 08 57 56.2 -2.3
EYMN Ely 151.86 320 *e*PKPbc PKPbc 08 58 11.5 -1.1
EYMN *e*PKPab PKPab 08 58 17.8 -3.9
ULM Lac du Bonnet 152.72 328 PKPbc PKPbc 08 58 13.2 -1.3
comp=Z,5.2nm,0.8s,baz=55,slow=4.0,SNR=8.4
EDM Edmonton 155.44 353 *e*PKP2 PKPab 08 58 36.3 -0.5
B05A Bryant 160.47 7⇓ PKP PKPab 08 58 57.7 -0.9
baz=160
B04A Port Angeles 160.48 10⇓ PKP PKPab 08 58 57.1 -1.6
baz=160
FLWY Flagg Ranch 163.67 340 *e*PKPab PKPab 08 59 14.2 +1.6
IMW Indian Meadow 163.91 340 *e*PKPab PKPab 08 59 17.8 +4.1
MOOW Moose Ponds 163.98 340 *e*PKPab PKPab 08 59 14.6 +0.6
LOHW Long Hollow 164.06 339 *e*PKPab PKPab 08 59 14.8 +0.5
TPAW Teton Pass 164.28 340 *e*PKPab PKPab 08 59 15.3 0.0
I02A Mapleton 164.32 15⇑ PKP PKPab 08 59 16.8 +1.3
baz=164
REDW Red Top Meadow 164.37 339 *e*PKPab PKPab 08 59 16.6 +0.9
H08A Prairie City 164.43 1⇓ PKP PKPab 08 59 16.5 +0.5
baz=164
PDAR Pinedale Array 164.45 335 PKP PKPdf 08 58 21.1 -0.3
comp=Z,0.4nm,0.8s,baz=151,slow=6.4,SNR=3.8
PDAR PKPab PKPab 08 59 14.6 -1.5
comp=Z,1.5nm,0.9s,baz=32,slow=4.6,SNR=9.6
RRI2 Red Ridge 164.52 340 *e*PKPab PKPab 08 59 17.1 +0.8
I07A Izee 164.84 3⇓ PKP PKPab 08 59 17.6 -0.1
baz=165
I08A Drewsey 165.03 1⇓ PKP PKPab 08 59 18.8 +0.2
baz=165
J05A Fort Rock 165.48 8⇑ PKP PKPab 08 59 21.0 +0.4
baz=165
J06A Christmas Vall 165.62 5⇑ PKP PKPab 08 59 22.1 +0.9
baz=166
K08A Mann Creek Ran 166.21 0⇓ PKP PKPab 08 59 24.8 +1.0
baz=166
K09A Rome 166.24 358⇓ PKP PKPab 08 59 24.0 +0.1
baz=166
L05A Lakeview 166.75 8⇓ PKP PKPab 08 59 26.6 +0.4
baz=167
L07A Adell 166.90 3⇑ PKP PKPab 08 59 27.5 +0.7
baz=167
L09A Wilkinson Ranc 166.91 358⇑ PKP PKPab 08 59 27.1 +0.2
baz=167
M02C Callahan 167.03 15⇑ PKP PKPab 08 59 27.2 -0.2
baz=167
M13A Montello 167.12 346⇑ PKP PKPab 08 59 27.7 -0.1
baz=167
M12A Wells 167.21 348⇑ PKP PKPab 08 59 29.0 +0.7
baz=167
M11A Holland Ranch, 167.34 351⇑ PKP PKPab 08 59 29.5 +0.7
baz=167
M08A Happy Creek Ra 167.50 0⇑ PKP PKPab 08 59 30.8 +1.3
baz=167
N12A Clover Valley, 167.78 348⇓ PKP PKPab 08 59 33.2 +2.4
baz=168
N06A Buffalo Meadow 168.13 5⇑ PKP PKPab 08 59 33.0 +0.7
baz=168
O12A Currie 168.29 346⇓ PKP PKPab 08 59 33.9 +1.0
baz=168
O11A Cowboy Ranch, 168.59 349⇓ PKP PKPab 08 59 36.1 +1.8
baz=168
O09A Fish Creek Ran 168.73 355⇑ PKP PKPab 08 59 37.2 +2.3
baz=169
O07A Toulon 168.77 2⇑ PKP PKPab 08 59 36.5 +1.3
baz=169
BEKR Beckwourth 168.95 8⇓ PKP PKPab 08 59 36.0 +0.1
baz=169
P12A McGill 169.09 346⇑ PKP PKPab 08 59 38.1 +1.6
baz=169
MSU Marysvale 169.13 333 *e*PKIKP PKPdf 08 58 26.9 +1.9
NVAR Mina Array Bea 170.51 360 PKPab PKPab 08 59 42.1 -0.7
comp=Z,1.2nm,0.9s,baz=1.4,slow=1.9,SNR=6.6
R09A Tonopah 170.64 354⇓ PKP PKPab 08 59 43.8 +0.4
baz=171
S09A Goldfield 171.16 354⇑ PKP PKPab 08 59 47.1 +1.4
baz=171
HELL Mitchell Peak, 172.24 4⇑ PKP PKPab 08 59 50.6 +0.1
baz=172
W14A Seligman 172.28 326⇑ PKP PKPab 08 59 52.2 +1.5
baz=172
U10A Ash Meadows, A 172.32 348⇑ PKP PKPab 08 59 51.8 +1.0
baz=172
FURC Furnace Creek, 172.36 351⇑ PKP PKPab 08 59 52.5 +1.4
baz=172
X15A Humboldt 172.37 318⇓ PKP PKPab 08 59 50.9 -0.2
baz=172
V12A Nelson 172.58 337⇑ PKP PKPab 08 59 53.2 +1.1
baz=172

IDC 17 08:48:34.3±0.7, 2893S×6167E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/25, mbtmp4.0/10, ML3.4/1, Error ellipse: s-maj=28.4km s-min=18.7km az=21.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.78**	**305**	Pn		Pn	08 52 32.3	+1.6
	0.2nm,0.3s,baz=135,slow=12,SNR=3.1							
BOSA	**Boshof**		**31.85 262**	P		P	08 55 00.3	-0.5
	2.1nm,0.7s,baz=86,slow=16,SNR=4.0							
LSZ	**Lusaka**		**33.74 287**	P		P	08 55 17.4	0.0
	3.4nm,0.7s,baz=130,slow=9.1,SNR=7.0							
MAW	**Mawson**		**38.70 179**	P		P	08 56 00.8	+0.9
	1.1nm,0.6s,baz=351,slow=10,SNR=4.2							
ASAR	**Alice Springs**		**64.06 104**	P		P	08 59 09.2	-0.6
	0.9nm,0.8s,baz=244,slow=6.1,SNR=8.3							
WRA	**Warramunga Arr**		**65.86 100**	P		P	08 59 22.1	+0.5
	0.5nm,0.5s,baz=249,slow=5.9,SNR=14							
TORD	**Torodi Ar. Bea**		**71.43 297**	P		P	08 59 56.3	-0.1
	0.7nm,0.8s,baz=110,slow=5.3,SNR=4.8							
MKAR	**Makanchi Array**		**77.64 14**	P		P	09 00 32.3	-0.2
	1.1nm,0.8s,baz=179,slow=6.7,SNR=6.1							
AKASG	**Malin Array Be**		**84.32 340**	P		P	09 01 08.1	0.0
	0.2nm,0.2s,baz=165,slow=4.9,SNR=4.3							
ZAL	**Zalesovo**		**84.92 13**	P		P	09 01 11.0	-0.1
	3.3nm,0.6s,baz=273,slow=4.1,SNR=9.7							
YKA	**Yellowknife Ar**		**146.35 357**	PKPbc		PKPbc	09 08 17.0	+0.1
	1.2nm,0.8s,baz=350,slow=3.6,SNR=3.8							
PDAR	**Pinedale Array**		**164.49 335**	PKPab		PKPab	09 09 34.2	-0.4
	0.5nm,0.7s,baz=50,slow=4.6,SNR=5.6							

*ISCJB **17** 08:52:56.7±0.4, 2889S×007×6160E×009, h10km, mb4.7/26, MS3.9/6, Error ellipse: s-maj=10.9km s-min=10.3km az=120.5*
*IDC **17** 08:52:57.0±0.5, 2887S×6161E, h0km, mb4.4/17, mb1 4.5/18, mb1mx4.3/28, mbtmp4.3/18, ML4.2/1, MS3.9/6, Ms1 3.9/6, ms1mx3.5/33, Error ellipse: s-maj=18.0km s-min=14.7km az=30.0*
*MOS **17** 08:52:57.0±0.9, 2888S×6161E, h10km, mb4.7/12, Error ellipse: s-maj=18.1km s-min=13.1km az=101.3*
*SZGRF **17** 08:53:01.5, 2879S×6149E, h33km, mb4.9, Southwest Indian Ridge*

ISC 17 08:52:58.6±0.4, 2887S±007×6157E±008, h10km, n55, σ0s69/45, mb4.7/26, MS3.9/6, 3C-2D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.67**	**305**	Pn		**Pn**	**08 56 51.6**	**-0.6**
	1.0nm,0.3s,baz=142,slow=19,SNR=3.8							
BOSA	**Boshof**		**31.76 262**	P		**P**	**08 59 23.4**	**+0.5**
	8.2nm,0.8s,mb4.6,baz=94,slow=9.6,SNR=11							
BOSA				LR	LR		09 10 09.4	
	comp=Z,114nm,19.7s,MS3.6,baz=270,slow=32							
LBTB	**Lobatse**		**32.22 268**	P		**P**	**08 59 27.4**	**+0.5**
	4.2nm,0.9s,mb4.3,baz=104,slow=9.4,SNR=4.3							
LBTB	**Lobatse**		**32.22 268**	P		**P**	**08 59 27.4**	**+0.5**
LBTB				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2							
LSZ	**Lusaka**		**33.63 287**	P		**P**	**08 59 40.3**	**+1.1**
	comp=Z,17nm,0.8s,mb5.0,baz=115,slow=7.9,SNR=30							
LSZ	**Lusaka**		**33.63 287**	P		**P**	**08 59 40.3**	**+1.1**
LSZ				pmax	pmax			
	comp=Z,17nm,0.8s,mb5.0							
KMBO	**Kilima Mbogo**		**36.05 316**	LR	LR		09 12 33.0	
	comp=Z,161nm,18.1s,MS3.8,baz=277,slow=33							
MAW	**Mawson**		**38.77 179**	P		**P**	**09 00 23.4**	**+0.3**
	comp=Z,7.9nm,1.1s,mb4.3,baz=0.8,slow=8.2,SNR=11							
MAW				LR	LR		09 13 09.9	
	comp=Z,181nm,19.6s,MS3.9,baz=58,slow=31							
SYO	**Syowa Base**		**42.17 192**⇓ *eX*				09 00 51.0	
MIR	**Mirnyy**		**42.30 162**	*eP*		**P**	**09 00 54.0**	**+1.6**
MIR				pmax	pmax			
	comp=Z,180nm,1.2s,mb5.6							
WSAR	**Wadi Sarin**		**51.88 357**	LR	LR		09 18 42.8	
	comp=Z,121nm,18.3s,MS4.0,baz=38,slow=30							
SNAA	**Sanae**		**54.87 200**	P		**P**	**09 02 28.9**	**-0.2**

	comp=Z,1.4nm,1.1s,mb3.9,baz=41,slow=7.8,SNR=5.3						
SNAA	Sanae	54.87	200	eP	P	09 02 26.7	-2.4
SNAA				e	pP	09 02 30.5	-1.8
SNAA				e		09 02 36.8	
SNAA				e		09 02 42.0	
SNAA	Sanae	54.87	200	P	P	09 02 28.9	-0.2
SNAA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
VNA1	Neumayer--Stat	56.38	202	eP	P	09 02 38.4	-1.6
VNA1				e	pP	09 02 41.9	-1.3
VNA1				e		09 02 48.7	
VNA1				e		09 02 53.3	
FITZ	Fitzroy Crossi	59.13	95	P	P	09 02 59.9	+0.6
	comp=Z,8.5nm,1.3s,mb4.6,baz=228,slow=12,SNR=4.0						
KOLN	Koldanda	60.14	23	eP	P	09 03 06.2	0.0
	comp=Z,60nm,1.4s,mb5.4						
DMN	Daman	60.52	24	eP	P	09 03 09.5	+0.7
	comp=Z,30nm,1.0s,mb5.4						
GKN	Gorkha	60.71	23	eP	P	09 03 10.1	0.0
KKN	Kakani	60.74	24	eP	P	09 03 10.5	+0.1
	comp=Z,36nm,1.0s,mb5.5						
GUN	Gumba	61.07	25	eP	P	09 03 13.5	+0.9
	comp=Z,55nm,1.1s,mb5.6						
ASAR	Alice Springs	64.17	104	P	P	09 03 33.0	-0.3
	comp=Z,2.5nm,0.8s,mb4.3,baz=242,slow=6.5,SNR=16						
ASAR				LR	LR	09 25 06.3	
	comp=Z,98nm,22.0s,MS4.0,baz=355,slow=30						
VNDA	Vanda	64.23	166	P	P	09 03 33.3	-0.4
	comp=Z,2.8nm,1.0s,mb4.2,baz=278,slow=7.1,SNR=4.6						
VNDA				LR	LR	09 29 12.2	
	comp=Z,182nm,20.1s,MS4.3,baz=214,slow=34						
WRA	Warramunga Arr	65.97	100	P	P	09 03 44.8	-0.2
	comp=Z,4.3nm,1.1s,mb4.4,baz=247,slow=5.9,SNR=17						
WRA	Warramunga Arr	65.97	100	P	P	09 03 44.8	-0.2
WRA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRAB	Tennant Creek	65.98	100	eP	P	09 03 44.9	-0.1
TORD	Torodi Ar. Bea	71.32	297	P	P	09 04 18.9	+0.5
	comp=Z,3.3nm,0.8s,mb4.3,baz=117,slow=5.3,SNR=18						
AAK	Ala-Archa	72.14	10d	iP	P	09 04 23.1	-0.2
AAK				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
BRTR	Keskin Array B	73.03	338	P	P	09 04 28.9	+0.4
	comp=Z,1.3nm,0.8s,mb3.9,baz=162,slow=8.9,SNR=7.6						
BRTR	Keskin Array B	73.03	338	P	P	09 04 29.0	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	77.60	14	P	P	09 04 54.9	0.0
	comp=Z,5.1nm,0.8s,mb4.5,baz=205,slow=4.9,SNR=15						
MKAR	Makanchi Array	77.60	14	P	P	09 04 54.9	0.0
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKASG	Malin Array Be	84.23	340	P	P	09 05 29.7	-0.5
	comp=Z,2.8nm,0.8s,mb4.5,baz=159,slow=4.2,SNR=15						
AKASG	Malin Array Be	84.23	340	P	P	09 05 29.7	-0.6
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZAL	Zalesovo	84.88	14	P	P	09 05 33.6	+0.1
	comp=Z,9.8nm,0.9s,mb5.0,baz=272,slow=4.9,SNR=41						
ZAL	Zalesovo	84.88	14	P	P	09 05 33.6	0.0
ZAL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARU	Arti	85.00	358	eP	P	09 05 33.5	-0.6
NVS	Novosibirsk	85.43	12	eP	P	09 05 34.8	-1.5
SONM	Songino Array	86.32	28	P	P	09 05 40.9	+0.2
	comp=Z,3.6nm,1.1s,mb4.5,baz=210,slow=4.9,SNR=16						
SONM	Songino Array	86.32	28	P	P	09 05 40.9	+0.2
SONM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
OBN	Obninsk	86.35	346⇑	eP	P	09 05 41.7	+0.8
OBN				pmax	pmax		
	comp=Z,49nm,1.4s,mb5.5						
ULN	Ulaanbaatar	86.62	29⇑	eP	P	09 05 42.1	-0.1
MOS	Moscow	86.72	347	eP	P	09 05 42.2	-0.5
MOS				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.7						
GERES	GERESS Array B	88.39	331	P	P	09 05 50.4	-0.3
	comp=Z,0.2nm,0.3s,mb3.8,baz=133,slow=5.7,SNR=4.3						
KHC	Kasperske Hory	88.66	331⇑	eP	P	09 05 51.0	-1.0
GRF	Grafenberg Arr	90.10	330	eP	P	09 05 59.3	+0.6
	comp=Z,9.0nm,1.0s,mb5.0						
GRF	Grafenberg Arr	90.10	330	eP	P	09 05 59.3	+0.6
GRF				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.7						
ESDC	Sonseca Array	91.43	315	P	P	09 06 04.7	-0.2
	comp=Z,0.2nm,0.3s,mb3.9,baz=102,slow=4.5,SNR=7.5						
CLNS	Chul'man	100.65	30	eP	Pdif	09 06 56.5	+10
CLNS				pmax	pmax		
	comp=Z,44nm,0.9s						
CLNS				pmax	pmax		
	comp=N,58nm,0.8s						
CLNS				pmax	pmax		
	comp=E,52nm,1.3s						
BILL	Bilibino	121.92	25	ePKIKP	PKPdf	09 11 51.8	-1.3
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	146.28	357	PKPbc	PKPbc	09 12 38.4	-0.9
	comp=Z,10nm,1.0s,baz=356,slow=3.7,SNR=16						
YKA	Yellowknife Ar	146.28	357	PKP2	PKPab	09 12 38.4	-1.7
YKA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULM	Lac du Bonnet	152.66	328	PKPbc	PKPbc	09 12 54.2	-1.2
	comp=Z,4.8nm,0.7s,baz=63,slow=3.6,SNR=8.6						
PDAR	Pinedale Array	164.39	335	PKP	PKPdf	09 13 02.1	-0.2
	comp=Z,1.1nm,1.1s,baz=112,slow=1.6,SNR=5.8						
PDAR				PKPab	PKPab	09 13 56.8	0.0
	comp=Z,1.8nm,0.8s,baz=48,slow=5.3,SNR=16						
NVAR	Mina Array Bea	170.46	359	PKP	PKPdf	09 13 07.3	+0.6
	comp=Z,0.4nm,0.8s,baz=134,slow=1.9,SNR=4.1						
NVAR				PKPab	PKPab	09 14 25.0	+1.4
	comp=Z,0.9nm,0.8s,baz=16,slow=3.4,SNR=7.3						

NEIC 17 09:24:14.5, 5621N×15564W, h20km, ML3.1 (AEIC), After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGN	Chignik	1.55	275	P	Pn	09 24 38.9	-2.1
KDAK	Kodiak Island	2.30	45	P	Pn	09 24 49.6	-1.7
SVW2	Sparrevohn	4.91	0	ePn	Pn	09 25 27.5	+0.4
SVW2				eSg	Sg	09 26 46.9	-5.0
SEW	Seward	5.10	37	P	Pn	09 25 27.6	-2.2
RC01	Rabbit Creek A	5.79	30	P	Pn	09 25 37.2	-1.9
DLMT	Dillon	28.83	94	eP	P	09 30 11.4	0.0
	7.8nm,0.4s						

NEIC 17 09:48:31.3±1.5, 3764N×6686E, h35km, mb4.4/2, Error ellipse: s-maj=28.1km s-min=10.8km az=61.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	7.68	47	ePn	Pn	09 50 20.7	0.0
AAK				eLg		09 52 19.8	
GKN	Gorkha	17.74	118	eP	Pn	09 52 35.3	-0.2
	54nm,0.9s						
DMN	Daman	18.31	118	eP	Pn	09 52 42.7	+0.2
KKN	Kakani	18.32	117	eP	Pn	09 52 42.6	0.0
	56nm,0.7s						
PKI	Pulchoki	18.55	117	eP	Pn	09 52 45.4	+0.1
	66nm,0.7s						
GUN	Gumba	18.68	116	eP	Pn	09 52 46.7	-0.2
	68nm,1.0s						
ARU	Arti	19.60	346	eP	Pn	09 52 56.3	-1.7
	31nm,0.6s						
LSA	Lhasa	21.67	104	eP	P	09 53 20.4	+1.5
	4.2nm,0.5s						

ISCJB 17 09:50:39.1±2.3, 16.11N±0.09×119.59E±0.09, h15km±15km, mb3.5/3, Error ellipse: s-maj=15.8km s-min=13.9km az=20.8
NEIC 17 09:50:42.8±2.8, 16.90N×121.90E, h54km±27km, mb4.6/2, Error ellipse: s-maj=37.8km s-min=15.6km az=72.0
IDC 17 09:50:44.1±8.1, 16.86N×121.66E, h63km±72km, mb3.4/3, mb1 3.6/3, mb1mx3.2/19, mbtmp3.7/3, ML4.7/1, Error ellipse: s-maj=91.7km s-min=29.7km az=67.0
MAN 17 09:50:46.3, 16.20N×120.07E, h1km, mb2.9, ML4.3, MS2.1
ISC 17 09:50:40.2±1.7, 1620N±006×11963E±007, h12km±8km, n8, σ1s37/12, mb3.5/3, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.93	79⇓	iP	Pg	09 50 57.4	-0.7
BCPH				i S	Sg	09 51 08.9	-1.3
PCPH	Palayan	1.54	114⇓	eP	Pn	09 51 07.8	+0.3
PCPH				eS	Sn	09 51 26.8	-0.6
TGY	Tagaytay City	2.44	149	P	Pg	09 51 27.1	+0.2
	106nm,0.3s,baz=16,slow=20,SNR=9.4						
TGY				S	Sg	09 52 00.5	+2.1
	121nm,0.3s,baz=270,slow=20,SNR=4.0						
CVP	Callao Caves	2.58	54	eP	Pn	09 51 24.0	+2.4
CVP				eS	Sn	09 51 54.0	+1.2
WRA	Warramunga Arr	38.71	158	P	P	09 58 01.4	-2.5
	0.3nm,0.5s,mb3.3,baz=341,slow=8.8,SNR=10.0						
ASAR	Alice Springs	42.00	160	P	P	09 58 29.4	-1.8
	0.5nm,0.6s,mb3.4,baz=332,slow=7.2,SNR=11						
FINES	FINESS Array B	77.61	331	P	P	10 02 35.6	-0.6
	0.5nm,0.5s,mb3.7,baz=71,slow=10,SNR=3.6						
KWP	Kalwaria	82.22	319	eP	P	10 03 02.4	+1.2
	47nm,0.4s						

NEIC 17 09:59:47.6, 26.81S×70.71W, h35km, ML3.9(GUC), After GUC.
GUC 17 09:59:47.6±1.1, 26.81S×70.71W, h35km, ML3.9
ISCJB 17 09:59:48.2±1.1, 26.77S±0.03×70.9W±0.2, h29km±6km, mb3.7/1, Error ellipse: s-maj=29.6km s-min=4.9km az=7.7
IDC 17 09:59:55.7±2.3, 26.54S×68.48W, h0km, mb3.9/1, mb1 3.5/4, mb1mx3.4/18, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=89.6km s-min=28.4km az=85.0
ISC 17 09:59:48.5±1.6, 2678S±003×710W±02, h21km±9km, n13, σ0s69/22, mb3.7/1, 2C, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDCH	Caldera	0.34	150⇑	iP	Pb	09 59 55.7	-0.1
CDCH				i S	Sb	10 00 00.5	-0.3
VACH	Vallenar	1.80	173	i P	Pn	10 00 18.7	+0.4
VACH				i S	Sn	10 00 40.4	-0.1
VACH				AML	AML	10 00 47.4	
	comp=N,2µm,0.3s						
VACH	Vallenar	1.80	173	i P	Pn	10 00 18.7	+0.4
VACH				i S	Sn	10 00 40.4	-0.1
CPN1	Cerro Paranal	2.22	15	eP	Pn	10 00 23.8	-0.2
CPN1				i S	Sn	10 00 49.9	-0.8
CPN1				AML	AML	10 00 58.5	
	comp=E,1µm,0.5s						
LCO	Las Campanas	2.24	173	eP	Pn	10 00 23.7	-0.6
LCO				i S	Sn	10 00 50.5	-0.8
TLL	Tololo Astrono	3.38	177	eP	Pn	10 00 40.4	+0.4
TLL				i S	Sn	10 01 20.0	+0.7
CEN1	Los Morros	3.46	13⇑	iP	Pn	10 00 37.1	-4.0
CEN1				i S	Sn	10 01 14.8	-6.6
LVC	Limon Verde	4.57	25	Pn	Pn	10 00 57.6	+1.2
	comp=E,0.9nm,0.3s,baz=221,slow=9.9,SNR=17						
LVC				Sn	Sn	10 01 49.3	+0.5
	comp=E,7.9nm,0.3s,baz=298,slow=13,SNR=3.6						
LVC				Lg		10 02 05.0	
	comp=E,38nm,0.3s,baz=21,slow=19,SNR=9.1						
LVC	Limon Verde	4.57	25	ePn	Pn	10 00 57.4	+1.0
LVC				Sn	Sn	10 01 49.3	+0.4
LVC				Lg		10 02 05.0	
CFAA	Coronel Fontan	5.38	154	Pn	Pn	10 01 11.4	+3.9
	comp=E,0.2nm,0.3s,baz=341,slow=14,SNR=9.8						
CFAA				Sn	Sn	10 02 09.3	+0.4
	comp=E,0.3nm,0.3s,baz=343,slow=10,SNR=4.2						
LPAZ	La Paz	10.78	15	Pn	Pn	10 02 21.9	+0.4
	comp=E,0.1nm,0.3s,baz=180,slow=10,SNR=3.8						
TORD	Torodi Ar. Bea	80.94	70	P	P	10 12 00.2	-1.0
	comp=E,0.6nm,0.6s,mb3.7,baz=257,slow=5.0,SNR=5.7						
MKAR	Makanchi Array	150.97	39	PKPbc	PKPbc	10 19 47.3	+7.7
	comp=E,0.6nm,0.6s,baz=304,slow=2.7,SNR=4.2						

IDC 17 10:07:50.5±31.0, 010N×12674E, h196km±225km, mb3.2/3, mb1 3.4/3, mb1mx3.0/15, mbtmp3.7/3, Error ellipse: s-maj=220.5km s-min=147.4km az=160.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.26	160	P	P	10 12 21.2	-0.1
	1.1nm,0.4s,baz=338,slow=11,SNR=27						
WB2	Warramunga Arr	21.27	160	eP	P	10 12 21.8	+0.4
ASAR	Alice Springs	24.62	164	P	P	10 12 53.9	+1.1
	0.5nm,0.4s,baz=345,slow=7.4,SNR=15						
STKA	Stephens Creek	34.77	158	P	P	10 14 21.4	-0.7
	1.6nm,0.9s,baz=342,slow=9.6,SNR=5.8						

IDC 17 10:29:17.3±1.9, 168N×12700E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=110.7km s-min=23.0km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.71	184	eP	Pn	10 33 49.9	+0.3
	2.6nm,0.4s						
FITZ	Fitzroy Crossi	19.71	184	P	Pn	10 33 49.7	+0.1
	0.3nm,0.3s,baz=22,slow=10,SNR=15						
WRA	Warramunga Arr	22.66	162	P	P	10 34 20.4	+0.3
	1.4nm,0.5s,baz=339,slow=11,SNR=19						
WB2	Warramunga Arr	22.67	162	eP	P	10 34 20.4	+0.3
ASAR	Alice Springs	26.08	165	P	P	10 34 52.2	-0.3
	0.5nm,0.6s,baz=341,slow=7.1,SNR=11						
MKAR	Makanchi Array	59.39	326	P	P	10 39 21.6	+0.2
	1.1nm,0.6s,baz=116,slow=8.2,SNR=8.6						

IDC 17 10:37:42.6±1.8, 656S×13043E, h0km, mb4.1/2, mb1 3.9/5, mb1mx3.7/13, mbtmp3.8/5, ML3.6/3, Error ellipse: s-maj=76.2km s-min=26.1km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.38	202	Pn	Pn	10 40 38.9	-1.2
	0.1nm,0.3s,baz=19,slow=12,SNR=23						
FITZ				Sn	Sn	10 42 41.5	-17
	0.7nm,0.3s,baz=131,slow=23,SNR=12						
WRA	Warramunga Arr	13.83	164	Pn	Pn	10 41 01.2	+1.3
	0.4nm,0.3s,baz=349,slow=13,SNR=32						
WRA				Sn	Sn	10 43 23.4	-11
	0.8nm,0.3s,baz=333,slow=22,SNR=12						
ASAR	Alice Springs	17.33	169	P	Pn	10 41 48.0	+2.1
	0.3nm,0.3s,baz=341,slow=9.7,SNR=17						
ASAR				S	Sn	10 44 46.6	-13
	0.2nm,0.3s,baz=349,slow=26,SNR=5.7						
STKA	Stephens Creek	27.26	159	P	P	10 43 27.9	-0.5
	1.5nm,0.4s,baz=332,slow=12,SNR=3.5						
MKAR	Makanchi Array	68.10	327	P	P	10 48 44.5	+0.3
	0.7nm,0.5s,baz=114,slow=6.5,SNR=4.9						

CASC 17 10:51:51.6±3.5, 1195N×8697W, h64km±18km, MD3.8, ML2.8, 6C-11D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.44	59⇓	eP	Pn	10 52 03.7	+0.5
COPN				eS	Sn	10 52 12.1	+0.4
LEON	Leon	0.47	10	eP	Pn	10 52 03.8	+0.3
LEON				eS	Sn	10 52 13.2	+1.0
MIRN	Miramar	0.55	28⇑	eP	Pn	10 52 04.5	+0.1
CNGN	Cerro Negro	0.61	26⇓	eP	Pn	10 52 04.9	-0.1
CNGN				eS	Sn	10 52 16.0	+1.2
XAVN	Gruta Xavier	0.66	73	eP	Pn	10 52 06.0	+0.4
XAVN				eS	Sn	10 52 17.2	+1.3
TELN	Telica	0.66	12	eP	Pn	10 52 05.9	+0.3
TELN				eS	Sn	10 52 16.9	+1.0
APYN	Apoyeque	0.67	65⇓	eP	Pn	10 52 06.2	+0.5
APYN				eS	Sn	10 52 17.6	+1.6
TISN	Laguna Tiscapa	0.71	74	eP	Pn	10 52 06.6	+0.3
TISN				eS	Sn	10 52 17.9	+1.0
TICN	Ticuantepe	0.73	83	eP	Pn	10 52 06.9	+0.5
TICN				eS	Sn	10 52 17.9	+0.6
MGAN	Managua	0.74	75⇑	eP	Pn	10 52 07.7	+1.2
MGAN				eS	Sn	10 52 18.3	+0.8
MGAN				i		10 52 18.6	
	comp=N,388nm,0.2s						
CRIN	San Cristobal	0.75	354⇑	eP	Pn	10 52 07.2	+0.5
CRIN				eS	Sn	10 52 18.6	+0.9
BOA	Boaco	1.34	67⇑	eP	Pn	10 52 14.2	0.0
BOA				eS	Sn	10 52 31.3	+0.2
BOA				i		10 52 31.8	
	comp=E,52nm,0.3s						
CONN	Concepcion	1.37	106⇓	eP	Pn	10 52 14.4	-0.3
CONN				eS	Sn	10 52 31.0	-1.0
CNCH	Conchagua	1.56	328⇓	eP	x	10 52 25.7	
CNCH				eS	x	10 52 45.3	
BLLM	Bellamira	1.93	320⇑	iP	x	10 52 31.2	
BLLM				eS	x	10 52 55.1	
VSM	San Miguel	1.94	319⇓	eP	x	10 52 31.6	
VSM				eS	x	10 52 57.6	
LIM1	Limonal	2.10	126⇑	eP	Pn	10 52 24.9	+0.6
LIM1				i P		10 52 25.2	
LIM1				eS	Sn	10 52 50.1	+0.7
VCR	Vista de Mar	2.24	144⇓	eP	Pn	10 52 27.2	+0.8
VCR				eS	Sn	10 52 52.5	-0.4
LCBS	La Ceiba	2.59	311	eP	x	10 52 40.3	
LCBS				eS	x	10 53 09.3	
LFRS	El Faro	2.63	309	eP	x	10 52 40.9	
LFRS				eS	x	10 53 09.9	
LBRS	Las Brisas	2.69	312⇓	eP	x	10 52 41.9	
LBRS				eS	x	10 53 11.9	
JCR	Jicaral	2.77	139⇓	eP	Pn	10 52 34.6	+1.0
JCR				eS	Sn	10 53 05.4	-0.5
BOQS	Boqueron	2.87	308	eP	x	10 52 44.8	
BOQS				eS	x	10 53 17.7	
CAO	Cobano	2.89	140⇓	iP	Pn	10 52 36.1	+0.9
CAO				eS	Sn	10 53 09.3	+0.5
EPA	Esparza	3.04	130	eP	Pn	10 52 39.3	+2.0
EPA				eS	Sn	10 53 14.2	+1.7
CGA2	Cerro Gallo 2	3.12	128	eP	Pn	10 52 40.2	+1.8
CGA2				eS	Sn	10 53 16.3	+1.8
SBLS	San Blas	3.19	306⇓	eP	x	10 52 49.0	
SBLS				eS	x	10 53 25.9	
SNJE	San Jose	3.20	307	eP	x	10 52 50.0	
SNJE				eS	x	10 53 28.9	
POA2	Poas 2	3.20	123	eP	Pn	10 52 40.8	+1.3
RTR	El Retiro	3.25	307	eP	x	10 52 49.9	
RTR				eS	x	10 53 21.1	
PRS1	Puriscal	3.26	127	eP	Pn	10 52 42.0	+1.7
LCR2	La Lucha 2	3.65	127	eP	Pn	10 52 47.8	+2.2
BUS	Buena Vista	3.96	127	eP	Pn	10 52 52.1	+2.3
BUS				eS	Sn	10 53 36.9	+2.0

CASC 17 11:07:29.7±3.6, 13.84N×92.35W, h9km±36km, MD4.3, mb4.1(NEIC)
ISCJB 17 11:07:31.4±2.0, 14.3N±0.3×92.48W±0.09, h27km, mb4.0/10, MS4.6/2, Error ellipse: s-maj=39.8km s-min=7.9km az=29.6
NEIC 17 11:07:34.0±3.8, 14.42N×92.47W, mb4.1/7, Error ellipse: s-maj=62.3km s-min=19.0km az=174.0
IDC 17 11:07:43.0±9.9, 16.32N×92.34W, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.8/21, mbtmp4.0/4, ML2.7/1, MS4.1/3, Ms1 4.1/3, ms1mx3.1/34, Error ellipse: s-maj=174.5km s-min=38.7km az=167.0
ISC 17 11:07:29.4±1.8, 141N±02×9254W±006, h10km, (h28km±.4km:pP-P), n30, σ1s15/26, mb4.0/11, MS4.6/2, 2C-1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TP2	Tecpan 2	1.63	64⇑	eP	Pn	11 07 57.6	-0.5
TP2				eS	Sn	11 08 21.1	+2.0
FUG	Fuego 3	1.69	77⇑	eP	Pn	11 07 57.2	-1.7
RBDL	Robledal	2.77	89	eP	x	11 08 19.8	
RBDL				eS	x	11 08 55.1	
RTR	El Retiro	2.81	93⇓	eP	x	11 08 20.6	
RTR				eS	x	11 08 51.7	
LCBS	La Ceiba	3.48	96	eP	x	11 08 31.1	
LCBS				eS	x	11 09 09.8	
CMIG	Matias Romero	3.75	323	Pn	Pn	11 08 26.2	-1.1
	1.5nm,0.3s,baz=134,slow=12,SNR=21						
OXX	Oaxaca	5.02	307	eP	Pn	11 08 45.0	+0.3
VHO	Vista Hermosa	5.02	307	eP	Pn	11 08 44.8	+0.1
VHO				i S	Sn	11 09 42.3	-0.5
JTS	JuntasAbangare	8.31	116	LR	LR	11 13 16.3	
	comp=Z,130nm,20.3s,baz=307,slow=36						
MIAR	Mount Ida	20.40	358	eP	P	11 12 06.5	0.0
	2.8nm,0.7s						
MNTX	Cornudas Mount	21.12	328	eP	P	11 12 13.2	-1.0
	6.7nm,1.3s,mb3.8						
WMOK	Wichita Mounta	21.33	346	eP	P	11 12 16.1	-0.4
	2.4nm,0.8s,mb3.6						
SWET	Sewanee	21.88	15	eP	P	11 12 21.0	-1.3
ANMO	Albuquerque	24.29	331	P	P	11 12 43.7	-3.1
	0.2nm,0.3s,mb3.1,baz=324,slow=8.7,SNR=2.6						
ANMO	Albuquerque	24.29	331	P	P	11 12 43.7	-3.1
MVCO	Mesa Verde	27.08	331	eP	P	11 13 14.7	+2.6
PV01	Paradox Valley	27.87	332	eP	P	11 13 20.6	+1.5
PV10	Paradox Valley	28.28	332	eP	P	11 13 23.3	+0.5
PDAR	Pinedale Array	32.14	336	P	P	11 13 55.9	-1.0
	0.8nm,0.9s,mb3.5,baz=133,slow=8.7,SNR=6.0						
SADO	Sadowa	32.65	18	P	P	11 13 57.5	-3.9
	1.5nm,0.4s,mb4.3,baz=226,slow=7.0,SNR=3.3						
REDW	Red Top Meadow	33.16	335	eP	P	11 14 06.4	+0.5
	17nm,1.2s,mb4.8						
LOHW	Long Hollow	33.26	336	eP	P	11 14 07.1	+0.3
	6.8nm,1.2s,mb4.5						
LOHW				epP	pP	11 14 15.3	+5.4
NVAR	Mina Array Bea	33.29	322	P	P	11 14 07.8	+0.8
	0.8nm,0.8s,mb3.7,baz=147,slow=8.5,SNR=7.8						
NVAR	Mina Array Bea	33.29	322	P	P	11 14 07.8	+0.8
HLID	Hailey	34.86	332	eP	P	11 14 20.9	+0.2
	3.0nm,1.2s,mb4.1						
MCMT	McKenzie Canyo	35.18	335	eP	P	11 14 25.1	+1.7
MCMT				epP	pP	11 14 32.8	+6.3
MCMT				e		11 15 13.7	
DLMT	Dillon	35.51	335	eP	P	11 14 27.2	+0.9
	10nm,1.2s,mb4.6						
DLMT				epP	pP	11 14 35.1	+5.8
YKA	Yellowknife Ar	50.84	347	P	P	11 16 28.9	-1.2
	3.6nm,0.8s,mb4.4,baz=148,slow=7.8,SNR=9.1						
JMIC	Jan Mayen	74.85	20	LR	LR	11 50 06.8	
	comp=Z,297nm,18.9s,MS4.6,baz=267,slow=35						
PMSA	Palmer Station	81.54	168	LR	LR	11 47 17.5	
	comp=Z,303nm,19.4s,MS4.7,baz=246,slow=28						

SZGRF 17 11:11:27.8, 55.06N×162.90E, h15km, mb6.4, MS5.1, Near east coast of Kamchatka Peninsula, Russia
BGS 17 11:11:29.8±1.1, 54.71N×162.02E, h55km, mb6.0
BJI 17 11:11:32.2, 55.47N×161.89E, h63km, mB5.3, mb5.3, Ms5.4, Msz5.2
ISCJB 17 11:11:34.8±0.1, 55.58N±0.02×161.62E±0.02, h64km, mb6.0/432, Error ellipse: s-maj=2.6km s-min=1.4km az=179.5
KRSC 17 11:11:34, 55.54N×162.18E, h57km, ML5.9
HRVD 17 11:11:35.5±0.1, 55.49N×162.26E, h66km, MW5.7/102, Centroid moment Tensor Solution. LP body waves: s102,c212; Mantle waves: s102,c279; Half duration: 1s8 Moment tensor: Scale 10^{17}Nm; M_{rr}4.09±.04; $M_{\theta\theta}$-3.38±.04; $M_{\phi\phi}$-0.71±.04; $M_{r\theta}$1.28±.04; $M_{\theta\phi}$-2.50±.04; $M_{\phi r}$-0.43±.03; Best double couple: $M_0$4.71200×10^{17} NP1:ϕ_s224.00000°,δ42.00000°,λ66.00000°. NP2: ϕ_s74.00000°,δ53.00000°,λ110.00000°. Principal axes: T 4.4590, Plg74.0000°, Azm40.0000°; N 0.5070, Plg15.0000°, Azm242.0000°; P -4.9660, Plg6.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.
NEIC 17 11:11:35.5±0.1, 55.62N×161.69E, h55km, mb6.1/243, ME6.0, MW5.7, MW6.1(MOS) Error ellipse: s-maj=2.7km s-min=1.7km az=186.0, Moment Tensor Solution. s76 Moment tensor: Scale 10^{17}Nm; M_{rr}4.32; $M_{\theta\theta}$-3.93; $M_{\phi\phi}$-0.39; $M_{r\theta}$0.61; $M_{\theta\phi}$-1.84; $M_{\phi r}$-1.20; Best double couple: $M_0$4.70000×10^{17} NP1:ϕ_s83.00000°,δ48.00000°, λ113.00000°. NP2:ϕ_s231.00000°,δ47.00000°,λ66.00000°. Principal axes: T 4.7400, Plg73.0000°, Azm65.0000°; N -0.0200, Plg17.0000°, Azm247.0000°; P -4.7200, Plg1.0000°, Azm157.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s72.00000°,δ48.00000°, λ109.00000°. NP2:ϕ_s225.00000°,δ45.00000°,λ70.00000°. Principal axes: T Plg76.0000°, Azm52.0000°; N Plg0.0000°, Azm0.0000°; P Plg2.0000°, Azm149.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.
NEIC Felt [IV] at Klyuchi and [III] at Petropavlovsk-Kamchatskiy.
IDC 17 11:11:35.9±0.3, 55.68N×161.67E, h58km±2km, mb5.6/45,

mb1 5.6/46,mb1mx5.6/46,mbtmp5.9/46,MS4.9/24, Ms1 4.9/24,ms1mx4.7/35 Error ellipse: s-maj=9.2km s-min=7.0km az=136.0

MOS ***17*** *11:11:36.3±0.9,5558N×161.71E,h80km,mb6.0/144, MS5.2/45,Error ellipse: s-maj=6.4km s-min=3.1km az=95.3 Broadband fault plane solution: P waves. $M_0$1.70000×10^{18} NP1:φ=48.00000°,δ=46.00000°, λ=103.00000°. NP2:φ=209.00000°,δ=46.00000°,λ=77.00000°. Principal axes: T Plg81.0000°, Azm39.0000°; N Plg9.0000°, Azm219.0000°; P Plg0.0000°, Azm129.0000°;*

MOS Felt (III-IV) at Klyuchi; (II-III) at Petropavlovsk-Kamchatskiy. Fault plane solution: P-wave C193, D11 . .

NIC ***17*** *11:11:36.4±0.4,5568N×161.82E,h80km,Earthquake Near E. CST Kamchatka Pen. 32 km S Shubertovo.*

CRAAG ***17*** *11:11:36.4,5568N×161.82E,Mb6.1*

ISC 17 11:11:36.7±0.1,5566N±002×16161E±002,h66km, h66km±1.0km:pP-P,n1720,σ0s82/1806,mb5.9/432, 589C-172D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.57**	**308**	*i*	P		**Pn**	**11 11 52.9**	**+3.0**
CIRR	**Tsirk**	**0.66**	**313**	*i*	P		**Pn**	**11 11 53.9**	**+3.0**
KMNR	**Kamenistaya**	**0.78**	**277**	*i*	P		**Pn**	**11 11 55.7**	**+3.4**
KRSR	**Krestovskiy**	**0.81**	**314**	*i*	P		**Pn**	**11 11 55.4**	**+2.8**
KPT	**Kopyto**	**0.84**	**292**	*i*	P		**Pn**	**11 11 56.2**	**+3.2**
KLY	**Klyuchi**	**0.84**	**321**		PN		**Pn**	**11 11 54.7**	**+1.7**
KLY	**Klyuchi**	**0.84**	**321**	*i*	P		**Pn**	**11 11 54.7**	**+1.7**
KBTR	**Krutoberegovo**	**0.87**	**51**		PN		**Pn**	**11 11 51.8**	**-1.6**
KBTR	**Krutoberegovo**	**0.87**	**51**	*i*	P		**Pn**	**11 11 51.8**	**-1.6**
TUMR	**Tumrok**	**0.92**	**246**	*i*	P		**Pn**	**11 11 56.8**	**+2.9**
SMKR	**Semkarok**	**0.92**	**355**	*i*	P		**Pn**	**11 11 55.9**	**+1.9**
BDR	**Baidarnaya**	**0.93**	**346**	*i*	P		**Pn**	**11 11 56.7**	**+2.6**
SRKR	**Sorokina**	**1.02**	**346**	*i*	P		**Pn**	**11 11 57.7**	**+2.5**
KOZR	**Kozyr**	**1.05**	**293**		PN		**Pn**	**11 11 59.7**	**+4.2**
KOZ	**Kozyrevsk**	**1.05**	**293**	*i*	P		**Pn**	**11 11 59.7**	**+4.0**
MKZ	**Mys Kozlova**	**1.11**	**176**		PN		**Pn**	**11 11 54.5**	**-1.9**
MKZ	**Mys Kozlova**	**1.11**	**176**	*i*	P		**Pn**	**11 11 54.5**	**-1.9**
SRDR	**Sredinnyy**	**1.25**	**302**	*i*	P		**Pn**	**11 12 01.8**	**+3.6**
KII	**Karymskiy**	**2.06**	**218**		PN		**Pn**	**11 12 10.7**	**+1.7**
KII	**Karymskiy**	**2.06**	**218**	*i*	P		**Pn**	**11 12 10.7**	**+1.7**
SPN	**Mys Shipunski**	**2.73**	**200**		PN		**Pn**	**11 12 17.4**	**-0.8**
SPN	**Mys Shipunski**	**2.73**	**200**	*i*	P		**Pn**	**11 12 17.4**	**-0.8**
NLC	**Nalytchevo**	**2.83**	**209**		PN		**Pn**	**11 12 20.2**	**+0.7**
NLC	**Nalytchevo**	**2.83**	**209**	*e*	P		**Pn**	**11 12 20.2**	**+0.7**
GNL	**Ganaly**	**2.90**	**229**	*e*	P		**Pn**	**11 12 23.4**	**+2.9**
AVH	**Avacha**	**2.93**	**216**	*e*	P		**Pn**	**11 12 23.1**	**+2.2**
PET	**Petropavlovsk**	**3.16**	**214**	⇑*i*	PN		**Pn**	**11 12 25.5**	**+1.5**
PET				*i*	S		**Sn**	**11 13 03.3**	**+2.8**
PET	comp=E,4μm,0.7s				pmax	pmax			
PET	comp=N,10μm,0.9s				pmax	pmax			
PET	comp=Z,13μm,0.9s				pmax	pmax			
PET	comp=E,2μm,6.6s				pmax	pmax			
PET	comp=N,2μm,7.5s				pmax	pmax			
PET	comp=Z,3μm,7.5s				pmax	pmax			
PET	comp=Z,18μm,0.8s				pmax	pmax			
PET	comp=N,16μm,0.9s				pmax	pmax			
PET	comp=E,13μm,0.6s				smax				
PET	comp=N,48μm,6.1s				smax				
PET	comp=E,45μm,2.0s				smax				
PET	comp=E,212μm,1.8s				smax				
PET	comp=N,128μm,1.0s				smax				
PET	comp=N,126μm,0.7s				smax				
PET	comp=E,76μm,0.9s				MLR	MLR			
PET	comp=Z,52μm,18.0s				MLR	MLR			
PET	comp=Z,43μm,15.0s								
PET	**Petropavlovsk**	**3.16**	**214**	*e*	Pn		**Pn**	**11 12 25.6**	**+1.6**
PET	**Petropavlovsk**	**3.16**	**214**	*e*	P		**Pn**	**11 12 25.7**	**+1.7**
RUS	**Russkaya**	**3.72**	**211**		PN		**Pn**	**11 12 32.6**	**+1.0**
RUS	**Russkaya**	**3.72**	**211**	*e*	P		**Pn**	**11 12 32.6**	**+1.0**
GRL	**Gorelyy**	**3.75**	**215**	*e*	P		**Pn**	**11 12 34.7**	**+2.7**
MIPR	**Malaya Ipel'ka**	**4.44**	**222**	*e*	P		**Pn**	**11 12 44.8**	**+3.3**
SKR	**Severo-Kuril's**	**5.98**	**216**	*e*	PN		**Pn**	**11 13 01.2**	**-1.4**
SKR				*i*	S		**Sn**	**11 14 09.0**	**-0.7**
SKR	comp=N,4μm,2.0s				pmax	pmax			
SKR	comp=E,6μm,2.0s				pmax	pmax			
SKR	comp=Z,11μm,2.0s				pmax	pmax			
SKR	comp=E,460nm,0.5s				pmax	pmax			
SKR	comp=Z,2μm,0.5s				pmax	pmax			
SKR	comp=N,1μm,1.0s				smax				
SKR	comp=N,12μm,0.9s				smax				
SKR	comp=E,5μm,0.9s				smax				
SKR	comp=N,41μm,6.0s				smax				
SKR	comp=E,27μm,6.0s				MLR	MLR			
SKR	comp=Z,12μm,14.0s				MLR	MLR			
SKR	comp=N,9μm,12.0s				MLR	MLR			
SKR	comp=E,19μm,12.0s								
ALID	**Alaid**	**6.02**	**220**	*e*	P		**Pn**	**11 13 06.6**	**+3.5**
MA2	**Magadan**	**7.02**	**308**	*d i*	PN		**Pn**	**11 13 20.2**	**+3.5**
MA2	comp=Z,774nm,1.1s				pmax	pmax			
MA2	comp=Z,18μm,23.0s				MLR	MLR			
MA2	**Magadan**	**7.02**	**308**	*e*	Pn		**Pn**	**11 13 20.8**	**+4.1**
SMY	**Shemya**	**7.89**	**107**	*e*	PN		**Pn**	**11 13 23.1**	**-5.6**
OKH	**Okha**	**11.03**	**267**	*e*	PN		**Pn**	**11 14 14.4**	**+2.8**
OKH				*e*	S		**Sn**	**11 16 20.0**	**+6.7**
OKH	comp=Z,2μm,6.0s				pmax	pmax			
OKH	comp=E,2μm,12.0s				smax				
OKH	comp=Z,11μm,14.0s				MLR	MLR			
AMKA	**Amchitka**	**11.37**	**105**	*e*	Pn		**Pn**	**11 14 11.5**	**-4.7**
AMKA				*e*	Sn		**Sn**	**11 16 08.4**	**-13**
BILL	**Bilibino**	**12.61**	**8**	*d i*	PN		**Pn**	**11 14 37.2**	**+4.1**
BILL	comp=Z,2μm,1.5s				pmax	pmax			
BILL	comp=Z,12μm,17.0s				MLR	MLR			
BILL	**Bilibino**	**12.61**	**8**	*e*	Pn		**Pn**	**11 14 37.1**	**+4.0**
KUR	**Kuril'sk**	**13.60**	**226**	*e*	P		**Pn**	**11 14 45.0**	**-1.5**
KUR	comp=Z,2μm,2.0s				pmax	pmax			
KUR	comp=N,250nm,1.0s				pmax	pmax			
KUR	comp=E,230nm,1.0s				pmax	pmax			
KUR	comp=Z,700nm,1.0s				pmax	pmax			
KUR	comp=N,3μm,15.0s				MLR	MLR			
KUR	comp=E,6μm,15.0s				MLR	MLR			
KUR	comp=Z,6μm,15.0s				MLR	MLR			
YSS	**Yuzh-Sakhalins**	**14.62**	**241**	⇓*i*	P		**Pn**	**11 15 04.7**	**+4.8**
YSS				*e*	S		**Sn**	**11 17 44.0**	**+3.3**
YSS	comp=N,180nm,1.0s				pmax	pmax			
YSS	comp=Z,280nm,1.0s				pmax	pmax			
YSS	comp=Z,1μm,2.0s				pmax	pmax			
YSS	comp=N,1μm,4.0s				pmax	pmax			
YSS	comp=E,1μm,4.0s				MLR	MLR			
YSS	comp=Z,7μm,16.0s				MLR	MLR			
YSS	comp=N,6μm,15.0s				MLR	MLR			
YSS	comp=E,6μm,15.0s								
YSS	**Yuzh-Sakhalins**	**14.62**	**241**	*e*	Pn		**Pn**	**11 15 04.4**	**+4.5**
YUK	**Yuzh-Kuril'sk**	**15.40**	**227**	*e*	P		**Pn**	**11 15 10.0**	**0.0**
YUK	comp=N,1μm,0.5s				pmax	pmax			
YUK	comp=E,1μm,0.5s				pmax	pmax			
YUK	comp=Z,2μm,0.5s				pmax	pmax			
YUK	comp=Z,6μm,2.0s				pmax	pmax			
YUK	comp=N,8μm,3.0s				pmax	pmax			
YUK	comp=E,4μm,3.0s				MLR	MLR			
YUK	comp=E,7μm,15.0s				MLR	MLR			
YUK	comp=Z,8μm,15.0s				MLR	MLR			
YUK	comp=N,6μm,17.0s								
SPIA	**Saint Paul Isl**	**15.60**	**73**	*e*	Pn		**Pn**	**11 15 11.0**	**-1.5**
ASAJ	**Asahikawa**	**16.77**	**234**		P		**Pn**	**11 15 29.1**	**+1.9**
YAK	**Yakutsk**	**17.56**	**304**	*e*	P		**Pn**	**11 15 39.3**	**+2.4**
YAK	comp=N,0.5nm,0.3s,baz=336,slow=32,SNR=5.1				*e*	S	**S**	**11 18 58.5**	**+2.4**
YAK	comp=Z,999nm,1.1s				pmax	pmax			
YAK	comp=N,133nm,1.4s				pmax	pmax			
YAK	comp=E,371nm,1.4s				smax				
YAK	comp=N,155nm,1.7s				smax				
YAK	comp=E,91nm,1.3s								
YAK	**Yakutsk**	**17.56**	**304**	*e*	Pn		**Pn**	**11 15 38.4**	**+1.5**
HABR	**Khabarovsk**	**17.76**	**257**	⇓*i*	P		**Pn**	**11 15 44.1**	**+4.7**
HABR	comp=E,2μm,0.8s				pmax	pmax			
HABR	comp=Z,875nm,1.9s				MLR	MLR			
HABR	comp=Z,4μm,13.3s								
ERM	**Erimo**	**18.19**	**229**		P		**Pn**	**11 15 44.2**	**-0.4**
	comp=Z,4μm,0.5s,SNR=11								
AKUT	**Akutan**	**18.73**	**81**	*e*	P		**Pn**	**11 15 49.6**	**-1.5**
CLNS	**Chul'man**	**20.28**	**289**	*c i*	P		**P**	**11 16 08.5**	**+1.6**
CLNS				*e*	PPP			11 16 35.1	
CLNS				*e*				11 20 13.6	
CLNS				*e*	SS			11 20 24.1	
CLNS				*e*				11 27 28.7	
CLNS	comp=Z,452nm,0.7s				pmax	pmax			
CLNS	comp=N,382nm,0.9s				pmax	pmax			
CLNS	comp=E,400nm,0.8s				pmax	pmax			
CLNS	comp=Z,8μm,15.0s				MLR	MLR			
CLNS	comp=N,2μm,13.0s				MLR	MLR			
CLNS	comp=E,6μm,14.0s								
TIXI	**Tiksi**	**21.17**	**332**	*e*	P		**P**	**11 16 16.1**	**-0.4**
TIXI				*e*	PP			11 16 37.8	
TIXI				*e*	S		**S**	**11 20 02.4**	**-5.7**
TIXI	comp=Z,1μm,1.1s,mb6.2				pmax	pmax			
TIXI	comp=N,697nm,1.3s				pmax	pmax			
TIXI	comp=E,1μm,1.2s				pmax	pmax			
TIXI	comp=Z,2μm,1.3s,mb6.3				MLR	MLR			
TIXI	comp=Z,6μm,15.0s								
SDPT	**Sand Point**	**21.30**	**75**	*e*	P		**P**	**11 16 14.6**	**-3.3**
SDPT	comp=Z,532nm,1.2s,mb5.8				LR	LR			
SDPT	comp=Z,4μm,22.0s								
CHGN	**Chignik**	**22.16**	**72**	*e*	P		**P**	**11 16 24.0**	**-3.0**
TTA	**Tatalina**	**22.46**	**54**	*e*	P		**P**	**11 16 29.2**	**-0.9**
SVW2	**Sparrevohn**	**22.76**	**59**	*e*	P		**P**	**11 16 31.8**	**-1.5**
MDJ	**Mudanjiang**	**23.09**	**255**		P		**P**	**11 16 34.4**	**-2.4**
MDJ	comp=Z,618nm,4.8s				AMB	AMB			
MDJ	**Mudanjiang**	**23.09**	**255**	*e*	P		**P**	**11 16 33.6**	**-3.2**
	comp=Z,137nm,1.1s,mb5.2								
IMA2	**Indian Mountai**	**23.57**	**46**	*e*	P		**P**	**11 16 39.9**	**-1.3**
KDAK	**Kodiak Island**	**24.86**	**66**		P		**P**	**11 16 50.0**	**-3.0**
	comp=Z,3μm,0.8s,mb6.8								
KDAK	**Kodiak Island**	**24.86**	**66**		P		**P**	**11 16 50.8**	**-2.2**
	comp=Z,961nm,1.2s,mb6.1,baz=293,slow=4.6,SNR=204								
KDAK	comp=Z,3μm,20.2s,baz=270,slow=35				LR	LR		11 26 03.1	
KDAK	**Kodiak Island**	**24.86**	**66**	*e*	P		**P**	**11 16 49.9**	**-3.1**
	comp=Z,767nm,1.1s,mb6.0								
KDAK				*e*	PcP	PcP		11 20 26.6	-0.8
MAJO	**Matsushiro**	**24.87**	**230**	*e*	P		**P**	**11 16 53.8**	**+0.7**
MAJO				*e*	*PP			11 17 09.0	
MAJO				*e*				11 20 27.3	
MAJO	comp=Z,731nm,0.8s,mb6.2				pmax	pmax			
MAJO	**Matsushiro**	**24.87**	**230**	*e*	P		**P**	**11 16 53.8**	**+0.7**
	comp=Z,731nm,0.8s,mb6.2								
MAJO				*e*	pP			11 17 09.0	
MAJO				*e*	PcP	PcP		11 20 27.3	-0.1
MAT	**Matsushiro**	**24.87**	**230**		P		**P**	**11 16 53.6**	**+0.5**
MAT					S		**S**	**11 21 06.0**	**-5.4**
MJAR	**Matsushiro Arr**	**24.87**	**230**		P		**P**	**11 16 53.8**	**+0.7**
	comp=Z,467nm,0.8s,mb5.9,baz=24,slow=8.9,SNR=186								
MJAR					pP			11 17 08.2	
	comp=Z,237nm,0.6s,baz=25,slow=8.9,SNR=12								
MJAR					PcP	PcP		11 20 27.4	-0.1
	comp=Z,34nm,1.1s,baz=35,slow=1.2,SNR=4.8								
MJAR					pPcP			11 20 44.0	
	comp=Z,12nm,0.7s,baz=106,slow=1.5,SNR=4.4								
MJAR					ScP	ScP		11 24 01.0	+0.4
	comp=Z,6.6nm,1.1s,baz=9.6,slow=3.1,SNR=5.6								
MJAR					LR	LR		11 27 36.0	
	comp=Z,4μm,19.6s,baz=50,slow=38								
MJAR					P3KPbc			11 49 56.4	
	comp=Z,2.7nm,1.0s,baz=204,slow=5.1,SNR=7.3								
MJAR	**Matsushiro Arr**	**24.87**	**230**		P		**P**	**11 16 53.8**	**+0.7**
MJAR					*PP			11 17 08.3	
MJAR								11 20 27.4	
MJAR	**Matsushiro Arr**	**24.87**	**230**		P		**P**	**11 16 53.8**	**+0.7**
MJAR					pP			11 17 08.2	
MJAR					PcP	PcP		11 20 27.4	-0.1
MJAR					pPcP			11 20 44.0	
MJAR					ScP	ScP		11 24 01.0	+0.4
MJAR					LR	LR		11 27 36.0	
SLKM	**Skilak Lake**	**25.44**	**59**	*e*	P		**P**	**11 16 55.4**	**-2.9**
SLKM				*e*				11 20 27.8	
BOD	**Bodaibo**	**25.77**	**295**	*e*	P		**P**	**11 17 01.3**	**0.0**
BOD	comp=Z,414nm,0.8s,mb5.9				pmax	pmax			
PMR	**Palmer**	**25.78**	**56**	*e*	P		**P**	**11 16 58.3**	**-3.0**
PMR	comp=Z,62nm,1.0s,mb5.0				pmax	pmax			
PMR	comp=Z,2μm,22.0s				MLR	MLR			
PMR	**Palmer**	**25.78**	**56**	*e*	P		**P**	**11 16 58.3**	**-3.0**
	comp=Z,62nm,1.0s,mb5.0								
PMR	comp=Z,2μm,22.0s				LR	LR			
CN2	**Changchun**	**25.90**	**258**	*e*	P		**P**	**11 17 00.0**	**-2.4**
CN2				*e*	AP	pP		11 17 17.5	-0.7
CN2				*e*	XP	sP		11 17 26.8	+0.8
CN2				*e*	S		**S**	**11 21 26.3**	**-1.4**
CN2	comp=Z,200nm,4.0s				AMB	AMB			
CN2	comp=N,3μm,19.0s				LR	LR			
CN2	comp=E,2μm,19.0s				LR	LR			
CN2	comp=Z,3μm,15.0s								
HIA	**Hailar**	**25.97**	**273**	*e*	P		**P**	**11 17 03.4**	**+0.3**
HIA	comp=Z,344nm,0.8s				pmax	pmax			
HIA	**Hailar**	**25.97**	**273**	*e*	P		**P**	**11 17 03.4**	**+0.4**
	comp=Z,344nm,0.8s,mb5.8								
COLA	**College**	**25.99**	**49**	*c i*	P		**P**	**11 17 02.2**	**-1.0**
COLA	**College**	**25.99**	**49**	⇑*i*	P		**P**	**11 17 02.2**	**-1.0**
COLA				*e*	pP		pP	11 17 17.6	-1.4
JHJ	**Hachijo jima 2**	**27.19**	**223**		P		**P**	**11 17 14.5**	**+0.5**
	comp=Z,114nm,0.6s,mb5.6,baz=116,slow=5.7,SNR=3.1								
JHJ					pP		pP	11 17 29.1	-0.7
	comp=Z,408nm,0.9s,baz=159,slow=6.8,SNR=5.1								
JHJ					LR		LR	11 27 29.8	
	comp=Z,1μm,21.1s,baz=72,slow=35								
MID	**Middleton Isla**	**27.59**	**61**	*e*	P		**P**	**11 17 15.7**	**-1.9**
EYAK	**Cordova Ski Ar**	**27.60**	**58**	*e*	P		**P**	**11 17 16.3**	**-1.4**
EYAK				*e*	PcP	PcP		11 20 32.9	-0.9
MENT	**Mentasta**	**28.04**	**53**	*e*	P		**P**	**11 17 20.3**	**-1.3**
CIT	**Chita**	**28.13**	**283**	*e*	P		**P**	**11 17 22.3**	**-0.1**
CIT				*e*		pP		11 17 37.7	-0.6
CIT				*e*				11 18 34.9	
CIT	comp=Z,276nm,1.2s,mb5.7				pmax	pmax			
SNY	**Shenyang**	**28.23**	**257**	⇑*i*	P		**P**	**11 17 21.3**	**-2.0**
SNY					AP	pP		11 17 38.5	-0.7
SNY					XP	sP		11 17 47.5	+0.5
SNY					PP	PP		11 18 10.3	-18
SNY					S		**S**	**11 21 58.4**	**-6.1**
SNY	comp=Z,550nm,8.2s				AMB	AMB			
SNY	comp=N,3μm,14.4s				LR	LR			
SNY	comp=E,3μm,13.8s				LR	LR			
SNY	comp=Z,3μm,17.8s				LR	LR			
DAWY	**Dawson**	**29.73**	**49**	*e*	P		**P**	**11 17 35.3**	**-1.3**
DAWY				*e*	PcP	PcP		11 20 38.5	-0.6
INK	**Inuvik**	**31.31**	**40**		P		**P**	**11 17 50.0**	**-0.5**
	comp=Z,157nm,1.1s,mb5.7,baz=280,slow=7.4,SNR=123								
INK					PcP	PcP		11 20 42.2	-1.0
	comp=Z,23nm,0.7s,baz=329,slow=4.1,SNR=4.0								
INK					LR	LR		11 31 45.5	
	comp=Z,2μm,19.6s,baz=265,slow=39								
INK	**Inuvik**	**31.31**	**40**	*e*	P		**P**	**11 17 49.8**	**-0.7**
INK				*e*				11 20 41.9	
INK	comp=Z,542nm,1.3s				pmax	pmax			
INK	**Inuvik**	**31.31**	**40**	*e*	P		**P**	**11 17 49.8**	**-0.8**
	comp=Z,542nm,1.3s,mb6.1								
INK				*e*	PcP	PcP		11 20 41.9	-1.4
DL2	**Dalian**	**31.33**	**255**		P		**P**	**11 17 49.0**	**-1.8**
DL2					AP	pP		11 18 08.1	+1.4
DL2					PCP	PcP		11 20 43.4	+0.1
DL2					S		**S**	**11 22 48.0**	**-5.1**
DL2	comp=Z,40nm,0.7s,mb5.3				AMB	AMB			
DL2	comp=Z,160nm,6.4s				AMB	AMB			
DL2	comp=N,930nm,14.3s				LR	LR			
DL2	comp=E,2μm,13.7s				LR	LR			
DL2	comp=Z,2μm,15.2s				LR	LR			
CBIJ	**Chichi jima**	**31.82**	**214**		P		**P**	**11 17 55.2**	**+0.2**
	comp=Z,258nm,1.0s,mb5.9,baz=37,slow=10,SNR=3.3								
CBIJ					pP		pP	11 18 09.4	-1.6
	comp=Z,606nm,1.0s,baz=44,slow=22,SNR=6.0								
CBIJ					LR		LR	11 28 22.9	
	comp=Z,1μm,20.8s,baz=350,slow=32								
SKAG	**Skagway**	**32.91**	**57**	*e*	P		**P**	**11 18 05.0**	**+0.4**
	comp=Z,846nm,1.3s,mb6.4								
SKAG	comp=Z,4μm,23.0s				LR	LR			
IRK	**Irkutsk**	**33.09**	**289**	*e*	P		**P**	**11 18 06.0**	**-0.1**
IRK				*e*				11 19 23.8	
IRK	comp=Z,178nm,2.0s,mb5.5				pmax	pmax			
BJI	**Beijing**	**33.57**	**262**		P		**P**	**11 18 08.4**	**-1.9**
BJI					S		**S**	**11 23 31.9**	**+4.1**
BJI	comp=N,4μm,17.4s				LR	LR			
BJI	comp=E,3μm,14.5s				LR	LR			
BJI	comp=Z,3μm,33.9s				LR	LR			
BJT	**Baijiatuan**	**33.58**	**262**	*e*	P		**P**	**11 18 08.8**	**-1.6**
BJT				*e*	*PP		pP	11 18 31.8	+5.3
BJT				*e*				11 20 49.6	
BJT	comp=Z,51nm,0.8s				pmax	pmax			
BJT	**Baijiatuan**	**33.58**	**262**	*e*	P		**P**	**11 18 08.8**	**-1.7**
	comp=Z,51nm,0.8s,mb5.4								
BJT				*e*	pP		pP	11 18 31.8	+5.3
BJT				*e*	PcP	PcP		11 20 49.6	+0.1
TLY	**Talaya**	**33.70**	**288**		P		**P**	**11 18 08.3**	**-3.2**
	comp=Z,239nm,0.9s,mb6.0,SNR=14								
TLY	**Talaya**	**33.70**	**288**	*e*	P		**P**	**11 18 11.0**	**-0.5**
TLY				*e*	PPP			11 19 33.4	
TLY				*e*				11 19 50.3	
TLY				*e*	S		**S**	**11 23 33.1**	**+3.2**
TLY	comp=Z,73nm,1.3s,mb5.3				pmax	pmax			
TLY	comp=Z,7μm,20.0s				MLR	MLR			
TLY	**Talaya**	**33.70**	**288**	*e*	P		**P**	**11 18 08.2**	**-3.3**
	comp=Z,39nm,0.9s,mb5.2								
TLY				*e*	PcP	PcP		11 20 49.7	-0.1
ULN	**Ulaanbaatar**	**33.86**	**280**	*e*	P		**P**	**11 18 12.7**	**-0.1**
ULN				*e*				11 20 50.1	
ULN	comp=Z,40nm,0.8s,mb5.3				pmax	pmax			
ULN	**Ulaanbaatar**	**33.86**	**280**	*e*	P		**P**	**11 18 12.7**	**-0.1**
	comp=Z,40nm,0.8s,mb5.3								
ULN				*e*	PcP	PcP		11 20 50.1	-0.2
SIT	**Sitka**	**33.87**	**61**	*e*	P		**P**	**11 18 13.4**	**+0.5**
SIT	comp=Z,2μm,2.4s,mb6.5				pmax	pmax			
SIT	comp=Z,2μm,22.0s				MLR	MLR			
SIT	**Sitka**	**33.87**	**61**	*e*	P		**P**	**11 18 13.4**	**+0.5**
	comp=Z,2μm,2.4s,mb6.5								
SIT	comp=Z,2μm,22.0s				LR	LR			
SONM	**Songino Array**	**34.24**	**280**		P		**P**	**11 18 16.5**	**+0.4**
	comp=Z,14nm,0.5s,mb5.0,baz=58,slow=7.2,SNR=54								
SONM					PcP	PcP		11 20 51.2	-0.2
	comp=Z,41nm,0.7s,baz=84,slow=2.5,SNR=18								
SONM					pPcP			11 21 07.0	
	comp=Z,35nm,0.7s,baz=68,slow=1.3,SNR=6.8								
SONM					ScP	ScP		11 24 31.5	+0.9
	comp=Z,10nm,0.9s,baz=75,slow=1.6,SNR=5.6								
SONM					P3KPbc			11 49 15.7	
	comp=Z,2.0nm,1.1s,baz=222,slow=4.4,SNR=8.2								
SONM					P3KP			11 50 43.2	
	comp=Z,1.5nm,1.2s,baz=248,slow=2.3,SNR=3.6								
SONM	**Songino Array**	**34.24**	**280**		P		**P**	**11 18 16.5**	**+0.4**
SONM								11 20 51.2	
SONM	**Songino Array**	**34.24**	**280**		P		**P**	**11 18 16.5**	**+0.4**
SONM					PcP	PcP		11 20 51.2	-0.2
SONM					pPcP			11 21 07.0	
SONM					ScP	ScP		11 24 31.5	+0.9
SONM				*e*				11 49 15.7	
SONM					PKKKP			11 50 43.2	
ZAK	**Zakamensk**	**34.57**	**286**	*e*	P		**P**	**11 18 19.0**	**0.0**
ZAK	comp=Z,32nm,1.5s,mb4.9				pmax	pmax			
MOY	**Mondy**	**35.13**	**289**	*e*	P		**P**	**11 18 24.3**	**+0.5**
MOY	comp=Z,211nm,2.2s,mb5.6				pmax	pmax			
HHC	**Hu-ho-hao-te**	**35.62**	**267**	*e*	P		**P**	**11 18 32.4**	**+4.4**
HHC					AP	pP		11 18 47.5	+3.3
HHC					XP	sP		11 18 54.8	+3.0
HHC					PP	PP		11 19 53.9	+4.0
HHC					S		**S**	**11 23 59.4**	**0.0**
HHC					XS	sS		11 24 28.4	+1.5
HHC					SS	SS		11 26 24.5	-12
HHC					AMB	AMB			
HHC	comp=Z,202nm,7.8s				LR	LR			

comp=N,3µm,14.0s
HHC LR LR
comp=E,3µm,17.5s
HHC LR LR
comp=Z,2µm,21.6s
CRAG Craig 35.68 62 *e*P **P 11 18 29.1 +0.6**
comp=Z,418nm,1.5s,mb6.2
CRAG LR LR
comp=Z,2µm,21.0s
TIA Tai'an 35.75 256 P **P 11 18 26.9 -2.2**
TIA AMB AMB
comp=Z,31nm,1.0s,mb5.2
TIA LR LR
comp=N,1µm,15.0s
TIA LR LR
comp=E,2µm,16.0s
DLBC Dease Lake 35.84 57 P **P 11 18 30.8 +0.9**
comp=E,263nm,0.9s,mb6.2,baz=292,slow=8.7,SNR=18
DLBC PcP PcP 11 20 55.3 -0.7
comp=E,39nm,1.0s,baz=297,slow=4.5,SNR=2.5
DLBC LR LR 11 33 11.8
comp=E,3µm,21.3s,baz=298,slow=36
BTO Baotou 36.66 268 *e*P **P 11 18 35.0 -1.8**
BTO S **S 11 24 15.8 +0.6**
BTO LR LR
comp=N,1µm,14.1s
BTO LR LR
comp=E,849nm,14.3s
KRAR Krasnoyarsk 37.14 300 *i* P **P 11 18 40.2 -0.8**
KRAR pmax pmax
comp=Z,179nm,2.2s,mb5.6
SSE Sheshan 37.49 246 P **P 11 18 43.9 0.0**
SSE PP PP 11 20 11.3 +0.8
SSE PCP PcP 11 21 01.1 +0.1
SSE S **S 11 24 25.5 -2.4**
SSE AMB AMB
comp=Z,24nm,0.8s,mb5.2
SSE AMB AMB
comp=Z,150nm,8.4s
SSE LR LR
comp=N,930nm,21.1s
SSE LR LR
comp=E,1µm,21.0s
SSE LR LR
comp=Z,2µm,16.0s
JOW Kunigami 37.54 234 P **P 11 18 43.9 -0.4**
comp=Z,249nm,0.9s,mb6.0,baz=15,slow=10,SNR=25
JOW PcP PcP 11 21 01.1 0.0
comp=Z,32nm,0.5s,baz=46,slow=2.5,SNR=6.0
JOW pPcP 11 21 18.4
comp=Z,78nm,0.9s,baz=309,slow=1.3,SNR=4.1
JOW LR LR 11 33 46.7
comp=Z,2µm,21.4s,baz=118,slow=35
NJ2 Nanjing 37.96 250 *e*P **P 11 18 48.1 +0.2**
NJ2 AP pP 11 19 03.3 -0.8
NJ2 XP sP 11 19 10.5 -1.3
NJ2 PP PP 11 20 19.6 +4.0
NJ2 S **S 11 24 34.0 -1.0**
NJ2 XS sS 11 25 02.0 -0.7
NJ2 AMB AMB
comp=Z,70nm,0.5s,mb5.8
NJ2 AMB AMB
comp=Z,550nm,4.4s
NJ2 LR LR
comp=N,5µm,26.2s
NJ2 LR LR
comp=E,5µm,18.6s
NJ2 LR LR
comp=Z,5µm,18.8s
ALE Alert 40.25 8 P **P 11 19 07.0 0.0**
comp=Z,862nm,1.0s,mb6.5,SNR=56
RES Resolute Bay 40.61 23 *e*P **P 11 19 09.6 -0.3**
RES pmax pmax
comp=Z,142nm,0.8s,mb5.8
RES Resolute Bay 40.61 23 *e*P **P 11 19 09.6 -0.3**
comp=Z,142nm,0.8s,mb5.8
YKW3 Yellowknife Ar 40.65 45 *e*P **P 11 19 09.5 -0.8**
YKA Yellowknife Ar 40.69 45 P **P 11 19 09.9 -0.7**
comp=Z,114nm,0.8s,mb5.7,baz=300,slow=8.3,SNR=118
YKA PcP PcP 11 21 10.2 -0.9
comp=Z,41nm,1.0s,baz=310,slow=3.3,SNR=10
YKA pPcP 11 21 27.7
comp=Z,16nm,0.8s,baz=306,slow=3.7,SNR=4.3
YKA Yellowknife Ar 40.69 45 *i* P **P 11 19 09.8 -0.8**
YKA pmax pmax
comp=Z,114nm,0.8s
YKA Yellowknife Ar 40.69 45 P **P 11 19 09.9 -0.7**
YKA PcP PcP 11 21 10.2 -0.9
YKA pPcP 11 21 27.7
WHN Wuhan 41.55 253 *e*P **P 11 19 16.0 -1.6**
WHN S **S 11 25 25.0 -3.7**
WHN LR LR
comp=Z,4µm,20.1s
ZAL Zalesovo 42.19 301 P **P 11 19 22.2 -0.7**
comp=Z,6.1nm,0.5s,baz=46,slow=7.6,SNR=26
ZAL PcP PcP 11 21 15.1 -0.9
comp=Z,33nm,0.7s,baz=357,slow=2.0,SNR=8.3
ZAL ScP ScP 11 25 01.7 +0.9
comp=Z,7.8nm,0.8s,baz=42,slow=7.5,SNR=3.9
ZAL LR LR 11 39 14.6
comp=Z,3µm,20.0s,baz=56,slow=39
ZAL Zalesovo 42.19 301 P **P 11 19 22.2 -0.7**
ZAL 11 21 15.1
ZAL Zalesovo 42.19 301 P **P 11 19 22.2 -0.7**
ZAL PcP PcP 11 21 15.1 -0.9
ZAL ScP ScP 11 25 01.7 +0.9
ZAL LR LR 11 39 14.6
NVS Novosibirsk 42.42 303⇑ *i*P **P 11 19 23.9 -0.9**
NVS *e* 11 21 02.5
NVS pmax pmax
comp=N,63nm,1.6s
NVS pmax pmax
comp=E,234nm,1.6s
NVS pmax pmax
comp=Z,297nm,1.6s,mb5.8
NVS pmax pmax
comp=N,792nm,2.2s
NVS pmax pmax
comp=E,546nm,2.2s
NVS pmax pmax
comp=Z,600nm,2.2s,mb5.9
YHNB Yeheng 42.65 240 *e*P **P 11 19 26.3 -0.3**
GTA Gaotai 43.24 275⇑ *i*P **P 11 19 30.9 -0.5**
GTA AP pP 11 19 49.0 +1.1
GTA XP sP 11 19 57.4 +1.9
GTA PP PP 11 21 13.6 +0.7
GTA PCP PcP 11 21 19.8 +0.3
GTA PPP 11 21 49.3
GTA SCP ScP 11 25 05.8 +0.8
GTA PCS PcS 11 25 11.3 -0.8
GTA S **S 11 25 51.3 -2.3**
GTA XS sS 11 26 21.6 -0.1
GTA SCS ScS 11 29 22.6 -2.6
GTA AMB AMB
comp=Z,627nm,4.2s
GTA LR LR
comp=N,3µm,15.2s
GTA LR LR
comp=E,3µm,15.2s
GTA LR LR
comp=Z,5µm,14.5s
LZH Lanzhou 43.28 268⇑ P **P 11 19 30.6 -1.1**
LZH PP PP 11 21 14.6 +1.3
LZH PCP PcP 11 21 19.5 -0.2
LZH SCP ScP 11 25 01.0 -4.2
LZH PCS PcS 11 25 10.8 -1.5
LZH S **S 11 25 49.8 -4.4**
LZH SS SS 11 28 58.3 -11
LZH SCS ScS 11 29 18.6 -6.9
LZH AMB AMB
comp=Z,427nm,1.2s,mb6.0
LZH AMB AMB
comp=Z,1µm,5.5s
LZH LR LR
comp=N,5µm,13.8s
LZH LR LR
comp=Z,7µm,18.2s
QZH Quanzhou 43.81 243 *e*P **P 11 19 38.8 +2.8**
QZH PCP PcP 11 21 22.1 +0.6
QZH S **S 11 26 00.5 -1.4**
QZH LR LR
comp=N,2µm,15.5s
QZH LR LR
comp=E,2µm,18.0s
QZH LR LR
comp=Z,3µm,25.9s
GUMO Guam 43.95 204 P **P 11 19 37.3 +0.2**
comp=Z,99nm,0.8s,mb5.6,baz=119,slow=4.5,SNR=3.6
GUMO pP pP 11 19 50.3 -3.3
comp=Z,121nm,0.8s,baz=159,slow=6.8,SNR=6.7
GUMO LR LR 11 36 46.8
comp=Z,744nm,21.7s,baz=215,slow=34
C03A Quillayute Air 44.27 68⇑ P **P 11 19 40.2 +0.6**
baz=44,SNR=14
ENH Enshi 44.42 257 *e*pP pP 11 19 57.6 +0.2
KBS Kingsbay 44.45 352 *i* P **P 11 19 41.4 +0.3**
KBS AMb AMB 11 19 48.5
KBS comp=Z,362nm,1.3s,mb5.9 *e* 11 21 53.4
KBS *e*S **S 11 26 12.1 +0.9**
KBS AMS AMS 11 38 05.0
comp=Z,1µm,22.2s
KBS Kingsbay 44.45 352 *e*P **P 11 19 41.9 +0.8**
KBS pmax pmax
comp=Z,384nm,1.0s,mb6.1
KBS Kingsbay 44.45 352 *e*P **P 11 19 41.9 +0.8**
comp=Z,384nm,1.0s,mb6.1
SNB Saturna Island 44.48 66 P **P 11 19 41.4 +0.1**
SPB4 Spitsbergen Ar 44.74 350 *e*P **P 11 19 43.9 +0.5**
SPB4 *e*pP pP 11 20 03.4 +3.4
SPB4 *e*PcP PcP 11 21 26.6 +1.9
A04A Legoe Bay, Lum 44.75 66⇓ P **P 11 19 43.4 -0.1**
baz=44,SNR=23
B04A Port Angeles 44.75 67⇓ P **P 11 19 43.4 -0.1**
baz=44,SNR=14
VDB Vedder Mountai 44.87 65 P **P 11 19 43.5 -0.9**
A05A Maple Falls 44.90 65⇑ P **P 11 19 43.8 -0.9**
baz=45,SNR=50
D03A Wishkah Elem. 45.21 68⇑ P **P 11 19 47.5 +0.3**
baz=45,SNR=22
B05A Bryant 45.35 66⇓ P **P 11 19 48.0 -0.3**
baz=45,SNR=75
GNW Green Mountain 45.42 67 *e*P **P 11 19 48.6 -0.2**
KIP Kipapa 45.46 122 *e*P **P 11 19 49.0 -0.1**
KIP *e**PP pP 11 20 06.4 +0.6
KIP pmax pmax
comp=Z,411nm,0.9s,mb6.2
KIP Kipapa 45.46 122 *e*P **P 11 19 49.0 -0.1**
comp=Z,411nm,0.9s,mb6.2
KIP *e*pP pP 11 20 06.4 +0.6
RPW Rockport 45.54 65 P **P 11 19 49.2 -0.5**
HON Honolulu 45.55 122 *e*P **P 11 19 48.3 -1.5**
E03A Lebam 45.69 69⇓ P **P 11 19 50.8 -0.2**
baz=46,SNR=61
D04A Dobbs Creek Ra 45.72 68⇑ P **P 11 19 51.4 +0.2**
baz=46,SNR=8.2
C05A Tolt Reservoir 45.93 66⇓ P **P 11 19 52.1 -0.7**
baz=46,SNR=64
PNT Penticton 45.95 63 P **P 11 19 52.4 -0.6**
F03A Seaside 46.09 69⇓ P **P 11 19 53.9 -0.1**
baz=46,SNR=22
D05A Enumclaw 46.10 67⇓ P **P 11 19 54.2 +0.1**
baz=46,SNR=58
E04A Onalaska 46.10 68⇑ P **P 11 19 54.3 +0.1**
baz=46,SNR=15
LON Longmire 46.48 67 *e*P **P 11 20 01.2 +4.1**
EDM Edmonton 46.54 56 *e*P **P 11 19 57.2 -0.4**
E05A Randle 46.62 67⇓ P **P 11 19 57.1 -1.2**
baz=46,SNR=72
G03A Yamhill 46.64 70⇓ P **P 11 19 58.0 -0.3**
baz=46,SNR=33
H02A Toledo 46.68 71⇑ P **P 11 19 58.4 -0.3**
baz=46,SNR=6.2
F04A Amboy 46.69 69⇓ P **P 11 19 58.0 -0.8**
baz=46,SNR=55
TWW Teanaway 46.71 66 P **P 11 19 59.0 0.0**
LTY Liberty 46.74 66 P **P 11 19 58.4 -0.7**
TBM Table Mountain 46.83 66 P **P 11 19 59.4 -0.5**
WMQ Urumqi 46.99 288 P **P 11 20 01.5 +0.4**
WMQ PP PP 11 21 53.5 +1.3
WMQ S **S 11 26 45.5 -2.2**
WMQ SCS ScS 11 29 43.5 -5.7
WMQ SS SS 11 30 06.5 -8.6
WMQ AMB AMB
comp=Z,345nm,1.0s,mb6.0
WMQ AMB AMB
comp=Z,2µm,5.0s
WMQ LR LR
comp=N,6µm,14.0s
WMQ LR LR
comp=E,5µm,14.0s
WMQ LR LR
comp=Z,4µm,14.0s
EBG Ellensburg 47.02 66 P **P 11 20 01.1 -0.2**
COR Corvallis 47.11 70 *e*P **P 11 20 02.3 +0.3**
COR pmax pmax
comp=Z,317nm,1.1s,mb6.0
COR Corvallis 47.11 70 *e*P **P 11 20 02.3 +0.3**
comp=Z,317nm,1.1s,mb6.0
CD2 Chengdu 47.13 263⇑ *i*P **P 11 20 01.1 -1.1**
CD2 AP pP 11 20 22.1 +3.1
CD2 PCP PcP 11 21 32.6 -0.4
CD2 PP PP 11 21 52.6 -0.9
CD2 SCP ScP 11 25 18.1 -3.0
CD2 PCS PcS 11 25 26.5 -1.7
CD2 S **S 11 26 46.9 -2.8**
CD2 XS sS 11 27 18.3 +0.2
CD2 SCS ScS 11 29 45.3 -4.9
CD2 SS SS 11 30 06.8 -11
CD2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,160nm,4.7s
CD2 LR LR
comp=E,1µm,18.0s
CD2 LR LR
comp=Z,1µm,16.8s
G04A Mulino 47.14 69⇓ P **P 11 20 01.6 -0.6**
baz=47,SNR=26
KURK Kurchatov 47.16 301 P **P 11 20 01.4 -1.0**
comp=Z,2µm,0.8s,mb6.9
I02A Mapleton 47.21 71⇑ P **P 11 20 02.5 -0.4**
baz=47,SNR=15
F05A White Salmon 47.23 68⇑ P **P 11 20 02.5 -0.5**
baz=47,SNR=30
EPH Ephrata 47.23 65 P **P 11 20 02.1 -0.8**
I03A Eugene 47.53 71⇓ P **P 11 20 05.3 -0.1**
baz=47,SNR=37
H04A Detroit Lake 47.64 70⇓ P **P 11 20 05.6 -0.6**
baz=47,SNR=108
OD2 Odessa Site #2 47.66 65 P **P 11 20 05.3 -1.0**
KEBM Edson Butte 47.70 73 *e*P **P 11 20 07.0 +0.4**
KEBM *e*PcP PcP 11 21 35.1 +0.1
BJO Bjornoya 47.71 347 *e*P **P 11 20 06.7 0.0**
BJO *i* 11 20 11.7
BJO AMS AMS 11 40 35.3
comp=Z,1µm,20.0s
G05A Wamic 47.73 69⇑ P **P 11 20 06.5 -0.3**
baz=48,SNR=50
J02A Umpqua 47.78 72⇓ P **P 11 20 07.4 +0.2**
baz=48,SNR=54
DAG Danmarks Havn 47.83 0⇓ *i*P **P 11 20 07.3 -0.3**
comp=Z,436nm,1.3s,mb6.1
DAG *i* 11 20 11.9
DAG
comp=Z,2µm,20.0s
DAG Danmarks Havn 47.83 0⇓ *i*P **P 11 20 07.3 -0.3**
DAG pmax pmax
comp=Z,437nm,1.3s,mb6.1
DAG MLR MLR
comp=Z,2µm,20.0s
MK31 Makanchi Array 47.87 294 P **P 11 20 06.0 -1.9**
MK31 pmax pmax
comp=Z,31nm,0.5s,mb5.4
MKAR Makanchi Array 47.87 294 P **P 11 20 07.2 -0.7**
comp=Z,24nm,0.5s,mb5.3,baz=52,slow=7.9,SNR=132
MKAR PKPPKP 11 51 08.4
comp=Z,1.2nm,0.9s,baz=252,slow=0.4,SNR=3.6
MKAR P4KPbc 11 57 47.1
comp=Z,0.4nm,0.5s,baz=28,slow=5.5,SNR=3.6
MKAR Makanchi Array 47.87 294 P **P 11 20 07.2 -0.7**
MKAR P'P' 11 51 08.4
NEW Newport 47.90 63 *e*P **P 11 20 07.4 -0.7**
NEW pmax pmax
comp=Z,215nm,1.2s
NEW Newport 47.90 63 *e*P **P 11 20 07.3 -0.8**
comp=Z,215nm,1.2s,mb5.8
HAWA Hanford 47.90 66 *e*P **P 11 20 07.5 -0.7**
comp=Z,23nm,1.3s,mb4.8
GZH Guangzhou 48.04 248 P **P 11 20 03.4 -5.9**
GZH LR LR
comp=N,1µm,19.6s
GZH LR LR
comp=E,863nm,20.8s
GZH LR LR
comp=Z,2µm,17.7s
POHA Pohakuloa 48.08 121 *e*P **P 11 20 09.3 -0.3**
comp=Z,2µm,1.0s,mb6.9
POHA *e*pP pP 11 20 26.0 -0.4
J03A Ideyld Park 48.10 71⇓ P **P 11 20 09.8 +0.1**
baz=48,SNR=78
HBO Huckleberry Mo 48.13 71 P **P 11 20 09.7 -0.3**
H05A Madras 48.17 69⇑ P **P 11 20 09.8 -0.5**
baz=48,SNR=80
KBO Bosley Butte 48.21 73 *e*P **P 11 20 11.1 +0.5**
CVP Callao Caves 48.39 235 *i* P **P 11 20 12.0 +0.1**
comp=Z,23µm,1.0s
CVP Callao Caves 48.39 235 *e*P **S 11 27 11.0 +3.5**
comp=Z,38µm,0.5s
I05A Bend 48.48 70 P **P 11 20 12.4 -0.2**
baz=48,SNR=94
M01C Crescent City 48.52 74⇑ P **P 11 20 13.0 +0.1**
baz=48,SNR=9.7
L02A Cave Junction 48.59 73⇓ P **P 11 20 13.5 +0.1**
baz=48,SNR=52
L02A ⇓S **S 11 27 11.3 +1.0**
baz=48
F08A Pendleton 48.69 66⇑ P **P 11 20 13.6 -0.7**
baz=48,SNR=44
KRMB Red Mountain 48.85 74 *e*P **P 11 20 15.8 +0.2**
GYA Guiyang 48.94 257⇑ *i*P **P 11 20 14.6 -1.6**
GYA PCP PcP 11 21 38.3 -1.2
GYA PP PP 11 22 09.4 -0.6
GYA SCP ScP 11 25 22.8 -5.9
GYA S **S 11 27 10.3 -4.9**
GYA SCS ScS 11 29 58.8 -3.4
GYA SS SS 11 30 36.4 -10
GYA AMB AMB
comp=Z,50nm,0.8s,mb5.5
GYA AMB AMB
comp=Z,270nm,4.5s
GYA LR LR
comp=N,2µm,16.5s
GYA LR LR
comp=E,2µm,16.5s
GYA LR LR
comp=Z,2µm,16.8s
WALA Waterton Lakes 48.97 60 *e*P **P 11 20 15.8 -0.6**
comp=Z,274nm,0.8s,mb6.2
CHKZ Chkalovo 48.97 308 *e*P **P 11 20 15.6 -0.8**
CHKZ pmax pmax
comp=Z,162nm,0.8s,mb6.0
CHKZ Chkalovo 48.97 308 *e*P **P 11 20 15.6 -0.8**
comp=Z,162nm,0.8s,mb6.0
J05A Fort Rock 49.09 70 P **P 11 20 17.6 +0.3**
baz=49,SNR=380
I06A Prineville 49.18 69 P **P 11 20 17.9 -0.2**
baz=49,SNR=122
I06A ⇑S **S 11 27 19.1 +0.4**
baz=49
JCC Jacoby Creek 49.27 75⇓ P **P 11 20 18.8 +0.1**
baz=49,SNR=16
JCC ⇓S **S 11 27 22.6 +2.6**
baz=49
K04A Chilquin 49.28 71⇓ P **P 11 20 18.8 0.0**
baz=49,SNR=24
BSMT Bassoo Peak 49.34 62 *e*P **P 11 20 19.2 -0.1**
YBH Yreka Blue Hor 49.36 73 P **P 11 20 19.8 +0.4**
comp=Z,182nm,0.9s,mb6.0,baz=346,slow=3.7,SNR=213
YBH Yreka Blue Hor 49.36 73 *e*P **P 11 20 19.8 +0.4**
YBH pmax pmax
comp=Z,239nm,1.0s
YBH Yreka Blue Hor 49.36 73 *e*P **P 11 20 19.8 +0.4**
comp=Z,239nm,1.0s,mb6.1
YBH Yreka Blue Hor 49.36 73⇓ P **P 11 20 19.7 +0.3**
baz=49,SNR=136
YBH ⇑S **S 11 27 21.2 0.0**
baz=49
KHMM Horse Mountain 49.40 74 *e*P **P 11 20 20.4 +0.7**
VOSK Vostochnaya 49.44 307 P **P 11 20 19.2 -0.8**
VOSK pmax pmax
comp=Z,82nm,1.0s,mb5.6
I07A Izee 49.46 69⇑ P **P 11 20 19.5 -0.6**
baz=49,SNR=107
I07A ⇓S **S 11 27 22.9 +0.2**
baz=49
L04A Klamath Falls 49.50 72⇑ P **P 11 20 20.5 +0.1**
baz=49,SNR=149
L04A ⇑S **S 11 27 22.9 -0.2**
baz=49
BVA0 Borovoye Array 49.51 307 *i* P **P 11 20 19.7 -0.8**
BVA0 pmax pmax
comp=Z,22nm,0.9s,mb5.1
BVAR Borovoye Array 49.51 307 P **P 11 20 20.0 -0.5**
comp=Z,61nm,0.6s,mb5.7,baz=54,slow=7.5,SNR=359
BVAR PcP PcP 11 21 40.6 -0.9
comp=Z,41nm,0.9s,baz=85,slow=3.1,SNR=4.1
BVAR ScP ScP 11 25 31.0 -0.1
comp=Z,14nm,0.9s,baz=85,slow=4.3,SNR=3.8
BVAR P4KPbc 11 57 54.1
comp=Z,0.9nm,0.4s,baz=57,slow=5.5,SNR=5.9
BVAR Borovoye Array 49.51 307 P **P 11 20 20.0 -0.5**
BVAR 11 21 40.6
BVAR Borovoye Array 49.51 307 P **P 11 20 20.0 -0.5**
BVAR PcP PcP 11 21 40.6 -0.9
BVAR ScP ScP 11 25 31.0 -0.1
M02C Callahan 49.52 73⇓ P **P 11 20 21.1 +0.5**
baz=49,SNR=90
M02C ⇓S **S 11 27 24.1 +0.7**
baz=49
BRVK Borovoye 49.53 308 P **P 11 20 20.2 -0.5**
comp=Z,1µm,0.7s,mb6.9,SNR=91
BRVK Borovoye 49.53 308⇓ P **P 11 20 20.8 +0.1**
SNR=100
BRVK Borovoye 49.53 308 *e*P **P 11 20 20.2 -0.5**
BRVK *e* 11 21 40.7
BRVK pmax pmax
comp=Z,142nm,1.0s,mb5.8
BRVK Borovoye 49.53 308 *e*P **P 11 20 20.2 -0.5**
comp=Z,142nm,1.0s,mb5.8
BRVK *e*PcP PcP 11 21 40.7 -1.0
HOG Hogback Mounta 49.55 72 P **P 11 20 21.0 +0.2**
H08A Prairie City 49.60 68⇓ P **P 11 20 20.8 -0.5**
baz=49,SNR=195
H08A ⇓S **S 11 27 23.6 -1.0**
baz=49
N02C Big Bar 49.67 74⇑ P **P 11 20 21.9 +0.2**
baz=50,SNR=74
N02C ⇓S **S 11 27 25.5 +0.1**
baz=50
J06A Christmas Vall 49.69 70⇓ P **P 11 20 21.9 +0.1**
baz=50,SNR=414
J06A ⇓S **S 11 27 25.9 +0.2**
baz=50
LHEM Herd Peak 49.70 73 P **P 11 20 22.3 +0.3**
M04C Macdoel 49.80 72⇑ P **P 11 20 22.7 0.0**
baz=50,SNR=126
M04C ⇑S **S 11 27 27.1 -0.1**
baz=50
O01C Eel River Cons 49.86 75⇑ P **P 11 20 23.8 +0.6**
baz=50,SNR=18
K06A Valley Falls 49.95 70⇓ P **P 11 20 24.0 +0.2**
baz=50,SNR=103
K06A ⇓S **S 11 27 28.2 -1.1**
baz=50
M03C McCloud 50.00 73⇓ P **P 11 20 24.0 -0.2**
baz=50,SNR=64
M03C ⇓S **S 11 27 30.3 +0.3**
baz=50
H09A Durkee 50.03 67⇑ P **P 11 20 24.1 -0.3**
baz=50,SNR=48
I08A Drewsey 50.07 68⇓ P **P 11 20 24.6 -0.2**
baz=50,SNR=308
I08A ⇓S **S 11 27 31.5 +0.3**
baz=50
BMO Blue Mountains 50.09 66 P **P 11 20 24.4 -0.6**
comp=Z,276nm,1.2s,mb6.1
BMO *e*PcP PcP 11 21 43.0 -0.7
BCPH Baguio City Da 50.11 235⇓ *e*P **P 11 20 25.2 +0.1**
L05A Lakeview 50.15 71 P **P 11 20 26.0 +0.6**
baz=50,SNR=254
ZRNK Zerenda 50.18 308 *e*P **P 11 20 25.0 -0.6**
ZRNK *e* 11 21 42.7
ZRNK pmax pmax
comp=Z,123nm,0.8s,mb5.9
ZRNK Zerenda 50.18 308 *e*P **P 11 20 25.0 -0.6**
comp=Z,123nm,0.8s,mb5.9

ZRNK ePcP PcP 11 21 42.7 -1.4
WDC Whiskeytown Da 50.25 74 eP P **11 20 25.9 -0.3**
WDC pmax pmax
comp=Z,222nm,1.0s,mb6.0
WDC Whiskeytown Da 50.25 74 eP P **11 20 25.9 -0.2**
comp=Z,222nm,1.0s,mb6.0
WDC Whiskeytown Da 50.25 74 ⇓P P **11 20 26.0 -0.1**
baz=50,SNR=122
WDC ⇑S S **11 27 33.3 -0.3**
baz=50
KIPM Iron Peak 50.28 75 eP P **11 20 26.7 +0.4**
KIPM epP pP 11 20 45.0 +1.8
O02C Red Bluff 50.40 74 ⇓P P **11 20 27.7 +0.4**
baz=50,SNR=87
BOLP Bolinao 50.42 236 eP P **11 20 28.4 +0.9**
MSO Missoula 50.46 62 eP P **11 20 27.1 -0.6**
comp=Z,258nm,1.3s,mb6.0
MSO ePcP PcP 11 21 44.2 -0.8
M05C Lookout 50.46 72 ⇑P P **11 20 27.7 0.0**
baz=50,SNR=19
M05C ⇓S S **11 27 35.5 -1.1**
baz=50
I09A Lost Marbles R 50.47 67 ⇑P P **11 20 27.4 -0.3**
baz=50,SNR=202
I09A ⇑S S **11 27 37.7 +1.2**
baz=50
SOKR Solikamsk 50.55 320 *c iP* P **11 20 27.8 -0.6**
SOKR S S **11 27 41.5 +3.8**
SOKR pmax pmax
comp=Z,170nm,1.1s,mb6.0
SOKR MLR MLR
comp=Z,2μm,14.0s
P01C Double 8 Ranch 50.60 75 ⇓P P **11 20 28.5 -0.2**
baz=50,SNR=16
FFC Flin Flon 50.62 48 P P **11 20 28.6 -0.3**
comp=Z,1μm,1.3s,mb6.8,SNR=74
KEV Kevo 50.66 341 ep P **11 20 27.4 -1.8**
comp=Z,68nm,0.5s,mb5.9
KEV Kevo 50.66 341 P P **11 20 28.5 -0.7**
KEV Kevo 50.66 341 eP P **11 20 27.4 -1.8**
KEV pmax pmax
comp=Z,68nm,0.5s,mb5.9
LVZ Lovozero 50.67 337 P P **11 20 28.1 -1.2**
comp=Z,1μm,0.9s,SNR=23
LVZ Lovozero 50.67 337 *c iP* P **11 20 28.5 -0.8**
LVZ eSS SS 11 31 13.7 -0.7
LVZ pmax pmax
comp=N,115nm,1.1s
LVZ pmax pmax
comp=Z,266nm,1.1s,mb6.2
LVZ pmax pmax
comp=E,50nm,1.0s
LVZ MLR MLR
comp=Z,3μm,23.0s
LVZ MLR MLR
comp=N,2μm,19.0s
LVZ MLR MLR
comp=E,1μm,20.0s
HATC Hat Creek Radi 50.67 73 ⇑P P **11 20 29.5 +0.1**
baz=50,SNR=60
CHMT Chamberlain Mo 50.74 62 eP P **11 20 29.0 -0.9**
GASB Alder Springs 50.81 75 P P **11 20 31.1 +0.7**
baz=51,SNR=88
GASB ⇑S S **11 27 43.1 +1.8**
baz=51
FCC Fort Churchill 50.93 41 eP P **11 20 30.4 -0.9**
FCC pmax pmax
comp=Z,171nm,0.6s,mb6.2
FCC Fort Churchill 50.93 41 eP P **11 20 30.4 -0.9**
comp=Z,171nm,0.6s,mb6.2
K08A Mann Creek Ran 50.93 69 ⇓P P **11 20 31.3 0.0**
baz=51,SNR=260
K08A ⇓S S **11 27 42.3 -0.8**
baz=51
M06C Likely Place G 50.93 72 P P **11 20 31.5 +0.2**
baz=51,SNR=140
M06C ⇓S S **11 27 42.0 -1.0**
baz=51
O03C Acorn Hollow, 50.94 74 ⇑P P **11 20 30.9 -0.4**
baz=51,SNR=27
L07A Adell 50.97 70 P P **11 20 31.9 +0.4**
baz=51,SNR=222
L07A ⇑S S **11 27 43.3 -0.3**
baz=51
SVE Sverdlovsk 51.02 316 ⇑ *iP* P **11 20 31.3 -0.7**
SVE *e* 11 20 53.3
SVE *e* 11 21 05.0
SVE *e* 11 27 44.0
SVE *eS* S 11 28 08.0 +24
SVE pmax pmax
comp=Z,240nm,1.5s,mb6.0
SVE MLR MLR
comp=N,4μm,16.0s
SVE MLR MLR
comp=E,4μm,16.0s
SVE MLR MLR
comp=Z,5μm,16.0s
WVOR Wild Horse Val 51.06 69 eP P **11 20 32.1 -0.1**
WVOR pmax pmax
comp=Z,352nm,1.1s,mb6.3
WVOR Wild Horse Val 51.06 69 eP P **11 20 32.1 -0.1**
comp=Z,352nm,1.1s,mb6.3
HOPS Hopland 51.08 76 eP P **11 20 32.2 -0.1**
comp=Z,292nm,1.2s,mb6.2
HOPS Hopland 51.08 76 ⇓P P **11 20 32.3 -0.1**
baz=51,SNR=19
ARCES ARCESS Array B 51.12 342 P P **11 20 32.1 -0.5**
comp=Z,278nm,1.0s,mb6.3,baz=35,slow=9.4,SNR=353
ARCES LR LR 11 45 08.2
comp=Z,2μm,20.1s,baz=26,slow=39
ARCES PKP2bc 11 51 33.2
comp=Z,1.1nm,0.7s,baz=208,slow=7.5,SNR=4.1
ARCES ARCESS Array B 51.12 342 P P **11 20 32.1 -0.5**
ARCES LR LR 11 45 08.2
ARCES ⇑ *e* 11 51 33.2
ARE0 ARCESS Array S 51.12 342 eP P **11 20 32.1 -0.6**
ELFS Eagle Lake Fie 51.21 73 ⇑P P **11 20 33.8 +0.5**
baz=51,SNR=57
ELFS ⇑S S **11 27 47.8 +0.9**
baz=51
APA Apatity 51.22 337 ⇑ *iP* P **11 20 32.8 -0.6**
APA *i* 11 20 55.0
APA *i* 11 21 44.0
APA *e* 11 22 39.0
APA *eS* S **11 27 42.0 -5.0**
APA *e* 11 30 10.0
APA pmax pmax
comp=Z,170nm,1.0s,mb6.0
APA MLR MLR
comp=Z,2μm,17.0s
O04C Chester 51.23 73 ⇑P P **11 20 33.7 +0.3**
baz=51,SNR=61
O04C ⇑S S **11 27 47.2 +0.1**
baz=51
SUMG Summit 51.29 8 eP P **11 20 34.4 +0.5**
comp=Z,965nm,1.2s,mb6.7
SUMG epP pP 11 20 52.6 +1.7
K09A Rome 51.36 69 ⇓P P **11 20 34.2 -0.3**
baz=51,SNR=304
K09A ⇓S S **11 27 48.4 -0.5**
baz=51
L08A Fields 51.38 70 ⇓P P **11 20 34.7 +0.1**
baz=51,SNR=256
MNRC McLaughlin Nat 51.51 75 ⇓P P **11 20 36.1 +0.5**
baz=51,SNR=56
ORV Oroville 51.54 74 ⇑P P **11 20 34.9 -0.9**
baz=51,SNR=70
ORV ⇓S S **11 27 49.6 -1.8**
baz=51
O05C Quincy 51.57 73 ⇑P P **11 20 36.1 0.0**
baz=51,SNR=180
O05C ⇓S S **11 27 51.8 0.0**
baz=51
HRY Holter Researc 51.59 61 eP P **11 20 36.1 -0.1**
N06A Buffalo Meadow 51.60 72 P P **11 20 36.5 +0.2**
baz=51,SNR=300
N06A ⇑S S **11 27 51.7 -0.6**
baz=51
SUTB Sutter Butte 51.62 75 ⇓P P **11 20 35.6 -0.8**
baz=51,SNR=91
SUTB ⇑S S **11 27 52.5 0.0**
baz=51
NSHM Saint Helena R 51.67 76 eP P **11 20 36.9 +0.1**
EGMT Eagleton 51.70 59 eP P **11 20 36.2 -0.9**
comp=Z,226nm,0.8s,mb6.2
OHCM Honcut 51.70 74 eP P **11 20 36.4 -0.7**

MCCM Marconi Confer 51.79 76 eP P **11 20 37.0 -0.6**
MCCM Marconi Confer 51.79 76 ⇑P P **11 20 37.0 -0.7**
baz=52,SNR=8.1
L09A Wilkinson Ranc 51.86 69 ⇑P P **11 20 38.2 -0.1**
baz=52,SNR=210
L09A ⇓S S **11 27 55.6 -0.3**
baz=52
CVS Carmenet Viney 51.88 76 ⇑P P **11 20 38.1 -0.3**
baz=52,SNR=43
M08A Happy Creek Ra 51.89 70 P P **11 20 38.9 +0.5**
baz=52,SNR=303
LRM Limekiln Ridge 51.90 62 eP P **11 20 38.1 -0.4**
Q03C Winters 51.91 75 ⇑P P **11 20 39.5 +0.9**
baz=52,SNR=26
BEKR Beckwourth 51.94 73 ⇑P P **11 20 38.6 -0.2**
baz=52,SNR=266
BEKR ⇑S S **11 27 56.2 -0.7**
baz=52
TGY Tagaytay City 51.94 233 P P **11 20 40.4 +1.6**
comp=Z,775nm,0.8s,baz=281,slow=2.7,SNR=23
O06A Flanigan 52.02 72 ⇑P P **11 20 39.5 +0.1**
baz=52,SNR=42
O06A ⇑S S **11 27 57.4 -0.5**
baz=52
FARB Farallon Islan 52.04 77 ⇑P P **11 20 38.9 -0.6**
baz=52
ARU Arti 52.12 317 ⇑ *iP* P **11 20 39.6 -0.5**
ARU *e* 11 21 02.0
ARU eSP 11 21 13.3
ARU *e* 11 21 46.2
ARU ePPP 11 23 43.3
ARU eS S **11 27 58.0 -1.3**
ARU eSS sS 11 28 35.8 +7.7
ARU *e* 11 30 17.6
ARU pmax pmax
comp=Z,191nm,0.8s,mb6.2
ARU MLR MLR
comp=Z,6μm,20.0s
ARU MLR MLR
comp=N,3μm,18.5s
ARU MLR MLR
comp=E,3μm,19.0s
ARU Arti 52.12 317 eP P **11 20 39.6 -0.5**
comp=E,164nm,0.7s,mb6.2
Q04C Lincoln 52.12 75 ⇓P P **11 20 39.9 -0.2**
baz=52,SNR=21
Q04C ⇑S S **11 27 59.6 +0.2**
baz=52
TRO Tromso 52.12 344 ⇑ *iP* P **11 20 38.8 -1.3**
TRO eS S **11 27 59.7 +0.4**
DLMT Dillon 52.15 63 eP P **11 20 39.8 -0.5**
comp=E,439nm,1.1s,mb6.4
KMI Kunming 52.16 259 P P **11 20 39.6 -0.8**
KMI AP pP 11 20 58.9 +1.5
KMI XP sP 11 21 07.1 +2.2
KMI PCP PcP 11 21 50.8 -0.6
KMI PP PP 11 22 39.8 +0.5
KMI PPP 11 23 44.4
KMI SCP ScP 11 25 39.4 -3.2
KMI PCS PcS 11 25 47.4 -2.3
KMI S S **11 27 56.6 -3.3**
KMI PS 11 28 17.8
KMI XS sS 11 28 29.3 +0.6
KMI SCS ScS 11 30 19.3 -5.0
KMI SS SS 11 31 33.1 -4.8
KMI SSS 11 33 18.8
KMI AMB AMB
comp=Z,23nm,0.7s,mb5.3
KMI AMB AMB
comp=Z,207nm,5.9s
KMI LR LR
comp=N,2μm,15.7s
KMI LR LR
comp=E,975nm,14.7s
KMI LR LR
comp=Z,2μm,17.1s
P05C Yuba Gap, Truc 52.20 74 ⇓P P **11 20 40.5 -0.2**
baz=52,SNR=141
P05C ⇑S S **11 28 00.2 -0.4**
baz=52
P06A Stead Airport, 52.32 73 ⇓P P **11 20 42.0 +0.3**
baz=52,SNR=70
P06A ⇓S S **11 28 03.0 +0.9**
baz=52
MCMT McKenzie Canyo 52.39 64 eP P **11 20 41.5 -0.6**
M09A Marrel Ranch, 52.40 70 P P **11 20 42.7 +0.5**
baz=52,SNR=158
BOZ Bozeman (W) 52.43 62 eP P **11 20 42.3 -0.2**
BOZ pmax pmax
comp=Z,316nm,1.2s,mb6.2
BOZ Bozeman (W) 52.43 62 eP P **11 20 42.3 -0.1**
comp=Z,316nm,1.2s,mb6.2
SAC San Andreas 52.45 76 eP P **11 20 42.2 -0.4**
HLID Hailey 52.48 66 eP P **11 20 42.6 -0.2**
comp=Z,151nm,1.1s,mb5.9
HLID ePcP PcP 11 21 53.4 +0.8
N08A GE Springer Mi 52.49 71 P P **11 20 43.1 +0.2**
baz=52,SNR=200
N08A ⇑S S **11 28 03.2 -1.2**
baz=52
LAVA Lava Cap Winer 52.52 74 ⇑P P **11 20 42.8 -0.3**
baz=52,SNR=177
LAVA ⇑S S **11 28 04.2 -0.7**
baz=52
O07A Toulon 52.53 72 P P **11 20 43.6 +0.4**
baz=52,SNR=339
O07A ⇓S S **11 28 05.2 +0.2**
baz=52
PAHR Pah Rah Range 52.58 72 eP P **11 20 43.6 0.0**
comp=Z,478nm,1.2s,mb6.4
PAHR epP pP 11 21 00.9 +0.3
WCN Washoe City 52.67 73 ⇑P P **11 20 44.4 +0.2**
baz=52,SNR=160
WCN ⇓S S **11 28 07.3 +0.4**
baz=52
JRSC Jasper Ridge 52.67 76 ⇓P P **11 20 43.7 -0.5**
baz=52,SNR=20
SGF Sodankyl 52.74 340 P P **11 20 42.8 -2.0**
N09A Rock Creek Ran 52.76 70 ⇑P P **11 20 45.2 +0.3**
baz=52,SNR=207
N09A ⇓S S **11 28 07.9 -0.3**
baz=52
R04C Big Horse Ranc 52.77 75 ⇑P P **11 20 44.6 -0.4**
baz=53,SNR=43
R04C ⇓S S **11 28 08.7 +0.4**
baz=53
WENL Wente Brothers 52.78 76 ⇓P P **11 20 45.1 +0.1**
baz=53,SNR=38
M10A I.L. Ranch, Tu 52.81 69 ⇑P P **11 20 45.7 +0.4**
baz=53,SNR=185
O08A Rochester Mine 52.83 71 ⇑P P **11 20 45.7 +0.3**
baz=53,SNR=6.7
BNLO Ben Lomond Sa 52.91 77 ⇓P P **11 20 45.3 -0.7**
baz=53,SNR=23
R05C Kirkwood Meado 52.92 74 ⇓P P **11 20 46.2 +0.2**
baz=53,SNR=283
R05C ⇑S S **11 28 10.2 -0.2**
baz=53
P07A Fallon 52.97 72 ⇓P P **11 20 46.9 +0.5**
baz=53,SNR=17
P07A ⇓S S **11 28 11.1 +0.2**
baz=53
AAA Alma-Ata 53.04 294 *i* P P **11 20 47.2 +0.3**
AAA eS S **11 28 07.5 -4.4**
AAA pmax pmax
comp=Z,669nm,3.5s
AAA smax
comp=E,837nm,8.8s
AAA MLR MLR
comp=Z,4μm,17.1s
S04C Ingram Canyon, 53.10 76 ⇑P P **11 20 47.3 -0.1**
baz=53,SNR=56
S04C ⇓S S **11 28 12.8 +0.1**
baz=53
QLMT Earthquake Lak 53.11 63 eP P **11 20 47.5 0.0**
QIZ Qiongzhong 53.22 248 P P **11 20 49.1 +0.9**
QIZ AP pP 11 21 04.1 -1.2
QIZ XP sP 11 21 10.3 -2.4
QIZ S S **11 28 16.9 +2.6**
QIZ XS sS 11 28 43.3 +0.1
QIZ AMB AMB
comp=Z,48nm,1.0s,mb5.5
QIZ AMB AMB
comp=Z,650nm,4.9s
QIZ LR LR
comp=E,876nm,20.0s
QIZ LR LR
comp=Z,1μm,22.9s
QIZ Qiongzhong 53.22 248 eP P **11 20 48.7 +0.4**
comp=Z,32nm,0.8s,mb5.4
QIZ ePcP PcP 11 21 56.2 +0.8
BMN Battle Mountai 53.23 70 eP P **11 20 48.7 +0.4**
BMN e*PP pP 11 21 07.1 +1.8
BMN *e* 11 21 55.6
CMB Columbia Colle 53.23 75 eP P **11 20 48.4 0.0**
CMB *e* 11 21 54.6
CMB pmax pmax
comp=Z,354nm,1.3s,mb6.2
CMB Columbia Colle 53.23 75 eP P **11 20 48.4 +0.1**
comp=Z,354nm,1.3s,mb6.2
CMB ePcP PcP 11 21 54.6 -0.8
CMB Columbia Colle 53.23 75 ⇓P P **11 20 48.4 +0.1**
baz=53,SNR=145
CMB ⇓S S **11 28 14.5 -0.1**
baz=53
M11A Holland Ranch, 53.27 68 ⇓P P **11 20 49.3 +0.6**
baz=53,SNR=69
M11A ⇑S S **11 28 14.6 -0.5**
baz=53
P08A Dixie Valley 53.29 72 ⇓P P **11 20 49.6 +0.8**
baz=53,SNR=100
GCMT Greycliff 53.31 61 eP P **11 20 49.1 +0.2**
GCMT ePP PP 11 22 50.5 +0.9
R06C Coleville 53.39 74 ⇓P P **11 20 50.2 +0.7**
baz=53,SNR=434
R06C ⇓S S **11 28 16.3 -0.5**
baz=53
N10A Dunphy 53.40 70 ⇑P P **11 20 50.0 +0.5**
baz=53,SNR=70
N10A ⇓S S **11 28 15.9 -0.9**
baz=53
WAKR Walker 53.41 74 eP P **11 20 50.2 +0.6**
O09A Fish Creek Ran 53.43 71 P P **11 20 50.5 +0.7**
baz=53,SNR=434
O09A ⇑S S **11 28 18.8 +1.6**
baz=53
Q07A Schurz 53.44 73 ⇓P P **11 20 50.4 +0.5**
baz=53,SNR=17
JMIC Jan Mayen 53.45 356 ⇑ *iP* P **11 20 50.0 0.0**
JMIC *eS* S **11 28 17.2 -0.3**
JMIC AMS AMS 11 43 19.7
comp=Z,878nm,20.8s
YMR Madison River 53.46 63 eP P **11 20 50.0 0.0**
comp=Z,7.4nm,0.5s,mb5.0
PACP Pacheco Peak 53.48 76 P P **11 20 50.4 +0.2**
baz=53,SNR=104
PACP ⇓S S **11 28 19.0 +1.0**
baz=53
YNR Norris Junctio 53.57 62 eP P **11 20 51.5 +0.7**
SAO San Andreas Ge 53.57 76 eP P **11 20 50.6 -0.2**
SAO pmax pmax
comp=Z,253nm,1.2s,mb6.1
SAO San Andreas Ge 53.57 76 eP P **11 20 50.6 -0.2**
comp=Z,253nm,1.2s,mb6.1
S06C San Francisco 53.64 74 ⇓P P **11 20 51.5 +0.2**
baz=53,SNR=473
S06C ⇓S S **11 28 20.7 +0.7**
baz=53
YFT Old Faithful 53.68 63 eP P **11 20 53.0 +1.4**
O10A Cortez Mining, 53.71 70 ⇑P P **11 20 52.5 +0.6**
baz=54,SNR=132
O10A ⇑S S **11 28 21.8 +0.8**
baz=54
N11A Elko Archery C 53.74 69 ⇑P P **11 20 52.6 +0.6**
baz=54,SNR=74
N11A ⇑S S **11 28 22.0 +0.6**
baz=54
M12A Wells 53.74 68 ⇓P P **11 20 52.5 +0.4**
baz=54,SNR=160
M12A ⇓S S **11 28 22.7 +1.2**
baz=54
S05C Merced 53.76 75 ⇓P P **11 20 51.8 -0.5**
baz=54,SNR=56
S05C ⇓S S **11 28 22.7 +0.9**
baz=54
HAST UC Hastings Re 53.79 77 ⇑P P **11 20 52.3 -0.1**
baz=54,SNR=63
HAST ⇓S S **11 28 22.5 +0.5**
baz=54
LKWY Lake 53.81 62 eP P **11 20 54.3 +1.7**
LKWY pmax pmax
comp=Z,598nm,1.1s,mb6.5
LKWY Lake 53.81 62 eP P **11 20 54.3 +1.7**
comp=Z,598nm,1.1s,mb6.5
P09A Austin 53.90 71 ⇓P P **11 20 53.9 +0.7**
baz=54,SNR=235
P09A ⇓S S **11 28 24.9 +1.3**
baz=54
T05C Eagle Field, D 53.90 76 ⇓P P **11 20 53.9 +0.6**
baz=54,SNR=30
R07C Lee Vining 53.92 74 ⇑P P **11 20 54.2 +0.8**
baz=54,SNR=102
R07C ⇑S S **11 28 25.1 +1.2**
baz=54
Q08A Gabbs 53.97 72 ⇑P P **11 20 54.2 +0.5**
baz=54,SNR=878
TKM2 Tokmak 2 53.98 295 P P **11 20 53.3 -0.5**
SNR=31
TKM2 Tokmak 2 53.98 295 *i* P P **11 20 52.5 -1.3**
TKM2 pmax pmax
comp=Z,108nm,0.8s,mb5.9
FLWY Flagg Ranch 54.01 63 eP P **11 20 54.9 +0.8**
comp=Z,256nm,0.7s,mb6.4
IMW Indian Meadow 54.02 63 eP P **11 20 57.8 +3.6**
comp=Z,652nm,1.1s,mb6.6
IMW ePcP PcP 11 21 59.2 +0.8
ELK Elko 54.05 69 eP P **11 20 54.9 +0.5**
ELK pmax pmax
comp=Z,343nm,1.1s
ELK Elko 54.05 69 eP P **11 20 54.9 +0.6**
comp=Z,343nm,1.1s,mb6.3
LRV Little Rabbit 54.05 76 eP P **11 20 54.8 +0.4**
N12A Clover Valley, 54.08 68 P P **11 20 55.2 +0.7**
baz=54,SNR=712
N12A ⇓S S **11 28 26.5 +0.4**
baz=54
NVAR Mina Array Bea 54.08 73 P P **11 20 55.1 +0.6**
comp=Z,326nm,1.0s,mb6.3,baz=305,slow=6.1,SNR=1132
NVAR PKPPKP 11 51 07.0
comp=Z,1.7nm,0.9s,baz=169,slow=4.5,SNR=7.1
NVAR PKP2bc 11 51 24.4
comp=Z,1.4nm,1.0s,baz=87,slow=2.1,SNR=3.7
NVAR P4KPbc 11 58 14.4
comp=Z,1.1nm,1.0s,baz=313,slow=3.8,SNR=5.3
NVAR Mina Array Bea 54.08 73 P P **11 20 55.1 +0.6**
NVAR P'P' 11 51 07.0
NVAR ⇑ *e* 11 51 24.4
DCID1 Drake Creek 54.11 64 eP P **11 20 55.2 +0.5**
ULHL Ulahol 54.13 294 P P **11 21 01.2 +6.3**
SNR=5.4
M13A Montello 54.17 67 ⇓P P **11 20 55.3 +0.1**
baz=54,SNR=323
M13A ⇓S S **11 28 27.1 -0.2**
baz=54
RRI2 Red Ridge 54.22 64 eP P **11 20 56.0 +0.5**
comp=Z,107nm,0.8s,mb5.9
MOOW Moose Ponds 54.22 63 eP P **11 20 56.0 +0.4**
U04C Hernandez Rese 54.23 76 P P **11 20 56.2 +0.6**
baz=54,SNR=66
V03C Hunter Liggett 54.23 77 ⇑P P **11 20 55.8 +0.2**
baz=54,SNR=52
R08A Mina 54.25 73 ⇑P P **11 20 56.4 +0.7**
baz=54,SNR=165
O11A Cowboy Ranch, 54.27 70 ⇓P P **11 20 56.4 +0.5**
baz=54
O11A ⇑S S **11 28 28.9 +0.3**
baz=54
LOF Lofoten 54.28 346 ⇑ *iP* P **11 20 57.1 +1.1**
LOF AMb AMB 11 20 59.3
comp=Z,1μm,1.4s,mb6.7
LOF *i* 11 21 01.9
LOF Lofoten 54.28 346 ⇑ *iP* P **11 20 57.1 +1.1**
comp=Z,1μm,1.4s,mb6.7
USP Ospenovka 54.30 296 P P **11 20 55.8 -0.3**
SNR=70
TPAW Teton Pass 54.30 64 eP P **11 20 56.7 +0.6**
comp=Z,548nm,1.1s,mb6.5
KCC Kaiser Creek 54.33 74 P P **11 20 56.8 +0.4**
baz=54,SNR=258
KCC ⇑S S **11 28 28.5 -0.9**
baz=54
LAO LASA Array 54.35 58 eP P **11 20 56.5 0.0**
comp=Z,626nm,0.9s,mb6.6

T06C Millerton Lake 54.35 75 P P 11 20 56.3 -0.2
baz=54,SNR=136
T06C ⇓S **S** 11 28 29.0 -0.7
baz=54
CHMS Chumysh 54.36 296 P P 11 20 53.1 -3.5
SNR=24
MLAC Mammoth Lakes 54.37 74 P P 11 20 58.0 +1.3
baz=54,SNR=66
LOHW Long Hollow 54.39 63 *e*P **P 11 20 57.4 +0.6**
comp=Z,392nm,1.0s,mb6.4
Q09A Carvers 54.40 72 ⇓P **P 11 20 57.6 +0.8**
baz=54,SNR=92
Q09A ⇑S **S** 11 28 30.7 +0.5
baz=54
REDW Red Top Meadow 54.45 64 *e*P **P 11 20 57.7 +0.5**
comp=Z,570nm,1.3s,mb6.4
KBK Karagaybulak 54.51 295 P P 11 21 00.9 +3.2
SNR=34
N13A Wendover, West 54.52 68 ⇑P **P 11 20 58.2 +0.4**
baz=54
N13A ⇑S **S** 11 28 32.0 +0.1
baz=54
FRU Bishkek 54.55 296 P P 11 20 56.6 -1.3
FRU *i* pP 11 21 14.0 -1.0
FRU *e* 11 24 18.0
FRU *e* 11 28 32.6
FRU pmax pmax
comp=Z,310nm,1.2s,mb6.2
HVU Hansel Valley 54.60 66 *e*P **P 11 20 58.4 +0.1**
HVU *e* 11 21 59.5
HVU pmax pmax
comp=Z,308nm,1.1s,mb6.2
HVU Hansel Valley 54.60 66 *e*P **P 11 20 58.4 +0.1**
comp=Z,308nm,1.1s,mb6.2
HVU *e*PcP PcP 11 21 59.5 -1.2
U05C Westside ANR, 54.61 76 ⇓P **P 11 20 59.2 +0.8**
baz=54,SNR=19
P11A Circle Ranch, 54.64 70 ⇓P **P 11 20 59.2 +0.6**
baz=54,SNR=25
O12A Currie 54.66 69 ⇑P **P 11 20 59.2 +0.5**
baz=54,SNR=675
PKD Parkfield 54.67 77 ⇓P **P 11 20 58.7 -0.1**
baz=54,SNR=62
V04C Ramage Ranch, 54.71 77 ⇓P **P 11 20 59.5 +0.3**
baz=54,SNR=47
MTUM Tungsten Hills 54.72 74 *e*P **P 11 20 59.8 +0.6**
MTUM *e*PcP PcP 11 21 59.2 -1.9
AHID Auburn Hatcher 54.75 64 *e*P **P 11 20 59.5 +0.1**
comp=Z,351nm,1.1s,mb6.3
AAK Ala-Archa 54.75 296 P P 11 21 01.2 +1.7
SNR=32
AAK Ala-Archa 54.75 296 P P 11 20 59.6 +0.2
comp=Z,2μm,0.8s,SNR=30
AAK Ala-Archa 54.75 296 ⇑P **P 11 20 58.6 -0.8**
SNR=98
AAK Ala-Archa 54.75 296 *e*P **P 11 20 58.1 -1.3**
AAK *e**PP pP 11 21 15.9 -0.6
AAK *e**SP sP 11 21 22.5 -1.5
AAK pmax pmax
comp=Z,245nm,0.8s,mb6.3
AAK Ala-Archa 54.75 296 *e*P **P 11 20 58.1 -1.3**
comp=Z,245nm,0.8s,mb6.3
AAK *e*pP pP 11 21 15.9 -0.6
AAK *e*sP sP 11 21 22.5 -1.5
KZA Kyzart 54.77 295 P P 11 21 00.4 +0.8
SNR=24
R09A Tonopah 54.89 72 P P 11 21 00.7 +0.3
baz=55,SNR=880
R09A ⇓S **S** 11 28 37.9 +1.0
baz=55
TPH Tonopah 54.92 72 *e*P **P 11 21 01.1 +0.4**
TPH pmax pmax
comp=Z,845nm,1.1s,mb6.7
TPH Tonopah 54.92 72 *e*P **P 11 21 01.1 +0.5**
comp=Z,845nm,1.1s,mb6.7
OUL Oulu 54.93 339 P P 11 20 58.8 -1.9
HELL Mitchell Peak, 54.96 75 P P 11 21 00.9 0.0
baz=55,SNR=495
HELL ⇓S **S** 11 28 38.5 +0.6
baz=55
UCH Uchtor 55.04 295 P P 11 21 03.6 +2.1
SNR=17
PTRM Twissleman Ran 55.06 76 *e*P **P 11 21 02.0 +0.3**
PTRM *e*PcP PcP 11 22 03.1 +0.7
V05C Boulder Hill, 55.08 76 ⇓P **P 11 21 02.6 +0.8**
baz=55,SNR=36
V05C ⇓S **S** 11 28 41.1 +1.7
baz=55
BGU Big Grassy Mou 55.08 67 *e*P **P 11 21 02.0 +0.2**
EKS2 Erkin-Say 55.10 296 P P 11 21 01.9 0.0
SNR=44
SPUT South Promonto 55.11 66 *e*P **P 11 21 02.0 0.0**
RCTC Rector, Farmer 55.12 75 P P 11 21 01.8 -0.3
baz=55,SNR=122
TIN Tinemaha 55.12 74 ⇓P **P 11 21 02.9 +0.8**
baz=55,SNR=74
TIN ⇓S **S** 11 28 41.4 +1.4
baz=55
P12A McGill 55.15 70 ⇑P **P 11 21 02.8 +0.5**
baz=55,SNR=299
P12A ⇑S **S** 11 28 40.1 -0.2
baz=55
KLMR Klimovskoe 55.17 330 *c* *i*P **P 11 21 02.3 -0.2**
KLMR *e* 11 23 07.5
KLMR pmax pmax
comp=Z,390nm,1.7s,mb6.2
KLMR pmax pmax
comp=Z,160nm,6.1s
KLMR MLR MLR
comp=Z,2μm,23.0s
LSA Lhasa 55.17 273 P P 11 21 04.0 +1.5
LSA Lhasa 55.17 273 *e*P **P 11 21 04.0 +1.5**
LSA pmax pmax
comp=Z,104nm,0.6s,mb6.0
LSA Lhasa 55.17 273 *e*P **P 11 21 04.0 +1.5**
comp=Z,104nm,0.6s,mb6.0
S09A Goldfield 55.18 73 ⇑P **P 11 21 02.8 +0.3**
baz=55,SNR=692
S09A ⇓S **S** 11 28 40.9 +0.1
baz=55
R10A Warm Springs 55.26 72 ⇓P **P 11 21 03.4 +0.3**
baz=55,SNR=377
R10A ⇓S **S** 11 28 42.4 +0.5
baz=55
SFJD Kangerlussuaq 55.30 15 P P 11 21 02.2 -1.2
comp=Z,67nm,0.5s,mb5.9,baz=316,slow=6.9,SNR=30
HWUT Hardware Ranch 55.35 66 *e*P **P 11 21 04.2 +0.5**
comp=Z,648nm,1.1s,mb6.6
SMMC Simmler 55.43 77 ⇑P **P 11 21 04.7 +0.3**
baz=55,SNR=112
Q12A Willow Creek R 55.50 70 ⇑P **P 11 21 05.3 +0.4**
baz=55,SNR=158
Q12A ⇓S **S** 11 28 44.5 -0.6
baz=55
AML Almayashu 55.53 296 P P 11 21 05.5 +0.5
SNR=40
BW06 Boulder Array 55.53 63 *e*P **P 11 21 05.2 +0.1**
comp=Z,532nm,1.1s,mb6.5
BW06 *e*pP pP 11 21 23.7 +1.5
PDAR Pinedale Array 55.53 63 P P 11 21 05.0 0.0
comp=Z,254nm,1.0s,mb6.2,baz=329,slow=2.6,SNR=777
PDAR LR LR 11 45 21.2
comp=Z,587nm,21.6s,baz=322,slow=36
PDAR PKPPKP 11 50 54.0
comp=Z,1.6nm,1.0s,baz=124,slow=4.5,SNR=5.1
VES Vestal, Richgr 55.55 76 ⇑P **P 11 21 04.6 -0.6**
baz=55,SNR=131
TRCR Troy Canyon 55.60 71 *e*P **P 11 21 05.7 +0.1**
JOF Joensuu 55.61 335 *e*p **P 11 21 03.8 -1.8**
comp=Z,102nm,0.4s,mb6.2
JOF Joensuu 55.61 335 *e*P **P 11 21 03.8 -1.8**
JOF pmax pmax
comp=Z,102nm,0.4s,mb6.2
GRAC Grapevine Rang 55.63 73 ⇑P **P 11 21 06.3 +0.6**
baz=55,SNR=192
GRAC ⇑S **S** 11 28 46.9 +0.1
baz=55
CWC Cottonwood Cre 55.66 74 ⇓P **P 11 21 06.1 +0.2**
baz=55,SNR=179
DUG Dugway 55.73 68 *e*P **P 11 21 06.9 +0.5**
DUG pmax pmax
comp=Z,686nm,1.1s,mb6.6
DUG Dugway 55.73 68 *e*P **P 11 21 06.9 +0.5**
comp=Z,686nm,1.1s,mb6.6
NOQ North Oquirrh 55.76 67 *e*P **P 11 21 07.2 +0.5**
comp=Z,1μm,1.2s,mb6.7
TCUT Toone Canyon 55.78 66 *e*P **P 11 21 07.5 +0.6**

PKM Peak Mountain 55.84 77 ⇑P **P 11 21 07.8 +0.5**
baz=56,SNR=146
PKM ⇓S **S** 11 28 49.8 +0.3
baz=56
CTU Camp Tracy 55.92 66 *e*P **P 11 21 08.0 +0.2**
comp=Z,362nm,1.0s,mb6.4
MOR8 Moi Rana 55.98 345 ⇑ *i*P **P 11 21 06.5 -1.7**
MOR8 AMb AMB 11 21 08.6
comp=Z,467nm,1.3s,mb6.4
MOR8 *e*pP pP 11 21 22.8 -2.7
MOR8 Moi Rana 55.98 345 ⇑ *i*P **P 11 21 06.5 -1.7**
comp=Z,467nm,1.3s,mb6.4
ISA Isabella 56.01 75 *e*P **P 11 21 07.8 -0.7**
ISA pmax pmax
comp=Z,320nm,1.1s,mb6.3
ISA Isabella 56.01 75 *e*P **P 11 21 07.7 -0.8**
comp=Z,626nm,2.3s,mb6.2
ISA Isabella 56.01 75 ⇓P **P 11 21 07.8 -0.7**
baz=56,SNR=228
ISA ⇑S **S** 11 28 50.9 -0.9
baz=56
DAC Darwin (Calif) 56.04 74 *e*P **P 11 21 08.9 +0.2**
DAC pmax pmax
comp=Z,304nm,1.2s,mb6.2
DAC Darwin (Calif) 56.04 74 *e*P **P 11 21 08.9 +0.2**
comp=Z,304nm,1.2s,mb6.2
ARVC Arvin 56.21 76 ⇓P **P 11 21 09.0 -0.9**
baz=56,SNR=27
ARVC ⇑S **S** 11 28 55.1 +0.5
baz=56
SBC Santa Barbara 56.23 77 ⇓P **P 11 21 10.2 +0.2**
baz=56,SNR=31
KSH Kashi 56.25 292 P P 11 21 12.3 +2.1
KSH AP pP 11 21 31.8 +4.4
KSH PP PP 11 23 19.6 +3.6
KSH PPP 11 24 36.8
KSH SCP ScP 11 25 59.3 -1.2
KSH PCS PcS 11 26 08.0 +0.4
KSH S **S** 11 28 54.4 -0.6
KSH XS sS 11 29 27.5 +3.4
KSH SCS ScS 11 30 50.5 -2.9
KSH SS SS 11 32 41.6 -0.8
KSH LR LR
comp=N,7μm,13.0s
KSH LR LR
comp=E,7μm,9.8s
KSH LR LR
comp=Z,4μm,26.9s
MPMC Manual Prospec 56.26 74 ⇓P **P 11 21 10.5 +0.3**
baz=56,SNR=383
MPMC ⇓S **S** 11 28 54.5 -0.6
baz=56
NLU North Lily Min 56.29 67 *e*P **P 11 21 11.1 +0.6**
NLU *e*pP pP 11 21 30.0 +2.4
FURC Furnace Creek, 56.30 73 ⇑P **P 11 21 10.8 +0.3**
baz=56,SNR=334
FURC ⇑S **S** 11 28 56.5 +0.9
baz=56
DAU Daniels Canyon 56.38 66 *e*P **P 11 21 11.7 +0.6**
KK31 Karatay Array 56.42 298 *i* P **P 11 21 10.7 -0.7**
KK31 pmax pmax
comp=Z,283nm,1.2s,mb6.2
KKAR Karatay Array 56.42 298 P P **11 21 10.7 -0.7**
KKAR pmax pmax
comp=Z,339nm,1.2s,mb6.2
ULM Lac du Bonnet 56.43 49 P **P 11 21 10.9 -0.6**
comp=Z,73nm,0.5s,mb6.0,baz=318,slow=7.4,SNR=221
ULM PcP PcP
comp=Z,69nm,1.0s,baz=332,slow=6.8,SNR=5.1
ULM LR LR 11 48 30.0
comp=Z,1μm,18.5s,baz=326,slow=39
ULM PKP2bc 11 51 05.1
comp=Z,3.6nm,0.9s,baz=137,slow=4.1,SNR=4.3
ULM Lac du Bonnet 56.43 49 *e*P **P 11 21 10.8 -0.7**
comp=Z,267nm,1.0s,mb6.2
ULM *e*PcP PcP 11 22 06.9 -0.8
MPU Maple Canyon 56.47 67 *e*P **P 11 21 12.5 +0.7**
comp=Z,1μm,1.3s,mb6.7
LRMC Laurel Mountai 56.58 75 ⇓P **P 11 21 12.4 -0.1**
baz=56,SNR=90
LRMC ⇓S **S** 11 29 00.3 +1.0
baz=56
BSC Santa Cruz Isl 56.61 77 ⇓P **P 11 21 12.4 -0.3**
baz=56,SNR=27
U10A Ash Meadows, A 56.62 73 ⇑P **P 11 21 13.1 +0.3**
baz=56,SNR=119
U10A ⇓S **S** 11 29 01.9 +2.0
baz=56
OSI Osito Adit 56.65 76 ⇑P **P 11 21 13.0 0.0**
baz=56
OSI ⇓S **S** 11 29 00.9 +0.6
baz=56
AKTK Aktyubinsk 56.75 312 P P 11 21 13.3 -0.5
AKTO Aktyubinsk 56.75 312 P P 11 21 13.3 -0.4
comp=Z,108nm,0.5s,mb6.2,baz=68,slow=9.1,SNR=333
AKTO Aktyubinsk 56.75 312 *i* P **P 11 21 13.2 -0.5**
AKTO pmax pmax
comp=Z,17nm,0.5s,mb5.3
PPR Puerto Princes 56.75 233 ⇓ *e*P **P 11 21 15.8 +2.1**
AB31 Akbulak array 56.81 310 *i* P **P 11 21 14.1 -0.1**
BLG Laguna Peak 56.84 77 ⇑P **P 11 21 14.0 -0.4**
baz=57,SNR=62
EDW2 Edwards Air Fo 56.86 76 ⇓P **P 11 21 14.3 -0.2**
baz=57,SNR=347
EDW2 ⇑S **S** 11 29 02.7 -0.3
baz=57
SHOC Shoshone 57.03 73 ⇓P **P 11 21 15.9 +0.2**
baz=57,SNR=45
SHOC ⇑S **S** 11 29 06.2 +0.8
baz=57
U11A Corn Creek 57.13 72 ⇓P **P 11 21 16.7 +0.2**
baz=57,SNR=31
DECC Green Verdugo 57.14 76 ⇑P **P 11 21 16.3 -0.1**
baz=57,SNR=21
DECC ⇑S **S** 11 29 07.4 +0.7
baz=57
ARUT Antelope Range 57.16 70 *e*P **P 11 21 16.9 +0.3**
ARUT *e**PP pP 11 21 32.6 -1.2
GSC Goldstone 57.19 74 *e*P **P 11 21 17.0 +0.2**
GSC Goldstone 57.19 74 ⇑P **P 11 21 16.9 0.0**
baz=57,SNR=250
GSC ⇓S **S** 11 29 08.7 +1.2
baz=57
TMUT Trail Mountain 57.23 67 *e*P **P 11 21 17.8 +0.7**
SNCC San Nicolas Is 57.23 78 ⇑P **P 11 21 17.0 -0.1**
baz=57,SNR=20
RSSD Black Hills 57.27 59 *e*P **P 11 21 17.4 0.0**
RSSD pmax pmax
comp=Z,486nm,1.1s,mb6.5
RSSD Black Hills 57.27 59 *e*P **P 11 21 17.4 0.0**
comp=Z,486nm,1.1s,mb6.5
RWWY Rawlins 57.51 63 *e*P **P 11 21 19.0 -0.1**
comp=Z,639nm,1.3s,mb6.5
BFSC Mount Baldy St 57.52 76 P **P 11 21 19.1 0.0**
baz=57,SNR=84
BFSC ⇓S **S** 11 29 11.9 +0.2
baz=57
FMP Fort Macarthur 57.56 77 ⇓P **P 11 21 19.2 -0.3**
baz=57,SNR=15
TUQ Turquoise Mtn. 57.57 74 P **P 11 21 19.9 +0.4**
baz=57,SNR=134
TUQ ⇑S **S** 11 29 14.0 +1.6
baz=57
U12A Valley of Fire 57.58 72 ⇓P **P 11 21 20.1 +0.5**
baz=57,SNR=36
U12A ⇓S **S** 11 29 14.9 +2.4
baz=57
SRU San Rafael 57.72 67 *e*P **P 11 21 21.1 +0.5**
SRU pmax pmax
comp=Z,602nm,1.1s,mb6.5
SRU San Rafael 57.72 67 *e*P **P 11 21 21.1 +0.5**
comp=Z,602nm,1.1s,mb6.5
CIS Catalina Islan 57.73 77 ⇑P **P 11 21 20.1 -0.5**
baz=58,SNR=49
CIS ⇓S **S** 11 29 15.2 +0.7
baz=58
HEC Hector,Ludlow 57.80 74 P **P 11 21 21.3 +0.1**
baz=58,SNR=193
HEC ⇓S **S** 11 29 16.9 +1.5
baz=58
NSS Namsos 57.89 345 ⇑ *i*P **P 11 21 20.1 -1.7**
NSS AMb AMB 11 21 22.4
comp=Z,378nm,0.7s,mb6.5
NSS Namsos 57.89 345 ⇑ *i*P **P 11 21 20.1 -1.7**
comp=Z,378nm,0.7s,mb6.5
BBRC Big Bear Sol-O 57.90 75 P **P 11 21 22.1 +0.2**
baz=58,SNR=74
BBRC ⇑S **S** 11 29 16.8 0.0
baz=58
SHL Shillong 57.93 269 *ex* **P 11 21 12.5 -10**
SHL AMb AMB 11 21 29.1
comp=Z,1μm,1.6s,mb6.7
V12A Nelson 57.94 73 ⇓P **P 11 21 22.5 +0.4**
baz=58,SNR=169
V12A ⇓S **S** 11 29 17.9 +0.7
baz=58
SCI San Clemente I 57.97 77 ⇑P **P 11 21 22.0 -0.3**
baz=58,SNR=28
CHRT Chiangrai 57.98 258 ⇓P **P 11 21 22.0 -0.4**
comp=Z,500nm,0.9s,mb6.5
FIA1 FINESS Array S 58.11 337 *e*P **P 11 21 23.0 -0.3**
FINES FINESS Array B 58.11 337 P **P 11 21 23.3 0.0**
comp=Z,240nm,0.7s,mb6.3,baz=41,slow=8.2,SNR=812
FINES LR LR 11 50 31.2
comp=Z,678nm,18.8s,baz=207,slow=40
FINES PKPPKP 11 50 57.6
comp=Z,9.6nm,1.1s,baz=178,slow=5.7,SNR=6.3
FINES PKP2bc 11 51 14.6
comp=Z,7.1nm,1.0s,baz=174,slow=5.2,SNR=6.0
FINES FINESS Array B 58.11 337 P **P 11 21 23.3 0.0**
FINES LR LR 11 50 31.2
FINES P'P' 11 50 57.6
FINES ⇑ *e* 11 51 14.6
W12A Cal Nev Ari 58.24 73 ⇓P **P 11 21 24.3 +0.1**
baz=58,SNR=12
W12A ⇑S **S** 11 29 22.2 +1.0
baz=58
MURC Murrieta 58.25 76 ⇓P **P 11 21 23.8 -0.5**
baz=58,SNR=65
MURC ⇑S **S** 11 29 22.4 +1.1
baz=58
PUL Pulkovo 58.57 334 ⇑ *i*P **P 11 21 27.5 +1.0**
PUL pmax pmax
comp=Z,292nm,0.6s,mb6.5
PUL MLR MLR
comp=Z,2μm,19.0s
PUL MLR MLR
comp=N,927nm,11.0s
PUL Pulkovo 58.57 334 ⇑ *e*P **P 11 21 27.3 +0.8**
BELC Belle Mtn. 58.60 75 P **P 11 21 26.3 -0.4**
baz=58,SNR=126
BELC ⇓S **S** 11 29 26.6 +0.7
baz=58
PFO Pinyon Flat Ob 58.65 75 P **P 11 21 26.0 -1.0**
comp=N,615nm,1.2s,mb6.5,SNR=38
PFO Pinyon Flat Ob 58.65 75 *e*P **P 11 21 26.7 -0.3**
comp=N,130nm,1.1s,mb5.9
PFO Pinyon Flat Ob 58.65 75 ⇓P **P 11 21 26.5 -0.5**
baz=58,SNR=57
PFO ⇓S **S** 11 29 26.4 0.0
baz=58
PHWY Pilot Hill 58.67 62 *e*P **P 11 21 26.9 -0.3**
NEE2 Needles Airpor 58.78 73 ⇑P **P 11 21 27.6 -0.4**
baz=59,SNR=10
109C Camp Elliot, M 58.83 76 ⇓P **P 11 21 28.0 -0.3**
baz=59,SNR=14
109C ⇑S **S** 11 29 30.5 +1.6
baz=59
UBT Ubonrachathani 58.90 250 P pP 11 21 46.5 +0.4
W13A Hualapai Mount 58.93 72 ⇑P **P 11 21 29.1 +0.1**
baz=59,SNR=95
W13A ⇓S **S** 11 29 31.0 +0.9
baz=59
IRM Iron Mountain 58.95 74 P **P 11 21 29.4 +0.2**
baz=59,SNR=199
IRM ⇑S **S** 11 29 33.0 +2.7
baz=59
PV10 Paradox Valley 59.04 66 *e*P **P 11 21 30.1 +0.3**
KKTK Khon Kaen 59.18 253 P P 11 21 30.5 -0.2
comp=N,370nm,1.1s,mb6.3
MONP Monument Peak 59.21 76 ⇓P **P 11 21 30.8 -0.2**
baz=59,SNR=25
W14A Seligman 59.27 72 ⇓P **P 11 21 31.9 +0.5**
baz=59,SNR=217
W14A ⇑S **S** 11 29 36.9 +2.4
baz=59
CHTO Chiang Mai 59.30 258 *e*P **P 11 21 30.6 -0.9**
CHTO pmax pmax
comp=Z,76nm,1.1s,mb5.6
CHTO Chiang Mai 59.30 258 *e*P **P 11 21 30.6 -0.9**
comp=Z,76nm,1.1s,mb5.6
X13A Yucca 59.34 73 P **P 11 21 31.8 0.0**
baz=59,SNR=178
X13A ⇑S **S** 11 29 35.6 +0.2
baz=59
PDMCI Parker Dam,Lak 59.39 73 P **P 11 21 32.0 -0.1**
baz=59,SNR=110
PDMCI ⇑S **S** 11 29 36.9 +0.8
baz=59
PV01 Paradox Valley 59.47 66 *e*P **P 11 21 32.4 -0.3**
SMCO Snowmass 59.50 64 *e*P **P 11 21 33.5 +0.5**
comp=Z,144nm,0.8s,mb6.0
SMCO *e*pP pP 11 21 51.9 +1.7
SWSC Sam W. Stewart 59.51 75 P **P 11 21 32.5 -0.5**
baz=59,SNR=41
GUN Gumba 59.52 276 *e*P **P 11 21 32.8 -0.2**
comp=Z,248nm,0.5s,mb6.5
JIRN Jiri 59.53 275 *e*P **P 11 21 33.9 +0.7**
DVTC Desert V Tower 59.56 76 ⇑P **P 11 21 33.3 -0.1**
baz=59,SNR=41
MEF Metsahovi 59.58 337 P **P 11 21 32.2 -1.3**
Y12C Blythe 59.60 74 ⇑P **P 11 21 33.6 0.0**
baz=59,SNR=102
Y12C ⇑S **S** 11 29 41.0 +2.3
baz=59
ISCO Idaho Springs 59.72 63 *e*P **P 11 21 35.4 +0.9**
comp=Z,473nm,1.2s,mb6.4
W15A Williams 59.74 71 P **P 11 21 35.5 +1.0**
baz=60,SNR=83
W15A ⇓S **S** 11 29 43.3 +2.7
baz=60
BORG Borgarnes 59.90 1 P **P 11 21 37.0 +1.3**
comp=Z,943nm,1.3s,mb6.7,SNR=14
BORG Borgarnes 59.90 1 *e*P **P 11 21 36.9 +1.2**
comp=Z,83nm,0.6s,mb5.9
Y13A Salome 59.93 73 ⇓P **P 11 21 35.9 0.0**
baz=60
Y13A ⇓S **S** 11 29 44.2 +1.2
baz=60
X14A Yava 59.94 72 P **P 11 21 36.6 +0.7**
baz=60,SNR=179
X14A ⇑S **S** 11 29 43.3 +0.2
baz=60
KKN Kakani 59.95 276 *e*P **P 11 21 35.7 -0.3**
comp=Z,224nm,0.6s,mb6.4
KKN Kakani 59.95 276 *e*P **P 11 21 35.7 -0.3**
KKN pmax pmax
comp=Z,225nm,0.6s,mb6.4
GLA Glamis 59.96 75 *e*P **P 11 21 36.3 +0.2**
GLA Glamis 59.96 75 ⇑P **P 11 21 36.3 +0.2**
baz=60,SNR=134
GLA ⇑S **S** 11 29 44.4 +1.0
baz=60
WUAZ Wupatki 59.96 70 *e*P **P 11 21 36.7 +0.6**
comp=Z,518nm,1.3s,mb6.4
MOS Moscow 59.97 327 *e*P **P 11 21 33.2 -3.0**
MOS *e**PP pP 11 21 53.4 -0.1
MOS *i* 11 22 19.1
MOS *e* 11 23 51.2
MOS *e*S **S** 11 29 38.8 -4.8
MOS pmax pmax
comp=Z,800nm,2.4s,mb6.3
MOS pmax pmax
comp=Z,273nm,1.5s,mb6.1
MOS MLR MLR
comp=Z,3μm,19.0s
PKI Pulchoki 60.04 276 *e*P **P 11 21 36.1 -0.6**
comp=Z,197nm,0.8s,mb6.2

PKI Pulchoki 60.04 276 *e*P **P 11 21 36.1 -0.6**
PKI pmax pmax
comp=Z,197nm,0.8s,mb6.2
EYMN Ely 60.05 48 *e*P **P 11 21 35.9 -0.8**
comp=Z,189nm,0.8s,mb6.2
EYMN *e*pP pP 11 21 51.5 -2.5
GKN Gorkha 60.15 277 *e*P **P 11 21 37.2 -0.2**
comp=Z,281nm,1.0s,mb6.3
DMN Daman 60.19 276 *e*P **P 11 21 37.3 -0.3**
comp=Z,238nm,1.0s,mb6.2
MVCO Mesa Verde 60.20 67 *e*P **P 11 21 37.7 0.0**
MVCO *e*pP pP 11 21 53.7 -1.4
X15A Humboldt 60.28 72 P **P 11 21 38.9 +0.7**
baz=60,SNR=201
X15A ⇓S **S 11 29 49.2 +1.7**
baz=60
Y14A Wickenburg 60.28 73 P **P 11 21 38.5 +0.2**
baz=60,SNR=143
Y14A ⇑S **S 11 29 47.0 -0.5**
baz=60
BAKI Biak 60.38 210 P **P 11 21 38.9 0.0**
JAY Jayapura 60.47 204 P **P 11 21 39.9 +0.3**
VSU Vasula 60.60 335*c i*P **P 11 21 40.5 0.0**
DOMB Dombas 60.68 346⇑*i*P **P 11 21 40.5 -0.4**
DOMB AMb AMB 11 21 42.7
comp=Z,372nm,1.5s,mb6.2
DOMB *e* 11 21 44.3
DOMB Dombas 60.68 346⇑*i*P **P 11 21 40.5 -0.4**
comp=Z,372nm,1.5s,mb6.2
Z14A Wintersburg 60.75 73 P **P 11 21 41.5 0.0**
baz=60,SNR=34
Z14A ⇑S **S 11 29 52.9 -0.6**
baz=60
OBN Obninsk 60.83 327*c i*P **P 11 21 41.6 -0.4**
OBN *e**PP pP 11 22 07.5 +8.1
OBN *e* 11 22 21.4
OBN *e* 11 23 54.9
OBN *e*S **S 11 29 49.8 -4.6**
OBN *e*SS SS 11 33 49.4 -4.9
OBN pmax pmax
comp=Z,346nm,1.7s,mb6.1
OBN MLR MLR
comp=Z,3μm,20.0s
OBN Obninsk 60.83 327 *e*P **P 11 21 41.7 -0.3**
comp=Z,164nm,1.1s,mb6.0
KOLN Koldanda 60.91 277 *e*P **P 11 21 41.5 -1.1**
comp=Z,136nm,0.6s,mb6.1
KLP Kalpa 61.00 284 *e*P **P 11 21 43.5 +0.3**
KKM Kota Kinabalu 61.19 234 P **P 11 21 46.5 +2.0**
KKM Kota Kinabalu 61.19 234 P **P 11 21 45.2 +0.7**
NST Nakhon Sawan 61.19 255 P **P 11 21 42.3 -2.2**
NB2 NORSAR Subarra 61.31 344 P **P 11 21 44.8 -0.5**
comp=Z,997nm,1.2s,mb6.7,baz=18,slow=6.9
NOA NORSAR Array B 61.31 344 P **P 11 21 44.9 -0.4**
comp=Z,241nm,0.7s,mb6.4,baz=19,slow=6.9,SNR=883
NOA LR LR 11 49 32.7
comp=Z,671nm,18.9s,baz=20,slow=37
NOA PKP2bc 11 51 02.2
comp=Z,7.7nm,1.1s,baz=176,slow=2.7,SNR=3.9
NOA NORSAR Array B 61.31 344 P **P 11 21 44.9 -0.4**
NOA LR LR 11 49 32.7
NOA ⇑*e* 11 51 02.2
SDCO Great Sand Dun 61.34 64 *e*P **P 11 21 46.6 +1.1**
comp=Z,221nm,1.3s,mb6.0
DLH Dalhousie 61.48 287 *e*P **P 11 21 47.0 +0.6**
LGTI Lohaghat 61.49 281 *ex* **P 11 21 51.5 +5.0**
SWI Sorong 61.54 215 P **P 11 21 47.1 +0.3**
115A Sonoran Desert 61.64 73⇑P **P 11 21 48.0 +0.5**
baz=61,SNR=124
115A ⇓S **S 11 30 03.8 -1.0**
baz=61
SMLA Simla 61.91 285 *e*P **P 11 21 48.5 -0.8**
TSM Tawau 61.99 231 P **P 11 21 50.9 +1.1**
116A Eloy 62.03 73 P **P 11 21 50.4 +0.3**
baz=62,SNR=56
116A ⇓S **S 11 30 11.4 +1.6**
baz=62
BHK Bhakra 62.09 285 *ex* **P 11 21 54.8 +4.2**
NIL Nilore 62.10 289 P **P 11 21 51.0 +0.4**
comp=Z,212nm,1.3s,mb6.0,SNR=5.8
OSL Oslo 62.44 344 *e*P **P 11 21 52.7 -0.2**
OSL AMb AMB 11 21 54.5
comp=Z,511nm,1.4s,mb6.4
OSL Oslo 62.44 344 *e*P **P 11 21 52.7 -0.2**
comp=Z,511nm,1.4s,mb6.4
VRHR Novokhopersk 62.55 322 *e*P **P 11 21 52.6 -1.0**
VRHR pmax pmax
comp=Z,80nm,0.5s,mb5.9
VRHR pmax pmax
comp=N,40nm,1.3s
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR MLR MLR
comp=Z,3μm,19.0s
VRHR MLR MLR
comp=N,2μm,18.0s
VRHR MLR MLR
comp=E,840nm,14.0s
ASK Askoy 62.70 347⇑*i*P **P 11 21 54.5 -0.1**
ASK AMb AMB 11 21 56.8
comp=Z,600nm,1.4s,mb6.3
ASK *e* 11 21 58.1
ASK Askoy 62.70 347⇑*i*P **P 11 21 54.5 -0.1**
comp=Z,600nm,1.4s,mb6.3
TUC Tucson 62.72 72 *e*P **P 11 21 54.8 +0.1**
TUC pmax pmax
comp=Z,129nm,1.3s,mb5.7
TUC Tucson 62.72 72 *e*P **P 11 21 54.8 +0.1**
comp=Z,129nm,1.3s,mb5.7
BER Bergen 62.78 347 *e*P **P 11 21 55.0 -0.1**
BER ⇑*i*P 11 21 55.0
BER AMb AMB 11 21 57.7
comp=Z,551nm,1.2s,mb6.3
BER *i* 11 22 00.0
BER *e*S **S 11 30 21.3 +2.2**
BER AMS AMS 11 47 56.5
comp=Z,1μm,21.3s
BER Bergen 62.78 347 *e*P **P 11 21 55.0 -0.1**
BER pmax pmax
comp=Z,551nm,1.2s,mb6.4
BER MLR MLR
comp=Z,1μm,21.3s
BER Bergen 62.78 347 *e*P **P 11 21 55.0 -0.1**
comp=Z,551nm,1.2s,mb6.4
BER LR LR
comp=Z,1μm,21.3s
KONO Kongsberg 62.89 344 *e*P **P 11 21 57.2 +1.4**
KONO *e*PP PP 11 24 13.7 -1.0
KONO *e*S **S 11 30 22.3 +1.8**
KONO *e*SS SS 11 34 28.1 +1.5
KONO *i* 11 37 34.9
KONO Kongsberg 62.89 344 *e*P **P 11 21 55.9 +0.1**
KONO pmax pmax
comp=Z,226nm,0.7s,mb6.2
KONO Kongsberg 62.89 344 *e*P **P 11 21 55.9 0.0**
comp=Z,226nm,0.7s,mb6.2
EGD Espegrend 62.90 347 *e*P **P 11 21 56.0 +0.1**
EGD AMb AMB 11 21 58.2
comp=Z,591nm,1.4s,mb6.3
EGD Espegrend 62.90 347 *e*P **P 11 21 55.8 -0.1**
comp=Z,591nm,1.4s,mb6.3
SCHQ Schefferville 62.96 29 P **P 11 21 55.0 -1.4**
comp=Z,248nm,0.7s,mb6.2,baz=347,slow=6.8,SNR=88
SCHQ PKP2bc 11 50 58.2
comp=Z,9.2nm,1.0s,baz=132,slow=2.2,SNR=6.1
SCHQ LR LR 11 51 42.9
comp=Z,870nm,20.2s,baz=320,slow=38
SCHQ Schefferville 62.96 29 *e*P **P 11 21 55.0 -1.4**
comp=Z,356nm,0.8s,mb6.3
ANMO Albuquerque 62.99 67 P **P 11 21 56.7 +0.2**
comp=Z,88nm,1.1s,mb5.6,baz=319,slow=7.5,SNR=159
ANMO Albuquerque 62.99 67 P **P 11 21 56.7 +0.2**
KKR Kurukshetra 62.99 284 *e*P **P 11 21 55.9 -0.6**
KKR AMb AMB 11 21 58.5
comp=Z,141nm,0.4s,mb6.3
LAZ Ladron 63.05 68 *e*P **P 11 21 57.6 +0.6**
LAZ *e*pP pP 11 22 14.4 0.0
VRSR Storozhevoye 63.29 324*c i*P **P 11 21 57.8 -0.7**
VRSR *e**PP pP 11 22 20.5 +4.6
VRSR *e*S **S 11 30 21.8 -3.7**
VRSR *e* 11 31 38.5
VRSR pmax pmax
comp=E,70nm,0.9s
VRSR pmax pmax
comp=Z,80nm,0.9s,mb5.7
VRSR pmax pmax
comp=N,130nm,1.0s
VRSR smax
comp=N,140nm,3.0s
VRSR smax
comp=Z,90nm,3.4s
VRSR smax
comp=E,340nm,7.0s
VRSR MLR MLR
comp=E,1μm,18.0s
VRSR MLR MLR
comp=Z,3μm,18.0s
VRSR MLR MLR
comp=N,1μm,17.0s
LENM Lemitar 63.32 68 *e*P **P 11 21 59.4 +0.7**
LENM *e*pP pP 11 22 17.2 +1.0
LPM Los Pinos Moun 63.39 68 *e*P **P 11 21 59.5 +0.4**
ASOR Ausora 63.40 282 *e*P **P 11 21 59.3 +0.1**
ASOR AMb AMB 11 22 06.4
comp=Z,137nm,0.6s,mb6.1
Y22C IRIS PASSCAL I 63.42 68⇑P **P 11 22 00.4 +1.0**
baz=63,SNR=13
BLS5 Blasjo 63.56 346⇑*i*P **P 11 22 00.8 +0.5**
BLS5 AMb AMB 11 22 03.0
comp=Z,240nm,1.1s,mb5.9
BLS5 *e* 11 22 04.8
BLS5 Blasjo 63.56 346⇑*i*P **P 11 22 00.8 +0.5**
comp=Z,240nm,1.1s,mb5.9
WAL1 Walls 63.66 351⇑*i*P **P 11 22 00.1 -0.8**
WAL1 Walls 63.66 351⇑*i*P **P 11 22 00.1 -0.8**
LRW Lerwick 63.74 350⇑*e*P **P 11 22 01.0 -0.5**
LRW Lerwick 63.74 350⇑*e*P **P 11 22 01.0 -0.5**
NDI New Delhi 63.76 283 *e*P **P 11 22 01.0 -0.7**
NNT Nongplab 63.95 253 P **P 11 22 04.2 +1.4**
AYAN Aya Nagar 63.97 283 *ex* x 11 21 55.5
STAV Stavanger 64.13 346 *e*P **P 11 22 04.3 +0.2**
STAV AMb AMB 11 22 06.1
comp=Z,423nm,1.5s,mb6.1
STAV *e* 11 22 07.5
STAV Stavanger 64.13 346 *e*P **P 11 22 04.2 +0.1**
comp=Z,423nm,1.5s,mb6.0
SONA Sohna 64.17 283 *e*P **P 11 22 03.0 -1.3**
AGRA Agra 64.49 281 *e*P **P 11 22 05.1 -1.2**
SNART Snartemo 64.50 345⇑*i*P **P 11 22 06.4 0.0**
SNART AMb AMB 11 22 08.5
comp=Z,327nm,1.7s,mb5.9
JFWS Jewell Farm 64.57 51 *e*P **P 11 22 05.0 -1.9**
JFWS pmax pmax
comp=Z,52nm,0.9s,mb5.4
JFWS Jewell Farm 64.57 51 *e*P **P 11 22 05.0 -1.9**
comp=Z,52nm,0.9s,mb5.4
KUDL Kundal 64.58 283 *e*P **P 11 22 04.8 -2.2**
KSU1 Kansas State U 64.69 57 *e*P **P 11 22 05.7 -2.0**
KSU1 *e*pP pP 11 22 24.0 -1.2
KSU1 *e*PP PP 11 24 25.9 -4.7
HNR Honiara 64.87 182 pP pP 11 22 24.7 -1.7
comp=Z,102nm,0.7s,baz=238,slow=2.4,SNR=3.5
KHET Khetri 65.01 284 *e*P **P 11 22 07.8 -2.0**
AAI Ambon 65.20 217 P **P 11 22 11.6 +0.6**
OBR Brabster 65.42 351⇑*i*P **P 11 22 12.1 -0.3**
OBR Brabster 65.42 351⇑*i*P **P 11 22 12.1 -0.3**
SUW Suwalki 65.48 335 *e*P **P 11 22 12.5 -0.3**
comp=Z,1.1nm,1.4s
SUW *e* 11 22 16.3
SUW *e*pP pP 11 22 35.2 +4.8
SUW *e*S S 11 30 52.5 -0.1
SUW L 11 49 24.0
comp=Z,3.0nm,27.5s
SUW Suwalki 65.48 335 *e*P **P 11 22 12.5 -0.3**
SUW *e*pP pP 11 22 35.2 +4.8
SUW *e*S S 11 30 52.5 -0.1
ORE Reay 65.53 352⇑*i*P **P 11 22 13.1 -0.1**
ORE Reay 65.53 352⇑*i*P **P 11 22 13.1 -0.1**
MLA1 Latheron 65.74 351⇑*i*P **P 11 22 14.2 -0.3**
MLA1 Latheron 65.74 351⇑*i*P **P 11 22 14.2 -0.3**
PCI Palu 65.82 227 P **P 11 22 14.0 -1.0**
PMG Port Moresby 65.94 196 P **P 11 22 16.0 +0.2**
comp=Z,100nm,0.8s,mb5.7,baz=28,slow=5.3,SNR=18
PMG pP pP 11 22 31.7 -1.7
comp=Z,182nm,1.0s,baz=5.2,slow=5.2,SNR=9.4
PMG Port Moresby 65.94 196 P **P 11 22 16.0 +0.2**
PMG *PP pP 11 22 31.7 -1.7
PMG pmax pmax
comp=Z,100nm,0.8s
MUD Monsted U'grnd 66.02 344⇑*i*P **P 11 22 16.5 +0.2**
comp=Z,519nm,1.3s,mb6.2
MUD *e* 11 24 43.2
MUD *i* 11 26 56.8
MUD *e* 11 35 24.1
MUD
comp=Z,930nm,19.0s
MUD Monsted U'grnd 66.02 344⇑*i*P **P 11 22 16.5 +0.2**
MUD *e* 11 24 43.2
MUD *e* 11 35 24.1
MUD pmax pmax
comp=Z,519nm,1.3s,mb6.2
MUD Monsted U'grnd 66.02 344⇑*i*P **P 11 22 16.5 +0.2**
comp=Z,519nm,1.3s,mb6.2
MUD *e* 11 24 43.2
MUD *i* 11 26 56.8
MUD *e* 11 35 24.1
MNTX Cornudas Mount 66.08 69 *e*P **P 11 22 16.6 0.0**
comp=Z,317nm,1.3s,mb6.0
MNTX *e*pP pP 11 22 34.6 +0.4
MVH1 Achvaich 66.19 352⇑*i*P **P 11 22 17.0 -0.4**
MVH1 Achvaich 66.19 352⇑*i*P **P 11 22 17.0 -0.4**
COP Copenhagen 66.20 342⇑*i*P **P 11 22 17.6 +0.2**
comp=Z,168nm,1.1s,mb5.8
COP *i* 11 26 53.4
COP *i* S S 11 31 01.5 +0.2
COP *i* 11 35 12.7
COP
comp=Z,560nm,22.0s
COP Copenhagen 66.20 342⇑*i*P **P 11 22 17.6 +0.2**
COP *i* S S 11 31 01.5 +0.2
COP *i* 11 35 12.7
COP pmax pmax
comp=Z,168nm,1.1s,mb5.8
COP MLR MLR
comp=Z,570nm,22.0s
ABKT Ailbek 66.43 303 P **P 11 22 18.6 -0.3**
comp=Z,1μm,0.8s,mb6.7,SNR=21
MCD Coleburn Disti 66.45 351⇑*i*P **P 11 22 18.8 -0.2**
MCD Coleburn Disti 66.45 351⇑*i*P **P 11 22 18.8 -0.2**
JBP Jabalpur 66.53 277⇓*i*P **P 11 22 19.4 -0.2**
KAC Achnashellach 66.70 352⇑*i*P **P 11 22 20.1 -0.5**
KAC Achnashellach 66.70 352⇑*e*P **P 11 22 20.1 -0.5**
KSK Scoval 66.83 353⇑*e*P **P 11 22 21.6 +0.1**
KSK Scoval 66.83 353⇑*e*P **P 11 22 21.6 +0.1**
AKASG Malin Array Be 66.86 329 P **P 11 22 20.9 -0.8**
comp=Z,27nm,0.4s,mb5.4,baz=28,slow=6.2,SNR=213
AKASG PKP2bc 11 50 48.2
comp=Z,9.7nm,1.1s,baz=226,slow=2.8,SNR=8.1
AKASG LR LR 11 55 03.9
comp=Z,2μm,20.1s,baz=15,slow=39
AKASG Malin Array Be 66.86 329 P **P 11 22 20.9 -0.8**
AKASG ⇑*e* 11 50 48.2
AKASG LR LR 11 55 03.9
AKBB Malin Array Si 66.86 329 P **P 11 22 21.0 -0.6**
AKBB Malin Array Si 66.86 329 *e*P **P 11 22 20.6 -1.0**
KPL Plockton 66.88 353⇑*e*P **P 11 22 21.3 -0.5**
KPL Plockton 66.88 353⇑*e*P **P 11 22 21.3 -0.5**
AJM Ajmer 66.90 283 *e*P **P 11 22 21.2 -0.7**
KSB Sheil Bridge 66.99 352⇑*i*P **P 11 22 22.2 -0.3**
KSB Sheil Bridge 66.99 352⇑*i*P **P 11 22 22.2 -0.3**
MAK Makhachkala 67.07 313*c i*P **P 11 22 20.7 -2.3**
MAK *e*PPP 11 26 33.5
MAK *e*S S 11 31 11.8 0.0
MAK pmax pmax
comp=Z,328nm,1.2s,mb6.0
MAK MLR MLR
comp=Z,4μm,19.0s
WMOK Wichita Mounta 67.08 62 *e*P **P 11 22 22.1 -0.9**
comp=Z,141nm,0.8s,mb5.8
WMOK *e*pP pP 11 22 39.0 -1.6
GOF Gofitskoye 67.10 317⇓*i*P **P 11 22 29.2 +6.1**
GOF *e*S S 11 31 15.8 +3.7
GOF pmax pmax
comp=Z,283nm,0.6s,mb6.3
RGN Rugen 67.12 341 *e*P **P 11 22 23.8 +0.5**
comp=Z,937nm,1.3s,mb6.5
RGN Rugen 67.12 341 *e*P **P 11 22 23.9 +0.6**
KAR1 Arisaig 67.31 353⇑*i*P **P 11 22 24.3 -0.2**
KAR1 Arisaig 67.31 353⇑*i*P **P 11 22 24.3 -0.2**
GKP Gorka Klasztor 67.53 338 *e*P **P 11 22 26.3 +0.4**
comp=Z,1.4nm,1.2s
GKP *e* 11 22 30.5
GKP *e*pP pP 11 22 45.6 +2.1
GKP *e*S S 11 31 20.4 +3.0
GKP L 11 48 13.8
comp=Z,3.8nm,33.3s
SADO Sadowa 67.60 42 P **P 11 22 23.9 -2.5**
comp=Z,32nm,0.9s,mb5.1,baz=341,slow=7.6,SNR=27
WAR Warsaw 67.63 335 *e*P **P 11 22 27.5 +1.0**
comp=Z,1.0nm,0.7s
WAR *e* 11 22 31.6
WAR *e*PcP PcP 11 22 50.8 -2.3
WAR *e*S S 11 31 22.9 +4.4
WAR *e*SKS 11 32 12.9
WAR L 11 50 54.9
comp=Z,3.1nm,29.6s
AAM Ann Arbor 67.88 47 *e*P **P 11 22 26.9 -1.2**
AAM pmax pmax
comp=Z,242nm,1.0s,mb6.0
AAM Ann Arbor 67.88 47 *e*P **P 11 22 26.9 -1.1**
comp=Z,242nm,1.0s,mb6.0
BHPL Bhopal 67.91 279 *e*P **P 11 22 27.1 -1.1**
BHPL AMb AMB 11 22 31.1
comp=Z,212nm,1.1s,mb5.9
EAB Aberfoyle 67.92 352⇑*i*P **P 11 22 28.0 -0.3**
EAB Aberfoyle 67.92 352⇑*i*P **P 11 22 28.0 -0.3**
SNG Songkhla 67.98 249 P **P 11 22 30.0 +1.3**
comp=Z,812nm,1.0s,mb6.5
SLM Saint Louis 68.03 53 *e*P **P 11 22 27.6 -1.4**
ESY Stoneypath 68.04 350⇑*i*P **P 11 22 28.7 -0.4**
ESY Stoneypath 68.04 350⇑*i*P **P 11 22 28.7 -0.4**
CCM Cathedral Cave 68.04 54 *e*P **P 11 22 27.7 -1.4**
CCM pmax pmax
comp=Z,217nm,1.3s,mb5.8
CCM Cathedral Cave 68.04 54 *e*P **P 11 22 27.7 -1.4**
comp=Z,217nm,1.3s,mb5.8
EDI Edinburgh 68.08 351⇑*e*P **P 11 22 29.7 +0.3**
EDI Edinburgh 68.08 351⇑*e*P **P 11 22 29.7 +0.3**
PCOU Corrie 68.10 351⇑*i*P **P 11 22 29.3 -0.2**
PCOU Corrie 68.10 351⇑*i*P **P 11 22 29.3 -0.2**
KIV Kislovodsk 68.16 317 P **P 11 22 30.1 +0.3**
comp=Z,539nm,0.6s,mb6.5,SNR=14
KIV Kislovodsk 68.16 317⇑P **P 11 22 31.1 +1.3**
SNR=17
KIV Kislovodsk 68.16 317*c i*P **P 11 22 30.1 +0.3**
KIV pmax pmax
comp=Z,157nm,2.4s,mb5.4
KIV MLR MLR
comp=Z,2μm,22.0s
KIV Kislovodsk 68.16 317 *e*P **P 11 22 30.3 +0.4**
comp=Z,57nm,0.7s,mb5.5
EAU Auchinoon 68.19 351⇑*i*P **P 11 22 29.8 -0.2**
EAU Auchinoon 68.19 351⇑*i*P **P 11 22 29.8 -0.2**
EBL Broad Law 68.22 351⇑*i*P **P 11 22 29.9 -0.4**
EBL Broad Law 68.22 351⇑*i*P **P 11 22 29.9 -0.4**
BSEG Bad Segeberg 68.25 342 *e*P **P 11 22 30.7 +0.3**
comp=Z,357nm,1.2s,mb6.1
POB1 Observatory 68.27 352⇑*e*P **P 11 22 30.2 -0.3**
POB1 Observatory 68.27 352⇑*e*P **P 11 22 30.2 -0.3**
PMSU Muirshiel 68.30 352⇑*i*P **P 11 22 30.1 -0.5**
PMSU Muirshiel 68.30 352⇑*i*P **P 11 22 30.1 -0.5**
PGBU Glenifferbraes 68.31 352⇑*i*P **P 11 22 30.6 -0.1**
PGBU Glenifferbraes 68.31 352⇑*i*P **P 11 22 30.6 -0.1**
HLG Helgoland 68.41 344 *e*P **P 11 22 31.7 +0.3**
comp=Z,391nm,1.2s,mb6.1
FVM French Village 68.48 54 *e*P **P 11 22 30.5 -1.3**
FVM pmax pmax
comp=Z,190nm,0.8s,mb6.0
FVM French Village 68.48 54 *e*P **P 11 22 30.5 -1.3**
comp=Z,190nm,0.8s,mb6.0
JASL Jaisalmer 68.60 286 *ex* **P 11 22 27.3 -5.3**
JASL AMb AMB 11 22 55.0
comp=Z,88nm,0.6s,mb5.8
NGP Nagpur 68.65 276 *ex* **P 11 22 27.1 -5.8**
ESK Eskdalemuir 68.69 351 P **P 11 22 33.8 +0.7**
comp=Z,2μm,1.3s,mb6.7,SNR=45
ESK Eskdalemuir 68.69 351⇑*i*P **P 11 22 32.7 -0.5**
ESK Eskdalemuir 68.69 351⇑*i*P **P 11 22 32.7 -0.5**
ESK Eskdalemuir 68.69 351 *e*P **P 11 22 33.0 -0.1**
ESK pmax pmax
comp=Z,239nm,0.8s,mb6.1
ESK Eskdalemuir 68.69 351 *e*P **P 11 22 33.0 -0.1**
comp=Z,239nm,0.8s,mb6.1
ZEI Tsey 68.69 316 *e*P **P 11 22 33.0 -0.1**
ZEI *e**PP pP 11 22 55.2 +4.4
ZEI pmax pmax
comp=Z,115nm,0.8s,mb5.8
GMK Mull of Kintyr 68.86 352⇑*i*P **P 11 22 33.7 -0.4**
GMK Mull of Kintyr 68.86 352⇑*i*P **P 11 22 33.7 -0.4**
VIS Vishakhapatnam 68.96 271 *e*P **P 11 22 33.0 -1.6**
MSNY Massena 68.99 39 *e*P **P 11 22 33.3 -2.0**
RUE Ruedersdorf 68.99 340 *e*P **P 11 22 35.2 +0.2**
comp=Z,654nm,1.3s,mb6.3
RUE Ruedersdorf 68.99 340 *e*P **P 11 22 35.5 +0.5**
comp=Z,416nm,1.0s,mb6.2
ONI Oni 69.02 316 P **P 11 22 34.4 -0.9**
LVV L'vov 69.10 332*c i*P **P 11 22 35.4 -0.3**
LVV *e* 11 25 09.0
LVV *i* S S 11 31 32.4 -3.5
LVV *i* PS 11 31 59.0
LVV MLR MLR
comp=Z,500nm,18.0s
GCL Cushendall 69.17 352⇑*i*P **P 11 22 35.7 -0.4**
GCL Cushendall 69.17 352⇑*i*P **P 11 22 35.7 -0.4**
DGRG David-gareji 69.20 314 P **P 11 22 36.6 +0.2**
TBLG Delisi 69.22 314 *e*P **P 11 22 36.9 +0.4**
TBLG Delisi 69.22 314 P **P 11 22 37.0 +0.5**
MTA Mtatsminda 69.23 314 P **P 11 22 36.9 +0.4**
SIUC Southern Illin 69.25 53 *e*P **P 11 22 35.4 -1.2**
comp=Z,159nm,0.9s,mb5.8
BLO Bloomington 69.25 50 *e*P **P 11 22 34.9 -1.7**
GAL1 Galloway 69.26 352⇑*i*P **P 11 22 36.2 -0.5**
GAL1 Galloway 69.26 352⇑*i*P **P 11 22 36.2 -0.5**
GOR Gori 69.26 315 P **P 11 22 36.8 +0.1**
ANN Anapa 69.39 321 *e*P **P 11 22 35.7 -1.8**
ANN *e**PP pP 11 22 58.8 +3.6
ANN *e*S S 11 31 35.5 -3.9
ANN pmax pmax
comp=Z,84nm,1.9s,mb5.2
ANN MLR MLR
comp=Z,2μm,23.0s
LPIG La Paz 69.40 77 P **P 11 22 37.6 +0.1**
comp=Z,91nm,1.0s,mb5.6,baz=337,slow=0.9,SNR=13
CKE Keswick 69.40 351⇑*i*P **P 11 22 37.3 -0.2**
CKE Keswick 69.40 351⇑*i*P **P 11 22 37.3 -0.2**
LONY Lake Ozonia 69.41 39 *e*P **P 11 22 35.5 -2.2**
LONY *e*PP PP 11 25 09.6 -2.1
ERPA Erie 69.51 44 *e*P **P 11 22 36.9 -1.3**
comp=Z,386nm,0.9s,mb6.2
XDE Dent Fell 69.52 351⇑*i*P **P 11 22 38.0 -0.3**
XDE AMb AMB 11 22 40.1
comp=Z,623nm,1.3s,mb6.3
XDE Dent Fell 69.52 351⇑*i*P **P 11 22 38.0 -0.3**
XDE AMb AMB 11 22 40.1
comp=Z,623nm,1.3s,mb6.3
KWP Kalwaria 69.61 333 *e*P **P 11 22 39.7 +0.8**
comp=Z,1.5nm,1.3s
KWP *e* 11 22 43.7
KWP *e*PcP PcP 11 23 03.4 +1.9
KWP *e*S S 11 31 44.8 +2.8
KWP L 11 56 35.6
comp=Z,2.9nm,19.6s
KWP Kalwaria 69.61 333 *e*P **P 11 22 39.7 +0.8**
KWP *e* 11 23 03.4
KWP *e*S S 11 31 44.8 +2.8
KWP pmax pmax
comp=Z,2μm,1.3s,mb6.7
KWP MLR MLR
comp=Z,3μm,19.6s
KWP Kalwaria 69.61 333 *e*P **P 11 22 39.7 +0.8**
KWP *e* 11 22 43.7
KWP *e*PcP PcP 11 23 03.4 +1.9
KWP *e*S S 11 31 44.8 +2.8
CDU1 Dunnerdale 69.66 351⇑*i*P **P 11 22 38.8 -0.3**
CDU1 Dunnerdale 69.66 351⇑*i*P **P 11 22 38.8 -0.3**
NRDL Niedersach Rie 69.66 342 *e*P **P 11 22 40.2 +1.0**
comp=Z,198nm,1.2s,mb5.8
MIAR Mount Ida 69.79 58 *e*P **P 11 22 39.0 -0.9**
MIAR pmax pmax
comp=Z,148nm,1.0s,mb5.8
MIAR Mount Ida 69.79 58 *e*P **P 11 22 39.0 -0.9**
comp=Z,148nm,1.0s,mb5.8
OJC Ojcow 69.80 335⇑*i*P **P 11 22 40.4 +0.4**

OJC *e*S S 11 31 45.5 +1.3
OJC MLR MLR
comp=Z,11µm,18.6s
GIM North Isle of 69.81 351⇑ *i*P **P 11 22 39.4 -0.7**
GIM North Isle of 69.81 351⇑ *i*P **P 11 22 39.4 -0.7**
ALLY Alegheny Colle 69.85 45 *e*P **P 11 22 39.0 -1.3**
ACSO Alum Creek Sta 69.88 47 *e*P **P 11 22 39.1 -1.4**
comp=Z,84nm,0.7s,mb5.7
JCT Junction City 69.95 65 *e*P **P 11 22 40.1 -0.8**
JCT pmax pmax
comp=Z,132nm,0.8s,mb5.8
JCT Junction City 69.95 65 *e*P **P 11 22 40.1 -0.9**
comp=Z,132nm,0.8s,mb5.8
WIM Isle of Man 69.97 351⇑ *i*P **P 11 22 40.8 -0.3**
WIM AMb AMB 11 22 42.8
comp=Z,509nm,1.4s,mb6.2
WIM Isle of Man 69.97 351⇑ *i*P **P 11 22 40.8 -0.3**
WIM AMb AMB 11 22 42.8
comp=Z,509nm,1.4s,mb6.2
GMM Mts of Mourne 69.98 352⇑ *i*P **P 11 22 40.6 -0.5**
GMM Mts of Mourne 69.98 352⇑ *i*P **P 11 22 40.6 -0.5**
KSP Ksiaz 70.01 337 *e*P **P 11 22 41.8 +0.5**
comp=Z,1.5nm,1.4s
KSP *e* 11 22 45.6
KSP *e*S S 11 31 50.2 +3.5
KSP L 11 49 22.8
comp=Z,5.2nm,32.0s
KSP Ksiaz 70.01 337⇑ *e*P **P 11 22 41.6 +0.3**
KSP *e*S S 11 31 31.7 -15
KSP *e*SS SS 11 36 26.3 +9.2
KSP LR LR
comp=Z,6µm,31.9s
IPM Ipoh 70.04 248 P **P 11 22 41.4 0.0**
NCB Newcomb 70.11 39 *e*P **P 11 22 39.6 -2.3**
comp=Z,72nm,0.8s,mb5.6
NCB *e*PP PP 11 25 15.0 -2.6
WCI Wyandotte Cave 70.13 51 *e*P **P 11 22 40.9 -1.1**
WCI pmax pmax
comp=Z,156nm,0.8s,mb5.9
WCI Wyandotte Cave 70.13 51 *e*P **P 11 22 40.9 -1.1**
comp=Z,156nm,0.8s,mb5.9
AKL Akola 70.15 278 *e*P **P 11 22 41.5 -0.7**
AKL AMb AMB 11 22 45.3
comp=Z,166nm,1.3s,mb5.7
STHS Stebnicka Huta 70.19 334 *i*P **P 11 22 43.3 +0.9**
comp=Z,166nm,0.9s,mb5.9
STHS *e*PP PP 11 25 14.5 -3.8
UALR University of 70.19 57 *e*P **P 11 22 41.2 -1.2**
comp=Z,31nm,0.7s,mb5.2
IBBN Ibbenburen 70.24 343 *e*P **P 11 22 42.7 0.0**
comp=Z,431nm,1.2s,mb6.2
CLL Collm 70.26 340⇑ *i*P **P 11 22 42.8 0.0**
comp=Z,738nm,1.3s,mb6.3
CLL *e*pP pP 11 23 00.0 -0.5
CLL *e*PP PP 11 25 19.8 +0.9
CLL *e*PPP 11 27 16.8
CLL *e*S S 11 31 50.2 +0.6
CLL *e*sS sS 11 32 17.4 -2.2
CLL *e*SS SS 11 36 20.9 +0.1
CLL *e*LR LR 11 45 58.7
CLL *e*PKPPKP 11 50 38.9
CLL *e*pPKPPKP 11 50 55.7
CLL *e*L 11 56 24.1
comp=Z,2µm,22.0s
CLL Collm 70.26 340⇑ P **P 11 22 42.8 0.0**
comp=Z,logA/T=2.7,mb6.3
CLL *i* 11 23 14.4
CLL *e* 11 27 24.0
CLL *e* 11 28 18.0
CLL *e*S S 11 31 50.0 +0.4
CLL *e**SS sS 11 32 17.0 -2.6
CLL *e*SCS ScS 11 32 37.0 -2.7
CLL *e* 11 32 47.0
CLL *e* 11 32 57.0
CLL *e*SS SS 11 36 15.0 -5.8
CLL *e**SSS 11 36 54.0
CLL *e* 11 40 25.0
CLL *i* 11 50 39.0
CLL *e* 11 50 56.0
CLL Collm 70.26 340⇑ *i*P **P 11 22 42.8 0.0**
comp=Z,715nm,1.3s,mb6.3
CLL *i* x x 11 23 14.4
CLL *e*sPPP 11 27 24.0
CLL *e*sPPPP 11 28 18.0
CLL *e*S S 11 31 50.0 +0.4
CLL *e*sS sS 11 32 17.0 -2.6
CLL *e*ScS ScS 11 32 37.0 -2.7
CLL *e*sPS 11 32 47.0
CLL *e*sPPS 11 32 57.0
CLL *e*(SS) 11 36 15.0
CLL *e*sSS 11 36 54.0
CLL *e*(sSSS) 11 40 25.0
CLL *i* PKPPKPbc 11 50 39.0
comp=Z,11nm,1.0s
CLL *e*pPKPPKP 11 50 56.0
comp=Z,36nm,1.6s
CLL Collm 70.26 340⇑ *i*P **P 11 22 42.8 0.0**
CLL *i* *SP sP 11 23 14.4 +6.6
CLL *e*S S 11 31 50.0 +0.4
CLL *i* P'P' 11 50 39.0
CLL *e* 11 50 56.0
CLL LR LR
comp=Z,2µm,17.7s
KIS Kishinev 70.29 328*c* *i*P **P 11 22 40.0 -3.0**
KIS *e*PPP 11 27 10.0
KIS *i* S S 11 31 48.0 -2.0
KIS *i* PS 11 32 19.0
KIS pmax pmax
comp=Z,1µm,1.0s,mb6.6
KIS MLR MLR
comp=Z,3µm,18.0s
KIS MLR MLR
comp=N,2µm,17.0s
KIS MLR MLR
comp=E,500nm,17.0s
KIS MLR MLR
comp=Z,3µm,18.0s
RAC Raciborz 70.30 336 *e*P **P 11 22 44.1 +1.0**
RAC LR LR
comp=Z,3µm,26.7s
LHO Holmfirth 70.31 350⇑ *i*P **P 11 22 42.4 -0.7**
LHO Holmfirth 70.31 350⇑ *i*P **P 11 22 42.4 -0.7**
HBAR Harrisburg 70.35 56 *e*P **P 11 22 43.1 -0.3**
KOLS Kolonicke sedl 70.37 333 *i*P **P 11 22 43.8 +0.3**
UPC Upice 70.39 337⇑ *i*P **P 11 22 44.2 +0.6**
UPC *ex* x 11 22 48.3
SIM Simferopol' 70.41 323*c* *i*P **P 11 23 43.0 -0.8**
SIM *i* S S 11 31 54.0 +2.6
SIM *e* 11 32 21.0
SIM *i* 11 32 29.0
SIM pmax pmax
comp=Z,32nm,0.9s,mb5.2
SIM MLR MLR
comp=Z,4µm,17.7s
NIE Niedzica 70.41 334 *i*Pc **P 11 22 44.8 +1.0**
DPC Dobruska-Polom 70.47 337⇑ *i*P **P 11 22 45.0 +0.9**
DPC *ex* x 11 22 49.3
DPC *ex* x 11 27 28.6
DPC *ex* x 11 28 11.1
DPC *e*S S 11 31 52.7 +0.6
DPC *e*SS SS 11 36 44.1 +20
DPC AMS AMS 11 49 00.0
comp=Z,4µm,36.1s
DPC Dobruska-Polom 70.47 337⇑ *i*P **P 11 22 45.0 +0.9**
DPC *e*S S 11 31 52.7 +0.6
BRG Berggiesshubel 70.48 339 *e*P **P 11 22 44.1 -0.1**
comp=Z,343nm,1.2s,mb6.1
BRG Berggiesshubel 70.48 339⇑ *i*P **P 11 22 44.4 +0.2**
comp=Z,205nm,1.2s,mb5.8
BRG pP pP 11 23 02.0 +0.1
BRG *i* PP PP 11 25 15.5 -5.4
comp=Z,24nm,1.2s
BRG S S 11 31 37.0 -15
BRG SS SS 11 35 59.0 -25
BRG *i* 11 50 39.0
comp=Z,12nm,1.5s
BRG *i* PKPPKP 11 50 56.1
comp=Z,20nm,1.6s
BRG
comp=N,663nm,24.1s
BRG
comp=E,538nm,18.6s
BRG
comp=Z,813nm,21.9s
BRG Berggiesshubel 70.48 339⇑ *i*P **P 11 22 44.4 +0.2**
BRG *PP pP 11 23 02.0 +0.1
BRG MLR MLR
comp=N,20µm,24.1s
BRG MLR MLR
comp=E,663nm,18.7s
BRG MLR MLR
comp=Z,538nm,21.9s
BRG Berggiesshubel 70.48 339⇑ *i*P **P 11 22 44.4 +0.2**
comp=Z,205nm,1.2s,mb5.8
BRG pP pP 11 23 02.0 +0.1
BRG *i* PP PP 11 25 15.5 -5.4
BRG S S 11 31 37.0 -15
BRG SS SS 11 35 59.0 -25
BRG *i* 11 50 39.0
BRG *i* P'P' 11 50 56.1
BRG LR LR
comp=Z,810nm,21.9s
UTMT University of 70.53 54 *e*P **P 11 22 43.9 -0.7**
comp=Z,252nm,0.5s,mb6.3
OKC Ostrava-Krasne 70.54 336⇑ *i*P **P 11 22 45.3 +0.8**
OKC *ex* x 11 22 49.8
OKC *e*S S 11 31 56.5 +3.6
OKC *e*SS SS 11 36 33.7 +8.5
OKC AMS AMS 11 52 40.0
comp=Z,2µm,29.7s
OKC Ostrava-Krasne 70.54 336⇑ *i*P **P 11 22 45.3 +0.8**
OKC *e*pP pP 11 22 49.8 -12
OKC *e*S S 11 31 56.5 +3.6
OKC *e*SS SS 11 36 33.7 +8.5
FBE Freiberg 70.55 339 *e*P **P 11 22 44.8 +0.2**
comp=Z,687nm,1.3s,mb6.3
GTTG Gvttingen 70.60 342 *e*P **P 11 22 45.0 +0.1**
comp=Z,276nm,1.4s,mb5.9
CRVS Cervenica-Dubn 70.61 333 *i*P **P 11 22 45.3 +0.4**
CRVS *e* 11 22 50.7
CRVS *e*S S 11 31 56.4 +2.8
ABA1 Baconsthorpe 70.62 348⇑ *e*P **P 11 22 44.3 -0.7**
ABA1 Baconsthorpe 70.62 348⇑ *e*P **P 11 22 44.3 -0.7**
UZH Uzhgorod 70.64 333*d* *i*P **P 11 22 44.5 -0.6**
UZH *i* S S 11 31 49.8 -4.2
UZH MLR MLR
comp=Z,1µm,19.0s
PKME Peaks-Kenny Pk 70.67 36 *e*P **P 11 22 44.3 -1.0**
PVCC Panska Ves 70.68 338⇑ *i*P **P 11 22 45.9 +0.5**
PVCC *ex* x 11 22 50.1
PVCC *e*S S 11 31 56.8 +2.3
PVCC AMS AMS 11 47 50.0
comp=Z,2µm,36.4s
PVCC Panska Ves 70.68 338⇑ *i*P **P 11 22 45.9 +0.5**
PVCC *e*S S 11 31 56.8 +2.3
LBNH Lisbon 70.68 38 *e*P **P 11 22 44.5 -0.9**
LBNH pmax pmax
comp=Z,198nm,0.9s,mb5.9
LBNH Lisbon 70.68 38 *e*P **P 11 22 44.5 -0.9**
comp=Z,198nm,0.9s,mb5.9
BCA Borcka 70.71 316 P **P 11 22 45.0 -0.6**
WCB1 Church Bay 70.72 351⇑ *i*P **P 11 22 44.9 -0.7**
WCB1 AMb AMB 11 22 50.3
comp=Z,221nm,1.0s,mb6.0
WCB1 Church Bay 70.72 351⇑ *i*P **P 11 22 44.9 -0.7**
WCB1 AMb AMB 11 22 50.3
comp=Z,221nm,1.0s,mb6.0
WTSB Winterswijk 70.73 344⇑ *i*P **P 11 22 45.6 0.0**
comp=Z,282nm,1.2s,mb6.0
WTSB *e*pP pP 11 22 49.7 -14
comp=Z,237nm,1.1s
WTSB *e*PP PP 11 25 23.8 +0.8
MORC Moravsky Berou 70.74 336 *e*P **P 11 22 46.5 +0.8**
MORC pmax pmax
comp=Z,272nm,1.0s,mb6.0
MORC Moravsky Berou 70.74 336 *e*P **P 11 22 46.5 +0.7**
comp=Z,272nm,1.0s,mb6.0
WPM1 Penmaenmawr 70.79 351⇑ *e*P **P 11 22 45.3 -0.7**
WPM1 Penmaenmawr 70.79 351⇑ *e*P **P 11 22 45.3 -0.7**
ACCN Adirondack Com 70.81 39 *e*P **P 11 22 44.7 -1.5**
KARS Kars 70.83 315 *e*P **P 11 22 47.3 +1.0**
YRC Rhoscolyn 70.85 351⇑ *e*P **P 11 22 45.5 -0.9**
YRC AMb AMB 11 22 47.9
comp=Z,125nm,1.4s,mb5.5
YRC Rhoscolyn 70.85 351⇑ *e*P **P 11 22 45.5 -0.9**
YRC AMb AMB 11 22 47.9
comp=Z,125nm,1.4s,mb5.5
AEU East Anglia Un 70.87 347⇑ *e*P **P 11 22 46.2 -0.3**
AEU East Anglia Un 70.87 347⇑ *e*P **P 11 22 46.2 -0.3**
KGM Kluang 70.95 244 P **P 11 22 47.8 +0.8**
DLF Lyons Farm 70.97 353 *i*P **P 11 22 46.8 -0.3**
DCN Croghan 70.97 353 *i*P **P 11 22 46.8 -0.3**
BINY Binghamton 70.99 42 *e*P **P 11 22 45.4 -1.8**
comp=Z,147nm,1.0s,mb5.8
DSB Dublin 71.00 352 *e*P **P 11 22 46.9 -0.5**
comp=Z,237nm,1.1s,mb5.9
MET Memphis--Engin 71.04 55 *e*P **P 11 22 47.4 -0.2**
LIKS Likavka 71.05 335 *i*P **P 11 22 48.6 +1.0**
LIKS pmax pmax
comp=Z,194nm,1.1s,mb5.8
LIKS Likavka 71.05 335 *i*P **P 11 22 48.6 +1.0**
comp=Z,194nm,1.1s,mb5.8
SBD1 Bryn Du 71.08 350⇑ *i*P **P 11 22 47.4 -0.3**
SBD1 Bryn Du 71.08 350⇑ *i*P **P 11 22 47.4 -0.3**
YRE Yr Eifl 71.11 351⇑ *i*P **P 11 22 47.3 -0.7**
YRE AMb AMB 11 22 54.2
comp=Z,220nm,1.9s,mb5.7
YRE Yr Eifl 71.11 351⇑ *i*P **P 11 22 47.3 -0.7**
YRE AMb AMB 11 22 54.2
comp=Z,220nm,1.9s,mb5.7
PRA Prague 71.14 338⇑ P **P 11 22 48.0 -0.2**
PRA sP sP 11 23 05.0 -8.2
MOX Moxa 71.16 340 *e*P **P 11 22 48.4 +0.1**
comp=Z,380nm,1.2s,mb6.1
MOX Moxa 71.16 340⇑ *i*P **P 11 22 48.5 +0.2**
comp=Z,379nm,1.3s,mb6.1
MOX *e* 11 22 52.6
MOX
comp=Z,900nm,23.0s
BUG Bochum--Univer 71.16 343 *e*P **P 11 22 48.1 -0.2**
comp=Z,292nm,1.1s,mb6.0
WVT Waverly 71.18 53 *e*P **P 11 22 47.3 -1.1**
WVT pmax pmax
comp=Z,146nm,0.9s,mb5.8
WVT Waverly 71.18 53 *e*P **P 11 22 47.3 -1.1**
comp=Z,146nm,0.9s,mb5.8
PRU Pruhonice 71.19 338⇑ *i*P **P 11 22 49.2 +0.7**
PRU *e*pP pP 11 22 52.9 -13
PRU *ex* x 11 27 35.2
PRU *ex* x 11 28 32.6
PRU *e*S S 11 32 01.3 +0.8
PRU *ex* x 11 36 52.1
PRU AMS AMS 11 48 20.0
comp=Z,2µm,38.2s
PRU Pruhonice 71.19 338⇑ *i*P **P 11 22 49.2 +0.7**
PRU *e*S S 11 32 01.3 +0.8
WERD Werda 71.21 340 *e*P **P 11 22 48.9 +0.3**
comp=Z,510nm,1.3s,mb6.2
TANN Tannenbergstha 71.21 340 *e*P **P 11 22 49.0 +0.4**
comp=Z,325nm,1.3s,mb6.0
KECS Kecovo 71.24 334 *i*P **P 11 22 49.2 +0.4**
KECS pmax pmax
comp=Z,68nm,1.2s,mb5.3
KECS Kecovo 71.24 334 *i*P **P 11 22 49.2 +0.4**
comp=Z,68nm,1.2s,mb5.3
KECS *e*PP PP 11 25 30.2 +2.8
GUNZ Gunzen 71.29 340 *e*P **P 11 22 49.6 +0.5**
comp=Z,573nm,1.5s,mb6.2
UBBA Unterbreizbach 71.29 341 *e*P **P 11 22 49.1 0.0**
comp=Z,303nm,1.4s,mb5.9
NKC Novy Kostel 71.39 340⇑ *i*P **P 11 22 50.3 +0.6**
NKC *ex* x 11 22 54.7
NKC *e*S S 11 31 59.6 -3.1
NKC *e*SS SS 11 36 32.6 -5.6
NKC AMS AMS 11 59 50.0
comp=Z,2µm,18.0s
NKC Novy Kostel 71.39 340⇑ *i*P **P 11 22 50.3 +0.6**
NKC *e*pP pP 11 22 54.7 -13
NKC *e*S S 11 31 59.6 -3.1
NKC *e*SS SS 11 36 32.6 -5.6
VRAC Vranov 71.39 337⇑ *i*P **P 11 22 50.7 +1.0**
VRAC Vranov 71.39 337 P **P 11 22 50.4 +0.7**
VRAC Vranov 71.39 337⇑ P **P 11 22 50.6 +1.0**
HLM1 Long Mynd 71.42 350⇑ *i*P **P 11 22 49.5 -0.4**
HLM1 AMb AMB 11 22 51.8
comp=Z,497nm,1.4s,mb6.2
HLM1 Long Mynd 71.42 350⇑ *i*P **P 11 22 49.5 -0.4**
HLM1 AMb AMB 11 22 51.8
comp=Z,497nm,1.4s,mb6.2
FFD Franklin Falls 71.45 38 *e*P **P 11 22 49.6 -0.4**
comp=Z,90nm,0.7s,mb5.7
NATX Nacogdoches 71.52 61 *e*P **P 11 22 50.1 -0.3**
comp=Z,220nm,1.1s,mb5.9
NATX *e* pP 11 23 07.9 -0.3
SSPA Standing Stone 71.60 44 *e*P **P 11 22 49.3 -1.6**
comp=Z,89nm,0.8s,mb5.6
SSPA *e*PP PP 11 25 29.1 -1.4
VYHS Vyhne 71.63 335 *i*P **P 11 22 51.8 +0.7**
VYHS *e*PP PP 11 25 29.2 -1.6
VYHS *e*S S 11 32 05.8 +0.3
VYHS Vyhne 71.63 335 *i*P **P 11 22 51.8 +0.7**
comp=Z,114nm,1.3s,mb5.5
VYHS *e*PP PP 11 25 29.2 -1.6
VYHS *e*S S 11 32 05.8 +0.3
VYHS LR LR
comp=Z,2µm,27.3s
TREC Trest 71.65 337⇑ *i*P **P 11 22 51.9 +0.7**
TREC *ex* x 11 22 56.1
TREC *e*S S 11 32 08.5 +2.8
TREC AMS AMS 11 49 40.0
comp=Z,3µm,33.9s
TREC Trest 71.65 337⇑ *i*P **P 11 22 51.9 +0.7**
TREC *e*S S 11 32 08.5 +2.8
MCWV Mont Chateau 71.66 46 *e*P **P 11 22 50.2 -1.1**
comp=Z,88nm,0.8s,mb5.6
MANZ Manzenberg 71.69 340 *e*P **P 11 22 51.8 +0.3**
comp=Z,290nm,1.2s,mb6.0
CLDR Calditan 71.74 314 P **P 11 22 53.2 +1.4**
OXF Oxford 71.79 55 *e*P **P 11 22 51.2 -0.9**
OXF pmax pmax
comp=Z,440nm,0.9s,mb6.3
OXF Oxford 71.79 55 *e*P **P 11 22 51.2 -0.9**
comp=Z,440nm,0.9s,mb6.3
OXF *e*PP PP 11 25 24.7 -7.4
ROTZ Rotzenmuhle 71.88 340 *e*P **P 11 22 53.3 +0.7**
comp=Z,476nm,1.3s,mb6.2
HTR Trewern Hill 71.90 350⇑ *i*P **P 11 22 52.5 -0.3**
HTR AMb AMB 11 22 54.6
comp=Z,509nm,1.4s,mb6.2
HTR Trewern Hill 71.90 350⇑ *i*P **P 11 22 52.5 -0.3**
HTR AMb AMB 11 22 54.6
comp=Z,509nm,1.4s,mb6.2
HYB Hyderabad 71.91 274⇑ *i*P **P 11 22 52.0 -0.8**
comp=Z,60nm,1.0s,mb5.4
HYB *e*pP pP 11 23 08.5 -2.1
HYB *e*sP sP 11 23 15.5 -2.4
HYB Hyderabad 71.91 274⇑ *e*P **P 11 22 52.0 -0.8**
HYB pmax pmax
comp=Z,60nm,1.0s,mb5.4
HYB Hyderabad 71.91 274⇑ *e*P **P 11 22 52.0 -0.8**
comp=Z,60nm,1.0s,mb5.4
PSZ Piszkesteto 71.91 334⇓ *i*P **P 11 22 53.6 +0.8**
PSZ Piszkesteto 71.91 334 *e*P **P 11 22 53.0 +0.2**
PSZ pmax pmax
comp=Z,136nm,1.0s,mb5.7
PSZ Piszkesteto 71.91 334 *e*P **P 11 22 53.0 +0.2**
comp=Z,136nm,1.0s,mb5.7
VRI Vrincioaia 71.94 329⇑ *i*P **P 11 22 53.0 0.0**
VRI Vrincioaia 71.94 329⇑ P **P 11 22 53.0 0.0**
SMOL Smolenice 71.95 336 *e*P **P 11 22 54.5 +1.5**
MCH1 Michaelchurch 71.95 350⇑ *e*P **P 11 22 52.4 -0.7**
MCH1 ⇑ *i*P 11 22 52.4
MCH1 Michaelchurch 71.95 350⇑ *e*P **P 11 22 52.4 -0.7**
MCH1 ⇑ *i*P 11 22 52.4
PLOR Plostina 71.97 329⇑ *i*P **P 11 22 53.7 +0.5**
SKP1 Kophill 71.99 349⇑ *e*P **P 11 22 52.5 -0.7**
SKP1 Kophill 71.99 349⇑ *e*P **P 11 22 52.5 -0.7**
PLAL Pickwick Lake 72.02 54 *e*P **P 11 22 52.0 -1.4**
comp=Z,204nm,0.9s,mb6.0
PLAL *e* pP 11 23 10.0 -1.2
HGN Heimansgroeve 72.03 344⇑ *i*P **P 11 22 53.3 -0.2**
comp=Z,310nm,1.5s,mb5.9
HGN *e*pP pP 11 22 57.6 -14
comp=Z,263nm,1.4s
HGN *e*PP PP 11 25 33.7 -0.4
HGN *e*PPP 11 27 33.1
HGN *e*S S 11 32 10.8 +0.8
HGN *e*SS SS 11 36 21.7 -26
BEBN Eben Emael 72.03 344 P **P 11 22 53.5 -0.1**
ERZM Erzurum 72.12 316 *i*P **P 11 22 55.5 +1.4**
EZM Erzurum 72.12 316 P **P 11 22 55.5 +1.4**
CFR Carcaliu 72.14 327⇑ *i*P **P 11 22 54.0 -0.2**
CFR Carcaliu 72.14 327⇑ P **P 11 22 54.0 -0.2**
TNS Taunus Mts 72.14 342 *e*P **P 11 22 54.3 +0.1**
comp=Z,300nm,1.5s,mb5.9
TNS Taunus Mts 72.14 342 *e*P **P 11 22 54.3 +0.1**
TNS pmax pmax
comp=Z,34nm,1.5s,mb5.0
GRA1 Grafenberg Arr 72.14 340 *e*P **P 11 22 54.8 +0.6**
comp=Z,834nm,1.4s,mb6.4
GRA1 *e*pP pP 11 22 59.0 -13
GRA1 *e*PP PP 11 25 34.3 -0.8
GRA1 *e*S S 11 32 12.4 +1.0
GRA1 LR LR
comp=Z,1µm,21.7s
GRF Grafenberg Arr 72.14 340 *e*P **P 11 22 54.8 +0.6**
comp=Z,834nm,1.4s,mb6.4
GRF *e*pP pP 11 22 59.0 -13
GRF *e*PP PP 11 25 34.3 -0.8
GRF *e*S S 11 32 12.4 +1.0
GRF *e*L 11 57 09.0
comp=Z,1µm,21.7s
GRF Grafenberg Arr 72.14 340 *e*P **P 11 22 54.8 +0.6**
GRF *e* 11 25 34.3
GRF *e*S S 11 32 12.4 +1.0
GRF Grafenberg Arr 72.14 340 *e*P **P 11 22 54.8 +0.6**
GRF *e* 11 25 34.3
GRF *e*S S 11 32 12.4 +1.0
GRF pmax pmax
comp=Z,834nm,1.4s,mb6.4
GRF MLR MLR
comp=Z,1µm,21.7s
MEM Membach 72.17 344 P **P 11 22 54.4 +0.1**
KHC Kasperske Hory 72.21 339⇑ *i*P **P 11 22 55.5 +0.9**
KHC *ex* x 11 22 59.8
KHC *ex* x 11 27 43.9
KHC *ex* x 11 28 44.7
KHC *e*S S 11 32 13.7 +1.6
KHC *e*SS SS 11 36 46.6 -4.2
KHC AMS AMS 11 49 10.0
comp=Z,2µm,34.2s
KHC Kasperske Hory 72.21 339⇑ *i*P **P 11 22 55.5 +0.9**
KHC *e*S S 11 32 13.7 +1.6
KHC *e*SS SS 11 36 46.6 -4.2
DRGR 72.22 332⇑ *i*P **P 11 22 54.9 +0.2**
DRGR 72.22 332⇑ P **P 11 22 54.9 +0.2**
UCC Uccle 72.23 345 P **P 11 22 54.2 -0.5**
HGH Gray Hill 72.29 350⇑ *i*P **P 11 22 54.8 -0.3**
HGH AMb AMB 11 23 00.6
comp=Z,608nm,1.0s,mb6.4
HGH Gray Hill 72.29 350⇑ *i*P **P 11 22 54.8 -0.3**
HGH AMb AMB 11 23 00.6
comp=Z,608nm,1.0s,mb6.4
SWN1 Swindon 72.31 349⇑ *e*P **P 11 22 54.8 -0.4**
SWN1 Swindon 72.31 349⇑ *e*P **P 11 22 54.8 -0.4**
ZST Bratislava 72.32 336 *e*P **P 11 22 56.3 +1.0**
ZST *e* 11 23 00.1
ZST *e* 11 25 27.9
ZST *e*S S 11 32 16.5 +3.1
ZST Bratislava 72.32 336 *e*P **P 11 22 56.3 +1.0**
comp=Z,174nm,1.1s,mb5.8
ZST *e* 11 23 00.1
ZST *e*PP PP 11 25 27.9 -8.8
ZST *e*S S 11 32 16.5 +3.1
ZST LR LR
comp=Z,900nm,27.2s
HRV Harvard--Oak R 72.33 38 *e*P **P 11 22 54.3 -1.0**
HRV pmax pmax
comp=Z,93nm,0.7s,mb5.7
HRV Harvard--Oak R 72.33 38 *e*P **P 11 22 54.3 -1.0**
comp=Z,93nm,0.7s,mb5.7
WET Wettzell 72.34 339 *e*P **P 11 22 56.0 +0.6**

comp=Z,470nm,1.3s,mb6.2
KAKA Kakadu 72.38 210 *e*P **P 11 22 55.9 +0.3**
comp=Z,286nm,0.9s,mb6.1
KAKA *e* pP 11 23 11.8 -1.6
HKT Hockley 72.40 63 *e*P **P 11 22 54.9 -0.8**
HKT pmax pmax
comp=Z,98nm,1.3s,mb5.5
HKT Hockley 72.40 63 *e*P **P 11 22 54.9 -0.8**
comp=Z,98nm,1.3s,mb5.5
VANB Van 72.43 314 P **P 11 22 56.9 +1.0**
GRSN GIRESUNGRSN 72.44 318 *i*P **P 11 22 55.3 -0.6**
GEC2 GERESS Array S 72.45 338 *e*P **P 11 22 56.3 +0.2**
comp=Z,257nm,1.2s,mb5.9
GERES GERESS Array B 72.45 338 P **P 11 22 56.5 +0.5**
comp=Z,54nm,0.6s,mb5.6,baz=41,slow=4.3,SNR=271
GERES PP PP 11 25 38.6 +0.8
comp=Z,12nm,0.9s,baz=26,slow=9.1,SNR=5.9
GERES PKPPKP 11 50 40.3
comp=Z,3.1nm,1.1s,baz=207,slow=2.7,SNR=4.9
GERES LR LR 12 00 15.2
comp=Z,2µm,19.1s,baz=16,slow=40
GERES GERESS Array B 72.45 338 P **P 11 22 56.5 +0.4**
GERES 11 25 38.6
TVAN Van 72.48 314 *i*P **P 11 22 57.8 +1.6**
MLR Muntele Rosu 72.51 329⇑*i*P **P 11 22 56.6 +0.2**
MLR Muntele Rosu 72.51 329⇑P **P 11 22 56.6 +0.3**
WES Weston 72.52 38 *e*P **P 11 22 55.6 -0.9**
WES pmax pmax
comp=Z,170nm,0.8s,mb5.9
SNF Seneffe 72.53 345 P **P 11 22 56.1 -0.3**
BUD Budapest 72.53 334⇑*i*P **P 11 22 57.5 +1.0**
VAL Valentia 72.55 355 *e*P **P 11 22 55.3 -1.3**
PSI Prapat 72.56 248 P **P 11 22 56.8 +0.1**
comp=Z,124nm,0.9s,mb5.8,baz=13,slow=5.6,SNR=51
PSI pP pP 11 23 13.6 -0.9
comp=Z,58nm,0.7s,baz=40,slow=4.8,SNR=3.6
ABH Alteburg 72.62 343⇑*e*P **P 11 22 57.0 0.0**
HARR Harsova 72.64 327⇑*i*P **P 11 22 57.3 +0.1**
HARR Harsova 72.64 327⇑P **P 11 22 57.3 +0.1**
ISR Istrita 72.67 328 P **P 11 22 58.4 +1.1**
TOD Tromm 72.67 342⇓*e*P **P 11 22 57.6 +0.3**
TIRR Tirgusor 72.70 327⇑*i*P **P 11 22 57.3 -0.2**
TIRR Tirgusor 72.70 327 P **P 11 22 57.5 0.0**
TIRR Tirgusor 72.70 327⇑P **P 11 22 57.4 -0.2**
SWK Warminster 72.71 349⇓*e*P **P 11 22 57.1 -0.4**
SWK Warminster 72.71 349⇑*e*P **P 11 22 57.1 -0.4**
SNX Sinaia 72.76 329⇓*i*P **P 11 22 58.0 +0.2**
PKSG 72.77 335⇑*e*P **P 11 22 59.0 +1.1**
MENF Mencas 72.77 346⇑*e*P **P 11 22 57.6 -0.3**
SIND Sindeldorf 72.77 341 P **P 11 22 58.1 +0.2**
PAL Palisades 72.80 41 *e*P **P 11 22 56.5 -1.6**
PAL pmax pmax
comp=Z,166nm,0.8s,mb5.9
PAL Palisades 72.80 41 *e*P **P 11 22 56.5 -1.6**
comp=Z,166nm,0.8s,mb5.9
SWS Schriesheim-Wi 72.81 342 P **P 11 22 58.2 +0.1**
VOIR 72.82 330⇑*i*P **P 11 22 58.9 +0.7**
VOIR 72.82 330⇑P **P 11 22 58.9 +0.7**
BRNJ Basking Ridge 72.83 41 *e*P **P 11 22 57.6 -0.7**
AFI Afiamalu 72.84 153 P **P 11 22 56.9 -1.4**
comp=Z,34nm,0.8s,mb5.2,baz=358,slow=3.2,SNR=6.3
AFI pP pP 11 23 14.9 -1.2
comp=Z,91nm,0.9s,baz=78,slow=19,SNR=8.6
AFI Afiamalu 72.84 153 *e*P **P 11 22 57.3 -1.0**
AFI *e**PP pP 11 23 14.5 -1.6
AFI pmax pmax
comp=Z,113nm,0.9s,mb5.7
AFI Afiamalu 72.84 153 *e*P **P 11 22 57.3 -1.0**
comp=Z,113nm,0.9s,mb5.7
AFI *e*pP pP 11 23 14.5 -1.7
GIVF Givet 72.84 345⇑*i*P **P 11 22 58.0 -0.3**
comp=Z,354nm,1.2s,mb5.8
GIVF Givet 72.84 345⇑*i*P **P 11 22 58.0 -0.3**
GIVF pmax pmax
comp=Z,177nm,1.2s,mb5.8
GIVF Givet 72.84 345⇑*i*P **P 11 22 58.0 -0.3**
comp=Z,177nm,1.2s,mb5.8
CONA Conrad Observa 72.86 337 *i*P **P 11 22 59.5 +1.1**
comp=Z,347nm,1.6s,mb6.0,SNR=53
RUP Ruppelstein 72.88 340⇓*e*P **P 11 22 58.5 -0.1**
DOU Dourbes 72.88 345 P **P 11 22 58.3 -0.3**
PKS7 Kunszentmiklos 72.90 334⇑*e*P **P 11 22 59.9 +1.2**
DIKM Dikmen 72.91 321 P **P 11 22 59.1 +0.4**
SOP Sopron 72.93 336⇑*i*P **P 11 23 00.1 +1.2**
BAIF Baives 72.97 345⇑*i*P **P 11 22 59.0 -0.1**
comp=Z,225nm,0.9s,mb5.7
BAIF Baives 72.97 345⇑*i*P **P 11 22 59.0 -0.1**
BAIF pmax pmax
comp=Z,113nm,0.9s,mb5.7
BAIF Baives 72.97 345⇑*i*P **P 11 22 59.0 -0.1**
comp=Z,112nm,0.9s,mb5.7
MTUR Matau 73.00 329⇓*i*P **P 11 23 00.0 +0.7**
MTUR Matau 73.00 329⇓P **P 11 22 60.0 +0.7**
BNGL BINGOL 73.03 315 *i*P **P 11 23 00.5 +1.0**
WLF Walferdange 73.06 344 *e*P **P 11 22 59.8 +0.2**
comp=Z,224nm,1.3s,mb5.8
WLF Walferdange 73.06 344 P **P 11 22 59.5 -0.2**
WLF Walferdange 73.06 344 *e*P **P 11 22 59.5 -0.1**
WLF pmax pmax
comp=Z,110nm,1.1s,mb5.6
WLF Walferdange 73.06 344 *e*P **P 11 22 59.5 -0.1**
comp=Z,110nm,1.1s,mb5.6
KTD Kalmit 73.07 342⇑*e*P **P 11 22 59.8 +0.1**
HTL Hartland 73.08 351⇑*e*P **P 11 22 59.4 -0.4**
HTL Hartland 73.08 351⇑*e*P **P 11 22 59.4 -0.4**
BZK Bozkurt 73.08 322 *e*P **P 11 22 59.5 -0.3**
KVT Kavak 73.13 320 *e*P **P 11 23 01.0 +0.9**
HKR Hakkari 73.15 313 *e*P **P 11 23 00.6 +0.5**
CPCT Cooper Cave 73.23 51 *e*P **P 11 22 59.6 -1.0**
BOYT Boyabat 73.24 321 *i*P **P 11 23 01.3 +0.6**
MOA Molln 73.28 338 *i*P **P 11 23 01.4 +0.5**
comp=Z,398nm,1.7s,mb6.0,SNR=29
KVTX Kingsville 73.30 66 *e*P **P 11 23 01.2 +0.2**
STU Stuttgart 73.40 341 *e*P **P 11 23 01.6 -0.1**
comp=Z,238nm,1.1s,mb5.9
STU Stuttgart 73.40 341 *e*P **P 11 23 01.8 +0.1**
STU pmax pmax
comp=Z,231nm,1.1s,mb5.9
STU Stuttgart 73.40 341 *e*P **P 11 23 01.8 +0.2**
comp=Z,231nm,1.1s,mb5.9
LANF Langenberg 73.45 342⇑*e*P **P 11 23 02.2 +0.3**
CUKT Cukurca 73.48 313 *e*P **P 11 23 02.2 0.0**
GZR Gura Zlata 73.50 331⇑*i*P **P 11 23 02.3 +0.1**
GZR Gura Zlata 73.50 331 P **P 11 23 02.5 +0.3**
GZR Gura Zlata 73.50 331⇑P **P 11 23 02.3 +0.1**
BLA Blacksburg 73.50 47 *e*P **P 11 23 00.7 -1.5**
BLA pmax pmax
comp=Z,22nm,0.9s,mb4.9
BLA Blacksburg 73.50 47 *e*P **P 11 23 00.7 -1.5**
comp=Z,22nm,0.9s,mb4.9
BUC1 Bucharest 73.52 328 P **P 11 23 02.8 +0.4**
PKS9 Tamasi 73.55 335⇑*e*P **P 11 23 02.8 +0.3**
ARSA Arzberg 73.57 337 *i*P **P 11 23 03.7 +1.1**
comp=Z,472nm,1.7s,mb5.9,SNR=22
LBG Lerchenberg 73.58 342 P **P 11 23 03.1 +0.4**
FUR Furstenfeldbru 73.59 340 *e*P **P 11 23 03.1 +0.3**
comp=Z,349nm,1.1s,mb6.0
FUR Furstenfeldbru 73.59 340 *e*P **P 11 23 03.1 +0.3**
FUR pmax pmax
comp=Z,45nm,1.1s,mb5.1
BZS Buzias 73.60 332⇑*i*P **P 11 23 02.5 -0.3**
BZS Buzias 73.60 332 P **P 11 23 03.0 +0.2**
BZS Buzias 73.60 332⇑P **P 11 23 02.5 -0.3**
POO Poona 73.66 279⇑*ix* **P 11 22 59.0 -4.2**
comp=Z,200nm,1.0s,mb5.8
BALT Daday 73.68 322 *i*P **P 11 23 03.5 +0.3**
MYNC Murphy 73.72 51 *e*P **P 11 23 02.5 -1.0**
MYNC pmax pmax
comp=Z,214nm,0.9s,mb5.9
MYNC Murphy 73.72 51 *e*P **P 11 23 02.5 -1.0**
comp=Z,214nm,0.9s,mb5.9
PTK Pertek 73.77 317 *e*P **P 11 23 04.8 +1.0**
SVSK Karacayir 73.79 319 *e*P **P 11 23 04.6 +0.6**
PKSM Moragy 73.81 334⇑*i*P **P 11 23 03.9 -0.2**
PKSM Moragy 73.81 334⇑P **P 11 23 03.9 -0.1**
STR Strasbourg 73.84 342⇑*e*P **P 11 23 05.0 +0.8**
BEST Besiri 73.89 315 *i*P **P 11 23 05.2 +0.6**
CBN Corbin 73.89 45 *e*P **P 11 23 03.6 -1.0**
comp=Z,182nm,0.9s,mb5.8
TOS Tosya 73.89 321 *e*P **P 11 23 05.4 +0.9**
CRQ2 Rosemanowes 2 73.96 351⇑*i*P **P 11 23 04.1 -0.8**
CRQ2 AMb AMB 11 23 06.6
comp=Z,279nm,1.6s,mb5.8
CRQ2 Rosemanowes 2 73.96 351⇑*i*P **P 11 23 04.1 -0.8**
CRQ2 AMb AMB 11 23 06.6
comp=Z,279nm,1.6s,mb5.8
BFO Black Forest 73.98 342 P **P 11 23 05.0 -0.1**
comp=Z,946nm,1.3s,mb6.4,SNR=65
BFO Black Forest 73.98 342 *e*P **P 11 23 04.9 -0.2**
comp=Z,259nm,1.2s,mb5.8
CTKT Corum 73.98 321 *i*P **P 11 23 06.0 +1.0**
CPZ Penzance 74.01 351⇑*i*P **P 11 23 04.6 -0.6**
CPZ AMb AMB 11 23 10.1
comp=Z,279nm,1.0s,mb5.9
CPZ Penzance 74.01 351⇑*i*P **P 11 23 04.6 -0.6**
CPZ AMb AMB 11 23 10.1
comp=Z,279nm,1.0s,mb5.9
CGW Gweek 74.03 351⇑*e*P **P 11 23 04.6 -0.7**
CGW Gweek 74.03 351⇑*e*P **P 11 23 04.6 -0.7**
WLS Welschbruch 74.07 342⇑*e*P **P 11 23 05.8 +0.2**
CGH1 Goonhilly 74.08 351⇑*e*P **P 11 23 04.5 -1.1**
CGH1 Goonhilly 74.08 351⇑*e*P **P 11 23 04.5 -1.1**
CDF Champ du Feu 74.09 343⇑*i*P **P 11 23 05.7 0.0**
comp=Z,773nm,1.2s,mb6.0
CDF Champ du Feu 74.09 343⇑*i*P **P 11 23 05.7 0.0**
CDF pmax pmax
comp=Z,386nm,1.2s,mb6.0
CDF Champ du Feu 74.09 343⇑*i*P **P 11 23 05.7 0.0**
comp=Z,386nm,1.2s,mb6.0
GUT Gutenstein 74.09 341 P **P 11 23 06.0 +0.3**
SPAK Spaichingen-Ko 74.12 341⇑*e*P **P 11 23 06.2 +0.3**
LRAL Lakeview Retre 74.13 54 *e*P **P 11 23 04.4 -1.5**
comp=Z,79nm,0.5s,mb5.7
PRD Provadia 74.15 327 *e*P **P 11 23 06.2 +0.2**
KOGS Kog 74.16 336⇑*i*P **P 11 23 06.4 +0.3**
SAFT Safranbolu 74.18 322 *e*P **P 11 23 06.3 +0.1**
KBA Koelnbreinsper 74.21 338⇑*i*P **P 11 23 07.9 +1.5**
comp=Z,972nm,1.5s,mb6.3,SNR=311
KBA Koelnbreinsper 74.21 338⇑*i*P **P 11 23 07.9 +1.5**
KBA pmax pmax
comp=Z,972nm,1.5s,mb6.3
PERS Pernice 74.24 337⇑*i*P **P 11 23 07.3 +0.8**
comp=Z,531nm,1.4s,mb6.1
PERS *e*S S 11 32 37.6 +2.5
ELZG Elazig 74.27 317 *i*P **P 11 23 07.8 +1.1**
UBR Ueberruh 74.28 340 *e*P **P 11 23 07.3 +0.5**
LIBD Limburg 74.28 342⇑*e*P **P 11 23 07.1 +0.3**
ECH Echery 74.30 343⇑*e*P **P 11 23 06.9 0.0**
WATA Walderalm 74.33 339⇑*i*P **P 11 23 07.8 +0.8**
comp=Z,377nm,1.3s,mb6.0,SNR=27
WATA Walderalm 74.33 339⇑*i*P **P 11 23 07.8 +0.7**
WATA pmax pmax
comp=Z,377nm,1.3s,mb6.0
ZIMR 74.35 329 P **P 11 23 06.9 -0.3**
MEZF Maizieres J'vi 74.36 344⇑*i*P **P 11 23 07.3 0.0**
comp=Z,272nm,0.8s,mb5.7
MEZF Maizieres J'vi 74.36 344⇑*i*P **P 11 23 07.3 0.0**
comp=Z,272nm,0.8s,mb6.0
WTTA Wattenberg 74.39 339 *i*P **P 11 23 08.4 +1.0**
comp=Z,876nm,1.6s,mb6.2,SNR=44
WTTA Wattenberg 74.39 339 *i*P **P 11 23 08.4 +1.0**
WTTA pmax pmax
comp=Z,876nm,1.6s,mb6.2
MOTA Moosalm 74.41 340⇑*i*P **P 11 23 08.1 +0.6**
comp=Z,332nm,1.2s,mb5.9,SNR=75
MOTA Moosalm 74.41 340⇑*i*P **P 11 23 08.1 +0.5**
MOTA pmax pmax
comp=Z,333nm,1.2s,mb5.9
CANT Cankiri 74.42 321 *e*P **P 11 23 08.4 +0.8**
KIZ Kirchzarten 74.42 342 P **P 11 23 07.5 -0.1**
CORM Corum 74.43 321 *e*P **P 11 23 08.6 +0.9**
KAD Karad 74.46 278 *i*P **P 11 23 06.7 -1.1**
FELD Feldberg im Sc 74.48 342⇑*e*P **P 11 23 08.0 +0.1**
THEF They Montfort 74.48 343⇑*e*P **P 11 23 08.0 0.0**
OBKA Obir 74.49 337 *i*P **P 11 23 08.9 +0.9**
comp=Z,783nm,1.4s,mb6.2,SNR=66
SISB Singen-Schiene 74.49 341 P **P 11 23 08.5 +0.5**
SLE Schleitheim 74.50 342⇑*i*P **P 11 23 07.7 -0.4**
comp=Z,220nm,1.3s,mb5.7
SLE Schleitheim 74.50 342⇑P **P 11 23 07.8 -0.3**
SQTA Sankt Quirin 74.51 340⇑*i*P **P 11 23 09.1 +1.0**
comp=Z,478nm,1.3s,mb6.1,SNR=68
SQTA Sankt Quirin 74.51 340⇑*i*P **P 11 23 09.1 +1.0**
SQTA pmax pmax
comp=Z,478nm,1.3s,mb6.1
MSL Mosul 74.52 313 *ex* x 11 23 10.0
MSL *ex* x 11 23 18.0
MSL *ex* x 11 25 45.0
MSL *ex* x 11 27 54.0
MSL *ex* x 11 32 42.0
MSL *ex* x 11 33 09.0
STEIN Stein am Rhein 74.52 341⇑*i*P **P 11 23 08.4 +0.2**
comp=Z,454nm,1.4s,mb6.0
SZH Strazhica 74.54 328 *e*P **P 11 23 08.1 -0.2**
TRULL Truellikon 74.58 341⇑*i*P **P 11 23 08.5 0.0**
comp=Z,337nm,1.5s,mb5.8
MARD Mardin 74.58 315 *i*P **P 11 23 09.0 +0.5**
ELDT Eldivan 74.59 322 *i*P **P 11 23 09.7 +1.1**
HAU Haudompre 74.64 343⇑*i*P **P 11 23 08.7 -0.2**
comp=Z,265nm,0.8s,mb5.7
HAU *e*R
comp=Z,1µm,23.0s
HAU Haudompre 74.64 343⇑*i*P **P 11 23 08.7 -0.2**
HAU pmax pmax
comp=Z,133nm,0.8s,mb5.7
HAU MLR MLR
comp=Z,1µm,23.0s
HAU Haudompre 74.64 343⇑*i*P **P 11 23 08.7 -0.2**
comp=Z,133nm,0.8s,mb5.7
HAU LR LR
comp=Z,1µm,23.0s
WEIN Weingarten 74.64 341⇑*i*P **P 11 23 09.5 +0.6**
comp=Z,576nm,1.7s,mb6.0
BEO Belgrade 74.65 332 *e*P **P 11 23 09.2 +0.3**
MALT Malatya 74.65 317 *e*P **P 11 23 09.8 +0.9**
MALT pmax pmax
comp=Z,85nm,1.3s,mb5.3
MALT Malatya 74.65 317 *e*P **P 11 23 09.8 +0.9**
comp=Z,85nm,1.3s,mb5.3
MOF Molkenrain 74.66 342⇑*e*P **P 11 23 08.9 -0.1**
YOZ Yozgat 74.66 320 *e*P **P 11 23 09.1 +0.1**
ZAIG Zacatecas 74.69 72⇑*i*P **P 11 23 09.4 +0.2**
DAVA Damuels 74.70 340⇑*i*P **P 11 23 09.6 +0.4**
comp=Z,322nm,1.6s,mb5.8,SNR=52
HINF Hinteralfeld 74.74 343⇑*i*P **P 11 23 09.1 -0.3**
comp=Z,328nm,1.2s,mb5.7
HINF Hinteralfeld 74.74 343⇑*i*P **P 11 23 09.1 -0.3**
HINF pmax pmax
comp=Z,164nm,1.2s,mb5.6
HINF Hinteralfeld 74.74 343⇑*i*P **P 11 23 09.1 -0.3**
comp=Z,164nm,1.2s,mb5.6
SEST Monte Rota 74.76 339 P **P 11 23 10.0 +0.4**
PVL Pavlikeni 74.76 328 *e*P **P 11 23 10.1 +0.5**
WILA Wila 74.76 341⇑*i*P **P 11 23 09.2 -0.4**
comp=Z,489nm,1.3s,mb6.1
WILA Wila 74.76 341⇑P **P 11 23 09.9 +0.3**
SULZ Sulz-Cheisache 74.80 342⇑*e*P **P 11 23 09.8 0.0**
comp=Z,515nm,1.2s,mb6.1
PDKS Podkum 74.81 337 *e*P **P 11 23 10.0 +0.1**
PTCC Patocco-Chiusa 74.85 338 P **P 11 23 10.1 0.0**
ZUR Zurich 74.87 341⇑*i*P **P 11 23 09.9 -0.3**
comp=Z,460nm,1.2s,mb6.1
ZUR Zurich 74.87 341⇑P **P 11 23 10.4 +0.2**
FLN La Foliniere 74.87 348⇑*i*P **P 11 23 09.5 -0.7**
comp=Z,397nm,0.8s,mb5.9
FLN *e*R
comp=Z,776nm,22.8s
FLN La Foliniere 74.87 348⇑*i*P **P 11 23 09.5 -0.7**
FLN pmax pmax
comp=Z,199nm,0.8s,mb5.9
FLN MLR MLR
comp=Z,780nm,22.8s
FLN La Foliniere 74.87 348⇑*i*P **P 11 23 09.5 -0.7**
comp=Z,199nm,0.8s,mb5.9
FLN LR LR
comp=Z,780nm,22.8s
SVIS Svilajnac 74.93 332 *e*P **P 11 23 09.8 -0.7**
SVIS Svilajnac 74.93 332 P **P 11 23 10.6 0.0**
CRES Cresnjev 74.93 336⇑*i*P **P 11 23 10.7 +0.2**
comp=Z,346nm,1.2s,mb6.0
CRES *e*pP pP 11 23 14.7 -14
CADS Cadrg 74.93 338⇑*i*P **P 11 23 10.2 -0.3**
comp=Z,202nm,0.8s,mb5.9
CADS *e*S S 11 32 43.4 +0.6
LJU Ljubljana 74.94 337⇑*i*P **P 11 23 10.7 +0.1**
LJU *i* pP pP 11 23 14.4 -14
BBS Basel-Blauen 74.96 342⇑*e*P **P 11 23 10.9 +0.2**
SGKT Sivrigoynuk 74.99 323 *i*P **P 11 23 11.5 +0.6**
LDF La Druitiere 74.99 348⇑*i*P **P 11 23 10.2 -0.7**
comp=Z,220nm,0.9s,mb5.6
LDF La Druitiere 74.99 348⇑*i*P **P 11 23 10.2 -0.7**
LDF pmax pmax
comp=Z,110nm,0.9s,mb5.6
LDF La Druitiere 74.99 348⇑*i*P **P 11 23 10.2 -0.7**
comp=Z,110nm,0.9s,mb5.6
GMNA Gemona 75.00 338 P **P 11 23 10.8 -0.1**
CDAG Cicekdag 75.02 320 *i*P **P 11 23 11.4 +0.4**
PLONS Plons 75.03 341⇑*i*P **P 11 23 11.4 +0.3**
comp=Z,410nm,1.7s,mb5.9
BALST Balsthal 75.06 342⇑*i*P **P 11 23 10.3 -1.0**
comp=Z,380nm,0.8s,mb6.2
JMB Yambol 75.07 327 P **P 11 23 11.8 +0.5**
BOURR Bourrignon 75.08 342⇑*i*P **P 11 23 11.3 -0.1**
comp=Z,591nm,1.7s,mb6.0
VOY Vojsko 75.09 337 *e*P **P 11 23 11.1 -0.3**
VOY *e*pP pP 11 23 14.9 -14
VOY *e* 11 23 43.9
VOY *e* 11 24 02.8
VOY *e* 11 24 25.4
BNN Bunyan 75.16 319 *e*P **P 11 23 11.7 -0.1**
HENT Hendek 75.16 323 *i*P **P 11 23 11.5 -0.3**
BOLS Boljevac 75.16 331⇓*i*P **P 11 23 10.6 -1.3**
BR131 Keskin Array S 75.19 321 *e*P **P 11 23 12.2 +0.2**
comp=Z,13nm,0.5s,mb4.9
BRTR Keskin Array B 75.19 321 P **P 11 23 12.2 +0.2**
comp=Z,21nm,0.6s,mb5.0,baz=60,slow=3.6,SNR=97
BRTR PKPPKP 11 50 34.7
comp=Z,4.2nm,1.1s,baz=180,slow=2.5,SNR=6.8
BRTR LR LR 12 02 35.3
comp=Z,1µm,18.4s,baz=9.1,slow=41
DAVOX Davos 75.19 340⇑*i*P **P 11 23 11.5 -0.6**
comp=Z,478nm,1.3s,mb6.1
LOMF Lomont 75.19 343⇑*e*P **P 11 23 12.3 +0.2**
APPI Appiano 75.22 339 P **P 11 23 12.2 0.0**
MUO Muotathal 75.24 341⇑*i*P **P 11 23 12.6 +0.2**
comp=Z,419nm,1.2s,mb6.0
MUO Muotathal 75.24 341⇑P **P 11 23 12.8 +0.5**
CEY Cerknica 75.25 337 P **P 11 23 12.5 +0.1**
URFA Urfa 75.25 316 *e*P **P 11 23 13.3 +0.9**
BOJS Bojanci 75.28 336⇑*i*P **P 11 23 12.8 +0.2**
comp=Z,538nm,1.4s,mb6.1
BOJS *e*S S 11 32 48.6 +1.9
BOJS *e* 11 33 17.6
GRR Gorron 75.28 348⇑*i*P **P 11 23 12.2 -0.4**
comp=Z,583nm,0.9s,mb6.0
GRR Gorron 75.28 348⇑*i*P **P 11 23 12.2 -0.4**
GRR pmax pmax
comp=Z,291nm,0.9s,mb6.0
GRR Gorron 75.28 348⇑*i*P **P 11 23 12.2 -0.4**
comp=Z,291nm,0.9s,mb6.0
LLS Linth-Limmern 75.29 341⇓*e*P **P 11 23 12.7 +0.1**
comp=Z,215nm,1.3s,mb5.7
LLS Linth-Limmern 75.29 341⇑P **P 11 23 12.2 -0.4**
ANTO Ankara 75.36 322 *e*P **P 11 23 12.8 -0.2**
ANTO Ankara 75.36 322⇓*i*P **P 11 23 13.2 +0.2**
ANTO Ankara 75.36 322 P **P 11 23 14.0 +0.9**
SNR=22
ANTO Ankara 75.36 322 *e*P **P 11 23 13.5 +0.5**
ANTO pmax pmax
comp=Z,154nm,1.4s,mb5.5
ANTO Ankara 75.36 322 *e*P **P 11 23 13.5 +0.4**
comp=Z,154nm,1.4s,mb5.5
BNALP Bannalp 75.38 341⇑*i*P **P 11 23 13.0 -0.1**
comp=Z,315nm,1.1s,mb5.8
MDU Mudurnu 75.38 323 *e*P **P 11 23 13.1 0.0**
BRMO Bormio 75.39 340 P **P 11 23 14.1 +0.9**
ATAB Bozova 75.43 317 *i*P **P 11 23 14.4 +1.0**
DIVS Divcibare 75.44 332⇓*i*P **P 11 23 12.8 -0.7**
DIVS Divcibare 75.44 332 *e*P **P 11 23 13.3 -0.2**
KNDS Knezji Dol 75.46 337⇑*i*P **P 11 23 13.8 +0.2**
comp=Z,810nm,1.4s,mb6.3
KNDS *e*pP pP 11 23 18.1 -13
KAMT Kaman 75.48 321 *e*P **P 11 23 13.7 0.0**
BERNI Berninapass 75.52 340⇑*i*P **P 11 23 14.2 +0.3**
comp=Z,328nm,1.4s,mb5.9
HASLI Hasliberg 75.53 342⇑*i*P **P 11 23 13.3 -0.7**
comp=Z,289nm,1.2s,mb5.9
CTI Castel Tesino 75.54 339 P **P 11 23 14.1 0.0**
VDL Val di Lei 75.55 341⇑*i*P **P 11 23 14.9 +0.8**
comp=Z,356nm,1.1s,mb6.0
VDL Val di Lei 75.55 341⇑P **P 11 23 15.1 +1.0**
HRT Hereke 75.57 324 *e*P **P 11 23 13.4 -0.8**
EDRB Edirne 75.58 327 *e*P **P 11 23 14.3 0.0**
TUE Stuetta 75.59 341 P **P 11 23 15.2 +0.9**
ROSF Rostrenen 75.60 350⇑*i*P **P 11 23 14.1 -0.3**
comp=Z,508nm,1.1s,mb5.9
ROSF Rostrenen 75.60 350⇑*i*P **P 11 23 14.1 -0.3**
ROSF pmax pmax
comp=Z,254nm,1.1s,mb5.9
ROSF Rostrenen 75.60 350⇑*i*P **P 11 23 14.1 -0.3**
comp=Z,254nm,1.1s,mb5.9
SGMF Saint Gilles 75.61 349⇑*i*P **P 11 23 14.1 -0.3**
comp=Z,411nm,0.9s,mb5.9
SGMF Saint Gilles 75.61 349⇑*i*P **P 11 23 14.1 -0.3**
SGMF pmax pmax
comp=Z,205nm,0.9s,mb5.9
SGMF Saint Gilles 75.61 349⇑*i*P **P 11 23 14.1 -0.3**
comp=Z,205nm,0.9s,mb5.9
BRANT Les Verrieres 75.65 343⇑*i*P **P 11 23 15.4 +0.7**
comp=Z,324nm,1.1s,mb6.0
ELBA Catalca 75.68 325 *i*P **P 11 23 14.7 -0.1**
PGB Panagyurishte 75.72 329 *e*P **P 11 23 15.0 -0.1**
WIMIS Wimmis 75.72 342⇑*i*P **P 11 23 15.2 +0.1**
comp=Z,203nm,1.2s,mb5.7
TORNY Torny 75.73 342⇑*i*P **P 11 23 15.6 +0.5**
comp=Z,717nm,1.4s,mb6.2
FUSIO Fusio 75.73 341⇑*i*P **P 11 23 15.6 +0.4**
comp=Z,373nm,1.4s,mb5.9
LOR Lormes 75.75 345⇑*i*P **P 11 23 14.9 -0.3**
comp=Z,767nm,1.3s,mb6.0
LOR *e*R
comp=Z,1µm,20.0s
LOR Lormes 75.75 345⇑*i*P **P 11 23 14.9 -0.3**
LOR pmax pmax
comp=Z,383nm,1.3s,mb6.0
LOR MLR MLR
comp=Z,1µm,20.0s
LOR Lormes 75.75 345⇑*i*P **P 11 23 14.9 -0.3**
comp=Z,383nm,1.3s,mb6.0
LOR LR LR
comp=Z,1µm,20.0s
MABI Malga Bissina 75.77 340 P **P 11 23 15.6 +0.3**
GZT Gaziantep 75.82 317 *i*P **P 11 23 16.0 +0.4**
ADVT Abdulvahap 75.90 324 *e*P **P 11 23 16.0 -0.1**
YLV Yalova 75.90 324 *e*P **P 11 23 15.5 -0.6**
HYF Humbligny 75.93 345⇑*i*P **P 11 23 16.4 +0.1**
VTS Vitosha 75.95 330 *e*P **P 11 23 16.2 -0.2**
VTS Vitosha 75.95 330 *e*P **P 11 23 15.4 -1.0**
VTS Vitosha 75.95 330⇑*i*P **P 11 23 16.2 -0.2**
PLD Plovdiv 75.97 328 *e*P **P 11 23 16.2 -0.3**
PLD Plovdiv 75.97 328 *e*P **P 11 23 15.5 -1.0**
LKBD Leukerbad 75.99 342⇑*i*P **P 11 23 15.8 -0.8**
comp=Z,148nm,1.0s,mb5.7
LKBD Leukerbad 75.99 342⇑P **P 11 23 17.3 +0.7**
SSF Saint Saulge 76.00 345⇑*i*P **P 11 23 16.4 -0.3**
comp=Z,205nm,1.1s,mb5.5
SSF Saint Saulge 76.00 345⇑*i*P **P 11 23 16.4 -0.3**
SSF pmax pmax
comp=Z,102nm,1.1s,mb5.5
SSF Saint Saulge 76.00 345⇑*i*P **P 11 23 16.4 -0.3**
comp=Z,102nm,1.1s,mb5.5
QUIF Quistinic 76.00 350⇑*i*P **P 11 23 16.3 -0.4**
comp=Z,340nm,1.0s,mb5.8
QUIF Quistinic 76.00 350⇑*i*P **P 11 23 16.3 -0.4**
QUIF pmax pmax
comp=Z,170nm,1.0s,mb5.7
QUIF Quistinic 76.00 350⇑*i*P **P 11 23 16.3 -0.4**
comp=Z,170nm,1.0s,mb5.7
CABF La Chapelle 76.03 343⇑*i*P **P 11 23 17.1 +0.2**
comp=Z,520nm,1.0s,mb5.9
CABF La Chapelle 76.03 343⇑*i*P **P 11 23 17.1 +0.2**
CABF pmax pmax
comp=Z,260nm,1.0s,mb5.9
CABF La Chapelle 76.03 343⇑*i*P **P 11 23 17.1 +0.2**
comp=Z,260nm,1.0s,mb5.9
GIMEL Gimel 76.08 343⇑*i*P **P 11 23 16.9 -0.2**
comp=Z,230nm,1.4s,mb5.7
GEMT Gemlik 76.08 325 *e*P **P 11 23 16.9 -0.2**
GAZ Gaziantep 76.11 317 *e*P **P 11 23 17.9 +0.6**
AIGLE Aigle 76.15 342 *e*P **P 11 23 17.9 +0.4**
comp=Z,205nm,1.1s,mb5.8
KDZ Kurdzhali 76.17 328 *e*P **P 11 23 17.5 -0.1**
MUGIO Muggio 76.18 341⇑*i*P **P 11 23 17.6 -0.1**
comp=Z,533nm,1.2s,mb6.1

OG01 **Vacheresse** 76.20 342 *e*P P 11 23 18.2 +0.4
GRYON **Gryon** 76.21 342⇑*i*P P 11 23 17.3 -0.6
comp=Z,154nm,1.2s,mb5.6
CNNC **Cliffs of the** 76.24 47 *e*P P 11 23 17.4 -0.7
MMK **Mattmark** 76.25 341⇑*i*P P 11 23 18.2 +0.1
comp=Z,314nm,1.2s,mb5.9
MMK **Mattmark** 76.25 341 ⇑P P 11 23 19.1 +1.0
NVLJ **Novalja** 76.26 336 *i* P P 11 23 17.0 -1.1
VAI **Varese** 76.28 341 P P 11 23 17.4 -0.9
SFJM **Santa Fe** 76.28 74⇑*i*P P 11 23 18.0 -0.3
AVF **Avril sur Loir** 76.29 345⇑*i*P P 11 23 18.1 -0.2
comp=Z,593nm,1.3s,mb5.9
AVF **Avril sur Loir** 76.29 345⇑*i*P P 11 23 18.1 -0.2
AVF pmax pmax
comp=Z,297nm,1.3s,mb5.9
AVF **Avril sur Loir** 76.29 345⇑*i*P P 11 23 18.1 -0.2
comp=Z,296nm,1.3s,mb5.9
PLE **Pljevlja** 76.31 333⇑*i*P P 11 23 19.3 +0.8
DIX **Grande Dixence** 76.32 342⇑*i*P P 11 23 18.6 +0.1
comp=Z,492nm,1.4s,mb6.0
DIX **Grande Dixence** 76.32 342 ⇑P P 11 23 19.5 +1.0
MCGN **Macugnaga** 76.34 341 P P 11 23 19.5 +0.9
SALAN **Lac Salante** 76.34 342⇑*e*P P 11 23 19.0 +0.4
comp=Z,163nm,1.4s,mb5.6
RZN **Rozhen** 76.34 328 *e*P P 11 23 18.4 -0.2
ESKT **Eskisehir** 76.34 323 *e*P P 11 23 18.6 -0.1
ESKT **Eskisehir** 76.34 323 *i* P P 11 23 18.5 -0.1
SMF **Signal de Mont** 76.36 344⇑*i*P P 11 23 18.4 -0.3
comp=Z,421nm,1.3s,mb5.7
SMF **Signal de Mont** 76.36 344⇑*i*P P 11 23 18.4 -0.3
SMF pmax pmax
comp=Z,211nm,1.3s,mb5.7
SMF **Signal de Mont** 76.36 344⇑*i*P P 11 23 18.4 -0.3
comp=Z,211nm,1.3s,mb5.7
ULDT **Uludag** 76.36 324 *i* P P 11 23 18.7 0.0
KOZT **Kozan** 76.37 318 *e*P P 11 23 19.0 +0.2
EMV **Vieux Emosson** 76.43 342⇑*i*P P 11 23 19.5 +0.4
comp=Z,253nm,1.2s,mb5.8
EMV **Vieux Emosson** 76.43 342 ⇑P P 11 23 19.6 +0.5
SART **Tekirdag** 76.50 326 *i* P P 11 23 19.1 -0.4
RKY **Sarkoy-Tekirda** 76.50 326 *e*P P 11 23 19.5 0.0
BHD **Baghdad** 76.55 310 *ex* x 11 23 17.0
BHD *ex* x 11 23 28.0
BHD *ex* x 11 32 59.0
BHD *ex* x 11 33 32.0
UPM **Unac-Piva** 76.56 333⇑*i*P P 11 23 19.6 -0.3
KIZT **Kizilcal** 76.56 322 *e*P P 11 23 19.9 0.0
CTA **Charters Tower** 76.57 195⇑*i*P P 11 23 19.8 -0.1
comp=Z,122nm,0.9s,mb5.6
CTA *e* pP 11 23 36.7 -1.2
CTA **Charters Tower** 76.57 195 P P 11 23 19.8 -0.1
comp=Z,224nm,1.0s,mb5.8,baz=8.6,slow=6.8,SNR=98
CTA pP pP 11 23 35.5 -2.4
comp=Z,387nm,0.9s,baz=5.3,slow=6.6,SNR=25
CTA **Charters Tower** 76.57 195⇑*i*P P 11 23 19.8 -0.1
CTA *e* pP 11 23 36.7 -1.2
CTA pmax pmax
comp=Z,122nm,0.9s
CTAO **Charters Tower** 76.57 195 P P 11 23 19.8 -0.1
CTAO **Charters Tower** 76.57 195 *e*P P 11 23 19.8 -0.1
CTAO *e**PP pP 11 23 36.6 -1.3
CTAO pmax pmax
comp=Z,397nm,0.9s,mb6.1
CTAO **Charters Tower** 76.57 195 *e*P P 11 23 19.8 -0.1
comp=Z,397nm,0.9s,mb6.1
CTAO *e*pP pP 11 23 36.6 -1.3
BGF **Bois d'Agland** 76.59 345⇑*i*P P 11 23 19.8 -0.2
comp=Z,313nm,1.3s,mb5.6
BGF **Bois d'Agland** 76.59 345⇑*i*P P 11 23 19.8 -0.2
BGF pmax pmax
comp=Z,157nm,1.3s,mb5.6
BGF **Bois d'Agland** 76.59 345⇑*i*P P 11 23 19.8 -0.2
comp=Z,157nm,1.3s,mb5.6
RDO **Rodhopi** 76.59 327 *e*P P 11 23 20.0 0.0
IVA **Berane** 76.61 332⇑*i*P P 11 23 20.3 +0.1
ORO **Oropa** 76.66 341 P P 11 23 20.2 -0.2
KKB **Krupnik** 76.66 329 *e*P P 11 23 19.9 -0.5
ALN **Alexandroupoli** 76.66 327 *e*P P 11 23 19.9 -0.6
OG05 **Jujurieux** 76.69 343⇑*e*P P 11 23 20.8 +0.2
MMB **Musomiste** 76.73 329 *e*P P 11 23 21.0 +0.2
MMB **Musomiste** 76.73 329 *e*P P 11 23 20.4 -0.4
ENEZ **Enez** 76.78 327 *e*P P 11 23 20.8 -0.3
KDHN **Kadinhani** 76.81 322 *i* P P 11 23 21.1 -0.1
CEYT **Ceyhan** 76.81 318 *e*P P 11 23 22.0 +0.8
RSL **Roselend** 76.84 342⇑*e*P P 11 23 22.1 +0.7
PVY **Plav** 76.85 332⇑*i*P P 11 23 20.7 -0.7
KARA **Karaisali** 76.85 319 *e*P P 11 23 21.9 +0.4
NKY **Niksic** 76.90 333⇑*i*P P 11 23 21.1 -0.7
NVR **Nevrokopi** 76.91 329 *e*P P 11 23 21.0 -0.8
LPK **Lapseki** 76.92 326 *e*P P 11 23 21.6 -0.2
BRY **Bratogost** 76.94 333⇑*i*P P 11 23 21.0 -1.0
TCF **Toulx Ste Croi** 76.95 345⇑*i*P P 11 23 21.9 -0.1
comp=Z,392nm,1.3s,mb5.7
TCF **Toulx Ste Croi** 76.95 345⇑*i*P P 11 23 21.9 -0.1
TCF pmax pmax
comp=Z,196nm,1.3s,mb5.7
TCF **Toulx Ste Croi** 76.95 345⇑*i*P P 11 23 21.9 -0.1
comp=Z,196nm,1.3s,mb5.7
MFF **Saint Martin d** 76.95 347⇑*i*P P 11 23 23.0 +0.9
comp=Z,467nm,1.2s,mb5.8
MFF **Saint Martin d** 76.95 347⇑*i*P P 11 23 23.0 +0.9
MFF pmax pmax
comp=Z,234nm,1.2s,mb5.8
MFF **Saint Martin d** 76.95 347⇑*i*P P 11 23 23.0 +0.9
comp=Z,234nm,1.2s,mb5.8
LCHF **La Chataignera** 76.96 348⇑*e*P P 11 23 23.2 +1.1
LPL **La Plagne** 76.98 342⇑*i*P P 11 23 23.4 +1.2
comp=Z,954nm,1.1s,mb6.1
LPL **La Plagne** 76.98 342⇑*i*P P 11 23 23.4 +1.2
LPL pmax pmax
comp=Z,477nm,1.1s,mb6.1
LPL **La Plagne** 76.98 342⇑*i*P P 11 23 23.4 +1.2
comp=Z,477nm,1.1s,mb6.1
LPG **La Plagne** 77.00 342⇑*i*P P 11 23 23.7 +1.4
comp=Z,1µm,1.2s,mb6.2
LPG **La Plagne** 77.00 342⇑*i*P P 11 23 23.7 +1.4
LPG pmax pmax
comp=Z,575nm,1.2s,mb6.2
LPG **La Plagne** 77.00 342⇑*i*P P 11 23 23.7 +1.4
comp=Z,575nm,1.2s,mb6.2
SKO **Skopje** 77.03 331 *e*P P 11 23 23.1 +0.6
SKO **Skopje** 77.03 331 *i* P P 11 23 23.0 +0.6
AGO **Saint Agoulin** 77.04 345⇑*e*P P 11 23 23.3 +0.7
COBT **Iskenderun** 77.05 318 *i* P P 11 23 23.3 +0.7
PLDF **La Plantade** 77.05 344⇑*e*P P 11 23 23.0 +0.4
STIP **Stip** 77.07 330 *e*P P 11 23 21.8 -1.0
STIP **Stip** 77.07 330 *i* P P 11 23 21.6 -1.1
BRSN **Barisano** 77.14 338 P P 11 23 25.2 +2.1
LRYF **La Roche-sur-Y** 77.15 348⇑*e*P P 11 23 23.2 +0.1
STON **Ston** 77.18 334 P P 11 23 22.3 -1.0
TTG **Podgorica** 77.19 332⇑*i*P P 11 23 22.7 -0.7
GDZ **Gediz** 77.20 324 *i* P P 11 23 23.0 +0.4
BOB **Bobbio (Coli)** 77.21 340 P P 11 23 24.5 +1.0
KONT **Konya--Tatoy** 77.23 321 *e*P P 11 23 23.5 -0.1
RSP **Reno Superiore** 77.25 342 P P 11 23 23.7 0.0
PESA **Pesaro** 77.31 337 P P 11 23 24.9 +0.9
VAY **Valandovo** 77.31 330 *e*P P 11 23 23.8 -0.3
VAY **Valandovo** 77.31 330 *i* P P 11 23 23.6 -0.5
ERBM **Eremo** 77.36 339 P P 11 23 25.8 +1.5
PYM **Petit Puy Mans** 77.36 345 *e*P P 11 23 24.9 +0.6
KNT **Kendrikon** 77.36 329 *e*P P 11 23 24.4 +0.1
HCY **Herceg Novi** 77.37 333⇑*i*P P 11 23 23.4 -1.0
GSCL **Gusciola** 77.39 339 P P 11 23 25.9 +1.4
RSM **Repubblica di** 77.40 338 P P 11 23 26.0 +1.4
BUM **Brajici-Budva** 77.41 333⇑*i*P P 11 23 24.1 -0.5
BNI **Bardonecchia** 77.44 342 *e*P P 11 23 26.0 +1.2
BNI pmax pmax
comp=Z,323nm,1.4s,mb5.9
BNI **Bardonecchia** 77.44 342 *e*P P 11 23 26.0 +1.1
comp=Z,323nm,1.4s,mb5.9
FNVD **Fontana Vidola** 77.45 339 P P 11 23 26.3 +1.4
COLF **Collangettes** 77.48 344⇑*e*P P 11 23 25.6 +0.6
AOI **Ancona** 77.51 337 P P 11 23 25.7 +0.5
SEI **Scarperia** 77.51 339 P P 11 23 26.8 +1.6
DZM **Mont Dzumac** 77.53 175 *e*P P 11 23 26.6 +1.3
DZM **Mont Dzumac** 77.53 175 P P 11 23 26.6 +1.3
comp=Z,140nm,1.1s,mb5.6,baz=37,slow=7.1,SNR=21
DZM pP pP 11 23 42.7 -0.6
comp=Z,219nm,1.1s,baz=18,slow=8.1,SNR=12
SOH **Sokhos** 77.54 329 *e*P P 11 23 25.0 -0.4
SFI **Santa Sofia** 77.55 338 P P 11 23 26.9 +1.5
FSSB **Fossombrone** 77.56 337 P P 11 23 26.4 +1.0
VLC **Villacollemand** 77.61 339 *e*P P 11 23 26.4 +0.7
comp=Z,602nm,1.4s,mb6.1
MNGI **Mangalore** 77.62 275 *ex* P 11 23 19.0 -6.9
ULC **Ulcinj** 77.63 332⇑*i*P P 11 23 25.3 -0.5
BDI **Bagni Di Lucca** 77.66 339 P P 11 23 26.2 +0.2
GRG **Griva** 77.69 330 *e*P P 11 23 26.4 +0.2
ORIF **Oris-en-Rattie** 77.71 343⇑*i*P P 11 23 27.2 +0.9
comp=Z,508nm,1.0s,mb5.9
ORIF *e*R
comp=Z,2µm,22.5s
ORIF **Oris-en-Rattie** 77.71 343⇑*i*P P 11 23 27.2 +0.9
ORIF pmax pmax
comp=Z,254nm,1.0s,mb5.9
ORIF **Oris-en-Rattie** 77.71 343⇑*i*P P 11 23 27.2 +0.9
comp=Z,254nm,1.0s,mb5.9
MBDF **Montbardon** 77.74 342⇑*i*P P 11 23 27.1 +0.6
comp=Z,308nm,1.0s,mb5.7
MBDF **Montbardon** 77.74 342⇑*i*P P 11 23 27.1 +0.6
MBDF pmax pmax
comp=Z,154nm,1.0s,mb5.7
MBDF **Montbardon** 77.74 342⇑*i*P P 11 23 27.1 +0.6
comp=Z,154nm,1.0s,mb5.7
CING **Cingoli** 77.77 337 P P 11 23 27.3 +0.7
MEST **Erdemli** 77.78 319 *i* P P 11 23 25.9 -0.8
CRE **Caprese Michel** 77.80 338 P P 11 23 27.8 +1.0
OUR **Ouranopolis** 77.81 328 *e*P P 11 23 26.3 -0.5
HORT **Hortiatis** 77.82 329 *e*P P 11 23 26.0 -0.9
LBL **Lubilhac** 77.83 345 *e*P P 11 23 27.7 +0.8
THE **Thessaloniki** 77.83 329 *e*P P 11 23 26.1 -0.8
LOS **Limnos** 77.84 327 *e*P P 11 23 26.6 -0.4
LIA **Limnos Island** 77.84 327 *e*P P 11 23 26.0 -1.0
BADI **Badiali** 77.85 338 P P 11 23 28.2 +1.2
TKTP **Tekketepe** 77.86 323 *i* P P 11 23 26.8 -0.3
DOI **San Damiano** 77.88 342 P P 11 23 26.0 -1.2
CDCA **Citt' di Caste** 77.90 338 P P 11 23 28.6 +1.3
PLG **Polygyros** 77.93 329 *e*P P 11 23 27.0 -0.5
SNTG **Esatoglia** 77.94 337 P P 11 23 28.4 +0.8
AKHS **Akhisar** 77.94 325 *i* P P 11 23 27.1 -0.5
AKS **Akhisar** 77.94 325 *e*P P 11 23 23.2 -4.3
BIA **Bitola** 77.94 330 *e*P P 11 23 26.6 -1.0
ISP **Isparta** 77.97 322 *e*P P 11 23 26.6 -1.1
ISP **Isparta** 77.97 322 *e*P P 11 23 27.2 -0.5
ISP **Isparta** 77.97 322 P P 11 23 27.7 0.0
VIVF **Saint-Julien-I** 77.97 343⇑*i*P P 11 23 28.3 +0.6
comp=Z,500nm,1.2s,mb5.8
VIVF **Saint-Julien-I** 77.97 343⇑*i*P P 11 23 28.3 +0.6
VIVF pmax pmax
comp=Z,250nm,1.2s,mb5.8
VIVF **Saint-Julien-I** 77.97 343⇑*i*P P 11 23 28.3 +0.6
comp=Z,250nm,1.2s,mb5.8
FIN **Finale Ligure** 77.98 341 P P 11 23 27.3 -0.5
PII **Pisa** 78.00 339 P P 11 23 27.6 -0.3
OHR **Ohrid** 78.00 331 *e*P P 11 23 27.1 -0.8
OHR **Ohrid** 78.00 331 *i* P P 11 23 26.9 -1.1
RJF **Les Rejaudoux** 78.01 346⇑*i*P P 11 23 28.0 +0.1
comp=Z,294nm,1.2s,mb5.6
RJF *e*R
comp=Z,1µm,21.5s
RJF **Les Rejaudoux** 78.01 346⇑*i*P P 11 23 28.0 +0.1
RJF pmax pmax
comp=Z,147nm,1.2s,mb5.6
RJF MLR MLR
comp=Z,1µm,21.5s
RJF **Les Rejaudoux** 78.01 346⇑*i*P P 11 23 28.0 +0.1
comp=Z,147nm,1.2s,mb5.6
RJF LR LR
comp=Z,1µm,21.5s
TIR **Tirane** 78.04 332 *e*P P 11 23 28.1 0.0
HDMB **Hadim** 78.06 321 *e*P P 11 23 28.2 0.0
OFFI **Offida** 78.08 337 P P 11 23 29.7 +1.4
CSNT **Castellina Chi** 78.08 338 P P 11 23 28.1 -0.3
PRK **Paraskevi** 78.10 326 *e*P P 11 23 27.0 -1.4
WSAR **Wadi Sarin** 78.10 294 P P 11 23 28.4 -0.1
comp=Z,22nm,0.9s,mb4.9,baz=8.0,slow=5.6,SNR=10
OCF **Saint Nazaire** 78.14 343⇑*e*P P 11 23 29.7 +1.0
OG26 **St.-Nazaire-De** 78.14 343⇑*e*P P 11 23 29.7 +1.0
FNA **Florina** 78.15 330 *e*P P 11 23 28.0 -0.8
MIB **Mutribah** 78.17 306 *e*P P 11 23 27.9 -0.9
MIB AMb AMB 11 23 29.8
comp=Z,296nm,0.6s,mb6.2
ERMK **Ermenek** 78.19 320 *i* P P 11 23 28.4 -0.5
UMR **Umm Al-Rimmam** 78.21 306 *e*P P 11 23 27.9 -1.2
UMR AMb AMB 11 23 29.9
comp=Z,169nm,0.5s,mb6.0
IKL **Isikli** 78.26 319 *e*P P 11 23 28.4 -0.9
PAIG **Paliouri** 78.27 328 *e*P P 11 23 28.6 -0.8
CAF **Calviac** 78.30 345⇑*i*P P 11 23 30.2 +0.6
comp=Z,473nm,1.3s,mb5.8
CAF **Calviac** 78.30 345⇑*i*P P 11 23 30.2 +0.6
CAF pmax pmax
comp=Z,236nm,1.3s,mb5.8
CAF **Calviac** 78.30 345⇑*i*P P 11 23 30.2 +0.6
comp=Z,236nm,1.3s,mb5.8
SAOF **Saorge** 78.32 341⇑*e*P P 11 23 29.7 0.0
AUTN **L'Aution** 78.33 341 *e*P P 11 23 30.0 +0.2
TOUF **Mont Tournerai** 78.35 341⇑*e*P P 11 23 30.3 +0.5
TERO **Terano** 78.39 336 P P 11 23 30.9 +0.8
LUCF **Luceram** 78.45 341 *e*P P 11 23 30.6 +0.2
GRFL **Gerfalco** 78.46 339 P P 11 23 30.6 +0.2
LIT **Litokhoron** 78.46 329 *e*P P 11 23 29.5 -0.9
SBF **Sospel** 78.46 341⇑*i*P P 11 23 30.5 0.0
comp=Z,876nm,1.3s,mb6.0
SBF **Sospel** 78.46 341⇑*i*P P 11 23 30.5 0.0
SBF pmax pmax
comp=Z,438nm,1.3s,mb6.0
SBF **Sospel** 78.46 341⇑*i*P P 11 23 30.5 0.0
comp=Z,438nm,1.3s,mb6.0
LFF **La Frestale** 78.47 346⇑*i*P P 11 23 30.8 +0.3
comp=Z,890nm,1.4s,mb6.0
LFF **La Frestale** 78.47 346⇑*i*P P 11 23 30.8 +0.3
LFF pmax pmax
comp=Z,445nm,1.4s,mb6.0
LFF **La Frestale** 78.47 346⇑*i*P P 11 23 30.8 +0.3
comp=Z,445nm,1.4s,mb6.0
KZN **Kozani** 78.48 330 *e*P P 11 23 29.0 -1.5
MVIF **Mont Vial** 78.48 341⇑*e*P P 11 23 31.0 +0.4
HOQ **Hoqain** 78.50 295 ⇑P P 11 23 29.5 -1.1
SNR=9.6
KBD **Kabd** 78.54 305 *e*P P 11 23 29.7 -1.2
KBD AMb AMB 11 23 31.6
comp=Z,438nm,0.6s,mb6.5
KDAG **Bornova** 78.55 325 *i* P P 11 23 27.5 -3.4
DENT **Denizli** 78.55 323 *e*P P 11 23 30.9 0.0
IZM **Izmir** 78.55 325 *e*P P 11 23 28.1 -2.8
REVF **Revere** 78.59 341⇑*e*P P 11 23 31.5 +0.3
DNZL **Cakiroluk** 78.60 323 *i* P P 11 23 31.4 +0.2
BLCB **Balcova** 78.64 325 *e*P P 11 23 30.6 -0.8
SMRF **Simiane la Rot** 78.68 343⇑*i*P P 11 23 32.9 +1.3
comp=Z,689nm,1.6s,mb5.9
SMRF **Simiane la Rot** 78.68 343⇑*i*P P 11 23 32.9 +1.3
comp=Z,689nm,1.6s,mb6.2
NAY **Al-Naaiem** 78.68 306 *e*P P 11 23 30.5 -1.2
NAY AMb AMB 11 23 32.7
comp=Z,153nm,0.9s,mb5.8
AQU **L'Aquila** 78.69 337⇑*i*P P 11 23 32.4 +0.7
AQU **L'Aquila** 78.69 337 *e*P P 11 23 32.6 +0.9
AQU pmax pmax
comp=Z,406nm,1.3s,mb6.1
AQU **L'Aquila** 78.69 337 *e*P P 11 23 32.6 +0.9
comp=Z,406nm,1.3s,mb6.1
FGMS **Monte Sant'Ang** 78.71 334 P P 11 23 31.6 -0.2
MSAG **Monte S. Angel** 78.71 335 P P 11 23 31.6 -0.2
SGRT **San Giovanni R** 78.71 335 P P 11 23 31.6 -0.2
VILF **Villemus** 78.78 342 *e*P P 11 23 33.4 +1.2
WRAB **Tennant Creek** 78.78 206 P P 11 23 32.0 -0.2
comp=Z,962nm,1.2s,mb6.5,SNR=57
WRAB **Tennant Creek** 78.78 206 *e*P P 11 23 32.0 -0.1
WB2 **Warramunga Arr** 78.78 206⇑*i*P P 11 23 32.1 -0.1
WB2 *e* pP 11 23 48.9 -1.4
WB2 *e*S S 11 33 23.8 -1.0
WRA **Warramunga Arr** 78.79 206 P P 11 23 32.0 -0.2
comp=Z,120nm,1.1s,mb5.6,baz=17,slow=5.5,SNR=110
WRA pP pP 11 23 48.6 -1.7
comp=Z,212nm,0.8s,baz=20,slow=5.9,SNR=23
WRA PKPPKP 11 50 26.7
comp=Z,1.7nm,1.1s,baz=197,slow=2.1,SNR=4.7
WRA LR LR 11 54 30.2
comp=Z,540nm,21.4s,baz=40,slow=33
WRA **Warramunga Arr** 78.79 206 P P 11 23 32.0 -0.2
WRA *PP pP 11 23 48.6 -1.7
LATE **Laterza** 78.80 338 P P 11 23 32.5 +0.2
QRN **Al-Qurain** 78.80 305 *e*P P 11 23 31.4 -0.9
QRN AMb AMB 11 23 33.3
comp=Z,238nm,0.6s,mb6.2
URLA **Izmir** 78.80 325 *i* P P 11 23 31.7 -0.6
FG2 **Serracapriola** 78.81 335 P P P 11 23 32.5 +0.2
RDF **Al-Radifah** 78.81 305 *e*P P P 11 23 31.6 -0.8
RDF AMb AMB 11 23 33.8
comp=Z,500nm,1.0s,mb6.3
MNS **Montasola** 78.82 337 P P P 11 23 32.3 -0.1
FIAM **Fiamignano** 78.84 337 P P P 11 23 33.4 +0.9
LASF **Ste Croix** 78.86 344⇑*i*P P P 11 23 33.5 +0.8
comp=Z,110nm,0.8s,mb5.5
FRF **La Foret Royal** 78.90 342⇑*i*P P P 11 23 32.8 0.0
PALK **Pallekele** 78.90 267 P P P 11 23 32.4 -0.5
comp=Z,312nm,0.8s,mb6.2,SNR=5.8
PALK **Pallekele** 78.90 267 *e*P P P 11 23 32.2 -0.7
comp=Z,60nm,1.0s,mb5.4
INTR **Introdacqua** 78.90 336 P P P 11 23 31.9 -1.0
AOS **Alonnisos** 78.91 328 *e*P P P 11 23 31.7 -1.2
PRAF **Pradon** 78.91 343⇑*e*P P P 11 23 34.3 +1.4
XOR **Xorichti** 78.93 328 *e*P P P 11 23 32.0 -1.0
TAVF **Tavernes** 78.94 342⇑*e*P P P 11 23 33.9 +0.8
CHOS **Chios island** 78.95 326 *e*P P P 11 23 31.7 -1.4
NEO **Neokhori** 78.98 328 *e*P P P 11 23 32.0 -1.3
CIGN **Sant'Elia a Pi** 79.01 335 P P P 11 23 33.7 +0.2
TREF **Trevaresse** 79.05 343 *e*P P P 11 23 35.2 +1.5
JMDO **Jabal Madar** 79.09 294 ⇓P P P 11 23 33.2 -0.7
SNR=14
PUYF **Puyloubier** 79.09 342⇑*e*P P P 11 23 34.9 +1.0
VVLD **Villa Vallelon** 79.10 336 P P P 11 23 34.1 +0.1
MEV **Metsovon** 79.11 330 *e*P P P 11 23 34.2 +0.1
LMR **La Mourre** 79.14 342⇑*i*P P P 11 23 34.4 +0.2
comp=Z,220nm,0.8s,mb5.7
LMR **La Mourre** 79.14 342⇑*i*P P P 11 23 34.4 +0.2
LMR pmax pmax
comp=Z,110nm,0.8s,mb5.7
LMR **La Mourre** 79.14 342⇑*i*P P P 11 23 34.4 +0.2
comp=Z,110nm,0.8s,mb5.7
RNI2 **Rionero Sannit** 79.14 336 P P P 11 23 34.9 +0.7
MTCE **Montecelio** 79.16 337 P P P 11 23 34.0 -0.3
ELL **Elmali** 79.16 322 *e*P P P 11 23 33.7 -0.6
CERT **Cerreto** 79.17 337 P P P 11 23 34.3 -0.1
MIDA **Miranda** 79.17 336 P P P 11 23 35.0 +0.6
SDI **San Donato** 79.21 336 P P P 11 23 34.7 +0.1
GUAR **Guarcino** 79.25 336 P P P 11 23 34.9 +0.2
FG5 **Orsara di Pugl** 79.28 335 P P P 11 23 35.7 +0.8
GELF **Grande-Etoile** 79.28 343⇑*e*P P P 11 23 36.1 +1.2
TOLF **Tolfa** 79.28 337 P P P 11 23 35.2 +0.3
BERF **Bertagne** 79.30 342⇑*e*P P P 11 23 36.3 +1.2
JAN **Janina** 79.34 330 *e*P P P 11 23 35.0 -0.3
FG4 **Candela** 79.36 335 P P P 11 23 35.8 +0.4
YER **Yerkesik** 79.36 324 *e*P P P 11 23 35.8 +0.4
MAMC **Mammari** 79.39 319 P P P 11 23 34.6 -0.9
RDP **Rocca di Papa** 79.41 337 P P P 11 23 35.5 -0.2
PGF **Pioggiola** 79.44 340⇑*i*P P P 11 23 36.0 +0.2
comp=Z,409nm,0.9s,mb6.0
PGF **Pioggiola** 79.44 340⇑*i*P P P 11 23 36.0 +0.2
PGF pmax pmax
comp=Z,205nm,0.9s,mb6.0
PGF **Pioggiola** 79.44 340⇑*i*P P P 11 23 36.0 +0.2
comp=Z,204nm,0.9s,mb6.0
PSB1 **Pescosannita** 79.44 335 P P P 11 23 36.1 +0.3
LCI **Lecce** 79.45 332 P P P 11 23 36.0 +0.1
AGG **Agios Georgios** 79.50 329 *e*P P P 11 23 34.5 -1.7
CSS **Prodhromos** 79.53 319 P P P 11 23 35.0 -1.3
comp=Z,1.6nm,1.4s
FITZ **Fitzroy Crossi** 79.53 215⇑*i*P P P 11 23 36.5 +0.2
comp=Z,191nm,1.2s,mb5.8
FITZ *e* pP 11 23 52.9 -1.5
FITZ *e*S S 11 33 33.3 +0.6
FITZ **Fitzroy Crossi** 79.53 215 P P P 11 23 36.5 +0.2
comp=Z,112nm,1.0s,mb5.6,baz=17,slow=5.9,SNR=102
FITZ pP pP 11 23 52.8 -1.5
comp=Z,87nm,0.8s,baz=12,slow=7.6,SNR=9.6
RFI **Roccamonfina** 79.56 336 P P P 11 23 37.1 +0.6
BHL **Bhannes** 79.59 317 *e*P P P 11 23 35.9 -0.7
IGT **Igoumenitsa** 79.60 331 *e*P P P 11 23 36.3 -0.4
ALFC **Alevga** 79.63 320 ⇓P P P 11 23 35.2 -1.6
LKR **Lokris** 79.65 328 *e*P P P 11 23 34.0 -3.0
BDRM **Kayabasi** 79.71 324 *i* P P P 11 23 36.2 -1.1
MRLC **Muro Lucano** 79.72 335 P P P 11 23 37.4 +0.1
AKAS **Kas** 79.73 322 *i* P P P 11 23 36.1 -1.2
EVR **Evrytania** 79.75 329 *e*P P P 11 23 36.0 -1.5
PPM **Popocatepetl** 79.83 71⇑*i*P P P 11 23 38.5 +0.6
MTLF **Montolieu** 79.83 345⇑*i*P P P 11 23 38.6 +0.7
comp=Z,250nm,1.0s,mb5.7
MTLF **Montolieu** 79.83 345⇑*i*P P P 11 23 38.6 +0.7
MTLF pmax pmax
comp=Z,125nm,1.0s,mb5.7
MTLF **Montolieu** 79.83 345⇑*i*P P P 11 23 38.6 +0.7
comp=Z,125nm,1.0s,mb5.7
PLIG **Platanillo** 79.91 72⇑*i*P P P 11 23 37.8 -0.6
PPCY **Paphos** 79.96 320 P P P 11 23 36.7 -1.9
TRD **Trivandrum** 80.02 270 *e*P P P 11 23 37.0 -2.0
SLCN **Sala Consilina** 80.03 334 P P P 11 23 39.3 +0.3
ORI **Oriolo Calabro** 80.14 334 P P P 11 23 40.2 +0.6
LRDF **Laroque-de-Fa** 80.18 345⇑*e*P P P 11 23 40.9 +1.1
KSDI **Kefar Szold** 80.21 316 P P P 11 23 40.2 +0.2
ARG **Arkhangelos** 80.25 323 *e*P P P 11 23 40.0 -0.2
LKD **Levkas** 80.28 330 *e*P P P 11 23 39.9 -0.5
TAOE **Nuku Hiva Isla** 80.29 122 *e*LR LR 11 48 30.6
comp=Z,6µm,29.9s,baz=335
CUC **Castrocucco** 80.36 334 P P P 11 23 40.1 -0.7
MLS **Moulis** 80.37 346⇑*e*P P P 11 23 41.5 +0.7
OSSF **Osses** 80.39 347 *e*P P P 11 23 40.7 -0.2
EPF **Esparros** 80.40 346⇑*i*P P P 11 23 41.0 0.0
comp=Z,256nm,1.1s,mb5.7
EPF **Esparros** 80.40 346⇑*i*P P P 11 23 41.0 0.0
EPF pmax pmax
comp=Z,128nm,1.1s,mb5.7
EPF **Esparros** 80.40 346⇑*i*P P P 11 23 41.0 0.0
comp=Z,128nm,1.1s,mb5.7
LABF **Labassere** 80.42 346⇑*e*P P P 11 23 40.9 -0.2
EALK **Alkurruntz** 80.45 348 P P P 11 23 41.6 +0.3
comp=Z,53nm,0.8s,mb5.4
CARF **Carcanieres** 80.46 345⇑*e*P P P 11 23 42.0 +0.7
REYF **Montagne du Re** 80.46 347 *e*P P P 11 23 41.1 -0.2
MELF **Melles** 80.50 346 *e*P P P 11 23 41.5 0.0
ELIZ **Elizondo** 80.51 348 P P P 11 23 42.1 +0.5
ELIZ pmax pmax
comp=Z,39nm,0.9s,mb5.2
ELIZ **Elizondo** 80.51 348 P P P 11 23 42.1 +0.5
comp=Z,39nm,0.9s,mb5.2
SJPF **Ste Jean** 80.52 347⇑*i*P P P 11 23 41.6 -0.1
comp=Z,95nm,0.8s,mb5.4
SJPF **Ste Jean** 80.52 347⇑*i*P P P 11 23 41.6 -0.1
SJPF pmax pmax
comp=Z,48nm,0.8s,mb5.4
SJPF **Ste Jean** 80.52 347⇑*i*P P P 11 23 41.6 -0.1
comp=Z,48nm,0.8s,mb5.4
FILF **Fillols** 80.54 344⇑*e*P P P 11 23 42.7 +0.9
SALF **Salau** 80.55 346 *e*P P P 11 23 41.6 -0.2
LARF **Larrau** 80.57 347 *e*P P P 11 23 42.8 +0.9
SJAF **Saint Jean de** 80.57 344⇑*e*P P P 11 23 42.7 +0.8
VIEF **Viey** 80.59 346⇑*e*P P P 11 23 43.1 +1.1
CAIG **El Cayaco** 80.59 74⇑*i*P P P 11 23 42.0 0.0
EJON **La Jonquera** 80.60 344 P P P 11 23 42.9 +0.8
comp=Z,104nm,1.1s,mb5.6
RESF **Ens** 80.62 346 *e*P P P 11 23 43.5 +1.3
ETSF **Etsaut** 80.65 347⇑*i*P P P 11 23 43.1 +0.8
comp=Z,246nm,0.9s,mb5.7
ETSF **Etsaut** 80.65 347⇑*i*P P P 11 23 43.1 +0.8
ETSF pmax pmax
comp=Z,123nm,0.9s,mb5.7
ETSF **Etsaut** 80.65 347⇑*i*P P P 11 23 43.1 +0.8
comp=Z,123nm,0.9s,mb5.7
RLS **Riolos of Patr** 80.65 329 *e*P P P 11 23 40.0 -2.3
ELAN **Lanestosa** 80.66 349 P P P 11 23 41.9 -0.5
comp=Z,379nm,1.2s,mb6.1
EBIE **Bielsa** 80.77 346 P P P 11 23 44.1 +1.2
comp=Z,84nm,0.9s,mb5.6
EARI **Arriondas** 80.78 350 P P P 11 23 43.1 +0.1
comp=Z,369nm,1.3s,mb6.0
VALF **Valcebollere** 80.78 345⇑*e*P P P 11 23 44.2 +1.2
VLS **Valsamata** 80.79 330 *e*P P P 11 23 41.5 -1.6
DWPF **Disney** 80.83 53 *e*P P P 11 23 43.3 0.0
comp=Z,298nm,1.4s,mb5.9
EPON **Pontenova** 80.92 352 P P P 11 23 43.6 -0.1
comp=Z,629nm,1.4s,mb6.2
MMLI **Mount Malkishu** 80.97 316 ⇑P P P 11 23 44.5 +0.5
OFRI **'Ofer** 80.98 317 ⇑P P P 11 23 44.0 -0.1
HMDT **Nahal Hemdat** 81.09 316 ⇑P P P 11 23 45.0 +0.3
SLTI **Sal'it** 81.29 316 P P P 11 23 45.8 0.0
GRI **Girifalco** 81.31 333 P P P 11 23 46.0 +0.1
ITM **Ithomi** 81.33 328 *e*P P P 11 23 43.5 -2.4
EMAZ **Mazaricos** 81.44 353 P P P 11 23 47.1 +0.6
comp=Z,148nm,1.3s,mb5.7

VLI Veliai 81.45 328 *e*P P **P** **11 23 42.0 -4.6**
DGI Dorgali Grotta 81.46 339 P P **P** **11 23 47.0 +0.4**
STS Santiago 81.47 353 P P **P** **11 23 46.5 -0.2**
STS pmax pmax
comp=Z,59nm,0.8s,mb5.5
STS Santiago 81.47 353 P P **P** **11 23 46.5 -0.2**
comp=Z,59nm,0.8s,mb5.5
DRGI Dragot 81.73 316 ⇑P P **P** **11 23 48.0 -0.1**
ESAC San Caprasio 81.80 347 P P **P** **11 23 49.5 +1.1**
comp=Z,181nm,0.7s,mb6.0
EPOB Poblet 81.94 345 P P **P** **11 23 50.0 +0.8**
comp=Z,161nm,1.1s,mb5.8
SLNA Salina 81.96 334 P P **P** **11 23 49.2 0.0**
MZDA Masada 81.99 316 ⇑P P **P** **11 23 49.4 0.0**
SOI Samo 82.11 333 P P **P** **11 23 49.4 -0.7**
PMOR Pomariorio Ree 82.16 131 *e*P P **P** **11 23 51.0 +0.7**
comp=Z,96nm,0.9s,mb5.6
EZAM Zamans 82.21 353 P P **P** **11 23 50.1 -0.5**
EZAM pmax pmax
comp=Z,62nm,0.6s,mb5.6
EZAM Zamans 82.21 353 P P **P** **11 23 50.1 -0.4**
comp=Z,62nm,0.6s,mb5.6
USI Ustica 82.22 336 P P **P** **11 23 50.6 0.0**
ECAL Calabor 82.26 351 P P **P** **11 23 51.0 +0.1**
comp=Z,22nm,0.7s,mb5.1
MTTG Motta San Giov 82.27 333 P P **P** **11 23 49.8 -1.1**
VSL Villasalto 82.30 339 *e*P P **P** **11 23 51.3 +0.3**
comp=Z,206nm,1.2s,mb5.8
PBRG Braganca 82.40 351 *e*P P **P** **11 23 51.6 0.0**
comp=Z,121nm,1.5s,mb5.5
ERTA Horta de San J 82.44 346 P P **P** **11 23 52.4 +0.7**
comp=Z,38nm,0.7s,mb5.3
ELOB Lobios 82.44 352 P P **P** **11 23 52.1 +0.3**
comp=Z,92nm,1.1s,mb5.5
AS31 Alice Springs 82.47 205 *e*P P **P** **11 23 52.1 +0.2**
AS31 *e* pP 11 24 09.1 -1.0
AS31 *e*S S 11 34 04.9 +1.7
ASAR Alice Springs 82.47 205 P P **P** **11 23 52.1 +0.2**
comp=Z,138nm,1.0s,mb5.7,baz=12,slow=4.7,SNR=256
ASAR pP pP 11 24 08.5 -1.6
comp=Z,162nm,0.8s,baz=14,slow=5.2,SNR=21
ASAR ScS ScS 11 34 07.9 -10
comp=Z,1.2nm,1.0s,baz=18,slow=9.3,SNR=5.2
ASAR PKKPbc PKKPbc 11 42 16.9 -0.6
comp=Z,4.8nm,1.1s,baz=192,slow=2.1,SNR=15
ASAR PKPPKP 11 50 22.8
comp=Z,2.5nm,1.1s,baz=179,slow=2.3,SNR=6.8
ASAR LR LR 11 57 42.5
comp=Z,778nm,20.4s,baz=20,slow=34
ASAR Alice Springs 82.47 205 P P **P** **11 23 52.2 +0.3**
ASAR 11 34 07.9
ASPA Alice Springs 82.47 205 *e*P P **P** **11 23 52.1 +0.2**
ASPA *e* pP 11 24 09.1 -1.0
ASPA *e*S S 11 34 04.9 +1.7
OXX Oaxaca 82.48 71 *i*P P **P** **11 23 53.0 +1.0**
VHO Vista Hermosa 82.48 71 ⇑*i*P P **P** **11 23 52.6 +0.6**
VAH Vaihoa 82.48 131 *e*P P **P** **11 23 52.5 +0.5**
comp=Z,195nm,1.0s,mb5.9
MASH Mash'abbe Sade 82.50 316 ⇑P P **P** **11 23 51.9 -0.2**
MNO Monte Soro 82.59 334 P P **P** **11 23 52.7 +0.2**
PCAB Cabril 82.60 352 *e*P P **P** **11 23 52.8 +0.2**
comp=Z,110nm,1.6s,mb5.4
GIB Gibilmanna 82.70 335 P P **P** **11 23 52.4 -0.7**
KZIT Kziot 82.73 316 ⇑P P **P** **11 23 53.0 -0.3**
ZFRI Zfri 82.73 316 ⇑P P **P** **11 23 53.2 -0.1**
PRNI Paran 82.98 316 ⇑P P **P** **11 23 54.6 0.0**
ERC Erice 82.99 336 P P **P** **11 23 55.1 +0.5**
PVRL Vila Real 83.00 352 *i*P P **P** **11 23 55.0 +0.3**
comp=Z,237nm,1.4s,mb5.8
AGST Augusta-Monte 83.10 334 P P **P** **11 23 54.2 -1.0**
EMOS Mosqueruela 83.13 346 P P **P** **11 23 56.4 +1.0**
comp=Z,75nm,0.7s,mb5.6
SSY Sortino 83.23 334 P P **P** **11 23 55.3 -0.6**
ETOS Mallorca 83.23 344 P P **P** **11 23 57.1 +1.2**
comp=Z,123nm,0.9s,mb5.7
HRFI Mount Harif 83.25 315 P P **P** **11 23 55.7 -0.3**
GUD Guadarrama 83.30 349 P P **P** **11 23 56.7 +0.5**
GUD pmax pmax
comp=Z,21nm,0.6s,mb5.1
GUD Guadarrama 83.30 349 P P **P** **11 23 56.7 +0.5**
comp=Z,21nm,0.6s,mb5.2
HVZN Vizzini 83.30 334 P P **P** **11 23 55.5 -0.7**
RAFF Raffo Rosso 83.34 334 P P **P** **11 23 56.0 -0.5**
HAVL Avola 83.40 334 P P **P** **11 23 57.0 +0.2**
CMIG Matias Romero 83.45 69 ⇑*i*P P **P** **11 23 56.5 -0.5**
HMDC Modica 83.49 334 P P **P** **11 23 57.2 0.0**
MBH Mount Berech 83.51 315 ⇑P P **P** **11 23 57.4 +0.1**
PVIS Viseu 83.58 352 *i*P P **P** **11 23 57.9 +0.3**
comp=Z,270nm,1.5s,mb5.9
EIL Elat 83.61 315 ⇑P P **P** **11 23 57.8 0.0**
PPT Papeete 83.76 134 *e*S S 11 34 15.0 -1.3
comp=Z,918nm,26.2s
PPT *e*LR LR 11 49 55.6
comp=Z,2μm,23.0s,baz=337
PPT Papeete 83.76 134 P P **P** **11 23 58.8 +0.3**
comp=Z,89nm,1.0s,mb5.6,baz=66,slow=5.6,SNR=5.7
PPT pP pP 11 24 15.6 -1.2
comp=Z,140nm,1.0s,baz=255,slow=3.9,SNR=5.1
BBSR BB Station 83.81 38 *e*P P **P** **11 23 58.5 -0.4**
comp=Z,217nm,0.9s,mb6.0
PAE Paea 83.84 134 *e*P P **P** **11 23 59.5 +0.5**
comp=Z,325nm,1.2s,mb6.0
MTE Manteigas 83.86 352 *e*P P **P** **11 23 59.5 +0.4**
comp=Z,392nm,1.4s,mb6.0
MTE Manteigas 83.86 352 *e*S S 11 34 06.4 -11
MTE Manteigas 83.86 352 *e*LR LR 11 52 26.3
MTE Manteigas 83.86 352 *e*P P **P** **11 23 59.4 +0.3**
comp=Z,184nm,1.1s,mb5.8
ECHE Chera 83.96 347 P P **P** **11 24 00.4 +0.8**
ECHE pmax pmax
comp=Z,118nm,1.2s,mb5.6
ECHE Chera 83.96 347 P P **P** **11 24 00.4 +0.8**
comp=Z,118nm,1.2s,mb5.6
EIBI Ibiza 84.19 345 P P **P** **11 24 00.7 -0.1**
comp=Z,167nm,1.0s,mb5.8
ESDC Sonseca Array 84.24 349 P P **P** **11 24 01.5 +0.5**
comp=Z,186nm,1.1s,mb5.8,baz=3.8,slow=4.9,SNR=250
ESDC PKKPbc PKKPbc 11 42 12.2 -1.2
comp=Z,0.2nm,0.3s,baz=234,slow=1.9,SNR=6.9
ESDC PKPPKP 11 50 07.7
comp=Z,0.3nm,0.3s,baz=162,slow=0.8,SNR=5.2
ESDC LR LR 12 02 40.2
comp=Z,415nm,21.6s,baz=40,slow=36
ESDC Sonseca Array 84.24 349 P P **P** **11 24 01.4 +0.4**
comp=Z,133nm,1.0s,mb5.7
MBWA Marble Bar 84.37 219 P P **P** **11 24 00.9 -0.7**
SNR=14
MBWA Marble Bar 84.37 219 *e*P P **P** **11 24 01.2 -0.5**
comp=Z,178nm,1.0s,mb5.8
MBWA *e*pP pP 11 24 18.0 -1.9
PCBR Castelo Branco 84.41 352 *i*P P **P** **11 24 02.0 +0.1**
comp=Z,455nm,1.6s,mb6.0
SOR Soroa 84.65 57 *e*P P **P** **11 24 02.4 -0.7**
PTOM Tomar 84.71 352 *e*P P **P** **11 24 03.3 -0.1**
comp=Z,382nm,1.3s,mb6.2
EBEN Beniarda 84.73 346 P P **P** **11 24 05.2 +1.7**
comp=Z,343nm,1.2s,mb6.2
ETOB Tobarra 84.97 347 P P **P** **11 24 05.9 +1.3**
comp=Z,165nm,1.0s,mb5.9
WHFO Wadi Hawf 85.03 295 ⇑P P **P** **11 24 03.6 -1.4**
SNR=6.6
EVIA Vianos 85.09 348 P P **P** **11 24 06.3 +1.0**
EVIA pmax pmax
comp=Z,71nm,0.8s,mb5.7
EVIA Vianos 85.09 348 P P **P** **11 24 06.3 +1.0**
comp=Z,71nm,0.8s,mb5.7
PESTR Estremoz 85.39 352 *i*P P **P** **11 24 06.5 -0.3**
comp=Z,382nm,1.4s,mb6.1
PESTR Estremoz 85.39 352 *e*S S 11 34 30.9 -1.6
PESTR Estremoz 85.39 352 *e*LQ 11 47 13.7
PESTR *e*LR LR 11 52 32.0
CAEH 'Ain El Ouahch 85.43 340 P P **11 24 09.0 +2.0**
PMAFR Mafra 85.43 353 *i*P P **P** **11 24 06.9 -0.1**
EBAD Badajoz 85.45 351 P P **P** **11 24 07.0 -0.1**
comp=Z,163nm,1.2s,mb5.8
CMAH Djebel Manchou 85.47 339 P P **P** **11 24 07.0 -0.2**
PLOU Loures 85.49 353 *e*P P **P** **11 24 07.3 0.0**
comp=Z,259nm,1.8s,mb5.9
EMUR La Murta 85.72 346 P P **P** **11 24 09.4 +1.0**
comp=Z,37nm,0.8s,mb5.4
ABSA Djebel Ababsia 85.79 339 P P **P** **11 24 09.5 +0.7**
EADA Adamuz 85.79 349 P P **P** **11 24 09.3 +0.5**
comp=Z,734nm,1.6s,mb6.4
PLML Palmela 85.80 353 *e*P P **P** **11 24 10.1 +1.3**
CKFL Kef-Lekhel 85.82 340 P P **P** **11 24 09.0 +0.1**

DFRA Djebel Bou Aff 85.84 341 P P **P** **11 24 13.0 +4.0**
EHUE Huescar 85.92 348 P P **P** **11 24 10.0 +0.6**
EHUE pmax pmax
comp=Z,94nm,1.2s,mb5.6
EHUE Huescar 85.92 348 P P **P** **11 24 10.0 +0.6**
comp=Z,94nm,1.2s,mb5.6
KEST Kesra 85.93 338 P P **P** **11 24 09.5 0.0**
comp=Z,6.3nm,0.4s,mb4.9,baz=296,slow=1.4,SNR=63
KEST PP PP 11 27 31.3 +1.4
comp=Z,14nm,1.1s,baz=0.2,slow=0.7,SNR=6.6
KEST PKKPbc PKKPbc 11 42 08.2 -1.2
comp=Z,0.8nm,0.8s,baz=203,slow=4.9,SNR=3.7
KEST LR LR 12 09 59.8
comp=Z,379nm,18.6s,baz=214,slow=41
EQES Quesada 85.98 348 P P **P** **11 24 11.1 +1.4**
comp=Z,43nm,0.9s,mb5.4
CASM Ain Smara 86.00 340 P P **P** **11 24 10.0 +0.2**
ABA Alger-Bouzarea 86.10 343 P P **P** **11 24 13.0 +2.7**
ARMA Armidale 86.16 189 *e*P P **P** **11 24 11.4 +0.8**
ARMA *e* pP 11 24 27.6 -1.3
CTEI Djebel Teioual 86.21 340 P P **P** **11 24 10.0 -0.8**
PBEJ Beja 86.25 352 *e*P P **P** **11 24 11.0 0.0**
comp=Z,197nm,1.6s,mb5.8
SET Setif 86.27 341 P P **P** **11 24 12.0 +0.9**
ELUQ Luque 86.36 349 P P **P** **11 24 11.8 +0.2**
ELUQ pmax pmax
comp=Z,169nm,1.8s,mb5.7
ELUQ Luque 86.36 349 P P **P** **11 24 11.8 +0.2**
comp=Z,169nm,1.8s,mb5.7
EMIN Mina Concepcio 86.40 351 P P **P** **11 24 11.9 +0.1**
comp=Z,64nm,1.0s,mb5.5
CKHR Kef el Ahmar 86.42 341 P P **P** **11 24 12.5 +0.6**
ECOG Cogollos-Vega 86.56 348 P P **P** **11 24 12.6 0.0**
ECOG pmax pmax
comp=Z,16nm,0.6s,mb5.1
ECOG Cogollos-Vega 86.56 348 P P **P** **11 24 12.6 0.0**
comp=Z,16nm,0.6s,mb5.1
MGV Manicaragua 86.66 55 *e*P P **P** **11 24 14.1 +1.1**
EMHD Djebel Mahouad 86.70 343 P P **P** **11 24 13.0 -0.2**
ENIJ Nijar 86.70 347 P P **P** **11 24 12.8 -0.4**
ENIJ pmax pmax
comp=Z,23nm,0.7s,mb5.2
ENIJ Nijar 86.70 347 P P **P** **11 24 12.8 -0.5**
comp=Z,23nm,0.7s,mb5.2
EGRO El Granado 86.70 351 P P **P** **11 24 13.3 +0.1**
comp=Z,38nm,0.8s,mb5.4
ELOJ Sierra Loja 86.76 349 P P **P** **11 24 14.0 +0.5**
ELOJ pmax pmax
comp=Z,27nm,0.8s,mb5.2
ELOJ Sierra Loja 86.76 349 P P **P** **11 24 14.0 +0.5**
comp=Z,27nm,0.8s,mb5.2
EBNR Beni Rached 86.84 344 P P **P** **11 24 15.0 +1.1**
ERON Agron 86.84 348 P P **P** **11 24 13.3 -0.7**
comp=Z,6.0nm,0.4s,mb4.9
EBER Berja 86.86 348 P P **P** **11 24 15.2 +1.2**
comp=Z,24nm,0.8s,mb5.2
EGUA Guajares 87.00 348 P P **P** **11 24 15.0 +0.3**
comp=Z,0.2nm,0.7s
ECHA Ech Chlef 87.00 344 P P **P** **11 24 15.5 +0.8**
ESPR Espera 87.21 350 P P **P** **11 24 16.2 +0.4**
comp=Z,31nm,0.9s,mb5.2
EANR 'Ain N'Sour 87.24 344 P P **P** **11 24 16.0 +0.1**
EMIJ Mijas 87.40 349 P P **P** **11 24 16.2 -0.4**
comp=Z,31nm,0.6s,mb5.4
EJIF Jimena Fronter 87.59 350 P P **P** **11 24 18.5 +1.0**
EJIF pmax pmax
comp=Z,25nm,0.6s,mb5.4
EJIF Jimena Fronter 87.59 350 P P **P** **11 24 18.5 +0.9**
comp=Z,25nm,0.6s,mb5.4
ETRT Tiaret 87.76 344 P P **P** **11 24 18.0 -0.4**
STKA Stephens Creek 88.86 197 *e*P P **P** **11 24 23.3 -0.3**
comp=Z,59nm,1.8s,mb5.3
STKA *e* pP 11 24 39.8 -2.1
STKA Stephens Creek 88.86 197 P P **P** **11 24 23.5 -0.1**
comp=Z,40nm,1.0s,mb5.4,baz=337,slow=5.8,SNR=25
STKA pP pP 11 24 39.6 -2.3
comp=Z,57nm,0.8s,baz=348,slow=6.7,SNR=14
STKA LR LR 12 00 18.9
comp=Z,824nm,20.4s,baz=17,slow=33
TBI Tubuai 89.00 136 *e*LR LR 11 52 09.9
comp=Z,2μm,31.5s,baz=332
RIV Riverview 89.58 189 *e*P P **P** **11 24 27.8 +0.8**
RIV *e* pP 11 24 43.9 -1.4
FORT Forrest 90.75 208 *e*P P **P** **11 24 31.8 -0.6**
comp=Z,225nm,0.8s,mb6.3
FORT *e* pP 11 24 49.0 -1.8
CNB Canberra Magne 91.22 190 *e*P P **P** **11 24 35.5 +0.9**
comp=Z,51nm,1.4s,mb5.5
CNB *e* pP 11 24 51.5 -1.5
URZ Urewera 94.49 168 P P **P** **11 24 47.6 -2.0**
comp=Z,12nm,0.9s,mb5.2,baz=252,slow=5.8,SNR=4.1
URZ pP pP 11 25 04.8 -3.3
comp=Z,36nm,1.0s,baz=322,slow=1.9,SNR=7.6
KLBR Kellerberrin 94.64 216 *e*P P **P** **11 24 48.6 -1.7**
comp=Z,18nm,0.7s,mb5.6
KLBR *e* pP 11 25 05.6 -3.1
RKT Rikitea 95.06 124 *e*PP PP 11 28 43.3 +0.9
comp=Z,107nm,29.2s
RKT Rikitea 95.06 124 *e*SKSac SKSac 11 35 24.5 +2.3
comp=Z,543nm,27.0s
RKT *e*SS SS 11 42 30.8 +2.4
comp=Z,310nm,31.8s
RKT *e*LR LR 11 55 05.1
comp=Z,1μm,33.2s,baz=324
MUN Mundaring 95.52 217 *e*P P **P** **11 24 53.1 -1.2**
ATD Arta Tunnel 95.94 300 LR LR 12 13 59.7
comp=Z,2μm,20.3s,baz=215,slow=39
NWAO Narrogin (SRO) 96.03 216 P P **P** **11 24 54.9 -1.8**
comp=Z,17nm,0.9s,mb5.5,baz=60,slow=4.0,SNR=7.5
NWAO pP pP 11 25 12.1 -3.0
comp=Z,26nm,1.0s,baz=36,slow=1.9,SNR=4.2
NWAO Narrogin (SRO) 96.03 216 *e*P P **P** **11 24 54.9 -1.8**
NWAO pmax pmax
comp=Z,22nm,1.0s
NWAO Narrogin (SRO) 96.03 216 *e*P P **P** **11 24 54.9 -1.8**
comp=Z,22nm,1.0s,mb5.5
NWAO *e*pP pP 11 25 11.9 -3.2
SJG San Juan 96.18 45 P P **P** **11 24 56.6 -0.8**
comp=Z,26nm,0.2s,mb6.2,baz=319,slow=22,SNR=9.8
SJG San Juan 96.18 45 P P **P** **11 24 56.6 -0.8**
SJG pmax pmax
comp=Z,26nm,0.2s
SJG San Juan 96.18 45 *e*P P **P** **11 24 56.9 -0.5**
comp=Z,99nm,1.1s,mb6.2
SDV Santo Domingo 102.50 53 P Pdif 11 25 24.9 -0.7
comp=Z,8.5nm,0.9s,baz=306,slow=4.6,SNR=10
SDV PP PP 11 29 36.0 -3.1
comp=Z,7.7nm,0.8s,baz=48,slow=4.5,SNR=6.5
PCRV Puerto La Cruz 103.95 47 PP PP 11 29 47.8 -2.1
comp=Z,6.6nm,0.8s,baz=191,slow=6.9,SNR=4.1
TORD Torodi Ar. Bea 109.40 339 Pdiff Pdif 11 25 57.2 +0.9
comp=Z,0.9nm,0.7s,baz=8.6,slow=3.8,SNR=4.8
TORD PKIKP PKiKP 11 29 58.8 -0.6
comp=Z,2.2nm,0.6s,baz=7.5,slow=2.0,SNR=7.5
TORD PP PP 11 30 19.8 -10
comp=Z,13nm,1.0s,baz=5.5,slow=6.7,SNR=9.7
TORD PKKPbc PKKPbc 11 41 02.9 -1.7
comp=Z,6.7nm,1.0s,baz=180,slow=2.9,SNR=13
TORD Torodi Ar. Bea 109.40 339 Pdif Pdif 11 25 57.2 +0.9
TORD PKPdf PKiKP 11 29 58.8 -0.6
TORD PP PP 11 30 19.8 -10
TORD PKKPbc PKKPbc 11 41 02.9 -1.7
KMBO Kilima Mbogo 109.62 299 PKIKP PKiKP 11 29 59.8 -0.1
comp=Z,3.9nm,1.0s,baz=49,slow=4.2,SNR=5.4
KMBO PKKPbc PKKPbc 11 41 03.7 -0.2
comp=Z,3.1nm,0.9s,baz=135,slow=1.4,SNR=5.5
DBIC Dimbokro 116.88 345 PKP PKPdf 11 30 12.8 -0.9
comp=Z,7.8nm,0.7s,baz=19,slow=1.9,SNR=8.9
DBIC pPKP pPKPdf 11 30 30.3 -2.4
comp=Z,4.8nm,0.6s,baz=90,slow=1.6,SNR=2.6
DBIC PP PP 11 31 20.7 -2.5
comp=Z,13nm,0.9s,baz=32,slow=7.5,SNR=4.9
DBIC PKKPbc PKKPbc 11 40 36.6 -2.8
comp=Z,10nm,1.0s,baz=163,slow=7.1,SNR=5.1
DBIC SKKP 11 44 33.5
comp=Z,6.6nm,1.0s,baz=271,slow=5.7,SNR=3.0
DBIC Dimbokro 116.88 345 PKIKP PKPdf 11 30 12.8 -0.9
DBIC 11 30 30.3
DBIC 11 31 20.7
DBIC Dimbokro 116.88 345 PKP PKPdf 11 30 12.8 -0.9
DBIC pPKP pPKPdf 11 30 30.3 -2.4
DBIC PP PP 11 31 20.7 -2.5
DBIC PKKPbc PKKPbc 11 40 36.6 -2.8
DBIC SKKP 11 44 33.5
LIC Lamto 117.34 345 *e*PKIKP PKPdf 11 30 08.9 -5.7
comp=Z,32nm,1.0s

LIC *e*R
comp=Z,138nm,22.5s
LIC Lamto 117.34 345 *e*PKPdf PKPdf 11 30 08.9 -5.7
LIC LR LR
comp=Z,70nm,22.5s
NNA Nana 117.40 70 PKP PKPdf 11 30 12.3 -2.4
comp=Z,14nm,1.0s,baz=237,slow=3.7,SNR=3.7
LPAZ La Paz 125.55 64 PKP PKPdf 11 30 30.3 0.0
comp=Z,11nm,1.0s,baz=8.9,slow=5.5,SNR=25
LPAZ PKKPab 11 40 11.4
comp=Z,1.4nm,0.7s,baz=147,slow=3.5,SNR=5.2
LPAZ La Paz 125.55 64 *e*PKPdf PKPdf 11 30 30.4 0.0
CASY Casey 127.55 203 *e*P PKPdf 11 30 32.1 -2.1
CASY *e* 11 30 50.5
SIV San Ignacio 128.77 57 PKP PKPdf 11 30 35.6 -0.9
comp=Z,41nm,1.0s,baz=328,slow=1.0,SNR=20
SIV PKP pPKPdf 11 30 53.2 -2.3
comp=Z,13nm,0.8s,baz=170,slow=0.6,SNR=4.3
SIV PP PP 11 32 40.2 -3.2
comp=Z,15nm,1.0s,baz=340,slow=5.0,SNR=7.6
LVC Limon Verde 130.38 69 PKP PKPdf 11 30 39.4 -0.1
comp=Z,59nm,1.2s,baz=292,slow=1.4,SNR=14
LVC pPKP pPKPdf 11 30 55.3 -3.3
comp=Z,5.2nm,0.2s,baz=163,slow=1.5,SNR=3.0
MIR Mirnyy 132.25 210*c* *i*PKIKP PKPdf 11 30 42.5 -0.6
MIR pmax pmax
comp=Z,400nm,1.3s
VNDA Vanda 132.92 180 PKP PKPdf 11 30 42.9 -1.5
comp=Z,15nm,0.9s,baz=326,slow=3.9,SNR=41
VNDA Vanda 132.92 180 PKIKP PKPdf 11 30 42.9 -1.4
VNDA pmax pmax
comp=Z,15nm,0.9s
VNDA Vanda 132.92 180 *e*PKPdf PKPdf 11 30 42.8 -1.6
SBA Scott Base 133.29 179 *e*PKIKP PKPdf 11 30 43.5 -1.5
BDFB Brasilia 134.05 41 PKP PKPdf 11 30 46.0 -0.4
comp=Z,22nm,1.1s,baz=222,slow=1.5,SNR=12
BDFB PP PP 11 33 14.1 -3.4
comp=Z,13nm,1.0s,baz=317,slow=6.4,SNR=3.0
LBTB Lobatse 135.76 295 *e*PKHKP 11 30 38.2
LBTB *e* 11 30 50.1
CFAA Coronel Fontan 137.86 76 PKhKP 11 30 44.6
baz=288,slow=3.0
CFAA PKP PKPdf 11 30 52.6 -1.0
comp=Z,7.2nm,1.1s,baz=303,slow=3.4
BOSA Boshof 138.85 293 PKhKP 11 30 45.9
comp=Z,3.3nm,0.4s,baz=48,slow=1.2,SNR=12
BOSA PKP PKPdf 11 30 55.5 +0.1
comp=Z,36nm,0.7s,baz=34,slow=2.6,SNR=24
BOSA Boshof 138.85 293 *i*PKHKP 11 30 45.9
BOSA 11 30 55.5
BOSA pmax pmax
comp=Z,3.0nm,0.4s
BOSA pmax pmax
comp=Z,36nm,0.7s
BOSA Boshof 138.85 293 *e*PKPpre 11 30 46.0
BOSA PKP PKPdf 11 30 55.5 +0.1
BOSA *e*PKPdf PKPdf 11 30 57.0 +1.6
CPUP Villa Florida 139.38 60 PKhKP 11 30 44.4
comp=Z,1.7nm,0.5s,baz=328,slow=3.8,SNR=6.5
CPUP PKP PKPdf 11 30 55.8 -0.5
comp=Z,12nm,0.8s,baz=322,slow=2.4,SNR=10
CPUP Villa Florida 139.38 60 *i*PKHKP 11 30 44.4
CPUP 11 30 55.8
CPUP pmax pmax
comp=Z,2.0nm,0.5s
CPUP pmax pmax
comp=Z,12nm,0.8s
CPUP Villa Florida 139.38 60 *e*PKPpre 11 30 45.1
CPUP *e*PKPdf PKPdf 11 30 55.8 -0.5
CAM3 Guarapari 141.38 34⇑ *e*P PKPdf 11 30 59.6 -0.4
CAM3 *i* 11 31 03.8
CAM3 *i* 11 31 20.4
CAM4 Nova Friburgo 142.20 38⇑ *i*P 11 30 57.1
CAM4 *i* 11 31 00.8
MAW Mawson 142.57 219 *e*P 11 30 55.7
comp=Z,57nm,0.9s
MAW Mawson 142.57 219 PKhKP 11 30 57.1
comp=Z,44nm,1.0s,baz=58,slow=3.2,SNR=44
MAW Mawson 142.57 219 *i*PKIKP 11 30 57.1
MAW pmax pmax
comp=Z,44nm,1.0s
PLCA Paso Flores 143.11 88 PKhKP 11 30 58.3
comp=Z,113nm,1.1s,baz=306,slow=4.5,SNR=29
PLCA PKP PKPdf 11 31 03.0 -0.1
comp=Z,101nm,1.1s,baz=297,slow=4.0,SNR=38
PLCA PKKP 11 40 18.4
comp=Z,3.4nm,1.1s,baz=115,slow=1.6,SNR=2.8
PLCA Paso Flores 143.11 88 *i*PKIKP 11 30 58.3
PLCA pmax pmax
comp=Z,113nm,1.1s
PLCA Paso Flores 143.11 88 *e*PKP 11 30 57.9
PLCA *e*PKPdf PKPdf 11 31 03.0 0.0
PLCA PKKP 11 40 18.4
SUR Sutherland 144.16 294 *e*PKPdf PKPdf 11 31 03.2 -1.6
SYO Syowa Base 151.27 219⇓ *e*PKPdf PKPdf 11 31 13.0 -3.6
SYO Syowa Base 151.27 219⇓ *i*PKPbc PKPbc 11 31 20.6 -2.0
USHA Ushuaia 151.96 109 PKPbc PKPbc 11 31 22.5 -1.7
comp=Z,179nm,1.0s,baz=293,slow=2.5,SNR=29
USHA PKPab PKPab 11 31 31.3 -2.3
comp=Z,79nm,1.1s,baz=234,slow=5.2,SNR=6.0
PMSA Palmer Station 156.09 131 *e*PKPdf PKPdf 11 31 20.6 -2.8
PMSA PKPbc PKPdf 11 31 30.7 +7.2
PMSA PKPab PKPab 11 31 48.7 -2.5
PMSA *e*PKPab PKPab 11 31 49.5 -1.7
NVL N'lazarevskaya 160.00 209*c* *i*PKP2 PKPab 11 32 05.5 -2.6
NVL *e*SS SS 11 55 54.3 +0.4
NVL pmax pmax
comp=Z,94nm,1.4s
SNAA Sanae 162.62 197 PKP PKPdf 11 31 28.0 -2.9
comp=Z,2.9nm,1.1s,baz=152,slow=0.7,SNR=12
SNAA PKPab PKPab 11 32 17.1 -2.5
comp=Z,20nm,1.0s,baz=128,slow=2.9,SNR=17
SNAA pPKPab pPKPab 11 32 33.7 -4.3
comp=Z,36nm,1.1s,baz=148,slow=5.4,SNR=10
SNAA PP PP 11 36 03.6 -0.5
comp=Z,4.0nm,1.0s,baz=141,slow=8.5,SNR=3.9
SNAA Sanae 162.62 197⇓ *i*PKPdf PKPdf 11 31 28.2 -2.8
SNAA *e* 11 31 46.8
SNAA *e* 11 31 52.5
SNAA *e* 11 32 01.5
SNAA *e* 11 32 17.4
SNAA *e* 11 32 34.0
SNAA *e* 11 32 40.3
SNAA *e* 11 32 52.7
SNAA *e* 11 32 57.3
SNAA *e* 11 33 09.0
SNAA *e* 11 36 01.5
SNAA *e* 11 36 20.6
SNAA *e* 11 36 32.9
SNAA *e* 11 36 38.6
SNAA Sanae 162.62 197 PKIKP PKPdf 11 31 28.0 -3.0
SNAA 11 32 17.1
SNAA 11 36 03.6
SNAA pmax pmax
comp=Z,3.0nm,1.1s
SNAA pmax pmax
comp=Z,20nm,1.0s
SNAA pmax pmax
comp=Z,4.0nm,1.0s
SNAA Sanae 162.62 197 *e*PKPdf PKPdf 11 31 27.5 -3.5
VNA1 Neumayer--Stat 164.32 193⇓ *i*PKPdf PKPdf 11 31 30.1 -2.5
VNA1 *e* 11 31 48.1
VNA1 *e* 11 31 54.1
VNA1 *e* 11 32 03.9
VNA1 *e* 11 32 25.2
VNA1 *e* 11 32 41.7
VNA1 *e* 11 32 48.8
VNA1 *e* 11 33 02.3
VNA1 *e* 11 33 08.6
VNA1 *e* 11 33 20.2
VNA1 *e* 11 36 12.2
VNA1 *e* 11 36 32.7
VNA1 *e* 11 36 43.7
VNA1 *e* 11 36 48.5

NIED ***17*** *11:12:00, 29.40N×142.20E, h5km, Mw4.5 Best double couple: M₀5.93000×10¹⁵ NP1:φ₀53.00000°, δ86.00000°, λ111.00000°. NP2:φ₀153.00000°, δ21.00000°, λ11.00000°.*
IDC ***17*** *11:12:34.3-2.6, 29.23N×141.96E, h0km, mb4.4/6, mb1 4.5/8, mb1mx4.4/23, mbtmp4.5/8, ML4.1/3, MS3.9/2, Ms1 3.9/2, ms1mx3.0/32, Error ellipse: s-maj=118.6km s-min=15.8km az=76.0*

*ISCJB **17** 11:12:35.5±0.6,2939N±003×1422E±0.1,h33km,mb4.5/8, Error ellipse: s-maj=17.6km s-min=2.8km az=160.4*
*JMA **17** 11:12:36.4±0.1,2937N×142.17E,h46km,M4.6*
*NEIC **17** 11:12:38.5±3.4,2940N×14227E,h45km±48km,mb4.7/2, MW4.4(NIED),Error ellipse: s-maj=39.6km s-min=19.1km az=199.0*
ISC 17 11:12:38.0±0.5,2935N±003×1422E±01,h35km,n37, $\sigma0^{s}97$/52,mb4.5/8,1C,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.25	180	Pn	Pn	11 13 12.3	-0.4
	27nm,0.3s,baz=297,slow=23,SNR=5.8						
CBIJ				Sn	Sn	11 13 37.5	-1.8
	76nm,0.3s,baz=333,slow=21,SNR=6.4						
CBIJ				LR	LR	11 13 59.1	
	comp=Z,387nm,19.8s,baz=136,slow=40						
CBIJ	Chichi jima	2.25	180	P	Pn	11 13 12.3	-0.4
CBIJ				eS	Sn	11 13 38.5	-0.7
JHHJ	Haha-jima-NKT	2.71	180	P	Pn	11 13 19.5	+0.4
JHHJ				eS	Sn	11 13 50.2	-0.5
JHJ2	Mitsune	4.27	332	P	Pn	11 13 39.8	-0.7
JHJ2				eS	Sn	11 14 26.9	-2.1
JHJ	Hachijo jima 2	4.29	332	Pn	Pn	11 13 39.9	-0.9
	31nm,0.3s,baz=54,slow=22,SNR=13						
JHJ				Sn	Sn	11 14 29.1	-0.5
	49nm,0.3s,baz=72,slow=23,SNR=4.8						
BSO1	Boso 1	5.39	349	P	Pn	11 13 54.9	-1.0
BSO1				eS	Sn	11 14 55.3	-1.3
BSO2	Boso 2	5.52	348	P	Pn	11 14 00.4	+2.7
BSO2				eS	Sn	11 15 00.7	+0.7
BSO3	Boso 3	5.62	346	P	Pn	11 13 59.0	-0.1
BSO3				eS	Sn	11 15 02.8	+0.4
BSO4	Boso 4	5.84	345	P	Pn	11 14 02.4	+0.3
BSO4				eS	Sn	11 15 09.7	+1.9
JOD2	Odawara 2	6.46	337	P	Pn	11 14 11.1	+0.6
JOD2				eS	Sn	11 15 23.1	+0.1
JHMK	Hamakita	6.62	326	P	Pn	11 14 13.9	+1.0
HMMJ	Hamamatsu 2	6.67	326	P	Pn	11 14 14.6	+1.1
JHU	Hanno	6.93	340	P	Pn	11 14 16.9	-0.2
JHU				eS	Sn	11 15 32.4	-2.3
JKN2	Miekihoku	7.01	316	P	Pn	11 14 24.7	+6.5
JNY	Yasuok	7.02	330	P	Pn	11 14 20.2	+1.9
JYT	Yasato	7.06	347	P	Pn	11 14 19.0	+0.1
JYT				eS	Sn	11 15 36.1	-1.8
JRY	Ryogami san	7.20	338	P	Pn	11 14 21.3	+0.5
JRY				eS	Sn	11 15 40.0	-1.4
JAO	Obara	7.23	326	P	Pn	11 14 22.2	+1.0
JHO	Hitachi	7.37	350	P	Pn	11 14 21.9	-1.2
JHO				eS	Sn	11 15 39.5	-5.9
JAG	Ashikaga	7.42	343	P	Pn	11 14 23.2	-0.6
JAG				eS	Sn	11 15 42.4	-4.3
MJAR	Matsushiro Arr	7.91	336	Pn	Pn	11 14 30.5	-0.1
	7.9nm,0.3s,baz=159,slow=10,SNR=67						
MJAR				Sn	Sn	11 15 59.5	+0.7
	1.9nm,0.3s,baz=192,slow=17,SNR=4.0						
MJAR				LR	LR	11 17 29.1	
	comp=Z,683nm,19.1s,baz=155,slow=37						
MAJO	Matsushiro	7.92	336	ePn	Pn	11 14 31.2	+0.6
	23nm,0.5s						
MAT	Matsushiro	7.92	336	P	Pn	11 14 31.6	+1.0
JOW	Kunigami	12.55	262	LR	LR	11 19 35.0	
	comp=Z,601nm,19.3s,baz=140,slow=34						
YHNB	Yeheng	19.12	261	eP	Pn	11 16 58.8	-0.2
CHG	Chiang Mai	40.66	265	⇑P	P	11 20 14.8	0.0
	14nm,0.9s,mb4.6						
CHTO	Chiang Mai	40.66	265	eP	P	11 20 14.9	+0.1
	7.6nm,0.7s,mb4.4						
WRAB	Tennant Creek	49.58	190	eP	P	11 21 25.3	-0.3
	5.0nm,0.5s,mb4.8						
WB2	Warramunga Arr	49.59	190	eP	P	11 21 25.7	0.0
WRA	Warramunga Arr	49.59	190	P	P	11 21 26.0	+0.3
	3.5nm,0.5s,mb4.7,baz=9.0,slow=8.1,SNR=56						
WRA				PcP	PcP	11 22 48.7	+1.8
	1.8nm,0.8s,baz=2.7,slow=3.8,SNR=4.9						
FITZ	Fitzroy Crossi	49.81	201	P	P	11 21 27.5	+0.1
	1.2nm,0.6s,mb4.1,baz=15,slow=12,SNR=3.9						
AS31	Alice Springs	53.31	189	eP	P	11 21 53.3	-0.2
ASAR	Alice Springs	53.31	189	P	P	11 21 53.9	+0.3
	0.8nm,0.5s,mb3.9,baz=0.5,slow=5.2,SNR=27						
ASPA	Alice Springs	53.31	189	eP	P	11 21 53.3	-0.3
BVAR	Borovoye Array	56.41	316	P	P	11 22 17.7	+1.7
	30nm,0.9s,mb5.3,baz=54,slow=9.7,SNR=3.9						
STKA	Stephens Creek	60.89	181	P	P	11 22 46.7	-0.5
	2.6nm,0.9s,mb4.4,baz=348,slow=9.3,SNR=2.8						
NWAO	Narrogin (SRO)	66.31	203	P	P	11 23 23.4	+0.5
	6.7nm,0.8s,mb4.7,baz=53,slow=6.7,SNR=5.6						

IDC 17 11:29:06.4±3.4,5858S×15009E,h0km,mb3.7/2, mb1 3.9/2,mb1mx3.9/10,mbtmp3.7/2,Error ellipse: s-maj=212.7km s-min=43.6km az=81.0,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.74	335	P	P	11 36 15.3	-0.1
	0.7nm,0.7s,baz=160,slow=8.4,SNR=8.0						
ASAR				PcP	PcP	11 38 37.8	-0.1
	0.6nm,0.7s,baz=162,slow=3.2,SNR=5.3						
WRA	Warramunga Arr	40.26	337	P	P	11 36 44.4	-0.5
	1.5nm,1.0s,baz=166,slow=6.9,SNR=10						
AKASG	Malin Array Be	145.92	283	PKPbc	PKPbc	11 48 45.7	-2.1
	0.7nm,0.4s,baz=98,slow=2.5,SNR=7.4						
FINES	FINESS Array B	152.60	300	PKPbc	PKPbc	11 49 03.2	-1.6
	1.2nm,0.7s,baz=112,slow=2.1,SNR=4.0						
GERES	GERESS Array B	152.88	268	PKPbc	PKPbc	11 49 04.1	-1.3
	0.3nm,0.3s,baz=126,slow=1.8,SNR=3.9						

*MOS **17** 11:57:24.9±2.1,4904N×15623E,h31km,mb4.0/1,Error ellipse: s-maj=93.7km s-min=12.3km az=75.9*
KRSC 17 11:57:24,4904N×15623E,h31km,ML4.5,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.65	357	ePN	Pn	11 57 49.0	-1.8
SKR				iS	Sn	11 58 09.3	-1.6
SKR				pmax	pmax		
	comp=N,150nm,0.5s						
SKR				pmax	pmax		
	comp=E,150nm,0.5s						
SKR				pmax	pmax		
	comp=Z,390nm,0.5s						
SKR				smax			
	comp=N,950nm,0.2s						
SKR				smax			
	comp=E,2μm,0.2s						
ALID	Alaid	1.88	347	eP	Pn	11 57 54.6	+0.6
ALID				iS	Sn	11 58 16.1	-0.6
MIPR	Malaya Ipel'ka	3.26	6	eP	Pn	11 58 16.5	+3.6
RUS	Russkaya	3.69	22	PN	Pn	11 58 23.2	+4.3
RUS				S	Sn	11 59 05.9	+4.5
RUS	Russkaya	3.69	22	eP	Pn	11 58 23.2	+4.3
RUS				iS	Sn	11 59 05.9	+4.5
GRL	Gorelyy	3.71	18	eP	Pn	11 58 24.3	+5.2
GRL				iS	Sn	11 59 08.0	+6.3
PET	Petropavlovsk	4.27	20	PN	Pn	11 58 32.3	+5.4
PET				S	Sn	11 59 21.9	+6.3
PET	Petropavlovsk	4.27	20	eP	Pn	11 58 32.3	+5.4
PET				iS	Sn	11 59 21.9	+6.3
AVH	Avacha	4.51	20	eP	Pn	11 58 36.8	+6.6
NLC	Nalytchevo	4.58	24	PN	Pn	11 58 35.0	+3.9
NLC	Nalytchevo	4.58	24	eP	Pn	11 58 35.0	+3.9
SPN	Mys Shipunski	4.71	29	PN	Pn	11 58 38.2	+5.3
SPN				S	Sn	11 59 32.1	+5.5
SPN	Mys Shipunski	4.71	29	eP	Pn	11 58 38.2	+5.3
SPN				iS	Sn	11 59 32.1	+5.5
GNL	Ganaly	4.78	12	eP	Pn	11 58 39.2	+5.3
MKZ	Mys Kozlova	6.49	30	PN	Pn	11 59 01.3	+3.9
MKZ	Mys Kozlova	6.49	30	eP	Pn	11 59 01.3	+3.9
MKZ				iS	Sn	12 00 13.7	+3.4
TUMR	Tumrok	6.70	20	eP	Pn	11 59 05.7	+5.5
TUMR				iS	Sn	12 00 21.2	+5.7
ZLN	Zelenaya	7.52	20	eP	Pn	11 59 16.6	+5.1
SRDR	Sredinnyy	7.59	15	eP	Pn	11 59 18.5	+6.1
SRKR	Sorokina	8.19	19	eP	Pn	11 59 25.4	+4.7
KBTR	Krutoberegovo	8.22	27	PN	Pn	11 59 25.9	+4.8
KBTR	Krutoberegovo	8.22	27	eP	Pn	11 59 25.9	+4.8

IDC 17 12:01:18.0±3.6,1060N×9182E,h0km,mb3.5/4,mb1 3.7/4, mb1mx3.4/21,mbtmp3.5/4,Error ellipse: s-maj=137.6km s-min=24.6km az=66.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.39	41	ix	x	12 01 26.0	
PBA				eP	x	12 01 26.0	
PBA				eS	x	12 01 42.4	
PBA				ex	x	12 01 47.7	
	comp=E,4μm,0.4s						
PBA				ex	x	12 01 47.8	
	comp=N,2μm,0.5s						
MKAR	Makanchi Array	36.97	349	P	P	12 08 28.9	0.0
	comp=N,0.7nm,0.5s,baz=177,slow=9.4,SNR=4.4						
SONM	Songino Array	39.09	16	P	P	12 08 47.0	+0.1
	comp=N,0.5nm,0.8s,baz=205,slow=6.4,SNR=2.9						
FITZ	Fitzroy Crossi	43.91	130	eP	P	12 09 36.8	+10
	comp=N,6.1nm,1.2s						
WRA	Warramunga Arr	51.70	126	P	P	12 10 27.6	+0.8
	comp=N,0.2nm,0.3s,baz=307,slow=8.3,SNR=9.0						
WB2	Warramunga Arr	51.71	126	eP	P	12 10 36.9	+10
ASAR	Alice Springs	53.41	130	P	P	12 10 39.5	0.0
	comp=N,0.6nm,0.9s,baz=308,slow=7.2,SNR=6.4						

WEL 17 12:05:01.1±0.2,3877S×17545E,h212km±2km,ML3.7/17, 3C,Error ellipse: s-maj=2.7km s-min=2.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.30	181	PN	Pn	12 05 28.7	-0.3
TWVZ				SN	S	12 05 50.6	-0.1
NGZ	Ngauruhoe	0.42	163	PN	Pn	12 05 29.5	+0.2
NGZ				SN	S	12 05 51.8	+0.7
WPVZ	Whakapapa	0.44	170	⇑PN	Pn	12 05 29.5	+0.2
FWVZ	Far West T-bar	0.49	170	PN	Pn	12 05 29.7	+0.2
TUVZ	Tukino	0.52	162	PN	Pn	12 05 29.9	+0.3
PKVZ	Pokaka	0.52	189	PN	Pn	12 05 29.4	-0.2
WNVZ	Wahianoa	0.57	168	PN	Pn	12 05 30.0	+0.2
MOVZ	Moawhango	0.68	159	PN	Pn	12 05 30.1	-0.2
MOVZ				SN	S	12 05 52.0	-0.9
BKZ	Black Stump Fm	0.91	116	⇑PN	Pn	12 05 31.6	+0.1
BKZ				SN	S	12 05 55.0	-0.1
WAZ	Wanganui	1.04	200	⇑PN	Pn	12 05 32.2	-0.2
WAZ				SN	S	12 05 56.5	-0.1
TSZ	Takapari Road	1.34	163	PN	Pn	12 05 34.7	+0.1
TSZ				SN	S	12 06 00.1	-0.5
PXZ	Pawanui	1.67	139	PN	Pn	12 05 37.5	+0.2
PXZ				SN	S	12 06 05.6	0.0
MWZ	Matawai	1.69	76	PN	Pn	12 05 37.1	-0.4
MRZ	Mangatainoka R	1.89	177	PN	Pn	12 05 38.6	-0.7
MRZ				SN	S	12 06 08.2	-1.1
BFZ	Birch Farm	2.00	162	PN	Pn	12 05 40.0	-0.5
BFZ				SN	S	12 06 10.7	-0.6
TIWZ	Tintock	2.03	171	PN	Pn	12 05 39.8	-0.9
KIW	Kapiti Island	2.13	191	PN	Pn	12 05 40.4	-1.3
DUWZ	D'Urville Isla	2.34	210	PN	Pn	12 05 42.1	-1.9
CAW	Cannon Point	2.35	187	PN	Pn	12 05 42.8	-1.3
MTW	Mount Morrison	2.38	179	PN	Pn	12 05 42.9	-1.5
MRW	Makara Radio	2.52	193	PN	Pn	12 05 44.3	-1.6
MRW				SN	S	12 06 18.6	-2.4
WEL	Wellington	2.56	192	PN	Pn	12 05 44.8	-1.6
SNZO	South Karori	2.60	192	PN	Pn	12 05 44.9	-1.9
TCW	Tory Channel	2.60	200	PN	Pn	12 05 45.1	-1.7
TCW				SN	S	12 06 19.5	-3.0
PAWZ	Paruwai Farm	2.61	180	PN	Pn	12 05 45.3	-1.6
MSWZ	Moikau Station	2.64	183	PN	Pn	12 05 45.6	-1.7
MSWZ				SN	S	12 06 20.9	-2.6
WVZ	Waitaha Valley	5.58	218	PN	Pn	12 06 10.2	-13

IDC 17 12:08:05.3±3.0,3293S×17859W,h0km,mb3.7/2, mb1 4.0/3,mb1mx3.7/13,mbtmp3.8/3,ML3.8/1,Error ellipse: s-maj=67.9km s-min=35.8km az=116.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.37	212	Pn	Pn	12 09 40.5	+0.1
	1.9nm,0.3s,baz=254,slow=0.4,SNR=11						
URZ				Sn	Sn	12 10 53.7	-0.1
	3.0nm,0.3s,baz=281,slow=22,SNR=5.7						
ASAR	Alice Springs	42.54	270	P	P	12 16 02.8	+0.2
	0.7nm,0.8s,baz=109,slow=7.7,SNR=13						
WRA	Warramunga Arr	43.76	275	P	P	12 16 12.8	+0.3
	0.8nm,0.4s,baz=116,slow=7.9,SNR=20						
FINES	FINESS Array B	147.32	338	PKPbc	PKPbc	12 27 49.1	-1.6
	1.5nm,0.7s,baz=354,slow=5.7,SNR=7.5						

*IDC **17** 12:24:08.6±0.7,2954N×6784E,h0km,mb4.1/22, mb1 4.3/23,mb1mx4.3/28,mbtmp4.2/23,ML4.9/1,MS3.8/6, Ms1 3.8/6,ms1mx3.5/27,Error ellipse: s-maj=15.7km s-min=14.1km az=169.0*
*ISCJB **17** 12:24:10.8±0.2,2930N±003×6788E±002,h35km, mb4.4/65,MS4.1/18,Error ellipse: s-maj=4.5km s-min=2.7km az=19.2*
*BJI **17** 12:24:11.7,2978N×6792E,h23km,mB5.0,mb4.7,Ms4.6, Msz4.4*
*MOS **17** 12:24:12.5±0.9,2964N×6788E,h33km,mb4.8/26, MS4.1/9,Error ellipse: s-maj=8.8km s-min=5.0km az=120.9*
*NEIC **17** 12:24:13.8±0.3,2957N×6790E,mb4.7/26,Error ellipse: s-maj=7.3km s-min=5.3km az=201.0*
*SZGRF **17** 12:24:17.9,2966N×6740E,h33km,mb4.8,Pakistan*
ISC 17 12:24:13.3±0.2,2937N±003×6790E±002,h37km±2.2km:pP-P,n200,$\sigma1^{s}28$/225,mb4.4/65,MS4.1/18, 11C-2D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRP	Derazinda	3.09	39	P	Pn	12 25 00.9	+1.4
SBDP	Sheikh Budin	3.84	40	⇑P	Pn	12 25 10.2	+0.3
THW	Thamme Wali	4.74	43	⇑P	Pn	12 25 22.4	+0.2
CEP	Cherat	5.60	37	⇑P	Pn	12 25 34.2	+0.2
AJM	Ajmer	6.62	114	eP	Pn	12 25 49.5	+1.5
AJM				eS	Sn	12 27 02.3	0.0
KHET	Khetri	7.06	99	eP	Pn	12 25 54.3	+0.2
KHET				eS	Sn	12 27 10.5	-2.6
DLH	Dalhousie	7.61	63	ex	Pn	12 26 07.0	+5.4
DLH				ex	Sn	12 27 35.0	+8.4
BHK	Bhakra	7.63	72	eP	Pn	12 26 09.0	+7.1
BHK				eS	Sn	12 27 28.8	+1.7
KUDL	Kundal	7.64	97	eP	Pn	12 26 03.5	+1.5
KUDL				eS	Sn	12 27 24.4	-2.9
SDNR	Sundarnagar	8.11	73	eP	Pn	12 26 08.0	-0.5
SDNR				ex	Sn	12 27 37.0	-1.9
SONA	Sohna	8.13	96	eP	Pn	12 26 09.1	+0.3
SONA				eS	Sn	12 27 33.8	-5.7
AYAN	Aya Nagar	8.13	94	eP	Pn	12 26 03.4	-5.4
AYAN				eS	Sn	12 27 31.2	-8.2
NDI	New Delhi	8.19	93	eP	Pn	12 26 09.0	-0.5
NDI				eP		12 26 10.8	
NDI				eS	Sn	12 27 35.0	-5.7
NDI				eS	Sn	12 27 36.9	-3.8
AGRA	Agra	9.11	101	eP	Pn	12 26 24.4	+2.3
AGRA				ex	x	12 28 05.7	
AGRA				AML	AML	12 29 02.9	
	comp=N,213nm,0.8s						
AGRA				AML	AML	12 29 03.8	
	comp=E,210nm,0.6s						
KLP	Kalpa	9.19	74	eP	Pn	12 26 21.2	-2.0
KLP				ex	x	12 27 56.0	
KLP				AML	AML	12 28 06.5	
	comp=E,334nm,0.6s						
KLP				AML	AML	12 28 07.2	
	comp=N,269nm,0.9s						
WSAR	Wadi Sarin	10.32	236	Pn	Pn	12 26 37.2	-1.5
	comp=N,9.5nm,0.3s,baz=41,slow=12,SNR=48						
WSAR				Sn	Sn	12 28 24.2	-8.8
	comp=N,4.8nm,0.3s,baz=301,slow=8.4,SNR=9.3						
WSAR	Wadi Sarin	10.32	236	Pn	Pn	12 26 37.2	-1.5
WSAR				Sn	Sn	12 28 24.2	-8.8
BHPL	Bhopal	10.50	123	eP	Pn	12 26 42.4	+1.2
BHPL				eS	Sn	12 28 34.0	-3.5
BIDO	Bidbid	10.52	239	⇑P	Pn	12 26 41.5	0.0
	SNR=8.8						
LGTI	Lohaghat	10.77	87	ex	Pn	12 26 46.0	+1.1
LGTI				ex	Sn	12 28 42.0	-2.1
SMDO	Samad	10.85	237	⇑P	Pn	12 26 45.7	-0.2
	SNR=14						
HOQ	Hoqain	11.10	241	⇓P	Pn	12 26 48.4	-1.0
	SNR=7.5						
ASHO	Ashiyiah	11.54	249	⇓P	Pn	12 26 57.4	+1.9
	SNR=6.7						
AKL	Akola	11.94	134	ex	Pn	12 26 58.1	-2.8
AKL				ex	Sn	12 29 10.4	-2.5
POO	Poona	12.08	152	eP	Pn	12 27 03.0	+0.1
KSH	Kashi	12.11	31	P	Pn	12 27 03.8	+0.6
KSH				S	Sn	12 29 12.4	-4.5
JBP	Jabalpur	12.47	117	⇑iP	Pn	12 27 08.1	-0.1
JBP				iS	Sn	12 29 19.5	-6.4
NGP	Nagpur	12.98	127	ex	Pn	12 27 11.8	-3.3
NGP				eS	Sn	12 29 31.1	-7.2
KOLN	Koldanda	13.89	93	eP	Pn	12 27 27.0	-0.5
	comp=N,106nm,1.0s						
AAK	Ala-Archa	14.26	20	P	Pn	12 27 29.1	-3.5
	SNR=14						
AAK	Ala-Archa	14.26	20	eP	Pn	12 27 28.8	-3.8
AAK				pmax	pmax		
	comp=Z,32nm,0.9s						
AAK	Ala-Archa	14.26	20	ePn	Pn	12 27 28.8	-3.8
	comp=Z,32nm,0.9s						
AAK				eSn	Sn	12 29 50.4	-19
FRU	Bishkek	14.48	20	P	Pn	12 27 32.0	-3.6
FRU				eS	Sn	12 30 18.0	+3.2
FRU				pmax	pmax		
	comp=Z,50nm,1.8s						
FRU				smax			
	comp=E,130nm,1.8s						
GKN	Gorkha	14.76	91	eP	Pn	12 27 34.4	-4.9
DMN	Daman	15.23	92	eP	Pn	12 27 40.4	-5.2
KKN	Kakani	15.35	92	eP	Pn	12 27 43.6	-3.5
	comp=E,47nm,0.7s						
HYB	Hyderabad	15.39	138	iP	Pn	12 27 48.0	+0.4
HYB				eS	S	12 30 43.5	-8.6
HYB				LR	LR	12 34 44.0	
	comp=E,6.0nm,10.0s						
HYB	Hyderabad	15.39	138	eP	Pn	12 27 48.0	+0.4
HYB				eS	S	12 31 15.0	+23
HYB				eLR	LR	12 34 44.0	
PKI	Pulchoki	15.50	92	eP	Pn	12 27 45.0	-4.1
	comp=E,26nm,0.6s						
GUN	Gumba	15.85	91	eP	Pn	12 27 51.1	-2.5
	comp=E,183nm,0.6s						
JIRN	Jiri	16.17	92	eP	Pn	12 27 55.9	-1.8
UMR	Umm Al-Rimmam	17.58	276	eP	Pn	12 28 12.6	-2.8
UMR				AMb	AMB	12 28 15.6	
	comp=Z,61nm,0.5s						
KBD	Kabd	17.64	274	eP	Pn	12 28 13.1	-2.9
KBD				AMb	AMB	12 28 16.4	
	comp=Z,132nm,0.5s						
RDF	Al-Radifah	17.79	274	eP	Pn	12 28 14.9	-3.0
RDF				AMb	AMB	12 28 18.2	
	comp=Z,53nm,0.7s						
MIB	Mutribah	17.89	276	eP	Pn	12 28 15.8	-3.4
MIB				AMb	AMB	12 28 19.8	
	comp=Z,68nm,0.9s						
NAY	Al-Naaiem	18.02	275	eP	Pn	12 28 16.8	-4.0
NAY				AMb	AMB	12 28 20.1	
	comp=Z,26nm,0.8s						
RST	Umm Al-Ruwaisa	18.21	276	eP	Pn	12 28 19.8	-3.4
RST				AMb	AMB	12 28 22.9	
	comp=Z,97nm,0.9s						
LSA	Lhasa	20.23	83	P	P	12 28 49.0	+3.9
LSA	Lhasa	20.23	83	eP	P	12 28 49.2	+4.1
LSA				pmax	pmax		
	comp=Z,35nm,0.9s						
LSA	Lhasa	20.23	83	eP	P	12 28 49.2	+4.1
	comp=Z,36nm,0.9s						
BHD	Baghdad	20.46	287	ex	x	12 28 32.0	
MKAR	Makanchi Array	20.70	29	P	P	12 28 48.0	-2.2
	comp=Z,8.0nm,0.9s,baz=224,slow=6.8,SNR=23						
MKAR	Makanchi Array	20.70	29	⇑eP	P	12 28 49.0	-1.2
WMQ	Urumqi	21.38	42	P	P	12 28 59.0	+1.4
WMQ				AP		12 29 08.0	
WMQ				XP	sP	12 29 13.0	+1.3
WMQ				PP		12 29 23.0	
WMQ				S	S	12 32 48.0	-4.9
WMQ				XS	sS	12 33 02.0	-6.1
WMQ				SS		12 33 22.0	
WMQ				AMB	AMB		
	comp=Z,32nm,0.8s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,203nm,3.0s						
WMQ				LR	LR		
	comp=N,985nm,5.0s						
WMQ				LR	LR		
	comp=E,587nm,4.0s						
WMQ				LR	LR		
	comp=Z,426nm,4.0s						
GNI	Garni	21.79	306	P	P	12 29 00.8	-1.2
	comp=Z,4.3nm,0.3s,mb4.3,baz=100,slow=6.8,SNR=2.1						
GNI				LR	LR	12 37 49.6	
	comp=Z,210nm,18.4s,MS3.6,baz=335,slow=38						
GNI	Garni	21.79	306	P	P	12 29 00.8	-1.2
GNI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GNI				MLR	MLR		
	comp=Z,210nm,18.4s						
GNI	Garni	21.79	306	eP	P	12 29 05.7	+3.7
	comp=Z,69nm,1.1s,mb5.0						
GNI				LR	LR	12 37 49.6	
AKTK	Aktyubinsk	22.32	343	P	P	12 29 05.7	-1.9
AKTO	Aktyubinsk	22.32	343	P	P	12 29 05.7	-1.9
	comp=Z,3.4nm,0.8s,mb3.8,baz=153,slow=11,SNR=11						
ZEI	Tsey	23.46	311	eP	P	12 29 21.2	+1.6
ZEI				e*PP		12 29 32.5	
ZEI				e		12 29 48.1	
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.5						
ZRNK	Zerenda	23.57	2	eP	P	12 29 19.1	-1.5
ZRNK				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.5						
ZRNK	Zerenda	23.57	2	eP	P	12 29 19.1	-1.5
	comp=Z,21nm,1.0s,mb4.5						
BVAR	Borovoye Array	23.70	4	P	P	12 29 19.7	-2.1
	comp=Z,7.2nm,0.8s,mb4.1,baz=177,slow=11,SNR=26						
BVAR				LR	LR	12 39 11.0	
	comp=Z,440nm,19.2s,MS3.9,baz=317,slow=38						
BRVK	Borovoye	23.73	4	eP	P	12 29 20.6	-1.4
BRVK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
BRVK	Borovoye	23.73	4	eP	P	12 29 20.6	-1.4
	comp=Z,15nm,1.0s,mb4.4						
CHKZ	Chkalovo	24.36	4	eP	P	12 29 26.6	-1.2
CHKZ				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.3						
CHKZ	Chkalovo	24.36	4	eP	P	12 29 26.6	-1.2
	comp=Z,11nm,0.8s,mb4.3						
KIV	Kislovodsk	24.79	313	c iP	P	12 29 32.4	+0.7
KIV				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.4						
ASF	Jabal al Asfar	26.74	284	P	P	12 29 49.2	-0.2
	comp=Z,1.5nm,0.6s,mb3.7,baz=11,slow=8.7,SNR=2.4						
ZAL	Zalesovo	27.46	22	P	P	12 29 54.5	-1.2
	comp=Z,2.2nm,0.3s,mb4.1,baz=246,slow=8.2,SNR=4.0						
NVS	Novosibirsk	27.75	19	eP	P	12 30 02.3	+3.9
NVS				pmax	pmax		
	comp=N,14nm,1.4s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.4						
ARU	Arti	27.84	349	⇑eP	P	12 29 58.9	-0.3
ARU				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.4						
ARU				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.0						
GTA	Gaotai	28.05	61	eP	P	12 30 02.8	+1.8
GTA				AP	pP	12 30 12.0	+0.6
GTA				XP	sP	12 30 16.1	+0.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.0						
GTA				AMB	AMB		
	comp=Z,100nm,5.3s						
GTA				LR	LR		
	comp=N,292nm,13.7s,MS4.2						
GTA				LR	LR		
	comp=E,295nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=Z,415nm,15.6s,MS4.1						
ANN	Anapa	28.56	311	eP	P	12 30 10.7	+5.1
ANN				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.1						
BRTR	Keskin Array B	29.89	299	P	P	12 30 16.2	-1.2

comp=Z,0.7nm,0.6s,mb3.5,baz=97,slow=8.1,SNR=5.0
CHTO Chiang Mai 30.14 103 *e*P **P 12 30 21.9 +2.3**
CHTO pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
CHTO Chiang Mai 30.14 103 *e*P **P 12 30 21.9 +2.3**
comp=Z,9.1nm,1.1s,mb4.4
VRSR Storozhevoye 30.59 324 *e*P **P 12 30 22.9 -0.7**
VRSR pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
VRSR pmax pmax
comp=N,10.0nm,0.8s
VRSR pmax pmax
comp=E,10.0nm,0.9s
CD2 Chengdu 30.97 78 *e*P **P 12 30 28.0 +1.1**
CD2 AP pP 12 30 37.5 +0.2
CD2 XP sP 12 30 41.5 -0.2
CD2 PP PP 12 31 30.4 -6.8
CD2 S **S 12 35 29.0 0.0**
CD2 SS SS 12 37 14.0 -28
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CD2 LR LR
comp=N,530nm,14.4s
CD2 LR LR
comp=Z,200nm,13.2s,MS4.0
KMI Kunming 31.19 89 P **P 12 30 31.1 +2.2**
KMI AP pP 12 30 40.4 +1.2
KMI XP sP 12 30 43.8 +0.1
KMI PP PP 12 31 35.8 -3.8
KMI PPP 12 31 52.5
KMI S **S 12 35 33.8 +1.3**
KMI XS sS 12 35 49.9 +0.3
KMI SS SS 12 37 20.4 -26
KMI SSS 12 37 43.9
KMI AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
KMI AMB AMB
comp=Z,86nm,6.9s
KMI LR LR
comp=N,431nm,16.7s,MS4.3
KMI LR LR
comp=E,306nm,17.4s,MS4.3
KMI LR LR
comp=Z,228nm,11.6s
ZAK Zakamensk 33.85 42 *e*P **P 12 30 52.6 +0.4**
ZAK *e* 12 32 08.7
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb3.9
MOS Moscow 34.03 329 *e*P **P 12 30 51.2 -2.5**
MOS *e* 12 31 06.4
OBN Obninsk 34.13 328 *e*P **P 12 30 54.2 -0.4**
OBN *e* 12 31 08.7
OBN *e* 12 33 31.6
OBN pmax pmax
comp=Z,37nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,300nm,21.0s,MS4.0
SONM Songino Array 34.83 47 P **P 12 31 01.6 +1.0**
comp=Z,1.4nm,0.7s,mb4.0,baz=252,slow=8.7,SNR=10
XAN Xi'an 35.04 72 P **P 12 31 03.8 +1.3**
XAN AP pP 12 31 08.1 -4.8
XAN AMB AMB
comp=Z,7.0nm,1.0s,mb4.5
ULN Ulaanbaatar 35.26 47⇑ *e*P **P 12 31 05.5 +1.1**
AKASG Malin Array Be 35.91 317 P **P 12 31 09.2 -0.7**
comp=Z,1.9nm,0.6s,mb4.2,baz=106,slow=7.1,SNR=23
AKBB Malin Array Si 35.91 317 *e*P **P 12 31 09.9 0.0**
KLMR Klimovskoe 36.73 337 *e*P **P 12 31 14.6 -2.4**
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.4
HHC Hu-ho-hao-te 37.16 60 *e*P **P 12 31 22.1 +1.5**
HHC AP pP 12 31 31.8 +0.7
HHC XP sP 12 31 35.8 +0.4
HHC PP PP 12 32 48.9 +3.2
HHC PCP PcP 12 33 43.3 +3.1
HHC S **S 12 37 04.9 +0.2**
HHC XS sS 12 37 21.0 -1.0
HHC SCP ScP 12 37 26.3 +2.0
HHC PCS PcS 12 37 30.1 +1.6
HHC SS SS 12 39 34.9 -13
HHC SCS ScS 12 41 32.3 +0.3
HHC AMB AMB
comp=Z,10.0nm,1.1s,mb4.6
HHC AMB AMB
comp=Z,156nm,6.7s
HHC LR LR
comp=N,305nm,15.6s,MS4.3
HHC LR LR
comp=E,181nm,15.7s,MS4.3
HHC LR LR
comp=Z,171nm,11.6s,MS4.1
LVV L'vov 38.80 314 *e*P **P 12 31 43.7 +9.3**
QIZ Qiongzhong 39.43 95 P **P 12 31 41.6 +1.9**
QIZ S **S 12 37 41.6 +2.6**
QIZ AMB AMB
comp=Z,15nm,2.4s,mb4.3
KOLS Kolonicke sedl 39.70 312 *e*P **P 12 31 42.4 +0.4**
CRVS Cervenica-Dubn 40.22 312 *e*P **P 12 31 46.1 -0.2**
STHS Stebnicka Huta 40.47 313 *e* **P 12 31 52.8 +4.5**
KECS Kecovo 40.78 311 *e*P **P 12 31 51.1 +0.3**
KECS *e* pP 12 32 02.6 +1.2
KECS pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
KECS Kecovo 40.78 311 *e*P **P 12 31 51.1 +0.3**
comp=Z,4.7nm,1.1s,mb4.0
KECS *e* pP 12 32 02.6 +1.2
JOF Joensuu 41.01 335 *e*p **P 12 31 51.1 -1.6**
comp=Z,2.7nm,0.5s,mb4.1
JOF Joensuu 41.01 335 *e*P **P 12 31 51.1 -1.6**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
PSZ Piszkesteto 41.07 310⇑ *e*P **P 12 31 54.3 +1.0**
PSZ Piszkesteto 41.07 310 *e*P **P 12 31 53.7 +0.4**
PSZ pmax pmax
comp=Z,20nm,1.0s,mb4.7
PSZ Piszkesteto 41.07 310 *e*P **P 12 31 53.7 +0.4**
comp=Z,20nm,1.0s,mb4.7
OJC Ojcow 41.55 314 *e*P **P 12 31 57.5 +0.3**
VYHS Vyhne 41.86 311 *e*P **P 12 32 00.1 +0.4**
VYHS *e* 12 32 15.3
VYHS Vyhne 41.86 311 *e*P **P 12 32 00.2 +0.5**
VYHS *e* 12 32 15.3
VYHS pmax pmax
comp=Z,7.0nm,1.4s,mb4.1
VYHS Vyhne 41.86 311 *e*P **P 12 32 00.2 +0.5**
comp=Z,7.2nm,1.4s,mb4.1
VYHS *e* 12 32 15.3
KMBO Kilima Mbogo 42.16 229 P **P 12 32 05.5 +3.3**
comp=Z,0.8nm,0.5s,mb3.6,baz=50,slow=21,SNR=3.9
KMBO LR LR 12 48 40.8
comp=Z,150nm,21.2s,MS3.9,baz=98,slow=35
FINES FINESS Array B 42.23 332 P **P 12 32 02.2 -0.5**
comp=Z,1.1nm,0.5s,mb3.8,baz=114,slow=7.0,SNR=13
FINES LR LR 12 53 25.1
comp=Z,119nm,19.1s,MS3.8,baz=159,slow=42
KAF Kangasniemi 42.47 332 *e*p **P 12 32 03.0 -1.7**
comp=Z,4.9nm,0.5s,mb4.4
KAF Kangasniemi 42.47 332 *e*P **P 12 32 03.0 -1.7**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.4
OKC Ostrava-Krasne 42.52 313 *e*P **P 12 32 05.9 +0.8**
OKC AMS AMS 12 55 30.0
comp=Z,200nm,15.9s
MORC Moravsky Berou 42.90 313 *e*P **P 12 32 08.5 +0.3**
MORC *e**PP pP 12 32 18.3 -0.5
MORC pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
MORC Moravsky Berou 42.90 313 *e*P **P 12 32 08.4 +0.3**
comp=Z,6.6nm,0.8s,mb4.4
MORC *e*pP pP 12 32 18.3 -0.5
ZST Bratislava 42.96 310 *e*P **P 12 32 08.9 +0.2**
ZST pmax pmax
comp=Z,14nm,1.2s,mb4.6
ZST Bratislava 42.96 310 *e*P **P 12 32 08.9 +0.2**
comp=Z,14nm,1.2s,mb4.6
NJ2 Nanjing 43.56 73 *e*P **P 12 32 15.6 +2.1**
NJ2 AP pP 12 32 25.5 +1.3
NJ2 XP sP 12 32 29.4 +0.9
NJ2 PP PP 12 33 57.3 +2.1
NJ2 S **S 12 38 40.0 -0.2**
NJ2 XS sS 12 38 56.0 -1.7
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
NJ2 AMB AMB
comp=Z,210nm,5.4s
NJ2 LR LR
comp=Z,660nm,15.9s,MS4.6
DPC Dobruska-Polom 43.77 313 *e*P **P 12 32 16.2 +1.0**
DPC *ex* x 12 32 29.9
DPC AMS AMS 12 55 40.0
comp=Z,200nm,8.7s
DPC Dobruska-Polom 43.77 313 *e*P **P 12 32 16.2 +1.0**
DPC *e* 12 32 29.9
CRES Cresnjev 43.87 307 *e*P **P 12 32 16.3 +0.3**
UPC Upice 43.98 314 *e*P **P 12 32 18.4 +1.5**
TREC Trest 44.16 312 AMS AMS 12 56 10.0
comp=Z,200nm,17.9s
PERS Pernice 44.16 308 *e*P **P 12 32 18.8 +0.5**
PDKS Podkum 44.21 307 *e*P **P 12 32 19.3 +0.6**
PRU Pruhonice 44.85 313 AMS AMS 12 56 40.0
comp=Z,200nm,18.2s
PVCC Panska Ves 44.90 314 *e*P **P 12 32 25.4 +1.1**
PVCC AMS AMS 12 58 00.0
comp=Z,300nm,11.1s
GEC2 GERESS Array S 45.28 311 *e*P **P 12 32 27.9 +0.6**
GEC2 *e**PP pP 12 32 37.4 -0.5
GERES GERESS Array B 45.28 311 P **P 12 32 27.5 +0.2**
comp=Z,2.4nm,0.8s,mb4.0,baz=106,slow=7.5,SNR=14
BRG Berggiesshubel 45.34 314 *e*P **P 12 32 28.5 +0.7**
comp=Z,3.6nm,1.0s,mb4.2
BRG *e* 12 32 44.1
comp=Z,22nm,1.7s
BRG
comp=N,49nm,11.3s
BRG
comp=E,204nm,12.0s
BRG
comp=Z,250nm,12.6s
BRG Berggiesshubel 45.34 314 *e*P **P 12 32 28.5 +0.8**
BRG *e* 12 32 44.1
BRG pmax pmax
comp=Z,1.0nm,1.0s,mb3.6
BRG pmax pmax
comp=Z,4.0nm,1.7s,mb4.0
BRG MLR MLR
comp=N,22µm,11.3s,MS6.3
BRG MLR MLR
comp=E,49nm,12.0s,MS6.3
BRG MLR MLR
comp=Z,204nm,12.6s,MS4.3
BRG Berggiesshubel 45.34 314 *e*P **P 12 32 28.5 +0.7**
comp=Z,3.6nm,1.0s,mb4.2
BRG *e* 12 32 44.1
BRG LR LR
comp=Z,250nm,12.6s,MS4.3
KHC Kasperske Hory 45.39 311 *e*P **P 12 32 28.7 +0.6**
KHC *ex* x 12 32 43.2
KHC AMS AMS 12 57 00.0
comp=Z,200nm,13.4s
SSE Sheshan 45.70 74 P **P 12 32 30.8 +0.2**
SSE AMB AMB
comp=Z,23nm,0.9s,mb5.1
SSE AMB AMB
comp=Z,210nm,4.3s
NKC Novy Kostel 46.22 313 *e*P **P 12 32 35.3 +0.6**
NKC AMS AMS 12 57 20.0
comp=Z,300nm,13.0s
MOX Moxa 46.78 313 *e*P **P 12 32 40.1 +1.0**
comp=Z,17nm,1.5s,mb4.8
MOX Moxa 46.78 313 *e*P **P 12 32 40.1 +1.0**
MOX pmax pmax
comp=Z,1.0nm,1.5s,mb3.5
ARCES ARCESS Array B 46.88 341 P **P 12 32 39.5 -0.3**
comp=Z,1.3nm,0.4s,mb4.2,baz=128,slow=7.8,SNR=28
ARCES LR LR 12 53 45.8
comp=Z,100nm,18.6s,MS3.8,baz=105,slow=38
GRA1 Grafenberg Arr 46.96 312 *e*P **P 12 32 41.2 +0.7**
comp=Z,13nm,1.3s,mb4.7
GRF Grafenberg Arr 46.96 312 *e*P **P 12 32 41.2 +0.7**
comp=Z,13nm,1.3s,mb4.7
GRF Grafenberg Arr 46.96 312 *e*P **P 12 32 41.2 +0.7**
GRF pmax pmax
comp=Z,1.0nm,1.3s,mb3.6
GRF Grafenberg Arr 46.96 312 *e*P **P 12 32 41.2 +0.7**
GRF pmax pmax
comp=Z,13nm,1.3s,mb4.7
NB2 NORSAR Subarra 48.73 327 P **P 12 32 52.7 -1.5**
comp=Z,0.7nm,0.7s,mb3.8,baz=106,slow=7.9
NOA NORSAR Array B 48.73 327 P **P 12 32 52.6 -1.6**
comp=Z,2.0nm,0.9s,mb4.2,baz=106,slow=7.6,SNR=6.3
NOA LR LR 12 54 51.1
comp=Z,75nm,21.5s,MS3.6,baz=115,slow=38
KEST Kesra 49.14 293 P **P 12 32 58.4 +1.0**
comp=Z,1.1nm,0.6s,mb4.0,baz=36,slow=7.3,SNR=5.2
CDF Champ du Feu 49.52 310 *e*P **P 12 32 59.7 -0.6**
comp=Z,11nm,0.9s,mb4.6
CDF Champ du Feu 49.52 310 *e*P **P 12 32 59.7 -0.6**
CDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
CDF Champ du Feu 49.52 310 *e*P **P 12 32 59.7 -0.6**
comp=Z,5.7nm,0.9s,mb4.6
LPG La Plagne 49.98 306 *e*P **P 12 33 03.8 +0.1**
LPL La Plagne 49.99 306 *e*P **P 12 33 03.7 -0.1**
HAU Haudompre 50.15 310 *e*P **P 12 33 04.8 -0.2**
HAU *e*R
comp=Z,122nm,17.8s
HAU Haudompre 50.15 310 *e*P **P 12 33 04.8 -0.2**
HAU LR LR
comp=Z,120nm,17.8s,MS4.0
CABF La Chapelle 50.38 308 *e*P **P 12 33 07.2 +0.4**
comp=Z,129nm,1.4s,mb5.5
CABF La Chapelle 50.38 308 *e*P **P 12 33 07.2 +0.4**
CABF pmax pmax
comp=Z,65nm,1.4s,mb5.5
CABF La Chapelle 50.38 308 *e*P **P 12 33 07.2 +0.4**
comp=Z,65nm,1.4s,mb5.5
MDJ Mudanjiang 50.42 55 P **P 12 33 06.8 -0.3**
MDJ AMB AMB
comp=Z,5.0nm,0.5s,mb4.8
MDJ AMB AMB
comp=Z,88nm,6.9s
VIVF Saint-Julien-l 51.49 306 *e*P **P 12 33 14.8 -0.3**
comp=Z,55nm,1.3s,mb5.0
VIVF Saint-Julien-l 51.49 306 *e*P **P 12 33 14.8 -0.3**
VIVF pmax pmax
comp=Z,28nm,1.3s,mb5.0
VIVF Saint-Julien-l 51.49 306 *e*P **P 12 33 14.8 -0.3**
comp=Z,28nm,1.3s,mb5.0
LOR Lormes 51.87 309 *e*P **P 12 33 17.5 -0.4**
LOR *e*R
comp=Z,151nm,19.0s
LOR Lormes 51.87 309 *e*P **P 12 33 17.5 -0.4**
LOR LR LR
comp=Z,150nm,19.0s,MS4.0
SMF Signal de Mont 51.92 308 *e*P **P 12 33 18.2 -0.1**
comp=Z,36nm,0.7s,mb5.1
SMF Signal de Mont 51.92 308 *e*P **P 12 33 18.2 -0.1**
SMF pmax pmax
comp=Z,18nm,0.7s,mb5.1
SMF Signal de Mont 51.92 308 *e*P **P 12 33 18.2 -0.1**
comp=Z,18nm,0.7s,mb5.1
SSF Saint Saulge 52.12 309 *e*P **P 12 33 19.7 -0.1**
comp=Z,32nm,1.0s,mb4.9
SSF Saint Saulge 52.12 309 *e*P **P 12 33 19.7 -0.1**
SSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SSF Saint Saulge 52.12 309 *e*P **P 12 33 19.7 -0.1**
comp=Z,16nm,1.0s,mb4.9
AVF Avril sur Loir 52.25 308 *e*P **P 12 33 20.5 -0.2**
comp=Z,19nm,1.1s,mb4.7
AVF Avril sur Loir 52.25 308 *e*P **P 12 33 20.5 -0.2**
AVF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
AVF Avril sur Loir 52.25 308 *e*P **P 12 33 20.5 -0.2**
comp=Z,9.6nm,1.1s,mb4.6
BGF Bois d'Agland 52.61 308 *e*P **P 12 33 23.3 -0.2**
TCF Toulx Ste Croi 53.08 308 *e*P **P 12 33 27.1 +0.2**
comp=Z,20nm,0.9s,mb4.7
TCF Toulx Ste Croi 53.08 308 *e*P **P 12 33 27.1 +0.2**
TCF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TCF Toulx Ste Croi 53.08 308 *e*P **P 12 33 27.1 +0.2**
comp=Z,10nm,0.9s,mb4.8
CAF Calviac 53.33 306 *e*P **P 12 33 29.0 +0.3**
comp=Z,78nm,1.4s,mb5.2
CAF Calviac 53.33 306 *e*P **P 12 33 29.0 +0.3**
CAF pmax pmax
comp=Z,39nm,1.4s,mb5.1
CAF Calviac 53.33 306 *e*P **P 12 33 29.0 +0.3**
comp=Z,39nm,1.4s,mb5.2
RJF Les Rejaudoux 53.67 307 *e*P **P 12 33 31.6 +0.4**
RJF *e*R
comp=Z,122nm,18.2s
RJF Les Rejaudoux 53.67 307 *e*P **P 12 33 31.6 +0.4**
RJF LR LR
comp=Z,120nm,18.3s,MS4.0
HABR Khabarovsk 53.86 49 *e*P **P 12 33 32.5 -0.1**
HABR *e*S **S 12 41 04.1 -1.0**
LFF La Frestale 54.26 306 *e*P **P 12 33 35.8 +0.3**
LDF La Druitiere 54.42 311 *e*P **P 12 33 36.3 -0.4**
ETSF Etsaut 55.50 304 *e*P **P 12 33 44.6 +0.1**
MJAR Matsushiro Arr 58.26 63 P **P 12 34 05.5 +1.4**
comp=Z,2.8nm,1.0s,mb4.3,baz=300,slow=10,SNR=7.5
MJAR Matsushiro Arr 58.26 63 P **P 12 34 05.5 +1.4**
ESDC Sonseca Array 58.67 301 P **P 12 34 07.1 +0.2**
comp=Z,1.1nm,0.8s,mb4.0,baz=76,slow=7.2,SNR=3.9
TOA0 Torodi Ar. Sit 63.04 270 *e*P **P 12 34 36.5 -0.1**
TOA0 *e*pP pP 12 34 47.0 -0.7
TORD Torodi Ar. Bea 63.04 270 P **P 12 34 36.5 -0.2**
comp=Z,5.1nm,0.9s,mb4.7,baz=61,slow=5.0,SNR=24
BILL Bilibino 66.15 24 *e*P **P 12 34 57.4 +0.5**
BILL *e*SS SS 12 48 00.1 +1.0
BILL pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
BILL MLR MLR
comp=Z,200nm,12.0s,MS4.5
BOSA Boshof 70.61 219 P **P 12 35 26.9 +2.1**
comp=Z,2.5nm,1.1s,mb4.1,baz=56,slow=11,SNR=3.3
IMA2 Indian Mountai 79.68 16 *e*P **P 12 36 17.1 0.0**
WRA Warramunga Arr 80.63 119 P **P 12 36 23.8 +1.6**
comp=Z,9.0nm,1.0s,mb4.7,baz=318,slow=4.7,SNR=22
WB2 Warramunga Arr 80.64 119 *e*P **P 12 36 24.2 +2.0**
INK Inuvik 81.32 8 *e*P **P 12 36 26.3 +0.4**
INK pmax pmax
comp=Z,22nm,1.4s
INK Inuvik 81.32 8 *e*P **P 12 36 26.3 +0.4**
comp=Z,22nm,1.4s,mb4.9
COLA College 82.02 15 *e*P **P 12 36 29.8 +0.2**
COLA pmax pmax
comp=Z,12nm,1.1s,mb4.7
COLA College 82.02 15 *e*P **P 12 36 29.8 +0.2**
comp=Z,12nm,1.1s,mb4.7
ASPA Alice Springs 82.49 122 *e*P **P 12 36 28.9 -3.1**
ASAR Alice Springs 82.49 122 P **P 12 36 34.1 +2.1**
comp=Z,3.3nm,0.8s,mb4.3,baz=307,slow=5.3,SNR=40
AS31 Alice Springs 82.49 122 *e*P **P 12 36 34.2 +2.2**
AS31 *e*pP pP 12 36 48.2 +4.8
DAWY Dawson 84.42 12 *e*P **P 12 36 42.6 +0.7**
YKA Yellowknife Ar 88.44 1 P **P 12 37 00.5 -1.1**
comp=Z,1.5nm,0.8s,mb4.3,baz=350,slow=4.8,SNR=4.3

*ISCJB **17** 12:37:25.7±0.7, 4046N±004×1413E±0.1, h94km±5km, mb3.7/3, Error ellipse: s-maj=14.4km s-min=6.2km az=3.0*
*JMA **17** 12:37:26.7±0.1, 4047N×14134E, h87km±1km, M3.1*
JMA Felt I J1.
*IDC **17** 12:37:28.8±1.8, 4086N×14041E, h139km±22km, mb3.3/3, mb1 3.2/5, mb1mx3.0/23, mbtmp3.5/5, Error ellipse: s-maj=39.9km s-min=16.7km az=100.0*
ISC 17 12:37:26.7±0.7, 4045N±004×1413E±01, h89km±5km, n14, σ0$63/21, mb3.7/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JANG	**Nango**	**0.17**	**117**	P		**Pn**	**12 37 39.1**	**-0.4**
JANG				S		**Sn**	**12 37 48.2**	**-0.7**
JTM	**Tenmabayashi**	**0.39**	**331**	P		**Pn**	**12 37 40.2**	**-0.3**
JTM				*e*S		**Sn**	**12 37 50.3**	**-0.5**
JAH	**Hinai**	**0.58**	**243**	P		**Pn**	**12 37 42.1**	**+0.1**
JAH				S		**Sn**	**12 37 53.5**	**+0.1**
JOT	**Ohata**	**0.95**	**348**	P		**Pn**	**12 37 45.6**	**-0.2**
JOT				*e*S		**Sn**	**12 37 59.8**	**-0.3**
JOM	**Ohasama**	**0.98**	**181**	P		**Pn**	**12 37 46.4**	**+0.3**
JOM				*e*S		**Sn**	**12 38 00.9**	**+0.3**
JIW	**Iwasaki**	**1.01**	**279**	P		**Pn**	**12 37 46.7**	**+0.3**
JSR	**Shiriuchi**	**1.27**	**328**	P		**Pn**	**12 37 49.5**	**-0.1**
JSR				*e*S		**Sn**	**12 38 06.6**	**-0.2**
JMK	**Ichinoseki**	**1.50**	**183**	P		**Pn**	**12 37 52.8**	**+0.4**
JYK	**Kaneyama**	**1.70**	**206**	P		**Pn**	**12 37 55.7**	**+0.8**
ASAJ	**Asahikawa**	**3.79**	**14**	P		**Pn**	**12 38 23.4**	**+0.6**
	1.0nm,0.3s,baz=237,slow=18,SNR=10							
ASAJ				S		**Sn**	**12 39 07.3**	**+1.1**
	0.9nm,0.3s,baz=355,slow=21,SNR=3.2							
MJAR	**Matsushiro Arr**	**4.60**	**213**	P		**Pn**	**12 38 37.4**	**+3.6**
	0.3nm,0.3s,baz=38,slow=13,SNR=4.3							
AKTO	**Aktyubinsk**	**56.37**	**310**	P		**P**	**12 46 49.5**	**-9.1**
	0.8nm,0.6s,mb3.9,baz=90,slow=4.0,SNR=3.4							
WRA	**Warramunga Arr**	**60.43**	**188**	P		**P**	**12 47 25.7**	**-1.1**
	0.4nm,0.3s,mb3.9,baz=4.7,slow=6.8,SNR=6.9							
ASAR	**Alice Springs**	**64.16**	**188**	P		**P**	**12 47 50.9**	**-0.8**
	0.2nm,0.4s,mb3.3,baz=358,slow=6.4,SNR=4.3							

*IDC **17** 13:07:19.4±0.6, 2967S×7182W, h0km, mb4.5/11, mb1 4.5/15, mb1mx4.4/20, mbtmp4.4/15, ML4.5/4, Error ellipse: s-maj=23.3km s-min=15.9km az=92.0*
*NEIC **17** 13:07:21.9, 2965S×7193W, h33km, mb4.7/15, ML4.7(GUC), After GUC.*
NEIC Felt [III] at La Serena.
*GUC **17** 13:07:21.9±0.5, 2965S×7193W, h33km±3km, ML4.7*
*BJI **17** 13:07:21.9, 2970S×7190W, h32km, mB5.0, Ms4.8, Msz4.7*
*ISCJB **17** 13:07:22.3±0.3, 2969S±002×7197W±005, h33km, mb4.5/21, MS4.7/1, Error ellipse: s-maj=6.0km s-min=3.3km az=167.8*
ISC 17 13:07:24.2±0.3, 2967S±002×7188W±005, h35km, h35km±1.2km:pP-P, n82, σ1$08/81, mb4.5/21, MS4.7/1, 9C-11D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TLL	**Tololo Astrono**	**1.06**	**118**	*e*P		**Pn**	**13 07 42.1**	**-0.4**
TLL				*i* S		**Sn**	**13 07 57.6**	**+1.5**
TLL				AML		AML	13 08 06.7	
	comp=N,35µm,0.8s							
TLL	**Tololo Astrono**	**1.06**	**118**	*e*P		**Pn**	**13 07 42.1**	**-0.4**
TLL				*i* S		**Sn**	**13 07 57.6**	**+1.5**
OVCH	**Ovalle**	**1.10**	**148**⇑	*i*P		**Pn**	**13 07 41.9**	**-1.3**
OVCH				*i* S		**Sn**	**13 07 57.1**	**-0.1**
OVCH				AML		AML	13 08 02.3	
	comp=N,16µm,0.3s							
OVCH	**Ovalle**	**1.10**	**148**⇑	*i*P		**Pn**	**13 07 41.9**	**-1.3**
OVCH				*i* S		**Sn**	**13 07 57.1**	**-0.1**
LCO	**Las Campanas**	**1.23**	**58**⇓	*i*P		**Pn**	**13 07 44.3**	**-0.6**
LCO				*i* S		**Sn**	**13 08 01.4**	**+1.2**
VACH	**Vallenar**	**1.47**	**42**	*e*P		**Pn**	**13 07 47.4**	**-0.9**
VACH				*i* S		**Sn**	**13 08 06.7**	**+0.4**
VACH				AML		AML	13 08 19.4	
	comp=E,16µm,0.5s							
VACH	**Vallenar**	**1.47**	**42**	*e*P		**Pn**	**13 07 47.4**	**-0.9**
VACH				*i* S		**Sn**	**13 08 06.7**	**+0.4**
CMCH	**Combarbala**	**1.68**	**153**⇓	*i*P		**Pn**	**13 07 50.2**	**-0.9**
CMCH				*i* S		**Sn**	**13 08 12.1**	**+0.7**
CMCH				AML		AML	13 08 25.6	
	comp=N,44µm,0.9s							
CMCH	**Combarbala**	**1.68**	**153**⇓	*i*P		**Pn**	**13 07 50.2**	**-0.9**
CMCH				*i* S		**Sn**	**13 08 12.1**	**+0.7**
CHNG	**Los Chungos**	**2.23**	**172**⇑	*i*P		**Pn**	**13 07 57.0**	**-1.6**
CHNG				*i* S		**Sn**	**13 08 24.1**	**-0.9**
CDCH	**Caldera**	**2.75**	**20**	*e*P		**Pn**	**13 08 02.5**	**-3.4**
JACH	**Jahuel**	**3.20**	**160**	*e*P		**Pn**	**13 08 12.0**	**0.0**
ROCH	**El Roble**	**3.37**	**167**⇓	*i*P		**Pn**	**13 08 13.9**	**-0.5**
PEL	**Peldehue**	**3.61**	**164**⇓	*i*P		**Pn**	**13 08 17.5**	**-0.2**
PEL				*i* S		**Sn**	**13 08 59.7**	**+0.7**
CFAA	**Coronel Fontan**	**3.69**	**122**	Pn		**Pn**	**13 08 20.9**	**+2.1**
	comp=N,1.8nm,0.3s,baz=311,slow=12,SNR=71							
CFAA				Lg			13 09 13.8	
	comp=N,5.0nm,0.3s,baz=46,slow=15,SNR=4.8							
LCCH	**Las Cruces**	**3.80**	**176**⇓	*i*P		**Pn**	**13 08 18.3**	**-2.0**
CLCH	**Cerro Calan**	**3.89**	**163**⇑	*i*P		**Pn**	**13 08 21.5**	**+0.1**
CLCH				*i* S		**Sn**	**13 09 06.7**	**+0.8**
FCH	**Farellones**	**3.89**	**160**	*e*P		**Pn**	**13 08 22.1**	**+0.5**
FCH				*i* S		**Sn**	**13 09 07.4**	**+1.5**
RCDM	**Rinconada Maip**	**3.91**	**167**⇑	*e*P		**Pn**	**13 08 21.3**	**-0.4**
TACH	**Talagante**	**4.05**	**169**⇓	*i*P		**Pn**	**13 08 23.3**	**-0.4**
PCH	**Pirque**	**4.11**	**164**⇑	*e*P		**Pn**	**13 08 24.4**	**-0.1**
CHCH	**Chadas Angostu**	**4.38**	**166**⇓	*i*P		**Pn**	**13 08 27.9**	**-0.3**
CACH	**El Canelo**	**4.56**	**166**⇑	*i*P		**Pn**	**13 08 30.9**	**+0.1**
CICH	**Cipreses**	**4.80**	**165**⇓	*i*P		**Pn**	**13 08 34.0**	**0.0**
SFDO	**San Fernando**	**4.98**	**172**⇓	*i*P		**Pn**	**13 08 35.5**	**-1.0**

CPN1 **Cerro Paranal** 5.20 15 *e*P Pn 13 08 35.1 -4.4
LVC **Limon Verde** 7.52 21 Pn Pn 13 09 09.0 -2.4
comp=N,2.4nm,0.3s,baz=199,slow=8.4,SNR=19
LVC Sn Sn 13 10 33.0 -2.5
comp=N,4.3nm,0.3s,baz=165,slow=15,SNR=3.7
LVC Lg 13 11 06.6
comp=N,6.8nm,0.3s,baz=327,slow=16,SNR=7.3
PLCA **Paso Flores** 11.09 175 Pn Pn 13 09 58.0 -2.3
comp=N,0.7nm,0.3s,baz=340,slow=13,SNR=18
PLCA Lg 13 13 16.1
comp=N,0.1nm,0.3s,baz=128,slow=23,SNR=1.8
PLCA **Paso Flores** 11.09 175 *e*Pn Pn 13 09 58.6 -1.7
comp=N,5.2nm,0.6s
CPUP **Villa Florida** 13.28 79 Pn Pn 13 10 29.7 -0.6
comp=N,0.5nm,0.3s,baz=222,slow=11,SNR=4.2
CPUP Lg 13 14 12.6
comp=N,0.6nm,0.3s,baz=236,slow=1.8,SNR=3.2
CPUP **Villa Florida** 13.28 79 *e*Pn Pn 13 10 30.1 -0.2
comp=N,62nm,0.8s
LPAZ **La Paz** 13.76 15 Pn Pn 13 10 33.2 -3.6
comp=N,0.2nm,0.3s,baz=236,slow=6.3,SNR=3.8
LPAZ **La Paz** 13.76 15 *e*Pn Pn 13 10 39.3 +2.5
comp=N,13nm,0.7s
SIV **San Ignacio** 16.86 38 Pn Pn 13 11 15.0 -2.5
comp=N,0.3nm,0.3s,baz=232,slow=15,SNR=10
SAML **Samuel** 22.17 23 *e*P P 13 12 16.6 -0.5
comp=N,17nm,1.0s,mb4.4
USHA **Ushuaia** 25.27 175 P P 13 12 47.2 +0.1
comp=N,23nm,0.8s,mb4.8,baz=294,slow=6.1,SNR=8.4
BDFB **Brasilia** 26.01 63 P P 13 12 53.7 -0.2
comp=N,6.7nm,0.6s,mb4.4,baz=242,slow=10,SNR=8.2
BDFB **Brasilia** 26.01 63 *e*P P 13 12 53.6 -0.3
comp=N,37nm,0.9s,mb4.9
VNA1 **Neumayer--Stat** 53.61 158⇑*i* P 13 16 42.3 +0.3
VNA1 *e* 13 16 44.4
VNA1 *e* 13 16 45.9
SNAA **Sanae** 55.55 159 P P 13 16 56.3 +0.2
comp=N,7.2nm,0.9s,mb4.7,baz=289,slow=5.5,SNR=48
SNAA **Sanae** 55.55 159⇑*i* P 13 16 55.7 -0.3
SNAA *e* 13 16 58.7
SNAA *e* 13 17 01.2
SNAA **Sanae** 55.55 159 *e*P P 13 16 55.4 -0.6
comp=N,45nm,1.3s,mb5.3
JCT **Junction City** 65.46 334 *e*P P 13 18 04.5 +0.8
comp=N,4.8nm,0.3s,mb5.0
SWET **Sewanee** 65.89 347 *e*P P 13 18 06.1 -0.3
WVT **Waverly** 67.15 346 *e*P P 13 18 13.8 -0.7
comp=N,5.2nm,0.9s,mb4.6
VNDA **Vanda** 68.36 191 P P 13 18 22.8 +0.6
comp=N,1.2nm,1.0s,mb3.9,baz=124,slow=5.8,SNR=3.7
MNTX **Cornudas Mount** 68.83 330 *e*P P 13 18 24.3 -0.8
comp=N,2.3nm,0.8s,mb4.2
MNTX *e*pP pP 13 18 34.2 -1.6
SYO **Syowa Base** 69.84 159⇓*e*P P 13 18 30.0 -1.3
DBIC **Dimbokro** 73.70 72 P P 13 18 55.6 +1.1
comp=N,4.5nm,0.6s,mb4.6,baz=214,slow=7.7,SNR=8.4
DBIC **Dimbokro** 73.70 72 *e*P P 13 18 55.4 +0.9
comp=N,5.3nm,0.6s,mb4.7
DBIC *e*pP pP 13 19 06.2 +0.8
SMCO **Snowmass** 75.90 333 *e*P P 13 19 08.9 +1.7
comp=N,7.5nm,1.0s,mb4.6
SMCO *e*pP pP 13 19 21.3 +3.3
MAW **Mawson** 77.28 164 P P 13 19 14.5 -0.5
comp=N,2.3nm,0.9s,mb4.1,baz=209,slow=7.6,SNR=8.3
MAW **Mawson** 77.28 164 *e*P P 13 19 14.4 -0.6
comp=N,11nm,1.4s,mb4.6
MSU **Marysvale** 77.56 329 *e*P P 13 19 18.6 +2.0
RWWY **Rawlins** 78.14 334 *e*P P 13 19 21.2 +1.4
comp=N,13nm,1.1s,mb4.8
RWWY *e*pP pP 13 19 30.7 0.0
DAC **Darwin (Calif)** 78.41 324 *e*P P 13 19 22.4 +1.1
comp=N,1.8nm,1.1s,mb3.9
DAC *e*pP pP 13 19 32.7 +0.5
HWUT **Hardware Ranch** 79.83 331 *e*P P 13 19 29.6 +0.5
comp=N,5.0nm,0.7s,mb4.5
HWUT *e*pP pP 13 19 39.3 -0.7
PDAR **Pinedale Array** 79.98 333 P P 13 19 31.1 +1.3
comp=N,0.6nm,0.6s,mb3.7,baz=150,slow=6.3,SNR=6.3
NVAR **Mina Array Bea** 80.42 325 P P 13 19 33.7 +1.4
comp=N,0.5nm,0.9s,mb3.5,baz=165,slow=3.7,SNR=3.2
NVAR **Mina Array Bea** 80.42 325 P P 13 19 33.7 +1.4
BOSA **Boshof** 81.98 118 P P 13 19 41.3 +0.7
comp=N,8.1nm,0.8s,mb4.7,baz=248,slow=4.8,SNR=14
ULM **Lac du Bonnet** 82.37 345 P P 13 19 42.6 0.0
comp=N,5.5nm,1.1s,mb4.4,baz=194,slow=6.1,SNR=5.6
ULM **Lac du Bonnet** 82.37 345 *e*P P 13 19 41.5 -1.1
comp=N,8.5nm,1.2s,mb4.5
TOA0 **Torodi Ar. Sit** 82.62 70 *e*P P 13 19 44.6 +0.7
TORD **Torodi Ar. Bea** 82.62 70 P P 13 19 44.6 +0.7
comp=N,12nm,0.8s,mb5.0,baz=265,slow=2.1,SNR=6.7
HLID **Hailey** 82.65 330 *e*P P 13 19 45.0 +1.0
comp=N,2.6nm,0.9s,mb4.3
HLID *e*pP pP 13 19 54.9 0.0
LBTB **Lobatse** 84.01 115 *e*P P 13 19 51.5 +0.4
comp=N,11nm,0.8s,mb5.0
WRA **Warramunga Arr** 124.58 210 PKP PKPdf 13 26 20.2 +0.3
comp=N,1.0nm,0.8s,baz=171,slow=1.7,SNR=5.5
ZRNK **Zerenda** 143.20 40 *e*PKPdf PKPdf 13 26 52.6 -2.0
BRVK **Borovoye** 143.86 39 *e*PKPdf PKPdf 13 26 54.3 -1.5
YAK **Yakutsk** 144.68 343 *e*PKPdf PKPdf 13 26 55.6 -1.6
AAK **Ala-Archa** 150.13 55 *e*PKPbc PKPbc 13 27 12.0 +0.6
AAK *e*PKPab PKPab 13 27 18.1 +0.8
ZAL **Zalesovo** 150.43 28 PKP PKPdf 13 27 07.5 +0.8
comp=N,1.4nm,0.5s,baz=206,slow=1.6,SNR=7.5
ZAL PKPbc PKPbc 13 27 13.0 +1.0
comp=N,20nm,0.7s,baz=174,slow=3.1,SNR=33
MKAR **Makanchi Array** 153.65 42 PKP PKPdf 13 27 10.9 -0.6
comp=N,0.7nm,0.7s,baz=357,slow=2.6,SNR=4.3
MKAR PKPbc PKPbc 13 27 19.4 0.0
comp=N,2.1nm,0.8s,baz=316,slow=3.3,SNR=10.0
MJAR **Matsushiro Arr** 153.95 293 PKPab PKPab 13 27 33.1 -0.2
comp=N,2.4nm,0.8s,baz=63,slow=2.8,SNR=6.4
MDJ **Mudanjiang** 157.39 317 PKP PKPdf 13 27 16.4 -0.2
MDJ PP PP
comp=Z,70nm,4.0s
WMQ **Urumqi** 158.47 43 *e*PKP PKPdf 13 27 17.0 -0.9
WMQ PP PP 13 31 36.0 +3.2
WMQ SKS SKSdf 13 34 17.0 -3.9
WMQ SKKS SKKSac 13 38 19.0 -0.3
WMQ SS SS 13 51 31.0 -0.6
WMQ PP PP
comp=Z,105nm,9.0s
WMQ LR LR
comp=N,98nm,20.0s,MS4.8
WMQ LR LR
comp=E,82nm,20.0s,MS4.8
WMQ LR LR
comp=Z,99nm,20.0s,MS4.7
SONM **Songino Array** 161.82 4 PKPab PKPab 13 28 07.8 +0.5
comp=Z,0.9nm,0.8s,baz=357,slow=3.4,SNR=3.9
HHC **Hu-ho-hao-te** 168.50 347 *e*PKP PKPdf 13 27 26.1 -1.2
HHC APKP 13 27 36.9
HHC XPKP 13 27 40.5
HHC PKS 13 30 57.8
HHC PP PP 13 32 28.1 +2.3
HHC SKS SKSdf 13 34 24.8 -3.5
HHC PP PP
comp=Z,53nm,6.9s
HHC LR LR
comp=N,130nm,53.1s
HHC LR LR
comp=E,85nm,51.2s
HHC LR LR
comp=Z,80nm,51.2s
NJ2 **Nanjing** 170.47 287 *e*PKP PKPdf 13 27 28.1 -0.4
KMI **Kunming** 173.41 132 PKP PKPdf 13 27 27.1 -2.7
CD2 **Chengdu** 176.03 71 *e*PKP PKPdf 13 27 27.4 -3.2

IDC 17 13:08:30.2±1.6**,2882S**×**6188E,h0**km**,mb3.8**/5**,mb1 3.9**/5**, mb1mx3.7**/23**,mbtmp3.8**/5**,MS3.6**/1**,Ms1 3.5**/1**, ms1mx3.1**/25**,Error ellipse: s-maj=54.8km s-min=30.6km az=83.0,Southwest Indian Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MAW **Mawson** 38.82 179 P P 13 15 56.3 -0.5
0.6nm,0.7s,baz=333,slow=8.2,SNR=4.4
MAW LR LR 13 29 11.1
comp=Z,80nm,19.3s,baz=230,slow=32
ASAR **Alice Springs** 63.92 104 P P 13 19 04.9 0.0
0.5nm,0.9s,baz=244,slow=6.0,SNR=5.9
WRA **Warramunga Arr** 65.71 100 P P 13 19 17.5 +1.0
0.8nm,1.1s,baz=249,slow=5.9,SNR=5.4
MKAR **Makanchi Array** 77.49 14 P P 13 20 26.7 -0.9
1.1nm,0.8s,baz=211,slow=4.0,SNR=4.3

ZAL **Zalesovo** 84.77 13 P P 13 21 06.5 +0.2
1.6nm,0.8s,baz=282,slow=4.8,SNR=9.8

IDC 17 13:17:33.6±2.4**,587S**×**13015E,h0**km**,mb4.1**/1**,mb1 3.5**/3**, mb1mx3.4**/12**,mbtmp3.4**/3**,ML3.2**/2**,Error ellipse: s-maj=147.4km s-min=31.5km az=70.0,Banda Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA **Warramunga Arr** 14.57 164 Pn Pn 13 21 01.0 0.0
0.1nm,0.3s,baz=347,slow=13,SNR=6.0
WRA Sn Sn 13 23 32.1 -11
0.5nm,0.3s,baz=339,slow=22,SNR=8.9
ASAR **Alice Springs** 18.06 169 P Pn 13 21 46.4 +0.4
0.1nm,0.3s,baz=358,slow=14,SNR=5.7
ASAR S Sn 13 24 57.1 -11
0.1nm,0.3s,baz=356,slow=29,SNR=5.0
MKAR **Makanchi Array** 67.37 326 P P 13 28 30.8 +0.2
0.8nm,0.4s,baz=117,slow=7.2,SNR=6.8

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*NEIC **17** 13:31:10.9,40.14N×1976E,h4km,MD3.6(ATH),After ATH.*
*ATH **17** 13:31:10.9,40.14N×1976E,h4km±1km,MD3.6/6*
*TIR **17** 13:31:12.9,4006N×1997E,h5km*
*ISCJB **17** 13:31:13.0±0.5,4004N±002×1985E±004,h4km,Error ellipse: s-maj=4.1km s-min=2.9km az=7.0*
*CSEM **17** 13:31:13.3±0.2,4005N×1990E,h1km±2km,MD3.6,Error ellipse: s-maj=4.1km s-min=2.5km az=115.0*
*THE **17** 13:31:13.2,4002N×1983E,h0km,ML3.1*
*SKO **17** 13:31:17.7,40.19N×2007E,h15km*
ISC 17 13:31:13.6±0.5**,4003N**±002×**1983E**±004**,h4**km**,n32, σ1ˢ16**/56**,Albania**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SRN **Sarande** 0.20 139 *i* Pg **Pg** **13 31 16.5 -1.0**
SRN *i* Sg **Sg** **13 31 19.1 -1.1**
KEK **Kerkira** 0.32 184 *e*PG **Pg** **13 31 19.4 -0.4**
KEK *e*SG **Sg** **13 31 25.2 +1.3**
LSK **Leskovik** 0.60 79 *i* Pg **Pg** **13 31 22.9 -2.3**
LSK *i* Sg **Sg** **13 31 32.0 -1.0**
IGT **Igoumenitsa** 0.63 142 *e*Pg **Pg** **13 31 24.5 -1.3**
IGT *e*Sg **Sg** **13 31 34.5 +0.5**
JAN **Janina** 0.87 115 *e*PB **Pg** **13 31 29.0 -1.3**
JAN *e*SG **Sg** **13 31 42.4 +0.7**
MEV **Metsovon** 1.11 103 *e*Pg **Pg** **13 31 33.4 -1.4**
comp=Z,18nm,0.4s
MEV *e*Sg **Sg** **13 31 50.3 +1.2**
OHR **Ohrid** 1.31 34 *e*Pg **Pg** **13 31 37.8 -0.8**
OHR *e*Sg **Sg** **13 31 57.0 +1.4**
OHR **Ohrid** 1.31 34 *e*Pg **Pg** **13 31 37.6 -1.0**
OHR *e*Sg **Sg** **13 31 51.8 -3.8**
OHR **Ohrid** 1.31 34 *e*Pg **Pg** **13 31 37.6 -1.0**
OHR *e*Sg **Sg** **13 31 57.0 +1.4**
TIR **Tirane** 1.31 1 *e*Pg **Pg** **13 31 38.3 -0.5**
TIR *e*Sg **Sg** **13 31 58.0 +2.2**
TIR **Tirane** 1.31 1 *i* Pg **Pg** **13 31 38.3 -0.5**
LCI **Lecce** 1.35 283 Pn **Pn** **13 31 40.3 +1.2**
FNA **Florina** 1.40 57 *e*Pg **Pn** **13 31 38.5 -1.3**
comp=Z,3.5nm,0.4s
FNA *e*Sg **Sg** **13 32 00.0 +1.4**
LKD **Levkas** 1.47 154 *e*Pg **Pn** **13 31 40.2 -0.7**
LKD *e*Sg **Sg** **13 32 00.8 0.0**
BIA **Bitola** 1.51 49 *e*Pg **Pn** **13 31 40.0 -1.4**
BIA *e*Sg **Sg** **13 32 02.1 +0.1**
BIA **Bitola** 1.51 49 *e*Pg **Pn** **13 31 40.0 -1.4**
BIA *e*Sg **Sn** **13 31 58.3 -3.2**
BIA **Bitola** 1.51 49 *e*Pg **Pn** **13 31 39.9 -1.4**
BIA *e*Sg **Sn** **13 31 58.2 -3.2**
KZN **Kozani** 1.51 79 *e*PN **Pn** **13 31 39.6 -1.8**
EVR **Evrytania** 1.90 125 *e*PG **Pn** **13 31 47.9 +1.2**
EVR *e*SN **Sn** **13 32 14.2 +3.2**
VLS **Valsamata** 1.95 162 *e*PN **Pn** **13 31 48.5 +1.1**
LIT **Litokhoron** 2.04 87 *e*Pn **Pn** **13 31 49.0 +0.3**
comp=Z,1.6nm,0.5s
LIT *e*Sn **Sn** **13 32 15.9 +1.2**
LIT **Litokhoron** 2.04 87 *e*Pn **Pn** **13 31 49.0 +0.3**
1.6nm,0.5s
GRG **Griva** 2.17 64 *e*Pn **Pn** **13 31 50.8 +0.4**
GRG *e*Sn **Sn** **13 32 19.4 +1.6**
AGG **Agios Georgios** 2.18 117 *e*Pn **Pn** **13 31 50.5 -0.1**
AGG *e*Sn **Sn** **13 32 19.2 +1.1**
AGG **Agios Georgios** 2.18 117 *e*Pn **Pn** **13 31 50.5 -0.1**
AGG *e*Sn **Sn** **13 32 19.2 +1.1**
VAY **Valandovo** 2.45 57 *e*Pn **Pn** **13 31 53.9 -0.5**
VAY *e*Sn **Sn** **13 32 21.1 -3.7**
VAY **Valandovo** 2.45 57 *e*Pn **Pn** **13 31 53.8 -0.5**
VAY *e*Sn **Sn** **13 32 21.0 -3.7**
SG1 **Sgolgore (BA)** 2.53 290 *e*Pn **Pn** **13 31 55.7 +0.2**
HORT **Hortiatis** 2.56 76 *e*Pn **Pn** **13 31 55.9 0.0**
HORT *e*Sn **Sn** **13 32 27.8 +0.3**
XOR **Xorichti** 2.68 103 *e*Pn **Pn** **13 31 57.2 -0.3**
XOR *e*Sn **Sn** **13 32 31.8 +1.4**
PLG **Polygyros** 2.79 82 *e*PB **Pn** **13 31 59.4 +0.4**
PAIG **Paliouri** 2.96 91 *e*Pn **Pn** **13 32 00.8 -0.6**

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*LDG **17** 13:32:49.1±1.8,23.16S×6946W,h10km,Mb5.4/15, Ms3.8/6,Error ellipse: s-maj=114.1km s-min=72.6km az=30.0*
*MOS **17** 13:32:54.1±0.9,2321S×6964W,h48km,mb5.4/47,Error ellipse: s-maj=10.6km s-min=6.5km az=96.8*
*ISCJB **17** 13:32:57.9±0.2,2329S±003×6957W±003,h83km, mb5.0/124,Error ellipse: s-maj=4.4km s-min=4.3km az=1.8*
*NEIC **17** 13:32:58.8,2340S×6971W,h80km,mb5.1/113,After GUC.*
NEIC Felt [IV] at Maria Elena and Tocopilla; [III] at Calama, Mejillones and San Pedro de Atacama; [II] at Antofagasta.
*GUC **17** 13:32:58.8±0.8,2340S×6971W,h80km,ML5.0*
*HRVD **17** 13:32:58.8±0.2,2341S×7002W,h100km±2km,MW5.2/67, Centroid moment Tensor Solution. LP body waves: s49,c69;Mantle waves: s67,c96; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.41±.19; Mθθ-2.04±.18; Mφφ-0.36±.23; Mrθ2.14±.11; Mθφ4.73±.18; Mφr-4.09±.14; Best double couple: M0 6.69700×10^16 NP1:φs268.00000°,δ38.00000°,λ22.00000°. NP2: φs161.00000°,δ77.00000°,λ126.00000°. Principal axes: T 5.5630, Plg46.0000°, Azm108.0000°; N 2.2750, Plg35.0000°, Azm331.0000°; P -7.8320, Plg23.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **17** 13:32:58.8,2340S×6970W,h80km,mB5.0,Ms5.6,Msz5.2*
*IDC **17** 13:32:59.2±0.4,2331S×6971W,h87km±3km,mb4.7/12, mb1 4.7/17,mb1mx4.7/19,mbtmp4.9/17,MS4.0/11, Ms1 4.0/11,ms1mx3.7/19,Error ellipse: s-maj=11.6km s-min=7.4km az=133.0*
ISC 17 13:32:59.4±0.1**,2338S**±003×**6957W**±003**,h85**km**, h85**km±.3km**:pP-P,n463,**σ**0ˢ91**/411**,mb5.0**/124**,61C-61D, Northern Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CEN1 **Los Morros** 0.58 269⇓*i*P **Pn** **13 33 13.4 -0.9**
CEN1 *i* S **Sn** **13 33 25.2 -0.1**
CEN1 AML AML 13 33 28.1
comp=E,65μm,0.5s
ANCH **Antofagasta** 0.83 249⇑*i*P **Pn** **13 33 15.4 -1.4**
ANCH *i* S **Sn** **13 33 27.2 -2.5**
ANCH AML AML 13 33 28.5
comp=N,141μm,0.5s
ANCH **Antofagasta** 0.83 249⇑*i*P **Pn** **13 33 15.4 -1.4**
ANCH *i* S **Sn** **13 33 27.2 -2.5**
LVC **Limon Verde** 0.98 39 P **Pn** **13 33 19.4 +0.9**
comp=N,4μm,0.3s,baz=232,slow=10
LVC S **Sn** **13 33 34.4 +1.7**
comp=N,7μm,0.3s,baz=333,slow=22,SNR=40
CPN1 **Cerro Paranal** 1.46 211⇓*i*P **Pn** **13 33 23.8 -0.6**
CPN1 *i* S **Sn** **13 33 42.5 -0.6**
CPN1 AML AML 13 33 44.6
comp=E,23μm,0.3s
CDCH **Caldera** 3.85 197 *e*P **Pn** **13 33 52.5 -3.7**
CDCH *i* S **Sn** **13 34 35.8 -4.6**
LCO **Las Campanas** 5.70 190⇓*e*P **Pn** **13 34 18.9 -2.5**
LCO *i* S **Sn** **13 35 23.6 -1.8**
TLL **Tololo Astrono** 6.85 189⇓*i*P **Pn** **13 34 34.7 -2.4**
ARE **Arequipa** 7.12 345⇑*i*P **Pn** **13 34 35.9 -4.9**
ARE *e*S **Sn** **13 35 50.0 -10**
LPAZ **La Paz** 7.18 11 P **Pn** **13 34 41.3 -0.4**
comp=E,110nm,0.3s,baz=194,slow=6.7,SNR=2962
LPAZ S **Sn** **13 36 01.2 -0.6**
comp=E,1.7nm,0.3s,baz=269,slow=13,SNR=2.1
LPAZ **La Paz** 7.18 11 P **Pn** **13 34 41.3 -0.4**
LPAZ S **Sn** **13 36 01.2 -0.6**
LPAZ pmax pmax
comp=Z,110nm,0.3s
LPAZ smax
comp=N,2.0nm,0.3s
LPAZ **La Paz** 7.18 11 *e*Pn **Pn** **13 34 42.0 +0.3**
comp=N,538nm,0.6s
CFAA **Coronel Fontan** 8.28 172 P **Pn** **13 34 56.1 -0.5**
comp=N,3.3nm,0.3s,baz=347,slow=13,SNR=190
CFAA S **Sn** **13 36 24.6 -3.8**
comp=N,2.5nm,0.3s,baz=192,slow=6.7,SNR=7.1
SIV **San Ignacio** 10.86 49 P **Pn** **13 35 29.0 -2.8**
comp=N,11nm,0.3s,baz=255,slow=12,SNR=152
SIV S **Sn** **13 37 21.8 -10**
comp=N,7.0nm,0.3s,baz=138,slow=23,SNR=5.8
CPUP **Villa Florida** 11.50 107 P **Pn** **13 35 40.6 +0.2**
comp=N,1.2nm,0.3s,baz=273,slow=12,SNR=52
CPUP LR LR 13 40 34.0
comp=N,927nm,19.4s,baz=275,slow=39
CPUP **Villa Florida** 11.50 107 *e*P **Pn** **13 35 40.3 -0.1**
CPUP pmax pmax
comp=Z,144nm,0.8s
CPUP **Villa Florida** 11.50 107 *e*Pn **Pn** **13 35 40.2 -0.2**
comp=Z,144nm,0.8s
NNA **Nana** 13.28 327 P **Pn** **13 36 02.5 -1.8**
comp=Z,3.1nm,0.3s,baz=124,slow=13,SNR=4.5
NNA S **Sn** **13 38 18.4 -12**
comp=Z,9.6nm,0.3s,baz=219,slow=15,SNR=6.3
NNA **Nana** 13.28 327 *e*Pn **Pn** **13 36 00.0 -4.3**
NNA *e*Sn **Sn** **13 38 17.5 -13**
SAML **Samuel** 15.60 24 *e*Pn **Pn** **13 36 29.3 -5.0**
comp=Z,50nm,0.7s
PLCA **Paso Flores** 17.32 183 P **Pn** **13 36 55.3 -0.3**
comp=Z,1.5nm,0.3s,baz=1.8,slow=13,SNR=46
PLCA LR LR 13 43 59.8
comp=Z,686nm,21.0s,baz=357,slow=38
PLCA **Paso Flores** 17.32 183 *e*P **Pn** **13 36 55.0 -0.6**
PLCA pmax pmax
comp=Z,108nm,1.1s
PLCA **Paso Flores** 17.32 183 *e*P **Pn** **13 36 55.0 -0.6**
comp=Z,108nm,1.1s
ATAH **Atahualpa** 18.36 331 P **Pn** **13 37 06.3 -2.0**
comp=Z,0.6nm,0.3s,baz=131,slow=11,SNR=2.3
BDFB **Brasilia** 21.71 73 P **P** **13 37 42.1 -1.4**
comp=Z,48nm,0.7s,mb4.9,baz=254,slow=11,SNR=23
BDFB LR LR 13 47 46.6
comp=Z,299nm,18.9s,baz=256,slow=41
BDFB **Brasilia** 21.71 73 P **P** **13 37 42.1 -1.3**
BDFB pmax pmax
comp=Z,48nm,0.7s
BDFB MLR MLR
comp=Z,299nm,18.9s
BDFB **Brasilia** 21.71 73 *e*P **P** **13 37 41.9 -1.6**
comp=Z,35nm,0.9s,mb4.7
BAO **Brasilia Array** 21.73 73 P **P** **13 37 43.0 -0.7**
ROSC **El Rosal** 28.45 350 LR LR 13 50 49.9
comp=Z,203nm,20.5s,baz=164,slow=38
USHA **Ushuaia** 31.42 179 P **P** **13 39 13.2 +0.8**
comp=Z,21nm,1.0s,mb4.8,baz=358,slow=9.4,SNR=6.4
SJG **San Juan** 41.37 5 *e*P **P** **13 40 33.9 -3.1**
SJG pmax pmax
comp=Z,28nm,0.4s
SJG **San Juan** 41.37 5 *e*P **P** **13 40 33.9 -3.1**
comp=Z,28nm,0.4s,mb5.4
LRAL **Lakeview Retre** 58.51 343 *e*P **P** **13 42 44.0 -2.7**
comp=Z,33nm,1.6s,mb5.1
HKT **Hockley** 58.72 333 *e*P **P** **13 42 47.2 -1.0**
HKT *e**PP pP 13 43 07.7 -1.9
HKT pmax pmax
comp=Z,15nm,1.2s,mb4.9
HKT **Hockley** 58.72 333 *e*P **P** **13 42 47.2 -1.0**
comp=Z,15nm,1.2s,mb4.9
HKT *e*pP pP 13 43 07.7 -1.9
HKT *e*sP sP 13 43 16.8 -2.2
VNA1 **Neumayer--Stat** 58.73 160⇑*i*P **P** **13 42 50.5 +2.2**
VNA1 *e* pP 13 43 07.5 -2.1
VNA1 *e* pP 13 43 11.4 +1.8
VNA1 *e* pP 13 43 13.1 +3.5
VNA1 *e* 13 43 20.3
VNA1 *e* 13 43 38.1
VNA1 *e* 13 43 49.5
VNA1 *e* 13 43 55.4
RKT **Rikitea** 59.59 256 *e*LR LR 14 00 32.7
comp=Z,494nm,33.2s,baz=105
MYNC **Murphy** 59.75 346 *e*P **P** **13 42 53.2 -2.1**
CPCT **Cooper Cave** 60.20 346 *e*P **P** **13 42 57.0 -1.4**
SWET **Sewanee** 60.31 345 *e*P **P** **13 42 57.2 -1.9**
OXF **Oxford** 60.58 341 *e*P **P** **13 42 58.1 -2.9**
OXF *e**PP pP 13 43 19.7 -2.7
OXF pmax pmax
comp=Z,50nm,1.0s,mb5.5
OXF **Oxford** 60.58 341 *e*P **P** **13 42 58.1 -2.8**
comp=Z,50nm,1.0s,mb5.5
OXF *e*pP pP 13 43 19.7 -2.7
OXF *e*sP sP 13 43 28.7 -3.2
PLAL **Pickwick Lake** 60.64 343 *e*P **P** **13 42 58.7 -2.7**
comp=Z,16nm,0.9s,mb5.0
PLAL *e*pP pP 13 43 19.9 -2.9
SNAA **Sanae** 60.71 161⇑*i*P **P** **13 43 02.7 +0.8**
SNAA *e* pP 13 43 25.1 +1.7
SNAA *e* 13 43 34.5
SNAA *e* 13 43 47.0
SNAA **Sanae** 60.71 161 *e*P **P** **13 43 02.3 +0.4**
SNAA *e**PP pP 13 43 21.9 -1.5
SNAA pmax pmax
comp=Z,3.0nm,0.5s
SNAA **Sanae** 60.71 161 *e*P **P** **13 43 02.3 +0.4**
comp=Z,3.3nm,0.5s,mb4.6
SNAA *e*pP pP 13 43 21.9 -1.4
JCT **Junction City** 60.91 330 *e*P **P** **13 43 01.8 -1.4**
JCT *e**PP pP 13 43 24.0 -0.7
JCT pmax pmax
comp=Z,13nm,0.6s,mb5.1
JCT **Junction City** 60.91 330 *e*P **P** **13 43 01.8 -1.4**
comp=Z,13nm,0.6s,mb5.1
JCT *e*pP pP 13 43 24.0 -0.7
ELN **Prospectdale** 61.20 350 *e*P **P** **13 43 04.1 -1.0**
WVT **Waverly** 61.66 343 *e*P **P** **13 43 05.4 -2.8**
WVT *e**PP pP 13 43 27.2 -2.6
WVT pmax pmax
comp=Z,17nm,0.8s,mb5.1
WVT **Waverly** 61.66 343 *e*P **P** **13 43 05.4 -2.8**
comp=Z,17nm,0.8s,mb5.1
WVT *e*pP pP 13 43 27.1 -2.6
WVT *e*sP sP 13 43 35.3 -3.9
MIAR **Mount Ida** 61.96 338 *e*P **P** **13 43 08.8 -1.4**
MIAR *e**PP pP 13 43 30.1 -1.7
MIAR pmax pmax
comp=Z,11nm,0.6s,mb5.1
MIAR **Mount Ida** 61.96 338 *e*P **P** **13 43 08.8 -1.5**
comp=Z,11nm,0.6s,mb5.1
MIAR *e*pP pP 13 43 30.1 -1.7
MIAR *e*sP sP 13 43 38.7 -2.5
WCI **Wyandotte Cave** 63.26 345 *e*P **P** **13 43 16.4 -2.5**
WCI *e**PP pP 13 43 38.4 -2.2
WCI pmax pmax
comp=Z,25nm,0.8s,mb5.2
WCI **Wyandotte Cave** 63.26 345 *e*P **P** **13 43 16.4 -2.6**
comp=Z,25nm,0.8s,mb5.2
WCI *e*pP pP 13 43 38.4 -2.2
WCI *e*sP sP 13 43 46.2 -3.7
MVL **Millersville** 63.37 354 *e*P **P** **13 43 18.6 -1.0**
SIUC **Southern Illin** 63.52 343 *e*P **P** **13 43 18.9 -1.8**
comp=Z,23nm,0.8s,mb5.1
SIUC *e*pP pP 13 43 40.2 -2.0
FVM **French Village** 64.11 342 *e*P **P** **13 43 22.6 -1.9**
FVM *e**PP pP 13 43 44.6 -1.6
FVM pmax pmax
comp=Z,26nm,0.7s,mb5.2
FVM **French Village** 64.11 342 *e*P **P** **13 43 22.6 -1.9**
comp=Z,26nm,0.7s,mb5.2
FVM *e*pP pP 13 43 44.5 -1.6
WMOK **Wichita Mounta** 64.11 333 *e*P **P** **13 43 21.7 -2.8**
WMOK pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
WMOK **Wichita Mounta** 64.11 333 *e*P **P** **13 43 21.6 -2.8**
comp=Z,2.1nm,0.8s,mb4.0
SSPA **Standing Stone** 64.16 353 *e*P **P** **13 43 23.8 -1.0**

CCM Cathedral Cave 64.41 341 eP P 13 43 23.6 -2.9
CCM e*PP pP 13 43 45.2 -3.0
CCM pmax pmax
comp=Z,15nm,0.6s,mb5.0
CCM Cathedral Cave 64.41 341 eP P 13 43 23.6 -2.9
comp=Z,15nm,0.6s,mb5.0
CCM epP pP 13 43 45.2 -3.0
GDL2 Guadalupe Moun 64.50 328 eP P 13 43 27.2 +0.1
GDL2 epP pP 13 43 48.4 -0.3
ACSO Alum Creek Sta 64.51 349 eP P 13 43 25.2 -1.9
comp=Z,12nm,0.7s,mb4.8
ACSO epP pP 13 43 46.6 -2.1
ACSO esP sP 13 43 55.2 -2.9
MNTX Cornudas Mount 64.61 326 eP P 13 43 25.6 -2.1
comp=Z,17nm,1.1s,mb4.8
MNTX epP pP 13 43 47.4 -2.1
BINY Binghamton 65.52 355 eP P 13 43 33.0 -0.7
comp=Z,22nm,0.8s,mb5.0
HRV Harvard--Oak R 65.58 358 eP P 13 43 33.8 -0.2
HRV e*PP pP 13 43 55.9 +0.1
HRV pmax pmax
comp=Z,30nm,1.0s,mb5.1
HRV Harvard--Oak R 65.58 358 eP P 13 43 33.8 -0.3
comp=Z,30nm,1.0s,mb5.1
HRV epP pP 13 43 55.9 +0.1
ACCN Adirondack Com 66.54 357 eP P 13 43 40.0 -0.2
HNH Hanover 66.80 358 eP P 13 43 41.5 -0.4
comp=Z,1.2nm,0.5s,mb4.0
NCB Newcomb 67.15 356 eP P 13 43 43.5 -0.6
comp=Z,23nm,1.1s,mb4.9
NCB epP pP 13 44 06.0 +0.1
LBNH Lisbon 67.32 358 eP P 13 43 45.2 0.0
LBNH e*PP pP 13 44 06.7 -0.3
LBNH pmax pmax
comp=Z,32nm,1.1s,mb5.1
LBNH Lisbon 67.32 358 eP P 13 43 45.2 +0.1
comp=Z,32nm,1.1s,mb5.1
LBNH epP pP 13 44 06.7 -0.3
LPM Los Pinos Moun 67.32 327 eP P 13 43 45.8 +0.6
LPM epP pP 13 44 07.1 +0.1
LENM Lemitar 67.38 327 eP P 13 43 45.6 +0.1
LENM epP pP 13 44 07.7 +0.3
WVL Waterville 67.61 360 eP P 13 43 47.0 0.0
comp=Z,17nm,0.9s,mb4.9
LAZ Ladron 67.65 327 eP P 13 43 47.4 +0.1
LAZ epP pP 13 44 08.9 -0.1
LAZ esP sP 13 44 19.4 +1.0
ANMO Albuquerque 67.75 328 eP P 13 43 48.1 +0.3
ANMO e*PP pP 13 44 09.7 0.0
ANMO e*SP sP 13 44 18.5 -0.5
ANMO pmax pmax
comp=Z,14nm,1.0s
ANMO Albuquerque 67.75 328 eP P 13 43 48.1 +0.2
comp=Z,14nm,1.0s,mb4.7
ANMO epP pP 13 44 09.7 0.0
ANMO esP sP 13 44 18.5 -0.5
EMMW East Machias 67.78 2 eP P 13 43 47.5 -0.6
comp=Z,27nm,0.8s,mb5.1
LONY Lake Ozonia 67.82 356 eP P 13 43 47.8 -0.5
LONY epP pP 13 44 09.1 -1.1
TUC Tucson 67.95 323 eP P 13 43 49.7 +0.6
TUC e*PP pP 13 44 10.6 -0.4
TUC pmax pmax
comp=Z,18nm,1.3s,mb4.7
TUC Tucson 67.95 323 eP P 13 43 49.7 +0.6
comp=Z,18nm,1.3s,mb4.7
TUC epP pP 13 44 10.6 -0.4
FRNY Flat Rock 67.98 357 eP P 13 43 48.4 -0.9
FRNY epP pP 13 44 10.8 -0.4
FRNY esP sP 13 44 18.6 -2.0
MSNY Massena 68.22 356 eP P 13 43 49.8 -1.0
MSNY epP pP 13 44 11.2 -1.4
MSNY esP sP 13 44 18.0 -4.0
PKME Peaks-Kenny Pk 68.31 0 eP P 13 43 50.5 -0.9
PKME epP pP 13 44 13.4 +0.1
PKME esP sP 13 44 20.1 -2.5
JFWS Jewell Farm 68.66 344 eP P 13 43 51.8 -1.8
JFWS e*PP pP 13 44 12.9 -2.6
JFWS e*SP sP 13 44 22.0 -2.8
JFWS pmax pmax
comp=Z,22nm,0.6s,mb5.2
JFWS Jewell Farm 68.66 344 eP P 13 43 51.8 -1.8
comp=Z,22nm,0.6s,mb5.2
JFWS epP pP 13 44 12.9 -2.6
JFWS esP sP 13 44 21.9 -2.8
TAOE Nuku Hiva Isla 68.76 269 eLR LR 14 04 46.0
comp=Z,501nm,27.0s
115A Sonoran Desert 69.05 322 ⇓P P 13 43 57.0 +1.1
baz=69
LIC Lamto 69.50 73 ⇑iP P 13 43 59.3 +0.5
comp=Z,52nm,0.8s,mb5.1
LIC Lamto 69.50 73 ⇑iP P 13 43 59.3 +0.5
comp=Z,26nm,0.8s,mb5.1
DBIC Dimbokro 69.86 73 P P 13 44 01.7 +0.8
comp=Z,63nm,0.8s,mb5.5,baz=218,slow=6.4,SNR=50
DBIC pP pP 13 44 23.4 +0.5
comp=Z,21nm,0.9s,baz=204,slow=8.3,SNR=3.7
DBIC LR LR 14 13 50.6
comp=Z,64nm,18.6s,baz=208,slow=35
DBIC Dimbokro 69.86 73 eP P 13 44 01.7 +0.8
DBIC pmax pmax
comp=Z,62nm,0.8s
DBIC Dimbokro 69.86 73 eP P 13 44 01.7 +0.8
comp=Z,62nm,0.8s,mb5.5
X15A Humboldt 70.38 324 ⇑P P 13 44 04.4 +0.3
baz=71
Y14A Wickenburg 70.40 323 ⇓P P 13 44 04.2 0.0
baz=71
WUAZ Wupatki 70.70 325 eP P 13 44 06.8 +0.8
comp=Z,16nm,0.8s,mb4.9
WUAZ epP pP 13 44 28.5 +0.4
X14A Yava 70.73 323 ⇓P P 13 44 07.2 +0.9
baz=71
Y13A Salome 70.77 322 ⇑P P 13 44 07.1 +0.6
baz=71
GLA Glamis 70.79 321 eP P 13 44 07.3 +0.7
GLA e*PP pP 13 44 28.9 +0.3
GLA Glamis 70.79 321 ⇓P P 13 44 07.2 +0.6
baz=71
Y12C Blythe 71.12 322 ⇑P P 13 44 09.2 +0.6
baz=71
DVTC Desert V Tower 71.26 320 ⇑P P 13 44 10.4 +1.0
baz=71
ISCO Idaho Springs 71.29 331 eP P 13 44 09.6 0.0
ISCO e*PP pP 13 44 31.7 0.0
ISCO pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
ISCO Idaho Springs 71.29 331 eP P 13 44 09.6 0.0
comp=Z,7.3nm,0.8s,mb4.6
ISCO epP pP 13 44 31.7 0.0
ISCO esP sP 13 44 41.8 +0.9
PV01 Paradox Valley 71.31 328 eP P 13 44 09.9 +0.2
PV01 epP pP 13 44 31.9 +0.1
X13A Yucca 71.34 323 ⇓P P 13 44 10.9 +0.9
baz=72
W14A Seligman 71.39 323 ⇓P P 13 44 11.2 +0.9
baz=72
SMCO Snowmass 71.39 330 eP P 13 44 10.8 +0.5
comp=Z,21nm,0.9s,mb5.0
SMCO epP pP 13 44 32.5 +0.2
MONP Monument Peak 71.61 320 ⇑P P 13 44 12.6 +1.0
baz=72
BAR Barrett 71.61 319 eP P 13 44 12.3 +0.7
BAR epP pP 13 44 33.8 +0.1
PV10 Paradox Valley 71.73 328 eP P 13 44 12.1 -0.2
PV10 epP pP 13 44 32.9 -1.5
W13A Hualapai Mount 71.75 323 ⇓P P 13 44 13.2 +0.8
baz=72
IRM Iron Mountain 71.78 321 ⇑P P 13 44 13.0 +0.4
baz=72
EGOM La Gomera 71.93 47 P P 13 44 12.4 -1.0
comp=Z,46nm,0.6s,mb5.5
PFO Pinyon Flat Ob 72.14 320 ⇓P P 13 44 15.3 +0.5
baz=72
BELC Belle Mtn. 72.15 321 ⇑P P 13 44 15.5 +0.7
baz=72
TBI Tubuai 72.32 252 eLR LR 14 06 27.8
comp=Z,130nm,31.5s
CCAN Las Canadas 72.38 48 P P 13 44 16.3 +0.1
comp=Z,8.1nm,0.5s,mb4.8
PHWY Pilot Hill 72.46 332 eP P 13 44 16.9 +0.3
PHWY epP pP 13 44 38.3 -0.4
V12A Nelson 72.74 323 ⇑P P 13 44 19.1 +0.8
baz=73
HEC Hector,Ludlow 72.93 321 ⇓P P 13 44 20.1 +0.6
baz=73
SRU San Rafael 73.02 328 eP P 13 44 20.2 +0.2
SRU e*PP pP 13 44 41.5 -0.6
SRU pmax pmax
comp=Z,15nm,0.6s,mb5.0
SRU San Rafael 73.02 328 eP P 13 44 20.2 +0.2
comp=Z,15nm,0.6s,mb5.0
SRU epP pP 13 44 41.5 -0.6
U12A Valley of Fire 73.08 323 ⇓P P 13 44 20.9 +0.6
baz=73
TUQ Turquoise Mtn. 73.13 322 ⇓P P 13 44 21.5 +0.9
baz=73
CCUT Cedar City 73.28 325 eP P 13 44 22.5 +1.0
CCUT epP pP 13 44 44.6 +1.0
BFSC Mount Baldy St 73.29 320 ⇑P P 13 44 22.3 +0.8
baz=74
MSU Marysvale 73.39 326 eP P 13 44 22.7 +0.6
MSU e*PP pP 13 44 44.3 0.0
SHPR Sheep Range 73.48 323 eP P 13 44 23.3 +0.6
SHPR epP pP 13 44 45.5 +0.7
ARUT Antelope Range 73.50 325 eP P 13 44 23.7 +0.9
ARUT e*PP pP 13 44 45.6 +0.7
TMUT Trail Mountain 73.50 327 eP P 13 44 23.3 +0.5
TMUT epP pP 13 44 45.5 +0.5
RWWY Rawlins 73.53 332 eP P 13 44 23.4 +0.4
comp=Z,20nm,0.9s,mb4.8
RWWY epP pP 13 44 45.1 0.0
GSC Goldstone 73.54 321 eP P 13 44 23.6 +0.6
GSC e*PP pP 13 44 45.5 +0.3
GSC Goldstone 73.54 321 ⇓P P 13 44 23.9 +0.8
baz=74
EYMN Ely 73.68 345 eP P 13 44 21.8 -2.1
comp=Z,17nm,0.9s,mb4.8
EYMN epP pP 13 44 44.6 -1.4
EYMN esP sP 13 44 51.8 -3.5
SBA Scott Base 73.88 191 eP P 13 44 26.8 +1.8
SBA e*PP pP 13 44 49.8 +2.7
SBA pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
SBA Scott Base 73.88 191 eP P 13 44 26.8 +1.8
comp=Z,7.1nm,1.0s,mb4.3
SBA epP pP 13 44 49.8 +2.6
EDW2 Edwards Air Fo 73.93 320 ⇑P P 13 44 25.7 +0.4
baz=74
U10A Ash Meadows, A 74.07 322 ⇓P P 13 44 27.2 +1.1
baz=74
LRMC Laurel Mountai 74.18 321 ⇑P P 13 44 27.3 +0.6
baz=74
RSSD Black Hills 74.22 335 eP P 13 44 26.8 -0.2
RSSD e*PP pP 13 44 48.9 -0.3
RSSD pmax pmax
comp=Z,14nm,0.8s,mb4.7
RSSD Black Hills 74.22 335 eP P 13 44 26.8 -0.2
comp=Z,14nm,0.8s,mb4.8
RSSD epP pP 13 44 48.9 -0.3
CFTV Fuerteventura 74.23 49 P P 13 44 26.2 -0.8
comp=Z,2.4nm,0.4s,mb4.3
MPU Maple Canyon 74.27 328 eP P 13 44 27.6 +0.3
comp=Z,8.2nm,0.7s,mb4.6
MPU epP pP 13 44 50.3 +0.8
PPT Papeete 74.31 257 eLR LR 14 07 21.7
comp=Z,662nm,32.2s,baz=112
PPT Papeete 74.31 257 LR LR 14 07 56.6
comp=Z,121nm,19.3s,baz=290,slow=28
DAU Daniels Canyon 74.39 328 eP P 13 44 28.9 +0.9
DAU e*PP pP 13 44 50.7 +0.6
FURC Furnace Creek, 74.40 322 ⇓P P 13 44 29.0 +1.0
baz=75
NLU North Lily Min 74.44 327 eP P 13 44 28.7 +0.5
NLU epP pP 13 44 51.4 +1.0
MPMC Manual Prospec 74.47 321 ⇓P P 13 44 28.4 0.0
baz=75
DAC Darwin (Calif) 74.68 321 eP P 13 44 30.4 +0.7
DAC e*PP pP 13 44 51.4 -0.5
ISA Isabella 74.76 321 eP P 13 44 30.7 +0.6
ISA e*PP pP 13 44 52.7 +0.4
ISA pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
ISA Isabella 74.76 321 eP P 13 44 30.7 +0.6
comp=Z,7.5nm,0.8s,mb4.5
ISA epP pP 13 44 52.7 +0.4
ISA Isabella 74.76 321 ⇓P P 13 44 30.7 +0.6
baz=75
VNDA Vanda 74.90 190 P P 13 44 32.7 +1.8
comp=Z,3.1nm,0.9s,mb4.0,baz=134,slow=5.5,SNR=12
VNDA pP pP 13 44 55.1 +2.0
comp=Z,2.5nm,1.0s,baz=167,slow=6.3,SNR=4.2
VNDA Vanda 74.90 190 P P 13 44 32.7 +1.8
VNDA *PP pP 13 44 55.1 +2.0
VNDA pmax pmax
comp=Z,3.0nm,0.9s
VNDA pmax pmax
comp=Z,3.0nm,1.0s
VNDA Vanda 74.90 190 eP P 13 44 32.3 +1.3
comp=Z,6.0nm,1.2s,mb4.2
SYO Syowa Base 74.97 159 eP P 13 44 31.0 -0.3
SYO Syowa Base 74.97 159 ePcP PcP 13 44 42.2 -2.5
SYO Syowa Base 74.97 159 epP pP 13 44 52.6 -0.9
DUG Dugway 74.99 327 eP P 13 44 32.1 +0.7
DUG e*PP pP 13 44 53.5 -0.1
DUG pmax pmax
comp=Z,20nm,1.0s,mb4.8
DUG Dugway 74.99 327 eP P 13 44 32.1 +0.7
comp=Z,20nm,1.0s,mb4.8
DUG epP pP 13 44 53.5 -0.2
TCUT Toone Canyon 75.00 329 eP P 13 44 32.1 +0.6
TCUT epP pP 13 44 54.3 +0.6
PKM Peak Mountain 75.03 319 ⇓P P 13 44 32.5 +0.8
baz=75
TRCR Troy Canyon 75.05 324 eP P 13 44 32.4 +0.6
TRCR epP pP 13 44 53.6 -0.4
GRAC Grapevine Rang 75.07 322 ⇑P P 13 44 32.8 +0.9
baz=75
CWC Cottonwood Cre 75.08 321 ⇓P P 13 44 32.6 +0.6
baz=75
Q12A Willow Creek R 75.16 325 ⇓P P 13 44 32.9 +0.5
baz=75
VES Vestal, Richgr 75.24 320 ⇓P P 13 44 33.2 +0.3
baz=75
SMMC Simmler 75.42 319 ⇑P P 13 44 34.7 +0.8
baz=76
BW06 Boulder Array 75.44 331 eP P 13 44 33.3 -0.7
PDAR Pinedale Array 75.44 331 P P 13 44 33.3 -0.7
comp=Z,1.6nm,0.5s,mb4.0,baz=134,slow=7.0,SNR=19
PDAR pP pP 13 44 55.5 -0.7
comp=Z,2.7nm,0.8s,baz=151,slow=6.8,SNR=4.3
HWUT Hardware Ranch 75.46 329 eP P 13 44 34.0 -0.2
comp=Z,19nm,0.8s,mb4.9
HWUT epP pP 13 44 55.8 -0.6
S09A Goldfield 75.50 323 ⇓P P 13 44 34.8 +0.5
baz=76
P12A McGill 75.52 325 ⇑P P 13 44 34.8 +0.3
baz=76
TIN Tinemaha 75.59 322 ⇑P P 13 44 35.9 +1.0
baz=76
BGU Big Grassy Mou 75.65 327 eP P 13 44 34.6 -0.6
BGU epP pP 13 44 56.8 -0.7
TPH Tonopah 75.75 323 eP P 13 44 36.2 +0.4
TPH e*PP pP 13 44 58.2 +0.2
TPH pmax pmax
comp=Z,13nm,0.9s,mb4.7
TPH Tonopah 75.75 323 eP P 13 44 36.2 +0.4
comp=Z,13nm,0.9s,mb4.7
TPH epP pP 13 44 58.2 +0.2
TPH esP sP 13 45 07.6 +0.3
R09A Tonopah 75.78 323 ⇓P P 13 44 36.1 +0.2
baz=76
HELL Mitchell Peak, 75.79 321 ⇓P P 13 44 36.1 +0.1
baz=76
MTUM Tungsten Hills 75.99 322 eP P 13 44 38.0 +0.8
MTUM epP pP 13 44 59.9 +0.4
MTUM esP sP 13 45 09.7 +1.0
O12A Currie 76.02 326 ⇑P P 13 44 37.8 +0.5
baz=76
HVU Hansel Valley 76.17 328 eP P 13 44 38.2 0.0
HVU e*PP pP 13 45 00.3 -0.2
HVU pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
HVU Hansel Valley 76.17 328 eP P 13 44 38.2 +0.1
comp=Z,8.0nm,0.8s,mb4.5
HVU epP pP 13 45 00.3 -0.1
MLAC Mammoth Lakes 76.34 322 ⇓P P 13 44 39.9 +0.7
baz=76
O11A Cowboy Ranch, 76.39 325 ⇓P P 13 44 40.1 +0.6
baz=77
KCC Kaiser Creek 76.40 321 ⇓P P 13 44 39.6 +0.1
baz=77
R08A Mina 76.43 323 ⇑P P 13 44 40.1 +0.4
baz=77
P10A Eureka 76.45 325 ⇑P P 13 44 40.3 +0.6
baz=77
REDW Red Top Meadow 76.49 330 eP P 13 44 39.9 0.0
comp=Z,16nm,0.9s,mb4.8
REDW epP pP 13 45 01.6 -0.7
REDW esP sP 13 45 09.0 -2.5
LOHW Long Hollow 76.57 331 eP P 13 44 40.5 0.0
comp=Z,23nm,1.0s,mb4.9
LOHW epP pP 13 45 02.3 -0.4
NVAR Mina Array Bea 76.60 323 P P 13 44 40.8 +0.2
comp=Z,3.1nm,0.8s,mb4.1,baz=183,slow=7.1,SNR=20
NVAR pP pP 13 45 02.3 -0.6
comp=Z,5.7nm,0.9s,baz=143,slow=6.7,SNR=9.3
TPAW Teton Pass 76.63 330 eP P 13 44 41.2 +0.4
comp=Z,48nm,1.3s,mb5.1
TPAW epP pP 13 45 02.8 -0.3
RRI2 Red Ridge 76.69 330 eP P 13 44 41.2 +0.1
comp=Z,16nm,0.7s,mb4.9
RRI2 epP pP 13 45 03.0 -0.4
Q08A Gabbs 76.70 323 ⇑P P 13 44 41.2 0.0
baz=77
MOOW Moose Ponds 76.74 331 eP P 13 44 41.2 -0.2
comp=Z,5.7nm,0.7s,mb4.4
MOOW epP pP 13 45 02.9 -0.8
R07C Lee Vining 76.78 322 ⇑P P 13 44 42.3 +0.7
baz=77
ULM Lac du Bonnet 76.92 343 P P 13 44 40.8 -1.7
comp=Z,7.6nm,0.6s,mb4.6,baz=155,slow=5.6,SNR=16
ULM pP pP 13 45 03.0 -1.7
comp=Z,6.4nm,0.7s,baz=150,slow=8.4,SNR=5.4
ULM Lac du Bonnet 76.92 343 eP P 13 44 40.2 -2.3
comp=Z,40nm,1.6s,mb4.9
ULM epP pP 13 45 02.7 -2.0
IMW Indian Meadow 76.95 331 eP P 13 44 45.7 +3.1
comp=Z,21nm,1.1s,mb4.8
IMW epP pP 13 45 07.5 +2.6
O10A Cortez Mining, 76.95 325 ⇑P P 13 44 43.0 +0.4
baz=77
M12A Wells 76.96 327 ⇓P P 13 44 43.0 +0.4
baz=77
FLWY Flagg Ranch 76.98 331 eP P 13 44 43.2 +0.4
comp=Z,30nm,0.7s,mb5.1
FLWY epP pP 13 45 05.2 +0.1
HAST UC Hastings Re 77.08 319 ⇑P P 13 44 43.3 0.0
baz=77
S06C San Francisco 77.09 321 ⇓P P 13 44 43.5 +0.1
baz=77
LAO LASA Array 77.22 335 eP P 13 44 44.0 -0.1
comp=Z,17nm,0.8s,mb4.8
LAO epP pP 13 45 05.8 -0.6
WAKR Walker 77.29 322 eP P 13 44 45.6 +1.2
WAKR epP pP 13 45 07.5 +0.7
R06C Coleville 77.31 322 ⇑P P 13 44 45.2 +0.6
baz=78
YFT Old Faithful 77.33 331 eP P 13 44 46.5 +1.8
PACP Pacheco Peak 77.34 320 ⇓P P 13 44 45.5 +0.8
baz=78
P08A Dixie Valley 77.37 324 ⇓P P 13 44 45.8 +0.9
baz=78
M11A Holland Ranch, 77.41 326 ⇑P P 13 44 45.7 +0.5
baz=78
YMR Madison River 77.56 331 eP P 13 44 46.5 +0.5
comp=Z,15nm,0.7s,mb4.8
YMR epP pP 13 45 08.7 +0.4
R05C Kirkwood Meado 77.79 322 ⇓P P 13 44 47.8 +0.6
baz=78
GCMT Greycliff 77.88 333 eP P 13 44 47.3 -0.5
GCMT epP pP 13 45 09.8 -0.4
QLMT Earthquake Lak 77.89 331 eP P 13 44 48.9 +1.1
QLMT epP pP 13 45 11.0 +0.8
SCHQ Schefferville 77.93 2 P P 13 44 46.8 -1.3
comp=Z,9.0nm,0.8s,mb4.6,baz=22,slow=18,SNR=9.9
SCHQ pP pP 13 45 10.1 -0.2
comp=Z,2.4nm,0.5s,baz=166,slow=11,SNR=3.1
SCHQ Schefferville 77.93 2 eP P 13 44 46.3 -1.7
PAHR Pah Rah Range 78.09 323 eP P 13 44 50.0 +1.0
comp=Z,17nm,0.7s,mb4.9
PAHR epP pP 13 45 11.5 +0.2
O07A Toulon 78.13 324 ⇓P P 13 44 49.4 +0.2
baz=78
SUR Sutherland 78.16 120 eP P 13 44 51.8 +2.5
comp=Z,24nm,0.7s,mb5.0
N08A GE Springer Mi 78.17 324 ⇓P P 13 44 48.6 -0.8
baz=78
LAVA Lava Cap Winer 78.20 322 ⇑P P 13 44 49.2 -0.3
baz=78
M09A Marrel Ranch, 78.27 325 ⇓P P 13 44 50.4 +0.5
baz=78
HLID Hailey 78.31 328 eP P 13 44 50.6 +0.5
comp=Z,25nm,0.9s,mb4.9
HLID epP pP 13 45 13.0 +0.5
P05C Yuba Gap, Truc 78.50 322 ⇓P P 13 44 52.2 +1.0
baz=79
MCMT McKenzie Canyo 78.53 330 eP P 13 44 51.8 +0.5
MCMT epP pP 13 45 14.0 +0.3
TOA0 Torodi Ar. Sit 78.56 70 eP P 13 44 51.8 +0.2
TORD Torodi Ar. Bea 78.56 70 P P 13 44 52.0 +0.4
comp=Z,59nm,0.6s,mb5.6,baz=252,slow=5.2,SNR=284
TORD pP pP 13 45 15.9 +2.0
comp=Z,15nm,0.6s,baz=259,slow=5.4,SNR=3.3
TORD LR LR 14 20 12.7
comp=Z,64nm,19.1s,baz=205,slow=36
BOZ Bozeman (W) 78.62 331 eP P 13 44 51.4 -0.4
BOZ e*PP pP 13 45 13.3 -0.9
BOZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
BOZ Bozeman (W) 78.62 331 eP P 13 44 51.4 -0.5
comp=Z,4.3nm,0.7s,mb4.4
BOZ epP pP 13 45 13.3 -0.9
Q04C Lincoln 78.62 321 ⇓P P 13 44 52.5 +0.7
baz=79
O06A Flanigan 78.66 323 ⇓P P 13 44 52.3 +0.2
baz=79
BEKR Beckwourth 78.75 323 ⇑P P 13 44 52.9 +0.4
baz=79
M08A Happy Creek Ra 78.77 325 ⇓P P 13 44 53.0 +0.4
baz=79
L09A Wilkinson Ranc 78.81 326 ⇑P P 13 44 53.0 +0.2
baz=79
DLMT Dillon 78.83 331 eP P 13 44 53.3 +0.3
comp=Z,22nm,1.0s,mb4.9
DLMT epP pP 13 45 14.9 -0.5
CVS Carmenet Viney 78.92 320 ⇑P P 13 44 53.7 +0.2
baz=79
N06A Buffalo Meadow 79.06 323 ⇓P P 13 44 54.4 +0.1
baz=79
LRM Limekiln Ridge 79.12 331 eP P 13 44 54.7 +0.1
ORV Oroville 79.18 322 ⇑P P 13 44 55.2 +0.3
baz=79
L08A Fields 79.28 325 ⇓P P 13 44 55.5 +0.1
baz=80
K09A Rome 79.32 326 ⇑P P 13 44 55.6 -0.1
baz=80
O04C Chester 79.46 322 ⇓P P 13 44 56.5 +0.1
baz=80
ELFS Eagle Lake Fie 79.47 323 ⇓P P 13 44 57.4 +0.9
baz=80
HRY Holter Researc 79.53 332 eP P 13 44 56.9 +0.1
HRY epP pP 13 45 19.4 +0.1
WVOR Wild Horse Val 79.61 325 eP P 13 44 56.8 -0.4
WVOR pmax pmax
comp=Z,20nm,1.6s,mb4.7
WVOR Wild Horse Val 79.61 325 eP P 13 44 56.8 -0.5
comp=Z,20nm,1.6s,mb4.7
L07A Adell 79.68 325 ⇓P P 13 44 58.2 +0.5
baz=80
EGMT Eagleton 79.70 334 eP P 13 44 57.2 -0.5
comp=Z,22nm,1.1s,mb4.9
M06C Likely Place G 79.73 323 ⇑P P 13 44 58.0 +0.1
baz=80
K08A Mann Creek Ran 79.74 326 ⇓P P 13 44 58.0 +0.1
baz=80
GASB Alder Springs 79.94 321 ⇑P P 13 44 59.5 +0.4
baz=80
HATC Hat Creek Radi 80.01 323 ⇑P P 13 44 58.9 -0.5
baz=80
TSUM Tsumeb 80.09 107 eP P 13 45 01.9 +2.1
comp=Z,44nm,1.0s,mb5.2
TSUM epP pP 13 45 24.4 +2.1
TSUM esP sP 13 45 33.7 +2.2
M05C Lookout 80.20 323 ⇓P P 13 45 00.2 -0.2
baz=80

I09A	**Lost Marbles R**	**80.25**	**327**	⇑P	**P**	**13 45 00.4**	**-0.2**
	baz=80						
CHMT	**Chamberlain Mo**	**80.31**	**331**	eP	**P**	**13 45 01.2**	**+0.2**
CHMT				epP	pP	13 45 23.5	+0.1
WDC	**Whiskeytown Da**	**80.46**	**322**	eP	**P**	**13 45 00.6**	**-1.2**
WDC				e*PP	pP	13 45 22.5	-1.8
L05A	**Lakeview**	**80.50**	**324**	⇓P	**P**	**13 45 02.7**	**+0.6**
	baz=81						
MSO	**Missoula**	**80.55**	**331**	eP	**P**	**13 45 02.4**	**+0.1**
MSO				epP	pP	13 45 24.9	+0.1
I08A	**Drewsey**	**80.62**	**326**	⇑P	**P**	**13 45 03.1**	**+0.5**
	baz=81						
BMO	**Blue Mountains**	**80.67**	**328**	eP	**P**	**13 45 02.6**	**-0.3**
	comp=Z,25nm,1.0s,mb5.0						
BMO				epP	pP	13 45 24.9	-0.5
H09A	**Durkee**	**80.71**	**327**	⇓P	**P**	**13 45 03.6**	**+0.5**
	baz=81						
K06A	**Valley Falls**	**80.71**	**325**	⇓P	**P**	**13 45 03.6**	**+0.4**
	baz=81						
M04C	**Macdoel**	**80.87**	**323**	⇑P	**P**	**13 45 04.2**	**+0.2**
	baz=81						
J06A	**Christmas Vall**	**80.97**	**325**	⇓P	**P**	**13 45 04.7**	**+0.1**
	baz=81						
N02C	**Big Bar**	**81.05**	**322**	⇑P	**P**	**13 45 05.0**	**0.0**
	baz=81						
H08A	**Prairie City**	**81.10**	**327**	⇑P	**P**	**13 45 05.4**	**+0.2**
	baz=81						
L04A	**Klamath Falls**	**81.17**	**323**	⇓P	**P**	**13 45 05.5**	**0.0**
	baz=81						
M02C	**Callahan**	**81.17**	**322**	⇑P	**P**	**13 45 04.8**	**-0.8**
	baz=81						
I07A	**Izee**	**81.22**	**326**	⇑P	**P**	**13 45 06.2**	**+0.3**
	baz=81						
YBH	**Yreka Blue Hor**	**81.32**	**323**	eP	**P**	**13 45 05.4**	**-1.0**
YBH				e*PP	pP	13 45 27.5	-1.4
YBH	**Yreka Blue Hor**	**81.32**	**323**	⇓P	**P**	**13 45 05.3**	**-1.1**
	baz=82						
I06A	**Prineville**	**81.48**	**326**	⇑P	**P**	**13 45 07.7**	**+0.4**
	baz=82						
J05A	**Fort Rock**	**81.57**	**325**	⇓P	**P**	**13 45 07.9**	**+0.2**
	baz=82						
BSMT	**Bassoo Peak**	**81.70**	**331**	eP	**P**	**13 45 08.3**	**-0.1**
BSMT				epP	pP	13 45 31.0	+0.1
F08A	**Pendleton**	**82.06**	**328**	⇓P	**P**	**13 45 10.2**	**-0.2**
	baz=82						
VIPM	**Ingram Point**	**82.09**	**326**	P	**P**	**13 45 19.0**	**+8.6**
I05A	**Bend**	**82.19**	**325**	⇑P	**P**	**13 45 11.3**	**+0.4**
	baz=82						
WALA	**Waterton Lakes**	**82.24**	**332**	eP	**P**	**13 45 10.8**	**-0.5**
	comp=Z,19nm,0.8s,mb5.0						
WALA				epP	pP	13 45 32.9	-0.9
MAW	**Mawson**	**82.71**	**163**	P	**P**	**13 45 13.5**	**-0.2**
	comp=Z,3.4nm,0.8s,mb4.2,baz=216,slow=6.9,SNR=11						
MAW				pP	pP	13 45 37.1	+0.9
	comp=Z,23nm,1.0s,baz=201,slow=14,SNR=15						
MAW				LR	LR	14 19 21.3	
	comp=Z,97nm,21.5s,baz=235,slow=34						
MAW	**Mawson**	**82.71**	**163**	P	**P**	**13 45 13.5**	**-0.2**
MAW				*PP	pP	13 45 37.1	+0.9
MAW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAW				pmax	pmax		
	comp=Z,23nm,1.0s						
MAW	**Mawson**	**82.71**	**163**	eP	**P**	**13 45 14.3**	**+0.6**
	comp=Z,35nm,1.1s,mb5.1						
MAW				epP	pP	13 45 37.0	+0.7
HAWA	**Hanford**	**82.86**	**328**	eP	**P**	**13 45 14.1**	**-0.4**
	comp=Z,0.6nm,0.7s						
HAWA				epP	pP	13 45 36.8	-0.2
J02A	**Umpqua**	**82.89**	**324**	⇑P	**P**	**13 45 14.5**	**-0.1**
	baz=83						
G05A	**Wamic**	**82.95**	**326**	⇑P	**P**	**13 45 14.9**	**0.0**
	baz=83						
H04A	**Detroit Lake**	**83.02**	**325**	⇑P	**P**	**13 45 14.7**	**-0.6**
	baz=83						
BOSA	**Boshof**	**83.11**	**118**	P	**P**	**13 45 16.8**	**+1.1**
	comp=Z,24nm,0.6s,mb5.2,baz=202,slow=19,SNR=60						
BOSA				pP	pP	13 45 39.9	+1.6
	comp=Z,8.0nm,0.8s,baz=345,slow=3.2,SNR=2.7						
BOSA				LR	LR	14 15 11.9	
	comp=Z,94nm,20.5s,baz=334,slow=30						
BOSA	**Boshof**	**83.11**	**118**	P	**P**	**13 45 16.8**	**+1.1**
BOSA				*PP	pP	13 45 39.9	+1.6
BOSA				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.2						
BOSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
BOSA	**Boshof**	**83.11**	**118**	eP	**P**	**13 45 17.0**	**+1.3**
	comp=Z,24nm,0.6s,mb5.2						
I03A	**Eugene**	**83.13**	**324**	⇑P	**P**	**13 45 15.8**	**0.0**
	baz=83						
G04A	**Mulino**	**83.53**	**325**	⇑P	**P**	**13 45 18.0**	**+0.1**
	baz=84						
MPOR	**Mary's Peak**	**83.63**	**324**	P	**P**	**13 45 18.7**	**+0.3**
EBG	**Ellensburg**	**83.73**	**328**	P	**P**	**13 45 18.7**	**-0.2**
MTMW	**Mount Mitchell**	**83.95**	**326**	P	**P**	**13 45 19.4**	**-0.7**
ETW	**Entiat**	**84.10**	**328**	P	**P**	**13 45 20.6**	**-0.2**
EGRO	**El Granado**	**84.11**	**45**	P	**P**	**13 45 21.6**	**+0.7**
	comp=Z,40nm,1.0s,mb5.2						
PBEJ	**Beja**	**84.15**	**44**	eP	**P**	**13 45 22.8**	**+1.7**
	comp=Z,49nm,1.4s,mb5.1						
FCC	**Fort Churchill**	**84.32**	**347**	eP	**P**	**13 45 20.0**	**-1.9**
FCC				e*PP	pP	13 45 43.2	-1.4
FCC				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
FCC	**Fort Churchill**	**84.32**	**347**	eP	**P**	**13 45 20.0**	**-1.9**
	comp=Z,18nm,0.8s,mb5.0						
FCC				epP	pP	13 45 43.2	-1.4
PTOM	**Tomar**	**84.74**	**43**	eP	**P**	**13 45 24.4**	**+0.4**
	comp=Z,120nm,1.2s,mb5.7						
EMIN	**Mina Concepcio**	**84.77**	**45**	P	**P**	**13 45 24.3**	**+0.1**
	comp=Z,107nm,0.9s,mb5.8						
LBTB	**Lobatse**	**84.79**	**115**	eP	**P**	**13 45 25.6**	**+1.3**
LBTB				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
LBTB	**Lobatse**	**84.79**	**115**	eP	**P**	**13 45 25.6**	**+1.3**
	comp=Z,16nm,0.7s,mb5.1						
ESPR	**Espera**	**84.80**	**46**	P	**P**	**13 45 24.6**	**+0.3**
	comp=Z,31nm,0.5s,mb5.5						
PESTR	**Estremoz**	**84.81**	**44**	eP	**P**	**13 45 25.3**	**+0.9**
	comp=Z,61nm,1.3s,mb5.4						
EJIF	**Jimena Fronter**	**84.83**	**47**	P	**P**	**13 45 25.9**	**+1.4**
EJIF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
EJIF	**Jimena Fronter**	**84.83**	**47**	P	**P**	**13 45 25.9**	**+1.4**
	comp=Z,22nm,0.9s,mb5.1						
EBAD	**Badajoz**	**85.12**	**44**	P	**P**	**13 45 25.9**	**0.0**
	comp=Z,21nm,0.6s,mb5.2						
EDM	**Edmonton**	**85.20**	**335**	eP	**P**	**13 45 24.0**	**-2.3**
EDM				e*PP	pP	13 45 47.0	-2.0
EMIJ	**Mijas**	**85.36**	**47**	P	**P**	**13 45 26.4**	**-0.7**
	comp=Z,41nm,0.9s,mb5.4						
PCBR	**Castelo Branco**	**85.45**	**43**	eP	**P**	**13 45 27.5**	**-0.1**
	comp=Z,52nm,2.2s,mb5.1						
PVIS	**Viseu**	**85.70**	**42**	eP	**P**	**13 45 29.6**	**+0.8**
MTE	**Manteigas**	**85.73**	**43**	eP	**P**	**13 45 29.4**	**+0.4**
	comp=Z,52nm,1.3s,mb5.3						
MTE	**Manteigas**	**85.73**	**43**	eP	**P**	**13 45 29.5**	**+0.5**
ELOJ	**Sierra Loja**	**86.09**	**47**	P	**P**	**13 45 31.8**	**+1.0**
ELOJ				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
ELOJ	**Sierra Loja**	**86.09**	**47**	P	**P**	**13 45 31.8**	**+1.1**
	comp=Z,8.7nm,0.5s,mb4.9						
PVRL	**Vila Real**	**86.14**	**42**	eP	**P**	**13 45 31.4**	**+0.4**
ELUQ	**Luque**	**86.24**	**46**	P	**P**	**13 45 32.0**	**+0.5**
ELUQ				pmax	pmax		
	comp=Z,79nm,0.8s,mb5.7						
ELUQ	**Luque**	**86.24**	**46**	P	**P**	**13 45 32.0**	**+0.5**
	comp=Z,79nm,0.8s,mb5.7						
ERON	**Agron**	**86.25**	**47**	P	**P**	**13 45 31.8**	**+0.3**
	comp=Z,8.3nm,0.5s,mb4.9						
ELOB	**Lobios**	**86.27**	**41**	P	**P**	**13 45 30.8**	**-0.9**
	comp=Z,12nm,0.4s,mb5.2						
EADA	**Adamuz**	**86.37**	**46**	P	**P**	**13 45 31.8**	**-0.3**
	comp=Z,70nm,0.9s,mb5.6						
ECOG	**Cogollos-Vega**	**86.55**	**47**	P	**P**	**13 45 32.9**	**-0.1**
ECOG				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
ECOG	**Cogollos-Vega**	**86.55**	**47**	P	**P**	**13 45 32.9**	**-0.2**
	comp=Z,3.5nm,0.5s,mb4.5						
EBER	**Berja**	**86.81**	**48**	P	**P**	**13 45 33.1**	**-1.2**
	comp=Z,59nm,1.3s,mb5.4						
PBRG	**Braganca**	**87.04**	**42**	eP	**P**	**13 45 35.6**	**+0.2**
EQES	**Quesada**	**87.17**	**47**	P	**P**	**13 45 35.5**	**-0.6**
	comp=Z,12nm,0.7s,mb4.9						
EHUE	**Huescar**	**87.50**	**47**	P	**P**	**13 45 37.4**	**-0.2**
EHUE				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
EHUE	**Huescar**	**87.50**	**47**	P	**P**	**13 45 37.4**	**-0.2**
	comp=Z,4.9nm,0.8s,mb4.5						
ESDC	**Sonseca Array**	**87.59**	**45**	P	**P**	**13 45 38.5**	**+0.5**
	comp=Z,5.5nm,0.8s,mb4.6,baz=265,slow=4.0,SNR=17						
ESDC				pP	pP	13 46 01.3	+0.5
	comp=Z,0.3nm,0.3s,baz=42,slow=40,SNR=1.9						
ESDC				LR	LR	14 19 50.7	
	comp=Z,78nm,20.4s,baz=130,slow=32						
ESDC	**Sonseca Array**	**87.59**	**45**	P	**P**	**13 45 37.9**	**-0.2**
	comp=Z,6.7nm,0.6s,mb4.8						
ESLA	**Sonseca Array**	**87.59**	**45**	eP	**P**	**13 45 38.5**	**+0.5**
	comp=Z,2.8nm,0.9s,mb4.3						
EPON	**Pontenova**	**87.67**	**40**	P	**P**	**13 45 37.3**	**-1.1**
	comp=Z,31nm,0.8s,mb5.4						
EVIA	**Vianos**	**87.99**	**46**	P	**P**	**13 45 39.9**	**0.0**
EVIA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
EVIA	**Vianos**	**87.99**	**46**	P	**P**	**13 45 39.9**	**0.0**
	comp=Z,7.2nm,0.6s,mb4.9						
ETOB	**Tobarra**	**88.63**	**47**	P	**P**	**13 45 42.6**	**-0.3**
	comp=Z,55nm,1.1s,mb5.5						
ECHE	**Chera**	**89.51**	**46**	P	**P**	**13 45 47.4**	**+0.3**
ECHE				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
ECHE	**Chera**	**89.51**	**46**	P	**P**	**13 45 47.4**	**+0.3**
	comp=Z,6.3nm,0.6s,mb4.9						
EBEN	**Beniarda**	**89.55**	**47**	P	**P**	**13 45 48.4**	**+1.1**
	comp=Z,83nm,1.3s,mb5.7						
EMOS	**Mosqueruela**	**90.23**	**46**	P	**P**	**13 45 47.6**	**-2.8**
	comp=Z,22nm,1.0s,mb5.2						
CASY	**Casey**	**90.62**	**180**	eP	**P**	**13 45 53.7**	**+1.4**
	comp=Z,11nm,1.0s,mb4.9						
CASY				epP	pP	13 46 14.8	-0.4
ERTA	**Horta de San J**	**91.06**	**45**	P	**P**	**13 45 54.5**	**+0.2**
	comp=Z,8.2nm,0.5s,mb5.1						
SJPF	**Ste Jean**	**91.17**	**43**	eP	**P**	**13 45 54.4**	**-0.4**
	comp=Z,38nm,1.1s,mb5.2						
SJPF	**Ste Jean**	**91.17**	**43**	eP	**P**	**13 45 54.4**	**-0.4**
SJPF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.1						
SJPF	**Ste Jean**	**91.17**	**43**	eP	**P**	**13 45 54.4**	**-0.4**
	comp=Z,19nm,1.1s,mb5.1						
ETSF	**Etsaut**	**91.48**	**43**	eP	**P**	**13 45 56.8**	**+0.6**
EPOB	**Poblet**	**91.75**	**45**	P	**P**	**13 45 56.0**	**-1.5**
	comp=Z,12nm,0.7s,mb5.2						
EBIE	**Bielsa**	**91.81**	**44**	P	**P**	**13 45 55.4**	**-2.4**
	comp=Z,9.5nm,0.6s,mb5.2						
EPF	**Esparros**	**92.11**	**44**	eP	**P**	**13 45 59.4**	**+0.2**
YKA	**Yellowknife Ar**	**92.75**	**341**	P	**P**	**13 46 00.4**	**-1.7**
	comp=Z,5.7nm,0.7s,mb5.0,baz=137,slow=4.4,SNR=12						
YKA				pP	pP	13 46 23.5	-1.5
	comp=Z,6.3nm,0.6s,baz=142,slow=4.3,SNR=8.4						
LFF	**La Frestale**	**93.32**	**42**	eP	**P**	**13 46 04.6**	**-0.1**
	comp=Z,59nm,1.0s,mb5.6						
LFF	**La Frestale**	**93.32**	**42**	eP	**P**	**13 46 04.6**	**-0.1**
LFF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.6						
LFF	**La Frestale**	**93.32**	**42**	eP	**P**	**13 46 04.6**	**-0.1**
	comp=Z,29nm,1.0s,mb5.6						
MTLF	**Montolieu**	**93.46**	**44**	eP	**P**	**13 46 05.1**	**-0.3**
	comp=Z,38nm,1.2s,mb5.3						
MTLF	**Montolieu**	**93.46**	**44**	eP	**P**	**13 46 05.1**	**-0.3**
MTLF				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.3						
MTLF	**Montolieu**	**93.46**	**44**	eP	**P**	**13 46 05.1**	**-0.3**
	comp=Z,19nm,1.2s,mb5.3						
MFF	**Saint Martin d**	**93.62**	**40**	eP	**P**	**13 46 05.9**	**-0.2**
RJF	**Les Rejaudoux**	**93.98**	**42**	eP	**P**	**13 46 07.3**	**-0.5**
	comp=Z,66nm,1.4s,mb5.5						
RJF				eR			
	comp=Z,71nm,20.5s						
RJF	**Les Rejaudoux**	**93.98**	**42**	eP	**P**	**13 46 07.3**	**-0.5**
RJF				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.5						
RJF				MLR	MLR		
	comp=Z,70nm,20.5s						
RJF	**Les Rejaudoux**	**93.98**	**42**	eP	**P**	**13 46 07.3**	**-0.5**
	comp=Z,33nm,1.4s,mb5.5						
RJF				LR	LR		
	comp=Z,70nm,20.5s						
CAF	**Calviac**	**94.13**	**43**	eP	**P**	**13 46 08.4**	**-0.1**
	comp=Z,11nm,0.9s,mb4.9						
CAF	**Calviac**	**94.13**	**43**	eP	**P**	**13 46 08.4**	**-0.1**
CAF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.8						
CAF	**Calviac**	**94.13**	**43**	eP	**P**	**13 46 08.4**	**-0.1**
	comp=Z,5.3nm,0.9s,mb4.9						
TCF	**Toulx Ste Croi**	**94.88**	**41**	eP	**P**	**13 46 10.8**	**-1.1**
	comp=Z,34nm,1.2s,mb5.3						
TCF	**Toulx Ste Croi**	**94.88**	**41**	eP	**P**	**13 46 10.8**	**-1.1**
TCF				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.3						
TCF	**Toulx Ste Croi**	**94.88**	**41**	eP	**P**	**13 46 10.8**	**-1.1**
	comp=Z,17nm,1.2s,mb5.3						
KEST	**Kesra**	**94.92**	**53**	P	**P**	**13 46 13.3**	**+1.3**
	comp=Z,3.4nm,1.0s,mb4.8,baz=264,slow=5.6,SNR=7.3						
KEST				LR	LR	14 28 44.6	
	comp=Z,40nm,18.0s,baz=87,slow=35						
BGF	**Bois d'Agland**	**95.40**	**41**	eP	**P**	**13 46 13.9**	**-0.3**
AVF	**Avril sur Loir**	**95.81**	**41**	eP	**P**	**13 46 15.6**	**-0.6**
	comp=Z,25nm,1.2s,mb5.2						
AVF	**Avril sur Loir**	**95.81**	**41**	eP	**P**	**13 46 15.6**	**-0.6**
AVF				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.2						
AVF	**Avril sur Loir**	**95.81**	**41**	eP	**P**	**13 46 15.6**	**-0.6**
	comp=Z,13nm,1.2s,mb5.2						
SSF	**Saint Saulge**	**96.03**	**41**	eP	**P**	**13 46 16.3**	**-0.8**
SMF	**Signal de Mont**	**96.04**	**42**	eP	**P**	**13 46 16.8**	**-0.4**
	comp=Z,34nm,1.2s,mb5.4						
SMF	**Signal de Mont**	**96.04**	**42**	eP	**P**	**13 46 16.8**	**-0.4**
SMF				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.3						
SMF	**Signal de Mont**	**96.04**	**42**	eP	**P**	**13 46 16.8**	**-0.4**
	comp=Z,17nm,1.2s,mb5.3						
LMR	**La Mourre**	**96.23**	**45**	eP	**P**	**13 46 17.5**	**-0.5**
	comp=Z,62nm,1.2s,mb5.6						
LMR	**La Mourre**	**96.23**	**45**	eP	**P**	**13 46 17.5**	**-0.5**
LMR				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.6						
LMR	**La Mourre**	**96.23**	**45**	eP	**P**	**13 46 17.5**	**-0.5**
	comp=Z,31nm,1.2s,mb5.6						
LOR	**Lormes**	**96.34**	**41**	eP	**P**	**13 46 17.7**	**-0.9**
LOR				eR			
	comp=Z,75nm,19.5s						
LOR	**Lormes**	**96.34**	**41**	eP	**P**	**13 46 17.7**	**-0.9**
LOR				LR	LR		
	comp=Z,70nm,19.5s						
ORIF	**Oris-en-Rattie**	**96.53**	**44**	eP	**P**	**13 46 20.2**	**+0.8**
	comp=Z,24nm,1.1s,mb5.3						
ORIF				eR			
	comp=Z,75nm,22.5s						
ORIF	**Oris-en-Rattie**	**96.53**	**44**	eP	**P**	**13 46 20.2**	**+0.8**
ORIF				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.2						
ORIF	**Oris-en-Rattie**	**96.53**	**44**	eP	**P**	**13 46 20.2**	**+0.8**
	comp=Z,12nm,1.1s,mb5.2						
MBDF	**Montbardon**	**97.01**	**44**	eP	**P**	**13 46 22.2**	**+0.6**
	comp=Z,17nm,1.1s,mb5.1						
MBDF	**Montbardon**	**97.01**	**44**	eP	**P**	**13 46 22.2**	**+0.6**
MBDF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.1						
MBDF	**Montbardon**	**97.01**	**44**	eP	**P**	**13 46 22.2**	**+0.6**
	comp=Z,8.4nm,1.1s,mb5.1						
LPL	**La Plagne**	**97.33**	**44**	eP	**P**	**13 46 23.9**	**+0.9**
	comp=Z,23nm,1.1s,mb5.2						
LPL	**La Plagne**	**97.33**	**44**	eP	**P**	**13 46 23.9**	**+0.9**
LPL				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.2						
LPL	**La Plagne**	**97.33**	**44**	eP	**P**	**13 46 23.9**	**+0.9**
	comp=Z,11nm,1.1s,mb5.2						
LPG	**La Plagne**	**97.33**	**44**	eP	**P**	**13 46 24.1**	**+1.1**
	comp=Z,26nm,0.9s,mb5.3						
LPG	**La Plagne**	**97.33**	**44**	eP	**P**	**13 46 24.1**	**+1.1**
LPG				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.4						
LPG	**La Plagne**	**97.33**	**44**	eP	**P**	**13 46 24.1**	**+1.1**
	comp=Z,13nm,0.9s,mb5.3						
BAIF	**Baives**	**97.83**	**39**	eP	**P**	**13 46 24.6**	**-0.7**
GIVF	**Givet**	**98.20**	**39**	eP	**P**	**13 46 26.4**	**-0.5**
HINF	**Hinteralfeld**	**98.40**	**41**	eP	**P**	**13 46 26.1**	**-1.7**
CDF	**Champ du Feu**	**98.91**	**41**	eP	**P**	**13 46 29.6**	**-0.5**
	comp=Z,8.4nm,0.9s,mb5.0						
CDF	**Champ du Feu**	**98.91**	**41**	eP	**P**	**13 46 29.6**	**-0.5**
CDF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb5.0						
CDF	**Champ du Feu**	**98.91**	**41**	eP	**P**	**13 46 29.6**	**-0.5**
	comp=Z,4.2nm,0.9s,mb5.0						
AKASG	**Malin Array Be**	**113.19**	**43**	PKiKP	PKiKP	13 51 25.7	-1.2
	comp=Z,1.5nm,0.6s,baz=265,slow=2.7,SNR=9.9						
BRTR	**Keskin Array B**	**114.40**	**56**	PKP	PKiKP	13 51 29.2	-0.1
	comp=Z,1.2nm,0.8s,baz=199,slow=2.6,SNR=6.4						
BRTR	**Keskin Array B**	**114.40**	**56**	⇑iPKIKP	PKiKP	13 51 29.2	-0.1
MALT	**Malatya**	**117.84**	**58**	ePKIKP	PKPdf	13 51 36.9	+1.0
OBN	**Obninsk**	**118.02**	**39**	ePKIKP	PKPdf	13 51 35.1	-1.1
OBN				e		13 51 57.2	
OBN				e		13 52 47.9	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	**Kislovodsk**	**121.62**	**52d**	iPKIKP	PKPdf	13 51 43.3	+0.2
ASAR	**Alice Springs**	**127.97**	**208**	PKP	PKPdf	13 51 55.8	+0.5
	comp=Z,1.7nm,0.7s,baz=130,slow=1.7,SNR=15						
ASAR				pPKP	pPKPdf	13 52 18.9	-0.2
	comp=Z,2.4nm,0.7s,baz=125,slow=1.8,SNR=8.3						
AS31	**Alice Springs**	**127.97**	**208**	ePKPdf	PKPdf	13 51 55.7	+0.4
ARU	**Arti**	**130.04**	**35**	⇑iPKIKP	PKPdf	13 51 59.4	+0.2
TIXI	**Tiksi**	**130.57**	**352**	⇑iPKIKP	PKPdf	13 51 59.1	-1.1
WRA	**Warramunga Arr**	**131.03**	**210**	PKP	PKPdf	13 52 01.9	+0.8
	comp=Z,0.6nm,0.5s,baz=156,slow=1.7,SNR=6.8						
WRA				pPKP	pPKPdf	13 52 26.4	+1.5
	comp=Z,5.2nm,1.0s,baz=159,slow=1.6,SNR=8.0						
WRA				SKPbc	SKPbc	13 55 18.9	+0.9
	comp=Z,3.3nm,0.9s,baz=155,slow=3.9,SNR=12						
ZRNK	**Zerenda**	**136.97**	**36**	ePKIKP	PKPdf	13 52 12.6	+0.3
CHKZ	**Chkalovo**	**137.48**	**34**	ePKPdf	PKPdf	13 52 13.5	+0.3
CHKZ				epPKPdf	pPKPdf	13 52 37.2	+0.2
CHKZ				esPKPdf		13 52 44.5	
BRVK	**Borovoye**	**137.61**	**35**	ePKIKP	PKPdf	13 52 13.6	+0.2
YAK	**Yakutsk**	**139.20**	**346**	⇑iPKIKP	PKPdf	13 52 15.6	-0.7
NVS	**Novosibirsk**	**142.62**	**26**	ePKHKP		13 52 16.5	
NVS				pmax	pmax		
	comp=Z,18nm,1.2s						
NVS				pmax	pmax		
	comp=N,5.0nm,1.0s						
ZAL	**Zalesovo**	**143.91**	**26**	PKP	PKPdf	13 52 22.6	-2.2
	comp=N,8.0nm,0.6s,baz=174,slow=2.8,SNR=30						
ZAL				pPKP	pPKPdf	13 52 49.0	+0.4
	comp=N,5.5nm,0.7s,baz=169,slow=2.7,SNR=3.2						
EKS2	**Erkin-Say**	**144.12**	**49**	P	PKPdf	13 52 24.8	-0.3
	SNR=18						
AML	**Almayashu**	**144.24**	**50**	P	PKPdf	13 52 25.8	+0.5
	SNR=34						
USP	**Ospenovka**	**144.39**	**47**	P	PKPdf	13 52 25.0	-0.6
	SNR=18						
AAK	**Ala-Archa**	**144.62**	**48**	P	PKPdf	13 52 26.8	+0.8
	SNR=26						
AAK	**Ala-Archa**	**144.62**	**48**	ePKPdf	PKPdf	13 52 25.7	-0.3
FRU	**Bishkek**	**144.63**	**48**	ePKIKP	PKPdf	13 52 26.0	0.0
FRU				pmax	pmax		
	comp=Z,150nm,1.6s						
CHMS	**Chumysh**	**144.66**	**48**	P	PKPdf	13 52 26.3	+0.2
	SNR=28						
UCH	**Uchtor**	**144.78**	**49**	P	PKPdf	13 52 27.9	+1.6
	SNR=9.6						
KBK	**Karagaybulak**	**144.92**	**48**	P	PKPdf	13 52 27.3	+0.8
	SNR=38						
YSS	**Yuzh-Sakhalins**	**145.02**	**320**	⇑iPKIKP	PKPdf	13 52 25.7	-1.0
TKM2	**Tokmak 2**	**145.26**	**47**	P	PKPbc	13 52 28.4	+1.4
	SNR=29						
KZA	**Kyzart**	**145.34**	**49**	P	PKPdf	13 52 29.6	+2.3
	SNR=16						
BOD	**Bodaibo**	**145.50**	**357**	⇓iPKP2	PKPab	13 52 26.0	-2.1
BOD				pmax	pmax		
	comp=Z,60nm,0.9s						
BOD				pmax	pmax		
	comp=Z,48nm,0.8s						
MKAR	**Makanchi Array**	**147.50**	**37**	PKPbc	PKPbc	13 52 30.8	-2.8
	comp=Z,31nm,0.7s,baz=336,slow=2.7,SNR=70						
MKAR				pPKPbc	pPKPbc	13 52 57.8	+0.6
	comp=Z,20nm,0.7s,baz=338,slow=2.9,SNR=9.8						
MKAR	**Makanchi Array**	**147.50**	**37**	PKPbc	PKPbc	13 52 30.8	-2.8
MKAR				pPKPbc	pPKPbc	13 52 57.8	+0.6
HYB	**Hyderabad**	**149.58**	**95**	i PKP	PKPbc	13 52 40.0	+1.1
CIT	**Chita**	**151.31**	**356**	ePKIKP	PKPbc	13 52 43.2	+0.2
CIT				e		13 52 50.9	
CIT				pmax	pmax		
	comp=Z,52nm,1.3s						
WMQ	**Urumqi**	**152.34**	**37**	ePKP	PKPdf	13 52 36.0	-2.5
WMQ				PP	PP		
	comp=Z,98nm,8.0s						
WMQ				LR	LR		
	comp=N,89nm,19.0s						
WMQ				LR	LR		
	comp=E,85nm,18.0s						
WMQ				LR	LR		
	comp=Z,78nm,19.0s						
ZAK	**Zakamensk**	**152.48**	**10**	ePKIKP	PKPdf	13 52 39.2	+0.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MJAR	**Matsushiro Arr**	**152.70**	**305**	PKPbc	PKPbc	13 52 45.8	-0.4
	comp=Z,4.2nm,0.9s,baz=83,slow=1.7,SNR=13						
MJAR				PKPab	PKPab	13 52 55.4	-1.8
	comp=Z,1.7nm,0.7s,baz=72,slow=3.0,SNR=5.3						
MJAR				pPKPbc	pPKPbc	13 53 09.3	-0.6
	comp=Z,10nm,0.8s,baz=87,slow=1.3,SNR=14						
MJAR	**Matsushiro Arr**	**152.70**	**305**	PKIKP	PKPbc	13 52 45.8	-0.4
MJAR						13 52 55.4	
MJAR	**Matsushiro Arr**	**152.70**	**305**	PKPbc	PKPbc	13 52 45.8	-0.4
MJAR				PKPab	PKPab	13 52 55.4	-1.8
MJAR				pPKPbc	pPKPbc	13 53 09.3	-0.6
MAJO	**Matsushiro**	**152.70**	**305**	ePKIKP	PKPbc	13 52 46.3	+0.1
MAJO				e		13 52 57.4	
MDJ	**Mudanjiang**	**153.65**	**328**	PKP	PKPdf	13 52 40.4	0.0
MDJ				PP	PP		
	comp=Z,56nm,4.2s						
SONM	**Songino Array**	**155.39**	**7**	PKP	PKPdf	13 52 43.1	+0.3
	comp=Z,2.7nm,1.0s,baz=130,slow=0.7,SNR=11						
SONM				PKPab	PKPab	13 53 07.7	-0.9
	comp=Z,5.7nm,1.0s,baz=341,slow=1.6,SNR=15						
ULN	**Ulaanbaatar**	**155.42**	**5**	⇑iPKIKP	PKPdf	13 52 43.8	+0.9
CN2	**Changchun**	**156.17**	**332**	ePKP	PKPdf	13 52 42.4	-1.5
GKN	**Gorkha**	**156.32**	**73**	eP	PKPab	13 53 12.9	+0.3
	comp=Z,52nm,0.8s						
DMN	**Daman**	**156.77**	**74**	eP	PKPab	13 53 15.2	+0.6
	comp=Z,74nm,1.0s						
KKN	**Kakani**	**156.91**	**74**	eP	PKPab	13 53 15.8	+0.6
	comp=Z,62nm,1.0s						
PKI	**Pulchoki**	**157.04**	**74**	eP	PKPab	13 53 16.2	+0.5
	comp=Z,39nm,0.9s						
GUN	**Gumba**	**157.43**	**73**	eP	PKPab	13 53 18.2	+0.8
	comp=Z,37nm,0.7s						
JIRN	**Jiri**	**157.73**	**74**	eP	PKPab	13 53 19.3	+0.6
SNPH	**Sibulan**	**161.43**	**223**	i P	PKPab	13 53 31.0	-3.8
SNPH				i S		13 53 33.0	
GTA	**Gaotai**	**161.65**	**27**	PKP	PKPdf	13 52 51.4	+1.1
HHC	**Hu-ho-hao-te**	**162.56**	**357**	ePKP	PKPdf	13 52 46.1	-5.1
HHC				PKS		13 56 18.6	
HHC				PP	PP		
	comp=Z,59nm,8.7s						
HHC				LR	LR		
	comp=N,129nm,45.5s						
HHC				LR	LR		
	comp=E,107nm,46.5s						
HHC				LR	LR		
	comp=Z,98nm,48.4s						
LZH	**Lanzhou**	**166.11**	**23**	ePKP	PKPdf	13 52 54.5	+0.1
LZH				PP	PP		
	comp=Z,119nm,9.4s						
LZH				LR	LR		
	comp=N,217nm,18.5s						
LZH				LR	LR		
	comp=Z,349nm,20.3s						
SSE	**Sheshan**	**167.73**	**311**	PKP	PKPdf	13 52 53.1	-2.5
SSE				PP	PP		
	comp=Z,99nm,4.9s						
NJ2	**Nanjing**	**168.59**	**321**	ePKP	PKPdf	13 52 55.3	-0.9
NJ2				PKS		13 56 26.0	
NJ2				PP	PP		
	comp=Z,220nm,12.0s						
NJ2				LR	LR		
	comp=N,380nm,16.0s						
NJ2				LR	LR		
	comp=E,600nm,30.0s						
KMI	**Kunming**	**172.77**	**75**	PKP	PKPdf	13 52 59.3	+0.9
GYA	**Guiyang**	**175.41**	**47**	i PKP	PKPdf	13 53 00.3	+1.0
GYA				PP	PP		
	comp=Z,120nm,8.9s						

*IDC **17** 14:07:47.7±1.8, 8.51N×92.13E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.8/23, mbtmp4.0/8, ML3.7/1, MS3.1/1, Ms1 3.1/1,*

ms1mx2.4/33, Error ellipse: s-maj=57.8km s-min=34.6km az=50.0
ISCJB **17** *14:07:50.7±0.6, 8.5N±0.1×92.12E±0.09, h33km, mb4.2/14, Error ellipse: s-maj=17.0km s-min=9.4km az=78.6*
NEIC **17** *14:07:51.2±4.6, 8.53N×92.16E, h20km±31km, mb4.5/7, Error ellipse: s-maj=15.3km s-min=8.5km az=209.0*
ISC 17 14:07:53.3±0.6**, 8.52N**±0.10×**92.14E**±0.09**, h35km, n21, σ0.89**/22**, mb4.2**/14**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**3.17**	**11**	eP	x	14 08 46.0	
PBA				eS	x	14 08 56.0	
PBA				ex	x	14 09 00.3	
	comp=N,302nm,0.3s						
PBA				ex	x	14 09 00.8	
	comp=E,265nm,0.4s						
PSI	**Prapat**	**8.82**	**130**	Pn	**Pn**	**14 09 58.0**	**-0.2**
	comp=E,0.8nm,0.3s,baz=321,slow=16,SNR=5.4						
PSI				LR	LR	14 14 07.2	
	comp=E,129nm,19.8s,baz=37,slow=43						
PSI	**Prapat**	**8.82**	**130**	Pn	**Pn**	**14 09 58.0**	**-0.2**
PSI				LR	LR	14 14 07.2	
KULM	**Kulim**	**9.03**	**110**	ePn	**Pn**	**14 09 59.9**	**-1.2**
KULM				eSn	**Sn**	**14 11 37.3**	**-4.3**
PALK	**Pallekele**	**11.40**	**265**	ePn	**Pn**	**14 10 33.4**	**-0.2**
PALK				eSn	**Sn**	**14 12 33.5**	**-6.1**
LSA	**Lhasa**	**21.09**	**358**	P	**P**	**14 12 36.3**	**+1.7**
	comp=E,7.3nm,0.7s,mb4.1						
KKM	**Kota Kinabalu**	**24.00**	**94**	eP	**P**	**14 13 06.1**	**+1.5**
AAK	**Ala-Archa**	**37.36**	**338**	eP	**P**	**14 15 03.7**	**+1.3**
	comp=E,3.8nm,0.7s,mb4.3						
MKAR	**Makanchi Array**	**39.06**	**349**	P	**P**	**14 15 16.9**	**+0.1**
	comp=E,1.1nm,0.5s,mb3.9,baz=149,slow=9.4,SNR=7.5						
MBWA	**Marble Bar**	**40.05**	**138**	eP	**P**	**14 15 26.3**	**+1.3**
	comp=E,12nm,0.6s,mb4.8						
SONM	**Songino Array**	**41.01**	**15**	P	**P**	**14 15 32.4**	**-0.5**
	comp=E,1.7nm,0.7s,mb3.8,baz=194,slow=8.2,SNR=12						
ULN	**Ulaanbaatar**	**41.20**	**15**	P	**P**	**14 15 33.5**	**-1.0**
	comp=E,1.0nm,0.7s,mb3.5						
BVAR	**Borovoye Array**	**47.76**	**342**	P	**P**	**14 16 26.6**	**-0.3**
	comp=E,1.1nm,0.5s,mb4.1,baz=151,slow=9.5,SNR=4.2						
ZRNK	**Zerenda**	**48.12**	**341**	P	**P**	**14 16 29.3**	**-0.4**
	comp=E,3.5nm,0.9s,mb4.4						
CHKZ	**Chkalovo**	**48.27**	**343**	eP	**P**	**14 16 30.7**	**-0.1**
	comp=E,4.8nm,0.5s,mb4.8						
ARU	**Arti**	**54.54**	**338**	eP	**P**	**14 17 17.0**	**-0.7**
	comp=E,11nm,1.0s,mb4.8						
FINES	**FINESS Array B**	**71.22**	**332**	P	**P**	**14 19 08.0**	**-0.8**
	comp=E,2.0nm,0.9s,mb4.1,baz=204,slow=4.2,SNR=4.0						
ARCES	**ARCESS Array B**	**74.00**	**340**	P	**P**	**14 19 25.1**	**-0.1**
	comp=E,1.1nm,0.5s,mb4.1,baz=98,slow=5.0,SNR=12						
GERES	**GERESS Array B**	**76.03**	**318**	P	**P**	**14 19 37.7**	**+0.8**
	comp=E,0.2nm,0.2s,mb3.6,baz=96,slow=5.4,SNR=4.6						
NB2	**NORSAR Subarra**	**78.20**	**331**	P	**P**	**14 19 48.1**	**-1.0**
	comp=Z,0.7nm,0.7s,mb3.7,baz=96,slow=5.3						
NOA	**NORSAR Array B**	**78.20**	**331**	P	**P**	**14 19 48.3**	**-0.8**
	comp=Z,0.9nm,0.8s,mb3.8,baz=94,slow=5.8,SNR=5.1						

BJI **17** *14:08:50.9, 7.99S×129.28E, h118km, mb4.8*
IDC **17** *14:08:56.1±4.9, 7.29S×128.60E, h87km±52km, mb4.1/6, mb1 4.2/9, mb1mx4.0/15, mbtmp4.4/9, ML4.4/3, Error ellipse: s-maj=48.6km s-min=25.7km az=69.0*
NEIC **17** *14:08:59.2±3.2, 7.46S×128.39E, h119km±35km, mb4.5/4, Error ellipse: s-maj=24.6km s-min=14.7km az=218.0*
ISCJB **17** *14:09:02.5±2.4, 7.73S±0.09×128.2E±0.1, h173km±26km, mb4.3/11, Error ellipse: s-maj=19.5km s-min=12.7km az=111.2*
ISC 17 14:09:06.5±1.7**, 7.98S**±0.08×**128.2E**±0.1**, h206km**±19km**, n21, σ0.73**/25**, mb4.1**/11**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.37**	**194**	P	**Pn**	**14 11 32.2**	**+1.8**
	1.3nm,0.3s,baz=27,slow=11,SNR=54						
FITZ				S	**Sn**	**14 13 25.4**	**-0.9**
	3.8nm,0.3s,baz=126,slow=18,SNR=5.7						
WRAB	**Tennant Creek**	**13.28**	**154**	ePn	**Pn**	**14 12 06.8**	**-0.4**
	16nm,0.6s						
WRAB				eSn	**Sn**	**14 14 25.7**	**-10**
WRA	**Warramunga Arr**	**13.29**	**154**	P	**Pn**	**14 12 06.9**	**-0.4**
	2.5nm,0.3s,baz=323,slow=13,SNR=52						
WRA				S	**S**	**14 14 28.1**	**-7.2**
	5.8nm,0.3s,baz=329,slow=22,SNR=10						
AS31	**Alice Springs**	**16.52**	**161**	ePn	**Pn**	**14 12 50.8**	**+4.1**
AS31				eSn	**S**	**14 15 40.5**	**-7.3**
ASAR	**Alice Springs**	**16.52**	**161**	P	**P**	**14 12 49.9**	**+4.3**
	1.1nm,0.3s,baz=338,slow=10,SNR=114						
ASAR				S	**S**	**14 15 48.0**	**+0.2**
	2.0nm,0.3s,baz=346,slow=25,SNR=6.3						
PMG	**Port Moresby**	**18.77**	**96**	P	**P**	**14 13 10.4**	**+0.2**
	1.6nm,0.3s,baz=263,slow=4.1,SNR=6.5						
KSM	**Kuching**	**20.18**	**297**	eP	**P**	**14 13 25.2**	**-0.1**
STKA	**Stephens Creek**	**26.84**	**154**	P	**P**	**14 14 32.8**	**+4.9**
	2.5nm,0.6s,mb4.0,baz=318,slow=20,SNR=6.2						
STKA	**Stephens Creek**	**26.84**	**154**	eP	**P**	**14 14 32.5**	**+4.6**
MJAR	**Matsushiro Arr**	**45.27**	**11**	P	**P**	**14 16 58.6**	**-4.8**
	3.3nm,0.7s,mb3.8,baz=186,slow=8.5,SNR=13						
LZH	**Lanzhou**	**49.47**	**334**	⇑P	**P**	**14 17 35.6**	**-0.2**
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.5						
LSA	**Lhasa**	**51.71**	**318**	P	**P**	**14 17 52.9**	**+0.3**
GTA	**Gaotai**	**54.01**	**333**	eP	**P**	**14 18 09.8**	**+0.5**
GTA				AMB	AMB		
	comp=Z,11nm,0.6s,mb4.6						
ULN	**Ulaanbaatar**	**58.67**	**343**	eP	**P**	**14 18 41.8**	**-0.4**
	comp=Z,2.3nm,0.5s,mb4.1						
SONM	**Songino Array**	**58.83**	**343**	P	**P**	**14 18 43.2**	**-0.2**
	comp=Z,2.9nm,0.5s,mb4.2,baz=161,slow=6.2,SNR=19						
MKAR	**Makanchi Array**	**68.09**	**328**	P	**P**	**14 19 44.8**	**+0.8**
	comp=Z,4.2nm,0.7s,mb4.2,baz=117,slow=8.1,SNR=21						
ZAL	**Zalesovo**	**71.69**	**335**	P	**P**	**14 20 04.2**	**-1.6**
	comp=Z,2.2nm,0.5s,mb4.0,baz=11,slow=5.7,SNR=7.0						
BVAR	**Borovoye Array**	**77.96**	**328**	P	**P**	**14 20 42.0**	**+0.2**
	comp=Z,1.7nm,0.5s,mb4.0,baz=134,slow=6.4,SNR=16						
BRVK	**Borovoye**	**78.03**	**328**	eP	**P**	**14 20 42.6**	**+0.4**
	comp=Z,2.1nm,0.9s,mb3.8						
ZRNK	**Zerenda**	**78.64**	**328**	eP	**P**	**14 20 45.3**	**-0.2**
	comp=Z,13nm,1.1s,mb4.5						
SUR	**Sutherland**	**100.21**	**235**	ePdif	Pdif	14 22 33.9	+4.9
	comp=Z,22nm,1.3s						

IDC **17** *14:30:20.0±1.3, 39.92S×175.21E, h51km±15km, mb3.5/3, mb1 3.7/5, mb1mx3.6/14, mbtmp3.8/5, ML3.6/2, Error ellipse: s-maj=27.3km s-min=9.0km az=133.0*
ISCJB **17** *14:30:21.7±0.3, 39.89S±0.02×175.32E±0.04, h92km±3km, mb4.0/4, Error ellipse: s-maj=5.5km s-min=3.2km az=29.4*
NEIC **17** *14:30:22.9, 39.87S×175.31E, h90km, mb4.4/2, ML4.4(WEL), After WEL.*
WEL **17** *14:30:23.0±0.1, 39.87S×175.31E, h88km±1km, ML4.4/24, Error ellipse: s-maj=0.9km s-min=0.4km az=90.0, MM 4.*
WEL Felt between Wanganui, Wellington and Hawke's Bay, maximum reported intensity.
ISC 17 14:30:22.4±0.3**, 39.90S**±0.02×**175.31E**±0.04**, h87km**±3km**, n120, σ0.86**/135**, mb4.0**/4**, 15C-9D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.29**	**300**	P	**Pn**	**14 30 36.1**	**+0.7**
WAZ				S	**Sn**	**14 30 45.8**	**+0.7**
WAZ	**Wanganui**	**0.29**	**300**	⇑PN	**Pn**	**14 30 36.1**	**+0.7**
WAZ				SN	**Sn**	**14 30 45.7**	**+0.6**
TSZ	**Takapari Road**	**0.53**	**108**	⇑P	**Pn**	**14 30 37.9**	**+0.8**
TSZ				S	**Sn**	**14 30 48.4**	**+0.4**
TSZ	**Takapari Road**	**0.53**	**108**	⇑PN	**Pn**	**14 30 37.9**	**+0.8**
TSZ				SN	**Sn**	**14 30 48.4**	**+0.4**
MOVZ	**Moawhango**	**0.60**	**35**	P	**Pn**	**14 30 37.8**	**+0.1**
MOVZ	**Moawhango**	**0.60**	**35**	PN	**Pn**	**14 30 37.8**	**+0.1**
MOVZ				SN	**Sn**	**14 30 48.4**	**-0.7**
WNVZ	**Wahianoa**	**0.61**	**22**	P	**Pn**	**14 30 38.3**	**+0.4**
WNVZ	**Wahianoa**	**0.61**	**22**	⇓PN	**Pn**	**14 30 38.3**	**+0.4**
WNVZ				SN	**Sn**	**14 30 49.0**	**-0.3**
TRVZ	**Turoa**	**0.63**	**17**	PN	**Pn**	**14 30 38.4**	**+0.4**
TRVZ				SN	**Sn**	**14 30 49.0**	**-0.5**
DRZ	**Dome Shelter**	**0.66**	**18**	P	**Pn**	**14 30 38.8**	**+0.6**
DRZ	**Dome Shelter**	**0.66**	**18**	PN	**Pn**	**14 30 38.7**	**+0.5**
FWVZ	**Far West T-bar**	**0.67**	**17**	PN	**Pn**	**14 30 38.5**	**+0.1**
FWVZ				SN	**Sn**	**14 30 49.9**	**-0.3**
TUVZ	**Tukino**	**0.69**	**23**	P	**Pn**	**14 30 39.0**	**+0.5**
TUVZ	**Tukino**	**0.69**	**23**	PN	**Pn**	**14 30 39.0**	**+0.4**
TUVZ				SN	**Sn**	**14 30 50.0**	**-0.6**
WPVZ	**Whakapapa**	**0.72**	**15**	P	**Pn**	**14 30 39.0**	**+0.1**
WPVZ	**Whakapapa**	**0.72**	**15**	PN	**Pn**	**14 30 39.0**	**+0.1**
NGZ	**Ngauruhoe**	**0.76**	**18**	P	**Pn**	**14 30 39.5**	**+0.2**
NGZ	**Ngauruhoe**	**0.76**	**18**	⇓PN	**Pn**	**14 30 39.5**	**+0.2**
NGZ				SN	**Sn**	**14 30 51.0**	**-0.8**
OTVZ	**Oturere**	**0.79**	**21**	⇓PN	**Pn**	**14 30 39.9**	**+0.4**
OTVZ				SN	**Sn**	**14 30 52.2**	**-0.2**
MRZ	**Mangatainoka R**	**0.79**	**165**	⇑P	**Pn**	**14 30 40.6**	**+1.0**
MRZ	**Mangatainoka R**	**0.79**	**165**	⇑PN	**Pn**	**14 30 40.6**	**+1.0**
MRZ				SN	**Sn**	**14 30 52.6**	**+0.2**
WTVZ	**West Tongariro**	**0.81**	**16**	P	**Pn**	**14 30 39.9**	**+0.1**
WTVZ	**West Tongariro**	**0.81**	**16**	⇓PN	**Pn**	**14 30 39.9**	**+0.1**
TWVZ	**Taurewa**	**0.83**	**7**	P	**Pn**	**14 30 40.0**	**-0.1**
TWVZ	**Taurewa**	**0.83**	**7**	PN	**Pn**	**14 30 39.8**	**-0.3**
KRVZ	**Karewarewa**	**0.84**	**18**	⇓PN	**Pn**	**14 30 40.3**	**+0.1**
KRVZ				SN	**Sn**	**14 30 52.7**	**-0.7**
VRZ	**Vera Road**	**0.88**	**331**	⇓PN	**Pn**	**14 30 40.6**	**0.0**
VRZ				SN	**Sn**	**14 30 53.6**	**-0.5**
RAEZ	**Rainy Point**	**0.93**	**311**	P	**Pn**	**14 30 41.9**	**+0.7**
RAEZ	**Rainy Point**	**0.93**	**311**	⇓PN	**Pn**	**14 30 41.9**	**+0.7**
KATZ	**Kakaramea**	**0.97**	**18**	PN	**Pn**	**14 30 41.8**	**+0.2**
TIWZ	**Tintock**	**0.98**	**153**	PN	**Pn**	**14 30 42.8**	**+1.1**
TIWZ				SN	**Sn**	**14 30 56.2**	**+0.1**
KIW	**Kapiti Island**	**1.01**	**197**	⇑P	**Pn**	**14 30 42.8**	**+0.8**
KIW	**Kapiti Island**	**1.01**	**197**	⇑PN	**Pn**	**14 30 42.8**	**+0.8**
KIW				SN	**Sn**	**14 30 56.5**	**-0.2**
RITZ	**Rihia Road**	**1.02**	**25**	P	**Pn**	**14 30 42.4**	**+0.3**
RITZ	**Rihia Road**	**1.02**	**25**	PN	**Pn**	**14 30 42.3**	**+0.2**
BFZ	**Birch Farm**	**1.06**	**138**	P	**Pn**	**14 30 43.6**	**+1.0**
BFZ	**Birch Farm**	**1.06**	**138**	PN	**Pn**	**14 30 43.6**	**+1.0**
DFE	**Dawson Falls**	**1.09**	**301**	P	**Pn**	**14 30 42.3**	**-0.7**
RATZ	**Rangitukua**	**1.09**	**19**	P	**Pn**	**14 30 42.9**	**-0.1**
RATZ	**Rangitukua**	**1.09**	**19**	PN	**Pn**	**14 30 42.9**	**-0.1**
NEZ	**North Egmont**	**1.13**	**304**	P	**Pn**	**14 30 44.4**	**+1.0**
NEZ	**North Egmont**	**1.13**	**304**	PN	**Pn**	**14 30 44.4**	**+0.9**
BKZ	**Black Stump Fm**	**1.17**	**52**	⇑P	**Pn**	**14 30 44.1**	**+0.1**
BKZ	**Black Stump Fm**	**1.17**	**52**	⇓PN	**Pn**	**14 30 44.1**	**+0.1**
BKZ				SN	**Sn**	**14 31 00.2**	**+0.1**
HATZ	**Hinemaiaia**	**1.18**	**31**	P	**Pn**	**14 30 43.8**	**-0.2**
HATZ	**Hinemaiaia**	**1.18**	**31**	PN	**Pn**	**14 30 43.8**	**-0.2**
NRZ	**Ngariki Road**	**1.20**	**298**	P	**Pn**	**14 30 44.8**	**+0.5**
NRZ	**Ngariki Road**	**1.20**	**298**	PN	**Pn**	**14 30 44.8**	**+0.5**
PXZ	**Pawanui**	**1.20**	**97**	PN	**Pn**	**14 30 44.7**	**+0.4**
CAW	**Cannon Point**	**1.22**	**188**	⇑P	**Pn**	**14 30 45.4**	**+0.9**
CAW	**Cannon Point**	**1.22**	**188**	⇑PN	**Pn**	**14 30 45.4**	**+0.8**
WATZ	**Wairara**	**1.23**	**16**	P	**Pn**	**14 30 44.7**	**0.0**
WATZ	**Wairara**	**1.23**	**16**	PN	**Pn**	**14 30 44.7**	**0.0**
PKE	**Pukeiti**	**1.24**	**304**	PN	**Pn**	**14 30 45.1**	**+0.3**
MTW	**Mount Morrison**	**1.27**	**173**	P	**Pn**	**14 30 45.8**	**+0.7**
MTW	**Mount Morrison**	**1.27**	**173**	PN	**Pn**	**14 30 45.8**	**+0.7**
NWEZ	**Newall Road**	**1.28**	**299**	P	**Pn**	**14 30 45.7**	**+0.5**
NWEZ	**Newall Road**	**1.28**	**299**	PN	**Pn**	**14 30 45.7**	**+0.4**
WHTZ	**Whakaora**	**1.33**	**23**	P	**Pn**	**14 30 46.4**	**+0.5**
WHTZ	**Whakaora**	**1.33**	**23**	PN	**Pn**	**14 30 46.4**	**+0.5**
DUWZ	**D'Urville Isla**	**1.39**	**229**	PN	**Pn**	**14 30 46.8**	**+0.2**
MRW	**Makara Radio**	**1.41**	**199**	P	**Pn**	**14 30 47.5**	**+0.7**
MRW	**Makara Radio**	**1.41**	**199**	PN	**Pn**	**14 30 47.5**	**+0.6**
HIZ	**Hauiti**	**1.43**	**346**	⇓P	**Pn**	**14 30 47.3**	**+0.2**
HIZ	**Hauiti**	**1.43**	**346**	⇑PN	**Pn**	**14 30 47.3**	**+0.2**
WEL	**Wellington**	**1.44**	**196**	P	**Pn**	**14 30 47.8**	**+0.5**
WEL	**Wellington**	**1.44**	**196**	PN	**Pn**	**14 30 47.8**	**+0.5**
SNZO	**South Karori**	**1.48**	**198**	P	**Pn**	**14 30 48.2**	**+0.4**
SNZO	**South Karori**	**1.48**	**198**	⇑PN	**Pn**	**14 30 48.2**	**+0.5**
MSWZ	**Moikau Station**	**1.51**	**182**	P	**Pn**	**14 30 48.8**	**+0.6**
MSWZ	**Moikau Station**	**1.51**	**182**	⇑PN	**Pn**	**14 30 48.8**	**+0.6**
TRWZ	**Traveller**	**1.52**	**169**	PN	**Pn**	**14 30 49.0**	**+0.7**
TCW	**Tory Channel**	**1.53**	**211**	P	**Pn**	**14 30 48.8**	**+0.4**
TCW	**Tory Channel**	**1.53**	**211**	⇑PN	**Pn**	**14 30 48.8**	**+0.4**
BHW	**Baring Head**	**1.54**	**192**	P	**Pn**	**14 30 49.0**	**+0.4**
BHW	**Baring Head**	**1.54**	**192**	⇑PN	**Pn**	**14 30 49.0**	**+0.5**
TUWZ	**Tuamarina**	**1.85**	**214**	PN	**Pn**	**14 30 52.6**	**+0.1**
NNZ	**Nelson**	**1.97**	**228**	P	**Pn**	**14 30 53.9**	**-0.2**
NNZ	**Nelson**	**1.97**	**228**	PN	**Pn**	**14 30 53.9**	**-0.3**
CMWZ	**Cape Campbell**	**2.02**	**204**	P	**Pn**	**14 30 55.6**	**+0.8**
KNZ	**Kokohu**	**2.03**	**65**	P	**Pn**	**14 30 54.4**	**-0.6**
KNZ	**Kokohu**	**2.03**	**65**	PN	**Pn**	**14 30 54.4**	**-0.5**
BSWZ	**Blackbirch Sta**	**2.11**	**210**	P	**Pn**	**14 30 56.1**	**+0.1**
URZ	**Urewera**	**2.16**	**41**	P	**Pn**	**14 30 55.6**	**-1.0**
	19nm,0.3s,baz=231,slow=6.6,SNR=208						
URZ				S	**Sn**	**14 31 21.1**	**-1.6**
	22nm,0.3s,baz=110,slow=19,SNR=22						
URZ	**Urewera**	**2.16**	**41**	P	**Pn**	**14 30 55.5**	**-1.1**
URZ	**Urewera**	**2.16**	**41**	PN	**Pn**	**14 30 55.6**	**-1.0**
TOZ	**Tahuroa Road**	**2.17**	**4**	P	**Pn**	**14 30 57.0**	**+0.2**
QRZ	**Quartz Range**	**2.31**	**246**	P	**Pn**	**14 30 57.8**	**-0.9**
MWZ	**Matawai**	**2.33**	**49**	P	**Pn**	**14 30 57.9**	**-1.0**
MWZ	**Matawai**	**2.33**	**49**	PN	**Pn**	**14 30 57.9**	**-1.0**
PUZ	**Puketiti**	**2.94**	**52**	P	**Pn**	**14 31 05.6**	**-1.4**
OTAZ	**Otara**	**2.96**	**354**	P	**Pn**	**14 31 07.8**	**+0.4**
WTAZ	**Waiatarua**	**3.02**	**349**	P	**Pn**	**14 31 09.1**	**+1.0**
KAAZ	**Kauri Point**	**3.11**	**351**	P	**Pn**	**14 31 10.0**	**+0.7**
KUZ	**Kuaotunu**	**3.17**	**6**	eP	**Pn**	**14 31 10.0**	**-0.1**
DSZ	**Denniston Nort**	**3.23**	**234**	P	**Pn**	**14 31 09.9**	**-1.1**
MXZ	**Matakaoa Point**	**3.31**	**46**	P	**Pn**	**14 31 11.0**	**-1.1**
WCZ	**Waipu Caves**	**4.03**	**349**	eP	**Pn**	**14 31 21.9**	**+0.1**
CRLZ	**Canterbury Las**	**4.19**	**208**	eP	**Pn**	**14 31 22.1**	**-1.8**
OUZ	**Omahuta**	**4.87**	**343**	eP	**Pn**	**14 31 34.2**	**+1.0**
RPZ	**Rata Peaks**	**4.96**	**218**	P	**Pn**	**14 31 32.7**	**-1.8**
	2.4nm,0.3s,baz=169,slow=5.0,SNR=34						
RPZ				S	**Sn**	**14 32 25.8**	**-4.7**
	49nm,0.3s,baz=352,slow=23,SNR=41						
RPZ	**Rata Peaks**	**4.96**	**218**	P	**Pn**	**14 31 32.4**	**-2.1**
FOZ	**Fox Glacier**	**5.57**	**227**	eP	**Pn**	**14 31 39.3**	**-3.5**
LBZ	**Lake Benmore**	**5.88**	**219**	eP	**Pn**	**14 31 43.9**	**-3.1**
ODZ	**Otahua Downs**	**6.19**	**212**	P	**Pn**	**14 31 48.3**	**-2.9**
JCZ	**Jackson Bay**	**6.42**	**227**	eP	**Pn**	**14 31 51.1**	**-3.2**
WKZ	**Wanaka**	**6.78**	**221**	eP	**Pn**	**14 31 57.2**	**-2.0**
EAZ	**Earnscleugh**	**6.93**	**218**	eP	**Pn**	**14 31 58.2**	**-3.0**
MSZ	**Milford Sound**	**7.25**	**227**	eP	**Pn**	**14 32 04.0**	**-1.7**
TUZ	**Tuapeka**	**7.34**	**213**	eP	**Pn**	**14 32 04.9**	**-2.0**
ASAR	**Alice Springs**	**38.36**	**282**	P	**P**	**14 37 36.0**	**+1.0**
	0.4nm,0.5s,mb3.5,baz=130,slow=8.6,SNR=8.7						
WB2	**Warramunga Arr**	**40.25**	**287**	eP	**P**	**14 37 52.2**	**+1.5**
WRAB	**Tennant Creek**	**40.26**	**287**	eP	**P**	**14 37 50.6**	**-0.1**
	10nm,1.1s,mb4.6						
WRA	**Warramunga Arr**	**40.26**	**287**	P	**P**	**14 37 51.9**	**+1.1**
	0.7nm,0.5s,mb3.8,baz=126,slow=8.2,SNR=21						
FITZ	**Fitzroy Crossi**	**47.87**	**282**	eP	**P**	**14 38 52.5**	**+1.0**
	8.0nm,2.0s,mb4.2						
FITZ	**Fitzroy Crossi**	**47.87**	**282**	P	**P**	**14 38 52.2**	**+0.7**
	0.6nm,0.4s,mb3.7,baz=60,slow=20,SNR=6.2						
ARCES	**ARCESS Array B**	**146.30**	**341**	PKPbc	PKPbc	14 49 51.0	-1.9
	0.6nm,0.5s,baz=70,slow=1.4,SNR=6.4						
DBIC	**Dimbokro**	**146.91**	**180**	PKPbc	PKPbc	14 49 58.7	+3.9
	1.9nm,0.6s,baz=167,slow=2.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**152.76**	**194**	PKPbc	PKPbc	14 50 10.1	+0.9
	0.7nm,0.4s,baz=167,slow=5.0,SNR=13						
TORD				PKPab	PKPab	14 50 22.3	+2.0
	0.8nm,0.6s,baz=166,slow=4.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**152.76**	**194**	PKPbc	PKPbc	14 50 10.1	+0.9
TORD				PKPab	PKPab	14 50 22.3	+2.0

ISCJB **17** *14:53:17.6±0.4, 28.85S±0.08×61.79E±0.08, h10km, mb4.4/27, MS3.5/3, Error ellipse: s-maj=12.0km s-min=10.0km az=37.9*
IDC **17** *14:53:17.6±0.5, 28.74S×61.80E, h0km, mb4.0/12, mb1 4.2/13, mb1mx4.1/24, mbtmp4.0/13, ML4.3/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/41, Error ellipse: s-maj=20.6km s-min=16.1km az=63.0*
BJI **17** *14:53:17.5, 28.64S×61.48E, h11km, mB4.8, mb4.9, Ms4.7, Msz4.4*
NEIC **17** *14:53:19.1±0.3, 28.78S×61.78E, h10km, mb4.4/12, Error ellipse: s-maj=10.5km s-min=7.5km az=204.0*
ISC 17 14:53:19.4±0.4**, 28.79S**±0.08×**61.77E**±0.08**, h10km, (h18km**±5.5km**:pP-P), n45, σ0.76**/36**, mb4.4**/27**, MS3.5**/3**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.77**	**304**	Pn	**Pn**	**14 57 14.4**	**0.0**
	1.1nm,0.3s,baz=113,slow=13,SNR=7.6						
OPO				Sn	**Sn**	**15 00 11.6**	**-9.1**
	1.7nm,0.3s,baz=5.5,slow=18,SNR=5.6						
BOSA	**Boshof**	**31.95**	**261**	P	**P**	**14 59 45.0**	**-0.4**
	4.0nm,0.8s,mb4.3,baz=121,slow=7.7,SNR=6.4						
BOSA	**Boshof**	**31.95**	**261**	eP	**P**	**14 59 44.2**	**-1.2**
	4.4nm,0.8s,mb4.3						
SUR	**Sutherland**	**35.29**	**254**	P	**P**	**15 00 14.3**	**-0.1**
	12nm,0.9s,mb4.8						
KMBO	**Kilima Mbogo**	**36.12**	**315**	LR	LR	15 11 20.1	
	comp=Z,42nm,21.4s,MS3.2,baz=90,slow=30						
MAW	**Mawson**	**38.84**	**179**	P	**P**	**15 00 44.8**	**+0.1**
	1.6nm,0.7s,mb3.9,baz=322,slow=12,SNR=6.8						
MAW				LR	LR	15 12 55.4	
	comp=Z,74nm,20.4s,MS3.5,baz=244,slow=30						
MAW	**Mawson**	**38.84**	**179**	eP	**P**	**15 00 44.5**	**-0.1**
	6.0nm,1.0s,mb4.3						
TSUM	**Tsumeb**	**41.28**	**273**	P	**P**	**15 01 05.4**	**+0.5**
	2.7nm,0.8s,mb3.9						
MBWA	**Marble Bar**	**52.66**	**96**	P	**P**	**15 02 32.4**	**-1.4**
	8.9nm,1.2s,mb4.6						
SNAA	**Sanae**	**55.00**	**200**	P	**P**	**15 02 50.8**	**-0.1**
	0.5nm,0.9s,mb3.5,baz=65,slow=6.6,SNR=2.2						
SNAA	**Sanae**	**55.00**	**200**	eP	**P**	**15 02 53.3**	**+2.4**
	2.2nm,1.0s,mb4.1						
ASPA	**Alice Springs**	**64.01**	**104**	eP	**P**	**15 03 53.2**	**+0.1**
ASAR	**Alice Springs**	**64.02**	**104**	P	**P**	**15 03 53.1**	**-0.1**
	2.2nm,0.8s,mb4.2,baz=243,slow=6.4,SNR=36						
AS31	**Alice Springs**	**64.02**	**104**	eP	**P**	**15 03 53.2**	**0.0**
VNDA	**Vanda**	**64.26**	**166**	P	**P**	**15 03 54.5**	**-0.3**
	3.5nm,0.9s,mb4.4,baz=272,slow=6.4,SNR=18						
VNDA				LR	LR	15 30 58.3	
	comp=Z,74nm,19.1s,MS3.9,baz=255,slow=35						
VNDA	**Vanda**	**64.26**	**166**	eP	**P**	**15 03 54.3**	**-0.5**
	4.0nm,1.1s,mb4.4						
VNDA				e		15 04 03.2	
SBA	**Scott Base**	**65.15**	**167**	eP	**P**	**15 04 00.9**	**+0.3**
	3.5nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**65.81**	**100**	P	**P**	**15 04 04.3**	**-0.6**
	2.1nm,0.6s,mb4.3,baz=248,slow=5.5,SNR=15						
WB2	**Warramunga Arr**	**65.82**	**100**	eP	**P**	**15 04 05.1**	**+0.2**
WRAB	**Tennant Creek**	**65.82**	**100**	eP	**P**	**15 04 05.2**	**+0.2**
	17nm,1.2s,mb5.0						
WRAB				e		15 04 20.5	
KMI	**Kunming**	**66.52**	**40**	P	**P**	**15 04 11.8**	**+2.4**
KMI				AP	pP	15 04 15.9	+3.2
KMI				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.5						
TORD	**Torodi Ar. Bea**	**71.44**	**297**	P	**P**	**15 04 39.6**	**-0.3**
	comp=Z,1.7nm,0.9s,mb4.0,baz=116,slow=5.2,SNR=6.6						
BRTR	**Keskin Array B**	**73.02**	**338**	P	**P**	**15 04 48.8**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.4,baz=136,slow=5.2,SNR=2.7						
WMQ	**Urumqi**	**76.07**	**19**	eP	**P**	**15 05 07.0**	**-0.1**
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
GTA	**Gaotai**	**76.56**	**29**	eP	**P**	**15 05 10.6**	**+0.7**
GTA				AP	pP	15 05 21.1	+7.9
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.3						
MKAR	**Makanchi Array**	**77.49**	**14**	P	**P**	**15 05 14.2**	**-1.0**
	comp=Z,0.9nm,0.7s,mb3.8,baz=203,slow=5.3,SNR=6.2						
NJ2	**Nanjing**	**81.26**	**46**	eP	**P**	**15 05 35.8**	**+0.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
ZRNK	**Zerenda**	**81.64**	**4**	eP	**P**	**15 05 36.6**	**-1.1**
	comp=Z,2.7nm,0.8s,mb4.2						
BRVK	**Borovoye**	**81.84**	**5**	eP	**P**	**15 05 39.0**	**+0.2**
	comp=Z,1.9nm,0.6s,mb4.2						
HHC	**Hu-ho-hao-te**	**83.25**	**36**	eP	**P**	**15 05 47.8**	**+1.7**
HHC				AP	pP	15 05 52.4	+3.0
HHC				XP	sP	15 05 54.8	+4.2
HHC				PP	PP	15 09 01.5	+4.0
HHC				SKS		15 16 05.6	
HHC				XS	sS	15 16 14.9	+2.9
HHC				PS		15 17 01.6	
HHC				SS	SS	15 21 35.9	+4.8
HHC				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.6						
HHC				AMB	AMB		
	comp=Z,87nm,8.6s						
HHC				LR	LR		
	comp=Z,3μm,32.2s						
AKASG	**Malin Array Be**	**84.22**	**340**	P	**P**	**15 05 51.3**	**+0.2**
	comp=Z,0.8nm,0.7s,mb4.0,baz=162,slow=4.1,SNR=6.8						
ZAL	**Zalesovo**	**84.77**	**13**	P	**P**	**15 05 53.5**	**-0.4**
	comp=Z,5.3nm,0.3s,mb5.1,baz=285,slow=4.0,SNR=27						
SONM	**Songino Array**	**86.17**	**28**	P	**P**	**15 06 00.7**	**-0.2**
	comp=Z,2.4nm,0.9s,mb4.4,baz=214,slow=4.3,SNR=11						
ULN	**Ulaanbaatar**	**86.47**	**29**	eP	**P**	**15 06 01.8**	**-0.5**
	comp=Z,2.0nm,0.8s,mb4.4						
ESDC	**Sonseca Array**	**91.50**	**315**	P	**P**	**15 06 27.3**	**+1.1**
	comp=Z,0.3nm,0.3s,mb4.1,baz=108,slow=4.5,SNR=5.3						
MDJ	**Mudanjiang**	**95.67**	**42**	P	**P**	**15 06 45.3**	**0.0**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.8						
SADO	**Sadowa**	**145.24**	**308**	PKPbc	PKPbc	15 12 56.2	-0.8
	comp=Z,4.5nm,0.9s,baz=36,slow=5.6,SNR=3.9						
SADO	**Sadowa**	**145.24**	**308**	PKPbc	PKPbc	15 12 56.2	-0.9
YKA	**Yellowknife Ar**	**146.21**	**357**	PKPbc	PKPbc	15 12 58.3	-1.7
	comp=Z,3.3nm,0.7s,baz=351,slow=3.4,SNR=6.6						
DLBC	**Dease Lake**	**149.25**	**12**	PKPbc	PKPbc	15 13 08.3	0.0
	comp=Z,1.4nm,0.6s,baz=211,slow=26,SNR=4.2						
DLBC	**Dease Lake**	**149.25**	**12**	PKPbc	PKPbc	15 13 08.3	0.0
ULM	**Lac du Bonnet**	**152.69**	**328**	PKPbc	PKPbc	15 13 14.9	-1.5
	comp=Z,1.5nm,0.5s,baz=195,slow=3.0,SNR=4.5						
ULM				PKPab	PKPab	15 13 24.0	-3.0
	comp=Z,2.9nm,0.6s,baz=59,slow=3.2,SNR=6.9						
ULM	**Lac du Bonnet**	**152.69**	**328**	PKPbc	PKPbc	15 13 14.9	-1.5
ULM				PKPab	PKPab	15 13 24.0	-3.0
PDAR	**Pinedale Array**	**164.40**	**336**	PKPab	PKPab	15 14 17.4	-0.3
	comp=Z,1.0nm,0.8s,baz=40,slow=5.8,SNR=9.2						
NVAR	**Mina Array Bea**	**170.39**	**0**	PKPab	PKPab	15 14 43.1	-1.0
	comp=Z,0.6nm,0.8s,baz=21,slow=4.6,SNR=4.7						

CSEM **17** *15:00:25.0, 37.21N×56.51E, h3km, ML3.5, After TEH*
TEH 17 15:00:45.1, 37.21N×56.51E, h3km, Mn3.5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHV	**Shirvan**	**0.99**	**71**	ePg	Pg	15 01 02.6	-1.6
ISHV				eSg	Sg	15 01 15.4	-1.7
ISFR	**Esferayen**	**1.20**	**98**	ePg	Pg	15 01 06.5	-1.6
IPAY	**Payeh**	**2.13**	**110**	ePn	Pn	15 01 17.5	-4.1
IPAY	**Payeh**	**2.13**	**110**	ePn	Pn	15 01 21.3	-0.3
IPAY				eLg		15 01 52.7	
IKIA	**Kiasar**	**2.48**	**247**	ePn	Pn	15 01 25.3	-1.2
IKIA	**Kiasar**	**2.48**	**247**	ePn	Pn	15 01 26.2	-0.3
IKIA				eSn	Sn	15 01 56.0	-1.3
IMOG	**Moghan**	**2.52**	**115**	ePn	Pn	15 01 26.7	-0.3
IMOG	**Moghan**	**2.52**	**115**	ePn	Pn	15 01 26.8	-0.2
IMOG				eSn	Sn	15 01 57.9	-0.4
IANJ	**Anjiloo**	**2.73**	**231**	ePn	Pn	15 01 29.3	-0.5
IANJ	**Anjiloo**	**2.73**	**231**	ePn	Pn	15 01 31.0	+1.2
IANJ				eSn	Sn	15 02 02.9	-0.3
ISHM	**Shahmirzad**	**2.95**	**243**	ePn	Pn	15 01 28.8	-4.0
ISHM	**Shahmirzad**	**2.95**	**243**	ePn	Pn	15 01 32.9	+0.1
ISHM				eLg		15 02 16.7	
IMYA	**Miamay**	**3.01**	**106**	ePn	Pn	15 01 33.1	-0.6
IMYA	**Miamay**	**3.01**	**106**	ePn	Pn	15 01 33.6	-0.1
IMYA				eSn	Sn	15 02 08.3	-1.9
ILAS	**Lasjerd**	**3.40**	**239**	ePn	Pn	15 01 38.7	-0.4
IFIR	**Firoozkooh**	**3.41**	**244**	ePn	Pn	15 01 36.6	-2.6
IFIR	**Firoozkooh**	**3.41**	**244**	ePn	Pn	15 01 39.3	+0.1
IFIR				eSn	Sn	15 02 18.0	-2.2
IDMV	**Damavand**	**3.97**	**247**	ePn	Pn	15 01 47.1	+0.3
IDMV	**Damavand**	**3.97**	**247**	ePn	Pn	15 01 50.1	+3.3
IDMV				eSn	Sn	15 02 31.6	-2.2
IVRN	**Varamin**	**4.46**	**242**	ePn	Pn	15 01 50.8	-2.8
IVRN	**Varamin**	**4.46**	**242**	ePn	Pn	15 01 52.2	-1.4
IVRN				eSn	Sn	15 02 43.1	-2.9
ISFB	**Sefidab**	**4.50**	**232**	ePn	Pn	15 01 47.3	-6.8
ISFB	**Sefidab**	**4.50**	**232**	ePn	Pn	15 01 52.7	-1.4
ISFB				eSn	Sn	15 02 43.1	-3.8
IGZV	**Gazvin**	**5.12**	**263**	ePn	Pn	15 02 01.5	-1.2
IGZV	**Gazvin**	**5.12**	**263**	ePn	Pn	15 02 01.9	-0.8
IGZV				eSn	Sn	15 02 59.3	-3.0
IZEF	**Zefreh**	**5.50**	**220**	ePn	Pn	15 02 05.7	-2.3
IZEF	**Zefreh**	**5.50**	**220**	ePn	Pn	15 02 07.7	-0.3
IZEF				eSn	Sn	15 03 07.6	-4.2
IKLH	**Kalahroud**	**5.60**	**228**	ePn	Pn	15 02 08.5	-0.8
IKLH	**Kalahroud**	**5.60**	**228**	ePn	Pn	15 02 12.1	+2.8
IKLH				eSn	Sn	15 03 09.6	-4.5
IRAZ	**Razeghan**	**5.61**	**253**	ePn	Pn	15 02 15.3	+5.8
IBAF	**Bafgh**	**5.66**	**188**	ePn	Pn	15 02 08.9	-1.2
IBAF	**Bafgh**	**5.66**	**188**	ePn	Pn	15 02 34.8	+25
IBAF				eSn	Sn	15 03 11.2	-4.4
IPIR	**Pirpir**	**6.46**	**227**	ePn	Pn	15 02 18.5	-2.5
IPIR	**Pirpir**	**6.46**	**227**	ePn	Pn	15 02 21.3	+0.3
IPIR				eSn	Sn	15 03 30.8	-4.4

IGQ 17 15:03:44.8, 252S±7738W, h15km±5km, Mb4.0, Ms3.8, 2C-1D, Error ellipse: s-maj=10.6km s-min=3.4km az=133.4, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PATA	**Patacocha**	**1.46**	**314**	P		Pn	15 04 12.3	+1.8
PATA				S		Sn	15 04 31.2	+1.8
ULBA	**Ulba**	**1.48**	**316**	⇓P		Pn	15 04 12.8	+2.0
ULBA				S		Sn	15 04 32.6	+2.7
RETU	**Refugio**	**1.50**	**315**	P		Pn	15 04 13.0	+1.8
RETU				S		Sn	15 04 32.5	+2.0
RUN5	**Runtun**	**1.51**	**316**	P		Pn	15 04 13.1	+1.8
RUN5				S		Sn	15 04 33.1	+2.3
JUIV	**Juive**	**1.54**	**315**	P		Pn	15 04 13.4	+1.8
JUIV				S		Sn	15 04 35.0	+3.7
TAMB	**Tambo**	**2.06**	**331**	⇑P		Pn	15 04 21.7	+2.8
VC1	**Cotopaxi 1**	**2.13**	**331**	P		Pn	15 04 22.6	+2.9
CAMI	**Rancho Maria**	**2.15**	**328**	P		Pn	15 04 23.4	+3.4
NAS1	**Nasa**	**2.17**	**330**	P		Pn	15 04 24.3	+3.9
ANTI	**Antisana**	**2.20**	**339**	⇑P		Pn	15 04 23.0	+2.3
ANTI				S		Sn	15 04 45.8	-1.9
CONE	**Cono NE Rev Vo**	**2.45**	**354**	P		Pn	15 04 26.9	+2.7
CAYR	**Refugio Cayamb**	**2.59**	**346**	P		Pn	15 04 30.4	+4.2
CAYA	**Cayambe**	**2.65**	**347**	P		Pn	15 04 30.4	+3.5
PINO	**Pino**	**2.65**	**332**	P		Pn	15 04 38.8	+12

*STR **17** 15:05:47.2±0.1, 4301N×080W, h2km±1km, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **17** 15:05:47.0±0.1, 4304N×081W, h10km, ML2.0, Error ellipse: s-maj=4.1km s-min=1.9km az=10.0*

LDG 17 15:05:47.3±0.1, 4302N×081W, h2km, Md1.9/1, Error ellipse: s-maj=4.0km s-min=2.0km az=7.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATE	**Arette**	**0.10**	**52**	Pg	Pg	15 05 49.4	+0.1
ATE				Sg	Sg	15 05 51.2	+0.6
LARF	**Larrau**	**0.13**	**276**	Pg	Pg	15 05 50.2	+0.3
LARF				Sg	Sg	15 05 52.3	+0.7
ETSF	**Etsaut**	**0.22**	**124**	*e*Pg	Pg	15 05 51.8	+0.2
ETSF				*e*Sg	Sg	15 05 54.6	+0.2
	2.6nm,0.2s						
ETSF	**Etsaut**	**0.22**	**124**	*e*Pg	Pg	15 05 51.8	+0.2
ETSF				*e*Sg	Sg	15 05 54.6	+0.2
	1.3nm,0.2s						
SJPF	**Ste Jean**	**0.32**	**287**	*e*Sg	Sg	15 05 57.0	-0.5
	1.1nm,0.2s						
SJPF	**Ste Jean**	**0.32**	**287**	*e*Sg	Sg	15 05 57.0	-0.5
	0.6nm,0.2s						

*NIED **17** 15:20:00, 4670N×14200E, h11km, Mw5.5 Best double couple: M0 2.15000×10^17 NP1:φs174.00000°, δ58.00000°, λ90.00000°. NP2:φs355.00000°, δ32.00000°, λ90.00000°.*

*IDC **17** 15:20:32.6±0.3, 4657N×14193E, h0km, mb5.6/42, mb1 5.6/46, mb1mx5.6/47, mbtmp5.6/46, ML4.9/4, MS5.1/32, Ms1 5.1/32, ms1mx4.9/45, Error ellipse: s-maj=11.5km s-min=7.8km az=90.0*

*BJI **17** 15:20:33.3, 4669N×14203E, h24km, mB5.6, mb5.5, ML5.9, Ms5.8, Msz5.7*

*JMA **17** 15:20:33.8±0.2, 4673N×14186E, h48km, M5.9*

JMA Felt III J1.

*MOS **17** 15:20:33.1±0.8, 4651N×14192E, h14km, mb6.2/146, MS5.4/57, Error ellipse: s-maj=5.9km s-min=3.2km az=108.3 Broadband fault plane solution: P waves. M0 6.70000×10^17 NP1:φs171.00000°, δ45.00000°, λ88.00000°. NP2:φs353.00000°, δ45.00000°, λ92.00000°. Principal axes: T Plg89.0000°, Azm352.0000°; N Plg1.0000°, Azm172.0000°; P Plg0.0000°, Azm262.0000°;*

MOS Felt (VII) at Gornozavodsk; (VI-VII) at Shebunino; (V) at Nevel'sk; (IV) at Kholmck, Kril'on, Ogon'ki; (III-IV) at Yuzhno-Sakhalinsk; (III) at Korsakov. Fault plane solution: P-wave C329, D22 . .

*ISCJB **17** 15:20:34.2±0.1, 4657N×001×14188E±002, h17km, mb6.0/422, MS5.3/190 Error ellipse: s-maj=1.7km s-min=1.5km az=101.9*

*SKHL **17** 15:20:34.3±1.6, 4660N×14190E, h13km±2km, mb5.6/12, mbh5.8/7, mbv6.1/8, ms5.9/8, msh6.1/6*

*BGS **17** 15:20:35.0±1.3, 4630N×14129E, h15km±999km, mb6.0*

*SZGRF **17** 15:20:35.2, 4655N×14235E, h21km, mb6.2, MS5.7, Sakhalin Island, Russia*

*NEIC **17** 15:20:35.0±0.1, 4654N×14191E, h14km, mb6.0/257, ME5.6, MS5.2/111, MW5.5, MW5.8(MOS), Error ellipse: s-maj=2.3km s-min=1.8km az=171.0, Moment Tensor Solution. s67 Moment tensor: Scale 10^17 Nm; Mrr 2.44; Mθθ 0.12; Mφφ -2.32; Mrθ 0.28; Mrφ 0.78; Mθφ -0.09; Best double couple: M0 2.50000×10^17 NP1:φs157.00000°, δ47.00000°, λ82.00000°. NP2:φs348.00000°, δ43.00000°, λ98.00000°. Principal axes: T 2.4700, Plg84.0000°, Azm1.0000°; N 0.1100, Plg6.0000°, Azm162.0000°; P -2.5800, Plg2.0000°, Azm252.0000°; Broadband fault plane solution: P waves. NP1:φs340.00000°, δ30.00000°, λ90.00000°. NP2:φs160.00000°, δ60.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm70.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm250.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [VII] at Gornozavodsk and Shebunino; [V] at Nevel'sk; [IV] at Kholmsk, Kril'on, Ogon'ki and Yuzhno-Sakhalinsk; [III] at Korsakov. Also felt at Wakkanai, Japan. Recorded [3 JMA] in northern Hokkaido.

*HRVD **17** 15:20:35.5±0.1, 4654N×14177E, h18km, MW5.7/104, Centroid moment Tensor Solution. LP body waves: s87,c183; Mantle waves: s104,c297; Half duration: 1s6 Moment tensor: Scale 10^17 Nm; Mrr 3.40±.04; Mθθ 0.15±.03; Mφφ -3.25±.04; Mrθ 0.51±.08; Mθφ 0.93±.03; Mφr -1.17±.08; Best double couple: M0 3.68000×10^17 NP1:φs347.00000°, δ35.00000°, λ95.00000°. NP2: φs162.00000°, δ55.00000°, λ87.00000°. Principal axes: T 3.6320, Plg80.0000°, Azm59.0000°; N 0.0930, Plg3.0000°, Azm164.0000°; P -3.7290, Plg10.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*CRAAG **17** 15:20:36.7, 4653N×14188E, Mb5.9*

ISC 17 15:20:35.9±0.1, 4660N×001×14186E±002, h18km, h18km±.3km: pP-P, n1775, σ0≠80/1789, mb6.0/422, MS5.3/190, 804C-182D, Sakalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**0.71**	**60**	*i* Pg	**Pg**	**15 20 48.9**	**-1.0**
YSS				AMB	AMB	15 20 50.0	
	12μm,0.8s						
YSS				AMB	AMB	15 20 50.0	
	16μm,0.8s						
YSS				AMB	AMB	15 20 50.0	
	17μm,0.8s						
YSS				*e*Sg	**Sg**	**15 20 59.1**	**-0.3**
YSS				A		15 21 02.6	
	155μm,0.7s						
YSS				AMS	AMS	15 21 23.0	
	693μm,7.0s						
YSS				AMS	AMS	15 21 23.0	
	618μm,7.0s						
YSS				AMS	AMS	15 21 23.0	
	933μm,7.0s						
YSS	**Yuzh-Sakhalins**	**0.71**	**60**	⇓*i*PN	**Pn**	**15 20 48.0**	**-3.1**
YSS				*e*		15 20 58.7	
YSS				pmax	pmax		
	comp=N,12μm,0.7s						
YSS				pmax	pmax		
	comp=E,16μm,0.7s						
YSS				pmax	pmax		
	comp=Z,15μm,0.7s						
YSS				smax			
	comp=E,155nm,0.7s						
YSS				smax			
	comp=E,360μm,3.0s						
YSS	**Yuzh-Sakhalins**	**0.71**	**60**	⇓*i*Pn	**Pn**	**15 20 48.0**	**-3.1**
YSS				*e*		15 20 58.7	
JWK2	**Keihoku**	**1.28**	**179**	P	**Pn**	**15 20 57.7**	**-1.2**
JWK2				*e*S	**Sn**	**15 21 14.8**	**-0.8**
JRR	**Rishiri**	**1.51**	**195**	⇓P	**Pn**	**15 21 00.8**	**-1.2**
JRR				*e*S	**Sn**	**15 21 21.5**	**+0.3**
JSE	**Soyaes**	**1.72**	**162**	⇑P	**Pn**	**15 21 03.8**	**-1.1**
JSE				*e*S	**Sn**	**15 21 25.3**	**-1.1**
JYG	**Yagishiri**	**2.19**	**188**	P	**Pn**	**15 21 10.0**	**-1.4**
JSS	**Shosan**	**2.20**	**180**	P	**Pn**	**15 21 10.6**	**-0.9**
UGL	**Uglegorsk**	**2.48**	**3**	*i* Pn	**Pn**	**15 21 15.6**	**+0.2**
UGL				*i* Pn	**Pn**	**15 21 15.6**	**+0.2**
UGL				AMB	AMB	15 21 16.8	
	comp=E,165nm,0.9s						
UGL				AMB	AMB	15 21 16.8	
	comp=E,526nm,0.9s						
UGL				AMB	AMB	15 21 16.8	
	comp=E,820nm,0.9s						
UGL				AMB	AMB	15 21 17.0	
	comp=E,8μm,6.0s						
UGL				AMB	AMB	15 21 17.0	
	comp=E,4μm,6.0s						
UGL				AMB	AMB	15 21 17.0	
	comp=E,8μm,6.0s						
UGL				*e*Sn	**Sn**	**15 21 44.0**	**-1.3**
UGL				A		15 21 52.5	
	comp=E,6μm,0.9s						
UGL				A		15 21 52.5	
	comp=E,11μm,0.9s						
UGL				A		15 21 52.5	
	comp=E,9μm,0.9s						
UGL	**Uglegorsk**	**2.48**	**3**	α *i*PN	**Pn**	**15 21 15.6**	**+0.2**
UGL				pmax	pmax		
	comp=N,165nm,0.9s						
UGL				pmax	pmax		
	comp=E,526nm,0.9s						
UGL				pmax	pmax		
	comp=Z,820nm,0.9s						
UGL				pmax	pmax		
	comp=N,8μm,6.0s						
UGL				pmax	pmax		
	comp=E,4μm,6.0s						
UGL				pmax	pmax		
	comp=Z,8μm,6.0s						
ASAJ	**Asahikawa**	**2.54**	**168**	Pn	**Pn**	**15 21 15.4**	**-0.8**
	comp=Z,478nm,0.3s,baz=357,slow=11,SNR=954						
ASAJ				Sn	**Sn**	**15 21 47.5**	**+0.9**
	comp=Z,931nm,0.3s,baz=308,slow=25,SNR=14						
ASAJ	**Asahikawa**	**2.54**	**168**	⇑P	**Pn**	**15 21 15.3**	**-0.9**
ASAJ				*e*S	**Sn**	**15 21 46.3**	**-0.3**
ASAJ	**Asahikawa**	**2.54**	**168**	PN	**Pn**	**15 21 15.4**	**-0.8**
ASAJ						15 21 47.5	
ASAJ				pmax	pmax		
	comp=Z,478nm,0.3s						
ASAJ				smax			
	comp=N,931nm,0.3s						
JKK2	**Kamakawa 2**	**2.80**	**167**	P	**Pn**	**15 21 19.2**	**-0.6**
JMP	**Maruseppu**	**2.80**	**157**	⇑P	**Pn**	**15 21 18.1**	**-1.7**
JHR	**Hokuryu**	**2.86**	**182**	P	**Pn**	**15 21 19.7**	**-0.9**
JTKR	**Abashiri--Toko**	**3.00**	**150**	⇑P	**Pn**	**15 21 20.9**	**-1.6**
JTKR				*e*S	**Sn**	**15 21 56.9**	**-1.1**
JAB	**Ashibetsu**	**3.11**	**175**	P	**Pn**	**15 21 23.8**	**-0.2**
JSK	**Shakotan**	**3.39**	**197**	P	**Pn**	**15 21 27.2**	**-0.7**
JNK	**Nakash**	**3.63**	**145**	P	**Pn**	**15 21 30.0**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**3.81**	**131**	*i* P	**Pn**	**15 21 32.4**	**-1.3**
YUK				AMB	AMB	15 21 40.0	
YUK	comp=N,12μm,2.0s			AMB	AMB	15 21 40.0	
YUK	comp=N,10μm,2.0s			AMB	AMB	15 21 40.0	
YUK	comp=N,12μm,2.0s			AMB	AMB	15 21 40.6	
YUK	comp=N,1μm,0.7s			AMB	AMB	15 21 40.6	
YUK	comp=N,2μm,0.7s			AMB	AMB	15 21 40.6	
YUK	comp=N,2μm,0.7s			*i* S	**Sn**	**15 22 15.0**	**-3.1**
YUK				A		15 22 20.7	
YUK	comp=N,14μm,0.7s			A		15 22 20.7	
YUK	comp=N,19μm,0.7s			A		15 22 23.0	
YUK	comp=N,63μm,2.4s			A		15 22 23.0	
YUK	comp=N,37μm,2.4s			A		15 22 23.0	
YUK	comp=N,200nm,2.4s			AMS	AMS	15 22 25.0	
YUK	comp=N,165μm,13.0s			AMS	AMS	15 22 25.0	
YUK	comp=N,103μm,13.0s			AMS	AMS	15 22 25.0	
YUK	comp=N,113μm,13.0s						
YUK	**Yuzh-Kuril'sk**	**3.81**	**131**	*e*PN	**Pn**	**15 21 33.2**	**-0.5**
TEY				*i* S	**Sn**	**15 22 17.6**	**-0.5**
TEY	**Ternei**	**3.99**	**249**	*i* P	**Pn**	**15 21 33.0**	**-3.2**
TEY				AMB	AMB	15 21 34.0	
TEY	comp=N,170nm,0.9s			AMB	AMB	15 21 34.0	
TEY	comp=N,220nm,0.9s			AMB	AMB	15 21 34.0	
TEY	comp=N,290nm,0.9s			AMB	AMB	15 21 44.0	
TEY	comp=N,15μm,10.0s			AMB	AMB	15 21 44.0	
TEY	comp=N,21μm,21.0s			AMB	AMB	15 21 44.0	
TEY	comp=N,25μm,21.0s			*e*S	**Sn**	**15 22 22.0**	**-0.5**
TEY				A		15 23 10.0	
TEY	comp=N,22μm,2.0s			A		15 23 10.0	
TEY	comp=N,1μm,2.0s			A		15 23 31.0	
TEY	comp=N,89μm,12.0s			A		15 23 31.0	
JSH	comp=N,71μm,12.0s						
TYV	**Shimam**	**4.16**	**199**	⇓P	**Pn**	**15 21 38.7**	**+0.2**
TYV	**Tymovskoe**	**4.30**	**7**	*e*P	**Pn**	**15 21 41.5**	**+1.1**
TYV				AMB	AMB	15 21 57.0	
TYV	comp=N,88nm,0.7s			AMB	AMB	15 21 57.0	
TYV	comp=N,311nm,0.7s			AMB	AMB	15 21 57.0	
TYV	comp=N,4μm,10.0s			AMB	AMB	15 21 57.0	
TYV	comp=N,6μm,10.0s			AMB	AMB	15 21 57.0	
TYV	comp=N,4μm,5.0s			*e*Pg	**Pg**	**15 21 59.2**	**+0.9**
TYV				AMS	AMS	15 26 45.0	
TYV	comp=N,38μm,10.0s			AMS	AMS	15 26 45.0	
TYV	comp=N,18μm,10.0s			AMS	AMS	15 26 45.0	
KUR	comp=N,55μm,10.0s						
KUR	**Kuril'sk**	**4.41**	**106**	*i* P	**Pn**	**15 21 38.9**	**-3.0**
KUR				AMB	AMB	15 21 54.5	
KUR	comp=N,650nm,0.6s			AMB	AMB	15 21 54.5	
KUR	comp=N,260nm,0.6s			AMB	AMB	15 21 54.5	
KUR	comp=N,2μm,0.6s			AMB	AMB	15 22 02.0	
KUR	comp=N,29μm,12.0s			*e*S	**Sn**	**15 22 26.0**	**-6.8**
KUR				A		15 22 37.0	
KUR	comp=N,9μm,1.0s			A		15 22 37.0	
KUR	comp=N,2μm,1.0s			A		15 22 50.0	
KUR	comp=N,22μm,4.0s			A		15 22 50.0	
KUR	comp=N,60μm,4.0s			AMS	AMS	15 23 35.0	
KUR	comp=N,84μm,14.0s			AMS	AMS	15 23 35.0	
KUR	comp=N,109μm,14.0s			AMS	AMS	15 23 35.0	
KUR	comp=N,82μm,14.0s						
KUR	**Kuril'sk**	**4.41**	**106**	⇓*i*PN	**Pn**	**15 21 38.5**	**-3.4**
KUR				pmax	pmax		
ERM	comp=Z,2μm,0.9s						
	Erimo	**4.68**	**168**	Pn	**Pn**	**15 21 49.3**	**+3.7**
	comp=Z,13μm,0.7s,SNR=39						
HABR	**Khabarovsk**	**4.97**	**295**	*e*P	**Pn**	**15 21 50.0**	**+0.3**
HABR				sP		15 21 54.5	
HABR				*e*Sb	**Sb**	**15 22 57.2**	**-4.7**
HABR	**Khabarovsk**	**4.97**	**295**	⇓*i*PN	**Pn**	**15 21 50.0**	**+0.3**
HABR				pmax	pmax		
	comp=Z,881nm,1.3s						
HABR				MLR	MLR		
	comp=Z,92μm,12.6s						
GRNR	**Gornyy**	**5.51**	**321**	*e*Pn	**Pn**	**15 21 57.6**	**+0.6**
GRNR				*e*S	**Sn**	**15 23 00.7**	**+0.8**
GRNR				*e*Sb	**Sb**	**15 23 15.1**	**-2.2**
GRNR				A		15 23 19.1	
	comp=Z,2μm,1.0s						
NKL	**Nikolayevsk**	**6.60**	**354**	*i* Pn	**Pn**	**15 22 08.8**	**-3.2**
NKL				AMB	AMB	15 22 11.0	
	comp=Z,270nm,0.5s						
NKL				AMB	AMB	15 22 11.0	
	comp=Z,90nm,0.5s						
NKL				AMB	AMB	15 22 11.0	
	comp=Z,280nm,0.5s						
NKL				AMB	AMB	15 22 18.0	
	comp=Z,2μm,9.0s						
NKL				AMB	AMB	15 22 18.0	
	comp=Z,2μm,9.0s						
NKL				*e*Sn	**Sn**	**15 23 22.0**	**-4.8**
NKL				A		15 23 45.0	
	comp=Z,2μm,4.0s						
NKL				A		15 23 45.0	
	comp=Z,3μm,7.0s						
NKL				AMS	AMS	15 25 23.0	
	comp=Z,50μm,15.0s						
NKL				AMS	AMS	15 25 23.0	
	comp=Z,32μm,15.0s						
NKL				AMS	AMS	15 25 23.0	
	comp=Z,64μm,15.0s						
OKH	**Okha**	**6.99**	**5**	⇑*i*Pn	**Pn**	**15 22 19.7**	**+2.3**
OKH				*i* Sn	**Sn**	**15 23 35.6**	**-0.8**
OKH				*i* Sg	Sn	15 24 27.5	+51
OKH				AMS	AMS	15 26 10.0	
	comp=Z,36μm,13.0s						
OKH				AMS	AMS	15 26 10.0	
	comp=Z,40μm,13.0s						
OKH				AMS	AMS	15 26 10.0	
	comp=Z,39μm,13.0s						
OKH	**Okha**	**6.99**	**5**	*e*PN	**Pn**	**15 22 16.2**	**-1.2**
OKH				pmax	pmax		
	comp=Z,1.0nm,0.9s						
JAW	**Awa shima**	**8.36**	**194**	P	**Pn**	**15 22 38.6**	**+2.4**
EKMR	**Ekimchan**	**8.66**	**322**	*e*P	**Pn**	**15 22 38.0**	**-2.3**
EKMR				AMB	AMB	15 22 51.4	
	comp=Z,23nm,0.5s						
EKMR				AMB	AMB	15 22 51.4	
	comp=Z,34nm,0.5s						
EKMR				AMB	AMB	15 22 51.4	
	comp=Z,77nm,0.5s						
EKMR				*e*S	**Sn**	**15 24 25.0**	**+7.6**
EKMR				A		15 25 29.5	
	comp=Z,500nm,0.6s						
EKMR				A		15 25 29.5	
	comp=Z,290nm,0.6s						
EKMR				A		15 25 29.5	
	comp=Z,310nm,0.6s						
MDJ	**Mudanjiang**	**8.82**	**261**	P	**Pn**	**15 22 43.9**	**+1.4**
MDJ				AMB	AMB		
	comp=Z,2μm,8.2s						
MDJ				LR	LR		
	comp=N,4μm,12.3s						
MDJ				LR	LR		
	comp=E,14μm,14.1s						
MDJ				LR	LR		
	comp=Z,20μm,13.2s						
MDJ	**Mudanjiang**	**8.82**	**261**	*e*Pn	**Pn**	**15 22 43.4**	**+0.9**
	comp=Z,200nm,0.9s						
MDJ				*e*Sn	**Sn**	**15 24 38.4**	**+17**
JSD	**Sado**	**8.96**	**199**	P	**Pn**	**15 22 46.9**	**+2.5**
JIZZ	**Izumozaki**	**9.36**	**196**	P	**Pn**	**15 22 52.7**	**+2.9**
JHG	**Hegura jima**	**9.48**	**204**	P	**Pn**	**15 22 55.9**	**+4.4**
JHK	**Hiroka**	**9.58**	**194**	P	**Pn**	**15 22 54.4**	**+1.5**
JSZ	**Suzu**	**9.73**	**202**	P	**Pn**	**15 22 58.4**	**+3.4**
JJN	**Nakama**	**9.88**	**197**	P	**Pn**	**15 22 58.9**	**+1.9**
JKT	**Katashina**	**10.02**	**192**	P	**Pn**	**15 23 00.0**	**+1.2**
SKR	**Severo-Kuril's**	**10.28**	**61**	*e*P	**Pn**	**15 23 04.0**	**+1.5**
SKR				AMB	AMB	15 23 10.0	
	comp=Z,200nm,1.0s						
SKR				AMB	AMB	15 23 10.0	
	comp=Z,250nm,1.0s						
SKR				AMB	AMB	15 23 10.0	
	comp=Z,450nm,1.0s						
SKR				AMB	AMB	15 23 10.0	
	comp=Z,3μm,5.0s						
SKR				*e*S	**Sn**	**15 24 58.4**	**+1.1**
SKR				A		15 25 05.5	
	comp=Z,680nm,1.4s						
SKR				A		15 25 05.5	
	comp=Z,640nm,1.4s						
SKR				A		15 25 21.0	
	comp=Z,22μm,9.0s						
SKR				A		15 25 21.0	
	comp=Z,19μm,9.0s						
SKR				A		15 25 21.0	
	comp=Z,11μm,9.0s						
SKR				AMS	AMS	15 27 46.0	
	comp=Z,18μm,13.0s						
SKR				AMS	AMS	15 27 46.0	
	comp=Z,8μm,13.0s						
SKR				AMS	AMS	15 27 46.0	
	comp=Z,19μm,13.0s						
SKR	**Severo-Kuril's**	**10.28**	**61**	*e*PN	**Pn**	**15 23 02.5**	**0.0**
SKR				*e*S	**Sn**	**15 25 06.0**	**+8.7**
SKR				pmax	pmax		
	comp=Z,360nm,1.0s						
JJH	**Hakui**	**10.38**	**203**	P	**Pn**	**15 23 07.4**	**+3.6**
MAJO	**Matsushiro**	**10.41**	**196**	⇑*e*Pn	**Pn**	**15 23 05.1**	**+0.9**
MAJO				*e*Sn	**Sn**	**15 25 09.2**	**+8.8**
MAT	**Matsushiro**	**10.41**	**196**	P	**Pn**	**15 23 05.2**	**+0.9**
MAT				S	**Sn**	**15 25 02.0**	**+1.6**
MAT	**Matsushiro**	**10.41**	**196**	P	**Pn**	**15 23 05.0**	**+0.7**
MJAR	**Matsushiro Arr**	**10.41**	**196**	Pn	**Pn**	**15 23 04.9**	**+0.6**
	comp=Z,3.5nm,0.3s,baz=12,slow=13,SNR=44						
MJAR				LR	LR	15 27 00.1	
	comp=Z,11μm,20.4s,baz=345,slow=37						
JTT	**Ttatey**	**10.54**	**200**	P	**Pn**	**15 23 08.5**	**+2.4**
JNG	**Nsakai**	**10.56**	**197**	P	**Pn**	**15 23 07.9**	**+1.5**
JRY	**Ryogami san**	**10.80**	**193**	P	**Pn**	**15 23 09.5**	**-0.1**
JGN	**Niukaw**	**10.91**	**200**	P	**Pn**	**15 23 12.6**	**+1.5**
PAU	**Pauzhetka**	**10.96**	**58**	*e*P	**Pn**	**15 23 15.1**	**+3.4**
JNT	**Takato**	**11.07**	**196**	P	**Pn**	**15 23 14.0**	**+0.7**
JKG	**Kaga**	**11.11**	**204**	P	**Pn**	**15 23 16.8**	**+2.9**
YASR	**Yasnyy**	**11.16**	**312**	*e*P	**Pn**	**15 23 12.6**	**-1.9**
YASR				AMB	AMB	15 23 18.6	
	comp=Z,9.0nm,0.6s						
YASR				AMB	AMB	15 23 18.6	
	comp=Z,32nm,0.6s						
YASR				*e*S	**Sn**	**15 25 28.0**	**+9.2**
YASR				A		15 26 55.5	
	comp=Z,1μm,1.2s						
JYN	**Shimob**	**11.37**	**194**	P	**Pn**	**15 23 18.7**	**+1.3**
JGF	**Kuroka**	**11.50**	**199**	P	**Pn**	**15 23 20.3**	**+1.2**
JGM	**Miyama**	**11.55**	**201**	P	**Pn**	**15 23 21.9**	**+2.0**
BMKR	**Bomnak**	**11.57**	**319**	*e*P	**Pn**	**15 23 19.0**	**-1.1**
ZEA	**Zeya**	**11.77**	**313**	*e*P	**Pn**	**15 23 23.7**	**+0.9**
ZEA				AMB	AMB	15 23 29.8	
	comp=Z,220nm,1.3s						
ZEA				AMB	AMB	15 23 29.8	
	comp=Z,260nm,1.3s						
ZEA				AMB	AMB	15 23 29.8	
	comp=Z,450nm,1.3s						
ZEA				AMB	AMB	15 23 34.0	
	comp=Z,1μm,12.0s						
ZEA				AMB	AMB	15 23 34.0	
	comp=Z,2μm,12.0s						
ZEA				*e*S	**Sn**	**15 25 29.5**	**-4.1**
ZEA				A		15 25 44.0	
	comp=Z,800nm,10.0s						
ZEA				A		15 25 44.0	
	comp=Z,2μm,10.0s						
ZEA				A		15 25 44.0	
	comp=Z,1μm,10.0s						
ZEA				AMS	AMS	15 28 21.0	
	comp=Z,35μm,12.0s						
ZEA				AMS	AMS	15 28 21.0	
	comp=Z,54μm,12.0s						
ZEA				AMS	AMS	15 28 21.0	
	comp=Z,62μm,12.0s						
JAO	**Obara**	**11.84**	**199**	P	**Pn**	**15 23 24.3**	**+0.5**
CN2	**Changchun**	**11.91**	**262**	⇓P	**Pn**	**15 23 27.5**	**+2.7**
CN2				PCP	PcP	15 29 12.5	+1.3
CN2				AMB	AMB		
	comp=Z,60nm,1.3s						
CN2				AMB	AMB		

comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,52µm,13.0s
JKY Yasaka 12.08 207 P Pn 15 23 29.7 +2.6
JWT Wachi 12.31 206 P Pn 15 23 32.0 +1.8
PET Petropavlovsk 12.60 53 eP Pn 15 23 38.0 +3.9
PET ⇑iP 15 23 38.2
PET AMB AMB 15 23 42.1
comp=Z,246nm,1.2s
PET AMB AMB 15 23 45.6
comp=Z,1µm,5.1s
PET AMB AMB 15 23 45.6
comp=Z,3µm,5.1s
PET AMB AMB 15 23 46.0
comp=Z,2µm,4.9s
PET AMB AMB 15 23 46.5
comp=Z,1µm,11.0s
PET AMB AMB 15 23 46.5
comp=Z,2µm,11.0s
PET AMB AMB 15 23 46.5
comp=Z,3µm,11.0s
PET AMS AMS 15 29 42.6
comp=Z,41µm,12.0s
PET AMS AMS 15 29 45.5
comp=Z,49µm,11.0s
PET Petropavlovsk 12.60 53 cePN Pn 15 23 38.0 +3.9
PET pmax pmax
comp=Z,247nm,1.2s
PET pmax pmax
comp=Z,3µm,5.1s
PET pmax pmax
comp=N,1µm,5.1s
PET pmax pmax
comp=E,2µm,4.9s
PET pmax pmax
comp=Z,3µm,10.6s
PET pmax pmax
comp=N,1µm,10.4s
PET pmax pmax
comp=E,2µm,12.9s
PET MLR MLR
comp=Z,41µm,12.0s
PET MLR MLR
comp=Z,49µm,11.0s
PET Petropavlovsk 12.60 53⇑ePn Pn 15 23 38.0 +3.9
comp=Z,247nm,1.2s
JAD Aida 13.01 209 P Pn 15 23 42.0 +2.1
JHJ Hachijo jima 2 13.56 187 Pn Pn 15 23 44.9 -2.4
comp=Z,12nm,0.3s,baz=40,slow=22,SNR=4.0
SNY Shenyang 13.94 257 ⇓P Pn 15 23 54.9 +2.4
SNY AP 15 24 03.8
SNY PP 15 24 08.3
SNY AMB AMB
comp=Z,367nm,1.2s
SNY AMB AMB
comp=Z,4µm,5.9s
SNY LR LR
comp=Z,56µm,10.8s
MA2 Magadan 14.04 19 i P Pn 15 23 54.2 +0.4
MA2 pmax pmax
comp=Z,222nm,1.2s
MA2 Magadan 14.04 19 i P Pn 15 23 54.2 +0.4
comp=Z,222nm,1.2s
INCN Inchon 14.50 237 eP Pn 15 24 01.9 +1.7
comp=Z,315nm,1.1s
CLNS Chul'man 14.64 321 c iP Pn 15 24 03.1 +1.1
CLNS eS Sn **15 26 38.0 -5.8**
CLNS pmax pmax
comp=E,21nm,1.0s
CLNS pmax pmax
comp=Z,45nm,1.0s
CLNS pmax pmax
comp=N,26nm,0.9s
CLNS smax
comp=E,798nm,11.9s
CLNS smax
comp=Z,677nm,9.9s
CLNS smax
comp=N,792nm,17.8s
CLNS MLR MLR
comp=Z,39µm,12.0s
CLNS MLR MLR
comp=N,29µm,13.0s
CLNS MLR MLR
comp=E,18µm,11.0s
HIA Hailar 15.05 288 ⇓eP Pn 15 24 08.8 +1.2
HIA e 15 27 02.2
HIA pmax pmax
comp=Z,330nm,1.0s
HIA Hailar 15.05 288⇓ePn Pn 15 24 08.8 +1.2
comp=Z,330nm,1.0s
HIA eSn Sn **15 27 02.2 +8.4**
DL2 Dalian 16.70 250 i PR Pn 15 24 31.3 +2.4
DL2 XP sP 15 24 40.3 +1.7
DL2 S Sn **15 27 38.3 +4.4**
DL2 LG1 15 29 22.9
DL2 LG2 15 29 42.4
DL2 AMB AMB
comp=Z,180nm,1.1s
DL2 AMB AMB
comp=Z,3µm,5.4s
DL2 LR LR
comp=N,22nm,10.9s
DL2 LR LR
comp=E,14µm,10.9s
DL2 LR LR
comp=Z,27µm,11.2s
YAK Yakutsk 16.96 340 c iP Pn 15 24 31.3 -0.9
YAK eS Sn **15 27 39.3 -1.0**
YAK pmax pmax
comp=N,112nm,1.2s
YAK pmax pmax
comp=Z,151nm,1.2s
YAK pmax pmax
comp=E,57nm,1.1s
YAK smax
comp=E,47nm,13.9s
YAK smax
comp=Z,95nm,8.5s
YAK smax
comp=N,22nm,11.8s
YAK MLR MLR
comp=Z,6µm,14.0s
YAK MLR MLR
comp=N,4µm,16.0s
YAK MLR MLR
comp=E,3µm,13.0s
YAK Yakutsk 16.96 340⇑iP Pn 15 24 31.3 -0.9
comp=E,151nm,1.2s
YAK eS Sn **15 27 39.3 -1.0**
CIT Chita 19.16 297 eP Pn 15 25 00.3 +1.0
CIT e 15 28 40.4
CIT pmax pmax
comp=Z,847nm,2.2s
CBIJ Chichi jima 19.47 179 P Pn 15 25 00.8 -2.2
comp=Z,14nm,0.3s,baz=25,slow=4.2,SNR=14
BJI Beijing 19.75 260 P Pn 15 25 04.9 -1.4
BJI LR LR
comp=N,19µm,19.6s
BJI LR LR
comp=E,24µm,11.6s
BJI LR LR
comp=Z,12µm,13.2s
BJT Baijiatuau 19.77 260⇑iP Pn 15 25 04.9 -1.6
BJT eS Sn **15 28 47.4 -0.7**
BJT pmax pmax
comp=Z,220nm,0.9s
BJT Baijiatuau 19.77 260⇑iP Pn 15 25 04.9 -1.5
comp=Z,220nm,0.9s
BJT epP pP 15 25 10.0 0.0
BJT eS Sn **15 28 47.4 -0.7**
BOD Bodaibo 20.27 314 ⇓iP P 15 25 11.2 +0.8
BOD pmax pmax
comp=Z,317nm,1.4s
TIA Tai'an 21.17 250 P P 15 25 19.1 -1.1
TIA S S **15 29 12.3 -2.6**
TIA XS sS 15 29 26.6 +3.5
TIA AMB AMB
comp=Z,129nm,1.2s,mb5.1
TIA LR LR
comp=N,10µm,11.0s,MS5.6
TIA LR LR
comp=E,8µm,11.0s,MS5.6
SMY Shemya 21.63 62⇑iP P 15 25 26.1 +1.1
SMY pmax pmax
comp=Z,2µm,1.7s,mb6.3
SMY Shemya 21.63 62⇑iP P 15 25 26.1 +1.0
comp=Z,2µm,1.7s,mb6.3
SSE Sheshan 22.23 233 P P 15 25 32.1 +0.6
SSE AP 15 25 39.9
SSE XP sP 15 25 43.9 +4.8
SSE S S **15 29 29.5 -6.1**
SSE XS sS 15 29 44.3 +0.4
SSE AMB AMB
comp=Z,92nm,1.5s,mb5.0
SSE AMB AMB
comp=Z,873nm,10.5s
SSE LR LR
comp=N,6µm,14.0s,MS5.2
SSE LR LR
comp=E,3µm,14.0s,MS5.2
SSE LR LR
comp=Z,4µm,12.4s,MS5.0
JOW Kunigami 22.47 213 P P 15 25 34.2 +0.1
comp=Z,146nm,0.9s,mb5.4,baz=56,slow=7.9,SNR=14
JOW LR LR 15 33 59.4
comp=Z,4µm,19.7s,MS4.8,baz=75,slow=36
HHC Hu-ho-hao-te 22.55 266 eP P 15 25 34.0 -0.9
HHC AP 15 25 38.3
HHC XP sP 15 25 41.0 -1.4
HHC PP 15 26 01.8
HHC PCP PcP 15 29 30.4 +2.3
HHC S S **15 29 34.0 -7.7**
HHC SS 15 30 14.8
HHC SCP ScP 15 33 05.5 +0.7
HHC PCS PcS 15 33 07.3 +0.3
HHC AMB AMB
comp=Z,148nm,1.5s,mb5.2
HHC AMB AMB
comp=Z,2µm,7.3s
HHC LR LR
comp=N,10µm,11.7s,MS5.9
HHC LR LR
comp=E,28µm,12.8s,MS5.9
HHC LR LR
comp=Z,26µm,13.5s,MS5.8
NJ2 Nanjing 22.86 239 eP P 15 25 38.3 +0.1
NJ2 AP 15 25 42.4
NJ2 XP sP 15 25 45.3 -0.4
NJ2 PP 15 26 07.3
NJ2 S S **15 29 42.0 -5.0**
NJ2 AMB AMB
comp=Z,170nm,1.0s,mb5.4
NJ2 AMB AMB
comp=Z,3µm,6.1s
NJ2 LR LR
comp=N,24µm,18.0s,MS5.7
NJ2 LR LR
comp=E,10µm,16.6s,MS5.7
NJ2 LR LR
comp=Z,12µm,18.2s,MS5.4
ULN Ulaanbaatar 23.55 286 ⇓P P 15 25 45.6 +0.2
SNR=117
ULN Ulaanbaatar 23.55 286⇑iP P 15 25 44.7 -0.7
ULN e*PP 15 25 51.8
ULN e 15 29 29.9
ULN pmax pmax
comp=Z,216nm,1.0s,mb5.5
ULN MLR MLR
comp=Z,4µm,20.0s,MS4.9
ULN Ulaanbaatar 23.55 286⇑iP P 15 25 44.7 -0.7
comp=Z,216nm,1.0s,mb5.5
ULN epP 15 25 51.8
ULN ePcP PcP 15 29 29.9 -0.3
ULN eScP ScP 15 33 01.2 -6.3
ULN LR LR
comp=Z,4µm,20.0s,MS4.9
BTO Baotou 23.71 267 eP P 15 25 45.1 -1.8
BTO S S **15 29 56.3 -4.6**
BTO LR LR
comp=N,6µm,11.4s,MS5.3
BTO LR LR
comp=E,3µm,11.6s,MS5.3
SONM Songino Array 23.99 286 P P 15 25 49.4 0.0
comp=E,118nm,1.0s,mb5.3,baz=80,slow=8.5,SNR=373
SONM PcP PcP 15 29 31.2 +0.1
comp=E,22nm,1.0s,baz=156,slow=2.5,SNR=5.1
SONM LR LR 15 34 49.5
comp=E,4µm,20.3s,MS4.9,baz=83,slow=36
SONM P3KPbc 15 59 05.3
comp=E,0.7nm,1.0s,baz=240,slow=2.9,SNR=3.8
SONM Songino Array 23.99 286 P P 15 25 49.4 0.0
SONM 15 29 31.2
SONM Songino Array 23.99 286 P P 15 25 49.4 0.0
SONM PcP PcP 15 29 31.2 +0.1
SONM LR LR 15 34 49.5
AMKA Amchitka 24.84 65⇑eP P 15 25 57.1 -0.1
BILL Bilibino 24.87 22 c iP P 15 25 57.9 +0.4
BILL pmax pmax
comp=Z,154nm,1.3s,mb5.4
BILL Bilibino 24.87 22⇑iP P 15 25 57.9 +0.4
comp=Z,154nm,1.3s,mb5.4
IRK Irkutsk 24.89 297 eP P 15 25 57.2 -0.4
IRK eS S **15 30 26.7 +6.9**
IRK pmax pmax
comp=Z,617nm,2.5s,mb5.7
TLY Talaya 25.30 296 P P 15 26 02.8 +1.5
comp=Z,1µm,1.0s,mb6.3,SNR=30
TLY Talaya 25.30 296 c iP P 15 26 01.4 +0.1
TLY eS S **15 30 29.4 +3.0**
TLY eSS 15 31 29.1
TLY pmax pmax
comp=Z,249nm,1.2s,mb5.6
TLY MLR MLR
comp=Z,21µm,13.0s,MS5.8
TLY Talaya 25.30 296⇑iP P 15 26 01.4 +0.1
TLY eS S **15 30 29.4 +3.0**
TLY eSS 15 31 29.1
ZAK Zakamensk 25.65 293 ⇓iP P 15 26 05.1 +0.6
ZAK pmax pmax
comp=Z,161nm,1.3s,mb5.4
TIXI Tiksi 25.87 351 eP P 15 26 03.9 -2.6
TIXI eS S **15 30 31.1 -4.4**
TIXI pmax pmax
comp=Z,104nm,1.1s,mb5.3
TIXI MLR MLR
comp=Z,11µm,13.0s,MS5.5
TIXI Tiksi 25.87 351 eP P 15 26 03.9 -2.6
comp=Z,104nm,1.1s,mb5.3
TIXI eS S **15 30 31.1 -4.4**
TIXI LR LR
comp=Z,11µm,13.0s,MS5.5
WHN Wuhan 26.64 243 eP P 15 26 13.4 0.0
WHN S S **15 30 47.0 -0.6**
WHN LR LR
comp=Z,18µm,10.6s,MS5.9
MOY Mondy 26.95 296 eP P 15 26 16.6 +0.4
MOY pmax pmax
comp=Z,208nm,1.6s,mb5.4
TATO Taipei 27.03 224⇑eP P 15 26 17.0 0.0
comp=Z,278nm,1.0s,mb5.7
TATO e 15 26 26.0
TATO LR LR
comp=Z,4µm,19.0s,MS5.0
YHNB Yeheng 27.34 224⇓eP P 15 26 21.0 +1.2
XAN Xi'an 27.86 255 P P 15 26 23.6 -0.8
XAN AP pP 15 26 27.6 -2.3
XAN PP 15 27 12.0
XAN S S **15 31 05.6 -1.2**
XAN AMB AMB
comp=Z,52nm,1.6s,mb4.9
XAN AMB AMB
comp=Z,587nm,7.7s
XAN LR LR
comp=N,8µm,14.7s,MS5.6
XAN LR LR
comp=E,10µm,15.6s,MS5.6
XAN LR LR
comp=Z,17µm,15.5s,MS5.7
QZH Quanzhou 28.50 229⇑iP P 15 26 31.0 +0.9
QZH S S **15 31 16.8 -0.1**
QZH AMB AMB
comp=Z,320nm,1.4s,mb5.9
QZH AMB AMB
comp=Z,2µm,2.9s,mb6.3
QZH LR LR
comp=N,10µm,9.9s
QZH LR LR
comp=E,4µm,9.5s
QZH LR LR
comp=Z,11µm,11.0s,MS5.7
ENH Enshi 29.88 248 PFAKE 15 26 50.0 +7.7
ENH LR LR
comp=Z,49nm,22.0s
LZH Lanzhou 30.14 263⇑iP P 15 26 45.5 +0.8
LZH AP pP 15 26 55.1 +4.9
LZH XP sP 15 26 59.0 +6.5
LZH PP PP 15 27 44.3 -8.5
LZH PPP 15 27 58.5
LZH PCP PcP 15 29 45.3 -0.5
LZH S S **15 31 40.5 -2.2**
LZH XS sS 15 31 56.6 +4.7
LZH SS SS 15 33 19.5 -32
LZH SCP ScP 15 33 25.1 -2.0
LZH PCS PcS 15 33 28.3 -0.9
LZH SCS ScS 15 37 19.3 -3.4
LZH AMB AMB
comp=Z,137nm,1.3s,mb5.5
LZH AMB AMB
comp=Z,705nm,5.4s
LZH LR LR
comp=E,11µm,13.5s
LZH LR LR
comp=Z,16µm,17.4s,MS5.7
SPIA Saint Paul Isl 30.77 52 eP P 15 26 50.8 +0.5
GTA Gaotai 31.28 272 eP P 15 26 55.0 +0.3
GTA AP pP 15 26 59.6 -0.6
GTA XP sP 15 27 01.8 -0.7
GTA PCP PcP 15 29 49.8 +1.0
GTA S S **15 32 01.5 +1.0**
GTA SCP ScP 15 33 28.4 -2.5
GTA PCS PcS 15 33 29.6 -3.4
GTA LG2 15 37 26.8
GTA AMB AMB
comp=Z,53nm,1.0s,mb5.3
GTA AMB AMB
comp=Z,115nm,5.0s
GTA LR LR
comp=N,17µm,12.2s,MS5.9
GTA LR LR
comp=E,7µm,14.1s,MS5.9
GTA LR LR
comp=Z,19µm,13.3s,MS5.9
KRAR Krasnoyarsk 31.42 306 c iP P 15 26 56.3 +0.4
KRAR pmax pmax
comp=Z,229nm,1.4s,mb5.8
KRAR MLR MLR
comp=Z,12µm,15.0s,MS5.7
HKC Hong Kong 32.99 232 P P 15 27 09.0 -0.8
HKC S S **15 32 27.0 -0.2**
GUMO Guam 33.00 175 P P 15 27 07.6 -2.2
comp=Z,58nm,0.9s,mb5.5,baz=216,slow=11,SNR=4.5
GUMO Guam 33.00 175 P P 15 27 07.6 -2.2
GUMO pmax pmax
comp=Z,58nm,1.0s,mb5.5
CD2 Chengdu 33.22 255⇑iP P 15 27 11.3 -0.4
CD2 AP pP 15 27 20.9 +3.6
CD2 XP sP 15 27 24.8 +5.3
CD2 PP PP 15 28 22.9 -4.0
CD2 PCP PcP 15 29 53.6 -0.5
CD2 S S **15 32 27.8 -3.0**
CD2 XS sS 15 32 43.8 +3.9
CD2 SCP ScP 15 33 34.3 -3.2
CD2 PCS PcS 15 33 38.5 -1.1
CD2 SS SS 15 34 30.1 -24
CD2 SCS ScS 15 37 33.3 -4.8
CD2 AMB AMB
comp=Z,80nm,1.1s,mb5.6
CD2 AMB AMB
comp=Z,470nm,9.8s
CD2 LR LR
comp=N,7µm,10.8s
CD2 LR LR
comp=Z,7µm,13.2s,MS5.5
WAKE Wake Island 34.00 135 eP P 15 27 16.5 -2.1
comp=Z,210nm,1.4s,mb5.9
WAKE LR LR
comp=Z,2µm,20.0s,MS4.9
GYA Guiyang 34.30 246⇑iP P 15 27 20.6 -0.5
GYA AP pP 15 27 29.8 +3.1
GYA XP sP 15 27 33.9 +5.0
GYA S S **15 32 47.0 -0.5**
GYA SCP ScP 15 33 36.4 -4.9
GYA SCS ScS 15 37 37.9 -5.8
GYA AMB AMB
comp=Z,90nm,1.0s,mb5.7
GYA AMB AMB
comp=Z,460nm,6.6s
GYA LR LR
comp=N,7µm,12.0s,MS5.8
GYA LR LR
comp=E,8µm,12.2s,MS5.8
GYA LR LR
comp=Z,12µm,10.8s,MS5.9
BCPH Baguio City Da 34.94 217⇓eP P 15 27 26.1 -0.5
SCZP Santa Cruz 35.76 218 eP P 15 27 33.0 -0.7
PVCP Virac 36.11 210 eP P 15 27 37.0 +0.2
ZAL Zalesovo 36.31 303 P P 15 27 38.6 +0.2
comp=Z,26nm,0.9s,mb5.2,baz=39,slow=8.4,SNR=140
ZAL PcP PcP 15 30 02.2 -0.8
comp=Z,27nm,0.9s,baz=109,slow=1.3,SNR=8.8
ZAL LR LR 15 44 28.9
comp=Z,3µm,20.2s,MS5.1,baz=204,slow=40
ZAL Zalesovo 36.31 303 P P 15 27 38.6 +0.1
ZAL e 15 30 02.2
SDPT Sand Point 36.38 54⇑eP P 15 27 35.6 -3.4
comp=Z,81nm,0.7s,mb5.8
MIDW Midway 36.73 105 PFAKE 15 27 50.0 +8.0
MIDW LR LR
comp=Z,2µm,19.0s,MS4.9
TGY Tagaytay City 36.84 215 P P 15 27 44.3 +1.3
comp=Z,740nm,1.1s,baz=223,slow=1.9,SNR=18
AUQP San Andres 36.89 212 eP P 15 27 45.0 +1.7
NVS Novosibirsk 37.02 305 ⇓iP P 15 27 44.8 +0.3
NVS eS S **15 33 25.6 -3.6**
NVS pmax pmax
comp=N,55nm,1.5s
NVS pmax pmax
comp=E,192nm,1.5s
NVS pmax pmax
comp=Z,181nm,1.5s,mb5.7
NVS smax
comp=N,85nm,2.0s
NVS smax
comp=E,60nm,2.4s
WMQ Urumqi 37.63 286⇑iP P 15 27 50.5 +0.8
WMQ AP pP 15 28 00.5 +5.2
WMQ XP sP 15 28 05.0 +7.5
WMQ PP PP 15 29 20.0 +4.4
WMQ S S **15 33 37.5 -1.0**
WMQ XS sS 15 33 54.5 +6.8
WMQ SS SS 15 36 12.5 -11
WMQ AMB AMB
comp=Z,201nm,1.0s,mb5.8
WMQ AMB AMB
comp=Z,1µm,4.0s
WMQ LR LR
comp=N,6µm,12.0s,MS5.8
WMQ LR LR
comp=E,6µm,12.0s,MS5.8
WMQ LR LR
comp=Z,6µm,12.0s,MS5.6
TTA Tatalina 37.68 41 eP P 15 27 50.3 +0.2
TTA e*PP pP 15 27 55.5 -0.2
TTA pmax pmax
comp=Z,859nm,1.2s,mb6.3
TTA Tatalina 37.68 41 eP P 15 27 50.2 +0.2
comp=Z,859nm,1.2s,mb6.3
TTA epP pP 15 27 55.5 -0.2
KMI Kunming 37.74 249 ⇑iP P 15 27 50.8 +0.2
KMI AP pP 15 27 55.6 -0.6
KMI XP sP 15 27 57.8 -0.7
KMI PP PP 15 29 19.5 +2.6
KMI PCP PcP 15 30 08.3 +0.9
KMI S S **15 33 40.0 -0.2**
KMI SCP ScP 15 33 53.8 -0.1
KMI PCS PcS 15 33 55.8 -0.2
KMI SS SS 15 36 14.0 -12
KMI SSS 15 36 45.8
KMI SCS ScS 15 38 00.9 -1.8
KMI AMB AMB
comp=Z,207nm,1.6s,mb5.6
KMI AMB AMB
comp=Z,2µm,3.1s
KMI LR LR

comp=N,6µm,13.3s,MS5.8
KMI LR LR
comp=E,8µm,11.7s,MS5.8
KMI LR LR
comp=Z,8µm,12.4s,MS5.7
QIZ Qiongzhong 38.02 235 P **P** **15 27 53.8 +0.9**
QIZ AP pP 15 27 59.9 +1.4
QIZ XP sP 15 28 01.4 +0.6
QIZ PP PP 15 29 27.8 +8.0
QIZ S **S** **15 33 46.4 +2.1**
QIZ XS sS 15 33 53.5 -0.1
QIZ AMB AMB
comp=Z,62nm,1.3s,mb5.2
QIZ AMB AMB
comp=Z,868nm,4.2s
QIZ LR LR
comp=E,6µm,12.7s
QIZ LR LR
comp=Z,4µm,11.9s,MS5.5
QIZ Qiongzhong 38.02 235⇑ *e*P **P** **15 27 54.1 +1.2**
comp=Z,429nm,1.8s,mb5.9
QIZ *e*pP pP 15 27 59.6 +1.1
QIZ LR LR
comp=Z,2µm,21.0s,MS4.8
SVW2 Sparrevohn 38.06 44⇑ *e*P **P** **15 27 53.9 +0.6**
PLP Palo 38.11 207 *e*P **P** **15 27 53.8 +0.1**
OCLP Ormoc 38.33 208 *e*P **P** **15 27 55.9 +0.3**
RCP Roxas 38.49 211⇑ *e*P **P** **15 27 57.2 +0.3**
IMA2 Indian Mountai 38.51 36 *e*P **P** **15 27 56.3 -0.8**
LLP Lapu-Lapu 39.23 209 *e*P **P** **15 28 02.6 -0.5**
MKAR Makanchi Array 39.98 293 P **P** **15 28 09.4 0.0**
comp=Z,74nm,0.8s,mb5.5,baz=73,slow=9.0,SNR=331
MKAR PcP PcP 15 30 13.9 -0.5
comp=Z,21nm,0.9s,baz=51,slow=6.4,SNR=3.9
MKAR ScP ScP 15 34 01.9 -0.6
comp=Z,5.9nm,1.0s,baz=40,slow=4.7,SNR=4.3
MKAR Makanchi Array 39.98 293 *i* P **P** **15 28 09.3 -0.1**
MKAR pmax pmax
comp=Z,74nm,0.8s
KDAK Kodiak Island 40.15 49 P **P** **15 28 09.0 -1.8**
comp=Z,1µm,1.3s,mb6.4,SNR=50
KDAK Kodiak Island 40.15 49 P **P** **15 28 09.8 -0.9**
comp=Z,157nm,1.0s,mb5.7,baz=305,slow=4.2,SNR=118
KDAK Kodiak Island 40.15 49⇑ *i*P **P** **15 28 09.5 -1.3**
comp=Z,278nm,1.1s,mb5.9
KDAK *e*PcP PcP 15 30 14.3 -0.6
SNPH Sibulan 40.39 209⇓ *e*P **P** **15 28 12.5 -0.2**
SLKM Skilak Lake 40.75 45 *e*P **P** **15 28 14.9 -0.8**
SLKM *e* 15 30 15.0
CGP Cagayan de Oro 40.75 207⇑ *i*P **P** **15 28 14.1 -1.6**
KURK Kurchatov 40.85 300 P **P** **15 28 16.1 -0.4**
comp=Z,788nm,1.1s,mb6.2,SNR=55
COLA College 41.05 38 P **P** **15 28 18.0 -0.2**
COLA pmax pmax
comp=Z,1µm,1.2s,mb6.3
COLA College 41.05 38⇑ *i*P **P** **15 28 18.1 0.0**
comp=Z,1µm,1.2s,mb6.3
COLA LR LR
comp=Z,2µm,21.0s,MS5.0
PMR Palmer 41.05 43 *e*P **P** **15 28 16.8 -1.4**
PMR pmax pmax
comp=Z,563nm,1.4s,mb6.0
PMR MLR MLR
comp=Z,2µm,17.0s,MS5.0
PMR Palmer 41.05 43 *e*P **P** **15 28 16.8 -1.4**
comp=Z,563nm,1.4s,mb6.0
PMR LR LR
comp=Z,2µm,17.0s,MS5.0
PAGZ Pagadian 41.74 208 *e*P **P** **15 28 23.1 -0.8**
DAV Davao City (W) 41.80 205 PFAKE 15 28 30.0 +5.6
DAV LR LR
comp=Z,2µm,19.0s,MS5.0
IPIL Ipil 42.06 209 *e*P **P** **15 28 25.0 -1.5**
LSA Lhasa 42.53 265 P **P** **15 28 32.0 +1.7**
LSA AP pP 15 28 40.0 +4.1
LSA XP sP 15 28 44.0 +5.8
LSA S **S** **15 34 46.0 -5.7**
LSA XS sS 15 35 04.6 +3.6
LSA SS SS 15 37 58.0 -3.5
LSA AMB AMB
comp=Z,160nm,1.1s,mb5.7
LSA AMB AMB
comp=Z,700nm,10.1s
LSA LR LR
comp=N,3µm,13.1s,MS5.6
LSA LR LR
comp=E,4µm,14.1s,MS5.6
LSA LR LR
comp=Z,6µm,13.1s,MS5.7
LSA Lhasa 42.53 265⇑ *i*P **P** **15 28 31.8 +1.5**
LSA *e**PP pP 15 28 37.6 +1.7
LSA pmax pmax
comp=Z,329nm,1.1s,mb6.0
LSA MLR MLR
comp=Z,860nm,19.0s,MS4.7
LSA Lhasa 42.53 265⇑ *i*P **P** **15 28 31.8 +1.5**
comp=Z,329nm,1.1s,mb6.0
LSA *e*pP pP 15 28 37.6 +1.6
LSA LR LR
comp=Z,860nm,19.0s,MS4.7
EYAK Cordova Ski Ar 42.89 44⇑ *i*P **P** **15 28 33.3 +0.1**
BATP Bataraza 42.91 216 *e*P **P** **15 28 34.2 +0.8**
CHRT Chiangrai 43.41 247⇑ P **P** **15 28 37.0 -0.4**
comp=Z,526nm,0.8s,mb6.3
NANT Nan 43.63 245⇑ P **P** **15 28 37.0 -2.2**
comp=Z,1µm,1.0s,mb6.7
KKTK Khon Kaen 44.22 240⇑ P **P** **15 28 46.5 +2.6**
comp=Z,1µm,0.5s,mb6.8
CHKZ Chkalovo 44.43 306⇑ *i*P **P** **15 28 45.2 -0.5**
CHKZ pmax pmax
comp=Z,211nm,1.3s,mb5.7
CHG Chiang Mai 44.72 246⇑ P **P** **15 28 48.1 +0.1**
comp=Z,56nm,0.9s,mb5.4
CHTO Chiang Mai 44.72 246⇑ *i*P **P** **15 28 47.5 -0.5**
CHTO *e* 15 28 55.8
CHTO *e* 15 30 29.4
CHTO pmax pmax
comp=Z,174nm,1.1s,mb5.8
CHTO MLR MLR
comp=Z,960nm,21.0s,MS4.7
CHTO Chiang Mai 44.72 246⇑ *i*P **P** **15 28 47.5 -0.5**
comp=Z,177nm,1.1s,mb5.8
CHTO *e* 15 28 55.8
CHTO *e*PcP PcP 15 30 29.4 -0.7
CHTO LR LR
comp=Z,975nm,21.0s,MS4.7
DAWY Dawson 44.80 38⇑ *i*P **P** **15 28 47.8 -0.8**
BVAR Borovoye Array 44.80 306 PcP PcP 15 30 29.6 -0.8
comp=Z,20nm,0.9s,baz=86,slow=1.7,SNR=3.3
BVAR LR LR 15 49 15.6
comp=Z,4µm,20.4s,MS5.3,baz=139,slow=38
BVAR PKPPKP 16 00 17.1
comp=Z,0.4nm,0.3s,baz=253,slow=4.5,SNR=4.3
BRVK Borovoye 44.85 306 P **P** **15 28 49.2 +0.2**
comp=Z,559nm,1.3s,mb6.2,SNR=56
BRVK Borovoye 44.85 306⇑ *i*P **P** **15 28 48.9 -0.1**
BRVK pmax pmax
comp=Z,120nm,1.3s,mb5.6
BRVK Borovoye 44.85 306⇑ *i*P **P** **15 28 48.9 -0.1**
comp=Z,120nm,1.3s,mb5.6
AAA Alma-Ata 44.91 290 *i* P **P** **15 28 51.0 +1.6**
AAA *e*S **S** **15 35 26.0 -0.5**
AAA pmax pmax
comp=Z,922nm,4.0s
AAA smax
comp=E,907nm,5.8s
AAA MLR MLR
comp=Z,11µm,12.3s,MS6.0
CM31 Chiang Mai Arr 44.99 246 PFAKE 15 29 00.0 +10
CM31 LR LR
comp=Z,2µm,20.0s,MS5.0
ZRNK Zerenda 45.60 306⇑ *i*P **P** **15 28 55.1 +0.1**
ZRNK *e* 15 30 28.7
ZRNK pmax pmax
comp=Z,221nm,1.3s,mb5.9
ZRNK Zerenda 45.60 306⇑ *i*P **P** **15 28 55.1 +0.1**
ZRNK *e* 15 30 28.7
INK Inuvik 45.87 31⇑ *e*P **P** **15 28 56.4 -0.6**
INK *e* 15 30 47.3
INK pmax pmax
comp=Z,253nm,1.1s
INK Inuvik 45.87 31⇑ *e*P **P** **15 28 56.4 -0.7**
comp=Z,8µm,1.1s
INK *e*PP PP 15 30 47.3 +2.7
TKM2 Tokmak 2 45.95 291 P **P** **15 28 58.5 +0.8**
SNR=40
KKM Kota Kinabalu 46.05 217 P **P** **15 28 58.7 +0.1**
KKM Kota Kinabalu 46.05 217⇑ *e*P **P** **15 28 58.6 +0.1**
NST Nakhon Sawan 46.35 242 P **P** **15 29 01.0 +0.1**
comp=Z,88nm,0.9s,mb5.7
CHMS Chumysh 46.45 291 P **P** **15 29 02.0 +0.4**
SNR=14
USP Ospenovka 46.48 292 P **P** **15 29 02.4 +0.5**
SNR=74
KBK Karagaybulak 46.49 291 P **P** **15 29 02.8 +0.9**
SNR=49
KZA Kyzart 46.58 290 P **P** **15 29 04.5 +1.9**
SNR=38
FRU Bishkek 46.62 291⇑ *i*P **P** **15 29 04.0 +1.0**
FRU *e* 15 30 36.4
FRU *e* 15 30 56.0
FRU *e*S **S** **15 35 53.0 +1.8**
FRU pmax pmax
comp=Z,290nm,2.0s,mb5.9
FRU smax
comp=E,1µm,5.0s
FRU MLR MLR
comp=N,12µm,13.0s,MS6.2
FRU MLR MLR
comp=E,14µm,13.0s,MS6.2
FRU MLR MLR
comp=Z,14µm,13.0s,MS6.1
AAK Ala-Archa 46.80 291 P **P** **15 29 04.8 +0.5**
SNR=14
AAK Ala-Archa 46.80 291 P **P** **15 29 03.0 -1.3**
SNR=20
AAK Ala-Archa 46.80 291⇓ P **P** **15 29 04.2 -0.1**
SNR=30
AAK Ala-Archa 46.80 291 *c* *i*P **P** **15 29 03.8 -0.5**
AAK pmax pmax
comp=Z,114nm,1.9s,mb5.5
AAK Ala-Archa 46.80 291⇑ *i*P **P** **15 29 03.8 -0.5**
comp=Z,114nm,1.9s,mb5.5
TSM Tawau 46.99 214 P **P** **15 29 05.8 -0.1**
JIRN Jiri 47.20 267 *e*P **P** **15 29 08.4 +0.9**
comp=Z,892nm,1.1s,mb6.6
EKS2 Erkin-Say 47.24 291 P **P** **15 29 08.3 +0.5**
SNR=39
GUN Gumba 47.26 267 *e*P **P** **15 29 08.3 +0.3**
comp=Z,575nm,1.1s,mb6.4
KSH Kashi 47.40 286 P **P** **15 29 10.8 +1.8**
KSH AP pP 15 29 20.8 +6.1
KSH XP sP 15 29 24.5 +7.5
KSH PCP PcP 15 30 42.1 +2.6
KSH PP PP 15 31 01.8 +1.5
KSH PPP 15 31 50.9
KSH SCP ScP 15 34 31.4 -1.2
KSH PCS PcS 15 34 35.5 +0.7
KSH S **S** **15 36 00.8 -1.4**
KSH XS sS 15 36 18.1 +6.5
KSH SCS ScS 15 38 59.3 -2.8
KSH SS SS 15 39 23.3 -6.6
KSH AMB AMB
comp=Z,311nm,1.2s,mb6.1
KSH AMB AMB
comp=Z,1µm,2.8s,mb6.3
KSH LR LR
comp=Z,14µm,12.1s,MS6.2
AML Almayashu 47.56 291 P **P** **15 29 11.5 +1.2**
SNR=20
KKN Kakani 47.75 267 *e*P **P** **15 29 11.8 0.0**
comp=Z,599nm,1.2s,mb6.5
KKN Kakani 47.75 267 *e*P **P** **15 29 11.8 0.0**
KKN pmax pmax
comp=Z,599nm,1.2s,mb6.5
PKI Pulchoki 47.80 267 *e*P **P** **15 29 12.2 +0.1**
comp=Z,1µm,1.5s,mb6.7
PKI Pulchoki 47.80 267 *e*P **P** **15 29 12.2 +0.1**
PKI pmax pmax
comp=Z,1µm,1.5s,mb6.6
BAKI Biak 47.86 188 P **P** **15 29 11.9 -0.7**
DMN Daman 47.98 267 *e*P **P** **15 29 14.0 +0.4**
comp=Z,2µm,1.8s,mb6.9
GKN Gorkha 48.06 268 *e*P **P** **15 29 14.2 0.0**
comp=Z,761nm,1.1s,mb6.6
SWI Sorong 48.17 194 P **P** **15 29 14.0 -1.1**
SKAG Skagway 48.19 43⇑ *i*P **P** **15 29 15.6 +0.4**
comp=Z,153nm,1.2s,mb5.9
SVE Sverdlovsk 48.48 313 *α* *i*P **P** **15 29 17.0 -0.4**
SVE *e* 15 30 40.0
SVE *e* 15 31 08.0
SVE *e*S **S** **15 36 15.0 -2.6**
SVE pmax pmax
comp=Z,660nm,1.8s,mb6.4
SVE MLR MLR
comp=N,4µm,8.0s
SVE MLR MLR
comp=E,10µm,8.0s
SVE MLR MLR
comp=Z,14µm,8.0s
JAY Jayapura 48.91 182 P **P** **15 29 19.6 -1.2**
KOLN Koldanda 48.92 269 *e*P **P** **15 29 21.0 +0.2**
comp=Z,1µm,1.2s,mb6.8
CAL Calcutta 49.08 260 *e*P **P** **15 29 20.5 -1.6**
CAL *ex* x 15 36 34.0
SIT Sitka 49.18 46 *e*P **P** **15 29 22.3 -0.5**
SIT pmax pmax
comp=Z,409nm,1.6s,mb6.2
SIT MLR MLR
comp=Z,2µm,17.0s,MS5.1
SIT Sitka 49.18 46 *e*P **P** **15 29 22.3 -0.5**
comp=Z,409nm,1.6s,mb6.2
SIT LR LR
comp=Z,2µm,17.0s,MS5.1
SOKR Solikamsk 49.19 318 *c* *i*P **P** **15 29 23.1 +0.2**
SOKR 15 31 17.0
SOKR S **S** **15 36 28.3 +0.7**
SOKR SS SS 15 39 55.9 -3.0
SOKR pmax pmax
comp=Z,340nm,1.1s,mb6.3
SOKR MLR MLR
comp=Z,5µm,17.0s,MS5.5
ARU Arti 49.69 314 P **P** **15 29 26.7 0.0**
comp=Z,1µm,1.2s,mb6.8,SNR=52
ARU Arti 49.69 314 *c* *i*P **P** **15 29 26.7 0.0**
ARU pmax pmax
comp=Z,440nm,1.5s,mb6.3
ARU Arti 49.69 314⇑ *i*P **P** **15 29 26.7 0.0**
comp=Z,440nm,1.5s,mb6.3
JOSI Joshimath 49.99 274 *ex* x 15 29 13.0
LGTI Lohaghat 50.19 273 *i* P **P** **15 29 33.3 +2.8**
KLP Kalpa 50.31 276 *e*P **P** **15 29 31.6 +0.3**
KLP AMb AMB 15 29 33.8
comp=Z,182nm,1.1s,mb6.0
ALE Alert 50.55 4 P **P** **15 29 33.0 -0.2**
comp=Z,681nm,1.4s,mb6.4,SNR=50
CRAG Craig 50.99 47⇑ *i*P **P** **15 29 37.3 +0.8**
comp=Z,177nm,1.5s,mb5.8
CRAG *e*pP pP 15 29 42.0 -0.2
PCI Palu 51.11 209 P **P** **15 29 34.5 -3.0**
KALG Kalgarh 51.18 274 *ex* x 15 29 12.3
KALG AMb AMB 15 29 14.2
comp=Z,242nm,0.9s,mb6.1
SPB4 Spitsbergen Ar 51.24 348⇑ *i*P **P** **15 29 38.0 -0.4**
DLH Dalhousie 51.27 279 *e*P **P** **15 29 38.0 -0.6**
SMLA Simla 51.29 277 *e*P **P** **15 29 38.5 -0.3**
SMLA AMb AMB 15 29 41.5
comp=Z,412nm,1.9s,mb6.0
KBS Kingsbay 51.31 349⇑ *i*P **P** **15 29 39.3 +0.3**
KBS AMb AMB 15 29 47.9
comp=Z,214nm,1.5s,mb5.8
KBS *e*PP PP 15 31 37.1 +1.2
KBS *e*S **S** **15 36 56.9 -0.3**
KBS AMS AMS 15 53 05.8
comp=Z,1µm,17.5s,MS4.9
KBS Kingsbay 51.31 349⇑ *e*P **P** **15 29 39.2 +0.2**
KBS *e**PP pP 15 29 44.8 +0.1
KBS pmax pmax
comp=Z,217nm,1.3s,mb5.9
KBS Kingsbay 51.31 349⇑ *e*P **P** **15 29 39.1 +0.2**
comp=Z,216nm,1.3s,mb5.9
KBS *e*pP pP 15 29 44.8 0.0
AAI Ambon 51.51 198 P **P** **15 29 39.7 -0.7**
BHK Bhakra 51.63 277 *e*P **P** **15 29 42.0 +0.7**
AB31 Akbulak array 52.36 305 *i* P **P** **15 29 46.8 0.0**
NIL Nilore 52.46 282 P **P** **15 29 48.9 +1.4**
comp=Z,175nm,0.8s,mb6.0,SNR=6.2
NIL Nilore 52.46 282 P **P** **15 29 48.2 +0.7**
KSM Kuching 52.70 221⇑ *i*P **P** **15 29 49.4 0.0**
KSM *e*pP pP 15 29 54.6 -0.5
KSM *e*PcP PcP 15 30 58.2 -0.8
KSM *e*PP PP 15 31 55.2 +6.7
NDI New Delhi 52.75 274 *e*P **P** **15 29 49.6 -0.1**
NDI AMb AMB 15 29 51.9
comp=Z,545nm,1.2s,mb6.4
SNG Songkhla 52.81 235 P **P** **15 29 51.0 +0.9**
comp=Z,518nm,1.0s,mb6.4
AKTO Aktyubinsk 52.84 307 LR LR 15 52 44.4
comp=Z,3µm,18.6s,MS5.4,baz=247,slow=36
AYAN Aya Nagar 52.94 274 *ex* **P** **15 29 46.0 -5.1**
AYAN AMb AMB 15 29 48.4
comp=Z,297nm,1.5s,mb6.0
AGRA Agra 53.16 272 *e*P **P** **15 29 52.8 +0.1**
AGRA AMb AMB 15 29 54.1
comp=Z,316nm,0.8s,mb6.3
RES Resolute Bay 53.29 16⇑ *i*P **P** **15 29 53.1 -0.6**
RES *e**PP pP 15 29 57.3 -2.1
RES pmax pmax
comp=Z,214nm,1.1s,mb6.0
RES Resolute Bay 53.29 16⇑ *i*P **P** **15 29 53.1 -0.6**
comp=Z,7µm,1.1s
RES *e*pP pP 15 29 57.3 -2.1
BJO Bjornoya 53.31 344 *e*P **P** **15 29 54.5 +0.7**
BJO AMb AMB 15 29 56.8
comp=Z,269nm,2.2s,mb5.8
BJO *e*S **S** **15 37 25.8 +1.3**
BJO AMS AMS 15 56 07.2
comp=Z,3µm,17.1s,MS5.4
BJO1 Bjornoya 53.35 344 *e*P **P** **15 29 54.5 +0.4**
comp=Z,269nm,2.2s,mb5.8
BJO1 LR LR
comp=Z,3µm,17.1s,MS5.4
KUDL Kundal 53.59 274 *e*P **P** **15 29 55.4 -0.4**
KUDL AMb AMB 15 29 58.1
comp=Z,250nm,1.5s,mb5.9
BLSP Bilaspur 53.59 264 *e*P **P** **15 29 55.0 -0.8**
LVZ Lovozero 53.62 333 P **P** **15 29 55.1 -0.9**
comp=Z,479nm,1.0s,mb6.4,SNR=11
LVZ Lovozero 53.62 333 *c* *i*P **P** **15 29 55.6 -0.4**
LVZ *e* 15 31 56.8
LVZ *e*PPP 15 33 04.5
LVZ *e*S **S** **15 37 33.8 +5.1**
LVZ pmax pmax
comp=N,27nm,1.1s
LVZ pmax pmax
comp=Z,98nm,1.1s,mb5.7
LVZ pmax pmax
comp=E,11nm,0.9s
LVZ smax
comp=N,287nm,4.9s
LVZ MLR MLR
comp=Z,4µm,16.0s,MS5.6
LVZ MLR MLR
comp=N,725nm,15.0s,MS5.4
LVZ MLR MLR
comp=E,2µm,14.0s,MS5.4
LVZ Lovozero 53.62 333⇑ *i*P **P** **15 29 55.6 -0.4**
LVZ *e* 15 31 56.8
LVZ *e*PPP 15 33 04.5
LVZ *e*S **S** **15 37 33.8 +5.1**
KHET Khetri 54.10 274 *e*P **P** **15 29 59.1 -0.5**
KHET AMb AMB 15 30 02.0
comp=Z,110nm,1.5s,mb5.6
APA Apatity 54.19 333⇑ *i*P **P** **15 30 00.2 -0.1**
APA *i* 15 30 02.7
APA *i* pP 15 30 06.3 +0.3
APA *e* 15 31 04.0
APA *e* 15 31 59.0
APA *e*PPP 15 33 10.0
APA *i* S **S** **15 37 37.0 +0.5**
APA *i* SP 15 37 49.0
APA MLR MLR
comp=Z,5µm,13.0s,MS5.7
KIP Kipapa 54.34 96 *e*P **P** **15 30 01.4 +0.1**
KIP *e**PP pP 15 30 07.4 +0.3
KIP pmax pmax
comp=Z,338nm,1.4s,mb6.1
KIP MLR MLR
comp=Z,782nm,19.0s,MS4.8
KIP Kipapa 54.34 96 *e*P **P** **15 30 01.4 0.0**
comp=Z,339nm,1.4s,mb6.1
KIP *e*pP pP 15 30 07.4 +0.3
KIP LR LR
comp=Z,782nm,19.0s,MS4.8
KULM Kulim 54.34 234⇑ *e*P **P** **15 30 01.5 +0.1**
KULM *e*pP pP 15 30 06.8 -0.3
JBP Jabalpur 54.38 267⇑ *e*P **P** **15 30 02.0 +0.4**
JBP *ex* x 15 30 04.3
comp=Z,780nm,1.3s
JBP *e*S **S** **15 37 40.0 +1.1**
KEV Kevo 54.68 337 *ep* **P** **15 30 02.9 -0.9**
comp=Z,41nm,0.8s,mb5.5
KEV Kevo 54.68 337 P **P** **15 30 04.1 +0.3**
KEV pmax pmax
comp=Z,130nm,1.0s,mb5.9
IPM Ipoh 54.81 233 P **P** **15 30 05.0 +0.3**
IPM Ipoh 54.81 233 P **P** **15 30 04.5 -0.2**
ARCES ARCESS Array B 55.23 337 P **P** **15 30 08.0 +0.2**
comp=Z,62nm,1.0s,mb5.6,baz=51,slow=6.6,SNR=78
ARCES LR LR 15 55 42.3
comp=Z,2µm,19.8s,MS5.2,baz=32,slow=38
ARCES ARCESS Array B 55.23 337 P **P** **15 30 08.0 +0.2**
ARCES LR LR 15 55 42.3
ARE0 ARCESS Array S 55.23 337⇑ *i*P **P** **15 30 07.8 +0.1**
ARE0 *e*pP pP 15 30 12.7 -0.8
YKW3 Yellowknife Ar 55.45 33 *e*P **P** **15 30 08.4 -0.9**
YKA Yellowknife Ar 55.49 33 P **P** **15 30 08.9 -0.7**
comp=Z,77nm,0.9s,mb5.7,baz=305,slow=7.1,SNR=83
YKA LR LR 15 55 36.0
comp=Z,1µm,18.5s,MS5.0,baz=270,slow=38
YKA Yellowknife Ar 55.49 33 *e*P **P** **15 30 08.9 -0.8**
YKA Yellowknife Ar 55.49 33 P **P** **15 30 08.9 -0.7**
YKA LR LR 15 55 36.0
KGM Kluang 55.64 229 P **P** **15 30 11.9 +1.2**
AJM Ajmer 55.91 274 *i* P **P** **15 30 12.0 -0.6**
AJM ⇑ *i*P 15 30 12.2
AJM AMb AMB 15 30 14.5
comp=Z,248nm,1.1s,mb6.2
PMG Port Moresby 55.95 174 P **P** **15 30 12.0 -1.0**
comp=Z,116nm,1.1s,mb5.8,baz=358,slow=7.1,SNR=17
PMG LR LR 15 49 56.2
comp=Z,650nm,21.9s,MS4.7,baz=220,slow=32
PMG Port Moresby 55.95 174 *c* *i*P **P** **15 30 12.0 -1.0**
BTDF Bukit Timah Da 55.97 228 P **P** **15 30 13.4 +0.3**
KLMR Klimovskoe 55.99 325 *c* *i*P **P** **15 30 12.0 -1.2**
KLMR *e* 15 32 15.5
KLMR *e*S **S** **15 38 00.3 -0.2**
KLMR *e*SS SS 15 41 46.6 +0.1
KLMR pmax pmax
comp=Z,260nm,1.2s,mb6.1
KLMR pmax pmax
comp=Z,530nm,10.5s
KLMR MLR MLR
comp=Z,3µm,16.0s,MS5.5
MAUI Maui 56.00 95⇑ *e*P **P** **15 30 12.6 -0.7**
BHPL Bhopal 56.09 269⇑ *i*P **P** **15 30 13.6 -0.3**
BHPL AMb AMB 15 30 15.8
comp=Z,697nm,1.3s,mb6.5
KTK1 Kautokeino 56.18 338⇑ *i*P **P** **15 30 14.7 +0.1**
KTK1 AMb AMB 15 30 17.3
comp=Z,255nm,1.6s,mb6.0
KTK1 *e*pP pP 15 30 20.2 -0.2
KTK1 Kautokeino 56.18 338⇑ *i*P **P** **15 30 14.7 +0.1**
comp=Z,255nm,1.6s,mb6.0
DAG Danmarks Havn 56.28 355⇓ *i*P **P** **15 30 14.9 -0.4**
comp=Z,250nm,1.2s,mb6.1
DAG *i* pP 15 30 20.8 -0.3
DAG Danmarks Havn 56.28 355⇓ *i*P **P** **15 30 14.9 -0.4**
DAG *i* pP 15 30 20.8 -0.3
DAG pmax pmax
comp=Z,250nm,1.2s,mb6.1
SGF Sodankyl 56.33 335 P **P** **15 30 14.5 -1.2**
NGP Nagpur 56.36 266 *e*P **P** **15 30 10.4 -5.5**
NGP *ex* x 15 30 12.4
comp=Z,365nm,1.2s
NGP *e*S **S** **15 37 59.0 -6.6**
PECR Pechory 56.67 319 *d* *i*P **P** **15 30 18.0 -0.1**
PECR *e* 15 31 10.6
PECR *e* 15 32 27.0
PECR *i* S **S** **15 38 09.0 -0.6**
PECR *e*PS 15 38 24.0
PECR pmax pmax
comp=Z,590nm,2.0s,mb6.3
PECR pmax pmax

PECR comp=N,500nm,4.0s pmax pmax
PECR comp=E,500nm,4.0s pmax pmax
PECR comp=E,400nm,3.0s smax
PECR comp=E,1µm,5.0s smax
PECR comp=Z,10µm,15.0s,MS6.0 MLR MLR
PECR comp=N,6µm,13.0s,MS6.0 MLR MLR
PECR comp=E,3µm,11.0s,MS6.0 MLR MLR
TRO Tromso 56.83 339⇑ iP P 15 30 18.3 -0.9
TRO eS S **15 38 11.8 +0.2**
TRO AMS AMS 16 02 51.5
comp=Z,1µm,14.1s,MS5.2
KKH Kailua Kona 56.91 96 eP P 15 30 19.9 +0.1
TSI Tuntungan 56.98 235 P P **15 30 19.0 -1.3**
POHA Pohakuloa 57.17 96 PFAKE 15 30 30.0 +8.4
POHA LR LR
comp=Z,1µm,19.0s,MS5.0
PSI Prapat 57.36 234 P P **15 30 23.0 +0.1**
comp=Z,46nm,0.9s,mb5.5,baz=6.5,slow=4.3,SNR=38
PSI LR LR 15 53 59.4
comp=Z,790nm,19.4s,MS4.8,baz=296,slow=35
JOF Joensuu 57.78 330 ep P **15 30 25.0 -0.9**
comp=Z,96nm,0.8s,mb5.9
JOF Joensuu 57.78 330 eP P **15 30 25.0 -0.9**
JOF pmax pmax
comp=Z,96nm,0.8s,mb5.9
AKL Akola 58.06 267 eP P **15 30 28.2 +0.3**
AKL AMb AMB 15 30 29.5
comp=Z,642nm,1.5s,mb6.4
HNR Honiara 58.08 159 P P **15 30 27.4 -0.6**
comp=Z,72nm,0.7s,mb5.8,baz=254,slow=3.2,SNR=4.7
HNR Honiara 58.08 159 P P **15 30 27.4 -0.6**
HNR LR LR
comp=Z,2µm,20.0s,MS5.2
OUL Oulu 58.12 333 P P **15 30 27.1 -1.2**
JASL Jaisalmer 58.19 277 ex P **15 30 25.6 -3.2**
HYB Hyderabad 59.26 263⇑ iP P 15 30 35.5 -0.7
comp=Z,130nm,1.0s,mb5.9
HYB epP pP 15 30 41.0 -1.0
HYB ePcP PcP 15 31 24.0 -0.4
HYB eS S **15 38 44.0 +0.6**
HYB eSS SS 15 42 44.0 +6.1
HYB LR LR 15 59 08.0
comp=Z,4.2nm,12.0s
HYB Hyderabad 59.26 263⇑ eP P 15 30 35.5 -0.7
HYB eS S **15 38 44.0 +0.6**
HYB pmax pmax
comp=Z,130nm,1.0s,mb5.9
HYB Hyderabad 59.26 263⇑ eP P 15 30 35.5 -0.7
comp=Z,130nm,1.0s,mb5.9
HYB eS S **15 38 44.0 +0.6**
HYB eLR LR 15 59 10.0
PPI Padang Panjang 59.27 230 P P **15 30 34.9 -1.4**
C03A Quillayute Air 59.52 51 ⇑P P 15 30 38.8 +0.8
baz=59,SNR=5.2
KAKA Kakadu 59.64 191⇑ iP P 15 30 37.6 -1.3
comp=Z,124nm,0.8s,mb6.0
ABKT Ailbek 59.81 295 P P **15 30 40.4 +0.3**
comp=Z,726nm,1.1s,mb6.6,SNR=56
ABKT Ailbek 59.81 295 P P **15 30 40.4 +0.3**
MOS Moscow 59.91 321 c iP P **15 30 40.5 -0.2**
MOS e 15 32 51.1
MOS i S S **15 38 50.5 -1.3**
MOS pmax pmax
comp=Z,1µm,2.4s,mb6.6
MOS pmax pmax
comp=Z,430nm,1.5s,mb6.3
MOS smax
comp=E,700nm,4.2s
MOS smax
comp=N,800nm,3.8s
MOS MLR MLR
comp=Z,8µm,13.0s,MS6.1
MOS MLR MLR
comp=N,6µm,14.1s,MS6.0
MOS MLR MLR
comp=E,4µm,12.9s,MS6.0
LATR Latur 59.93 265 eP P **15 30 40.3 -0.6**
B04A Port Angeles 60.02 51 ⇓P P 15 30 41.6 +0.1
baz=60,SNR=9.8
A04A Legoe Bay, Lum 60.04 50 ⇑P P 15 30 41.6 0.0
baz=60
KAF Kangasniemi 60.04 331 ep P **15 30 39.6 -2.0**
comp=E,94nm,0.8s,mb5.9
KAF Kangasniemi 60.04 331 eP P **15 30 39.6 -2.0**
KAF pmax pmax
comp=Z,94nm,0.8s,mb5.9
VDB Vedder Mountai 60.17 49 P P **15 30 41.9 -0.6**
A05A Maple Falls 60.19 49 ⇑P P 15 30 42.2 -0.5
baz=60,SNR=12
A05A ⇑S S **15 38 52.6 -2.9**
baz=60
PUL Pulkovo 60.23 327 eP P **15 30 43.2 +0.3**
PUL e 15 32 54.0
PUL eS S 15 39 17.5 +22
PUL pmax pmax
comp=Z,301nm,1.1s,mb6.2
PUL pmax pmax
comp=N,130nm,0.7s
PUL pmax pmax
comp=E,88nm,0.7s
PUL MLR MLR
comp=Z,6µm,19.0s,MS5.8
PUL MLR MLR
comp=N,2µm,16.0s,MS5.7
PUL MLR MLR
comp=E,3µm,12.0s,MS5.7
PUL Pulkovo 60.23 327 eP P **15 30 43.2 +0.3**
comp=E,301nm,1.1s,mb6.2
PUL e 15 32 54.0
PUL eS S 15 39 17.5 +22
PUL LR LR
comp=Z,6µm,19.0s,MS5.8
D03A Wishkah Elem. 60.45 52 P P **15 30 45.5 +1.1**
baz=60,SNR=14
MOR8 Moi Rana 60.56 338⇑ iP P 15 30 43.6 -1.5
MOR8 AMb AMB 15 30 46.0
comp=Z,278nm,1.4s,mb6.2
MOR8 Moi Rana 60.56 338⇑ iP P 15 30 43.6 -1.5
comp=Z,278nm,1.4s,mb6.2
FIA1 FINESS Array S 60.59 330⇑ iP P 15 30 44.7 -0.7
FINES FINESS Array B 60.59 330 P P **15 30 45.1 -0.3**
comp=Z,86nm,0.8s,mb6.0,baz=48,slow=8.5,SNR=234
FINES LR LR 15 58 20.3
comp=Z,2µm,18.9s,MS5.2,baz=229,slow=37
FINES FINESS Array B 60.59 330 i P P **15 30 45.0 -0.4**
FINES pmax pmax
comp=Z,86nm,0.8s
FINES FINESS Array B 60.59 330 P P **15 30 45.1 -0.2**
FINES LR LR 15 58 20.2
B05A Bryant 60.64 50 ⇑P P 15 30 45.7 0.0
baz=60,SNR=27
B05A ⇑S S **15 38 58.9 -2.4**
baz=60
GNW Green Mountain 60.69 51 eP P **15 30 46.3 +0.3**
OBN Obninsk 60.77 321 P P **15 30 46.5 -0.1**
comp=Z,1µm,1.4s,mb6.8,SNR=24
OBN Obninsk 60.77 321 c iP P **15 30 46.3 -0.3**
OBN e* PP pP 15 30 52.2 -0.2
OBN e 15 33 01.3
OBN eS S **15 39 03.6 +0.7**
OBN eSS SS 15 43 01.7 0.0
OBN pmax pmax
comp=Z,470nm,1.7s,mb6.3
OBN MLR MLR
comp=Z,6µm,12.0s,MS6.0
OBN Obninsk 60.77 321⇑ iP P 15 30 46.3 -0.3
comp=Z,470nm,1.7s,mb6.3
OBN epP pP 15 30 52.2 -0.2
OBN e 15 33 01.3
OBN eS S **15 39 03.6 +0.7**
OBN eSS SS 15 43 01.7 0.0
OBN LR LR
comp=Z,6µm,12.0s,MS6.0
JMIC Jan Mayen 60.80 349 LR LR 15 57 50.6
comp=Z,865nm,18.2s,MS4.9,baz=198,slow=37
JMIC Jan Mayen 60.80 349 eP P **15 30 47.9 +1.1**
JMIC ePP PP 15 33 01.8 +1.0
JMIC eS S **15 39 05.2 +1.9**

JMIC AMS AMS 15 58 24.9
comp=Z,848nm,16.4s,MS5.0
E03A Lebam 60.92 52 ⇓P P 15 30 48.2 +0.6
baz=61,SNR=21
D04A Dobbs Creek Ra 60.98 51 ⇓P P 15 30 48.8 +0.8
baz=61
VRHR Novokhopersk 61.00 315 eP P **15 30 47.3 -0.8**
VRHR pmax pmax
comp=N,50nm,0.7s
VRHR pmax pmax
comp=Z,60nm,0.7s,mb5.8
VRHR pmax pmax
comp=E,80nm,1.1s
VRHR MLR MLR
comp=Z,3µm,16.0s,MS5.6
VRHR MLR MLR
comp=N,2µm,13.0s,MS5.7
VRHR MLR MLR
comp=E,3µm,13.0s,MS5.7
SUMG Summit 61.13 0⇑ iP P 15 30 49.8 +0.8
comp=E,553nm,1.2s,mb6.6
SUMG epP pP 15 30 55.2 +0.3
MDRS Chennai 61.17 258 ex P **15 30 41.0 -8.3**
MDRS ex x 15 33 44.0
C05A Tolt Reservoir 61.21 50 ⇑P P 15 30 49.5 -0.1
baz=61,SNR=32
PNT Penticton 61.27 48 P P **15 30 49.6 -0.4**
F03A Seaside 61.30 52 ⇑P P 15 30 50.6 +0.4
baz=61,SNR=12
E04A Onalaska 61.34 51 ⇑P P 15 30 51.5 +1.0
baz=61,SNR=9.2
D05A Enumclaw 61.37 51 P P **15 30 51.2 +0.6**
baz=61,SNR=22
D05A ⇑S S **15 39 03.8 -6.7**
baz=61
NLW Nelson Butte 61.68 49 P P **15 30 52.9 +0.1**
FMW Mount Fremont 61.70 51 P P **15 30 53.3 +0.4**
POO Poona 61.72 267⇑ ix P 15 30 50.0 -3.0
comp=E,430nm,1.0s,mb6.5
LON Longmire 61.74 51 P P **15 30 53.1 -0.1**
VOR Voronezh 61.76 316 eP P **15 30 52.3 -1.0**
VOR pmax pmax
comp=Z,400nm,1.8s,mb6.2
VOR pmax pmax
comp=N,150nm,1.7s
VOR pmax pmax
comp=E,140nm,1.7s
EDM Edmonton 61.78 41⇑ iP P 15 30 52.7 -0.8
EDM e*PP pP 15 30 57.0 -2.3
G03A Yamhill 61.84 53 ⇓P P 15 30 54.4 +0.6
baz=62,SNR=20
H02A Toledo 61.84 54 ⇑P P 15 30 54.8 +1.0
baz=62,SNR=6.2
E05A Randle 61.88 51 ⇓P P 15 30 53.9 -0.3
baz=62,SNR=34
E05A ⇑S S **15 39 11.2 -5.9**
baz=62
F04A Amboy 61.92 52 ⇑P P 15 30 54.7 +0.3
baz=62,SNR=36
VRSR Storozhevoye 62.10 316 i P P **15 30 55.4 -0.2**
VRSR pmax pmax
comp=N,160nm,0.9s
VRSR pmax pmax
comp=E,150nm,0.9s
VRSR pmax pmax
comp=Z,140nm,0.9s,mb6.1
VRSR MLR MLR
comp=E,2µm,15.0s,MS5.6
VRSR MLR MLR
comp=Z,3µm,15.0s,MS5.6
VRSR MLR MLR
comp=N,2µm,14.0s,MS5.6
MPOR Mary's Peak 62.20 54 P P **15 30 57.4 +1.1**
COR Corvallis 62.28 54⇑ iP P 15 30 58.1 +1.3
COR MLR MLR
comp=Z,982nm,20.0s,MS5.0
KAD Karad 62.33 266 i P P **15 30 56.8 -0.3**
G04A Mulino 62.35 53 ⇓P P 15 30 57.9 +0.7
baz=62,SNR=14
G04A ⇓S S **15 39 16.2 -6.7**
baz=62
I02A Mapleton 62.36 54 ⇓P P 15 30 58.1 +0.8
baz=62,SNR=13
RNO Roman Nose 62.47 54 P P **15 30 59.4 +1.4**
VSU Vasula 62.47 328 c iP P **15 30 58.0 -0.1**
F05A White Salmon 62.47 51 ⇓P P 15 30 58.7 +0.6
baz=62,SNR=23
F05A ⇓S S **15 39 25.4 +0.9**
baz=62
NSS Namsos 62.49 338 eP P **15 30 56.8 -1.5**
NSS AMb AMB 15 30 59.5
comp=Z,156nm,1.6s,mb5.9
NSS AMS AMS 16 02 43.4
comp=Z,3µm,15.0s,MS5.6
NSS Namsos 62.49 338 eP P **15 30 56.8 -1.5**
comp=Z,156nm,1.6s,mb5.9
NSS LR LR
comp=Z,3µm,15.0s,MS5.6
EPH Ephrata 62.52 49 P P **15 30 58.1 -0.3**
I03A Eugene 62.69 54 ⇓P P 15 31 00.6 +1.1
baz=62,SNR=26
KEBM Edson Butte 62.79 56⇑ eP P **15 31 01.1 +0.9**
KEBM epP pP 15 31 06.2 +0.1
VFP Flag Point 62.83 52 P P **15 31 01.2 +0.7**
H04A Detroit Lake 62.84 53 ⇑P P 15 31 01.1 +0.5
baz=63,SNR=120
H04A ⇑S S **15 39 25.9 -3.1**
baz=63
J02A Umpqua 62.91 55 ⇑P P 15 31 02.0 +1.0
baz=63,SNR=56
J02A ⇓S S **15 39 29.6 -0.3**
baz=63
G05A Wamic 62.96 52 ⇓P P 15 31 02.0 +0.7
baz=63,SNR=22
OD2 Odessa Site #2 62.96 49 P P **15 31 00.9 -0.4**
MAK Makhachkala 63.04 305 c iP P **15 31 00.4 -1.5**
MAK e 15 31 35.6
MAK i 15 33 20.2
MAK i PPP 15 34 57.6
MAK i S S **15 39 31.1 -0.5**
MAK e 15 40 48.1
MAK pmax pmax
comp=Z,658nm,1.8s,mb6.5
MAK pmax pmax
comp=Z,1µm,1.7s,mb6.7
MAK smax
comp=N,854nm,1.5s
MAK smax
comp=E,728nm,1.8s
MAK Makhachkala 63.04 305⇑ iP P 15 31 00.4 -1.5
comp=E,658nm,1.8s,mb6.5
MAK e 15 31 35.6
MAK i 15 33 20.2
MAK i PPP 15 34 57.6
MAK i S S **15 39 31.1 -0.5**
MAK e 15 40 48.1
HAWA Hanford 63.17 50⇑ eP P **15 31 02.6 -0.2**
comp=E,204nm,1.3s,mb6.1
HAWA LR LR
comp=Z,418nm,19.0s,MS4.6
NEW Newport 63.21 47⇑ eP P **15 31 02.3 -0.7**
NEW e*PP pP 15 31 08.3 -0.5
NEW pmax pmax
comp=Z,112nm,1.1s
NEW MLR MLR
comp=Z,1µm,22.0s
NEW Newport 63.21 47⇑ eP P **15 31 02.3 -0.7**
comp=Z,109nm,1.1s,mb5.9
NEW epP pP 15 31 08.3 -0.5
NEW LR LR
comp=Z,1µm,22.0s,MS5.0
J03A Ideyld Park 63.24 54 ⇑P P 15 31 04.1 +0.9
baz=63,SNR=31
J03A ⇑S S **15 39 31.8 -2.3**
baz=63
KBO Bosley Butte 63.27 56 eP P **15 31 03.8 +0.4**
HBO Huckleberry Mo 63.30 54 P P **15 31 04.4 +0.8**
H05A Madras 63.39 52 ⇓P P 15 31 04.7 +0.5
baz=63,SNR=20
H05A ⇑S S **15 39 34.0 -1.9**
baz=63
VTHM Trough 63.41 52 P P **15 31 04.9 +0.6**
M01C Crescent City 63.56 56 ⇑P P 15 31 06.3 +0.9
baz=63
SALM Salem 63.57 259 eP P **15 31 03.0 -2.4**
L02A Cave Junction 63.66 56 P P **15 31 06.7 +0.7**

baz=63,SNR=24
I05A Bend 63.68 53 ⇓P P 15 31 06.6 +0.5
baz=63,SNR=18
I05A ⇓S S **15 39 39.8 +0.3**
baz=63
VIPM Ingram Point 63.81 52 P P **15 31 07.5 +0.5**
KRMB Red Mountain 63.89 57⇑ iP P 15 31 08.2 +0.7
KRMB epP pP 15 31 12.8 -0.6
F08A Pendleton 63.96 50 ⇑P P 15 31 08.3 +0.3
baz=64,SNR=44
F08A ⇑S S **15 39 41.0 -2.1**
baz=64
GOF Gofitskoye 64.15 309⇑ iP P 15 31 09.8 +0.6
GOF i S S **15 39 49.2 +3.8**
GOF pmax pmax
comp=Z,588nm,1.2s,mb6.5
GOF smax
comp=N,159nm,1.5s
FUNA Funafuti 64.18 138 PFAKE 15 31 20.0 +11
FUNA LR LR
comp=Z,6µm,19.0s,MS5.8
J05A Fort Rock 64.27 54 ⇑P P 15 31 11.0 +1.1
baz=64,SNR=106
J05A ⇑S S **15 39 46.9 +0.1**
baz=64
JCC Jacoby Creek 64.28 57 ⇓P P 15 31 11.1 +1.1
baz=64,SNR=7.6
WALA Waterton Lakes 64.28 45⇑ iP P 15 31 09.8 -0.2
comp=Z,144nm,1.1s,mb5.9
I06A Prineville 64.40 52 P P **15 31 11.5 +0.7**
baz=64,SNR=52
I06A ⇑S S **15 39 47.8 -0.7**
baz=64
KHMM Horse Mountain 64.41 57⇑ iP P 15 31 12.0 +1.1
KHMM epP pP 15 31 16.4 -0.4
K04A Chilquin 64.42 54 ⇓P P 15 31 11.7 +0.7
baz=64,SNR=6.4
K04A ⇓S S **15 39 50.5 +1.7**
baz=64
YBH Yreka Blue Hor 64.44 56 P P **15 31 12.1 +1.0**
comp=Z,86nm,1.0s,mb5.7,baz=343,slow=2.4,SNR=89
YBH Yreka Blue Hor 64.44 56⇑ iP P 15 31 12.0 +0.9
YBH e*PP pP 15 31 17.5 +0.5
YBH e 15 33 28.9
YBH pmax pmax
comp=Z,129nm,1.1s
YBH MLR MLR
comp=Z,747nm,22.0s
YBH Yreka Blue Hor 64.44 56⇑ iP P 15 31 12.0 +0.9
comp=Z,129nm,1.1s,mb5.9
YBH epP pP 15 31 17.4 +0.5
YBH ePP PP 15 33 28.9 -4.0
YBH LR LR
comp=Z,747nm,22.0s,MS4.8
YBH Yreka Blue Hor 64.44 56 ⇑P P 15 31 12.0 +0.9
baz=64,SNR=74
YBH ⇓S S **15 39 48.1 -0.9**
baz=64
M02C Callahan 64.58 56 ⇑P P 15 31 13.1 +1.1
baz=64,SNR=45
M02C ⇓S S **15 39 49.7 -1.1**
baz=64
L04A Klamath Falls 64.62 55 ⇑P P 15 31 12.9 +0.7
baz=64,SNR=32
L04A ⇓S S **15 39 47.3 -3.9**
baz=64
BSMT Bassoo Peak 64.66 46 P P **15 31 13.0 +0.4**
N02C Big Bar 64.69 57 P P **15 31 13.4 +0.6**
baz=64,SNR=22
I07A Izee 64.69 52 ⇓P P 15 31 13.2 +0.5
baz=64,SNR=76
I07A ⇓S S **15 39 53.5 +1.4**
baz=64
LHEM Herd Peak 64.79 56 P P **15 31 14.3 +0.9**
H08A Prairie City 64.86 51 ⇓P P 15 31 14.3 +0.4
baz=65,SNR=37
H08A ⇑S S **15 39 54.6 +0.4**
baz=65
MNK Minsk 64.88 324 eP P **15 31 12.0 -2.0**
MNK eS S **15 39 56.0 +1.6**
J06A Christmas Vall 64.89 53 ⇓P P 15 31 14.6 +0.5
baz=65,SNR=109
J06A ⇑S S **15 39 56.1 +1.6**
baz=65
M04C Macdoel 64.91 55 P P **15 31 15.0 +0.9**
baz=65,SNR=62
M04C ⇓S S **15 39 55.6 +0.9**
baz=65
KIV Kislovodsk 65.07 308 P P **15 31 16.7 +1.5**
comp=Z,3µm,1.1s,SNR=87
KIV Kislovodsk 65.07 308⇑ iP P 15 31 15.8 +0.6
KIV e*PP pP 15 31 21.9 +0.8
M03C McCloud 65.08 56 ⇑P P 15 31 15.7 +0.5
baz=65,SNR=25
M03C ⇑S S 15 39 58.0 +1.2
baz=65
PALK Pallekele 65.09 253 eP P **15 31 15.4 0.0**
K06A Valley Falls 65.13 53 ⇑P P 15 31 16.4 +0.8
baz=65,SNR=90
K06A ⇓S S 15 39 57.7 +0.2
baz=65
ZEI Tsey 65.18 307 eP P **15 31 16.1 +0.2**
ZEI e*PP pP 15 31 26.5 +4.7
ZEI e 15 31 45.9
ZEI pmax pmax
comp=Z,146nm,1.1s,mb5.9
DGRG David-gareji 65.22 305 P P **15 31 17.0 +0.8**
DGRG S S 15 40 02.2 +3.5
KIPM Iron Peak 65.25 58 eP P **15 31 17.1 +0.7**
KIPM epP pP 15 31 22.6 +0.4
DOMB Dombas 65.29 338⇑ iP P 15 31 16.4 -0.2
WDC Whiskeytown Da 65.29 57⇑ iP P 15 31 16.9 +0.3
WDC e*PP pP 15 31 21.7 -0.8
WDC pmax pmax
comp=Z,109nm,1.1s,mb5.8
WDC MLR MLR
comp=Z,655nm,20.0s,MS4.8
WDC Whiskeytown Da 65.29 57⇑ iP P 15 31 16.9 +0.2
comp=Z,110nm,1.1s,mb5.8
WDC epP pP 15 31 21.7 -0.8
WDC LR LR
comp=Z,655nm,20.0s,MS4.8
WDC Whiskeytown Da 65.29 57 ⇑P P 15 31 16.7 +0.1
baz=65,SNR=25
WDC ⇑S S 15 40 00.1 +0.6
baz=65
L05A Lakeview 65.30 54 ⇓P P 15 31 17.6 +0.9
baz=65,SNR=83
L05A ⇑S S 15 40 00.1 +0.5
baz=65
H09A Durkee 65.30 51 ⇓P P 15 31 17.2 +0.5
baz=65,SNR=24
H09A ⇓S S 15 39 59.4 -0.2
baz=65
I08A Drewsey 65.31 52 P P **15 31 17.5 +0.7**
baz=65,SNR=102
I08A ⇓S S 15 40 00.8 +1.0
baz=65
FCC Fort Churchill 65.36 28⇑ iP P 15 31 16.0 -1.1
FCC e*PP pP 15 31 21.1 -1.9
FCC pmax pmax
comp=Z,202nm,1.1s,mb6.1
FCC Fort Churchill 65.36 28⇑ iP P 15 31 15.9 -1.2
comp=Z,202nm,1.1s,mb6.1
FCC epP pP 15 31 21.1 -1.9
BMO Blue Mountains 65.36 50⇑ iP P 15 31 17.4 +0.2
comp=Z,142nm,1.3s,mb5.8
BMO epP pP 15 31 21.9 -1.1
BMO LR LR
comp=Z,936nm,20.0s,MS5.0
MTA Mtatsminda 65.39 305 P P **15 31 17.9 +0.6**
MTA S S 15 40 03.7 +3.0
TBLG Delisi 65.40 305 eP P **15 31 18.3 +1.0**
TBLG Delisi 65.40 305 P P **15 31 18.3 +0.9**
O02C Red Bluff 65.41 57 ⇓P P 15 31 18.1 +0.7
baz=65,SNR=40
O02C ⇓S S 15 40 01.5 +0.6
baz=65
NB2 NORSAR Subarra 65.54 336 P P **15 31 17.8 -0.4**
comp=Z,128nm,1.1s,mb5.9,baz=35,slow=6.5
NB2 NORSAR Subarra 65.54 336 P P **15 31 17.6 -0.6**
NOA NORSAR Array B 65.54 336 P P **15 31 17.9 -0.3**
comp=Z,52nm,1.0s,mb5.5,baz=35,slow=6.4,SNR=156
NOA PP PP 15 33 41.0 -1.4
comp=Z,18nm,1.0s,baz=32,slow=8.9,SNR=3.6
NOA PKP2bc 16 00 00.1

comp=Z,4.2nm,1.1s,baz=207,slow=3.0,SNR=4.0
NOA LR LR 16 02 48.2
comp=Z,2µm,20.1s,MS5.3,baz=350,slow=39
NOA NORSAR Array B 65.54 336 P P 15 31 17.9 -0.3
NOA 15 33 41.1
NOA NORSAR Array B 65.54 336 P P 15 31 17.9 -0.3
NOA PP PP 15 33 41.0 -1.4
NOA ⇑*e* 16 00 00.1
NOA LR LR 16 02 48.2
P01C Double 8 Ranch 65.56 58 ⇑P P 15 31 18.6 +0.3
baz=65,SNR=11
ONI Oni 65.56 307 P P 15 31 19.4 +1.0
FFC Flin Flon 65.57 35 P P 15 31 17.1 -1.4
comp=Z,701nm,1.2s,mb6.6,SNR=33
FFC Flin Flon 65.57 35 P P 15 31 17.8 -0.6
M05C Lookout 65.58 55 ⇑P P 15 31 18.9 +0.4
baz=65,SNR=64
M05C ⇓S S 15 40 01.2 -1.7
baz=65
I09A Lost Marbles R 65.72 51 ⇓P P 15 31 19.8 +0.4
baz=66,SNR=29
I09A ⇑S S 15 40 05.9 +1.2
baz=66
HATC Hat Creek Radi 65.75 56 ⇑P P 15 31 20.3 +0.6
baz=66,SNR=40
HATC ⇑S S 15 40 06.9 +1.8
baz=66
MSO Missoula 65.77 47⇑*e*P P 15 31 19.5 -0.2
comp=Z,141nm,1.2s,mb5.9
MSO LR LR
comp=Z,998nm,19.0s,MS5.0
NAO01 NORSAR Array S 65.79 336⇑*e*P P 15 31 19.2 -0.7
comp=Z,41nm,1.0s,mb5.4
NAO01 *e*pP pP 15 31 24.7 -1.0
NAO01 *e*PP PP 15 33 39.6 -5.1
NAO01 LR LR
comp=Z,3µm,20.0s,MS5.4
GASB Alder Springs 65.80 57 ⇑P P 15 31 20.9 +0.9
baz=66,SNR=49
O03C Acorn Hollow, 65.97 57 ⇑P P 15 31 20.8 -0.2
baz=66
HOPS Hopland 66.02 58⇑*i*P P 15 31 21.4 0.0
comp=Z,131nm,1.2s,mb5.8
HOPS *e*pP pP 15 31 27.5 +0.2
HOPS LR LR
comp=Z,794nm,20.0s,MS4.9
HOPS Hopland 66.02 58 ⇓P P 15 31 21.6 +0.2
baz=66,SNR=10.0
FITZ Fitzroy Crossi 66.04 197⇑*i*P P 15 31 20.6 -0.9
comp=Z,117nm,1.0s,mb5.9
FITZ *e*pP pP 15 31 26.5 -0.9
FITZ Fitzroy Crossi 66.04 197 P P 15 31 20.6 -0.9
comp=Z,65nm,1.0s,mb5.6,baz=7.2,slow=8.1,SNR=82
FITZ LR LR 16 00 25.7
comp=Z,503nm,18.8s,MS4.8,baz=18,slow=36
M06C Likely Place G 66.06 55 ⇓P P 15 31 22.0 +0.4
baz=66,SNR=15
M06C ⇓S S 15 40 08.8 0.0
baz=66
CHMT Chamberlain Mo 66.06 46 *e*P P 15 31 21.3 -0.3
K08A Mann Creek Ran 66.14 53 ⇑P P 15 31 22.7 +0.6
baz=66,SNR=73
K08A ⇓S S 15 40 10.0 +0.1
baz=66
L07A Adell 66.15 54 ⇑P P 15 31 23.1 +0.9
baz=66,SNR=140
L07A ⇓S S 15 40 08.8 -1.2
baz=66
WVOR Wild Horse Val 66.26 53⇑*e*P P 15 31 23.2 +0.3
WVOR *e**PP pP 15 31 28.6 -0.2
WVOR *e* 15 33 46.4
WVOR pmax pmax
comp=Z,388nm,1.5s,mb6.2
WVOR Wild Horse Val 66.26 53⇑*e*P P 15 31 23.2 +0.3
comp=Z,359nm,1.5s,mb6.2
WVOR *e*pP pP 15 31 28.6 -0.2
WVOR *e*PP PP 15 33 46.4 -2.4
O04C Chester 66.30 56 ⇑P P 15 31 23.9 +0.8
baz=66,SNR=30
O04C ⇓S S 15 40 11.0 -0.7
baz=66
ELFS Eagle Lake Fie 66.30 56 ⇓P P 15 31 23.9 +0.7
baz=66,SNR=25
ELFS ⇑S S 15 40 12.3 +0.5
baz=66
SFJD Kangerlussuaq 66.34 5 P P 15 31 22.7 -0.7
comp=Z,106nm,1.0s,mb5.8,baz=326,slow=6.7,SNR=20
SFJD Kangerlussuaq 66.34 5 P P 15 31 22.7 -0.7
SFJD pmax pmax
comp=Z,106nm,1.0s,mb5.8
SFJD Kangerlussuaq 66.34 5 P P 15 31 20.6 -2.7
comp=Z,24nm,0.9s,mb5.2
GNI Garni 66.44 304 *e*P P 15 31 24.6 +0.6
GNI Garni 66.44 304 LR LR 16 01 11.3
comp=Z,2µm,21.1s,MS5.2,baz=88,slow=37
GNI Garni 66.44 304*c i*P P 15 31 25.8 +1.7
GNI pmax pmax
comp=Z,315nm,1.3s
GNI MLR MLR
comp=Z,2µm,14.0s
GNI Garni 66.44 304⇑*i*P P 15 31 25.8 +1.7
comp=Z,315nm,1.3s,mb6.2
GNI LR LR
comp=Z,2µm,14.0s,MS5.5
MNRC McLaughlin Nat 66.47 58 ⇓P P 15 31 25.0 +0.8
baz=66,SNR=36
CTA Charters Tower 66.49 175⇑*i*P P 15 31 22.6 -1.8
comp=Z,23nm,1.1s,mb5.1
CTA Charters Tower 66.49 175 P P 15 31 22.7 -1.6
comp=Z,26nm,1.0s,mb5.2,baz=19,slow=6.9,SNR=12
CTA LR LR 15 57 00.2
comp=Z,745nm,19.0s,MS4.9,baz=344,slow=33
CTAO Charters Tower 66.49 175 *e*P P 15 31 22.4 -2.0
CTAO *e**PP pP 15 31 28.0 -2.2
CTAO pmax pmax
comp=Z,14nm,1.3s
CTAO MLR MLR
comp=Z,375nm,19.0s,MS4.6
CTAO Charters Tower 66.49 175 *e*P P 15 31 22.4 -2.0
comp=Z,14nm,1.3s
CTAO *e*pP pP 15 31 28.0 -2.3
CTAO LR LR
comp=Z,375nm,19.0s,MS4.6
WRAB Tennant Creek 66.56 188 P P 15 31 23.6 -1.2
comp=Z,479nm,1.4s,mb6.3,SNR=30
WRAB Tennant Creek 66.56 188 *e*P P 15 31 23.4 -1.4
WRAB pmax pmax
comp=Z,241nm,1.3s,mb6.1
WRAB Tennant Creek 66.56 188 *e*P P 15 31 23.4 -1.5
comp=Z,168nm,1.3s,mb5.9
ORV Oroville 66.57 57 ⇓P P 15 31 24.3 -0.5
baz=66,SNR=34
ORV ⇑S S 15 40 14.1 -1.0
baz=66
WB2 Warramunga Arr 66.57 188⇑*i*P P 15 31 23.3 -1.6
WRA Warramunga Arr 66.57 188 P P 15 31 23.3 -1.6
comp=Z,68nm,1.1s,mb5.6,baz=6.2,slow=6.6,SNR=92
WRA PKP2bc 15 59 58.2
comp=Z,2.6nm,1.0s,baz=200,slow=1.6,SNR=8.2
WRA LR LR 16 00 00.3
comp=Z,840nm,20.4s,MS4.9,baz=25,slow=36
WRA Warramunga Arr 66.57 188 P P 15 31 23.3 -1.6
WRA ⇑*e* 15 59 58.2
WRA LR LR 16 00 00.3
K09A Rome 66.58 52 ⇑P P 15 31 25.1 +0.2
baz=66,SNR=58
K09A ⇑S S 15 40 15.3 +0.1
baz=66
L08A Fields 66.59 53 P P 15 31 25.5 +0.5
baz=66,SNR=66
L08A ⇓S S 15 40 14.7 -0.5
baz=66
NSHM Saint Helena R 66.61 58 *e*P P 15 31 25.2 +0.1
SUTB Sutter Butte 66.62 57 ⇓P P 15 31 24.6 -0.5
baz=66
SUTB ⇑S S 15 40 16.3 +0.7
baz=66
O05C Quincy 66.63 56 ⇑P P 15 31 25.3 0.0
baz=66,SNR=13
O05C ⇑S S 15 40 14.4 -1.3
baz=66
TRD Trivandrum 66.68 257 *e*P P 15 31 25.4 -0.2
TRD AMb AMB 15 31 27.5
comp=Z,167nm,1.6s,mb5.8
TRD *ex* x 15 39 48.1
MCCM Marconi Confer 66.70 59 ⇑P P 15 31 25.0 -0.6
baz=66
N06A Buffalo Meadow 66.72 55 ⇓P P 15 31 26.2 +0.3
baz=66,SNR=181
N06A ⇓S S 15 40 15.6 -1.2
baz=66
OHCM Honcut 66.72 57 *e*P P 15 31 25.4 -0.4
OHCM *e*pP pP 15 31 31.1 -0.7
CVS Carmenet Viney 66.81 58 ⇑P P 15 31 26.1 -0.3
baz=67,SNR=12
Q03C Winters 66.88 58 ⇓P P 15 31 27.8 +1.0
baz=67,SNR=8.6
HRY Holter Researc 66.91 46 *e*P P 15 31 27.3 +0.3
HRY *e*pP pP 15 31 33.0 +0.1
FARB Farallon Islan 66.92 59 ⇓P P 15 31 26.9 -0.3
baz=67
EGMT Eagleton 67.00 44⇑*i*P P 15 31 27.4 -0.2
comp=Z,234nm,1.1s,mb6.1
EGMT *e*pP pP 15 31 31.8 -1.7
EGMT *e*PP PP 15 33 53.6 -1.6
EGMT LR LR
comp=Z,1µm,19.0s,MS5.1
BEKR Beckwourth 67.01 56 ⇓P P 15 31 27.7 0.0
baz=67,SNR=47
BEKR ⇑S S 15 40 19.5 -1.0
baz=67
AKASG Malin Array Be 67.03 320 P P 15 31 27.2 -0.7
comp=Z,102nm,0.9s,mb5.8,baz=40,slow=6.6,SNR=252
AKASG PKP2bc 15 59 56.1
comp=Z,0.2nm,0.2s,baz=231,slow=3.4,SNR=5.1
AKASG LR LR 16 02 30.3
comp=Z,772nm,19.2s,MS4.9,baz=30,slow=38
AKBB Malin Array Si 67.03 320⇑*i*P P 15 31 27.1 -0.7
AKBB *e**PP pP 15 31 32.1 -1.6
DIGO Kars 67.04 305 *i* P P 15 31 29.1 +1.3
M08A Happy Creek Ra 67.07 54 P P 15 31 28.9 +0.8
baz=67,SNR=56
M08A ⇑S S 15 40 18.4 -2.6
baz=67
KARS Kars 67.07 305 *e*P P 15 31 30.7 +2.7
L09A Wilkinson Ranc 67.07 53 ⇑P P 15 31 28.6 +0.5
baz=67,SNR=34
L09A ⇓S S 15 40 19.8 -1.4
baz=67
SUW Suwalki 67.08 326 *e*Pc 15 31 27.4
SUW *e*pP pP 15 31 35.4 +1.4
SUW *e*S S 15 40 21.6 +0.3
SUW L 16 02 53.2
comp=Z,4.0nm,18.0s
SUW Suwalki 67.08 326⇑*e*P P 15 31 27.4 -0.8
SUW *e**PP pP 15 31 35.4 +1.4
SUW *e*S S 15 40 21.6 +0.3
SUW pmax pmax
comp=Z,800nm,2.3s,mb6.3
SUW MLR MLR
comp=Z,4µm,18.0s,MS5.7
SUW Suwalki 67.08 326⇑*e*P P 15 31 27.4 -0.8
SUW *e*pP pP 15 31 35.4 +1.4
SUW *e*S S 15 40 21.6 +0.3
Q04C Lincoln 67.11 57 ⇑P P 15 31 28.5 +0.1
baz=67
Q04C ⇓S S 15 40 20.1 -1.5
baz=67
O06A Flanigan 67.12 55 ⇑P P 15 31 28.6 +0.2
baz=67,SNR=77
O06A ⇓S S 15 40 20.1 -1.6
baz=67
KONO Kongsberg 67.14 336⇑*i*P P 15 31 27.5 -1.0
KONO *e*S S 15 40 24.3 +2.4
KONO Kongsberg 67.14 336⇑*i*P P 15 31 28.2 -0.3
KONO pmax pmax
comp=Z,163nm,1.6s,mb5.8
KONO MLR MLR
comp=Z,2µm,20.0s,MS5.4
KONO Kongsberg 67.14 336⇑*i*P P 15 31 28.2 -0.3
comp=Z,163nm,1.6s,mb5.8
KONO *e*PP PP 15 33 49.8 -6.7
KONO LR LR
comp=Z,2µm,20.0s,MS5.4
LRM Limekiln Ridge 67.21 47 *e*P P 15 31 29.1 +0.1
P05C Yuba Gap, Truc 67.25 57 ⇑P P 15 31 29.1 -0.1
baz=67,SNR=21
P05C ⇑S S 15 40 24.2 +0.9
baz=67
ANN Anapa 67.27 312⇑*i*P P 15 31 28.6 -0.8
ANN *i* S 15 40 23.1 -0.5
ANN pmax pmax
comp=Z,320nm,1.7s,mb6.1
ANN MLR MLR
comp=Z,6µm,17.0s,MS5.9
BCA Borcka 67.33 307 *e*P P 15 31 29.9 +0.2
SAC San Andreas 67.34 59 *e*P P 15 31 30.1 +0.3
P06A Stead Airport, 67.40 56 ⇓P P 15 31 30.5 +0.3
baz=67
P06A ⇑S S 15 40 23.2 -1.9
baz=67
FRB Frobisher Bay 67.41 14 P P 15 31 29.0 -1.2
comp=Z,166nm,0.9s,mb6.1,baz=339,slow=7.6,SNR=36
DLMT Dillon 67.46 47⇑*e*P P 15 31 30.5 0.0
comp=Z,182nm,1.1s,mb6.0
DLMT *e*pP pP 15 31 35.0 -1.4
LAVA Lava Cap Winer 67.54 57 ⇑P P 15 31 31.0 0.0
baz=67,SNR=50
LAVA ⇑S S 15 40 26.0 -0.7
baz=67
JRSC Jasper Ridge 67.57 59 ⇑P P 15 31 30.8 -0.4
baz=67,SNR=6.5
JRSC ⇑S S 15 40 27.5 +0.4
baz=67
CLDR Caldiran 67.59 304 *e*P P 15 31 33.1 +1.8
M09A Marrel Ranch, 67.60 53 ⇓P P 15 31 32.1 +0.7
baz=67,SNR=22
N08A GE Springer Mi 67.65 54 ⇑P P 15 31 32.1 +0.4
baz=67,SNR=102
N08A ⇓S S 15 40 27.3 -0.8
baz=67
O07A Toulon 67.66 55 ⇑P P 15 31 32.3 +0.5
baz=67,SNR=76
O07A ⇑S S 15 40 27.3 -0.8
baz=67
BER Bergen 67.66 338 *e*P P 15 31 32.1 +0.3
BER AMb AMB 15 31 34.6
comp=Z,261nm,1.9s,mb5.9
BER *e*S S 15 40 29.6 +1.4
BER AMS AMS 16 05 45.3
comp=Z,3µm,17.8s,MS5.5
BER Bergen 67.66 338 *e*P P 15 31 32.1 +0.3
BER pmax pmax
comp=Z,261nm,1.9s,mb5.9
BER MLR MLR
comp=Z,3µm,17.8s,MS5.5
BER Bergen 67.66 338 *e*P P 15 31 32.1 +0.3
comp=Z,261nm,1.9s,mb5.9
BER LR LR
comp=Z,3µm,17.8s,MS5.5
PAHR Pah Rah Range 67.68 56⇑*i*P P 15 31 32.2 +0.3
comp=Z,186nm,1.0s,mb6.1
PAHR *e*pP pP 15 31 36.7 -1.1
MCMT McKenzie Canyo 67.70 48 *e*P P 15 31 31.7 -0.4
MCMT *e*pP pP 15 31 36.9 -1.1
WENL Wente Brothers 67.71 59 ⇓P P 15 31 32.2 +0.1
baz=68,SNR=9.6
WCN Washoe City 67.74 56 P P 15 31 33.0 +0.7
baz=68,SNR=36
WCN ⇓S S 15 40 29.2 0.0
baz=68
BOZ Bozeman (W) 67.75 47⇑*e*P P 15 31 32.4 0.0
BOZ *e**PP pP 15 31 37.3 -0.9
BOZ pmax pmax
comp=Z,145nm,1.2s,mb5.9
BOZ MLR MLR
comp=Z,943nm,19.0s,MS5.0
BOZ Bozeman (W) 67.75 47⇑*e*P P 15 31 32.4 0.0
comp=Z,145nm,1.2s,mb5.9
BOZ *e*pP pP 15 31 37.3 -1.0
BOZ LR LR
comp=Z,989nm,19.0s,MS5.1
R04C Big Horse Ranc 67.76 58 ⇓P P 15 31 32.1 -0.3
baz=68
R04C ⇑S S 15 40 28.7 -0.7
baz=68
HLID Hailey 67.77 50⇑*e*P P 15 31 32.6 +0.1
comp=Z,48nm,1.1s,mb5.4
HLID *e*pP pP 15 31 38.4 0.0
HLID LR LR
comp=Z,1µm,19.0s,MS5.1
BNLO Ben Lomond (Sa 67.79 59 ⇓P P 15 31 32.5 -0.2
baz=68,SNR=15
N09A Rock Creek Ran 67.94 54 ⇑P P 15 31 34.3 +0.7
baz=68,SNR=23
N09A ⇓S S 15 40 31.7 +0.1
baz=68
R05C Kirkwood Meado 67.96 57 P P 15 31 34.1 +0.4
baz=68,SNR=52
R05C ⇓S S 15 40 30.6 -1.2
baz=68
O08A Rochester Mine 67.97 54 ⇓P P 15 31 34.5 +0.7
baz=68
M10A I.L. Ranch, Tu 68.03 52 P P 15 31 35.0 +0.8
baz=68,SNR=62
M10A ⇓S S 15 40 31.6 -1.0
baz=68
S04C Ingram Canyon, 68.04 58 ⇓P P 15 31 34.1 -0.1
baz=68,SNR=13
S04C ⇑S S 15 40 33.7 +1.0
baz=68
P07A Fallon 68.07 55 ⇓P P 15 31 35.0 +0.6
baz=68
P07A ⇑S S 15 40 32.5 -0.6
baz=68
BLS5 Blasjo 68.20 337⇑*i*P P 15 31 36.5 +1.3
BLS5 AMb AMB 15 31 39.2
comp=Z,195nm,1.6s,mb5.9
BLS5 Blasjo 68.20 337⇑*i*P P 15 31 36.5 +1.3
comp=Z,195nm,1.6s,mb5.9
BORG Borgarnes 68.22 352 P P 15 31 36.0 +0.7
SNR=12
BORG Borgarnes 68.22 352 P P 15 31 36.3 +1.0
comp=Z,120nm,1.1s,mb5.8,baz=4.4,slow=3.9,SNR=7.3
BORG LR LR 16 01 58.6
comp=Z,706nm,19.2s,MS4.9,baz=145,slow=36
BORG Borgarnes 68.22 352 *e*P P 15 31 36.7 +1.4
comp=Z,340nm,1.3s,mb6.2
BORG *e*pP pP 15 31 41.6 +0.4
CMB Columbia Colle 68.23 57⇑*i*P P 15 31 35.5 +0.1
CMB *e**PP pP 15 31 39.9 -1.4
CMB pmax pmax
comp=Z,219nm,1.2s,mb6.1
CMB MLR MLR
comp=Z,718nm,19.0s,MS4.9
CMB Columbia Colle 68.23 57⇑*i*P P 15 31 35.5 +0.1
comp=Z,219nm,1.2s,mb6.1
CMB *e*pP pP 15 31 39.9 -1.4
CMB LR LR
comp=Z,718nm,19.0s,MS4.9
CMB Columbia Colle 68.23 57 P P 15 31 35.7 +0.3
baz=68,SNR=73
CMB ⇑S S 15 40 32.3 -2.7
baz=68
VANB Van 68.26 303 *e*P P 15 31 36.9 +1.3
TVAN Van 68.30 303 *i* P P 15 31 37.7 +1.9
PACP Pacheco Peak 68.40 59 ⇑P P 15 31 36.8 +0.3
baz=68,SNR=42
PACP ⇓S S 15 40 35.9 -1.1
baz=68
BMN Battle Mountai 68.40 54⇑*i*P P 15 31 37.0 +0.6
BMN *e**PP pP 15 31 42.0 -0.3
BMN *e* 15 32 02.4
BMN pmax pmax
comp=Z,104nm,1.1s,mb5.8
BMN Battle Mountai 68.40 54⇑*i*P P 15 31 37.0 +0.6
comp=Z,104nm,1.1s,mb5.8
BMN *e*pP pP 15 31 42.0 -0.4
BMN *e*PcP PcP 15 32 02.4 +0.6
P08A Dixie Valley 68.42 55 ⇑P P 15 31 37.5 +0.9
baz=68,SNR=5.3
QLMT Earthquake Lak 68.42 47 *e*P P 15 31 36.8 +0.2
R06C Coleville 68.44 56 ⇑P P 15 31 37.2 +0.5
baz=68,SNR=80
R06C ⇓S S 15 40 34.9 -2.6
baz=68
WAKR Walker 68.46 56 *e*P P 15 31 37.6 +0.8
SAO San Andreas Ge 68.47 59⇑*e*P P 15 31 36.5 -0.4
SAO MLR MLR
comp=Z,592nm,20.0s,MS4.8
M11A Holland Ranch, 68.50 52 ⇑P P 15 31 38.1 +1.0
baz=68,SNR=67
M11A ⇓S S 15 40 39.0 +0.8
baz=68
ERZM Erzurum 68.52 306 *i* P P 15 31 38.6 +1.4
EZM Erzurum 68.52 306 *e*P P 15 31 39.0 +1.7
Q07A Schurz 68.53 56 ⇓P P 15 31 37.4 +0.2
baz=68
Q07A ⇓S S 15 40 37.3 -1.2
baz=68
FSV Svinoy 68.54 345 *e*P P 15 31 37.7 +0.4
FSV Svinoy 68.54 345 *e*P P 15 31 37.7 +0.4
O09A Fish Creek Ran 68.60 54 ⇑P P 15 31 38.3 +0.6
baz=68,SNR=37
O09A ⇑S S 15 40 39.6 +0.3
baz=68
N10A Dunphy 68.60 53 ⇑P P 15 31 38.3 +0.6
baz=68
GCMT Greycliff 68.62 45 *e*P P 15 31 38.1 +0.3
GCMT *e*pP pP 15 31 44.1 +0.4
S06C San Francisco 68.65 57 P P 15 31 38.2 +0.2
baz=68,SNR=86
S06C ⇓S S 15 40 39.4 -0.6
baz=68
HAST UC Hastings Re 68.66 59 ⇓P P 15 31 38.0 -0.1
baz=68,SNR=21
BANOM Banah 68.72 286 ⇓P P 15 31 38.4 0.0
SNR=8.8
S05C Merced 68.73 58 ⇓P P 15 31 38.1 -0.4
baz=68,SNR=5.8
S05C ⇑S S 15 40 39.3 -1.7
baz=68
YMR Madison River 68.77 47⇑*i*P P 15 31 39.1 +0.3
comp=Z,189nm,1.3s,mb5.9
YMR *e*pP pP 15 31 43.5 -1.2
YMR LR LR
comp=Z,2µm,20.0s,MS5.4
T05C Eagle Field, D 68.83 58 ⇓P P 15 31 39.4 +0.3
baz=69
FTO Torshavn 68.85 345 *e*P P 15 31 39.4 +0.2
FTO Torshavn 68.85 345 *e*P P 15 31 39.4 +0.2
SIM Simferopol' 68.86 314*c i*P P 15 31 39.0 -0.3
SIM *e* pP 15 31 45.0 -0.2
SIM *e* 15 34 14.0
SIM *i* S S 15 40 44.0 +1.6
SIM *e*PS 15 41 10.0
SIM pmax pmax
comp=Z,125nm,1.2s,mb5.7
SIM pmax pmax
comp=Z,100nm,9.6s
SIM MLR MLR
comp=Z,5µm,13.5s,MS5.9
YNR Norris Junctio 68.88 47⇑*e*P P 15 31 40.1 +0.6
O10A Cortez Mining, 68.90 53 P P 15 31 40.6 +1.1
baz=69,SNR=38
O10A ⇓S S 15 40 42.1 -0.8
baz=69
LRV Little Rabbit 68.95 59 *e*P P 15 31 39.8 -0.1
N11A Elko Archery C 68.95 53 ⇓P P 15 31 40.2 +0.3
baz=69
WSAR Wadi Sarin 68.96 282 P P 15 31 40.2 +0.3
comp=Z,42nm,1.1s,mb5.3,baz=44,slow=3.5,SNR=10
WSAR Wadi Sarin 68.96 282 P P 15 31 40.2 +0.3
R07C Lee Vining 68.97 57 ⇑P P 15 31 40.7 +0.7
baz=69
R07C ⇑S S 15 40 43.3 -0.5
baz=69
M12A Wells 68.99 52 P P 15 31 41.1 +1.0
baz=69,SNR=58
M12A ⇑S S 15 40 43.9 0.0
baz=69
YFT Old Faithful 68.99 47⇑*i*P P 15 31 41.6 +1.4
P09A Austin 69.05 54 ⇓P P 15 31 41.1 +0.6
baz=69,SNR=8.3
P09A ⇑S S 15 40 45.0 +0.3
baz=69
CUKT Cukurca 69.05 302 *e*P P 15 31 41.2 +0.7
Q08A Gabbs 69.08 55 ⇑P P 15 31 41.0 +0.3
baz=69,SNR=19
V03C Hunter Liggett 69.10 59 ⇑P P 15 31 41.0 +0.2
baz=69,SNR=10
LKWY Lake 69.13 47⇑*e*P P 15 31 42.6 +1.6
LKWY pmax pmax
comp=Z,155nm,1.4s,mb5.7
LKWY MLR MLR
comp=Z,3µm,19.0s,MS5.5
LKWY Lake 69.13 47⇑*e*P P 15 31 42.6 +1.6
comp=Z,117nm,1.4s,mb5.6

LKWY LR LR
comp=Z,2µm,19.0s,MS5.4
U04C Hernandez Rese 69.13 59 ⇓P P 15 31 41.5 +0.5
baz=69,SNR=17
U04C ⇓S S 15 40 45.7 -0.1
baz=69
NVAR Mina Array Bea 69.16 56 P P 15 31 41.8 +0.6
comp=Z,60nm,0.9s,mb5.5,baz=306,slow=4.1,SNR=357
NVAR PKP2bc 15 59 48.0
comp=Z,4.5nm,1.0s,baz=131,slow=5.3,SNR=17
NVAR Mina Array Bea 69.16 56 P P 15 31 41.8 +0.6
NVAR ⇑*e* 15 59 48.0
ELK Elko 69.28 52⇑*i*P P 15 31 42.5 +0.6
ELK *e**PP pP 15 31 47.2 -0.6
ELK pmax pmax
comp=Z,59nm,1.0s
ELK MLR MLR
comp=Z,844nm,21.0s
ELK Elko 69.28 52⇑*i*P P 15 31 42.5 +0.5
comp=Z,59nm,1.0s,mb5.5
ELK *ep*P pP 15 31 47.2 -0.6
ELK LR LR
comp=Z,847nm,21.0s,MS5.0
WAR Warsaw 69.28 326 *e*P P 15 31 42.5 +0.6
WAR *ep*P pP 15 31 47.0 -0.8
WAR *e*S S 15 40 50.5 +3.1
WAR L 16 05 00.6
comp=Z,4.2nm,15.9s
BNGL BINGOL 69.29 305 *i* P P 15 31 43.3 +1.3
N12A Clover Valley, 69.31 52 ⇑P P 15 31 43.0 +0.9
baz=69,SNR=69
N12A ⇓S S 15 40 49.2 +1.4
baz=69
FLWY Flagg Ranch 69.32 47⇑*e*P P 15 31 43.2 +1.0
comp=Z,330nm,1.4s,mb6.1
FLWY *ep*P pP 15 31 48.5 +0.4
T06C Millerton Lake 69.32 58 ⇑P P 15 31 41.8 -0.4
baz=69,SNR=12
T06C ⇑S S 15 40 46.8 -1.2
baz=69
R08A Mina 69.33 56 ⇑P P 15 31 42.7 +0.4
baz=69,SNR=36
R08A ⇓S S 15 40 48.7 +0.7
baz=69
IMW Indian Meadow 69.33 48⇑*i*P P 15 31 46.0 +3.7
comp=Z,181nm,1.4s,mb5.8
IMW *ep*P pP 15 31 51.0 +2.9
KCC Kaiser Creek 69.33 57 P P 15 31 42.6 +0.3
baz=69,SNR=40
KCC ⇑S S 15 40 48.8 +0.7
baz=69
MLAC Mammoth Lakes 69.40 57 ⇑P P 15 31 43.9 +1.2
baz=69,SNR=11
DCID1 Drake Creek 69.42 48⇑*i*P P 15 31 43.5 +0.7
DCID1 *ep*P pP 15 31 48.4 -0.3
WAL1 Walls 69.42 342⇑*e*P P 15 31 42.4 -0.4
WAL1 Walls 69.42 342⇑*e*P P 15 31 42.4 -0.4
M13A Montello 69.43 51 ⇓P P 15 31 43.4 +0.6
baz=69,SNR=96
M13A ⇑S S 15 40 47.3 -1.9
baz=69
LRW Lerwick 69.43 341⇑*e*P P 15 31 42.7 -0.1
LRW Lerwick 69.43 341⇑*e*P P 15 31 42.7 -0.1
O11A Cowboy Ranch, 69.47 53 ⇑P P 15 31 43.6 +0.5
baz=69,SNR=31
O11A ⇑S S 15 40 49.6 -0.2
baz=69
EZC Erzincan 69.49 306 *e*P P 15 31 45.6 +2.4
Q09A Carvers 69.52 55 ⇓P P 15 31 43.9 +0.5
baz=69,SNR=16
GRSN GIRESUNGRSN 69.52 308 *i* P P 15 31 42.9 -0.6
RRI2 Red Ridge 69.53 48⇑*e*P P 15 31 44.2 +0.8
comp=Z,235nm,1.0s,mb6.1
RRI2 *ep*P pP 15 31 49.0 -0.4
MOOW Moose Ponds 69.54 48⇑*e*P P 15 31 44.2 +0.7
comp=Z,191nm,1.3s,mb5.9
U05C Westside ANR, 69.54 59 ⇓P P 15 31 44.0 +0.5
baz=69
PKD Parkfield 69.56 59 ⇑P P 15 31 43.7 0.0
baz=69,SNR=20
PKD ⇑S S 15 40 52.2 +1.4
baz=69
V04C Ramage Ranch, 69.58 60 ⇓P P 15 31 44.3 +0.5
baz=69,SNR=8.4
COP Copenhagen 69.58 332⇑*i*P P 15 31 43.9 +0.1
comp=Z,197nm,1.2s,mb5.9
COP *i* S S 15 40 51.6 +0.6
COP
comp=Z,2µm,18.0s
COP Copenhagen 69.58 332⇑*i*P P 15 31 43.9 +0.1
COP *i* S S 15 40 51.6 +0.6
COP pmax pmax
comp=Z,197nm,1.2s,mb5.9
COP MLR MLR
comp=Z,2µm,18.0s,MS5.5
TPAW Teton Pass 69.61 48⇑*i*P P 15 31 44.7 +0.7
comp=Z,268nm,1.2s,mb6.0
BTMT Batman 69.62 304 *e*P P 15 31 42.0 -2.0
LAO LASA Array 69.63 43⇑*i*P P 15 31 44.0 -0.1
comp=Z,187nm,1.3s,mb5.9
LAO *ep*P pP 15 31 49.0 -1.0
LAO *e*PP PP 15 34 18.6 +0.5
LAO LR LR
comp=Z,2µm,19.0s,MS5.4
LOHW Long Hollow 69.70 48⇑*i*P P 15 31 45.2 +0.7
comp=Z,316nm,1.4s,mb6.0
LOHW *ep*P pP 15 31 50.3 -0.2
MTUM Tungsten Hills 69.75 57 *e*P P 15 31 45.4 +0.5
REDW Red Top Meadow 69.76 48⇑*e*P P 15 31 45.3 +0.4
comp=Z,376nm,1.5s,mb6.1
N13A Wendover, West 69.76 52 ⇓P P 15 31 45.3 +0.4
baz=70,SNR=17
N13A ⇓S S 15 40 53.9 +0.8
baz=70
P11A Circle Ranch, 69.82 54 ⇑P P 15 31 45.7 +0.5
baz=70,SNR=19
P11A ⇑S S 15 40 51.1 -2.7
baz=70
HVU Hansel Valley 69.88 50⇑*i*P P 15 31 45.8 +0.2
HVU pmax pmax
comp=Z,105nm,1.4s,mb5.6
HVU Hansel Valley 69.88 50⇑*i*P P 15 31 45.8 +0.2
comp=Z,105nm,1.4s,mb5.6
O12A Currie 69.88 52 ⇓P P 15 31 45.9 +0.3
baz=70,SNR=64
O12A ⇑S S 15 40 55.3 +0.8
baz=70
GKP Gorka Klasztor 69.89 328 *e*Pc P 15 31 45.9 +0.2
comp=Z,0.9nm,2.1s
GKP *ep*P pP 15 31 51.3 -0.3
GKP *e*S S 15 40 55.6 +0.9
GKP *es*S sS 15 41 05.3 +0.9
GKP L 16 05 04.5
comp=Z,6.4nm,17.3s
GKP Gorka Klasztor 69.89 328⇑*e*P P 15 31 45.9 +0.2
GKP *e**PP pP 15 31 51.3 -0.3
GKP *e*S S 15 40 55.6 +0.9
GKP pmax pmax
comp=Z,900nm,2.1s,mb6.3
GKP MLR MLR
comp=Z,6µm,17.3s,MS5.9
KIS Kishinev 69.92 318*c i*P P 15 31 44.0 -1.9
KIS *e* 15 32 04.0
KIS *e* 15 34 20.0
KIS *e* 15 36 02.0
KIS *e*S S 15 40 54.0 -1.0
KIS pmax pmax
comp=N,600nm,1.0s
KIS pmax pmax
comp=E,600nm,1.0s
KIS pmax pmax
comp=Z,1µm,1.0s,mb6.8
KIS MLR MLR
comp=Z,6µm,13.0s,MS6.0
KIS MLR MLR
comp=N,4µm,12.0s,MS6.0
KIS MLR MLR
comp=E,2µm,12.0s,MS6.0
KIS MLR MLR
comp=Z,6µm,13.0s
LVV L'vov 69.92 322⇑*i*P P 15 31 45.9 0.0
LVV *e* 15 34 22.5
LVV *e*S S 15 40 56.1 +1.1
LVV *e*SS SS 15 45 27.9 +3.8
LVV MLR MLR
comp=N,3µm,15.0s,MS5.9
LVV MLR MLR
comp=E,4µm,15.0s,MS5.9
LVV MLR MLR
comp=Z,4µm,15.0s,MS5.8
HELL Mitchell Peak, 69.95 58 ⇓P P 15 31 45.7 -0.3
baz=70,SNR=130
HELL ⇑S S 15 40 53.2 -2.1
baz=70
MUD Monsted U'grnd 69.95 334⇑*i*P P 15 31 46.1 0.0
comp=Z,263nm,1.5s,mb5.9
MUD *i* 15 36 03.9
MUD *i*S S 15 41 00.0 +4.7
MUD *i* 15 48 43.4
MUD
comp=Z,3µm,18.0s
MUD Monsted U'grnd 69.95 334⇑*i*P P 15 31 46.1 0.0
comp=Z,263nm,1.5s,mb5.9
MUD *i* 15 36 03.9
MUD *i*S S 15 41 00.0 +4.7
MUD *i* 15 48 43.4
PTRM Twissleman Ran 69.95 59 *e*P P 15 31 46.3 +0.2
BEST Besiri 69.96 304 *i*P P 15 31 47.2 +1.1
V05C Boulder Hill, 69.99 59 ⇓P P 15 31 46.9 +0.6
baz=70,SNR=5.3
R09A Tonopah 69.99 55 ⇓P P 15 31 46.5 +0.1
baz=70,SNR=116
R09A ⇑S S 15 40 54.1 -1.7
baz=70
MSL Mosul 70.01 302 *i* x x 15 31 48.0
MSL *i* x x 15 31 54.0
MSL *ex* x 15 40 58.0
TPH Tonopah 70.02 56⇑*i*P P 15 31 46.8 +0.3
TPH *e**PP pP 15 31 51.9 -0.5
TPH pmax pmax
comp=Z,362nm,1.4s,mb6.1
TPH Tonopah 70.02 56⇑*i*P P 15 31 46.8 +0.3
comp=Z,362nm,1.4s,mb6.1
TPH *ep*P pP 15 31 51.9 -0.5
AHID Auburn Hatcher 70.05 49⇑*i*P P 15 31 46.6 -0.1
comp=Z,122nm,1.4s,mb5.6
AHID *ep*P pP 15 31 51.9 -0.7
AHID LR LR
comp=Z,731nm,22.0s,MS4.9
RCTC Rector, Farmer 70.08 58 ⇑P P 15 31 46.2 -0.6
baz=70
TIN Tinemaha 70.15 57 ⇑P P 15 31 48.1 +0.8
baz=70,SNR=9.2
TIN ⇓S S 15 40 58.3 +0.6
baz=70
RGN Rugen 70.22 331 *e*P P 15 31 48.1 +0.4
comp=Z,737nm,1.5s,mb6.4
RGN Rugen 70.22 331 *e*P P 15 31 48.0 +0.2
comp=Z,328nm,1.0s,mb6.2
S09A Goldfield 70.26 56 ⇓P P 15 31 48.2 +0.2
baz=70,SNR=111
S09A ⇑S S 15 40 59.6 +0.6
baz=70
AS31 Alice Springs 70.30 188 *e*P P 15 31 47.7 -0.5
AS31 *ep*P pP 15 31 53.8 -0.3
ASAR Alice Springs 70.30 188 P P 15 31 47.6 -0.6
comp=Z,107nm,0.9s,mb5.8,baz=4.6,slow=5.3,SNR=378
ASAR PKP2ab 15 59 48.2
comp=Z,2.9nm,1.1s,baz=190,slow=4.1,SNR=8.2
ASAR LR LR 16 02 07.5
comp=Z,1µm,21.8s,MS5.1,baz=5.5,slow=36
ASPA Alice Springs 70.30 188 *e*P P 15 31 47.7 -0.5
ASPA *ep*P pP 15 31 53.8 -0.3
SMMC Simmler 70.31 59 ⇓P P 15 31 48.5 +0.2
baz=70,SNR=15
PTK Pertek 70.32 306 *e*P P 15 31 49.2 +0.9
BGU Big Grassy Mou 70.34 51⇑*i*P P 15 31 48.6 +0.2
P12A McGill 70.34 53 ⇑P P 15 31 48.7 +0.2
baz=70,SNR=75
P12A ⇓S S 15 41 00.7 +0.7
baz=70
MBWA Marble Bar 70.35 202 P P 15 31 47.8 -0.7
SNR=13
MBWA Marble Bar 70.35 202⇑*i*P P 15 31 47.4 -1.1
comp=Z,149nm,1.1s,mb5.8
MBWA LR LR
comp=Z,728nm,19.0s,MS5.0
SPUT South Promonto 70.38 50⇑*i*P P 15 31 48.3 -0.4
SPUT *ep*P pP 15 31 53.4 -1.2
R10A Warm Springs 70.39 55 ⇑P P 15 31 49.0 +0.2
baz=70,SNR=7.3
VES Vestal, Richgr 70.49 58 ⇓P P 15 31 48.4 -1.0
baz=70,SNR=5.5
DIY Diyarbakir 70.55 305 *e*P P 15 31 50.2 +0.5
KVT Kavak 70.61 310 *e*P P 15 31 50.7 +0.6
DIKM Dikmen 70.62 310 *e*P P 15 31 48.1 -2.0
KWP Kalwaria 70.62 323 *e*Pc P 15 31 50.9 +0.7
comp=Z,1.2nm,1.7s
KWP *ep*P pP 15 31 56.2 +0.1
KWP Kalwaria 70.62 323⇑*e*P P 15 31 50.9 +0.7
KWP *e**PP pP 15 31 56.2 +0.1
KWP pmax pmax
comp=Z,1µm,1.7s,mb6.5
HWUT Hardware Ranch 70.64 50⇑*i*P P 15 31 50.5 +0.3
comp=Z,142nm,1.1s,mb5.8
HWUT *ep*P pP 15 31 55.5 -0.7
HWUT LR LR
comp=Z,1µm,19.0s,MS5.1
MARD Mardin 70.64 304 *i* P P 15 31 51.1 +0.8
CWC Cottonwood Cre 70.66 57 ⇓P P 15 31 50.4 0.0
baz=70,SNR=7.7
GRAC Grapevine Rang 70.68 56 ⇑P P 15 31 51.1 +0.6
baz=70,SNR=111
Q12A Willow Creek R 70.69 53 ⇓P P 15 31 51.1 +0.6
baz=70,SNR=39
Q12A ⇓S S 15 41 02.2 -1.8
baz=70
PKM Peak Mountain 70.71 60 P P 15 31 51.4 +0.7
baz=70,SNR=32
PKM ⇑S S 15 41 05.0 +0.8
baz=70
TRCR Troy Canyon 70.75 54⇑*i*P P 15 31 51.1 +0.1
TRCR *ep*P pP 15 31 55.5 -1.4
ELZG Elazig 70.83 306 *i* P P 15 31 52.7 +1.3
BW06 Boulder Array 70.84 48⇑*i*P P 15 31 51.3 -0.2
comp=Z,122nm,1.1s,mb5.7
BW06 *ep*P pP 15 31 56.1 -1.3
BW06 LR LR
comp=Z,985nm,21.0s,MS5.0
PDAR Pinedale Array 70.84 48 P P 15 31 51.3 -0.2
comp=Z,64nm,0.9s,mb5.5,baz=318,slow=2.0,SNR=324
PDAR PKP2ab 15 59 43.6
comp=Z,1.3nm,1.0s,baz=108,slow=3.3,SNR=8.5
PDAR LR LR 16 07 19.6
comp=Z,972nm,18.3s,MS5.1,baz=154,slow=40
TOKT Tokat 70.88 309 *e*P P 15 31 52.1 +0.3
SVSK Karacayir 70.92 308 *e*P P 15 31 52.8 +0.8
BOYT Boyabat 70.97 310 *i* P P 15 31 53.2 +0.9
ISA Isabella 70.97 58⇑*i*P P 15 31 51.4 -0.9
ISA pmax pmax
comp=Z,80nm,1.2s,mb5.5
ISA MLR MLR
comp=Z,165nm,20.0s,MS4.3
ISA Isabella 70.97 58⇑*i*P P 15 31 51.4 -0.9
comp=Z,0.2nm,1.2s
ISA LR LR
comp=Z,165nm,20.0s
ISA Isabella 70.97 58 ⇑P P 15 31 51.5 -0.8
baz=71,SNR=36
DUG Dugway 70.98 51⇑*i*P P 15 31 52.7 +0.4
DUG pmax pmax
comp=Z,146nm,1.1s,mb5.8
DUG MLR MLR
comp=Z,405nm,20.0s,MS4.7
DUG Dugway 70.98 51⇑*i*P P 15 31 52.7 +0.3
comp=Z,146nm,1.1s,mb5.8
DUG LR LR
comp=Z,405nm,20.0s,MS4.7
BYBT Boyabat 71.00 311 *e*P P 15 31 52.8 +0.3
NOQ North Oquirrh 71.02 51⇑*i*P P 15 31 52.8 +0.1
comp=Z,113nm,1.2s,mb5.7
NOQ *ep*P pP 15 31 58.0 -0.5
BZK Bozkurt 71.05 311 *e*P P 15 31 53.5 +0.7
DAC Darwin (Calif) 71.06 57⇑*i*P P 15 31 52.9 +0.1
DAC *e**PP pP 15 31 58.0 -0.7
DAC pmax pmax
comp=Z,91nm,1.2s,mb5.6
DAC MLR MLR
comp=Z,597nm,20.0s,MS4.8
DAC Darwin (Calif) 71.06 57⇑*i*P P 15 31 52.9 0.0
comp=Z,91nm,1.2s,mb5.6
DAC *ep*P pP 15 31 58.0 -0.7
DAC LR LR
comp=Z,597nm,20.0s,MS4.8
TCUT Toone Canyon 71.07 50⇑*i*P P 15 31 53.1 +0.2
SBC Santa Barbara 71.08 60 ⇑P P 15 31 53.2 +0.3
baz=71
BURAR Bucovina Array 71.09 320⇑*i*P P 15 31 53.1 +0.1
BURAR Bucovina Array 71.09 320 ⇑P P 15 31 53.1 +0.1
ARVC Arvin 71.13 59 ⇓P P 15 31 52.8 -0.5
baz=71
CTU Camp Tracy 71.19 50⇑*i*P P 15 31 53.6 0.0
comp=Z,166nm,1.4s,mb5.8
CTU *ep*P pP 15 31 58.5 -1.0
MYA Malataya 71.26 306 *e*P P 15 31 55.3 +1.3
MALT Malatya 71.27 306⇑*i*P P 15 31 55.3 +1.2
MALT Malatya 71.27 306⇑*i*P P 15 31 55.2 +1.1
MALT *e**PP pP 15 32 01.2 +1.2
MALT pmax pmax
comp=Z,236nm,1.4s,mb5.9
MALT Malatya 71.27 306⇑*i*P P 15 31 55.2 +1.1
comp=Z,236nm,1.4s,mb5.9
MALT *ep*P pP 15 32 01.2 +1.2
MPMC Manual Prospec 71.27 57 ⇓P P 15 31 54.2 +0.1
baz=71,SNR=117
MPMC ⇓S S 15 41 10.9 +0.2
baz=71
BHD Baghdad 71.32 299 *i* x x 15 31 51.0
BHD *ex* x 15 32 11.0
BHD *ex* x 15 41 03.0
KOLS Kolonicke sedl 71.34 323 *i* P P 15 31 54.1 -0.4
KOLS *es*P sP 15 32 03.1 +0.5
KOLS *e*S S 15 41 11.4 -0.1
OJC Ojcow 71.34 325⇑*i*P P 15 31 54.8 +0.3
OJC *i* S S 15 41 12.0 +0.5
OJC MLR MLR
comp=Z,15µm,20.3s,MS6.2
FURC Furnace Creek, 71.35 57 ⇓P P 15 31 54.8 +0.2
baz=71,SNR=63
FURC ⇑S S 15 41 12.0 +0.4
baz=71
STHS Stebnicka Huta 71.39 324 *i* P P 15 31 55.3 +0.5
STHS pmax pmax
comp=Z,95nm,1.0s,mb5.7
STHS Stebnicka Huta 71.39 324 *i* P P 15 31 55.3 +0.5
comp=Z,95nm,1.0s,mb5.7
ULM Lac du Bonnet 71.40 35 P P 15 31 53.5 -1.4
comp=Z,45nm,1.0s,mb5.3,baz=322,slow=6.8,SNR=43
ULM PKPPKP 15 59 44.3
comp=Z,2.6nm,0.9s,baz=205,slow=2.1,SNR=4.8
ULM LR LR 16 08 26.6
comp=Z,2µm,18.1s,MS5.3,baz=331,slow=40
ULM Lac du Bonnet 71.40 35⇑*i*P P 15 31 53.5 -1.4
comp=Z,191nm,1.4s,mb5.8
ULM *ep*P pP 15 31 58.2 -2.6
ULM LR LR
comp=Z,2µm,19.0s,MS5.5
ORE Reay 71.44 342⇑*i*P P 15 31 55.0 -0.1
ORE Reay 71.44 342⇑*i*P P 15 31 55.0 -0.1
BSC Santa Cruz Isl 71.44 60 ⇓P P 15 31 55.0 -0.1
baz=71
NLU North Lily Min 71.55 51⇑*i*P P 15 31 56.1 +0.3
OSI Osito Adit 71.55 59 ⇑P P 15 31 56.0 +0.2
baz=71,SNR=5.7
OSI ⇑S S 15 41 11.4 -2.6
baz=71
LRMC Laurel Mountai 71.56 58 ⇑P P 15 31 55.7 -0.1
baz=71,SNR=39
LRMC ⇑S S 15 41 14.6 +0.6
baz=71
UZH Uzhgorod 71.56 323 *e*P P 15 31 54.0 -1.9
UZH *e*S S 15 41 10.0 -4.1
UZH MLR MLR
comp=Z,6µm,12.0s,MS6.1
MLA1 Latheron 71.57 341⇑*i*P P 15 31 55.7 -0.2
MLA1 Latheron 71.57 341⇑*i*P P 15 31 55.7 -0.2
CFR Carcaliu 71.59 317⇓*i*P P 15 31 55.9 -0.1
CFR Carcaliu 71.59 317 ⇓P P 15 31 55.9 -0.1
CTKT Corum 71.60 310 *i* P P 15 31 56.7 +0.6
DAU Daniels Canyon 71.66 50 *e*P P 15 31 57.0 +0.6
DAU *e**PP pP 15 32 03.2 +0.8
URFA Urfa 71.66 305 *e*P P 15 31 57.4 +1.0
BALT Daday 71.67 311 *i* P P 15 31 57.5 +0.9
U10A Ash Meadows, A 71.69 56 ⇓P P 15 31 57.2 +0.6
baz=72,SNR=67
U10A ⇑S S 15 41 16.6 +1.1
baz=72
BLG Laguna Peak 71.70 60 ⇑P P 15 31 56.3 -0.4
baz=72,SNR=7.5
CRVS Cervenica-Dubn 71.70 323 *i* P P 15 31 57.0 +0.3
CRVS *e*S S 15 41 15.1 -0.6
TOS Tosya 71.70 311 *e*P P 15 31 57.7 +0.9
BSEG Bad Segeberg 71.72 332 *e*P P 15 31 57.1 +0.3
comp=Z,329nm,1.5s,mb6.0
BSEG *e*S S 15 41 17.0 +1.1
BSEG Bad Segeberg 71.72 332 *e*P P 15 31 57.1 +0.3
BSEG *e*S S 15 41 17.0 +1.1
BSEG pmax pmax
comp=Z,357nm,1.5s,mb6.1
VRI Vrincioaia 71.73 318⇓*i*P P 15 31 57.3 +0.4
VRI Vrincioaia 71.73 318 ⇓P P 15 31 57.3 +0.4
MPU Maple Canyon 71.74 51⇑*i*P P 15 31 57.3 +0.4
comp=Z,97nm,0.9s,mb5.7
MPU *ep*P pP 15 32 02.5 -0.4
MPU LR LR
comp=Z,2µm,21.0s,MS5.4
NIE Niedzica 71.77 324 *i* Pc P 15 31 58.0 +0.9
RUE Ruedersdorf 71.77 330 *e*P P 15 31 57.3 +0.2
comp=Z,449nm,1.3s,mb6.2
RUE Ruedersdorf 71.77 330 *e*P P 15 31 57.1 0.0
comp=Z,513nm,1.5s,mb6.2
PLOR Plostina 71.78 318⇓*i*P P 15 31 58.0 +0.8
EDW2 Edwards Air Fo 71.80 58 ⇑P P 15 31 57.2 -0.1
baz=72,SNR=93
EDW2 ⇑S S 15 41 17.3 +0.5
baz=72
UMR Umm Al-Rimmam 71.82 294 *e*P P 15 31 56.5 -1.0
UMR AMb AMB 15 31 57.5
comp=Z,342nm,0.8s,mb6.3
DZM Mont Dzumac 71.88 156 *e*P P 15 31 59.0 +1.2
DZM Mont Dzumac 71.88 156 P P 15 31 58.8 +1.0
comp=Z,104nm,0.9s,mb5.8,baz=16,slow=6.5,SNR=20
MIB Mutribah 71.88 294 *e*P P 15 31 56.8 -1.0
MIB AMb AMB 15 31 58.9
comp=Z,454nm,1.0s,mb6.4
ATAB Bozova 71.94 306 *i* P P 15 31 59.4 +1.3
TIRR Tirgusor 72.00 316⇓*i*P P 15 31 58.4 -0.1
TIRR Tirgusor 72.00 316⇑*i*P P 15 31 58.3 -0.2
comp=Z,92nm,1.1s,mb5.6
TIRR *ep*P pP 15 32 03.5 -0.9
CORM Corum 72.00 310 *e*P P 15 31 57.5 -1.0
SNCC San Nicolas Is 72.03 61⇑*i*P P 15 31 58.6 -0.1
comp=Z,0.2nm,1.1s
SNCC *ep*P pP 15 32 03.5 -1.1
SNCC LR LR
comp=Z,530nm,21.0s
SNCC San Nicolas Is 72.03 61 ⇓P P 15 31 58.6 -0.1
baz=72,SNR=8.1
DECC Green Verdugo 72.04 59 ⇓P P 15 31 58.5 -0.2
baz=72
HARR Harsova 72.05 317⇓*i*P P 15 31 59.4 +0.6
HARR Harsova 72.05 317 ⇓P P 15 31 59.4 +0.6
RAC Raciborz 72.08 326 *e*P P 15 31 59.9 +0.9
RAC MLR MLR
comp=Z,8µm,13.6s,MS6.2
SHOC Shoshone 72.08 57 ⇓P P 15 31 59.1 +0.1
baz=72,SNR=12
SHOC ⇓S S 15 41 21.6 +1.5
baz=72
KBD Kabd 72.09 294 *e*P P 15 31 58.2 -0.9
KBD AMb AMB 15 32 00.4
comp=Z,818nm,1.1s,mb6.6
MVH1 Achvaich 72.10 342⇑*i*P P 15 31 58.9 -0.2
MVH1 Achvaich 72.10 342⇑*i*P P 15 31 58.9 -0.2
KSP Ksiaz 72.19 327 *e*Pc P 15 32 00.2 +0.5
comp=Z,1.1nm,1.7s
KSP *ep*P pP 15 32 05.6 0.0
KSP *e*PcP PcP 15 32 15.3 -2.5
KSP *e*S S 15 41 22.4 +1.0
KSP L 16 06 15.4
comp=Z,7.1nm,20.0s
KSP Ksiaz 72.19 327⇑*e*P P 15 32 00.0 +0.3
KSP *e**PP pP 15 32 05.7 +0.1
KSP *e* 15 34 35.8
KSP *e*S S 15 41 22.0 +0.6
KSP MLR MLR
comp=Z,9µm,19.1s,MS6.0

KSP **Ksiaz** 72.19 327⇑ *eP* P 15 32 00.0 +0.3
KSP *epP* pP 15 32 05.7 +0.1
KSP *ePP* PP 15 34 35.8 -4.3
KSP *eS* S 15 41 22.0 +0.6
KSP *eSS* SS 15 46 33.7 +35
KSP LR LR
comp=Z,9μm,19.1s,MS6.0
GSC Goldstone 72.20 57⇓ *eP* P 15 31 59.5 -0.2
GSC *e**PP pP 15 32 04.0 -1.6
GSC Goldstone 72.20 57 ⇑P P 15 31 59.7 0.0
baz=72,SNR=20
GSC ⇓S S 15 41 19.7 -1.7
baz=72
MCD Coleburn Disti 72.21 341⇑ *iP* P 15 31 59.6 -0.1
MCD Coleburn Disti 72.21 341⇑ *iP* P 15 31 59.6 -0.1
MWC Mount Wilson 72.22 59 *eP* P 15 31 59.9 +0.1
U11A Corn Creek 72.22 56 ⇑P P 15 32 00.5 +0.7
baz=72,SNR=9.2
CANT Cankiri 72.23 311 *eP* P 15 31 59.0 -0.9
QRN Al-Qurain 72.25 293 *eP* P 15 31 59.1 -0.9
QRN AMb AMB 15 32 00.1
comp=Z,285nm,0.9s,mb6.2
SAFT Safranbolu 72.25 312 *eP* P 15 32 00.6 +0.6
HLG Helgoland 72.27 334 *eP* P 15 32 00.4 +0.3
comp=Z,402nm,1.2s,mb6.2
OKC Ostrava-Krasne 72.29 326 *eP* P 15 32 00.6 +0.3
OKC *epP* pP 15 32 06.6 +0.4
OKC *ePP* PP 15 34 44.5 +3.6
OKC *ex* x 15 36 22.1
OKC *eS* S 15 41 26.1 +3.6
OKC AMS AMS 16 07 10.0
comp=Z,7μm,13.2s
OKC Ostrava-Krasne 72.29 326 *eP* P 15 32 00.6 +0.3
OKC *epP* pP 15 32 06.6 +0.4
OKC *ePP* PP 15 34 44.5 +3.6
OKC *e* 15 36 22.1
OKC *eS* S 15 41 26.1 +3.6
SHPR Sheep Range 72.29 56 *eP* P 15 32 00.8 +0.5
BNN Bunyan 72.30 308 *eP* P 15 32 01.3 +0.9
NAY Al-Naaiem 72.33 294 *eP* P 15 31 59.4 -1.1
NAY AMb AMB 15 32 01.4
comp=Z,150nm,1.1s,mb5.8
ARUT Antelope Range 72.35 54 *eP* P 15 32 00.5 -0.1
RDF Al-Radifah 72.36 293 *eP* P 15 31 59.6 -1.0
RDF AMb AMB 15 32 01.9
comp=Z,427nm,1.1s,mb6.3
MLR Muntele Rosu 72.37 318 P P 15 32 01.0 +0.3
comp=Z,80nm,1.1s,mb5.6,baz=360,slow=4.2,SNR=75
MLR Muntele Rosu 72.37 318⇑ *iP* P 15 32 01.0 +0.3
MLR Muntele Rosu 72.37 318 P P 15 32 00.9 +0.2
MLR Muntele Rosu 72.37 318 ⇑P P 15 32 01.0 +0.3
ISR Istrita 72.38 318 P P 15 32 02.1 +1.3
RRX Edison Barstow 72.38 58 ⇓P P 15 32 01.0 +0.2
baz=72
ELDT Eldivan 72.41 311 *iP* P 15 32 01.7 +0.7
GZT Gaziantep 72.43 306 *iP* P 15 32 02.1 +1.1
KECS Kecovo 72.43 323 *iP* P 15 32 01.2 +0.1
KECS pmax pmax
comp=Z,27nm,1.1s,mb5.1
KECS Kecovo 72.43 323 *iP* P 15 32 01.2 +0.1
comp=Z,27nm,1.1s,mb5.1
FMP Fort Macarthur 72.44 59 ⇓P P 15 32 00.6 -0.6
baz=72
BFSC Mount Baldy St 72.44 59 ⇑P P 15 32 01.0 -0.1
baz=72,SNR=41
TMUT Trail Mountain 72.48 51⇑ *iP* P 15 32 01.7 +0.3
TMUT *epP* pP 15 32 06.0 -1.4
MVU Marysvale 72.51 52 PFAKE 15 32 10.0 +8.4
MVU LR LR
comp=Z,671nm,21.0s,MS4.9
MSU Marysvale 72.52 52 *eP* P 15 32 02.4 +0.8
MSU *e**PP pP 15 32 08.4 +0.8
CDAG Cicekdag 72.54 309 *iP* P 15 32 01.9 +0.2
LIKS Likavka 72.54 325 *eP* P 15 32 03.0 +1.3
LIKS *e* pP 15 32 08.7 +1.0
LIKS pmax pmax
comp=Z,140nm,1.0s,mb5.8
LIKS Likavka 72.54 325 *eP* P 15 32 03.0 +1.3
comp=Z,140nm,1.0s,mb5.8
LIKS *e* pP 15 32 08.7 +1.0
CCUT Cedar City 72.56 54⇑ *iP* P 15 32 02.1 +0.3
RSSD Black Hills 72.57 44⇑ *iP* P 15 32 01.5 -0.4
RSSD *e**PP pP 15 32 06.3 -1.5
RSSD pmax pmax
comp=Z,433nm,1.5s,mb6.2
RSSD MLR MLR
comp=Z,1μm,19.0s,MS5.2
RSSD Black Hills 72.57 44⇑ *iP* P 15 32 01.5 -0.4
comp=Z,389nm,1.5s,mb6.1
RSSD *epP* pP 15 32 06.3 -1.5
RSSD LR LR
comp=Z,1μm,19.0s,MS5.2
UPC Upice 72.57 327 *eP* P 15 32 02.5 +0.6
UPC *epP* pP 15 32 08.6 +0.8
MORC Moravsky Berou 72.58 326⇑ *iP* P 15 32 02.5 +0.6
MORC Moravsky Berou 72.58 326⇑ *iP* P 15 32 02.2 +0.2
MORC *epP* pP 15 32 07.9 -0.2
DPC Dobruska-Polom 72.58 327 *eP* P 15 32 02.9 +0.9
DPC *epP* pP 15 32 08.8 +0.9
DPC *ePP* PP 15 34 45.1 +1.7
DPC *ex* x 15 36 24.6
DPC *eS* S 15 41 26.8 +1.0
DPC AMS AMS 16 07 10.0
comp=Z,7μm,14.2s
CIS Catalina Islan 72.58 60 ⇑P P 15 32 01.5 -0.5
baz=72,SNR=17
CIS ⇓S S 15 41 25.9 +0.1
baz=72
TUQ Turquoise Mtn. 72.61 57 ⇓P P 15 32 02.3 +0.1
baz=72,SNR=97
TUQ ⇓S S 15 41 27.3 +1.1
baz=72
SNX Sinaia 72.67 319 P P 15 32 03.5 +1.0
U12A Valley of Fire 72.70 55 ⇓P P 15 32 03.0 +0.3
baz=72,SNR=9.8
KAC Achnashellach 72.73 342⇑ *iP* P 15 32 02.6 -0.3
KAC Achnashellach 72.73 342⇑ *iP* P 15 32 02.6 -0.3
GAZ Gaziantep 72.75 306 *eP* P 15 32 03.6 +0.6
SCI San Clemente I 72.80 60 ⇓P P 15 32 03.2 -0.1
baz=73
HEC Hector,Ludlow 72.81 57 ⇓P P 15 32 03.4 +0.1
baz=73,SNR=19
HEC ⇑S S 15 41 29.7 +1.4
baz=73
DRGR 72.81 321⇑ *iP* P 15 32 03.7 +0.3
DRGR 72.81 321 ⇑P P 15 32 03.7 +0.3
RWWY Rawlins 72.82 47 *eP* P 15 32 03.2 -0.2
comp=Z,267nm,1.4s,mb6.0
VOIR 72.82 319⇓ *iP* P 15 32 03.9 +0.5
VOIR 72.82 319 ⇓P P 15 32 03.9 +0.5
KDZE Karadeniz Ereo 72.83 312 *eP* P 15 32 03.7 +0.2
BR131 Keskin Array S 72.86 310⇑ *iP* P 15 32 03.6 0.0
comp=Z,44nm,0.9s,mb5.4
BR131 *epP* pP 15 32 09.6 +0.1
BR131 *ePP* PP 15 34 46.5 +0.7
BR131 LR LR
comp=Z,1μm,19.0s,MS5.2
BRTR Keskin Array B 72.86 310 P P 15 32 04.0 +0.3
comp=Z,39nm,0.9s,mb5.3,baz=71,slow=4.2,SNR=172
BRTR PP PP 15 34 40.9 -4.9
comp=Z,11nm,1.0s,baz=95,slow=6.6,SNR=4.0
BRTR PKPPKP 15 59 41.0
comp=Z,0.4nm,0.6s,baz=48,slow=5.8,SNR=4.3
BRTR LR LR 16 10 19.9
comp=Z,1μm,18.5s,MS5.3,baz=43,slow=41
BRTR Keskin Array B 72.86 310 *iP* P 15 32 04.0 +0.4
BRTR pmax pmax
comp=Z,39nm,0.9s
BBRC Big Bear Sol-O 72.86 58 ⇑P P 15 32 03.6 0.0
baz=73,SNR=6.1
KPL Plockton 72.95 342⇑ *iP* P 15 32 04.2 0.0
KPL Plockton 72.95 342⇑ *iP* P 15 32 04.2 0.0
MTUR Matau 72.98 319 P P 15 32 05.1 +0.8
SRU San Rafael 72.98 51⇑ *iP* P 15 32 04.2 -0.2
SRU pmax pmax
comp=Z,80nm,1.0s,mb5.6
SRU San Rafael 72.98 51⇑ *iP* P 15 32 04.2 -0.2
comp=Z,80nm,1.0s,mb5.6
NRDL Niedersach Rie 73.00 332 *eP* P 15 32 05.5 +1.0
comp=Z,309nm,1.5s,mb6.0
NRDL *ePP* PP 15 34 49.3 +2.3
CLL Collm 73.01 329⇑ *iP* P 15 32 04.5 0.0
comp=Z,401nm,1.2s,mb6.2
CLL *epP* pP 15 32 10.3 -0.1
CLL *ePP* PP 15 34 49.1 +2.1
CLL *ePPP* 15 36 30.7
CLL *eS* S 15 41 30.7 +0.1
CLL *ePPS* 15 42 16.3
CLL *eSS* SS 15 46 11.8 +0.4
CLL *eSSS* 15 49 40.9
CLL *eL* 16 07 13.9
comp=Z,4μm,20.0s
CLL Collm 73.01 329 ⇑P P 15 32 04.4 -0.1
comp=Z,logA/T=2.5,mb6.2
CLL *i* *PP pP 15 32 10.2 -0.2
CLL *ePP* PP 15 34 50.0 +3.0
CLL *ePPP* 15 36 31.0
CLL *e* 15 37 31.0
CLL *eS* S 15 41 28.0 -2.6
CLL *e* 15 41 54.0
CLL *ePPS* 15 42 18.0
CLL *eSS* SS 15 46 18.0 +6.6
CLL *eSSS* 15 49 36.0
CLL Collm 73.01 329⇑ *iP* P 15 32 04.4 -0.1
comp=Z,396nm,1.2s,mb6.2
CLL *i* pP pP 15 32 10.2 -0.2
CLL *ePP* PP 15 34 50.0 +3.0
CLL *ePPP* 15 36 31.0
CLL *ePPPP* 15 37 31.0
CLL *eS* S 15 41 28.0 -2.6
CLL *ex* x 15 41 54.0
CLL *ePPS* 15 42 18.0
CLL *eSS* SS 15 46 18.0 +6.6
CLL *eSSS* 15 49 36.0
CLL Collm 73.01 329⇑ *iP* P 15 32 04.4 -0.1
CLL *i* *PP pP 15 32 10.2 -0.2
CLL *eS* S 15 41 28.0 -2.6
CLL pmax pmax
comp=Z,396nm,1.2s,mb6.2
CLL MLR MLR
comp=Z,4μm,17.1s,MS5.8
CLL Collm 73.01 329⇑ *iP* P 15 32 04.4 -0.1
comp=Z,396nm,1.2s,mb6.2
CLL *i* pP pP 15 32 10.2 -0.2
CLL *eS* S 15 41 28.0 -2.6
CLL LR LR
comp=Z,4μm,17.1s,MS5.8
V12A Nelson 73.02 56 ⇓P P 15 32 04.8 +0.2
baz=73,SNR=21
V12A ⇑S S 15 41 31.6 +0.8
baz=73
KSB Sheil Bridge 73.02 342⇑ *iP* P 15 32 04.5 -0.1
KSB Sheil Bridge 73.02 342⇑ *iP* P 15 32 04.5 -0.1
BRG Berggiesshubel 73.03 328 *eP* P 15 32 04.6 0.0
comp=Z,416nm,1.9s,mb6.0
BRG *ePP* PP 15 34 49.3 +2.1
BRG *eS* S 15 41 31.2 +0.3
BRG Berggiesshubel 73.03 328⇑ *iP* P 15 32 04.8 +0.2
comp=Z,248nm,1.9s,mb5.8
BRG PP PP 15 34 44.0 -3.2
BRG *i* 15 36 31.0
BRG S S 15 41 30.0 -0.9
BRG SS SS 15 46 11.0 -0.7
BRG *e*PKPPKP 15 59 46.3
comp=Z,1.8nm,1.0s
BRG
comp=N,2μm,14.9s
BRG
comp=E,1μm,12.4s
BRG
comp=Z,3μm,13.3s
BRG Berggiesshubel 73.03 328⇑ *iP* P 15 32 04.8 +0.2
BRG 15 34 44.0
BRG *i* 15 36 31.0
BRG S S 15 41 30.0 -0.9
BRG SS SS 15 46 11.0 -0.7
BRG MLR MLR
comp=N,2μm,15.0s,MS5.6
BRG MLR MLR
comp=E,2μm,12.4s,MS5.6
BRG MLR MLR
comp=Z,1μm,13.3s,MS5.4
BRG Berggiesshubel 73.03 328⇑ *iP* P 15 32 04.8 +0.2
comp=Z,248nm,1.9s,mb5.8
BRG PP PP 15 34 44.0 -3.2
BRG *i* 15 36 31.0
BRG S S 15 41 30.0 -0.9
BRG SS SS 15 46 11.0 -0.7
BRG *e*PP' 15 59 46.3
BRG LR LR
comp=Z,3μm,13.3s,MS5.8
SGKT Sivrigoynuk 73.06 311 *iP* P 15 32 05.7 +0.9
KAMT Kaman 73.08 310 *eP* P 15 32 04.6 -0.3
PVCC Panska Ves 73.09 328 *eP* P 15 32 05.6 +0.6
PVCC *ePP* PP 15 34 50.4 +2.7
PVCC *ex* x 15 36 30.1
PVCC AMS AMS 16 08 00.0
comp=Z,5μm,13.7s
VYHS Vyhne 73.09 324 *iP* P 15 32 05.5 +0.5
VYHS *eS* S 15 41 33.4 +1.8
VYHS Vyhne 73.09 324 *iP* P 15 32 05.5 +0.5
comp=Z,250nm,1.9s,mb5.8
VYHS *eS* S 15 41 33.4 +1.8
comp=Z,3μm,14.8s,MS5.7
PSZ Piszkesteto 73.12 323⇑ *e* P 15 32 06.0 +0.8
PSZ Piszkesteto 73.12 323⇑ *iP* P 15 32 05.9 +0.7
PSZ Piszkesteto 73.12 323 *eP* P 15 32 05.7 +0.5
PSZ pmax pmax
comp=Z,200nm,1.2s,mb5.9
MURC Murrieta 73.16 59 ⇑P P 15 32 05.1 -0.3
baz=73,SNR=6.8
MURC ⇓S S 15 41 32.6 +0.1
baz=73
ANTO Ankara 73.20 311 *eP* P 15 32 05.6 0.0
ANTO Ankara 73.20 311⇑ *iP* P 15 32 06.3 +0.7
ANTO Ankara 73.20 311 P P 15 32 06.6 +1.0
SNR=38
ANTO Ankara 73.20 311⇑ *iP* P 15 32 06.0 +0.4
ANTO *e**PP pP 15 32 12.2 +0.6
ANTO pmax pmax
comp=Z,108nm,1.0s,mb5.7
ANTO MLR MLR
comp=Z,2μm,20.0s,MS5.4
AFI Afiamalu 73.20 133⇑ *eP* P 15 32 05.3 -0.3
AFI pmax pmax
comp=Z,267nm,1.5s,mb6.0
AFI MLR MLR
comp=Z,768nm,20.0s,MS5.0
AFI Afiamalu 73.20 133⇑ *eP* P 15 32 05.3 -0.3
comp=Z,267nm,1.5s,mb6.0
AFI LR LR
comp=Z,768nm,20.0s,MS5.0
FBE Freiberg 73.20 329 *eP* P 15 32 05.7 0.0
comp=Z,309nm,1.2s,mb6.1
BUC1 Bucharest 73.20 318 P P 15 32 06.0 +0.3
KOZT Kozan 73.30 307 *eP* P 15 32 07.1 +0.9
W12A Cal Nev Ari 73.31 56 ⇑P P 15 32 06.5 +0.1
baz=73
VRAC Vranov 73.32 326⇑ *iP* P 15 32 07.1 +0.7
VRAC Vranov 73.32 326 ⇑P P 15 32 07.1 +0.8
KAR1 Arisaig 73.38 342⇑ *iP* P 15 32 06.7 0.0
KAR1 Arisaig 73.38 342⇑ *iP* P 15 32 06.7 0.0
PRD Provadia 73.43 316 P P 15 32 06.7 -0.3
HENT Hendek 73.47 312 *iP* P 15 32 06.8 -0.5
PRA Prague 73.51 328 ⇑P P 15 32 08.0 +0.5
PRA pP pP 15 32 14.0 +0.6
PRA *ex* x 15 32 19.0
PRU Pruhonice 73.54 328 *eP* P 15 32 08.2 +0.6
PRU *epP* pP 15 32 14.2 +0.6
PRU *ePP* PP 15 34 53.9 +2.3
PRU *ex* x 15 36 34.8
PRU *eS* S 15 41 37.6 +0.9
PRU AMS AMS 16 08 00.0
comp=Z,4μm,14.2s
MDU Mudurnu 73.58 312 *eP* P 15 32 08.3 +0.5
ESY Stoneypath 73.58 340⇑ *iP* P 15 32 07.4 -0.5
ESY Stoneypath 73.58 340⇑ *iP* P 15 32 07.4 -0.5
BELC Belle Mtn. 73.58 58 P P 15 32 07.7 -0.2
baz=73,SNR=52
PFO Pinyon Flat Ob 73.59 58 P P 15 32 07.6 -0.4
comp=Z,428nm,1.0s,mb6.3,SNR=15
PFO Pinyon Flat Ob 73.59 58⇑ *iP* P 15 32 07.7 -0.3
PFO *e**PP pP 15 32 12.4 -1.5
PFO pmax pmax
comp=Z,101nm,1.1s,mb5.7
PFO MLR MLR
comp=Z,789nm,20.0s,MS5.0
PFO Pinyon Flat Ob 73.59 58⇑ *iP* P 15 32 07.7 -0.3
comp=Z,99nm,1.1s,mb5.7
PFO *epP* pP 15 32 12.4 -1.5
PFO LR LR
comp=Z,777nm,20.0s,MS5.0
PFO Pinyon Flat Ob 73.59 58 P P 15 32 08.0 0.0
baz=73,SNR=34
SMOL Smolenice 73.64 325 *eP* P 15 32 09.3 +1.1
SMOL *epP* pP 15 32 15.0 +0.8
CEYT Ceyhan 73.68 307 *eP* P 15 32 09.4 +0.9
EDI Edinburgh 73.71 340⇑ *eP* P 15 32 08.8 +0.1
EDI Edinburgh 73.71 340⇑ *eP* P 15 32 08.8 +0.1
109C Camp Elliot, M 73.72 59 ⇑P P 15 32 08.3 -0.4
baz=74
EAB Aberfoyle 73.73 341⇑ *iP* P 15 32 08.6 -0.2
EAB Aberfoyle 73.73 341⇑ *iP* P 15 32 08.6 -0.2
TREC Trest 73.75 327 *eP* P 15 32 09.6 +0.7
TREC *epP* pP 15 32 15.6 +0.8
TREC *ePP* PP 15 34 55.6 +2.2
TREC *ex* x 15 36 37.3
TREC AMS AMS 16 08 00.0
comp=Z,7μm,13.4s
COBT Iskenderun 73.75 306 *iP* P 15 32 09.7 +0.8
EBL Broad Law 73.81 340⇑ *iP* P 15 32 09.1 -0.2
EBL Broad Law 73.81 340⇑ *iP* P 15 32 09.1 -0.2
BUD Budapest 73.82 324⇑ *e* P 15 32 10.1 +0.8
NEE2 Needles Airpor 73.84 56 ⇓P P 15 32 09.0 -0.4
baz=74
EAU Auchinoon 73.84 340⇑ *iP* P 15 32 09.5 0.0
EAU Auchinoon 73.84 340⇑ *iP* P 15 32 09.5 0.0
PCOU Corrie 73.86 341⇑ *iP* P 15 32 09.6 +0.1
PCOU Corrie 73.86 341⇑ *iP* P 15 32 09.6 +0.1
GZR Gura Zlata 73.87 320⇓ *iP* P 15 32 10.2 +0.6
GZR Gura Zlata 73.87 320 ⇓P P 15 32 10.2 +0.6
KARA Karaisali 73.88 307 *eP* P 15 32 11.2 +1.5
IBBN Ibbenburen 73.92 333 *eP* P 15 32 09.8 -0.1
comp=Z,457nm,1.3s,mb6.2
IBBN *epP* pP 15 32 15.9 +0.1
IBBN *ePP* PP 15 34 56.4 +1.6
TANN Tannenbergstha 73.94 329 *eP* P 15 32 10.2 +0.2
comp=Z,276nm,1.9s,mb5.9
TANN *eS* S 15 41 41.4 +0.2
IRM Iron Mountain 73.97 57 ⇑P P 15 32 10.4 +0.3
baz=74,SNR=110
IRM ⇓S S 15 41 40.5 -1.0
baz=74
WERD Werda 73.97 329 *eP* P 15 32 10.3 +0.1
comp=Z,262nm,1.5s,mb5.9
PHWY Pilot Hill 73.99 46⇑ *iP* P 15 32 09.6 -0.7
PHWY *epP* pP 15 32 13.8 -2.4
W13A Hualapai Mount 74.02 56 ⇓P P 15 32 10.6 +0.1
baz=74,SNR=38
W13A ⇑S S 15 41 43.4 +1.3
baz=74
ZST Bratislava 74.02 325 *eP* P 15 32 11.3 +0.8
ZST *eS* S 15 41 40.8 -1.3
ZST Bratislava 74.02 325 *eP* P 15 32 11.3 +0.8
comp=Z,100nm,1.1s,mb5.7
ZST *eS* S 15 41 40.8 -1.3
ZST LR LR
comp=Z,2μm,18.1s,MS5.5
GUNZ Gunzen 74.03 329 *eP* P 15 32 10.8 +0.3
comp=Z,135nm,1.1s,mb5.8
ZIMR 74.04 317 P P 15 32 10.4 -0.2
MOX Moxa 74.05 330 *eP* P 15 32 10.8 +0.2
comp=Z,310nm,1.4s,mb6.0
MOX *epP* pP 15 32 16.8 +0.2
MOX *ePP* PP 15 34 57.3 +1.4
MOX *eS* S 15 41 42.8 +0.4
MOX Moxa 74.05 330⇑ *iP* P 15 32 10.7 +0.1
comp=Z,307nm,1.5s,mb6.0
MOX *e* pP 15 32 16.7 +0.1
MOX
comp=Z,2μm,19.0s
MOX Moxa 74.05 330⇑ *iP* P 15 32 10.7 +0.1
MOX *e* pP 15 32 16.7 +0.1
MOX Moxa 74.05 330⇑ *iP* P 15 32 10.7 +0.1
comp=Z,307nm,1.5s,mb6.0
MOX *epP* pP 15 32 16.7 +0.1
MOX *ePP* PP 15 35 03.0 +7.1
MOX *ePPP* 15 36 42.0
MOX *eS* S 15 41 45.0 +2.6
MOX *eSS* SS 15 47 18.0 +51
MOX *eSSS* 15 50 09.0
MOX LR LR
comp=Z,2μm,19.0s,MS5.5
POB1 Observatory 74.06 341⇑ *eP* P 15 32 10.7 0.0
POB1 Observatory 74.06 341⇑ *eP* P 15 32 10.7 0.0
SZH Strazhica 74.07 317 P P 15 32 11.6 +0.8
KLYT Kilyos 74.09 314 *eP* P 15 32 10.7 -0.2
NKC Novy Kostel 74.10 329 *eP* P 15 32 11.3 +0.4
NKC *epP* pP 15 32 17.2 +0.4
NKC *ex* x 15 36 45.3
NKC *eS* S 15 41 43.9 +0.9
NKC AMS AMS 16 07 40.0
comp=Z,4μm,18.3s
NKC Novy Kostel 74.10 329 *eP* P 15 32 11.3 +0.4
NKC *epP* pP 15 32 17.2 +0.4
NKC *e* 15 36 45.3
NKC *eS* S 15 41 43.9 +0.9
HRT Hereke 74.10 313 *eP* P 15 32 09.3 -1.6
HTY Hatay 74.11 306 *eP* P 15 32 12.1 +1.1
PGBU Glenifferbraes 74.11 341⇑ *iP* P 15 32 11.1 +0.2
PGBU Glenifferbraes 74.11 341⇑ *iP* P 15 32 11.1 +0.2
BAR Barrett 74.13 59 *eP* P 15 32 10.5 -0.6
MONP Monument Peak 74.13 59 P P 15 32 11.1 0.0
baz=74,SNR=20
PMSU Muirshiel 74.14 341⇑ *eP* P 15 32 10.8 -0.3
PMSU Muirshiel 74.14 341⇑ *eP* P 15 32 10.8 -0.3
PKSG 74.15 324⇑ *eP* P 15 32 12.1 +0.8
BZS Buzias 74.21 321⇑ *iP* P 15 32 11.4 -0.2
BZS Buzias 74.21 321 ⇑P P 15 32 11.4 -0.1
ISK Istanbul-Kandi 74.22 314 *eP* P 15 32 08.4 -3.3
ISK Istanbul-Kandi 74.22 314 P P 15 32 12.9 +1.3
ESK Eskdalemuir 74.27 340 P P 15 32 11.2 -0.7
comp=Z,291nm,1.2s,mb6.1,SNR=6.6
ESK Eskdalemuir 74.27 340⇑ *iP* P 15 32 11.7 -0.3
ESK Eskdalemuir 74.27 340⇑ *iP* P 15 32 11.7 -0.3
ESK Eskdalemuir 74.27 340 *eP* P 15 32 12.0 +0.1
ESK MLR MLR
comp=Z,1μm,20.0s,MS5.1
ESK Eskdalemuir 74.27 340 P P 15 32 11.8 -0.1
PV10 Paradox Valley 74.31 50 *eP* P 15 32 12.7 +0.5
ADVT Abdulvahap 74.35 313 *eP* P 15 32 11.2 -1.2
JMB Yambol 74.37 316 *eP* P 15 32 12.8 +0.2
PVL Pavlikeni 74.39 317 *eP* P 15 32 13.0 +0.4
W14A Seligman 74.39 55 ⇑P P 15 32 13.2 +0.5
baz=74,SNR=77
KIZT Kizilcal 74.40 310 *eP* P 15 32 12.7 0.0
X13A Yucca 74.42 56 ⇑P P 15 32 13.0 +0.2
baz=74,SNR=94
X13A ⇑S S 15 41 46.3 -0.2
baz=74
MANZ Manzenberg 74.42 329 *eP* P 15 32 13.2 +0.4
comp=Z,119nm,1.2s,mb5.7
YLV Yalova 74.44 313 *eP* P 15 32 13.5 +0.6
PDMCI Parker Dam,Lak 74.45 56 ⇓P P 15 32 12.8 -0.2
baz=74,SNR=38
PDMCI ⇑S S 15 41 44.5 -2.4
baz=74
UBBA Unterbreizbach 74.45 331 *eP* P 15 32 12.8 -0.2
comp=Z,255nm,1.5s,mb5.9
UBBA *eS* S 15 41 47.3 +0.3
SWSC Sam W. Stewart 74.46 58 ⇑P P 15 32 12.6 -0.4
baz=74,SNR=16
MERS Mersin 74.46 307 *eP* P 15 32 13.3 +0.3
ESKT Eskisehir 74.47 311 *eP* P 15 32 12.1 -0.9
ESKT Eskisehir 74.47 311 *iP* P 15 32 12.9 -0.2
ELBA Catalca 74.47 314 *iP* P 15 32 13.2 +0.1
BHH Howats Hill 74.48 340⇑ *iP* P 15 32 13.1 -0.1
BHH Howats Hill 74.48 340⇑ *iP* P 15 32 13.1 -0.1
DVTC Desert V Tower 74.48 59 ⇓P P 15 32 12.9 -0.2
baz=74,SNR=14
BWH Wardlaw 74.50 340⇑ *iP* P 15 32 13.2 -0.1
BWH Wardlaw 74.50 340⇑ *iP* P 15 32 13.2 -0.1
WTSB Winterswijk 74.51 333⇑ *iP* P 15 32 13.4 +0.1
comp=Z,402nm,1.4s,mb6.2
WTSB *epP* pP 15 32 19.3 0.0
LWH Whinny Nab 74.54 338⇑ *eP* P 15 32 13.3 -0.2
LWH Whinny Nab 74.54 338⇑ *eP* P 15 32 13.3 -0.2
KDHN Kadinhani 74.54 310 *iP* P 15 32 13.4 -0.2
ROTZ Rotzenmuhle 74.57 329 *eP* P 15 32 14.2 +0.5
comp=Z,183nm,1.2s,mb5.9

KHC **Kasperske Hory** 74.60 328 *e*P P 15 32 14.6 +0.7
KHC *e*pP pP 15 32 20.4 +0.6
KHC *e*PP PP 15 35 05.0 +4.4
KHC *ex* x 15 36 44.7
KHC *e*S S 15 41 50.0 +1.4
KHC AMS AMS 16 08 50.0
comp=Z,5µm,15.8s
KHC Kasperske Hory 74.60 328*c* *i*P P 15 32 14.6 +0.7
Y12C Blythe 74.62 57 ⇑P P 15 32 14.2 +0.3
baz=74,SNR=52
Y12C ⇑S S 15 41 46.2 -2.7
baz=74
GEMT Gemlik 74.63 313 *e*P P 15 32 13.5 -0.5
SOP Sopron 74.65 325⇑ *e*P P 15 32 15.5 +1.4
CONA Conrad Observa 74.73 326 *i* P P 15 32 15.7 +1.1
comp=Z,178nm,1.4s,mb5.8,SNR=56
PV01 Paradox Valley 74.74 50 *e*P P 15 32 14.7 +0.1
EDRB Edirne 74.77 315 *e*P P 15 32 13.5 -1.3
GEC2 GERESS Array S 74.79 327 *e*P P 15 32 15.1 +0.1
comp=Z,120nm,1.2s,mb5.7
GEC2 *e*S S 15 41 52.9 +2.1
GEC2 GERESS Array S 74.79 327 *e*P P 15 32 15.1 +0.1
GEC2 *e*S S 15 41 52.9 +2.1
GEC2 pmax pmax
comp=Z,257nm,1.2s,mb6.0
GERES GERESS Array B 74.79 327 P P 15 32 15.2 +0.2
comp=Z,37nm,0.9s,mb5.3,baz=35,slow=4.9,SNR=224
GERES PP PP 15 35 00.7 -1.6
comp=Z,9.7nm,1.1s,baz=38,slow=8.9,SNR=3.5
GERES LR LR 16 08 20.1
comp=Z,4µm,18.0s,MS5.8,baz=284,slow=38
GERES GERESS Array B 74.79 327 P P 15 32 15.2 +0.2
GERES 15 35 00.7
SMCO Snowmass 74.81 49⇑ *i*P P 15 32 14.9 -0.1
comp=Z,282nm,1.6s,mb6.0
BBO1 Bothel 74.81 340⇑ *i*P P 15 32 15.1 +0.1
BBO1 Bothel 74.81 340⇑ *i*P P 15 32 15.1 +0.1
BUG Bochum--Univer 74.82 332 *e*P P 15 32 15.0 -0.1
comp=Z,510nm,1.4s,mb6.3
BUG *e*PP PP 15 35 03.7 +1.2
BUG *e*S S 15 41 52.2 +1.1
KONT Konya--Tatoy 74.84 309 *e*P P 15 32 09.8 -5.5
WET Wettzell 74.85 328 *e*P P 15 32 15.9 +0.6
comp=Z,312nm,1.3s,mb6.1
WET *e*pP pP 15 32 21.8 +0.6
WET *e*S S 15 41 51.2 -0.2
WET Wettzell 74.85 328 *e*P P 15 32 15.9 +0.6
WET *e**PP pP 15 32 21.8 +0.6
WET *e*S S 15 41 51.2 -0.2
WET pmax pmax
comp=Z,470nm,1.3s,mb6.3
MEST Erdemli 74.87 307 *i* P P 15 32 15.4 0.0
ULDT Uludag 74.88 313 *i* P P 15 32 15.6 +0.2
W15A Williams 74.88 55 ⇓P P 15 32 16.1 +0.7
baz=75,SNR=17
CKE Keswick 74.91 340⇑ *e*P P 15 32 15.3 -0.3
CKE Keswick 74.91 340⇑ *e*P P 15 32 15.3 -0.3
GLA Glamis 74.94 58 ⇑P P 15 32 15.7 -0.1
GLA *e**PP pP 15 32 20.1 -1.7
GLA Glamis 74.94 58 ⇓P P 15 32 16.1 +0.2
baz=75,SNR=59
GLA ⇑S S 15 41 53.2 +0.8
baz=75
EYMN Ely 74.97 34⇑ *i*P P 15 32 14.3 -1.6
comp=Z,2µm,1.1s,mb6.9
EYMN *e*pP pP 15 32 19.5 -2.4
EYMN *e*PP PP 15 35 02.1 -1.6
EYMN LR LR
comp=Z,19µm,19.0s,MS6.4
Y13A Salome 74.98 57 ⇓P P 15 32 16.1 +0.1
baz=75,SNR=8.4
Y13A ⇓S S 15 41 52.1 -0.7
baz=75
GRA1 Grafenberg Arr 74.98 329 *e*P P 15 32 16.7 +0.6
comp=Z,581nm,1.3s,mb6.3
GRA1 *e*pP pP 15 32 22.4 +0.4
GRA1 *e*PP PP 15 35 03.8 -0.1
GRA1 *e*S S 15 41 55.4 +2.5
GRA1 LR LR
comp=Z,4µm,18.1s,MS5.7
GRF Grafenberg Arr 74.98 329 *e*P P 15 32 16.7 +0.6
comp=Z,581nm,1.3s,mb6.3
GRF *e*pP pP 15 32 22.4 +0.4
GRF *e*PP PP 15 35 03.8 -0.1
GRF *e*S S 15 41 55.4 +2.5
GRF *e*L 16 08 33.1
comp=Z,4µm,18.1s
GRF Grafenberg Arr 74.98 329 *e*P P 15 32 16.7 +0.6
GRF *e**PP pP 15 32 22.4 +0.4
GRF *e* 15 35 03.8
GRF *e*S S 15 41 55.4 +2.5
GRF Grafenberg Arr 74.98 329 *e*P P 15 32 16.7 +0.6
GRF *e**PP pP 15 32 22.4 +0.4
GRF *e* 15 35 03.8
GRF *e*S S 15 41 55.4 +2.5
GRF pmax pmax
comp=Z,581nm,1.3s,mb6.3
GRF MLR MLR
comp=Z,4µm,18.1s,MS5.7
PKSM Moragy 75.00 323⇑ *i*P P 15 32 15.9 -0.2
PKSM Moragy 75.00 323⇑ *e*P P 15 32 15.9 -0.2
ISCO Idaho Springs 75.04 47⇑ *i*P P 15 32 16.6 +0.2
ISCO *e**PP pP 15 32 21.8 -0.5
ISCO pmax pmax
comp=Z,193nm,1.5s,mb5.8
ISCO MLR MLR
comp=Z,698nm,20.0s,MS5.0
ISCO Idaho Springs 75.04 47⇑ *i*P P 15 32 16.6 +0.2
comp=Z,179nm,1.5s,mb5.8
ISCO *e*pP pP 15 32 21.8 -0.5
ISCO LR LR
comp=Z,546nm,20.0s,MS4.8
X14A Yava 75.04 56 ⇑P P 15 32 17.1 +0.8
baz=75,SNR=8.2
X14A ⇓S S 15 41 48.0 -5.6
baz=75
XDE Dent Fell 75.08 340⇑ *e*P P 15 32 16.4 -0.2
XDE AMb AMB 15 32 20.9
comp=Z,263nm,1.7s,mb5.9
XDE Dent Fell 75.08 340⇑ *e*P P 15 32 16.4 -0.2
XDE AMb AMB 15 32 20.9
comp=Z,263nm,1.7s,mb5.9
WUAZ Wupatki 75.13 54⇑ *e*P P 15 32 17.3 +0.4
comp=Z,176nm,1.4s,mb5.8
WUAZ *e*pP pP 15 32 22.4 -0.5
WUAZ LR LR
comp=Z,519nm,19.0s,MS4.8
CDU1 Dunnerdale 75.16 340⇑ *i*P P 15 32 16.6 -0.5
CDU1 Dunnerdale 75.16 340⇑ *i*P P 15 32 16.6 -0.5
DIM Dimitrovgrad 75.19 316 P P 15 32 17.5 +0.2
DIM Dimitrovgrad 75.19 316 P P 15 32 17.1 -0.2
MFT Murefte 75.31 314 *e*P P 15 32 17.7 -0.2
BEO Belgrade 75.34 321 *e*P P 15 32 18.4 +0.3
BEO Belgrade 75.34 321 P P 15 32 18.9 +0.8
Y14A Wickenburg 75.36 56 P P 15 32 18.5 +0.2
baz=75,SNR=41
IKL Isikli 75.38 307 *e*P P 15 32 17.3 -1.1
X15A Humboldt 75.40 55 P P 15 32 19.4 +0.9
baz=75,SNR=32
MOA Molln 75.40 327 *i* P P 15 32 19.1 +0.6
comp=Z,721nm,2.6s,mb6.1,SNR=48
ARSA Arzberg 75.41 325 *i* P P 15 32 19.3 +0.8
comp=Z,562nm,1.9s,mb6.2,SNR=76
SVIS Svilajnac 75.42 320⇓ *i*P P 15 32 17.6 -1.0
SART Tekirdag 75.44 314 *i* P P 15 32 15.2 -3.5
RKY Sarkoy-Tekirda 75.44 314 *e*P P 15 32 15.9 -2.8
PGB Panagyurishte 75.45 317 *i* P P 15 32 18.9 +0.1
BOLS Boljevac 75.46 320⇓ *i*P P 15 32 17.6 -1.2
MVCO Mesa Verde 75.46 51⇑ *i*P P 15 32 18.7 -0.1
comp=Z,128nm,1.1s,mb5.8
MVCO *e*pP pP 15 32 23.3 -1.4
TNS Taunus Mts 75.48 331 *e*P P 15 32 19.1 +0.2
comp=Z,297nm,1.3s,mb6.1
TNS *e*PP PP 15 35 09.7 +1.6
TNS Taunus Mts 75.48 331 *e*P P 15 32 19.1 +0.2
TNS *e* 15 35 09.7
TNS pmax pmax
comp=Z,300nm,1.3s,mb6.1
GDZ Gediz 75.49 312 *i* P P 15 32 19.1 +0.2
HDMB Hadim 75.50 309 *e*P P 15 32 17.8 -1.3
GIM North Isle of 75.50 340⇑ *e*P P 15 32 18.5 -0.5
GIM North Isle of 75.50 340⇑ *e*P P 15 32 18.5 -0.5
ERMK Ermenek 75.50 308 *i* P P 15 32 18.6 -0.4
PLD Plovdiv 75.55 317 *e*P P 15 32 19.5 +0.2

PLD Plovdiv 75.55 317 P P 15 32 19.4 +0.1
LHO Holmfirth 75.56 339⇑ *i*P P 15 32 19.1 -0.3
LHO Holmfirth 75.56 339⇑ *i*P P 15 32 19.1 -0.3
KDZ Kurdzhali 75.56 316 P P 15 32 19.4 0.0
AEU East Anglia Un 75.58 336⇑ *e*P P 15 32 19.5 0.0
AEU East Anglia Un 75.58 336⇑ *e*P P 15 32 19.5 0.0
WIM Isle of Man 75.68 340⇑ *e*P P 15 32 20.0 0.0
WIM AMb AMB 15 32 22.3
comp=Z,277nm,1.5s,mb6.0
WIM Isle of Man 75.68 340⇑ *e*P P 15 32 20.0 0.0
WIM AMb AMB 15 32 22.3
comp=Z,277nm,1.5s,mb6.0
KOGS Kog 75.78 325⇑ *e*P P 15 32 20.4 -0.2
KOGS *e*S S 15 42 02.6 +0.9
Z14A Wintersburg 75.81 56 ⇑P P 15 32 20.9 0.0
baz=76,SNR=14
HGN Heimansgroeve 75.83 333⇑ *i*P P 15 32 20.8 -0.1
comp=Z,298nm,1.4s,mb6.0
HGN *e*pP pP 15 32 26.7 -0.2
HGN *e*PP PP 15 35 12.0 +1.0
HGN *e*S S 15 42 03.2 +1.0
HGN *e*SSS 15 50 26.4
ALN Alexandroupoli 75.83 315 *e*P P 15 32 21.0 +0.1
SIND Sindeldorf 75.84 330 P P 15 32 21.2 +0.2
VTS Vitosha 75.86 318 *e*P P 15 32 21.6 +0.5
VTS Vitosha 75.86 318 *i* P P 15 32 20.9 -0.2
VTS Vitosha 75.86 318⇑ *i*P P 15 32 21.7 +0.6
BEBN Eben Emael 75.88 333 P P 15 32 21.1 -0.1
RDO Rodhopi 75.89 316 *e*P P 15 32 22.0 +0.8
TOD Tromm 75.89 331⇑ *e*P P 15 32 21.6 +0.3
ENEZ Enez 75.90 315 *e*P P 15 32 19.2 -2.2
WHFO Wadi Hawf 75.91 281 ⇓P P 15 32 20.8 -0.6
SNR=7.2
MEM Membach 75.94 333 P P 15 32 21.5 0.0
GRUS Gruza 75.97 320 *e*P P 15 32 21.2 -0.5
GRUS Gruza 75.97 320 P P 15 32 21.3 -0.4
BHL Bhannes 75.99 305 *e*P P 15 32 21.9 +0.1
CANB Canakkale 76.01 314 *e*P P 15 32 22.0 +0.1
SWS Schriesheim-Wi 76.03 331 P P 15 32 22.3 +0.2
SCHQ Schefferville 76.07 17 P P 15 32 21.3 -1.0
comp=Z,47nm,0.9s,mb5.4,baz=353,slow=6.6,SNR=37
SCHQ LR LR 16 08 52.5
comp=Z,2µm,19.0s,MS5.4,baz=126,slow=38
SCHQ Schefferville 76.07 17⇑ *i*P P 15 32 21.1 -1.1
comp=Z,130nm,1.1s,mb5.8
SCHQ LR LR
comp=Z,3µm,19.0s,MS5.6
ABH Alteburg 76.07 332⇓ *e*P P 15 32 22.6 +0.3
PERS Pernice 76.08 325⇑ *i*P P 15 32 22.7 +0.4
DIVS Divcibare 76.11 321⇑ *i*P P 15 32 22.0 -0.5
DIVS Divcibare 76.11 321 *e*P P 15 32 22.5 -0.1
FUR Furstenfeldbru 76.25 328 *e*P P 15 32 23.8 +0.5
comp=Z,666nm,1.2s,mb6.4
FUR Furstenfeldbru 76.25 328 *e*P P 15 32 23.8 +0.5
FUR pmax pmax
comp=Z,349nm,1.2s,mb6.2
UCC Uccle 76.28 334 P P 15 32 23.3 -0.2
WPM1 Penmaenmawr 76.32 340⇑ *e*P P 15 32 23.4 -0.3
WPM1 Penmaenmawr 76.32 340⇑ *e*P P 15 32 23.4 -0.3
BCLA Clavier 76.33 333 P P 15 32 23.7 0.0
WCB1 Church Bay 76.36 340⇑ *e*P P 15 32 23.2 -0.8
WCB1 AMb AMB 15 32 25.9
comp=Z,130nm,1.9s,mb5.5
WCB1 Church Bay 76.36 340⇑ *e*P P 15 32 23.2 -0.8
WCB1 AMb AMB 15 32 25.9
comp=Z,130nm,1.9s,mb5.5
KTD Kalmit 76.38 331⇑ *e*P P 15 32 24.3 +0.3
RUP Ruppelstein 76.39 332⇑ *e*P P 15 32 24.3 +0.2
KBA Koelnbreinsper 76.39 327 *i* P P 15 32 24.9 +0.8
comp=Z,760nm,1.4s,mb6.4,SNR=138
KBA Koelnbreinsper 76.39 327 *i* P P 15 32 24.9 +0.8
KBA pmax pmax
comp=Z,760nm,1.4s,mb6.4
OBKA Obir 76.40 326⇑ *i*P P 15 32 24.5 +0.3
comp=Z,1µm,3.5s,SNR=22
MMB Musomiste 76.40 317 *e*P P 15 32 24.8 +0.6
MMB Musomiste 76.40 317 *i* P P 15 32 25.0 +0.8
MAMC Mammari 76.42 307 P P 15 32 23.8 -0.5
GADA Gvkgeada 76.45 315 *e*P P 15 32 20.6 -3.9
STU Stuttgart 76.47 330 *e*P P 15 32 24.6 0.0
comp=Z,360nm,1.1s,mb6.2
STU *e*PP PP 15 35 18.9 +2.5
STU Stuttgart 76.47 330⇑ *i*P P 15 32 24.6 0.0
STU *e**PP pP 15 32 28.6 -1.9
STU pmax pmax
comp=Z,270nm,1.0s,mb6.1
STU Stuttgart 76.47 330⇑ *i*P P 15 32 24.6 +0.1
comp=Z,270nm,1.0s,mb6.1
STU *e*pP pP 15 32 28.6 -2.0
SBD1 Bryn Du 76.49 339⇑ *i*P P 15 32 24.8 +0.1
SBD1 Bryn Du 76.49 339⇑ *i*P P 15 32 24.8 +0.1
YRC Rhoscolyn 76.49 340⇑ *i*P P 15 32 24.1 -0.5
YRC AMb AMB 15 32 32.1
comp=Z,214nm,1.5s,mb5.8
YRC Rhoscolyn 76.49 340⇑ *i*P P 15 32 24.1 -0.5
YRC AMb AMB 15 32 32.1
comp=Z,214nm,1.5s,mb5.8
KKB Krupnik 76.49 318 *i* P P 15 32 24.8 +0.1
KKB Krupnik 76.49 318 P P 15 32 24.3 -0.4
YLL Llanberis 76.49 340⇑ *e*P P 15 32 24.2 -0.5
YLL Llanberis 76.49 340⇑ *e*P P 15 32 24.2 -0.5
AKHS Akhisar 76.50 313 *i* P P 15 32 24.0 -0.8
AKS Akhisar 76.50 313 *e*P P 15 32 22.9 -1.8
CSS Prodhromos 76.52 307 ⇓P P 15 32 24.6 -0.2
comp=Z,1.6nm,1.0s
CSS Prodhromos 76.52 307 *e*P P 15 32 24.2 -0.6
ASF Jabal al Asfar 76.54 303 LR LR 16 12 14.7
comp=Z,788nm,19.0s,MS5.0,baz=67,slow=40
BBLS Bajina Basta - 76.55 321 *e*P P 15 32 26.0 +0.9
SNF Seneffe 76.56 334 P P 15 32 25.0 -0.1
PDKS Podkum 76.60 325 *i* P P 15 32 25.4 +0.1
CRES Cresnjev 76.61 325⇑ *i*P P 15 32 25.3 0.0
comp=Z,514nm,1.5s,mb6.2
CRES *e*pP pP 15 32 30.8 -0.5
BOZC Bozcaada 76.64 315 *i* P P 15 32 24.9 -0.6
SDCO Great Sand Dun 76.64 49 PFAKE 15 32 40.0 +14
SDCO LR LR
comp=Z,1µm,22.0s,MS5.2
LBG Lerchenberg 76.70 330 P P 15 32 26.2 +0.3
YRE Yr Eifl 76.70 340⇑ *i*P P 15 32 25.5 -0.4
YRE AMb AMB 15 32 34.4
comp=Z,370nm,1.7s,mb6.0
YRE Yr Eifl 76.70 340⇑ *i*P P 15 32 25.5 -0.4
YRE AMb AMB 15 32 34.4
comp=Z,370nm,1.7s,mb6.0
115A Sonoran Desert 76.70 56 ⇓P P 15 32 26.4 +0.5
baz=76,SNR=19
115A ⇑S S 15 42 03.3 -8.6
baz=76
WLF Walferdange 76.71 332 *e*P P 15 32 26.1 +0.2
comp=Z,128nm,1.3s,mb5.7
WLF Walferdange 76.71 332 P P 15 32 26.2 +0.2
WLF Walferdange 76.71 332 *e*P P 15 32 26.1 +0.2
DENT Denizli 76.73 311 *e*P P 15 32 24.3 -1.7
AYVA Ayvalik 76.73 314 *i* P P 15 32 25.9 -0.1
HLM1 Long Mynd 76.75 339⇑ *i*P P 15 32 26.0 -0.2
HLM1 AMb AMB 15 32 34.0
comp=Z,252nm,1.6s,mb5.9
HLM1 Long Mynd 76.75 339⇑ *i*P P 15 32 26.0 -0.2
HLM1 AMb AMB 15 32 34.0
comp=Z,252nm,1.6s,mb5.9
GIVF Givet 76.75 333⇑ *i*P P 15 32 26.0 -0.2
comp=Z,410nm,1.2s,mb5.9
GIVF Givet 76.75 333⇑ *i*P P 15 32 26.0 -0.2
GIVF pmax pmax
comp=Z,205nm,1.2s,mb5.9
GIVF Givet 76.75 333⇑ *i*P P 15 32 26.0 -0.2
comp=Z,205nm,1.2s,mb5.9
LANF Langenberg 76.76 331⇑ *e*P P 15 32 26.5 +0.3
DNZL Cakiroluk 76.77 311 *i* P P 15 32 26.5 +0.3
ALFC Alevga 76.77 307 P P 15 32 25.3 -1.0
LJU Ljubljana 76.80 325⇑ *e*P P 15 32 26.2 -0.2
LJU *e*pP pP 15 32 31.6 -0.7
LSR Lussari 76.83 326⇑ *i*P P 15 32 26.0 -0.6
DOU Dourbes 76.83 333 P P 15 32 26.4 -0.2
WATA Walderalm 76.84 328 *i* P P 15 32 27.4 +0.8
comp=Z,428nm,1.2s,mb6.2,SNR=50
WATA Walderalm 76.84 328 *i* P P 15 32 27.4 +0.8
WATA pmax pmax
comp=Z,428nm,1.2s,mb6.2
GOLH Golhisar 76.84 311 *i* P P 15 32 25.9 -0.8
VISS Visnje 76.87 325⇑ *e*P P 15 32 26.8 0.0
comp=Z,481nm,1.5s,mb6.2

WTTA Wattenberg 76.88 328 *i* P P 15 32 27.8 +1.0
comp=Z,968nm,1.5s,mb6.5,SNR=61
WTTA Wattenberg 76.88 328 *i* P P 15 32 27.8 +0.9
WTTA pmax pmax
comp=Z,968nm,1.5s,mb6.5
DLF Lyons Farm 76.89 341⇑ *i*P P 15 32 27.0 0.0
DSB Dublin 76.91 341⇑ *i*P P 15 32 27.1 +0.1
comp=Z,135nm,1.3s,mb5.7
PLRO Paularo 76.91 326⇑ *e*P P 15 32 26.0 -1.0
SKP1 Kophill 76.94 337⇑ *e*P P 15 32 26.2 -1.0
SKP1 Kophill 76.94 337⇑ *e*P P 15 32 26.2 -1.0
CADS Cadrg 76.95 326⇑ *e*P P 15 32 26.4 -0.9
CADS *e*pP pP 15 32 32.0 -1.3
PTCC Patocco-Chiusa 76.95 326 P P 15 32 26.8 -0.5
BOJS Bojanci 76.95 325⇑ *i*P P 15 32 27.2 0.0
comp=Z,478nm,1.7s,mb6.2
BOJS *e*S S 15 42 14.1 -0.5
ZOU Zoufplan 76.97 327⇓ *i*P P 15 32 27.0 -0.4
BAIF Baives 76.98 334⇑ *i*P P 15 32 27.4 0.0
comp=Z,402nm,1.3s,mb5.9
BAIF Baives 76.98 334⇑ *i*P P 15 32 27.4 0.0
BAIF pmax pmax
comp=Z,201nm,1.3s,mb5.9
BAIF Baives 76.98 334⇑ *i*P P 15 32 27.4 0.0
comp=Z,201nm,1.3s,mb5.9
PLE Pljevlja 76.99 321⇑ *i*P P 15 32 28.3 +0.8
SSW Stow on the Wo 76.99 338⇑ *e*P P 15 32 27.6 +0.1
SSW Stow on the Wo 76.99 338⇑ *e*P P 15 32 27.6 +0.1
PRK Paraskevi 76.99 314 *e*P P 15 32 27.5 0.0
MOTA Moosalm 77.00 328 *i* P P 15 32 28.3 +0.7
comp=Z,483nm,1.1s,mb6.3,SNR=62
MOTA Moosalm 77.00 328 *i* P P 15 32 28.3 +0.7
MOTA pmax pmax
comp=Z,483nm,1.1s,mb6.3
FVI Forni Avoltri 77.01 327 P P 15 32 27.1 -0.5
DCN Croghan 77.01 342⇑ *i*P P 15 32 27.8 +0.2
DRE Drenchia 77.03 326⇑ *e*P P 15 32 27.0 -0.7
STIP Stip 77.04 318 *e*P P 15 32 27.2 -0.6
STIP Stip 77.04 318⇑ *i*P P 15 32 27.4 -0.4
LOS Limnos 77.04 315 *e*P P 15 32 27.2 -0.6
VOY Vojsko 77.05 326 *e*P P 15 32 27.1 -0.8
VOY *e* 15 32 51.0
VOY *e* 15 32 56.5
VOY *e* 15 33 33.0
SQTA Sankt Quirin 77.07 328 *i* P P 15 32 28.8 +0.9
comp=Z,454nm,1.3s,mb6.2,SNR=77
SQTA Sankt Quirin 77.07 328 *i* P P 15 32 28.8 +0.8
SQTA pmax pmax
comp=Z,454nm,1.3s,mb6.2
UBR Ueberruh 77.08 329 P P 15 32 28.5 +0.5
SEST Monte Rota 77.09 327 P P 15 32 28.2 +0.1
GUT Gutenstein 77.10 330 P P 15 32 28.5 +0.4
GMNA Gemona 77.10 326 P P 15 32 27.6 -0.5
116A Eloy 77.11 56 ⇓P P 15 32 28.2 +0.1
baz=77,SNR=21
PPCY Paphos 77.11 307 P P 15 32 27.7 -0.5
STR Strasbourg 77.12 331⇑ *e*P P 15 32 28.8 +0.6
BOO Bordano 77.12 326⇑ *i*P P 15 32 27.0 -1.2
KNT Kendrikon 77.13 317 *e*P P 15 32 28.4 +0.1
CSMI Casera Mimoias 77.13 327⇓ *e*P P 15 32 28.0 -0.3
BAD Bernadia 77.13 326⇓ *e*P P 15 32 27.0 -1.3
IVA Berane 77.14 320⇑ *i*P P 15 32 27.7 -0.6
KDAG Bornova 77.14 313 *i* P P 15 32 28.2 -0.2
BFO Black Forest 77.14 330 P P 15 32 28.8 +0.4
comp=Z,1µm,1.1s,mb6.7,SNR=61
BFO Black Forest 77.14 330 *e*P P 15 32 28.4 0.0
comp=Z,376nm,1.3s,mb6.2
BFO *e*S S 15 42 15.2 -1.5
BFO Black Forest 77.14 330 *e*P P 15 32 28.4 0.0
BFO *e*S S 15 42 15.2 -1.5
BFO pmax pmax
comp=Z,259nm,1.3s,mb6.0
IZM Izmir 77.14 313 *e*P P 15 32 22.0 -6.4
MENF Mencas 77.15 335⇑ *e*P P 15 32 28.3 -0.1
VAY Valandovo 77.16 318 *e*P P 15 32 28.3 -0.1
VAY Valandovo 77.16 318⇑ *i*P P 15 32 28.3 -0.2
SKO Skopje 77.16 319 *e*P P 15 32 29.4 +0.9
SKO Skopje 77.16 319⇑ *i*P P 15 32 29.7 +1.2
ARMA Armidale 77.17 171⇑ *i*P P 15 32 28.4 -0.1
ARMA *e*pP pP 15 32 34.4 0.0
SOH Sokhos 77.18 317 *e*P P 15 32 28.4 -0.2
SPAK Spaichingen-Ko 77.18 330⇑ *e*P P 15 32 29.1 +0.5
BUA Buia 77.19 326⇓ *e*P P 15 32 28.0 -0.7
HTR Trewern Hill 77.25 339⇑ *i*P P 15 32 29.0 +0.1
HTR AMb AMB 15 32 31.4
comp=Z,244nm,1.8s,mb5.8
HTR Trewern Hill 77.25 339⇑ *i*P P 15 32 29.0 +0.1
HTR AMb AMB 15 32 31.4
comp=Z,244nm,1.8s,mb5.8
MCH1 Michaelchurch 77.25 339⇑ *i*P P 15 32 28.9 -0.1
MCH1 Michaelchurch 77.25 339⇑ *i*P P 15 32 28.9 -0.1
OUR Ouranopolis 77.26 316 *e*P P 15 32 28.7 -0.4
BLCB Balcova 77.27 313 *e*P P 15 32 28.6 -0.5
KNDS Knezji Dol 77.28 325⇑ *e*P P 15 32 29.0 -0.1
UPM Unac-Piva 77.30 321⇑ *i*P P 15 32 28.9 -0.3
PVY Plav 77.32 320⇑ *i*P P 15 32 28.8 -0.6
TRI Trieste 77.37 326 P P 15 32 28.9 -0.7
SWN1 Swindon 77.39 338⇑ *i*P P 15 32 30.3 +0.5
SWN1 Swindon 77.39 338⇑ *i*P P 15 32 30.3 +0.5
AYDN Tasoluk 77.39 312 *i* P P 15 32 30.6 +0.9
WLS Welschbruch 77.40 331⇑ *e*P P 15 32 30.0 +0.2
CDF Champ du Feu 77.43 331⇑ *i*P P 15 32 30.1 +0.1
comp=Z,731nm,1.3s,mb6.2
CDF Champ du Feu 77.43 331⇑ *i*P P 15 32 30.1 +0.1
CDF pmax pmax
comp=Z,366nm,1.3s,mb6.2
CDF Champ du Feu 77.43 331⇑ *i*P P 15 32 30.1 +0.1
comp=Z,366nm,1.3s,mb6.2
HORT Hortiatis 77.47 317 *e*P P 15 32 29.7 -0.6
HORT Hortiatis 77.47 317 P P 15 32 30.0 -0.2
SISB Singen-Schiene 77.48 330 P P 15 32 30.9 +0.7
PLG Polygyros 77.49 317 *e*P P 15 32 30.0 -0.3
DAVA Damuels 77.50 329 *i* P P 15 32 30.9 +0.5
comp=Z,583nm,1.4s,mb6.3,SNR=86
URLA Izmir 77.51 313 *i* P P 15 32 30.0 -0.4
THE Thessaloniki 77.51 317 *e*P P 15 32 29.7 -0.7
GRG Griva 77.52 318 *e*P P 15 32 30.5 0.0
STEIN Stein am Rhein 77.53 330⇑ *i*P P 15 32 30.7 +0.2
comp=Z,659nm,1.2s,mb6.5
HGH Gray Hill 77.53 338⇑ *i*P P 15 32 30.4 -0.2
HGH AMb AMB 15 32 38.2
comp=Z,296nm,1.5s,mb6.0
HGH Gray Hill 77.53 338⇑ *i*P P 15 32 30.4 -0.2
HGH AMb AMB 15 32 38.2
comp=Z,296nm,1.5s,mb6.0
LIBD Limburg 77.55 331⇑ *e*P P 15 32 31.1 +0.5
SLE Schleitheim 77.57 330⇑ *i*P P 15 32 30.8 0.0
comp=Z,468nm,1.9s,mb6.1
SLE Schleitheim 77.57 330 ⇑P P 15 32 30.7 -0.1
NKY Niksic 77.58 321⇑ *i*P P 15 32 30.1 -0.7
AKAS Kas 77.58 310 *i* P P 15 32 29.7 -1.1
YER Yerkesik 77.59 311 *e*P P 15 32 26.7 -4.2
WEIN Weingarten 77.61 329⇑ *i*P P 15 32 31.3 +0.4
comp=Z,544nm,1.5s,mb6.3
KIZ Kirchzarten 77.61 330 P P 15 32 31.0 0.0
TRULL Truellikon 77.61 330⇑ *i*P P 15 32 31.8 +0.8
comp=Z,1µm,1.4s,mb6.6
ECH Echery 77.64 331⇑ *e*P P 15 32 31.2 +0.1
FELD Feldberg im Sc 77.65 330⇑ *e*P P 15 32 31.3 +0.1
DALT Dalyan (Mudla) 77.68 311 *e*P P 15 32 28.1 -3.3
APPI Appiano 77.69 328 P P 15 32 30.8 -0.6
BRY Bratogost 77.70 321⇑ *i*P P 15 32 30.8 -0.7
PAIG Paliouri 77.72 316 *e*P P 15 32 31.3 -0.3
WILA Wila 77.73 329⇑ *i*P P 15 32 31.7 +0.1
comp=Z,421nm,1.5s,mb6.2
WILA Wila 77.73 329 ⇑P P 15 32 31.8 +0.2
CHOS Chios island 77.76 314 *e*P P 15 32 31.9 +0.1
TTG Podgorica 77.77 320⇑ *i*P P 15 32 31.0 -0.8
TUC Tucson 77.82 56⇑ *e*P P 15 32 32.3 +0.2
TUC *e**PP pP 15 32 37.4 -0.7
TUC MLR MLR
comp=Z,506nm,19.0s,MS4.9
PLONS Plons 77.88 329⇑ *i*P P 15 32 32.7 +0.2
comp=Z,553nm,1.2s,mb6.3
NVLJ Novalja 77.88 324 *i* P P 15 32 31.0 -1.5
ZUR Zurich 77.88 330⇑ *i*P P 15 32 32.0 -0.5
comp=Z,602nm,1.7s,mb6.3
ZUR Zurich 77.88 330 ⇑P P 15 32 32.7 +0.2
CTI Castel Tesino 77.90 327 P P 15 32 32.0 -0.6
SULZ Sulz-Cheisache 77.91 330⇑ *i*P P 15 32 32.6 0.0
comp=Z,813nm,1.1s,mb6.5
SULZ Sulz-Cheisache 77.91 330 ⇑P P 15 32 32.8 +0.2
DAVOX Davos 77.93 329⇑ *i*P P 15 32 32.7 0.0

comp=Z,316nm,1.2s,mb6.1
MOF Molkenrain 77.96 331⇑eP P 15 32 33.0 +0.1
BIA Bitola 77.97 318 eP P 15 32 32.1 -0.9
BIA Bitola 77.97 318⇑iP P 15 32 32.0 -0.9
BRMO Bormio 78.01 328 P P 15 32 33.9 +0.7
THEF They Montfort 78.02 332⇑eP P 15 32 33.3 0.0
FORT Forrest 78.02 192 eP P 15 32 32.3 -1.0
comp=Z,74nm,0.9s,mb5.6
FORT epP pP 15 32 38.1 -1.1
BUM Brajici-Budva 78.03 320⇑iP P 15 32 32.9 -0.5
BDRM Kayabasi 78.07 312 iP P 15 32 33.5 -0.1
MEZF Maizieres J'vi 78.08 332⇑iP P 15 32 33.9 +0.3
comp=Z,1µm,1.4s,mb6.4
MEZF Maizieres J'vi 78.08 332⇑iP P 15 32 33.9 +0.3
comp=Z,1µm,1.4s,mb6.7
HINF Hinteralfeld 78.09 331⇑iP P 15 32 33.3 -0.3
comp=Z,378nm,1.4s,mb5.8
HINF Hinteralfeld 78.09 331⇑iP P 15 32 33.3 -0.3
HINF pmax pmax
comp=Z,189nm,1.4s,mb5.8
HINF Hinteralfeld 78.09 331⇑iP P 15 32 33.3 -0.3
comp=Z,189nm,1.4s,mb5.8
HCY Herceg Novi 78.09 321⇑iP P 15 32 32.8 -0.9
HAU Haudompre 78.09 331⇑iP P 15 32 33.5 -0.2
comp=Z,298nm,1.1s,mb5.8
HAU eR
comp=Z,2µm,19.0s
HAU Haudompre 78.09 331⇑iP P 15 32 33.5 -0.2
HAU pmax pmax
comp=Z,149nm,1.1s,mb5.8
HAU MLR MLR
comp=Z,2µm,19.0s,MS5.5
HAU Haudompre 78.09 331⇑iP P 15 32 33.5 -0.2
comp=Z,149nm,1.1s,mb5.8
HAU LR LR
comp=Z,2µm,19.0s,MS5.5
STKA Stephens Creek 78.11 180⇑iP P 15 32 33.1 -0.7
comp=Z,31nm,0.9s,mb5.2
STKA epP pP 15 32 38.9 -0.8
STKA Stephens Creek 78.11 180 P P 15 32 33.0 -0.8
comp=Z,41nm,0.9s,mb5.3,baz=342,slow=6.6,SNR=38
STKA LR LR 16 08 24.3
comp=Z,794nm,19.7s,MS5.0,baz=354,slow=37
FNA Florina 78.13 318 eP P 15 32 33.4 -0.4
OHR Ohrid 78.14 319 eP P 15 32 33.3 -0.6
OHR Ohrid 78.14 319⇑iP P 15 32 33.3 -0.6
BODT Bodrum 78.14 312 eP P 15 32 29.1 -4.9
ULC Ulcinj 78.15 320⇑iP P 15 32 33.5 -0.5
LIT Litokhoron 78.15 317 eP P 15 32 33.3 -0.7
BBS Basel-Blauen 78.17 330⇑eP P 15 32 34.4 +0.3
LLS Linth-Limmern 78.18 329⇑eP P 15 32 33.9 -0.2
comp=Z,262nm,1.4s,mb6.0
LLS Linth-Limmern 78.18 329 ⇑P P 15 32 33.6 -0.5
BERNI Berninapass 78.19 328⇑iP P 15 32 34.6 +0.4
comp=Z,354nm,1.5s,mb6.1
MUO Muotathal 78.21 329⇑iP P 15 32 34.4 +0.1
comp=Z,616nm,1.5s,mb6.3
MUO Muotathal 78.21 329 ⇑P P 15 32 34.7 +0.4
BALST Balsthal 78.22 330⇑iP P 15 32 33.3 -1.1
comp=Z,1µm,1.4s,mb6.6
AOS Alonnisos 78.22 315 eP P 15 32 34.2 -0.1
ANMO Albuquerque 78.25 51⇑iP P 15 32 35.1 +0.6
ANMO e*PP pP 15 32 39.5 -1.0
ANMO MLR MLR
comp=Z,746nm,20.0s
DAT Datca 78.26 312 eP P 15 32 30.5 -4.1
LAZ Ladron 78.29 52 eP P 15 32 35.4 +0.7
LAZ epP pP 15 32 41.2 +0.5
MABI Malga Bissina 78.31 328 P P 15 32 34.6 -0.3
VDL Val di Lei 78.33 329⇑iP P 15 32 35.0 +0.1
comp=Z,470nm,1.9s,mb6.1
VDL Val di Lei 78.33 329 ⇑P P 15 32 35.7 +0.8
BOURR Bourrignon 78.33 330⇑iP P 15 32 34.9 -0.1
comp=Z,522nm,1.4s,mb6.3
BNALP Bannalp 78.37 329⇑eP P 15 32 35.7 +0.5
comp=Z,337nm,1.4s,mb6.1
ARG Arkhangelos 78.37 311 eP P 15 32 36.0 +0.8
TIR Tirane 78.37 319 eP P 15 32 35.2 0.0
TUE Stuetta 78.38 329 P P 15 32 34.3 -1.0
XOR Xorichti 78.40 316 eP P 15 32 34.7 -0.6
NEO Neokhori 78.43 316 eP P 15 32 35.0 -0.5
LOMF Lomont 78.50 331⇑eP P 15 32 36.2 +0.3
HTL Hartland 78.55 339⇑eP P 15 32 35.5 -0.7
HTL Hartland 78.55 339⇑eP P 15 32 35.5 -0.7
LENM Lemitar 78.56 52 eP P 15 32 36.8 +0.5
LENM epP pP 15 32 42.4 +0.1
HASLI Hasliberg 78.56 330⇑eP P 15 32 35.5 -0.7
comp=Z,647nm,1.4s,mb6.4
LPM Los Pinos Moun 78.63 52 eP P 15 32 37.2 +0.5
FUSIO Fusio 78.64 329⇑iP P 15 32 36.0 -0.7
comp=Z,505nm,1.3s,mb6.3
Y22C IRIS PASSCAL I 78.66 52 ⇓P P 15 32 37.2 +0.4
baz=78
WIMIS Wimmis 78.82 330⇑iP P 15 32 37.6 -0.1
comp=Z,292nm,1.7s,mb5.9
TORNY Torny 78.96 330⇑iP P 15 32 37.6 -0.8
comp=Z,457nm,1.7s,mb6.1
MUGIO Muggio 78.96 329⇑iP P 15 32 38.5 0.0
comp=Z,557nm,1.1s,mb6.4
BRANT Les Verrieres 78.98 331⇑iP P 15 32 38.1 -0.5
comp=Z,439nm,1.9s,mb6.1
MEV Metsovon 78.99 318 eP P 15 32 38.0 -0.7
LKBD Leukerbad 79.06 330⇑iP P 15 32 38.8 -0.2
comp=Z,465nm,1.2s,mb6.3
LKBD Leukerbad 79.06 330 ⇑P P 15 32 39.3 +0.3
AGG Agios Georgios 79.08 316 eP P 15 32 37.6 -1.5
VAI Varese 79.11 329 P P 15 32 38.9 -0.3
SENIN Lac Senin 79.20 330⇑iP P 15 32 39.3 -0.4
comp=Z,365nm,1.6s,mb6.1
AOI Ancona 79.23 324 P P 15 32 39.9 0.0
MMK Mattmark 79.23 329⇑iP P 15 32 39.9 0.0
comp=Z,372nm,1.4s,mb6.1
MMK Mattmark 79.23 329 ⇑P P 15 32 40.6 +0.7
CSA1 St Austell 79.24 339⇑eP P 15 32 39.8 -0.2
CSA1 St Austell 79.24 339⇑eP P 15 32 39.8 -0.2
JAN Janina 79.27 318 eP P 15 32 40.0 -0.2
MCGN Macugnaga 79.31 329 P P 15 32 40.8 +0.5
GRYON Gryon 79.36 330⇑iP P 15 32 40.3 -0.3
comp=Z,291nm,1.1s,mb6.1
RSM Repubblica di 79.37 325 P P 15 32 41.6 +0.9
CABF La Chapelle 79.39 331⇑iP P 15 32 40.9 +0.1
DIX Grande Dixence 79.40 330⇑iP P 15 32 40.8 -0.1
comp=Z,389nm,1.3s,mb6.2
DIX Grande Dixence 79.40 330 ⇑P P 15 32 41.6 +0.7
GIMEL Gimel 79.40 331⇑iP P 15 32 40.5 -0.4
comp=Z,234nm,2.2s,mb5.7
EVR Evrytania 79.41 317 eP P 15 32 40.0 -0.9
OG01 Vacheresse 79.44 330⇑eP P 15 32 41.2 +0.1
FSSB Fossombrone 79.44 325 P P 15 32 40.5 -0.6
CRQ2 Rosemanowes 2 79.48 339⇑eP P 15 32 41.2 -0.1
CRQ2 AMb AMB 15 32 49.0
comp=Z,615nm,1.6s,mb6.3
CRQ2 Rosemanowes 2 79.48 339⇑eP P 15 32 41.2 -0.1
CRQ2 AMb AMB 15 32 49.0
comp=Z,615nm,1.6s,mb6.3
SALAN Lac Salanfe 79.50 330⇑iP P 15 32 41.5 +0.1
comp=Z,213nm,1.2s,mb6.0
EIL Elat 79.50 302⇑eP P 15 32 41.7 +0.3
comp=Z,4µm,1.3s
EIL epP pP 15 32 47.9 +0.5
FLN La Foliniere 79.52 336⇑iP P 15 32 41.3 -0.2
comp=Z,655nm,1.3s,mb6.1
FLN eR
comp=Z,3µm,22.5s
FLN La Foliniere 79.52 336⇑iP P 15 32 41.3 -0.2
FLN pmax pmax
comp=Z,328nm,1.3s,mb6.1
FLN MLR MLR
comp=Z,3µm,22.5s,MS5.6
FLN La Foliniere 79.52 336⇑iP P 15 32 41.3 -0.2
comp=Z,328nm,1.3s,mb6.1
FLN LR LR
comp=Z,3µm,22.5s,MS5.6
CING Cingoli 79.54 325 P P 15 32 41.6 0.0
CMA1 Manaccan 79.55 339⇑iP P 15 32 41.5 -0.2
CMA1 Manaccan 79.55 339⇑iP P 15 32 41.5 -0.2
LOR Lormes 79.55 332⇑iP P 15 32 41.5 -0.2
comp=Z,1µm,1.2s,mb6.3
LOR eR
comp=Z,3µm,18.2s
LOR Lormes 79.55 332⇑iP P 15 32 41.5 -0.2
LOR pmax pmax
comp=Z,515nm,1.2s,mb6.3
LOR MLR MLR
comp=Z,3µm,18.3s,MS5.7
LOR Lormes 79.55 332⇑iP P 15 32 41.5 -0.2
LOR LR LR
comp=Z,3µm,18.3s,MS5.7
CGW Gweek 79.55 339⇑iP P 15 32 41.6 -0.1
CGW Gweek 79.55 339⇑iP P 15 32 41.6 -0.1
LDF La Druitiere 79.57 335⇑iP P 15 32 41.5 -0.3
comp=Z,843nm,1.4s,mb6.2
LDF La Druitiere 79.57 335⇑iP P 15 32 41.5 -0.3
LDF pmax pmax
comp=Z,421nm,1.4s,mb6.2
LDF La Druitiere 79.57 335⇑iP P 15 32 41.5 -0.3
comp=Z,421nm,1.4s,mb6.2
CGH1 Goonhilly 79.58 339⇑iP P 15 32 42.0 +0.1
CGH1 Goonhilly 79.58 339⇑iP P 15 32 42.0 +0.1
ZCCA Zocca 79.58 327 P P 15 32 43.5 +1.6
ORO Oropa 79.59 329 P P 15 32 41.3 -0.6
EMV Vieux Emosson 79.59 330⇑iP P 15 32 41.6 -0.3
comp=Z,468nm,2.0s,mb6.1
EMV Vieux Emosson 79.59 330 ⇑P P 15 32 42.2 +0.3
IGT Igoumenitsa 79.61 318 eP P 15 32 41.3 -0.7
JFWS Jewell Farm 79.62 36 eP P 15 32 39.8 -2.2
JFWS pmax pmax
comp=Z,64nm,0.7s,mb5.7
JFWS MLR MLR
comp=Z,1µm,19.0s,MS5.2
JFWS Jewell Farm 79.62 36 eP P 15 32 39.8 -2.3
comp=Z,60nm,0.7s,mb5.6
JFWS LR LR
comp=Z,1µm,19.0s,MS5.2
SFI Santa Sofia 79.63 326 P P 15 32 43.1 +1.0
FNVD Fontana Vidola 79.68 326 P P 15 32 43.5 +1.1
SEI Scarperia 79.69 326 P P 15 32 43.6 +1.2
KEK Kerkira 79.71 318 eP P 15 32 42.5 -0.1
OFFI Offida 79.71 324 P P 15 32 43.5 +0.9
GSCL Gusciola 79.73 327 P P 15 32 43.7 +1.0
ERBM Eremo 79.74 327 P P 15 32 43.9 +1.2
SNTG Esanatoglia 79.74 325 P P 15 32 43.0 +0.3
FGMS Monte Sant'Ang 79.79 322 P P 15 32 42.7 -0.3
BOB Bobbio (Coli) 79.80 328 P P 15 32 43.4 +0.4
MSAG Monte S. Angel 79.80 322 P P 15 32 43.1 +0.1
BADI Badiali 79.81 325 P P 15 32 43.9 +0.8
CRE Caprese Michel 79.83 326 P P 15 32 43.9 +0.7
SGRT San Giovanni R 79.84 322 P P 15 32 42.9 -0.3
SSF Saint Saulge 79.85 333⇑iP P 15 32 43.1 -0.2
comp=Z,355nm,1.2s,mb5.9
SSF Saint Saulge 79.85 333⇑iP P 15 32 43.1 -0.2
SSF pmax pmax
comp=Z,178nm,1.2s,mb5.9
SSF Saint Saulge 79.85 333⇑iP P 15 32 43.1 -0.2
comp=Z,178nm,1.2s,mb5.9
CDCA Citt' di Caste 79.85 325 P P 15 32 44.2 +0.9
HYF Humbligny 79.94 333⇑iP P 15 32 44.0 +0.2
KSU1 Kansas State U 79.96 42⇑iP P 15 32 42.2 -1.7
comp=Z,102nm,1.1s,mb5.7
KSU1 epP pP 15 32 46.5 -3.3
GRR Gorron 79.97 336⇑iP P 15 32 43.9 0.0
comp=Z,684nm,1.1s,mb6.2
GRR Gorron 79.97 336⇑iP P 15 32 43.9 0.0
GRR pmax pmax
comp=Z,342nm,1.1s,mb6.2
GRR Gorron 79.97 336⇑iP P 15 32 43.9 0.0
comp=Z,342nm,1.1s,mb6.2
VLC Villacollemand 79.97 327⇑iP P 15 32 43.9 0.0
comp=Z,342nm,1.2s,mb6.2
VLC epP pP 15 32 50.6 +0.7
LCI Lecce 79.97 320 P P 15 32 41.6 -2.4
RGNG Rignano Grg 79.97 322 P P 15 32 43.6 -0.4
BDI Bagni Di Lucca 79.97 327 P P 15 32 43.7 -0.3
TERO Teramo 80.01 324 P P 15 32 44.4 +0.3
RSL Roselend 80.02 330⇑eP P 15 32 44.4 +0.2
ASS Assisi 80.02 325 P P 15 32 44.4 +0.2
FG2 Serracapriola 80.04 323 P P 15 32 44.6 +0.3
OG05 Jujurieux 80.11 331⇑eP P 15 32 45.0 +0.3
SMF Signal de Mont 80.11 332⇑iP P 15 32 44.6 -0.1
comp=Z,1µm,1.2s,mb6.4
SMF Signal de Mont 80.11 332⇑iP P 15 32 44.6 -0.1
SMF pmax pmax
comp=Z,629nm,1.2s,mb6.4
SMF Signal de Mont 80.11 332⇑iP P 15 32 44.6 -0.1
comp=Z,629nm,1.2s,mb6.4
LKD Leas 80.12 317 eP P 15 32 44.3 -0.5
LPL La Plagne 80.13 330⇑iP P 15 32 45.5 +0.7
comp=Z,335nm,1.1s,mb5.9
LPL La Plagne 80.13 330⇑iP P 15 32 45.5 +0.7
LPL pmax pmax
comp=Z,167nm,1.1s,mb5.9
LPL La Plagne 80.13 330⇑iP P 15 32 45.5 +0.7
comp=Z,167nm,1.1s,mb5.9
AVF Avril sur Loir 80.14 332⇑iP P 15 32 44.9 +0.1
comp=Z,1µm,1.3s,mb6.4
AVF Avril sur Loir 80.14 332⇑iP P 15 32 44.9 +0.1
AVF pmax pmax
comp=Z,687nm,1.3s,mb6.4
AVF Avril sur Loir 80.14 332⇑iP P 15 32 44.9 +0.1
comp=Z,687nm,1.3s,mb6.4
LPG La Plagne 80.14 330⇑iP P 15 32 45.6 +0.7
comp=Z,493nm,1.2s,mb6.0
LPG La Plagne 80.14 330⇑iP P 15 32 45.6 +0.7
LPG pmax pmax
comp=Z,246nm,1.2s,mb6.0
LPG La Plagne 80.14 330⇑iP P 15 32 45.6 +0.7
comp=Z,246nm,1.2s,mb6.0
CSNT Castellina Chi 80.21 326 P P 15 32 44.6 -0.6
RSP Reno Superiore 80.26 329 P P 15 32 44.7 -0.8
CIGN Sant'Elia a Pi 80.28 323 P P 15 32 45.7 +0.1
PII Pisa 80.29 326 P P 15 32 44.8 -0.9
AQU L'Aquila 80.31 324⇓iP P 15 32 46.2 +0.4
AQU L'Aquila 80.31 324⇑iP P 15 32 46.1 +0.3
AQU pmax pmax
comp=Z,433nm,1.2s,mb6.3
AQU L'Aquila 80.31 324⇑iP P 15 32 46.1 +0.3
comp=Z,433nm,1.2s,mb6.3
INTR Introdacqua 80.39 323 P P 15 32 44.9 -1.3
NPS Neapolis 80.40 312 eP P 15 32 43.0 -3.3
FG5 Orsara di Pugl 80.43 322 P P 15 32 47.0 +0.6
FG4 Candela 80.45 322 P P 15 32 46.8 +0.3
RIV Riverview 80.50 172 eP P 15 32 47.2 +0.4
FIAM Fiamignano 80.50 324 P P 15 32 47.0 +0.2
BGF Bois d'Agland 80.50 333⇑iP P 15 32 46.9 +0.1
comp=Z,657nm,1.5s,mb6.0
BGF Bois d'Agland 80.50 333⇑iP P 15 32 46.9 +0.1
BGF pmax pmax
comp=Z,328nm,1.5s,mb6.0
BGF Bois d'Agland 80.50 333⇑iP P 15 32 46.9 +0.1
comp=Z,328nm,1.5s,mb6.0
RNI2 Rionero Sannit 80.55 323 P P 15 32 47.5 +0.4
BNI Bardonecchia 80.55 330 eP P 15 32 46.9 -0.2
MIDA Miranda 80.56 323 P P 15 32 47.4 +0.3
SGMF Saint Gilles 80.56 337⇑iP P 15 32 47.4 +0.3
comp=Z,533nm,1.1s,mb6.1
SGMF Saint Gilles 80.56 337⇑iP P 15 32 47.4 +0.3
SGMF pmax pmax
comp=Z,267nm,1.1s,mb6.1
SGMF Saint Gilles 80.56 337⇑iP P 15 32 47.4 +0.3
comp=Z,267nm,1.1s,mb6.1
VLS Valsamata 80.58 317 eP P 15 32 47.0 -0.2
MNS Montasola 80.58 324 P P 15 32 46.7 -0.5
GRFL Gerfalco 80.61 326 P P 15 32 47.0 -0.4
VLI Veliai 80.61 315 eP P 15 32 44.0 -3.4
VVLD Villa Vallelon 80.63 324 P P 15 32 47.3 -0.2
XRY Khrisi 80.66 312 eP P 15 32 47.5 -0.2
PSB1 Pescosannita 80.67 322 P P 15 32 47.7 0.0
ROSF Rostrenen 80.68 337⇑iP P 15 32 48.1 +0.3
comp=Z,763nm,1.1s,mb6.2
ROSF Rostrenen 80.68 337⇑iP P 15 32 48.1 +0.3
ROSF pmax pmax
comp=Z,381nm,1.1s,mb6.2
ROSF Rostrenen 80.68 337⇑iP P 15 32 48.1 +0.3
comp=Z,381nm,1.1s,mb6.2
SDI San Donato 80.68 323 P P 15 32 47.6 -0.2
ITM Ithomi 80.73 315 eP P 15 32 47.0 -1.1
LATE Laterza 80.73 325 P P 15 32 47.9 -0.2
FIN Finale Ligure 80.74 328 P P 15 32 47.1 -1.0
IDI Anoyia 80.75 312 P P 15 32 46.6 -1.5
comp=Z,79nm,1.0s,mb5.6,baz=33,slow=8.1,SNR=19
IDI LR LR 16 09 11.6
comp=Z,1µm,21.6s,MS5.3,baz=38,slow=36
MRLC Muro Lucano 80.77 322 P P 15 32 48.1 -0.2
PLDF La Plantade 80.78 332⇑eP P 15 32 48.5 +0.2
MBDF Montbardon 80.80 329⇑iP P 15 32 48.3 -0.1
comp=Z,467nm,1.5s,mb5.9
MBDF Montbardon 80.80 329⇑iP P 15 32 48.3 -0.1
MBDF pmax pmax
comp=Z,233nm,1.5s,mb5.9
MBDF Montbardon 80.80 329⇑iP P 15 32 48.3 -0.1
comp=Z,233nm,1.5s,mb5.9
GUAR Guarcino 80.82 324 P P 15 32 48.2 -0.3
KLBR Kellerberrin 80.82 201 eP P 15 32 47.3 -1.2
comp=Z,77nm,0.9s,mb5.6
KLBR epP pP 15 32 53.0 -1.5
CERT Cerreto 80.82 324 P P 15 32 48.0 -0.5
DOI San Damiano 80.83 329 P P 15 32 46.7 -1.9
MTCE Montecelio 80.86 324 P P 15 32 48.0 -0.7
AGO Saint Agoulin 80.86 332⇑eP P 15 32 49.2 +0.5
ORI Oriolo Calabro 80.93 321 P P 15 32 49.9 +0.8
TCF Toulx Ste Croi 80.94 333⇑iP P 15 32 49.4 +0.2
comp=Z,440nm,1.2s,mb6.0
TCF Toulx Ste Croi 80.94 333⇑iP P 15 32 49.4 +0.2
TCF pmax pmax
comp=Z,220nm,1.2s,mb6.0
TCF Toulx Ste Croi 80.94 333⇑iP P 15 32 49.4 +0.2
comp=Z,220nm,1.2s,mb6.0
ORIF Oris-en-Rattie 80.94 330⇑iP P 15 32 49.6 +0.4
comp=Z,295nm,1.1s,mb5.8
ORIF eR
comp=Z,2µm,22.8s
ORIF Oris-en-Rattie 80.94 330⇑iP P 15 32 49.6 +0.4
ORIF pmax pmax
comp=Z,148nm,1.1s,mb5.8
ORIF Oris-en-Rattie 80.94 330⇑iP P 15 32 49.6 +0.4
comp=Z,148nm,1.1s,mb5.8
RFI Roccamonfina 80.95 323 P P 15 32 49.5 +0.3
VAM Vamos 81.01 313 eP P 15 32 48.0 -1.5
SLCN Sala Consilina 81.01 321 P P 15 32 49.7 +0.2
QUIF Quistinic 81.04 337⇑iP P 15 32 49.7 0.0
comp=Z,257nm,1.0s,mb5.8
QUIF Quistinic 81.04 337⇑iP P 15 32 49.7 0.0
QUIF pmax pmax
comp=Z,128nm,1.0s,mb5.8
QUIF Quistinic 81.04 337⇑iP P 15 32 49.7 0.0
comp=Z,128nm,1.0s,mb5.8
RDP Rocca di Papa 81.09 324 P P 15 32 49.6 -0.4
TOLF Tolfa 81.12 325 P P 15 32 49.8 -0.3
COLF Collangettes 81.15 332⇑eP P 15 32 50.8 +0.5
SAOF Saorge 81.17 328⇑eP P 15 32 49.8 -0.6
PYM Petit Puy Mans 81.17 332 eP P 15 32 50.8 +0.4
AUTN L'Aution 81.20 329⇑eP P 15 32 50.1 +0.5
TOUF Mont Tournerai 81.25 329⇑eP P 15 32 50.6 -0.2
CUC Castrocucco 81.26 321 P P 15 32 50.0 -0.9
MNTX Cornudas Mount 81.30 53⇑iP P 15 32 51.2 +0.1
comp=Z,82nm,1.1s,mb5.6
MNTX LR LR
comp=Z,609nm,21.0s,MS4.9
SBF Sospel 81.31 328⇑iP P 15 32 50.7 -0.5
comp=Z,524nm,1.1s,mb6.1
SBF Sospel 81.31 328⇑iP P 15 32 50.7 -0.5
SBF pmax pmax
comp=Z,262nm,1.1s,mb6.1
SBF Sospel 81.31 328⇑iP P 15 32 50.7 -0.5
comp=Z,262nm,1.1s,mb6.1
LUCF Luceram 81.32 329 eP P 15 32 50.9 -0.3
MFF Saint Martin d 81.38 335⇑iP P 15 32 52.8 +1.3
comp=Z,953nm,1.4s,mb6.2
MFF Saint Martin d 81.38 335⇑iP P 15 32 52.8 +1.3
MFF pmax pmax
comp=Z,476nm,1.4s,mb6.2
MFF Saint Martin d 81.38 335⇑iP P 15 32 52.8 +1.3
comp=Z,476nm,1.4s,mb6.2
MVIF Mont Vial 81.39 329⇑eP P 15 32 51.2 -0.3
VIVF Saint-Julien-l 81.41 331⇑iP P 15 32 52.0 +0.3
comp=Z,473nm,1.2s,mb6.0
VIVF Saint-Julien-l 81.41 331⇑iP P 15 32 52.0 +0.3
VIVF pmax pmax
comp=Z,237nm,1.2s,mb6.0
VIVF Saint-Julien-l 81.41 331⇑iP P 15 32 52.0 +0.3
comp=Z,237nm,1.2s,mb6.0
OCF Saint Nazaire 81.44 330⇑eP P 15 32 52.5 +0.7
OG26 St.-Nazaire-De 81.44 330⇑eP P 15 32 52.5 +0.7
REVF Revere 81.45 328⇑eP P 15 32 51.5 -0.3
GDL2 Guadalupe Moun 81.47 52 eP P 15 32 52.2 +0.3
LCHF La Chataignera 81.49 335⇑eP P 15 32 52.8 +0.7
GVD Gavdhos 81.51 313 eP P 15 32 50.5 -1.7
LBL Lubilhac 81.55 332 eP P 15 32 53.0 +0.6
MUN Mundaring 81.57 202 eP P 15 32 51.9 -0.6
MUN epP pP 15 32 57.3 -1.2
LRYF La Roche-sur-Y 81.81 335⇑eP P 15 32 54.1 +0.3
CNB Canberra Magne 81.82 174 eP P 15 32 53.6 -0.2
comp=Z,45nm,1.3s,mb5.2
FRF La Foret Royal 81.86 329⇑iP P 15 32 53.6 -0.4
comp=Z,394nm,1.5s,mb5.8
FRF La Foret Royal 81.86 329⇑iP P 15 32 53.6 -0.4
FRF pmax pmax
comp=Z,197nm,1.5s,mb5.8
FRF La Foret Royal 81.86 329⇑iP P 15 32 53.6 -0.4
comp=Z,197nm,1.5s,mb5.8
PGF Pioggiola 81.87 327⇑iP P 15 32 53.7 -0.4
comp=Z,451nm,1.6s,mb5.9
PGF Pioggiola 81.87 327⇑iP P 15 32 53.7 -0.4
PGF pmax pmax
comp=Z,225nm,1.6s,mb5.8
PGF Pioggiola 81.87 327⇑iP P 15 32 53.7 -0.4
comp=Z,225nm,1.6s,mb5.8
SMRF Simiane la Rot 81.88 330⇑iP P 15 32 54.3 +0.2
comp=Z,134nm,1.2s,mb5.5
SMRF Simiane la Rot 81.88 330⇑iP P 15 32 54.3 +0.2
comp=Z,134nm,1.2s,mb5.8
VILF Villemus 81.93 330 eP P 15 32 55.4 +1.0
GRI Girifalco 81.96 320 P P 15 32 54.2 -0.4
TAVF Tavernes 82.02 329 eP P 15 32 55.1 +0.2
RJF Les Rejaudoux 82.04 333⇑iP P 15 32 55.3 +0.3
comp=Z,574nm,1.5s,mb6.0
RJF eR
comp=Z,2µm,20.5s
RJF Les Rejaudoux 82.04 333⇑iP P 15 32 55.3 +0.3
RJF pmax pmax
comp=Z,287nm,1.5s,mb6.0
RJF MLR MLR
comp=Z,2µm,20.5s,MS5.5
RJF Les Rejaudoux 82.04 333⇑iP P 15 32 55.3 +0.3
comp=Z,287nm,1.5s,mb6.0
RJF LR LR
comp=Z,2µm,20.5s,MS5.5
SADO Sadowa 82.09 28 P P 15 32 53.3 -2.0
comp=Z,15nm,1.0s,mb4.9,baz=333,slow=6.4,SNR=12
LMR La Mourre 82.11 329⇑iP P 15 32 55.1 -0.2
comp=Z,481nm,1.2s,mb6.0
LMR La Mourre 82.11 329⇑iP P 15 32 55.1 -0.2
LMR pmax pmax
comp=Z,241nm,1.2s,mb6.0
LMR La Mourre 82.11 329⇑iP P 15 32 55.1 -0.2
comp=Z,241nm,1.2s,mb6.0
PRAF Pradon 82.17 330⇑eP P 15 32 56.1 +0.5
CAF Calviac 82.20 332⇑iP P 15 32 56.7 +0.9
comp=Z,662nm,1.3s,mb6.1
CAF Calviac 82.20 332⇑iP P 15 32 56.7 +0.9
CAF pmax pmax
comp=Z,331nm,1.3s,mb6.1
CAF Calviac 82.20 332⇑iP P 15 32 56.7 +0.9
comp=Z,331nm,1.3s,mb6.1
NWAO Narrogin (SRO) 82.22 201 P P 15 32 55.1 -0.8
comp=Z,83nm,0.9s,mb5.7,baz=18,slow=5.4,SNR=33
NWAO LR LR 16 10 00.2
comp=Z,419nm,21.4s,MS4.8,baz=18,slow=36
NWAO Narrogin (SRO) 82.22 201 eP P 15 32 55.1 -0.8
NWAO pmax pmax
comp=Z,110nm,1.0s
NWAO Narrogin (SRO) 82.22 201⇑eP P 15 32 55.0 -0.9
comp=Z,108nm,1.0s,mb5.7
PUYF Puyloubier 82.22 329⇑eP P 15 32 56.3 +0.4
TREF Trevaresse 82.25 330⇑eP P 15 32 56.7 +0.6
OLEF Ile d'Oleron 82.33 335 eP P 15 32 56.8 +0.3
LASF Ste Croix 82.37 331⇑iP P 15 32 57.3 +0.6
comp=Z,384nm,1.3s,mb5.9
WMOK Wichita Mounta 82.39 46⇑iP P 15 32 56.3 -0.5
WMOK e*PP pP 15 33 01.2 -1.6
WMOK pmax pmax
comp=Z,142nm,1.4s,mb5.7
WMOK Wichita Mounta 82.39 46⇑iP P 15 32 56.2 -0.6
comp=Z,142nm,1.4s,mb5.7
WMOK epP pP 15 33 01.2 -1.6
GELF Grande-Etoile 82.45 330⇑eP P 15 32 57.5 +0.4
LFF La Frestale 82.61 333⇑iP P 15 32 58.6 +0.6
comp=Z,894nm,1.3s,mb6.3
LFF La Frestale 82.61 333⇑iP P 15 32 58.6 +0.6
LFF pmax pmax
comp=Z,447nm,1.3s,mb6.3
LFF La Frestale 82.61 333⇑iP P 15 32 58.6 +0.6
comp=Z,447nm,1.3s,mb6.3

AAM Ann Arbor 82.69 32 *e*P P **15 32 57.3 -1.1**
AAM pmax pmax
comp=Z,126nm,1.0s,mb5.9
AAM MLR MLR
comp=Z,1µm,19.0s,MS5.3
AAM Ann Arbor 82.69 32 *e*P P **15 32 57.3 -1.1**
comp=Z,126nm,1.0s,mb5.9
AAM LR LR
comp=Z,1µm,19.0s,MS5.3
SOI Samo 82.74 320 P P **15 32 58.4 -0.2**
SLNA Salina 82.87 321 P P **15 32 58.5 -0.8**
MTTG Motta San Giov 82.96 320 P P **15 32 59.1 -0.7**
SLM Saint Louis 83.19 38 *e*P P **15 33 00.4 -0.6**
SLM pmax pmax
comp=Z,204nm,1.3s,mb6.0
SLM Saint Louis 83.19 38 *e*P P **15 33 00.4 -0.6**
comp=Z,204nm,1.3s,mb6.0
CCM Cathedral Cave 83.24 39 PFAKE 15 33 10.0 +8.8
CCM LR LR
comp=Z,2µm,19.0s,MS5.4
MNO Monte Soro 83.45 321 P P **15 33 01.6 -0.7**
USI Ustica 83.46 322 P P **15 33 02.2 -0.2**
DGI Dorgali Grotta 83.55 325 P P **15 33 02.7 -0.1**
MTLF Montolieu 83.57 332⇑*i*P P **15 33 03.6 +0.7**
comp=Z,267nm,1.3s,mb5.9
MTLF Montolieu 83.57 332⇑*i*P P **15 33 03.6 +0.7**
MTLF pmax pmax
comp=Z,133nm,1.3s,mb5.9
MTLF Montolieu 83.57 332⇑*i*P P **15 33 03.6 +0.7**
comp=Z,133nm,1.3s,mb5.9
LONY Lake Ozonia 83.64 25⇑*i*P P **15 33 01.4 -1.9**
comp=Z,74nm,1.4s,mb5.6
FVM French Village 83.65 39⇑*i*P P **15 33 02.1 -1.3**
FVM *e**PP pP 15 33 07.3 -2.1
FVM pmax pmax
comp=Z,154nm,1.5s,mb5.9
FVM French Village 83.65 39⇑*i*P P **15 33 02.1 -1.3**
comp=Z,169nm,1.5s,mb6.0
FVM *e*pP pP 15 33 07.3 -2.0
FRNY Flat Rock 83.73 25 *e*P P **15 33 01.9 -1.8**
AGST Augusta-Monte 83.78 320 P P **15 33 03.5 -0.5**
LRDF Laroque-de-Fa 83.83 331⇑*e*P P **15 33 05.0 +0.8**
TOO Toolangi 83.86 177 *e*P P **15 33 04.4 0.0**
comp=Z,42nm,1.4s,mb5.4
TOO Toolangi 83.86 177 *e*P P **15 33 04.4 0.0**
TOO pmax pmax
comp=Z,42nm,1.4s,mb5.4
SSY Sortino 83.94 320 P P **15 33 04.6 -0.2**
HAVL Avola 84.07 320 P P **15 33 05.5 0.0**
HVZN Vizzini 84.07 320 P P **15 33 05.1 -0.4**
SJAF Saint Jean de 84.11 331⇑*e*P P **15 33 05.9 +0.2**
EJON La Jonquera 84.14 331 P P **15 33 06.0 +0.2**
comp=Z,270nm,1.4s,mb6.2
FILF Fillols 84.15 331⇑*e*P P **15 33 06.4 +0.5**
ERPA Erie 84.16 30⇑*i*P P **15 33 04.6 -1.4**
comp=Z,111nm,1.1s,mb5.9
ERPA *e*pP pP 15 33 10.4 -1.6
ERPA LR LR
comp=Z,2µm,20.0s,MS5.4
CARF Carcanieres 84.17 331⇑*e*P P **15 33 06.5 +0.5**
RAFF Raffo Rosso 84.19 320 P P **15 33 07.4 +1.3**
HMDC Modica 84.23 320 P P **15 33 06.9 +0.6**
ERC Erice 84.27 322 P P **15 33 06.4 -0.1**
MLS Moulis 84.28 332⇑*e*P P **15 33 07.2 +0.7**
BLO Bloomington 84.28 36 P P **15 33 05.6 -1.0**
BLO pmax pmax
comp=Z,61nm,1.0s,mb5.7
NCB Newcomb 84.34 25⇑*i*P P **15 33 05.2 -1.7**
NCB *e*pP pP 15 33 09.6 -3.2
NCB LR LR
comp=Z,2µm,22.0s,MS5.4
VSL Villasalto 84.35 325 *e*P P **15 33 06.0 -0.9**
SIUC Southern Illin 84.40 38 *e*P P **15 33 06.3 -0.8**
SALF Salau 84.43 332⇑*e*P P **15 33 07.3 0.0**
EPF Esparros 84.45 333⇑*i*P P **15 33 07.6 +0.2**
comp=Z,631nm,1.7s,mb6.2
EPF Esparros 84.45 333⇑*i*P P **15 33 07.6 +0.2**
EPF pmax pmax
comp=Z,316nm,1.7s,mb6.2
EPF Esparros 84.45 333⇑*i*P P **15 33 07.6 +0.2**
comp=Z,316nm,1.7s,mb6.2
MELF Melles 84.46 332⇑*e*P P **15 33 07.7 +0.2**
VALF Valcebollere 84.48 331⇑*e*P P **15 33 08.6 +1.1**
PKME Peaks-Kenny Pk 84.49 22⇑*i*P P **15 33 06.4 -1.3**
comp=Z,72nm,1.1s,mb5.7
PKME *e*pP pP 15 33 10.7 -2.9
LBOS 84.52 284 *e*P P **15 33 08.3 +0.5**
ALLY Alegheny Colle 84.52 30⇑*e*P P **15 33 06.5 -1.3**
ALLY *e*pP pP 15 33 10.9 -2.9
LABF Labassere 84.52 333 *e*P P **15 33 08.1 +0.3**
REYF Montagne du Re 84.65 333 *e*P P **15 33 08.5 +0.1**
RESF Ens 84.66 333⇑*e*P P **15 33 09.9 +1.4**
VIEF Viey 84.69 333⇑*e*P P **15 33 09.8 +1.2**
ATE Arette 84.73 333⇑*e*P P **15 33 08.7 -0.1**
ACSO Alum Creek Sta 84.74 33⇑*i*P P **15 33 07.8 -1.1**
comp=Z,128nm,1.0s,mb6.0
ACSO *e*pP pP 15 33 12.1 -2.8
LBNH Lisbon 84.75 24⇑*e*P P **15 33 08.1 -0.8**
LBNH pmax pmax
comp=Z,126nm,1.7s,mb5.8
LBNH MLR MLR
comp=Z,1µm,19.0s,MS5.3
LBNH Lisbon 84.75 24⇑*e*P P **15 33 08.1 -0.9**
comp=Z,126nm,1.7s,mb5.8
LBNH LR LR
comp=Z,1µm,19.0s,MS5.2
EBIE Bielsa 84.83 333 P P **15 33 10.5 +1.2**
comp=Z,496nm,1.4s,mb6.5
USIN University of 84.84 37 *e*P P **15 33 08.6 -0.8**
comp=Z,111nm,1.0s,mb6.0
USIN *e*pP pP 15 33 13.7 -1.7
EALK Alkurruntz 84.85 334 P P **15 33 09.6 +0.2**
comp=Z,459nm,1.5s,mb6.4
ETSF Etsaut 84.86 333⇑*i*P P **15 33 10.6 +1.1**
comp=Z,648nm,1.3s,mb6.3
ETSF Etsaut 84.86 333⇑*i*P P **15 33 10.6 +1.1**
ETSF pmax pmax
comp=Z,324nm,1.3s,mb6.3
ETSF Etsaut 84.86 333⇑*i*P P **15 33 10.6 +1.1**
comp=Z,324nm,1.3s,mb6.3
LARF Larrau 84.86 334 *e*P P **15 33 10.4 +0.9**
SJPF Ste Jean 84.86 334⇑*i*P P **15 33 10.5 +1.0**
comp=Z,192nm,1.2s,mb5.8
SJPF Ste Jean 84.86 334⇑*i*P P **15 33 10.5 +1.0**
SJPF pmax pmax
comp=Z,96nm,1.2s,mb5.8
SJPF Ste Jean 84.86 334⇑*i*P P **15 33 10.5 +1.0**
comp=Z,96nm,1.2s,mb5.8
ELIZ Elizondo 84.91 334 P P **15 33 10.2 +0.5**
ELIZ pmax pmax
comp=Z,84nm,0.9s,mb5.9
ELIZ Elizondo 84.91 334 P P **15 33 10.2 +0.5**
comp=Z,84nm,0.9s,mb5.9
ACCN Adirondack Com 85.03 25⇑*i*P P **15 33 08.8 -1.5**
ACCN *e*pP pP 15 33 13.0 -3.4
WVL Waterville 85.05 22 *e*P P **15 33 09.0 -1.4**
MIAR Mount Ida 85.08 43⇑*e*P P **15 33 10.0 -0.6**
MIAR pmax pmax
comp=Z,109nm,1.2s,mb5.9
MIAR MLR MLR
comp=Z,1µm,19.0s,MS5.3
MIAR Mount Ida 85.08 43⇑*e*P P **15 33 10.0 -0.6**
comp=Z,109nm,1.2s,mb5.9
MIAR LR LR
comp=Z,1µm,19.0s,MS5.3
HNH Hanover 85.14 24 *e*P P **15 33 10.6 -0.2**
WCI Wyandotte Cave 85.18 36⇑*i*P P **15 33 10.2 -0.9**
WCI *e**PP pP 15 33 14.7 -2.4
WCI pmax pmax
comp=Z,91nm,1.1s,mb5.8
WCI MLR MLR
comp=Z,1µm,21.0s,MS5.2
WCI Wyandotte Cave 85.18 36⇑*i*P P **15 33 10.2 -0.9**
comp=Z,91nm,1.1s,mb5.8
WCI *e*pP pP 15 33 14.7 -2.4
WCI LR LR
comp=Z,1µm,21.0s,MS5.2
JCT Junction City 85.24 50⇑*e*P P **15 33 10.8 -0.6**
JCT *e**PP pP 15 33 15.7 -1.7
JCT MLR MLR
comp=Z,632nm,20.0s,MS5.0
BINY Binghamton 85.41 27⇑*e*P P **15 33 10.7 -1.5**
comp=Z,65nm,1.0s,mb5.7
BINY LR LR
comp=Z,1µm,20.0s,MS5.3
ELAN Lanestosa 85.41 335 P P **15 33 12.4 +0.1**
comp=Z,589nm,1.4s,mb6.5
UALR University of 85.46 42 *e*P P **15 33 11.9 -0.6**
comp=Z,153nm,1.8s,mb5.8
EMMW East Machias 85.47 20 *e*P P **15 33 11.5 -1.0**
comp=Z,81nm,1.1s,mb5.8
FFD Franklin Falls 85.53 24 *e*P P **15 33 12.0 -0.8**
comp=Z,188nm,1.6s,mb6.1
FFD *e*pP pP 15 33 18.2 -0.6
HBAR Harrisburg 85.58 40⇑*i*P P **15 33 12.9 -0.2**
HBAR *e*pP pP 15 33 18.7 -0.4
GLAT Glass 85.58 39 *e*P P **15 33 12.4 -0.7**
GLAT *e*pP pP 15 33 18.6 -0.6
RAR Rarotonga 85.59 127 P P **15 33 12.6 -0.6**
comp=Z,39nm,1.0s,mb5.6,baz=149,slow=12,SNR=3.1
RAR Rarotonga 85.59 127 P P **15 33 12.6 -0.5**
RAR LR LR
comp=Z,2.0nm,20.0s
EPOB Poblet 85.73 331 P P **15 33 14.1 +0.3**
comp=Z,459nm,1.2s,mb6.6
EARI Arriondas 85.85 337 P P **15 33 14.4 0.0**
comp=Z,835nm,1.6s,mb6.7
ESAC San Caprasio 85.89 333 P P **15 33 15.8 +1.1**
comp=Z,1µm,1.4s
SSPA Standing Stone 86.20 29⇑*i*P P **15 33 15.0 -1.2**
comp=Z,63nm,1.1s,mb5.8
SSPA *e*pP pP 15 33 19.5 -2.7
SSPA LR LR
comp=Z,1µm,20.0s,MS5.3
ERTA Horta de San J 86.33 332 P P **15 33 17.1 +0.3**
comp=Z,576nm,1.6s,mb6.6
WVT Waverly 86.33 38⇑*e*P P **15 33 15.8 -1.0**
WVT *e**PP pP 15 33 21.2 -1.6
WVT pmax pmax
comp=Z,91nm,1.2s,mb5.9
WVT MLR MLR
comp=Z,1µm,19.0s,MS5.2
WVT Waverly 86.33 38⇑*e*P P **15 33 15.8 -1.1**
comp=Z,91nm,1.2s,mb5.9
WVT *e*pP pP 15 33 21.2 -1.7
WVT LR LR
comp=Z,1µm,19.0s,MS5.2
EPON Pontenova 86.34 338 P P **15 33 16.5 -0.3**
comp=Z,376nm,1.5s,mb6.4
MCWV Mont Chateau 86.39 31⇑*e*P P **15 33 16.6 -0.5**
comp=Z,128nm,1.2s,mb6.0
MCWV *e*pP pP 15 33 21.7 -1.4
MCWV LR LR
comp=Z,1µm,21.0s,MS5.3
QUA2 Belchertown 86.43 25 *e*P P **15 33 15.7 -1.6**
comp=Z,58nm,1.4s,mb5.6
QUA2 *e*pP pP 15 33 21.3 -2.1
HRV Harvard--Oak R 86.45 24⇑*e*P P **15 33 16.6 -0.8**
HRV *e**PP pP 15 33 21.2 -2.2
HRV pmax pmax
comp=Z,88nm,1.3s,mb5.8
HRV MLR MLR
comp=Z,1µm,19.0s,MS5.3
HRV Harvard--Oak R 86.45 24⇑*e*P P **15 33 16.6 -0.8**
comp=Z,88nm,1.3s,mb5.8
HRV *e*pP pP 15 33 21.1 -2.3
HRV LR LR
comp=Z,1µm,19.0s,MS5.3
ETOS Mallorca 86.56 330 P P **15 33 18.0 +0.1**
comp=Z,273nm,1.1s,mb6.4
WES Weston 86.63 24⇑*e*P P **15 33 17.3 -1.0**
WES *e**PP pP 15 33 21.7 -2.6
WES pmax pmax
comp=Z,107nm,1.1s,mb6.0
WES MLR MLR
comp=Z,1µm,20.0s,MS5.3
WES Weston 86.63 24⇑*e*P P **15 33 17.3 -1.0**
comp=Z,107nm,1.1s,mb6.0
WES *e*pP pP 15 33 21.7 -2.6
WES LR LR
comp=Z,1µm,20.0s,MS5.3
NATX Nacogdoches 86.83 45⇑*e*P P **15 33 19.2 0.0**
comp=Z,413nm,1.2s,mb6.5
NATX *e*pP pP 15 33 24.1 -1.2
NATX LR LR
comp=Z,654nm,19.0s,MS5.1
OXF Oxford 87.01 40⇑*i*P P **15 33 19.4 -0.7**
OXF *e**PP pP 15 33 23.9 -2.3
OXF pmax pmax
comp=Z,353nm,1.3s,mb6.4
OXF MLR MLR
comp=Z,1µm,19.0s,MS5.4
OXF Oxford 87.01 40⇑*i*P P **15 33 19.4 -0.8**
comp=Z,353nm,1.3s,mb6.4
OXF *e*pP pP 15 33 23.9 -2.3
OXF LR LR
comp=Z,1µm,19.0s,MS5.4
STS Santiago 87.11 339 P P **15 33 19.8 -0.8**
STS pmax pmax
comp=Z,21nm,0.9s,mb5.4
STS Santiago 87.11 339 P P **15 33 19.8 -0.9**
comp=Z,21nm,0.9s,mb5.4
EMOS Mosqueruela 87.12 332 P P **15 33 21.0 +0.4**
comp=Z,535nm,1.9s,mb6.5
PAL Palisades 87.14 26 *e*P P **15 33 20.0 -0.8**
PAL pmax pmax
comp=Z,147nm,1.6s,mb6.0
PAL Palisades 87.14 26 *e*P P **15 33 20.0 -0.8**
comp=Z,147nm,1.6s,mb6.0
EMAZ Mazaricos 87.16 339 P P **15 33 19.7 -1.1**
comp=Z,162nm,1.2s,mb6.1
PLAL Pickwick Lake 87.20 39⇑*e*P P **15 33 19.6 -1.4**
comp=Z,91nm,1.1s,mb5.9
PLAL *e*PP PP 15 36 42.8 -2.0
PLAL LR LR
comp=Z,971nm,20.0s,MS5.2
CPNY Central Park 87.32 26 *e*P P **15 33 21.1 -0.5**
ECAL Calabor 87.53 337 P P **15 33 22.4 -0.3**
comp=Z,211nm,1.7s,mb6.1
KEST Kesra 87.59 323 P P **15 33 22.5 -0.4**
comp=Z,17nm,0.9s,mb5.3,baz=304,slow=2.8,SNR=39
KEST LR LR 16 15 13.4
comp=Z,764nm,18.3s,MS5.2,baz=178,slow=37
CMAH Djebel Manchou 87.60 325 P P **15 33 23.0 0.0**
SDMD Soldier's Deli 87.65 29 *e*P P **15 33 23.5 +0.3**
PBRG Braganca 87.65 337 *e*P P **15 33 22.6 -0.6**
comp=Z,64nm,1.2s,mb5.7
CAEH 'Ain El Ouahch 87.69 325 P P **15 33 23.0 -0.4**
HKT Hockley 87.72 47⇑*e*P P **15 33 22.9 -0.6**
HKT pmax pmax
comp=Z,68nm,1.4s,mb5.7
HKT MLR MLR
comp=Z,997nm,19.0s,MS5.2
HKT Hockley 87.72 47⇑*e*P P **15 33 22.9 -0.6**
comp=Z,68nm,1.4s,mb5.7
HKT LR LR
comp=Z,997nm,19.0s,MS5.2
EIBI Ibiza 87.73 330 P P **15 33 23.7 +0.1**
comp=Z,308nm,1.7s,mb6.3
TZTN Tazewell 87.74 35 *e*P P **15 33 23.0 -0.6**
PMOR Pomariorio Ree 87.77 114 *e*P P **15 33 22.4 -1.4**
comp=Z,222nm,1.4s,mb6.2
EZAM Zamans 87.84 339 P P **15 33 24.1 0.0**
EZAM pmax pmax
comp=Z,55nm,1.0s,mb5.7
EZAM Zamans 87.84 339 P P **15 33 24.1 -0.1**
comp=Z,55nm,1.0s,mb5.7
FWV Forest Hill 87.88 33 *e*P P **15 33 23.1 -1.2**
FWV *e*pP pP 15 33 29.2 -1.1
ABSA Djebel Ababsia 87.89 325 P P **15 33 24.0 -0.3**
SWET Sewanee 87.91 37⇑*e*P P **15 33 22.9 -1.5**
SWET *e*pP pP 15 33 27.3 -3.2
ELOB Lobios 87.94 338 P P **15 33 24.0 -0.6**
comp=Z,48nm,0.7s,mb5.8
ECHE Chera 87.98 332 P P **15 33 24.9 +0.1**
ECHE pmax pmax
comp=Z,22nm,0.8s,mb5.4
ECHE Chera 87.98 332 P P **15 33 24.9 +0.1**
comp=Z,22nm,0.8s,mb5.4
GUD Guadarrama 88.00 335 P P **15 33 24.9 0.0**
GUD pmax pmax
comp=Z,15nm,0.7s,mb5.3
GUD Guadarrama 88.00 335 P P **15 33 24.9 0.0**
comp=Z,14nm,0.7s,mb5.3
CKFL Kef-Lekhel 88.08 325 P P **15 33 25.0 -0.2**
PCAB Cabril 88.08 338 *e*P P **15 33 24.8 -0.5**
comp=Z,91nm,1.4s,mb5.8
ELN Prospectdale 88.21 33 *e*P P **15 33 24.8 -1.1**
ELN *e*pP pP 15 33 30.5 -1.4
DFRA Djebel Bou Aff 88.28 326 P P **15 33 26.5 +0.3**
CASM Ain Smara 88.29 325 P P **15 33 26.0 -0.2**
CPCT Cooper Cave 88.29 36⇑*i*P P **15 33 25.4 -0.8**
CPCT *e*pP pP 15 33 29.5 -2.9
BLA Blacksburg 88.35 32⇑*i*P P **15 33 25.6 -0.9**
comp=Z,168nm,1.4s,mb6.1
BLA *e*pP pP 15 33 30.3 -2.3
BLA LR LR
comp=Z,1µm,20.0s,MS5.3
PVRL Vila Real 88.41 338 *e*P P **15 33 25.8 -1.0**
comp=Z,144nm,1.2s,mb6.1
CBN Corbin 88.55 30⇑*e*P P **15 33 26.5 -1.0**
CBN *e*pP pP 15 33 32.1 -1.4
CBN LR LR
comp=Z,2µm,21.0s,MS5.4
PPT Papeete 88.68 117 *e*SS SS 15 50 10.0 +4.7
comp=Z,474nm,29.0s
PPT *e*LQ 15 57 38.6
comp=Z,2µm,27.2s
PPT *e*LR LR 16 01 04.1
comp=Z,1µm,22.8s,baz=320
PPT Papeete 88.68 117 LR LR 16 11 40.3
comp=Z,1µm,18.1s,MS5.3,baz=319,slow=35
SET Setif 88.76 326 P P **15 33 29.0 +0.5**
MYNC Murphy 88.78 36 PFAKE 15 33 40.0 +11
MYNC LR LR
comp=Z,2µm,21.0s,MS5.5
ESDC Sonseca Array 88.84 334 P P **15 33 28.8 -0.1**
comp=Z,25nm,0.9s,mb5.5,baz=18,slow=3.7,SNR=70
ESDC LR LR 16 17 47.2
comp=Z,2µm,18.5s,MS5.6,baz=30,slow=39
ESDC Sonseca Array 88.84 334 P P **15 33 28.5 -0.4**
comp=Z,36nm,0.8s,mb5.8
ESLA Sonseca Array 88.84 334⇑*i*P P **15 33 28.5 -0.3**
comp=Z,11nm,1.0s,mb5.1
ESLA LR LR
comp=Z,12µm,19.0s,MS6.3
CKHR Kef el Ahmar 88.88 326 P P **15 33 29.0 0.0**
PVIS Viseu 88.98 337 *e*P P **15 33 28.9 -0.6**
comp=Z,124nm,1.4s,mb6.0
PVIS Viseu 88.98 337 *e*P P **15 33 28.8 -0.7**
ETOB Tobarra 89.03 332 P P **15 33 30.4 +0.6**
comp=Z,296nm,2.5s,mb6.2
CMER Merouana 89.08 325 P P **15 33 30.0 0.0**
MTE Manteigas 89.18 337 *i*P P **15 33 29.1 -1.4**
comp=Z,142nm,1.5s,mb6.1
LRAL Lakeview Retre 89.32 39⇑*e*P P **15 33 29.9 -1.2**
comp=Z,65nm,1.2s,mb5.8
LRAL LR LR
comp=Z,1µm,19.0s,MS5.3
EVIA Vianos 89.34 333 P P **15 33 31.7 +0.5**
EVIA pmax pmax
comp=Z,37nm,0.8s,mb5.8
EVIA Vianos 89.34 333 P P **15 33 31.7 +0.5**
comp=Z,37nm,0.8s,mb5.8
EMUR La Murta 89.66 332 P P **15 33 32.0 -0.7**
comp=Z,93nm,1.2s,mb6.0
PCBR Castelo Branco 89.69 337 *e*P P **15 33 31.9 -0.9**
comp=Z,76nm,1.4s,mb5.8
PCBR Castelo Branco 89.69 337 *e*P P **15 33 31.8 -1.0**
EHUE Huescar 90.12 333 P P **15 33 34.5 -0.4**
EHUE pmax pmax
comp=Z,25nm,1.1s,mb5.5
EHUE Huescar 90.12 333 P P **15 33 34.5 -0.4**
comp=Z,25nm,1.1s,mb5.5
URZ Urewera 90.19 153 P P **15 33 34.0 -1.2**
comp=Z,50nm,0.9s,mb5.8,baz=360,slow=3.7,SNR=19
EQES Quesada 90.28 333 P P **15 33 35.2 -0.4**
comp=Z,185nm,1.7s,mb6.1
EADA Adamuz 90.41 334 P P **15 33 35.9 -0.3**
comp=Z,182nm,1.3s,mb6.2
EBAD Badajoz 90.57 336 P P **15 33 36.0 -1.0**
comp=Z,74nm,1.0s,mb6.0
PESTR Estremoz 90.63 337 *i*P P **15 33 36.2 -1.0**
comp=Z,90nm,1.5s,mb5.9
ELUQ Luque 90.88 334 P P **15 33 38.4 0.0**
ELUQ pmax pmax
comp=Z,44nm,0.8s,mb5.8
ELUQ Luque 90.88 334 P P **15 33 38.4 0.0**
comp=Z,44nm,0.8s,mb5.8
ECOG Cogollos-Vega 90.92 333 P P **15 33 38.2 -0.4**
ECOG pmax pmax
comp=Z,16nm,1.0s,mb5.3
ECOG Cogollos-Vega 90.92 333 P P **15 33 38.2 -0.4**
comp=Z,16nm,1.0s,mb5.3
EBER Berja 91.06 332 P P **15 33 36.9 -2.3**
comp=Z,64nm,1.2s,mb5.8
ELOJ Sierra Loja 91.22 333 P P **15 33 39.0 -1.0**
ELOJ pmax pmax
comp=Z,27nm,0.9s,mb5.6
ELOJ Sierra Loja 91.22 333 P P **15 33 39.0 -1.0**
comp=Z,27nm,0.9s,mb5.6
ERON Agron 91.23 333 P P **15 33 38.5 -1.5**
comp=Z,14nm,0.7s,mb5.4
EGUA Guajares 91.33 333 P P **15 33 39.5 -1.0**
comp=Z,1.6nm,0.8s
EMIN Mina Concepcio 91.40 336 P P **15 33 40.2 -0.6**
comp=Z,263nm,1.6s,mb6.3
PBEJ Beja 91.49 337 *e*P P **15 33 40.7 -0.5**
comp=Z,89nm,1.8s,mb5.8
PBEJ Beja 91.49 337 *e*P P **15 33 40.9 -0.3**
EGRO El Granado 91.84 336 P P **15 33 42.4 -0.5**
comp=Z,58nm,1.1s,mb5.8
EMIJ Mijas 91.95 334 P P **15 33 41.8 -1.6**
comp=Z,26nm,0.8s,mb5.6
EALB Alboran 91.98 332 P P **15 33 41.3 -2.2**
comp=Z,82nm,1.4s,mb5.9
ESPR Espera 92.00 335 P P **15 33 43.3 -0.2**
comp=Z,47nm,0.6s,mb6.0
PTEO Sao Teotonio 92.17 337 *e*P P **15 33 44.0 -0.4**
comp=Z,120nm,1.7s,mb6.0
EJIF Jimena Fronter 92.27 334 P P **15 33 44.7 -0.1**
EJIF pmax pmax
comp=Z,73nm,1.4s,mb5.8
EJIF Jimena Fronter 92.27 334 P P **15 33 44.7 -0.1**
comp=Z,73nm,1.4s,mb5.8
SNZO South Karori 92.28 156 PFAKE 15 33 50.0 +5.1
SNZO LR LR
comp=Z,756nm,20.0s,MS5.1
TBI Tubuai 93.16 121 *e*SS SS 15 51 13.3 +3.4
comp=Z,247nm,27.0s
TBI *e*LQ 15 59 15.3
comp=Z,906nm,31.5s
TBI *e*LR LR 16 02 54.3
comp=Z,923nm,26.2s,baz=317
RPZ Rata Peaks 93.57 159 P P **15 33 49.8 -1.0**
comp=Z,41nm,0.8s,mb5.9,baz=181,slow=12,SNR=16
MDT Midelt 95.36 332 P P **15 33 58.0 -1.1**
comp=Z,6.2nm,0.9s,mb5.0,baz=19,slow=7.3,SNR=5.4
MDT PP PP 15 37 48.1 -1.3
comp=Z,18nm,1.1s,baz=39,slow=12,SNR=10
DWPF Disney 95.97 38 PFAKE 15 34 10.0 +8.2
DWPF LR LR
comp=Z,1µm,21.0s,MS5.3
BBSR BB Station 97.82 22 PFAKE 15 34 20.0 +10
BBSR LR LR
comp=Z,993nm,21.0s,MS5.3
KMBO Kilima Mbogo 100.83 280 P Pdif 15 34 24.1 +0.5
comp=Z,4.7nm,0.9s,baz=19,slow=6.6,SNR=7.1
KMBO PP PP 15 38 30.6 -0.8
comp=Z,6.3nm,1.1s,baz=41,slow=9.9,SNR=5.1
KMBO PKKP PKKPbc 15 50 37.2 +1.1
comp=Z,0.7nm,0.3s,baz=216,slow=20,SNR=4.0
KMBO Kilima Mbogo 100.83 280 *e*P Pdif 15 34 20.5 -3.1
KMBO 15 38 30.6
KMBO pmax pmax
comp=Z,23nm,1.4s
KMBO MLR MLR
comp=Z,2µm,19.0s
KMBO Kilima Mbogo 100.83 280 *e*Pdif Pdif 15 34 20.5 -3.1
comp=Z,23nm,1.4s
KMBO PP PP 15 38 30.6 -0.8
KMBO PKKP PKKPbc 15 50 37.2 +1.1
KMBO LR LR
comp=Z,2µm,19.0s,MS5.5
RKT Rikitea 101.96 111 *e*LQ 16 03 18.2
comp=Z,826nm,37.0s
RKT Rikitea 101.96 111 *e*PS PS 15 47 45.5 +0.5
comp=Z,297nm,28.5s
RKT Rikitea 101.96 111 *e*SS SS 15 53 19.2 +5.2
comp=Z,567nm,28.5s
RKT *e*LR LR 16 06 43.5
comp=Z,706nm,36.8s,baz=317
CFTV Fuerteventura 102.23 338 P Pdif 15 34 29.0 -0.8
comp=Z,10nm,0.8s
EBAJ Bajamar 102.65 340 P Pdif 15 34 31.5 -0.2
OPO Ambohidratompo 106.41 260 PP PP 15 39 11.9 -1.1
comp=Z,6.0nm,1.0s,baz=72,slow=6.1,SNR=3.6
PTCN Pitcairn Islan 106.49 109 PFAKE 15 39 10.0 +10

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTCN				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
JTS	**JuntasAbangare**	**109.63**	**50**	PFAKE		15 39 20.0	+14
JTS				LR	LR		
	comp=Z,587nm,21.0s,MS5.1						
TORD	**Torodi Ar. Bea**	**110.61**	**318**	Pdiff	Pdif	15 35 08.5	+1.4
	comp=Z,1.9nm,1.2s,baz=11,slow=3.0,SNR=4.1						
TORD				PKiKP	PKiKP	15 39 06.0	-1.3
	comp=Z,2.5nm,0.8s,baz=18,slow=1.1,SNR=8.2						
TORD				PP	PP	15 39 40.4	-3.3
	comp=Z,25nm,1.1s,baz=20,slow=6.5,SNR=20						
TORD				PKKPbc	PKKPbc	15 50 03.4	-2.8
	comp=Z,3.5nm,1.0s,baz=226,slow=2.6,SNR=8.7						
TORD				PKKPab	PKKPab	15 50 16.3	-0.6
	comp=Z,9.5nm,1.0s,baz=242,slow=3.1,SNR=15						
TORD				PKKP	PKKPbc	15 50 22.3	+16
	comp=Z,7.1nm,1.1s,baz=241,slow=3.9,SNR=6.8						
TORD	**Torodi Ar. Bea**	**110.61**	**318**	Pdif	Pdif	15 35 08.5	+1.4
TORD				PKPdf	PKiKP	15 39 06.0	-1.3
TORD				PP	PP	15 39 40.4	-3.2
TORD				PKKPbc	PKKPbc	15 50 03.4	-2.8
TORD				PKKPab	PKKPab	15 50 16.3	-0.6
TORD				PKKP	PKKPbc	15 50 22.3	+16
SJG	**San Juan**	**110.81**	**29**	PP	PP	15 39 42.8	-2.2
	comp=Z,12nm,0.3s,baz=358,slow=17,SNR=6.3						
SJG	**San Juan**	**110.81**	**29**	PFAKE		15 39 20.0	+12
SJG				LR	LR		
	comp=Z,912nm,19.0s,MS5.4						
CASY	**Casey**	**115.09**	**193**	PFAKE		15 39 20.0	+4.1
CASY				LR	LR		
	comp=Z,342nm,21.0s,MS4.9						
PAYG	**Puerto Ayora**	**115.57**	**61**	PFAKE		15 39 30.0	+13
PAYG				LR	LR		
	comp=Z,270nm,20.0s,MS4.8						
LSZ	**Lusaka**	**117.18**	**276**	PFAKE		15 39 30.0	+10
LSZ				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
SDV	**Santo Domingo**	**117.62**	**37**	PFAKE		15 39 30.0	+9.2
SDV				LR	LR		
	comp=Z,443nm,20.0s,MS5.1						
PCRV	**Puerto La Cruz**	**118.71**	**30**	PP	PP	15 40 38.4	-2.4
	comp=Z,14nm,1.0s,baz=0.1,slow=8.6,SNR=3.4						
MIR	**Mirnyy**	**118.82**	**200**	*e*PKIKP	PKPdf	15 39 22.0	-1.1
MIR				pmax	pmax		
	comp=Z,110nm,1.2s						
DBIC	**Dimbokro**	**119.27**	**321**	PKP	PKPdf	15 39 22.5	-1.5
	comp=Z,16nm,0.9s,baz=66,slow=3.6,SNR=7.0						
DBIC				PP	PP	15 40 42.4	-2.3
	comp=Z,20nm,1.0s,baz=7.7,slow=11,SNR=5.8						
DBIC				PKKPbc	PKKPbc	15 49 35.9	-0.5
	comp=Z,5.7nm,0.8s,baz=194,slow=8.6,SNR=3.4						
DBIC	**Dimbokro**	**119.27**	**321**	PKP	PKPdf	15 39 22.5	-1.5
DBIC				PP	PP	15 40 42.4	-2.3
DBIC				PKKPbc	PKKPbc	15 49 35.9	-0.5
DBIC				LR	LR		
	comp=Z,952nm,20.0s,MS5.4						
ROSC	**El Rosal**	**119.58**	**43**	PKP	PKPdf	15 39 24.0	-0.6
	comp=Z,7.0nm,0.6s,baz=280,slow=22,SNR=4.5						
LIC	**Lamto**	**119.75**	**321**	*e*PKIKP	PKPdf	15 39 20.3	-4.6
	comp=Z,84nm,1.3s						
LIC				*e*R			
	comp=Z,514nm,22.8s						
LIC	**Lamto**	**119.75**	**321**	*e*PKPdf	PKPdf	15 39 20.3	-4.6
LIC				LR	LR		
	comp=Z,260nm,22.8s,MS4.8						
MATP	**Matopo**	**120.51**	**272**	PKP	PKPdf	15 39 25.8	-0.5
	comp=Z,21nm,1.2s,baz=21,slow=1.9,SNR=13						
MATP				PP	PP	15 40 47.6	-5.5
	comp=Z,9.7nm,1.1s,baz=28,slow=5.5,SNR=5.5						
MATP				PKKPab	PKKPab	15 49 32.5	-0.8
	comp=Z,2.9nm,0.8s,baz=255,slow=3.8,SNR=4.3						
MATP	**Matopo**	**120.51**	**272**	PKP	PKPdf	15 39 25.8	-0.5
MATP				PP	PP	15 40 47.6	-5.5
MATP				PKKPab	PKKPab	15 49 32.5	-0.8
VNDA	**Vanda**	**124.47**	**175**	PKP	PKPdf	15 39 31.3	-2.6
	comp=Z,9.9nm,0.9s,baz=314,slow=3.9,SNR=36						
VNDA				PP	PP	15 41 20.1	+0.2
	comp=Z,3.5nm,1.1s,baz=4.0,slow=8.4,SNR=3.3						
VNDA	**Vanda**	**124.47**	**175**⇑	*e*PKPdf	PKPdf	15 39 31.1	-2.8
VNDA				*e*pPKPdf	pPKPdf	15 39 36.1	-4.1
VNDA				*e*PP	PP	15 41 17.8	-2.2
VNDA				LR	LR		
	comp=Z,344nm,19.0s,MS5.0						
SBA	**Scott Base**	**125.12**	**174**⇑	*e*PKIKP	PKPdf	15 39 33.1	-2.1
LBTB	**Lobatse**	**125.55**	**270**	PKP	PKPdf	15 39 35.9	-0.1
	comp=Z,29nm,1.2s,baz=85,slow=2.4,SNR=12						
LBTB	**Lobatse**	**125.55**	**270**⇑	*e*PKPdf	PKPdf	15 39 35.3	-0.7
LBTB				*e*pPKPdf	pPKPdf	15 39 41.4	-0.8
LBTB				LR	LR		
	comp=Z,792nm,20.0s,MS5.4						
TSUM	**Tsumeb**	**127.14**	**282**	PKP	PKPdf	15 39 39.2	+0.2
	comp=Z,18nm,1.1s,baz=71,slow=2.7,SNR=13						
TSUM	**Tsumeb**	**127.14**	**282**⇑	*e*PKPdf	PKPdf	15 39 38.3	-0.7
TSUM				LR	LR		
	comp=Z,898nm,20.0s,MS5.5						
BOSA	**Boshof**	**128.06**	**267**	PKP	PKPdf	15 39 40.5	-0.2
	comp=Z,11nm,1.2s,baz=27,slow=2.4,SNR=4.4						
BOSA	**Boshof**	**128.06**	**267**	PKP	PKPdf	15 39 40.5	-0.2
BOSA				LR	LR		
	comp=Z,818nm,20.0s,MS5.4						
MAW	**Mawson**	**128.21**	**209**	*e*P	PKPdf	15 39 39.3	-1.8
	comp=Z,10nm,1.1s						
MAW				*e*pP		15 39 45.6	
MAW	**Mawson**	**128.21**	**209**	PKP	PKPdf	15 39 39.3	-1.7
	comp=Z,12nm,1.1s,baz=185,slow=2.4,SNR=3.5						
NNA	**Nana**	**132.53**	**56**	PFAKE		15 40 00.0	+11
NNA				LR	LR		
	comp=Z,329nm,19.0s,MS5.1						
SUR	**Sutherland**	**133.38**	**266**	PFAKE		15 40 00.0	+9.1
SUR				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
SYO	**Syowa Base**	**136.75**	**211**⇑	*e*P	PKPdf	15 39 49.8	-7.4
SAML	**Samuel**	**136.81**	**38**	PFAKE		15 40 10.0	+13
SAML				LR	LR		
	comp=Z,638nm,19.0s,MS5.4						
LPAZ	**La Paz**	**140.84**	**49**	PKhKP		15 39 59.4	
	comp=Z,3.2nm,0.9s,baz=355,slow=9.9,SNR=4.4						
LPAZ				PKP	PKPdf	15 40 05.3	+0.7
	comp=Z,13nm,1.0s,baz=28,slow=7.0,SNR=21						
LPAZ	**La Paz**	**140.84**	**49**	*i* PKIKP	PKPdf	15 39 59.4	-5.3
LPAZ						15 40 05.4	
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPAZ	**La Paz**	**140.84**	**49**	*e*PKPpre		15 39 57.0	
LPAZ				*e*PKPdf	PKPdf	15 40 04.4	-0.3
LPAZ				PKP	PKPdf	15 40 05.3	+0.7
LPAZ				LR	LR		
	comp=Z,479nm,21.0s,MS5.2						
SIV	**San Ignacio**	**144.01**	**40**	PKP	PKPdf	15 40 07.5	-2.8
	comp=Z,31nm,1.0s,baz=332,slow=2.6,SNR=49						
SIV				PP	PP	15 43 22.1	-2.0
	comp=Z,10nm,1.1s,baz=350,slow=7.6,SNR=5.6						
CEN1	**Los Morros**	**145.37**	**59**⇓	*i*P	PKPbc	15 40 13.2	+0.7
LVC	**Limon Verde**	**145.52**	**57**	PKPbc	PKPbc	15 40 13.6	+0.6
LVC	**Limon Verde**	**145.52**	**57**	PFAKE		15 40 20.0	+7.1
LVC				LR	LR		
	comp=Z,474nm,20.0s,MS5.3						
NVL	**N'lazarevskaya**	**146.13**	**207***c*	*i*PKP2	PKPab	15 40 12.2	-3.3
NVL				pmax	pmax		
	comp=Z,352nm,1.2s						
NVL				pmax	pmax		
	comp=N,78nm,1.0s						
NVL				pmax	pmax		
	comp=E,35nm,0.9s						
MAIT	**Maitri**	**146.16**	**207**	*e*PKP	PKPdf	15 40 13.0	-1.0
BDFB	**Brasilia**	**148.05**	**18**	PKPbc	PKPbc	15 40 17.3	-3.0
	comp=E,53nm,1.0s,baz=344,slow=2.1,SNR=14						
BDFB	**Brasilia**	**148.05**	**18**	PKPbc	PKPbc	15 40 17.3	-3.0
BDFB				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
TLL	**Tololo Astrono**	**149.87**	**69**	*e*P	PKPdf	15 40 19.3	-0.8
TLL	**Tololo Astrono**	**149.87**	**69**⇓	*e*P	PKPdf	15 40 22.6	+2.5
SNAA	**Sanae**	**149.89**	**201**⇑	*i*PKPdf	PKPdf	15 40 17.0	-3.1
SNAA				*e*		15 40 22.3	
SNAA				*e*		15 40 23.2	
SNAA				*e*		15 40 28.7	
SNAA				*e*		15 40 31.5	
SNAA				*e*		15 40 32.6	
SNAA				*e*		15 40 33.7	
SNAA				*e*		15 40 36.2	
SNAA				*e*		15 40 39.2	
SNAA				*e*		15 40 42.7	
SNAA				*e*		15 42 41.0	
SNAA				*e*		15 42 46.1	
SNAA				*e*		15 43 47.4	
SNAA				*e*		15 43 52.5	
SNAA				*e*		15 43 57.3	
SNAA				*e*		15 44 18.7	
SNAA	**Sanae**	**149.89**	**201**	*e*PKPdf	PKPdf	15 40 15.3	-4.8
SNAA				*e*PKPbc	PKPbc	15 40 22.2	-2.8
VNA1	**Neumayer--Stat**	**151.90**	**201**⇑	*i*PKPdf	PKPdf	15 40 20.6	-2.6
VNA1				*e*		15 40 27.9	
VNA1				*e*		15 40 31.5	
VNA1				*e*		15 40 33.9	
VNA1				*e*		15 40 36.6	
VNA1				*e*		15 40 37.7	
VNA1				*e*		15 40 42.3	
VNA1				*e*		15 40 47.2	
VNA1				*e*		15 40 50.8	
VNA1				*e*		15 42 52.8	
VNA1				*e*		15 44 08.8	
CPUP	**Villa Florida**	**154.68**	**44**	PKP	PKPdf	15 40 26.8	-0.5
	comp=Z,14nm,1.0s,baz=1.1,slow=2.4,SNR=14						
CPUP				PKPbc	PKPbc	15 40 33.0	-2.7
	comp=Z,18nm,1.1s,baz=346,slow=1.5,SNR=9.1						
CPUP				PKPab	PKPab	15 40 49.4	-1.2
	comp=Z,19nm,0.9s,baz=147,slow=1.8,SNR=3.2						
CPUP	**Villa Florida**	**154.68**	**44**	PKIKP	PKPdf	15 40 26.8	-0.4
CPUP						15 40 33.1	
CPUP						15 40 49.4	
CPUP				pmax	pmax		
	comp=Z,14nm,1.0s						
CPUP				pmax	pmax		
	comp=Z,18nm,1.1s						
CPUP				pmax	pmax		
	comp=Z,19nm,0.9s						
CPUP	**Villa Florida**	**154.68**	**44**	*e*PKPdf	PKPdf	15 40 26.1	-1.1
CPUP				*e*PP	PP	15 44 19.2	-6.8
PLCA	**Paso Flores**	**155.95**	**88**	PKPdf	PKPdf	15 40 26.1	-2.8
PLCA				PKPab	PKPab	15 40 55.8	-0.2
PLCA	**Paso Flores**	**155.95**	**88**	PKP	PKPdf	15 40 26.2	-2.8
	comp=Z,14nm,1.1s,baz=345,slow=2.8,SNR=13						
PLCA				PKPab	PKPab	15 40 55.9	-0.2
	comp=Z,75nm,1.2s,baz=287,slow=4.6,SNR=17						
PLCA				PP	PP	15 44 32.8	-0.3
	comp=Z,16nm,1.3s,baz=287,slow=7.3,SNR=4.6						
PLCA	**Paso Flores**	**155.95**	**88**	*e*PKPdf	PKPdf	15 40 26.1	-2.9
PLCA				*e*PP	PP	15 44 31.9	-1.2

*JMA **17** 15:25:31.6±0.4, 4667N×14179E, h31km, M4.1*

SKHL 17 15:25:31.3±0.4**, 4662N×14183E, h10km, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.72**	**62**	*e*Pg	Pg	15 25 46.0	+0.8
YSS				*i* Sg	Sg	15 25 56.2	+1.6
YSS				A		15 25 57.9	
	2µm,0.3s						
YSS				A		15 25 57.9	
	2µm,0.3s						
YSS				A		15 25 58.3	
	4µm,0.4s						
YSS				A		15 25 58.3	
	3µm,0.4s						
JWK2	**Keihoku**	**1.30**	**178**	P	Pn	15 25 55.1	-0.5
JWK2				*e*S	Sb	15 26 12.2	-0.5
JRR	**Rishiri**	**1.53**	**194**	P	Pn	15 25 58.5	-0.1
JSE	**Soyaes**	**1.74**	**162**	P	Pn	15 26 01.2	-0.4
JSE				*e*S	Sn	15 26 22.5	-1.4

IGQ 17 15:32:02.1, 265S×7837W, h12km±4km, Mb4.0, Ms3.8, 1C-8D, Error ellipse: s-maj=12.0km s-min=3.5km az=175.1, Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARRY	**Arrayan**	**1.14**	**356**	P	Pb	15 32 22.8	-0.9
ARRY				S	Sb	15 32 39.2	+0.7
PATA	**Patacocha**	**1.14**	**357**	P	Pb	15 32 23.4	-0.3
PATA				S	Sb	15 32 39.2	+0.7
RETU	**Refugio**	**1.19**	**356**	P	Pn	15 32 24.7	+0.1
RETU				S	Sb	15 32 40.8	+0.7
ULBA	**Ulba**	**1.19**	**358**	⇓P	Pn	15 32 24.3	-0.3
ULBA				S	Sb	15 32 40.8	+0.7
JUIV	**Juive**	**1.22**	**356**	P	Pn	15 32 25.3	+0.3
JUIV				S	Sb	15 32 41.6	+0.7
RUN5	**Runtun**	**1.23**	**357**	⇓P	Pn	15 32 25.4	+0.3
RUN5				S	Sb	15 32 42.7	+1.6
PISA	**Pisayambo**	**1.58**	**359**	P	Pn	15 32 31.2	+1.2
PISA				S	Sn	15 32 53.0	+2.7
TAMB	**Tambo**	**1.94**	**0**	P	Pn	15 32 36.9	+2.0
TAMB				S	Sn	15 33 02.8	+3.5
CAMI	**Rancho Maria**	**1.96**	**356**	⇓P	Pn	15 32 38.5	+3.3
CAMI				S	Sn	15 33 06.3	+6.5
VC1	**Cotopaxi 1**	**2.00**	**359**	⇑P	Pn	15 32 38.4	+2.7
VC1				S	Sn	15 33 05.1	+4.6
NAS1	**Nasa**	**2.01**	**357**	⇓P	Pn	15 32 39.4	+3.6
NAS1				S	Sn	15 33 08.1	+7.3
ANTI	**Antisana**	**2.20**	**5**	⇓P	Pn	15 32 40.1	+1.7
ANTI				S	Sn	15 33 08.2	+2.7
GGP	**Refugio Guagua**	**2.47**	**355**	P	Pn	15 32 47.0	+4.8
TERV	**Terraza Guagua**	**2.47**	**355**	P	Pn	15 32 47.2	+5.0
TERV				S	Sn	15 33 22.0	+10
PINO	**Pino**	**2.49**	**355**	P	Pn	15 32 46.7	+4.3
YANA	**Yana**	**2.52**	**355**	P	Pn	15 32 48.4	+5.5
YANA				S	Sn	15 33 23.1	+10
LAV3	**Lava3-Reventad**	**2.64**	**16**	P	Pn	15 32 45.7	+1.2
LAV3				S	Sn	15 33 20.1	+3.7
CONE	**Cono NE Rev Vo**	**2.66**	**16**	⇓P	Pn	15 32 46.9	+2.1
CONE				S	Sn	15 33 21.8	+4.7
CAYR	**Refugio Cayamb**	**2.67**	**8**	⇓P	Pn	15 32 48.3	+3.4
CAYR				S	Sn	15 33 22.8	+5.6
CAYA	**Cayambe**	**2.73**	**8**	⇓P	Pn	15 32 49.0	+3.3
CAYA				S	Sn	15 33 24.6	+5.9
MAG1	**Magdalena**	**2.92**	**331**	P	Pn	15 32 56.0	+7.7

WEL 17 15:36:47.1±0.2**, 3866S×17586E, h138km±1km, ML3.7**/18**, 3C, Error ellipse: s-maj=1.3km s-min=1.3km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WTVZ	**West Tongariro**	**0.50**	**205**	PN	Pn	15 37 07.3	+0.2
WTVZ				SN	Sn	15 37 22.3	+0.1
TWVZ	**Taurewa**	**0.52**	**219**	PN	Pn	15 37 07.3	+0.1
NGZ	**Ngauruhoe**	**0.55**	**201**	PN	Pn	15 37 07.7	+0.4
NGZ				SN	Sn	15 37 23.3	+0.5
WPVZ	**Whakapapa**	**0.59**	**204**	PN	Pn	15 37 07.9	+0.2
WPVZ				SN	Sn	15 37 23.6	+0.3
TUVZ	**Tukino**	**0.62**	**195**	⇑PN	Pn	15 37 08.2	+0.4
TUVZ				SN	Sn	15 37 23.8	+0.2
FWVZ	**Far West T-bar**	**0.64**	**202**	PN	Pn	15 37 08.0	+0.1
FWVZ				SN	Sn	15 37 24.0	+0.3
WNVZ	**Wahianoa**	**0.69**	**197**	PN	Pn	15 37 08.6	+0.3
WNVZ				SN	Sn	15 37 24.5	+0.1
BKZ	**Black Stump Fm**	**0.70**	**136**	PN	Pn	15 37 08.7	+0.4
BKZ				SN	Sn	15 37 24.3	-0.2
PKVZ	**Pokaka**	**0.74**	**212**	PN	Pn	15 37 08.5	-0.1
PKVZ				SN	Sn	15 37 25.0	0.0
MOVZ	**Moawhango**	**0.75**	**186**	⇑PN	Pn	15 37 08.6	-0.1
MOVZ				SN	Sn	15 37 23.9	-1.2
HIZ	**Hauiti**	**0.80**	**280**	PN	Pn	15 37 08.8	-0.3
HIZ				SN	Sn	15 37 25.8	0.0
VRZ	**Vera Road**	**0.97**	**241**	PN	Pn	15 37 10.2	-0.3
VRZ				SN	Sn	15 37 28.4	+0.1
URZ	**Urewera**	**1.06**	**68**	PN	Pn	15 37 11.2	-0.1
URZ				SN	Sn	15 37 29.1	-0.6
WAZ	**Wanganui**	**1.28**	**212**	PN	Pn	15 37 13.1	-0.4
MWZ	**Matawai**	**1.35**	**76**	PN	Pn	15 37 14.6	+0.4
MWZ				SN	Sn	15 37 34.1	-0.7
TSZ	**Takapari Road**	**1.40**	**177**	PN	Pn	15 37 14.4	-0.2
TSZ				SN	Sn	15 37 33.8	-1.9
PXZ	**Pawanui**	**1.57**	**151**	PN	Pn	15 37 16.5	-0.1
PXZ				SN	Sn	15 37 38.2	-0.9
MRZ	**Mangatainoka R**	**2.01**	**186**	⇑PN	Pn	15 37 20.2	-1.4
BFZ	**Birch Farm**	**2.04**	**172**	PN	Pn	15 37 20.9	-1.0
TIWZ	**Tintock**	**2.11**	**179**	PN	Pn	15 37 21.6	-1.3
KIW	**Kapiti Island**	**2.31**	**198**	PN	Pn	15 37 23.2	-2.1
MTW	**Mount Morrison**	**2.51**	**186**	PN	Pn	15 37 25.5	-2.2
CAW	**Cannon Point**	**2.52**	**194**	PN	Pn	15 37 25.8	-2.1

*JMA **17** 15:39:53.1±0.3, 4664N×14179E, h21km, M3.7*

SKHL 17 15:39:52.6±0.1**, 4661N×14182E, h10km, mb3.7**/1**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.73**	**61**	*e*Pg	Pg	15 40 07.0	+0.3
YSS				AMB	AMB	15 40 08.4	
	90nm,0.6s						
YSS				*e*Sg	Sg	15 40 17.0	+0.8
YSS				A		15 40 19.0	
	1µm,0.8s						
JWK2	**Keihoku**	**1.29**	**178**	P	Pn	15 40 16.8	+0.1
JWK2				*e*S	Sb	15 40 34.1	+0.4
JRR	**Rishiri**	**1.52**	**194**	P	Pn	15 40 19.6	-0.2
JSE	**Soyaes**	**1.74**	**162**	P	Pn	15 40 22.9	+0.1
JSE				*e*S	Sn	15 40 44.3	-0.7
ASAJ	**Asahikawa**	**2.55**	**167**	P	Pn	15 40 35.1	+1.1

NEIC 17 16:40:58.3±0.5**, 4422N×10617W, h5km, MN3.1, Error ellipse: s-maj=6.8km s-min=6.2km az=60.0, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.54**	**93**	*e*Pn	Pn	16 41 26.4	0.0
RSSD				*e*Sn	Sn	16 41 47.0	+0.3
LAO	**LASA Array**	**2.47**	**359**	*e*Pn	Pn	16 41 40.1	+0.9
RWWY	**Rawlins**	**2.64**	**197**	*e*Pn	Pn	16 41 42.2	+0.7
BW06	**Boulder Array**	**2.86**	**241**	*e*Pn	Pn	16 41 44.6	0.0
GCMT	**Greycliff**	**2.94**	**304**	*e*Pn	Pn	16 41 45.4	-0.2
PHWY	**Pilot Hill**	**2.96**	**170**	*e*Pn	Pn	16 41 46.5	+0.6
LOHW	**Long Hollow**	**3.26**	**261**	*e*Pn	Pn	16 41 48.4	-1.7
FLWY	**Flagg Ranch**	**3.26**	**269**	*e*Pn	Pn	16 41 51.7	+1.6
YNR	**Norris Junctio**	**3.27**	**280**	*e*Pn	Pn	16 41 50.8	+0.6
MOOW	**Moose Ponds**	**3.33**	**264**	*e*Pn	Pn	16 41 52.9	+1.9
YFT	**Old Faithful**	**3.36**	**276**	*e*Pn	Pn	16 41 53.2	+1.8
IMW	**Indian Meadow**	**3.45**	**266**	*e*Pn	Pn	16 41 57.7	+5.0
REDW	**Red Top Meadow**	**3.50**	**257**	*e*Pn	Pn	16 41 55.7	+2.4
TPAW	**Teton Pass**	**3.53**	**260**	*e*Pn	Pn	16 41 57.2	+3.4
QLMT	**Earthquake Lak**	**3.81**	**281**	*e*Pn	Pn	16 41 59.6	+1.9
RRI2	**Red Ridge**	**3.83**	**259**	*e*Pn	Pn	16 41 57.2	-0.7
AHID	**Auburn Hatcher**	**3.87**	**250**	*e*Pn	Pn	16 41 59.3	+0.9
ISCO	**Idaho Springs**	**4.43**	**174**	*e*Pn	Pn	16 42 08.0	+1.8
EGMT	**Eagleton**	**4.55**	**328**	*e*Pn	Pn	16 42 07.9	+0.1
HRY	**Holter Researc**	**4.70**	**304**	*e*Pn	Pn	16 42 08.9	-0.9
HRY				*e*Sg	Sg	16 43 18.4	-11
DLMT	**Dillon**	**4.71**	**286**	*e*Pn	Pn	16 42 13.9	+3.8
LRM	**Limekiln Ridge**	**4.73**	**292**	*e*Pn	Pn	16 42 09.6	-0.7
LRM				*e*Sn	Sn	16 43 04.6	-0.9
HWUT	**Hardware Ranch**	**4.74**	**238**	*e*Pn	Pn	16 42 09.9	-0.5
HWUT				*e*Sg	Sg	16 43 16.4	-14
MCMT	**McKenzie Canyo**	**4.81**	**280**	*e*Pn	Pn	16 42 20.7	+9.2
TCUT	**Toone Canyon**	**4.95**	**233**	*e*Pn	Pn	16 42 13.7	+0.4
SMCO	**Snowmass**	**5.07**	**187**	*e*Pn	Pn	16 42 18.8	+3.8
	14nm,0.5s						
HVU	**Hansel Valley**	**5.42**	**246**	*e*Pn	Pn	16 42 19.9	+0.1
SPUT	**South Promonto**	**5.46**	**240**	*e*Pn	Pn	16 42 20.5	+0.3
SPUT				*e*Pg	Pg	16 42 34.0	-8.9
SPUT				*e*Sg	Sg	16 43 40.0	-14
CHMT	**Chamberlain Mo**	**5.66**	**301**	*e*Pn	Pn	16 42 21.6	-1.4
HLID	**Hailey**	**5.99**	**267**	*e*Pn	Pn	16 42 30.4	+2.8
BGU	**Big Grassy Mou**	**6.04**	**239**	*e*Pn	Pn	16 42 25.5	-2.7
MSO	**Missoula**	**6.05**	**298**	*e*Pn	Pn	16 42 19.0	-9.4
	2.4nm,0.5s						
SRU	**San Rafael**	**6.05**	**214**	*e*Pn	Pn	16 42 28.5	+0.1
	17nm,0.5s						
TMUT	**Trail Mountain**	**6.19**	**219**	*e*Pn	Pn	16 42 23.9	-6.4
PV10	**Paradox Valley**	**6.22**	**201**	*e*Pn	Pn	16 42 30.9	+0.1
PV01	**Paradox Valley**	**6.34**	**197**	*e*Pn	Pn	16 42 35.7	+3.3
BSMT	**Bassoo Peak**	**7.01**	**304**	Pn	Pn	16 42 51.2	+10
MSU	**Marysvale**	**7.27**	**220**	*e*Pn	Pn	16 42 48.5	+3.4
ARUT	**Antelope Range**	**8.45**	**223**	*e*Pn	Pn	16 43 01.2	-0.1
CCUT	**Cedar City**	**8.60**	**222**	*e*Pn	Pn	16 43 02.8	-0.6
ULM	**Lac du Bonnet**	**9.24**	**46**	*e*Pn	Pn	16 43 11.9	-0.3
ULM				*e*Sn	Sn	16 44 50.8	-5.7
EYMN	**Ely**	**10.85**	**65**	Pn	Pn	16 43 28.2	-6.1
WMOK	**Wichita Mounta**	**11.05**	**146**	*e*Pn	Pn	16 43 36.4	-0.6
	3.3nm,0.6s						
WMOK				*e*Sn	Sn	16 45 31.2	-10

*TRN **17** 16:46:49.6, 1771N×6235W, h16km, MD3.4*
*ISCJB **17** 16:46:51.8±0.8, 1785N±008×6228W±004, h42km±18km, Error ellipse: s-maj=13.8km s-min=4.8km az=47.0*
*NEIC **17** 16:46:51.4±1.5, 1779N×6231W, h15km, MD3.4(TRN), MD3.8(RSPR), Error ellipse: s-maj=22.5km s-min=8.8km az=216.0*
*RSPR **17** 16:46:53.6, 19.11N×6237W, h25km±42km*

ISC 17 16:46:52.3±0.8**, 1781N**±007×**6230W**±004**, h28km**±**5km, n19, σ0s84**/30**, 5C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPB	**Codrington**	**0.48**	**110**	*e*P	**Pb**	**16 47 02.3**	**-0.1**
CPB				*e*S	**Sb**	**16 47 09.5**	**+0.3**
STAT	**Sint Eustatius**	**0.71**	**244**	*e*P	**Pb**	**16 47 04.5**	**-1.7**
STAT				*e*S	**Sb**	**16 47 14.6**	**-1.1**
STMA	**St. Maarten, A**	**0.80**	**287**⇑	*i*P	**Pb**	**16 47 07.6**	**-0.1**
STMA				*e*S	**Sb**	**16 47 18.4**	**+0.2**
BPA	**Boggy Peak**	**0.87**	**151**	*e*P	**Pn**	**16 47 08.1**	**-0.6**
BPA	**Boggy Peak**	**0.87**	**151**	*e*P	**Pn**	**16 47 08.1**	**-0.5**
BPA				*e*S	**Sb**	**16 47 21.2**	**+1.2**
BPA	**Boggy Peak**	**0.87**	**151**	*e*P	**Pn**	**16 47 08.1**	**-0.5**
BPA				*e*S	**Sb**	**16 47 21.2**	**+1.2**
SABS	**Saba**	**0.92**	**259**	*e*P	**Pn**	**16 47 09.6**	**+0.3**
SABS				*e*S	**Sb**	**16 47 22.0**	**+0.6**
SABT	**Saba**	**0.92**	**259**	*e*P	**Pn**	**16 47 09.4**	**+0.1**
SABT				*e*S	**Sb**	**16 47 22.0**	**+0.6**
SEG	**Port Louis**	**1.59**	**151**	*e*P	**Pn**	**16 47 17.9**	**-0.7**
LZG	**Guadaloupe-1**	**1.73**	**163**	*e*P	**Pn**	**16 47 20.2**	**-0.3**
DOG	**Dongo Capester**	**1.88**	**160**	*e*P	**Pn**	**16 47 22.6**	**0.0**
PHG	**Guadaloupe-2**	**1.89**	**160**	*e*P	**Pn**	**16 47 22.7**	**0.0**
DEG	**La Desirade**	**1.90**	**141**⇓	*e*P	**Pn**	**16 47 22.7**	**-0.2**
TBVI	**Tortola**	**2.28**	**286**⇓	*e*P	**Pn**	**16 47 27.3**	**-0.7**
TBVI				*e*S	**Sn**	**16 47 53.4**	**-1.7**
CULB	**Culebra**	**2.92**	**280**⇑	*e*P	**Pn**	**16 47 37.5**	**+0.5**
CULB	**Culebra**	**2.92**	**280**	*e*S	**Sn**	**16 48 10.0**	**-1.1**
MTP	**Monte Pirata**	**3.11**	**276**⇑	*e*P	**Pn**	**16 47 40.0**	**+0.5**
MTP				*e*S	**Sn**	**16 48 17.0**	**+1.3**
CBYP	**Canovanas**	**3.41**	**278**⇑	*e*P	**Pn**	**16 47 44.4**	**+0.8**
CBYP				*e*S	**Sn**	**16 48 22.9**	**-0.2**
CPD	**Cerro la Pandu**	**3.45**	**274**⇑	*e*P	**Pn**	**16 47 44.7**	**+0.6**
CPD				*e*S	**Sn**	**16 48 26.6**	**+2.6**

*ISCJB **17** 16:48:55.4±0.5, 41.15N±002×2385E±004, h10km, Error ellipse: s-maj=4.3km s-min=3.0km az=26.0*
*ATH **17** 16:48:56.2, 41.15N×2390E, h19km±3km, MD3.1/3*
*NEIC **17** 16:48:56.2, 41.15N×2390E, h19km, MD3.1(ATH), After ATH.*
*CSEM **17** 16:48:56.4±0.1, 41.15N×2385E, h18km±1km, MD3.1, Error ellipse: s-maj=2.1km s-min=1.6km az=105.0*
*THE **17** 16:48:56.6, 41.14N×2383E, h1km, ML2.0*

ISC 17 16:48:56.1±0.5**, 4114N**±002×**2387E**±004**, h10km, n12, σ0s85**/24**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**0.21**	**358**	*e*PB	**Pg**	**16 49 01.4**	**+0.9**
NVR				*e*SB	**Sg**	**16 49 04.9**	**+1.4**
MMB	**Musomiste**	**0.46**	**347**	*e*Pg	**Pg**	**16 49 05.2**	**+0.1**
MMB				*e*Sg	**Sg**	**16 49 11.3**	**0.0**
SOH	**Sokhos**	**0.50**	**231**	*e*Pg	**Pg**	**16 49 06.0**	**+0.1**
SOH				*e*Sg	**Sg**	**16 49 13.0**	**+0.4**
KNT	**Kendrikon**	**0.73**	**272**	*e*Pg	**Pg**	**16 49 10.3**	**0.0**
	comp=Z,2.7nm,0.1s						
KNT				*e*Sg	**Sg**	**16 49 20.1**	**+0.2**
HORT	**Hortiatis**	**0.80**	**227**	*e*Pg	**Pg**	**16 49 11.2**	**-0.2**
HORT				*e*Sg	**Sg**	**16 49 22.0**	**+0.1**
OUR	**Ouranopolis**	**0.81**	**174**	*e*Pg	**Pg**	**16 49 12.3**	**+0.6**
	comp=Z,7.0nm,0.2s						
OUR				*e*Sg	**Sg**	**16 49 24.1**	**+1.9**
PLG	**Polygyros**	**0.83**	**203**	*e*PN	**Pn**	**16 49 12.2**	**-1.6**
PLG				*e*SN	**Sn**	**16 49 23.7**	**-2.4**
THE	**Thessaloniki**	**0.85**	**234**	*e*Pg	**Pg**	**16 49 11.9**	**-0.7**
THE				*e*Sg	**Sg**	**16 49 23.9**	**+0.3**
GRG	**Griva**	**1.12**	**261**	*e*Pg	**Pg**	**16 49 17.4**	**-0.3**
GRG				*e*Sg	**Sg**	**16 49 33.1**	**+0.7**
PAIG	**Paliouri**	**1.22**	**187**	*e*Pg	**Pg**	**16 49 18.8**	**-0.8**
PAIG				*e*Sg	**Sg**	**16 49 36.1**	**+0.8**
RDO	**Rodhopi**	**1.26**	**89**	*e*PN	**Pn**	**16 49 19.3**	**-0.5**
RDO				*e*SN	**Sn**	**16 49 36.7**	**-0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**1.53**	**341**	*e*Pg	**Pg**	**16 49 24.7**	**-0.9**
VTS				*e*Sg	**Sg**	**16 49 45.0**	**-0.5**

MEX 17 16:54:54.0±0.6, 1665N×10058W, h10km±999km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.49**	**37**	*i* P	Pg	16 55 02.9	-0.8
CAIG				*i* S	Sg	16 55 09.7	-0.5
ACX	**Acapulco**	**0.67**	**71**	*i* P	Pg	16 55 05.5	-1.4
ACX				*i* S	Sg	16 55 14.5	-1.2
MEIG	**Mezcala**	**1.56**	**36**	*i* P	Pn	16 55 18.9	-2.9
MEIG				*i* S	Sn	16 55 39.0	-3.2

*ISCJB **17** 17:00:35.2±0.8, 4172N±007×14298E±008, h53km±7km, mb3.5/4, Error ellipse: s-maj=14.1km s-min=7.6km az=104.4*
*JMA **17** 17:00:36.2±0.1, 4175N×14296E, h41km±2km, M3.5*
*IDC **17** 17:00:39.5±2.2, 4173N×14283E, h77km±21km, mb3.2/4, mb1 3.3/6, mb1mx3.1/21, mbtmp3.4/6, Error ellipse: s-maj=52.3km s-min=16.1km az=91.0*
ISC 17 17:00:36.5±0.8, 4176N±007×14295E±008, h47km±7km, n14, σ0^{s}85/20, mb3.5/4, 4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.30**	**32**	⇓P	**Pn**	**17 00 44.5**	**-0.8**
JEM				S	**Sn**	**17 00 50.4**	**-1.2**
JNBK	**Urakawa-nobuka**	**0.54**	**344**	⇓P	**Pn**	**17 00 47.5**	**-0.5**
JNBK				*e*S	**Sn**	**17 00 56.3**	**+0.1**
JCH	**Churui**	**0.90**	**20**	⇓P	**Pn**	**17 00 52.9**	**+0.1**
JCH				*e*S	**Sn**	**17 01 05.5**	**+0.7**
JBT2	**Biratori 2**	**1.10**	**337**	⇓P	**Pn**	**17 00 55.7**	**+0.2**
JOB	**Onbets**	**1.31**	**30**	P	**Pn**	**17 00 59.2**	**+0.8**
JFR	**Furan**	**1.42**	**349**	P	**Pn**	**17 01 00.1**	**+0.2**
JKB	**Kayabe**	**1.44**	**276**	P	**Pn**	**17 00 59.6**	**-0.5**
JKB				*e*S	**Sn**	**17 01 17.2**	**-0.6**
JOT	**Ohata**	**1.48**	**256**	P	**Pn**	**17 01 00.6**	**0.0**
JOT				*e*S	**Sn**	**17 01 19.2**	**+0.5**
ASAJ	**Asahikawa**	**2.37**	**354**	P	**Pn**	**17 01 15.2**	**+2.3**
	10nm,0.3s,baz=200,slow=12,SNR=90						
ASAJ				S	**Sn**	**17 01 45.9**	**+5.3**
	8.3nm,0.3s,baz=309,slow=23,SNR=8.2						
MJAR	**Matsushiro Arr**	**6.38**	**217**	P	**Pn**	**17 02 09.7**	**+1.7**
	0.6nm,0.3s,baz=35,slow=12,SNR=7.0						
MKAR	**Makanchi Array**	**42.78**	**298**	P	**P**	**17 08 28.9**	**-0.4**
	0.3nm,0.3s,mb3.5,baz=82,slow=9.6,SNR=4.3						
WRA	**Warramunga Arr**	**61.91**	**189**	P	**P**	**17 10 50.6**	**-0.5**
	0.2nm,0.4s,mb3.6,baz=6.6,slow=6.8,SNR=7.6						
FINES	**FINESS Array B**	**65.20**	**332**	P	**P**	**17 11 11.4**	**-1.4**
	0.9nm,0.6s,mb4.0,baz=64,slow=6.6,SNR=6.1						
ASAR	**Alice Springs**	**65.63**	**189**	P	**P**	**17 11 15.7**	**0.0**
	0.1nm,0.5s,mb3.1,baz=3.0,slow=7.8,SNR=5.7						

*IDC **17** 17:38:28.4±3.1, 300S×10091E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/18, mbtmp4.0/4, Error ellipse: s-maj=176.1km s-min=24.4km az=53.0*
*ISCJB **17** 17:38:31.8±0.7, 34S±0.1×1007E±0.1, h33km, mb4.0/5, Error ellipse: s-maj=23.3km s-min=12.6km az=95.6*
*NEIC **17** 17:38:33.0±0.8, 343S×10070E, h30km, mb4.7/2, Error ellipse: s-maj=28.2km s-min=14.9km az=49.0*
ISC 17 17:38:34.4±0.7, 34S±01×1007E±01, h35km, n12, σ1^{s}18/11, mb4.0/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**8.66**	**360**	*e*Pn	**Pn**	**17 40 38.4**	**+1.3**
DGAR	**Diego Garcia**	**28.39**	**261**	P	**P**	**17 44 26.2**	**+0.8**
WRA	**Warramunga Arr**	**36.68**	**119**	P	**P**	**17 45 36.8**	**-1.0**
	0.6nm,0.4s,mb3.8,baz=282,slow=8.0,SNR=16						
WRAB	**Tennant Creek**	**36.68**	**119**	*e*P	**P**	**17 45 36.9**	**-0.9**
	2.0nm,0.5s,mb4.2						
WB2	**Warramunga Arr**	**36.69**	**119**	*e*P	**P**	**17 45 36.4**	**-1.4**
ASPA	**Alice Springs**	**37.85**	**125**	*e*P	**P**	**17 45 48.7**	**+1.0**
ASAR	**Alice Springs**	**37.85**	**125**	P	**P**	**17 45 49.0**	**+1.3**
	1.2nm,0.5s,mb3.9,baz=302,slow=7.9,SNR=61						
ASAR				PcP	PcP	17 48 03.5	0.0
	0.4nm,0.7s,baz=313,slow=2.7,SNR=5.6						
AS31	**Alice Springs**	**37.85**	**125**	*e*P	**P**	**17 45 48.7**	**+1.0**
STKA	**Stephens Creek**	**47.68**	**131**	P	**P**	**17 47 07.7**	**+0.3**
	0.7nm,0.4s,mb4.0,baz=313,slow=8.5,SNR=6.1						
MKAR	**Makanchi Array**	**52.59**	**344**	P	**P**	**17 47 41.4**	**-3.2**
	1.1nm,0.5s,mb4.1,baz=148,slow=7.4,SNR=12						
SUR	**Sutherland**	**79.64**	**238**	*e*P	pP	17 50 48.0	-1.1
	32nm,1.3s						
SANT	**Santorini**	**80.20**	**308**	P	**P**	**17 50 40.1**	**-1.1**

*CSEM **17** 17:49:14.8, 4310N×4770E, h12km, mb4.0, After OBN*
MOS 17 17:49:14.8±1.2, 4310N×4770E, h12km, mb4.0/1, Error ellipse: s-maj=40.4km s-min=21.2km az=49.1, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAK	**Makhachkala**	**0.20**	**226**	*i* PG	Pg	17 49 22.4	+3.3
MAK				*i*		17 49 25.2	
MAK				pmax	pmax		
	comp=Z,520nm,0.2s						
MAK				smax			
	comp=N,4μm,0.2s						
MAK	**Makhachkala**	**0.20**	**226**	*i* Pg	Pg	17 49 22.4	+3.3
	comp=N,520nm,0.2s						
MAK				*i* Sg	Sg	17 49 25.2	+3.1
	comp=N,4μm,0.2s						
MNSR	**Manas**	**0.40**	**178**	*e*PG	Pg	17 49 23.5	+0.8
MNSR				*e*S	Sg	17 49 29.0	+1.0
MNSR				pmax	pmax		
	comp=Z,235nm,0.2s						
MNSR	**Manas**	**0.40**	**178**	*e*Pg	Pg	17 49 23.5	+0.8
	comp=Z,235nm,0.2s						
MNSR				*e*Sg	Sg	17 49 29.0	+1.0
BUJR	**Buynaksk**	**0.51**	**238**	*e*PG	Pg	17 49 26.8	+1.9
BUJR				*i* S	Sg	17 49 36.0	+4.3
BUJR				pmax	pmax		
	comp=Z,143nm,0.2s						
BUJR	**Buynaksk**	**0.51**	**238**	*e*Pg	Pg	17 49 26.8	+1.9
	comp=Z,143nm,0.2s						
BUJR				*i* Sg	Sg	17 49 36.0	+4.3
DBC	**Dubki**	**0.64**	**263**	*i* PG	Pg	17 49 28.5	+1.2
DBC				*e*S	Sg	17 49 38.0	+2.2
DBC				pmax	pmax		
	comp=Z,39nm,0.2s						
DBC	**Dubki**	**0.64**	**263**	*i* Pg	Pg	17 49 28.5	+1.2
	comp=Z,39nm,0.2s						
DBC				*e*Sg	Sg	17 49 38.0	+2.2
BTLR	**Botlikh**	**1.17**	**249**	*e*PG	Pg	17 49 38.7	+1.4
BTLR				*e*S	Sb	17 49 55.3	+3.2
BTLR				pmax	pmax		
	comp=Z,42nm,0.3s						
BTLR	**Botlikh**	**1.17**	**249**	*e*Pg	Pg	17 49 38.7	+1.4
	comp=Z,42nm,0.3s						
BTLR				*e*Sg	Sg	17 49 55.3	+2.8

*ISCJB **17** 17:49:59.5±0.7, 4206N±006×1434E±0.1, h54km±7km, mb3.6/4, Error ellipse: s-maj=13.6km s-min=8.4km az=50.3*
*NIED **17** 17:50:00, 4210N×14340E, h32km, Mw3.6 Best double couple: $M_0$2.64000×10^{14} NP1:ϕ_s225.00000°, δ71.00000°, λ-87.00000°. NP2:ϕ_s36.00000°, δ19.00000°, λ-99.00000°.*
*JMA **17** 17:50:01.0±0.1, 4214N×14335E, h40km±1km, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s127.00000°, δ30.00000°, λ11.00000°. NP2:ϕ_s27.00000°, δ84.00000°, λ119.00000°. Principal axes: T Plg43.0000°, Azm325.0000°; N Plg29.0000°, Azm204.0000°; P Plg33.0000°, Azm93.0000°;*
JMA Felt I J1.
*IDC **17** 17:50:02.6±2.8, 4211N×14327E, h65km±24km, mb3.3/4, mb1 3.4/6, mb1mx3.2/21, mbtmp3.5/6 Error ellipse: s-maj=60.2km s-min=16.9km az=87.0*
*MOS **17** 17:50:03.3±1.4, 4213N×14266E, h81km, mb3.8/1, Error ellipse: s-maj=43.7km s-min=18.8km az=75.2*
ISC 17 17:50:00.6±0.8, 4209N±006×1434E±01, h47km±7km, n16, σ0^{s}84/21, mb3.6/4, 2C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.17**	**244**	⇓P	**Pn**	**17 50 08.1**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.49**	**292**	⇓P	**Pn**	**17 50 11.3**	**-0.3**
JNBK				*e*S	**Sn**	**17 50 19.4**	**0.0**
JCH	**Churui**	**0.52**	**360**	⇓P	**Pn**	**17 50 11.4**	**-0.5**
JCH				*e*S	**Sn**	**17 50 19.4**	**-0.6**
JOB	**Onbets**	**0.88**	**23**	⇑P	**Pn**	**17 50 17.3**	**+0.7**
JBT2	**Biratori 2**	**1.01**	**313**	P	**Pn**	**17 50 18.3**	**-0.1**
JFR	**Furan**	**1.21**	**332**	P	**Pn**	**17 50 19.7**	**-1.4**
JAR	**Ashorobuto**	**1.24**	**14**	⇑P	**Pn**	**17 50 21.5**	**0.0**
JAR				*e*S	**Sn**	**17 50 37.1**	**+0.1**
JAK	**Akkeshi**	**1.33**	**47**	P	**Pn**	**17 50 22.8**	**0.0**
ASAJ	**Asahikawa**	**2.10**	**345**	P	**Pn**	**17 50 34.2**	**+0.9**
	16nm,0.3s,baz=202,slow=12,SNR=78						
ASAJ				S	**Sn**	**17 51 00.3**	**+2.2**
	8.0nm,0.3s,baz=273,slow=32,SNR=8.9						
ASAJ	**Asahikawa**	**2.10**	**345**	PN	**Pn**	**17 50 34.2**	**+0.9**
ASAJ				S	**Sn**	**17 51 00.4**	**+2.2**
ASAJ				pmax	pmax		
	comp=Z,17nm,0.3s						
ASAJ				smax			
	comp=N,8.0nm,0.3s						
MJAR	**Matsushiro Arr**	**6.83**	**217**	P	**Pn**	**17 51 39.5**	**+1.3**
	comp=N,0.4nm,0.3s,baz=34,slow=14,SNR=4.9						
MKAR	**Makanchi Array**	**42.90**	**298**	P	**P**	**17 57 54.3**	**-0.2**
	comp=N,0.3nm,0.3s,mb3.5,baz=83,slow=9.7,SNR=3.1						
WRA	**Warramunga Arr**	**62.28**	**190**	P	**P**	**18 00 17.6**	**-0.2**
	comp=N,0.3nm,0.8s,mb3.5,baz=6.8,slow=6.9,SNR=6.6						
FINES	**FINESS Array B**	**65.06**	**332**	P	**P**	**18 00 34.5**	**-1.6**
	comp=N,1.1nm,0.8s,mb3.9,baz=38,slow=7.2,SNR=4.0						
FINES	**FINESS Array B**	**65.06**	**332**	P	**P**	**18 00 34.5**	**-1.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**66.01**	**189**	P	**P**	**18 00 42.9**	**+0.7**
	comp=Z,0.3nm,0.9s,mb3.3,baz=14,slow=7.7,SNR=4.9						

*JMA **17** 17:52:11.5±0.4, 4662N×14178E, h15km, M3.1*
SKHL 17 17:52:12.3±0.7, 4663N×14183E, h10km, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.71**	**63**	*e*Pg	Pg	17 52 27.0	+0.9
YSS				*e*Sg	Sg	17 52 36.9	+1.5
YSS				A		17 52 38.5	
	380nm,0.3s						
YSS				A		17 52 38.5	
	710nm,0.3s						
JWK2	**Keihoku**	**1.31**	**178**	P	Pn	17 52 35.2	-1.5
JWK2				*e*S	Sb	17 52 52.1	-1.9
JRR	**Rishiri**	**1.54**	**194**	P	Pn	17 52 39.0	-0.7
JRR				*e*S	Sn	17 52 58.5	-1.2
JSE	**Soyaes**	**1.75**	**162**	P	Pn	17 52 41.2	-1.5
JSE				*e*S	Sn	17 53 02.3	-2.8
JTKR	**Abashiri--Toko**	**3.04**	**150**	P	Pn	17 52 58.9	-1.5
JTKR				*e*S	Sn	17 53 34.3	-2.5

IDC 17 17:57:07.0±2.1, 755S×12763E, h0km, mb4.4/1, mb1 4.2/3, mb1mx3.8/12, mbtmp4.1/3, ML4.1/2, Error ellipse: s-maj=284.1km s-min=30.5km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.93**	**153**	Pn	Pn	18 00 25.1	-0.5
	1.0nm,0.3s,baz=331,slow=14,SNR=38						
WRA				Sn	Sn	18 02 43.9	-17
	2.1nm,0.3s,baz=332,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.12**	**160**	P	Pn	18 01 08.4	+0.9
	0.7nm,0.3s,baz=335,slow=9.0,SNR=90						
ASAR				S	Sn	18 04 06.5	-12
	0.2nm,0.3s,baz=328,slow=18,SNR=4.7						
MKAR	**Makanchi Array**	**67.42**	**328**	P	P	18 08 04.4	+0.2
	2.0nm,0.4s,baz=120,slow=8.0,SNR=26						

*JMA **17** 18:00:24.8±0.3, 4665N×14180E, h13km, M3.3*
SKHL 17 18:00:25.3±0.5, 4661N×14185E, h10km, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.71**	**61**	*e*Pg	Pg	18 00 39.5	+0.5
YSS				*e*Sg	Sg	18 00 49.5	+1.2
YSS				A		18 00 51.9	
	650nm,0.3s						
JWK2	**Keihoku**	**1.29**	**179**	P	Pn	18 00 49.0	-0.4
JWK2				*e*S	Sb	18 01 06.5	+0.1
JRR	**Rishiri**	**1.52**	**195**	P	Pn	18 00 52.4	-0.1
JRR				*e*S	Sn	18 01 12.8	+0.5
JSE	**Soyaes**	**1.73**	**162**	P	Pn	18 00 55.4	0.0
JSE				*e*S	Sn	18 01 16.6	-0.9
JYG	**Yagishiri**	**2.20**	**188**	P	Pn	18 01 02.6	+0.7
ASAJ	**Asahikawa**	**2.55**	**168**	P	Pn	18 01 07.6	+0.9
ASAJ				*e*S	Sn	18 01 40.8	+3.1
JTKR	**Abashiri--Toko**	**3.01**	**150**	P	Pn	18 01 12.3	-0.8
JTKR				*e*S	Sn	18 01 47.5	-1.7

WEL 17 18:08:57.3±0.5, 3663S×17741E, h217km±6km, ML3.7/9, 1C, Error ellipse: s-maj=8.1km s-min=7.6km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.18**	**143**	PN	Pn	18 09 29.6	-0.3
MXZ				SN	S	18 09 54.3	-1.1
PUZ	**Puketiti**	**1.59**	**155**	⇑PN	Pn	18 09 33.4	+0.2
PUZ				SN	S	18 10 00.9	-0.5
URZ	**Urewera**	**1.65**	**188**	PN	Pn	18 09 34.0	+0.3
URZ				SN	S	18 10 02.1	-0.1
MWZ	**Matawai**	**1.71**	**177**	PN	Pn	18 09 34.7	+0.5
MWZ				SN	S	18 10 03.0	-0.1
KNZ	**Kokohu**	**2.40**	**175**	PN	Pn	18 09 41.0	0.0
BKZ	**Black Stump Fm**	**2.63**	**196**	PN	Pn	18 09 43.3	-0.4
TUVZ	**Tukino**	**2.98**	**207**	PN	Pn	18 09 47.6	+0.1
PXZ	**Pawanui**	**3.42**	**187**	PN	Pn	18 09 51.3	-1.4
PXZ				SN	S	18 10 34.7	-1.7
TSZ	**Takapari Road**	**3.61**	**198**	PN	Pn	18 09 53.4	-1.5
TSZ				SN	S	18 10 39.4	-0.9
MRZ	**Mangatainoka R**	**4.27**	**199**	PN	Pn	18 10 00.4	-2.5
MRZ				SN	S	18 10 52.1	-2.8
KIW	**Kapiti Island**	**4.66**	**204**	PN	Pn	18 10 05.0	-2.7
MTW	**Mount Morrison**	**4.76**	**198**	PN	Pn	18 10 06.4	-2.7
CAW	**Cannon Point**	**4.83**	**201**	PN	Pn	18 10 07.0	-2.9
MSWZ	**Moikau Station**	**5.07**	**199**	SN	S	18 11 08.3	-4.4

*NEIC **17** 18:14:31.4, 3126S×6781W, h30km, ML3.9(GUC), After GUC.*
GUC 17 18:14:31.4±0.9, 3126S×6781W, h30km±32km, ML3.9, 2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**2.76**	**238**	*e*P	Pn	18 15 16.1	+2.5
TLL	**Tololo Astrono**	**2.80**	**292**	⇓*i*P	Pn	18 15 16.5	+2.4
TLL				*i* S	Sn	18 15 49.8	+3.0
TLL				AML	AML	18 15 56.0	
	comp=E,730nm,0.6s						
TLL	**Tololo Astrono**	**2.80**	**292**	⇓*i*P	Pn	18 15 16.5	+2.4
TLL				*i* S	Sn	18 15 49.8	+3.0
FCH	**Farellones**	**2.95**	**225**	*e*P	Pn	18 15 18.6	+2.4
FCH				*i* S	Sn	18 15 53.9	+3.4
FCH				AML	AML	18 16 01.3	
	comp=E,163nm,0.5s						
PEL	**Peldehue**	**3.08**	**232**	*e*P	Pn	18 15 19.5	+1.5
PEL				*i* S	Sn	18 15 55.9	+2.1
PEL				AML	AML	18 16 10.8	
	comp=N,290nm,0.5s						
PEL	**Peldehue**	**3.08**	**232**	*e*P	Pn	18 15 19.5	+1.5
PEL				*i* S	Sn	18 15 55.9	+2.1
CLCH	**Cerro Calan**	**3.14**	**227**	*e*P	Pn	18 15 19.8	+0.9
CLCH				*i* S	Sn	18 15 57.6	+2.3
CLCH				AML	AML	18 16 05.8	
	comp=E,319nm,0.6s						
CHNG	**Los Chungos**	**3.21**	**258**	*e*P	Pn	18 15 19.9	+0.2
CHNG				*i* S	Sn	18 15 57.7	+0.7
ROCH	**El Roble**	**3.21**	**237**	*e*P	Pn	18 15 23.9	+4.2
PCH	**Pirque**	**3.28**	**223**	*e*P	Pn	18 15 22.4	+1.6
LCO	**Las Campanas**	**3.36**	**311**	*e*P	Pn	18 15 23.4	+1.6
LCO				*i* S	Sn	18 16 03.7	+3.1
CHCH	**Chadas Angostu**	**3.59**	**221**	*e*P	Pn	18 15 26.6	+1.6

*CSEM **17** 18:32:16.1±0.1, 3600N×3665E, h30km, Mc2.1, Error ellipse: s-maj=2.4km s-min=2.3km az=48.0*
*ISCJB **17** 18:32:17.2±0.4, 3596N±003×3672E±004, h22km±7km, Error ellipse: s-maj=5.7km s-min=4.2km az=30.1*
ISC 17 18:32:16.9±0.6, 3596N±003×3674E±005, h15km±6km, n15, σ0^{s}71/26, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTCH	**Batrach**	**0.24**	**289**	⇑*i*P	**Pg**	**18 32 23.1**	**+0.8**
WRDH	**Warideh**	**0.52**	**211**	⇓*i*P	**Pg**	**18 32 27.7**	**+0.4**
WRDH				⇓*i*S	**Sg**	**18 32 34.8**	**+0.5**
SLNF	**Slenfeh**	**0.55**	**229**	⇑*i*P	**Pg**	**18 32 28.1**	**+0.2**
SLNF				⇑*i*S	**Sg**	**18 32 35.3**	**0.0**
ARNB	**Al Arnab**	**0.63**	**261**	⇑*i*P	**Pg**	**18 32 28.9**	**-0.4**
ARNB				⇑*i*S	**Sg**	**18 32 37.5**	**-0.2**
DRWC	**Darouich**	**0.66**	**355**	⇑*i*P	**Pg**	**18 32 29.3**	**-0.6**
DRWC				⇑*i*S	**Sg**	**18 32 38.7**	**0.0**
COBT	**Iskenderun**	**0.68**	**325**	*i* P	**Pg**	**18 32 30.1**	**-0.2**
COBT				*i* S	**Sg**	**18 32 38.9**	**-0.5**
KFRA	**Kufra**	**0.75**	**176**	⇓*i*P	**Pb**	**18 32 31.7**	**+0.1**
KFRA				⇓*i*S	**Sb**	**18 32 42.2**	**+0.6**
SLMH	**Al Salmeh**	**1.00**	**75**	⇑*i*P	**Pb**	**18 32 36.0**	**+0.1**
SLMH				⇑*i*S	**Sb**	**18 32 48.5**	**-0.3**
BIDA	**Albida**	**1.00**	**200**	⇓*i*P	**Pb**	**18 32 35.3**	**-0.7**
BIDA				⇓*i*S	**Sb**	**18 32 47.9**	**-1.0**
JHLN	**Al Jahlan**	**1.41**	**101**	⇓*i*P	**Pn**	**18 32 41.7**	**-0.3**
JHLN				⇓*i*S	**Sn**	**18 32 59.7**	**-0.6**
GZT	**Gaziantep**	**1.54**	**25**	*i* P	**Pn**	**18 32 45.3**	**+1.4**
GZT				*i* S	**Sn**	**18 33 05.3**	**+1.7**
HWQ	**Hawqa**	**1.80**	**201**	*e*Pn	**Pn**	**18 32 47.6**	**+0.3**
MEST	**Erdemli**	**2.19**	**287**	*i* P	**Pn**	**18 32 51.8**	**-0.9**
BHL	**Bhannes**	**2.24**	**204**	*e*Pn	**Pn**	**18 32 54.3**	**+0.9**
MARD	**Mardin**	**3.52**	**66**	*i* P	**Pn**	**18 33 09.9**	**-1.1**
MARD				*i* S	**Sg**	**18 34 06.0**	**-4.0**

*VIE **17** 18:35:35.5±0.8, 4422N×1184E, h10km, mb2.5/1, ML2.3/4, Error ellipse: s-maj=6.9km s-min=2.7km az=144.0 51 km SE of Bologna*
*ISCJB **17** 18:35:37.1±0.6, 4434N±004×1166E±005, h5km±7km, Error ellipse: s-maj=6.3km s-min=5.9km az=84.9*
*CSEM **17** 18:35:37.5±0.1, 4428N×1153E, h25km, MD2.5/10, Error ellipse: s-maj=1.7km s-min=1.3km az=84.0*
*ROM **17** 18:35:38.3±0.3, 4428N×1155E, h10km, Md2.5/10, Ml2.0/5, Error ellipse: s-maj=4.2km s-min=3.2km az=30.0*
ISC 17 18:35:38.3±0.5, 4429N±004×1162E±005, h12km±7km, n16, σ1^{s}03/25, 2C-7D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEI	**Scarperia**	**0.30**	**218**	Pg	**Pg**	**18 35 43.6**	**-0.9**
SEI				Sg	**Sg**	**18 35 49.7**	**+1.1**
	826nm,0.2s						
FIU	**Minerbio Fiu**	**0.36**	**345**	Pg	**Pg**	**18 35 45.8**	**+0.4**
	23μm,8.6s						
FNVD	**Fontana Vidola**	**0.38**	**251**	Pg	**Pg**	**18 35 45.1**	**-0.7**
FNVD				Sg	**Sg**	**18 35 51.1**	**+0.2**
	177nm,0.3s						
SFI	**Santa Sofia**	**0.42**	**157**	Pg	**Pg**	**18 35 46.3**	**-0.3**
SFI				Sg	**Sg**	**18 35 54.2**	**+1.9**
	186nm,0.6s						
ZCCA	**Zocca**	**0.47**	**277**	Pg	**Pg**	**18 35 48.1**	**+0.7**
	11nm,0.3s						
PZZT	**Monte Pizzetto**	**0.57**	**254**	Pg	**Pg**	**18 35 48.5**	**-0.9**
	36nm,0.3s						
CRE	**Caprese Michel**	**0.72**	**160**	Pg	**Pg**	**18 35 51.7**	**-0.5**
	20nm,0.3s						
CSNT	**Castellina Chi**	**0.85**	**196**	Pg	**Pg**	**18 35 54.4**	**-0.4**
	41nm,0.6s						
PII	**Pisa**	**0.97**	**234**	Pg	**Pg**	**18 35 56.0**	**-1.1**
	17nm,0.3s						
FSSB	**Fossombrone**	**1.03**	**125**	Pg	**Pg**	**18 35 58.8**	**+0.7**
	20nm,0.3s						
SNTG	**Esanatoglia**	**1.41**	**137**	Pg	**Pg**	**18 36 05.7**	**+0.3**
	24nm,0.4s						
SQTA	**Sankt Quirin**	**2.94**	**355**	⇓*i*Pn	**Pn**	**18 36 24.2**	**-0.6**
SQTA				⇓*i*Sn	**Sn**	**18 37 01.2**	**+1.1**
KBA	**Koelnbreinsper**	**3.04**	**23**	⇑*i*Pn	**Pn**	**18 36 24.4**	**-1.7**
KBA				⇓*i*Sn	**Sn**	**18 37 00.4**	**-2.1**
KBA				⇓*i*Sg	**Sg**	**18 37 15.8**	**0.0**
	2.2nm,0.4s						
KBA	**Koelnbreinsper**	**3.04**	**23**	Pn	**Pn**	**18 36 24.4**	**-1.7**
KBA				Sn	**Sn**	**18 37 00.4**	**-2.0**
MOTA	**Moosalm**	**3.07**	**353**	⇓*i*Pn	**Pn**	**18 36 26.3**	**-0.3**
MOTA				⇓*i*Sn	**Sn**	**18 37 05.0**	**+1.7**
DAVA	**Damuels**	**3.23**	**338**	⇓*i*Pn	**Pn**	**18 36 28.6**	**-0.2**
DAVA				⇑*i*Sn	**Sn**	**18 37 09.6**	**+2.3**

*IDC **17** 18:36:02.3±1.2, 3816N×2140E, h0km, mb3.6/7, mb1 3.7/11, mb1mx3.6/25, mbtmp3.6/11, ML3.4/4, MS3.0/1, Ms1 3.0/1, ms1mx2.0/32, Error ellipse: s-maj=23.3km s-min=17.9km az=69.0*
*NEIC **17** 18:36:03.6, 3806N×2157E, h10km, ML3.5(THE), ML3.5(ATH), After ATH.*
*ATH **17** 18:36:03.6, 3806N×2157E, h10km±1km, MD3.8/15, ML3.5*
*THE **17** 18:36:03.9, 3805N×2159E, h0km, ML3.6*
*ISCJB **17** 18:36:03.5±0.3, 3802N±002×2153E±003, h10km, mb3.6/7, MS2.8/1, Error ellipse: s-maj=3.1km s-min=2.7km az=84.5*
*CSEM **17** 18:36:04.2±0.1, 3803N×2156E, h2km, ML3.5, Error ellipse: s-maj=1.8km s-min=1.4km az=18.0*
*SKO **17** 18:36:17.7, 3894N×2204E, h0km*
ISC 17 18:36:04.6±0.3, 3802N±002×2154E±003, h10km, n62, σ1^{s}17/89, mb3.6/7, MS2.8/1, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**301**	*e*PG	**Pg**	**18 36 06.2**	**-0.5**
VLS	**Valsamata**	**0.77**	**282**	*e*PG	**Pg**	**18 36 18.5**	**-0.8**
VLS				*e*SB	**Sg**	**18 36 30.0**	**+0.7**
ITM	**Ithomi**	**0.90**	**160**	*e*PG	**Pg**	**18 36 20.6**	**-1.2**
ITM				*e*SB	**Sg**	**18 36 34.2**	**+0.7**
EVR	**Evrytania**	**0.92**	**13**	*e*PB	**Pg**	**18 36 20.6**	**-1.6**
LKD	**Levkas**	**0.98**	**315**	*e*Pg	**Pg**	**18 36 21.9**	**-1.4**
LKD				*e*Sg	**Sg**	**18 36 35.8**	**-0.3**
AGG	**Agios Georgios**	**1.17**	**32**	*e*Pg	**Pg**	**18 36 24.2**	**-2.9**
AGG				*e*Sg	**Sg**	**18 36 41.6**	**-0.8**
LKR	**Lokris**	**1.31**	**61**	*e*PG	**Pg**	**18 36 27.3**	**-2.4**
LKR				*e*SB	**Sb**	**18 36 44.9**	**-1.1**
MGER	**Gerania Oros**	**1.36**	**91**	*e*PB	**Pb**	**18 36 28.7**	**-1.4**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*PG	**Pn**	**18 36 32.0**	**-0.4**
VLI	**Veliai**	**1.71**	**139**	*e*PG	**Pn**	**18 36 35.1**	**+0.7**
JAN	**Janina**	**1.72**	**342**	*e*PG	**Pn**	**18 36 35.1**	**+0.6**
ATH	**Athens Observa**	**1.72**	**91**	*e*PN	**Pn**	**18 36 35.7**	**+1.2**
ATH				*e*SB	**Sb**	**18 36 58.3**	**+0.4**
KVR	**Kavouri**	**1.77**	**96**	*e*PG	**Pg**	**18 36 37.0**	**-1.6**
MEV	**Metsovon**	**1.78**	**352**	*e*Pb	**Pn**	**18 36 35.0**	**-0.3**
	comp=Z,32nm,0.6s						
MEV				*e*Sb	**Sb**	**18 36 59.1**	**-0.4**
IGT	**Igoumenitsa**	**1.78**	**328**	*e*Pb	**Pn**	**18 36 35.1**	**-0.2**
IGT				*e*Sb	**Sb**	**18 36 59.2**	**-0.4**
PTL	**Penteli**	**1.83**	**88**	*e*PG	**Pn**	**18 36 37.0**	**+0.9**
NEO	**Neokhori**	**1.84**	**45**	*e*PN	**Pn**	**18 36 36.6**	**+0.4**
XOR	**Xorichti**	**1.86**	**43**	*e*Pb	**Pn**	**18 36 35.4**	**-1.1**
XOR				*e*Sb	**Sb**	**18 36 59.6**	**-2.4**
KYTH	**Kithira**	**2.11**	**145**	*e*PN	**Pn**	**18 36 42.0**	**+2.1**
AOS	**Alonnisos**	**2.16**	**57**	*e*Pn	**Pn**	**18 36 39.0**	**-1.6**
AOS				*e*Sn	**Sn**	**18 37 07.0**	**-0.5**
KEK	**Kerkira**	**2.17**	**322**	*e*PN	**Pn**	**18 36 41.7**	**+1.0**
LIT	**Litokhoron**	**2.20**	**19**	*e*Pn	**Pn**	**18 36 41.0**	**-0.2**
	comp=Z,4.0nm,0.6s						
LIT				*e*Sn	**Sn**	**18 37 09.0**	**+0.6**
KZN	**Kozani**	**2.29**	**4**	*e*PN	**Pn**	**18 36 43.6**	**+1.3**
PAIG	**Paliouri**	**2.53**	**41**	*e*Pn	**Pn**	**18 36 44.1**	**-1.6**
PAIG				*e*Sn	**Sn**	**18 37 16.3**	**-0.2**
FNA	**Florina**	**2.76**	**357**	*e*Pn	**Pn**	**18 36 49.1**	**+0.2**
	comp=Z,4.8nm,0.4s						
FNA				*e*Sn	**Sn**	**18 37 23.1**	**+0.9**
PLG	**Polygyros**	**2.77**	**32**	*e*PN	**Pn**	**18 36 49.4**	**+0.4**
THE	**Thessaloniki**	**2.83**	**23**	*e*Pn	**Pn**	**18 36 49.4**	**-0.4**
THE				*e*Sn	**Sn**	**18 37 25.2**	**+1.2**
HORT	**Hortiatis**	**2.84**	**25**	*e*Pn	**Pn**	**18 36 49.7**	**-0.3**
HORT				*e*Sn	**Sn**	**18 37 24.6**	**+0.3**
OUR	**Ouranopolis**	**2.99**	**39**	*e*Pn	**Pn**	**18 36 51.6**	**-0.4**
	comp=Z,1.9nm,0.3s						
OUR				*e*Sn	**Sn**	**18 37 29.2**	**+1.4**
BIA	**Bitola**	**3.00**	**357**	*e*Pn	**Pn**	**18 36 51.4**	**-0.7**
BIA				*e*Sn	**Sn**	**18 37 29.8**	**+1.7**

BIA	Bitola	3.00	357	i Pn	Pn	18 36 54.6	+2.5
BIA	Bitola	3.00	357	i Pn	Pn	18 36 54.6	+2.5
BIA				eSn	Sn	18 37 29.8	+1.7
GRG	Griva	3.00	13	ePn	Pn	18 36 52.1	0.0
SOH	Sokhos	3.13	26	ePn	Pn	18 36 53.7	-0.2
SOH				eSn	Sn	18 37 32.0	+0.8
SOH	Sokhos	3.13	26	ePn	Pn	18 36 53.7	-0.2
SOH				eSn	Sn	18 37 32.0	+0.7
OHR	Ohrid	3.14	350	i Pn	Pn	18 36 58.4	+4.4
OHR				eSn	Sn	18 37 27.6	-3.9
KNT	Kendrikon	3.31	18	ePn	Pn	18 36 56.6	+0.2
	comp=Z,2.5nm,0.6s						
KNT				eSn	Sn	18 37 36.0	+0.3
APE	Apeiranthos	3.31	105	ePn	Pn	18 36 55.7	-0.7
APE				eSn	Sn	18 37 37.8	+2.0
LOS	Limnos	3.35	54	ePn	Pn	18 36 57.3	+0.3
VAY	Valandovo	3.39	13	ePn	Pn	18 36 56.7	-0.7
VAY				eSn	Sn	18 37 39.5	+1.8
VAY	Valandovo	3.39	13	i Pn	Pn	18 36 58.0	+0.5
CHOS	Chios island	3.58	83	ePn	Pn	18 37 00.2	+0.1
STIP	Stip	3.70	8	ePn	Pn	18 37 02.1	+0.4
NVR	Nevrokopi	3.77	28	ePN	Pn	18 37 03.7	+0.9
IDI	Anoyia	3.83	134	Pn	Pn	18 37 05.2	+1.6
	1.7nm,0.3s,baz=345,slow=13,SNR=13						
IDI				Sn	Sn	18 37 53.9	+5.2
	2.5nm,0.3s,baz=271,slow=21,SNR=3.9						
MMB	Musomiste	3.94	25	ePn	Pn	18 37 05.5	+0.5
MMB				eSn	Sn	18 37 52.9	+1.6
ALN	Alexandroupoli	4.52	49	ePn	Pn	18 37 13.4	+0.4
VTS	Vitosha	4.74	15	ePn	Pn	18 37 16.6	+0.6
VTS				eSn	Sn	18 38 13.1	+2.1
VAE	Valguarnera	5.67	267	Sn	Sn	18 38 35.4	+1.3
	0.8nm,0.3s,baz=344,slow=9.8,SNR=2.6						
MLR	Muntele Rosu	8.15	22	Pn	Pn	18 38 03.9	+1.0
	0.3nm,0.3s,baz=120,slow=8.1,SNR=2.5						
BRTR	Keskin Array B	9.59	76	Pn	Pn	18 38 23.9	+1.3
	0.1nm,0.3s,baz=259,slow=11,SNR=2.7						
VYHS	Vyhne	10.65	350	e	Pn	18 38 38.2	+1.1
KOLS	Kolonicke sedl	10.92	3	e	Pn	18 38 32.7	-8.1
GERES	GERESS Array B	12.22	335	Pn	Pn	18 38 57.0	-1.6
	0.1nm,0.3s,baz=160,slow=8.9,SNR=2.6						
HFS	Hagfors	22.69	350	P	P	18 41 04.5	-1.6
	1.4nm,0.5s,mb3.6,baz=146,slow=11,SNR=7.4						
HFS				LR	LR	18 50 32.4	
	comp=Z,35nm,20.1s,MS2.8,baz=126,slow=39						
FINES	FINESS Array B	23.62	5	P	P	18 41 12.1	-3.7
	1.2nm,0.8s,mb3.4,baz=181,slow=9.2,SNR=5.3						
NB2	NORSAR Subarra	23.93	348	P	P	18 41 16.0	-2.8
	comp=Z,0.7nm,0.7s,mb3.2,baz=145,slow=10						
NOA	NORSAR Array B	23.93	348	P	P	18 41 15.8	-3.0
	comp=Z,0.7nm,0.8s,mb3.1,baz=154,slow=9.0,SNR=5.6						
EKA	Eskdalemuir Ar	24.02	324	P	P	18 41 17.1	-2.4
	comp=Z,2.6nm,0.7s,mb3.8,baz=116,slow=10,SNR=9.8						
TORD	Torodi Ar. Bea	30.43	221	P	P	18 42 17.1	+0.1
	comp=Z,1.0nm,0.8s,mb3.6,baz=24,slow=8.9,SNR=6.0						
ARCES	ARCESS Array B	31.64	3	P	P	18 42 25.3	-2.5
	comp=Z,0.9nm,0.8s,mb3.6,baz=203,slow=8.8,SNR=4.5						
MKAR	Makanchi Array	44.70	58	P	P	18 44 16.0	-1.7
	comp=Z,0.6nm,0.4s,mb3.8,baz=283,slow=7.0,SNR=6.7						

KRSC 17 18:41:16,5560N×16176E,h86km,ML3.7,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.68	308	eP	Pn	18 41 33.9	+1.9
ZLN				eS	Sn	18 41 46.5	+2.6
KBTR	Krutoberegovo	0.85	44	eP	Pn	18 41 35.6	+1.9
KBTR				eS	Sn	18 41 49.5	+2.5
KMNR	Kamenistaya	0.88	281	eP	Pn	18 41 36.0	+2.0
KMNR				eS	Sn	18 41 50.4	+2.9
KRSR	Krestovskiy	0.91	313	eP	Pn	18 41 35.5	+1.1
KRSR				eS	Sn	18 41 49.8	+1.6
KPT	Kopyto	0.94	294	eP	Pn	18 41 36.0	+1.2
KPT				eS	Sn	18 41 50.8	+2.0
KLY	Klyuchi	0.95	319	eP	Pn	18 41 35.0	+0.2
KLY				eS	Sn	18 41 48.9	0.0
TUMR	Tumrok	0.97	252	eP	Pn	18 41 37.3	+2.2
TUMR				eS	Sn	18 41 52.7	+3.3
SMKR	Semkarok	1.00	351	eP	Pn	18 41 36.3	+0.9
SMKR				eS	Sn	18 41 51.4	+1.5
BDR	Baidarnaya	1.02	343	eP	Pn	18 41 36.8	+1.2
BDR				eS	Sn	18 41 52.4	+2.1
MKZ	Mys Kozlova	1.05	181	eP	Pn	18 41 37.8	+1.9
MKZ				eS	Sn	18 41 54.0	+3.1
SRKR	Sorokina	1.11	343	eP	Pn	18 41 37.8	+1.1
SRKR				eS	Sn	18 41 54.0	+1.8
KOZ	Kozyrevsk	1.16	294	eP	Pn	18 41 38.5	+1.2
KOZ				eS	Sn	18 41 55.6	+2.3
SRDR	Sredinnyy	1.35	303	eP	Pn	18 41 40.2	+0.5
SRDR				eS	Sn	18 41 58.3	+0.7
KII	Karymskiy	2.06	221	eP	Pn	18 41 51.4	+2.6
SPN	Mys Shipunski	2.71	203	eP	Pn	18 41 57.9	+0.5
SPN				eS	Sn	18 42 28.4	-0.9
NLC	Nalytchevo	2.81	211	eS	Sn	18 42 32.4	+0.5
GNL	Ganaly	2.93	231	eP	Pn	18 42 02.4	+2.0
AVH	Avacha	2.93	218	eP	Pn	18 42 03.4	+2.9
AVH				eS	Sn	18 42 38.1	+3.4
PET	Petropavlovsk	3.16	216	eS	Sn	18 42 41.6	+1.4
RUS	Russkaya	3.71	212	eP	Pn	18 42 12.0	+1.0
RUS				eS	Sn	18 42 52.9	-0.6

CSEM 17 18:43:20.0±0.4,3845N×2841W,h4km±3km,ML0.8,Error ellipse: s-maj=1.7km s-min=1.3km az=53.0,After PDA
PDA 17 18:43:20.0±0.4,3845N×2841W,h4km±3km,MD2.8,ML0.8, Error ellipse: s-maj=1.7km s-min=1.3km az=53.0
SVSA 17 18:43:20.0±0.4,3845N×2841W,h4km±3km,MD2.8,ML0.8, Error ellipse: s-maj=1.7km s-min=1.3km az=53.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBOI	Pico dos Bois	0.03	123	eP	Pg	18 43 21.0	+0.1
PBOI				i S	Sg	18 43 21.6	+0.1
PBOI							
	92nm,0.1s						
PCND	Candelaria	0.05	291	eP	Pg	18 43 21.1	0.0
PCND				eS	Sg	18 43 22.2	+0.3
PCND							
	11nm,0.2s						
PICO	Pico	0.05	342	eP	Pg	18 43 21.2	0.0
PICO				eS	Sg	18 43 22.2	+0.2
PTEI	Pico do Teixo	0.06	42	eP	Pg	18 43 21.5	+0.2
PTEI				eS	Sg	18 43 22.5	+0.3
PTEI							
	72nm,0.1s						
PIED	Piedade	0.28	97	erx		18 43 22.0	

CASC 17 18:45:57.6±3.3,955N×8592W,h26km±7km,MD3.9,ML3.2, 11C-6D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	Vista de Mar	0.64	27⇑	eP	Pb	18 46 09.3	-0.8
VCR				eS	Sb	18 46 19.2	+0.5
CAO	Cobano	0.82	80⇓	eP	Pb	18 46 12.2	-1.0
CAO				eS	Sb	18 46 25.4	+1.6
JCR	Jicaral	0.85	70⇑	eP	Pb	18 46 12.9	-0.8
JCR				eS	Sb	18 46 25.6	+0.9
JTS	JuntasAbangare	1.20	52	eS	Sn	18 46 34.6	+0.4
LIM1	Limonal	1.31	30⇑	iP	Pn	18 46 19.6	-0.7
LIM1				i S	Sn	18 46 37.3	+0.3
RIN3	Volcan Rincon	1.34	23⇑	iP	Pn	18 46 19.6	-1.1
RIN3				eS	Sn	18 46 38.7	+1.1
EPA	Esparza	1.38	72	eP	Pn	18 46 20.8	-0.3
EPA				eS	Sn	18 46 40.2	+1.8
CRZC	La Cruz	1.43	13⇑	eP	Pn	18 46 21.0	-0.9
CRZC				eS	Sn	18 46 40.2	+0.5
CGA2	Cerro Gallo 2	1.51	72⇓	eP	Pn	18 46 23.1	+0.2
CGA2				eS	Sn	18 46 43.8	+2.1
VACR	Volcan Arenal	1.53	53⇑	eP	Pn	18 46 23.6	+0.4
VACR				eS	Sn	18 46 44.5	+2.2
PRS1	Puriscal	1.64	75⇓	eP	Pn	18 46 24.3	-0.5
PRS1				eS	Sn	18 46 43.9	-1.2
POA2	Poas 2	1.76	69⇑	eP	Pn	18 46 27.1	+0.7
POA2				eS	Sn	18 46 50.2	+2.3
LAJ	Bijagual	1.80	80⇓	eP	Pn	18 46 20.2	-6.7
LAJ				eS	Sn	18 46 37.6	-11
SJS	Escuela Geolog	1.88	78	eP	Pn	18 46 28.7	+0.6
MADN	Villa Maderas	1.88	12	eP	Pn	18 46 29.6	+1.5
MADN				eS	Sn	18 46 52.2	+1.2
LCR2	La Lucha 2	1.90	84⇓	eP	Pn	18 46 28.3	0.0
LCR2				eS	Sn	18 46 52.1	+0.7
OCM	Ochomogo	1.96	80⇑	eP	Pn	18 46 29.4	+0.2
OCM				eS	Sn	18 46 54.9	+1.9
CONN	Concepcion	2.02	8	eP	Pn	18 46 31.0	+1.0
CONN				eS	Sn	18 46 56.6	+2.2
ICR	Volcan Irazu	2.10	78⇑	eP	Pn	18 46 39.4	+8.3
ICR				eS	Sn	18 46 59.1	+2.7
URSC	Urasca	2.13	82⇑	eP	Pn	18 46 32.4	+0.9
BUS	Buena Vista	2.13	90⇑	eP	Pn	18 46 32.0	+0.5
BUS				eS	Sn	18 46 58.9	+1.7
VTU	Volcan Turrial	2.18	78⇓	iP	Pn	18 46 34.3	+2.1
COPN	Copaltepe	2.69	346	eP	Pn	18 46 40.2	+1.0
APYN	Apoyeque	2.70	351	eP	Pn	18 46 40.9	+1.6
MIRN	Miramar	2.97	345	eP	Pn	18 46 44.5	+1.5
LEON	Leon	3.00	342	eP	Pn	18 46 44.4	+1.0
LEON				eS	Sn	18 47 18.8	+0.2
	comp=Z,128nm,0.4s						

ISCJB 17 19:46:55.2±0.2,4984N±002×1847E±002,h0km,mb3.2/1, Error ellipse: s-maj=2.8km s-min=1.7km az=28.7
MOS 17 19:46:55.9±0.8,4988N×1856E,h10km,mb3.6/1,Error ellipse: s-maj=5.9km s-min=5.7km az=108.0
CSEM 17 19:46:56.9±0.1,4982N×1859E,h2km,ML3.6/12,Ms3.6, Error ellipse: s-maj=2.3km s-min=1.5km az=16.0,Mining induced.
NEIC 17 19:46:56.8±0.3,4981N×1857E,h5km,ML3.6(SZGRF), Error ellipse: s-maj=5.2km s-min=3.0km az=192.0
VIE 17 19:46:57.9±0.5,4967N×1847E,h0km,mb2.8/8,ML3.0/7, Ms3.6/1,Error ellipse: s-maj=3.4km s-min=2.3km az=90.0 24 km SE of Ostrava Suspected Mining induced.
IPEC 17 19:46:57.0±0.1,4977N×1858E,h0km,ML3.1/3,Error ellipse: s-maj=1.6km s-min=0.7km az=164.0,Mining induced.
PRU 17 19:46:58.0,4980N×1850E,h0km,Felt In Karvina
IDC 17 19:46:58.6±1.9,4965N×1856E,h11km±15km,mb3.4/1, mb1 3.4/6,mb1mx3.3/19,mbtmp3.4/6,ML3.2/5,Error ellipse: s-maj=15.1km s-min=10.5km az=141.0
LDG 17 19:46:58.6±0.2,4980N×1854E,h2km,Ml3.6/4,Error ellipse: s-maj=6.2km s-min=3.7km az=17.0
BGR 17 19:47:00.8±0.8,4946N×18.11E,h1km,ML3.6/11,Error ellipse: s-maj=21.1km s-min=8.9km az=34.0
ISC 17 19:46:56.3±0.2,4983N±002×1854E±002,h0km,n109, σ1§17/188,mb3.2/1,13C-10D,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.25	271	eP	Pg	19 47 03.0	+1.8
OKC				e		19 47 07.7	
OKC				smax			
	comp=N,2μm,0.6s						
OKC	Ostrava-Krasne	0.25	271	eP	Pg	19 47 03.0	+1.8
	comp=N,2μm,0.6s						
OKC				eSg	Sg	19 47 07.7	+3.2
	comp=N,2μm,0.6s						
RAC	Raciborz	0.34	318	ePg	Pg	19 47 05.2	+2.5
RAC				eSg	Sg	19 47 10.7	+3.6
MORC	Moravsky Berou	0.65	265⇓	iP	Pg	19 47 09.6	+0.8
MORC	Moravsky Berou	0.65	265	eP	Pg	19 47 09.2	+0.5
MORC	Moravsky Berou	0.65	265	i Pg	Pg	19 47 09.9	+1.1
MORC				eSg	Sg	19 47 17.9	+0.7
	comp=N,300nm,0.5s						
LIKS	Likavka	0.87	155	i Pn	Pn	19 47 14.3	-1.5
LIKS				eS	Sg	19 47 29.7	+5.5
OJC	Ojcow	0.90	64	i Pgd	Pg	19 47 13.9	+0.3
OJC				eSg	Sg	19 47 26.4	+1.2
OJC	Ojcow	0.90	64	i Pg	Pg	19 47 13.9	+0.3
OJC				eSg	Sg	19 47 25.4	+0.2
JAVC	Velka Javorina	1.13	211	i Pg	Pg	19 47 19.4	+1.4
JAVC				eSg	Sg	19 47 34.7	+2.1
NIE	Niedzica	1.23	109	eP	Pg	19 47 20.0	+0.2
NIE				eS	Sg	19 47 37.8	+2.1
VYHS	Vyhne	1.35	172	i PN	Pg	19 47 21.7	-0.6
VYHS				eSN	Sn	19 47 41.6	+0.4
VYHS	Vyhne	1.35	172	i P	Pg	19 47 21.7	-0.6
VYHS				e		19 47 41.6	
VYHS				smax			
	comp=N,40nm,0.7s						
VRAC	Vranov	1.37	248	Pg	Pg	19 47 22.6	0.0
	comp=N,79nm,0.3s,baz=68,slow=15,SNR=155						
VRAC				Lg		19 47 41.7	
	comp=N,80nm,0.3s,baz=172,slow=23,SNR=13						
VRAC	Vranov	1.37	248⇓	iP	Pg	19 47 22.2	-0.4
VRAC	Vranov	1.37	248	Pg	Pg	19 47 22.6	0.0
VRAC				eSg	Sg	19 47 40.1	-0.3
	comp=N,223nm,0.4s						
SMOL	Smolenice	1.51	209	i PN	Pn	19 47 24.4	-0.2
SMOL				eSN	Sn	19 47 44.8	-0.2
DPC	Dobruska-Polom	1.52	291	ePG	Pn	19 47 24.8	+0.1
DPC				eSG	Sg	19 47 46.5	+1.4
	comp=N,131nm,0.5s						
DPC	Dobruska-Polom	1.52	291	eP	Pn	19 47 24.8	+0.1
DPC				e		19 47 46.5	
DPC				smax			
	comp=N,131nm,0.5s						
DPC	Dobruska-Polom	1.52	291	i Pg	Pg	19 47 25.2	-0.2
DPC				eSg	Sg	19 47 46.3	+1.2
KRUC	Moravsky	1.60	242	i Pg	Pg	19 47 25.9	-1.1
KRUC				eSg	Sg	19 47 47.2	-0.5
	comp=N,237nm,0.7s						
KSP	Ksiaz	1.76	306	ePn	Pn	19 47 28.2	+0.2
KSP				ePg	Pg	19 47 30.5	+0.5
KSP				eSg	Sg	19 47 53.2	+0.4
KSP	Ksiaz	1.76	306	ePn	Pn	19 47 28.2	+0.2
KSP				ePg	Pg	19 47 33.0	+3.0
KSP				eSg	Sg	19 47 54.1	+1.3
KSP	Ksiaz	1.76	306	ePn	Pn	19 47 28.2	+0.2
KSP				i Pg	Pg	19 47 30.5	+0.5
KSP				eSg	Sg	19 47 53.2	+0.4
KSP	Ksiaz	1.76	306	ePn	Pn	19 47 28.1	+0.1
UPC	Upice	1.76	294	ePG	Pg	19 47 29.7	-0.4
UPC				eSG	Sg	19 47 54.7	+1.8
STHS	Stebnicka Huta	1.81	102	ePN	Pn	19 47 28.5	-0.2
STHS				ePG	Pg	19 47 32.1	+1.1
STHS				eSN	Sn	19 47 56.6	+4.3
STHS	Stebnicka Huta	1.81	102	eP	Pn	19 47 28.5	-0.2
STHS				e		19 47 56.6	
STHS				smax			
	comp=N,202nm,0.6s						
STHS	Stebnicka Huta	1.81	102	ePg	Pg	19 47 32.1	+1.1
STHS				eS	Sn	19 47 56.6	+4.3
	comp=N,202nm,0.6s						
KECS	Kecovo	1.86	136	i PN	Pn	19 47 29.1	-0.3
KECS				eSN	Sn	19 47 54.0	+0.4
KECS	Kecovo	1.86	136	i P	Pn	19 47 29.1	-0.3
KECS				e		19 47 54.0	
KECS				pmax	pmax		
	comp=N,65nm,0.7s						
ZST	Bratislava	1.89	211	ePN	Pn	19 47 29.7	-0.2
ZST				eSN	Sn	19 47 52.7	-1.7
ZST	Bratislava	1.89	211	eP	Pn	19 47 29.7	-0.2
ZST				e		19 47 52.7	
ZST				smax			
	comp=N,89nm,0.6s						
TREC	Trest	2.06	256	ePN	Pn	19 47 32.0	-0.2
TREC				ePG	Pg	19 47 34.1	-1.7
TREC				eSG	Sg	19 48 03.0	+0.5
PENC	Penc	2.10	166⇑	iP	Pn	19 47 32.8	0.0
PSZ	Piszkesteto	2.12	154⇓	ePB	Pb	19 47 32.9	-2.6
PSZ				eSB	Sb	19 48 00.9	-1.4
PSZ	Piszkesteto	2.12	154	eP	Pn	19 47 32.7	-0.3
CRVS	Cervenica-Dubn	2.13	115	ePN	Pn	19 47 33.0	-0.1
CRVS				ePG	Pg	19 47 36.6	-0.5
CRVS				eSN	Sn	19 48 03.3	+3.1
CRVS	Cervenica-Dubn	2.13	115	eP	Pn	19 47 33.0	-0.1
CRVS				e		19 48 03.3	
CRVS				smax			
	comp=N,80nm,1.0s						
CRVS	Cervenica-Dubn	2.13	115	ePg	Pg	19 47 36.6	-0.5
CRVS				eS	Sn	19 48 03.3	+3.1
	comp=N,80nm,1.0s						
BUD	Budapest	2.37	172⇑	ePB	Pb	19 47 41.1	+1.2
PKSG		2.45	182⇑	eP	Pn	19 47 37.1	-0.4
SOP	Sopron	2.52	212⇑	iPn	Pn	19 47 38.8	+0.3
SOP				eSn	Sn	19 48 10.2	+0.3
PRU	Pruhonice	2.59	275	ePN	Pn	19 47 39.0	-0.5
PRU				ePG	Pg	19 47 44.9	-1.1
PRU				eSG	Sg	19 48 20.8	+1.3
	comp=N,124nm,1.2s						
PRU	Pruhonice	2.59	275	eP	Pn	19 47 39.0	-0.5
PRU				e		19 48 20.8	
PRU				smax			
	comp=N,124nm,1.2s						
CONA	Conrad Observa	2.60	224	ePn	Pn	19 47 39.3	-0.4
	SNR=39						
CONA				⇑iSn	Sn	19 48 10.8	-1.1
KOLS	Kolonicke sedl	2.60	109	ePN	Pn	19 47 40.0	+0.4
KOLS				ePG	Pg	19 47 47.2	+1.0
KOLS				eSG	Sg	19 48 23.1	+3.2
KOLS	Kolonicke sedl	2.60	109	eP	Pn	19 47 40.0	+0.4
KOLS				pmax	pmax		
	comp=N,45nm,0.7s						
KOLS	Kolonicke sedl	2.60	109	ePn	Pn	19 47 40.0	+0.4
KOLS				ePg	Pg	19 47 47.3	+1.1
KOLS				eSg	Sg	19 48 23.1	+3.2
PVCC	Panska Ves	2.65	287	ePN	Pn	19 47 40.4	+0.2
PVCC				ePG	Pg	19 47 46.3	-0.7
PVCC				eSG	Sg	19 48 22.4	+1.1
PRA	Prague	2.66	277	PG	Pg	19 47 47.0	-0.4
PRA				SG	Sg	19 48 26.0	+4.1
KWP	Kalwaria	2.71	93	ePn	Pn	19 47 46.3	+5.1
BRG	Berggiesshubel	3.12	291	ePn	Pn	19 47 50.3	+3.5
BRG				eSg	Sg	19 48 36.1	-0.6
BRG	Berggiesshubel	3.12	291	PG	Pg	19 47 53.6	-2.5
BRG				SG	Sg	19 48 35.6	-1.0
	comp=N,29nm,0.7s						
BRG	Berggiesshubel	3.12	291	Pg	Pg	19 47 53.7	-2.5
BRG				Sg	Sg	19 48 36.1	-0.6
ARSA	Arzberg	3.27	219⇓	iPn	Pn	19 47 48.1	-0.7
	SNR=6.9						
ARSA				⇓iSg	Sg	19 48 39.5	-1.9
	comp=N,12nm,0.5s						
ARSA	Arzberg	3.27	219	Pn	Pn	19 47 48.1	-0.7
	comp=N,6.0nm,9.0s						
ARSA				Sg	Sg	19 48 39.5	-1.9
	comp=N,12nm,0.5s						
KHC	Kasperske Hory	3.31	260	ePN	Pn	19 47 49.7	+0.3
KHC				ePG	Pg	19 47 56.8	-3.0
KHC				eSG	Sg	19 48 42.3	-0.4
	comp=N,69nm,0.9s						
GEC2	GERESS Array S	3.31	254	ePn	Pn	19 47 49.4	0.0
GEC2	GERESS Array S	3.31	254	ePn	Pn	19 47 49.4	0.0
GERES	GERESS Array B	3.31	254	Pn	Pn	19 47 49.5	+0.1
	comp=N,1.2nm,0.3s,baz=64,slow=14,SNR=25						
GERES				Pg	Pg	19 47 58.9	-1.0
	comp=N,13nm,0.3s,baz=69,slow=16,SNR=113						
GERES				Lg		19 48 42.4	
	comp=N,16nm,0.3s,baz=72,slow=27,SNR=12						
GERES	GERESS Array B	3.31	254	Pg	Pg	19 47 58.9	-1.0
MOA	Molln	3.45	236⇑	iPn	Pn	19 47 50.8	-0.5
	SNR=12						
MOA				⇑iSg	Sg	19 48 47.3	+0.1
	comp=N,29nm,0.5s						
MOA	Molln	3.45	236	Pn	Pn	19 47 50.8	-0.5
	comp=N,11nm,6.0s						
MOA				Sg	Sg	19 48 47.3	+0.1
	comp=N,29nm,0.5s						
FBE	Freiberg	3.49	290	eSg	Sg	19 48 47.6	-1.0
LVV	L'vov	3.56	88	eP	Pn	19 47 53.1	+0.3
PKSM	Moragy	3.62	179⇑	ePn	Pn	19 47 53.2	-0.5
PKSM				eSn	Sn	19 48 31.8	-5.4
WET	Wettzell	3.75	262	ePn	Pn	19 47 55.2	-0.3
WET	Wettzell	3.75	262	ePn	Pn	19 47 55.2	-0.3
CLL	Collm	3.83	295	ePn	Pn	19 47 58.0	+1.5
CLL				ePg	Pg	19 48 08.0	-1.7
CLL				i x	x	19 48 11.9	
CLL				eSn	Sn	19 48 40.0	-2.1
CLL				i Sg	Sg	19 49 03.3	+4.1
	comp=Z,42nm,0.6s						
CLL				i x	x	19 49 11.2	
CLL	Collm	3.83	295	eP	Pn	19 47 58.0	+1.5
CLL				e		19 48 40.0	
CLL	Collm	3.83	295	ePn	Pn	19 47 58.0	+1.5
CLL				ePg	Pg	19 48 08.0	-1.7
CLL				eSn	Sn	19 48 40.0	-2.1
CLL				i Sg	Sg	19 49 03.3	+4.1
CLL	Collm	3.83	295	ePg	Pg	19 48 08.0	-1.7
CLL				eS	Sn	19 48 40.0	-2.1
CLL				Sg	Sg	19 49 01.1	+1.9
NKC	Novy Kostel	3.95	278	ePN	Pn	19 47 59.5	+1.4
NKC				ePG	Pg	19 48 09.8	-2.2
NKC				eSG	Sg	19 49 05.0	+1.8
	comp=Z,47nm,0.7s						
TANN	Tannenbergstha	3.95	281	ePn	Pn	19 47 57.8	-0.4
TANN				eSg	Sg	19 49 01.6	-1.8
GUNZ	Gunzen	4.03	280	ePn	Pn	19 47 59.1	-0.2
WERD	Werda	4.06	281	ePn	Pn	19 48 00.7	+1.1
ROTZ	Rotzenmuhle	4.10	271	ePn	Pn	19 47 59.7	-0.6
DRGR		4.12	136⇓	iP	Pn	19 48 01.0	+0.4
MANZ	Manzenberg	4.16	275	ePn	Pn	19 48 00.8	-0.3
OBKA	Obir	4.26	220⇓	iPn	Pn	19 48 02.2	-0.3
OBKA				⇑iSg	Sg	19 49 14.3	+1.0
	comp=Z,7.1nm,0.6s						
KBA	Koelnbreinsper	4.42	233⇓	iPn	Pn	19 48 05.0	+0.4
	SNR=13						
KBA				⇑iSg	Sg	19 49 19.8	+1.4
	comp=Z,19nm,0.5s						
KBA	Koelnbreinsper	4.42	233	Pn	Pn	19 48 05.0	+0.4
	comp=Z,13nm,2.0s						
KBA				Sg	Sg	19 49 19.8	+1.4
	comp=Z,19nm,0.5s						
MOX	Moxa	4.52	283	ePn	Pn	19 48 06.1	+0.2
MOX	Moxa	4.52	283	ePN	Pn	19 48 06.3	+0.3
MOX				ePG	Pg	19 48 22.9	0.0
MOX				eSG	Sg	19 49 25.0	+3.5
MOX	Moxa	4.52	283	Pn	Pn	19 48 06.1	+0.1
BZS	Buzias	4.70	153⇓	iP	Pn	19 48 08.9	+0.4
GRF	Grafenberg Arr	4.75	271	eSg	Sb	19 49 21.2	+3.1
BURAR	Bucovina Array	4.95	114⇓	iP	Pn	19 48 12.4	+0.5
DAVA	Damuels	6.29	249⇑	iPn	Pn	19 48 30.1	-0.2
DAVA				⇑iSn	Sn	19 49 42.8	0.0
DAVA				⇑iSg	Sg	19 50 20.7	+2.4
	comp=Z,20nm,0.7s						
AKASG	Malin Array Be	6.91	79	Pn	Pn	19 48 36.7	-2.1
	comp=Z,1.4nm,0.3s,baz=261,slow=13,SNR=10.0						
CDF	Champ du Feu	7.53	263	ePg	Pg	19 49 18.5	-2.0
CDF				eSg	Sg	19 50 52.8	-5.3
	comp=Z,9.9nm,0.7s						
CDF	Champ du Feu	7.53	263	ePg	Pg	19 49 18.5	-2.0
CDF				eSg	Sg	19 50 52.8	-5.3
	comp=Z,4.9nm,0.7s						
WTSB	Winterswijk	7.72	291	ePg	Sb	19 50 34.4	-9.3
HINF	Hinteralfeld	7.97	260	ePn	Pn	19 48 52.9	-0.5
HINF				eSg	Sg	19 51 08.1	-4.3
	comp=Z,8.9nm,0.7s						
HINF	Hinteralfeld	7.97	260	ePn	Pn	19 48 52.9	-0.5
HINF				eSg	Sg	19 51 08.1	-4.3
	comp=Z,4.4nm,0.7s						
HAU	Haudompre	8.24	262	ePn	Pn	19 48 57.4	+0.3
HAU				eSg	Sg	19 51 17.1	-3.7
	comp=Z,15nm,0.6s						
HAU	Haudompre	8.24	262	ePn	Pn	19 48 57.4	+0.3
HAU				eSg	Sg	19 51 17.1	-3.7
	comp=Z,7.6nm,0.6s						
LPG	La Plagne	9.06	246	ePn	Pn	19 49 10.2	+1.9
LPL	La Plagne	9.06	246	ePn	Pn	19 49 10.2	+1.9
MBDF	Montbardon	9.49	242	ePn	Pn	19 49 14.1	-0.1
HFS	Hagfors	10.69	347	Pn	Pn	19 49 29.6	-1.0
	comp=Z,0.2nm,0.3s,baz=166,slow=13,SNR=6.6						
NOA	NORSAR Array B	11.96	343	Pn	Pn	19 49 46.7	-1.4
	comp=Z,0.3nm,0.3s,baz=148,slow=12,SNR=6.0						
OBN	Obninsk	12.19	57	eP	Pn	19 49 48.2	-2.9
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN	Obninsk	12.19	57	eP	Pn	19 49 48.2	-2.9
	comp=Z,6.0nm,0.9s						
FINES	FINESS Array B	12.38	17	Pn	Pn	19 49 51.0	-2.8
	comp=Z,0.4nm,0.3s,baz=184,slow=12,SNR=22						
FINES				Sn	Sn	19 52 02.0	-10
	comp=Z,0.1nm,0.3s,baz=180,slow=25,SNR=3.2						
ARCES	ARCESS Array B	20.05	7	P	P	19 51 30.4	-0.5
	comp=Z,1.3nm,0.6s,baz=206,slow=11,SNR=15						
ARCES	ARCESS Array B	20.05	7	P	P	19 51 30.4	-0.6
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TORD	Torodi Ar. Bea	39.11	207	P	P	19 54 25.4	+0.1
	comp=Z,0.4nm,0.7s,mb3.2,baz=13,slow=7.8,SNR=8.7						

ISCJB ***17*** *19:48:01.2±3.5, 1855N±008×1466E±04, h72km±25km, mb3.8/11, Error ellipse: s-maj=64.3km s-min=13.2km az=177.4*
NEIC ***17*** *19:48:03.2±2.8, 1852N×14655E, h74km±19km, mb4.3/2, Error ellipse: s-maj=57.7km s-min=10.4km az=86.0*
IDC ***17*** *19:48:04.0±4.9, 1854N×14651E, h79km±37km, mb3.6/9, mb1 3.7/11, mb1mx3.6/20, mbtmp3.9/11, MS3.2/1, Ms1 3.2/1, ms1mx2.4/30, Error ellipse: s-maj=71.6km s-min=15.0km az=85.0*
ISC 17 19:48:01.5±3.3**, 1859N**±008×**1468E**±04**, h64**km±23km**, n14,** σ**0.70**/15**, mb3.9**/11**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.30**	**201**	P	**Pn**	**19 49 17.1**	**-1.0**
	10nm,0.3s,baz=104,slow=1.1,SNR=12						
GUMO				S	**Sn**	**19 50 18.3**	**+0.4**
	5.6nm,0.3s,baz=23,slow=22,SNR=2.4						
MJAR	**Matsushiro Arr**	**19.41**	**339**	P	**Pn**	**19 52 25.1**	**+1.0**
	0.2nm,0.3s,baz=152,slow=10,SNR=3.8						
WRAB	**Tennant Creek**	**40.18**	**198**	*e*P	**P**	**19 55 31.7**	**+0.3**
	3.7nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**40.19**	**198**	P	**P**	**19 55 31.3**	**-0.2**
	1.4nm,0.8s,mb3.8,baz=19,slow=8.2,SNR=9.7						
FITZ	**Fitzroy Crossi**	**41.97**	**211**	P	**P**	**19 55 46.1**	**0.0**
	1.3nm,0.5s,mb3.8,baz=24,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**43.84**	**197**	P	**P**	**19 56 01.6**	**+0.4**
	0.3nm,0.6s,mb3.2,baz=15,slow=8.2,SNR=4.9						
SONM	**Songino Array**	**43.87**	**321**	P	**P**	**19 56 01.9**	**+0.4**
	0.6nm,0.7s,mb3.4,baz=134,slow=11,SNR=5.5						
SONM				LR	LR	20 14 31.8	
	comp=Z,30nm,19.3s,baz=260,slow=36						
MBWA	**Marble Bar**	**47.57**	**215**	*e*P	**P**	**19 56 30.1**	**-0.5**
	1.4nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**50.42**	**186**	P	**P**	**19 56 53.5**	**+1.0**
	1.7nm,0.8s,mb4.1,baz=354,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**59.28**	**314**	P	**P**	**19 57 56.2**	**-0.2**
	0.5nm,0.6s,mb3.7,baz=70,slow=11,SNR=5.6						
BVAR	**Borovoye Array**	**67.21**	**320**	P	**P**	**19 58 48.7**	**-0.2**
	1.4nm,0.6s,mb4.2,baz=101,slow=6.9,SNR=9.4						
ARCES	**ARCESS Array B**	**82.91**	**342**	P	**P**	**20 00 19.9**	**+0.7**
	1.6nm,0.6s,mb4.3,baz=69,slow=7.9,SNR=17						
JOF	**Joensuu**	**84.55**	**335**	*e*p	**P**	**20 00 26.0**	**-1.6**
FINES	**FINESS Array B**	**87.41**	**336**	P	**P**	**20 00 41.0**	**-0.7**
	0.8nm,0.6s,mb4.1,baz=86,slow=4.3,SNR=9.8						

IDC ***17*** *19:55:38.1±1.2, 1108S×11844E, h0km, mb4.0/3, mb1 4.0/5, mb1mx3.7/15, mbtmp3.8/5, ML3.4/3, Error ellipse: s-maj=54.4km s-min=20.5km az=60.0*
ISCJB ***17*** *19:55:44.6±3.6, 112S±0.1×1187E±0.1, h75km±35km, mb3.9/3, Error ellipse: s-maj=24.8km s-min=16.4km az=64.3*
ISC 17 19:55:48.5±3.0**, 112S**±01×**1190E**±01**, h103**km±30km**, n9,** σ**0.60**/12**, mb3.9**/3**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.34**	**138**	*e*P	**Pn**	**19 58 00.5**	**+0.3**
	2.9nm,0.3s						
FITZ				*e*S	**Sn**	**19 59 42.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**9.34**	**138**	Pn	**Pn**	**19 58 00.5**	**+0.3**
	0.4nm,0.3s,baz=315,slow=10,SNR=23						
FITZ				Sn	**Sn**	**19 59 43.5**	**+0.1**
	1.5nm,0.3s,baz=175,slow=19,SNR=13						
WRA	**Warramunga Arr**	**17.08**	**122**	P	**Pn**	**19 59 45.6**	**+4.8**
	0.1nm,0.3s,baz=295,slow=13,SNR=5.0						
WRA				S	**S**	**20 02 51.6**	**+0.2**
	0.2nm,0.3s,baz=289,slow=23,SNR=4.4						
ASAR	**Alice Springs**	**18.79**	**133**	P	**P**	**20 00 05.9**	**+6.2**
	0.1nm,0.3s,baz=301,slow=11,SNR=14						
KLBR	**Kellerberrin**	**20.29**	**183**	*e*P	**P**	**20 00 15.8**	**-0.2**
	4.9nm,0.4s						
KLBR				*e*S	Sx	20 03 36.4	
MUN	**Mundaring**	**20.81**	**187**	*e*P	**P**	**20 00 20.9**	**-0.7**
MUN				*e*S	Sx	20 03 48.4	
NWAO	**Narrogin (SRO)**	**21.66**	**184**	P	**P**	**20 00 31.6**	**+1.0**
	4.1nm,0.3s,mb4.2,baz=5.1,slow=11,SNR=13						
NWAO				S	Sx	20 04 07.7	
	3.0nm,0.3s,baz=94,slow=16,SNR=5.6						
MKAR	**Makanchi Array**	**66.46**	**333**	P	**P**	**20 06 27.3**	**+0.5**
	0.5nm,0.5s,mb3.6,baz=140,slow=7.1,SNR=14						
ZAL	**Zalesovo**	**71.13**	**339**	P	**P**	**20 06 55.1**	**-0.7**
	0.5nm,0.3s,mb3.8,baz=311,slow=11,SNR=2.6						

IDC 17 19:58:02.1±2.9**, 1865N**×**14656E, h0**km**, mb4.0**/5**, mb1 4.1**/6**, mb1mx3.8**/19**, mbtmp4.0**/6**, ML3.7**/1**, Error ellipse: s-maj=129.9km s-min=21.1km az=96.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.29**	**198**	Pn	Pn	19 59 20.2	-2.1
	2.4nm,0.3s,baz=30,slow=14,SNR=2.2						
GUMO				Sn	Sn	20 00 26.1	+2.2
	2.9nm,0.3s,baz=181,slow=24,SNR=2.2						
WRA	**Warramunga Arr**	**40.18**	**198**	P	P	20 05 41.1	+1.1
	0.9nm,0.8s,baz=20,slow=9.6,SNR=3.2						
FITZ	**Fitzroy Crossi**	**41.91**	**211**	P	P	20 05 54.6	+0.3
	1.5nm,0.9s,baz=14,slow=17,SNR=4.4						
BVAR	**Borovoye Array**	**67.03**	**320**	P	P	20 08 57.4	+0.4
	0.7nm,0.6s,baz=92,slow=10,SNR=5.8						
ARCES	**ARCESS Array B**	**82.79**	**342**	P	P	20 10 28.3	+0.2
	1.9nm,0.9s,baz=65,slow=8.6,SNR=9.1						
JOF	**Joensuu**	**84.41**	**335**	*e*p	P	20 10 34.3	-2.1
	0.8nm,0.4s						
FINES	**FINESS Array B**	**87.27**	**336**	P	P	20 10 49.0	-1.5
	1.2nm,0.8s,baz=73,slow=4.8,SNR=5.1						

ISCJB ***17*** *20:11:50.4±0.7, 5656S±009×56W±02, h10km, mb4.1/8, MS4.6/21, Error ellipse: s-maj=17.7km s-min=12.3km az=143.9*
IDC ***17*** *20:11:50.7±0.7, 5661S×561W, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.0/19, mbtmp4.1/9, ML4.4/1, MS4.5/22, Ms1 4.5/22, ms1mx4.5/23, Error ellipse: s-maj=25.4km s-min=19.3km az=40.0*
NEIC ***17*** *20:11:52.2±0.5, 5660S×554W, h10km, mb4.3/1, Error ellipse: s-maj=16.4km s-min=12.3km az=64.0*
HRVD ***17*** *20:11:52.2±0.1, 5682S×563W, h12km, MW5.3/101, Centroid moment Tensor Solution. LP body waves: s63,c94; Mantle waves: s101,c156; Half duration: 1.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.16±.02; $M_{\theta\theta}$-0.16±.02; $M_{\phi\phi}$0.31±.02; $M_{r\theta}$0.10±.05; $M_{\theta\phi}$0.99±.01; $M_{\phi r}$-0.20±.04; Best double couple: $M_0$1.04600×10^{17} NP1: ϕ_s263.00000°, δ77.00000°, λ-7.00000°. NP2: ϕ_s354.00000°, δ83.00000°, λ-167.00000°. Principal axes: T 1.1040, Plg4.0000°, Azm128.0000°; N -0.1150, Plg75.0000°, Azm21.0000°; P -0.9890, Plg14.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 17 20:11:52.0±0.7**, 5658S**±009×**55W**±02**, h10**km**, n39,** σ**0.60**/20**, mb4.1**/8**, MS4.6**/21**, 2C-2D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.18**	**184**	⇓*i*	**Pn**	**20 15 13.6**	**+0.8**
VNA1				*e*		20 15 15.3	
VNA1				*e*		20 15 16.9	
VNA1				*e*		20 15 19.3	
VNA1				*e*		20 15 24.3	
VNA1				*e*		20 15 28.5	
VNA1				*e*		20 15 39.5	
VNA1				*e*		20 15 50.2	
SNAA	**Sanae**	**15.20**	**177**	Pn	**Pn**	**20 15 26.4**	**-0.2**
	1.8nm,0.3s,baz=4.8,slow=12,SNR=73						
SNAA				Sn	**Sn**	**20 17 57.6**	**-17**
	0.2nm,0.3s,baz=192,slow=18,SNR=3.3						
SNAA				LR	LR	20 19 41.7	
	comp=Z,306nm,21.1s,baz=9.7,slow=31						
SNAA	**Sanae**	**15.20**	**177**	⇓*i*	**Pn**	**20 15 27.2**	**+0.6**
SNAA				*e*		20 15 28.3	
SNAA				*e*		20 15 32.8	
SNAA				*e*		20 15 38.3	
SNAA				*e*		20 15 48.7	
SNAA				*e*		20 15 58.7	
SNAA				*e*		20 18 00.6	
SNAA				*e*		20 18 06.0	
SNAA				*e*		20 18 08.6	
SNAA				*e*		20 18 11.5	
SYO	**Syowa Base**	**23.40**	**140**	⇑*e*P	**P**	**20 17 00.3**	**-0.8**
SYO	**Syowa Base**	**23.40**	**140**	⇑*e*P	**P**	**20 17 05.6**	**+4.5**
PMSA	**Palmer Station**	**28.80**	**229**	LR	LR	20 27 17.5	
	comp=Z,1μm,20.6s,MS4.4,baz=99,slow=32						
SUR	**Sutherland**	**30.27**	**48**	LR	LR	20 27 07.7	
	comp=Z,1μm,21.5s,MS4.5,baz=190,slow=30						
MAW	**Mawson**	**32.06**	**138**	P	**P**	**20 18 19.1**	**+0.2**
	13nm,0.8s,mb4.8,baz=262,slow=8.9,SNR=43						
MAW				LR	LR	20 28 49.0	
	comp=Z,649nm,21.0s,MS4.3,baz=264,slow=32						
MAW	**Mawson**	**32.06**	**138**	*e*P	**P**	**20 18 18.6**	**-0.3**
MAW				LR	LR	20 28 49.0	
BOSA	**Boshof**	**35.42**	**51**	LR	LR	20 30 14.8	
	comp=Z,618nm,21.5s,MS4.3,baz=210,slow=31						
MATP	**Matopo**	**44.01**	**49**	P	**P**	**20 20 00.2**	**+0.6**
	1.6nm,0.8s,mb3.8,baz=217,slow=11,SNR=4.1						
MATP	**Matopo**	**44.01**	**49**	P	**P**	**20 20 00.2**	**+0.6**
PLCA	**Paso Flores**	**44.04**	**262**	LR	LR	20 35 34.5	
	comp=Z,359nm,20.6s,MS4.3,baz=127,slow=32						
VNDA	**Vanda**	**45.93**	**176**	P	**P**	**20 20 14.0**	**-0.9**
	2.2nm,1.0s,mb4.0,baz=222,slow=6.8,SNR=8.7						
VNDA				LR	LR	20 37 54.5	
	comp=Z,561nm,18.7s,MS4.5,baz=195,slow=34						
VNDA	**Vanda**	**45.93**	**176**	*e*P	**P**	**20 20 14.7**	**-0.2**
	3.3nm,0.9s,mb4.3						
VNDA				LR	LR	20 37 54.5	
CPUP	**Villa Florida**	**47.59**	**287**	P	**P**	**20 20 28.8**	**+0.9**
	0.4nm,0.3s,mb3.9,baz=102,slow=4.7,SNR=4.9						
CPUP				LR	LR	20 36 44.7	
	comp=Z,905nm,21.2s,MS4.7,baz=130,slow=31						
CFAA	**Coronel Fontan**	**49.41**	**273**	P	**P**	**20 20 41.5**	**-0.4**
	1.1nm,0.8s,mb3.9,baz=144,slow=6.2,SNR=12						
CFAA	**Coronel Fontan**	**49.41**	**273**	P	**P**	**20 20 41.5**	**-0.4**
BDFB	**Brasilia**	**51.96**	**304**	LR	LR	20 38 31.8	
	comp=Z,851nm,21.9s,MS4.7,baz=167,slow=31						
LPAZ	**La Paz**	**61.54**	**284**	P	**P**	**20 22 08.5**	**-0.7**
	4.9nm,0.9s,mb4.6,baz=159,slow=5.1,SNR=14						
LPAZ				LR	LR	20 48 07.9	
	comp=Z,332nm,19.1s,MS4.5,baz=131,slow=35						
LPAZ	**La Paz**	**61.54**	**284**	P	**P**	**20 22 08.5**	**-0.7**
LPAZ				LR	LR	20 48 07.9	
DBIC	**Dimbokro**	**63.03**	**1**	LR	LR	20 43 17.7	
	comp=Z,154nm,19.5s,MS4.2,baz=163,slow=30						
KMBO	**Kilima Mbogo**	**65.01**	**48**	LR	LR	20 48 38.7	
	comp=Z,840nm,19.2s,MS5.0,baz=95,slow=34						
TORD	**Torodi Ar. Bea**	**69.72**	**7**	P	**P**	**20 23 02.2**	**+0.1**
	0.4nm,0.8s,mb3.4,baz=196,slow=8.3,SNR=3.6						
TORD				LR	LR	20 48 59.5	
	comp=Z,229nm,20.1s,MS4.4,baz=175,slow=32						
TORD	**Torodi Ar. Bea**	**69.72**	**7**	P	**P**	**20 23 02.2**	**+0.1**
TORD				LR	LR	20 48 59.5	
ROSC	**El Rosal**	**82.58**	**290**	LR	LR	21 02 07.4	
	comp=Z,370nm,18.4s,MS4.8,baz=185,slow=37						
URZ	**Urewera**	**85.50**	**182**	LR	LR	21 01 02.7	
	comp=Z,299nm,18.7s,MS4.7,baz=139,slow=34						
STKA	**Stephens Creek**	**87.57**	**152**	LR	LR	20 58 13.4	
	comp=Z,332nm,21.6s,MS4.7,baz=201,slow=32						
RKT	**Rikitea**	**89.92**	**225**	*e*SS	SS	20 41 39.6	-1.9
	159nm,28.0s						
RKT				*e*LR	LR	20 53 33.3	
	446nm,35.2s						
KEST	**Kesra**	**92.81**	**12**	LR	LR	21 02 44.5	
	comp=Z,47nm,18.2s,MS4.0,baz=209,slow=33						
ASAR	**Alice Springs**	**93.03**	**143**	P	**P**	**20 25 05.3**	**-0.5**
	0.4nm,0.7s,mb4.0,baz=192,slow=4.7,SNR=5.0						
RAO	**Raoul Island**	**94.27**	**187**	LR	LR	21 04 25.4	
	comp=Z,2μm,21.4s,MS5.4,baz=160,slow=34						
FITZ	**Fitzroy Crossi**	**95.11**	**134**	LR	LR	21 03 05.6	
	comp=Z,174nm,19.2s,MS4.5,baz=144,slow=32						
ESDC	**Sonseca Array**	**95.89**	**1**	LR	LR	21 07 13.3	
	comp=Z,142nm,19.4s,MS4.5,baz=150,slow=35						
WRA	**Warramunga Arr**	**96.63**	**142**	LR	LR	21 01 12.6	
	comp=Z,226nm,21.2s,MS4.6,baz=160,slow=31						
RAR	**Rarotonga**	**99.53**	**204**	LR	LR	21 01 28.3	
	comp=Z,238nm,21.8s,MS4.7,baz=49,slow=30						
CHKZ	**Chkalovo**	**126.19**	**46**	PKPdf	PKPdf	20 30 53.8	-0.9
YKA	**Yellowknife Ar**	**145.26**	**310**	PKPbc	PKPbc	20 31 30.0	+0.4
	2.5nm,0.9s,baz=104,slow=2.6,SNR=3.1						
MJAR	**Matsushiro Arr**	**148.54**	**114**	PKPbc	PKPbc	20 31 38.2	-0.8
	1.8nm,0.9s,baz=241,slow=2.5,SNR=3.2						

ISCJB ***17*** *20:14:09.9±0.6, 3889N±003×2353E±004, h12km±4km, Error ellipse: s-maj=5.6km s-min=4.4km az=17.2*
ATH ***17*** *20:14:10.2, 3890N×2350E, h27km±1km, MD3.2/7, ML3.0*
NEIC ***17*** *20:14:10.1, 3888N×2352E, h5km, ML3.0(ATH), ML3.2(THE), After THE.*
CSEM ***17*** *20:14:10.2±0.1, 3886N×2354E, h8km, ML3.4, Error ellipse: s-maj=1.8km s-min=1.4km az=84.0*
THE ***17*** *20:14:10.1, 3888N×2352E, h5km, ML3.4*
ISC 17 20:14:10.2±0.6**, 3888N**±003×**2355E**±004**, h13**km±4km**, n19,** σ**0.55**/28**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.39**	**41**	*e*Pg	**Pg**	**20 14 17.8**	**-0.3**
AOS				*e*Sg	**Sg**	**20 14 23.4**	**0.0**
LKR	**Lokris**	**0.48**	**242**	*e*PB	**Pg**	**20 14 20.1**	**+0.3**
LKR				*e*SB	**Sg**	**20 14 27.3**	**+1.1**
NEO	**Neokhori**	**0.50**	**330**	*e*PB	**Pg**	**20 14 20.4**	**+0.4**
NEO				*e*SB	**Sg**	**20 14 27.0**	**+0.3**
XOR	**Xorichti**	**0.56**	**331**	*e*Pg	**Pg**	**20 14 21.3**	**+0.1**
XOR				*e*Sg	**Sg**	**20 14 28.6**	**-0.1**
PTL	**Penteli**	**0.86**	**163**	*e*PN	**Pn**	**20 14 27.5**	**-0.6**
ATH	**Athens Observa**	**0.91**	**172**	*e*PN	**Pn**	**20 14 27.9**	**-0.9**
AGG	**Agios Georgios**	**0.96**	**279**	*e*Pg	**Pg**	**20 14 27.7**	**-1.0**
AGG				*e*Sg	**Sg**	**20 14 40.4**	**-0.9**
PAIG	**Paliouri**	**1.05**	**6**	*e*Pg	**Pg**	**20 14 30.1**	**-0.5**
PAIG				*e*Sg	**Sg**	**20 14 44.9**	**+0.6**
KVR	**Kavouri**	**1.06**	**170**	*e*PN	**Pn**	**20 14 31.0**	**+0.2**
NAIG	**Nisos Aigina**	**1.12**	**182**	*e*PN	**Pn**	**20 14 32.0**	**+0.4**
LIT	**Litokhoron**	**1.47**	**327**	*e*Pg	**Pn**	**20 14 36.2**	**-0.2**
LIT				*e*Sg	**Sg**	**20 14 57.4**	**-0.2**
OUR	**Ouranopolis**	**1.49**	**13**	*e*Pg	**Pn**	**20 14 36.7**	**-0.1**
	comp=Z,8.0nm,0.1s						
PLG	**Polygyros**	**1.50**	**357**	*e*PN	**Pn**	**20 14 36.6**	**-0.2**
HORT	**Hortiatis**	**1.75**	**349**	*e*Pb	**Pn**	**20 14 40.5**	**+0.1**
HORT				*e*Sb	**Sb**	**20 15 03.0**	**-1.1**
CHOS	**Chios island**	**2.02**	**103**	*e*Pn	**Pn**	**20 14 44.1**	**+0.1**
GRG	**Griva**	**2.26**	**337**	*e*Pn	**Pn**	**20 14 47.8**	**+0.6**
GRG				*e*Sn	**Sn**	**20 15 15.5**	**+0.5**
KNT	**Kendrikon**	**2.34**	**348**	*e*Pn	**Pn**	**20 14 49.2**	**+0.9**
MMB	**Musomiste**	**2.71**	**3**	*e*Pn	**Pn**	**20 14 53.9**	**+0.3**
MMB	**Musomiste**	**2.71**	**3**	*e*Pn	**Pn**	**20 14 53.8**	**+0.3**

IDC ***17*** *20:32:07.4±0.8, 5209N×17260W, h0km, mb3.9/11, mb1 4.1/12, mb1mx3.9/26, mbtmp3.9/12, ML3.8/1, MS3.6/3, Ms1 3.6/3, ms1mx3.1/35, Error ellipse: s-maj=30.4km s-min=16.8km az=166.0*
ISCJB ***17*** *20:32:11.7±0.7, 521N±02×17242W±010, h33km, mb4.0/14, MS3.9/7, Error ellipse: s-maj=23.0km s-min=6.5km az=149.9*
NEIC ***17*** *20:32:13.1±1.2, 5206N×17246W, h39km±10km, mb4.1/1, Error ellipse: s-maj=22.8km s-min=9.3km az=166.0*
BJI ***17*** *20:32:13.1, 5210N×17250W, h38km, mB4.6, mb4.6, Ms4.5, Msz4.2*
ISC 17 20:32:13.3±0.7**, 522N**±02×**17243W**±010**, h35**km**, n28,** σ**1.22**/25**, mb4.0**/14**, MS3.9**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**2.33**	**68**	P	**Pn**	**20 32 47.1**	**-2.0**
NIKO				S	**Sn**	**20 33 15.2**	**-1.3**
AKUT	**Akutan**	**4.47**	**61**	*e*P	**Pn**	**20 33 19.8**	**+1.3**
AMKA	**Amchitka**	**5.19**	**265**	P	**Pn**	**20 33 28.3**	**-0.2**
KDAK	**Kodiak Island**	**12.69**	**56**	Pn	**Pn**	**20 35 12.8**	**+1.5**
	0.5nm,0.3s,baz=292,slow=7.5,SNR=4.8						
SVW2	**Sparrevohn**	**12.85**	**39**	*e*P	**Pn**	**20 35 18.0**	**+4.5**
INK	**Inuvik**	**24.57**	**34**	P	**P**	**20 37 29.2**	**-0.7**
	2.2nm,0.5s,mb3.9,baz=269,slow=6.3,SNR=12						
INK				LR	LR	20 48 10.4	
	comp=Z,86nm,18.6s,MS3.3,baz=211,slow=39						
INK	**Inuvik**	**24.57**	**34**	*e*P	**P**	**20 37 28.3**	**-1.5**
INK				LR	LR	20 48 10.4	
DLBC	**Dease Lake**	**24.60**	**58**	P	**P**	**20 37 32.1**	**+2.0**
	2.5nm,0.4s,mb4.1,baz=134,slow=25,SNR=7.0						
DLBC				LR	LR	20 47 18.1	
	comp=Z,106nm,19.3s,MS3.4,baz=258,slow=37						
NEW	**Newport**	**34.88**	**74**	P	**P**	**20 39 01.6**	**+0.4**
	2.8nm,0.5s,mb4.4,baz=194,slow=3.3,SNR=3.8						
MJAR	**Matsushiro Arr**	**37.81**	**266**	P	**P**	**20 39 25.9**	**-0.4**
	1.0nm,0.7s,mb3.7,baz=36,slow=6.1,SNR=4.7						
MDJ	**Mudanjiang**	**38.31**	**282**	P	**P**	**20 39 29.8**	**-0.7**
NVAR	**Mina Array Bea**	**39.55**	**88**	P	**P**	**20 39 41.1**	**+0.3**
	0.6nm,0.6s,mb3.5,baz=285,slow=9.3,SNR=4.5						
PDAR	**Pinedale Array**	**42.29**	**77**	P	**P**	**20 40 03.6**	**+0.2**
	3.7nm,0.5s,mb4.2,baz=304,slow=4.3,SNR=40						
SONM	**Songino Array**	**49.78**	**299**	LR	LR	21 01 59.9	
	comp=Z,93nm,21.0s,MS3.8,baz=228,slow=36						
NJ2	**Nanjing**	**52.71**	**276**	*e*P	**P**	**20 41 28.3**	**+4.0**
NJ2				PP	PP	20 43 29.0	+5.3
NJ2				S	**S**	**20 48 56.0**	**+6.2**
NJ2				LR	LR		
	comp=N,310nm,25.1s,MS4.3						
NJ2				LR	LR		
	comp=E,130nm,25.4s,MS4.3						
NJ2				LR	LR		
	comp=Z,260nm,24.5s,MS4.2						
LZH	**Lanzhou**	**58.91**	**290**	*e*P	**P**	**20 42 13.3**	**+4.5**
LZH				*e*PP	PP	20 44 25.3	+6.2
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,57nm,6.8s						
LZH				LR	LR		
	comp=N,263nm,15.2s						
LZH				LR	LR		
	comp=Z,315nm,18.3s,MS4.5						
BVAR	**Borovoye Array**	**62.76**	**323**	P	**P**	**20 42 34.3**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.8,baz=5.7,slow=4.3,SNR=3.3						
ZRNK	**Zerenda**	**63.33**	**324**	*e*P	**P**	**20 42 38.3**	**-0.5**
	comp=Z,1.0nm,0.6s,mb4.1						
FINES	**FINESS Array B**	**65.79**	**350**	P	**P**	**20 42 55.6**	**+0.8**
	comp=Z,1.5nm,1.0s,mb4.0,baz=22,slow=4.9,SNR=2.6						
NOA	**NORSAR Array B**	**67.12**	**358**	P	**P**	**20 43 02.5**	**-0.7**
	comp=Z,0.4nm,0.7s,mb3.6,baz=3.0,slow=6.6,SNR=4.1						
KMI	**Kunming**	**67.49**	**282**	P	**P**	**20 43 09.0**	**+3.4**
KMI				XP	sP	20 43 18.6	-1.9
KMI				PP	PP	20 45 38.8	+4.2
KMI				PPP		20 47 13.0	
KMI				S	S	20 52 06.3	+6.9
KMI				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.3						
KMI				LR	LR		
	comp=N,134nm,19.8s,MS4.3						
KMI				LR	LR		
	comp=E,104nm,18.7s,MS4.3						
KMI				LR	LR		
	comp=Z,162nm,27.4s						
QIZ	**Qiongzhong**	**67.72**	**273**	P	**P**	**20 43 09.6**	**+2.5**
QIZ				S	S	20 52 06.4	+4.2
QIZ				LR	LR		
	comp=Z,202nm,31.4s,MS4.2						
WRA	**Warramunga Arr**	**85.42**	**229**	P	**P**	**20 44 45.5**	**-1.6**
	comp=Z,0.7nm,0.9s,mb3.8,baz=38,slow=6.1,SNR=6.0						
BRTR	**Keskin Array B**	**85.72**	**340**	P	**P**	**20 44 48.2**	**-0.5**
	comp=Z,0.1nm,0.4s,mb3.4,baz=9.5,slow=3.5,SNR=1.8						
TORD	**Torodi Ar. Bea**	**114.77**	**6**	PKP	PKiKP	20 50 48.4	-1.6
	comp=Z,0.9nm,1.2s,baz=224,slow=4.0,SNR=3.2						
MAW	**Mawson**	**149.54**	**218**	PKPbc	PKPbc	20 51 56.8	-2.1
	comp=Z,0.8nm,0.5s,baz=122,slow=2.8,SNR=4.7						
LBTB	**Lobatse**	**149.63**	**326**	*e*PKPbc	PKPbc	20 51 58.6	-0.5
LBTB				*e*PKPab	PKPab	20 52 06.2	+1.9
BOSA	**Boshof**	**153.04**	**324**	PKPbc	PKPbc	20 52 05.4	-1.6
	comp=Z,1.3nm,0.5s,baz=39,slow=3.9,SNR=4.0						
BOSA				PKPab	PKPab	20 52 15.1	-3.3
	comp=Z,3.6nm,1.0s,baz=356,slow=1.5,SNR=3.7						

SZGRF ***17*** *20:50:58.2, 2342S×17978W, h33km, South of Fiji Islands*
ISCJB ***17*** *20:52:09.3±1.1, 208S±0.1×1788W±0.1, h638km±16km, mb3.9/12, Error ellipse: s-maj=23.6km s-min=13.1km az=126.3*
IDC ***17*** *20:52:09.9±1.7, 2071S×17873W, h629km±20km, mb3.3/7, mb1 3.5/10, mb1mx3.3/16, mbtmp4.3/10, Error ellipse: s-maj=23.2km s-min=13.4km az=155.0*
NEIC ***17*** *20:52:10.1±0.8, 2071S×17871W, h636km±8km, mb4.1/8, Error ellipse: s-maj=15.3km s-min=7.6km az=149.0*
ISC 17 20:52:10.0±1.2**, 208S**±01×**1787W**±01**, h629**km±17km**, n93,** σ**0.54**/23**, mb4.0**/12**, 7C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.49**	**45**	P	**P**	**20 54 24.6**	**+0.2**
	4.7nm,0.3s,baz=65,slow=20,SNR=4.2						
DZM	**Mont Dzumac**	**13.90**	**262**	P	**P**	**20 55 06.2**	**-0.6**
	0.8nm,0.3s,baz=242,slow=20,SNR=5.3						
URZ	**Urewera**	**17.81**	**191**	P	**P**	**20 55 41.9**	**-0.6**
	2.0nm,0.3s,baz=275,slow=1.1,SNR=8.5						
CTA	**Charters Tower**	**32.82**	**265**	*e*P	**P**	**20 57 54.4**	**+0.5**
	5.9nm,0.5s,mb4.5						
CTA	**Charters Tower**	**32.82**	**265**	P	**P**	**20 57 54.4**	**+0.4**
	5.6nm,0.4s,mb4.5,baz=90,slow=11,SNR=17						
CTAO	**Charters Tower**	**32.82**	**265**	*e*P	**P**	**20 57 54.1**	**+0.2**
STKA	**Stephens Creek**	**37.09**	**244**	*e*P	**P**	**20 58 30.5**	**+1.3**
	3.7nm,1.2s,mb3.8						
STKA	**Stephens Creek**	**37.09**	**244**	P	**P**	**20 58 30.3**	**+1.1**
	0.8nm,0.4s,mb3.6,baz=49,slow=14,SNR=5.7						
AS31	**Alice Springs**	**43.82**	**257**	*e*P	**P**	**20 59 22.7**	**+0.3**
ASPA	**Alice Springs**	**43.83**	**257**	*e*P	**P**	**20 59 22.7**	**+0.3**
WB2	**Warramunga Arr**	**43.91**	**262**	⇓*i*P	**P**	**20 59 22.6**	**-0.4**
WRAB	**Tennant Creek**	**43.91**	**262**	*e*P	**P**	**20 59 22.7**	**-0.4**
	6.1nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**43.92**	**262**	P	**P**	**20 59 22.9**	**-0.2**
	2.6nm,0.3s,mb4.2,baz=97,slow=7.2,SNR=148						
WRA				S	**S**	**21 05 11.0**	**+0.4**
	0.8nm,0.9s,baz=95,slow=12,SNR=3.5						
KAKA	**Kakadu**	**47.33**	**272**	*e*P	**P**	**20 59 48.6**	**-0.3**
	3.2nm,0.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**52.35**	**263**	*e*P	**P**	**21 00 26.0**	**+0.6**
	3.2nm,0.4s,mb4.0						
FITZ	**Fitzroy Crossi**	**52.35**	**263**	P	**P**	**21 00 25.7**	**+0.4**
	1.6nm,0.5s,mb3.6,baz=119,slow=5.3,SNR=30						
MBWA	**Marble Bar**	**57.16**	**258**	*e*P	**P**	**21 00 58.7**	**0.0**
	5.3nm,0.5s,mb4.0						
KLBR	**Kellerberrin**	**57.35**	**245**	*e*P	**P**	**21 01 00.4**	**+0.3**
	57nm,1.7s,mb4.5						
MJAR	**Matsushiro Arr**	**70.04**	**324**	P	**P**	**21 02 19.1**	**-1.2**
	2.3nm,0.6s,mb3.8,baz=152,slow=5.1,SNR=9.2						
BMO	**Blue Mountains**	**85.93**	**39**	*e*P	**P**	**21 03 45.3**	**+0.3**
	3.0nm,0.9s,mb3.9						
SNAA	**Sanae**	**87.76**	**179**	P	**P**	**21 03 53.2**	**-0.4**
	0.3nm,0.7s,mb3.1,baz=225,slow=13,SNR=3.7						
PDAR	**Pinedale Array**	**89.60**	**43**	P	**P**	**21 04 02.5**	**+0.4**
	1.8nm,0.6s,mb4.1,baz=218,slow=3.5,SNR=18						
MKAR	**Makanchi Array**	**110.91**	**313**	PKiKP	PKiKP	21 09 32.0	-1.1
	0.5nm,0.4s,baz=116,slow=0.6,SNR=16						
CHKZ	**Chkalovo**	**118.69**	**321**	*e*PKPdf	PKPdf	21 09 46.3	-1.6
BVAR	**Borovoye Array**	**118.86**	**320**	PKP	PKPdf	21 09 47.4	-0.9
	2.7nm,0.4s,baz=29,slow=0.9,SNR=14						
ZRNK	**Zerenda**	**119.70**	**320**	*e*PKPdf	PKPdf	21 09 48.5	-1.5
AKTK	**Aktyubinsk**	**126.83**	**318**	PKP	PKPdf	21 10 03.7	+0.2
AKTO	**Aktyubinsk**	**126.83**	**318**	PKP	PKPdf	21 10 03.7	+0.2
	1.4nm,0.6s,baz=44,slow=0.9,SNR=6.1						
ARCES	**ARCESS Array B**	**129.06**	**349**	PKP	PKPdf	21 10 06.5	-1.3
	1.7nm,0.6s,baz=18,slow=1.2,SNR=20						
JOF	**Joensuu**	**133.18**	**342**	*e*p	PKPdf	21 10 13.7	-1.9
	3.5nm,0.5s						
FINES	**FINESS Array B**	**135.84**	**343**	PKhKP		21 10 17.3	
	1.0nm,0.5s,baz=29,slow=4.4,SNR=7.3						
NB2	**NORSAR Subarra**	**139.17**	**353**	PKPa		21 10 19.6	
	comp=Z,0.4nm,0.5s,baz=16,slow=4.0						
NOA	**NORSAR Array B**	**139.17**	**353**	PKhKP		21 10 19.6	
	comp=Z,0.4nm,0.5s,baz=21,slow=2.0,SNR=4.4						
NOA				PKP	PKPdf	21 10 25.2	-1.4
	comp=Z,0.5nm,0.5s,baz=19,slow=3.9,SNR=4.0						
HFS	**Hagfors**	**139.70**	**350**	PKhKP		21 10 18.6	
	comp=Z,1.8nm,0.4s,baz=65,slow=3.9,SNR=26						
AKASG	**Malin Array Be**	**142.93**	**330**	PKhKP		21 10 29.9	
	comp=Z,4.7nm,0.4s,baz=42,slow=4.3,SNR=45						
MALT	**Malatya**	**143.57**	**307**	⇓*i*P	PKPdf	21 10 34.3	-0.2
MALT	**Malatya**	**143.57**	**307**	*e*PKPdf	PKPdf	21 10 34.2	-0.3
MUD	**Monsted U'grnd**	**143.89**	**353**	*i* P	PKPdf	21 10 33.7	-1.3
	comp=Z,9.4nm,0.6s						
COP	**Copenhagen**	**144.15**	**349**	*i* P	PKPdf	21 10 32.8	-2.7
	comp=Z,13nm,1.1s						
COP	**Copenhagen**	**144.15**	**349**	*e*P	PKPdf	21 10 32.8	-2.7
EKA	**Eskdalemuir Ar**	**145.32**	**4**	PKPbc	PKPbc	21 10 37.9	-1.0
	comp=Z,2.6nm,0.7s,baz=345,slow=2.1,SNR=7.6						
BSEG	**Bad Segeberg**	**146.18**	**350**	*e*PKPbc	PKPdf	21 10 40.9	-0.4
DMUB	**Kingscourt**	**146.33**	**9**	⇓*i*P	PKPdf	21 10 40.7	+1.5
BR131	**Keskin Array S**	**146.53**	**312**	*e*PKPbc	PKPbc	21 10 42.2	0.0
BRTR	**Keskin Array B**	**146.53**	**312**	PKPbc	PKPbc	21 10 42.1	-0.1
	comp=Z,2.2nm,0.6s,baz=138,slow=3.8,SNR=12						
DCN	**Croghan**	**146.82**	**9**	⇓*i*P	PKPbc	21 10 42.0	-1.0

BURAR	Bucovina Array	146.97	330	⇓iP	PKPbc	21 10 43.7	+0.3
DLF	Lyons Farm	146.97	9	⇓iP	PKPbc	21 10 42.5	-0.9
CFR	Carcaliu	147.12	324	⇓iP	PKPbc	21 10 43.8	0.0
OJC	Ojcow	147.17	338	ePX	PKPbc	21 10 43.2	-0.7
KOLS	Kolonicke sedl	147.27	334	ePKP	PKPbc	21 10 44.4	+0.2
STHS	Stebnicka Huta	147.30	336	ePKP	PKPbc	21 10 44.5	+0.3
STHS				e		21 10 49.0	
VRI	Vrincioaia	147.43	326	⇑iP	PKPbc	21 10 44.8	+0.2
PLOR	Plostina	147.48	326	⇑iP	PKPbc	21 10 45.1	+0.4
HARR	Harsova	147.54	323	⇑iP	PKPbc	21 10 45.2	+0.3
NRDL	Niedersach Rie	147.60	350	ePKPbc	PKPbc	21 10 45.8	+0.8
CRVS	Cervenica-Dubn	147.62	335	ePKP	PKPbc	21 10 44.8	-0.3
NIE	Niedzica	147.65	337	eP	PKPbc	21 10 45.5	+0.4
MLR	Muntele Rosu	148.09	326	PKPbc	PKPbc	21 10 46.1	-0.2
	comp=Z,3.0nm,0.6s,baz=310,slow=8.4,SNR=6.0						
MLR	Muntele Rosu	148.09	326	⇓iP	PKPbc	21 10 46.7	+0.5
UPC	Upice	148.13	342	ePKPbc	PKPbc	21 10 46.3	0.0
UPC				ePKPab	PKPab	21 10 52.1	+0.3
CLL	Collm	148.17	346	⇓iPKPbc	PKPbc	21 10 46.2	-0.2
	comp=Z,13nm,0.7s						
CLL				⇑iPKPab	PKPab	21 10 50.8	-1.1
	comp=Z,7.0nm,1.0s						
DPC	Dobruska-Polom	148.18	342	ePKPbc	PKPbc	21 10 47.0	+0.5
DPC				ePKPab	PKPab	21 10 51.7	-0.3
KECS	Kecovo	148.35	335	ePKP	PKPbc	21 10 46.2	-0.7
KECS				e		21 10 52.0	
BRG	Berggiesshubel	148.35	345	ePKPbc	PKPbc	21 10 46.9	0.0
BRG	Berggiesshubel	148.35	345	i P	PKPdf	21 10 47.0	+4.5
	comp=Z,3.0nm,0.7s						
FBE	Freiberg	148.45	345	ePKPbc	PKPbc	21 10 47.1	0.0
PVCC	Panska Ves	148.51	344	ePKPbc	PKPbc	21 10 47.4	+0.1
VYHS	Vyhne	148.96	337	ePKP	PKPbc	21 10 48.3	-0.1
VYHS				e		21 10 54.9	
PRU	Pruhonice	149.01	343	ePKPbc	PKPbc	21 10 48.6	+0.1
VRAC	Vranov	149.02	340	PKPbc	PKPbc	21 10 47.5	-1.0
	comp=Z,1.0nm,0.4s,baz=7.8,slow=5.1,SNR=3.6						
VRAC	Vranov	149.02	340	⇓iP	PKPbc	21 10 47.4	-1.1
VRAC	Vranov	149.02	340	⇓P	PKPbc	21 10 47.4	-1.1
MOX	Moxa	149.09	347	ePKPbc	PKPbc	21 10 48.7	0.0
TANN	Tannenbergstha	149.13	346	ePKPbc	PKPbc	21 10 48.6	-0.2
WERD	Werda	149.13	346	ePKPbc	PKPbc	21 10 48.7	-0.1
GUNZ	Gunzen	149.21	346	ePKPbc	PKPbc	21 10 49.0	0.0
UBBA	Unterbreizbach	149.24	349	ePKPbc	PKPbc	21 10 49.2	+0.2
NKC	Novy Kostel	149.30	346	ePKPbc	PKPbc	21 10 49.5	+0.3
NKC				ePKPab	PKPab	21 10 56.0	-0.6
MANZ	Manzenberg	149.61	346	ePKPbc	PKPbc	21 10 50.0	+0.1
GZR	Gura Zlata	149.74	329	⇑iP	PKPbc	21 10 50.1	-0.1
ROTZ	Rotzenmuhle	149.79	346	ePKPbc	PKPbc	21 10 50.1	-0.3
KHC	Kasperske Hory	150.05	344	ePKPbc	PKPbc	21 10 50.9	0.0
KHC				ePKPab	PKPab	21 10 59.5	-0.2
TNS	Taunus Mts	150.07	351	ePKPbc	PKPbc	21 10 50.6	-0.4
GRA1	Grafenberg Arr	150.08	347	ePKPbc	PKPbc	21 10 50.6	-0.4
GRF	Grafenberg Arr	150.08	347	ePKPbc	PKPbc	21 10 50.6	-0.4
BZS	Buzias	150.12	331	⇑iP	PKPbc	21 10 50.8	-0.3
GEC2	GERESS Array S	150.28	343	ePKPbc	PKPbc	21 10 51.0	-0.5
GERES	GERESS Array B	150.28	343	PKPbc	PKPbc	21 10 51.3	-0.1
	comp=Z,2.2nm,0.7s,baz=22,slow=2.4,SNR=22						
WLF	Walferdange	150.91	354	ePKPbc	PKPbc	21 10 53.6	+0.7
PKSM	Moragy	150.93	335	⇑iP	PKPbc	21 10 52.7	-0.3
STU	Stuttgart	151.35	349	ePKPbc	PKPbc	21 10 54.1	+0.2
VTS	Vitosha	151.51	325	⇓iP	PKPbc	21 10 54.5	+0.2

*ISCJB **17** 21:34:16.0±0.8, 1900N±007×6645W±003, h48^{km}±9^{km}, mb3.7/5, Error ellipse: s-maj=11.3km s-min=5.2km az=169.5*

*RSPR **17** 21:34:16.9, 1908N×6646W, h25^{km}±14^{km}, MD3.8/13, MD3.8/13*

*NEIC **17** 21:34:16.9, 1908N×6646W, h25^{km}, MD3.8(RSPR), After RSPR.*

*IDC **17** 21:34:17.8±2.8, 1894N×6647W, h46^{km}±25^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.5/22, mbtmp3.8/7, MS2.9/2, Ms1 2.9/2, ms1mx2.6/28, Error ellipse: s-maj=37.5km s-min=25.1km az=103.0*

ISC 17 21:34:15.8±1.0, **1901N**±005×**6646W**±003, **h28**^{km}±6^{km}, **n29**, σ**0^{s}61**/41, **mb3.7**/5, **3C-13D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LRS	Lares	0.80	207	⇓iP	Pb	21 34 30.9	-0.2
AGPR	Aguadilla, PR	0.82	229	⇓iP	Pb	21 34 30.9	-0.6
AGPR				eS	Sb	21 34 41.5	-0.7
CBYP	Canovanas	0.93	142	⇓iP	Pn	21 34 32.9	-0.2
CBYP				eS	Sb	21 34 45.4	+0.1
CELP	Cerrillos	0.94	187	⇓iP	Pn	21 34 33.3	+0.2
SJG	San Juan	0.94	162	⇓eP	Pn	21 34 33.3	+0.1
SJG	San Juan	0.94	162	eS	Sb	21 34 45.9	+0.4
SJG	San Juan	0.94	162	P	Pn	21 34 33.3	+0.2
	86nm,0.3s,baz=343,slow=7.0,SNR=181						
SJG				S	Sb	21 34 46.5	+0.9
	248nm,0.3s,baz=270,slow=19,SNR=38						
SJG	San Juan	0.94	162	⇓eP	Pn	21 34 33.3	+0.1
SJG				eS	Sb	21 34 45.9	+0.4
OBIP	Obispado Ponce	0.97	188	⇓iP	Pn	21 34 33.8	+0.2
OBIP				eS	Sb	21 34 46.5	0.0
LSP	Las Mesas	1.02	216	⇑iP	Pn	21 34 34.2	-0.1
MPR	Mayaguez	1.02	219	⇑eP	Pn	21 34 34.2	-0.1
MPR				eS	Sn	21 34 46.8	-0.9
HUMP	Col San Antoni	1.04	146	⇓eP	Pn	21 34 34.4	-0.1
HUMP				eS	Sn	21 34 47.5	-0.6
CPD	Cerro la Pandu	1.09	152	⇓iP	Pn	21 34 35.4	+0.1
CPD				eS	Sn	21 34 49.8	+0.3
ICM	Isla Caja Muer	1.11	183	⇓iP	Pn	21 34 36.2	+0.7
ICM				eS	Sn	21 34 50.1	+0.2
MGP	Maguayo	1.16	211	⇑iP	Pn	21 34 36.3	0.0
CRPR	Cabo Rojo, PR	1.18	212	⇓iP	Pn	21 34 36.3	-0.1
CRPR				eS	Sn	21 34 51.4	-0.1
MTP	Monte Pirata	1.25	137	⇓iP	Pn	21 34 37.2	-0.2
MTP				eS	Sn	21 34 52.8	-0.5
CULB	Culebra	1.28	123	⇑eP	Pn	21 34 37.4	-0.4
CULB	Culebra	1.28	123	eS	Sn	21 34 54.3	+0.4
TBVI	Tortola	1.85	109	⇓eP	Pn	21 34 45.5	-0.2
TBVI				eS	Sn	21 35 06.8	-1.4
ABV	Anegada	2.03	98	⇑eP	Pn	21 34 47.7	-0.4
SEG	Port Louis	5.38	118	eP	Pn	21 35 37.6	+3.3
SEG				eS	Sn	21 36 06.7	-29
PCRV	Puerto La Cruz	8.96	168	P	Pn	21 36 24.7	+1.4
	0.6nm,0.3s,baz=70,slow=8.2,SNR=3.5						
PCRV				LR	LR	21 40 01.9	
	comp=Z,98nm,19.1s,baz=13,slow=39						
SDV	Santo Domingo	10.85	202	P	Pn	21 36 50.7	+1.5
	0.8nm,0.3s,baz=51,slow=14,SNR=4.6						
SDV				LR	LR	21 40 29.4	
	comp=Z,41nm,21.9s,baz=358,slow=34						
LPAZ	La Paz	35.11	183	P	P	21 41 06.8	+0.1
	0.4nm,0.5s,mb3.6,baz=0.0,slow=12,SNR=2.8						
SIV	San Ignacio	35.18	171	P	P	21 41 06.5	-0.8
	0.3nm,0.4s,mb3.6,baz=216,slow=17,SNR=3.3						
TORD	Torodi Ar. Bea	65.41	84	P	P	21 44 56.4	+0.5
	0.6nm,0.7s,mb3.8,baz=272,slow=6.9,SNR=7.8						
NOA	NORSAR Array B	67.59	31	P	P	21 45 10.5	+0.6
	0.7nm,0.8s,mb3.8,baz=270,slow=6.4,SNR=4.6						
ARCES	ARCESS Array B	73.04	22	P	P	21 45 43.0	-0.2
	1.2nm,0.7s,mb3.9,baz=286,slow=4.6,SNR=5.6						

*NEIC **17** 21:47:32.1, 3840S×17587E, h211^{km}, MG4.0(WEL), After WEL.*

WEL 17 21:47:35.9±0.3, **3833S**×**17610E, h158**^{km}±2^{km}, **ML3.8**/17, **2C, Error ellipse: s-maj=2.6km s-min=2.4km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.80	86	PN	Pn	21 47 59.9	0.0
URZ				SN	Sn	21 48 18.1	-0.1
WTVZ	West Tongariro	0.89	207	PN	Pn	21 48 00.8	+0.2
BKZ	Black Stump Fm	0.90	160	PN	Pn	21 48 01.0	+0.4
BKZ				SN	Sn	21 48 19.6	+0.1
TWVZ	Taurewa	0.91	215	PN	Pn	21 48 00.9	+0.2
NGZ	Ngauruhoe	0.94	204	PN	Pn	21 48 01.1	+0.2
WPVZ	Whakapapa	0.98	206	PN	Pn	21 48 01.6	+0.3
TUVZ	Tukino	1.01	200	PN	Pn	21 48 01.8	+0.3
WNVZ	Wahianoa	1.08	201	PN	Pn	21 48 02.3	+0.2
MOVZ	Moawhango	1.12	194	⇑PN	Pn	21 48 02.2	-0.2
MWZ	Matawai	1.12	91	PN	Pn	21 48 02.7	+0.2
MWZ				SN	Sn	21 48 22.6	-0.2
PKVZ	Pokaka	1.13	211	PN	Pn	21 48 02.4	-0.1
VRZ	Vera Road	1.32	232	PN	Pn	21 48 04.1	-0.2
KNZ	Kokohu	1.41	120	SN	Sn	21 48 27.2	-0.5
WAZ	Wanganui	1.67	211	PN	Pn	21 48 07.3	-0.6
PUZ	Puketiti	1.72	82	PN	Pn	21 48 08.2	-0.2
TSZ	Takapari Road	1.74	184	⇑PN	Pn	21 48 08.2	-0.4
PXZ	Pawanui	1.81	161	PN	Pn	21 48 09.3	0.0
BFZ	Birch Farm	2.36	177	P	Pn	21 48 14.5	-1.2
BFZ	Birch Farm	2.36	177	PN	Pn	21 48 14.5	-1.2
MRZ	Mangatainoka R	2.37	190	P	Pn	21 48 14.3	-1.5
MRZ	Mangatainoka R	2.37	190	PN	Pn	21 48 14.3	-1.6
KIW	Kapiti Island	2.70	200	P	Pn	21 48 17.4	-2.4
KIW	Kapiti Island	2.70	200	PN	Pn	21 48 17.4	-2.4
KIW				SN	Sn	21 48 51.2	-2.5
MTW	Mount Morrison	2.87	189	P	Pn	21 48 19.5	-2.4
CAW	Cannon Point	2.89	196	P	Pn	21 48 19.9	-2.3
TRWZ	Traveller	3.09	186	SN	Sn	21 48 57.7	-4.7
MRW	Makara Radio	3.10	200	P	Pn	21 48 22.0	-2.8
PAWZ	Paruwai Farm	3.10	189	P	Pn	21 48 22.2	-2.6
PAWZ	Paruwai Farm	3.10	189	SN	Sn	21 48 57.9	-4.8
MSWZ	Moikau Station	3.16	192	P	Pn	21 48 22.8	-2.7
TCW	Tory Channel	3.21	205	P	Pn	21 48 23.5	-2.7
TCW				S	Sn	21 49 02.2	-3.0
TCW	Tory Channel	3.21	205	SN	Sn	21 49 01.0	-4.2
NNZ	Nelson	3.57	215	eP	Pn	21 48 27.2	-3.6
NNZ	Nelson	3.57	215	SN	Sn	21 49 09.0	-4.5
QRZ	Quartz Range	3.72	227	P	Pn	21 48 28.5	-4.3
BSWZ	Blackbirch Sta	3.79	206	P	Pn	21 48 30.6	-3.1
THZ	Tophouse	4.22	215	eP	Pn	21 48 35.5	-3.7
THZ	Tophouse	4.22	215	SN	Sn	21 49 23.6	-5.0
KHZ	Kahutara	4.53	205	eP	Pn	21 48 39.6	-3.7
LTZ	Lake Taylor	5.32	212	eP	Pn	21 48 48.9	-4.8

*IDC **17** 22:06:09.1±1.7, 1901N×6646W, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.7/20, mbtmp3.8/5, ML3.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/33, Error ellipse: s-maj=55.2km s-min=16.4km az=89.0*

*ISCJB **17** 22:06:12.8±1.1, 1904N±007×6642W±004, h37^{km}±12^{km}, mb3.8/4, Error ellipse: s-maj=11.3km s-min=6.1km az=169.1*

*NEIC **17** 22:06:13.7, 1910N×6644W, h23^{km}, MD3.6(RSPR), After RSPR.*

*RSPR **17** 22:06:13.7, 1910N×6644W, h23^{km}±19^{km}, MD3.6/15, MD3.6/15*

ISC 17 22:06:13.2±1.2, **1900N**±005×**6644W**±004, **h29**^{km}±7^{km}, **n26**, σ**0^{s}57**/37, **mb3.8**/4, **3C-11D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LRS	Lares	0.80	209	⇓iP	Pb	22 06 28.1	-0.5
CBYP	Canovanas	0.92	143	⇓eP	Pn	22 06 30.0	-0.1
CBYP				eS	Sb	22 06 42.6	+0.3
SJG	San Juan	0.93	163	⇓eP	Pn	22 06 30.3	0.0
SJG	San Juan	0.93	163	eS	Sb	22 06 43.0	+0.3
SJG	San Juan	0.93	163	Pn	Pn	22 06 30.5	+0.3
	116nm,0.3s,baz=320,slow=11,SNR=76						
SJG				Sn	Sn	22 06 43.1	+0.5
	459nm,0.3s,baz=270,slow=20,SNR=48						
SJG	San Juan	0.93	163	⇓eP	Pn	22 06 30.3	0.0
SJG				eS	Sb	22 06 43.0	+0.3
CELP	Cerrillos	0.93	188	⇓iP	Pn	22 06 30.4	+0.1
OBIP	Obispado Ponce	0.97	189	⇓eP	Pn	22 06 30.9	+0.1
OBIP				eS	Sb	22 06 44.4	+0.6
HUMP	Col San Antoni	1.02	147	⇓iP	Pn	22 06 31.6	0.0
HUMP				eS	Sn	22 06 44.9	0.0
LSP	Las Mesas	1.02	217	⇑iP	Pn	22 06 31.4	-0.1
MPR	Mayaguez	1.03	220	⇑eP	Pn	22 06 31.0	-0.6
MPR				eS	Sn	22 06 44.5	-0.5
CPD	Cerro la Pandu	1.08	152	⇓eP	Pn	22 06 32.4	+0.1
CPD				eS	Sn	22 06 46.0	-0.4
ICM	Isla Caja Muer	1.11	184	⇓eP	Pn	22 06 33.3	+0.6
ICM				eS	Sn	22 06 48.0	+1.0
MGP	Maguayo	1.17	212	⇑iP	Pn	22 06 33.6	+0.1
CRPR	Cabo Rojo, PR	1.18	213	⇓eP	Pn	22 06 33.5	-0.1
CRPR				eS	Sn	22 06 48.7	0.0
MTP	Monte Pirata	1.23	137	⇓eP	Pn	22 06 34.3	-0.1
MTP				eS	Sn	22 06 49.5	-0.5
CULB	Culebra	1.26	123	⇑eP	Pn	22 06 34.5	-0.3
CULB	Culebra	1.26	123	eS	Sn	22 06 50.6	-0.1
TBVI	Tortola	1.83	109	⇑eP	Pn	22 06 42.3	-0.4
TBVI				eS	Sn	22 07 04.0	-0.9
SDV	Santo Domingo	10.85	203	Pn	Pn	22 08 44.3	-2.1
	0.3nm,0.3s,baz=360,slow=19,SNR=2.6						
SDV				LR	LR	22 13 04.8	
	comp=Z,44nm,21.7s,baz=141,slow=38						
SDV	Santo Domingo	10.85	203	Pn	Pn	22 08 44.3	-2.1
SDV				LR	LR	22 13 04.8	
CPUP	Villa Florida	45.92	169	P	P	22 14 33.8	+0.6
	0.4nm,0.4s,mb3.7,baz=330,slow=8.1,SNR=4.0						
TORD	Torodi Ar. Bea	65.39	84	P	P	22 16 53.6	+0.7
	0.6nm,0.7s,mb3.7,baz=285,slow=5.0,SNR=6.5						
NB2	NORSAR Subarra	67.59	31	P	P	22 17 08.0	+1.0
	comp=Z,0.6nm,0.7s,mb3.7,baz=269,slow=6.5						
NOA	NORSAR Array B	67.59	31	P	P	22 17 07.4	+0.4
	comp=Z,0.5nm,0.7s,mb3.6,baz=273,slow=6.5,SNR=6.9						
ARCES	ARCESS Array B	73.04	22	P	P	22 17 40.9	+0.5
	comp=Z,1.6nm,0.7s,mb4.1,baz=282,slow=4.5,SNR=6.3						

IDC 17 22:06:39.3±69.0, **2183S**×**17981W, h0**^{km}, **mb4.0**/3, **mb1 4.2**/3, **mb1mx3.8**/11, **mbtmp4.0**/3, **Error ellipse: s-maj=1239.0km s-min=163.8km az=84.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.69	245	P	P	22 13 38.4	-0.9
	0.8nm,0.4s,baz=83,slow=13,SNR=2.9						
ASAR	Alice Springs	42.58	258	P	P	22 14 37.0	+0.2
	0.7nm,0.4s,baz=95,slow=7.2,SNR=11						
WRA	Warramunga Arr	42.76	264	P	P	22 14 39.4	+1.0
	1.9nm,0.3s,baz=96,slow=8.4,SNR=43						

MAN 17 22:09:11.9, 1799N×**12304E, h33**^{km}, **mb2.3, ML3.9, MS4.8, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	1.09	213	⇓iP	Pn	22 09 30.8	-0.1
PALP				i S	Sn	22 09 40.6	-4.2

*NEIC **17** 22:20:29.5, 2815S×6767W, h150^{km}, MG4.3(GUC), After GUC.*

GUC 17 22:20:29.5±0.9, **2815S**×**6767W, h150**^{km}, **ML4.3, 4C-3D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	2.51	288	eP	Pn	22 21 11.1	+0.5
CPCH				i S	Sn	22 21 43.0	+0.6
VACH	Vallenar	2.76	260	⇑iP	Pn	22 21 15.7	+1.9
VACH				i S	Sn	22 21 50.2	+2.3
VACH				AML	AML	22 21 52.1	
	comp=N,1μm,0.2s						
VACH	Vallenar	2.76	260	⇑iP	Pn	22 21 15.7	+1.9
VACH				i S	Sn	22 21 50.2	+2.3
LCO	Las Campanas	2.80	251	eP	Pn	22 21 15.7	+1.4
LCO				i S	Sn	22 21 50.7	+1.8
CDCH	Caldera	3.00	290	⇑iP	Pn	22 21 17.7	+0.9
CDCH				i S	Sn	22 21 53.3	-0.2
CDCH				AML	AML	22 21 54.5	
	comp=E,230nm,0.3s						
CDCH	Caldera	3.00	290	⇑iP	Pn	22 21 17.7	+0.9
CDCH				i S	Sn	22 21 53.3	-0.2
TLL	Tololo Astrono	3.40	233	⇓iP	Pn	22 21 23.0	+1.0
TLL				i S	Sn	22 22 03.8	+1.2
TLL				AML	AML	22 22 09.2	
	comp=N,358nm,0.7s						
TLL	Tololo Astrono	3.40	233	⇓iP	Pn	22 21 23.0	+1.0
TLL				i S	Sn	22 22 03.8	+1.2
CMCH	Combarbala	4.18	223	⇓iP	Pn	22 21 31.4	-0.7
CMCH				i S	Sn	22 22 20.2	-0.5
CPN1	Cerro Paranal	4.28	324	eP	Pn	22 21 35.5	+2.1
CPN1				i S	Sn	22 22 24.5	+1.4
LPAZ	La Paz	11.81	358	P	Pn	22 23 13.1	-0.2
PLCA	Paso Flores	12.77	190	Pn	Pn	22 23 25.6	-0.1

MOS 17 22:24:43.5±2.7, **5079N**×**9635E, h10**^{km}, **mb4.0**/1, **Error ellipse: s-maj=99.9km s-min=32.8km az=152.1, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	Orlik	2.78	50	ePN	Pn	22 25 28.3	+0.3
ORL				e		22 26 05.2	
ORL				pmax	pmax		
	comp=Z,74nm,0.4s						
ORL				smax			
	comp=N,259nm,1.1s						
MOY	Mondy	3.05	71	ePN	Pn	22 25 31.5	-0.2
MOY				e		22 26 09.6	
MOY				pmax	pmax		
	comp=Z,117nm,0.4s						
MOY				smax			
	comp=N,365nm,1.4s						
ARS	Arshan	3.97	71	ePN	Pn	22 25 49.4	+5.0
ARS				e		22 26 38.1	
ARS				pmax	pmax		
	comp=Z,48nm,0.4s						
ARS				smax			
	comp=E,303nm,0.6s						
ZAK	Zakamensk	4.43	93	ePN	Pn	22 25 43.8	-7.0
ZAK				e		22 26 50.5	
ZAK				pmax	pmax		
	comp=Z,34nm,0.9s						
ZAK				smax			
	comp=N,564nm,1.5s						
TLY	Talaya	4.67	76	ePN	Pn	22 25 59.7	+5.7
TLY				e		22 26 58.4	
TLY				pmax	pmax		
	comp=Z,15nm,0.5s						
TLY				smax			
	comp=E,66nm,0.5s						
IRK	Irkutsk	5.16	71	ePN	Pn	22 26 10.2	+9.5
IRK				e		22 27 13.0	
IRK				pmax	pmax		
	comp=Z,69nm,0.1s						
IRK				smax			
	comp=N,305nm,0.3s						
LSTR	Listvyanka	5.43	75	ePN	Pn	22 26 15.3	+11
LSTR				e		22 27 21.2	
LSTR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LSTR				smax			
	comp=N,74nm,1.6s						

*CRAAG **17** 22:38:50.5, 3669N×286E, Ml2.5*

*CSEM **17** 22:38:51.3±0.3, 3673N×290E, h10^{km}, ML2.7/4, Error ellipse: s-maj=9.2km s-min=6.4km az=30.0*

*NEIC **17** 22:38:53.4, 3690N×283E, h4^{km}, MG3.7(MDD), After MDD.*

MDD 17 22:38:52.0±1.1, **3676N**×**283E, h7**^{km}±20^{km}, **mb3.4**/6, **Error ellipse: s-maj=18.6km s-min=7.7km az=118.0, PRXIMO, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.17	75	P	Pg	22 38 55.0	-0.5
ABMS	Boumerdes	0.52	91	P	Pg	22 39 02.2	+0.1
EMHD	Djebel Mahouad	0.56	170	P	Pg	22 39 02.0	-0.9
EIBI	Ibiza	2.55	333	P	Pn	22 39 33.0	-0.8
	3.4nm,0.1s,SNR=13						
EIBI				S	Sn	22 40 01.8	-3.3
	1.8nm,0.2s,SNR=5.0						
EIBI	Ibiza	2.55	333	Pn	Pn	22 39 33.0	-0.8
EIBI				Sn	Sn	22 40 01.1	-4.0
EIBI	Ibiza	2.55	333	Pn	Pn	22 39 33.0	-0.8
	3.4nm,0.1s,SNR=13						
EIBI				Sn	Sn	22 40 01.1	-4.0
	1.8nm,0.2s,SNR=5.0						
ETOS	Mallorca	3.01	360	P	Pn	22 39 39.0	-1.1
	0.7nm,0.2s,SNR=7.9						
ETOS				S	Sn	22 40 12.0	-4.3
	0.7nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.01	360	Pn	Pn	22 39 39.0	-1.1
ETOS				Sn	Sn	22 40 11.5	-4.8
ETOS	Mallorca	3.01	360	Pn	Pn	22 39 39.0	-1.0
	SNR=7.9						
ETOS				Sn	Sn	22 40 11.5	-4.8
	SNR=7.9						
EBEN	Beniarda	3.11	310	P	Pn	22 39 40.0	-1.4
	0.2nm,0.1s,SNR=4.0						
EBEN				S	Sn	22 40 15.5	-3.2
	0.4nm,0.2s,SNR=4.0						
EBEN	Beniarda	3.11	310	Pn	Pn	22 39 40.0	-1.4
	0.2nm,0.1s,SNR=4.0						
EBEN				Sn	Sn	22 40 15.5	-3.3
	SNR=4.0						
ETOB	Tobarra	3.95	300	P	Pn	22 39 52.6	-0.5
	0.9nm,0.2s,SNR=12						
ETOB				S	Sn	22 40 36.8	-2.8
	1.1nm,0.3s,SNR=5.0						
ETOB	Tobarra	3.95	300	Pn	Pn	22 39 52.6	-0.5
ETOB				Sn	Sn	22 40 37.4	-2.2
ETOB	Tobarra	3.95	300	Pn	Pn	22 39 52.6	-0.4
	0.9nm,0.2s,SNR=12						
ETOB				Sn	Sn	22 40 37.4	-2.2
	1.1nm,0.3s,SNR=5.0						
EMOS	Mosqueruela	4.43	325	P	Pn	22 39 59.1	-0.6
	1.1nm,0.1s,SNR=17						
EMOS				S	Sn	22 40 47.1	-4.4
	0.5nm,0.2s,SNR=5.0						
EMOS	Mosqueruela	4.43	325	Pn	Pn	22 39 59.1	-0.6
	1.1nm,0.1s,SNR=17						
EMOS				Sn	Sn	22 40 47.1	-4.5
	0.5nm,0.2s,SNR=5.0						
EQES	Quesada	4.82	284	P	Pn	22 40 04.9	-0.1
	3.5nm,1.0s,SNR=4.0						
EQES				S	Sn	22 40 58.0	-3.2
	10nm,1.2s,SNR=4.0						
EQES	Quesada	4.82	284	Pn	Pn	22 40 04.2	-0.8
EQES				Sn	Sn	22 40 59.8	-1.3
EQES	Quesada	4.82	284	Pn	Pn	22 40 04.2	-0.8
	3.5nm,1.0s,SNR=4.0						
EQES				Sn	Sn	22 40 59.8	-1.3
	10nm,1.2s,SNR=4.0						

*BJI **17** 22:39:59.0, 4675N×14250E, h17^{km}, mB4.7, mb4.6, ML4.6, Ms4.5, Msz4.3*

*NIED **17** 22:40:00, 4670N×14190E, h8^{km}, Mw4.5 Best double couple: $M_0$6.03000×10^{15} NP1:ϕ_s171.00000°, δ70.00000°, λ90.00000°. NP2:ϕ_s349.00000°, δ20.00000°, λ89.00000°.*

*MOS **17** 22:40:00.3±0.7, 4657N×14191E, h7^{km}, mb4.9/56, Error ellipse: s-maj=9.0km s-min=4.8km az=109.2*

MOS Felt (IV) at Gornozavodsk, Shebunino; (II-III) at Nevel'sk.

*JMA **17** 22:40:01.2±0.3, 4668N×14188E, h27^{km}, M4.9*

JMA Felt I J1.

*SKHL **17** 22:40:01.6±0.2, 4660N×14184E, h10^{km}±2^{km}*

SKHL Felt (IV) at Gornozavodsk, Shebunino, (II-III) at Nevelsk.

*ISCJB **17** 22:40:01.9±0.1, 4659N±002×14195E±003, h17^{km}, mb4.6/112, MS3.9/16, Error ellipse: s-maj=2.9km s-min=2.4km az=150.8*

*IDC **17** 22:40:02.8±0.6, 4655N×14195E, h16^{km}±3^{km}, mb4.2/17, mb1 4.4/19, mb1mx4.3/22, mbtmp4.3/19, ML4.1/2, MS3.5/6, Ms1 3.5/6, ms1mx3.2/26, Error ellipse: s-maj=14.3km s-min=12.9km az=104.0*

*NEIC **17** 22:40:05.1±0.3, 4693N×14196E, mb4.7/79, MS4.0/2, Error ellipse: s-maj=8.0km s-min=3.7km az=174.0*

NEIC Felt [IV] at Gornozavodsk and Shebunino; [III] at Nevel'sk. Recorded [1 JMA] in northern Hokkaido.

*SZGRF **17** 22:40:08.9, 4687N×14101E, h19^{km}, mb4.7, Sakhalin Island, Russia*

ISC 17 22:40:03.4±0.1, **4656N**±002×**14188E**±003, **h18**^{km}, **h18**^{km}±.4^{km}**:pP-P, n434,** σ**0^{s}77**/453, **mb4.6**/112, **MS3.9**/16, **72C-58D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.72	57	⇓iPg	Pg	22 40 15.7	-1.9
YSS				⇓iPg	Pg	22 40 15.8	-1.8
YSS				i Sg	Sg	22 40 25.7	-1.5
YSS				A		22 40 27.9	
	7μm,0.7s						
YSS				AMS	AMS	22 40 50.0	
	21μm,7.0s						
YSS				AMS	AMS	22 40 50.0	
	14μm,7.0s						
YSS				AMS	AMS	22 40 50.0	
	17μm,7.0s						
YSS	Yuzh-Sakhalins	0.72	57	⇓iPN	Pg	22 40 15.7	-1.9

YSS *i* 22 40 25.7
YSS smax
comp=E,7μm,0.7s
YSS Yuzh-Sakhalins 0.72 57 ⇓*i* Pg **Pg 22 40 16.0 -1.6**
YSS *e*Sg **Sg 22 40 25.3 -1.9**
JWK2 Keihoku 1.25 179 P **Pn 22 40 24.9 -1.0**
JWK2 *e*S **Sb 22 40 41.9 -0.1**
JRR Rishiri 1.48 196 P **Pn 22 40 28.7 -0.4**
JRR *e*S **Sn 22 40 48.8 +0.9**
JSE Soyaes 1.68 163 P **Pn 22 40 30.9 -0.9**
JSE *e*S **Sn 22 40 52.4 -0.4**
JYG Yagishiri 2.16 189 P **Pn 22 40 38.3 -0.1**
JSS Shosan 2.16 180 P **Pn 22 40 38.6 +0.1**
JSS *e*S **Sn 22 41 05.4 +0.6**
ASAJ Asahikawa 2.50 168 Pn **Pn 22 40 42.9 -0.2**
comp=E,49nm,0.3s,baz=352,slow=11,SNR=130
ASAJ Sn **Sn 22 41 13.2 +0.1**
comp=E,142nm,0.3s,baz=6.7,slow=17,SNR=7.6
ASAJ Asahikawa 2.50 168 P **Pn 22 40 42.7 -0.4**
ASAJ *e*S **Sn 22 41 13.9 +0.8**
ASAJ Asahikawa 2.50 168 PN **Pn 22 40 42.9 -0.2**
ASAJ 22 41 13.2
ASAJ pmax pmax
comp=Z,49nm,0.3s
ASAJ smax
comp=N,143nm,0.3s
UGL Uglegorsk 2.52 3 *e*Pb **Pb 22 40 47.0 -1.1**
UGL *e*Pg **Pg 22 40 49.9 -1.9**
UGL AMB AMB 22 40 51.0
comp=N,115nm,0.8s
UGL AMB AMB 22 40 51.0
comp=N,214nm,0.8s
UGL AMB AMB 22 40 51.0
comp=N,120nm,0.8s
UGL AMB AMB 22 41 04.0
comp=N,1μm,2.0s
UGL AMB AMB 22 41 04.0
comp=N,2μm,2.0s
UGL *e*Sb **Sn 22 41 16.0 +2.3**
UGL A 22 41 19.6
comp=N,494nm,1.0s
UGL A 22 41 19.6
comp=N,629nm,1.0s
UGL *e*Sg **Sg 22 41 26.5 +2.0**
UGL A 22 41 29.0
comp=N,2μm,2.0s
UGL A 22 41 29.0
comp=N,3μm,2.0s
UGL AMS AMS 22 42 00.0
comp=N,6μm,9.0s
UGL AMS AMS 22 42 00.0
comp=N,4μm,9.0s
UGL AMS AMS 22 42 00.0
comp=N,4μm,9.0s
UGL Uglegorsk 2.52 3 *e*PN **Pb 22 40 47.0 -1.1**
UGL S **Sn 22 41 16.0 +2.3**
UGL pmax pmax
comp=Z,120nm,0.7s
UGL pmax pmax
comp=N,115nm,0.9s
UGL pmax pmax
comp=E,214nm,0.9s
UGL pmax pmax
comp=N,1μm,2.0s
UGL pmax pmax
comp=E,1μm,2.0s
UGL pmax pmax
comp=Z,2μm,2.0s
UGL smax
comp=N,494nm,1.0s
UGL smax
comp=E,629nm,1.0s
UGL smax
comp=N,2μm,2.0s
UGL smax
comp=E,3μm,2.0s
UGL MLR MLR
comp=N,6μm,9.0s
UGL MLR MLR
comp=E,4μm,9.0s
UGL MLR MLR
comp=Z,4μm,9.0s
JKK2 Kamakawa 2 2.76 167 P **Pn 22 40 46.4 -0.3**
JMP Maruseppu 2.76 157 P **Pn 22 40 45.4 -1.3**
JHR Hokuryu 2.82 182 P **Pn 22 40 48.3 +0.8**
JTKR Abashiri--Toko 2.96 150 P **Pn 22 40 47.9 -1.6**
JTKR *e*S **Sn 22 41 23.0 -1.5**
JAB Ashibetsu 3.07 175 P **Pn 22 40 51.5 +0.6**
YUK Yuzh-Kuril'sk 3.78 131 *e*P **Pn 22 41 00.6 -0.1**
YUK AMB AMB 22 41 01.9
comp=Z,330nm,0.3s
YUK *i* S **Sn 22 41 43.9 -0.8**
YUK A 22 41 46.3
comp=Z,1μm,0.4s
YUK A 22 41 46.3
comp=Z,380nm,0.4s
YUK A 22 41 51.0
comp=Z,2μm,1.5s
YUK AMS AMS 22 42 58.0
comp=Z,4μm,14.0s
YUK AMS AMS 22 42 58.0
comp=Z,3μm,10.0s
YUK Yuzh-Kuril'sk 3.78 131 PN **Pn 22 41 00.5 -0.2**
YUK pmax pmax
comp=Z,330nm,0.3s
YUK MLR MLR
comp=Z,3μm,10.0s
YUK MLR MLR
comp=N,4μm,14.0s
TEY Ternei 3.99 249 *e*P **Pn 22 41 04.2 +0.6**
TEY *e*Pg **Pg 22 41 18.5 -1.4**
TEY *e*S **Sn 22 41 48.0 -1.9**
TEY AMS AMS 22 43 22.5
comp=N,2μm,10.0s
TEY AMS AMS 22 43 22.5
comp=N,1μm,10.0s
TEY AMS AMS 22 43 22.5
comp=N,2μm,10.0s
TYV Tymovskoe 4.34 7 *e*Pb **Pb 22 41 16.0 -3.1**
TYV AMB AMB 22 41 18.0
comp=N,13nm,0.7s
TYV AMB AMB 22 41 22.0
comp=N,300nm,5.0s
TYV AMB AMB 22 41 22.0
comp=N,300nm,10.0s
TYV AMB AMB 22 41 22.0
comp=N,300nm,10.0s
TYV *e*Pg **Pg 22 41 25.4 -1.1**
TYV A 22 42 15.0
comp=N,400nm,5.0s
TYV *e*Sg **Sg 22 42 26.0 +3.3**
TYV AMS AMS 22 44 04.0
comp=N,1μm,16.0s
TYV AMS AMS 22 44 04.0
comp=N,4μm,16.0s
TYV AMS AMS 22 44 04.0
comp=N,4μm,16.0s
KUR Kuril'sk 4.39 105 ⇓*i* PN **Pn 22 41 11.3 +2.2**
KUR AMB AMB 22 41 13.0
comp=N,226nm,1.0s
KUR AMB AMB 22 41 13.0
comp=N,94nm,1.0s
KUR AMB AMB 22 41 13.0
comp=N,283nm,1.0s
KUR A 22 41 55.0
comp=N,566nm,1.0s
KUR A 22 41 55.0
comp=N,189nm,1.0s
KUR *e*S **Sn 22 41 56.5 -3.2**
KUR Kuril'sk 4.39 105 ⇓*i* PN **Pn 22 41 11.3 +2.2**
KUR pmax pmax
comp=E,260nm,0.9s
KUR pmax pmax
comp=Z,280nm,0.9s
HABR Khabarovsk 5.00 295 *e*PN **Pn 22 41 14.5 -3.1**
HABR 22 42 17.6
GRNR Gornyy 5.55 321 *e*P **Pn 22 41 22.9 -2.1**
GRNR AMB AMB 22 41 23.4
comp=Z,42nm,1.0s
GRNR *e*Pg **Pg 22 41 49.0 -0.6**
GRNR *e*Sb **Sb 22 42 42.6 -3.3**
GRNR A 22 42 44.0
comp=Z,96nm,1.0s
GRNR *e*Sg **Sg 22 43 08.0 +6.5**
NKL Nikolayevsk 6.64 354 *e*P **Pn 22 41 37.0 -3.1**
NKL AMB AMB 22 41 41.3
comp=Z,20nm,0.6s
NKL *e*Pg Pn 22 42 14.3 +34
NKL *e*S **Sn 22 42 54.0 -1.3**
NKL *e*Sg Sn 22 43 45.0 +50
NKL AMS AMS 22 44 51.0
comp=Z,1μm,14.0s
KLR Kul'dur 7.31 295 *e*PN **Pn 22 41 48.0 -1.3**
KLR MLR MLR
comp=E,1μm,11.5s
KLR MLR MLR
comp=Z,3μm,11.5s
EKMR Ekimchan 8.70 322 *e*P **Pn 22 42 08.5 +0.2**
EKMR AMB AMB 22 42 24.5
comp=Z,4.0nm,0.5s
EKMR *e*S **Sn 22 43 54.5 +8.6**
MDJ Mudanjiang 8.83 262 P **Pn 22 42 14.4 +4.3**
MDJ LR LR
comp=N,379nm,7.7s
MDJ LR LR
comp=E,698nm,11.6s
MDJ LR LR
comp=Z,965nm,10.6s
SKR Severo-Kuril's 10.29 61 *e*P **Pn 22 42 35.0 +4.9**
SKR AMB AMB 22 42 40.0
comp=Z,1μm,8.0s
SKR *e*Sg Sn 22 44 46.0 +21
SKR A 22 44 53.0
comp=Z,1μm,8.0s
SKR AMS AMS 22 47 42.0
comp=Z,1μm,14.0s
SKR AMS AMS 22 47 42.0
comp=Z,1μm,14.0s
SKR AMS AMS 22 48 06.0
comp=Z,1μm,13.0s
SKR AMS AMS 22 48 06.0
comp=Z,2μm,13.0s
MAJO Matsushiro 10.38 197 *e*PN **Pn 22 42 39.5 +8.2**
MAJO pmax pmax
comp=Z,14nm,0.8s
MAJO Matsushiro 10.38 197 *e*Pn **Pn 22 42 39.5 +8.2**
comp=Z,14nm,0.8s
MAT Matsushiro 10.38 197 P **Pn 22 42 39.1 +7.8**
MJAR Matsushiro Arr 10.38 197 Pn **Pn 22 42 32.4 +1.1**
comp=Z,0.5nm,0.3s,baz=5.9,slow=14,SNR=6.6
MJAR LR LR 22 46 26.2
comp=Z,168nm,21.6s,baz=340,slow=37
YASR Yasnyy 11.20 312 *e*P **Pn 22 42 41.9 -0.6**
YASR *e*S **Sn 22 44 52.4 +5.3**
YASR A 22 46 15.8
comp=Z,45nm,1.1s
YASR A 22 46 15.8
comp=Z,21nm,1.1s
KROS Kirovskiy 12.32 315 *e*rx rx 22 46 25.0
PET Petropavlovsk 12.61 53 *e*PN **Pn 22 43 05.3 +3.5**
PET *e*S **Sn 22 45 28.3 +6.6**
PET pmax pmax
comp=Z,100nm,2.6s
PET pmax pmax
comp=Z,17nm,1.0s
PET smax
comp=N,200nm,14.4s
PET MLR MLR
comp=Z,800nm,12.0s
PET MLR MLR
comp=E,800nm,12.0s
PET MLR MLR
comp=E,1μm,13.0s
PET MLR MLR
comp=Z,700nm,12.0s
PET MLR MLR
comp=N,400nm,12.0s
PET MLR MLR
comp=N,600nm,14.0s
HIA Hailar 15.08 288 P **Pn 22 43 41.8 +6.3**
HIA pmax pmax
comp=Z,17nm,0.8s
HIA Hailar 15.08 288 Pn **Pn 22 43 41.8 +6.3**
comp=Z,17nm,0.8s
YAK Yakutsk 17.01 340 *i* P **Pn 22 44 01.0 +0.7**
YAK pmax pmax
comp=Z,14nm,1.2s
YAK MLR MLR
comp=Z,100nm,13.0s
YAK Yakutsk 17.01 340 Pn **Pn 22 43 56.0 -4.3**
CIT Chita 19.20 297 *e*P **Pn 22 44 29.0 +1.9**
BJT Baijiatuau 19.77 260 *e*P **Pn 22 44 37.3 +3.3**
BJT pmax pmax
comp=Z,9.0nm,0.8s
BJT Baijiatuau 19.77 260 *e*P **Pn 22 44 37.3 +3.3**
comp=Z,9.4nm,0.8s
BOD Bodaibo 20.31 314 *e*P **P 22 44 33.2 -5.1**
BOD pmax pmax
comp=Z,14nm,1.2s
SSE Sheshan 22.22 233 P **P 22 44 57.8 -1.1**
SSE AMB AMB
comp=Z,34nm,0.8s,mb4.8
SSE AMB AMB
comp=Z,181nm,3.4s
HHC Hu-ho-hao-te 22.56 266 *e*P **P 22 45 06.6 +4.1**
HHC AP 22 45 10.9
HHC XP sP 22 45 13.6 +3.5
HHC PP 22 45 34.8
HHC S **S 22 49 09.3 -0.1**
HHC SS 22 49 50.9
HHC AMB AMB
comp=Z,12nm,1.3s,mb4.2
HHC AMB AMB
comp=Z,85nm,7.7s
HHC LR LR
comp=N,330nm,11.1s,MS4.2
HHC LR LR
comp=E,468nm,12.6s,MS4.2
HHC LR LR
comp=Z,438nm,12.5s,MS4.1
NJ2 Nanjing 22.85 239 *e*P **P 22 45 11.3 +5.7**
NJ2 AP 22 45 15.4
NJ2 XP sP 22 45 18.3 +5.2
NJ2 PP 22 45 41.5
NJ2 S **S 22 49 18.0 +3.7**
NJ2 XS sS 22 49 25.0 +1.6
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb4.5
NJ2 AMB AMB
comp=Z,70nm,10.3s
NJ2 LR LR
comp=N,80nm,24.0s,MS3.8
NJ2 LR LR
comp=E,420nm,20.0s,MS3.8
NJ2 LR LR
comp=Z,310nm,16.0s,MS3.8
ULN Ulaanbaatar 23.58 286 *e*P **P 22 45 11.9 -1.2**
ULN pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
ULN Ulaanbaatar 23.58 286 *e*P **P 22 45 11.9 -1.2**
comp=Z,4.4nm,0.7s,mb4.0
SONM Songino Array 24.02 286 P **P 22 45 17.4 +0.2**
comp=Z,3.2nm,0.6s,mb3.9,baz=80,slow=9.2,SNR=35
SONM pP 22 45 23.0
comp=Z,8.7nm,1.0s,baz=82,slow=8.9,SNR=26
SONM PcP PcP 22 48 58.3 -0.4
comp=Z,0.6nm,0.7s,baz=162,slow=2.5,SNR=4.5
SONM LR LR 22 54 17.0
comp=Z,97nm,20.5s,MS3.3,baz=243,slow=36
SONM Songino Array 24.02 286 P **P 22 45 17.4 +0.3**
SONM *PP 22 45 23.0
SONM 22 48 58.3
AMKA Amchitka 24.85 65 *e*P **P 22 45 24.4 -0.3**
BILL Bilibino 24.90 22 ⇑*i* P **P 22 45 25.1 -0.1**
BILL pmax pmax
comp=Z,14nm,1.1s,mb4.4
BILL MLR MLR
comp=Z,200nm,14.0s,MS3.8
TLY Talaya 25.33 296 *e*P **P 22 45 30.5 +1.4**
TLY *e* 22 46 14.7
TLY *e*S **S 22 50 02.0 +7.6**
TLY pmax pmax
comp=Z,8.0nm,1.1s,mb4.2
TLY MLR MLR
comp=Z,328nm,13.0s,MS4.0
TLY Talaya 25.33 296 *e*P **P 22 45 28.4 -0.7**
comp=Z,8.2nm,1.0s,mb4.2
ZAK Zakamensk 25.67 293 ⇑*e*P **P 22 45 32.7 +0.5**
ZAK pmax pmax
comp=Z,9.0nm,1.1s,mb4.2
TIXI Tiksi 25.91 351 *e*P **P 22 45 30.0 -4.4**
TIXI pmax pmax
comp=Z,9.0nm,0.8s,mb4.3
TIXI MLR MLR
comp=Z,173nm,12.0s,MS3.8
YHNB Yeheng 27.32 224 *e*P **P 22 45 53.4 +6.3**
NACB Ninganchiao 27.64 223 P **P 22 45 52.9 +3.0**
ENH Enshi 29.88 248 P **P 22 46 15.6 +5.7**
LZH Lanzhou 30.15 263 *e*P **P 22 46 12.0 -0.3**
LZH AMB AMB
comp=Z,21nm,1.3s,mb4.7
LZH AMB AMB
comp=Z,53nm,4.6s
LZH LR LR
comp=N,386nm,13.6s
LZH LR LR
comp=Z,496nm,17.5s,MS4.2
ZAL Zalesovo 36.35 303 P **P 22 47 06.4 +0.2**
baz=24,slow=11,SNR=6.9
ZAL pP pP 22 47 11.8 0.0
comp=Z,2.1nm,0.8s,baz=30,slow=11,SNR=6.0
ZAL LR LR 23 02 37.8
comp=Z,54nm,18.6s,MS3.4,baz=39,slow=37
ZAL Zalesovo 36.35 303 P **P 22 47 06.4 +0.2**
ZAL *PP pP 22 47 11.8 0.0
NVS Novosibirsk 37.05 305 *e*P **P 22 47 12.6 +0.4**
NVS pmax pmax
comp=N,4.0nm,1.6s
NVS pmax pmax
comp=E,10.0nm,1.6s
NVS pmax pmax
comp=Z,13nm,1.6s,mb4.5
WMQ Urumqi 37.66 286 *e*P **P 22 47 18.0 +0.6**
WMQ AMB AMB
comp=Z,15nm,1.0s,mb4.7
TTA Tatalina 37.70 41 P **P 22 47 12.0 -5.7**
TTA pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
TTA Tatalina 37.70 41 P **P 22 47 12.0 -5.7**
comp=Z,4.2nm,0.8s,mb4.2
KMI Kunming 37.74 249 P **P 22 47 23.4 +5.3**
KMI AMB AMB
comp=Z,13nm,1.3s,mb4.5
QIZ Qiongzhong 38.01 235 P **P 22 47 25.0 +4.7**
SVW2 Sparrevohn 38.08 44 *e*P **P 22 47 21.0 +0.1**
IMA2 Indian Mountai 38.53 36 *e*P **P 22 47 24.6 -0.1**
MKAR Makanchi Array 40.01 293 P **P 22 47 37.0 -0.1**
comp=Z,3.2nm,0.7s,mb4.2,baz=74,slow=9.4,SNR=27
MKAR pP pP 22 47 42.0 -0.8
comp=Z,5.9nm,0.7s,baz=79,slow=8.0,SNR=12
MKAR PcP PcP 22 49 41.5 -0.4
comp=Z,0.5nm,0.3s,baz=59,slow=4.0,SNR=4.6
MKAR pPcP 22 49 46.2
comp=Z,0.5nm,0.3s,baz=36,slow=6.4,SNR=4.7
MKAR Makanchi Array 40.01 293 ⇑*e*P **P 22 47 37.0 -0.1**
KDAK Kodiak Island 40.16 49 P **P 22 47 36.9 -1.5**
comp=Z,6.4nm,0.6s,mb4.6,baz=296,slow=4.9,SNR=16
KDAK Kodiak Island 40.16 49 *e*P **P 22 47 37.5 -0.8**
comp=Z,6.1nm,0.7s,mb4.4
KDAK *e* 22 47 44.9
SLKM Skilak Lake 40.76 45 *e*P **P 22 47 42.6 -0.7**
MCK McKinley 40.78 40 *e*P **P 22 47 39.9 -3.5**
MCK pmax pmax
comp=Z,16nm,0.9s,mb4.7
MCK McKinley 40.78 40 *e*P **P 22 47 39.9 -3.6**
comp=Z,16nm,0.9s,mb4.7
PMR Palmer 41.07 43 *e*P **P 22 47 45.1 -0.7**
PMR pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
PMR Palmer 41.07 43 *e*P **P 22 47 45.1 -0.7**
comp=Z,8.0nm,0.6s,mb4.5
COLA College 41.07 38 *c i*P **P 22 47 45.8 0.0**
COLA College 41.07 38 *e*P **P 22 47 45.6 -0.3**
comp=Z,63nm,1.1s,mb5.2
LSA Lhasa 42.54 265 P **P 22 48 01.0 +3.1**
LSA Lhasa 42.54 265 *e*P **P 22 47 59.3 +1.4**
LSA pmax pmax
comp=Z,15nm,1.0s,mb4.7
LSA Lhasa 42.54 265 *e*P **P 22 47 59.3 +1.4**
comp=Z,15nm,1.0s,mb4.7
CHKZ Chkalovo 44.47 306 *e*P **P 22 48 12.8 -0.6**
CHKZ *e**PP pP 22 48 17.9 -1.2
CHKZ pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
CHKZ Chkalovo 44.47 306 *e*P **P 22 48 12.8 -0.7**
comp=Z,1.3nm,0.5s,mb3.9
CHKZ *e*pP pP 22 48 17.9 -1.2
DAWY Dawson 44.82 38 *e*P **P 22 48 12.6 -3.6**
BRVK Borovoye 44.88 306 *e*P **P 22 48 17.3 +0.6**
BRVK *e**PP pP 22 48 22.1 -0.3
BRVK pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
BRVK Borovoye 44.88 306 *e*P **P 22 48 17.3 +0.5**
comp=Z,6.1nm,1.1s,mb4.3
BRVK *e*pP pP 22 48 22.1 -0.4
ZRNK Zerenda 45.64 306 *e*P **P 22 48 23.1 +0.4**
ZRNK *e**PP pP 22 48 27.9 -0.5
ZRNK *e* 22 50 00.3
ZRNK *e* 22 50 08.9
ZRNK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ZRNK Zerenda 45.64 306 *e*P **P 22 48 23.1 +0.4**
comp=Z,6.8nm,0.9s,mb4.6
ZRNK *e*pP pP 22 48 27.9 -0.5
ZRNK *e*PcP PcP 22 50 00.3 -0.5
ZRNK *e*PP PP 22 50 08.9 -0.8
INK Inuvik 45.89 31 P **P 22 48 24.3 -0.5**
comp=Z,11nm,1.0s,mb4.7,baz=308,slow=11,SNR=4.9
INK Inuvik 45.89 31 P **P 22 48 24.3 -0.5**
AAK Ala-Archa 46.82 291 *e*P **P 22 48 32.7 +0.7**
AAK pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
AAK Ala-Archa 46.82 291 *e*P **P 22 48 32.7 +0.7**
comp=Z,1.9nm,0.5s,mb4.3
SVE Sverdlovsk 48.52 314 *e*P **P 22 48 45.8 +0.6**
SVE MLR MLR
comp=N,100nm,11.0s,MS4.4
SVE MLR MLR
comp=E,200nm,11.0s,MS4.4
SVE MLR MLR
comp=Z,400nm,11.0s,MS4.7
ARU Arti 49.73 314 ⇑*i* P **P 22 48 54.3 -0.2**
ARU *e* 22 50 48.9
ARU *e*PPP 22 51 39.6
ARU *e*S **S 22 56 03.4 +0.8**
ARU *e*SS SS 22 59 33.4 -1.6
ARU pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
ARU Arti 49.73 314 *e*P **P 22 48 54.4 0.0**
comp=Z,17nm,1.2s,mb4.9
ARU *e*pP pP 22 48 59.5 -0.7
DLBC Dease Lake 51.12 42 P **P 22 49 05.0 -0.1**
comp=Z,4.0nm,0.9s,mb4.4,baz=281,slow=7.2,SNR=7.9
NDI New Delhi 52.77 274 *e*P **P 22 49 15.5 -1.8**
RES Resolute Bay 53.32 16 P **P 22 49 19.8 -1.6**
KEV Kevo 54.73 337 *e*p **P 22 49 31.7 +0.1**
comp=Z,3.3nm,0.8s,mb4.4
KEV Kevo 54.73 337 *e*P **P 22 49 31.7 +0.1**
KEV pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
ARCES ARCESS Array B 55.27 337 LR LR 23 20 59.4
comp=Z,46nm,19.1s,MS3.6,baz=22,slow=44
YKA Yellowknife Ar 55.52 33 P **P 22 49 36.5 -0.8**
comp=Z,5.1nm,0.8s,mb4.6,baz=299,slow=6.5,SNR=6.7
YKA Yellowknife Ar 55.52 33 *i* P **P 22 49 36.5 -0.8**
YKA pmax pmax
comp=Z,5.0nm,0.8s
YKA Yellowknife Ar 55.52 33 P **P 22 49 36.5 -0.8**
KLMR Klimovskoe 56.02 325 *e*P **P 22 49 38.7 -2.3**
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
JOF Joensuu 57.82 330 *e*p **P 22 49 52.8 -0.9**
comp=Z,7.0nm,0.8s,mb4.7
JOF Joensuu 57.82 330 *e*P **P 22 49 52.8 -0.9**
JOF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
A04A Legoe Bay, Lum 60.05 50 ⇑P **P 22 50 08.5 -0.7**
baz=60
KAF Kangasniemi 60.08 331 *e*p **P 22 50 08.3 -1.1**
comp=Z,4.6nm,0.8s,mb4.6
KAF Kangasniemi 60.08 331 *e*P **P 22 50 08.3 -1.1**
KAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
FINES FINESS Array B 60.63 330 P **P 22 50 13.1 -0.1**
comp=Z,3.2nm,0.6s,mb4.6,baz=48,slow=9.4,SNR=17

FINES pP pP 22 50 18.1 -1.0
comp=Z,4.6nm,0.7s,baz=64,slow=8.7,SNR=9.4
FINES FINESS Array B 60.63 330 *i* P **P** **22 50 13.1 0.0**
FINES pmax pmax
comp=Z,3.0nm,0.6s
B05A Bryant 60.66 50 ⇓P **P** **22 50 12.7 -0.6**
baz=60
OBN Obninsk 60.81 321⇑ *e*P **P** **22 50 14.8 +0.4**
OBN *e* pP 22 50 19.7 -0.5
OBN *eS* **S** **22 58 29.5 -1.3**
OBN pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
OBN MLR MLR
comp=Z,100nm,11.0s,MS4.2
E03A Lebam 60.93 52 ⇓P **P** **22 50 14.4 -0.8**
baz=60
SUMG Summit 61.17 0 *e*P **P** **22 50 17.5 +0.7**
comp=Z,16nm,1.0s,mb5.1
C05A Tolt Reservoir 61.22 50 ⇑P **P** **22 50 16.4 -0.7**
baz=61
E05A Randle 61.89 51 ⇓P **P** **22 50 21.3 -0.4**
baz=61
F04A Amboy 61.93 52 ⇑P **P** **22 50 21.7 -0.2**
baz=61
F05A White Salmon 62.48 51 ⇓P **P** **22 50 25.4 -0.3**
baz=62
I03A Eugene 62.70 54 ⇑P **P** **22 50 27.0 -0.1**
baz=62
H04A Detroit Lake 62.85 53 ⇑P **P** **22 50 28.1 0.0**
baz=62
J02A Umpqua 62.91 55 ⇑P **P** **22 50 28.6 0.0**
baz=62
G05A Wamic 62.97 52 ⇑P **P** **22 50 29.1 +0.2**
baz=62
NEW Newport 63.22 47 *e*P **P** **22 50 30.2 -0.4**
NEW pmax pmax
comp=Z,1.0nm,0.6s
NEW Newport 63.22 47 *e*P **P** **22 50 30.2 -0.4**
comp=Z,1.3nm,0.6s,mb4.2
J03A Ideyld Park 63.26 54 ⇓P **P** **22 50 31.4 +0.7**
baz=63
H05A Madras 63.40 52 ⇑P **P** **22 50 31.9 +0.2**
baz=63
I05A Bend 63.69 53 ⇑P **P** **22 50 33.5 -0.1**
baz=63
GOF Gofitskoye 64.19 309 *e*P **P** **22 50 42.5 +5.6**
J05A Fort Rock 64.28 54 ⇑P **P** **22 50 38.0 +0.4**
baz=64,SNR=6.6
WALA Waterton Lakes 64.30 45 *e*P **P** **22 50 37.5 -0.2**
comp=Z,5.2nm,0.8s,mb4.6
WALA *ep*P pP 22 50 43.5 0.0
I06A Prineville 64.41 52 ⇑P **P** **22 50 38.8 +0.4**
baz=64
YBH Yreka Blue Hor 64.45 56 ⇓P **P** **22 50 38.9 +0.2**
baz=64
M02C Callahan 64.59 56 ⇓P **P** **22 50 39.6 0.0**
baz=64
L04A Klamath Falls 64.63 55 ⇑P **P** **22 50 40.2 +0.3**
baz=64
N02C Big Bar 64.70 57 ⇓P **P** **22 50 40.5 +0.2**
baz=64
I07A Izee 64.71 52 ⇓P **P** **22 50 40.3 0.0**
baz=64
H08A Prairie City 64.87 51 ⇓P **P** **22 50 41.7 +0.3**
baz=64
J06A Christmas Vall 64.90 53 ⇓P **P** **22 50 42.0 +0.4**
baz=64,SNR=5.0
M04C Macdoel 64.92 55 ⇑P **P** **22 50 42.2 +0.5**
baz=64
M03C McCloud 65.09 56 ⇑P **P** **22 50 43.3 +0.5**
baz=65
KIV Kislovodsk 65.10 308 *e*P **P** **22 50 44.1 +1.2**
KIV *e**PP pP 22 50 49.1 +0.3
KIV pmax pmax
comp=Z,33nm,1.2s,mb5.2
KIV Kislovodsk 65.10 308 *e*P **P** **22 50 44.1 +1.2**
comp=Z,33nm,1.2s,mb5.2
KIV *ep*P pP 22 50 49.1 +0.3
K06A Valley Falls 65.14 53 ⇑P **P** **22 50 43.6 +0.5**
baz=65,SNR=6.3
WDC Whiskeytown Da 65.30 57 ⇓P **P** **22 50 44.4 +0.2**
baz=65
L05A Lakeview 65.31 54 ⇑P **P** **22 50 44.9 +0.7**
baz=65,SNR=5.2
H09A Durkee 65.31 51 ⇑P **P** **22 50 44.5 +0.2**
baz=65
I08A Drewsey 65.33 52 ⇑P **P** **22 50 45.0 +0.6**
baz=65
BMO Blue Mountains 65.38 50 *e*P **P** **22 50 45.0 +0.3**
comp=Z,2.6nm,0.8s,mb4.3
FCC Fort Churchill 65.39 28 *e*P **P** **22 50 43.6 -1.2**
FCC pmax pmax
comp=Z,13nm,0.8s,mb5.0
FCC Fort Churchill 65.39 28 *e*P **P** **22 50 43.6 -1.2**
comp=Z,14nm,0.8s,mb5.0
O02C Red Bluff 65.42 57 ⇑P **P** **22 50 45.6 +0.6**
baz=65
NB2 NORSAR Subarra 65.58 336 P **P** **22 50 45.4 -0.6**
comp=Z,4.2nm,0.9s,mb4.5,baz=35,slow=6.5
NOA NORSAR Array B 65.58 336 P **P** **22 50 45.1 -0.8**
comp=Z,1.7nm,0.7s,mb4.2,baz=36,slow=6.6,SNR=9.9
NOA pP pP 22 50 50.7 -1.2
comp=Z,2.3nm,0.8s,baz=35,slow=6.3,SNR=11
NOA NORSAR Array B 65.58 336 P **P** **22 50 45.1 -0.8**
NOA *ep*P pP 22 50 50.7 -1.2
M05C Lookout 65.58 55 ⇑P **P** **22 50 46.4 +0.4**
baz=65
I09A Lost Marbles R 65.73 51 ⇑P **P** **22 50 46.9 -0.1**
baz=65
HATC Hat Creek Radi 65.76 56 ⇓P **P** **22 50 47.4 +0.3**
baz=65
GASB Alder Springs 65.81 57 ⇓P **P** **22 50 48.0 +0.5**
baz=65
CHMT Chamberlain Mo 66.08 46 *e*P **P** **22 50 49.0 -0.2**
K08A Mann Creek Ran 66.16 53 P **P** **22 50 50.4 +0.6**
baz=66,SNR=5.1
L07A Adell 66.16 54 ⇑P **P** **22 50 50.4 +0.7**
baz=66,SNR=12
WVOR Wild Horse Val 66.27 53 *e*P **P** **22 50 51.0 +0.5**
WVOR *e**PP pP 22 50 56.2 -0.2
WVOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
WVOR Wild Horse Val 66.27 53 *e*P **P** **22 50 51.0 +0.5**
comp=Z,8.0nm,1.1s,mb4.7
WVOR *ep*P pP 22 50 56.2 -0.1
WVOR *es*P sP 22 50 58.3 -0.2
O04C Chester 66.31 56 ⇓P **P** **22 50 51.3 +0.6**
baz=66
ELFS Eagle Lake Fie 66.31 56 ⇓P **P** **22 50 51.0 +0.3**
baz=66
MNRC McLaughlin Nat 66.48 58 ⇓P **P** **22 50 52.5 +0.7**
baz=66
WRA Warramunga Arr 66.54 188 P **P** **22 50 50.5 -1.7**
comp=Z,2.6nm,1.0s,mb4.2,baz=7,2,slow=6.5,SNR=6.2
ORV Oroville 66.58 57 ⇑P **P** **22 50 52.8 +0.4**
baz=66
K09A Rome 66.59 52 ⇓P **P** **22 50 52.8 +0.3**
baz=66
L08A Fields 66.60 53 ⇑P **P** **22 50 52.9 +0.3**
baz=66
O05C Quincy 66.64 56 ⇑P **P** **22 50 53.1 +0.3**
baz=66
N06A Buffalo Meadow 66.73 55 ⇑P **P** **22 50 53.7 +0.3**
baz=66,SNR=7.9
EGMT Eagleton 67.02 44 *e*P **P** **22 50 55.0 -0.2**
comp=Z,15nm,1.4s,mb4.8
BEKR Beckwourth 67.02 56 ⇑P **P** **22 50 55.3 0.0**
baz=66,SNR=5.9
AKASG Malin Array Be 67.07 320 P **P** **22 50 54.8 -0.7**
comp=Z,2.5nm,0.7s,mb4.3,baz=41,slow=6.8,SNR=19
AKASG pP pP 22 50 60.0 -1.5
comp=Z,3.7nm,0.8s,baz=40,slow=6.5,SNR=9.1
AKBB Malin Array Si 67.07 320 *e*P **P** **22 50 55.1 -0.5**
AKBB *e**PP pP 22 51 00.1 -1.4
AKBB *e* 22 53 19.3
O06A Flanigan 67.13 55 ⇓P **P** **22 50 56.3 +0.4**
baz=67
P05C Yuba Gap, Truc 67.26 57 ⇓P **P** **22 50 56.5 -0.2**
baz=67
DLMT Dillon 67.48 47 *e*P **P** **22 50 57.6 -0.5**
comp=Z,28nm,1.1s,mb5.2
LAVA Lava Cap Winer 67.55 57 ⇑P **P** **22 50 58.8 +0.2**
baz=67
M09A Marrel Ranch, 67.61 53 ⇑P **P** **22 50 58.7 -0.3**
baz=67
PAHR Pah Rah Range 67.69 56 *e*P **P** **22 50 59.5 0.0**
comp=Z,15nm,1.1s,mb5.0

BOZ Bozeman (W) 67.77 47 *e*P **P** **22 51 00.2 +0.3**
BOZ *e**PP pP 22 51 06.6 +0.7
BOZ pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
BOZ Bozeman (W) 67.77 47 *e*P **P** **22 51 00.2 +0.2**
comp=Z,8.2nm,1.3s,mb4.6
BOZ *ep*P pP 22 51 06.6 +0.8
R04C Big Horse Ranc 67.77 58 ⇓P **P** **22 51 00.1 +0.1**
baz=67
R05C Kirkwood Meado 67.97 57 ⇑P **P** **22 51 01.4 +0.2**
baz=68
CMB Columbia Colle 68.24 57 *e*P **P** **22 51 03.2 +0.3**
CMB *e* pP 22 51 10.3 +1.4
CMB pmax pmax
comp=Z,13nm,1.4s,mb4.8
CMB Columbia Colle 68.24 57 *e*P **P** **22 51 03.2 +0.2**
comp=Z,13nm,1.4s,mb4.8
CMB *e* pP 22 51 10.3 +1.4
CMB Columbia Colle 68.24 57 ⇑P **P** **22 51 03.1 +0.1**
baz=68
PACP Pacheco Peak 68.41 59 ⇓P **P** **22 51 04.1 +0.1**
baz=68
R06C Coleville 68.45 56 ⇑P **P** **22 51 04.8 +0.6**
baz=68
S06C San Francisco 68.66 57 ⇑P **P** **22 51 05.8 +0.2**
baz=68,SNR=5.2
R07C Lee Vining 68.98 57 ⇑P **P** **22 51 08.1 +0.6**
baz=68
ELK Elko 69.29 52 P **P** **22 51 10.1 +0.6**
R08A Mina 69.34 56 ⇓P **P** **22 51 10.3 +0.5**
baz=69
KCC Kaiser Creek 69.34 57 ⇓P **P** **22 51 10.3 +0.5**
baz=69
M13A Montello 69.44 51 ⇑P **P** **22 51 10.5 +0.1**
baz=69
RRI2 Red Ridge 69.54 48 *e*P **P** **22 51 12.1 +1.0**
comp=Z,13nm,0.8s,mb4.9
RRI2 *ep*P pP 22 51 17.2 +0.3
PKD Parkfield 69.57 59 ⇑P **P** **22 51 10.9 -0.3**
baz=69
LOHW Long Hollow 69.72 48 *e*P **P** **22 51 12.8 +0.7**
comp=Z,2.6nm,0.9s,mb4.2
LOHW *e* 22 51 21.2
N13A Wendover, West 69.77 52 ⇑P **P** **22 51 12.6 +0.1**
baz=69
P11A Circle Ranch, 69.83 54 ⇓P **P** **22 51 13.1 +0.2**
baz=69
HELL Mitchell Peak, 69.96 58 ⇑P **P** **22 51 13.3 -0.3**
baz=70,SNR=7.8
TPH Tonopah 70.03 56 *e*P **P** **22 51 14.7 +0.7**
ASAR Alice Springs 70.27 188 P **P** **22 51 15.5 0.0**
comp=Z,4.1nm,0.8s,mb4.4,baz=5.0,slow=5.6,SNR=32
S09A Goldfield 70.27 56 ⇓P **P** **22 51 15.9 +0.3**
baz=70
VES Vestal, Richgr 70.50 58 ⇑P **P** **22 51 17.1 +0.1**
baz=70
HWUT Hardware Ranch 70.65 50 *e*P **P** **22 51 18.3 +0.4**
comp=Z,5.9nm,1.0s,mb4.5
HWUT *ep*P pP 22 51 22.9 -0.8
HWUT *es*P sP 22 51 26.3 +0.3
GRAC Grapevine Rang 70.69 56 ⇑P **P** **22 51 18.7 +0.6**
baz=70
Q12A Willow Creek R 70.70 53 ⇓P **P** **22 51 18.1 -0.1**
baz=70
BW06 Boulder Array 70.86 48 *e*P **P** **22 51 18.6 -0.5**
comp=Z,11nm,1.2s,mb4.7
BW06 *ep*P pP 22 51 24.4 -0.7
PDAR Pinedale Array 70.86 48 P **P** **22 51 18.9 -0.3**
comp=Z,4.7nm,0.8s,mb4.5,baz=336,slow=2.7,SNR=40
DUG Dugway 70.99 51 *e*P **P** **22 51 20.4 +0.5**
DUG *e**PP pP 22 51 26.5 +0.6
DUG pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
DUG Dugway 70.99 51 *e*P **P** **22 51 20.4 +0.5**
comp=Z,3.6nm,0.8s,mb4.3
DUG *ep*P pP 22 51 26.5 +0.7
DAC Darwin (Calif) 71.07 57 *e*P **P** **22 51 20.6 +0.2**
DAC *e**PP pP 22 51 26.4 +0.1
DAC pmax pmax
comp=Z,15nm,1.8s,mb4.6
DAC Darwin (Calif) 71.07 57 *e*P **P** **22 51 20.6 +0.2**
comp=Z,15nm,1.8s,mb4.6
DAC *ep*P pP 22 51 26.4 +0.1
BURAR Bucovina Array 71.13 320 ⇓*i*P **P** **22 51 20.6 -0.1**
BURAR Bucovina Array 71.13 320 ⇓P **P** **22 51 20.6 -0.1**
MPMC Manual Prospec 71.28 57 ⇓P **P** **22 51 21.9 +0.2**
baz=71,SNR=5.5
MALT Malatya 71.30 306 ⇓*i*P **P** **22 51 23.4 +1.6**
MALT Malatya 71.30 306 ⇓P **P** **22 51 23.4 +1.6**
FURC Furnace Creek, 71.36 57 ⇓P **P** **22 51 22.3 +0.2**
baz=71,SNR=7.0
KOLS Kolonicke sedl 71.38 323 *e*P **P** **22 51 22.1 -0.2**
OJC Ojcow 71.38 325 *e*P **P** **22 51 22.6 +0.3**
ULM Lac du Bonnet 71.42 35 P **P** **22 51 20.6 -1.9**
comp=Z,2.2nm,0.7s,mb4.2,baz=298,slow=6.8,SNR=5.2
STHS Stebnicka Huta 71.43 324 *e*P **P** **22 51 23.5 +0.9**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
STHS Stebnicka Huta 71.43 324 *e*P **P** **22 51 23.5 +0.9**
comp=Z,3.1nm,1.0s,mb4.2
U10A Ash Meadows, A 71.69 56 ⇓P **P** **22 51 24.6 +0.5**
baz=71
CRVS Carvsnica-Dubn 71.74 323 *e*P **P** **22 51 25.2 +0.8**
BSEG Bad Segeberg 71.76 332 *e*P **P** **22 51 24.8 +0.3**
comp=Z,6.0nm,0.9s,mb4.5
BSEG Bad Segeberg 71.76 332 *e*P **P** **22 51 24.8 +0.3**
BSEG pmax pmax
comp=Z,329nm,0.9s,mb6.3
NIE Niedzica 71.81 324 *e*P **P** **22 51 25.6 +0.8**
EDW2 Edwards Air Fo 71.81 58 ⇑P **P** **22 51 24.9 0.0**
baz=71,SNR=5.2
GSC Goldstone 72.20 57 ⇓P **P** **22 51 27.3 +0.1**
baz=72
U11A Corn Creek 72.23 56 ⇓P **P** **22 51 27.7 +0.3**
baz=72
OKC Ostrava-Krasne 72.33 326 *e*P **P** **22 51 29.1 +1.1**
OKC *ep*P pP 22 51 34.0 +0.1
OKC AMS AMS 23 26 50.0
comp=Z,200nm,13.9s
OKC Ostrava-Krasne 72.33 326 *e*P **P** **22 51 29.1 +1.1**
OKC *ep*P pP 22 51 34.0 +0.1
BFSC Mount Baldy St 72.45 59 ⇑P **P** **22 51 28.9 +0.2**
baz=72
MSU Marysvale 72.54 52 *e*P **P** **22 51 29.9 +0.7**
MSU *e**PP pP 22 51 34.9 -0.3
MSU *e* 22 51 47.5
MSU Marysvale 72.54 52 *e*P **P** **22 51 29.9 +0.7**
MSU *ep*P pP 22 51 34.9 -0.2
MSU *es*P sP 22 51 38.0 +0.6
MSU *ePcP* PcP 22 51 47.5 +0.7
RSSD Black Hills 72.58 44 *e*P **P** **22 51 28.9 -0.6**
RSSD *e**PP pP 22 51 35.2 -0.2
RSSD *e* 22 51 48.3
RSSD pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
RSSD Black Hills 72.58 44 *e*P **P** **22 51 28.9 -0.5**
comp=Z,5.0nm,1.0s,mb4.4
RSSD *ep*P pP 22 51 35.2 -0.3
RSSD *es*P sP 22 51 37.0 -0.6
RSSD *ePcP* PcP 22 51 48.2 +1.2
UPC Upice 72.61 327 *e*P **P** **22 51 30.3 +0.7**
UPC *ep*P pP 22 51 35.4 -0.2
MORC Moravsky Berou 72.62 326 ⇑*i*P **P** **22 51 30.2 +0.5**
DPC Dobruska-Polom 72.62 327 *e*P **P** **22 51 30.5 +0.8**
DPC *ep*P pP 22 51 35.8 +0.1
DPC AMS AMS 23 26 50.0
comp=Z,100nm,14.6s
TUQ Turquoise Mtn. 72.62 57 ⇑P **P** **22 51 29.9 +0.2**
baz=72
U12A Valley of Fire 72.71 55 ⇑P **P** **22 51 30.5 +0.3**
baz=72
HEC Hector,Ludlow 72.81 57 ⇑P **P** **22 51 30.9 0.0**
baz=72
BR131 Keskin Array S 72.89 310 *e*P **P** **22 51 31.5 +0.2**
comp=Z,1.7nm,0.8s,mb4.0
BR131 *ep*P pP 22 51 36.7 -0.6
BRTR Keskin Array B 72.89 310 P **P** **22 51 31.2 -0.1**
comp=Z,1.9nm,0.8s,mb4.1,baz=61,slow=4.8,SNR=10.0
BRTR pP pP 22 51 36.5 -0.7
comp=Z,1.7nm,0.8s,baz=48,slow=3.9,SNR=8.1
SRU San Rafael 73.00 51 *e*P **P** **22 51 32.2 +0.3**
SRU *e* 22 51 48.7
SRU pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SRU San Rafael 73.00 51 *e*P **P** **22 51 32.2 +0.2**
comp=Z,4.8nm,0.7s,mb4.5
SRU *ePcP* PcP 22 51 48.7 -0.1
CLL Collm 73.05 329 *e*P **P** **22 51 32.0 -0.2**
comp=Z,14nm,1.1s,mb4.8
CLL Collm 73.05 329 ⇑P **P** **22 51 32.0 -0.2**
comp=Z,logA/T=1.1,mb4.8
CLL *j* *PP pP 22 51 37.0 -1.2
CLL Collm 73.05 329⇑ *i*P **P** **22 51 32.0 -0.2**
comp=Z,14nm,1.1s,mb4.8
CLL *j* pP pP 22 51 37.0 -1.2
CLL Collm 73.05 329⇑ *i*P **P** **22 51 32.0 -0.2**
CLL *i* pP 22 51 37.0 -1.2
CLL pmax pmax
comp=Z,14nm,1.1s,mb4.8
BRG Berggiesshubel 73.07 329 *e*P **P** **22 51 32.7 +0.3**
comp=Z,10.0nm,1.4s,mb4.5
BRG Berggiesshubel 73.07 329 *e*P **P** **22 51 32.7 +0.3**
BRG pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
PVCC Panska Ves 73.13 328 *e*P **P** **22 51 33.5 +0.8**
PVCC AMS AMS 23 28 00.0
VYHS Vyhne 73.13 324 *e*P **P** **22 51 32.9 +0.2**
VYHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
VYHS Vyhne 73.13 324 *e*P **P** **22 51 32.9 +0.2**
comp=Z,4.1nm,1.1s,mb4.3
VYHS *ePP* PP 22 54 06.1 -10
GMRC Granite Mounta 73.24 57 ⇑P **P** **22 51 33.5 +0.1**
baz=73
FBE Freiberg 73.24 329 *e*P **P** **22 51 33.4 0.0**
comp=Z,8.0nm,1.0s,mb4.6
VRAC Vranov 73.36 326⇑ *i*P **P** **22 51 34.9 +0.8**
PRU Pruhonice 73.58 328 *e*P **P** **22 51 36.0 +0.6**
PRU *e**PP pP 22 51 41.1 -0.2
PRU MLR MLR
comp=Z,100nm,7.4s
PRU Pruhonice 73.58 328 *e*P **P** **22 51 36.0 +0.6**
PRU *ep*P pP 22 51 41.1 -0.2
BELC Belle Mtn. 73.59 58 ⇓P **P** **22 51 35.4 0.0**
baz=73
PFO Pinyon Flat Ob 73.60 58 *e*P **P** **22 51 35.8 +0.3**
PFO pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
PFO Pinyon Flat Ob 73.60 58 *e*P **P** **22 51 35.8 +0.3**
comp=Z,2.2nm,0.5s,mb4.3
PFO Pinyon Flat Ob 73.60 58 ⇓P **P** **22 51 35.5 0.0**
baz=73
TREC Trest 73.79 327 *e*P **P** **22 51 37.4 +0.8**
TREC *e**PP pP 22 51 42.4 -0.2
TREC MLR MLR
comp=Z,200nm,7.6s
IRM Iron Mountain 73.97 57 ⇓P **P** **22 51 37.9 +0.2**
baz=74,SNR=5.8
WERD Werda 74.01 329 *e*P **P** **22 51 38.0 +0.1**
comp=Z,7.0nm,1.5s,mb4.4
W13A Hualapai Mount 74.03 56 ⇓P **P** **22 51 37.9 -0.1**
baz=74
ZST Bratislava 74.06 325 *e*P **P** **22 51 39.0 +0.8**
ZST pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
ZST Bratislava 74.06 325 *e*P **P** **22 51 39.0 +0.8**
comp=Z,5.2nm,1.1s,mb4.4
GUNZ Gunzen 74.07 329 *e*P **P** **22 51 38.6 +0.4**
comp=Z,8.0nm,1.1s,mb4.6
MOX Moxa 74.08 330 *e*P **P** **22 51 38.0 -0.3**
comp=Z,11nm,1.4s,mb4.6
MOX Moxa 74.08 330 *e*(P) **P** **22 51 38.6 +0.3**
MOX *e* pP 22 51 43.6 -0.7
NKC Novy Kostel 74.14 329 *e*P **P** **22 51 39.1 +0.5**
NKC *e**PP pP 22 51 44.5 -0.1
NKC MLR MLR
comp=Z,100nm,5.9s
NKC Novy Kostel 74.14 329 *e*P **P** **22 51 39.1 +0.5**
NKC *ep*P pP 22 51 44.5 -0.1
BZS Buzias 74.25 321⇑ *i*P **P** **22 51 39.1 -0.2**
BZS Buzias 74.25 321 ⇑P **P** **22 51 39.1 -0.2**
PV10 Paradox Valley 74.33 50 P **P** **22 51 40.8 +1.0**
W14A Seligman 74.40 55 ⇓P **P** **22 51 40.8 +0.6**
baz=74
X13A Yucca 74.42 56 ⇑P **P** **22 51 40.2 -0.1**
baz=74,SNR=5.4
PDMCI Parker Dam,Lak 74.46 56 ⇓P **P** **22 51 40.6 +0.1**
baz=74
MANZ Manzenberg 74.46 329 *e*P **P** **22 51 40.8 +0.3**
comp=Z,5.0nm,1.2s,mb4.3
SWSC Sam W. Stewart 74.47 59 ⇓P **P** **22 51 40.9 +0.4**
baz=74
DVTC Desert V Tower 74.49 59 ⇓P **P** **22 51 40.5 -0.1**
baz=74
UBBA Unterbreizbach 74.49 331 *e*P **P** **22 51 40.7 0.0**
ROTZ Rotzenmuhle 74.61 329 *e*P **P** **22 51 41.8 +0.4**
comp=Z,8.0nm,1.5s,mb4.4
Y12C Blythe 74.63 57 ⇑P **P** **22 51 41.4 -0.1**
baz=74
KHC Kasperske Hory 74.64 328 *e*P **P** **22 51 42.1 +0.5**
KHC *ep*P pP 22 51 47.4 -0.2
KHC *ePCP* PcP 22 51 55.5 -0.3
KHC AMS AMS 23 27 20.0
comp=Z,100nm,18.7s
KHC Kasperske Hory 74.64 328 *e*⇓*i*P **P** **22 51 42.1 +0.5**
PV01 Paradox Valley 74.75 50 P **P** **22 51 42.7 +0.5**
PV01 *ep*P pP 22 51 47.8 -0.4
CONA Conrad Observa 74.77 326⇑ *i*P **P** **22 51 43.3 +1.0**
comp=Z,7.3nm,1.6s,mb4.4,SNR=5.1
GEC2 GERESS Array S 74.83 327 *e*P **P** **22 51 42.6 -0.1**
comp=Z,8.0nm,1.6s,mb4.4
GEC2 GERESS Array S 74.83 327 *e*P **P** **22 51 42.6 -0.1**
GEC2 pmax pmax
comp=Z,120nm,1.6s,mb5.6
GERES GERESS Array B 74.83 327 P **P** **22 51 42.6 -0.1**
comp=Z,1.6nm,0.7s,mb4.0,baz=36,slow=5.3,SNR=17
GERES pP pP 22 51 47.7 -1.0
comp=Z,1.9nm,0.8s,baz=35,slow=5.6,SNR=10.0
GERES LR LR 23 28 04.5
comp=Z,52nm,18.5s,MS3.9,baz=74,slow=38
GERES GERESS Array B 74.83 327 P **P** **22 51 42.6 -0.1**
GERES *PP pP 22 51 47.7 -1.0
WET Wettzell 74.89 328 *e*P **P** **22 51 42.7 -0.3**
comp=Z,10.0nm,1.0s,mb4.7
WET Wettzell 74.89 328 *e*P **P** **22 51 42.7 -0.3**
WET pmax pmax
comp=Z,312nm,1.0s,mb6.2
GLA Glamis 74.95 58 ⇑P **P** **22 51 43.6 +0.2**
baz=74
Y13A Salome 74.98 57 ⇓P **P** **22 51 43.5 -0.1**
baz=74
GRA1 Grafenberg Arr 75.02 329 *e*P **P** **22 51 44.3 +0.5**
comp=Z,30nm,1.4s,mb5.0
GRA1 *ep*P pP 22 51 49.8 0.0
GRF Grafenberg Arr 75.02 329 *e*P **P** **22 51 44.3 +0.5**
comp=Z,30nm,1.4s,mb5.0
GRF *ep*P pP 22 51 49.8 0.0
GRF Grafenberg Arr 75.02 329 *e*P **P** **22 51 44.3 +0.5**
GRF *e**PP pP 22 51 49.8 0.0
GRF pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
GRF Grafenberg Arr 75.02 329 *e*P **P** **22 51 44.3 +0.5**
GRF *e**PP pP 22 51 49.8 0.0
GRF pmax pmax
comp=Z,30nm,1.4s,mb5.0
X14A Yava 75.05 56 ⇓P **P** **22 51 44.1 +0.2**
baz=75
Y14A Wickenburg 75.37 56 ⇑P **P** **22 51 46.1 +0.4**
baz=75
X15A Humboldt 75.41 55 ⇓P **P** **22 51 46.5 +0.5**
baz=75
MVCO Mesa Verde 75.47 51 *e*P **P** **22 51 46.8 +0.4**
TNS Taunus Mts 75.52 331 *e*P **P** **22 51 47.0 +0.3**
comp=Z,12nm,1.3s,mb4.7
TNS Taunus Mts 75.52 331 *e*P **P** **22 51 47.0 +0.3**
TNS pmax pmax
comp=Z,297nm,1.3s,mb6.1
VTS Vitosha 75.90 318 ⇓*i*P **P** **22 51 49.5 +0.7**
VTS Vitosha 75.90 318 ⇓P **P** **22 51 49.5 +0.7**
SCHQ Schefferville 76.10 17 P **P** **22 51 49.2 -0.8**
comp=Z,2.2nm,0.6s,mb4.2,baz=353,slow=6.0,SNR=5.2
SCHQ LR LR 23 30 07.6
comp=Z,46nm,19.0s,MS3.8,baz=107,slow=40
SCHQ Schefferville 76.10 17 P **P** **22 51 49.2 -0.8**
SCHQ LR LR 23 30 07.6
PERS Pernice 76.12 325 *e*P **P** **22 51 50.4 +0.3**
BCLA Clavier 76.36 333 P **P** **22 51 51.4 -0.1**
GOLS Golise 76.43 325 *e*P **P** **22 51 51.8 0.0**
KBA Koelnbreinsper 76.43 327⇑ *i*P **P** **22 51 52.7 +0.9**
comp=Z,14nm,1.1s,mb4.8,SNR=8.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBA	Koelnbreinsper	76.43	327	⇑iP	P	22 51 52.7	+0.9
KBA				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
STU	Stuttgart	76.51	330	eP	P	22 51 52.7	+0.4
	comp=Z,17nm,1.0s,mb4.9						
CRES	Cresnjev	76.65	325	eP	P	22 51 52.8	-0.3
GIVF	Givet	76.79	333	eP	P	22 51 53.1	-0.8
DOU	Dourbes	76.87	333	P	P	22 51 53.8	-0.5
VISS	Visnje	76.91	325	eP	P	22 51 54.4	-0.2
WTTA	Wattenberg	76.92	328	⇑iP	P	22 51 55.4	+0.8
	comp=Z,17nm,1.2s,mb4.8,SNR=6.2						
WTTA	Wattenberg	76.92	328	⇑iP	P	22 51 55.4	+0.8
WTTA				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
BAIF	Baives	77.02	334	eP	P	22 51 54.4	-0.8
MOTA	Moosalm	77.04	328	⇓iP	P	22 51 55.8	+0.5
	comp=Z,14nm,1.0s,mb4.8,SNR=11						
MOTA	Moosalm	77.04	328	⇓iP	P	22 51 55.8	+0.5
MOTA				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
SQTA	Sankt Quirin	77.11	328	⇑iP	P	22 51 56.4	+0.7
	comp=Z,11nm,1.1s,mb4.7						
SQTA	Sankt Quirin	77.11	328	⇑iP	P	22 51 56.4	+0.7
SQTA				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
116A	Eloy	77.12	56	⇓P	P	22 51 56.4	+0.7
	baz=77						
BFO	Black Forest	77.19	330	eP	P	22 51 56.3	+0.2
	comp=Z,7.0nm,1.1s,mb4.5						
BFO	Black Forest	77.19	330	eP	P	22 51 56.3	+0.2
BFO				pmax	pmax		
	comp=Z,376nm,1.1s,mb6.2						
CDF	Champ du Feu	77.47	331	eP	P	22 51 57.2	-0.5
	comp=Z,38nm,1.4s,mb4.8						
CDF	Champ du Feu	77.47	331	eP	P	22 51 57.2	-0.5
CDF				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
CDF	Champ du Feu	77.47	331	eP	P	22 51 57.2	-0.5
	comp=Z,19nm,1.4s,mb4.8						
DAVA	Damuels	77.53	329	⇑iP	P	22 51 58.5	+0.5
	comp=Z,15nm,0.9s,mb4.9,SNR=8.7						
MEZF	Maizieres J'vi	78.12	332	eP	P	22 52 00.9	-0.4
	comp=Z,25nm,1.0s,mb4.8						
MEZF	Maizieres J'vi	78.12	332	eP	P	22 52 00.9	-0.4
	comp=Z,25nm,1.0s,mb5.1						
HINF	Hinteralfeld	78.13	331	eP	P	22 52 00.4	-1.0
	comp=Z,6.3nm,0.7s,mb4.3						
HINF	Hinteralfeld	78.13	331	eP	P	22 52 00.4	-1.0
HINF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
HINF	Hinteralfeld	78.13	331	eP	P	22 52 00.4	-1.0
	comp=Z,3.2nm,0.7s,mb4.4						
ANMO	Albuquerque	78.26	51	eP	P	22 52 01.4	-0.6
	comp=Z,2.0nm,0.9s,mb4.0						
ANMO				epP	pP	22 52 07.8	-0.3
FLN	La Foliniere	79.56	336	eP	P	22 52 08.2	-1.0
	comp=Z,28nm,1.1s,mb4.8						
FLN				eR			
	comp=Z,51nm,20.2s						
FLN	La Foliniere	79.56	336	eP	P	22 52 08.2	-1.0
FLN				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
FLN				MLR	MLR		
	comp=Z,50nm,20.3s,MS3.9						
FLN	La Foliniere	79.56	336	eP	P	22 52 08.2	-1.0
	comp=Z,14nm,1.0s,mb4.8						
FLN				LR	LR		
	comp=Z,50nm,20.3s,MS3.9						
LOR	Lormes	79.59	332	eP	P	22 52 08.5	-0.9
	comp=Z,28nm,1.0s,mb4.8						
LOR				eR			
	comp=Z,53nm,17.8s						
LOR	Lormes	79.59	332	eP	P	22 52 08.5	-0.9
LOR				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
LOR				MLR	MLR		
	comp=Z,50nm,17.8s,MS3.9						
LOR	Lormes	79.59	332	eP	P	22 52 08.5	-0.9
	comp=Z,14nm,1.0s,mb4.8						
LOR				LR	LR		
	comp=Z,50nm,17.8s,MS3.9						
LDF	La Druitiere	79.61	335	eP	P	22 52 08.4	-1.1
	comp=Z,25nm,1.0s,mb4.8						
LDF	La Druitiere	79.61	335	eP	P	22 52 08.4	-1.1
LDF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
LDF	La Druitiere	79.61	335	eP	P	22 52 08.4	-1.1
	comp=Z,12nm,1.0s,mb4.8						
HYF	Humbligny	79.98	333	eP	P	22 52 11.0	-0.5
GRR	Gorron	80.01	336	eP	P	22 52 10.8	-0.8
	comp=Z,21nm,0.9s,mb4.8						
GRR	Gorron	80.01	336	eP	P	22 52 10.8	-0.8
GRR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
GRR	Gorron	80.01	336	eP	P	22 52 10.8	-0.8
	comp=Z,10nm,0.9s,mb4.8						
SMF	Signal de Mont	80.15	332	eP	P	22 52 11.7	-0.7
	comp=Z,42nm,1.0s,mb5.0						
SMF	Signal de Mont	80.15	332	eP	P	22 52 11.7	-0.7
SMF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
SMF	Signal de Mont	80.15	332	eP	P	22 52 11.7	-0.7
	comp=Z,21nm,1.0s,mb5.0						
LPL	La Plagne	80.17	330	eP	P	22 52 12.5	0.0
	comp=Z,22nm,1.0s,mb4.8						
LPL	La Plagne	80.17	330	eP	P	22 52 12.5	0.0
LPL				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
LPL	La Plagne	80.17	330	eP	P	22 52 12.5	0.0
	comp=Z,11nm,1.0s,mb4.8						
AVF	Avril sur Loir	80.18	332	eP	P	22 52 11.9	-0.6
	comp=Z,39nm,1.1s,mb5.0						
AVF	Avril sur Loir	80.18	332	eP	P	22 52 11.9	-0.6
AVF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
AVF	Avril sur Loir	80.18	332	eP	P	22 52 11.9	-0.6
	comp=Z,20nm,1.1s,mb5.0						
LPG	La Plagne	80.18	330	eP	P	22 52 12.6	0.0
	comp=Z,18nm,0.9s,mb4.7						
LPG	La Plagne	80.18	330	eP	P	22 52 12.6	0.0
LPG				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
LPG	La Plagne	80.18	330	eP	P	22 52 12.6	0.0
	comp=Z,9.3nm,0.9s,mb4.7						
AQU	L'Aquila	80.35	324	eP	P	22 52 14.0	+0.5
AQU				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
AQU	L'Aquila	80.35	324	eP	P	22 52 14.0	+0.5
	comp=Z,5.5nm,0.6s,mb4.7						
BGF	Bois d'Agland	80.54	333	eP	P	22 52 13.8	-0.7
SGMF	Saint Gilles	80.60	337	eP	P	22 52 14.3	-0.5
	comp=Z,45nm,1.1s,mb5.0						
SGMF	Saint Gilles	80.60	337	eP	P	22 52 14.3	-0.5
SGMF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
SGMF	Saint Gilles	80.60	337	eP	P	22 52 14.3	-0.5
	comp=Z,23nm,1.1s,mb5.0						
ROSF	Rostrenen	80.72	337	eP	P	22 52 15.1	-0.4
	comp=Z,30nm,0.9s,mb4.9						
ROSF	Rostrenen	80.72	337	eP	P	22 52 15.1	-0.4
ROSF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
ROSF	Rostrenen	80.72	337	eP	P	22 52 15.1	-0.4
	comp=Z,15nm,0.9s,mb4.9						
MBDF	Montbardon	80.84	329	eP	P	22 52 15.2	-0.9
	comp=Z,9.9nm,0.9s,mb4.5						
MBDF	Montbardon	80.84	329	eP	P	22 52 15.2	-0.9
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MBDF	Montbardon	80.84	329	eP	P	22 52 15.2	-0.9
	comp=Z,4.9nm,0.9s,mb4.4						
TCF	Toulx Ste Croi	80.98	333	eP	P	22 52 16.5	-0.4
	comp=Z,17nm,0.9s,mb4.7						
TCF	Toulx Ste Croi	80.98	333	eP	P	22 52 16.5	-0.4
TCF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
TCF	Toulx Ste Croi	80.98	333	eP	P	22 52 16.5	-0.4
	comp=Z,8.6nm,0.9s,mb4.7						
ORIF	Oris-en-Rattie	80.98	330	eP	P	22 52 16.7	-0.2
	comp=Z,47nm,1.3s,mb5.0						
ORIF				eR			
	comp=Z,63nm,20.2s						
ORIF	Oris-en-Rattie	80.98	330	eP	P	22 52 16.7	-0.2
ORIF				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
ORIF	Oris-en-Rattie	80.98	330	eP	P	22 52 16.7	-0.2
	comp=Z,23nm,1.3s,mb5.0						
QUIF	Quistinic	81.08	337	eP	P	22 52 16.7	-0.7
MNTX	Cornudas Mount	81.31	53	eP	P	22 52 18.6	0.0
	comp=Z,3.4nm,1.0s,mb4.2						
MNTX				epP	pP	22 52 24.0	-0.6
MFF	Saint Martin d	81.42	335	eP	P	22 52 19.8	+0.6
	comp=Z,27nm,1.0s,mb4.8						
MFF	Saint Martin d	81.42	335	eP	P	22 52 19.8	+0.6
MFF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
MFF	Saint Martin d	81.42	335	eP	P	22 52 19.8	+0.6
	comp=Z,13nm,1.0s,mb4.8						
FRF	La Foret Royal	81.90	329	eP	P	22 52 20.8	-0.9
	comp=Z,64nm,1.2s,mb5.1						
FRF	La Foret Royal	81.90	329	eP	P	22 52 20.8	-0.9
FRF				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
FRF	La Foret Royal	81.90	329	eP	P	22 52 20.8	-0.9
	comp=Z,32nm,1.2s,mb5.1						
RJF	Les Rejaudoux	82.08	333	eP	P	22 52 22.5	-0.2
RJF				eR			
	comp=Z,45nm,22.5s						
RJF	Les Rejaudoux	82.08	333	eP	P	22 52 22.5	-0.2
RJF				LR	LR		
	comp=Z,40nm,22.5s,MS3.7						
CAF	Calviac	82.25	332	eP	P	22 52 23.7	+0.2
	comp=Z,16nm,1.0s,mb4.6						
CAF	Calviac	82.25	332	eP	P	22 52 23.7	+0.2
CAF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
CAF	Calviac	82.25	332	eP	P	22 52 23.7	+0.2
	comp=Z,7.8nm,1.0s,mb4.6						
WMOK	Wichita Mounta	82.41	46	eP	P	22 52 23.5	-0.9
LFF	La Frestale	82.65	333	eP	P	22 52 25.7	0.0
MTLF	Montolieu	83.61	332	eP	P	22 52 30.6	0.0
EPF	Esparros	84.50	333	eP	P	22 52 34.6	-0.5
	comp=Z,6.9nm,0.8s,mb4.5						
EPF	Esparros	84.50	333	eP	P	22 52 34.6	-0.5
EPF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
EPF	Esparros	84.50	333	eP	P	22 52 34.6	-0.5
	comp=Z,3.5nm,0.8s,mb4.5						
ETSF	Etsaut	84.90	333	eP	P	22 52 37.4	+0.2
	comp=Z,17nm,1.0s,mb4.8						
ETSF	Etsaut	84.90	333	eP	P	22 52 37.4	+0.2
ETSF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
ETSF	Etsaut	84.90	333	eP	P	22 52 37.4	+0.2
	comp=Z,8.4nm,1.0s,mb4.8						
ESDC	Sonseca Array	88.88	334	P	P	22 52 56.4	-0.1
	comp=Z,1.3nm,0.7s,mb4.3,baz=11,slow=4.3,SNR=5.6						
TORD	Torodi Ar. Bea	110.65	318	PKiKP	PKiKP	22 58 33.6	-1.4
	comp=Z,0.3nm,0.7s,baz=353,slow=1.2,SNR=4.1						
SIV	San Ignacio	144.03	40	PKP	PKPdf	22 59 35.7	-2.1
	comp=Z,2.0nm,0.7s,baz=303,slow=1.6,SNR=9.8						
LVC	Limon Verde	145.53	57	PKPbc	PKPbc	22 59 41.1	+0.6
	comp=Z,4.0nm,0.7s,baz=282,slow=4.7,SNR=4.2						
BDFB	Brasilia	148.09	18	PKPbc	PKPbc	22 59 47.3	-0.6
	comp=Z,2.0nm,0.4s,baz=19,slow=1.4,SNR=4.5						
SNAA	Sanae	149.86	201	PKPbc	PKPbc	22 59 49.8	-2.5
	comp=Z,1.4nm,1.0s,baz=136,slow=4.6,SNR=8.0						
SNAA				PKPab	PKPab	22 59 55.8	-2.1
	comp=Z,1.0nm,0.8s,baz=167,slow=2.9,SNR=9.8						
SNAA	Sanae	149.86	201	ePKPdf	PKPdf	22 59 49.8	+2.2
SNAA				e		22 59 52.5	
SNAA				e		22 59 59.5	
VNA1	Neumayer--Stat	151.87	201	ePKPdf	PKPab	23 00 00.6	-5.6
VNA1				e		23 00 02.3	
CFAA	Coronel Fontan	152.47	68	PKPbc	PKPbc	22 59 57.3	-1.2
	comp=Z,0.4nm,0.5s,baz=296,slow=3.2,SNR=6.7						
CFAA				PKPab	PKPab	23 00 08.0	-0.7
	comp=Z,0.2nm,0.6s,baz=307,slow=4.7,SNR=3.8						
CFAA	Coronel Fontan	152.47	68	PKPbc	PKPbc	22 59 57.3	-1.2
CFAA				PKPab	PKPab	23 00 08.0	-0.7
CPUP	Villa Florida	154.70	44	PKPab	PKPab	23 00 17.4	-0.8
	comp=Z,0.2nm,0.3s,baz=15,slow=3.0,SNR=3.0						
PLCA	Paso Flores	155.93	88	PKPbc	PKPdf	23 00 04.2	+7.8
	comp=Z,2.5nm,1.0s,baz=325,slow=2.3,SNR=3.9						
PLCA				PKPab	PKPab	23 00 23.6	+0.1
	comp=Z,1.4nm,0.9s,baz=278,slow=7.1,SNR=3.3						

*NEIC **17** 22:40:57.6, 3133S×6949W, h156km, MG3.5(GUC), After GUC.*

GUC 17 22:40:57.6±0.8**, 3133S×6949W, h156**^{km}±9^{km}**, MD3.4, ML3.5, 12C-3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	1.30	276	⇓iP	Pn	22 41 26.0	+0.4
CMCH				iS	Sn	22 41 47.6	+0.6
CMCH				AML	AML	22 41 48.8	
	comp=E,2μm,0.4s						
CMCH	Combarbala	1.30	276	⇓iP	Pn	22 41 26.0	+0.4
CMCH				iS	Sn	22 41 47.6	+0.6
TLL	Tololo Astrono	1.62	315	eP	Pn	22 41 30.0	+1.2
TLL				iS	Sn	22 41 54.0	+1.2
TLL				AML	AML	22 41 57.1	
	comp=N,294nm,0.3s						
TLL	Tololo Astrono	1.62	315	eP	Pn	22 41 30.0	+1.2
TLL				iS	Sn	22 41 54.0	+1.2
OVCH	Ovalle	1.64	296	eP	Pn	22 41 29.7	+0.8
OVCH				iS	Sn	22 41 53.4	+0.3
OVCH				AML	AML	22 41 54.1	
	comp=E,351nm,0.5s						
OVCH	Ovalle	1.64	296	eP	Pn	22 41 29.7	+0.8
OVCH				iS	Sn	22 41 53.4	+0.3
JACH	Jahuel	1.64	214	⇑iP	Pn	22 41 29.9	+0.8
JACH				iS	Sn	22 41 54.0	+0.8
CHNG	Los Chungos	1.80	252	⇑iP	Pn	22 41 31.4	+0.6
CHNG				iS	Sn	22 41 56.4	+0.1
CHNG				AML	AML	22 42 03.3	
	comp=E,183nm,0.6s						
PEL	Peldehue	2.08	209	⇑iP	Pn	22 41 34.6	+0.8
PEL				iS	Sn	22 42 02.1	+0.3
PEL				AML	AML	22 42 05.4	
	comp=N,220nm,0.4s						
PEL	Peldehue	2.08	209	⇑iP	Pn	22 41 34.6	+0.8
PEL				iS	Sn	22 42 02.1	+0.3
ROCH	El Roble	2.09	218	⇑iP	Pn	22 41 34.7	+0.7
FCH	Farellones	2.11	199	iS	Sn	22 42 04.4	+1.9
FCH				AML	AML	22 42 09.6	
	comp=E,112nm,0.5s						
CLCH	Cerro Calan	2.25	203	⇓iP	Pn	22 41 36.8	+0.9
CLCH				iS	Sn	22 42 06.1	+0.7
CLCH				AML	AML	22 42 10.0	
	comp=E,182nm,0.2s						
RCDM	Rinconada Maip	2.43	207	⇑iP	Pn	22 41 38.8	+0.7
RCDM				iS	Sn	22 42 10.2	+0.9
RCDM				AML	AML	22 42 11.0	
	comp=E,293nm,0.4s						
RCDM	Rinconada Maip	2.43	207	⇑iP	Pn	22 41 38.8	+0.7
RCDM				iS	Sn	22 42 10.2	+0.9
PCH	Pirque	2.44	200	⇑iP	Pn	22 41 39.0	+0.8
PCH				iS	Sn	22 42 10.8	+1.2
LCO	Las Campanas	2.54	335	eP	Pn	22 41 40.2	+0.8
LCO				iS	Sn	22 42 12.1	+0.5
TACH	Talagante	2.62	207	⇑iP	Pn	22 41 40.8	+0.4
TACH				iS	Sn	22 42 14.1	+0.5
LCCH	Las Cruces	2.77	219	⇑iP	Pn	22 41 42.8	+0.5
CHCH	Chadas Angostu	2.78	200	⇑iP	Pn	22 41 42.5	+0.1
CHCH				eS	Sn	22 42 17.5	+0.5
LNV	Longovilo	3.08	211	⇑iP	Pn	22 41 45.7	-0.4

*NEIC **17** 22:46:58.0, 1925N×6333W, h50km, MD3.7(RSPR), After RSPR.*

RSPR 17 22:46:58.0, 1925N×6333W, h50^{km}±6^{km}**, MD3.7**/3**, MD3.7**/3**, 7C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	1.08	242	⇑eP	Pn	22 47 16.1	-0.7
ABV				eS	Sn	22 47 30.0	-0.7
TBVI	Tortola	1.48	236	⇑eP	Pn	22 47 20.9	-1.2
TBVI				eS	Sn	22 47 39.2	-1.0
CULB	Culebra	2.12	244	⇑eP	Pn	22 47 29.8	-1.0
CULB				eS	Sn	22 47 55.4	-0.6
MTP	Monte Pirata	2.41	242	⇑eP	Pn	22 47 34.0	-0.8
MTP				eS	Sn	22 48 02.5	-0.6
CBYP	Canovanas	2.59	248	eP	Pn	22 47 36.7	-0.7
CBYP				eS	Sn	22 48 06.6	-1.0
HUMP	Col San Antoni	2.63	246	⇑eP	Pn	22 47 37.7	-0.3
HUMP				eS	Sn	22 48 08.3	-0.4
CELP	Cerrillos	3.30	250	⇑eP	Pn	22 47 46.7	-0.4
CELP				eS	Sn	22 48 24.2	-0.8
LSP	Las Mesas	3.72	254	eP	Pn	22 47 53.0	+0.1
LSP				eS	Sn	22 48 35.2	-0.2
CRPR	Cabo Rojo, PR	3.79	252	⇑eP	Pn	22 47 53.4	-0.5
CRPR				eS	Sn	22 48 37.2	0.0

*NEIC **17** 22:55:20.0, 1567N×9867W, h2km, MD4.0(MEX), After MEX.*

MEX 17 22:55:20.4±1.1**, 1566N×9867W, h6**^{km}±27^{km}**, MD4.0, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	1.70	315	eP	Pn	22 55 47.5	-3.1
ACX				iS	Sn	22 56 06.5	-6.1
CAIG	El Cayaco	2.07	312	iP	Pn	22 55 52.0	-3.7
CAIG				iS	Sn	22 56 18.7	-3.0
UTMO	Huajuapan	2.31	21	eP	Pn	22 55 54.1	-4.9
UTMO				iS	Sn	22 56 24.5	-3.2
VHO	Vista Hermosa	2.33	53	iP	Pn	22 55 55.8	-3.4
VHO				iS	Sn	22 56 24.4	-3.7
OXX	Oaxaca	2.34	53	iP	Pn	22 55 57.0	-2.4
OXX				iS	Sn	22 56 24.0	-4.4
MEIG	Mezcala	2.43	338	iP	Pn	22 55 57.3	-3.4
MEIG				iS	Sn	22 56 27.7	-3.0
PLIG	Platanillo	2.83	344	iP	Pn	22 56 04.1	-2.0
PLIG				iS	Sn	22 56 37.3	-3.3
TPIG	Tehuac#an	3.01	24	iP	Pn	22 56 07.5	-1.2
TPIG				iS	Sn	22 56 42.1	-3.0
YAIG	Yautepec	3.21	353	iP	Pn	22 56 09.9	-1.4
YAIG				iS	Sn	22 56 45.7	-4.1
PPM	Popocatepetl	3.39	1	iP	Pn	22 56 14.7	+0.9
PPM				iS	Sn	22 56 51.6	-2.7
IIZ	Mezontepec	3.55	351	eP	Pn	22 56 14.4	-1.6
IIZ				iS	Sn	22 56 56.0	-2.3

RSPR 17 22:59:24.8, 1899N×6643W, h59^{km}±7^{km}**, MD2.8**/3**, MD2.8**/3**, 9C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	Canovanas	0.90	143	⇑eP	Pn	22 59 40.7	-0.8
CBYP				eS	Sn	22 59 53.1	-0.7
CBYP	Canovanas	0.90	143	⇑eP	Pn	22 59 40.2	-1.3
CBYP	Canovanas	0.90	143	eS	Sn	22 59 53.1	-0.7
HUMP	Col San Antoni	1.01	147	⇑eP	Pn	22 59 41.9	-1.0
HUMP				eS	Sn	22 59 56.0	-0.3
HUMP	Col San Antoni	1.01	147	⇑eP	Pn	22 59 41.5	-1.4
HUMP	Col San Antoni	1.01	147	eS	Sn	22 59 55.9	-0.4
LSP	Las Mesas	1.02	217	⇑eP	Pn	22 59 42.2	-0.8
LSP	Las Mesas	1.02	217	eS	Sn	22 59 56.0	-0.6
LSP	Las Mesas	1.02	217	⇑eP	Pn	22 59 42.3	-0.8
LSP	Las Mesas	1.02	217	eS	Sn	22 59 55.8	-0.8
CRPR	Cabo Rojo, PR	1.17	213	⇑eP	Pn	22 59 44.4	-0.6
CRPR	Cabo Rojo, PR	1.17	213	eS	Sn	22 59 59.2	-0.9
CRPR	Cabo Rojo, PR	1.17	213	⇑eP	Pn	22 59 44.3	-0.7
CRPR	Cabo Rojo, PR	1.17	213	eS	Sn	22 59 58.8	-1.4
MTP	Monte Pirata	1.22	137	⇓eP	Pn	22 59 45.0	-0.6
MTP	Monte Pirata	1.22	137	eS	Sn	23 00 00.4	-0.8
MTP	Monte Pirata	1.22	137	⇑eP	Pn	22 59 44.7	-1.0
MTP	Monte Pirata	1.22	137	eS	Sn	23 00 00.4	-0.9
CULB	Culebra	1.29	123	eS	Sn	23 00 02.0	-0.9

*NEIC **17** 23:02:29.1, 3749S×17641E, h322km, MG4.1(WEL), After WEL.*

WEL 17 23:02:33.0±0.2**, 3743S×17631E, h275**^{km}±2^{km}**, ML4.0**/15**, 2C, Error ellipse: s-maj=3.8km s-min=3.8km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	1.04	143	PN	Pn	23 03 10.8	0.0
URZ				SN	S	23 03 40.6	-0.2
MWZ	Matawai	1.32	134	P	Pn	23 03 12.7	+0.2
MWZ	Matawai	1.32	134	⇑PN	Pn	23 03 12.7	+0.2
MXZ	Matakaoa Point	1.59	96	eP	Pn	23 03 14.6	+0.3
MXZ	Matakaoa Point	1.59	96	PN	Pn	23 03 14.6	+0.3
PUZ	Puketiti	1.67	113	P	Pn	23 03 15.0	+0.1
PUZ	Puketiti	1.67	113	PN	Pn	23 03 15.0	+0.1
PUZ				SN	S	23 03 46.8	-1.3
BKZ	Black Stump Fm	1.74	175	P	Pn	23 03 15.6	+0.2
BKZ	Black Stump Fm	1.74	175	⇑PN	Pn	23 03 15.6	+0.1
BKZ				SN	S	23 03 48.5	-0.6
NGZ	Ngauruhoe	1.83	197	PN	Pn	23 03 16.8	+0.6
TUVZ	Tukino	1.91	195	P	Pn	23 03 17.2	+0.4
TUVZ	Tukino	1.91	195	PN	Pn	23 03 17.2	+0.4
KNZ	Kokohu	1.92	146	eP	Pn	23 03 16.9	+0.1
KNZ	Kokohu	1.92	146	PN	Pn	23 03 16.9	0.0
WNVZ	Wahianoa	1.98	196	P	Pn	23 03 17.8	+0.5
WNVZ	Wahianoa	1.98	196	PN	Pn	23 03 17.8	+0.4
PKVZ	Pokaka	2.01	202	PN	Pn	23 03 17.8	+0.2
MOVZ	Moawhango	2.03	192	P	Pn	23 03 17.6	-0.1
MOVZ	Moawhango	2.03	192	PN	Pn	23 03 17.6	-0.2
WAZ	Wanganui	2.55	204	eP	Pn	23 03 22.3	-0.2
WAZ	Wanganui	2.55	204	PN	Pn	23 03 22.0	-0.4
PXZ	Pawanui	2.64	171	PN	Pn	23 03 22.8	-0.6
PXZ				SN	S	23 04 03.0	-0.4
TSZ	Takapari Road	2.64	186	P	Pn	23 03 22.5	-0.9
TSZ	Takapari Road	2.64	186	PN	Pn	23 03 22.5	-0.9
MRZ	Mangatainoka R	3.28	190	P	Pn	23 03 28.4	-1.5
MRZ	Mangatainoka R	3.28	190	PN	Pn	23 03 28.3	-1.7
KIW	Kapiti Island	3.60	197	P	Pn	23 03 31.6	-1.8
MTW	Mount Morrison	3.78	189	P	Pn	23 03 33.2	-2.2
CAW	Cannon Point	3.80	194	P	Pn	23 03 33.8	-1.8
MRW	Makara Radio	4.00	198	P	Pn	23 03 35.6	-2.3
MSWZ	Moikau Station	4.07	191	P	Pn	23 03 36.2	-2.4
TCW	Tory Channel	4.10	202	P	Pn	23 03 37.1	-1.9
NNZ	Nelson	4.42	210	P	Pn	23 03 40.0	-2.7
QRZ	Quartz Range	4.49	220	P	Pn	23 03 40.4	-3.1
BSWZ	Blackbirch Sta	4.68	203	P	Pn	23 03 43.7	-2.0
THZ	Tophouse	5.07	210	P	Pn	23 03 47.4	-2.9
KHZ	Kahutara	5.42	202	eP	Pn	23 03 51.9	-2.7
MQZ	McQueen's Vall	6.86	203	eP	Pn	23 04 07.5	-4.7

*NEIC **17** 23:09:15.6, 1850N×6501W, h17km, MD2.7(RSPR), After RSPR.*

RSPR 17 23:09:15.6, 1850N×6501W, h17^{km}±1^{km}**, MD2.7**/4**, MD2.7**/4**, 11C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CULB	Culebra	0.36	231	⇑eP	Pg	23 09 22.6	-0.4
CULB	Culebra	0.36	231	eS	Sg	23 09 27.7	-0.4
CULB	Culebra	0.36	231	⇑eP	Pg	23 09 22.3	-0.8
CULB	Culebra	0.36	231	eS	Sg	23 09 27.7	-0.4
TBVI	Tortola	0.38	103	⇑eP	Pg	23 09 22.9	-0.6
TBVI	Tortola	0.38	103	eS	Sg	23 09 28.9	+0.2
TBVI	Tortola	0.38	103	⇑eP	Pg	23 09 22.9	-0.6
TBVI	Tortola	0.38	103	eS	Sg	23 09 28.7	-0.1
TBVI	Tortola	0.38	103	⇑eP	Pg	23 09 22.9	-0.6
TBVI				eS	Sg	23 09 28.7	-0.1
MTP	Monte Pirata	0.66	232	⇓eP	Pg	23 09 27.2	-1.3
MTP	Monte Pirata	0.66	232	eS	Sg	23 09 36.1	-1.1
MTP	Monte Pirata	0.66	232	⇑eP	Pg	23 09 27.0	-1.4
MTP	Monte Pirata	0.66	232	eS	Sg	23 09 35.5	-1.7
MTP	Monte Pirata	0.66	232	⇑eP	Pg	23 09 27.0	-1.4
MTP				eS	Sg	23 09 35.5	-1.7
CBYP	Canovanas	0.84	254	⇓eP	Pb	23 09 29.6	-2.1
CBYP	Canovanas	0.84	254	eS	Sb	23 09 40.8	-1.8
CBYP	Canovanas	0.84	254	⇑eP	Pb	23 09 29.5	-2.2
CBYP	Canovanas	0.84	254	eS	Sb	23 09 40.2	-2.4
CBYP	Canovanas	0.84	254	⇑eP	Pb	23 09 29.5	-2.2
CBYP				eS	Sb	23 09 40.2	-2.4
HUMP	Col San Antoni	0.88	246	⇓eP	Pb	23 09 30.3	-2.0
HUMP	Col San Antoni	0.88	246	eS	Sb	23 09 41.2	-2.5
HUMP	Col San Antoni	0.88	246	⇑eP	Pb	23 09 30.2	-2.1
HUMP	Col San Antoni	0.88	246	eS	Sb	23 09 41.0	-2.8
HUMP	Col San Antoni	0.88	246	⇑eP	Pb	23 09 30.2	-2.1
HUMP				eS	Sb	23 09 41.0	-2.8

RSPR 17 23:11:43.5, 1894N×6645W, h64^{km}±6^{km}**, MD2.7**/3**, MD2.7**/3**, 3C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	Canovanas	0.87	140	⇓eP	Pn	23 11 59.1	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CBYP	Canovanas	0.87	140	eS	Sn	23 12 11.9	-0.4
CBYP	Canovanas	0.87	140	⇑eP	Pn	23 11 58.9	-1.1
LSP	Las Mesas	0.97	218	eS	Sn	23 12 14.5	-0.1
CRPR	Cabo Rojo, PR	1.12	214	eS	Sn	23 12 17.3	-0.7
CRPR	Cabo Rojo, PR	1.12	214	⇓eP	Pn	23 12 02.7	-0.5
CRPR	Cabo Rojo, PR	1.12	214	eS	Sn	23 12 18.0	0.0
CRPR	Cabo Rojo, PR	1.12	214	⇑eP	Pn	23 12 02.6	-0.6
MTP	Monte Pirata	1.20	134	eS	Sn	23 12 19.1	-0.6
MTP	Monte Pirata	1.20	134	⇓eP	Pn	23 12 03.5	-0.7
MTP	Monte Pirata	1.20	134	eS	Sn	23 12 18.9	-0.8
MTP	Monte Pirata	1.20	134	⇑eP	Pn	23 12 03.2	-1.0

IGQ 17 23:15:23.3, 277S×7920W, h32km±6km, Mb4.0, Ms3.8, 1C-10D, Error ellipse: s-maj=10.8km s-min=2.4km az=42.2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGUA	Igualata	1.39	24	P	Pn	23 15 49.7	+3.3
IGUA				S	Sn	23 16 07.0	+3.4
ARRY	Arrayan	1.46	31	⇓P	Pn	23 15 50.2	+2.8
ARRY				S	Sn	23 16 07.2	+1.8
PATA	Patacocha	1.47	31	⇓P	Pn	23 15 51.0	+3.5
PATA				S	Sn	23 16 09.5	+3.8
RETU	Refugio	1.51	30	P	Pn	23 15 51.3	+3.2
RETU				S	Sn	23 16 11.1	+4.4
JUIV	Juive	1.53	29	⇓P	Pn	23 15 51.3	+3.1
JUIV				S	Sn	23 16 11.1	+4.1
ULBA	Ulba	1.53	31	⇓P	Pn	23 15 51.7	+3.3
ULBA				S	Sn	23 16 11.1	+4.0
RUN5	Runtun	1.55	30	P	Pn	23 15 51.3	+2.7
RUN5				S	Sn	23 16 10.5	+2.8
PISA	Pisayambo	1.89	26	⇑P	Pn	23 15 56.3	+3.1
PISA				S	Sn	23 16 19.3	+3.4
CAMI	Rancho Maria	2.19	18	⇓P	Pn	23 16 00.4	+3.0
VC1	Cotopaxi 1	2.26	21	P	Pn	23 16 01.3	+2.9
ANTI	Antisana	2.53	24	⇓P	Pn	23 16 04.7	+2.7
ANTI				S	Sn	23 16 36.1	+4.4
JUA2	San Juan 2	2.61	13	P	Pn	23 16 06.2	+3.0
TERV	Terraza Guagua	2.65	13	⇓P	Pn	23 16 06.7	+3.0
TERV				S	Sn	23 16 38.4	+3.8
GGP	Refugio Guagua	2.65	13	⇓P	Pn	23 16 06.7	+3.0
PINO	Pino	2.66	13	⇓P	Pn	23 16 06.7	+2.8
YANA	Yana	2.71	13	⇓P	Pn	23 16 06.9	+2.3
YANA				S	Sn	23 16 40.1	+3.9

*NEIC **17** 23:25:06.8, 1909N×6646W, h30km, MD2.7(RSPR), After RSPR.*

RSPR 17 23:25:06.8, 1909N×6646W, h30km±22km, MD2.7/6, MD2.7/6, 14C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	Canovanas	0.99	145	⇓eP	Pn	23 25 22.7	-1.9
CBYP	Canovanas	0.99	145	eS	Sn	23 25 35.2	-2.5
CBYP	Canovanas	0.99	145	⇑eP	Pn	23 25 22.3	-2.3
CBYP	Canovanas	0.99	145	eS	Sn	23 25 34.8	-2.8
CBYP	Canovanas	0.99	145	⇑eP	Pn	23 25 22.3	-2.3
CBYP				eS	Sn	23 25 34.8	-2.8
CELP	Cerrillos	1.01	186	⇑eP	Pn	23 25 23.0	-1.9
CELP				eS	Sn	23 25 35.6	-2.5
LSP	Las Mesas	1.08	213	⇓iP	Pn	23 25 24.0	-1.9
LSP	Las Mesas	1.08	213	eS	Sn	23 25 38.1	-1.8
LSP	Las Mesas	1.08	213	⇑eP	Pn	23 25 23.9	-2.0
LSP	Las Mesas	1.08	213	eS	Sn	23 25 37.2	-2.7
LSP	Las Mesas	1.08	213	⇑eP	Pn	23 25 23.9	-2.0
LSP				eS	Sn	23 25 37.2	-2.7
HUMP	Col San Antoni	1.10	148	⇓eP	Pn	23 25 24.9	-1.3
HUMP	Col San Antoni	1.10	148	eS	Sn	23 25 37.9	-2.4
HUMP	Col San Antoni	1.10	148	⇑eP	Pn	23 25 24.2	-2.0
HUMP	Col San Antoni	1.10	148	eS	Sn	23 25 37.7	-2.7
HUMP	Col San Antoni	1.10	148	⇑eP	Pn	23 25 24.2	-2.0
HUMP				eS	Sn	23 25 37.7	-2.7
ICM	Isla Caja Muer	1.19	183	eS	Sn	23 25 40.1	-2.3
ICM	Isla Caja Muer	1.19	183	⇑eP	Pn	23 25 25.4	-2.0
ICM				eS	Sn	23 25 40.1	-2.3
MGP	Maguayo	1.23	209	⇑eP	Pn	23 25 26.4	-1.5
CRPR	Cabo Rojo, PR	1.24	210	⇓eP	Pn	23 25 26.2	-1.9
CRPR	Cabo Rojo, PR	1.24	210	eS	Sn	23 25 41.9	-1.8
CRPR	Cabo Rojo, PR	1.24	210	⇑eP	Pn	23 25 26.1	-1.9
CRPR	Cabo Rojo, PR	1.24	210	eS	Sn	23 25 40.9	-2.9
CRPR	Cabo Rojo, PR	1.24	210	⇑eP	Pn	23 25 26.1	-1.9
CRPR				eS	Sn	23 25 40.9	-2.9
MTP	Monte Pirata	1.31	139	⇑eP	Pn	23 25 27.9	-1.0
MTP	Monte Pirata	1.31	139	eS	Sn	23 25 43.6	-1.8
MTP	Monte Pirata	1.31	139	⇑eP	Pn	23 25 26.8	-2.2
MTP	Monte Pirata	1.31	139	eS	Sn	23 25 43.0	-2.4
MTP	Monte Pirata	1.31	139	⇑eP	Pn	23 25 26.8	-2.2
MTP				eS	Sn	23 25 43.0	-2.4

*ISCJB **17** 23:34:50.7±0.4, 1867N±003×10248W±003, h81km±4km, mb3.9/17, Error ellipse: s-maj=6.1km s-min=3.6km az=43.2*
*NEIC **17** 23:34:53.0, 1872N×10247W, h60km, mb3.9/11, MD4.6(MEX), After MEX.*
*MEX **17** 23:34:53.5±1.1, 1872N×10246W, h50km±29km, MD4.6*
*IDC **17** 23:34:56.0±3.5, 1895N×10221W, h105km±29km, mb3.7/13, mb1 3.9/15, mb1mx3.8/25, mbtmp4.1/15, MS3.2/4, Ms1 3.2/4, ms1mx2.7/31, Error ellipse: s-maj=31.3km s-min=15.0km az=53.0*

ISC 17 23:34:51.8±0.3, 1867N±004×10249W±003, h76km±4km, n68, σ1s38/100, mb3.9/17, 3C, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.90	245	⇑iP	Pn	23 35 08.5	-0.9
MMIG				iS	Sn	23 35 21.9	-0.6
ZIIG	Zihuatanejo	1.44	137	⇑iP	Pn	23 35 16.0	-0.1
ZIIG				iS	Sn	23 35 32.4	-2.0
ZIIG	Zihuatanejo	1.44	137	iP	Pn	23 35 15.8	-0.2
ZIIG				iS	Sn	23 35 32.4	-2.0
MOIG	Morelia	1.58	51	⇑iP	Pn	23 35 18.1	+0.1
MOIG				iS	Sn	23 35 34.8	-3.0
MOIG	Morelia	1.58	51	iP	Pn	23 35 18.0	0.0
MOIG				iS	Sn	23 35 34.8	-3.0
SFJM	Santa Fe	1.88	344	iP	Pn	23 35 21.0	-0.9
SFJM				iS	Sn	23 35 43.0	-1.8
SFJM	Santa Fe	1.88	344	iP	Pn	23 35 21.0	-0.9
SFJM				iS	Sn	23 35 38.0	-6.8
CJM	Chamela	2.55	289	iP	Pn	23 35 31.3	+0.3
CJM				iS	Sn	23 35 60.0	-1.1
CJM	Chamela	2.55	289	iP	Pn	23 35 29.5	-1.4
CJM				iS	Sn	23 35 58.4	-2.7
CAIG	El Cayaco	2.66	127	iP	Pn	23 35 32.8	+0.4
CAIG				iS	Sn	23 36 02.7	-1.0
MEIG	Mezcala	2.82	105	iP	Pn	23 35 35.1	+0.5
MEIG				iS	Sn	23 36 06.2	-1.4
PLIG	Platanillo	2.84	95	eP	Pn	23 35 35.6	+0.7
PLIG				iS	Sn	23 36 07.7	-0.4
PLIG	Platanillo	2.84	95	iP	Pn	23 35 36.0	+1.1
PLIG				iS	Sn	23 36 08.2	+0.1
ACX	Acapulco	3.04	126	iP	Pn	23 35 38.3	+0.8
ACX				eP		23 35 39.0	
ACX				iS	Sn	23 36 14.6	+1.8
ACX	Acapulco	3.04	126	iP	Pn	23 35 38.3	+0.8
ACX				eP		23 35 39.0	
IIZ	Mezontepec	3.11	80	eP	Pn	23 35 39.0	+0.5
IIZ				iS	Sn	23 36 17.5	+2.9
UNM	Universidad Na	3.20	78	iP	Pn	23 35 41.1	+1.4
UNM				iP		23 35 43.5	
UNM				iP		23 35 43.9	
UNM				iS	Sn	23 36 15.8	-0.8
UNM	Universidad Na	3.20	78	iP	Pn	23 35 41.1	+1.4
UNM				iP		23 35 43.5	
UNM				iP		23 35 43.9	
UNM				iS	Sn	23 36 12.5	-4.1
YAIG	Yautepec	3.24	86	iP	Pn	23 35 41.4	+1.1
YAIG				iS	Sn	23 36 16.8	-1.0
PTVM	Pico Tres Padr	3.32	73	eP	Pn	23 35 41.5	+0.2
PTVM				iS	Sn	23 36 20.1	+0.6
CIVM	Cilcuayo	3.34	82	eP	Pn	23 35 39.4	-2.2
CIVM				iS	Sn	23 36 21.5	+1.3
CIVM	Cilcuayo	3.34	82	eP	Pn	23 35 39.2	-2.4
CIVM				iS	Sn	23 36 18.9	-1.2
PPM	Popocatepetl	3.67	83	eP	Pn	23 35 45.6	-0.5
PPM				iP		23 35 49.5	
PPM				iS	Sn	23 36 27.5	-0.8
PPM				iS	Sn	23 36 30.8	+2.4
PPM	Popocatepetl	3.67	83	eP	Pn	23 35 43.8	-2.4
PPM				eP		23 35 45.6	
PPM				iP		23 35 49.5	
PPM				iS	Sn	23 36 24.1	-4.2
PPM				iS	Sn	23 36 25.8	-2.5
ZAIG	Zacatecas	4.08	359	iP	Pn	23 35 51.8	+0.1
ZAIG				iS	Sn	23 36 40.3	+2.2
UTMO	Huajuapan	4.53	100	iP	Pn	23 36 00.1	+2.3
UTMO				iS	Sn	23 36 55.1	+6.0
TPIG	Tehuac#an	4.87	92	eP	Pn	23 36 03.6	+1.1
TPIG				iS	Sn	23 36 58.4	+0.9
VHO	Vista Hermosa	5.70	105	iP	Pn	23 36 16.6	+2.7
VHO				iS	Sn	23 37 16.2	-1.7
OXX	Oaxaca	5.71	105	eP	Pn	23 36 17.5	+3.5
LVIG	Laguna Verde	5.83	79	iP	Pn	23 36 18.6	+3.1
LVIG				iS	Sn	23 37 18.6	-2.4
CMIG	Matias Romero	7.41	101	P	Pn	23 36 39.6	+2.5
	3.0nm,0.3s,baz=280,slow=9.9,SNR=26						
CMIG				S	Sn	23 37 59.2	-0.4
	2.6nm,0.3s,baz=150,slow=20,SNR=4.1						
CMIG	Matias Romero	7.41	101	iP	Pn	23 36 39.4	+2.3
CMIG				P		23 36 39.6	
CMIG				S	Sn	23 37 59.2	-0.4
CMIG				iS	Sn	23 37 59.3	-0.3
JCT	Junction City	12.00	11	ePn	Pn	23 37 43.6	+3.8
	22nm,1.1s						
MNTX	Cornudas Mount	13.23	349	ePn	Pn	23 37 58.2	+1.8
	5.8nm,0.9s						
MNTX				e		23 38 04.4	
NATX	Nacogdoches	14.82	27	ePn	Pn	23 38 20.8	+3.7
	23nm,0.7s						
TUC	Tucson	15.50	333	ePn	Pn	23 38 27.1	+1.3
	4.5nm,0.8s						
WMOK	Wichita Mounta	16.34	11	ePn	Pn	23 38 37.5	+1.1
	7.6nm,0.8s						
WMOK				e		23 38 54.5	
ANMO	Albuquerque	16.59	348	P	Pn	23 38 41.6	+2.1
	0.2nm,0.3s,baz=158,slow=12,SNR=7.3						
ANMO				LR	LR	23 45 48.7	
	comp=Z,55nm,19.6s,baz=274,slow=40						
ANMO	Albuquerque	16.59	348	ePn	Pn	23 38 42.0	+2.5
	8.1nm,1.2s						
MIAR	Mount Ida	17.69	25	ePn	Pn	23 38 51.2	-1.8
	11nm,1.1s						
WUAZ	Wupatki	18.53	337	eP	Pn	23 39 03.6	+0.4
	11nm,1.0s						
WUAZ				e		23 39 19.5	
MVCO	Mesa Verde	19.21	345	eP	Pn	23 39 12.4	+1.3
LRAL	Lakeview Retre	19.93	41	eP	Pn	23 39 16.9	-2.8
	11nm,0.5s						
LRAL				e		23 39 33.2	
SMCO	Snowmass	20.80	350	eP	P	23 39 26.7	0.0
	8.7nm,0.8s						
SMCO				e		23 39 45.5	
ISCO	Idaho Springs	21.23	353	eP	P	23 39 32.0	+0.7
	5.3nm,0.8s,mb3.9						
MSU	Marysvale	21.49	339	eP	P	23 39 35.2	+1.0
SWET	Sewanee	22.06	38	eP	P	23 39 38.2	-2.1
SWET				e		23 39 55.0	
DUG	Dugway	23.22	340	eP	P	23 39 52.4	+0.3
NVAR	Mina Array Bea	24.02	328	P	P	23 40 01.1	+1.6
	3.2nm,0.6s,mb3.8,baz=142,slow=12,SNR=28						
WCI	Wyandotte Cave	24.06	33	eP	P	23 39 58.8	-1.0
	5.6nm,0.7s,mb4.0						
PDAR	Pinedale Array	24.75	347	P	P	23 40 05.8	-0.4
	2.6nm,0.9s,mb3.7,baz=145,slow=5.4,SNR=17						
LOHW	Long Hollow	25.79	346	eP	P	23 40 15.6	+0.1
	2.7nm,0.7s,mb3.8						
FWV	Forest Hill	26.72	41	eP	P	23 40 23.9	0.0
BOZ	Bozeman (W)	27.95	346	eP	P	23 40 34.8	-0.1
	1.2nm,0.8s,mb3.5						
ULM	Lac du Bonnet	31.94	8	P	P	23 41 08.5	-1.7
	1.3nm,0.5s,mb4.0,baz=160,slow=12,SNR=3.9						
SADO	Sadowa	32.50	32	P	P	23 41 12.2	-2.8
	2.3nm,0.4s,mb4.4,baz=228,slow=8.2,SNR=6.7						
YKA	Yellowknife Ar	44.58	352	P	P	23 42 54.0	-2.2
	1.6nm,0.7s,mb3.8,baz=160,slow=7.5,SNR=4.0						
YKA				LR	LR	00 03 02.4	
	comp=Z,19nm,18.2s,baz=190,slow=38						
SCHQ	Schefferville	45.15	28	P	P	23 42 59.1	-1.5
	1.3nm,0.3s,mb4.2,baz=224,slow=5.7,SNR=10						
SCHQ				LR	LR	00 05 17.6	
	comp=Z,28nm,19.6s,baz=99,slow=41						
INK	Inuvik	53.31	346	eP	P	23 44 02.1	-0.8
INK				epP	pP	23 44 20.1	-2.0
KDAK	Kodiak Island	53.52	329	P	P	23 44 04.8	+0.4
	2.4nm,0.7s,mb4.3,baz=76,slow=19,SNR=4.0						
CPUP	Villa Florida	62.64	134	P	P	23 45 09.2	+1.0
	0.6nm,0.5s,mb3.8,baz=305,slow=6.1,SNR=3.1						
PLCA	Paso Flores	66.14	154	P	P	23 45 32.8	+1.8
	2.2nm,1.0s,mb4.0,baz=332,slow=2.3,SNR=3.7						
EKA	Eskdalemuir Ar	80.01	35	P	P	23 46 53.3	+0.5
	0.7nm,0.6s,mb3.7,baz=286,slow=4.1,SNR=4.6						
ARCES	ARCESS Array B	84.68	16	P	P	23 47 16.1	-1.0
	0.6nm,0.4s,mb3.9,baz=308,slow=6.1,SNR=12						
NB2	NORSAR Subarra	84.69	27	P	P	23 47 16.6	-0.6
	comp=Z,0.4nm,0.7s,mb3.5,baz=300,slow=4.6						
NOA	NORSAR Array B	84.69	27	P	P	23 47 16.9	-0.3
	comp=Z,0.5nm,0.7s,mb3.6,baz=302,slow=4.8,SNR=5.1						
FINES	FINESS Array B	90.28	22	LR	LR	00 31 07.6	
	comp=Z,27nm,18.7s,baz=155,slow=38						
GERES	GERESS Array B	92.15	36	P	P	23 47 51.8	-0.9
	comp=Z,0.4nm,0.6s,mb3.8,baz=321,slow=1.7,SNR=4.8						

*NEIC **17** 23:43:41.0±3.2, 666S×12978E, h156km±32km, mb4.3/2, Error ellipse: s-maj=42.0km s-min=23.4km az=58.0*
*ISCJB **17** 23:43:44.1±1.9, 695S±009×1298E±0.1, h205km±19km, mb3.5/1, Error ellipse: s-maj=21.4km s-min=13.1km az=140.5*
*IDC **17** 23:43:44.4±5.2, 687S×12943E, h186km±50km, mb3.4/1, mb1 3.2/4, mb1mx3.1/14, mbtmp3.7/4, Error ellipse: s-maj=60.3km s-min=23.0km az=70.0*

ISC 17 23:43:41.6±1.7, 684S±009×1296E±01, h157km±16km, n10, σ1s31/17, mb3.6/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.48	155	eP	Pn	23 45 15.7	+1.0
	7.6nm,0.2s						
KAKA				eS	Sn	23 46 25.5	-2.2
FITZ	Fitzroy Crossi	11.84	199	eP	Pn	23 46 28.1	+2.5
	4.1nm,1.1s						
FITZ				eS	Sn	23 48 35.6	-1.0
FITZ	Fitzroy Crossi	11.84	199	P	Pn	23 46 27.9	+2.3
	0.2nm,0.3s,baz=28,slow=11,SNR=15						
FITZ				S	Sn	23 48 35.5	-1.0
	0.4nm,0.3s,baz=171,slow=19,SNR=6.0						
WRAB	Tennant Creek	13.81	161	Pn	Pn	23 46 51.6	+0.8
WRAB				eSn	Sn	23 49 16.3	-7.7
WRA	Warramunga Arr	13.82	161	P	Pn	23 46 52.6	+1.6
	0.6nm,0.3s,baz=338,slow=13,SNR=5.6						
WRA				S	Sn	23 49 16.8	-7.3
	0.8nm,0.3s,baz=333,slow=23,SNR=5.6						
WB2	Warramunga Arr	13.82	161	eP	Pn	23 46 49.2	-1.8
WB2				eS	Sn	23 49 17.6	-6.6
ASAR	Alice Springs	17.24	167	P	Pn	23 47 33.6	+0.7
	0.4nm,0.3s,baz=342,slow=11,SNR=18						
ASAR				S	S	23 50 43.3	-0.1
	0.1nm,0.3s,baz=0.6,slow=27,SNR=4.1						
STKA	Stephens Creek	27.32	157	eP	P	23 49 12.6	+1.0
MKAR	Makanchi Array	67.87	327	P	P	23 54 22.2	-0.8
	0.6nm,0.4s,mb3.6,baz=116,slow=7.2,SNR=8.0						
BRVK	Borovoye	77.78	328	P	P	23 55 20.2	-1.2

*ISCJB **17** 23:45:53.5±0.6, 28.17N±009×1417E±03, h33km, mb4.0/8, Error ellipse: s-maj=33.7km s-min=7.6km az=142.1*
*IDC **17** 23:45:55.1±3.6, 2820N×14202E, h36km±33km, mb3.7/4, mb1 3.8/5, mb1mx3.4/19, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=186.6km s-min=19.9km az=81.0*
*NEIC **17** 23:45:56.4±2.1, 28.16N×14165E, h36km±19km, mb4.2/4, Error ellipse: s-maj=33.5km s-min=12.4km az=83.0*

ISC 17 23:45:55.4±0.7, 2816N±009×1419E±03, h35km, n12, σ0s70/13, mb4.0/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.09	165	Pn	Pn	23 46 14.1	-0.1
	49nm,0.3s,baz=284,slow=19,SNR=17						
CBIJ				Sn	Sn	23 46 27.2	-0.9
	181nm,0.3s,baz=37,slow=20,SNR=25						
MJAR	Matsushiro Arr	8.91	341	Pn	Pn	23 48 01.8	+0.2
	0.6nm,0.3s,baz=163,slow=11,SNR=4.0						
WRAB	Tennant Creek	48.36	189	eP	P	23 54 34.5	+0.9
	2.1nm,0.6s,mb4.3						
WB2	Warramunga Arr	48.37	189	eP	P	23 54 34.5	+0.8
WB2				ePP	PP	23 56 29.4	+3.0
WRA	Warramunga Arr	48.37	189	P	P	23 54 34.4	+0.7
	1.1nm,0.6s,mb4.1,baz=11,slow=8.4,SNR=6.2						
CHKZ	Chkalovo	56.90	318	eP	P	23 55 36.0	-0.7
	0.5nm,0.4s,mb3.9						
BRVK	Borovoye	57.14	317	P	P	23 55 38.5	0.0
ZRNK	Zerenda	57.92	317	eP	P	23 55 44.2	+0.2
	0.6nm,0.4s,mb4.0						
INK	Inuvik	62.18	25	eP	P	23 56 14.2	+1.0
	1.3nm,0.4s,mb4.4						
ARCES	ARCESS Array B	72.45	341	P	P	23 57 18.1	-0.1
	0.8nm,0.7s,mb3.8,baz=74,slow=7.6,SNR=4.8						
FINES	FINESS Array B	76.88	334	P	P	23 57 42.6	-1.2
	0.5nm,0.5s,mb3.7,baz=76,slow=6.3,SNR=8.3						
NOA	NORSAR Array B	82.53	338	P	P	23 58 13.7	-0.8
	0.4nm,0.7s,mb3.6,baz=43,slow=5.2,SNR=4.2						

*IDC **17** 23:52:51.9±0.9, 5541S×2535W, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.9/21, mbtmp3.9/9, ML3.8/1, MS3.4/1, Ms1 3.3/1, ms1mx2.8/23, Error ellipse: s-maj=28.2km s-min=20.1km az=40.0*
*ISCJB **17** 23:52:54.4±0.6, 554S±0.1×253W±02, h33km, mb4.1/9, MS3.4/1, Error ellipse: s-maj=19.1km s-min=11.9km az=91.3*
*NEIC **17** 23:52:56.6±0.4, 5539S×2528W, h35km, mb4.1/2, Error ellipse: s-maj=15.5km s-min=9.8km az=224.0*

ISC 17 23:52:56.7±5.8, 555S±01×253W±02, h38km±57km, n18, σ0s81/17, mb4.1/9, MS3.4/1, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	18.86	158	P	Pn	23 57 14.5	+0.1
	0.3nm,0.3s,baz=325,slow=14,SNR=26						
SNAA	Sanae	18.86	158	eP	Pn	23 57 14.6	+0.3
	1.8nm,0.4s						
CPUP	Villa Florida	37.27	308	P	P	00 00 04.6	-0.3
	2.7nm,0.8s,mb4.2,baz=136,slow=7.7,SNR=9.7						
CPUP	Villa Florida	37.27	308	P	P	00 00 04.6	-0.3
CFAA	Coronel Fontan	38.34	290	P	P	00 00 12.4	-1.5
	0.3nm,0.5s,mb3.2,baz=153,slow=7.9,SNR=5.7						
BDFB	Brasilia	43.43	327	LR	LR	00 17 34.9	
	comp=Z,45nm,18.0s,MS3.4,baz=197,slow=34						
LVC	Limon Verde	45.96	298	P	P	00 01 17.1	+1.2
	4.2nm,0.6s,mb4.5,baz=129,slow=4.9,SNR=3.9						
LVC	Limon Verde	45.96	298	eP	P	00 01 17.3	+1.3
	3.0nm,0.5s,mb4.5						
VNDA	Vanda	47.20	182	P	P	00 01 25.6	0.0
	0.8nm,0.7s,mb3.8,baz=201,slow=8.6,SNR=6.1						
SIV	San Ignacio	47.99	311	P	P	00 01 31.7	-0.1
	0.8nm,0.9s,mb3.7,baz=180,slow=5.5,SNR=4.0						
TSUM	Tsumeb	48.46	59	eP	P	00 01 34.1	-1.3
LPAZ	La Paz	50.95	303	P	P	00 01 55.8	+1.5
	3.8nm,0.7s,mb4.5,baz=160,slow=6.3,SNR=20						
MATP	Matopo	53.08	71	P	P	00 02 11.3	+1.1
	0.8nm,0.7s,mb3.7,baz=180,slow=5.1,SNR=2.4						
CASY	Casey	54.09	160	P	P	00 02 17.3	-0.3
SAML	Samuel	55.18	312	eP	P	00 02 25.1	-0.4
NNA	Nana	58.93	297	eP	P	00 02 51.9	-0.2
	4.9nm,0.4s,mb4.9						
TORD	Torodi Ar. Bea	72.03	28	P	P	00 04 16.9	+0.2
	2.4nm,0.6s,mb4.3,baz=200,slow=6.2,SNR=36						
SDV	Santo Domingo	74.38	313	P	P	00 04 30.5	-0.1

*IDC **17** 23:58:53.7±0.8, 6464S×17552E, h0km, mb4.2/10, mb1 4.4/11, mb1mx4.3/15, mbtmp4.2/11, ML3.5/1, MS4.2/12, Ms1 4.2/12, ms1mx4.0/18, Error ellipse: s-maj=30.5km s-min=16.8km az=58.0*
*ISCJB **17** 23:58:54.1±0.6, 6466S±008×1752E±03, h10km, mb4.4/12, MS4.2/11, Error ellipse: s-maj=20.9km s-min=9.4km az=145.2*
*NEIC **17** 23:58:55.8±0.6, 6459S×17559E, h10km, mb4.5/6, Error ellipse: s-maj=18.7km s-min=9.5km az=74.0*
*HRVD **17** 23:58:55.8±0.3, 6449S×17545E, h12km, MW5.2/59, Centroid moment Tensor Solution. LP body waves: s16,c16; Mantle waves: s59,c80; Half duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.82±.19; $M_{\theta\theta}$3.76±.13; $M_{\phi\phi}$-2.94±.16; $M_{r\theta}$-8.48±.44; $M_{\theta\phi}$-0.46±.18; $M_{\phi r}$-0.60±.52; Best double couple: $M_0$8.84800×10^{16} NP1:ϕ_s311.00000°, δ10.00000°, λ-43.00000°. NP2: ϕ_s83.00000°, δ83.00000°, λ-98.00000°. Principal axes: T 10.2530, Plg37.0000°, Azm180.0000°; N -2.8110, Plg8.0000°, Azm84.0000°; P -7.4440, Plg52.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 17 23:58:55.7±0.6, 6466S±007×1753E±03, h10km, n37, σ1s07/25, mb4.4/12, MS4.2/11, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	Scott Base	13.51	188	ePn	Pn	00 02 06.8	-0.6
	20nm,1.2s						
VNDA	Vanda	13.56	192	Pn	Pn	00 02 07.8	-0.3
	0.2nm,0.3s,baz=39,slow=16,SNR=20						
VNDA				LR	LR	00 06 14.4	
	comp=Z,1μm,18.9s,baz=45,slow=32						
RPZ	Rata Peaks	21.12	351	P	P	00 03 39.9	-0.6
	14nm,0.9s,mb4.3,baz=236,slow=15,SNR=3.4						
RPZ				LR	LR	00 10 10.2	
	comp=Z,912nm,19.1s,MS4.2,baz=351,slow=32						
CASY	Casey	25.87	237	eP	P	00 04 31.3	+3.8
URZ	Urewera	26.46	3	LR	LR	00 13 06.8	
	comp=Z,570nm,20.4s,MS4.1,baz=151,slow=32						
STKA	Stephens Creek	38.83	311	P	P	00 06 20.8	0.0
	13nm,1.2s,mb4.5,baz=137,slow=12,SNR=5.7						
STKA				LR	LR	00 19 58.6	
	comp=Z,286nm,19.0s,MS4.1,baz=186,slow=32						
STKA	Stephens Creek	38.83	311	eP	P	00 06 21.1	+0.3
MAW	Mawson	39.57	214	P	P	00 06 27.3	+0.3
	1.8nm,0.9s,mb3.8,baz=145,slow=9.2,SNR=5.9						
MAW				LR	LR	00 21 21.0	
	comp=Z,229nm,22.0s,MS4.0,baz=345,slow=34						
MAW	Mawson	39.57	214	eP	P	00 06 28.6	+1.6
	3.5nm,1.1s,mb4.0						
PMSA	Palmer Station	43.82	148	LR	LR	00 21 33.9	
	comp=Z,352nm,21.1s,MS4.2,baz=241,slow=31						
SNAA	Sanae	43.93	181	P	P	00 06 59.9	-2.8
	0.7nm,0.9s,mb3.4,baz=204,slow=7.6,SNR=4.5						
SNAA	Sanae	43.93	181	eP	P	00 07 03.9	+1.2
	1.9nm,0.9s,mb3.8						
TBI	Tubuai	47.26	46	eLQ		00 18 15.0	
	835nm,27.5s						
TBI				eLR	LR	00 20 22.6	
	603nm,29.2s,baz=205						
CTA	Charters Tower	48.56	323	P	P	00 07 39.0	0.0
	7.6nm,1.0s,mb4.7,baz=115,slow=8.2,SNR=3.3						
CTA	Charters Tower	48.56	323	eP	P	00 07 39.1	0.0
	7.9nm,1.1s,mb4.7						
CTAO	Charters Tower	48.56	323	eP	P	00 07 39.0	-0.1
	8.6nm,0.9s,mb4.8						
AS31	Alice Springs	48.98	307	eP	P	00 07 42.3	0.0
ASAR	Alice Springs	48.98	307	P	P	00 07 42.4	+0.1
	5.7nm,0.8s,mb4.7,baz=154,slow=7.0,SNR=28						
ASAR				LR	LR	00 26 41.5	
	comp=Z,213nm,19.7s,MS4.1,baz=344,slow=34						
WB2	Warramunga Arr	52.27	309	eP	P	00 08 06.1	-1.1
WB2				eP		00 08 06.6	
WRA	Warramunga Arr	52.27	309	P	P	00 08 06.4	-0.8
	7.3nm,0.8s,mb4.7,baz=161,slow=6.5,SNR=16						
WRA				LR	LR	00 28 22.6	
	comp=Z,224nm,21.5s,MS4.2,baz=180,slow=34						
WRAB	Tennant Creek	52.28	309	eP	P	00 08 06.2	-1.1
	11nm,0.5s,mb5.0						
RKT	Rikitea	52.52	62	eLR	LR	00 22 40.8	
	156nm,28.8s						
PPT	Papeete	52.66	44	eS	S	00 15 29.3	-8.3
	120nm,26.8s						
PPT				eLQ		00 20 16.0	
	1μm,28.2s						
PPT				eLR	LR	00 22 49.3	
	587nm,28.5s,baz=203						
PPT	Papeete	52.66	44	LR	LR	00 23 28.0	
	comp=Z,287nm,20.0s,MS4.3,baz=186,slow=28						
FITZ	Fitzroy Crossi	57.05	300	eP	P	00 08 43.1	+1.2
	5.2nm,1.0s,mb4.5						
PMG	Port Moresby	58.59	327	P	P	00 08 54.3	+1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	63.08	129	P	P	00 09 21.3	-1.9
	1.8nm,0.9s,mb4.2,baz=226,slow=3.9,SNR=2.9						
PLCA				LR	LR	00 32 23.5	
	comp=Z,121nm,19.7s,MS4.1,baz=203,slow=32						
TRQA	Tornquist	68.26	134	P	P	00 10 00.6	+3.9
BOSA	Boshof	84.13	206	LR	LR	00 45 50.3	
	comp=Z,375nm,19.5s,MS4.8,baz=4.7,slow=34						
LPAZ	La Paz	86.18	121	P	P	00 11 38.4	+1.2
	1.5nm,1.0s,mb4.2,baz=180,slow=8.1,SNR=3.1						
SIV	San Ignacio	88.98	127	P	P	00 11 51.4	+0.8
	0.9nm,0.9s,mb4.1,baz=215,slow=3.6,SNR=4.2						
BDFB	Brasilia	93.44	139	LR	LR	00 51 24.8	
	comp=Z,90nm,19.1s,MS4.2,baz=197,slow=34						
MYNC	Murphy	125.54	82	PKPdf	PKPdf	00 17 55.8	-1.3
KIV	Kislovodsk	146.58	255	ePKPdf	PKPdf	00 18 35.9	+0.1
BRTR	Keskin Array B	146.60	240	PKPbc	PKPbc	00 18 35.6	-1.8
	1.6nm,0.8s,baz=156,slow=6.2,SNR=11						
SCHQ	Schefferville	148.51	78	PKPbc	PKPbc	00 18 37.7	-5.0
	2.5nm,0.8s,baz=221,slow=6.2,SNR=4.0						
ARU	Arti	149.10	285	ePKPbc	PKPbc	00 18 42.9	-1.3

RSPR 17 23:58:59.6, 1853N×6492W, h35km±4km, MD2.7/3, MD2.7/3, 7C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.30	111	eS	Sb	23 59 12.7	-0.3
TBVI	Tortola	0.30	111	⇑iP	Pb	23 59 06.6	-1.0
TBVI	Tortola	0.30	111	eS	Sb	23 59 12.7	-0.3
TBVI	Tortola	0.30	111	⇑eP	Pb	23 59 06.3	-1.3
CULB	Culebra	0.44	236	⇑eP	Pb	23 59 08.7	-0.7
CULB				eS	Sb	23 59 15.2	-0.9
CULB	Culebra	0.44	236	eS	Sb	23 59 16.4	+0.2
CULB	Culebra	0.44	236	⇑eP	Pb	23 59 08.7	-0.7
MTP	Monte Pirata	0.74	235	⇑eP	Pn	23 59 12.7	-0.9
MTP	Monte Pirata	0.74	235	eS	Sn	23 59 22.0	-1.6
MTP	Monte Pirata	0.74	235	⇑eP	Pn	23 59 12.2	-1.3
MTP	Monte Pirata	0.74	235	eS	Sn	23 59 23.7	+0.1
CBYP	Canovanas	0.93	254	⇑eP	Pn	23 59 15.2	-0.9
CBYP	Canovanas	0.93	254	eS	Sn	23 59 26.6	-1.7
CBYP	Canovanas	0.93	254	⇑eP	Pn	23 59 14.0	-2.1
CBYP	Canovanas	0.93	254	eS	Sn	23 59 26.4	-1.9

*NEIC **18** 00:02:52.6, 1526N×9136W, h23km, MD4.2(MEX), After MEX.*

MEX 18 00:02:50.4±0.8, 1511N×9133W, h19km±999km, MD4.2, 2C, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	Comitan	1.40	326	⇑iP	Pn	00 03 11.6	-3.3
CCIG				iS	Sn	00 03 28.9	-3.9
CCIG	Comitan	1.40	326	⇑iP	Pn	00 03 11.6	-3.3
CCIG				iS	Sn	00 03 26.6	-6.2
SCX	San Cristobal	2.04	322	eP	Pn	00 03 22.0	-1.8
SCX				iS	Sn	00 03 45.0	-3.8
SCX	San Cristobal	2.04	322	eP	Pn	00 03 23.5	-0.3
SCX				iS	Sn	00 03 45.5	-3.3
CMIG	Matias Romero	3.94	300	iP	Pn	00 03 47.9	-2.0
CMIG				iS	Sn	00 04 32.3	-3.3
CMIG	Matias Romero	3.94	300	iP	Pn	00 03 47.9	-2.0
CMIG				iS	Sn	00 04 32.8	-2.8
OXX	Oaxaca	5.54	291	eP	Pn	00 04 12.0	+0.1
UTMO	Huajuapan	6.77	294	iS	Sn	00 05 43.5	-1.9

*NEIC **18** 00:05:57.6, 3241S×7167W, h15km, ML3.2(GUC), After GUC.*

GUC 18 00:05:57.6±0.8, 3241S×7167W, h15km±3km, MD3.8, ML3.2, 13C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.55	15	⇓iP	Pg	00 06 08.0	-0.4
CHNG				iS	Sg	00 06 15.8	+0.1
CHNG				AML	AML	00 06 16.4	
	comp=E,426nm,0.4s						
IHA	Instituto Hidr	0.61	178	⇓iP	Pg	00 06 09.0	-0.6
IHA				iS	Sg	00 06 17.7	0.0
ROCH	El Roble	0.79	135	⇑iP	Pg	00 06 12.1	-0.8
ROCH				iS	Sg	00 06 22.8	-0.4
JACH	Jahuel	0.95	107	⇑iP	Pb	00 06 14.5	-1.2
JACH				iS	Sb	00 06 27.4	-0.7
LCCH	Las Cruces	1.06	176	⇑iP	Pb	00 06 16.2	-1.5
LCCH				iS	Sb	00 06 30.0	-1.4
PEL	Peldehue	1.10	132	⇑iP	Pb	00 06 17.1	-1.3
PEL				iS	Sb	00 06 31.7	-0.9
PEL				AML	AML	00 06 33.4	
	comp=E,4µm,0.2s						
PEL	Peldehue	1.10	132	⇑iP	Pb	00 06 17.1	-1.3
PEL				iS	Sb	00 06 31.7	-0.9
RCDM	Rinconada Maip	1.29	146	eP	Pn	00 06 19.8	-1.3
RCDM				iS	Sb	00 06 36.8	-1.2
RCDM				AML	AML	00 06 37.9	
	comp=E,703nm,0.1s						
RCDM	Rinconada Maip	1.29	146	eP	Pn	00 06 19.8	-1.3
RCDM				iS	Sb	00 06 36.8	-1.2
CMCH	Combarbala	1.36	25	⇑iP	Pn	00 06 20.1	-1.9
CMCH				iS	Sn	00 06 38.8	-1.1
CMCH				AML	AML	00 06 40.5	
	comp=E,2µm,0.3s						
CMCH	Combarbala	1.36	25	⇑iP	Pn	00 06 20.1	-1.9
CMCH				iS	Sn	00 06 38.8	-1.1
CLCH	Cerro Calan	1.36	136	⇑iP	Pn	00 06 21.2	-1.0
CLCH				iS	Sn	00 06 39.2	-0.7
CLCH				AML	AML	00 06 46.5	
	comp=E,444nm,0.8s						
TACH	Talagante	1.38	154	eP	Pn	00 06 21.5	-0.8
TACH				iS	Sn	00 06 39.7	-0.6
ANTU	Antumapu	1.44	143	⇑iP	Pn	00 06 22.9	-0.2
ANTU				iS	Sn	00 06 41.3	-0.6
ANTU				AML	AML	00 06 46.6	
	comp=N,497nm,0.3s						
ANTU	Antumapu	1.44	143	⇑iP	Pn	00 06 22.9	-0.2
ANTU				iS	Sn	00 06 41.3	-0.6
FCH	Farellones	1.47	129	eP	Pn	00 06 22.6	-1.0
FCH				iS	Sn	00 06 42.2	-0.4
FCH				AML	AML	00 06 43.5	
	comp=N,368nm,0.2s						
PCH	Pirque	1.54	141	⇑iP	Pn	00 06 24.6	+0.1
PCH				eS	Sn	00 06 44.8	+0.4
CHCH	Chadas Angostu	1.74	151	eP	Pn	00 06 27.2	0.0
CHCH				iS	Sn	00 06 49.1	0.0
CACH	El Canelo	1.92	153	⇑iP	Pn	00 06 30.6	+0.9
CACH				eS	Sn	00 06 56.0	+2.4
CICH	Cipreses	2.17	152	⇑iP	Pn	00 06 34.4	+1.2
SFDO	San Fernando	2.26	166	eP	Pn	00 06 35.8	+1.4
TLL	Tololo Astrono	2.36	18	eP	Pn	00 06 37.4	+1.6
TLL				iS	Sn	00 07 07.5	+3.0
TLL				AML	AML	00 07 11.7	
	comp=N,238nm,0.6s						
TLL	Tololo Astrono	2.36	18	eP	Pn	00 06 37.4	+1.6
TLL				iS	Sn	00 07 07.5	+3.0
MDZ	Mendoza	2.42	102	eP	Pn	00 06 34.0	-2.7

*NIED **18** 00:27:00, 3630N×14090E, h59km, Mw3.7 Best double couple: $M_0$4.20000×10^{14} NP1:φs154.00000°, δ81.00000°, λ-54.00000°. NP2:φs256.00000°, δ37.00000°, λ-166.00000°.*

JMA 18 00:27:22.4, 3623N×14089E, h47km±1km, M3.5, 3C-3D Broadband fault plane solution: P waves. NP1: φs247.00000°, δ36.00000°, λ168.00000°. **NP2:** φs347.00000°, δ83.00000°, λ54.00000°. **Principal axes:** T Plg41.0000°, Azm224.0000°; N Plg35.0000°, Azm352.0000°; P Plg29.0000°, Azm105.0000°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.46	326	⇓P	Pn	00 27 32.6	-0.4
JHO				S	Sn	00 27 39.7	-0.8
CHOJ	Chosi	0.53	183	⇑P	Pn	00 27 33.6	-0.2
CHOJ				S	Sn	00 27 41.1	-0.8
JYT	Yasato	0.56	270	⇓P	Pn	00 27 34.2	0.0
JYT				S	Sn	00 27 42.3	-0.4
ONAJ	Iwakimizuishiy	0.87	355	⇑P	Pn	00 27 37.8	-0.5
ONAJ				S	Sn	00 27 48.3	-1.6
JFK	Kawauchi	1.13	359	⇑P	Pn	00 27 41.2	-0.7
JAG	Ashikaga	1.18	280	⇓P	Pn	00 27 42.7	+0.3
JFT	Otama	1.36	341	P	Pn	00 27 46.0	+1.1
JFT				S	Sn	00 28 02.8	+1.0
MAT	Matsushiro	2.19	279	P	Pn	00 27 57.4	+1.1
MAT				eS	Sn	00 28 26.3	+4.2

*CASC **18** 00:29:47.8±1.6, 992N×8564W, h22km±5km, MD3.9, ML4.2, mb4.3(NEIC)*

*ISCJB **18** 00:29:49.0±0.3, 1004N±004×8554W±003, h33km, mb4.2/23, MS3.2/3, Error ellipse: s-maj=6.6km s-min=3.1km az=54.2*

*IDC **18** 00:29:48.6±2.8, 1019N×8555W, h35km±21km, mb3.8/7, mb1 4.0/9, mb1mx3.7/22, mbtmp4.1/9, ML3.8/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/29, Error ellipse: s-maj=34.7km s-min=16.2km az=62.0*

*NEIC **18** 00:29:51.4±1.4, 1015N×8535W, h53km±13km, mb4.3/16, MD4.0(HDC), Error ellipse: s-maj=19.9km s-min=9.9km az=48.0*

NEIC Felt at Liberia, Nicoya and Samara.

ISC 18 00:29:50.5±0.8, 1014N±005×8546W±004, h29km±5km, n154, σ1§35/154, mb4.2/23, MS3.2/3, 56C-57D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	Vista de Mar	0.17	266	⇑iP	Pb	00 29 53.4	-2.8
JCR	Jicaral	0.45	130	⇓iP	Pb	00 29 58.4	-1.6
JTS	JuntasAbangare	0.52	73	Pg	Pb	00 30 01.1	0.0
	914nm,0.3s,baz=273,slow=8.2,SNR=2019						
JTS	JuntasAbangare	0.52	73	⇓iPn	Pn	00 30 01.2	-0.8
JTS				eSn	Sb	00 30 09.9	+1.5
LIM1	Limonal	0.59	20	iP	Pb	00 30 03.6	+1.2
LIM1				iS	Sb	00 30 15.9	+5.5
FORC	Fortuna	0.84	67	⇓iP	Pn	00 30 07.7	+1.2
CGA2	Cerro Gallo 2	0.99	97	⇓eP	Pn	00 30 08.1	-0.3
PRS1	Puriscal	1.14	98	⇓eP	Pn	00 30 09.4	-1.1
MADN	Villa Maderas	1.26	357	⇑eP	Pn	00 30 13.3	+1.1
LAJ	Bijagual	1.35	102	⇑iP	Pn	00 30 06.4	-6.9
SJS	Escuela Geolog	1.40	98	⇓eP	Pn	00 30 15.0	+0.9
CONN	Concepcion	1.43	353	⇑eP	Pn	00 30 15.0	+0.6
LCR2	La Lucha 2	1.49	105	⇓iP	Pn	00 30 14.9	-0.4
ICR	Volcan Irazu	1.61	95	⇑eP	Pn	00 30 18.1	+1.1
BUS	Buena Vista	1.77	109	⇓eP	Pn	00 30 18.5	-0.7
MASN	Masaya	1.96	340	⇓eP	Pn	00 30 22.1	+0.3
TICN	Ticuantepe	2.03	338	⇑eP	Pn	00 30 23.1	+0.4
TISN	Laguna Tiscapa	2.14	338	⇓eP	Pn	00 30 24.6	+0.3
XAVN	Gruta Xavier	2.17	337	⇑eP	Pn	00 30 25.0	+0.3
APYN	Apoyeque	2.26	337	⇑eP	Pn	00 30 26.1	+0.2
COPN	Copaltepe	2.31	331	⇑eP	Pn	00 30 26.1	-0.5
BOA	Boaco	2.34	354	⇑eP	Pn	00 30 26.9	-0.1
MIRN	Miramar	2.59	332	⇑eP	Pn	00 30 30.2	-0.3
CNGN	Cerro Negro	2.64	333	eP	Pn	00 30 30.6	-0.5
CNGN				⇑eP		00 30 30.7	
LEON	Leon	2.66	328	⇓eP	Pn	00 30 30.9	-0.6
TELN	Telica	2.79	331	eP	Pn	00 30 33.9	+0.6
CNI	Changuinola	2.99	104	⇑eP	Pn	00 30 36.1	+0.2
BRU	Baru	3.15	115	⇑eP	Pn	00 30 38.5	+0.4
DVD	David	3.42	119	⇑eP	Pn	00 30 41.6	-0.2
AZU	Azuero	5.63	114	eP	Pn	00 31 13.5	+1.3
ACH	Altos	5.65	105	⇑eP	Pn	00 31 12.4	-0.1
CMIG	Matias Romero	11.47	308	Pn	Pn	00 32 29.5	-2.8
	0.6nm,0.3s,baz=113,slow=12,SNR=6.8						
ROSC	El Rosal	12.22	115	Pn	Pn	00 32 45.3	+2.8
	0.5nm,0.3s,baz=89,slow=23,SNR=2.6						
ROSC				LR	LR	00 37 01.4	
	comp=Z,88nm,18.6s,baz=0.3,slow=35						
SDV	Santo Domingo	14.68	94	Pn	Pn	00 33 19.2	+3.1
	0.4nm,0.3s,baz=328,slow=9.5,SNR=3.6						
SDV	Santo Domingo	14.68	94	ePn	Pn	00 33 15.2	-0.9
ATAH	Atahualpa	18.42	157	P	Pn	00 34 05.0	+1.3
	0.4nm,0.3s,baz=328,slow=10,SNR=3.6						
SJG	San Juan	20.32	65	LR	LR	00 42 15.7	
	comp=Z,63nm,18.8s,MS3.0,baz=90,slow=37						
PCRV	Puerto La Cruz	20.50	88	P	P	00 34 25.9	-0.2
	5.7nm,0.8s,baz=351,slow=6.4,SNR=2.5						
HKT	Hockley	21.96	335	eP	P	00 34 42.0	+0.1
	15nm,1.4s,mb4.2						
LRAL	Lakeview Retre	22.83	357	eP	P	00 34 51.3	+0.2
	10nm,0.6s,mb4.4						
JCT	Junction City	24.25	329	eP	P	00 35 03.3	-1.6
	9.9nm,0.7s,mb4.3						
PLAL	Pickwick Lake	24.84	355	eP	P	00 35 08.8	-1.6
	5.7nm,0.9s,mb4.1						
SWET	Sewanee	24.96	359	eP	P	00 35 09.5	-1.9
CPCT	Cooper Cave	25.21	2	eP	P	00 35 13.4	-0.2
MIAR	Mount Ida	25.40	344	eP	P	00 35 13.8	-1.6
	15nm,0.8s,mb4.6						
WVT	Waverly	25.96	356	eP	P	00 35 18.6	-1.9
	2.7nm,0.7s,mb3.9						
WVT				ePcP	PcP	00 38 48.1	-0.3
WMOK	Wichita Mounta	27.34	336	eP	P	00 35 30.5	-2.4
	5.8nm,0.8s,mb4.2						
LPIG	La Paz	27.44	304	LR	LR	00 47 40.5	
	comp=Z,76nm,21.9s,MS3.2,baz=143,slow=39						
CCM	Cathedral Cave	28.28	350	eP	P	00 35 39.2	-2.1
	4.7nm,0.8s,mb4.2						
CCM				epP	pP	00 35 49.4	-0.2
MNTX	Cornudas Mount	28.30	322	eP	P	00 35 45.7	+4.2
	23nm,2.1s,mb4.4						
MNTX				ePcP	PcP	00 38 50.0	-4.0
116A	Eloy	32.92	317	⇑P	P	00 36 20.1	-2.2
	baz=33						
115A	Sonoran Desert	33.36	316	⇑P	P	00 36 24.7	-1.4
	baz=34						
Z14A	Wintersburg	34.24	317	⇑P	P	00 36 33.7	0.0
	baz=34						
X15A	Humboldt	34.45	319	⇑P	P	00 36 34.1	-1.4
	baz=35						
ISCO	Idaho Springs	34.55	332	eP	P	00 36 36.2	-0.3
	1.7nm,0.9s,mb4.0						
Y14A	Wickenburg	34.62	317	⇓P	P	00 36 36.3	-0.7
	baz=35						
X14A	Yava	34.86	318	⇑P	P	00 36 37.9	-1.2
	baz=35						
Y13A	Salome	35.10	317	⇓P	P	00 36 42.3	+1.1
	baz=35						
GLA	Glamis	35.35	315	⇓P	P	00 36 45.7	+2.4
	baz=36						
W14A	Seligman	35.44	319	⇓P	P	00 36 42.7	-1.4
	baz=36						
SIV	San Ignacio	35.45	137	P	P	00 36 42.3	-1.9
	1.5nm,0.7s,mb4.0,baz=309,slow=7.1,SNR=8.7						
X13A	Yucca	35.56	318	⇓P	P	00 36 45.1	0.0
	baz=36						
PDMCI	Parker Dam,Lak	35.59	317	⇓P	P	00 36 46.0	+0.6
	baz=36						
LONY	Lake Ozonia	35.62	13	eP	P	00 36 43.6	-2.0
W13A	Hualapai Mount	35.89	318	⇓P	P	00 36 47.4	-0.6
	baz=36						
DVTC	Desert V Tower	36.05	313	⇓P	P	00 36 53.1	+3.8
	baz=36						
SRU	San Rafael	36.51	326	eP	P	00 36 52.8	-0.5
	5.7nm,0.9s,mb4.4						
BELC	Belle Mtn.	36.69	315	⇓P	P	00 36 56.9	+2.1
	baz=37						
GMRC	Granite Mounta	36.89	316	⇑P	P	00 36 57.8	+1.3
	baz=37						
109C	Camp Elliot, M	36.89	313	⇓P	P	00 37 01.6	+5.1
	baz=37						
V12A	Nelson	36.90	318	⇑P	P	00 36 56.8	+0.2
	baz=37						
MURC	Murrieta	37.33	314	⇑P	P	00 37 03.1	+2.9
	baz=37						
TUQ	Turquoise Mtn.	37.44	317	⇓P	P	00 37 02.7	+1.5
	baz=38						
SHOC	Shoshone	37.95	317	⇑P	P	00 37 05.3	-0.2
	baz=38						
GSC	Goldstone	37.96	316	⇑P	P	00 37 07.3	+1.7
	baz=38						
BFSC	Mount Baldy St	37.98	314	⇓P	P	00 37 08.4	+2.6
	baz=38						
U10A	Ash Meadows, A	38.28	318	⇓P	P	00 37 08.8	+0.6
	baz=38						
FURC	Furnace Creek,	38.66	318	⇓P	P	00 37 12.8	+1.4
	baz=39						
PDAR	Pinedale Array	38.72	331	P	P	00 37 09.7	-2.3
	0.6nm,0.5s,mb3.5,baz=134,slow=9.5,SNR=8.8						
MPMC	Manual Prospec	38.85	317	⇑P	P	00 37 14.0	+1.0
	baz=39						
HWUT	Hardware Ranch	38.85	328	eP	P	00 37 12.5	-0.6
	2.3nm,0.5s,mb4.2						
OSI	Osito Adit	38.93	314	⇑P	P	00 37 16.4	+2.7
	baz=39						
DAC	Darwin (Calif)	39.04	317	eP	P	00 37 15.7	+1.1
	2.1nm,0.9s,mb3.9						
P12A	McGill	39.25	323	⇑P	P	00 37 14.4	-2.0
	baz=39						
R10A	Warm Springs	39.36	320	⇑P	P	00 37 17.6	+0.3
	baz=40						
CWC	Cottonwood Cre	39.45	317	⇓P	P	00 37 20.1	+2.0
	baz=40						
S09A	Goldfield	39.62	319	⇑P	P	00 37 19.1	-0.3
	baz=40						
O12A	Currie	39.67	324	⇓P	P	00 37 16.6	-3.3
	baz=40						
N13A	Wendover, West	39.76	325	⇑P	P	00 37 18.1	-2.5
	baz=40						
REDW	Red Top Meadow	39.79	331	eP	P	00 37 19.5	-1.4
	9.5nm,1.0s,mb4.5						
VES	Vestal, Richgr	39.81	315	⇑P	P	00 37 23.5	+2.4
	baz=40						
R09A	Tonopah	39.82	320	⇓P	P	00 37 21.3	+0.2
	baz=40,SNR=5.0						
M13A	Montello	40.07	326	⇓P	P	00 37 19.3	-3.9
	baz=40						
O11A	Cowboy Ranch,	40.12	323	⇑P	P	00 37 21.4	-2.2
	baz=40						
HELL	Mitchell Peak,	40.22	317	⇑P	P	00 37 26.4	+1.9
	baz=40						
N12A	Clover Valley,	40.23	325	⇑P	P	00 37 21.6	-2.9
	baz=40						
P10A	Eureka	40.28	322	⇓P	P	00 37 23.8	-1.2
	baz=40						
M12A	Wells	40.53	325	⇓P	P	00 37 24.4	-2.6
	baz=41						
R08A	Mina	40.54	319	⇓P	P	00 37 27.8	+0.7
	baz=41						
N11A	Elko Archery C	40.60	324	⇑P	P	00 37 25.2	-2.4
	baz=41						
NVAR	Mina Array Bea	40.72	319	P	P	00 37 29.1	+0.6
	4.4nm,0.6s,mb4.2,baz=118,slow=8.2,SNR=29						
Q08A	Gabbs	40.73	320	⇓P	P	00 37 28.5	-0.1
	baz=41,SNR=17						
KCC	Kaiser Creek	40.77	317	⇓P	P	00 37 30.9	+2.0
	baz=41						
T06C	Millerton Lake	40.86	316	⇓P	P	00 37 32.3	+2.5
	baz=41						
ULM	Lac du Bonnet	40.91	350	P	P	00 37 25.9	-4.2
	1.1nm,0.5s,mb3.7,baz=180,slow=14,SNR=3.5						
R07C	Lee Vining	41.01	318	⇓P	P	00 37 32.7	+1.8
	baz=41						
O09A	Fish Creek Ran	41.06	322	⇑P	P	00 37 30.3	-1.1
	baz=41						
U04C	Hernandez Rese	41.27	315	⇓P	P	00 37 35.9	+2.9
	baz=41						
Q07A	Schurz	41.33	320	P	P	00 37 33.8	+0.2
	baz=42,SNR=6.9						
S06C	San Francisco	41.42	318	⇓P	P	00 37 35.0	+0.6
	baz=42						
S05C	Merced	41.46	317	⇓P	P	00 37 37.5	+2.8
	baz=42						
R06C	Coleville	41.51	319	⇑P	P	00 37 35.7	+0.6
	baz=42						
N09A	Rock Creek Ran	41.68	323	⇓P	P	00 37 35.0	-1.5
	baz=42						
HLID	Hailey	41.72	328	eP	P	00 37 36.6	-0.2
	1.6nm,0.6s,mb3.8						
CMB	Columbia Colle	41.86	317	P	P	00 37 39.2	+1.2
CMB	Columbia Colle	41.86	317	⇑P	P	00 37 40.0	+2.0
	baz=42						
PACP	Pacheco Peak	41.94	315	⇑P	P	00 37 41.9	+3.3
	baz=42						
R05C	Kirkwood Meado	42.02	318	⇓P	P	00 37 40.5	+1.3
	baz=42						
O07A	Toulon	42.08	321	⇓P	P	00 37 40.0	+0.2
	baz=42						
LAVA	Lava Cap Winer	42.48	318	⇑P	P	00 37 44.5	+1.5
	baz=43						
L09A	Wilkinson Ranc	42.49	324	⇑P	P	00 37 41.9	-1.1
	baz=43						
N07B	Gerlach	42.51	322	⇑P	P	00 37 43.1	-0.1
	baz=43						
O06A	Flanigan	42.68	320	⇑P	P	00 37 45.5	+0.8
	baz=43						
P05C	Yuba Gap, Truc	42.69	319	⇓P	P	00 37 46.0	+1.3
	baz=43						
BEKR	Beckwourth	42.85	320	⇑P	P	00 37 46.5	+0.5
	baz=43						
K09A	Rome	42.95	325	⇓P	P	00 37 45.0	-1.8
	baz=43,SNR=7.8						
L08A	Fields	42.99	324	⇓P	P	00 37 45.9	-1.2
	baz=43						
N06A	Buffalo Meadow	43.02	321	⇑P	P	00 37 48.1	+0.7
	baz=43						
WVOR	Wild Horse Val	43.31	324	eP	P	00 37 48.7	-1.0
	9.1nm,0.8s,mb4.6						
K08A	Mann Creek Ran	43.41	324	⇑P	P	00 37 49.6	-0.9
	baz=44,SNR=13						
ORV	Oroville	43.41	319	⇓P	P	00 37 52.3	+1.8
	baz=44						
SUTB	Sutter Butte	43.42	318	⇓P	P	00 37 53.7	+3.0
	baz=44						
L07A	Adell	43.47	323	⇑P	P	00 37 50.3	-0.7
	baz=44,SNR=8.1						
ELFS	Eagle Lake Fie	43.50	320	⇓P	P	00 37 52.0	+0.7
	baz=44						
I09A	Lost Marbles R	43.78	326	⇓P	P	00 37 51.5	-2.0
	baz=44						
M05C	Lookout	44.18	321	⇓P	P	00 37 57.8	+1.0
	baz=44						
K06A	Valley Falls	44.48	323	⇓P	P	00 37 59.2	+0.1
	baz=45						
P01C	Double 8 Ranch	44.58	317	⇓P	P	00 38 03.5	+3.6
	baz=45						
J06A	Christmas Vall	44.69	324	⇑P	P	00 37 60.0	-0.9
	baz=45						
M03C	McCloud	44.74	320	⇓P	P	00 38 03.2	+1.9
	baz=45						
I07A	Izee	44.83	325	⇑P	P	00 38 00.7	-1.2
	baz=45						
M04C	Macdoel	44.85	321	⇓P	P	00 38 02.7	+0.7
	baz=45						
L04A	Klamath Falls	45.10	321	⇓P	P	00 38 05.9	+1.8
	baz=45						
I06A	Prineville	45.15	324	⇓P	P	00 38 04.1	-0.4
	baz=45						
K04A	Chilquin	45.25	322	⇑P	P	00 38 04.7	-0.6
	baz=45						
N02C	Big Bar	45.26	319	⇑P	P	00 38 08.8	+3.5
	baz=45						
J05A	Fort Rock	45.35	323	⇑P	P	00 38 06.3	+0.3
	baz=46						
G05A	Wamic	46.56	325	⇓P	P	00 38 15.0	-0.6
	baz=47						
H04A	Detroit Lake	46.72	324	⇑P	P	00 38 16.9	0.0
	baz=47						
SCHQ	Schefferville	46.96	15	P	P	00 38 15.4	-3.3
	1.7nm,0.5s,mb4.3,baz=207,slow=6.2,SNR=9.6						
SCHQ				LR	LR	00 56 33.3	
	comp=Z,48nm,21.6s,MS3.4,baz=76,slow=34						
F05A	White Salmon	47.03	326	⇑P	P	00 38 19.4	+0.1
	baz=47						
PLCA	Paso Flores	52.46	166	P	P	00 38 58.2	-2.4
	3.7nm,1.0s,mb4.3,baz=358,slow=8.0,SNR=5.6						
YKA	Yellowknife Ar	56.35	344	P	P	00 39 25.1	-3.7
	1.1nm,0.5s,mb4.1,baz=141,slow=6.9,SNR=8.9						
AMKA	Amchitka	85.42	321	eP	P	00 42 21.7	-3.5

*ISCJB **18** 00:50:46.5±0.6, 1674S±008×7061W±005, h33km, mb3.9/5, MS3.8/1, Error ellipse: s-maj=11.3km s-min=6.7km az=35.2*

*NEIC **18** 00:50:49.9±1.0, 1674S×7021W, h56km±11km, mb4.2/1, Error ellipse: s-maj=13.7km s-min=10.0km az=73.0*

*IDC **18** 00:50:50.9±2.1, 1682S×7028W, h67km±20km, mb3.6/4, mb1 3.8/8, mb1mx3.6/20, mbtmp3.9/8, MS3.5/4, Ms1 3.5/4, ms1mx3.1/25, Error ellipse: s-maj=25.9km s-min=22.1km az=47.0*

ISC 18 00:50:48.4±0.6, 1680S±008×7070W±005, h35km, n20, σ1§24/19, mb3.9/5, MS3.8/1, 1C, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	Arequipa	0.82	294	⇑iP	Pn	00 51 01.8	-1.7
ARE				iS	Sn	00 51 15.5	+1.1
LPAZ	La Paz	2.52	79	P	Pn	00 51 26.6	-0.2
	14nm,0.3s,baz=254,slow=16,SNR=634						
LPAZ				S	Sn	00 51 57.9	+1.7
	4.2nm,0.3s,baz=99,slow=19,SNR=3.1						
LPAZ				LR	LR	00 52 34.2	
	comp=Z,907nm,19.8s,baz=336,slow=48						
LVC	Limon Verde	6.03	164	P	Pn	00 52 14.9	-0.1

	0.5nm,0.3s,baz=312,slow=8.0,SNR=6.3						
LVC				S	Sn	00 53 29.1	+6.4
	0.4nm,0.3s,baz=209,slow=19,SNR=2.3						
NNA	Nana	7.63	308	P	Pn	00 52 43.6	+6.6
	0.6nm,0.3s,baz=141,slow=6.5,SNR=2.6						
SIV	San Ignacio	9.28	86	P	Pn	00 52 55.7	-3.9
	0.4nm,0.3s,baz=276,slow=11,SNR=12						
SIV				S	Sn	00 54 42.7	0.0
	0.1nm,0.3s,baz=195,slow=20,SNR=3.6						
SAML	Samuel	10.70	44	ePn	Pn	00 53 14.8	-4.3
	3.6nm,1.0s						
ATAH	Atahualpa	12.30	321	LR	LR	00 59 08.1	
	comp=Z,305nm,18.5s,baz=332,slow=40						
CPUP	Villa Florida	15.63	130	LR	LR	01 01 22.9	
	comp=Z,112nm,21.6s,baz=28,slow=41						
TRQA	Tornquist	22.52	162	P	P	00 55 45.9	+0.9
PLCA	Paso Flores	23.85	180	P	P	00 55 58.0	-0.3
	1.6nm,0.9s,mb3.5,baz=333,slow=2.3,SNR=3.3						
SDV	Santo Domingo	25.52	0	P	P	00 56 14.0	+0.5
	2.0nm,0.2s,mb4.3						
ECSD	EROS,Sioux Fal	64.74	339	eP	P	01 01 22.5	-0.6
PV01	Paradox Valley	65.19	328	eP	P	01 01 27.4	+1.5
DBIC	Dimbokro	69.14	76	LR	LR	01 30 15.8	
	comp=Z,54nm,20.8s,MS3.8,baz=307,slow=34						
PDAR	Pinedale Array	69.21	330	P	P	01 01 52.1	+0.6
	0.6nm,0.9s,mb3.5,baz=144,slow=2.8,SNR=5.2						
ULM	Lac du Bonnet	70.35	343	P	P	01 01 57.2	-1.3
	3.7nm,0.8s,mb4.4,baz=157,slow=7.1,SNR=9.1						
ULM	Lac du Bonnet	70.35	343	P	P	01 01 57.2	-1.3
TORD	Torodi Ar. Bea	77.45	72	P	P	01 02 36.0	-4.0
	1.1nm,0.9s,mb3.8,baz=259,slow=8.1,SNR=5.4						
MJAR	Matsushiro Arr	147.73	313	PKPbc	PKPbc	01 10 29.9	+0.7
	1.3nm,0.7s,baz=38,slow=0.8,SNR=7.0						
SONM	Songino Array	148.96	4	PKPbc	PKPbc	01 10 32.5	0.0
	1.7nm,0.8s,baz=343,slow=2.1,SNR=7.2						

*ISCJB **18** 01:14:14.6±8.5, 5969S±007×1591E±04, h3km±60km, mb4.2/7, MS3.9/3, Error ellipse: s-maj=31.4km s-min=11.5km az=175.6*
*IDC **18** 01:14:15.4±1.8, 5974S×159.19E, h0km, mb4.1/2, mb1 4.4/4, mb1mx4.1/12, mbtmp4.3/4, MS3.8/5, Ms1 3.8/5, ms1mx3.6/15, Error ellipse: s-maj=60.7km s-min=30.9km az=82.0*
*NEIC **18** 01:14:17.1±0.5, 5969S×159.18E, h10km, mb4.4/6, Error ellipse: s-maj=15.7km s-min=7.0km az=85.0*
ISC 18 01:14:16.0±8.8, **5971S**±007×**1591E**±04, **h3**km±61km, **n16**, σ**0s46**/13, **mb4.2**/7, **MS3.9**/3, **Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	Rata Peaks	17.59	30	P	Pn	01 18 22.3	+0.2
	1.8nm,0.3s,baz=116,slow=2.5,SNR=6.8						
RPZ				LR	LR	01 23 12.6	
	comp=Z,329nm,20.3s,baz=56,slow=30						
VNDA	Vanda	17.92	178	P	Pn	01 18 26.7	+0.6
	0.1nm,0.3s,baz=346,slow=11,SNR=18						
VNDA				LR	LR	01 24 08.5	
	comp=Z,91nm,18.7s,baz=359,slow=33						
TAU	Tasmania Unive	18.32	331	ePn	Pn	01 18 30.5	-0.6
	25nm,1.0s						
SBA	Scott Base	18.40	175	ePn	Pn	01 18 31.7	-0.4
CASY	Casey	22.49	232	eP	P	01 19 16.9	+0.3
	3.4nm,0.9s,mb3.8						
STKA	Stephens Creek	30.21	329	LR	LR	01 31 43.8	
	comp=Z,376nm,21.6s,MS4.0,baz=3.8,slow=35						
FORT	Forrest	35.65	310	eP	P	01 21 15.6	+0.4
	21nm,0.8s,mb5.1						
MAW	Mawson	39.20	217	LR	LR	01 37 37.6	
	comp=Z,163nm,18.4s,MS3.9,baz=86,slow=36						
MAW	Mawson	39.20	217	P	P	01 21 44.7	-0.5
ASAR	Alice Springs	40.14	323	P	P	01 21 53.7	+0.6
	4.0nm,0.9s,mb4.1,baz=162,slow=8.8,SNR=21						
ASAR				LR	LR	01 36 38.3	
	comp=Z,149nm,19.8s,MS3.8,baz=352,slow=33						
WB2	Warramunga Arr	43.51	325	eP	P	01 22 20.1	-0.6
WRA	Warramunga Arr	43.52	325	P	P	01 22 20.5	-0.2
	0.7nm,0.7s,mb3.5,baz=159,slow=6.7,SNR=6.9						
WRAB	Tennant Creek	43.52	325	eP	P	01 22 20.6	-0.2
	4.3nm,0.8s,mb4.2						
FITZ	Fitzroy Crossi	48.07	315	eP	P	01 22 57.3	+0.6
	7.9nm,0.8s,mb4.8						
SNAA	Sanae	48.30	188	eP	P	01 22 58.2	-0.3
	1.7nm,0.8s,mb4.1						
AKASG	Malin Array Be	150.70	275	PKPbc	PKPbc	01 34 06.6	-2.9
	0.3nm,0.4s,baz=98,slow=1.7,SNR=5.1						

*NEIC **18** 01:19:09.2, 1895N×6642W, h70km, MD2.7(RSPR), After RSPR.*
RSPR 18 01:19:09.2, 1895N×6642W, h69km±9km, **MD2.7**/4, **MD2.7**/4, **9C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	Canovanas	0.85	142	⇑eP	Pn	01 19 25.0	-0.9
CBYP	Canovanas	0.85	142	eS	Sn	01 19 37.8	-0.5
CBYP	Canovanas	0.85	142	⇑eP	Pn	01 19 24.6	-1.3
CBYP	Canovanas	0.85	142	eS	Sn	01 19 37.4	-0.8
CBYP	Canovanas	0.85	142	⇑eP	Pn	01 19 24.6	-1.3
CBYP				eS	Sn	01 19 37.4	-0.8
HUMP	Col San Antoni	0.96	146	⇑eP	Pn	01 19 26.6	-0.6
HUMP				eS	Sn	01 19 40.5	-0.1
CRPR	Cabo Rojo, PR	1.14	215	⇓eP	Pn	01 19 28.9	-0.6
CRPR	Cabo Rojo, PR	1.14	215	eS	Sn	01 19 44.0	-0.6
CRPR	Cabo Rojo, PR	1.14	215	⇑eP	Pn	01 19 28.7	-0.8
CRPR	Cabo Rojo, PR	1.14	215	eS	Sn	01 19 43.9	-0.7
CRPR	Cabo Rojo, PR	1.14	215	⇑eP	Pn	01 19 28.7	-0.8
CRPR				eS	Sn	01 19 43.9	-0.7
MTP	Monte Pirata	1.18	136	⇑eP	Pn	01 19 29.4	-0.5
MTP	Monte Pirata	1.18	136	eS	Sn	01 19 44.5	-0.9
MTP	Monte Pirata	1.18	136	⇑eP	Pn	01 19 29.3	-0.6
MTP	Monte Pirata	1.18	136	eS	Sn	01 19 44.6	-0.8
MTP	Monte Pirata	1.18	136	⇑eP	Pn	01 19 29.3	-0.6
MTP				eS	Sn	01 19 44.6	-0.8

*CSEM **18** 02:31:27.5, 6602N×1823W, h2km, ML3.5, After REY*
REY 18 02:31:27.5, 6602N×1823W, h2km, **ML3.3, ML3.5, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHLA	Hella	0.10	220	P	Pg	02 31 29.8	+0.4
IHLA				S	Sg	02 31 31.5	+0.8
IBRE	Brettingsstaoi	0.17	51	P	Pg	02 31 31.1	+0.4
IBRE				S	Sg	02 31 34.0	+1.1
IFLA	Flatey	0.21	47	P	Pg	02 31 32.2	+0.6
IFLA				S	Sg	02 31 35.8	+1.5
IGRA	Granastaoir	0.29	110	P	Pg	02 31 33.2	+0.2
IGRA				S	Sg	02 31 37.5	+0.8
ISIG	Siglufjorour	0.30	293	P	Pg	02 31 33.5	+0.2
ISIG				S	Sg	02 31 38.2	+1.0
IHED	Heoinshofoi	0.38	80	P	Pg	02 31 35.0	+0.2
IHED				S	Sg	02 31 40.7	+0.9
IKVO	Krokottuvotn	0.63	118	P	Pg	02 31 39.0	-0.7
IKVO				S	Sg	02 31 47.9	0.0
IREN	Reynihlio	0.66	124	P	Pg	02 31 39.5	-0.7
IREN				S	Sg	02 31 48.8	0.0
IGIL	Gilhagi	0.77	85	P	Pg	02 31 41.2	-1.1
IGIL				S	Sg	02 31 51.9	-0.4
IHRN	Hraun	0.78	278	P	Pg	02 31 41.3	-1.1
IHRN				S	Sg	02 31 52.1	-0.4
ISVA	Svartarkot	0.80	149	P	Pg	02 31 41.9	-0.9
ISVA				S	Sg	02 31 53.0	-0.1
ILEI	Leirhofn	0.81	60	P	Pg	02 31 42.0	-1.0
ILEI				S	Sg	02 31 53.2	-0.2
IGRS	Grimsstaoir	0.95	113	P	Pg	02 31 44.1	-1.6
IGRS				S	Sg	02 31 57.1	-0.9
IHVE	Hveravellir	1.28	206	P	Pg	02 31 50.1	-2.0
IHVE				S	Sg	02 32 06.8	-1.9
IMKO	Mokollar	1.31	142	P	Pg	02 31 50.3	-2.3
IMKO				S	Sg	02 32 08.1	-1.5
IHVA	Hvannstoosfjol	1.45	136	P	Pn	02 31 52.5	-2.3
IHVA				S	Sb	02 32 12.5	-1.7
ISKR	Skrokkalda	1.47	183	P	Pn	02 31 53.2	-1.7
ISKR				S	Sb	02 32 12.9	-1.7
IBRU	Bruarjokull	1.49	142	P	Pn	02 31 52.7	-2.6
IBRU				S	Sb	02 32 13.4	-1.9
IADA	Aoalbol	1.50	131	P	Pn	02 31 53.2	-2.1
IADA				S	Sb	02 32 12.5	-2.9
IVSH	V-Sauoahnukur	1.60	138	P	Pn	02 31 54.2	-2.6
IVSH				S	Sn	02 32 16.5	-1.6
IGLU	Glumsstadir	1.68	127	P	Pn	02 31 56.3	-1.5
IGLU				S	Sn	02 32 17.5	-2.4
IASB	`sbjarnarst	1.82	227	P	Pn	02 31 58.0	-1.8
IASB				S	Sn	02 32 21.9	-1.5
IVAT	Vatnsfell	1.86	189	P	Pn	02 31 59.2	-1.2
IVAT				S	Sn	02 32 24.0	-0.5
IGYG	Gygjarholskot	1.94	207	P	Pn	02 32 00.2	-1.2
IGYG				S	Sn	02 32 25.4	-0.9
IKAL	Kalfafell	2.09	173	P	Pn	02 32 02.6	-0.9
IKAL				S	Sn	02 32 30.9	+0.7
IHAU	Haukadalur	2.19	200	P	Pn	02 32 04.4	-0.4
IHAU				S	Sn	02 32 31.6	-0.9
IHEI	Heioarbar	2.23	216	P	Pn	02 32 03.6	-1.8
IHEI				S	Sn	02 32 33.6	+0.2
ISAU	Saurbar	2.24	205	P	Pn	02 32 04.2	-1.4
ISAU				S	Sn	02 32 34.6	+0.8
IFAG	Fagurholsmyri	2.25	162	P	Pn	02 32 05.4	-0.4
IFAG				S	Sn	02 32 35.2	+1.0
IKUD	Kuludalsa	2.30	224	P	Pn	02 32 04.7	-1.6
IKUD				S	Sn	02 32 34.0	-1.2
ISNB	Snabyli	2.30	184	P	Pn	02 32 06.0	-0.4
ISNB				S	Sn	02 32 36.8	+1.6
IASM	Asmuli	2.42	206	P	Pn	02 32 07.1	-0.9
IASM				S	Sn	02 32 40.0	+1.8
ISAN	Sandskeio	2.43	217	P	Pn	02 32 06.6	-1.5

*ISCJB **18** 02:39:24.0±0.5, 3891N±002×2355E±004, h9km±5km, Error ellipse: s-maj=5.2km s-min=4.1km az=177.0*
*NEIC **18** 02:39:24.5, 3890N×2353E, h20km, MD3.1(ATH), After ATH.*
*CSEM **18** 02:39:24.3±0.1, 3886N×2356E, h9km, ML3.3, Error ellipse: s-maj=2.0km s-min=1.4km az=88.0*
*THE **18** 02:39:24.8, 3892N×2354E, h4km, ML3.3*
*ATH **18** 02:39:24.5, 3890N×2353E, h20km±4km, MD3.1/5*
ISC 18 02:39:24.6±0.5, **3891N**±003×**2355E**±004, **h12**km±5km, **n19**, σ**0s75**/28, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	Alonnisos	0.37	44	ePg	Pg	02 39 31.7	-0.2
AOS				eSg	Sg	02 39 37.1	+0.3
NEO	Neokhori	0.47	328	ePB	Pg	02 39 34.2	+0.3
NEO				eSB	Sg	02 39 40.9	+0.7
LKR	Lokris	0.50	240	ePB	Pg	02 39 33.9	-0.5
LKR				eSB	Sg	02 39 41.4	+0.4
XOR	Xorichti	0.54	329	ePg	Pg	02 39 35.3	+0.2
XOR				eSg	Sg	02 39 42.4	+0.2
ATH	Athens Observa	0.94	172	ePN	Pg	02 39 42.8	+0.1
AGG	Agios Georgios	0.96	277	ePg	Pg	02 39 42.2	-0.9
AGG				eSg	Sg	02 39 56.6	+1.0
PAIG	Paliouri	1.02	6	ePg	Pg	02 39 44.0	-0.3
PAIG				eSg	Sg	02 39 58.6	+0.9
KVR	Kavouri	1.09	171	ePN	Pg	02 39 45.0	-0.6
NAIG	Nisos Aigina	1.15	182	ePN	Pn	02 39 46.0	-0.5
EVR	Evrytania	1.36	271	ePN	Pn	02 39 49.8	+0.4
LIT	Litokhoron	1.45	326	ePg	Pg	02 39 50.5	-1.9
LIT				eSg	Sg	02 40 11.3	+0.1
OUR	Ouranopolis	1.47	13	ePg	Pn	02 39 50.5	-0.3
	comp=Z,7.3nm,0.2s						
HORT	Hortiatis	1.73	348	ePb	Pb	02 39 54.5	-1.7
HORT				eSb	Sb	02 40 17.1	-0.8
SOH	Sokhos	1.92	356	ePb	Pn	02 39 57.3	+0.2
CHOS	Chios island	2.03	104	ePn	Pn	02 39 59.1	+0.5
KNT	Kendrikon	2.31	348	ePn	Pn	02 40 03.1	+0.7
APE	Apeiranthos	2.41	139	ePn	Pn	02 40 03.5	-0.3
APE				eSn	Sn	02 40 36.4	+3.1
FNA	Florina	2.51	319	ePn	Pn	02 40 05.7	+0.4
MMB	Musomiste	2.68	3	ePn	Pn	02 40 07.5	-0.1

*BJI **18** 02:56:08.9, 4841N×8853E, h8km, mB4.7, mb4.7, ML4.5, Ms4.1, Msz3.9*
*ISCJB **18** 02:56:08.6±1.4, 4843N±003×8848E±004, h6km±9km, mb4.1/18, MS3.5/3, Error ellipse: s-maj=5.8km s-min=4.8km az=46.1*
*MOS **18** 02:56:10.5±1.6, 4833N×8844E, h23km, mb4.6/7, Error ellipse: s-maj=9.2km s-min=7.2km az=120.2*
*IDC **18** 02:56:10.0±1.1, 4840N×8854E, h0km, mb4.0/9, mb1 4.1/14, mb1mx3.9/28, mbtmp4.0/14, ML4.0/5, MS3.5/5, Ms1 3.5/5, ms1mx3.0/31, Error ellipse: s-maj=16.9km s-min=12.5km az=123.0*
*NEIC **18** 02:56:11.2±3.2, 4838N×8851E, h8km±22km, mb4.5/7, Error ellipse: s-maj=9.4km s-min=6.2km az=65.0*
*NNC **18** 02:56:12.1±2.0, 4850N×8827E, h0km, mb4.1, mpv4.9, Error ellipse: s-maj=14.9km s-min=11.4km az=107.0*
ISC 18 02:56:10.2±1.4, **4842N**±003×**8846E**±004, **h1**km±9km, **n79**, σ**1s13**/93, **mb4.1**/18, **MS3.5**/3, **20C-7D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UKR	Ust'-Kan	3.48	318	ePN	Pn	02 57 09.9	+4.5
UKR				e		02 57 16.7	
UKR				e		02 58 01.7	
TASR	Tashtagol	4.37	355	ePN	Pg	02 57 30.7	-3.1
TASR				e		02 58 27.6	
MK05	Makanchi Array	4.48	251	⇓Pn	Pn	02 57 21.3	+2.2
	173nm,0.7s,baz=74,slow=15						
MK05				⇑Pg	Pg	02 57 33.5	-2.4
	baz=72,slow=17						
MK05				⇑Lg		02 58 29.1	
	351nm,0.6s,baz=72,slow=30						
MK31	Makanchi Array	4.48	251	PN	Pn	02 57 21.2	+2.1
MK31						02 58 29.2	
MK31				pmax	pmax		
	comp=Z,41nm,0.4s						
MK31				smax			
	comp=Z,126nm,0.4s						
MKAR	Makanchi Array	4.48	251	Pn	Pn	02 57 21.1	+1.9
	comp=Z,3.3nm,0.3s,baz=74,slow=15,SNR=52						
MKAR				Lg		02 58 33.8	
	comp=Z,89nm,0.3s,baz=75,slow=29,SNR=12						
MKAR	Makanchi Array	4.48	251	i PN	Pn	02 57 21.1	+2.0
MKAR				pmax	pmax		
	comp=Z,12nm,0.5s						
WMQ	Urumqi	4.63	187	P	Pn	02 57 22.3	+1.1
WMQ				S	Sn	02 58 15.8	+0.3
WMQ				Smax			
	comp=N,927nm,0.6s						
WMQ				Smax			
	comp=E,945nm,0.6s						
CERR	Cheremushki	4.83	22	ePN	Pg	02 57 40.1	-2.5
CERR				e		02 58 35.3	
ELT	Yel'tsovka	5.05	345	ePN	Pn	02 57 30.7	+3.7
ELT				e		02 57 45.0	
ZAL	Zalesovo	5.99	339	Pn	Pn	02 57 42.1	+2.3
	comp=E,17nm,0.3s,baz=321,slow=10,SNR=69						
ZAL				Sn	Sn	02 58 50.0	+0.9
	comp=E,20nm,0.3s,baz=247,slow=15,SNR=3.1						
ZAL				Lg		02 59 19.2	
	comp=E,44nm,0.3s,baz=242,slow=24,SNR=9.6						
ZAL	Zalesovo	5.99	339	PN	Pn	02 57 42.2	+2.3
ZAL						02 58 50.0	
ZAL	Zalesovo	5.99	339	Pn	Pn	02 57 42.1	+2.3
ZAL				Sn	Sn	02 58 50.0	+0.9
ZAL				Lg		02 59 19.2	
NVS	Novosibirsk	7.21	335	eP	Pn	02 58 07.5	+11
NVS				e		02 59 19.0	
KRAR	Krasnoyarsk	8.07	18	i P	Pn	02 58 08.5	0.0
ZAK	Zakamensk	9.86	73	eP	Pn	02 58 53.8	+21
ZAK				eS	Sn	03 00 26.2	+1.8
ZAK				pmax	pmax		
	comp=Z,18nm,1.4s						
ZAK				smax			
	comp=N,659nm,1.9s						
TLY	Talaya	10.30	66	i P	Pn	02 58 39.1	+0.1
TKM2	Tokmak 2	10.54	243	⇑Pn	Pn	02 58 42.9	+0.5
	comp=N,0.4nm,0.5s						
TKM2				⇑Lg		03 01 43.8	
	comp=N,15nm,1.0s						
AAK	Ala-Archa	11.37	245	eP	Pn	02 58 53.2	-0.5
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AAK				MLR	MLR		
	comp=Z,200nm,20.0s						
AAK	Ala-Archa	11.37	245	ePn	Pn	02 58 57.6	+3.9
	comp=Z,6.9nm,0.6s						
VOSK	Vostochnaya	11.91	298	⇑Pn	Pn	02 59 00.5	-0.7
	comp=Z,4.7nm,0.5s						
VOSK				⇓Sn	Sn	03 01 15.7	+1.0
	comp=Z,9.2nm,0.6s						
VOSK				⇑Lg		03 02 23.8	
	comp=Z,111nm,1.3s						
VOSK	Vostochnaya	11.91	298	P	Pn	02 58 59.4	-1.7
VOSK						03 01 08.8	
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
VOSK				smax			
	comp=Z,5.0nm,0.6s						
VOSK				smax			
	comp=Z,54nm,1.0s						
SONM	Songino Array	12.00	86	Pn	Pn	02 59 01.8	-0.6
	comp=Z,0.2nm,0.3s,baz=278,slow=12,SNR=5.4						
SONM				Lg		03 02 24.6	
	comp=Z,0.8nm,0.3s,baz=276,slow=30,SNR=7.8						
SONM				LR	LR	03 03 58.9	
	comp=Z,159nm,20.5s,baz=207,slow=39						
BVA0	Borovoye Array	12.34	299	⇑Pn	Pn	02 59 06.7	-0.2
	comp=Z,1.3nm,0.6s,baz=106,slow=17,SNR=83						
BVA0				⇑Sn	Sn	03 01 24.9	-0.1
	comp=Z,1.7nm,0.6s,baz=108,slow=23,SNR=4.2						
BVA0				⇑Lg		03 02 41.4	
	comp=Z,11nm,1.1s,baz=98,slow=23,SNR=4.8						
BVA0	Borovoye Array	12.34	299	i P	Pn	02 59 06.5	-0.4
BVA0				i		03 01 27.8	
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVA0				smax			
	comp=Z,1.0nm,0.8s						
BVA0				smax			
	comp=Z,13nm,1.2s						
BVAR	Borovoye Array	12.34	299	Pn	Pn	02 59 07.0	+0.1
	comp=Z,4.1nm,0.3s,baz=102,slow=14,SNR=35						
BVAR				Sn	Sn	03 01 25.9	+0.9
	comp=Z,2.8nm,0.3s,baz=106,slow=22,SNR=5.5						
BVAR				LR	LR	03 04 07.0	
	comp=Z,153nm,18.9s,baz=217,slow=38						
BVAR	Borovoye Array	12.34	299	P	Pn	02 59 07.0	+0.1
BVAR						03 01 25.9	
CHKZ	Chkalovo	12.39	302	⇑Pn	Pn	02 59 07.3	-0.3
	comp=Z,2.6nm,0.5s						
CHKZ				⇑Sn	Sn	03 01 24.2	-2.1
	comp=Z,10nm,0.7s						
CHKZ				⇑Lg		03 02 43.0	
	comp=Z,76nm,0.8s						
CHKZ	Chkalovo	12.39	302	P	Pn	02 59 07.3	-0.3
CHKZ						03 01 24.2	
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CHKZ				smax			
	comp=Z,7.0nm,0.7s						
CHKZ				smax			
	comp=Z,65nm,0.9s						
CHKZ	Chkalovo	12.39	302	ePn	Pn	02 59 07.4	-0.2
	comp=Z,4.3nm,0.5s						
BRVK	Borovoye	12.41	299	eP	Pn	02 59 07.4	-0.5
BRVK				e		03 01 19.0	
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	12.41	299	ePn	Pn	02 59 07.4	-0.4
	comp=Z,9.7nm,0.8s						
BRVK				eSn	Sn	03 01 19.0	-7.8
ULN	Ulaanbaatar	12.44	86	eP	Pn	02 59 09.4	+1.1
ZRNK	Zerenda	13.13	298	⇓Pn	Pn	02 59 17.5	-0.2
	comp=Z,7.9nm,0.8s						
ZRNK				⇑Sn	Sn	03 01 36.9	-7.6
	comp=Z,25nm,1.0s						
ZRNK				⇑Lg		03 03 03.0	
	comp=Z,82nm,1.1s						
ZRNK	Zerenda	13.13	298	eP	Pn	02 59 17.1	-0.7
ZRNK				e		03 01 39.2	
ZRNK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ZRNK	Zerenda	13.13	298	ePn	Pn	02 59 17.1	-0.7
	comp=Z,8.2nm,0.4s						
ZRNK				eSn	Sn	03 01 39.2	-5.3
KK31	Karatay Array	13.60	254	⇑Pn	Pn	02 59 23.7	-0.5
	comp=Z,3.0nm,0.4s,baz=180,slow=24,SNR=42						
KK31				⇑Sn	Sn	03 02 01.0	+5.1
	comp=Z,6.6nm,0.6s,baz=236,slow=45,SNR=4.1						
KK31				⇓Lg		03 03 19.2	
	comp=Z,24nm,0.8s						
KKAR	Karatay Array	13.60	254	P	Pn	02 59 21.6	-2.6
KKAR						03 01 50.8	
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KKAR				smax			
	comp=Z,1.0nm,0.4s						
KKAR				smax			
	comp=Z,65nm,1.1s						
AB31	Akbulak array	18.75	283	⇑P	Pn	03 00 30.3	-0.5
	comp=Z,5.1nm,0.8s,baz=95,slow=14,SNR=38						
AB31				⇑Lg		03 06 00.5	
	comp=Z,36nm,1.6s						
AB31	Akbulak array	18.75	283	P	Pn	03 00 29.9	-0.9
AB31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARU	Arti	19.79	305	eP	Pn	03 00 44.1	+0.8
ARU				MLR	MLR		
	comp=E,40nm,17.0s						
ARU				MLR	MLR		
	comp=Z,60nm,17.0s						
ARU	Arti	19.79	305	eP	Pn	03 00 44.1	+0.8
	comp=Z,19nm,0.9s						
AKTK	Aktyubinsk	19.84	287	P	Pn	03 00 42.8	-1.1
AKTK				LR	LR	03 08 38.4	
AKTO	Aktyubinsk	19.84	287	⇑P	Pn	03 00 44.6	+0.7
	comp=Z,0.1nm,0.7s						
AKTO				⇓Lg		03 06 39.1	
	comp=Z,1.1nm,1.3s						
AKTO	Aktyubinsk	19.84	287	P	Pn	03 00 42.8	-1.1
	comp=Z,0.2nm,0.3s,baz=78,slow=13,SNR=5.9						
AKTO				LR	LR	03 08 38.4	
	comp=Z,175nm,18.9s,baz=198,slow=38						
HIA	Hailar	20.54	76	eP	P	03 00 49.6	-0.4
GUN	Gumba	20.57	187	eP	P	03 00 51.8	+1.5
GKN	Gorkha	20.59	190	eP	P	03 00 50.2	-0.4
KKN	Kakani	20.74	188	eP	P	03 00 51.9	-0.3
	comp=Z,22nm,0.5s						
KKN	Kakani	20.74	188	eP	P	03 00 51.9	-0.3
KKN				pmax	pmax		
	comp=Z,22nm,0.5s						
JIRN	Jiri	20.80	186	eP	P	03 00 53.0	+0.2
	comp=Z,9.4nm,0.3s						
PKI	Pulchoki	20.95	188	eP	P	03 00 54.1	-0.3
	comp=Z,22nm,0.6s						
PKI	Pulchoki	20.95	188	eP	P	03 00 54.1	-0.3
PKI				pmax	pmax		
	comp=Z,22nm,0.6s						
KOLN	Koldanda	20.96	192	eP	P	03 00 53.3	-1.2
SNY	Shenyang	25.48	92	⇑P	P	03 01 38.1	-1.7
SNY				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2	Nanjing	28.14	114	eP	P	03 02 01.3	-2.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
KIV	Kislovodsk	31.63	279	⇓eP	P	03 02 34.5	-0.2
KIV				e		03 03 38.5	
KIV				eS	S	03 07 45.3	+0.7
KIV				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.4						
OBN	Obninsk	32.15	302	eP	P	03 02 38.8	-0.5
OBN				e		03 03 44.6	
OBN				eS	S	03 07 51.1	-1.7
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
JOF	Joensuu	34.06	317	ep	P	03 02 55.6	-0.3
	comp=Z,2.1nm,0.5s,mb4.3						
JOF	Joensuu	34.06	317	eP	P	03 02 55.6	-0.3
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
KEV	Kevo	35.91	329	ep	P	03 03 16.1	+4.2
	comp=Z,0.6nm,0.4s,mb3.8						
KEV	Kevo	35.91	329	eP	P	03 03 16.1	+4.2
KEV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
ARCES	ARCESS Array B	36.42	328	P	P	03 03 17.4	+1.1
	comp=Z,1.5nm,0.8s,mb3.9,baz=81,slow=9.1,SNR=8.3						
ARCES				LR	LR	03 18 06.9	
	comp=Z,42nm,18.5s,MS3.2,baz=338,slow=36						
KAF	Kangasniemi	36.44	316	ep	P	03 03 15.2	-1.2
	comp=Z,1.4nm,0.4s,mb4.1						
KAF	Kangasniemi	36.44	316	eP	P	03 03 15.2	-1.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
FINES	FINESS Array B	36.64	314	P	P	03 03 17.9	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.9nm,0.4s,mb3.8,baz=82,slow=8.5,SNR=17						
AKASG	**Malin Array Be**	**37.60**	**296**	P	**P**	**03 03 25.7**	**-0.6**
	comp=Z,0.4nm,0.3s,mb3.6,baz=61,slow=8.5,SNR=3.2						
MJAR	**Matsushiro Arr**	**37.93**	**89**	LR	LR	03 19 53.6	
	comp=Z,85nm,18.0s,MS3.6,baz=250,slow=38						
BRTR	**Keskin Array B**	**39.58**	**278**	P	**P**	**03 03 44.0**	**+1.0**
	comp=Z,0.4nm,0.6s,mb3.2,baz=70,slow=5.9,SNR=3.4						
BILL	**Bilibino**	**41.94**	**33**	⇓eP	**P**	**03 04 09.9**	**+7.5**
BILL				e		03 05 49.6	
BILL				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.6						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.8						
NB2	**NORSAR Subarra**	**43.69**	**317**	P	**P**	**03 04 15.9**	**-0.7**
	comp=Z,6.0nm,0.7s,mb4.4,baz=67,slow=7.9						
NOA	**NORSAR Array B**	**43.69**	**317**	P	**P**	**03 04 16.5**	**-0.2**
	comp=Z,4.9nm,0.6s,mb4.4,baz=66,slow=7.7,SNR=29						
NAO01	**NORSAR Array S**	**43.91**	**316**	eP	**P**	**03 04 21.8**	**+3.4**
	comp=Z,4.6nm,0.7s,mb4.3						
CLL	**Collm**	**46.72**	**303**	eP	**P**	**03 04 41.0**	**+0.3**
INK	**Inuvik**	**59.46**	**17**	P	**P**	**03 06 13.8**	**-0.8**
	comp=Z,3.1nm,0.8s,mb4.4,baz=354,slow=6.6,SNR=5.5						
KDAK	**Kodiak Island**	**62.81**	**32**	P	**P**	**03 06 36.9**	**-0.4**
	comp=Z,2.0nm,0.5s,mb4.5,baz=44,slow=3.0,SNR=4.7						
KDAK	**Kodiak Island**	**62.81**	**32**	P	**P**	**03 06 36.9**	**-0.5**
ESDC	**Sonseca Array**	**63.10**	**300**	P	**P**	**03 06 38.7**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.8,baz=50,slow=6.5,SNR=4.5						
TORD	**Torodi Ar. Bea**	**78.16**	**276**	P	**P**	**03 08 11.3**	**+0.2**
	comp=Z,0.2nm,0.4s,mb3.6,baz=34,slow=5.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**78.16**	**276**	P	**P**	**03 08 11.3**	**+0.2**

*IDC **18** 02:59:08.6±1.0,7.08N×92.42E,h0^{km},mb4.0/6,mb1 4.1/7, mb1mx3.8/23,mbtmp4.0/7,ML3.2/1,Error ellipse: s-maj=63.9km s-min=18.2km az=51.0*
*ISCJB **18** 02:59:12.1±1.3,7.2N±0.3×92.7E±0.4,h33^{km},mb4.1/8,Error ellipse: s-maj=74.4km s-min=11.8km az=102.0*
*NEIC **18** 02:59:13.0±0.5,7.09N×92.49E,h30^{km},mb4.4/3,Error ellipse: s-maj=30.6km s-min=8.1km az=50.0*
ISC 18 02:59:14.5±1.3**,7.2N**±0.3×**92.6E**±0.4**,h35**^{km}**,n14,**σ0^{s}**27**/11**, mb4.1**/8**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.67**	**125**	Pn	**Pn**	**03 01 03.3**	**-0.4**
	0.4nm,0.3s,baz=326,slow=16,SNR=4.7						
MKAR	**Makanchi Array**	**40.41**	**349**	P	**P**	**03 06 49.5**	**+0.3**
	1.3nm,0.4s,mb4.0,baz=166,slow=8.4,SNR=4.1						
FITZ	**Fitzroy Crossi**	**41.19**	**128**	eP	**P**	**03 06 55.4**	**-0.2**
	13nm,2.0s,mb4.2						
BVAR	**Borovoye Array**	**49.13**	**342**	P	**P**	**03 07 58.6**	**0.0**
	1.6nm,0.8s,mb4.1,baz=144,slow=12,SNR=2.6						
WRA	**Warramunga Arr**	**49.14**	**124**	P	**P**	**03 07 58.9**	**+0.2**
	1.9nm,0.7s,mb4.2,baz=302,slow=9.1,SNR=10						
WB2	**Warramunga Arr**	**49.15**	**124**	eP	**P**	**03 07 58.8**	**0.0**
CHKZ	**Chkalovo**	**49.63**	**343**	eP	**P**	**03 08 02.2**	**-0.3**
	2.3nm,0.5s,mb4.5						
ASAR	**Alice Springs**	**50.68**	**129**	P	**P**	**03 08 10.9**	**+0.5**
	1.6nm,0.8s,mb4.0,baz=310,slow=7.6,SNR=16						
STKA	**Stephens Creek**	**60.77**	**133**	P	**P**	**03 09 22.9**	**+0.1**
	0.8nm,0.4s,mb4.2,baz=323,slow=7.0,SNR=6.6						
STKA	**Stephens Creek**	**60.77**	**133**	eP	**P**	**03 09 23.0**	**+0.2**
	5.5nm,1.5s,mb4.5						
GERES	**GERESS Array B**	**77.30**	**318**	P	**P**	**03 11 05.1**	**-0.3**
	0.6nm,0.7s,mb3.6,baz=76,slow=5.6,SNR=6.4						
PDAR	**Pinedale Array**	**126.31**	**20**	PKP	PKPdf	03 18 13.2	-0.2
	0.1nm,0.5s,baz=307,slow=0.5,SNR=3.6						
CPUP	**Villa Florida**	**145.66**	**233**	PKPbc	PKPbc	03 18 48.7	-0.8
	1.9nm,0.9s,baz=110,slow=7.0,SNR=3.5						
CPUP	**Villa Florida**	**145.66**	**233**	PKPbc	PKPbc	03 18 48.7	-0.8

*BGR **18** 03:06:02.4±0.6,48.21N×9.01E,h10^{km},ML1.7/4,Error ellipse: s-maj=5.6km s-min=4.4km az=101.0*
*LDG **18** 03:06:03.4±0.1,48.27N×8.85E,h21^{km},Ml2.3/6,Error ellipse: s-maj=1.5km s-min=1.2km az=14.0*
*ZUR **18** 03:06:03.9,48.26N×8.83E,h12^{km}±1^{km},ML2.1/7*
*STR **18** 03:06:04.6±0.4,48.27N×8.76E,h10^{km}±1^{km},Ml1.8,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LEDBW 18 03:06:03.8±0.1**,48.268N**±0.005×**8.862E**±0.007**,h17**^{km}±1^{km}**, ML2.0,7C-14D,Error ellipse: s-maj=2.4km s-min=2.0km az=93.0,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHBD	**Braunhartsberg**	**0.10**	**102**	⇑iPg	Pg	03 06 07.5	+0.2
BHBD				iSg	Sg	03 06 10.2	+0.5
MSS	**Messtetten**	**0.11**	**143**	⇓iPg	Pg	03 06 07.7	+0.2
MSS				iSg	Sg	03 06 10.4	+0.5
SPAK	**Spaichingen-Ko**	**0.17**	**197**	⇑iP*	Pg	03 06 08.4	+0.2
SPAK				S*	Sg	03 06 11.3	+0.1
SPAK	**Spaichingen-Ko**	**0.17**	**197**	⇑iPg	Pg	03 06 08.4	+0.2
SPAK				Sg	Sg	03 06 11.3	+0.1
GUT	**Gutenstein**	**0.26**	**139**	⇓iP*	Pg	03 06 09.7	+0.1
GUT				iS*	Sg	03 06 13.6	+0.1
TUBL	**Tuebingen-Lenn**	**0.29**	**30**	⇑iP*	Pg	03 06 11.0	+0.8
TUBL				iS*	Sg	03 06 15.2	+0.7
TUBL	**Tuebingen-Lenn**	**0.29**	**30**	⇑iPg	Pg	03 06 11.0	+0.8
TUBL				iSg	Sg	03 06 15.2	+0.7
BFO	**Black Forest**	**0.36**	**280**	ePg	Pg	03 06 11.3	-0.1
	SNR=11						
BFO				⇑iP*	Pg	03 06 11.4	0.0
BFO				PmP		03 06 12.4	
BFO				iS*	Sg	03 06 16.5	+0.1
BFO				iSmS		03 06 18.6	
BFO	**Black Forest**	**0.36**	**280**	⇑iPg	Pg	03 06 11.4	0.0
BFO	**Black Forest**	**0.36**	**280**	P	Pg	03 06 12.4	+1.1
BFO				iSg	Sg	03 06 16.5	+0.1
BFO				iS	Sg	03 06 18.6	+2.2
LBG	**Lerchenberg**	**0.40**	**354**	⇓iP*	Pg	03 06 11.9	-0.1
LBG				PmP		03 06 12.9	
LBG				iS*	Sg	03 06 17.7	+0.2
LBG				SmS		03 06 19.6	
LBG	**Lerchenberg**	**0.40**	**354**	⇓iPg	Pg	03 06 11.9	-0.1
LBG				iSg	Sg	03 06 17.7	+0.2
LBG	**Lerchenberg**	**0.40**	**354**	P	Pg	03 06 12.9	+0.9
LBG				S	Sg	03 06 19.6	+2.1
STU	**Stuttgart**	**0.55**	**24**	ePg	Pg	03 06 14.6	-0.2
STU				eSg	Sg	03 06 21.4	-0.8
	SNR=5.0						
SLE	**Schleitheim**	**0.56**	**206**	⇓iPg	Pg	03 06 14.7	-0.2
	174nm,0.4s						
SLE				iSg	Sg	03 06 22.1	-0.3
	174nm,0.4s						
SISB	**Singen-Schiene**	**0.59**	**173**	⇓P*	Pg	03 06 15.4	0.0
SISB				S*	Sg	03 06 23.3	+0.1
SISB				SmS		03 06 24.4	
STEIN	**Stein am Rhein**	**0.60**	**180**	iSg	Pg	03 06 15.7	+0.1
	42nm,0.5s						
STEIN	**Stein am Rhein**	**0.60**	**180**	⇓iPg	Sg	03 06 23.8	+0.1
	42nm,0.5s						
TRULL	**Truellikon**	**0.63**	**191**	iSg	Pg	03 06 16.2	-0.1
	140nm,0.2s						
TRULL	**Truellikon**	**0.63**	**191**	⇓iPg	Sg	03 06 24.7	0.0
	140nm,0.2s						
FELD	**Feldberg im Sc**	**0.70**	**236**	⇓iP*	Pb	03 06 17.0	-0.5
FELD				⇑Pg	Pg	03 06 17.5	0.0
FELD				S*	Sb	03 06 26.0	-0.8
FELD	**Feldberg im Sc**	**0.70**	**236**	⇑P	Pg	03 06 17.5	0.0
KIZ	**Kirchzarten**	**0.70**	**244**	⇓iP	Pb	03 06 17.1	-0.6
KIZ				⇑Pg	Pg	03 06 17.4	-0.2
KIZ				⇓iPmP		03 06 17.5	
KIZ				S	Sg	03 06 26.4	-0.6
KIZ	**Kirchzarten**	**0.70**	**244**	⇑P	Pb	03 06 17.4	-0.2
KIZ	**Kirchzarten**	**0.70**	**244**	⇓iP	Pb	03 06 17.5	-0.2
WEIN	**Weingarten**	**0.74**	**174**	iPg	Pg	03 06 18.3	-0.1
	33nm,0.3s						
WEIN				eSg	Sg	03 06 28.6	+0.3
	33nm,0.3s						
WILA	**Wila**	**0.85**	**178**	⇑iP	Pb	03 06 20.2	0.0
	107nm,0.2s						
SULZ	**Sulz-Cheisache**	**0.90**	**214**	iSg	Sg	03 06 31.8	-1.2
	173nm,0.3s						
ZUR	**Zurich**	**0.92**	**192**	iS	Pg	03 06 23.9	+2.2
	131nm,0.4s						
HDH	**Heidenheim-Cha**	**0.95**	**70**	⇓P	Pb	03 06 21.5	-0.3
HDH				Sg	Sg	03 06 34.3	-0.5
HDH	**Heidenheim-Cha**	**0.95**	**70**	⇓Pn	Pn	03 06 21.5	-0.8
HDH				S	Sb	03 06 34.3	+0.2
LANF	**Langenberg**	**1.00**	**316**	Pg	Pg	03 06 23.1	-0.1
LANF				Sg	Sg	03 06 35.6	-0.7
WLS	**Welschbruch**	**1.02**	**279**	Pg	Pg	03 06 22.5	-1.0
WLS				Sg	Sg	03 06 36.0	-0.9
UBR	**Ueberruh**	**1.02**	**125**	Pg	Pg	03 06 23.2	-0.4
UBR				Sg	Sg	03 06 37.1	0.0
UBR	**Ueberruh**	**1.02**	**125**	Px	Px	03 06 23.2	
UBR				S	Sb	03 06 37.1	+0.9
LIENZ	**Alp Oberkamor**	**1.06**	**156**	iP	Sg	03 06 32.5	-5.8
	14nm,0.5s						
CDF	**Champ du Feu**	**1.07**	**278**	ePn	Pn	03 06 21.9	-2.1
CDF	**Champ du Feu**	**1.07**	**278**	ePg	Pg	03 06 23.5	-1.0
CDF				eSg	Sg	03 06 36.8	-1.7
	7.7nm,0.3s						
ECH	**Echery**	**1.14**	**268**	Pg	Pg	03 06 24.7	-1.2
ECH				Sg	Sg	03 06 39.6	-1.2
SIND	**Sindeldorf**	**1.19**	**24**	P	Pn	03 06 23.3	-2.3
SIND				Pg	Pg	03 06 26.5	-0.3
SIND				Sg	Sg	03 06 41.0	-1.3
SIND	**Sindeldorf**	**1.19**	**24**	P	Pn	03 06 26.5	+0.9
DAVA	**Damuels**	**1.20**	**145**	eSg	Sn	03 06 37.4	-4.3
	SNR=3.0						
HINF	**Hinteralfeld**	**1.42**	**252**	ePn	Pn	03 06 26.0	-2.9
HINF				eSg	Sg	03 06 48.1	-1.6
	5.1nm,0.4s						
FUR	**Furstenfeldbru**	**1.62**	**93**	eSg	Sg	03 06 55.6	-0.4
HAU	**Haudompre**	**1.70**	**262**	ePg	Pg	03 06 35.8	-0.8
HAU				eSg	Sg	03 06 56.6	-2.2
	5.2nm,0.3s						
CABF	**La Chapelle**	**2.51**	**230**	eSg	Sg	03 07 22.2	-2.3
SFTF	**Sexfontaines**	**2.56**	**270**	ePn	Pn	03 06 42.0	-2.5
SFTF	**Sexfontaines**	**2.56**	**270**	ePg	Pg	03 06 50.9	-2.0
SFTF				eSg	Sg	03 07 23.2	-2.8
	5.3nm,0.5s						
MOX	**Moxa**	**2.98**	**36**	eSg	Sg	03 07 36.5	-3.1
	SNR=1.2						
GUNZ	**Gunzen**	**3.09**	**46**	eSg	Sg	03 07 39.7	-3.4
	SNR=2.8						
WERD	**Werda**	**3.13**	**45**	eSg	Sg	03 07 40.8	-3.8
	SNR=2.5						
TANN	**Tannenbergstha**	**3.19**	**46**	eSg	Sg	03 07 42.4	-3.8
	SNR=1.9						
GEC2	**GERESS Array S**	**3.27**	**78**	eSg	Sg	03 07 43.8	-5.0
	SNR=1.9						
LOR	**Lormes**	**3.52**	**255**	eSg	Sg	03 07 53.4	-3.5
	1.2nm,0.2s						

IDC 18 03:08:06.4±1.6**,52.50S**×**120.19W,h0**^{km}**,mb3.9**/3**, mb1 4.2**/3**,mb1mx3.8**/14**,mbtmp3.9**/3**,Error ellipse: s-maj=71.8km s-min=47.1km az=138.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**36.86**	**201**	P	P	03 15 16.1	-0.3
	1.0nm,1.0s,baz=112,slow=5.4,SNR=4.1						
ASAR	**Alice Springs**	**80.67**	**243**	P	P	03 20 19.4	-1.7
	1.4nm,1.0s,baz=158,slow=4.9,SNR=6.2						
WRA	**Warramunga Arr**	**83.41**	**246**	P	P	03 20 36.2	+0.7
	0.4nm,0.3s,baz=146,slow=4.7,SNR=5.2						
GERES	**GERESS Array B**	**150.94**	**79**	PKPbc	PKPbc	03 27 59.7	-1.3
	0.7nm,0.8s,baz=242,slow=2.1,SNR=6.8						
MKAR	**Makanchi Array**	**164.39**	**258**	PKPab	PKPab	03 29 07.0	+0.7
	0.4nm,0.5s,baz=116,slow=6.9,SNR=5.1						

*ISCJB **18** 03:15:27.6±0.3,36.38S±0.07×98.79W±0.08,h10^{km}, mb4.5/47,MS4.5/25,Error ellipse: s-maj=10.7km s-min=8.2km az=96.2*
*IDC **18** 03:15:27.6±0.8,36.40S×98.82W,h0^{km},mb4.6/11, mb1 4.7/11,mb1mx4.6/18,mbtmp4.6/11,MS4.5/23, Ms1 4.5/23,ms1mx4.4/25,Error ellipse: s-maj=20.8km s-min=17.9km az=94.0*
*MOS **18** 03:15:27.4±0.9,36.37S×98.78W,h10^{km},mb4.8/18,Error ellipse: s-maj=19.8km s-min=10.7km az=93.5*
*BJI **18** 03:15:29.1,36.40S×98.70W,h10^{km},mB5.3,Ms5.2,Msz4.8*
*HRVD **18** 03:15:29.2±0.2,36.39S×98.74W,h13^{km}±1^{km},MW5.2/82, Centroid moment Tensor Solution. LP body waves: s64,c103;Mantle waves: s82,c139; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.15; $M_{\theta\theta}$-0.31±.15; $M_{\phi\phi}$0.61±.17; $M_{r\theta}$1.22±.33; $M_{\theta\phi}$-8.60±.17; $M_{\phi r}$-1.36±.37; Best double couple: $M_0$8.79000×10^{16} NP1:ϕ_s91.00000°,δ82.00000°,λ172.00000°. NP2: ϕ_s182.00000°,δ83.00000°,λ8.00000°. Principal axes: T 9.1160, Plg11.0000°, Azm47.0000°; N -0.6520, Plg79.0000°, Azm225.0000°; P -8.4640, Plg0.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **18** 03:15:29.2±0.3,36.38S×98.74W,h10^{km},mb4.6/36 Error ellipse: s-maj=9.5km s-min=6.4km az=52.0*
ISC 18 03:15:29.1±0.3**,3639S**±0.06×**98.85W**±0.08**,h10**^{km}**,n129,** σ0^{s}**90**/91**,mb4.5**/47**,MS4.5**/25**,2C-1D,Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**12.83**	**313**	LR	LR	03 21 59.4	
	comp=Z,5µm,19.6s,baz=137,slow=30						
PLCA	**Paso Flores**	**22.50**	**110**	P	**P**	**03 20 30.2**	**+1.5**
	30nm,1.0s,mb4.7,baz=272,slow=11,SNR=21						
PLCA				LR	LR	03 26 59.0	
	comp=Z,2µm,19.1s,MS4.5,baz=274,slow=31						
PLCA	**Paso Flores**	**22.50**	**110**	P	**P**	**03 20 30.2**	**+1.4**
PLCA				LR	LR	03 26 59.0	
CFAA	**Coronel Fontan**	**25.76**	**88**	P	**P**	**03 20 59.6**	**-0.3**
	3.6nm,1.1s,mb3.8,baz=250,slow=10.0,SNR=16						
CFAA				LR	LR	03 27 36.5	
	comp=Z,44nm,22.0s,MS2.9,baz=255,slow=28						
USHA	**Ushuaia**	**27.82**	**141**	LR	LR	03 29 49.6	
	comp=Z,3µm,19.2s,MS4.9,baz=274,slow=31						
TRQA	**Tornquist**	**29.29**	**104**	eP	**P**	**03 21 29.8**	**-1.7**
	7.5nm,0.8s,mb4.5						
LVC	**Limon Verde**	**29.31**	**70**	LR	LR	03 30 12.4	
	comp=Z,2µm,18.7s,MS4.7,baz=224,slow=30						
LVC	**Limon Verde**	**29.31**	**70**	eP	**P**	**03 21 35.4**	**+3.7**
	422nm,0.4s						
LVC				e		03 21 48.1	
ARE	**Arequipa**	**31.35**	**58**	eP	**P**	**03 21 49.5**	**-0.2**
NNA	**Nana**	**31.36**	**45**	LR	LR	03 31 15.9	
	comp=Z,2µm,19.2s,MS4.8,baz=133,slow=30						
LPAZ	**La Paz**	**33.81**	**62**	P	**P**	**03 22 12.5**	**+1.2**
	26nm,0.8s,mb5.2,baz=222,slow=6.0,SNR=87						
LPAZ				LR	LR	03 32 57.4	
	comp=Z,487nm,21.2s,MS4.2,baz=50,slow=31						
RKT	**Rikitea**	**33.84**	**283**	eLQ		03 29 38.0	
	2µm,29.0s						
RKT				eLR	LR	03 31 04.6	
	896nm,28.2s,baz=128						
RKT	**Rikitea**	**33.84**	**283**	eLR	LR	03 23 01.9	
	102nm,25.8s						
ATAH	**Atahualpa**	**34.71**	**38**	P	**P**	**03 22 19.5**	**+0.4**
	19nm,0.8s,mb5.1,baz=205,slow=7.8,SNR=12						
PMSA	**Palmer Station**	**35.15**	**155**	LR	LR	03 32 28.9	
	comp=Z,1µm,21.4s,MS4.7,baz=270,slow=29						
CPUP	**Villa Florida**	**36.60**	**86**	P	**P**	**03 22 33.9**	**-1.5**
	2.5nm,0.5s,mb4.3,baz=239,slow=8.9,SNR=14						
CPUP				LR	LR	03 34 22.7	
	comp=Z,402nm,19.9s,MS4.2,baz=234,slow=31						
CPUP	**Villa Florida**	**36.60**	**86**	P	**P**	**03 22 33.9**	**-1.5**
CPUP				LR	LR	03 34 22.7	
SAML	**Samuel**	**42.35**	**59**	eP	**P**	**03 23 22.4**	**-1.0**
	21nm,1.1s,mb4.7						
TBI	**Tubuai**	**45.30**	**272**	eS	**S**	**03 30 26.5**	**-1.0**
	309nm,27.8s						
TBI				eLR	LR	03 36 22.4	
	675nm,25.5s,baz=110						
TAOE	**Nuku Hiva Isla**	**46.42**	**296**	eLR	LR	03 36 53.0	
	2µm,26.6s						
TAOE	**Nuku Hiva Isla**	**46.42**	**296**	eLR	LR	03 30 03.4	
	798nm,25.0s						
ROSC	**El Rosal**	**47.01**	**34**	P	**P**	**03 24 02.1**	**+1.6**
	3.5nm,0.8s,mb4.3,baz=108,slow=20,SNR=4.2						
ROSC				LR	LR	03 40 30.5	
	comp=Z,750nm,19.4s,MS4.7,baz=199,slow=32						
PPT	**Papeete**	**48.36**	**279**	eS	**S**	**03 31 09.3**	**-1.9**
	459nm,28.8s						
PPT				eLR	LR	03 37 47.0	
	396nm,24.8s,baz=129						
PPT	**Papeete**	**48.36**	**279**	eLR	LR	03 27 53.8	
	100nm,26.2s						
PPT	**Papeete**	**48.36**	**279**	LR	LR	03 38 58.1	
	comp=Z,234nm,19.2s,MS4.2,baz=113,slow=29						
BDFB	**Brasilia**	**49.51**	**79**	P	**P**	**03 24 19.2**	**-0.6**
	8.2nm,0.9s,mb4.8,baz=240,slow=5.5,SNR=10						
BDFB				LR	LR	03 43 39.6	
	comp=Z,782nm,19.4s,MS4.7,baz=237,slow=34						
QSPA	**South Pole Qui**	**53.83**	**180**	eP	**P**	**03 24 53.4**	**+1.3**
	9.4nm,0.9s,mb4.7						
VNA1	**Neumayer--Stat**	**56.35**	**156**	eP	**P**	**03 25 10.4**	**+0.1**
VNA1				e	pP	03 25 13.2	-0.3
VNA1				e	pP	03 25 14.3	+0.8
VNA1				e		03 25 18.5	
VNA1				e		03 25 23.4	
VNA1				e		03 26 07.9	
VNA1				e		03 27 14.5	
VNDA	**Vanda**	**56.76**	**195**	P	**P**	**03 25 12.8**	**-0.5**
	1.3nm,0.8s,mb4.0,baz=120,slow=5.4,SNR=7.0						
VNDA				LR	LR	03 43 43.3	
	comp=Z,378nm,21.0s,MS4.5,baz=103,slow=30						
SNAA	**Sanae**	**57.75**	**158**	P	**P**	**03 25 19.6**	**-0.6**
	0.6nm,0.7s,mb3.7,baz=269,slow=4.9,SNR=8.6						
SNAA	**Sanae**	**57.75**	**158**	eP	**P**	**03 25 18.7**	**-1.5**
SNAA				e	pP	03 25 22.6	-0.8
SNAA				e	pP	03 25 23.5	+0.1
SNAA				e		03 25 30.1	
SNAA				e		03 25 48.6	
SNAA				e		03 26 11.2	
SNAA				e		03 27 27.1	
SNAA	**Sanae**	**57.75**	**158**	eP	**P**	**03 25 19.5**	**-0.7**
SNAA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SNAA	**Sanae**	**57.75**	**158**	⇑eP	**P**	**03 25 19.8**	**-0.4**
SNAA	**Sanae**	**57.75**	**158**	eP	**P**	**03 25 19.5**	**-0.7**
	comp=Z,3.4nm,0.9s,mb4.4						
JCT	**Junction City**	**66.52**	**359**	eP	**P**	**03 26 20.4**	**+1.4**
JCT				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
JCT	**Junction City**	**66.52**	**359**	eP	**P**	**03 26 20.4**	**+1.3**
	comp=Z,4.1nm,0.6s,mb4.6						
MNTX	**Cornudas Mount**	**68.00**	**354**	eP	**P**	**03 26 27.5**	**-1.0**
	comp=Z,2.2nm,0.9s,mb4.2						
TUC	**Tucson**	**69.25**	**349**	eP	**P**	**03 26 36.9**	**+0.7**
TUC				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
TUC	**Tucson**	**69.25**	**349**	eP	**P**	**03 26 36.9**	**+0.7**
	comp=Z,7.9nm,1.4s,mb4.5						
SYO	**Syowa Base**	**70.53**	**165**	⇑esP	**P**	**03 26 46.0**	**+1.9**
WMOK	**Wichita Mounta**	**70.76**	**0**	eP	**P**	**03 26 51.8**	**+6.3**
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
WMOK	**Wichita Mounta**	**70.76**	**0**	eP	**P**	**03 26 51.8**	**+6.3**
	comp=Z,4.2nm,1.4s,mb4.2						
ANMO	**Albuquerque**	**71.33**	**353**	eP	**P**	**03 26 49.7**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANMO	**Albuquerque**	**71.33**	**353**	eP	**P**	**03 26 49.7**	**+0.7**
	comp=Z,1.6nm,1.0s,mb3.9						
JSC	**Jenkinsville**	**72.19**	**15**	eP	**P**	**03 26 53.4**	**-0.8**
WUAZ	**Wupatki**	**72.48**	**349**	eP	**P**	**03 26 57.9**	**+2.0**
	comp=Z,3.5nm,0.9s,mb4.3						
WVT	**Waverly**	**72.87**	**9**	eP	**P**	**03 26 57.6**	**-0.6**
WVT				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
WVT	**Waverly**	**72.87**	**9**	eP	**P**	**03 26 57.6**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.3						
MVCO	**Mesa Verde**	**73.77**	**352**	eP	**P**	**03 27 04.2**	**+0.7**
ISA	**Isabella**	**73.97**	**343**	eP	**P**	**03 27 05.1**	**+0.4**
ISA				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.8						
ISA	**Isabella**	**73.97**	**343**	eP	**P**	**03 27 05.1**	**+0.4**
	comp=Z,4.3nm,0.3s,mb4.9						
DAC	**Darwin (Calif)**	**74.36**	**344**	eP	**P**	**03 27 07.2**	**+0.2**
DAC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
DAC	**Darwin (Calif)**	**74.36**	**344**	eP	**P**	**03 27 07.2**	**+0.2**
	comp=Z,3.2nm,0.9s,mb4.2						
CCUT	**Cedar City**	**74.79**	**348**	eP	**P**	**03 27 10.1**	**+0.7**
ELN	**Prospectdale**	**75.14**	**15**	eP	**P**	**03 27 10.0**	**-1.5**
WCI	**Wyandotte Cave**	**75.15**	**10**	eP	**P**	**03 27 10.8**	**-0.7**
WCI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
WCI	**Wyandotte Cave**	**75.15**	**10**	eP	**P**	**03 27 10.8**	**-0.7**
	comp=Z,4.1nm,0.7s,mb4.5						
LRV	**Little Rabbit**	**75.31**	**342**	eP	**P**	**03 27 14.0**	**+1.5**
MAW	**Mawson**	**75.41**	**173**	P	**P**	**03 27 12.8**	**-0.2**
	comp=Z,5.0nm,0.9s,mb4.5,baz=229,slow=5.7,SNR=9.0						
MAW				LR	LR	03 58 48.2	
	comp=Z,302nm,20.0s,MS4.6,baz=203,slow=34						
MSU	**Marysvale**	**75.54**	**349**	eP	**P**	**03 27 14.2**	**+0.4**
SMCO	**Snowmass**	**75.56**	**353**	eP	**P**	**03 27 14.6**	**+0.7**
	comp=Z,8.6nm,1.1s,mb4.6						
MTUM	**Tungsten Hills**	**75.61**	**344**	eP	**P**	**03 27 14.4**	**+0.2**
SRU	**San Rafael**	**75.89**	**351**	eP	**P**	**03 27 15.9**	**+0.1**
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
SRU	**San Rafael**	**75.89**	**351**	eP	**P**	**03 27 15.9**	**+0.1**
	comp=Z,6.0nm,1.1s,mb4.4						
NVAR	**Mina Array Bea**	**76.59**	**344**	P	**P**	**03 27 20.4**	**+0.7**
	comp=Z,9.7nm,0.8s,mb4.8,baz=159,slow=7.4,SNR=40						
NVAR	**Mina Array Bea**	**76.59**	**344**	P	**P**	**03 27 20.4**	**+0.7**
CMB	**Columbia Colle**	**76.69**	**343**	eP	**P**	**03 27 20.4**	**+0.1**
CMB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CMB	**Columbia Colle**	**76.69**	**343**	eP	**P**	**03 27 20.4**	**+0.1**
	comp=Z,5.3nm,0.8s,mb4.5						
DAU	**Daniels Canyon**	**77.27**	**350**	eP	**P**	**03 27 23.7**	**+0.1**
DUG	**Dugway**	**77.28**	**349**	eP	**P**	**03 27 23.5**	**-0.2**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
DUG	**Dugway**	**77.28**	**349**	eP	**P**	**03 27 23.5**	**-0.2**
	comp=Z,6.5nm,1.4s,mb4.4						
BMN	**Battle Mountai**	**78.29**	**346**	eP	**P**	**03 27 28.3**	**-1.0**
BMN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
BMN	**Battle Mountai**	**78.29**	**346**	eP	**P**	**03 27 28.3**	**-1.0**
	comp=Z,5.9nm,0.9s,mb4.5						
BW06	**Boulder Array**	**79.38**	**352**	eP	**P**	**03 27 34.5**	**-0.8**
	comp=Z,5.1nm,0.8s,mb4.5						
PDAR	**Pinedale Array**	**79.38**	**352**	P	**P**	**03 27 34.9**	**-0.4**
	comp=Z,4.5nm,0.7s,mb4.5,baz=152,slow=5.5,SNR=37						
AAM	**Ann Arbor**	**79.53**	**11**	eP	**P**	**03 27 35.4**	**-0.7**
AAM				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
AAM	**Ann Arbor**	**79.53**	**11**	eP	**P**	**03 27 35.4**	**-0.7**
	comp=Z,9.1nm,0.5s,mb5.0						
WDC	**Whiskeytown Da**	**79.63**	**342**	eP	**P**	**03 27 35.5**	**-1.1**
WDC				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
WDC	**Whiskeytown Da**	**79.63**	**342**	eP	**P**	**03 27 35.5**	**-1.1**
	comp=Z,8.3nm,0.9s,mb4.7						
ECSD	**EROS,Sioux Fal**	**79.77**	**2**	eP	**P**	**03 27 36.9**	**-0.5**
REDW	**Red Top Meadow**	**80.12**	**351**	eP	**P**	**03 27 38.6**	**-0.7**
	comp=Z,23nm,1.5s,mb4.9						
RRI2	**Red Ridge**	**80.17**	**351**	eP	**P**	**03 27 39.4**	**-0.2**
	comp=Z,18nm,1.3s,mb4.8						
TPAW	**Teton Pass**	**80.26**	**351**	eP	**P**	**03 27 39.9**	**-0.2**
	comp=Z,17nm,1.2s,mb4.9						
RSSD	**Black Hills**	**80.27**	**356**	eP	**P**	**03 27 39.9**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
RSSD	**Black Hills**	**80.27**	**356**	eP	**P**	**03 27 39.9**	**-0.2**
	comp=Z,2.7nm,0.7s,mb4.3						
LOHW	**Long Hollow**	**80.34**	**351**	eP	**P**	**03 27 40.0**	**-0.4**
	comp=Z,14nm,1.4s,mb4.7						
MOOW	**Moose Ponds**	**80.49**	**351**	eP	**P**	**03 27 41.0**	**-0.2**
	comp=Z,3.6nm,0.9s,mb4.3						
WVOR	**Wild Horse Val**	**80.50**	**345**	eP	**P**	**03 27 41.4**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
WVOR	**Wild Horse Val**	**80.50**	**345**	eP	**P**	**03 27 41.4**	**+0.1**
	comp=Z,10nm,1.2s,mb4.6						
IMW	**Indian Meadow**	**80.66**	**351**	eP	**P**	**03 27 45.1**	**+2.9**
	comp=Z,7.1nm,1.1s,mb4.5						
YBH	**Yreka Blue Hor**	**80.75**	**342**	eP	**P**	**03 27 42.1**	**-0.6**
YBH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YBH	**Yreka Blue Hor**	**80.75**	**342**	eP	**P**	**03 27 42.1**	**-0.5**
	comp=Z,6.9nm,1.0s,mb4.5						
HLID	**Hailey**	**80.82**	**349**	eP	**P**	**03 27 43.2**	**+0.2**
	comp=Z,7.5nm,0.8s,mb4.7						
DZM	**Mont Dzumac**	**80.84**	**249**	LR	LR	03 58 38.9	
	comp=Z,196nm,18.3s,MS4.5,baz=200,slow=32						
MCMT	**McKenzie Canyo**	**81.83**	**350**	eP	**P**	**03 27 48.9**	**+0.5**
BMO	**Blue Mountains**	**82.57**	**347**	eP	**P**	**03 27 52.9**	**+0.6**
	comp=Z,0.9nm,0.7s,mb3.9						
FFD	**Franklin Falls**	**83.24**	**20**	eP	**P**	**03 27 55.9**	**+0.2**
LONY	**Lake Ozonia**	**83.57**	**17**	eP	**P**	**03 27 55.5**	**-1.9**
CHMT	**Chamberlain Mo**	**83.93**	**350**	eP	**P**	**03 27 60.0**	**+0.7**
HAWA	**Hanford**	**84.48**	**346**	eP	**P**	**03 28 01.8**	**-0.2**
	comp=Z,0.5nm,0.8s,mb3.7						
EGMT	**Eagleton**	**84.60**	**353**	eP	**P**	**03 28 02.7**	**0.0**
	comp=Z,5.2nm,0.9s,mb4.7						

NEW	Newport	85.84	348	eP	P	03 28 08.5	-0.4
NEW				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NEW	Newport	85.84	348	eP	P	03 28 08.5	-0.4
	comp=Z,7.6nm,1.0s,mb4.9						
ULM	Lac du Bonnet	86.30	2	LR	LR	04 04 48.9	
	comp=Z,141nm,18.3s,MS4.4,baz=354,slow=34						
STKA	Stephens Creek	91.62	228	LR	LR	04 02 18.9	
	comp=Z,346nm,20.9s,MS4.8,baz=302,slow=31						
HNR	Honiara	93.36	256	LR	LR	04 02 25.4	
	comp=Z,233nm,19.1s,MS4.7,baz=178,slow=30						
SCHQ	Schefferville	94.93	18	LR	LR	04 08 15.5	
	comp=Z,341nm,19.0s,MS4.8,baz=338,slow=33						
BOSA	Boshof	96.68	133	LR	LR	04 06 39.0	
	comp=Z,208nm,19.3s,MS4.6,baz=227,slow=32						
CTA	Charters Tower	96.76	239	LR	LR	04 06 23.9	
	comp=Z,415nm,19.5s,MS4.9,baz=316,slow=32						
DBIC	Dimbokro	97.12	87	LR	LR	04 09 14.2	
	comp=Z,198nm,20.1s,MS4.6,baz=208,slow=33						
YKA	Yellowknife Ar	99.35	353	LR	LR	04 09 49.5	
	comp=Z,100nm,18.3s,MS4.3,baz=90,slow=33						
MDJ	Mudanjiang	142.73	298	PKP	PKPdf	03 35 02.4	-0.2
MDJ				PP	PP		
	comp=Z,84nm,4.3s						
BRTR	Keskin Array B	142.78	70	PKhKP		03 34 58.2	
	comp=Z,0.8nm,0.7s,baz=260,slow=4.9,SNR=4.0						
KULM	Kulim	144.25	215	ePKPdf	PKPdf	03 35 05.0	-0.2
OBN	Obninsk	144.45	44	i PKIKP	PKPdf	03 35 02.6	-3.0
OBN				e		03 41 41.8	
OBN				eSS	SS	03 57 09.6	+1.8
OBN				eSSS		04 02 34.8	
OBN				pmax	pmax		
	comp=Z,19nm,1.2s						
CN2	Changchun	145.65	296	ePKP	PKPdf	03 35 05.8	-1.9
CN2				PP	PP	03 38 30.9	+2.5
CN2				LR	LR		
	comp=N,200nm,17.0s,MS5.2						
CN2				LR	LR		
	comp=E,300nm,17.0s,MS5.2						
CN2				LR	LR		
	comp=Z,200nm,18.0s,MS4.9						
MALT	Malatya	146.20	74	ePKP2	PKPab	03 35 07.9	-2.4
KIV	Kislovodsk	149.86	63⇓	i PKHKP		03 35 17.1	
KIV				eSS	SS	03 58 03.4	-5.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KIV				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.6						
ZEI	Tsey	150.76	66	ePKIKP	PKPab	03 35 28.9	+0.3
GNI	Garni	151.29	71	i PKIKP	PKPab	03 35 30.7	-0.2
SOKR	Solikamsk	151.96	27	ePKIKP	PKPdf	03 35 23.1	+5.2
SOKR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC	Hu-ho-hao-te	155.89	290	ePKP	PKPdf	03 35 21.4	-2.0
HHC				PKS		03 38 54.1	
HHC				PP	PP	03 39 30.8	+3.5
HHC				SKS	SKSdf	03 42 24.5	-5.3
HHC				SS	SS	03 59 13.9	-1.2
HHC				PP	PP		
	comp=Z,66nm,9.4s						
HHC				LR	LR		
	comp=N,107nm,43.6s,MS4.8						
HHC				LR	LR		
	comp=E,260nm,42.7s,MS4.8						
HHC				LR	LR		
	comp=Z,133nm,42.7s,MS4.4						
KMI	Kunming	158.37	245	PKP	PKPdf	03 35 29.3	+2.7
ZAK	Zakamensk	158.79	318	ePKP2	PKPab	03 35 59.4	-3.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
CD2	Chengdu	160.42	260	ePKP	PKPdf	03 35 25.6	-3.3
ZRNK	Zerenda	161.37	23	ePKP2	PKPab	03 36 13.6	-0.4
ZAL	Zalesovo	162.27	353	PKP	PKPdf	03 35 29.8	-1.1
	comp=Z,1.6nm,0.3s,baz=0.0,slow=4.0,SNR=4.3						
MKAR	Makanchi Array	169.57	356	PKP	PKPdf	03 35 36.5	-0.3
	comp=Z,0.4nm,0.5s,baz=27,slow=0.3,SNR=2.8						
MKAR				PKPab	PKPab	03 36 48.8	-1.4
	comp=Z,1.3nm,0.8s,baz=14,slow=5.4,SNR=4.4						
WMQ	Urumqi	171.04	328	ePKP	PKPdf	03 35 38.0	+0.4

IDC ***18*** *03:43:06.6±1.8, 34.17N×28.36E, h0km, mb3.3/2, mb1 3.3/3, mb1mx3.2/19, mbtmp3.3/3, ML2.7/1, Error ellipse: s-maj=160.3km s-min=27.4km az=140.0*
ISCJB ***18*** *03:43:08.5±1.6, 35.23N±0.06×27.26E±0.06, h0km±13km, mb3.2/2, Error ellipse: s-maj=11.9km s-min=5.9km az=122.4*
NEIC ***18*** *03:43:10.0, 35.28N×27.25E, h22km, MD3.8(ATH), After ATH.*
CSEM ***18*** *03:43:10.2±0.1, 35.26N×27.30E, h10km, MD3.8, Error ellipse: s-maj=3.6km s-min=1.6km az=155.0*
ATH ***18*** *03:43:10.0, 35.28N×27.25E, h22km±2km, MD3.8/6*
ISC 18 03:43:09.2±1.5, **35.19N**±0.06×**27.28E**±0.06, **h3**km±8km, **n23, σ0.78**/31, **mb3.1**/2, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.37	345	ePB	Pg	03 43 16.3	-0.1
KARP				eSB	Sg	03 43 21.2	0.0
ARG	Arkhangelos	1.23	34	ePN	Pn	03 43 32.5	-0.8
ARG				eSN	Sn	03 43 49.2	-1.3
XRY	Khrisi	1.34	257	ePN	Pn	03 43 35.2	+0.5
NPS	Neapolis	1.37	274	ePN	Pn	03 43 35.5	+0.4
NPS				eSN	Sn	03 43 53.5	-0.2
DAT	Datca	1.56	9	i PN	Pn	03 43 37.1	-0.6
BODT	Bodrum	1.87	1	PN	Pn	03 43 41.1	-1.0
BDRM	Kayabasi	1.88	4	i P	Pn	03 43 41.1	-1.0
BDRM				i S	Sn	03 44 06.4	+0.1
DALT	Dalyan (Mudla)	1.92	34	PN	Pn	03 43 43.1	+0.3
YER	Yerkesik	2.10	22	ePN	Pn	03 43 45.5	+0.2
AKAS	Kas	2.16	60	i P	Pn	03 43 46.1	0.0
AKAS				i S	Sn	03 44 05.9	-7.4
APE	Apeiranthos	2.35	323	ePN	Pn	03 43 47.8	-0.9
AYDN	Tasoluk	2.52	11	i P	Pn	03 43 51.0	+0.1
AYDN				i S	Sn	03 44 24.7	+2.7
VAM	Vamos	2.53	276	ePN	Pn	03 43 51.8	+0.7
ELL	Elmali	2.64	53	ePN	Pn	03 43 53.8	+1.2
DNZL	Cakiroluk	2.87	29	i P	Pn	03 43 56.1	+0.3
DNZL				i S	Sn	03 44 31.2	+0.3
DNZL	Cakiroluk	2.87	29	i P	Pn	03 43 56.1	+0.2
DNZL				i S	Sn	03 44 31.2	+0.3
DENT	Denizli	2.92	28	eP	Pn	03 43 57.1	+0.6
VLI	Veliai	3.84	295	ePN	Pn	03 44 09.7	+0.6
BRTR	Keskin Array B	6.79	46	Pn	Pn	03 44 50.0	+0.4
	0.1nm,0.3s,baz=217,slow=14,SNR=6.4						
BRTR	Keskin Array B	6.79	46	Pn	Pn	03 44 50.0	+0.4
TORD	Torodi Ar. Bea	31.86	233	P	P	03 49 34.7	-0.7
	0.2nm,0.5s,mb3.2,baz=35,slow=8.7,SNR=5.1						
TORD	Torodi Ar. Bea	31.86	233	P	P	03 49 34.7	-0.7
MKAR	Makanchi Array	42.31	57	P	P	03 51 00.5	-3.6
	0.2nm,0.5s,mb3.0,baz=270,slow=7.2,SNR=3.8						

ISCJB ***18*** *03:54:36.0±2.2, 10.8S±0.1×165.7E±0.1, h158km±17km, mb4.3/11, Error ellipse: s-maj=24.5km s-min=12.8km az=120.5*
IDC ***18*** *03:54:35.6±3.4, 10.67S×165.77E, h144km±29km, mb4.0/8, mb1 4.1/10, mb1mx3.9/17, mbtmp4.5/10, Error ellipse: s-maj=24.3km s-min=23.3km az=162.0*
NEIC ***18*** *03:54:36.0±1.5, 10.59S×165.74E, h149km±12km, mb4.5/5, Error ellipse: s-maj=15.0km s-min=11.9km az=223.0*
ISC 18 03:54:35.6±2.1, **10.7S**±0.1×**165.8E**±0.1, **h141**km±16km, **n18, σ0.93**/19, **mb4.3**/11, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.89	282	P	Pn	03 56 00.2	-0.6
	12nm,0.3s,baz=200,slow=0.4,SNR=3.6						
DZM	Mont Dzumac	11.30	177	P	Pn	03 57 14.7	+1.9
	1.1nm,0.3s,baz=204,slow=20,SNR=13						
DZM				S	Sn	03 59 16.0	-1.6
	0.4nm,0.3s,baz=306,slow=19,SNR=4.5						
CTA	Charters Tower	20.98	241	P	P	03 59 08.8	+1.2
	22nm,0.7s,baz=71,slow=12,SNR=19						
CTAO	Charters Tower	20.98	241	eP	P	03 59 08.5	+1.0
	17nm,0.8s						
STKA	Stephens Creek	30.70	223	P	P	04 00 38.2	+1.3
	6.3nm,0.6s,mb4.5,baz=30,slow=8.6,SNR=20						
STKA	Stephens Creek	30.70	223	eP	P	04 00 38.4	+1.5
	4.9nm,0.6s,mb4.4						
WRAB	Tennant Creek	31.62	249	eP	P	04 00 44.7	-0.3
	6.2nm,0.5s,mb4.6						
WB2	Warramunga Arr	31.62	249	eP	P	04 00 45.1	+0.1
WRA	Warramunga Arr	31.63	249	P	P	04 00 45.0	-0.1
	3.7nm,0.5s,mb4.4,baz=81,slow=9.0,SNR=41						
KAKA	Kakadu	32.70	263	eP	P	04 00 54.1	-0.3
	12nm,0.4s,mb5.0						
ASAR	Alice Springs	32.97	243	P	P	04 00 56.4	-0.4
	4.0nm,0.8s,mb4.2,baz=71,slow=9.8,SNR=28						
FITZ	Fitzroy Crossi	39.50	255	P	P	04 01 52.8	+0.5
	12nm,0.6s,mb4.7,baz=83,slow=7.8,SNR=87						
FITZ	Fitzroy Crossi	39.50	255	eP	P	04 01 52.7	+0.4
	22nm,0.6s,mb5.0						
MBWA	Marble Bar	45.34	251	eP	P	04 02 40.0	+0.6
	7.0nm,0.6s,mb4.5						
CASY	Casey	66.69	201	eP	P	04 05 10.9	-0.3
	1.0nm,0.4s,mb4.0						
MAW	Mawson	85.03	202	P	P	04 06 54.2	-1.0
	0.8nm,0.2s,mb4.1,baz=63,slow=4.5,SNR=3.6						
NVAR	Mina Array Bea	85.79	50	P	P	04 06 59.6	+0.7
	0.7nm,0.9s,mb3.4,baz=224,slow=7.6,SNR=3.2						
MKAR	Makanchi Array	93.32	317	P	P	04 07 32.9	-1.5
	0.6nm,0.7s,mb3.8,baz=74,slow=9.0,SNR=3.9						

KRSC 18 03:58:09, 55.56N×162.15E, h70km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.75	30	eP	Pn	03 58 27.1	+2.6
KBTR				i S	Sn	03 58 39.5	+3.6
ZLN	Zelenaya	0.89	302	eP	Pn	03 58 28.5	+2.4
ZLN				i S	Sn	03 58 42.4	+3.6
CIRR	Tsirk	0.97	306	eP	Pn	03 58 29.5	+2.4
CIRR				i S	Sn	03 58 44.2	+3.7
MKZ	Mys Kozlova	1.03	194	eP	Pn	03 58 30.0	+2.1
MKZ				i S	Sn	03 58 44.5	+2.5
SMKR	Semkarok	1.09	340	eP	Pn	03 58 31.5	+2.9
SMKR				i S	Sn	03 58 47.5	+4.2
KMNR	Kamenistaya	1.10	281	eP	Pn	03 58 31.5	+2.7
KMNR				i S	Sn	03 58 46.8	+3.3
KRSR	Krestovskiy	1.11	307	eP	Pn	03 58 31.0	+2.2
KRSR				i S	Sn	03 58 46.5	+2.8
KLY	Klyuchi	1.13	312	eP	Pn	03 58 30.1	+1.0
KLY				i S	Sn	03 58 44.8	+0.6
BDR	Baidarnaya	1.14	333	eP	Pn	03 58 32.3	+3.1
BDR				i S	Sn	03 58 48.3	+3.9
KPT	Kopyto	1.16	291	eP	Pn	03 58 32.2	+2.7
KPT				i S	Sn	03 58 48.4	+3.5
TUMR	Tumrok	1.18	257	eP	Pn	03 58 32.6	+2.9
TUMR				i S	Sn	03 58 49.2	+4.0
SRKR	Sorokina	1.23	334	eP	Pn	03 58 33.3	+2.9
SRKR				i S	Sn	03 58 50.1	+3.7
KOZ	Kozyrevsk	1.38	292	eP	Pn	03 58 35.5	+3.2
KOZ				i S	Sn	03 58 53.9	+4.0
SRDR	Sredinnyy	1.56	300	eP	Pn	03 58 37.3	+2.5
KII	Karymskiy	2.19	227	eP	Pn	03 58 46.8	+3.7
KII				i S	Sn	03 59 14.1	+4.9
SPN	Mys Shipunski	2.76	208	eP	Pn	03 58 52.9	+1.9
SPN				i S	Sn	03 59 24.2	+1.0
NLC	Nalytchevo	2.90	216	eP	Pn	03 58 56.2	+3.4
NLC				i S	Sn	03 59 29.5	+2.9
AVH	Avacha	3.04	222	eP	Pn	03 58 59.3	+4.5
RUS	Russkaya	3.80	216	eP	Pn	03 59 08.0	+3.0
RUS				i S	Sn	03 59 50.7	+2.2

RSPR 18 04:14:18.4, 18.91N×66.43W, h73km±7km, MD2.7/3, MD2.7/3, 4C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBYP	Canovanas	0.84	139⇓	eP	Pn	04 14 34.1	-0.9
CBYP	Canovanas	0.84	139	eS	Sn	04 14 47.1	-0.2
CBYP	Canovanas	0.84	139⇑	eP	Pn	04 14 34.5	-0.5
CBYP	Canovanas	0.84	139	eS	Sn	04 14 46.9	-0.4
CRPR	Cabo Rojo, PR	1.10	216⇓	eP	Pn	04 14 37.8	-0.5
CRPR	Cabo Rojo, PR	1.10	216	eS	Sn	04 14 52.6	-0.6
CRPR	Cabo Rojo, PR	1.10	216⇑	eP	Pn	04 14 37.8	-0.5
CRPR	Cabo Rojo, PR	1.10	216	eS	Sn	04 14 52.4	-0.8
MTP	Monte Pirata	1.16	134⇑	eP	Pn	04 14 38.6	-0.4
MTP	Monte Pirata	1.16	134	eS	Sn	04 14 53.9	-0.6
MTP	Monte Pirata	1.16	134⇑	eP	Pn	04 14 39.5	+0.5
MTP	Monte Pirata	1.16	134	eS	Sn	04 14 55.6	+1.2

ISCJB ***18*** *04:22:22.7±0.7, 7.7S±0.1×107.92E±0.08, h10km, mb4.0/8, MS3.4/1, Error ellipse: s-maj=18.6km s-min=10.0km az=30.9*
IDC ***18*** *04:22:23.4±1.0, 7.54S×108.05E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/19, mbtmp3.9/7, MS3.4/1, Ms1 3.3/1, ms1mx2.6/26, Error ellipse: s-maj=68.6km s-min=17.7km az=46.0*
NEIC ***18*** *04:22:24.9±0.6, 7.63S×107.97E, h10km, mb4.3/3, Error ellipse: s-maj=38.7km s-min=9.3km az=46.0*
NEIC Felt [III] at Cipatujah, Kalipucang and Pangandaran.
ISC 18 04:22:25.1±0.7, **7.6S**±0.1×**107.99E**±0.08, **h10**km, **n14, σ0.57**/14, **mb4.0**/8, **MS3.4**/1, **1C-1D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJII	Banjamegara	1.73	82⇑	i P	Pn	04 23 00.4	+5.2
BJII				i S	Sn	04 23 16.7	-0.5
BJII	Banjamegara	1.73	82⇓	eP	Pn	04 22 54.0	-1.2
BJII				eS	Sn	04 23 18.4	+1.2
FITZ	Fitzroy Crossi	20.11	123	P	P	04 27 00.2	+1.2
	2.1nm,0.7s,baz=230,slow=5.0,SNR=11						
FITZ	Fitzroy Crossi	20.11	123	eP	P	04 26 59.9	+0.9
	4.3nm,0.7s						
WRA	Warramunga Arr	28.33	118	P	P	04 28 18.8	-0.2
	0.4nm,0.3s,mb3.5,baz=290,slow=12,SNR=6.2						
ASAR	Alice Springs	29.55	126	P	P	04 28 29.4	-0.5
	0.5nm,0.8s,mb3.3,baz=297,slow=8.3,SNR=4.5						
STKA	Stephens Creek	39.52	132	P	P	04 29 55.6	-0.4
	1.4nm,0.4s,mb4.1,baz=351,slow=5.9,SNR=6.3						
STKA				LR	LR	04 47 20.6	
	comp=Z,57nm,21.1s,MS3.4,baz=209,slow=38						
SONM	Songino Array	55.20	359	PcP	PcP	04 32 59.0	0.0
	1.0nm,0.5s,baz=167,slow=3.6,SNR=5.3						
MKAR	Makanchi Array	58.77	340	P	P	04 32 23.2	-0.1
	1.5nm,0.4s,mb4.3,baz=145,slow=7.4,SNR=20						
BVAR	Borovoye Array	68.29	337	P	P	04 33 26.0	-0.2
	1.3nm,0.5s,mb4.2,baz=144,slow=9.7,SNR=5.6						
CHKZ	Chkalovo	68.70	337	eP	P	04 33 29.0	+0.2
	2.8nm,0.4s,mb4.5						
ZRNK	Zerenda	68.79	336	eP	P	04 33 29.3	-0.1
	1.0nm,0.4s,mb4.1						
BRTR	Keskin Array B	82.95	312	P	P	04 34 50.8	+0.5
	0.6nm,0.7s,mb3.8,baz=143,slow=7.2,SNR=3.3						
BDFB	Brasilia	146.87	226	PKPbc	PKPbc	04 42 08.6	+1.0
	1.0nm,0.4s,baz=135,slow=5.7,SNR=4.6						

NEIC 18 04:43:47.4, 61.76N×152.04W, h114km, MG3.1(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIB	Fire Island	1.07	123	P	Pn	04 44 10.4	+0.8
RC01	Rabbit Creek A	1.29	120	P	Pn	04 44 11.2	-0.9
RC01				S	Sn	04 44 30.5	-0.2
PMR	Palmer	1.40	95	P	Pn	04 44 12.1	-1.1
PMR				S	Sn	04 44 31.4	-1.4
GHO	Glory Hole Cre	1.48	88	P	Pn	04 44 13.3	-0.9
SLKM	Skilak Lake	1.53	144	P	Pn	04 44 14.9	+0.1
KNK	Knik Glacier	1.75	100	P	Pn	04 44 16.5	-0.9
SVW2	Sparrevohn	1.82	250	P	Pn	04 44 17.2	-1.1
KTH	Kantishna Hill	1.88	15	P	Pn	04 44 18.2	-0.8
TRF	Thorofare Moun	1.89	25	P	Pn	04 44 18.6	-0.5
TRF				S	Sn	04 44 43.0	-0.3
SEW	Seward	2.08	141	P	Pn	04 44 20.8	-0.8
TTA	Tatalina	2.20	304	P	Pn	04 44 21.6	-1.4
MCK	McKinley	2.45	34	P	Pn	04 44 25.1	-1.1
EYAK	Cordova Ski Ar	3.28	109	ePn	Pn	04 44 36.2	-1.0
EYAK				eSn	Sn	04 45 12.7	-2.9
MID	Middleton Isla	3.66	127	eP	Pn	04 44 40.9	-1.3
COLA	College	3.66	29	P	Pn	04 44 41.0	-1.2
KDAK	Kodiak Island	4.00	184	P	Pn	04 44 45.9	-0.8
MENT	Mentasta	4.06	69	ePn	Pn	04 44 46.1	-1.5
IMA2	Indian Mountai	4.39	351	eP	Pn	04 44 51.1	-0.9
COLD	Coldfoot	5.55	7	P	Pn	04 45 07.3	-0.3
DAWY	Dawson	6.23	63	P	Pn	04 45 16.1	-0.7
INK	Inuvik	10.18	42	ePn	Pn	04 46 09.4	-1.0

IDC 18 05:02:36.1±71.0, **14.66S**×**173.04W, h0**km, **mb4.2**/3, **mb1 4.4**/3, **mb1mx3.9**/15, **mbtmp4.2**/3, **Error ellipse: s-maj=1367.0km s-min=199.1km az=78.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.71	239	P	P	05 10 51.2	+0.3
	5.6nm,1.1s,baz=93,slow=10,SNR=4.4						
WRA	Warramunga Arr	50.35	256	P	P	05 11 34.8	0.0
	0.5nm,0.4s,baz=94,slow=7.0,SNR=7.3						
ASAR	Alice Springs	50.67	251	P	P	05 11 37.9	+0.7
	3.7nm,0.4s,baz=88,slow=8.0,SNR=57						

IGQ 18 06:03:24.3, 2.36S×77.26W, h18km±3km, **Mb4.0, Ms3.8, 6C-5D, Error ellipse: s-maj=6.1km s-min=2.2km az=115.6, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULBA	Ulba	1.46	308 ⇑	P	Pn	06 03 52.1	+2.4
ULBA				S	Sn	06 04 11.3	+2.9
ARRY	Arrayan	1.47	305 ⇓	P	Pn	06 03 51.7	+1.9
ARRY				S	Sn	06 04 11.1	+2.6
RUN5	Runtun	1.50	309 ⇑	P	Pn	06 03 52.4	+2.2
RUN5				S	Sn	06 04 11.6	+2.4
IGUA	Igualata	1.63	302	P	Pn	06 03 54.7	+2.7
IGUA				S	Sn	06 04 16.8	+4.4
TAMB	Tambo	1.99	326 ⇓	P	Pn	06 04 00.4	+3.4
TAMB				S	Sn	06 04 26.8	+5.4
VC1	Cotopaxi 1	2.05	326	P	Pn	06 04 01.3	+3.4
CAMI	Rancho Maria	2.08	323	P	Pn	06 04 01.9	+3.6
ANTI	Antisana	2.10	335 ⇓	P	Pn	06 04 01.7	+3.2
ANTI				S	Sn	06 04 27.7	+3.6
NAS1	Nasa	2.10	325	P	Pn	06 04 02.1	+3.5
CONE	Cono NE Rev Vo	2.31	350 ⇑	P	Pn	06 04 04.9	+3.5
CAYR	Refugio Cayamb	2.48	342 ⇑	P	Pn	06 04 08.0	+4.3
CAYR				S	Sn	06 04 33.4	0.0
JUA2	San Juan 2	2.52	328 ⇑	P	Pn	06 04 07.2	+2.9
GGP	Refugio Guagua	2.55	328 ⇓	P	Pn	06 04 07.3	+2.7
TERV	Terraza Guagua	2.55	328	P	Pn	06 04 07.3	+2.6
PINO	Pino	2.57	328 ⇑	P	Pn	06 04 07.9	+3.0
YANA	Yana	2.58	329 ⇓	P	Pn	06 04 08.0	+2.9

THE ***18*** *06:50:50.8, 37.50N×20.78E, h0km*
ISCJB ***18*** *06:50:52.5±0.8, 37.57N±0.04×20.93E±0.05, h10km, Error ellipse: s-maj=6.9km s-min=4.0km az=108.2*
NEIC ***18*** *06:50:52.5, 37.58N×20.90E, h8km, MD3.5(ATH), After ATH.*
ATH ***18*** *06:50:52.5, 37.58N×20.90E, h8km±3km, MD3.5/6*
CSEM ***18*** *06:50:53.2±0.2, 37.64N×20.92E, h3km±2km, MD3.5, Error ellipse: s-maj=6.2km s-min=2.2km az=50.0*
ISC 18 06:50:52.8±0.8, **37.57N**±0.04×**20.89E**±0.05, **h10**km, **n24, σ1.18**/38, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.65	338	ePG	Pg	06 51 04.5	-0.9
VLS				eSB	Sg	06 51 14.7	+0.8
RLS	Riolos of Patr	0.67	43	ePB	Pg	06 51 04.2	-1.5
RLS				eSB	Sg	06 51 14.1	-0.3
ITM	Ithomi	0.91	115	ePG	Pg	06 51 09.3	-1.0
ITM				eSB	Sg	06 51 22.8	+0.6
LKD	Levkas	1.15	351	ePg	Pg	06 51 13.0	-1.9
LKD				eSg	Sg	06 51 31.2	+1.3
LKD	Levkas	1.15	351	P	Pb	06 51 13.2	-1.6
LKD				S	Sb	06 51 30.6	+0.9
LKD	Levkas	1.15	351	ePg	Pg	06 51 13.0	-1.9
LKD				S	Sb	06 51 30.6	+0.9
LKD				eSg	Sg	06 51 31.2	+1.4
EVR	Evrytania	1.52	28	ePB	Pb	06 51 21.6	+0.5
EVR				eSB	Sg	06 51 42.7	+0.9
AGG	Agios Georgios	1.84	38	ePb	Pb	06 51 25.9	-0.6
AGG				eSb	Sb	06 51 50.2	+0.6
AGG	Agios Georgios	1.84	38	P	Pb	06 51 25.9	-0.6
AGG				S	Sg	06 51 51.4	-0.5
AGG	Agios Georgios	1.84	38	ePb	Pb	06 51 25.9	-0.6
AGG				eSb	Sb	06 51 50.2	+0.7
AGG				S	Sg	06 51 51.4	-0.5
VLI	Veliai	1.84	117	ePG	Pg	06 51 27.4	-0.7
LKR	Lokris	1.98	56	ePN	Pn	06 51 27.6	+1.3
IGT	Igoumenitsa	2.01	348	ePn	Pn	06 51 26.2	-0.5
IGT				eSn	Sg	06 51 54.2	-3.1
KYTH	Kithira	2.15	126	ePN	Pn	06 51 30.5	+1.9
MEV	Metsovon	2.23	7	ePn	Pn	06 51 29.6	-0.1
MEV	Metsovon	2.23	7	P	Pn	06 51 30.7	+1.0
MEV	Metsovon	2.23	7	P	Pn	06 51 30.7	+1.0
KEK	Kerkira	2.30	339	ePN	Pn	06 51 33.5	+2.7
NEO	Neokhori	2.52	46	ePB	Pb	06 51 35.3	-2.8
XOR	Xorichti	2.54	44	ePn	Pn	06 51 34.4	+0.3
XOR	Xorichti	2.54	44	P	Pn	06 51 34.9	+0.8
AOS	Alonnisos	2.84	55	ePn	Pn	06 51 38.5	+0.3
AOS				eSn	Sn	06 52 16.4	+4.0
PAIG	Paliouri	3.21	42	ePn	Pn	06 51 43.0	-0.2
PAIG	Paliouri	3.21	42	P	Pn	06 51 43.2	0.0

MAN 18 07:31:45.7, 18.55N×121.07E, h5km, **mb3.5, ML4.7, MS1.6, 3C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.48	242⇓	i P	Pg	07 31 54.8	-0.3
PIP				eS	Sg	07 32 02.0	+0.6
APYP	Conner	0.71	167	eP	Pg	07 31 59.6	+0.3
APYP				eS	Sg	07 32 10.5	+2.0
APYP	Conner	0.71	167	eP	Pg	07 32 00.2	+0.9
APYP				eS	Sg	07 32 10.4	+1.9
ABRA	Dolores	0.96	201	eP	Pg	07 32 04.3	+0.2
ABRA	Dolores	0.96	201	eP	Pg	07 32 02.8	-1.4
SGCP	Mt. Cagua	0.98	108	eP	Pg	07 32 04.6	+0.1
SGCP	Mt. Cagua	0.98	108	eP	Pg	07 32 04.6	+0.2
CVP	Callao Caves	1.11	140⇑	eP	Pg	07 32 07.0	0.0
CVP				i S	Sg	07 32 23.0	+1.7
PALP	Palanan	1.96	139	eP	Pn	07 32 23.7	+4.0
PALP	Palanan	1.96	139	eP	Pn	07 32 21.8	+2.1
BCPH	Baguio City Da	2.21	192⇑	i P	Pn	07 32 23.5	+0.5
BCPH				i S	Sn	07 32 53.2	+2.5
PCPH	Palayan	2.97	180⇑	eP	Pn	07 32 34.1	+0.6

IDC 18 07:48:17.1±1.2, **24.23S**×**67.13W, h182**km±21km, **mb3.1**/1, **mb1 3.0**/6, **mb1mx2.9**/19, **mbtmp3.4**/6, **Error ellipse: s-maj=28.0km s-min=19.5km az=71.0, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.29	314	P	Pn	07 48 58.6	+1.1
	14nm,0.3s,baz=141,slow=6.4,SNR=333						
LVC				S	Sn	07 49 29.8	+0.9
	16nm,0.3s,baz=115,slow=5.6,SNR=6.7						
CFAA	Coronel Fontan	7.41	187	P	Pn	07 50 01.7	-0.9
	0.0nm,0.3s,baz=356,slow=14,SNR=2.1						
CFAA				S	Sn	07 51 19.6	-6.6
	0.0nm,0.3s,baz=4.6,slow=11,SNR=3.2						
LPAZ	La Paz	7.96	353	P	Pn	07 50 11.2	+1.4
	0.1nm,0.3s,baz=149,slow=5.9,SNR=5.4						
CPUP	Villa Florida	9.12	105	P	Pn	07 50 26.4	+1.5
	0.2nm,0.3s,baz=225,slow=8.6,SNR=2.6						
SIV	San Ignacio	9.97	36	P	Pn	07 50 34.5	-1.8
	0.1nm,0.3s,baz=231,slow=13,SNR=4.7						
BDFB	Brasilia	19.88	68	P	P	07 52 34.6	+0.2
	0.3nm,0.3s,baz=249,slow=6.0,SNR=4.1						
TORD	Torodi Ar. Bea	76.76	69	P	P	07 59 49.1	+0.7
	0.5nm,0.8s,baz=257,slow=6.0,SNR=5.5						

ISCJB ***18*** *07:49:04.2±0.3, 1.32N±0.04×97.06E±0.04, h27km, mb4.7/68, MS4.5/40, Error ellipse: s-maj=7.2km s-min=5.4km az=84.5*
BJI ***18*** *07:49:04.4, 1.15N×97.28E, h37km, mB5.1, mb4.9, Ms4.9, Msz4.8*
IDC ***18*** *07:49:06.0±0.5, 1.43N×97.16E, h23km±3km, mb4.2/15, mb1 4.4/16, mb1mx4.2/21, mbtmp4.4/16, ML3.4/1, MS4.2/16, Ms1 4.2/16, ms1mx4.0/27, Error ellipse: s-maj=19.8km s-min=10.6km az=53.0*
MOS ***18*** *07:49:05.0±0.9, 1.37N×97.11E, h33km, mb5.0/22,*

MS4.6/10, Error ellipse: s-maj=12.0km s-min=6.4km az=97.9

*NEIC **18** 07:49:06.5±0.3, 134N×9709E, h30km, mb4.9/24, Error ellipse: s-maj=8.4km s-min=5.3km az=48.0*

ISC 18 07:49:06.6±0.3**, 132N**±004×**9706E**±004**, h29km, h29km**±1.1km**:pP-P, n134,** σ1.00/128, **mb4.7**/68, **MS4.5**/40, **5C-5D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.37	52	Pn	Pn	07 49 42.2	-1.2
	12nm,0.3s,baz=220,slow=6.5,SNR=178						
TSI	Tuntungan	2.63	35	P	Pn	07 49 47.2	+0.1
	935nm,0.9s						
PPI	Padang Panjang	3.77	118	P	Pn	07 50 03.3	+0.6
	152nm,0.7s						
BSI	Banda Aceh	4.51	337	P	Pn	07 50 22.5	+10
	140nm,1.1s						
IPM	Ipoh	5.05	52	P	Pn	07 50 21.1	+0.8
KULM	Kulim	5.33	42	*e*Pn	Pn	07 50 23.7	-0.4
KULM				*e*pPn		07 50 30.7	
KGM	Kluang	6.29	84	P	Pn	07 50 38.3	+1.0
SNG	Songkhla	6.81	31	P	Pn	07 50 44.0	-0.5
	614nm,1.0s						
KSM	Kuching	13.24	89	*e*Pn	Pn	07 52 13.1	+0.6
KSM				*e*pPn		07 52 22.7	
KSM				*e*PcP	PcP	07 57 44.4	+2.7
CHTO	Chiang Mai	17.48	6	*e*P	Pn	07 53 06.7	-1.4
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	Chiang Mai	17.48	6	*e*Pn	Pn	07 53 06.7	-1.5
	comp=Z,9.7nm,0.8s						
CHTO				*e*sP	sP	07 53 21.9	+1.3
KKM	Kota Kinabalu	19.67	76	P	Pn	07 53 34.7	0.0
KKM	Kota Kinabalu	19.67	76	*e*P	Pn	07 53 33.7	-1.0
QIZ	Qiongzhong	21.60	35	P	P	07 53 54.3	+0.3
QIZ				AP		07 54 01.6	
QIZ				XP	sP	07 54 05.6	0.0
QIZ				LR	LR		
	comp=E,1µm,14.1s						
QIZ				LR	LR		
	comp=Z,869nm,16.1s,MS4.2						
QIZ	Qiongzhong	21.60	35	*e*P	P	07 53 54.2	+0.1
	comp=Z,10nm,0.7s,mb4.4						
KMI	Kunming	24.29	13	P	P	07 54 22.5	+1.2
KMI				AP		07 54 29.4	
KMI				XP	sP	07 54 32.1	-1.2
KMI				PP		07 55 00.3	
KMI				PPP		07 55 10.3	
KMI				S	S	07 58 40.6	+2.2
KMI				XS	sS	07 58 50.8	-1.5
KMI				SS		07 59 34.3	
KMI				SSS		07 59 56.0	
KMI				AMB	AMB		
	comp=Z,34nm,0.9s,mb4.8						
KMI				AMB	AMB		
	comp=Z,266nm,4.0s						
KMI				LR	LR		
	comp=N,3µm,15.0s,MS5.0						
KMI				LR	LR		
	comp=E,2µm,13.8s,MS5.0						
KMI				LR	LR		
	comp=Z,3µm,14.4s,MS5.0						
GYA	Guiyang	26.64	19	⇓*i*P	P	07 54 42.5	-0.2
GYA				AP	pP	07 54 51.8	+0.7
GYA				XP	sP	07 54 55.6	+0.9
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.5						
GYA				AMB	AMB		
	comp=Z,90nm,4.5s						
GYA				LR	LR		
	comp=N,3µm,13.5s,MS5.0						
GYA				LR	LR		
	comp=E,850nm,11.7s,MS5.0						
GYA				LR	LR		
	comp=Z,3µm,13.8s,MS5.0						
JIRN	Jiri	28.18	339	*e*P	P	07 54 58.2	+1.7
	comp=Z,103nm,1.0s,mb5.4						
GUN	Gumba	28.52	339	*e*P	P	07 55 01.2	+1.7
	comp=Z,86nm,0.8s,mb5.5						
DMN	Daman	28.54	337	*e*P	P	07 55 00.8	+1.2
	comp=Z,55nm,1.1s,mb5.2						
KKN	Kakani	28.64	338	*e*P	P	07 55 01.7	+1.2
	comp=Z,45nm,0.9s,mb5.2						
KKN	Kakani	28.64	338	*e*P	P	07 55 01.7	+1.2
KKN				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.2						
LSA	Lhasa	28.78	349	*e*P	P	07 55 02.5	+0.8
LSA				*e**PP	pP	07 55 10.9	+0.7
LSA				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
LSA	Lhasa	28.78	349	*e*P	P	07 55 02.5	+0.8
	comp=Z,13nm,0.7s,mb4.8						
LSA				*e*pP	pP	07 55 10.9	+0.6
GKN	Gorkha	29.07	337	*e*P	P	07 55 05.7	+1.3
	comp=Z,80nm,0.9s,mb5.5						
KOLN	Koldanda	29.29	335	*e*P	P	07 55 07.2	+0.9
	comp=Z,54nm,0.7s,mb5.4						
CD2	Chengdu	30.10	12	*e*P	P	07 55 12.6	-0.9
CD2				AP	pP	07 55 22.3	+0.3
CD2				XP	sP	07 55 26.5	+0.9
CD2				PP	PP	07 56 12.5	-9.2
CD2				S	S	08 00 09.8	-0.5
CD2				XS	sS	08 00 25.8	+1.5
CD2				SS	SS	08 01 50.5	-28
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
CD2				AMB	AMB		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=E,1µm,15.6s						
CD2				LR	LR		
	comp=Z,940nm,14.4s,MS4.6						
FITZ	Fitzroy Crossi	34.11	126	P	P	07 55 47.8	-0.8
	comp=Z,3.7nm,0.7s,mb4.4,baz=316,slow=7.7,SNR=14						
FITZ	Fitzroy Crossi	34.11	126	*e*P	P	07 55 48.0	-0.6
	comp=Z,7.8nm,0.8s,mb4.7						
XAN	Xi'an	34.39	18	P	P	07 55 49.9	-1.1
XAN				AMB	AMB		
	comp=Z,33nm,1.0s,mb5.2						
XAN				LR	LR		
	comp=N,882nm,14.3s,MS4.7						
XAN				LR	LR		
	comp=E,559nm,14.1s,MS4.7						
XAN				LR	LR		
	comp=Z,2µm,14.5s,MS5.0						
LZH	Lanzhou	35.16	10	*e*P	P	07 55 58.3	+0.6
LZH				AP	pP	07 56 07.8	+1.5
LZH				XP	sP	07 56 11.8	+2.0
LZH				PP	PP	07 57 18.3	+0.6
LZH				*e*S	S	08 01 29.3	+0.4
LZH				XS	sS	08 01 45.1	+2.1
LZH				*e*SS	SS	08 03 47.5	-15
LZH				AMB	AMB		
	comp=Z,27nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,97nm,5.8s						
LZH				LR	LR		
	comp=E,638nm,13.2s						
LZH				LR	LR		
	comp=Z,983nm,17.5s,MS4.6						
NJ2	Nanjing	36.83	32	*e*P	P	07 56 12.9	+0.9
NJ2				AP	pP	07 56 22.6	+2.0
NJ2				XP	sP	07 56 26.6	+2.4
NJ2				PP	PP	07 57 39.8	+3.6
NJ2				S	S	08 02 01.0	+6.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,30nm,3.9s						
NJ2				LR	LR		
	comp=N,210nm,15.2s,MS4.8						
NJ2				LR	LR		
	comp=E,1µm,14.3s,MS4.8						
NJ2				LR	LR		
	comp=Z,1µm,14.1s,MS4.8						
SSE	Sheshan	37.39	35	P	P	07 56 15.9	-0.9
SSE				AP	pP	07 56 24.8	-0.6
SSE				XP	sP	07 56 28.9	0.0
SSE				PP	PP	07 57 41.8	-0.5
SSE				S	S	08 02 03.1	+0.1
SSE				XS	sS	08 02 18.9	+1.7
SSE				AMB	AMB		
	comp=Z,39nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,123nm,8.7s						
SSE				LR	LR		
	comp=N,382nm,17.8s,MS4.3						
SSE				LR	LR		
	comp=E,185nm,17.9s,MS4.3						
SSE				LR	LR		
	comp=Z,506nm,16.5s,MS4.4						
KAKA	Kakadu	37.77	113	*e*P	P	07 56 18.9	-1.1
	comp=Z,11nm,0.6s,mb4.8						
GTA	Gaotai	37.99	3	P	P	07 56 21.9	+0.1
GTA				AP	pP	07 56 29.3	-1.2
GTA				XP	sP	07 56 32.5	-1.5
GTA				PP	PP	07 57 57.4	+8.5
GTA				PPP		07 58 21.8	
GTA				XS	sS	08 02 28.1	+1.8
GTA				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.8						
GTA				AMB	AMB		
	comp=Z,115nm,5.0s						
GTA				LR	LR		
	comp=N,848nm,14.1s,MS4.8						
GTA				LR	LR		
	comp=E,584nm,14.8s,MS4.8						
GTA				LR	LR		
	comp=Z,869nm,14.8s,MS4.7						
HHC	Hu-ho-hao-te	41.48	17	*e*P	P	07 56 52.3	+1.4
HHC				AP	pP	07 57 04.5	+4.9
HHC				XP	sP	07 57 10.0	+6.9
HHC				PP	PP	07 58 32.8	+5.9
HHC				PCP	PcP	07 58 49.8	+1.6
HHC				SCP	ScP	08 02 34.6	-1.6
HHC				PCS	PcS	08 02 38.6	-0.9
HHC				S	S	08 03 05.1	+0.7
HHC				XS	sS	08 03 25.5	+6.8
HHC				SS	SS	08 06 05.3	-4.0
HHC				SCS	ScS	08 06 49.5	-2.9
HHC				AMB	AMB		
	comp=Z,19nm,0.9s,mb4.7						
HHC				AMB	AMB		
	comp=Z,141nm,5.7s						
HHC				LR	LR		
	comp=N,1µm,15.7s,MS5.0						
HHC				LR	LR		
	comp=E,1µm,16.5s,MS5.0						
HHC				LR	LR		
	comp=Z,1µm,15.7s,MS4.9						
WRA	Warramunga Arr	42.21	122	P	P	07 56 56.5	-0.4
	comp=Z,6.6nm,0.6s,mb4.4,baz=300,slow=9.1,SNR=67						
WRA				pP	pP	07 57 03.3	-2.3
	comp=Z,3.8nm,0.6s,baz=302,slow=9.2,SNR=9.4						
WRA				LR	LR	08 17 59.5	
	comp=Z,399nm,19.8s,MS4.3,baz=290,slow=41						
WRA	Warramunga Arr	42.21	122	*i* P	P	07 56 56.5	-0.4
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WRAB	Tennant Creek	42.22	122	*e*P	P	07 56 56.8	-0.1
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
WRAB	Tennant Creek	42.22	122	*e*P	P	07 56 56.8	-0.1
	comp=Z,9.7nm,0.6s,mb4.6						
WB2	Warramunga Arr	42.23	122	*e*P	P	07 56 56.8	-0.1
BJT	Baijiatuau	42.26	22	*e*P	P	07 56 57.7	+0.5
BJT				*e**PP	pP	07 57 05.3	-0.6
BJT				pmax	pmax		
	comp=Z,29nm,0.6s						
BJT	Baijiatuau	42.26	22	*e*P	P	07 56 57.7	+0.5
	comp=Z,28nm,0.6s,mb5.1						
BJT				*e*pP	pP	07 57 05.3	-0.6
WMQ	Urumqi	43.13	350	*e*P	P	07 57 05.0	+0.7
WMQ				AP	pP	07 57 15.0	+2.0
WMQ				XP	sP	07 57 19.0	+2.5
WMQ				PP	PP	07 58 48.0	+3.3
WMQ				SS	SS	08 06 35.0	-6.8
WMQ				AMB	AMB		
	comp=Z,24nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,132nm,5.0s						
WMQ				LR	LR		
	comp=N,324nm,14.0s,MS4.6						
WMQ				LR	LR		
	comp=E,426nm,14.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,256nm,13.0s,MS4.3						
FORT	Forrest	43.46	140	*e*P	P	07 57 09.1	+2.2
	comp=Z,24nm,0.7s,mb5.0						
ASAR	Alice Springs	43.58	127	P	P	07 57 08.1	+0.2
	comp=Z,2.2nm,0.7s,mb4.0,baz=298,slow=7.5,SNR=36						
ASAR				pP	pP	07 57 15.0	-1.6
	comp=Z,2.2nm,0.7s,baz=299,slow=7.8,SNR=11						
ASAR				PcP	PcP	07 58 56.5	+1.3
	comp=Z,0.6nm,0.7s,baz=291,slow=3.6,SNR=4.1						
ASAR				LR	LR	08 17 09.5	
	comp=Z,274nm,21.5s,MS4.1,baz=309,slow=39						
ASAR	Alice Springs	43.58	127	P	P	07 57 08.1	+0.2
ASAR				*PP	pP	07 57 15.0	-1.6
ASAR						07 58 56.5	
AS31	Alice Springs	43.58	127	*e*P	P	07 57 08.0	+0.1
AAK	Ala-Archa	45.83	337	⇓*e*P	P	07 57 28.7	+2.8
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
AAK				MLR	MLR		
	comp=Z,400nm,26.0s,MS4.2						
FRU	Bishkek	45.95	337	*e*P	P	07 57 29.0	+2.1
SNY	Shenyang	46.86	27	⇑P	P	07 57 33.3	-0.6
SNY				PP	PP	07 59 22.9	-1.4
SNY				S	S	08 04 24.6	+1.9
SNY				XS	sS	08 04 37.0	-0.1
SNY				SS	SS	08 07 40.3	-9.1
SNY				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.9						
SNY				AMB	AMB		
	comp=Z,358nm,4.0s						
SNY				LR	LR		
	comp=N,586nm,15.4s,MS5.0						
SNY				LR	LR		
	comp=E,1µm,14.3s,MS5.0						
SNY				LR	LR		
	comp=Z,1µm,15.3s,MS4.9						
SONM	Songino Array	47.03	9	P	P	07 57 35.4	+0.1
	comp=Z,14nm,0.8s,mb5.0,baz=188,slow=8.6,SNR=47						
SONM				pP	pP	07 57 42.4	-1.7
	comp=Z,8.4nm,0.8s,baz=187,slow=8.5,SNR=10						
MK31	Makanchi Array	47.09	346	P	P	07 57 35.9	+0.1
MK31				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
MKAR	Makanchi Array	47.09	346	P	P	07 57 36.1	+0.3
	comp=Z,8.9nm,0.7s,mb4.8,baz=153,slow=6.8,SNR=47						
ULN	Ulaanbaatar	47.16	9*c*	*i*P	P	07 57 36.5	+0.2
ULN	Ulaanbaatar	47.16	9	*e*P	P	07 57 36.4	+0.1
	comp=Z,7.0nm,0.8s,mb4.6						
KK31	Karatay Array	47.89	334	*i* P	P	07 57 42.7	+0.8
KK31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
KKAR	Karatay Array	47.89	334	*i* P	P	07 57 42.7	+0.8
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
ZAK	Zakamensk	49.16	5	*e*P	P	07 57 51.3	-0.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CN2	Changchun	49.26	27	*e*P	P	07 57 51.9	-0.6
CN2				*e*S	S	08 04 54.8	-1.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,600nm,16.0s,MS4.9						
CN2				LR	LR		
	comp=E,700nm,16.0s,MS4.9						
CN2				LR	LR		
	comp=Z,800nm,16.0s,MS4.8						
TLY	Talaya	50.48	5	*e*P	P	07 58 02.0	+0.2
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
TLY				MLR	MLR		
	comp=Z,592nm,16.0s,MS4.7						
TLY	Talaya	50.48	5	*e*P	P	07 58 02.1	+0.2
	comp=Z,7.9nm,0.8s,mb4.8						
TLY				*e*pP	pP	07 58 10.0	-0.7
HIA	Hailar	51.57	19	⇓*e*P	P	07 58 10.2	+0.2
MAT	Matsushiro	51.69	42	P	P	07 58 09.0	-1.9
MAT				*e*S	S	08 05 32.6	+2.1
MAT	Matsushiro	51.69	42	P	P	07 58 09.0	-1.9
MAT				S	S	08 05 33.0	+2.5
MJAR	Matsushiro Arr	51.69	42	P	P	07 58 10.7	-0.1
	comp=Z,3.0nm,0.8s,mb4.3,baz=228,slow=6.5,SNR=9.4						
MJAR				LR	LR	08 24 16.0	
	comp=Z,192nm,18.6s,MS4.2,baz=240,slow=41						
MDJ	Mudanjiang	51.83	29	P	P	07 58 12.3	+0.4
MDJ				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,129nm,5.0s						
MDJ				LR	LR		
	comp=N,284nm,19.9s,MS4.3						
MDJ				LR	LR		
	comp=E,66nm,17.3s,MS4.3						
MDJ				LR	LR		
	comp=Z,388nm,16.7s,MS4.5						
MDJ	Mudanjiang	51.83	29	*e*P	P	07 58 12.3	+0.4
	comp=Z,11nm,0.8s,mb4.8						
MDJ				*e*pP	pP	07 58 20.9	+0.1
VLA	Vladivostok	51.94	32	P	P	07 58 10.0	-2.7
VLA				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.3						
VLA				MLR	MLR		
	comp=Z,600nm,13.6s,MS4.8						
ZAL	Zalesovo	53.41	351	P	P	07 58 24.1	+0.5
	comp=Z,10nm,0.8s,mb4.8,baz=293,slow=6.6,SNR=40						
ZAL	Zalesovo	53.41	351	*i* P	P	07 58 24.1	+0.5
ZAL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STKA	Stephens Creek	53.54	132	P	P	07 58 25.8	+1.2
	comp=Z,4.4nm,0.7s,mb4.5,baz=320,slow=8.5,SNR=9.7						
STKA				pP	pP	07 58 33.0	-0.4
	comp=Z,5.3nm,0.6s,baz=302,slow=7.7,SNR=5.4						
STKA				LR	LR	08 24 08.1	
	comp=Z,382nm,20.3s,MS4.4,baz=122,slow=39						
STKA	Stephens Creek	53.54	132	*e*P	P	07 58 25.8	+1.3
	comp=Z,4.7nm,0.6s,mb4.6						
NVS	Novosibirsk	54.53	350	*e*P	P	07 58 30.9	-0.9
NVS				pmax	pmax		
	comp=N,8.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
VOSK	Vostochnaya	55.64	341	P	P	07 58 39.1	-0.7
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
BVA0	Borovoye Array	56.09	341	*i* P	P	07 58 42.6	-0.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
BVAR	Borovoye Array	56.09	341	LR	LR	08 26 37.4	
	comp=Z,179nm,20.3s,MS4.2,baz=139,slow=40						
BRVK	Borovoye	56.15	341	*e*P	P	07 58 43.3	-0.2
BRVK				*e**PP	pP	07 58 51.4	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
BRVK	Borovoye	56.15	341	*e*P	P	07 58 43.3	-0.1
	comp=Z,6.3nm,0.8s,mb4.7						
BRVK				*e*pP	pP	07 58 51.4	-1.0
ZRNK	Zerenda	56.49	340	*i* P	P	07 58 45.2	-0.7
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
ZRNK	Zerenda	56.49	340	*e*P	P	07 58 45.2	-0.7
	comp=Z,7.4nm,0.8s,mb4.8						
CHKZ	Chkalovo	56.57	341	*e*P	P	07 58 46.2	-0.2
CHKZ				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
CHKZ	Chkalovo	56.57	341	*e*P	P	07 58 46.2	-0.2
	comp=Z,17nm,0.8s,mb5.1						
HABR	Khabarovsk	57.22	29	*e*P	P	07 58 51.8	+0.8
HABR				*e*S	S	08 06 46.4	+1.6
AB31	Akbulak array	57.34	332	*i* P	P	07 58 51.6	-0.3
AB31				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
BOD	Bodaibo	57.92	11	*e*P	P	07 58 53.0	-2.9
BOD				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.5						
KMBO	Kilima Mbogo	59.86	268	LR	LR	08 20 23.4	
	comp=Z,169nm,19.8s,MS4.2,baz=97,slow=31						
YSS	Yuzh-Sakhalins	60.33	34	*e*P	P	07 59 12.0	-0.6
YSS				*e*		07 59 23.2	
YSS				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.8						
GNI	Garni	61.11	316	*i* P	pP	07 59 27.2	+0.2
SVE	Sverdlovsk	62.52	338	*e*P	P	07 59 26.0	-1.5
SVE				MLR	MLR		
	comp=N,200nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,200nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
ARU	Arti	63.02	337	⇓*i*P	P	07 59 29.4	-1.4
ARU				*e*		08 01 49.8	
ARU				*e*S	S	08 07 59.0	-0.3
ARU				*e*SS	SS	08 12 05.6	+0.5
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
KIV	Kislovodsk	64.13	319	*i* P	P	07 59 38.7	+0.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
YAK	Yakutsk	65.34	16*c*	*i*P	P	07 59 44.9	-1.1
YAK				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.5						
YAK				MLR	MLR		
	comp=Z,700nm,22.0s,MS4.8						
YAK	Yakutsk	65.34	16	*e*P	P	07 59 45.1	-0.9
	comp=Z,58nm,0.9s,mb5.6						
MMAI	Mount Meron Ar	65.72	306	LR	LR	08 29 23.0	
	comp=Z,88nm,18.2s,MS4.0,baz=120,slow=37						
SOKR	Solikamsk	65.92	339	*e*P	P	07 59 50.2	+0.4
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,310nm,18.0s,MS4.6						
BRTR	Keskin Array B	68.93	312	P	P	08 00 08.7	-0.1
	comp=Z,1.1nm,0.7s,mb3.9,baz=132,slow=7.2,SNR=5.8						
BRTR				pP	pP	08 00 16.4	-1.6
	comp=Z,2.3nm,0.7s,baz=130,slow=6.8,SNR=9.0						
BRTR				LR	LR	08 34 14.6	
	comp=Z,51nm,19.6s,MS3.8,baz=248,slow=39						
BRTR	Keskin Array B	68.93	312	P	P	08 00 08.7	-0.1
BRTR				*PP	pP	08 00 16.4	-1.5
LSZ	Lusaka	70.02	253	LR	LR	08 28 20.6	
	comp=Z,285nm,18.4s,MS4.5,baz=101,slow=34						
MA2	Magadan	71.28	26	*e*P	P	08 00 23.0	-0.2
MA2				pmax	pmax		
	comp=Z,100nm,0.6s,mb5.9						
PET	Petropavlovsk	72.21	34	*e*P	P	08 00 28.2	-0.6
PET				*e*S	S	08 09 51.4	+1.9
PET				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
PET				pmax	pmax		
	comp=Z,100nm,13.8s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.5						
OBN	Obninsk	72.44	328*c*	*e*P	P	08 00 29.4	-0.8
OBN				*e*		08 03 13.2	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
OBN				MLR	MLR		
	comp=N,100nm,18.0s						
MAW	Mawson	72.80	193	P	P	08 00 33.8	+1.5
	comp=N,0.7nm,0.5s,mb3.8,baz=64,slow=7.2,SNR=3.2						
MAW				LR	LR	08 26 11.2	
	comp=N,143nm,19.0s,MS4.3,baz=58,slow=30						
TIXI	Tiksi	73.09	10	*i* P	P	08 00 32.7	-1.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.9						
BOSA	Boshof	74.72	240	LR	LR	08 28 31.3	
	comp=Z,213nm,21.0s,MS4.4,baz=272,slow=32						
AKASG	Malin Array Be	75.08	322	P	P	08 00 44.8	-0.9
	comp=Z,1.8nm,0.6s,mb4.2,baz=89,slow=4.7,SNR=8.0						
AKASG				pP	pP	08 00 52.2	-2.6
	comp=Z,1.9nm,0.6s,baz=91,slow=5.0,SNR=4.0						
JOF	Joensuu	77.98	335	*e*p	P	08 01 00.5	-1.5
APA	Apatity	78.97	339	⇑*i*P	P	08 01 07.0	-0.5
APA				*i*	pP	08 01 15.0	-1.7
APA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
FINES	FINESS Array B	79.83	333	P	P	08 01 11.6	-0.6
	comp=Z,2.7nm,0.7s,mb4.3,baz=104,slow=8.0,SNR=11						
FINES				pP	pP	08 01 19.1	-2.4
	comp=Z,2.3nm,0.8s,baz=98,slow=5.9,SNR=3.3						
FINES				LR	LR	08 39 47.5	
	comp=Z,68nm,20.0s,MS4.0,baz=137,slow=38						
FINES	FINESS Array B	79.83	333	P	P	08 01 11.6	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FINES				*PP	pP	08 01 19.1	-2.4
FINES	**FINESS Array B**	**79.83**	**333**	P	**P**	**08 01 11.6**	**-0.6**
FINES				pP	pP	08 01 19.1	-2.4
FINES				LR	LR	08 39 47.5	
KAF	**Kangasniemi**	**79.91**	**333**	*e*p	**P**	**08 01 11.5**	**-1.1**
	comp=Z,4.9nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**79.91**	**333**	*e*P	**P**	**08 01 11.5**	**-1.1**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
BILL	**Bilibino**	**81.10**	**21**⇓	*e*P	**P**	**08 01 21.8**	**+2.8**
BILL				*e*S	S	08 11 17.9	-8.8
BILL				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
BILL				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.9						
MORC	**Moravsky Berou**	**82.22**	**320**	*e*P	**P**	**08 01 24.2**	**-0.7**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
MORC	**Moravsky Berou**	**82.22**	**320**	*e*P	**P**	**08 01 24.2**	**-0.8**
	comp=Z,5.1nm,0.6s,mb4.6						
ARCES	**ARCESS Array B**	**82.38**	**340**	P	**P**	**08 01 25.2**	**-0.5**
	comp=Z,4.4nm,0.8s,mb4.5,baz=77,slow=5.4,SNR=14						
ARCES				LR	LR	08 42 18.1	
	comp=Z,200nm,20.8s,MS4.5,baz=100,slow=39						
ROBS	**Robic**	**84.58**	**316**	*e*P	**P**	**08 01 35.7**	**-1.4**
GERES	**GERESS Array B**	**84.63**	**319**	P	**P**	**08 01 37.1**	**-0.2**
	comp=Z,1.3nm,0.8s,mb4.1,baz=108,slow=4.3,SNR=6.2						
GERES				pP	pP	08 01 46.4	-0.2
	comp=Z,1.2nm,0.7s,baz=64,slow=4.6,SNR=3.6						
CLL	**Collm**	**85.25**	**321**	*e*PCP	PcP	08 01 46.0	+2.5
CLL	**Collm**	**85.25**	**321**	*e*(PcP)	PcP	08 01 46.0	+2.5
VNDA	**Vanda**	**85.97**	**169**	pP	pP	08 01 52.0	-1.3
	comp=Z,0.8nm,0.7s,baz=283,slow=5.5,SNR=4.1						
VNDA				LR	LR	08 37 36.4	
	comp=Z,147nm,19.4s,MS4.4,baz=314,slow=34						
NB2	**NORSAR Subarra**	**86.83**	**331**	P	**P**	**08 01 47.6**	**-0.7**
	comp=Z,1.6nm,0.7s,mb4.4,baz=96,slow=4.8						
NOA	**NORSAR Array B**	**86.83**	**331**	P	**P**	**08 01 47.3**	**-1.0**
	comp=Z,1.8nm,0.8s,mb4.4,baz=94,slow=5.0,SNR=11						
NOA				LR	LR	08 46 23.5	
	comp=Z,106nm,21.0s,MS4.2,baz=100,slow=40						
TORD	**Torodi Ar. Bea**	**94.93**	**283**	LR	LR	08 44 39.7	
	comp=Z,180nm,18.1s,MS4.6,baz=110,slow=35						
IMA2	**Indian Mountai**	**96.52**	**23**	*e*P	**P**	**08 02 33.5**	**+0.2**
TBI	**Tubuai**	**112.03**	**115**	*e*LR	LR	08 41 01.2	
	comp=Z,222nm,38.5s						
PPT	**Papeete**	**112.64**	**108**	*e*LR	LR	08 41 18.6	
	comp=Z,126nm,25.8s						
TAOE	**Nuku Hiva Isla**	**122.58**	**100**	*e*LR	LR	08 45 55.7	
	comp=Z,500nm,28.7s						
RKT	**Rikitea**	**125.11**	**117**	*e*LR	LR	08 47 04.7	
	comp=Z,171nm,26.0s						
NVAR	**Mina Array Bea**	**128.76**	**36**	PKP	PKPdf	08 08 10.4	-0.6
	comp=Z,0.8nm,1.0s,baz=243,slow=1.7,SNR=4.9						
PDAR	**Pinedale Array**	**129.99**	**26**	PKP	PKPdf	08 08 14.2	+0.8
	comp=Z,0.4nm,0.7s,baz=202,slow=1.9,SNR=4.5						
CPUP	**Villa Florida**	**145.00**	**223**	PKPbc	PKPbc	08 08 43.1	+2.9
	comp=Z,2.2nm,0.8s,baz=65,slow=4.4,SNR=6.3						
CPUP				pPKPbc		08 08 50.3	
	comp=Z,4.0nm,0.7s,baz=103,slow=2.2,SNR=9.0						
LRAL	**Lakeview Retre**	**145.61**	**6**	*e*PKPdf	PKPdf	08 08 41.8	-0.2

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*IDC **18** 08:06:43.2±3.1, 5253N×3443E, h0km, mb1 3.6/4, mb1mx3.3/21, mbtmp3.5/4, ML3.3/5, Error ellipse: s-maj=38.1km s-min=14.1km az=108.0*
*ISCJB **18** 08:06:45.1±2.6, 5297N±009×334E±04, h10km, Error ellipse: s-maj=38.9km s-min=12.3km az=17.4*
ISC 18 08:06:43.2±2.6**, 5279N**±008×**338E**±04**, h10km, n8, σ1ˢ51**/9**, 1D, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**3.54**	**235**	Pn	**Pn**	**08 07 40.1**	**+1.9**
	1.6nm,0.3s,baz=151,slow=4.3,SNR=4.1						
AKASG				Lg		08 08 43.8	
	3.9nm,0.3s,baz=67,slow=29,SNR=6.8						
BURAR	**Bucovina Array**	**7.56**	**230**⇓	*i*P	**Pn**	**08 08 31.8**	**-1.7**
FINES	**FINESS Array B**	**9.63**	**337**	Pn	**Pn**	**08 09 03.2**	**+1.4**
	0.2nm,0.3s,baz=148,slow=13,SNR=7.0						
FINES				Sn	**Sn**	**08 10 49.8**	**-0.3**
	0.3nm,0.3s,baz=155,slow=23,SNR=5.6						
FINES				Lg		08 11 59.2	
	0.2nm,0.3s,baz=149,slow=28,SNR=3.0						
KAF	**Kangasniemi**	**10.17**	**340**	*e*p	**Pn**	**08 09 12.5**	**+3.2**
JOF	**Joensuu**	**10.24**	**354**	*e*p	**Pn**	**08 09 06.2**	**-4.0**
HFS	**Hagfors**	**13.29**	**312**	Pn	**Pn**	**08 09 52.7**	**+0.8**
	0.2nm,0.3s,baz=108,slow=17,SNR=3.6						
NOA	**NORSAR Array B**	**14.78**	**313**	Pn	**Pn**	**08 10 10.4**	**-1.8**
	0.1nm,0.3s,baz=113,slow=13,SNR=3.4						
ARCES	**ARCESS Array B**	**17.24**	**350**	Pn	**Pn**	**08 10 43.4**	**-0.6**
	0.5nm,0.3s,baz=166,slow=9.3,SNR=20						

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*IDC **18** 08:08:46.5±1.3, 122N×9687E, h0km, mb4.0/8, mb1 4.0/9, mb1mx3.8/21, mbtmp3.9/9, ML3.0/1, Error ellipse: s-maj=43.0km s-min=19.1km az=51.0*
*BJI **18** 08:08:49.9, 091N×9731E, h48km, mb4.8*
*ISCJB **18** 08:08:50.1±0.8, 13N±01×970E±01, h33km, mb4.0/11, Error ellipse: s-maj=18.6km s-min=13.5km az=101.5*
*NEIC **18** 08:08:51.4±0.6, 130N×9699E, h30km, mb4.2/2, Error ellipse: s-maj=13.1km s-min=9.4km az=48.0*
ISC 18 08:08:52.5±0.8**, 14N**±01×**970E**±01**, h35km, n14, σ0ˢ53**/16**, mb4.0**/11**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.39**	**53**	Pn	**Pn**	**08 09 29.0**	**-0.1**
	3.1nm,0.3s,baz=251,slow=4.7,SNR=35						
PSI				Sn	**Sn**	**08 10 06.8**	**+10**
	4.2nm,0.3s,baz=14,slow=22,SNR=2.7						
PSI	**Prapat**	**2.39**	**53**	Pn	**Pn**	**08 09 29.0**	**-0.2**
PSI				Sn	**Sn**	**08 10 06.8**	**+10**
KULM	**Kulim**	**5.34**	**43**	*e*Pn	**Pn**	**08 10 09.3**	**-0.4**
GTA	**Gaotai**	**37.97**	**4**	*e*P	**P**	**08 16 08.3**	**+1.5**
GTA				AP	pP	08 16 19.8	+2.8
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**42.27**	**122**	P	**P**	**08 16 42.3**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.6,baz=301,slow=9.1,SNR=13						
WRAB	**Tennant Creek**	**42.27**	**122**	*e*P	**P**	**08 16 42.8**	**+0.3**
	comp=Z,2.0nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**43.63**	**127**	P	**P**	**08 16 53.6**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.4,baz=297,slow=8.0,SNR=7.3						
SONM	**Songino Array**	**47.02**	**9**	P	**P**	**08 17 20.4**	**+0.1**
	comp=Z,2.5nm,0.8s,mb4.2,baz=194,slow=9.2,SNR=13						
MKAR	**Makanchi Array**	**47.06**	**346**	P	**P**	**08 17 20.8**	**+0.2**
	comp=Z,1.3nm,0.5s,mb4.2,baz=159,slow=8.1,SNR=18						
ZAL	**Zalesovo**	**53.38**	**351**	P	**P**	**08 18 08.6**	**+0.1**
	comp=Z,3.3nm,0.5s,mb4.5,baz=289,slow=7.0,SNR=11						
BVAR	**Borovoye Array**	**56.05**	**341**	P	**P**	**08 18 27.5**	**-0.4**
	comp=Z,1.9nm,0.8s,mb4.2,baz=134,slow=8.5,SNR=6.8						
CHKZ	**Chkalovo**	**56.53**	**342**	*e*P	**P**	**08 18 31.3**	**0.0**
	comp=Z,2.7nm,0.6s,mb4.5						
FINES	**FINESS Array B**	**79.79**	**333**	P	**P**	**08 20 56.9**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=92,slow=7.2,SNR=3.3						
ARCES	**ARCESS Array B**	**82.34**	**340**	P	**P**	**08 21 09.6**	**-1.1**
	comp=Z,1.1nm,0.9s,mb3.8,baz=64,slow=2.8,SNR=5.6						

IDC 18 08:18:59.3±4.2**, 146N**×**9737E, h0km, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/20**, mbtmp3.5**/4**, Error ellipse: s-maj=168.2km s-min=25.5km az=59.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.03**	**122**	P	P	08 26 52.5	0.0
	0.5nm,0.7s,baz=300,slow=9.3,SNR=5.5						
ASAR	**Alice Springs**	**43.42**	**127**	P	P	08 27 04.5	+0.8
	0.3nm,0.8s,baz=304,slow=8.4,SNR=3.5						
SONM	**Songino Array**	**46.85**	**8**	P	P	08 27 31.4	+0.4
	0.3nm,0.4s,baz=189,slow=8.4,SNR=4.2						
MKAR	**Makanchi Array**	**47.03**	**346**	P	P	08 27 32.3	-0.2
	0.4nm,0.4s,baz=154,slow=8.2,SNR=7.8						

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*ISCJB **18** 09:11:12.8±0.5, 3805N±003×2159E±003, h7km, Error ellipse: s-maj=4.3km s-min=3.8km az=139.6*
*CSEM **18** 09:11:13.2±0.2, 3805N×2158E, h2km, MD3.5, Error ellipse: s-maj=3.5km s-min=3.0km az=161.0*
*ATH **18** 09:11:13.3, 3804N×2158E, h7km±3km, MD3.5/5*
*NEIC **18** 09:11:16.0, 3822N×2156E, h0km, MD3.5(ATH), After THE.*
*THE **18** 09:11:16.0, 3822N×2156E, h0km, ML2.4*
ISC 18 09:11:13.4±0.5**, 3806N**±003×**2160E**±004**, h3km**±7km**, n14, σ0ˢ91**/25**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.11**	**268**	*e*PG	**Pg**	**09 11 15.3**	**-0.2**
RLS				*e*SG	**Sg**	**09 11 17.6**	**+0.6**
VLS	**Valsamata**	**0.81**	**279**	*e*PB	**Pg**	**09 11 27.7**	**-1.2**
VLS				*e*SB	**Sg**	**09 11 40.3**	**+1.0**
EVR	**Evrytania**	**0.87**	**11**	*e*PG	**Pg**	**09 11 29.7**	**-0.4**
EVR				*e*SB	**Sg**	**09 11 43.3**	**+1.9**
ITM	**Ithomi**	**0.92**	**163**	*e*PG	**Pg**	**09 11 30.2**	**-0.8**
ITM				*e*SB	**Sg**	**09 11 43.2**	**+0.3**
LKD	**Levkas**	**0.99**	**311**	*e*Pg	**Pg**	**09 11 31.4**	**-1.0**
LKD				*e*Sg	**Sg**	**09 11 45.4**	**+0.2**
LKD	**Levkas**	**0.99**	**311**	*e*Pg	**Pg**	**09 11 31.4**	**-1.0**
LKD				*e*Sg	**Sg**	**09 11 45.3**	**+0.2**
AGG	**Agios Georgios**	**1.12**	**31**	*e*Pg	**Pg**	**09 11 33.9**	**-1.0**
	comp=Z,2.7nm,0.5s						
AGG				*e*Sg	**Sg**	**09 11 50.5**	**+1.1**
LKR	**Lokris**	**1.25**	**61**	*e*PG	**Pg**	**09 11 36.8**	**-0.6**
LKR				*e*SB	**Sb**	**09 11 54.4**	**+0.4**
VLI	**Veliai**	**1.71**	**141**	*e*PN	**Pn**	**09 11 46.3**	**+2.2**
MEV	**Metsovon**	**1.75**	**351**	*e*Pg	**Pn**	**09 11 45.5**	**+0.9**
	comp=Z,4.4nm,0.5s						
MEV				*e*Sg	**Sn**	**09 12 06.2**	**-1.1**
IGT	**Igoumenitsa**	**1.77**	**326**	*e*Pb	**Pb**	**09 11 46.2**	**-0.3**
NEO	**Neokhori**	**1.78**	**45**	*e*PG	**Pg**	**09 11 46.9**	**-0.6**
XOR	**Xorichti**	**1.80**	**43**	*e*Pb	**Pb**	**09 11 46.6**	**-0.5**
XOR				*e*Sb	**Sb**	**09 12 09.7**	**-0.3**
XOR	**Xorichti**	**1.80**	**43**	*e*Pb	**Pb**	**09 11 46.6**	**-0.4**
XOR				*e*Sb	**Sb**	**09 12 09.6**	**-0.4**

IDC 18 09:15:44.8±0.8**, 2116S**×**6827W, h126km**±9km**, mb3.5**/3**, mb1 3.7**/8**, mb1mx3.5**/20**, mbtmp4.0**/8**, Error ellipse: s-maj=25.3km s-min=9.6km az=102.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.56**	**202**	P	Pn	09 16 13.9	+0.7
	247nm,0.3s,baz=20,slow=8.9,SNR=2438						
LVC				S	Sn	09 16 35.5	+0.5
	83nm,0.3s,baz=211,slow=20,SNR=27						
LPAZ	**La Paz**	**4.85**	**2**	P	Pn	09 16 58.3	+2.6
	2.3nm,0.3s,baz=193,slow=5.7,SNR=70						
LPAZ				S	Sn	09 17 51.9	+0.9
	0.0nm,0.3s,baz=262,slow=23,SNR=1.7						
SIV	**San Ignacio**	**8.54**	**54**	P	Pn	09 17 44.5	-1.1
	11nm,0.3s,baz=250,slow=12,SNR=270						
CFAA	**Coronel Fontan**	**10.40**	**180**	P	Pn	09 18 07.3	-3.2
	0.1nm,0.3s,baz=353,slow=11,SNR=9.1						
CFAA				S	Sn	09 19 57.5	-7.7
	0.1nm,0.3s,baz=94,slow=20,SNR=6.9						
CPUP	**Villa Florida**	**11.26**	**119**	P	Pn	09 18 22.0	+0.1
	0.2nm,0.3s,baz=284,slow=11,SNR=4.6						
PLCA	**Paso Flores**	**19.61**	**185**	P	P	09 20 02.6	-0.6
	0.1nm,0.3s,baz=33,slow=13,SNR=6.5						
BDFB	**Brasilia**	**19.98**	**77**	P	P	09 20 08.5	+1.3
	1.0nm,0.3s,baz=282,slow=11,SNR=6.7						
SNAA	**Sanae**	**62.41**	**161**	P	P	09 25 54.4	+0.2
	0.5nm,0.6s,baz=292,slow=5.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**76.68**	**70**	P	P	09 27 22.0	+0.1
	1.0nm,0.5s,baz=252,slow=5.4,SNR=16						
YKA	**Yellowknife Ar**	**91.07**	**340**	P	P	09 28 33.8	-1.2
	0.2nm,0.5s,baz=134,slow=5.0,SNR=4.8						
MKAR	**Makanchi Array**	**145.01**	**36**	PKPbc	PKPbc	09 35 07.1	+0.4
	0.4nm,0.4s,baz=330,slow=4.2,SNR=5.0						

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*NEIC **18** 09:16:09.0, 3996N×2677E, h10km, MD3.1(ISK), MD3.5(ATH), After ISK.*
*CSEM **18** 09:16:09.6±0.1, 3994N×2680E, h8km, MD3.1, Error ellipse: s-maj=1.4km s-min=1.1km az=156.0*
*ISK **18** 09:16:09.8, 3994N×2678E, h10km, MD3.1*
*ISCJB **18** 09:16:09.1±0.3, 3992N±002×2676E±002, h2km±3km, Error ellipse: s-maj=2.6km s-min=2.4km az=166.8*
*ATH **18** 09:16:10.2, 3993N×2667E, h12km±3km, MD3.5/4*
*THE **18** 09:16:11.6, 3991N×2661E, h3km, ML3.3*
*SOF **18** 09:16:13.5, 40.16N×2655E, h15km, MD2.8*
ISC 18 09:16:09.9±0.3**, 3991N**±002×**2676E**±002**, h4km**±3km**, n54, σ0ˢ88**/80**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CANB	**Canakkale**	**0.26**	**65**	*i* PG	**Pg**	**09 16 15.1**	**+0.2**
CANB				*i* SG	**Sg**	**09 16 19.0**	**+0.7**
EZN	**Ezine**	**0.34**	**256**	PG	**Pg**	**09 16 17.4**	**+0.9**
EZN				SG	**Sg**	**09 16 22.7**	**+1.7**
LPK	**Lapseki**	**0.47**	**0**	PG	**Pg**	**09 16 19.5**	**+0.7**
BOZC	**Bozcaada**	**0.55**	**263**	*i* P	**Pg**	**09 16 20.8**	**+0.4**
BOZC				*i* S	**Sg**	**09 16 26.2**	**-1.3**
AYVA	**Ayvalik**	**0.60**	**185**	*i* P	**Pg**	**09 16 21.3**	**-0.1**
AYVA				*i* S	**Sg**	**09 16 29.2**	**0.0**
GADA	**Gvkgeada**	**0.72**	**294**	PG	**Pg**	**09 16 24.1**	**+0.4**
GADA				SG	**Sg**	**09 16 34.8**	**+1.8**
PRK	**Paraskevi**	**0.76**	**210**	*e*PG	**Pg**	**09 16 24.3**	**-0.2**
PRK				*e*SB	**Sb**	**09 16 35.0**	**-1.3**
RKY	**Sarkoy-Tekirda**	**0.84**	**22**	PG	**Pg**	**09 16 26.0**	**-0.1**
RKY				SG	**Sg**	**09 16 37.4**	**+0.4**
SART	**Tekirdag**	**0.84**	**22**	*i* P	**Pg**	**09 16 25.8**	**-0.3**
SART				*i* S	**Sg**	**09 16 37.2**	**+0.1**
MRMT	**Marmara Adasi**	**0.95**	**42**	PG	**Pg**	**09 16 27.3**	**-0.7**
ENEZ	**Enez**	**0.95**	**331**	PG	**Pg**	**09 16 28.4**	**+0.3**
MFT	**Murefte**	**0.96**	**24**	PG	**Pg**	**09 16 27.3**	**-1.1**
MFT				SG	**Sg**	**09 16 41.3**	**+0.4**
BTOK	**Tokmak**	**0.99**	**98**	*i* P	**Pg**	**09 16 29.2**	**+0.3**
BTOK				*i* S	**Sg**	**09 16 41.7**	**0.0**
BNT	**Bandirma**	**1.00**	**63**	PG	**Pg**	**09 16 27.6**	**-1.4**
ALN	**Alexandroupoli**	**1.13**	**331**	*e*Pg	**Pg**	**09 16 31.0**	**-0.5**
	comp=Z,17nm,0.3s						
ALN				*e*Sg	**Sg**	**09 16 46.8**	**+0.7**
LIA	**Limnos Island**	**1.21**	**270**	*e*PB	**Pb**	**09 16 32.1**	**-1.2**
LOS	**Limnos**	**1.29**	**272**	*e*Pg	**Pg**	**09 16 33.8**	**-0.8**
LOS				*e*Sg	**Sg**	**09 16 51.0**	**-0.3**
AKS	**Akhisar**	**1.31**	**141**	PN	**Pn**	**09 16 35.0**	**0.0**
AKHS	**Akhisar**	**1.31**	**141**	*i* P	**Pn**	**09 16 34.6**	**-0.3**
AKHS				*i* S	**Sg**	**09 16 52.5**	**+0.4**
DST	**Dursunbey**	**1.47**	**101**	PN	**Pn**	**09 16 37.0**	**-0.2**
BLCB	**Balcova**	**1.54**	**172**	PN	**Pn**	**09 16 38.6**	**+0.6**
RDO	**Rodhopi**	**1.55**	**323**	*e*PB	**Pb**	**09 16 38.3**	**-0.8**
RDO				*e*SB	**Sb**	**09 16 58.8**	**-0.2**
KDAG	**Bornova**	**1.55**	**165**	*i* P	**Pn**	**09 16 39.3**	**+1.1**
KDAG				*i* S	**Sn**	**09 17 00.6**	**+1.7**
IZM	**Izmir**	**1.56**	**165**	PN	**Pn**	**09 16 39.5**	**+1.2**
CHOS	**Chios island**	**1.61**	**200**	*e*Pg	**Pn**	**09 16 38.6**	**-0.5**
CHOS				*e*Sg	**Sg**	**09 17 01.5**	**-0.2**
ORLT	**Orhaneli**	**1.65**	**84**	PN	**Pn**	**09 16 39.9**	**+0.3**
CTT	**Catalca**	**1.78**	**45**	PN	**Pn**	**09 16 40.2**	**-1.2**
ELBA	**Catalca**	**1.78**	**45**	*i* P	**Pn**	**09 16 40.2**	**-1.1**
ELBA				*i* S	**Sn**	**09 17 06.2**	**+1.8**
ULDT	**Uludag**	**1.84**	**82**	*i* P	**Pg**	**09 16 45.9**	**+0.7**
ULDT				*i* S	**Sg**	**09 17 08.5**	**-0.5**
GEMT	**Gemlik**	**1.94**	**73**	*e*PN	**Pn**	**09 16 42.8**	**-0.7**
EDRB	**Edirne**	**1.94**	**360**	*e*PN	**Pn**	**09 16 42.8**	**-0.8**
KDZ	**Kurdzhali**	**2.02**	**330**	*i* P	**Pn**	**09 16 44.6**	**0.0**
ISK	**Istanbul-Kandi**	**2.10**	**56**	*e*PN	**Pn**	**09 16 44.9**	**-0.9**
YLV	**Yalova**	**2.11**	**71**	*e*PN	**Pn**	**09 16 45.7**	**-0.2**
OUR	**Ouranopolis**	**2.17**	**282**	*e*Pn	**Pn**	**09 16 46.0**	**-0.8**
SMG	**Samos**	**2.20**	**178**	*e*PN	**Pn**	**09 16 49.7**	**+2.6**
KLYT	**Kilyos**	**2.20**	**52**	*e*PN	**Pn**	**09 16 46.8**	**-0.3**
GDZ	**Gediz**	**2.26**	**110**	*i* P	**Pg**	**09 16 53.5**	**+0.3**
GDZ				*i* S	**Sg**	**09 17 21.0**	**-1.5**
DIM	**Dimitrovgrad**	**2.33**	**337**	*i* P	**Pn**	**09 16 48.9**	**-0.1**
AOS	**Alonnisos**	**2.34**	**253**	*e*Pn	**Pn**	**09 16 48.3**	**-0.8**
ADVT	**Abdulvahap**	**2.34**	**76**	*e*PN	**Pn**	**09 16 49.6**	**+0.5**
PAIG	**Paliouri**	**2.37**	**271**	*e*Pn	**Pn**	**09 16 48.8**	**-0.7**
PAIG				*e*Sn	**Sn**	**09 17 17.0**	**-1.9**
HRT	**Hereke**	**2.40**	**67**	*e*PN	**Pn**	**09 16 50.1**	**+0.1**
JMB	**Yambol**	**2.56**	**357**	*e*Pn	**Pn**	**09 16 52.8**	**+0.7**
JMB				*e*Sn	**Sn**	**09 17 25.5**	**+1.8**
JMB	**Yambol**	**2.56**	**357**	P	**Pn**	**09 16 52.9**	**+0.8**
NVR	**Nevrokopi**	**2.63**	**304**	*e*PN	**Pn**	**09 16 53.8**	**+0.7**
PLD	**Plovdiv**	**2.69**	**325**	*e*Pn	**Pn**	**09 16 53.5**	**-0.4**
PLD				*e*Sn	**Sn**	**09 17 26.9**	**+0.1**
PLD	**Plovdiv**	**2.69**	**325**	*e*Pn	**Pn**	**09 16 53.5**	**-0.4**
PLD				*e*Sn	**Sn**	**09 17 27.0**	**+0.1**
BORA	**Eskisehir**	**2.84**	**89**	*e*P	**Pb**	**09 16 58.9**	**-2.3**
BORA				*i* S	**Sg**	**09 17 42.1**	**+0.8**
MMB	**Musomiste**	**2.85**	**307**	*e*Pn	**Pn**	**09 16 56.4**	**+0.3**
MMB				*e*Sn	**Sn**	**09 17 30.2**	**-0.7**
APE	**Apeiranthos**	**2.99**	**199**	*e*Pn	**Pn**	**09 16 59.5**	**+1.5**
APE	**Apeiranthos**	**2.99**	**199**	*e*Pn	**Pn**	**09 16 59.4**	**+1.3**
KNT	**Kendrikon**	**3.20**	**294**	*e*Pn	**Pn**	**09 17 01.1**	**+0.2**
VTS	**Vitosha**	**3.79**	**316**	*e*Pn	**Pn**	**09 17 09.3**	**+0.3**
VTS				*e*Sn	**Sn**	**09 17 54.7**	**+0.7**

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*ISCJB **18** 09:19:10.9±1.1, 3823N±003×2648E±006, h6km±5km, Error ellipse: s-maj=8.4km s-min=5.7km az=162.4*
*CSEM **18** 09:19:11.7±0.2, 3829N×2657E, h8km±1km, MD2.8, Error ellipse: s-maj=4.4km s-min=2.6km az=35.0*
*ATH **18** 09:19:12.1, 3832N×2685E, h20km, MD3.3/3*
*ISK **18** 09:19:12.8, 38.19N×2666E, h12km, MD2.8*
ISC 18 09:19:12.1±0.9**, 3827N**±003×**2651E**±006**, h10km**±4km**, n14, σ0ˢ64**/25**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.11**	**38**	*i* P	**Pg**	**09 19 14.8**	**0.0**
URLA				*i* S	**Sg**	**09 19 17.3**	**+0.5**
BLCB	**Balcova**	**0.44**	**75**	PG	**Pg**	**09 19 20.6**	**0.0**
BLCB				SG	**Sg**	**09 19 25.3**	**-1.1**
IZM	**Izmir**	**0.61**	**78**	*i* PG	**Pg**	**09 19 23.6**	**-0.2**
IZM				*i* SG	**Sg**	**09 19 31.6**	**-0.2**
KDAG	**Bornova**	**0.61**	**77**	*i* P	**Pg**	**09 19 23.5**	**-0.4**
KDAG				*i* S	**Sg**	**09 19 32.0**	**+0.1**
SMG	**Samos**	**0.62**	**155**	*e*PN	**Pg**	**09 19 24.3**	**+0.3**
SMG				*e*SN	**Sg**	**09 19 33.0**	**+0.9**
PRK	**Paraskevi**	**0.99**	**349**	*e*PN	**Pn**	**09 19 31.7**	**-0.3**
PRK				*e*SN	**Sn**	**09 19 46.0**	**-0.1**
AKHS	**Akhisar**	**1.19**	**59**	*i* P	**Pb**	**09 19 35.4**	**+0.6**
AKHS				*i* S	**Sb**	**09 19 50.6**	**+0.4**
AKHS	**Akhisar**	**1.19**	**59**	*i* P	**Pb**	**09 19 35.3**	**+0.6**
AKHS				*i* S	**Sb**	**09 19 50.6**	**+0.4**
AKS	**Akhisar**	**1.19**	**59**	*e*PN	**Pn**	**09 19 35.8**	**+1.0**
AKS				*e*SN	**Sn**	**09 19 51.6**	**+0.6**
AYDN	**Tasoluk**	**1.24**	**119**	*i* P	**Pn**	**09 19 35.6**	**+0.1**
AYDN				*i* S	**Sb**	**09 19 51.7**	**0.0**
BODT	**Bodrum**	**1.36**	**152**	*e*PN	**Pn**	**09 19 36.3**	**-0.9**
BDRM	**Kayabasi**	**1.41**	**148**	*i* P	**Pn**	**09 19 36.9**	**-1.0**
BDRM				*i* S	**Sn**	**09 19 57.2**	**+0.7**
APE	**Apeiranthos**	**1.43**	**213**	*e*PN	**Pn**	**09 19 42.0**	**+4.0**
YER	**Yerkesik**	**1.81**	**128**	*e*PN	**Pn**	**09 19 42.1**	**-1.2**

MAN 18 09:19:36.1, 912N×**12530E, h3km, mb2.3, ML3.9, MS0.0, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.35**	**115**	*e*P	Pg	09 19 43.3	+0.4
SCPH	**Surigao**	**0.69**	**16**⇓	*e*P	Pg	09 19 49.7	+0.4
BUKP	**Musuan**	**1.25**	**191**	*e*P	Pg	09 19 59.5	-0.6

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*ISCJB **18** 09:21:53.0±0.7, 4908S±008×308E±03, h10km, mb3.9/7, MS3.5/7, Error ellipse: s-maj=30.9km s-min=10.2km az=157.2*
*IDC **18** 09:21:53.4±1.0, 49.14S×3069E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.9/21, mbtmp4.0/8, ML3.9/1, MS3.6/8, Ms1 3.6/8, ms1mx3.4/32, Error ellipse: s-maj=43.6km s-min=17.5km az=78.0*
*NEIC **18** 09:21:54.9±0.7, 49.14S×3072E, h10km, mb4.5/1, Error ellipse: s-maj=32.1km s-min=10.6km az=77.0*
ISC 18 09:21:54.5±0.7**, 4913S**±008×**309E**±03**, h10km, n18, σ0ˢ90**/14**, mb3.9**/7**, MS3.5**/7**, 1C-1D, South of Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**18.36**	**332**	P	**Pn**	**09 26 09.4**	**+0.2**
	0.4nm,0.3s,baz=150,slow=10,SNR=4.6						
SUR				LR	LR	09 31 31.1	
	comp=Z,255nm,19.9s,baz=186,slow=32						
SYO	**Syowa Base**	**20.39**	**171**⇑	*e*P	**P**	**09 26 30.4**	**-1.1**
SYO	**Syowa Base**	**20.39**	**171**⇓	*e*P	**P**	**09 26 35.4**	**+3.9**
BOSA	**Boshof**	**20.94**	**346**	P	**P**	**09 26 37.4**	**0.0**
	5.7nm,0.9s,baz=177,slow=11,SNR=5.6						
BOSA				LR	LR	09 32 34.9	
	comp=Z,153nm,20.7s,MS3.4,baz=156,slow=31						
LBTB	**Lobatse**	**24.43**	**348**	LR	LR	09 35 18.6	
	comp=Z,84nm,20.5s,MS3.2,baz=160,slow=33						
MAW	**Mawson**	**24.50**	**151**	P	**P**	**09 27 14.6**	**+0.8**
	2.8nm,0.8s,mb3.7,baz=291,slow=12,SNR=7.4						
MAW				LR	LR	09 35 03.4	
	comp=Z,45nm,20.5s,MS3.0,baz=250,slow=32						
SNAA	**Sanae**	**27.37**	**202**	P	**P**	**09 27 40.1**	**+0.3**
	1.0nm,0.7s,mb3.4,baz=119,slow=3.5,SNR=8.0						
SNAA	**Sanae**	**27.37**	**202**	*e*	**P**	**09 27 40.8**	**+1.0**
SNAA				*e*		09 27 46.3	
VNA1	**Neumayer--Stat**	**28.28**	**206**	*e*	**P**	**09 27 49.6**	**+1.6**
VNA1				*e*		09 27 55.8	
VNA1				*e*		09 28 02.1	
MATP	**Matopo**	**28.70**	**355**	P	**P**	**09 27 51.9**	**+0.2**
	4.8nm,1.1s,mb4.1,baz=181,slow=9.3,SNR=7.1						
MATP				LR	LR	09 37 46.1	
	comp=Z,114nm,19.5s,MS3.5,baz=195,slow=33						
MATP	**Matopo**	**28.70**	**355**	P	**P**	**09 27 51.9**	**+0.2**
MATP				LR	LR	09 37 46.1	
QSPA	**South Pole Qui**	**41.09**	**180**	*e*P	**P**	**09 29 38.0**	**-0.4**
	7.2nm,0.8s,mb4.3						
KMBO	**Kilima Mbogo**	**48.13**	**9**	LR	LR	09 48 21.9	
	comp=Z,60nm,21.4s,MS3.5,baz=111,slow=33						
VNDA	**Vanda**	**50.04**	**168**	P	**P**	**09 30 48.0**	**-1.2**
	0.8nm,0.6s,mb3.9,baz=226,slow=5.8,SNR=9.3						
VNDA				LR	LR	09 50 46.1	
	comp=Z,97nm,20.6s,MS3.8,baz=317,slow=35						
TORD	**Torodi Ar. Bea**	**67.16**	**329**	P	**P**	**09 32 48.6**	**+0.1**
	0.7nm,0.6s,mb3.9,baz=178,slow=8.1,SNR=3.4						
CPUP	**Villa Florida**	**69.47**	**253**	P	**P**	**09 33 01.4**	**-1.5**
	0.7nm,0.6s,mb3.8,baz=109,slow=9.2,SNR=4.8						
GERES	**GERESS Array B**	**98.71**	**349**	LR	LR	10 19 56.5	
	comp=Z,151nm,18.1s,MS4.5,baz=285,slow=35						
PDAR	**Pinedale Array**	**152.03**	**272**	PKPbc	PKPbc	09 41 51.7	+1.8
	0.6nm,0.9s,baz=93,slow=3.0,SNR=4.6						

IDC 18 09:26:51.2±8.7**, 952S**×**12428E, h100km**±96km**, mb3.7**/2**, mb1 3.9**/5**, mb1mx3.6**/15**, mbtmp4.1**/5**, ML4.3**/3**, Error ellipse: s-maj=80.1km s-min=56.4km az=55.0, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.63**	**171**	P	Pn	09 28 54.7	+1.5
	3.8nm,0.3s,baz=2.6,slow=9.0,SNR=153						
FITZ				S	Sn	09 30 26.1	-2.7
	18nm,0.3s,baz=99,slow=9.9,SNR=38						
WRA	**Warramunga Arr**	**14.21**	**138**	P	Pn	09 30 07.8	+0.1
	1.7nm,0.3s,baz=323,slow=13,SNR=68						
WRA				S	Sn	09 32 36.6	-7.5
	2.6nm,0.3s,baz=306,slow=22,SNR=16						
ASAR	**Alice Springs**	**16.81**	**148**	P	Pn	09 30 42.5	+2.2
	0.5nm,0.3s,baz=315,slow=11,SNR=43						
ASAR				S	S	09 33 42.8	-8.3
	1.2nm,0.3s,baz=313,slow=20,SNR=24						
MKAR	**Makanchi Array**	**67.40**	**330**	P	P	09 37 35.3	-0.5
	0.8nm,0.6s,baz=125,slow=7.6,SNR=6.3						
AKTO	**Aktyubinsk**	**82.67**	**324**	P	P	09 39 04.2	+0.6
	1.0nm,0.5s,baz=108,slow=3.2,SNR=3.9						

CASC 18 09:57:27.5±3.5**, 1568N**×**9105W, h0km**±24km**, MD3.8, mb4.3**(NEIC)**, 1C-2D, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TP2	**Tecpan 2**	**0.89**	**178**⇓	*e*P	Pg	09 57 46.5	+2.0
TP2				*e*S	Sg	09 57 59.2	+3.2
RBDL	**Robledal**	**2.04**	**140**⇑	*e*P	x	09 58 10.3	
RBDL				*e*S	x	09 58 38.4	
MTO2	**Montecristo 2**	**2.06**	**128**⇓	*e*P	x	09 58 09.8	
MTO2				*e*S	x	09 58 37.1	
RTR	**El Retiro**	**2.23**	**142**	*e*P	x	09 58 13.9	
RTR				*e*S	x	09 58 46.8	
SNJE	**San Jose**	**2.27**	**142**	*e*P	x	09 58 14.7	
SNJE				*e*S	x	09 58 44.5	

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*PRU **18** 10:12:33.9, 3982N×1886E, h0km, M4.2*
*ROM **18** 10:12:33.8±0.4, 4001N×1989E, h10km, Ml4.2/35, Error*

ellipse: s-maj=6.8km s-min=4.1km az=61.0
ATH ***18*** *10:12:33.9, 40.12N×1961E, h19km±1km, MD4.1/18, ML4.4*
TIR ***18*** *10:12:33.5, 3998N×1976E, h35km, Ml3.8*
ISCJB ***18*** *10:12:34.0±0.1, 40.16N±001×1970E±001, h10km, mb4.1/15, MS3.4/4, Error ellipse: s-maj=2.0km s-min=1.4km az=22.5*
NEIC ***18*** *10:12:35.0, 40.11N×1970E, h9km, mb4.2/3, ML4.1(PDG), ML4.0(THE), ML4.4(ATH), After THE.*
PDG ***18*** *10:12:34.4±1.2, 40.15N×1966E, h6km±3km*
THE ***18*** *10:12:35.0, 40.12N×1970E, h8km, ML4.1*
CSEM ***18*** *10:12:35.0±0.0, 4020N×1977E, h10km, mb4.0/1, ML4.5/5, Ms3.5, Error ellipse: s-maj=1.1km s-min=0.7km az=10.0*
MOS ***18*** *10:12:35.0±1.0, 4020N×1963E, h24km, mb4.3/3, Error ellipse: s-maj=4.4km s-min=3.5km az=98.3*
LDG ***18*** *10:12:37.7±0.1, 40.13N×1968E, h10km, Ml4.2/5, Error ellipse: s-maj=4.2km s-min=2.6km az=19.0*
IDC ***18*** *10:12:39.0±1.8, 4025N×1973E, h41km±17km, mb3.8/13, mb1 3.9/20, mb1mx3.9/30, mbtmp3.9/20, ML3.7/7, MS3.3/5, Ms1 3.3/5, ms1mx2.8/31, Error ellipse: s-maj=19.5km s-min=11.1km az=139.0*
VIE ***18*** *10:12:39.4±0.6, 4054N×1962E, h10km, mb3.5/4, Ms3.5/4, Error ellipse: s-maj=9.0km s-min=4.2km az=57.0 86 km S of Durres*
HLW ***18*** *10:13:41.4, 3602N×2422E, h13km, Mb4.3*
ISC 18 10:12:35.3±0.1**, 4014N**±001×**1970E**±001**, h10**km**, n272,** σ1§**32**/349**, mb4.1**/15**, MS3.4**/4**, 32C-25D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.28**	**56**	*i* Pg	**Pg**	**10 12 43.1**	**+2.1**
TPE				*i* Sg	**Sg**	**10 12 52.4**	**+7.6**
SRN	**Sarande**	**0.34**	**138**	*i* Pg	**Pg**	**10 12 40.9**	**-1.2**
SRN				*i* Sg	**Sg**	**10 12 45.9**	**-0.9**
KEK	**Kerkira**	**0.43**	**170**	*e*PB	**Pg**	**10 12 42.4**	**-1.4**
KEK				*e*SB	**Sg**	**10 12 49.0**	**-0.5**
LSK	**Leskovik**	**0.69**	**89**	*i* Pg	**Pg**	**10 12 47.2**	**-1.4**
LSK				*i* Sg	**Sg**	**10 12 57.2**	**-0.4**
IGT	**Igoumenitsa**	**0.78**	**141**	*e*Pg	**Pg**	**10 12 48.3**	**-2.0**
IGT				*e*Sg	**Sg**	**10 13 00.2**	**-0.2**
SCTE	**Santa Cesarea**	**0.95**	**266**	Pn	**Pn**	**10 12 54.5**	**-0.2**
SCTE				Sn	**Sn**	**10 13 09.5**	**+1.2**
	7μm,0.7s						
KBN	**Korca**	**0.96**	**59**	*i* Pg	**Pg**	**10 12 52.9**	**-0.9**
KBN				*i* Sg	**Sg**	**10 13 09.3**	**+3.0**
JAN	**Janina**	**1.00**	**118**	*e*PB	**Pb**	**10 12 53.1**	**-1.7**
JAN				*e*SN	**Sn**	**10 13 09.1**	**-0.6**
TIR	**Tirane**	**1.21**	**6**	*e*Pg	**Pg**	**10 12 57.4**	**-1.3**
TIR				*e*Sg	**Sg**	**10 13 14.6**	**+0.2**
TIR	**Tirane**	**1.21**	**6**	*i* Pg	**Pg**	**10 12 57.4**	**-1.3**
TIR	**Tirane**	**1.21**	**6**	Pn	**Pn**	**10 12 59.4**	**+1.1**
	6μm,0.9s						
TIR				*e*Sg	**Sg**	**10 13 14.6**	**+0.2**
MEV	**Metsovon**	**1.22**	**106**	*e*Pg	**Pg**	**10 12 57.1**	**-1.8**
MEV				*e*Sg	**Sg**	**10 13 14.1**	**-0.7**
LCI	**Lecce**	**1.23**	**280**	Pn	**Pn**	**10 12 58.5**	**-0.1**
	584nm,0.3s						
OHR	**Ohrid**	**1.28**	**40**	*e*Pg	**Pg**	**10 12 57.7**	**-2.2**
OHR				*e*Sg	**Sg**	**10 13 17.0**	**+0.5**
OHR	**Ohrid**	**1.28**	**40**	*e*Pn	**Pn**	**10 12 58.3**	**-1.0**
OHR				*e*Sn	**Sn**	**10 13 18.3**	**+1.8**
OHR	**Ohrid**	**1.28**	**40**	*e*Pn	**Pn**	**10 12 58.2**	**-1.1**
OHR				*e*Sg	**Sg**	**10 13 17.0**	**+0.5**
OHR				*e*Sn	**Sn**	**10 13 18.2**	**+1.7**
FNA	**Florina**	**1.43**	**63**	*e*Pg	**Pg**	**10 12 59.7**	**-3.1**
FNA				*e*Sg	**Sg**	**10 13 20.4**	**-0.9**
BIA	**Bitola**	**1.52**	**54**	*e*Pg	**Pg**	**10 13 01.5**	**-2.9**
BIA				*e*Sg	**Sg**	**10 13 21.9**	**-2.2**
BIA	**Bitola**	**1.52**	**54**	*e*Pn	**Pn**	**10 13 01.7**	**-0.8**
BIA				*e*Sn	**Sn**	**10 13 23.0**	**+0.7**
BIA	**Bitola**	**1.52**	**54**	*e*Pg	**Pg**	**10 13 01.5**	**-2.9**
BIA				*e*Sg	**Sg**	**10 13 21.9**	**-2.2**
BIA				*e*Sn	**Sn**	**10 13 23.0**	**+0.7**
KZN	**Kozani**	**1.59**	**83**	*e*PN	**Pn**	**10 13 04.0**	**+0.5**
KZN				*e*SN	**Sn**	**10 13 26.4**	**+2.3**
LKD	**Levkas**	**1.61**	**153**	*e*Pg	**Pg**	**10 13 02.7**	**-3.5**
LKD				*e*Sg	**Sg**	**10 13 23.8**	**-3.2**
ULC	**Ulcinj**	**1.86**	**349**	⇑*i*Pn	**Pn**	**10 13 06.5**	**-0.7**
ULC				*e*Sn	**Sn**	**10 13 34.7**	**+4.0**
PE1	**Pezze di Greco**	**1.86**	**292**	*e*Pn	**Pn**	**10 13 06.7**	**-0.6**
EVR	**Evrytania**	**2.03**	**126**	*e*PN	**Pn**	**10 13 10.9**	**+1.3**
EVR				*e*SN	**Sn**	**10 13 36.8**	**+1.7**
VLS	**Valsamata**	**2.08**	**160**	*e*PN	**Pn**	**10 13 10.5**	**+0.3**
NOCI	**Noci**	**2.12**	**289**	Pn	**Pn**	**10 13 10.9**	**+0.2**
	2μm,0.6s						
LIT	**Litokhoron**	**2.14**	**90**	*e*Pn	**Pn**	**10 13 10.4**	**-0.6**
	comp=Z,26nm,0.6s						
LIT				*e*Sn	**Sn**	**10 13 37.5**	**-0.1**
GRG	**Griva**	**2.21**	**67**	*e*Pn	**Pn**	**10 13 12.1**	**0.0**
GRG				*e*Sn	**Sn**	**10 13 40.0**	**+0.5**
BUM	**Brajici-Budva**	**2.24**	**345**	⇑*i*Pn	**Pn**	**10 13 11.7**	**-0.8**
BUM				*e*Sn	**Sn**	**10 13 43.3**	**+3.0**
SKO	**Skopje**	**2.25**	**35**	*e*Pn	**Pn**	**10 13 13.0**	**+0.3**
SKO				*e*Sn	**Sn**	**10 13 42.7**	**+2.2**
SKO	**Skopje**	**2.25**	**35**	*e*Pn	**Pn**	**10 13 13.7**	**+1.1**
SKO				*e*Sn	**Sn**	**10 13 38.3**	**-2.2**
TTG	**Podgorica**	**2.31**	**352**	⇓*i*Pn	**Pn**	**10 13 13.1**	**-0.4**
TTG				*e*Sn	**Sn**	**10 13 45.1**	**+3.1**
AGG	**Agios Georgios**	**2.32**	**118**	*e*Pn	**Pn**	**10 13 12.9**	**-0.6**
	comp=Z,18nm,0.5s						
AGG				*e*Sn	**Sn**	**10 13 42.1**	**+0.1**
BAI	**Bari**	**2.36**	**295**	*e*Pn	**Pn**	**10 13 13.6**	**-0.5**
SG1	**Sgolgore (BA)**	**2.41**	**288**	*e*Pn	**Pn**	**10 13 14.1**	**-0.7**
STIP	**Stip**	**2.44**	**50**	*e*Pn	**Pn**	**10 13 15.0**	**-0.2**
STIP				*e*Sn	**Sn**	**10 13 46.7**	**+1.6**
STIP	**Stip**	**2.44**	**50**	*e*Pn	**Pn**	**10 13 15.6**	**+0.4**
STIP				*e*Sn	**Sn**	**10 13 46.9**	**+1.8**
PVY	**Plav**	**2.46**	**5**	⇓*i*Pn	**Pn**	**10 13 15.8**	**+0.3**
PVY				*e*Sn	**Sn**	**10 13 48.6**	**+2.9**
VAY	**Valandovo**	**2.48**	**61**	*e*Pn	**Pn**	**10 13 14.3**	**-1.4**
VAY				*e*Sn	**Sn**	**10 13 47.3**	**+1.3**
VAY	**Valandovo**	**2.48**	**61**	*e*Pn	**Pn**	**10 13 15.4**	**-0.4**
VAY				*e*Sn	**Sn**	**10 13 44.9**	**-1.1**
HCY	**Herceg Novi**	**2.48**	**339**	⇓*i*Pn	**Pn**	**10 13 14.6**	**-1.2**
HCY				*e*Sn	**Sn**	**10 13 49.1**	**+3.0**
AMUR	**Altamura**	**2.48**	**289**	Pn	**Pn**	**10 13 15.7**	**-0.1**
	643nm,0.5s						
RLS	**Riolos of Patr**	**2.49**	**146**	*e*PN	**Pn**	**10 13 16.1**	**+0.2**
MIGL	**Miglionico**	**2.54**	**282**	Pn	**Pn**	**10 13 17.3**	**+0.8**
	5μm,0.8s						
THE	**Thessaloniki**	**2.54**	**78**	*e*Pn	**Pn**	**10 13 16.6**	**0.0**
	comp=Z,5.0nm,0.7s						
THE				*e*Sn	**Sn**	**10 13 47.8**	**+0.3**
SERS	**Sersale**	**2.58**	**246**	Pn	**Pn**	**10 13 17.5**	**+0.4**
	658nm,1.3s						
HORT	**Hortiatis**	**2.63**	**79**	*e*Pn	**Pn**	**10 13 17.3**	**-0.6**
HORT				*e*Sn	**Sn**	**10 13 50.1**	**+0.2**
KNT	**Kendrikon**	**2.64**	**66**	*e*Pn	**Pn**	**10 13 17.9**	**0.0**
	comp=Z,17nm,1.0s						
NKY	**Niksic**	**2.73**	**349**	⇑*i*Pn	**Pn**	**10 13 18.9**	**-0.2**
NKY				*e*Sn	**Sn**	**10 13 54.4**	**+2.3**
IVA	**Berane**	**2.73**	**3**	⇓*i*Pn	**Pn**	**10 13 19.6**	**+0.4**
IVA				*e*Sn	**Sn**	**10 13 55.5**	**+3.1**
IVA	**Berane**	**2.73**	**3**	⇓*i*Pn	**Pn**	**10 13 19.6**	**+0.3**
TREB	**Trebinje**	**2.77**	**339**	P	**Pn**	**10 13 18.6**	**-1.1**
TREB				S	**Sn**	**10 13 55.4**	**+2.2**
CDT	**Castel del Mon**	**2.78**	**291**	*e*Pn	**Pn**	**10 13 19.1**	**-0.7**
SCHR	**S. Chirico Rap**	**2.78**	**272**	Pn	**Pn**	**10 13 22.6**	**+2.7**
	635nm,1.1s						
XOR	**Xorichti**	**2.80**	**105**	*e*Pn	**Pn**	**10 13 19.9**	**-0.2**
XOR				*e*Sn	**Sn**	**10 13 54.3**	**+0.4**
NEO	**Neokhori**	**2.84**	**106**	*e*PN	**Pn**	**10 13 21.4**	**+0.7**
GRI	**Girifalco**	**2.86**	**244**	Pn	**Pn**	**10 13 21.2**	**+0.2**
	80nm,0.4s						
SOH	**Sokhos**	**2.87**	**75**	*e*Pn	**Pn**	**10 13 21.1**	**0.0**
SOH				*e*Sn	**Sn**	**10 13 55.5**	**-0.1**
PLG	**Polygyros**	**2.87**	**84**	*e*PN	**Pn**	**10 13 22.6**	**+1.4**
PLG				*e*SN	**Sn**	**10 13 56.2**	**+0.4**
BRY	**Bratogost**	**2.89**	**343**	⇓*i*Pn	**Pn**	**10 13 20.5**	**-1.0**
BRY				*e*Sn	**Sn**	**10 13 58.3**	**+2.0**
LKR	**Lokris**	**2.95**	**119**	*e*PN	**Pn**	**10 13 23.1**	**+0.8**
CUC	**Castrocucco**	**2.99**	**268**	Pn	**Pn**	**10 13 25.6**	**+2.9**
	1μm,1.2s						
PLAC	**Placanica**	**3.04**	**237**	Pn	**Pn**	**10 13 22.8**	**-0.7**
	189nm,0.6s						
PAIG	**Paliouri**	**3.06**	**93**	*e*Pn	**Pn**	**10 13 23.6**	**-0.1**
PAIG				*e*Sn	**Sn**	**10 14 00.3**	**-0.1**
UPM	**Unac-Piva**	**3.12**	**349**	⇓*i*Pn	**Pn**	**10 13 25.0**	**+0.4**
UPM				*e*Sn	**Sn**	**10 14 04.8**	**+3.0**
SLCN	**Sala Consilina**	**3.12**	**276**	Pn	**Pn**	**10 13 25.7**	**+1.1**
	787nm,0.9s						
PLE	**Pljevlja**	**3.20**	**356**	⇓*i*Pn	**Pn**	**10 13 24.9**	**-0.7**
PLE				*e*Sn	**Sn**	**10 14 06.4**	**+2.6**
FGMS	**Monte Sant'Ang**	**3.25**	**300**	Pn	**Pn**	**10 13 26.0**	**-0.3**
	212nm,0.5s						
MS1	**Monte Sant'Ang**	**3.25**	**300**	*e*Pn	**Pn**	**10 13 25.3**	**-1.1**
MRLC	**Muro Lucano**	**3.27**	**282**	Pn	**Pn**	**10 13 28.4**	**+1.7**
	608nm,0.9s						
MSAG	**Monte S. Angel**	**3.28**	**300**	Pn	**Pn**	**10 13 26.2**	**-0.5**
	801nm,0.8s						
OUR	**Ouranopolis**	**3.28**	**85**	*e*Pn	**Pn**	**10 13 27.0**	**+0.2**
	comp=Z,10.0nm,1.0s						
AOS	**Alonnisos**	**3.37**	**105**	*e*Pn	**Pn**	**10 13 27.9**	**0.0**
AOS				*e*Sn	**Sn**	**10 14 09.0**	**+1.1**
CMPR	**Campora**	**3.37**	**274**	Pn	**Pn**	**10 13 29.1**	**+1.1**
	423nm,1.1s						
MMB	**Musomiste**	**3.38**	**63**	*e*Pn	**Pn**	**10 13 28.5**	**+0.4**
MMB				*e*Sn	**Sn**	**10 14 08.8**	**+0.6**
CDRU	**Civita di Ruta**	**3.38**	**277**	Pn	**Pn**	**10 13 29.5**	**+1.3**
	716nm,1.7s						
NVR	**Nevrokopi**	**3.38**	**68**	*e*PN	**Pn**	**10 13 29.7**	**+1.5**
SGRT	**San Giovanni R**	**3.41**	**300**	Pn	**Pn**	**10 13 28.2**	**-0.3**
	720nm,1.1s						
ITM	**Ithomi**	**3.43**	**149**	*e*PN	**Pn**	**10 13 30.0**	**+1.2**
SGTA	**Sant Agata di**	**3.45**	**288**	Pn	**Pn**	**10 13 30.9**	**+1.8**
	1μm,1.3s						
RGNG	**Rignano Grg**	**3.48**	**298**	Pn	**Pn**	**10 13 29.2**	**-0.3**
MGER	**Gerania Oros**	**3.50**	**127**	*e*PN	**Pn**	**10 13 30.0**	**+0.2**
SOI	**Samo**	**3.51**	**235**	Pn	**Pn**	**10 13 29.3**	**-0.6**
SOI				Sn	**Sn**	**10 14 11.2**	**-0.3**
	296nm,0.6s						
SNAL	**S. Angelo Dei**	**3.52**	**284**	Pn	**Pn**	**10 13 32.2**	**+2.2**
	4μm,2.1s						
CAFE	**Carife**	**3.52**	**286**	Pn	**Pn**	**10 13 32.0**	**+2.0**
	1μm,1.2s						
MCRV	**Calabrutti - M**	**3.52**	**282**	Pn	**Pn**	**10 13 31.5**	**+1.5**
	262nm,0.7s						
FG5	**Orsara di Pugl**	**3.56**	**290**	Pn	**Pn**	**10 13 32.2**	**+1.6**
	254nm,0.5s						
VTS	**Vitosha**	**3.60**	**46**	*e*Pn	**Pn**	**10 13 31.6**	**+0.5**
VTS				*e*Sn	**Sn**	**10 14 14.5**	**+0.7**
VTS	**Vitosha**	**3.60**	**46**	⇑*i*P	**Pn**	**10 13 32.5**	**+1.3**
VTS				*e*Sn	**Sn**	**10 14 14.5**	**+0.8**
MSRU	**Castanea**	**3.76**	**241**	Pn	**Pn**	**10 13 33.6**	**+0.3**
	462nm,0.8s						
MTTG	**Motta San Giov**	**3.78**	**237**	Pn	**Pn**	**10 13 33.2**	**-0.4**
	237nm,0.6s						
NAIG	**Nisos Aigina**	**3.79**	**128**	*e*PN	**Pn**	**10 13 33.5**	**-0.2**
ATH	**Athens Observa**	**3.80**	**123**	*e*PN	**Pn**	**10 13 33.9**	**0.0**
PTL	**Penteli**	**3.85**	**121**	*e*PN	**Pn**	**10 13 34.5**	**-0.1**
CIGN	**Sant'Elia a Pi**	**3.94**	**294**	Pn	**Pn**	**10 13 37.8**	**+2.0**
	779nm,1.0s						
DIVS	**Divcibare**	**3.96**	**3**	*e*Pn	**Pn**	**10 13 35.5**	**-0.6**
DIVS	**Divcibare**	**3.96**	**3**	*e*Pn	**Pn**	**10 13 35.5**	**-0.6**
SACR	**S. Croce Del S**	**4.00**	**290**	Pn	**Pn**	**10 13 38.7**	**+2.1**
	483nm,1.2s						
BOLS	**Boljevac**	**4.05**	**24**	⇓*i*Pn	**Pn**	**10 13 37.5**	**+0.1**
MMME	**Mongiuffi-Meli**	**4.10**	**239**	Pn	**Pn**	**10 13 38.6**	**+0.5**
	151nm,0.7s						
FRES	**Fresagrandinar**	**4.22**	**297**	Pn	**Pn**	**10 13 41.1**	**+1.4**
TRIV	**Trivento**	**4.23**	**294**	Pn	**Pn**	**10 13 41.2**	**+1.4**
	1μm,1.5s						
VLI	**Veliai**	**4.25**	**142**	*e*PN	**Pn**	**10 13 40.3**	**+0.1**
PLD	**Plovdiv**	**4.26**	**61**	*e*Pn	**Pn**	**10 13 40.6**	**+0.5**
PLD				*e*Sn	**Sn**	**10 14 30.6**	**+0.6**
PLD	**Plovdiv**	**4.26**	**61**	*e*Pn	**Pn**	**10 13 40.7**	**+0.5**
PLD				*e*Sn	**Sn**	**10 14 30.5**	**+0.6**
VAGA	**Valle Agricola**	**4.34**	**289**	Pn	**Pn**	**10 13 42.6**	**+1.2**
	339nm,0.9s						
MOCO	**Biccari - m.te**	**4.39**	**288**	Pn	**Pn**	**10 13 33.7**	**-8.3**
	2μm,1.5s						
MIDA	**Miranda**	**4.39**	**292**	Pn	**Pn**	**10 13 43.5**	**+1.4**
	587nm,1.6s						
MNO	**Monte Soro**	**4.48**	**242**	Pn	**Pn**	**10 13 44.7**	**+1.5**
	360nm,0.8s						
RNI2	**Rionero Sannit**	**4.49**	**292**	Pn	**Pn**	**10 13 45.3**	**+2.0**
	665nm,1.6s						
CERA	**Filignano**	**4.55**	**291**	Pn	**Pn**	**10 13 46.0**	**+1.8**
	621nm,1.4s						
RDO	**Rodhopi**	**4.55**	**75**	*e*PN	**Pn**	**10 13 46.4**	**+2.2**
KYTH	**Kithira**	**4.66**	**145**	*e*PN	**Pn**	**10 13 47.0**	**+1.3**
SSY	**Sortino**	**4.69**	**232**	Pn	**Pn**	**10 13 43.4**	**-2.8**
	501nm,0.7s						
SDI	**San Donato**	**4.73**	**291**	Pn	**Pn**	**10 13 48.4**	**+1.7**
	54nm,0.6s						
INTR	**Introdacqua**	**4.77**	**295**	Pn	**Pn**	**10 13 47.2**	**0.0**
	411nm,0.9s						
HAVL	**Avola**	**4.79**	**230**	Pn	**Pn**	**10 13 45.7**	**-1.8**
	275nm,0.4s						
ALN	**Alexandroupoli**	**4.89**	**79**	*e*Pn	**Pn**	**10 13 49.0**	**+0.1**
ALN				*e*Sn	**Sn**	**10 14 47.7**	**+2.1**
VAE	**Valguarnera**	**4.91**	**239**	P	**Pn**	**10 13 51.3**	**+2.1**
	1.1nm,0.3s,baz=264,slow=3.1,SNR=5.0						
VAE				S	**Sn**	**10 14 50.0**	**+3.9**
	3.1nm,0.3s,baz=288,slow=4.1,SNR=2.9						
VAE	**Valguarnera**	**4.91**	**239**	P	**Pn**	**10 13 51.3**	**+2.1**
VAE				S	**Sn**	**10 14 50.0**	**+3.9**
VVLD	**Villa Vallelon**	**4.92**	**293**	Pn	**Pn**	**10 13 50.1**	**+0.8**
	420nm,1.2s						
PRK	**Paraskevi**	**5.14**	**98**	*e*PN	**Pn**	**10 13 54.9**	**+2.5**
TERO	**Teramo**	**5.22**	**300**	Pn	**Pn**	**10 13 53.2**	**-0.2**
	80nm,0.5s						
CHOS	**Chios island**	**5.23**	**108**	*e*Pn	**Pn**	**10 13 52.9**	**-0.7**
CHOS				*e*Sn	**Sn**	**10 14 54.8**	**+0.9**
AQU	**L'Aquila**	**5.24**	**297**	⇑*i*P	**Pn**	**10 13 55.0**	**+1.3**
AQU	**L'Aquila**	**5.24**	**297**	*e*P	**Pn**	**10 13 54.9**	**+1.2**
AQU				pmax	pmax		
	comp=Z,93nm,0.9s						
AQU	**L'Aquila**	**5.24**	**297**	*e*P	**Pn**	**10 13 54.9**	**+1.2**
	comp=Z,93nm,0.9s						
AQU	**L'Aquila**	**5.24**	**297**	*e*P	**Pn**	**10 13 54.9**	**+1.2**
	comp=Z,93nm,0.9s						
CERT	**Cerreto**	**5.39**	**292**	Pn	**Pn**	**10 13 57.4**	**+1.6**
	comp=Z,39nm,0.5s						
FIAM	**Fiamignano**	**5.41**	**295**	Pn	**Pn**	**10 13 57.7**	**+1.7**
	comp=Z,70nm,0.7s						
APE	**Apeiranthos**	**5.50**	**122**	*e*Pn	**Pn**	**10 13 56.8**	**-0.4**
APE	**Apeiranthos**	**5.50**	**122**	*e*PN	**Pn**	**10 13 59.7**	**+2.5**
APE	**Apeiranthos**	**5.50**	**122**	⇓*i*P	**Pn**	**10 13 55.7**	**-1.5**
APE	**Apeiranthos**	**5.50**	**122**	P	**Pn**	**10 13 56.8**	**-0.4**
APE				*e*Pn	**Pn**	**10 13 59.7**	**+2.5**
LNSS	**Leonessa**	**5.58**	**298**	Pn	**Pn**	**10 13 59.8**	**+1.4**
	comp=Z,167nm,0.6s						
BZS	**Buzias**	**5.65**	**14**	⇓*i*P	**Pn**	**10 13 59.3**	**-0.1**
BZS	**Buzias**	**5.65**	**14**	⇓P	**Pn**	**10 13 59.3**	**0.0**
JMB	**Yambol**	**5.68**	**64**	*e*Pn	**Pn**	**10 14 00.4**	**+0.7**
NVLJ	**Novalja**	**5.69**	**323**	*i* Pn	**Pn**	**10 13 58.7**	**-1.1**
NVLJ				*i* Sn	**Sn**	**10 15 03.1**	**-2.1**
CING	**Cingoli**	**5.84**	**306**	Pn	**Pn**	**10 14 01.4**	**-0.6**
	comp=Z,49nm,0.7s						
VAM	**Vamos**	**5.91**	**142**	*e*PN	**Pn**	**10 14 04.0**	**+1.0**
SNTG	**Esanatoglia**	**5.94**	**304**	Pn	**Pn**	**10 14 03.1**	**-0.3**
	comp=Z,44nm,0.4s						
PKSM	**Moragy**	**6.12**	**353**	⇑*i*P	**Pn**	**10 14 07.1**	**+1.3**
PKSM	**Moragy**	**6.12**	**353**	⇑P	**Pn**	**10 14 07.1**	**+1.3**
FSSB	**Fossombrone**	**6.27**	**307**	Pn	**Pn**	**10 14 07.4**	**-0.4**
BOJS	**Bojanci**	**6.28**	**330**	*i* Pn	**Pn**	**10 14 07.6**	**-0.4**
BOJS				*e*Sn	**Sn**	**10 15 16.3**	**-3.5**
VOIR		**6.59**	**35**	⇑*i*P	**Pn**	**10 14 13.4**	**+1.1**
VOIR		**6.59**	**35**	⇑P	**Pn**	**10 14 13.4**	**+1.1**
LJU	**Ljubljana**	**7.01**	**329**	*e*Pn	**Pn**	**10 14 17.0**	**-1.0**
LJU				*e*Sn	**Sn**	**10 15 37.0**	**-0.8**
MLR	**Muntele Rosu**	**7.05**	**39**	P	**Pn**	**10 14 20.2**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=252,slow=10,SNR=7.8						
MLR	**Muntele Rosu**	**7.05**	**39**	⇑*i*P	**Pn**	**10 14 20.6**	**+2.1**
MLR	**Muntele Rosu**	**7.05**	**39**	P	**Pn**	**10 14 20.2**	**+1.7**
MLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MLR	**Muntele Rosu**	**7.05**	**39**	⇑P	**Pn**	**10 14 20.6**	**+2.1**
VOY	**Vojsko**	**7.26**	**326**	*e*Pn	**Pn**	**10 14 20.2**	**-1.3**
VOY				*e*Sn	**Sn**	**10 15 40.9**	**-3.1**
PERS	**Pernice**	**7.30**	**334**	*e*Pn	**Pn**	**10 14 20.7**	**-1.4**
PERS				*i* Sn	**Sn**	**10 15 38.2**	**-6.8**
OBKA	**Obir**	**7.39**	**331**	⇓*i*Pn	**Pn**	**10 14 22.2**	**-1.0**
	SNR=9.6						
OBKA				⇓*i*Sn	**Sn**	**10 15 44.1**	**-3.1**
OBKA	**Obir**	**7.39**	**331**	Pn	**Pn**	**10 14 22.2**	**-1.1**
	SNR=9.6						
OBKA				Sn	**Sn**	**10 15 44.1**	**-3.1**
ROBS	**Robic**	**7.60**	**325**	*i* Pn	**Pn**	**10 14 24.2**	**-1.9**
ROBS				*e*Sn	**Sn**	**10 15 47.4**	**-4.8**
PLOR	**Plostina**	**7.65**	**39**	⇑*i*P	**Pn**	**10 14 28.3**	**+1.5**
VRI	**Vrincioaia**	**7.70**	**40**	⇑*i*P	**Pn**	**10 14 29.3**	**+1.9**
VRI	**Vrincioaia**	**7.70**	**40**	⇑P	**Pn**	**10 14 29.3**	**+1.8**
TIRR	**Tirgusor**	**7.76**	**53**	⇑*i*P	**Pn**	**10 14 29.3**	**+0.9**
TIRR	**Tirgusor**	**7.76**	**53**	P	**Pn**	**10 14 26.5**	**-1.9**
PSZ	**Piszkesteto**	**7.78**	**1**	*e*Pn	**Pn**	**10 14 34.1**	**+5.5**
PSZ	**Piszkesteto**	**7.78**	**1**	*e*P	**Pn**	**10 14 33.8**	**+5.2**
PSZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PSZ	**Piszkesteto**	**7.78**	**1**	*e*P	**Pn**	**10 14 33.8**	**+5.2**
	comp=Z,10nm,0.7s						
KBA	**Koelnbreinsper**	**8.33**	**328**	⇑*i*Pn	**Pn**	**10 14 35.0**	**-1.1**
KBA				⇑*i*Sn	**Sn**	**10 16 06.5**	**-3.7**
KECS	**Kecovo**	**8.36**	**4**	*e*	**Pn**	**10 14 40.3**	**+3.7**
VYHS	**Vyhne**	**8.38**	**356**	*e*PN	**Pn**	**10 14 36.7**	**-0.1**
VYHS				*e*SN	**Sn**	**10 16 08.3**	**-3.1**
BURAR	**Bucovina Array**	**8.47**	**26**	⇑*i*P	**Pn**	**10 14 39.8**	**+1.8**
BURAR	**Bucovina Array**	**8.47**	**26**	⇑P	**Pn**	**10 14 39.8**	**+1.9**
MOA	**Molln**	**8.64**	**335**	⇓*i*Pn	**Pn**	**10 14 39.8**	**-0.6**
MOA				⇑*i*Sn	**Sn**	**10 16 12.6**	**-5.4**
MOA	**Molln**	**8.64**	**335**	Pn	**Pn**	**10 14 39.8**	**-0.7**
MOA				Sn	**Sn**	**10 16 12.6**	**-5.4**
ISP	**Isparta**	**8.72**	**102**	*i* P	**Pn**	**10 14 46.3**	**+4.8**
KOLS	**Kolonicke sedl**	**8.98**	**11**	*e*	**Pn**	**10 14 49.3**	**+4.2**
WTTA	**Wattenberg**	**9.21**	**323**	⇑*i*Pn	**Pn**	**10 14 47.1**	**-1.1**
WTTA				⇓*i*Sn	**Sn**	**10 16 28.9**	**-2.9**
KEST	**Kesra**	**9.29**	**245**	P	**Pn**	**10 14 51.1**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=205,slow=15,SNR=2.5						
KEST				LR	LR	10 19 24.4	
	comp=Z,59nm,18.3s,baz=149,slow=43						
WATA	**Walderalm**	**9.29**	**323**	⇑*i*Pn	**Pn**	**10 14 48.5**	**-0.8**
	SNR=10.0						
WATA				⇑*i*Sn	**Sn**	**10 16 29.7**	**-4.1**
STHS	**Stebnicka Huta**	**9.34**	**6**	*e*P	**Pn**	**10 14 57.3**	**+7.3**
	comp=Z,4.1nm,0.8s						
SQTA	**Sankt Quirin**	**9.38**	**322**	⇑*i*Pn	**Pn**	**10 14 50.1**	**-0.4**
	SNR=6.8						
MOTA	**Moosalm**	**9.52**	**322**	⇑*i*Pn	**Pn**	**10 14 51.0**	**-1.3**
	SNR=19						
MOTA				⇑*i*Sn	**Sn**	**10 16 35.5**	**-3.9**
TREC	**Trest**	**9.63**	**343**	AMS	AMS	10 19 40.0	
	comp=Z,200nm,13.5s						
GEC2	**GERESS Array S**	**9.70**	**336**	*e*P	**Pn**	**10 14 51.9**	**-3.0**
GERES	**GERESS Array B**	**9.70**	**336**	P	**Pn**	**10 14 53.0**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=150,slow=16,SNR=8.4						
OKC	**Ostrava-Krasne**	**9.76**	**354**	AMS	AMS	10 20 00.0	
	comp=Z,200nm,11.8s						
KHC	**Kasperske Hory**	**9.99**	**336**	*e*P	**Pn**	**10 14 56.9**	**-2.0**
KHC				*e*x	x	10 15 10.0	
KHC				*e*x	x	10 15 15.5	
KHC				*e*S	**Sn**	**10 16 46.8**	**-4.2**
KHC				AMS	AMS	10 19 40.0	
	comp=Z,300nm,10.3s						
KHC	**Kasperske Hory**	**9.99**	**336**	*e*Pn	**Pn**	**10 14 56.9**	**-2.0**
KHC				*e*		10 15 10.0	
KHC				*e*		10 15 15.5	
KHC				*e*Sn	**Sn**	**10 16 46.8**	**-4.2**
FRF	**La Foret Royal**	**10.32**	**294**	*e*Pn	**Pn**	**10 15 03.7**	**+0.2**
DPC	**Dobruska-Polom**	**10.48**	**348**	AMS	AMS	10 20 00.0	
	comp=Z,200nm,11.2s						
PRU	**Pruhonice**	**10.50**	**341**	AMS	AMS	10 20 00.0	
	comp=Z,200nm,8.9s						
BRTR	**Keskin Array B**	**10.71**	**88**	P	**Pn**	**10 15 10.6**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=276,slow=34,SNR=3.0						
LPG	**La Plagne**	**10.91**	**304**	*e*Pn	**Pn**	**10 15 11.6**	**+0.1**
LPL	**La Plagne**	**10.93**	**304**	*e*Pn	**Pn**	**10 15 10.8**	**-1.0**
PVCC	**Panska Ves**	**11.00**	**343**	AMS	AMS	10 20 40.0	
	comp=Z,200nm,6.4s						
ORIF	**Oris-en-Rattie**	**11.26**	**300**	*e*Pn	**Pn**	**10 15 17.3**	**+1.0**
NKC	**Novy Kostel**	**11.31**	**336**	AMS	AMS	10 20 20.0	
	comp=Z,300nm,7.5s						
CABF	**La Chapelle**	**11.83**	**308**	*e*Pn	**Pn**	**10 15 22.5**	**-1.5**
CABF				*e*Sn	**Sn**	**10 17 26.9**	**-9.1**
	comp=Z,4.9nm,0.5s						
CABF	**La Chapelle**	**11.83**	**308**	*e*Pn	**Pn**	**10 15 22.5**	**-1.5**
CABF				*e*Sn	**Sn**	**10 17 26.9**	**-9.1**
	comp=Z,2.5nm,0.5s						
SWA2		**11.85**	**155**	⇑P	**Pn**	**10 15 21.1**	**-3.2**
SWA1		**11.92**	**154**	⇑P	**Pn**	**10 15 21.9**	**-3.4**
MOX	**Moxa**	**11.94**	**334**	*e*P	**Pn**	**10 15 25.0**	**-0.5**
	comp=Z,10.0nm,0.9s						
MOX							
	comp=Z,200nm,16.0s						
MOX	**Moxa**	**11.94**	**334**	*e*P	**Pn**	**10 15 25.0**	**-0.5**
MOX				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MOX				MLR	MLR		
	comp=Z,10μm,16.0s						
HINF	**Hinteralfeld**	**12.01**	**314**	*e*Pn	**Pn**	**10 15 23.8**	**-2.8**
HINF				*e*Sn	**Sn**	**10 17 31.9**	**-8.7**
	comp=Z,8.6nm,0.6s						
HINF	**Hinteralfeld**	**12.01**	**314**	*e*Pn	**Pn**	**10 15 23.8**	**-2.8**
HINF				*e*Sn	**Sn**	**10 17 31.9**	**-8.7**
	comp=Z,4.3nm,0.6s						
CLL	**Collm**	**12.11**	**340**	*e**SP	**Pn**	**10 15 31.0**	**+3.2**
CLL				*e*L		10 18 52.0	
CLL				*e*L		10 20 00.0	
CLL	**Collm**	**12.11**	**340**	*e*sP	**Pn**	**10 15 31.0**	**+3.2**
CDF	**Champ du Feu**	**12.14**	**317**	*e*Pn	**Pn**	**10 15 26.8**	**-1.5**
HAU	**Haudompre**	**12.40**	**314**	*e*Pn	**Pn**	**10 15 29.7**	**-2.2**
HAU				*e*Sn	**Sn**	**10 17 39.9**	**-10**
	comp=Z,14nm,0.5s						
HAU	**Haudompre**	**12.40**	**314**	*e*Pn	**Pn**	**10 15 29.7**	**-2.2**
HAU				*e*Sn	**Sn**	**10 17 39.9**	**-10**
	comp=Z,7.2nm,0.5s						
AKASG	**Malin Array Be**	**12.49**	**29**	P	**Pn**	**10 15 32.5**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=212,slow=11,SNR=8.3						
LOR	**Lormes**	**13.48**	**307**	*e*Pn	**Pn**	**10 15 45.7**	**-1.0**
LOR				*e*Sn	**Sn**	**10 18 07.9**	**-8.7**
	comp=Z,4.6nm,0.3s						
SSF	**Saint Saulge**	**13.61**	**306**	*e*Pn	**Pn**	**10 15 47.2**	**-1.2**
AWBH		**14.02**	**144**	P	**Pn**	**10 15 46.5**	**-7.4**
KOT	**Kottamia**	**14.21**	**132**	⇓P	**Pn**	**10 15 48.6**	**-8.0**
HSAF	**As Saff**	**14.29**	**134**	⇑P	**Pn**	**10 15 49.6**	**-8.1**
HHAG	**Hagoal**	**14.35**	**131**	⇑P	**Pn**	**10 15 51.0**	**-7.4**
HHAG	**Hagoal**	**14.35**	**131**	P	**Pn**	**10 15 51.0**	**-7.5**
GLL	**Jalalah**	**14.41**	**133**	⇓P	**Pn**	**10 15 51.3**	**-8.0**
AMAG	**Maghara**	**14.51**	**127**	⇓P	**Pn**	**10 15 54.4**	**-6.3**
BAIF	**Baives**	**14.74**	**317**	*e*Sn	**Sn**	**10 18 37.1**	**-10**
	comp=Z,6.3nm,0.3s						
HFRF	**Wahat Farafira**	**14.79**	**149**	P	**Pn**	**10 15 58.2**	**-6.3**
HNKL	**Nakhl**	**15.49**	**127**	⇑P	**Pn**	**10 16 08.1**	**-5.6**
TR2		**16.46**	**131**	⇓P	**Pn**	**10 16 20.3**	**-6.0**
HKAT	**Jabal Katrina**	**16.51**	**130**	⇓P	**Pn**	**10 16 21.4**	**-5.7**
HDHB	**Dhahab**	**16.74**	**128**	⇓P	**Pn**	**10 16 25.2**	**-4.7**
TR1		**16.88**	**131**	P	**Pn**	**10 16 25.7**	**-5.9**
HHRG	**Al Ghardaqah**	**17.27**	**134**	P	**Pn**	**10 16 31.4**	**-5.1**
KIV	**Kislovodsk**	**17.48**	**70**	⇓*e*P	**Pn**	**10 16 39.1**	**0.0**
KIV				*i* S	**Sn**	**10 19 49.0**	**-4.7**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KIV	**Kislovodsk**	**17.48**	**70**	*e*P	**Pn**	**10 16 39.1**	**0.0**
	comp=Z,4.0nm,0.5s						
KIV				*i* S	**Sn**	**10 19 49.0**	**-4.7**
HSFG		**17.98**	**135**	⇓P	**Pn**	**10 16 41.0**	**-4.3**
ESDC	**Sonseca Array**	**18.16**	**276**	P	**Pn**	**10 16 48.9**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=89,slow=11,SNR=5.4						
OBN	**Obninsk**	**18.73**	**31**	⇓*e*P	**Pn**	**10 16 51.7**	**-2.8**
OBN				pmax	pmax		
	comp=Z,19nm,0.7s						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s						
OBN	**Obninsk**	**18.73**	**31**	*e*P	**Pn**	**10 16 51.7**	**-2.8**
	comp=Z,100nm,16.0s						
HEDF	**Idfu**	**18.78**	**139**	⇑P	**Pn**	**10 16 51.6**	**-3.5**
VSU	**Vasula**	**18.89**	**11**	*e*P	**Pn**	**10 16 55.2**	**-1.2**
AKRL	**Khor El Raml**	**19.76**	**142**	P	**Pn**	**10 17 05.5**	**-1.4**
HFS	**Hagfors**	**20.37**	**351**	P	**P**	**10 17 11.0**	**-1.1**
	comp=Z,8.1nm,0.7s,baz=162,slow=12,SNR=23						
KONO	**Kongsberg**	**20.54**	**345**	*i* P	**P**	**10 17 13.4**	**-0.5**
MDT	**Midelt**	**20.84**	**257**	P	**P**	**10 17 17.5**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=77,slow=9.4,SNR=3.7						
NAO01	**NORSAR Array S**	**21.44**	**348**	*e*P	**P**	**10 17 22.0**	**-1.6**
	comp=Z,6.0nm,0.7s,mb4.0						
EKA	**Eskdalemuir Ar**	**21.47**	**323**	P	**P**	**10 17 22.4**	**-1.5**
	comp=Z,3.9nm,0.9s,mb3.8,baz=126,slow=11,SNR=9.1						
NB2	**NORSAR Subarra**	**21.57**	**349**	P	**P**	**10 17 23.2**	**-1.8**
	comp=Z,1.0nm,0.7s,mb3.4,baz=157,slow=11						
NOA	**NORSAR Array B**	**21.57**	**349**	P	**P**	**10 17 23.4**	**-1.6**
	comp=Z,6.9nm,0.7s,mb4.2,baz=161,slow=9.9,SNR=27						
FINES	**FINESS Array B**	**21.69**	**8**	P	**P**	**10 17 23.8**	**-2.5**
	comp=Z,4.4nm,0.7s,mb4.0,baz=171,slow=11,SNR=21						
FINES	**FINESS Array B**	**21.69**	**8**	*e*P	**P**	**10 17 23.6**	**-2.7**
FIA1	**FINESS Array S**	**21.69**	**8**	*e*P	**P**	**10 17 23.8**	**-2.5**
FIA1	**FINESS Array S**	**21.69**	**8**	*e*P	**P**	**10 17 23.8**	**-2.5**
KAF	**Kangasniemi**	**22.37**	**8**	*e*p	**P**	**10 17 29.9**	**-3.6**
	comp=Z,5.4nm,0.6s,mb4.2						

KAF	Kangasniemi	22.37	8	eP	P	10 17 29.9	-3.6
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
JOF	Joensuu	23.85	13	ep	P	10 17 45.4	-3.4
	comp=Z,2.3nm,0.4s,mb4.0						
JOF	Joensuu	23.85	13	eP	P	10 17 45.4	-3.4
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
AKTO	Aktyubinsk	28.56	56	LR	LR	10 31 44.5	
	comp=Z,43nm,19.0s,MS3.1,baz=113,slow=40						
ARCES	ARCESS Array B	29.62	4	P	P	10 18 38.3	-2.4
	comp=Z,4.0nm,0.7s,mb4.2,baz=183,slow=9.3,SNR=21						
ARCES				LR	LR	10 30 29.4	
	comp=Z,34nm,18.9s,MS3.0,baz=81,slow=36						
TORD	Torodi Ar. Bea	31.20	216	P	P	10 18 54.3	-0.4
	comp=Z,1.5nm,0.8s,mb3.9,baz=24,slow=8.2,SNR=8.3						
SPB4	Spitsbergen Ar	38.18	359	P	P	10 19 48.3	-6.7
DBIC	Dimbokro	39.94	220	LR	LR	10 37 55.8	
	comp=Z,57nm,21.7s,MS3.4,baz=226,slow=38						
MKAR	Makanchi Array	44.84	60	P	P	10 20 47.7	-1.9
	comp=Z,3.5nm,0.6s,mb4.4,baz=292,slow=6.4,SNR=20						
ZAL	Zalesovo	44.87	49	P	P	10 20 47.5	-2.3
	comp=Z,2.3nm,0.4s,mb4.3,baz=189,slow=6.7,SNR=8.3						
SONM	Songino Array	59.72	51	P	P	10 22 40.3	+0.2
	comp=Z,1.9nm,1.0s,mb4.1,baz=277,slow=8.4,SNR=4.4						
YKA	Yellowknife Ar	71.33	339	P	P	10 23 54.1	-1.1
	comp=Z,1.1nm,0.8s,mb3.9,baz=34,slow=5.3,SNR=7.7						
YKA	Yellowknife Ar	71.33	339	i P	P	10 23 54.0	-1.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	71.33	339	i P	P	10 23 54.0	-1.2
	comp=Z,1.0nm,0.8s,mb3.8						
ULM	Lac du Bonnet	73.75	323	P	P	10 24 08.8	-0.8
	comp=Z,5.7nm,1.2s,mb4.4,baz=35,slow=4.5,SNR=5.8						
DAWY	Dawson	74.83	351	eP	P	10 24 15.2	-0.7
DAWY	Dawson	74.83	351	eP	P	10 24 15.1	-0.8
LAO	LASA Array	81.02	326	eP	P	10 24 50.9	+0.6
	comp=Z,5.2nm,1.0s,mb4.4						
PHWY	Pilot Hill	84.86	322	eP	P	10 25 11.2	+0.9
PDAR	Pinedale Array	85.58	325	P	P	10 25 13.4	-0.4
	comp=Z,0.4nm,0.8s,mb3.7,baz=18,slow=5.3,SNR=4.0						
PV10	Paradox Valley	88.86	322	eP	P	10 25 30.5	+0.8
CPUP	Villa Florida	97.41	242	LR	LR	11 07 25.8	
	comp=Z,46nm,20.7s,MS4.0,baz=163,slow=34						
ASAR	Alice Springs	122.99	94	PKP	PKPdf	10 31 30.2	-1.7
	comp=Z,0.3nm,0.4s,baz=310,slow=1.7,SNR=8.7						

*ATH **18** 10:16:10.9, 4023N×1948E, h10^{km}±2^{km}, MD3.9/7*
*MOS **18** 10:16:13.8±1.2, 4005N×1955E, h13^{km}, mb3.7/5, Error ellipse: s-maj=8.4km s-min=6.8km az=136.6*
*ISCJB **18** 10:16:13.8±0.5, 40.13N±002×1962E±003, h1^{km}±3^{km}, mb3.6/5, Error ellipse: s-maj=3.7km s-min=3.1km az=121.2*
*IDC **18** 10:16:14.6±1.5, 4023N×1996E, h0^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.5/21, mbtmp3.6/6, Error ellipse: s-maj=45.1km s-min=23.6km az=109.0*
*THE **18** 10:16:16.0, 40.12N×1972E, h0^{km}, ML3.5*
*CSEM **18** 10:16:15.3±0.1, 40.10N×1968E, h2^{km}, MD3.9, Error ellipse: s-maj=2.0km s-min=1.4km az=39.0*
*TIR **18** 10:16:15.0, 40.10N×1978E, h20^{km}, Ml3.2*
*SKO **18** 10:16:16.3, 40.10N×1993E, h0^{km}*
*NEIC **18** 10:16:16.1, 40.11N×1972E, h0^{km}, MD3.9(ATH), ML3.6(THE), After THE.*
ISC 18 10:16:14.8±0.5**, 4012N**±002×**1962E**±003**, h2**^{km}±3^{km}**, n74,** σ1^s**14**/118**, mb3.6**/5**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.36	345	i Pg	Pg	10 16 24.2	+2.5
VLO				i Sg	Sg	10 16 31.0	+4.6
SRN	Sarande	0.38	129	i Pg	Pg	10 16 21.5	-0.5
SRN				i Sg	Sg	10 16 26.9	0.0
KEK	Kerkira	0.43	161	ePG	Pg	10 16 21.7	-1.3
IGT	Igoumenitsa	0.80	137	ePg	Pg	10 16 29.4	-0.8
IGT				eSg	Sg	10 16 41.4	+0.8
IGT	Igoumenitsa	0.80	137	P	Pg	10 16 29.4	-0.8
IGT				S	Sg	10 16 41.3	+0.7
KBN	Korca	1.02	60	i Pg	Pg	10 16 34.2	-0.2
KBN				i Sg	Sg	10 16 49.9	+2.2
JAN	Janina	1.05	116	ePB	Pg	10 16 34.1	-0.9
JAN				eSB	Sg	10 16 49.4	+0.7
TIR	Tirane	1.24	9	ePg	Pg	10 16 38.7	+0.1
TIR				eSg	Sg	10 16 57.0	+2.3
TIR	Tirane	1.24	9	i Pg	Pg	10 16 39.5	+0.9
TIR	Tirane	1.24	9	P	Pg	10 16 39.5	+0.9
TIR				S	Sg	10 16 58.4	+3.7
TIR	Tirane	1.24	9	P	Pg	10 16 39.5	+0.9
TIR				eSg	Sg	10 16 57.0	+2.3
TIR				S	Sg	10 16 58.4	+3.7
MEV	Metsovon	1.28	105	ePg	Pg	10 16 38.4	-0.9
MEV				eSg	Sg	10 16 56.0	0.0
OHR	Ohrid	1.34	42	ePg	Pg	10 16 39.6	-0.8
OHR				eSg	Sg	10 16 59.0	+1.2
OHR	Ohrid	1.34	42	i Pn	Pn	10 16 39.5	-0.9
OHR				i Sn	Sn	10 16 56.1	-2.8
OHR	Ohrid	1.34	42	P	Pg	10 16 39.6	-0.8
OHR				S	Sg	10 16 59.2	+1.4
OHR	Ohrid	1.34	42	ePg	Pg	10 16 39.6	-0.8
OHR				i Sn	Sn	10 16 56.0	-2.8
OHR				S	Sg	10 16 59.2	+1.4
FNA	Florina	1.50	63	ePg	Pg	10 16 41.7	-1.7
FNA				eSg	Sg	10 17 02.8	-0.1
BIA	Bitola	1.58	55	ePg	Pg	10 16 43.3	-1.8
BIA				eSg	Sg	10 17 05.6	+0.1
BIA	Bitola	1.58	55	i Pn	Pn	10 16 43.1	-0.7
BIA				i Sn	Sn	10 17 03.3	-1.5
BIA	Bitola	1.58	55	P	Pn	10 16 43.2	-0.6
BIA				S	Sg	10 17 05.6	+0.1
BIA	Bitola	1.58	55	i Pn	Pn	10 16 43.0	-0.8
BIA				i Sn	Sn	10 17 03.3	-1.5
BIA				eSg	Sg	10 17 05.6	0.0
LKD	Levkas	1.62	150	ePg	Pg	10 16 45.1	-0.7
LKD				eSg	Sg	10 17 06.4	-0.5
LKD	Levkas	1.62	150	P	Pn	10 16 45.2	+0.8
LKD				S	Sg	10 17 06.4	-0.5
KZN	Kozani	1.66	83	ePN	Pn	10 16 43.6	-1.3
PE1	Pezze di Greco	1.81	293	ePn	Pn	10 16 47.7	+0.7
EVR	Evrytania	2.08	125	ePN	Pn	10 16 50.0	-0.6
EVR				eSN	Sn	10 17 18.7	+1.7
VLS	Valsamata	2.08	158	ePN	Pn	10 16 50.1	-0.6
LIT	Litokhoron	2.20	90	P	Pn	10 16 51.8	-0.6
LIT				S	Sn	10 17 20.2	0.0
GRG	Griva	2.28	68	ePn	Pn	10 16 54.2	+0.8
GRG				eSn	Sn	10 17 22.7	+0.6
SKO	Skopje	2.31	36	ePn	Pn	10 16 55.0	+1.2
SKO				eSn	Sn	10 17 24.3	+1.6
SKO	Skopje	2.31	36	i Pn	Pn	10 16 53.7	-0.1
SKO				i Sn	Sn	10 17 21.1	-1.6
SKO	Skopje	2.31	36	i Pn	Pn	10 16 53.6	-0.2
SKO				i Sn	Sn	10 17 21.1	-1.7
BAI	Bari	2.31	296	ePn	Pn	10 16 54.2	+0.4
SG1	Sgolgore (BA)	2.36	289	ePn	Pn	10 16 55.1	+0.6
AGG	Agios Georgios	2.36	117	P	Pn	10 16 54.8	+0.2
AGG				S	Sn	10 17 25.1	+0.9
STIP	Stip	2.50	50	ePn	Pn	10 16 56.0	-0.5
STIP	Stip	2.50	50	i Pn	Pn	10 16 55.9	-0.6
VAY	Valandovo	2.54	61	ePn	Pn	10 16 57.8	+0.8
VAY				eSn	Sn	10 17 28.9	+0.3
VAY	Valandovo	2.54	61	i Pn	Pn	10 16 56.8	-0.3
VAY	Valandovo	2.54	61	P	Pn	10 16 57.9	+0.8
VAY				S	Sn	10 17 28.9	+0.3
VAY	Valandovo	2.54	61	i Pn	Pn	10 16 56.7	-0.4
VAY	Valandovo	2.54	61	P	Pn	10 16 57.9	+0.8
VAY				eSn	Sn	10 17 28.9	+0.3
THE	Thessaloniki	2.61	78	P	Pn	10 16 58.8	+0.9
XOR	Xorichti	2.85	104	ePn	Pn	10 17 02.0	+0.7
SOH	Sokhos	2.93	75	P	Pn	10 17 03.5	+1.1
PLG	Polygyros	2.94	84	ePN	Pn	10 17 00.3	-2.2
PLG				eSN	Sn	10 17 37.7	-0.7
PAIG	Paliouri	3.12	92	ePn	Pn	10 17 04.4	-0.6
PAIG	Paliouri	3.12	92	P	Pn	10 17 04.4	-0.6
PAIG				S	Sn	10 17 44.1	+1.2
PAIG	Paliouri	3.12	92	ePn	Pn	10 17 04.4	-0.6
PAIG				S	Sn	10 17 44.2	+1.3
MS1	Monte Sant'Ang	3.21	301	ePn	Pn	10 17 07.1	+0.9
OUR	Ouranopolis	3.35	85	P	Pn	10 17 08.9	+0.8
AOS	Alonnisos	3.42	105	ePn	Pn	10 17 09.4	+0.2
AOS	Alonnisos	3.42	105	P	Pn	10 17 09.3	+0.1
MMB	Musomiste	3.44	63	ePn	Pn	10 17 10.1	+0.6
MMB				eSn	Sn	10 17 51.0	+0.2
MMB	Musomiste	3.44	63	P	Pn	10 17 10.1	+0.6
MMB				S	Sn	10 17 52.8	+2.0
MMB	Musomiste	3.44	63	ePn	Pn	10 17 10.1	+0.7
MMB				eSn	Sn	10 17 51.0	+0.2
MMB				S	Sn	10 17 52.8	+2.0
VTS	Vitosha	3.66	46	ePn	Pn	10 17 13.4	+1.0
VLI	Veliai	4.28	141	ePN	Pn	10 17 22.0	+1.1
NVLJ	Novalja	5.67	323	i Pn	Pn	10 17 40.0	0.0
NVLJ				i Sn	Sn	10 18 44.4	-1.2
BOJS	Bojanci	6.27	331	ePn	Pn	10 17 49.8	+1.5
BOJS				eSn	Sn	10 18 58.0	-2.4
PERS	Pernice	7.29	335	ePn	Pn	10 18 01.9	-0.4
PERS				i Sn	Sn	10 19 20.7	-5.0
CLL	Collm	12.10	340	eP	Pn	10 19 10.0	+1.8
CLL				MLR	MLR		
	comp=Z,200nm,9.7s						
HFS	Hagfors	20.38	351	P	P	10 20 52.0	-0.7
	comp=Z,1.4nm,0.6s,baz=138,slow=14,SNR=4.8						
HFS	Hagfors	20.38	351	P	P	10 20 52.0	-0.7
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	21.58	349	P	P	10 21 05.1	-0.6
	comp=Z,1.4nm,0.8s,mb3.4,baz=152,slow=10						
NOA	NORSAR Array B	21.58	349	P	P	10 21 06.5	+0.8
	comp=Z,1.0nm,0.6s,mb3.4,baz=161,slow=9.8,SNR=5.3						
NOA	NORSAR Array B	21.58	349	P	P	10 21 06.5	+0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	21.72	8	P	P	10 21 05.2	-2.0
	comp=Z,0.8nm,0.5s,mb3.4,baz=178,slow=13,SNR=5.6						
FINES	FINESS Array B	21.72	8	P	P	10 21 05.2	-2.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	29.64	4	P	P	10 22 18.8	-2.8
	comp=Z,1.2nm,0.7s,mb3.7,baz=181,slow=9.7,SNR=4.0						
ARCES	ARCESS Array B	29.64	4	P	P	10 22 18.8	-2.8
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TORD	Torodi Ar. Bea	31.15	215	P	P	10 22 37.4	+2.4
	comp=Z,0.8nm,1.0s,mb3.5,baz=21,slow=8.7,SNR=3.3						
MKAR	Makanchi Array	44.91	60	P	P	10 24 28.9	-1.9
	comp=Z,0.6nm,0.5s,mb3.7,baz=292,slow=6.4,SNR=4.7						
MKAR	Makanchi Array	44.91	60	P	P	10 24 29.0	-1.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*NEIC **18** 10:20:08.5, 3390S×7103W, h76^{km}, MG2.9(GUC), After GUC.*
GUC 18 10:20:08.5±0.6**, 3390S**×**7103W, h76**^{km}±3^{km}**, MD3.8, ML2.9, 5C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCH	Chadas Angostu	0.32	97⇑	iP	Pn	10 20 20.7	+0.3
CHCH				i S	Sn	10 20 30.0	+0.8
LNV	Longovilo	0.32	259⇓	iP	Pn	10 20 20.6	+0.1
LNV				i S	Sn	10 20 29.5	+0.3
CACH	El Canelo	0.42	122⇓	iP	Pn	10 20 22.1	+0.9
CACH				i S	Sn	10 20 32.3	+1.8
RCDM	Rinconada Maip	0.45	25	eP	Pn	10 20 21.5	+0.1
RCDM				i S	Sn	10 20 31.4	+0.5
RCDM				AML	AML	10 20 32.5	
	comp=E,2μm,0.1s						
RCDM	Rinconada Maip	0.45	25	eP	Pn	10 20 21.5	+0.1
RCDM				i S	Sn	10 20 31.4	+0.5
ANTU	Antumapu	0.47	46	eP	Pn	10 20 21.7	+0.2
ANTU				i S	Sn	10 20 32.1	+1.0
ANTU				AML	AML	10 20 33.2	
	comp=N,499nm,0.2s						
ANTU	Antumapu	0.47	46	eP	Pn	10 20 21.7	+0.2
ANTU				i S	Sn	10 20 32.1	+1.0
PCH	Pirque	0.51	58⇓	iP	Pn	10 20 22.4	+0.4
PCH				i S	Sn	10 20 32.6	+0.7
SAN	Santiago	0.54	35	eP	Pn	10 20 22.5	+0.3
SAN				i S	Sn	10 20 33.1	+0.7
LCCH	Las Cruces	0.61	313	eP	Pn	10 20 22.9	-0.1
CLCH	Cerro Calan	0.65	40⇑	iP	Pn	10 20 23.8	+0.6
CLCH				i S	Sn	10 20 35.2	+1.0
CLCH				AML	AML	10 20 36.3	
	comp=N,653nm,0.4s						
CICH	Cipreses	0.66	130	eP	Pn	10 20 24.1	+0.6
CICH				i S	Sn	10 20 35.7	+1.2
SFDO	San Fernando	0.72	179⇑	iP	Pn	10 20 24.3	+0.3
SFDO				i S	Sn	10 20 36.1	+0.7
PEL	Peldehue	0.80	21	eP	Pn	10 20 25.6	+0.6
PEL				i S	Sn	10 20 38.5	+1.2
PEL				AML	AML	10 20 40.0	
	comp=N,692nm,0.3s						
PEL	Peldehue	0.80	21	eP	Pn	10 20 25.6	+0.6
PEL				i S	Sn	10 20 38.5	+1.2
FCH	Farellones	0.84	48⇑	iP	Pn	10 20 26.1	+0.7
FCH				i S	Sn	10 20 39.5	+1.5
FCH				AML	AML	10 20 40.8	
	comp=E,690nm,0.4s						
ROCH	El Roble	0.92	1⇑	iP	Pn	10 20 27.2	+0.8
ROCH				i S	Sn	10 20 41.1	+1.4
JACH	Jahuel	1.27	17	i P	Pn	10 20 31.0	+0.4
JACH				i S	Sn	10 20 48.0	+0.8

*ROM **18** 10:23:04.4±0.6, 3997N×1990E, h10^{km}, Ml3.2/5, Error ellipse: s-maj=8.3km s-min=5.3km az=145.0*
*TIR **18** 10:23:04.4, 40.15N×1976E, h17^{km}, Ml3.7*
*NEIC **18** 10:23:04.5, 40.13N×1958E, h14^{km}, MD3.8(ATH), ML3.7(THE), After ATH.*
*ATH **18** 10:23:04.5, 40.13N×1958E, h14^{km}±1^{km}, MD3.8/6*
*ISCJB **18** 10:23:05.2±0.2, 40.17N±002×1968E±002, h10^{km}, mb3.6/3, Error ellipse: s-maj=2.5km s-min=2.2km az=2.2*
*CSEM **18** 10:23:05.1±0.2, 4021N×1967E, h0^{km}±1^{km}, MD3.8, Error ellipse: s-maj=2.1km s-min=1.7km az=13.0*
*THE **18** 10:23:05.1, 40.16N×1968E, h0^{km}, ML3.6*
*SKO **18** 10:23:07.4, 4025N×1988E, h2^{km}*
*IDC **18** 10:23:13.0±10.0, 4034N×1959E, h78^{km}±37^{km}, mb3.2/4, mb1 3.3/6, mb1mx3.2/23, mbtmp3.6/6, MS2.7/1, Ms1 2.7/1, ms1mx2.0/20, Error ellipse: s-maj=173.1km s-min=26.1km az=36.0*
ISC 18 10:23:06.0±0.2**, 4016N**±002×**1968E**±002**, h10**^{km}**, n74,** σ1^s**29**/112**, mb3.6**/3**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.29	62	i Pg	Pg	10 23 10.3	-1.6
TPE				i Sg	Sg	10 23 14.2	-1.6
SRN	Sarande	0.37	138	i Pg	Pg	10 23 11.6	-1.8
SRN				i Sg	Sg	10 23 16.8	-1.6
KEK	Kerkira	0.46	168	ePB	Pg	10 23 13.6	-1.3
KEK				eSB	Sg	10 23 20.2	-0.8
LSK	Leskovik	0.71	90	i Pg	Pg	10 23 17.6	-2.1
LSK				i Sg	Sg	10 23 27.5	-1.5
IGT	Igoumenitsa	0.80	141	ePg	Pg	10 23 19.1	-2.5
IGT				eSg	Sg	10 23 31.9	-0.2
IGT	Igoumenitsa	0.80	141	ePg	Pg	10 23 19.0	-2.5
SCTE	Santa Cesarea	0.93	265	Pn	Pg	10 23 25.0	+1.0
SCTE				Sn	Sg	10 23 40.3	+4.2
KBN	Korca	0.97	61	i pg?	Pg	10 23 19.2	-5.4
KBN				i Sg	Sg	10 23 39.5	+2.3
JAN	Janina	1.03	119	ePG	Pg	10 23 24.7	-1.2
JAN				eSB	Sg	10 23 39.4	+0.1
TIR	Tirane	1.20	7	ePg	Pg	10 23 28.2	-0.8
TIR				eSg	Sg	10 23 44.4	-0.2
TIR	Tirane	1.20	7	i Pg	Pg	10 23 28.2	-0.8
TIR	Tirane	1.20	7	Pn	Pn	10 23 29.9	+1.1
TIR				eSg	Sg	10 23 44.4	-0.2
LCI	Lecce	1.21	279	Pn	Pn	10 23 28.9	-0.1
LCI				Sn	Sn	10 23 49.3	+3.9
MEV	Metsovon	1.25	107	ePg	Pg	10 23 28.0	-2.1
	comp=Z,36nm,0.3s						
MEV				eSg	Sg	10 23 46.8	+0.5
OHR	Ohrid	1.28	42	ePg	Pg	10 23 29.0	-1.6
OHR				eSg	Sg	10 23 47.7	+0.5
OHR	Ohrid	1.28	42	i Pn	Pn	10 23 29.4	-0.5
OHR				i Sn	Sn	10 23 44.6	-2.6
OHR	Ohrid	1.28	42	i Pn	Pn	10 23 29.4	-0.5
OHR				i Sn	Sn	10 23 44.5	-2.6
OHR				eSg	Sg	10 23 47.7	+0.5
FNA	Florina	1.44	64	ePg	Pg	10 23 31.9	-1.8
	comp=Z,19nm,0.8s						
FNA				eSg	Sg	10 23 52.4	0.0
BIA	Bitola	1.52	55	ePg	Pg	10 23 32.6	-2.6
BIA				eSg	Sg	10 23 53.8	-1.2
BIA	Bitola	1.52	55	i Pn	Pn	10 23 32.6	-0.7
BIA				i Sn	Sn	10 23 51.7	-1.4
BIA	Bitola	1.52	55	i Pn	Pn	10 23 32.5	-0.8
BIA	Bitola	1.52	55	ePg	Pg	10 23 32.7	-2.5
BIA				i Sn	Sn	10 23 51.7	-1.4
BIA				eSg	Sg	10 23 53.8	-1.2
KZN	Kozani	1.61	84	ePB	Pb	10 23 35.8	0.0
KZN				eSB	Sb	10 23 59.2	+3.0
LKD	Levkas	1.63	152	ePb	Pb	10 23 34.4	-1.9
LKD				eSb	Sb	10 23 57.4	+0.5
PE1	Pezze di Greco	1.84	291	ePn	Pn	10 23 38.5	+0.9
EVR	Evrytania	2.06	126	ePN	Pn	10 23 41.6	+0.9
EVR				eSN	Sn	10 24 08.7	+2.2
VLS	Valsamata	2.10	160	ePN	Pn	10 23 41.1	-0.2
LIT	Litokhoron	2.16	91	ePn	Pn	10 23 42.1	+0.1
	comp=Z,4.8nm,0.4s						
LIT				eSn	Sn	10 24 10.4	+1.6
GRG	Griva	2.22	68	ePn	Pn	10 23 42.3	-0.6
GRG				eSn	Sn	10 24 11.5	+1.0
SKO	Skopje	2.25	36	ePn	Pn	10 23 43.2	-0.1
SKO				eSn	Sn	10 24 13.3	+2.2
SKO	Skopje	2.25	36	i Pn	Pn	10 23 44.2	+0.9
AGG	Agios Georgios	2.34	118	ePn	Pn	10 23 44.6	0.0
	comp=Z,3.5nm,0.3s						
AGG				eSn	Sn	10 24 14.7	+1.3
SG1	Sgolgore (BA)	2.38	288	ePn	Pn	10 23 44.9	-0.2
STIP	Stip	2.44	50	ePn	Pn	10 23 46.4	+0.5
STIP				eSn	Sn	10 24 17.2	+1.3
AMUR	Altamura	2.46	289	Pn	Pn	10 23 46.6	+0.4
	31nm,0.4s						
VAY	Valandovo	2.49	61	ePn	Pn	10 23 46.7	+0.2
VAY				eSn	Sn	10 24 18.0	+1.1
VAY	Valandovo	2.49	61	ePn	Pn	10 23 46.9	+0.4
RLS	Riolos of Patr	2.52	146	ePB	Pn	10 23 47.5	+0.5
SERS	Sersale	2.57	245	Pn	Pn	10 23 48.1	+0.5
KNT	Kendrikon	2.65	67	ePn	Pn	10 23 48.0	-0.8
	comp=Z,2.9nm,0.9s						
HORT	Hortiatis	2.65	79	ePn	Pn	10 23 47.7	-1.1
HORT				eSn	Sn	10 24 21.7	+0.7
XOR	Xorichti	2.82	105	ePn	Pn	10 23 50.6	-0.6
XOR				eSn	Sn	10 24 26.9	+1.7
NEO	Neokhori	2.86	106	ePN	Pn	10 23 53.3	+1.6
SOH	Sokhos	2.88	76	ePn	Pn	10 23 52.2	+0.2
SOH				eSn	Sn	10 24 28.6	+1.9
PLG	Polygyros	2.89	85	ePN	Pn	10 23 53.2	+1.1
CUC	Castrocucco	2.97	268	Pn	Pn	10 23 56.4	+3.2
	107nm,0.8s						
LKR	Lokris	2.98	119	ePN	Pn	10 23 54.6	+1.2
PLAC	Placanica	3.04	237	Pn	Pn	10 23 53.3	-0.8
PAIG	Paliouri	3.08	93	ePn	Pn	10 23 54.1	-0.7
PAIG				eSn	Sn	10 24 33.9	+2.2
FGMS	Monte Sant'Ang	3.22	300	Pn	Pn	10 23 56.7	+0.1
MSAG	Monte S. Angel	3.25	300	Pn	Pn	10 23 57.2	+0.2
	83nm,0.4s						
MRLC	Muro Lucano	3.25	282	Pn	Pn	10 23 59.6	+2.5
OUR	Ouranopolis	3.30	86	ePn	Pn	10 23 58.3	+0.5
CMPR	Campora	3.35	274	Pn	Pn	10 24 00.8	+2.4
	44nm,0.6s						
CDRU	Civita di Ruta	3.36	277	Pn	Pn	10 24 00.8	+2.3
	26nm,0.3s						
MMB	Musomiste	3.39	64	ePn	Pn	10 23 58.4	-0.5
MMB				eSn	Sn	10 24 40.6	+1.4
AOS	Alonnisos	3.39	106	ePn	Pn	10 23 59.2	+0.2
RGNG	Rignano Grg	3.45	297	Pn	Pn	10 24 00.9	+1.1
SOI	Samo	3.50	235	Pn	Pn	10 23 59.8	-0.7
VTS	Vitosha	3.60	46	ePn	Pn	10 24 02.2	+0.3
VTS				eSn	Sn	10 24 47.1	+2.6
MTTG	Motta San Giov	3.77	236	Pn	Pn	10 24 04.9	+0.6
ALN	Alexandroupoli	4.91	79	ePn	Pn	10 24 19.9	0.0
CHOS	Chios island	5.26	108	ePn	Pn	10 24 26.0	+1.4
NVLJ	Novalja	5.66	323	i Pn	Pn	10 24 27.6	-2.6
NVLJ				i Sn	Sn	10 25 32.4	-2.8
BOJS	Bojanci	6.25	330	ePn	Pn	10 24 39.7	+1.4
BOJS				eSn	Sn	10 25 48.7	-1.1
MLR	Muntele Rosu	7.04	39	LR	LR	10 27 51.4	
	comp=Z,59nm,21.7s,baz=46,slow=40						
ROBS	Robic	7.57	326	ePn	Pn	10 24 55.3	-1.0
ROBS				eSn	Sn	10 26 17.5	-4.7
GERES	GERESS Array B	9.67	336	P	Pn	10 25 25.1	-0.1
	0.3nm,0.3s,baz=174,slow=15,SNR=3.9						
BRTR	Keskin Array B	10.73	88	P	Pn	10 25 45.6	+5.8
	0.7nm,0.3s,baz=310,slow=13,SNR=15						
HFS	Hagfors	20.34	351	P	P	10 27 41.8	-0.7
	1.2nm,0.5s,baz=150,slow=15,SNR=6.5						
NB2	NORSAR Subarra	21.55	349	P	P	10 27 54.8	-0.7
	comp=Z,1.1nm,0.6s,mb3.5,baz=154,slow=11						
NOA	NORSAR Array B	21.55	349	P	P	10 27 54.3	-1.2
	comp=Z,1.4nm,0.8s,mb3.5,baz=165,slow=10,SNR=5.6						
FINES	FINESS Array B	21.67	8	P	P	10 27 54.8	-2.0
	comp=Z,1.0nm,0.6s,mb3.5,baz=188,slow=9.6,SNR=5.7						
MKAR	Makanchi Array	44.85	60	P	P	10 31 18.5	-1.9
	comp=Z,0.7nm,0.5s,mb3.8,baz=281,slow=5.9,SNR=11						

*IDC **18** 10:36:40.7±2.3, 621S×14675E, h0^{km}, mb3.7/3, mb1 3.7/5, mb1mx3.6/14, mbtmp3.6/5, ML3.0/2, Error ellipse: s-maj=55.5km s-min=24.5km az=88.0*
*NEIC **18** 10:36:42.3±1.6, 621S×14674E, h10^{km}, mb3.7/1, Error ellipse: s-maj=29.5km s-min=17.8km az=82.0*
*ISCJB **18** 10:36:43.8±6.7, 62S±0.1×1467E±02, h32^{km}±47^{km}, mb3.6/3, Error ellipse: s-maj=39.5km s-min=16.2km az=128.8*
ISC 18 10:36:43.5±6.8**, 62S**±01×**1468E**±02**, h17**^{km}±41^{km}**, n9,** σ0^s**55**/11**, mb3.6**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.20	173	Pn	Pn	10 37 32.9	-0.1
	2.5nm,0.3s,baz=26,slow=10,SNR=7.2						
PMG				Sn	Sn	10 38 10.8	+0.2
	4.1nm,0.3s,baz=212,slow=21,SNR=11						
PMG	Port Moresby	3.20	173	Pn	Pn	10 37 32.9	-0.1
PMG				Sn	Sn	10 38 10.8	+0.2
WRAB	Tennant Creek	18.19	220	P	Pn	10 40 56.1	+0.9
	7.1nm,1.1s						
WRA	Warramunga Arr	18.21	220	P	Pn	10 40 55.8	+0.4
	0.1nm,0.3s,baz=42,slow=12,SNR=14						
AS31	Alice Springs	21.30	214	eP	P	10 41 28.3	-0.9
ASAR	Alice Springs	21.30	214	P	P	10 41 28.8	-0.5
	0.6nm,0.5s,mb3.2,baz=37,slow=9.6,SNR=15						
FITZ	Fitzroy Crossi	23.74	238	P	P	10 41 54.6	-0.3
	2.4nm,0.5s,mb3.9,baz=62,slow=9.0,SNR=23						
MKAR	Makanchi Array	77.50	321	P	P	10 48 38.5	+0.3
	1.0nm,0.8s,mb3.8,baz=116,slow=8.2,SNR=9.7						
MKAR	Makanchi Array	77.50	321	P	P	10 48 38.5	+0.3

IDC 18 10:38:45.5±2.0**, 265N**×**12899E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/17**, mbtmp3.7**/4**, Error ellipse: s-maj=124.0km s-min=31.4km az=80.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.88	189	P	P	10 43 29.9	+0.8
	0.9nm,0.4s,baz=27,slow=8.3,SNR=7.5						
WRA	Warramunga Arr	23.05	167	P	P	10 43 53.1	+0.7
	0.4nm,0.4s,baz=346,slow=10,SNR=13						
ASAR	Alice Springs	26.59	170	P	P	10 44 24.7	-0.6
	0.4nm,0.4s,baz=350,slow=7.1,SNR=15						
ARCES	ARCESS Array B	92.24	340	P	P	10 51 57.4	+0.2
	1.0nm,0.8s,baz=81,slow=7.9,SNR=3.8						

MAN 18 10:39:21.8, 942N×**12682E, h1**^{km}**, mb2.7, ML4.2, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.36	286⇑	eP	Pg	10 39 47.0	-0.9
PLP	Palo	2.51	314	eP	Pn	10 40 04.8	+1.1
PLP				eS	Sn	10 40 36.5	+1.5
TBP	Tagbilaran	2.93	276	eP	Pn	10 40 10.3	+0.8
TBP				eS	Sn	10 40 47.6	+2.2

*ATH **18** 10:42:22.9, 3784N×2018E, h23^{km}±10^{km}, MD3.5/3*
*CSEM **18** 10:42:28.0±0.3, 3784N×2054E, h5^{km}, MD3.5, Error ellipse: s-maj=7.0km s-min=3.6km az=32.0*
*ISCJB **18** 10:42:32.2±2.2, 38.17N±009×205E±0.1, h0^{km}±9^{km}, Error ellipse: s-maj=18.7km s-min=8.0km az=83.9*

NEIC ***18*** *10:42:33.9, 3823N×2064E, h0km, MD3.5(ATH), After THE.*
ISC 18 10:42:32.7±2.4**, 3816N**±009×**205E**±01**, h5km**±8km**, n12, σ0s86**/20**, 2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.05**	**74**	⇓*i*PB	**Pg**	**10 42 33.6**	**-0.4**
VLS				*e*SB	**Sg**	**10 42 39.5**	**+4.6**
VLS	**Valsamata**	**0.05**	**74**	⇓*e*Pb	**Pg**	**10 42 33.6**	**-0.4**
VLS				*e*Sb	**Sg**	**10 42 39.5**	**+4.6**
LKD	**Levkas**	**0.55**	**10**	*e*S	**Sg**	**10 42 49.6**	**-0.9**
LKD	**Levkas**	**0.55**	**10**	P	**Pg**	**10 42 42.7**	**-0.6**
LKD				S	**Sg**	**10 42 49.6**	**-0.9**
LKD	**Levkas**	**0.55**	**10**	*e*P	**Pg**	**10 42 42.7**	**-0.6**
LKD				S	**Sg**	**10 42 49.6**	**-0.9**
RLS	**Riolos of Patr**	**0.75**	**98**	*e*PN	**Pg**	**10 42 42.2**	**-4.9**
RLS				*e*SN	**Sg**	**10 42 57.7**	**+0.9**
EVR	**Evrytania**	**1.26**	**53**	*e*PN	**Pn**	**10 42 52.9**	**-4.0**
IGT	**Igoumenitsa**	**1.38**	**354**	P	**Pn**	**10 42 58.7**	**+0.2**
IGT				S	**Sg**	**10 43 18.2**	**+1.3**
IGT	**Igoumenitsa**	**1.38**	**354**	P	**Pn**	**10 42 58.7**	**+0.2**
IGT				*e*S	**Sg**	**10 43 18.2**	**+1.3**
AGG	**Agios Georgios**	**1.66**	**58**	*e*P	**Pn**	**10 43 00.8**	**-1.5**
AGG				*e*S	**Sn**	**10 43 24.1**	**+0.2**
MEV	**Metsovon**	**1.71**	**18**	*e*P	**Pn**	**10 43 03.2**	**+0.1**
FNA	**Florina**	**2.70**	**14**	*e*P	**Pn**	**10 43 17.4**	**+0.7**

PRU ***18*** *10:53:49.6, 5030N×1888E, h0km*
WAR 18 10:53:50.2, 5024N×1895E, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.54**	**92**	*i* Pgd	Pg	10 54 00.4	-0.2
OJC				*e*Sg	Sg	10 54 08.3	+0.6
OKC	**Ostrava-Krasne**	**0.66**	**232**	*e*PG	Pg	10 54 02.3	-0.6
OKC				*e*SG	Sg	10 54 11.7	+0.3
	34nm,0.8s						
NIE	**Niedzica**	**1.21**	**133**	*e*Pg	Pg	10 54 13.8	+0.5
NIE				*e*Sg	Sg	10 54 30.7	+1.7
DPC	**Dobruska-Polom**	**1.69**	**275**	*e*PG	Pg	10 54 19.3	-3.3
DPC				*e*SG	Sg	10 54 41.6	-2.9
	22nm,0.6s						
STHS	**Stebnicka Huta**	**1.70**	**118**	*e*PN	Pn	10 54 22.1	+1.0
STHS				*e*SN	Sn	10 54 45.3	+1.8
VYHS	**Vyhne**	**1.75**	**183**	*e*PN	Pn	10 54 21.5	-0.3
VYHS				*e*SN	Sn	10 54 43.3	-1.6
KSP	**Ksiaz**	**1.80**	**290**	*e*Pg	Pg	10 54 23.2	-1.5
KSP				*e*Sg	Sg	10 54 46.4	-1.6
CRVS	**Cervenica-Dubn**	**2.11**	**128**	*e*PN	Pn	10 54 29.1	+2.3
KOLS	**Kolonicke sedl**	**2.53**	**120**	*e*PN	Pn	10 54 36.1	+3.6
PRU	**Pruhonice**	**2.85**	**267**	*e*PG	Pg	10 54 40.1	-4.8
PRU				*e*SG	Sg	10 55 20.0	-1.8
	4.9nm,0.7s						
BRG	**Berggiesshubel**	**3.26**	**283**	SG	Sg	10 55 33.6	-1.2
	2.1nm,0.5s						
KHC	**Kasperske Hory**	**3.66**	**254**	*e*PG	Pg	10 54 54.2	-6.2
KHC				*e*SG	Sg	10 55 45.7	-2.2
	6.1nm,0.6s						
NKC	**Novy Kostel**	**4.18**	**272**	*e*SG	Sg	10 56 00.9	-3.5
	26nm,0.5s						

ISCJB ***18*** *10:58:38.5±0.7, 37.13S±0.06×177.10E±0.10, h277km±4km, mb3.4/4, Error ellipse: s-maj=12.4km s-min=9.0km az=170.7*
IDC ***18*** *10:58:38.5±1.3, 3721S×17731E, h276km±14km, mb3.2/3, mb1 3.6/4, mb1mx3.4/13, mbtmp4.1/4, Error ellipse: s-maj=54.9km s-min=31.0km az=172.0*
NEIC ***18*** *10:58:40.3, 3696S×17694E, h256km, MG4.8(WEL), After WEL.*
WEL ***18*** *10:58:41.2±0.4, 3698S×17699E, h248km±3km, ML4.8/24, Error ellipse: s-maj=3.8km s-min=3.2km az=0.0*
ISC 18 10:58:39.5±0.7**, 3714S**±006×**17708E**±010**, h271km**±4km**, n83, σ1s15**/89**, mb3.4**/4**, 6C-1D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.91**	**201**	P	**Pn**	**10 59 16.7**	**+0.4**
MARZ	**Manawahe**	**0.91**	**201**	PN	**Pn**	**10 59 16.7**	**+0.4**
MXZ	**Matakaoa Point**	**1.06**	**114**	P	**Pn**	**10 59 17.3**	**+0.2**
MXZ	**Matakaoa Point**	**1.06**	**114**	PN	**Pn**	**10 59 17.3**	**+0.3**
MXZ				SN	**S**	**10 59 45.0**	**-1.8**
URZ	**Urewera**	**1.12**	**179**	P	**Pn**	**10 59 17.6**	**+0.2**
	54nm,0.3s,baz=288,slow=2.5,SNR=251						
URZ				S	**S**	**10 59 46.9**	**-0.5**
	86nm,0.3s,baz=170,slow=23,SNR=17						
URZ	**Urewera**	**1.12**	**179**	P	**Pn**	**10 59 17.6**	**+0.2**
URZ	**Urewera**	**1.12**	**179**	⇑PN	**Pn**	**10 59 17.6**	**+0.2**
URZ				SN	**S**	**10 59 46.1**	**-1.2**
KUZ	**Kuaotunu**	**1.16**	**289**	P	**Pn**	**10 59 15.8**	**-1.8**
KUZ	**Kuaotunu**	**1.16**	**289**	⇑PN	**Pn**	**10 59 15.8**	**-1.8**
KUZ				SN	**S**	**10 59 43.8**	**-4.0**
MWZ	**Matawai**	**1.25**	**164**	P	**Pn**	**10 59 18.8**	**+0.7**
MWZ	**Matawai**	**1.25**	**164**	⇑PN	**Pn**	**10 59 18.8**	**+0.6**
MWZ				SN	**S**	**10 59 47.4**	**-1.3**
PUZ	**Puketiti**	**1.32**	**135**	⇑PN	**Pn**	**10 59 19.6**	**+1.0**
PUZ				SN	**S**	**10 59 48.2**	**-1.3**
OTAZ	**Otara**	**1.74**	**276**	P	**Pn**	**10 59 20.7**	**-0.8**
OTAZ	**Otara**	**1.74**	**276**	PN	**Pn**	**10 59 20.7**	**-0.9**
MTAZ	**Motutapu**	**1.78**	**281**	P	**Pn**	**10 59 24.6**	**+2.8**
WATZ	**Wairara**	**1.90**	**214**	P	**Pn**	**10 59 24.1**	**+1.3**
WATZ	**Wairara**	**1.90**	**214**	PN	**Pn**	**10 59 24.1**	**+1.3**
KAAZ	**Kauri Point**	**1.93**	**279**	P	**Pn**	**10 59 22.0**	**-1.1**
KAAZ	**Kauri Point**	**1.93**	**279**	PN	**Pn**	**10 59 21.8**	**-1.3**
KNZ	**Kokohu**	**1.94**	**166**	P	**Pn**	**10 59 24.7**	**+1.5**
KNZ	**Kokohu**	**1.94**	**166**	PN	**Pn**	**10 59 24.5**	**+1.4**
KNZ				SN	**S**	**10 59 57.0**	**-0.7**
WTAZ	**Waiatarua**	**2.02**	**275**	P	**Pn**	**10 59 22.7**	**-1.1**
WTAZ	**Waiatarua**	**2.02**	**275**	PN	**Pn**	**10 59 22.7**	**-1.2**
RITZ	**Rihia Road**	**2.08**	**207**	PN	**Pn**	**10 59 25.7**	**+1.4**
BKZ	**Black Stump Fm**	**2.08**	**193**	P	**Pn**	**10 59 25.3**	**+0.9**
BKZ	**Black Stump Fm**	**2.08**	**193**	⇑PN	**Pn**	**10 59 25.3**	**+0.9**
BKZ				SN	**S**	**10 59 58.9**	**-1.1**
HIZ	**Hauiti**	**2.24**	**231**	P	**Pn**	**10 59 27.2**	**+1.4**
HIZ	**Hauiti**	**2.24**	**231**	⇑PN	**Pn**	**10 59 27.1**	**+1.4**
WTVZ	**West Tongariro**	**2.30**	**210**	P	**Pn**	**10 59 27.6**	**+1.2**
WTVZ	**West Tongariro**	**2.30**	**210**	PN	**Pn**	**10 59 27.5**	**+1.2**
OTVZ	**Oturere**	**2.31**	**209**	PN	**Pn**	**10 59 27.9**	**+1.4**
TWVZ	**Taurewa**	**2.33**	**213**	PN	**Pn**	**10 59 27.8**	**+1.2**
NGZ	**Ngauruhoe**	**2.35**	**209**	P	**Pn**	**10 59 28.1**	**+1.3**
NGZ	**Ngauruhoe**	**2.35**	**209**	PN	**Pn**	**10 59 28.1**	**+1.3**
WPVZ	**Whakapapa**	**2.39**	**210**	P	**Pn**	**10 59 28.5**	**+1.3**
WPVZ	**Whakapapa**	**2.39**	**210**	PN	**Pn**	**10 59 28.3**	**+1.1**
TUVZ	**Tukino**	**2.41**	**207**	PN	**Pn**	**10 59 28.6**	**+1.2**
FWVZ	**Far West T-bar**	**2.43**	**209**	P	**Pn**	**10 59 28.8**	**+1.2**
FWVZ	**Far West T-bar**	**2.43**	**209**	PN	**Pn**	**10 59 29.3**	**+1.7**
DRZ	**Dome Shelter**	**2.45**	**209**	P	**Pn**	**10 59 29.4**	**+1.7**
DRZ	**Dome Shelter**	**2.45**	**209**	PN	**Pn**	**10 59 29.4**	**+1.6**
WNVZ	**Wahianoa**	**2.48**	**208**	P	**Pn**	**10 59 29.2**	**+1.2**
WNVZ	**Wahianoa**	**2.48**	**208**	PN	**Pn**	**10 59 29.2**	**+1.1**
MOVZ	**Moawhango**	**2.50**	**204**	P	**Pn**	**10 59 28.9**	**+0.7**
MOVZ	**Moawhango**	**2.50**	**204**	PN	**Pn**	**10 59 28.9**	**+0.7**
MOVZ				SN	**S**	**11 00 07.6**	**+0.7**
WCZ	**Waipu Caves**	**2.51**	**298**	P	**Pn**	**10 59 25.9**	**-2.4**
WCZ	**Waipu Caves**	**2.51**	**298**	⇓PN	**Pn**	**10 59 25.9**	**-2.4**
VRZ	**Vera Road**	**2.70**	**222**	PN	**Pn**	**10 59 31.8**	**+1.6**
VRZ				*e*SN	**S**	**11 00 15.1**	**+4.6**
TSZ	**Takapari Road**	**3.05**	**196**	P	**Pn**	**10 59 34.5**	**+0.8**
WAZ	**Wanganui**	**3.09**	**212**	P	**Pn**	**10 59 35.2**	**+1.0**
PKE	**Pukeiti**	**3.19**	**229**	P	**Pn**	**10 59 37.6**	**+2.4**
MRZ	**Mangatainoka R**	**3.71**	**198**	P	**Pn**	**10 59 41.1**	**+0.2**
KIW	**Kapiti Island**	**4.09**	**204**	P	**Pn**	**10 59 45.0**	**-0.2**
CAW	**Cannon Point**	**4.26**	**201**	P	**Pn**	**10 59 47.1**	**-0.1**
PAWZ	**Paruwai Farm**	**4.43**	**196**	P	**Pn**	**10 59 49.4**	**+0.3**
MRW	**Makara Radio**	**4.49**	**204**	P	**Pn**	**10 59 49.6**	**-0.2**
MSWZ	**Moikau Station**	**4.50**	**198**	P	**Pn**	**10 59 49.7**	**-0.3**
SNZO	**South Karori**	**4.56**	**203**	*e*P	**Pn**	**10 59 49.8**	**-0.9**
BHW	**Baring Head**	**4.60**	**201**	P	**Pn**	**10 59 50.7**	**-0.4**
TCW	**Tory Channel**	**4.62**	**207**	P	**Pn**	**10 59 50.8**	**-0.5**
NNZ	**Nelson**	**4.99**	**214**	P	**Pn**	**10 59 54.8**	**-0.9**
QRZ	**Quartz Range**	**5.11**	**223**	P	**Pn**	**10 59 55.7**	**-1.6**
BSWZ	**Blackbirch Sta**	**5.20**	**208**	P	**Pn**	**10 59 58.4**	**+0.1**
THZ	**Tophouse**	**5.64**	**214**	*e*P	**Pn**	**11 00 02.5**	**-1.1**
KHZ	**Kahutara**	**5.94**	**206**	P	**Pn**	**11 00 07.1**	**-0.1**
DSZ	**Denniston Nort**	**6.15**	**220**	P	**Pn**	**11 00 07.8**	**-2.1**
LTZ	**Lake Taylor**	**6.74**	**212**	P	**Pn**	**11 00 16.4**	**-0.7**
CRLZ	**Canterbury Las**	**7.28**	**207**	P	**Pn**	**11 00 23.0**	**-0.8**
MQZ	**McQueen's Vall**	**7.38**	**206**	P	**Pn**	**11 00 23.9**	**-1.2**
RPZ	**Rata Peaks**	**8.02**	**213**	P	**Pn**	**11 00 32.2**	**-0.8**
	11nm,0.3s,baz=32,slow=2.7,SNR=19						
FOZ	**Fox Glacier**	**8.54**	**219**	P	**Pn**	**11 00 36.2**	**-3.4**
LBZ	**Lake Benmore**	**8.93**	**214**	*e*P	**Pn**	**11 00 42.7**	**-1.7**
ODZ	**Otahua Downs**	**9.27**	**210**	P	**Pn**	**11 00 48.6**	**-0.1**
EAZ	**Earnscleugh**	**9.98**	**213**	*e*P	**Pn**	**11 00 55.5**	**-2.0**
AS31	**Alice Springs**	**39.26**	**278**	*e*P	**P**	**11 05 42.9**	**+0.8**
ASAR	**Alice Springs**	**39.26**	**278**	P	**P**	**11 05 42.5**	**+0.4**
	0.7nm,0.5s,mb3.3,baz=122,slow=8.1,SNR=18						
WRA	**Warramunga Arr**	**40.89**	**283**	P	**P**	**11 05 55.0**	**-0.4**
	0.6nm,0.3s,mb3.3,baz=123,slow=7.0,SNR=61						
VNDA	**Vanda**	**41.02**	**185**	*e*P	**P**	**11 05 56.1**	**-0.4**
	3.0nm,1.0s,mb3.5						
FITZ	**Fitzroy Crossi**	**48.75**	**278**	P	**P**	**11 06 57.6**	**+0.5**
	1.5nm,0.9s,mb3.3,baz=105,slow=12,SNR=4.9						
ARCES	**ARCESS Array B**	**144.09**	**343**	PKP	PKPdf	11 17 39.2	-3.5
	1.1nm,0.5s,baz=42,slow=4.1,SNR=15						
ARCES	**ARCESS Array B**	**144.09**	**343**	PKP	PKPdf	11 17 39.2	-3.5
JOF	**Joensuu**	**146.81**	**332**	*e*p	PKPdf	11 17 46.3	-1.0
	1.3nm,0.5s						
FINES	**FINESS Array B**	**149.66**	**333**	PKPbc	PKPbc	11 17 54.8	-2.1
	0.4nm,0.3s,baz=58,slow=5.2,SNR=6.8						

JMA 18 11:18:38.2±0.2**, 4181N×14705E, h14km, M3.6, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.83**	**329**	P	Pn	11 19 09.9	+0.7
NEM2				*e*S	Sn	11 19 32.9	+0.7
JAK	**Akkeshi**	**2.11**	**305**	P	Pn	11 19 14.2	+1.2
JAK				*e*S	Sn	11 19 40.5	+1.5
JNK	**Nakash**	**2.47**	**317**	P	Pn	11 19 18.6	+0.6
JNK				*e*S	Sn	11 19 47.8	-0.2
JRA	**Rausu**	**2.56**	**327**	*e*S	Sn	11 19 51.5	+1.4
JOB	**Onbets**	**2.62**	**296**	P	Pn	11 19 21.4	+1.3
JOB				*e*S	Sn	11 19 53.1	+1.4
JAR	**Ashorobuto**	**2.84**	**303**	P	Pn	11 19 24.2	+1.1
JAR				*e*S	Sn	11 19 57.8	+0.6
JCH	**Churui**	**2.85**	**288**	P	Pn	11 19 24.6	+1.3
JCH				*e*S	Sn	11 19 57.9	+0.4
JEM	**Erimo**	**2.91**	**275**	P	Pn	11 19 26.2	+2.1
JNBK	**Urakawa-nobuka**	**3.23**	**280**	P	Pn	11 19 29.6	+1.1
JANG	**Nango**	**4.42**	**253**	P	Pn	11 19 43.2	-1.6
JANG				*e*S	Sn	11 20 31.7	-4.4
JKB	**Kayabe**	**4.50**	**273**	P	Pn	11 19 47.0	+1.1
JKB				*e*S	Sn	11 20 36.7	-1.2
JOT	**Ohata**	**4.52**	**267**	P	Pn	11 19 47.1	+0.9

IDC ***18*** *11:40:32.3±2.1, 3689N×6832E, h0km, mb3.9/7, mb1 4.0/10, mb1mx3.8/24, mbtmp3.8/10, ML3.7/3, Error ellipse: s-maj=41.5km s-min=21.0km az=148.0*
ISCJB ***18*** *11:40:35.6±2.2, 3731N±0.07×68.13E±0.08, h20km±19km, mb3.8/7, Error ellipse: s-maj=13.1km s-min=9.0km az=113.5*
MOS ***18*** *11:40:37.9±1.2, 3737N×68.16E, h33km, mb4.4/1, Error ellipse: s-maj=20.0km s-min=7.9km az=87.0*
NEIC ***18*** *11:40:38.3±1.7, 3706N×6846E, h45km, mb3.5/3, Error ellipse: s-maj=33.6km s-min=12.7km az=150.0*
NNC ***18*** *11:40:41.1±3.8, 3776N×6828E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=36.6km s-min=22.3km az=1.0*
ISC 18 11:40:36.5±2.3**, 3727N**±008×**6806E**±007**, h13km**±17km**, n40, σ1s14**/44**, mb3.8**/7**, 8C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.12**	**17**	Pn	**Pn**	**11 42 08.2**	**+1.5**
	1.6nm,0.2s,baz=59,slow=8.7,SNR=66						
KK31				⇑Sn	**Sn**	**11 43 15.7**	**-0.8**
	3.9nm,0.4s,baz=39,slow=121,SNR=3.7						
KKAR	**Karatay Array**	**6.12**	**17**	PN	**Pn**	**11 42 08.1**	**+1.5**
KKAR				S	**Sn**	**11 43 17.2**	**+0.7**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KKAR				smax			
	comp=Z,1.0nm,0.3s						
AML	**Almayashu**	**6.51**	**40**	P	**Pn**	**11 42 13.0**	**+1.0**
	SNR=19						
EKS2	**Erkin-Say**	**6.95**	**37**	P	**Pn**	**11 42 19.1**	**+1.1**
	SNR=6.7						
AAK	**Ala-Archa**	**7.29**	**41**	P	**Pn**	**11 42 23.3**	**+0.7**
	SNR=5.9						
AAK	**Ala-Archa**	**7.29**	**41**	*e*PN	**Pn**	**11 42 22.1**	**-0.5**
AAK				pmax	pmax		
	comp=Z,11nm,0.3s						
AAK	**Ala-Archa**	**7.29**	**41**	*e*P	**Pn**	**11 42 22.1**	**-0.6**
	comp=Z,11nm,0.3s						
KZA	**Kyzart**	**7.33**	**47**	P	**Pn**	**11 42 23.8**	**+0.5**
	SNR=14						
KBK	**Karagaybulak**	**7.54**	**42**	P	**Pn**	**11 42 27.3**	**+1.2**
	SNR=9.1						
ULHL	**Ulahol**	**8.03**	**49**	P	**Pn**	**11 42 32.1**	**-0.7**
	SNR=15						
TKM2	**Tokmak 2**	**8.07**	**43**	P	**Pn**	**11 42 33.6**	**+0.2**
	SNR=7.0						
TKM2	**Tokmak 2**	**8.07**	**43**	⇓Pn	**Pn**	**11 42 33.4**	**0.0**
	comp=Z,0.5nm,0.6s						
TKM2				⇑Sn	**Sn**	**11 44 04.0**	**-0.6**
	comp=Z,0.9nm,0.6s						
AB31	**Akbulak array**	**13.35**	**336**	Pn	**Pn**	**11 43 46.1**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=158,slow=12,SNR=60						
AB31				⇑Sn	**Sn**	**11 46 14.7**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=165,slow=21,SNR=2.7						
MKAR	**Makanchi Array**	**14.21**	**43**	Pn	**Pn**	**11 43 54.6**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=223,slow=16,SNR=10.0						
AKTK	**Aktyubinsk**	**15.00**	**334**	Pn	**Pn**	**11 44 06.7**	**-1.5**
AKTO	**Aktyubinsk**	**15.00**	**334**	⇑Pn	**Pn**	**11 44 06.3**	**-1.9**
AKTO	**Aktyubinsk**	**15.00**	**334**	Pn	**Pn**	**11 44 06.7**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=150,slow=14,SNR=7.4						
VOSK	**Vostochnaya**	**15.59**	**7**	⇑Pn	**Pn**	**11 44 13.3**	**-2.6**
	comp=Z,1.6nm,0.8s						
ZRNK	**Zerenda**	**15.70**	**2**	⇑Pn	**Pn**	**11 44 16.1**	**-1.2**
	comp=Z,5.2nm,1.4s						
ZRNK	**Zerenda**	**15.70**	**2**	*e*P	**Pn**	**11 44 15.8**	**-1.5**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZRNK	**Zerenda**	**15.70**	**2**	*e*P	**Pn**	**11 44 15.8**	**-1.5**
	comp=Z,2.2nm,0.6s						
BVA0	**Borovoye Array**	**15.84**	**5**	⇑Pn	**Pn**	**11 44 22.5**	**+3.4**
	comp=Z,0.3nm,0.5s,baz=161,slow=9.5,SNR=7.6						
BVAR	**Borovoye Array**	**15.84**	**5**	Pn	**Pn**	**11 44 17.6**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=171,slow=11,SNR=6.1						
BRVK	**Borovoye**	**15.87**	**5**	*e*P	**Pn**	**11 44 20.0**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	**15.87**	**5**	*e*P	**Pn**	**11 44 20.0**	**+0.5**
	comp=Z,2.4nm,0.6s						
CHKZ	**Chkalovo**	**16.50**	**5**	⇑Pn	**Pn**	**11 44 29.0**	**+1.4**
	comp=Z,3.1nm,1.2s						
CHKZ	**Chkalovo**	**16.50**	**5**	*e*P	**Pn**	**11 44 28.4**	**+0.7**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHKZ	**Chkalovo**	**16.50**	**5**	*e*P	**Pn**	**11 44 28.4**	**+0.7**
	comp=Z,1.8nm,0.6s						
ZAL	**Zalesovo**	**20.29**	**29**	P	**P**	**11 45 10.7**	**-1.2**
	comp=Z,2.8nm,0.6s,baz=235,slow=9.0,SNR=11						
NVS	**Novosibirsk**	**20.41**	**26**	*e*P	**P**	**11 45 12.8**	**-0.4**
BRTR	**Keskin Array B**	**26.96**	**286**	P	**P**	**11 46 17.8**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.4,baz=87,slow=10,SNR=5.2						
JOF	**Joensuu**	**34.04**	**331**	*e*p	**P**	**11 47 19.4**	**-0.8**
	comp=Z,1.3nm,0.3s,mb4.3						
JOF	**Joensuu**	**34.04**	**331**	*e*P	**P**	**11 47 19.4**	**-0.8**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
FINES	**FINESS Array B**	**35.54**	**326**	P	**P**	**11 47 34.8**	**+1.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=126,slow=11,SNR=8.7						
ARCES	**ARCESS Array B**	**39.55**	**338**	P	**P**	**11 48 08.2**	**+1.1**
	comp=Z,1.0nm,0.7s,mb3.6,baz=128,slow=8.8,SNR=10						
NB2	**NORSAR Subarra**	**42.35**	**323**	P	**P**	**11 48 30.9**	**+0.7**
	comp=Z,1.2nm,0.5s,mb3.8,baz=98,slow=8.6						
NOA	**NORSAR Array B**	**42.35**	**323**	P	**P**	**11 48 31.2**	**+1.0**
	comp=Z,1.3nm,0.5s,mb3.8,baz=99,slow=8.1,SNR=12						
TORD	**Torodi Ar. Bea**	**63.40**	**266**	P	**P**	**11 51 05.2**	**-0.4**
	comp=Z,0.6nm,0.7s,mb3.9,baz=44,slow=5.4,SNR=5.0						
YKA	**Yellowknife Ar**	**80.56**	**1**	P	**P**	**11 52 48.3**	**-0.3**
	comp=Z,0.8nm,0.5s,mb3.9,baz=353,slow=5.4,SNR=7.6						
YKA	**Yellowknife Ar**	**80.56**	**1**	P	**P**	**11 52 48.3**	**-0.3**

IDC ***18*** *11:44:18.8±0.8, 134N×12286E, h0km, mb4.6/7, mb1 4.8/8, mb1mx4.4/19, mbtmp4.6/8, ML4.7/1, MS3.6/7, Ms1 3.6/7, ms1mx3.3/24, Error ellipse: s-maj=35.1km s-min=17.5km az=72.0*
ISCJB ***18*** *11:44:21.5±0.4, 134N±0.04×12286E±0.09, h33km, mb4.5/14, MS3.6/6, Error ellipse: s-maj=13.2km s-min=6.2km az=172.0*
BJI ***18*** *11:44:22.8, 120N×12270E, h27km, mB5.2, mb4.6, Ms4.6, Msz4.5*
NEIC ***18*** *11:44:22.9±3.6, 124N×12274E, h28km±26km, mb4.7/9, Error ellipse: s-maj=16.5km s-min=8.0km az=81.0*
NEIC Felt [II] at Gorontalo.
ISC 18 11:44:20.5±4.8**, 129N**±006×**1228E**±01**, h11km**±32km**, n37, σ1s04**/30**, mb4.5**/14**, MS3.6**/6**, 5C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**6.06**	**13**	⇑*e*P	**Pn**	**11 45 49.4**	**-0.5**
DAV	**Davao City (W)**	**6.36**	**25**	*e*P	**Pn**	**11 45 56.5**	**+2.3**
IPIL	**Ipil**	**6.46**	**358**	⇑*e*P	**Pn**	**11 45 54.9**	**-0.6**
IPIL	**Ipil**	**6.46**	**358**	*e*P	**Pn**	**11 45 53.9**	**-1.6**
PAGZ	**Pagadian**	**6.54**	**5**	*e*P	**Pn**	**11 45 54.6**	**-1.9**
BUKP	**Musuan**	**6.92**	**19**	*e*P	**Pn**	**11 46 02.1**	**+0.4**
KAKA	**Kakadu**	**16.86**	**146**	*e*P	**Pn**	**11 48 17.1**	**+0.7**
	26nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.46**	**172**	P	**Pn**	**11 48 47.8**	**-0.5**
	1.5nm,0.3s,baz=3.5,slow=8.8,SNR=73						
FITZ				LR	LR	11 56 45.4	
	comp=Z,145nm,21.8s,baz=191,slow=38						
FITZ	**Fitzroy Crossi**	**19.46**	**172**	⇑*i*P	**Pn**	**11 48 47.8**	**-0.5**
	24nm,0.6s						
KSI	**Kapahiang**	**20.81**	**256**	P	**P**	**11 49 03.3**	**+1.5**
	126nm,0.9s						
MBWA	**Marble Bar**	**22.51**	**188**	*e*P	**P**	**11 49 18.7**	**-1.3**
	11nm,0.9s,mb4.3						
WRAB	**Tennant Creek**	**23.92**	**152**	*e*P	**P**	**11 49 34.0**	**-0.3**
	39nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**23.93**	**152**	P	**P**	**11 49 34.4**	**-0.1**
	16nm,0.8s,mb4.5,baz=336,slow=9.8,SNR=108						
WB2	**Warramunga Arr**	**23.93**	**152**	⇑*i*P	**P**	**11 49 34.2**	**-0.3**
PSI	**Prapat**	**23.94**	**274**	P	**P**	**11 49 35.0**	**+0.5**
	11nm,0.9s,mb4.3,baz=122,slow=3.5,SNR=6.4						
GUMO	**Guam**	**25.00**	**60**	LR	LR	11 57 35.9	
	comp=Z,118nm,21.8s,MS3.4,baz=244,slow=32						
JOW	**Kunigami**	**25.93**	**11**	LR	LR	11 58 30.3	
	comp=Z,134nm,21.9s,MS3.4,baz=274,slow=33						
AS31	**Alice Springs**	**27.04**	**157**	*e*P	**P**	**11 50 02.9**	**+0.2**
ASAR	**Alice Springs**	**27.04**	**157**	P	**P**	**11 50 03.1**	**+0.5**
	3.0nm,0.8s,mb3.9,baz=333,slow=7.6,SNR=32						
GYA	**Guiyang**	**29.46**	**330**	P	**P**	**11 50 25.6**	**+1.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
FORT	**Forrest**	**32.27**	**172**	*e*P	**P**	**11 50 48.5**	**-0.6**
	comp=Z,23nm,0.7s,mb5.1						
NWAO	**Narrogin (SRO)**	**34.44**	**188**	LR	LR	12 04 36.4	
	comp=Z,184nm,22.0s,MS3.8,baz=214,slow=35						
STKA	**Stephens Creek**	**37.47**	**153**	P	**P**	**11 51 35.5**	**+1.6**
	comp=Z,20nm,0.9s,mb5.0,baz=323,slow=8.4,SNR=25						
STKA				LR	LR	12 07 25.4	
	comp=Z,133nm,20.1s,MS3.7,baz=28,slow=37						
STKA	**Stephens Creek**	**37.47**	**153**	⇑*i*P	**P**	**11 51 34.7**	**+0.8**
	comp=Z,15nm,0.9s,mb4.8						
MJAR	**Matsushiro Arr**	**37.86**	**20**	P	**P**	**11 51 36.2**	**-1.0**
	comp=Z,3.8nm,1.0s,mb4.1,baz=192,slow=8.8,SNR=7.2						
MJAR	**Matsushiro Arr**	**37.86**	**20**	P	**P**	**11 51 36.2**	**-1.0**
ARMA	**Armidale**	**41.79**	**141**	*e*P	**P**	**11 52 12.6**	**+2.7**
SONM	**Songino Array**	**48.51**	**345**	P	**P**	**11 53 03.9**	**+0.6**
	comp=Z,4.4nm,0.8s,mb4.5,baz=158,slow=7.8,SNR=7.0						
ZAL	**Zalesovo**	**61.08**	**335**	LR	LR	12 20 34.7	
	comp=Z,59nm,18.5s,MS3.8,baz=70,slow=36						
CASY	**Casey**	**67.99**	**185**	*e*P	**P**	**11 55 18.4**	**-1.1**
MAW	**Mawson**	**80.14**	**200**	*e*P	**P**	**11 56 29.4**	**-1.2**
	comp=Z,2.0nm,0.9s,mb4.0						
VNDA	**Vanda**	**81.54**	**172**	P	**P**	**11 56 37.7**	**-0.3**
	comp=Z,13nm,0.8s,mb4.9,baz=315,slow=6.0,SNR=93						
SBA	**Scott Base**	**82.49**	**171**	*e*P	**P**	**11 56 43.4**	**+0.4**
	comp=Z,7.4nm,0.9s,mb4.6						
QSPA	**South Pole Qui**	**91.21**	**180**	*e*P	**P**	**11 57 24.9**	**-0.7**
	comp=Z,6.7nm,1.1s,mb4.9						
FINES	**FINESS Array B**	**92.12**	**331**	LR	LR	12 39 41.9	
	comp=Z,32nm,19.8s,MS3.8,baz=193,slow=36						
CFAA	**Coronel Fontan**	**148.08**	**162**	PKPbc	PKPbc	12 04 06.7	+0.6
	comp=Z,1.1nm,0.9s,baz=242,slow=2.4,SNR=10						
CPUP	**Villa Florida**	**155.10**	**180**	PKPab	PKPab	12 04 38.4	+0.3
	comp=Z,0.4nm,0.4s,baz=158,slow=6.8,SNR=3.2						

IDC ***18*** *11:45:46.1±0.8, 38.19N×6873E, h0km, mb3.9/12, mb1 4.2/16, mb1mx4.1/25, mbtmp4.0/16, ML4.1/4, MS3.8/18, Ms1 3.8/18, ms1mx3.6/32, Error ellipse: s-maj=16.4km s-min=13.6km az=20.0*
ISCJB ***18*** *11:45:47.5±1.1, 3831N±0.03×6881E±0.04, h20km±8km, mb4.3/35, MS3.9/26, Error ellipse: s-maj=6.0km s-min=4.2km az=131.2*
BJI ***18*** *11:45:49.0, 3872N×69.18E, h4km, mB4.9, mb4.5, ML4.9, Ms4.3, Msz4.2*
NEIC ***18*** *11:45:49.5±0.5, 3825N×6922E, h10km, mb4.7/19, Error ellipse: s-maj=12.6km s-min=7.5km az=218.0*
NEIC Minor damage [IV] at Dushanbe.
NNC ***18*** *11:45:50.2±3.6, 3858N×6868E, h18km±17km, mb4.7, mpv5.0, Error ellipse: s-maj=23.4km s-min=17.4km az=12.0*
MOS ***18*** *11:45:51.1±1.9, 3840N×6908E, h33km, mb4.7/17, Error ellipse: s-maj=8.5km s-min=5.5km az=86.3*
SZGRF ***18*** *11:45:57.2, 38.18N×6875E, h33km, mb4.2, Tajikistan*
ISC 18 11:45:47.1±1.4**, 3834N**±003×**6869E**±004**, h4km**±9km**, n150, σ1s41**/163**, mb4.3**/35**, MS3.9**/26**, 26C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	**Tashkent**	**3.02**	**9**	*e*PN	**Pn**	**11 46 38.0**	**+2.3**
TAS				*e*		11 47 26.0	
TAS				pmax	pmax		
	comp=Z,150µm,1.0s						
KK31	**Karatay Array**	**4.96**	**16**	⇑Pn	**Pn**	**11 47 02.5**	**+0.1**
	comp=Z,134nm,0.6s,baz=52,slow=15,SNR=164						
KK31				⇑Pg	**Pg**	**11 47 17.0**	**-5.2**
	comp=Z,221nm,0.8s,baz=249,slow=66,SNR=26						
KK31				⇑Lg		11 48 20.0	
	comp=Z,992nm,1.0s,baz=211,slow=88,SNR=5.0						
KKAR	**Karatay Array**	**4.96**	**16**	PN	**Pn**	**11 47 02.2**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,42nm,0.5s						
AML	**Almayashu**	**5.39**	**44**	P	**Pn**	**11 47 08.7**	**+0.5**
	SNR=37						
KSH	**Kashi**	**5.80**	**76**	PG	**Pn**	**11 47 18.9**	**+5.0**
KSH				S	**Sn**	**11 48 21.5**	**+0.7**
KSH				Smax			
	comp=N,2µm,1.1s						
KSH				Smax			
	comp=E,1µm,0.8s						
EKS2	**Erkin-Say**	**5.81**	**40**	P	**Pn**	**11 47 15.5**	**+1.5**
	SNR=24						
UCH	**Uchtor**	**5.91**	**47**	P	**Pn**	**11 47 19.0**	**+3.6**
	SNR=10						
THW	**Thamme Wali**	**6.06**	**155**	⇓P	**Pn**	**11 47 20.7**	**+3.3**
AAK	**Ala-Archa**	**6.17**	**44**	P	**Pn**	**11 47 20.0**	**+1.1**
	SNR=9.7						
AAK	**Ala-Archa**	**6.17**	**44**	*i* PN	**Pn**	**11 47 18.8**	**-0.1**
AAK	**Ala-Archa**	**6.17**	**44**	*e*Pn	**Pn**	**11 47 18.7**	**-0.2**
KZA	**Kyzart**	**6.26**	**51**	P	**Pn**	**11 47 20.5**	**+0.3**
	SNR=38						
FRU	**Bishkek**	**6.37**	**43**	*e*PN	**Pn**	**11 47 23.0**	**+1.4**
FRU				*i*		11 47 40.5	
FRU				*e*S	**Sn**	**11 48 40.0**	**+5.2**
FRU				*i*		11 49 17.0	
FRU				pmax	pmax		
	comp=Z,160nm,1.6s						
KBK	**Karagaybulak**	**6.43**	**46**	P	**Pn**	**11 47 30.1**	**+7.5**
	SNR=6.6						
CHMS	**Chumysh**	**6.55**	**43**	P	**Pn**	**11 47 24.6**	**+0.4**
	SNR=25						
USP	**Ospenovka**	**6.61**	**40**	P	**Pn**	**11 47 25.4**	**+0.4**
	SNR=14						
TKM2	**Tokmak 2**	**6.97**	**47**	P	**Pn**	**11 47 30.3**	**+0.4**
	SNR=30						
TKM2	**Tokmak 2**	**6.97**	**47**	⇓Pn	**Pn**	**11 47 30.7**	**+0.8**
	comp=Z,34nm,1.0s						
TKM2				⇑Lg		11 49 22.6	
	comp=Z,32nm,0.8s						
TKM2	**Tokmak 2**	**6.97**	**47**	*i* PN	**Pn**	**11 47 30.4**	**+0.5**

TKM2 pmax pmax
comp=Z,211nm,1.0s
ULHL Ulahol 6.97 54 P **Pn 11 47 31.0 +1.1**
SNR=17
KNDC Almaty 7.95 50 ⇑Pn **Pn 11 47 48.2 +4.9**
KNDC ⇑Pg **Pg 11 48 12.3 -7.0**
comp=Z,344nm,1.1s
KNDC ⇑Lg 11 49 55.0
comp=Z,825nm,1.2s
DLH Dalhousie 8.29 132 *e*P **Pn 11 47 50.0 +2.0**
DLH *ex* x 11 49 19.0
PONG Pong 8.71 135 *e*P **Pn 11 47 55.0 +1.2**
PONG *ex* x 11 49 57.0
BHK Bhakra 9.38 135 *ex* x 11 48 17.2
SDNR Sundarnagar 9.63 133 *e*P **Pn 11 48 06.0 -0.3**
SDNR *ex* x 11 49 51.4
SMLA Simla 10.02 133 *e*P **Pn 11 48 12.2 +0.6**
SMLA AMb AMB 11 48 15.9
comp=Z,38nm,0.7s
KLP Kalpa 10.37 128 *e*P **Pn 11 48 15.6 -1.0**
KLP AMb AMB 11 48 23.1
comp=Z,112nm,1.2s
KLP *ex* x 11 49 52.2
RTK Rohtak 11.29 143 *ex* **Sn 11 50 35.1 -0.5**
KHET Khetri 11.84 148 *e*P **Pn 11 48 35.2 -1.4**
KHET AMb AMB 11 48 37.1
comp=Z,13nm,1.4s
KHET *ex* x 11 50 44.8
NDI New Delhi 11.96 141 *e*P **Pn 11 48 39.1 +0.8**
NDI AMb AMB 11 48 42.2
comp=Z,48nm,0.8s
NDI *ex* x 11 50 47.0
AYAN Aya Nagar 12.09 142 *ex* **Pn 11 48 35.5 -4.6**
AYAN AMb AMB 11 48 37.4
comp=Z,35nm,0.2s
AB31 Akbulak array 12.60 333 ⇑P **Pn 11 48 45.1 -1.9**
comp=Z,7.8nm,0.5s
AB31 ⇑S **Sn 11 51 00.3 -7.5**
comp=Z,53nm,0.9s
AB31 ⇑Lg 11 52 31.4
comp=Z,42nm,0.8s
AB31 Akbulak array 12.60 333 P **Pn 11 48 45.0 -2.0**
AB31 pmax pmax
comp=Z,3.0nm,0.4s
LGTI Lohaghat 13.06 129 *ex* **Pn 11 48 55.5 +2.2**
MK31 Makanchi Array 13.10 45 P **Pn 11 48 52.4 -1.5**
MK31 pmax pmax
comp=Z,11nm,0.7s
MKAR Makanchi Array 13.10 45 Pn **Pn 11 48 52.8 -1.1**
comp=Z,0.2nm,0.3s,baz=241,slow=12,SNR=33
MKAR Lg 11 52 46.8
comp=Z,0.5nm,0.3s,baz=245,slow=20,SNR=3.6
MK05 Makanchi Array 13.10 45 ⇑P **Pn 11 48 52.5 -1.4**
comp=Z,14nm,0.8s
MK05 ⇓Lg 11 52 46.4
comp=Z,28nm,0.9s
AGRA Agra 13.53 142 *e*P **Pn 11 48 59.2 -0.4**
AGRA AMb AMB 11 48 59.9
comp=Z,42nm,0.2s
AGRA *ex* x 11 51 25.7
AKTK Aktyubinsk 14.28 331 Pn **Pn 11 49 07.4 -2.6**
AKTK Sn **Sn 11 51 42.8 -6.1**
AKTK Lg 11 53 24.2
AKTK LR LR 11 55 04.5
AKTO Aktyubinsk 14.28 331 ⇑P **Pn 11 49 09.5 -0.5**
comp=Z,0.8nm,1.0s
AKTO ⇓S **Sn 11 51 41.0 -7.8**
comp=Z,1.3nm,1.2s
AKTO ⇑Lg 11 53 27.9
comp=Z,8.9nm,2.4s
AKTO Aktyubinsk 14.28 331 Pn **Pn 11 49 07.4 -2.6**
comp=Z,0.9nm,0.3s,baz=143,slow=17,SNR=12
AKTO Sn **Sn 11 51 42.8 -6.1**
comp=Z,0.5nm,0.3s,baz=235,slow=20,SNR=3.0
AKTO Lg 11 53 24.2
baz=126,slow=6.1,SNR=2.7
AKTO LR LR 11 55 04.5
comp=Z,318nm,21.0s,baz=351,slow=39
VOSK Vostochnaya 14.48 6 ⇑P **Pn 11 49 10.7 -2.0**
comp=Z,7.2nm,0.8s
VOSK ⇑S **Sn 11 51 44.6 -9.0**
comp=Z,20nm,1.1s
VOSK ⇑Lg 11 53 30.6
comp=Z,194nm,1.9s
ZRNK Zerenda 14.62 1 ⇑P **Pn 11 49 16.0 +1.4**
comp=Z,16nm,1.1s
ZRNK ⇑S **Sn 11 51 52.8 -4.2**
comp=Z,18nm,0.9s
ZRNK ⇑Lg 11 53 38.4
comp=Z,86nm,1.3s
ZRNK Zerenda 14.62 1 *e*P **Pn 11 49 14.5 -0.1**
ZRNK pmax pmax
comp=Z,43nm,1.5s
ZRNK Zerenda 14.62 1 *e*Pn **Pn 11 49 14.5 -0.1**
comp=Z,43nm,1.5s
BVA0 Borovoye Array 14.74 4 ⇑P **Pn 11 49 15.8 -0.4**
comp=Z,3.0nm,1.0s,baz=225,slow=33,SNR=31
BVA0 ⇑S **Sn 11 51 58.5 -1.4**
comp=Z,6.9nm,1.6s
BVA0 ⇓Lg 11 53 26.8
comp=Z,25nm,1.5s
BVAR Borovoye Array 14.74 4 Pn **Pn 11 49 14.4 -1.8**
comp=Z,0.8nm,0.3s,baz=172,slow=12,SNR=15
BVAR Sn **Sn 11 52 00.6 +0.6**
comp=Z,0.9nm,0.3s,baz=209,slow=23,SNR=3.4
BVAR Lg 11 53 31.6
comp=Z,0.3nm,0.3s,baz=208,slow=31,SNR=3.1
BVAR Borovoye Array 14.74 4 P **Pn 11 49 14.4 -1.8**
BVAR 11 52 00.6
BRVK Borovoye 14.77 4 *e*P **Pn 11 49 20.6 +4.0**
BRVK pmax pmax
comp=Z,12nm,0.6s
BRVK Borovoye 14.77 4 *e*Pn **Pn 11 49 20.6 +4.0**
comp=Z,12nm,0.6s
BRVK *e*S **Sn 11 52 13.7 +13**
WMQ Urumqi 15.34 63 *e*P **Pn 11 49 23.0 -1.3**
WMQ S **Sn 11 52 06.0 -8.6**
WMQ SS 11 52 25.0
WMQ AMB AMB
comp=Z,16nm,0.8s
WMQ LR LR
comp=N,564nm,5.0s
WMQ LR LR
comp=E,468nm,5.0s
WMQ LR LR
comp=Z,514nm,5.0s
CHKZ Chkalovo 15.40 4 ⇑P **Pn 11 49 27.6 +2.5**
comp=Z,7.4nm,0.8s
CHKZ ⇓S **Sn 11 52 07.9 -8.2**
comp=Z,41nm,1.7s
CHKZ ⇑Lg 11 53 49.4
comp=Z,174nm,1.4s
CHKZ Chkalovo 15.40 4 *e*P **Pn 11 49 27.8 +2.7**
CHKZ pmax pmax
comp=Z,13nm,0.9s
CHKZ Chkalovo 15.40 4 *e*P **Pn 11 49 27.8 +2.7**
comp=Z,13nm,0.9s
KOLN Koldanda 16.33 126 *e*P **Pn 11 49 33.6 -3.5**
comp=Z,117nm,0.9s
GKN Gorkha 16.84 123 *e*P **Pn 11 49 40.9 -2.8**
comp=Z,217nm,1.0s
WSAR Wadi Sarin 17.33 213 LR LR 11 58 11.6
comp=Z,435nm,20.8s,baz=240,slow=43
KKN Kakani 17.41 122 *e*P **Pn 11 49 48.9 -1.9**
DMN Daman 17.41 123 *e*P **Pn 11 49 46.4 -4.4**
comp=Z,135nm,0.9s
PKI Pulchoki 17.64 123 *e*P **Pn 11 49 50.3 -3.3**
comp=Z,92nm,0.8s
PKI Pulchoki 17.64 123 *e*P **Pn 11 49 50.3 -3.3**
PKI pmax pmax
comp=Z,92nm,0.8s
GUN Gumba 17.73 121 *e*P **Pn 11 49 53.2 -1.6**
comp=Z,278nm,1.0s
JIRN Jiri 18.11 121 *e*P **Pn 11 49 55.0 -4.4**
comp=Z,94nm,0.7s
GNI Garni 18.63 283 P **Pn 11 50 09.7 +3.9**
comp=Z,0.8nm,0.3s,baz=153,slow=6.1,SNR=3.2
GNI Garni 18.63 283 P **Pn 11 50 09.7 +4.0**
GNI pmax pmax
comp=Z,1.0nm,0.3s
GNI Garni 18.63 283 *e*P **Pn 11 50 12.3 +6.5**
comp=Z,45nm,1.1s
AKL Akola 18.99 155 *ex* x 11 49 59.9
AKL AMb AMB 11 50 04.5
comp=Z,18nm,1.1s
ZAL Zalesovo 19.11 30 P **Pn 11 50 09.6 -2.1**
comp=Z,2.5nm,0.3s,baz=253,slow=9.9,SNR=24
ZAL Lg 11 55 57.2
comp=Z,0.1nm,0.3s,baz=199,slow=21,SNR=2.4
ZAL LR LR 11 58 48.5
comp=Z,444nm,21.2s,baz=249,slow=41
ZAL Zalesovo 19.11 30 P **Pn 11 50 09.6 -2.1**
ZAL Lg 11 55 57.2
ZAL LR LR 11 58 48.5
NVS Novosibirsk 19.23 26 *e*P **Pn 11 50 09.9 -3.2**
NVS *e*S **Sn 11 53 34.8 -14**
NVS pmax pmax
comp=N,10.0nm,1.1s
NVS pmax pmax
comp=E,13nm,1.1s
NVS pmax pmax
comp=Z,21nm,1.1s
NVS smax
comp=N,27nm,1.2s
NVS smax
comp=E,27nm,1.6s
SVE Sverdlovsk 19.26 347 *e*P **Pn 11 50 16.0 +2.6**
SVE MLR MLR
comp=N,1μm,10.0s
SVE MLR MLR
comp=E,500nm,10.0s
SVE MLR MLR
comp=Z,2μm,10.0s
ARU Arti 19.32 343 *e*P **Pn 11 50 17.1 +3.0**
ARU *e*S **Sn 11 53 55.8 +4.7**
ARU MLR MLR
comp=N,300nm,18.0s
ARU MLR MLR
comp=Z,500nm,18.0s
ARU MLR MLR
comp=E,300nm,19.0s
ARU Arti 19.32 343 *e*P **Pn 11 50 15.3 +1.2**
comp=E,9.3nm,0.6s
NGP Nagpur 19.32 149 *ex* x 11 49 18.3
NGP AMb AMB 11 49 38.2
comp=Z,17nm,2.4s
ZEI Tsey 19.32 291 *e*P **Pn 11 50 20.9 +6.7**
UMR Umm Al-Rimmam 19.45 249 *e*P **Pn 11 50 14.6 -1.1**
UMR AML AML 11 50 23.7
comp=Z,13nm,0.5s
MIB Mutribah 19.59 251 *e*P **Pn 11 50 16.3 -1.1**
MIB AMb AMB 11 50 25.7
comp=Z,26nm,1.1s
NAY Al-Naaiem 19.96 249 *e*P **Pn 11 50 20.5 -1.3**
NAY AMb AMB 11 50 34.0
comp=Z,18nm,0.8s
GOF Gofitskoye 20.25 298 *e*P **P 11 50 27.2 +3.9**
GOF pmax pmax
comp=Z,60nm,1.0s
KIV Kislovodsk 20.33 294 *e*P **P 11 50 32.0 +7.9**
KIV pmax pmax
comp=Z,17nm,0.6s
KIV Kislovodsk 20.33 294 *e*P **P 11 50 32.0 +7.9**
comp=Z,17nm,0.6s
LSA Lhasa 20.48 108 P **P 11 50 27.3 +1.5**
LSA Lhasa 20.48 108 *e*P **P 11 50 28.0 +2.2**
LSA pmax pmax
comp=Z,19nm,0.8s
LSA Lhasa 20.48 108 *e*P **P 11 50 27.9 +2.2**
comp=Z,20nm,0.8s
BOK Bokaro 20.62 130 *e*P **P 11 50 28.3 +1.0**
BOK AMb AMB 11 50 30.0
comp=Z,24nm,0.9s
SOKR Solikamsk 22.57 344 *e*P **P 11 50 54.2 +5.9**
SOKR S **S 11 54 59.0 +2.5**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.2
SOKR MLR MLR
comp=Z,340nm,18.0s,MS3.8
GTA Gaotai 24.20 78 *e*P **P 11 51 07.3 +2.7**
GTA PPP 11 51 52.1
GTA PCP PcP 11 54 47.4 +2.3
GTA S **S 11 55 21.3 -2.1**
GTA AMB AMB
comp=Z,4.0nm,1.0s,mb3.8
GTA AMB AMB
comp=Z,77nm,3.8s
GTA LR LR
comp=N,375nm,15.6s,MS4.1
GTA LR LR
comp=E,388nm,17.9s,MS4.1
GTA LR LR
comp=Z,295nm,12.2s
BR131 Keskin Array S 27.16 284 *e*P **P 11 51 37.1 +5.7**
comp=Z,0.9nm,0.6s,mb3.5
BRTR Keskin Array B 27.16 284 P **P 11 51 33.5 +2.1**
comp=Z,0.3nm,0.6s,mb3.0,baz=129,slow=35,SNR=3.8
ZAK Zakamensk 27.26 53 *e*P **P 11 51 31.9 -0.4**
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.1
OBN Obninsk 27.35 318 *d*P **P 11 51 38.2 +5.1**
OBN *e* 11 52 20.4
OBN *i*S **S 11 56 16.4 +3.0**
OBN *e*SS 11 57 34.4
OBN pmax pmax
comp=Z,30nm,1.3s,mb4.7
OBN MLR MLR
comp=Z,300nm,20.0s,MS3.9
MMAI Mount Meron Ar 27.46 269 LR LR 12 04 46.0
comp=Z,68nm,19.8s,MS3.2,baz=95,slow=42
LZH Lanzhou 27.99 84 *e*P **P 11 51 39.1 +0.3**
LZH *e*PP 11 52 28.5
LZH AMB AMB
comp=Z,21nm,1.2s,mb4.6
LZH AMB AMB
comp=Z,46nm,4.5s
LZH LR LR
comp=N,306nm,12.5s
LZH LR LR
comp=Z,395nm,16.7s,MS4.1
SONM Songino Array 28.88 59 P **P 11 51 46.7 0.0**
comp=Z,1.2nm,0.7s,mb3.8,baz=326,slow=40,SNR=3.0
SONM LR LR 12 03 07.2
comp=Z,153nm,19.9s,MS3.6,baz=217,slow=36
ULN Ulaanbaatar 29.33 59 *e*P **P 11 51 49.7 -1.0**
ULN *e* 11 52 04.4
ULN pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
ULN Ulaanbaatar 29.33 59 *e*P **P 11 51 49.7 -1.0**
comp=Z,4.3nm,0.7s,mb4.3
ULN *e* 11 52 04.4
CD2 Chengdu 29.67 94 *e*P **P 11 51 53.9 +0.2**
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
AKASG Malin Array Be 30.37 307 P **P 11 52 02.2 +2.3**
comp=Z,0.9nm,0.5s,mb3.8,baz=82,slow=7.6,SNR=4.2
AKASG Malin Array Be 30.37 307 P **P 11 52 02.2 +2.3**
KMI Kunming 31.63 105 P **P 11 52 14.3 +3.2**
KMI PP PP 11 53 19.9 -2.5
KMI PPP 11 53 35.4
KMI S **S 11 57 14.5 -6.2**
KMI SS SS 11 59 05.5 -30
KMI AMB AMB
comp=Z,6.0nm,1.0s,mb4.4
KMI AMB AMB
comp=Z,132nm,4.1s
KMI LR LR
comp=N,293nm,16.7s,MS4.1
KMI LR LR
comp=E,277nm,20.9s,MS4.1
KMI LR LR
comp=Z,287nm,19.3s,MS4.0
MLR Muntele Rosu 32.29 297 LR LR 12 07 19.7
comp=Z,120nm,21.0s,MS3.6,baz=273,slow=40
HHC Hu-ho-hao-te 32.90 72 *e*P **P 11 52 22.5 +0.3**
HHC PP PP 11 53 32.3 -4.2
HHC S **S 11 57 31.4 -9.0**
HHC PCS PcS 11 58 53.0 +1.0
HHC SS SS 11 59 30.4 -31
HHC AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
HHC AMB AMB
comp=Z,59nm,7.8s
HHC LR LR
comp=N,245nm,13.7s,MS4.3
HHC LR LR
comp=E,376nm,16.1s,MS4.3
HHC LR LR
comp=Z,339nm,16.9s,MS4.1
JOF Joensuu 33.36 330 *e*p **P 11 52 26.0 -0.2**
comp=Z,1.1nm,0.4s,mb4.1
JOF Joensuu 33.36 330 *e*P **P 11 52 26.0 -0.2**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
FINES FINESS Array B 34.93 325 P **P 11 52 39.9 0.0**
comp=Z,1.6nm,0.7s,mb4.0,baz=131,slow=14,SNR=7.2
FINES LR LR 12 07 10.8
comp=Z,164nm,20.2s,MS3.8,baz=344,slow=37
KAF Kangasniemi 35.09 327 *e*p **P 11 52 42.3 +1.1**
BOD Bodaibo 35.14 41 *e*P **P 11 52 39.9 -1.8**
BOD pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ARCES ARCESS Array B 38.75 337 P **P 11 53 12.2 -0.2**
comp=Z,3.5nm,0.8s,mb4.1,baz=114,slow=6.9,SNR=10
ARCES LR LR 12 12 10.6
comp=Z,26nm,21.2s,MS3.0,baz=107,slow=41
GERES GERESS Array B 40.38 303 LR LR 12 12 47.4
comp=Z,90nm,18.5s,MS3.6,baz=90,slow=40
QIZ Qiongzhong 40.51 107 P **P 11 53 30.8 +3.8**
QIZ S **S 11 59 30.8 -5.6**
QIZ AMB AMB
comp=Z,16nm,2.1s,mb4.3
QIZ LR LR
comp=N,260nm,18.6s
QIZ LR LR
comp=Z,149nm,21.3s,MS3.8
CLL Collm 40.61 307 *e*P **P 11 53 33.0 +5.1**
CLL *ex* x 11 53 49.0
NJ2 Nanjing 41.06 83 *e*P **P 11 53 33.3 +1.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
SNY Shenyang 41.55 67 ⇑P **P 11 53 33.8 -1.8**
SNY AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
NB2 NORSAR Subarra 41.81 322 P **P 11 53 37.2 -0.5**
comp=Z,5.9nm,0.9s,mb4.2,baz=97,slow=8.6
NOA NORSAR Array B 41.81 322 P **P 11 53 37.2 -0.5**
comp=Z,0.8nm,0.6s,mb3.5,baz=93,slow=8.0,SNR=4.6
NOA LR LR 12 12 00.2
comp=Z,120nm,19.7s,MS3.8,baz=95,slow=38
NOA NORSAR Array B 41.81 322 P **P 11 53 37.2 -0.5**
NOA LR LR 12 12 00.2
GRA1 Grafenberg Arr 41.89 305 *e*P **P 11 53 44.7 +6.3**
comp=Z,3.0nm,0.7s,mb4.0
GRF Grafenberg Arr 41.89 305 *e*P **P 11 53 44.7 +6.3**
comp=Z,3.0nm,0.7s,mb4.0
GRF Grafenberg Arr 41.89 305 *e*P **P 11 53 44.7 +6.3**
GRF pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
GRF Grafenberg Arr 41.89 305 *e*P **P 11 53 44.7 +6.3**
GRF pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
CN2 Changchun 42.43 64 *e*P **P 11 53 41.8 -1.0**
CN2 *e*S **S 11 59 54.3 -11**
CN2 LR LR
comp=N,300nm,11.0s,MS4.6
CN2 LR LR
comp=E,300nm,11.0s,MS4.6
CN2 LR LR
comp=Z,300nm,15.0s,MS4.3
SSE Sheshan 43.27 83 P **P 11 53 49.4 -0.2**
SSE XP sP 11 54 02.8 +11
SSE PP PP 11 55 30.3 +0.2
SSE S **S 12 00 11.1 -6.3**
SSE XS sS 12 00 26.8 +7.1
SSE SS SS 12 03 23.8 -6.6
SSE AMB AMB
comp=Z,28nm,0.7s,mb5.1
SSE AMB AMB
comp=Z,202nm,3.9s
SSE LR LR
comp=N,114nm,19.9s,MS3.9
SSE LR LR
comp=E,118nm,19.9s,MS3.9
SSE LR LR
comp=Z,57nm,16.9s,MS3.5
YAK Yakutsk 43.57 37 *i*P **P 11 53 50.7 -1.4**
YAK MLR MLR
comp=Z,300nm,20.0s,MS4.2
TIXI Tiksi 44.79 23 *e*P **P 11 54 05.1 +3.3**
TIXI pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
MDJ Mudanjiang 45.13 62 P **P 11 54 03.4 -1.2**
MDJ AMB AMB
comp=Z,4.0nm,1.6s,mb4.0
MDJ AMB AMB
comp=Z,78nm,5.5s
MDJ LR LR
comp=N,150nm,19.3s,MS4.0
MDJ LR LR
comp=E,71nm,20.8s,MS4.0
MDJ LR LR
comp=Z,155nm,17.8s,MS4.0
KMBO Kilima Mbogo 48.79 224 LR LR 12 17 30.2
comp=Z,105nm,20.5s,MS3.8,baz=85,slow=39
DAG Danmarks Havn 52.45 343 ⇑*i*P **P 11 55 02.2 +1.4**
comp=Z,1.7nm,0.4s,mb4.3
DAG Danmarks Havn 52.45 343 ⇑*e*P **P 11 55 02.2 +1.4**
DAG pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
MJAR Matsushiro Arr 54.00 69 P **P 11 55 13.3 +1.1**
comp=Z,0.9nm,0.8s,mb3.8,baz=98,slow=33,SNR=2.7
SUMG Summit 58.72 340 *e*P **P 11 55 46.8 +0.9**
comp=Z,7.7nm,0.8s,mb4.8
TORD Torodi Ar. Bea 63.96 266 P **P 11 56 21.9 +0.6**
comp=Z,1.6nm,0.6s,mb4.3,baz=47,slow=6.1,SNR=11
TORD LR LR 12 24 39.0
comp=Z,88nm,20.7s,MS3.9,baz=55,slow=36
IMA2 Indian Mountai 70.92 17 *e*P **P 11 57 07.1 +1.7**
INK Inuvik 72.38 8 *e*P **P 11 57 14.4 +0.2**
INK *e* 11 57 23.1
INK pmax pmax
comp=Z,2.0nm,0.7s
INK Inuvik 72.38 8 *e*P **P 11 57 14.3 +0.2**
comp=Z,2.5nm,0.7s,mb4.2
INK *e* 11 57 23.1
DBIC Dimbokro 72.99 265 LR LR 12 34 38.8
comp=Z,85nm,18.2s,MS4.1,baz=209,slow=40
COLA College 73.22 15 *e*P **P 11 57 17.7 -1.5**
COLA pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
COLA College 73.22 15 *e*P **P 11 57 17.7 -1.5**
comp=Z,4.2nm,0.4s,mb4.7
DAWY Dawson 75.54 12 *e*P **P 11 57 31.9 -0.8**
BOSA Boshof 78.00 218 LR LR 12 39 15.6
comp=Z,79nm,19.0s,MS4.1,baz=200,slow=41
YKA Yellowknife Ar 79.48 2 P **P 11 57 54.1 -0.6**
comp=Z,1.5nm,0.6s,mb4.1,baz=352,slow=5.7,SNR=7.8
YKA LR LR 12 34 59.3
comp=Z,51nm,19.2s,MS3.9,baz=10.0,slow=37
YKA Yellowknife Ar 79.48 2 P **P 11 57 54.1 -0.6**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA MLR MLR
comp=Z,51nm,19.3s
SCHQ Schefferville 79.68 336 P **P 11 57 54.8 -1.1**
comp=Z,2.1nm,0.9s,mb4.1,baz=45,slow=4.3,SNR=2.0
SCHQ LR LR 12 35 58.6
comp=Z,57nm,18.4s,MS3.9,baz=100,slow=38
WRA Warramunga Arr 84.52 121 P **P 11 58 20.3 -0.9**
comp=Z,2.1nm,0.7s,mb4.4,baz=326,slow=4.8,SNR=11
WRA Warramunga Arr 84.52 121 P **P 11 58 20.3 -0.9**
WRA pmax pmax
comp=Z,2.0nm,0.7s
WRAB Tennant Creek 84.52 121 *e*P **P 11 58 24.3 +3.1**
WRAB *e* 11 58 37.8
WRAB pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
WRAB Tennant Creek 84.52 121 *e*P **P 11 58 24.3 +3.2**
comp=Z,5.3nm,0.7s,mb4.8
WRAB *e* 11 58 37.8
ASAR Alice Springs 86.81 124 P **P 11 58 32.0 -0.5**
comp=Z,0.5nm,0.8s,mb3.8,baz=317,slow=5.3,SNR=4.4
ASAR Alice Springs 86.81 124 P **P 11 58 32.1 -0.5**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ULM Lac du Bonnet 90.75 350 LR LR 12 43 45.9
comp=Z,55nm,18.0s,MS4.0,baz=75,slow=38
PDAR Pinedale Array 99.26 359 LR LR 12 46 13.5
comp=Z,60nm,18.8s,MS4.1,baz=155,slow=36

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*ISCJB **18** 12:33:10.0±0.4, 41.93N±0.03×142.29E±0.05, h73km±4km, mb3.6/6, Error ellipse: s-maj=6.5km s-min=4.0km az=80.7*
*JMA **18** 12:33:10.4±0.2, 41.93N×142.30E, h69km±3km, M3.4*
Broadband fault plane solution: P waves. NP1: ϕs148.00000°, δ21.00000°, λ31.00000°. NP2:ϕs29.00000°,

δ80.00000°,λ108.00000°. Principal axes: T Plg52.0000°, Azm320.0000°; N Plg18.0000°, Azm206.0000°; P Plg32.0000°, Azm104.0000°;
JMA Felt I J1.
*IDC **18** 12:33:11.2±2.0,41.91N×142.16E,h71km±17km,mb3.4/6, mb1 3.6/8,mb1mx3.4/22,mbtmp3.6/8 Error ellipse: s-maj=31.4km s-min=15.1km az=101.0*
ISC 18 12:33:10.8±0.4,**41.93N**±0.03×**142.28E**±0.04,**h67**km±4km,**n24,σ0.66**/39,**mb3.6**/6,**3C-6D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.49**	**45**	⇑P	**Pn**	**12 33 22.5**	**-0.8**
JNBK				*e*S	**Sn**	**12 33 31.7**	**-0.8**
JEM	**Erimo**	**0.66**	**83**	⇑P	**Pn**	**12 33 25.0**	**-0.1**
JEM				*e*S	**Sn**	**12 33 35.6**	**+0.1**
JBT2	**Biratori 2**	**0.85**	**4**	P	**Pn**	**12 33 26.9**	**-0.4**
JBT2				*e*S	**Sn**	**12 33 38.9**	**-0.5**
JKB	**Kayabe**	**0.93**	**268**	⇓P	**Pn**	**12 33 28.1**	**-0.3**
JKB				*e*S	**Sn**	**12 33 41.1**	**-0.3**
JCH	**Churui**	**1.05**	**49**	⇑P	**Pn**	**12 33 29.8**	**0.0**
JCH				*e*S	**Sn**	**12 33 44.1**	**+0.1**
JNB	**Noboribetsu**	**1.07**	**300**	⇓P	**Pn**	**12 33 29.4**	**-0.7**
JNB				*e*S	**Sn**	**12 33 43.8**	**-0.6**
JOT	**Ohata**	**1.08**	**240**	⇓P	**Pn**	**12 33 30.2**	**0.0**
JOT				*e*S	**Sn**	**12 33 44.4**	**-0.2**
JEW	**Eniwo**	**1.10**	**326**	⇓P	**Pn**	**12 33 30.5**	**+0.1**
JEW				*e*S	**Sn**	**12 33 45.5**	**+0.5**
JFR	**Furan**	**1.25**	**10**	⇓P	**Pn**	**12 33 32.1**	**-0.3**
JFR				*e*S	**Sn**	**12 33 48.1**	**-0.5**
JYM2	**Yakumo 2**	**1.44**	**278**	P	**Pn**	**12 33 34.6**	**-0.3**
JSR	**Shiriuchi**	**1.45**	**254**	P	**Pn**	**12 33 35.0**	**-0.1**
JSR				*e*S	**Sn**	**12 33 53.2**	**-0.1**
JTM	**Tenmabayashi**	**1.47**	**219**	P	**Pn**	**12 33 35.7**	**+0.5**
JTM				*e*S	**Sn**	**12 33 54.3**	**+0.7**
JANG	**Nango**	**1.66**	**201**	P	**Pn**	**12 33 38.4**	**+0.5**
JANG				*e*S	**Sn**	**12 33 59.1**	**+0.8**
JAR	**Ashorobuto**	**1.75**	**38**	P	**Pn**	**12 33 39.1**	**+0.1**
JAR				*e*S	**Sn**	**12 34 00.2**	**-0.2**
JHR	**Hokuryu**	**1.85**	**347**	⇓P	**Pn**	**12 33 41.3**	**+0.9**
JHR				*e*S	**Sn**	**12 34 04.4**	**+1.5**
ASAJ	**Asahikawa**	**2.19**	**6**	P	**Pn**	**12 33 45.4**	**+0.4**
	8.4nm,0.3s,baz=203,slow=14,SNR=102						
ASAJ				S	**Sn**	**12 34 13.2**	**+2.1**
	12nm,0.3s,baz=337,slow=25,SNR=13						
MJAR	**Matsushiro Arr**	**6.24**	**212**	P	**Pn**	**12 34 40.3**	**0.0**
	0.3nm,0.3s,baz=24,slow=14,SNR=3.7						
ZAL	**Zalesovo**	**39.28**	**308**	P	**P**	**12 40 33.2**	**+0.3**
	1.2nm,0.3s,mb4.2,baz=30,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**42.26**	**298**	P	**P**	**12 40 55.9**	**-1.6**
	0.8nm,0.6s,mb3.6,baz=92,slow=6.2,SNR=4.7						
WRA	**Warramunga Arr**	**62.00**	**188**	P	**P**	**12 43 23.5**	**-0.4**
	0.2nm,0.5s,mb3.4,baz=6.5,slow=6.9,SNR=6.9						
FINES	**FINESS Array B**	**64.81**	**332**	P	**P**	**12 43 42.0**	**-0.5**
	0.7nm,0.4s,mb3.9,baz=58,slow=7.7,SNR=17						
NB2	**NORSAR Subarra**	**69.94**	**337**	P	**P**	**12 44 14.5**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.6,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**69.94**	**337**	P	**P**	**12 44 13.8**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.4,baz=40,slow=5.8,SNR=4.1						
PDAR	**Pinedale Array**	**73.79**	**47**	P	**P**	**12 44 39.1**	**+1.2**
	comp=Z,0.4nm,0.7s,mb3.3,baz=90,slow=1.5,SNR=3.7						

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*ISCJB **18** 12:34:51.1±5.4,14.5S±0.3×167.2E±0.3,h191km±38km, mb3.5/4,Error ellipse: s-maj=59.3km s-min=34.2km az=110.8*
*IDC **18** 12:34:51.1±6.4,14.51S×167.15E,h170km±49km,mb3.2/4, mb1 3.4/5,mb1mx3.3/14,mbtmp3.7/5,Error ellipse: s-maj=49.0km s-min=28.8km az=28.0*
ISC 18 12:34:52.3±6.1,**14.6S**±0.3×**167.2E**±0.3,**h183**km±42km,**n13, σ0.70**/6,**mb3.5**/4,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.51**	**185**	P	**Pn**	**12 36 39.2**	**+0.2**
	0.3nm,0.3s,baz=11,slow=16,SNR=6.1						
DZM				S	**Sn**	**12 38 03.3**	**-0.2**
	0.1nm,0.3s,baz=108,slow=20,SNR=2.5						
STKA	**Stephens Creek**	**29.06**	**229**	P	**P**	**12 40 36.1**	**+0.7**
	2.3nm,0.9s,mb3.9,baz=80,slow=12,SNR=4.3						
WRA	**Warramunga Arr**	**31.81**	**256**	P	**P**	**12 40 59.0**	**-0.6**
	0.4nm,0.7s,mb3.3,baz=85,slow=9.5,SNR=5.6						
ASAR	**Alice Springs**	**32.68**	**249**	P	**P**	**12 41 07.2**	**+0.1**
	0.2nm,0.3s,mb3.4,baz=78,slow=9.6,SNR=12						
VNDA	**Vanda**	**63.03**	**181**	P	**P**	**12 44 59.6**	**-0.2**
	0.6nm,0.6s,mb3.6,baz=356,slow=7.1,SNR=8.8						
ARCES	**ARCESS Array B**	**120.08**	**345**	PKP	PKPdf	12 53 20.9	-0.3
	0.5nm,0.4s,baz=37,slow=1.8,SNR=15						
LOR	**Lormes**	**144.56**	**340**	*e*PKP1	PKPdf	12 54 07.1	+0.3
SSF	**Saint Saulge**	**144.86**	**341**	*e*PKP1	PKPdf	12 54 08.3	+0.9
	3.1nm,0.5s						
GRR	**Gorron**	**144.86**	**346**	*e*PKP1	PKPdf	12 54 07.8	+0.4
LPL	**La Plagne**	**145.02**	**336**	*e*PKP1	PKPbc	12 54 09.3	+1.9
LPG	**La Plagne**	**145.02**	**336**	*e*PKP1	PKPbc	12 54 09.4	+2.0
SMF	**Signal de Mont**	**145.11**	**340**	*e*PKP1	PKPbc	12 54 08.2	+0.5
ORIF	**Oris-en-Rattie**	**145.85**	**336**	*e*PKP1	PKPbc	12 54 11.5	+1.5
	7.7nm,0.6s						

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*NEIC **18** 12:54:02.7,19.10N×66.45W,h25km,MD3.1(RSPR),After RSPR.*
RSPR 18 12:54:02.7,19.10N×**66.45W,h25**km±16km,**MD3.1**/11, **MD3.1**/11,**27C-9D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LRS	**Lares**	**0.88**	**205**	⇓*e*P	Pb	12 54 16.9	-2.4
LRS				*e*S	Sb	12 54 27.6	-3.0
LRS	**Lares**	**0.88**	**205**	⇑*e*P	Pb	12 54 16.8	-2.5
LRS				*e*S	Sb	12 54 28.2	-2.4
LRS	**Lares**	**0.88**	**205**	⇑*e*P	Pb	12 54 16.8	-2.5
LRS				*e*S	Sb	12 54 27.6	-3.0
AGPR	**Aguadilla, PR**	**0.88**	**225**	*e*S	Sb	12 54 27.9	-2.8
AGPR	**Aguadilla, PR**	**0.88**	**225**	⇑*e*P	Pb	12 54 17.1	-2.2
AGPR	**Aguadilla, PR**	**0.88**	**225**	*e*S	Sb	12 54 28.1	-2.6
AGPR	**Aguadilla, PR**	**0.88**	**225**	⇑*e*P	Pb	12 54 17.1	-2.2
AGPR				*e*S	Sb	12 54 28.1	-2.6
CBYP	**Canovanas**	**0.99**	**145**	⇓*e*P	Pn	12 54 18.9	-2.1
CBYP	**Canovanas**	**0.99**	**145**	*e*S	Sb	12 54 31.1	-2.8
CBYP	**Canovanas**	**0.99**	**145**	⇑*e*P	Pn	12 54 18.8	-2.2
CBYP	**Canovanas**	**0.99**	**145**	*e*S	Sb	12 54 31.5	-2.4
CBYP	**Canovanas**	**0.99**	**145**	⇑*e*P	Pn	12 54 18.8	-2.2
CBYP				*e*S	Sb	12 54 31.5	-2.4
SJG	**San Juan**	**1.02**	**164**	⇓*e*P	Pn	12 54 19.4	-2.0
SJG	**San Juan**	**1.02**	**164**	*e*S	Sb	12 54 32.1	-2.5
SJG	**San Juan**	**1.02**	**164**	⇑*e*P	Pn	12 54 19.3	-2.1
SJG	**San Juan**	**1.02**	**164**	*e*S	Sb	12 54 32.2	-2.4
SJG	**San Juan**	**1.02**	**164**	⇑*e*P	Pn	12 54 19.3	-2.1
SJG				*e*S	Sb	12 54 32.1	-2.5
CELP	**Cerrillos**	**1.02**	**187**	⇓*e*P	Pn	12 54 19.4	-2.1
CELP				*e*S	Sb	12 54 31.8	-2.9
CELP	**Cerrillos**	**1.02**	**187**	⇑*e*P	Pn	12 54 19.5	-1.9
CELP				*e*S	Sb	12 54 32.2	-2.5
CELP	**Cerrillos**	**1.02**	**187**	⇑*e*P	Pn	12 54 19.5	-1.9
CELP				*e*S	Sb	12 54 32.2	-2.5
OBIP	**Obispado Ponce**	**1.06**	**188**	*e*S	Sb	12 54 32.4	-3.3
OBIP	**Obispado Ponce**	**1.06**	**188**	⇑*e*P	Pn	12 54 19.9	-2.0
OBIP	**Obispado Ponce**	**1.06**	**188**	*e*S	Sb	12 54 32.7	-3.0
OBIP	**Obispado Ponce**	**1.06**	**188**	⇓*e*P	Pn	12 54 19.8	-2.1
OBIP				*e*S	Sb	12 54 32.7	-3.0
LSP	**Las Mesas**	**1.09**	**213**	⇓*e*P	Pn	12 54 20.4	-2.0
LSP	**Las Mesas**	**1.09**	**213**	*e*S	Sn	12 54 33.8	-2.9
LSP	**Las Mesas**	**1.09**	**213**	⇑*e*P	Pn	12 54 20.3	-2.1
LSP	**Las Mesas**	**1.09**	**213**	*e*S	Sn	12 54 33.7	-3.0
LSP	**Las Mesas**	**1.09**	**213**	⇑*e*P	Pn	12 54 20.3	-2.1
LSP				*e*S	Sn	12 54 33.7	-3.0
HUMP	**Col San Antoni**	**1.11**	**149**	⇓*i*P	Pn	12 54 20.5	-2.1
HUMP	**Col San Antoni**	**1.11**	**149**	*e*S	Sn	12 54 33.9	-3.1
HUMP	**Col San Antoni**	**1.11**	**149**	⇑*e*P	Pn	12 54 20.4	-2.1
HUMP	**Col San Antoni**	**1.11**	**149**	*e*S	Sn	12 54 33.9	-3.2
HUMP	**Col San Antoni**	**1.11**	**149**	⇑*e*P	Pn	12 54 20.4	-2.1
HUMP				*e*S	Sn	12 54 33.9	-3.2
CPD	**Cerro la Pandu**	**1.17**	**154**	*e*S	Sn	12 54 36.3	-2.3
CPD	**Cerro la Pandu**	**1.17**	**154**	*e*S	Sn	12 54 35.9	-2.7
CPD	**Cerro la Pandu**	**1.17**	**154**	⇑*e*P	Pn	12 54 21.5	-2.0
CPD				*e*S	Sn	12 54 36.3	-2.3
ICM	**Isla Caja Muer**	**1.20**	**183**	⇑*e*P	Pn	12 54 22.4	-1.4
ICM	**Isla Caja Muer**	**1.20**	**183**	*e*S	Sn	12 54 36.6	-2.6
ICM	**Isla Caja Muer**	**1.20**	**183**	⇑*e*P	Pn	12 54 21.8	-2.0
ICM	**Isla Caja Muer**	**1.20**	**183**	*e*S	Sn	12 54 36.8	-2.5
ICM	**Isla Caja Muer**	**1.20**	**183**	⇑*e*P	Pn	12 54 21.8	-2.0
ICM				*e*S	Sn	12 54 36.6	-2.6
MGP	**Maguayo**	**1.24**	**209**	⇓*i*P	Pn	12 54 22.5	-1.9
MGP				*e*S	Sn	12 54 37.5	-2.8
MGP	**Maguayo**	**1.24**	**209**	⇑*e*P	Pn	12 54 22.3	-2.1
MGP				*e*S	Sn	12 54 37.6	-2.7
MGP	**Maguayo**	**1.24**	**209**	⇑*e*P	Pn	12 54 22.3	-2.1
MGP				*e*S	Sn	12 54 37.6	-2.7
CRPR	**Cabo Rojo, PR**	**1.25**	**210**	*e*S	Sn	12 54 37.7	-2.8
CRPR	**Cabo Rojo, PR**	**1.25**	**210**	⇑*e*P	Pn	12 54 22.5	-2.0
CRPR	**Cabo Rojo, PR**	**1.25**	**210**	*e*S	Sn	12 54 37.6	-3.0
CRPR	**Cabo Rojo, PR**	**1.25**	**210**	⇑*e*P	Pn	12 54 22.5	-2.0
CRPR				*e*S	Sn	12 54 37.6	-3.0
CRPR				*e*S	Sn	12 54 37.7	-2.8
MTP	**Monte Pirata**	**1.31**	**139**	⇓*e*P	Pn	12 54 23.2	-2.1
MTP	**Monte Pirata**	**1.31**	**139**	*e*S	Sn	12 54 39.1	-2.9
MTP	**Monte Pirata**	**1.31**	**139**	⇑*e*P	Pn	12 54 23.2	-2.2
MTP	**Monte Pirata**	**1.31**	**139**	*e*S	Sn	12 54 38.9	-3.2
MTP	**Monte Pirata**	**1.31**	**139**	⇑*e*P	Pn	12 54 23.2	-2.2
MTP				*e*S	Sn	12 54 39.1	-2.9
CULB	**Culebra**	**1.36**	**127**	⇑*e*P	Pn	12 54 23.2	-2.9
CULB	**Culebra**	**1.36**	**127**	*e*S	Sn	12 54 39.9	-3.5
CULB	**Culebra**	**1.36**	**127**	⇑*e*P	Pn	12 54 23.7	-2.4
CULB	**Culebra**	**1.36**	**127**	*e*S	Sn	12 54 40.1	-3.2
TBVI	**Tortola**	**1.86**	**111**	*e*S	Sn	12 54 53.3	-2.5

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*IDC **18** 13:21:54.5±3.1,19.65N×122.18E,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.6/21,mbtmp3.7/4,Error ellipse: s-maj=208.1km s-min=26.7km az=63.0*
*ISCJB **18** 13:21:58.9±1.2,19.47N±0.08×121.4E±0.2,h33km,mb3.6/4, Error ellipse: s-maj=23.3km s-min=11.7km az=173.2*
*MAN **18** 13:22:00.5,19.35N×121.14E,h12km,mb3.6,ML4.7*
ISC 18 13:22:01.6±1.1,**19.39N**±0.08×**121.3E**±0.1,**h35**km,**n16, σ1.60**/20,**mb3.6**/4,**3C,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**1.22**	**210**	⇑*i*P	**Pn**	**13 22 20.6**	**-1.6**
SGCP	**Mt. Cagua**	**1.36**	**147**	*e*P	**Pn**	**13 22 24.8**	**+0.7**
APYP	**Conner**	**1.52**	**181**	*e*P	**Pn**	**13 22 25.6**	**-0.6**
APYP				*e*S	**Sn**	**13 22 45.0**	**+0.3**
CVP	**Callao Caves**	**1.75**	**162**	*e*P	**Pn**	**13 22 31.0**	**+1.5**
CVP				*i* S	**Sn**	**13 22 53.0**	**+2.4**
ABRA	**Dolores**	**1.80**	**197**	*e*P	**Pn**	**13 22 30.4**	**+0.2**
ABRA				*e*S	**Sn**	**13 22 42.5**	**-9.3**
CAUP	**Cauayan**	**2.48**	**168**	*e*P	**Pn**	**13 22 42.4**	**+2.9**
PALP	**Palanan**	**2.56**	**154**	⇑*e*P	**Pn**	**13 22 43.4**	**+2.8**
PALP	**Palanan**	**2.56**	**154**	*e*P	**Pn**	**13 22 42.9**	**+2.3**
BCPH	**Baguio City Da**	**3.06**	**192**	⇑*i*P	**Pn**	**13 22 50.4**	**+3.0**
BCPH				*i* S	**Sn**	**13 23 31.2**	**+8.5**
BESP	**Borongan**	**8.72**	**152**	*e*P	**Sn**	**13 25 39.6**	**-2.7**
PLP	**Palo**	**8.92**	**156**	*e*P	**Sn**	**13 25 39.2**	**-8.0**
MSLP	**Maasin**	**9.83**	**159**	*e*P	**Sn**	**13 25 54.0**	**-15**
FITZ	**Fitzroy Crossi**	**37.50**	**173**	P	**P**	**13 29 10.6**	**-1.3**
	1.4nm,0.9s,mb3.8,baz=67,slow=13,SNR=3.6						
WRA	**Warramunga Arr**	**41.13**	**161**	P	**P**	**13 29 40.0**	**-2.2**
	0.6nm,0.4s,mb3.5,baz=345,slow=9.3,SNR=29						
MKAR	**Makanchi Array**	**41.93**	**320**	P	**P**	**13 29 49.8**	**+1.0**
	0.6nm,0.6s,mb3.4,baz=112,slow=9.3,SNR=4.0						
ASAR	**Alice Springs**	**44.53**	**163**	P	**P**	**13 30 09.1**	**-0.7**
	0.7nm,0.5s,mb3.7,baz=351,slow=7.2,SNR=27						

IDC 18 13:43:31.2±1.7,**0.76N**×**97.82E,h0**km,**mb3.5**/4,**mb1 3.6**/5, **mb1mx3.4**/21,**mbtmp3.4**/5,**ML2.9**/1,**Error ellipse: s-maj=54.2km s-min=23.7km az=61.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.31**	**28**	Pn	Pn	13 44 09.8	-0.6
	3.1nm,0.3s,baz=179,slow=15,SNR=14						
WRA	**Warramunga Arr**	**41.27**	**122**	P	P	13 51 17.8	-0.3
	0.4nm,0.8s,baz=300,slow=9.6,SNR=3.4						
ASAR	**Alice Springs**	**42.63**	**127**	P	P	13 51 30.2	+1.0
	0.2nm,0.5s,baz=302,slow=7.5,SNR=6.9						
MKAR	**Makanchi Array**	**47.82**	**346**	P	P	13 52 09.9	-0.5
	0.6nm,0.6s,baz=157,slow=7.9,SNR=5.5						
ARCES	**ARCESS Array B**	**83.16**	**340**	P	P	13 55 59.2	+0.2
	1.2nm,0.9s,baz=101,slow=5.8,SNR=5.3						

IDC 18 13:58:13.5±6.7,**1.71N**×**99.78E,h0**km,**mb3.3**/3,**mb1 3.5**/3, **mb1mx3.3**/20,**mbtmp3.3**/3,**Error ellipse: s-maj=373.3km s-min=29.9km az=55.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.15**	**124**	P	P	14 05 52.3	+1.1
	0.2nm,0.5s,baz=304,slow=9.0,SNR=5.6						
ASAR	**Alice Springs**	**41.68**	**129**	P	P	14 06 03.5	-0.3
	0.2nm,0.6s,baz=298,slow=7.7,SNR=6.9						
MKAR	**Makanchi Array**	**47.43**	**344**	P	P	14 06 49.8	0.0
	0.3nm,0.5s,baz=162,slow=8.3,SNR=3.9						

IDC 18 14:24:40.8±1.7,**3.78N**×**127.83E,h0**km,**mb3.6**/5,**mb1 3.7**/5, **mb1mx3.6**/18,**mbtmp3.6**/5,**Error ellipse: s-maj=96.3km s-min=22.2km az=69.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.85**	**186**	P	P	14 29 36.2	+1.3
	0.6nm,0.4s,baz=6.0,slow=12,SNR=11						
WRA	**Warramunga Arr**	**24.43**	**165**	P	P	14 30 01.6	+0.6
	0.7nm,0.6s,baz=343,slow=10,SNR=16						
ASAR	**Alice Springs**	**27.91**	**168**	P	P	14 30 33.0	+0.4
	0.1nm,0.4s,baz=351,slow=7.0,SNR=5.1						
STKA	**Stephens Creek**	**37.80**	**161**	P	P	14 31 57.5	-1.3
	0.6nm,0.4s,baz=331,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**58.14**	**325**	P	P	14 34 36.5	+0.2
	0.9nm,0.4s,baz=118,slow=7.7,SNR=12						

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*ISCJB **18** 14:26:34.8±0.6,9.3S±0.1×107.9E±0.2,h10km,mb4.0/12, Error ellipse: s-maj=25.8km s-min=11.5km az=109.0*
*IDC **18** 14:26:35.4±0.9,9.26S×107.81E,h0km,mb4.0/7,mb1 4.0/8, mb1mx3.9/18,mbtmp3.9/8,ML3.3/1,Error ellipse: s-maj=36.3km s-min=19.6km az=57.0*
*NEIC **18** 14:26:36.8±0.6,9.33S×107.88E,h10km,mb4.4/6,Error ellipse: s-maj=25.1km s-min=10.6km az=55.0*
ISC 18 14:26:36.8±0.6,**9.3S**±0.1×**107.8E**±0.2,**h10**km,**n15,σ0.73**/15, **mb4.0**/12,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBWA	**Marble Bar**	**16.43**	**137**	*e*Pn	**Pn**	**14 30 24.3**	**-3.1**
FITZ	**Fitzroy Crossi**	**19.37**	**119**	P	**Pn**	**14 31 04.0**	**+0.2**
	0.1nm,0.3s,baz=314,slow=22,SNR=3.6						
WRA	**Warramunga Arr**	**27.70**	**115**	P	**P**	**14 32 25.4**	**+0.3**
	1.2nm,0.7s,mb3.6,baz=288,slow=11,SNR=10						
WRAB	**Tennant Creek**	**27.71**	**115**	*e*P	**P**	**14 32 25.1**	**-0.1**
	5.5nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**28.72**	**123**	P	**P**	**14 32 34.5**	**+0.4**
	0.8nm,0.9s,mb3.5,baz=304,slow=8.1,SNR=5.6						
ASAR				PcP	PcP	14 35 46.4	+2.0
	0.2nm,0.7s,baz=328,slow=2.0,SNR=2.9						
STKA	**Stephens Creek**	**38.51**	**131**	P	**P**	**14 34 00.6**	**+1.5**
	3.0nm,0.7s,mb4.1,baz=285,slow=7.5,SNR=5.9						
STKA	**Stephens Creek**	**38.51**	**131**	*e*P	**P**	**14 33 59.8**	**+0.7**
SONM	**Songino Array**	**56.92**	**359**	P	**P**	**14 36 21.3**	**-0.8**
	1.4nm,0.5s,mb4.3,baz=162,slow=6.2,SNR=3.6						
ULN	**Ulaanbaatar**	**56.95**	**359**	*e*P	**P**	**14 36 21.9**	**-0.3**
	2.5nm,0.7s,mb4.3						
MKAR	**Makanchi Array**	**60.34**	**340**	P	**P**	**14 36 45.6**	**-0.2**
	3.1nm,0.7s,mb4.5,baz=143,slow=7.1,SNR=25						
MAW	**Mawson**	**65.39**	**197**	P	**P**	**14 37 19.9**	**+0.4**
	1.1nm,0.6s,mb4.0,baz=50,slow=7.2,SNR=5.9						
CHKZ	**Chkalovo**	**70.23**	**338**	*e*P	**P**	**14 37 50.9**	**+1.0**
	3.0nm,0.6s,mb4.4						
ZRNK	**Zerenda**	**70.30**	**336**	*e*P	**P**	**14 37 50.5**	**+0.1**
	1.6nm,0.6s,mb4.1						
ZRNK				*e*		14 38 01.2	
VNDA	**Vanda**	**73.54**	**169**	P	**P**	**14 38 09.4**	**-0.5**
	0.5nm,0.7s,mb3.5,baz=51,slow=2.5,SNR=4.2						
SBA	**Scott Base**	**74.62**	**169**	*e*P	**P**	**14 38 15.8**	**-0.4**
	1.5nm,0.9s,mb3.9						

MAN 18 14:37:50.8,9.77N×**126.50E,h3**km,**mb1.4,ML3.3,1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.00**	**271**	⇓*e*P	Pg	14 38 09.6	-0.3
BUTP	**Butuan**	**1.18**	**228**	*e*P	Pg	14 38 13.1	-0.2
BUTP				*e*S	Sg	14 38 22.9	-5.7
MSLP	**Maasin**	**1.66**	**283**	*e*P	Pn	14 38 20.9	+0.2
BESP	**Borongan**	**2.10**	**330**	*e*P	Pn	14 38 27.1	+0.4

IDC 18 14:38:34.8±9.6,**0.52N**×**98.16E,h69**km±65km,**mb3.5**/5, **mb1 3.7**/6,**mb1mx3.4**/21,**mbtmp3.8**/6,**Error ellipse: s-maj=137.2km s-min=18.6km az=59.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.40**	**19**	P	Pn	14 39 10.7	-1.1
	2.0nm,0.3s,baz=212,slow=13,SNR=6.8						
WRA	**Warramunga Arr**	**40.86**	**122**	P	P	14 46 10.0	+0.1
	0.6nm,0.5s,baz=304,slow=8.9,SNR=12						
ASAR	**Alice Springs**	**42.22**	**127**	P	P	14 46 21.4	+0.5
	0.6nm,0.7s,baz=297,slow=7.9,SNR=12						
SONM	**Songino Array**	**47.67**	**8**	P	P	14 47 05.3	+1.0
	0.7nm,0.5s,baz=179,slow=8.2,SNR=2.1						
MKAR	**Makanchi Array**	**48.13**	**345**	P	P	14 47 07.3	-0.5
	0.7nm,0.4s,baz=148,slow=7.1,SNR=7.5						
ZAL	**Zalesovo**	**54.38**	**350**	P	P	14 47 54.1	-0.4
	2.2nm,0.4s,baz=322,slow=6.8,SNR=5.3						

MAN 18 14:46:08.5,7.92N×**123.88E,h1**km,**mb2.3,ML3.9,MS2.2, 1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.50**	**262**	*e*P	Pg	14 46 18.6	+0.6
PAGZ				*e*S	Sg	14 46 22.1	-2.4
DCPH	**Dipolog City**	**0.84**	**322**	⇑*e*P	Pg	14 46 24.7	+0.1
DCPH				*e*S	Sg	14 46 40.8	+5.2
IPIL	**Ipil**	**1.30**	**264**	⇓*e*P	Pg	14 46 33.4	0.0
IPIL				*e*S	Sg	14 46 53.1	+2.8
IPIL	**Ipil**	**1.30**	**264**	*e*P	Pg	14 46 33.2	-0.3
IPIL				*e*S	Sg	14 46 52.4	+2.1

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*IDC **18** 15:00:21.2±6.1,8.59S×116.56E,h0km,mb3.8/4,mb1 4.1/5, mb1mx3.8/17,mbtmp3.9/5,ML3.7/1,MS3.1/1,Ms1 3.1/1, ms1mx2.3/34,Error ellipse: s-maj=134.6km s-min=56.9km az=9.0*
*NEIC **18** 15:00:25.2±1.7,8.89S×116.67E,h10km,mb4.3/2,Error ellipse: s-maj=30.9km s-min=16.7km az=182.0*
NEIC Felt [III] at Lombok.
*ISCJB **18** 15:00:28.0±1.4,9.1S±0.2×116.8E±0.1,h33km,mb3.9/4, Error ellipse: s-maj=29.9km s-min=15.4km az=57.4*
ISC 18 15:00:30.9±1.2,**9.3S**±0.1×**116.6E**±0.1,**h35**km,**n12,σ1.07**/14, **mb3.9**/4,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBWA	**Marble Bar**	**12.20**	**166**	*e*Pn	**Pn**	**15 03 23.3**	**+1.2**
MBWA				*e*Sn	**Sn**	**15 05 34.6**	**-2.3**
FITZ	**Fitzroy Crossi**	**12.42**	**136**	Pn	**Pn**	**15 03 26.7**	**+1.5**
	0.3nm,0.3s,baz=331,slow=13,SNR=16						
FITZ				Sn	**Sn**	**15 05 43.5**	**+1.2**
	0.1nm,0.3s,baz=163,slow=22,SNR=2.0						
FITZ				LR	LR	15 09 05.0	
	comp=Z,88nm,20.4s,baz=187,slow=40						
FITZ	**Fitzroy Crossi**	**12.42**	**136**	*e*P	**Pn**	**15 03 25.9**	**+0.7**
	8.4nm,1.3s						
WRA	**Warramunga Arr**	**20.17**	**124**	P	**P**	**15 05 01.6**	**-0.6**
	4.5nm,0.6s,baz=300,slow=12,SNR=68						
WRAB	**Tennant Creek**	**20.18**	**124**	*e*P	**P**	**15 05 01.0**	**-1.3**
	22nm,1.1s						
WB2	**Warramunga Arr**	**20.18**	**124**	*e*P	**P**	**15 05 01.4**	**-1.0**
AS31	**Alice Springs**	**21.89**	**133**	*e*P	**P**	**15 05 20.5**	**-0.3**
ASAR	**Alice Springs**	**21.89**	**133**	P	**P**	**15 05 21.0**	**+0.2**
	3.3nm,0.7s,mb3.9,baz=309,slow=9.6,SNR=48						
STKA	**Stephens Creek**	**32.31**	**138**	P	**P**	**15 06 56.8**	**+0.3**
	1.0nm,0.5s,mb3.9,baz=323,slow=12,SNR=3.8						
CASY	**Casey**	**57.08**	**183**	P	**P**	**15 10 15.4**	**+1.8**
	1.6nm,0.8s,mb4.1						
MAW	**Mawson**	**68.18**	**199**	P	**P**	**15 11 27.3**	**-0.3**
VNDA	**Vanda**	**72.10**	**171**	P	**P**	**15 11 51.0**	**-0.6**
	0.8nm,0.9s,mb3.6,baz=314,slow=4.5,SNR=4.1						

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*ISCJB **18** 15:06:14.6±0.5,60.25N±0.03×25.15E±0.07,h0km,Error ellipse: s-maj=5.1km s-min=3.4km az=61.3*
*IDC **18** 15:06:15.9±1.6,60.22N×25.39E,h0km,mb1 2.8/3, mb1mx2.7/20,mbtmp2.7/3,ML2.5/3,Error ellipse: s-maj=16.1km s-min=6.8km az=142.0*
*HEL **18** 15:06:16.2±0.1,60.23N×25.15E,h0km,ML2.0,ML2.0(UPP), Explosion*
ISC 18 15:06:15.6±0.5,**60.26N**±0.03×**25.21E**±0.07,**h0**km,**n31, σ1.05**/44,**Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.41**	**265**	*e*P	**Pg**	**15 06 22.9**	**-0.4**
MEF				*e*S	**Sg**	**15 06 28.1**	**-0.5**
FIA0	**FINESS Array S**	**1.27**	**19**	*e*P	**Pg**	**15 06 39.5**	**-0.4**
FIA0				*e*S	**Sg**	**15 06 55.8**	**-0.5**
FINES	**FINESS Array B**	**1.27**	**19**	Pg	**Pg**	**15 06 39.5**	**-0.4**
	2.4nm,0.3s,baz=194,slow=17,SNR=45						
FINES				Pn	**Pn**	**15 06 42.1**	**+1.6**
	2.4nm,0.3s,baz=199,slow=12,SNR=59						
FINES				Lg		15 06 56.1	
	1.3nm,0.3s,baz=195,slow=28,SNR=13						
FINES				Sn	**Sn**	**15 07 01.2**	**+3.0**
	4.7nm,0.3s,baz=196,slow=23,SNR=36						
FINES				Rg		15 07 03.5	
	21nm,0.8s,baz=192,slow=32,SNR=35						
RAF	**Rauma**	**1.86**	**296**	*e*PG	**Pg**	**15 06 49.3**	**-1.9**
RAF				*e*S	**Sn**	**15 07 13.8**	**+0.9**
RAF				MSG		15 07 17.9	
	comp=Z,11nm,0.1s						
KAF	**Kangasniemi**	**1.94**	**15**	*e*PB	**Pb**	**15 06 50.9**	**-0.8**
KAF				*e*SG	**Sg**	**15 07 16.7**	**-1.2**
KAF				MSG		15 07 19.3	
	comp=Z,7.9nm,0.1s						
VSU	**Vasula**	**1.96**	**156**	*e*P	**Pn**	**15 06 50.6**	**+0.5**
VSU				*e*SB	**Sb**	**15 07 15.8**	**-1.4**
SUF	**Sumiainen**	**2.51**	**10**	*e*PB	**Pb**	**15 07 00.1**	**-1.4**
SUF				*e*SB	**Sb**	**15 07 32.8**	**-0.2**
SUF				MSG		15 07 34.8	
	comp=Z,5.2nm,0.1s						
VAF	**Ylistaro**	**3.05**	**338**	*e*P	**Pn**	**15 07 07.4**	**+2.4**
VAF				*e*SB	**Sb**	**15 07 46.2**	**-2.2**
GRAU	**Graesoe**	**3.32**	**274**	*e*P	**Pn**	**15 07 08.4**	**-0.4**
FLYU	**Flymyra**	**3.66**	**271**	*e*P	**Pn**	**15 07 13.4**	**0.0**
IGGU	**Iggoen**	**3.94**	**282**	*e*P	**Pn**	**15 07 17.3**	**0.0**
OSTU	**Oestervaala**	**4.02**	**273**	*e*P	**Pn**	**15 07 18.6**	**+0.1**
ARNU	**Arnoeviken**	**4.08**	**294**	*e*P	**Pn**	**15 07 20.0**	**+0.8**
HEMU	**Hemsoen**	**4.21**	**308**	*e*P	**Pn**	**15 07 22.6**	**+1.6**
HASU	**Hassela**	**4.57**	**298**	*e*P	**Pn**	**15 07 26.9**	**+1.0**
ESKU	**Eskilstuna**	**4.58**	**261**	*e*P	**Pn**	**15 07 26.7**	**+0.7**
FALU	**Falun**	**4.66**	**277**	*e*P	**Pn**	**15 07 27.7**	**+0.6**
BURU	**Burvik**	**4.69**	**339**	*e*P	**Pn**	**15 07 29.2**	**+1.6**
ROTU	**Roteberg**	**4.74**	**288**	*e*P	**Pn**	**15 07 29.3**	**+1.0**
BREU	**Bredtraesk**	**4.80**	**322**	*e*P	**Pn**	**15 07 29.5**	**+0.5**
VSTU	**Vaestervik**	**5.19**	**244**	*e*P	**Pn**	**15 07 34.5**	**+0.1**
BYXU	**Byxelkrok**	**5.20**	**239**	*e*P	**Pn**	**15 07 35.1**	**+0.5**
LNKU	**Linkoeping**	**5.38**	**252**	*e*P	**Pn**	**15 07 37.3**	**+0.3**
ASKU	**Askersund**	**5.45**	**260**	*e*P	**Pn**	**15 07 37.7**	**-0.3**
SJUU	**Sjulsmark**	**5.52**	**344**	*e*P	**Pn**	**15 07 40.5**	**+1.4**
SJUU				*e*S	**Sn**	**15 08 43.3**	**+0.1**
OSKU	**Oskarshamn**	**5.65**	**241**	*e*P	**Pn**	**15 07 40.3**	**-0.4**
HFS	**Hagfors**	**5.74**	**274**	Pn	**Pn**	**15 07 41.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=114,slow=14,SNR=5.0						
HFS				Sn	**Sn**	**15 08 46.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=87,slow=29,SNR=4.0						
HFS				Lg		15 09 12.9	
	comp=Z,0.2nm,0.3s,baz=72,slow=30,SNR=5.4						
EKSU	**Eksjoe**	**5.79**	**247**	*e*P	**Pn**	**15 07 42.6**	**-0.1**
VXJU	**Vaexsjoe**	**6.32**	**243**	*e*P	**Pn**	**15 07 49.4**	**-0.6**
NOA	**NORSAR Array B**	**6.92**	**283**	Pn	**Pn**	**15 07 58.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=120,slow=15,SNR=2.7						
NOA				Sn	**Sn**	**15 09 13.9**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=46,slow=16,SNR=2.5						
ARCES	**ARCESS Array B**	**9.32**	**1**	Pn	**Pn**	**15 08 29.6**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=181,slow=12,SNR=6.4						
ARCES				Sn	**Sn**	**15 10 11.8**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=178,slow=25,SNR=2.8						

ISCJB ***18*** *15:12:31.1±3.7, 23.1S±0.3×179.5W±0.5, h600km, mb4.4/11, Error ellipse: s-maj=71.1km s-min=31.9km az=120.2*
IDC ***18*** *15:12:31.6±4.7, 23.12S×179.85W, h538km±30km, mb3.8/5, mb1 3.9/5, mb1mx3.4/14, mbtmp4.8/5, Error ellipse: s-maj=61.8km s-min=44.2km az=130.0*
NEIC ***18*** *15:12:42.9±5.8, 23.29S×179.65E, h674km±58km, mb4.6/9, Error ellipse: s-maj=60.1km s-min=24.9km az=77.0*
ISC 18 15:12:33.0±3.7**, 23.1S**±0.3×**179.5W**±0.5**, h600km, n20, σ0.39**/18**, mb4.4**/11**, 1C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.92**	**269**	P	**P**	**15 18 11.4**	**+0.4**
	23nm,0.4s,mb5.2,baz=95,slow=11,SNR=124						
CTA	**Charters Tower**	**31.92**	**269**	⇓*i*P	**P**	**15 18 11.3**	**+0.3**
	20nm,0.3s,mb5.2						
CTAO	**Charters Tower**	**31.92**	**269**	*e*P	**P**	**15 18 11.2**	**+0.2**
	29nm,0.5s,mb5.2						
PMG	**Port Moresby**	**34.66**	**288**	P	**P**	**15 18 34.7**	**+0.7**
	32nm,1.0s,mb4.9,baz=164,slow=4.1,SNR=6.1						
PMG	**Port Moresby**	**34.66**	**288**	*e*P	**P**	**15 18 34.5**	**+0.6**
	26nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**35.43**	**247**	P	**P**	**15 18 40.5**	**+0.2**
	2.7nm,0.5s,mb4.1,baz=81,slow=10,SNR=12						
STKA	**Stephens Creek**	**35.43**	**247**	⇓*i*P	**P**	**15 18 40.4**	**+0.1**
	2.3nm,0.6s,mb4.0						
AS31	**Alice Springs**	**42.60**	**260**	*e*P	**P**	**15 19 37.7**	**-0.1**
ASAR	**Alice Springs**	**42.60**	**260**	P	**P**	**15 19 38.0**	**+0.2**
	6.1nm,0.8s,mb4.2,baz=98,slow=7.4,SNR=133						
ASAR				ScP	ScP	15 24 18.7	+8.6
	0.2nm,0.4s,baz=112,slow=4.2,SNR=5.6						
WB2	**Warramunga Arr**	**42.90**	**265**	⇓*i*P	**P**	**15 19 39.7**	**-0.4**
WRAB	**Tennant Creek**	**42.90**	**265**	*e*P	**P**	**15 19 39.5**	**-0.6**
	12nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**42.91**	**265**	P	**P**	**15 19 39.8**	**-0.3**
	3.7nm,0.4s,mb4.3,baz=95,slow=8.3,SNR=255						
WRA				ScP	ScP	15 24 20.4	+9.0
	0.8nm,0.9s,baz=96,slow=3.8,SNR=5.2						
KAKA	**Kakadu**	**46.68**	**274**	*e*P	**P**	**15 20 08.7**	**-0.3**
	5.5nm,0.3s,mb4.6						
FORT	**Forrest**	**47.00**	**249**	⇑*i*P	**P**	**15 20 11.2**	**-0.2**
	31nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.33**	**265**	*e*P	**P**	**15 20 43.9**	**+0.7**
	7.0nm,0.5s,mb4.3						
MBWA	**Marble Bar**	**55.95**	**259**	*e*P	**P**	**15 21 15.7**	**+0.1**
	7.6nm,0.5s,mb4.2						
CASY	**Casey**	**61.01**	**206**	*e*P	**P**	**15 21 49.7**	**+0.2**
	2.2nm,0.8s,mb3.4						
KSM	**Kuching**	**72.41**	**279**	*e*P	**P**	**15 22 59.0**	**-0.5**
AKASG	**Malin Array Be**	**144.54**	**328**	PKP	PKPdf	15 31 04.8	+2.8
	0.2nm,0.3s,baz=46,slow=4.1,SNR=4.0						
MMAI	**Mount Meron Ar**	**147.77**	**296**	PKPbc	PKPbc	15 31 15.8	+4.5
	2.2nm,0.6s,baz=81,slow=5.4,SNR=3.9						

ISCJB ***18*** *15:17:10.7±0.7, 10.41N±0.02×62.17W±0.02, h14km±4km, Error ellipse: s-maj=4.3km s-min=3.0km az=128.2*
FUNV ***18*** *15:17:10.8, 10.40N×62.10W, h5km, MW3.8*
NEIC ***18*** *15:17:11.6, 10.53N×62.11W, h3km, MD3.8(TRN), After TRN.*
TRN ***18*** *15:17:11.9, 10.52N×62.10W, h3km, MD3.8*
ISC 18 15:17:10.7±0.5**, 10.39N**±0.02×**62.15W**±0.02**, h10km**±3km**, n31, σ1.05**/53**, 4C-4D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.27**	**344**	⇓*i*P	**Pg**	**15 17 16.2**	**+0.1**
GUIV				*e*S	**Sg**	**15 17 20.3**	**+0.5**
TCE	**Chacachacare**	**0.49**	**52**	⇓*i*P	**Pg**	**15 17 20.0**	**-0.3**
TCE				*e*S	**Sg**	**15 17 24.6**	**-2.3**
ALNG	**Atlantic LNG**	**0.50**	**115**	*e*P	**Pg**	**15 17 24.9**	**+4.5**
ALNG				*e*S	**Sg**	**15 17 30.7**	**+3.6**
SIPA	**Siparia**	**0.68**	**111**	*e*P	**Pg**	**15 17 25.1**	**+1.3**
SIPA				*e*S	**Sg**	**15 17 30.8**	**-2.0**
TPP	**Pointe-a-Pierr**	**0.69**	**96**	⇑*i*P	**Pg**	**15 17 24.6**	**+0.5**
TPP				*e*S	**Sg**	**15 17 36.8**	**+3.7**
TRN	**Trinidad (W)**	**0.78**	**71**	⇑*i*P	**Pg**	**15 17 24.6**	**-1.1**
TRN				*e*S	**Sg**	**15 17 35.4**	**-0.5**
GUNV	**Guanoco**	**0.81**	**254**	⇑*i*P	**Pg**	**15 17 26.0**	**-0.4**
GUNV				*e*S	**Sg**	**15 17 38.4**	**+1.3**
TBH	**Brigand Hill**	**1.07**	**85**	⇓*i*P	**Pb**	**15 17 31.4**	**+0.1**
TBH				*e*S	**Sg**	**15 17 48.7**	**+3.6**
CRUV	**Carupano**	**1.11**	**285**	*e*P	**Pb**	**15 17 30.4**	**-1.5**
CRUV				*e*S	**Sb**	**15 17 45.7**	**-0.7**
TPR	**Prospect**	**1.56**	**59**	⇓*i*P	**Pn**	**15 17 38.6**	**+0.1**
TPR				*e*S	**Sn**	**15 18 00.2**	**+1.4**
BOT	**Bacolet**	**1.60**	**61**	*e*P	**Pn**	**15 17 39.4**	**+0.4**
ORIV	**Oritupano**	**1.81**	**224**	*e*P	**Pn**	**15 17 42.3**	**+0.4**
ORIV				*e*S	**Sn**	**15 18 06.6**	**+1.8**
GRW	**Mount Saint Ca**	**1.82**	**15**	⇑*e*P	**Pn**	**15 17 43.2**	**+1.1**
GRW				*e*S	**Sn**	**15 18 04.8**	**-0.4**
GRHS	**Sauteurs**	**1.89**	**15**	*e*P	**Pn**	**15 17 42.9**	**-0.1**
GRHS				*e*S	**Sn**	**15 18 05.2**	**-1.6**
GRSS	**Sisters**	**1.97**	**15**	*e*P	**Pn**	**15 17 45.2**	**+1.1**
GRSS				*e*S	**Sn**	**15 18 08.9**	**+0.1**
GRCU	**Cariacou**	**2.18**	**18**	*i* P	**Pn**	**15 17 47.8**	**+0.8**
GRCU				*e*S	**Sn**	**15 18 13.8**	**-0.1**
PCRV	**Puerto La Cruz**	**2.46**	**265**	*e*P	**Pn**	**15 17 51.2**	**+0.4**
PCRV				*e*S	**Sn**	**15 18 21.3**	**+0.4**
GURV	**El Guri**	**2.77**	**200**	*e*P	**Pn**	**15 17 55.0**	**-0.1**
GURV				*e*S	**Sn**	**15 18 29.1**	**+0.5**
IBAV	**Isla La Blanqu**	**2.78**	**301**	*e*P	**Pn**	**15 17 55.6**	**+0.4**
IBAV				*e*S	**Sn**	**15 18 29.1**	**+0.3**
PRGV	**PARIAGUAN**	**2.95**	**237**	*e*P	**Pn**	**15 17 58.1**	**+0.6**
PRGV				*e*S	**Sn**	**15 18 33.5**	**+0.6**
CUPV	**Cœpira**	**3.60**	**265**	*e*P	**Pn**	**15 18 06.1**	**-0.4**
CUPV				*e*S	**Sn**	**15 18 48.4**	**-0.6**
BIRV	**Birongo**	**4.05**	**272**	*e*P	**Pn**	**15 18 13.3**	**+0.6**
ORCV	**Isla La Orchil**	**4.21**	**290**	*e*P	**Pn**	**15 18 14.2**	**-0.7**
MERV	**Las Mercedes**	**4.24**	**255**	*e*P	**Pn**	**15 18 15.8**	**+0.4**
LUEV	**Luepa**	**4.57**	**171**	*e*P	**Pn**	**15 18 18.4**	**-1.5**
LUEV				*e*S	**Sn**	**15 19 10.7**	**-2.2**
CAOV	**Caicara del Or**	**5.13**	**234**	*e*P	**Pn**	**15 18 25.8**	**-1.7**
TURV	**Turiamo**	**5.60**	**271**	*e*P	**Pn**	**15 18 33.8**	**-0.2**
PHG	**Guadaloupe-2**	**5.61**	**5**	*e*P	**Pn**	**15 18 33.9**	**-0.3**
PHG				*e*S	**Sn**	**15 19 38.7**	**0.0**
LZG	**Guadaloupe-1**	**5.73**	**4**	*e*P	**Pn**	**15 18 38.2**	**+2.5**
BAUV	**El Baul**	**5.99**	**257**	*e*P	**Pn**	**15 18 37.9**	**-1.4**
CURV	**Curarigua**	**7.70**	**268**	*e*P	**Pn**	**15 19 01.9**	**-0.9**

BJI ***18*** *15:27:40.9, 5.73S×146.79E, h46km, mB4.9, mb4.7, Ms4.5, Msz4.1*
ISCJB ***18*** *15:27:42.0±1.8, 6.04S±0.07×146.61E±0.10, h67km±17km, mb4.4/21, Error ellipse: s-maj=15.9km s-min=11.7km az=164.7*
NEIC ***18*** *15:27:41.4±1.6, 5.94S×146.63E, h50km±13km, mb4.3/11, Error ellipse: s-maj=12.2km s-min=9.2km az=218.0*
IDC ***18*** *15:27:42.2±4.5, 5.95S×146.54E, h55km±37km, mb3.9/7, mb1 4.1/10, mb1mx4.0/17, mbtmp4.2/10, ML3.8/3, MS3.6/5, Ms1 3.6/5, ms1mx3.3/15, Error ellipse: s-maj=31.7km s-min=24.0km az=41.0*
ISC 18 15:27:44.7±1.8**, 6.09S**±0.07×**146.61E**±0.10**, h75km**±16km**, h45km**±2.0km**:pP-P, n48, σ1.06**/40**, mb4.4**/21**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.34**	**171**	P	**Pn**	**15 28 35.4**	**+0.8**
	24nm,0.3s,baz=15,slow=5.2,SNR=43						
PMG				S	**Sn**	**15 29 27.3**	**+14**
	34nm,0.3s,baz=265,slow=17,SNR=4.5						
PMG	**Port Moresby**	**3.34**	**171**	*e*Pn	**Pn**	**15 28 32.2**	**-2.3**
PMG				S	**Sn**	**15 29 27.3**	**+14**
CTA	**Charters Tower**	**13.92**	**181**	P	**Pn**	**15 30 59.0**	**+0.6**
	0.4nm,0.3s,baz=359,slow=14,SNR=9.8						
CTAO	**Charters Tower**	**13.92**	**181**	*e*Pn	**Pn**	**15 31 01.9**	**+3.5**
	7.0nm,0.7s						
KAKA	**Kakadu**	**15.44**	**244**	*e*P	**Pn**	**15 31 18.1**	**0.0**
	20nm,0.5s						
WRAB	**Tennant Creek**	**18.20**	**220**	*e*Pn	**Pn**	**15 31 51.3**	**-0.9**
	17nm,1.0s						
WB2	**Warramunga Arr**	**18.20**	**220**	*e*P	**Pn**	**15 31 51.9**	**-0.4**
WRA	**Warramunga Arr**	**18.21**	**220**	P	**Pn**	**15 31 52.1**	**-0.3**
	0.5nm,0.3s,baz=35,slow=11,SNR=34						
GUMO	**Guam**	**19.63**	**355**	LR	LR	15 39 03.7	
	comp=Z,57nm,20.8s,baz=359,slow=35						
AS31	**Alice Springs**	**21.32**	**214**	*e*P	**P**	**15 32 26.2**	**+0.8**
ASAR	**Alice Springs**	**21.32**	**214**	P	**P**	**15 32 26.1**	**+0.6**
	1.4nm,0.5s,mb3.5,baz=54,slow=8.8,SNR=64						
FITZ	**Fitzroy Crossi**	**23.69**	**238**	P	**P**	**15 32 48.3**	**-1.2**
	16nm,0.8s,mb4.4,baz=74,slow=9.1,SNR=59						
FITZ				LR	LR	15 43 23.0	
	comp=Z,159nm,18.1s,baz=186,slow=40						
FITZ	**Fitzroy Crossi**	**23.69**	**238**	*e*P	**P**	**15 32 49.5**	**0.0**
	22nm,0.6s,mb4.7						
DZM	**Mont Dzumac**	**24.89**	**132**	P	**P**	**15 33 00.5**	**-0.1**
	6.2nm,0.8s,mb4.1,baz=299,slow=15,SNR=5.0						
DZM				LR	LR	15 41 54.1	
	comp=Z,104nm,19.9s,baz=207,slow=34						
STKA	**Stephens Creek**	**26.08**	**190**	P	**P**	**15 33 10.9**	**-0.3**
	2.7nm,0.7s,mb3.8,baz=348,slow=8.2,SNR=8.8						
STKA				LR	LR	15 44 15.8	
	comp=Z,233nm,19.5s,baz=206,slow=38						
STKA	**Stephens Creek**	**26.08**	**190**	*e*P	**P**	**15 33 12.9**	**+1.7**
	1.8nm,0.4s,mb3.9						
MBWA	**Marble Bar**	**30.03**	**237**	*e*P	**P**	**15 33 46.7**	**+0.2**
	5.9nm,0.8s,mb4.3						
KSM	**Kuching**	**37.01**	**281**	P	**P**	**15 34 46.4**	**-0.7**
NJ2	**Nanjing**	**46.24**	**327**	*e*P	**P**	**15 36 03.3**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
KULM	**Kulim**	**47.25**	**283**	*e*P	**P**	**15 36 10.6**	**+0.2**
KMI	**Kunming**	**52.74**	**308**	P	**P**	**15 36 53.6**	**+1.7**
KMI				AP	pP	15 37 04.8	-5.9
KMI				XP	sP	15 37 10.0	-9.1
KMI				S	**S**	**15 44 14.4**	**+0.1**
KMI				XS	sS	15 44 38.9	-7.5
KMI				SS	SS	15 47 52.8	-0.9
KMI				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.5						
KMI				AMB	AMB		
	comp=Z,46nm,4.2s						
KMI				LR	LR		
	comp=Z,22nm,24.4s						
MDJ	**Mudanjiang**	**52.75**	**345**	P	**P**	**15 36 52.8**	**+0.9**
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,70nm,4.2s						
MDJ				LR	LR		
	comp=Z,21nm,14.5s						
CM31	**Chiang Mai Arr**	**52.95**	**298**	P	**P**	**15 36 49.5**	**-3.9**
	comp=Z,1.9nm,0.5s,mb4.4						
CN2	**Changchun**	**53.22**	**341**	*e*P	**P**	**15 36 53.8**	**-1.6**
XAN	**Xi'an**	**53.51**	**321**	P	**P**	**15 36 57.0**	**-0.5**
XAN				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.7						
BJT	**Baijiatuau**	**53.78**	**331**	P	**P**	**15 36 58.6**	**-0.8**
	comp=Z,13nm,0.5s,mb5.2						
BJI	**Beijing**	**53.79**	**331**	P	**P**	**15 36 58.8**	**-0.8**
BJI				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.9						
HHC	**Hu-ho-hao-te**	**56.71**	**329**	*e*P	**P**	**15 37 23.1**	**+2.6**
HHC				AP	pP	15 37 35.9	-3.7
HHC				XP	sP	15 37 41.3	-6.6
HHC				PCP	PcP	15 38 18.3	+2.5
HHC				PP	PP	15 39 31.1	+3.8
HHC				S	**S**	**15 45 11.3**	**+3.9**
HHC				PS		15 45 30.0	
HHC				XS	sS	15 45 32.8	-7.0
HHC				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,61nm,5.4s						
HHC				LR	LR		
	comp=N,104nm,26.6s						
HHC				LR	LR		
	comp=E,105nm,27.5s						
HHC				LR	LR		
	comp=Z,83nm,27.5s						
LZH	**Lanzhou**	**58.03**	**320**	*e*P	**P**	**15 37 32.5**	**+2.7**
LZH				AP	pP	15 37 45.5	-3.4
LZH				XP	sP	15 37 50.8	-6.5
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,52nm,6.2s						
LZH				LR	LR		
	comp=N,177nm,15.3s						
LZH				LR	LR		
	comp=Z,258nm,18.1s						
ULN	**Ulaanbaatar**	**64.00**	**332**	*e*P	**P**	**15 38 09.6**	**-0.7**
	comp=Z,1.9nm,0.8s,mb4.0						
CASY	**Casey**	**65.06**	**195**	P	**P**	**15 38 16.7**	**-0.5**
	comp=Z,2.5nm,0.9s,mb4.0						
VNDA	**Vanda**	**71.84**	**177**	P	**P**	**15 39 00.1**	**+0.6**
	comp=Z,1.8nm,0.7s,mb4.0,baz=329,slow=6.2,SNR=13						
VNDA	**Vanda**	**71.84**	**177**	*e*P	**P**	**15 38 59.6**	**+0.2**
	comp=Z,2.0nm,0.7s,mb4.1						
WMQ	**Urumqi**	**72.61**	**319**	*e*P	**P**	**15 39 05.0**	**+1.0**
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8						
MKAR	**Makanchi Array**	**77.32**	**321**	P	**P**	**15 39 30.3**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.4,baz=104,slow=5.1,SNR=6.9						
QSPA	**South Pole Qui**	**83.88**	**180**	*e*P	**P**	**15 40 05.7**	**-0.5**
	comp=Z,4.1nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**86.61**	**324**	P	**P**	**15 40 18.0**	**-1.9**
	comp=Z,0.9nm,0.8s,mb3.8,baz=95,slow=6.4,SNR=5.5						
YBH	**Yreka Blue Hor**	**94.52**	**49**	LR	LR	16 21 44.3	
	comp=Z,39nm,19.4s,baz=359,slow=34						
PLCA	**Paso Flores**	**122.26**	**147**	PKP	PKPdf	15 46 31.9	+1.0
	comp=Z,2.3nm,0.9s,baz=163,slow=6.8,SNR=4.8						
LPAZ	**La Paz**	**139.06**	**123**	PKhKP		15 46 59.7	
	comp=Z,1.0nm,0.9s,baz=255,slow=3.5,SNR=4.0						
CPUP	**Villa Florida**	**140.28**	**145**	PKP	PKPdf	15 47 07.0	+2.1
	comp=Z,2.5nm,0.8s,baz=292,slow=5.8,SNR=6.3						
TOA0	**Torodi Ar. Sit**	**144.74**	**284**	*e*PKPdf	PKPdf	15 47 12.7	-0.2
TORD	**Torodi Ar. Bea**	**144.74**	**284**	PKP	PKPdf	15 47 12.8	0.0
	comp=Z,5.9nm,0.9s,baz=71,slow=3.3,SNR=26						
TORD	**Torodi Ar. Bea**	**144.74**	**284**	PKP	PKPdf	15 47 12.8	0.0
SAML	**Samuel**	**146.76**	**116**	*e*PKPdf	PKPdf	15 47 18.5	+2.3
DBIC	**Dimbokro**	**151.64**	**273**	PKPbc	PKPbc	15 47 32.7	+2.3
	comp=Z,7.5nm,0.6s,baz=136,slow=1.3,SNR=11						
DBIC	**Dimbokro**	**151.64**	**273**	*e*PKPbc	PKPbc	15 47 32.7	+2.3
BDFB	**Brasilia**	**154.00**	**146**	PKPbc	PKPbc	15 47 36.9	+1.3
	comp=Z,2.8nm,0.7s,baz=166,slow=3.4,SNR=4.2						

IDC ***18*** *15:41:10.5±1.4, 41.50N×72.60E, h0km, mb3.6/4, mb1 4.0/8, mb1mx3.7/27, mbtmp3.9/8, ML3.8/4, MS2.6/1, Ms1 2.6/1, ms1mx2.2/28, Error ellipse: s-maj=18.3km s-min=13.3km az=159.0*
KNET ***18*** *15:41:12.1±0.5, 41.70N×72.86E, h1km±2km, ml3.8, Error ellipse: s-maj=4.2km s-min=2.3km az=106.0*
ISCJB ***18*** *15:41:13.2±0.9, 42.00N±0.05×72.53E±0.03, h12km±4km, mb3.7/5, Error ellipse: s-maj=8.1km s-min=3.6km az=16.1*
NNC ***18*** *15:41:14.2±4.3, 41.74N×72.56E, h16km±16km, mb4.0, mpv4.0, Error ellipse: s-maj=39.2km s-min=10.4km az=11.0*
NEIC ***18*** *15:41:14.9±1.2, 41.71N×72.60E, h35km, mb3.7/1, Error ellipse: s-maj=18.3km s-min=14.1km az=147.0*
MOS ***18*** *15:41:17.6±1.4, 42.13N×72.56E, h33km, mb4.2/2, Error ellipse: s-maj=11.4km s-min=7.5km az=99.0*
ISC 18 15:41:12.6±0.9**, 41.86N**±0.05×**72.58E**±0.03**, h2km**±4km**, n50, σ1.29**/73**, mb3.7**/5**, 24C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.88**	**71**	⇓P	**Pg**	**15 41 27.3**	**-2.2**
	241nm,0.2s,SNR=332						
AML				⇑S	**Sg**	**15 41 39.4**	**-1.4**
	622nm,0.2s						
EKS2	**Erkin-Say**	**1.20**	**48**	⇑P	**Pg**	**15 41 34.8**	**-0.9**
	74nm,0.2s,SNR=125						
EKS2				⇓S	**Sg**	**15 41 52.4**	**+1.1**
	316nm,0.2s						
UCH	**Uchtor**	**1.49**	**75**	⇑P	**Pn**	**15 41 38.0**	**-2.4**
	48nm,0.2s,SNR=50						
UCH				⇓S	**Sn**	**15 41 58.0**	**-2.4**
	613nm,0.4s						
AAK	**Ala-Archa**	**1.62**	**61**	⇑P	**Pn**	**15 41 41.3**	**-0.9**
	253nm,0.2s,SNR=251						
AAK				⇓S	**Sn**	**15 42 04.0**	**+0.3**
	347nm,0.2s						
AAK	**Ala-Archa**	**1.62**	**61**	*e*Pn	**Pn**	**15 41 40.3**	**-1.9**
AAK				*e*Sn	**Sn**	**15 42 04.8**	**+1.1**
FRU	**Bishkek**	**1.80**	**56**	⇑*i*PN	**Pn**	**15 41 46.2**	**+1.5**
FRU				*i* S	**Sg**	**15 42 11.8**	**+1.3**
FRU				pmax	pmax		
	comp=Z,294nm,1.2s						
FRU				smax			
	comp=E,1μm,1.2s						
KBK	**Karagaybulak**	**1.93**	**65**	⇑P	**Pn**	**15 41 46.6**	**+0.1**
	comp=E,106nm,0.2s,SNR=247						
KBK				⇓S	**Sn**	**15 42 12.9**	**+1.6**
	comp=E,2μm,0.4s						
KK31	**Karatay Array**	**1.97**	**310**	⇓Pn	**Pg**	**15 41 50.4**	**0.0**
	comp=E,44nm,0.3s,baz=41,slow=214,SNR=1196						
KK31				⇓Lg		15 42 21.8	
	comp=E,172nm,0.4s,baz=233,slow=35,SNR=12						
KK31	**Karatay Array**	**1.97**	**310**	*i* PN	**Pg**	**15 41 50.4**	**0.0**
KK31				pmax	pmax		
	comp=Z,83nm,0.2s						
KKAR	**Karatay Array**	**1.97**	**310**	PN	**Pg**	**15 41 50.4**	**0.0**
KKAR						15 42 21.7	
KKAR				pmax	pmax		
	comp=Z,17nm,0.2s						
KKAR				smax			
	comp=Z,67nm,0.3s						
CHMS	**Chumysh**	**1.97**	**54**	⇓P	**Pn**	**15 41 48.1**	**+1.0**
	comp=Z,210nm,0.2s,SNR=124						
CHMS				⇑S	**Sg**	**15 42 16.2**	**+0.1**
	comp=Z,772nm,0.4s						
USP	**Ospenovka**	**2.00**	**45**	⇓P	**Pn**	**15 41 49.3**	**+1.8**
	comp=Z,241nm,0.2s,SNR=161						
USP				⇓S	**Sg**	**15 42 17.3**	**+0.4**
	comp=Z,653nm,0.3s						
KZA	**Kyzart**	**2.01**	**83**	⇑P	**Pn**	**15 41 46.3**	**-1.2**
	comp=Z,180nm,0.2s,SNR=100						
KZA				⇑S	**Sn**	**15 42 12.6**	**-0.5**
	comp=Z,418nm,0.2s						
TKM2	**Tokmak 2**	**2.48**	**64**	⇓P	**Pn**	**15 41 55.6**	**+1.6**
	comp=Z,356nm,0.5s,SNR=160						
TKM2	**Tokmak 2**	**2.48**	**64**	⇑Pn	**Pn**	**15 41 55.9**	**+1.9**
	comp=Z,17nm,0.5s						
TKM2				⇑Sn	**Sg**	**15 42 29.9**	**-2.3**
	comp=Z,78nm,0.6s						
TKM2	**Tokmak 2**	**2.48**	**64**	*i* PN	**Pn**	**15 41 55.8**	**+1.8**
TKM2				pmax	pmax		
	comp=Z,211nm,0.5s						
ULHL	**Ulahol**	**2.76**	**81**	⇓P	**Pn**	**15 41 57.6**	**-0.2**
	comp=Z,129nm,0.5s,SNR=131						
KNDC	**Almaty**	**3.52**	**66**	⇑Pg	**Pb**	**15 42 15.2**	**-0.4**
	comp=Z,58nm,0.5s						
KNDC				⇓Lg		15 43 01.4	
	comp=Z,600nm,1.1s						
MK31	**Makanchi Array**	**8.53**	**51**	P	**Pn**	**15 43 19.1**	**+1.9**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**8.53**	**51**	Pn	**Pn**	**15 43 18.6**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=233,slow=12,SNR=15						
MKAR				Lg		15 45 44.2	
	comp=Z,0.9nm,0.3s,baz=237,slow=29,SNR=4.3						
MKAR	**Makanchi Array**	**8.53**	**51**	*i* P	**Pn**	**15 43 19.6**	**+2.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MK05	**Makanchi Array**	**8.53**	**51**	⇑Pn	**Pn**	**15 43 18.5**	**+1.3**
	comp=Z,2.0nm,0.5s,baz=233,slow=14						
MK05				⇑Lg		15 45 42.2	
	comp=Z,7.5nm,0.8s,baz=223,slow=28						
VOSK	**Vostochnaya**	**10.93**	**355**	⇑Lg		15 47 02.0	
	comp=Z,8.4nm,0.8s						
BVA0	**Borovoye Array**	**11.27**	**353**	⇑Pn	**Pn**	**15 43 55.1**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=168,slow=10,SNR=38						
BVA0	**Borovoye Array**	**11.27**	**353**	P	**Pn**	**15 43 55.3**	**+0.6**
BVAR	**Borovoye Array**	**11.27**	**353**	Pn	**Pn**	**15 43 55.3**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=155,slow=11,SNR=28						
BVAR				Sn	**Sn**	**15 46 03.5**	**+2.3**
	comp=Z,0.8nm,0.3s,baz=156,slow=23,SNR=4.5						
BVAR				LR	LR	15 48 33.8	
	comp=Z,35nm,21.8s,baz=142,slow=38						
BVAR	**Borovoye Array**	**11.27**	**353**	P	**Pn**	**15 43 55.3**	**+0.6**
BVAR						15 46 03.5	
BRVK	**Borovoye**	**11.31**	**353**	*e*P	**Pn**	**15 43 55.9**	**+0.6**
BRVK				*e*		15 46 00.8	
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BRVK	**Borovoye**	**11.31**	**353**	*e*Pn	**Pn**	**15 43 55.9**	**+0.6**
	comp=Z,3.0nm,0.3s						
BRVK				*e*Sn	**Sn**	**15 46 00.8**	**-1.5**
ZRNK	**Zerenda**	**11.36**	**349**	⇓Pn	**Pn**	**15 43 56.7**	**+0.8**
	comp=Z,2.8nm,0.6s						
ZRNK				⇑Sn	**Sn**	**15 46 02.0**	**-1.4**
	comp=Z,2.6nm,0.5s						
ZRNK				⇑Lg		15 47 24.8	
	comp=Z,18nm,1.2s						
ZRNK	**Zerenda**	**11.36**	**349**	*e*P	**Pn**	**15 43 55.8**	**-0.1**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZRNK	**Zerenda**	**11.36**	**349**	*e*Pn	**Pn**	**15 43 55.8**	**-0.1**
	comp=Z,3.6nm,0.4s						
AB31	**Akbulak array**	**11.53**	**314**	⇑Pn	**Pn**	**15 43 59.2**	**+1.0**
	comp=Z,5.4nm,0.4s,baz=119,slow=13,SNR=150						
AB31				⇑Sn	**Sn**	**15 46 05.5**	**-2.0**
	comp=Z,6.0nm,0.9s,baz=117,slow=23,SNR=5.6						
AB31	**Akbulak array**	**11.53**	**314**	*e*P	**Pn**	**15 43 59.1**	**+0.9**
AB31				*e*S	**Sn**	**15 46 07.0**	**-0.5**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CHKZ	**Chkalovo**	**11.90**	**354**	⇑Pn	**Pn**	**15 44 03.7**	**+0.4**
	comp=Z,1.3nm,0.5s						
CHKZ				⇑Sn	**Sn**	**15 46 11.6**	**-5.0**
	comp=Z,3.2nm,0.6s						
CHKZ				⇓Lg		15 47 36.9	
	comp=Z,15nm,0.9s						
CHKZ	**Chkalovo**	**11.90**	**354**	*e*P	**Pn**	**15 44 03.3**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.4s						
CHKZ	**Chkalovo**	**11.90**	**354**	*e*Pn	**Pn**	**15 44 03.3**	**0.0**
	comp=Z,2.6nm,0.4s						
AKTK	**Aktyubinsk**	**13.23**	**315**	Pn	**Pn**	**15 44 21.9**	**+0.4**
AKTK				Sn	**Sn**	**15 46 48.9**	**-0.3**
AKTO	**Aktyubinsk**	**13.23**	**315**	⇑Pn	**Pn**	**15 44 22.2**	**+0.8**
	comp=Z,0.1nm,0.6s						
AKTO				⇑Sn	**Sn**	**15 46 46.8**	**-2.3**
	comp=Z,0.1nm,1.0s						
AKTO	**Aktyubinsk**	**13.23**	**315**	Pn	**Pn**	**15 44 21.9**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=126,slow=14,SNR=26						
AKTO				Sn	**Sn**	**15 46 48.9**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=170,slow=20,SNR=6.2						
ZAL	**Zalesovo**	**14.58**	**30**	Pn	**Pn**	**15 44 40.9**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=256,slow=12,SNR=10						
ZAL				Sn	**Sn**	**15 47 18.4**	**-3.6**
	comp=Z,0.6nm,0.3s,baz=24,slow=9.8,SNR=4.6						
NVS	**Novosibirsk**	**14.78**	**25**	*e*P	**Pn**	**15 44 49.6**	**+7.1**
NVS				*e*S	**Sn**	**15 47 23.9**	**-2.9**
NVS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NVS				smax			
	comp=N,9.0nm,1.3s						
ARU	**Arti**	**17.18**	**333**	⇓*i*P	**Pn**	**15 45 12.4**	**-1.3**
ARU				*e*S	**Sn**	**15 48 20.6**	**-4.5**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARU	**Arti**	**17.18**	**333**	*e*Pn	**Pn**	**15 45 10.6**	**-3.0**
	comp=Z,4.3nm,0.7s						
WSAR	**Wadi Sarin**	**21.92**	**216**	P	**P**	**15 46 02.7**	**-4.5**
	comp=Z,2.1nm,0.6s,mb3.8,baz=122,slow=2.6,SNR=5.2						
WSAR	**Wadi Sarin**	**21.92**	**216**	P	**P**	**15 46 02.7**	**-4.5**
OBN	**Obninsk**	**26.96**	**312**	⇓*e*P	**P**	**15 46 54.5**	**-1.0**
OBN				*e*		15 47 36.2	
OBN				*e*S	**S**	**15 51 35.4**	**+2.0**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.1						
FINES	**FINESS Array B**	**33.89**	**321**	P	**P**	**15 47 57.0**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=119,slow=11,SNR=4.4						
NOA	**NORSAR Array B**	**40.98**	**319**	P	**P**	**15 48 56.9**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.4,baz=90,slow=8.0,SNR=3.4						
GERES	**GERESS Array B**	**41.05**	**301**	P	**P**	**15 48 56.8**	**-0.6**
	comp=Z,1.0nm,0.7s,mb3.5,baz=75,slow=8.5,SNR=3.8						

WEL 18 15:52:11.1±0.3**, 43.88S**×**173.16E, h5km, ML3.7**/9**, 2D, Error ellipse: s-maj=1.9km s-min=1.8km az=0.0, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.41**	**294**	⇓PG	Pg	15 52 19.4	+0.4
MQZ				SG	Sg	15 52 24.1	-0.1
MQZ				SG	Sg	15 52 24.4	+0.2
CRLZ	**Canterbury Las**	**0.49**	**307**	⇓PG	Pg	15 52 21.3	+0.7
CRLZ				SG	Sg	15 52 28.0	+1.0
CRLZ				SG	Sg	15 52 28.0	+1.0
LTZ	**Lake Taylor**	**1.27**	**329**	P*	Pb	15 52 34.6	-0.9
LTZ				S*	Sb	15 52 51.2	-1.0
KHZ	**Kahutara**	**1.48**	**11**	PN	Pn	15 52 38.1	-0.3
KHZ				SN	Sn	15 52 56.9	-1.2
RPZ	**Rata Peaks**	**1.54**	**275**	PN	Pn	15 52 37.5	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RPZ				SN	Sn	15 52 59.0	-0.4
WVZ	**Waitaha Valley**	**1.94**	**294**	*e*PN	Pn	15 52 43.4	-1.3
WVZ				SN	Sn	15 53 07.6	-1.8
THZ	**Tophouse**	**2.12**	**355**	*e*PN	Pn	15 52 47.1	-0.1
THZ				SN	Sn	15 53 13.1	-0.8
LBZ	**Lake Benmore**	**2.20**	**256**	PN	Pn	15 52 46.4	-1.9
BSWZ	**Blackbirch Sta**	**2.22**	**14**	*e*PN	Pn	15 52 48.9	+0.4
DSZ	**Denniston Nort**	**2.35**	**334**	*e*PN	Pn	15 52 50.2	-0.1
FOZ	**Fox Glacier**	**2.54**	**276**	*e*PN	Pn	15 52 51.9	-1.0
FOZ				SN	Sn	15 53 19.4	-4.8
HHSZ	**Highcliff Hill**	**2.71**	**221**	*e*PN	Pn	15 52 52.7	-2.7
EAZ	**Earnscleugh**	**3.07**	**242**	PN	Pn	15 52 58.2	-2.0
QRZ	**Quartz Range**	**3.08**	**351**	PN	Pn	15 53 00.9	+0.5
CAW	**Cannon Point**	**3.10**	**28**	*e*PN	Pn	15 53 00.3	-0.4
WKZ	**Wanaka**	**3.12**	**251**	*e*PN	Pn	15 52 59.8	-1.1
JCZ	**Jackson Bay**	**3.19**	**265**	*e*PN	Pn	15 53 01.0	-0.8
MTW	**Mount Morrison**	**3.22**	**33**	*e*PN	Pn	15 53 01.5	-0.8
TUZ	**Tuapeka**	**3.26**	**229**	*e*PN	Pn	15 53 00.3	-2.5
MRZ	**Mangatainoka R**	**3.68**	**30**	*e*PN	Pn	15 53 09.4	+0.8
SYZ	**Scrubby Hill**	**3.90**	**225**	*e*PN	Pn	15 53 09.5	-2.0
WHZ	**Wether Hill Ro**	**4.22**	**240**	PN	Pn	15 53 13.5	-2.5

*IDC **18** 17:06:38.9±11.0, 5720N×12284E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/21, mbtmp3.6/6, Error ellipse: s-maj=223.0km s-min=47.7km az=128.0*
*ISCJB **18** 17:06:45.1±0.5, 5729N±004×12038E±004, h10km, mb3.5/6, Error ellipse: s-maj=5.9km s-min=3.4km az=9.6*
*MOS **18** 17:06:46.9±1.8, 5750N×12083E, h14km, mb3.9/3, Error ellipse: s-maj=24.8km s-min=16.8km az=84.5*
*BYKL **18** 17:06:47.3±0.7, 5738N×12080E*
ISC 18 17:06:46.7±0.5**, 5731N**±004×**12047E**±004**, h10km, n35, σ1s29**/48**, mb3.5**/6**, 1C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**1.27**	**252**	⇓*i*Pg	**Pg**	**17 07 14.2**	**+3.2**
CRS				*e*		17 07 17.2	
CRS				*e*Sg	**Sg**	**17 07 32.6**	**+5.1**
CRS				max			
	147nm,0.5s						
CRS				Smax			
	608nm,1.1s						
CRS	**Chara**	**1.27**	**252**	*e*P	**Pn**	**17 07 14.3**	**+3.9**
CRS				*e*		17 07 31.3	
CRS				pmax	pmax		
	comp=Z,91nm,0.3s						
CRS				smax			
	comp=N,389nm,0.6s						
CLNS	**Chul'man**	**2.46**	**99**	*e*	**Pn**	**17 07 26.9**	**+0.1**
CLNS				*e*Pg	**Pg**	**17 07 28.4**	**-5.4**
CLNS				*e*Sg	**Sg**	**17 07 58.6**	**-7.1**
CLNS	**Chul'man**	**2.46**	**99**	*e*P	**Pn**	**17 07 26.6**	**-0.2**
CLNS				*e*S	**Sn**	**17 07 57.1**	**+0.2**
CLNS				pmax	pmax		
	comp=Z,33nm,0.2s						
CLNS				pmax	pmax		
	comp=N,19nm,0.3s						
CLNS				pmax	pmax		
	comp=E,26nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,108nm,0.3s						
CLNS				pmax	pmax		
	comp=N,92nm,0.4s						
CLNS				pmax	pmax		
	comp=E,53nm,0.3s						
CLNS				smax			
	comp=N,83nm,0.3s						
CLNS				smax			
	comp=Z,32nm,0.3s						
CLNS				smax			
	comp=E,61nm,0.2s						
CLNS				smax			
	comp=N,894nm,0.5s						
CLNS				smax			
	comp=E,817nm,0.4s						
CLNS				smax			
	comp=Z,232nm,0.4s						
NLYR	**Nelyaty**	**2.74**	**255**	*e*Pn	**Pn**	**17 07 35.7**	**+5.0**
NLYR				*e*Pg	**Pg**	**17 07 40.1**	**+0.9**
NLYR				*e*Sg	**Sg**	**17 08 17.0**	**+2.3**
TUP	**Tupik**	**2.90**	**186**	⇑*i*Pn	**Pn**	**17 07 36.2**	**+3.3**
TUP				*e*Pg	**Pg**	**17 07 41.9**	**-0.4**
TUP				*e*Sn	**Sn**	**17 08 12.6**	**+4.8**
TUP				*e*Sg	**Sg**	**17 08 19.9**	**0.0**
TUP				Pmax			
	comp=Z,110nm,0.7s						
TUP				Smax			
	comp=Z,685nm,1.2s						
TUP	**Tupik**	**2.90**	**186**	*e*P	**Pn**	**17 07 36.1**	**+3.2**
TUP				*e*S	**Sn**	**17 08 11.5**	**+3.7**
TUP				pmax	pmax		
	comp=Z,102nm,0.6s						
TUP				smax			
	comp=E,632nm,1.0s						
TNDR	**Tynda**	**3.21**	**131**	*e*	**Pn**	**17 07 37.8**	**+0.6**
TNDR				*e*		17 07 43.1	
TNDR				*e*		17 08 16.3	
TNDR				*e*Sg	**Sg**	**17 08 24.1**	**-5.7**
BOD	**Bodaibo**	**3.52**	**281**	*e*Pg	**Pg**	**17 07 53.1**	**-1.0**
BOD				*e*Sg	**Sg**	**17 08 39.5**	**-0.3**
BOD				Pmax			
	comp=E,25nm,0.4s						
BOD				Smax			
	comp=E,263nm,1.1s						
SVKR	**Severomuysk**	**3.99**	**256**	*e*Pg	**Pg**	**17 08 02.7**	**-0.4**
SVKR				*e*		17 08 05.6	
SVKR				*e*Sg	**Sg**	**17 08 57.0**	**+2.2**
SVKR				max			
	comp=E,136nm,0.2s						
SVKR				Smax			
	comp=E,381nm,0.8s						
UKT	**Uakit**	**4.22**	**247**	*e*	**Pg**	**17 08 08.9**	**+1.5**
UKT				*e*Sg	**Sg**	**17 09 02.9**	**+0.9**
UKT				max			
	comp=E,21nm,0.6s						
UKT				Smax			
	comp=E,124nm,2.5s						
KROS	**Kirovskiy**	**4.66**	**125**	*e*Pg	**Pb**	**17 08 06.6**	**-1.8**
KROS				*e*		17 08 10.1	
KROS				*i* Sg	**Sb**	**17 09 05.0**	**+0.4**
KMO	**Kumora**	**5.32**	**258**	*e*Pg	**Pg**	**17 08 26.3**	**-2.2**
KMO				*e*Sg	**Sg**	**17 09 36.4**	**-0.9**
KMO				Pmax			
	comp=E,25nm,0.9s						
KMO				Smax			
	comp=E,167nm,1.8s						
YLYR	**Ulyunkhan**	**5.75**	**249**	*e*Pg	**Pg**	**17 08 34.6**	**-2.2**
YLYR				*e*Sg	**Sg**	**17 09 50.3**	**-1.0**
YLYR				Pmax			
	comp=E,8.0nm,0.6s						
YLYR				Smax			
	comp=E,119nm,1.6s						
NIZ	**Nizh Angarsk**	**6.24**	**260**	*e*Sg	**Sg**	**17 10 05.4**	**-1.5**
NIZ				Smax			
	comp=E,88nm,0.9s						
CIT	**Chita**	**6.64**	**220**	*e*Pg	**Pg**	**17 08 49.2**	**-4.6**
CIT				*e*Sg	**Sg**	**17 10 17.5**	**-2.3**
CIT				Pmax			
	comp=E,62nm,1.6s						
CIT				Smax			
	comp=E,185nm,2.0s						
YAK	**Yakutsk**	**6.65**	**41**	*i* P	**Pn**	**17 08 23.8**	**-0.6**
SYVR	**Suvo**	**6.98**	**243**	*e*Sg	**Sg**	**17 10 30.6**	**-0.1**
SYVR				Smax			
	comp=E,140nm,1.5s						
OGRR	**Ongureny**	**8.18**	**249**	*e*Sg	Sx	17 11 08.8	
OGRR				Smax			
	comp=E,31nm,1.3s						
KPC	**Khapcheranga**	**9.01**	**216**	*e*Sg	Sx	17 11 30.4	
KPC				Smax			
	comp=E,65nm,2.0s						
TRG	**Tyrgan**	**9.29**	**247**	*e*Sg	Sx	17 11 40.0	
TRG				Smax			
	comp=E,20nm,2.1s						
LSTR	**Listvyanka**	**10.57**	**246**	*e*Sg	Sx	17 12 22.7	
LSTR				Smax			
	comp=E,35nm,2.1s						
SONM	**Songino Array**	**12.75**	**228**	Lg		17 13 33.0	
	comp=E,0.6nm,0.3s,baz=40,slow=25,SNR=7.9						
ZAL	**Zalesovo**	**20.27**	**276**	P	**P**	**17 11 29.9**	**+7.6**
	comp=E,0.6nm,0.3s,baz=46,slow=12,SNR=4.2						
ZAL	**Zalesovo**	**20.27**	**276**	P	**P**	**17 11 30.0**	**+7.7**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**25.39**	**262**	P	**P**	**17 12 19.3**	**+5.2**
	comp=Z,0.3nm,0.2s,mb3.4,baz=46,slow=8.3,SNR=3.5						
BVAR	**Borovoye Array**	**28.39**	**283**	P	**P**	**17 12 49.5**	**+8.4**
	comp=Z,0.3nm,0.6s,mb3.1,baz=66,slow=11,SNR=2.6						
BVAR	**Borovoye Array**	**28.39**	**283**	P	**P**	**17 12 49.5**	**+8.4**
ARCES	**ARCESS Array B**	**39.67**	**327**	P	**P**	**17 14 18.7**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.2,baz=59,slow=8.7,SNR=2.7						
FINES	**FINESS Array B**	**44.23**	**317**	P	**P**	**17 14 56.3**	**+0.3**
	comp=Z,1.1nm,0.8s,mb3.7,baz=59,slow=9.2,SNR=4.0						
FINES	**FINESS Array B**	**44.23**	**317**	P	**P**	**17 14 56.3**	**+0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**49.71**	**323**	P	**P**	**17 15 38.7**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.9,baz=40,slow=7.4						
NOA	**NORSAR Array B**	**49.71**	**323**	P	**P**	**17 15 39.2**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=42,slow=7.8,SNR=4.0						
NOA	**NORSAR Array B**	**49.71**	**323**	P	**P**	**17 15 39.2**	**+0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**50.16**	**304**	P	**P**	**17 15 43.2**	**+0.9**
	comp=Z,0.3nm,0.4s,mb3.7,baz=40,slow=8.6,SNR=5.2						

*NIED **18** 17:10:00, 3130N×12920E, h20km, Mw3.4 Best double couple: Mo1.22000×10^14 NP1:φs288.00000°, δ84.00000°, λ-9.00000°. NP2:φs19.00000°, δ81.00000°, λ-174.00000°.*
JMA 18 17:10:31.2±0.1**, 3133N×12916E, h3km**±2km**, M3.5, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.59**	**54**	P	Pg	17 10 42.7	+0.2
JSJ				*e*S	Sg	17 10 50.8	+0.7
JSU	**Suzuyama**	**1.12**	**81**	P	Pg	17 10 52.6	-0.1
JSU				*e*S	Sg	17 11 07.7	+0.5
JKC	**Kuchinoerabu**	**1.24**	**134**	P	Pg	17 10 53.8	-1.2
JKC				*e*S	Sg	17 11 10.6	-0.5
JFU	**Fukue jima 2**	**1.37**	**345**	P	Pn	17 10 56.1	-1.1
JFU				S	Sg	17 11 14.9	-0.2
JZO	**Okuchi**	**1.47**	**56**	P	Pn	17 10 59.2	+0.7
JZO				*e*S	Sb	17 11 18.7	+0.5

GUC 18 17:23:26.2±0.7**, 3608S×7276W, h5km**±5km**, MD3.5, ML3.3, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCO	**Chanco**	**0.39**	**29**	*e*P	Pg	17 24 08.6	+35
CNCO				*e*S	Sg	17 24 14.7	+36
CCHI	**Chillan**	**0.76**	**134**	⇓*i*P	Pg	17 23 40.9	0.0
CCHI				*i* S	Sg	17 23 52.8	+2.0
CCHI				AML	AML	17 23 53.2	
	comp=E,2μm,0.2s						
LNCH	**Linares**	**0.97**	**77**	⇑*i*P	Pg	17 23 44.6	-0.2
LNCH				*i* S	Sg	17 23 58.2	+0.9
LNCH				AML	AML	17 23 59.0	
	comp=E,2μm,0.4s						
TALC	**Talca**	**1.14**	**54**	*e*P	Pg	17 23 47.4	-0.6
TALC				*i* S	Sg	17 24 02.9	0.0
TALC				AML	AML	17 24 05.0	
	comp=N,1μm,0.2s						
CICH	**Cipreses**	**2.60**	**48**	*i* P	Pn	17 24 10.2	+1.3
CICH				*i* S	Sn	17 24 43.9	+3.2
CACH	**El Canelo**	**2.64**	**43**	⇑*i*P	Pn	17 24 10.9	+1.5
CACH				*i* S	Sn	17 24 44.6	+2.8

*NEIC **18** 17:40:26.0±1.8, 842S×10901E, h35km, mb4.2/3, Error ellipse: s-maj=83.2km s-min=19.8km az=50.0*
NEIC Felt [III] at Bantul, Klaten, Sleman and Yogyakarta.
*IDC **18** 17:40:26.8±7.5, 718S×11046E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/18, mbtmp4.0/5, ML3.8/1, MS3.8/1, Ms1 3.7/1, ms1mx2.6/32, Error ellipse: s-maj=174.2km s-min=58.4km az=177.0*
*ISCJB **18** 17:40:41.6±1.9, 73S±03×1109E±03, h122km±22km, mb3.9/6, Error ellipse: s-maj=61.2km s-min=21.6km az=75.6*
ISC 18 17:40:43.6±1.5**, 74S**±03×**1107E**±03**, h125km**±19km**, n10, σ0s62**/11**, mb3.9**/6**, 1C, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**1.00**	**275**	⇑*i*P	**Pn**	**17 41 06.1**	**0.0**
BJII				*i* S	**Sn**	**17 41 31.7**	**+8.6**
FITZ	**Fitzroy Crossi**	**18.00**	**128**	P	**Pn**	**17 44 41.7**	**-4.0**
	0.2nm,0.3s,baz=297,slow=9.0,SNR=9.2						
WRA	**Warramunga Arr**	**26.06**	**121**	P	**P**	**17 46 06.0**	**+0.8**
	1.7nm,0.6s,mb3.7,baz=296,slow=12,SNR=10						
WRAB	**Tennant Creek**	**26.07**	**121**	*e*P	**P**	**17 46 04.3**	**-1.0**
	6.1nm,0.7s,mb4.1						
WB2	**Warramunga Arr**	**26.07**	**121**	*e*P	**P**	**17 46 05.8**	**+0.5**
ASAR	**Alice Springs**	**27.49**	**129**	P	**P**	**17 46 18.0**	**-0.1**
	0.5nm,0.4s,mb3.4,baz=303,slow=8.9,SNR=19						
STKA	**Stephens Creek**	**37.67**	**134**	P	**P**	**17 47 46.9**	**+0.3**
	7.5nm,0.4s,mb4.9,baz=314,slow=7.6,SNR=35						
STKA				LR	LR	18 03 46.6	
	comp=Z,142nm,21.6s,baz=204,slow=37						
STKA	**Stephens Creek**	**37.67**	**134**	*e*P	**P**	**17 47 46.6**	**+0.1**
STKA				LR	LR	18 03 46.6	
CHKZ	**Chkalovo**	**69.62**	**336**	*e*P	**P**	**17 51 39.1**	**-0.1**
	1.3nm,0.8s,mb3.8						
VNDA	**Vanda**	**74.90**	**170**	P	**P**	**17 52 10.5**	**-0.1**
	0.9nm,1.1s,mb3.4,baz=313,slow=8.3,SNR=4.4						

*IDC **18** 17:43:20.7±0.4, 295N×9576E, h0km, mb4.4/27, mb1 4.5/27, mb1mx4.5/29, mbtmp4.4/27, MS3.6/8, Ms1 3.6/8, ms1mx3.2/37, Error ellipse: s-maj=18.5km s-min=11.5km az=50.0*
*BJI **18** 17:43:22.9, 267N×9569E, h43km, mB4.9, mb4.7, Ms4.1, Msz3.9*
*NEIC **18** 17:43:25.1±0.2, 290N×9572E, h30km, mb4.8/38, Error ellipse: s-maj=6.0km s-min=4.4km az=48.0*
*ISCJB **18** 17:43:26.2±0.9, 294N±004×9578E±004, h55km±7km, mb4.7/89, MS3.8/20, Error ellipse: s-maj=7.0km s-min=6.6km az=105.1*
*MOS **18** 17:43:26.0±0.9, 301N×9580E, h51km, mb5.0/28, Error ellipse: s-maj=11.4km s-min=5.9km az=112.1*
*SZGRF **18** 17:43:34.0, 397N×9458E, h33km, mb4.6, Off west coast of northern Sumatera, Indonesia*
ISC 18 17:43:28.8±0.8**, 296N**±004×**9580E**±004**, h59km**±7km**, h58km**±2.9km**:pP-P, n167, σ0s92**/168**, mb4.7**/89**, MS3.8**/20**, 10C-6D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.13**	**93**	Pn	**Pn**	**17 44 14.8**	**-0.9**
	6.5nm,0.3s,baz=284,slow=6.3,SNR=32						
PSI				LR	LR	17 45 44.4	
	comp=Z,829nm,20.3s,baz=272,slow=45						
PSI	**Prapat**	**3.13**	**93**	Pn	**Pn**	**17 44 14.8**	**-0.9**
PSI				LR	LR	17 45 44.4	
KULM	**Kulim**	**5.37**	**64**	*e*Pn	**Pn**	**17 44 45.5**	**-0.8**
IPM	**Ipoh**	**5.43**	**74**	P	**Pn**	**17 44 48.9**	**+1.7**
SNG	**Songkhla**	**6.37**	**49**	P	**Pn**	**17 45 02.0**	**+1.9**
	178nm,0.7s						
KGM	**Kluang**	**7.57**	**97**	P	**Pn**	**17 45 15.9**	**-0.7**
KSM	**Kuching**	**14.58**	**96**	Pn	**Pn**	**17 46 56.6**	**+4.9**
PALK	**Pallekele**	**15.63**	**286**	*e*P	**Pn**	**17 47 06.6**	**+1.3**
	25nm,1.1s						
CM31	**Chiang Mai Arr**	**15.71**	**11**	*e*P	**Pn**	**17 47 06.3**	**0.0**
	16nm,0.9s						
CHG	**Chiang Mai**	**16.05**	**11**	⇑P	**Pn**	**17 47 08.7**	**-2.0**
	14nm,1.1s						
CHTO	**Chiang Mai**	**16.05**	**11**	*e*P	**Pn**	**17 47 08.3**	**-2.4**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	**Chiang Mai**	**16.05**	**11**	*e*P	**Pn**	**17 47 08.3**	**-2.3**
	comp=Z,9.5nm,0.9s						
NANT	**Nan**	**16.46**	**17**	P	**Pn**	**17 47 13.0**	**-2.7**
KKM	**Kota Kinabalu**	**20.58**	**81**	*e*P	**P**	**17 48 04.1**	**+1.3**
QIZ	**Qiongzhong**	**21.07**	**40**	P	**P**	**17 48 08.1**	**+0.1**
QIZ				XP	sP	17 48 28.8	+0.3
QIZ				S	**S**	**17 52 00.9**	**+1.8**
QIZ				LR	LR		
	comp=E,275nm,18.0s						
QIZ				LR	LR		
	comp=Z,237nm,17.4s,MS3.6						
KMI	**Kunming**	**23.03**	**16**	P	**P**	**17 48 29.9**	**+1.1**
KMI				AP		17 48 35.8	
KMI				PP		17 49 03.4	
KMI				S	**S**	**17 52 37.4**	**+2.5**
KMI				SS		17 53 24.8	
KMI				SSS		17 53 40.5	
KMI				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.3						
KMI				AMB	AMB		
	comp=Z,86nm,4.2s						
KMI				LR	LR		
	comp=N,221nm,13.7s,MS3.9						
KMI				LR	LR		
	comp=E,203nm,13.7s,MS3.9						
KMI				LR	LR		
	comp=Z,284nm,12.1s,MS3.9						
GYA	**Guiyang**	**25.59**	**23**	P	**P**	**17 48 52.9**	**+0.6**
GYA				AP	pP	17 49 07.3	+0.5
GYA				PP		17 49 34.5	
GYA				S	**S**	**17 53 14.6**	**-1.3**
GYA				SCP	ScP	17 55 57.0	+0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GYA				AMB	AMB		
	comp=Z,80nm,4.2s						
GYA				LR	LR		
	comp=N,280nm,15.9s,MS4.0						
GYA				LR	LR		
	comp=E,260nm,16.4s,MS4.0						
GYA				LR	LR		
	comp=Z,310nm,16.8s,MS3.9						
PKI	**Pulchoki**	**26.41**	**339**	*e*P	**P**	**17 49 00.0**	**+0.2**
	comp=Z,24nm,0.6s,mb4.9						
PKI	**Pulchoki**	**26.41**	**339**	*e*P	**P**	**17 49 00.0**	**+0.2**
PKI				pmax	pmax		
	comp=Z,24nm,0.6s,mb4.9						
DMN	**Daman**	**26.55**	**338**	*e*P	**P**	**17 49 01.6**	**+0.5**
	comp=Z,28nm,0.9s,mb4.8						
GUN	**Gumba**	**26.56**	**340**	*e*P	**P**	**17 49 01.6**	**+0.5**
	comp=Z,86nm,0.6s,mb5.5						
KKN	**Kakani**	**26.66**	**339**	*e*P	**P**	**17 49 02.2**	**+0.2**
	comp=Z,51nm,0.8s,mb5.1						
KKN	**Kakani**	**26.66**	**339**	*e*P	**P**	**17 49 02.2**	**+0.2**
KKN				pmax	pmax		
	comp=Z,51nm,0.8s,mb5.1						
LSA	**Lhasa**	**26.96**	**351**	P	**P**	**17 49 06.0**	**+1.3**
LSA	**Lhasa**	**26.96**	**351**	*e*P	**P**	**17 49 05.2**	**+0.5**
LSA				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.8						
LSA	**Lhasa**	**26.96**	**351**	*e*P	**P**	**17 49 05.2**	**+0.5**
	comp=Z,22nm,0.7s,mb4.8						
GKN	**Gorkha**	**27.09**	**338**	*e*P	**P**	**17 49 05.8**	**0.0**
	comp=Z,51nm,0.7s,mb5.2						
KOLN	**Koldanda**	**27.28**	**336**	*e*P	**P**	**17 49 08.7**	**+1.1**
	comp=Z,63nm,0.8s,mb5.2						
CD2	**Chengdu**	**28.80**	**14**	P	**P**	**17 49 20.5**	**-0.6**
CD2				AP	pP	17 49 35.3	-0.5
CD2				XP	sP	17 49 42.5	-0.3
CD2				PP	PP	17 50 15.8	-11
CD2				S	**S**	**17 54 05.3**	**-1.3**
CD2				XS	sS	17 54 30.5	-1.1
CD2				SS	SS	17 55 36.9	-34
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=E,160nm,16.8s						
CD2				LR	LR		
	comp=Z,140nm,15.6s,MS3.7						
XAN	**Xi'an**	**33.26**	**20**	P	**P**	**17 49 59.4**	**-0.9**
XAN				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
MBWA	**Marble Bar**	**33.53**	**137**	*e*P	**P**	**17 50 01.5**	**-1.2**
	comp=Z,10nm,1.0s,mb4.7						
LZH	**Lanzhou**	**33.79**	**12**	⇑P	**P**	**17 50 06.1**	**+1.1**
LZH				AP	pP	17 50 21.3	+1.5
LZH				PP	PP	17 51 21.3	-1.1
LZH				AMB	AMB		
	comp=Z,23nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,81nm,5.3s						
LZH				LR	LR		
	comp=E,621nm,13.5s						
LZH				LR	LR		
	comp=Z,935nm,17.6s,MS4.6						
FITZ	**Fitzroy Crossi**	**36.09**	**127**	P	**P**	**17 50 23.9**	**-0.9**
	comp=Z,3.5nm,0.8s,mb4.3,baz=300,slow=5.8,SNR=7.3						
FITZ				PcP	PcP	17 52 51.2	+1.5
	comp=Z,1.4nm,0.7s,baz=137,slow=17,SNR=3.4						
FITZ	**Fitzroy Crossi**	**36.09**	**127**	*e*P	**P**	**17 50 23.1**	**-1.7**
	comp=Z,6.0nm,0.7s,mb4.6						
NJ2	**Nanjing**	**36.16**	**34**	*e*P	**P**	**17 50 26.3**	**+0.9**
NJ2				AP	pP	17 50 41.5	+1.2
NJ2				PP	PP	17 51 50.4	+1.9
NJ2				S	**S**	**17 56 01.0**	**+0.1**
NJ2				XS	sS	17 56 26.0	-0.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,800nm,4.9s						
NJ2				LR	LR		
	comp=N,230nm,15.7s,MS4.6						
NJ2				LR	LR		
	comp=E,690nm,14.9s,MS4.6						
NJ2				LR	LR		
	comp=Z,1μm,14.1s,MS4.8						
GTA	**Gaotai**	**36.46**	**5**	P	**P**	**17 50 28.0**	**0.0**
GTA				AP	pP	17 50 38.8	-4.1
GTA				XP	sP	17 50 43.5	-6.4
GTA				PP	PP	17 51 52.5	+0.6
GTA				PPP		17 52 11.5	
GTA				PCP	PcP	17 52 52.5	+1.7
GTA				S	**S**	**17 56 04.9**	**-0.7**
GTA				XS	sS	17 56 23.6	-7.3
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,89nm,6.1s						
GTA				LR	LR		
	comp=N,51nm,13.7s						
GTA				LR	LR		
	comp=E,116nm,19.0s						
GTA				LR	LR		
	comp=Z,62nm,16.0s,MS3.5						
SSE	**Sheshan**	**36.84**	**38**	P	**P**	**17 50 30.6**	**-0.6**
SSE				AP	pP	17 50 39.1	-7.0
SSE				XP	sP	17 50 43.4	-10
SSE				PP	PP	17 51 54.4	-1.6
SSE				S	**S**	**17 56 12.8**	**+1.5**
SSE				AMB	AMB		
	comp=Z,25nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,292nm,4.0s						
SSE				LR	LR		
	comp=N,71nm,19.2s,MS3.5						
SSE				LR	LR		
	comp=E,47nm,19.2s,MS3.5						
SSE				LR	LR		
	comp=Z,73nm,16.2s,MS3.5						
HHC	**Hu-ho-hao-te**	**40.31**	**19**	*e*P	**P**	**17 51 01.8**	**+1.5**
HHC				AP	pP	17 51 17.1	+1.7
HHC				PP	PP	17 52 39.5	+5.5
HHC				PCP	PcP	17 53 04.6	+1.8
HHC				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.7						
HHC				AMB	AMB		
	comp=Z,57nm,6.9s						
HHC				LR	LR		
	comp=N,155nm,16.1s,MS4.1						
HHC				LR	LR		
	comp=E,184nm,19.9s,MS4.1						
HHC				LR	LR		
	comp=Z,143nm,17.1s,MS3.9						
NWAO	**Narrogin (SRO)**	**41.06**	**152**	LR	LR	18 06 48.1	
	comp=Z,91nm,21.2s,MS3.6,baz=343,slow=34						
WSAR	**Wadi Sarin**	**41.22**	**303**	P	**P**	**17 51 07.8**	**+0.1**
	comp=Z,6.4nm,1.1s,mb4.2,baz=67,slow=13,SNR=1.7						
WSAR	**Wadi Sarin**	**41.22**	**303**	P	**P**	**17 51 07.8**	**0.0**
BJT	**Baijiatuau**	**41.25**	**24**	*e*P	**P**	**17 51 08.9**	**+0.9**
BJT				pmax	pmax		
	comp=Z,18nm,0.8s						
BJT	**Baijiatuau**	**41.25**	**24**	*e*P	**P**	**17 51 08.9**	**+0.9**
	comp=Z,18nm,0.8s,mb4.8						
BJI	**Beijing**	**41.27**	**24**	P	**P**	**17 51 08.9**	**+0.7**
BJI				AMB	AMB		
	comp=Z,22nm,1.0s,mb4.7						

WMQ Urumqi 41.32 351 eP P 17 51 08.5 -0.1
WMQ AP pP 17 51 24.0 +0.3
WMQ PP PP 17 52 48.0 +3.2
WMQ AMB AMB
comp=Z,18nm,1.0s,mb4.7
WMQ AMB AMB
comp=Z,124nm,5.0s
WMQ LR LR
comp=N,24nm,12.0s,MS3.5
WMQ LR LR
comp=E,36nm,12.0s,MS3.5
WMQ LR LR
comp=Z,27nm,12.0s,MS3.3
AAK Ala-Archa 43.84 337⇓eP P 17 51 29.5 +0.5
AAK pmax pmax
comp=Z,11nm,1.5s,mb4.4
AAK MLR MLR
comp=Z,100nm,19.0s,MS3.8
AAK Ala-Archa 43.84 337 eP P 17 51 28.1 -0.9
comp=Z,7.6nm,0.9s,mb4.4
WRA Warramunga Arr 44.16 123 P P 17 51 31.3 -0.2
comp=Z,9.3nm,0.8s,mb4.5,baz=302,slow=8.9,SNR=44
WRA PcP PcP 17 53 16.4 +0.8
comp=Z,1.6nm,0.7s,baz=305,slow=2.9,SNR=6.2
WRAB Tennant Creek 44.16 123 eP P 17 51 31.1 -0.5
WRAB pmax pmax
comp=Z,19nm,0.9s,mb4.8
WRAB Tennant Creek 44.16 123 eP P 17 51 31.1 -0.4
comp=Z,19nm,0.9s,mb4.8
WB2 Warramunga Arr 44.17 123⇑iP P 17 51 31.0 -0.6
MK31 Makanchi Array 45.21 347 P P 17 51 39.8 -0.2
MK31 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
MKAR Makanchi Array 45.21 347 P P 17 51 39.8 -0.2
comp=Z,27nm,0.9s,mb5.1,baz=159,slow=7.1,SNR=86
FORT Forrest 45.52 140 eP P 17 51 43.2 +0.8
comp=Z,22nm,0.6s,mb5.3
ASAR Alice Springs 45.57 128 P P 17 51 42.7 -0.1
comp=Z,2.9nm,0.6s,mb4.4,baz=298,slow=8.1,SNR=54
ASAR PcP PcP 17 53 21.9 +1.4
comp=Z,2.0nm,0.9s,baz=311,slow=3.1,SNR=8.8
SONM Songino Array 45.63 10 P P 17 51 43.5 +0.3
comp=Z,10nm,0.8s,mb4.8,baz=189,slow=8.8,SNR=20
SONM PcP PcP 17 53 21.7 +1.0
comp=Z,2.1nm,0.6s,baz=131,slow=4.5,SNR=3.7
SONM LR LR 18 11 11.3
comp=Z,32nm,19.6s,MS3.3,baz=46,slow=37
SONM Songino Array 45.63 10 P P 17 51 43.5 +0.2
SONM 17 53 21.7
ULN Ulaanbaatar 45.78 11c iP P 17 51 44.2 -0.2
ULN Ulaanbaatar 45.78 11 eP P 17 51 43.8 -0.6
comp=Z,6.6nm,0.8s,mb4.6
KK31 Karatay Array 45.87 334 i P P 17 51 45.3 +0.2
KK31 pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
KKAR Karatay Array 45.87 334 P P 17 51 45.3 +0.2
KKAR pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
SNY Shenyang 46.02 29 ⇑P P 17 51 46.8 +0.5
SNY AMB AMB
comp=Z,13nm,1.0s,mb4.8
ZAK Zakamensk 47.67 6 eP P 17 51 58.9 -0.3
ZAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
CN2 Changchun 48.41 29 eP P 17 52 04.8 -0.1
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
TLY Talaya 48.99 6 i P P 17 52 10.0 +0.6
TLY Talaya 48.99 6 eP P 17 52 09.1 -0.3
GUMO Guam 49.60 75 LR LR 18 13 16.7
comp=Z,44nm,21.4s,MS3.4,baz=267,slow=36
HIA Hailar 50.46 20 eP P 17 52 21.3 +0.8
HIA pmax pmax
comp=Z,10.0nm,1.1s
HIA Hailar 50.46 20 eP P 17 52 21.3 +0.8
comp=Z,10nm,1.1s,mb4.8
MDJ Mudanjiang 51.05 31 P P 17 52 25.6 +0.6
MDJ AMB AMB
comp=Z,9.0nm,1.2s,mb4.6
MDJ AMB AMB
comp=Z,51nm,4.6s
MDJ LR LR
comp=N,17nm,23.9s
MDJ LR LR
comp=E,36nm,17.9s
MDJ LR LR
comp=Z,39nm,19.9s,MS3.4
MDJ Mudanjiang 51.05 31 eP P 17 52 25.5 +0.5
comp=Z,8.0nm,0.9s,mb4.7
MJAR Matsushiro Arr 51.38 44 PcP PcP 17 53 43.2 +1.8
comp=Z,1.5nm,0.8s,baz=264,slow=2.5,SNR=6.3
MJAR LR LR 18 13 27.9
comp=Z,52nm,21.6s,MS3.5,baz=45,slow=35
ZAL Zalesovo 51.61 352 P P 17 52 29.6 +0.4
comp=Z,9.2nm,0.8s,mb4.8,baz=290,slow=6.7,SNR=37
OPO Ambohidratompo 52.40 244 P P 17 52 35.1 +0.1
comp=Z,1.7nm,0.7s,mb4.1,baz=119,slow=10,SNR=5.6
RDF Al-Radifah 52.58 305 eP P 17 52 35.9 -0.4
RDF AMb AMB 17 52 37.9
comp=Z,39nm,0.9s,mb5.3
UMR Umm Al-Rimmam 52.66 305 eP P 17 52 36.3 -0.7
UMR AMb AMB 17 52 38.4
comp=Z,24nm,0.8s,mb5.2
NVS Novosibirsk 52.72 351⇑iP P 17 52 35.8 -1.6
NVS e pP 17 52 50.1 -2.9
NVS pmax pmax
comp=Z,17nm,1.0s,mb4.9
NVS pmax pmax
comp=N,16nm,1.2s
NVS pmax pmax
comp=E,8.0nm,1.1s
NAY Al-Naaiem 52.94 305 eP P 17 52 37.9 -1.1
NAY AMb AMB 17 52 41.3
comp=Z,16nm,0.7s,mb5.0
KRAR Krasnoyarsk 52.94 358⇓eP P 17 52 39.6 +0.6
KRAR pmax pmax
comp=Z,11nm,0.3s,mb5.3
MIB Mutribah 53.06 306 eP P 17 52 39.3 -0.6
MIB AMb AMB 17 52 41.5
comp=Z,55nm,0.9s,mb5.5
BVA0 Borovoye Array 54.14 341 i P P 17 52 47.1 -0.7
BVA0 pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BVAR Borovoye Array 54.14 341 P P 17 52 47.3 -0.6
comp=Z,14nm,0.8s,mb4.9,baz=142,slow=7.5,SNR=46
BRVK Borovoye 54.20 341 eP P 17 52 47.5 -0.8
BRVK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BRVK Borovoye 54.20 341 eP P 17 52 47.5 -0.8
comp=Z,8.5nm,0.8s,mb4.7
ZRNK Zerenda 54.53 340 eP P 17 52 49.6 -1.0
ZRNK pmax pmax
comp=Z,15nm,0.9s,mb5.0
ZRNK Zerenda 54.53 340 eP P 17 52 49.6 -1.1
comp=Z,14nm,0.9s,mb5.0
CTAO Charters Tower 54.54 117 P P 17 52 51.2 +0.5
CTAO pmax pmax
comp=Z,13nm,1.1s,mb4.9
CTAO Charters Tower 54.54 117 P P 17 52 51.2 +0.4
comp=Z,13nm,1.1s,mb4.9
CHKZ Chkalovo 54.62 342 eP P 17 52 50.7 -0.6
CHKZ pmax pmax
comp=Z,24nm,0.8s,mb5.3
CHKZ Chkalovo 54.62 342 eP P 17 52 50.7 -0.6
comp=Z,24nm,0.8s,mb5.3
AB31 Akbulak array 55.31 332 i P P 17 52 55.8 -0.5
AB31 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KLR Kul'dur 55.34 28 eP P 17 52 54.0 -2.5
STKA Stephens Creek 55.57 132 P P 17 52 58.4 +0.3
comp=Z,4.9nm,0.9s,mb4.5,baz=314,slow=6.5,SNR=6.6
STKA Stephens Creek 55.57 132 eP P 17 52 58.3 +0.2
comp=Z,5.3nm,1.2s,mb4.5
AKTK Aktyubinsk 57.03 332 P P 17 53 07.8 -0.7
AKTO Aktyubinsk 57.03 332 P P 17 53 07.8 -0.7
comp=Z,9.5nm,0.8s,mb4.9,baz=135,slow=5.8,SNR=17
KMBO Kilima Mbogo 58.66 267 P P 17 53 20.6 +0.6
comp=Z,2.2nm,0.9s,mb4.2,baz=51,slow=12,SNR=5.9
KMBO LR LR 18 14 38.2
comp=Z,86nm,20.4s,MS3.9,baz=92,slow=32
KMBO Kilima Mbogo 58.66 267⇑eP P 17 53 22.5 +2.5
KMBO Kilima Mbogo 58.66 267 eP P 17 53 19.6 -0.4
comp=Z,7.1nm,1.2s,mb4.6
SVE Sverdlovsk 60.55 339⇑eP P 17 53 31.5 -1.4
SVE pmax pmax
comp=Z,40nm,1.0s,mb5.5

ARU Arti 61.03 337⇓iP P 17 53 33.8 -2.4
ARU e 17 54 15.1
ARU eS S 18 01 50.7 +0.3
ARU eSS SS 18 05 50.2 -0.5
ARU pmax pmax
comp=Z,11nm,0.9s,mb5.0
ARU Arti 61.03 337 eP P 17 53 35.2 -1.0
comp=Z,13nm,0.9s,mb5.0
KIV Kislovodsk 62.07 319⇑eP P 17 53 42.2 -1.0
KIV e 17 55 56.5
KIV eS S 18 01 53.6 -10
KIV pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
KIV Kislovodsk 62.07 319 P P 17 53 42.9 -0.4
ASF Jabal al Asfar 62.31 305 P P 17 53 45.8 +0.9
comp=Z,1.2nm,0.3s,mb4.5,baz=350,slow=4.5,SNR=4.8
MALT Malatya 62.91 312 eP P 17 53 47.8 -1.1
MALT pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
MALT Malatya 62.91 312 eP P 17 53 47.8 -1.1
comp=Z,6.1nm,1.0s,mb4.7
EIL Elat 63.34 302 eP P 17 53 51.9 +0.2
comp=Z,182nm,0.9s
MMAI Mount Meron Ar 63.74 305 P P 17 53 55.7 +1.4
comp=Z,3.5nm,0.7s,mb4.5,baz=98,slow=10,SNR=8.4
YAK Yakutsk 64.14 17 eP P 17 53 56.2 -0.8
YAK pmax pmax
comp=Z,46nm,0.9s,mb5.5
YAK Yakutsk 64.14 17 eP P 17 53 56.2 -0.8
comp=Z,46nm,0.9s,mb5.5
BR131 Keskin Array S 66.90 312 eP P 17 54 13.4 -1.3
comp=Z,2.0nm,0.8s,mb4.2
BRTR Keskin Array B 66.90 312 P P 17 54 13.9 -0.8
comp=Z,1.9nm,0.7s,mb4.2,baz=133,slow=7.2,SNR=9.6
BRTR Keskin Array B 66.90 312⇑eP P 17 54 14.0 -0.7
LSZ Lusaka 69.28 253 P P 17 54 30.3 +0.6
comp=Z,1.1nm,0.7s,mb3.9,baz=130,slow=2.6,SNR=3.6
LSZ Lusaka 69.28 253 P P 17 54 30.3 +0.6
CASY Casey 69.89 174 eP P 17 54 33.4 0.0
comp=Z,2.7nm,0.9s,mb4.2
OBN Obninsk 70.39 328⇓eP P 17 54 36.0 -0.5
OBN e 17 57 13.9
OBN eS S 18 03 39.4 -5.2
OBN eSS SS 18 08 09.6 -6.6
OBN pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
TIXI Tiksi 71.71 10d iP P 17 54 43.7 -0.8
TIXI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TIXI MLR MLR
comp=Z,300nm,28.0s,MS4.4
AKASG Malin Array Be 73.02 322 P P 17 54 51.1 -1.2
comp=Z,3.9nm,0.8s,mb4.4,baz=92,slow=4.9,SNR=15
LBTB Lobatse 73.42 243 eP P 17 54 54.3 -0.3
LBTB pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
LBTB Lobatse 73.42 243 eP P 17 54 54.2 -0.4
comp=Z,5.4nm,0.9s,mb4.5
MLR Muntele Rosu 73.83 317 P P 17 54 57.5 +0.5
comp=Z,5.1nm,0.8s,mb4.5,baz=190,slow=5.4,SNR=7.8
MAW Mawson 74.11 193 P P 17 54 59.2 +0.6
comp=Z,0.8nm,0.7s,mb3.8,baz=17,slow=4.7,SNR=3.8
MAW Mawson 74.11 193 eP P 17 54 58.8 +0.1
MAW pmax pmax
comp=Z,4.0nm,1.0s
MAW Mawson 74.11 193 eP P 17 54 58.8 +0.1
comp=Z,3.7nm,1.0s,mb4.3
BOSA Boshof 74.45 239 P P 17 55 00.8 +0.2
comp=Z,1.3nm,0.8s,mb3.9,baz=86,slow=15,SNR=3.1
BOSA LR LR 18 23 19.3
comp=Z,88nm,18.1s,MS4.1,baz=208,slow=32
JOF Joensuu 75.97 335 ep P 17 55 06.1 -3.2
SUW Suwalki 77.44 325 eP P 17 55 16.9 -0.7
STHS Stebnicka Huta 77.73 320 eP P 17 55 20.2 +0.9
FINES FINESS Array B 77.80 333 P P 17 55 19.3 -0.4
comp=Z,2.4nm,0.7s,mb4.2,baz=67,slow=5.0,SNR=9.7
FINES FINESS Array B 77.80 333 P P 17 55 19.3 -0.4
KAF Kangasniemi 77.89 333 ep P 17 55 18.6 -1.6
comp=Z,5.8nm,0.8s,mb4.6
KAF Kangasniemi 77.89 333 eP P 17 55 18.6 -1.6
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VYHS Vyhne 79.15 319 eP P 17 55 26.8 -0.3
ZST Bratislava 80.26 318 eP P 17 55 32.6 -0.5
ARCES ARCESS Array B 80.42 340 P P 17 55 33.3 -0.7
comp=Z,6.0nm,0.9s,mb4.5,baz=89,slow=6.6,SNR=12
DPC Dobruska-Polom 81.01 320 eP P 17 55 38.0 +0.9
UPC Upice 81.22 321 eP P 17 55 38.9 +0.6
GEC2 GERESS Array S 82.57 319 eP P 17 55 46.0 +0.6
comp=Z,6.0nm,1.0s,mb4.6
GEC2 GERESS Array S 82.57 319 eP P 17 55 46.0 +0.6
GEC2 pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
GERES GERESS Array B 82.57 319 P P 17 55 46.0 +0.7
comp=Z,2.6nm,0.8s,mb4.3,baz=96,slow=5.5,SNR=20
KHC Kasperske Hory 82.67 319 eP P 17 55 48.6 +2.7
WET Wettzell 83.13 319 eP P 17 55 48.7 +0.4
comp=Z,5.0nm,1.2s,mb4.4
WET Wettzell 83.13 319 eP P 17 55 48.7 +0.4
WET pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
TANN Tannenbergstha 83.48 320 eP P 17 55 50.9 +0.9
comp=Z,2.0nm,0.8s,mb4.2
HFS Hagfors 83.51 330 P P 17 55 49.9 -0.2
comp=Z,3.9nm,0.9s,mb4.6,baz=108,slow=4.8,SNR=6.6
WERN Wernitzgruen 83.53 320 eP P 17 55 51.9 +1.6
comp=Z,4.0nm,1.0s,mb4.5
WERD Werda 83.58 320 eP P 17 55 50.3 -0.2
comp=Z,4.0nm,1.2s,mb4.4
ROTZ Rotzenmuhle 83.61 320 eP P 17 55 51.8 +1.1
comp=Z,6.0nm,1.2s,mb4.6
MANZ Manzenberg 83.68 320 eP P 17 55 51.9 +0.8
comp=Z,7.0nm,1.0s,mb4.8
GRA1 Grafenberg Arr 84.24 319 eP P 17 55 54.6 +0.7
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 84.24 319 eP P 17 55 54.6 +0.7
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 84.24 319 eP P 17 55 54.6 +0.7
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 84.24 319 eP P 17 55 54.6 +0.7
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
NB2 NORSAR Subarra 84.80 331 P P 17 55 56.4 -0.3
comp=Z,1.0nm,0.8s,mb4.0,baz=96,slow=5.3
NOA NORSAR Array B 84.80 331 P P 17 55 56.3 -0.4
comp=Z,1.8nm,0.9s,mb4.2,baz=94,slow=5.5,SNR=5.5
NOA LR LR 18 42 09.7
comp=Z,22nm,19.4s,MS3.6,baz=55,slow=42
KEST Kesra 85.40 305 P P 17 56 01.1 +1.4
comp=Z,2.4nm,1.0s,mb4.3,baz=315,slow=6.5,SNR=5.2
LPG La Plagne 87.24 315 eP P 17 56 08.9 +0.1
comp=Z,10nm,0.9s,mb4.8
LPG La Plagne 87.24 315 eP P 17 56 08.9 +0.1
LPG pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
LPG La Plagne 87.24 315 eP P 17 56 08.9 +0.1
comp=Z,5.3nm,0.9s,mb4.8
TORD Torodi Ar. Bea 93.32 283 P P 17 56 38.5 +1.3
comp=Z,0.6nm,0.7s,mb4.1,baz=72,slow=4.0,SNR=3.9
ULM Lac du Bonnet 126.05 9 PKP PKPdf 18 02 24.0 -0.2
comp=Z,1.9nm,0.6s,baz=356,slow=6.8,SNR=3.6
PDAR Pinedale Array 129.04 24 PKP PKPdf 18 02 31.4 +1.4
comp=Z,0.4nm,0.6s,baz=135,slow=0.2,SNR=3.9
JCT Junction City 143.56 23⇓ePKIKP PKPdf 18 02 56.2 -0.6
CPUP Villa Florida 145.29 225 PKPbc PKPbc 18 03 00.6 +1.0
comp=Z,3.6nm,0.7s,baz=106,slow=2.9,SNR=13
SIV San Ignacio 153.81 239 PKPbc PKPbc 18 03 21.9 +0.7
comp=Z,0.9nm,0.7s,baz=56,slow=5.1,SNR=4.9

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*MOS **18** 17:45:05.7±1.1, 51.63N×16.03E, h16km, mb4.1/4, Error ellipse: s-maj=5.9km s-min=3.5km az=80.7*
*ISCJB **18** 17:45:05.3±0.2, 51.46N±0.01×16.07E±0.02, h0km, mb4.4/12, MS4.2/2, Error ellipse: s-maj=2.2km s-min=1.5km az=6.4*
*IPEC **18** 17:45:05.5±0.4, 51.60N×16.21E, h0km±1km, ML3.6/4, Error ellipse: s-maj=2.1km s-min=1.3km az=4.0*
*BGR **18** 17:45:07.0±0.5, 51.50N×16.22E, h1km, ML3.9/16, Error ellipse: s-maj=8.9km s-min=6.7km az=146.0*
*NEIC **18** 17:45:06.5±0.2, 51.60N×16.07E, h5km, mb4.0/5, ML3.9(SZGRF), Error ellipse: s-maj=3.4km s-min=2.9km az=154.0*
*CSEM **18** 17:45:07.9±0.1, 51.49N×16.14E, h1km, mb4.2/1, ML4.2/26, Ms3.9, Error ellipse: s-maj=1.6km s-min=0.9km az=8.0*
*PRU **18** 17:45:08.0, 51.49N×16.06E, h0km, M4.0, Felt In Harrachov*
*WAR **18** 17:45:08.3, 51.49N×16.09E, ML3.5, Mining Induced*
*LDG **18** 17:45:08.9±0.4, 51.54N×15.99E, h1km, Ml4.3/19, Error ellipse: s-maj=11.8km s-min=3.7km az=178.0, Suspected Mining induced.*
*IDC **18** 17:45:08.9±1.7, 51.49N×15.94E, h11km±13km, mb3.8/4, mb1 3.8/11, mb1mx3.7/25, mbtmp3.8/11, ML3.4/7, Error ellipse: s-maj=10.3km s-min=7.7km az=92.0*
*BJI **18** 17:45:10.6, 52.49N×16.46E, h15km, mB4.9, mb4.7, Ms4.3, Msz4.0*
*VIE **18** 17:45:10.4±0.6, 51.24N×16.04E, h0km, mb3.1/9, ML3.3/11, Ms3.9/1, Error ellipse: s-maj=3.7km s-min=2.7km az=0.0 69 km WNW of Breslau Suspected Mining induced.*
ISC 18 17:45:06.5±0.2, 51.52N±0.01×16.11E±0.02, h0km, n206, σ1§15/324, mb4.4/12, MS4.2/2, 21C-13D, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSP Ksiaz 0.69 170 i Pgd Pg 17 45 20.4 +0.7
KSP eSg Sg 17 45 29.3 +0.7
KSP eL 17 45 32.5
KSP Ksiaz 0.69 170⇓iP Pg 17 45 20.4 +0.7
KSP e 17 45 29.3
KSP Ksiaz 0.69 170 ePg Pg 17 45 20.3 +0.6
KSP eSg Sg 17 45 29.3 +0.7
UPC Upice 1.02 183 ePG Pg 17 45 26.3 +0.3
DPC Dobruska-Polom 1.18 173 ePG Pg 17 45 29.2 +0.1
DPC eSG Sg 17 45 44.1 -0.3
516nm,0.7s
DPC Dobruska-Polom 1.18 173 eP Pg 17 45 29.2 +0.1
DPC e 17 45 44.1
DPC smax
comp=N,516nm,0.7s
DPC Dobruska-Polom 1.18 173 ePg Pg 17 45 29.1 0.0
DPC eSg Sg 17 45 44.1 -0.3
PVCC Panska Ves 1.39 225 ePn Pn 17 45 33.1 0.0
PVCC eSg Sg 17 45 52.8 +1.6
BRG Berggiesshubel 1.51 245 ePn Pn 17 45 34.3 -0.4
BRG eSg Sg 17 45 55.8 +0.8
BRG Berggiesshubel 1.51 245 PN Pn 17 45 34.2 -0.6
BRG PG Pg 17 45 35.5 +0.1
BRG SG Sg 17 45 55.4 +0.4
comp=N,303nm,0.7s
BRG
comp=N,560nm,3.0s
BRG
comp=E,434nm,5.4s
BRG
comp=Z,754nm,4.9s
BRG Berggiesshubel 1.51 245 P Pn 17 45 34.2 -0.6
BRG 17 45 55.3
BRG smax
comp=N,2.0nm,0.7s
BRG MLR MLR
comp=N,303μm,3.0s
BRG MLR MLR
comp=E,560nm,5.4s
BRG MLR MLR
comp=Z,754nm,4.9s
RUE Ruedersdorf 1.73 305 ePn Pn 17 45 37.6 -0.2
RUE eSg Sg 17 46 04.3 +2.2
RUE Ruedersdorf 1.73 305 ePn Pn 17 45 37.6 -0.2
RUE eSg Sg 17 46 04.3 +2.2
PRA Prague 1.80 217 PG Pg 17 45 38.0 -3.0
PRA SG Sg 17 46 02.0 -2.3
PRU Pruhonice 1.83 214 ePN Pn 17 45 38.8 -0.4
PRU ePG Pg 17 45 40.8 -0.8
PRU eSG Sg 17 46 04.5 -0.8
comp=Z,387nm,0.6s
PRU Pruhonice 1.83 214 eP Pn 17 45 38.8 -0.4
PRU e 17 46 04.5
PRU smax
comp=N,387nm,0.6s
FBE Freiberg 1.83 252 ePn Pn 17 45 38.8 -0.5
FBE eSg Sg 17 46 08.7 +3.3
GKP Gorka Klasztor 1.88 21 ePn Pn 17 45 49.2 +9.2
GKP eSn Sn 17 46 10.4 +6.0
GKP eSg Sg 17 46 13.6 +6.5
RAC Raciborz 1.96 137 ePg Pg 17 45 44.4 +0.4
RAC eSg Sg 17 46 09.8 +0.5
CLL Collm 1.96 265 ePn Pn 17 45 40.6 -0.4
CLL Collm 1.96 265 i Pn Pn 17 45 40.5 -0.4
CLL i Pg Pg 17 45 43.5 -0.5
CLL i x x 17 45 47.6
CLL i Sg Sg 17 46 09.8 +0.4
comp=Z,357nm,1.2s
CLL i x x 17 46 19.1
CLL Collm 1.96 265 i Pn Pn 17 45 40.5 -0.4
CLL i Pg Pg 17 45 43.5 -0.5
CLL i Sg Sg 17 46 09.8 +0.4
MORC Moravsky Berou 1.97 152⇑iP Pn 17 45 41.3 +0.2
MORC Moravsky Berou 1.97 152 eP Pn 17 45 40.7 -0.4
MORC e 17 46 05.1
MORC Moravsky Berou 1.97 152 ePn Pn 17 45 40.7 -0.4
MORC eSn Sn 17 46 05.1 -1.4
MORC eSg Sg 17 46 09.4 -0.4
MORC Moravsky Berou 1.97 152 ePn Pn 17 45 40.7 -0.4
MORC eSn Sn 17 46 05.1 -1.4
MORC eSg Sg 17 46 08.4 -1.4
comp=Z,180nm,0.5s
OKC Ostrava-Krasne 2.13 142 ePN Pn 17 45 42.8 -0.5
OKC ePG Pg 17 45 46.9 -0.4
OKC eSG Sg 17 46 13.8 -1.1
comp=Z,418nm,0.6s
OKC Ostrava-Krasne 2.13 142 eP Pn 17 45 42.8 -0.5
OKC e 17 46 13.8
OKC smax
comp=N,418nm,0.6s
OKC Ostrava-Krasne 2.13 142 ePn Pn 17 45 42.6 -0.7
VRAC Vranov 2.24 172 Pn Pn 17 45 44.9 +0.1
comp=N,5.3nm,0.3s,baz=355,slow=14,SNR=23
VRAC Lg 17 46 17.7
comp=N,18nm,0.3s,baz=257,slow=19,SNR=15
VRAC Vranov 2.24 172⇑iP Pn 17 45 45.4 +0.6
VRAC Vranov 2.24 172 ePn Pn 17 45 44.7 -0.1
VRAC eSg Sg 17 46 17.0 -1.4
comp=N,427nm,0.9s
KRUC Moravsky 2.47 176 eSg Sg 17 46 25.6 -0.2
comp=N,214nm,0.8s
TANN Tannenbergstha 2.56 246 ePn Pn 17 45 49.7 +0.5
TANN eSg Sg 17 46 28.6 -0.1
WERD Werda 2.63 247 ePn Pn 17 45 50.3 +0.1
WERD eSg Sg 17 46 31.4 +0.3
NKC Novy Kostel 2.65 242 ePN Pn 17 45 51.2 +0.7
NKC ePG Pg 17 45 56.8 -0.6
NKC eSG Sg 17 46 32.7 +0.9
comp=N,410nm,0.8s
GUNZ Gunzen 2.66 246 ePn Pn 17 45 51.1 +0.5
WERN Wernitzgruen 2.67 244 ePn Pn 17 45 51.3 +0.6
WERN eSg Sg 17 46 34.4 +2.3
OJC Ojcow 2.68 118 ePn Pn 17 45 49.6 -1.2
OJC ePg Pg 17 45 57.7 -0.1
OJC eSg Sg 17 46 33.4 +0.9
OJC Ojcow 2.68 118 ePn Pn 17 45 49.3 -1.5
KHC Kasperske Hory 2.89 215 ePN Pn 17 45 53.6 -0.2
KHC ePG Pg 17 46 00.1 -1.8
KHC eSN Sn 17 46 28.7 -0.5
KHC eSG Sg 17 46 38.7 -0.7
comp=N,147nm,0.9s
MOX Moxa 2.96 255 ePn Pn 17 45 54.9 +0.1
MOX eSg Sg 17 46 43.6 +1.8
MOX Moxa 2.96 255 ePN Pn 17 45 54.9 +0.1
MOX ePG Pg 17 46 03.2 -0.2
MOX eSG Sg 17 46 43.0 +1.2
MOX Moxa 2.96 255 ePn Pn 17 45 54.9 +0.1
MOX ePg Pg 17 46 03.2 -0.2
MOX eSg Sg 17 46 43.0 +1.2
MANZ Manzenberg 2.97 240 eSg Sg 17 46 43.0 +1.1
ROTZ Rotzenmuhle 3.04 236 ePn Pn 17 45 56.1 +0.2
ROTZ eSg Sg 17 46 43.9 -0.3
GEC2 GERESS Array S 3.09 211 ePn Pn 17 45 56.6 0.0
GERES GERESS Array B 3.09 211 Pn Pn 17 45 56.8 +0.2
comp=N,4.7nm,0.3s,baz=32,slow=12,SNR=123
GERES Pg Pg 17 46 03.9 -1.9
comp=N,9.7nm,0.3s,baz=28,slow=17,SNR=68
GERES Lg 17 46 43.5
comp=N,13nm,0.3s,baz=31,slow=25,SNR=6.8
GERES GERESS Array B 3.09 211 Pg Pg 17 46 03.9 -1.9
SMOL Smolenice 3.13 164 ePN Pn 17 45 57.4 +0.3
SMOL ePG Pg 17 46 06.2 -0.3

SMOL eSG Sg 17 46 49.0 +2.0
LIKS Likavka 3.13 141 ePN Pn 17 45 58.9 +1.8
LIKS eSG Sg 17 46 50.3 +3.1
LIKS Likavka 3.13 141 eP Pn 17 45 58.9 +1.8
LIKS pmax pmax
comp=N,231nm,0.6s
WET Wettzell 3.15 222 ePn Pn 17 45 57.5 +0.1
WET eSg Sg 17 46 47.3 -0.5
WET Wettzell 3.15 222 ePn Pn 17 45 57.5 +0.1
WET eSg Sg 17 46 47.3 -0.5
ZST Bratislava 3.39 169 ePN Pn 17 46 01.9 +1.2
ZST ePG Pg 17 46 10.5 -1.0
ZST eSG Sg 17 46 53.9 -1.5
ZST Bratislava 3.39 169 eP Pn 17 46 01.9 +1.2
ZST pmax pmax
comp=N,188nm,1.3s
ZST pmax pmax
comp=N,12nm,0.6s
ZST Bratislava 3.39 169 ePn Pn 17 46 01.9 +1.2
ZST ePg Pg 17 46 10.5 -1.0
ZST eSg Sg 17 46 53.9 -1.5
NIE Niedzica 3.41 126 ePn Pn 17 46 01.7 +0.7
NIE ePg Pg 17 46 11.6 -0.3
NIE eSg Sg 17 46 56.0 -0.2
NIE e 17 46 57.6
NIE Niedzica 3.41 126 ePn Pn 17 46 01.7 +0.7
NIE ePg Pg 17 46 11.6 -0.3
NIE eSg Sg 17 46 56.0 -0.2
VYHS Vyhne 3.50 149 ePN Pn 17 46 01.8 -0.4
VYHS ePG Pg 17 46 11.9 -1.8
VYHS eSG Sg 17 47 02.1 +3.0
VYHS Vyhne 3.50 149 eP Pn 17 46 01.8 -0.4
VYHS pmax pmax
comp=N,69nm,1.4s
VYHS Vyhne 3.50 149 ePn Pn 17 46 01.8 -0.4
VYHS ePg Pg 17 46 11.9 -1.8
VYHS eSg Sg 17 47 02.2 +3.1
CONA Conrad Observa 3.60 183 *i* Pn Pn 17 46 04.3 +0.7
SNR=18
CONA ⇑*i*Sg Sg 17 47 00.3 -1.8
comp=N,162nm,0.8s
CONA Conrad Observa 3.60 183 Pn Pn 17 46 04.3 +0.8
SNR=18
CONA Sg Sg 17 47 00.3 -1.9
comp=N,162nm,0.8s
GRA1 Grafenberg Arr 3.61 241 ePn Pn 17 46 04.2 +0.5
GRA1 eSg Sg 17 47 03.6 +1.1
GRA1 Grafenberg Arr 3.61 241 Pn Pn 17 46 04.2 +0.5
GRA1 Sg Sg 17 47 03.6 +1.1
GRF Grafenberg Arr 3.61 241 ePn Pn 17 46 04.2 +0.5
GRF eSg Sg 17 47 03.6 +1.1
SOP Sopron 3.85 175⇑ ePn Pn 17 46 07.6 +0.6
MOA Molln 3.86 199 *i* Pn Pn 17 46 07.6 +0.5
SNR=25
MOA ⇑*i*Sg Sg 17 47 10.1 -0.6
comp=N,193nm,0.8s
STHS Stebnicka Huta 3.90 121 ePN Pn 17 46 08.3 +0.7
STHS ePG Pg 17 46 22.3 +1.1
STHS eSG Sg 17 47 16.3 +4.5
STHS Stebnicka Huta 3.90 121 eP Pn 17 46 08.3 +0.7
STHS pmax pmax
comp=N,254nm,1.2s
STHS Stebnicka Huta 3.90 121 ePn Pn 17 46 08.3 +0.7
STHS ePg Pg 17 46 22.3 +1.1
STHS eSg Sg 17 47 16.3 +4.5
UBBA Unterbreizbach 3.91 262 ePn Pn 17 46 08.0 +0.2
UBBA eSg Sg 17 47 13.0 +0.9
KECS Kecovo 4.15 135 ePN Pn 17 46 11.1 0.0
KECS ePG Pg 17 46 27.1 +1.1
KECS eSG Sg 17 47 19.4 -0.4
KECS Kecovo 4.15 135 eP Pn 17 46 11.1 0.0
KECS pmax pmax
comp=N,38nm,0.8s
ARSA Arzberg 4.29 185⇓ *i*Pn Pn 17 46 14.3 +1.2
ARSA ⇑*i*Sg Sg 17 47 21.8 -2.6
comp=N,129nm,0.7s
CRVS Cervenica-Dubn 4.32 125 ePN Pn 17 46 14.0 +0.5
CRVS ePG Pg 17 46 28.6 -0.8
CRVS e 17 47 26.1
PSZ Piszkesteto 4.36 144⇑ ePn Pn 17 46 14.8 +0.8
PSZ Piszkesteto 4.36 144 ePn Pn 17 46 14.4 +0.3
PSZ Piszkesteto 4.36 144 ePn Pn 17 46 14.4 +0.4
KWP Kalwaria 4.61 112 ePn Pn 17 46 17.4 -0.1
KWP ePg Pg 17 46 32.2 -2.7
KWP eSg Sg 17 47 44.7 +10
COP Copenhagen 4.71 334⇑ *i*P Pg 17 46 43.2 +6.4
COP *i* S Sg 17 47 38.2 +0.3
KOLS Kolonicke sedl 4.73 121 ePN Pn 17 46 19.3 +0.2
KOLS e 17 46 39.5
KOLS Kolonicke sedl 4.73 121 eSG Sg 17 47 41.8 +3.3
KOLS Kolonicke sedl 4.73 121 eP Pn 17 46 19.3 +0.2
KOLS pmax pmax
comp=N,92nm,1.1s
KOLS Kolonicke sedl 4.73 121 ePn Pn 17 46 19.3 +0.2
KOLS e 17 46 39.5
KOLS eSg Sg 17 47 41.8 +3.3
KBA Koelnbreinsper 4.80 203 *i* Pn Pn 17 46 20.9 +0.8
SNR=18
KBA ⇑*i*Sg Sg 17 47 40.5 -0.2
comp=N,104nm,0.8s
PERS Pernice 4.93 188 ePn Pn 17 46 23.2 +1.3
SUW Suwalki 4.97 57 ePn Pn 17 46 22.8 +0.5
TNS Taunus Mts 5.02 258 ePn Pn 17 46 23.2 +0.1
TNS eSg Sg 17 47 51.5 +3.6
TNS Taunus Mts 5.02 258 ePn Pn 17 46 23.2 +0.1
TNS eSg Sg 17 47 51.5 +3.6
GROS Grobnik 5.08 185 ePn Pn 17 46 24.6 +0.8
OBKA Obir 5.12 192⇑ *i*Pn Pn 17 46 24.3 -0.1
OBKA ⇑*i*Sg Sg 17 47 50.0 -1.0
comp=N,70nm,0.7s
WATA Walderalm 5.13 217⇑ *i*Pn Pn 17 46 25.8 +1.3
WATA ⇑*i*Sg Sg 17 47 51.5 +0.3
comp=N,28nm,0.6s
WTTA Wattenberg 5.16 216⇑ *i*Pn Pn 17 46 26.5 +1.5
SNR=13
WTTA ⇑*i*Sg Sg 17 47 51.6 -0.8
comp=N,92nm,0.9s
STU Stuttgart 5.23 241 eP Pn 17 46 25.2 -0.7
STU pmax pmax
comp=Z,20nm,0.5s
STU Stuttgart 5.23 241 ePn Pn 17 46 25.2 -0.7
comp=Z,20nm,0.5s
STU ePg Pg 17 46 46.8 +0.1
STU eSb Sb 17 47 42.7 +0.6
STU eSg Sg 17 47 54.4 0.0
STU Stuttgart 5.23 241 ePn Pn 17 46 25.2 -0.7
comp=Z,20nm,0.5s
STU Stuttgart 5.23 241 ePg Pg 17 46 46.8 +0.1
MOTA Moosalm 5.30 220⇑ *i*Pn Pn 17 46 27.6 +0.6
SNR=13
MOTA ⇑*i*Sg Sg 17 47 57.6 +0.7
comp=Z,48nm,0.8s
LVV L'vov 5.32 106 eP Pn 17 46 19.7 -7.5
SQTA Sankt Quirin 5.36 219⇓ *i*Pn Pn 17 46 28.9 +1.2
SNR=9.8
SQTA ⇑*i*Sg Sg 17 47 59.5 +0.7
comp=Z,19nm,0.5s
DOBS Dobrina 5.39 185 *i* Pn Pn 17 46 30.3 +2.1
ROBS Robic 5.55 199 ePn Pn 17 46 33.2 +2.8
PKSM Morągy 5.57 162⇓ eP Pn 17 46 31.9 +1.3
LJU Ljubljana 5.58 191 ePn Pn 17 46 32.0 +1.2
LJU e 17 47 57.1
LJU e 17 48 14.5
VOY Vojsko 5.68 196 ePn Pg 17 46 50.2 -5.3
VOY eSn Sg 17 48 06.1 -3.0
VISS Visnje 5.78 189 *i* Pn Pn 17 46 34.5 +1.0
DAVA Damuels 5.87 226⇓ *i*Pn Pn 17 46 34.7 0.0
DAVA ⇑*i*Sg Sg 17 48 16.6 +1.5
comp=Z,26nm,0.6s
BFO Black Forest 5.95 241 ePn Pn 17 46 33.6 -2.2
BFO ePb Pb 17 46 48.8 -2.3
BFO ePg Pg 17 47 00.7 +0.1
BFO eSg Sg 17 48 16.2 -1.5
BFO Black Forest 5.95 241 ePn Pn 17 46 33.6 -2.3
BOJS Bojanci 6.05 186 *i* Pn Pn 17 46 38.2 +1.0
DRGR 6.41 135⇓ *i*P Pn 17 46 40.1 -2.1
DRGR 6.41 135⇓ P Pn 17 46 40.1 -2.1
MUD Monsted U'grnd 6.41 323 *i* P Pg 17 47 15.6 +6.2
comp=Z,36nm,1.1s
MUD *i* 17 48 52.8
MEM Membach 6.43 266 P Pn 17 46 43.2 +0.8
CDF Champ du Feu 6.49 245 ePn Pn 17 46 42.0 -1.3
CDF eSg Sg 17 48 31.8 -3.2
comp=Z,209nm,1.2s
CDF Champ du Feu 6.49 245 ePn Pn 17 46 42.0 -1.3
CDF eSg Sg 17 48 31.8 -3.2
comp=Z,105nm,1.2s
BCLA Clavier 6.91 265 P Pn 17 46 50.1 +1.0
BCLA Clavier 6.91 265 P Pn 17 46 50.0 +0.9
BZS Buzias 6.95 146⇓ *i*P Pn 17 46 51.6 +2.1
BZS Buzias 6.95 146⇓ P Pn 17 46 51.6 +2.1
HINF Hinteralfeld 7.06 242 ePn Pn 17 46 50.1 -0.9
HINF eSg Sg 17 48 47.4 -5.7
comp=Z,73nm,0.9s
HINF Hinteralfeld 7.06 242 ePn Pn 17 46 50.1 -0.9
HINF eSg Sg 17 48 47.4 -5.7
comp=Z,36nm,0.9s
BURAR Bucovina Array 7.09 120⇑ *i*P Pn 17 46 52.5 +0.9
BURAR Bucovina Array 7.09 120 ⇑P Pn 17 46 52.5 +1.0
HAU Haudompre 7.23 245 ePn Pn 17 46 52.3 -1.2
HAU eSg Sg 17 48 57.0 -1.8
comp=Z,80nm,0.8s
GIVF Givet 7.29 263 eSg Sg 17 48 54.5 -6.2
comp=Z,84nm,1.0s
GIVF Givet 7.29 263 eSg Sg 17 48 54.5 -6.2
comp=Z,42nm,1.0s
DOU Dourbes 7.43 263 P Pn 17 46 58.0 +1.8
DOU Dourbes 7.43 263 P Pn 17 46 57.9 +1.7
GZR Gura Zlata 7.56 142⇓ *i*P Pn 17 46 57.7 -0.3
BAIF Baives 7.69 264 eSg Sg 17 49 06.1 -7.2
comp=Z,56nm,1.0s
BAIF Baives 7.69 264 eSg Sg 17 49 06.1 -7.2
comp=Z,28nm,1.0s
MEZF Maizieres J'vi 7.74 251 eSg Sg 17 49 08.1 -6.9
comp=Z,148nm,1.4s
MEZF Maizieres J'vi 7.74 251 eSg Sg 17 49 08.1 -6.9
comp=Z,74nm,1.4s
SFTF Sexfontaines 7.88 249 ePn Pn 17 47 01.4 -1.0
SFTF eSg Sg 17 49 12.7 -7.0
comp=Z,147nm,1.3s
SFTF Sexfontaines 7.88 249 ePn Pn 17 47 01.4 -1.0
SFTF eSg Sg 17 49 12.7 -7.0
comp=Z,74nm,1.3s
CABF La Chapelle 8.21 237 ePg Pg 17 47 40.2 -3.6
CABF eSg Sg 17 49 23.3 -6.8
comp=Z,229nm,1.2s
CABF La Chapelle 8.21 237 ePg Pg 17 47 40.2 -3.6
CABF eSg Sg 17 49 23.3 -6.8
comp=Z,115nm,1.2s
AKASG Malin Array Be 8.30 91 Pn Pn 17 47 06.7 -1.4
comp=Z,3.1nm,0.3s,baz=279,slow=12,SNR=28
AKASG Sn Sn 17 48 38.2 -4.3
comp=Z,1.4nm,0.3s,baz=79,slow=4.8,SNR=5.0
AKASG Lg 17 49 38.0
comp=Z,0.9nm,0.3s,baz=342,slow=27,SNR=4.7
AKASG Malin Array Be 8.30 91 P Pn 17 47 06.7 -1.4
AKASG 17 48 38.2
AKASG Malin Array Be 8.30 91 Pn Pn 17 47 06.7 -1.4
AKASG Sn Sn 17 48 38.2 -4.3
AKASG Lg 17 49 38.0
AKBB Malin Array Si 8.30 91 eP Pn 17 47 06.3 -1.8
AKBB *e* 17 48 36.4
AKBB Malin Array Si 8.30 91 ePn Pn 17 47 06.3 -1.7
AKBB ePg Pg 17 47 44.2 -1.3
AKBB eSn Sn 17 48 36.4 -6.1
AKBB eSg Sg 17 49 35.9 +2.9
AKBB Malin Array Si 8.30 91 ePn Pn 17 47 06.3 -1.8
VLC Villacollemand 8.31 210 ePn Pn 17 47 07.7 -0.5
VLC Villacollemand 8.31 210 ePn Pn 17 47 07.7 -0.5
LPL La Plagne 8.64 230 ePn Pn 17 47 13.6 +0.8
LPL eSg Sg 17 49 36.4 -7.7
comp=Z,90nm,1.5s
LPG La Plagne 8.65 229 ePn Pn 17 47 13.9 +1.0
LPG eSg Sg 17 49 35.9 -8.3
comp=Z,87nm,1.3s
HFS Hagfors 8.74 352 Pn Pn 17 47 12.8 -1.4
comp=Z,0.2nm,0.3s,baz=168,slow=15,SNR=8.1
HFS Sn Sn 17 48 46.9 -6.4
comp=Z,0.2nm,0.3s,baz=159,slow=18,SNR=3.5
KONO Kongsberg 8.94 338 P Pn 17 47 11.1 -5.8
LOR Lormes 9.05 247 ePn Pn 17 47 17.3 -1.1
LOR eSg Sg 17 49 51.9 -5.1
comp=Z,31nm,0.9s
LOR Lormes 9.05 247 ePn Pn 17 47 17.3 -1.1
LOR eSg Sg 17 49 51.9 -5.1
comp=Z,16nm,0.9s
MBDF Montbardon 9.22 226 ePn Pn 17 47 22.1 +1.3
MBDF eSg Sn 17 49 52.6 +47
comp=Z,45nm,1.4s
SSF Saint Saulge 9.36 246 ePn Pn 17 47 20.2 -2.5
SSF eSg Sn 17 49 59.0 +50
comp=Z,53nm,1.4s
SSF Saint Saulge 9.36 246 ePn Pn 17 47 20.2 -2.5
SSF eSg Sn 17 49 59.0 +50
comp=Z,27nm,1.4s
SMF Signal de Mont 9.41 244 ePn Pn 17 47 22.0 -1.3
SMF eSg Sn 17 50 01.1 +51
comp=Z,54nm,1.0s
SMF Signal de Mont 9.41 244 ePn Pn 17 47 22.0 -1.3
SMF eSg Sn 17 50 01.1 +51
comp=Z,27nm,1.0s
AVF Avril sur Loir 9.60 245 ePn Pn 17 47 24.6 -1.3
AVF eSg Sn 17 50 10.5 +56
comp=Z,49nm,1.2s
SBF Sospel 9.63 221 ePn Pn 17 47 26.5 +0.1
NAO01 NORSAR Array S 9.79 345 ePn Pn 17 47 26.2 -2.3
comp=Z,2.6nm,0.7s
NAO01 NORSAR Array S 9.79 345 ePn Pn 17 47 26.2 -2.3
comp=Z,2.6nm,0.7s
NOA NORSAR Array B 9.92 346 Pn Pn 17 47 28.4 -1.9
comp=Z,0.2nm,0.3s,baz=157,slow=12,SNR=6.1
BGF Bois d'Agland 10.02 245 eSg Sx 17 50 21.6
comp=Z,71nm,1.2s
BGF Bois d'Agland 10.02 245 eSg Sx 17 50 21.6
comp=Z,36nm,1.2s
TCF Toulx Ste Croi 10.54 246 eSg Sx 17 50 35.1
comp=Z,74nm,1.7s
TCF Toulx Ste Croi 10.54 246 eSg Sx 17 50 35.1
comp=Z,37nm,1.7s
FINES FINESS Array B 11.36 25 Pn Pn 17 47 48.0 -2.0
comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=11
FINES Sn Sn 17 49 47.5 -10
comp=Z,0.3nm,0.3s,baz=203,slow=24,SNR=5.0
KAF Kangasniemi 11.98 24 ep Pn 17 47 57.5 -1.0
EKA Eskdalemuir Ar 12.10 296 Pn Pn 17 47 56.8 -3.4
comp=Z,0.2nm,0.3s,baz=101,slow=13,SNR=4.4
EKA Sn Sn 17 50 10.3 -5.5
comp=Z,0.1nm,0.3s,baz=99,slow=26,SNR=4.3
OBN Obninsk 12.74 66 *i* P Pn 17 48 06.6 -2.3
OBN eS Sn 17 50 21.6 -10
OBN pmax pmax
comp=Z,12nm,1.2s
OBN Obninsk 12.74 66 ePn Pn 17 48 04.5 -4.5
comp=Z,9.0nm,0.5s
OBN Obninsk 12.74 66 ePn Pn 17 48 04.4 -4.5
comp=Z,9.0nm,0.5s
MOS Moscow 13.43 63 eP Pn 17 48 27.9 +10
JOF Joensuu 14.03 30 ep Pn 17 48 26.1 -0.5
ARCES ARCESS Array B 18.61 10 Pn Pn 17 49 22.2 -3.4
comp=Z,0.4nm,0.3s,baz=198,slow=12,SNR=21
ARE0 ARCESS Array S 18.61 10 P Pn 17 49 22.0 -3.6
GOF Gofitskoye 18.98 99 eP Pn 17 49 31.0 +0.9
KEV Kevo 19.00 12 ep Pn 17 49 26.0 -4.3
comp=Z,4.6nm,0.6s
KEV Kevo 19.00 12 eP Pn 17 49 26.0 -4.3
KEV pmax pmax
comp=Z,5.0nm,0.6s
KIV Kislovodsk 19.34 103⇓ eP Pn 17 49 29.0 -5.3
KIV eS Sn 17 53 12.7 +1.0
KIV pmax pmax
comp=Z,4.0nm,0.9s
MALT Malatya 20.49 121 P P 17 49 47.3 +1.3
MALT pmax pmax
comp=Z,2.0nm,0.5s
MALT Malatya 20.49 121 P P 17 49 47.3 +1.4
comp=Z,1.6nm,0.5s
MALT Malatya 20.49 121 P P 17 49 47.3 +1.3
comp=Z,1.6nm,0.5s
ARU Arti 25.14 62⇓ *i*P P 17 50 32.2 -1.0
ARU *e* 17 51 11.0
ARU ePPP 17 51 19.7
ARU eS S 17 55 00.1 +1.2
ARU eSS 17 55 51.7
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
ARU Arti 25.14 62 eP P 17 50 32.8 -0.4
comp=Z,5.7nm,0.8s,mb4.3
AKTK Aktyubinsk 26.15 76 P P 17 50 42.9 +0.5
AKTO Aktyubinsk 26.15 76 P P 17 50 42.9 +0.5
comp=Z,2.0nm,0.6s,mb3.9,baz=285,slow=9.8,SNR=6.0
ZRNK Zerenda 31.82 66 eP P 17 51 33.5 +0.6
ZRNK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
ZRNK Zerenda 31.82 66 eP P 17 51 33.5 +0.6
comp=Z,2.6nm,1.0s,mb4.1
ZRNK Zerenda 31.82 66 eP P 17 51 33.5 +0.6
comp=Z,3.0nm,1.0s,mb4.2
BRVK Borovoye 32.52 66 eP P 17 51 38.9 -0.1
BRVK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BRVK Borovoye 32.52 66 eP P 17 51 38.9 0.0
comp=Z,1.7nm,0.9s,mb4.0
BRVK Borovoye 32.52 66 eP P 17 51 38.9 -0.1
comp=Z,2.0nm,0.9s,mb4.0
BVAR Borovoye Array 32.59 66 P P 17 51 40.9 +1.3
comp=Z,0.9nm,0.6s,mb3.9,baz=294,slow=9.3,SNR=9.8
AAK Ala-Archa 39.77 79 P P 17 52 41.9 +0.9
TORD Torodi Ar. Bea 40.01 202 P P 17 52 43.3 +0.3
comp=Z,2.0nm,0.8s,mb3.8,baz=8.5,slow=8.6,SNR=11
WMQ Urumqi 47.03 70 eP P 17 53 41.0 +1.3
WMQ AMB AMB
comp=Z,16nm,1.0s,mb5.1
LZH Lanzhou 61.45 67 eP P 17 55 25.4 +0.6
LZH ePP PP 17 57 43.3 +3.4
LZH AMB AMB
comp=Z,17nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,46nm,6.3s
LZH LR LR
comp=N,197nm,15.6s
LZH LR LR
comp=Z,259nm,18.3s,MS4.4
HHC Hu-ho-hao-te 62.38 58 eP P 17 55 31.0 0.0
HHC PCP PcP 17 56 10.8 +0.2
HHC PP PP 17 57 50.3 +2.2
HHC PCS PcS 18 00 12.6 -1.2
HHC S S 18 03 56.4 -2.3
HHC PS 18 04 12.0
HHC SKS 18 05 20.3
HHC AMB AMB
comp=Z,10.0nm,1.1s,mb5.0
HHC AMB AMB
comp=Z,102nm,6.4s
HHC LR LR
comp=N,82nm,33.2s,MS4.0
HHC LR LR
comp=E,138nm,29.4s,MS4.0
HHC LR LR
comp=Z,90nm,30.4s,MS3.8
CN2 Changchun 67.13 48 eP P 17 56 05.9 +3.9
SNY Shenyang 67.76 50⇓ P P 17 56 03.5 -2.5
SNY AMB AMB
comp=Z,8.0nm,0.5s,mb5.2
MDJ Mudanjiang 68.37 45 P P 17 56 08.5 -1.3
MDJ AMB AMB
comp=Z,5.0nm,0.8s,mb4.8
MDJ AMB AMB
comp=Z,56nm,3.6s
NJ2 Nanjing 72.83 60 eP P 17 56 37.4 +0.4
PDAR Pinedale Array 74.93 322 P P 17 56 50.5 +1.2
comp=Z,0.3nm,0.6s,mb3.5,baz=28,slow=6.7,SNR=4.0

*ISCJB **18** 17:53:41.6±1.1,36N±02×1262E±04,h10km,mb3.8/7, Error ellipse: s-maj=55.2km s-min=15.0km az=136.5*
*IDC **18** 17:53:42.4±1.7,330N×125.47E,h0km,mb3.7/5,mb1 3.9/5, mb1mx3.7/17,mbtmp3.7/5,Error ellipse: s-maj=112.3km s-min=24.8km az=67.0*
*NEIC **18** 17:53:43.5±0.9,354N×12629E,h10km,mb4.3/2,Error ellipse: s-maj=48.7km s-min=13.1km az=69.0*
ISC 18 17:53:43.7±1.1,35N±02×1263E±04,h10km,n11,σ0s80/11, mb3.8/7,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.52**	**182**	P		P		**17 58 32.0**	**-0.8**
	1.7nm,0.8s,mb3.5,baz=10,slow=13,SNR=7.9								
WRAB	**Tennant Creek**	**24.64**	**162**	eP		P		**17 59 04.1**	**-0.3**
	11nm,0.9s,mb4.4								
WRAB				*e*				17 59 13.0	
WRA	**Warramunga Arr**	**24.64**	**162**	eP		P		**17 59 04.3**	**-0.1**
	2.4nm,0.6s,mb3.9,baz=335,slow=11,SNR=30								
WB2	**Warramunga Arr**	**24.65**	**162**	eP		P		**17 59 04.2**	**-0.2**
MBWA	**Marble Bar**	**25.37**	**194**	eP		P		**17 59 11.8**	**+0.7**
AS31	**Alice Springs**	**28.05**	**165**	P		P		**17 59 34.3**	**-0.8**
ASAR	**Alice Springs**	**28.05**	**165**	P		P		**17 59 36.0**	**+0.8**
	0.5nm,0.5s,mb3.4,baz=342,slow=7.0,SNR=14								
STKA	**Stephens Creek**	**38.12**	**159**	P		P		**18 01 03.5**	**+0.6**
	1.5nm,0.6s,mb3.9,baz=336,slow=13,SNR=5.9								
STKA	**Stephens Creek**	**38.12**	**159**	eP		P		**18 01 03.4**	**+0.6**
MKAR	**Makanchi Array**	**57.45**	**326**	P		P		**18 03 31.3**	**-1.4**
	0.3nm,0.5s,mb3.6,baz=116,slow=8.1,SNR=4.5								
ZRNK	**Zerenda**	**67.95**	**327**	eP		P		**18 04 44.0**	**+1.3**
	1.1nm,0.8s,mb3.9								

*NIED **18** 18:20:00,4170N×142.40E,h14km,Mw3.7 Best double couple: M0≏4.19000×10^14 NP1:φs≏42.00000°,δ70.00000°, λ83.00000°. NP2:φs≏241.00000°,δ21.00000°,λ107.00000°.*
*JMA **18** 18:20:05.9±0.1,4169N×142.45E,h45km±4km,M3.6*
*ISCJB **18** 18:20:06.6±0.4,4172N±003×142.40E±004,h45km±5km, mb3.9/8,Error ellipse: s-maj=6.6km s-min=4.1km az=95.6*
*MOS **18** 18:20:09.2±1.1,4170N×142.40E,h75km,mb4.2/2,Error ellipse: s-maj=26.7km s-min=12.0km az=87.7*
*IDC **18** 18:20:10.4±2.2,4170N×142.44E,h66km±20km,mb3.6/6, mb1 3.6/8,mb1mx3.4/22,mbtmp3.8/8,Error ellipse: s-maj=45.5km s-min=15.8km az=95.0*
*NEIC **18** 18:20:11.7±4.1,4170N×142.29E,h75km±32km,mb4.0/2, Error ellipse: s-maj=52.5km s-min=16.5km az=69.0*
ISC 18 18:20:07.1±0.5,4171N±004×142.41E±004,h37km±7km, n31,σ0s63/45,mb3.9/8,2C-5D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.62**	**24**	⇓P		P		**18 20 18.1**	**-1.3**
JNBK				eS		Sn		**18 20 27.5**	**-0.6**
JEM	**Erimo**	**0.64**	**61**	⇓P		P		**18 20 18.7**	**-0.9**
JEM				eS		Sn		**18 20 28.1**	**-0.4**
JKB	**Kayabe**	**1.04**	**280**	⇑P		Pn		**18 20 24.4**	**-0.8**
JKB				eS		Sn		**18 20 38.2**	**-0.3**
JBT2	**Biratori 2**	**1.07**	**358**	P		Pn		**18 20 25.4**	**-0.1**
JOT	**Ohata**	**1.07**	**253**	P		Pn		**18 20 25.2**	**-0.4**
JOT				eS		Sn		**18 20 39.2**	**0.0**
JCH	**Churui**	**1.15**	**38**	⇓P		Pn		**18 20 26.7**	**+0.1**
JCH				eS		Sn		**18 20 41.7**	**+0.6**
JNB	**Noboribetsu**	**1.27**	**307**	⇓P		Pn		**18 20 27.7**	**-0.6**
JNB				eS		Sn		**18 20 43.9**	**-0.2**
JEW	**Eniwo**	**1.33**	**328**	⇑P		Pn		**18 20 29.2**	**+0.1**
JEW				eS		Sn		**18 20 46.1**	**+0.5**
JTM	**Tenmabayashi**	**1.37**	**228**	P		Pn		**18 20 30.2**	**+0.5**
JTM				eS		Sn		**18 20 47.4**	**+0.8**
JFR	**Furan**	**1.46**	**5**	P		Pn		**18 20 30.8**	**-0.1**
JFR				eS		Sn		**18 20 49.1**	**+0.4**
JANG	**Nango**	**1.50**	**207**	⇓P		Pn		**18 20 30.9**	**-0.5**
JANG				eS		Sn		**18 20 49.4**	**-0.3**
JSR	**Shiriuchi**	**1.50**	**264**	P		Pn		**18 20 31.5**	**0.0**
JSR				eS		Sn		**18 20 50.0**	**+0.1**
JYM2	**Yakumo 2**	**1.57**	**286**	P		Pn		**18 20 32.5**	**0.0**
JYM2				eS		Sn		**18 20 51.5**	**-0.1**
JOB	**Onbets**	**1.59**	**41**	P		Pn		**18 20 34.1**	**+1.4**
ASAJ	**Asahikawa**	**2.41**	**3**	P		Pn		**18 20 45.7**	**+1.8**
	9.0nm,0.3s,baz=222,slow=10,SNR=99								
ASAJ				S		Sn		**18 21 17.1**	**+4.9**
	7.3nm,0.3s,baz=329,slow=24,SNR=7.9								
ASAJ	**Asahikawa**	**2.41**	**3**	P		Pn		**18 20 45.7**	**+1.8**
ASAJ				S		Sn		**18 21 17.1**	**+4.9**
ASAJ				pmax	pmax				
	comp=Z,9.0nm,0.3s								
ASAJ				smax					
	comp=N,7.0nm,0.3s								
YSS	**Yuzh-Sakhalins**	**5.25**	**3**	P		Pn		**18 21 29.0**	**+6.1**
MAJO	**Matsushiro**	**6.11**	**214**	eP		Pn		**18 21 38.5**	**+3.7**
MJAR	**Matsushiro Arr**	**6.11**	**214**	P		Pn		**18 21 38.7**	**+3.9**
	comp=N,0.3nm,0.3s,baz=21,slow=15,SNR=4.3								
ZAL	**Zalesovo**	**39.49**	**308**	P		P		**18 27 34.2**	**+0.3**
	comp=N,1.5nm,0.6s,mb3.9,baz=6.0,slow=9.3,SNR=6.3								
MKAR	**Makanchi Array**	**42.44**	**298**	P		P		**18 27 58.5**	**+0.2**
	comp=N,0.4nm,0.3s,mb3.6,baz=78,slow=9.7,SNR=9.0								
CHKZ	**Chkalovo**	**47.78**	**310**	eP		P		**18 28 40.4**	**-0.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
CHKZ	Chkalovo	47.78	310	eP	P	18 28 40.4	-0.2
	comp=Z,1.3nm,0.6s,mb4.1						
ZRNK	Zerenda	48.92	310	eP	P	18 28 49.1	-0.3
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
ZRNK	Zerenda	48.92	310	eP	P	18 28 49.1	-0.3
	comp=Z,1.1nm,0.6s,mb4.1						
WRA	Warramunga Arr	61.79	189	P	P	18 30 22.4	+0.3
	comp=Z,0.8nm,0.8s,mb3.9,baz=6.4,slow=6.9,SNR=6.5						
FINES	FINESS Array B	65.05	332	P	P	18 30 43.5	-0.1
	comp=Z,0.4nm,0.4s,mb3.8,baz=72,slow=8.2,SNR=6.5						
NB2	NORSAR Subarra	70.18	337	P	P	18 31 15.3	-0.7
	comp=Z,0.5nm,0.6s,mb3.6,baz=36,slow=6.5						
NOA	NORSAR Array B	70.18	337	P	P	18 31 15.7	-0.3
	comp=Z,0.6nm,0.6s,mb3.7,baz=37,slow=6.3,SNR=4.6						
AKASG	Malin Array Be	71.09	322	P	P	18 31 21.4	-0.1
	comp=Z,1.4nm,0.7s,mb4.0,baz=46,slow=6.0,SNR=8.5						
AKASG	Malin Array Be	71.09	322	P	P	18 31 21.4	-0.1

*ISCJB **18** 18:29:47.6±2.8, 6.1S±0.1×146.7E±0.1, h54km±23km, mb4.1/8, MS3.4/4, Error ellipse: s-maj=25.1km s-min=18.6km az=108.8*

*IDC **18** 18:29:48.5±3.8, 6.06S×146.50E, h42km±31km, mb3.7/7, mb1 4.0/10, mb1mx3.9/15, mbtmp4.0/10, ML3.8/3, MS3.4/7, Ms1 3.4/7, ms1mx3.2/19, Error ellipse: s-maj=37.4km s-min=21.7km az=67.0*

*NEIC **18** 18:29:49.5±2.5, 5.97S×146.57E, h54km±20km, mb4.5/4, Error ellipse: s-maj=19.6km s-min=17.8km az=207.0*

ISC 18 18:29:49.5±2.7, 6.1S±0.1×146.7E±0.1, h54km±22km, n26, σ0.81/19, mb4.1/8, MS3.4/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.37	172	P	Pn	18 30 39.1	-0.4
	29nm,0.3s,baz=358,slow=8.5,SNR=40						
PMG				S	Sn	18 31 18.1	-0.1
	27nm,0.3s,baz=317,slow=22,SNR=3.5						
HNR	Honiara	13.59	105	LR	LR	18 37 02.2	
	comp=Z,64nm,18.6s,baz=359,slow=32						
CTA	Charters Tower	13.95	182	P	Pn	18 33 05.0	+0.7
	0.5nm,0.3s,baz=12,slow=13,SNR=9.9						
CTA				LR	LR	18 37 49.5	
	comp=Z,204nm,19.1s,baz=22,slow=34						
CTA	Charters Tower	13.95	182	eP	Pn	18 33 08.5	+4.2
	5.3nm,0.7s						
CTA				LR	LR	18 37 49.5	
KAKA	Kakadu	15.50	244	eP	Pn	18 33 25.3	+0.7
	15nm,0.5s						
WB2	Warramunga Arr	18.27	220	eP	Pn	18 33 58.7	-0.2
WRA	Warramunga Arr	18.27	220	P	Pn	18 33 58.7	-0.3
	0.4nm,0.3s,baz=34,slow=10,SNR=22						
WRA				PcP	PcP	18 38 29.9	+1.1
	0.1nm,0.3s,baz=32,slow=1.6,SNR=5.1						
GUMO	Guam	19.60	355	LR	LR	18 41 00.4	
	comp=Z,43nm,21.8s,baz=167,slow=34						
AS31	Alice Springs	21.38	214	eP	P	18 34 32.9	+0.5
ASAR	Alice Springs	21.38	214	P	P	18 34 32.8	+0.4
	1.0nm,0.4s,mb3.5,baz=53,slow=8.9,SNR=54						
ASAR				LR	LR	18 41 43.4	
	comp=Z,124nm,22.0s,MS3.3,baz=16,slow=34						
FITZ	Fitzroy Crossi	23.75	238	P	P	18 34 54.7	-2.1
	9.0nm,0.6s,mb4.4,baz=70,slow=9.4,SNR=35						
FITZ				LR	LR	18 45 37.7	
	comp=Z,96nm,18.7s,MS3.3,baz=186,slow=40						
FITZ	Fitzroy Crossi	23.75	238	eP	P	18 34 56.4	-0.3
	14nm,0.6s,mb4.5						
STKA	Stephens Creek	26.12	190	P	P	18 35 17.1	-1.2
	1.3nm,0.5s,mb3.7,baz=349,slow=14,SNR=6.3						
STKA				LR	LR	18 46 04.4	
	comp=Z,204nm,22.0s,MS3.6,baz=24,slow=37						
STKA	Stephens Creek	26.12	190	eP	P	18 35 20.0	+1.7
	2.5nm,1.0s,mb3.7						
KLBR	Kellerberrin	37.10	223	eP	P	18 36 53.9	-0.6
	41nm,1.5s,mb5.0						
SONM	Songino Array	64.29	331	P	P	18 40 20.2	+1.1
	0.5nm,0.3s,mb4.0,baz=125,slow=9.0,SNR=4.2						
VNDA	Vanda	71.88	177	P	P	18 41 06.7	0.0
	1.3nm,0.7s,mb4.0,baz=332,slow=6.0,SNR=13						
MKAR	Makanchi Array	77.33	321	P	P	18 41 36.9	-1.3
	0.3nm,0.2s,mb3.8,baz=78,slow=7.7,SNR=5.6						
MKAR	Makanchi Array	77.33	321	P	P	18 41 36.9	-1.3
ZAL	Zalesovo	78.88	328	LR	LR	19 15 54.4	
	comp=Z,23nm,18.1s,MS3.6,baz=265,slow=35						
MAW	Mawson	82.07	203	P	P	18 42 04.7	+0.7
	0.6nm,0.3s,mb4.0,baz=56,slow=3.6,SNR=3.6						
LPAZ	La Paz	139.04	123	PKP	PKPdf	18 49 11.5	+1.5
	1.6nm,0.6s,baz=262,slow=4.1,SNR=6.2						
TOA0	Torodi Ar. Sit	144.78	284	ePKPdf	PKPdf	18 49 21.0	+0.9
TORD	Torodi Ar. Bea	144.78	284	PKP	PKPdf	18 49 19.6	-0.6
	3.4nm,0.7s,baz=73,slow=3.5,SNR=19						
SAML	Samuel	146.73	116	ePKPdf	PKPdf	18 49 25.1	+1.6
DBIC	Dimbokro	151.69	273	PKPbc	PKPbc	18 49 39.5	+1.7
	3.8nm,0.5s,baz=91,slow=3.3,SNR=11						

IDC 18 18:46:13.1±58.0, 19.54S×178.61W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/12, mbtmp3.9/3, MS3.3/1, Ms1 3.3/1, ms1mx2.7/17, Error ellipse: s-maj=1060.0km s-min=148.8km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	9.69	176	LR	LR	18 51 09.1	
	comp=Z,178nm,18.7s,baz=65,slow=30						
STKA	Stephens Creek	37.70	243	P	P	18 53 30.1	-0.1
	1.4nm,0.9s,baz=96,slow=9.2,SNR=2.7						
WRA	Warramunga Arr	44.17	261	P	P	18 54 24.1	+0.5
	0.4nm,0.3s,baz=96,slow=7.5,SNR=28						
ASAR	Alice Springs	44.18	256	P	P	18 54 24.1	+0.4
	1.5nm,0.5s,baz=94,slow=8.0,SNR=31						

MAN 18 18:59:51.0, 9.46N×126.08E, h19km, mb3.4, ML4.6, MS2.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.66	299⇓	eP	Pb	19 00 04.0	+0.1
BUTP	Butuan	0.67	223	eP	Pb	19 00 04.3	+0.3
BUTP				eS	Sb	19 00 15.5	+2.6
MSLP	Maasin	1.37	299	eP	Pn	19 00 14.1	-1.0
BUKP	Musuan	1.87	213	eP	Pn	19 00 22.6	+0.6
PLP	Palo	2.01	328	eP	Pn	19 00 24.6	+0.7
PLP				eS	Sn	19 00 50.0	+1.5
BESP	Borongan	2.22	344	eP	Pn	19 00 26.4	-0.4
PAGZ	Pagadian	3.11	239	eP	Pn	19 00 40.9	+1.8

*ISCJB **18** 19:01:30.9±0.6, 40.14N±0.02×19.71E±0.04, h5km, Error ellipse: s-maj=4.8km s-min=2.9km az=4.6*

*NEIC **18** 19:01:30.2, 40.17N×19.54E, h18km, MD3.6(ATH), ML3.0(THE), After ATH.*

*ATH **18** 19:01:30.2, 40.17N×19.54E, h18km±5km, MD3.6/4*

*TIR **18** 19:01:31.5, 40.15N×19.83E, h14km, Ml3.0*

*CSEM **18** 19:01:32.2±0.2, 40.12N×19.75E, h5km, MD3.6, Error ellipse: s-maj=3.8km s-min=2.7km az=87.0*

*THE **18** 19:01:32.4, 40.14N×19.78E, h0km, ML3.0*

*SKO **18** 19:01:34.0, 40.18N×20.00E, h1km*

ISC 18 19:01:31.6±0.7, 40.14N±0.02×19.70E±0.05, h1km±4km, n27, σ0.93/47, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.28	56	i Pg	Pg	19 01 36.4	-0.6
TPE				i Sg	Sg	19 01 40.8	+0.1
SRN	Sarande	0.34	138	i Pg	Pg	19 01 37.9	-0.2
SRN				i Sg	Sg	19 01 43.9	+1.3
KEK	Kerkira	0.43	170	ePB	Pg	19 01 40.0	+0.2
KEK				eSB	Sg	19 01 47.5	+2.2
LSK	Leskovik	0.69	89	i Pg	Pg	19 01 43.5	-1.2
LSK				i Sg	Sg	19 01 54.5	+0.9
IGT	Igoumenitsa	0.77	141	ePg	Pg	19 01 45.6	-0.7
IGT				eSg	Sg	19 01 57.2	+0.8
JAN	Janina	1.00	118	ePN	Pn	19 01 51.3	-1.5
JAN				eSN	Sn	19 02 06.8	-0.8
TIR	Tirane	1.22	6	ePg	Pg	19 01 55.3	+0.4
TIR				eSg	Sg	19 02 12.3	+1.7
TIR	Tirane	1.22	6	i Pg	Pg	19 01 55.3	+0.4
MEV	Metsovon	1.22	106	ePg	Pg	19 01 54.4	-0.6
	comp=Z,6.8nm,0.4s						
MEV				eSg	Sg	19 02 10.9	0.0
OHR	Ohrid	1.28	40	ePg	Pg	19 01 55.6	-0.5
OHR				eSg	Sg	19 02 13.2	+0.4
OHR	Ohrid	1.28	40	ePn	Pn	19 01 56.0	-0.6
OHR				eSn	Sn	19 02 10.8	-3.7
OHR	Ohrid	1.28	40	ePn	Pn	19 01 55.9	-0.7
OHR				eSn	Sn	19 02 10.7	-3.7
OHR				eSg	Sg	19 02 13.2	+0.5
FNA	Florina	1.43	63	ePg	Pg	19 01 58.7	-0.3
	comp=Z,2.6nm,0.3s						
FNA				eSg	Sg	19 02 17.7	+0.2
BIA	Bitola	1.52	54	ePg	Pg	19 01 58.9	-1.7
BIA				eSg	Sg	19 02 20.7	+0.4
BIA	Bitola	1.52	54	ePn	Pn	19 01 59.4	-0.4
BIA	Bitola	1.52	54	ePn	Pn	19 01 59.4	-0.4
BIA				eSg	Sg	19 02 20.7	+0.4
LKD	Levkas	1.60	153	ePg	Pg	19 02 00.9	-1.4
LKD				eSg	Sg	19 02 22.7	-0.5
PE1	Pezze di Greco	1.86	292	ePn	Pn	19 02 08.1	+3.5
EVR	Evrytania	2.03	126	ePN	Pn	19 02 08.4	+1.5
VLS	Valsamata	2.07	160	ePB	Pb	19 02 07.3	-2.7
LIT	Litokhoron	2.14	90	ePn	Pn	19 02 08.1	-0.3
LIT				eSn	Sn	19 02 35.8	+0.2
GRG	Griva	2.21	67	ePn	Pn	19 02 09.3	-0.1
AGG	Agios Georgios	2.31	118	ePn	Pn	19 02 11.2	+0.4
AGG				eSn	Sn	19 02 40.0	0.0
SG1	Sgolgore (BA)	2.41	288	ePn	Pn	19 02 12.5	+0.3
HORT	Hortiatis	2.63	79	ePn	Pn	19 02 15.0	-0.2
HORT				eSn	Sn	19 02 48.5	+0.7
XOR	Xorichti	2.80	105	ePn	Pn	19 02 17.8	+0.3
XOR				eSn	Sn	19 02 52.7	+0.9
AOS	Alonnisos	3.37	105	ePn	Pn	19 02 25.7	+0.4

WEL 18 19:15:22.7±0.6, 35.64S×179.47E, h296km±6km, ML3.7/3, Error ellipse: s-maj=18.4km s-min=14.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	2.62	202	PN	Pn	19 16 14.2	-0.2
PUZ				SN	S	19 16 54.6	-1.1
MWZ	Matawai	3.11	209	PN	Pn	19 16 19.9	+0.7
MWZ				SN	S	19 17 03.9	-0.4
URZ	Urewera	3.23	215	PN	Pn	19 16 20.0	-0.4
URZ				SN	S	19 17 05.5	-1.0
NNZ	Nelson	7.34	219	PN	Pn	19 17 08.7	+0.6
THZ	Tophouse	7.98	218	PN	Pn	19 17 17.0	+1.0

*ISCJB **18** 20:27:21.6±0.6, 33.34S±0.05×179.3W±0.1, h33km, mb4.2/7, MS4.3/1, Error ellipse: s-maj=15.7km s-min=5.8km az=37.4*

*IDC **18** 20:27:23.4±2.0, 33.25S×179.21W, h40km±18km, mb4.0/6, mb1 4.3/8, mb1mx4.1/15, mbtmp4.3/8, ML4.4/2, MS4.0/2, Ms1 4.0/2, ms1mx3.2/22, Error ellipse: s-maj=22.8km s-min=11.1km az=115.0*

*NEIC **18** 20:27:24.1±1.2, 33.34S×179.18W, h47km±10km, mb4.7/1, Error ellipse: s-maj=15.7km s-min=11.7km az=109.0*

ISC 18 20:27:23.3±0.6, 33.31S±0.05×179.3W±0.1, h35km, n46, σ1.36/40, mb4.2/7, MS4.3/1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.21	17	P	Pn	20 28 25.5	+0.4
	36nm,0.3s,baz=268,slow=23,SNR=3.0						
RAO				S	Sn	20 29 11.0	-2.0
	27nm,0.3s,baz=82,slow=23,SNR=2.1						
MXZ	Matakaoa Point	4.68	204	PN	Pn	20 28 29.1	-2.3
PUZ	Puketiti	5.16	202	eP	Pn	20 28 38.0	0.0
PUZ	Puketiti	5.16	202	PN	Pn	20 28 37.5	-0.5
MWZ	Matawai	5.64	206	eP	Pn	20 28 45.6	+0.9
MWZ	Matawai	5.64	206	PN	Pn	20 28 45.6	+1.0
MWZ				SN	Sn	20 29 49.3	+1.1
URZ	Urewera	5.74	210	P	Pn	20 28 46.5	+0.5
	8.1nm,0.3s,baz=69,slow=4.8,SNR=28						
URZ				S	Sn	20 29 52.7	+2.0
	12nm,0.3s,baz=359,slow=22,SNR=6.2						
URZ	Urewera	5.74	210	eP	Pn	20 28 45.9	-0.1
URZ	Urewera	5.74	210	PN	Pn	20 28 45.8	-0.2
URZ				SN	Sn	20 29 51.6	+0.9
WCZ	Waipu Caves	5.87	242	P	Pn	20 28 52.8	+5.0
WCZ	Waipu Caves	5.87	242	PN	Pn	20 28 52.8	+5.0
OUZ	Omahuta	6.19	250	eP	Pn	20 28 56.8	+4.6
OUZ	Omahuta	6.19	250	PN	Pn	20 28 56.8	+4.6
TSZ	Takapari Road	7.74	208	eP	Pn	20 29 13.6	+0.1
TSZ	Takapari Road	7.74	208	PN	Pn	20 29 12.1	-1.4
MRZ	Mangatainoka R	8.41	208	SN	Sn	20 30 51.4	-4.8
TCW	Tory Channel	9.41	211	PN	Pn	20 29 32.9	-3.4
TCW				SN	Sn	20 31 13.5	-7.3
NNZ	Nelson	9.82	214	PN	Pn	20 29 38.6	-3.4
NNZ				SN	Sn	20 31 24.7	-6.2
QRZ	Quartz Range	9.95	219	PN	Pn	20 29 40.8	-2.9
THZ	Tophouse	10.46	214	PN	Pn	20 29 46.9	-3.9
THZ				SN	Sn	20 31 38.8	-8.0
DZM	Mont Dzumac	16.86	308	LR	LR	20 36 21.4	
	comp=Z,221nm,20.6s,baz=226,slow=32						
PPT	Papeete	30.93	67	eLR	LR	20 41 42.2	
	181nm,26.2s						
CTA	Charters Tower	33.32	285	P	P	20 33 59.9	+2.2
	1.9nm,0.5s,mb4.3,baz=118,slow=13,SNR=7.7						
CTA	Charters Tower	33.32	285	P	P	20 33 59.9	+2.2
CTAO	Charters Tower	33.32	285	eP	P	20 33 59.2	+1.4
VAH	Vaihoa	33.82	66	eT		21 09 18.1	
	16nm,0.3s						
PMG	Port Moresby	38.98	300	LR	LR	20 47 31.4	
	comp=Z,383nm,18.4s,MS4.3,baz=204,slow=31						
RKT	Rikitea	40.09	87	eT		21 17 30.4	
	3.2nm,0.3s						
AS31	Alice Springs	41.95	271	eP	P	20 35 11.1	+0.3
ASAR	Alice Springs	41.95	271	P	P	20 35 11.1	+0.3
	2.3nm,0.6s,mb4.0,baz=110,slow=7.7,SNR=50						
WB2	Warramunga Arr	43.20	276	eP	P	20 35 21.1	+0.3
WRAB	Tennant Creek	43.20	276	eP	P	20 35 20.5	-0.4
WRA	Warramunga Arr	43.21	276	P	P	20 35 21.1	+0.2
	3.8nm,0.6s,mb4.3,baz=116,slow=8.1,SNR=50						
QSPA	South Pole Qui	56.81	180	eP	P	20 37 05.4	+1.3
	5.6nm,0.7s,mb4.7						
MAW	Mawson	69.21	201	P	P	20 38 25.4	-1.1
	1.2nm,0.7s,mb3.9,baz=158,slow=8.0,SNR=3.5						
PLCA	Paso Flores	81.32	133	P	P	20 39 37.2	+1.1
	1.5nm,0.6s,mb4.1,baz=242,slow=6.8,SNR=6.8						
NVAR	Mina Array Bea	91.11	43	P	P	20 40 25.2	+0.9
	0.4nm,0.6s,mb3.9,baz=240,slow=8.6,SNR=3.6						
NVAR	Mina Array Bea	91.11	43	P	P	20 40 25.2	+0.9
ARCES	ARCESS Array B	141.17	346	PKP	PKPdf	20 46 49.8	-0.3
	0.7nm,0.6s,baz=69,slow=4.0,SNR=4.3						
KAF	Kangasniemi	146.88	338	ep	PKPdf	20 46 57.7	-2.3
	2.5nm,0.6s						
FINES	FINESS Array B	147.45	338	PKPbc	PKPbc	20 47 01.1	-2.4
	3.9nm,0.7s,baz=54,slow=3.3,SNR=18						
HFS	Hagfors	151.84	346	PKPbc	PKPbc	20 47 11.6	-2.7
	4.3nm,0.7s,baz=180,slow=1.5,SNR=13						
BRTR	Keskin Array B	152.88	293	PKPbc	PKPbc	20 47 14.8	-1.9
	1.1nm,0.9s,baz=123,slow=4.6,SNR=5.5						
DBIC	Dimbokro	152.99	168	PKPbc	PKPbc	20 47 16.2	-0.7
	4.1nm,0.8s,baz=135,slow=1.4,SNR=4.4						
DBIC	Dimbokro	152.99	168	PKPbc	PKPbc	20 47 16.2	-0.8
TORD	Torodi Ar. Bea	159.91	183	PKPab	PKPab	20 47 57.7	-0.3
	3.0nm,0.8s,baz=175,slow=4.0,SNR=12						

*MOS **18** 20:30:40.1±1.2, 1.55N×126.39E, h33km, mb5.2/38, MS4.0/4, Error ellipse: s-maj=13.6km s-min=6.2km az=112.9*

*BJI **18** 20:30:41.7, 1.23N×126.37E, h69km, mB5.2, mb4.9, Ms4.7, Msz4.2*

*ISCJB **18** 20:30:41.2±0.7, 1.44N±0.03×126.32E±0.06, h43km±6km, mb4.9/87, MS4.1/21, Error ellipse: s-maj=9.7km s-min=4.9km az=142.3*

*IDC **18** 20:30:42.2±2.9, 1.49N×126.40E, h38km±24km, mb4.5/18, mb1 4.6/19, mb1mx4.6/20, mbtmp4.7/19, ML4.2/1, MS3.9/5, Ms1 3.9/5, ms1mx3.4/20, Error ellipse: s-maj=24.1km s-min=9.5km az=70.0*

*NEIC **18** 20:30:43.9±1.3, 1.51N×126.46E, h56km±12km, mb5.0/39, Error ellipse: s-maj=9.3km s-min=5.0km az=67.0*

*MAN **18** 20:31:53.3, 6.64N×124.28E, h99km, mb3.5, ML4.7, MS5.7*

ISC 18 20:30:44.3±0.6, 1.44N±0.03×126.38E±0.05, h56km±5km, h51km±2.7km:pP-P, n170, σ1.16/186, mb5.0/86, MS4.1/21, 11C-6D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	5.39	115	P	Pn	20 32 02.8	+0.8
	122nm,1.1s						
DAV	Davao City (W)	5.65	352	ePn	Pn	20 32 10.2	+4.5
DAV				eS	Sn	20 33 14.8	+5.6
CTBH	Cotabato--PC H	6.13	340⇑	eP	Pn	20 32 11.6	-0.5
BUKP	Musuan	6.53	348	eP	Pn	20 32 19.2	+1.5
PCI	Palu	6.95	250	P	Pn	20 32 27.7	+4.3
	181nm,1.1s						
PAGZ	Pagadian	7.04	335	eP	Pn	20 32 23.0	-1.6
IPIL	Ipil	7.36	329⇑	eP	Pn	20 32 28.1	-1.0
IPIL	Ipil	7.36	329	eP	Pn	20 32 27.1	-1.9
SCPH	Surigao	8.34	354⇑	eP	Pn	20 32 45.1	+2.7
OCLP	Ormoc	9.71	350	eP	Pn	20 32 59.3	-1.9
KKM	Kota Kinabalu	11.13	295	ePn	Pn	20 33 22.4	+1.8
KAKA	Kakadu	15.29	157	eP	Pn	20 34 20.5	+4.0
	61nm,0.6s						
KSM	Kuching	16.07	270	eP	Pn	20 34 28.7	+2.3
FITZ	Fitzroy Crossi	19.43	182	P	Pn	20 35 05.7	-1.9
	0.5nm,0.3s,baz=19,slow=10,SNR=28						
WRAB	Tennant Creek	22.63	160	eP	P	20 35 39.5	-0.8
WRAB				eS	S	20 39 35.5	-8.9
WRAB				pmax	pmax		
	comp=Z,97nm,0.6s,mb5.4						
WRAB	Tennant Creek	22.63	160	eP	P	20 35 39.5	-0.9
	comp=Z,98nm,0.6s,mb5.4						
WRAB				eS	S	20 39 35.5	-8.9
WRA	Warramunga Arr	22.63	160	P	P	20 35 40.2	-0.2
	comp=Z,33nm,0.6s,mb4.9,baz=339,slow=11,SNR=39						
WRA				S	S	20 39 44.0	-0.4
	comp=Z,3.6nm,0.9s,baz=343,slow=16,SNR=5.1						
WB2	Warramunga Arr	22.64	160	eP	P	20 35 39.9	-0.5
WB2				eS	S	20 39 44.1	-0.4
PMG	Port Moresby	23.33	118	P	P	20 35 46.7	-0.8
	comp=Z,21nm,0.8s,mb4.6,baz=337,slow=13,SNR=3.6						
PMG	Port Moresby	23.33	118	P	P	20 35 45.5	-2.0
MBWA	Marble Bar	23.38	196	eP	P	20 35 46.9	-1.1
	comp=Z,14nm,0.8s,mb4.4						
QIZ	Qiongzhong	23.84	318	P	P	20 35 54.0	+1.8
QIZ				AP		20 36 04.3	
QIZ				XP	sP	20 36 10.8	-1.9
QIZ				S	S	20 40 02.8	-1.3
QIZ				XS	sS	20 40 24.3	-3.2
QIZ				LR	LR		
	comp=N,294nm,23.1s						
QIZ				LR	LR		
	comp=Z,347nm,18.6s,MS3.9						
QIZ	Qiongzhong	23.84	318	eP	P	20 35 51.6	-0.6
	comp=Z,18nm,1.0s,mb4.4						
JOW	Kunigami	25.32	4	P	P	20 36 06.2	+0.6
	comp=Z,53nm,0.7s,mb5.2,baz=195,slow=9.6,SNR=9.7						
KULM	Kulim	25.97	279	eP	P	20 36 14.9	+3.4
AS31	Alice Springs	26.00	164	eP	P	20 36 12.2	+0.4
AS31				eS	S	20 40 48.8	+10
ASAR	Alice Springs	26.00	164	P	P	20 36 12.3	+0.5
	comp=Z,9.5nm,0.7s,mb4.4,baz=344,slow=8.0,SNR=46						
ASAR				PcP	PcP	20 39 40.9	+2.1
	comp=Z,1.6nm,0.4s,baz=346,slow=2.1,SNR=5.0						
ASAR				S	S	20 40 43.4	+4.9
	comp=Z,1.6nm,0.9s,baz=347,slow=22,SNR=5.6						
ASAR				ScP	ScP	20 43 21.2	+7.7
	comp=Z,1.2nm,0.9s,baz=354,slow=2.5,SNR=4.2						
ASAR	Alice Springs	26.00	164	P	P	20 36 12.3	+0.5
ASAR						20 39 40.9	
ASAR				S	S	20 40 43.4	+4.9
PSI	Prapat	27.47	273	P	P	20 36 24.2	-0.8
	comp=Z,12nm,0.9s,mb4.4,baz=178,slow=4.0,SNR=8.4						
CTA	Charters Tower	28.94	139	P	P	20 36 41.8	+3.8
	comp=Z,9.4nm,0.9s,mb4.5,baz=321,slow=13,SNR=7.1						
CTA	Charters Tower	28.94	139	eP	P	20 36 41.5	+3.4
CTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CTA	Charters Tower	28.94	139	eP	P	20 36 41.5	+3.4
	comp=Z,7.6nm,1.0s,mb4.4						
CTAO	Charters Tower	28.94	139	eP	P	20 36 34.3	-3.8
CTAO				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
CTAO	Charters Tower	28.94	139	eP	P	20 36 34.3	-3.7
	comp=Z,14nm,0.9s,mb4.7						
CBIJ	Chichi jima	29.68	29	P	P	20 36 47.2	+2.5
	comp=Z,63nm,0.8s,mb5.4,baz=308,slow=6.8,SNR=3.8						
SSE	Sheshan	29.91	351	P	P	20 36 47.3	+0.6
SSE				S	S	20 41 40.4	+0.4
SSE				AMB	AMB		
	comp=Z,21nm,0.9s,mb4.9						
SSE				AMB	AMB		
	comp=Z,240nm,5.3s						
SSE				LR	LR		
	comp=N,112nm,19.1s,MS3.7						
SSE				LR	LR		
	comp=E,129nm,19.1s,MS3.7						
SSE				LR	LR		
	comp=Z,137nm,19.2s,MS3.6						
NJ2	Nanjing	31.27	348	eP	P	20 37 01.3	+2.6
NJ2				AP	pP	20 37 13.1	+0.3
NJ2				PP	PP	20 38 05.9	-4.2
NJ2				S	S	20 42 03.0	+1.7
NJ2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,840nm,4.6s						
NJ2				LR	LR		
	comp=N,1µm,13.5s,MS4.8						
NJ2				LR	LR		
	comp=E,1µm,14.6s,MS4.8						
NJ2				LR	LR		
	comp=Z,1µm,14.5s,MS4.7						
GYA	Guiyang	31.28	324⇑	iP	P	20 36 58.8	0.0
GYA				AP	pP	20 37 10.5	-2.4
GYA				PP	PP	20 38 01.8	-8.4
GYA				S	S	20 41 59.1	-2.4
GYA				SCS	ScS	20 47 27.3	-0.3
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.9						
GYA				AMB	AMB		
	comp=Z,160nm,5.7s						
GYA				LR	LR		
	comp=N,420nm,16.8s,MS4.3						
GYA				LR	LR		
	comp=E,380nm,17.2s,MS4.3						
GYA				LR	LR		
	comp=Z,410nm,17.5s,MS4.2						
CHTO	Chiang Mai	31.96	304	eP	P	20 37 04.5	-0.3
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
CHTO	Chiang Mai	31.96	304	eP	P	20 37 04.5	-0.3
	comp=Z,4.8nm,0.6s,mb4.5						
FORT	Forrest	32.08	177	eP	P	20 37 05.7	-0.1
	comp=Z,36nm,0.7s,mb5.3						
KMI	Kunming	32.79	318	P	P	20 37 12.5	+0.5
KMI				AP	pP	20 37 25.4	-0.8
KMI				PP	PP	20 38 28.3	+1.4
KMI				PPP		20 38 43.1	
KMI				S	S	20 42 21.1	-3.9
KMI				SS	SS	20 44 31.8	-16
KMI				SSS		20 44 56.8	
KMI				AMB	AMB		
	comp=Z,13nm,1.7s,mb4.6						
KMI				AMB	AMB		
	comp=Z,125nm,5.8s						
KMI				LR	LR		
	comp=N,257nm,24.5s,MS3.9						
KMI				LR	LR		
	comp=E,161nm,23.3s,MS3.9						
KMI				LR	LR		
	comp=Z,339nm,23.3s,MS4.0						
KLBR	Kellerberrin	33.85	193	eP	P	20 37 22.1	+0.8
	comp=Z,130nm,2.0s,mb5.5						
MUN	Mundaring	34.60	195	eP	P	20 37 28.8	+1.0
NWAO	Narrogin (SRO)	35.25	193	LR	LR	20 52 11.8	
	comp=Z,127nm,21.1s,MS3.6,baz=34,slow=36						
STKA	Stephens Creek	36.14	158	P	P	20 37 41.5	+0.5
	comp=Z,11nm,0.7s,mb4.9,baz=341,slow=6.7,SNR=23						
STKA				PcP	PcP	20 40 07.2	+1.6
	comp=Z,2.9nm,0.6s,baz=346,slow=4.2,SNR=2.8						
STKA	Stephens Creek	36.14	158	eP	P	20 37 41.3	+0.4
	comp=Z,12nm,0.6s,mb5.0						
CD2	Chengdu	36.31	326⇓	iP	P	20 37 41.8	-0.6
CD2				PP	PP	20 39 06.8	+1.0
CD2				S	S	20 43 20.0	+0.8
CD2				SS	SS	20 45 46.8	-13
CD2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
CD2				AMB	AMB		

comp=Z,60nm,6.4s
CD2 LR LR
comp=E,150nm,20.4s
CD2 LR LR
comp=Z,150nm,21.6s,MS3.7
XAN Xi'an 36.32 335 P **P 20 37 40.4 -2.1**
XAN AMB AMB
comp=Z,20nm,1.2s,mb4.9
MJAR Matsushiro Arr 36.61 16 P **P 20 37 43.7 -1.3**
comp=Z,9.1nm,0.8s,mb4.7,baz=186,slow=9.0,SNR=29
MAJO Matsushiro 36.61 16 *e*P **P 20 37 43.1 -1.9**
MAJO pmax pmax
comp=Z,22nm,1.0s,mb4.9
MAJO Matsushiro 36.61 16 *e*Pn **P 20 37 43.1 -1.8**
comp=Z,22nm,1.0s,mb4.9
MAT Matsushiro 36.61 16 P **P 20 37 43.2 -1.8**
MAT *e*S **S 20 43 31.6 +7.8**
MAT Matsushiro 36.61 16 *e*P **P 20 37 43.0 -2.0**
MAT S **S 20 43 32.0 +8.2**
MAT pmax pmax
comp=Z,15nm,1.0s,mb4.8
MAT Matsushiro 36.61 16 *e*P **P 20 37 43.0 -2.0**
comp=Z,15nm,1.0s,mb4.8
MAT S **S 20 43 32.0 +8.2**
BJT Baijiatuau 39.51 348 *e*P **P 20 38 09.2 -0.2**
BJT pmax pmax
comp=Z,13nm,0.7s
BJT Baijiatuau 39.51 348 *e*P **P 20 38 09.2 -0.2**
comp=Z,13nm,0.7s,mb4.8
BJI Beijing 39.53 348 P **P 20 38 07.5 -2.1**
BJI AMB AMB
comp=Z,14nm,1.4s,mb4.5
ARMA Armidale 39.78 145 *e*P **P 20 38 14.0 +2.4**
SNY Shenyang 40.29 357 ⇓P **P 20 38 17.1 +1.2**
SNY AMB AMB
comp=Z,27nm,0.9s,mb5.0
LZH Lanzhou 40.31 331 ⇑P **P 20 38 16.3 +0.2**
LZH AP pP 20 38 31.8 +1.3
LZH PP PP 20 39 53.6 +3.9
LZH *e*S **S 20 44 21.8 +2.1**
LZH SS SS 20 47 15.8 -4.2
LZH AMB AMB
comp=Z,39nm,1.4s,mb4.9
LZH AMB AMB
comp=Z,182nm,6.3s
LZH LR LR
comp=E,816nm,14.2s
LZH LR LR
comp=Z,1μm,17.8s,MS4.8
HHC Hu-ho-hao-te 41.46 343 *e*P **P 20 38 25.8 +0.3**
HHC AP pP 20 38 38.8 -1.2
HHC PP PP 20 40 06.3 +4.2
HHC PCP PcP 20 40 24.0 +1.6
HHC SCP ScP 20 44 07.9 +0.3
HHC PCS PcS 20 44 12.8 -0.9
HHC S **S 20 44 38.3 +1.5**
HHC SS SS 20 47 38.8 -4.0
HHC SCS ScS 20 48 23.3 -0.7
HHC AMB AMB
comp=Z,23nm,1.0s,mb4.8
HHC AMB AMB
comp=Z,55nm,7.4s
HHC LR LR
comp=N,156nm,19.9s,MS4.1
HHC LR LR
comp=E,231nm,19.9s,MS4.1
HHC LR LR
comp=Z,220nm,23.7s,MS4.0
CN2 Changchun 42.19 359 *e*P **P 20 38 33.4 +1.9**
CN2 *e*S **S 20 44 50.3 +2.8**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,13.0s,MS4.3
CN2 LR LR
comp=E,200nm,13.0s,MS4.3
CN2 LR LR
comp=Z,200nm,14.0s,MS4.2
MDJ Mudanjiang 43.09 3 P **P 20 38 39.3 +0.5**
MDJ AP pP 20 38 50.6 -2.7
MDJ PP PP 20 40 20.8 +1.2
MDJ SCP ScP 20 44 15.3 +1.2
MDJ PCS PcS 20 44 19.9 -0.4
MDJ S **S 20 45 05.0 +4.3**
MDJ AMB AMB
comp=Z,18nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,76nm,4.7s
MDJ LR LR
comp=N,117nm,27.0s,MS3.7
MDJ LR LR
comp=E,83nm,27.0s,MS3.7
MDJ LR LR
comp=Z,149nm,32.1s
MDJ Mudanjiang 43.09 3 *e*P **P 20 38 37.4 -1.3**
comp=Z,17nm,0.9s,mb4.8
LSA Lhasa 43.72 313 *e*P **P 20 38 44.1 +0.3**
LSA pmax pmax
comp=Z,12nm,0.6s,mb4.8
LSA Lhasa 43.72 313 *e*P **P 20 38 44.1 +0.3**
comp=Z,12nm,0.6s,mb4.8
GTA Gaotai 44.89 331 *e*P **P 20 38 52.6 -0.6**
GTA AP pP 20 39 08.4 +0.6
GTA XP sP 20 39 15.9 +1.6
GTA PP PP 20 40 39.4 +0.5
GTA PPP 20 41 19.8
GTA S **S 20 45 26.8 -0.2**
GTA SS SS 20 48 38.8 -11
GTA AMB AMB
comp=Z,4.0nm,1.1s,mb4.2
GTA AMB AMB
comp=Z,41nm,5.7s
GTA LR LR
comp=N,165nm,17.9s,MS4.1
GTA LR LR
comp=E,181nm,22.4s,MS4.1
GTA LR LR
comp=Z,289nm,18.2s,MS4.2
GUN Gumba 46.82 308 *e*P **P 20 39 08.2 -0.2**
comp=Z,29nm,0.5s,mb5.5
PKI Pulchoki 47.04 307 *e*P **P 20 39 09.7 -0.4**
comp=Z,12nm,0.5s,mb5.1
PKI Pulchoki 47.04 307 *e*P **P 20 39 09.7 -0.4**
PKI pmax pmax
comp=Z,13nm,0.5s,mb5.1
KKN Kakani 47.24 308 *e*P **P 20 39 11.5 -0.1**
comp=Z,28nm,0.9s,mb5.2
KKN Kakani 47.24 308 *e*P **P 20 39 11.5 -0.1**
KKN pmax pmax
comp=Z,29nm,0.9s,mb5.2
DMN Daman 47.30 307 *e*P **P 20 39 12.0 -0.1**
comp=Z,11nm,0.5s,mb5.1
HABR Khabarovsk 47.45 8 *e*P **P 20 39 13.2 -0.1**
HABR S **S 20 46 04.5 +0.9**
HABR pmax pmax
comp=Z,60nm,1.5s,mb5.3
YSS Yuzh-Sakhalins 47.53 15 *e*P **P 20 39 12.6 -1.3**
YSS *e* pP 20 39 31.0 +2.4
YSS Yuzh-Sakhalins 47.53 15 *e*P **P 20 39 10.4 -3.5**
comp=Z,9.8nm,0.4s,mb5.2
GKN Gorkha 47.84 307 *e*P **P 20 39 15.8 -0.5**
HIA Hailar 47.99 354 *e*P **P 20 39 17.8 +0.3**
HIA pmax pmax
comp=Z,55nm,1.5s
HIA Hailar 47.99 354 *e*P **P 20 39 17.8 +0.4**
comp=Z,55nm,1.5s,mb5.4
KOLN Koldanda 48.57 307 *e*P **P 20 39 21.9 0.0**
SONM Songino Array 49.35 342 P **P 20 39 27.3 -0.6**
comp=Z,4.3nm,0.7s,mb4.6,baz=155,slow=8.4,SNR=18
CIT Chita 51.55 350 *e*P **P 20 39 45.2 +0.7**
CIT pmax pmax
comp=Z,138nm,1.4s,mb5.7
ZAK Zakamensk 52.57 342 *e*P **P 20 39 53.4 +1.3**
ZAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
TLY Talaya 53.59 343 *e*P **P 20 40 00.3 +0.7**
TLY *e*S **S 20 47 26.2 -2.6**
TLY pmax pmax
comp=Z,22nm,1.9s,mb4.8
TLY MLR MLR
comp=Z,144nm,26.0s,MS3.9
WMQ Urumqi 54.41 326 *e*P **P 20 40 06.0 +0.5**
WMQ AP pP 20 40 19.0 -1.5
WMQ PP PP 20 42 10.0 +2.0
WMQ S **S 20 47 40.0 +0.2**
WMQ SCS ScS 20 49 47.0 -2.8
WMQ SS SS 20 51 22.0 -0.6
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,128nm,6.0s
WMQ LR LR
comp=N,234nm,14.0s,MS4.5
WMQ LR LR
comp=E,187nm,14.0s,MS4.5
WMQ LR LR
comp=Z,183nm,14.0s,MS4.3
MOY Mondy 54.41 341 *e*P **P 20 40 07.0 +1.4**
BOD Bodaibo 57.07 352 *e*P **P 20 40 22.4 -2.2**
BOD pmax pmax
comp=Z,17nm,1.0s,mb5.0
MKAR Makanchi Array 59.24 326 P **P 20 40 39.6 -0.2**
comp=Z,7.7nm,0.5s,mb5.0,baz=115,slow=8.2,SNR=91
YAK Yakutsk 60.50 2 *c i*P **P 20 40 48.2 -0.2**
YAK pmax pmax
comp=Z,37nm,0.7s,mb5.5
YAK Yakutsk 60.50 2 *e*P **P 20 40 48.1 -0.2**
comp=Z,57nm,1.0s,mb5.5
MA2 Magadan 61.00 14 *e*P **P 20 40 51.5 -0.3**
MA2 pmax pmax
comp=Z,36nm,1.0s,mb5.5
MA2 Magadan 61.00 14 *e*P **P 20 40 51.5 -0.3**
comp=Z,36nm,1.0s,mb5.5
AAK Ala-Archa 61.83 319⇑*e*P **P 20 40 57.6 +0.2**
AAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
AAK MLR MLR
comp=Z,100nm,24.0s,MS3.9
AAK Ala-Archa 61.83 319 *e*P **P 20 40 55.9 -1.5**
comp=Z,3.7nm,0.6s,mb4.7
KURK Kurchatov 63.48 328 P **P 20 41 07.8 -0.6**
comp=Z,285nm,0.4s,SNR=29
NVS Novosibirsk 63.76 334 *e*P **P 20 41 08.7 -1.5**
NVS pmax pmax
comp=N,13nm,1.4s
NVS pmax pmax
comp=E,12nm,1.4s
NVS pmax pmax
comp=Z,19nm,1.4s,mb4.9
BRVK Borovoye 69.12 328 *e*P **P 20 41 43.9 -0.6**
BRVK pmax pmax
comp=Z,12nm,1.0s,mb4.8
BRVK Borovoye 69.12 328 *e*P **P 20 41 43.9 -0.6**
comp=Z,12nm,1.0s,mb4.8
CHKZ Chkalovo 69.23 328 *e*P **P 20 41 44.0 -1.2**
CHKZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CHKZ Chkalovo 69.23 328 *e*P **P 20 41 44.0 -1.2**
comp=Z,9.4nm,0.9s,mb4.7
ZRNK Zerenda 69.76 327 *e*P **P 20 41 47.8 -0.6**
ZRNK pmax pmax
comp=Z,13nm,0.5s,mb5.1
ZRNK Zerenda 69.76 327 *e*P **P 20 41 47.8 -0.7**
comp=Z,13nm,0.5s,mb5.1
TIXI Tiksi 70.12 1⇑*i*P **P 20 41 50.6 -0.1**
TIXI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
TIXI Tiksi 70.12 1 *e*P **P 20 41 49.9 -0.8**
AKTO Aktyubinsk 75.24 322 LR LR 21 17 10.6
comp=Z,110nm,21.0s,MS4.1,baz=287,slow=37
SVE Sverdlovsk 75.73 329⇑*e*P **P 20 42 22.8 -1.0**
SVE *e* pP 20 42 35.5 -4.0
SVE pmax pmax
comp=Z,64nm,2.2s,mb5.2
ARU Arti 76.68 328⇓*i*P **P 20 42 28.3 -0.9**
ARU *e* pP 20 42 39.2 -5.7
ARU *e* 20 45 21.9
ARU *e*PPP 20 47 06.8
ARU *e*S S 20 52 12.6 +1.0
ARU *e*SS SS 20 57 11.4 +3.4
ARU pmax pmax
comp=Z,29nm,1.2s,mb5.1
ARU Arti 76.68 328 *e*P **P 20 42 28.3 -0.9**
comp=Z,37nm,1.0s,mb5.3
SOKR Solikamsk 78.53 331 *d i*P **P 20 42 39.6 +0.1**
SOKR pmax pmax
comp=Z,20nm,1.2s,mb4.9
QRN Al-Qurain 79.19 299 *e*P **P 20 42 42.7 -0.4**
QRN AMb AMB 20 42 45.3
comp=Z,22nm,0.4s,mb5.4
MIB Mutribah 79.78 300 *e*P **P 20 42 45.6 -0.8**
MIB AMb AMB 20 42 49.4
comp=Z,38nm,1.0s,mb5.3
NAY Al-Naaiem 79.82 299 *e*P **P 20 42 46.0 -0.5**
NAY AMb AMB 20 42 49.5
comp=Z,17nm,0.9s,mb5.0
RST Umm Al-Ruwaisa 80.05 300 *e*P **P 20 42 47.0 -0.8**
RST AMb AMB 20 42 50.7
comp=Z,35nm,0.8s,mb5.4
VNDA Vanda 81.21 173 P **P 20 42 54.5 +0.5**
comp=Z,4.3nm,0.7s,mb4.5,baz=317,slow=6.5,SNR=29
VNDA Vanda 81.21 173 *e*P **P 20 42 53.6 -0.4**
VNDA pmax pmax
comp=Z,5.0nm,0.8s
VNDA Vanda 81.21 173 *e*P **P 20 42 53.6 -0.4**
comp=Z,4.7nm,0.8s,mb4.5
MAW Mawson 81.50 200 P **P 20 42 56.3 +0.7**
comp=Z,2.4nm,0.6s,mb4.3,baz=108,slow=5.8,SNR=8.4
MAW Mawson 81.50 200 *e*P **P 20 42 55.3 -0.2**
MAW pmax pmax
comp=Z,6.0nm,1.0s
MAW Mawson 81.50 200 *e*P **P 20 42 55.3 -0.2**
comp=Z,6.4nm,1.0s,mb4.5
SBA Scott Base 82.13 172 *e*P **P 20 42 58.8 0.0**
DGRG David-gareji 82.31 311 P **P 20 43 01.4 +1.6**
GNI Garni 82.68 310⇑*e*P **P 20 43 03.5 +1.8**
GNI pmax pmax
comp=Z,11nm,0.8s
GNI Garni 82.68 310 *e*P **P 20 43 01.2 -0.5**
comp=Z,14nm,0.8s,mb5.1
MTA Mtatsminda 82.76 312 P **P 20 43 02.5 +0.4**
TBLG Delisi 82.80 312 *e*P **P 20 43 03.7 +1.3**
TBLG Delisi 82.80 312 P **P 20 43 03.7 +1.4**
TTA Tatalina 83.09 27 *e*P **P 20 43 05.5 +1.6**
ZEI Tsey 83.50 313 *e*P **P 20 43 07.4 +1.4**
ZEI *e**PP pP 20 43 21.4 -0.5
ZEI *e* 20 46 17.0
ZEI pmax pmax
comp=Z,27nm,1.0s,mb5.3
ONI Oni 83.82 312 P **P 20 43 05.8 -1.8**
GOF Gofitskoye 84.28 315 *e*P **P 20 43 09.1 -0.8**
KIV Kislovodsk 84.46 314 *d i*P **P 20 43 12.2 +1.3**
KIV pmax pmax
comp=Z,18nm,1.4s,mb5.0
KIV Kislovodsk 84.46 314 *e*P **P 20 43 12.6 +1.7**
comp=Z,12nm,0.9s,mb5.0
IMA2 Indian Mountai 84.61 24 *e*P **P 20 43 12.4 +0.9**
VRHR Novokhopersk 85.59 321 *e*P **P 20 43 17.0 +0.5**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.6
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRSR Storozhevoye 87.12 321 *e*P **P 20 43 25.1 +1.1**
VRSR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
VRSR pmax pmax
comp=N,4.0nm,0.8s
VRSR pmax pmax
comp=E,10.0nm,1.3s
VOR Voronezh 87.13 322 *e*P **P 20 43 24.0 -0.1**
VOR pmax pmax
comp=Z,70nm,1.3s,mb5.7
MALT Malatya 87.51 308 *e*P **P 20 43 27.0 +1.1**
MALT pmax pmax
comp=Z,21nm,1.3s,mb5.2
MALT Malatya 87.51 308 *e*P **P 20 43 27.0 +1.1**
comp=Z,21nm,1.3s,mb5.2
ANN Anapa 88.25 315 *e*P **P 20 43 29.6 +0.2**
ANN *i* 20 43 34.7
ANN *i **PP pP 20 43 46.6 +1.2
ANN *e* 20 46 58.5
ANN *e* 20 53 52.9
ANN pmax pmax
comp=Z,38nm,1.1s,mb5.5
OBN Obninsk 88.72 325⇑*e*P **P 20 43 30.9 -0.8**
OBN *e* 20 46 57.6
OBN *i* S S 20 53 56.6 -18
OBN *e*PS 20 55 24.4
OBN *e*SS SS 21 00 01.7 -4.9
OBN pmax pmax
comp=Z,24nm,1.4s,mb5.3
OBN MLR MLR
comp=Z,100nm,22.0s,MS4.2
OBN Obninsk 88.72 325 P **P 20 43 30.6 -1.0**
comp=Z,13nm,0.6s,mb5.4
ASF Jabal al Asfar 88.81 302 P **P 20 43 33.8 +1.8**
comp=Z,16nm,1.1s,mb5.3,baz=342,slow=0.4,SNR=18
KMBO Kilima Mbogo 89.16 269 P **P 20 43 38.1 +4.4**
comp=Z,3.8nm,0.9s,mb4.7,baz=41,slow=6.8,SNR=7.3
KMBO LR LR 21 24 28.0
comp=Z,99nm,18.7s,MS4.3,baz=282,slow=36
APA Apatity 89.82 337⇓*i*P **P 20 43 33.3 -3.5**
APA pmax pmax
comp=Z,14nm,1.2s,mb5.2
EIL Elat 90.54 300 *e*P **P 20 43 41.6 +1.5**
SIM Simferopol' 90.60 315 *e*P **P 20 43 44.0 +3.6**
SIM pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
SIM MLR MLR
comp=Z,70nm,23.5s,MS4.0
JOF Joensuu 91.05 333 *e*p **P 20 43 41.2 -1.3**
comp=Z,1.7nm,0.5s,mb4.6
JOF Joensuu 91.05 333 *e*P **P 20 43 41.2 -1.3**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.7
BR131 Keskin Array S 91.21 310 P **P 20 43 43.7 +0.5**
comp=Z,2.0nm,0.8s,mb4.5
BRTR Keskin Array B 91.21 310 P **P 20 43 43.4 +0.2**
comp=Z,1.7nm,0.8s,mb4.4,baz=126,slow=6.3,SNR=7.7
KEV Kevo 91.91 340 *e*p **P 20 43 50.1 +3.6**
comp=Z,1.7nm,0.6s,mb4.5
KEV Kevo 91.91 340 *e*P **P 20 43 50.1 +3.6**
KEV pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
INK Inuvik 92.41 21 *e*P **P 20 43 49.4 +0.6**
INK pmax pmax
comp=Z,15nm,1.5s
INK Inuvik 92.41 21 *e*P **P 20 43 49.4 +0.6**
comp=Z,15nm,1.5s,mb5.1
ARCES ARCESS Array B 92.47 340 P **P 20 43 48.1 -0.9**
comp=Z,2.6nm,0.8s,mb4.6,baz=81,slow=6.8,SNR=18
AKASG Malin Array Be 93.44 321 P **P 20 43 52.5 -1.0**
comp=Z,0.3nm,0.2s,mb4.3,baz=74,slow=3.9,SNR=7.2
AKASG LR LR 21 29 23.7
comp=Z,39nm,19.8s,MS3.9,baz=80,slow=38
AKASG Malin Array Be 93.44 321 *i* P **P 20 43 53.2 -0.3**
KAF Kangasniemi 93.45 332 *e*p **P 20 43 52.6 -1.0**
comp=Z,1.5nm,0.5s,mb4.7
KAF Kangasniemi 93.45 332 *e*P **P 20 43 52.6 -1.0**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.8
FINES FINESS Array B 93.67 332 P **P 20 43 53.1 -1.6**
comp=Z,1.5nm,0.8s,mb4.5,baz=72,slow=6.2,SNR=8.9
FINES LR LR 21 30 34.5
comp=Z,49nm,21.0s,MS3.9,baz=285,slow=38
FINES FINESS Array B 93.67 332 P **P 20 43 53.1 -1.6**
FINES LR LR 21 30 34.5
MLR Muntele Rosu 96.30 316 P **P 20 44 06.4 -0.2**
comp=Z,1.5nm,0.5s,mb4.7,baz=223,slow=16,SNR=3.8
HFS Hagfors 99.87 332 P Pdif 20 44 21.8 -0.8
comp=Z,0.6nm,0.6s,baz=116,slow=6.8,SNR=3.8
NOA NORSAR Array B 100.67 333 P Pdif 20 44 24.1 -2.1
comp=Z,0.6nm,0.7s,baz=70,slow=4.5,SNR=2.9
SCHQ Schefferville 122.87 9 PKP PKPdf 20 49 33.8 -0.2
comp=Z,2.3nm,0.8s,baz=20,slow=14,SNR=3.9
TORD Torodi Ar. Bea 123.27 287 PKP PKPdf 20 49 36.9 +2.1
comp=Z,1.3nm,0.7s,baz=63,slow=1.8,SNR=6.4
PLCA Paso Flores 137.98 161 PKP PKPdf 20 50 04.2 +1.7
comp=Z,1.2nm,0.7s,baz=232,slow=3.6,SNR=2.7
CPUP Villa Florida 154.99 172 PKP PKPdf 20 50 32.1 +1.4
comp=Z,0.6nm,0.3s,baz=69,slow=6.6,SNR=3.1
CPUP PKPbc PKPbc 20 50 43.4 +3.9
comp=Z,0.9nm,0.3s,baz=88,slow=2.8,SNR=4.2
CPUP PKPab PKPab 20 50 57.8 +2.6
comp=Z,0.6nm,0.3s,baz=49,slow=6.1,SNR=3.2
CPUP Villa Florida 154.99 172 PKIKP PKPdf 20 50 32.1 +1.3
CPUP 20 50 43.4

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*NEIC **18** 20:30:49.3, 46.31N, 283.W, h16km, ML3.1(STR), ML3.2(LDG), After LDG.*
*LDG **18** 20:30:49.3±0.1, 46.31N, 283.W, h16km, Ml3.2/20, Error ellipse: s-maj=2.9km s-min=1.7km az=62.0*
*STR **18** 20:30:49.5±0.9, 46.30N, 280.W, h5km±1km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
CSEM 18 20:30:47.4±0.1, 46.23N, 297.W, h12km, ML3.2/14, Error ellipse: s-maj=2.9km s-min=2.5km az=64.0, Bay of Biscay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LRYF	**La Roche-sur-Y**	**1.04**	**70**	Pg	Pg	20 31 07.3	-0.2
LRYF				Sg	Sg	20 31 19.8	-1.3
OLEF	**Ile d'Oleron**	**1.16**	**104**	Pg	Pg	20 31 10.2	+0.4
OLEF				Sg	Sg	20 31 24.6	-0.3
LCHF	**La Chataignera**	**1.60**	**73**	Pg	Pg	20 31 17.7	-0.4
LCHF				Sg	Sg	20 31 36.4	-2.5
LCHF	**La Chataignera**	**1.60**	**73**	Pn	Pn	20 31 14.8	-0.7
LCHF				Pg	Pg	20 31 17.7	-0.4
LCHF				Sg	Sg	20 31 36.4	-2.5
LCHF	**La Chataignera**	**1.60**	**73**	Pg	Pg	20 31 17.7	-0.4
LCHF				Sg	Sg	20 31 36.4	-2.5
QUIF	**Quistinic**	**1.69**	**355**	*e*Pg	Pg	20 31 19.0	-0.9
QUIF				*e*Sg	Sg	20 31 39.3	-2.6
	41nm,0.2s						
QUIF	**Quistinic**	**1.69**	**355**	*e*Pn	Pn	20 31 15.9	-0.9
QUIF				*e*Pg	Pg	20 31 19.0	-0.9
QUIF				*e*Sg	Sg	20 31 39.3	-2.6
QUIF	**Quistinic**	**1.69**	**355**	*e*Pg	Pg	20 31 19.0	-0.9
QUIF				*e*Sg	Sg	20 31 39.3	-2.6
	20nm,0.2s						
MFF	**Saint Martin d**	**1.99**	**78**	*e*Pg	Pg	20 31 25.0	-0.5
MFF				*e*Sg	Sg	20 31 49.0	-2.3
	33nm,0.2s						
MFF	**Saint Martin d**	**1.99**	**78**	*e*Pn	Pn	20 31 20.5	-0.3
MFF				*e*Pg	Pg	20 31 25.0	-0.5
MFF				*e*Sg	Sg	20 31 49.0	-2.3
MFF	**Saint Martin d**	**1.99**	**78**	*e*Pg	Pg	20 31 25.0	-0.5
MFF				*e*Sg	Sg	20 31 49.0	-2.3
	16nm,0.2s						
SGMF	**Saint Gilles**	**2.04**	**8**	*e*Pg	Pg	20 31 25.4	-1.2
SGMF				*e*Sg	Sg	20 31 49.5	-3.7
	44nm,0.3s						
SGMF	**Saint Gilles**	**2.04**	**8**	*e*Pn	Pn	20 31 20.4	-1.2
SGMF				*e*Pg	Pg	20 31 25.4	-1.2
SGMF				*e*Sg	Sg	20 31 49.5	-3.7
SGMF	**Saint Gilles**	**2.04**	**8**	*e*Pg	Pg	20 31 25.4	-1.2
SGMF				*e*Sg	Sg	20 31 49.5	-3.7
	22nm,0.3s						
ROSF	**Rostrenen**	**2.12**	**354**	*e*Pg	Pg	20 31 27.4	-0.6
ROSF				*e*Sg	Sg	20 31 52.2	-3.3
	28nm,0.3s						
ROSF	**Rostrenen**	**2.12**	**354**	*e*Pn	Pn	20 31 21.5	-1.1
ROSF				*e*Pg	Pg	20 31 27.4	-0.6
ROSF				*e*Sg	Sg	20 31 52.2	-3.3
ROSF	**Rostrenen**	**2.12**	**354**	*e*Pg	Pg	20 31 27.4	-0.6
ROSF				*e*Sg	Sg	20 31 52.2	-3.3
	14nm,0.3s						
GRR	**Gorron**	**2.59**	**33**	*e*Pg	Pg	20 31 35.9	-1.2
GRR				*e*Sg	Sg	20 32 05.4	-5.3
	20nm,0.3s						
GRR	**Gorron**	**2.59**	**33**	*e*Pn	Pn	20 31 27.1	-2.0
GRR				*e*Pg	Pg	20 31 35.9	-1.2
GRR				*e*Sg	Sg	20 32 05.4	-5.3
GRR	**Gorron**	**2.59**	**33**	*e*Pg	Pg	20 31 35.9	-1.2
GRR				*e*Sg	Sg	20 32 05.4	-5.3
	10nm,0.3s						
LFF	**La Frestale**	**2.91**	**115**	*e*Pg	Pg	20 31 42.3	-0.8
LFF				*e*Sn	Sn	20 32 04.5	-3.8
LFF				*e*Sg	Sg	20 32 18.6	-2.1
	22nm,0.3s						
LFF	**La Frestale**	**2.91**	**115**	*e*Pn	Pn	20 31 32.6	-0.8
LFF				*e*Pg	Pg	20 31 42.3	-0.8
LFF				*e*Sn	Sn	20 32 04.5	-3.8
LFF				*e*Sg	Sg	20 32 18.6	-2.1
LFF	**La Frestale**	**2.91**	**115**	*e*Pg	Pg	20 31 42.3	-0.8
LFF				*e*Sn	Sn	20 32 04.5	-3.8
LFF				*e*Sg	Sg	20 32 18.6	-2.1
	11nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELAN	Lanestosa	3.02	186	P	Pn	20 31 36.2	+1.2
ELAN				S	Sn	20 32 07.8	-3.2
ELAN	Lanestosa	3.02	186	P	Pn	20 31 36.2	+1.2
ELAN				S	Sn	20 32 07.8	-3.2
FLN	La Foliniere	3.04	33	*e*Pn	Pn	20 31 33.1	-2.2
FLN				*e*Sn	Sn	20 32 06.1	-5.6
FLN				*e*Sg	Sg	20 32 17.7	-7.5
	15nm,0.3s						
FLN	La Foliniere	3.04	33	*e*Pn	Pn	20 31 33.1	-2.2
FLN				*e*Sn	Sn	20 32 06.1	-5.6
LDF	La Druitiere	3.05	38	*e*Pg	Pg	20 31 43.7	-2.2
LDF				*e*Sn	Sn	20 32 06.8	-5.2
LDF				*e*Sg	Sg	20 32 20.0	-5.5
	12nm,0.3s						
LDF	La Druitiere	3.05	38	*e*Pn	Pn	20 31 33.3	-2.2
LDF				*e*Pg	Pg	20 31 43.7	-2.2
LDF				*e*Sn	Sn	20 32 06.8	-5.2
LDF				*e*Sg	Sg	20 32 20.0	-5.5
LDF	La Druitiere	3.05	38	*e*Pg	Pg	20 31 43.7	-2.2
LDF				*e*Sn	Sn	20 32 06.8	-5.2
LDF				*e*Sg	Sg	20 32 20.0	-5.5
	6.1nm,0.3s						
EALK	Alkurruntz	3.18	160	P	Pn	20 31 36.6	-0.7
EALK				S	Sn	20 32 13.2	-1.9
EALK	Alkurruntz	3.18	160	P	Pn	20 31 36.6	-0.7
EALK				S	Sn	20 32 13.2	-1.9
ELIZ	Elizondo	3.23	161	P	Pn	20 31 38.4	+0.5
ELIZ				S	Sn	20 32 13.7	-2.6
RJF	Les Rejaudoux	3.27	105	*e*Pg	Pg	20 31 48.3	-1.8
RJF				*e*Sn	Sn	20 32 11.2	-6.1
RJF				*e*Sg	Sg	20 32 27.4	-5.1
	20nm,0.2s						
RJF	Les Rejaudoux	3.27	105	*e*Pn	Pn	20 31 37.5	-1.0
RJF				*e*Pg	Pg	20 31 48.3	-1.8
RJF				*e*Sn	Sn	20 32 11.2	-6.1
RJF				*e*Sg	Sg	20 32 27.4	-5.1
RJF	Les Rejaudoux	3.27	105	*e*Pg	Pg	20 31 48.3	-1.8
RJF				*e*Sn	Sn	20 32 11.2	-6.1
RJF				*e*Sg	Sg	20 32 27.4	-5.1
	9.9nm,0.2s						
EARI	Arriondas	3.33	209	P	Pn	20 31 40.4	+1.1
EARI				S	Sn	20 32 16.4	-2.5
EARI	Arriondas	3.33	209	P	Pn	20 31 40.4	+1.1
EARI				S	Sn	20 32 16.4	-2.5
SJPF	Ste Jean	3.35	158	*e*Pn	Pn	20 31 39.1	-0.5
SJPF				*e*Sn	Sn	20 32 16.7	-2.6
TCF	Toulx Ste Croi	3.59	87	*e*Pn	Pn	20 31 41.4	-1.5
TCF				*e*Sn	Sn	20 32 18.0	-7.2
	6.6nm,0.3s						
TCF				*e*Sg	Sg	20 32 38.3	-4.5
	14nm,0.2s						
TCF	Toulx Ste Croi	3.59	87	*e*Pn	Pn	20 31 41.4	-1.5
TCF				*e*Sn	Sn	20 32 18.0	-7.2
	3.3nm,0.3s						
TCF				*e*Sg	Sg	20 32 38.3	-4.5
	7.0nm,0.2s						
ETSF	Etsaut	3.75	152	*e*Pn	Pn	20 31 44.0	-1.0
ETSF				*e*Pg	Pg	20 31 59.2	0.0
CAF	Calviac	3.77	108	*e*Pn	Pn	20 31 44.6	-0.7
CAF				*e*Sn	Sn	20 32 23.2	-6.3
CAF				*e*Sg	Sg	20 32 45.4	-2.9
	15nm,0.2s						
CAF	Calviac	3.77	108	*e*Pn	Pn	20 31 44.6	-0.7
CAF				*e*Sn	Sn	20 32 23.2	-6.3
CAF				*e*Sg	Sg	20 32 45.4	-2.9
	7.4nm,0.2s						
EPF	Esparros	3.98	142	*e*Pg	Pg	20 32 02.6	-0.9
EPF				*e*Sn	Sn	20 32 29.8	-4.9
EPF				*e*Sg	Sg	20 32 54.5	-0.5
	4.2nm,0.2s						
EPF	Esparros	3.98	142	*e*Pn	Pn	20 31 47.0	-1.1
EPF				*e*Pg	Pg	20 32 02.6	-0.9
EPF				*e*Sn	Sn	20 32 29.8	-4.9
EPF				*e*Sg	Sg	20 32 54.5	-0.5
EPF	Esparros	3.98	142	*e*Pg	Pg	20 32 02.6	-0.9
EPF				*e*Sn	Sn	20 32 29.8	-4.9
EPF				*e*Sg	Sg	20 32 54.5	-0.5
	2.1nm,0.2s						
HYF	Humbligny	3.99	73	*e*Pn	Pn	20 31 47.1	-1.3
BGF	Bois d'Agland	4.04	83	*e*Pn	Pn	20 31 47.6	-1.4
BGF				*e*Sn	Sn	20 32 28.2	-8.0
BGF				*e*Sg	Sg	20 32 53.0	-4.0
	33nm,0.4s						
BGF	Bois d'Agland	4.04	83	*e*Pn	Pn	20 31 47.6	-1.4
BGF				*e*Sn	Sn	20 32 28.2	-8.0
BGF				*e*Sg	Sg	20 32 53.0	-4.0
	16nm,0.4s						
EPON	Pontenova	4.16	227	P	Pn	20 31 51.7	+1.0
EPON				S	Sn	20 32 38.4	-0.8
EPON	Pontenova	4.16	227	P	Pn	20 31 51.7	+1.1
EPON				S	Sn	20 32 38.3	-0.9
EBIE	Bielsa	4.18	147	P	Pn	20 31 51.7	+0.7
EBIE				S	Sn	20 32 38.1	-1.7
EBIE	Bielsa	4.18	147	P	Pn	20 31 51.7	+0.7
EBIE				S	Sn	20 32 38.1	-1.7
PYM	Petit Puy Mans	4.19	94	Pn	Pn	20 31 52.0	+0.9
AGO	Saint Agoulin	4.24	90	Pn	Pn	20 31 50.4	-1.4
AVF	Avril sur Loir	4.40	80	*e*Pn	Pn	20 31 52.1	-1.9
AVF				*e*Sn	Sn	20 32 37.1	-8.0
AVF				*e*Sg	Sg	20 33 04.2	-4.5
LBL	Lubilhac	4.46	101	Pn	Pn	20 31 53.6	-1.3
SSF	Saint Saulge	4.54	77	*e*Pn	Pn	20 31 54.3	-1.6
SSF				*e*Sn	Sn	20 32 41.3	-7.2
MTLF	Montolieu	4.69	126	*e*Pn	Pn	20 31 57.2	-0.7
MTLF				*e*Sn	Sn	20 32 45.1	-7.1
SMF	Signal de Mont	4.73	82	*e*Pg	Pg	20 32 14.3	-3.6
SMF				*e*Sn	Sn	20 32 44.9	-8.3
SMF				*e*Sg	Sg	20 33 14.1	-5.0
	3.3nm,0.2s						
SMF	Signal de Mont	4.73	82	*e*Pn	Pn	20 31 56.9	-1.6
SMF				*e*Pg	Pg	20 32 14.3	-3.6
SMF				*e*Sn	Sn	20 32 44.9	-8.3
SMF				*e*Sg	Sg	20 33 14.1	-5.0
SMF	Signal de Mont	4.73	82	*e*Pg	Pg	20 32 14.3	-3.6
SMF				*e*Sn	Sn	20 32 44.9	-8.3
SMF				*e*Sg	Sg	20 33 14.1	-5.0
	1.6nm,0.2s						
LOR	Lormes	4.81	75	*e*Pn	Pn	20 31 57.7	-1.9
LOR				*e*Sn	Sn	20 32 47.3	-7.9
LOR				*e*Sg	Sg	20 33 15.3	-6.4
	5.5nm,0.4s						
LOR	Lormes	4.81	75	*e*Pn	Pn	20 31 57.7	-1.9
LOR				*e*Sn	Sn	20 32 47.3	-7.9
LOR				*e*Sg	Sg	20 33 15.3	-6.4
	2.8nm,0.4s						
ECAL	Calabor	5.07	214	P	Pn	20 32 04.9	+1.7
ECAL				S	Sn	20 33 00.7	-1.1
LASF	Ste Croix	5.29	112	*e*Pn	Pn	20 32 05.4	-0.7
LASF				*e*Sn	Sn	20 33 01.4	-5.6
LASF				*e*Sg	Sg	20 33 33.8	-3.3
	8.4nm,0.5s						
LASF	Ste Croix	5.29	112	*e*Pn	Pn	20 32 05.4	-0.7
LASF				*e*Sn	Sn	20 33 01.4	-5.6
LASF				*e*Sg	Sg	20 33 33.8	-3.3
	4.2nm,0.5s						
EMAZ	Mazaricos	5.40	235	P	Pn	20 32 08.3	+0.5
EMAZ				S	Sn	20 33 07.6	-2.2
EMAZ	Mazaricos	5.40	235	P	Pn	20 32 08.3	+0.6
VIVF	Saint-Julien-l	5.54	102	*e*Sg	Sg	20 33 40.1	-5.1
	6.4nm,0.5s						
VIVF	Saint-Julien-l	5.54	102	*e*Sg	Sg	20 33 40.1	-5.1
	3.2nm,0.5s						
ELOB	Lobios	5.70	222	P	Pn	20 32 12.9	+1.1
ELOB				S	Sn	20 33 15.5	-1.6
ELOB	Lobios	5.70	222	P	Pn	20 32 12.9	+1.1
BAIF	Baives	6.14	49	*e*Pn	Pn	20 32 15.4	-2.5
BAIF				*e*Sn	Sn	20 33 20.2	-7.9
	1.5nm,0.3s						
BAIF	Baives	6.14	49	*e*Pn	Pn	20 32 15.4	-2.5
BAIF				*e*Sn	Sn	20 33 20.2	-7.9
	0.8nm,0.3s						

*ISCJB **18** 20:41:29.6±1.3, 1.9S±0.2×99.6E±0.3, h29km, mb4.2/11, Error ellipse: s-maj=46.3km s-min=10.1km az=118.9*
*NEIC **18** 20:41:31.1±6.5, 1.97S×99.56E, h25km±42km, mb4.3/4, Error ellipse: s-maj=47.4km s-min=9.9km az=57.0*
*IDC **18** 20:41:32.8±1.7, 1.82S×99.83E, h29km±5km, mb3.9/6, mb1 4.0/7, mb1mx3.7/19, mbtmp4.0/7, ML3.0/1, Error ellipse: s-maj=65.8km s-min=13.3km az=59.0*
ISC 18 20:41:32.1±1.3**, 1.9S**±0.2×**99.5E**±0.3**, h30**km**, h30**km±1.2km**: pP-P, n17, σ1s11**/15**, mb4.2**/11**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	4.75	352	Pn	Pn	20 42 39.6	-2.0
	0.7nm,0.3s,baz=187,slow=13,SNR=6.2						
CM31	Chiang Mai Arr	20.28	358	*e*P	P	20 46 06.9	+1.8
LSA	Lhasa	32.47	346	*e*P	P	20 48 01.7	+2.0
WRA	Warramunga Arr	38.41	120	P	P	20 48 50.3	-0.5
	1.4nm,0.7s,mb3.8,baz=306,slow=9.1,SNR=14						
WRA				pP	pP	20 48 58.5	-1.3
	1.3nm,0.8s,baz=304,slow=9.1,SNR=5.9						
WRAB	Tennant Creek	38.42	120	*e*P	P	20 48 50.7	-0.1
	5.5nm,0.9s,mb4.3						
WB2	Warramunga Arr	38.42	120	*e*P	P	20 48 51.8	+0.9
ASAR	Alice Springs	39.66	126	P	P	20 49 00.8	-0.3
	1.3nm,0.7s,mb3.8,baz=300,slow=7.9,SNR=16						
ASAR				pP	pP	20 49 10.8	+0.6
	1.0nm,0.8s,baz=303,slow=8.0,SNR=5.5						
STKA	Stephens Creek	49.53	131	P	P	20 50 20.1	+0.2
	3.4nm,0.8s,mb4.4,baz=323,slow=7.8,SNR=5.8						
STKA				pP	pP	20 50 28.9	-0.1
	2.4nm,0.6s,baz=305,slow=9.7,SNR=3.2						
SONM	Songino Array	49.93	6	P	P	20 50 23.9	+0.8
	4.0nm,0.8s,mb4.5,baz=186,slow=9.3,SNR=14						
SONM				pP	pP	20 50 32.0	-0.2
	2.5nm,1.0s,baz=182,slow=7.3,SNR=5.9						
ULN	Ulaanbaatar	50.03	7	*e*P	P	20 50 24.6	+0.8
	4.3nm,0.9s,mb4.5						
ULN				*e*		20 50 50.5	
MKAR	Makanchi Array	50.85	345	P	P	20 50 30.2	+0.3
	2.4nm,0.7s,mb4.2,baz=144,slow=7.2,SNR=24						
MKAR				pP	pP	20 50 38.6	-0.5
	1.8nm,0.7s,baz=134,slow=6.9,SNR=5.6						
MJAR	Matsushiro Arr	52.52	39	P	P	20 50 41.0	-1.5
	1.3nm,1.0s,mb3.8,baz=225,slow=12,SNR=3.0						
ZAL	Zalesovo	57.02	350	P	P	20 51 15.2	+0.1
	2.5nm,0.8s,mb4.3,baz=309,slow=6.4,SNR=14						
ZRNK	Zerenda	60.39	339	*e*P	P	20 51 36.8	-1.7
	1.3nm,0.8s,mb4.0						
CHKZ	Chkalovo	60.44	341	*e*P	P	20 51 37.9	-0.9
	1.6nm,0.7s,mb4.2						
MIAR	Mount Ida	145.33	19	*e*PKPdf	PKPdf	21 01 07.0	+0.1
JCT	Junction City	146.21	31	*e*PKPdf	PKPdf	21 01 10.4	+2.1

*NEIC **18** 20:41:52.6±11.0, 2.11S×99.43E, h2km±68km, mb4.0/1, Error ellipse: s-maj=64.3km s-min=15.7km az=59.0*
*ISCJB **18** 20:41:54.5±1.7, 2.0S±0.2×99.5E±0.4, h27km, mb4.1/7, Error ellipse: s-maj=57.0km s-min=13.7km az=124.2*
*IDC **18** 20:41:57.5±2.1, 2.01S×99.61E, h28km±6km, mb4.0/6, mb1 4.1/7, mb1mx3.7/19, mbtmp4.1/7, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/23, Error ellipse: s-maj=76.6km s-min=15.7km az=61.0*
ISC 18 20:41:57.0±1.7**, 2.0S**±0.2×**99.5E**±0.4**, h28**km**, h28**km±.3km**: pP-P, n8, σ1s10**/8**, mb4.1**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	4.80	353	Pn	Pn	20 43 06.1	-1.2
	1.2nm,0.3s,baz=164,slow=10,SNR=6.9						
PSI				LR	LR	20 45 04.8	
	comp=Z,518nm,19.5s,baz=127,slow=40						
WRA	Warramunga Arr	38.45	120	P	P	20 49 15.8	-0.4
	2.7nm,0.9s,mb4.0,baz=298,slow=9.6,SNR=5.4						
WRA				pP	pP	20 49 24.0	-0.6
	1.5nm,0.7s,baz=302,slow=9.1,SNR=3.4						
ASAR	Alice Springs	39.68	126	P	P	20 49 24.7	-1.8
	2.0nm,0.9s,mb3.8,baz=304,slow=8.4,SNR=6.3						
STKA	Stephens Creek	49.54	131	P	P	20 50 46.6	+1.4
	1.7nm,0.6s,mb4.2,baz=307,slow=10,SNR=3.8						
STKA				pP	pP	20 50 54.8	+1.0
	3.4nm,0.8s,baz=282,slow=5.2,SNR=3.7						
SONM	Songino Array	49.99	6	P	P	20 50 49.8	+1.2
	5.2nm,0.8s,mb4.6,baz=188,slow=8.8,SNR=15						
SONM				pP	pP	20 50 57.8	+0.5
	3.3nm,1.0s,baz=184,slow=8.1,SNR=3.9						
MKAR	Makanchi Array	50.89	345	P	P	20 50 56.1	+0.7
	3.6nm,0.7s,mb4.4,baz=148,slow=7.0,SNR=9.3						
MKAR				pP	pP	20 51 04.2	+0.2
	1.8nm,0.7s,baz=148,slow=7.9,SNR=2.6						
MJAR	Matsushiro Arr	52.60	39	P	P	20 51 08.9	+0.7
	1.3nm,0.7s,mb4.0,baz=221,slow=8.5,SNR=4.2						
CHKZ	Chkalovo	60.47	341	*e*P	P	20 52 03.4	-0.7
	0.9nm,0.7s,mb3.9						

*SZGRF **18** 20:45:01.6, 67.17N×5.25W, h33km, mb3.6, Norwegian Sea*
*CSEM **18** 20:45:40.3±0.1, 63.28N×0.76W, h10km, ML3.9/8, Error ellipse: s-maj=1.5km s-min=1.3km az=174.0*
*ISCJB **18** 20:45:40.0±0.4, 63.24N±0.03×0.56W±0.05, h10km, mb3.5/4, MS3.0/2, Error ellipse: s-maj=3.8km s-min=3.4km az=108.4*
*NAO **18** 20:45:41.7±2.8, 63.33N×0.72W, ML3.3*
*NEIC **18** 20:45:41.6±0.4, 63.30N×0.81W, h10km, mb3.8/2, Error ellipse: s-maj=6.5km s-min=4.7km az=128.0*
*IDC **18** 20:45:44.0±6.2, 63.40N×0.96W, h24km±44km, mb3.3/5, mb1 3.9/11, mb1mx3.7/26, mbtmp3.8/11, ML4.0/6, MS2.9/6, Ms1 2.9/6, ms1mx2.6/23, Error ellipse: s-maj=18.6km s-min=16.1km az=157.0*
*BER **18** 20:45:44.4±3.8, 63.27N×0.84W, h10km, MD3.3, ML3.1, ML3.3(NAO)*
*BGS **18** 20:45:44.3±0.6, 63.36N×0.88W, h20km, ML3.8*
ISC 18 20:45:41.7±0.3**, 63.21N**±0.02×**0.69W**±0.05**, h10**km**, n122, σ1s43**/203**, mb3.5**/4**, MS3.0**/2**, 1C, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FSV	Svinoy	2.78	252	⇑*i*P	Pn	20 46 25.7	-0.5
WAL1	Walls	3.00	189	*e*P	Pn	20 46 30.9	+1.6
WAL1	Walls	3.00	189	*e*P	Pn	20 46 30.9	+1.6
	87nm,0.3s						
FTO	Torshavn	3.08	250	*e*P	Pn	20 46 29.9	-0.4
FTO				*e*S	Sn	20 47 03.4	-3.9
FTO				AML	AML	20 47 05.1	
	comp=E,208nm,0.3s						
FTO				AML	AML	20 47 08.6	
	comp=N,135nm,0.5s						
FTO	Torshavn	3.08	250	P	Pn	20 46 29.9	-0.4
FTO				S	Sn	20 47 03.4	-3.9
FTO	Torshavn	3.08	250	*e*P	Pn	20 46 29.9	-0.4
	SNR=50						
FTO				*e*S	Sn	20 47 03.4	-3.8
	comp=N,135nm,0.5s						
LRW	Lerwick	3.10	185	*e*P	Pn	20 46 32.7	+2.2
LRW				*e*S	Sn	20 47 07.9	+0.2
LRW				AML	AML	20 47 12.0	
	comp=E,120nm,0.3s						
LRW				AML	AML	20 47 12.9	
	comp=N,87nm,0.3s						
LRW	Lerwick	3.10	185	P	Pn	20 46 32.7	+2.2
LRW				S	Sn	20 47 07.9	+0.2
LRW	Lerwick	3.10	185	*e*P	Pn	20 46 32.7	+2.1
	SNR=50						
LRW				*e*S	Sn	20 47 07.9	+0.2
	comp=N,87nm,0.3s,SNR=50						
FOO	Floro	3.12	119	*e*P	Pn	20 46 30.1	-0.8
FOO				*e*S	Sn	20 47 06.1	-2.2
FOO				AML	AML	20 47 11.1	
	comp=Z,126nm,0.5s						
FOO	Floro	3.12	119	*e*P	Pn	20 46 30.1	-0.8
FOO				*e*S	Sn	20 47 06.1	-2.2
FOO	Floro	3.12	119	*e*P	Pn	20 46 30.1	-0.8
	SNR=50						
FOO				*e*S	Sn	20 47 06.1	-2.1
	comp=Z,126nm,0.5s						
FVA	Vagar	3.28	253	*e*P	Pn	20 46 33.1	0.0
SUE	Sulen	3.35	128	*e*	Pn	20 46 33.7	-0.3
SUE				*e*P		20 46 35.0	
SUE				*e*S	Sn	20 47 13.2	-0.7
SUE				AML	AML	20 47 16.2	
	comp=Z,74nm,0.4s						
SUE	Sulen	3.35	128	*e*P	Pn	20 46 35.0	+0.9
SUE				*e*S	Sn	20 47 13.2	-0.7
SUE	Sulen	3.35	128	*e*P	Pn	20 46 35.0	+0.9
	SNR=50						
SUE				*e*S	Sn	20 47 13.2	-0.7
	comp=Z,74nm,0.4s,SNR=50						
HYA	Hoyanger	3.82	119	*e*P	Pn	20 46 42.8	+2.3
HYA				*e*S	Sn	20 47 27.1	+1.6
HYA				AML	AML	20 47 37.9	
	comp=Z,90nm,0.2s						
HYA	Hoyanger	3.82	119	*e*P	Pn	20 46 42.8	+2.3
HYA				*e*S	Sn	20 47 27.1	+1.6
HYA	Hoyanger	3.82	119	*e*P	Pn	20 46 42.8	+2.3
	SNR=49						
HYA				*e*S	Sn	20 47 27.1	+1.6
	comp=Z,90nm,0.2s,SNR=49						
ASK	Askoy	3.91	132	*e*P	Pn	20 46 43.0	+1.3
ASK				*e*S	Sn	20 47 28.5	+0.8
ASK				AML	AML	20 47 33.5	
	comp=Z,50nm,0.6s						
ASK	Askoy	3.91	132	*e*P	Pn	20 46 43.0	+1.3
ASK				*e*S	Sn	20 47 28.5	+0.8
ASK	Askoy	3.91	132	*e*P	Pn	20 46 43.0	+1.3
	SNR=49						
ASK				*e*S	Sn	20 47 28.5	+0.8
	comp=Z,50nm,0.6s,SNR=49						
RUND	Rundenannen	4.02	132	*e*P	Pn	20 46 44.6	+1.3
RUND				*e*S	Sn	20 47 29.0	-1.3
BER	Bergen	4.03	132	*e*P	Pn	20 46 44.6	+1.2
BER				*e*S	Sn	20 47 32.2	+1.6
BER				AML	AML	20 47 34.9	
	comp=Z,40nm,0.2s						
BER	Bergen	4.03	132	*e*P	Pn	20 46 44.6	+1.2
BER				*e*S	Sn	20 47 32.2	+1.6
BER	Bergen	4.03	132	*e*P	Pn	20 46 44.6	+1.2
	SNR=49						
BER				*e*S	Sn	20 47 32.2	+1.6
	comp=Z,40nm,0.2s,SNR=49						
EGD	Espegrend	4.08	134	*e*P	Pn	20 46 45.2	+1.1
EGD				*e*S	Sn	20 47 30.7	-1.1
EGD				AML	AML	20 47 33.4	
	comp=Z,40nm,0.5s						
EGD	Espegrend	4.08	134	*e*P	Pn	20 46 45.2	+1.1
EGD				*e*S	Sn	20 47 30.7	-1.1
EGD	Espegrend	4.08	134	*e*P	Pn	20 46 45.2	+1.2
	SNR=49						
EGD				*e*S	Sn	20 47 30.7	-1.1
	comp=Z,40nm,0.5s,SNR=49						
DOMB	Dombas	4.65	100	*e*P	Pn	20 46 53.9	+1.9
DOMB				*e*S	Sn	20 47 45.8	-0.2
DOMB				AML	AML	20 47 50.0	
	comp=Z,97nm,0.3s						
DOMB	Dombas	4.65	100	*e*P	Pn	20 46 53.9	+1.9
DOMB				*e*S	Sn	20 47 45.8	-0.2
DOMB	Dombas	4.65	100	*e*P	Pn	20 46 53.9	+1.9
	SNR=49						
DOMB				*e*S	Sn	20 47 45.8	-0.2
	comp=Z,97nm,0.3s,SNR=49						
OBR	Brabster	4.77	196	*e*P	Pn	20 46 54.8	+1.2
ODD1	Odda	4.82	130	*e*P	Pn	20 46 54.3	+0.1
ODD1				*e*S	Sn	20 47 47.5	-2.6
ODD1				AML	AML	20 47 50.6	
	comp=Z,58nm,0.3s						
ODD1	Odda	4.82	130	*e*P	Pn	20 46 54.3	+0.1
ODD1				*e*S	Sn	20 47 47.5	-2.6
ORE	Reay	4.92	199	*e*P	Pn	20 46 56.8	+1.2
ORE				AML	AML	20 47 54.1	
	comp=N,68nm,0.3s						
ORE				AML	AML	20 47 56.1	
	comp=E,102nm,0.4s						
ORE	Reay	4.92	199	*e*P	Pn	20 46 56.8	+1.2
	comp=E,102nm,0.4s						
KMY	Karmoy	4.93	142	*e*P	Pn	20 46 56.5	+0.7
KMY				*e*S	Sn	20 47 51.6	-1.4
KMY				AML	AML	20 47 58.3	
	comp=Z,47nm,0.5s						
KMY	Karmoy	4.93	142	*e*P	Pn	20 46 56.5	+0.7
KMY				*e*S	Sn	20 47 51.6	-1.4
BLS5	Blasjo	5.13	135	*e*P	Pn	20 47 00.5	+2.0
BLS5				*e*S	Sn	20 47 57.2	-0.5
STAV	Stavanger	5.29	141	*e*S	Sn	20 48 00.2	-1.6
MVH1	Achvaich	5.58	200	*e*P	Pn	20 47 05.9	+1.2
NSS	Namsos	5.75	71	*e*P	Pn	20 47 06.3	-0.7
NSS				*e*S	Sn	20 48 08.0	-4.9
NSS				AML	AML	20 48 11.1	
	comp=Z,174nm,0.2s						
NSS	Namsos	5.75	71	*e*P	Pn	20 47 06.3	-0.7
NSS				*e*S	Sn	20 48 07.5	-5.4
MCD	Coleburn Disti	5.79	194	*e*P	Pn	20 47 09.3	+1.7
MCD				*e*S	Sn	20 48 11.0	-3.0
MCD				AML	AML	20 48 15.8	
	comp=E,62nm,0.4s						
MCD				AML	AML	20 48 15.9	
	comp=N,82nm,0.3s						
MCD	Coleburn Disti	5.79	194	P	Pn	20 47 09.3	+1.7
MCD				S	Sn	20 48 11.0	-3.0
MCD	Coleburn Disti	5.79	194	*e*P	Pn	20 47 09.3	+1.7
	SNR=49						
MCD				*e*S	Sn	20 48 11.0	-3.1
	comp=N,26nm,0.4s						
NAO01	NORSAR Array S	5.94	108	*e*P	Pn	20 47 11.1	+1.4
	comp=N,25nm,0.3s						
NAO01	NORSAR Array S	5.94	108	*e*P	Pn	20 47 11.1	+1.4
	comp=N,25nm,0.3s						
NB2	NORSAR Subarra	5.99	106	Pn	Pn	20 47 11.8	+1.4
	baz=301,slow=14						
NB2				Sn	Sn	20 48 19.7	+0.6
	baz=305,slow=22						
NOA	NORSAR Array B	5.99	106	Pn	Pn	20 47 11.3	+0.9
	comp=N,4.9nm,0.3s,baz=299,slow=13,SNR=58						
NOA				Sn	Sn	20 48 17.1	-2.0
	comp=N,9.4nm,0.3s,baz=303,slow=22,SNR=6.8						
NOA				LR	LR	20 50 10.5	
	comp=N,64nm,19.9s,baz=305,slow=43						
SNART	Snartemo	6.23	138	*e*P	Pn	20 47 14.3	+0.6
SNART				*e*S	Sn	20 48 23.0	-2.0
MOR8	Moi Rana	7.13	59	*e*P	Pn	20 47 27.6	+1.7
MOR8				*e*S	Sn	20 48 47.0	+0.1
MOR8				AML	AML	20 48 52.7	
	comp=Z,102nm,0.2s						
MOR8	Moi Rana	7.13	59	*e*P	Pn	20 47 27.6	+1.7
MOR8				*e*S	Sn	20 48 47.0	+0.1
MOR8	Moi Rana	7.13	59	*e*P	Pn	20 47 27.6	+1.7
	SNR=47						
MOR8				*e*S	Sn	20 48 47.0	0.0
	comp=Z,102nm,0.2s,SNR=47						
EDI	Edinburgh	7.42	191	*e*P	Pn	20 47 33.7	+3.7
EDI				AML	AML	20 48 55.1	
	comp=N,22nm,0.6s						
EDI				AML	AML	20 48 57.6	
	comp=E,26nm,0.4s						
HFS	Hagfors	7.50	108	Pn	Pn	20 47 32.5	+1.4
	comp=E,2.7nm,0.3s,baz=290,slow=11,SNR=61						
HFS				Sn	Sn	20 48 54.6	-1.6
	comp=E,5.8nm,0.3s,baz=302,slow=21,SNR=11						
HFS				LR	LR	20 50 34.9	
	comp=E,68nm,20.8s,baz=297,slow=38						
HFS	Hagfors	7.50	108	Pn	Pn	20 47 33.0	+1.9
	baz=298,slow=16						
HFS				Sn	Sn	20 48 55.6	-0.6
	baz=305,slow=56						
HFS	Hagfors	7.50	108	Pn	Pn	20 47 32.5	+1.4
HFS				Sn	Sn	20 48 55.6	-0.6
	SNR=0.7						
LOF	Lofoten	7.66	44	*e*	Pn	20 47 31.5	-1.7
LOF				*e*P		20 47 33.1	
LOF				*e*S	Sn	20 48 51.0	-9.1
LOF				AML	AML	20 49 03.4	
	comp=Z,46nm,0.3s						
LOF	Lofoten	7.66	44	*e*P	Pn	20 47 33.1	-0.1
LOF				*e*S	Sn	20 48 51.0	-9.1
LOF	Lofoten	7.66	44	*e*P	Pn	20 47 33.1	-0.2
	SNR=47						
EKA	Eskdalemuir Ar	8.01	190	Pn	Pn	20 47 39.5	+1.5
	comp=Z,3.2nm,0.3s,baz=356,slow=12,SNR=51						
EKA				Sn	Sn	20 49 05.7	-2.9
	comp=Z,4.9nm,0.3s,baz=1.3,slow=24,SNR=9.9						
EKA	Eskdalemuir Ar	8.01	190	Pn	Pn	20 47 39.5	+1.5
JMIC	Jan Mayen	8.38	342	Pn	Pn	20 47 40.3	-2.8
	comp=Z,2.8nm,0.3s,baz=163,slow=6.1,SNR=26						
BORG	Borgarnes	9.19	289	LR	LR	20 50 54.2	
	comp=Z,85nm,20.2s,baz=18,slow=34						
TRO	Tromso	10.11	42	*e*P	Pn	20 48 04.5	-2.3
TRO				*e*S	Sn	20 49 52.5	-7.8
TRO	Tromso	10.11	42	*e*P	Pn	20 48 04.5	-2.3
TRO				*e*S	Sn	20 49 53.6	-6.7
KTK1	Kautokeino	11.24	49	*e*P	Pn	20 48 21.9	-0.5
ARCES	ARCESS Array B	12.18	47	Pn	Pn	20 48 34.1	-1.0
	comp=Z,1.1nm,0.3s,baz=245,slow=13,SNR=70						
ARCES				Sn	Sn	20 50 43.0	-8.0
	comp=Z,0.8nm,0.3s,baz=235,slow=22,SNR=4.0						
ARCES				LR	LR	20 53 17.4	
	comp=Z,44nm,20.6s,baz=229,slow=37						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARA0	**ARCESS Array S**	**12.18**	**47**	Pn	**Pn**	**20 48 34.1**	**-1.1**
	baz=246,slow=14						
ARA0				Sn	**Sn**	**20 50 41.9**	**-9.1**
	baz=241,slow=22						
ARA0	**ARCESS Array S**	**12.18**	**47**	Pn	**Pn**	**20 48 34.1**	**-1.1**
ARA0				Sn	**Sn**	**20 50 41.8**	**-9.2**
	SNR=5.1						
FIA0	**FINESS Array S**	**12.53**	**86**	Pn	**Pn**	**20 48 40.4**	**+0.4**
	baz=292,slow=12						
FIA0				Sn	**Sn**	**20 50 52.5**	**-7.0**
	baz=300,slow=22						
FIA0	**FINESS Array S**	**12.53**	**86**	Pn	**Pn**	**20 48 40.3**	**+0.4**
	SNR=50						
FIA0				Sn	**Sn**	**20 50 52.5**	**-7.0**
FINES	**FINESS Array B**	**12.53**	**86**	Pn	**Pn**	**20 48 40.6**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=280,slow=11,SNR=24						
FINES				Sn	**Sn**	**20 50 52.4**	**-7.1**
	comp=Z,1.2nm,0.3s,baz=288,slow=20,SNR=9.5						
FIA1	**FINESS Array S**	**12.53**	**86**	*e*P	**Pn**	**20 48 39.4**	**-0.5**
KEV	**Kevo**	**12.74**	**47**	*e*P	**Pn**	**20 48 42.9**	**-0.1**
	comp=Z,6.2nm,0.6s						
KEV	**Kevo**	**12.74**	**47**	*e*P	**Pn**	**20 48 42.9**	**0.0**
	comp=Z,6.2nm,0.6s						
BAIF	**Baives**	**13.45**	**166**	*e*Pn	**Pn**	**20 48 53.3**	**+0.7**
BAIF				*e*Sn	**Sn**	**20 51 13.9**	**-8.3**
	comp=Z,1.7nm,0.3s						
BAIF	**Baives**	**13.45**	**166**	*e*Pn	**Pn**	**20 48 53.3**	**+0.7**
BAIF				*e*Sn	**Sn**	**20 51 13.9**	**-8.3**
	comp=Z,0.9nm,0.3s						
FLN	**La Foliniere**	**14.49**	**179**	*e*Pn	**Pn**	**20 49 04.5**	**-2.2**
FLN				*e*Sn	**Sn**	**20 51 32.7**	**-15**
	comp=Z,4.2nm,0.4s						
FLN	**La Foliniere**	**14.49**	**179**	*e*Pn	**Pn**	**20 49 04.5**	**-2.2**
FLN				*e*Sn	**Sn**	**20 51 32.7**	**-15**
	comp=Z,2.1nm,0.4s						
LDF	**La Druitiere**	**14.66**	**179**	*e*Pn	**Pn**	**20 49 05.8**	**-3.2**
LDF				*e*Sn	**Sn**	**20 51 36.3**	**-15**
	comp=Z,1.6nm,0.3s						
LDF	**La Druitiere**	**14.66**	**179**	*e*Pn	**Pn**	**20 49 05.8**	**-3.2**
LDF				*e*Sn	**Sn**	**20 51 36.3**	**-15**
	comp=Z,0.8nm,0.3s						
GRA1	**Grafenberg Arr**	**15.03**	**149**	*e*P	**Pn**	**20 49 24.8**	**+11**
	comp=Z,3.0nm,0.8s						
GRF	**Grafenberg Arr**	**15.03**	**149**	*e*P	**Pn**	**20 49 24.8**	**+11**
	comp=Z,3.0nm,0.8s						
CDF	**Champ du Feu**	**15.47**	**160**	*e*Pn	**Pn**	**20 49 21.4**	**+1.5**
BFO	**Black Forest**	**15.73**	**157**	P	**Pn**	**20 49 29.6**	**+6.3**
SPA0	**Spitsbergen Ar**	**15.93**	**13**	P	**Pn**	**20 49 25.3**	**-0.5**
	baz=186,slow=9.3						
LOR	**Lormes**	**16.18**	**169**	*e*Pn	**Pn**	**20 49 29.0**	**-0.1**
LOR				*e*Sn	**Sn**	**20 52 16.7**	**-12**
	comp=Z,2.8nm,0.3s						
LOR	**Lormes**	**16.18**	**169**	*e*Pn	**Pn**	**20 49 29.0**	**-0.1**
LOR				*e*Sn	**Sn**	**20 52 16.7**	**-12**
	comp=Z,1.4nm,0.3s						
SSF	**Saint Saulge**	**16.36**	**170**	*e*Pn	**Pn**	**20 49 29.8**	**-1.6**
SSF				*e*Sn	**Sn**	**20 52 21.1**	**-12**
	comp=Z,1.4nm,0.3s						
SSF	**Saint Saulge**	**16.36**	**170**	*e*Pn	**Pn**	**20 49 29.8**	**-1.6**
SSF				*e*Sn	**Sn**	**20 52 21.1**	**-12**
	comp=Z,0.7nm,0.3s						
AVF	**Avril sur Loir**	**16.61**	**170**	*e*Pn	**Pn**	**20 49 34.1**	**-0.5**
AVF				*e*Sn	**Sn**	**20 52 27.0**	**-12**
	comp=Z,1.7nm,0.3s						
AVF	**Avril sur Loir**	**16.61**	**170**	*e*Pn	**Pn**	**20 49 34.1**	**-0.5**
AVF				*e*Sn	**Sn**	**20 52 27.0**	**-12**
	comp=Z,0.9nm,0.3s						
MFF	**Saint Martin d**	**16.65**	**179**	*e*Pn	**Pn**	**20 49 32.6**	**-2.5**
MFF				*e*Sn	**Sn**	**20 52 30.7**	**-9.3**
	comp=Z,2.3nm,0.4s						
MFF	**Saint Martin d**	**16.65**	**179**	*e*Pn	**Pn**	**20 49 32.6**	**-2.5**
MFF				*e*Sn	**Sn**	**20 52 30.7**	**-9.3**
	comp=Z,1.1nm,0.4s						
SMF	**Signal de Mont**	**16.80**	**169**	*e*Pn	**Pn**	**20 49 36.6**	**-0.4**
SMF				*e*Sn	**Sn**	**20 52 31.6**	**-12**
	comp=Z,1.4nm,0.3s						
SMF	**Signal de Mont**	**16.80**	**169**	*e*Pn	**Pn**	**20 49 36.6**	**-0.4**
SMF				*e*Sn	**Sn**	**20 52 31.6**	**-12**
	comp=Z,0.7nm,0.3s						
BGF	**Bois d'Agland**	**16.81**	**172**	*e*Pn	**Pn**	**20 49 36.0**	**-1.1**
BGF				*e*Sn	**Sn**	**20 52 32.0**	**-12**
	comp=Z,6.6nm,0.4s						
BGF	**Bois d'Agland**	**16.81**	**172**	*e*Pn	**Pn**	**20 49 36.0**	**-1.1**
BGF				*e*Sn	**Sn**	**20 52 32.0**	**-12**
	comp=Z,3.3nm,0.4s						
TCF	**Toulx Ste Croi**	**17.04**	**173**	*e*Pn	**Pn**	**20 49 39.1**	**-0.9**
TCF				*e*Sn	**Sn**	**20 52 35.6**	**-14**
	comp=Z,1.1nm,0.3s						
TCF	**Toulx Ste Croi**	**17.04**	**173**	*e*Pn	**Pn**	**20 49 39.1**	**-0.9**
TCF				*e*Sn	**Sn**	**20 52 35.6**	**-14**
	comp=Z,0.6nm,0.3s						
CABF	**La Chapelle**	**17.07**	**164**	*e*Pn	**Pn**	**20 49 42.3**	**+1.9**
RJF	**Les Rejaudoux**	**17.99**	**175**	*e*Pn	**Pn**	**20 49 51.6**	**-0.2**
RJF				*e*Sn	**Sn**	**20 52 58.5**	**-14**
	comp=Z,2.1nm,0.4s						
RJF	**Les Rejaudoux**	**17.99**	**175**	*e*Pn	**Pn**	**20 49 51.6**	**-0.2**
RJF				*e*Sn	**Sn**	**20 52 58.5**	**-14**
	comp=Z,1.0nm,0.4s						
LPL	**La Plagne**	**18.23**	**163**	*e*Pn	**Pn**	**20 49 59.6**	**+4.9**
LPG	**La Plagne**	**18.25**	**163**	*e*Pn	**Pn**	**20 50 00.6**	**+5.6**
LFF	**La Frestale**	**18.33**	**177**	*e*Pn	**Pn**	**20 49 55.6**	**-0.4**
LFF				*e*Sn	**Sn**	**20 53 06.0**	**-15**
	comp=Z,2.9nm,0.3s						
LFF	**La Frestale**	**18.33**	**177**	*e*Pn	**Pn**	**20 49 55.6**	**-0.4**
LFF				*e*Sn	**Sn**	**20 53 06.0**	**-15**
	comp=Z,1.5nm,0.3s						
VIVF	**Saint-Julien-l**	**18.65**	**168**	*e*Pn	**Pn**	**20 50 03.2**	**+3.3**
ORIF	**Oris-en-Rattie**	**18.71**	**165**	*e*Pn	**Pn**	**20 50 05.2**	**+4.6**
LASF	**Ste Croix**	**19.35**	**170**	*e*Pn	**Pn**	**20 50 12.7**	**+4.3**
LASF				*e*Sn	**Sn**	**20 53 39.6**	**-5.8**
	comp=Z,0.6nm,0.2s						
LASF	**Ste Croix**	**19.35**	**170**	*e*Pn	**Pn**	**20 50 12.7**	**+4.3**
LASF				*e*Sn	**Sn**	**20 53 39.6**	**-5.8**
	comp=Z,0.3nm,0.2s						
AKASG	**Malin Array Be**	**20.32**	**114**	P	**P**	**20 50 19.9**	**+2.1**
	comp=Z,0.7nm,0.5s,baz=324,slow=12,SNR=4.9						
ETSF	**Etsaut**	**20.35**	**180**	*e*Pn	**P**	**20 50 21.4**	**+3.2**
ESDC	**Sonseca Array**	**23.66**	**186**	P	**P**	**20 50 56.1**	**+2.8**
	comp=Z,0.2nm,0.4s,mb2.9,baz=15,slow=10,SNR=3.1						
SCHQ	**Schefferville**	**33.58**	**287**	LR	LR	21 04 29.9	
	comp=Z,30nm,21.9s,MS3.0,baz=126,slow=34						
GNI	**Garni**	**35.29**	**109**	LR	LR	21 09 02.9	
	comp=Z,25nm,18.6s,MS3.0,baz=327,slow=39						
MKAR	**Makanchi Array**	**46.70**	**70**	P	**P**	**20 54 12.2**	**+1.5**
	comp=Z,0.3nm,0.2s,mb3.8,baz=336,slow=6.6,SNR=3.6						
TORD	**Torodi Ar. Bea**	**50.02**	**177**	P	**P**	**20 54 37.0**	**+0.8**
	comp=Z,1.1nm,0.8s,mb3.9,baz=351,slow=8.6,SNR=8.5						
PDAR	**Pinedale Array**	**60.32**	**307**	P	**P**	**20 55 48.2**	**-2.3**
	comp=Z,0.3nm,0.6s,mb3.5,baz=57,slow=5.5,SNR=3.8						

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*ISCJB **18** 21:22:31.1±0.4, 4052N±002×2320E±003, h14km±4km, Error ellipse: s-maj=4.3km s-min=3.4km az=144.0*
*NEIC **18** 21:22:31.9, 4053N×2322E, h10km, MD3.1(ATH), ML2.1(THE), After THE.*
*CSEM **18** 21:22:31.8±0.1, 4055N×2321E, h15km, ML2.1, Error ellipse: s-maj=1.4km s-min=1.1km az=75.0*
*THE **18** 21:22:31.9, 4053N×2322E, h10km, ML2.1*
*ATH **18** 21:22:32.2, 4050N×2332E, h26km±1km, MD3.1/3*
ISC 18 21:22:31.5±0.4, **4052N**±002×**2320E**±003, **h16**km±4km, **n17**, σ0.s72/30, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HORT	**Hortiatis**	**0.11**	**314**	*e*Pg	**Pg**	**21 22 35.0**	**0.0**
HORT				*e*Sg	**Sg**	**21 22 36.9**	**-0.6**
THE	**Thessaloniki**	**0.21**	**301**	*e*Pg	**Pg**	**21 22 36.3**	**-0.1**
	comp=Z,6.0nm,0.2s						
THE				*e*Sg	**Sg**	**21 22 39.3**	**-0.6**
PLG	**Polygyros**	**0.24**	**129**	*e*PB	**Pg**	**21 22 37.2**	**+0.3**
PLG				*e*SB	**Sg**	**21 22 40.9**	**+0.3**
SOH	**Sokhos**	**0.32**	**21**	*e*Pg	**Pg**	**21 22 38.4**	**+0.1**
SOH				*e*Sg	**Sg**	**21 22 43.3**	**+0.4**
OUR	**Ouranopolis**	**0.62**	**107**	*e*Pg	**Pg**	**21 22 43.9**	**+0.1**
	comp=Z,5.5nm,0.2s						
OUR				*e*Sg	**Sg**	**21 22 52.5**	**+0.3**
KNT	**Kendrikon**	**0.68**	**340**	*e*Pg	**Pg**	**21 22 44.3**	**-0.5**
	comp=Z,6.6nm,0.2s						
KNT				*e*Sg	**Sg**	**21 22 54.4**	**+0.5**
LIT	**Litokhoron**	**0.69**	**232**	*e*Pg	**Pg**	**21 22 45.4**	**+0.3**
LIT				*e*Sg	**Sg**	**21 22 55.4**	**+1.2**
PAIG	**Paliouri**	**0.70**	**148**	*e*Pg	**Pg**	**21 22 45.1**	**-0.1**
PAIG				*e*Sg	**Sg**	**21 22 54.8**	**+0.3**
GRG	**Griva**	**0.75**	**306**	*e*Pg	**Pg**	**21 22 46.6**	**+0.5**
GRG				*e*Sg	**Sg**	**21 22 57.7**	**+1.7**
VAY	**Valandovo**	**0.93**	**329**	*e*Pg	**Pg**	**21 22 49.1**	**-0.5**
NVR	**Nevrokopi**	**0.97**	**31**	*e*PN	**Pn**	**21 22 50.5**	**+0.1**
NVR				*e*SN	**Sn**	**21 23 03.6**	**-0.1**
MMB	**Musomiste**	**1.14**	**20**	*e*Pg	**Pg**	**21 22 53.0**	**-0.5**
MMB				*e*Sg	**Sg**	**21 23 08.5**	**+0.1**
XOR	**Xorichti**	**1.16**	**180**	*e*Pg	**Pg**	**21 22 53.8**	**0.0**
XOR				*e*Sg	**Sg**	**21 23 09.2**	**+0.2**
NEO	**Neokhori**	**1.22**	**179**	*e*PN	**Pn**	**21 22 55.0**	**+1.2**
FNA	**Florina**	**1.41**	**281**	*e*Pg	**Pg**	**21 22 57.0**	**-1.8**
FNA				*e*Sg	**Sg**	**21 23 17.1**	**-0.1**
AOS	**Alonnisos**	**1.45**	**159**	*e*Pg	**Pg**	**21 22 57.8**	**-1.7**
AGG	**Agios Georgios**	**1.64**	**204**	*e*Pb	**Pb**	**21 23 00.0**	**-1.4**

IDC 18 21:23:53.9±39.0, **836N**×**12536E**, **h0**km, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.5**/19, **mbtmp3.6**/4, **Error ellipse: s-maj=672.3km s-min=129.3km az=160.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**26.30**	**179**	P	P	21 29 33.2	+2.1
	1.4nm,1.1s,baz=356,slow=14,SNR=4.3						
WRA	**Warramunga Arr**	**29.48**	**163**	P	P	21 29 59.2	-0.4
	0.3nm,0.3s,baz=337,slow=10,SNR=8.6						
ASAR	**Alice Springs**	**32.91**	**165**	P	P	21 30 29.8	0.0
	0.1nm,0.4s,baz=355,slow=7.4,SNR=3.6						
STKA	**Stephens Creek**	**42.92**	**160**	P	P	21 31 53.2	-1.0
	1.9nm,0.9s,baz=340,slow=14,SNR=2.9						

MAN 18 21:40:28.7, 811N×12373E, h52km**, mb2.5, ML4.0, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.42**	**233**	*e*P	Pn	21 40 41.1	+1.9
IPIL	**Ipil**	**1.19**	**255**	⇓*i*P	Pn	21 40 49.5	+0.6
IPIL				*e*S	Sn	21 41 06.1	+2.1
IPIL	**Ipil**	**1.19**	**255**	*e*P	Pn	21 40 48.8	-0.1
BUKP	**Musuan**	**1.34**	**100**	*e*P	Pn	21 40 52.4	+1.4
BUKP				*e*S	Sn	21 41 09.0	+1.2

IDC 18 21:53:40.7±2.6, **1020S**×**11887E**, **h0**km, **mb3.7**/2, **mb1 3.8**/5, **mb1mx3.6**/15, **mbtmp3.7**/5, **ML3.6**/3, **Error ellipse: s-maj=154.7km s-min=22.1km az=54.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.23**	**141**	Pn	Pn	21 56 07.5	-1.3
	0.7nm,0.3s,baz=330,slow=14,SNR=26						
FITZ				Sn	Sn	21 57 51.8	-12
	0.7nm,0.3s,baz=184,slow=20,SNR=7.2						
WRA	**Warramunga Arr**	**17.79**	**125**	P	Pn	21 57 48.5	-1.1
	0.1nm,0.3s,baz=299,slow=14,SNR=9.7						
WRA				S	Sn	22 00 57.6	-11
	0.1nm,0.3s,baz=301,slow=26,SNR=5.1						
ASAR	**Alice Springs**	**19.62**	**135**	P	Pn	21 58 12.9	+0.9
	0.2nm,0.3s,baz=319,slow=14,SNR=30						
ASAR				S	Sn	22 01 40.9	-12
	0.1nm,0.3s,baz=305,slow=22,SNR=4.5						
SONM	**Songino Array**	**58.83**	**350**	P	P	22 03 41.5	+0.5
	0.4nm,0.5s,baz=148,slow=8.5,SNR=3.4						
MKAR	**Makanchi Array**	**65.46**	**333**	P	P	22 04 25.1	-0.4
	0.4nm,0.4s,baz=134,slow=6.2,SNR=5.8						

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*CRAAG **18** 22:08:32.0, 3683N×339E, Ml3.8*
*ISCJB **18** 22:08:34.7±0.5, 3726N±003×327E±003, h10km, Error ellipse: s-maj=4.6km s-min=3.9km az=5.9*
*NEIC **18** 22:08:35.9, 37.11N×331E, h0km, MG3.5(MDD), After MDD.*
*MDD **18** 22:08:35.5±1.8, 3709N×332E, h0km±15km, mb3.4/12, Error ellipse: s-maj=8.5km s-min=7.1km az=169.0, PRXIMO*
*LDG **18** 22:08:36.4±0.4, 3697N×344E, h15km, Ml2.8/7, Error ellipse: s-maj=8.6km s-min=4.0km az=157.0*
*CSEM **18** 22:08:37.9±0.3, 37.16N×295E, h10km, ML2.6/5, Error ellipse: s-maj=7.2km s-min=4.6km az=133.0*
ISC 18 22:08:36.0±0.5, **3718N**±003×**326E**±003, **h10**km, **n64**, σ1.s26/103, **Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.41**	**206**	P	**Pg**	**22 08 38.4**	**-5.7**
ABMS	**Boumerdes**	**0.46**	**157**	P	**Pg**	**22 08 33.2**	**-12**
EMHD	**Djebel Mahouad**	**1.00**	**194**	P	**Pg**	**22 08 46.0**	**-9.3**
EBNR	**Beni Rached**	**1.65**	**238**	P	**Pn**	**22 09 05.0**	**+0.1**
ECHA	**Ech Chlef**	**1.83**	**237**	P	**Pn**	**22 09 11.0**	**+3.5**
ECHF	**Ech Chlef**	**1.85**	**237**	P	**Pn**	**22 09 11.0**	**+3.3**
SET	**Setif**	**1.98**	**119**	P	**Pn**	**22 09 07.0**	**-2.5**
EANR	**'Ain N'Sour**	**2.12**	**235**	P	**Pn**	**22 09 11.0**	**-0.5**
CKHR	**Kef el Ahmar**	**2.15**	**122**	P	**Pn**	**22 09 11.0**	**-0.9**
DFRA	**Djebel Bou Aff**	**2.19**	**106**	P	**Pn**	**22 09 06.0**	**-6.4**
EIBI	**Ibiza**	**2.39**	**321**	P	**Pn**	**22 09 15.7**	**+0.6**
	1.4nm,0.3s,SNR=9.0						
EIBI				S	**Sn**	**22 09 45.4**	**+1.0**
	19nm,0.2s,SNR=8.5						
EIBI	**Ibiza**	**2.39**	**321**	P	**Pn**	**22 09 15.7**	**+0.6**
	1.4nm,0.3s,SNR=9.0						
EIBI				S	**Sn**	**22 09 45.4**	**+1.0**
	19nm,0.2s,SNR=8.5						
ETOS	**Mallorca**	**2.61**	**352**	P	**Pn**	**22 09 18.7**	**+0.5**
	0.6nm,0.1s,SNR=12						
ETOS				S	**Sn**	**22 09 51.3**	**+1.4**
	2.5nm,0.2s						
ETOS	**Mallorca**	**2.61**	**352**	P	**Pn**	**22 09 18.7**	**+0.5**
	0.6nm,0.1s,SNR=12						
ETOS				S	**Sn**	**22 09 51.3**	**+1.4**
	2.5nm,0.2s						
CMER	**Merouana**	**2.64**	**125**	P	**Pn**	**22 09 20.0**	**+1.4**
CASM	**Ain Smara**	**2.75**	**108**	P	**Pg**	**22 09 33.5**	**+4.8**
EBEN	**Beniarda**	**3.15**	**300**	P	**Pn**	**22 09 25.2**	**-0.4**
	0.3nm,0.2s,SNR=9.1						
EBEN				S	**Sn**	**22 10 02.6**	**-0.6**
	1.3nm,0.2s						
EBEN	**Beniarda**	**3.15**	**300**	P	**Pn**	**22 09 25.2**	**-0.4**
	0.3nm,0.2s,SNR=9.1						
EBEN				S	**Sn**	**22 10 02.6**	**-0.6**
	1.3nm,0.2s						
EMUR	**La Murta**	**3.64**	**282**	P	**Pn**	**22 09 32.9**	**+0.6**
	0.8nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**22 10 15.3**	**0.0**
	2.2nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**3.64**	**282**	P	**Pn**	**22 09 32.9**	**+0.6**
	0.8nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**22 10 15.3**	**0.0**
	2.2nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**4.07**	**293**	P	**Pn**	**22 09 38.8**	**+0.5**
	1.1nm,0.3s,SNR=13						
ETOB				S	**Sn**	**22 10 24.8**	**-1.2**
	1.9nm,0.2s,SNR=5.7						
ETOB	**Tobarra**	**4.07**	**293**	P	**Pn**	**22 09 38.8**	**+0.5**
	1.1nm,0.3s,SNR=13						
ETOB				S	**Sn**	**22 10 24.8**	**-1.2**
	1.9nm,0.2s,SNR=5.7						
ECHE	**Chera**	**4.10**	**307**	P	**Pn**	**22 09 39.9**	**+1.2**
	3.0nm,0.3s,SNR=16						
ECHE				S	**Sn**	**22 10 27.6**	**+0.8**
	1.0nm,0.2s						
EMOS	**Mosqueruela**	**4.32**	**319**	P	**Pn**	**22 09 42.8**	**+1.1**
	1.4nm,0.3s,SNR=9.1						
EMOS				S	**Sn**	**22 10 32.4**	**+0.4**
	2.6nm,0.4s,SNR=8.4						
EMOS	**Mosqueruela**	**4.32**	**319**	P	**Pn**	**22 09 42.8**	**+1.1**
EMOS				S	**Sn**	**22 10 32.4**	**+0.4**
EMOS	**Mosqueruela**	**4.32**	**319**	P	**Pn**	**22 09 42.8**	**+1.2**
	1.4nm,0.3s,SNR=9.1						
EMOS				S	**Sn**	**22 10 32.4**	**+0.4**
	2.6nm,0.4s,SNR=8.4						
ERTA	**Horta de San J**	**4.41**	**330**	S	**Sn**	**22 10 34.1**	**-0.2**
	3.7nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**4.50**	**339**	P	**Pn**	**22 09 46.3**	**+2.1**
	0.6nm,0.4s,SNR=7.9						
EPOB				S	**Sn**	**22 10 35.3**	**-1.3**
	1.6nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**4.50**	**339**	P	**Pn**	**22 09 46.3**	**+2.1**
	0.6nm,0.4s,SNR=7.9						
EPOB				S	**Sn**	**22 10 35.3**	**-1.2**
	1.6nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**4.70**	**280**	S	**Sn**	**22 10 41.9**	**+0.5**
	0.8nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**4.78**	**290**	P	**Pn**	**22 09 48.2**	**+0.1**
	0.7nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**22 10 43.3**	**-0.3**
	1.2nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**4.78**	**290**	P	**Pn**	**22 09 48.2**	**+0.1**
EVIA				S	**Sn**	**22 10 44.5**	**+0.9**
EVIA	**Vianos**	**4.78**	**290**	P	**Pn**	**22 09 48.2**	**+0.1**
	0.7nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**22 10 44.5**	**+1.0**
	SNR=7.9						
EBER	**Berja**	**4.93**	**269**	S	**Sn**	**22 10 45.0**	**-2.0**
	1.6nm,0.3s,SNR=7.9						
EBER	**Berja**	**4.93**	**269**	S	**Sn**	**22 10 45.0**	**-2.1**
	1.6nm,0.3s,SNR=7.9						
EQES	**Quesada**	**5.07**	**279**	P	**Pn**	**22 09 52.6**	**+0.6**
	1.2nm,0.3s,SNR=5.5						
EQES				S	**Sn**	**22 10 50.0**	**-0.7**
	3.8nm,0.3s,SNR=5.4						
EQES	**Quesada**	**5.07**	**279**	P	**Pn**	**22 09 52.6**	**+0.6**
	1.2nm,0.3s,SNR=5.5						
EQES				S	**Sn**	**22 10 50.0**	**-0.7**
	3.8nm,0.3s,SNR=5.4						
EJON	**La Jonquera**	**5.27**	**357**	P	**Pn**	**22 09 56.7**	**+1.9**
	0.9nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**5.27**	**357**	P	**Pn**	**22 09 56.7**	**+1.9**
	0.9nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**5.35**	**272**	P	**Pn**	**22 09 56.0**	**+0.2**
	0.3nm,0.3s,SNR=4.0						
EQUE				S	**Sn**	**22 10 55.4**	**-2.0**
	0.8nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**5.35**	**272**	P	**Pn**	**22 09 58.7**	**+2.9**
	0.3nm,0.3s,SNR=4.0						
EQUE				S	**Sn**	**22 10 55.4**	**-2.1**
	0.8nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**6.00**	**337**	S	**Sn**	**22 11 13.4**	**-0.1**
	0.5nm,0.2s,SNR=4.0						
EBIE	**Bielsa**	**6.00**	**337**	S	**Sn**	**22 11 13.4**	**-0.1**
	0.5nm,0.2s,SNR=4.0						
ESDC	**Sonseca Array**	**6.19**	**296**	P	**Pn**	**22 10 07.2**	**-0.2**
	0.2nm,0.1s,baz=108,slow=14,SNR=3.8						
ESDC				S	**Sn**	**22 11 17.2**	**-1.1**
	0.2nm,0.1s,baz=131,slow=39,SNR=5.7						
ESDC	**Sonseca Array**	**6.19**	**296**	P	**Pn**	**22 10 07.2**	**-0.2**
	0.2nm,0.1s,SNR=3.8						
ESDC				S	**Sn**	**22 11 17.2**	**-1.1**
	0.2nm,0.1s,SNR=5.7						
MTLF	**Montolieu**	**6.21**	**353**	*e*Pn	**Pn**	**22 10 09.6**	**+2.0**
MTLF				*e*Sn	**Sn**	**22 11 16.5**	**-2.2**
	0.5nm,0.3s						
MTLF	**Montolieu**	**6.21**	**353**	*e*Pn	**Pn**	**22 10 09.6**	**+2.0**
MTLF				*e*Sn	**Sn**	**22 11 16.5**	**-2.2**
	0.2nm,0.3s						
EPF	**Esparros**	**6.26**	**340**	*e*Pn	**Pn**	**22 10 10.2**	**+1.9**
EPF				*e*Sn	**Sn**	**22 11 16.8**	**-3.1**
	2.1nm,0.4s						
EPF	**Esparros**	**6.26**	**340**	*e*Pn	**Pn**	**22 10 10.2**	**+1.9**
EPF				*e*Sn	**Sn**	**22 11 16.8**	**-3.1**
	1.0nm,0.4s						
ETSF	**Etsaut**	**6.42**	**334**	*e*Pn	**Pn**	**22 10 14.1**	**+3.5**
ETSF				*e*Sn	**Sn**	**22 11 23.1**	**-0.8**
	0.5nm,0.2s						
ETSF	**Etsaut**	**6.42**	**334**	*e*Pn	**Pn**	**22 10 14.1**	**+3.5**
ETSF				*e*Sn	**Sn**	**22 11 23.1**	**-0.8**
	0.2nm,0.2s						
LMR	**La Mourre**	**6.63**	**21**	*e*Pn	**Pn**	**22 10 12.3**	**-1.2**
LMR				*e*Sn	**Sn**	**22 11 24.9**	**-4.2**
	0.9nm,0.2s						
LMR	**La Mourre**	**6.63**	**21**	P	**Pn**	**22 10 12.3**	**-1.2**
LMR				S	**Sn**	**22 11 24.9**	**-4.2**
	0.4nm,0.2s						
FRF	**La Foret Royal**	**6.88**	**21**	*e*Pn	**Pn**	**22 10 15.8**	**-1.1**
FRF				*e*Sn	**Sn**	**22 11 31.0**	**-4.2**
	2.6nm,0.4s						
FRF	**La Foret Royal**	**6.88**	**21**	P	**Pn**	**22 10 15.8**	**-1.1**
FRF				S	**Sn**	**22 11 31.0**	**-4.2**
	1.3nm,0.4s						
LASF	**Ste Croix**	**6.91**	**4**	*e*Pn	**Pn**	**22 10 17.7**	**+0.5**
LASF				*e*Sn	**Sn**	**22 11 33.7**	**-2.2**
	1.0nm,0.3s						
LASF	**Ste Croix**	**6.91**	**4**	*e*Pn	**Pn**	**22 10 17.7**	**+0.5**
LASF				*e*Sn	**Sn**	**22 11 33.7**	**-2.2**
	0.5nm,0.3s						
PGF	**Pioggiola**	**6.95**	**38**	*e*Pn	**Pn**	**22 10 15.6**	**-2.2**
PGF				*e*Sn	**Sn**	**22 11 32.8**	**-4.1**
	1.1nm,0.3s						
PGF	**Pioggiola**	**6.95**	**38**	*e*Pn	**Pn**	**22 10 15.6**	**-2.2**
PGF				*e*Sn	**Sn**	**22 11 32.8**	**-4.1**
	0.6nm,0.3s						
SMRF	**Simiane la Rot**	**7.02**	**14**	*e*Pn	**Pn**	**22 10 19.2**	**+0.5**
VIVF	**Saint-Julien-l**	**7.75**	**7**	*e*Pn	**Pn**	**22 10 29.2**	**+0.5**
LPG	**La Plagne**	**8.72**	**16**	*e*Pn	**Pn**	**22 10 43.6**	**+1.5**
LPL	**La Plagne**	**8.73**	**16**	*e*Pn	**Pn**	**22 10 41.2**	**-1.1**
AVF	**Avril sur Loir**	**9.61**	**0**	*e*Pn	**Pn**	**22 10 55.0**	**+0.7**

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*IDC **18** 22:09:37.6±5.7, 2080S×17575W, h210km±51km, mb3.5/10, mb1 3.7/12, mb1mx3.7/18, mbtmp4.1/12, MS3.6/10, Ms1 3.6/10, ms1mx3.3/27, Error ellipse: s-maj=21.2km s-min=17.0km az=66.0*
*ISCJB **18** 22:09:39.3±4.8, 209S±0.1×1758W±0.1, h239km±45km, mb3.8/16, Error ellipse: s-maj=21.3km s-min=17.3km az=175.9*
*NEIC **18** 22:09:42.9±4.2, 2093S×17582W, h262km±39km, mb4.1/8, Error ellipse: s-maj=18.1km s-min=15.6km az=72.0*
ISC 18 22:09:42.5±4.8, **210S**±01×**1758W**±01, **h255**km±46km, **n36**, σ1.s05/23, **mb3.8**/16, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.98**	**29**	LR	LR	22 13 33.5	
	comp=Z,263nm,19.4s,baz=137,slow=30						
DZM	**Mont Dzumac**	**16.57**	**263**	P	**P**	**22 13 19.6**	**+0.4**
	0.2nm,0.3s,baz=107,slow=20,SNR=2.6						
URZ	**Urewera**	**18.31**	**198**	P	**P**	**22 13 37.7**	**-0.3**
	0.7nm,0.3s,baz=97,slow=8.1,SNR=4.2						
HNR	**Honiara**	**26.02**	**292**	P	**P**	**22 14 50.2**	**-2.1**
	50nm,0.3s,baz=268,slow=11,SNR=3.3						
HNR				LR	LR	22 22 05.5	
	comp=Z,51nm,21.1s,baz=178,slow=29						
CTA	**Charters Tower**	**35.51**	**264**	P	**P**	**22 16 15.2**	**0.0**
	2.7nm,0.5s,mb4.0,baz=100,slow=12,SNR=5.7						
CTAO	**Charters Tower**	**35.51**	**264**	*e*P	**P**	**22 16 15.6**	**+0.5**
	2.0nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**39.46**	**245**	P	**P**	**22 16 49.7**	**+1.5**
	0.7nm,0.5s,mb3.3,baz=100,slow=8.1,SNR=4.1						
ASAR	**Alice Springs**	**46.43**	**257**	P	**P**	**22 17 44.3**	**+0.4**
	1.8nm,0.8s,mb3.5,baz=87,slow=8.7,SNR=16						
ASAR				PcP	PcP	22 19 14.1	0.0
	0.9nm,0.8s,baz=111,slow=4.3,SNR=5.8						
ASAR				LR	LR	22 35 50.9	
	comp=Z,93nm,19.6s,baz=194,slow=34						
WRAB	**Tennant Creek**	**46.58**	**262**	P	**P**	**22 17 44.1**	**-0.9**
	3.6nm,0.8s,mb3.8						
WRA	**Warramunga Arr**	**46.59**	**262**	P	**P**	**22 17 45.4**	**+0.3**
	1.2nm,0.8s,mb3.3,baz=97,slow=7.4,SNR=26						
FITZ	**Fitzroy Crossi**	**55.02**	**262**	P	**P**	**22 18 48.9**	**+1.2**
	0.6nm,0.6s,mb3.2,baz=63,slow=6.8,SNR=2.8						
SBA	**Scott Base**	**57.57**	**184**	*e*P	**P**	**22 19 06.7**	**+1.0**
	5.4nm,0.8s,mb4.0						
VNDA	**Vanda**	**57.65**	**186**	P	**P**	**22 19 05.8**	**-0.4**
	1.3nm,0.9s,mb3.4,baz=9.1,slow=7.3,SNR=14						
NWAO	**Narrogin (SRO)**	**60.02**	**243**	LR	LR	22 41 20.3	
	comp=Z,100nm,21.2s,baz=103,slow=32						
QSPA	**South Pole Qui**	**69.12**	**180**	*e*P	**P**	**22 20 20.1**	**-1.0**
	8.4nm,0.9s,mb4.5						
MJAR	**Matsushiro Arr**	**71.81**	**322**	P	**P**	**22 20 35.7**	**-1.7**
	1.3nm,0.6s,mb3.8,baz=160,slow=6.7,SNR=8.0						
YBH	**Yreka Blue Hor**	**79.37**	**38**	LR	LR	22 47 19.4	
	comp=Z,55nm,19.9s,baz=181,slow=28						
NVAR	**Mina Array Bea**	**79.95**	**42**	P	**P**	**22 21 23.5**	**+0.3**
	4.1nm,1.0s,mb4.1,baz=215,slow=6.6,SNR=11						
MAW	**Mawson**	**81.83**	**199**	P	**P**	**22 21 33.5**	**+0.3**
	1.4nm,0.7s,mb3.8,baz=128,slow=6.2,SNR=6.5						
MAW	**Mawson**	**81.83**	**199**	*e*P	**P**	**22 21 32.9**	**-0.2**
	2.5nm,0.8s,mb4.0						
WVOR	**Wild Horse Val**	**82.17**	**39**	*e*P	**P**	**22 21 34.5**	**-0.4**
	5.9nm,1.2s,mb4.2						
MSU	**Marysvale**	**83.95**	**45**	*e*P	**P**	**22 21 44.7**	**+0.7**
ANMO	**Albuquerque**	**86.08**	**50**	LR	LR	22 54 34.5	
	comp=Z,41nm,21.2s,baz=278,slow=31						
ANMO	**Albuquerque**	**86.08**	**50**	*e*P	**P**	**22 21 53.7**	**-0.9**
	6.0nm,1.1s,mb4.3						
PLCA	**Paso Flores**	**87.46**	**133**	LR	LR	22 52 55.8	
	comp=Z,46nm,21.9s,baz=357,slow=30						
SNAA	**Sanae**	**87.49**	**178**	*e*P	**P**	**22 21 58.3**	**-3.0**
	1.8nm,1.0s,mb3.9						
PDAR	**Pinedale Array**	**87.89**	**42**	P	**P**	**22 22 04.1**	**+0.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.2nm,0.5s,mb3.2,baz=212,slow=5.3,SNR=3.8						
PDAR				LR	LR	22 54 33.7	
	comp=Z,28nm,19.8s,baz=74,slow=31						
DAWY	Dawson	89.34	15	*e*P	P	22 22 11.6	+1.6
YKA	Yellowknife Ar	96.07	24	LR	LR	22 58 48.9	
	comp=Z,19nm,18.5s,baz=270,slow=31						
ULM	Lac du Bonnet	99.64	40	LR	LR	22 58 21.4	
	comp=Z,50nm,22.0s,baz=279,slow=29						
ARCES	ARCESS Array B	129.72	350	PKP	PKPdf	22 28 19.0	-2.2
	0.6nm,0.6s,baz=336,slow=1.1,SNR=4.3						
BRTR	Keskin Array B	148.66	313	PKPbc	PKPbc	22 29 00.8	+1.5
	0.6nm,0.8s,baz=166,slow=2.2,SNR=3.3						
CLL	Collm	148.93	349	*i* PKiKP	PKiKP	22 29 02.6	+1.4
	comp=Z,5.0nm,1.0s						
CLL				*i* (pPKiKP)		22 29 07.5	
CLL				*i* (pPKPab)		22 29 09.9	
BRG	Berggiesshubel	149.17	348	*e*P	PKPdf	22 28 54.6	-1.5
	comp=Z,4.8nm,1.5s						
BRG				*e*		22 29 08.1	
	comp=Z,5.5nm,1.3s						
GEC2	GERESS Array S	151.15	347	*e*PKPbc	PKPab	22 29 13.2	-0.9
GERES	GERESS Array B	151.15	347	PKP	PKPdf	22 28 59.2	0.0
	comp=Z,1.3nm,0.9s,baz=75,slow=1.5,SNR=9.6						
GERES				PKPab	PKPab	22 29 13.2	-0.9
	comp=Z,1.5nm,0.9s,baz=48,slow=2.0,SNR=8.4						

*ISCJB **18** 23:09:13.6±0.5, 5146N±003×1616E±002, h0km, Error ellipse: s-maj=3.9km s-min=2.1km az=19.7*
*IDC **18** 23:09:14.8±0.9, 5142N×1558E, h0km, mb1 3.2/5, mb1mx3.1/20, mbtmp3.2/5, ML2.7/4, Error ellipse: s-maj=15.4km s-min=8.4km az=97.0*
*NEIC **18** 23:09:14.9±0.5, 5152N×1620E, h5km, ML2.9(SZGRF), Error ellipse: s-maj=6.4km s-min=4.3km az=193.0*
*IPEC **18** 23:09:15.5±0.4, 5151N×1623E, h10km±1km, ML2.4/4, Error ellipse: s-maj=2.4km s-min=1.3km az=18.0*
*CSEM **18** 23:09:15.2, 5152N×1618E, h2km, ML3.4/7*
*WAR **18** 23:09:16.2, 5147N×1614E, ML2.7, Mining Induced*
*PRU **18** 23:09:16.7, 5145N×1609E, h0km*
*VIE **18** 23:09:16.8±0.8, 5132N×1612E, h0km, mb2.4/3, ML2.8/4, Error ellipse: s-maj=5.0km s-min=4.7km az=171.0 67 km WNW of Breslau Suspected Mining induced.*
ISC 18 23:09:14.6±0.4**, 5150N**±002×**1615E**±003**, h0**km**, n53, σ0.98**/95**, 3C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.67	172	*i* Pgd	Pg	23 09 27.9	+0.5
KSP				*e*Sg	Sg	23 09 35.4	-0.7
KSP				*e*L		23 09 40.0	
KSP	Ksiaz	0.67	172	*e*Pg	Pg	23 09 27.9	+0.5
KSP				*e*Sg	Sg	23 09 35.4	-0.7
UPC	Upice	1.00	185	*e*PG	Pg	23 09 34.1	+0.3
DPC	Dobruska-Polom	1.16	174	*e*PG	Pg	23 09 36.8	0.0
DPC				*e*SG	Sg	23 09 51.9	0.0
	73nm,0.7s						
PVCC	Panska Ves	1.40	226	*e*Pn	Pn	23 09 41.3	0.0
PVCC				*e*Sg	Sg	23 10 00.7	+1.2
BRG	Berggiesshubel	1.52	246	PN	Pn	23 09 43.0	-0.1
BRG				PG	Pg	23 09 43.8	0.0
BRG				SG	Sg	23 10 04.0	+0.4
	37nm,0.7s						
BRG	Berggiesshubel	1.52	246	Pg	Pg	23 09 43.8	0.0
RUE	Ruedersdorf	1.76	305	*e*Pn	Pn	23 09 46.1	-0.2
RUE	Ruedersdorf	1.76	305	*e*Pn	Pn	23 09 46.2	-0.1
PRU	Pruhonice	1.83	215	*e*PN	Pn	23 09 47.5	+0.3
PRU				*e*PG	Pg	23 09 48.9	-0.7
PRU				*e*SG	Sg	23 10 14.0	+0.6
	57nm,0.7s						
RAC	Raciborz	1.93	137	*e*Pg	Pg	23 09 50.9	-0.6
RAC				*e*Sg	Sg	23 10 17.3	+0.8
MORC	Moravsky Berou	1.94	152	⇓*i*Pn	Pn	23 09 48.5	-0.4
MORC				*e*Sn	Sn	23 10 11.0	-3.0
MORC	Moravsky Berou	1.94	152	*e*Pn	Pn	23 09 48.5	-0.3
MORC				*e*Sn	Sn	23 10 11.0	-2.9
CLL	Collm	1.98	266	*i* Pn	Pn	23 09 49.0	-0.3
CLL				*i* Pg	Pg	23 09 52.9	+0.4
CLL				*e*x	x	23 09 55.0	
CLL				*i* x	x	23 10 01.1	
CLL				*i* Sg	Sg	23 10 18.9	+0.7
	comp=Z,24nm,0.6s						
CLL	Collm	1.98	266	*i* Pn	Pn	23 09 49.0	-0.3
CLL				*i* Pg	Pg	23 09 52.9	+0.4
CLL				*i* Sg	Sg	23 10 18.9	+0.7
OKC	Ostrava-Krasne	2.10	142	*e*PG	Pg	23 09 54.5	-0.3
OKC				*e*SG	Sg	23 10 20.9	-1.1
	comp=Z,45nm,0.6s						
OKC	Ostrava-Krasne	2.10	142	*e*Pn	Pn	23 09 49.5	-1.4
OKC	Ostrava-Krasne	2.10	142	*e*Pg	Pg	23 09 54.5	-0.3
OKC				*e*Sg	Sg	23 10 20.9	-1.1
VRAC	Vranov	2.22	172	Pn	Pn	23 09 53.5	+1.0
	comp=Z,1.4nm,0.3s,baz=341,slow=16,SNR=19						
VRAC				Sn	Sn	23 10 22.3	+1.6
	comp=Z,3.6nm,0.3s,baz=260,slow=23,SNR=9.8						
VRAC	Vranov	2.22	172	*e*Pn	Pn	23 09 52.5	-0.1
VRAC				Sn	Sn	23 10 22.3	+1.6
VRAC				*e*Sg	Sg	23 10 24.0	-1.8
	comp=Z,19nm,0.4s						
KRUC	Moravsky	2.45	176	*e*Pn	Pn	23 09 56.1	+0.3
KRUC				*e*Sg	Sg	23 10 33.0	-0.3
	comp=Z,18nm,0.5s						
OJC	Ojcow	2.65	118	*e*Pg	Pg	23 10 05.0	-0.3
OJC				e		23 10 39.6	
OJC				*e*Sg	Sg	23 10 40.5	+0.9
NKC	Novy Kostel	2.67	243	*e*PN	Pn	23 09 59.2	+0.4
NKC				*e*PG	Pg	23 10 05.2	-0.5
NKC				*e*SG	Sg	23 10 41.3	+1.0
	comp=Z,35nm,0.4s						
KHC	Kasperske Hory	2.89	216	*e*PN	Pn	23 10 02.4	+0.5
KHC				*e*PG	Pg	23 10 08.2	-1.8
KHC				*e*SN	Sn	23 10 37.2	-0.1
KHC				*e*SG	Sg	23 10 47.3	-0.2
	comp=Z,23nm,0.5s						
GEC2	GERESS Array S	3.09	212	*e*Pn	Pn	23 10 05.1	+0.5
GEC2				*e*Sn	Sn	23 10 42.9	+0.7
GEC2	GERESS Array S	3.09	212	*e*Pn	Pn	23 10 05.1	+0.5
GEC2				*e*Sn	Sn	23 10 42.9	+0.6
GERES	GERESS Array B	3.09	212	Pg	Pn	23 10 05.4	+0.7
	comp=Z,0.6nm,0.3s,baz=28,slow=12,SNR=24						
GERES				Lg		23 10 49.6	
	comp=Z,2.7nm,0.3s,baz=30,slow=26,SNR=6.4						
GERES	GERESS Array B	3.09	212	Pg	Pn	23 10 05.4	+0.7
GERES				Lg		23 10 49.6	
WET	Wettzell	3.16	223	*e*Pn	Pn	23 10 05.5	0.0
ZST	Bratislava	3.37	169	*e*SG	Sg	23 11 01.7	-1.1
NIE	Niedzica	3.38	126	*e*P	Pg	23 10 18.8	-0.6
NIE				*e*S	Sg	23 11 04.3	+1.1
VYHS	Vyhne	3.48	149	*e*PN	Pn	23 10 09.4	-0.5
VYHS				*e*PG	Pg	23 10 20.0	-1.2
VYHS				*e*SG	Sg	23 11 07.4	+1.1
CONA	Conrad Observa	3.58	183	⇑*i*Pn	Pn	23 10 11.1	-0.3
CONA				⇓*i*Sg	Sg	23 11 08.4	-1.4
	comp=Z,13nm,0.5s						
GRA1	Grafenberg Arr	3.62	242	*e*Pn	Pn	23 10 12.5	+0.6
GRA1				*e*Sg	Sg	23 11 11.0	-0.1
GRF	Grafenberg Arr	3.62	242	*e*Pn	Pn	23 10 12.5	+0.6
GRF				*e*Sg	Sg	23 11 11.0	-0.1
MOA	Molln	3.86	199	⇑*i*Pn	Pn	23 10 14.6	-0.5
MOA				⇑*i*Sg	Sg	23 11 17.7	-0.8
	comp=Z,13nm,0.5s						
STHS	Stebnicka Huta	3.87	121	*e*PN	Pn	23 10 16.6	+1.3
STHS				*e*PG	Pg	23 10 29.2	+0.5
STHS				*e*SG	Sg	23 11 23.8	+4.9
KECS	Kecovo	4.12	136	*e*SG	Sg	23 11 30.0	+3.1
CRVS	Cervenica-Dubn	4.29	125	*e*PG	Pg	23 10 36.5	-0.4
CRVS				*e*SG	Sg	23 11 36.3	+3.8
KWP	Kalwaria	4.58	112	*e*Pg	Pg	23 10 39.6	-2.8
KWP				*e*Sg	Sg	23 11 46.1	+4.3
KWP	Kalwaria	4.58	112	*e*Pg	Pg	23 10 39.6	-2.8
KOLS	Kolonicke sedl	4.70	121	*e*	Pg	23 10 46.6	+2.0
KOLS				*e*	Sg	23 11 56.0	+10
DOBS	Dobrina	5.38	185	*e*Pn	Pn	23 10 38.0	+1.9
ROBS	Robic	5.54	199	*i* Pn	Pg	23 10 52.9	-7.9
VISS	Visnje	5.77	189	*i* Pn	Pn	23 10 42.5	+1.1
VISS	Visnje	5.77	189	*i* Pn	Pn	23 10 42.5	+1.1
BFO	Black Forest	5.97	241	Pg	Pg	23 11 08.7	-0.2
BFO				*e*Sg	Sg	23 12 24.8	-1.4
BFO	Black Forest	5.97	241	Pg	Pg	23 11 08.7	-0.2
BOJS	Bojanci	6.03	186	*i* Pn	Pn	23 10 46.3	+1.3
AKASG	Malin Array Be	8.27	90	Pn	Pn	23 11 15.9	+0.2
	baz=280,slow=12,SNR=5.6						
HFS	Hagfors	8.76	352	Pn	Pn	23 11 22.0	-0.5
	comp=Z,0.1nm,0.3s,baz=167,slow=13,SNR=3.3						
FINES	FINESS Array B	11.36	25	Pn	Pn	23 11 55.8	-2.3
	comp=Z,0.1nm,0.3s,baz=186,slow=11,SNR=4.2						
ARCES	ARCESS Array B	18.62	10	Pn	Pn	23 13 29.8	-4.0
	comp=Z,0.1nm,0.3s,baz=201,slow=12,SNR=8.5						

*ISCJB **18** 23:16:40.4±4.0, 192S±03×1777W±02, h576km±51km, mb3.4/7, Error ellipse: s-maj=44.9km s-min=20.7km az=133.1*
*IDC **18** 23:16:41.8±3.4, 1911S×17765W, h575km±40km, mb2.9/6, mb1 3.2/6, mb1mx3.1/13, mbtmp3.8/6, Error ellipse: s-maj=33.6km s-min=15.8km az=155.0*
*NEIC **18** 23:16:41.7±5.8, 1908S×17765W, h577km±67km, mb3.8/1, Error ellipse: s-maj=29.6km s-min=26.9km az=166.0*
ISC 18 23:16:41.6±4.1**, 192S**±03×**1776W**±02**, h574**km±50km**, n12, σ0.21**/9**, mb3.4**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.73	243	P	P	23 23 17.4	+0.1
	0.7nm,0.4s,mb3.5,baz=79,slow=11,SNR=3.8						
STKA	Stephens Creek	38.73	243	*e*P	P	23 23 17.2	-0.1
WRAB	Tennant Creek	45.18	261	*e*P	P	23 24 07.9	0.0
	1.0nm,0.3s,mb3.8						
WRA	Warramunga Arr	45.19	261	P	P	23 24 07.8	-0.2
	1.4nm,0.5s,mb3.8,baz=98,slow=6.7,SNR=11						
ASAR	Alice Springs	45.22	255	P	P	23 24 08.4	+0.3
	1.4nm,0.4s,mb3.8,baz=88,slow=8.1,SNR=20						
ASAR				S	S	23 30 06.9	0.0
	0.5nm,0.8s,baz=95,slow=15,SNR=4.8						
VNDA	Vanda	59.25	185	P	P	23 25 48.5	0.0
	0.4nm,0.8s,mb2.6,baz=351,slow=6.8,SNR=5.6						
NVAR	Mina Array Bea	79.80	43	P	P	23 27 51.2	+0.3
	0.3nm,0.5s,mb2.9,baz=224,slow=7.6,SNR=2.9						
PDAR	Pinedale Array	87.74	43	P	P	23 28 29.6	-0.3
	0.4nm,0.7s,mb3.2,baz=209,slow=2.7,SNR=3.5						
ARCES	ARCESS Array B	127.70	350	PKP	PKPdf	23 34 41.0	-1.3
	0.8nm,0.8s,baz=5.7,slow=2.4,SNR=6.7						
CLL	Collm	146.87	348	*e*PKP1	PKPbc	23 35 22.0	+2.0
MMAI	Mount Meron Ar	147.48	302	PKPbc	PKPbc	23 35 22.7	+1.1
	0.7nm,0.5s,baz=81,slow=7.2,SNR=4.4						
GERES	GERESS Array B	149.03	345	PKPbc	PKPbc	23 35 25.4	-0.1
	0.7nm,0.7s,baz=37,slow=3.3,SNR=7.9						

*ISCJB **19** 00:22:34.8±0.4, 3704N±003×496W±002, h4km±3km, Error ellipse: s-maj=5.3km s-min=3.1km az=178.7*
*MDD **19** 00:22:36.8±0.2, 3690N×489W, h10km, mbLg2.0/19, Error ellipse: s-maj=2.4km s-min=1.7km az=168.0, PRXIMO*
*INMG **19** 00:22:37.6±1.5, 3682N×493W, h20km±5km, ML2.2, Error ellipse: s-maj=3.9km s-min=3.0km az=170.0*
ISC 19 00:22:35.7±0.4**, 3698N**±003×**493W**±002**, h10**km±3km**, n28, σ0.94**/48**, 3C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIJA	Lijar	0.38	259	⇑Pg	Pg	00 22 43.4	+0.1
LIJA				Lg		00 22 51.3	
EMIJ	Mijas	0.43	163	⇑Pg	Pg	00 22 43.1	-1.1
	13nm,0.2s,SNR=18						
EMIJ				Lg		00 22 47.9	
	216nm,0.4s,SNR=5.0						
REAL	Reales	0.54	204	Pg	Pg	00 22 45.7	-0.6
REAL				Lg		00 22 53.6	
ELOJ	Sierra Loja	0.65	75	Pg	Pg	00 22 48.8	+0.6
	8.9nm,0.6s,SNR=13						
ELOJ				Lg		00 22 57.6	
	26nm,0.5s,SNR=11						
EJIF	Jimena Fronter	0.68	219	Pg	Pg	00 22 49.2	+0.3
	4.5nm,0.2s,SNR=20						
EJIF				Lg		00 22 58.1	
	6.0nm,0.3s,SNR=7.9						
ESPR	Espera	0.75	262	Pg	Pg	00 22 51.4	+1.3
	12nm,0.4s,SNR=41						
ESPR				Lg		00 23 02.0	
	34nm,0.2s,SNR=8.6						
ELUQ	Luque	0.79	42	Pg	Pg	00 22 51.8	+0.9
	4.2nm,0.3s,SNR=7.9						
ELUQ				Lg		00 23 03.6	
	33nm,0.3s,SNR=7.9						
GIBL	Gibalbin	0.84	260	Pg	Pg	00 22 53.9	+2.0
GIBL				Lg		00 23 08.1	
ERON	Agron	0.90	87	Pg	Pg	00 22 53.8	+0.7
	2.8nm,0.2s,SNR=8.0						
ERON				Lg		00 23 05.2	
	9.1nm,0.3s,SNR=5.0						
EGUA	Guajares	1.11	97	Pg	Pg	00 22 56.5	-0.5
	1.8nm,0.4s,SNR=7.9						
EGUA				Lg		00 23 11.6	
	0.8nm,0.2s,SNR=7.9						
ECOG	Cogollos-Vega	1.13	74	Pg	Pg	00 22 57.7	+0.2
	4.8nm,0.2s,SNR=17						
ECOG				Lg		00 23 13.6	
	12nm,0.2s,SNR=6.9						
EQUE	Quentar	1.22	79	Pg	Pg	00 22 59.9	+0.9
	6.3nm,0.3s,SNR=50						
EQUE				Lg		00 23 15.9	
	13nm,0.3s,SNR=7.4						
EADA	Adamuz	1.22	13	Pn	Pn	00 22 59.0	+0.2
	1.7nm,0.1s,SNR=48						
EADA				Pg	Pg	00 23 00.7	+1.6
	6.1nm,0.2s,SNR=7.9						
EADA				Sn	Sn	00 23 16.5	+1.1
	42nm,0.3s,SNR=19						
EADA				Lg		00 23 17.7	
	42nm,0.3s,SNR=7.9						
EBAN	Banos Encina	1.50	37	Pn	Pn	00 23 03.4	+0.8
	0.9nm,0.1s,SNR=4.0						
EBAN				Pg	Pg	00 23 05.1	+0.6
	2.7nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	00 23 22.1	0.0
	72nm,0.4s,SNR=5.0						
EBAN				Lg		00 23 24.7	
	17nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	1.59	300	Pn	Pn	00 23 02.9	-1.1
	0.6nm,0.2s,SNR=32						
EMIN				Pg	Pg	00 23 06.4	+0.1
	3.7nm,0.2s,SNR=8.1						
EMIN				Sn	Sn	00 23 25.2	+0.6
	11nm,0.2s,SNR=17						
EMIN				Lg		00 23 28.2	
	7.6nm,0.3s,SNR=7.9						
EBER	Berja	1.64	92	Pg	Pg	00 23 06.6	-0.6
	4.8nm,0.3s,SNR=12						
EBER				Lg		00 23 27.4	
	13nm,0.4s,SNR=4.0						
EQES	Quesada	1.70	60	Pg	Pg	00 23 08.2	-0.1
	2.7nm,0.2s,SNR=13						
EQES				Lg		00 23 30.7	
	24nm,0.4s,SNR=14						
EHUE	Huescar	2.04	65	Pn	Pn	00 23 10.6	+0.5
	0.2nm,0.2s,SNR=7.9						
EHUE				Pg	Pg	00 23 13.7	-1.2
	0.7nm,0.1s,SNR=7.9						
EHUE				Lg		00 23 41.7	
	4.5nm,0.2s,SNR=7.6						
EGRO	El Granado	2.11	286	Pn	Pn	00 23 10.4	-0.6
	0.5nm,0.1s,SNR=7.7						
EGRO				Pg	Pg	00 23 15.0	-1.1
	1.2nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	00 23 37.0	-0.3
	2.8nm,0.2s,SNR=7.9						
EGRO				Lg		00 23 44.0	
	10nm,0.3s,SNR=5.4						
EBAD	Badajoz	2.42	318	⇑Pn	Pn	00 23 14.5	-0.8
	0.7nm,0.1s,SNR=18						
EBAD				Sn	Sn	00 23 44.1	-0.9
	6.7nm,0.2s,SNR=5.0						
EBAD				Lg		00 23 55.0	
	7.6nm,0.2s,SNR=5.0						
EVIA	Vianos	2.54	49	Pn	Pn	00 23 18.1	+1.1
	0.3nm,0.1s,SNR=4.0						
EVIA				Pg	Pg	00 23 23.3	-1.2
	2.5nm,0.3s,SNR=7.9						
EVIA				Sn	Sn	00 23 46.5	-1.4
	1.1nm,0.1s,SNR=7.9						
EVIA				Lg		00 23 58.3	
	8.5nm,0.4s,SNR=5.2						
PBEJ	Beja	2.56	295	*e*Pn	Pn	00 23 18.4	+1.2
PBEJ				*e*Sg	Sg	00 23 59.1	+1.2
PBEJ							
	4.8nm,0.5s						
ESDC	Sonseca Array	2.80	16	Pn	Pn	00 23 21.5	+1.0
	1.3nm,0.2s,baz=196,slow=12,SNR=19						
ESDC				Pg	Pg	00 23 28.1	-1.2
	0.1nm,0.1s,baz=195,slow=13,SNR=8.2						
ESDC				Sn	Sn	00 23 54.0	-0.3
	0.5nm,0.4s,baz=185,slow=16,SNR=4.8						
ESDC				Lg		00 24 02.8	
	1.1nm,0.3s,baz=196,slow=28,SNR=12						
PESTR	Estremoz	2.82	313	*e*Pn	Pn	00 23 21.8	+1.0
PESTR				*e*Sg	Sg	00 24 05.2	-1.2
PESTR							
	6.8nm,0.5s						
PTEO	Sao Teotonio	3.08	282	*e*Sn	Sn	00 24 00.3	-0.8
PTEO				*e*Sg	Sg	00 24 13.0	-1.6
PTEO							
	7.3nm,0.4s						
ETOB	Tobarra	3.16	57	Pn	Pn	00 23 25.7	+0.3
	0.2nm,0.1s,SNR=7.9						
ETOB				Pg	Pg	00 23 34.0	-2.2
	0.4nm,0.3s,SNR=6.5						
ETOB				Sn	Sn	00 24 02.6	-0.5
	0.9nm,0.2s,SNR=7.9						
ETOB				Lg		00 24 17.1	
	8.5nm,0.5s,SNR=5.8						
PCBR	Castelo Branco	3.49	326	*e*Pn	Pn	00 23 30.7	+0.7
PCBR				*e*Sg	Sg	00 24 28.4	+0.7
MTE	Manteigas	3.98	330	*e*Sg	Sg	00 24 42.6	-1.0
MTE							
	5.4nm,0.6s						

*ISCJB **19** 00:26:58.5±0.3, 3342N±003×5684E±002, h10km, Error ellipse: s-maj=3.9km s-min=2.9km az=2.0*
*THR **19** 00:26:58.9±0.3, 3339N×5684E, h14km±7km, ML3.5*
*CSEM **19** 00:27:00.0±0.0, 3336N×5686E, h30km, ML3.6, Error ellipse: s-maj=1.2km s-min=0.9km az=174.0*
*TEH **19** 00:27:00.7, 3335N×5687E, h14km, Mn3.6*
ISC 19 00:26:59.6±0.3**, 3339N**±003×**5685E**±002**, h10**km**, n23, σ0.85**/41**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITEG		1.66	107	*e*Pn	Pn	00 27 28.6	-0.2
ITEG				*e*Sn	Sn	00 27 50.2	0.0
IKOO		2.05	117	*e*Pn	Pn	00 27 33.8	-0.3
IKOO				*e*Sn	Sn	00 27 59.2	-0.4
IBAF	Bafgh	2.09	212	*e*Pn	Pn	00 27 34.7	0.0
IBAF				*e*Sn	Sn	00 28 00.2	-0.6
ICHK	Chekchek	2.35	242	*e*Pn	Pn	00 27 38.7	+0.4
ICHK				*e*Sn	Sn	00 28 06.6	-0.6
IMON		2.36	94	*e*Pn	Pn	00 27 38.8	+0.4
IMON				*e*Sn	Sn	00 28 06.9	-0.6
IDAH		2.61	103	*e*Pn	Pn	00 27 42.0	+0.2
IDAH				*e*Sn	Sn	00 28 12.8	-0.8
IMEH	Mehriz	2.75	224	*e*Pn	Pn	00 27 44.6	+0.9
IMEH				*e*Sn	Sn	00 28 15.9	-1.0
ISAD	Sadrabad	3.05	242	*e*Pn	Pn	00 27 48.4	+0.6
ISAD				*e*Sn	Sn	00 28 23.2	-1.2
IANJ	Anjiloo	3.20	311	*e*Pn	Pn	00 27 50.6	+0.7
IANJ				*e*Sn	Sn	00 28 27.6	-0.4
KRBR	Kerman	3.39	181	*e*PN	Pn	00 27 53.9	+1.3
KRBR				*e*SG	Sg	00 28 44.9	-3.6
KRBR				AML	AML	00 28 47.8	
	comp=N,94nm,0.5s						
KRBR				AML	AML	00 28 52.7	
	comp=E,142nm,0.4s						
KRBR	Kerman	3.39	181	*e*Pn	Pn	00 27 53.8	+1.2
	SNR=52						
KRBR				*e*Sg	Sg	00 28 44.9	-3.7
	SNR=90						
IMOG	Moghan	3.40	36	*e*Pn	Pn	00 27 53.4	+0.7
IMOG				*e*Sn	Sn	00 28 32.4	-0.6
NASN	Na'in	3.45	261	*e*PN	Pn	00 27 54.4	+1.1
IPAY	Payeh	3.53	29	*e*Pn	Pn	00 27 55.1	+0.7
IPAY				*e*Sn	Sn	00 28 35.3	-0.9
ILAS	Lasjerd	3.79	303	*e*Pn	Pn	00 27 58.7	+0.7
ILAS				*e*Sn	Sn	00 28 41.6	-1.0
ISHM	Shahmirzad	3.80	310	*e*Pn	Pn	00 27 58.9	+0.7
ISHM				*e*Sn	Sn	00 28 42.1	-0.9
IMYA	Miamay	3.98	41	*e*Pn	Pn	00 28 01.6	+1.0
IMYA				*e*Sn	Sn	00 28 46.0	-1.3
IFIR	Firoozkooh	4.07	305	*e*Pn	Pn	00 28 02.5	+0.7
IFIR				*e*Sn	Sn	00 28 48.4	-1.0
MRVT	Maraveh tapeh	4.31	352	*e*PN	Pn	00 28 06.0	+0.9
IDMV	Damavand	4.54	300	*e*Pn	Pn	00 28 09.0	+0.6
IDMV				*e*Sn	Sn	00 28 59.4	-1.8
DAMV	Damavand	4.61	300	*e*PN	Pn	00 28 10.5	+1.2
DAMV				AML	AML	00 29 35.7	
	comp=E,26nm,0.5s						
ASAO	Ashtian	5.79	283	*e*PN	Pn	00 28 26.6	+1.0
ASAO	Ashtian	5.79	283	*e*Pn	Pn	00 28 26.5	+1.0
	SNR=52						

*IDC **19** 00:38:01.8±0.5, 051N×12602E, h0km, mb4.6/16, mb1 4.6/17, mb1mx4.5/21, mbtmp4.5/17, ML3.9/1, MS3.8/6, Ms1 3.8/6, ms1mx3.2/28, Error ellipse: s-maj=25.2km s-min=10.5km az=72.0*
*ISCJB **19** 00:38:05.8±1.5, 054N±004×12620E±007, h42km±13km, mb4.7/42, MS3.8/8, Error ellipse: s-maj=12.6km s-min=6.3km az=136.5*
*MOS **19** 00:38:06.1±1.2, 053N×12609E, h46km, mb5.1/13, Error ellipse: s-maj=18.2km s-min=8.0km az=111.9*
*BJI **19** 00:38:07.6, 074N×12601E, h45km, mB4.9, mb5.0, Ms4.4*
*NEIC **19** 00:38:09.9±1.5, 046N×126.17E, h65km±14km, mb4.6/18, Error ellipse: s-maj=13.2km s-min=6.8km az=63.0*
ISC 19 00:38:10.0±1.2**, 050N**±004×**12621E**±007**, h65**km±11km**, h26**km±3.7km**:pP-P, n86, σ1.21**/85**, mb4.6**/42**, 6C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	5.23	105	P	Pn	00 39 38.6	+13
	0.0nm,0.0s						
PCI	Palu	6.52	258	P	Pn	00 39 48.8	+5.6
	0.0nm,0.0s						
KKM	Kota Kinabalu	11.39	299	*e*Pn	Pn	00 40 49.9	+0.1
KAKA	Kakadu	14.51	155	*e*P	Pn	00 41 30.1	-1.6
	24nm,0.7s						
KSM	Kuching	15.92	274	*e*Pn	Pn	00 41 51.9	+1.9
BJII	Banjamegara	18.20	244	P	Pn	00 42 20.6	+2.6
	52nm,0.9s						
FITZ	Fitzroy Crossi	18.49	182	P	Pn	00 42 20.5	-1.0
	0.3nm,0.3s,baz=42,slow=11,SNR=10						
FITZ	Fitzroy Crossi	18.49	182	*e*P	Pn	00 42 20.1	-1.4
	9.5nm,0.9s						
WRAB	Tennant Creek	21.82	159	*e*P	P	00 42 56.2	-0.5
WRAB				*e*S	S	00 46 52.9	-1.2
WRAB				pmax	pmax		
	comp=Z,73nm,0.8s,mb5.1						
WRAB	Tennant Creek	21.82	159	*e*P	P	00 42 56.2	-0.5
	comp=Z,73nm,0.8s,mb5.1						
WRAB				*e*S	S	00 46 52.9	-1.3
WRA	Warramunga Arr	21.82	159	P	P	00 42 56.3	-0.4
	comp=Z,41nm,0.7s,mb4.9,baz=338,slow=12,SNR=52						
WRA				S	S	00 46 54.8	+0.6
	comp=Z,4.9nm,1.1s,baz=334,slow=18,SNR=5.6						
WB2	Warramunga Arr	21.82	159	*e*P	P	00 42 55.9	-0.9
MBWA	Marble Bar	22.43	196	*e*P	P	00 43 02.3	-0.9
	comp=Z,3.2nm,0.6s,mb3.8						
GUMO	Guam	22.60	54	P	P	00 43 05.9	+0.8
	comp=Z,17nm,0.5s,mb4.7,baz=177,slow=8.7,SNR=4.2						
GUMO				LR	LR	00 51 02.0	
	comp=Z,71nm,19.5s,baz=251,slow=34						
PMG	Port Moresby	23.07	116	P	P	00 43 11.2	+1.3
	comp=Z,10nm,0.7s,mb4.3,baz=266,slow=9.7,SNR=4.0						
QIZ	Qiongzhong	24.43	320	P	P	00 43 20.8	-1.6
QIZ				S	S	00 47 36.1	-1.7
AS31	Alice Springs	25.16	163	*e*P	P	00 43 29.7	+0.7
ASAR	Alice Springs	25.16	163	P	P	00 43 29.4	+0.3
	comp=Z,7.9nm,0.4s,mb4.5,baz=344,slow=9.1,SNR=131						
ASAR				PcP	PcP	00 47 03.3	+1.8
	comp=Z,1.2nm,0.6s,baz=351,slow=2.1,SNR=5.5						
ASAR				S	S	00 47 56.7	+7.3
	comp=Z,1.5nm,0.8s,baz=346,slow=20,SNR=6.2						
ASAR	Alice Springs	25.16	163	P	P	00 43 29.4	+0.3
ASAR				PcP	PcP	00 47 03.3	+1.8
ASAR				S	S	00 47 56.7	+7.3
KULM	Kulim	25.95	281	*e*P	P	00 43 36.4	+0.1
JOW	Kunigami	26.26	4	P	P	00 43 41.0	+2.0
	comp=Z,14nm,0.7s,mb4.5,baz=193,slow=13,SNR=5.5						
CTA	Charters Tower	28.36	137	P	P	00 43 59.2	+1.4
	comp=Z,4.1nm,0.7s,mb4.0,baz=13,slow=18,SNR=4.2						
CTA	Charters Tower	28.36	137	*e*P	P	00 43 59.6	+1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CTA	**Charters Tower**	**28.36**	**137**	*e*P	**P**	**00 43 59.6**	**+1.8**
	comp=Z,4.3nm,1.0s,mb3.9						
CBIJ	**Chichi jima**	**30.58**	**29**	LR	LR	00 54 39.6	
	comp=Z,218nm,21.8s,baz=339,slow=32						
SSE	**Sheshan**	**30.80**	**352**	P	**P**	**00 44 18.1**	**-1.3**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
FORT	**Forrest**	**31.15**	**177**	*e*P	**P**	**00 44 22.4**	**-0.1**
	comp=Z,23nm,0.6s,mb5.1						
NJ2	**Nanjing**	**32.15**	**348**	*e*P	**P**	**00 44 30.5**	**-0.7**
NJ2				AP	pP	00 44 40.0	-7.1
NJ2				XP	sP	00 44 44.0	-11
NJ2				PP	PP	00 45 37.1	-7.8
NJ2				S	**S**	**00 49 40.0**	**+0.8**
NJ2				XS	sS	00 49 54.0	-12
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
NJ2				LR	LR		
	comp=N,400nm,15.8s						
NJ2				LR	LR		
	comp=E,150nm,14.3s						
KLBR	**Kellerberrin**	**32.90**	**193**	*e*P	**P**	**00 44 38.3**	**+0.4**
	comp=E,50nm,1.7s,mb5.1						
JHJ	**Hachijo jima 2**	**34.87**	**20**	LR	LR	00 55 46.2	
	comp=E,692nm,21.5s,baz=97,slow=30						
HNR	**Honiara**	**35.01**	**107**	LR	LR	00 58 40.9	
	comp=E,58nm,18.8s,baz=357,slow=35						
STKA	**Stephens Creek**	**35.34**	**157**	P	**P**	**00 44 59.9**	**+0.9**
	comp=E,12nm,0.7s,mb4.8,baz=319,slow=8.6,SNR=20						
STKA				PcP	PcP	00 47 29.9	+1.9
	comp=E,1.3nm,0.6s,baz=284,slow=9.7,SNR=2.8						
STKA	**Stephens Creek**	**35.34**	**157**	⇑*i*P	**P**	**00 44 59.7**	**+0.7**
	comp=E,9.9nm,0.9s,mb4.6						
MJAR	**Matsushiro Arr**	**37.55**	**16**	P	**P**	**00 45 17.0**	**-0.8**
	comp=E,6.2nm,0.9s,mb4.4,baz=186,slow=9.0,SNR=15						
LZH	**Lanzhou**	**41.05**	**332**	*e*P	**P**	**00 45 47.1**	**+0.1**
LZH				AP	pP	00 45 54.0	-9.2
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.8						
LSA	**Lhasa**	**44.24**	**314**	*e*P	**P**	**00 46 12.6**	**-0.2**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
LSA	**Lhasa**	**44.24**	**314**	*e*P	**P**	**00 46 12.6**	**-0.2**
	comp=Z,6.6nm,0.6s,mb4.5						
GTA	**Gaotai**	**45.62**	**331**	*e*P	**P**	**00 46 23.8**	**0.0**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
ASAJ	**Asahikawa**	**45.82**	**16**	P	**P**	**00 46 26.6**	**+1.2**
	comp=Z,5.0nm,0.6s,mb4.4,baz=236,slow=20,SNR=4.5						
HABR	**Khabarovsk**	**48.40**	**8**	*e*P	**P**	**00 46 43.0**	**-2.4**
HABR				*e*S	**S**	**00 53 42.2**	**+1.1**
YSS	**Yuzh-Sakhalins**	**48.48**	**15**	*i* P	**P**	**00 46 46.1**	**+0.1**
KLR	**Kul'dur**	**48.78**	**5**	*e*P	**P**	**00 46 45.8**	**-2.5**
ULN	**Ulaanbaatar**	**50.03**	**343**	⇑*e*P	**P**	**00 46 57.9**	**+0.1**
ULN	**Ulaanbaatar**	**50.03**	**343**	*e*P	**P**	**00 46 57.7**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.3						
SONM	**Songino Array**	**50.19**	**343**	P	**P**	**00 46 59.3**	**+0.3**
	comp=Z,2.1nm,0.6s,mb4.2,baz=161,slow=7.8,SNR=14						
SONM				PcP	PcP	00 48 18.9	+1.4
	comp=Z,2.2nm,0.8s,baz=154,slow=3.7,SNR=6.2						
CIT	**Chita**	**52.43**	**350**	*e*P	**P**	**00 47 17.8**	**+2.0**
CIT				*e*		00 48 25.9	
ZAK	**Zakamensk**	**53.40**	**342**	*e*P	**P**	**00 47 23.2**	**+0.2**
ZAK				*e*		00 48 26.7	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
MKAR	**Makanchi Array**	**59.92**	**327**	P	**P**	**00 48 08.6**	**-0.6**
	comp=Z,5.9nm,0.5s,mb4.9,baz=113,slow=8.4,SNR=44						
MKAR				PcP	PcP	00 48 56.1	+1.2
	comp=Z,3.0nm,0.7s,baz=115,slow=5.5,SNR=5.7						
YAK	**Yakutsk**	**61.43**	**2**	⇑*e*P	**P**	**00 48 20.4**	**+0.9**
YAK				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.3						
AAK	**Ala-Archa**	**62.41**	**319**	⇑*e*P	**P**	**00 48 27.3**	**+1.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.3						
AAK				MLR	MLR		
	comp=Z,100nm,25.0s						
AAK	**Ala-Archa**	**62.41**	**319**	*e*P	**P**	**00 48 25.6**	**-0.5**
	comp=Z,2.0nm,0.8s,mb4.2						
NVS	**Novosibirsk**	**64.52**	**334**	*e*P	**P**	**00 48 38.5**	**-1.4**
CASY	**Casey**	**67.56**	**187**	*e*P	**P**	**00 48 56.0**	**-3.5**
	comp=Z,13nm,1.5s,mb4.5						
BVAR	**Borovoye Array**	**69.74**	**328**	P	**P**	**00 49 12.7**	**-0.4**
	comp=Z,6.9nm,1.0s,mb4.4,baz=120,slow=8.8,SNR=18						
BRVK	**Borovoye**	**69.81**	**328**	*e*P	**P**	**00 49 13.0**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
BRVK	**Borovoye**	**69.81**	**328**	*e*P	**P**	**00 49 13.0**	**-0.5**
	comp=Z,4.7nm,0.9s,mb4.3						
CHKZ	**Chkalovo**	**69.93**	**328**	*e*P	**P**	**00 49 13.1**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
CHKZ	**Chkalovo**	**69.93**	**328**	*e*P	**P**	**00 49 13.1**	**-1.1**
	comp=Z,6.7nm,1.1s,mb4.4						
ZRNK	**Zerenda**	**70.45**	**327**	*e*P	**P**	**00 49 16.8**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
ZRNK	**Zerenda**	**70.45**	**327**	*e*P	**P**	**00 49 16.8**	**-0.5**
	comp=Z,6.1nm,0.8s,mb4.5						
SVE	**Sverdlovsk**	**76.43**	**329**	⇑*e*P	**P**	**00 49 52.3**	**-0.2**
SVE				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.0						
ARU	**Arti**	**77.38**	**328**	*c i*P	**P**	**00 49 57.2**	**-0.6**
ARU				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.6						
ARU	**Arti**	**77.38**	**328**	*e*P	**P**	**00 49 57.1**	**-0.8**
	comp=Z,14nm,1.0s,mb4.7						
VNDA	**Vanda**	**80.31**	**173**	P	**P**	**00 50 14.7**	**+0.8**
	comp=Z,1.9nm,0.7s,mb4.0,baz=316,slow=6.5,SNR=22						
MAW	**Mawson**	**80.56**	**200**	P	**P**	**00 50 15.8**	**+0.6**
	comp=Z,2.6nm,1.0s,mb4.0,baz=7.0,slow=6.7,SNR=4.2						
MAW	**Mawson**	**80.56**	**200**	*e*P	**P**	**00 50 13.0**	**-2.2**
MAW				pmax	pmax		
	comp=Z,35nm,2.1s						
MAW	**Mawson**	**80.56**	**200**	*e*P	**P**	**00 50 13.0**	**-2.2**
	comp=Z,35nm,2.1s,mb4.8						
GNI	**Garni**	**83.15**	**310**	*e*P	**P**	**00 50 31.9**	**+3.1**
GNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GNI	**Garni**	**83.15**	**310**	*e*P	**P**	**00 50 31.9**	**+3.0**
	comp=Z,8.6nm,0.9s,mb4.6						
ZEI	**Tsey**	**84.01**	**313**	*e*P	**P**	**00 50 34.7**	**+1.5**
ZEI				*e**PP	pP	00 50 43.0	-8.2
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
KIV	**Kislovodsk**	**84.98**	**314**	*i* P	**P**	**00 50 39.1**	**+0.9**
KIV				pmax	pmax		
	comp=Z,22nm,2.5s,mb4.6						
VRHR	**Novokhopersk**	**86.20**	**321**	*e*P	**P**	**00 50 44.4**	**+0.2**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
VRHR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,6.0nm,0.5s						
KMBO	**Kilima Mbogo**	**88.96**	**269**	LR	LR	01 29 39.6	
	comp=E,37nm,18.4s,baz=274,slow=35						
OBN	**Obninsk**	**89.39**	**325**	*e*P	**P**	**00 50 57.9**	**-1.5**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
QSPA	**South Pole Qui**	**90.42**	**180**	*e*P	**P**	**00 51 05.8**	**+1.5**
	comp=Z,4.2nm,1.3s,mb4.4						
BRTR	**Keskin Array B**	**91.67**	**310**	P	**P**	**00 51 09.9**	**-0.1**
	comp=Z,0.8nm,0.7s,mb4.0,baz=133,slow=9.1,SNR=4.8						
BRTR	**Keskin Array B**	**91.67**	**310**	*i* P	**P**	**00 51 10.0**	**0.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JOF	**Joensuu**	**91.80**	**333**	*e*p	**P**	**00 51 13.3**	**+2.7**
ARCES	**ARCESS Array B**	**93.28**	**340**	P	**P**	**00 51 16.1**	**-1.3**
	comp=Z,2.1nm,0.7s,mb4.6,baz=79,slow=6.3,SNR=11						
KAF	**Kangasniemi**	**94.20**	**332**	*e*p	**P**	**00 51 19.3**	**-2.4**
FINES	**FINESS Array B**	**94.41**	**332**	P	**P**	**00 51 24.6**	**+1.9**
	comp=Z,1.2nm,0.5s,mb4.5,baz=80,slow=2.3,SNR=17						
BOSA	**Boshof**	**99.85**	**241**	LR	LR	01 37 03.8	
	comp=Z,67nm,18.7s,baz=271,slow=36						
PMSA	**Palmer Station**	**115.43**	**175**	*e*PKPdf	PKPdf	00 56 44.2	-0.1
TORD	**Torodi Ar. Bea**	**123.36**	**286**	PKP	PKPdf	00 57 01.3	+1.8
	comp=Z,1.1nm,0.7s,baz=74,slow=1.7,SNR=12						
TORD				PKKPbc	PKKPbc	01 06 52.0	+3.2
	comp=Z,0.8nm,0.7s,baz=271,slow=2.9,SNR=6.1						
CPUP	**Villa Florida**	**154.09**	**173**	PKPbc	PKPbc	00 58 03.7	+1.5
	comp=Z,0.5nm,0.4s,baz=358,slow=4.1,SNR=4.2						
CPUP	**Villa Florida**	**154.09**	**173**	PKPbc	PKPbc	00 58 03.7	+1.5

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*ISCJB **19** 01:01:22.8±1.0, 680N±0.10×9579E±0.10, h248km±9km, mb3.8/18, Error ellipse: s-maj=20.2km s-min=9.0km az=88.6*
*IDC **19** 01:01:22.4±1.9, 671N×9570E, h225km±18km, mb3.5/11, mb1 3.7/12, mb1mx3.4/22, mbtmp4.1/12, Error ellipse: s-maj=31.2km s-min=11.7km az=53.0*
*NEIC **19** 01:01:24.4±1.0, 679N×9571E, h249km±10km, mb4.3/10, Error ellipse: s-maj=15.0km s-min=8.4km az=225.0*
ISC 19 01:01:25.0±1.0**, 678N**±009×**9572E**±009**, h254**km±10km**, n29, σ0ˢ94**/31**, mb3.8**/18**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.08**	**141**	P	**Pn**	**01 02 40.6**	**-1.2**
	2.2nm,0.3s,baz=300,slow=9.3,SNR=12						
PSI				S	**S**	**01 03 38.6**	**-4.6**
	2.9nm,0.3s,baz=297,slow=13,SNR=8.7						
KULM	**Kulim**	**5.12**	**107**	*e*Pn	**Pn**	**01 02 44.0**	**+1.6**
PALK	**Pallekele**	**14.91**	**273**	*e*Pn	**Pn**	**01 04 43.2**	**-0.7**
	12nm,0.8s						
QIZ	**Qiongzhong**	**18.36**	**47**	P	**P**	**01 05 19.2**	**-2.0**
	46nm,1.6s						
MBWA	**Marble Bar**	**36.42**	**140**	*e*P	**P**	**01 08 05.6**	**0.0**
	0.9nm,0.5s,mb3.6						
FITZ	**Fitzroy Crossi**	**38.52**	**130**	*e*P	**P**	**01 08 22.3**	**-0.7**
	4.2nm,0.6s,mb4.2						
WSAR	**Wadi Sarin**	**39.22**	**299**	P	**P**	**01 08 29.9**	**+1.1**
	2.2nm,0.5s,mb4.0,baz=183,slow=12,SNR=8.4						
MKAR	**Makanchi Array**	**41.50**	**346**	P	**P**	**01 08 48.7**	**+1.2**
	0.6nm,0.6s,mb3.2,baz=169,slow=8.2,SNR=5.5						
MKAR	**Makanchi Array**	**41.50**	**346**	P	**P**	**01 08 48.7**	**+1.2**
MUN	**Mundaring**	**43.22**	**154**	*e*P	**P**	**01 09 01.9**	**+0.6**
KLBR	**Kellerberrin**	**43.58**	**152**	*e*P	**P**	**01 09 04.8**	**+0.7**
	10.0nm,0.6s,mb4.3						
NWAO	**Narrogin (SRO)**	**44.47**	**154**	P	**P**	**01 09 12.1**	**+0.8**
	20nm,0.7s,mb4.5,baz=336,slow=7.1,SNR=19						
NWAO	**Narrogin (SRO)**	**44.47**	**154**	*e*P	**P**	**01 09 11.9**	**+0.6**
	14nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**46.35**	**126**	P	**P**	**01 09 26.5**	**+0.5**
	4.1nm,0.4s,mb4.1,baz=304,slow=9.1,SNR=34						
WRA				S	**S**	**01 15 50.9**	**-2.6**
	0.7nm,0.7s,baz=313,slow=18,SNR=3.4						
WRAB	**Tennant Creek**	**46.36**	**126**	*e*P	**P**	**01 09 26.6**	**+0.6**
	10.0nm,0.6s,mb4.3						
WB2	**Warramunga Arr**	**46.37**	**126**	*e*P	**P**	**01 09 26.2**	**+0.2**
AS31	**Alice Springs**	**48.02**	**130**	*e*P	**P**	**01 09 38.4**	**-0.3**
ASAR	**Alice Springs**	**48.02**	**130**	P	**P**	**01 09 39.0**	**+0.2**
	3.3nm,0.5s,mb3.9,baz=302,slow=7.9,SNR=33						
ASAR				S	**S**	**01 16 16.0**	**-1.0**
	0.6nm,0.8s,baz=297,slow=14,SNR=3.5						
FORT	**Forrest**	**48.52**	**142**	*e*P	**P**	**01 09 43.6**	**+1.1**
	9.5nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**58.23**	**134**	P	**P**	**01 10 53.5**	**+0.6**
	1.0nm,0.3s,mb3.9,baz=325,slow=9.2,SNR=3.9						
STKA	**Stephens Creek**	**58.23**	**134**	*e*P	**P**	**01 10 53.3**	**+0.4**
	3.5nm,1.0s,mb3.9						
BRTR	**Keskin Array B**	**64.32**	**311**	P	**P**	**01 11 31.9**	**-1.8**
	0.2nm,0.6s,mb2.9,baz=123,slow=7.0,SNR=4.3						
CASY	**Casey**	**73.67**	**174**	*e*P	**P**	**01 12 30.4**	**-0.5**
	4.7nm,0.8s,mb4.2						
FINES	**FINESS Array B**	**74.40**	**332**	P	**P**	**01 12 34.8**	**-0.4**
	0.6nm,0.7s,mb3.3,baz=140,slow=9.9,SNR=4.3						
ARCES	**ARCESS Array B**	**76.82**	**340**	P	**P**	**01 12 49.4**	**+0.6**
	0.4nm,0.6s,mb3.2,baz=92,slow=6.4,SNR=3.6						
MAW	**Mawson**	**77.80**	**192**	P	**P**	**01 12 53.7**	**-0.5**
	0.8nm,0.6s,mb3.5,baz=34,slow=7.3,SNR=4.9						
GERES	**GERESS Array B**	**79.68**	**318**	P	**P**	**01 13 04.6**	**+0.1**
	0.1nm,0.3s,mb2.9,baz=88,slow=5.2,SNR=2.6						
VNDA	**Vanda**	**91.55**	**169**	P	**P**	**01 14 02.6**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=300,slow=4.7,SNR=9.4						
PLCA	**Paso Flores**	**144.03**	**198**	PKP	PKPdf	01 20 29.2	-1.0
	3.0nm,0.8s,baz=198,slow=4.4,SNR=8.7						

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*NEIC **19** 01:26:32.8, 1957N×63.14W, h25km, MD3.9(RSPR), After RSPR.*
RSPR 19 01:26:32.8, 1957N×6314W, h25km±27km**, MD3.9**/8**, 8C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.80**	**231**	⇑*e*P	Pn	01 27 00.1	-2.1
TBVI				*e*S	Sn	01 27 21.2	-3.1
STVI	**Saint Thomas**	**2.10**	**235**	⇑*e*P	Pn	01 27 04.6	-1.7
STVI				*e*S	Sn	01 27 29.1	-2.6
CULB	**Culebra**	**2.42**	**239**	⇑*e*P	Pn	01 27 08.6	-2.1
CULB				*e*S	Sn	01 27 37.4	-2.1
MTP	**Monte Pirata**	**2.72**	**238**	⇓*e*P	Pn	01 27 13.2	-1.5
MTP				*e*S	Sn	01 27 45.0	-1.8
CBYP	**Canovanas**	**2.88**	**244**	⇑*e*P	Pn	01 27 15.3	-1.6
CBYP				*e*S	Sn	01 27 48.4	-2.3
HUMP	**Col San Antoni**	**2.93**	**242**	⇑*e*P	Pn	01 27 16.3	-1.4
HUMP				*e*S	Sn	01 27 50.5	-1.6
CPD	**Cerro la Pandu**	**3.04**	**240**	⇑*e*P	Pn	01 27 18.3	-0.9
CPD				*e*S	Sn	01 27 53.2	-1.4
ICM	**Isla Caja Muer**	**3.61**	**243**	⇑*e*P	Pn	01 27 25.7	-1.3
AOPR	**Arecibo Observ**	**3.62**	**251**	⇑*e*P	Pn	01 27 25.8	-1.5
AOPR				*e*S	Sn	01 28 07.6	-1.6
CRPR	**Cabo Rojo, PR**	**4.07**	**248**	⇓*e*P	Pn	01 27 32.3	-1.1
CRPR				*e*S	Sn	01 28 17.9	-2.2

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*ISCJB **19** 01:33:15.4±0.4, 3102S±004×6830W±004, h115km±6km, mb3.7/3, Error ellipse: s-maj=6.1km s-min=5.8km az=83.8*
*IDC **19** 01:33:16.4±0.9, 3107S×6848W, h103km±8km, mb3.5/2, mb1 3.7/5, mb1mx3.5/17, mbtmp3.9/5, Error ellipse: s-maj=35.2km s-min=22.1km az=88.0*
*GUC **19** 01:33:17.0±1.0, 3107S×6866W, h163km±24km, MD3.7, ML4.1*
*NEIC **19** 01:33:17.0, 3107S×6866W, h163km, mb4.5/6, After GUC.*
ISC 19 01:33:16.4±0.4**, 3102S**±004×**6829W**±004**, h110**km±7km**, n42, σ1ˢ00**/60**, mb3.7**/3**, 9C-11D, San Juan Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.58**	**175**	P	**Pn**	**01 33 34.6**	**+0.7**
	65nm,0.3s,baz=349,slow=5.7						
CFAA				S	**Sn**	**01 33 47.3**	**+0.3**
	251nm,0.3s,baz=223,slow=19,SNR=219						
MDZ	**Mendoza**	**1.92**	**194**	⇑*i*P	**Pn**	**01 33 48.7**	**+0.4**
MDZ				*i* S	**Sn**	**01 34 11.7**	**-1.0**
MDZ				*i*		01 34 14.1	
TLL	**Tololo Astrono**	**2.33**	**291**	⇓*i*P	**Pn**	**01 33 55.2**	**+1.7**
TLL				*i* S	**Sn**	**01 34 23.6**	**+1.5**
TLL				AML	AML	01 34 26.6	
	comp=N,744nm,0.5s						
TLL	**Tololo Astrono**	**2.33**	**291**	⇓*i*P	**Pn**	**01 33 55.2**	**+1.7**
TLL				*i* S	**Sn**	**01 34 23.6**	**+1.5**
CMCH	**Combarbala**	**2.33**	**266**	⇓*i*P	**Pn**	**01 33 53.5**	**0.0**
CMCH				*i* S	**Sn**	**01 34 21.4**	**-0.6**
OVCH	**Ovalle**	**2.53**	**279**	⇓*i*P	**Pn**	**01 33 56.3**	**0.0**
OVCH				*i* S	**Sn**	**01 34 25.4**	**-1.5**
OVCH				AML	AML	01 34 27.9	
	comp=N,918nm,0.3s						
OVCH	**Ovalle**	**2.53**	**279**	⇓*i*P	**Pn**	**01 33 56.3**	**0.0**
OVCH				*i* S	**Sn**	**01 34 25.4**	**-1.5**
JACH	**Jahuel**	**2.56**	**229**	⇑*i*P	**Pn**	**01 33 57.5**	**+0.8**
PTCH	**Petorca**	**2.57**	**240**	*e*P	**Pn**	**01 33 56.5**	**-0.2**
PTCH				*i* S	**Sn**	**01 34 26.6**	**-1.0**
PTCH				AML	AML	01 34 29.7	
	comp=N,2μm,0.2s						
PTCH	**Petorca**	**2.57**	**240**	*e*P	**Pn**	**01 33 56.5**	**-0.2**
PTCH				*i* S	**Sn**	**01 34 26.6**	**-1.0**
FCH	**Farellones**	**2.86**	**216**	⇑*e*P	**Pn**	**01 34 01.9**	**+1.4**
FCH				*i* S	**Sn**	**01 34 35.9**	**+1.4**
FCH				AML	AML	01 34 41.0	
	comp=E,299nm,0.2s						
CHNG	**Los Chungos**	**2.87**	**252**	⇓*i*P	**Pn**	**01 33 59.8**	**-0.9**
CHNG				*i* S	**Sn**	**01 34 32.9**	**-1.9**
PEL	**Peldehue**	**2.93**	**223**	*e*P	**Pn**	**01 34 01.7**	**+0.2**
PEL				*e*S	**Sn**	**01 34 35.6**	**-0.7**
PEL				AML	AML	01 34 38.2	
	comp=E,726nm,0.4s						
PEL	**Peldehue**	**2.93**	**223**	*e*P	**Pn**	**01 34 01.7**	**+0.2**
PEL				*e*S	**Sn**	**01 34 35.6**	**-0.7**
ROCH	**El Roble**	**3.02**	**229**	⇑*e*P	**Pn**	**01 34 02.4**	**-0.2**
ROCH				*i* S	**Sn**	**01 34 38.4**	**+0.1**
CLCH	**Cerro Calan**	**3.04**	**218**	*e*P	**Pn**	**01 34 03.8**	**+0.9**
CLCH				*i* S	**Sn**	**01 34 38.2**	**-0.5**
CLCH				AML	AML	01 34 48.2	
	comp=E,418nm,0.9s						
LACH	**Colegio Las Am**	**3.08**	**217**	⇓*i*P	**Pn**	**01 34 03.8**	**+0.4**
STL	**Santa Lucia**	**3.12**	**219**	⇓*i*P	**Pn**	**01 34 04.2**	**+0.2**
SJCH	**San Jose de Ma**	**3.14**	**213**	⇑*i*P	**Pn**	**01 34 05.0**	**+0.7**
SJCH				AML	AML	01 34 49.5	
	comp=N,131nm,0.5s						
SAN	**Santiago**	**3.15**	**219**	*e*P	**Pn**	**01 34 05.0**	**+0.6**
SAN				*i* S	**Sn**	**01 34 40.4**	**-0.9**
PCH	**Pirque**	**3.20**	**215**	*e*P	**Pn**	**01 34 05.6**	**+0.5**
ANTU	**Antumapu**	**3.22**	**217**	⇓*i*P	**Pn**	**01 34 06.0**	**+0.7**
ANTU				AML	AML	01 34 49.2	
	comp=N,243nm,0.4s						
RCDM	**Rinconada Maip**	**3.25**	**220**	⇓*i*P	**Pn**	**01 34 06.0**	**+0.2**
RCDM				AML	AML	01 34 48.1	
	comp=E,575nm,0.1s						
TACH	**Talagante**	**3.45**	**220**	⇑*i*P	**Pn**	**01 34 08.1**	**-0.3**
CHCH	**Chadas Angostu**	**3.52**	**214**	⇓*i*P	**Pn**	**01 34 09.7**	**+0.3**
CACH	**El Canelo**	**3.65**	**212**	⇑*i*P	**Pn**	**01 34 11.9**	**+0.8**
LCCH	**Las Cruces**	**3.70**	**228**	⇑*i*P	**Pn**	**01 34 10.7**	**-1.1**
CICH	**Cipreses**	**3.75**	**208**	⇑*i*P	**Pn**	**01 34 13.3**	**+1.0**
LVC	**Limon Verde**	**8.39**	**356**	P	**Pn**	**01 35 15.1**	**-0.1**
	comp=E,4.8nm,0.3s,baz=188,slow=9.5,SNR=28						
LVC				S	**Sn**	**01 36 43.8**	**-4.4**
	comp=E,0.8nm,0.3s,baz=17,slow=19,SNR=3.7						
LVC	**Limon Verde**	**8.39**	**356**	*e*Pn	**Pn**	**01 35 14.8**	**-0.4**
	comp=E,8.3nm,0.3s						
TRQA	**Tornquist**	**8.74**	**145**	*e*Pn	**Pn**	**01 35 20.2**	**+0.3**
	comp=E,10nm,0.8s						
TRQA				Sn	**Sn**	**01 36 54.5**	**-2.0**
PLCA	**Paso Flores**	**9.86**	**190**	P	**Pn**	**01 35 33.6**	**-1.6**
	comp=E,0.3nm,0.3s,baz=10,slow=14,SNR=6.1						
CPUP	**Villa Florida**	**10.70**	**67**	P	**Pn**	**01 35 44.8**	**-1.7**
	comp=E,1.3nm,0.3s,baz=215,slow=12,SNR=11						
CPUP	**Villa Florida**	**10.70**	**67**	*e*Pn	**Pn**	**01 35 44.5**	**-2.0**
	comp=E,15nm,0.5s						
CPUP				*e*Sn	**Sn**	**01 37 44.2**	**0.0**
LPAZ	**La Paz**	**14.67**	**1**	P	**Pn**	**01 36 39.4**	**+1.0**
	comp=E,0.2nm,0.3s,baz=183,slow=8.6,SNR=11						
LPAZ	**La Paz**	**14.67**	**1**	*e*Pn	**Pn**	**01 36 39.0**	**+0.6**
	comp=E,2.2nm,0.8s						
SIV	**San Ignacio**	**16.35**	**25**	P	**Pn**	**01 36 58.0**	**-1.4**
	comp=E,0.1nm,0.3s,baz=202,slow=13,SNR=12						
NNA	**Nana**	**20.52**	**335**	P	**P**	**01 37 44.0**	**-1.9**
	comp=E,56nm,1.3s						
SAML	**Samuel**	**22.47**	**13**	*e*P	**P**	**01 38 10.9**	**+4.3**
	comp=E,4.8nm,0.9s,mb3.8						
TORD	**Torodi Ar. Bea**	**80.20**	**68**	P	**P**	**01 45 16.9**	**+2.3**
	comp=E,2.1nm,1.1s,mb3.9,baz=260,slow=5.2,SNR=14						
TORD				pP	pP	01 45 46.0	+3.3
	comp=E,0.3nm,0.5s,baz=274,slow=6.1,SNR=8.5						
PDAR	**Pinedale Array**	**82.63**	**331**	P	**P**	**01 45 28.2**	**+0.8**
	comp=E,0.6nm,0.8s,mb3.5,baz=133,slow=7.5,SNR=6.2						
WRA	**Warramunga Arr**	**124.86**	**206**	PKP	PKPdf	01 52 03.9	+0.5
	comp=E,0.5nm,0.4s,baz=160,slow=1.8,SNR=10						

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*IDC **19** 01:55:46.4±3.7, 557S×14653E, h0km, mb3.0/2, mb1 3.4/4, mb1mx3.3/13, mbtmp3.2/4, ML3.0/2, Error ellipse: s-maj=62.6km s-min=50.6km az=74.0*
NEIC 19 01:55:47.3±8.2**, 556S**×**14655E, h10**km**, mb3.4**/1**, Error ellipse: s-maj=119.0km s-min=25.4km az=216.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.87**	**171**	Pn	Pn	01 56 46.8	0.0
	4.3nm,0.3s,baz=15,slow=4.7,SNR=10						
PMG				Sn	Sn	01 57 24.5	-7.8
	3.3nm,0.3s,baz=330,slow=20,SNR=3.7						
WRAB	**Tennant Creek**	**18.57**	**219**	P	Pn	02 00 04.5	0.0
	1.1nm,0.4s						
WRA	**Warramunga Arr**	**18.58**	**219**	P	Pn	02 00 04.2	-0.5
	0.1nm,0.3s,baz=38,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**21.73**	**213**	P	P	02 00 39.7	+1.0
	0.1nm,0.3s,baz=50,slow=8.7,SNR=2.9						
FITZ	**Fitzroy Crossi**	**23.92**	**237**	P	P	02 01 01.7	+0.3
	0.9nm,0.7s,baz=78,slow=13,SNR=4.8						
TORD	**Torodi Ar. Bea**	**144.54**	**285**	PKP	PKPdf	02 15 26.2	+2.2
	0.3nm,0.8s,baz=85,slow=2.7,SNR=5.6						

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*CSEM **19** 02:14:24.2±0.5, 3874N×2895W, h1km±8km, ML1.8, Error ellipse: s-maj=9.5km s-min=2.7km az=83.0, After PDA*
*PDA **19** 02:14:24.2±0.5, 3874N×2895W, h1km±8km, MD2.9, ML1.8, Error ellipse: s-maj=9.5km s-min=2.7km az=83.0*
SVSA 19 02:14:24.2±0.5**, 3874N**×**2895W, h1**km±8km**, MD2.9, ML1.8, Error ellipse: s-maj=9.5km s-min=2.7km az=83.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.23**	**119**	*e*P	Pg	02 14 28.4	-0.1
PCED				*e*S	Sg	02 14 31.9	+0.5
PCED							
	42nm,0.1s						
PCED	**Cedros**	**0.23**	**119**	*e*P	Pg	02 14 28.4	-0.1
PCED				*e*S	Sg	02 14 31.9	+0.5
CALA	**Caldeira**	**0.25**	**128**	*e*S	Sg	02 14 32.8	+0.5
PICO	**Pico**	**0.48**	**120**	*e*P	Pg	02 14 33.0	-0.3
PICO				*e*S	Sg	02 14 39.5	0.0
ROSA	**Rosais**	**0.56**	**92**	*e*P	Pg	02 14 34.2	-0.7
ROSA				*e*S	Sg	02 14 41.5	-0.6

IDC 19 02:14:41.2±6.8**, 772S**×**1231W, h0**km**, mb3.9**/6**, mb1 3.9**/6**, mb1mx3.6**/21**, mbtmp3.9**/6**, MS3.7**/12**, Ms1 3.7**/12**, ms1mx3.5**/22**, Error ellipse: s-maj=182.9km s-min=115.6km az=153.0, Ascension Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**24.96**	**34**	P	P	02 20 06.3	0.0
	3.5nm,0.7s,baz=222,slow=6.1,SNR=32						
TORD				LR	LR	02 28 22.8	
	comp=Z,77nm,19.8s,baz=185,slow=33						
TSUM	**Tsumeb**	**31.17**	**115**	LR	LR	02 32 14.2	
	comp=Z,171nm,19.2s,baz=299,slow=34						
BDFB	**Brasilia**	**35.80**	**254**	LR	LR	02 34 33.3	
	comp=Z,120nm,18.1s,baz=19,slow=33						
BOSA	**Boshof**	**41.04**	**125**	LR	LR	02 37 05.0	
	comp=Z,132nm,19.3s,baz=282,slow=33						
CPUP	**Villa Florida**	**46.56**	**241**	LR	LR	02 41 04.1	
	comp=Z,80nm,19.7s,baz=58,slow=34						
KEST	**Kesra**	**47.79**	**24**	P	P	02 23 21.0	+0.8
	2.2nm,1.0s,baz=264,slow=9.2,SNR=4.3						
KMBO	**Kilima Mbogo**	**49.81**	**85**	LR	LR	02 43 22.1	
	comp=Z,140nm,18.3s,baz=274,slow=34						
LPAZ	**La Paz**	**55.12**	**256**	LR	LR	02 45 20.2	
	comp=Z,36nm,19.4s,baz=77,slow=33						
GERES	**GERESS Array B**	**60.78**	**19**	P	P	02 24 55.2	+0.3
	0.3nm,0.4s,baz=192,slow=8.6,SNR=6.3						
GERES				LR	LR	02 51 08.5	
	comp=Z,29nm,20.5s,baz=52,slow=36						
PLCA	**Paso Flores**	**61.11**	**228**	LR	LR	02 48 18.9	
	comp=Z,52nm,19.2s,baz=1.1,slow=33						
ROSC	**El Rosal**	**63.12**	**279**	LR	LR	02 50 14.8	
	comp=Z,82nm,19.6s,baz=120,slow=34						
BRTR	**Keskin Array B**	**63.48**	**38**	P	P	02 25 13.8	+0.8
	0.7nm,0.9s,baz=215,slow=6.7,SNR=3.5						
AKASG	**Malin Array Be**	**68.36**	**27**	P	P	02 25 43.9	-0.6
	0.7nm,0.7s,baz=227,slow=6.5,SNR=4.6						
NOA	**NORSAR Array B**	**70.99**	**12**	LR	LR	02 55 02.0	
	comp=Z,9.8nm,18.7s,baz=220,slow=34						
FINES	**FINESS Array B**	**75.15**	**18**	P	P	02 26 24.9	-0.4
	1.4nm,0.9s,baz=204,slow=6.1,SNR=3.7						
RPN	**Rapa Nui**	**92.72**	**242**	LR	LR	03 02 27.0	
	comp=Z,225nm,20.2s,baz=182,slow=31						

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*ISCJB **19** 02:30:03.7±0.8, 3803S±009×1763E±0.1, h239km±9km, mb3.2/2, Error ellipse: s-maj=21.2km s-min=8.7km az=75.4*
*IDC **19** 02:30:03.3±4.7, 3739S×17626E, h206km±71km, mb3.1/2, mb1 3.3/2, mb1mx3.0/11, mbtmp3.6/2, Error ellipse: s-maj=286.6km s-min=48.6km az=5.0*
*WEL **19** 02:30:05.8±0.4, 3776S×17620E, h210km±3km, ML4.3/18, Error ellipse: s-maj=5.8km s-min=4.3km az=0.0*
ISC 19 02:30:04.7±0.8**, 3804S**±009×**1763E**±01**, h233**km±9km**, n40, σ0ˢ92**/44**, mb3.2**/2**, 2C, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.69**	**109**	P	**Pn**	**02 30 35.8**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	70nm,0.3s,baz=259,slow=5.3,SNR=224						
URZ				S	S	02 30 58.5	-2.5
	72nm,0.3s,baz=177,slow=22,SNR=41						
URZ	Urewera	0.69	109	⇑PN	Pn	02 30 35.8	-0.5
URZ				SN	S	02 30 58.7	-2.3
MWZ	Matawai	1.03	107	PN	Pn	02 30 37.8	-0.2
MWZ				SN	S	02 31 03.2	-0.9
BKZ	Black Stump Fm	1.14	172	PN	Pn	02 30 39.5	+0.8
NGZ	Ngauruhoe	1.26	205	PN	Pn	02 30 40.5	+1.0
TUVZ	Tukino	1.33	202	PN	Pn	02 30 41.0	+1.0
FWVZ	Far West T-bar	1.35	205	PN	Pn	02 30 41.8	+1.7
WNVZ	Wahianoa	1.40	202	PN	Pn	02 30 41.7	+1.2
MOVZ	Moawhango	1.43	197	PN	Pn	02 30 41.3	+0.5
PKVZ	Pokaka	1.45	210	PN	Pn	02 30 41.7	+0.7
KNZ	Kokohu	1.47	132	⇑PN	Pn	02 30 42.6	+1.5
PUZ	Puketiti	1.56	92	PN	Pn	02 30 41.7	-0.1
PUZ				SN	S	02 31 09.4	-1.5
VRZ	Vera Road	1.62	227	PN	Pn	02 30 43.4	+1.2
MXZ	Matakaoa Point	1.67	74	PN	Pn	02 30 42.1	-0.6
TSZ	Takapari Road	2.04	187	PN	Pn	02 30 47.3	+1.2
PXZ	Pawanui	2.04	167	PN	Pn	02 30 47.8	+1.7
MRZ	Mangatainoka R	2.68	192	PN	Pn	02 30 53.3	+0.7
TIWZ	Tintock	2.75	186	SN	S	02 31 31.8	0.0
KIW	Kapiti Island	3.02	200	PN	Pn	02 30 56.4	+0.1
MTW	Mount Morrison	3.18	191	PN	Pn	02 30 58.2	+0.1
CAW	Cannon Point	3.21	197	PN	Pn	02 30 58.9	+0.4
DUWZ	D'Urville Isla	3.31	213	PN	Pn	02 30 59.3	-0.4
TRWZ	Traveller	3.39	188	PN	Pn	02 31 01.3	+0.8
MRW	Makara Radio	3.42	200	PN	Pn	02 31 01.0	+0.1
MSWZ	Moikau Station	3.47	193	PN	Pn	02 31 01.7	+0.2
SNZO	South Karori	3.49	200	PN	Pn	02 31 01.7	0.0
TCW	Tory Channel	3.53	205	PN	Pn	02 31 02.1	0.0
TUWZ	Tuamarina	3.84	207	PN	Pn	02 31 05.6	-0.2
NNZ	Nelson	3.89	214	PN	Pn	02 31 05.9	-0.5
QRZ	Quartz Range	4.03	225	PN	Pn	02 31 06.6	-1.5
BSWZ	Blackbirch Sta	4.11	206	*e*PN	Pn	02 31 08.9	-0.1
THZ	Tophouse	4.54	214	PN	Pn	02 31 13.3	-0.9
THZ				SN	S	02 32 08.0	-1.4
KHZ	Kahutara	4.85	205	PN	Pn	02 31 18.1	0.0
DSZ	Denniston Nort	5.06	222	*e*PN	Pn	02 31 18.7	-1.9
LTZ	Lake Taylor	5.64	212	*e*PN	Pn	02 31 27.1	-0.9
MQZ	McQueen's Vall	6.30	205	*e*PN	Pn	02 31 34.7	-1.5
ODZ	Otahua Downs	8.18	209	*e*PN	Pn	02 31 59.8	-0.4
ASAR	Alice Springs	38.76	279	P	P	02 37 07.0	+0.3
	0.6nm,0.6s,mb3.3,baz=124,slow=8.3,SNR=7.2						
WRA	Warramunga Arr	40.48	284	P	P	02 37 20.7	-0.1
	0.4nm,0.4s,mb3.2,baz=128,slow=8.4,SNR=17						
ARCES	ARCESS Array B	144.76	343	PKP	PKPdf	02 49 12.0	-1.7
	2.6nm,1.1s,baz=71,slow=3.1,SNR=3.9						

*LDG **19** 02:40:05.7±0.1, 4301N×003W, h2^{km}±1^{km}, Md2.0/2, Error ellipse: s-maj=1.4km s-min=0.9km az=152.0*
*STR **19** 02:40:05.5±0.0, 4301N×005W, h2^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **19** 02:40:05.8±0.1, 4301N×003W, h5^{km}, ML2.2, Error ellipse: s-maj=1.9km s-min=1.0km az=159.0*
MDD 19 02:40:06.0±0.6**, 4300N×002W, h6**^{km}±8^{km}**, mbLg0.4**/3**, Error ellipse: s-maj=2.9km s-min=2.6km az=140.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LABF	Labassere	0.08	57	Pg	Pg	02 40 07.6	-0.3
LABF				Sg	Sg	02 40 09.2	0.0
LABF	Labassere	0.08	57	Pg	Pg	02 40 07.8	-0.2
LABF				Lg		02 40 09.2	
VIEF	Viey	0.12	164	Pg	Pg	02 40 08.4	-0.2
VIEF				Sg	Sg	02 40 10.5	+0.2
VIEF	Viey	0.12	164	Pg	Pg	02 40 08.6	0.0
VIEF				Lg		02 40 10.6	
EPF	Esparros	0.27	84	*e*Pg	Pg	02 40 11.2	-0.1
EPF				*e*Sg	Sg	02 40 14.8	0.0
	1.6nm,0.2s						
EPF	Esparros	0.27	84	*e*Pg	Pg	02 40 11.2	-0.1
EPF				*e*Sg	Sg	02 40 14.8	0.0
	0.8nm,0.2s						
EBIE	Bielsa	0.34	159	Pg	Pg	02 40 12.5	-0.1
	0.2nm,0.1s,SNR=7.9						
EBIE				Lg		02 40 16.9	
	3.6nm,0.2s,SNR=12						
ETSF	Etsaut	0.41	256	*e*Pg	Pg	02 40 13.6	-0.3
ETSF				*e*Sg	Sg	02 40 19.1	-0.1
	1.4nm,0.2s						
ETSF	Etsaut	0.41	256	*e*Pg	Pg	02 40 13.6	-0.3
ETSF				*e*Sg	Sg	02 40 19.1	-0.1
	0.7nm,0.2s						

*NEIC **19** 02:43:53.2, 3057S×7096W, h45^{km}, MG3.1(GUC), After GUC.*
GUC 19 02:43:53.2±0.9**, 3057S×7096W, h45**^{km}±2^{km}**, MD3.5, ML3.1, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.21	259	⇑*i*P	Pn	02 44 01.1	0.0
OVCH				*i* S	Sn	02 44 07.4	+0.9
OVCH				AML	AML	02 44 08.0	
	comp=N,2μm,0.3s						
OVCH	Ovalle	0.21	259	⇑*i*P	Pn	02 44 01.1	0.0
OVCH				*i* S	Sn	02 44 07.4	+0.9
TLL	Tololo Astrono	0.42	19	*i* P	Pn	02 44 04.0	+0.8
TLL				*i* S	Sn	02 44 12.4	+2.1
TLL				AML	AML	02 44 15.5	
	comp=E,2μm,0.5s						
TLL	Tololo Astrono	0.42	19	*i* P	Pn	02 44 04.0	+0.8
TLL				*i* S	Sn	02 44 12.4	+2.1
CMCH	Combarbala	0.60	183	⇑*i*P	Pn	02 44 05.5	0.0
CMCH				*i* S	Sn	02 44 15.7	+1.4
CMCH				AML	AML	02 44 17.8	
	comp=E,1μm,0.6s						
CMCH	Combarbala	0.60	183	⇑*i*P	Pn	02 44 05.5	0.0
CMCH				*i* S	Sn	02 44 15.7	+1.4
CHNG	Los Chungos	1.39	199	*i* P	Pn	02 44 16.6	+0.5
CHNG				*i* S	Sn	02 44 34.5	+1.2
PTCH	Petorca	1.69	179	*e*P	Pn	02 44 20.5	+0.3
PTCH				*i* S	Sn	02 44 42.5	+1.8
PTCH				AML	AML	02 44 49.1	
	comp=E,585nm,0.2s						
PTCH	Petorca	1.69	179	*e*P	Pn	02 44 20.5	+0.3
PTCH				*i* S	Sn	02 44 42.5	+1.8
VACH	Vallenar	2.00	5	*i* P	Pn	02 44 24.9	+0.5
VACH				*i* S	Sn	02 44 49.6	+1.5

IDC 19 02:49:47.7±1.7**, 1541S×17481W, h252**^{km}±34^{km}**, mb3.2**/3**, mb1 3.5**/4**, mb1mx3.2**/14**, mbtmp3.8**/4**, Error ellipse: s-maj=238.5km s-min=22.2km az=150.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.29	63	P	Pn	02 50 45.4	+2.1
	4.2nm,0.3s,baz=337,slow=18,SNR=2.7						
AFI				S	S	02 51 27.4	-0.1
	7.8nm,0.3s,baz=90,slow=19,SNR=4.4						
WRA	Warramunga Arr	48.52	257	P	P	02 58 05.4	0.0
	0.2nm,0.4s,baz=94,slow=7.9,SNR=7.8						
ASAR	Alice Springs	48.82	252	P	P	02 58 08.2	+0.5
	2.6nm,0.6s,baz=87,slow=7.8,SNR=33						
PDAR	Pinedale Array	83.18	42	P	P	03 01 46.0	+0.3
	0.5nm,0.5s,baz=201,slow=1.7,SNR=4.2						
GERES	GERESS Array B	145.93	350	PKPbc	PKPbc	03 08 57.1	-0.5
	0.1nm,0.3s,baz=20,slow=3.1,SNR=3.6						

*NIED **19** 03:18:00, 3290N×14220E, h5^{km}, Mw3.6 Best double couple: $M_0$3.32000×10^{14} NP1:ϕ_s166.00000°, δ59.00000°, λ-99.00000°. NP2:ϕ_s3.00000°, δ32.00000°, λ-76.00000°.*
*IDC **19** 03:18:11.7±1.1, 3279N×14255E, h0^{km}, mb3.8/7, mb1 3.9/11, mb1mx3.7/23, mbtmp3.8/11, ML3.8/4, Error ellipse: s-maj=37.8km s-min=16.6km az=76.0*
*ISCJB **19** 03:18:13.9±1.8, 3282N±005×14246E±008, h28^{km}±14^{km}, mb3.8/9, Error ellipse: s-maj=12.7km s-min=6.6km az=118.8*
*JMA **19** 03:18:14.6±0.3, 3287N×14225E, h11^{km}, M3.6*
*NEIC **19** 03:18:16.8±0.9, 3283N×14261E, h35^{km}, MG3.6(JMA), Error ellipse: s-maj=36.3km s-min=12.7km az=67.0*
ISC 19 03:18:15.2±1.8**, 3280N**±005×**14242E**±008**, h23**^{km}±14^{km}**, n26,** σ**0**^{s}**91**/37**, mb3.8**/9**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	2.21	327	P	Pn	03 18 49.9	-0.5
BSO1				S	Sn	03 19 16.2	-0.8
JHJ2	Mitsune	2.21	279	P	Pn	03 18 50.0	-0.5
JHJ	Hachijo jima 2	2.24	279	Pn	Pn	03 18 50.2	-0.7
	33nm,0.3s,baz=250,slow=17,SNR=14						
JHJ				Sn	Sn	03 19 17.4	-0.5
	40nm,0.3s,baz=76,slow=23,SNR=8.1						
BSO3	Boso 3	2.56	322	P	Pn	03 18 55.1	-0.1
BSO3				S	Sn	03 19 25.6	0.0
BSO4	Boso 4	2.79	322	P	Pn	03 18 58.9	+0.5
BSO4				S	Sn	03 19 31.5	+0.1
JIM2	Oshima 3	3.14	308	P	Pn	03 19 03.7	+0.4
JOD2	Odawara 2	3.70	313	P	Pn	03 19 10.2	-0.8
JYN	Shimob	4.19	311	P	Pn	03 19 20.0	+2.3
JRY	Ryogami san	4.33	319	P	Pn	03 19 19.8	+0.2
JRY				S	Sn	03 20 09.6	+0.2
JAG	Ashikaga	4.37	327	P	Pn	03 19 20.3	+0.2
JAG				S	Sn	03 20 09.0	-1.3
MJAR	Matsushiro Arr	5.10	318	Pn	Pn	03 19 30.8	+0.7
	1.4nm,0.3s,baz=127,slow=10,SNR=12						
MJAR				Sn	Sn	03 20 28.7	+0.4
	1.0nm,0.3s,baz=137,slow=24,SNR=5.3						
MAT	Matsushiro	5.10	318	P	Pn	03 19 31.7	+1.5
MAT				S	Sn	03 20 27.6	-0.8
MAT	Matsushiro	5.10	318	P	Pn	03 19 31.8	+1.6
MAT	Matsushiro	5.10	318	*e*P	Pn	03 19 32.0	+1.8
MAT				*e*S	Sn	03 20 28.0	-0.4
JMM	Marumori	5.23	346	P	Pn	03 19 30.9	-1.0
JMM				S	Sn	03 20 26.2	-5.3
CBIJ	Chichi jima	5.69	182	Pn	Pn	03 19 36.7	-1.5
	9.3nm,0.3s,baz=280,slow=22,SNR=6.3						
CBIJ				Sn	Sn	03 20 37.6	-5.2
	6.3nm,0.3s,baz=288,slow=20,SNR=3.4						
ASAJ	Asahikawa	11.30	1	Pn	Pn	03 20 54.8	-0.4
	1.3nm,0.3s,baz=117,slow=19,SNR=9.6						
SONM	Songino Array	30.99	310	P	P	03 24 32.6	+1.9
	0.4nm,0.4s,mb3.6,baz=113,slow=11,SNR=4.5						
MKAR	Makanchi Array	47.17	306	P	P	03 26 47.3	+1.5
	0.5nm,0.5s,mb3.7,baz=92,slow=12,SNR=3.7						
WRA	Warramunga Arr	53.01	190	P	P	03 27 29.5	-0.7
	0.9nm,0.7s,mb3.8,baz=8.4,slow=7.7,SNR=13						
ASAR	Alice Springs	56.73	189	P	P	03 27 58.5	+1.4
	0.2nm,0.4s,mb3.5,baz=3.3,slow=6.5,SNR=3.5						
ARCES	ARCESS Array B	68.25	340	P	P	03 29 14.3	+0.3
	3.2nm,1.2s,mb4.2,baz=68,slow=7.3,SNR=4.2						
JOF	Joensuu	70.09	333	*e*p	P	03 29 25.0	-0.5
	0.8nm,0.5s,mb3.9						
KAF	Kangasniemi	72.45	334	*e*p	P	03 29 39.6	-0.2
	1.0nm,0.4s,mb4.1						
FINES	FINESS Array B	72.95	333	P	P	03 29 43.2	+0.5
	0.8nm,0.7s,mb3.8,baz=59,slow=7.4,SNR=7.4						
NOA	NORSAR Array B	78.41	338	P	P	03 30 12.6	-1.4
	0.8nm,0.8s,mb3.7,baz=42,slow=5.5,SNR=3.5						

CASC 19 03:22:36.6±4.4**, 1611N×8958W, h0**^{km}±56^{km}**, MD4.3, 2C-2D, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TP2	Tecpan 2	1.91	227	⇑*e*P	Pn	03 23 08.5	-1.9
TP2				*e*S	Sn	03 23 36.9	+1.7
RBDL	Robledal	1.99	183	⇑*e*P	x	03 23 31.9	
RBDL				*e*S	x	03 24 00.3	
SNJE	San Jose	2.23	181	⇓*e*P	x	03 23 32.6	
SNJE				*e*S	x	03 24 01.9	
SBLS	San Blas	2.26	181	⇓*e*P	x	03 23 31.6	
SBLS				*e*S	x	03 24 03.4	
LBRS	Las Brisas	2.41	167	*e*P	x	03 23 44.5	
LBRS				*e*S	x	03 24 17.1	

*ISCJB **19** 03:49:46.7±0.6, 5152N±003×1608E±004, h0^{km}, Error ellipse: s-maj=4.9km s-min=3.1km az=18.2*
*IDC **19** 03:49:50.9±1.1, 5145N×1602E, h0^{km}, mb1 3.2/3, mb1mx3.1/19, mbtmp3.1/3, ML2.5/3, Error ellipse: s-maj=32.0km s-min=9.6km az=117.0*
*PRU **19** 03:49:51.5, 5139N×1605E, h0^{km}*
ISC 19 03:49:48.3±0.6**, 5153N**±003×**1609E**±004**, h0**^{km}**, n16,** σ**0**^{s}**97**/30**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.70	169	*i* Pgd	Pg	03 50 02.0	+0.3
KSP				*e*Sg	Sg	03 50 10.1	-0.6
KSP				*e*L		03 50 14.3	
UPC	Upice	1.02	183	*e*PG	Pg	03 50 08.1	+0.2
DPC	Dobruska-Polom	1.19	173	*e*PG	Pg	03 50 10.9	-0.2
DPC				*e*SG	Sg	03 50 25.5	-1.0
	20nm,0.6s						
PVCC	Panska Ves	1.39	224	*e*PG	Pg	03 50 15.7	+0.9
PRU	Pruhonice	1.83	213	*e*PG	Pg	03 50 22.5	-0.8
PRU				*e*SG	Sg	03 50 46.5	-0.5
	15nm,0.5s						
CLL	Collm	1.94	265	*e*Pn	Pn	03 50 22.0	-0.5
CLL				*i* Pg	Pg	03 50 25.6	+0.1
CLL				*i* x	x	03 50 26.5	
CLL				*i* x	x	03 50 28.6	
CLL				*i* x	x	03 50 40.5	
CLL				*i* Sg	Sg	03 50 52.1	+1.4
	comp=Z,12nm,0.5s						
CLL				*i* x	x	03 51 00.9	
OKC	Ostrava-Krasne	2.14	141	*e*PG	Pg	03 50 29.0	-0.3
OKC				*e*SG	Sg	03 50 55.5	-1.6
	comp=Z,20nm,0.7s						
NKC	Novy Kostel	2.64	242	*e*PG	Pg	03 50 39.5	+0.5
NKC				*e*SG	Sg	03 51 14.1	+0.9
	comp=Z,18nm,0.4s						
OJC	Ojcow	2.69	118	*e*Pg	Pg	03 50 40.5	+0.6
OJC				*e*Sg	Sg	03 51 15.6	+0.8
KHC	Kasperske Hory	2.89	215	*e*PN	Pn	03 50 36.0	+0.5
KHC				*e*PG	Pg	03 50 42.0	-1.6
KHC				*e*SN	Sn	03 51 11.0	+0.1
KHC				*e*SG	Sg	03 51 21.0	-0.1
	comp=Z,8.5nm,0.4s						
GERES	GERESS Array B	3.09	211	Pn	Pn	03 50 39.5	+1.1
	comp=Z,0.4nm,0.3s,baz=27,slow=12,SNR=16						
GERES				Pg	Pg	03 50 45.8	-1.8
	comp=Z,1.5nm,0.3s,baz=26,slow=18,SNR=28						
GERES				Sn	Sn	03 51 15.6	-0.4
	comp=Z,0.8nm,0.3s,baz=39,slow=27,SNR=5.6						
GERES				Lg		03 51 28.0	
	comp=Z,1.9nm,0.3s,baz=34,slow=28,SNR=9.2						
SMOL	Smolenice	3.14	163	*e*SG	Sg	03 51 31.1	+2.0
STHS	Stebnicka Huta	3.91	121	*e*PG	Pg	03 51 04.6	+1.3
STHS				*e*SG	Sg	03 51 57.9	+3.9
CRVS	Cervenica-Dubn	4.34	125	*e*SG	Sg	03 52 11.8	+4.2
FINES	FINESS Array B	11.35	25	Pn	Pn	03 52 30.4	-1.3
	comp=Z,0.1nm,0.3s,baz=209,slow=17,SNR=3.3						
ARCES	ARCESS Array B	18.61	10	Pn	Pn	03 54 06.6	-0.7
	comp=Z,0.1nm,0.3s,baz=195,slow=10.0,SNR=5.2						

MAN 19 04:00:40.9, 1503N×12293E, h51^{km}**, mb2.9, ML4.3, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	1.00	253	*e*P	Pn	04 00 58.5	-0.1
POLP				*e*S	Sn	04 01 13.3	+1.6
GQP	Guinayangan	1.21	203	⇓*e*P	Pn	04 01 02.2	+0.8
GQP				*e*S	Sn	04 01 18.7	+1.9
PVCP	Virac	1.85	140	*e*P	Pn	04 01 11.1	+0.9
CAUP	Cauayan	2.18	331	*e*P	Pn	04 01 15.5	+0.8

*ISCJB **19** 04:03:18.1±0.6, 3697N±004×335W±002, h1^{km}±3^{km}, Error ellipse: s-maj=6.4km s-min=3.3km az=3.2*
*CSEM **19** 04:03:18.8±0.1, 3679N×325W, h2^{km}, ML3.0/5, Error ellipse: s-maj=1.5km s-min=1.1km az=1.0*
*SFS **19** 04:03:18.0, 3680N×320W, h10^{km}, ML2.3*
*MDD **19** 04:03:19.1±0.2, 3681N×327W, h0^{km}±5^{km}, mbLg2.3/26, Error ellipse: s-maj=2.2km s-min=1.1km az=3.0, PRXIMO*
*INMG **19** 04:03:19.3±1.0, 3682N×327W, h0^{km}, ML2.3, Error ellipse: s-maj=2.2km s-min=1.3km az=175.0*
ISC 19 04:03:18.2±0.5**, 3684N**±004×**326W**±002**, h5**^{km}±3^{km}**, n58,** σ**1**^{s}**14**/82**, 1C-5D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EGUA	Guajares	0.25	269	⇓Pg	Pg	04 03 23.6	+0.6
	18nm,0.1s,SNR=18						
EGUA				Lg		04 03 27.3	
	48nm,0.1s,SNR=7.9						
EBER	Berja	0.30	79	⇓Pg	Pg	04 03 24.9	+0.8
	180nm,0.1s,SNR=18						
EBER				Lg		04 03 29.2	
	252nm,0.1s,SNR=5.0						
EBER	Berja	0.30	79	Pg	Pg	04 03 24.9	+0.8
	180nm,0.1s,SNR=18						
EBER				Lg		04 03 29.2	
	252nm,0.1s,SNR=5.0						
EQUE	Quentar	0.39	338	⇑Pg	Pg	04 03 26.8	+1.1
	264nm,0.2s,SNR=18						
EQUE				Lg		04 03 32.0	
	197nm,0.1s,SNR=5.2						
EQUE	Quentar	0.39	338	Pg	Pg	04 03 26.8	+1.0
	264nm,0.2s,SNR=18						
EQUE				Lg		04 03 32.0	
	197nm,0.1s,SNR=5.2						
ERON	Agron	0.47	292	⇓Pg	Pg	04 03 27.9	+0.6
	18nm,0.2s,SNR=18						
ERON				Lg		04 03 34.3	
	34nm,0.1s,SNR=15						
ECOG	Cogollos-Vega	0.50	331	⇓Pg	Pg	04 03 28.9	+1.0
	73nm,0.1s,SNR=18						
ECOG				Lg		04 03 35.4	
	140nm,0.2s,SNR=41						
ELOJ	Sierra Loja	0.78	294	Pg	Pg	04 03 33.4	+0.3
	1.6nm,0.2s,SNR=11						
ELOJ				Lg		04 03 43.9	
	8.0nm,0.2s,SNR=9.4						
ENIJ	Nijar	0.85	81	Pg	Pg	04 03 34.3	-0.3
	13nm,0.1s,SNR=16						
ENIJ				Lg		04 03 46.9	
	13nm,0.1s,SNR=11						
EALB	Alboran	0.92	168	Pg	Pg	04 03 34.6	-1.2
	14nm,0.1s,SNR=12						
EALB				Lg		04 03 46.8	
	64nm,0.2s,SNR=8.8						
EALB	Alboran	0.92	168	Pg	Pg	04 03 34.6	-1.1
	14nm,0.1s,SNR=12						
MAL	Malaga	0.93	264	*e*P	Pg	04 03 35.4	-0.7
EQES	Quesada	0.97	9	Pg	Pg	04 03 37.7	+0.8
	2.1nm,0.1s,SNR=100						
EQES				Lg		04 03 52.2	
	75nm,0.2s,SNR=11						
EQES	Quesada	0.97	9	Pg	Pg	04 03 37.7	+0.8
	2.1nm,0.1s,SNR=100						
ELUQ	Luque	1.08	312	Pg	Pg	04 03 39.7	+0.8
	1.6nm,0.2s,SNR=7.9						
ELUQ				Lg		04 03 54.7	
	7.8nm,0.2s,SNR=4.0						
ELUQ	Luque	1.08	312	Pg	Pg	04 03 40.9	+2.0
	1.6nm,0.2s,SNR=7.9						
EHUE	Huescar	1.11	28	Pg	Pg	04 03 40.3	+0.8
	1.1nm,0.2s,SNR=62						
EHUE				Lg		04 03 55.8	
	13nm,0.2s,SNR=8.4						
EMIJ	Mijas	1.25	258	Pg	Pg	04 03 38.3	-3.8
	0.5nm,0.2s,SNR=26						
EMIJ				Lg		04 03 52.9	
	9.9nm,0.2s,SNR=11						
EBAN	Banos Encina	1.39	343	⇓Pg	Pg	04 03 45.2	+0.4
	3.6nm,0.1s,SNR=18						
EBAN				Lg		04 04 04.8	
	26nm,0.3s,SNR=11						
EADA	Adamuz	1.69	322	Pg	Pg	04 03 50.8	+0.2
	3.7nm,0.1s,SNR=52						
EADA				Lg		04 04 13.8	
	13nm,0.2s,SNR=11						
EADA	Adamuz	1.69	322	Pg	Pg	04 03 50.8	+0.2
	3.7nm,0.1s,SNR=52						
LIJA	Lijar	1.72	273	*i* P	Pn	04 03 53.0	+4.3
LIJA				*e*S	Sn	04 04 14.0	+3.0
EJIF	Jimena Fronter	1.82	258	Pg	Pg	04 03 52.1	-0.9
	0.3nm,0.2s,SNR=7.9						
EMUR	La Murta	1.90	57	Pn	Pn	04 03 51.5	+0.3
	6.7nm,0.3s,SNR=13						
EMUR				Sn	Sn	04 04 14.6	-0.8
	1.8nm,0.3s,SNR=7.9						
EMUR				Lg		04 04 20.7	
	35nm,0.7s,SNR=4.0						
EMUR	La Murta	1.90	57	Pg	Pg	04 03 52.5	-2.0
	6.7nm,0.3s,SNR=13						
EVIA	Vianos	1.90	18	Pg	Pg	04 03 53.4	-1.1
	3.9nm,0.2s,SNR=27						
EVIA				Lg		04 04 20.0	
	10nm,0.3s,SNR=5.5						
ESPR	Espera	2.08	272	Pg	Pg	04 03 57.6	-0.5
	0.4nm,0.1s,SNR=5.0						
ESPR				Lg		04 04 25.7	
	2.9nm,0.2s,SNR=7.9						
ESPR	Espera	2.08	272	Pg	Pg	04 03 58.4	+0.3
	0.4nm,0.1s,SNR=5.0						
ETOB	Tobarra	2.26	36	Pn	Pn	04 03 57.2	+1.1
	0.1nm,0.1s,SNR=37						
ETOB				Pg	Pg	04 04 00.5	-1.0
	2.9nm,0.3s,SNR=7.9						
ETOB				Lg		04 04 31.3	
	19nm,0.3s,SNR=7.9						
ETOB	Tobarra	2.26	36	Pn	Pn	04 03 57.7	+1.6
	0.1nm,0.1s,SNR=37						
ETOB	Tobarra	2.26	36	Pg	Pg	04 04 00.5	-0.9
	2.9nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	2.88	290	Pn	Pn	04 04 03.9	-0.7
	0.4nm,0.1s,SNR=17						
EMIN				Sn	Sn	04 04 38.3	-1.2
	0.6nm,0.2s,SNR=7.9						
EMIN				Lg		04 04 50.8	
	3.8nm,0.5s,SNR=5.0						
EMIN	Mina Concepcio	2.88	290	Pn	Pn	04 04 03.9	-0.7
	0.4nm,0.1s,SNR=17						
ESDC	Sonseca Array	2.88	349	Pn	Pn	04 04 06.2	+1.5
	0.3nm,0.1s,baz=167,slow=12,SNR=5.4						
ESDC				Pg	Pg	04 04 12.7	-0.7
	2.3nm,0.2s,baz=166,slow=17,SNR=14						
ESDC				Lg		04 04 52.9	
	2.4nm,0.3s,baz=169,slow=28,SNR=34						
ESDC	Sonseca Array	2.88	349	Pn	Pn	04 04 06.2	+1.5
	0.3nm,0.1s,SNR=5.4						
ESDC	Sonseca Array	2.88	349	Pg	Pg	04 04 12.7	-0.8
	2.3nm,0.2s,SNR=14						
EBEN	Beniarda	3.04	51	Pn	Pn	04 04 07.9	+1.0
	0.4nm,0.2s,SNR=4.0						
EBEN	Beniarda	3.04	51	Pg	Pg	04 04 13.9	-2.6
	0.8nm,0.5s,SNR=7.9						
ECHE	Chera	3.29	33	Pn	Pn	04 04 12.6	+2.3
	0.4nm,0.2s,SNR=7.9						
ECHE	Chera	3.29	33	Pg	Pg	04 04 20.9	-0.3
	0.5nm,0.2s,SNR=7.8						
EBAD	Badajoz	3.54	304	Pn	Pn	04 04 13.4	-0.2
	0.5nm,0.3s,SNR=7.1						
EBAD				Pg	Pg	04 04 24.1	-1.8
	1.3nm,0.3s,SNR=8.1						
EBAD				Sn	Sn	04 04 53.4	-2.4
	2.8nm,0.2s,SNR=4.6						
EBAD				Lg		04 05 12.5	
	4.8nm,0.3s,SNR=5.0						
EBAD	Badajoz	3.54	304	Pn	Pn	04 04 13.4	-0.3
	0.5nm,0.3s,SNR=7.1						
EBAD	Badajoz	3.54	304	Pg	Pg	04 04 24.1	-1.9
	1.3nm,0.3s,SNR=8.1						
EBAD				Sn	Sn	04 04 53.4	-2.4
	2.8nm,0.2s,SNR=4.6						
PBEJ	Beja	3.85	289	*e*Pn	Pn	04 04 18.0	-0.1
PBEJ				*e*Sn	Sn	04 05 03.5	-0.2
PBEJ				*e*Sg	Sg	04 05 22.6	+0.6
GUD	Guadarrama	3.86	350	Pn	Pn	04 04 19.6	+1.4
	0.5nm,0.3s,SNR=7.9						
GUD				Pg	Pg	04 04 31.0	-1.2
	0.7nm,0.2s,SNR=5.7						
GUD				Lg		04 05 22.5	
	2.3nm,0.3s,SNR=5.8						
GUD	Guadarrama	3.86	350	Pg	Pg	04 04 31.0	-1.2
	0.7nm,0.2s,SNR=5.7						
PESTR	Estremoz	3.98	302	*e*Pn	Pn	04 04 20.3	+0.5
PESTR				*e*Sn	Sn	04 05 06.3	-0.5
PESTR				*e*Sg	Sg	04 05 26.9	+0.8
PESTR							
	4.4nm,0.5s						
PESTR	Estremoz	3.98	302	*e*Pn	Pn	04 04 20.3	+0.5
PESTR				*e*Sn	Sn	04 05 06.3	-0.5
PESTR				*e*Sg	Sg	04 05 26.9	+0.8
	4.4nm,0.5s						
PCBR	Castelo Branco	4.47	313	*e*Pn	Pn	04 04 27.5	+1.0
PCBR				*e*Sn	Sn	04 05 17.9	-1.0
PCBR				*e*Sg	Sg	04 05 40.7	-1.0
PCBR							

4.6nm,0.6s
PCBR Castelo Branco 4.47 313 *e*Pn Pn 04 04 27.5 +1.0
PCBR *e*Sn Sn 04 05 17.9 -1.0
PCBR *e*Sg Sg 04 05 40.7 -1.0
4.6nm,0.6s
MTE Manteigas 4.89 318 *e*Sg Sg 04 05 54.1 -1.1
MTE
5.9nm,0.5s
MTE Manteigas 4.89 318 *e*Sg Sg 04 05 54.1 -1.1
5.9nm,0.5s
PTOM Tomar 4.91 306 *e*Pn Pn 04 04 33.1 +0.5
PTOM *e*Sn Sn 04 05 28.5 -1.3
PTOM *e*Sg Sg 04 05 56.9 +0.9
PTOM
4.9nm,0.6s
PTOM Tomar 4.91 306 *e*Pn Pn 04 04 33.1 +0.5
PTOM *e*Sn Sn 04 05 28.5 -1.3
PTOM *e*Sg Sg 04 05 56.9 +0.9
4.9nm,0.6s
ERTA Horta de San J 4.98 33 Pn Pn 04 04 35.5 +2.0
0.8nm,0.3s,SNR=7.9
PVIS Viseu 5.30 318 *e*Pn Pn 04 04 38.9 +1.0
PVIS *e*Sg Sg 04 06 08.4 0.0
PVIS
4.3nm,0.6s
PCAB Cabril 6.11 324 *e*Pn Pn 04 04 50.3 +1.2
BRG Berggiesshubel 18.66 36 SG Sn 04 11 03.6 -2.5
1.2nm,0.4s

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*ISCJB **19** 04:04:33.7±0.4, 5433S±007×52E±02, h10km, mb4.5/16, MS4.0/18, Error ellipse: s-maj=12.8km s-min=9.7km az=168.0*
*IDC **19** 04:04:34.2±0.7, 5429S×524E, h0km, mb4.3/10, mb1 4.4/11, mb1mx4.2/19, mbtmp4.3/11, ML3.2/1, MS3.9/18, Ms1 3.9/18, ms1mx3.8/26, Error ellipse: s-maj=21.3km s-min=18.6km az=78.0*
*NEIC **19** 04:04:35.4±0.3, 5432S×518E, h10km, mb4.8/11, Error ellipse: s-maj=11.6km s-min=9.2km az=84.0*
*BJI **19** 04:04:35.4, 5430S×520E, h10km, mB4.9, Ms5.0, Msz4.7*
*HRVD **19** 04:04:35.4±0.6, 5443S×540E, h13km±1km, MW4.8/46, Centroid moment Tensor Solution. LP body waves: s12,c13;Mantle waves: s46,c59; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.64±.17; $M_{\theta\theta}$1.28±.14; $M_{\phi\phi}$0.36±.10; $M_{r\theta}$0.52±.28; $M_{\theta\phi}$-0.52±.06; $M_{\phi r}$-0.19±.26; Best double couple: $M_0$1.67100×10^{16} NP1:ϕ_s115.00000°,δ35.00000°,λ-88.00000°. NP2: ϕ_s293.00000°,δ55.00000°,λ-91.00000°. Principal axes: T 1.6090, Plg10.0000°, Azm24.0000°; N 0.1290, Plg1.0000°, Azm294.0000°; P -1.7330, Plg80.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 19 04:04:35.4±0.4**, 5438S**±007×**52E**±02**, h10**km**, n51, σ0s84**/27**, mb4.5**/16**, MS4.0**/18**, 1C-1D, Bouvet Island region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VNA1 Neumayer--Stat 17.40 195 *e* Pn 04 08 36.9 -1.3
VNA1 *e* 04 08 40.5
VNA1 *e* 04 08 42.1
VNA1 *e* 04 08 44.8
VNA1 *e* 04 08 48.4
VNA1 *e* 04 08 52.9
VNA1 *e* 04 09 01.5
SNAA Sanae 17.71 188 P Pn 04 08 41.6 -0.5
0.1nm,0.3s,baz=16,slow=12,SNR=27
SNAA LR LR 04 14 02.8
comp=Z,210nm,19.8s,baz=23,slow=32
SNAA Sanae 17.71 188 *e* Pn 04 08 38.5 -3.5
SNAA *e* 04 08 42.4
SNAA *e* 04 08 44.0
SNAA *e* 04 08 46.8
SNAA *e* 04 08 51.1
SNAA *e* 04 08 54.8
SNAA *e* 04 09 04.9
SNAA Sanae 17.71 188 *e*Pn Pn 04 08 40.9 -1.1
57nm,1.2s
SYO Syowa Base 21.47 146⇑ *e*P P 04 09 22.2 -1.8
SYO Syowa Base 21.47 146⇓ *e*Pn P 04 09 24.2 +0.2
SUR Sutherland 24.62 33 LR LR 04 16 57.1
comp=Z,317nm,20.6s,MS3.8,baz=174,slow=30
BOSA Boshof 29.58 38 P P 04 10 40.7 +0.3
11nm,1.3s,mb4.4,baz=199,slow=9.1,SNR=4.3
BOSA LR LR 04 20 30.9
comp=Z,387nm,18.8s,MS4.1,baz=187,slow=32
BOSA Boshof 29.58 38 *e*P P 04 10 40.2 -0.3
12nm,1.2s,mb4.5
MAW Mawson 29.64 139 P P 04 10 41.8 +0.8
2.1nm,0.9s,mb3.9,baz=278,slow=9.9,SNR=3.6
MAW LR LR 04 19 20.6
comp=Z,102nm,21.4s,MS3.4,baz=57,slow=30
QSPA South Pole Qui 35.86 180 *e*P P 04 11 35.9 +0.6
9.8nm,1.0s,mb4.7
TSUM Tsumeb 36.37 20 *e*P P 04 11 39.9 +0.3
23nm,1.2s,mb5.0
MATP Matopo 38.24 37 P P 04 11 55.3 -0.2
11nm,1.3s,mb4.4,baz=226,slow=10,SNR=4.9
CASY Casey 47.21 148 *e*P P 04 13 09.6 +1.2
9.3nm,1.1s,mb4.6
TRQA Tornquist 47.42 261 *e*P P 04 13 09.6 -0.3
13nm,1.3s,mb4.7
VNDA Vanda 47.56 173 P P 04 13 11.9 +0.9
3.2nm,0.9s,mb4.3,baz=219,slow=7.7,SNR=20
VNDA LR LR 04 33 04.4
comp=Z,110nm,19.9s,MS3.8,baz=192,slow=36
VNDA Vanda 47.56 173 *e*P P 04 13 11.6 +0.5
3.8nm,1.0s,mb4.4
PLCA Paso Flores 50.48 253 LR LR 04 31 42.4
comp=Z,73nm,21.9s,MS3.6,baz=14,slow=32
CPUP Villa Florida 53.16 276 P P 04 13 52.9 -0.6
5.0nm,0.8s,mb4.5,baz=119,slow=5.7,SNR=14
CPUP LR LR 04 32 23.5
comp=Z,56nm,20.6s,MS3.6,baz=132,slow=31
CPUP Villa Florida 53.16 276 *e*P P 04 13 52.8 -0.6
22nm,0.9s,mb5.1
BDFB Brasilia 56.33 292 P P 04 14 17.3 +0.9
1.1nm,0.6s,mb4.1,baz=222,slow=10,SNR=2.3
BDFB LR LR 04 32 52.9
comp=Z,81nm,20.5s,MS3.8,baz=198,slow=30
KMBO Kilima Mbogo 59.22 38 LR LR 04 38 13.4
comp=Z,227nm,19.0s,MS4.3,baz=276,slow=34
DBIC Dimbokro 61.41 349 P P 04 14 50.8 -0.9
4.7nm,0.9s,mb4.6,baz=44,slow=3.1,SNR=4.1
DBIC LR LR 04 34 24.4
comp=Z,85nm,21.1s,MS3.9,baz=114,slow=29
LVC Limon Verde 62.76 269 *e*P P 04 15 02.1 +1.3
10nm,1.1s,mb4.9
LPAZ La Paz 67.24 274 P P 04 15 31.3 +1.4
6.1nm,0.9s,mb4.7,baz=118,slow=6.5,SNR=26
LPAZ LR LR 04 40 58.4
comp=Z,96nm,21.5s,MS4.0,baz=203,slow=32
LPAZ La Paz 67.24 274 *e*P P 04 15 30.7 +0.7
23nm,1.4s,mb5.0
TORD Torodi Ar. Bea 67.33 356 P P 04 15 29.8 -0.7
1.6nm,0.9s,mb4.0,baz=181,slow=5.1,SNR=6.9
TORD LR LR 04 39 46.9
comp=Z,67nm,19.9s,MS3.9,baz=195,slow=31
SAML Samuel 70.25 283 *e*P P 04 15 48.1 -0.7
7.1nm,1.1s,mb4.5
RPZ Rata Peaks 81.53 170 LR LR 04 49 44.9
comp=Z,242nm,20.6s,MS4.5,baz=236,slow=33
ROSC El Rosal 87.86 281 LR LR 04 54 34.9
comp=Z,57nm,18.1s,MS4.0,baz=182,slow=34
KEST Kesra 89.82 3 LR LR 04 52 58.3
comp=Z,17nm,18.7s,MS3.5,baz=218,slow=32
ASF Jabal al Asfar 90.43 26 LR LR 04 56 46.0
comp=Z,109nm,21.6s,MS4.2,baz=44,slow=35
ASAR Alice Springs 90.65 134 P P 04 17 37.8 -0.4
3.0nm,1.0s,mb4.6,baz=208,slow=5.2,SNR=13
AS31 Alice Springs 90.65 134 *e*P P 04 17 37.9 -0.2
MMAI Mount Meron Ar 90.85 25 LR LR 04 56 52.9
comp=Z,92nm,19.1s,MS4.2,baz=190,slow=35
PSI Prapat 94.41 91 LR LR 04 49 55.1
comp=Z,74nm,19.8s,MS4.2,baz=169,slow=29
WMQ Urumqi 120.26 56 *e*PKP PKPdf 04 23 28.0 +1.3
ARCES ARCESS Array B 124.49 8 PKP PKPdf 04 23 34.3 -0.5
0.8nm,0.8s,baz=188,slow=2.5,SNR=4.2
HHC Hu-ho-hao-te 130.78 74 *e*PKP PKPdf 04 23 48.4 +1.6
HHC PP PP 04 26 09.4 +7.0
HHC PKS 04 27 24.3
HHC PP PP
comp=Z,40nm,10.0s
HHC LR LR
comp=N,63nm,23.8s,MS4.5
HHC LR LR
comp=E,109nm,22.6s,MS4.5
HHC LR LR
comp=Z,111nm,22.6s,MS4.5
SMCO Snowmass 133.01 280 *e*PKPdf PKPdf 04 23 50.8 -0.3
BW06 Boulder Array 136.84 282 *e*PKPdf PKPdf 04 23 57.4 -0.7
PDAR Pinedale Array 136.84 282 PKP PKPdf 04 23 57.0 -1.2
comp=Z,0.9nm,0.9s,baz=96,slow=4.5,SNR=5.2
HWUT Hardware Ranch 137.25 280 *e*PKPdf PKPdf 04 23 56.6 -2.3
LAO LASA Array 137.36 289 *e*PKPdf PKPdf 04 23 56.6 -2.6
LOHW Long Hollow 137.96 283 *e*PKPdf PKPdf 04 23 59.5 -0.7
TPAW Teton Pass 138.08 282 *e*PKPdf PKPdf 04 24 00.4 -0.1
MOOW Moose Ponds 138.13 283 *e*PKPdf PKPdf 04 24 00.6 0.0
NVAR Mina Array Bea 139.10 271 PKP PKPdf 04 24 03.8 +1.4
comp=Z,0.9nm,1.0s,baz=171,slow=4.4,SNR=5.0
EDM Edmonton 144.72 294 *e*PKPdf PKPdf 04 24 09.6 -2.8
YKA Yellowknife Ar 148.59 309 PKPbc PKPbc 04 24 20.8 -1.7
comp=Z,1.1nm,0.3s,baz=101,slow=2.3,SNR=6.3
YKA Yellowknife Ar 148.59 309 PKPbc PKPbc 04 24 20.8 -1.7

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*ISCJB **19** 04:20:02.8±0.2, 7188N±003×1312W±0.1, h35km, mb4.2/49, MS3.5/9, Error ellipse: s-maj=6.5km s-min=3.7km az=30.6*
*PGC **19** 04:20:03.9, 72.13N×131.11W, h35km, MLSn4.3/1, 201km northwest of Sachs Harbour, Nt Beaufort Sea.*
*NEIC **19** 04:20:03.9, 72.13N×131.11W, h35km, mb4.3/28, ML4.3(PGC), After PGC.*
*BJI **19** 04:20:03.8, 72.10N×131.10W, h35km, mB4.8, mb4.6, Ms4.2, Msz3.7*
*IDC **19** 04:20:06.1±5.1, 72.13N×13057W, h30km±38km, mb3.9/19, mb1 4.1/21, mb1mx4.1/26, mbtmp4.1/21, ML4.8/2, MS3.0/5, Ms1 3.0/5, ms1mx2.7/45, Error ellipse: s-maj=20.6km s-min=14.2km az=77.0*
ISC 19 04:20:04.7±0.2**, 7188N**±003×**1310W**±01**, h35**km**, n117, σ1s18**/140**, mb4.2**/49**, MS3.5**/9**, Beaufort Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
INK Inuvik 3.70 195 Pn Pn 04 21 01.2 +1.9
131nm,0.3s,baz=14,slow=14,SNR=6427
INK Sn Sn 04 21 43.3 +1.7
138nm,0.3s,baz=281,slow=30,SNR=21
INK Inuvik 3.70 195 Pn Pn 04 21 01.2 +1.9
INK Sn Sn 04 21 43.0 +1.3
INK Trac 04 21 45.9
comp=Z,177nm,0.1s
INK Inuvik 3.70 195 *e*Pn Pn 04 21 00.9 +1.6
INK *e*Sn Sn 04 21 42.4 +0.7
EGAK Eagle 8.05 213 *e*Pn Pn 04 21 58.9 -0.3
EGAK *e*Sn Sn 04 23 26.6 -2.5
COLD Coldfoot 8.16 245 P Pn 04 22 00.7 +0.1
COLD S Sn 04 23 24.6 -7.0
DAWY Dawson 8.45 206 Pn Pn 04 22 04.8 +0.2
DAWY Sn Sn 04 23 33.8 -5.0
DAWY Trac 04 23 39.8
comp=Z,110nm,0.2s
DAWY Dawson 8.45 206 P Pn 04 22 04.8 +0.1
DAWY S Sn 04 23 33.2 -5.6
COLA College 9.35 230 P Pn 04 22 16.8 -0.2
COLA S Sn 04 23 55.4 -5.5
IMA2 Indian Mountai 9.97 246 *e*P Pn 04 22 28.8 +3.4
MENT Mentasta 10.20 215 *e*P Pn 04 22 28.2 -0.4
MCK McKinley 10.57 228 P Pn 04 22 34.1 +0.4
RES Resolute Bay 10.63 58 Pn Pn 04 22 30.6 -3.9
RES Sn Sn 04 24 17.4 -15
RES Trac 04 24 32.5
comp=Z,20nm,0.2s
RES Resolute Bay 10.63 58 *e*Pn Pn 04 22 30.3 -4.2
RES *e*Sn Sn 04 24 21.7 -11
YKW3 Yellowknife Ar 11.24 138 Pn Pn 04 22 43.1 +0.2
YKW3 Pn Pn 04 22 43.1 +0.2
YKW3 Sn Sn 04 24 38.9 -8.4
YKW3 Sn Sn 04 24 40.2 -7.0
YKW3 Trac 04 24 46.0
comp=Z,58nm,0.4s
YKW3 Trac 04 24 46.1
comp=Z,58nm,0.3s
YKA Yellowknife Ar 11.31 138 Pn Pn 04 22 43.2 -0.6
baz=326,slow=13,SNR=103
YKA Sn Sn 04 24 43.2 -5.6
baz=329,slow=22,SNR=13
YKA Lg 04 25 55.8
baz=331,slow=29,SNR=4.0
YKA LR LR 04 27 58.1
comp=Z,43nm,19.3s,baz=270,slow=41
YKA Yellowknife Ar 11.31 138 Pn Pn 04 22 43.2 -0.6
YKA Sn Sn 04 24 43.2 -5.6
YKA Lg 04 25 55.8
YKA LR LR 04 27 58.1
WHY Whitehorse 11.38 190 Pn Pn 04 22 46.0 +1.3
WHY Sn Sn 04 24 47.7 -2.8
WHY Trac 04 25 17.7
comp=Z,10.0nm,0.5s
WHY Whitehorse 11.38 190 P Pn 04 22 46.3 +1.5
HYT Haines Junctio 11.40 196 Pn Pn 04 22 45.6 +0.6
HYT Sn Sn 04 24 47.5 -3.6
comp=Z,16nm,0.5s
HYT Trac 04 25 05.0
comp=Z,16nm,0.5s
SKAG Skagway 12.60 190 *e*P Pn 04 23 03.5 +2.1
30nm,1.0s
PLBC Pleasant Camp 12.67 193 Pn Pn 04 23 04.5 +2.2
PLBC Sn Sn 04 25 19.6 -2.5
FNBB Fort Nelson 13.44 162 Pn Pn 04 23 11.2 -1.6
FNBB Sn Sn 04 25 33.6 -7.4
FNBB Trac 04 25 45.8
comp=Z,14nm,0.3s
DLBC Dease Lake 13.51 178 Pn Pn 04 23 15.0 +1.2
2.2nm,0.3s,baz=8.6,slow=14,SNR=23
DLBC LR LR 04 29 32.2
comp=Z,58nm,18.1s,baz=81,slow=41
DLBC Dease Lake 13.51 178 Pn Pn 04 23 15.3 +1.4
DLBC Sn Sn 04 25 39.6 -3.1
DLBC Trac 04 26 33.5
comp=Z,13nm,0.8s
BMBC Bull Mountain 16.33 162 Pn Pn 04 23 49.3 -2.0
BMBC Sn Sn 04 26 40.4 -11
BMBC Trac 04 26 47.4
comp=Z,16nm,0.5s
KDAK Kodiak Island 16.70 223 Pn Pn 04 23 59.2 +3.3
0.6nm,0.3s,baz=24,slow=10,SNR=5.0
KDAK Kodiak Island 16.70 223 Pn Pn 04 23 59.2 +3.3
FCC Fort Churchill 19.77 112 Pn Pn 04 24 31.8 -1.6
FCC Sn Sn 04 27 53.5 -21
FCC Trac 04 28 09.2
comp=Z,4.0nm,0.4s
FCC Fort Churchill 19.77 112 *e*P Pn 04 24 31.8 -1.7
7.1nm,0.6s
EDM Edmonton 20.25 148 Pn P 04 24 39.9 +3.0
EDM Sn S 04 28 08.1 -14
EDM Trac 04 28 17.2
comp=Z,12nm,0.5s
EDM Edmonton 20.25 148 *e*P P 04 24 39.0 +2.1
DOWB Downie Slide 21.18 158 Pn P 04 24 53.2 +6.2
DOWB Trac 04 29 05.4
comp=Z,31nm,0.5s
SLEB Sale Mountain 21.57 158 Pn P 04 24 59.2 +8.0
WSLR Whistler 22.14 166 Pn P 04 25 02.8 +5.6
WPB Watts Point 22.58 167 Pn P 04 25 06.3 +4.3
FRB Frobisher Bay 23.78 78 P P 04 25 13.1 -1.0
8.7nm,0.4s,mb4.5,baz=314,slow=10,SNR=19
WALA Waterton Lakes 24.20 152 Pn P 04 25 28.1 +10
WALA Sn S 04 29 44.6 +11
WALA Trac 04 29 54.0
comp=Z,7.0nm,0.6s
WALA Waterton Lakes 24.20 152 *e*P P 04 25 17.2 -0.6
4.1nm,0.6s,mb4.0
WALA *e*pP 04 25 28.2
HRY Holter Researc 26.80 150 *e*P P 04 25 40.2 -1.3
ULM Lac du Bonnet 26.80 125 P P 04 25 42.6 +1.1
1.8nm,0.5s,mb3.9,baz=342,slow=9.3,SNR=6.4
ULM Lac du Bonnet 26.80 125 Pn P 04 25 42.2 +0.7
ULM Trac 04 31 10.7
comp=Z,1.0nm,0.3s
ULM Lac du Bonnet 26.80 125 *e*P P 04 25 41.5 -0.1
3.5nm,0.6s,mb4.1
BOZ Bozeman (W) 27.87 150 *e*P P 04 25 51.8 +0.7
2.4nm,1.1s,mb3.7
TPAW Teton Pass 30.08 150 *e*P P 04 26 10.1 -0.6
2.4nm,0.8s,mb4.0
BW06 Boulder Array 31.01 149 *e*P P 04 26 22.6 +3.6
1.1nm,0.8s,mb3.7
PDAR Pinedale Array 31.01 149 P P 04 26 22.8 +3.8
0.9nm,0.5s,mb3.9,baz=15,slow=8.8,SNR=11
SCHQ Schefferville 31.39 88 P P 04 26 22.6 +0.4
3.9nm,0.8s,mb4.3,baz=309,slow=6.5,SNR=5.3
HWUT Hardware Ranch 31.83 152 *e*P P 04 26 29.9 +3.8
2.1nm,0.8s,mb4.0
NVAR Mina Array Bea 34.14 162 P P 04 26 51.1 +4.8
0.2nm,0.5s,mb3.3,baz=346,slow=7.0,SNR=3.4
SMCO Snowmass 34.94 146 *e*P P 04 26 56.6 +3.4
1.1nm,0.6s,mb4.0
ARCES ARCESS Array B 37.98 13 P P 04 27 18.0 -1.1
2.3nm,0.9s,mb3.9,baz=334,slow=8.1,SNR=7.1
ARCES PcP PcP 04 29 34.1 -0.2
1.7nm,0.8s,baz=345,slow=2.5,SNR=9.4
ARCES LR LR 04 45 20.1
comp=Z,23nm,20.0s,MS3.0,baz=210,slow=40
ARCES ARCESS Array B 37.98 13 P P 04 27 18.0 -1.1
ARCES PcP PcP 04 29 34.1 -0.2
ARCES LR LR 04 45 20.1
WCI Wyandotte Cave 40.49 121 *e*P P 04 27 41.0 +0.9
3.5nm,0.5s,mb4.3
WMOK Wichita Mounta 40.82 138 *e*P P 04 27 45.4 +2.6
0.7nm,0.4s,mb3.6
WVT Waverly 42.07 124 *e*P P 04 27 53.4 +0.4
1.9nm,0.7s,mb3.8
NB2 NORSAR Subarra 44.81 25 P P 04 28 14.2 -1.0
comp=Z,0.8nm,0.6s,mb3.7,baz=344,slow=7.9
NOA NORSAR Array B 44.81 25 P P 04 28 13.5 -1.7
comp=Z,1.3nm,0.7s,mb3.9,baz=344,slow=8.0,SNR=5.6
NOA LR LR 04 48 45.8
comp=Z,15nm,19.6s,MS2.9,baz=10.0,slow=39
NOA NORSAR Array B 44.81 25 P P 04 28 13.5 -1.7
NOA LR LR 04 48 45.8
JOF Joensuu 44.92 11 *e*p P 04 28 14.1 -2.0
comp=Z,0.5nm,0.3s,mb3.8
FINES FINESS Array B 46.01 15 P P 04 28 23.2 -1.5
comp=Z,3.8nm,0.8s,mb4.4,baz=17,slow=8.0,SNR=19
FINES PcP PcP 04 30 00.3 -0.5
comp=Z,0.4nm,0.6s,baz=14,slow=6.2,SNR=2.8
FINES LR LR 04 51 27.7
comp=Z,26nm,18.2s,MS3.2,baz=180,slow=41
HFS Hagfors 46.01 24 P P 04 28 23.4 -1.3
comp=Z,1.8nm,0.6s,mb4.2,baz=25,slow=3.9,SNR=10
HFS PcP PcP 04 29 60.0 -0.9
comp=Z,0.9nm,0.5s,baz=283,slow=2.6,SNR=6.1
EKA Eskdalemuir Ar 47.94 37 P P 04 28 38.7 -1.1
comp=Z,0.8nm,0.5s,mb4.0,baz=331,slow=7.2,SNR=7.1
ZAL Zalesovo 51.98 334 P P 04 29 09.7 -0.7
comp=Z,1.2nm,0.3s,mb4.3,baz=101,slow=8.3,SNR=4.7
CHKZ Chkalovo 53.82 344 *e*P P 04 29 23.3 -0.7
comp=Z,0.9nm,0.5s,mb4.0
SONM Songino Array 53.97 315 P P 04 29 26.5 +1.4
comp=Z,2.1nm,0.9s,mb4.0,baz=8.2,slow=9.6,SNR=13
ROSF Rostrenen 54.57 40 *e*P P 04 29 29.2 -0.2
ZRNK Zerenda 54.67 345 *e*P P 04 29 29.6 -0.6
comp=Z,3.4nm,1.1s,mb4.3
FLN La Foliniere 54.71 38 *e*P P 04 29 29.9 -0.6
comp=Z,7.9nm,0.7s,mb4.5
FLN *e*R
comp=Z,76nm,20.0s
FLN La Foliniere 54.71 38 *e*P P 04 29 29.9 -0.6
comp=Z,4.0nm,0.7s,mb4.6
FLN LR LR
comp=Z,80nm,20.0s,MS3.8
LDF La Druitiere 54.94 38 *e*P P 04 29 31.7 -0.4
comp=Z,8.3nm,0.7s,mb4.6
LDF La Druitiere 54.94 38 *e*P P 04 29 31.7 -0.4
comp=Z,4.2nm,0.7s,mb4.6
GRR Gorron 55.00 38 *e*P P 04 29 32.3 -0.2
HAU Haudompre 56.68 33 *e*P P 04 29 44.8 +0.2
HAU *e*R
comp=Z,38nm,18.8s
HAU Haudompre 56.68 33 *e*P P 04 29 44.8 +0.2
HAU LR LR
comp=Z,40nm,18.8s,MS3.5
MFF Saint Martin d 56.85 39 *e*P P 04 29 46.9 +1.1
comp=Z,3.5nm,0.4s,mb4.4
MFF Saint Martin d 56.85 39 *e*P P 04 29 46.9 +1.1
comp=Z,1.8nm,0.4s,mb4.5
AKASG Malin Array Be 56.92 15 P P 04 29 45.6 -0.7
comp=Z,3.4nm,0.6s,mb4.6,baz=352,slow=7.2,SNR=24
AKBB Malin Array Si 56.92 15 *e*P P 04 29 42.9 -3.4
LOR Lormes 56.96 35 *e*P P 04 29 46.6 +0.1
comp=Z,6.8nm,0.7s,mb4.5
LOR *e*R
comp=Z,35nm,21.8s
LOR Lormes 56.96 35 *e*P P 04 29 46.6 +0.1
comp=Z,3.4nm,0.7s,mb4.5
LOR LR LR
comp=Z,40nm,21.8s,MS3.5
GERES GERESS Array B 57.02 27 P P 04 29 47.1 +0.2
comp=Z,0.4nm,0.6s,mb3.6,baz=350,slow=6.8,SNR=5.5
SSF Saint Saulge 57.09 36 *e*P P 04 29 47.6 +0.1
comp=Z,3.2nm,0.5s,mb4.3
SSF Saint Saulge 57.09 36 *e*P P 04 29 47.6 +0.1
comp=Z,1.6nm,0.5s,mb4.3
AVF Avril sur Loir 57.33 36 *e*P P 04 29 49.2 0.0
comp=Z,6.0nm,0.8s,mb4.4
AVF Avril sur Loir 57.33 36 *e*P P 04 29 49.2 0.0
comp=Z,3.0nm,0.8s,mb4.4
BGF Bois d'Agland 57.46 36 *e*P P 04 29 50.1 0.0
comp=Z,13nm,0.7s,mb4.8
BGF Bois d'Agland 57.46 36 *e*P P 04 29 50.1 0.0
comp=Z,6.7nm,0.6s,mb4.8
SMF Signal de Mont 57.56 35 *e*P P 04 29 50.7 -0.1
TCF Toulx Ste Croi 57.60 37 *e*P P 04 29 51.0 -0.1
comp=Z,5.4nm,0.6s,mb4.5
TCF Toulx Ste Croi 57.60 37 *e*P P 04 29 51.0 -0.1
comp=Z,2.7nm,0.6s,mb4.5
CABF La Chapelle 57.99 34 *e*P P 04 29 54.2 +0.4
comp=Z,7.0nm,0.8s,mb4.5
CABF La Chapelle 57.99 34 *e*P P 04 29 54.2 +0.4
comp=Z,3.5nm,0.8s,mb4.4
RJF Les Rejaudoux 58.41 38 *e*P P 04 29 57.2 +0.4
RJF *e*R
comp=Z,52nm,22.8s
RJF Les Rejaudoux 58.41 38 *e*P P 04 29 57.2 +0.4
RJF LR LR
comp=Z,50nm,22.8s,MS3.6
LFF La Frestale 58.62 38 *e*P P 04 29 58.7 +0.5
comp=Z,8.5nm,0.5s,mb4.8
LFF La Frestale 58.62 38 *e*P P 04 29 58.7 +0.5
comp=Z,4.3nm,0.5s,mb4.7
CAF Calviac 58.88 37 *e*P P 04 30 00.2 +0.1
LPL La Plagne 59.16 33 *e*P P 04 30 03.1 +1.1
comp=Z,1.8nm,0.5s,mb4.0
LPL La Plagne 59.16 33 *e*P P 04 30 03.1 +1.1
comp=Z,0.9nm,0.5s,mb4.1
LPG La Plagne 59.18 33 *e*P P 04 30 02.8 +0.7
comp=Z,5.9nm,0.9s,mb4.3
LPG La Plagne 59.18 33 *e*P P 04 30 02.8 +0.7
comp=Z,3.0nm,0.9s,mb4.3
MKAR Makanchi Array 59.31 334 P P 04 30 01.8 -1.2
comp=Z,0.4nm,0.5s,mb3.7,baz=64,slow=5.5,SNR=3.8
MKAR Makanchi Array 59.31 334 P P 04 30 01.8 -1.2
HHC Hu-ho-hao-te 59.38 309 *e*P P 04 30 02.8 -0.7
HHC AP pP 04 30 12.8 -1.3
HHC XP sP 04 30 16.8 -1.4
HHC PCP PcP 04 30 51.3 +0.2
HHC PP PP 04 32 14.9 +0.1
HHC SCP ScP 04 34 47.9 -1.2
HHC PCS PcS 04 34 51.3 -1.8
HHC S S 04 38 05.1 -4.7
HHC XS sS 04 38 22.1 -5.3
HHC SCS ScS 04 39 46.3 -4.6
HHC SS SS 04 42 00.9 -4.0
HHC AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
HHC AMB AMB
comp=Z,52nm,5.6s
HHC LR LR
comp=N,70nm,22.6s,MS4.0
HHC LR LR
comp=E,91nm,20.2s,MS4.0
HHC LR LR
comp=Z,64nm,20.2s,MS3.8
ORIF Oris-en-Rattie 59.59 34 *e*P P 04 30 05.4 +0.5
ORIF *e*R
comp=Z,37nm,19.8s
MBDF Montbardon 59.93 34 *e*P P 04 30 09.0 +1.7
comp=Z,11nm,1.0s,mb4.5
MBDF Montbardon 59.93 34 *e*P P 04 30 09.0 +1.7
comp=Z,5.3nm,1.0s,mb4.5
WMQ Urumqi 61.41 329 *e*P P 04 30 17.0 -0.4
WMQ XP sP 04 30 31.0 -1.1
WMQ PP PP 04 32 34.0 +1.3

WMQ				S	S	04 38 32.0	-3.9
WMQ				SCS	ScS	04 40 02.0	-4.1
WMQ				SS	SS	04 42 34.0	-2.8
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,132nm,6.0s						
WMQ				LR	LR		
	comp=N,39nm,14.0s,MS4.0						
WMQ				LR	LR		
	comp=E,62nm,14.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,31nm,14.0s,MS3.6						
ESDC	**Sonseca Array**	**62.70**	**44**	P	**P**	**04 30 26.7**	**+0.7**
	comp=Z,1.7nm,0.7s,mb4.3,baz=351,slow=7.3,SNR=7.7						
GTA	**Gaotai**	**63.43**	**318**	*e*P	**P**	**04 30 32.1**	**+1.3**
GTA				AP	pP	04 30 38.5	-3.1
GTA				XP	sP	04 30 42.6	-3.0
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.6						
SJG	**San Juan**	**65.16**	**108**	*e*P	**P**	**04 30 42.0**	**-0.1**
	comp=Z,13nm,0.6s,mb5.1						
BRTR	**Keskin Array B**	**68.17**	**13**	P	**P**	**04 31 02.2**	**+0.9**
	comp=Z,1.1nm,0.6s,mb4.1,baz=334,slow=4.2,SNR=7.1						
KEST	**Kesra**	**69.13**	**34**	P	**P**	**04 31 08.4**	**+1.1**
	comp=Z,2.8nm,0.8s,mb4.2,baz=238,slow=2.9,SNR=7.2						
TORD	**Torodi Ar. Bea**	**89.54**	**46**	P	**P**	**04 32 58.7**	**+0.3**
	comp=Z,0.7nm,0.7s,mb4.1,baz=352,slow=5.3,SNR=8.2						
SAML	**Samuel**	**91.72**	**114**	*e*P	**P**	**04 33 09.0**	**+0.4**
	comp=Z,1.4nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**113.87**	**267**	PKP	PKiKP	04 38 39.5	-0.2
	comp=Z,0.4nm,0.5s,baz=42,slow=1.9,SNR=6.8						
STKA	**Stephens Creek**	**119.16**	**257**	PKP	PKPdf	04 38 50.0	0.0
	comp=Z,1.3nm,0.7s,baz=292,slow=5.4,SNR=3.2						

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*ISCJB **19** 04:41:36.3±0.4, 4609N±002×710E±004, h10km±5km, Error ellipse: s-maj=4.8km s-min=3.2km az=28.5*
*ROM **19** 04:41:36.9±0.1, 4605N×709E, h1km, Md1.6/3, Ml1.2/1, Error ellipse: s-maj=1.8km s-min=0.1km az=90.0*
*ZUR **19** 04:41:36.9, 4608N×709E, h6km±2km, ML1.2/6*
*LDG **19** 04:41:37.4±0.2, 4608N×711E, h2km, Md2.2/2, Ml2.1/4, Error ellipse: s-maj=4.7km s-min=1.8km az=96.0*
*STR **19** 04:41:37.3±0.0, 4608N×710E, h2km±1km, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 19 04:41:36.8±0.4**, 4609N**±002×**711E**±004**, h9**km±5km**, n24, σ0**s**73**/35**, 3C-5D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALAN	**Lac Salanfe**	**0.11**	**300**	*i* Sg	**Pg**	**04 41 39.5**	**+0.2**
SALAN	**Lac Salanfe**	**0.11**	**300**	⇓*i*Pg	**Sg**	**04 41 41.1**	**0.0**
EMV	**Vieux Emosson**	**0.15**	**259**	⇓*i*Pg	**Pg**	**04 41 40.1**	**+0.1**
EMV				Sg	**Sg**	**04 41 41.9**	**-0.3**
EMV	**Vieux Emosson**	**0.15**	**259**	*i* Sg	**Pg**	**04 41 40.5**	**+0.5**
	317nm,0.2s						
EMV	**Vieux Emosson**	**0.15**	**259**	⇓*i*Pg	**Sg**	**04 41 41.9**	**-0.3**
	317nm,0.2s						
GRYON	**Gryon**	**0.16**	**1**	⇑*i*Pg	**Pg**	**04 41 40.7**	**+0.5**
	80nm,0.3s						
DIX	**Grande Dixence**	**0.21**	**93**	⇓*i*Pg	**Pg**	**04 41 41.9**	**+0.8**
DIX				Sg	**Sg**	**04 41 45.0**	**+1.0**
DIX	**Grande Dixence**	**0.21**	**93**	⇓*i*Pg	**Pg**	**04 41 41.9**	**+0.8**
	80nm,0.3s						
DIX				*i* Sg	**Sg**	**04 41 43.2**	**-0.8**
	80nm,0.3s						
AIGLE	**Aigle**	**0.27**	**337**	*i* Sg	**Pg**	**04 41 42.5**	**+0.3**
	54nm,0.2s						
AIGLE	**Aigle**	**0.27**	**337**	⇑*i*Pg	**Sg**	**04 41 45.0**	**-0.9**
	54nm,0.2s						
SENIN	**Lac Senin**	**0.30**	**26**	*e*Pg	**Pg**	**04 41 43.3**	**+0.5**
	85nm,0.2s						
SENIN				*e*Sg	**Sg**	**04 41 46.4**	**-0.4**
	85nm,0.2s						
MRGE	**Morge**	**0.32**	**186**	⇑*i*Pg	**Pg**	**04 41 43.4**	**+0.3**
MRGE				Sg	**Sg**	**04 41 47.7**	**+0.3**
	25nm,0.2s						
RSL	**Roselend**	**0.53**	**220**	Pg	**Pg**	**04 41 46.9**	**0.0**
RSL				Sg	**Sg**	**04 41 53.4**	**-0.4**
MMK	**Mattmark**	**0.60**	**93**	*e*Pg	**Pg**	**04 41 46.3**	**-2.0**
LPL	**La Plagne**	**0.63**	**205**	*e*Pg	**Pg**	**04 41 49.3**	**+0.3**
LPL				*e*Sg	**Sg**	**04 41 57.1**	**-0.1**
	2.6nm,0.2s						
LPG	**La Plagne**	**0.64**	**203**	*e*Pg	**Pg**	**04 41 49.7**	**+0.5**
LPG	**La Plagne**	**0.64**	**203**	*e*Pn	**Pg**	**04 41 51.4**	**+2.2**
LPG				*e*Sg	**Sg**	**04 41 57.1**	**-0.5**
	3.7nm,0.2s						
CABF	**La Chapelle**	**0.88**	**307**	*e*Pg	**Pg**	**04 41 54.4**	**+0.8**
CABF	**La Chapelle**	**0.88**	**307**	*e*Pn	**Pn**	**04 41 55.4**	**+0.1**
CABF				*e*Sg	**Sg**	**04 42 06.1**	**+1.0**
	5.2nm,0.3s						
MBDF	**Montbardon**	**1.38**	**190**	*e*Pn	**Pn**	**04 42 02.4**	**+0.2**
ORIF	**Oris-en-Rattie**	**1.46**	**217**	*e*Sg	**Sg**	**04 42 24.2**	**+0.6**
	3.7nm,0.3s						
HINF	**Hinteralfeld**	**1.74**	**354**	*e*Pn	**Pn**	**04 42 07.1**	**0.0**
HINF	**Hinteralfeld**	**1.74**	**354**	*e*Pg	**Pg**	**04 42 09.8**	**-0.2**
HINF				*e*Sg	**Sg**	**04 42 31.9**	**-0.6**
	1.1nm,0.2s						
VIVF	**Saint-Julien-l**	**2.11**	**235**	*e*Pg	**Pg**	**04 42 16.7**	**-0.5**
VIVF				*e*Sg	**Sg**	**04 42 42.7**	**-1.9**
	4.0nm,0.3s						

WEL 19 04:48:07.3±0.3**, 3634S**×**17761E, h230**km±5km**, ML3.8**/3**, Error ellipse: s-maj=6.0km s-min=5.0km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**1.81**	**163**	PN	Pn	04 48 46.5	+0.2
PUZ				SN	S	04 49 16.1	-0.9
URZ	**Urewera**	**1.96**	**191**	PN	Pn	04 48 47.9	+0.2
URZ				SN	S	04 49 19.6	+0.1
MWZ	**Matawai**	**2.00**	**182**	PN	Pn	04 48 48.6	+0.5
MWZ				SN	S	04 49 19.6	-0.5
KNZ	**Kokohu**	**2.68**	**179**	PN	Pn	04 48 55.1	+0.1
TCW	**Tory Channel**	**5.52**	**207**	SN	S	04 50 30.7	-3.3

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*IDC **19** 04:56:43.9±14.0, 499S×130.10E, h81km±150km, mb3.4/2, mb1 3.8/5, mb1mx3.6/14, mbtmp3.9/5, ML3.8/3, Error ellipse: s-maj=126.9km s-min=52.8km az=61.0*
*ISCJB **19** 04:56:52.6±1.8, 53S±0.1×1299E±02, h191km±18km, mb3.7/2, Error ellipse: s-maj=37.0km s-min=11.2km az=139.7*
*NEIC **19** 04:56:54.0±2.8, 529S×12982E, h185km±31km, mb4.0/3, Error ellipse: s-maj=27.3km s-min=19.5km az=81.0*
ISC 19 04:56:55.0±1.7**, 54S**±01×**1301E**±02**, h198**km±17km**, n11, σ1**s**68**/17**, mb3.5**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.60**	**162**	*e*P	**Pn**	**04 58 44.7**	**+1.8**
	33nm,0.5s						
KAKA				*e*S	**Sn**	**05 00 06.3**	**-2.4**
FITZ	**Fitzroy Crossi**	**13.30**	**199**	P	**Pn**	**04 59 55.5**	**-0.7**
	1.0nm,0.3s,baz=30,slow=11,SNR=51						
FITZ				S	**Sn**	**05 02 13.6**	**-11**
	0.7nm,0.3s,baz=86,slow=23,SNR=6.8						
FITZ	**Fitzroy Crossi**	**13.30**	**199**	*e*P	**Pn**	**04 59 57.1**	**+0.9**
	1.1nm,0.2s						
FITZ				*e*S	**Sn**	**05 02 13.8**	**-11**
WRAB	**Tennant Creek**	**15.00**	**164**	*e*P	**Pn**	**05 00 19.8**	**+2.7**
	2.8nm,0.4s						
WRA	**Warramunga Arr**	**15.01**	**164**	P	**Pn**	**05 00 15.3**	**-1.9**
	0.1nm,0.3s,baz=345,slow=13,SNR=8.2						
WRA				S	**S**	**05 02 59.4**	**-4.5**
	0.7nm,0.3s,baz=340,slow=22,SNR=8.6						
WB2	**Warramunga Arr**	**15.01**	**164**	*e*P	**Pn**	**05 00 18.1**	**+0.8**
WB2				*e*S	**S**	**05 03 00.8**	**-3.2**
AS31	**Alice Springs**	**18.50**	**169**	*e*P	**P**	**05 00 58.6**	**+2.5**
ASAR	**Alice Springs**	**18.50**	**169**	P	**P**	**05 00 59.0**	**+2.8**
	0.8nm,0.3s,baz=348,slow=11,SNR=57						
ASAR				S	**S**	**05 04 16.8**	**+0.1**
	0.2nm,0.3s,baz=345,slow=17,SNR=4.0						
MBWA	**Marble Bar**	**18.55**	**212**	*e*P	**P**	**05 00 56.5**	**-0.3**
	4.3nm,0.4s						
SONM	**Songino Array**	**56.99**	**341**	P	**P**	**05 06 18.7**	**-1.1**
	0.2nm,0.3s,mb3.2,baz=160,slow=7.4,SNR=2.8						
MKAR	**Makanchi Array**	**66.96**	**326**	P	**P**	**05 07 25.4**	**-0.8**
	0.8nm,0.4s,mb3.7,baz=108,slow=7.8,SNR=8.7						

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*CSEM **19** 05:04:22.5±0.1, 3808N×2649E, h5km, MD2.7, Error ellipse: s-maj=4.7km s-min=3.0km az=126.0*
*ATH **19** 05:04:25.3, 3804N×2640E, h44km±3km, MD3.3/3*
*ISCJB **19** 05:04:26.7±0.7, 3822N±003×2665E±006, h10km, Error ellipse: s-maj=6.3km s-min=4.3km az=162.3*
*ISK **19** 05:04:27.1, 3848N×2670E, h16km, MD2.7*
ISC 19 05:04:27.0±0.7**, 3823N**±003×**2663E**±006**, h10**km**, n12, σ1**s**08**/18**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.13**	**347**	*i* P	**Pg**	**05 04 29.2**	**-0.9**
URLA				*i* S	**Sg**	**05 04 31.9**	**-0.3**
BLCB	**Balcova**	**0.36**	**64**	*i* PG	**Pg**	**05 04 33.5**	**-0.6**
BLCB				*i* SG	**Sg**	**05 04 38.4**	**-0.4**
IZM	**Izmir**	**0.52**	**71**	PG	**Pg**	**05 04 36.2**	**-1.0**
KDAG	**Bornova**	**0.53**	**71**	*i* P	**Pg**	**05 04 37.3**	**0.0**
KDAG				*i* S	**Sg**	**05 04 44.7**	**+0.5**
SMG	**Samos**	**0.55**	**163**	*e*P	**Pg**	**05 04 36.6**	**-1.0**
SMG				*e*S	**Sg**	**05 04 44.8**	**0.0**
SMG	**Samos**	**0.55**	**163**	*e*S	**Sg**	**05 04 44.8**	**0.0**
PRK	**Paraskevi**	**1.05**	**344**	*e*P	**Pg**	**05 04 47.0**	**-0.3**
PRK				*e*S	**Sg**	**05 05 02.6**	**+1.7**
AKHS	**Akhisar**	**1.13**	**55**	*i* P	**Pb**	**05 04 48.8**	**+0.1**
AKHS				*i* S	**Sb**	**05 05 05.1**	**+1.8**
AKS	**Akhisar**	**1.13**	**55**	PG	**Pb**	**05 04 46.0**	**-2.6**
BODT	**Bodrum**	**1.28**	**155**	*e*PN	**Pg**	**05 04 54.0**	**+2.3**
APE	**Apeiranthos**	**1.45**	**217**	*e*P	**Pn**	**05 04 46.8**	**-6.5**
DAT	**Datca**	**1.68**	**153**	PN	**Pg**	**05 04 59.8**	**+0.6**

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*IDC **19** 05:08:35.5±0.8, 30.18S×7162W, h0km, mb4.3/9, mb1 4.4/12, mb1mx4.2/18, mbtmp4.3/12, ML4.7/3, MS3.7/4, Ms1 3.7/4, ms1mx3.2/24, Error ellipse: s-maj=25.8km s-min=15.2km az=34.0*
*ISCJB **19** 05:08:40.6±0.6, 3007S±003×7174W±007, h45km±7km, mb4.2/22, MS3.6/2, Error ellipse: s-maj=10.6km s-min=4.0km az=17.9*
*GUC **19** 05:08:40.5±0.7, 3004S×7167W, h43km±2km, ML5.0*
*NEIC **19** 05:08:40.5, 3004S×7167W, h43km, mb4.3/15, After GUC.*
NEIC Felt [II] at Alto del Carmen, La Higuera and La Serena.
ISC 19 05:08:40.0±1.1**, 3003S**±002×**7176W**±006**, h25**km±8km**, n83, σ1**s**02**/92**, mb4.2**/22**, MS3.6**/2**, 9C-9D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.76**	**140**	⇓*i*P	**Pb**	**05 08 54.3**	**-0.2**
OVCH				*i* S	**Sb**	**05 09 04.4**	**-0.1**
OVCH				AML	AML	05 09 06.1	
	comp=N,31μm,0.7s						
OVCH	**Ovalle**	**0.76**	**140**	⇓*i*P	**Pb**	**05 08 54.3**	**-0.2**
OVCH				*i* S	**Sb**	**05 09 04.4**	**-0.1**
TLL	**Tololo Astrono**	**0.84**	**100**	⇓*i*P	**Pb**	**05 08 56.0**	**0.0**
TLL				*i* S	**Sb**	**05 09 07.1**	**+0.2**
TLL				AML	AML	05 09 11.1	
	comp=E,70μm,0.5s						
TLL	**Tololo Astrono**	**0.84**	**100**	⇓*i*P	**Pb**	**05 08 56.0**	**0.0**
TLL				*i* S	**Sb**	**05 09 07.1**	**+0.2**
CMCH	**Combarbala**	**1.32**	**150**	⇓*i*P	**Pn**	**05 09 02.7**	**-0.2**
CMCH				*i* S	**Sn**	**05 09 20.1**	**+0.5**
CMCH				AML	AML	05 09 23.1	
	comp=E,86μm,0.7s						
CMCH	**Combarbala**	**1.32**	**150**	⇓*i*P	**Pn**	**05 09 02.7**	**-0.2**
CMCH				*i* S	**Sn**	**05 09 20.1**	**+0.5**
LCO	**Las Campanas**	**1.37**	**43**	⇑*i*P	**Pn**	**05 09 03.9**	**+0.3**
LCO				*i* S	**Sn**	**05 09 21.8**	**+0.9**
VACH	**Vallenar**	**1.69**	**31**	⇑*i*P	**Pn**	**05 09 08.8**	**+0.9**
VACH				*i* S	**Sn**	**05 09 29.9**	**+1.1**
VACH				AML	AML	05 09 35.6	
	comp=N,40μm,0.5s						
VACH	**Vallenar**	**1.69**	**31**	⇑*i*P	**Pn**	**05 09 08.8**	**+0.9**
VACH				*i* S	**Sn**	**05 09 29.9**	**+1.1**
CHNG	**Los Chungos**	**1.86**	**173**	⇑*i*P	**Pn**	**05 09 10.1**	**-0.3**
CHNG				*i* S	**Sn**	**05 09 33.0**	**-0.1**
JACH	**Jahuel**	**2.83**	**160**	*e*P	**Pn**	**05 09 24.6**	**+0.9**
CPCH	**Copiapo**	**2.93**	**25**	⇓*i*P	**Pn**	**05 09 25.1**	**+0.1**
CPCH				AML	AML	05 10 02.7	
	comp=E,10μm,0.1s						
IHA	**Instituto Hidr**	**2.99**	**178**	*e*P	**Pn**	**05 09 24.6**	**-1.3**
ROCH	**El Roble**	**3.01**	**168**	*e*P	**Pn**	**05 09 26.5**	**+0.5**
CDCH	**Caldera**	**3.05**	**16**	*e*P	**Pn**	**05 09 24.5**	**-2.2**
PEL	**Peldehue**	**3.24**	**164**	⇑*e*P	**Pn**	**05 09 29.2**	**-0.1**
PEL				*i* S	**Sn**	**05 10 06.5**	**-0.6**
PEL				AML	AML	05 10 28.2	
	comp=N,4μm,0.5s						
PEL	**Peldehue**	**3.24**	**164**	⇑*e*P	**Pn**	**05 09 29.2**	**-0.1**
PEL				*i* S	**Sn**	**05 10 06.5**	**-0.6**
CFAA	**Coronel Fontan**	**3.42**	**118**	Pg	**Pn**	**05 09 34.7**	**+3.0**
	comp=N,3.6nm,0.3s,baz=313,slow=12,SNR=86						
CFAA				Lg		05 10 18.2	
	comp=N,14nm,0.3s,baz=203,slow=21,SNR=7.8						
CFAA	**Coronel Fontan**	**3.42**	**118**	Pg	**Pn**	**05 09 34.7**	**+3.0**
CFAA				Lg		05 10 18.2	
LCCH	**Las Cruces**	**3.44**	**177**	⇑*e*P	**Pn**	**05 09 31.6**	**-0.5**
CLCH	**Cerro Calan**	**3.52**	**163**	*e*P	**Pn**	**05 09 33.5**	**+0.3**
CLCH				*i* S	**Sn**	**05 10 13.9**	**-0.1**
CLCH				AML	AML	05 10 33.5	
	comp=E,3μm,0.6s						
FCH	**Farellones**	**3.52**	**160**	*e*P	**Pn**	**05 09 35.0**	**+1.8**
FCH				AML	AML	05 10 33.4	
	comp=N,1μm,0.5s						
RCDM	**Rinconada Maip**	**3.55**	**167**	⇑*i*P	**Pn**	**05 09 33.7**	**+0.2**
ANTU	**Antumapu**	**3.66**	**165**	*e*P	**Pn**	**05 09 35.5**	**+0.5**
ANTU				*i* S	**Sn**	**05 10 16.6**	**-0.8**
ANTU				AML	AML	05 10 37.6	
	comp=E,2μm,0.3s						
ANTU	**Antumapu**	**3.66**	**165**	*e*P	**Pn**	**05 09 35.5**	**+0.5**
ANTU				*i* S	**Sn**	**05 10 16.6**	**-0.8**
TACH	**Talagante**	**3.68**	**169**	⇓*i*P	**Pn**	**05 09 35.6**	**+0.2**
PCH	**Pirque**	**3.74**	**164**	*e*P	**Pn**	**05 09 36.5**	**+0.3**
MDZ	**Mendoza**	**3.78**	**140**	*e*P	**Pn**	**05 09 40.1**	**+3.4**
MDZ				*i*		05 10 06.8	
MDZ				*e*S	Sn	05 10 44.9	+24
LNV	**Longovilo**	**3.93**	**176**	*e*P	**Pn**	**05 09 38.0**	**-0.8**
CHCH	**Chadas Angostu**	**4.01**	**167**	⇑*i*P	**Pn**	**05 09 40.1**	**+0.2**
CACH	**El Canelo**	**4.20**	**167**	*e*P	**Pn**	**05 09 43.3**	**+0.8**
CICH	**Cipreses**	**4.43**	**165**	⇓*i*P	**Pn**	**05 09 45.9**	**+0.3**
SFDO	**San Fernando**	**4.62**	**172**	*e*P	**Pn**	**05 09 48.1**	**-0.2**
CPN1	**Cerro Paranal**	**5.51**	**13**	*e*P	**Pn**	**05 09 57.7**	**-2.8**
CEN1	**Los Morros**	**6.75**	**12**	*e*P	**Pn**	**05 10 10.5**	**-7.1**
LVC	**Limon Verde**	**7.81**	**20**	Pn	**Pn**	**05 10 29.3**	**-2.7**
	comp=E,3.4nm,0.3s,baz=207,slow=9.6,SNR=54						
LVC				Sn	**Sn**	**05 12 06.4**	**+6.7**
	comp=E,5.5nm,0.3s,baz=200,slow=20,SNR=5.1						
LVC				Lg		05 12 41.5	
	comp=E,16nm,0.3s,baz=76,slow=19,SNR=4.5						
LVC	**Limon Verde**	**7.81**	**20**	*e*Pn	**Pn**	**05 10 28.9**	**-3.2**
	comp=E,62nm,0.7s						
LVC				*e*Sn	**Sn**	**05 11 41.5**	**-18**
PLCA	**Paso Flores**	**10.73**	**175**	Pn	**Pn**	**05 11 11.6**	**-0.5**
	comp=E,0.1nm,0.3s,baz=339,slow=12,SNR=4.0						
PLCA				LR	LR	05 15 18.9	
	comp=E,252nm,21.2s,baz=351,slow=38						
PLCA	**Paso Flores**	**10.73**	**175**	*e*Pn	**Pn**	**05 11 11.6**	**-0.5**
TRQA	**Tornquist**	**11.39**	**137**	*e*Pn	**Pn**	**05 11 22.1**	**+0.9**
	comp=E,14nm,0.7s						
CPUP	**Villa Florida**	**13.25**	**77**	Pn	**Pn**	**05 11 43.4**	**-3.2**
	comp=E,1.1nm,0.3s,baz=226,slow=9.8,SNR=12						
CPUP				Lg		05 15 23.6	
	comp=E,1.5nm,0.3s,baz=138,slow=2.6,SNR=2.9						
CPUP				LR	LR	05 17 12.6	
	comp=E,337nm,19.2s,baz=310,slow=39						
CPUP	**Villa Florida**	**13.25**	**77**	*e*Pn	**Pn**	**05 11 45.2**	**-1.4**
	comp=E,33nm,0.4s						
ARE	**Arequipa**	**13.50**	**1**	P	**Pn**	**05 11 41.0**	**-9.0**
LPAZ	**La Paz**	**14.07**	**14**	Pn	**Pn**	**05 11 60.0**	**+2.2**
	comp=E,1.1nm,0.3s,baz=188,slow=8.2,SNR=65						
LPAZ	**La Paz**	**14.07**	**14**	*e*Pn	**Pn**	**05 11 59.2**	**+1.4**
	comp=E,10nm,0.6s						
SIV	**San Ignacio**	**17.07**	**37**	P	**Pn**	**05 12 36.0**	**-0.9**
	comp=E,1.8nm,0.3s,baz=227,slow=11,SNR=38						
SAML	**Samuel**	**22.45**	**23**	*e*P	**P**	**05 13 35.2**	**-1.9**
	comp=E,14nm,0.9s,mb4.4						
USHA	**Ushuaia**	**24.91**	**175**	LR	LR	05 23 49.6	
	comp=E,178nm,18.5s,MS3.6,baz=109,slow=37						
BDFB	**Brasilia**	**26.08**	**62**	P	**P**	**05 14 10.5**	**-1.1**
	comp=E,7.1nm,0.6s,mb4.4,baz=244,slow=8.4,SNR=19						
BDFB				LR	LR	05 25 25.9	
	comp=E,234nm,21.1s,MS3.7,baz=200,slow=39						
SNAA	**Sanae**	**55.18**	**159**	*e*P	**P**	**05 18 09.1**	**-1.5**
	comp=E,16nm,1.3s,mb4.9						
QSPA	**South Pole Qui**	**60.20**	**180**	*e*P	**P**	**05 18 54.3**	**+8.4**
HKT	**Hockley**	**63.90**	**337**	*e*P	**P**	**05 19 12.2**	**+1.5**
	comp=E,2.8nm,1.0s,mb4.2						
SWET	**Sewanee**	**66.25**	**347**	*e*P	**P**	**05 19 25.5**	**-0.5**
WVT	**Waverly**	**67.52**	**346**	*e*P	**P**	**05 19 33.1**	**-1.0**
	comp=E,5.0nm,0.9s,mb4.5						
MNTX	**Cornudas Mount**	**69.19**	**330**	*e*P	**P**	**05 19 43.5**	**-1.0**
	comp=E,2.1nm,1.0s,mb4.0						
WMOK	**Wichita Mounta**	**69.28**	**336**	*e*P	**P**	**05 19 43.5**	**-1.6**
	comp=E,0.9nm,0.5s,mb4.0						
ANMO	**Albuquerque**	**72.43**	**331**	P	**P**	**05 20 06.0**	**+1.7**
	comp=E,1.1nm,0.8s,mb3.8,baz=258,slow=2.7,SNR=4.0						
ANMO	**Albuquerque**	**72.43**	**331**	*e*P	**P**	**05 20 05.8**	**+1.5**
	comp=E,3.5nm,1.4s,mb4.1						
DBIC	**Dimbokro**	**73.71**	**72**	P	**P**	**05 20 11.4**	**-0.4**
	comp=E,8.0nm,0.7s,mb4.8,baz=222,slow=6.2,SNR=13						
PV01	**Paradox Valley**	**76.03**	**331**	*e*P	**P**	**05 20 26.4**	**+1.2**
SMCO	**Snowmass**	**76.26**	**333**	*e*P	**P**	**05 20 28.4**	**+1.9**
	comp=E,5.4nm,0.8s,mb4.5						
MAW	**Mawson**	**76.92**	**164**	P	**P**	**05 20 29.0**	**-1.2**
	comp=E,0.6nm,0.6s,mb3.7,baz=207,slow=6.8,SNR=2.7						
MSU	**Marysvale**	**77.92**	**329**	*e*P	**P**	**05 20 37.3**	**+1.5**
RSSD	**Black Hills**	**79.47**	**337**	*e*P	**P**	**05 20 45.1**	**+0.8**
	comp=E,1.7nm,0.6s,mb4.2						
HWUT	**Hardware Ranch**	**80.19**	**331**	*e*P	**P**	**05 20 48.0**	**-0.3**
	comp=E,2.7nm,1.0s,mb4.1						
BW06	**Boulder Array**	**80.34**	**333**	*e*P	**P**	**05 20 49.0**	**-0.1**
	comp=E,0.7nm,0.6s,mb3.8						
PDAR	**Pinedale Array**	**80.34**	**333**	P	**P**	**05 20 49.5**	**+0.5**
	comp=E,0.4nm,0.4s,mb3.7,baz=159,slow=4.5,SNR=5.6						
NVAR	**Mina Array Bea**	**80.77**	**325**	P	**P**	**05 20 52.0**	**+0.7**
	comp=E,0.2nm,0.5s,mb3.3,baz=190,slow=6.6,SNR=5.1						
LOHW	**Long Hollow**	**81.46**	**333**	*e*P	**P**	**05 20 55.2**	**+0.2**
	comp=E,0.9nm,0.7s,mb3.8						
TPAW	**Teton Pass**	**81.50**	**332**	*e*P	**P**	**05 20 55.7**	**+0.4**
	comp=E,3.9nm,1.3s,mb4.2						
BOSA	**Boshof**	**81.72**	**118**	P	**P**	**05 20 55.6**	**-0.8**
	comp=E,3.4nm,0.9s,mb4.3,baz=213,slow=7.8,SNR=5.2						
TOA0	**Torodi Ar. Sit**	**82.64**	**70**	*e*P	**P**	**05 21 00.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**82.64**	**70**	P	**P**	**05 21 00.8**	**-0.4**
	comp=E,8.8nm,0.8s,mb4.8,baz=281,slow=5.3,SNR=72						
ULM	**Lac du Bonnet**	**82.73**	**345**	P	**P**	**05 21 01.2**	**-0.5**
	comp=E,1.7nm,0.7s,mb4.2,baz=161,slow=4.7,SNR=4.2						
ULM	**Lac du Bonnet**	**82.73**	**345**	*e*P	**P**	**05 21 01.2**	**-0.5**
	comp=E,4.9nm,0.9s,mb4.5						
HLID	**Hailey**	**83.00**	**330**	*e*P	**P**	**05 21 04.1**	**+1.0**
	comp=E,5.0nm,1.5s,mb4.3						
WRA	**Warramunga Arr**	**124.33**	**210**	PKP	PKPdf	05 27 35.4	-1.3
	comp=E,0.3nm,0.4s,baz=157,slow=1.8,SNR=6.9						
CHKZ	**Chkalovo**	**143.98**	**38**	*e*PKPdf	PKPdf	05 28 10.8	-2.5
AAK	**Ala-Archa**	**150.25**	**56**	*e*PKPbc	PKPbc	05 28 28.6	-0.3
ZAL	**Zalesovo**	**150.69**	**29**	PKPbc	PKPbc	05 28 29.5	-0.5
	comp=E,5.1nm,0.6s,baz=162,slow=2.9,SNR=15						
MKAR	**Makanchi Array**	**153.84**	**43**	PKPbc	PKPbc	05 28 35.7	-1.4
	comp=E,0.5nm,0.7s,baz=255,slow=2.4,SNR=3.9						
MKAR				PKPab	PKPab	05 28 48.8	-1.3
	comp=E,0.9nm,0.9s,baz=343,slow=2.9,SNR=4.9						
MKAR	**Makanchi Array**	**153.84**	**43**	PKPbc	PKPbc	05 28 35.7	-1.4
MKAR				PKPab	PKPab	05 28 48.8	-1.3
SONM	**Songino Array**	**162.16**	**4**	PKPab	PKPab	05 29 25.8	-0.2
	comp=E,0.7nm,0.9s,baz=330,slow=5.1,SNR=3.7						

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*NEIC **19** 05:36:32.6, 2965S×7225W, h4km, ML4.1(GUC), After GUC.*
GUC 19 05:36:32.6±0.7**, 2965S**×**7225W, h4**km±3km**, MD4.1, ML4.1, 7C-9D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**1.32**	**137**	⇑*i*P	Pn	05 36 56.9	-0.9
OVCH				*i* S	Sg	05 37 14.5	-0.7
OVCH				AML	AML	05 37 15.3	
	comp=E,3μm,0.4s						
OVCH	**Ovalle**	**1.32**	**137**	⇑*i*P	Pn	05 36 56.9	-0.9
OVCH				*i* S	Sg	05 37 14.5	-0.7
TLL	**Tololo Astrono**	**1.36**	**113**	⇓*i*P	Pn	05 36 57.6	-0.7
TLL				*i* S	Sg	05 37 17.3	+1.0
TLL				AML	AML	05 37 19.5	
	comp=N,5μm,0.6s						
TLL	**Tololo Astrono**	**1.36**	**113**	⇓*i*P	Pn	05 36 57.6	-0.7
TLL				*i* S	Sg	05 37 17.3	+1.0
LCO	**Las Campanas**	**1.49**	**65**	⇓*i*P	Pn	05 36 59.6	-0.5
LCO				*i* S	Sn	05 37 20.6	+0.5
VACH	**Vallenar**	**1.69**	**51**	*e*P	Pn	05 37 02.6	-0.2
VACH				*i* S	Sn	05 37 25.3	+0.5
VACH				AML	AML	05 37 32.6	
	comp=E,3μm,0.4s						
VACH	**Vallenar**	**1.69**	**51**	*e*P	Pn	05 37 02.6	-0.2
VACH				*i* S	Sn	05 37 25.3	+0.5
CMCH	**Combarbala**	**1.87**	**145**	⇓*i*P	Pn	05 37 05.5	+0.2
CMCH				*i* S	Sn	05 37 30.4	+1.1
CMCH				AML	AML	05 37 34.6	
	comp=E,5μm,0.4s						
CMCH	**Combarbala**	**1.87**	**145**	⇓*i*P	Pn	05 37 05.5	+0.2
CMCH				*i* S	Sn	05 37 30.4	+1.1
CPCH	**Copiapo**	**2.83**	**37**	⇑*i*P	Pn	05 37 19.5	+1.0
JACH	**Jahuel**	**3.34**	**155**	⇑*i*P	Pn	05 37 27.1	+1.4
JACH				*i* S	Sn	05 38 08.2	+2.5
ROCH	**El Roble**	**3.48**	**163**	⇑*i*P	Pn	05 37 28.8	+1.2
ROCH				*i* S	Sn	05 38 12.2	+3.0
PEL	**Peldehue**	**3.74**	**159**	⇓*i*P	Pn	05 37 32.5	+1.5
PEL				*i* S	Sn	05 38 17.3	+1.9
PEL				AML	AML	05 38 44.7	
	comp=E,483nm,0.8s						
PEL	**Peldehue**	**3.74**	**159**	⇓*i*P	Pn	05 37 32.5	+1.5
PEL				*i* S	Sn	05 38 17.3	+1.9
LCCH	**Las Cruces**	**3.86**	**172**	⇓*i*P	Pn	05 37 33.5	+0.8
LCCH				*i* S	Sn	05 38 20.5	+1.9
CLCH	**Cerro Calan**	**4.02**	**159**	*e*P	Pn	05 37 36.2	+1.3
CLCH				*i* S	Sn	05 38 24.4	+2.1
CLCH				AML	AML	05 38 55.1	
	comp=E,248nm,0.6s						
RCDM	**Rinconada Maip**	**4.03**	**163**	⇓*i*P	Pn	05 37 35.8	+0.8
RCDM				AML	AML	05 38 45.2	
	comp=E,111nm,0.6s						
FCH	**Farellones**	**4.04**	**156**	*e*P	Pn	05 37 37.4	+2.3
FCH				*i* S	Sn	05 38 25.5	+2.7
FCH				AML	AML	05 38 50.5	
	comp=E,102nm,0.9s						
TACH	**Talagante**	**4.15**	**165**	⇑*i*P	Pn	05 37 37.6	+0.9
TACH				*i* S	Sn	05 38 27.3	+1.7
PCH	**Pirque**	**4.23**	**160**	*i* P	Pn	05 37 39.0	+1.2
PCH				*i* S	Sn	05 38 29.3	+1.7
MDZ	**Mendoza**	**4.35**	**139**	*e*P	Pn	05 37 57.0	+18
MDZ				S	Sn	05 38 46.9	+16
CHCH	**Chadas Angostu**	**4.49**	**163**	⇑*i*P	Pn	05 37 42.6	+1.3
CHCH				*i* S	Sn	05 38 35.6	+1.7
CACH	**El Canelo**	**4.67**	**163**	*i* P	Pn	05 37 45.8	+1.9
CACH				*i* S	Sn	05 38 41.7	+3.2
CICH	**Cipreses**	**4.91**	**162**	*i* P	Pn	05 37 48.7	+1.5
CICH				*i* S	Sn	05 38 46.3	+1.8
SFDO	**San Fernando**	**5.07**	**168**	*i* P	Pn	05 37 50.8	+1.5
SFDO				*i* S	Sn	05 38 49.7	+1.5

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*IDC **19** 05:41:25.7±2.0, 16.16N×9742W, h16km±11km, mb4.6/23, mb1 4.7/25, mb1mx4.7/28, mbtmp4.7/25, ML4.7/2, MS4.9/23, Ms1 4.9/23, ms1mx4.9/24, Error ellipse: s-maj=13.7km s-min=7.7km az=56.0*
*MOS **19** 05:41:27.9±0.9, 1637N×9726W, h33km, mb5.3/75, MS5.1/53, Error ellipse: s-maj=6.5km s-min=3.9km az=90.0*
*SZGRF **19** 05:41:27.7, 1632N×9799W, h35km, mb5.2, MS5.3, Oaxaca, Mexico*
*MEX **19** 05:41:27.2±0.9, 1601N×9750W, h11km±9km, MD5.0*
*ISCJB **19** 05:41:27.2±0.2, 1630N±002×9728W±002, h31km, mb5.0/167, MS5.1/161, Error ellipse: s-maj=3.8km s-min=1.9km az=56.9*
*CSEM **19** 05:41:27.4, 1634N×9724W, h30km, ML5.6*
*HRVD **19** 05:41:28.5±0.2, 1626N×9727W, h27km, MW5.6/89, Centroid moment Tensor Solution. LP body waves: s86,c150; Mantle waves: s89,c197; Half duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}1.39±.03; $M_{\theta\theta}$-1.34±.03; $M_{\phi\phi}$-0.04±.03; $M_{r\theta}$2.12±.08; $M_{\theta\phi}$0.42±.02; $M_{\phi r}$-1.09±.07; Best double couple: $M_0$2.77900×10^{17} NP1: ϕ_s277.00000°, δ16.00000°, λ72.00000°. NP2: ϕ_s116.00000°, δ75.00000°, λ95.00000°. Principal axes: T 2.7610, Plg60.0000°, Azm33.0000°; N 0.0380, Plg5.0000°, Azm294.0000°; P -2.7970, Plg30.0000°, Azm202.0000°;*

nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

BJI ***19*** *05:41:28.1, 1591N×9801W, h35km, mB5.6, Ms5.5, Msz5.2*

NEIC ***19*** *05:41:28.5±0.2, 1623N×9726W, mb5.1/137, MS5.1/134, MW5.6, MD5.4(MEX), Error ellipse: s-maj=3.8km s-min=2.3km az=211.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^{17}Nm; M_{rr}1.05; $M_{\theta\theta}$0.91; $M_{\phi\phi}$-1.96; $M_{r\theta}$2.04; $M_{\theta\phi}$-0.13; $M_{\phi r}$-1.07; Best double couple: $M_0$2.80000×10^{17} NP1:ϕ_s141.00000°, δ77.00000°, λ55.00000°. NP2:ϕ_s32.00000°, δ37.00000°, λ157.00000°. Principal axes: T 3.1700, Plg47.0000°, Azm14.0000°; N -0.7600, Plg34.0000°, Azm150.0000°; P -2.4100, Plg23.0000°, Azm257.0000°;*

NEIC Felt at Huatulco, Mexico City, Mitla, Oaxaca and Tlacolula.

ISC 19 05:41:29.3±0.2**, 1628N**±002×**9723W**±002**, h33**km**, h33**km±.7km**:pP-P, n811,** σ**0.87**/848**, mb5.0**/167**, MS5.1**/161**, 291C-121D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.92**	**31**	*i* P	**Pn**	**05 41 47.4**	**+1.5**
VHO				*i* S	**Sn**	**05 42 03.3**	**+5.4**
OXX	**Oaxaca**	**0.93**	**31**	*i* P	**Pn**	**05 41 47.0**	**+1.0**
HUIG	**Huatulco**	**1.19**	**115**	*i* P	**Pn**	**05 41 49.1**	**-0.5**
HUIG				*i* S	**Sn**	**05 42 04.7**	**0.0**
UTMO	**Huajuapan**	**1.63**	**340**	*e*P	**Pn**	**05 41 55.5**	**-0.2**
UTMO				*i* S	**Sn**	**05 42 18.3**	**+2.7**
TPIG	**Tehuac#an**	**2.13**	**357**	*i* P	**Pn**	**05 42 04.4**	**+1.9**
TPIG				*i* S	**Sn**	**05 42 31.8**	**+4.0**
CMIG	**Matias Romero**	**2.39**	**70**	Pn	**Pn**	**05 42 07.0**	**+0.9**
	127nm,0.3s,baz=244,slow=11,SNR=1106						
CMIG				Pg	**Pn**	**05 42 14.1**	**+8.0**
	469nm,0.3s,baz=270,slow=14,SNR=83						
CMIG				Sn	**Sn**	**05 42 39.6**	**+5.5**
	749nm,0.3s,baz=260,slow=9.3,SNR=7.5						
CMIG				Lg		05 42 49.6	
	3μm,0.3s,baz=288,slow=2.5,SNR=8.9						
CMIG	**Matias Romero**	**2.39**	**70**	*i* P	**Pn**	**05 42 07.1**	**+1.1**
CMIG				*i* S	**Sn**	**05 42 39.3**	**+5.1**
CMIG	**Matias Romero**	**2.39**	**70**	Pn	**Pn**	**05 42 07.0**	**+0.9**
CMIG				*i* P		05 42 07.4	
CMIG				Pg	**Pn**	**05 42 14.1**	**+8.0**
CMIG				Sn	**Sn**	**05 42 39.6**	**+5.5**
CMIG				Lg		05 42 49.6	
ACX	**Acapulco**	**2.64**	**283**	*i* P	**Pn**	**05 42 02.0**	**-7.6**
ACX				*i* P		05 42 05.2	
ACX				*i* S	**Sn**	**05 42 33.9**	**-6.6**
ACX	**Acapulco**	**2.64**	**283**	*i* P	**Pn**	**05 42 06.0**	**-3.6**
ACX				*i* S	**Sn**	**05 42 38.0**	**-2.5**
MEIG	**Mezcala**	**2.81**	**306**	*i* P	**Pn**	**05 42 08.8**	**-3.0**
MEIG				*i* S	**Sn**	**05 42 42.0**	**-2.6**
CAIG	**El Cayaco**	**3.01**	**285**	*i* P	**Pn**	**05 42 10.4**	**-4.2**
CAIG				*i* S	**Sn**	**05 42 43.2**	**-6.4**
CAIG	**El Cayaco**	**3.01**	**285**	*i* P	**Pn**	**05 42 14.2**	**-0.5**
CAIG				*i* S	**Sn**	**05 42 49.0**	**-0.6**
PLIG	**Platanillo**	**3.02**	**314**	*i* P	**Pn**	**05 42 13.1**	**-1.7**
PLIG				*i* S	**Sn**	**05 42 49.2**	**-0.6**
PLIG	**Platanillo**	**3.02**	**314**	*i* P	**Pn**	**05 42 16.6**	**+1.8**
PLIG				*i* S	**Sn**	**05 42 52.2**	**+2.4**
PPM	**Popocatepetl**	**3.07**	**334**	*e*P	**Pn**	**05 42 14.8**	**-0.7**
PPM				*e*P		05 42 15.0	
PPM				*i* P		05 42 16.0	
PPM				*i* S	**Sn**	**05 42 52.0**	**+0.9**
PPM				*i* S	**Sn**	**05 42 53.3**	**+2.2**
PPM	**Popocatepetl**	**3.07**	**334**	*e*P	**Pn**	**05 42 14.8**	**-0.7**
PPM				*i* P		05 42 17.0	
PPM				*i* S	**Sn**	**05 42 56.4**	**+5.3**
YAIG	**Yautepec**	**3.11**	**326**	*e*P	**Pn**	**05 42 15.7**	**-0.3**
YAIG				*i* S	**Sn**	**05 42 51.3**	**-0.7**
YAIG	**Yautepec**	**3.11**	**326**	*e*P	**Pn**	**05 42 14.6**	**-1.4**
YAIG				*i* P		05 42 17.4	
YAIG				*i* S	**Sn**	**05 42 56.9**	**+4.9**
YAIG				*i* S	**Sn**	**05 42 58.9**	**+7.0**
TUIG	**Tuzandepetl**	**3.20**	**57**	*i* P	**Pn**	**05 42 18.2**	**+1.0**
CIVM	**Cilcuayo**	**3.27**	**329**	*i* P	**Pn**	**05 42 18.0**	**-0.1**
CIVM				*i* S	**Sn**	**05 42 55.3**	**-0.6**
CIVM	**Cilcuayo**	**3.27**	**329**	*i* P	**Pn**	**05 42 22.7**	**+4.6**
CIVM				*i* S	**Sn**	**05 43 06.0**	**+10**
RFVM	**Rio Frio**	**3.37**	**335**	*e*P	**Pn**	**05 42 20.0**	**+0.4**
RFVM				*i* S	**Sn**	**05 42 57.9**	**-0.4**
RFVM	**Rio Frio**	**3.37**	**335**	*e*P	**Pn**	**05 42 22.3**	**+2.8**
RFVM				*i* S	**Sn**	**05 43 12.6**	**+14**
IIZ	**Mezontepec**	**3.47**	**327**	*i* P	**Pn**	**05 42 20.6**	**-0.3**
IIZ				*i* S	**Sn**	**05 42 60.0**	**-0.8**
LVIG	**Laguna Verde**	**3.51**	**13**	*i* P	**Pn**	**05 42 22.0**	**+0.5**
UNM	**Universidad Na**	**3.55**	**329**	*e*P	**Pn**	**05 42 22.0**	**-0.1**
UNM				*i* P		05 42 22.1	
UNM				*i* P		05 42 25.0	
UNM				*i* S	**Sn**	**05 43 04.1**	**+1.1**
UNM				*i* S	**Sn**	**05 43 04.3**	**+1.3**
UNM	**Universidad Na**	**3.55**	**329**	*e*P	**Pn**	**05 42 22.0**	**-0.1**
UNM				*e*P		05 42 24.6	
UNM				*i* P		05 42 25.0	
UNM				*i* P		05 42 26.1	
UNM				*i* S	**Sn**	**05 43 04.1**	**+1.1**
PTVM	**Pico Tres Padr**	**3.75**	**332**	*e*P	**Pn**	**05 42 23.0**	**-1.8**
PTVM				*i* S	**Sn**	**05 43 06.0**	**-1.8**
PTVM	**Pico Tres Padr**	**3.75**	**332**	*e*P	**Pn**	**05 42 29.3**	**+4.5**
PTVM				*i* S	**Sn**	**05 43 18.7**	**+11**
ZIIG	**Zihuatanejo**	**4.26**	**289**	*i* P	**Pn**	**05 42 26.1**	**-5.7**
ZIIG				*i* S	**Sn**	**05 43 15.4**	**-5.0**
ZIIG	**Zihuatanejo**	**4.26**	**289**	*i* P	**Pn**	**05 42 30.6**	**-1.2**
ZIIG				*i* S	**Sn**	**05 43 18.1**	**-2.3**
SCX	**San Cristobal**	**4.43**	**84**	*e*P	**Pn**	**05 42 37.0**	**+2.8**
MOIG	**Morelia**	**5.06**	**312**	*i* P	**Pn**	**05 42 41.5**	**-1.3**
MOIG				*i* S	**Sn**	**05 43 41.6**	**+1.5**
MOIG	**Morelia**	**5.06**	**312**	*i* P	**Pn**	**05 42 42.3**	**-0.5**
MOIG				*i* S	**Sn**	**05 43 44.2**	**+4.1**
MRX	**Morelia**	**5.08**	**313**	*i* P	**Pn**	**05 42 43.5**	**+0.4**
SFJM	**Santa Fe**	**6.92**	**308**	*i* P	**Pn**	**05 43 05.0**	**-3.4**
CJM	**Chamela**	**8.10**	**294**	*i* P	**Pn**	**05 43 22.2**	**-2.4**
CJM				*i* S	**Sn**	**05 44 52.2**	**-2.7**
ZAIG	**Zacatecas**	**8.18**	**323**	*i* P	**Pn**	**05 43 26.8**	**+1.1**
ZAIG				*i* S	**Sn**	**05 44 58.3**	**+1.3**
TEIG	**Tepich**	**9.37**	**64**	*e*Pn	**Pn**	**05 43 48.3**	**+6.4**
LEON	**Leon**	**10.73**	**110**	*e*P	**Pn**	**05 44 03.0**	**+2.5**
LEON				*i*		05 44 55.7	
	comp=Z,14nm,0.6s						
CNGN	**Cerro Negro**	**10.87**	**109**	*e*P	**Pn**	**05 44 05.6**	**+3.1**
MIRN	**Miramar**	**10.88**	**109**	*e*P	**Pn**	**05 44 05.7**	**+3.0**
COPN	**Copaltepe**	**11.09**	**110**	⥣*e*P	**Pn**	**05 44 07.5**	**+2.0**
APYN	**Apoyeque**	**11.29**	**109**	*e*P	**Pn**	**05 44 11.3**	**+3.1**
TISN	**Laguna Tiscapa**	**11.39**	**110**	⥣*e*P	**Pn**	**05 44 12.2**	**+2.5**
LIM1	**Limonal**	**12.90**	**114**	⥣*e*P	**Pn**	**05 44 33.8**	**+3.5**
JTS	**JuntasAbangare**	**13.35**	**115**	Pn	**Pn**	**05 44 38.0**	**+1.6**
	comp=Z,5.2nm,0.3s,baz=299,slow=7.1,SNR=18						
JTS				Sn	**Sn**	**05 47 17.3**	**+14**
	comp=Z,0.5nm,0.3s,baz=252,slow=17,SNR=2.0						
JTS	**JuntasAbangare**	**13.35**	**115**	P	**Pn**	**05 44 38.0**	**+1.6**
JTS						05 47 17.3	
JTS				pmax	pmax		
	comp=Z,5.0nm,0.3s						
JTS				smax			
	comp=N,1.0nm,0.3s						
JTS	**JuntasAbangare**	**13.35**	**115**	*e*Pn	**Pn**	**05 44 37.7**	**+1.3**
JCR	**Jicaral**	**13.42**	**117**	*e*P	**Pn**	**05 44 41.2**	**+3.8**
HKT	**Hockley**	**13.66**	**5**	*e*P	**Pn**	**05 44 39.6**	**-1.1**
CGA2	**Cerro Gallo 2**	**13.90**	**115**	*e*P	**Pn**	**05 44 48.0**	**+4.1**
PRS1	**Puriscal**	**14.05**	**115**	*e*P	**Pn**	**05 44 50.6**	**+4.6**
LAJ	**Bijagual**	**14.27**	**115**	*e*P	**Pn**	**05 44 50.1**	**+1.1**
JCT	**Junction City**	**14.33**	**351**	*e*P	**Pn**	**05 44 50.2**	**+0.5**
JCT				pmax	pmax		
	comp=Z,81nm,0.7s						
JCT	**Junction City**	**14.33**	**351**	*e*Pn	**Pn**	**05 44 50.2**	**+0.5**
	comp=Z,81nm,0.7s						
LCR2	**La Lucha 2**	**14.43**	**115**	*e*P	**Pn**	**05 44 54.4**	**+3.2**
ICR	**Volcan Irazu**	**14.47**	**114**	*e*P	**Pn**	**05 44 56.0**	**+4.3**
LPIG	**La Paz**	**14.53**	**304**	Pn	**Pn**	**05 44 53.3**	**+0.9**
	comp=Z,5.4nm,0.3s,baz=328,slow=3.3,SNR=2.4						
LPIG				Lg		05 48 50.9	
	comp=Z,1.3nm,0.3s,baz=166,slow=6.2,SNR=2.3						
BUS	**Buena Vista**	**14.73**	**115**	*e*P	**Pn**	**05 44 59.5**	**+4.2**
NATX	**Nacogdoches**	**15.58**	**8**	*e*Pn	**Pn**	**05 45 05.0**	**-1.4**
MNTX	**Cornudas Mount**	**17.05**	**336**	*e*Pn	**Pn**	**05 45 24.3**	**-0.8**
GDL2	**Guadalupe Moun**	**17.12**	**339**	*e*Pn	**Pn**	**05 45 26.0**	**+0.1**
MGV	**Manicaragua**	**17.29**	**68**	*e*P	**Pn**	**05 45 25.0**	**-3.0**
	baz=254						
MGV				*e*S	**Sn**	**05 48 38.7**	**-0.6**
	comp=N,2μm,3.0s						
MGV				*e*			
	comp=E,1μm,3.0s						
WMOK	**Wichita Mounta**	**18.43**	**356**	*e*P	**Pn**	**05 45 40.2**	**-1.9**
WMOK				pmax	pmax		
	comp=Z,100nm,1.2s						
WMOK	**Wichita Mounta**	**18.43**	**356**	*e*P	**Pn**	**05 45 40.2**	**-1.9**
	comp=Z,100nm,1.2s						
MIAR	**Mount Ida**	**18.48**	**10**	*e*P	**Pn**	**05 45 41.0**	**-1.7**
MIAR				*e*S	**Sn**	**05 49 07.0**	**-1.2**
MIAR				pmax	pmax		
	comp=Z,77nm,0.7s						
MIAR	**Mount Ida**	**18.48**	**10**	*e*P	**Pn**	**05 45 41.0**	**-1.7**
	comp=Z,77nm,0.7s						
MIAR				*e*S	**Sn**	**05 49 07.0**	**-1.2**
DWPF	**Disney**	**18.75**	**48**	*e*P	**Pn**	**05 45 45.5**	**-0.5**
	comp=Z,114nm,1.1s						
LRAL	**Lakeview Retre**	**19.07**	**27**	*e*P	**Pn**	**05 45 49.2**	**-0.7**
	comp=Z,78nm,0.9s						
LRAL				*e*S	**Sn**	**05 49 17.2**	**-5.3**
OXF	**Oxford**	**19.46**	**20**	*e*P	**Pn**	**05 45 52.8**	**-1.7**
OXF				*e*S	**Sn**	**05 49 27.0**	**-4.9**
OXF				pmax	pmax		
	comp=Z,77nm,0.4s						
OXF	**Oxford**	**19.46**	**20**	*e*P	**Pn**	**05 45 52.8**	**-1.7**
	comp=Z,78nm,0.4s						
OXF				*e*S	**Sn**	**05 49 27.0**	**-4.9**
Y22C	**IRIS PASSCAL I**	**19.75**	**336**	⥣P	**Pn**	**05 45 57.4**	**-0.5**
	baz=20						
Y22C				⥣S	**Sn**	**05 49 40.5**	**+1.8**
	baz=20						
LPM	**Los Pinos Moun**	**19.84**	**337**	*e*P	**Pn**	**05 45 57.6**	**-1.5**
LENM	**Lemitar**	**19.85**	**336**	*e*P	**Pn**	**05 45 57.7**	**-1.4**
HBAR	**Harrisburg**	**20.07**	**16**	*e*P	**P**	**05 46 00.6**	**+0.8**
LAZ	**Ladron**	**20.12**	**336**	*e*P	**P**	**05 46 01.1**	**+0.8**
TUC	**Tucson**	**20.14**	**325**	*e*P	**P**	**05 46 01.0**	**+0.4**
TUC				pmax	pmax		
	comp=Z,52nm,0.9s						
TUC				MLR	MLR		
	comp=Z,14μm,21.0s,MS5.3						
TUC	**Tucson**	**20.14**	**325**	*e*P	**P**	**05 46 01.0**	**+0.4**
	comp=Z,52nm,0.9s						
TUC				LR	LR		
	comp=Z,14μm,21.0s,MS5.3						
ANMO	**Albuquerque**	**20.35**	**338**	P	**P**	**05 46 03.2**	**+0.4**
ANMO				S	**S**	**05 49 52.7**	**+3.6**
ANMO	**Albuquerque**	**20.35**	**338**	P	**P**	**05 46 03.3**	**+0.5**
	comp=Z,38nm,1.0s,baz=146,slow=11,SNR=89						
ANMO				S	**S**	**05 49 55.7**	**+6.6**
	comp=Z,1.9nm,0.9s,baz=94,slow=6.7,SNR=2.5						
ANMO				Lg		05 52 13.3	
	comp=Z,2.4nm,0.9s,baz=250,slow=20,SNR=3.3						
ANMO				LR	LR	05 53 59.6	
	comp=Z,5μm,19.8s,MS4.9,baz=159,slow=37						
ANMO	**Albuquerque**	**20.35**	**338**	⥣*e*P	**P**	**05 46 03.2**	**+0.4**
ANMO	**Albuquerque**	**20.35**	**338**	⥣*i*P	**P**	**05 46 03.2**	**+0.5**
ANMO				LR	LR		
	comp=Z,5μm,19.0s,MS4.9						
PLAL	**Pickwick Lake**	**20.35**	**22**	*e*P	**P**	**05 46 02.3**	**-0.5**
	comp=Z,55nm,0.6s						
PLAL				*e*S	**S**	**05 49 49.0**	**0.0**
PLAL				LR	LR		
	comp=Z,4μm,19.0s,MS4.8						
HALT	**Halls**	**20.77**	**18**	*e*P	**P**	**05 46 06.9**	**-0.5**
116A	**Eloy**	**20.85**	**324**	P	**P**	**05 46 08.4**	**+0.1**
	baz=21,SNR=37						
116A				⥣S	**S**	**05 50 00.8**	**+1.8**
	baz=21						
GLAT	**Glass**	**21.12**	**18**	*e*P	**P**	**05 46 10.6**	**-0.6**
115A	**Sonoran Desert**	**21.25**	**323**	P	**P**	**05 46 13.0**	**+0.4**
	baz=21,SNR=49						
115A				⥣S	**S**	**05 50 07.8**	**+0.9**
	baz=21						
UTMT	**University of**	**21.32**	**19**	*e*P	**P**	**05 46 13.3**	**0.0**
PARMO	**Parma**	**21.36**	**17**	*e*P	**P**	**05 46 14.1**	**+0.4**
SWET	**Sewanee**	**21.39**	**26**	⥣*i*P	**P**	**05 46 13.2**	**-0.8**
SWET				*e*pP		05 46 23.2	
WVT	**Waverly**	**21.46**	**21**	⥣*i*P	**P**	**05 46 13.7**	**-1.2**
WVT				pmax	pmax		
	comp=Z,114nm,0.9s,mb5.2						
WVT				MLR	MLR		
	comp=Z,3μm,19.0s,MS4.7						
WVT	**Waverly**	**21.46**	**21**	⥣*i*P	**P**	**05 46 13.7**	**-1.1**
	comp=Z,114nm,0.9s,mb5.2						
WVT				LR	LR		
	comp=Z,3μm,19.0s,MS4.7						
MYNC	**Murphy**	**22.08**	**30**	⥣*i*P	**P**	**05 46 20.7**	**-0.8**
MYNC				pmax	pmax		
	comp=Z,327nm,0.8s,mb5.8						
MYNC				MLR	MLR		
	comp=Z,5μm,21.0s,MS4.9						
MYNC	**Murphy**	**22.08**	**30**	⥣*i*P	**P**	**05 46 20.7**	**-0.8**
	comp=Z,327nm,0.8s,mb5.8						
MYNC				LR	LR		
	comp=Z,5μm,21.0s,MS4.9						
Z14A	**Wintersburg**	**22.15**	**323**	⥣P	**P**	**05 46 22.0**	**-0.2**
	baz=22,SNR=18						
Z14A				⥣S	**S**	**05 50 28.1**	**+3.7**
	baz=22						
CPCT	**Cooper Cave**	**22.21**	**28**	⥣*i*P	**P**	**05 46 21.7**	**-1.1**
CCM	**Cathedral Cave**	**22.32**	**13**	*e*P	**P**	**05 46 22.5**	**-1.5**
CCM				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.1						
CCM				MLR	MLR		
	comp=Z,3μm,22.0s,MS4.7						
CCM	**Cathedral Cave**	**22.32**	**13**	*e*P	**P**	**05 46 22.5**	**-1.5**
	comp=Z,66nm,0.8s,mb5.1						
CCM				LR	LR		
	comp=Z,3μm,22.0s,MS4.7						
FVM	**French Village**	**22.43**	**14**	⥣*i*P	**P**	**05 46 23.0**	**-2.2**
FVM				pmax	pmax		
	comp=Z,58nm,1.1s,mb4.9						
FVM	**French Village**	**22.43**	**14**	⥣*i*P	**P**	**05 46 23.0**	**-2.2**
	comp=Z,58nm,1.1s,mb4.9						
SIUC	**Southern Illin**	**22.49**	**17**	*e*P	**P**	**05 46 25.3**	**-0.5**
	comp=Z,93nm,0.8s,mb5.3						
X15A	**Humboldt**	**22.59**	**326**	P	**P**	**05 46 27.1**	**+0.3**
	baz=23,SNR=80						
X15A				⥥S	**S**	**05 50 36.3**	**+3.6**
	baz=23						
SDCO	**Great Sand Dun**	**22.59**	**343**	PFAKE		05 46 40.0	+13
SDCO				LR	LR		
	comp=Z,9μm,19.0s,MS5.2						
Y14A	**Wickenburg**	**22.60**	**324**	P	**P**	**05 46 26.8**	**-0.1**
	baz=23,SNR=52						
Y14A				⥥S	**S**	**05 50 31.7**	**-1.2**
	baz=23						
X14A	**Yava**	**22.93**	**325**	⥥P	**P**	**05 46 30.5**	**0.0**
	baz=23,SNR=45						
X14A				⥣S	**S**	**05 50 39.0**	**+0.7**
	baz=23						
JSC	**Jenkinsville**	**22.96**	**36**	*e*P	**P**	**05 46 30.1**	**-0.7**
Y13A	**Salome**	**22.98**	**322**	⥣P	**P**	**05 46 30.8**	**-0.2**
	baz=23,SNR=11						
Y13A				⥥S	**S**	**05 50 40.8**	**+1.6**
	baz=23						
GLA	**Glamis**	**23.06**	**320**	⥣*i*P	**P**	**05 46 31.1**	**-0.7**
GLA	**Glamis**	**23.06**	**320**	⥥P	**P**	**05 46 31.5**	**-0.3**
	baz=23,SNR=33						
GLA				⥣S	**S**	**05 50 41.9**	**+1.4**
	baz=23						
SLM	**Saint Louis**	**23.10**	**14**	*e*P	**P**	**05 46 32.0**	**-0.2**
SLM				pmax	pmax		
	comp=Z,106nm,1.0s,mb5.2						
SLM	**Saint Louis**	**23.10**	**14**	*e*P	**P**	**05 46 32.0**	**-0.3**
	comp=Z,106nm,1.0s,mb5.2						
W15A	**Williams**	**23.13**	**327**	⥥P	**P**	**05 46 33.3**	**+0.8**
	baz=23,SNR=38						
W15A				⥣S	**S**	**05 50 44.4**	**+2.8**
	baz=23						
USIN	**University of**	**23.18**	**19**	*e*P	**P**	**05 46 33.4**	**+0.3**
	comp=Z,72nm,0.6s,mb5.3						
Y12C	**Blythe**	**23.35**	**321**	⥥P	**P**	**05 46 34.3**	**-0.6**
	baz=23,SNR=8.0						
Y12C				⥥S	**S**	**05 50 47.6**	**+2.4**
	baz=23						
PDMCI	**Parker Dam,Lak**	**23.51**	**323**	⥣P	**P**	**05 46 36.1**	**-0.3**
	baz=24,SNR=15						
PDMCI				⥥S	**S**	**05 50 51.1**	**+3.3**
	baz=24						
X13A	**Yucca**	**23.54**	**324**	P	**P**	**05 46 36.5**	**-0.2**
	baz=24,SNR=54						
X13A				⥣S	**S**	**05 50 51.1**	**+2.8**
	baz=24						
TZTN	**Tazewell**	**23.55**	**28**	⥣*i*P	**P**	**05 46 35.9**	**-1.0**
TZTN				*e*pP		05 46 45.9	
W14A	**Seligman**	**23.59**	**326**	P	**P**	**05 46 37.5**	**+0.3**
	baz=24,SNR=56						
W14A				⥣S	**S**	**05 50 53.3**	**+4.3**
	baz=24						
SWSC	**Sam W. Stewart**	**23.60**	**318**	⥥P	**P**	**05 46 36.7**	**-0.5**
	baz=24,SNR=9.4						
SWSC				⥥S	**S**	**05 50 54.3**	**+5.1**
	baz=24						
DVTC	**Desert V Tower**	**23.62**	**317**	P	**P**	**05 46 37.3**	**-0.1**
	baz=24,SNR=8.6						
WCI	**Wyandotte Cave**	**23.89**	**22**	⥣*i*P	**P**	**05 46 39.0**	**-0.9**
WCI				pmax	pmax		
	comp=Z,153nm,0.9s,mb5.4						
WCI				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.6						
WCI	**Wyandotte Cave**	**23.89**	**22**	⥣*i*P	**P**	**05 46 39.0**	**-0.9**
	comp=Z,153nm,0.9s,mb5.4						
WCI				LR	LR		
	comp=Z,2μm,20.0s,MS4.6						
W13A	**Hualapai Mount**	**23.94**	**325**	⥥P	**P**	**05 46 40.8**	**+0.4**
	baz=24,SNR=40						
W13A				⥥S	**S**	**05 51 00.1**	**+5.3**
	baz=24						
PV01	**Paradox Valley**	**23.95**	**338**	*e*P	**P**	**05 46 40.7**	**+0.3**
MONP	**Monument Peak**	**23.97**	**317**	⥥P	**P**	**05 46 40.4**	**-0.2**
	baz=24,SNR=12						
MONP				⥣S	**S**	**05 50 58.3**	**+3.0**
	baz=24						
BAR	**Barrett**	**24.01**	**316**	*e*P	**P**	**05 46 41.2**	**+0.2**
IRM	**Iron Mountain**	**24.01**	**321**	P	**P**	**05 46 41.0**	**+0.1**
	baz=24,SNR=54						
IRM				⥣S	**S**	**05 50 59.2**	**+3.3**
	baz=24						
PV10	**Paradox Valley**	**24.34**	**337**	*e*P	**P**	**05 46 43.8**	**-0.2**
SMCO	**Snowmass**	**24.35**	**341**	⥣*i*P	**P**	**05 46 45.0**	**+0.9**
	comp=Z,187nm,1.3s,mb5.4						
BELC	**Belle Mtn.**	**24.42**	**320**	P	**P**	**05 46 44.9**	**+0.1**
	baz=24,SNR=22						
BELC				⥣S	**S**	**05 51 07.4**	**+4.9**
	baz=24						
109C	**Camp Elliot, M**	**24.42**	**316**	⥥P	**P**	**05 46 44.2**	**-0.6**
	baz=24						
109C				⥥S	**S**	**05 51 06.2**	**+3.7**
	baz=24						
PFO	**Pinyon Flat Ob**	**24.45**	**318**	P	**P**	**05 46 45.9**	**+0.9**
	comp=Z,137nm,1.3s,mb5.2,SNR=8.1						
PFO	**Pinyon Flat Ob**	**24.45**	**318**	*e*P	**P**	**05 46 45.5**	**+0.5**
PFO				pmax	pmax		
	comp=Z,32nm,1.1s,mb4.7						
PFO				MLR	MLR		
	comp=Z,3μm,20.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**24.45**	**318**	*e*P	**P**	**05 46 45.5**	**+0.4**
	comp=Z,32nm,1.1s,mb4.7						
PFO				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**24.45**	**318**	⥣P	**P**	**05 46 45.2**	**+0.1**
	baz=24,SNR=12						
PFO				⥣S	**S**	**05 51 08.3**	**+5.3**
	baz=24						
ISCO	**Idaho Springs**	**24.54**	**344**	⥣*i*P	**P**	**05 46 46.3**	**+0.4**
ISCO				pmax	pmax		
	comp=Z,188nm,1.4s,mb5.4						
ISCO				MLR	MLR		
	comp=Z,4μm,21.0s,MS4.9						
ISCO	**Idaho Springs**	**24.54**	**344**	⥣*i*P	**P**	**05 46 46.3**	**+0.4**
	comp=Z,188nm,1.4s,mb5.4						
ISCO				LR	LR		
	comp=Z,4μm,21.0s,MS4.9						
W12A	**Cal Nev Ari**	**24.64**	**324**	⥣P	**P**	**05 46 46.9**	**+0.1**
	baz=25,SNR=6.2						
W12A				⥣S	**S**	**05 51 11.5**	**+5.4**
	baz=25						
BLO	**Bloomington**	**24.65**	**20**	⥣*i*P	**P**	**05 46 46.4**	**-0.5**
BLO				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.3						
BLO	**Bloomington**	**24.65**	**20**	⥣*i*P	**P**	**05 46 46.4**	**-0.5**
	comp=Z,84nm,0.9s,mb5.3						
GMRC	**Granite Mounta**	**24.74**	**322**	P	**P**	**05 46 47.8**	**+0.2**
	baz=25,SNR=26						
GMRC				⥣S	**S**	**05 51 11.5**	**+3.9**
	baz=25						
MURC	**Murrieta**	**24.93**	**317**	⥣P	**P**	**05 46 49.0**	**-0.4**
	baz=25,SNR=12						
MURC				⥣S	**S**	**05 51 16.0**	**+5.4**
	baz=25						
V12A	**Nelson**	**24.94**	**324**	P	**P**	**05 46 49.5**	**+0.1**
	baz=25,SNR=59						
V12A				⥣S	**S**	**05 51 15.5**	**+4.7**
	baz=25						
BBRC	**Big Bear Sol-O**	**25.17**	**319**	⥥P	**P**	**05 46 52.1**	**+0.6**
	baz=25						
BBRC				⥥S	**S**	**05 51 20.9**	**+6.4**
	baz=25						
ROSC	**El Rosal**	**25.18**	**114**	P	**P**	**05 46 54.0**	**+2.4**
	comp=Z,10.0nm,0.8s,mb4.4,baz=61,slow=4.3,SNR=11						
ROSC				S	**S**	**05 51 20.1**	**+5.5**
	comp=Z,1.2nm,0.4s,baz=268,slow=22,SNR=1.8						
ROSC				LR	LR	05 56 56.6	
	comp=Z,920nm,20.3s,MS4.3,baz=350,slow=37						
ROSC	**El Rosal**	**25.18**	**114**	*e*P	**P**	**05 46 55.8**	**+4.2**
HEC	**Hector,Ludlow**	**25.18**	**321**	⥥P	**P**	**05 46 51.9**	**+0.2**
	baz=25,SNR=8.0						
HEC				⥣S	**S**	**05 51 20.4**	**+5.8**
	baz=25						
U12A	**Valley of Fire**	**25.28**	**326**	⥣P	**P**	**05 46 52.5**	**-0.1**
	baz=25,SNR=36						
U12A				⥥S	**S**	**05 51 20.5**	**+4.2**
	baz=25						
TUQ	**Turquoise Mtn.**	**25.35**	**322**	P	**P**	**05 46 53.1**	**-0.1**
	baz=25,SNR=96						
TUQ				⥣S	**S**	**05 51 24.0**	**+6.7**
	baz=25						
SCI	**San Clemente I**	**25.45**	**315**	⥣P	**P**	**05 46 52.6**	**-1.5**
	baz=26						
ELN	**Prospectdale**	**25.45**	**32**	*e*P	**P**	**05 46 54.1**	**0.0**
ELN				*e*pP	pP	05 47 03.6	+0.1
CCUT	**Cedar City**	**25.53**	**329**	⥣*i*P	**P**	**05 46 55.7**	**+0.9**
SRU	**San Rafael**	**25.55**	**335**	⥣*i*P	**P**	**05 46 54.8**	**-0.2**
SRU				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.0						
SRU	**San Rafael**	**25.55**	**335**	⥣*i*P	**P**	**05 46 54.8**	**-0.2**
	comp=Z,44nm,0.8s,mb5.0						
CIS	**Catalina Islan**	**25.60**	**316**	⥥P	**P**	**05 46 55.0**	**-0.5**
	baz=26						
RRX	**Edison Barstow**	**25.62**	**320**	⥣P	**P**	**05 46 55.5**	**-0.1**
	baz=26						
RRX				⥥S	**S**	**05 51 25.4**	**+3.7**
	baz=26						
BFSC	**Mount Baldy St**	**25.62**	**318**	⥣P	**P**	**05 46 55.5**	**-0.2**
	baz=26,SNR=8.7						
BFSC				⥥S	**S**	**05 51 27.1**	**+5.4**
	baz=26						
SHPR	**Sheep Range**	**25.68**	**325**	*e*P	**P**	**05 46 56.4**	**+0.2**
FWV	**Forest Hill**	**25.69**	**31**	*e*P	**P**	**05 46 56.1**	**-0.2**
FMP	**Fort Macarthur**	**25.71**	**316**	⥣P	**P**	**05 46 56.1**	**-0.4**
	baz=26						
U11A	**Corn Creek**	**25.74**	**325**	⥥P	**P**	**05 46 56.8**	**0.0**
	baz=26						
MSU	**Marysvale**	**25.74**	**332**	*e*P	**P**	**05 46 57.2**	**+0.4**
MVU	**Marysvale**	**25.75**	**332**	PFAKE		05 47 10.0	+13
MVU				LR	LR		
	comp=Z,6μm,21.0s,MS5.1						
ARUT	**Antelope Range**	**25.75**	**329**	*e*P	**P**	**05 46 57.8**	**+0.9**
SCIA	**State Center**	**25.77**	**7**	⥣*i*P	**P**	**05 46 56.3**	**-0.7**
SCIA				*e*pP	pP	05 47 06.7	+0.3
GSC	**Goldstone**	**25.78**	**321**	*e*P	**P**	**05 46 57.2**	**+0.1**
GSC	**Goldstone**	**25.78**	**321**	⥣P	**P**	**05 46 57.3**	**+0.2**
	baz=26,SNR=19						
GSC				⥥S	**S**	**05 51 26.3**	**+2.1**
	baz=26						
MWC	**Mount Wilson**	**25.87**	**318**	*e*P	**P**	**05 46 58.3**	**+0.4**
SHOC	**Shoshone**	**25.88**	**323**	⥣P	**P**	**05 46 57.6**	**-0.4**
	baz=26,SNR=11						
SHOC				⥣S	**S**	**05 51 30.1**	**+4.4**
	baz=26						
PHWY	**Pilot Hill**	**25.92**	**346**	⥣*i*P	**P**	**05 46 58.5**	**+0.1**
TMUT	**Trail Mountain**	**25.98**	**335**	*e*P	**P**	**05 46 59.3**	**+0.4**
DECC	**Green Verdugo**	**26.06**	**317**	⥣P	**P**	**05 46 59.6**	**-0.1**
	baz=26						
EDW2	**Edwards Air Fo**	**26.24**	**319**	⥣P	**P**	**05 47 00.9**	**-0.4**
	baz=26,SNR=12						
EDW2				⥥S	**S**	**05 51 35.7**	**+4.2**
	baz=26						
U10A	**Ash Meadows, A**	**26.27**	**323**	⥥P	**P**	**05 47 01.8**	**+0.3**
	baz=26,SNR=23						
SNCC	**San Nicolas Is**	**26.27**	**314**	PFAKE		05 47 10.0	+8.4
SNCC				LR	LR		
	comp=Z,2μm,20.0s,MS4.7						

SNCC San Nicolas Is 26.27 314 ⇑P **P 05 47 01.0 -0.5**
baz=26
LRMC Laurel Mountai 26.44 320 ⇓P **P 05 47 03.0 0.0**
baz=26,SNR=11
LRMC ⇓S **S 05 51 38.9 +4.3**
baz=26
BLG Laguna Peak 26.46 316 ⇓P **P 05 47 03.1 -0.2**
baz=26
BLG ⇓S **S 05 51 40.2 +5.3**
baz=26
OSI Osito Adit 26.55 317 ⇑P **P 05 47 03.7 -0.3**
baz=27
OSI ⇓S **S 05 51 41.0 +4.7**
baz=27
FURC Furnace Creek, 26.61 323 ⇑P **P 05 47 04.4 -0.2**
baz=27,SNR=15
MPMC Manual Prospec 26.70 321 P **P 05 47 05.2 -0.2**
baz=27,SNR=18
MPMC ⇓S **S 05 51 44.6 +5.8**
baz=27
RWWY Rawlins 26.74 343 ⇑*iP* **P 05 47 06.0 +0.3**
comp=Z,65nm,1.1s,mb5.1
MPU Maple Canyon 26.77 335 ⇑*iP* **P 05 47 06.2 +0.2**
comp=Z,31nm,1.0s,mb4.8
MPU LR LR
comp=Z,14µm,21.0s,MS5.5
BSC Santa Cruz Isl 26.78 315 ⇓P **P 05 47 05.4 -0.7**
baz=27
NLU North Lily Min 26.90 334 ⇑*iP* **P 05 47 07.4 +0.2**
NLU *epP* pP 05 47 17.6 +1.0
DAC Darwin (Calif) 26.91 322 ⇑*iP* **P 05 47 07.0 -0.3**
DAC pmax pmax
comp=Z,25nm,1.2s,mb4.6
DAC MLR MLR
comp=Z,3µm,19.0s,MS4.9
DAC Darwin (Calif) 26.91 322 ⇑*iP* **P 05 47 07.0 -0.4**
comp=Z,25nm,1.2s,mb4.6
DAC LR LR
comp=Z,3µm,19.0s,MS4.9
ARVC Arvin 26.93 318 ⇓P **P 05 47 07.1 -0.4**
baz=27,SNR=11
DAU Daniels Canyon 26.95 336 *eP* **P 05 47 08.9 +1.2**
SDV Santo Domingo 26.95 103 P **P 05 47 09.9 +2.2**
comp=Z,41nm,0.7s,mb5.1,baz=320,slow=3.9,SNR=13
SDV LR LR 05 59 18.3
comp=Z,2µm,19.3s,MS4.6,baz=319,slow=40
SDV Santo Domingo 26.95 103 *eP* **P 05 47 08.8 +1.1**
comp=Z,34nm,0.7s,mb5.0
SDV LR LR
comp=Z,1µm,19.0s,MS4.5
ISA Isabella 27.05 320 ⇑*iP* **P 05 47 08.7 +0.2**
ISA pmax pmax
comp=Z,12nm,0.9s,mb4.4
ISA MLR MLR
comp=Z,422nm,19.0s,MS4.0
ISA Isabella 27.05 320 ⇑*iP* **P 05 47 08.7 +0.2**
comp=Z,12nm,0.9s,mb4.4
ISA LR LR
comp=Z,422nm,19.0s,MS4.0
ISA Isabella 27.05 320 P **P 05 47 08.7 +0.2**
baz=27,SNR=10
ISA ⇑S **S 05 51 45.1 +1.0**
baz=27
SBC Santa Barbara 27.09 316 ⇓P **P 05 47 08.7 -0.2**
baz=27
JFWS Jewell Farm 27.20 11 ⇑*iP* **P 05 47 08.9 -1.0**
JFWS pmax pmax
comp=Z,179nm,0.5s,mb5.8
JFWS Jewell Farm 27.20 11 ⇑*iP* **P 05 47 08.9 -1.1**
comp=Z,179nm,0.5s,mb5.8
TRCR Troy Canyon 27.27 327 ⇑*iP* **P 05 47 10.9 +0.4**
GRAC Grapevine Rang 27.27 323 P **P 05 47 11.1 +0.6**
baz=27,SNR=13
GRAC ⇑S **S 05 51 52.5 +4.8**
baz=27
CWC Cottonwood Cre 27.31 321 ⇑P **P 05 47 11.0 +0.1**
baz=27
CTU Camp Tracy 27.39 336 *eP* **P 05 47 12.2 +0.6**
comp=Z,15nm,0.9s,mb4.5
DUG Dugway 27.41 333 ⇑*iP* **P 05 47 12.0 +0.2**
DUG pmax pmax
comp=Z,29nm,1.2s,mb4.7
DUG MLR MLR
comp=Z,6µm,20.0s,MS5.2
DUG Dugway 27.41 333 ⇑*iP* **P 05 47 12.0 +0.2**
comp=Z,29nm,1.2s,mb4.7
DUG LR LR
comp=Z,6µm,20.0s,MS5.2
Q12A Willow Creek R 27.41 329 P **P 05 47 12.4 +0.6**
baz=28,SNR=15
Q12A ⇓S **S 05 51 53.2 +3.3**
baz=28
PKM Peak Mountain 27.43 317 ⇓P **P 05 47 11.4 -0.6**
baz=28
VES Vestal, Richgr 27.54 319 ⇓P **P 05 47 12.8 -0.1**
baz=28,SNR=20
R10A Warm Springs 27.60 326 ⇑P **P 05 47 14.2 +0.8**
baz=28,SNR=16
TCUT Toone Canyon 27.62 336 ⇑*iP* **P 05 47 14.1 +0.5**
S09A Goldfield 27.70 324 ⇑P **P 05 47 14.2 -0.1**
baz=28,SNR=17
S09A ⇓S **S 05 51 58.6 +4.2**
baz=28
P12A McGill 27.79 330 ⇓P **P 05 47 15.8 +0.6**
baz=28,SNR=19
P12A ⇑S **S 05 52 00.0 +4.2**
baz=28
MCWV Mont Chateau 27.79 30 ⇑*iP* **P 05 47 15.3 +0.1**
comp=Z,62nm,0.9s,mb5.2
MCWV LR LR
comp=Z,3µm,19.0s,MS4.8
SMMC Simmler 27.80 317 ⇑P **P 05 47 14.8 -0.4**
baz=28,SNR=7.0
TIN Tinemaha 27.81 322 ⇓P **P 05 47 15.3 -0.1**
baz=28
RCTC Rector, Farmer 27.94 320 ⇓P **P 05 47 16.3 -0.2**
baz=28
TPH Tonopah 27.94 325 PFAKE 05 47 30.0 +13
TPH LR LR
comp=Z,9µm,19.0s,MS5.3
CBN Corbin 27.96 35 PFAKE 05 47 30.0 +13
CBN LR LR
comp=Z,4µm,21.0s,MS4.9
R09A Tonopah 27.98 325 P **P 05 47 17.1 +0.3**
baz=28,SNR=23
R09A ⇓S **S 05 52 02.7 +3.8**
baz=28
HELL Mitchell Peak, 28.04 321 P **P 05 47 17.8 +0.4**
baz=28,SNR=18
HELL ⇑S **S 05 52 03.8 +4.0**
baz=28
V05C Boulder Hill, 28.07 318 ⇓P **P 05 47 18.2 +0.5**
baz=28
HWUT Hardware Ranch 28.10 337 ⇑*iP* **P 05 47 17.8 -0.2**
comp=Z,25nm,1.1s,mb4.8
HWUT LR LR
comp=Z,14µm,19.0s,MS5.6
PTRM Twissleman Ran 28.14 318 *eP* **P 05 47 19.2 +0.8**
SPUT South Promonto 28.19 335 ⇑*iP* **P 05 47 18.3 -0.4**
MTUM Tungsten Hills 28.21 322 *eP* **P 05 47 19.4 +0.4**
P11A Circle Ranch, 28.26 329 ⇑P **P 05 47 19.8 +0.4**
baz=28,SNR=11
O12A Currie 28.33 331 ⇑P **P 05 47 20.6 +0.5**
baz=28,SNR=33
O12A ⇑S **S 05 52 09.9 +5.5**
baz=28
RSSD Black Hills 28.34 350 ⇑*iP* **P 05 47 20.1 0.0**
RSSD pmax pmax
comp=Z,15nm,1.0s,mb4.6
RSSD MLR MLR
comp=Z,4µm,19.0s,MS5.0
RSSD Black Hills 28.34 350 ⇑*iP* **P 05 47 20.1 0.0**
comp=Z,15nm,1.0s,mb4.6
RSSD LR LR
comp=Z,4µm,19.0s,MS5.0
BW06 Boulder Array 28.42 341 ⇑*iP* **P 05 47 20.5 -0.3**
comp=Z,37nm,1.3s,mb4.9
BW06 LR LR
comp=Z,8µm,19.0s,MS5.4
PDAR Pinedale Array 28.42 341 P **P 05 47 20.1 -0.7**
comp=Z,5.3nm,0.8s,mb4.2,baz=134,slow=8.5,SNR=47
PDAR PcP PcP 05 50 31.1 -1.5
comp=Z,1.0nm,0.6s,baz=124,slow=4.0,SNR=3.7
PDAR S **S 05 52 17.8 +12**
comp=Z,0.7nm,0.9s,baz=105,slow=32,SNR=2.3
PDAR Lg 05 56 26.4
comp=Z,0.4nm,0.8s,baz=96,slow=26,SNR=2.8
PDAR LR LR 05 59 55.5
comp=Z,7µm,19.1s,MS5.3,baz=171,slow=39
PDAR Pinedale Array 28.42 341 P **P 05 47 20.1 -0.7**
PDAR PcP PcP 05 50 31.1 -1.5
PDAR S **S 05 52 17.8 +12**
PDAR Lg 05 56 26.4
PDAR LR LR 05 59 55.5
AAM Ann Arbor 28.43 21 *eP* **P 05 47 19.6 -1.2**
AAM pmax pmax
comp=Z,42nm,0.8s,mb5.1
AAM MLR MLR
comp=Z,2µm,22.0s,MS4.7
AAM Ann Arbor 28.43 21 *eP* **P 05 47 19.6 -1.2**
comp=Z,42nm,0.8s,mb5.1
AAM LR LR
comp=Z,2µm,22.0s,MS4.7
Q09A Carvers 28.47 326 ⇓P **P 05 47 22.2 +0.9**
baz=28
Q09A ⇓S **S 05 52 12.4 +5.8**
baz=28
U05C Westside ANR, 28.50 319 ⇓P **P 05 47 21.4 -0.2**
baz=29
PKD Parkfield 28.53 318 ⇑P **P 05 47 21.6 -0.2**
baz=29
MLAC Mammoth Lakes 28.56 322 ⇑P **P 05 47 22.4 +0.4**
baz=29
N13A Wendover, West 28.56 332 ⇓P **P 05 47 22.4 +0.3**
baz=29,SNR=5.5
N13A ⇑S **S 05 52 10.7 +2.7**
baz=29
V04C Ramage Ranch, 28.56 317 ⇑P **P 05 47 21.9 -0.2**
baz=29
R08A Mina 28.63 324 ⇑P **P 05 47 23.4 +0.8**
baz=29
R08A ⇑S **S 05 52 08.5 -0.6**
baz=29
KCC Kaiser Creek 28.64 321 ⇓P **P 05 47 22.7 -0.1**
baz=29,SNR=10.0
KCC ⇓S **S 05 52 11.4 +2.1**
baz=29
O11A Cowboy Ranch, 28.66 330 ⇓P **P 05 47 23.5 +0.6**
baz=29
O11A ⇑S **S 05 52 16.2 +6.7**
baz=29
T06C Millerton Lake 28.67 320 ⇑P **P 05 47 21.8 -1.2**
baz=29
HVU Hansel Valley 28.72 335 ⇑*iP* **P 05 47 23.6 +0.1**
HVU pmax pmax
comp=Z,11nm,0.8s,mb4.6
HVU Hansel Valley 28.72 335 ⇑*iP* **P 05 47 23.6 +0.2**
comp=Z,10nm,0.8s,mb4.6
NVAR Mina Array Bea 28.80 324 P **P 05 47 24.9 +0.8**
comp=Z,12nm,0.8s,mb4.7,baz=134,slow=9.7,SNR=96
NVAR PcP PcP 05 50 33.6 +0.2
comp=Z,0.5nm,0.6s,baz=159,slow=2.8,SNR=3.7
NVAR S **S 05 52 14.7 +2.9**
comp=Z,0.2nm,0.4s,baz=245,slow=22,SNR=2.8
NVAR Lg 05 56 37.8
comp=Z,0.1nm,0.4s,baz=71,slow=7.0,SNR=2.0
NVAR Mina Array Bea 28.80 324 P **P 05 47 24.9 +0.8**
NVAR PcP PcP 05 50 33.6 +0.2
NVAR S **S 05 52 14.7 +2.9**
NVAR Lg 05 56 37.8
Q08A Gabbs 28.89 325 ⇑P **P 05 47 25.5 +0.5**
baz=29,SNR=24
N12A Clover Valley, 28.93 331 ⇓P **P 05 47 25.9 +0.5**
baz=29,SNR=15
N12A ⇓S **S 05 52 20.5 +6.7**
baz=29
AHID Auburn Hatcher 28.94 339 ⇑*iP* **P 05 47 25.2 -0.2**
comp=Z,53nm,1.4s,mb5.1
AHID LR LR
comp=Z,5µm,19.0s,MS5.2
ELK Elko 28.94 331 *eP* **P 05 47 25.1 -0.3**
ELK pmax pmax
comp=Z,79nm,1.7s
ELK MLR MLR
comp=Z,10µm,19.0s
ELK Elko 28.94 331 *eP* **P 05 47 25.1 -0.3**
comp=Z,79nm,1.7s,mb5.2
ELK LR LR
comp=Z,10µm,19.0s,MS5.4
U04C Hernandez Rese 28.94 318 ⇓P **P 05 47 25.2 -0.2**
baz=29
U04C ⇓S **S 05 52 20.0 +6.0**
baz=29
M13A Montello 28.95 333 P **P 05 47 26.1 +0.6**
baz=29,SNR=28
M13A ⇓S **S 05 52 19.2 +5.0**
baz=29
P09A Austin 28.97 327 ⇑P **P 05 47 26.3 +0.6**
baz=29
R07C Lee Vining 28.99 323 ⇓P **P 05 47 26.2 +0.3**
baz=29
V03C Hunter Liggett 29.03 317 ⇓P **P 05 47 26.1 -0.2**
baz=29,SNR=5.1
SDMD Sonjer's Deli 29.12 34 ⇑*iP* **P 05 47 28.3 +1.3**
LRV Little Rabbit 29.13 318 *eP* **P 05 47 27.3 +0.2**
O10A Cortez Mining, 29.20 329 ⇓P **P 05 47 27.9 +0.2**
baz=29,SNR=9.8
N11A Elko Archery C 29.23 330 ⇑P **P 05 47 28.7 +0.7**
baz=29,SNR=8.8
N11A ⇑S **S 05 52 23.2 +4.6**
baz=29
ALLY Alegheny Colle 29.25 27 *eP* **P 05 47 28.2 0.0**
S05C Merced 29.27 320 ⇑P **P 05 47 27.7 -0.7**
baz=29
S06C San Francisco 29.32 322 ⇓P **P 05 47 28.9 0.0**
baz=29,SNR=7.2
S06C ⇑S **S 05 52 22.7 +2.7**
baz=29
M12A Wells 29.33 332 P **P 05 47 29.3 +0.5**
baz=29,SNR=22
M12A ⇓S **S 05 52 25.6 +5.6**
baz=29
REDW Red Top Meadow 29.38 340 ⇑*iP* **P 05 47 29.4 +0.1**
comp=Z,162nm,1.7s,mb5.5
Q07A Schurz 29.43 324 ⇑P **P 05 47 30.1 +0.3**
baz=30
HAST UC Hastings Re 29.45 317 ⇑P **P 05 47 29.4 -0.6**
baz=30,SNR=6.4
O09A Fish Creek Ran 29.45 328 P **P 05 47 30.5 +0.5**
baz=30,SNR=39
O09A ⇑S **S 05 52 27.6 +5.6**
baz=30
SSPA Standing Stone 29.49 31 ⇑*iP* **P 05 47 30.3 -0.1**
comp=Z,340nm,1.9s,mb5.8
SSPA *epP* pP 05 47 40.6 +0.9
SSPA LR LR
comp=Z,2µm,20.0s,MS4.7
WAKR Walker 29.50 323 *eP* **P 05 47 31.2 +0.8**
R06C Coleville 29.52 323 ⇑P **P 05 47 31.1 +0.6**
baz=30,SNR=12
R06C ⇓S **S 05 52 28.5 +5.5**
baz=30
LOHW Long Hollow 29.52 340 ⇑*iP* **P 05 47 30.5 -0.1**
comp=Z,20nm,0.7s,mb5.0
N10A Dunphy 29.53 329 ⇑P **P 05 47 31.2 +0.6**
baz=30,SNR=5.7
N10A ⇑S **S 05 52 26.4 +3.2**
baz=30
RRI2 Red Ridge 29.53 339 ⇑*iP* **P 05 47 30.8 +0.1**
comp=Z,12nm,0.8s,mb4.7
TPAW Teton Pass 29.53 339 ⇑*iP* **P 05 47 30.9 +0.3**
comp=Z,86nm,1.4s,mb5.3
P08A Dixie Valley 29.57 326 ⇓P **P 05 47 31.8 +0.8**
baz=30,SNR=9.3
SAO San Andreas Ge 29.61 318 PFAKE 05 47 40.0 +8.6
SAO LR LR
comp=Z,3µm,22.0s,MS4.9
PACP Pacheco Peak 29.66 319 ⇑P **P 05 47 31.0 -0.8**
baz=30
BMN Battle Mountai 29.66 328 ⇑*iP* **P 05 47 32.1 +0.2**
BMN *e**PP pP 05 47 41.5 +0.2
BMN pmax pmax
comp=Z,46nm,1.3s,mb5.0
BMN MLR MLR
comp=Z,2µm,19.0s,MS4.8
BMN Battle Mountai 29.66 328 ⇑*iP* **P 05 47 32.0 +0.2**
comp=Z,46nm,1.3s,mb5.0
BMN *epP* pP 05 47 41.5 +0.2
BMN LR LR
comp=Z,2µm,19.0s,MS4.8
MOOW Moose Ponds 29.69 340 ⇑*iP* **P 05 47 31.7 -0.3**
comp=Z,73nm,1.6s,mb5.2
DCID1 Drake Creek 29.70 339 ⇑*iP* **P 05 47 32.3 +0.1**
ERPA Erie 29.70 26 *eP* **P 05 47 31.2 -0.9**
comp=Z,21nm,0.7s,mb5.0
ERPA LR LR
comp=Z,2µm,19.0s,MS4.8
ATAH Atahualpa 29.71 140 P **P 05 47 33.5 +1.3**
comp=Z,5.1nm,0.7s,mb4.3,baz=2.4,slow=7.6,SNR=3.6
ATAH S **S 05 52 30.8 +4.8**
comp=Z,2.8nm,0.7s,baz=155,slow=21,SNR=1.9
ATAH LR LR 05 57 35.9
comp=Z,4µm,18.5s,MS5.1,baz=327,slow=32
SJG San Juan 29.73 82 P **P 05 47 32.9 +0.5**
comp=Z,38nm,0.6s,mb5.3,baz=338,slow=20,SNR=20
SJG San Juan 29.73 82 *eP* **P 05 47 33.1 +0.7**
SJG pmax pmax
comp=Z,33nm,0.7s
SJG MLR MLR
comp=Z,2µm,20.0s
SJG San Juan 29.73 82 *eP* **P 05 47 33.1 +0.7**
comp=Z,34nm,0.7s,mb5.2
SJG LR LR
comp=Z,2µm,20.0s,MS4.8
M11A Holland Ranch, 29.74 331 ⇓P **P 05 47 32.9 +0.4**
baz=30,SNR=18
M11A ⇓S **S 05 52 31.4 +4.9**
baz=30
CMB Columbia Colle 29.75 321 ⇑*iP* **P 05 47 31.8 -0.8**
CMB pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
CMB MLR MLR
comp=Z,3µm,19.0s,MS4.9
CMB Columbia Colle 29.75 321 ⇑*iP* **P 05 47 31.8 -0.8**
comp=Z,8.5nm,1.0s,mb4.4
CMB LR LR
comp=Z,3µm,19.0s,MS4.9
CMB Columbia Colle 29.75 321 P **P 05 47 32.1 -0.4**
baz=30,SNR=8.0
CMB ⇑S **S 05 52 29.6 +3.0**
baz=30
MVL Millersville 29.80 33 ⇑*iP* **P 05 47 33.0 -0.1**
MVL *epP* pP 05 47 41.6 -0.9
P07A Fallon 29.90 325 ⇓P **P 05 47 34.4 +0.5**
baz=30
P07A ⇑S **S 05 52 33.1 +4.1**
baz=30
CPD Cerro la Pandu 29.95 82 *eP* **P 05 47 35.1 +0.7**
FLWY Flagg Ranch 29.97 340 ⇑*iP* **P 05 47 34.8 +0.2**
comp=Z,115nm,1.7s,mb5.3
FLWY *epP* pP 05 47 45.0 +1.0
S04C Ingram Canyon, 29.99 319 ⇑P **P 05 47 34.2 -0.5**
baz=30
S04C ⇓S **S 05 52 33.6 +3.2**
baz=30
R05C Kirkwood Meado 30.00 323 P **P 05 47 35.5 +0.7**
baz=30,SNR=16
R05C ⇓S **S 05 52 35.0 +4.3**
baz=30
CBYP Canovanas 30.00 82 *eP* **P 05 47 35.1 +0.3**
HUMP Col San Antoni 30.01 82 *eP* **P 05 47 35.9 +1.0**
O08A Rochester Mine 30.04 327 ⇓P **P 05 47 35.8 +0.6**
baz=30
N09A Rock Creek Ran 30.13 328 P **P 05 47 36.5 +0.5**
baz=30,SNR=18
N09A ⇑S **S 05 52 37.1 +4.4**
baz=30
M10A I.L. Ranch, Tu 30.16 330 ⇓P **P 05 47 36.8 +0.6**
baz=30,SNR=8.4
M10A ⇑S **S 05 52 37.6 +4.5**
baz=30
WCN Washoe City 30.22 324 ⇓P **P 05 47 37.6 +0.8**
baz=30,SNR=12
R04C Big Horse Ranc 30.22 321 ⇑P **P 05 47 37.2 +0.5**
baz=30,SNR=8.1
R04C ⇓S **S 05 52 37.5 +3.5**
baz=30
PAHR Pah Rah Range 30.29 325 ⇑*iP* **P 05 47 37.8 +0.5**
comp=Z,74nm,1.6s,mb5.2
PAHR *epP* pP 05 47 45.8 -1.0
BNLO Ben Lomond (Sa 30.30 318 ⇓P **P 05 47 37.5 +0.1**
baz=30
MTP Monte Pirata 30.30 82 *eP* **P 05 47 37.3 -0.1**
LKWY Lake 30.31 341 PFAKE 05 47 50.0 +12
LKWY LR LR
comp=Z,9µm,19.0s,MS5.4
WENL Wente Brothers 30.33 319 ⇑P **P 05 47 37.9 +0.2**
baz=30
O07A Toulon 30.33 326 P **P 05 47 38.1 +0.4**
baz=30,SNR=32
O07A ⇑S **S 05 52 39.5 +3.6**
baz=30
YFT Old Faithful 30.34 341 *eP* **P 05 47 39.3 +1.5**
N08A GE Springer Mi 30.39 328 ⇓P **P 05 47 38.3 0.0**
baz=30,SNR=17
N08A ⇑S **S 05 52 41.2 +4.5**
baz=30
LAVA Lava Cap Winer 30.42 322 ⇓P **P 05 47 38.8 +0.2**
baz=30,SNR=6.4
LAVA ⇓S **S 05 52 42.1 +4.9**
baz=30
JRSC Jasper Ridge 30.50 318 ⇓P **P 05 47 39.2 -0.1**
baz=31
M09A Marrel Ranch, 30.52 329 P **P 05 47 40.4 +1.0**
baz=31,SNR=24
M09A ⇑S **S 05 52 43.7 +4.8**
baz=31
P06A Stead Airport, 30.56 324 ⇓P **P 05 47 40.5 +0.8**
baz=31,SNR=5.3
P06A ⇓S **S 05 52 44.2 +4.9**
baz=31
YMR Madison River 30.58 341 ⇑*iP* **P 05 47 40.6 +0.7**
comp=Z,19nm,0.8s,mb5.0
YMR *epP* pP 05 47 50.7 +1.3
YMR LR LR
comp=Z,4µm,20.0s,MS5.0
BDM Black Diamond 30.60 320 ⇑P **P 05 47 40.6 +0.5**
baz=31
P05C Yuba Gap, Truc 30.71 323 ⇓P **P 05 47 41.8 +0.7**
baz=31,SNR=9.4
P05C ⇑S **S 05 52 47.4 +5.7**
baz=31
O06A Flanigan 30.85 325 ⇑P **P 05 47 42.9 +0.6**
baz=31,SNR=46
O06A ⇓S **S 05 52 48.7 +4.7**
baz=31
Q04C Lincoln 30.86 321 ⇓P **P 05 47 43.1 +0.7**
baz=31
Q04C ⇑S **S 05 52 48.1 +4.1**
baz=31
HLID Hailey 30.87 335 ⇑*iP* **P 05 47 42.6 +0.1**
comp=Z,15nm,1.2s,mb4.7
QLMT Earthquake Lak 30.88 340 *eP* **P 05 47 43.6 +1.0**
QLMT *epP* pP 05 47 53.8 +1.8
BEKR Beckwourth 30.94 324 P **P 05 47 43.8 +0.7**
baz=31,SNR=30
BEKR ⇓S **S 05 52 50.5 +5.0**
baz=31
M08A Happy Creek Ra 31.01 328 ⇑P **P 05 47 43.9 +0.2**
baz=31
M08A ⇓S **S 05 52 49.8 +3.4**
baz=31
L09A Wilkinson Ranc 31.08 330 ⇓P **P 05 47 44.5 +0.1**
baz=31,SNR=13
L09A ⇓S **S 05 52 52.3 +4.7**
baz=31
Q03C Winters 31.11 321 ⇑P **P 05 47 45.9 +1.3**
baz=31
FARB Farallon Islan 31.16 318 ⇑P **P 05 47 45.1 0.0**
baz=31
CVS Carmenet Viney 31.21 320 ⇑P **P 05 47 45.4 -0.1**
baz=31
GCMT Greycliff 31.21 343 *eP* **P 05 47 45.4 -0.1**
LAO LASA Array 31.23 348 ⇑*iP* **P 05 47 45.1 -0.5**
comp=Z,81nm,1.5s,mb5.3
LAO LR LR
comp=Z,3µm,19.0s,MS5.0
OHCM Honcut 31.24 322 *eP* **P 05 47 44.9 -0.9**
OHCM *epP* pP 05 47 55.1 -0.2
BRNJ Basking Ridge 31.25 34 *eP* **P 05 47 45.0 -0.9**
BRNJ *epP* pP 05 47 54.9 -0.4
N06A Buffalo Meadow 31.26 326 P **P 05 47 46.5 +0.6**
baz=31,SNR=53
N06A ⇑S **S 05 52 55.3 +4.9**
baz=31
O05C Quincy 31.33 324 ⇓P **P 05 47 47.3 +0.7**
baz=31,SNR=5.3
MCCM Marconi Confer 31.35 319 ⇓P **P 05 47 46.7 0.0**
baz=31
SUTB Sutter Butte 31.35 322 ⇑P **P 05 47 46.7 -0.1**
baz=31
MCMT McKenzie Canyo 31.36 338 *eP* **P 05 47 48.3 +1.5**

ORV Oroville 31.39 322 ⇓P P **05 47 47.2 +0.1**
baz=32,SNR=7.0
ORV ⇑S S **05 52 56.9 +4.5**
baz=32
MNRC McLaughlin Nat 31.53 321 ⇑P P **05 47 48.8 +0.5**
baz=32
L08A Fields 31.54 329 ⇑P P **05 47 48.5 0.0**
baz=32,SNR=24
L08A ⇓S S **05 52 57.8 +3.0**
baz=32
BINY Binghamton 31.61 31⇑*i*P P **05 47 49.0 0.0**
comp=Z,24nm,0.8s,mb5.1
BINY *e*pP pP 05 47 57.8 -0.7
BINY LR LR
comp=Z,3μm,19.0s,MS5.0
K09A Rome 31.63 331 P P **05 47 49.7 +0.5**
baz=32,SNR=37
K09A ⇓S S **05 52 59.8 +3.6**
baz=32
CPNY Central Park 31.65 35 *e*P P **05 47 49.0 -0.5**
CPNY *e*pP pP 05 47 58.1 -0.8
O04C Chester 31.66 324 ⇑P P **05 47 50.2 +0.7**
baz=32,SNR=19
O04C ⇓S S **05 53 01.0 +4.4**
baz=32
ELFS Eagle Lake Fie 31.66 325 ⇓P P **05 47 50.4 +0.9**
baz=32,SNR=9.2
BOZ Bozeman (W) 31.67 341⇑*i*P P **05 47 49.5 0.0**
BOZ pmax pmax
comp=Z,41nm,1.4s,mb5.1
BOZ MLR MLR
comp=Z,5μm,19.0s,MS5.2
BOZ Bozeman (W) 31.67 341⇑*i*P P **05 47 49.5 0.0**
comp=Z,41nm,1.4s,mb5.1
BOZ LR LR
comp=Z,5μm,19.0s,MS5.2
DLMT Dillon 31.73 339⇑*i*P P **05 47 50.6 +0.5**
comp=Z,20nm,0.7s,mb5.1
DLMT *e*pP pP 05 48 00.8 +1.3
PAL Palisades 31.83 35⇑*i*P P **05 47 50.8 -0.2**
PAL *e**PP pP 05 47 58.8 -1.6
PAL pmax pmax
comp=Z,43nm,0.9s,mb5.3
PAL Palisades 31.83 35⇑*i*P P **05 47 50.8 -0.2**
comp=Z,43nm,0.9s,mb5.3
PAL *e*pP pP 05 47 58.8 -1.7
WVOR Wild Horse Val 31.87 329⇑*i*P P **05 47 51.3 0.0**
WVOR *e**PP pP 05 48 01.2 +0.5
WVOR pmax pmax
comp=Z,83nm,1.3s,mb5.4
WVOR MLR MLR
comp=Z,3μm,20.0s,MS5.0
WVOR Wild Horse Val 31.87 329⇑*i*P P **05 47 51.3 0.0**
comp=Z,83nm,1.3s,mb5.4
WVOR *e*pP pP 05 48 01.2 +0.5
WVOR LR LR
comp=Z,3μm,20.0s,MS5.0
L07A Adell 31.91 328 P P **05 47 51.8 +0.1**
baz=32,SNR=31
L07A ⇑S S **05 53 04.7 +4.1**
baz=32
EYMN Ely 31.93 7⇑*i*P P **05 47 50.8 -1.0**
comp=Z,44nm,1.2s,mb5.2
EYMN *e*pP pP 05 47 58.6 -2.7
EYMN LR LR
comp=Z,4μm,21.0s,MS5.1
M06C Likely Place G 31.93 326 ⇓P P **05 47 51.9 +0.1**
baz=32,SNR=46
HOPS Hopland 31.98 320 PFAKE 05 48 00.0 +7.7
HOPS LR LR
comp=Z,3μm,19.0s,MS5.0
HOPS Hopland 31.98 320 ⇑P P **05 47 52.9 +0.5**
baz=32
O03C Acorn Hollow, 31.99 323 ⇓P P **05 47 53.4 +1.0**
baz=32
K08A Mann Creek Ran 32.02 330 ⇑P P **05 47 52.9 +0.3**
baz=32,SNR=55
K08A ⇑S S **05 53 05.3 +3.2**
baz=32
LRM Limekiln Ridge 32.09 340 *e*P P **05 47 53.7 +0.5**
GASB Alder Springs 32.18 321 ⇓P P **05 47 54.6 +0.5**
baz=32,SNR=7.9
GASB ⇑S S **05 53 07.0 +2.3**
baz=32
HATC Hat Creek Radi 32.21 324 ⇓P P **05 47 54.4 +0.1**
baz=32,SNR=5.8
M05C Lookout 32.40 325 P P **05 47 56.1 +0.1**
baz=32,SNR=14
P01C Double 8 Ranch 32.44 321 ⇓P P **05 47 56.6 +0.3**
baz=32
O02C Red Bluff 32.55 322 ⇑P P **05 47 57.2 -0.1**
baz=33
I09A Lost Marbles R 32.62 332 ⇓P P **05 47 57.9 0.0**
baz=33,SNR=28
I09A ⇓S S **05 53 16.5 +4.9**
baz=33
WDC Whiskeytown Da 32.67 323 *e*P P **05 47 57.2 -1.1**
WDC MLR MLR
comp=Z,2μm,21.0s,MS4.7
WDC Whiskeytown Da 32.67 323 ⇓P P **05 47 58.2 -0.1**
baz=33
HRY Holter Researc 32.68 341 *e*P P **05 47 58.6 +0.2**
L05A Lakeview 32.71 327 P P **05 47 59.2 +0.5**
baz=33,SNR=43
M03C McCloud 32.88 324 ⇓P P **05 47 59.4 -0.8**
baz=33
K06A Valley Falls 32.94 328 ⇑P P **05 48 00.1 -0.6**
baz=33
I08A Drewsey 32.95 331 ⇑P P **05 48 00.4 -0.4**
baz=33,SNR=6.9
M04C Macdoel 33.07 325 ⇓P P **05 48 01.6 -0.2**
baz=33,SNR=11
BMO Blue Mountains 33.12 333⇑*i*P P **05 48 01.2 -1.1**
comp=Z,43nm,1.8s,mb5.1
BMO LR LR
comp=Z,5μm,19.0s,MS5.2
H09A Durkee 33.13 333 P P **05 48 01.9 -0.5**
baz=33,SNR=30
H09A ⇑S S **05 53 19.5 0.0**
baz=33
J06A Christmas Vall 33.22 329 ⇑P P **05 48 02.4 -0.7**
baz=33,SNR=5.8
N02C Big Bar 33.27 323 ⇓P P **05 48 03.1 -0.5**
baz=33,SNR=6.2
CHMT Chamberlain Mo 33.31 340 *e*P P **05 48 03.5 -0.5**
L04A Klamath Falls 33.37 326 P P **05 48 04.2 -0.2**
baz=33,SNR=6.3
M02C Callahan 33.38 324 ⇑P P **05 48 03.9 -0.6**
baz=33
H08A Prairie City 33.47 332 P P **05 48 05.0 -0.3**
baz=34,SNR=19
H08A ⇑S S **05 53 26.6 +1.8**
baz=34
MSO Missoula 33.47 339⇑*i*P P **05 48 04.8 -0.5**
comp=Z,15nm,1.3s,mb4.8
MSO LR LR
comp=Z,4μm,21.0s,MS5.2
YBH Yreka Blue Hor 33.52 324 *e*P P **05 48 04.2 -1.5**
YBH pmax pmax
comp=Z,6.0nm,0.8s
YBH MLR MLR
comp=Z,4μm,20.0s
YBH Yreka Blue Hor 33.52 324 *e*P P **05 48 04.2 -1.5**
comp=Z,6.0nm,0.8s,mb4.6
YBH LR LR
comp=Z,4μm,20.0s,MS5.2
YBH Yreka Blue Hor 33.52 324 ⇓P P **05 48 05.0 -0.8**
baz=34,SNR=5.4
I07A Izee 33.52 330 ⇑P P **05 48 05.0 -0.7**
baz=34,SNR=6.7
BBSR BB Station 33.52 55 PFAKE 05 48 20.0 +14
BBSR LR LR
comp=Z,5μm,20.0s,MS5.2
KHMM Horse Mountain 33.55 322 *e*P P **05 48 07.4 +1.4**
QUA2 Belchertown 33.55 34⇑*i*P P **05 48 05.8 -0.3**
comp=Z,41nm,0.8s,mb5.4
QUA2 *e*pP pP 05 48 14.0 -1.5
K04A Chilquin 33.58 326 ⇑P P **05 48 05.8 -0.5**
baz=34
ACCN Adirondack Com 33.64 32⇑*i*P P **05 48 06.5 -0.3**
ACCN *e*pP pP 05 48 15.3 -0.9
JCC Jacoby Creek 33.69 322 ⇓P P **05 48 07.4 +0.1**
baz=34
I06A Prineville 33.76 330 ⇓P P **05 48 07.1 -0.7**
baz=34,SNR=6.5
NCB Newcomb 33.79 30⇑*i*P P **05 48 07.6 -0.5**
comp=Z,38nm,0.9s,mb5.3
NCB *e*pP pP 05 48 16.7 -0.9
NCB LR LR
comp=Z,2μm,21.0s,MS4.8
J05A Fort Rock 33.79 328 ⇑P P **05 48 07.7 -0.5**
baz=34
ULM Lac du Bonnet 33.90 2 P P **05 48 08.2 -0.8**
comp=Z,4.8nm,0.7s,mb4.5,baz=183,slow=8.3,SNR=15
ULM S S **05 53 31.8 +0.4**
comp=Z,1.3nm,0.8s,baz=184,slow=20,SNR=1.5
ULM LR LR 06 03 28.9
comp=Z,2μm,21.4s,MS4.7,baz=191,slow=39
ULM Lac du Bonnet 33.90 2⇑*i*P P **05 48 07.3 -1.7**
comp=Z,34nm,1.1s,mb5.2
ULM LR LR
comp=Z,4μm,22.0s,MS5.1
HRV Harvard--Oak R 34.14 35⇑*i*P P **05 48 10.9 -0.2**
HRV *e**PP pP 05 48 18.6 -2.0
HRV pmax pmax
comp=Z,41nm,1.2s,mb5.2
HRV MLR MLR
comp=Z,2μm,19.0s,MS5.0
HRV Harvard--Oak R 34.14 35⇑*i*P P **05 48 10.8 -0.3**
comp=Z,41nm,1.2s,mb5.2
HRV *e*pP pP 05 48 18.6 -2.0
HRV LR LR
comp=Z,2μm,19.0s,MS5.0
WES Weston 34.19 35 *e*P P **05 48 09.8 -1.8**
WES *e**PP pP 05 48 20.2 -0.8
WES pmax pmax
comp=Z,56nm,1.5s,mb5.3
WES MLR MLR
comp=Z,2μm,19.0s,MS4.8
WES Weston 34.19 35 *e*P P **05 48 09.8 -1.7**
comp=Z,56nm,1.5s,mb5.3
WES *e*pP pP 05 48 20.2 -0.8
WES LR LR
comp=Z,2μm,19.0s,MS4.8
L02A Cave Junction 34.30 324 ⇓P P **05 48 12.0 -0.5**
baz=34
I05A Bend 34.44 329 ⇓P P **05 48 13.7 0.0**
baz=34,SNR=5.5
F08A Pendleton 34.51 333 ⇓P P **05 48 14.2 -0.1**
baz=35
HNH Hanover 34.57 33⇑*i*P P **05 48 15.2 +0.4**
comp=Z,2.1nm,0.8s,mb4.1
HNH *e*pP pP 05 48 23.4 -0.9
NNA Nana 34.58 143 PFAKE 05 48 30.0 +15
NNA LR LR
comp=Z,4μm,21.0s,MS5.1
BSMT Bassoo Peak 34.64 339 *e*P P **05 48 15.7 +0.2**
FRNY Flat Rock 34.73 30⇑*i*P P **05 48 15.8 -0.4**
FFD Franklin Falls 34.74 33 *e*P P **05 48 17.1 +0.7**
comp=Z,33nm,0.8s,mb5.3
FFD *e*pP pP 05 48 25.2 -0.6
HBO Huckleberry Mo 34.75 327 P P **05 48 15.9 -0.5**
J03A Ideyld Park 34.76 326 ⇑P P **05 48 16.1 -0.4**
baz=35
H05A Madras 34.77 329 ⇓P P **05 48 16.5 -0.1**
baz=35
J02A Umpqua 35.08 326 ⇑P P **05 48 19.3 0.0**
baz=35
LBNH Lisbon 35.13 32⇑*i*P P **05 48 20.3 +0.6**
LBNH pmax pmax
comp=Z,140nm,1.5s,mb5.7
LBNH MLR MLR
comp=Z,2μm,19.0s,MS5.0
LBNH Lisbon 35.13 32⇑*i*P P **05 48 20.2 +0.5**
comp=Z,140nm,1.5s,mb5.7
LBNH LR LR
comp=Z,2μm,19.0s,MS5.0
KEBM Edson Butte 35.17 324 *e*P P **05 48 21.8 +1.7**
KEBM *e*pP pP 05 48 29.7 +0.1
G05A Wamic 35.25 330 ⇑P P **05 48 21.1 +0.4**
baz=35
H04A Detroit Lake 35.27 329 ⇑P P **05 48 20.5 -0.4**
baz=35,SNR=16
HAWA Hanford 35.30 333 *e*P P **05 48 20.2 -0.9**
comp=Z,0.3nm,0.8s
HAWA LR LR
comp=Z,46nm,22.0s
I03A Eugene 35.34 327 ⇓P P **05 48 20.9 -0.6**
baz=35,SNR=6.8
VFP Flag Point 35.38 330 P P **05 48 22.9 +1.1**
WALA Waterton Lakes 35.41 341⇑*i*P P **05 48 21.8 -0.3**
comp=Z,15nm,0.8s,mb5.0
VLL Laurance Lake 35.59 330 P P **05 48 24.8 +1.2**
I02A Mapleton 35.65 326 ⇓P P **05 48 23.8 -0.3**
baz=36
COR Corvallis 35.77 328 PFAKE 05 48 40.0 +15
COR LR LR
comp=Z,4μm,20.0s,MS5.2
G04A Mulino 35.79 329 ⇑P P **05 48 24.9 -0.4**
baz=36
NEW Newport 35.83 337⇑*i*P P **05 48 24.3 -1.4**
NEW pmax pmax
comp=Z,11nm,0.9s
NEW MLR MLR
comp=Z,9μm,19.0s
NEW Newport 35.83 337⇑*i*P P **05 48 24.2 -1.5**
comp=Z,11nm,0.9s,mb4.8
NEW LR LR
comp=Z,9μm,19.0s,MS5.6
EBG Ellensburg 36.16 333 P P **05 48 29.3 +0.8**
H02A Toledo 36.20 327 ⇑P P **05 48 28.7 -0.2**
baz=36
G03A Yamhill 36.27 328 ⇑P P **05 48 29.2 -0.3**
baz=36
F04A Amboy 36.28 330 ⇑P P **05 48 29.0 -0.6**
baz=36
TBM Table Mountain 36.37 333 P P **05 48 30.6 +0.3**
E05A Randle 36.43 331 ⇓P P **05 48 30.6 -0.3**
baz=36,SNR=9.7
WTV Waterville 36.50 334 P P **05 48 31.0 -0.5**
WVL Waterville 36.54 34 *e*P P **05 48 32.6 +0.9**
ETW Entiat 36.59 334 P P **05 48 32.1 -0.1**
LON Longmire 36.59 331 P P **05 48 32.1 -0.1**
F03A Seaside 36.84 329 ⇑P P **05 48 34.3 0.0**
baz=37
E04A Onalaska 36.91 330 ⇓P P **05 48 35.0 +0.1**
baz=37
D05A Enumclaw 37.00 332 ⇑P P **05 48 35.3 -0.4**
baz=37,SNR=8.2
PKME Peaks-Kenny Pk 37.20 33⇑*i*P P **05 48 37.7 +0.3**
C05A Tolt Reservoir 37.25 332 ⇓P P **05 48 37.0 -0.8**
baz=37
E03A Lebam 37.28 330 ⇑P P **05 48 38.1 +0.1**
baz=37,SNR=5.8
D04A Dobbs Creek Ra 37.32 331 ⇑P P **05 48 38.4 0.0**
baz=37
GNW Green Mountain 37.66 331 *e*P P **05 48 40.3 -1.1**
D03A Wishkah Elem. 37.78 330 ⇑P P **05 48 42.2 -0.1**
baz=38
EMMW East Machias 37.83 35 *e*P P **05 48 44.0 +1.3**
comp=Z,47nm,1.1s,mb5.1
EMMW *e*pP pP 05 48 51.1 -1.2
C04A Brinnon 37.84 331 ⇓P P **05 48 41.9 -0.9**
baz=38
B05A Bryant 37.86 333 ⇑P P **05 48 41.5 -1.4**
baz=38
OSD Olympics--Snow 38.26 331 P P **05 48 46.4 +0.1**
B04A Port Angeles 38.34 331 ⇑P P **05 48 46.5 -0.5**
baz=38
A05A Maple Falls 38.41 334 ⇑P P **05 48 46.5 -1.1**
baz=38,SNR=6.4
VDB Vedder Mountai 38.44 334 P P **05 48 46.7 -1.1**
A04A Legoe Bay, Lum 38.47 333 ⇓P P **05 48 47.1 -1.0**
baz=39,SNR=8.7
MCW Mount Constitu 38.49 333 P P **05 48 47.6 -0.7**
FFC Flin Flon 38.54 356 P P **05 48 48.2 -0.5**
comp=Z,196nm,1.1s,mb5.8,SNR=8.0
EDM Edmonton 38.97 345⇑*i*P P **05 48 51.3 -1.0**
EDM *e**PP pP 05 49 01.0 -0.9
SAML Samuel 42.00 124 *e*P P **05 49 15.8 -1.6**
comp=Z,12nm,1.0s,mb4.5
SAML LR LR
comp=Z,771nm,19.0s,MS4.6
FCC Fort Churchill 42.47 2 *e*P P **05 49 20.6 -0.6**
FCC pmax pmax
comp=Z,56nm,1.5s,mb5.0
FCC Fort Churchill 42.47 2 *e*P P **05 49 20.6 -0.6**
comp=Z,56nm,1.5s,mb5.0
LPAZ La Paz 43.26 137 P P **05 49 28.4 +0.9**
comp=Z,4.5nm,0.8s,mb4.3,baz=328,slow=7.8,SNR=24
LPAZ LR LR 06 06 47.0
comp=Z,1μm,18.8s,MS4.9,baz=98,slow=35
LPAZ La Paz 43.26 137 P P **05 49 28.5 +0.9**
LPAZ pmax pmax
comp=Z,5.0nm,0.8s
LPAZ MLR MLR
comp=Z,1μm,18.8s
LPAZ La Paz 43.26 137 *e*P P **05 49 28.3 +0.7**
comp=Z,12nm,1.0s,mb4.6
LPAZ LR LR
comp=Z,2μm,22.0s,MS5.0
RPN Rapa Nui 44.72 195 LR LR 06 03 38.8
comp=Z,1μm,21.7s,MS4.8,baz=55,slow=30
SCHQ Schefferville 45.04 24 P P **05 49 41.1 -0.7**
comp=Z,9.9nm,0.5s,mb4.9,baz=230,slow=6.9,SNR=32
SCHQ LR LR 06 13 31.5
comp=Z,2μm,18.1s,MS5.1,baz=234,slow=43
SCHQ Schefferville 45.04 24⇑*i*P P **05 49 40.9 -1.0**
comp=Z,37nm,1.0s,mb5.2
SCHQ LR LR
comp=Z,3μm,19.0s,MS5.2
LVC Limon Verde 47.57 144 P P **05 50 02.6 +0.9**
comp=Z,3.5nm,0.8s,mb4.5,baz=268,slow=7.9,SNR=5.8
LVC Limon Verde 47.57 144 *e*P P **05 50 03.1 +1.4**
comp=Z,17nm,1.1s,mb5.0
LVC LR LR
comp=Z,1μm,21.0s,MS4.8
YKA Yellowknife Ar 47.75 349 P P **05 50 01.5 -1.6**
comp=Z,6.1nm,0.7s,mb4.8,baz=155,slow=7.5,SNR=20
YKA LR LR 06 12 21.5
comp=Z,2μm,18.9s,MS5.1,baz=180,slow=39
YKA Yellowknife Ar 47.75 349 P P **05 50 01.5 -1.6**
YKA LR LR 06 12 21.5
SIV San Ignacio 47.97 130 P P **05 50 03.4 -1.4**
comp=Z,5.4nm,0.7s,mb4.7,baz=300,slow=7.8,SNR=25
TAOE Nuku Hiva Isla 49.28 243 *e*S S **05 57 21.2 +2.4**
comp=Z,2μm,25.0s
TAOE *e*LR LR 06 03 56.9
comp=Z,9μm,24.7s,baz=60
SIT Sitka 49.73 334 PFAKE 05 50 30.0 +12
SIT LR LR
comp=Z,4μm,19.0s,MS5.5
RKT Rikitea 53.82 224 *e*S S **05 58 19.1 -2.3**
comp=Z,1μm,28.0s
RKT *e*LQ 06 04 08.1
comp=Z,562nm,27.8s
RKT *e*LR LR 06 06 19.6
comp=Z,3μm,26.0s,baz=39
POHA Pohakuloa 55.33 283 PFAKE 05 51 10.0 +10
POHA LR LR
comp=Z,1μm,19.0s,MS5.1
DAWY Dawson 55.72 339⇑*i*P P **05 51 01.6 -1.0**
DIV Divide 56.48 334 PFAKE 05 51 20.0 +12
DIV LR LR
comp=Z,6μm,22.0s,MS5.6
MENT Mentasta 56.62 337 *e*P P **05 51 09.9 +0.9**
EGAK Eagle 56.76 339 *e*P P **05 51 08.6 -1.4**
INK Inuvik 56.87 345⇑*i*P P **05 51 09.5 -1.3**
INK *e**PP pP 05 51 18.8 -1.9
INK pmax pmax
comp=Z,28nm,1.0s
INK Inuvik 56.87 345⇑*i*P P **05 51 09.4 -1.4**
comp=Z,28nm,1.0s,mb5.2
INK *e*pP pP 05 51 18.8 -2.0
CPUP Villa Florida 57.43 137 P P **05 51 13.3 -1.5**
comp=Z,4.8nm,0.6s,mb4.7,baz=308,slow=7.7,SNR=21
CPUP LR LR 06 16 24.0
comp=Z,237nm,19.2s,MS4.3,baz=310,slow=36
CPUP Villa Florida 57.43 137 P P **05 51 13.3 -1.5**
CPUP pmax pmax
comp=Z,5.0nm,0.6s
CPUP MLR MLR
comp=Z,237nm,19.2s
CPUP Villa Florida 57.43 137⇑*i*P P **05 51 13.0 -1.7**
comp=Z,26nm,0.7s,mb5.4
CPUP LR LR
comp=Z,247nm,21.0s,MS4.3
KIP Kipapa 57.46 285 PFAKE 05 51 30.0 +15
KIP LR LR
comp=Z,706nm,19.0s,MS4.8
BDFB Brasilia 58.01 121 P P **05 51 19.1 +0.3**
comp=Z,14nm,0.7s,mb5.1,baz=296,slow=9.5,SNR=28
BDFB LR LR 06 18 52.3
comp=Z,1μm,18.6s,MS5.0,baz=72,slow=39
PMR Palmer 58.12 334⇑*i*P P **05 51 18.4 -1.2**
PMR *e**PP pP 05 51 27.8 -1.8
PMR pmax pmax
comp=Z,12nm,0.7s,mb5.0
PMR MLR MLR
comp=Z,2μm,21.0s,MS5.2
PMR Palmer 58.12 334⇑*i*P P **05 51 18.4 -1.2**
comp=Z,12nm,0.7s,mb5.0
PMR *e*pP pP 05 51 27.8 -1.8
PMR LR LR
comp=Z,2μm,21.0s,MS5.2
SFJD Kangerlussuaq 58.97 19 *i*P P **05 51 20.1 -5.4**
SFJD *i* 05 55 10.4
SFJD *e* 05 59 25.0
SFJD
comp=Z,940nm,23.0s
MCK McKinley 59.04 336⇑*i*P P **05 51 25.0 -1.0**
MCK pmax pmax
comp=Z,16nm,1.3s,mb4.9
MCK MLR MLR
comp=Z,1μm,19.0s,MS5.0
MCK McKinley 59.04 336⇑*i*P P **05 51 25.0 -1.0**
comp=Z,16nm,1.3s,mb4.9
MCK LR LR
comp=Z,1μm,19.0s,MS5.0
COLA College 59.19 337*c*⇑*i*P P **05 51 25.7 -1.4**
COLA College 59.19 337⇑*i*P P **05 51 25.6 -1.5**
comp=Z,8.9nm,0.8s,mb4.8
COLA LR LR
comp=Z,4μm,19.0s,MS5.6
SVW2 Sparrevohn 60.77 332 *e*P P **05 51 36.4 -1.4**
PPT Papeete 61.57 239 *e*S S **06 00 04.0 +1.0**
comp=Z,2μm,31.2s
PPT *e*LQ 06 07 32.9
comp=Z,2μm,32.8s
PPT *e*LR LR 06 09 38.9
comp=Z,3μm,25.5s,baz=54
PPT Papeete 61.57 239 LR LR 06 10 52.4
comp=Z,1μm,18.6s,MS5.0,baz=39,slow=29
PLCA Paso Flores 61.90 157 P P **05 51 44.1 -1.4**
comp=Z,7.1nm,0.9s,mb4.8,baz=332,slow=9.8,SNR=14
PLCA LR LR 06 13 11.6
comp=Z,2μm,18.1s,MS5.2,baz=331,slow=31
PLCA Paso Flores 61.90 157 *e*P P **05 51 45.0 -0.5**
PLCA pmax pmax
comp=Z,23nm,0.8s
PLCA MLR MLR
comp=Z,2μm,19.0s
PLCA Paso Flores 61.90 157 *e*P P **05 51 45.0 -0.5**
comp=Z,23nm,0.8s,mb5.4
PLCA LR LR
comp=Z,2μm,19.0s,MS5.2
TRQA Tornquist 63.38 149 *e*P P **05 51 53.6 -1.8**
comp=Z,8.4nm,0.8s,mb4.9
TRQA LR LR
comp=Z,2μm,20.0s,MS5.3
TBI Tubuai 64.48 234 *e*S S **06 00 39.5 +0.1**
comp=Z,435nm,26.5s
TBI *e*LQ 06 08 10.1
comp=Z,833nm,30.5s
TBI *e*LR LR 06 11 12.1
comp=Z,3μm,26.2s,baz=54
ADH Angra Heroismo 64.49 55 *e*LR LR 06 11 25.0
RCBR Riachuelo 64.51 105 PFAKE 05 52 20.0 +17
RCBR LR LR
comp=Z,961nm,20.0s,MS5.0
UNV Unalaska Valle 64.79 322 PFAKE 05 52 20.0 +15
UNV LR LR
comp=Z,2μm,20.0s,MS5.2
SUMG Summit 65.44 16⇑*i*P P **05 52 08.5 -0.3**
comp=Z,232nm,2.1s,mb5.8
SUMG *e*pP pP 05 52 18.8 -0.2
PDA Ponta Delgada 65.76 56 *e* 06 14 18.0
TNA Tin City 67.33 335 PFAKE 05 52 30.0 +9.1
TNA LR LR
comp=Z,881nm,20.0s,MS5.0
BORG Borgarnes 69.39 26 PFAKE 05 52 50.0 +16
BORG LR LR
comp=Z,669nm,21.0s,MS4.9
DAG Danmarks Havn 71.64 14⇓*i*P P **05 52 46.1 -1.5**
comp=Z,13nm,0.8s,mb4.9
DAG pmax pmax
comp=Z,2μm,22.0s
DAG Danmarks Havn 71.64 14⇓*i*P P **05 52 46.1 -1.5**
DAG pmax pmax
comp=Z,13nm,0.8s,mb4.9

DAG MLR MLR
comp=Z,2µm,22.0s,MS5.3
JMIC Jan Mayen 74.31 20 *e*P **P 05 53 04.0 +0.6**
JMIC *e*PP PP 05 55 49.4 -0.2
JMIC AMS AMS 06 28 22.0
comp=Z,1µm,22.0s,MS5.1
EFI East Falkland 75.78 156 *e*P **P 05 53 12.9 +1.0**
EFI East Falkland 75.78 156 PFAKE 05 53 20.0 +8.1
EFI LR LR
comp=Z,3µm,19.0s,MS5.5
SMY Shemya 76.42 321 PFAKE 05 53 30.0 +14
SMY LR LR
comp=Z,572nm,19.0s,MS4.9
BILL Bilibino 77.45 337 *e*P **P 05 53 19.9 -1.4**
BILL pmax pmax
comp=Z,15nm,1.3s,mb4.8
BILL MLR MLR
comp=Z,1µm,21.0s,MS5.2
BILL Bilibino 77.45 337 PFAKE 05 53 30.0 +8.7
BILL LR LR
comp=Z,1nm,19.0s,MS5.3
KBS Kingsbay 77.73 11 *e*P **P 05 53 22.2 -0.6**
KBS *e*PP PP 05 56 14.6 -3.8
KBS Kingsbay 77.73 11 *e*P **P 05 53 22.2 -0.6**
KBS LR LR
comp=Z,832nm,19.0s,MS5.1
STS Santiago 78.16 49 P **P 05 53 24.1 -1.1**
STS pmax pmax
comp=Z,24nm,0.9s,mb5.1
STS Santiago 78.16 49 P **P 05 53 24.1 -1.2**
comp=Z,24nm,0.9s,mb5.1
EZAM Zamans 78.19 49 P **P 05 53 24.3 -1.1**
EZAM pmax pmax
comp=Z,15nm,0.6s,mb5.1
EZAM Zamans 78.19 49 P **P 05 53 24.3 -1.1**
comp=Z,15nm,0.6s,mb5.1
PMAFR Mafra 78.39 53 *e*S S 06 03 16.2 -3.7
PMAFR Mafra 78.39 53 *e*LQ 06 17 21.0
PMAFR *e*LR LR 06 18 47.2
PCAB Cabril 78.77 50 *e*P **P 05 53 28.5 -0.1**
comp=Z,37nm,1.9s,mb5.0
PTOM Tomar 78.91 52 *e*P **P 05 53 29.9 +0.5**
comp=Z,52nm,1.2s,mb5.3
PVIS Viseu 79.07 51 *e*P **P 05 53 30.2 -0.1**
comp=Z,29nm,1.5s,mb5.0
PVRL Vila Real 79.09 50 *e*P **P 05 53 30.8 +0.4**
comp=Z,17nm,1.4s,mb4.8
MTE Manteigas 79.40 51 *e*P **P 05 53 32.0 -0.1**
comp=Z,36nm,1.4s,mb5.1
MTE *e*S S 06 03 30.1 -0.6
MTE Manteigas 79.40 51 *e*LR LR 06 18 44.8
comp=Z,1µm,28.3s
MTE Manteigas 79.40 51 *e*P **P 05 53 31.8 -0.2**
comp=Z,24nm,1.1s,mb5.0
PBEJ Beja 79.67 53 *e*P **P 05 53 34.0 +0.5**
comp=Z,29nm,1.9s,mb4.9
PBRG Braganca 79.69 49 *e*P **P 05 53 34.4 +0.8**
comp=Z,13nm,1.2s,mb4.7
PESTR Estremoz 79.70 53 *e*P **P 05 53 34.1 +0.4**
comp=Z,16nm,1.3s,mb4.8
PESTR Estremoz 79.70 53 *e*S S 06 03 40.6 +6.8
PESTR Estremoz 79.70 53 *e*LR LR 06 19 03.5
ROSF Rostrenen 80.60 42 *e*P **P 05 53 39.5 +1.0**
EMIN Mina Concepcio 80.64 53 P **P 05 53 39.9 +1.1**
comp=Z,41nm,2.1s,mb5.0
QUIF Quistinic 80.77 43 *e*P **P 05 53 39.1 -0.3**
comp=Z,27nm,0.9s,mb4.9
QUIF Quistinic 80.77 43 *e*P **P 05 53 39.1 -0.3**
QUIF pmax pmax
comp=Z,14nm,0.9s,mb4.9
QUIF Quistinic 80.77 43 *e*P **P 05 53 39.1 -0.3**
comp=Z,14nm,0.9s,mb4.9
BJO Bjornoya 81.17 14 AMS AMS 06 32 22.3
comp=Z,2µm,22.0s,MS5.4
ESPR Espera 81.49 54 P **P 05 53 43.4 +0.1**
comp=Z,25nm,1.1s,mb5.1
GUD Guadarrama 81.86 50 P **P 05 53 45.0 -0.2**
GUD pmax pmax
comp=Z,18nm,1.0s,mb5.0
GUD Guadarrama 81.86 50 P **P 05 53 45.0 -0.2**
comp=Z,18nm,1.0s,mb5.0
EJIF Jimena Fronter 81.89 54 P **P 05 53 47.5 +2.1**
EJIF pmax pmax
comp=Z,19nm,1.3s,mb4.9
EJIF Jimena Fronter 81.89 54 P **P 05 53 47.5 +2.1**
comp=Z,18nm,1.3s,mb4.8
BER Bergen 82.06 29 *e*P **P 05 53 47.3 +1.0**
BER *e*PP PP 05 56 54.1 -0.3
BER *e*S S 06 04 00.3 +1.8
BER AMS AMS 06 28 42.6
comp=Z,572nm,25.6s,MS4.8
GRR Gorron 82.14 42⇑ *i*P **P 05 53 46.6 -0.1**
comp=Z,54nm,0.9s,mb5.2
GRR Gorron 82.14 42⇑ *i*P **P 05 53 46.6 -0.1**
GRR pmax pmax
comp=Z,27nm,0.9s,mb5.2
GRR Gorron 82.14 42⇑ *i*P **P 05 53 46.6 -0.1**
comp=Z,27nm,0.9s,mb5.2
EADA Adamuz 82.16 53 P **P 05 53 45.8 -1.0**
comp=Z,27nm,1.5s,mb5.0
ESDC Sonseca Array 82.24 51 P **P 05 53 47.8 +0.6**
comp=Z,4.0nm,0.7s,mb4.4,baz=299,slow=4.7,SNR=22
ESDC LR LR 06 30 39.9
comp=Z,924nm,18.6s,MS5.2,baz=295,slow=36
ESDC Sonseca Array 82.24 51 P **P 05 53 45.0 -2.3**
comp=Z,1.4nm,0.4s,mb4.2
ESLA Sonseca Array 82.24 51 *e*P **P 05 53 47.4 +0.2**
comp=Z,4.4nm,1.3s,mb4.2
ESLA LR LR
comp=Z,6µm,19.0s,MS6.0
FLN La Foliniere 82.28 42⇑ *i*P **P 05 53 47.5 +0.1**
comp=Z,37nm,0.9s,mb5.0
FLN *e*R
comp=Z,2µm,19.8s
FLN La Foliniere 82.28 42⇑ *i*P **P 05 53 47.5 +0.1**
FLN pmax pmax
comp=Z,19nm,0.9s,mb5.0
FLN MLR MLR
comp=Z,2µm,19.8s,MS5.4
FLN La Foliniere 82.28 42⇑ *i*P **P 05 53 47.5 +0.1**
comp=Z,18nm,0.9s,mb5.0
FLN LR LR
comp=Z,2µm,19.8s,MS5.4
EMIJ Mijas 82.41 54 P **P 05 53 47.4 -0.7**
comp=Z,24nm,1.1s,mb5.0
ELUQ Luque 82.55 53 P **P 05 53 50.2 +1.4**
ELUQ pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
ELUQ Luque 82.55 53 P **P 05 53 50.2 +1.4**
comp=Z,2.4nm,0.6s,mb4.4
LDF La Druitiere 82.56 42⇑ *i*P **P 05 53 48.7 -0.2**
comp=Z,28nm,0.9s,mb5.0
LDF La Druitiere 82.56 42⇑ *i*P **P 05 53 48.7 -0.2**
LDF pmax pmax
comp=Z,14nm,0.9s,mb5.0
LDF La Druitiere 82.56 42⇑ *i*P **P 05 53 48.7 -0.2**
comp=Z,14nm,0.9s,mb5.0
ELOJ Sierra Loja 82.74 54 P **P 05 53 50.2 +0.4**
ELOJ pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ELOJ Sierra Loja 82.74 54 P **P 05 53 50.2 +0.4**
comp=Z,9.9nm,1.0s,mb4.8
ERON Agron 83.04 54 P **P 05 53 50.8 -0.5**
comp=Z,8.1nm,0.6s,mb4.9
MFF Saint Martin d 83.10 44 *e*P **P 05 53 52.4 +0.7**
ECOG Cogollos-Vega 83.16 53 P **P 05 53 52.2 +0.2**
ECOG pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
ECOG Cogollos-Vega 83.16 53 P **P 05 53 52.2 +0.2**
comp=Z,10nm,0.6s,mb5.0
EQES Quesada 83.40 53 P **P 05 53 52.8 -0.4**
comp=Z,14nm,1.0s,mb5.0
NSS Namsos 83.41 24 *e*P **P 05 53 52.8 -0.5**
TRO Tromso 83.52 18 *e*P **P 05 53 53.5 -0.4**
TRO *e*PP PP 05 57 00.5 -5.9
TRO *e* 06 03 59.6
TRO *e*SS SS 06 09 43.1 +3.5
TRO AMS AMS 06 31 34.6
comp=Z,542nm,21.2s,MS4.9
EVIA Vianos 83.61 52 P **P 05 53 54.0 -0.3**
EVIA pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
EVIA Vianos 83.61 52 P **P 05 53 54.0 -0.3**
comp=Z,9.8nm,0.7s,mb5.0
EHUE Huescar 83.76 53 P **P 05 53 56.1 +1.0**
EHUE pmax pmax
comp=Z,15nm,1.1s,mb5.0
EHUE Huescar 83.76 53 P **P 05 53 56.1 +1.0**
comp=Z,15nm,1.1s,mb5.0
EBER Berja 83.78 54 P **P 05 53 53.7 -1.4**
comp=Z,76nm,1.7s,mb5.5
ETSF Etsaut 83.86 47⇑ *i*P **P 05 53 55.8 +0.2**
comp=Z,16nm,0.8s,mb4.9
ETSF Etsaut 83.86 47⇑ *i*P **P 05 53 55.8 +0.2**
ETSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
ETSF Etsaut 83.86 47⇑ *i*P **P 05 53 55.8 +0.2**
comp=Z,7.8nm,0.8s,mb4.9
LFF La Frestale 84.17 45⇑ *i*P **P 05 53 57.1 -0.1**
comp=Z,30nm,0.8s,mb5.2
LFF La Frestale 84.17 45⇑ *i*P **P 05 53 57.1 -0.1**
LFF pmax pmax
comp=Z,15nm,0.8s,mb5.2
LFF La Frestale 84.17 45⇑ *i*P **P 05 53 57.1 -0.1**
comp=Z,15nm,0.8s,mb5.2
KONO Kongsberg 84.33 29 *e*P **P 05 53 59.9 +2.0**
KONO *e*S S 06 04 15.7 -5.7
KONO Kongsberg 84.33 29⇑ *e*P **P 05 53 58.3 +0.3**
KONO Kongsberg 84.33 29 *e*P **P 05 53 59.9 +2.0**
KONO LR LR
comp=Z,594nm,20.0s,MS5.0
NAO01 NORSAR Array S 84.45 28 *e*P **P 05 53 58.3 -0.3**
comp=Z,7.9nm,1.2s,mb4.7
NAO01 LR LR
comp=Z,900nm,22.0s,MS5.1
EPF Esparros 84.45 47 *e*P **P 05 53 58.7 +0.1**
ECHE Chera 84.49 51 P **P 05 53 58.1 -0.7**
ECHE pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
ECHE Chera 84.49 51 P **P 05 53 58.1 -0.7**
comp=Z,5.8nm,0.7s,mb4.8
NB2 NORSAR Subarra 84.52 28 P **P 05 53 59.2 +0.3**
comp=Z,0.4nm,0.6s,baz=303,slow=5.1
NOA NORSAR Array B 84.52 28 P **P 05 53 59.1 +0.2**
comp=Z,5.7nm,0.8s,mb4.7,baz=300,slow=5.0,SNR=17
NOA LR LR 06 33 06.7
comp=Z,502nm,20.7s,MS4.9,baz=290,slow=37
RJF Les Rejaudoux 84.58 44 *e*P **P 05 53 59.0 -0.3**
comp=Z,9.7nm,0.7s,mb4.7
RJF *e*R
comp=Z,2µm,22.0s
RJF Les Rejaudoux 84.58 44 *e*P **P 05 53 59.0 -0.3**
RJF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
RJF MLR MLR
comp=Z,2µm,22.0s,MS5.4
RJF Les Rejaudoux 84.58 44 *e*P **P 05 53 59.0 -0.3**
comp=Z,4.8nm,0.7s,mb4.7
RJF LR LR
comp=Z,2µm,22.0s,MS5.4
PMSA Palmer Station 84.68 166 PFAKE 05 54 10.0 +10
PMSA LR LR
comp=Z,1µm,21.0s,MS5.2
HYF Humbligny 84.72 42 *e*P **P 05 53 59.9 -0.1**
TCF Toulx Ste Croi 84.75 43⇑ *i*P **P 05 53 59.9 -0.2**
comp=Z,50nm,1.3s,mb5.2
TCF Toulx Ste Croi 84.75 43⇑ *i*P **P 05 53 59.9 -0.2**
TCF pmax pmax
comp=Z,25nm,1.3s,mb5.2
TCF Toulx Ste Croi 84.75 43⇑ *i*P **P 05 53 59.9 -0.2**
comp=Z,25nm,1.3s,mb5.2
BAIF Baives 84.82 39⇑ *i*P **P 05 54 00.5 0.0**
comp=Z,104nm,1.6s,mb5.4
BAIF Baives 84.82 39⇑ *i*P **P 05 54 00.5 0.0**
BAIF pmax pmax
comp=Z,52nm,1.6s,mb5.4
BAIF Baives 84.82 39⇑ *i*P **P 05 54 00.5 0.0**
comp=Z,52nm,1.6s,mb5.4
CAF Calviac 85.07 45 *e*P **P 05 54 01.4 -0.3**
comp=Z,15nm,0.9s,mb4.8
CAF Calviac 85.07 45 *e*P **P 05 54 01.4 -0.3**
CAF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
CAF Calviac 85.07 45 *e*P **P 05 54 01.4 -0.3**
comp=Z,7.4nm,0.9s,mb4.8
BGF Bois d'Agland 85.08 43⇑ *i*P **P 05 54 01.4 -0.4**
comp=Z,37nm,1.0s,mb5.2
BGF Bois d'Agland 85.08 43⇑ *i*P **P 05 54 01.4 -0.4**
BGF pmax pmax
comp=Z,19nm,1.0s,mb5.2
BGF Bois d'Agland 85.08 43⇑ *i*P **P 05 54 01.4 -0.4**
comp=Z,19nm,1.0s,mb5.2
GIVF Givet 85.18 39⇑ *i*P **P 05 54 02.3 0.0**
comp=Z,131nm,1.5s,mb5.5
GIVF Givet 85.18 39⇑ *i*P **P 05 54 02.3 0.0**
GIVF pmax pmax
comp=Z,66nm,1.5s,mb5.5
GIVF Givet 85.18 39⇑ *i*P **P 05 54 02.3 0.0**
comp=Z,66nm,1.5s,mb5.5
AVF Avril sur Loir 85.34 43⇑ *i*P **P 05 54 02.3 -0.8**
comp=Z,20nm,1.0s,mb4.9
AVF Avril sur Loir 85.34 43⇑ *i*P **P 05 54 02.3 -0.8**
AVF pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
AVF Avril sur Loir 85.34 43⇑ *i*P **P 05 54 02.3 -0.8**
comp=Z,10nm,1.0s,mb4.9
MUD Monsted U'grnd 85.34 32 *i* P **P 05 54 02.3 -0.8**
MUD *i* 05 57 23.7
MUD *i* S S 06 04 41.2 +10
MUD
comp=Z,700nm,18.0s
MUD Monsted U'grnd 85.34 32 *i* P **P 05 54 02.3 -0.8**
MUD *i* 05 57 23.7
MUD Monsted U'grnd 85.34 32 *i* P **P 05 54 02.3 -0.8**
MUD *i* 05 57 23.7
MUD *i* S S 06 04 41.2 +10
SSF Saint Saulge 85.35 42⇑ *i*P **P 05 54 02.6 -0.5**
comp=Z,56nm,1.4s,mb5.2
SSF Saint Saulge 85.35 42⇑ *i*P **P 05 54 02.6 -0.5**
SSF pmax pmax
comp=Z,28nm,1.4s,mb5.2
SSF Saint Saulge 85.35 42⇑ *i*P **P 05 54 02.6 -0.5**
comp=Z,28nm,1.4s,mb5.2
PET Petropavlovsk 85.38 324 *e*P **P 05 53 59.8 -3.5**
PET *e* 05 57 23.6
PET *e*S S 06 04 33.5 +1.6
PET *e* 06 05 52.1
PET pmax pmax
comp=Z,200nm,15.5s
PET pmax pmax
comp=Z,100nm,16.0s
PET MLR MLR
comp=Z,500nm,10.0s,MS5.2
PET MLR MLR
comp=Z,400nm,18.0s
PET Petropavlovsk 85.38 324 *e*P **P 05 54 02.6 -0.6**
comp=Z,8.0nm,0.5s,mb5.1
PET LR LR
comp=Z,503nm,20.0s,MS4.9
PYM Petit Puy Mans 85.44 44 *e*P **P 05 54 02.9 -0.7**
LOR Lormes 85.51 42⇑ *i*P **P 05 54 03.7 -0.2**
comp=Z,52nm,1.0s,mb5.4
LOR *e*R
comp=Z,1µm,21.2s
LOR Lormes 85.51 42⇑ *i*P **P 05 54 03.7 -0.2**
LOR pmax pmax
comp=Z,26nm,1.0s,mb5.4
LOR MLR MLR
comp=Z,1µm,21.3s,MS5.2
LOR Lormes 85.51 42⇑ *i*P **P 05 54 03.7 -0.2**
comp=Z,26nm,1.0s,mb5.4
LOR LR LR
comp=Z,1µm,21.3s,MS5.2
ARCES ARCESS Array B 85.52 17 P **P 05 54 02.6 -1.3**
comp=Z,5.4nm,0.9s,mb4.8,baz=297,slow=5.3,SNR=13
ARCES LR LR 06 32 50.0
comp=Z,700nm,21.9s,MS5.0,baz=306,slow=36
ARE0 ARCESS Array S 85.52 17 *e*P **P 05 54 03.0 -1.0**
HGN Heimansgroeve 85.62 38⇑ *i*P **P 05 54 04.3 -0.2**
comp=Z,39nm,1.8s,mb5.3
HGN *e*PP PP 05 57 24.8 +1.4
HGN *e*S S 06 04 45.5 +11
HGN *e*SS SS 06 09 59.0 -12
MTLF Montolieu 85.67 46⇑ *i*P **P 05 54 04.6 -0.1**
comp=Z,42nm,1.1s,mb5.3
MTLF Montolieu 85.67 46⇑ *i*P **P 05 54 04.6 -0.1**
MTLF pmax pmax
comp=Z,21nm,1.1s,mb5.3
MTLF Montolieu 85.67 46⇑ *i*P **P 05 54 04.6 -0.1**
comp=Z,21nm,1.1s,mb5.3
SMF Signal de Mont 85.70 43⇑ *i*P **P 05 54 04.1 -0.8**
comp=Z,33nm,1.2s,mb5.1
SMF Signal de Mont 85.70 43⇑ *i*P **P 05 54 04.1 -0.8**
SMF pmax pmax
comp=Z,17nm,1.2s,mb5.2
SMF Signal de Mont 85.70 43⇑ *i*P **P 05 54 04.1 -0.8**
comp=Z,17nm,1.2s,mb5.1
WTSB Winterswijk 85.70 37 *e*P **P 05 54 05.2 +0.3**
comp=Z,39nm,2.0s,mb5.3
LBL Lubilhac 85.77 44 *e*P **P 05 54 05.8 +0.6**
KEV Kevo 85.81 17 PFAKE 05 54 20.0 +15
KEV LR LR
comp=Z,719nm,21.0s,MS5.0
MEZF Maizieres J'vi 85.86 41⇑ *i*P **P 05 54 05.5 -0.1**
comp=Z,80nm,1.3s,mb5.5
MEZF Maizieres J'vi 85.86 41⇑ *i*P **P 05 54 05.5 -0.1**
comp=Z,80nm,1.3s,mb5.8
COLF Collangettes 85.97 44 *e*P **P 05 54 07.1 +0.9**
WLF Walferdange 86.14 39 *e*P **P 05 54 07.0 0.0**
comp=Z,74nm,1.9s,mb5.6
WLF Walferdange 86.14 39 *e*P **P 05 54 07.2 +0.2**
WLF pmax pmax
comp=Z,32nm,1.4s,mb5.4
WLF Walferdange 86.14 39 *e*P **P 05 54 07.2 +0.2**
comp=Z,32nm,1.4s,mb5.4
BUG Bochum--Univer 86.17 37 *e*P **P 05 54 08.2 +1.0**
FUNA Funafuti 86.26 260 PFAKE 05 54 20.0 +12
FUNA LR LR
comp=Z,8µm,19.0s,MS6.1
THEF They Montfort 86.54 41 *e*P **P 05 54 09.6 +0.6**
LASF Ste Croix 86.56 45⇑ *i*P **P 05 54 09.5 +0.4**
comp=Z,102nm,1.3s,mb5.6
RUP Ruppelstein 86.67 39 *e*P **P 05 54 10.4 +0.7**
MA2 Magadan 86.75 332 PFAKE 05 54 20.0 +10
MA2 LR LR
comp=Z,531nm,20.0s,MS4.9
HAU Haudompre 86.84 41⇑ *i*P **P 05 54 10.3 -0.2**
comp=Z,23nm,0.9s,mb5.1
HAU *e*R
comp=Z,1µm,22.0s
HAU Haudompre 86.84 41⇑ *i*P **P 05 54 10.3 -0.2**
HAU pmax pmax
comp=Z,11nm,0.9s,mb5.1
HAU MLR MLR
comp=Z,1µm,22.0s,MS5.3
HAU Haudompre 86.84 41⇑ *i*P **P 05 54 10.3 -0.2**
comp=Z,11nm,0.9s,mb5.1
HAU LR LR
comp=Z,1µm,22.0s,MS5.3
VIVF Saint-Julien-l 86.85 44⇑ *i*P **P 05 54 10.7 +0.2**
comp=Z,26nm,1.2s,mb5.0
VIVF Saint-Julien-l 86.85 44⇑ *i*P **P 05 54 10.7 +0.2**
VIVF pmax pmax
comp=Z,13nm,1.2s,mb5.0
VIVF Saint-Julien-l 86.85 44⇑ *i*P **P 05 54 10.7 +0.2**
comp=Z,13nm,1.2s,mb5.0
ABH Alteburg 86.90 39 *e*P **P 05 54 11.5 +0.7**
BSEG Bad Segeberg 86.93 34 *e*P **P 05 54 11.7 +0.8**
comp=Z,15nm,1.5s,mb5.0
BSEG Bad Segeberg 86.93 34 *e*P **P 05 54 11.7 +0.8**
BSEG pmax pmax
comp=Z,15nm,1.5s,mb5.0
TIXI Tiksi 86.94 347 *e*P **P 05 54 08.7 -2.3**
TIXI *e* 05 57 29.0
TIXI *e*PPP 05 59 26.4
TIXI *e*S S 06 04 37.5 -10
TIXI *e*SS SS 06 10 23.2 -6.8
TIXI pmax pmax
comp=Z,20nm,0.8s,mb5.4
TIXI Tiksi 86.94 347 PFAKE 05 54 20.0 +9.0
TIXI LR LR
comp=Z,669nm,20.0s,MS5.0
CABF La Chapelle 87.17 42 *e*P **P 05 54 12.1 0.0**
HINF Hinteralfeld 87.23 41 *e*P **P 05 54 11.5 -0.9**
comp=Z,6.5nm,0.7s,mb4.6
HINF Hinteralfeld 87.23 41 *e*P **P 05 54 11.5 -0.9**
HINF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
HINF Hinteralfeld 87.23 41 *e*P **P 05 54 11.5 -0.9**
comp=Z,3.3nm,0.7s,mb4.7
ECH Echery 87.27 40 *e*P **P 05 54 11.7 -0.9**
CDF Champ du Feu 87.28 40⇑ *i*P **P 05 54 12.0 -0.6**
comp=Z,8.8nm,1.0s,mb4.6
CDF Champ du Feu 87.28 40⇑ *i*P **P 05 54 12.0 -0.6**
CDF pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
CDF Champ du Feu 87.28 40⇑ *i*P **P 05 54 12.0 -0.6**
comp=Z,4.4nm,1.0s,mb4.6
TNS Taunus Mts 87.31 38 *e*P **P 05 54 12.8 0.0**
comp=Z,7.0nm,0.8s,mb4.9
TNS Taunus Mts 87.31 38 *e*P **P 05 54 12.8 0.0**
TNS pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
COP Copenhagen 87.33 32 *i* P **P 05 54 13.3 +0.5**
COP *i* 05 57 38.5
COP *e*S S 06 05 13.7 +23
COP
comp=Z,300nm,18.0s
COP Copenhagen 87.33 32 *i* P **P 05 54 13.3 +0.5**
COP *i* 05 57 38.5
COP MLR MLR
comp=Z,310nm,18.0s,MS4.8
LOMF Lomont 87.38 41 *e*P **P 05 54 13.5 +0.4**
MOF Molkenrain 87.39 41 *e*P **P 05 54 13.5 +0.4**
GTTG Gvttingen 87.69 37 *e*P **P 05 54 15.5 +0.9**
comp=Z,5.0nm,0.7s,mb4.8
FELD Feldberg im Sc 87.93 41 *e*P **P 05 54 15.6 -0.1**
UBBA Unterbreizbach 88.00 37 *e*P **P 05 54 15.9 -0.1**
comp=Z,8.0nm,1.4s,mb4.8
MOX Moxa 89.00 37 *e*P **P 05 54 20.3 -0.5**
comp=Z,7.0nm,1.1s,mb4.9
MOX Moxa 89.00 37 *e*P **P 05 54 20.8 0.0**
comp=Z,14nm,1.5s,mb5.1
MOX
comp=Z,400nm,19.0s
LVZ Lovozero 89.12 16*ce*P **P 05 54 19.3 -2.0**
LVZ *e* 05 57 47.5
LVZ *e*PPP 05 59 50.4
LVZ *e* 06 05 00.4
LVZ *e*PS PS 06 06 14.3 -1.9
LVZ *e*SP 06 06 16.2
LVZ *e*SS SS 06 10 55.4 -6.4
LVZ MLR MLR
comp=Z,435nm,18.0s,MS4.9
LVZ MLR MLR
comp=N,304nm,19.0s,MS4.9
LVZ MLR MLR
comp=E,286nm,20.0s,MS4.9
LVZ Lovozero 89.12 16 PFAKE 05 54 30.0 +8.7
LVZ LR LR
comp=Z,602nm,22.0s,MS5.0
GRA1 Grafenberg Arr 89.17 38 *e*P **P 05 54 21.3 -0.3**
GRA1 *e*pP pP 05 54 31.0 -1.0
GRA1 *e*sP sP 05 54 34.7 -1.0
GRA1 *e*PP PP 05 57 51.7 -0.3
GRA1 LR LR
comp=Z,1µm,21.7s,MS5.3
GRF Grafenberg Arr 89.17 38 *e*P **P 05 54 21.3 -0.3**
GRF *e*pP pP 05 54 31.0 -1.0
GRF *e*sP sP 05 54 34.7 -1.0
GRF *e*PP PP 05 57 51.7 -0.3
GRF *e*L 06 33 23.0
comp=Z,1µm,21.7s
WERD Werda 89.49 37 *e*P **P 05 54 23.0 -0.1**
comp=Z,7.0nm,1.2s,mb4.9
CLL Collm 89.52 36 *e*P **P 05 54 22.0 -1.2**
CLL *e*PP PP 05 57 50.0 -4.8
CLL *e*SKKSac SKKSac 06 05 04.0 +0.4
CLL *e*sS sS 06 05 28.0 -0.8
CLL *e*pPS 06 06 29.0
CLL Collm 89.52 36 *e*P **P 05 54 22.0 -1.2**
CLL *e* 06 05 04.0
CLL MLR MLR
comp=Z,1µm,23.4s,MS5.2
CLL Collm 89.52 36 *e*P **P 05 54 22.0 -1.2**
CLL *e*SKS 06 05 04.0
CLL *e*S PS 06 06 29.0 +8.4
CLL LR LR
comp=Z,1µm,23.4s,MS5.2
GUNZ Gunzen 89.54 37 *e*P **P 05 54 23.1 -0.2**
comp=Z,17nm,1.5s,mb5.2
MANZ Manzenberg 89.57 38 *e*P **P 05 54 23.1 -0.3**
TANN Tannenbergstha 89.59 37 *e*P **P 05 54 23.8 +0.3**
comp=Z,5.0nm,1.0s,mb4.8
WERN Wernitzgruen 89.60 37 *e*P **P 05 54 23.5 -0.1**
comp=Z,18nm,1.5s,mb5.2
NKC Novy Kostel 89.66 37 *e*P **P 05 54 24.2 +0.3**

NKC *e*PP PP 05 57 53.7 -2.2
NKC *e*SKS 06 04 58.2
NKC AMS AMS 06 38 10.0
comp=Z,1μm,16.0s
NKC Novy Kostel 89.66 37 *e*P **P 05 54 24.2 +0.3**
NKC *e* 05 57 53.7
NKC MLR MLR
comp=Z,1μm,16.0s,MS5.3
NKC Novy Kostel 89.66 37 *e*P **P 05 54 24.2 +0.3**
NKC *e*PP PP 05 57 53.7 -2.2
NKC *e*S S 06 04 58.2 -15
ROTZ Rotzenmuhle 89.72 38 *e*P **P 05 54 24.3 +0.2**
comp=Z,8.0nm,1.3s,mb4.9
FBE Freiberg 89.88 36 *e*P **P 05 54 24.6 -0.3**
comp=Z,11nm,1.3s,mb5.0
KAF Kangasniemi 90.20 23 *e*p **P 05 54 24.5 -1.9**
BRG Berggiesshubel 90.24 36 *e*P **P 05 54 26.8 +0.2**
comp=Z,9.1nm,1.4s,mb4.9
BRG PP PP 05 57 59.0 -1.5
BRG SKS 06 04 55.0
BRG S S 06 05 19.0 +0.7
BRG
comp=N,283nm,21.2s
BRG
comp=E,259nm,20.1s
BRG
comp=Z,491nm,21.3s
BRG Berggiesshubel 90.24 36 *e*P **P 05 54 26.8 +0.2**
BRG 05 57 59.0
BRG 06 04 55.0
BRG S S 06 05 19.0 +0.7
BRG SS SS 06 11 23.0 +5.1
BRG pmax pmax
comp=Z,9.0nm,1.4s,mb4.9
BRG MLR MLR
comp=N,283nm,21.2s,MS4.8
BRG MLR MLR
comp=E,259nm,20.1s,MS4.8
BRG MLR MLR
comp=Z,491nm,21.3s,MS4.9
BRG Berggiesshubel 90.24 36 *e*P **P 05 54 26.8 +0.2**
comp=Z,9.1nm,1.4s,mb4.9
BRG PP PP 05 57 59.0 -1.5
BRG SKS 06 04 55.0
BRG S S 06 05 19.0 +0.7
BRG SP SP 06 06 35.0 +11
BRG SS SS 06 11 23.0 +5.1
BRG LR LR
comp=Z,490nm,21.3s,MS4.9
WET Wettzell 90.38 38 *e*P **P 05 54 27.1 -0.1**
comp=Z,11nm,1.1s,mb5.1
WET Wettzell 90.38 38 *e*P **P 05 54 27.1 -0.1**
WET pmax pmax
comp=Z,11nm,1.1s,mb5.1
DBIC Dimbokro 90.42 83 P **P 05 54 27.9 +0.5**
comp=Z,3.5nm,0.7s,mb4.8,baz=236,slow=9.9,SNR=5.2
DBIC LR LR 06 34 32.9
comp=Z,604nm,19.3s,MS5.0,baz=269,slow=35
FINES FINESS Array B 90.52 24 P **P 05 54 26.6 -1.3**
comp=Z,3.2nm,1.0s,mb4.6,baz=270,slow=3.8,SNR=9.1
FINES LR LR 06 37 23.6
comp=Z,832nm,18.6s,MS5.2,baz=300,slow=37
PVCC Panska Ves 90.75 36 *e*P **P 05 54 29.6 +0.7**
PVCC *e*PP PP 05 58 02.4 -2.2
PVCC *e*SKKS SKKSac 06 05 09.3 -3.5
PVCC AMS AMS 06 33 10.0
comp=Z,900nm,19.9s
PVCC Panska Ves 90.75 36 *e*P **P 05 54 29.6 +0.7**
PVCC *e* 05 58 02.4
PVCC MLR MLR
comp=Z,900nm,19.9s,MS5.2
KHC Kasperske Hory 90.80 38 *e*P **P 05 54 30.2 +1.0**
KHC *e*PP PP 05 58 03.0 -2.0
KHC *e*SKS 06 05 01.2
KHC AMS AMS 06 33 40.0
comp=Z,2μm,21.8s
PRU Pruhonice 90.98 37 *e*P **P 05 54 30.6 +0.6**
PRU *e*PP PP 05 58 03.9 -2.5
PRU *e*SKS 06 04 57.8
PRU AMS AMS 06 33 40.0
comp=Z,700nm,20.8s
GEC2 GERESS Array S 91.00 38 *e*P **P 05 54 29.1 -1.0**
comp=Z,9.0nm,1.4s,mb4.9
GEC2 GERESS Array S 91.00 38 *e*P **P 05 54 29.1 -1.0**
GEC2 pmax pmax
comp=Z,9.0nm,1.4s,mb4.9
GERES GERESS Array B 91.00 38 P **P 05 54 29.1 -1.0**
comp=Z,1.1nm,0.7s,mb4.3,baz=23,slow=7.2,SNR=12
GERES LR LR 06 34 15.0
comp=Z,1μm,21.2s,MS5.3,baz=288,slow=35
UPC Upice 91.58 36 *e*P **P 05 54 33.6 +0.8**
UPC *e*PP PP 05 58 10.9 -0.2
DPC Dobruska-Polom 91.83 36 *e*P **P 05 54 33.8 -0.1**
DPC *e*PP PP 05 58 12.3 -0.8
DPC *e*SKS 06 05 06.8
DPC AMS AMS 06 35 10.0
comp=Z,900nm,18.8s
TREC Trest 91.84 37 *e*P **P 05 54 37.2 +3.2**
TREC *e*PP PP 05 58 12.4 -0.8
TREC AMS AMS 06 33 40.0
comp=Z,1μm,21.4s
CADS Cadrg 92.18 40 *e*P **P 05 54 35.2 -0.4**
LJU Ljubljana 92.75 40 *e*P **P 05 54 38.1 -0.1**
MORC Moravsky Berou 92.79 36 *e*P **P 05 54 37.5 -0.9**
MORC pmax pmax
comp=Z,8.0nm,1.5s,mb4.9
MORC Moravsky Berou 92.79 36 *e*P **P 05 54 37.5 -0.9**
comp=Z,7.8nm,1.5s,mb4.9
CEY Cerknica 92.83 41 *e*P **P 05 54 38.7 +0.1**
KNDS Knezji Dol 92.89 41 *e*P **P 05 54 39.2 +0.4**
OKC Ostrava-Krasne 93.10 36 *e*P **P 05 54 41.1 +1.3**
OKC *e*PP PP 05 58 21.5 -1.6
OKC *e*SKS 06 05 17.0
OKC AMS AMS 06 40 20.0
comp=Z,700nm,20.2s
OKC Ostrava-Krasne 93.10 36 *e*P **P 05 54 41.1 +1.3**
OKC *e* 05 58 21.5
OKC MLR MLR
comp=Z,700nm,20.2s,MS5.1
OKC Ostrava-Krasne 93.10 36 *e*P **P 05 54 41.1 +1.3**
OKC *e*PP PP 05 58 21.5 -1.6
OKC *e*S SKSac 06 05 17.0 +5.5
PUL Pulkovo 93.20 24 *ce*P **P 05 54 36.8 -3.5**
PUL *e* 05 58 18.6
PUL *e*SP SP 06 07 05.9 +8.6
PUL *e*SS SS 06 12 09.4 +8.8
PUL MLR MLR
comp=N,503nm,19.0s,MS5.2
PUL MLR MLR
comp=Z,938nm,19.0s,MS5.3
PUL MLR MLR
comp=E,646nm,18.0s,MS5.2
KEST Kesra 93.49 51 LR LR 06 35 06.9
comp=E,314nm,19.4s,MS4.8,baz=232,slow=34
YAK Yakutsk 93.64 340 *e*P **P 05 54 41.8 -0.5**
YAK pmax pmax
comp=Z,16nm,1.1s,mb5.4
YAK MLR MLR
comp=Z,800nm,21.0s,MS5.2
YAK Yakutsk 93.64 340 PFAKE 05 54 50.0 +7.7
YAK LR LR
comp=Z,760nm,20.0s,MS5.2
VYHS Vyhne 94.17 37 *e*P **P 05 54 45.2 +0.5**
VYHS *e*pP pP 05 54 53.1 -2.1
VYHS *e*PP PP 05 58 26.9 -4.5
VYHS Vyhne 94.17 37 *e*P **P 05 54 45.3 +0.6**
VYHS *e* 05 54 53.1
VYHS *e* 05 58 26.9
VYHS pmax pmax
comp=Z,4.0nm,1.5s,mb4.6
VYHS Vyhne 94.17 37 *e*P **P 05 54 45.3 +0.6**
comp=Z,4.1nm,1.5s,mb4.6
VYHS *e* 05 54 53.1
VYHS *e*PP PP 05 58 26.9 -4.5
TORD Torodi Ar. Bea 94.71 75 P **P 05 54 46.5 -0.8**
comp=Z,1.9nm,0.7s,mb4.6,baz=288,slow=4.5,SNR=11
TORD LR LR 06 35 11.7
comp=Z,1μm,20.6s,MS5.3,baz=290,slow=34
TORD Torodi Ar. Bea 94.71 75 P **P 05 54 46.5 -0.8**
TORD LR LR 06 35 11.7
YSS Yuzh-Sakhalins 97.25 323 P **P 05 54 57.2 -1.6**
YSS *e* 06 13 12.0
YSS Yuzh-Sakhalins 97.25 323 PFAKE 05 55 10.0 +11
YSS LR LR
comp=Z,511nm,19.0s,MS5.0
AKASG Malin Array Be 98.50 31 LR LR 06 47 01.8
comp=Z,418nm,18.2s,MS5.0,baz=300,slow=40
MOS Moscow 98.82 24 *e*P **P 05 54 56.2 -10**
MOS pmax pmax
comp=Z,44nm,0.7s,mb6.1
MOS MLR MLR
comp=N,700nm,19.0s,MS5.2
MOS MLR MLR
comp=E,400nm,19.0s,MS5.2
MOS MLR MLR
comp=Z,1μm,19.0s,MS5.3
OBN Obninsk 98.85 25 *c i*P **P 05 55 04.8 -1.2**
OBN *i* 05 59 09.2
OBN *e* 06 05 45.6
OBN *i*PS PS 06 08 03.2 0.0
OBN *e*SS SS 06 13 21.8 +1.2
OBN pmax pmax
comp=Z,29nm,1.6s,mb5.6
OBN MLR MLR
comp=Z,700nm,22.0s,MS5.1
OBN Obninsk 98.85 25 PFAKE 05 55 20.0 +14
OBN LR LR
comp=Z,675nm,21.0s,MS5.1
SNZO South Karori 99.14 230 PFAKE 05 55 20.0 +13
SNZO LR LR
comp=Z,1μm,19.0s,MS5.4
KIS Kishinev 100.58 34 *e*P Pdif 05 55 16.0 +2.3
KIS *e* 05 59 20.0
KIS *e*PS PS 06 08 16.0 -5.8
KIS MLR MLR
comp=N,500nm,20.0s
KIS MLR MLR
comp=Z,600nm,20.0s,MS5.1
KIS MLR MLR
comp=Z,900nm,20.0s
ARU Arti 104.77 14 PFAKE 05 55 40.0 +7.7
ARU LR LR
comp=Z,716nm,19.0s,MS5.2
MAJO Matsushiro 105.88 316 PFAKE 06 00 00.0 +10
MAJO LR LR
comp=Z,339nm,20.0s,MS4.9
MDJ Mudanjiang 105.92 327 PFAKE 06 00 00.0 +10
MDJ LR LR
comp=Z,376nm,22.0s,MS4.9
HIA Hailar 106.98 336 PFAKE 06 00 00.0 +8.3
HIA LR LR
comp=Z,1μm,22.0s,MS5.3
SBA Scott Base 107.08 193 PFAKE 06 00 00.0 +8.2
SBA LR LR
comp=Z,660nm,21.0s,MS5.2
ANTO Ankara 107.30 38 PFAKE 06 00 00.0 +7.7
ANTO LR LR
comp=Z,323nm,21.0s,MS4.9
BR131 Keskin Array S 107.89 38 PFAKE 06 00 00.0 +6.6
BR131 LR LR
comp=Z,476nm,21.0s,MS5.0
BRTR Keskin Array B 107.89 38 PP PP 06 00 18.9 +3.7
comp=Z,0.4nm,0.4s,baz=264,slow=2.5,SNR=4.2
VNDA Vanda 108.15 193 PFAKE 06 00 00.0 +6.2
VNDA LR LR
comp=Z,547nm,22.0s,MS5.1
CN2 Changchun 108.61 329 PDIF Pdif 05 55 49.3 0.0
CN2 PP PP 06 00 22.4 +2.0
CN2 LR LR
comp=N,500nm,15.0s,MS5.3
CN2 LR LR
comp=E,300nm,15.0s,MS5.3
CN2 LR LR
comp=Z,300nm,21.0s
KIV Kislovodsk 109.75 30 PFAKE 06 00 10.0 +13
KIV LR LR
comp=Z,401nm,20.0s,MS5.0
TLY Talaya 109.92 346 PFAKE 06 00 10.0 +13
TLY LR LR
comp=Z,487nm,20.0s,MS5.1
ZAL Zalesovo 110.05 359 PP PP 06 00 35.4 +4.6
comp=Z,1.2nm,0.3s,baz=104,slow=6.8,SNR=3.8
BRVK Borovoye 110.11 8 PFAKE 06 00 10.0 +12
BRVK LR LR
comp=Z,344nm,20.0s,MS4.9
BVAR Borovoye Array 110.16 8 PP PP 06 00 30.5 -1.1
comp=Z,2.3nm,1.1s,baz=333,slow=5.8,SNR=7.3
INCN Inchon 112.46 323 PFAKE 06 00 10.0 +8.0
INCN LR LR
comp=Z,570nm,19.0s,MS5.2
SONM Songino Array 112.76 343 PKKPab PKKPab 06 11 02.7 +4.2
comp=Z,1.4nm,0.8s,baz=188,slow=4.9,SNR=6.4
GNI Garni 113.63 31 PFAKE 06 00 20.0 +16
GNI LR LR
comp=Z,556nm,20.0s,MS5.2
PMG Port Moresby 117.06 268 PFAKE 06 00 20.0 +9.2
PMG LR LR
comp=Z,574nm,20.0s,MS5.2
HHC Hu-ho-hao-te 117.19 336 *e*PKP PKPdf 06 00 12.8 +1.8
HHC PP PP 06 01 26.3 +4.8
HHC PKS 06 03 48.3
HHC SKS SKSdf 06 07 20.1 -0.6
HHC SKKS SKKSac 06 08 15.1 -4.8
HHC SS SS 06 17 27.0 -1.5
HHC LR LR
comp=N,407nm,18.0s
HHC LR LR
comp=E,524nm,23.5s
HHC LR LR
comp=Z,657nm,20.6s,MS5.2
MKAR Makanchi Array 117.22 0 PP PP 06 01 24.1 +2.4
comp=Z,1.4nm,0.9s,baz=23,slow=6.6,SNR=4.7
DRV Dumont d'Urvil 117.56 202 Pdif Pdif 05 56 31.0 +1.9
TSUM Tsumeb 118.16 103 PFAKE 06 00 20.0 +7.1
TSUM LR LR
comp=Z,701nm,20.0s,MS5.3
CTAO Charters Tower 119.88 256 PFAKE 06 00 30.0 +14
CTAO LR LR
comp=Z,528nm,20.0s,MS5.2
WMQ Urumqi 120.02 356 *e*PKP PKPdf 06 00 17.0 +0.5
WMQ PP PP 06 01 46.0 +4.9
WMQ SKS SKSdf 06 07 24.0 -2.1
WMQ SKKS SKKSac 06 08 35.0 -3.6
WMQ SS SS 06 18 07.0 +1.9
WMQ LR LR
comp=N,789nm,18.0s,MS5.5
WMQ LR LR
comp=E,625nm,18.0s,MS5.5
WMQ LR LR
comp=Z,598nm,17.0s,MS5.3
SSE Sheshan 120.15 322 PKP PKPdf 06 00 15.5 -1.2
SSE PP PP 06 01 43.4 +1.4
SSE SS SS 06 18 01.8 -5.0
SSE PP PP
comp=Z,56nm,12.0s
SSE LR LR
comp=N,164nm,21.6s,MS4.9
SSE LR LR
comp=E,288nm,21.6s,MS4.9
SSE LR LR
comp=Z,191nm,22.4s,MS4.7
NJ2 Nanjing 120.79 324 *e*PKP PKPdf 06 00 17.9 -0.1
NJ2 XPKP 06 00 32.3
NJ2 PP PP 06 01 49.0 +2.6
NJ2 PKS 06 03 53.0
NJ2 SKS SKSdf 06 07 25.0 -2.5
NJ2 SKKS SKKSac 06 08 38.0 -5.7
NJ2 LR LR
comp=N,760nm,18.0s
NJ2 LR LR
comp=E,2μm,25.8s
NJ2 LR LR
comp=Z,2μm,29.4s
AAK Ala-Archa 120.89 7 PFAKE 06 00 30.0 +12
AAK LR LR
comp=Z,818nm,21.0s,MS5.3
SUR Sutherland 122.04 118 PFAKE 06 00 30.0 +10
SUR LR LR
comp=Z,1μm,20.0s,MS5.5
LZH Lanzhou 124.23 339 *e*PKP PKPdf 06 00 28.0 +3.4
LZH XPKP 06 00 42.0
LZH PP PP 06 02 11.0 +1.3
LZH PKS 06 04 01.0
LZH SKKS SKKSac 06 09 05.0 -0.9
LZH SS SS 06 18 55.0 -3.7
LZH PP PP
comp=Z,275nm,4.6s
LZH LR LR
comp=N,496nm,15.0s
LZH LR LR
comp=Z,1μm,20.5s
STKA Stephens Creek 124.71 242 PKP PKPdf 06 00 23.4 -2.0
comp=Z,2.6nm,0.5s,baz=245,slow=2.0,SNR=8.6
STKA Stephens Creek 124.71 242 *e*PKPdf PKPdf 06 00 24.1 -1.4
BOSA Boshof 125.89 114 PKP PKPdf 06 00 26.8 -0.9
comp=Z,5.1nm,0.8s,baz=186,slow=11,SNR=7.7
LBTB Lobatse 126.12 109 PFAKE 06 00 40.0 +12
LBTB LR LR
comp=Z,501nm,19.0s,MS5.2
CASY Casey 126.77 194 PFAKE 06 00 40.0 +11
CASY LR LR
comp=Z,424nm,20.0s,MS5.1
ENH Enshi 127.04 331 PFAKE 06 00 40.0 +10
ENH LR LR
comp=Z,46nm,20.0s,MS4.2
MAW Mawson 127.12 171 PKP PKPdf 06 00 28.3 -1.8
comp=Z,1.3nm,0.7s,baz=261,slow=2.8,SNR=11
MAW Mawson 127.12 171 *e*PKPdf PKPdf 06 00 28.1 -2.0
MAW *e*pPKPdf pPKPdf 06 00 35.5 -5.3
MAW LR LR
comp=Z,1μm,20.0s,MS5.6
LSZ Lusaka 127.60 97 PKP PKPdf 06 00 31.7 +0.7
comp=Z,1.0nm,0.5s,baz=286,slow=1.1,SNR=5.2
LSZ Lusaka 127.60 97 *e*PKPdf PKPdf 06 00 31.8 +0.8
LSZ LR LR
comp=Z,595nm,21.0s,MS5.2
MATP Matopo 128.51 103 PKP PKPdf 06 00 33.2 +0.5
comp=Z,1.7nm,0.8s,baz=116,slow=0.9,SNR=5.3
MATP Matopo 128.51 103 PKP PKPdf 06 00 33.2 +0.5
CD2 Chengdu 128.92 337 *e*PKP PKPdf 06 00 31.9 -1.6
CD2 XPKP 06 00 43.9
CD2 PP PP 06 02 42.3 +1.6
CD2 PKS 06 04 07.0
CD2 SKS SKSdf 06 07 38.3 -4.4
CD2 SKKS SKKSac 06 09 29.5 -6.0
CD2 SS SS 06 19 53.8 -3.5
CD2 PP PP
comp=Z,130nm,9.6s
CD2 LR LR
comp=E,310nm,21.6s
CD2 LR LR
comp=Z,300nm,19.2s,MS5.0
WRAB Tennant Creek 130.99 258 *e*PKIKP PKPdf 06 00 36.9 -0.6
WRAB MLR MLR
comp=Z,635nm,20.0s,MS5.3
WRA Warramunga Arr 131.00 258 PKP PKPdf 06 00 36.7 -0.7
comp=Z,2.7nm,0.7s,baz=84,slow=2.6,SNR=25
GYA Guiyang 131.58 331 *e*PKP PKPdf 06 00 40.3 +1.7
GYA XPKP 06 00 54.8
GYA PKS 06 04 15.3
GYA SKS SKSdf 06 07 46.8 -0.8
GYA PP PP
comp=Z,160nm,7.9s
GYA LR LR
comp=N,370nm,20.7s,MS5.2
GYA LR LR
comp=E,370nm,18.3s,MS5.2
GYA LR LR
comp=Z,590nm,22.1s,MS5.2
ASAR Alice Springs 131.59 253 PKP PKPdf 06 00 37.7 -0.9
comp=Z,1.0nm,0.7s,baz=72,slow=1.6,SNR=13
DAV Davao City (W) 131.70 295 PFAKE 06 00 50.0 +11
DAV LR LR
comp=Z,463nm,22.0s,MS5.1
LSA Lhasa 133.58 350 PFAKE 06 00 50.0 +7.7
LSA LR LR
comp=Z,794nm,22.0s,MS5.4
KMI Kunming 134.47 334 PKP PKPdf 06 00 41.3 -2.7
QIZ Qiongzhong 135.95 322 PKP PKPdf 06 00 48.9 +2.1
QIZ PP PP 06 03 31.1 +5.3
FITZ Fitzroy Crossi 139.07 261 PKP PKPdf 06 00 51.9 -0.7
comp=Z,1.9nm,0.8s,baz=168,slow=4.4,SNR=4.1
CHTO Chiang Mai 141.66 335 PFAKE 06 01 10.0 +13
CHTO LR LR
comp=Z,303nm,19.0s,MS5.1
CM31 Chiang Mai Arr 141.98 335 PFAKE 06 01 10.0 +12
CM31 LR LR
comp=Z,350nm,19.0s,MS5.1
MBWA Marble Bar 144.72 256 *e*PKPdf PKPdf 06 00 59.9 -2.7
MBWA LR LR
comp=Z,695nm,19.0s,MS5.5
NWAO Narrogin (SRO) 144.76 236 PFAKE 06 01 10.0 +7.3
NWAO LR LR
comp=Z,384nm,21.0s,MS5.2
OPO Ambohidratompo146.01 99 PKPbc PKPbc 06 01 07.1 +1.5
comp=Z,10nm,0.6s,baz=272,slow=4.5,SNR=23
HYB Hyderabad 146.26 7 *i*PKP PKPdf 06 01 06.0 +0.8
HYB Hyderabad 146.26 7 *e*P PKPdf 06 01 06.0 +0.8
KSM Kuching 147.59 300 *e*PKPbc PKPbc 06 01 09.3 -0.8
KULM Kulim 152.21 319 *e*PKPbc PKPbc 06 01 21.2 -0.2
PSI Prapat 155.21 318 PKP PKPdf 06 01 19.1 0.0
comp=Z,2.0nm,0.4s,baz=325,slow=9.4,SNR=3.7
PSI PKPab PKPab 06 01 44.1 +0.1
comp=Z,7.3nm,0.9s,baz=348,slow=2.1,SNR=6.6
PALK Pallekele 156.51 5 PFAKE 06 01 30.0 +9.2
PALK LR LR
comp=Z,496nm,20.0s,MS5.3

IDC ***19*** *05:41:49.4±1.5, 993S×10763E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.9/18, mbtmp3.9/7, ML4.1/1, Error ellipse: s-maj=77.3km s-min=18.6km az=48.0*
ISCJB ***19*** *05:41:51.4±4.9, 981S±009×10777E±009, h23km±35km, mb4.0/10, Error ellipse: s-maj=15.6km s-min=14.7km az=111.2*
NEIC ***19*** *05:41:51.3±0.9, 990S×10771E, h10km, mb4.4/3, Error ellipse: s-maj=48.4km s-min=9.3km az=47.0*
ISC 19 05:41:52.4±5.6, 979S±009×10779E±009, h14km±36km, n13, σ0s50/13, mb3.9/10, 1C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJII	**Banjamegara**	**3.10**	**38**	*e*P	**Pn**	**05 42 40.4**	**-0.4**
BJII				*e*S	**Sn**	**05 43 17.6**	**+0.1**
PSI	**Prapat**	**15.31**	**324**	Pn	**Pn**	**05 45 28.2**	**+0.3**
	0.9nm,0.3s,baz=237,slow=8.6,SNR=3.6						
WRA	**Warramunga Arr**	**27.53**	**115**	P	**P**	**05 47 38.0**	**-0.6**
	0.8nm,0.9s,mb3.3,baz=284,slow=12,SNR=5.1						
ASAR	**Alice Springs**	**28.49**	**122**	P	**P**	**05 47 48.0**	**+0.8**
	0.5nm,0.6s,mb3.3,baz=295,slow=9.7,SNR=7.9						
CHTO	**Chiang Mai**	**29.73**	**343**	*e*P	**P**	**05 47 58.4**	**+0.3**
	2.0nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**38.23**	**130**	P	**P**	**05 49 11.8**	**0.0**
	1.9nm,0.9s,mb3.8,baz=330,slow=13,SNR=3.4						
SONM	**Songino Array**	**57.38**	**359**	P	**P**	**05 51 40.8**	**+0.5**
	1.7nm,0.6s,mb4.3,baz=173,slow=8.4,SNR=12						
MKAR	**Makanchi Array**	**60.76**	**340**	P	**P**	**05 52 03.3**	**-0.4**
	1.2nm,0.6s,mb4.2,baz=126,slow=6.2,SNR=9.1						
BVAR	**Borovoye Array**	**70.22**	**337**	P	**P**	**05 53 08.8**	**+4.0**
	0.9nm,0.5s,mb3.9,baz=139,slow=9.0,SNR=3.9						
CHKZ	**Chkalovo**	**70.64**	**338**	*e*P	**P**	**05 53 07.3**	**-0.1**
	2.4nm,0.5s,mb4.4						
ZRNK	**Zerenda**	**70.71**	**336**	*e*P	**P**	**05 53 07.5**	**-0.3**
	2.4nm,0.6s,mb4.3						
BRTR	**Keskin Array B**	**84.26**	**312**	P	**P**	**05 54 23.0**	**-0.5**
	0.6nm,0.7s,mb3.9,baz=123,slow=5.8,SNR=3.2						
WMOK	**Wichita Mounta**	**145.27**	**40**	*e*PKPbc	PKPbc	06 01 30.2	+0.9
WMOK				*e*		06 01 41.3	

INMG ***19*** *05:45:17.3±1.1, 3681N×820W, h20km±4km, ML1.8, Error ellipse: s-maj=5.0km s-min=3.2km az=26.0*
IGIL ***19*** *05:45:17.8, 3678N×823W, h2km, ML1.9*
MDD 19 05:45:16.8±1.7, 3678N×821W, h22km±13km, mb3.7/4, Error ellipse: s-maj=22.9km s-min=7.7km az=35.0, PRXIMO, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MORF	**Marmelete**	**0.63**	**326**	*e*P	Pb	05 45 28.8	-0.4
MORF				*e*S	Sb	05 45 37.3	-0.3
MORF				*e*S	Sb	05 45 37.3	-0.3
MORF				AML	AML	05 45 38.6	
	comp=E,55nm,0.3s						
MORF	**Marmelete**	**0.63**	**326**	*e*P	Pb	05 45 28.8	-0.4
MORF				*e*S	Sb	05 45 37.3	-0.3
PTEO	**Sao Teotonio**	**0.87**	**332**	*e*P	Pb	05 45 32.4	-0.8
PTEO				*e*S	Sb	05 45 44.4	+0.1
PTEO							
	comp=E,7.7nm,0.1s						
EGRO	**El Granado**	**0.95**	**37**	P	Pb	05 45 33.8	-0.8
	comp=E,0.6nm,0.0s,SNR=7.9						
EGRO				S	Sb	05 45 46.1	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,6.0nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**1.27**	**12**	*e*S	Sn	05 45 53.8	-1.8
PBEJ							
	comp=E,7.6nm,0.1s						
PBEJ	**Beja**	**1.27**	**12**	S	Sn	05 45 53.8	-1.8
	comp=E,3.8nm,0.1s						
EMIN	**Mina Concepcio**	**1.57**	**51**	P	Pn	05 45 41.9	-1.4
	comp=E,0.1nm,0.0s,SNR=7.9						
EMIN				S	Sn	05 46 01.4	-1.6
	comp=E,0.8nm,0.1s,SNR=4.0						
ESPR	**Espera**	**1.89**	**87**	S	Sn	05 46 09.2	-1.7
	comp=E,3.6nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**2.14**	**13**	*e*Sn	Sn	05 46 16.1	-0.9
PESTR				*e*Sg	Sn	05 46 26.1	+9.1
EBAD	**Badajoz**	**2.19**	**25**	P	Pn	05 45 51.5	-0.3
	comp=E,0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	05 46 16.9	-1.3
	comp=E,0.7nm,0.0s,SNR=7.9						
PTOM	**Tomar**	**2.84**	**357**	*e*Sn	Sn	05 46 30.5	-3.7
PTOM							
	comp=E,4.6nm,0.1s						
PTOM	**Tomar**	**2.84**	**357**	S	Sn	05 46 30.5	-3.7
	comp=E,2.3nm,0.1s						
PCBR	**Castelo Branco**	**3.11**	**10**	*e*Pn	Pn	05 46 02.9	-1.6
PCBR				*e*Sn	Sn	05 46 38.9	-2.0
PCBR							
	comp=E,3.5nm,0.1s						
EADA	**Adamuz**	**3.21**	**63**	P	Pn	05 46 04.6	-1.2
	comp=E,0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	05 46 40.6	-2.6
	comp=E,0.2nm,0.0s,SNR=7.9						

ISCJB ***19*** *05:49:45.2±0.5, 2640N±008×125.13E±006, h215km±7km, mb3.5/6, Error ellipse: s-maj=15.6km s-min=4.7km az=120.3*
NEIC ***19*** *05:49:46.6±0.7, 2655N×125.11E, h215km±8km, mb4.0/1, Error ellipse: s-maj=15.8km s-min=10.7km az=162.0*
JMA ***19*** *05:49:47.0±0.4, 2665N×12489E, h178km, M4.1*
IDC ***19*** *05:49:47.4±3.0, 2668N×12544E, h228km±35km, mb3.2/5, mb1 3.3/6, mb1mx3.1/22, mbtmp3.8/6, Error ellipse: s-maj=61.9km s-min=18.1km az=61.0*
ISC 19 05:49:46.2±0.5**, 2646N**±009×**12508E**±007**, h205**km±7km**,** **n25,** σ1s15/40**, mb3.5**/6**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**1.53**	**94**	P	**Pn**	**05 50 21.7**	**+1.1**
JKE				*e*S	**Sn**	**05 50 47.6**	**+0.2**
JMJ	**Miyako jima 2**	**1.65**	**173**	P	**Pn**	**05 50 23.1**	**+1.5**
JMJ				S	**Sn**	**05 50 49.6**	**+0.4**
JOGS	**Gusukube**	**1.71**	**170**	P	**Pn**	**05 50 24.1**	**+1.8**
JOGS				S	**Sn**	**05 50 51.1**	**+0.7**
JTJ	**Tarama**	**1.84**	**191**	P	**Pn**	**05 50 24.6**	**+1.1**
JTJ				S	**Sn**	**05 50 51.9**	**-0.6**
JAGN	**Aguni-jima**	**1.94**	**86**	P	**Pn**	**05 50 25.1**	**+0.7**
JAGN				S	**Sn**	**05 50 53.8**	**-0.5**
JIJ	**Ishigaki jima**	**2.25**	**202**	P	**Pn**	**05 50 27.8**	**+0.1**
JIJ				S	**Sn**	**05 50 57.7**	**-2.4**
NAH1	**Naha**	**2.35**	**96**	*e*S	**Sn**	**05 51 01.1**	**-0.9**
JJT2	**Tamagusuku 2**	**2.41**	**97**	P	**Pn**	**05 50 31.1**	**+1.7**
JJT2				*e*S	**Sn**	**05 51 03.5**	**+0.3**
JKRS	**Kuro-shima**	**2.41**	**204**	P	**Pn**	**05 50 29.6**	**+0.2**
JKRS				S	**Sn**	**05 51 01.5**	**-1.7**
IRIF	**Iriomote-Funau**	**2.44**	**210**	P	**Pn**	**05 50 29.8**	**+0.1**
IRIF				*e*S	**Sn**	**05 51 02.6**	**-1.2**
JIH	**Iheya**	**2.64**	**77**	P	**Pn**	**05 50 32.8**	**+0.9**
JIH				*e*S	**Sn**	**05 51 05.9**	**-1.8**
HATJ	**Hateruma jima**	**2.66**	**206**	P	**Pn**	**05 50 32.4**	**+0.3**
HATJ				*e*S	**Sn**	**05 51 06.2**	**-1.8**
YOJ	**Yonaguni jima**	**2.73**	**224**	P	**Pn**	**05 50 33.6**	**+0.6**
YOJ				*e*S	**Sn**	**05 51 09.1**	**-0.5**
JOW	**Kunigami**	**2.88**	**82**	P	**Pn**	**05 50 35.3**	**+0.6**
	54nm,0.3s,baz=237,slow=8.9,SNR=132						
JOW				S	**Sn**	**05 51 10.2**	**-2.5**
	83nm,0.3s,baz=116,slow=26,SNR=30						
JOW	**Kunigami**	**2.88**	**82**	P	**Pn**	**05 50 35.2**	**+0.5**
JOW				*e*S	**Sn**	**05 51 10.3**	**-2.3**
TATO	**Taipei**	**3.56**	**246**	*e*Pn	**Pn**	**05 50 44.4**	**+1.6**
YHNB	**Yeheng**	**3.79**	**243**	*e*Pn	**Pn**	**05 50 47.1**	**+1.6**
JMZ	**Minamidaito 2**	**5.55**	**95**	P	**Pn**	**05 51 08.5**	**+0.8**
JMZ				*e*S	**Sn**	**05 52 08.3**	**-3.9**
CHTO	**Chiang Mai**	**25.26**	**258**	*e*P	**P**	**05 54 54.0**	**+0.6**
	2.1nm,0.5s,mb4.0						
SONM	**Songino Array**	**25.90**	**330**	P	**P**	**05 54 58.6**	**-0.5**
	1.1nm,0.7s,mb3.6,baz=148,slow=9.8,SNR=5.7						
MKAR	**Makanchi Array**	**39.29**	**313**	P	**P**	**05 56 54.2**	**-0.9**
	1.6nm,0.5s,mb3.8,baz=98,slow=8.6,SNR=8.4						
MKAR	**Makanchi Array**	**39.29**	**313**	P	**P**	**05 56 54.2**	**-0.9**
WRA	**Warramunga Arr**	**46.99**	**168**	P	**P**	**05 57 57.0**	**+0.4**
	0.6nm,0.9s,mb2.9,baz=351,slow=8.7,SNR=5.1						
WRA				PcP	PcP	05 59 24.5	-1.0
	0.3nm,0.8s,baz=341,slow=3.3,SNR=4.8						
FINES	**FINESS Array B**	**71.27**	**330**	P	**P**	**06 00 41.1**	**-1.9**
	0.3nm,0.7s,mb3.0,baz=56,slow=7.4,SNR=3.9						
NOA	**NORSAR Array B**	**77.85**	**333**	P	**P**	**06 01 19.7**	**-1.2**
	0.8nm,0.7s,mb3.5,baz=57,slow=5.5,SNR=5.0						

BJI 19 05:53:18.1, 3564N×8321E, h15km**, ML3.5, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.93**	**306**	*e*PG	Pn	05 55 23.1	+24
KSH				Smax			
	comp=N,82nm,1.0s						
KSH				Smax			
	comp=E,80nm,1.0s						

NEIC ***19*** *05:55:12.7, 1606N×9738W, h39km, MD4.2(MEX), After MEX.*
MEX 19 05:55:12.3±0.9**, 1604N×9740W, h20**km±10km**, MD4.2, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.21**	**32**	*i* P	Pn	05 55 30.3	-3.8
VHO				*i* S	Sb	05 55 46.1	-3.6
OXX	**Oaxaca**	**1.23**	**32**	*i* P	Pn	05 55 31.5	-2.8
HUIG	**Huatulco**	**1.27**	**102**	*i* P	Pn	05 55 31.5	-3.4
HUIG				*i* S	Sn	05 55 47.7	-3.8
UTMO	**Huajuapan**	**1.82**	**348**	*e*P	Pn	05 55 38.5	-4.0
UTMO				*i* S	Sn	05 56 02.0	-3.0
TPIG	**Tehuac#an**	**2.37**	**1**	*i* P	Pn	05 55 48.8	-1.2
TPIG				*i* S	Sn	05 56 15.6	-2.8
ACX	**Acapulco**	**2.55**	**289**	*e*P	Pn	05 55 49.0	-3.5
ACX				*i* S	Sn	05 56 20.5	-2.4
CMIG	**Matias Romero**	**2.63**	**66**	*i* P	Pn	05 55 50.6	-3.0
CMIG				*i* S	Sn	05 56 20.4	-4.6
MEIG	**Mezcala**	**2.83**	**312**	*i* P	Pn	05 55 54.7	-1.7
MEIG				*i* S	Sn	05 56 26.4	-3.5
CAIG	**El Cayaco**	**2.92**	**290**	*i* P	Pn	05 55 56.9	-0.8
CAIG				*i* S	Sn	05 56 28.8	-3.4
PLIG	**Platanillo**	**3.08**	**320**	*i* P	Pn	05 55 58.0	-1.8
PLIG				*i* S	Sn	05 56 32.7	-3.4
PLIG	**Platanillo**	**3.08**	**320**	*i* P	Pn	05 55 58.8	-1.1
PLIG				*i* S	Sn	05 56 32.7	-3.4
YAIG	**Yautepec**	**3.23**	**331**	*i* P	Pn	05 56 00.1	-1.7
YAIG				*i* S	Sn	05 56 37.0	-2.6
YAIG	**Yautepec**	**3.23**	**331**	*i* P	Pn	05 56 00.1	-1.7
YAIG				*i* S	Sn	05 56 34.0	-5.6
PPM	**Popocatepetl**	**3.23**	**339**	*i* P	Pn	05 56 00.7	-1.2
PPM				*i* S	Sn	05 56 36.0	-3.7
PPM	**Popocatepetl**	**3.23**	**339**	*i* P	Pn	05 56 01.9	+0.1
PPM				*i* S	Sn	05 56 35.1	-4.6
IIZ	**Mezontepec**	**3.59**	**331**	*e*P	Pn	05 56 04.0	-2.8
IIZ				*i* S	Sn	05 56 43.5	-5.1
UNM	**Universidad Na**	**3.68**	**333**	*e*P	Pn	05 56 06.0	-2.1
LVIG	**Laguna Verde**	**3.78**	**14**	*i* P	Pn	05 56 06.3	-3.1
LVIG				*i* S	Sn	05 56 49.5	-3.8

NEIC ***19*** *05:56:42.7, 1802N×6779W, h115km, MD3.6(RSPR), After RSPR.*
RSPR 19 05:56:42.7, 1802N×6779W, h115km±1km**, MD3.6**/6**,** **MD3.6**/6**, 5C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**0.65**	**91**⇑	*e*P	Pn	05 57 00.7	-0.5
CRPR				*e*S	Sn	05 57 14.9	-0.2
AGPR	**Aguadilla, PR**	**0.79**	**55**⇓	*e*P	Pn	05 57 02.1	-0.3
AGPR				*e*S	Sn	05 57 17.3	+0.2
AOPR	**Arecibo Observ**	**1.04**	**72**⇑	*e*P	Pn	05 57 03.8	-1.0
AOPR				*e*S	Sn	05 57 21.3	-0.2
CPD	**Cerro la Pandu**	**1.79**	**89**⇑	*e*P	Pn	05 57 13.7	+0.4
CPD				*e*S	Sn	05 57 37.0	+0.4
CBYP	**Canovanas**	**1.86**	**82**⇑	*e*P	Pn	05 57 13.7	-0.5
CBYP				*e*S	Sn	05 57 38.0	-0.2
MTP	**Monte Pirata**	**2.13**	**88**⇑	*e*P	Pn	05 57 17.7	+0.1
MTP				*e*S	Sn	05 57 44.3	+0.1

STR ***19*** *05:57:10.6±0.8, 4433N×687E, h2km±1km, Ml1.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG 19 05:57:08.0±0.1**, 4422N×694E, h11**km**, Md1.8**/2**, Ml1.7**/3**, Error ellipse: s-maj=3.0km s-min=1.2km az=87.0, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOUF	**Mont Tournerai**	**0.30**	**133**	Pg	Pg	05 57 18.4	+4.3
TOUF				Sg	Sg	05 57 24.7	+6.4
LUCF	**Luceram**	**0.44**	**138**	Pg	Pg	05 57 21.5	+4.8
LUCF				Sg	Sg	05 57 28.9	+6.4
MBDF	**Montbardon**	**0.52**	**346**	*e*Pg	Pg	05 57 18.2	+0.1
MBDF				*e*Sg	Sg	05 57 24.9	0.0
	2.1nm,0.2s						
FRF	**La Foret Royal**	**0.70**	**198**	*e*Pg	Pg	05 57 21.4	-0.1
FRF				*e*Sg	Sg	05 57 30.6	0.0
	2.2nm,0.2s						
LMR	**La Mourre**	**0.94**	**200**	*e*Pg	Pg	05 57 25.5	-0.7
LMR				*e*Sg	Sg	05 57 38.1	-0.4
	2.5nm,0.2s						
SMRF	**Simiane la Rot**	**1.01**	**256**	*e*Pg	Pg	05 57 26.9	-0.6
SMRF				*e*Sg	Sg	05 57 40.5	-0.3
	1.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.03**	**313**	*e*Pg	Pg	05 57 27.7	-0.1
ORIF				*e*Sg	Sg	05 57 40.8	-0.4
	0.8nm,0.2s						

NEIC ***19*** *05:57:56.5, 2971S×7208W, h38km, MG3.6(GUC), After GUC.*
GUC 19 05:57:56.5±0.9**, 2971S×7208W, h38**km±5km**, MD3.9, ML3.6, 1C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**1.17**	**140**⇑	*i*P	Pn	05 58 17.4	+1.0
OVCH				*i* S	Sn	05 58 33.3	+2.1
TLL	**Tololo Astrono**	**1.20**	**113**⇓	*i*P	Pn	05 58 17.8	+1.1
TLL				*i* S	Sn	05 58 34.6	+2.8
TLL				AML	AML	05 58 38.9	
	comp=E,2μm,0.3s						
TLL	**Tololo Astrono**	**1.20**	**113**⇓	*i*P	Pn	05 58 17.8	+1.1
TLL				*i* S	Sn	05 58 34.6	+2.8
VACH	**Vallenar**	**1.62**	**46**	*e*P	Pn	05 58 23.5	+1.0
VACH				*i* S	Sn	05 58 44.9	+2.8
CMCH	**Combarbala**	**1.73**	**148**⇓	*i*P	Pn	05 58 25.7	+1.6
CMCH				*i* S	Sn	05 58 47.3	+2.4
CMCH				AML	AML	05 58 54.8	
	comp=E,1μm,0.5s						
CMCH	**Combarbala**	**1.73**	**148**⇓	*i*P	Pn	05 58 25.7	+1.6
CMCH				*i* S	Sn	05 58 47.3	+2.4

MOS ***19*** *06:03:22.3±0.9, 3667N×7127E, h178km, mb4.2/28, Error ellipse: s-maj=8.5km s-min=5.0km az=106.7*
ISCJB ***19*** *06:03:23.3±0.3, 3665N±002×7144E±004, h193km±4km, mb4.0/46, Error ellipse: s-maj=5.1km s-min=2.9km az=148.7*
BJI ***19*** *06:03:24.0, 3675N×7141E, h201km, mb4.4*
NEIC ***19*** *06:03:24.2±0.9, 3667N×7145E, h184km±11km, mb4.2/24, Error ellipse: s-maj=7.9km s-min=4.8km az=60.0*
IDC ***19*** *06:03:25.1±3.5, 3660N×7146E, h195km±33km, mb3.7/18, mb1 3.8/23, mb1mx3.7/29, mbtmp4.3/23, Error ellipse: s-maj=14.6km s-min=11.8km az=174.0*
NNC ***19*** *06:03:30.1±2.7, 3725N×7132E, h196km±19km, mb3.4, mpv4.5, Error ellipse: s-maj=22.4km s-min=18.8km az=31.0*
ISC 19 06:03:24.1±0.3**, 3668N**±002×**7143E**±004**, h185**km±4km**,** **n179,** σ0s99/210**, mb4.2**/46**, 18C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.88**	**172**	⇓P	**Pn**	**06 04 12.6**	**+1.0**
CHCP	**Chirah Chowk**	**3.37**	**153**	⇓P	**Pn**	**06 04 19.3**	**+1.8**
THW	**Thamme Wali**	**3.89**	**176**	⇑P	**Pn**	**06 04 24.7**	**+0.7**
SBDP	**Sheikh Budin**	**4.40**	**187**	⇑P	**Pn**	**06 04 30.5**	**0.0**
KSH	**Kashi**	**4.57**	**50**	P	**Pn**	**06 04 34.9**	**+2.3**
KSH				S	**Sn**	**06 05 26.4**	**+0.1**
KSH				Smax			
	comp=N,654nm,0.4s						
KSH				Smax			
	comp=E,382nm,0.9s						
SARP	**Sargodha**	**4.86**	**167**	P	**Pn**	**06 04 36.3**	**-0.1**
SARP				S	**Sn**	**06 05 26.0**	**-7.1**
DRP	**Derazinda**	**5.03**	**192**	P	**Pn**	**06 04 39.2**	**+0.7**
DLH	**Dalhousie**	**5.58**	**137**	*e*P	**Pn**	**06 04 45.0**	**-0.6**
DLH				*e*S	**Sn**	**06 05 48.0**	**-1.7**
AML	**Almayashu**	**5.71**	**17**	P	**Pn**	**06 04 47.5**	**+0.1**
	SNR=682						
PONG	**Pong**	**6.02**	**140**	*e*P	**Pn**	**06 04 51.0**	**-0.4**
PONG				*e*x	x	06 06 00.0	
UCH	**Uchtor**	**6.03**	**22**	P	**Pn**	**06 04 52.1**	**+0.6**
	SNR=9.6						
KZA	**Kyzart**	**6.14**	**28**	P	**Pn**	**06 04 53.6**	**+0.6**
	SNR=52						
EKS2	**Erkin-Say**	**6.24**	**16**	P	**Pn**	**06 04 54.3**	**+0.1**
	SNR=81						
AAK	**Ala-Archa**	**6.39**	**21**⇑	*e*PN	**Pn**	**06 04 55.7**	**-0.6**
AAK	**Ala-Archa**	**6.39**	**21**	*e*Pn	**Pn**	**06 04 55.5**	**-0.7**
	comp=E,44nm,0.3s						
KK31	**Karatay Array**	**6.45**	**354**	⇓P	**Pn**	**06 04 56.3**	**-0.7**
	comp=E,36nm,0.2s,baz=64,slow=19,SNR=1788						
KK31				⇑S	**Sn**	**06 06 04.8**	**-5.6**
	comp=E,108nm,0.3s						
KK31	**Karatay Array**	**6.45**	**354**	*i* PN	**Pn**	**06 04 56.2**	**-0.8**
KK31				pmax	pmax		
	comp=Z,114nm,0.2s						
KKAR	**Karatay Array**	**6.45**	**354**	PN	**Pn**	**06 04 56.2**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,23nm,0.2s						
KBK	**Karagaybulak**	**6.55**	**23**	P	**Pn**	**06 04 59.6**	**+1.2**
	SNR=12						
FRU	**Bishkek**	**6.61**	**21**⇓	*i*PN	**Pn**	**06 04 59.5**	**+0.3**
FRU				pmax	pmax		
	comp=Z,70nm,1.4s						
ULHL	**Ulahol**	**6.69**	**32**	P	**Pn**	**06 05 00.6**	**+0.5**
	SNR=24						
BHK	**Bhakra**	**6.69**	**140**	*e*x	x	06 05 05.2	
BHK				*e*x	x	06 06 23.0	
CHMS	**Chumysh**	**6.80**	**21**	P	**Pn**	**06 05 01.7**	**+0.1**
	SNR=29						
SDNR	**Sundarnagar**	**6.92**	**137**	*e*P	**Pn**	**06 05 03.0**	**-0.1**
SDNR				*e*S	**Sn**	**06 06 19.0**	**-2.4**
USP	**Ospenovka**	**6.98**	**19**	P	**Pn**	**06 05 04.2**	**+0.2**
	SNR=7.9						
TKM2	**Tokmak 2**	**7.01**	**26**	P	**Pn**	**06 05 05.0**	**+0.7**
	SNR=118						
TKM2	**Tokmak 2**	**7.01**	**26**	⇓P	**Pn**	**06 05 04.3**	**0.0**
	comp=Z,7.3nm,0.6s						
TKM2				⇑S	**Sn**	**06 06 18.7**	**-4.8**
	comp=Z,0.1nm,0.1s						
TKM2	**Tokmak 2**	**7.01**	**26**	*i* PN	**Pn**	**06 05 04.9**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,83nm,0.5s						
SMLA	**Simla**	**7.31**	**138**	*e*P	**Pn**	**06 05 09.1**	**+0.8**
SMLA				*e*S	**Sn**	**06 06 27.2**	**-3.5**
SMLA				AML	AML	06 06 50.5	
	comp=N,154nm,0.4s						
SMLA				AML	AML	06 06 53.8	
	comp=E,167nm,0.3s						
KLP	**Kalpa**	**7.64**	**130**	*e*P	**Pn**	**06 05 13.7**	**+1.1**
KLP				*e*S	**Sn**	**06 06 36.6**	**-2.0**
KLP				AML	AML	06 06 37.3	
	comp=E,451nm,0.5s						
KLP				AML	AML	06 06 44.3	
	comp=N,435nm,0.9s						
KHET	**Khetri**	**9.35**	**155**	*e*P	**Pn**	**06 05 33.8**	**-1.2**
KHET				*e*S	**Sn**	**06 07 12.5**	**-6.8**
KHET				AML	AML	06 07 16.1	
	comp=E,44nm,0.3s						
KHET				AML	AML	06 07 17.1	
	comp=N,34nm,0.3s						
NDI	**New Delhi**	**9.35**	**147**	*e*P	**Pn**	**06 05 35.5**	**+0.5**
NDI				*e*x	x	06 07 11.9	
AYAN	**Aya Nagar**	**9.48**	**148**	*e*P	**Pn**	**06 05 31.3**	**-5.4**
AYAN				*e*S	**Sn**	**06 07 12.7**	**-10**
KUDL	**Kundal**	**9.53**	**152**	*e*P	**Pn**	**06 05 37.3**	**0.0**
KUDL				*e*S	**Sn**	**06 07 17.7**	**-5.9**
LGTI	**Lohaghat**	**10.33**	**132**	*i* P	**Pn**	**06 05 48.0**	**+0.2**
LGTI				*e*x	x	06 07 42.0	
AJM	**Ajmer**	**10.54**	**164**	*e*P	**Pn**	**06 05 49.8**	**-0.6**
AJM				*e*S	**Sn**	**06 07 40.8**	**-6.9**
AJM				AML	AML	06 07 44.9	
	comp=E,35nm,0.2s						
AJM				AML	AML	06 07 45.5	
	comp=N,30nm,0.4s						
AGRA	**Agra**	**10.93**	**148**	*e*P	**Pn**	**06 05 54.9**	**-0.6**
AGRA				*e*S	**Sn**	**06 07 50.5**	**-6.5**
AGRA				AML	AML	06 08 27.4	
	comp=E,136nm,0.3s						
AGRA				AML	AML	06 08 28.8	
	comp=N,109nm,0.3s						
MK05	**Makanchi Array**	**12.94**	**35**	⇑P	**Pn**	**06 06 21.8**	**+0.5**
	comp=N,4.3nm,0.6s,baz=206,slow=9.9						
MK31	**Makanchi Array**	**12.94**	**35**	P	**Pn**	**06 06 21.7**	**+0.4**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**12.94**	**35**	P	**Pn**	**06 06 21.6**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=213,slow=11,SNR=12						
MKAR	**Makanchi Array**	**12.94**	**35**⇑	*e*P	**Pn**	**06 06 21.6**	**+0.3**
KOLN	**Koldanda**	**13.60**	**127**	*e*P	**Pn**	**06 06 29.3**	**-0.2**
KOLN				*e*S	**Sn**	**06 08 52.3**	**-8.6**
GKN	**Gorkha**	**14.12**	**124**	*e*P	**Pn**	**06 06 36.5**	**+0.5**
GKN				*e*S	**Sn**	**06 09 03.8**	**-10**
KKN	**Kakani**	**14.69**	**123**	*e*P	**Pn**	**06 06 43.4**	**+0.4**
DMN	**Daman**	**14.69**	**124**	*e*P	**Pn**	**06 06 43.0**	**0.0**
PKI	**Pulchoki**	**14.91**	**124**	*e*P	**Pn**	**06 06 46.7**	**+0.9**
PKI				*e*S	**Sn**	**06 09 23.2**	**-9.2**
GUN	**Gumba**	**15.02**	**122**	*e*P	**Pn**	**06 06 46.0**	**-1.1**
AB31	**Akbulak array**	**15.09**	**330**	P	**Pn**	**06 06 45.7**	**-2.3**
	comp=Z,6.2nm,0.4s,baz=142,slow=13,SNR=144						
AB31				⇑S	**S**	**06 09 23.5**	**-12**
	comp=Z,29nm,0.7s						
AB31	**Akbulak array**	**15.09**	**330**	*i* P	**Pn**	**06 06 45.6**	**-2.4**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
JIRN	**Jiri**	**15.39**	**122**	*e*P	**Pn**	**06 06 52.3**	**+0.7**
JIRN				*e*S	**S**	**06 09 35.5**	**-7.1**
VOSK	**Vostochnaya**	**16.04**	**359**	⇓P	**Pn**	**06 06 57.6**	**-1.9**
	comp=Z,15nm,0.8s						
VOSK				⇑S	**S**	**06 09 50.7**	**-6.7**
	comp=Z,3.2nm,0.9s						
ZRNK	**Zerenda**	**16.35**	**355**	⇓P	**Pn**	**06 07 01.8**	**-1.5**
	comp=Z,13nm,0.5s						
ZRNK				S	**S**	**06 10 00.0**	**-4.5**
ZRNK	**Zerenda**	**16.35**	**355**	*e*P	**Pn**	**06 07 01.7**	**-1.6**
ZRNK				*e*S	**S**	**06 09 55.0**	**-10**
ZRNK				pmax	pmax		
	comp=Z,20nm,0.5s						
ZRNK	**Zerenda**	**16.35**	**355**	*e*P	**Pn**	**06 07 01.7**	**-1.6**
	comp=Z,20nm,0.5s						
ZRNK				*e*S	**S**	**06 09 55.0**	**-10**
BVA0	**Borovoye Array**	**16.36**	**358**	P	**Pn**	**06 07 02.3**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=167,slow=16,SNR=42						
BVA0				S	**S**	**06 09 58.9**	**-5.7**
	comp=Z,0.8nm,0.7s,baz=170,slow=23,SNR=6.7						
BVA0	**Borovoye Array**	**16.36**	**358**	*i* P	**Pn**	**06 07 02.3**	**-1.0**
BVAR	**Borovoye Array**	**16.36**	**358**	P	**Pn**	**06 07 02.5**	**-0.9**
	comp=Z,3.7nm,0.3s,baz=158,slow=11,SNR=36						
BVAR				S	**S**	**06 09 59.1**	**-5.5**
	comp=Z,0.8nm,0.3s,baz=169,slow=23,SNR=5.4						
BRVK	**Borovoye**	**16.39**	**358**	*e*P	**Pn**	**06 07 03.1**	**-0.7**
BRVK				*e*S	**S**	**06 10 00.9**	**-4.4**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BRVK	**Borovoye**	**16.39**	**358**	*e*P	**Pn**	**06 07 03.1**	**-0.7**
	comp=Z,6.8nm,0.5s						
BRVK				*e*S	**S**	**06 10 00.9**	**-4.4**
AKTK	**Aktyubinsk**	**16.80**	**329**	P	**Pn**	**06 07 08.2**	**-0.3**
AKTK				S	**S**	**06 10 10.3**	**-3.1**
AKTO	**Aktyubinsk**	**16.80**	**329**	⇑P	**Pn**	**06 07 08.0**	**-0.6**
	comp=Z,1.1nm,0.9s						
AKTO				⇑S	**S**	**06 10 06.3**	**-7.1**
	comp=Z,0.5nm,0.8s						
AKTO	**Aktyubinsk**	**16.80**	**329**	P	**Pn**	**06 07 08.2**	**-0.3**
	comp=Z,6.5nm,0.3s,baz=136,slow=10,SNR=107						
AKTO				S	**S**	**06 10 10.3**	**-3.1**
	comp=Z,1.1nm,0.3s,baz=150,slow=21,SNR=8.8						
CHKZ	**Chkalovo**	**17.00**	**358**	⇑P	**Pn**	**06 07 09.7**	**-1.3**
	comp=Z,7.9nm,0.8s						
CHKZ				⇓S	**S**	**06 10 11.2**	**-6.3**
	comp=Z,5.5nm,0.8s						
CHKZ	**Chkalovo**	**17.00**	**358**	*e*P	**Pn**	**06 07 09.8**	**-1.3**
CHKZ				*e*S	**S**	**06 10 14.4**	**-3.2**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CHKZ	**Chkalovo**	**17.00**	**358**	*e*P	**Pn**	**06 07 09.8**	**-1.3**
	comp=Z,9.6nm,0.4s						
CHKZ				*e*S	**S**	**06 10 14.4**	**-3.2**
WSAR	**Wadi Sarin**	**17.37**	**223**	P	**Pn**	**06 07 14.4**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=36,slow=12,SNR=5.5						
LSA	**Lhasa**	**17.90**	**107**	*e*P	**Pn**	**06 07 24.8**	**+3.1**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LSA	**Lhasa**	**17.90**	**107**	*e*P	**Pn**	**06 07 24.8**	**+3.1**
	comp=Z,6.5nm,0.5s						
ZAL	**Zalesovo**	**19.59**	**24**	P	**P**	**06 07 38.7**	**+0.7**
	comp=Z,3.0nm,0.3s,baz=250,slow=8.0,SNR=20						
NVS	**Novosibirsk**	**19.89**	**20**⇑	*i*P	**P**	**06 07 41.7**	**+0.5**
NVS				*e*S	**S**	**06 11 12.3**	**-2.5**
NVS				pmax	pmax		
	comp=Z,17nm,1.0s						
NVS				pmax	pmax		
	comp=N,15nm,1.1s						
NVS				smax			
	comp=N,20nm,1.7s						
GNI	**Garni**	**21.16**	**288**	P	**P**	**06 07 57.1**	**+2.3**
	comp=N,4.0nm,0.4s,mb4.1,baz=120,slow=6.8,SNR=3.7						
GNI	**Garni**	**21.16**	**288**	*e*P	**P**	**06 07 52.8**	**-2.0**
GNI				pmax	pmax		
	comp=Z,14nm,1.7s						
RDF	**Al-Radifah**	**21.47**	**256**	*e*P	**P**	**06 07 58.1**	**+0.1**
RDF				AMb	AMB	06 08 00.2	
	comp=Z,18nm,0.6s,mb4.6						
NAY	**Al-Naaiem**	**21.57**	**257**	*e*P	**P**	**06 07 58.8**	**-0.2**
NAY				AMb	AMB	06 08 00.8	
	comp=Z,14nm,0.6s,mb4.5						
ARU	**Arti**	**21.57**	**340**⇑	*e*P	**P**	**06 07 59.0**	**-0.1**
ARU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
ARU	**Arti**	**21.57**	**340**	*e*P	**P**	**06 07 59.1**	**0.0**
	comp=Z,6.7nm,0.5s,mb4.3						
RST	**Umm Al-Ruwaisa**	**21.65**	**258**	*e*P	**P**	**06 07 59.8**	**-0.1**
RST				AMb	AMB	06 08 01.3	
	comp=Z,32nm,0.6s,mb4.9						
KIV	**Kislovodsk**	**23.01**	**297**	*e*P	**P**	**06 08 10.5**	**-2.2**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
TLY	**Talaya**	**27.27**	**46**	*e*P	**P**	**06 08 54.4**	**+3.3**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**27.95**	**55**	P	**P**	**06 08 58.5**	**+1.3**
	comp=Z,0.3nm,0.4s,mb3.4,baz=260,slow=8.6,SNR=3.7						
MMAI	**Mount Meron Ar**	**29.68**	**274**	P	**P**	**06 09 14.7**	**+2.3**
	comp=Z,0.3nm,0.3s,mb3.5,baz=58,slow=11,SNR=2.3						
BR131	**Keskin Array S**	**29.71**	**288**	*e*P	**P**	**06 09 13.8**	**+1.1**
	comp=Z,2.3nm,0.6s,mb4.1						
BRTR	**Keskin Array B**	**29.71**	**288**	P	**P**	**06 09 14.7**	**+2.0**
	comp=Z,2.4nm,0.7s,mb4.1,baz=108,slow=9.1,SNR=15						
BRTR	**Keskin Array B**	**29.71**	**288**	*i* P	**P**	**06 09 14.6**	**+1.9**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**33.10**	**309**	P	**P**	**06 09 42.9**	**+0.5**
	comp=Z,3.8nm,0.4s,mb4.5,baz=80,slow=8.0,SNR=25						
AKASG	**Malin Array Be**	**33.10**	**309**	*i* P	**P**	**06 09 42.9**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
PUL	**Pulkovo**	**34.96**	**325**⇑	*e*P	**P**	**06 09 53.4**	**-5.0**
PUL				pmax	pmax		
	comp=N,45nm,0.6s						
PUL				pmax	pmax		
	comp=Z,65nm,0.6s,mb5.4						
PUL				pmax	pmax		
	comp=E,131nm,0.9s						

MLR Muntele Rosu 34.99 299⇑iP P 06 10 01.3 +2.6
BURAR Bucovina Array 35.48 303⇑iP P 06 10 04.2 +1.4
FINES FINESS Array B 37.52 326 P P 06 10 20.6 +0.4
comp=E,1.9nm,0.3s,mb4.2,baz=122,slow=9.3,SNR=28
FINES FINESS Array B 37.52 326 i P P 06 10 20.6 +0.5
FINES pmax pmax
comp=Z,2.0nm,0.3s
KAF Kangasniemi 37.66 327 ep P 06 10 21.3 0.0
NIE Niedzica 38.74 306 eP P 06 10 32.6 +2.3
NJ2 Nanjing 39.11 82 eP P 06 10 34.3 +1.0
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
ARCES ARCESS Array B 41.11 337 P P 06 10 50.4 +0.7
comp=Z,1.5nm,0.4s,mb4.0,baz=118,slow=9.2,SNR=41
ARCES ARCESS Array B 41.11 337 P P 06 10 50.4 +0.7
BRG Berggiesshubel 42.78 308 eP P 06 11 05.2 +1.9
comp=Z,2.5nm,0.6s,mb4.0
BRG Berggiesshubel 42.78 308 eP P 06 11 05.2 +1.9
BRG pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
GERES GERESS Array B 43.10 305 P P 06 11 06.9 +1.0
comp=Z,0.5nm,0.4s,mb3.5,baz=64,slow=7.6,SNR=7.7
NB2 NORSAR Subarra 44.44 323 P P 06 11 16.5 -0.1
comp=Z,1.9nm,0.4s,mb4.1,baz=95,slow=8.6
NOA NORSAR Array B 44.44 323 P P 06 11 16.8 +0.3
comp=Z,4.0nm,0.6s,mb4.2,baz=96,slow=7.7,SNR=23
CDF Champ du Feu 47.38 305 eP P 06 11 39.1 -0.5
HINF Hinteralfeld 47.78 305 eP P 06 11 42.5 -0.1
comp=Z,4.0nm,0.6s,mb3.9
HINF Hinteralfeld 47.78 305 eP P 06 11 42.5 -0.1
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
HINF Hinteralfeld 47.78 305 eP P 06 11 42.5 -0.1
comp=Z,2.0nm,0.6s,mb3.9
MBDF Montbardon 48.51 301 eP P 06 11 48.0 -0.2
comp=Z,11nm,0.8s,mb4.2
MBDF Montbardon 48.51 301 eP P 06 11 48.0 -0.2
MBDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
MBDF Montbardon 48.51 301 eP P 06 11 48.0 -0.2
comp=Z,5.3nm,0.8s,mb4.2
CABF La Chapelle 48.54 303 eP P 06 11 48.1 -0.3
comp=Z,8.6nm,0.6s,mb4.3
CABF La Chapelle 48.54 303 eP P 06 11 48.1 -0.3
CABF pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
CABF La Chapelle 48.54 303 eP P 06 11 48.1 -0.3
comp=Z,4.3nm,0.6s,mb4.3
GIVF Givet 48.65 308 eP P 06 11 48.6 -0.7
MEZF Maizieres J'vi 48.82 306 eP P 06 11 51.0 +0.5
FRF La Foret Royal 48.90 299 eP P 06 11 51.0 -0.1
comp=Z,7.8nm,0.7s,mb4.1
FRF La Foret Royal 48.90 299 eP P 06 11 51.0 -0.1
FRF pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
FRF La Foret Royal 48.90 299 eP P 06 11 51.0 -0.1
comp=Z,3.9nm,0.7s,mb4.2
BAIF Baives 49.05 308 eP P 06 11 52.4 +0.1
comp=Z,4.5nm,0.7s,mb3.9
BAIF Baives 49.05 308 eP P 06 11 52.4 +0.1
BAIF pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
BAIF Baives 49.05 308 eP P 06 11 52.4 +0.1
comp=Z,2.3nm,0.7s,mb3.9
LOR Lormes 49.88 305 eP P 06 11 58.6 +0.1
VIVF Saint-Julien-l 49.93 301 eP P 06 11 59.1 +0.2
comp=Z,4.3nm,0.6s,mb4.0
VIVF Saint-Julien-l 49.93 301 eP P 06 11 59.1 +0.2
VIVF pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
VIVF Saint-Julien-l 49.93 301 eP P 06 11 59.1 +0.2
comp=Z,2.2nm,0.6s,mb4.0
SMF Signal de Mont 50.04 304 eP P 06 11 59.7 0.0
comp=Z,11nm,0.7s,mb4.3
SMF Signal de Mont 50.04 304 eP P 06 11 59.7 0.0
SMF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
SMF Signal de Mont 50.04 304 eP P 06 11 59.7 0.0
comp=Z,5.4nm,0.7s,mb4.3
SSF Saint Saulge 50.16 304 eP P 06 12 00.4 -0.3
AVF Avril sur Loir 50.33 304 eP P 06 12 01.8 -0.1
comp=Z,12nm,0.7s,mb4.3
AVF Avril sur Loir 50.33 304 eP P 06 12 01.8 -0.1
AVF pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
AVF Avril sur Loir 50.33 304 eP P 06 12 01.8 -0.1
comp=Z,6.1nm,0.7s,mb4.3
LASF Ste Croix 50.70 301 eP P 06 12 05.2 +0.5
comp=Z,12nm,0.9s,mb4.2
TCF Toulx Ste Croi 51.22 304 eP P 06 12 08.9 +0.3
comp=Z,6.1nm,0.6s,mb4.1
TCF Toulx Ste Croi 51.22 304 eP P 06 12 08.9 +0.3
TCF pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
TCF Toulx Ste Croi 51.22 304 eP P 06 12 08.9 +0.3
comp=Z,3.0nm,0.6s,mb4.1
CAF Calviac 51.69 302 eP P 06 12 12.6 +0.5
comp=Z,8.0nm,0.9s,mb4.1
CAF Calviac 51.69 302 eP P 06 12 12.6 +0.5
CAF pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
CAF Calviac 51.69 302 eP P 06 12 12.6 +0.5
comp=Z,4.0nm,0.9s,mb4.0
RJF Les Rejaudoux 51.96 303 eP P 06 12 14.6 +0.6
comp=Z,15nm,1.1s,mb4.2
RJF Les Rejaudoux 51.96 303 eP P 06 12 14.6 +0.6
RJF pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
RJF Les Rejaudoux 51.96 303 eP P 06 12 14.6 +0.6
comp=Z,7.5nm,1.0s,mb4.3
MTLF Montolieu 52.05 300 eP P 06 12 15.0 +0.3
comp=Z,7.0nm,0.8s,mb4.0
MTLF Montolieu 52.05 300 eP P 06 12 15.0 +0.3
MTLF pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
MTLF Montolieu 52.05 300 eP P 06 12 15.0 +0.3
comp=Z,3.5nm,0.8s,mb4.0
LDF La Druitiere 52.14 307 eP P 06 12 15.1 -0.3
comp=Z,2.2nm,0.3s,mb4.0
FLN La Foliniere 52.33 307 eP P 06 12 16.5 -0.3
LFF La Frestale 52.59 302 eP P 06 12 18.5 -0.2
comp=Z,8.2nm,0.6s,mb4.4
LFF La Frestale 52.59 302 eP P 06 12 18.5 -0.2
LFF pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
LFF La Frestale 52.59 302 eP P 06 12 18.5 -0.2
comp=Z,4.1nm,0.6s,mb4.3
GRR Gorron 52.67 307 eP P 06 12 18.9 -0.4
MBAR Mbarara 52.89 235 eP P 06 12 18.0 -2.9
EPF Esparros 53.45 300 eP P 06 12 24.8 -0.2
comp=Z,3.9nm,0.7s,mb4.0
EPF Esparros 53.45 300 eP P 06 12 24.8 -0.2
EPF pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
EPF Esparros 53.45 300 eP P 06 12 24.8 -0.2
comp=Z,2.0nm,0.7s,mb4.0
SGMF Saint Gilles 53.79 307 eP P 06 12 26.1 -1.4
ETSF Etsaut 54.12 300 eP P 06 12 30.3 +0.5
comp=Z,11nm,0.6s,mb4.5
ETSF Etsaut 54.12 300 eP P 06 12 30.3 +0.5
ETSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
ETSF Etsaut 54.12 300 eP P 06 12 30.3 +0.5
comp=Z,5.5nm,0.6s,mb4.5
ROSF Rostrenen 54.23 308 eP P 06 12 30.4 -0.2
ESDC Sonseca Array 57.68 298 P P 06 12 55.4 +0.3
comp=Z,0.3nm,0.3s,mb3.6,baz=61,slow=7.0,SNR=7.2
LSZ Lusaka 65.83 226 P P 06 13 50.1 +0.6
comp=Z,3.3nm,0.7s,mb4.3,baz=60,slow=5.8,SNR=8.1
LSZ Lusaka 65.83 226 P P 06 13 50.1 +0.6
TORD Torodi Ar. Bea 66.07 269 P P 06 13 49.9 -1.2
comp=Z,8.5nm,0.6s,mb4.7,baz=49,slow=5.8,SNR=105
INK Inuvik 73.67 9 eP P 06 14 38.1 +0.7
INK pmax pmax
comp=Z,1.0nm,0.4s
INK Inuvik 73.67 9 eP P 06 14 38.1 +0.7
comp=Z,1.2nm,0.4s,mb4.0
DBIC Dimbokro 75.05 267 P P 06 14 44.2 -1.1
comp=Z,2.1nm,0.6s,mb4.0,baz=308,slow=17,SNR=5.4
DBIC Dimbokro 75.05 267 P P 06 14 44.2 -1.1
DBIC pmax pmax
comp=Z,2.0nm,0.6s
TSUM Tsumeb 75.30 232 P P 06 14 47.3 +0.6
comp=Z,2.9nm,1.0s,mb3.9,baz=148,slow=22,SNR=7.4
LIC Lamto 75.45 267 eP P 06 14 46.3 -1.3
comp=Z,5.6nm,0.5s,mb4.2
BOSA Boshof 78.11 220 P P 06 15 02.4 -0.1
comp=Z,2.5nm,0.9s,mb3.8,baz=109,slow=2.4,SNR=4.1
BOSA Boshof 78.11 220 P P 06 15 02.4 -0.1
BOSA pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
YKA Yellowknife Ar 81.05 3 P P 06 15 18.7 +0.4
comp=Z,1.4nm,0.4s,mb3.9,baz=351,slow=5.3,SNR=15
YKA Yellowknife Ar 81.05 3⇑eP P 06 15 18.7 +0.4
WRA Warramunga Arr 81.80 122 P P 06 15 22.1 -0.1
comp=Z,1.3nm,0.4s,mb3.9,baz=325,slow=5.0,SNR=43
WRA Warramunga Arr 81.80 122 i P P 06 15 22.1 -0.1
WRA pmax pmax
comp=Z,1.0nm,0.4s
WRAB Tennant Creek 81.80 122 eP P 06 15 22.4 +0.2
WB2 Warramunga Arr 81.80 122 eP P 06 15 22.2 -0.1
ASAR Alice Springs 84.08 125 P P 06 15 33.9 -0.1
comp=Z,1.4nm,0.6s,mb3.9,baz=307,slow=5.1,SNR=27
ASAR Alice Springs 84.08 125 P P 06 15 33.9 -0.1
ASAR pmax pmax
comp=Z,1.0nm,0.6s
PLCA Paso Flores 150.21 250 PKPbc PKPbc 06 22 53.2 +0.2
comp=Z,2.1nm,1.0s,baz=133,slow=2.3,SNR=3.1

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*NEIC **19** 06:07:02.1, 15.96N×97.40W, h20km, MD4.1(MEX), After MEX.*

MEX 19 06:07:02.1±1.1**, 15.98N×97.40W, h19**km±26km**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.26**	**99**	*i* P	Pn	06 07 21.7	-3.0
HUIG				*i* S	Sb	06 07 35.9	-5.1
VHO	**Vista Hermosa**	**1.26**	**30**	*i* P	Pn	06 07 21.3	-3.4
VHO				*i* S	Sn	06 07 37.1	-4.0
OXX	**Oaxaca**	**1.28**	**30**	*i* P	Pn	06 07 20.0	-4.9
OXX	**Oaxaca**	**1.28**	**30**	*i* P	Pn	06 07 17.0	-7.9
UTMO	**Huajuapan**	**1.89**	**348**	*e*P	Pn	06 07 29.1	-4.1
UTMO				*i* S	Sn	06 07 52.3	-4.2
TPIG	**Tehuac#an**	**2.43**	**1**	*i* P	Pn	06 07 39.8	-1.0
TPIG				*i* S	Sn	06 08 07.1	-2.9
ACX	**Acapulco**	**2.57**	**291**	*i* P	Pn	06 07 41.0	-1.7
ACX				*i* S	Sn	06 08 10.5	-3.0
CMIG	**Matias Romero**	**2.66**	**65**	*i* P	Pn	06 07 41.5	-2.4
CMIG				*i* S	Sn	06 08 13.4	-2.1
MEIG	**Mezcala**	**2.88**	**313**	*i* P	Pn	06 07 44.1	-2.8
MEIG				*i* S	Sn	06 08 16.9	-4.1
CAIG	**El Cayaco**	**2.95**	**292**	*i* P	Pn	06 07 45.8	-2.2
CAIG				*i* S	Sn	06 08 18.1	-4.7
CAIG	**El Cayaco**	**2.95**	**292**	*i* P	Pn	06 07 45.8	-2.2
CAIG				*i* S	Sn	06 08 16.8	-6.0
PLIG	**Platanillo**	**3.13**	**320**	*i* P	Pn	06 07 49.7	-0.7
PLIG				*i* S	Sn	06 08 23.1	-4.2
PLIG	**Platanillo**	**3.13**	**320**	*i* P	Pn	06 07 49.7	-0.7
PLIG				*i* S	Sn	06 08 22.4	-4.9
YAIG	**Yautepec**	**3.28**	**331**	*i* P	Pn	06 07 50.3	-2.1
YAIG				*i* S	Sn	06 08 29.3	-1.6
PPM	**Popocatepetl**	**3.29**	**339**	*i* P	Pn	06 07 51.7	-0.9
PPM				*i* S	Sn	06 08 28.7	-2.4
IIZ	**Mezontepec**	**3.65**	**331**	*e*P	Pn	06 07 54.4	-3.1
IIZ				*i* S	Sn	06 08 35.4	-4.5
UNM	**Universidad Na**	**3.74**	**333**	*e*P	Pn	06 07 59.5	+0.7
UNM	**Universidad Na**	**3.74**	**333**	*e*P	Pn	06 07 51.5	-7.3

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*MEX **19** 06:26:41.4±0.6, 13.51N×92.35W, h20km±163km, MD4.7*

CASC 19 06:26:35.2±2.9**, 13.46N×92.36W, h29**km±193km**, MD4.4, 5C-1D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TP2	**Tecpan 2**	**1.84**	**44**⇑	*e*P	Pn	06 27 05.1	+0.3
TP2				*e*S	Sn	06 27 29.9	+2.8
RBDL	**Robledal**	**2.67**	**76**⇑	*e*P	x	06 27 29.7	
RBDL				*e*S	x	06 28 01.3	
SBLS	**San Blas**	**2.68**	**82**⇑	*e*P	x	06 27 30.0	
SBLS				*e*S	x	06 28 01.5	
CCIG	**Comitan**	**2.81**	**4**	*i* P	Pn	06 27 22.3	+4.2
CCIG				*i* S	Sn	06 27 54.4	+3.5
BOQS	**Boqueron**	**3.00**	**84**⇓	*e*P	x	06 27 35.3	
BOQS				*e*S	x	06 28 11.8	
LCBS	**La Ceiba**	**3.29**	**86**⇑	*e*P	x	06 27 38.6	
LCBS				*e*S	x	06 28 19.7	
SNVI	**San Vicente**	**3.42**	**87**⇑	*e*P	x	06 27 42.2	
SNVI				*e*S	x	06 28 21.9	
CMIG	**Matias Romero**	**4.35**	**326**	*i* P	Pn	06 27 43.7	+4.4
CMIG				*i* S	Sn	06 28 32.7	+3.7
OXX	**Oaxaca**	**5.54**	**311**	*e*P	Pn	06 28 04.5	+8.8
VHO	**Vista Hermosa**	**5.54**	**311**	*i* P	Pn	06 28 02.9	+7.2
VHO				*i* S	Sn	06 29 00.7	+2.3
UTMO	**Huajuapan**	**6.81**	**310**	*i* S	Sn	06 29 34.0	+4.4
TPIG	**Tehuac#an**	**6.89**	**316**	*e*P	Pn	06 28 20.8	+6.7
TPIG				*i* S	Sn	06 29 36.6	+5.1
PPM	**Popocatepetl**	**8.20**	**314**	*e*P	Pn	06 28 39.0	+6.8
PPM				*i* S	Sn	06 30 11.1	+7.2

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*SZGRF **19** 06:42:22.9, 19.17S×178.18W, h33km, Fiji Islands region*
*CSEM **19** 06:42:25.4, 18.72S×176.54W, h33km, mb5.5*
*ISCJB **19** 06:43:18.5±0.8, 19.24S±0.06×177.64W±0.08, h541km±10km, mb4.2/24, Error ellipse: s-maj=12.3km s-min=7.9km az=72.4*
*BJI **19** 06:43:18.0, 19.66S×177.90W, h543km, mB4.7, mb4.5*
*NEIC **19** 06:43:19.5±0.8, 19.25S×177.51W, h543km±9km, mb4.5/14, Error ellipse: s-maj=11.7km s-min=8.2km az=138.0*
*MOS **19** 06:43:19.1±2.5, 19.29S×177.71W, h529km, mb4.5/5, Error ellipse: s-maj=16.6km s-min=11.9km az=47.5*
*IDC **19** 06:43:20.9±1.3, 19.24S×177.48W, h560km±15km, mb3.5/9, mb1 3.8/12, mb1mx3.7/17, mbtmp4.5/12, Error ellipse: s-maj=16.5km s-min=11.4km az=134.0*

ISC 19 06:43:20.1±0.7**, 19.31S**±0.06×**177.52W**±0.07**, h548**km±9km**, h535**km±5.1km**:pP-P, n129,** σ1§**13**/68**, mb4.2**/24**, 5C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.70**	**47**	P	**P**	**06 45 15.4**	**+0.7**
	24nm,0.3s,baz=103,slow=1.3,SNR=17						
AFI				S	**S**	**06 46 49.6**	**+1.0**
	13nm,0.3s,baz=194,slow=22,SNR=4.3						
AFI	**Afiamalu**	**7.70**	**47**	*e*P	**P**	**06 45 13.4**	**-1.3**
AFI				*e*S	**S**	**06 46 45.1**	**-3.5**
AFI				pmax	pmax		
	comp=Z,74nm,0.6s						
AFI	**Afiamalu**	**7.70**	**47**	*e*P	**P**	**06 45 13.4**	**-1.2**
	comp=Z,74nm,0.6s						
AFI				*e*S	**S**	**06 46 45.0**	**-3.6**
RAO	**Raoul Island**	**9.90**	**182**	S	**S**	**06 47 33.8**	**+4.5**
	comp=Z,59nm,0.3s,baz=258,slow=22,SNR=3.7						
RAO	**Raoul Island**	**9.90**	**182**	P	**P**	**06 45 35.7**	**-1.2**
RAO				*e*S	**S**	**06 47 28.4**	**-0.9**
DZM	**Mont Dzumac**	**15.25**	**257**	P	**P**	**06 46 33.6**	**+1.6**
	comp=Z,1.1nm,0.3s,baz=86,slow=17,SNR=10						
URZ	**Urewera**	**19.45**	**193**	P	**P**	**06 47 10.2**	**-1.0**
	comp=Z,7.0nm,0.3s,baz=273,slow=1.6,SNR=36						
URZ				S	**S**	**06 50 13.2**	**-5.5**
	comp=Z,0.6nm,0.3s,baz=45,slow=20,SNR=6.5						
SNZO	**South Karori**	**22.91**	**195**	*e*P	**P**	**06 47 42.4**	**+0.2**
	comp=Z,9.3nm,0.5s,mb4.7						
CNB	**Canberra Magne**	**33.27**	**235**	*e*P	**P**	**06 49 13.9**	**+1.5**
	comp=Z,8.5nm,0.8s,mb4.3						
CTA	**Charters Tower**	**34.07**	**262**	P	**P**	**06 49 20.2**	**+1.1**
	comp=Z,5.6nm,0.4s,mb4.5,baz=104,slow=12,SNR=11						
CTAO	**Charters Tower**	**34.07**	**262**	*e*P	**P**	**06 49 19.0**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.4						
CTAO	**Charters Tower**	**34.07**	**262**	*e*P	**P**	**06 49 19.0**	**-0.1**
	comp=Z,9.1nm,0.7s,mb4.4						
PMG	**Port Moresby**	**35.53**	**281**	*e*P	**P**	**06 49 28.3**	**-3.0**
TOO	**Toolangi**	**36.96**	**233**⇓	*i*P	**P**	**06 49 44.3**	**+1.2**
TOO				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.6						
TOO	**Toolangi**	**36.96**	**233**⇓	*i*P	**P**	**06 49 44.3**	**+1.2**
	comp=Z,8.7nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**38.72**	**243**	P	**P**	**06 49 58.8**	**+1.4**
	comp=Z,10nm,0.6s,mb4.6,baz=93,slow=8.1,SNR=29						
STKA	**Stephens Creek**	**38.72**	**243**⇓	*i*P	**P**	**06 49 58.8**	**+1.5**
	comp=Z,9.5nm,0.7s,mb4.4						
MAUI	**Maui**	**44.96**	**29**	*e*P	**P**	**06 50 44.5**	**-2.0**
WB2	**Warramunga Arr**	**45.21**	**261**	*e*P	**P**	**06 50 48.6**	**+0.2**
WB2				*e*		06 52 17.1	
WB2				*e*S	**S**	**06 56 45.0**	**-3.5**
WRAB	**Tennant Creek**	**45.21**	**261**	*e*P	**P**	**06 50 47.3**	**-1.1**
WRAB	**Tennant Creek**	**45.21**	**261**	*e*P	**P**	**06 50 47.0**	**-1.4**
	comp=Z,35nm,1.3s,mb4.7						
WRA	**Warramunga Arr**	**45.22**	**261**	P	**P**	**06 50 48.5**	**0.0**
	comp=Z,3.2nm,0.3s,mb4.4,baz=98,slow=6.9,SNR=144						
WRA				PcP	PcP	06 52 17.0	+0.2
	comp=Z,0.9nm,0.3s,baz=96,slow=3.3,SNR=6.0						
WRA				S	**S**	**06 56 44.5**	**-4.1**
	comp=Z,1.3nm,0.7s,baz=97,slow=13,SNR=7.7						
AS31	**Alice Springs**	**45.23**	**256**⇓	*i*P	**P**	**06 50 49.2**	**+0.6**
AS31				*e*		06 52 16.9	
AS31				*e*S	**S**	**06 56 46.0**	**-2.8**
ASAR	**Alice Springs**	**45.24**	**256**	P	**P**	**06 50 49.3**	**+0.7**
	comp=Z,7.1nm,0.6s,mb4.4,baz=88,slow=8.1,SNR=123						
ASAR				PcP	PcP	06 52 16.9	0.0
	comp=Z,2.6nm,0.6s,baz=103,slow=4.2,SNR=10						
ASAR				S	**S**	**06 56 46.9**	**-2.0**
	comp=Z,2.1nm,0.6s,baz=91,slow=15,SNR=21						
MBWA	**Marble Bar**	**58.56**	**257**	*e*P	**P**	**06 52 23.9**	**-0.4**
	comp=Z,12nm,0.3s,mb4.6						
KLBR	**Kellerberrin**	**58.97**	**244**	*e*P	**P**	**06 52 26.9**	**-0.2**
	comp=Z,17nm,0.6s,mb4.5						
SBA	**Scott Base**	**59.08**	**184**	*e*P	**P**	**06 52 29.0**	**+1.1**
SBA				pmax	pmax		
	comp=Z,158nm,3.1s						
SBA	**Scott Base**	**59.08**	**184**	*e*P	**P**	**06 52 29.0**	**+1.2**
	comp=Z,158nm,3.1s						
VNDA	**Vanda**	**59.12**	**185**	P	**P**	**06 52 29.4**	**+1.2**
	comp=Z,2.1nm,0.6s,mb3.5,baz=357,slow=7.6,SNR=32						
VNDA	**Vanda**	**59.12**	**185**	*e*P	**P**	**06 52 27.9**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VNDA	**Vanda**	**59.12**	**185**	*e*P	**P**	**06 52 27.9**	**-0.2**
	comp=Z,1.9nm,0.6s,mb3.5						
MUN	**Mundaring**	**60.24**	**244**	*e*P	**P**	**06 52 36.3**	**+0.7**
CASY	**Casey**	**65.22**	**205**	*e*P	**P**	**06 53 07.5**	**-0.2**
MJAR	**Matsushiro Arr**	**69.53**	**323**	P	**P**	**06 53 33.4**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.5,baz=153,slow=5.4,SNR=4.9						
QSPA	**South Pole Qui**	**70.75**	**180**	*e*P	**P**	**06 53 42.1**	**+0.8**
	comp=Z,11nm,0.7s,mb4.5						
YSS	**Yuzh-Sakhalins**	**75.04**	**333**	*e*P	**P**	**06 54 06.3**	**+0.4**
CMB	**Columbia Colle**	**78.29**	**43**	*e*P	**P**	**06 54 24.3**	**+0.7**
	comp=Z,0.4nm,0.4s,mb3.1						
NJ2	**Nanjing**	**79.47**	**309**	*e*P	**P**	**06 54 29.5**	**-0.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.4						
MDJ	**Mudanjiang**	**79.81**	**325**	P	**P**	**06 54 32.5**	**+0.8**
MDJ				AP	pP	06 56 26.0	-2.4
MDJ				XP	sP	06 57 20.8	-3.6
MDJ				PP	PP	06 57 43.0	+0.1
MDJ				S	S	07 03 52.8	+2.9
MDJ				SCS	ScS	07 04 07.4	+1.3
MDJ				XS	sS	07 07 15.8	-2.1
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb3.8						
MDJ				AMB	AMB		
	comp=Z,157nm,6.3s						
NVAR	**Mina Array Bea**	**79.86**	**43**	P	**P**	**06 54 32.0**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.2,baz=229,slow=11,SNR=9.0						
CN2	**Changchun**	**81.64**	**322**	*e*P	**P**	**06 54 44.3**	**+3.2**
MAW	**Mawson**	**82.83**	**200**	P	**P**	**06 54 46.3**	**-0.8**
	comp=Z,3.1nm,0.6s,mb4.0,baz=130,slow=8.5,SNR=17						
MAW	**Mawson**	**82.83**	**200**	*e*P	**P**	**06 54 46.8**	**-0.3**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAW	**Mawson**	**82.83**	**200**	*e*P	**P**	**06 54 46.8**	**-0.3**
	comp=Z,2.7nm,0.6s,mb4.0						
TMUT	**Trail Mountain**	**85.01**	**46**	*e*P	**P**	**06 54 59.1**	**+1.2**
TMUT				*e*		06 56 38.7	
ANMO	**Albuquerque**	**86.31**	**51**	*e*P	**P**	**06 55 04.6**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ANMO	**Albuquerque**	**86.31**	**51**	*e*P	**P**	**06 55 04.6**	**+0.5**
	comp=Z,2.1nm,1.3s,mb3.6						
COLA	**College**	**86.96**	**12**	*e*P	**P**	**06 55 05.2**	**-2.0**
PDAR	**Pinedale Array**	**87.79**	**43**	P	**P**	**06 55 10.8**	**-0.3**
	comp=Z,0.5nm,0.8s,mb3.3,baz=237,slow=2.1,SNR=6.0						
SYO	**Syowa Base**	**87.98**	**193**⇑	*e*P	**P**	**06 55 10.4**	**-1.5**
HHC	**Hu-ho-hao-te**	**88.85**	**314**	*e*P	**P**	**06 55 16.3**	**+0.3**
HHC				AP	pP	06 57 15.9	0.0
HHC				XP	sP	06 58 09.0	-2.1
HHC				PP	PP	06 58 57.8	+2.6
HHC				SKS		07 04 53.8	
HHC				S	S	07 05 16.9	-0.6
HHC				XS	sS	07 08 48.4	-2.9
HHC				SS	SS	07 11 30.4	+4.2
HHC				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.7						
HHC				AMB	AMB		
	comp=Z,473nm,9.8s						
SNAA	**Sanae**	**89.18**	**178**	*e*P	**P**	**06 55 16.6**	**-0.9**
SNAA				*e*		06 55 17.7	
SNAA				*e*		06 55 19.4	
SNAA				*e*		06 55 23.4	
SNAA	**Sanae**	**89.18**	**178**	*e*P	**P**	**06 55 16.5**	**-1.0**
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SNAA	**Sanae**	**89.18**	**178**	*e*P	**P**	**06 55 16.5**	**-1.0**
	comp=Z,7.3nm,1.0s,mb4.5						
KMI	**Kunming**	**89.21**	**297**	P	**P**	**06 55 17.8**	**+0.1**
KMI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.7						
VNA1	**Neumayer--Stat**	**89.96**	**176**	*e*P	**P**	**06 55 21.1**	**-0.1**
VNA1				*e*		06 55 21.9	
VNA1				*e*		06 55 22.9	
VNA1				*e*		06 55 28.2	
CD2	**Chengdu**	**90.53**	**303**	*e*P	**P**	**06 55 21.0**	**-2.8**
LZH	**Lanzhou**	**92.41**	**307**	*e*P	**P**	**06 55 33.0**	**+0.6**
LZH				AP	pP	06 57 32.5	-0.3
LZH				XP	sP	06 58 25.0	-2.8
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
JTS	**JuntasAbangare**	**95.74**	**81**	*e*P	**P**	**06 55 49.8**	**+2.2**
MKAR	**Makanchi Array**	**110.71**	**314**	PKiKP	PKiKP	07 00 48.0	-2.8
	comp=Z,0.5nm,0.5s,baz=207,slow=4.6,SNR=7.1						
ARU	**Arti**	**124.48**	**326**	*i* PKIKP	PKPdf	07 01 14.4	-2.8
ARU	**Arti**	**124.48**	**326**	*e*PKPdf	PKPdf	07 01 15.3	-1.9
ARCES	**ARCESS Array B**	**127.84**	**350**	PKP	PKPdf	07 01 22.0	-1.6
	comp=Z,1.0nm,0.4s,baz=17,slow=0.5,SNR=30						
JOF	**Joensuu**	**132.14**	**343**	*e*p	PKPdf	07 01 28.2	-3.5
	comp=Z,0.8nm,0.4s						
JOF	**Joensuu**	**132.14**	**343**	*e*PKIKP	PKPdf	07 01 28.2	-3.5
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**134.76**	**344**	PKP	PKPdf	07 01 35.5	-1.2
	comp=Z,0.3nm,0.3s,baz=88,slow=3.7,SNR=4.8						
NOA	**NORSAR Array B**	**137.86**	**354**	PKP	PKPdf	07 01 40.0	-2.3
	comp=Z,0.2nm,0.4s,baz=16,slow=3.2,SNR=3.6						
AKASG	**Malin Array Be**	**142.19**	**332**	PKhKP		07 01 44.9	
	comp=Z,1.2nm,0.3s,baz=40,slow=3.8,SNR=14						
MALT	**Malatya**	**143.55**	**309**⇑	*i*P	PKPdf	07 01 51.7	-0.9
MALT	**Malatya**	**143.55**	**309**	*e*PKPdf	PKPdf	07 01 52.0	-0.6
MALT				*e*PP	PP	07 05 10.9	-0.7
BURAR	**Bucovina Array**	**146.24**	**332**⇓	*i*P	PKPdf	07 02 00.4	+3.2
BR131	**Keskin Array S**	**146.36**	**314**	*e*PKPdf	PKPdf	07 01 58.1	+0.7
BRTR	**Keskin Array B**	**146.36**	**314**	PKPbc	PKPbc	07 01 59.0	-0.7
	comp=Z,2.5nm,0.6s,baz=134,slow=5.1,SNR=12						
KSP	**Ksiaz**	**146.69**	**344**	*e*PKHKP		07 01 57.5	
CRVS	**Cervenica-Dubn**	**146.75**	**337**	*e*PKP	PKPdf	07 02 00.4	+2.4
TIRR	**Tirgusor**	**146.89**	**325**⇓	*i*P	PKPdf	07 01 59.5	+1.2
CLL	**Collm**	**147.01**	**348**	*e*PKPbc	PKPbc	07 02 00.0	-1.5
CLL	**Collm**	**147.01**	**348**⇓	*i*PKPbc	PKPbc	07 02 00.4	-1.1
	comp=Z,8.0nm,0.6s						
CLL				*i* PKiKP	PKiKP	07 02 03.4	+0.1
CLL	**Collm**	**147.01**	**348**⇓	*i*PKIKP	PKPdf	07 02 00.4	+1.9
CLL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
UPC	**Upice**	**147.07**	**344**	*e*PKP	PKPdf	07 02 01.0	+2.5
DPC	**Dobruska-Polom**	**147.13**	**344**	*e*PKP	PKPdf	07 02 01.4	+2.8
BRG	**Berggiesshubel**	**147.22**	**347**	*e*PKPbc	PKPbc	07 02 01.3	-0.7
BRG	**Berggiesshubel**	**147.22**	**347**	*e*PKP	PKPdf	07 02 01.6	+2.8
	comp=Z,5.5nm,1.3s						
BRG	**Berggiesshubel**	**147.22**	**347**	*e*PKIKP	PKPdf	07 02 01.6	+2.8
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FBE	**Freiberg**	**147.30**	**347**	*e*PKPbc	PKPbc	07 02 00.9	-1.3
KECS	**Kecovo**	**147.46**	**338**	*e*PKP	PKPdf	07 02 02.3	+3.1
MLR	**Muntele Rosu**	**147.46**	**329**⇑	*i*P	PKPdf	07 02 03.0	+3.8
MOX	**Moxa**	**147.91**	**349**	*e*PKPbc	PKPbc	07 02 02.8	-1.0
PRU	**Pruhonice**	**147.91**	**345**	*e*PKP	PKPdf	07 02 03.1	+3.2
VOIR		**147.94**	**329**⇓	*i*P	PKPdf	07 02 03.6	+3.6
DRGR		**147.96**	**333**⇑	*i*P	PKPdf	07 02 03.7	+3.7
WERD	**Werda**	**147.96**	**348**	*e*PKPbc	PKPbc	07 02 03.2	-0.7
TANN	**Tannenbergstha**	**147.97**	**348**	*e*PKPbc	PKPbc	07 02 03.2	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UBBA	Unterbreizbach	148.00	351	ePKPbc	PKPbc	07 02 03.5	-0.5
VYHS	Vyhne	148.02	339	ePKP	PKPdf	07 02 03.6	+3.5
WERN	Wernitzgruen	148.10	348	ePKPbc	PKPbc	07 02 04.0	-0.3
NKC	Novy Kostel	148.14	348	ePKP	PKPdf	07 02 03.7	+3.4
MANZ	Manzenberg	148.44	348	ePKPbc	PKPbc	07 02 04.4	-0.7
CSS	Prodhromos	148.59	306	ePKPdf	PKPdf	07 02 01.2	+0.2
ROTZ	Rotzenmuhle	148.63	348	ePKPbc	PKPbc	07 02 05.0	-0.6
EIL	Elat	148.79	296	ePKPbc	PKPbc	07 02 06.1	+0.2
GRF	Grafenberg Arr	148.89	349	ePKPbc	PKPbc	07 02 06.1	-0.1
KHC	Kasperske Hory	148.94	346	ePKP	PKPdf	07 02 05.7	+4.1
WET	Wettzell	149.08	347	ePKPbc	PKPbc	07 02 05.9	-0.8
GEC2	GERESS Array S	149.18	345	ePKPbc	PKPbc	07 02 05.1	-1.8
GERES	GERESS Array B	149.18	345	PKPbc	PKPbc	07 02 06.2	-0.7
	comp=Z,2.2nm,0.6s,baz=28,slow=2.6,SNR=16						
BAIF	Baives	149.29	358	ePKP1	PKPbc	07 02 06.2	-1.0
	comp=Z,7.0nm,0.7s						
WLF	Walferdange	149.58	355	ePKPbc	PKPbc	07 02 07.6	-0.3
PKSM	Moragy	150.05	337	⇑iP	PKPdf	07 02 07.9	+4.6
FLN	La Foliniere	150.53	4	ePKP1	PKPbc	07 02 08.8	-1.3
	comp=Z,7.9nm,0.5s						
BFO	Black Forest	150.67	352	ePKPbc	PKPbc	07 02 09.8	-0.6
CDF	Champ du Feu	150.71	353	ePKP1	PKPbc	07 02 09.6	-0.9
	comp=Z,5.6nm,0.5s						
LDF	La Druitiere	150.72	4	ePKP1	PKPbc	07 02 09.0	-1.5
	comp=Z,8.3nm,0.6s						
MEZF	Maizieres J'vi	150.81	356	ePKP1	PKPbc	07 02 09.8	-0.9
PERS	Pernice	150.84	342	i PKPbc	PKPbc	07 02 09.4	-1.4
SGMF	Saint Gilles	150.84	7	ePKP1	PKPbc	07 02 09.2	-1.6
GRR	Gorron	150.87	5	ePKP1	PKPbc	07 02 09.6	-1.3
	comp=Z,10nm,0.5s						
HAU	Haudompre	151.21	355	ePKP1	PKPbc	07 02 10.5	-1.1
	comp=Z,7.0nm,0.6s						
HINF	Hinteralfeld	151.35	354	ePKP1	PKPbc	07 02 10.6	-1.3
	comp=Z,5.4nm,0.7s						
LJU	Ljubljana	151.55	342	i PKPbc	PKPbc	07 02 11.4	-0.9
BOJS	Bojanci	151.82	341	i PKPbc	PKPbc	07 02 12.3	-0.7
LOR	Lormes	152.09	358	ePKP1	PKPbc	07 02 12.6	-1.0
	comp=Z,6.1nm,0.6s						
SSF	Saint Saulge	152.31	358	ePKP1	PKPbc	07 02 13.1	-1.0
AVF	Avril sur Loir	152.59	359	ePKP1	PKPbc	07 02 13.2	-1.5
CABF	La Chapelle	152.61	355	ePKP1	PKPbc	07 02 14.9	+0.2
	comp=Z,3.8nm,0.6s						
MFF	Saint Martin d	152.70	4	ePKP1	PKPbc	07 02 14.7	-0.2
TCF	Toulx Ste Croi	153.10	0	ePKP1	PKPbc	07 02 14.6	-1.2
MBDF	Montbardon	154.41	353	ePKP1	PKPbc	07 02 18.4	-0.2
TORD	Torodi Ar. Bea	173.82	173	PKP	PKPdf	07 02 25.6	-1.1
	comp=Z,1.0nm,1.0s,baz=197,slow=1.5,SNR=3.9						
TORD				PKPab	PKPab	07 04 01.5	+0.4
	comp=Z,0.2nm,0.5s,baz=188,slow=1.7,SNR=4.8						

NEIC 19 06:56:05.4, 6339N×15145W, h13km, ML3.3(AEIC), ML3.5(PMR), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTH	Kantishna Hill	0.29	56	P	Pg	06 56 11.6	+0.2
KTH				S	Sg	06 56 15.8	+0.5
TRF	Thorofare Moun	0.53	83	P	Pg	06 56 15.6	-0.1
TRF				S	Sg	06 56 23.0	+0.2
MCK	McKinley	1.18	72	P	Pn	06 56 26.9	-0.6
MCK				S	Sb	06 56 43.6	+0.9
GHO	Glory Hole Cre	2.00	143	P	Pn	06 56 39.4	+0.4
PMR	Palmer	2.10	148	P	Pn	06 56 40.7	+0.4
TTA	Tatalina	2.12	259	P	Pn	06 56 39.6	-1.0
COLA	College	2.17	45	P	Pn	06 56 40.4	-0.8
RC01	Rabbit Creek A	2.45	160	P	Pn	06 56 45.6	+0.6
GCSA	Galena City Sc	2.75	302	P	Pn	06 56 50.8	+1.7
IMA2	Indian Mountai	2.85	341	eP	Pn	06 56 50.9	+0.3
SLKM	Skilak Lake	2.95	168	ePn	Pn	06 56 53.2	+1.2
SLKM				eSn	Sn	06 57 28.4	+1.1
SVW2	Sparrevohn	3.01	222	P	Pn	06 56 51.3	-1.5
DIV	Divide	3.49	128	P	Pn	06 57 00.3	+0.8
MENT	Mentasta	3.54	94	eP	Pn	06 57 02.7	+2.7
COLD	Coldfoot	3.89	7	P	Pn	06 57 04.6	-0.2
EGAK	Eagle	4.72	68	ePn	Pn	06 57 15.9	-0.4
EGAK				eSg	Sg	06 58 32.8	-4.3
DAWY	Dawson	5.40	77	ePn	Pn	06 57 26.0	+0.4

*ISCJB **19** 07:22:43.6±1.2, 772N±007×1239E±02, h620km±18km, mb4.0/15, Error ellipse: s-maj=24.4km s-min=8.9km az=145.9*

*NEIC **19** 07:22:44.5±1.1, 775N×12382E, h610km±15km, mb4.4/5, Error ellipse: s-maj=20.3km s-min=8.4km az=72.0*

*IDC **19** 07:22:46.0±1.9, 768N×12396E, h626km±25km, mb3.1/10, mb1 3.2/10, mb1mx3.1/19, mbtmp4.2/10, Error ellipse: s-maj=39.6km s-min=8.7km az=72.0*

ISC 19 07:22:45.1±1.2, 773N±007×1238E±02, h621km±17km, n25, σ1^{s}03/26, mb3.9/15, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	7.73	258	eP	P	07 24 41.3	-1.3
KSM	Kuching	14.82	246	eP	P	07 25 51.5	+0.8
YHNB	Yeheng	17.01	352	eP	P	07 26 09.4	-1.3
FITZ	Fitzroy Crossi	25.73	176	P	P	07 27 28.6	-0.1
	0.8nm,0.5s,mb3.6,baz=186,slow=21,SNR=6.1						
WRAB	Tennant Creek	29.38	159	eP	P	07 28 00.1	-0.2
	4.9nm,0.4s,mb4.5						
WRA	Warramunga Arr	29.38	160	P	P	07 28 00.4	0.0
	3.5nm,0.4s,mb4.3,baz=332,slow=11,SNR=61						
WRA				PcP	PcP	07 30 46.8	+1.2
	0.8nm,0.7s,baz=337,slow=2.7,SNR=7.8						
WRA				S	S	07 32 09.3	-2.9
	1.9nm,1.0s,baz=336,slow=15,SNR=5.9						
WB2	Warramunga Arr	29.39	159	eP	P	07 28 00.4	0.0
WB2				eS	S	07 32 09.3	-3.0
MJAR	Matsushiro Arr	31.54	23	P	P	07 28 19.1	+0.3
	1.8nm,0.7s,mb3.8,baz=200,slow=10,SNR=5.1						
AS31	Alice Springs	32.72	163	eP	P	07 28 29.5	+0.8
AS31				eS	S	07 33 02.7	-0.4
ASAR	Alice Springs	32.72	163	P	P	07 28 29.6	+0.8
	2.3nm,0.3s,mb4.2,baz=343,slow=7.2,SNR=104						
ASAR				PcP	PcP	07 30 56.1	+1.3
	0.8nm,0.5s,baz=340,slow=2.8,SNR=12						
ASAR				S	S	07 33 04.3	+1.2
	1.3nm,0.8s,baz=350,slow=18,SNR=8.7						
FORT	Forrest	38.50	174	eP	P	07 29 16.9	+0.7
	11nm,0.8s,mb4.4						
KLBR	Kellerberrin	39.53	188	eP	P	07 29 24.4	0.0
	28nm,1.5s,mb4.6						
SONM	Songino Array	42.62	343	P	P	07 29 50.6	+1.8
	0.8nm,0.8s,mb3.3,baz=174,slow=6.9,SNR=5.5						
STKA	Stephens Creek	42.89	158	P	P	07 29 51.3	+0.5
	1.8nm,0.4s,mb4.0,baz=345,slow=8.0,SNR=4.4						
MKAR	Makanchi Array	52.64	325	P	P	07 31 04.7	+1.6
	3.6nm,0.5s,mb4.0,baz=114,slow=8.2,SNR=22						
MKAR				PcP	PcP	07 32 03.0	+0.6
	0.8nm,0.5s,baz=57,slow=4.5,SNR=4.0						
MKAR	Makanchi Array	52.64	325	P	P	07 31 04.7	+1.6
MKAR				PcP	PcP	07 32 03.0	+0.6
BRVK	Borovoye	62.48	327	eP	P	07 32 10.5	+0.9
	2.8nm,0.9s,mb3.5						
BRVK				epP	pP	07 34 06.4	-3.4
JOF	Joensuu	84.32	333	ep	P	07 34 11.7	-1.4
ARCES	ARCESS Array B	85.72	340	P	P	07 34 19.0	-0.9
	2.9nm,1.1s,mb3.8,baz=52,slow=4.8,SNR=4.1						
KAF	Kangasniemi	86.73	332	ep	P	07 34 22.7	-1.9
	2.2nm,0.5s,mb4.1						
FINES	FINESS Array B	86.96	332	P	P	07 34 25.9	+0.2
	0.9nm,0.5s,mb3.7,baz=67,slow=5.0,SNR=9.6						
VNDA	Vanda	87.74	172	P	P	07 34 29.1	-0.3
	0.5nm,0.9s,mb3.2,baz=316,slow=6.5,SNR=10						
TORD	Torodi Ar. Bea	118.89	290	PKP	PKPdf	07 40 24.7	+0.5
	0.4nm,0.6s,baz=28,slow=1.8,SNR=4.7						
PLCA	Paso Flores	144.73	161	PKP	PKPdf	07 41 15.1	+2.7
	1.8nm,0.7s,baz=154,slow=2.7,SNR=6.2						
PLCA	Paso Flores	144.73	161	PKP	PKPdf	07 41 15.1	+2.7

GUC 19 07:25:44.5±0.7, 2971S×7197W, h41km±4km, MD4.0, ML3.5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.11	115	i P	Pn	07 26 04.8	+1.3
TLL				i S	Sn	07 26 20.3	+2.8
TLL				AML	AML	07 26 21.6	
	comp=N,1μm,0.7s						
OVCH	Ovalle	1.11	144	i S	Sn	07 26 19.5	+1.8
VACH	Vallenar	1.55	43	eP	Pn	07 26 10.9	+1.3
VACH				i S	Sn	07 26 30.2	+1.8
VACH				AML	AML	07 26 39.0	
	comp=N,1μm,0.6s						
CMCH	Combarbala	1.68	151	i P	Pn	07 26 12.2	+0.8
CMCH				i S	Sn	07 26 34.0	+2.4
CMCH				AML	AML	07 26 44.9	
	comp=E,1μm,0.5s						

MEX 19 08:00:37.5±0.9, 1712N×10008W, h15km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.19	247	i P	Pg	08 00 40.9	-1.1
CAIG				i S	Sg	08 00 45.4	+0.4
ACX	Acapulco	0.30	148	i P	Pg	08 00 43.0	-0.8
ACX				i S	Sg	08 00 48.0	-0.1
MEIG	Mezcala	0.91	29	i P	Pb	08 00 51.5	-3.5
MEIG				i S	Sb	08 01 04.2	-2.8
PLIG	Platanillo	1.38	24	eP	Pn	08 00 59.4	-2.7
PLIG				i S	Sn	08 01 16.1	-4.0
IIZ	Mezontepec	2.20	21	i P	Pn	08 01 09.5	-4.0
IIZ				i S	Sn	08 01 35.5	-5.0

*NEIC **19** 08:10:12.9, 3476S×7078W, h18km, ML3.7(GUC), After GUC.*

GUC 19 08:10:12.9±0.5, 3476S×7078W, h18km±1km, MD3.6, ML3.7, 10C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.24	306	⇑iP	Pg	08 10 18.2	-0.3
SFDO				i S	Sg	08 10 22.3	+0.1
NICH	Los Niches	0.44	236	i P	Pg	08 10 21.4	-0.6
NICH				i S	Sg	08 10 27.6	-0.4
CICH	Cipreses	0.53	35	⇑iP	Pg	08 10 23.2	-0.3
CICH				i S	Sg	08 10 30.8	+0.2
CACH	El Canelo	0.65	13	⇓iP	Pb	08 10 25.4	-0.4
CACH				i S	Sb	08 10 34.7	+0.2
CHCH	Chadas Angostu	0.83	8	⇑iP	Pb	08 10 28.2	-0.5
CHCH				i S	Sb	08 10 39.9	+0.4
TALC	Talca	0.95	227	eP	Pb	08 10 29.4	-1.3
TALC				i S	Sb	08 10 42.7	-0.3
TALC				AML	AML	08 10 43.0	
	comp=E,5μm,0.3s						
TALC	Talca	0.95	227	eP	Pb	08 10 29.4	-1.3
TALC				i S	Sb	08 10 42.7	-0.3
LNV	Longovilo	0.95	327	⇑iP	Pb	08 10 30.5	-0.3
LNV				i S	Sb	08 10 43.5	+0.5
TACH	Talagante	1.11	353	⇓iP	Pn	08 10 33.4	0.0
TACH				i S	Sb	08 10 48.8	+1.3
PCH	Pirque	1.15	11	i P	Pn	08 10 34.0	-0.1
PCH				i S	Sb	08 10 50.2	+1.4
SJCH	San Jose de Ma	1.17	18	⇑iP	Pn	08 10 34.0	-0.3
SJCH				i S	Sb	08 10 50.6	+1.3
ANTU	Antumapu	1.19	6	eP	Pn	08 10 34.8	+0.3
ANTU				i S	Sb	08 10 50.7	+0.8
RCDM	Rinconada Maip	1.26	359	eP	Pn	08 10 35.8	+0.2
RCDM				i S	Sb	08 10 53.1	+1.1
RCDM				AML	AML	08 10 54.1	
	comp=E,3μm,0.2s						
RCDM	Rinconada Maip	1.26	359	eP	Pn	08 10 35.8	+0.2
RCDM				i S	Sb	08 10 53.1	+1.1
LACH	Colegio Las Am	1.32	9	i P	Pn	08 10 36.8	+0.5
STL	Santa Lucia	1.32	5	⇑iP	Pn	08 10 36.9	+0.6
STL				i S	Sn	08 10 54.8	+1.3
CLCH	Cerro Calan	1.37	9	i P	Pn	08 10 37.9	+0.8
CLCH				i S	Sn	08 10 56.5	+1.8
LCCH	Las Cruces	1.43	333	⇑iP	Pn	08 10 38.7	+0.7
LCCH				i S	Sn	08 10 58.2	+2.0
FCH	Farellones	1.48	16	⇓iP	Pn	08 10 39.7	+1.1
FCH				i S	Sn	08 11 00.3	+2.8
PEL	Peldehue	1.61	3	i P	Pn	08 10 41.8	+1.5
PEL				i S	Sn	08 11 03.5	+2.9
PEL				AML	AML	08 11 12.1	
	comp=N,816nm,0.2s						
PEL	Peldehue	1.61	3	i P	Pn	08 10 41.8	+1.5
PEL				i S	Sn	08 11 03.5	+2.9
CNCO	Chanco	1.73	235	⇑iP	Pn	08 11 21.4	+39
CNCO				i S	Sn	08 11 44.7	+41
CNCO				AML	AML	08 11 49.8	
	comp=N,665nm,0.5s						
ROCH	El Roble	1.79	354	i P	Pn	08 10 45.0	+2.2
ROCH				i S	Sn	08 11 09.6	+4.6
IHA	Instituto Hidr	1.87	337	i P	Pn	08 10 45.7	+1.8
IHA				i S	Sn	08 11 10.7	+3.7
JACH	Jahuel	2.07	4	i P	Pn	08 10 49.6	+2.8
JACH				i S	Sn	08 11 17.6	+5.6
CCHI	Chillan	2.12	209	⇑iP	Pn	08 10 50.0	+2.6
CCHI				i S	Sn	08 11 18.7	+5.4
CCHI				AML	AML	08 11 19.6	
	comp=E,666nm,0.5s						
CCHI	Chillan	2.12	209	⇑iP	Pn	08 10 50.0	+2.6
CCHI				i S	Sn	08 11 18.7	+5.4
CMCH	Combarbala	3.58	357	AML	AML	08 12 17.0	
	comp=N,271nm,0.6s						

IDC 19 08:23:13.0±3.9, 868N×9238E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.4/4, Error ellipse: s-maj=152.0km s-min=25.8km az=65.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	38.95	349	P	P	08 30 40.6	0.0
	0.3nm,0.4s,baz=165,slow=7.8,SNR=4.7						
SONM	Songino Array	40.80	14	P	P	08 30 56.3	+0.2
	0.4nm,0.5s,baz=206,slow=6.4,SNR=4.2						
WRA	Warramunga Arr	50.15	125	P	P	08 32 10.8	+0.7
	0.3nm,0.4s,baz=305,slow=8.5,SNR=6.2						
ASAR	Alice Springs	51.77	129	P	P	08 32 22.4	+0.1
	0.1nm,0.3s,baz=312,slow=7.3,SNR=5.3						

NIED 19 08:59:00, 2940N×14300E, h38km, Mw4.0 Best double couple: M0 1.08000×10^15 NP1: φs312.00000°, δ67.00000°, λ-84.00000°. NP2: φs118.00000°, δ24.00000°, λ-103.00000°., Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.41	198	P	Pn	08 59 44.1	+7.3
BSO2	Boso 2	5.67	341	eS	Sn	09 01 31.0	+5.6
BSO3	Boso 3	5.79	339	P	Pn	09 00 30.7	+7.4
BSO3				eS	Sn	09 01 33.9	+5.5
JOD2	Odawara 2	6.72	331	P	Pn	09 00 45.5	+9.4
JHU	Hanno	7.16	335	P	Pn	09 00 49.2	+7.1
JHU				eS	Sn	09 02 05.0	+2.9
JRY	Ryogami san	7.45	333	P	Pn	09 00 53.3	+7.2
JRY				eS	Sn	09 02 11.7	+2.5
JHO	Hitachi	7.47	345	P	Pn	09 00 53.6	+7.1
JHO				eS	Sn	09 02 03.5	-6.4
JAG	Ashikaga	7.61	338	P	Pn	09 00 55.1	+6.7
JAG				eS	Sn	09 02 14.0	+0.7
MAT	Matsushiro	8.18	332	P	Pn	09 01 02.8	+6.7
MAT	Matsushiro	8.18	332	P	Pn	09 01 04.6	+8.5
JMM	Marumori	8.64	348	P	Pn	09 01 09.5	+7.0
JMM				eS	Sn	09 02 40.2	+1.6
JYA	Atsumi	9.57	344	P	Pn	09 01 20.9	+5.8
JMK	Ichinoseki	9.64	352	eS	Sn	09 03 03.9	+0.7
JOM	Ohasama	10.15	352	eS	Sn	09 03 17.8	+2.2
JMZ	Minamidaito 2	11.04	254	P	Pn	09 01 42.8	+7.5

WEL 19 09:34:55.6±0.4, 3983S×17726E, h39km±6km, ML3.6/5, Error ellipse: s-maj=3.8km s-min=2.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PXZ	Pawanui	0.36	237	PN	Pn	09 35 04.4	-0.2
PXZ				SN	Sn	09 35 11.9	+1.1
KNZ	Kokohu	0.87	22	PN	Pn	09 35 11.5	+0.1
BKZ	Black Stump Fm	0.89	318	PN	Pn	09 35 10.9	-0.8
BKZ				SN	Sn	09 35 22.7	-0.6
TSZ	Takapari Road	1.02	257	PN	Pn	09 35 12.9	-0.5
MOVZ	Moawhango	1.24	290	PN	Pn	09 35 16.2	-0.2
TUVZ	Tukino	1.36	294	PN	Pn	09 35 19.2	+1.1
WNVZ	Wahianoa	1.38	291	ePN	Pn	09 35 19.1	+0.7
RITZ	Rihia Road	1.38	308	ePN	Pn	09 35 19.1	+0.8
OTVZ	Oturere	1.40	298	ePN	Pn	09 35 19.4	+0.7
DRZ	Dome Shelter	1.42	293	ePN	Pn	09 35 19.9	+0.9
TRVZ	Turoa	1.42	291	ePN	Pn	09 35 20.7	+1.7
FWVZ	Far West T-bar	1.44	293	PN	Pn	09 35 19.8	+0.6
NGZ	Ngauruhoe	1.44	297	PN	Pn	09 35 20.1	+0.9
KRVZ	Karewarewa	1.45	300	ePN	Pn	09 35 19.5	+0.1
WPVZ	Whakapapa	1.46	295	PN	Pn	09 35 20.8	+1.3
WTVZ	West Tongariro	1.48	299	PN	Pn	09 35 20.6	+1.0
MWZ	Matawai	1.51	8	ePN	Pn	09 35 19.6	-0.6
MRZ	Mangatainoka R	1.53	237	PN	Pn	09 35 20.1	-0.3
MRZ				SN	Sn	09 35 39.1	0.0
URZ	Urewera	1.58	356	ePN	Pn	09 35 20.7	-0.4
THZ	Tophouse	3.83	238	SN	Sn	09 36 33.0	-2.6
MQZ	McQueen's Vall	5.18	220	SN	Sn	09 37 02.3	-6.8

*IDC **19** 09:58:30.6±1.5, 1096N×8673W, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/21, mbtmp3.6/4, ML3.4/1, MS3.1/1, Ms1 3.1/1, ms1mx2.0/27, Error ellipse: s-maj=58.4km s-min=12.7km az=31.0*

*NEIC **19** 09:58:31.8±2.5, 1112N×8650W, h9km±17km, mb4.3/1, Error ellipse: s-maj=45.4km s-min=11.4km az=46.0*

*ISCJB **19** 09:58:32.9±0.6, 1105N±003×8677W±004, h10km, mb3.6/4, Error ellipse: s-maj=6.4km s-min=3.0km az=125.9*

*CASC **19** 09:58:35.0±2.6, 1115N×8651W, h0km±4km, MD4.1, ML3.8, mb4.3(NEIC)*

ISC 19 09:58:34.0±0.6, 1110N±003×8671W±004, h10km, n36, σ1^{s}22/46, mb3.6/4, 8C-6D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASN	Masaya	1.04	32	eP	Pg	09 58 53.4	-0.6
MASN				eS	Sg	09 59 07.3	-0.1
TICN	Ticuantepe	1.04	27	⇑eP	Pg	09 58 53.9	0.0
COPN	Copaltepe	1.08	6	⇓eP	Pb	09 58 55.0	+0.3
COPN				eS	Sg	09 59 10.7	+1.9
XAVN	Gruta Xavier	1.11	20	⇑eP	Pb	09 58 55.1	-0.2
XAVN				eS	Sg	09 59 10.1	+0.4
TISN	Laguna Tiscapa	1.12	23	⇓eP	Pb	09 58 55.3	-0.2
TISN				eS	Sb	09 59 10.4	+0.3
MGAN	Managua	1.14	23	⇑eP	Pb	09 58 55.2	-0.5
MGAN				eP		09 58 55.3	
MGAN				⇑eP		09 58 55.3	
MGAN				eS	Sb	09 59 10.5	0.0
MGAN				i		09 59 11.9	
	comp=E,2μm,0.5s						
CONN	Concepcion	1.16	66	eP	Pb	09 58 53.9	-2.2
APYN	Apoyeque	1.18	17	⇓eP	Pb	09 58 56.2	-0.2
MOMJ	Momotombo	1.31	7	⇑eP	Pn	09 58 58.0	-0.3
MOMJ				eS	Sb	09 59 14.6	-0.9
LEON	Leon	1.32	352	⇑eP	Pn	09 58 58.6	+0.2
MIRN	Miramar	1.33	360	⇓eP	Pn	09 58 58.7	+0.1
MIRN				eS	Sb	09 59 17.3	+1.1
RIN3	Volcan Rincon	1.34	103	⇑eP	Pn	09 58 56.5	-2.3
RIN3				eS	Sb	09 59 14.6	-1.8
CNGN	Cerro Negro	1.39	0	⇑eP	Pn	09 58 59.3	-0.1
CNGN				eS	Sn	09 59 18.5	+0.6
VCR	Vista de Mar	1.44	132	eP	Pn	09 58 59.1	-0.9
LIM1	Limonal	1.48	105	⇓eP	Pn	09 58 58.6	-2.1
LIM1				eS	Sn	09 59 17.6	-2.5
TELN	Telica	1.50	355	eP	Pn	09 59 00.8	-0.1
CRIN	San Cristobal	1.63	348	eP	Pn	09 59 02.7	+0.1
CRIN				eS	Sn	09 59 27.6	+4.0
JTS	JuntasAbangare	1.91	115	Pg	Pg	09 59 05.0	-5.5
	comp=E,11nm,0.3s,baz=310,slow=18,SNR=72						
JTS				Lg		09 59 30.3	
	comp=E,14nm,0.3s,baz=59,slow=22,SNR=10						
JTS	JuntasAbangare	1.91	115	eS	Sn	09 59 29.8	-0.7
JCR	Jicaral	2.00	128	eP	Pn	09 59 09.2	+1.4
VACR	Volcan Arenal	2.09	107	eP	Pn	09 59 09.0	0.0
VACR				eS	Sn	09 59 36.6	+1.4
CAO	Cobano	2.10	131	⇓eP	Pn	09 59 11.9	+2.7
EPA	Esparza	2.35	118	eP	Pn	09 59 14.6	+2.0
EPA				eS	Sn	09 59 43.7	+2.1
CGA2	Cerro Gallo 2	2.46	116	eP	Pn	09 59 15.7	+1.7
PRS1	Puriscal	2.61	115	eP	Pn	09 59 16.0	-0.1
VSM	San Miguel	2.77	327	eP	x	09 59 34.3	
VSM				eS	x	10 00 12.7	
LCR2	La Lucha 2	2.98	117	eP	Pn	09 59 22.1	+0.8
LCR2				eS	Sn	09 59 58.7	+1.6
BUS	Buena Vista	3.28	118	eP	Pn	09 59 28.2	+2.8
CMIG	Matias Romero	9.91	308	Pn	Pn	10 00 56.5	0.0
	comp=E,0.3nm,0.3s,baz=141,slow=9.9,SNR=5.5						
LPIG	La Paz	25.89	303	LR	LR	10 14 49.0	
	comp=E,45nm,19.8s,baz=172,slow=38						
WMOK	Wichita Mounta	25.98	337	eP	P	10 04 05.5	-1.2
	comp=E,7.8nm,1.2s,mb4.1						
ANMO	Albuquerque	29.78	326	P	P	10 04 41.2	+0.4
	comp=E,0.3nm,0.4s,mb3.4,baz=139,slow=6.8,SNR=3.3						
SIV	San Ignacio	36.99	136	P	P	10 05 40.8	-2.7
	comp=E,0.6nm,0.7s,mb3.5,baz=331,slow=10,SNR=5.2						
PDAR	Pinedale Array	37.30	332	P	P	10 05 44.4	-1.8
	comp=E,0.5nm,0.6s,mb3.5,baz=121,slow=8.5,SNR=6.7						
ASAR	Alice Springs	139.42	247	PKP	PKPdf	10 18 00.5	-1.0
	comp=E,0.1nm,0.6s,baz=94,slow=3.0,SNR=4.0						
WRA	Warramunga Arr	139.57	252	PKP	PKPdf	10 18 01.8	0.0
	comp=E,0.3nm,0.8s,baz=92,slow=2.9,SNR=4.9						

PGC 19 10:14:34.6, 4982N×12961W, h10km, ML3.6/1, 1C-3D, 184km southwest of Pt. Hardy, Bc West of Vancouver Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPBC	Brooks Peninsu	1.23	73	P	Pn	10 14 55.5	-2.5
BPBC				S	Sb	10 15 10.7	-3.3
BPBC				Trac		10 15 12.1	
	comp=Z,809nm,0.3s						
HOLB	Holberg	1.26	49	⇓P	Pn	10 14 56.1	-2.2
EDB	Eliza Dome	1.61	87	Pn	Pn	10 15 00.8	-2.3
PHC	Port Hardy	1.66	57	⇓Pn	Pn	10 15 01.8	-2.0
PHC				Sn	Sn	10 15 21.1	-4.0
PHC				Trac		10 15 21.6	
	comp=Z,41nm,0.2s						
MAYB	Maynard	1.68	69	Pn	Pn	10 15 01.9	-2.1
MAYB				Sn	Sn	10 15 20.1	-5.5
	comp=Z,48nm,0.2s						
MAYB				Trac		10 15 22.4	
	comp=Z,48nm,0.2s						
WOSB	Woss	1.99	79	⇑Pn	Pn	10 15 07.2	-1.2
WOSB				Trac		10 15 33.3	
	comp=Z,17nm,0.2s						
GDR	Gold River	2.32	90	Pn	Pn	10 15 12.2	-0.7
GDR				Trac		10 15 44.5	
	comp=Z,21nm,0.6s						
NCRB	Newcastle Ridg	2.36	74	Pn	Pn	10 15 12.7	-0.7
NCRB				Sn	Sn	10 15 40.1	-2.4
	comp=Z,20nm,0.3s						
NCRB				Trac		10 15 44.0	
	comp=Z,20nm,0.3s						
BBB	Bella Bella	2.55	21	⇓Pn	Pn	10 15 14.7	-1.3
BBB				Sn	Sn	10 15 42.5	-4.7
BBB				Trac		10 15 45.5	
	comp=Z,12nm,0.2s						
BTB	Buttle Lake	2.68	96	Pn	Pn	10 15 18.3	+0.5
BTB				Trac		10 15 53.3	
	comp=Z,8.0nm,0.2s						
CBB	Campbell River	2.75	84	Pn	Pn	10 15 18.1	-0.7
CBB				Sn	Sn	10 15 50.0	-2.0
CBB				Trac		10 15 50.9	
	comp=Z,7.0nm,0.2s						
OZB	Mount Ozzard	2.83	106	Pn	Pn	10 15 20.6	+0.8
OZB				Sn	Sn	10 15 51.4	-2.5
OZB				Trac		10 15 54.0	
	comp=Z,9.0nm,0.3s						
BNB	Barry Inlet	3.07	335	Pn	Pn	10 15 22.1	-1.1
MGB	Mount Grey	3.32	102	Pn	Pn	10 15 27.0	+0.5
MGB				Trac		10 16 06.8	
	comp=Z,4.0nm,0.3s						
TXB	Texada	3.36	90	Pn	Pn	10 15 27.8	+0.7
TXB				Trac		10 16 09.7	
	comp=Z,4.0nm,0.2s						
WPB	Watts Point	4.16	90	Pn	Pn	10 15 40.0	+1.9
RUBB	Prince Rupert	4.53	355	Pn	Pn	10 15 43.1	-0.1
VDB	Vedder Mountai	4.96	96	Pn	Pn	10 15 51.7	+2.5
FSB	Fort Saint Jam	5.68	33	Pn	Pn	10 15 58.5	-0.6

*ISCJB **19** 10:21:37.0±0.8, 299N±0.1×1390E±04, h411km±16km, mb3.4/11, Error ellipse: s-maj=55.0km s-min=9.4km az=143.3*

IDC 19 10:21:38.0±0.7, 29.97N×139.24E, h410km±14km, mb3.2/11, mb1 3.2/14, mb1mx3.1/25, mbtmp3.9/14, Error ellipse: s-maj=44.0km s-min=8.7km az=73.0
NEIC 19 10:21:38.7, 30.15N×140.12E, h437km, MG3.5(JMA), After JMA.
ISC 19 10:21:38.1±0.7, 30.0N±0.1×139.3E±0.4, h415km±15km, n16, σ0.69/19, mb3.4/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.15	7	P	P	10 22 44.8	+1.2
	14nm,0.3s,baz=192,slow=14,SNR=7.4						
JHJ				S	S	10 23 36.9	+0.2
	12nm,0.3s,baz=250,slow=22,SNR=5.9						
CBIJ	Chichi jima	3.82	138	P	P	10 22 49.5	+0.1
	27nm,0.3s,baz=280,slow=11,SNR=9.8						
CBIJ				S	S	10 23 46.1	-1.2
	35nm,0.3s,baz=286,slow=23,SNR=12						
MJAR	Matsushiro Arr	6.61	352	P	P	10 23 18.3	+0.6
	0.3nm,0.3s,baz=170,slow=10,SNR=3.7						
MJAR				S	S	10 24 38.6	-0.5
	0.2nm,0.3s,baz=175,slow=16,SNR=4.1						
SONM	Songino Array	30.90	315	P	P	10 27 18.3	-0.2
	0.6nm,0.4s,mb3.2,baz=123,slow=7.7,SNR=7.6						
MKAR	Makanchi Array	46.71	308	P	P	10 29 26.9	-0.7
	0.5nm,0.4s,mb3.2,baz=94,slow=9.0,SNR=5.4						
MKAR	Makanchi Array	46.71	308	P	P	10 29 26.9	-0.7
WRA	Warramunga Arr	49.87	186	P	P	10 29 51.6	+0.2
	0.4nm,0.4s,mb3.1,baz=1.5,slow=7.9,SNR=38						
ASAR	Alice Springs	53.59	186	P	P	10 30 20.1	+1.5
	0.3nm,0.4s,mb2.9,baz=359,slow=7.4,SNR=13						
BVAR	Borovoye Array	54.22	316	P	P	10 30 22.6	-0.4
	2.6nm,0.4s,mb3.8,baz=93,slow=8.0,SNR=13						
AKTO	Aktyubinsk	62.22	314	P	P	10 31 16.6	-0.9
	0.8nm,0.4s,mb3.6,baz=76,slow=4.2,SNR=5.6						
ARCES	ARCESS Array B	69.99	340	P	P	10 32 07.1	+0.8
	1.2nm,0.6s,mb3.6,baz=67,slow=9.3,SNR=5.7						
FINES	FINESS Array B	74.25	333	P	P	10 32 30.9	-0.3
	0.5nm,0.3s,mb3.6,baz=67,slow=6.0,SNR=7.2						
HFS	Hagfors	79.78	336	P	P	10 33 01.4	-0.1
	0.6nm,0.4s,mb3.6,baz=66,slow=3.6,SNR=6.9						
NB2	NORSAR Subarra	79.99	337	P	P	10 33 02.8	+0.1
	comp=Z,0.1nm,0.5s,mb2.7,baz=54,slow=5.6						
NOA	NORSAR Array B	79.99	337	P	P	10 33 02.4	-0.4
	comp=Z,0.6nm,0.6s,mb3.4,baz=48,slow=4.9,SNR=3.8						
BRTR	Keskin Array B	82.20	311	P	P	10 33 14.2	0.0
	comp=Z,1.1nm,0.8s,mb3.6,baz=85,slow=4.1,SNR=4.9						

IDC 19 10:27:11.4±2.1, 16.36S×178.26W, h0km, mb4.1/5, mb1 4.4/5, mb1mx4.2/13, mbtmp4.1/5, Error ellipse: s-maj=165.8km s-min=24.2km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.52	240	P	P	10 34 43.7	0.0
	3.3nm,0.9s,baz=92,slow=10,SNR=4.2						
WRA	Warramunga Arr	45.07	258	P	P	10 35 29.6	+0.6
	1.4nm,0.5s,baz=92,slow=7.0,SNR=54						
ASAR	Alice Springs	45.37	253	P	P	10 35 31.7	+0.3
	9.5nm,0.6s,baz=88,slow=8.4,SNR=257						
NVAR	Mina Array Bea	78.22	44	P	P	10 39 14.7	+1.9
	0.4nm,0.7s,baz=232,slow=11,SNR=3.9						
PDAR	Pinedale Array	86.14	43	P	P	10 39 53.3	-1.0
	0.3nm,0.7s,baz=195,slow=5.1,SNR=4.5						

ISCJB 19 10:28:02.9±0.1, 25.60S±0.04×176.80W±0.04, h33km, mb5.3/93, MS4.6/38, Error ellipse: s-maj=7.4km s-min=3.9km az=104.9
MOS 19 10:28:03.4±0.9, 25.54S×176.80W, h34km, mb5.4/39, MS4.6/15, Error ellipse: s-maj=11.0km s-min=7.8km az=63.3
SZGRF 19 10:28:03.8, 25.29S×174.58W, h33km, South of Tonga Islands
IDC 19 10:28:04.1±6.0, 25.48S×176.71W, h33km±43km, mb5.0/15, mb1 5.2/17, mb1mx5.2/18, mbtmp5.2/17, ML4.9/2, MS4.4/15, Ms1 4.4/15, ms1mx4.3/18, Error ellipse: s-maj=18.0km s-min=14.5km az=55.0
HRVD 19 10:28:07.6±0.2, 25.71S×176.16W, h44km, MW5.2/74, Centroid moment Tensor Solution. LP body waves: s63,c107;Mantle waves: s74,c116; Half duration: 1.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.72±.02; $M_{\theta\theta}$0.01±.01; $M_{\phi\phi}$-0.72±.01; $M_{r\theta}$0.09±.01; $M_{\theta\phi}$-0.21±.01; $M_{\phi r}$0.30±.01; Best double couple: $M_0$0.81400×10^{17} NP1:ϕ_s195.00000°, δ34.00000°, λ89.00000°. NP2:ϕ_s15.00000°, δ56.00000°, λ90.00000°. Principal axes: T 0.7800, Plg79.0000°, Azm287.0000°; N 0.0680, Plg0.0000°, Azm195.0000°; P -0.8480, Plg11.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 19 10:28:07.6±1.0, 25.62S×176.82W, h65km±8km, mb5.2/63 Error ellipse: s-maj=7.1km s-min=3.9km az=153.0
BJI 19 10:28:07.6, 25.60S×176.80W, h64km, mB5.5, mb5.5, Ms4.9, Msz4.6
ORF 19 10:28:09.5, 27.34S×176.21W, h30km, mb5.9
BGS 19 10:28:12.1±6.0, 25.62S×176.82W, h65km, mb5.2(NEIC)
ISC 19 10:28:04.8±0.1, 25.59S±0.04×176.76W±0.04, h35km, (h37km±4.7km:pP-P), n760, σ0.69/414, mb5.3/93, MS4.6/38, 135C-93D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.79	195	Pn	Pn	10 29 01.1	+0.4
	353nm,0.3s,baz=256,slow=22,SNR=17						
RAO				Sn	Sn	10 29 46.4	+2.4
	874nm,0.3s,baz=98,slow=23,SNR=9.4						
RAO	Raoul Island	3.79	195	ePn	Pn	10 29 01.3	+0.7
RAO				eSn	Sn	10 29 49.2	+5.2
AFI	Afiamalu	12.53	23	Pn	Pn	10 30 54.3	-6.2
	23nm,0.3s,baz=240,slow=5.9,SNR=18						
AFI				Sn	Sn	10 33 01.1	-18
	13nm,0.3s,baz=69,slow=20,SNR=4.2						
AFI				T		10 43 57.5	
	3.5nm,0.3s,baz=98,slow=20,SNR=3.7						
AFI	Afiamalu	12.53	23	ePn	Pn	10 30 53.9	-6.5
	254nm,1.0s						
PUZ	Puketiti	13.14	198	ePN	Pn	10 30 59.0	-10
PUZ				SN	Sn	10 33 20.0	-14
URZ	Urewera	13.66	201	Pn	Pn	10 31 15.7	-0.2
	1.4nm,0.3s,baz=249,slow=6.2,SNR=6.1						
URZ				Sn	Sn	10 33 36.1	-10
	2.1nm,0.3s,baz=267,slow=22,SNR=5.1						
URZ	Urewera	13.66	201	ePN	Pn	10 31 12.1	-3.8
TSZ	Takapari Road	15.66	201	ePN	Pn	10 31 41.0	-1.7
DZM	Mont Dzumac	15.76	279	eP	Pn	10 31 51.2	+7.2
DZM	Mont Dzumac	15.76	279	Pn	Pn	10 31 50.9	+6.9
	2.7nm,0.3s,baz=80,slow=17,SNR=23						
DZM				LR	LR	10 35 29.6	
	comp=Z,953nm,21.3s,baz=74,slow=28						
RAR	Rarotonga	16.19	78	Pn	Pn	10 31 40.0	-10
	5.5nm,0.3s,baz=250,slow=12,SNR=7.1						
RAR				Sn	Sn	10 34 22.8	-25
	3.9nm,0.3s,baz=280,slow=21,SNR=2.8						
RAR				T		10 48 03.6	
	68nm,0.3s,baz=114,slow=12,SNR=7.7						
RAR	Rarotonga	16.19	78	Pn	Pn	10 31 40.0	-10
RAR				Sn	Sn	10 34 22.8	-25
MRZ	Mangatainoka R	16.33	201	SN	Sn	10 34 34.4	-17
TCW	Tory Channel	17.27	203	ePN	Pn	10 31 58.9	-4.1
TUWZ	Tuamarina	17.58	204	PN	Pn	10 32 01.5	-5.4
NNZ	Nelson	17.61	205	ePN	Pn	10 32 01.4	-5.9
QRZ	Quartz Range	17.62	208	ePN	Pn	10 32 06.5	-0.9
THZ	Tophouse	18.26	205	ePN	Pn	10 32 07.4	-7.9
THZ				SN	Sn	10 35 21.2	-17
KHZ	Kahutara	18.59	203	ePN	Pn	10 32 11.2	-8.1
LTZ	Lake Taylor	19.37	205	ePN	Pn	10 32 22.5	-6.2
RPZ	Rata Peaks	20.64	206	P	P	10 32 36.0	-5.1
	20nm,0.8s,baz=40,slow=7.3,SNR=12						
RPZ				LR	LR	10 40 19.9	
	comp=Z,2μm,21.5s,MS4.4,baz=32,slow=36						
TBI	Tubuai	24.93	91	eLQ		10 38 05.1	
	968nm,29.0s						
TBI				eLR	LR	10 39 29.0	
	3μm,26.0s,baz=265						
PPT	Papeete	26.47	78	eLQ		10 38 44.3	
	2μm,25.5s						
PPT				eLR	LR	10 40 09.0	
	3μm,25.5s,baz=246						
PPT	Papeete	26.47	78	T		11 00 53.8	
	30nm,0.4s,baz=32,slow=20,SNR=6.9						
HNR	Honiara	27.34	302	LR	LR	10 42 54.2	
	comp=Z,1μm,21.0s,MS4.5,baz=181,slow=33						
ARMA	Armidale	28.27	253	eP	P	10 33 57.3	+2.7
CNB	Canberra Magne	30.64	243	⇓iP	P	10 34 17.8	+2.1
	35nm,0.7s,mb5.3						
TOO	Toolangi	34.09	240	⇑iP	P	10 34 46.7	+0.8
TOO				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
TOO	Toolangi	34.09	240	⇑iP	P	10 34 46.7	+0.8
	comp=Z,17nm,0.7s,mb5.1						
CTA	Charters Tower	34.45	271	P	P	10 34 50.7	+1.7
	comp=Z,56nm,0.6s,mb5.7,baz=104,slow=11,SNR=74						
CTA				LR	LR	10 47 19.5	
	comp=Z,980nm,19.2s,MS4.6,baz=98,slow=34						
CTA	Charters Tower	34.45	271	P	P	10 34 50.7	+1.7
CTA				pmax	pmax		
	comp=Z,57nm,0.6s						
CTA				MLR	MLR		
	comp=Z,980nm,19.2s						
CTA	Charters Tower	34.45	271	eP	P	10 34 50.3	+1.3
	comp=Z,52nm,0.6s,mb5.6						
CTAO	Charters Tower	34.45	271	eP	P	10 34 50.5	+1.5
CTAO				pmax	pmax		
	comp=Z,46nm,0.6s,mb5.6						
CTAO	Charters Tower	34.45	271	eP	P	10 34 50.5	+1.6
	comp=Z,46nm,0.6s,mb5.6						
STKA	Stephens Creek	36.88	250	P	P	10 35 10.7	+0.8
	comp=Z,29nm,0.5s,mb5.4,baz=94,slow=9.4,SNR=99						
STKA	Stephens Creek	36.88	250	⇑iP	P	10 35 10.5	+0.6
	comp=Z,31nm,1.2s,mb5.0						
PMG	Port Moresby	37.82	289	P	P	10 35 18.0	+0.1
	comp=Z,101nm,0.7s,mb5.7,baz=95,slow=4.6,SNR=27						
PMG				LR	LR	10 48 47.0	
	comp=Z,701nm,19.3s,MS4.5,baz=179,slow=33						
PMG	Port Moresby	37.82	289	eP	P	10 35 18.0	+0.1
PMG				eP		10 35 18.2	
PMG				epP	pP	10 35 31.3	+3.3
PMG				ePcP	PcP	10 37 34.8	+0.9
RKT	Rikitea	38.04	95	eS	S	10 41 05.0	-4.7
	comp=Z,359nm,30.2s						
RKT				eLR	LR	10 45 17.5	
	comp=Z,1μm,26.8s,baz=257						
TAOE	Nuku Hiva Isla	38.55	71	eS	S	10 41 21.5	+4.0
	comp=Z,1μm,28.0s						
TAOE				eLR	LR	10 45 43.2	
	comp=Z,3μm,25.4s,baz=241						
ADE	Adelaide	39.31	245	⇑iP	P	10 35 30.9	+0.6
AS31	Alice Springs	44.68	262	eP	P	10 36 14.0	-0.2
ASAR	Alice Springs	44.68	262	P	P	10 36 14.2	0.0
	comp=Z,85nm,0.5s,mb5.8,baz=91,slow=6.8,SNR=267						
WB2	Warramunga Arr	45.23	267	eP	P	10 36 18.0	-0.5
WRAB	Tennant Creek	45.23	267	P	P	10 36 18.0	-0.5
	comp=Z,316nm,0.6s,mb6.3,SNR=35						
WRAB	Tennant Creek	45.23	267	d iP	P	10 36 18.5	0.0
WRAB	Tennant Creek	45.23	267	eP	P	10 36 18.0	-0.6
	comp=Z,134nm,1.1s,mb5.7						
WRA	Warramunga Arr	45.24	267	P	P	10 36 18.1	-0.5
	comp=Z,27nm,0.5s,mb5.3,baz=103,slow=8.1,SNR=111						
WRA				PcP	PcP	10 37 58.1	-0.1
	comp=Z,6.7nm,0.8s,baz=100,slow=4.1,SNR=6.8						
WRA				LR	LR	10 54 13.5	
	comp=Z,602nm,20.2s,MS4.5,baz=100,slow=35						
WRA	Warramunga Arr	45.24	267	P	P	10 36 18.1	-0.5
WRA						10 37 58.1	
FORT	Forrest	48.51	251	⇑iP	P	10 36 42.9	-1.2
	comp=Z,213nm,0.6s,mb6.3						
KAKA	Kakadu	49.39	275	eP	P	10 36 49.7	-1.2
	comp=Z,19nm,0.8s,mb5.2						
KIP	Kipapa	50.15	23	eP	P	10 36 56.7	0.0
SBA	Scott Base	52.90	184	eP	P	10 37 19.0	+1.8
SBA				e		10 38 26.6	
SBA				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4						
SBA	Scott Base	52.90	184	eP	P	10 37 19.0	+1.8
	comp=Z,44nm,0.8s,mb5.5						
SBA				e		10 37 22.9	
SBA				ePcP	PcP	10 38 26.6	+0.7
VNDA	Vanda	52.97	186	P	P	10 37 18.8	+1.1
	comp=Z,21nm,0.8s,mb5.1,baz=0.7,slow=8.4,SNR=39						
VNDA				LR	LR	10 56 05.5	
	comp=Z,84nm,21.7s,MS3.8,baz=358,slow=32						
VNDA	Vanda	52.97	186	eP	P	10 37 18.6	+0.8
	comp=Z,17nm,0.7s,mb5.1						
FITZ	Fitzroy Crossi	53.64	266	⇑iP	P	10 37 22.2	-0.5
	comp=Z,84nm,0.8s,mb5.7						
GUMO	Guam	53.97	312	P	P	10 37 23.3	-1.8
	comp=Z,51nm,0.7s,mb5.6,baz=170,slow=5.2,SNR=8.4						
KLBR	Kellerberrin	57.06	248	eP	P	10 37 45.9	-1.4
	comp=Z,27nm,0.6s,mb5.5						
MBWA	Marble Bar	57.99	260	eP	P	10 37 52.8	-1.0
	comp=Z,16nm,0.5s,mb5.3						
MBWA				ePcP	PcP	10 38 45.2	-0.4
MUN	Mundaring	58.27	247	eP	P	10 37 54.8	-1.0
CASY	Casey	59.90	207	⇑iP	P	10 38 06.2	-0.9
CASY				eP		10 38 06.3	
QSPA	South Pole Qui	64.50	180	eP	P	10 38 38.1	+0.2
	comp=Z,44nm,0.7s,mb5.6						
MIR	Mirnyy	66.91	206	c iP	P	10 38 54.0	+0.6
MIR				i		10 39 30.0	
MIR				pmax	pmax		
	comp=Z,400nm,1.8s,mb6.2						
KKM	Kota Kinabalu	72.20	286	eP	P	10 39 25.6	-0.5
MJAR	Matsushiro Arr	74.97	324	P	P	10 39 41.5	-0.8
	comp=Z,8.4nm,0.8s,mb4.7,baz=156,slow=5.7,SNR=20						
MJAR				LR	LR	11 07 11.8	
	comp=Z,246nm,21.0s,MS4.5,baz=165,slow=31						
MAJO	Matsushiro	74.97	324	eP	P	10 39 39.3	-3.0
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MAJO	Matsushiro	74.97	324	eP	P	10 39 39.3	-3.0
	comp=Z,9.1nm,0.8s,mb4.8						
MAT	Matsushiro	74.97	324	P	P	10 39 41.1	-1.2
MAT				S	S	10 49 14.6	-2.9
MAT	Matsushiro	74.97	324	eP	P	10 39 41.0	-1.3
MAT				eS	S	10 49 15.0	-2.5
MAT				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MAT				MLR	MLR		
	comp=Z,370nm,22.0s,MS4.6						
MAT	Matsushiro	74.97	324	eP	P	10 39 41.0	-1.3
	comp=Z,10nm,0.9s,mb4.8						
MAT				eS	S	10 49 15.0	-2.5
MAT				LR	LR		
	comp=Z,370nm,22.0s,MS4.6						
KSM	Kuching	75.28	279	eP	P	10 39 43.7	-0.4
AMKA	Amchitka	76.71	357	eP	P	10 39 50.6	-1.6
MAW	Mawson	77.19	200	P	P	10 39 55.3	+0.3
	comp=Z,30nm,0.6s,mb5.4,baz=131,slow=6.8,SNR=136						
MAW				LR	LR	11 13 34.0	
	comp=Z,335nm,18.6s,MS4.7,baz=84,slow=35						
MAW	Mawson	77.19	200	P	P	10 39 55.3	+0.4
MAW				pmax	pmax		
	comp=Z,30nm,0.6s						
MAW				MLR	MLR		
	comp=Z,335nm,18.6s						
MAW	Mawson	77.19	200	⇑iP	P	10 39 55.2	+0.3
	comp=Z,28nm,0.8s,mb5.2						
NIKO	Nikolski	78.53	5	eP	P	10 40 01.2	-1.2
ASAJ	Asahikawa	78.72	331	P	P	10 40 04.5	+1.1
	baz=224,slow=3.9						
ASAJ				LR	LR	11 11 38.3	
	comp=Z,261nm,19.8s,MS4.6,baz=169,slow=33						
SBC	Santa Barbara	80.55	45	⇑P	P	10 40 14.9	+1.5
	baz=81						
V04C	Ramage Ranch,	80.60	43	⇓P	P	10 40 13.4	-0.2
	baz=81						
V03C	Hunter Liggett	80.62	43	⇓P	P	10 40 14.0	+0.2
	baz=81						
HAST	UC Hastings Re	80.67	42	⇓P	P	10 40 14.2	+0.2
	baz=81,SNR=7.9						
FARB	Farallon Islan	80.68	40	⇓P	P	10 40 13.9	-0.2
	baz=81						
CIS	Catalina Islan	80.74	46	⇑P	P	10 40 12.8	-1.7
	baz=81						
BLG	Laguna Peak	80.75	45	⇓P	P	10 40 13.9	-0.6
	baz=81						
PKM	Peak Mountain	80.78	44	⇓P	P	10 40 15.4	+0.8
	baz=81						
BNLO	Ben Lomond (Sa	80.79	41	⇑P	P	10 40 14.9	+0.2
	baz=81						
SMMC	Simmler	80.93	44	⇓P	P	10 40 15.7	+0.3
	baz=81						
YSS	Yuzh-Sakhalins	80.93	333	αeP	P	10 40 16.0	+0.5
YSS				e	pP	10 40 26.0	-0.5
YSS				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.6						
YSS	Yuzh-Sakhalins	80.93	333	eP	P	10 40 16.4	+0.9
	comp=Z,63nm,1.0s,mb5.5						
JRSC	Jasper Ridge	80.93	41	⇓P	P	10 40 15.6	+0.2
	baz=81						
SAO	San Andreas Ge	80.98	42	eP	P	10 40 16.3	+0.6
SAO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
SAO	San Andreas Ge	80.98	42	eP	P	10 40 16.3	+0.6
	comp=Z,12nm,1.0s,mb4.8						
PKD	Parkfield	81.00	43	⇓P	P	10 40 15.7	-0.1
	baz=81						
FMP	Fort Macarthur	81.00	46	⇓P	P	10 40 15.4	-0.4
	baz=81						
LRV	Little Rabbit	81.02	42	eP	P	10 40 16.4	+0.5
MCCM	Marconi Confer	81.05	40	⇑P	P	10 40 16.0	-0.1
	baz=81						
U04C	Hernandez Rese	81.12	43	⇑P	P	10 40 17.2	+0.8
	baz=81,SNR=8.6						
PET	Petropavlovsk	81.16	345	eP	P	10 40 16.7	+0.1
PET				eS	S	10 50 31.9	+7.8
PET				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
PET				smax			
	comp=N,100nm,13.7s						
PACP	Pacheco Peak	81.24	42	⇓P	P	10 40 17.5	+0.4
	baz=82,SNR=6.9						
109C	Camp Elliot, M	81.27	47	⇑P	P	10 40 16.6	-0.6
	baz=82						
DECC	Green Verdugo	81.32	46	⇓P	P	10 40 16.9	-0.6
	baz=82						
V05C	Boulder Hill,	81.35	43	⇓P	P	10 40 18.0	+0.4
	baz=82						
WENL	Wente Brothers	81.36	41	⇑P	P	10 40 18.2	+0.4
	baz=82						
CVS	Carmenet Viney	81.43	40	⇓P	P	10 40 17.9	-0.2
	baz=82						
NSHM	Saint Helena R	81.46	40	eP	P	10 40 18.5	+0.2
MWC	Mount Wilson	81.47	46	eP	P	10 40 18.7	+0.4
U05C	Westside ANR,	81.51	43	⇓P	P	10 40 19.1	+0.5
	baz=82						
HOPS	Hopland	81.52	39	⇓P	P	10 40 18.5	-0.1
	baz=82						
BDM	Black Diamond	81.52	41	⇓P	P	10 40 19.0	+0.4
	baz=82						
T05C	Eagle Field, D	81.54	42	⇑P	P	10 40 18.9	+0.3
	baz=82						
S04C	Ingram Canyon,	81.54	41	⇑P	P	10 40 18.7	0.0
	baz=82,SNR=5.9						
ARVC	Arvin	81.55	45	⇑P	P	10 40 18.6	-0.1
	baz=82						
MURC	Murrieta	81.65	47	⇑P	P	10 40 19.4	+0.1
	baz=82						
P01C	Double 8 Ranch	81.69	39	⇓P	P	10 40 19.8	+0.3
	baz=82						
MONP	Monument Peak	81.73	48	⇓P	P	10 40 20.0	+0.3
	baz=82						
BFSC	Mount Baldy St	81.74	46	⇓P	P	10 40 19.5	-0.3
	baz=82						
MNRC	McLaughlin Nat	81.80	40	⇓P	P	10 40 20.3	+0.3
	baz=82,SNR=5.3						
DVTC	Desert V Tower	81.80	48	⇑P	P	10 40 19.7	-0.4
	baz=82						
SSE	Sheshan	81.82	310	P	P	10 40 18.5	-1.6
SSE				PP	PP	10 43 25.9	-1.6
SSE				S	S	10 50 30.9	0.0
SSE				AMB	AMB		
	comp=Z,26nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,305nm,4.1s						
SSE				LR	LR		
	comp=N,72nm,25.0s,MS4.2						
SSE				LR	LR		
	comp=E,98nm,25.0s,MS4.2						
SSE				LR	LR		
	comp=Z,144nm,25.0s,MS4.2						
VES	Vestal, Richgr	81.84	44	P	P	10 40 20.2	0.0
	baz=82,SNR=8.2						
Q03C	Winters	81.89	40	⇑P	P	10 40 21.2	+0.7
	baz=82						
EDW2	Edwards Air Fo	81.93	45	⇑P	P	10 40 20.6	-0.1
	baz=82,SNR=11						
SYO	Syowa Base	82.03	192	⇓eP	P	10 40 19.7	-1.6
SYO	Syowa Base	82.03	192	⇓epP	P	10 40 23.2	+1.9
S05C	Merced	82.04	42	⇓P	P	10 40 22.3	+1.0
	baz=82						
RCTC	Rector, Farmer	82.04	43	⇓P	P	10 40 21.4	+0.1
	baz=82						
ISA	Isabella	82.11	44	eP	P	10 40 21.9	+0.2
ISA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ISA	Isabella	82.11	44	eP	P	10 40 21.9	+0.3
	comp=Z,9.0nm,0.9s,mb4.7						
ISA	Isabella	82.11	44	⇓P	P	10 40 21.7	0.0
	baz=82,SNR=17						
PFO	Pinyon Flat Ob	82.14	47	eP	P	10 40 21.8	-0.1
PFO				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
PFO	Pinyon Flat Ob	82.14	47	eP	P	10 40 21.8	-0.1
	comp=Z,11nm,1.2s,mb4.7						
PFO	Pinyon Flat Ob	82.14	47	⇓P	P	10 40 21.8	0.0
	baz=82						
GASB	Alder Springs	82.16	39	⇑P	P	10 40 23.1	+1.2
	baz=82,SNR=5.0						
SWSC	Sam W. Stewart	82.18	48	⇑P	P	10 40 21.9	-0.2
	baz=82						
T06C	Millerton Lake	82.20	43	⇑P	P	10 40 21.8	-0.4
	baz=82,SNR=9.5						
BBRC	Big Bear Sol-O	82.24	46	⇑P	P	10 40 22.3	0.0
	baz=82						
R04C	Big Horse Ranc	82.27	41	⇓P	P	10 40 21.9	-0.6
	baz=83						
Q04C	Lincoln	82.39	40	⇓P	P	10 40 22.8	-0.4
	baz=83						
HELL	Mitchell Peak,	82.41	43	P	P	10 40 23.0	-0.3
	baz=83,SNR=9.1						
SUTB	Sutter Butte	82.41	40	⇓P	P	10 40 22.7	-0.6
	baz=83						
CMB	Columbia Colle	82.45	42	eP	P	10 40 23.3	-0.2
CMB				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
CMB	Columbia Colle	82.45	42	eP	P	10 40 23.3	-0.1
	comp=Z,12nm,1.0s,mb4.8						
CMB	Columbia Colle	82.45	42	⇑P	P	10 40 23.2	-0.2
	baz=83,SNR=15						
O02C	Red Bluff	82.48	39	⇑P	P	10 40 23.8	+0.2
	baz=83,SNR=10						
LRMC	Laurel Mountai	82.49	45	P	P	10 40 23.9	+0.2
	baz=83,SNR=6.3						
RRX	Edison Barstow	82.57	46	⇑P	P	10 40 23.9	-0.2
	baz=83						
N02C	Big Bar	82.62	38	⇑P	P	10 40 24.7	+0.3
	baz=83						
KCC	Kaiser Creek	82.64	43	⇑P	P	10 40 24.9	+0.5
	baz=83,SNR=5.8						
OHCM	Honcut	82.66	40	eP	P	10 40 24.1	-0.4
S06C	San Francisco	82.68	42	⇑P	P	10 40 24.2	-0.4
	baz=83,SNR=8.8						
BELC	Belle Mtn.	82.68	47	⇑P	P	10 40 24.8	+0.1
	baz=83,SNR=11						
LAVA	Lava Cap Winer	82.71	41	⇑P	P	10 40 24.2	-0.6
	baz=83						
O03C	Acorn Hollow,	82.78	39	⇓P	P	10 40 25.2	0.0
	baz=83						
ORV	Oroville	82.80	40	⇓P	P	10 40 24.9	-0.4
	baz=83						
CWC	Cottonwood Cre	82.85	44	⇓P	P	10 40 25.7	+0.2
	baz=83						
WDC	Whiskeytown Da	82.89	39	eP	P	10 40 25.9	+0.2
WDC				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.0						
WDC	Whiskeytown Da	82.89	39	eP	P	10 40 25.9	+0.2
	comp=Z,19nm,1.1s,mb5.0						
WDC	Whiskeytown Da	82.89	39	P	P	10 40 26.0	+0.3
	baz=83,SNR=7.6						
GLA	Glamis	82.90	48	⇑P	P	10 40 26.2	+0.5
	baz=83,SNR=8.3						
SNAA	Sanae	82.91	178	⇑iP	P	10 40 24.7	-1.2
SNAA				e		10 40 25.5	
SNAA				e		10 40 26.8	
SNAA				e	pP	10 40 33.3	-3.6
SNAA				e	pP	10 40 36.5	-0.4
SNAA				e		10 40 41.4	
SNAA				e		10 43 40.3	
SNAA	Sanae	82.91	178	eP	P	10 40 24.8	-1.1
SNAA				pmax	pmax		
	comp=Z,33nm,0.9s						
SNAA	Sanae	82.91	178	eP	P	10 40 24.8	-1.1

comp=Z,33nm,0.9s,mb5.4
GSC Goldstone 82.95 46 ⇑P P 10 40 25.9 -0.2
baz=83,SNR=11
HEC Hector,Ludlow 82.97 46 ⇑P P 10 40 26.2 0.0
baz=83,SNR=7.5
MPMC Manual Prospec 82.98 45 P P 10 40 26.6 +0.4
baz=83,SNR=22
DAC Darwin (Calif) 83.05 44 *e*P P 10 40 26.7 +0.1
DAC pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
DAC Darwin (Calif) 83.05 44 *e*P P 10 40 26.7 +0.1
comp=Z,3.6nm,0.9s,mb4.4
R05C Kirkwood Meado 83.07 41 P P 10 40 26.8 +0.1
baz=83,SNR=14
VLA Vladivostok 83.08 325 *e*P P 10 40 26.7 0.0
VLA pmax pmax
comp=Z,25nm,1.3s,mb5.1
MTUM Tungsten Hills 83.12 43 *e*P P 10 40 27.4 +0.5
MLAC Mammoth Lakes 83.13 43 ⇓P P 10 40 27.4 +0.4
baz=83
TIN Tinemaha 83.14 43 ⇑P P 10 40 27.3 +0.3
baz=83
P05C Yuba Gap, Truc 83.15 40 ⇓P P 10 40 27.2 +0.1
baz=83,SNR=10
M02C Callahan 83.26 38 ⇓P P 10 40 28.3 +0.7
baz=84,SNR=9.7
R07C Lee Vining 83.30 42 ⇑P P 10 40 28.1 +0.3
baz=84
WAKR Walker 83.33 42 *e*P P 10 40 28.3 +0.3
R06C Coleville 83.33 42 P P 10 40 28.1 +0.1
baz=84,SNR=12
IRM Iron Mountain 83.34 47 ⇑P P 10 40 28.2 +0.1
baz=84,SNR=14
L02A Cave Junction 83.37 37 ⇑P P 10 40 28.7 +0.5
baz=84
GMRC Granite Mounta 83.38 47 P P 10 40 28.7 +0.4
baz=84,SNR=6.3
O05C Quincy 83.40 40 ⇑P P 10 40 28.0 -0.4
baz=84,SNR=6.3
Y12C Blythe 83.51 48 ⇓P P 10 40 29.1 +0.1
baz=84,SNR=5.1
YBH Yreka Blue Hor 83.57 38 P P 10 40 28.5 -0.7
comp=Z,9.7nm,0.9s,mb4.9,baz=165,slow=1.4,SNR=18
YBH LR LR 11 10 19.0
comp=Z,187nm,19.8s,MS4.5,baz=139,slow=30
YBH Yreka Blue Hor 83.57 38 *e*P P 10 40 29.8 +0.5
YBH pmax pmax
comp=Z,18nm,1.1s
YBH Yreka Blue Hor 83.57 38 *e*P P 10 40 29.8 +0.5
comp=Z,18nm,1.1s,mb5.1
YBH Yreka Blue Hor 83.57 38 ⇓P P 10 40 29.6 +0.3
baz=84,SNR=8.1
M03C McCloud 83.59 38 ⇑P P 10 40 29.4 +0.1
baz=84,SNR=8.8
TUQ Turquoise Mtn. 83.60 46 ⇑P P 10 40 29.7 +0.2
baz=84,SNR=7.0
FURC Furnace Creek, 83.64 45 P P 10 40 29.7 +0.1
baz=84,SNR=10
GRAC Grapevine Rang 83.64 44 ⇑P P 10 40 29.8 +0.1
baz=84,SNR=16
WCN Washoe City 83.65 41 P P 10 40 30.0 +0.3
baz=84,SNR=14
HATC Hat Creek Radi 83.66 39 P P 10 40 30.0 +0.4
baz=84,SNR=7.6
SHOC Shoshone 83.66 45 ⇓P P 10 40 29.6 -0.1
baz=84,SNR=16
BEKR Beckwourth 83.66 40 P P 10 40 29.8 +0.1
baz=84,SNR=15
VNA1 Neumayer--Stat 83.68 176 ⇑*i*P P 10 40 29.4 -0.4
VNA1 *e* 10 40 29.9
VNA1 *e* 10 40 31.2
VNA1 *e* 10 40 34.2
VNA1 *e* 10 40 34.7
VNA1 *e* 10 40 36.3
VNA1 *e* pP 10 40 39.6 -1.3
VNA1 *e* 10 40 45.0
VNA1 *e* 10 43 46.6
MAIT Maitri 83.72 183 *e*P P 10 40 28.7 -1.3
NVL N'lazarevskaya 83.72 183 ⇑*i*P P 10 40 27.6 -2.4
NVL pmax pmax
comp=Z,30nm,1.4s,mb5.2
NVL MLR MLR
comp=Z,390nm,19.0s,MS4.8
P06A Stead Airport, 83.81 41 ⇑P P 10 40 30.5 +0.1
baz=84
U10A Ash Meadows, A 83.94 45 ⇓P P 10 40 31.3 +0.1
baz=84,SNR=13
ELFS Eagle Lake Fie 83.94 39 ⇓P P 10 40 31.1 0.0
baz=84,SNR=5.0
NVAR Mina Array Bea 83.96 42 P P 10 40 31.2 0.0
comp=Z,9.5nm,0.9s,mb4.9,baz=211,slow=6.4,SNR=55
NVAR PKKPbc PKKPbc 10 58 47.9 +2.0
comp=Z,0.4nm,0.7s,baz=151,slow=2.1,SNR=4.5
NVAR PKPPKP 11 06 57.1
comp=Z,0.6nm,0.9s,baz=123,slow=2.7,SNR=5.0
NVAR Mina Array Bea 83.96 42 P P 10 40 31.2 0.0
NVAR PKKPbc PKKPbc 10 58 47.9 +2.0
NVAR P'P' 11 06 57.1
QIZ Qiongzhong 83.98 294 P P 10 40 32.6 +1.3
QIZ AMB AMB
comp=Z,24nm,1.7s,mb5.0
QIZ LR LR
comp=Z,115nm,15.7s,MS4.4
Q07A Schurz 83.98 42 ⇓P P 10 40 31.7 +0.4
baz=84
NJ2 Nanjing 83.99 310 *e*P P 10 40 32.4 +1.0
NJ2 PP PP 10 43 47.4 +2.1
NJ2 S S 10 50 48.0 -5.0
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
NJ2 AMB AMB
comp=Z,1μm,3.6s
NJ2 LR LR
comp=N,370nm,14.0s
NJ2 LR LR
comp=E,400nm,24.0s
NJ2 LR LR
comp=Z,270nm,22.0s
Y13A Salome 84.02 48 ⇓P P 10 40 31.9 +0.3
baz=84,SNR=7.5
R08A Mina 84.03 42 ⇓P P 10 40 31.6 0.0
baz=84
M04C Macdoel 84.09 38 P P 10 40 32.0 +0.2
baz=84,SNR=6.4
PDMCI Parker Dam,Lak 84.10 48 ⇑P P 10 40 31.9 0.0
baz=84,SNR=5.6
PAHR Pah Rah Range 84.13 41 *e*P P 10 40 32.1 0.0
comp=Z,19nm,1.2s,mb5.1
O06A Flanigan 84.17 40 ⇑P P 10 40 31.8 -0.5
baz=84,SNR=12
S09A Goldfield 84.18 43 ⇑P P 10 40 32.2 -0.2
baz=84,SNR=7.5
M05C Lookout 84.19 39 ⇑P P 10 40 32.4 0.0
baz=84,SNR=8.9
W12A Cal Nev Ari 84.21 46 ⇓P P 10 40 32.8 +0.3
baz=84,SNR=10
J02A Umpqua 84.22 36 ⇓P P 10 40 32.8 +0.2
baz=84
L04A Klamath Falls 84.32 38 ⇓P P 10 40 33.2 +0.1
baz=85,SNR=6.6
Z14A Wintersburg 84.35 49 ⇑P P 10 40 33.4 +0.2
baz=85,SNR=6.6
TPH Tonopah 84.40 43 *e*P P 10 40 33.9 +0.4
TPH pmax pmax
comp=Z,27nm,1.1s,mb5.3
TPH Tonopah 84.40 43 *e*P P 10 40 33.9 +0.4
comp=Z,27nm,1.1s,mb5.3
Q08A Gabbs 84.46 42 ⇓P P 10 40 33.5 -0.3
baz=85,SNR=14
115A Sonoran Desert 84.47 50 ⇓P P 10 40 34.0 +0.2
baz=85
M06C Likely Place G 84.47 39 ⇓P P 10 40 33.4 -0.4
baz=85
V12A Nelson 84.47 46 ⇑P P 10 40 34.0 +0.1
baz=85,SNR=12
X13A Yucca 84.48 48 ⇓P P 10 40 34.2 +0.3
baz=85,SNR=13
I02A Mapleton 84.52 35 ⇓P P 10 40 34.3 +0.2
baz=85
N06A Buffalo Meadow 84.54 40 P P 10 40 34.0 -0.2
baz=85,SNR=14
J03A Ideyld Park 84.55 36 ⇓P P 10 40 34.3 +0.1
baz=85
U11A Corn Creek 84.55 45 ⇑P P 10 40 34.3 +0.1
baz=85,SNR=7.7
R09A Tonopah 84.60 43 P P 10 40 34.6 +0.1
baz=85,SNR=25
Y14A Wickenburg 84.65 48 ⇑P P 10 40 34.8 +0.1
baz=85,SNR=13
K04A Chilquin 84.70 37 ⇑P P 10 40 35.1 +0.1
baz=85
O07A Toulon 84.72 41 P P 10 40 35.1 0.0
baz=85,SNR=29
W13A Hualapai Mount 84.74 47 ⇓P P 10 40 35.5 +0.3
baz=85,SNR=9.6
SHPR Sheep Range 84.74 45 *e*P P 10 40 35.6 +0.4
116A Eloy 84.75 50 ⇑P P 10 40 35.4 +0.2
baz=85,SNR=6.2
I03A Eugene 84.79 36 ⇓P P 10 40 35.9 +0.4
baz=85
L05A Lakeview 84.82 38 P P 10 40 36.1 +0.5
baz=85,SNR=8.9
P08A Dixie Valley 84.90 41 ⇓P P 10 40 36.1 +0.1
baz=85,SNR=12
Q09A Carvers 84.90 43 ⇓P P 10 40 35.8 -0.2
baz=85
PLCA Paso Flores 84.97 133 P P 10 40 36.7 +0.4
comp=Z,9.9nm,0.9s,mb4.9,baz=221,slow=4.7,SNR=19
PLCA LR LR 11 09 49.6
comp=Z,155nm,20.2s,MS4.4,baz=252,slow=30
PLCA Paso Flores 84.97 133 *e*P P 10 40 36.8 +0.5
PLCA LR LR 11 09 49.6
X14A Yava 85.03 48 ⇑P P 10 40 37.2 +0.5
baz=85,SNR=10
U12A Valley of Fire 85.10 46 ⇑P P 10 40 37.7 +0.7
baz=85,SNR=22
R10A Warm Springs 85.11 43 ⇑P P 10 40 37.0 0.0
baz=85,SNR=28
TUC Tucson 85.25 51 *e*P P 10 40 38.4 +0.7
TUC pmax pmax
comp=Z,20nm,1.0s,mb5.2
TUC Tucson 85.25 51 *e*P P 10 40 38.4 +0.7
comp=Z,20nm,1.0s,mb5.2
MDJ Mudanjiang 85.32 325 P P 10 40 38.9 +0.8
MDJ AMB AMB
comp=Z,31nm,1.2s,mb5.3
MDJ AMB AMB
comp=Z,88nm,3.6s
MDJ LR LR
comp=N,118nm,22.1s,MS4.3
MDJ LR LR
comp=E,77nm,21.5s,MS4.3
MDJ LR LR
comp=Z,184nm,23.4s,MS4.4
W14A Seligman 85.33 47 ⇑P P 10 40 38.8 +0.7
baz=86,SNR=15
P09A Austin 85.37 42 ⇓P P 10 40 38.0 -0.3
baz=86,SNR=6.0
HABR Khabarovsk 85.41 330 ⇑*i*P P 10 40 39.6 +1.1
HABR *e*S S 10 51 01.2 -5.9
HABR pmax pmax
comp=Z,108nm,1.6s,mb5.7
J05A Fort Rock 85.42 37 ⇑P P 10 40 38.5 -0.1
baz=86,SNR=15
X15A Humboldt 85.48 48 ⇓P P 10 40 38.9 0.0
baz=86,SNR=18
N08A GE Springer Mi 85.55 41 ⇑P P 10 40 38.8 -0.4
baz=86,SNR=17
KULM Kulim 85.60 278 *e*P P 10 40 40.4 +0.9
K06A Valley Falls 85.64 38 ⇑P P 10 40 39.8 0.0
baz=86,SNR=10
L07A Adell 85.65 39 ⇑P P 10 40 39.9 +0.1
baz=86,SNR=10
G03A Yamhill 85.71 35 ⇓P P 10 40 42.1 +2.0
baz=86
O09A Fish Creek Ran 85.73 41 P P 10 40 40.1 0.0
baz=86,SNR=10
P10A Eureka 85.83 42 ⇑P P 10 40 40.5 -0.1
baz=86
M08A Happy Creek Ra 85.83 40 ⇑P P 10 40 40.6 -0.1
baz=86,SNR=5.2
H04A Detroit Lake 85.85 36 ⇑P P 10 40 39.9 -0.9
baz=86
W15A Williams 85.86 48 ⇑P P 10 40 41.0 +0.2
baz=86
BMN Battle Mountai 85.87 41 *e*P P 10 40 40.7 -0.1
BMN pmax pmax
comp=Z,21nm,1.2s,mb5.2
BMN Battle Mountai 85.87 41 *e*P P 10 40 40.7 -0.1
comp=Z,21nm,1.2s,mb5.2
N09A Rock Creek Ran 85.96 41 ⇑P P 10 40 41.2 -0.1
baz=86,SNR=9.5
I05A Bend 85.99 36 ⇓P P 10 40 41.5 0.0
baz=86
F03A Seaside 85.99 34 ⇑P P 10 40 41.5 +0.1
baz=86
J06A Christmas Vall 85.99 38 P P 10 40 41.0 -0.4
baz=86,SNR=7.3
G04A Mulino 86.05 35 ⇑P P 10 40 41.4 -0.3
baz=86
PSI Prapat 86.07 275 LR LR 11 18 33.0
comp=Z,332nm,18.6s,MS4.8,baz=121,slow=35
P11A Circle Ranch, 86.22 43 ⇑P P 10 40 42.1 -0.5
baz=86
O10A Cortez Mining, 86.22 42 ⇓P P 10 40 42.2 -0.3
baz=86,SNR=6.0
WVOR Wild Horse Val 86.31 39 *e*P P 10 40 42.6 -0.4
WVOR pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
WVOR Wild Horse Val 86.31 39 *e*P P 10 40 42.6 -0.4
comp=Z,9.6nm,1.1s,mb4.9
L08A Fields 86.33 39 P P 10 40 43.0 -0.1
baz=87,SNR=6.3
H05A Madras 86.33 36 ⇑P P 10 40 42.9 -0.2
baz=87
M09A Marrel Ranch, 86.36 40 P P 10 40 43.3 +0.1
baz=87,SNR=8.3
WHN Wuhan 86.36 306 ⇓P P 10 40 44.5 +1.2
E03A Lebam 86.41 34 ⇓P P 10 40 43.8 +0.3
baz=87
I06A Prineville 86.42 37 ⇑P P 10 40 43.7 +0.1
baz=87,SNR=10
Q12A Willow Creek R 86.48 44 P P 10 40 44.0 +0.2
baz=87,SNR=6.8
N10A Dunphy 86.48 41 ⇑P P 10 40 43.7 -0.1
baz=87
CCUT Cedar City 86.52 45 *e*P P 10 40 44.3 +0.3
F04A Amboy 86.57 35 ⇓P P 10 40 44.8 +0.5
baz=87
K08A Mann Creek Ran 86.59 39 ⇑P P 10 40 44.2 -0.2
baz=87,SNR=11
L09A Wilkinson Ranc 86.61 40 ⇑P P 10 40 44.2 -0.2
baz=87,SNR=6.0
ARUT Antelope Range 86.61 45 *e*P P 10 40 44.2 -0.3
O11A Cowboy Ranch, 86.63 42 ⇑P P 10 40 44.6 0.0
baz=87
WUAZ Wupatki 86.65 48 *e*P P 10 40 45.2 +0.5
comp=Z,21nm,1.1s,mb5.3
P12A McGill 86.69 43 ⇑P P 10 40 44.8 0.0
baz=87,SNR=9.6
D03A Wikkah Elem. 86.70 33 ⇑P P 10 40 45.5 +0.5
baz=87
I07A Izee 86.89 37 P P 10 40 45.9 0.0
baz=87,SNR=6.6
M10A I.L. Ranch, Tu 86.95 41 ⇑P P 10 40 46.0 -0.1
baz=87,SNR=9.1
N11A Elko Archery C 87.00 42 ⇑P P 10 40 45.8 -0.6
baz=87
K09A Rome 87.00 39 ⇓P P 10 40 45.9 -0.5
baz=87,SNR=16
CN2 Changchun 87.00 322 ⇑P P 10 40 46.5 +0.1
CN2 AMB AMB
comp=Z,40nm,1.5s,mb5.4
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,11.0s,MS4.9
CN2 LR LR
comp=E,200nm,11.0s,MS4.9
CN2 LR LR
comp=Z,300nm,21.0s
D04A Dobbs Creek Ra 87.18 34 ⇑P P 10 40 46.5 -0.8
baz=88
O12A Currie 87.27 43 P P 10 40 47.5 -0.2
baz=88,SNR=7.5
I08A Drewsey 87.30 38 ⇑P P 10 40 47.2 -0.6
baz=88,SNR=5.9
E05A Randle 87.33 34 ⇑P P 10 40 47.3 -0.7
baz=88,SNR=5.4
M11A Holland Ranch, 87.34 41 ⇓P P 10 40 47.9 -0.1
baz=88,SNR=7.8
N12A Clover Valley, 87.44 42 ⇑P P 10 40 48.1 -0.4
baz=88,SNR=10.0
KLR Kul'dur 87.46 329 *e*P P 10 40 45.2 -3.4
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,78nm,1.8s,mb5.6
GNW Green Mountain 87.48 33 *e*P P 10 40 48.6 -0.1
B04A Port Angeles 87.48 33 ⇓P P 10 40 48.8 0.0
baz=88
C04A Brinnon 87.51 33 ⇓P P 10 40 48.9 0.0
baz=88
TIA Tai'an 87.53 312 P P 10 40 50.0 +1.0
TIA AMB AMB
comp=Z,86nm,1.1s,mb5.9
H08A Prairie City 87.63 37 ⇓P P 10 40 48.7 -0.7
baz=88
D05A Enumclaw 87.64 34 ⇑P P 10 40 49.8 +0.4
baz=88,SNR=8.4
I09A Lost Marbles R 87.80 38 ⇑P P 10 40 49.5 -0.7
baz=88
MSU Marysvale 87.84 45 *e*P P 10 40 51.1 +0.7
M12A Wells 87.86 42 P P 10 40 50.4 -0.2
baz=88,SNR=7.5
RMW Rattlesnake Mo 87.92 34 P P 10 40 50.6 -0.2
N13A Wendover, West 87.95 42 ⇑P P 10 40 50.7 -0.3
baz=88,SNR=9.1
SVW2 Sparrevohn 88.07 10 *e*P P 10 40 50.5 -1.0
C05A Tolt Reservoir 88.13 34 ⇓P P 10 40 51.4 -0.5
baz=88,SNR=10
TWW Teanaway 88.18 34 P P 10 40 52.6 +0.6
M13A Montello 88.27 42 ⇑P P 10 40 52.0 -0.5
baz=89,SNR=13
H09A Durkee 88.28 38 ⇓P P 10 40 52.0 -0.5
baz=89
B05A Bryant 88.31 33 P P 10 40 52.7 0.0
baz=89,SNR=8.9
TBM Table Mountain 88.33 35 P P 10 40 52.9 +0.1
HAWA Hanford 88.38 36 *e*P P 10 40 52.7 -0.3
comp=Z,5.0nm,1.8s,mb4.4
F08A Pendleton 88.39 36 ⇑P P 10 40 52.5 -0.6
baz=89
BMO Blue Mountains 88.59 38 *e*P P 10 40 53.6 -0.4
comp=Z,17nm,1.6s,mb5.1
RPW Rockport 88.72 33 P P 10 40 54.0 -0.6
MNTX Cornudas Mount 88.79 54 *e*P P 10 40 54.7 -0.2
comp=Z,20nm,1.4s,mb5.2
A05A Maple Falls 88.82 33 ⇑P P 10 40 54.5 -0.6
baz=89
TMUT Trail Mountain 88.91 45 *e*P P 10 40 56.2 +0.7
LENM Lemitar 88.93 51 *e*P P 10 40 56.3 +0.7
LAZ Ladron 88.94 51 *e*P P 10 40 56.3 +0.7
EPH Ephrata 88.97 35 P P 10 40 55.6 -0.2
WTV Waterville 89.01 34 P P 10 40 55.7 -0.3
MPU Maple Canyon 89.05 44 *e*P P 10 40 56.3 +0.2
comp=Z,8.5nm,0.9s,mb5.1
SRU San Rafael 89.24 45 *e*P P 10 40 57.1 +0.1
SRU pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
SRU San Rafael 89.24 45 *e*P P 10 40 57.1 +0.1
comp=Z,10nm,0.8s,mb5.2
LPM Los Pinos Moun 89.25 51 *e*P P 10 40 57.7 +0.6
CTU Camp Tracy 89.36 44 *e*P P 10 40 57.6 0.0
comp=Z,11nm,1.1s,mb5.1
HVU Hansel Valley 89.36 42 *e*P P 10 40 57.4 -0.2
HVU pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
HVU Hansel Valley 89.36 42 *e*P P 10 40 57.4 -0.2
comp=Z,5.8nm,0.9s,mb4.9
HLID Hailey 89.44 40 *e*P P 10 40 57.9 -0.1
comp=Z,9.3nm,1.3s,mb5.0
OD2 Odessa Site #2 89.45 35 P P 10 40 58.1 +0.1
DAU Daniels Canyon 89.51 44 *e*P P 10 40 58.9 +0.6
PMR Palmer 89.69 13 *e*P P 10 40 58.1 -1.1
PMR pmax pmax
comp=Z,16nm,1.0s,mb5.3
PMR Palmer 89.69 13 *e*P P 10 40 58.1 -1.1
comp=Z,16nm,1.0s,mb5.3
ANMO Albuquerque 89.71 51 *e*P P 10 40 59.3 +0.1
ANMO pmax pmax
comp=Z,20nm,1.0s
ANMO Albuquerque 89.71 51 *e*P P 10 40 59.3 +0.1
comp=Z,20nm,1.0s,mb5.4
TTA Tatalina 89.75 9 *e*P P 10 40 59.1 -0.3
GDL2 Guadalupe Moun 89.78 54 *e*P P 10 41 00.1 +0.5
PV10 Paradox Valley 89.80 47 *e*P P 10 40 58.9 -0.7
TCUT Toone Canyon 89.82 43 *e*P P 10 40 60.0 +0.2
PV01 Paradox Valley 89.97 47 *e*P P 10 41 00.0 -0.5
DIV Divide 89.99 14 *e*P P 10 41 00.1 -0.5
HWUT Hardware Ranch 90.00 43 *e*P P 10 40 60.0 -0.6
comp=Z,3.1nm,0.7s,mb4.8
GYA Guiyang 90.14 299 ⇓*i*P P 10 41 02.8 +1.6
GYA PP PP 10 44 38.9 +4.0
GYA AMB AMB
comp=Z,20nm,1.2s,mb5.3
GYA AMB AMB
comp=Z,120nm,5.8s
GYA LR LR
comp=N,490nm,18.9s,MS5.1
GYA LR LR
comp=E,430nm,19.0s,MS5.1
GYA LR LR
comp=Z,460nm,18.6s,MS4.9
CMIG Matias Romero 90.20 71 P P 10 41 00.9 -0.6
comp=Z,7.9nm,0.9s,mb5.0,baz=245,slow=5.8,SNR=9.0
PNT Penticton 90.24 33 P P 10 41 01.4 -0.3
BJI Beijing 90.29 315 P P 10 41 02.3 +0.4
BJI AMB AMB
comp=Z,42nm,1.5s,mb5.5
BJI LR LR
comp=N,99nm,26.2s,MS4.4
BJI LR LR
comp=E,154nm,26.2s,MS4.4
BJI LR LR
comp=Z,305nm,26.8s,MS4.6
NST Nakhon Sawan 90.62 287 ⇑P pP 10 41 16.0 +1.4
comp=Z,58nm,0.8s
AHID Auburn Hatcher 90.95 42 *e*P P 10 41 04.7 -0.3
comp=Z,11nm,0.7s,mb5.3
MCMT McKenzie Canyo 91.10 40 P P 10 41 06.1 +0.4
RRI2 Red Ridge 91.14 42 *e*P P 10 41 06.0 +0.1
comp=Z,20nm,1.1s,mb5.4
DCID1 Drake Creek 91.37 41 *e*P P 10 41 07.0 +0.1
REDW Red Top Meadow 91.43 42 *e*P P 10 41 07.1 -0.1
comp=Z,24nm,1.2s,mb5.4
TPAW Teton Pass 91.45 42 *e*P P 10 41 07.3 0.0
comp=Z,22nm,1.3s,mb5.3
NANT Nan 91.52 290 ⇓P P 10 41 10.0 +2.3
comp=Z,475nm,0.4s
DLMT Dillon 91.56 39 *e*P P 10 41 07.6 -0.2
comp=Z,23nm,1.1s,mb5.4
SMCO Snowmass 91.59 47 *e*P P 10 41 08.2 +0.2
comp=Z,16nm,1.1s,mb5.3
SMCO *e* 10 41 12.5
MSO Missoula 91.66 38 *e*P P 10 41 07.5 -0.8
comp=Z,5.5nm,1.1s,mb4.8
MCK McKinley 91.68 12 *e*P P 10 41 07.5 -0.9
MOOW Moose Ponds 91.72 41 *e*P P 10 41 08.8 +0.2
comp=Z,13nm,1.3s,mb5.1
LOHW Long Hollow 91.72 42 *e*P P 10 41 08.4 -0.2
comp=Z,25nm,1.3s,mb5.4
BSMT Bassoo Peak 91.82 37 *e*P P 10 41 08.3 -0.7
BW06 Boulder Array 91.89 43 *e*P P 10 41 08.6 -0.7
comp=Z,10nm,1.2s,mb5.0
PDAR Pinedale Array 91.89 43 P P 10 41 08.6 -0.8
comp=Z,4.4nm,0.8s,mb4.8,baz=226,slow=2.6,SNR=38
PDAR PKKPbc PKKPbc 10 58 27.4 +0.7
comp=Z,0.5nm,0.7s,baz=72,slow=4.8,SNR=6.3
PDAR LR LR 11 17 03.4
comp=Z,106nm,18.1s,MS4.3,baz=246,slow=32
LRM Limekiln Ridge 91.91 39 *e*P P 10 41 09.6 +0.2
QLMT Earthquake Lak 91.93 40 *e*P P 10 41 10.3 +0.8
FLWY Flagg Ranch 91.93 41 *e*P P 10 41 09.8 +0.2
comp=Z,31nm,1.1s,mb5.5
YFT Old Faithful 92.06 41 *e*P P 10 41 11.8 +1.6
CHMT Chamberlain Mo 92.10 38 *e*P P 10 41 09.6 -0.8
XAN Xi'an 92.10 307 P P 10 41 11.5 +1.2
XAN AMB AMB
comp=Z,71nm,1.0s,mb6.0
XAN LR LR
comp=E,146nm,20.8s
XAN LR LR
comp=Z,219nm,26.5s
YMR Madison River 92.11 41 *e*P P 10 41 10.9 +0.6
comp=Z,21nm,1.1s,mb5.4
LCCM Lewis and Clar 92.24 39 P P 10 41 10.7 -0.3
BOZ Bozeman (W) 92.28 40 *e*P P 10 41 10.9 -0.3
BOZ pmax pmax
comp=Z,20nm,1.0s,mb5.4
BOZ Bozeman (W) 92.28 40 *e*P P 10 41 10.9 -0.3

comp=Z,20nm,1.0s,mb5.4
JCT Junction City 92.34 57 *e*P **P 10 41 10.7 -0.8**
JCT pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
JCT Junction City 92.34 57 *e*P **P 10 41 10.7 -0.7**
comp=Z,6.8nm,1.0s,mb4.9
LKWY Lake 92.38 41 *e*P **P 10 41 12.5 +0.9**
LKWY pmax pmax
comp=Z,15nm,1.0s,mb5.3
LKWY Lake 92.38 41 *e*P **P 10 41 12.5 +0.9**
comp=Z,15nm,1.0s,mb5.3
KMI Kunming 92.65 296 P **P 10 41 15.0 +2.1**
KMI PP PP 10 44 54.4 -0.3
KMI AMB AMB
comp=Z,66nm,1.1s,mb6.0
KMI AMB AMB
comp=Z,119nm,3.1s
KMI LR LR
comp=N,115nm,21.4s,MS4.4
KMI LR LR
comp=E,131nm,25.5s,MS4.4
KMI LR LR
comp=Z,168nm,30.6s
CHRT Chiangrai 92.77 291 ⇑P **P 10 41 14.0 +0.6**
comp=Z,434nm,1.0s
HRY Holter Researc 92.77 39 *e*P **P 10 41 12.9 -0.5**
COLA College 92.92 12 *c i*P **P 10 41 12.2 -1.9**
COLA College 92.92 12 *e*P **P 10 41 12.0 -2.1**
comp=Z,8.2nm,0.9s,mb5.2
WALA Waterton Lakes 93.01 36 *e*P **P 10 41 14.2 -0.4**
comp=Z,13nm,1.4s,mb5.2
CHG Chiang Mai 93.02 289 ⇑P **P 10 41 16.4 +1.8**
comp=Z,71nm,0.9s,mb6.1
CHTO Chiang Mai 93.02 289 ⇑P **P 10 41 16.9 +2.4**
SNR=18
CHTO Chiang Mai 93.02 289 *e*P **P 10 41 16.7 +2.1**
CHTO pmax pmax
comp=Z,56nm,0.8s,mb6.0
CHTO Chiang Mai 93.02 289 *e*P **P 10 41 16.6 +2.1**
comp=Z,56nm,0.8s,mb6.0
GCMT Greycliff 93.49 40 *e*P **P 10 41 16.2 -0.5**
HHC Hu-ho-hao-te 93.70 314 *e*P **P 10 41 18.6 +0.9**
HHC PP PP 10 45 06.9 +4.0
HHC AMB AMB
comp=Z,38nm,1.1s,mb5.7
HHC AMB AMB
comp=Z,93nm,5.7s
HHC LR LR
comp=N,166nm,36.0s,MS4.6
HHC LR LR
comp=E,346nm,37.0s,MS4.6
HHC LR LR
comp=Z,161nm,33.2s,MS4.3
DAWY Dawson 94.03 16 *e*P **P 10 41 18.2 -1.0**
BILL Bilibino 94.19 354 *e*P **P 10 41 18.8 -1.2**
BILL pmax pmax
comp=Z,35nm,1.3s,mb5.6
BILL MLR MLR
comp=Z,200nm,22.0s,MS4.5
EGAK Eagle 94.22 14 *e*P **P 10 41 18.7 -1.4**
CD2 Chengdu 94.47 302 *e*P **P 10 41 20.4 -0.8**
CD2 PP PP 10 45 10.6 +1.7
CD2 S S 10 52 29.4 -1.6
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.3
CD2 AMB AMB
comp=Z,40nm,8.2s
CD2 LR LR
comp=E,150nm,21.6s
CD2 LR LR
comp=Z,170nm,25.2s,MS4.4
LVC Limon Verde 95.25 118 *e*P **P 10 41 25.8 +1.0**
comp=Z,6.5nm,0.9s,mb5.1
EDM Edmonton 95.75 33 *e*P **P 10 41 26.2 -0.9**
LAO LASA Array 95.99 41 *e*P **P 10 41 28.6 +0.4**
RSSD Black Hills 96.02 44 *e*P **P 10 41 27.5 -0.8**
RSSD pmax pmax
comp=Z,17nm,1.2s,mb5.3
RSSD Black Hills 96.02 44 *e*P **P 10 41 27.5 -0.8**
comp=Z,17nm,1.2s,mb5.4
LZH Lanzhou 96.73 307 *e*P **P 10 41 33.3 +1.7**
LZH PP PP 10 45 24.1 -2.4
LZH *e*S S 10 52 49.0 -1.6
LZH AMB AMB
comp=Z,32nm,1.0s,mb5.7
LZH AMB AMB
comp=Z,79nm,4.5s
LZH LR LR
comp=N,662nm,13.6s
LZH LR LR
comp=Z,923nm,15.0s,MS5.4
YAK Yakutsk 97.23 338 ⇓*i*P **P 10 41 32.6 -1.2**
YAK pmax pmax
comp=Z,23nm,1.0s,mb5.6
LPAZ La Paz 99.05 113 P **P 10 41 44.0 +2.0**
comp=Z,1.1nm,0.8s,mb4.4,baz=234,slow=2.4,SNR=5.1
LPAZ LR LR 11 16 18.9
comp=Z,133nm,19.0s,MS4.5,baz=158,slow=29
LPAZ La Paz 99.05 113 P **P 10 41 44.0 +2.0**
LPAZ LR LR 11 16 18.9
SONM Songino Array 100.31 318 P Pdif 10 41 47.6 +0.1
comp=Z,1.5nm,0.6s,baz=153,slow=3.6,SNR=9.7
SONM PKKPbc PKKPbc 10 58 04.5 +0.6
comp=Z,1.1nm,0.8s,baz=258,slow=4.2,SNR=7.1
GTA Gaotai 101.04 308 *e*P Pdif 10 41 51.8 +1.0
GTA AMB AMB
comp=Z,8.0nm,1.3s
GTA AMB AMB
comp=Z,81nm,6.5s
GTA LR LR
comp=N,114nm,17.9s,MS4.6
GTA LR LR
comp=E,103nm,15.6s,MS4.6
GTA LR LR
comp=Z,175nm,24.7s
ZAL Zalesovo 115.14 320 PKP PKiKP 10 46 39.8 -2.5
comp=Z,1.5nm,0.5s,baz=319,slow=7.0,SNR=6.0
MKAR Makanchi Array 115.46 312 PKP PKPdf 10 46 41.5 -1.4
comp=Z,3.8nm,0.7s,baz=51,slow=2.8,SNR=7.3
MKAR Makanchi Array 115.46 312 PKP PKPdf 10 46 41.5 -1.4
NVS Novosibirsk 116.18 321 *i* PKIKP PKPdf 10 46 42.5 -1.7
AAK Ala-Archa 120.27 306 *i* PKIKP PKPdf 10 46 49.4 -2.7
SCHQ Schefferville 121.90 40 PKP PKPdf 10 46 53.3 -1.9
comp=Z,1.7nm,0.6s,baz=135,slow=4.3,SNR=2.5
BOSA Boshof 122.10 203 PKP PKPdf 10 46 56.1 +0.5
comp=Z,11nm,0.7s,baz=146,slow=2.9,SNR=28
BOSA PP PP 10 48 35.4 +4.9
comp=Z,2.7nm,0.8s,baz=145,slow=8.2,SNR=3.6
BOSA Boshof 122.10 203 PKIKP PKPdf 10 46 56.1 +0.5
BOSA 10 48 35.4
BOSA pmax pmax
comp=Z,11nm,0.7s
BOSA pmax pmax
comp=Z,3.0nm,0.8s
BOSA Boshof 122.10 203 *e*PKPdf PKPdf 10 46 56.0 +0.4
CHKZ Chkalovo 123.50 319 *e*PKIKP PKPdf 10 46 56.3 -2.0
BVAR Borovoye Array 123.65 318 PKP PKPdf 10 46 56.9 -1.6
comp=Z,7.6nm,0.8s,baz=98,slow=2.1,SNR=43
ZRNK Zerenda 124.49 318 *e*PKIKP PKPdf 10 46 58.5 -1.7
SPB4 Spitsbergen Ar 126.99 357 *e*PKPdf PKPdf 10 47 02.8 -2.1
SVE Sverdlovsk 128.78 324 *e*PKIKP PKPdf 10 47 06.3 -2.1
SVE pmax pmax
comp=Z,36nm,1.2s
ARU Arti 129.99 323 *i* PKIKP PKPdf 10 47 09.7 -1.0
ARU *e* 10 54 14.4
ARU *e*SS SS 11 06 39.8 -5.5
ARU MLR MLR
comp=Z,100nm,20.0s,MS4.5
ARU MLR MLR
comp=N,90nm,23.0s,MS4.6
ARU MLR MLR
comp=E,100nm,18.5s,MS4.6
ARU Arti 129.99 323 *e*PKPdf PKPdf 10 47 09.5 -1.1
SOKR Solikamsk 130.00 328 *e*PKIKP PKPdf 10 47 09.9 -0.8
SOKR pmax pmax
comp=Z,20nm,0.9s
AKTK Aktyubinsk 131.55 316 PKP PKPdf 10 47 12.9 -0.7
AKTO Aktyubinsk 131.55 316 PKP PKPdf 10 47 12.9 -0.7
comp=Z,3.6nm,0.8s,baz=64,slow=4.4,SNR=14
LVZ Lovozero 133.57 344 ⇓*i* PKIKP PKPdf 10 47 16.1 -1.3
LVZ MLR MLR
comp=Z,154nm,20.0s,MS4.7
KEV Kevo 133.66 349 *ep* PKPdf 10 47 13.8 -3.8
comp=Z,3.7nm,0.6s
KEV Kevo 133.66 349 *e*PKIKP PKPdf 10 47 13.8 -3.8
KEV pmax pmax
comp=Z,4.0nm,0.6s
ARCES ARCESS Array B 134.11 349 PKhKP 10 47 03.5
comp=Z,1.3nm,0.9s,baz=316,slow=3.3,SNR=3.5
ARCES PKP PKPdf 10 47 16.6 -1.8
comp=Z,6.5nm,0.6s,baz=340,slow=1.4,SNR=16
JOF Joensuu 138.30 341 *ep* PKPdf 10 47 20.1 -6.1
KAF Kangasniemi 140.33 343 *ep* PKPdf 10 47 20.2 -10
FIA1 FINESS Array S 140.95 343 *e*PKPdf PKPdf 10 47 23.3 -7.8
FINES FINESS Array B 140.95 343 PKhKP 10 47 22.3
comp=Z,2.9nm,0.7s,baz=50,slow=4.7,SNR=29
FINES PKP PKPdf 10 47 28.4 -2.7
comp=Z,7.4nm,0.7s,baz=64,slow=3.2,SNR=12
OBN Obninsk 141.73 329 ⇓*e*PKHKP 10 47 26.3
OBN *i* 10 47 29.7
OBN pmax pmax
comp=Z,11nm,1.2s
OBN pmax pmax
comp=Z,10.0nm,1.1s
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.6
VRSR Storozhevoye 142.54 323 *e*PKHKP 10 47 27.7
VRSR pmax pmax
comp=Z,10.0nm,0.9s
VRSR pmax pmax
comp=N,20nm,1.0s
VRSR pmax pmax
comp=E,10.0nm,0.9s
GNI Garni 142.59 303 PKP PKPdf 10 47 33.8 -0.1
comp=E,5.5nm,0.5s,baz=122,slow=1.7,SNR=4.1
ZEI Tsey 142.66 308 *e*PKIKP PKPdf 10 47 31.3 -2.8
KIV Kislovodsk 143.20 310 *i* PKIKP PKPdf 10 47 30.9 -4.2
KIV MLR MLR
comp=Z,100nm,24.0s,MS4.5
VSU Vasula 143.20 340 *i* PKHKP PKPdf 10 47 29.9 -5.2
NB2 NORSAR Subarra1 144.15 353 PKPa PKPdf 10 47 33.3 -3.4
comp=Z,60nm,0.7s,baz=11,slow=3.5
NB2 NORSAR Subarra1 144.15 353 PKPa PKPdf 10 47 33.3 -3.4
baz=11,slow=3.5
NOA NORSAR Array B 144.15 353 PKP PKPdf 10 47 33.3 -3.5
comp=Z,47nm,0.7s,baz=3.6,slow=2.3,SNR=218
NAO01 NORSAR Array S 144.37 354 *e*PKPdf PKPdf 10 47 34.2 -3.0
BCA Borcka 144.63 306 *e*P PKPdf 10 47 36.0 -1.5
ERZM Erzurum 145.18 304 *i* P PKPbc 10 47 39.1 +0.9
EZM Erzurum 145.18 304 *e*P PKPbc 10 47 38.9 +0.7
WAL1 Walls 145.19 4 *e*P PKPbc 10 47 36.4 -1.8
WAL1 Walls 145.19 4 *e*P PKPbc 10 47 36.4 -1.8
LRW Lerwick 145.33 4 *e*P PKPbc 10 47 37.1 -1.6
LRW Lerwick 145.33 4 *e*P PKPbc 10 47 37.1 -1.6
BTMT Batman 145.41 301 *e*P PKPdf 10 47 39.7 +0.8
BNGL BINGOL 145.54 302 *i* P PKPdf 10 47 40.6 +1.5
BEST Besiri 145.64 300 *i* P PKPdf 10 47 40.2 +0.9
KONO Kongsberg 145.67 354 *c i*PKP2 PKPab 10 47 38.5 -1.6
KONO Kongsberg 145.67 354 *e*PKPdf PKPdf 10 47 38.5 -0.9
BINT Bingol 146.06 302 *e*P PKPdf 10 47 41.1 +1.1
MARD Mardin 146.12 299 *i* P PKPdf 10 47 41.4 +1.3
EZC Erzincan 146.37 304 *e*P PKPab 10 47 43.5 +0.8
ANN Anapa 146.45 314 *c i*PKP2 PKPab 10 47 41.3 -1.7
ANN pmax pmax
comp=Z,126nm,1.3s
OBR Brabster 146.69 6 PKPdf 10 47 40.5 -0.6
OBR Brabster 146.69 6 P PKPdf 10 47 40.8 -0.3
OBR Brabster 146.69 6 *e* PKPdf 10 47 40.5 -0.6
OBR *e*P 10 47 40.8
OBR Brabster 146.69 6 *e* PKPdf 10 47 40.5 -0.6
OBR *e*P 10 47 40.8
ORE Reay 146.69 7 *e*P PKPdf 10 47 41.3 +0.2
ORE Reay 146.69 7 *e*P PKPdf 10 47 41.3 +0.2
PTK Pertek 146.89 303 *e*P PKPbc 10 47 44.0 +0.7
GRSN GIRESUNGRSN 147.21 307 *i* P PKPdf 10 47 43.2 +1.2
MVH1 Achvaich 147.26 7 *e*P PKPdf 10 47 42.6 +0.6
MVH1 Achvaich 147.26 7 *e*P PKPdf 10 47 42.6 +0.6
ELZG Elazig 147.29 302 *i* P PKPbc 10 47 45.8 +1.4
KAC Achnashellach 147.53 9 *e*P PKPdf 10 47 43.9 +1.3
KAC Achnashellach 147.53 9 *e*P PKPdf 10 47 43.9 +1.3
URFA Urfa 147.63 300 *e*P PKPbc 10 47 45.6 +0.2
KPL Plockton 147.64 9 *e*P PKPdf 10 47 43.5 +0.9
KPL Plockton 147.64 9 *e*P PKPdf 10 47 43.5 +0.9
MCD Coleburn Disti 147.69 7 *e*P PKPdf 10 47 43.2 +0.4
MCD Coleburn Disti 147.69 7 *e*P PKPdf 10 47 43.2 +0.4
MYA Malataya 147.75 302 *e*P PKPdf 10 47 44.8 +1.9
MALT Malataya 147.75 302 ⇑*i*P PKPbc 10 47 46.7 +1.0
MALT Malataya 147.75 302 PKP2 PKPab 10 47 47.0 -1.1
MALT Malataya 147.75 302 *e*PKPdf PKPdf 10 47 42.9 +0.1
AKASG Malin Array Be 147.96 328 PKPbc PKPbc 10 47 44.9 -1.4
comp=Z,15nm,0.5s,baz=41,slow=4.1,SNR=101
AKBB Malin Array Si 147.96 328 *e*PKPdf PKPdf 10 47 41.9 -1.4
AKBB *e*PKPbc PKPbc 10 47 45.0 -1.9
AKBB *e*PKPab PKPab 10 47 48.1 -0.9
SUW Suwalki 147.97 338 *e*PKIKP PKPdf 10 47 42.8 -0.4
SUW *e* 10 47 45.4
KAR1 Arisaig 148.02 9 *e*P PKPdf 10 47 45.0 +1.7
KAR1 Arisaig 148.02 9 *e*P PKPdf 10 47 45.0 +1.7
SVSK Karacayir 148.43 305 *e*P PKPdf 10 47 45.7 +1.8
SIM Simferopol' 148.52 316 *i* PKP2 PKPbc 10 47 47.8 0.0
SIM pmax pmax
comp=Z,32nm,0.8s
GZT Gaziantep 148.63 300 *i* P PKPbc 10 47 48.4 +0.4
KVT Kavak 148.76 308 *e*P PKPbc 10 47 47.6 -0.8
MUD Monsted U'grnd 148.86 354 ⇑*i*P PKPbc 10 47 47.8 -0.8
comp=Z,74nm,1.1s
EAB Aberfoyle 148.94 8 *e*P PKPbc 10 47 47.5 -1.3
EAB Aberfoyle 148.94 8 *e*P PKPbc 10 47 47.5 -1.3
GAZ Gaziantep 148.94 300 *e*P PKPbc 10 47 49.2 +0.3
COP Copenhagen 149.19 350 ⇑*i*P PKPbc 10 47 48.6 -0.9
comp=Z,35nm,0.6s
PGBU Glenifferbraes 149.28 9 *e*P PKPbc 10 47 48.3 -1.4
PGBU Glenifferbraes 149.28 9 *e*P PKPbc 10 47 48.3 -1.4
EDI Edinburgh 149.33 7 *e*P PKPbc 10 47 49.0 -0.8
EDI Edinburgh 149.33 7 *e*P PKPbc 10 47 49.0 -0.8
EAU Auchinoon 149.38 7 *e*P PKPbc 10 47 48.6 -1.3
EAU Auchinoon 149.38 7 *e*P PKPbc 10 47 48.6 -1.3
ESY Stoneypath 149.40 6 *e*P PKPbc 10 47 48.6 -1.4
ESY Stoneypath 149.40 6 *e*P PKPbc 10 47 48.6 -1.4
BOYT Boyabat 149.45 309 *i* P PKPbc 10 47 50.7 +0.6
EBL Broad Law 149.50 7 *e*P PKPbc 10 47 48.9 -1.3
EBL Broad Law 149.50 7 *e*P PKPbc 10 47 48.9 -1.3
BNN Bunyan 149.58 304 *e*P PKPbc 10 47 49.4 +0.6
CTKT Corum 149.81 308 *i* P PKPbc 10 47 51.6 +0.6
BZK Bozkurt 149.87 311 *e*P PKPbc 10 47 49.9 -1.3
EKA Eskdalemuir Ar 149.92 7 PKP PKPdf 10 47 44.5 -1.8
comp=Z,7.1nm,1.0s,baz=129,slow=1.0,SNR=3.7
EKA PKPbc PKPbc 10 47 49.7 -1.5
comp=Z,9.6nm,0.7s,baz=324,slow=2.0,SNR=26
EKA PKPab PKPab 10 47 55.8 -1.1
comp=Z,13nm,0.8s,baz=310,slow=3.1,SNR=15
ESK Eskdalemuir 149.93 7 *e*P PKPbc 10 47 49.5 -1.7
ESK Eskdalemuir 149.93 7 *e*P PKPbc 10 47 49.5 -1.7
KOZT Kozan 149.95 301 *e*P PKPbc 10 47 51.3 -0.1
HTY Hatay 150.00 298 *e*P PKPbc 10 47 51.3 -0.2
BWH Wardlaw 150.01 8 *e*P PKPbc 10 47 50.0 -1.4
BWH Wardlaw 150.01 8 *e*P PKPbc 10 47 50.0 -1.4
CORM Corum 150.07 307 *e*P PKPbc 10 47 52.0 +0.4
CEYT Ceyhan 150.12 300 *e*P PKPbc 10 47 51.6 -0.1
TOS Tosya 150.21 309 *e*P PKPbc 10 47 51.7 -0.2
CDAG Cicekdag 150.44 306 *i* P PKPbc 10 47 52.0 -0.5
BALT Daday 150.46 310 *i* P PKPbc 10 47 52.4 -0.1
BBO1 Bothel 150.49 8 *e*P PKPbc 10 47 51.3 -1.3
BBO1 Bothel 150.49 8 *e*P PKPbc 10 47 51.3 -1.3
KIS Kishinev 150.54 323 *e*PKIKP PKPbc 10 47 50.0 -2.7
KARA Karaisali 150.60 301 *e*P PKPbc 10 47 52.0 -0.9
CANT Cankiri 150.65 308 *e*P PKPbc 10 47 53.0 +0.1
BHL Bhannes 150.75 294 *e*P PKPbc 10 47 53.8 +0.5
ELDT Eldivan 150.83 308 *i* P PKPbc 10 47 53.5 +0.1
WIM Isle of Man 150.87 10 *e*P PKPbc 10 47 51.7 -1.8
WIM Isle of Man 150.87 10 *e*P PKPbc 10 47 51.7 -1.8
LVV L'vov 150.94 332 *e*PKIKP PKPbc 10 47 52.9 -0.8
LVV *e* 10 51 31.5
LVV *e* 10 54 42.7
BR131 Keskin Array S 150.94 307 *e*PKPbc PKPbc 10 47 53.5 -0.1
BR131 *e*PKPab PKPab 10 48 01.4 +0.3
BRTR Keskin Array B 150.94 307 PKP PKPdf 10 47 47.0 -1.0
comp=Z,3.4nm,1.1s,baz=131,slow=3.4,SNR=13
BRTR PKPbc PKPbc 10 47 53.4 -0.3
comp=Z,11nm,0.7s,baz=141,slow=4.0,SNR=38
BRTR PKPab PKPab 10 48 01.6 +0.5
comp=Z,34nm,0.9s,baz=98,slow=3.7,SNR=27
KAMT Kaman 151.01 306 *e*P PKPbc 10 47 53.6 -0.2
SAFT Safranbolu 151.06 310 *e*P PKPbc 10 47 53.5 -0.5
MERS Mersin 151.11 300 *e*P PKPbc 10 47 54.0 -0.1
DCN Croghan 151.18 13 ⇑*i*P PKPbc 10 47 52.8 -1.4
BSEG Bad Segeberg 151.20 351 *e*PKPdf PKPdf 10 47 47.7 -0.7
BSEG *e*PKPbc PKPbc 10 47 53.6 -0.7
BSEG *e*PKPab PKPab 10 48 01.9 -0.3
DLF Lyons Farm 151.37 12 ⇑*i*P PKPbc 10 47 52.4 -2.3
MEST Erdemli 151.47 300 *i* P PKPbc 10 47 54.9 0.0
ANTO Ankara 151.50 307 *e*P PKPbc 10 47 53.9 -1.1
ANTO Ankara 151.50 307 ⇑*i*P PKPbc 10 47 54.9 -0.1
ANTO Ankara 151.50 307 ⇓P PKPbc 10 47 55.3 +0.3
SNR=16
ANTO Ankara 151.50 307 *e*PKPdf PKPdf 10 47 49.1 +0.3
ANTO *e*PKPbc PKPbc 10 47 55.2 +0.2
ANTO *e*PKPab PKPab 10 48 04.1 +0.7
KWP Kalwaria 151.64 333 *e*PKIKP PKPbc 10 47 54.9 -0.4
WCB1 Church Bay 151.64 10 *e*P PKPbc 10 47 53.4 -1.9
WCB1 Church Bay 151.64 10 *e*P PKPbc 10 47 53.4 -1.9
EIL Elat 151.66 285 *e*PKPbc PKPbc 10 47 56.2 +0.8
EIL *e*PKPab PKPab 10 48 06.1 +2.0
WLF1 Llynfaes 151.75 10 *e*P PKPbc 10 47 53.6 -2.0
WLF1 Llynfaes 151.75 10 *e*P PKPbc 10 47 53.6 -2.0
SGKT Sivrigoynuk 151.76 309 *i* P PKPbc 10 47 55.6 +0.1
IKL Isikli 151.91 300 *e*P PKPbc 10 47 54.6 -1.3
RUE Ruedersdorf 151.99 346 *e*PKPbc PKPbc 10 47 55.4 -0.7
BURAR Bucovina Array 151.99 327 ⇓*i*P PKPbc 10 47 55.8 -0.3
BURAR Bucovina Array 151.99 327 ⇓P PKPbc 10 47 55.8 -0.3
CFR Carcaliu 152.01 321 ⇑*i*P PKPbc 10 47 55.9 -0.2
CFR Carcaliu 152.01 321 PKIKP PKPbc 10 47 56.0 -0.1
CFR Carcaliu 152.01 321 ⇑P PKPbc 10 47 55.9 -0.3
TIRR Tirgusor 152.26 319 ⇑*i*P PKPbc 10 47 56.2 -0.5
TIRR Tirgusor 152.26 319 *e*PKPdf PKPdf 10 47 50.0 0.0
TIRR ⇑P 10 47 56.2
TIRR *e*PKPbc PKPbc 10 47 56.3 -0.4
OJC Ojcow 152.28 337 *e*PKPdf PKPdf 10 47 50.2 +0.2
OJC *e*PKPbc PKPbc 10 47 56.2 -0.6
SBD1 Bryn Du 152.28 8 *e*P PKPbc 10 47 55.5 -1.3
SBD1 Bryn Du 152.28 8 *e*P PKPbc 10 47 55.5 -1.3
KOLS Kolonicke sedl 152.36 332 *e*PKP PKPdf 10 47 49.5 -0.6
KOLS *e* 10 47 57.0
VRI Vrincioaia 152.38 323 ⇑*i*P PKPbc 10 47 56.3 -0.7
MDU Mudurnu 152.39 309 *e*P PKPbc 10 47 56.4 -0.6
STHS Stebnicka Huta 152.40 334 *e*PKP PKPbc 10 47 56.5 -0.5
HARR Harsova 152.41 320 ⇓*i*P PKPbc 10 47 57.2 +0.1
HARR Harsova 152.41 320 ⇓P PKPbc 10 47 57.2 +0.1
ERMK Ermenek 152.41 301 *i* P PKPbc 10 47 57.4 +0.3
PLOR Plostina 152.43 323 ⇑*i*P PKPbc 10 47 56.2 -0.9
KDHN Kadinhani 152.46 305 *i* P PKPbc 10 47 56.5 -0.7
HENT Hendek 152.47 310 *i* P PKPbc 10 47 56.9 -0.3
CSS Prodhromos 152.47 297 P PKPbc 10 47 56.9 -0.3
comp=Z,2.0nm,0.8s
KIZT Kizilcal 152.51 306 *e*P PKPbc 10 47 56.8 -0.5
MAMC Mammari 152.52 297 P PKPbc 10 47 56.1 -1.2
CVD Cernavoda 152.57 319 PKIKP PKPbc 10 47 57.9 +0.5
NRDL Niedersach Rie 152.63 351 *e*PKPdf PKPdf 10 47 49.6 -0.9
NRDL *e*PKPbc PKPbc 10 47 56.6 -0.9
NRDL *e*PKPab PKPab 10 48 07.0 -1.2
HDMB Hadim 152.66 302 *e*P PKPbc 10 47 56.0 -1.6
HLM1 Long Mynd 152.71 8 *e*P PKPbc 10 47 56.3 -1.4
HLM1 Long Mynd 152.71 8 *e*P PKPbc 10 47 56.3 -1.4
CRVS Cervenica-Dubn 152.72 333 *e*PKP PKPdf 10 47 50.2 -0.4
CRVS *e* 10 47 57.4
KSP Ksiaz 152.86 342 *e*PKPdf PKPdf 10 47 50.1 -0.7
KSP *e*PKPdf PKPbc 10 47 57.8 -0.3
KSP *e*PKP PKPab 10 48 09.3 +0.1
ESKT Eskisehir 153.03 308 *e*P PKPbc 10 47 57.9 -0.6
ESKT Eskisehir 153.03 308 *i* P PKPbc 10 47 58.0 -0.4
MLR Muntele Rosu 153.04 323 PKP PKPdf 10 47 49.6 -1.5
comp=Z,1.6nm,0.6s,baz=72,slow=1.4,SNR=3.7
MLR PKPbc PKPbc 10 47 57.3 -1.2
comp=Z,10nm,0.9s,baz=56,slow=5.2,SNR=17
MLR Muntele Rosu 153.04 323 ⇓*i*P PKPbc 10 47 57.3 -1.1
HTR Trewern Hill 153.09 9 *e*P PKPbc 10 47 57.0 -1.6
HTR Trewern Hill 153.09 9 *e*P PKPbc 10 47 57.0 -1.6
IBBN Ibbenburen 153.10 354 *e*PKPbc PKPbc 10 47 57.6 -1.0
IBBN *e*PKPab PKPab 10 48 09.1 -1.1
OKC Ostrava-Krasne 153.17 338 *e*PKPDF PKPdf 10 47 51.2 -0.1
OKC ⇑*e*PKPB PKPbc 10 47 58.5 -0.2
OKC *e*PKPAB PKPab 10 48 10.3 -0.2
OKC AMS AMS 11 49 10.0
OKC Ostrava-Krasne 153.17 338 *e*PKP PKPdf 10 47 51.2 -0.1
OKC *e* 10 47 58.5
OKC *e* 10 48 10.3
MCH1 Michaelchurch 153.21 9 P PKPbc 10 47 57.0 -1.8
MCH1 Michaelchurch 153.21 9 *e*P PKPbc 10 47 56.9 -1.9
MCH1 *e*P 10 47 57.0
MCH1 Michaelchurch 153.21 9 *e*P PKPbc 10 47 56.9 -1.9
MCH1 *e*P 10 47 57.0
HAE Alders End 153.22 8 *e*P PKPbc 10 47 57.3 -1.5
HAE Alders End 153.22 8 *e*P PKPbc 10 47 57.3 -1.5
UPC Upice 153.24 342 *e*PKPDF PKPdf 10 47 50.5 -0.9
UPC ⇑*e*PKPB PKPbc 10 47 58.5 -0.4
UPC *e*PKPAB PKPab 10 48 10.9 +0.1
UPC Upice 153.24 342 *e*PKIKP PKPdf 10 47 50.5 -0.9
UPC *e* 10 47 58.5
CLL Collm 153.25 346 *e*PKPdf PKPdf 10 47 50.1 -1.3
CLL *e*PKPbc PKPbc 10 47 58.0 -0.9
CLL Collm 153.25 346 *i* PKIKP PKPdf 10 47 50.4 -1.0
comp=Z,logA/T=1.1
CLL *i* PKP1 PKPbc 10 47 58.2 -0.7
CLL *i* 10 48 01.9
CLL *i* PKP2 PKPab 10 48 10.2 -0.6
CLL *e**PPKP 10 48 17.0
CLL Collm 153.25 346 *i* PKPdf PKPdf 10 47 50.4 -1.0
comp=Z,21nm,1.6s
CLL ⇑*i*PKPbc PKPbc 10 47 58.2 -0.7
comp=Z,38nm,0.8s
CLL *i* x x 10 48 01.9
CLL *i* PKPab PKPab 10 48 10.2 -0.6
CLL *e*pPKPbc pPKPbc 10 48 17.0 +6.7
CLL Collm 153.25 346 ⇑*i*PKIKP PKPdf 10 47 50.4 -1.0
CLL *i* 10 47 58.2
CLL *i* 10 48 10.2
CLL pmax pmax
comp=Z,21nm,1.6s
CLL pmax pmax
comp=Z,38nm,0.8s
CLL Collm 153.25 346 *i* PKP PKPdf 10 47 50.4 -1.0
CLL ⇑*i*PKP PKPbc 10 47 58.2 -0.7
CLL *i* PKP PKPab 10 48 10.2 -0.6
DPC Dobruska-Polom 153.29 341 *e*PKPDF PKPdf 10 47 51.0 -0.5
DPC ⇑*e*PKPB PKPbc 10 47 58.6 -0.4
DPC *e*PKPAB PKPab 10 48 11.4 +0.4
DPC AMS AMS 11 51 30.0
comp=Z,200nm,22.1s
DPC Dobruska-Polom 153.29 341 *e*PKIKP PKPdf 10 47 51.0 -0.5
DPC *e* 10 47 58.6
DPC MLR MLR
comp=Z,200nm,22.1s,MS4.9
MORC Moravsky Berou 153.43 339 ⇑*i*P PKPbc 10 47 59.1 -0.2
MORC Moravsky Berou 153.43 339 *e*PKIKP PKPdf 10 47 50.8 -0.9
MORC *e* 10 47 58.9
MORC Moravsky Berou 153.43 339 *e*PKPdf PKPdf 10 47 50.8 -0.9
MORC *e*PKPbc PKPbc 10 47 58.9 -0.4
MORC *e*PKPab PKPab 10 48 11.6 0.0
KECS Kecovo 153.44 334 *e*PKP PKPab 10 48 11.2 -0.4
BRG Berggiesshubel 153.45 345 *e*PKPdf PKPdf 10 47 50.4 -1.3
BRG *e*PKPbc PKPbc 10 47 58.7 -0.6
BRG Berggiesshubel 153.45 345 *e*PKP PKPdf 10 47 51.0 -0.7
comp=Z,5.6nm,0.9s
BRG Berggiesshubel 153.45 345 *i* PKP PKPbc 10 47 58.8 -0.5
comp=Z,16nm,0.8s
BRG Berggiesshubel 153.45 345 *e*PKIKP PKPdf 10 47 51.0 -0.7
BRG *i* 10 47 58.8
BRG pmax pmax
comp=Z,6.0nm,0.9s
BRG pmax pmax
comp=Z,16nm,0.8s
BRG Berggiesshubel 153.45 345 *e*PKP PKPdf 10 47 51.0 -0.7
BRG *i* PKP PKPbc 10 47 58.8 -0.5
WTSB Winterswijk 153.52 355 *e*PKiKP PKiKP 10 47 58.4 -1.2
comp=Z,40nm,0.8s
FBE Freiberg 153.54 346 *e*PKPdf PKPdf 10 47 50.8 -1.0
FBE *e*PKPbc PKPbc 10 47 59.0 -0.5
PRD Provadia 153.57 318 *i* P PKPab 10 48 14.1 +1.9
GTTG Gyttingen 153.58 351 *e*PKPbc PKPbc 10 47 58.8 -0.8
GTTG *e*PKPab PKPab 10 48 11.7 -0.5
HGH Gray Hill 153.58 8 *e*P PKPbc 10 47 57.8 -1.8
HGH Gray Hill 153.58 8 *e*P PKPbc 10 47 57.8 -1.8
PVCC Panska Ves 153.61 344 *e*PKPDF PKPdf 10 47 51.3 -0.6
PVCC ⇑*e*PKPB PKPbc 10 47 59.3 -0.4
PVCC *e*PKPAB PKPab 10 48 12.3 0.0
PVCC AMS AMS 11 48 10.0
PVCC Panska Ves 153.61 344 *e*PKIKP PKPdf 10 47 51.3 -0.6
PVCC *e* 10 47 59.3
PVCC Panska Ves 153.61 344 *e*PKP PKPdf 10 47 51.3 -0.6

PVCC				e		10 47 59.3	
PVCC				e		10 48 12.3	
DRGR		**153.78**	**329**	⇓iP	PKPbc	10 47 55.5	-4.6
DRGR		**153.78**	**329**	⇓P	PKPbc	10 47 55.5	-4.5
ULDT	**Uludag**	**153.97**	**310**	i P	PKPbc	10 47 59.9	-0.5
VYHS	**Vyhne**	**154.07**	**336**	ePKP	PKPdf	10 47 51.5	-1.1
VYHS				e		10 48 00.0	
VYHS				e		10 48 14.3	
VYHS	**Vyhne**	**154.07**	**336**	ePKIKP	PKPdf	10 47 51.5	-1.1
VYHS				e		10 48 00.0	
PRU	**Pruhonice**	**154.12**	**343**	ePKPDF	PKPdf	10 47 51.6	-1.0
PRU				⇑ePKPB	PKPbc	10 48 00.0	-0.8
PRU				ePKPAB	PKPab	10 48 14.7	+0.2
PRU				AMS	AMS	11 47 20.0	
	comp=Z,200nm,25.4s						
PRU	**Pruhonice**	**154.12**	**343**	ePKIKP	PKPdf	10 47 51.6	-1.0
PRU				e		10 48 00.0	
PRU				MLR	MLR		
	comp=Z,200nm,25.4s,MS4.8						
PSZ	**Piszkesteto**	**154.13**	**334**	ePKP/F	PKPbc	10 48 00.2	-0.6
PSZ	**Piszkesteto**	**154.13**	**334**	⇑iP	PKPbc	10 48 00.9	+0.1
VRAC	**Vranov**	**154.14**	**340**	PKPbc	PKPbc	10 48 00.2	-0.6
	comp=Z,1.9nm,0.5s,baz=304,slow=1.5,SNR=6.2						
VRAC				PKPab	PKPab	10 48 14.0	-0.6
	comp=Z,13nm,0.7s,baz=33,slow=3.9,SNR=15						
VRAC	**Vranov**	**154.14**	**340**	⇓iP	PKPab	10 48 14.5	-0.1
VRAC	**Vranov**	**154.14**	**340**	PKPbc	PKPbc	10 48 00.2	-0.6
VRAC				PKPab	PKPab	10 48 14.0	-0.6
VRAC				⇓P		10 48 14.5	
MOX	**Moxa**	**154.16**	**348**	ePKP	PKPdf	10 47 48.7	-4.0
	comp=Z,15nm,1.4s						
TANN	**Tannenbergstha**	**154.21**	**346**	ePKPdf	PKPdf	10 47 51.7	-1.1
TANN				ePKPbc	PKPbc	10 48 00.3	-0.7
TANN				ePKPab	PKPab	10 48 14.3	-0.6
WERD	**Werda**	**154.21**	**347**	ePKPdf	PKPdf	10 47 51.7	-1.1
WERD				ePKPbc	PKPbc	10 48 00.3	-0.7
WERD				ePKPab	PKPab	10 48 14.2	-0.7
UBBA	**Unterbreizbach**	**154.28**	**350**	ePKPbc	PKPbc	10 48 00.1	-1.0
GUNZ	**Gunzen**	**154.29**	**347**	ePKPdf	PKPdf	10 47 51.7	-1.2
GUNZ				ePKPbc	PKPbc	10 48 00.4	-0.7
GUNZ				ePKPab	PKPab	10 48 14.7	-0.5
WERN	**Wernitzgruen**	**154.35**	**346**	ePKPdf	PKPdf	10 47 52.1	-0.9
WERN				ePKPbc	PKPbc	10 48 00.9	-0.4
WERN				ePKPab	PKPab	10 48 15.0	-0.5
NKC	**Novy Kostel**	**154.39**	**346**	ePKPDF	PKPdf	10 47 52.3	-0.7
NKC				⇑ePKPB	PKPbc	10 48 01.2	-0.2
NKC				ePKPAB	PKPab	10 48 15.2	-0.4
NKC				AMS	AMS	11 48 40.0	
NKC	**Novy Kostel**	**154.39**	**346**	ePKP	PKPdf	10 47 52.3	-0.7
NKC				e		10 48 01.2	
NKC				e		10 48 15.2	
SZH	**Strazhica**	**154.41**	**319**	i P	PKPab	10 48 18.0	+2.3
JMB	**Yambol**	**154.48**	**317**	i P	PKPab	10 48 17.8	+1.8
TREC	**Trest**	**154.48**	**341**	AMS	AMS	11 49 00.0	
MANZ	**Manzenberg**	**154.69**	**347**	ePKPdf	PKPdf	10 47 52.3	-1.1
MANZ				ePKPbc	PKPbc	10 48 01.0	-1.0
HGN	**Heimansgroeve**	**154.78**	**356**	ePKiKP	PKiKP	10 48 01.5	-0.7
HGN				ex	x	10 48 16.5	
	comp=Z,21nm,1.6s						
PVL	**Pavlikeni**	**154.79**	**320**	i P	PKPab	10 48 19.8	+2.4
GOLH	**Golhisar**	**154.80**	**304**	i P	PKPdf	10 47 56.5	+2.9
UCC	**Uccle**	**154.81**	**358**	PKPab	PKPab	10 48 17.1	-0.4
ROTZ	**Rotzenmuhle**	**154.88**	**346**	ePKPbc	PKPbc	10 48 01.7	-0.7
ROTZ				ePKPab	PKPab	10 48 17.2	-0.5
MEM	**Membach**	**154.93**	**356**	PKPab	PKPab	10 48 17.6	-0.3
ZST	**Bratislava**	**154.94**	**338**	ePKP	PKPab	10 48 18.6	+0.6
ZST				LR	LR		
	comp=Z,100nm,19.7s,MS4.6						
DNZL	**Cakiroluk**	**155.02**	**305**	i P	PKPdf	10 47 55.0	+1.1
MENF	**Mencas**	**155.06**	**2**	PKP	PKPab	10 48 17.4	-1.1
TNS	**Taunus Mts**	**155.08**	**352**	ePKPdf	PKPdf	10 47 52.8	-1.2
TNS				ePKPbc	PKPdf	10 48 01.8	+7.8
TNS				ePKPab	PKPab	10 48 17.9	-0.7
SNF	**Seneffe**	**155.11**	**358**	PKPab	PKPab	10 48 18.0	-0.7
GRA1	**Grafenberg Arr**	**155.15**	**348**	ePKP	PKPdf	10 47 52.9	-1.2
GRA1				ePKPab	PKPab	10 48 18.9	0.0
GRF	**Grafenberg Arr**	**155.15**	**348**	ePKP	PKPdf	10 47 52.9	-1.2
GRF				ePKPab	PKPab	10 48 18.9	0.0
KHC	**Kasperske Hory**	**155.15**	**344**	ePKPDF	PKPdf	10 47 52.8	-1.3
KHC				⇑ePKPB	PKPdf	10 48 02.3	+8.2
KHC				ePKPAB	PKPab	10 48 18.9	0.0
KHC				AMS	AMS	11 47 50.0	
	comp=Z,200nm,33.3s						
BZS	**Buzias**	**155.16**	**328**	⇓iP	PKPdf	10 47 53.5	-0.6
BZS	**Buzias**	**155.16**	**328**	⇓P	PKPdf	10 47 53.5	-0.6
BCLA	**Clavier**	**155.16**	**357**	PKPab	PKPab	10 48 18.0	-0.9
WET	**Wettzell**	**155.31**	**345**	ePKPdf	PKPdf	10 47 53.2	-1.1
WET				ePKPab	PKPab	10 48 19.3	-0.3
DIM	**Dimitrovgrad**	**155.36**	**317**	i P	PKPab	10 48 21.2	+1.4
GEC2	**GERESS Array S**	**155.38**	**343**	ePKPbc	PKPdf	10 48 02.6	+8.2
GEC2	**GERESS Array S**	**155.38**	**343**	ePKPdf	PKPdf	10 47 53.4	-1.0
GEC2				ePKPbc	PKPdf	10 48 02.6	+8.2
GEC2				ePKPbc	PKPdf	10 48 03.0	+8.6
GEC2				ePKPab	PKPab	10 48 19.6	-0.3
GERES	**GERESS Array B**	**155.38**	**343**	PKP	PKPdf	10 47 53.3	-1.1
	comp=Z,1.6nm,0.8s,baz=48,slow=2.0,SNR=14						
GERES				PKPbc	PKPdf	10 48 02.8	+8.4
	comp=Z,2.4nm,0.7s,baz=50,slow=2.1,SNR=12						
GERES				PKPab	PKPab	10 48 18.2	-1.6
	comp=Z,1.5nm,0.6s,baz=33,slow=3.2,SNR=6.9						
DOU	**Dourbes**	**155.51**	**358**	PKPab	PKPab	10 48 19.5	-0.9
ABH	**Alteburg**	**155.52**	**353**	PKP	PKPab	10 48 19.8	-0.7
SOP	**Sopron**	**155.56**	**338**	⇓ePKP/p	PKPab	10 48 21.3	+0.6
TOD	**Tromm**	**155.64**	**351**	PKP	PKPab	10 48 20.0	-1.0
KDZ	**Kurdzhali**	**155.66**	**317**	i P	PKPab	10 48 22.2	+1.1
PLD	**Plovdiv**	**155.83**	**318**	eP	PKPab	10 48 21.0	-0.8
PLD	**Plovdiv**	**155.83**	**318**	i P	PKPab	10 48 22.2	+0.4
WLF	**Walferdange**	**155.86**	**355**	ePKPab	PKPab	10 48 21.3	-0.6
WLF	**Walferdange**	**155.86**	**355**	PKPab	PKPab	10 48 21.5	-0.4
WLF	**Walferdange**	**155.86**	**355**	ePKPab	PKPab	10 48 21.6	-0.3
PKSM	**Moragy**	**156.02**	**333**	⇓iP	PKPdf	10 47 54.2	-1.0
PKSM	**Moragy**	**156.02**	**333**	PKIKP	PKPdf	10 47 54.5	-0.7
PKSM	**Moragy**	**156.02**	**333**	⇑eP	PKPdf	10 47 53.9	-1.3
RZN	**Rozhen**	**156.07**	**317**	i P	PKPab	10 48 23.9	+1.1
STU	**Stuttgart**	**156.39**	**350**	ePKPdf	PKPdf	10 47 54.6	-1.1
VTS	**Vitosha**	**156.41**	**321**	eP	PKPab	10 48 24.7	+0.4
VTS	**Vitosha**	**156.41**	**321**	⇑iP	PKPab	10 48 25.1	+0.8
FLN	**La Foliniere**	**156.69**	**6**	ePKIKP	PKPdf	10 47 53.8	-2.3
	comp=Z,44nm,1.3s						
FLN				eR			
	comp=Z,62nm,21.2s						
FLN	**La Foliniere**	**156.69**	**6**	ePKPdf	PKPdf	10 47 53.8	-2.3
FLN				LR	LR		
	comp=Z,60nm,21.3s,MS4.4						
MMB	**Musomiste**	**156.72**	**318**	i P	PKPab	10 48 26.3	+0.7
KKB	**Krupnik**	**156.94**	**320**	i P	PKPab	10 48 26.7	+0.2
BFO	**Black Forest**	**156.95**	**351**	ePKP2	PKPab	10 48 25.6	-1.0
GROS	**Grobnik**	**156.99**	**338**	ePKPdf	PKPdf	10 47 54.6	-1.9
GROS				i		10 48 06.3	
GROS				ePKPab	PKPab	10 48 26.1	-0.7
WLS	**Welschbruch**	**156.99**	**353**	PKP	PKPab	10 48 26.5	-0.3
CDF	**Champ du Feu**	**157.00**	**353**	ePKIKP	PKPdf	10 47 54.4	-2.1
DIVS	**Divcibare**	**157.06**	**328**	⇑iPKP	PKPdf	10 47 56.4	-0.2
MEZF	**Maizieres J'vi**	**157.08**	**357**	ePKIKP	PKPdf	10 47 55.2	-1.4
ECH	**Echery**	**157.21**	**353**	PKP	PKPab	10 48 26.9	-0.8
THEF	**They Montfort**	**157.30**	**355**	PKP	PKPab	10 48 27.1	-1.0
HAU	**Haudompre**	**157.49**	**355**	ePKIKP	PKPdf	10 47 55.2	-1.9
HAU				eR			
	comp=Z,118nm,20.8s						
HAU	**Haudompre**	**157.49**	**355**	ePKPdf	PKPdf	10 47 55.2	-1.9
HAU				LR	LR		
	comp=Z,120nm,20.8s,MS4.7						
MOF	**Molkenrain**	**157.57**	**353**	PKP	PKPab	10 48 28.6	-0.7
VAY	**Valandovo**	**157.58**	**319**	ePKP	PKPab	10 48 28.0	-1.3
HINF	**Hinteralfeld**	**157.63**	**354**	ePKIKP	PKPdf	10 47 55.2	-2.1
LJU	**Ljubljana**	**157.67**	**339**	ePKPdf	PKPdf	10 47 55.9	-1.4
HORT	**Hortiatis**	**157.69**	**317**	eP	PKPab	10 48 29.4	-0.4
CADS	**Cadrg**	**157.76**	**340**	ePKPab	PKPab	10 48 28.5	-1.6
VISS	**Visnje**	**157.78**	**338**	ePKPdf	PKPdf	10 47 56.1	-1.4
VISS				ePKPab	PKPab	10 48 29.1	-1.1
SKO	**Skopje**	**157.81**	**322**	eP	PKPab	10 48 30.7	+0.4
SKO	**Skopje**	**157.81**	**322**	ePKP	PKPab	10 48 31.0	+0.7
ROBS	**Robic**	**157.81**	**341**	i PKPab	PKPab	10 48 29.1	-1.3
GRG	**Griva**	**157.90**	**319**	eP	PKPab	10 48 30.1	-0.6
BOJS	**Bojanci**	**157.90**	**337**	ePKPdf	PKPdf	10 47 56.3	-1.3
LOMF	**Lomont**	**158.09**	**353**	PKP	PKPab	10 48 31.4	-0.1
XOR	**Xorichti**	**158.34**	**314**	eP	PKPab	10 48 32.5	-0.1
LOR	**Lormes**	**158.36**	**359**	ePKIKP	PKPdf	10 47 56.6	-1.6
	comp=Z,19nm,1.2s						
LOR				eR			
	comp=Z,176nm,22.2s						
LOR	**Lormes**	**158.36**	**359**	ePKPdf	PKPdf	10 47 56.6	-1.6
LOR				LR	LR		
	comp=Z,180nm,22.3s,MS4.9						
LIT	**Litokhoron**	**158.36**	**317**	eP	PKPab	10 48 31.8	-0.9
SSF	**Saint Saulge**	**158.57**	**360**	ePKIKP	PKPdf	10 47 56.7	-1.8
	comp=Z,32nm,1.4s						
AVF	**Avril sur Loir**	**158.84**	**360**	ePKIKP	PKPdf	10 47 56.7	-2.1
CABF	**La Chapelle**	**158.90**	**355**	ePKIKP	PKPdf	10 47 56.3	-2.5
SMF	**Signal de Mont**	**158.98**	**359**	ePKIKP	PKPdf	10 47 56.9	-2.0
AGG	**Agios Georgios**	**159.08**	**314**	eP	PKPab	10 48 35.2	-0.6
LIC	**Lamto**	**159.18**	**156**	ePKIKP	PKPdf	10 47 58.6	-0.6
	comp=Z,49nm,1.3s						
TCF	**Toulx Ste Croi**	**159.33**	**2**	ePKIKP	PKPdf	10 47 57.6	-1.7
	comp=Z,22nm,1.4s						
AGO	**Saint Agoulin**	**159.58**	**0**	PKP	PKPab	10 48 37.5	-0.5
DBIC	**Dimbokro**	**159.66**	**156**	PKP	PKPdf	10 47 59.4	-0.4
	comp=Z,10nm,1.1s,baz=110,slow=3.4,SNR=4.3						
DBIC				PKPab	PKPab	10 48 38.0	-0.4
	comp=Z,6.9nm,0.8s,baz=193,slow=4.3,SNR=5.3						
DBIC	**Dimbokro**	**159.66**	**156**	PKP	PKPdf	10 47 59.4	-0.4
DBIC				PKPab	PKPab	10 48 38.0	-0.4
PLDF	**La Plantade**	**159.66**	**359**	PKP	PKPab	10 48 37.8	-0.5
PYM	**Petit Puy Mans**	**159.88**	**0**	PKP	PKPab	10 48 38.9	-0.4
IGT	**Igoumenitsa**	**160.03**	**318**	eP	PKPab	10 48 39.2	-0.7
LKD	**Levkas**	**160.34**	**316**	eP	PKPab	10 48 41.3	0.0
LBL	**Lubilhac**	**160.40**	**360**	PKP	PKPab	10 48 41.5	-0.1
ORIF	**Oris-en-Rattie**	**160.59**	**354**	ePKIKP	PKPdf	10 47 59.3	-1.5
	comp=Z,14nm,1.0s						
ORIF				eR			
	comp=Z,300nm,21.8s						
CAF	**Calviac**	**160.68**	**3**	ePKIKP	PKPdf	10 47 59.6	-1.3
AQU	**L'Aquila**	**161.30**	**336**	⇑iP	PKPab	10 48 45.9	+0.4
PVIS	**Viseu**	**162.29**	**29**	ePKPdf	PKPdf	10 48 00.0	-2.6
PVIS	**Viseu**	**162.29**	**29**	ePKPab	PKPab	10 48 49.4	-0.4
MTE	**Manteigas**	**162.70**	**29**	ePKPdf	PKPdf	10 48 02.9	-0.1
MTE	**Manteigas**	**162.70**	**29**	eLR	LR	11 48 23.0	
	comp=Z,146nm,27.0s						
PCBR	**Castelo Branco**	**163.19**	**30**	ePKPdf	PKPdf	10 48 03.8	+0.4
PESTR	**Estremoz**	**163.92**	**32**	ePKPdf	PKPdf	10 48 04.5	+0.4
PESTR	**Estremoz**	**163.92**	**32**	ePKPab	PKPab	10 48 55.9	-1.1
PESTR	**Estremoz**	**163.92**	**32**	eLR	LR	11 51 36.8	
PBEJ	**Beja**	**164.43**	**35**	ePKPdf	PKPdf	10 48 05.3	+0.7
ESDC	**Sonseca Array**	**164.71**	**22**	PKP	PKPdf	10 48 03.7	-1.2
	comp=Z,0.3nm,0.3s,baz=338,slow=2.8,SNR=10						
ESDC				PKPab	PKPab	10 48 59.5	-1.0
	comp=Z,1.0nm,0.6s,baz=339,slow=4.3,SNR=7.2						
TOA0	**Torodi Ar. Sit**	**167.54**	**173**	ePKPdf	PKPdf	10 48 06.8	-0.3
TOA0				ePKPab	PKPab	10 49 13.1	+0.2
TORD	**Torodi Ar. Bea**	**167.54**	**173**	PKP	PKPdf	10 48 07.0	-0.1
	comp=Z,5.4nm,0.7s,baz=341,slow=0.3,SNR=36						
TORD				PKPab	PKPab	10 49 13.2	+0.2
	comp=Z,19nm,0.7s,baz=189,slow=3.7,SNR=41						
TORD				PP	PP	10 53 03.4	+2.0
	comp=Z,1.3nm,0.9s,baz=145,slow=5.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**167.54**	**173**	PKP	PKPdf	10 48 07.0	-0.1
TORD				PKPab	PKPab	10 49 13.2	+0.2
TORD				PP	PP	10 53 03.4	+2.0
KEST	**Kesra**	**168.61**	**334**	PKPab	PKPab	10 49 17.0	-0.7
	comp=Z,3.8nm,0.8s,baz=315,slow=2.9,SNR=8.6						

CASC 19 10:37:37.0±2.7**,1116N**×**8652W,h12**km**,MD3.8,ML2.5, 6C-4D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TICN	**Ticuantepe**	**0.92**	**18**	⇓eP	Pg	10 37 54.4	-0.3
TICN				eS	Sg	10 38 08.1	+1.4
CONN	**Concepcion**	**0.96**	**65**	⇓eP	Pg	10 37 54.2	-1.4
CONN				eS	Sg	10 38 07.8	-0.4
XAVN	**Gruta Xavier**	**1.00**	**11**	⇑eP	Pg	10 37 55.4	-1.0
TISN	**Laguna Tiscapa**	**1.01**	**14**	eP	Pb	10 37 55.6	-0.8
COPN	**Copaltepe**	**1.02**	**356**	⇓eP	Pb	10 37 55.3	-1.3
COPN				eS	Sg	10 38 11.4	+1.5
MGAN	**Managua**	**1.02**	**15**	⇑eP	Pb	10 37 55.8	-0.9
MGAN				eS	Sg	10 38 10.4	+0.5
APYN	**Apoyeque**	**1.08**	**9**	eP	Pb	10 37 56.7	-1.0
RIN3	**Volcan Rincon**	**1.18**	**108**	⇑eP	Pb	10 37 57.0	-2.3
RIN3				eS	Sb	10 38 14.6	+0.1
MIRN	**Miramar**	**1.29**	**352**	eP	Pn	10 37 58.9	-2.0
MIRN				eS	Sb	10 38 18.1	+0.3
LEON	**Leon**	**1.30**	**344**	eP	Pn	10 37 58.9	-2.2
LEON				eS	Sb	10 38 18.9	+0.7
LIM1	**Limonal**	**1.32**	**110**	⇑eP	Pn	10 37 59.4	-1.9
LIM1				eS	Sb	10 38 18.2	-0.5
VCR	**Vista de Mar**	**1.34**	**139**	eP	Pn	10 38 00.5	-1.1
CNGN	**Cerro Negro**	**1.35**	**353**	⇑eP	Pn	10 37 59.5	-2.2
CNGN				eS	Sb	10 38 17.9	-1.5
TELN	**Telica**	**1.47**	**348**	eP	Pn	10 38 01.8	-1.6
BOA	**Boaco**	**1.53**	**31**	⇑eP	Pn	10 38 02.3	-1.9
BOA				eS	Sn	10 38 23.3	-0.8
BOA				i		10 38 25.1	
	comp=N,56nm,0.6s						
JTS	**JuntasAbangare**	**1.76**	**119**	eP	Pn	10 38 05.9	-1.5
JTS				eS	Sn	10 38 31.2	+1.4
JCR	**Jicaral**	**1.90**	**133**	eP	Pn	10 38 11.0	+1.8
CAO	**Cobano**	**2.01**	**136**	eP	Pn	10 38 11.8	+1.1
EPA	**Esparza**	**2.22**	**121**	⇓eP	Pn	10 38 15.2	+1.6
PRS1	**Puriscal**	**2.46**	**118**	eP	Pn	10 38 17.9	+0.9
LCR2	**La Lucha 2**	**2.85**	**119**	eP	Pn	10 38 24.1	+1.8

*ISCJB **19** 10:43:19.8±0.9, 57S±0.1×293E±0.1, h10km, mb3.8/4, MS3.5/1, Error ellipse: s-maj=21.6km s-min=15.0km az=44.9*

*IDC **19** 10:43:22.0±5.5, 547S×2932E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/22, mbtmp3.9/5, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/25, Error ellipse: s-maj=128.4km s-min=28.1km az=170.0*

*NEIC **19** 10:43:22.1±0.8, 569S×2927E, h10km, mb3.8/1, Error ellipse: s-maj=20.1km s-min=14.2km az=112.0*

ISC 19 10:43:22.4±0.9**,57S**±0.1×**293E**±0.1**,h10**km**,n8,**σ0.s58/10**,mb3.8**/4**,MS3.5**/1**,Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**9.16**	**61**	Pn	**Pn**	**10 45 33.9**	**-0.7**
	0.9nm,0.3s,baz=237,slow=14,SNR=17						
KMBO				Sn	**Sn**	**10 47 10.8**	**-6.9**
	4.4nm,0.3s,baz=147,slow=23,SNR=9.7						
KMBO				Lg		10 48 04.6	
	6.0nm,0.3s,baz=325,slow=19,SNR=7.6						
KMBO	**Kilima Mbogo**	**9.16**	**61**	Pn	**Pn**	**10 45 33.9**	**-0.7**
KMBO				Sn	**Sn**	**10 47 10.8**	**-6.9**
KMBO				Lg		10 48 04.6	
LSZ	**Lusaka**	**9.59**	**186**	ePn	**Pn**	**10 45 40.5**	**+0.1**
	4.2nm,0.7s						
LSZ				eSn	**Sn**	**10 47 16.2**	**-12**
LSZ				e		10 48 23.5	
TSUM	**Tsumeb**	**17.61**	**219**	ePn	Px	10 47 18.0	
	5.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**33.18**	**304**	P	**P**	**10 49 58.4**	**-0.7**
	1.9nm,0.7s,mb4.2,baz=126,slow=9.1,SNR=3.4						
TORD				LR	LR	11 04 12.3	
	comp=Z,84nm,19.9s,MS3.5,baz=100,slow=38						
BRTR	**Keskin Array B**	**45.37**	**5**	P	**P**	**10 51 41.7**	**+0.8**
	1.0nm,0.7s,mb3.8,baz=180,slow=8.5,SNR=4.4						
NOA	**NORSAR Array B**	**68.01**	**351**	P	**P**	**10 54 21.8**	**-0.1**
	0.6nm,0.7s,mb3.7,baz=162,slow=5.7,SNR=3.4						
MKAR	**Makanchi Array**	**70.13**	**36**	P	**P**	**10 54 35.6**	**+0.6**
	0.3nm,0.4s,mb3.5,baz=243,slow=5.8,SNR=2.7						

*ISCJB **19** 10:43:28.8±1.4, 427N±0.1×7810E±0.09, h10km, Error ellipse: s-maj=19.9km s-min=5.8km az=128.8*

*NNC **19** 10:43:31.9±4.2, 4329N×7765E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=65.1km s-min=8.7km az=150.0*

*KNET **19** 10:43:31.9±0.9, 4288N×7759E, h1km±4km, ml2.9, Error ellipse: s-maj=8.0km s-min=5.0km az=172.0*

ISC 19 10:43:29.3±1.5**,426N**±0.1×**7811E**±0.10**,h10**km**,n9,** σ**1.s38**/17**,12C-6D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.44**	**255**	⇓P	**Pn**	**10 43 54.4**	**-1.0**
	34nm,0.2s,SNR=210						
ULHL				⇑S	**Sn**	**10 44 11.9**	**-2.4**
	445nm,0.2s						
TKM2	**Tokmak 2**	**1.87**	**280**	⇓P	**Pn**	**10 44 00.3**	**-1.1**
	18nm,0.1s,SNR=34						
TKM2				⇑S	**Sn**	**10 44 22.5**	**-2.5**
	90nm,0.2s						
TKM2	**Tokmak 2**	**1.87**	**280**	⇑P	**Pn**	**10 43 59.8**	**-1.6**
	0.5nm,0.3s						
TKM2				⇑S	**Sn**	**10 44 21.7**	**-3.4**
	1.9nm,0.3s						
KBK	**Karagaybulak**	**2.33**	**272**	⇓P	**Pn**	**10 44 09.0**	**+1.2**
	35nm,0.3s,SNR=9.4						
KBK				⇑S	**Sn**	**10 44 37.5**	**+1.1**
	85nm,0.2s						
CHMS	**Chumysh**	**2.50**	**280**	⇑P	**Pn**	**10 44 10.3**	**+0.3**
	8.3nm,0.2s,SNR=12						
CHMS				⇓S	**Sn**	**10 44 40.0**	**-0.5**
	39nm,0.2s						
AAK	**Ala-Archa**	**2.67**	**271**	⇓P	**Pn**	**10 44 14.7**	**+2.4**
	11nm,0.2s						
AAK				⇑S	**Sn**	**10 44 47.1**	**+2.4**
	38nm,0.3s						
USP	**Ospenovka**	**2.72**	**285**	⇓P	**Pn**	**10 44 13.0**	**-0.1**
	9.8nm,0.2s,SNR=9.8						
USP				⇑S	**Sn**	**10 44 46.2**	**+0.1**
	46nm,0.2s						
MK09	**Makanchi Array**	**5.10**	**34**	⇑Pn	**Pn**	**10 44 46.7**	**+1.0**
	1.1nm,0.6s,baz=218,slow=16						
MK09				⇑Sn	**Sn**	**10 45 43.6**	**-1.0**
	1.3nm,0.4s,baz=216,slow=26						
MK09				⇑Lg		10 46 02.7	
	3.6nm,0.5s,baz=219,slow=29						
KK31	**Karatay Array**	**5.60**	**277**	Pg	**Pb**	**10 45 02.0**	**-5.2**
	0.3nm,0.2s,baz=14,slow=16,SNR=4.0						
KK31				⇑Lg		10 46 17.7	
	1.7nm,0.3s,baz=125,slow=78,SNR=5.3						

*HLW **19** 11:12:16.2, 2964N×3669E, h11km, Mb3.3*

*ISCJB **19** 11:12:19.0±1.2, 2978N±0.07×3625E±0.08, h10km, Error ellipse: s-maj=10.1km s-min=9.5km az=121.7*

*GII **19** 11:12:19.7±0.8, 2990N×3620E, h0km±12km, ML1.7/2*

ISC 19 11:12:18.9±1.2**,2978N**±0.07×**3630E**±0.08**,h10**km**,n15,** σ**0.s90**/18**,4C,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.09**	**268**	Pg	**Pg**	**11 12 39.9**	**-0.1**
HRFI	**Mount Harif**	**1.13**	**284**	Pg	**Pg**	**11 12 39.5**	**-1.1**
HRFI				Sg	**Sg**	**11 12 55.9**	**+0.6**
EIL	**Elat**	**1.18**	**265**	Pg	**Pg**	**11 12 41.6**	**0.0**
MBH	**Mount Berech**	**1.21**	**271**	Pg	**Pg**	**11 12 41.5**	**-0.6**
ZFRI	**Zfri**	**1.24**	**309**	Pg	**Pn**	**11 12 40.7**	**-1.7**
PRNI	**Paran**	**1.26**	**297**	Pg	**Pn**	**11 12 41.4**	**-1.2**
PRNI				Sg	**Sg**	**11 12 59.3**	**-0.3**
HBST	**Basata**	**1.48**	**248**	⇑P	**Pn**	**11 12 46.0**	**+0.4**
MZDA	**Masada**	**1.73**	**332**	Pn	**Pn**	**11 12 49.0**	**0.0**
HDHB	**Dhahab**	**1.81**	**235**	⇑P	**Pn**	**11 12 49.5**	**-0.7**
SVTA	**Shivta**	**1.85**	**309**	Pn	**Pn**	**11 12 50.9**	**+0.1**
MKRJ	**Makawir**	**1.86**	**342**	Pn	**Pn**	**11 12 51.0**	**+0.2**
KZIT	**Kziot**	**2.00**	**305**	Pn	**Pn**	**11 12 54.0**	**+1.3**
HNKL	**Nakhl**	**2.02**	**275**	P	**Pn**	**11 12 54.4**	**+1.3**
HNKL				S	**Sn**	**11 13 22.3**	**+3.9**
HKAT	**Jabal Katrina**	**2.38**	**239**	⇑P	**Pn**	**11 12 57.8**	**-0.1**
AMAG	**Maghara**	**2.81**	**289**	⇑P	**Pn**	**11 13 05.5**	**+1.6**

IDC 19 11:16:04.4±64.0**,1839S**×**17960E,h0**km**,mb4.1**/3**, mb1 4.2**/3**,mb1mx3.8**/12**,mbtmp4.1**/3**,Error ellipse: s-maj=1151.0km s-min=146.6km az=79.0,Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.74**	**241**	P	P	11 23 14.2	+0.8
	1.0nm,0.4s,baz=83,slow=12,SNR=5.7						
WRA	**Warramunga Arr**	**42.69**	**260**	P	P	11 24 02.9	0.0
	0.3nm,0.3s,baz=97,slow=7.6,SNR=21						
ASAR	**Alice Springs**	**42.84**	**255**	P	P	11 24 04.3	+0.2
	3.2nm,0.5s,baz=90,slow=8.5,SNR=89						

CASC 19 11:20:39.2±2.9**,845N**×**8288W,h0**km±7km**,MD4.0,4C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVD	**David**	**0.42**	**92**	⇓iP	Pg	11 20 50.4	+3.1
CTCR	**Cotoan**	**0.46**	**15**	⇓eP	Pg	11 20 48.9	+0.9
CTCR				eS	Sg	11 20 58.6	+4.7
LCR2	**La Lucha 2**	**1.70**	**319**	⇑eP	Pn	11 21 08.8	-1.3
LCR2				eS	Sn	11 21 34.4	+1.9
VTU	**Volcan Turrial**	**1.79**	**331**	eP	Pn	11 21 10.5	-0.8
OCM	**Ochomogo**	**1.79**	**323**	⇑eP	Pn	11 21 10.2	-1.1
OCM				eS	Sn	11 21 37.9	+3.2
PRS1	**Puriscal**	**2.08**	**317**	⇑eP	Pn	11 21 14.3	-1.1
PRS1				eS	Sn	11 21 43.6	+1.7
POA2	**Poas 2**	**2.19**	**322**	eP	Pn	11 21 16.9	+0.2
CGA2	**Cerro Gallo 2**	**2.21**	**315**	eP	Pn	11 21 16.1	-1.0
EPA	**Esparza**	**2.28**	**312**	eP	Pn	11 21 17.9	-0.2
JCR	**Jicaral**	**2.61**	**302**	eP	Pn	11 21 23.6	+1.0
AZU	**Azuero**	**2.66**	**104**	⇑eP	Pn	11 21 23.9	+0.6
VACR	**Volcan Arenal**	**2.68**	**319**	eP	Pn	11 21 24.4	+0.8
JTS	**JuntasAbangare**	**2.75**	**312**	eP	Pn	11 21 24.4	0.0
ACH	**Altos**	**2.92**	**86**	eP	Pn	11 21 29.1	+2.1
ZANG	**Zanguenga, Cho**	**3.02**	**80**	eP	Pn	11 21 27.3	-0.9
ZANG				eS	Sn	11 22 04.9	-0.2
LIM1	**Limonal**	**3.24**	**314**	eP	Pn	11 21 33.5	+2.2
ACLA	**Agua Clara, Si**	**3.26**	**74**	eP	Pn	11 21 31.3	-0.3

MEX 19 11:24:57.8±0.5**,1605N**×**9748W,h20**km±39km**,MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.24**	**35**	i P	Pn	11 25 16.8	-3.3
VHO				i S	Sb	11 25 32.2	-4.0
OXX	**Oaxaca**	**1.26**	**35**	i P	Pn	11 25 17.5	-2.7
OXX				eS	Sb	11 25 31.0	-5.6
UTMO	**Huajuapan**	**1.80**	**350**	eP	Pn	11 25 25.1	-2.6
UTMO				i S	Sn	11 25 45.9	-4.1
TPIG	**Tehuac#an**	**2.36**	**3**	i P	Pn	11 25 32.1	-3.4
TPIG				i S	Sn	11 26 01.0	-2.9
CMIG	**Matias Romero**	**2.69**	**67**	i P	Pn	11 25 37.7	-2.3
CMIG				i S	Sn	11 26 08.5	-3.6

*NIED **19** 11:43:00, 3570N×14080E, h65km, Mw4.1 Best double couple: M0 1.60000×10^15 NP1: φs4.00000°, δ89.00000°, λ85.00000°. NP2: φs260.00000°, δ5.00000°, λ166.00000°.*

*IDC **19** 11:43:21.4±0.8, 3557N×14072E, h0km, mb3.8/9, mb1 4.0/12, mb1mx3.9/23, mbtmp3.9/12, ML4.1/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/44, Error ellipse: s-maj=23.7km s-min=16.6km az=64.0*

*ISCJB **19** 11:43:26.3±0.6, 3563N±0.04×14075E±0.06, h52km±5km, mb3.6/10, Error ellipse: s-maj=8.5km s-min=5.9km az=159.2*

*JMA **19** 11:43:26.7±0.1, 3568N×14073E, h48km±1km, M3.4 Broadband fault plane solution: P waves. NP1: φs227.00000°, δ28.00000°, λ131.00000°. NP2: φs3.00000°, δ69.00000°, λ71.00000°. Principal axes: T Plg61.0000°, Azm244.0000°; N Plg18.0000°, Azm10.0000°; P Plg22.0000°, Azm107.0000°;*

JMA Felt I J1.

*NEIC **19** 11:43:26.8, 3568N×14073E, h48km, mb4.0/1, After JMA.*

ISC 19 11:43:27.0±0.6**,3563N**±0.03×**14077E**±0.06**,h42**km±6km**, n29,** σ**1.s03**/37**,mb3.7**/10**,1C-5D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.11**	**44**	⇑P	**Pn**	**11 43 34.2**	**+0.3**
JCN	**Nagara**	**0.50**	**246**	⇓P	**Pn**	**11 43 38.5**	**+0.6**
JCN				S	**Sn**	**11 43 47.4**	**+1.9**
BSO4	**Boso 4**	**0.72**	**209**	P	**Pn**	**11 43 41.3**	**+0.5**
JYT	**Yasato**	**0.76**	**323**	⇓P	**Pn**	**11 43 40.2**	**-1.1**
JYT				S	**Sn**	**11 43 50.4**	**-1.2**
BSO3	**Boso 3**	**0.85**	**194**	P	**Pn**	**11 43 43.1**	**+0.6**
BSO1	**Boso 1**	**0.98**	**170**	⇓P	**Pn**	**11 43 44.8**	**+0.5**
JHO	**Hitachi**	**1.00**	**351**	⇓P	**Pn**	**11 43 44.1**	**-0.4**
JAG	**Ashikaga**	**1.33**	**307**	P	**Pn**	**11 43 48.1**	**-1.0**
JOD2	**Odawara 2**	**1.42**	**256**	⇓P	**Pn**	**11 43 50.0**	**-0.3**
JOD2				S	**Sn**	**11 44 07.4**	**-0.3**
JIM2	**Oshima 3**	**1.42**	**231**	P	**Pn**	**11 43 49.2**	**-1.1**
JIM2				S	**Sn**	**11 44 06.3**	**-1.5**
MJAR	**Matsushiro Arr**	**2.26**	**295**	Pn	**Pn**	**11 44 01.6**	**-0.3**
	21nm,0.3s,baz=101,slow=14,SNR=203						

MJAR				Sn	Sn	11 44 30.4	+1.9
	14nm,0.3s,baz=142,slow=14,SNR=6.7						
MAJO	**Matsushiro**	**2.27**	**295**	*e*Pn	**Pn**	**11 44 02.9**	**+1.0**
MAT	**Matsushiro**	**2.27**	**295**	P	**Pn**	**11 44 02.7**	**+0.8**
MAT				S	**Sn**	**11 44 29.2**	**+0.6**
MAT	**Matsushiro**	**2.27**	**295**	*e*P	**Pn**	**11 44 03.0**	**+1.1**
MAT				*e*S	**Sn**	**11 44 29.0**	**+0.4**
JHJ	**Hachijo jima 2**	**2.63**	**198**	Pn	**Pn**	**11 44 06.9**	**0.0**
	76nm,0.3s,baz=312,slow=6.3,SNR=26						
JHJ				Sn	**Sn**	**11 44 37.3**	**-0.2**
	207nm,0.3s,baz=230,slow=23,SNR=12						
CBIJ	**Chichi jima**	**8.59**	**172**	Pn	**Pn**	**11 45 26.1**	**-2.6**
	15nm,0.3s,baz=281,slow=17,SNR=6.0						
CBIJ				Sn	**Sn**	**11 46 55.2**	**-9.0**
	7.5nm,0.3s,baz=272,slow=23,SNR=2.7						
ASAJ	**Asahikawa**	**8.60**	**9**	Pn	**Pn**	**11 45 28.4**	**-0.4**
	1.8nm,0.3s,baz=225,slow=15,SNR=16						
JOW	**Kunigami**	**13.81**	**234**	LR	LR	11 51 44.2	
	comp=Z,57nm,18.1s,baz=249,slow=37						
SONM	**Songino Array**	**28.17**	**306**	P	**P**	**11 49 14.3**	**-1.0**
	0.5nm,0.5s,mb3.4,baz=103,slow=9.7,SNR=5.2						
ZAL	**Zalesovo**	**42.50**	**314**	P	**P**	**11 51 18.0**	**-0.1**
	0.8nm,0.4s,mb3.8,baz=45,slow=4.3,SNR=6.1						
ZAL	**Zalesovo**	**42.50**	**314**	P	**P**	**11 51 18.0**	**-0.1**
MKAR	**Makanchi Array**	**44.44**	**303**	P	**P**	**11 51 33.4**	**-0.3**
	1.2nm,0.6s,mb3.8,baz=80,slow=11,SNR=7.4						
ZRNK	**Zerenda**	**51.98**	**313**	*e*P	**P**	**11 52 30.4**	**-1.5**
	1.0nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**55.60**	**187**	P	**P**	**11 52 57.5**	**-0.8**
	0.8nm,0.4s,mb4.1,baz=0.7,slow=7.6,SNR=24						
ASAR	**Alice Springs**	**59.32**	**187**	P	**P**	**11 53 25.8**	**+1.1**
	0.2nm,0.4s,mb3.5,baz=15,slow=11,SNR=7.1						
FINES	**FINESS Array B**	**69.82**	**332**	P	**P**	**11 54 34.3**	**+1.2**
	0.4nm,0.6s,mb3.5,baz=72,slow=8.9,SNR=3.4						
NOA	**NORSAR Array B**	**75.28**	**337**	P	**P**	**11 55 05.1**	**-0.5**
	0.6nm,0.7s,mb3.6,baz=41,slow=5.8,SNR=2.8						
NVAR	**Mina Array Bea**	**76.25**	**53**	P	**P**	**11 55 13.3**	**+2.2**
	0.4nm,0.6s,mb3.5,baz=300,slow=6.1,SNR=6.3						
PDAR	**Pinedale Array**	**79.03**	**45**	P	**P**	**11 55 27.9**	**+1.3**
	0.3nm,0.6s,mb3.4,baz=268,slow=2.2,SNR=4.6						

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*NIED **19** 11:49:00, 3280N×14030E, h101km, Mw3.8 Best double couple: M₀5.55000×10^{14} NP1:φs191.00000°, δ90.00000°, λ-143.00000°. NP2:φs101.00000°, δ53.00000°, λ0.00000°.*
*ISCJB **19** 11:49:48.1±0.6, 3277N±004×14032E±006, h125km, mb3.6/5, Error ellipse: s-maj=7.1km s-min=5.6km az=160.3*
*IDC **19** 11:49:48.8±0.6, 3266N×140.14E, h122km±4km, mb3.4/5, mb1 3.5/7, mb1mx3.3/21, mbtmp3.8/7, MS3.9/1, Ms1 3.9/1, ms1mx2.4/23, Error ellipse: s-maj=30.8km s-min=10.2km az=71.0*
*NEIC **19** 11:49:49.7, 3284N×14032E, h125km, MG3.6(JMA), After JMA.*
*JMA **19** 11:49:49.7±0.1, 3284N×14032E, h125km±1km, M3.6*
ISC 19 11:49:48.9±0.6**, 3278N**±004×**14033E**±006**, h128**km±5km**, n31,** σ**0§83**/45**, mb3.6**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.55**	**307**	P	**Pn**	**11 50 08.4**	**+0.5**
JHJ2				S	**Sn**	**11 50 22.6**	**+0.3**
JHJ	**Hachijo jima 2**	**0.57**	**306**	P	**Pn**	**11 50 08.5**	**+0.4**
	640nm,0.3s,baz=241,slow=23,SNR=279						
JHJ				S	**Sn**	**11 50 22.6**	**0.0**
	423nm,0.3s,baz=77,slow=23,SNR=30						
JMY	**Miyakejima3**	**1.46**	**332**	P	**Pn**	**11 50 16.3**	**0.0**
JMY				*e*S	**Sn**	**11 50 37.0**	**-0.2**
JKO	**Kozu shima**	**1.72**	**325**	P	**Pn**	**11 50 19.7**	**+0.4**
JKO				*e*S	**Sn**	**11 50 42.2**	**-0.4**
NJJJ	**Nii jima 2**	**1.84**	**332**	P	**Pn**	**11 50 21.4**	**+0.7**
BSO1	**Boso 1**	**1.94**	**16**	P	**Pn**	**11 50 22.5**	**+0.5**
BSO1				*e*S	**Sn**	**11 50 47.3**	**0.0**
BSO2	**Boso 2**	**2.00**	**10**	*e*S	**Sn**	**11 50 49.0**	**+0.5**
BSO3	**Boso 3**	**2.02**	**4**	P	**Pn**	**11 50 23.4**	**+0.5**
BSO3				*e*S	**Sn**	**11 50 49.5**	**+0.5**
JIM2	**Oshima 3**	**2.07**	**339**	P	**Pn**	**11 50 23.7**	**+0.1**
JIM2				*e*S	**Sn**	**11 50 49.2**	**-1.0**
JIZS	**Izushimoda**	**2.28**	**328**	P	**Pn**	**11 50 26.6**	**+0.4**
TK01	**Tokai 1**	**2.50**	**294**	*e*S	**Sn**	**11 50 59.6**	**-0.1**
TK04	**Tokai 4**	**2.60**	**309**	P	**Pn**	**11 50 31.1**	**+0.9**
TK04				*e*S	**Sn**	**11 51 03.3**	**+1.2**
JOD2	**Odawara 2**	**2.68**	**338**	P	**Pn**	**11 50 31.7**	**+0.4**
JOD2				*e*S	**Sn**	**11 51 02.9**	**-1.0**
SHZ3	**Shizuoka 3**	**2.88**	**323**	P	**Pn**	**11 50 34.8**	**+0.9**
JYN	**Shimob**	**3.09**	**332**	P	**Pn**	**11 50 37.6**	**+1.1**
JIE	**Ise**	**3.43**	**299**	P	**Pn**	**11 50 41.2**	**+0.2**
JIE				S	**Sn**	**11 51 20.3**	**-0.9**
JRY	**Ryogami san**	**3.44**	**340**	P	**Pn**	**11 50 41.6**	**+0.5**
JRY				*e*S	**Sn**	**11 51 20.9**	**-0.6**
JAG	**Ashikaga**	**3.71**	**349**	P	**Pn**	**11 50 43.9**	**-0.8**
JAG				*e*S	**Sn**	**11 51 26.9**	**-1.0**
MJAR	**Matsushiro Arr**	**4.14**	**336**	P	**Pn**	**11 50 50.3**	**-0.1**
	6.5nm,0.3s,baz=158,slow=11,SNR=55						
MJAR				S	**Sn**	**11 51 37.6**	**-0.5**
	baz=126,slow=18,SNR=2.9						
MAJO	**Matsushiro**	**4.14**	**336**	*e*P	**Pn**	**11 50 50.6**	**+0.2**
MAT	**Matsushiro**	**4.14**	**336**	P	**Pn**	**11 50 50.5**	**+0.1**
MAT				*e*S	**Sn**	**11 51 37.3**	**-0.9**
MAT	**Matsushiro**	**4.14**	**336**	*e*P	**Pn**	**11 50 51.0**	**+0.6**
MAT				S	**Sn**	**11 51 37.0**	**-1.2**
CBIJ	**Chichi jima**	**5.89**	**164**	P	**Pn**	**11 51 11.4**	**-2.4**
	12nm,0.3s,baz=297,slow=18,SNR=6.1						
CBIJ				S	**Sn**	**11 52 16.7**	**-3.4**
	4.7nm,0.3s,baz=285,slow=20,SNR=2.5						
ASAJ	**Asahikawa**	**11.46**	**8**	P	**Pn**	**11 52 25.9**	**-2.6**
	0.6nm,0.3s,baz=274,slow=18,SNR=12						
SONM	**Songino Array**	**29.65**	**311**	P	**P**	**11 55 42.3**	**+0.1**
	0.3nm,0.3s,mb3.4,baz=119,slow=7.5,SNR=5.2						
MKAR	**Makanchi Array**	**45.74**	**306**	P	**P**	**11 57 57.0**	**-0.2**
	1.0nm,0.6s,mb3.8,baz=80,slow=11,SNR=7.9						
FITZ	**Fitzroy Crossi**	**52.51**	**198**	LR	LR	12 17 51.4	
	comp=Z,116nm,22.0s,baz=310,slow=32						
WRA	**Warramunga Arr**	**52.74**	**187**	P	**P**	**11 58 50.2**	**-0.2**
	0.4nm,0.3s,mb3.9,baz=5.7,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**56.46**	**187**	P	**P**	**11 59 17.4**	**+0.1**
	0.2nm,0.4s,mb3.5,baz=3.6,slow=7.1,SNR=7.0						
NVAR	**Mina Array Bea**	**78.28**	**52**	P	**P**	**12 01 36.9**	**+2.3**
	0.6nm,0.7s,mb3.5,baz=296,slow=5.5,SNR=5.8						
LPAZ	**La Paz**	**149.48**	**64**	PKPbc	PKPbc	12 09 25.4	+2.5
	0.3nm,0.4s,baz=352,slow=3.0,SNR=3.7						

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*NEIC **19** 11:51:34.7, 2968S×7201W, h37km, MG3.4(GUC), After GUC.*
GUC 19 11:51:34.7±0.8**, 2968S**×**7201W, h37**km±4km**, MD3.7, ML3.4, 1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**1.16**	**143**	*i* P	Pn	11 51 55.3	+0.9
OVCH				*i* S	Sn	11 52 10.9	+2.0
LCO	**Las Campanas**	**1.32**	**60**⇑	*i*P	Pn	11 51 58.0	+1.3
LCO				*i* S	Sn	11 52 16.2	+3.2
VACH	**Vallenar**	**1.55**	**45**	*i* P	Pn	11 52 01.6	+1.7
VACH				*i* S	Sn	11 52 21.6	+2.9
VACH				AML	AML	11 52 29.0	
	comp=E,687nm,0.4s						
VACH	**Vallenar**	**1.55**	**45**	*i* P	Pn	11 52 01.6	+1.7
VACH				*i* S	Sn	11 52 21.6	+2.9
CMCH	**Combarbala**	**1.72**	**150**	*i* P	Pn	11 52 03.5	+1.4
CMCH				*i* S	Sn	11 52 25.5	+2.6
CMCH				AML	AML	11 52 37.0	
	comp=N,841nm,0.8s						
CMCH	**Combarbala**	**1.72**	**150**	*i* P	Pn	11 52 03.5	+1.4
CMCH				*i* S	Sn	11 52 25.5	+2.6

IDC 19 11:55:22.9±2.0**, 066N**×**12664E, h0**km**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.6**/15**, mbtmp3.7**/3**, Error ellipse: s-maj=165.7km s-min=25.8km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.82**	**160**	P	P	12 00 15.9	-0.7
	3.0nm,0.8s,baz=339,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.19**	**164**	P	P	12 00 51.1	+1.1
	0.5nm,0.5s,baz=341,slow=7.9,SNR=9.8						
KKTK	**Khon Kaen**	**28.18**	**305**	P	P	12 01 23.0	+6.0
	340nm,0.7s						
MKAR	**Makanchi Array**	**60.03**	**326**	P	P	12 05 31.5	+0.1
	0.5nm,0.5s,baz=117,slow=8.3,SNR=5.5						

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*IDC **19** 11:57:30.7±0.7, 1037S×10841E, h0km, mb4.3/9, mb1 4.3/10, mb1mx4.1/19, mbtmp4.2/10, ML4.0/1, Error ellipse: s-maj=27.4km s-min=17.9km az=48.0*
*ISCJB **19** 11:57:33.7±2.4, 104S±0.1×1085E±0.1, h34km±20km, mb4.2/9, Error ellipse: s-maj=29.0km s-min=12.1km az=88.6*
*NEIC **19** 11:57:38.2±6.5, 971S×10946E, h10km, mb3.8/1, Error ellipse: s-maj=165.0km s-min=25.8km az=64.0*
ISC 19 11:57:33.2±7.9**, 104S**±01×**1084E**±01**, h16**km±49km**, n22,** σ**1§05**/19**, mb4.2**/9**, 1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**3.32**	**23**	P	**Pn**	**11 58 24.8**	**+0.4**
	114nm,0.8s						
BJII	**Banjamegara**	**3.32**	**23**⇑	*i*P	**Pn**	**11 58 24.5**	**+0.1**
LEM	**Lembang**	**3.65**	**348**	P	**Pn**	**11 58 29.1**	**+0.2**
	238nm,0.9s						
JCJI	**Jatiwangi**	**3.90**	**358**	P	**Pn**	**11 58 29.7**	**-2.7**
	560nm,0.6s						
CBJI	**Citeko**	**4.25**	**339**	P	**Pn**	**11 58 33.3**	**-4.0**
	970nm,0.8s						
KRKI	**Karangkates**	**4.58**	**61**	P	**Pn**	**11 58 41.8**	**+0.1**
	972nm,0.8s						
NBBI	**Negara**	**6.46**	**72**	P	**Pn**	**11 59 08.6**	**+1.1**
	682nm,0.7s						
FITZ	**Fitzroy Crossi**	**18.36**	**117**	P	**Pn**	**12 01 46.5**	**-0.6**
	0.4nm,0.3s,baz=260,slow=7.6,SNR=18						
FITZ	**Fitzroy Crossi**	**18.36**	**117**	*e*P	**Pn**	**12 01 46.3**	**-0.7**
	4.8nm,0.6s						
FITZ				*e*S	Sn	12 04 49.5	-22
WRA	**Warramunga Arr**	**26.72**	**114**	P	**P**	**12 03 11.1**	**-0.8**
	2.7nm,0.7s,mb3.9,baz=285,slow=11,SNR=14						
NST	**Nakhon Sawan**	**27.18**	**342**	P	**P**	**12 03 17.0**	**+1.1**
ASAR	**Alice Springs**	**27.65**	**122**	P	**P**	**12 03 22.6**	**+2.5**
	1.4nm,0.7s,mb3.7,baz=299,slow=9.3,SNR=15						
MJAR	**Matsushiro Arr**	**54.47**	**29**	P	**P**	**12 06 58.2**	**-1.7**
	1.5nm,0.9s,mb3.9,baz=201,slow=7.5,SNR=4.9						
SONM	**Songino Array**	**58.01**	**358**	P	**P**	**12 07 25.7**	**+0.5**
	2.9nm,0.6s,mb4.5,baz=177,slow=8.6,SNR=5.1						
MKAR	**Makanchi Array**	**61.55**	**340**	P	**P**	**12 07 49.9**	**+0.4**
	5.7nm,0.7s,mb4.8,baz=134,slow=6.9,SNR=5.4						
BVAR	**Borovoye Array**	**71.03**	**337**	P	**P**	**12 08 50.0**	**-0.3**
	2.5nm,0.7s,mb4.3,baz=147,slow=8.8,SNR=3.5						
VNDA	**Vanda**	**72.38**	**169**	P	**P**	**12 08 57.2**	**-1.2**
	0.7nm,0.8s,mb3.7,baz=49,slow=4.3,SNR=5.5						
MATP	**Matopo**	**77.06**	**251**	P	**P**	**12 09 26.2**	**+0.7**
	5.1nm,1.0s,mb4.4,baz=110,slow=6.9,SNR=7.8						
BRTR	**Keskin Array B**	**85.12**	**312**	P	**P**	**12 10 08.6**	**+0.2**
	3.3nm,0.7s,mb4.6,baz=131,slow=6.5,SNR=9.8						
NVAR	**Mina Array Bea**	**129.86**	**48**	PKP	PKPdf	12 16 44.7	+2.9
	0.6nm,0.7s,baz=182,slow=1.5,SNR=5.4						
BDFB	**Brasilia**	**145.14**	**222**	PKPbc	PKPbc	12 17 10.3	+0.9
	1.2nm,0.4s,baz=111,slow=8.6,SNR=3.2						
LPAZ	**La Paz**	**153.25**	**187**	PKPbc	PKPbc	12 17 34.0	+3.7
	1.2nm,0.8s,baz=141,slow=4.5,SNR=5.2						

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*BJI **19** 11:57:58.5, 138N×9684E, h30km, mB5.0, mb4.9, Ms4.5, Msz4.3*
*NEIC **19** 11:58:07.7±0.4, 225N×9648E, h30km, mb4.8/11, Error ellipse: s-maj=10.6km s-min=6.4km az=210.0*
*MOS **19** 11:58:07.7±0.8, 237N×9651E, h44km, mb4.9/21, Error ellipse: s-maj=14.0km s-min=7.3km az=101.9*
*ISCJB **19** 11:58:08.5±1.3, 230N±006×9659E±007, h55km±11km, mb4.6/49, MS4.2/21, Error ellipse: s-maj=12.5km s-min=8.6km az=103.9*
*IDC **19** 11:58:09.6±4.0, 228N×9653E, h45km±37km, mb4.1/15, mb1 4.2/16, mb1mx4.0/23, mbtmp4.4/16, ML4.0/1, MS4.0/13, Ms1 4.0/13, ms1mx3.7/33, Error ellipse: s-maj=29.0km s-min=17.1km az=63.0*
*SZGRF **19** 11:58:22.0, 426N×9521E, h23km, mb4.6, Northern Sumatera, Indonesia*
ISC 19 11:58:10.4±1.2**, 231N**±006×**9661E**±007**, h53**km±10km**, h24**km±3.4km**:pP-P, n103,** σ**0§88**/94**, mb4.6**/49**, MS4.2**/21**, 6C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**2.28**	**59**	P	**Pn**	**11 58 46.1**	**+0.5**
	1µm,0.9s						
PSI	**Prapat**	**2.36**	**78**	P	**Pn**	**11 58 46.5**	**-0.2**
	31nm,0.3s,baz=276,slow=7.6,SNR=108						
PSI				S	**Sn**	**11 59 13.4**	**-1.1**
	24nm,0.3s,baz=183,slow=16,SNR=7.5						
PSI				LR	LR	11 59 27.3	
	comp=Z,1µm,20.0s,baz=275,slow=32						
PSI	**Prapat**	**2.36**	**78**	P	**Pn**	**11 58 46.5**	**-0.2**
PSI				S	**Sn**	**11 59 13.5**	**-1.0**
PPI	**Padang Panjang**	**4.68**	**126**	P	**Pn**	**11 59 17.4**	**-1.1**
	101nm,0.8s						
IPM	**Ipoh**	**4.91**	**64**	P	**Pn**	**11 59 22.5**	**+0.9**
KULM	**Kulim**	**5.00**	**54**	*e*Pn	**Pn**	**11 59 23.2**	**+0.3**
KGM	**Kluang**	**6.71**	**92**	P	**Pn**	**11 59 46.5**	**+0.1**
KSM	**Kuching**	**13.72**	**93**	*e*Pn	**Pn**	**12 01 22.8**	**+0.7**
KSM				*e*		12 01 31.2	
CHG	**Chiang Mai**	**16.56**	**8**	⇑P	**Pn**	**12 01 57.8**	**-1.2**
	13nm,0.7s						
NANT	**Nan**	**16.87**	**13**	P	**Pn**	**12 02 04.0**	**+1.1**
KKM	**Kota Kinabalu**	**19.90**	**79**	P	**Pn**	**12 02 38.3**	**-1.2**
KKM	**Kota Kinabalu**	**19.90**	**79**	*e*P	**Pn**	**12 02 38.0**	**-1.5**
QIZ	**Qiongzhong**	**21.07**	**37**	P	**P**	**12 02 48.8**	**-1.3**
QIZ				AP		12 02 58.8	
QIZ				AMB	AMB		
	comp=Z,23nm,1.9s,mb4.2						
QIZ				LR	LR		
	comp=N,1µm,13.9s,MS4.6						
QIZ				LR	LR		
	comp=E,1µm,13.9s,MS4.6						
QIZ				LR	LR		
	comp=Z,2µm,13.6s,MS4.7						
TSM	**Tawau**	**21.32**	**84**	P	**P**	**12 02 53.5**	**+0.7**
HYB	**Hyderabad**	**23.24**	**311**	*i* P	pP	12 03 24.0	-1.4
KMI	**Kunming**	**23.44**	**14**	P	**P**	**12 03 16.0**	**+1.0**
KMI				AP		12 03 24.1	
KMI				AMB	AMB		
	comp=Z,18nm,1.5s,mb4.3						
KMI				AMB	AMB		
	comp=Z,154nm,3.5s						
KMI				LR	LR		
	comp=N,573nm,14.9s,MS4.3						
KMI				LR	LR		
	comp=E,525nm,16.7s,MS4.3						
KMI				LR	LR		
	comp=Z,682nm,15.6s,MS4.2						
GYA	**Guiyang**	**25.88**	**21**⇓	*i*P	**P**	**12 03 37.5**	**+0.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.2						
GYA				AMB	AMB		
	comp=Z,150nm,6.4s						
GYA				LR	LR		
	comp=N,780nm,16.2s,MS4.4						
GYA				LR	LR		
	comp=E,470nm,15.3s,MS4.4						
GYA				LR	LR		
	comp=Z,960nm,15.9s,MS4.4						
JIRN	**Jiri**	**27.11**	**339**	*e*P	**P**	**12 03 49.3**	**+1.0**
PKI	**Pulchoki**	**27.31**	**338**	*e*P	**P**	**12 03 50.8**	**+0.7**
GUN	**Gumba**	**27.45**	**339**	*e*P	**P**	**12 03 51.8**	**+0.5**
DMN	**Daman**	**27.46**	**337**	*e*P	**P**	**12 03 52.4**	**+1.0**
KKN	**Kakani**	**27.55**	**338**	*e*P	**P**	**12 03 52.6**	**+0.3**
	comp=Z,67nm,1.2s,mb5.1						
KKN	**Kakani**	**27.55**	**338**	*e*P	**P**	**12 03 52.6**	**+0.3**
KKN				pmax	pmax		
	comp=Z,67nm,1.2s,mb5.2						
LSA	**Lhasa**	**27.73**	**350**	*e*P	**P**	**12 03 54.5**	**+0.7**
LSA				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.7						
LSA	**Lhasa**	**27.73**	**350**	*e*P	**P**	**12 03 54.5**	**+0.7**
	comp=Z,22nm,1.0s,mb4.8						
GKN	**Gorkha**	**27.99**	**337**	*e*P	**P**	**12 03 56.7**	**+0.5**
KOLN	**Koldanda**	**28.21**	**335**	*e*P	**P**	**12 03 58.9**	**+0.8**
	comp=Z,75nm,1.2s,mb5.2						
XAN	**Xi'an**	**33.59**	**19**	P	**P**	**12 04 45.0**	**-0.6**
XAN				AMB	AMB		
	comp=Z,29nm,1.1s,mb5.1						
XAN				LR	LR		
	comp=N,308nm,13.2s,MS4.3						
XAN				LR	LR		
	comp=E,229nm,12.0s,MS4.3						
XAN				LR	LR		
	comp=Z,659nm,13.8s,MS4.5						
LZH	**Lanzhou**	**34.27**	**10**	*e*P	**P**	**12 04 51.8**	**+0.4**
LZH				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,127nm,4.6s						
LZH				LR	LR		
	comp=E,472nm,14.0s						
LZH				LR	LR		
	comp=Z,430nm,19.5s						
SSE	**Sheshan**	**36.86**	**36**	P	**P**	**12 05 09.8**	**-3.8**
SSE				AMB	AMB		
	comp=Z,33nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,148nm,4.1s						
SSE				LR	LR		
	comp=N,146nm,18.7s,MS4.1						
SSE				LR	LR		
	comp=E,246nm,18.7s,MS4.1						
SSE				LR	LR		
	comp=Z,197nm,20.8s,MS3.9						
GTA	**Gaotai**	**37.04**	**4**	*e*P	**P**	**12 05 15.1**	**-0.1**
GTA				PP	PP	12 06 41.9	+1.6
GTA				S	**S**	**12 10 57.8**	**+0.6**
GTA				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.8						
GTA				AMB	AMB		
	comp=Z,125nm,4.9s						
GTA				LR	LR		
	comp=N,238nm,17.5s,MS4.2						
GTA				LR	LR		
	comp=E,262nm,14.4s,MS4.2						
GTA				LR	LR		
	comp=Z,244nm,18.6s,MS4.0						
JOW	**Kunigami**	**38.93**	**48**	P	**P**	**12 05 32.8**	**+1.7**
	comp=Z,10nm,0.7s,mb4.7,baz=243,slow=9.0,SNR=3.7						
JOW				LR	LR	12 20 40.9	
	comp=Z,152nm,21.4s,MS3.8,baz=174,slow=35						
JOW	**Kunigami**	**38.93**	**48**	P	**P**	**12 05 32.8**	**+1.7**
JOW				LR	LR	12 20 40.9	
NWAO	**Narrogin (SRO)**	**40.11**	**153**	LR	LR	12 22 20.4	
	comp=Z,267nm,20.1s,MS4.1,baz=39,slow=36						
WMQ	**Urumqi**	**42.09**	**350**	*e*P	**P**	**12 06 00.6**	**+3.5**
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	**43.12**	**123**	P	**P**	**12 06 06.0**	**+0.4**
	comp=Z,6.9nm,0.8s,mb4.5,baz=300,slow=9.4,SNR=5.0						
FORT	**Forrest**	**44.50**	**140**	*e*P	**P**	**12 06 17.9**	**+1.3**
	comp=Z,14nm,0.7s,mb4.8						
TKM2	**Tokmak 2**	**44.57**	**338**	P	**P**	**12 06 18.0**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.7						
AAK	**Ala-Archa**	**44.75**	**337**⇑	*e*P	**P**	**12 06 17.1**	**-1.5**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.6s,mb4.3						
MK31	**Makanchi Array**	**46.03**	**346**	P	**P**	**12 06 28.7**	**0.0**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
MKAR	**Makanchi Array**	**46.03**	**346**	P	**P**	**12 06 28.9**	**+0.2**
	comp=Z,7.7nm,0.4s,mb5.0,baz=157,slow=7.6,SNR=70						
MKAR	**Makanchi Array**	**46.03**	**346**	P	**P**	**12 06 28.9**	**+0.2**
SONM	**Songino Array**	**46.13**	**9**	P	**P**	**12 06 30.5**	**+1.0**
	comp=Z,3.4nm,0.5s,mb4.6,baz=193,slow=8.8,SNR=36						
ZAK	**Zakamensk**	**48.23**	**6**	*e*P	**P**	**12 06 46.0**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.3						
TLY	**Talaya**	**49.55**	**6**	*e*P	**P**	**12 06 56.9**	**+0.9**
TLY				*e*		12 08 43.7	
TLY				*e*S	**S**	**12 13 50.4**	**-10**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
TLY				MLR	MLR		
	comp=Z,334nm,17.0s,MS4.4						
HIA	**Hailar**	**50.79**	**19**	*e*P	**P**	**12 07 04.8**	**-0.5**
MJAR	**Matsushiro Arr**	**51.28**	**43**	P	**P**	**12 07 09.6**	**+0.6**
	comp=Z,4.3nm,1.0s,mb4.3,baz=223,slow=7.4,SNR=9.3						
MJAR				LR	LR	12 31 20.1	
	comp=Z,201nm,20.3s,MS4.1,baz=235,slow=39						
VLA	**Vladivostok**	**51.35**	**33**	*e*P	**P**	**12 07 09.5**	**-0.1**
VLA				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
CIT	**Chita**	**51.53**	**13**	*e*P	**P**	**12 07 11.0**	**+0.1**
ZAL	**Zalesovo**	**52.37**	**351**	P	**P**	**12 07 17.3**	**+0.2**
	comp=Z,9.7nm,0.5s,mb5.0,baz=302,slow=5.7,SNR=44						
ZAL				LR	LR	12 34 49.0	
	comp=Z,164nm,20.2s,MS4.1,baz=292,slow=42						
ZAL	**Zalesovo**	**52.37**	**351**	P	**P**	**12 07 17.3**	**+0.2**
ZAL				LR	LR	12 34 49.0	
NVS	**Novosibirsk**	**53.49**	**350**	*e*P	**P**	**12 07 22.0**	**-3.4**
STKA	**Stephens Creek**	**54.53**	**132**	P	**P**	**12 07 33.2**	**+0.3**
	comp=Z,3.2nm,0.9s,mb4.4,baz=329,slow=12,SNR=2.7						
STKA				LR	LR	12 31 59.0	
	comp=Z,200nm,20.8s,MS4.2,baz=24,slow=37						
VOSK	**Vostochnaya**	**54.57**	**341**	P	**P**	**12 07 32.5**	**-0.7**
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
BVA0	**Borovoye Array**	**55.01**	**341**	*i* P	**P**	**12 07 36.0**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
BVAR	**Borovoye Array**	**55.01**	**341**	P	**P**	**12 07 35.9**	**-0.6**
	comp=Z,5.1nm,0.7s,mb4.7,baz=143,slow=8.4,SNR=25						
BRVK	**Borovoye**	**55.08**	**341**	*e*P	**P**	**12 07 36.2**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**55.08**	**341**	*e*P	**P**	**12 07 36.2**	**-0.7**
	comp=Z,3.6nm,0.8s,mb4.5						
ZRNK	**Zerenda**	**55.41**	**340**	*e*P	**P**	**12 07 38.7**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ZRNK	**Zerenda**	**55.41**	**340**	*e*P	**P**	**12 07 38.7**	**-0.7**
	comp=Z,5.4nm,0.8s,mb4.6						
CHKZ	**Chkalovo**	**55.49**	**342**	*i* P	**P**	**12 07 39.8**	**-0.1**
CHKZ				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
CHKZ	**Chkalovo**	**55.49**	**342**	*e*P	**P**	**12 07 39.8**	**-0.2**
	comp=Z,12nm,0.8s,mb5.0						
CHKZ				*e*	pP	12 07 48.8	-5.4
KLR	**Kul'dur**	**55.54**	**27**	*e*P	**P**	**12 07 38.0**	**-2.2**
AB31	**Akbulak array**	**56.26**	**332**	*i* P	**P**	**12 07 44.9**	**-0.5**
AB31				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
HABR	**Khabarovsk**	**56.58**	**30**	*e*P	**P**	**12 07 47.5**	**-0.2**
HABR				pmax	pmax		
	comp=Z,18nm,1.6s,mb4.8						
BOD	**Bodaibo**	**57.03**	**11**	*e*P	**P**	**12 07 50.8**	**-0.1**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
AKTK	**Aktyubinsk**	**57.98**	**332**	P	**P**	**12 07 56.8**	**-0.8**
AKTO	**Aktyubinsk**	**57.98**	**332**	P	**P**	**12 07 56.8**	**-0.8**
	comp=Z,3.2nm,0.7s,mb4.5,baz=144,slow=6.1,SNR=5.2						
YSS	**Yuzh-Sakhalins**	**59.77**	**35**⇑	*i*P	**P**	**12 08 10.4**	**+0.4**
YSS				*e*		12 08 18.1	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
YSS	**Yuzh-Sakhalins**	**59.77**	**35**	*e*P	**P**	**12 08 10.5**	**+0.6**
	comp=Z,25nm,1.0s,mb5.2						
YSS				*e*	pP	12 08 19.6	-4.8
GNI	**Garni**	**60.09**	**316**⇑	*e*P	pP	12 08 20.8	-5.9
GNI				pmax	pmax		
	comp=Z,18nm,1.3s						
SVE	**Sverdlovsk**	**61.44**	**338**	*e*P	**P**	**12 08 20.0**	**-1.4**
SVE				*e*		12 08 28.0	
SVE				MLR	MLR		
	comp=N,200nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,200nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.4						
ARU	**Arti**	**61.94**	**337**⇑	*i*P	**P**	**12 08 23.7**	**-1.0**
ARU				*e*		12 09 10.3	
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
ARU	**Arti**	**61.94**	**337**	*e*P	**P**	**12 08 23.8**	**-0.8**
	comp=Z,8.0nm,0.9s,mb4.8						
KIV	**Kislovodsk**	**63.09**	**319**	*e*P	**P**	**12 08 39.0**	**+6.7**
KIV				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
YAK	**Yakutsk**	**64.53**	**17**	*e*P	**P**	**12 08 41.7**	**-0.1**
YAK				*e*		12 08 50.3	
YAK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
YAK				pmax	pmax		
	comp=N,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						

YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK MLR MLR
comp=N,113nm,15.0s,MS4.2
YAK MLR MLR
comp=Z,182nm,15.0s,MS4.4
YAK MLR MLR
comp=E,76nm,16.0s,MS4.2
YAK pmax pmax
comp=Z,13nm,1.2s,mb4.8
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,5.0nm,1.1s
BRTR Keskin Array B 67.93 312 P **P 12 09 03.4 -0.3**
comp=E,0.3nm,0.3s,mb3.7,baz=73,slow=11,SNR=2.6
MOS Moscow 71.08 329 eP **P 12 09 29.5 +6.5**
OBN Obninsk 71.37 328⇑eP **P 12 09 32.3 +7.5**
OBN i 12 18 42.9
OBN pmax pmax
comp=Z,43nm,1.6s,mb5.1
OBN pmax pmax
comp=Z,38nm,1.0s,mb5.3
OBN pmax pmax
comp=Z,48nm,1.6s,mb5.2
OBN pmax pmax
comp=Z,27nm,1.5s,mb5.0
OBN pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
PET Petropavlovsk 71.65 34 eP **P 12 09 31.3 +4.9**
PET pmax pmax
comp=Z,38nm,2.5s,mb4.9
MAW Mawson 73.66 193 P **P 12 09 38.2 -0.1**
comp=Z,1.5nm,0.9s,mb3.9,baz=354,slow=9.2,SNR=2.7
AKASG Malin Array Be 74.02 322 P **P 12 09 40.1 -0.4**
comp=Z,0.5nm,0.5s,mb3.7,baz=90,slow=4.3,SNR=6.2
BOSA Boshof 74.82 240 LR LR 12 37 32.0
comp=Z,143nm,19.7s,MS4.3,baz=242,slow=32
JOF Joensuu 76.89 335 ep **P 12 09 55.0 -2.0**
FINES FINESS Array B 78.75 332 P **P 12 10 07.3 0.0**
comp=Z,1.5nm,0.9s,mb3.9,baz=126,slow=9.8,SNR=5.7
FINES LR LR 12 49 52.7
comp=Z,111nm,20.2s,MS4.2,baz=127,slow=39
FINES FINESS Array B 78.75 332 P **P 12 10 07.3 0.0**
FINES LR LR 12 49 52.7
KAF Kangasniemi 78.83 333 ep **P 12 10 06.6 -1.1**
OKC Ostrava-Krasne 80.80 320 eP pP 12 10 27.9 -5.6
ARCES ARCESS Array B 81.30 340 P **P 12 10 20.4 -0.7**
comp=Z,3.3nm,1.1s,mb4.2,baz=86,slow=4.0,SNR=8.7
ARCES LR LR 12 49 54.6
comp=Z,124nm,21.3s,MS4.2,baz=208,slow=38
DPC Dobruska-Polom 82.03 320 eP pP 12 10 33.9 -6.1
UPC Upice 82.24 321 eP pP 12 10 37.4 -3.7
GERES GERESS Array B 83.59 319 P **P 12 10 33.6 +0.6**
comp=Z,1.1nm,1.0s,mb4.0,baz=94,slow=11,SNR=7.3
HFS Hagfors 84.47 330 LR LR 12 50 52.2
comp=Z,50nm,19.5s,MS3.9,baz=98,slow=37
GRA1 Grafenberg Arr 85.26 319 eP **P 12 10 43.6 +2.2**
comp=Z,6.0nm,1.5s,mb4.5
GRA1 epP pP 12 10 50.4 -6.2
GRF Grafenberg Arr 85.26 319 eP **P 12 10 43.6 +2.2**
comp=Z,6.0nm,1.5s,mb4.5
GRF epP pP 12 10 50.4 -6.2
GRF Grafenberg Arr 85.26 319 eP **P 12 10 43.6 +2.2**
GRF pmax pmax
comp=Z,6.0nm,1.5s,mb4.5
GRF Grafenberg Arr 85.26 319 eP **P 12 10 43.6 +2.2**
GRF pmax pmax
comp=Z,6.0nm,1.5s,mb4.5
NOA NORSAR Array B 85.75 331 LR LR 12 56 32.1
comp=Z,73nm,19.4s,MS4.1,baz=90,slow=41
VNDA Vanda 87.02 169 LR LR 12 46 05.8
comp=Z,71nm,18.6s,MS4.1,baz=312,slow=33
TORD Torodi Ar. Bea 94.26 283 P **P 12 11 24.8 +0.9**
comp=Z,0.8nm,1.1s,mb4.1,baz=116,slow=2.3,SNR=3.0
ESDC Sonseca Array 96.66 310 LR LR 12 58 31.2
comp=Z,40nm,20.6s,MS3.9,baz=135,slow=38
ULM Lac du Bonnet 126.56 10 PKP PKPdf 12 17 05.8 -1.9
comp=Z,1.4nm,0.8s,baz=319,slow=9.3,SNR=3.0
CPUP Villa Florida 145.41 224 PKPbc PKPbc 12 17 43.5 +1.0
comp=Z,1.5nm,0.7s,baz=92,slow=3.6,SNR=3.5

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*LDG **19** 11:59:19.6±0.2, 1984S×16694E, h10km, Mb4.3/1, Error ellipse: s-maj=25.9km s-min=3.3km az=95.0*
*SZGRF **19** 11:59:20.0, 2136S×16746E, h34km, Loyalty Islands*
*BJI **19** 11:59:21.8, 1944S×16830E, h37km, mB5.2, mb4.8, Ms5.2, Msz4.8*
*ISCJB **19** 11:59:21.5±0.2, 1977S±005×16788E±005, h34km, mb4.7/35, MS3.9/11, Error ellipse: s-maj=8.3km s-min=4.4km az=100.8*
*IDC **19** 11:59:23.5±0.7, 1974S×16788E, h35km±4km, mb4.4/16, mb1 4.5/17, mb1mx4.5/19, mbtmp4.6/17, ML3.6/1, MS3.7/7, Ms1 3.7/7, ms1mx3.5/17, Error ellipse: s-maj=16.5km s-min=15.5km az=108.0*
*MOS **19** 11:59:23.3±2.5, 1985S×16779E, h33km, mb5.1/11, Error ellipse: s-maj=15.0km s-min=11.1km az=161.7*
*NEIC **19** 11:59:23.2±0.2, 1973S×16791E, mb4.9/18, Error ellipse: s-maj=8.1km s-min=5.2km az=146.0*
ISC 19 11:59:23.5±0.2, **1979S**±005×**16794E**±005, **h36**km, **h36**km±.8km**:pP-P, n272,** σ0.**82**/223, **mb4.7**/35, **MS3.9**/11, **63C-68D, Vanuatu Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BKM Butte a Klehm 2.12 8⇑iP **Pn 11 59 52.3 -4.2**
DZM Mont Dzumac 2.67 211 eP **Pn 12 00 02.0 -2.0**
DZM eS **Sn 12 00 35.0 0.0**
DZM Mont Dzumac 2.67 211 Pn **Pn 12 00 02.1 -1.8**
10nm,0.3s,baz=64,slow=19,SNR=73
DZM Sn **Sn 12 00 31.0 -4.1**
41nm,0.3s,baz=42,slow=16,SNR=7.7
HNR Honiara 12.87 322 LR LR 12 05 48.9
comp=Z,66nm,20.9s,baz=179,slow=30
ARMA Armidale 18.15 231 eP **Pn 12 03 34.5 +1.9**
URZ Urewera 20.06 159 P **P 12 03 55.1 +1.5**
7.6nm,0.9s,baz=45,slow=14,SNR=3.7
AFI Afiamalu 20.26 76 LR LR 12 10 24.0
comp=Z,321nm,20.1s,MS3.7,baz=172,slow=32
CTA Charters Tower 20.39 265 P **P 12 03 57.4 +0.2**
29nm,0.8s,baz=95,slow=11,SNR=18
CTA LR LR 12 10 20.8
comp=Z,271nm,20.6s,MS3.6,baz=76,slow=32
CTA Charters Tower 20.39 265 eP **P 12 03 59.3 +2.1**
CTA e*PP 12 04 10.1
CTA pmax pmax
comp=Z,21nm,0.8s
CTA Charters Tower 20.39 265 eP **P 12 03 59.3 +2.1**
comp=Z,21nm,0.8s
CTA epP 12 04 10.1
CTAO Charters Tower 20.39 265 eP **P 12 03 56.6 -0.6**
CTAO pmax pmax
comp=Z,8.0nm,1.0s
CTAO Charters Tower 20.39 265 eP **P 12 03 56.6 -0.6**
comp=Z,7.9nm,1.0s
CTAO ePn **P 12 03 59.7 +2.5**
CNB Canberra Magne 22.54 223 eP **P 12 04 22.1 +1.9**
comp=Z,29nm,0.8s,mb4.8
PMG Port Moresby 22.58 294 P **P 12 04 20.9 +0.3**
comp=Z,21nm,0.8s,mb4.6,baz=80,slow=5.1,SNR=3.9
PMG LR LR 12 11 26.4
comp=Z,120nm,20.0s,MS3.3,baz=12,slow=32
PMG Port Moresby 22.58 294 eP **P 12 04 19.9 -0.7**
PMG e 12 04 31.8
PMG pmax pmax
comp=Z,34nm,0.9s
PMG Port Moresby 22.58 294 eP **P 12 04 19.9 -0.7**
comp=Z,34nm,0.9s,mb4.8
PMG e 12 04 31.8
RPZ Rata Peaks 24.00 174 P **P 12 04 35.7 +0.9**
comp=Z,13nm,0.7s,mb4.5,baz=41,slow=8.5,SNR=6.7
STKA Stephens Creek 26.52 238 P **P 12 04 56.1 -1.5**
comp=Z,16nm,0.9s,mb4.5,baz=76,slow=8.8,SNR=15
STKA LR LR 12 15 13.6
comp=Z,164nm,19.5s,MS3.6,baz=25,slow=36
STKA Stephens Creek 26.52 238 eP **P 12 04 56.1 -1.5**
comp=Z,11nm,1.0s,mb4.3
RAR Rarotonga 30.25 98 LR LR 12 15 01.3
comp=Z,271nm,21.3s,MS3.9,baz=219,slow=31
WB2 Warramunga Arr 31.56 264 eP **P 12 05 41.3 -1.1**
WRAB Tennant Creek 31.57 264 eP **P 12 05 41.9 -0.6**
WRAB pmax pmax
comp=Z,14nm,0.9s,mb4.8
WRAB Tennant Creek 31.57 264 eP **P 12 05 41.9 -0.6**
comp=Z,14nm,0.9s,mb4.8
WRA Warramunga Arr 31.57 264 P **P 12 05 41.7 -0.8**
comp=Z,8.1nm,1.0s,mb4.5,baz=92,slow=9.0,SNR=18
AS31 Alice Springs 31.81 257 eP **P 12 05 44.5 -0.1**
ASAR Alice Springs 31.81 257 P **P 12 05 44.5 -0.1**
comp=Z,10nm,0.7s,mb4.8,baz=83,slow=8.9,SNR=75
ASAR LR LR 12 19 28.0
comp=Z,176nm,19.3s,MS3.8,baz=27,slow=38
ASAR Alice Springs 31.81 257 P **P 12 05 44.5 -0.1**
ASAR LR LR 12 19 27.9
FITZ Fitzroy Crossi 39.97 265 P **P 12 06 55.1 +0.6**
comp=Z,27nm,0.7s,mb5.1,baz=115,slow=8.4,SNR=26
FITZ pP pP 12 07 05.7 +0.8
comp=Z,23nm,0.8s,baz=143,slow=8.3,SNR=13
FITZ Fitzroy Crossi 39.97 265⇓iP **P 12 06 54.9 +0.4**
comp=Z,51nm,0.8s,mb5.3
FITZ i pP 12 07 05.5 +0.6
PPT Papeete 40.23 94 eLR LR 12 17 55.7
comp=Z,192nm,28.8s
MBWA Marble Bar 45.05 260 eP **P 12 07 36.4 +0.7**
comp=Z,27nm,0.9s,mb5.1
MBWA epP pP 12 07 46.5 +0.3
KLBR Kellerberrin 46.37 245 eP **P 12 07 45.4 -0.8**
comp=Z,49nm,1.2s,mb5.3
NWAO Narrogin (SRO) 46.88 243 P **P 12 07 50.5 +0.3**
comp=Z,33nm,0.9s,mb5.3,baz=111,slow=6.3,SNR=8.8
NWAO Narrogin (SRO) 46.88 243 eP **P 12 07 49.9 -0.2**
NWAO pmax pmax
comp=Z,19nm,0.8s
NWAO Narrogin (SRO) 46.88 243 eP **P 12 07 49.9 -0.2**
comp=Z,19nm,0.8s,mb5.1
VNDA Vanda 57.85 182 P **P 12 09 11.7 +0.2**
comp=Z,1.1nm,0.9s,mb3.9,baz=353,slow=6.4,SNR=5.4
SBA Scott Base 58.11 180 eP **P 12 09 13.4 +0.1**
SBA eP 12 09 13.7
CASY Casey 59.14 203 eP **P 12 09 19.4 -1.1**
CASY epP pP 12 09 30.2 -1.1
MJAR Matsushiro Arr 62.67 333 P **P 12 09 44.2 -0.3**
comp=Z,1.3nm,0.8s,mb4.1,baz=177,slow=5.3,SNR=4.6
MJAR pP pP 12 09 55.0 -0.3
comp=Z,2.8nm,0.9s,baz=164,slow=6.6,SNR=6.5
MIR Mirnyy 66.02 205 eP **P 12 10 07.0 +0.6**
MIR pmax pmax
comp=Z,120nm,1.0s
SSE Sheshan 67.63 317 P **P 12 10 15.4 -1.3**
SSE AMB AMB
comp=Z,33nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,176nm,4.1s
NJ2 Nanjing 69.76 317 eP **P 12 10 31.3 +1.4**
NJ2 AP pP 12 10 41.6 +0.7
NJ2 XP sP 12 10 45.6 +0.5
NJ2 PP PP 12 13 07.5 +3.1
NJ2 S S 12 19 37.0 +0.6
NJ2 XS sS 12 19 54.0 -0.6
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
NJ2 AMB AMB
comp=Z,530nm,3.9s
NJ2 LR LR
comp=N,350nm,23.8s
NJ2 LR LR
comp=E,1μm,17.8s
NJ2 LR LR
comp=Z,2μm,12.4s
QSPA South Pole Qui 70.27 180 eP **P 12 10 32.3 -0.7**
comp=Z,9.9nm,1.1s,mb4.7
PSI Prapat 71.31 280 P **P 12 10 39.3 0.0**
comp=Z,5.5nm,0.8s,mb4.5,baz=190,slow=6.4,SNR=5.6
MDJ Mudanjiang 73.03 332 P **P 12 10 51.1 +1.5**
MDJ AP pP 12 11 00.6 -0.1
MDJ XP sP 12 11 04.3 -0.5
MDJ PCP PcP 12 11 07.4 +1.1
MDJ PP PP 12 13 33.9 +1.5
MDJ S S 12 20 17.8 +3.6
MDJ XS sS 12 20 33.9 +1.4
MDJ AMB AMB
comp=Z,5.0nm,1.0s,mb4.4
MDJ AMB AMB
comp=Z,38nm,4.5s
MDJ LR LR
comp=N,112nm,16.6s,MS4.3
MDJ LR LR
comp=E,103nm,18.9s,MS4.3
MDJ LR LR
comp=Z,122nm,17.4s,MS4.2
CN2 Changchun 74.30 329 eP **P 12 10 55.8 -1.3**
CN2 eAP pP 12 11 06.1 -2.1
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CN2 LR LR
comp=N,400nm,15.0s
MAW Mawson 77.47 202 P **P 12 11 15.8 +0.7**
comp=N,9.4nm,0.8s,mb4.8,baz=116,slow=7.3,SNR=18
MAW pP pP 12 11 26.5 +0.1
comp=N,4.1nm,0.8s,baz=121,slow=8.7,SNR=4.4
MAW Mawson 77.47 202 eP **P 12 11 15.7 +0.5**
MAW pmax pmax
comp=Z,8.0nm,0.8s
MAW Mawson 77.47 202 eP **P 12 11 15.7 +0.5**
comp=Z,7.6nm,0.8s,mb4.7
KMI Kunming 77.53 303 P **P 12 11 17.3 +1.8**
KMI AP pP 12 11 28.4 +1.8
KMI XP sP 12 11 31.4 +0.6
KMI PP PP 12 14 13.0 +2.5
KMI S S 12 21 04.9 +0.8
KMI XS sS 12 21 22.8 +0.2
KMI SSS 12 29 24.9
KMI AMB AMB
comp=Z,7.0nm,0.8s,mb4.6
KMI AMB AMB
comp=Z,111nm,5.5s
KMI LR LR
comp=N,91nm,19.9s,MS4.2
KMI LR LR
comp=E,82nm,22.9s,MS4.2
KMI LR LR
comp=Z,93nm,21.4s,MS4.1
CD2 Chengdu 79.60 308 eP **P 12 11 27.0 +0.1**
CD2 AP pP 12 11 37.4 -0.7
CD2 XP sP 12 11 41.5 -0.7
CD2 PP PP 12 14 29.9 +2.1
CD2 S S 12 21 26.3 0.0
CD2 XS sS 12 21 43.6 -1.2
CD2 SS SS 12 26 38.5 +3.7
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,40nm,5.8s
CD2 LR LR
comp=N,130nm,13.2s
CD2 LR LR
comp=Z,50nm,14.4s,MS4.0
HHC Hu-ho-hao-te 79.84 320 eP **P 12 11 30.3 +2.1**
HHC PCP PcP 12 11 37.9 +2.1
HHC AP pP 12 11 40.6 +1.2
HHC XP sP 12 11 44.5 +1.0
HHC PP PP 12 14 33.3 +3.5
HHC S S 12 21 30.8 +1.9
HHC SKS 12 21 39.9
HHC XS sS 12 21 47.8 +0.4
HHC SCS ScS 12 21 49.1 -0.8
HHC PS 12 22 19.5
HHC SS SS 12 26 43.6 +5.2
HHC AMB AMB
comp=Z,12nm,1.1s,mb4.7
HHC AMB AMB
comp=Z,44nm,3.7s
HHC LR LR
comp=N,226nm,24.7s,MS4.9
HHC LR LR
comp=E,610nm,23.7s,MS4.9
HHC LR LR
comp=Z,96nm,24.7s,MS4.0
LZH Lanzhou 82.19 313 eP **P 12 11 42.5 +1.8**
LZH AP pP 12 11 58.0 +6.1
LZH XP sP 12 12 02.0 +5.9
LZH AMB AMB
comp=Z,13nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,119nm,4.3s
SYO Syowa Base 84.07 197⇑eP **P 12 11 47.4 -3.0**
BNLO Ben Lomond (Sa 86.76 49 ⇑P **P 12 12 03.2 -0.6**
baz=87
HAST UC Hastings Re 86.86 50 ⇑P **P 12 12 03.4 -1.0**
baz=87
SONM Songino Array 86.92 324 P **P 12 12 04.9 +0.2**
comp=Z,1.4nm,0.7s,mb4.3,baz=134,slow=4.7,SNR=7.4
SONM pP pP 12 12 15.5 -0.5
comp=Z,2.1nm,0.7s,baz=155,slow=6.4,SNR=7.0
HOPS Hopland 87.00 47 ⇑P **P 12 12 04.4 -0.6**
baz=87
P01C Double 8 Ranch 87.05 46 ⇑P **P 12 12 03.6 -1.7**
baz=87
KIPM Iron Peak 87.11 46 eP **P 12 12 05.5 0.0**
KIPM ePcP PcP 12 12 08.0 +0.3
KIPM epP pP 12 12 15.8 -1.0
CVS Carmenet Viney 87.12 48 ⇓P **P 12 12 05.0 -0.6**
baz=87
MNRC McLaughlin Nat 87.38 47 ⇓P **P 12 12 06.2 -0.6**
baz=88
U04C Hernandez Rese 87.40 50 ⇓P **P 12 12 08.4 +1.4**
baz=88
PKM Peak Mountain 87.45 52 ⇑P **P 12 12 07.9 +0.7**
baz=88
SMMC Simmler 87.50 51 ⇓P **P 12 12 05.7 -1.7**
baz=88
S04C Ingram Canyon, 87.53 49 ⇓P **P 12 12 08.7 +1.1**
baz=88
GASB Alder Springs 87.55 46 ⇑P **P 12 12 07.8 +0.1**
baz=88,SNR=5.6
Q03C Winters 87.56 47 ⇑P **P 12 12 08.2 +0.4**
baz=88
N02C Big Bar 87.72 45 ⇑P **P 12 12 08.2 -0.3**
baz=88
O02C Red Bluff 87.76 46 P **P 12 12 09.2 +0.5**
baz=88,SNR=8.3
SUTB Sutter Butte 88.00 47 ⇑P **P 12 12 08.8 -1.0**
baz=88
WDC Whiskeytown Da 88.11 46 eP **P 12 12 10.1 -0.3**
WDC e pP 12 12 19.8 -1.9
WDC pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
WDC Whiskeytown Da 88.11 46 eP **P 12 12 10.1 -0.3**
comp=Z,10nm,1.1s,mb5.0
WDC e pP 12 12 19.8 -1.9
WDC Whiskeytown Da 88.11 46 ⇑P **P 12 12 11.5 +1.1**
baz=88
R04C Big Horse Ranc 88.14 48 ⇑P **P 12 12 09.5 -1.0**
baz=88
S05C Merced 88.17 49 ⇑P **P 12 12 09.9 -0.7**
baz=88
OHCM Honcut 88.25 47 P **P 12 12 10.1 -1.0**
ARVC Arvin 88.28 52 ⇑P **P 12 12 11.2 0.0**
baz=88
M02C Callahan 88.29 45 ⇓P **P 12 12 11.6 +0.4**
baz=88
ORV Oroville 88.34 47 ⇓P **P 12 12 11.5 0.0**
baz=88
VES Vestal, Richgr 88.41 51 ⇑P **P 12 12 11.0 -0.7**
baz=88
CMB Columbia Colle 88.43 49 eP **P 12 12 11.3 -0.6**
CMB e pP 12 12 21.7 -1.5
CMB pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
CMB Columbia Colle 88.43 49 eP **P 12 12 11.2 -0.6**
comp=Z,6.6nm,0.9s,mb4.9
CMB e pP 12 12 21.7 -1.5
CMB Columbia Colle 88.43 49 ⇓P **P 12 12 10.5 -1.4**
baz=89,SNR=8.8
T06C Millerton Lake 88.46 50 ⇑P **P 12 12 11.7 -0.3**
baz=89
LAVA Lava Cap Winer 88.51 48 ⇓P **P 12 12 11.2 -1.0**
baz=89
YBH Yreka Blue Hor 88.54 44 eP **P 12 12 12.2 -0.2**
YBH e pP 12 12 22.5 -1.2
YBH pmax pmax
comp=Z,8.0nm,0.9s
YBH Yreka Blue Hor 88.54 44 eP **P 12 12 12.2 -0.2**
comp=Z,7.6nm,0.9s,mb5.0
YBH e pP 12 12 22.5 -1.2
YBH Yreka Blue Hor 88.54 44 ⇑P **P 12 12 12.4 +0.1**
baz=89
SNAA Sanae 88.56 183 eP **P 12 12 11.5 -1.0**
SNAA e 12 12 13.1
SNAA e pP 12 12 23.2 -0.6
SNAA e 12 12 25.5
SNAA Sanae 88.56 183 eP **P 12 12 10.8 -1.7**
SNAA e*PP pP 12 12 23.2 -0.6
SNAA pmax pmax
comp=Z,11nm,1.3s
SNAA Sanae 88.56 183 eP **P 12 12 10.8 -1.7**
comp=Z,11nm,1.3s,mb5.0
SNAA epP pP 12 12 23.2 -0.6
SNAA esP sP 12 12 28.7 +0.8
M03C McCloud 88.72 45 P **P 12 12 13.1 -0.2**
baz=89,SNR=9.4
S06C San Francisco 88.74 49 P **P 12 12 12.8 -0.5**
baz=89,SNR=5.3
ISA Isabella 88.77 51 eP **P 12 12 13.5 0.0**
ISA e*PP pP 12 12 24.6 -0.2
ISA pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
ISA Isabella 88.77 51 eP **P 12 12 13.5 0.0**
comp=Z,6.1nm,0.9s,mb4.9
ISA epP pP 12 12 24.6 -0.2
ISA Isabella 88.77 51 P **P 12 12 13.6 +0.2**
baz=89,SNR=8.3
BFSC Mount Baldy St 88.78 53 ⇑P **P 12 12 13.1 -0.4**
baz=89
EDW2 Edwards Air Fo 88.80 52 ⇑P **P 12 12 13.2 -0.4**
baz=89
HELL Mitchell Peak, 88.81 50 ⇓P **P 12 12 13.3 -0.4**
baz=89
P05C Yuba Gap, Truc 88.84 47 P **P 12 12 14.2 +0.4**
baz=89,SNR=5.3
MURC Murrieta 88.86 54 ⇓P **P 12 12 13.8 0.0**
baz=89
KCC Kaiser Creek 88.88 50 ⇓P **P 12 12 13.3 -0.7**
baz=89
O05C Quincy 88.93 47 ⇓P **P 12 12 13.9 -0.3**
baz=89
R05C Kirkwood Meado 88.95 48 ⇑P **P 12 12 14.0 -0.3**
baz=89
HATC Hat Creek Radi 88.95 46 ⇓P **P 12 12 14.3 0.0**
baz=89
O04C Chester 88.98 46 ⇑P **P 12 12 13.8 -0.7**
baz=89
M04C Macdoel 89.14 45 ⇑P **P 12 12 16.0 +0.7**
baz=89
MONP Monument Peak 89.16 55 ⇑P **P 12 12 14.9 -0.4**
baz=89
BEKR Beckwourth 89.27 47 P **P 12 12 16.0 +0.2**
baz=89,SNR=6.0
LRMC Laurel Mountai 89.27 52 P **P 12 12 16.2 +0.4**
baz=89,SNR=7.3
L04A Klamath Falls 89.29 44 ⇓P **P 12 12 17.0 +1.1**
baz=89
R06C Coleville 89.31 48 P **P 12 12 15.5 -0.5**
baz=90,SNR=6.1
WAKR Walker 89.31 48 eP **P 12 12 16.2 +0.2**
BBRC Big Bear Sol-O 89.34 53 ⇓P **P 12 12 17.5 +1.4**
baz=90
ELFS Eagle Lake Fie 89.36 46 ⇓P **P 12 12 17.3 +1.1**
baz=90
MLAC Mammoth Lakes 89.36 49 ⇓P **P 12 12 17.6 +1.4**
baz=90
CWC Cottonwood Cre 89.39 51 ⇑P **P 12 12 15.7 -0.7**
baz=90
R07C Lee Vining 89.40 49 ⇓P **P 12 12 16.4 0.0**
baz=90
M05C Lookout 89.41 45 ⇑P **P 12 12 15.4 -1.0**
baz=90,SNR=5.8
MTUM Tungsten Hills 89.43 50 eP **P 12 12 16.8 +0.2**
MTUM e pP 12 12 27.2 -0.7
WCN Washoe City 89.44 48 ⇓P **P 12 12 17.3 +0.7**
baz=90
P06A Stead Airport, 89.50 47 ⇓P **P 12 12 19.0 +2.1**
baz=90
TIN Tinemaha 89.55 50 ⇓P **P 12 12 18.5 +1.4**
baz=90
K04A Chilquin 89.60 44 ⇓P **P 12 12 18.1 +0.7**
baz=90
SWSC Sam W. Stewart 89.66 55 ⇓P **P 12 12 18.6 +1.0**
baz=90
MPMC Manual Prospec 89.67 51 ⇓P **P 12 12 16.9 -0.7**
baz=90,SNR=5.6
DAC Darwin (Calif) 89.68 51 eP **P 12 12 17.6 -0.1**
DAC e pP 12 12 27.5 -1.6
O06A Flanigan 89.77 47 P **P 12 12 18.0 -0.2**

baz=90,SNR=6.0
VNA1 Neumayer--Stat 89.77 181 *e*P **P** **12 12 18.4 +0.3**
VNA1 *e* 12 12 20.0
M06C Likely Place G 89.79 46 ⇓P **P** **12 12 19.0 +0.7**
baz=90
GSC Goldstone 89.86 52 *e*P **P** **12 12 19.8 +1.2**
GSC Goldstone 89.86 52 ⇑P **P** **12 12 19.9 +1.4**
baz=90
PAHR Pah Rah Range 89.87 47 *e*P **P** **12 12 18.8 +0.2**
L05A Lakeview 89.93 45 ⇓P **P** **12 12 19.3 +0.4**
baz=90
BELC Belle Mtn. 89.93 54 ⇑P **P** **12 12 18.9 -0.1**
baz=90,SNR=5.2
HEC Hector,Ludlow 90.02 53 ⇑P **P** **12 12 19.2 -0.1**
baz=90
N06A Buffalo Meadow 90.02 46 P **P** **12 12 19.1 -0.2**
baz=90,SNR=15
ZAK Zakamensk 90.03 325 *e*P **P** **12 12 16.7 -2.6**
ZAK pmax pmax
comp=Z,2.0nm,1.6s,mb4.2
NVAR Mina Array Bea 90.08 49 P **P** **12 12 19.9 +0.4**
comp=Z,3.9nm,1.0s,mb4.7,baz=210,slow=5.3,SNR=13
NVAR pP pP 12 12 30.1 -0.9
comp=Z,1.8nm,0.7s,baz=212,slow=5.9,SNR=6.9
GRAC Grapevine Rang 90.15 51 ⇓P **P** **12 12 19.9 0.0**
baz=90
R08A Mina 90.19 49 ⇓P **P** **12 12 20.1 0.0**
baz=90,SNR=6.1
J05A Fort Rock 90.23 44 ⇓P **P** **12 12 19.6 -0.7**
baz=90
H04A Detroit Lake 90.27 42 ⇑P **P** **12 12 20.5 0.0**
baz=90
E03A Lebam 90.30 40 ⇓P **P** **12 12 22.1 +1.5**
baz=90
FURC Furnace Creek, 90.30 51 ⇑P **P** **12 12 21.6 +1.0**
baz=90
G04A Mulino 90.33 41 ⇓P **P** **12 12 22.2 +1.4**
baz=90
O07A Toulon 90.42 47 ⇓P **P** **12 12 21.5 +0.3**
baz=91
GLA Glamis 90.45 55 *e*P **P** **12 12 21.4 +0.1**
GLA *e**PP pP 12 12 32.6 -0.1
GLA Glamis 90.45 55 P **P** **12 12 22.1 +0.8**
baz=91,SNR=6.4
Q08A Gabbs 90.53 49 ⇓P **P** **12 12 21.7 0.0**
baz=91
S09A Goldfield 90.55 50 ⇓P **P** **12 12 21.4 -0.4**
baz=91
TUQ Turquoise Mtn. 90.57 52 ⇑P **P** **12 12 22.2 +0.3**
baz=91,SNR=5.4
IRM Iron Mountain 90.64 54 ⇓P **P** **12 12 22.5 +0.3**
baz=91,SNR=5.5
K06A Valley Falls 90.65 44 ⇑P **P** **12 12 22.3 0.0**
baz=91
U10A Ash Meadows, A 90.67 51 ⇑P **P** **12 12 23.0 +0.7**
baz=91
F04A Amboy 90.71 41 ⇓P **P** **12 12 21.8 -0.7**
baz=91
P08A Dixie Valley 90.78 48 ⇑P **P** **12 12 23.5 +0.7**
baz=91
E04A Onalaska 90.83 40 ⇓P **P** **12 12 22.8 -0.3**
baz=91
H05A Madras 90.86 42 ⇑P **P** **12 12 23.6 +0.4**
baz=91
R09A Tonopah 90.88 50 ⇓P **P** **12 12 22.9 -0.4**
baz=91
L07A Adell 90.91 45 ⇓P **P** **12 12 23.1 -0.4**
baz=91
J06A Christmas Vall 90.92 44 ⇓P **P** **12 12 22.8 -0.7**
baz=91
Y12C Blythe 90.96 54 ⇓P **P** **12 12 23.3 -0.4**
baz=91
G05A Wamic 91.07 42 ⇓P **P** **12 12 23.5 -0.7**
baz=91
I06A Prineville 91.19 43 ⇑P **P** **12 12 24.1 -0.7**
baz=91
N08A GE Springer Mi 91.20 47 ⇓P **P** **12 12 24.1 -0.7**
baz=91
C04A Brinnon 91.22 39 ⇑P **P** **12 12 24.6 -0.3**
baz=91
GNW Green Mountain 91.23 39 *e*P **P** **12 12 24.6 -0.4**
W12A Cal Nev Ari 91.31 53 ⇑P **P** **12 12 25.2 -0.1**
baz=91
M08A Happy Creek Ra 91.32 46 ⇓P **P** **12 12 25.7 +0.3**
baz=92
U11A Corn Creek 91.37 52 ⇑P **P** **12 12 25.9 +0.3**
baz=92
P09A Austin 91.37 48 ⇑P **P** **12 12 26.3 +0.7**
baz=92
E05A Randle 91.40 41 ⇑P **P** **12 12 26.1 +0.4**
baz=92
R10A Warm Springs 91.45 50 ⇓P **P** **12 12 25.6 -0.4**
baz=92
PDMCI Parker Dam,Lak 91.47 54 ⇓P **P** **12 12 26.0 -0.1**
baz=92
V12A Nelson 91.49 53 ⇓P **P** **12 12 25.7 -0.4**
baz=92
Y13A Salome 91.52 55 ⇓P **P** **12 12 25.5 -0.8**
baz=92
D05A Enumclaw 91.56 40 ⇓P **P** **12 12 26.5 0.0**
baz=92
SHPR Sheep Range 91.57 52 *e*P **P** **12 12 26.4 -0.1**
O09A Fish Creek Ran 91.59 48 ⇓P **P** **12 12 26.3 -0.4**
baz=92
N09A Rock Creek Ran 91.65 47 ⇑P **P** **12 12 26.9 0.0**
baz=92
L08A Fields 91.66 46 ⇑P **P** **12 12 26.9 0.0**
baz=92
BMN Battle Mountai 91.68 47 *e*P **P** **12 12 27.3 +0.3**
BMN *e* pP 12 12 38.4 0.0
I07A Izee 91.71 43 ⇓P **P** **12 12 27.5 +0.3**
baz=92
K08A Mann Creek Ran 91.79 45 ⇓P **P** **12 12 27.9 +0.3**
baz=92
X13A Yucca 91.81 54 ⇑P **P** **12 12 27.9 +0.3**
baz=92
P10A Eureka 91.88 48 ⇑P **P** **12 12 27.2 -0.8**
baz=92
M09A Marrel Ranch, 91.94 47 ⇓P **P** **12 12 28.5 +0.3**
baz=92
W13A Hualapai Mount 91.97 53 ⇑P **P** **12 12 27.6 -0.8**
baz=92
C05A Tule Reservoir 91.97 40 ⇓P **P** **12 12 27.3 -1.0**
baz=92
B05A Bryant 91.99 39 ⇓P **P** **12 12 28.5 0.0**
baz=92
U12A Valley of Fire 92.00 52 ⇓P **P** **12 12 28.8 +0.3**
baz=92
Z14A Wintersburg 92.03 55 ⇑P **P** **12 12 27.8 -0.8**
baz=92
L09A Wilkinson Ranc 92.04 46 ⇓P **P** **12 12 29.4 +0.7**
baz=92
O10A Cortez Mining, 92.13 48 ⇑P **P** **12 12 28.4 -0.8**
baz=92
Y14A Wickenburg 92.20 55 ⇑P **P** **12 12 29.7 +0.2**
baz=92
I08A Drewsey 92.24 44 ⇑P **P** **12 12 28.6 -1.1**
baz=92
K09A Rome 92.29 45 ⇑P **P** **12 12 29.8 0.0**
baz=92
115A Sonoran Desert 92.33 56 ⇑P **P** **12 12 31.3 +1.3**
baz=92
A05A Maple Falls 92.34 38 ⇓P **P** **12 12 30.4 +0.4**
baz=92
P11A Circle Ranch, 92.35 49 ⇑P **P** **12 12 30.1 -0.1**
baz=92
H08A Prairie City 92.44 43 ⇓P **P** **12 12 33.0 +2.4**
baz=93
X14A Yava 92.48 54 ⇑P **P** **12 12 31.3 +0.6**
baz=93
M10A I.L. Ranch, Tu 92.60 47 ⇑P **P** **12 12 30.9 -0.4**
baz=93
W14A Seligman 92.62 54 ⇓P **P** **12 12 32.7 +1.3**
baz=93
O11A Cowboy Ranch, 92.65 48 ⇑P **P** **12 12 31.8 +0.3**
baz=93
116A Eloy 92.69 56 ⇑P **P** **12 12 31.9 +0.2**
baz=93
Q12A Willow Creek R 92.81 50 ⇑P **P** **12 12 30.8 -1.5**
baz=93
I09A Lost Marbles R 92.81 44 ⇑P **P** **12 12 32.2 0.0**
baz=93
F08A Pendleton 92.92 42 ⇓P **P** **12 12 33.8 +1.0**
baz=93
P12A McGill 92.92 49 ⇑P **P** **12 12 33.0 +0.3**
baz=93
X15A Humboldt 92.99 55 ⇑P **P** **12 12 32.6 -0.5**
baz=93
M11A Holland Ranch, 93.08 47 ⇓P **P** **12 12 33.8 +0.3**
baz=93
H09A Durkee 93.15 43 ⇓P **P** **12 12 31.3 -2.5**
baz=93
W15A Williams 93.23 54 ⇑P **P** **12 12 34.4 +0.2**
baz=93
TUC Tucson 93.33 57 *e*P **P** **12 12 34.5 -0.1**
TUC *e**PP pP 12 12 45.1 -0.9
TUC pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
TUC Tucson 93.33 57 *e*P **P** **12 12 34.5 -0.2**
comp=Z,4.9nm,1.1s,mb4.8
TUC *e*pP pP 12 12 45.1 -0.9
O12A Currie 93.35 48 ⇓P **P** **12 12 34.3 -0.4**
baz=94
N12A Clover Valley, 93.37 48 ⇓P **P** **12 12 35.1 +0.3**
baz=94
M13A Montello 94.18 48 ⇓P **P** **12 12 37.7 -0.8**
baz=94
MSU Marysvale 94.52 51 P **P** **12 12 40.2 +0.1**
WMQ Urumqi 96.70 314 *e*P **P** **12 12 50.0 -0.1**
WMQ AP pP 12 13 01.0 -0.4
WMQ XP sP 12 13 05.0 -0.5
WMQ SKS 12 23 23.0
WMQ S S 12 24 05.0 -3.9
WMQ SS SS 12 30 44.0 +0.1
WMQ AMB AMB
comp=Z,22nm,1.0s,mb5.5
WMQ LR LR
comp=N,38nm,15.0s,MS4.2
WMQ LR LR
comp=E,41nm,15.0s,MS4.2
WMQ LR LR
comp=Z,32nm,15.0s,MS3.9
PDAR Pinedale Array 97.88 47 P **P** **12 12 56.1 +0.8**
comp=Z,0.7nm,1.0s,mb4.1,baz=204,slow=3.3,SNR=4.9
FVM French Village 110.87 56 *e*PKIKP PKiKP 12 17 59.3 +6.6
ARCES ARCESS Array B 125.28 345 PKP PKPdf 12 18 19.1 -1.2
comp=Z,1.3nm,0.8s,baz=31,slow=2.8,SNR=4.9
VYHS Vyhne 142.07 326 *e*PKP PKPdf 12 18 53.6 +1.9
CLL Collm 142.88 334 *i**PPKP 12 19 03.1
CLL *i* 12 19 06.4
CLL Collm 142.88 334 *i* pPKPdf pPKPdf 12 19 03.1 -1.7
comp=Z,3.0nm,0.7s
CLL *i* pPKiKP 12 19 06.4
WERD Werda 143.82 333 *e*PKPbc PKPdf 12 18 52.6 -2.2
GUNZ Gunzen 143.87 333 *e*PKPbc PKPdf 12 18 52.9 -2.0
GUNZ *ep*PKPbc 12 19 03.6
WERN Wernitzgruen 143.91 333 *e*PKPbc PKPdf 12 18 52.7 -2.3
WERN *ep*PKPbc 12 19 02.7
MOX Moxa 143.96 334 *e*PKPbc PKPdf 12 18 52.7 -2.3
MOX Moxa 143.96 334 *e*PKP PKPdf 12 18 52.8 -2.2
ROTZ Rotzenmuhle 144.37 333 *e*PKPbc PKPdf 12 18 54.4 -1.4
ROTZ *ep*PKPbc 12 19 04.9
GERES GERESS Array B 144.38 330 PKP PKPdf 12 18 54.7 -1.1
comp=Z,0.3nm,0.4s,baz=230,slow=3.3,SNR=3.7
UBBA Unterbreizbach 144.46 336 *e*PKPbc PKPdf 12 18 53.8 -2.1
GRF Grafenberg Arr 144.85 334 *e*PKPbc PKPdf 12 18 55.9 -0.7
PERS Pernice 145.20 327 *i* PKPbc PKPbc 12 18 56.8 0.0
PERS *e* 12 19 07.5
TNS Taunus Mts 145.53 337 *e*PKPbc PKPbc 12 18 58.1 +0.2
TNS *ep*PKPbc pPKPbc 12 19 08.5 -1.0
LEGS Legarje 145.54 325 *e*PKPbc PKPbc 12 18 58.0 0.0
LJU Ljubljana 145.89 326 *e*PKPbc PKPbc 12 18 58.9 -0.2
LJU *e* 12 19 09.9
MEM Membach 146.07 339 APKP 12 19 11.7
WLF Walferdange 146.83 338 *e*PKPbc PKPbc 12 19 02.4 +0.6
WLF *ep*PKPbc pPKPbc 12 19 12.4 -1.0
WLF Walferdange 146.83 338 PKP PKPdf 12 19 02.8 +2.8
WLF APKP 12 19 12.9
WLF Walferdange 146.83 338 *e*PKPab PKPab 12 19 02.4 -0.7
GIVF Givet 146.90 340 *e*PKP1 PKPbc 12 19 01.0 -1.0
DOU Daurles 146.98 340 PKP PKPdf 12 19 01.9 +1.7
BFO Black Forest 147.10 335 *ep*PKPbc pPKPbc 12 19 12.4 -1.8
BFO Black Forest 147.10 335 *e*PKIKP PKPdf 12 19 01.9 +1.5
BAIF Baives 147.13 341 *e*PKP1 PKPbc 12 19 01.8 -0.9
comp=Z,21nm,1.0s
CDF Champ du Feu 147.45 336 *e*PKP1 PKPbc 12 19 02.6 -0.9
comp=Z,16nm,0.9s
HINF Hinteralfeld 148.10 336 *e*PKP1 PKPbc 12 19 04.6 -0.7
HAU Haudompre 148.14 336 *e*PKP1 PKPbc 12 19 04.4 -1.0
MEZF Maizieres J'vi 148.20 338 *e*PKP1 PKPbc 12 19 04.9 -0.6
comp=Z,33nm,1.0s
CABF La Chapelle 149.39 335 *e*PKP1 PKPbc 12 19 08.1 -0.5
comp=Z,37nm,1.2s
FLN La Foliniere 149.62 345 *e*PKP1 PKPbc 12 19 07.7 -1.5
LOR Lormes 149.67 338 *e*PKP1 PKPbc 12 19 08.2 -1.1
comp=Z,18nm,0.9s
LDF La Druitiere 149.69 344 *e*PKP1 PKPbc 12 19 07.8 -1.5
SSF Saint Saulge 149.97 338 *e*PKP1 PKPbc 12 19 09.0 -1.0
comp=Z,28nm,1.1s
GRR Gorron 150.06 345 *e*PKP1 PKPbc 12 19 09.1 -1.1
comp=Z,25nm,0.9s
SMF Signal de Mont 150.21 338 *e*PKP1 PKPbc 12 19 09.4 -1.2
comp=Z,13nm,0.9s
AVF Avril sur Loir 150.26 338 *e*PKP1 PKPbc 12 19 09.3 -1.4
comp=Z,20nm,1.1s
BNI Bardonecchia 150.40 333 *e*PKIKP PKPdf 12 19 05.8 0.0
MBDF Montbardon 150.61 332 *e*PKP1 PKPbc 12 19 10.5 -1.1
BGF Bois d'Agland 150.63 339 *e*PKP1 PKPbc 12 19 10.5 -1.1
comp=Z,15nm,0.8s
ORIF Oris-en-Rattie 150.85 333 *e*PKP1 PKPbc 12 19 11.2 -0.9
comp=Z,18nm,0.8s
SBF Sospel 150.98 330 *e*PKP1 PKPbc 12 19 12.0 -0.4
comp=Z,64nm,1.1s
TCF Toulx Ste Croi 151.08 339 *e*PKP1 PKPbc 12 19 11.5 -1.2
comp=Z,18nm,1.0s
VIVF Saint-Julien-l 151.40 335 *e*PKP1 PKPbc 12 19 12.4 -1.0
comp=Z,12nm,1.0s
MFF Saint Martin d 151.52 343 *e*PKP1 PKPbc 12 19 13.4 -0.3
SMRF Simiane la Rot 151.73 332 *e*PKP1 PKPbc 12 19 13.7 -0.5
comp=Z,53nm,1.4s

*ISCJB **19** 12:22:41.5±0.6, 6451N±008×400W±0.1, h10km, mb3.9/12, Error ellipse: s-maj=12.0km s-min=6.5km az=35.0*
*IDC **19** 12:22:41.8±1.1, 6443N×4005W, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.6/25, mbtmp3.7/8, ML3.9/1, Error ellipse: s-maj=34.1km s-min=20.1km az=3.0*
*NEIC **19** 12:22:43.4±0.6, 6456N×4014W, h10km, mb4.2/6, Error ellipse: s-maj=12.8km s-min=9.2km az=177.0*

ISC 19 12:22:43.1±0.5, 6454N±008×401W±01, h10km, n24, σ0§92/32, mb3.9/12, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**5.00**	**304**	Pn	**Pn**	**12 23 58.3**	**+0.1**
	4.3nm,0.3s,baz=89,slow=11,SNR=14						
SFJD				Pg	**Pg**	**12 24 11.3**	**-7.7**
	35nm,0.3s,baz=101,slow=14,SNR=32						
SFJD				Sn	**Sn**	**12 24 56.0**	**-0.1**
	27nm,0.3s,baz=71,slow=13,SNR=7.4						
SFJD				Lg		12 25 11.9	
	120nm,0.3s,baz=173,slow=20,SNR=19						
SFJD	**Kangerlussuaq**	**5.00**	**304**	*i* P	**Pn**	**12 23 59.7**	**+1.5**
SFJD				*i*		12 24 10.5	
SFJD				*i* S	**Sn**	**12 24 55.9**	**-0.2**
SFJD				*i* S	**Sn**	**12 25 10.7**	**+15**
SFJD	**Kangerlussuaq**	**5.00**	**304**	*e*Pn	**Pn**	**12 23 58.0**	**-0.2**
SFJD				*e*Pb	**Pb**	**12 24 10.8**	**+0.1**
SFJD				*e*Sn	**Sn**	**12 24 53.5**	**-2.6**
SFJD				*e*Sb	**Sb**	**12 25 11.7**	**+0.7**
SUMG	**Summit**	**8.10**	**3**	*e*Pn	**Pn**	**12 24 38.7**	**-2.1**
	14nm,0.5s						
SUMG				*e*Sn	**Sn**	**12 25 55.2**	**-17**
SUMG				*e*Sg	Sn	12 26 54.0	+42
DAG	**Danmarks Havn**	**14.02**	**20**	*i* P	**Pn**	**12 26 02.0**	**+0.2**
DAG	**Danmarks Havn**	**14.02**	**20**	*e*P	**Pn**	**12 26 02.0**	**+0.2**
SCHQ	**Schefferville**	**16.51**	**247**	*e*Pn	**Pn**	**12 26 35.3**	**+0.6**
EKA	**Eskdalemuir Ar**	**20.35**	**99**	P	**P**	**12 27 20.0**	**+0.3**
	1.1nm,0.7s,baz=293,slow=9.2,SNR=3.7						
KONO	**Kongsberg**	**23.23**	**79**	P	**P**	**12 27 52.0**	**+1.6**
	8.0nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**24.90**	**50**	P	**P**	**12 28 05.7**	**-0.5**
	2.2nm,0.8s,mb3.7,baz=277,slow=7.9,SNR=7.1						
EYMN	**Ely**	**31.93**	**264**	P	**P**	**12 29 07.9**	**-1.0**
	2.5nm,0.7s,mb4.2						
ESLA	**Sonseca Array**	**32.54**	**122**	P	**P**	**12 29 13.3**	**-1.0**
	0.7nm,0.9s,mb3.6						
INK	**Inuvik**	**34.17**	**319**	*e*P	**P**	**12 29 25.3**	**-3.2**
	2.5nm,0.9s,mb4.1						
DAWY	**Dawson**	**38.83**	**316**	*e*P	**P**	**12 30 08.7**	**+0.5**
PDAR	**Pinedale Array**	**43.82**	**275**	P	**P**	**12 30 49.5**	**+0.2**
	0.5nm,0.7s,mb3.4,baz=46,slow=8.5,SNR=4.9						
ARU	**Arti**	**44.45**	**52**	P	**P**	**12 30 54.6**	**+0.3**
	4.2nm,1.1s,mb4.1						
CHKZ	**Chkalovo**	**50.65**	**46**	*e*P	**P**	**12 31 42.7**	**+0.2**
	1.3nm,0.7s,mb4.0						
NVAR	**Mina Array Bea**	**51.15**	**279**	P	**P**	**12 31 46.5**	**+0.2**
	0.3nm,0.4s,mb3.6,baz=26,slow=4.0,SNR=5.5						
NVAR	**Mina Array Bea**	**51.15**	**279**	P	**P**	**12 31 46.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**58.80**	**131**	P	**P**	**12 32 40.7**	**-0.9**
	1.0nm,0.9s,mb3.9,baz=348,slow=6.4,SNR=5.1						
TORD	**Torodi Ar. Bea**	**58.80**	**131**	P	**P**	**12 32 40.7**	**-0.9**
MKAR	**Makanchi Array**	**60.24**	**42**	P	**P**	**12 32 52.0**	**+0.4**
	0.5nm,0.5s,mb3.8,baz=345,slow=4.3,SNR=4.6						
MKAR	**Makanchi Array**	**60.24**	**42**	P	**P**	**12 32 52.0**	**+0.4**
SONM	**Songino Array**	**64.94**	**24**	P	**P**	**12 33 24.0**	**+1.1**
	0.3nm,0.3s,mb3.8,baz=330,slow=7.1,SNR=4.9						

MAN 19 12:41:05.1, 793N×12286E, h28km, mb1.4, ML3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**0.32**	**244**	*e*P	Pb	12 41 14.0	+1.5
IPIL				*e*S	Sb	12 41 19.8	+2.1
PAGZ	**Pagadian**	**0.53**	**99**	*e*P	Pb	12 41 17.6	+1.8
PAGZ				*e*S	Sb	12 41 25.9	+2.7
DCPH	**Dipolog City**	**0.81**	**37**	⇓*e*P	Pb	12 41 19.7	-0.9
DCPH				*i* S	Sb	12 41 29.3	-2.0
SNPH	**Sibulan**	**1.45**	**15**	*e*P	Pn	12 41 30.0	+0.5

IDC 19 12:49:31.0±8.5, 607S×15146E, h72km±59km, mb3.8/4, mb1 4.0/5, mb1mx3.6/14, mbtmp4.1/5, ML3.2/1, Error ellipse: s-maj=61.4km s-min=55.3km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.40**	**232**	P	Pn	12 50 48.6	-0.4
	5.6nm,0.3s,baz=49,slow=9.0,SNR=23						
PMG				S	Sn	12 51 51.8	+2.0
	21nm,0.3s,baz=64,slow=11,SNR=15						
WRA	**Warramunga Arr**	**21.61**	**229**	P	P	12 54 14.3	-0.8
	3.0nm,0.8s,baz=53,slow=9.7,SNR=17						
ASAR	**Alice Springs**	**24.32**	**222**	P	P	12 54 41.9	-0.1
	4.1nm,0.4s,baz=57,slow=9.0,SNR=114						
STKA	**Stephens Creek**	**27.29**	**199**	P	P	12 55 09.3	+0.6
	1.0nm,0.7s,baz=336,slow=15,SNR=3.3						
FITZ	**Fitzroy Crossi**	**27.89**	**242**	P	P	12 55 14.3	+0.2
	1.6nm,0.8s,baz=58,slow=10,SNR=16						
TORD	**Torodi Ar. Bea**	**149.40**	**286**	PKPbc	PKPbc	13 09 13.3	+1.5
	0.5nm,0.8s,baz=100,slow=2.2,SNR=2.6						

*IDC **19** 13:05:40.2±4.1, 3848N×7727E, h0km, mb3.7/2, mb1 3.6/4, mb1mx3.3/23, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=83.4km s-min=33.9km az=126.0*
*ISCJB **19** 13:05:52.0±1.4, 396N±01×762E±02, h66km±8km, mb3.6/2, Error ellipse: s-maj=26.1km s-min=16.4km az=27.8*
*BJI **19** 13:05:54.7, 3994N×7576E, h15km, ML3.5*

ISC 19 13:05:53.6±1.4, 396N±01×761E±02, h58km±9km, n17, σ1§18/19, mb3.6/2, 2C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.14**	**223**	⇓*i*Pg	**Pn**	**13 06 02.1**	**-0.5**
KSH				SG	**Sn**	**13 06 09.3**	**+0.3**
KSH				Smax			
	comp=N,3μm,0.5s						
KSH				Smax			
	comp=E,2μm,0.4s						
KZA	**Kyzart**	**2.54**	**346**	P	**Pn**	**13 06 30.6**	**-1.8**
	SNR=90						
ULHL	**Ulahol**	**2.63**	**2**	P	**Pn**	**13 06 33.6**	**-0.1**
	SNR=78						
UCH	**Uchtor**	**2.87**	**336**	P	**Pn**	**13 06 36.9**	**-0.1**
	SNR=8.8						
AML	**Almayashu**	**3.10**	**325**	P	**Pn**	**13 06 40.5**	**+0.4**
	SNR=102						
KBK	**Karagaybulak**	**3.16**	**344**	P	**Pn**	**13 06 40.5**	**-0.4**
	SNR=9.8						
AAK	**Ala-Archa**	**3.25**	**339**	P	**Pn**	**13 06 41.1**	**-1.0**
	SNR=43						
TKM2	**Tokmak 2**	**3.32**	**354**	P	**Pn**	**13 06 46.0**	**+2.9**
	SNR=8.1						
TKM2	**Tokmak 2**	**3.32**	**354**	⇓Pn	**Pn**	**13 06 43.1**	**0.0**
	comp=E,2.4nm,0.5s						
TKM2				⇑Lg		13 07 24.0	
	comp=E,5.9nm,0.7s						
EKS2	**Erkin-Say**	**3.51**	**331**	P	**Pn**	**13 06 48.1**	**+2.4**
	SNR=12						
CHMS	**Chumysh**	**3.53**	**344**	P	**Pn**	**13 06 48.7**	**+2.8**
	SNR=12						
USP	**Ospenovka**	**3.84**	**342**	P	**Pn**	**13 06 48.8**	**-1.4**
	SNR=8.9						
KK31	**Karatay Array**	**5.46**	**311**	⇓Pn	**Pn**	**13 07 08.9**	**-3.5**
	comp=E,0.3nm,0.3s,baz=137,slow=12,SNR=7.3						
KK31				⇓Pg	**Pn**	**13 07 22.3**	**+10**
	comp=E,4.7nm,0.7s,baz=130,slow=16,SNR=13						
KK31				⇑Lg		13 08 29.0	
	comp=E,6.0nm,0.5s,baz=173,slow=50,SNR=6.8						
MKAR	**Makanchi Array**	**8.48**	**30**	Pn	**Pn**	**13 07 54.1**	**+0.3**
	comp=E,0.3nm,0.3s,baz=209,slow=15,SNR=2.9						
BVAR	**Borovoye Array**	**13.97**	**346**	Pn	**Pn**	**13 09 13.2**	**+4.6**
	comp=E,0.2nm,0.3s,baz=153,slow=9.7,SNR=6.8						
FINES	**FINESS Array B**	**37.30**	**323**	P	**P**	**13 13 07.2**	**+7.1**
	comp=E,0.9nm,0.7s,mb3.7,baz=97,slow=11,SNR=4.1						
TORD	**Torodi Ar. Bea**	**69.76**	**271**	P	**P**	**13 16 57.6**	**0.0**
	comp=E,0.5nm,0.7s,mb3.5,baz=44,slow=6.4,SNR=3.1						

WEL 19 13:08:31.0±0.4, 3869S×17588E, h133km±3km, ML3.5/13, 3C, Error ellipse: s-maj=1.4km s-min=1.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTVZ	**West Tongariro**	**0.48**	**207**	PN	Pn	13 08 50.3	0.0
TWVZ	**Taurewa**	**0.52**	**221**	PN	Pn	13 08 50.4	0.0
WPVZ	**Whakapapa**	**0.58**	**206**	PN	Pn	13 08 51.0	+0.1
TUVZ	**Tukino**	**0.61**	**196**	PN	Pn	13 08 51.2	+0.2
FWVZ	**Far West T-bar**	**0.62**	**204**	PN	Pn	13 08 51.1	0.0
BKZ	**Black Stump Fm**	**0.68**	**135**	⇑PN	Pn	13 08 51.7	+0.1
MOVZ	**Moawhango**	**0.73**	**187**	⇑PN	Pn	13 08 51.7	-0.2
HIZ	**Hauiti**	**0.82**	**282**	PN	Pn	13 08 52.4	-0.1
VRZ	**Vera Road**	**0.98**	**243**	⇑PN	Pn	13 08 53.9	0.0
URZ	**Urewera**	**1.06**	**67**	PN	Pn	13 08 54.4	-0.3
WAZ	**Wanganui**	**1.27**	**213**	PN	Pn	13 08 56.7	-0.1
MWZ	**Matawai**	**1.34**	**75**	PN	Pn	13 08 57.7	+0.1
TSZ	**Takapari Road**	**1.38**	**177**	PN	Pn	13 08 57.7	-0.2
KNZ	**Kokohu**	**1.44**	**104**	PN	Pn	13 08 59.2	+0.6
PXZ	**Pawanui**	**1.55**	**151**	PN	Pn	13 08 59.8	0.0
PXZ				SN	Sn	13 09 20.3	-1.5
PUZ	**Puketiti**	**1.97**	**73**	PN	Pn	13 09 04.7	0.0
MRZ	**Mangatainoka R**	**1.99**	**186**	PN	Pn	13 09 03.7	-1.2
BFZ	**Birch Farm**	**2.01**	**172**	PN	Pn	13 09 04.3	-1.0
KIW	**Kapiti Island**	**2.30**	**199**	PN	Pn	13 09 07.0	-1.8
MTW	**Mount Morrison**	**2.49**	**186**	PN	Pn	13 09 09.0	-2.1
TRWZ	**Traveller**	**2.71**	**183**	PN	Pn	13 09 12.1	-1.9
MSWZ	**Moikau Station**	**2.77**	**190**	PN	Pn	13 09 12.2	-2.5
TCW	**Tory Channel**	**2.81**	**205**	PN	Pn	13 09 12.8	-2.4
TUWZ	**Tuamarina**	**3.12**	**208**	SN	Sn	13 09 51.6	-4.8
NNZ	**Nelson**	**3.17**	**216**	PN	Pn	13 09 17.4	-2.5
NNZ				SN	Sn	13 09 54.0	-3.7
QRZ	**Quartz Range**	**3.35**	**229**	SN	Sn	13 09 19.7	-2.5
THZ	**Tophouse**	**3.82**	**216**	SN	Sn	13 10 08.9	-4.1
KHZ	**Kahutara**	**4.13**	**205**	PN	Pn	13 09 29.4	-3.2
KHZ				SN	Sn	13 10 15.2	-5.0
MQZ	**McQueen's Vall**	**5.58**	**205**	SN	Sn	13 10 44.5	-10

SKHL 19 13:14:50.8±0.2, 4897N×13165E, h10km, mb3.8/4, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLR	**Kul'dur**	**0.27**	**14**	*e*Pg	Pg	13 14 55.8	-0.4
KLR				*e*Sg	Sg	13 14 59.5	-0.4
GRNR	**Gornyy**	**3.57**	**58**	*e*Pg	Pg	13 15 54.8	-4.5
GRNR				AMB	AMB	13 15 55.4	
	32nm,0.8s						
GRNR				*e*Sg	Sg	13 16 41.2	-4.4
GRNR				A		13 16 42.2	
	110nm,0.8s						
EKMR	**Ekimchan**	**4.19**	**11**	*e*Pn	Pn	13 15 56.0	+1.3

EKMR				ePg	Pg	13 16 06.0	-5.0
EKMR				AMB	AMB	13 16 10.5	
	8.0nm,0.4s						
EKMR				AMB	AMB	13 16 10.5	
	9.0nm,0.4s						
EKMR				AMB	AMB	13 16 10.5	
	12nm,0.4s						
EKMR				eSg	Sg	13 17 01.0	-4.2
EKMR				A		13 17 05.6	
	74nm,0.6s						
EKMR				A		13 17 05.6	
	19nm,0.6s						
EKMR				A		13 17 05.6	
	20nm,0.6s						
YASR	Yasnyy	4.90	333	ePn	Pn	13 16 04.3	-0.3
YASR				ePg	Pg	13 16 18.8	-5.9
YASR				AMB	AMB	13 16 22.5	
	6.0nm,0.7s						
YASR				AMB	AMB	13 16 22.5	
	5.0nm,0.7s						
YASR				eSg	Sg	13 17 23.3	-5.0
YASR				A		13 17 26.6	
	15nm,0.6s						
YASR				A		13 17 26.6	
	30nm,0.6s						
TEY	Ternei	5.19	137	eSg	Sg	13 17 32.5	-5.0
TEY				A		13 17 39.8	
	30nm,0.7s						
ZEA	Zeya	5.51	332	ePg	Pg	13 16 31.5	-4.9
ZEA				AMB	AMB	13 16 36.6	
	10.0nm,0.5s						
ZEA				eSg	Sg	13 17 42.3	-5.5
ZEA				A		13 17 44.0	
	50nm,0.6s						
ZEA				A		13 17 44.0	
	19nm,0.6s						
KROS	Kirovskiy	6.20	334	ePn	Pn	13 16 23.5	+1.2
KROS				AMB	AMB	13 16 24.1	
	1.0nm,0.4s						
KROS				eSg	Sg	13 18 03.6	-6.1
KROS				A		13 18 04.5	
	12nm,0.6s						
NKL	Nikolayevsk	7.06	50	eSg	Sg	13 18 30.7	-6.8
NKL				A		13 18 44.2	
	43nm,1.0s						

*IDC **19** 13:33:28.0±1.3, 34.18N×25.06E, h0^{km}, mb3.8/6, mb1 3.9/9, mb1mx3.7/22, mbtmp3.8/9, ML4.1/3, MS2.6/1, Ms1 2.6/1, ms1mx2.0/31, Error ellipse: s-maj=29.3km s-min=23.1km az=138.0*
*ISCJB **19** 13:33:29.6±1.1, 34.10N±0.03×25.18E±0.05, h27^{km}±9^{km}, mb3.6/6, Error ellipse: s-maj=6.5km s-min=4.6km az=167.0*
*CSEM **19** 13:33:30.8±0.1, 34.08N×25.15E, h40^{km}, MD3.9, Error ellipse: s-maj=3.0km s-min=1.7km az=71.0*
*NEIC **19** 13:33:30.5, 34.26N×25.00E, h24^{km}, MD3.9(ATH), After ATH.*
*ATH **19** 13:33:30.5, 34.26N×25.00E, h24^{km}±1^{km}, MD3.9/6*
*HLW **19** 13:33:31.1, 34.31N×25.18E, h27^{km}, Mb3.7*
ISC 19 13:33:29.9±1.6, **34.16N**±0.03×**25.13E**±0.05, **h14**^{km}±11^{km}, **n32,** σ**1**^{s}**02**/38, **mb3.6**/6, **6C-3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	Khrisi	0.86	33	ePN	Pn	13 33 46.5	-1.0
GVD	Gavdhos	1.09	309	ePN	Pn	13 33 49.0	-1.8
NPS	Neapolis	1.17	20	ePN	Pn	13 33 52.0	+0.1
NPS				eSN	Sn	13 34 07.1	-0.6
VAM	Vamos	1.46	329	ePN	Pn	13 33 55.4	-0.5
VAM				eSN	Sn	13 34 14.1	-0.7
KARP	Karpathos	2.17	50	ePb	Pb	13 34 08.1	-0.9
KAP	Karpathos	2.18	50	ePB	Pb	13 34 08.1	-1.1
VLI	Veliai	3.12	326	ePN	Pn	13 34 19.0	+0.4
AKAS	Kas	4.21	59	i P	Pn	13 34 34.6	+1.0
AKAS				i S	Sn	13 35 21.2	-1.4
GOLH	Golhisar	4.74	48	i P	Pn	13 34 42.4	+1.5
GOLH				i S	Sn	13 35 38.0	+2.4
DNZL	Cakiroluk	4.75	41	i P	Pn	13 34 44.2	+3.2
DNZL				i S	Sn	13 35 37.3	+1.4
SWA1		4.91	174	⇓P	Pn	13 34 44.3	+1.1
SWA2		4.91	177	⇑P	Pn	13 34 44.4	+1.2
SWA2				S	Sn	13 35 39.1	-0.7
HBRG	Burj al ‘Arab	5.35	131	⇓P	Pn	13 34 49.6	+0.2
HNAT	Natroun	6.49	133	⇑P	Pn	13 35 05.2	+0.2
AWBH		6.66	150	P	Pn	13 35 07.6	+0.3
HSAF	As Saff	7.09	128	P	Pn	13 35 12.5	-0.8
GLL	Jalalah	7.22	127	⇑P	Pn	13 35 14.7	-0.4
HFRF	Wahat Farafira	7.50	158	⇓P	Pn	13 35 19.4	+0.5
AMAG	Maghara	7.68	115	⇑P	Pn	13 35 20.5	-0.8
MMAI	Mount Meron Ar	8.65	95	Pn	Pn	13 35 36.9	+2.3
	1.7nm,0.3s,baz=281,slow=16,SNR=5.0						
MMAI				Sn	Sn	13 37 10.4	-1.5
	1.9nm,0.3s,baz=278,slow=33,SNR=4.1						
VAE	Valguarnera	9.31	294	LR	LR	13 39 16.0	
	comp=Z,38nm,20.7s,baz=77,slow=37						
HKAT	Jabal Katrina	9.43	124	⇑P	Pn	13 35 44.7	-0.7
HHRG	Al Ghardaqah	10.03	131	⇑P	Pn	13 35 52.7	-0.8
AKASG	Malin Array Be	16.80	9	Pn	Pn	13 37 24.3	-0.5
	0.9nm,0.3s,baz=200,slow=11,SNR=9.4						
AKASG	Malin Array Be	16.80	9	Pn	Pn	13 37 24.3	-0.5
GERES	GERESS Array B	16.96	333	Pn	Pn	13 37 27.8	+1.1
	0.3nm,0.3s,baz=147,slow=12,SNR=22						
FINES	FINESS Array B	27.31	1	P	P	13 39 13.3	-0.8
	0.4nm,0.6s,mb3.2,baz=169,slow=16,SNR=2.8						
TORD	Torodi Ar. Bea	29.83	231	P	P	13 39 36.7	+0.1
	1.1nm,0.6s,mb3.8,baz=32,slow=10,SNR=11						
ARCES	ARCESS Array B	35.43	0	P	P	13 40 26.6	+1.1
	0.2nm,0.4s,mb3.4,baz=169,slow=9.8,SNR=3.9						
MKAR	Makanchi Array	44.36	56	P	P	13 41 39.9	+0.2
	1.1nm,0.5s,mb3.9,baz=262,slow=8.1,SNR=7.3						
ZAL	Zalesovo	45.71	45	P	P	13 41 50.2	-0.3
	1.0nm,0.5s,mb4.0,baz=191,slow=6.2,SNR=3.5						
SONM	Songino Array	60.15	50	P	P	13 43 37.4	+0.4
	0.5nm,0.6s,mb3.7,baz=280,slow=7.3,SNR=5.8						

GUC 19 14:22:24.9±0.8**, 27.40S×70.63W, h63**^{km}±10^{km}**, ML4.0, 1C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	0.25	82	⇑iP	Pn	14 22 34.9	-0.1
CPCH				i S	Sn	14 22 43.0	+0.8
CPCH				AML	AML	14 22 44.8	
	comp=E,97μm,0.1s						
CDCH	Caldera	0.37	331	⇓iP	Pn	14 22 35.7	-0.1
CDCH				i S	Sn	14 22 44.3	+0.6
CDCH				AML	AML	14 22 44.8	
	comp=E,5μm,0.2s						
VACH	Vallenar	1.18	186	⇓iP	Pn	14 22 46.2	+0.8
VACH				i S	Sn	14 23 01.2	+0.5
VACH				AML	AML	14 23 03.1	
	comp=N,4μm,0.1s						
CEN1	Los Morros	4.01	6	i P	Pn	14 23 18.6	-5.2
CEN1				i S	Sn	14 24 01.7	-7.7

*CSEM **19** 14:36:28.7, 33.80N×25.30E, h32^{km}, MD3.8/4, After ATH*
*NEIC **19** 14:36:28.7, 33.80N×25.30E, h32^{km}, MD3.8(ATH), After ATH.*
*ATH **19** 14:36:28.7, 33.80N×25.30E, h32^{km}±11^{km}, MD3.8/4*
*ISCJB **19** 14:36:33.8±0.9, 34.10N±0.06×25.42E±0.07, h10^{km}, mb3.6/3, Error ellipse: s-maj=9.4km s-min=8.0km az=86.1*
*IDC **19** 14:36:40.6±7.4, 34.20N×25.02E, h33^{km}±62^{km}, mb3.5/3, mb1 3.6/7, mb1mx3.4/22, mbtmp3.7/7, ML3.8/4, Error ellipse: s-maj=33.2km s-min=23.9km az=147.0*
ISC 19 14:36:36.0±1.0**, 34.15N**±0.06×**25.38E**±0.07**, h10**^{km}**, n13,** σ**1**^{s}**75**/17**, mb3.6**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	Khrisi	0.77	20	ePN	Pg	14 36 49.8	-1.0
NPS	Neapolis	1.12	10	ePB	Pg	14 36 54.5	-3.1
NPS				eSN	Sg	14 37 13.6	+1.3
GVD	Gavdhos	1.27	303	ePB	Pn	14 36 54.0	-5.8
GVD	Gavdhos	1.27	303	ePn	Pn	14 36 52.1	-7.6
GVD				ePb	Pn	14 36 54.0	-5.8
VAM	Vamos	1.58	323	ePB	Pn	14 37 01.0	-3.1
VAM				eSN	Sn	14 37 23.6	-1.1
KARP	Karpathos	2.02	46	ePN	Pn	14 37 07.3	-2.9
MMAI	Mount Meron Ar	8.44	95	Pn	Pn	14 38 44.9	+6.5
	0.7nm,0.3s,baz=287,slow=10,SNR=3.0						
MMAI				Sn	Sn	14 40 13.2	-0.5
	0.7nm,0.3s,baz=300,slow=20,SNR=2.8						
VRAC	Vranov	16.48	339	Pn	Pn	14 40 29.0	+1.7
	0.2nm,0.3s,baz=117,slow=6.1,SNR=3.6						
AKASG	Malin Array Be	16.78	8	Pn	Pn	14 40 32.1	+1.0
	0.4nm,0.3s,baz=200,slow=10,SNR=6.0						
GERES	GERESS Array B	17.06	333	Pn	Pn	14 40 36.0	+1.5
	0.1nm,0.3s,baz=150,slow=12,SNR=13						
TORD	Torodi Ar. Bea	29.99	232	P	P	14 42 44.4	-0.3
	0.9nm,0.6s,mb3.7,baz=33,slow=9.1,SNR=9.8						
MKAR	Makanchi Array	44.19	56	P	P	14 44 47.8	+2.7
	0.9nm,0.6s,mb3.7,baz=289,slow=4.4,SNR=8.6						
SONM	Songino Array	59.99	50	P	P	14 46 45.6	+2.9
	0.3nm,0.6s,mb3.5,baz=287,slow=8.0,SNR=4.1						

*TIF **19** 14:51:18.6, 41.22N×43.70E, h15^{km}±2^{km}*
*CSEM **19** 14:51:21.9, 41.21N×43.91E, h11^{km}, mb3.9, After OBN*
*MOS **19** 14:51:21.9±1.5, 41.21N×43.91E, h11^{km}, mb3.9/1, Error ellipse: s-maj=18.4km s-min=7.4km az=84.6*
*ISCJB **19** 14:51:22.1±0.8, 41.27N±0.03×43.84E±0.05, h10^{km}, Error ellipse: s-maj=6.3km s-min=4.2km az=122.6*
ISC 19 14:51:22.3±0.8**, 41.26N**±0.03×**43.81E**±0.06**, h10**^{km}**, n14,** σ**1**^{s}**04**/24**, 1D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	Delisi	0.84	56	P	Pg	14 51 37.5	-1.0
TBLG				S	Sg	14 51 49.6	+0.2
TBLG	Delisi	0.84	56	ePg	Pg	14 51 37.5	-1.0
TBLG				eSg	Sg	14 51 49.5	+0.1
MTA	Mtatsminda	0.85	59	P	Pg	14 51 37.2	-1.6
MTA				S	Sg	14 51 49.5	-0.4
DGRG	David-gareji	1.19	80	P	Pb	14 51 43.9	-1.0
DGRG				S	Sg	14 52 02.1	+1.5
GNI	Garni	1.32	147	dePG	Pn	14 51 45.8	-0.9
GNI				i S	Sg	14 52 05.5	+0.8
GNI	Garni	1.32	147	ePg	Pn	14 51 45.8	-0.9
GNI				i Sg	Sg	14 52 05.5	+0.8
ONI	Oni	1.34	348	P	Pn	14 51 45.7	-1.4
ONI				S	Sb	14 52 04.4	-0.5
ZEI	Tsey	1.51	2	ePg	Pn	14 51 50.0	+0.6
ZEI				eSg	Sg	14 52 10.7	-0.1
DIGR	Digorskoe uzhe	1.65	354	i Pn	Pn	14 51 50.7	-0.6
KORR	Kora	1.83	6	i Pn	Pn	14 51 54.8	+1.0
VLKR	Vladikavkaz	1.90	20	ePn	Pg	14 51 57.2	-1.5
VLKR				eSg	Sg	14 52 23.1	-0.2
ARNR	Ardon	1.96	10	ePn	Pn	14 51 56.9	+1.3
KMSR	Komsomolskaya	2.14	9	ePn	Pn	14 51 59.3	+1.3
KMSR				eSn	Sn	14 52 26.7	+2.1
KUBR	Kubataba	2.55	353	ePn	Pb	14 52 08.8	+0.6

*ISCJB **19** 15:25:53.1±0.9, 32.57N±0.05×3.43W±0.07, h10^{km}, Error ellipse: s-maj=10.3km s-min=3.9km az=79.0*
*CSEM **19** 15:25:53.1±0.5, 32.47N×3.44W, h15^{km}, MD3.8, Error ellipse: s-maj=13.3km s-min=5.4km az=131.0*
*CNRM **19** 15:25:54.2, 32.43N×3.26W, h16^{km}, MD3.8*
*MDD **19** 15:25:54.5±1.4, 32.49N×3.35W, h14^{km}±15^{km}, mb3.6/6, Error ellipse: s-maj=23.0km s-min=6.8km az=137.0, PRXIMO*
ISC 19 15:25:54.2±1.0**, 32.55N**±0.05×**3.45W**±0.07**, h10**^{km}**, n24,** σ**1**^{s}**16**/40**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFT	Errachidia	0.92	236	i P	Pg	15 26 12.0	+0.2
ZFT				i S	Sg	15 26 25.0	+1.2
CZD	Col de Zad	1.42	290	i P	Pn	15 26 21.0	+0.9
CZD				i S	Sn	15 26 40.0	+1.2
TZK	Tazeka	1.65	338	i P	Pn	15 26 24.0	+0.8
TZK				i S	Sn	15 26 45.0	+0.5
MIF	Mishlifen	1.72	300	i P	Pn	15 26 24.0	-0.2
MIF				i S	Sn	15 26 46.5	+0.3
KIB	El Ksiba	2.18	271	i P	Pn	15 26 31.0	+0.5
KIB				i S	Sn	15 26 59.0	+1.4
ZAI	Zaio	2.49	14	eP	Pn	15 26 34.0	-0.7
ZAI				eS	Sn	15 27 03.0	-2.1
TZC	Tazercounte	2.60	262	i P	Pn	15 26 35.5	-0.8
TZC				i S	Sn	15 27 07.0	-0.9
OUK	Oukaimeden	3.98	252	eP	Pn	15 26 55.0	-0.3
OUK				i S	Sn	15 27 40.5	-1.6
EGUA	Guajares	4.28	359	P	Pn	15 27 01.0	+1.7
	0.4nm,1.1s						
EBER	Berja	4.36	6	P	Pn	15 27 00.9	+0.4
	5.9nm,1.0s,SNR=4.5						
EBER				S	Sn	15 27 49.3	-2.1
	5.0nm,0.6s						
EBER	Berja	4.36	6	S	Sn	15 27 52.2	+0.8
	5.0nm,0.6s						
CIA	Chichaoua	4.61	259	eP	Pn	15 27 03.0	-0.9
CIA				i S	Sn	15 27 56.0	-1.5
EQUE	Quentar	4.65	0	P	Pn	15 27 06.4	+2.0
	0.8nm,0.4s,SNR=7.9						
EQUE				S	Sn	15 27 54.4	-3.9
	12nm,1.3s,SNR=4.0						
EQUE	Quentar	4.65	0	P	Pn	15 27 06.4	+2.0
	0.8nm,0.4s,SNR=7.9						
EQUE				S	Sn	15 27 58.3	-0.1
	12nm,1.3s,SNR=4.0						
EQES	Quesada	5.25	3	P	Pn	15 27 13.5	+0.8
	1.9nm,0.4s,SNR=6.9						
EQES				S	Sn	15 28 10.2	-3.1
	12nm,1.8s,SNR=4.0						
EQES	Quesada	5.25	3	P	Pn	15 27 15.5	+2.8
	1.9nm,0.4s,SNR=6.9						
EQES				S	Sn	15 28 12.9	-0.4
	12nm,1.8s,SNR=4.0						
EADA	Adamuz	5.68	351	P	Pn	15 27 20.0	+1.4
	1.4nm,0.8s,SNR=7.9						
EMIN	Mina Concepcio	5.84	334	P	Pn	15 27 20.6	-0.2
	1.5nm,0.4s,SNR=11						
EMIN				S	Sn	15 28 23.3	-4.4
	14nm,1.2s						
EMIN	Mina Concepcio	5.84	334	P	Pn	15 27 20.6	-0.1
	1.5nm,0.4s,SNR=11						
EGRO	El Granado	5.97	328	P	Pn	15 27 21.0	-1.6
	2.1nm,0.3s,SNR=5.3						
EGRO				S	Sn	15 28 25.3	-5.7
	11nm,1.5s,SNR=7.9						
ETOB	Tobarra	6.28	14	P	Pn	15 27 30.6	+3.8
	0.2nm,0.3s,SNR=7.9						
PBEJ	Beja	6.55	328	eSn	Sn	15 28 38.8	-6.4
PESTR	Estremoz	7.15	333	ePn	Pn	15 27 38.0	-0.7
PCBR	Castelo Branco	7.97	337	ePn	Pn	15 27 49.2	-0.8

IDC 19 15:29:08.2±3.0**, 9.33S×108.51E, h0**^{km}**, mb3.8**/4**, mb1 3.8**/4**, mb1mx3.6**/16**, mbtmp3.8**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.8**/28**, 1C, Error ellipse: s-maj=133.3km s-min=23.9km az=54.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	Banjamegara	2.31	31	⇑eP	Pn	15 29 55.2	+7.7
BJII				eS	Sn	15 30 32.2	+16
WRA	Warramunga Arr	27.09	116	P	P	15 34 52.9	+0.4
	0.4nm,0.9s,baz=289,slow=11,SNR=3.9						
STKA	Stephens Creek	37.99	131	P	P	15 36 27.9	+0.1
	1.6nm,0.7s,baz=302,slow=11,SNR=5.5						
PMG	Port Moresby	38.12	93	LR	LR	15 54 38.4	
	comp=Z,47nm,19.8s,baz=186,slow=40						
SONM	Songino Array	56.94	358	P	P	15 38 55.5	+0.3
	0.6nm,0.5s,baz=180,slow=8.0,SNR=7.8						
MKAR	Makanchi Array	60.57	340	P	P	15 39 20.3	-0.2
	0.5nm,0.4s,baz=131,slow=6.6,SNR=5.2						

IDC 19 15:45:17.0±4.1**, 50.29S×113.22E, h0**^{km}**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/12**, mbtmp3.9**/4**, Error ellipse: s-maj=166.4km s-min=25.3km az=98.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	31.08	39	P	P	15 51 36.5	-0.3
	0.8nm,0.8s,baz=207,slow=8.7,SNR=6.5						
VNDA	Vanda	32.76	162	P	P	15 51 50.9	-0.7
	0.7nm,0.6s,baz=319,slow=7.9,SNR=9.0						
FITZ	Fitzroy Crossi	33.62	22	P	P	15 51 58.7	-0.3
	2.4nm,0.8s,baz=198,slow=10						
WRA	Warramunga Arr	34.61	37	P	P	15 52 08.0	+0.4
	0.7nm,0.6s,baz=203,slow=11,SNR=10						
PDAR	Pinedale Array	149.97	88	PKPbc	PKPbc	16 05 08.7	-0.6
	0.2nm,0.6s,baz=255,slow=1.8,SNR=4.0						

*IDC **19** 15:52:45.5±5.8, 6.28S×146.47E, h35^{km}±56^{km}, mb3.5/4, mb1 3.9/7, mb1mx3.7/15, mbtmp4.0/7, ML3.7/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/19, Error ellipse: s-maj=44.7km s-min=26.4km az=119.0*
*ISCJB **19** 15:52:46.2±3.5, 6.3S±0.2×146.5E±0.1, h69^{km}±36^{km}, mb3.5/4, Error ellipse: s-maj=29.9km s-min=16.9km az=112.6*
*NEIC **19** 15:52:48.6±2.9, 6.49S×146.59E, h69^{km}±31^{km}, mb3.9/2, Error ellipse: s-maj=29.7km s-min=13.2km az=141.0*
ISC 19 15:52:47.6±3.3**, 6.3S**±0.2×**146.5E**±0.1**, h62**^{km}±37^{km}**, n16,** σ**1**^{s}**08**/20**, mb3.6**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.20	168	Pn	Pn	15 53 33.8	-1.6
	11nm,0.3s,baz=357,slow=5.6,SNR=41						
PMG				Pg	Pn	15 53 43.8	+8.5
	21nm,0.3s,baz=17,slow=7.6,SNR=20						
PMG				Sn	Sn	15 54 14.1	+1.9
	8.8nm,0.3s,baz=190,slow=21,SNR=3.0						
PMG				Lg		15 54 28.1	
	17nm,0.3s,baz=21,slow=16,SNR=7.4						
PMG	Port Moresby	3.20	168	Pn	Pn	15 53 33.8	-1.6
PMG				e		15 53 43.1	
PMG				Pg	Pn	15 53 43.8	+8.5
PMG				Sn	Sn	15 54 14.2	+1.9
PMG				Lg		15 54 28.1	
HNR	Honiara	13.71	104	Pn	Pn	15 55 58.2	-0.8
	2.2nm,0.3s,baz=96,slow=8.3,SNR=2.3						
CTA	Charters Tower	13.75	181	Pn	Pn	15 56 01.0	+1.6
	0.4nm,0.3s,baz=213,slow=19,SNR=6.7						
CTA	Charters Tower	13.75	181	Pn	Pn	15 56 01.0	+1.6
CTAO	Charters Tower	13.75	181	ePn	Pn	15 55 55.6	-3.9
WRAB	Tennant Creek	17.99	220	eP	Pn	15 56 52.8	-0.4
	5.0nm,0.8s						
WB2	Warramunga Arr	17.99	220	eP	Pn	15 56 53.0	-0.3
WRA	Warramunga Arr	18.00	220	P	Pn	15 56 52.7	-0.7
	0.3nm,0.3s,baz=42,slow=11,SNR=21						
AS31	Alice Springs	21.11	214	eP	P	15 57 26.6	-0.4
ASAR	Alice Springs	21.11	214	P	P	15 57 27.6	+0.6
	0.5nm,0.4s,mb3.2,baz=54,slow=9.0,SNR=14						
ASAR				LR	LR	16 05 38.6	
	comp=Z,72nm,19.3s,baz=356,slow=37						
FITZ	Fitzroy Crossi	23.49	238	P	P	15 57 51.8	+0.1
	2.1nm,0.6s,mb3.7,baz=78,slow=16,SNR=9.7						
FITZ	Fitzroy Crossi	23.49	238	eP	P	15 57 51.8	+0.1
	4.0nm,0.7s,mb4.0						
STKA	Stephens Creek	25.89	190	P	P	15 58 12.3	-1.3
	0.8nm,0.6s,mb3.5,baz=349,slow=10,SNR=4.2						
STKA	Stephens Creek	25.89	190	eP	P	15 58 12.4	-1.2
SONM	Songino Array	64.38	331	P	P	16 03 18.7	+1.8
	1.5nm,0.8s,mb4.1,baz=144,slow=8.3,SNR=10						

*ISCJB **19** 15:58:08.6±0.6, 50.17S±0.09×112.8E±0.3, h10^{km}, mb4.3/10, MS3.9/5, Error ellipse: s-maj=26.8km s-min=9.1km az=44.6*
*IDC **19** 15:58:09.6±1.1, 50.33S×113.13E, h0^{km}, mb4.2/6, mb1 4.3/6, mb1mx4.1/13, mbtmp4.2/6, MS4.0/6, Ms1 4.0/6, ms1mx3.8/14, Error ellipse: s-maj=58.8km s-min=17.5km az=113.0*
*NEIC **19** 15:58:10.6±0.4, 50.20S×112.72E, h10^{km}, mb4.6/7, Error ellipse: s-maj=22.5km s-min=8.1km az=111.0*
ISC 19 15:58:10.4±0.6**, 50.22S**±0.09×**112.8E**±0.3**, h10**^{km}**, n43,** σ**0**^{s}**96**/17**, mb4.3**/10**, MS3.9**/5**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	Casey	16.15	183	P	Pn	16 01 58.5	+1.0
	22nm,1.4s						
NWAO	Narrogin (SRO)	17.59	12	LR	LR	16 07 31.1	
	comp=Z,638nm,18.3s,baz=198,slow=32						
STKA	Stephens Creek	28.16	60	LR	LR	16 12 46.4	
	comp=Z,241nm,18.8s,MS3.8,baz=205,slow=31						
MAW	Mawson	29.96	216	P	P	16 04 20.2	+1.4
	1.4nm,0.7s,mb3.8,baz=68,slow=11,SNR=3.8						
ASAR	Alice Springs	31.20	40	P	P	16 04 29.8	+0.1
	1.9nm,0.8s,mb4.0,baz=209,slow=7.9,SNR=20						
ASAR				LR	LR	16 15 41.0	
	comp=Z,228nm,20.9s,MS3.8,baz=186,slow=34						
AS31	Alice Springs	31.20	40	eP	P	16 04 28.8	-1.0
VNDA	Vanda	32.91	162	P	P	16 04 43.8	-1.0
	2.5nm,0.8s,mb4.2,baz=302,slow=8.4,SNR=20						
VNDA				LR	LR	16 17 10.8	
	comp=Z,284nm,19.3s,MS4.0,baz=330,slow=35						
VNDA	Vanda	32.91	162	eP	P	16 04 42.8	-2.0
	5.4nm,0.9s,mb4.5						
VNDA				LR	LR	16 17 10.8	
FITZ	Fitzroy Crossi	33.66	22	P	P	16 04 52.6	+1.4
	10nm,1.1s,mb4.7,baz=199,slow=11,SNR=8.4						
FITZ				LR	LR	16 17 44.5	
	comp=Z,255nm,18.2s,MS4.0,baz=212,slow=35						
FITZ	Fitzroy Crossi	33.66	22	eP	P	16 04 53.1	+1.8
	16nm,1.1s,mb4.9						
SBA	Scott Base	34.01	162	eP	P	16 04 54.7	+0.4
	14nm,1.4s,mb4.7						
WRA	Warramunga Arr	34.72	37	P	P	16 05 00.9	+0.4
	1.8nm,0.5s,mb4.3,baz=203,slow=11,SNR=31						
WRA				LR	LR	16 19 07.2	
	comp=Z,218nm,18.7s,MS3.9,baz=240,slow=36						
WB2	Warramunga Arr	34.73	37	eP	P	16 05 00.3	-0.2
WRAB	Tennant Creek	34.73	37	eP	P	16 05 00.7	+0.1
	12nm,1.0s,mb4.8						
QSPA	South Pole Qui	39.91	180	eP	P	16 05 43.8	-0.7
	3.3nm,0.7s,mb4.2						
SNAA	Sanae	50.28	202	P	P	16 07 06.2	-0.7
	1.6nm,1.0s,mb4.0,baz=119,slow=8.9,SNR=8.3						
SNAA	Sanae	50.28	202	e	P	16 07 06.5	-0.4
SNAA				e		16 07 20.7	
VNA1	Neumayer--Stat	52.26	201	e	P	16 07 22.4	+0.6
VNA1				e	pP	16 07 24.4	-0.6
VNA1				e		16 07 27.8	
LSZ	Lusaka	74.98	264	P	P	16 09 50.2	-1.7
	9.0nm,1.3s,mb4.5						
WVOR	Wild Horse Val	144.27	82	ePKPdf	PKPdf	16 17 45.5	-1.0
CCUT	Cedar City	144.97	93	ePKPdf	PKPdf	16 17 47.6	-0.2
WUAZ	Wupatki	145.01	98	ePKPdf	PKPdf	16 17 47.6	-0.3
HAWA	Hanford	145.58	76	ePKPdf	PKPdf	16 17 49.6	+0.8
BMO	Blue Mountains	146.29	79	ePKPdf	PKPdf	16 17 49.8	-0.3
MSU	Marysvale	146.29	93	ePKPbc	PKPbc	16 17 52.5	+1.3
DUG	Dugway	146.82	90	ePKPbc	PKPbc	16 17 53.7	+0.9
LAZ	Ladron	146.97	103	ePKPdf	PKPdf	16 17 50.6	-0.6
NLU	North Lily Min	147.17	91	ePKPbc	PKPbc	16 17 52.3	-1.4
SRU	San Rafael	147.69	93	ePKPbc	PKPbc	16 17 54.6	-0.6
ANMO	Albuquerque	147.75	103	ePKPbc	PKPbc	16 17 55.9	+0.6
DAU	Daniels Canyon	147.94	91	ePKPbc	PKPbc	16 17 57.1	+1.2
PV01	Paradox Valley	148.38	96	ePKPdf	PKPdf	16 17 54.1	+0.5
TPAW	Teton Pass	149.70	86	ePKPbc	PKPbc	16 18 01.2	+0.8
REDW	Red Top Meadow	149.71	86	ePKPbc	PKPbc	16 18 01.0	+0.6
CHMT	Chamberlain Mo	149.73	78	ePKPdf	PKPbc	16 17 59.4	-1.0
MOOW	Moose Ponds	149.96	85	ePKPbc	PKPbc	16 18 01.7	+0.7
LOHW	Long Hollow	149.98	86	ePKPbc	PKPbc	16 18 01.4	+0.3
QLMT	Earthquake Lak	150.01	83	ePKPbc	PKPbc	16 18 01.2	+0.1
PDAR	Pinedale Array	150.25	88	PKPbc	PKPbc	16 18 01.0	-0.7
	1.0nm,0.9s,baz=211,slow=5.2,SNR=9.2						
HRY	Holter Researc	150.55	79	ePKPbc	PKPbc	16 18 01.0	-1.4
RWWY	Rawlins	151.21	92	ePKPbc	PKPbc	16 18 03.8	-0.2
YKA	Yellowknife Ar	151.72	46	PKPbc	PKPbc	16 18 03.8	-1.4
	0.7nm,0.6s,baz=294,slow=3.1,SNR=4.7						
WMOK	Wichita Mounta	152.32	112	ePKPbc	PKPbc	16 18 05.6	-0.9

*BJI **19** 16:05:57.1, 28.88S×61.47E, h10^{km}, mB5.2, mb5.0, Ms4.7, Msz4.5*
*IDC **19** 16:05:58.3±0.5, 28.85S×61.60E, h0^{km}, mb4.4/18, mb1 4.5/19, mb1mx4.4/28, mbtmp4.4/19, ML4.2/1, MS4.2/7, Ms1 4.2/7, ms1mx4.0/14, Error ellipse: s-maj=17.2km s-min=14.0km az=34.0*
*ISCJB **19** 16:05:58.3±0.2, 28.90S±0.05×61.66E±0.06, h10^{km}, mb5.0/68, MS4.3/21, Error ellipse: s-maj=8.2km s-min=7.2km az=129.1*
*MOS **19** 16:05:58.4±0.8, 28.91S×61.55E, h10^{km}, mb5.2/19, MS4.3/5, Error ellipse: s-maj=16.3km s-min=8.1km az=101.8*
*HRVD **19** 16:05:59.7±0.3, 28.89S×61.19E, h12^{km}, MW5.1/58, Centroid moment Tensor Solution. LP body waves:*

s25,cx29;Mantle waves: s58,c86; Half duration: 0
Moment tensor: Scale 10^{16}Nm; M_T~3.97±.14;
$M_{\theta\theta}$4.12±.12; $M_{\theta\phi}$-0.14±.15; M_{rr}1.04±.47; $M_{r\theta}$0.61±.12;
$M_{r\phi}$3.16±.58; Best double couple: $M_0$5.16100×10^{16}
NP1:ϕ_s104.00000°,δ40.00000°,λ-47.00000°. NP2:
ϕ_s233.00000°,δ62.00000°,λ-120.00000°. Principal axes:
T 4.5330, Plg12.0000°, Azm344.0000°; N 1.2600,
Plg26.0000°, Azm248.0000°; P -5.7890, Plg61.0000°,
Azm97.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s.

*NEIC **19** 16:05:59.7±0.2,2892S×6154E,h10km,mb5.1/28,*
MS4.2/1 Error ellipse: s-maj=9.1km s-min=7.1km az=53.0

*SZGRF **19** 16:06:09.1,2794S×5997E,h24km,mb5.3,South Indian Ocean*

ISC 19 16:05:59.9±0.2,2888S±005×6158E±006,h10km,
(h18km±1.9km:pP-P),n164,σ0s82/149,mb5.0/68,MS4.3/21,
4C-7D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.68**	**305**	Pn	**Pn**	**16 09 55.5**	**+1.7**
	0.9nm,0.3s,baz=122,slow=14,SNR=8.2						
OPO				Sn	**Sn**	**16 12 48.0**	**-11**
	0.5nm,0.3s,baz=138,slow=15,SNR=2.9						
BOSA	**Boshof**	**31.77**	**262**	P	**P**	**16 12 23.9**	**-0.4**
	12nm,0.9s,mb4.7,baz=113,slow=6.9,SNR=11						
BOSA				LR	LR	16 23 04.1	
	comp=Z,276nm,21.5s,MS3.9,baz=106,slow=32						
BOSA	**Boshof**	**31.77**	**262**	*e*P	**P**	**16 12 24.4**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,175nm,2.3s,mb5.5						
BOSA	**Boshof**	**31.77**	**262**	*e*P	**P**	**16 12 24.4**	**+0.1**
	comp=Z,175nm,2.3s,mb5.5						
LBTB	**Lobatse**	**32.23**	**268**	P	**P**	**16 12 27.9**	**-0.4**
	comp=Z,5.6nm,0.9s,mb4.4,baz=149,slow=3.9,SNR=6.3						
LBTB	**Lobatse**	**32.23**	**268**	*e*P	**P**	**16 12 27.6**	**-0.7**
LBTB				*e*		16 12 34.0	
LBTB				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
LBTB	**Lobatse**	**32.23**	**268**	*e*P	**P**	**16 12 27.6**	**-0.7**
	comp=Z,11nm,1.1s,mb4.6						
LBTB				*e*		16 12 34.0	
LSZ	**Lusaka**	**33.64**	**287**	*e*P	**P**	**16 12 39.6**	**-1.1**
LSZ				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
LSZ	**Lusaka**	**33.64**	**287**	*e*P	**P**	**16 12 39.6**	**-1.1**
	comp=Z,26nm,1.0s,mb5.1						
SUR	**Sutherland**	**35.10**	**254**	LR	LR	16 24 59.9	
	comp=Z,368nm,18.9s,MS4.2,baz=116,slow=32						
SUR	**Sutherland**	**35.10**	**254**	*e*P	**P**	**16 12 49.9**	**-3.4**
	comp=Z,59nm,1.5s,mb5.3						
KMBO	**Kilima Mbogo**	**36.06**	**316**	LR	LR	16 26 18.0	
	comp=Z,624nm,18.3s,MS4.4,baz=270,slow=34						
MAW	**Mawson**	**38.76**	**179**	P	**P**	**16 13 25.2**	**+0.8**
	comp=Z,8.1nm,0.8s,mb4.5,baz=354,slow=9.4,SNR=20						
MAW				LR	LR	16 26 38.2	
	comp=Z,730nm,19.0s,MS4.5,baz=36,slow=32						
MAW	**Mawson**	**38.76**	**179**	*e*P	**P**	**16 13 24.2**	**-0.3**
MAW				pmax	pmax		
	comp=Z,51nm,1.5s						
MAW	**Mawson**	**38.76**	**179**	*e*P	**P**	**16 13 24.2**	**-0.2**
	comp=Z,51nm,1.5s,mb5.0						
TSUM	**Tsumeb**	**41.12**	**273**	P	**P**	**16 13 45.1**	**+1.1**
	comp=Z,8.3nm,1.2s,mb4.2,baz=130,slow=7.7,SNR=7.4						
TSUM				LR	LR	16 29 19.4	
	comp=Z,121nm,21.1s,MS3.7,baz=96,slow=34						
TSUM	**Tsumeb**	**41.12**	**273**	*e*P	**P**	**16 13 44.6**	**+0.6**
	comp=Z,79nm,2.0s,mb5.0						
SYO	**Syowa Base**	**42.16**	**192**⇑	*e*P	**P**	**16 13 52.2**	**-0.4**
SYO	**Syowa Base**	**42.16**	**192**⇓	*e*pP	pP	16 13 55.4	-0.3
MIR	**Mirnyy**	**42.29**	**162**	*d*/P	**P**	**16 13 55.5**	**+1.9**
MIR				pmax	pmax		
	comp=Z,220nm,1.8s,mb5.5						
ATD	**Arta Tunnel**	**44.06**	**333**	LR	LR	16 28 56.6	
	comp=Z,673nm,22.0s,MS4.5,baz=144,slow=31						
CASY	**Casey**	**47.75**	**156**	P	**P**	**16 14 37.3**	**+0.2**
	comp=Z,82nm,1.8s,mb5.5						
SNAA	**Sanae**	**54.86**	**200**	P	**P**	**16 15 29.9**	**-0.5**
	comp=Z,2.2nm,1.1s,mb4.1,baz=95,slow=6.6,SNR=6.9						
SNAA	**Sanae**	**54.86**	**200**	*e*P	**P**	**16 15 30.0**	**-0.4**
SNAA				*e*	pP	16 15 33.4	-0.2
SNAA				*e*	pP	16 15 34.4	+0.8
SNAA				*e*		16 15 37.8	
SNAA				*e*		16 15 40.6	
SNAA	**Sanae**	**54.86**	**200**⇑	*e*P	**P**	**16 15 29.7**	**-0.7**
SNAA	**Sanae**	**54.86**	**200**	*e*P	**P**	**16 15 29.4**	**-1.0**
	comp=Z,11nm,1.1s,mb4.8						
VNA1	**Neumayer--Stat**	**56.38**	**202**	*e*P	**P**	**16 15 43.0**	**+1.7**
VNA1				*e*	pP	16 15 44.5	0.0
VNA1				*e*	pP	16 15 47.4	+2.9
FITZ	**Fitzroy Crossi**	**59.12**	**95**	P	**P**	**16 16 00.4**	**-0.2**
	comp=Z,2.7nm,1.0s,mb4.2,baz=135,slow=8.6,SNR=3.6						
DRV	**Dumont d'Urvil**	**59.29**	**153**	S	**S**	**16 24 17.0**	**+7.0**
KOLN	**Koldanda**	**60.15**	**23**	*e*P	**P**	**16 16 07.4**	**-0.3**
	comp=Z,46nm,1.4s,mb5.3						
DMN	**Daman**	**60.52**	**24**	*e*P	**P**	**16 16 10.9**	**+0.6**
	comp=Z,30nm,1.0s,mb5.3						
PKI	**Pulchoki**	**60.60**	**24**	*e*P	**P**	**16 16 11.1**	**+0.3**
GKN	**Gorkha**	**60.72**	**23**	*e*P	**P**	**16 16 11.2**	**-0.4**
	comp=Z,43nm,1.0s,mb5.5						
KKN	**Kakani**	**60.75**	**24**	*e*P	**P**	**16 16 12.2**	**+0.4**
	comp=Z,33nm,1.1s,mb5.4						
GUN	**Gumba**	**61.08**	**25**	*e*P	**P**	**16 16 14.0**	**0.0**
QSPA	**South Pole Qui**	**61.28**	**180**	*e*P	**P**	**16 16 15.4**	**0.0**
	comp=Z,21nm,1.2s,mb5.1						
EIL	**Elat**	**63.53**	**334**	P	**P**	**16 16 28.2**	**-2.3**
	comp=Z,184nm,1.3s,mb6.0						
ASAR	**Alice Springs**	**64.16**	**104**	P	**P**	**16 16 34.5**	**-0.1**
	comp=Z,3.0nm,0.9s,mb4.3,baz=242,slow=6.2,SNR=18						
AS31	**Alice Springs**	**64.16**	**104**	*e*P	**P**	**16 16 33.5**	**-1.1**
VNDA	**Vanda**	**64.22**	**166**	P	**P**	**16 16 35.1**	**+0.1**
	comp=Z,2.3nm,0.9s,mb4.2,baz=271,slow=8.0,SNR=15						
VNDA	**Vanda**	**64.22**	**166**	*e*P	**P**	**16 16 34.1**	**-0.9**
VNDA				pmax	pmax		
	comp=Z,24nm,1.9s						
VNDA	**Vanda**	**64.22**	**166**	*e*P	**P**	**16 16 34.1**	**-0.9**
	comp=Z,24nm,1.9s,mb4.9						
LSA	**Lhasa**	**64.73**	**28**	P	**P**	**16 16 40.4**	**+2.0**
LSA	**Lhasa**	**64.73**	**28**	*e*P	**P**	**16 16 39.7**	**+1.3**
LSA				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9						
LSA	**Lhasa**	**64.73**	**28**	*e*P	**P**	**16 16 39.7**	**+1.4**
	comp=Z,16nm,1.2s,mb4.9						
SBA	**Scott Base**	**65.11**	**167**	*e*P	**P**	**16 16 41.5**	**+0.7**
SBA				pmax	pmax		
	comp=Z,379nm,3.2s						
SBA	**Scott Base**	**65.11**	**167**	*e*P	**P**	**16 16 41.5**	**+0.7**
	comp=Z,379nm,3.2s						
WRA	**Warramunga Arr**	**65.96**	**100**	P	**P**	**16 16 46.4**	**+0.1**
	comp=Z,3.2nm,1.0s,mb4.3,baz=248,slow=6.0,SNR=18						
WRAB	**Tennant Creek**	**65.97**	**100**	*e*P	**P**	**16 16 44.3**	**-2.1**
QIZ	**Qiongzhong**	**66.64**	**50**	P	**P**	**16 16 51.3**	**+0.7**
QIZ				AP	pP	16 16 55.5	+1.6
QIZ				XP	sP	16 16 58.3	+3.2
QIZ				S	S	16 25 44.3	+2.3
QIZ				XS	sS	16 25 51.9	+4.5
QIZ				AMB	AMB		
	comp=Z,136nm,3.4s						
QIZ				LR	LR		
	comp=Z,160nm,16.6s,MS4.3						
KMI	**Kunming**	**66.69**	**41**	P	**P**	**16 16 52.5**	**+1.5**
KMI				AP	pP	16 16 57.9	+3.6
KMI				XP	sP	16 17 00.0	+4.5
KMI				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.5						
KMI				AMB	AMB		
	comp=Z,121nm,4.1s						
KMI				LR	LR		
	comp=N,209nm,24.6s						
KMI				LR	LR		
	comp=E,127nm,32.0s						
KMI				LR	LR		
	comp=Z,205nm,23.4s,MS4.3						
STKA	**Stephens Creek**	**67.55**	**115**	P	**P**	**16 16 56.6**	**+0.1**
	comp=Z,1.9nm,0.9s,mb4.1,baz=204,slow=12,SNR=2.9						
STKA	**Stephens Creek**	**67.55**	**115**	*e*P	**P**	**16 16 56.4**	**-0.1**
GYA	**Guiyang**	**69.99**	**43**	P	**P**	**16 17 12.3**	**+0.6**
GYA				AP	pP	16 17 16.8	+1.9
GYA				XP	sP	16 17 19.4	+3.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=Z,380nm,18.4s,MS4.7						
MALT	**Malatya**	**70.26**	**341**	*e*P	**P**	**16 17 13.1**	**-0.2**
MALT				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
MALT	**Malatya**	**70.26**	**341**	*e*P	**P**	**16 17 13.1**	**-0.2**
	comp=Z,3.0nm,1.0s,mb4.2						
GNI	**Garni**	**70.44**	**346**	P	**P**	**16 17 15.0**	**+0.6**
GNI				pmax	pmax		
	comp=Z,31nm,1.1s						
GNI	**Garni**	**70.44**	**346**	P	**P**	**16 17 15.0**	**+0.7**
	comp=Z,31nm,1.1s,mb5.2						
TOA0	**Torodi Ar. Sit**	**71.33**	**297**	*e*P	**P**	**16 17 19.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**71.33**	**297**	P	**P**	**16 17 19.6**	**-0.2**
	comp=Z,3.5nm,0.9s,mb4.3,baz=120,slow=5.2,SNR=15						
CD2	**Chengdu**	**71.76**	**37**	*e*P	**P**	**16 17 22.5**	**+0.1**
CD2				AP	pP	16 17 27.3	+1.6
CD2				XP	sP	16 17 29.8	+2.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
CD2				LR	LR		
	comp=E,280nm,19.2s						
CD2				LR	LR		
	comp=Z,110nm,20.4s,MS4.1						
AAK	**Ala-Archa**	**72.14**	**10**⇑	*e*P	**P**	**16 17 25.3**	**+0.6**
AAK				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.8						
AAK	**Ala-Archa**	**72.14**	**10**	*e*P	**P**	**16 17 24.0**	**-0.8**
	comp=Z,3.5nm,1.0s,mb4.4						
FRU	**Bishkek**	**72.36**	**10**	*e*P	**P**	**16 17 27.0**	**+1.0**
FRU				*e*		16 17 34.0	
FRU				pmax	pmax		
	comp=Z,70nm,2.2s,mb5.2						
BRTR	**Keskin Array B**	**73.04**	**338**	P	**P**	**16 17 30.5**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=161,slow=7.9,SNR=6.9						
KIV	**Kislovodsk**	**74.52**	**346**⇑	*e*P	**P**	**16 17 39.8**	**+1.1**
KIV				pmax	pmax		
	comp=Z,26nm,2.2s,mb4.8						
KIV	**Kislovodsk**	**74.52**	**346**	*e*P	**P**	**16 17 36.3**	**-2.4**
	comp=Z,20nm,1.4s,mb4.9						
LZH	**Lanzhou**	**75.88**	**34**	*e*P	**P**	**16 17 47.5**	**+0.9**
LZH				AP	pP	16 17 50.0	+0.1
LZH				XP	sP	16 17 52.0	+0.9
LZH				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,157nm,4.6s						
WMQ	**Urumqi**	**76.20**	**19**	*e*P	**P**	**16 17 49.5**	**+1.1**
WMQ				XP	sP	16 17 56.5	+3.6
WMQ				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,135nm,6.0s						
WMQ				LR	LR		
	comp=Z,287nm,15.0s,MS4.7						
GTA	**Gaotai**	**76.71**	**30**	*e*P	**P**	**16 17 51.8**	**+0.5**
GTA				AP	pP	16 17 59.8	+5.2
GTA				XP	sP	16 18 03.8	+8.0
GTA				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,135nm,4.2s						
GTA				LR	LR		
	comp=N,98nm,17.5s,MS4.3						
GTA				LR	LR		
	comp=E,88nm,18.3s,MS4.3						
GTA				LR	LR		
	comp=Z,158nm,20.2s,MS4.3						
XAN	**Xi'an**	**76.95**	**39**	P	**P**	**16 17 52.6**	**0.0**
MKAR	**Makanchi Array**	**77.61**	**14**	P	**P**	**16 17 56.1**	**-0.2**
	comp=Z,4.8nm,0.8s,mb4.5,baz=177,slow=4.9,SNR=33						
KIS	**Kishinev**	**81.11**	**338**	*e*P	**P**	**16 18 12.0**	**-3.4**
NJ2	**Nanjing**	**81.44**	**46**	*e*P	**P**	**16 18 17.1**	**-0.1**
NJ2				AP	pP	16 18 21.8	+1.3
NJ2				XP	sP	16 18 24.1	+2.4
NJ2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,440nm,3.5s						
NJ2				LR	LR		
	comp=Z,440nm,26.6s,MS4.7						
ZRNK	**Zerenda**	**81.74**	**5**	*e*P	**P**	**16 18 17.6**	**-1.2**
ZRNK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
ZRNK	**Zerenda**	**81.74**	**5**	*e*P	**P**	**16 18 17.6**	**-1.2**
	comp=Z,8.9nm,1.0s,mb4.7						
BRVK	**Borovoye**	**81.94**	**5**	*e*P	**P**	**16 18 19.5**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.4						
BRVK	**Borovoye**	**81.94**	**5**	*e*P	**P**	**16 18 19.5**	**-0.3**
	comp=Z,8.3nm,1.6s,mb4.4						
DIVS	**Divcibare**	**81.98**	**331**	*e*P	**P**	**16 18 19.5**	**-0.5**
BBLS	**Bajina Basta -**	**82.05**	**331**	*e*P	**P**	**16 18 17.9**	**-2.5**
SSE	**Sheshan**	**82.32**	**48**	P	**P**	**16 18 20.3**	**-1.5**
SSE				AP	pP	16 18 29.9	+4.8
SSE				XP	sP	16 18 33.8	+7.5
SSE				S	S	16 28 34.3	-3.3
SSE				XS	sS	16 28 50.6	+7.5
SSE				SS	SS	16 33 56.1	-1.7
SSE				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,241nm,4.1s						
SSE				LR	LR		
	comp=Z,46nm,20.5s,MS3.8						
CHKZ	**Chkalovo**	**82.58**	**5**	*e*P	**P**	**16 18 22.3**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
CHKZ	**Chkalovo**	**82.58**	**5**	*e*P	**P**	**16 18 22.2**	**-0.9**
	comp=Z,7.5nm,1.0s,mb4.7						
HHC	**Hu-ho-hao-te**	**83.41**	**36**	*e*P	**P**	**16 18 28.5**	**+1.0**
HHC				AP	pP	16 18 33.3	+2.5
HHC				XP	sP	16 18 35.5	+3.5
HHC				PP	PP	16 21 43.8	+4.4
HHC				SKS		16 28 46.8	
HHC				S	S	16 28 49.6	+0.9
HHC				XS	sS	16 28 57.5	+3.3
HHC				PS		16 29 44.6	
HHC				SS	SS	16 34 19.3	+5.2
HHC				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,126nm,5.6s						
HHC				LR	LR		
	comp=Z,146nm,37.9s,MS4.1						
AKBB	**Malin Array Si**	**84.24**	**340**	*e*P	**P**	**16 18 31.0**	**-0.7**
AKASG	**Malin Array Be**	**84.24**	**340**	P	**P**	**16 18 31.6**	**-0.1**
	comp=Z,4.1nm,0.9s,mb4.6,baz=163,slow=4.3,SNR=28						
AKASG				LR	LR	16 56 35.1	
	comp=Z,80nm,19.8s,MS4.1,baz=170,slow=36						
ZAL	**Zalesovo**	**84.89**	**14**	P	**P**	**16 18 34.6**	**-0.4**
	comp=Z,6.6nm,0.8s,mb4.8,baz=273,slow=4.7,SNR=41						
ARU	**Arti**	**85.01**	**358**⇓	*i*/P	**P**	**16 18 35.9**	**+0.3**
ARU				*e*		16 21 53.3	
ARU				*e*S	S	16 28 57.0	-7.7
ARU				*e*SS	SS	16 34 38.3	+0.7
ARU				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.1						
ARU	**Arti**	**85.01**	**358**	*e*P	**P**	**16 18 35.3**	**-0.3**
	comp=Z,16nm,1.1s,mb5.1						
KOLS	**Kolonicke sedl**	**85.05**	**335**	*e*P	**P**	**16 18 36.0**	**+0.2**
CRVS	**Cervenica-Dubn**	**85.32**	**335**	*e*P	**P**	**16 18 37.2**	**0.0**
KECS	**Kecovo**	**85.35**	**334**	*e*P	**P**	**16 18 35.9**	**-1.4**
KECS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
KECS	**Kecovo**	**85.35**	**334**	*e*P	**P**	**16 18 35.9**	**-1.4**
	comp=Z,3.0nm,0.9s,mb4.4						
SVE	**Sverdlovsk**	**85.37**	**359**	*e*P	**P**	**16 18 37.0**	**-0.4**
SVE				pmax	pmax		
	comp=Z,125nm,2.3s,mb5.6						
SVE				MLR	MLR		
	comp=N,300nm,12.0s,MS5.0						
SVE				MLR	MLR		
	comp=E,200nm,12.0s,MS5.0						
SVE				MLR	MLR		
	comp=Z,200nm,12.0s,MS4.7						
NVS	**Novosibirsk**	**85.44**	**12**	*e*P	**P**	**16 18 36.8**	**-0.9**
NVS				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.2						
NVS				pmax	pmax		
	comp=N,18nm,1.6s						
NVS				pmax	pmax		
	comp=E,16nm,1.8s						
GROS	**Grobnik**	**85.79**	**330**	*e*P	**P**	**16 18 39.6**	**+0.1**
STHS	**Stebnicka Huta**	**85.83**	**335**	*e*P	**P**	**16 18 39.2**	**-0.5**
VYHS	**Vyhne**	**86.00**	**333**	*e*P	**P**	**16 18 40.4**	**-0.1**
VYHS				pmax	pmax		
	comp=Z,13nm,2.2s,mb4.8						
VYHS	**Vyhne**	**86.00**	**333**	*e*P	**P**	**16 18 40.4**	**-0.1**
	comp=Z,13nm,2.2s,mb4.8						
SONM	**Songino Array**	**86.33**	**28**	P	**P**	**16 18 41.6**	**-0.5**
	comp=Z,2.4nm,1.1s,mb4.3,baz=205,slow=5.3,SNR=12						
OBN	**Obninsk**	**86.36**	**346**	*e*P	**P**	**16 18 42.9**	**+0.6**
OBN				pmax	pmax		
	comp=Z,70nm,1.8s,mb5.6						
OBN	**Obninsk**	**86.36**	**346**	*e*P	**P**	**16 18 43.0**	**+0.7**
	comp=Z,112nm,1.8s,mb5.8						
ARSA	**Arzberg**	**86.39**	**331**	*e*P	**P**	**16 18 42.9**	**+0.4**
CADS	**Cadrg**	**86.40**	**329**	*e*P	**P**	**16 18 42.2**	**-0.3**
ZST	**Bratislava**	**86.47**	**332**	*e*P	**P**	**16 18 43.0**	**+0.2**
ZST				pmax	pmax		
	comp=Z,18nm,1.6s,mb5.0						
ZST	**Bratislava**	**86.47**	**332**	*e*P	**P**	**16 18 43.0**	**+0.2**
	comp=Z,18nm,1.6s,mb5.1						
MOS	**Moscow**	**86.73**	**347**	*e*P	**P**	**16 18 43.8**	**-0.3**
MOS				pmax	pmax		
	comp=Z,65nm,1.5s,mb5.6						
OKC	**Ostrava-Krasne**	**87.35**	**334**	*e*P	**P**	**16 18 47.4**	**+0.3**
OKC				AMS	AMS	16 59 00.0	
	comp=Z,100nm,15.3s						
OKC	**Ostrava-Krasne**	**87.35**	**334**	*e*P	**P**	**16 18 47.4**	**+0.3**
MOA	**Molln**	**87.40**	**330**	*e*P	**P**	**16 18 47.4**	**0.0**
MORC	**Moravsky Berou**	**87.54**	**333**	*e*P	**P**	**16 18 47.1**	**-1.0**
MORC				pmax	pmax		
	comp=Z,21nm,1.8s,mb5.1						
MORC	**Moravsky Berou**	**87.54**	**333**	*e*P	**P**	**16 18 47.1**	**-1.0**
	comp=Z,21nm,1.8s,mb5.1						
TREC	**Trest**	**87.99**	**332**	AMS	AMS	16 57 20.0	
	comp=Z,100nm,20.3s						
WTTA	**Wattenberg**	**88.13**	**329**	*e*P	**P**	**16 18 50.9**	**0.0**
GEC2	**GERESS Array S**	**88.40**	**331**	*e*P	**P**	**16 18 51.7**	**-0.5**
GERES	**GERESS Array B**	**88.40**	**331**	P	**P**	**16 18 51.4**	**-0.8**
	comp=Z,0.7nm,0.8s,mb3.9,baz=159,slow=4.1,SNR=8.1						
DPC	**Dobruska-Polom**	**88.47**	**333**	*e*P	**P**	**16 18 52.6**	**+0.1**
DPC				AMS	AMS	16 56 30.0	
DPC	**Dobruska-Polom**	**88.47**	**333**	*e*P	**P**	**16 18 52.6**	**+0.1**
KHC	**Kasperske Hory**	**88.67**	**331**	*e*P	**P**	**16 18 52.8**	**-0.6**
KHC				LR	LR		
	comp=Z,100nm,24.9s,MS4.1						
UPC	**Upice**	**88.72**	**333**	*e*P	**P**	**16 18 54.3**	**+0.6**
KSP	**Ksiaz**	**88.87**	**333**	*e*P	**P**	**16 18 54.9**	**+0.5**
KSP				*e*		16 29 31.7	
KSP	**Ksiaz**	**88.87**	**333**	*e*P	**P**	**16 18 54.9**	**+0.5**
KSP				*e*SKS		16 29 31.7	
PRU	**Pruhonice**	**88.92**	**332**	*e*P	**P**	**16 18 54.3**	**-0.3**
PRU				LR	LR		
	comp=Z,100nm,20.0s,MS4.2						
WET	**Wettzell**	**88.98**	**330**	*e*P	**P**	**16 18 54.3**	**-0.6**
PVCC	**Panska Ves**	**89.32**	**332**	*e*P	**P**	**16 18 57.1**	**+0.6**
ROTZ	**Rotzenmuhle**	**89.74**	**331**	*e*P	**P**	**16 18 58.7**	**+0.3**
	comp=Z,2.3nm,1.7s,mb5.2						
BRG	**Berggiesshubel**	**89.84**	**332**	*e*P	**P**	**16 18 59.3**	**+0.4**
	comp=Z,29nm,1.5s,mb5.4						
BRG	**Berggiesshubel**	**89.84**	**332**	*e*P	**P**	**16 18 59.6**	**+0.7**
	comp=Z,18nm,1.5s,mb5.2						
BRG	**Berggiesshubel**	**89.84**	**332**	*e*P	**P**	**16 18 59.6**	**+0.7**
BRG				pmax	pmax		
	comp=Z,18nm,1.5s,mb5.2						
MANZ	**Manzenberg**	**89.94**	**331**	*e*P	**P**	**16 18 59.5**	**+0.1**
	comp=Z,11nm,1.3s,mb5.0						
NKC	**Novy Kostel**	**89.98**	**331**	*e*P	**P**	**16 19 00.7**	**+1.1**
NKC				AMS	AMS	16 56 50.0	
NKC	**Novy Kostel**	**89.98**	**331**	*e*P	**P**	**16 19 00.7**	**+1.1**
WERN	**Wernitzgruen**	**90.06**	**331**	*e*P	**P**	**16 19 00.6**	**+0.7**
	comp=Z,35nm,1.6s,mb5.4						
GRA1	**Grafenberg Arr**	**90.11**	**330**	*e*P	**P**	**16 19 00.4**	**+0.2**
	comp=Z,69nm,1.8s,mb5.7						
GRA1				*e*pP	pP	16 19 07.2	+3.7
GRF	**Grafenberg Arr**	**90.11**	**330**	*e*P	**P**	**16 19 00.4**	**+0.2**
	comp=Z,69nm,1.8s,mb5.7						
GRF				*e*pP	pP	16 19 07.2	+3.7
GRF	**Grafenberg Arr**	**90.11**	**330**	*e*P	**P**	**16 19 00.4**	**+0.2**
GRF				*e**PP	pP	16 19 07.2	+3.7
GRF				pmax	pmax		
	comp=Z,69nm,1.8s,mb5.7						
GRF	**Grafenberg Arr**	**90.11**	**330**	*e*P	**P**	**16 19 00.4**	**+0.2**
GRF				*e**PP	pP	16 19 07.2	+3.7
GRF				pmax	pmax		
	comp=Z,69nm,1.8s,mb5.7						
TANN	**Tannenbergstha**	**90.11**	**331**	*e*P	**P**	**16 19 00.7**	**+0.5**
	comp=Z,26nm,1.5s,mb5.3						
FBE	**Freiberg**	**90.12**	**332**	*e*P	**P**	**16 19 00.6**	**+0.4**
	comp=Z,39nm,1.7s,mb5.5						
FBE				*e*pP	pP	16 19 07.6	+4.0
GUNZ	**Gunzen**	**90.13**	**331**	*e*P	**P**	**16 19 01.0**	**+0.7**
	comp=Z,40nm,1.5s,mb5.5						
WERD	**Werda**	**90.20**	**331**	*e*P	**P**	**16 19 01.2**	**+0.6**
	comp=Z,37nm,1.7s,mb5.4						
CLL	**Collm**	**90.56**	**332**	*e*P	**P**	**16 19 02.7**	**+0.4**
	comp=Z,25nm,1.6s,mb5.3						
CLL				*e*pP	pP	16 19 09.7	+4.1
CLL	**Collm**	**90.56**	**332**	⇓P	**P**	**16 19 01.8**	**-0.5**
	comp=Z,logA/T=1.2,mb5.3						
CLL				*i* *SP	sP	16 19 09.6	+2.8
CLL				*e*S	S	16 30 00.0	+2.2
CLL			

PDAR PKPab PKPab 16 26 58.2 +0.1
comp=Z,2.0nm,0.9s,baz=48,slow=4.4,SNR=14

BJI ***19*** *16:07:12.0, 2890S×6093E, h13km, mB5.1, mb4.9, Ms5.0, Msz4.5*
MOS ***19*** *16:07:12.4±1.1, 2894S×6148E, h10km, mb5.1/20, Error ellipse: s-maj=16.8km s-min=11.0km az=105.8*
IDC ***19*** *16:07:12.7±0.5, 2885S×6150E, h0km, mb4.0/19, mb1 4.2/19, mb1mx4.1/26, mbtmp4.0/19, MS4.0/3, Ms1 4.0/3, ms1mx3.8/15, Error ellipse: s-maj=20.3km s-min=15.8km az=30.0*
ISCJB ***19*** *16:07:12.7±0.3, 2901S±007×6144E±007, h10km, mb4.8/53, MS4.4/10, Error ellipse: s-maj=9.7km s-min=8.2km az=46.3*
NEIC ***19*** *16:07:14.0±0.3, 2895S×6143E, h10km, mb4.9/26, Error ellipse: s-maj=10.1km s-min=8.3km az=211.0*
SZGRF ***19*** *16:07:28.8, 2753S×5907E, h33km, mb5.2, South Indian Ocean*

ISC 19 16:07:14.4±0.3, 2895S±007×6142E±007, h10km, (h17km±1.4km: pP-P), n127, s0s95/111, mb4.8/53, MS4.4/10, 1C-1D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.61**	**305**	Sn	**Sn**	**16 14 00.4**	**-11**
	0.4nm,0.3s,baz=315,slow=20,SNR=2.0						
BOSA	**Boshof**	**31.62**	**262**	P	**P**	**16 13 37.2**	**-0.3**
	10nm,1.0s,mb4.6,baz=116,slow=13,SNR=3.1						
BOSA	**Boshof**	**31.62**	**262**	*e*P	**P**	**16 13 36.6**	**-0.9**
BOSA				pmax	pmax		
	comp=Z,52nm,1.5s,mb5.1						
BOSA	**Boshof**	**31.62**	**262**	*e*P	**P**	**16 13 36.6**	**-0.8**
	comp=Z,52nm,1.5s,mb5.1						
LBTB	**Lobatse**	**32.09**	**268**	P	**P**	**16 13 42.5**	**+1.0**
	comp=Z,4.1nm,0.9s,mb4.2,baz=170,slow=3.2,SNR=4.4						
LBTB	**Lobatse**	**32.09**	**268**	*e*P	**P**	**16 13 42.9**	**+1.3**
LBTB				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.9						
LBTB	**Lobatse**	**32.09**	**268**	*e*P	**P**	**16 13 42.9**	**+1.4**
	comp=Z,28nm,1.4s,mb4.9						
LSZ	**Lusaka**	**33.53**	**287**	*e*P	**P**	**16 13 54.6**	**+0.4**
LSZ				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
LSZ	**Lusaka**	**33.53**	**287**	*e*P	**P**	**16 13 54.6**	**+0.4**
	comp=Z,16nm,1.0s,mb4.9						
SUR	**Sutherland**	**34.95**	**254**	*e*P	**P**	**16 14 05.7**	**-0.8**
	comp=Z,34nm,1.4s,mb5.1						
KMBO	**Kilima Mbogo**	**36.02**	**316**	P	**P**	**16 14 14.6**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=45,slow=20,SNR=1.9						
KMBO	**Kilima Mbogo**	**36.02**	**316**	P	**P**	**16 14 14.6**	**-1.1**
MAW	**Mawson**	**38.69**	**179**	P	**P**	**16 14 39.0**	**+0.6**
	comp=Z,0.8nm,0.3s,mb3.9,baz=15,slow=11,SNR=1.7						
MAW	**Mawson**	**38.69**	**179**	*e*P	**P**	**16 14 39.1**	**+0.8**
MAW				*e*		16 14 45.0	
MAW				pmax	pmax		
	comp=Z,17nm,0.9s						
MAW	**Mawson**	**38.69**	**179**	*e*P	**P**	**16 14 39.1**	**+0.8**
	comp=Z,16nm,0.9s,mb4.8						
MAW				*e*		16 14 45.0	
TSUM	**Tsumeb**	**40.99**	**274**	P	**P**	**16 14 58.4**	**+0.9**
	comp=Z,8.1nm,1.1s,mb4.2,baz=134,slow=13,SNR=4.7						
TSUM	**Tsumeb**	**40.99**	**274**	*e*P	**P**	**16 14 56.3**	**-1.1**
	comp=Z,32nm,1.5s,mb4.7						
SYO	**Syowa Base**	**42.07**	**192**	*e*sP	pP	16 15 12.6	+3.2
NWAO	**Narrogin (SRO)**	**47.57**	**110**	LR	LR	16 29 15.0	
	comp=Z,248nm,20.3s,MS4.2,baz=197,slow=28						
CASY	**Casey**	**47.74**	**156**	*e*P	**P**	**16 15 50.9**	**-0.6**
	comp=Z,9.6nm,0.9s,mb4.8						
KULM	**Kulim**	**50.81**	**54**	*e*P	**P**	**16 16 17.7**	**+2.8**
MBWA	**Marble Bar**	**52.95**	**96**	P	**P**	**16 16 33.6**	**+2.7**
	comp=Z,15nm,1.3s,mb4.8						
SNAA	**Sanae**	**54.74**	**200**	P	**P**	**16 16 45.4**	**+1.4**
	comp=Z,1.4nm,1.1s,mb3.9,baz=11,slow=10.0,SNR=1.9						
SNAA	**Sanae**	**54.74**	**200**	⇑*i*P	pP	16 16 50.2	+3.0
SNAA				*e*		16 16 51.9	
SNAA				*e*		16 16 56.7	
SNAA	**Sanae**	**54.74**	**200**	*e*P	**P**	**16 16 43.3**	**-0.7**
SNAA				*e*		16 16 50.3	
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SNAA	**Sanae**	**54.74**	**200**	*e*P	**P**	**16 16 43.3**	**-0.8**
	comp=Z,8.6nm,1.0s,mb4.7						
SNAA				*e*		16 16 50.3	
FITZ	**Fitzroy Crossi**	**59.25**	**95**	P	**P**	**16 17 16.6**	**+0.7**
	comp=Z,3.6nm,1.1s,mb4.3,baz=131,slow=9.3,SNR=2.5						
VNDA	**Vanda**	**64.18**	**166**	P	**P**	**16 17 48.8**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.8,baz=274,slow=8.9,SNR=2.1						
VNDA	**Vanda**	**64.18**	**166**	P	**P**	**16 17 48.7**	**-0.5**
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.6s						
VNDA	**Vanda**	**64.18**	**166**	P	**P**	**16 17 48.6**	**-0.6**
	comp=Z,9.2nm,1.6s,mb4.6						
ASAR	**Alice Springs**	**64.27**	**104**	P	**P**	**16 17 49.2**	**-0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=233,slow=6.5,SNR=3.1						
AS31	**Alice Springs**	**64.28**	**104**	*e*P	**P**	**16 17 48.5**	**-1.4**
AS31				*e*		16 17 54.2	
LSA	**Lhasa**	**64.86**	**28**	*e*P	**P**	**16 17 54.7**	**+1.0**
LSA				*e*		16 18 00.8	
LSA				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
LSA	**Lhasa**	**64.86**	**28**	*e*P	**P**	**16 17 54.7**	**+1.1**
	comp=Z,16nm,1.1s,mb5.0						
LSA				*e*		16 18 00.8	
SBA	**Scott Base**	**65.07**	**167**	P	**P**	**16 17 56.2**	**+1.2**
SBA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
SBA	**Scott Base**	**65.07**	**167**	P	**P**	**16 17 56.2**	**+1.2**
	comp=Z,2.6nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**66.08**	**100**	P	**P**	**16 18 01.2**	**-0.4**
	comp=Z,4.9nm,1.0s,mb4.5,baz=248,slow=5.8,SNR=4.7						
WRAB	**Tennant Creek**	**66.09**	**100**	P	**P**	**16 17 59.5**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**66.09**	**100**	P	**P**	**16 17 59.5**	**-2.1**
	comp=Z,18nm,1.1s,mb5.0						
KMI	**Kunming**	**66.84**	**41**	P	**P**	**16 18 07.3**	**+0.9**
KMI				AP	pP	16 18 12.3	+2.7
KMI				XP	sP	16 18 15.3	+4.5
KMI				PP	PP	16 20 39.6	+6.1
KMI				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.7						
KMI				AMB	AMB		
	comp=Z,44nm,3.6s						
KMI				LR	LR		
	comp=N,136nm,17.3s,MS4.3						
KMI				LR	LR		
	comp=E,100nm,17.3s,MS4.3						
KMI				LR	LR		
	comp=Z,142nm,18.6s,MS4.2						
STKA	**Stephens Creek**	**67.65**	**115**	P	**P**	**16 18 10.6**	**-1.0**
	comp=Z,0.9nm,0.6s,mb4.0,baz=11,slow=10,SNR=2.2						
STKA	**Stephens Creek**	**67.65**	**115**	P	**P**	**16 18 11.4**	**-0.1**
GYA	**Guiyang**	**70.14**	**43**	P	**P**	**16 18 26.4**	**-0.6**
GYA				AP	pP	16 18 30.8	+0.5
GYA				XP	sP	16 18 33.8	+2.3
GYA				PP	PP	16 21 03.1	+1.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,100nm,4.6s						
GYA				LR	LR		
	comp=N,340nm,18.9s,MS4.8						
GYA				LR	LR		
	comp=E,310nm,18.4s,MS4.8						
GYA				LR	LR		
	comp=Z,300nm,19.0s,MS4.6						
MALT	**Malatya**	**70.28**	**341**	P	**P**	**16 18 29.0**	**+1.1**
MALT				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.5						
MALT	**Malatya**	**70.28**	**341**	P	**P**	**16 18 29.0**	**+1.1**
	comp=Z,9.2nm,1.5s,mb4.5						
TOA0	**Torodi Ar. Sit**	**71.24**	**297**	*e*P	**P**	**16 18 32.2**	**-1.5**
TORD	**Torodi Ar. Bea**	**71.24**	**297**	P	**P**	**16 18 33.8**	**0.0**
	comp=Z,1.2nm,0.8s,mb3.9,baz=114,slow=5.4,SNR=3.6						
CD2	**Chengdu**	**71.90**	**38**	*e*P	**P**	**16 18 37.0**	**-0.7**
CD2				XP	sP	16 18 44.0	+1.8
CD2				PP	PP	16 21 19.0	+1.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				LR	LR		
	comp=E,240nm,14.4s						
CD2				LR	LR		
	comp=Z,120nm,13.2s,MS4.3						
AAK	**Ala-Archa**	**72.24**	**10**	*e*P	**P**	**16 18 39.2**	**-0.5**
AAK				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.8						
AAK	**Ala-Archa**	**72.24**	**10**	*e*P	**P**	**16 18 39.2**	**-0.5**
	comp=Z,22nm,1.6s,mb4.8						
DBIC	**Dimbokro**	**72.86**	**288**	P	**P**	**16 18 43.7**	**+0.2**
DBIC				pmax	pmax		
	comp=Z,43nm,1.6s						
DBIC	**Dimbokro**	**72.86**	**288**	P	**P**	**16 18 43.7**	**+0.2**
	comp=Z,43nm,1.6s,mb5.1						
BRTR	**Keskin Array B**	**73.05**	**338**	P	**P**	**16 18 44.1**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=133,slow=6.6,SNR=2.4						
KIV	**Kislovodsk**	**74.55**	**346**	*e*P	**P**	**16 18 53.0**	**-0.4**
KIV				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
KIV	**Kislovodsk**	**74.55**	**346**	*e*P	**P**	**16 18 53.0**	**-0.4**
	comp=Z,15nm,1.2s,mb4.8						
LZH	**Lanzhou**	**76.02**	**34**	*e*P	**P**	**16 19 03.5**	**+1.7**
LZH				AP	pP	16 19 07.5	+2.4
LZH				XP	sP	16 19 09.5	+3.2
LZH				PP	PP	16 21 56.4	+4.1
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,81nm,6.9s						
LZH				LR	LR		
	comp=N,423nm,15.3s						
LZH				LR	LR		
	comp=Z,935nm,16.3s,MS5.2						
WMQ	**Urumqi**	**76.31**	**19**	*e*P	**P**	**16 19 03.0**	**-0.5**
WMQ				XP	sP	16 19 10.0	+2.0
WMQ				PP	PP	16 21 56.0	+1.2
WMQ				AMB	AMB		
	comp=Z,26nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,132nm,6.0s						
WMQ				LR	LR		
	comp=N,322nm,15.0s,MS4.8						
WMQ				LR	LR		
	comp=E,158nm,15.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,275nm,15.0s,MS4.7						
GTA	**Gaotai**	**76.84**	**30**	*e*P	**P**	**16 19 06.3**	**-0.2**
GTA				AP	pP	16 19 12.8	+3.0
GTA				XP	sP	16 19 15.8	+4.8
GTA				PP	PP	16 22 03.4	+4.1
GTA				AMB	AMB		
	comp=Z,6.0nm,1.8s,mb4.2						
GTA				AMB	AMB		
	comp=Z,75nm,6.1s						
GTA				LR	LR		
	comp=N,98nm,19.8s,MS4.3						
GTA				LR	LR		
	comp=E,88nm,18.3s,MS4.3						
GTA				LR	LR		
	comp=Z,158nm,20.9s,MS4.3						
MKAR	**Makanchi Array**	**77.71**	**15**	P	**P**	**16 19 10.1**	**-1.3**
	comp=Z,1.4nm,0.7s,mb4.0,baz=167,slow=5.7,SNR=4.8						
NJ2	**Nanjing**	**81.59**	**46**	*e*P	**P**	**16 19 32.3**	**-0.1**
NJ2				AP	pP	16 19 37.0	+1.3
NJ2				XP	sP	16 19 39.3	+2.4
NJ2				PP	PP	16 22 40.3	+1.5
NJ2				AMB	AMB		
	comp=Z,40nm,0.5s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,440nm,3.5s						
NJ2				LR	LR		
	comp=N,220nm,23.4s,MS4.5						
NJ2				LR	LR		
	comp=E,130nm,24.3s,MS4.5						
NJ2				LR	LR		
	comp=Z,240nm,26.1s,MS4.4						
ZRNK	**Zerenda**	**81.82**	**5**	*e*P	**P**	**16 19 32.2**	**-1.4**
ZRNK				*e*		16 19 38.4	
ZRNK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
ZRNK	**Zerenda**	**81.82**	**5**	*e*P	**P**	**16 19 32.2**	**-1.4**
	comp=Z,5.1nm,1.1s,mb4.4						
ZRNK				*e*		16 19 38.4	
BRVK	**Borovoye**	**82.02**	**5**	*e*P	**P**	**16 19 33.5**	**-1.2**
BRVK				*e*		16 19 40.0	
BRVK				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.6						
BRVK	**Borovoye**	**82.02**	**5**	*e*P	**P**	**16 19 33.5**	**-1.2**
	comp=Z,12nm,1.5s,mb4.6						
BRVK				*e*		16 19 40.0	
CHKZ	**Chkalovo**	**82.67**	**6**	*e*P	**P**	**16 19 35.4**	**-2.7**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
CHKZ	**Chkalovo**	**82.67**	**6**	*e*P	**P**	**16 19 35.4**	**-2.7**
	comp=Z,4.6nm,1.0s,mb4.5						
AKASG	**Malin Array Be**	**84.26**	**340**	P	**P**	**16 19 45.4**	**-0.9**
	comp=Z,0.5nm,0.4s,mb4.0,baz=164,slow=4.4,SNR=6.3						
AKBB	**Malin Array Si**	**84.26**	**340**	P	**P**	**16 19 46.4**	**+0.1**
ZAL	**Zalesovo**	**84.99**	**14**	P	**P**	**16 19 49.6**	**-0.3**
	comp=Z,3.7nm,0.8s,mb4.6,baz=270,slow=5.2,SNR=6.6						
ARU	**Arti**	**85.07**	**358**	*e*P	**P**	**16 19 49.5**	**-0.9**
ARU				*e*		16 19 55.5	
ARU				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.1						
ARU	**Arti**	**85.07**	**358**	*e*P	**P**	**16 19 49.5**	**-0.9**
	comp=Z,18nm,1.2s,mb5.1						
ARU				*e*		16 19 55.5	
OBN	**Obninsk**	**86.40**	**346**	*e*P	**P**	**16 19 57.3**	**+0.3**
	comp=Z,48nm,1.3s,mb5.6						
OBN				*e*		16 20 03.6	
SONM	**Songino Array**	**86.45**	**28**	P	**P**	**16 19 56.8**	**-0.5**
	comp=Z,3.3nm,1.3s,mb4.4,baz=212,slow=5.3,SNR=4.8						
MOS	**Moscow**	**86.77**	**347**	*e*P	**P**	**16 19 58.7**	**-0.1**
MOS				*e*		16 20 05.7	
MOS				pmax	pmax		
	comp=Z,57nm,1.3s,mb5.6						
OKC	**Ostrava-Krasne**	**87.35**	**334**	*e*P	**P**	**16 20 00.9**	**-0.7**
OKC	**Ostrava-Krasne**	**87.35**	**334**	*e*	**P**	**16 20 00.9**	**-0.7**
MOA	**Molln**	**87.39**	**330**	*e*P	**P**	**16 20 02.2**	**+0.4**
WTTA	**Wattenberg**	**88.12**	**329**	*e*P	**P**	**16 20 05.6**	**+0.3**
GEC2	**GERESS Array S**	**88.40**	**331**	*e*P	**P**	**16 20 06.3**	**-0.3**
GERES	**GERESS Array B**	**88.40**	**331**	P	**P**	**16 20 04.5**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=211,slow=5.3,SNR=3.6						
GERES				LR	LR	16 55 25.2	
	comp=Z,77nm,21.9s,MS4.1,baz=268,slow=33						
DPC	**Dobruska-Polom**	**88.48**	**333**	*e*P	**P**	**16 20 06.9**	**-0.1**
DPC	**Dobruska-Polom**	**88.48**	**333**	*e*	**P**	**16 20 06.9**	**-0.1**
KHC	**Kasperske Hory**	**88.67**	**331**	*e*P	**P**	**16 20 06.6**	**-1.3**
KHC	**Kasperske Hory**	**88.67**	**331**	*e*	**P**	**16 20 06.6**	**-1.3**
UPC	**Upice**	**88.72**	**333**	*e*P	**P**	**16 20 08.6**	**+0.5**
UPC	**Upice**	**88.72**	**333**	*e*	**P**	**16 20 08.6**	**+0.5**
KSP	**Ksiaz**	**88.88**	**333**	*e*SS	SS	16 36 47.6	-1.1
PRU	**Pruhonice**	**88.92**	**332**	*e*P	**P**	**16 20 08.9**	**-0.2**
PRU	**Pruhonice**	**88.92**	**332**	*e*	**P**	**16 20 08.9**	**-0.2**
PVCC	**Panska Ves**	**89.32**	**332**	*e*P	**P**	**16 20 11.8**	**+0.8**
PVCC	**Panska Ves**	**89.32**	**332**	*e*	**P**	**16 20 11.8**	**+0.8**
ROTZ	**Rotzenmuhle**	**89.73**	**331**	*e*P	**P**	**16 20 13.4**	**+0.5**
	comp=Z,34nm,2.2s,mb5.3						
BRG	**Berggiesshubel**	**89.84**	**332**	*e*P	**P**	**16 20 14.1**	**+0.7**
	comp=Z,17nm,1.7s,mb5.1						
BRG	**Berggiesshubel**	**89.84**	**332**	*e*P	**P**	**16 20 13.7**	**+0.3**
	comp=Z,10nm,1.7s,mb4.9						
BRG	**Berggiesshubel**	**89.84**	**332**	*e*P	**P**	**16 20 13.7**	**+0.3**
BRG				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.9						
MANZ	**Manzenberg**	**89.94**	**331**	*e*P	**P**	**16 20 14.2**	**+0.4**
	comp=Z,14nm,1.7s,mb5.0						
NKC	**Novy Kostel**	**89.98**	**331**	*e*P	**P**	**16 20 14.5**	**+0.5**
NKC	**Novy Kostel**	**89.98**	**331**	*e*	**P**	**16 20 14.5**	**+0.5**
WERN	**Wernitzgruen**	**90.05**	**331**	*e*P	**P**	**16 20 15.3**	**+0.9**
	comp=Z,18nm,1.7s,mb5.1						
GRA1	**Grafenberg Arr**	**90.11**	**330**	*e*P	**P**	**16 20 14.8**	**+0.2**
	comp=Z,28nm,1.7s,mb5.3						
GRF	**Grafenberg Arr**	**90.11**	**330**	*e*P	**P**	**16 20 14.8**	**+0.2**
	comp=Z,28nm,1.7s,mb5.3						
GRF	**Grafenberg Arr**	**90.11**	**330**	*e*P	**P**	**16 20 14.8**	**+0.2**
GRF				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.3						
GRF	**Grafenberg Arr**	**90.11**	**330**	*e*P	**P**	**16 20 14.8**	**+0.2**
GRF				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.3						
TANN	**Tannenbergstha**	**90.11**	**331**	*e*P	**P**	**16 20 15.5**	**+0.9**
	comp=Z,24nm,1.9s,mb5.2						
FBE	**Freiberg**	**90.12**	**332**	*e*P	**P**	**16 20 15.4**	**+0.7**
	comp=Z,31nm,1.8s,mb5.3						
GUNZ	**Gunzen**	**90.13**	**331**	*e*P	**P**	**16 20 15.7**	**+1.0**
	comp=Z,26nm,1.7s,mb5.3						
WERD	**Werda**	**90.20**	**331**	*e*P	**P**	**16 20 15.9**	**+0.8**
	comp=Z,20nm,1.7s,mb5.2						
CLL	**Collm**	**90.56**	**332**	*e*P	**P**	**16 20 17.4**	**+0.7**
	comp=Z,18nm,1.9s,mb5.1						
CLL	**Collm**	**90.56**	**332**	P	**P**	**16 20 17.3**	**+0.6**
	comp=Z,logA/T=1.0,mb5.1						
CLL				*i* *SP	sP	16 20 23.8	+2.5
CLL	**Collm**	**90.56**	**332**	*i* P	**P**	**16 20 17.3**	**+0.6**
	comp=Z,18nm,1.9s,mb5.1						
CLL				*i* (sP)	sP	16 20 23.8	+2.5
	comp=Z,26nm,1.9s						
CLL	**Collm**	**90.56**	**332**	*i* P	**P**	**16 20 17.3**	**+0.6**
CLL				*i* *PP	pP	16 20 23.8	+3.7
CLL				pmax	pmax		
	comp=Z,18nm,1.9s,mb5.1						
MOX	**Moxa**	**90.64**	**331**	*e*P	**P**	**16 20 17.8**	**+0.7**
	comp=Z,14nm,1.7s,mb5.0						
ESDC	**Sonseca Array**	**91.40**	**315**	P	**P**	**16 20 20.8**	**+0.2**
	comp=Z,2.4nm,1.0s,mb4.5,baz=127,slow=6.0,SNR=5.2						
CN2	**Changchun**	**93.11**	**41**	*e*P	**P**	**16 20 30.9**	**+2.4**
FINES	**FINESS Array B**	**94.52**	**344**	LR	LR	17 03 41.5	
	comp=Z,70nm,21.1s,MS4.1,baz=305,slow=36						
MDJ	**Mudanjiang**	**95.99**	**42**	P	**P**	**16 20 42.1**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,73nm,3.9s						
INK	**Inuvik**	**139.63**	**9**	PKP	PKPdf	16 26 43.1	+0.8
	comp=Z,2.5nm,1.0s,baz=4.8,slow=6.0,SNR=2.1						
YKA	**Yellowknife Ar**	**146.35**	**357**	PKPbc	PKPbc	16 26 53.9	-1.5
	comp=Z,1.7nm,0.7s,baz=352,slow=3.7,SNR=3.5						
DLBC	**Dease Lake**	**149.47**	**12**	PKPbc	PKPbc	16 27 03.3	-0.5
	comp=Z,1.6nm,0.7s,baz=330,slow=7.2,SNR=4.4						
SWET	**Sewanee**	**151.72**	**291**	*e*PKPbc	PKPbc	16 27 08.0	-1.2
EYMN	**Ely**	**151.77**	**320**	*e*PKPbc	PKPbc	16 27 08.5	-0.8
ULM	**Lac du Bonnet**	**152.66**	**327**	PKPbc	PKPbc	16 27 10.2	-1.1
	comp=Z,8.5nm,0.9s,baz=96,slow=5.0,SNR=3.1						
ULM	**Lac du Bonnet**	**152.66**	**327**	*e*PKPbc	PKPbc	16 27 09.7	-1.6
PDAR	**Pinedale Array**	**164.41**	**335**	PKPab	PKPab	16 28 12.4	-0.2
	comp=Z,1.2nm,0.9s,baz=48,slow=2.2,SNR=4.8						
ARUT	**Antelope Range**	**170.20**	**335**	*e*PKIKP	PKPdf	16 27 25.3	+2.9
NVAR	**Mina Array Bea**	**170.54**	**359**	PKP	PKPdf	16 27 24.2	+1.5
	comp=Z,0.7nm,0.8s,baz=21,slow=3.4,SNR=7.0						
NVAR				PKPab	PKPab	16 28 40.7	+0.9
	comp=Z,0.4nm,0.7s,baz=15,slow=1.2,SNR=2.9						
NVAR	**Mina Array Bea**	**170.54**	**359**	PKP	PKPdf	16 27 24.2	+1.5
NVAR				PKPab	PKPab	16 28 40.7	+0.9

ISCJB ***19*** *16:10:48.7±0.3, 2892S±006×6155E±008, h10km, mb4.6/48, MS4.4/6, Error ellipse: s-maj=9.7km s-min=8.6km az=10.8*
IDC ***19*** *16:10:48.5±0.5, 2888S×6154E, h0km, mb4.2/17, mb1 4.3/17, mb1mx4.2/26, mbtmp4.2/17, Error ellipse: s-maj=19.2km s-min=15.8km az=42.0*
MOS ***19*** *16:10:48.7±0.8, 2897S×6148E, h10km, mb4.9/20, Error ellipse: s-maj=17.1km s-min=11.2km az=102.0*
BJI ***19*** *16:10:49.2, 2869S×62.11E, h1km, mB5.2, mb5.0, Ms4.7, Msz4.4*
NEIC ***19*** *16:10:50.0±0.3, 2892S×6157E, h10km, mb4.8/24, Error ellipse: s-maj=10.5km s-min=8.9km az=47.0*

ISC 19 16:10:50.4±0.3, 2888S±006×6152E±008, h10km, (h17km±2.0km: pP-P), n102, s0s81/93, mb4.6/48, MS4.4/6, 5C-3D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.64**	**305**	Sn	**Sn**	**16 17 38.8**	**-10**
	0.4nm,0.3s,baz=19,slow=18,SNR=4.1						
BOSA	**Boshof**	**31.72**	**262**	P	**P**	**16 17 14.1**	**-0.2**
	4.6nm,0.9s,mb4.3,baz=105,slow=8.8,SNR=4.4						
BOSA	**Boshof**	**31.72**	**262**	*e*P	**P**	**16 17 14.0**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.8						
BOSA	**Boshof**	**31.72**	**262**	*e*P	**P**	**16 17 14.0**	**-0.2**
	comp=Z,19nm,1.2s,mb4.8						
LBTB	**Lobatse**	**32.17**	**268**	*e*P	**P**	**16 17 18.3**	**0.0**
LBTB				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
LBTB	**Lobatse**	**32.17**	**268**	*e*P	**P**	**16 17 18.3**	**0.0**
	comp=Z,11nm,1.2s,mb4.6						
LSZ	**Lusaka**	**33.59**	**287**	*e*P	**P**	**16 17 31.6**	**+0.9**
LSZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
LSZ	**Lusaka**	**33.59**	**287**	*e*P	**P**	**16 17 31.6**	**+0.9**
	comp=Z,12nm,0.9s,mb4.8						
MAW	**Mawson**	**38.76**	**179**	P	**P**	**16 18 14.9**	**0.0**
	comp=Z,7.7nm,1.1s,mb4.3,baz=2.7,slow=11,SNR=8.0						
MAW	**Mawson**	**38.76**	**179**	*e*P	**P**	**16 18 14.9**	**0.0**
MAW				*e*		16 18 20.1	
MAW				pmax	pmax		
	comp=Z,12nm,0.9s						
MAW	**Mawson**	**38.76**	**179**	*e*P	**P**	**16 18 14.9**	**0.0**
	comp=Z,12nm,0.9s,mb4.6						
MAW				*e*		16 18 20.1	
TSUM	**Tsumeb**	**41.07**	**274**	P	**P**	**16 18 33.5**	**-0.5**
	comp=Z,7.4nm,1.2s,mb4.2,baz=108,slow=11,SNR=3.5						
TSUM	**Tsumeb**	**41.07**	**274**	*e*P	**P**	**16 18 35.7**	**+1.7**
	comp=Z,14nm,1.4s,mb4.4						
SYO	**Syowa Base**	**42.16**	**192**	*e*P	**P**	**16 18 43.0**	**0.0**
SYO	**Syowa Base**	**42.16**	**192**	*e*pP	pP	16 18 48.0	+1.9

STKA					*e*			16 21 52.5	
GYA	**Guiyang**	**70.03**	**43**		P	**P**		**16 22 02.3**	**0.0**
GYA					AP	pP		16 22 06.8	+1.2
GYA					XP	sP		16 22 09.4	+2.6
GYA					PP	PP		16 24 38.9	+1.7
GYA					S	S		16 31 10.9	-2.0
GYA					PS			16 31 39.3	
GYA					AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.7								
GYA					AMB	AMB			
	comp=Z,90nm,4.8s								
GYA					LR	LR			
	comp=N,210nm,18.4s,MS4.7								
GYA					LR	LR			
	comp=E,310nm,18.6s,MS4.7								
GYA					LR	LR			
	comp=Z,240nm,19.0s,MS4.5								
TOA0	**Torodi Ar. Sit**	**71.28**	**297**		P	**P**		**16 22 08.2**	**-1.8**
TORD	**Torodi Ar. Bea**	**71.28**	**297**		P	**P**		**16 22 10.1**	**+0.1**
	comp=Z,1.7nm,0.9s,mb4.0,baz=115,slow=5.3,SNR=6.3								
CD2	**Chengdu**	**71.79**	**37**	*e*	P	**P**		**16 22 12.9**	**-0.1**
CD2					AMB	AMB			
	comp=Z,10.0nm,0.9s,mb4.8								
AAK	**Ala-Archa**	**72.15**	**10**	*e*	P	**P**		**16 22 15.4**	**+0.2**
AAK					pmax	pmax			
	comp=Z,12nm,1.6s,mb4.6								
AAK	**Ala-Archa**	**72.15**	**10**	*e*	P	**P**		**16 22 13.8**	**-1.4**
	comp=Z,19nm,1.6s,mb4.8								
BRTR	**Keskin Array B**	**73.02**	**338**		P	**P**		**16 22 20.2**	**-0.2**
	comp=Z,1.2nm,0.9s,mb3.8,baz=134,slow=5.3,SNR=4.8								
BRTR	**Keskin Array B**	**73.02**	**338**	*e*	P	**P**		**16 22 20.2**	**-0.2**
KIV	**Kislovodsk**	**74.50**	**346**	*e*	P	**P**		**16 22 29.7**	**+0.6**
KIV					pmax	pmax			
	comp=Z,16nm,2.5s,mb4.5								
LZH	**Lanzhou**	**75.91**	**34**	*e*	P	**P**		**16 22 37.5**	**+0.3**
LZH					AP	pP		16 22 44.0	+3.5
LZH					XP	sP		16 22 47.5	+5.8
LZH					AMB	AMB			
	comp=Z,19nm,1.0s,mb5.0								
LZH					AMB	AMB			
	comp=Z,116nm,4.1s								
CTAO	**Charters Tower**	**76.14**	**105**		P	**P**		**16 22 39.4**	**+0.9**
CTAO					pmax	pmax			
	comp=Z,14nm,1.2s,mb4.8								
CTAO	**Charters Tower**	**76.14**	**105**		P	**P**		**16 22 39.4**	**+0.9**
	comp=Z,14nm,1.2s,mb4.8								
WMQ	**Urumqi**	**76.22**	**19**	*e*	P	**P**		**16 22 39.0**	**+0.1**
WMQ					XP	sP		16 22 46.0	+2.6
WMQ					PP	PP		16 25 32.0	+2.0
WMQ					S	S		16 32 22.0	-1.2
WMQ					SS	SS		16 37 19.0	+2.3
WMQ					AMB	AMB			
	comp=Z,16nm,1.0s,mb4.9								
WMQ					AMB	AMB			
	comp=Z,103nm,6.0s								
WMQ					LR	LR			
	comp=N,102nm,14.0s,MS4.4								
WMQ					LR	LR			
	comp=E,85nm,14.0s,MS4.4								
WMQ					LR	LR			
	comp=Z,76nm,13.0s,MS4.2								
GTA	**Gaotai**	**76.73**	**30**	*e*	P	**P**		**16 22 42.0**	**+0.1**
GTA					AP	pP		16 22 48.3	+3.1
GTA					XP	sP		16 22 51.3	+4.9
GTA					PP	PP		16 25 37.1	+2.7
GTA					PPP			16 27 25.8	
GTA					S	S		16 32 29.3	+0.4
GTA					SKS			16 32 49.5	
GTA					AMB	AMB			
	comp=Z,9.0nm,1.0s,mb4.7								
GTA					AMB	AMB			
	comp=Z,111nm,4.2s								
GTA					LR	LR			
	comp=N,89nm,20.5s,MS4.2								
GTA					LR	LR			
	comp=E,76nm,17.9s,MS4.2								
GTA					LR	LR			
	comp=Z,72nm,12.2s								
MKAR	**Makanchi Array**	**77.62**	**14**		P	**P**		**16 22 46.9**	**0.0**
	comp=Z,2.4nm,0.8s,mb4.2,baz=178,slow=3.6,SNR=14								
MKAR	**Makanchi Array**	**77.62**	**14**	*e*	P	**P**		**16 22 46.9**	**+0.1**
NJ2	**Nanjing**	**81.48**	**46**	*e*	P	**P**		**16 23 08.3**	**+0.5**
NJ2					AP	pP		16 23 13.0	+1.9
NJ2					XP	sP		16 23 15.3	+3.0
NJ2					PP	PP		16 26 16.3	+2.4
NJ2					AMB	AMB			
	comp=Z,40nm,0.5s,mb5.6								
NJ2					AMB	AMB			
	comp=Z,440nm,3.5s								
NJ2					LR	LR			
	comp=N,120nm,23.4s,MS4.3								
NJ2					LR	LR			
	comp=E,130nm,24.5s,MS4.3								
NJ2					LR	LR			
	comp=Z,140nm,16.6s								
PMG	**Port Moresby**	**81.73**	**96**		P	**P**		**16 23 13.9**	**+4.7**
PMG					pmax	pmax			
	comp=Z,36nm,1.2s								
PMG	**Port Moresby**	**81.73**	**96**		P	**P**		**16 23 13.9**	**+4.7**
	comp=Z,36nm,1.2s,mb5.2								
ZRNK	**Zerenda**	**81.74**	**5**	*e*	P	**P**		**16 23 08.7**	**-0.5**
ZRNK					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3								
ZRNK	**Zerenda**	**81.74**	**5**	*e*	P	**P**		**16 23 08.7**	**-0.5**
	comp=Z,2.9nm,0.8s,mb4.3								
BRVK	**Borovoye**	**81.94**	**5**	*e*	P	**P**		**16 23 10.2**	**-0.1**
BRVK					pmax	pmax			
	comp=Z,6.0nm,1.3s,mb4.4								
BRVK	**Borovoye**	**81.94**	**5**	*e*	P	**P**		**16 23 10.2**	**-0.1**
	comp=Z,5.7nm,1.3s,mb4.3								
CHKZ	**Chkalovo**	**82.58**	**5**	*e*	P	**P**		**16 23 12.7**	**-0.9**
CHKZ					pmax	pmax			
	comp=Z,5.0nm,1.2s,mb4.4								
CHKZ	**Chkalovo**	**82.58**	**5**	*e*	P	**P**		**16 23 12.7**	**-1.0**
	comp=Z,5.2nm,1.2s,mb4.4								
AKASG	**Malin Array Be**	**84.22**	**340**		P	**P**		**16 23 21.6**	**-0.5**
	comp=Z,1.2nm,0.8s,mb4.1,baz=154,slow=4.2,SNR=7.3								
AKASG	**Malin Array Be**	**84.22**	**340**	*i*	P	**P**		**16 23 22.7**	**+0.6**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.8s								
ZAL	**Zalesovo**	**84.90**	**14**		P	**P**		**16 23 25.5**	**0.0**
	comp=Z,4.9nm,0.8s,mb4.7,baz=272,slow=4.5,SNR=24								
ZAL	**Zalesovo**	**84.90**	**14**	*i*	P	**P**		**16 23 25.5**	**0.0**
ZAL					pmax	pmax			
	comp=Z,5.0nm,0.8s								
ARU	**Arti**	**85.00**	**358**	*e*	P	**P**		**16 23 25.2**	**-0.8**
ARU				*e*				16 23 31.5	
ARU					pmax	pmax			
	comp=Z,22nm,1.3s,mb5.1								
ARU	**Arti**	**85.00**	**358**	*e*	P	**P**		**16 23 25.2**	**-0.8**
	comp=Z,22nm,1.3s,mb5.1								
ARU				*e*				16 23 31.5	
SVE	**Sverdlovsk**	**85.37**	**360**	*e*	P	**P**		**16 23 27.8**	**0.0**
SVE					pmax	pmax			
	comp=Z,65nm,1.8s,mb5.5								
SVE					MLR	MLR			
	comp=N,300nm,10.0s,MS5.0								
SVE					MLR	MLR			
	comp=E,100nm,10.0s,MS5.0								
SVE					MLR	MLR			
	comp=Z,200nm,10.0s,MS4.8								
NVS	**Novosibirsk**	**85.44**	**12**	*i*	P	**P**		**16 23 24.8**	**-3.4**
NVS					pmax	pmax			
	comp=N,11nm,1.5s								
NVS					pmax	pmax			
	comp=Z,22nm,1.5s,mb5.1								
NVS					pmax	pmax			
	comp=E,10.0nm,1.3s								
SONM	**Songino Array**	**86.35**	**28**		P	**P**		**16 23 32.8**	**+0.1**
	comp=E,3.6nm,1.2s,mb4.5,baz=207,slow=4.5,SNR=10								
OBN	**Obninsk**	**86.35**	**346**	*e*	P	**P**		**16 23 33.1**	**+0.4**
OBN					pmax	pmax			
	comp=Z,29nm,1.5s,mb5.3								
OBN	**Obninsk**	**86.35**	**346**	*e*	P	**P**		**16 23 31.7**	**-1.0**
	comp=Z,33nm,1.1s,mb5.5								
MOS	**Moscow**	**86.72**	**347**	*e*	P	**P**		**16 23 33.9**	**-0.6**
OKC	**Ostrava-Krasne**	**87.32**	**334**	*e*	P	**P**		**16 23 38.2**	**+0.7**
TREC	**Trest**	**87.97**	**332**	*e*	P	**P**		**16 23 46.1**	**+5.6**
GERES	**GERESS Array B**	**88.37**	**331**		P	**P**		**16 23 40.9**	**-1.6**
	comp=Z,0.2nm,0.6s,mb3.5,baz=140,slow=6.2,SNR=3.2								
DPC	**Dobruska-Polom**	**88.45**	**333**	*e*	P	**P**		**16 23 44.0**	**+1.2**
KHC	**Kasperske Hory**	**88.64**	**331**	*e*	P	**P**		**16 23 44.0**	**+0.3**
UPC	**Upice**	**88.70**	**333**	*e*	P	**P**		**16 23 44.4**	**+0.4**
PRU	**Pruhonice**	**88.89**	**332**	*e*	P	**P**		**16 23 50.1**	**+5.2**
PVCC	**Panska Ves**	**89.30**	**332**	*e*	P	**P**		**16 23 51.9**	**+5.1**
BRG	**Berggiesshubel**	**89.82**	**332**	*e*	P	**P**		**16 23 49.7**	**+0.4**
	comp=Z,5.0nm,1.4s,mb4.7								
BRG				*e*				16 23 55.9	
	comp=Z,17nm,1.9s								
BRG	**Berggiesshubel**	**89.82**	**332**	*e*	P	**P**		**16 23 49.7**	**+0.5**
BRG				*e*				16 23 55.9	
BRG					pmax	pmax			
	comp=Z,5.0nm,1.4s,mb4.7								
BRG					pmax	pmax			
	comp=Z,17nm,1.9s,mb5.0								
NKC	**Novy Kostel**	**89.96**	**331**	*e*	P	**P**		**16 23 50.6**	**+0.7**
CLL	**Collm**	**90.53**	**332**	P	P	**P**		**16 23 52.9**	**+0.3**
	comp=Z,logA/T=0.8,mb4.9								
CLL				*i*	*SP	sP		16 23 58.5	+1.4
CLL	**Collm**	**90.53**	**332**	*i*	P	**P**		**16 23 52.9**	**+0.3**
	comp=Z,10.0nm,1.6s,mb4.9								
CLL				*i*	(sP)	sP		16 23 58.5	+1.4
	comp=Z,17nm,1.5s								
CLL	**Collm**	**90.53**	**332**	*i*	P	**P**		**16 23 52.9**	**+0.3**
CLL				*i*	*PP	pP		16 23 58.5	+2.6
CLL					pmax	pmax			
	comp=Z,10.0nm,1.6s,mb4.9								
ESDC	**Sonseca Array**	**91.41**	**315**	P	P	**P**		**16 23 56.7**	**0.0**
	comp=Z,0.2nm,0.3s,mb3.9,baz=108,slow=3.6,SNR=7.1								
ESLA	**Sonseca Array**	**91.41**	**315**	*e*	P	**P**		**16 23 55.8**	**-0.9**
	comp=Z,5.0nm,1.4s,mb4.7								
CN2	**Changchun**	**93.00**	**41**	*e*	P	**P**		**16 24 04.3**	**+0.3**
TRQA	**Tornquist**	**95.00**	**221**	*e*	P	**P**		**16 24 13.3**	**+0.1**
	comp=Z,2.4nm,0.8s,mb4.7								
MDJ	**Mudanjiang**	**95.88**	**42**		P	**P**		**16 24 17.5**	**+0.3**
MDJ					AMB	AMB			
	comp=Z,7.0nm,1.7s,mb4.8								
MDJ					AMB	AMB			
	comp=Z,44nm,3.7s								
YKA	**Yellowknife Ar**	**146.28**	**357**		PKPbc	PKPbc		16 30 30.8	-0.3
	comp=Z,5.2nm,0.9s,baz=348,slow=4.1,SNR=7.1								
YKA	**Yellowknife Ar**	**146.28**	**357**		PKPbc	PKPbc		16 30 30.8	-0.3
DLBC	**Dease Lake**	**149.38**	**12**		PKPbc	PKPbc		16 30 39.5	-0.1
	comp=Z,3.8nm,1.0s,baz=22,slow=4.5,SNR=3.8								
EYMN	**Ely**	**151.77**	**320**	*e*	PKPbc	PKPbc		16 30 44.4	-0.9
ULM	**Lac du Bonnet**	**152.64**	**328**	*e*	PKPbc	PKPbc		16 30 45.8	-1.4
	comp=Z,4.2nm,0.9s,baz=358,slow=4.1,SNR=7.2								
ULM	**Lac du Bonnet**	**152.64**	**328**	*e*	PKPbc	PKPbc		16 30 43.9	-3.3
PDAR	**Pinedale Array**	**164.38**	**335**		PKP	PKPdf		16 30 53.9	-0.3
	comp=Z,0.8nm,1.0s,baz=48,slow=2.2,SNR=5.0								
PDAR					PKPab	PKPab		16 31 48.1	-0.4
	comp=Z,0.3nm,0.5s,baz=53,slow=5.7,SNR=4.9								
NVAR	**Mina Array Bea**	**170.47**	**359**		PKPab	PKPab		16 32 15.1	-0.4
	comp=Z,0.4nm,0.7s,baz=7.1,slow=3.5,SNR=4.3								

IDC 19 16:22:28.0±2.4, 3165N×13863E, h308km±32km, mb2.9/4, mb1 3.0/5, mb1mx2.8/20, mbtmp3.5/5, Error ellipse: s-maj=86.8km s-min=19.2km az=76.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**4.90**	**356**	P	Pn	16 23 44.4	-0.2
	0.7nm,0.3s,baz=168,slow=11,SNR=15						
MAT	**Matsushiro**	**4.90**	**356**	P	Pn	16 23 43.8	-0.8
MKAR	**Makanchi Array**	**45.24**	**306**	P	P	16 30 15.6	+0.2
	0.3nm,0.2s,baz=81,slow=8.9,SNR=3.5						
WRA	**Warramunga Arr**	**51.46**	**185**	P	P	16 31 02.0	-0.5
	0.2nm,0.4s,baz=0.4,slow=7.6,SNR=6.3						
ASAR	**Alice Springs**	**55.18**	**185**	P	P	16 31 30.2	+0.8
	0.2nm,0.5s,baz=0.2,slow=5.1,SNR=4.7						
FINES	**FINESS Array B**	**72.50**	**332**	P	P	16 33 21.1	-0.5
	0.3nm,0.4s,baz=60,slow=5.5,SNR=8.3						

*CSEM **19** 16:29:10.6±0.2, 3858N×1443E, h28km±3km, MD3.0/8, ML3.5/3, Error ellipse: s-maj=3.9km s-min=2.4km az=179.0, After ROM*
*NEIC **19** 16:29:10.6, 3858N×1443E, h28km, ML3.2(ROM), After ROM.*
ROM 19 16:29:10.6±0.2, 3858N×1443E, h28km±3km, Md3.0/8, Ml3.2/16, Error ellipse: s-maj=3.9km s-min=2.4km az=179.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLNA	**Salina**	**0.32**	**92**	Pg	Pb	16 29 18.3	+0.3
LLI	**Lipari**	**0.43**	**108**	Pg	Pb	16 29 20.1	+0.4
	10μm,0.6s						
VPL	**Vulcano Piano**	**0.48**	**114**	Pg	Pb	16 29 20.3	-0.2
VPL				Sg	Sb	16 29 28.9	+1.6
	4μm,0.5s						
GIB	**Gibilmanna**	**0.67**	**209**	Pg	Pb	16 29 23.7	0.0
GIB				Sg	Sb	16 29 34.5	+1.9
MNO	**Monte Soro**	**0.68**	**162**	Pg	Pb	16 29 23.8	0.0
CSLB	**Castelbuono**	**0.70**	**205**	Pg	Pb	16 29 24.1	-0.2
	734nm,0.2s						
MSRU	**Castanea**	**0.90**	**110**	Pg	Pn	16 29 26.7	-0.7
MSRU				Sg	Sb	16 29 41.7	+2.4
	1μm,0.5s						
MMME	**Mongiuffi-Meli**	**0.91**	**134**	Pg	Pn	16 29 27.1	-0.5
MMME				Sg	Sb	16 29 41.4	+1.9
	1μm,0.5s						
MSI	**Messina ING**	**0.96**	**112**	Pg	Pn	16 29 27.5	-0.7
MSI				Sg	Sb	16 29 43.2	+2.4
	1μm,0.4s						
ESLN	**Serra La Nave**	**0.98**	**154**	Pg	Pn	16 29 30.3	+1.8
USI	**Ustica**	**0.99**	**278**	Pg	Pn	16 29 29.1	+0.5
USI				Sg	Sn	16 29 42.3	+0.6
	1μm,0.4s						
CORL	**Corleone**	**1.12**	**233**	Pg	Pn	16 29 31.6	+1.2
	501nm,0.7s						
MTTG	**Motta San Giov**	**1.15**	**120**	Pg	Pn	16 29 30.6	-0.2
	249nm,0.4s						
RAFF	**Raffo Rosso**	**1.35**	**182**	Pn	Pn	16 29 35.4	+1.8
	334nm,0.8s						
SOI	**Samo**	**1.37**	**111**	Pg	Pn	16 29 33.7	-0.2
	252nm,0.8s						
HAGA	**Augusta**	**1.41**	**156**	Pn	Pn	16 29 34.8	+0.4
	243nm,0.5s						
HVZN	**Vizzini**	**1.41**	**171**	Pn	Pn	16 29 35.6	+1.1
	884nm,0.6s						
AGST	**Augusta-Monte**	**1.46**	**154**	Pn	Pn	16 29 35.7	+0.6
	85nm,0.2s						
SSY	**Sortino**	**1.51**	**160**	Pn	Pn	16 29 36.2	+0.4
	576nm,0.6s						
PLAC	**Placanica**	**1.58**	**94**	Pn	Pn	16 29 37.4	+0.7
	50nm,0.5s						
HAVL	**Avola**	**1.71**	**161**	Pn	Pn	16 29 39.1	+0.6
	254nm,0.4s						
CUC	**Castrocucco**	**1.78**	**37**	Pn	Pn	16 29 40.8	+1.3
	103nm,0.5s						
SLCN	**Sala Consilina**	**2.04**	**27**	Pn	Pn	16 29 45.8	+2.8
	46nm,0.6s						
SCHR	**S. Chirico Rap**	**2.06**	**38**	Pn	Pn	16 29 45.6	+2.2
	22nm,0.6s						

*NEIC **19** 16:33:58.7, 18.19N×103.61W, h10km, MD4.2(MEX), After MEX.*
MEX 19 16:33:59.1±0.9, 1821N×10360W, h13km±7km, MD4.1, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.26**	**71**	*i* P	Pg	16 34 03.7	-0.8
MMIG				*i* S	Sg	16 34 08.3	+0.2
CJM	**Chamela**	**1.88**	**313**	*i* P	Pn	16 34 27.6	-3.3
CJM				*i* S	Sn	16 34 49.4	-5.0
CJM	**Chamela**	**1.88**	**313**	*i* P	Pn	16 34 27.6	-3.3
CJM				*i* S	Sn	16 34 51.9	-2.5
SFJM	**Santa Fe**	**2.33**	**13**	*e* P	Pn	16 34 35.5	-1.6
SFJM				*i* S	Sn	16 35 00.5	-5.0
MOIG	**Morelia**	**2.71**	**57**	*i* P	Pn	16 34 38.8	-3.5
MOIG				*i* S	Sn	16 35 12.4	-2.5
MOIG	**Morelia**	**2.71**	**57**	*i* P	Pn	16 34 38.8	-3.5
MOIG				*i* S	Sn	16 35 16.4	+1.4
MEIG	**Mezcala**	**3.80**	**94**	*i* P	Pn	16 34 55.4	-1.8
MEIG				*i* S	Sn	16 35 37.8	-3.9
PLIG	**Platanillo**	**3.90**	**87**	*i* P	Pn	16 34 56.9	-1.7
PLIG				*i* S	Sn	16 35 38.4	-5.8
PPM	**Popocatepetl**	**4.79**	**79**	*i* P	Pn	16 35 28.5	+18
PPM				*i* S	Sn	16 36 03.0	-3.2
UTMO	**Huajuapan**	**5.53**	**93**	*i* S	Sn	16 36 23.9	-0.5

*ISCJB **19** 16:44:54.5±0.3, 2896S±007×6143E±007, h10km, mb4.4/39, MS3.9/15, Error ellipse: s-maj=9.5km s-min=9.3km az=169.4*
*IDC **19** 16:44:54.5±0.5, 2890S×6151E, h0km, mb4.0/17, mb1 4.1/18, mb1mx4.0/27, mbtmp4.0/18, ML3.0/1, MS3.7/11, Ms1 3.7/11, ms1mx3.5/34, Error ellipse: s-maj=19.5km s-min=15.3km az=36.0*
*BJI **19** 16:44:55.8, 2857S×6138E, h10km, mB5.0, mb4.9, Ms4.7, Msz4.2*
*NEIC **19** 16:44:55.9±0.4, 2890S×6145E, h10km, mb4.5/16, Error ellipse: s-maj=12.5km s-min=10.3km az=210.0*
ISC 19 16:44:56.4±0.3, 2894S±007×6142E±007, h10km, (h17km±2.3km: pP-P), n66, σ1§13/55, mb4.4/39, MS3.9/15, 2C, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.61**	**305**	Pn	**Pn**	**16 48 48.6**	**-0.7**
	0.1nm,0.3s,baz=102,slow=19,SNR=2.7						
OPO				Sn	**Sn**	**16 51 42.4**	**-11**
	0.3nm,0.3s,baz=326,slow=11,SNR=2.8						
BOSA	**Boshof**	**31.63**	**262**	P	**P**	**16 51 20.1**	**+0.6**
	3.4nm,0.8s,mb4.2,baz=90,slow=10,SNR=4.3						
BOSA				LR	LR	17 02 26.0	
	comp=Z,116nm,18.9s,MS3.6,baz=135,slow=33						
BOSA	**Boshof**	**31.63**	**262**	*e* Pn	**P**	**16 51 20.0**	**+0.5**
	12nm,1.2s,mb4.6						
LBTB	**Lobatse**	**32.09**	**268**	P	**P**	**16 51 23.9**	**+0.4**
	2.1nm,0.7s,mb4.1,baz=163,slow=14,SNR=3.9						
LBTB	**Lobatse**	**32.09**	**268**	P	**P**	**16 51 24.1**	**+0.5**
	4.1nm,0.9s,mb4.3						
LSZ	**Lusaka**	**33.53**	**287**	*e* P	**P**	**16 51 37.3**	**+1.2**
	8.9nm,0.9s,mb4.7						
KMBO	**Kilima Mbogo**	**36.01**	**316**	P	**P**	**16 51 58.4**	**+0.8**
	0.3nm,0.3s,mb3.7,baz=219,slow=21,SNR=3.6						
KMBO				LR	LR	17 03 52.7	
	comp=Z,161nm,19.1s,MS3.8,baz=87,slow=32						
MAW	**Mawson**	**38.70**	**179**	P	**P**	**16 52 21.0**	**+0.6**
	3.9nm,0.7s,mb4.2,baz=334,slow=14,SNR=3.8						
MAW				LR	LR	17 06 18.5	
	comp=Z,138nm,18.4s,MS3.8,baz=61,slow=33						
TSUM	**Tsumeb**	**40.99**	**274**	P	**P**	**16 52 37.0**	**-2.4**
	1.9nm,0.8s,mb3.8,baz=323,slow=5.1,SNR=2.4						
TSUM	**Tsumeb**	**40.99**	**274**	*e* P	**P**	**16 52 37.4**	**-2.0**
	45nm,1.8s,mb4.8						
SYO	**Syowa Base**	**42.08**	**192**	*e* P	**P**	**16 52 48.6**	**+0.3**
SYO	**Syowa Base**	**42.08**	**192**	*e* pP	pP	16 52 52.3	+0.9
MDRS	**Chennai**	**45.55**	**26**	*ex*	x	16 53 10.9	
MDRS				*ex*	x	17 00 30.9	
NWAO	**Narrogin (SRO)**	**47.57**	**110**	LR	LR	17 07 50.6	
	comp=Z,103nm,19.1s,MS3.8,baz=200,slow=29						
SNAA	**Sanae**	**54.75**	**200**	P	**P**	**16 54 25.9**	**-0.2**
	1.2nm,1.1s,mb3.9,baz=70,slow=11,SNR=5.4						
SNAA				LR	LR	17 11 04.4	
	comp=Z,16nm,21.7s,MS3.1,baz=200,slow=29						
SNAA	**Sanae**	**54.75**	**200**	*e* P	**P**	**16 54 27.9**	**+1.9**
SNAA				*e*	pP	16 54 31.3	+2.1
SNAA	**Sanae**	**54.75**	**200**	*e* P	**P**	**16 54 25.3**	**-0.7**
	5.4nm,1.2s,mb4.5						
VNA1	**Neumayer--Stat**	**56.27**	**202**	*e* P	**P**	**16 54 36.4**	**-0.5**
VNA1				*e*	pP	16 54 39.4	-0.7
VNA1				*e*	pP	16 54 41.3	+1.2
FITZ	**Fitzroy Crossi**	**59.25**	**95**	P	**P**	**16 54 57.9**	**0.0**
	1.1nm,0.8s,mb3.9,baz=245,slow=17,SNR=2.0						
QSPA	**South Pole Qui**	**61.21**	**180**	*e* P	**P**	**16 55 11.4**	**0.0**
	3.5nm,0.9s,mb4.5						
KKM	**Kota Kinabalu**	**63.11**	**66**	*e* P	**P**	**16 55 24.5**	**+0.4**
VNDA	**Vanda**	**64.19**	**166**	P	**P**	**16 55 29.8**	**-1.4**
	0.8nm,0.8s,mb3.8,baz=276,slow=7.7,SNR=4.4						
VNDA				LR	LR	17 20 53.6	
	comp=Z,154nm,18.3s,MS4.2,baz=249,slow=34						
VNDA	**Vanda**	**64.19**	**166**	P	**P**	**16 55 29.8**	**-1.4**
VNDA				LR	LR	17 20 53.6	
ASAR	**Alice Springs**	**64.27**	**104**	P	**P**	**16 55 30.8**	**-1.0**
	1.2nm,0.8s,mb4.0,baz=246,slow=6.3,SNR=16						
LSA	**Lhasa**	**64.85**	**28**	P	**P**	**16 55 34.3**	**-1.2**
LSA	**Lhasa**	**64.85**	**28**	*e* P	**P**	**16 55 34.3**	**-1.2**
	9.0nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**66.08**	**100**	P	**P**	**16 55 42.5**	**-1.0**
	1.3nm,1.0s,mb3.9,baz=250,slow=5.8,SNR=7.6						
WRAB	**Tennant Creek**	**66.09**	**100**	P	**P**	**16 55 49.0**	**+5.4**
	6.1nm,0.9s,mb4.6						
KMI	**Kunming**	**66.83**	**41**	P	**P**	**16 55 50.1**	**+1.8**
KMI				AP	pP	16 55 54.3	+2.8
KMI				XP	sP	16 55 57.1	+4.4
KMI				S	S	17 04 43.5	+2.7
KMI				SS	SS	17 09 01.4	+2.7
KMI				SSS		17 11 58.6	
KMI				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.5						
KMI				AMB	AMB		
	comp=Z,63nm,4.3s						
KMI				LR	LR		
	comp=N,88nm,18.1s,MS4.2						
KMI				LR	LR		
	comp=E,81nm,17.0s,MS4.2						
KMI				LR	LR		
	comp=Z,91nm,17.0s,MS4.1						
STKA	**Stephens Creek**	**67.65**	**115**	P	**P**	**16 55 54.5**	**+1.1**
	comp=Z,1.7nm,0.8s,mb4.1,baz=127,slow=15,SNR=2.8						
STKA	**Stephens Creek**	**67.65**	**115**	P	**P**	**16 55 54.6**	**+1.2**
GYA	**Guiyang**	**70.13**	**43**	*e* P	**P**	**16 56 09.0**	**+0.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
MALT	**Malatya**	**70.28**	**341**	P	**P**	**16 56 11.3**	**+1.5**
	comp=Z,2.2nm,0.9s,mb4

ZRNK	**Zerenda**	**81.81**	**5**	*e*P	**P**	**16 57 14.4**	**-1.1**
	comp=Z,2.7nm,0.8s,mb4.2							
ZRNK				*e*		16 57 22.8		
BRVK	**Borovoye**	**82.02**	**5**	*e*P	**P**	**16 57 14.5**	**-2.1**
	comp=Z,5.3nm,1.3s,mb4.3							
CHKZ	**Chkalovo**	**82.66**	**5**	*e*P	**P**	**16 57 19.4**	**-0.6**
	comp=Z,2.6nm,1.0s,mb4.2							
HHC	**Hu-ho-hao-te**	**83.54**	**36**	*e*P	**P**	**16 57 26.1**	**+1.5**
HHC				AP	pP	16 57 30.9	+3.0	
HHC				XP	sP	16 57 33.1	+4.0	
HHC				PP	PP	17 00 40.8	+4.0	
HHC				SKS		17 07 44.5		
HHC				S	S	17 07 46.4	-0.1	
HHC				XS	sS	17 07 54.9	+3.0	
HHC				PS		17 08 42.3		
HHC				AMB	AMB			
	comp=Z,7.0nm,1.1s,mb4.7							
HHC				AMB	AMB			
	comp=Z,108nm,9.5s							
HHC				LR	LR			
	comp=N,149nm,23.7s,MS4.8							
HHC				LR	LR			
	comp=E,450nm,20.8s,MS4.8							
HHC				LR	LR			
	comp=Z,84nm,24.7s,MS4.0							
AKASG	**Malin Array Be**	**84.25**	**340**	P	**P**	**16 57 27.5**	**-0.7**
	comp=Z,0.9nm,0.7s,mb4.0,baz=172,slow=4.0,SNR=11							
ZAL	**Zalesovo**	**84.98**	**14**	P	**P**	**16 57 31.1**	**-0.7**
	comp=Z,5.0nm,0.9s,mb4.7,baz=263,slow=3.7,SNR=22							
ARU	**Arti**	**85.06**	**358**	*e*P	**P**	**16 57 32.4**	**+0.1**
	comp=Z,50nm,1.8s,mb5.3							
OBN	**Obninsk**	**86.39**	**346**	*e*P	**P**	**16 57 40.6**	**+1.7**
SONM	**Songino Array**	**86.44**	**28**	P	**P**	**16 57 38.9**	**-0.2**
	comp=Z,1.5nm,0.9s,mb4.2,baz=215,slow=5.2,SNR=11							
BRG	**Berggiesshubel**	**89.84**	**332**	*e*(P)	**P**	**16 57 56.3**	**+1.0**
	comp=Z,1.7nm,1.3s,mb4.2							
CLL	**Collm**	**90.55**	**332**	*e**SP	sP	16 58 02.0	-1.2	
CLL	**Collm**	**90.55**	**332**	*e*(sP)	sP	16 58 02.0	-1.2	
CLL	**Collm**	**90.55**	**332**	*e*P	**P**	**16 57 55.0**	**-3.6**
CLL				epP	pP	16 58 02.0	0.0	
ESDC	**Sonseca Array**	**91.40**	**315**	P	**P**	**16 58 03.9**	**+1.4**
	comp=Z,0.7nm,0.8s,mb4.1,baz=117,slow=3.9,SNR=5.1							
ESDC				LR	LR	17 43 03.3		
	comp=Z,34nm,18.1s,MS3.8,baz=200,slow=38							
ESLA	**Sonseca Array**	**91.40**	**315**	P	**P**	**16 58 04.3**	**+1.7**
	comp=Z,2.2nm,1.2s,mb4.4							
MDJ	**Mudanjiang**	**95.98**	**42**	P	**P**	**16 58 23.9**	**+0.3**
MDJ				AMB	AMB			
	comp=Z,7.0nm,0.5s,mb5.3							
PLCA	**Paso Flores**	**97.62**	**215**	LR	LR	17 33 37.5		
	comp=Z,31nm,18.5s,MS3.8,baz=0,slow=30							
SADO	**Sadowa**	**145.09**	**308**	PKPbc	PKPbc	17 04 33.0	-0.5	
	comp=Z,2.4nm,0.6s,baz=110,slow=4.8,SNR=4.6							
YKA	**Yellowknife Ar**	**146.34**	**357**	PKPbc	PKPbc	17 04 37.4	+0.1	
	comp=Z,7.3nm,1.0s,baz=352,slow=3.5,SNR=7.7							
ULM	**Lac du Bonnet**	**152.65**	**327**	PKPbc	PKPbc	17 04 50.6	-2.6	
	comp=Z,3.4nm,0.8s,baz=332,slow=7.6,SNR=6.7							
PDAR	**Pinedale Array**	**164.40**	**335**	PKP	PKPdf	17 05 01.4	+1.3	
	comp=Z,0.1nm,0.5s,baz=333,slow=1.0,SNR=2.5							
NVAR	**Mina Array Bea**	**170.53**	**359**	PKPab	PKPab	17 06 22.4	+0.7	
	comp=Z,0.3nm,0.6s,baz=8.5,slow=2.6,SNR=3.9							

*ISCJB **19** 16:52:16.4±2.5,378S±02°×1788W±02,h33km,Error ellipse: s-maj=26.3km s-min=18.1km az=168.6*
*WEL **19** 16:52:16.2±0.5,3755S×17872W,h33km,ML3.3/5,Error ellipse: s-maj=5.5km s-min=4.2km az=0.0*

ISC 19 16:52:17.0±2.5,377S±02°×1788W±02,h33km,n6,σ0°35/9, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**2.34**	**260**	PN	**Pn**	**16 52 52.7**	**-0.4**
PUZ				SN	**Sn**	**16 53 21.3**	**+0.6**
MWZ	**Matawai**	**2.95**	**256**	PN	**Pn**	**16 53 01.3**	**-0.2**
MWZ				SN	**Sn**	**16 53 35.9**	**0.0**
URZ	**Urewera**	**3.26**	**259**	PN	**Pn**	**16 53 06.0**	**+0.2**
URZ				SN	**Sn**	**16 53 42.9**	**-0.5**
BKZ	**Black Stump Fm**	**3.96**	**247**	PN	**Pn**	**16 53 15.9**	**+0.5**
PXZ	**Pawanui**	**4.10**	**234**	*e*PN	**Pn**	**16 53 17.2**	**0.0**
MRZ	**Mangatainoka R**	**5.26**	**234**	SN	**Sn**	**16 54 32.7**	**-0.1**

*IDC **19** 16:51:38.4±7.3,3073S×17918W,h0km,mb3.3/2, mb1 3.6/2,mb1mx3.4/10,mbtmp3.3/2,Error ellipse: s-maj=308.9km s-min=54.7km az=157.0*
*ISCJB **19** 16:52:17.0±1.6,322S±02°×1792W±05,h419km±26km, mb2.7/2,Error ellipse: s-maj=68.9km s-min=15.3km az=47.0*

ISC 19 16:52:20.2±1.7,323S±01°×1795W±04,h408km±13km,n14, σ0°86/19,mb2.7/2,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.51**	**198**	*e*PN	**Pn**	**16 53 49.5**	**+1.5**
PUZ	**Puketiti**	**6.01**	**197**	*e*PN	**Pn**	**16 53 52.4**	**-0.8**
PUZ				SN	**S**	**16 55 08.8**	**-0.2**
MWZ	**Matawai**	**6.45**	**201**	*e*PN	**Pn**	**16 53 57.4**	**-0.6**
MWZ				SN	**S**	**16 55 19.3**	**+1.4**
URZ	**Urewera**	**6.52**	**204**	*e*PN	**Pn**	**16 53 56.8**	**-2.0**
URZ				SN	**S**	**16 55 19.0**	**-0.3**
BKZ	**Black Stump Fm**	**7.55**	**204**	*e*PN	**Pn**	**16 54 09.1**	**-1.1**
BKZ				SN	**S**	**16 55 39.6**	**-0.6**
PXZ	**Pawanui**	**8.22**	**200**	*e*PN	**Pn**	**16 54 18.6**	**+0.8**
TSZ	**Takapari Road**	**8.53**	**204**	*e*PN	**Pn**	**16 54 22.0**	**+0.7**
TSZ				SN	**S**	**16 56 00.4**	**-0.1**
MRZ	**Mangatainoka R**	**9.20**	**204**	SN	**S**	**16 56 13.3**	**-0.9**
KIW	**Kapiti Island**	**9.61**	**206**	*e*PN	**Pn**	**16 54 34.9**	**+1.2**
TUWZ	**Tuamarina**	**10.47**	**208**	SN	**S**	**16 56 40.9**	**+0.7**
NNZ	**Nelson**	**10.53**	**211**	*e*PN	**Pn**	**16 54 44.2**	**-0.1**
NNZ				SN	**S**	**16 56 41.3**	**0.0**
ASAR	**Alice Springs**	**41.75**	**270**	P	**P**	**16 59 31.9**	**+0.3**
	0.2nm,0.6s,mb2.6,baz=107,slow=7.3,SNR=5.0							
WRA	**Warramunga Arr**	**42.91**	**275**	P	**P**	**16 59 40.5**	**-0.3**
	0.2nm,0.4s,mb2.8,baz=111,slow=8.1,SNR=8.5							
FINES	**FINESS Array B**	**146.47**	**338**	PKPbc	PKPbc	17 11 15.8	+1.5	
	1.3nm,0.3s,baz=52,slow=4.6,SNR=26							

IDC 19 16:52:23.4±1.4,5028S×11267E,h0km,mb3.8/6, mb1 4.0/6,mb1mx3.9/13,mbtmp3.8/6,Error ellipse: s-maj=64.2km s-min=19.7km az=110.0,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**28.25**	**60**	P	P	16 58 17.8	-0.4
	1.0nm,0.7s,baz=56,slow=11,SNR=3.4						
ASAR	**Alice Springs**	**31.30**	**40**	P	P	16 58 45.0	-0.2
	0.5nm,0.7s,baz=211,slow=8.1,SNR=12						
VNDA	**Vanda**	**32.87**	**162**	P	P	16 58 58.8	-0.1
	1.6nm,0.7s,baz=294,slow=8.5,SNR=16						
FITZ	**Fitzroy Crossi**	**33.74**	**23**	P	P	16 59 07.3	+0.8
	4.5nm,1.0s,baz=198,slow=9.1,SNR=5.2						
WRA	**Warramunga Arr**	**34.81**	**37**	P	P	16 59 15.8	-0.1
	1.2nm,0.7s,baz=203,slow=11,SNR=19						
SNAA	**Sanae**	**50.19**	**202**	P	P	17 01 20.0	-0.9
	0.4nm,0.9s,baz=144,slow=16,SNR=5.2						
NEW	**Newport**	**147.93**	**74**	PKPbc	PKPbc	17 12 09.0	-1.5
	1.4nm,0.5s,baz=130,slow=7.9,SNR=3.7						
PDAR	**Pinedale Array**	**150.32**	**88**	PKPbc	PKPbc	17 12 15.7	-0.9
	0.6nm,0.8s,baz=172,slow=1.8,SNR=4.4						
YKA	**Yellowknife Ar**	**151.82**	**46**	PKPbc	PKPbc	17 12 18.1	-1.9
	1.0nm,0.6s,baz=284,slow=2.0,SNR=3.9						

*MOS **19** 16:53:52.5±0.6,5545N×16389E,h43km,mb4.2/1,Error ellipse: s-maj=25.0km s-min=14.7km az=58.4*

KRSC 19 16:53:57,5544N×16296E,h33km,ML4.0,1C,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.77**	**354**	PN	Pn	16 54 10.7	-0.9
KBTR				S	Sn	16 54 21.0	-1.1
KBTR	**Krutoberegovo**	**0.77**	**354**	*e*P	Pn	16 54 10.7	-0.9
KBTR				*i* S	Sn	16 54 21.0	-1.1
MKZ	**Mys Kozlova**	**1.13**	**219**	PN	Pn	16 54 17.9	+1.4
MKZ				S	Sn	16 54 32.6	+1.6
MKZ	**Mys Kozlova**	**1.13**	**219**	*e*P	Pn	16 54 17.9	+1.4
MKZ				*i* S	Sn	16 54 32.6	+1.6
SMKR	**Semkarok**	**1.42**	**324**	*e*P	Pn	16 54 22.3	+1.8
SMKR				*i* S	Sn	16 54 40.4	+2.4
CIRR	**Tsirk**	**1.42**	**299**	*e*P	Pn	16 54 22.8	+2.3
CIRR				*i* S	Sn	16 54 41.0	+3.0
BDR	**Baidarnaya**	**1.50**	**320**	*e*P	Pn	16 54 23.4	+1.8
BDR				*i* S	Sn	16 54 42.9	+2.9
KRSR	**Krestovskiy**	**1.56**	**301**	*e*P	Pn	16 54 24.2	+1.8
KRSR				*i* S	Sn	16 54 43.6	+2.1
KLY	**Klyuchi**	**1.57**	**305**	PN	Pn	16 54 22.8	+0.3
KLY				S	Sn	16 54 41.4	-0.3
KLY	**Klyuchi**	**1.57**	**305**	*e*P	Pn	16 54 22.8	+0.3
KLY				*i* S	Sn	16 54 41.4	-0.3
KMNR	**Kamenistaya**	**1.58**	**283**	*e*P	Pn	16 54 26.0	+3.4
KMNR				*i* S	Sn	16 54 46.9	+5.0
SRKR	**Sorokina**	**1.58**	**321**	*e*P	Pn	16 54 24.3	+1.6
SRKR				*i* S	Sn	16 54 44.4	+2.5
KPT	**Kopyto**	**1.64**	**290**	*e*P	Pn	16 54 26.5	+3.0
KPT				*i* S	Sn	16 54 47.4	+4.0
KOZR	**Kozyr**	**1.84**	**291**	PN	Pn	16 54 29.8	+3.5
KOZR				S	Sn	16 54 53.7	+5.3
KOZ	**Kozyrevsk**	**1.85**	**291**	*e*P	Pn	16 54 29.8	+3.4
KOZ				*i* S	Sn	16 54 53.7	+5.0
SRDR	**Sredinnyy**	**2.03**	**297**	*e*P	Pn	16 54 32.0	+3.2
SRDR				*i* S	Sn	16 54 57.6	+4.6
KII	**Karymskiy**	**2.48**	**237**	PN	Pn	16 54 38.5	+3.5
KII				S	Sn	16 55 08.5	+4.5
KII	**Karymskiy**	**2.48**	**237**	P	Pn	16 54 38.5	+3.5
KII				*i* S	Sn	16 55 08.5	+4.5
SPN	**Mys Shipunski**	**2.91**	**217**	PN	Pn	16 54 41.9	+0.9
SPN	**Mys Shipunski**	**2.91**	**217**	*e*P	Pn	16 54 41.9	+0.9
SPN				*i* S	Sn	16 55 14.3	-0.5
NLC	**Nalytchevo**	**3.11**	**224**	PN	Pn	16 54 45.9	+2.2
NLC	**Nalytchevo**	**3.11**	**224**	*e*P	Pn	16 54 45.9	+2.2
NLC				*i* S	Sn	16 55 21.2	+1.6
AVH	**Avacha**	**3.29**	**230**	*e*P	Pn	16 54 48.9	+2.7
AVH				*i* S	Sn	16 55 26.2	+1.9
GNL	**Ganaly**	**3.40**	**241**	*e*P	Pn	16 54 51.5	+3.7
GNL				*i* S	Sn	16 55 30.3	+3.3
PET	**Petropavlovsk**	**3.50**	**228**	⇑*i*PN	Pn	16 54 52.2	+3.1
PET				pmax	pmax		
	comp=Z,27nm,0.5s						
PET	**Petropavlovsk**	**3.50**	**228**	*e*P	Pn	16 54 52.1	+3.0
PET				*i* S	Sn	16 55 31.4	+2.1
RUS	**Russkaya**	**4.00**	**223**	PN	Pn	16 54 58.6	+2.7
RUS	**Russkaya**	**4.00**	**223**	*e*P	Pn	16 54 58.6	+2.7
RUS				*i* S	Sn	16 55 42.4	+0.8
GRL	**Gorelyy**	**4.08**	**227**	*e*P	Pn	16 55 01.3	+4.2
GRL				*i* S	Sn	16 55 47.0	+3.2
MIPR	**Malaya Ipel'ka**	**4.85**	**232**	P	Pn	16 55 11.5	+3.9

*ISCJB **19** 16:59:25.8±0.5, 1890N±006°×7020W±003,h109km±6km, mb4.2/41,Error ellipse: s-maj=10.2km s-min=4.7km az=11.0*
*SSNC **19** 16:59:25.2,2131N×7174W,h0km,MD3.4,ML3.7*
*NEIC **19** 16:59:26.1±0.3, 1888N×7033W,mb4.4/29,MD4.4(RSPR), Error ellipse: s-maj=7.4km s-min=3.6km az=211.0*
NEIC Felt at Santo Domingo.
*IDC **19** 16:59:26.2±0.7, 1882N×7033W,h102km±5km,mb3.8/15, mb1 4.0/19,mb1mx3.9/27,mbtmp4.2/19,MS2.8/1, Ms1 2.8/1,ms1mx2.3/27,Error ellipse: s-maj=16.2km s-min=10.1km az=24.0*
*RSPR **19** 16:59:30.0, 1993N×6961W,h15km±88km,MD4.4/14, MD4.4/14*

ISC 19 16:59:26.3±0.4,1901N±006°×7024W±003,h88km±5km, h104km±9km:pP-P,n177,σ0°85/193,mb4.2/41,35C-46D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**3.02**	**100**	⇑*e*P	**Pn**	**17 00 13.5**	**+1.5**
AGPR				*e*S	**Sn**	**17 00 49.4**	**+2.2**
MPR	**Mayaguez**	**3.05**	**105**	*e*Pn	**Pn**	**17 00 13.9**	**+1.5**
LSP	**Las Mesas**	**3.11**	**105**	⇑*e*P	**Pn**	**17 00 14.7**	**+1.5**
CRPR	**Cabo Rojo, PR**	**3.14**	**108**	⇓*e*P	**Pn**	**17 00 14.1**	**+0.5**
CRPR				*e*S	**Sn**	**17 00 49.1**	**-1.0**
MGP	**Maguayo**	**3.15**	**108**	⇓*e*P	**Pn**	**17 00 14.8**	**+0.9**
LRS	**Lares**	**3.30**	**102**	⇓*e*P	**Pn**	**17 00 16.6**	**+0.8**
LRS				*e*S	**Sn**	**17 00 54.4**	**+0.4**
AOPR	**Arecibo Observ**	**3.37**	**101**	⇓*e*P	**Pn**	**17 00 18.7**	**+1.9**
AOPR				*e*S	**Sn**	**17 00 58.0**	**+2.2**
OBIP	**Obispado Ponce**	**3.58**	**105**	⇓*e*P	**Pn**	**17 00 20.2**	**+0.6**
OBIP				*e*S	**Sn**	**17 01 01.0**	**+0.2**
CELP	**Cerrillos**	**3.60**	**104**	⇓*e*P	**Pn**	**17 00 20.5**	**+0.6**
ICM	**Isla Caja Muer**	**3.70**	**107**	⇓*e*P	**Pn**	**17 00 21.3**	**0.0**
ICM				*e*S	**Sn**	**17 01 02.6**	**-1.2**
MASC	**Masc**	**3.94**	**288**	*e*PG	**Pn**	**17 00 24.0**	**-0.4**
	baz=64						
MASC				*e*SG	**Sn**	**17 01 07.5**	**-1.9**
	comp=N,3μm,0.1s						
MASC				*e*			
	comp=E,3μm,0.1s						
SJG	**San Juan**	**3.98**	**102**	⇑*e*P	**Pn**	**17 00 24.2**	**-0.9**
SJG	**San Juan**	**3.98**	**102**	*e*S	**Sn**	**17 01 08.8**	**-1.8**
SJG	**San Juan**	**3.98**	**102**	P	**Pn**	**17 00 25.9**	**+0.9**
	comp=E,31nm,0.3s,baz=304,slow=11,SNR=29						
SJG				S	**Sn**	**17 01 13.5**	**+2.9**
	comp=E,88nm,0.3s,baz=294,slow=20,SNR=11						
SJG				LR	LR	17 01 43.0	
	comp=E,124nm,19.3s,baz=270,slow=34						
SJG	**San Juan**	**3.98**	**102**	⇑*e*P	**Pn**	**17 00 24.2**	**-0.9**
SJG				*e*S	**Sn**	**17 01 08.8**	**-1.8**
CPD	**Cerro la Pandu**	**4.22**	**103**	⇑*e*P	**Pn**	**17 00 28.7**	**+0.4**
CPD				*e*S	**Sn**	**17 01 14.9**	**-1.4**
CBYP	**Canovanas**	**4.22**	**99**	⇑*e*P	**Pn**	**17 00 27.2**	**-1.1**
CBYP				*e*S	**Sn**	**17 01 13.1**	**-3.3**
HUMP	**Col San Antoni**	**4.25**	**101**	⇓*e*P	**Pn**	**17 00 28.9**	**+0.2**
HUMP				*e*S	**Sn**	**17 01 15.1**	**-2.1**
MTP	**Monte Pirata**	**4.54**	**101**	⇑*e*P	**Pn**	**17 00 32.4**	**-0.2**
MTP				*e*S	**Sn**	**17 01 19.8**	**-4.4**
CULB	**Culebra**	**4.74**	**98**	⇓*e*P	**Pn**	**17 00 33.6**	**-1.8**
CULB				*e*S	**Sn**	**17 01 21.9**	**-7.1**
LZG	**Guadaloupe-1**	**8.56**	**108**	*e*P	**Pn**	**17 01 28.1**	**+0.7**
SDV	**Santo Domingo**	**10.07**	**182**	P	**Pn**	**17 01 46.6**	**-1.3**
	comp=E,2.0nm,0.3s,baz=20,slow=6.5,SNR=11						
SDV				S	**Sn**	**17 03 30.3**	**-8.8**
	comp=E,5.9nm,0.3s,baz=356,slow=18,SNR=8.6						
SDV	**Santo Domingo**	**10.07**	**182**	*e*Pn	**Pn**	**17 01 47.4**	**-0.5**
SDV				*e*Sn	**Sn**	**17 03 31.2**	**-7.8**
PCRV	**Puerto La Cruz**	**10.32**	**148**	P	**Pn**	**17 01 49.7**	**-1.6**
	comp=E,4.7nm,0.3s,baz=334,slow=5.0,SNR=14						
PCRV				S	**Sn**	**17 03 34.6**	**-11**
	comp=E,2.9nm,0.3s,baz=272,slow=10,SNR=4.6						
ROSC	**El Rosal**	**14.62**	**196**	P	**Pn**	**17 02 47.2**	**-1.4**
	comp=E,0.8nm,0.3s,baz=92,slow=24,SNR=4.4						
JSC	**Jenkinsville**	**18.10**	**329**	*e*Pn	**Pn**	**17 03 29.8**	**-2.0**
JSC				*e*Sn	**Sn**	**17 06 39.0**	**-14**
MYNC	**Murphy**	**20.19**	**325**	*e*P	**P**	**17 03 58.5**	**+4.8**
LRAL	**Lakeview Retre**	**20.50**	**316**	*e*P	**P**	**17 03 53.1**	**-4.1**
	comp=E,11nm,0.9s						
LRAL				*e*		17 04 29.8	
FWV	**Forest Hill**	**20.68**	**336**	*e*P	**P**	**17 03 58.5**	**-0.7**
FWV				*e*		17 04 10.0	
FWV				*e*S	**S**	**17 07 39.3**	**-6.0**
TZTN	**Tazewell**	**21.02**	**329**	*e*P	**P**	**17 04 00.1**	**-2.6**
SWET	**Sewanee**	**21.30**	**322**	*e*P	**P**	**17 04 05.4**	**-0.3**
PLAL	**Pickwick Lake**	**22.43**	**319**	*e*P	**P**	**17 04 18.3**	**+0.6**
	comp=E,7.4nm,0.8s,mb4.1						
OXF	**Oxford**	**22.99**	**316**	P	**P**	**17 04 23.2**	**-0.3**
	comp=E,32nm,1.0s,mb4.6						
WVT	**Waverly**	**23.04**	**321**	*e*P	**P**	**17 04 23.4**	**-0.6**
	comp=E,9.0nm,0.6s,mb4.3						
WVT				*e*		17 04 56.5	
HRV	**Harvard--Oak R**	**23.45**	**358**	*e*P	**P**	**17 04 27.8**	**+0.1**
	comp=E,20nm,0.8s,mb4.5						
HRV				epP		17 04 47.7	
WCI	**Wyandotte Cave**	**23.71**	**327**	*e*P	**P**	**17 04 31.4**	**+1.4**
ACCN	**Adirondack Com**	**24.47**	**354**	*e*P	**P**	**17 04 36.0**	**-1.0**
SIUC	**Southern Illin**	**24.93**	**322**	*e*P	**P**	**17 04 41.7**	**+0.5**
	comp=E,13nm,0.8s,mb4.4						
CCM	**Cathedral Cave**	**26.36**	**320**	*e*P	**P**	**17 04 51.8**	**-2.3**
	comp=E,7.3nm,0.9s,mb4.1						
CCM				*e*		17 05 25.9	
SAML	**Samuel**	**28.64**	**165**	*e*P	**P**	**17 05 08.7**	**-5.7**
	comp=E,1.6nm,0.7s,mb3.8						
WMOK	**Wichita Mounta**	**29.75**	**308**	*e*P	**P**	**17 05 22.7**	**-1.6**
	comp=E,5.1nm,1.1s,mb4.1						
MNTX	**Cornudas Mount**	**34.02**	**299**	*e*P	**P**	**17 06 01.8**	**+0.1**
	comp=E,5.5nm,1.1s,mb4.3						
ANMO	**Albuquerque**	**35.74**	**304**	P	**P**	**17 06 16.8**	**+0.3**
	comp=E,1.9nm,0.9s,mb4.0,baz=101,slow=6.9,SNR=4.7						
ANMO	**Albuquerque**	**35.74**	**304**	*e*P	**P**	**17 06 16.7**	**+0.2**
	comp=E,1.9nm,1.0s,mb4.0						
SCHQ	**Schefferville**	**35.85**	**3**	P	**P**	**17 06 17.7**	**+0.2**
	comp=E,5.2nm,0.7s,mb4.5,baz=171,slow=8.6,SNR=5.7						
SCHQ	**Schefferville**	**35.85**	**3**	*e*P	**P**	**17 06 17.3**	**-0.2**
	comp=E,13nm,1.0s,mb4.8						
Y22C	**IRIS PASSCAL I**	**35.86**	**302**	⇑P	**P**	**17 06 19.5**	**+2.0**
	baz=36						
SIV	**San Ignacio**	**35.93**	**165**	P	**P**	**17 06 14.1**	**-4.0**
	comp=E,0.5nm,0.5s,mb3.7,baz=6.0,slow=11,SNR=3.2						
ULM	**Lac du Bonnet**	**37.26**	**333**	P	**P**	**17 06 28.1**	**-1.3**
	comp=E,5.1nm,0.9s,mb4.5,baz=135,slow=8.0,SNR=8.9						
X15A	**Humboldt**	**40.24**	**301**	⇑P	**P**	**17 06 54.7**	**+0.3**
	baz=40						
PDAR	**Pinedale Array**	**40.70**	**314**	PcP	PcP	17 08 56.2	-1.8
	comp=E,0.7nm,0.7s,baz=115,slow=5.6,SNR=3.9						
Y14A	**Wickenburg**	**40.76**	**300**	⇓P	**P**	**17 06 58.8**	**+0.2**
	baz=41						
X14A	**Yava**	**40.77**	**301**	⇑P	**P**	**17 06 58.8**	**+0.2**
	baz=41						
W14A	**Seligman**	**41.07**	**302**	⇓P	**P**	**17 07 01.5**	**+0.4**
	baz=41						
Y13A	**Salome**	**41.42**	**300**	⇑P	**P**	**17 07 04.7**	**+0.7**
	baz=41						
X13A	**Yucca**	**41.55**	**301**	⇑P	**P**	**17 07 04.9**	**-0.2**
	baz=42						
W13A	**Hualapai Mount**	**41.69**	**302**	⇑P	**P**	**17 07 06.7**	**+0.5**
	baz=42						
IRM	**Iron Mountain**	**42.56**	**300**	⇓P	**P**	**17 07 13.7**	**+0.5**
	baz=42						
V12A	**Nelson**	**42.58**	**302**	⇓P	**P**	**17 07 14.0**	**+0.5**
	baz=43						
Q12A	**Willow Creek R**	**43.29**	**307**	⇓P	**P**	**17 07 19.8**	**+0.6**
	baz=43						
N13A	**Wendover, West**	**43.32**	**310**	⇑P	**P**	**17 07 20.0**	**+0.6**
	baz=43						
TUQ	**Turquoise Mtn.**	**43.39**	**302**	⇓P	**P**	**17 07 20.2**	**+0.2**
	baz=43						
MONP	**Monument Peak**	**43.43**	**298**	⇓P	**P**	**17 07 20.3**	**0.0**
	baz=43						
M13A	**Montello**	**43.44**	**311**	⇑P	**P**	**17 07 20.1**	**-0.3**
	baz=43						
P12A	**McGill**	**43.46**	**308**	⇓P	**P**	**17 07 21.0**	**+0.4**
	baz=44						
O12A	**Currie**	**43.55**	**309**	⇑P	**P**	**17 07 21.3**	**+0.1**
	baz=44						
HEC	**Hector,Ludlow**	**43.62**	**301**	⇑P	**P**	**17 07 22.2**	**+0.4**
	baz=44						
SHOC	**Shoshone**	**43.76**	**302**	⇓P	**P**	**17 07 22.7**	**-0.2**
	baz=44						
HRY	**Holter Researc**	**43.79**	**319**	*e*P	**P**	**17 07 22.9**	**-0.3**
U10A	**Ash Meadows, A**	**43.89**	**303**	⇓P	**P**	**17 07 24.0**	**0.0**
	baz=44						
GSC	**Goldstone**	**44.08**	**301**	⇓P	**P**	**17 07 26.2**	**+0.7**
	baz=44						
P11A	**Circle Ranch,**	**44.11**	**308**	⇓P	**P**	**17 07 25.8**	**+0.1**
	baz=44						
O11A	**Cowboy Ranch,**	**44.19**	**308**	⇑P	**P**	**17 07 27.0**	**+0.6**
	baz=44						
FURC	**Furnace Creek,**	**44.32**	**303**	⇓P	**P**	**17 07 27.6**	**+0.2**
	baz=44						
M11A	**Holland Ranch,**	**44.63**	**310**	⇑P	**P**	**17 07 30.3**	**+0.4**
	baz=45						
MPMC	**Manual Prospec**	**44.75**	**302**	⇓P	**P**	**17 07 31.4**	**+0.5**
	baz=45						
CHMT	**Chamberlain Mo**	**44.77**	**318**	*e*P	**P**	**17 07 27.6**	**-3.3**
GRAC	**Grapevine Rang**	**44.82**	**304**	⇓P	**P**	**17 07 32.1**	**+0.7**
	baz=45						
LRMC	**Laurel Mountai**	**44.82**	**301**	⇓P	**P**	**17 07 31.6**	**+0.1**
	baz=45						
R09A	**Tonopah**	**44.82**	**305**	⇓P	**P**	**17 07 32.2**	**+0.8**
	baz=45,SNR=7.5						
S09A	**Goldfield**	**44.84**	**305**	⇓P	**P**	**17 07 31.9**	**+0.4**
	baz=45,SNR=5.3						
DAC	**Darwin (Calif)**	**44.87**	**303**	*e*P	**P**	**17 07 32.4**	**+0.6**
EDW2	**Edwards Air Fo**	**44.98**	**301**	⇓P	**P**	**17 07 33.2**	**+0.6**
	baz=45						
O09A	**Fish Creek Ran**	**45.34**	**308**	⇑P	**P**	**17 07 35.7**	**+0.2**
	baz=45						
Q08A	**Gabbs**	**45.61**

QUIF	Quistinic	60.83	45	eP	P	17 09 29.3	+0.1
	comp=E,6.4nm,0.8s,mb4.7						
SJPF	Ste Jean	62.06	51	eP	P	17 09 37.6	+0.1
	comp=E,10nm,0.8s,mb4.6						
SJPF	Ste Jean	62.06	51	eP	P	17 09 37.6	+0.1
	comp=E,5.1nm,0.8s,mb4.6						
GRR	Gorron	62.39	45	eP	P	17 09 39.6	-0.1
ETSF	Etsaut	62.55	51	eP	P	17 09 41.3	+0.5
FLN	La Foliniere	62.66	44	eP	P	17 09 41.6	+0.1
	comp=E,5.5nm,0.6s,mb4.4						
FLN	La Foliniere	62.66	44	eP	P	17 09 41.6	+0.1
	comp=E,2.8nm,0.6s,mb4.4						
MFF	Saint Martin d	62.83	47	eP	P	17 09 43.9	+1.2
	comp=E,16nm,0.7s,mb4.8						
MFF	Saint Martin d	62.83	47	eP	P	17 09 43.9	+1.2
	comp=E,8.2nm,0.7s,mb4.8						
LDF	La Druitiere	62.89	45	eP	P	17 09 43.1	+0.1
	comp=E,4.2nm,0.5s,mb4.3						
LDF	La Druitiere	62.89	45	eP	P	17 09 43.1	+0.1
	comp=E,2.1nm,0.5s,mb4.3						
EPF	Esparros	63.21	51	eP	P	17 09 45.8	+0.7
	comp=E,19nm,1.1s,mb4.6						
EPF	Esparros	63.21	51	eP	P	17 09 45.8	+0.7
	comp=E,9.6nm,1.1s,mb4.6						
LFF	La Frestale	63.46	49	eP	P	17 09 46.8	0.0
	comp=E,19nm,0.9s,mb4.7						
LFF	La Frestale	63.46	49	eP	P	17 09 46.8	0.0
	comp=E,9.4nm,0.9s,mb4.7						
DAWY	Dawson	63.97	333	eP	P	17 09 49.5	-0.6
CAF	Calviac	64.40	49	eP	P	17 09 53.0	+0.1
	comp=E,5.2nm,0.6s,mb4.2						
CAF	Calviac	64.40	49	eP	P	17 09 53.0	+0.1
	comp=E,2.6nm,0.6s,mb4.2						
TCF	Toulx Ste Croi	64.47	47	eP	P	17 09 53.2	-0.2
MTLF	Montolieu	64.57	50	eP	P	17 09 54.1	0.0
	comp=E,7.9nm,0.9s,mb4.2						
MTLF	Montolieu	64.57	50	eP	P	17 09 54.1	0.0
	comp=E,4.0nm,0.9s,mb4.2						
BGF	Bois d'Agland	64.90	47	eP	P	17 09 55.9	-0.3
AVF	Avril sur Loir	65.24	47	eP	P	17 09 57.9	-0.5
	comp=E,14nm,1.1s,mb4.4						
AVF	Avril sur Loir	65.24	47	eP	P	17 09 57.9	-0.5
	comp=E,6.9nm,1.1s,mb4.4						
SSF	Saint Saulge	65.34	46	eP	P	17 09 58.4	-0.6
LOR	Lormes	65.57	46	eP	P	17 10 00.1	-0.5
	comp=E,9.3nm,0.7s,mb4.4						
LOR	Lormes	65.57	46	eP	P	17 10 00.1	-0.5
	comp=E,4.7nm,0.7s,mb4.4						
SMF	Signal de Mont	65.58	47	eP	P	17 10 00.1	-0.5
	comp=E,6.4nm,0.8s,mb4.2						
SMF	Signal de Mont	65.58	47	eP	P	17 10 00.1	-0.5
	comp=E,3.2nm,0.8s,mb4.2						
VIVF	Saint-Julien-l	66.25	49	eP	P	17 10 05.6	+0.7
	comp=E,9.9nm,1.0s,mb4.3						
VIVF	Saint-Julien-l	66.25	49	eP	P	17 10 05.6	+0.7
	comp=E,4.9nm,1.0s,mb4.3						
MEZF	Maizieres J'vi	66.33	45	eP	P	17 10 05.3	-0.1
	comp=E,17nm,0.6s,mb4.8						
MEZF	Maizieres J'vi	66.33	45	eP	P	17 10 05.3	-0.1
	comp=E,17nm,0.6s,mb5.0						
HINF	Hinteralfeld	67.57	45	eP	P	17 10 12.5	-0.8
	comp=E,3.2nm,0.6s,mb4.0						
HINF	Hinteralfeld	67.57	45	eP	P	17 10 12.5	-0.8
	comp=E,1.6nm,0.6s,mb4.0						
CDF	Champ du Feu	67.81	45	eP	P	17 10 14.3	-0.5
TORD	Torodi Ar. Bea	68.97	83	eP	P	17 10 21.0	-1.0
	comp=E,0.5nm,0.8s,mb3.4,baz=283,slow=5.7,SNR=3.5						
NB2	NORSAR Subarra	69.44	31	eP	P	17 10 25.1	+0.2
	comp=Z,0.8nm,0.6s,mb3.7,baz=274,slow=6.5						
NOA	NORSAR Array B	69.44	31	eP	P	17 10 25.3	+0.4
	comp=Z,1.7nm,0.8s,mb3.9,baz=274,slow=6.4,SNR=6.0						
GERES	GERESS Array B	72.00	44	eP	P	17 10 40.6	+0.2
	comp=Z,1.8nm,0.8s,mb3.9,baz=270,slow=4.0,SNR=13						
ARCES	ARCESS Array B	74.35	21	eP	P	17 10 52.2	-2.1
	comp=Z,1.9nm,0.7s,mb3.9,baz=309,slow=6.1,SNR=7.1						
ARCES				pP	pP	17 11 18.8	+1.6
	comp=Z,1.6nm,0.9s,baz=316,slow=6.7,SNR=1.5						
ARCES				sP	sP	17 11 29.7	+2.9
	comp=Z,0.8nm,0.6s,baz=308,slow=6.0,SNR=1.4						
ARCES	ARCESS Array B	74.35	21	P	P	17 10 52.2	-2.1
ARCES				pP	pP	17 11 18.8	+1.6
ARCES				sP	sP	17 11 29.7	+2.9
VYHS	Vyhne	75.41	43	eP	P	17 11 00.4	0.0
KAF	Kangasniemi	76.41	29	ep	P	17 11 12.8	+6.7
	comp=Z,1.0nm,0.4s,mb3.9						
FINES	FINESS Array B	76.47	29	P	P	17 11 06.0	-0.4
	comp=E,0.5nm,0.6s,mb3.7,baz=298,slow=4.1,SNR=8.3						
FINES	FINESS Array B	76.47	29	P	P	17 11 06.0	-0.4
JOF	Joensuu	78.40	27	ep	P	17 11 05.9	-11
BRTR	Keskin Array B	88.22	49	P	P	17 12 06.8	-0.7
	comp=Z,0.9nm,0.8s,mb3.9,baz=276,slow=4.2,SNR=6.7						
BRTR				pP	pP	17 12 33.5	+2.4
	comp=Z,0.6nm,0.6s,baz=336,slow=3.2,SNR=2.8						
ASAR	Alice Springs	157.05	254	PKP	PKPdf	17 19 09.0	-2.5
	comp=Z,0.3nm,0.9s,baz=200,slow=4.9,SNR=2.9						
ASAR				PKPab	PKPab	17 19 40.0	-2.3
	comp=Z,0.5nm,0.6s,baz=101,slow=4.3,SNR=3.5						
ASAR				pPKPab	pPKPab	17 20 07.2	+1.2
	comp=Z,0.3nm,0.7s,baz=109,slow=4.4,SNR=2.0						

*ISCJB **19** 16:59:46.3±0.8, 1787S×0.10×17820W±007, h540km±12km, mb4.1/24, Error ellipse: s-maj=16.1km s-min=9.8km az=136.6*

*NEIC **19** 16:59:46.6±0.8, 1781S×178.14W, h536km±10km, mb4.4/17, Error ellipse: s-maj=13.1km s-min=8.1km az=158.0*

*IDC **19** 16:59:47.6±1.3, 1771S×17822W, h545km±16km, mb3.5/12, mb1 3.7/14, mb1mx3.6/19, mbtmp4.5/14, Error ellipse: s-maj=20.2km s-min=10.5km az=158.0*

*BJI **19** 16:59:50.6, 1703S×17868W, h535km, mB4.3, mb4.1*

ISC 19 16:59:46.9±0.8, 1792S±0.10×17811W±007, h536km±11km, n50, σ0°83/47, mb4.1/24, 3C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.28	58	P	P	17 01 36.9	-0.1
	14nm,0.3s,baz=65,slow=19,SNR=14						
AFI				S	S	17 03 06.3	-0.8
	2.7nm,0.3s,baz=60,slow=20,SNR=2.1						
AFI	Afiamalu	7.28	58	eP	P	17 01 36.6	-0.3
	148nm,0.9s						
AFI				eS	S	17 03 08.1	+1.0
DZM	Mont Dzumac	15.10	252	eP	P	17 02 56.4	-1.0
DZM	Mont Dzumac	15.10	252	P	P	17 02 56.9	-0.6
	1.6nm,0.3s,baz=86,slow=18,SNR=17						
URZ	Urewera	20.70	191	P	P	17 03 48.2	-1.7
	4.2nm,0.4s,baz=27,slow=4.3,SNR=8.4						
ARMA	Armidale	30.19	240	↑iP	P	17 05 15.3	+1.6
CNB	Canberra Magne	33.65	233	↓iP	P	17 05 44.4	+1.2
	27nm,0.6s,mb5.0						
CTA	Charters Tower	33.73	261	P	P	17 05 43.8	-0.1
	7.3nm,0.7s,mb4.3,baz=92,slow=9.8,SNR=7.5						
CTA	Charters Tower	33.73	261	eP	P	17 05 44.0	+0.2
	5.8nm,0.8s,mb4.2						
CTAO	Charters Tower	33.73	261	eP	P	17 05 43.5	-0.4
	12nm,0.9s,mb4.4						
PMG	Port Moresby	34.74	279	P	P	17 05 52.4	+0.1
	26nm,0.9s,mb4.8,baz=108,slow=9.6,SNR=4.7						
PMG	Port Moresby	34.74	279	eP	P	17 05 52.8	+0.5
	37nm,1.0s,mb4.9						
TOO	Toolangi	37.39	231	eP	P	17 06 15.5	+1.3
	14nm,0.6s,mb4.7						
STKA	Stephens Creek	38.88	241	P	P	17 06 27.3	+1.0
	21nm,0.8s,mb4.7,baz=89,slow=9.1,SNR=38						
STKA	Stephens Creek	38.88	241	eP	P	17 06 26.9	+0.6
WB2	Warramunga Arr	44.90	260	eP	P	17 07 13.1	-0.7
WRAB	Tennant Creek	44.91	260	eP	P	17 07 13.0	-0.7
	11nm,0.7s,mb4.5						
WRA	Warramunga Arr	44.91	259	P	P	17 07 13.2	-0.7
	6.6nm,0.7s,mb4.2,baz=96,slow=7.0,SNR=118						
AS31	Alice Springs	45.06	254	eP	P	17 07 14.8	-0.2
AS31				ePP	pP	17 08 43.9	-8.9
ASAR	Alice Springs	45.07	254	P	P	17 07 15.1	0.0
	43nm,0.7s,mb5.1,baz=88,slow=8.4,SNR=588						
ASAR				PcP	PcP	17 08 44.2	-0.1
	1.5nm,0.6s,baz=103,slow=4.1,SNR=6.2						
ASAR				S	S	17 13 11.4	-3.5
	1.5nm,1.0s,baz=88,slow=16,SNR=8.3						
KAKA	Kakadu	47.87	269	eP	P	17 07 36.1	-0.1
	6.2nm,0.4s,mb4.5						
FORT	Forrest	50.26	245	eP	P	17 07 53.5	-0.4
	8.7nm,0.5s,mb4.4						
FITZ	Fitzroy Crossi	53.31	260	P	P	17 08 16.2	+0.3
	1.5nm,0.7s,mb3.4,baz=178,slow=1.3,SNR=8.1						
FITZ	Fitzroy Crossi	53.31	260	eP	P	17 08 16.1	+0.2
	3.8nm,1.2s,mb3.6						
MBWA	Marble Bar	58.35	256	eP	P	17 08 50.1	-0.6
	5.6nm,0.7s,mb3.9						
KLBR	Kellerberrin	59.08	244	eP	P	17 08 55.3	-0.4
	8.5nm,0.7s,mb4.1						
SBA	Scott Base	60.43	184	eP	P	17 09 06.4	+1.8
	1.3nm,0.6s,mb3.4						
VNDA	Vanda	60.46	185	P	P	17 09 06.2	+1.3
	0.9nm,0.6s,mb3.2,baz=352,slow=6.4,SNR=16						
VNDA	Vanda	60.46	185	eP	P	17 09 05.6	+0.8
	1.1nm,0.7s,mb3.3						
QSPA	South Pole Qui	72.14	180	eP	P	17 10 18.0	+0.8
	8.8nm,0.7s,mb4.3						
KSM	Kuching	72.97	277	eP	P	17 10 22.6	+0.5
MDJ	Mudanjiang	78.36	325	P	P	17 10 52.3	+0.4
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb3.8						
MDJ				AMB	AMB		
	comp=Z,64nm,4.2s						
NVAR	Mina Array Bea	79.23	44	P	P	17 10 57.0	+0.5
	comp=Z,1.2nm,0.8s,mb3.3,baz=232,slow=12,SNR=6.8						
MAW	Mawson	83.95	200	P	P	17 11 20.3	-0.4
	comp=Z,1.1nm,0.2s,mb3.9,baz=202,slow=3.9,SNR=5.2						
PV10	Paradox Valley	85.51	47	eP	P	17 11 34.7	+6.5
ANMO	Albuquerque	85.88	51	P	P	17 11 30.0	0.0
	comp=Z,0.9nm,0.7s,mb3.5,baz=192,slow=10.0,SNR=2.9						
ANMO	Albuquerque	85.88	51	eP	P	17 11 30.5	+0.5
	comp=Z,0.9nm,0.6s,mb3.6						
PDAR	Pinedale Array	87.16	43	P	P	17 11 35.8	-0.3
	comp=Z,0.6nm,0.7s,mb3.3,baz=228,slow=3.8,SNR=6.1						
HHC	Hu-ho-hao-te	87.48	314	eP	P	17 11 37.8	+0.2
HHC				AP	pP	17 13 37.0	+2.1
HHC				XP	sP	17 14 30.3	+1.3
HHC				PP	PP	17 15 14.8	+2.7
HHC				SKS		17 21 13.5	
HHC				S	S	17 21 32.9	-0.9
HHC				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.3						
HHC				AMB	AMB		
	comp=Z,97nm,4.6s						
SYO	Syowa Base	89.21	193	↑eP	P	17 11 44.3	-1.4
SNAA	Sanae	90.58	179	ePdiff	P	17 11 51.4	-0.6
SNAA				e		17 11 52.5	
SNAA	Sanae	90.58	179	eP	P	17 11 50.6	-1.4
	comp=Z,3.0nm,0.8s,mb4.3						
PLCA	Paso Flores	91.12	134	P	P	17 11 53.9	-0.6
	comp=Z,1.8nm,1.0s,mb4.0,baz=225,slow=4.3,SNR=3.3						
VNA1	Neumayer--Stat	91.38	177	ePdiff	P	17 11 55.3	-0.4
VNA1				e		17 11 56.5	
ARCES	ARCESS Array B	126.37	350	PKP	PKPdf	17 17 47.0	-1.8
	comp=Z,1.7nm,0.8s,baz=318,slow=3.3,SNR=3.9						
BRTR	Keskin Array B	144.99	315	PKP	PKPdf	17 18 23.2	+0.1
	comp=Z,1.5nm,0.8s,baz=134,slow=3.6,SNR=6.8						
CLL	Collm	145.53	348	↑/PKPbc	PKPbc	17 18 24.2	-1.2
	comp=Z,4.0nm,0.8s						
BRG	Berggiesshubel	145.74	346	e(P)	PKPdf	17 18 24.6	+0.1
	comp=Z,2.2nm,1.1s						
GERES	GERESS Array B	147.69	345	PKPbc	PKPbc	17 18 30.4	-0.9
	comp=Z,1.1nm,0.5s,baz=27,slow=3.3,SNR=14						
TORD	Torodi Ar. Bea	175.25	178	PKPab	PKPab	17 20 35.5	-0.1
	comp=Z,0.4nm,0.7s,baz=188,slow=3.5,SNR=4.5						

*NEIC **19** 17:04:50.2, 16.12N×9777W, h44km, MD3.8(MEX), After MEX.*

MEX 19 17:04:50.1±0.8, 1610N×9775W, h15km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VHO	Vista Hermosa	1.37	45	iP	Pn	17 05 11.4	-3.3
VHO				iS	Sn	17 05 27.2	-5.5
OXX	Oaxaca	1.39	45	iP	Pn	17 05 12.0	-2.9
OXX				iS	Sn	17 05 28.5	-4.5
HUIG	Huatulco	1.61	102	iP	Pn	17 05 14.4	-3.6
HUIG				iS	Sn	17 05 33.2	-5.4
HUIG	Huatulco	1.61	102	iP	Pn	17 05 15.4	-2.6
HUIG				iS	Sn	17 05 33.2	-5.4
UTMO	Huajuapan	1.72	358	iP	Pn	17 05 16.1	-3.4
UTMO				iS	Sn	17 05 36.6	-4.6
ACX	Acapulco	2.21	290	iS	Sn	17 05 55.0	+1.7
TPIG	Tehuac#an	2.34	9	iS	Sn	17 05 52.2	-4.2
MEIG	Mezcala	2.55	316	iS	Sn	17 05 56.6	-5.0
CAIG	El Cayaco	2.59	292	iP	Pn	17 05 27.3	-4.1
CAIG				iS	Sn	17 05 58.0	-4.6
CAIG	El Cayaco	2.59	292	iP	Pn	17 05 23.8	-7.6
CAIG				iS	Sn	17 05 56.1	-6.5
CMIG	Matias Romero	2.92	70	iP	Pn	17 05 32.6	-3.3
CMIG				iS	Sn	17 06 05.6	-5.2
PPM	Popocatepetl	3.07	344	iP	Pn	17 05 39.8	+1.8
PPM				iS	Sn	17 06 09.4	-5.0

*IDC **19** 17:15:36.8±1.1, 336S×145.61E, h0km, mb4.0/7, mb1 4.4/11, mb1mx4.3/15, mbtmp4.3/11, ML4.3/3, MS3.5/10, Ms1 3.5/10, ms1mx3.4/21, Error ellipse: s-maj=36.0km s-min=17.4km az=87.0*

*ISCJB **19** 17:15:39.9±0.7, 339S±008×1456E±0.1, h33km, mb4.0/8, MS3.7/6, Error ellipse: s-maj=15.4km s-min=11.8km az=9.5*

*NEIC **19** 17:15:41.8±0.8, 345S×14573E, h35km, mb4.8/3, Error ellipse: s-maj=17.6km s-min=13.0km az=84.0*

ISC 19 17:15:42.0±0.7, 343S±008×1456E±01, h35km, n24, σ0°95/21, mb4.0/8, MS3.7/6, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.13	165	Pn	Pn	17 17 07.9	-2.1
	1.9nm,0.3s,baz=18,slow=3.1,SNR=8.6						
PMG				LR	LR	17 19 16.8	
	comp=Z,216nm,20.0s,baz=16,slow=36						
PMG	Port Moresby	6.13	165	ePn	Pn	17 17 05.5	-4.6
PMG				LR	LR	17 19 16.8	
HNR	Honiara	15.45	113	Pn	Pn	17 19 17.4	+0.2
	3.3nm,0.3s,baz=119,slow=1.6,SNR=2.8						
HNR				LR	LR	17 24 23.2	
	comp=Z,88nm,21.7s,baz=359,slow=34						
CTA	Charters Tower	16.57	178	Pn	Pn	17 19 32.5	+1.0
	0.2nm,0.3s,baz=358,slow=14,SNR=3.4						
CTA	Charters Tower	16.57	178	Pn	Pn	17 19 32.5	+1.0
CTAO	Charters Tower	16.57	178	ePn	Pn	17 19 31.4	-0.1
GUMO	Guam	16.93	358	LR	LR	17 24 23.9	
	comp=Z,77nm,19.6s,baz=201,slow=31						
WRAB	Tennant Creek	19.73	213	eP	Pn	17 20 09.7	-0.6
	97nm,1.0s						
WB2	Warramunga Arr	19.74	213	eP	Pn	17 20 09.5	-0.8
WRA	Warramunga Arr	19.75	213	P	Pn	17 20 09.2	-1.2
	1.2nm,0.3s,baz=37,slow=12,SNR=113						
WRA				LR	LR	17 27 59.3	
	comp=Z,83nm,19.3s,baz=150,slow=38						
AS31	Alice Springs	23.07	208	eP	P	17 20 44.8	+0.4
ASAR	Alice Springs	23.07	208	P	P	17 20 44.5	+0.1
	11nm,0.9s,mb4.3,baz=41,slow=8.2,SNR=66						
ASAR				LR	LR	17 31 03.6	
	comp=Z,150nm,19.8s,MS3.4,baz=200,slow=40						
FITZ	Fitzroy Crossi	24.38	232	P	P	17 20 57.4	+0.5
	18nm,0.9s,mb4.5,baz=55,slow=9.5,SNR=41						
FITZ				LR	LR	17 31 12.3	
	comp=Z,141nm,18.4s,MS3.5,baz=233,slow=38						
FITZ	Fitzroy Crossi	24.38	232	eP	P	17 20 57.6	+0.8
	26nm,0.9s,mb4.7						
STKA	Stephens Creek	28.54	187	P	P	17 21 36.4	+2.1
	3.9nm,0.7s,mb4.2,baz=343,slow=9.8,SNR=7.1						
STKA				LR	LR	17 34 36.5	
	comp=Z,110nm,19.8s,MS3.5,baz=200,slow=40						
STKA	Stephens Creek	28.54	187	eP	P	17 21 34.8	+0.5
MBWA	Marble Bar	30.71	233	eP	P	17 21 56.8	+3.3
	5.4nm,0.9s,mb4.4						
MJAR	Matsushiro Arr	40.36	351	P	P	17 23 15.0	-1.3
	0.8nm,0.8s,mb3.5,baz=175,slow=9.7,SNR=5.0						
RPZ	Rata Peaks	46.01	154	LR	LR	17 42 15.5	
	comp=Z,116nm,18.8s,MS3.9,baz=203,slow=35						
SONM	Songino Array	61.49	331	P	P	17 25 55.4	+0.2
	1.0nm,0.9s,mb4.0,baz=151,slow=5.6,SNR=4.1						
SONM				LR	LR	17 52 22.2	
	comp=Z,64nm,18.5s,MS3.8,baz=324,slow=36						
VNDA	Vanda	74.54	176	P	P	17 27 16.9	-0.2
	0.7nm,1.0s,mb3.5,baz=308,slow=7.0,SNR=3.0						
MKAR	Makanchi Array	74.64	320	P	P	17 27 18.3	+0.6
	0.3nm,0.2s,mb3.8,baz=74,slow=6.2,SNR=3.6						
MKAR	Makanchi Array	74.64	320	P	P	17 27 18.3	+0.6
ZAL	Zalesovo	76.11	328	LR	LR	18 00 53.0	
	comp=Z,68nm,18.2s,MS4.0,baz=45,slow=36						

IDC 19 17:34:39.5±64.0, 2205S×17940W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/12, mbtmp4.0/3, Error ellipse: s-maj=1156.0km s-min=163.1km az=85.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	35.95	246	P	P	17 41 40.9	-0.8
	0.4nm,0.3s,baz=73,slow=11,SNR=3.5						
ASAR	Alice Springs	42.91	259	P	P	17 42 40.0	+0.2
	0.7nm,0.3s,baz=97,slow=7.4,SNR=50						
WRA	Warramunga Arr	43.12	264	P	P	17 42 42.5	+1.1
	1.9nm,0.3s,baz=96,slow=8.3,SNR=121						

*IDC **19** 17:44:52.0±4.5, 706S×11786E, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.7/16, mbtmp4.1/3, Error ellipse: s-maj=223.7km s-min=49.6km az=49.0*

NEIC 19 17:44:55.6±1.3, 695S×11828E, h10km, Error ellipse: s-maj=105.0km s-min=14.3km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	13.20	148	eP	Pn	17 48 13.3	+10
FITZ				eS	Sn	17 50 27.3	-2.6
WRA	Warramunga Arr	20.24	131	P	P	17 49 31.3	+0.4
	4.7nm,0.5s,baz=304,slow=12,SNR=113						
WRA				S	S	17 53 04.2	-14
	1.2nm,0.7s,baz=306,slow=25,SNR=5.8						
WRAB	Tennant Creek	20.24	131	eP	P	17 49 30.9	0.0
WRAB				eS	S	17 53 02.8	-15
WB2	Warramunga Arr	20.25	131	eP	P	17 49 31.3	+0.3
WB2				eS	S	17 53 04.8	-13
AS31	Alice Springs	22.39	140	eP	P	17 49 54.7	+0.6
AS31				eS	S	17 54 03.9	+3.7
ASAR	Alice Springs	22.39	140	P	P	17 49 54.9	+0.8
	3.6nm,0.4s,baz=315,slow=8.8,SNR=151						
ASAR				S	S	17 54 04.2	+4.0
	1.0nm,0.9s,baz=314,slow=24,SNR=4.5						
STKA	Stephens Creek	32.98	142	P	P	17 51 30.3	-0.3
	1.1nm,0.3s,baz=319,slow=10,SNR=5.4						
STKA	Stephens Creek	32.98	142	P	P	17 51 30.3	-0.3

*ISCJB **19** 17:46:39.3±1.0, 610N±0.1×1660E±0.3, h10km, mb3.6/7, MS3.0/1, Error ellipse: s-maj=22.4km s-min=18.0km az=88.4*

*IDC **19** 17:46:39.6±1.1, 6086N×16588E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.6/7, MS3.2/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=36.3km s-min=24.4km az=163.0*

*MOS **19** 17:46:39.4±2.2, 6097N×16608E, h10km, mb3.8/3, Error ellipse: s-maj=37.9km s-min=18.6km az=99.5*

ISC 19 17:46:40.8±1.0, 609N±01×1660E±03, h10km, n14, σ1§16/13, mb3.6/7, MS3.0/1, 1D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BILL	Bilibino	7.17	1↓	ePN	Pn	17 48 25.3	-0.3
BILL				pmax	pmax		
	comp=Z,11nm,1.2s						
BILL				pmax	pmax		
	comp=E,62nm,1.3s						
YAK	Yakutsk	17.23	290	eP	Pn	17 50 44.8	+3.3
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
ASAJ	Asahikawa	21.82	230	LR	LR	17 59 43.6	
	comp=E,61nm,20.7s,MS3.0,baz=183,slow=36						
INK	Inuvik	25.94	48	P	P	17 52 15.3	+2.1
	comp=E,1.3nm,0.9s,mb3.5,baz=302,slow=9.5,SNR=2.9						
INK	Inuvik	25.94	48	P	P	17 52 15.3	+2.1
INK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	35.76	276	P	P	17 53 40.6	+0.8
	comp=Z,0.5nm,0.9s,mb3.4,baz=65,slow=10,SNR=3.6						
SONM				PcP	PcP	17 56 08.4	+0.8
	comp=Z,0.1nm,0.5s,baz=29,slow=3.3,SNR=3.9						
SONM	Songino Array	35.76	276	P	P	17 53 40.6	+0.8
SONM						17 56 08.4	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	47.86	293	P	P	17 55 18.3	-0.5
	comp=Z,0.3nm,0.3s,mb3.8,baz=28,slow=6.4,SNR=4.6						
MKAR	Makanchi Array	47.86	293	P	P	17 55 18.3	-0.5
PDAR	Pinedale Array	51.33	70	P	P	17 55 45.1	-0.1
	comp=Z,0.8nm,0.9s,mb3.7,baz=353,slow=3.4,SNR=6.5						
FINES	FINESS Array B	54.16	338	P	P	17 56 05.4	-0.8
	comp=Z,0.3nm,0.5s,mb3.5,baz=10,slow=8.8,SNR=4.4						
NOA	NORSAR Array B	56.84	346	P	P	17 56 24.4	-1.0
	comp=Z,0.6nm,0.6s,mb3.8,baz=14,slow=7.3,SNR=3.3						
NOA	NORSAR Array B	56.84	346	P	P	17 56 24.4	-1.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	84.50	210	P	P	17 59 13.1	-0.8
	comp=Z,0.3nm,0.7s,mb3.5,baz=12,slow=5.6,SNR=6.7						

CASC 19 18:00:41.1±2.4, 726N×8248W, h73km±79km, MD4.2, 2C-1D, South of Panama

| Code | Station Name | Δ° |

comp=N,620nm,0.6s
CLCH AML AML 18 15 39.0

comp=E,674nm,0.5s
ANTU Antumapu 1.39 141 *e*P Pn 18 15 15.9 +0.5
ANTU *i* S Sn 18 15 34.3 +1.5
ANTU AML AML 18 15 39.1

comp=N,578nm,0.4s
ANTU Antumapu 1.39 141 *e*P Pn 18 15 15.9 +0.5
ANTU *i* S Sn 18 15 34.3 +1.5
CMCH Combarbala 1.43 24⇑*i*P Pn 18 15 16.3 +0.2
CMCH *i* S Sn 18 15 35.4 +1.5
CMCH AML AML 18 15 38.4

comp=E,2μm,0.5s
CMCH Combarbala 1.43 24⇑*i*P Pn 18 15 16.3 +0.2
CMCH *i* S Sn 18 15 35.4 +1.5
FCH Farellones 1.43 126⇑*i*P Pn 18 15 16.9 +0.9
FCH *i* S Sn 18 15 36.0 +2.1
FCH AML AML 18 15 36.8

comp=E,597nm,0.2s
LNV Longovilo 1.48 172 *e*P Pn 18 15 16.4 -0.3
PCH Pirque 1.49 140⇑*i*P Pn 18 15 17.8 +0.9
PCH *i* S Sn 18 15 36.9 +1.5
SJCH San Jose de Ma 1.60 136 *e*P Pn 18 15 18.7 +0.4
SJCH *i* S Sn 18 15 39.5 +1.5
SJCH AML AML 18 15 45.0

comp=N,236nm,0.5s
SJCH San Jose de Ma 1.60 136 *e*P Pn 18 15 18.7 +0.4
SJCH *i* S Sn 18 15 39.5 +1.5
CHCH Chadas Angostu 1.68 150⇑*i*P Pn 18 15 20.8 +1.4
CHCH *i* S Sn 18 15 42.1 +2.1
CACH El Canelo 1.86 151⇑*i*P Pn 18 15 24.0 +2.1
CACH *i* S Sn 18 15 48.8 +4.4
CICH Cipreses 2.10 150⇑*i*P Pn 18 15 27.2 +1.9
SFDO San Fernando 2.19 166 *e*P Pn 18 15 27.7 +1.3

MAN 19 18:18:06.7,797N×12284E,h36km,mb2.2,ML3.9,MS4.3, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**0.32**	**237**	⇑*i*P	Pn	18 18 17.2	+2.3
IPIL				*e*S	Sn	18 18 23.2	+2.6
IPIL	**Ipil**	**0.32**	**237**	*e*P	Pn	18 18 17.2	+2.2
IPIL				*e*S	Sn	18 18 23.0	+2.3
PAGZ	**Pagadian**	**0.55**	**102**	*e*P	Pn	18 18 20.6	+2.6
PAGZ				*e*S	Sn	18 18 27.9	+1.9
DCPH	**Dipolog City**	**0.79**	**39**⇓	*e*P	Pn	18 18 22.9	+1.5
DCPH				*e*S	Sn	18 18 33.1	+1.1

IDC 19 18:54:25.8±5.2,3447S×17997W,h0km,mb3.2/2, mb1 3.5/2,mb1mx3.4/11,mbtmp3.2/2,Error ellipse: s-maj=230.5km s-min=57.3km az=164.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.42**	**272**	P	P	19 02 13.9	0.0
	0.1nm,0.3s,baz=115,slow=7.6,SNR=9.2						
WRA	**Warramunga Arr**	**42.78**	**278**	P	P	19 02 25.4	+0.3
	0.3nm,0.4s,baz=119,slow=7.7,SNR=13						
FINES	**FINESS Array B**	**148.29**	**336**	PKPbc	PKPbc	19 14 12.5	-1.4
	0.2nm,0.4s,baz=45,slow=6.1,SNR=6.3						

*ISCJB **19** 19:11:50.9±2.9,3356S×0.10×179.4W±0.5,h33km,mb3.0/2, Error ellipse: s-maj=54.6km s-min=12.7km az=12.8*
*IDC **19** 19:11:54.5±9.1,3355S×17942W,h49km±90km,mb2.9/2, mb1 3.3/3,mb1mx3.2/13,mbtmp3.3/3,Error ellipse: s-maj=78.9km s-min=60.7km az=164.0*
ISC 19 19:11:52.0±3.0,335S±01×1792W±05,h35km,n7,σ0s51/8, mb3.0/2,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**4.98**	**204**	*e*PN	**Pn**	**19 13 03.6**	**-0.5**
PUZ				SN	**Sn**	**19 14 00.3**	**-0.1**
MWZ	**Matawai**	**5.47**	**208**	*e*PN	**Pn**	**19 13 11.1**	**+0.2**
URZ	**Urewera**	**5.58**	**211**	P	**Pn**	**19 13 13.9**	**+1.4**
	1.0nm,0.3s,baz=353,slow=13,SNR=9.6						
URZ				S	**Sn**	**19 14 15.4**	**0.0**
	1.1nm,0.3s,baz=190,slow=18,SNR=3.7						
URZ	**Urewera**	**5.58**	**211**	*e*PN	**Pn**	**19 13 12.6**	**+0.1**
ASAR	**Alice Springs**	**42.02**	**271**	P	**P**	**19 19 39.2**	**-0.6**
	0.2nm,0.9s,mb2.8,baz=114,slow=8.0,SNR=5.8						
WRA	**Warramunga Arr**	**43.29**	**276**	P	**P**	**19 19 50.7**	**+0.4**
	0.5nm,0.8s,mb3.3,baz=116,slow=7.9,SNR=9.7						
FINES	**FINESS Array B**	**147.68**	**337**	PKPbc	PKPbc	19 31 31.8	-1.0
	0.4nm,0.8s,baz=95,slow=7.0,SNR=4.9						

MAN 19 19:46:09.3,1602N×12013E,h14km,mb1.8,ML3.6,MS1.9, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCZP	**Santa Cruz**	**0.32**	**221**	*e*P	Pg	19 46 17.0	+1.1
BOLP	**Bolinao**	**0.41**	**330**	*e*P	Pg	19 46 18.3	+0.7
BOLP				*e*S	Sg	19 46 25.9	+2.7
BCPH	**Baguio City Da**	**0.56**	**50**⇓	*i*P	Pg	19 46 21.3	+0.9
BCPH				*i* S	Sg	19 46 31.0	+3.2
BALP	**Baler**	**1.42**	**101**	*e*P	Pn	19 46 33.4	-1.3
ABRA	**Dolores**	**1.71**	**19**	*e*P	Pn	19 46 37.3	-1.3
CAUP	**Cauayan**	**1.87**	**60**	*e*P	Pn	19 46 41.7	+0.9
APYP	**Conner**	**2.12**	**30**	*e*P	Pn	19 46 45.0	+0.7

*ISCJB **19** 19:47:33.8±0.2,103N±002×12193E±003,h51km, mb4.8/76,MS3.9/33,Error ellipse: s-maj=4.9km s-min=3.4km az=165.4*
*BJI **19** 19:47:34.6,080N×12201E,h67km,mB5.0,mb4.7,Ms4.3, Msz4.0*
*MOS **19** 19:47:34.3±1.0,106N×12191E,h58km,mb5.1/26,Error ellipse: s-maj=13.5km s-min=6.7km az=117.9*
*HRVD **19** 19:47:35.2±0.4,128N×12179E,h46km±1km,MW4.9/38, Centroid moment Tensor Solution. LP body waves: s38,c44;Mantle waves: s35,c50; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.27±.15; $M_{\theta\theta}$-2.29±.08; $M_{\phi\phi}$0.01±.11; $M_{r\theta}$-0.68±.06; $M_{\theta\phi}$-0.20±.09; $M_{\phi r}$-0.07±.09; Best double couple: $M_0$2.38800×10^{16} NP1:ϕ_s85.00000°,δ37.00000°,λ90.00000°. NP2: ϕ_s265.00000°,δ53.00000°,λ90.00000°. Principal axes: T 2.3690, Plg82.0000°, Azm174.0000°; N 0.0330, Plg0.0000°, Azm265.0000°; P -2.4060, Plg8.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **19** 19:47:35.1±0.2,099N×12182E,mb4.9/33 Error ellipse: s-maj=8.8km s-min=4.8km az=61.0*
NEIC Felt [III] at Gorontalo.
*IDC **19** 19:47:37.7±2.2,096N×12175E,h71km±18km,mb4.4/22, mb1 4.4/23,mb1mx4.4/25,mbtmp4.6/23,MS3.8/21, Ms1 3.8/21,ms1mx3.7/30,Error ellipse: s-maj=16.4km s-min=8.7km az=68.0*
ISC 19 19:47:36.0±0.2,100N±002×12192E±003,h53km, h53km±1.7km:pP-P,n200,σ1s30/209,mb4.8/76,MS3.9/33, 12C-4D,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**2.81**	**228**	P	**Pn**	**19 48 16.3**	**-2.1**
	2μm,1.1s						
TSM	**Tawau**	**5.20**	**309**	P	**Pn**	**19 48 49.0**	**-2.1**
CTBH	**Cotabato--PC H**	**6.60**	**21**	*e*P	**Pn**	**19 49 17.1**	**+6.7**
CTBH				*i* S	**Sn**	**19 50 17.1**	**-7.1**
IPIL	**Ipil**	**6.77**	**6**⇑	*e*P	**Pn**	**19 49 11.3**	**-1.4**
IPIL	**Ipil**	**6.77**	**6**⇑	*e*P	**Sn**	**19 50 22.0**	**-6.4**
IPIL	**Ipil**	**6.77**	**6**	*e*P	**Pn**	**19 49 11.3**	**-1.3**
PAGZ	**Pagadian**	**6.96**	**12**	*e*P	**Pn**	**19 49 13.2**	**-2.0**
DAV	**Davao City (W)**	**7.05**	**31**	⇓P	**Pn**	**19 49 18.8**	**+2.4**
	SNR=9.5						
DAV	**Davao City (W)**	**7.05**	**31**	*e*Pn	**Pn**	**19 49 16.0**	**-0.5**
	469nm,0.7s						
DAV				*e*Sn	**Sn**	**19 50 34.3**	**-0.9**
MATI	**Mati**	**7.32**	**36**	*e*P	**Pn**	**19 49 18.8**	**-1.4**
BUKP	**Musuan**	**7.52**	**25**	*e*P	**Pn**	**19 49 22.1**	**-0.8**
KKM	**Kota Kinabalu**	**7.58**	**311**	P	**Pn**	**19 49 23.1**	**-0.6**
KKM	**Kota Kinabalu**	**7.58**	**311**	*e*Pn	**Pn**	**19 49 22.8**	**-0.9**
KKM				*e*Sn	**Sn**	**19 50 40.8**	**-7.4**
DCPH	**Dipolog City**	**7.67**	**11**	*e*P	**Pn**	**19 49 25.2**	**+0.2**
AAI	**Ambon**	**7.82**	**127**	P	**Pn**	**19 49 32.6**	**+5.6**
	359nm,0.9s						
CGP	**Cagayan de Oro**	**7.90**	**20**⇑	*e*P	**Pn**	**19 49 28.0**	**-0.2**
CGP				*e*S	**Sn**	**19 50 52.3**	**-3.9**
SNPH	**Sibulan**	**8.39**	**9**	*e*P	**Pn**	**19 49 35.5**	**+0.7**
BATP	**Bataraza**	**8.76**	**332**	*e*P	**Pn**	**19 49 38.2**	**-1.7**
PPR	**Puerto Princes**	**9.27**	**340**	*e*P	**Pn**	**19 49 46.3**	**-0.7**
SWI	**Sorong**	**9.53**	**101**	P	**Pn**	**19 50 00.9**	**+10**
	75nm,0.7s						
GUIM	**Jordan**	**9.58**	**4**	*e*P	**Pn**	**19 49 48.5**	**-2.7**
CUYO	**Cuyo Island**	**9.82**	**355**	*e*P	**Pn**	**19 49 53.9**	**-0.6**
ENPP	**El Nido**	**10.43**	**346**	*e*P	**Pn**	**19 50 01.3**	**-1.5**
BUSP	**Coron**	**11.06**	**351**	*e*P	**Pn**	**19 50 09.9**	**-1.4**
KSM	**Kuching**	**11.61**	**272**	*e*Pn	**Pn**	**19 50 12.9**	**-6.0**
BALP	**Baler**	**14.65**	**359**	*e*P	**Pn**	**19 51 01.7**	**+1.8**
BJII	**Banjamegara**	**14.72**	**236**	P	**Pn**	**19 51 01.2**	**+0.2**
	147nm,1.4s						
CAUP	**Cauayan**	**15.84**	**360**	*e*P	**Pn**	**19 51 18.7**	**+3.3**
LEM	**Lembang**	**16.25**	**241**	P	**Pn**	**19 51 22.6**	**+2.0**
	70nm,1.4s						
CBJI	**Citeko**	**16.75**	**244**	P	**Pn**	**19 51 31.5**	**+4.7**
	138nm,1.0s						
APYP	**Conner**	**16.77**	**358**	*e*P	**Pn**	**19 51 28.2**	**+1.1**
KAKA	**Kakadu**	**17.17**	**143**	*e*P	**Pn**	**19 51 33.2**	**+1.2**
	38nm,0.6s						
KGM	**Kluang**	**18.62**	**273**	P	**Pn**	**19 51 49.5**	**-0.3**
JAY	**Jayapura**	**19.11**	**101**	P	**Pn**	**19 52 01.7**	**+6.1**
	20nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.34**	**169**	P	**Pn**	**19 51 57.8**	**-0.5**
	3.0nm,0.3s,baz=0.9,slow=8.2,SNR=146						
FITZ				LR	LR	20 00 17.1	
	comp=Z,277nm,18.7s,baz=201,slow=39						
FITZ	**Fitzroy Crossi**	**19.34**	**169**	⇑*i*P	**Pn**	**19 51 57.7**	**-0.6**
	30nm,0.6s						
FITZ				*e*S	**S**	**19 55 34.2**	**+1.5**
KSI	**Kapahiang**	**19.86**	**256**	P	**Pn**	**19 52 03.4**	**-1.1**
	190nm,0.8s						
IPM	**Ipoh**	**21.15**	**280**	P	**P**	**19 52 16.8**	**+0.3**
QIZ	**Qiongzhong**	**21.47**	**327**	P	**P**	**19 52 20.4**	**+0.5**
QIZ				S	**S**	**19 56 13.5**	**-1.5**
QIZ				AMB	AMB		
	comp=Z,142nm,3.7s						
QIZ				LR	LR		
	comp=N,215nm,17.4s						
QIZ				LR	LR		
	comp=Z,303nm,29.2s						
PPI	**Padang Panjang**	**21.57**	**266**	P	**P**	**19 52 20.9**	**0.0**
	comp=Z,57nm,0.8s,mb5.0						
KULM	**Kulim**	**21.65**	**282**	*e*Pn	**P**	**19 52 21.3**	**-0.6**
KULM				*e*		19 52 33.7	
SNG	**Songkhla**	**22.10**	**287**	P	**P**	**19 52 28.0**	**+1.3**
MBWA	**Marble Bar**	**22.13**	**185**	*e*P	**P**	**19 52 25.8**	**-1.2**
	comp=Z,21nm,1.0s,mb4.5						
PSI	**Prapat**	**23.05**	**275**	P	**P**	**19 52 36.1**	**-0.5**
	comp=Z,24nm,0.9s,mb4.6,baz=105,slow=7.6,SNR=25						
PSI				LR	LR	20 02 45.8	
	comp=Z,271nm,19.6s,MS3.7,baz=226,slow=40						
YHNB	**Yeheng**	**23.53**	**359**	*e*P	**P**	**19 52 41.4**	**+0.1**
WRAB	**Tennant Creek**	**24.12**	**150**	*d*i P	**P**	**19 52 46.8**	**+0.1**
WRAB	**Tennant Creek**	**24.12**	**150**	*e*P	**P**	**19 52 46.1**	**-0.5**
	comp=Z,59nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**24.12**	**150**	P	**P**	**19 52 46.4**	**-0.3**
	comp=Z,41nm,0.8s,mb4.9,baz=326,slow=10,SNR=277						
WRA				PcP	PcP	19 56 26.9	+0.3
	comp=Z,1.8nm,0.6s,baz=319,slow=2.2,SNR=4.7						
WRA				S	**S**	**19 57 02.9**	**+2.2**
	comp=Z,5.4nm,1.1s,baz=331,slow=16,SNR=5.1						
WRA				LR	LR	20 02 30.9	
	comp=Z,185nm,20.5s,MS3.5,baz=300,slow=37						
WRA	**Warramunga Arr**	**24.12**	**150**	P	**P**	**19 52 46.4**	**-0.3**
WRA						19 56 26.9	
WRA				S	**S**	**19 57 02.9**	**+2.2**
WRA	**Warramunga Arr**	**24.12**	**150**	P	**P**	**19 52 46.4**	**-0.3**
WRA				PcP	PcP	19 56 26.9	+0.3
WRA				S	**S**	**19 57 02.9**	**+2.2**
WRA				LR	LR	20 02 30.9	
WB2	**Warramunga Arr**	**24.12**	**150**	⇑*i*P	**P**	**19 52 46.3**	**-0.4**
WB2				*e*S	**S**	**19 56 59.5**	**-1.3**
GUMO	**Guam**	**25.93**	**60**	LR	LR	20 01 47.4	
	comp=Z,139nm,19.0s,MS3.5,baz=240,slow=33						
JOW	**Kunigami**	**26.40**	**13**	P	**P**	**19 53 09.3**	**+2.0**
	comp=Z,7.5nm,0.9s,mb4.2,baz=188,slow=15,SNR=4.6						
JOW				LR	LR	20 02 35.5	
	comp=Z,228nm,21.4s,MS3.7,baz=145,slow=34						
JOW	**Kunigami**	**26.40**	**13**	P	**P**	**19 53 09.3**	**+2.0**
JOW				LR	LR	20 02 35.5	
AS31	**Alice Springs**	**27.15**	**155**	*e*P	**P**	**19 53 14.3**	**+0.2**
AS31				*e*PcP	PcP	19 56 33.9	+0.4
AS31				*e*S	**S**	**19 57 46.9**	**-1.9**
ASAR	**Alice Springs**	**27.15**	**155**	P	**P**	**19 53 14.4**	**+0.3**
	comp=Z,9.8nm,0.5s,mb4.6,baz=343,slow=12,SNR=302						
ASAR				PcP	PcP	19 56 33.7	+0.2
	comp=Z,4.1nm,0.4s,baz=344,slow=2.4,SNR=14						
ASAR				S	**S**	**19 57 49.0**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=336,slow=18,SNR=4.8						
ASAR				ScP	ScP	20 00 07.5	-1.8
	comp=Z,0.6nm,0.7s,baz=348,slow=4.6,SNR=4.0						
ASAR				LR	LR	20 04 50.9	
	comp=Z,333nm,18.7s,MS3.9,baz=335,slow=38						
ASAR	**Alice Springs**	**27.15**	**155**	P	**P**	**19 53 14.4**	**+0.3**
ASAR						19 56 33.7	
ASAR				S	**S**	**19 57 49.0**	**+0.1**
PMG	**Port Moresby**	**27.18**	**113**	P	**P**	**19 53 16.4**	**+2.0**
	comp=Z,20nm,0.7s,mb4.7,baz=321,slow=10,SNR=7.2						
PMG	**Port Moresby**	**27.18**	**113**	*e*P	**P**	**19 53 16.2**	**+1.8**
PMG				*e**PP	pP	19 53 33.4	+5.5
PMG				pmax	pmax		
	comp=Z,26nm,0.8s						
PMG	**Port Moresby**	**27.18**	**113**	*e*P	**P**	**19 53 16.2**	**+1.7**
	comp=Z,26nm,0.8s,mb4.8						
PMG				*e*pP	pP	19 53 33.4	+5.6
NANT	**Nan**	**27.31**	**312**	P	**P**	**19 53 17.0**	**+1.4**
CHG	**Chiang Mai**	**28.65**	**310**	⇑P	**P**	**19 53 28.1**	**+0.6**
	comp=Z,16nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**28.65**	**310**	*e*P	**P**	**19 53 27.6**	**+0.1**
CHTO				*e**PP	pP	19 53 38.9	-2.1
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.3						
CHTO	**Chiang Mai**	**28.65**	**310**	*e*P	**P**	**19 53 27.6**	**+0.1**
	comp=Z,7.4nm,1.2s,mb4.3						
CHTO				*e*pP	pP	19 53 38.9	-2.1
GYA	**Guiyang**	**29.25**	**331**	P	**P**	**19 53 34.4**	**+1.5**
GYA				AP	pP	19 53 49.1	+2.7
GYA				XP	sP	19 53 56.5	+3.8
GYA				PPP		19 54 45.5	
GYA				S	**S**	**19 58 22.6**	**+0.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
GYA				AMB	AMB		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,370nm,16.7s,MS4.2						
GYA				LR	LR		
	comp=E,280nm,17.4s,MS4.2						
GYA				LR	LR		
	comp=Z,290nm,17.0s,MS4.0						
SSE	**Sheshan**	**29.94**	**359**	P	**P**	**19 53 36.8**	**-2.1**
SSE				S	**S**	**19 58 33.4**	**+0.7**
SSE				AMB	AMB		
	comp=Z,23nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,184nm,4.3s						
SSE				LR	LR		
	comp=N,149nm,27.2s,MS3.5						
SSE				LR	LR		
	comp=E,28nm,27.2s,MS3.5						
SSE				LR	LR		
	comp=Z,222nm,27.3s,MS3.7						
KMI	**Kunming**	**30.30**	**324**	P	**P**	**19 53 44.8**	**+2.7**
KMI				AP	pP	19 53 57.3	+1.7
KMI				PP	PP	19 54 43.0	-8.2
KMI				PPP		19 54 59.5	
KMI				S	**S**	**19 58 43.8**	**+5.5**
KMI				XS	sS	19 59 05.8	+4.6
KMI				SS	SS	20 00 19.1	-30
KMI				SSS		20 00 47.8	
KMI				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.3						
KMI				AMB	AMB		
	comp=Z,73nm,4.2s						
KMI				LR	LR		
	comp=N,117nm,26.2s,MS3.5						
KMI				LR	LR		
	comp=E,99nm,22.9s,MS3.5						
KMI				LR	LR		
	comp=Z,236nm,29.5s						
NJ2	**Nanjing**	**31.02**	**355**	*e*P	**P**	**19 53 51.9**	**+3.5**
NJ2				AP	pP	19 54 03.8	+1.8
NJ2				PP	PP	19 54 56.6	-2.6
NJ2				S	**S**	**19 58 52.0**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,190nm,3.5s						
NJ2				LR	LR		
	comp=N,240nm,12.8s,MS4.2						
NJ2				LR	LR		
	comp=E,320nm,16.2s,MS4.2						
NJ2				LR	LR		
	comp=Z,230nm,13.2s,MS4.0						
CTA	**Charters Tower**	**31.75**	**133**	*e*P	**P**	**19 53 56.7**	**+1.8**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CTA	**Charters Tower**	**31.75**	**133**	*e*P	**P**	**19 53 56.7**	**+1.8**
	comp=Z,5.3nm,0.7s,mb4.5						
CTAO	**Charters Tower**	**31.75**	**133**	*e*P	**P**	**19 53 55.9**	**+1.0**
CTAO				*e*		19 56 46.9	
CTAO				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
CTAO	**Charters Tower**	**31.75**	**133**	*e*P	**P**	**19 53 55.9**	**+0.9**
	comp=Z,15nm,1.0s,mb4.8						
CTAO				*e*PcP	PcP	19 56 46.9	+1.6
FORT	**Forrest**	**32.14**	**170**	*e*P	**P**	**19 53 57.9**	**-0.4**
	comp=Z,63nm,0.7s,mb5.5						
CBIJ	**Chichi jima**	**32.43**	**35**	P	**P**	**19 54 01.4**	**+0.5**
	comp=Z,85nm,0.5s,mb5.8,baz=238,slow=7.8,SNR=7.4						
KLBR	**Kellerberrin**	**32.66**	**187**	*e*P	**P**	**19 54 01.7**	**-1.1**
	comp=Z,55nm,1.4s,mb5.3						
NWAO	**Narrogin (SRO)**	**34.03**	**187**	P	**P**	**19 54 14.8**	**-0.1**
	comp=Z,13nm,1.0s,mb4.8,baz=1.4,slow=9.8,SNR=5.0						
NWAO	**Narrogin (SRO)**	**34.03**	**187**	P	**P**	**19 54 14.8**	**-0.1**
CD2	**Chengdu**	**34.37**	**332**	*e*P	**P**	**19 54 18.0**	**+0.3**
CD2				AP	pP	19 54 31.5	+0.2
CD2				PP	PP	19 55 35.0	-1.3
CD2				S	**S**	**19 59 42.8**	**+1.2**
CD2				SS	SS	20 01 57.0	-15
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				LR	LR		
	comp=N,180nm,16.8s						
CD2				LR	LR		
	comp=Z,120nm,13.2s,MS3.8						
STKA	**Stephens Creek**	**37.64**	**152**	P	**P**	**19 54 46.5**	**+0.7**
	comp=Z,34nm,0.7s,mb5.2,baz=321,slow=8.6,SNR=71						
STKA				PcP	PcP	19 57 01.6	-0.7
	comp=Z,8.0nm,0.8s,baz=34,slow=3.6,SNR=3.6						
STKA				LR	LR	20 11 24.0	
	comp=Z,172nm,20.0s,MS3.9,baz=21,slow=38						
STKA	**Stephens Creek**	**37.64**	**152**	⇑*i*P	**P**	**19 54 46.3**	**+0.6**
	comp=Z,28nm,0.8s,mb5.0						
STKA				*e*PcP	PcP	19 57 01.9	-0.4
MAJO	**Matsushiro**	**38.45**	**21**	*e*P	**P**	**19 54 51.9**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
MAJO	**Matsushiro**	**38.45**	**21**	*e*P	**P**	**19 54 51.9**	**-0.6**
	comp=Z,9.8nm,1.1s,mb4.5						
MAT	**Matsushiro**	**38.45**	**21**	P	**P**	**19 54 52.1**	**-0.4**
MAT				*e*S	**S**	**20 00 46.0**	**+2.1**
MAT	**Matsushiro**	**38.45**	**21**	*e*P	**P**	**19 54 52.0**	**-0.5**
MAT				S	**S**	**20 00 46.0**	**+2.1**
MJAR	**Matsushiro Arr**	**38.45**	**21**	P	**P**	**19 54 52.5**	**0.0**
	comp=Z,1.9nm,0.7s,mb3.9,baz=194,slow=8.7,SNR=7.7						
MJAR				PcP	PcP	19 57 05.0	+0.3
	comp=Z,3.5nm,1.0s,baz=211,slow=2.0,SNR=6.3						
MJAR				LR	LR	20 10 44.7	
	comp=Z,92nm,20.9s,MS3.6,baz=215,slow=36						
MJAR	**Matsushiro Arr**	**38.45**	**21**	P	**P**	**19 54 52.5**	**0.0**
MJAR						19 57 05.1	
LZH	**Lanzhou**	**38.73**	**336**	*e*P	**P**	**19 54 58.9**	**+4.1**
LZH				AP	pP	19 55 12.3	+3.7
LZH				XP	sP	19 55 17.5	+2.7
LZH				PP	PP	19 56 32.6	+8.3
LZH				*e*S	**S**	**20 00 53.1**	**+5.0**
LZH				SS	SS	20 03 37.1	-3.2
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,48nm,5.4s						
LZH				LR	LR		
	comp=N,592nm,13.0s						
LZH				LR	LR		
	comp=Z,1μm,16.4s,MS4.8						
BJI	**Beijing**	**39.20**	**353**	P	**P**	**19 55 00.0**	**+1.2**
BJI				AMB	AMB		
	comp=Z,17nm,0.9s,mb4.8						
HNR	**Honiara**	**39.27**	**106**	P	**P**	**19 54 59.1**	**-0.3**
HHC	**Hu-ho-hao-te**	**40.76**	**348**	*e*P	**P**	**19 55 13.3**	**+1.6**
HHC				AP	pP	19 55 28.6	+3.0
HHC				XP	sP	19 55 35.8	+4.0
HHC				PP	PP	19 56 52.0	+5.6
HHC				PCP	PcP	19 57 13.1	+1.0
HHC				SCP	ScP	20 00 56.3	-0.9
HHC				PCS	PcS	20 01 02.8	-0.2
HHC				S	**S**	**20 01 21.3**	**+2.8**
HHC				XS	sS	20 01 47.1	+5.2
HHC				SS	SS	20 04 20.5	-0.4
HHC				SCS	ScS	20 05 09.8	-2.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
HHC				AMB	AMB		
	comp=Z,77nm,6.9s						
HHC				LR	LR		
	comp=N,245nm,19.9s,MS4.3						
HHC				LR	LR		
	comp=E,338nm,22.8s,MS4.3						
HHC				LR	LR		
	comp=Z,249nm,19.0s,MS4.1						
LSA	**Lhasa**	**40.88**	**317**	P	**P**	**19 55 15.0**	**+2.3**
LSA	**Lhasa**	**40.88**	**317**	*e*P	**P**	**19 55 14.2**	**+1.5**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
LSA	**Lhasa**	**40.88**	**317**	*e*P	**P**	**19 55 14.2**	**+1.4**
	comp=Z,9.9nm,0.6s,mb4.6						
PALK	**Pallekele**	**41.55**	**280**	P	**P**	**19 55 17.0**	**-1.2**
	comp=Z,7.6nm,0.8s,mb4.4						
ARMA	**Armidale**	**42.15**	**140**	*e*P	**P**	**19 55 25.4**	**+2.3**
CN2	**Changchun**	**42.73**	**4**	*e*P	**P**	**19 55 32.1**	**+4.3**
CN2				*e*S	**S**	**20 01 54.9**	**+7.2**
CN2				LR	LR		
	comp=N,200nm,18.0s,MS4.3						
CN2				LR	LR		
	comp=E,300nm,18.0s,MS4.3						
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS4.0						
GTA	**Gaotai**	**43.23**	**335**	*e*P	**P**	**

MDJ LR LR
comp=Z,120nm,20.9s,MS3.8
KKN Kakani 44.04 310 *eP* **P 19 55 39.1 +0.7**
comp=Z,31nm,0.9s,mb5.0
KKN Kakani 44.04 310 *eP* **P 19 55 39.1 +0.7**
KKN pmax pmax
comp=Z,31nm,0.9s,mb5.0
DMN Daman 44.08 310 *eP* **P 19 55 39.3 +0.6**
comp=Z,47nm,0.9s,mb5.2
TOO Toolangi 44.14 153 *eP* **P 19 55 40.5 +1.3**
TOO pmax pmax
comp=Z,12nm,1.4s,mb4.4
TOO Toolangi 44.14 153 *eP* **P 19 55 40.5 +1.3**
comp=Z,12nm,1.4s,mb4.4
CNB Canberra Magne 44.30 147 *eP* **P 19 55 42.6 +2.1**
comp=Z,8.1nm,0.6s,mb4.6
GKN Gorkha 44.63 310 *eP* **P 19 55 43.8 +0.7**
comp=Z,49nm,0.8s,mb5.4
KOLN Koldanda 45.31 309 *eP* **P 19 55 49.5 +1.0**
comp=Z,41nm,0.8s,mb5.3
SONM Songino Array 48.55 346 P **P 19 56 15.3 +1.5**
comp=Z,8.0nm,0.7s,mb4.9,baz=163,slow=8.7,SNR=107
SONM PcP PcP 19 57 38.6 -0.3
comp=Z,3.6nm,0.8s,baz=167,slow=4.2,SNR=5.5
SONM LR LR 20 17 38.5
comp=Z,200nm,20.5s,MS4.1,baz=161,slow=37
SONM Songino Array 48.55 346 P **P 19 56 15.3 +1.5**
SONM 19 57 38.6
LGTI Lohaghat 48.70 309 *i* P **P 19 56 16.7 +1.7**
KLR Kul'dur 48.78 9 *eP* **P 19 56 13.4 -2.1**
YSS Yuzh-Sakhalins 49.25 19 P **P 19 56 18.0 -1.1**
ZAK Zakamensk 51.69 345 *eP* **P 19 56 36.5 -1.0**
ZAK *e* 19 57 49.4
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
WMQ Urumqi 52.38 329 *eP* **P 19 56 45.0 +2.3**
WMQ AP pP 19 56 59.0 +2.0
WMQ XP sP 19 57 05.0 +1.9
WMQ PP PP 19 58 45.0 +3.3
WMQ S **S** **20 04 05.0 +0.4**
WMQ SCS ScS 20 06 25.0 -2.8
WMQ SS SS 20 07 42.0 -0.8
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,132nm,5.0s
WMQ LR LR
comp=N,78nm,13.0s,MS4.1
WMQ LR LR
comp=E,103nm,14.0s,MS4.1
WMQ LR LR
comp=Z,79nm,13.0s,MS3.9
TLY Talaya 52.79 346 *eP* **P 19 56 47.4 +1.7**
TLY *e* 19 58 44.2
TLY *e*SS SS 20 07 46.8 -2.5
TLY pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TLY MLR MLR
comp=Z,136nm,21.0s,MS4.0
TLY Talaya 52.79 346 *eP* **P 19 56 46.5 +0.8**
comp=Z,6.1nm,0.7s,mb4.6
TLY *e*pP pP 19 57 01.1 +1.1
BOD Bodaibo 57.00 355 *eP* **P 19 57 12.0 -4.1**
BOD pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
MKAR Makanchi Array 57.20 329 P **P 19 57 18.3 +0.8**
comp=Z,6.8nm,0.8s,mb4.8,baz=116,slow=8.4,SNR=43
MKAR PcP PcP 19 58 11.1 -0.5
comp=Z,5.9nm,0.6s,baz=94,slow=4.9,SNR=6.8
MKAR Makanchi Array 57.20 329 P **P 19 57 18.3 +0.8**
MKAR PcP PcP 19 58 11.1 -0.5
KZA Kyzart 58.50 321 P **P 19 57 28.9 +2.2**
SNR=11
TKM2 Tokmak 2 58.73 322 P **P 19 57 29.8 +1.6**
SNR=10
KBK Karagaybulak 59.00 321 P **P 19 57 32.3 +2.2**
SNR=7.0
AAK Ala-Archa 59.27 321 ⇓P **P 19 57 32.8 +0.8**
SNR=5.1
AAK Ala-Archa 59.27 321 *eP* **P 19 57 32.3 +0.3**
AAK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
AAK Ala-Archa 59.27 321 *eP* **P 19 57 32.2 +0.3**
comp=Z,9.5nm,0.9s,mb4.8
FRU Bishkek 59.30 321 *eP* **P 19 57 35.0 +2.8**
AML Almayashu 59.53 320 P **P 19 57 35.6 +1.9**
SNR=9.8
USP Ospenovka 59.60 321 P **P 19 57 35.3 +1.1**
SNR=9.8
KRAR Krasnoyarsk 59.65 342 *eP* **P 19 57 33.9 -0.7**
KRAR pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
EKS2 Erkin-Say 59.74 321 P **P 19 57 36.7 +1.5**
SNR=11
ZAL Zalesovo 60.96 336 P **P 19 57 43.9 +0.3**
comp=Z,2.1nm,0.4s,mb4.6,baz=316,slow=3.8,SNR=16
ZAL LR LR 20 25 11.2
comp=Z,85nm,18.2s,MS3.9,baz=144,slow=37
ZAL Zalesovo 60.96 336⇑ *eP* **P 19 57 43.9 +0.4**
YAK Yakutsk 61.16 4⇑ *eP* **P 19 57 44.8 -0.1**
YAK pmax pmax
comp=Z,19nm,0.8s,mb5.3
NVS Novosibirsk 62.25 336 *i* P **P 19 57 51.5 -0.7**
NVS *i* pP 19 58 06.8 -0.1
NVS *i* S **S** **20 06 10.8 -3.4**
NVS pmax pmax
comp=Z,12nm,1.3s,mb4.9
NVS pmax pmax
comp=N,7.0nm,1.2s
NVS pmax pmax
comp=E,9.0nm,1.3s
NVS smax
comp=N,10.0nm,2.0s
NVS smax
comp=E,12nm,1.7s
BVAR Borovoye Array 67.07 329 LR LR 20 30 33.7
comp=E,46nm,19.3s,MS3.7,baz=320,slow=38
BRVK Borovoye 67.14 329 ⇓P **P 19 58 24.6 +0.5**
SNR=7.6
BRVK Borovoye 67.14 329 *eP* **P 19 58 23.9 -0.2**
BRVK *e**PP pP 19 58 37.8 -1.1
BRVK pmax pmax
comp=Z,11nm,1.0s,mb4.8
BRVK Borovoye 67.14 329 *eP* **P 19 58 23.9 -0.2**
comp=Z,11nm,1.0s,mb4.8
BRVK *e*pP pP 19 58 37.8 -1.1
CHKZ Chkalovo 67.30 330 *eP* **P 19 58 24.7 -0.4**
CHKZ *e**PP pP 19 58 38.9 -1.0
CHKZ pmax pmax
comp=Z,18nm,1.1s,mb5.0
CHKZ Chkalovo 67.30 330 *eP* **P 19 58 24.7 -0.4**
comp=Z,18nm,1.1s,mb5.0
CHKZ *e*pP pP 19 58 38.9 -1.0
ZRNK Zerenda 67.75 329 *eP* **P 19 58 27.6 -0.3**
ZRNK *e**PP pP 19 58 41.8 -0.9
ZRNK pmax pmax
comp=Z,22nm,0.8s,mb5.2
ZRNK Zerenda 67.75 329 *eP* **P 19 58 27.6 -0.3**
comp=Z,22nm,0.8s,mb5.2
ZRNK *e*pP pP 19 58 41.8 -0.9
AKTO Aktyubinsk 72.86 323 LR LR 20 34 33.9
comp=Z,49nm,18.2s,MS3.8,baz=294,slow=39
SVE Sverdlovsk 73.82 330 *eP* **P 19 59 03.7 -1.1**
SVE *e* pP 19 59 19.0 -0.8
SVE pmax pmax
comp=Z,40nm,1.0s,mb5.3
ARU Arti 74.72 329⇑ *iP* **P 19 59 09.1 -0.9**
ARU *e* pP 19 59 21.7 -3.3
ARU *e* 20 01 56.4
ARU *e*PPP 20 03 43.2
ARU *e*S S 20 08 44.1 +1.8
ARU *e*SS SS 20 13 32.2 +1.7
ARU pmax pmax
comp=Z,16nm,0.8s,mb5.0
ARU Arti 74.72 329 *eP* **P 19 59 08.8 -1.2**
comp=Z,17nm,0.9s,mb5.0
KBD Kabd 75.75 300 *eP* **P 19 59 15.1 -0.9**
RDF Al-Radifah 75.84 299 *eP* **P 19 59 15.9 -0.6**
RDF AMb AMB 19 59 16.6
comp=Z,21nm,0.7s,mb5.2
OPO Ambohidratompo 75.86 251 P **P 19 59 15.2 -1.4**
comp=Z,1.7nm,0.8s,mb4.0,baz=158,slow=5.6,SNR=5.0
MIB Mutribah 76.13 300 *eP* **P 19 59 17.6 -0.5**
MIB AMb AMB 19 59 19.0
comp=Z,45nm,0.7s,mb5.5
NAY Al-Naaiem 76.15 300 *eP* **P 19 59 17.2 -1.0**
NAY AMb AMB 19 59 18.5
comp=Z,7.5nm,0.6s,mb4.8
RST Umm Al-Ruwaisa 76.39 300 *eP* **P 19 59 18.9 -0.7**
RST AMb AMB 19 59 20.0
comp=Z,46nm,0.6s,mb5.6
MAW Mawson 79.57 200 P **P 19 59 36.4 -0.9**
comp=Z,1.4nm,0.6s,mb4.0,baz=70,slow=6.1,SNR=3.7
MAW LR LR 20 29 48.1
comp=Z,88nm,20.2s,MS4.1,baz=60,slow=32
MAW Mawson 79.57 200 *eP* **P 19 59 35.8 -1.5**
ZEI Tsey 80.52 313 *eP* **P 19 59 42.0 -0.4**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
VNDA Vanda 81.38 172 P **P 19 59 45.7 -1.2**
comp=Z,2.4nm,0.6s,mb4.3,baz=319,slow=6.6,SNR=22
VNDA LR LR 20 35 39.3
comp=Z,79nm,18.1s,MS4.1,baz=22,slow=35
VNDA Vanda 81.38 172 *eP* **P 19 59 45.4 -1.6**
VNDA pmax pmax
comp=Z,3.0nm,0.7s
VNDA Vanda 81.38 172 *eP* **P 19 59 45.4 -1.5**
comp=Z,2.7nm,0.7s,mb4.3
SBA Scott Base 82.35 171 P **P 19 59 49.4 -2.6**
SBA pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
SBA Scott Base 82.35 171 P **P 19 59 49.4 -2.6**
comp=Z,3.7nm,1.1s,mb4.2
VRSR Storozhevoye 84.66 321 *eP* **P 20 00 02.8 -1.1**
VRSR pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
VRSR pmax pmax
comp=N,6.0nm,1.2s
VRSR pmax pmax
comp=E,6.0nm,1.2s
KMBO Kilima Mbogo 84.68 269 P **P 20 00 05.1 +1.1**
comp=E,3.5nm,0.8s,mb4.5,baz=61,slow=11,SNR=5.2
KMBO LR LR 20 35 35.2
comp=E,73nm,19.6s,MS4.1,baz=94,slow=34
OBN Obninsk 86.51 325 *i* P **P 20 00 11.2 -1.9**
OBN *e* pP 20 00 24.9 -3.5
OBN pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
EIL Elat 86.87 299 *eP* **P 20 00 15.2 +0.4**
comp=Z,233nm,1.3s
BR131 Keskin Array S 88.04 310 *eP* **P 20 00 19.9 -0.6**
comp=Z,1.2nm,0.6s,mb4.3
BRTR Keskin Array B 88.04 310 P **P 20 00 20.1 -0.3**
comp=Z,2.0nm,0.8s,mb4.4,baz=104,slow=5.2,SNR=11
BRTR LR LR 20 44 56.5
comp=Z,24nm,21.5s,MS3.6,baz=313,slow=39
BRTR Keskin Array B 88.04 310⇑ *eP* **P 20 00 20.1 -0.3**
LVZ Lovozero 88.04 338⇑ *eP* **P 20 00 19.3 -1.2**
LVZ pmax pmax
comp=E,5.0nm,1.0s
LVZ pmax pmax
comp=Z,18nm,1.0s,mb5.3
LVZ MLR MLR
comp=Z,128nm,17.0s,MS4.4
LVZ MLR MLR
comp=E,66nm,14.0s
PMR Palmer 88.62 29 *eP* **P 20 00 18.1 -5.1**
JOF Joensuu 89.39 333 *ep* **P 20 00 23.8 -3.0**
comp=E,11nm,0.7s,mb5.3
JOF Joensuu 89.39 333 *eP* **P 20 00 23.8 -3.0**
JOF pmax pmax
comp=Z,11nm,0.7s,mb5.3
KEV Kevo 90.77 340 *ep* **P 20 00 29.8 -3.5**
comp=Z,6.5nm,0.9s,mb5.0
KEV Kevo 90.77 340 *eP* **P 20 00 29.8 -3.5**
KEV pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
QSPA South Pole Qui 90.93 180 *eP* **P 20 00 33.2 -0.8**
comp=Z,3.1nm,0.5s,mb4.9
AKASG Malin Array Be 90.94 321 P **P 20 00 32.1 -2.0**
comp=Z,0.8nm,0.4s,mb4.4,baz=73,slow=4.5,SNR=9.0
AKASG LR LR 20 44 46.2
comp=Z,48nm,21.9s,MS3.9,baz=195,slow=38
ARCES ARCESS Array B 91.32 340 P **P 20 00 33.4 -2.4**
comp=Z,2.3nm,0.7s,mb4.7,baz=89,slow=7.4,SNR=13
ARCES ARCESS Array B 91.32 340 P **P 20 00 33.4 -2.4**
KAF Kangasniemi 91.75 332 *ep* **P 20 00 34.7 -3.1**
comp=Z,5.3nm,0.6s,mb5.0
KAF Kangasniemi 91.75 332 *eP* **P 20 00 34.7 -3.1**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
FINES FINESS Array B 91.93 331 P **P 20 00 36.8 -1.8**
comp=Z,2.8nm,0.6s,mb4.7,baz=91,slow=7.6,SNR=25
MLR Muntele Rosu 93.48 316 LR LR 20 47 40.7
comp=Z,37nm,18.1s,MS3.9,baz=315,slow=39
LSZ Lusaka 93.86 255 P **P 20 00 46.8 -0.8**
comp=Z,5.2nm,0.9s,mb5.0,baz=80,slow=1.6,SNR=12
LSZ PP PP 20 04 31.9 -1.7
comp=Z,6.5nm,1.1s,baz=102,slow=7.0,SNR=7.3
INK Inuvik 94.44 21 P **P 20 00 49.3 -0.8**
comp=Z,0.9nm,0.5s,mb4.4,baz=247,slow=1.6,SNR=4.9
HFS Hagfors 98.13 331 LR LR 20 50 13.7
comp=Z,58nm,18.6s,MS4.1,baz=83,slow=38
NB2 NORSAR Subarra 99.02 333 P **P 20 01 08.6 -2.3**
comp=Z,1.2nm,0.8s,mb4.5,baz=72,slow=4.4
NOA NORSAR Array B 99.02 333 P **P 20 01 08.9 -2.1**
comp=Z,1.7nm,0.8s,mb4.7,baz=73,slow=4.6,SNR=10
NOA LR LR 20 51 06.5
comp=Z,52nm,18.2s,MS4.1,baz=50,slow=38
VRAC Vranov 99.19 320 LR LR 20 48 29.0
comp=Z,33nm,21.2s,MS3.8,baz=202,slow=37
GERES GERESS Array B 101.15 320 P Pdif 20 01 19.9 -0.5
comp=Z,0.2nm,0.5s,baz=77,slow=2.1,SNR=4.5
NVAR Mina Array Bea 112.29 47 PKiKP PKiKP 20 06 07.1 +1.4
comp=Z,0.6nm,0.7s,baz=238,slow=2.8,SNR=4.7
TORD Torodi Ar. Bea 119.10 286 PKP PKPdf 20 06 18.6 -0.1
comp=Z,1.7nm,0.6s,baz=96,slow=1.5,SNR=21
TORD PP PP 20 07 41.1 +2.0
comp=Z,1.1nm,1.0s,baz=88,slow=5.3,SNR=3.8
ULM Lac du Bonnet 119.60 27 PKP PKPdf 20 06 19.7 -0.1
comp=Z,0.8nm,0.4s,baz=243,slow=2.3,SNR=2.7
SCHQ Schefferville 123.89 6 PKP PKPdf 20 06 28.4 +0.4
comp=Z,2.7nm,0.9s,baz=274,slow=1.4,SNR=3.5
DBIC Dimbokro 126.34 279 PKP PKPdf 20 06 33.4 +0.7
comp=Z,3.8nm,0.9s,baz=115,slow=5.9,SNR=3.6
PLCA Paso Flores 138.87 166 PKP PKPdf 20 06 57.0 +0.8
comp=Z,1.8nm,0.7s,baz=267,slow=5.1,SNR=5.6
CPUP Villa Florida 154.81 182 PKP PKPdf 20 07 20.9 -1.6
comp=Z,1.2nm,0.6s,baz=87,slow=1.6,SNR=5.1
CPUP PKPbc PKPbc 20 07 30.9 -0.3
comp=Z,0.7nm,0.5s,baz=2.8,slow=2.4,SNR=4.1
CPUP PKPab PKPab 20 07 46.8 +0.3
comp=Z,0.3nm,0.3s,baz=139,slow=2.3,SNR=2.9
CPUP Villa Florida 154.81 182 PKP PKPdf 20 07 20.9 -1.6
CPUP PKPbc PKPbc 20 07 30.9 -0.3
CPUP PKPab PKPab 20 07 46.8 +0.3
LPAZ La Paz 161.87 147 PKP PKPdf 20 07 33.0 +2.0
comp=Z,3.6nm,1.1s,baz=2.5,slow=2.6,SNR=9.8
LPAZ PKPab PKPab 20 08 19.5 +2.5
comp=Z,4.0nm,0.7s,baz=178,slow=3.8,SNR=14
LPAZ La Paz 161.87 147 PKP PKPdf 20 07 33.0 +2.0
LPAZ PKPab PKPab 20 08 19.5 +2.5
BDFB Brasilia 162.38 214 PKPab PKPab 20 08 19.3 0.0
comp=Z,2.0nm,0.7s,baz=149,slow=6.1,SNR=3.1

*KISR **19** 20:22:52.6±1.5, 3357N×4848E, h34km, ML3.0*
*THR **19** 20:22:53.0±0.5, 3313N×4831E, h14km±5km, ML3.2*
*CSEM **19** 20:22:53.0, 3313N×4831E, h14km, ML3.2, After THR*
*ISCJB **19** 20:22:56.5±0.5, 3337N±003×4837E±008, h10km, Error ellipse: s-maj=10.0km s-min=4.1km az=19.5*
ISC 19 20:22:57.9±0.5, 3338N±003×4841E±007, h10km, n14, σ0s93/22, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAO	**Ashtian**	**1.78**	**48**	*e*PG	**Pn**	**20 23 29.6**	**+1.0**
ASAO				AML	AML	20 24 04.9	
	comp=E,186nm,0.7s						
ASAO	**Ashtian**	**1.78**	**48**	*e*Pg	**Pn**	**20 23 29.6**	**+0.9**
	SNR=90						
SNGE	**Sanandaj**	**1.93**	**333**	*e*PG	**Pn**	**20 23 31.4**	**+0.7**
SNGE				*e*SG	**Sg**	**20 23 59.8**	**0.0**
SNGE				AML	AML	20 24 09.3	
	comp=E,114nm,0.4s						
SNGE				AML	AML	20 24 09.4	
	comp=N,176nm,0.4s						
SNGE	**Sanandaj**	**1.93**	**333**	*e*Pg	**Pn**	**20 23 31.4**	**+0.7**
	SNR=90						
SNGE				*e*Sg	**Sg**	**20 23 59.8**	**0.0**
	comp=N,176nm,0.4s,SNR=90						
THKV	**Tehran--Karaj**	**3.25**	**38**	*e*Pn	**Pn**	**20 23 49.1**	**+0.2**
THKV				*e*SG	**Sg**	**20 24 41.8**	**-0.4**
THKV				AML	AML	20 24 48.3	
	comp=N,40nm,0.2s						
THKV				AML	AML	20 24 49.5	
	comp=E,54nm,0.5s						
THKV	**Tehran--Karaj**	**3.25**	**38**	*e*Pn	**Pn**	**20 23 49.1**	**+0.2**
	SNR=52						
THKV				*e*Sg	**Sg**	**20 24 41.8**	**-0.4**
	comp=E,54nm,0.5s,SNR=90						
CHTH	**Charan**	**3.37**	**41**	*e*PN	**Pn**	**20 23 51.1**	**+0.5**
MIB	**Mutribah**	**3.68**	**195**	*e*P	**Pn**	**20 23 53.8**	**-1.0**
MIB				*e*S	**Sn**	**20 24 40.2**	**+2.0**
MIB				AML	AML	20 24 42.1	
	comp=Z,23nm,0.6s						
DAMV	**Damavand**	**3.70**	**52**	*e*PN	**Pn**	**20 23 55.3**	**+0.2**
DAMV				AML	AML	20 25 03.5	
	comp=N,32nm,0.4s						
DAMV				AML	AML	20 25 17.6	
	comp=E,33nm,0.3s						
UMR	**Umm Al-Rimmam**	**3.86**	**189**	*e*P	**Pn**	**20 23 56.6**	**-0.6**
UMR				*e*S	**Sn**	**20 24 43.8**	**+1.2**
UMR				AML	AML	20 24 48.2	
	comp=Z,26nm,0.5s						
RST	**Umm Al-Ruwaisa**	**4.05**	**198**	*e*P	**Pn**	**20 23 58.6**	**-1.2**
RST				*e*S	**Sn**	**20 24 48.1**	**+0.8**
RST				AML	AML	20 24 49.9	
	comp=Z,14nm,0.6s						
NAY	**Al-Naaiem**	**4.23**	**194**	*e*P	**Pn**	**20 24 01.3**	**-1.1**
NAY				*e*S	**Sn**	**20 24 52.3**	**+0.4**
NAY				AML	AML	20 24 55.2	
	comp=Z,6.9nm,0.6s						
RDF	**Al-Radifah**	**4.50**	**190**	*e*P	**Pn**	**20 24 05.4**	**-0.6**
RDF				AML	AML	20 24 59.1	
	comp=Z,17nm,0.4s						
QRN	**Al-Qurain**	**4.64**	**185**	*e*P	**Pn**	**20 24 06.3**	**-1.7**

*NEIC **19** 20:25:03.2, 3475N×2366E, h12km, MD3.5(ATH), After ATH.*
*CSEM **19** 20:25:03.2, 3475N×2366E, h12km, MD3.5/3, After ATH*
*IDC **19** 20:25:08.5±1.5, 3629N×2453E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.4/21, mbtmp3.8/4, Error ellipse: s-maj=51.4km s-min=26.6km az=134.0*
ATH 19 20:25:03.2, 3475N×2366E, h12km±6km, MD3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.36**	**76**	*e*PB	Pg	20 25 10.5	0.0
VAM	**Vamos**	**0.79**	**34**	*e*PB	Pb	20 25 17.6	-1.3
VAM				*e*SB	Sb	20 25 29.9	+0.4
KYTH	**Kithira**	**1.61**	**342**	*e*PB	Pb	20 25 33.5	+0.7
VLI	**Veliai**	**2.05**	**344**	*e*PN	Pn	20 25 40.3	+2.8
VLI				*e*SG	Sg	20 26 05.8	-3.3
HFS	**Hagfors**	**26.22**	**349**	P	P	20 30 32.4	-5.5
	0.5nm,0.4s,baz=134,slow=12,SNR=7.2						
TORD	**Torodi Ar. Bea**	**29.29**	**228**	P	Px	20 31 26.4	
	0.8nm,0.8s,baz=54,slow=7.1,SNR=7.4						
MKAR	**Makanchi Array**	**45.03**	**56**	P	P	20 33 13.8	-4.9
	0.3nm,0.3s,baz=284,slow=7.4,SNR=3.6						
ZAL	**Zalesovo**	**46.16**	**46**	P	P	20 33 22.4	-5.2
	1.9nm,0.4s,baz=353,slow=7.0,SNR=4.1						

*IDC **19** 20:32:48.0±1.5, 3374N×14183E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.6/21, mbtmp3.6/8, ML3.4/2, Error ellipse: s-maj=29.9km s-min=21.3km az=88.0*
*ISCJB **19** 20:32:49.7±1.9, 3378N±005×14187E±008, h27km±15km, mb3.6/6, Error ellipse: s-maj=11.4km s-min=8.8km az=139.6*
*NEIC **19** 20:32:51.7, 3377N×14166E, h30km, MG3.4(JMA), After JMA.*
*JMA **19** 20:32:51.7±0.5, 3377N×14166E, h30km, M3.3*
ISC 19 20:32:49.2±1.5, 3374N±005×14179E±009, h7km±10km, n23, σ0s63/30, mb3.6/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.13**	**324**	P	**Pn**	**20 33 18.6**	**-0.3**
BSO3	**Boso 3**	**1.50**	**315**	P	**Pn**	**20 33 16.4**	**0.0**
BSO4	**Boso 4**	**1.73**	**317**	P	**Pn**	**20 33 20.2**	**+0.6**
JHJ2	**Mitsune**	**1.76**	**250**	P	**Pn**	**20 33 20.3**	**+0.2**
JHJ	**Hachijo jima 2**	**1.79**	**250**	Pn	**Pn**	**20 33 20.4**	**0.0**
	86nm,0.3s,baz=240,slow=22,SNR=45						
JHJ				Sn	**Sn**	**20 33 43.4**	**+0.1**
	55nm,0.3s,baz=250,slow=22,SNR=7.8						
JIM2	**Oshima 3**	**2.18**	**297**	P	**Pn**	**20 33 24.7**	**-1.1**
JIZS	**Izushimoda**	**2.60**	**293**	P	**Pn**	**20 33 31.1**	**-0.5**
JOD2	**Odawara 2**	**2.70**	**305**	P	**Pn**	**20 33 32.1**	**-0.8**
JYN	**Shimob**	**3.20**	**304**	P	**Pn**	**20 33 40.0**	**+0.2**
JYN				S	**Sn**	**20 34 17.1**	**-1.1**
SHIG	**Shizuoka 3**	**3.24**	**295**	P	**Pn**	**20 33 41.1**	**+0.7**
JRY	**Ryogami san**	**3.29**	**315**	P	**Pn**	**20 33 41.0**	**0.0**
JRY				*e*S	**Sn**	**20 34 20.0**	**-0.3**
JAG	**Ashikaga**	**3.29**	**325**	P	**Pn**	**20 33 41.3**	**+0.2**
MJAR	**Matsushiro Arr**	**4.05**	**315**	Pn	**Pn**	**20 33 52.2**	**+0.7**
	2.2nm,0.3s,baz=136,slow=12,SNR=33						
MJAR				Sn	**Sn**	**20 34 40.0**	**+0.7**
	1.2nm,0.3s,baz=163,slow=18,SNR=4.8						
MAJO	**Matsushiro**	**4.05**	**315**	*e*Pn	**Pn**	**20 33 52.2**	**+0.6**
MAJO				*e*Sn	**Sn**	**20 34 40.2**	**+0.9**
MAT	**Matsushiro**	**4.05**	**315**	P	**Pn**	**20 33 52.4**	**+0.8**
MAT				S	**Sn**	**20 34 38.6**	**-0.7**
MAT	**Matsushiro**	**4.05**	**315**	*e*P	**Pn**	**20 33 52.0**	**+0.4**
MAT				*e*S	**Sn**	**20 34 39.0**	**-0.3**
ASAJ	**Asahikawa**	**10.38**	**3**	Pn	**Pn**	**20 35 18.1**	**-0.3**
	0.4nm,0.3s,baz=249,slow=15,SNR=5.3						
SONM	**Songino Array**	**29.98**	**309**	P	**P**	**20 38 59.3**	**+1.1**
	0.4nm,0.8s,mb3.2,baz=106,slow=8.9,SNR=3.4						
ZAL	**Zalesovo**	**44.42**	**315**	P	**P**	**20 40 59.9**	**-0.6**
	0.5nm,0.3s,mb3.8,baz=224,slow=20,SNR=3.2						
MKAR	**Makanchi Array**	**46.19**	**305**	P	**P**	**20 41 14.8**	**+0.2**
	0.4nm,0.3s,mb3.9,baz=88,slow=7.8,SNR=4.3						
BVAR	**Borovoye Array**	**53.05**	**314**	P	**P**	**20 42 05.5**	**-1.4**
	0.2nm,0.4s,mb3.4,baz=83,slow=4.6,SNR=4.2						
WRA	**Warramunga Arr**	**53.85**	**189**	P	**P**	**20 42 12.9**	**+0.2**
	0.4nm,0.6s,mb3.6,baz=5.2,slow=7.5,SNR=14						
FINES	**FINESS Array B**	**71.88**	**333**	P	**P**	**20 44 12.7**	**-0.1**
	0.8nm,1.0s,mb3.6,baz=68,slow=7.7,SNR=4.2						

*IDC **19** 20:38:13.0±0.8, 1.15N×12200E, h0km, mb3.8/8, mb1 3.8/9, mb1mx3.7/20, mbtmp3.7/9, ML3.7/1, Error ellipse: s-maj=54.1km s-min=15.3km az=68.0*
*ISCJB **19** 20:38:16.8±3.2, 1.1N±0.1×1220E±0.3, h41km±32km, mb3.7/9, Error ellipse: s-maj=48.5km s-min=12.0km az=127.3*
*NEIC **19** 20:38:18.1±0.5, 1.16N×12210E, h35km, mb3.9/1, Error ellipse: s-maj=28.7km s-min=9.3km az=63.0*
ISC 19 20:38:18.8±2.6, 11N±01×1220E±03, h41km±26km, n13, σ1s03/13, mb3.7/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**7.58**	**310**	*e*Pn	**Pn**	**20 40 07.2**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.42**	**170**	P	**Pn**	**20 42 41.4**	**-1.6**
	0.2nm,0.3s,baz=9.6,slow=13,SNR=6.0						
WRAB	**Tennant Creek**	**24.16**	**151**	*e*P	**P**	**20 43 31.7**	**+0.7**
	1.6nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**24.16**	**151**	P	**P**	**20 43 30.8**	**-0.2**
	1.1nm,0.4s,mb3.6,baz=338,slow=9.0,SNR=28						
ASAR	**Alice Springs**	**27.21**	**156**	P	**P**	**20 43 58.9**	**+0.3**
	0.4nm,0.5s,mb3.2,baz=345,slow=15,SNR=12						
STKA	**Stephens Creek**	**37.69**	**152**	P	**P**	**20 45 32.1**	**+1.9**
	0.7nm,0.4s,mb3.7,baz=342,slow=8.7,SNR=3.3						
STKA	**Stephens Creek**	**37.69**	**152**	*e*P	**P**	**20 45 31.4**	**+1.2**
MJAR	**Matsushiro Arr**	**38.31**	**21**	P	**P**	**20 45 34.4**	**-1.1**
	1.2nm,0.9s,mb3.6,baz=210,slow=11,SNR=5.0						
SONM	**Songino Array**	**48.47**	**346**	P	**P**	**20 46 58.8**	**+1.5**
	1.0nm,0.7s,mb4.0,baz=163,slow=8.6,SNR=10						
MKAR	**Makanchi Array**	**57.16**	**328**	P	**P**	**20 48 02.1**	**+0.7**
	0.6nm,0.4s,mb4.0,baz=119,slow=8.2,SNR=8.1						
BVAR	**Borovoye Array**	**67.03**	**329**	P	**P**	**20 49 05.8**	**-1.8**
	0.7nm,0.6s,mb3.9,baz=149,slow=9.4,SNR=5.1						
AKTK	**Aktyubinsk**	**72.84**	**323**	P	**P**	**20 49 43.0**	**-0.3**
AKTO	**Aktyubinsk**	**72.84**	**323**	P	**P**	**20 49 43.0**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=142,slow=8.8,SNR=3.4						

*NEIC **19** 20:55:51.7, 1584N×9634W, h45km, mb4.5/2,*

MD4.3(MEX), After MEX.

MEX 19 20:55:53.3±1.0, 1593N×9635W, h20km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.28**	**125**	*i* P	Pb	20 55 58.5	-1.2
HUIG				*i* S	Sb	20 56 03.5	-0.6
VHO	**Vista Hermosa**	**1.19**	**342**	*i* P	Pn	20 56 12.1	-2.8
VHO				*i* S	Sb	20 56 26.8	-3.4
OXX	**Oaxaca**	**1.20**	**343**	*i* P	Pn	20 56 12.5	-2.4
CMIG	**Matias Romero**	**1.82**	**50**	*i* P	Pn	20 56 19.2	-4.3
CMIG				*i* S	Sn	20 56 42.1	-3.8
UTMO	**Huajuapan**	**2.35**	**324**	*e*P	Pn	20 56 28.1	-2.6
UTMO				*i* S	Sn	20 56 55.5	-3.4
TPIG	**Tehuac#an**	**2.66**	**339**	*i* P	Pn	20 56 32.1	-2.8
TPIG				*i* S	Sn	20 57 03.4	-3.2
ACX	**Acapulco**	**3.55**	**286**	*i* P	Pn	20 56 44.0	-3.2
ACX	**Acapulco**	**3.55**	**286**	*i* P	Pn	20 56 54.0	+6.8
MEIG	**Mezcala**	**3.71**	**303**	*e*P	Pn	20 56 54.2	+4.8
MEIG				*i* S	Sn	20 57 29.1	-3.3
PPM	**Popocatepetl**	**3.80**	**325**	*i* P	Pn	20 56 47.0	-3.7
PPM				*i* S	Sn	20 57 32.1	-2.7
PLIG	**Platanillo**	**3.88**	**310**	*i* P	Pn	20 56 49.0	-2.8
PLIG				*i* S	Sn	20 57 34.4	-2.5
PLIG	**Platanillo**	**3.88**	**310**	*i* P	Pn	20 56 48.1	-3.7
PLIG				*i* S	Sn	20 57 33.0	-3.9
CAIG	**El Cayaco**	**3.92**	**287**	*i* P	Pn	20 56 49.6	-2.7
CAIG				*i* S	Sn	20 57 34.2	-3.6
CAIG	**El Cayaco**	**3.92**	**287**	*i* P	Pn	20 56 46.1	-6.2
UNM	**Universidad Na**	**4.33**	**322**	*e*P	Pn	20 56 55.0	-2.9
PAYG	**Puerto Ayora** 77nm,1.4s	**17.55**	**159**	*e*Pn	Pn	20 59 44.9	-12
MCWV	**Mont Chateau** 6.2nm,0.7s	**27.69**	**28**	*e*P	P	21 01 37.8	-2.2

NNC 19 21:22:53.7±7.5, 3991N×7576E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=64.3km s-min=31.4km az=153.0
ISCJB 19 21:22:55.7±0.7, 4006N±004×762E±0.1, h10km, Error ellipse: s-maj=11.2km s-min=5.2km az=12.3
BJI 19 21:22:56.1, 4010N×7625E, h6km, mb3.7, ML3.3

ISC 19 21:22:56.8±0.6, 4007N±004×7611E±010, h10km, n17, σ1§03/19, 3C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.56**	**191**	⇑*i*Pg	**Pg**	**21 23 07.1**	**-0.6**
KSH				SG	**Sg**	**21 23 16.8**	**+1.7**
KSH	comp=N,1μm,0.8s			Smax			
KSH	comp=E,1μm,0.4s			Smax			
KZA	**Kyzart** SNR=212	**2.11**	**342**	P	**Pn**	**21 23 31.5**	**-0.6**
ULHL	**Ulahol** SNR=117	**2.17**	**3**	P	**Pn**	**21 23 32.8**	**-0.2**
UCH	**Uchtor** SNR=15	**2.47**	**331**	P	**Pn**	**21 23 37.4**	**+0.3**
KBK	**Karagaybulak** SNR=57	**2.73**	**342**	P	**Pn**	**21 23 43.1**	**+2.5**
AML	**Almayashu** SNR=114	**2.75**	**319**	P	**Pn**	**21 23 40.8**	**-0.2**
AAK	**Ala-Archa** SNR=76	**2.83**	**335**	P	**Pn**	**21 23 42.1**	**0.0**
TKM2	**Tokmak 2** SNR=83	**2.87**	**353**	P	**Pn**	**21 23 43.3**	**+0.6**
TKM2	**Tokmak 2** comp=E,5.1nm,0.6s	**2.87**	**353**	⇓Pn	**Pn**	**21 23 43.1**	**+0.5**
TKM2	comp=E,7.7nm,0.6s			⇓Sn	**Sn**	**21 24 20.7**	**+3.5**
CHMS	**Chumysh** SNR=28	**3.10**	**341**	P	**Pn**	**21 23 45.6**	**-0.1**
EKS2	**Erkin-Say** SNR=42	**3.13**	**327**	P	**Pn**	**21 23 46.6**	**+0.5**
KNDC	**Almaty** comp=E,151nm,0.6s	**3.21**	**11**	⇑Sn	**Sb**	**21 24 33.9**	**+0.9**
USP	**Ospenovka** SNR=16	**3.41**	**340**	P	**Pn**	**21 23 49.9**	**-0.1**
KK31	**Karatay Array** comp=E,0.3nm,0.3s,baz=45,slow=26,SNR=6.8	**5.17**	**308**	⇓Pn	**Pn**	**21 24 12.5**	**-1.7**
KK31	comp=E,6.8nm,0.6s,baz=243,slow=41,SNR=35			Pg ⇓Lg	**Pb**	**21 24 26.2**	**-1.1**
KK31	comp=E,9.9nm,0.7s,baz=181,slow=63,SNR=6.7					21 25 32.3	
MK03	**Makanchi Array** comp=E,1.5nm,0.8s,baz=184,slow=12	**8.07**	**32**	⇑Pn	**Pn**	**21 24 53.1**	**-0.9**
CHKZ	**Chkalovo**	**14.11**	**346**	Lg		21 30 19.0	
GTA	**Gaotai**	**18.24**	**84**	*e*P	**Pn**	**21 27 09.0**	**-1.0**
GTA				AP	pP	21 27 13.0	0.0
GTA				XP	sP	21 27 15.8	+1.5
GTA	comp=Z,3.0nm,0.8s			AMB	AMB		

IDC 19 21:27:21.0±1.7, 5035S×11286E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.8/13, mbtmp3.8/5, Error ellipse: s-maj=82.2km s-min=20.9km az=107.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 1.1nm,0.9s,baz=209,slow=8.0,SNR=8.9	**31.27**	**39**	P	P	21 33 42.5	+0.1
VNDA	**Vanda** 1.3nm,0.8s,baz=288,slow=8.9,SNR=12	**32.77**	**162**	P	P	21 33 54.9	-0.8
FITZ	**Fitzroy Crossi** 3.9nm,1.0s,baz=195,slow=12,SNR=5.2	**33.76**	**22**	P	P	21 34 04.2	-0.1
WRA	**Warramunga Arr** 1.3nm,0.8s,baz=203,slow=10,SNR=9.7	**34.80**	**37**	P	P	21 34 12.8	-0.5
SNAA	**Sanae** 0.5nm,0.9s,baz=138,slow=16,SNR=3.6	**50.17**	**202**	P	P	21 36 17.4	-0.9
PDAR	**Pinedale Array** 0.6nm,0.8s,baz=94,slow=1.2,SNR=5.9	**150.20**	**88**	PKPbc	PKPbc	21 47 13.9	+0.1

IDC 19 21:33:07.5±8.5, 247N×12713E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/16, mbtmp3.5/4, Error ellipse: s-maj=135.3km s-min=102.8km az=139.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.8nm,0.4s,baz=1.7,slow=11,SNR=7.0	**20.49**	**184**	P	P	21 37 48.9	+1.9
WRA	**Warramunga Arr** 0.6nm,0.5s,baz=339,slow=11,SNR=9.7	**23.37**	**163**	P	P	21 38 18.1	+0.4
ASAR	**Alice Springs** 0.3nm,0.6s,baz=352,slow=7.1,SNR=6.3	**26.80**	**166**	P	P	21 38 49.2	0.0
STKA	**Stephens Creek** 2.4nm,0.9s,baz=338,slow=11,SNR=3.5	**36.82**	**159**	P	P	21 40 16.3	-0.8

CASC 19 21:34:45.0±2.2, 1191N×8730W, h9km±10km, MD4.2, ML3.3, 4C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**0.64**	**38**	⇑*i*P	Pg	21 34 58.2	+0.8
COPN	**Copaltepe**	**0.74**	**68**	⇓*i*P	Pg	21 34 59.3	0.0
COPN				*e*S	Sg	21 35 11.3	+2.4
MIRN	**Miramar**	**0.78**	**47**	⇓*e*P	Pg	21 34 59.9	-0.2
CRIN	**San Cristobal**	**0.82**	**17**	⇑*e*P	Pg	21 35 01.0	+0.1
CNGN	**Cerro Negro**	**0.83**	**45**	⇑*e*P	Pg	21 35 00.6	-0.4
XAVN	**Gruta Xavier**	**0.98**	**76**	⇓*e*P	Pg	21 35 02.6	-1.2
TICN	**Ticuantepe**	**1.05**	**83**	⇓*e*P	Pg	21 35 03.8	-1.3
MGAN	**Managua**	**1.05**	**77**	⇓*e*P	Pg	21 35 03.5	-1.7
MGAN				*e*S	Sg	21 35 19.2	+0.3
MGAN	comp=E,765nm,0.4s			*i*		21 35 20.2	
CNCH	**Conchagua**	**1.46**	**339**	*e*P	x	21 35 28.6	
CNCH				*e*S	x	21 35 48.2	
CONN	**Concepcion**	**1.67**	**102**	⇑*e*P	Pn	21 35 11.3	-3.2
VSM	**San Miguel**	**1.79**	**328**	*e*P	x	21 35 33.9	
VSM				*e*S	x	21 35 58.3	
MADN	**Villa Maderas**	**1.80**	**106**	*e*P	Pn	21 35 15.0	-1.2
VCR	**Vista de Mar**	**2.41**	**137**	*e*P	Pn	21 35 24.0	-0.7
VCR				*e*S	Sn	21 35 55.3	+1.1
LFRS	**El Faro**	**2.42**	**315**	*e*P	x	21 35 41.4	
LFRS				*e*S	x	21 36 12.2	
JCR	**Jicaral**	**2.96**	**133**	*e*P	Pn	21 35 32.7	+0.4
SBLS	**San Blas**	**2.97**	**310**	*e*P	x	21 35 50.4	
SBLS				*e*S	x	21 36 27.2	
PRS1	**Puriscal**	**3.50**	**123**	*e*P	Pn	21 35 41.3	+1.7
LAJ	**Bijagual**	**3.72**	**123**	*e*P	Pn	21 35 37.7	-5.0
LCR2	**La Lucha 2**	**3.88**	**123**	*e*P	Pn	21 35 44.6	-0.3
LCR2				*e*S	Sn	21 36 32.9	+2.2
BUS	**Buena Vista**	**4.19**	**124**	*e*P	Pn	21 35 49.6	+0.5

WEL 19 21:36:22.3±0.9, 3707S×17863E, h12km, ML3.9/4, Error ellipse: s-maj=10.5km s-min=4.0km az=90.0
ISCJB 19 21:36:23.4±1.8, 37.13S±008×1786E±02, h40km±15km, mb3.3/2, Error ellipse: s-maj=22.6km s-min=10.6km az=125.0
NEIC 19 21:36:24.1, 37.19S×17862E, h17km, ML3.9(WEL), After WEL.
IDC 19 21:36:30.3±2.4, 3727S×17681E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/11, mbtmp3.5/2, Error ellipse: s-maj=70.1km s-min=22.8km az=55.0

ISC 19 21:36:24.4±1.6, 3718S±006×1786E±01, h31km±8km, n21, σ1§03/27, mb3.3/2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.43**	**207**	P	**Pb**	**21 36 32.7**	**-1.0**
MXZ	**Matakaoa Point**	**0.43**	**207**	P*	**Pb**	**21 36 32.6**	**-1.1**
MXZ				S*	**Sb**	**21 36 39.6**	**-0.5**
PUZ	**Puketiti**	**0.92**	**195**	P	**Pn**	**21 36 41.2**	**0.0**
PUZ				S	**Sb**	**21 36 56.7**	**+3.0**
PUZ	**Puketiti**	**0.92**	**195**	P*	**Pb**	**21 36 41.0**	**-0.8**
PUZ				S*	**Sb**	**21 36 56.0**	**+2.3**
PUZ				S*	**Sb**	**21 36 56.5**	**+2.8**
MWZ	**Matawai**	**1.41**	**215**	P	**Pn**	**21 36 48.8**	**+0.9**
MWZ				S	**Sn**	**21 37 05.9**	**+0.5**
MWZ	**Matawai**	**1.41**	**215**	*e*PN	**Pn**	**21 36 49.2**	**+1.3**
URZ	**Urewera** 38nm,0.3s,baz=44,slow=3.8,SNR=121	**1.57**	**226**	Pn	**Pn**	**21 36 51.5**	**+1.4**
URZ	58nm,0.3s,baz=134,slow=14,SNR=45			Sn	**Sn**	**21 37 15.4**	**+6.0**
URZ	**Urewera**	**1.57**	**226**	P	**Pn**	**21 36 51.5**	**+1.4**
URZ	**Urewera**	**1.57**	**226**	PN	**Pn**	**21 36 51.4**	**+1.3**
KNZ	**Kokohu**	**1.96**	**200**	*e*P	**Pn**	**21 36 55.1**	**-0.5**
KNZ	**Kokohu**	**1.96**	**200**	*e*PN	**Pn**	**21 36 54.9**	**-0.7**
KUZ	**Kuaotunu**	**2.31**	**280**	PN	**Pn**	**21 37 00.1**	**-0.2**
KUZ				SN	**Sn**	**21 37 27.3**	**-0.3**
WCZ	**Waipu Caves**	**3.60**	**289**	*e*P	**Pn**	**21 37 19.1**	**+0.9**
WCZ	**Waipu Caves**	**3.60**	**289**	PN	**Pn**	**21 37 19.0**	**+0.9**
OUZ	**Omahuta**	**4.46**	**295**	*e*P	**Pn**	**21 37 31.0**	**+1.1**
OUZ	**Omahuta**	**4.46**	**295**	PN	**Pn**	**21 37 30.8**	**+0.9**
TCW	**Tory Channel**	**5.22**	**218**	SN	**Sn**	**21 38 37.6**	**-1.8**
MQZ	**McQueen's Vall**	**7.92**	**213**	SN	**Sn**	**21 39 37.0**	**-8.8**
ASAR	**Alice Springs** 0.4nm,0.6s,mb3.3,baz=119,slow=7.6,SNR=6.3	**40.43**	**277**	P	**P**	**21 43 59.1**	**-0.8**
WRA	**Warramunga Arr** 0.3nm,0.4s,mb3.3,baz=121,slow=7.7,SNR=11	**42.05**	**282**	P	**P**	**21 44 12.4**	**-0.8**
FINES	**FINESS Array B** 0.6nm,0.8s,baz=46,slow=4.0,SNR=3.7	**150.24**	**333**	PKPbc	PKPab	21 56 21.4	+2.8

NEIC 19 22:18:21.2, 1607N×9706W, h30km, MD3.7(MEX), After MEX.

MEX 19 22:18:21.5±0.7, 1607N×9705W, h16km±14km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.96**	**108**	*i* P	Pb	22 18 36.1	-3.6
HUIG				*i* S	Sb	22 18 47.9	-4.2
VHO	**Vista Hermosa**	**1.05**	**17**	*i* P	Pb	22 18 37.8	-3.5
VHO				*i* S	Sb	22 18 50.3	-4.4
OXX	**Oaxaca**	**1.06**	**17**	*e*P	Pb	22 18 38.5	-2.9
OXX				*i* S	Sb	22 18 50.0	-5.0
UTMO	**Huajuapan**	**1.90**	**338**	*e*P	Pn	22 18 50.2	-2.9
UTMO				*i* S	Sn	22 19 11.9	-4.9
CMIG	**Matias Romero**	**2.32**	**64**	*i* P	Pn	22 18 55.5	-3.4
CMIG				*i* S	Sn	22 19 23.8	-3.3
CMIG	**Matias Romero**	**2.32**	**64**	*i* P	Pn	22 18 55.5	-3.4
CMIG				*i* S	Sn	22 19 24.2	-2.9
TPIG	**Tehuac#an**	**2.36**	**353**	*i* P	Pn	22 19 00.8	+1.2
TPIG				*i* S	Sn	22 19 24.1	-4.1

IDC 19 22:20:17.8±1.3, 7.18S×13172E, h0km, mb3.7/4, mb1 3.8/7, mb1mx3.8/12, mbtmp3.7/7, ML3.6/3, MS3.5/1, Ms1 3.5/1, ms1mx2.5/19, Error ellipse: s-maj=78.1km s-min=20.2km az=76.0
NEIC 19 22:20:22.6±1.1, 724S×13198E, h35km, mb3.5/1, Error ellipse: s-maj=29.7km s-min=13.2km az=77.0
ISCJB 19 22:20:25.4±2.0, 755S±007×1317E±0.1, h90km±22km, mb3.5/4, Error ellipse: s-maj=21.3km s-min=10.7km az=155.8

ISC 19 22:20:26.1±2.0, 754S±009×1317E±01, h70km±22km, n14, σ1§25/20, mb3.5/4, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 10nm,0.4s	**5.20**	**172**	*e*P	**Pn**	**22 21 43.1**	**+1.8**
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=23,slow=22,SNR=15	**12.03**	**209**	Pn	**Pn**	**22 23 15.7**	**+1.1**
FITZ	0.6nm,0.3s,baz=186,slow=19,SNR=6.2			Sn	**Sn**	**22 25 26.3**	**-0.6**
FITZ	**Fitzroy Crossi** 2.4nm,0.4s	**12.03**	**209**	*e*P	**Pn**	**22 23 16.5**	**+1.9**
FITZ				*e*S	**Sn**	**22 25 26.1**	**-0.8**
WRAB	**Tennant Creek** 2.4nm,0.5s	**12.59**	**168**	*e*Pn	**Pn**	**22 23 22.0**	**-0.2**
WRAB				*e*Sn	**Sn**	**22 25 41.3**	**+0.6**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=352,slow=14,SNR=24	**12.60**	**168**	Pn	**Pn**	**22 23 21.2**	**-1.2**
WRA	1.1nm,0.3s,baz=349,slow=24,SNR=7.1			Sn	**Sn**	**22 25 40.2**	**-0.7**
WB2	**Warramunga Ar**	**12.60**	**168**	*e*P	**Pn**	**22 23 21.5**	**-0.9**
WB2				*e*S	**Sn**	**22 25 40.4**	**-0.5**
ASAR	**Alice Springs** 0.2nm,0.3s,baz=357,slow=8.9,SNR=12	**16.18**	**173**	Pn	**Pn**	**22 24 09.8**	**+0.8**
ASAR	0.2nm,0.3s,baz=356,slow=26,SNR=4.7			Sn	**Sn**	**22 27 06.8**	**-0.8**
MBWA	**Marble Bar** 2.6nm,0.7s	**17.79**	**219**	P	**Pn**	**22 24 33.8**	**+4.9**
STKA	**Stephens Creek** 0.7nm,0.4s,mb3.5,baz=339,slow=14,SNR=3.9	**25.92**	**160**	P	**P**	**22 25 55.3**	**+3.6**
STKA	comp=Z,104nm,18.3s,baz=246,slow=40			LR		22 37 34.0	
STKA	**Stephens Creek**	**25.92**	**160**	P	**P**	**22 25 54.6**	**+2.9**
SONM	**Songino Array** 0.4nm,0.8s,mb3.5,baz=160,slow=8.8,SNR=3.5	**59.48**	**340**	P	**P**	**22 30 20.3**	**-1.5**
MKAR	**Makanchi Array** 0.5nm,0.3s,mb3.8,baz=114,slow=7.4,SNR=7.4	**69.58**	**326**	P	**P**	**22 31 27.2**	**-0.5**
MKAR	**Makanchi Array**	**69.58**	**326**	P	**P**	**22 31 27.2**	**-0.5**
VNDA	**Vanda** 0.3nm,0.6s,mb3.3,baz=324,slow=6.9,SNR=2.9	**71.72**	**173**	P	**P**	**22 31 44.1**	**+3.4**

ISCJB 19 22:55:13.3±0.8, 248N±0.1×12181E±006, h94km±8km, mb3.3/4, Error ellipse: s-maj=17.1km s-min=8.5km az=152.1
JMA 19 22:55:13.4±0.3, 2485N×12180E, h85km, M2.8
NEIC 19 22:55:14.6±1.0, 2470N×12184E, h88km±9km, Error ellipse: s-maj=21.0km s-min=15.7km az=118.0
IDC 19 22:55:16.4±8.5, 2478N×12199E, h108km±85km, mb3.1/4, mb1 3.2/5, mb1mx3.0/21, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=67.0km s-min=20.7km az=70.0

ISC 19 22:55:14.5±0.8, 2475N±010×12182E±006, h87km±8km, n12, σ0§41/18, mb3.3/4, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.61**	**200**	*e*Pn	**Pn**	**22 55 29.7**	**-0.2**
NACB				*e*Sn	**Sn**	**22 55 41.3**	**0.0**
YOJ	**Yonaguni jima**	**1.12**	**105**	P	**Pn**	**22 55 34.9**	**-0.5**
YOJ				S	**Sn**	**22 55 51.1**	**0.0**
IRIF	**Iriomote-Funau**	**1.79**	**103**	P	**Pn**	**22 55 43.3**	**-0.5**
IRIF				*e*S	**Sn**	**22 56 06.5**	**+0.4**
HATJ	**Hateruma jima**	**1.94**	**110**	P	**Pn**	**22 55 46.0**	**+0.2**
HATJ				*e*S	**Sn**	**22 56 10.1**	**+0.5**
JKRS	**Kuro-shima**	**2.06**	**104**	P	**Pn**	**22 55 47.4**	**0.0**
JKRS				*e*S	**Sn**	**22 56 12.2**	**-0.2**
JIJ	**Ishigaki jima**	**2.15**	**100**	P	**Pn**	**22 55 48.1**	**-0.5**
JTJ	**Tarama**	**2.62**	**92**	P	**Pn**	**22 55 55.7**	**+0.8**
JOW	**Kunigami** 0.6nm,0.3s,baz=113,slow=24,SNR=7.2	**6.18**	**69**	P	**Pn**	**22 56 43.2**	**+0.2**
JOW	0.1nm,0.3s,baz=126,slow=18,SNR=2.0			S	**Sn**	**22 57 51.7**	**-0.6**
SONM	**Songino Array** 0.2nm,0.4s,mb2.9,baz=154,slow=11,SNR=2.8	**26.08**	**336**	P	**P**	**23 00 40.6**	**+0.7**
WRA	**Warramunga Arr** 0.7nm,0.7s,mb3.5,baz=346,slow=8.7,SNR=6.2	**46.06**	**164**	P	**P**	**23 03 29.3**	**-0.3**
ASAR	**Alice Springs** 0.1nm,0.3s,mb3.3,baz=340,slow=6.7,SNR=4.4	**49.54**	**165**	P	**P**	**23 03 56.4**	**0.0**
FINES	**FINESS Array B** 0.5nm,0.8s,mb3.4,baz=32,slow=5.4,SNR=3.0	**71.25**	**330**	P	**P**	**23 06 24.0**	**-0.4**

ISCJB 19 23:12:01.1±0.7, 110S±02×666E±0.1, h10km, mb4.1/7, MS3.6/8, Error ellipse: s-maj=26.1km s-min=16.4km az=176.9
IDC 19 23:12:01.1±0.8, 1084S×6663E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.6/23, mbtmp3.9/6, MS3.6/8, Ms1 3.6/8, ms1mx3.2/26, Error ellipse: s-maj=35.9km s-min=21.1km az=179.0
NEIC 19 23:12:02.8±0.6, 1090S×6663E, h10km, mb4.7/2, Error ellipse: s-maj=25.8km s-min=16.5km az=177.0

ISC 19 23:12:03.6±0.7, 109S±02×666E±01, h10km, n16, σ0§29/8, mb4.1/7, MS3.6/8, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo** 1.7nm,0.9s,baz=356,slow=6.7,SNR=3.3	**20.26**	**246**	P	**P**	**23 16 39.0**	**-0.1**
KMBO	**Kilima Mbogo** comp=Z,64nm,19.9s,MS3.3,baz=97,slow=32	**30.74**	**286**	LR	LR	23 28 15.2	
ATD	**Arta Tunnel** comp=Z,40nm,18.6s,MS3.1,baz=158,slow=31	**32.48**	**313**	LR	LR	23 28 53.1	
LSZ	**Lusaka** 5.3nm,0.7s,mb4.4,baz=89,slow=6.7,SNR=18	**37.65**	**259**	P	**P**	**23 19 18.7**	**0.0**
BOSA	**Boshof** comp=Z,81nm,18.7s,MS3.6,baz=99,slow=34	**42.46**	**239**	LR	LR	23 36 08.5	
NWAO	**Narrogin (SRO)** comp=Z,103nm,20.7s,MS3.8,baz=331,slow=29	**51.26**	**124**	LR	LR	23 36 32.6	
KIV	**Kislovodsk** 7.2nm,1.1s,mb4.6	**58.78**	**340**	P	**P**	**23 22 02.3**	**+0.4**
ASAR	**Alice Springs** 0.9nm,0.8s,mb3.9,baz=277,slow=6.4,SNR=12	**64.99**	**111**	P	**P**	**23 22 43.5**	**-0.2**
ASAR	comp=Z,80nm,20.9s,MS3.9,baz=359,slow=34			LR	LR	23 49 03.2	
WRA	**Warramunga Arr** 1.5nm,0.8s,mb4.1,baz=278,slow=5.6,SNR=13	**65.54**	**107**	P	**P**	**23 22 47.5**	**+0.2**
WRAB	**Tennant Creek** 6.8nm,1.1s,mb4.6	**65.55**	**107**	*e*P	**P**	**23 22 47.6**	**+0.2**
SONM	**Songino Array** 1.6nm,0.7s,mb4.1,baz=217,slow=6.4,SNR=10	**68.31**	**28**	P	**P**	**23 23 04.3**	**-0.6**
SONM	comp=Z,52nm,21.4s,MS3.7,baz=194,slow=35			LR	LR	23 52 00.2	
DBIC	**Dimbokro** comp=Z,48nm,18.4s,MS3.8,baz=266,slow=33	**73.24**	**280**	LR	LR	23 52 49.2	
SNAA	**Sanae** comp=Z,14nm,18.4s,MS3.3,baz=234,slow=30	**73.30**	**198**	LR	LR	23 48 56.4	
ESDC	**Sonseca Array** 0.2nm,0.5s,mb3.3,baz=104,slow=4.1,SNR=2.8	**82.39**	**313**	P	**P**	**23 24 25.9**	**+0.1**
PDAR	**Pinedale Array** 0.4nm,0.7s,baz=341,slow=3.1,SNR=4.5	**148.09**	**355**	PKPbc	PKPbc	23 31 46.3	-3.2
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=223,slow=6.2,SNR=3.6	**152.24**	**8**	PKPbc	PKPbc	23 31 59.5	0.0

IDC 19 23:21:31.7±1.1, 1695N×10028W, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.8/22, mbtmp3.7/7, ML3.5/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/24, Error ellipse: s-maj=39.8km s-min=20.5km az=55.0
ISCJB 19 23:21:36.0±0.4, 1707N±003×10007W±002, h40km±4km, mb4.0/16, MS3.4/5, Error ellipse: s-maj=5.4km s-min=3.9km az=8.8
MEX 19 23:21:38.7±0.6, 1710N×10008W, h30km±6km, MD4.5
NEIC 19 23:21:38.1, 1704N×10007W, h37km, mb4.1/18, MD4.5(MEX), After MEX.

ISC 19 23:21:37.1±0.5, 1709N±004×10007W±002, h32km±4km, n66, σ1§03/86, mb4.0/16, MS3.4/5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.20**	**257**	*i* P	**Pb**	**23 21 43.0**	**-0.5**
CAIG				*i* S	**Sb**	**23 21 47.6**	**-0.2**
CAIG				*i* S	**Sb**	**23 21 47.7**	**-0.1**
CAIG	**El Cayaco**	**0.20**	**257**	*i* P	**Pb**	**23 21 43.0**	**-0.5**
CAIG				*i* S	**Sb**	**23 21 47.6**	**-0.2**
ACX	**Acapulco**	**0.27**	**147**	*i* P	**Pb**	**23 21 45.0**	**+0.7**
MEIG	**Mezcala**	**0.93**	**27**	*i* P	**Pn**	**23 21 53.0**	**-1.0**
MEIG				*i* S	**Sn**	**23 22 05.2**	**-1.2**
PLIG	**Platanillo**	**1.40**	**23**	*i* P	**Pn**	**23 22 00.3**	**-0.2**
PLIG				*i* S	**Sn**	**23 22 17.6**	**-0.3**
PLIG	**Platanillo**	**1.40**	**23**	*i* P	**Pn**	**23 22 00.1**	**-0.4**
PLIG				*i* S	**Sn**	**23 22 17.9**	**+0.1**
ZIIG	**Zihuatanejo**	**1.43**	**291**	*i* P	**Pn**	**23 22 00.6**	**-0.3**
ZIIG				*i* S	**Sn**	**23 22 17.4**	**-1.2**
YAIG	**Yautepec**	**2.00**	**28**	*i* P	**Pn**	**23 22 09.0**	**+0.2**
YAIG				*i* S	**Sn**	**23 22 32.4**	**-0.3**
YAIG	**Yautepec**	**2.00**	**28**	*i* P	**Pn**	**23 22 09.0**	**+0.2**
YAIG				*i* S	**Sn**	**23 22 34.4**	**+1.7**
IIZ	**Mezontepec**	**2.23**	**21**	*i* P	**Pn**	**23 22 12.2**	**+0.4**
IIZ				*i* S	**Sn**	**23 22 37.2**	**-1.1**
UTMO	**Huajuapan**	**2.28**	**71**	*e*P	**Pn**	**23 22 12.5**	**-0.1**
UTMO				*i* S	**Sn**	**23 22 39.4**	**-0.3**
UNM	**Universidad Na**	**2.38**	**21**	*i* P	**Pn**	**23 22 14.3**	**+0.3**
UNM				*i* P		23 22 15.3	
UNM				*i* P		23 22 15.5	
UNM				*i* S	**Sn**	**23 22 42.6**	**+0.5**
UNM	**Universidad Na**	**2.38**	**21**	*i* P	**Pn**	**23 22 15.3**	**+1.3**
UNM				*i* S	**Sn**	**23 22 45.6**	**+3.5**
PPM	**Popocatepetl**	**2.40**	**35**	*i* P	**Pn**	**23 22 14.3**	**+0.2**
PPM				*i* S	**Sn**	**23 22 43.5**	**+1.1**
MOIG	**Morelia**	**2.78**	**338**	*i* P	**Pn**	**23 22 19.2**	**-0.3**
MOIG				*i* S	**Sn**	**23 22 51.6**	**-0.4**
MOIG	**Morelia**	**2.78**	**338**	*i* P	**Pn**	**23 22 22.2**	**+2.7**
MOIG				*i* S	**Sn**	**23 22 55.6**	**+3.6**
TPIG	**Tehuac#an**	**2.90**	**62**	*i* P	**Pn**	**23 22 21.0**	**-0.1**
TPIG				*i* S	**Sn**	**23 22 53.9**	**-0.9**
VHO	**Vista Hermosa**	**3.19**	**90**	*i* P	**Pn**	**23 22 25.1**	**+0.1**
VHO				*i* S	**Sn**	**23 23 02.3**	**+0.3**
VHO	**Vista Hermosa**	**3.19**	**90**	*i* P	**Pn**	**23 22 23.1**	**-1.9**
VHO				*i* S	**Sn**	**23 22

	7.3nm,0.8s,mb4.2								
SWET	**Sewanee**	22.02	32	*e*P		P	23 26 28.3	-0.5	
KSU1	**Kansas State U**	22.14	7	*e*P		P	23 26 31.1	+1.1	
PV01	**Paradox Valley**	22.25	342	*e*P		P	23 26 34.0	+2.8	
CCM	**Cathedral Cave**	22.28	19	*e*P		P	23 26 33.5	+1.9	
	3.6nm,0.7s,mb3.9								
FVM	**French Village**	22.47	20	*e*P		P	23 26 32.5	-1.1	
	5.7nm,0.8s,mb4.0								
SMCO	**Snowmass**	22.82	346	P		P	23 26 37.2	-0.1	
	6.3nm,0.9s,mb4.0								
CPCT	**Cooper Cave**	22.93	34	*e*P		P	23 26 38.9	+0.4	
ISCO	**Idaho Springs**	23.14	349	*e*P		P	23 26 41.1	+0.5	
	2.8nm,0.7s,mb3.8								
WCI	**Wyandotte Cave**	24.28	27	*e*P		P	23 26 52.1	+0.7	
	7.2nm,0.6s,mb4.3								
HWUT	**Hardware Ranch**	26.36	340	*e*P		P	23 27 09.2	-1.1	
	3.4nm,0.8s,mb3.9								
NVAR	**Mina Array Bea**	26.59	327	P		P	23 27 12.4	-0.1	
	1.5nm,0.9s,mb3.5,baz=137,slow=9.6,SNR=5.9								
PDAR	**Pinedale Array**	26.84	344	P		P	23 27 13.7	-1.0	
	0.4nm,0.7s,mb3.1,baz=140,slow=9.2,SNR=2.7								
PDAR				PcP	PcP		23 30 36.4	-0.4	
	0.2nm,0.6s,baz=152,slow=4.1,SNR=2.9								
PDAR				LR	LR		23 38 57.3		
	comp=Z,130nm,19.5s,MS3.5,baz=166,slow=39								
TPAW	**Teton Pass**	27.89	343	*e*P		P	23 27 25.1	+1.1	
	4.1nm,0.8s,mb4.1								
TPAW				*e*pP	pP		23 27 37.3	+4.1	
LOHW	**Long Hollow**	27.91	344	*e*P		P	23 27 24.9	+0.7	
	2.3nm,0.7s,mb3.9								
ULM	**Lac du Bonnet**	33.25	5	LR	LR		23 42 26.6		
	comp=Z,27nm,18.5s,MS3.0,baz=60,slow=38								
SAML	**Samuel**	44.71	123	*e*P		P	23 29 46.3	-0.9	
	1.3nm,0.8s,mb3.8								
SCHQ	**Schefferville**	45.49	26	P		P	23 29 54.5	+1.2	
	2.4nm,0.8s,mb4.1,baz=254,slow=7.4,SNR=2.5								
LPAZ	**La Paz**	45.73	135	P		P	23 29 56.0	+0.7	
	0.4nm,0.4s,mb3.7,baz=303,slow=10,SNR=4.4								
LPAZ	**La Paz**	45.73	135	*e*P		P	23 29 56.8	+1.5	
	0.4nm,0.3s,mb3.8								
YKA	**Yellowknife Ar**	46.49	351	LR	LR		23 50 40.9		
	comp=Z,55nm,18.9s,MS3.5,baz=155,slow=38								
LVC	**Limon Verde**	49.86	141	P		P	23 30 27.5	+0.1	
	2.1nm,0.8s,mb4.2								
CPUP	**Villa Florida**	59.90	135	P		P	23 31 39.7	-0.3	
	1.0nm,0.6s,mb4.0,baz=320,slow=7.0,SNR=4.4								
CPUP	**Villa Florida**	59.90	135	*e*P		P	23 31 39.6	-0.3	
	14nm,1.0s,mb4.9								
NOA	**NORSAR Array B**	85.06	27	LR	LR		00 11 07.2		
	comp=Z,17nm,18.5s,MS3.5,baz=295,slow=35								
ARCES	**ARCESS Array B**	85.54	17	LR	LR		00 15 22.2		
	comp=Z,20nm,18.5s,MS3.5,baz=342,slow=38								
WRA	**Warramunga Arr**	128.51	258	PKP	PKPdf		23 40 41.4	+0.6	
	1.0nm,0.7s,baz=79,slow=2.6,SNR=10								

NEIC ***19*** *23:39:36.0, 38.13S×175.62E, h204km, MG3.7(WEL), After WEL.*

WEL 19 23:39:43.6±0.5, 38.41S×175.95E, h151km±5km, ML3.2/9, 1C, Error ellipse: s-maj=6.2km s-min=4.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BKZ	**Black Stump Fm**	0.87	151	P		Pn	23 40 07.8	+0.5
BKZ	**Black Stump Fm**	0.87	151	PN		Pn	23 40 07.8	+0.4
BKZ				SN		Sn	23 40 25.6	+0.2
URZ	**Urewera**	0.93	81	*e*P		Pn	23 40 07.9	+0.1
URZ	**Urewera**	0.93	81	PN		Pn	23 40 07.7	0.0
URZ				SN		Sn	23 40 26.1	-0.2
MOVZ	**Moawhango**	1.01	189	P		Pn	23 40 08.5	0.0
MOVZ	**Moawhango**	1.01	189	⇑PN		Pn	23 40 08.5	+0.1
MWZ	**Matawai**	1.25	87	PN		Pn	23 40 10.8	+0.2
MWZ				SN		Sn	23 40 31.2	-0.1
KNZ	**Kokohu**	1.48	115	SN		Sn	23 40 35.6	+0.1
TSZ	**Takapari Road**	1.65	180	P		Pn	23 40 14.4	-0.3
TSZ	**Takapari Road**	1.65	180	PN		Pn	23 40 14.3	-0.4
TSZ				SN		Sn	23 40 37.7	-0.9
MRZ	**Mangatainoka R**	2.27	187	*e*P		Pn	23 40 20.3	-1.6
MRZ	**Mangatainoka R**	2.27	187	PN		Pn	23 40 20.2	-1.7
MRZ				SN		Sn	23 40 48.7	-2.7
KIW	**Kapiti Island**	2.58	198	P		Pn	23 40 23.4	-2.2
KIW	**Kapiti Island**	2.58	198	PN		Pn	23 40 23.3	-2.4
WCZ	**Waipu Caves**	2.77	332	*e*P		Pn	23 40 19.0	-9.1
CAW	**Cannon Point**	2.78	194	PN		Pn	23 40 25.7	-2.5
TCW	**Tory Channel**	3.08	204	PN		Pn	23 40 28.9	-3.0
TCW				SN		Sn	23 41 05.4	-4.0
TUWZ	**Tuamarina**	3.39	206	PN		Pn	23 40 32.6	-3.2
TUWZ				SN		Sn	23 41 12.0	-4.4
NNZ	**Nelson**	3.43	214	PN		Pn	23 40 32.9	-3.6
NNZ				SN		Sn	23 41 13.4	-4.1
THZ	**Tophouse**	4.08	214	PN		Pn	23 40 41.4	-3.5
THZ				SN		Sn	23 41 28.0	-4.5
KHZ	**Kahutara**	4.41	204	PN		Pn	23 40 45.3	-3.8
KHZ				SN		Sn	23 41 34.9	-5.2
MQZ	**McQueen's Vall**	5.85	204	SN		Sn	23 42 04.9	-10

IDC ***19*** *23:41:25.3±2.2, 6.07S×130.09E, h0km, mb3.6/1, mb1 4.0/4, mb1mx3.7/13, mbtmp3.8/4, ML3.9/3, Error ellipse: s-maj=92.8km s-min=27.6km az=77.0*

ISCJB ***19*** *23:41:28.0±1.6, 6.15S±0.1×130.1E±0.3, h33km, mb3.5/1, Error ellipse: s-maj=44.1km s-min=17.2km az=143.1*

NEIC ***19*** *23:41:30.0±1.5, 6.11S×130.25E, h35km, Error ellipse: s-maj=41.5km s-min=16.4km az=72.0*

ISC 19 23:41:30.2±1.6, 61S±0.1×130.2E±0.3, h35km, n6, σ1§19/6, mb3.5/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	12.74	200	Pn		**Pn**	**23 44 28.6**	**-0.2**
FITZ				Sn		Sx	23 46 39.3	
	0.6nm,0.3s,baz=40,slow=12,SNR=31							
WRAB	**Tennant Creek**	14.31	164	*e*Pn		**Pn**	**23 44 50.4**	**+0.1**
	0.6nm,0.3s,baz=37,slow=20,SNR=5.1							
WRAB				*e*Sn		Sx	23 47 17.8	
	9.4nm,0.7s							
WRA	**Warramunga Arr**	14.32	164	Pn		**Pn**	**23 44 48.7**	**-1.7**
	0.6nm,0.3s,baz=345,slow=13,SNR=15							
WRA				Sn		Sx	23 47 18.4	
	1.3nm,0.3s,baz=341,slow=25,SNR=12							
AS31	**Alice Springs**	17.81	169	*e*Pn		**Pn**	**23 45 36.1**	**+0.9**
AS31				*e*Sn		Sx	23 48 43.6	
ASAR	**Alice Springs**	17.81	169	P		**Pn**	**23 45 36.1**	**+0.9**
	0.3nm,0.3s,baz=348,slow=8.9,SNR=23							
ASAR				S		Sx	23 48 41.2	
	0.3nm,0.3s,baz=349,slow=26,SNR=7.1							
MKAR	**Makanchi Array**	67.61	327	P		**P**	**23 52 23.3**	**-0.1**
	0.2nm,0.4s,mb3.5,baz=133,slow=7.4,SNR=3.1							

MOS ***20*** *00:14:54.1±1.2, 8.40N×102.82W, h10km, mb4.8/16, Error ellipse: s-maj=22.0km s-min=7.7km az=98.3*

ISCJB ***20*** *00:14:55.1±0.6, 8.48N±0.08×102.61W±0.08, h10km, mb4.5/51, MS4.3/20, Error ellipse: s-maj=14.3km s-min=7.5km az=87.3*

IDC ***20*** *00:14:55.6±1.2, 8.64N×102.55W, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.2/21, mbtmp4.2/13, ML3.6/1, MS4.2/17, Ms1 4.2/17, ms1mx4.0/25, Error ellipse: s-maj=46.4km s-min=14.5km az=61.0*

BJI ***20*** *00:14:56.8, 8.50N×102.60W, h10km, Ms5.2, Msz4.5*

HRVD ***20*** *00:14:56.8±0.4, 8.44N×102.93W, h13km±1km, MW5.0/69, Centroid moment Tensor Solution. LP body waves: s35,c43;Mantle waves: s69,c109; Half duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.05±.14; Mθθ=2.11±.13; Mϕϕ=1.05±.14; Mrθ=0.19±.29; Mrϕ=-3.52±.13; Mθϕ=1.95±.42; Best double couple: Mo=4.39900×10^16 NP1:ϕs=260.00000°, δ61.00000°, λ=-169.00000°. NP2: ϕs=165.00000°, δ80.00000°, λ=-29.00000°. Principal axes: T 4.6630, Plg13.0000°, Azm215.0000°; N -0.5160, Plg59.0000°, Azm327.0000°; P -4.1360, Plg28.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***20*** *00:14:56.8±0.6, 8.51N×102.61W, h10km, mb4.7/41 Error ellipse: s-maj=14.2km s-min=7.4km az=55.0*

ISC 20 00:14:57.7±0.5, 8.55N±0.08×102.56W±0.07, h10km, n211, σ0§73/193, mb4.5/51, MS4.3/20, 48C-59D, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMIG	**Matias Romero**	11.32	41	Pn		Pn	00 17 37.1	-2.2
	0.4nm,0.3s,baz=229,slow=9.3,SNR=5.9							
CMIG				LR		LR	00 21 19.1	
	comp=Z,3μm,18.2s,baz=222,slow=34							
JCT	**Junction City**	21.97	6	*e*P		P	00 19 53.2	+1.6
JCT				pmax		pmax		
	comp=Z,54nm,1.0s,mb4.9							
JCT	**Junction City**	21.97	6	*e*P		P	00 19 53.2	+1.5
	comp=Z,54nm,1.0s,mb4.9							
HKT	**Hockley**	22.20	16	⇑*i*P		P	00 19 55.7	+1.6
HKT				pmax		pmax		
	comp=Z,154nm,1.6s,mb5.2							
HKT	**Hockley**	22.20	16	⇑*i*P		P	00 19 55.7	+1.5
	comp=Z,154nm,1.6s,mb5.2							
NATX	**Nacogdoches**	24.24	17	*e*P		P	00 20 15.5	+0.9
	comp=Z,58nm,1.1s,mb4.9							
TUC	**Tucson**	24.84	343	*e*P		P	00 20 19.4	-0.8
TUC				pmax		pmax		
	comp=Z,14nm,1.1s,mb4.4							
TUC	**Tucson**	24.84	343	*e*P		P	00 20 19.4	-0.7
	comp=Z,14nm,1.1s,mb4.4							
116A	**Eloy**	25.35	342	⇑P		P	00 20 24.8	0.0
	baz=26							
115A	**Sonoran Desert**	25.65	341	⇑P		P	00 20 27.3	-0.1
	baz=26,SNR=12							
LAZ	**Ladron**	26.07	351	*e*P		P	00 20 31.8	+0.5
WMOK	**Wichita Mounta**	26.29	7	*e*P		P	00 20 31.3	-2.0
WMOK				pmax		pmax		
	comp=Z,9.0nm,1.4s,mb4.1							
WMOK	**Wichita Mounta**	26.29	7	*e*P		P	00 20 31.3	-2.0
	comp=Z,8.8nm,1.4s,mb4.1							
Z14A	**Wintersburg**	26.49	340	⇑P		P	00 20 34.8	-0.3
	baz=27							
ANMO	**Albuquerque**	26.52	353	P		P	00 20 34.2	-1.1
	comp=Z,1.4nm,0.7s,mb3.6,baz=206,slow=10.0,SNR=6.6							
ANMO				LR		LR	00 30 41.5	
	comp=Z,491nm,18.9s,MS4.1,baz=30,slow=36							
ANMO	**Albuquerque**	26.52	353	*e*P		P	00 20 36.1	+0.7
ANMO				pmax		pmax		
	comp=Z,3.0nm,1.2s							
ANMO	**Albuquerque**	26.52	353	*e*P		P	00 20 36.1	+0.7
	comp=Z,3.2nm,1.2s,mb3.7							
GLA	**Glamis**	26.89	337	⇑P		P	00 20 38.5	-0.2
	baz=27							
Y14A	**Wickenburg**	27.04	341	⇑P		P	00 20 40.0	-0.1
	baz=27							
DVTC	**Desert V Tower**	27.07	334	⇓P		P	00 20 40.1	-0.3
	baz=27							
MIAR	**Mount Ida**	27.16	16	*e*P		P	00 20 41.3	+0.2
MIAR				pmax		pmax		
	comp=Z,38nm,1.1s,mb4.8							
MIAR	**Mount Ida**	27.16	16	*e*P		P	00 20 41.3	+0.2
	comp=Z,38nm,1.1s,mb4.8							
SWSC	**Sam W. Stewart**	27.19	335	⇑P		P	00 20 41.0	-0.4
	baz=27							
Y13A	**Salome**	27.20	339	⇓P		P	00 20 41.4	-0.1
	baz=27							
X15A	**Humboldt**	27.30	342	⇓P		P	00 20 42.7	+0.3
	baz=27							
Y12C	**Blythe**	27.40	338	⇑P		P	00 20 43.2	0.0
	baz=28							
MONP	**Monument Peak**	27.41	334	⇓P		P	00 20 43.7	+0.4
	baz=28							
X14A	**Yava**	27.49	341	⇑P		P	00 20 44.4	+0.3
	baz=28							
X13A	**Yucca**	27.91	340	⇓P		P	00 20 47.8	0.0
	baz=28,SNR=5.6							
IRM	**Iron Mountain**	28.00	337	⇓P		P	00 20 48.7	+0.1
	baz=28,SNR=7.4							
WUAZ	**Wupatki**	28.02	345	*e*P		P	00 20 48.4	-0.4
	comp=Z,18nm,1.1s,mb4.6							
PFO	**Pinyon Flat Ob**	28.04	335	⇑P		P	00 20 49.1	+0.1
	baz=28							
BELC	**Belle Mtn.**	28.19	336	⇓P		P	00 20 50.2	-0.1
	baz=28							
W14A	**Seligman**	28.23	342	⇓P		P	00 20 51.0	+0.2
	baz=28							
ROSC	**El Rosal**	28.27	96	LR		LR	00 29 39.8	
	comp=Z,252nm,21.7s,MS3.8,baz=340,slow=31							
LRAL	**Lakeview Retre**	28.30	28	*e*P		P	00 20 52.6	+1.3
	comp=Z,10nm,1.2s,mb4.3							
MURC	**Murrieta**	28.35	334	⇑P		P	00 20 51.6	-0.2
	baz=28							
W13A	**Hualapai Mount**	28.39	340	⇑P		P	00 20 52.3	+0.1
	baz=28							
ATAH	**Atahualpa**	28.62	122	P		P	00 20 57.0	+2.8
	comp=Z,1.6nm,0.4s,mb4.1,baz=315,slow=10.0,SNR=2.5							
GMRC	**Granite Mounta**	28.74	337	⇑P		P	00 20 55.5	+0.2
	baz=29							
HEC	**Hector,Ludlow**	29.05	336	⇓P		P	00 20 57.8	-0.2
	baz=29							
BFSC	**Mount Baldy St**	29.09	334	⇓P		P	00 20 58.2	-0.2
	baz=29							
SDCO	**Great Sand Dun**	29.19	355	*e*P		P	00 20 59.9	+0.6
	comp=Z,35nm,0.7s,mb5.2							
V12A	**Nelson**	29.29	339	⇓P		P	00 21 00.2	+0.1
	baz=29							
TUQ	**Turquoise Mtn.**	29.42	337	⇓P		P	00 21 01.4	+0.2
	baz=30							
PLAL	**Pickwick Lake**	29.47	25	*e*P		P	00 21 02.1	+0.3
	comp=Z,16nm,1.0s,mb4.7							
GSC	**Goldstone**	29.65	336	⇓P		P	00 21 02.9	-0.5
	baz=30							
EDW2	**Edwards Air Fo**	29.78	334	⇑P		P	00 21 03.8	-0.7
	baz=30							
SHOC	**Shoshone**	29.96	337	⇑P		P	00 21 05.8	-0.3
	baz=30							
LRMC	**Laurel Mountai**	30.16	335	⇓P		P	00 21 07.3	-0.6
	baz=30							
PV10	**Paradox Valley**	30.26	350	*e*P		P	00 21 09.1	+0.3
WVT	**Waverly**	30.56	24	*e*P		P	00 21 11.5	+0.1
WVT				pmax		pmax		
	comp=Z,9.0nm,1.0s,mb4.5							
WVT	**Waverly**	30.56	24	*e*P		P	00 21 11.5	0.0
	comp=Z,9.4nm,1.0s,mb4.6							
MPMC	**Manual Prospec**	30.58	336	⇓P		P	00 21 11.4	-0.2
	baz=31,SNR=7.2							
FURC	**Furnace Creek,**	30.69	337	⇑P		P	00 21 12.2	-0.3
	baz=31							
SMCO	**Snowmass**	30.75	353	*e*P		P	00 21 13.4	+0.3
	comp=Z,12nm,1.3s,mb4.6							
MSU	**Marysvale**	31.06	345	*e*P		P	00 21 16.6	+0.8
SRU	**San Rafael**	31.26	348	*e*P		P	00 21 17.5	0.0
SRU				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.1							
SRU	**San Rafael**	31.26	348	*e*P		P	00 21 17.5	-0.1
	comp=Z,2.6nm,0.9s,mb4.1							
HELL	**Mitchell Peak,**	31.75	334	⇓P		P	00 21 22.0	+0.2
	baz=32,SNR=6.5							
PKD	**Parkfield**	31.82	332	⇑P		P	00 21 22.0	-0.5
	baz=32							
S09A	**Goldfield**	31.93	338	⇓P		P	00 21 23.7	+0.3
	baz=32							
R10A	**Warm Springs**	32.09	339	⇑P		P	00 21 26.1	+1.2
	baz=32							
USIN	**University of**	32.23	22	*e*P		P	00 21 26.9	+0.8
	comp=Z,22nm,0.9s,mb5.0							
Q12A	**Willow Creek R**	32.30	342	⇑P		P	00 21 26.9	+0.2
	baz=32							
T06C	**Millerton Lake**	32.32	334	⇓P		P	00 21 26.1	-0.7
	baz=32							
R09A	**Tonopah**	32.33	338	⇓P		P	00 21 27.4	+0.4
	baz=32,SNR=6.7							
MPU	**Maple Canyon**	32.36	347	*e*P		P	00 21 28.6	+1.3
	comp=Z,23nm,1.0s,mb5.0							
MLAC	**Mammoth Lakes**	32.48	336	⇓P		P	00 21 28.4	+0.1
	baz=33							
DAU	**Daniels Canyon**	32.66	348	*e*P		P	00 21 30.6	+0.7
P12A	**McGill**	32.72	342	⇑P		P	00 21 30.8	+0.5
	baz=33							
R08A	**Mina**	32.81	337	⇑P		P	00 21 31.4	+0.3
	baz=33							
DUG	**Dugway**	32.81	345	*e*P		P	00 21 30.9	-0.3
DUG				pmax		pmax		
	comp=Z,16nm,1.3s,mb4.8							
DUG	**Dugway**	32.81	345	*e*P		P	00 21 30.9	-0.3
	comp=Z,16nm,1.3s,mb4.8							
NVAR	**Mina Array Bea**	32.96	337	P		P	00 21 33.6	+1.1
	comp=Z,2.0nm,0.9s,mb4.0,baz=154,slow=8.8,SNR=13							
R07C	**Lee Vining**	32.96	336	⇓P		P	00 21 33.0	+0.5
	baz=33							
WCI	**Wyandotte Cave**	32.99	24	*e*P		P	00 21 33.4	+0.6
WCI				pmax		pmax		
	comp=Z,15nm,1.0s,mb4.9							
WCI	**Wyandotte Cave**	32.99	24	*e*P		P	00 21 33.4	+0.6
	comp=Z,14nm,1.0s,mb4.9							
PACP	**Pacheco Peak**	33.03	332	⇑P		P	00 21 33.2	0.0
	baz=33							
CTU	**Camp Tracy**	33.04	347	*e*P		P	00 21 33.6	+0.5
	comp=Z,13nm,1.1s,mb4.8							
P11A	**Circle Ranch,**	33.05	341	⇑P		P	00 21 34.6	+1.3
	baz=33							
S06C	**San Francisco**	33.12	335	⇓P		P	00 21 34.5	+0.7
	baz=33							
Q08A	**Gabbs**	33.19	338	⇓P		P	00 21 35.0	+0.5
	baz=33,SNR=9.1							
TCUT	**Toone Canyon**	33.37	348	*e*P		P	00 21 36.5	+0.5
O12A	**Currie**	33.40	343	⇓P		P	00 21 37.5	+1.1
	baz=34,SNR=8.2							
R06C	**Coleville**	33.49	336	⇑P		P	00 21 37.5	+0.4
	baz=34							
O11A	**Cowboy Ranch,**	33.55	342	⇓P		P	00 21 37.7	+0.1
	baz=34,SNR=5.0							
SPUT	**South Promonto**	33.78	347	*e*P		P	00 21 39.6	0.0
HWUT	**Hardware Ranch**	33.87	348	*e*P		P	00 21 40.5	0.0
	comp=Z,14nm,1.1s,mb4.8							
R05C	**Kirkwood Meado**	33.90	335	⇓P		P	00 21 40.7	0.0
	baz=34							
O10A	**Cortez Mining,**	33.96	341	⇑P		P	00 21 41.8	+0.6
	baz=34							
N12A	**Clover Valley,**	34.03	343	⇓P		P	00 21 41.4	-0.4
	baz=34							
O09A	**Fish Creek Ran**	34.09	340	⇑P		P	00 21 42.4	+0.1
	baz=34							
P07A	**Fallon**	34.15	337	⇓P		P	00 21 42.7	-0.1
	baz=34							
N11A	**Elko Archery C**	34.20	342	⇑P		P	00 21 43.5	+0.2
	baz=34							
LAVA	**Lava Cap Winer**	34.23	334	⇓P		P	00 21 43.1	-0.4
	baz=34							
M13A	**Montello**	34.26	344	⇓P		P	00 21 43.6	-0.1
	baz=34							
WCN	**Washoe City**	34.28	336	⇑P		P	00 21 44.5	+0.5
	baz=34							
BMN	**Battle Mountai**	34.33	340	*e*P		P	00 21 45.0	+0.6
BMN				pmax		pmax		
	comp=Z,12nm,1.1s,mb4.7							
BMN	**Battle Mountai**	34.33	340	*e*P		P	00 21 45.0	+0.6
	comp=Z,12nm,1.1s,mb4.7							
M12A	**Wells**	34.51	344	⇓P		P	00 21 45.2	-0.8
	baz=35							
Q04C	**Lincoln**	34.58	334	⇑P		P	00 21 46.6	+0.1
	baz=35							
BW06	**Boulder Array**	34.63	351	*e*P		P	00 21 46.3	-0.7
	comp=Z,15nm,1.1s,mb4.8							
P05C	**Yuba Gap, Truc**	34.63	335	⇓P		P	00 21 46.9	-0.1
	baz=35							
PDAR	**Pinedale Array**	34.63	351	P		P	00 21 46.1	-0.9
	comp=Z,7.5nm,0.9s,mb4.6,baz=159,slow=8.9,SNR=42							
CVS	**Carmenet Viney**	34.66	332	⇑P		P	00 21 46.9	-0.3
	baz=35							
O07A	**Toulon**	34.68	338	⇑P		P	00 21 47.7	+0.2
	baz=35							
M11A	**Holland Ranch,**	34.78	342	⇓P		P	00 21 48.7	+0.4
	baz=35							
N09A	**Rock Creek Ran**	34.81	340	⇓P		P	00 21 48.6	0.0
	baz=35							
BEKR	**Beckwourth**	35.01	336	⇓P		P	00 21 50.6	+0.4
	baz=35							
O06A	**Flanigan**	35.05	337	⇑P		P	00 21 50.8	+0.2
	baz=35							
M10A	**I.L. Ranch, Tu**	35.09	342	⇑P		P	00 21 51.8	+0.8
	baz=35,SNR=5.8							
ORV	**Oroville**	35.22	334	⇑P		P	00 21 52.6	+0.5
	baz=35,SNR=6.0							
M09A	**Marrel Ranch,**	35.30	340	⇓P		P	00 21 53.1	+0.3
	baz=35							
O05C	**Quincy**	35.31	335	⇑P		P	00 21 53.6	+0.7
	baz=35							
REDW	**Red Top Meadow**	35.43	350	*e*P		P	00 21 54.1	+0.2
	comp=Z,15nm,1.4s,mb4.7							
RSSD	**Black Hills**	35.46	358	*e*P		P	00 21 54.3	+0.2
RSSD				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.3							
RSSD	**Black Hills**	35.46	358	*e*P		P	00 21 54.3	+0.1
	comp=Z,3.7nm,1.0s,mb4.3							
RRI2	**Red Ridge**	35.50	349	*e*P		P	00 21 53.5	-1.0
	comp=Z,8.8nm,1.1s,mb4.6							
N06A	**Buffalo Meadow**	35.55	337	⇓P		P	00 21 55.4	+0.4
	baz=36,SNR=7.4							
TPAW	**Teton Pass**	35.57	349	*e*P		P	00 21 55.7	+0.6
	comp=Z,15nm,1.1s,mb4.4							
LOHW	**Long Hollow**	35.63	350	*e*P		P	00 21 54.9	-0.7
	comp=Z,11nm,1.0s,mb4.7							
M08A	**Happy Creek Ra**	35.63	339	⇓P		P	00 21 56.5	+0.8
	baz=36							
MOOW	**Moose Ponds**	35.78	350	*e*P		P	00 21 55.7	-1.2
	comp=Z,5.7nm,1.2s,mb4.4							
ELFS	**Eagle Lake Fie**	35.79	336	⇓P		P	00 21 57.9	+0.9
	baz=36,SNR=10.0							
GASB	**Alder Springs**	35.84	333	⇓P		P	00 21 58.7	+1.3
	baz=36							
RPN	**Rapa Nui**	36.07	190	LR		LR	00 32 48.7	
	comp=Z,617nm,21.3s,MS4.3,baz=108,slow=30							
FLWY	**Flagg Ranch**	36.10	350	*e*P		P

baz=40,SNR=5.5
EGMT Eagleton 39.81 352 *e*P P **00 22 29.3 -1.6**
comp=Z,32nm,1.6s,mb4.8
H04A Detroit Lake 39.82 338 ⇓P P **00 22 30.8 -0.3**
baz=40
EYMN Ely 40.37 11 *e*P P **00 22 35.0 -0.7**
comp=Z,17nm,1.1s,mb4.7
F05A White Salmon 40.59 340 ⇓P P **00 22 37.6 +0.1**
baz=41
F04A Amboy 40.97 339 ⇓P P **00 22 40.2 -0.4**
baz=41
TAOE Nuku Hiva Isla 41.24 246 *e*LR LR 00 33 30.5
comp=Z,2μm,25.7s
E05A Randle 41.29 340 ⇑P P **00 22 43.0 -0.1**
baz=41
NEW Newport 41.45 345 *e*P P **00 22 43.1 -1.4**
NEW pmax pmax
comp=Z,11nm,1.1s
NEW Newport 41.45 345 *e*P P **00 22 43.1 -1.4**
comp=Z,12nm,1.1s,mb4.4
E03A Lebam 41.91 338 ⇑P P **00 22 48.1 -0.2**
baz=42
ULM Lac du Bonnet 41.94 6 P P **00 22 48.6 +0.1**
comp=Z,3.9nm,0.9s,mb4.0,baz=183,slow=8.1,SNR=6.1
ULM LR LR 00 40 10.5
comp=Z,285nm,19.5s,MS4.2,baz=344,slow=36
ULM Lac du Bonnet 41.94 6 *e*P P **00 22 48.4 -0.2**
comp=Z,4.9nm,1.1s,mb4.0
LPAZ La Paz 42.08 126 P P **00 22 51.9 +2.2**
comp=Z,4.9nm,1.1s,mb4.1,baz=315,slow=7.4,SNR=9.9
LPAZ La Paz 42.08 126 *e*P P **00 22 51.7 +2.0**
LPAZ pmax pmax
comp=Z,10.0nm,1.2s
LPAZ La Paz 42.08 126 *e*P P **00 22 51.7 +2.0**
comp=Z,10nm,1.2s,mb4.3
C05A Tolt Reservoir 42.25 341 ⇓P P **00 22 50.0 -1.1**
baz=42
B05A Bryant 42.88 341 ⇑P P **00 22 55.4 -0.8**
baz=43
SAML Samuel 42.91 113 *e*P P **00 22 56.5 +0.1**
comp=Z,13nm,1.3s,mb4.5
RKT Rikitea 44.68 225 *e*S S **00 29 38.1 -9.0**
comp=Z,113nm,28.8s
RKT *e*LR LR 00 35 28.2
comp=Z,1μm,27.2s
EDM Edmonton 45.39 351 *e*P P **00 23 15.6 -0.8**
PPT Papeete 53.20 241 *e*S S **00 31 38.1 -8.8**
comp=Z,109nm,27.8s
PPT *e*LR LR 00 39 11.4
comp=Z,787nm,24.8s,baz=57
SCHQ Schefferville 54.20 25 P P **00 24 21.1 -2.2**
comp=Z,5.7nm,0.9s,mb4.5,baz=285,slow=1.3,SNR=5.8
SCHQ LR LR 00 49 28.9
comp=Z,330nm,18.5s,MS4.4,baz=131,slow=38
YKA Yellowknife Ar 54.55 353 P P **00 24 23.1 -2.8**
comp=Z,3.0nm,1.0s,mb4.3,baz=159,slow=8.1,SNR=5.8
YKA LR LR 00 48 13.6
comp=Z,543nm,19.0s,MS4.6,baz=155,slow=37
TBI Tubuai 55.74 234 *e*S S **00 32 13.4 -7.8**
comp=Z,278nm,28.0s
TBI *e*LR LR 00 40 33.5
comp=Z,523nm,25.8s,baz=52
CPUP Villa Florida 55.95 130 P P **00 24 35.8 -0.2**
comp=Z,2.7nm,0.9s,mb4.2,baz=259,slow=5.2,SNR=3.9
CPUP LR LR 00 44 46.9
comp=Z,97nm,21.9s,MS3.9,baz=301,slow=32
PLCA Paso Flores 57.23 151 P P **00 24 44.4 -0.7**
comp=Z,3.2nm,1.0s,mb4.3,baz=295,slow=8.3,SNR=3.2
BDFB Brasilia 59.13 114 P P **00 24 57.8 -0.6**
comp=Z,3.0nm,0.8s,mb4.3,baz=323,slow=8.0,SNR=3.7
BDFB LR LR 00 49 33.4
comp=Z,163nm,18.4s,MS4.2,baz=172,slow=35
DAWY Dawson 61.26 343 *e*P P **00 25 11.4 -1.6**
INK Inuvik 63.10 348 *e*P P **00 25 23.5 -1.8**
INK pmax pmax
comp=Z,14nm,1.2s
INK Inuvik 63.10 348 *e*P P **00 25 23.5 -1.8**
comp=Z,14nm,1.2s,mb5.0
SUMG Summit 74.28 16 *e*P P **00 26 33.0 -2.1**
comp=Z,11nm,1.1s,mb4.7
BILL Bilibino 82.57 338 *e*P P **00 27 16.0 -4.9**
BILL pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
BILL MLR MLR
comp=Z,200nm,20.0s,MS4.5
JMIC Jan Mayen 83.30 19 LR LR 01 06 16.0
comp=Z,131nm,18.3s,MS4.3,baz=284,slow=37
ESDC Sonseca Array 91.16 50 LR LR 01 06 37.6
comp=Z,105nm,19.0s,MS4.3,baz=295,slow=34
MDT Midelt 92.03 57 LR LR 01 03 35.5
comp=Z,50nm,19.5s,MS4.0,baz=99,slow=32
NOA NORSAR Array B 93.73 27 LR LR 01 08 17.6
comp=Z,155nm,21.0s,MS4.4,baz=290,slow=34
ARCES ARCESS Array B 94.37 16 LR LR 01 11 03.2
comp=Z,232nm,21.9s,MS4.6,baz=1.9,slow=36
DBIC Dimbokro 96.59 82 LR LR 01 06 20.6
comp=Z,89nm,21.8s,MS4.2,baz=270,slow=32
VNDA Vanda 99.50 193 LR LR 01 04 43.4
comp=Z,89nm,20.2s,MS4.3,baz=93,slow=30
FINES FINESS Array B 99.63 22 LR LR 01 16 38.0
comp=Z,111nm,20.5s,MS4.3,baz=297,slow=37
CN2 Changchun 112.16 324 *e*PKP PKiKP 00 33 28.8 -4.7
KIV Kislovodsk 119.00 28 *e*PKIKP PKPdf 00 33 37.7 -8.9
KIV pmax pmax
comp=Z,2.0nm,0.7s
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.5
HHC Hu-ho-hao-te 121.66 330 *e*PKP PKPdf 00 33 47.0 -4.7
HHC PP PP 00 35 23.4 -0.7
HHC PKS 00 37 22.4
HHC SKS SKSdf 00 40 57.8 -5.9
HHC SKKS SKKSac 00 42 15.4 -8.3
HHC SS SS 00 51 56.8 -3.3
HHC LR LR
comp=N,148nm,34.2s,MS4.8
HHC LR LR
comp=E,336nm,35.1s,MS4.8
HHC LR LR
comp=Z,77nm,37.0s,MS4.1
NJ2 Nanjing 123.49 318 *e*PKP PKPdf 00 33 50.3 -4.9
NJ2 PP PP 00 35 36.0 -0.5
NJ2 PKS 00 37 25.0
NJ2 LR LR
comp=N,520nm,23.0s,MS5.2
NJ2 LR LR
comp=E,250nm,24.2s,MS5.2
NJ2 LR LR
comp=Z,350nm,22.4s,MS5.0
WMQ Urumqi 127.05 351 *e*PKP PKPdf 00 34 02.0 0.0
CD2 Chengdu 133.35 328 *e*PKP PKPdf 00 34 11.3 -2.7
KMI Kunming 138.43 324 PKP PKPdf 00 34 22.8 -0.6

*ISCJB **20** 00:22:15.0±0.9, 87.7N±0.1×102.5W±02, h10km, mb4.1/10, MS4.2/3, Error ellipse: s-maj=26.2km s-min=11.7km az=112.8*
*IDC **20** 00:22:14.7±1.8, 864N×10262W, h0km, mb3.9/6, mb1 4.2/7, mb1mx4.0/19, mbtmp3.9/7, ML3.1/1, MS4.2/3, Ms1 4.2/3, ms1mx3.5/24, Error ellipse: s-maj=64.5km s-min=19.7km az=57.0*
*NEIC **20** 00:22:16.5±0.7, 862N×10254W, h10km, mb4.5/4, Error ellipse: s-maj=20.9km s-min=9.4km az=57.0*
*HRVD **20** 00:22:16.5±0.9, 846N×10284W, h12km, MW4.8/57, Centroid moment Tensor Solution. LP body waves: s5,c5;Mantle waves: s57,c76; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.54±.09; Mθθ 0.45±.09; Mφφ 0.08±.13; Mrθ-0.50±.32; Mrφ-1.80±.07; Mθφ 1.15±.38; Best double couple: M0 2.16900×10^16 NP1:φ266.00000°, δ54.00000°, λ-174.00000°. NP2:φ173.00000°, δ85.00000°, λ-36.00000°. Principal axes: T 2.5160, Plg21.0000°, Azm225.0000°; N -0.6940, Plg54.0000°, Azm346.0000°; P -1.8220, Plg28.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 20 00:22:17.0±0.9, 87N±01×1025W±02, h10km, n18, σ0§75/15, mb4.1/10, MS4.2/3, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**11.22**	**41**	Pn	**Pn**	**00 24 57.1**	**-0.4**
	0.1nm,0.3s,baz=247,slow=7.7,SNR=2.4						
HKT	**Hockley**	**22.10**	**16**	*e*P	**P**	**00 27 13.1**	**+0.7**
	38nm,1.5s,mb4.6						
LAZ	**Ladron**	**25.97**	**351**	*e*P	**P**	**00 27 50.2**	**+0.4**
WUAZ	**Wupatki**	**27.93**	**344**	*e*P	**P**	**00 28 07.8**	**+0.3**
	9.3nm,1.2s,mb4.3						
ATAH	**Atahualpa**	**28.65**	**122**	LR	LR	00 37 18.9	
	comp=Z,856nm,21.6s,MS4.3,baz=282,slow=31						
DUG	**Dugway**	**32.72**	**345**	*e*P	**P**	**00 28 50.0**	**+0.3**
	9.4nm,1.3s,mb4.6						
NVAR	**Mina Array Bea**	**32.87**	**337**	P	**P**	**00 28 49.5**	**-1.6**
	0.7nm,0.8s,mb3.6,baz=145,slow=7.0,SNR=4.6						
PDAR	**Pinedale Array**	**34.53**	**351**	P	**P**	**00 29 04.8**	**-0.7**
	1.3nm,0.9s,mb3.9,baz=162,slow=11,SNR=9.7						
MCMT	**McKenzie Canyo**	**37.13**	**348**	*e*P	**P**	**00 29 27.8**	**-0.1**
NEW	**Newport**	**41.36**	**345**	P	**P**	**00 30 03.7**	**+0.5**
	4.0nm,1.1s,mb4.0,baz=181,slow=8.7,SNR=4.3						
NEW	**Newport**	**41.36**	**345**	P	**P**	**00 30 03.7**	**+0.5**
LPAZ	**La Paz**	**42.11**	**126**	P	**P**	**00 30 10.8**	**+1.4**
	2.0nm,1.0s,mb3.7,baz=332,slow=8.5,SNR=6.9						
SAML	**Samuel**	**42.92**	**113**	*e*P	**P**	**00 30 14.8**	**-1.0**
	3.3nm,0.6s,mb4.2						
DLBC	**Dease Lake**	**53.95**	**343**	LR	LR	00 53 50.5	
	comp=Z,159nm,18.8s,MS4.1,baz=111,slow=35						
CPUP	**Villa Florida**	**55.99**	**130**	P	**P**	**00 31 55.0**	**-0.7**
	1.1nm,0.7s,mb4.0,baz=312,slow=11,SNR=4.6						
PLCA	**Paso Flores**	**57.30**	**151**	LR	LR	00 50 31.8	
	comp=Z,171nm,18.6s,MS4.2,baz=133,slow=30						
BDFB	**Brasilia**	**59.15**	**114**	P	**P**	**00 32 18.1**	**+0.3**
	2.4nm,0.8s,mb4.3,baz=176,slow=10,SNR=3.1						
DAWY	**Dawson**	**61.18**	**342**	*e*P	**P**	**00 32 32.2**	**+0.4**

*NEIC **20** 00:40:37.6, 33.10S×68.90W, h6km, ML2.9(GUC), After GUC.*

GUC 20 00:40:37.6±0.8, 3310S×6890W, h6km±17km, MD3.6, ML2.9, 10C-3D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**1.19**	**259**	⇓*i* P	Pg	00 40 58.6	-1.8
FCH				*i* S	Sg	00 41 14.9	-0.9
FCH				AML	AML	00 41 15.8	
	comp=N,274nm,0.2s						
CLCH	**Cerro Calan**	**1.40**	**257**	⇓*i* P	Pn	00 41 02.4	-1.3
CLCH				*i* S	Sb	00 41 21.6	-0.7
CLCH				AML	AML	00 41 26.7	
	comp=E,215nm,0.5s						
PCH	**Pirque**	**1.45**	**248**	⇓*i* P	Pn	00 41 03.3	-0.9
PCH				*i* S	Sn	00 41 23.0	-0.5
JACH	**Jahuel**	**1.48**	**286**	⇑*i* P	Pn	00 41 04.2	-0.6
JACH				*i* S	Sn	00 41 24.3	-0.1
PEL	**Peldehue**	**1.50**	**268**	⇑*i* P	Pn	00 41 04.1	-0.8
PEL				*i* S	Sn	00 41 24.3	-0.4
PEL				AML	AML	00 41 31.4	
	comp=N,122nm,0.3s						
PEL	**Peldehue**	**1.50**	**268**	⇑*i* P	Pn	00 41 04.1	-0.8
PEL				*i* S	Sn	00 41 24.3	-0.4
ANTU	**Antumapu**	**1.52**	**252**	AML	AML	00 41 26.9	
	comp=N,190nm,0.3s						
RCDM	**Rinconada Maip**	**1.64**	**256**	⇑*i* P	Pn	00 41 06.9	0.0
RCDM				*i* S	Sn	00 41 29.0	+0.7
RCDM				AML	AML	00 41 30.3	
	comp=N,179nm,0.1s						
RCDM	**Rinconada Maip**	**1.64**	**256**	⇑*i* P	Pn	00 41 06.9	0.0
RCDM				*i* S	Sn	00 41 29.0	+0.7
CHCH	**Chadas Angostu**	**1.68**	**240**	⇑*i* P	Pn	00 41 07.1	-0.4
CHCH				*i* S	Sn	00 41 29.6	+0.3
ROCH	**El Roble**	**1.78**	**273**	⇑*i* P	Pn	00 41 09.2	+0.4
ROCH				*i* S	Sn	00 41 33.4	+1.7
TACH	**Talagante**	**1.79**	**251**	⇑*i* P	Pn	00 41 09.0	0.0
TACH				*i* S	Sn	00 41 33.2	+1.2
LNV	**Longovilo**	**2.27**	**247**	⇑*i* P	Pn	00 41 16.3	+0.8
LNV				*i* S	Sn	00 41 46.4	+2.7
LCCH	**Las Cruces**	**2.27**	**260**	⇑*i* P	Pn	00 41 17.0	+1.4
CMCH	**Combarbala**	**2.62**	**317**	*i* P	Pn	00 41 21.6	+1.3
CMCH				AML	AML	00 42 00.5	
	comp=E,931nm,0.7s						

*NEIC **20** 00:50:23.5±0.9, 3822N×7323E, h88km±11km, mb4.4/33, Error ellipse: s-maj=10.3km s-min=5.1km az=57.0*
*MOS **20** 00:50:25.2±1.2, 3837N×7302E, h107km, mb4.4/35, Error ellipse: s-maj=8.9km s-min=4.7km az=116.4*
*BJI **20** 00:50:25.2, 3846N×7301E, h113km, mB4.5, mb4.4*
*ISCJB **20** 00:50:25.8±0.4, 3831N±002×7310E±005, h119km±5km, mb4.2/45, Error ellipse: s-maj=6.9km s-min=4.0km az=4.1*
*IDC **20** 00:50:26.4±3.3, 3832N×7306E, h103km±30km, mb3.8/16, mb1 4.0/21, mb1mx3.9/29, mbtmp4.2/21, Error ellipse: s-maj=19.1km s-min=13.0km az=172.0*
*SZGRF **20** 00:50:27.7, 39.18N×7258E, h126km, mb4.3, Kyrgyzstan*
*NNC **20** 00:50:30.9±3.1, 3928N×7221E, h0km, mb4.5, mpv3.8, Error ellipse: s-maj=26.4km s-min=14.8km az=175.0*

ISC 20 00:50:27.1±0.4, 3830N±002×7314E±006, h117km±5km, h128km±1.9km; pP-P, n208, σ1§19/226, mb4.2/45, 15C-17D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.52**	**60**	*i* P	**Pn**	**00 51 09.1**	**+2.1**
KSH				S	**Sn**	**00 51 41.3**	**+3.6**
KSH				Smax			
	comp=N,3μm,0.3s						
KSH				Smax			
	comp=E,3μm,0.4s						
AML	**Almayashu**	**3.85**	**6**	P	**Pn**	**00 51 24.9**	**+0.4**
	SNR=416						
UCH	**Uchtor**	**4.06**	**15**	P	**Pn**	**00 51 28.8**	**+1.4**
	SNR=45						
KZA	**Kyzart**	**4.11**	**22**	P	**Pn**	**00 51 28.9**	**+0.9**
	SNR=58						
EKS2	**Erkin-Say**	**4.38**	**6**	P	**Pn**	**00 51 32.2**	**+0.5**
	SNR=132						
AAK	**Ala-Archa**	**4.45**	**13**	P	**Pn**	**00 51 33.9**	**+1.3**
	SNR=44						
AAK	**Ala-Archa**	**4.45**	**13**	⇓P	**Pn**	**00 51 32.9**	**+0.3**
	SNR=20						
AAK	**Ala-Archa**	**4.45**	**13**	⇓*i* Pn	**Pn**	**00 51 32.7**	**+0.1**
AAK				*e*Sn	**Sn**	**00 52 22.4**	**-1.0**
KBK	**Karagaybulak**	**4.56**	**17**	P	**Pn**	**00 51 35.3**	**+1.2**
	SNR=44						
CEP	**Cherat**	**4.58**	**193**	P	**Pn**	**00 51 35.3**	**+1.0**
ULHL	**Ulahol**	**4.60**	**30**	P	**Pn**	**00 51 35.3**	**+0.8**
	SNR=234						
CHCP	**Chirah Chowk**	**4.63**	**179**	⇓P	**Pn**	**00 51 36.3**	**+1.3**
FRU	**Bishkek**	**4.67**	**13**	*e*PN	**Pn**	**00 51 37.5**	**+2.0**
FRU				*i*		00 52 28.0	
FRU				pmax	pmax		
	comp=Z,70nm,2.0s						
FRU				smax			
	comp=N,1μm,1.9s						
CHMS	**Chumysh**	**4.85**	**14**	P	**Pn**	**00 51 39.1**	**+1.2**
	SNR=27						
TKM2	**Tokmak 2**	**4.98**	**21**	P	**Pn**	**00 51 40.6**	**+0.9**
	SNR=48						
TKM2	**Tokmak 2**	**4.98**	**21**	⇓Pn	**Pn**	**00 51 41.0**	**+1.3**
	comp=N,1.1nm,0.3s						
TKM2				⇑Sn	**Sn**	**00 52 35.1**	**-1.1**
	comp=N,130nm,0.7s						
TKM2	**Tokmak 2**	**4.98**	**21**	PN	**Pn**	**00 51 41.0**	**+1.3**
TKM2						00 52 35.0	
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TKM2				smax			
	comp=Z,91nm,0.7s						
USP	**Ospenovka**	**5.07**	**11**	P	**Pn**	**00 51 41.3**	**+0.4**
	SNR=114						
THW	**Thamme Wali**	**5.61**	**192**	⇑P	**Pn**	**00 51 47.9**	**-0.3**
KNDC	**Almaty**	**5.71**	**29**	⇑Pn	**Pn**	**00 51 51.1**	**+1.6**
	comp=Z,51nm,0.6s						
KNDC				⇑Sn	**Sn**	**00 52 54.5**	**+0.8**
	comp=Z,344nm,0.8s						
SARP	**Sargodha**	**6.37**	**184**	P	**Pn**	**00 51 57.4**	**-1.1**
PONG	**Pong**	**6.73**	**159**	*e*P	**Pn**	**00 52 01.0**	**-2.4**
PONG				*ex*	x	00 53 15.0	
DRP	**Derazinda**	**6.97**	**201**	⇓P	**Pn**	**00 52 06.0**	**-0.6**
BHK	**Bhakra**	**7.37**	**158**	*e*P	**Pn**	**00 52 16.4**	**+4.4**
BHK				*e*S	**Sn**	**00 53 35.0**	**+0.9**
SDNR	**Sundarnagar**	**7.47**	**154**	*e*P	**Pn**	**00 52 11.0**	**-2.4**
SDNR				*e*S	**Sn**	**00 53 29.0**	**-7.5**
NDI	**New Delhi**	**10.17**	**159**	*e*P	**Pn**	**00 52 47.6**	**-2.3**
NDI				*e*P		00 52 48.0	
NDI				*e*S	**Sn**	**00 54 31.4**	**-11**
NDI				*e*S	**Sn**	**00 54 32.0**	**-10**
NDI				AML	AML	00 54 35.2	
	comp=E,105nm,0.6s						
MK02	**Makanchi Array**	**10.83**	**36**	⇑Pn	**Pn**	**00 52 58.6**	**-0.1**
	comp=E,7.9nm,1.1s,baz=227,slow=15						
MK02				⇑Lg		00 56 02.8	
	comp=E,11nm,0.9s,baz=228,slow=31						
MK31	**Makanchi Array**	**10.84**	**36**	P	**Pn**	**00 52 58.5**	**-0.3**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MKAR	**Makanchi Array**	**10.84**	**36**	P	**Pn**	**00 52 58.7**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=206,slow=8.0,SNR=20						
MKAR	**Makanchi Array**	**10.84**	**36**	P	**Pn**	**00 52 58.7**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AJM	**Ajmer**	**11.85**	**173**	*e*P	**Pn**	**00 53 08.0**	**-4.3**
AJM				*i* S	**Sn**	**00 55 10.0**	**-13**
WMQ	**Urumqi**	**12.29**	**59**	*e*P	**Pn**	**00 53 15.6**	**-2.4**
KOLN	**Koldanda**	**13.67**	**137**	*e*P	**Pn**	**00 53 31.4**	**-4.6**
	comp=Z,55nm,0.3s						
GKN	**Gorkha**	**14.06**	**134**	*e*P	**Pn**	**00 53 36.6**	**-4.4**
	comp=Z,182nm,0.4s						
AB31	**Akbulak array**	**14.50**	**323**	⇑Pn	**Pn**	**00 53 42.4**	**-4.1**
	comp=Z,17nm,0.6s						
AB31				⇓Sn	**Sn**	**00 56 12.5**	**-14**
	comp=Z,17nm,0.8s						
AB31	**Akbulak array**	**14.50**	**323**	P	**Pn**	**00 53 42.4**	**-4.2**
AB31						00 56 12.4	
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AB31				smax			
	comp=Z,13nm,0.8s						
VOSK	**Vostochnaya**	**14.51**	**355**	⇑Pn	**Pn**	**00 53 42.9**	**-3.8**
	comp=Z,10nm,0.9s						
VOSK				⇓Sn	**Sn**	**00 56 13.6**	**-13**
	comp=Z,18nm,1.2s						
VOSK				⇓Lg		00 57 38.5	
	comp=Z,43nm,1.6s						
KKN	**Kakani**	**14.59**	**132**	*e*P	**Pn**	**00 53 42.8**	**-5.0**
	comp=Z,60nm,0.4s						
KKN	**Kakani**	**14.59**	**132**	*e*P	**Pn**	**00 53 42.8**	**-5.0**
KKN				pmax	pmax		
	comp=Z,60nm,0.4s						
DMN	**Daman**	**14.63**	**133**	*e*P	**Pn**	**00 53 44.1**	**-4.1**
	comp=Z,58nm,0.3s						
PKI	**Pulchoki**	**14.83**	**133**	*e*P	**Pn**	**00 53 47.0**	**-3.8**
	comp=Z,49nm,0.2s						
PKI	**Pulchoki**	**14.83**	**133**	*e*P	**Pn**	**00 53 47.0**	**-3.8**
PKI				pmax	pmax		
	comp=Z,49nm,0.2s						
BVA0	**Borovoye Array**	**14.85**	**353**	⇑Pn	**Pn**	**00 53 48.5**	**-2.6**
	comp=Z,4.2nm,0.8s,baz=162,slow=14,SNR=153						
BVA0				⇓Sn	**Sn**	**00 56 19.2**	**-16**
	comp=Z,2.4nm,1.2s,baz=164,slow=23,SNR=6.4						
BVA0				⇓Lg		00 57 44.6	
	comp=Z,3.6nm,1.1s						
BVA0	**Borovoye Array**	**14.85**	**353**	*i* P	**Pn**	**00 53 48.4**	**-2.7**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVAR	**Borovoye Array**	**14.85**	**353**	P	**Pn**	**00 53 48.7**	**-2.4**
	comp=Z,1.0nm,0.3s,baz=160,slow=13,SNR=64						
BVAR				S	**Sn**	**00 56 25.1**	**-10**
	comp=Z,0.3nm,0.3s,baz=163,slow=24,SNR=5.4						
BVAR	**Borovoye Array**	**14.85**	**353**	P	**Pn**	**00 53 48.7**	**-2.4**
BVAR				S	**Sn**	**00 56 25.1**	**-10**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GUN	**Gumba**	**14.86**	**130**	*e*P	**Pn**	**00 53 46.8**	**-4.3**
	comp=Z,101nm,0.5s						
BRVK	**Borovoye**	**14.89**	**353**	⇓P	**Pn**	**00 53 49.4**	**-2.2**
	SNR=19						
BRVK	**Borovoye**	**14.89**	**353**	*e*P	**Pn**	**00 53 49.2**	**-2.4**
BRVK				*e*		00 56 25.8	
BRVK				pmax	pmax		
	comp=Z,22nm,0.8s						
BRVK	**Borovoye**	**14.89**	**353**	*e*Pn	**Pn**	**00 53 49.2**	**-2.4**
	comp=Z,22nm,0.8s						
BRVK				*e*Sn	**Sn**	**00 56 25.8**	**-10**
ZRNK	**Zerenda**	**14.93**	**350**	⇓Pn	**Pn**	**00 53 50.0**	**-2.1**
	comp=Z,25nm,0.7s						
ZRNK				⇑Sn	**Sn**	**00 56 26.1**	**-11**
	comp=Z,13nm,1.1s						
ZRNK	**Zerenda**	**14.93**	**350**	*e*P	**Pn**	**00 53 49.7**	**-2.4**
ZRNK				*e*		00 56 26.5	
ZRNK				pmax	pmax		
	comp=Z,33nm,0.6s						
ZRNK	**Zerenda**	**14.93**	**350**	*e*Pn	**Pn**	**00 53 49.6**	**-2.4**
	comp=Z,33nm,0.6s						
ZRNK				*e*Sn	**Sn**	**00 56 26.5**	**-11**
CHKZ	**Chkalovo**	**15.48**	**354**	⇑Pn	**Pn**	**00 53 55.4**	**-3.5**
	comp=Z,7.7nm,0.8s						
CHKZ				⇑Sn	**Sn**	**00 56 37.2**	**-13**
	comp=Z,13nm,1.0s						
CHKZ	**Chkalovo**	**15.48**	**354**	⇓*e*P	**Pn**	**00 53 56.2**	**-2.7**
CHKZ				*e*		00 56 41.6	
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CHKZ	**Chkalovo**	**15.48**	**354**	⇓*e*Pn	**Pn**	**00 53 56.2**	**-2.7**
	comp=Z,7.6nm,0.6s						
CHKZ				*e*Sn	**Sn**	**00 56 41.6**	**-8.7**
AKTK	**Aktyubinsk**	**16.21**	**323**	P	**Pn**	**00 54 05.6**	**-2.4**
AKTK				S	**S**	**00 56 56.9**	**-16**
AKTO	**Aktyubinsk**	**16.21**	**323**	⇑Pn	**Pn**	**00 54 05.7**	**-2.4**
	comp=Z,2.2nm,1.1s						
AKTO				⇑Sn	Sn	00 56 45.3	-23
	comp=Z,0.4nm,1.1s						
AKTO	**Aktyubinsk**	**16.21**	**323**	P	**Pn**	**00 54 05.6**	**-2.4**
	comp=Z,4.2nm,0.3s,baz=130,slow=12,SNR=47						
AKTO				S	**S**	**00 56 56.9**	**-16**
	comp=Z,0.2nm,0.3s,baz=332,slow=20,SNR=4.3						
AKTO	**Aktyubinsk**	**16.21**	**323**	P	**Pn**	**00 54 05.6**	**-2.4**
AKTO				S	**S**	**00 56 56.9**	**-16**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.3s						
LSA	**Lhasa**	**17.20**	**115**	P	**Pn**	**00 54 20.6**	**+0.6**
LSA	**Lhasa**	**17.20**	**115**	*e*P	**Pn**	**00 54 18.9**	**-1.1**
LSA				pmax	pmax		
	comp=Z,14nm,0.6s						
LSA	**Lhasa**	**17.20**	**115**	*e*Pn	**Pn**	**00 54 18.9**	**-1.1**
	comp=Z,14nm,0.6s						
ZAL	**Zalesovo**	**17.57**	**23**	P	**Pn**	**00 54 22.2**	**-2.2**
	comp=Z,5.9nm,0.3s,baz=253,slow=7.9,SNR=30						
ZAL	**Zalesovo**	**17.57**	**23**	P	**Pn**	**00 54 22.3**	**-2.2**
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.3s						
NGP	**Nagpur**	**17.83**	**162**	AML	AML	00 54 35.0	
	comp=Z,7.3nm,0.3s						
AKL	**Akola**	**17.85**	**168**	*e*P	**Pn**	**00 54 28.7**	**+0.8**
AKL				*ex*	x	00 57 31.9	
NVS	**Novosibirsk**	**17.91**	**19**	*i* P	**Pn**	**00 54 30.2**	**+1.6**
NVS				*e*S	**S**	**00 57 37.8**	**-9.3**
NVS				pmax	pmax		
	comp=N,6.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.6s						
NVS				smax			
	comp=N,40nm,1.5s						
NVS				smax			
	comp=E,13nm,1.7s						
WSAR	**Wadi Sarin**	**19.48**	**224**	P	**P**	**00 54 45.0**	**+0.4**
	comp=E,0.3nm,0.3s,baz=33,slow=16,SNR=5.2						
SVE	**Sverdlovsk**	**20.31**	**340**	*e*P	**P**	**00 54 53.0**	**-0.7**
SVE				MLR	MLR		
	comp=N,100nm,7.0s						
SVE				MLR	MLR		
	comp=E,100nm,7.0s						
SVE				MLR	MLR		
	comp=Z,200nm,7.0s						
ARU	**Arti**	**20.57**	**337**	⇓*i* P	**P**	**00 54 55.8**	**-0.7**
ARU				*e*SS		00 58 39.8	
ARU				pmax	pmax		
	comp=Z,23nm,1.3s						
ARU	**Arti**	**20.57**	**337**	⇓*i* P	**P**	**00 54 55.6**	**-0.9**
	comp=Z,16nm,0.8s						
GTA	**Gaotai**	**20.78**	**79**	*e*P	**P**	**00 55 01.4**	**+2.7**
GTA	

GNI pmax pmax
comp=Z,22nm,0.9s
GNI Garni 22.05 284 *e*P **P 00 55 13.2 +1.0**
comp=Z,34nm,0.9s,mb4.7
ZEI Tsey 22.61 291 *e*P **P 00 55 18.9 +0.8**
ONI Oni 22.94 290 P **P 00 55 22.6 +1.5**
KIV Kislovodsk 23.55 294 *e*P **P 00 55 22.9 -3.8**
KIV *e* 00 55 42.8
KIV pmax pmax
comp=Z,8.0nm,1.1s,mb4.0
KIV Kislovodsk 23.55 294 *e*P **P 00 55 27.9 +1.3**
comp=Z,22nm,1.0s,mb4.4
LZH Lanzhou 24.50 86 *e*P **P 00 55 37.5 +2.1**
LZH AP 00 55 59.0
LZH AMB AMB
comp=Z,13nm,1.0s,mb4.3
LZH AMB AMB
comp=E,55nm,4.0s
SONM Songino Array 25.92 58 P **P 00 55 50.4 +2.2**
comp=Z,2.0nm,0.7s,mb3.7,baz=258,slow=10.0,SNR=19
SONM Songino Array 25.92 58 P **P 00 55 50.4 +2.2**
SONM pmax pmax
comp=Z,2.0nm,0.7s
VRSR Storozhevoye 27.09 310 *e*P **P 00 55 58.5 -0.2**
VRSR pmax pmax
comp=Z,10.0nm,1.5s,mb4.1
VRSR pmax pmax
comp=N,5.0nm,0.8s
VRSR pmax pmax
comp=E,10.0nm,1.0s
OBN Obninsk 29.75 316⇓ *e*P **P 00 56 22.0 -0.3**
OBN pmax pmax
comp=Z,3.0nm,0.3s,mb4.4
BR131 Keskin Array S 30.56 285 *e*P **P 00 56 30.1 +0.6**
comp=Z,1.7nm,0.7s,mb3.9
BR131 *e*PcP PcP 00 59 24.0 -1.4
BRTR Keskin Array B 30.56 285 P **P 00 56 30.5 +1.0**
comp=Z,0.9nm,0.4s,mb3.8,baz=108,slow=6.9,SNR=14
BRTR Keskin Array B 30.56 285 P **P 00 56 30.5 +1.0**
BRTR pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 33.20 306 P **P 00 56 52.1 -0.5**
comp=Z,2.2nm,0.4s,mb4.4,baz=79,slow=8.5,SNR=17
AKASG Malin Array Be 33.20 306 P **P 00 56 52.1 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
JOF Joensuu 35.21 328 *e*p **P 00 57 09.0 -0.9**
comp=Z,5.0nm,0.3s,mb4.8
JOF Joensuu 35.21 328 *e*P **P 00 57 09.0 -0.9**
JOF pmax pmax
comp=Z,5.0nm,0.3s,mb4.8
MLR Muntele Rosu 35.44 297 P **P 00 57 13.3 +1.4**
comp=Z,5.3nm,0.8s,mb4.4,baz=97,slow=1.0,SNR=11
MLR Muntele Rosu 35.44 297 P **P 00 57 13.3 +1.4**
MLR pmax pmax
comp=Z,5.0nm,0.8s
FINES FINESS Array B 36.99 324 P **P 00 57 24.9 -0.2**
comp=Z,3.6nm,0.4s,mb4.7,baz=116,slow=10,SNR=122
FINES FINESS Array B 36.99 324 P **P 00 57 24.9 -0.1**
FINES pmax pmax
comp=Z,4.0nm,0.4s
KAF Kangasniemi 37.08 325 *e*p **P 00 57 24.4 -1.4**
comp=Z,1.7nm,0.4s,mb4.3
KAF Kangasniemi 37.08 325 *e*P **P 00 57 24.4 -1.4**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
KWP Kalwaria 37.37 304 *e*P **P 00 57 28.8 +0.5**
KWP *e* 00 58 55.7
KWP *e* 00 59 41.8
KWP pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
KWP Kalwaria 37.37 304 *e*P **P 00 57 28.8 +0.5**
comp=Z,5.6nm,0.3s,mb5.0
KWP *e*PP PP 00 58 55.7 -0.1
KWP *e*PcP PcP 00 59 41.8 -3.0
NIE Niedzica 38.94 304 *e*P **P 00 57 42.7 +1.3**
KEV Kevo 39.79 337 *e*p **P 00 57 45.6 -2.9**
comp=Z,2.8nm,0.6s,mb4.3
KEV Kevo 39.79 337 *e*P **P 00 57 45.6 -2.9**
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
ARCES ARCESS Array B 40.16 336 P **P 00 57 51.6 0.0**
comp=Z,4.4nm,0.5s,mb4.6,baz=111,slow=9.2,SNR=48
ARCES ARCESS Array B 40.16 336 P **P 00 57 51.6 0.0**
ARCES pmax pmax
comp=Z,4.0nm,0.5s
OKC Ostrava-Krasne 40.31 305 AMS AMS 01 10 00.0
MORC Moravsky Berou 40.70 305 *e*P **P 00 57 56.4 +0.3**
comp=Z,0.3nm,0.3s,mb3.6
DPC Dobruska-Polom 41.43 306 *e*P **P 00 58 02.8 +0.8**
DPC *e*pP pP 00 58 16.3 -12
DPC *e*sP sP 00 58 31.7 -10
DPC AMS AMS 01 11 40.0
comp=Z,100nm,15.8s
TREC Trest 42.09 304 AMS AMS 01 11 30.0
comp=Z,200nm,24.6s
PVCC Panska Ves 42.53 306 AMS AMS 01 08 00.0
comp=Z,200nm,25.2s
PRU Pruhonice 42.61 306 *e*P **P 00 58 12.5 +0.9**
PRU *e*pP pP 00 58 25.1 -13
PRU *e*sP sP 00 58 41.3 -10
PRU AMS AMS 01 11 20.0
comp=Z,200nm,31.1s
BRG Berggiesshubel 42.88 307 *e*P **P 00 58 14.3 +0.6**
comp=Z,3.0nm,0.9s,mb4.0
BRG *e* pP 00 58 43.6 +3.0
comp=Z,2.8nm,1.0s
BRG
comp=N,62nm,12.3s
BRG
comp=E,59nm,26.8s
BRG
comp=Z,133nm,22.7s
BRG Berggiesshubel 42.88 307 *e*P **P 00 58 14.3 +0.5**
BRG *e* pP 00 58 43.6 +3.0
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
BRG MLR MLR
comp=N,62nm,12.3s
BRG MLR MLR
comp=E,59nm,26.8s
BRG MLR MLR
comp=Z,133nm,22.7s
BRG Berggiesshubel 42.88 307 *e*P **P 00 58 14.3 +0.6**
comp=Z,3.0nm,0.9s,mb4.0
BRG *e* pP 00 58 43.6 +3.0
BRG LR LR
comp=Z,130nm,22.7s
GERES GERESS Array B 43.31 304 P **P 00 58 17.6 +0.4**
comp=Z,0.7nm,0.8s,mb3.5,baz=90,slow=4.0,SNR=6.0
GERES GERESS Array B 43.31 304 P **P 00 58 17.6 +0.4**
GERES pmax pmax
comp=Z,1.0nm,0.8s
KHC Kasperske Hory 43.35 304 *e*P **P 00 58 18.4 +0.9**
KHC *e*pP pP 00 58 29.4 -15
KHC *e*sP sP 00 58 47.0 -11
KHC AMS AMS 01 07 30.0
comp=Z,200nm,24.1s
CLL Collm 43.42 308 P **P 00 58 17.8 -0.3**
comp=Z,logA/T=0.6,mb4.1
CLL *e*SP sP 00 58 47.0 -11
CLL Collm 43.42 308 *i* P **P 00 58 17.8 -0.3**
comp=Z,3.0nm,0.8s,mb4.1
CLL *e*sP sP 00 58 47.0 -11
CLL Collm 43.42 308 *i* P **P 00 58 17.8 -0.3**
CLL pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
CLL Collm 43.42 308 *i* P **P 00 58 17.8 -0.3**
comp=Z,3.0nm,0.8s,mb4.1
CLL *i* 00 58 22.4
NKC Novy Kostel 43.91 306 AMS AMS 01 10 20.0
NB2 NORSAR Subarra 44.00 322 P **P 00 58 21.8 -0.9**
comp=Z,3.3nm,0.6s,mb4.2,baz=92,slow=8.6
NOA NORSAR Array B 44.00 322 P **P 00 58 22.3 -0.4**
comp=Z,2.9nm,0.6s,mb4.2,baz=92,slow=7.7,SNR=19
NOA NORSAR Array B 44.00 322 P **P 00 58 22.3 -0.4**
NOA pmax pmax
comp=Z,3.0nm,0.6s
GRA1 Grafenberg Arr 44.78 306 *e*P **P 00 58 30.4 +1.5**
comp=Z,9.0nm,1.5s,mb4.3
GRA1 *e*pP pP 00 58 59.0 +3.1
GRF Grafenberg Arr 44.78 306 *e*P **P 00 58 30.4 +1.5**
comp=Z,9.0nm,1.5s,mb4.3
GRF *e*pP pP 00 58 59.0 +3.1
GRF Grafenberg Arr 44.78 306 *e*P **P 00 58 30.4 +1.5**
GRF *e**PP pP 00 58 59.0 +3.1
GRF pmax pmax
comp=Z,9.0nm,1.5s,mb4.3
GRF Grafenberg Arr 44.78 306 *e*P **P 00 58 30.4 +1.5**
GRF *e**PP pP 00 58 59.0 +3.1
GRF pmax pmax
comp=Z,9.0nm,1.5s,mb4.3
CDF Champ du Feu 47.58 305 *e*P **P 00 58 50.8 0.0**
comp=Z,3.5nm,0.8s,mb4.0
CDF Champ du Feu 47.58 305 *e*P **P 00 58 50.8 0.0**
CDF pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
CDF Champ du Feu 47.58 305 *e*P **P 00 58 50.8 0.0**
comp=Z,1.8nm,0.8s,mb4.0
PGF Pioggiola 47.98 296 *e*P **P 00 58 53.5 -0.4**
comp=Z,5.3nm,0.7s,mb4.2
PGF Pioggiola 47.98 296 *e*P **P 00 58 53.5 -0.4**
PGF pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
PGF Pioggiola 47.98 296 *e*P **P 00 58 53.5 -0.4**
comp=Z,2.7nm,0.7s,mb4.2
HINF Hinteralfeld 48.00 304 *e*P **P 00 58 53.7 -0.4**
comp=Z,4.2nm,0.8s,mb4.0
HINF Hinteralfeld 48.00 304 *e*P **P 00 58 53.7 -0.4**
HINF pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
HINF Hinteralfeld 48.00 304 *e*P **P 00 58 53.7 -0.4**
comp=Z,2.1nm,0.8s,mb4.0
HAU Haudompre 48.28 304 *e*P **P 00 58 56.0 -0.2**
comp=Z,3.8nm,0.7s,mb4.0
HAU Haudompre 48.28 304 *e*P **P 00 58 56.0 -0.2**
HAU pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
HAU Haudompre 48.28 304 *e*P **P 00 58 56.0 -0.2**
comp=Z,1.9nm,0.7s,mb4.0
CABF La Chapelle 48.81 302 *e*P **P 00 59 00.1 -0.2**
comp=Z,4.5nm,0.6s,mb4.3
CABF La Chapelle 48.81 302 *e*P **P 00 59 00.1 -0.2**
CABF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
CABF La Chapelle 48.81 302 *e*P **P 00 59 00.1 -0.2**
comp=Z,2.3nm,0.6s,mb4.3
MBDF Montbardon 48.88 300 *e*P **P 00 59 00.5 -0.3**
MEZF Maizieres J'vi 48.99 305 *e*P **P 00 59 01.9 +0.2**
comp=Z,4.1nm,0.7s,mb4.2
MEZF Maizieres J'vi 48.99 305 *e*P **P 00 59 01.9 +0.2**
comp=Z,4.1nm,0.7s,mb4.5
BAIF Baives 49.15 307 *e*P **P 00 59 03.0 +0.2**
comp=Z,8.7nm,0.7s,mb4.5
BAIF Baives 49.15 307 *e*P **P 00 59 03.0 +0.2**
BAIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BAIF Baives 49.15 307 *e*P **P 00 59 03.0 +0.2**
comp=Z,4.3nm,0.7s,mb4.5
FRF La Foret Royal 49.31 298 *e*P **P 00 59 03.8 -0.3**
comp=Z,3.7nm,0.6s,mb4.2
FRF La Foret Royal 49.31 298 *e*P **P 00 59 03.8 -0.3**
FRF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
FRF La Foret Royal 49.31 298 *e*P **P 00 59 03.8 -0.3**
comp=Z,1.9nm,0.6s,mb4.2
KEST Kesra 50.10 288 P **P 00 59 10.9 +0.9**
comp=Z,0.7nm,0.6s,mb3.8,baz=343,slow=3.2,SNR=13
LOR Lormes 50.10 304 *e*P **P 00 59 09.3 -0.8**
comp=Z,2.8nm,0.7s,mb4.0
LOR Lormes 50.10 304 *e*P **P 00 59 09.3 -0.8**
LOR pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
LOR Lormes 50.10 304 *e*P **P 00 59 09.3 -0.8**
comp=Z,1.4nm,0.6s,mb4.1
VIVF Saint-Julien-l 50.27 301 *e*P **P 00 59 11.2 -0.1**
SMF Signal de Mont 50.29 303 *e*P **P 00 59 11.0 -0.5**
comp=Z,6.4nm,0.6s,mb4.4
SMF Signal de Mont 50.29 303 *e*P **P 00 59 11.0 -0.5**
SMF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SMF Signal de Mont 50.29 303 *e*P **P 00 59 11.0 -0.5**
comp=Z,3.2nm,0.6s,mb4.4
SSF Saint Saulge 50.39 304 *e*P **P 00 59 11.6 -0.7**
AVF Avril sur Loir 50.57 303 *e*P **P 00 59 13.2 -0.4**
comp=Z,7.8nm,0.6s,mb4.7
AVF Avril sur Loir 50.57 303 *e*P **P 00 59 13.2 -0.4**
AVF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
AVF Avril sur Loir 50.57 303 *e*P **P 00 59 13.2 -0.4**
comp=Z,3.9nm,0.6s,mb4.6
LASF Ste Croix 51.07 300 *e*P **P 00 59 17.5 +0.2**
TCF Toulx Ste Croi 51.47 303 *e*P **P 00 59 20.3 -0.1**
comp=Z,4.4nm,0.7s,mb4.3
TCF Toulx Ste Croi 51.47 303 *e*P **P 00 59 20.3 -0.1**
TCF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
TCF Toulx Ste Croi 51.47 303 *e*P **P 00 59 20.3 -0.1**
comp=Z,2.2nm,0.7s,mb4.3
CAF Calviac 52.00 301 *e*P **P 00 59 24.5 +0.2**
comp=Z,2.7nm,0.6s,mb4.2
CAF Calviac 52.00 301 *e*P **P 00 59 24.5 +0.2**
CAF pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
CAF Calviac 52.00 301 *e*P **P 00 59 24.5 +0.2**
comp=Z,1.4nm,0.6s,mb4.2
LDF La Druitiere 52.27 306 *e*P **P 00 59 26.1 -0.2**
comp=Z,8.1nm,0.5s,mb4.7
LDF La Druitiere 52.27 306 *e*P **P 00 59 26.1 -0.2**
LDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
LDF La Druitiere 52.27 306 *e*P **P 00 59 26.1 -0.2**
comp=Z,4.1nm,0.5s,mb4.7
MTLF Montolieu 52.43 300 *e*P **P 00 59 27.5 0.0**
GRR Gorron 52.80 306 *e*P **P 00 59 29.5 -0.7**
comp=Z,14nm,0.8s,mb4.8
GRR Gorron 52.80 306 *e*P **P 00 59 29.5 -0.7**
GRR pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
GRR Gorron 52.80 306 *e*P **P 00 59 29.5 -0.7**
comp=Z,7.1nm,0.8s,mb4.8
LFF La Frestale 52.88 302 *e*P **P 00 59 30.9 +0.1**
comp=Z,11nm,0.8s,mb4.6
LFF La Frestale 52.88 302 *e*P **P 00 59 30.9 +0.1**
LFF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
LFF La Frestale 52.88 302 *e*P **P 00 59 30.9 +0.1**
comp=Z,5.4nm,0.8s,mb4.6
MFF Saint Martin d 52.91 304 *e*P **P 00 59 31.2 +0.2**
SGMF Saint Gilles 53.92 307 *e*P **P 00 59 37.9 -0.4**
ROSF Rostrenen 54.34 307 *e*P **P 00 59 40.9 -0.5**
QUIF Quistinic 54.41 307 *e*P **P 00 59 41.6 -0.4**
ETSF Etsaut 54.49 300 *e*P **P 00 59 42.6 +0.1**
comp=Z,6.5nm,0.9s,mb4.3
ETSF Etsaut 54.49 300 *e*P **P 00 59 42.6 +0.1**
ETSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ETSF Etsaut 54.49 300 *e*P **P 00 59 42.6 +0.1**
comp=Z,3.3nm,0.9s,mb4.4
SJPF Ste Jean 54.86 300 *e*P **P 00 59 45.0 -0.2**
ESDC Sonseca Array 58.13 298 P **P 01 00 08.3 0.0**
comp=Z,0.5nm,0.5s,mb3.8,baz=57,slow=6.7,SNR=6.2
TORD Torodi Ar. Bea 67.46 269 P **P 01 01 09.7 -0.5**
comp=Z,2.3nm,0.6s,mb4.2,baz=48,slow=5.7,SNR=50
INK Inuvik 71.85 10 P **P 01 01 37.9 +0.8**
comp=Z,3.7nm,0.5s,mb4.5,baz=337,slow=5.9,SNR=24
INK Inuvik 71.85 10 P **P 01 01 37.9 +0.8**
INK pmax pmax
comp=Z,4.0nm,0.5s
INK Inuvik 71.85 10 *e*P **P 01 01 37.8 +0.7**
comp=Z,4.9nm,0.6s,mb4.5
YKA Yellowknife Ar 79.36 4 P **P 01 02 20.3 +0.4**
comp=Z,1.7nm,0.5s,mb4.2,baz=349,slow=5.5,SNR=20
YKA Yellowknife Ar 79.36 4 P **P 01 02 20.3 +0.4**
YKA pmax pmax
comp=Z,2.0nm,0.5s
YKA Yellowknife Ar 79.36 4 P **P 01 02 20.3 +0.4**
WRA Warramunga Arr 81.52 124 P **P 01 02 32.6 +1.1**
comp=Z,0.9nm,0.6s,mb3.8,baz=325,slow=5.1,SNR=4.8
WRA Warramunga Arr 81.52 124 P **P 01 02 32.6 +1.1**
WRA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 83.91 126 P **P 01 02 45.5 +1.6**
comp=Z,0.2nm,0.4s,mb3.3,baz=314,slow=3.6,SNR=4.4

KRSC ***20*** *00:58:15, 4965N×15760E, h5km, ML4.0*
MOS 20 00:58:17.0±0.5, 4965N×15760E, h14km, mb4.1/1, 2D,
Error ellipse: s-maj=99.9km s-min=19.0km az=77.7,

East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.41**	**318**	*i* P	N	Pn	00 58 32.0	-10
SKR				pmax	pmax			
	comp=Z,650nm,0.7s							
MIPR	**Malaya Ipel'ka**	**2.68**	**349**	P		Pn	00 58 59.3	-0.4
RUS	**Russkaya**	**2.85**	**11**	PN		Pn	00 59 03.2	+1.2
RUS				S		Sn	00 59 37.1	+1.1
RUS	**Russkaya**	**2.85**	**11**	*e*P		Pn	00 59 03.2	+1.2
RUS				*i* S		Sn	00 59 37.1	+1.1
GRL	**Gorelyy**	**2.92**	**6**	*e*P		Pn	00 59 04.6	+1.6
GRL				*i* S		Sn	00 59 39.6	+1.7
PET	**Petropavlovsk**	**3.44**	**11**	*e*PN		Pn	00 59 11.9	+1.7
PET				*e*S		Sn	00 59 56.1	+5.3
PET				smax				
	comp=N,78nm,0.6s							
PET				smax				
	comp=E,91nm,0.5s							
PET	**Petropavlovsk**	**3.44**	**11**	*e*P		Sn	00 59 59.2	+8.5
	comp=E,34nm,0.6s							
PET	**Petropavlovsk**	**3.44**	**11**	P		Pn	00 59 12.2	+2.0
PET				*i* S		Sn	00 59 52.6	+1.8
SDLR	**Sedlovina**	**3.72**	**12**	*e*P		Pn	00 59 16.1	+2.1
SDLR				*e*S		Sn	00 59 59.5	+1.9
SPN	**Mys Shipunski**	**3.77**	**23**	PN		Pn	00 59 17.4	+2.7
SPN				S		Sn	01 00 01.7	+2.8
SPN	**Mys Shipunski**	**3.77**	**23**	*e*P		Pn	00 59 17.4	+2.7
SPN				*i* S		Sn	01 00 01.7	+2.8
GNL	**Ganaly**	**4.06**	**3**	*e*P		Pn	00 59 20.9	+2.3
MKZ	**Mys Kozlova**	**5.53**	**26**	PN		Pn	00 59 40.8	+1.9
MKZ	**Mys Kozlova**	**5.53**	**26**	*e*P		Pn	00 59 40.8	+1.9
MKZ				*e*S		Sn	01 00 45.4	+3.1
KBTR	**Krutoberegovo**	**7.29**	**24**	PN		Pn	01 00 05.3	+2.3
KBTR	**Krutoberegovo**	**7.29**	**24**	*e*P		Pn	01 00 05.3	+2.3

ISCJB ***20*** *00:59:06.3±1.3, 1935S×006×7019W±009, h55km±14km, mb4.0/9, MS3.9/3, Error ellipse: s-maj=13.9km s-min=9.5km az=21.7*
IDC ***20*** *00:59:08.2±2.2, 1932S×7015W, h57km±20km, mb3.8/9, mb1 4.1/13, mb1mx3.9/20, mbtmp4.1/13, ML4.2/5, MS3.7/4, Ms1 3.7/4, ms1mx3.0/30, Error ellipse: s-maj=20.5km s-min=17.6km az=56.0*
NEIC ***20*** *00:59:09.0±1.1, 1939S×7017W, h68km±24km, Error ellipse: s-maj=16.5km s-min=11.1km az=93.0*
ISC 20 00:59:08.8±1.0, 1939S±006×7020W±009, h62km±11km,
n25, σ0.888/18, mb4.0/9, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**3.43**	**160**	P		**Pn**	**00 59 59.4**	**-0.4**
	20nm,0.3s,baz=344,slow=9.6,SNR=138							
LVC				S		**Sn**	**01 00 45.5**	**+6.4**
	77nm,0.3s,baz=220,slow=21,SNR=13							
LVC				LR		LR	01 01 33.3	
	comp=Z,314nm,19.0s,baz=230,slow=42							
LPAZ	**La Paz**	**3.66**	**33**	P		**Pn**	**01 00 06.2**	**+3.3**
	4.6nm,0.3s,baz=214,slow=9.6,SNR=126							
SIV	**San Ignacio**	**9.33**	**70**	P		**Pn**	**01 01 20.4**	**-0.2**
	2.5nm,0.3s,baz=260,slow=11,SNR=63							
NNA	**Nana**	**9.75**	**318**	P		**Pn**	**01 01 26.1**	**-0.1**
	1.7nm,0.3s,baz=159,slow=17,SNR=4.8							
CFAA	**Coronel Fontan**	**12.29**	**172**	P		**Pn**	**01 02 01.6**	**+0.6**
	0.1nm,0.3s,baz=357,slow=18,SNR=2.6							
SAML	**Samuel**	**12.40**	**34**	*e*Pn		**Pn**	**01 02 01.0**	**-1.5**
	3.8nm,0.7s							
SAML				*e*Sn		**Sn**	**01 04 20.2**	**+1.2**
CPUP	**Villa Florida**	**13.72**	**123**	P		**Pn**	**01 02 19.6**	**-0.8**
	0.4nm,0.3s,baz=282,slow=11,SNR=6.7							
PLCA	**Paso Flores**	**21.28**	**181**	P		**P**	**01 03 50.7**	**+0.7**
	5.3nm,1.1s,mb3.8,baz=10,slow=13,SNR=4.9							
BDFB	**Brasilia**	**21.48**	**83**	P		**P**	**01 03 51.8**	**-0.4**
	4.6nm,0.5s,mb4.1,baz=257,slow=9.2,SNR=13							
PCRV	**Puerto La Cruz**	**29.88**	**11**	LR		LR	01 18 28.4	
	comp=Z,150nm,19.5s,baz=218,slow=39							
DBIC	**Dimbokro**	**69.32**	**75**	P		**P**	**01 10 09.7**	**+0.1**
	2.1nm,0.6s,mb4.2,baz=232,slow=15,SNR=6.0							
PDAR	**Pinedale Array**	**71.69**	**331**	P		**P**	**01 10 23.9**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=115,slow=6.1,SNR=5.4							
ULM	**Lac du Bonnet**	**72.95**	**343**	P		**P**	**01 10 30.0**	**-1.5**
	1.6nm,0.5s,mb4.2,baz=328,slow=2.9,SNR=6.3							
NVAR	**Mina Array Bea**	**73.09**	**322**	P		**P**	**01 10 33.4**	**+1.0**
	1.0nm,0.8s,mb3.8,baz=188,slow=8.0,SNR=6.9							
TORD	**Torodi Ar. Bea**	**77.81**	**71**	P		**P**	**01 10 59.8**	**+0.4**
	3.7nm,0.8s,mb4.4,baz=251,slow=5.4,SNR=36							
VNDA	**Vanda**	**78.71**	**190**	P		**P**	**01 11 05.0**	**+0.7**
	0.5nm,0.8s,mb3.5,baz=134,slow=5.2,SNR=4.1							
NEW	**Newport**	**79.32**	**330**	LR		LR	01 53 15.2	
	comp=Z,23nm,18.9s,baz=360,slow=41							
YKA	**Yellowknife Ar**	**88.81**	**341**	P		**P**	**01 11 55.1**	**-0.7**
	2.9nm,0.8s,mb4.7,baz=139,slow=4.8,SNR=8.5							
RPZ	**Rata Peaks**	**95.85**	**220**	LR		LR	01 45 40.7	
	comp=Z,181nm,19.9s,baz=153,slow=29							
ASAR	**Alice Springs**	**131.18**	**210**	PKP		PKPdf	01 18 14.1	+0.5
	0.5nm,0.6s,baz=141,slow=1.8,SNR=5.3							
WRA	**Warramunga Arr**	**134.11**	**213**	PKP		PKPdf	01 18 18.4	-0.7
	0.7nm,0.8s,baz=161,slow=2.0,SNR=5.6							
ZAL	**Zalesovo**	**140.53**	**23**	PKP		PKPdf	01 18 32.2	+1.2
	0.8nm,0.4s,baz=143,slow=5.1,SNR=3.2							
MKAR	**Makanchi Array**	**144.59**	**33**	PKP		PKPdf	01 18 38.1	-0.1
	0.8nm,0.5s,baz=304,slow=2.8,SNR=7.6							
MJAR	**Matsushiro Arr**	**149.80**	**310**	PKPbc		PKPbc	01 18 52.1	+0.4
	1.3nm,0.6s,baz=118,slow=1.4,SNR=6.7							
MJAR				PKPab		PKPab	01 18 57.0	-0.2
	1.2nm,0.8s,baz=96,slow=2.1,SNR=4.7							
SONM	**Songino Array**	**151.49**	**5**	PKPbc		PKPbc	01 18 56.5	+0.8
	1.1nm,0.6s,baz=293,slow=1.6,SNR=9.4							
SONM				PKPab		PKPab	01 19 03.4	-0.8
	1.0nm,0.6s,baz=338,slow=2.6,SNR=6.3							

KISR 20 01:06:14.9±1.1, 2902N×4969E, h34km, MD3.5, ML2.6,
Persian Gulf

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
QRN	**Al-Qurain**	**1.58**	**261**	*e*P		Pn	01 06 43.0	+2.5
QRN				*e*S		Sn	01 07 04.0	+4.3
QRN				AML		AML	01 07 08.3	
	comp=Z,51nm,0.3s							
KBD	**Kabd**	**1.75**	**276**	*e*P		Pn	01 06 45.7	+2.8
KBD				*e*S		Sn	01 07 08.2	+4.0
KBD				AML		AML	01 07 09.1	
	comp=Z,112nm,0.3s							
RDF	**Al-Radifah**	**1.88**	**268**	*e*P		Pn	01 06 47.7	+3.1
RDF				*e*S		Sn	01 07 12.5	+5.4
RDF				AML		AML	01 07 19.7	
	comp=Z,77nm,0.4s							
NAY	**Al-Naaiem**	**2.15**	**277**	*e*P		Pn	01 06 51.8	+3.3
NAY				AML		AML	01 07 25.6	
	comp=Z,14nm,0.5s							
MIB	**Mutribah**	**2.20**	**291**	*e*P		Pn	01 06 51.7	+2.7
MIB				*e*S		Sn	01 07 19.6	+4.6
MIB				AML		AML	01 07 26.4	
	comp=Z,46nm,0.5s							
RST	**Umm Al-Ruwaisa**	**2.40**	**282**	*e*P		Pn	01 06 54.8	+2.9
RST				*e*S		Sn	01 07 25.3	+5.2
RST				AML		AML	01 07 27.6	
	comp=Z,19nm,0.5s							

ISCJB ***20*** *01:49:05.0±0.6, 2413S×005×6676W±009, h195km±16km, mb3.2/1, Error ellipse: s-maj=14.1km s-min=8.1km az=26.7*
IDC ***20*** *01:49:05.5±1.0, 2408S×6664W, h179km±16km, mb3.2/1, mb1 3.2/7, mb1mx3.1/20, mbtmp3.7/7, Error ellipse: s-maj=19.4km s-min=13.9km az=85.0*
NEIC ***20*** *01:49:06.0±0.6, 2405S×6665W, h182km±10km, mb3.7/2, Error ellipse: s-maj=12.0km s-min=8.8km az=118.0*
GUC ***20*** *01:49:08.3±0.6, 2417S×6724W, h220km, ML4.2*
ISC 20 01:49:05.9±0.6, 2415S±005×6673W±009, h182km±15km,
n18, σ1.9 16/26, mb3.2/1, 2C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.52**	**307**	P		**Pn**	**01 49 50.1**	**+1.2**
	35nm,0.3s,baz=107,slow=6.9,SNR=179							
LVC				S		**Sn**	**01 50 22.9**	**+0.5**
	19nm,0.3s,baz=258,slow=21,SNR=29							
LVC	**Limon Verde**	**2.52**	**307**	*e*Pn		**Pn**	**01 49 50.1**	**+1.2**
LVC				*e*Sn		**Sn**	**01 50 22.1**	**-0.2**
CEN1	**Los Morros**	**3.27**	**283**	⇓ *i* P		**Pn**	**01 49 59.8**	**+1.8**

CEN1 *i* S **Sn** **01 50 38.6 +0.1**
CEN1 AML AML 01 50 41.2
comp=N,163nm,0.2s
CPN1 Cerro Paranal 3.39 261 ⇑*i*P **Pn** **01 50 00.5 +1.2**
CPN1 *i* S **Sn** **01 50 40.1 -1.0**
CPN1 AML AML 01 50 43.6
comp=E,227nm,0.2s
ANCH Antofagasta 3.40 277 *e*P **Pn** **01 50 00.3 +0.8**
ANCH *i* S **Sn** **01 50 39.6 -1.8**
ANCH AML AML 01 50 41.5
comp=N,652nm,0.1s
ANCH Antofagasta 3.40 277 ⇑*i*P **Pn** **01 50 00.5 +1.0**
ANCH *i* S **Sn** **01 50 39.6 -1.8**
CDCH Caldera 4.71 231 *e*P **Pn** **01 50 15.8 -0.4**
CDCH *i* S **Sn** **01 51 08.9 -2.4**
CDCH Caldera 4.71 231 *e*P **Pn** **01 50 16.1 -0.1**
CDCH *i* S **Sn** **01 51 09.2 -2.0**
CFAA Coronel Fontan 7.55 190 P **Pn** **01 50 54.9 +1.7**
comp=N,0.0nm,0.3s,baz=335,slow=4.9,SNR=6.6
CFAA S **Sn** **01 52 17.4 -0.7**
comp=N,0.2nm,0.3s,baz=148,slow=19,SNR=19
LPAZ La Paz 7.93 350 P **Pn** **01 50 58.4 +0.3**
comp=N,0.2nm,0.3s,baz=125,slow=6.0,SNR=7.2
LPAZ La Paz 7.93 350 *e*Pn **Pn** **01 50 58.4 +0.2**
comp=N,0.7nm,0.5s
CPUP Villa Florida 8.78 106 P **Pn** **01 51 09.4 0.0**
comp=N,0.2nm,0.3s,baz=278,slow=10,SNR=4.2
CPUP Villa Florida 8.78 106 *e*Pn **Pn** **01 51 09.4 0.0**
comp=N,5.5nm,0.7s
SIV San Ignacio 9.70 34 P **Pn** **01 51 19.4 -1.9**
comp=N,0.4nm,0.3s,baz=221,slow=12,SNR=17
PLCA Paso Flores 16.85 190 P **Pn** **01 52 52.5 +1.3**
comp=N,0.1nm,0.3s,baz=348,slow=14,SNR=2.0
BDFB Brasilia 19.51 68 P **P** **01 53 18.3 -0.8**
comp=N,0.5nm,0.3s,baz=250,slow=11,SNR=10.0
TORD Torodi Ar. Bea 76.39 69 P **P** **02 00 34.5 -0.5**
comp=N,0.2nm,0.3s,mb3.2,baz=260,slow=6.2,SNR=14
WRA Warramunga Arr 131.61 207 PKP PKPdf 02 07 58.5 +1.6
comp=N,0.2nm,0.3s,baz=152,slow=2.0,SNR=6.0

NIED ***20*** *01:58:00, 39.80N×143.70E, h11km, Mw5.0 Best double couple: M0 3.37000×10^16 NP1:φs 40.00000°, δ 69.00000°, λ 121.00000°. NP2:φs 160.00000°, δ 37.00000°, λ 36.00000°.*
IDC ***20*** *01:58:13.8±0.6, 39.68N×143.64E, h0km, mb4.5/20, mb1 4.6/23, mb1mx4.5/26, mbtmp4.5/23, ML4.0/3, MS4.2/13, Ms1 4.2/13, ms1mx3.9/36, Error ellipse: s-maj=16.7km s-min=13.8km az=105.0*
BJI ***20*** *01:58:16.7, 39.72N×143.34E, h18km, mB5.2, mb5.0, Ms4.9, Msz4.7*
JMA ***20*** *01:58:16.0±0.3, 39.82N×143.68E, h32km, M5.0*
JMA Felt I J1.
ISCJB ***20*** *01:58:17.1±0.1, 39.77N±0.002×143.52E±0.002, h28km, mb4.8/133, MS4.7/46, Error ellipse: s-maj=3.2km s-min=2.1km az=133.3*
MOS ***20*** *01:58:17.0±0.9, 39.90N×143.51E, h23km, mb5.0/71, MS4.8/29, Error ellipse: s-maj=8.0km s-min=4.4km az=110.4*
HRVD ***20*** *01:58:19.5±0.3, 39.72N×143.86E, h16km±1km, MW5.1/68, Centroid moment Tensor Solution. LP body waves: s24,c37; Mantle waves: s68,c116; Half duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.29±.17; Mθθ 0.26±.10; Mφφ -2.55±.12; Mrθ 2.03±.37; Mθφ -0.87±.07; Mφr 4.19±.49; Best double couple: M0 5.31000×10^16 NP1:φs 183.00000°, δ 15.00000°, λ 69.00000°. NP2:φs 25.00000°, δ 76.00000°, λ 96.00000°. Principal axes: T 5.0960, Plg 59.0000°, Azm 303.0000°; N 0.4300, Plg 5.0000°, Azm 204.0000°; P -5.5250, Plg 31.0000°, Azm 110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***20*** *01:58:19.5±0.6, 39.67N×143.54E, h36km±5km, mb4.8/86, MS4.8/6, MW5.0(NIED) Error ellipse: s-maj=4.5km s-min=3.3km az=151.0*
NEIC Recorded [1 JMA] in Iwate Prefecture.
SZGRF ***20*** *01:58:24.3, 40.54N×143.73E, h29km, mb5.1, MS4.7, Off east coast of Honshu, Japan*
ISC 20 01:58:19.1±0.1, 39.78N±0.002×143.51E±0.002, h30km, h30km±1.0km:pP-P, n509, σ0s 87/534, mb4.8/133, MS4.7/46, 131C-75D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.28**	**278**	⇑P	**Pn**	**01 58 40.0**	**-0.8**
MIYJ	**Miyakonagasawa**	**1.32**	**262**	⇑P	**Pn**	**01 58 41.1**	**-0.3**
OFUJ	**Ofunato**	**1.58**	**245**	⇑P	**Pn**	**01 58 44.3**	**-0.8**
JANG	**Nango**	**1.64**	**292**	⇑P	**Pn**	**01 58 45.1**	**-0.8**
JOM	**Ohasama**	**1.74**	**261**	⇑P	**Pn**	**01 58 47.5**	**+0.3**
JOM				*e*S	**Sn**	**01 59 10.9**	**+2.6**
JMK	**Ichinoseki**	**1.96**	**246**	⇑P	**Pn**	**01 58 49.8**	**-0.4**
JTM	**Tenmabayashi**	**2.12**	**299**	⇑P	**Pn**	**01 58 52.5**	**0.0**
JIO	**Ouri**	**2.13**	**233**	⇑P	**Pn**	**01 58 51.3**	**-1.4**
JOT	**Ohata**	**2.47**	**311**	P	**Pn**	**01 58 57.1**	**-0.1**
JNBK	**Urakawa-nobuka**	**2.57**	**347**	P	**Pn**	**01 58 57.4**	**-1.2**
JYK	**Kaneyama**	**2.59**	**252**	⇑P	**Pn**	**01 58 59.2**	**+0.3**
JYK				*e*S	**Sn**	**01 59 30.3**	**+1.0**
JKB	**Kayabe**	**2.83**	**319**	P	**Pn**	**01 59 01.6**	**-0.5**
JKB				*e*S	**Sn**	**01 59 36.3**	**+1.1**
JCH	**Churui**	**2.84**	**358**	P	**Pn**	**01 59 00.0**	**-2.3**
JCH				*e*S	**Sn**	**01 59 32.4**	**-3.1**
JMM	**Marumori**	**2.85**	**229**	P	**Pn**	**01 59 00.8**	**-1.7**
JAK	**Akkeshi**	**3.34**	**15**	P	**Pn**	**01 59 06.0**	**-3.2**
JAK				*e*S	**Sn**	**01 59 45.3**	**-2.6**
JEW	**Eniwo**	**3.43**	**334**	P	**Pn**	**01 59 10.5**	**0.0**
JEW				*e*S	**Sn**	**01 59 51.5**	**+1.4**
JFR	**Furan**	**3.45**	**349**	*e*S	**Sn**	**01 59 49.1**	**-1.6**
JHO	**Hitachi**	**3.92**	**217**	P	**Pn**	**01 59 14.0**	**-3.1**
JHK	**Hiroka**	**4.33**	**236**	P	**Pn**	**01 59 22.6**	**-0.3**
ASAJ	**Asahikawa**	**4.39**	**351**	Pn	**Pn**	**01 59 22.5**	**-1.2**
	3.6nm,0.3s,baz=203,slow=15,SNR=21						
ASAJ				Sn	**Sn**	**02 00 13.4**	**-0.3**
	6.6nm,0.3s,baz=26,slow=29,SNR=5.6						
ASAJ				LR	LR	02 01 45.5	
	comp=Z,3μm,20.6s,baz=359,slow=47						
ASAJ	**Asahikawa**	**4.39**	**351**	P	**Pn**	**01 59 22.5**	**-1.2**
ASAJ						02 00 13.5	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,7.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,3μm,20.6s						
JSD	**Sado**	**4.45**	**249**	P	**Pn**	**01 59 24.6**	**+0.2**
JKT	**Katashina**	**4.50**	**229**	P	**Pn**	**01 59 25.2**	**0.0**
YUK	**Yuzh-Kuril'sk**	**4.60**	**22**	*e*P	**Pn**	**01 59 22.2**	**-4.4**
YUK				*e*S	**Sn**	**02 00 08.7**	**-10**
YUK				pmax	pmax		
	comp=N,540nm,0.5s						
YUK				pmax	pmax		
	comp=Z,580nm,0.5s						
YUK				pmax	pmax		
	comp=E,810nm,0.8s						
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				pmax	pmax		
	comp=N,2μm,0.8s						
YUK				pmax	pmax		
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,11μm,1.7s						
YUK				smax			
	comp=E,10μm,1.9s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,2μm,0.5s						
YUK				MLR	MLR		
	comp=Z,4μm,18.0s						
YUK				MLR	MLR		
	comp=N,4μm,17.0s						
YUK				MLR	MLR		
	comp=E,6μm,17.0s						
JAG	**Ashikaga**	**4.63**	**225**	P	**Pn**	**01 59 25.7**	**-1.2**
JJN	**Nakama**	**4.97**	**239**	P	**Pn**	**01 59 32.5**	**+0.9**
JGK	**Kuni**	**5.00**	**232**	P	**Pn**	**01 59 32.6**	**+0.6**
JRY	**Ryogami san**	**5.23**	**226**	P	**Pn**	**01 59 34.0**	**-1.2**
MJAR	**Matsushiro Arr**	**5.28**	**234**	Pn	**Pn**	**01 59 36.2**	**+0.3**
	comp=E,4.4nm,0.3s,baz=41,slow=12,SNR=308						
MJAR	**Matsushiro Arr**	**5.28**	**234**	P	**Pn**	**01 59 36.2**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR	**Matsushiro Arr**	**5.28**	**234**	Pn	**Pn**	**01 59 36.2**	**+0.3**
MAJO	**Matsushiro**	**5.28**	**234**	⇑*i*P	**Pn**	**01 59 36.3**	**+0.4**
MAT	**Matsushiro**	**5.28**	**234**	P	**Pn**	**01 59 36.3**	**+0.4**
MAT				S	**Sn**	**02 00 37.0**	**+1.3**
MAT	**Matsushiro**	**5.28**	**234**	*e*P	**Pn**	**01 59 36.0**	**+0.1**
MAT				*e*S	**Sn**	**02 00 37.0**	**+1.3**
MAT				pmax	pmax		
	comp=Z,166nm,0.9s						
MAT	**Matsushiro**	**5.28**	**234**	*e*P	**Pn**	**01 59 36.0**	**+0.1**
	comp=Z,166nm,0.9s						
MAT				*e*S	**Sn**	**02 00 37.0**	**+1.3**
JNG	**Nsakai**	**5.43**	**233**	P	**Pn**	**01 59 38.4**	**+0.4**
JNT	**Takato**	**5.76**	**229**	P	**Pn**	**01 59 42.6**	**+0.1**
JTT	**Ttatey**	**5.80**	**239**	P	**Pn**	**01 59 44.3**	**+1.3**
JYN	**Shimob**	**5.81**	**224**	P	**Pn**	**01 59 42.8**	**-0.3**
JJH	**Hakui**	**6.00**	**244**	P	**Pn**	**01 59 46.8**	**+1.0**
JGN	**Niukaw**	**6.04**	**236**	P	**Pn**	**01 59 47.1**	**+0.8**
KUR	**Kuril'sk**	**6.33**	**29**	⇑*i*P	**Pn**	**01 59 44.0**	**-6.4**
KUR				*i* S	**Sn**	**02 00 52.0**	**-10**
KUR				pmax	pmax		
	comp=N,90nm,0.7s						
KUR				pmax	pmax		
	comp=E,70nm,0.7s						
KUR				pmax	pmax		
	comp=Z,170nm,0.7s						
KUR				smax			
	comp=E,4μm,4.0s						
KUR				smax			
	comp=N,430nm,0.7s						
KUR				smax			
	comp=E,280nm,0.7s						
KUR				MLR	MLR		
	comp=E,6μm,14.0s						
KUR				MLR	MLR		
	comp=Z,5μm,14.0s						
YSS	**Yuzh-Sakhalins**	**7.20**	**356**	⇑*e*P	**Pn**	**02 00 02.1**	**-0.1**
YSS				*e*S	**Sn**	**02 01 22.0**	**-0.9**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				pmax	pmax		
	comp=N,40nm,1.1s						
YSS				smax			
	comp=N,60nm,1.0s						
YSS				MLR	MLR		
	comp=Z,3μm,15.0s						
YSS				MLR	MLR		
	comp=N,3μm,16.0s						
YSS				MLR	MLR		
	comp=E,3μm,17.0s						
YSS	**Yuzh-Sakhalins**	**7.20**	**356**	*e*Pn	**Pn**	**02 00 02.0**	**-0.2**
JHJ	**Hachijo jima 2**	**7.29**	**205**	Pn	**Pn**	**01 59 60.0**	**-3.5**
	comp=E,22nm,0.3s,baz=90,slow=17,SNR=7.5						
JHJ				Sn	**Sn**	**02 01 18.6**	**-6.6**
	comp=E,51nm,0.3s,baz=85,slow=22,SNR=11						
VLA	**Vladivostok**	**9.34**	**295**	*e*P	**Pn**	**02 00 33.3**	**+1.7**
VLA				*e*		02 02 22.0	
VLA				pmax	pmax		
	comp=Z,46nm,1.1s						
VLA				MLR	MLR		
	comp=Z,2μm,12.3s						
HABR	**Khabarovsk**	**10.60**	**328**	⇑*e*P	**Pn**	**02 00 48.7**	**-0.2**
HABR				*e*		02 02 48.4	
HABR				pmax	pmax		
	comp=Z,122nm,1.6s						
MDJ	**Mudanjiang**	**11.40**	**300**	P	**Pn**	**02 01 00.5**	**+0.7**
MDJ				S	**Sn**	**02 03 06.8**	**+0.8**
MDJ				PCP	PcP	02 06 51.3	-0.7
MDJ				SCP	ScP	02 10 21.8	-0.7
MDJ				PCS	PcS	02 10 25.5	-0.3
MDJ				SCS	ScS	02 13 57.4	-0.5
MDJ				AMB	AMB		
	comp=Z,27nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,546nm,7.5s						
MDJ				LR	LR		
	comp=N,823nm,14.0s						
MDJ				LR	LR		
	comp=E,722nm,15.2s						
MDJ				LR	LR		
	comp=Z,1μm,12.7s						
KLR	**Kul'dur**	**12.63**	**322**	*e*P	**Pn**	**02 01 12.8**	**-3.8**
KLR				pmax	pmax		
	comp=E,68nm,1.6s						
KLR				pmax	pmax		
	comp=Z,90nm,1.6s						
KLR				MLR	MLR		
	comp=N,4μm,13.0s						
KLR				MLR	MLR		
	comp=Z,6μm,13.0s						
CBIJ	**Chichi jima**	**12.69**	**185**	Pn	**Pn**	**02 01 11.2**	**-6.3**
	comp=Z,4.2nm,0.3s,baz=262,slow=18,SNR=3.9						
CBIJ				Sn	**Sn**	**02 03 21.6**	**-16**
	comp=Z,6.8nm,0.3s,baz=244,slow=23,SNR=4.3						
CBIJ				LR	LR	02 06 22.1	
	comp=Z,804nm,18.3s,baz=12,slow=39						
PET	**Petropavlovsk**	**16.82**	**33**	*b*P	**Pn**	**02 02 14.1**	**+1.7**
PET				*e*S	**Sn**	**02 05 23.4**	**+5.1**
PET				pmax	pmax		
	comp=Z,55nm,1.3s						
PET				pmax	pmax		
	comp=Z,300nm,2.8s						
PET				smax			
	comp=E,600nm,8.7s						
PET				smax			
	comp=N,500nm,3.8s						
PET				smax			
	comp=E,700nm,8.5s						
PET				smax			
	comp=N,300nm,8.2s						
PET				MLR	MLR		
	comp=Z,2μm,14.0s						
PET				MLR	MLR		
	comp=Z,2μm,15.0s						
PET	**Petropavlovsk**	**16.82**	**33**	*e*P	**Pn**	**02 02 14.1**	**+1.8**
	comp=Z,56nm,1.1s						
DL2	**Dalian**	**16.95**	**274**	⇑*i*P	**Pn**	**02 02 12.9**	**-1.0**
DL2				PP		02 02 24.5	
DL2				*e*S	**Sn**	**02 05 17.0**	**-4.3**
DL2				SS		02 05 42.8	
DL2				AMB	AMB		
	comp=Z,50nm,1.0s						
DL2				AMB	AMB		
	comp=Z,250nm,6.8s						
DL2				LR	LR		
	comp=N,780nm,12.7s						
DL2				LR	LR		
	comp=E,360nm,16.5s						
DL2				LR	LR		
	comp=Z,750nm,16.3s						
HIA	**Hailar**	**19.35**	**307**	*e*P	**Pn**	**02 02 39.9**	**-3.4**
HIA				pmax	pmax		
	comp=Z,35nm,1.0s						
HIA	**Hailar**	**19.35**	**307**	*e*P	**Pn**	**02 02 39.9**	**-3.4**
	comp=Z,35nm,1.0s						
SSE	**Sheshan**	**20.11**	**251**	P	**P**	**02 02 48.1**	**-2.2**
SSE				AP		02 02 56.1	
SSE				XP	sP	02 03 00.4	-1.7
SSE				S	**S**	**02 06 31.9**	**-2.7**
SSE				AMB	AMB		
	comp=Z,42nm,0.7s						
SSE				AMB	AMB		
	comp=Z,295nm,12.0s						
SSE				LR	LR		
	comp=N,782nm,17.2s,MS4.2						
SSE				LR	LR		
	comp=E,503nm,17.2s,MS4.2						
SSE				LR	LR		
	comp=Z,521nm,14.5s,MS4.0						
MA2	**Magadan**	**20.35**	**11**	*e*P	**P**	**02 02 52.6**	**-0.3**
MA2				*e*		02 03 21.8	
MA2				*e*S	**S**	**02 06 32.2**	**-7.1**
MA2				*e*		02 07 12.0	
MA2				pmax	pmax		
	comp=Z,80nm,0.8s						
MA2				MLR	MLR		
	comp=Z,1μm,18.0s,MS4.3						
BJI	**Beijing**	**20.94**	**280**	*e*P	**P**	**02 02 57.4**	**-2.0**
BJI				XP	sP	02 03 12.3	+1.1
BJI				AMB	AMB		
	comp=Z,29nm,1.4s						
BJI				AMB	AMB		
	comp=Z,257nm,3.2s						
BJI				LR	LR		
	comp=N,2μm,14.4s,MS4.7						
BJI				LR	LR		
	comp=E,2μm,16.0s,MS4.7						
BJI				LR	LR		
	comp=Z,1μm,16.5s,MS4.3						
CLNS	**Chul'man**	**20.97**	**331**	*e*P	**P**	**02 02 58.4**	**-1.3**
CLNS				*e*		02 03 08.1	
CLNS				*e*PPP		02 03 20.5	
CLNS				*e*S	**S**	**02 06 47.4**	**-4.3**
CLNS				*e*		02 07 20.3	
CLNS				pmax	pmax		
	comp=Z,80nm,1.4s						
CLNS				pmax	pmax		
	comp=N,105nm,1.5s						
CLNS				pmax	pmax		
	comp=E,29nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,48nm,1.0s						
CLNS				pmax	pmax		
	comp=N,27nm,0.9s						
CLNS				pmax	pmax		
	comp=E,45nm,1.1s						
CLNS				smax			
	comp=N,442nm,13.6s						
CLNS				smax			
	comp=Z,135nm,12.0s						
CLNS				smax			
	comp=E,262nm,11.1s						
CLNS				MLR	MLR		
	comp=Z,3μm,14.0s,MS4.9						
CLNS				MLR	MLR		
	comp=N,2μm,13.0s,MS4.9						
CLNS				MLR	MLR		
	comp=E,3μm,14.0s,MS4.9						
TIA	**Tai'an**	**21.07**	**269**	*e*P	**P**	**02 02 58.3**	**-2.4**
TIA				AMB	AMB		
	comp=Z,79nm,1.1s,mb5.0						
NJ2	**Nanjing**	**21.36**	**257**	*e*P	**P**	**02 03 03.3**	**-0.6**
NJ2				AP		02 03 12.3	
NJ2				XP	sP	02 03 16.3	+0.6
NJ2				PP		02 03 27.3	
NJ2				S	**S**	**02 06 51.0**	**-8.4**
NJ2				XS	sS	02 07 05.0	-7.2
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,70nm,3.5s						
NJ2				LR	LR		
	comp=N,3μm,19.9s						
NJ2				LR	LR		
	comp=E,3μm,14.6s						
NJ2				LR	LR		
	comp=Z,3μm,12.0s						
TATO	**Taipei**	**23.65**	**238**	*e*P	**P**	**02 03 27.2**	**-0.6**
YAK	**Yakutsk**	**23.83**	**344**	*e*P	**P**	**02 03 26.2**	**-3.3**
YAK				*e**PP		02 03 34.3	
YAK				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
YAK				MLR	MLR		
	comp=Z,336nm,16.0s,MS3.9						
YAK				MLR	MLR		
	comp=N,453nm,17.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,785nm,17.0s,MS4.3						
YAK	**Yakutsk**	**23.83**	**344**	*e*P	**P**	**02 03 27.6**	**-1.8**
	comp=E,37nm,0.6s,mb5.0						
YHNB	**Yeheng**	**23.94**	**238**	*e*P	**P**	**02 03 28.8**	**-1.7**
CIT	**Chita**	**23.99**	**311**	*e*P	**P**	**02 03 29.2**	**-1.8**
CIT				*e*		02 03 36.6	
CIT				pmax	pmax		
	comp=Z,206nm,1.4s,mb5.4						
HHC	**Hu-ho-hao-te**	**24.32**	**283**	*e*P	**P**	**02 03 32.4**	**-1.5**
HHC				AP		02 03 39.4	
HHC				XP	sP	02 03 42.9	-3.3
HHC				PP		02 04 07.4	
HHC				PCP	PcP	02 07 14.1	+0.9
HHC				S	**S**	**02 07 47.3**	**-3.9**
HHC				XS	sS	02 07 57.9	-7.5
HHC				SS		02 08 39.3	
HHC				SCP	ScP	02 10 49.4	-0.2
HHC				PCS	PcS	02 10 53.3	+0.3
HHC				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.3						
HHC				AMB	AMB		
	comp=Z,302nm,7.2s						
HHC				LR	LR		
	comp=N,868nm,12.4s,MS4.6						
HHC				LR	LR		
	comp=E,1μm,16.5s,MS4.6						
HHC				LR	LR		
	comp=Z,1μm,15.5s,MS4.6						
WHN	**Wuhan**	**25.46**	**258**	⇑*i*P	**P**	**02 03 44.9**	**+0.5**
WHN				S	**S**	**02 08 11.0**	**+1.5**
WHN				AMB	AMB		
	comp=Z,240nm,1.1s,mb5.6						
WHN				LR	LR		
	comp=Z,3μm,12.9s,MS5.0						
BTO	**Baotou**	**25.51**	**283**	*e*P	**P**	**02 03 44.3**	**-0.5**
QZH	**Quanzhou**	**25.61**	**242**	P	**P**	**02 03 45.6**	**-0.1**
QZH				S	**S**	**02 08 14.0**	**+2.1**
QZH				LR	LR		
	comp=N,2μm,14.0s,MS5.0						
QZH				LR	LR		
	comp=E,2μm,10.7s,MS5.0						
QZH				LR	LR		
	comp=Z,2μm,11.7s,MS4.9						
BOD	**Bodaibo**	**26.20**	**323**	*e*P	**P**	**02 03 50.2**	**-0.9**
BOD				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.7						
SONM	**Songino Array**	**27.75**	**299**	P	**P**	**02 04 06.0**	**+1.0**
	comp=Z,14nm,1.1s,mb4.5,baz=101,slow=6.5,SNR=68						
SONM				LR	LR	02 15 07.4	
	comp=Z,246nm,21.1s,MS3.8,baz=274,slow=36						
SONM	**Songino Array**	**27.75**	**299**	P	**P**	**02 04 06.0**	**+1.0**
SONM				pmax	pmax		
	comp=Z,15nm,1.1s						
SONM				MLR	MLR		
	comp=Z,246nm,21.1s						
XAN	**Xi'an**	**28.13**	**269**	P	**P**	**02 04 07.8**	**-0.5**
XAN				PP	PP	02 05 02.5	-10
XAN				PPP		02 05 55.9	
XAN				S	**S**	**02 08 59.8**	**+8.2**
XAN				AMB	AMB		
	comp=Z,28nm,1.3s,mb4.7						
XAN				AMB	AMB		
	comp=Z,216nm,8.9s						
XAN				LR	LR		
	comp=E,1μm,14.4s						
XAN				LR	LR		
	comp=Z,1μm,14.0s,MS4.7						
IRK	**Irkutsk**	**29.59**	**308**	*e*P	**P**	**02 04 20.3**	**-1.1**
IRK				pmax	pmax		
	comp=Z,43nm,1.5s,mb5.0						
TLY	**Talaya**	**29.89**	**307**	P	**P**	**02 04 24.9**	**+0.9**
	SNR=10						
TLY	**Talaya**	**29.89**	**307**	*e*P	**P**	**02 04 23.7**	**-0.3**
TLY				*e*		02 05 28.1	
TLY				*e*S	**S**	**02 09 26.5**	**+7.2**
TLY				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.7						
TLY				MLR	MLR		
	comp=Z,758nm,13.0s,MS4.5						
TLY	**Talaya**	**29.89**	**307**	*e*P	**P**	**02 04 24.4**	**+0.3**
	comp=Z,26nm,1.5s,mb4.7						
ZAK	**Zakamensk**	**29.98**	**304**	*e*P	**P**	**02 04 24.6**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.4						
BILL	**Bilibino**	**30.94**	**16**	*e*P	**P**	**02 04 31.6**	**-1.6**
BILL				*e*	pP	02 04 39.8	-2.2
BILL				*e*		02 05 36.2	
BILL				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
BILL				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.3						
LZH	**Lanzhou**	**31.32**	**276**	⇓P	**P**	**02 04 37.5**	**+0.8**
LZH				AP	pP	02 04 45.5	+0.1
LZH				XP	sP	02 04 48.5	-0.5
LZH				PP	PP	02 05 40.8	-6.8
LZH				PCP	PcP	02 07 30.3	+0.1
LZH				*e*S	**S**	**02 09 40.1**	**-1.6**
LZH				XS	sS	02 09 57.0	+0.8
LZH				SS	SS	02 11 26.0	-30
LZH				SCS	ScS	02 15 12.0	+3.5
LZH				AMB	AMB		

comp=Z,56nm,1.6s,mb5.1
LZH AMB AMB
comp=Z,159nm,6.1s
LZH LR LR
comp=E,2µm,14.6s
LZH LR LR
comp=Z,3µm,15.5s,MS5.1
GYA Guiyang 33.36 258⇑ *i*P **P 02 04 54.4 -0.1**
GYA AP pP 02 05 03.8 +0.6
GYA XP sP 02 05 07.6 +0.7
GYA PP PP 02 06 06.8 -3.4
GYA PCP PcP 02 07 34.6 -1.2
GYA S **S 02 10 15.8 +2.4**
GYA XS sS 02 10 29.4 +1.6
GYA SCP ScP 02 11 15.3 -2.7
GYA AMB AMB
comp=Z,40nm,1.3s,mb5.2
GYA AMB AMB
comp=Z,230nm,8.1s
GYA LR LR
comp=N,2µm,15.0s,MS4.9
GYA LR LR
comp=E,880nm,16.8s,MS4.9
GYA LR LR
comp=Z,1µm,14.1s,MS4.7
CD2 Chengdu 33.38 267 *e*P **P 02 04 53.8 -0.9**
CD2 AP pP 02 05 01.1 -2.4
CD2 XP sP 02 05 04.4 -2.7
CD2 PP PP 02 06 05.9 -4.6
CD2 S **S 02 10 11.8 -2.0**
CD2 XS sS 02 10 24.6 -3.7
CD2 SS SS 02 12 15.8 -23
CD2 AMB AMB
comp=Z,20nm,1.2s,mb4.9
CD2 AMB AMB
comp=Z,80nm,11.8s
CD2 LR LR
comp=N,1µm,15.6s
CD2 LR LR
comp=Z,1µm,14.4s,MS4.7
GTA Gaotai 33.42 284⇑ *i*P **P 02 04 56.0 +0.9**
GTA AP pP 02 05 02.8 -1.0
GTA XP sP 02 05 06.0 -1.4
GTA PP PP 02 06 10.3 -0.6
GTA PPP 02 06 25.3
GTA PCP PcP 02 07 37.0 +1.0
GTA S **S 02 10 15.4 +1.0**
GTA XS sS 02 10 25.8 -3.1
GTA SS SS 02 12 18.0 -21
GTA AMB AMB
comp=Z,43nm,1.2s,mb5.2
GTA AMB AMB
comp=Z,260nm,6.9s
GTA LR LR
comp=N,469nm,14.8s,MS4.8
GTA LR LR
comp=E,1µm,15.2s,MS4.8
GTA LR LR
comp=Z,1µm,16.7s,MS4.8
QIZ Qiongzhong 35.58 244 P **P 02 05 13.4 -0.3**
QIZ AP pP 02 05 21.5 -1.0
QIZ XP sP 02 05 25.8 -0.3
QIZ S **S 02 10 46.1 -1.6**
QIZ XS sS 02 11 01.6 -0.5
QIZ AMB AMB
comp=Z,17nm,1.5s,mb4.8
QIZ LR LR
comp=N,893nm,15.6s
QIZ LR LR
comp=Z,844nm,14.3s,MS4.7
KMI Kunming 37.05 259 P **P 02 05 26.4 +0.2**
KMI AP pP 02 05 34.9 -0.1
KMI XP sP 02 05 40.0 +1.3
KMI PP PP 02 06 51.9 +1.0
KMI PPP 02 07 13.5
KMI PCP PcP 02 07 47.6 +1.0
KMI S **S 02 11 09.4 -0.7**
KMI XS sS 02 11 25.6 +1.0
KMI SCP ScP 02 11 30.4 -0.9
KMI PCS PcS 02 11 34.6 -0.2
KMI SS SS 02 13 38.1 -15
KMI SSS 02 14 08.9
KMI SCS ScS 02 15 36.3 -2.5
KMI AMB AMB
comp=Z,26nm,1.3s,mb4.9
KMI AMB AMB
comp=Z,186nm,6.3s
KMI LR LR
comp=N,1µm,16.8s,MS4.9
KMI LR LR
comp=E,781nm,13.4s,MS4.9
KMI LR LR
comp=Z,924nm,15.1s,MS4.7
WMQ Urumqi 41.14 294⇑ *i*P **P 02 06 01.5 +1.1**
WMQ AP pP 02 06 11.5 +2.2
WMQ XP sP 02 06 15.5 +2.6
WMQ PP PP 02 07 40.5 +4.9
WMQ S **S 02 12 12.5 +0.8**
WMQ SS SS 02 15 11.5 -3.4
WMQ AMB AMB
comp=Z,45nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,243nm,4.0s
WMQ LR LR
comp=N,375nm,12.0s,MS4.6
WMQ LR LR
comp=E,404nm,12.0s,MS4.6
WMQ LR LR
comp=Z,456nm,13.0s,MS4.5
ZAL Zalesovo 41.36 310 P **P 02 06 02.7 +0.4**
comp=Z,4.6nm,0.5s,mb4.4,baz=18,slow=8.8,SNR=19
ZAL LR LR 02 22 23.1
comp=Z,86nm,21.8s,baz=32,slow=35
ZAL Zalesovo 41.36 310 P **P 02 06 02.7 +0.4**
ZAL pmax pmax
comp=Z,5.0nm,0.5s
ZAL MLR MLR
comp=Z,87nm,21.8s
ZAL Zalesovo 41.36 310 P **P 02 06 02.7 +0.4**
ZAL LR LR 02 22 23.1
NVS Novosibirsk 42.20 312 *i*P **P 02 06 09.5 +0.4**
NVS pmax pmax
comp=Z,36nm,1.8s,mb4.7
NVS pmax pmax
comp=N,10.0nm,1.6s
NVS pmax pmax
comp=E,28nm,1.6s
NANT Nan 42.29 253 ⇓P **P 02 06 10.0 +0.1**
IMA2 Indian Mountai 43.49 32 *e*P **P 02 06 19.9 +0.3**
IMA2 *e*pP pP 02 06 28.6 +0.1
CHG Chiang Mai 43.58 255 ⇑P **P 02 06 21.0 +0.7**
comp=E,12nm,0.9s,mb4.6
CHTO Chiang Mai 43.58 255 *e*P **P 02 06 20.2 -0.1**
CHTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
CHTO Chiang Mai 43.58 255 *e*P **P 02 06 20.2 -0.2**
comp=Z,8.6nm,0.8s,mb4.5
KDAK Kodiak Island 43.98 44 P **P 02 06 22.2 -1.3**
comp=Z,6.4nm,0.7s,mb4.5,baz=286,slow=8.0,SNR=4.2
MK31 Makanchi Array 44.11 300 P **P 02 06 24.9 +0.3**
MK31 pmax pmax
comp=Z,16nm,0.9s,mb4.8
MKAR Makanchi Array 44.11 300 P **P 02 06 24.9 +0.2**
comp=Z,13nm,1.0s,mb4.6,baz=82,slow=9.9,SNR=62
MKAR Makanchi Array 44.11 300 P **P 02 06 24.9 +0.3**
MKAR pmax pmax
comp=Z,13nm,1.0s
COLA College 45.89 34 *e*P **P 02 06 38.0 -0.7**
COLA pmax pmax
comp=Z,13nm,1.0s,mb4.8
COLA College 45.89 34 *e*P **P 02 06 38.0 -0.7**
comp=Z,13nm,1.0s,mb4.8
JIRN Jiri 48.44 274 *e*P **P 02 06 59.9 +1.3**
comp=Z,33nm,0.7s,mb5.5
GUN Gumba 48.56 274 *e*P **P 02 07 00.4 +0.9**
comp=Z,77nm,0.8s,mb5.8
KSM Kuching 48.63 227 *e*P **P 02 06 58.9 -1.2**
EGAK Eagle 48.75 33 *e*P **P 02 07 02.3 +1.3**
KKN Kakani 49.08 275 *e*P **P 02 07 04.4 +0.9**
comp=Z,60nm,0.7s,mb5.7
KKN Kakani 49.08 275 *e*P **P 02 07 04.4 +0.9**
KKN pmax pmax
comp=Z,60nm,0.7s,mb5.7
PKI Pulchoki 49.09 274 *e*P **P 02 07 04.3 +0.7**
comp=Z,67nm,1.2s,mb5.5
PKI Pulchoki 49.09 274 *e*P **P 02 07 04.3 +0.7**
PKI pmax pmax
comp=Z,67nm,1.2s,mb5.5
DMN Daman 49.30 274 *e*P **P 02 07 06.2 +1.0**
comp=Z,52nm,1.0s,mb5.5
GKN Gorkha 49.47 275 *e*P **P 02 07 07.2 +0.7**
comp=Z,119nm,1.3s,mb5.8
ULHL Ulahol 49.61 296 P **P 02 07 08.4 +0.8**
SNR=8.2
CHKZ Chkalovo 49.68 312 *e*P **P 02 07 08.1 0.0**
TKM2 Tokmak 2 49.81 297 P **P 02 07 10.4 +1.3**
TKM2 pmax pmax
comp=Z,55nm,1.1s,mb5.5
BVA0 Borovoye Array 49.98 311 *i*P **P 02 07 10.6 +0.2**
BVA0 pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
BRVK Borovoye 50.03 311 ⇑P **P 02 07 11.5 +0.7**
SNR=10
BRVK Borovoye 50.03 311 *e*P **P 02 07 11.3 +0.5**
BRVK pmax pmax
comp=Z,13nm,1.1s,mb4.9
BRVK Borovoye 50.03 311 *e*P **P 02 07 11.3 +0.5**
comp=Z,12nm,1.1s,mb4.9
KBK Karagaybulak 50.35 297 P **P 02 07 14.1 +0.9**
SNR=16
KZA Kyzart 50.36 296 P **P 02 07 15.1 +1.8**
SNR=6.0
KOLN Koldanda 50.38 276 *e*P **P 02 07 14.3 +0.9**
comp=Z,158nm,1.5s,mb5.8
USP Osenovka 50.44 298 P **P 02 07 14.4 +0.5**
SNR=12
FRU Bishkek 50.52 297 *e*P **P 02 07 15.0 +0.5**
FRU *e* pP 02 07 24.0 +0.5
FRU pmax pmax
comp=Z,50nm,2.0s,mb5.1
FRU MLR MLR
comp=E,700nm,13.0s
FRU MLR MLR
comp=Z,500nm,13.0s,MS4.7
AAK Ala-Archa 50.67 297 ⇓P **P 02 07 15.5 -0.2**
SNR=10
AAK Ala-Archa 50.67 297 *e*P **P 02 07 15.3 -0.4**
ZRNK Zerenda 50.81 311 P **P 02 07 16.9 +0.3**
ZRNK pmax pmax
comp=Z,32nm,1.3s,mb5.1
ZRNK Zerenda 50.81 311 *e*P **P 02 07 16.8 +0.2**
comp=Z,28nm,1.2s,mb5.1
EKS2 Erkin-Say 51.16 297 P **P 02 07 19.9 +0.7**
SNR=9.0
INK Inuvik 51.20 28 P **P 02 07 19.3 -0.3**
comp=Z,5.8nm,0.6s,mb4.7,baz=295,slow=7.2,SNR=39
INK Inuvik 51.20 28 P **P 02 07 19.3 -0.3**
INK pmax pmax
comp=Z,6.0nm,0.6s
INK Inuvik 51.20 28 *e*P **P 02 07 19.3 -0.3**
comp=Z,6.2nm,0.6s,mb4.7
AML Almayashu 51.41 297 P **P 02 07 22.6 +1.5**
SNR=17
KULM Kulim 51.62 240 *e*P **P 02 07 22.5 -0.2**
KAKA Kakadu 53.22 194 *e*P **P 02 07 33.4 -1.2**
comp=Z,17nm,0.8s,mb5.0
SVE Sverdlovsk 54.21 318⇑ *e*P **P 02 07 41.3 -0.5**
SVE *e* pP 02 07 50.6 -0.3
SVE *e* 02 08 45.5
SVE *e* 02 09 44.0
SVE *e*S **S 02 15 33.0 +16**
SVE pmax pmax
comp=Z,60nm,1.8s,mb5.2
SVE MLR MLR
comp=N,300nm,13.0s,MS5.5
SVE MLR MLR
comp=E,2µm,13.0s,MS5.5
SVE MLR MLR
comp=Z,4µm,13.0s,MS5.6
PSI Prapat 54.61 239 LR LR 02 34 56.9
comp=Z,289nm,18.0s,MS4.4,baz=34,slow=40
SOKR Solikamsk 55.18 322 *c i*P **P 02 07 49.0 +0.1**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,720nm,17.0s,MS4.8
ARU Arti 55.42 318 *e*P **P 02 07 50.5 -0.1**
ARU pmax pmax
comp=Z,31nm,1.1s,mb5.2
ARU Arti 55.42 318 *e*P **P 02 07 50.5 -0.1**
comp=Z,31nm,1.1s,mb5.2
AB31 Akbulak array 57.45 309 *i*P **P 02 08 05.2 +0.1**
AB31 pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
FITZ Fitzroy Crossi 59.94 200 *e*P **P 02 08 20.6 -1.8**
comp=Z,12nm,0.9s,mb4.9
WRAB Tennant Creek 60.01 190 *e*P **P 02 08 19.7 -3.1**
WRAB pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
WRAB Tennant Creek 60.01 190 *e*P **P 02 08 19.7 -3.2**
comp=Z,6.7nm,0.6s,mb4.8
WB2 Warramunga Arr 60.02 190 *e*P **P 02 08 20.6 -2.3**
WRA Warramunga Ar 60.02 190 P **P 02 08 21.0 -1.9**
comp=Z,5.4nm,0.6s,mb4.8,baz=7.6,slow=6.8,SNR=5.4
WRA Warramunga Ar 60.02 190 P **P 02 08 21.0 -1.9**
WRA pmax pmax
comp=Z,5.0nm,0.6s
LVZ Lovozero 60.29 336 *de*P **P 02 08 25.3 +0.5**
LVZ *e* 02 10 34.7
LVZ *e*PPP 02 12 03.2
LVZ *e*S **S 02 16 31.7 -5.4**
LVZ *e*SS SS 02 20 27.9 -6.8
LVZ smax
comp=N,45nm,2.5s
LVZ MLR MLR
comp=Z,524nm,17.0s,MS4.7
LVZ MLR MLR
comp=E,189nm,15.0s
YKA Yellowknife Ar 60.62 31 P **P 02 08 25.4 -1.6**
comp=E,1.1nm,0.6s,mb4.1,baz=301,slow=6.8,SNR=5.0
YKA LR LR 02 39 20.9
comp=E,87nm,18.9s,MS3.9,baz=270,slow=41
YKA Yellowknife Ar 60.62 31 P **P 02 08 25.4 -1.6**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA MLR MLR
comp=Z,87nm,18.9s
YKA Yellowknife Ar 60.62 31 P **P 02 08 25.4 -1.6**
YKA LR LR 02 39 20.9
ARCES ARCESS Array B 62.01 339 P **P 02 08 35.6 -0.8**
comp=Z,2.6nm,0.8s,mb4.4,baz=38,slow=8.0,SNR=7.0
ARCES LR LR 02 38 45.2
comp=Z,366nm,20.5s,MS4.5,baz=201,slow=39
ARCES ARCESS Array B 62.01 339 P **P 02 08 35.6 -0.9**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,367nm,20.5s
AS31 Alice Springs 63.74 190 *e*P **P 02 08 46.5 -1.5**
ASAR Alice Springs 63.74 190 P **P 02 08 46.8 -1.2**
comp=Z,1.7nm,0.7s,mb4.2,baz=8.2,slow=6.0,SNR=31
ASAR Alice Springs 63.74 190 P **P 02 08 46.8 -1.2**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 64.32 332 *ep* **P 02 08 49.8 -2.0**
comp=Z,10nm,0.8s,mb4.9
JOF Joensuu 64.32 332 *e*P **P 02 08 49.8 -2.0**
JOF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
MBWA Marble Bar 64.56 205 *e*P **P 02 08 52.0 -1.3**
comp=Z,4.3nm,0.6s,mb4.7
I02A Mapleton 65.46 52 ⇓P **P 02 08 57.0 -2.2**
baz=65
MOS Moscow 66.03 323 *e*P **P 02 09 02.4 -0.5**
MOS *e* 02 09 13.5
MOS *e* 02 09 37.0
MOS pmax pmax
comp=Z,42nm,1.1s,mb5.4
MOS MLR MLR
comp=Z,1µm,14.0s,MS5.2
H04A Detroit Lake 66.09 51 ⇓P **P 02 09 03.8 +0.6**
baz=66
EDM Edmonton 66.19 40 *e*P **P 02 09 02.6 -1.2**
KAF Kangasniemi 66.62 333 *ep* **P 02 09 04.7 -2.0**
comp=Z,14nm,1.0s,mb5.0
KAF Kangasniemi 66.62 333 *e*P **P 02 09 04.7 -2.0**
KAF pmax pmax
comp=Z,14nm,1.0s,mb5.0
PUL Pulkovo 66.67 330 *de*P **P 02 09 03.1 -3.8**
PUL *e*S S 02 17 57.2 +0.6
PUL *e*SS SS 02 22 14.1 -0.2
PUL MLR MLR
comp=Z,775nm,14.0s,MS5.1
PUL MLR MLR
comp=N,368nm,16.0s,MS4.9
PUL MLR MLR
comp=E,391nm,14.0s,MS4.9
OBN Obninsk 66.89 323⇑ *e*P **P 02 09 06.4 -1.9**
OBN *e* 02 09 34.0
OBN *e*S S 02 17 57.4 -1.8
OBN pmax pmax
comp=Z,34nm,1.4s,mb5.2
OBN MLR MLR
comp=Z,1µm,17.0s,MS5.1
NEW Newport 67.03 46 *e*P **P 02 09 09.0 -0.2**
NEW pmax pmax
comp=Z,7.0nm,1.1s
NEW Newport 67.03 46 *e*P **P 02 09 09.0 -0.2**
comp=Z,7.1nm,1.1s,mb4.6
FINES FINESS Array B 67.16 332 P **P 02 09 09.5 -0.5**
comp=Z,5.3nm,0.8s,mb4.6,baz=54,slow=9.7,SNR=28
FINES LR LR 02 41 43.2
comp=Z,681nm,18.4s,MS4.9,baz=231,slow=39
FINES FINESS Array B 67.16 332 P **P 02 09 09.5 -0.5**
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES MLR MLR
comp=Z,681nm,18.4s
YBH Yreka Blue Hor 67.39 54 *e*P **P 02 09 12.2 +0.7**
YBH pmax pmax
comp=Z,6.0nm,0.9s
YBH Yreka Blue Hor 67.39 54 *e*P **P 02 09 12.2 +0.7**
comp=Z,5.7nm,0.9s,mb4.6
YBH Yreka Blue Hor 67.39 54 ⇑P **P 02 09 11.8 +0.3**
baz=67
J05A Fort Rock 67.43 52 ⇓P **P 02 09 12.3 +0.5**
baz=67
M02C Callahan 67.48 54 ⇓P **P 02 09 12.7 +0.6**
baz=67
L04A Klamath Falls 67.65 53 ⇑P **P 02 09 13.7 +0.5**
baz=68
I06A Prineville 67.68 51 ⇑P **P 02 09 14.1 +0.7**
baz=68
M04C Macdoel 67.90 54 ⇑P **P 02 09 14.9 +0.1**
baz=68
SUMG Summit 67.94 1 *e*P **P 02 09 15.1 +0.1**
comp=Z,13nm,1.1s,mb4.9
VRSR Storozhevoye 67.94 319 *e*P **P 02 09 14.7 -0.3**
VRSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
VRSR pmax pmax
comp=N,10.0nm,0.8s
VRSR pmax pmax
comp=E,9.0nm,1.0s
VRSR MLR MLR
comp=N,240nm,16.0s,MS4.9
VRSR MLR MLR
comp=E,480nm,16.0s,MS4.9
VRSR MLR MLR
comp=Z,630nm,16.0s,MS4.9
M03C McCloud 68.01 54 ⇓P **P 02 09 15.4 0.0**
baz=68
I07A Izee 68.03 50 ⇑P **P 02 09 16.2 +0.7**
baz=68
MAK Makhachkala 68.07 308 *i*P **P 02 09 14.3 -1.5**
MAK *e* 02 09 39.6
MAK *e* 02 11 43.4
MAK *e*S S 02 18 14.2 +0.9
MAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
J06A Christmas Vall 68.11 52 ⇓P **P 02 09 16.0 0.0**
baz=68
WDC Whiskeytown Da 68.13 55 ⇓P **P 02 09 15.7 -0.5**
baz=68
O02C Red Bluff 68.20 55 ⇑P **P 02 09 16.2 -0.5**
baz=68
P01C Double 8 Ranch 68.25 56 ⇑P **P 02 09 16.2 -0.7**
baz=68
H08A Prairie City 68.27 50 ⇓P **P 02 09 17.2 +0.1**
baz=68
K06A Valley Falls 68.30 52 ⇓P **P 02 09 17.2 -0.1**
baz=68
WALA Waterton Lakes 68.31 44 *e*P **P 02 09 17.5 +0.2**
comp=Z,2.8nm,0.8s,mb4.3
L05A Lakeview 68.37 53 ⇓P **P 02 09 18.3 +0.6**
baz=68
GASB Alder Springs 68.54 56 ⇓P **P 02 09 18.5 -0.2**
baz=68
M05C Lookout 68.57 54 ⇑P **P 02 09 19.0 0.0**
baz=68
I08A Drewsey 68.68 50 ⇓P **P 02 09 20.1 +0.5**
baz=68
HATC Hat Creek Radi 68.68 54 ⇑P **P 02 09 19.0 -0.6**
baz=68
HOPS Hopland 68.69 57 ⇑P **P 02 09 18.0 -1.7**
baz=68
BMO Blue Mountains 68.88 49 *e*P **P 02 09 21.3 +0.5**
K07A Rock Creek Ran 68.97 52 ⇑P **P 02 09 21.2 -0.2**
baz=69,SNR=7.2
I09A Lost Marbles R 69.13 50 ⇓P **P 02 09 22.9 +0.5**
baz=69
MNRC McLaughlin Nat 69.16 56 ⇑P **P 02 09 21.7 -0.9**
baz=69
L07A Adell 69.30 52 ⇑P **P 02 09 23.9 +0.4**
baz=69,SNR=6.7
ORV Oroville 69.37 55 ⇓P **P 02 09 23.1 -0.8**
baz=69
K08A Mann Creek Ran 69.41 51 ⇓P **P 02 09 24.2 +0.1**
baz=69
WVOR Wild Horse Val 69.49 52 *e*P **P 02 09 24.7 +0.1**
WVOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
WVOR Wild Horse Val 69.49 52 *e*P **P 02 09 24.7 +0.1**
comp=Z,7.5nm,1.1s,mb4.5
O05C Quincy 69.51 55 ⇑P **P 02 09 24.1 -0.6**
baz=69
OHCM Honcut 69.51 56 *e*P **P 02 09 25.1 +0.4**
MSO Missoula 69.62 46 *e*P **P 02 09 25.4 0.0**
comp=Z,3.3nm,1.0s,mb4.2
N06A Buffalo Meadow 69.73 54 ⇑P **P 02 09 25.8 -0.3**
baz=70,SNR=5.7
L08A Fields 69.81 52 ⇓P **P 02 09 27.1 +0.5**
baz=70
K09A Rome 69.88 51 ⇑P **P 02 09 27.6 +0.6**
baz=70
BEKR Beckwourth 69.91 55 ⇓P **P 02 09 26.7 -0.6**
baz=70,SNR=8.4
P05C Yuba Gap, Truc 70.08 55 ⇓P **P 02 09 27.6 -0.7**
baz=70
JRSC Jasper Ridge 70.13 58 ⇑P **P 02 09 26.8 -1.8**
baz=70
N07B Gerlach 70.25 53 ⇑P **P 02 09 29.1 -0.2**
baz=70,SNR=6.0
L09A Wilkinson Ranc 70.31 51 ⇓P **P 02 09 30.1 +0.4**
baz=70
LAVA Lava Cap Winer 70.31 56 ⇑P **P 02 09 28.8 -0.9**
baz=70
WENL Wente Brothers 70.32 57 ⇓P **P 02 09 29.0 -0.7**
baz=70
BNLO Ben Lomond (Sa 70.33 58 ⇓P **P 02 09 29.1 -0.7**
baz=70
ZEI Tsey 70.34 310 *e*P **P 02 09 27.8 -2.1**
ZEI *e**PP pP 02 09 37.8 -1.5
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
KIV Kislovodsk 70.35 311 ⇓P **P 02 09 31.3 +1.3**
SNR=15
KIV Kislovodsk 70.35 311⇑ *e*P **P 02 09 30.7 +0.8**
KIV *e* pP 02 09 40.7 +1.4
KIV pmax pmax
comp=Z,80nm,1.1s,mb5.6
KIV Kislovodsk 70.35 311 *e*P **P 02 09 30.6 +0.7**
comp=Z,59nm,1.0s,mb5.5
PAHR Pah Rah Range 70.62 54 *e*P **P 02 09 32.5 +1.0**
comp=Z,7.5nm,1.0s,mb4.6
WCN Washoe City 70.62 55 ⇑P **P 02 09 32.0 +0.4**
baz=70
S04C Ingram Canyon, 70.66 57 ⇓P **P 02 09 31.7 -0.2**
baz=70
O07A Toulon 70.67 54 ⇓P **P 02 09 31.9 +0.1**
baz=70,SNR=7.9
R05C Kirkwood Meado 70.77 55 ⇑P **P 02 09 32.2 -0.2**
baz=71
M09A Marrel Ranch, 70.80 52 ⇓P **P 02 09 33.3 +0.6**
baz=71
HRY Holter Researc 70.84 45 *e*P **P 02 09 32.6 -0.3**
CMB Columbia Colle 70.96 56 *e*P **P 02 09 33.4 -0.2**
CMB pmax pmax

comp=Z,11nm,1.3s,mb4.6
CMB Columbia Colle 70.96 56 *e*P **P 02 09 33.4 -0.2**
comp=Z,11nm,1.3s,mb4.6
CMB Columbia Colle 70.96 56 ⇑P **P 02 09 33.1 -0.5**
baz=71,SNR=5.5
PACP Pacheco Peak 70.98 57 ⇑P **P 02 09 33.1 -0.7**
baz=71
LRM Limekiln Ridge 71.05 46 *e*P **P 02 09 34.7 +0.5**
N09A Rock Creek Ran 71.09 52 ⇓P **P 02 09 34.3 -0.1**
baz=71
EGMT Eagleton 71.14 43 *e*P **P 02 09 34.4 -0.3**
comp=Z,7.8nm,1.0s,mb4.6
HAST UC Hastings Re 71.17 58 ⇑P **P 02 09 35.1 +0.2**
baz=71
DLMT Dillon 71.25 46 *e*P **P 02 09 35.8 +0.4**
comp=Z,13nm,1.0s,mb4.8
R06C Coleville 71.27 55 ⇑P **P 02 09 35.5 0.0**
baz=71
M10A I.L. Ranch, Tu 71.29 51 ⇑P **P 02 09 36.3 +0.7**
baz=71
STKA Stephens Creek 71.31 182 P **P 02 09 34.7 -1.1**
comp=Z,3.0nm,0.5s,mb4.4,baz=343,slow=6.8,SNR=11
STKA Stephens Creek 71.31 182 *e*P **P 02 09 34.6 -1.1**
HLID Hailey 71.32 49 *e*P **P 02 09 36.2 +0.4**
comp=Z,2.9nm,0.9s,mb4.2
GNI Garni 71.38 307 *e*P **P 02 09 35.8 -0.4**
GNI pmax pmax
comp=Z,38nm,1.6s
GNI Garni 71.38 307 *e*P **P 02 09 35.8 -0.4**
comp=Z,38nm,1.6s,mb5.1
S06C San Francisco 71.39 56 ⇑P **P 02 09 34.9 -1.4**
baz=71
P08A Dixie Valley 71.44 54 ⇓P **P 02 09 36.7 +0.2**
baz=71
BOZ Bozeman (W) 71.61 46 *e*P **P 02 09 37.8 +0.2**
BOZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BOZ Bozeman (W) 71.61 46 *e*P **P 02 09 37.8 +0.2**
comp=Z,8.9nm,0.9s,mb4.7
U04C Hernandez Rese 71.68 58 ⇓P **P 02 09 37.8 -0.2**
baz=72
O09A Fish Creek Ran 71.70 53 ⇓P **P 02 09 38.7 +0.6**
baz=72
R07C Lee Vining 71.78 55 ⇑P **P 02 09 38.4 -0.2**
baz=72,SNR=6.1
N10A Dunphy 71.79 52 ⇓P **P 02 09 39.5 +0.8**
baz=72
M11A Holland Ranch, 71.79 51 ⇑P **P 02 09 39.6 +1.0**
baz=72,SNR=7.4
T06C Millerton Lake 72.00 57 ⇓P **P 02 09 39.3 -0.6**
baz=72
Q08A Gabbs 72.03 54 P **P 02 09 40.9 +0.8**
baz=72,SNR=6.1
NVAR Mina Array Bea 72.05 55 P **P 02 09 40.8 +0.6**
comp=Z,3.7nm,0.8s,mb4.4,baz=281,slow=7.7,SNR=26
O10A Cortez Mining, 72.05 52 ⇑P **P 02 09 41.1 +0.8**
baz=72
KCC Kaiser Creek 72.06 56 ⇑P **P 02 09 39.5 -0.8**
baz=72
PKD Parkfield 72.09 58 ⇑P **P 02 09 39.4 -1.0**
baz=72
P09A Austin 72.10 53 P **P 02 09 39.5 -1.1**
baz=72,SNR=6.4
N11A Elko Archery C 72.20 52 ⇑P **P 02 09 42.3 +1.2**
baz=72
R08A Mina 72.22 55 ⇓P **P 02 09 40.9 -0.3**
baz=72
NB2 NORSAR Subarra 72.29 338 P **P 02 09 40.7 -0.9**
comp=Z,0.7nm,0.8s,baz=42,slow=6.2
NOA NORSAR Array B 72.29 338 P **P 02 09 41.1 -0.5**
comp=Z,7.4nm,0.9s,mb4.6,baz=37,slow=6.0,SNR=29
NOA LR LR 02 47 41.4
comp=Z,300nm,18.6s,MS4.6,baz=5.0,slow=41
M12A Wells 72.33 51 ⇑P **P 02 09 43.0 +1.1**
baz=72,SNR=6.2
Q09A Carvers 72.51 54 ⇑P **P 02 09 43.7 +0.8**
baz=72
NAO01 NORSAR Array S 72.54 338 *e*P **P 02 09 41.3 -1.8**
comp=Z,5.3nm,0.9s,mb4.5
GCMT Greycliff 72.59 45 *e*P **P 02 09 43.6 +0.2**
N12A Clover Valley, 72.60 51 ⇑P **P 02 09 44.6 +1.1**
baz=72
HELL Mitchell Peak, 72.64 57 P **P 02 09 43.4 -0.3**
baz=72,SNR=7.4
O11A Cowboy Ranch, 72.66 52 ⇑P **P 02 09 44.5 +0.6**
baz=72
M13A Montello 72.81 50 ⇓P **P 02 09 46.0 +1.3**
baz=73
ANN Anapa 72.81 314 *e*P **P 02 09 43.2 -1.5**
ANN pmax pmax
comp=Z,48nm,1.6s,mb5.2
R09A Tonopah 72.94 54 P **P 02 09 45.9 +0.4**
baz=73,SNR=12
AKASG Malin Array Be 73.13 323 P **P 02 09 46.2 -0.4**
comp=Z,3.6nm,0.6s,mb4.5,baz=43,slow=6.0,SNR=43
AKASG LR LR 02 47 50.0
comp=Z,312nm,18.4s,MS4.6,baz=40,slow=41
AKBB Malin Array Si 73.13 323 *e*P **P 02 09 45.5 -1.1**
O12A Currie 73.13 52 ⇑P **P 02 09 47.1 +0.5**
baz=73
S09A Goldfield 73.15 55 ⇓P **P 02 09 47.0 +0.2**
baz=73,SNR=6.3
RRI2 Red Ridge 73.22 47 *e*P **P 02 09 47.8 +0.6**
comp=Z,9.3nm,1.0s,mb4.7
MOOW Moose Ponds 73.29 47 *e*P **P 02 09 48.5 +0.9**
comp=Z,5.7nm,1.0s,mb4.5
TPAW Teton Pass 73.34 47 *e*P **P 02 09 49.3 +1.5**
comp=Z,9.1nm,1.1s,mb4.6
HVU Hansel Valley 73.36 49 *e*P **P 02 09 50.2 +2.2**
CWC Cottonwood Cre 73.39 56 ⇓P **P 02 09 47.9 -0.2**
baz=73
R10A Warm Springs 73.39 54 ⇓P **P 02 09 48.9 +0.8**
baz=73
LOHW Long Hollow 73.46 47 *e*P **P 02 09 49.0 +0.4**
comp=Z,2.0nm,0.7s,mb4.2
SUW Suwalki 73.46 328 *e*P **P 02 09 48.2 -0.4**
REDW Red Top Meadow 73.48 47 *e*P **P 02 09 48.9 +0.2**
comp=Z,14nm,1.4s,mb4.7
GRAC Grapevine Rang 73.50 56 ⇑P **P 02 09 49.3 +0.4**
baz=73
P12A McGill 73.52 52 ⇓P **P 02 09 49.5 +0.6**
baz=73
ISA Isabella 73.60 57 ⇑P **P 02 09 49.3 -0.1**
baz=73
ARVC Arvin 73.69 58 ⇓P **P 02 09 49.0 -1.0**
baz=74
DAC Darwin (Calif) 73.80 56 *e*P **P 02 09 50.2 -0.4**
DAC pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
DAC Darwin (Calif) 73.80 56 *e*P **P 02 09 50.2 -0.3**
comp=Z,3.0nm,1.0s,mb4.2
Q12A Willow Creek R 73.83 53 ⇓P **P 02 09 51.2 +0.5**
baz=74
MPMC Manual Prospec 74.00 56 ⇑P **P 02 09 51.4 -0.3**
baz=74
FURC Furnace Creek, 74.15 56 ⇓P **P 02 09 52.0 -0.6**
baz=74
BLG Laguna Peak 74.16 59 ⇑P **P 02 09 50.6 -2.1**
baz=74
HWUT Hardware Ranch 74.18 49 *e*P **P 02 09 51.1 -1.7**
comp=Z,6.2nm,1.0s,mb4.5
DUG Dugway 74.33 51 *e*P **P 02 09 53.6 -0.1**
DUG pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
DUG Dugway 74.33 51 *e*P **P 02 09 53.6 -0.1**
comp=Z,5.5nm,1.0s,mb4.4
EDW2 Edwards Air Fo 74.39 58 ⇓P **P 02 09 54.5 +0.5**
baz=74
U10A Ash Meadows, A 74.52 55 ⇑P **P 02 09 56.0 +1.2**
baz=74
SIM Simferopol' 74.52 316 P **P 02 09 55.0 +0.2**
SIM *e*S S 02 19 24.0 -3.9
SIM pmax pmax
comp=Z,11nm,1.0s,mb4.7
SIM MLR MLR
comp=Z,480nm,19.0s,MS4.8
BW06 Boulder Array 74.58 47 *e*P **P 02 09 54.5 -0.6**
comp=Z,3.0nm,0.8s,mb4.3
PDAR Pinedale Array 74.59 47 P **P 02 09 55.1 -0.1**
comp=Z,2.0nm,0.7s,mb4.1,baz=289,slow=1.8,SNR=20
PDAR LR LR 02 46 20.1
comp=Z,90nm,18.6s,MS4.1,baz=177,slow=39
SHOC Shoshone 74.87 56 ⇓P **P 02 09 57.4 +0.6**
baz=75
GSC Goldstone 74.90 57 *e*P **P 02 09 57.1 +0.1**
GSC Goldstone 74.90 57 ⇑P **P 02 09 56.8 -0.1**
baz=75
BFSC Mount Baldy St 75.00 58 ⇑P **P 02 09 57.7 +0.1**
baz=75
U11A Corn Creek 75.11 55 ⇑P **P 02 09 59.3 +1.1**
baz=75
SHPR Sheep Range 75.20 55 *e*P **P 02 09 59.6 +0.8**
TUQ Turquoise Mtn. 75.38 56 ⇓P **P 02 10 00.5 +0.8**
baz=75
HEC Hector,Ludlow 75.50 57 ⇓P **P 02 10 00.7 +0.2**
baz=75
U12A Valley of Fire 75.64 55 ⇑P **P 02 10 01.9 +0.7**
baz=76
CCUT Cedar City 75.67 53 *e*P **P 02 10 01.6 +0.2**
MURC Murrieta 75.69 58 ⇓P **P 02 10 01.7 +0.1**
baz=76
KIS Kishinev 75.86 320 *e*P **P 02 10 10.0 +7.5**
KIS *e* 02 19 50.0
KIS *e* 02 20 22.0
KIS MLR MLR
comp=N,500nm,15.0s
KIS MLR MLR
comp=Z,500nm,15.0s,MS4.9
KIS MLR MLR
comp=Z,600nm,13.0s
V12A Nelson 75.88 55 ⇑P **P 02 10 03.4 +0.8**
baz=76
GMRC Granite Mounta 75.96 56 ⇓P **P 02 10 03.3 +0.2**
baz=76
LVV L'vov 76.12 324 ⇓*i*P **P 02 10 04.5 +0.5**
LVV *e*S S 02 19 49.3 +3.5
LVV MLR MLR
comp=Z,500nm,16.0s,MS4.9
LVV MLR MLR
comp=N,400nm,17.0s,MS5.0
LVV MLR MLR
comp=E,400nm,17.0s,MS5.0
W12A Cal Nev Ari 76.14 56 ⇓P **P 02 10 04.8 +0.7**
baz=76
BELC Belle Mtn. 76.23 57 ⇑P **P 02 10 04.9 +0.3**
baz=76
ULM Lac du Bonnet 76.31 35 P **P 02 10 03.7 -1.4**
comp=E,2.3nm,0.8s,mb4.2,baz=266,slow=7.8,SNR=4.1
ULM Lac du Bonnet 76.31 35 *e*P **P 02 10 03.9 -1.2**
comp=E,6.8nm,1.1s,mb4.5
MALT Malatya 76.37 309 ⇑*i*P **P 02 10 07.1 +1.7**
MALT Malatya 76.37 309 *e*P **P 02 10 06.6 +1.2**
comp=E,22nm,1.1s,mb5.0
MONP Monument Peak 76.64 58 ⇑P **P 02 10 07.2 +0.2**
baz=76
IRM Iron Mountain 76.68 57 ⇑P **P 02 10 07.3 +0.2**
baz=76
RSSD Black Hills 76.70 43 *e*P **P 02 10 06.1 -1.2**
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
RSSD Black Hills 76.70 43 *e*P **P 02 10 06.1 -1.2**
comp=Z,3.9nm,0.8s,mb4.4
KWP Kalwaria 76.85 325 *e*P **P 02 10 08.8 +0.7**
KWP Kalwaria 76.85 325 *e*P **P 02 10 08.1 0.0**
comp=Z,48nm,1.2s,mb5.3
W13A Hualapai Mount 76.89 55 ⇑P **P 02 10 09.3 +1.0**
baz=77
BURAR Bucovina Array 77.17 322 ⇓*i*P **P 02 10 10.6 +0.7**
BURAR Bucovina Array 77.17 322 ⇓P **P 02 10 10.6 +0.7**
PDMCI Parker Dam,Lak 77.23 56 ⇓P **P 02 10 10.9 +0.6**
baz=77
X13A Yucca 77.25 56 ⇓P **P 02 10 10.8 +0.5**
baz=77
W14A Seligman 77.32 55 ⇓P **P 02 10 11.6 +0.9**
baz=77
Y12C Blythe 77.34 57 ⇑P **P 02 10 11.1 +0.3**
baz=77
CFR Carcaliu 77.47 319 ⇓*i*P **P 02 10 11.9 +0.3**
CFR Carcaliu 77.47 319 ⇓P **P 02 10 11.9 +0.3**
KOLS Kolonicke sedl 77.56 325 *e*P **P 02 10 12.3 +0.2**
GLA Glamis 77.58 57 ⇓P **P 02 10 12.6 +0.3**
baz=77
STHS Stebnicka Huta 77.65 326 *e*P **P 02 10 12.9 +0.3**
STHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
STHS Stebnicka Huta 77.65 326 *e*P **P 02 10 12.9 +0.3**
comp=Z,5.8nm,1.0s,mb4.5
OJC Ojcow 77.67 327 ⇑*i*P **P 02 10 13.0 +0.3**
OJC *e* pP 02 10 22.2 0.0
OJC *e*S S 02 19 55.9 -6.7
OJC MLR MLR
comp=Z,4μm,17.9s,MS5.7
Y13A Salome 77.74 56 ⇓P **P 02 10 13.4 +0.3**
baz=78
PV10 Paradox Valley 77.74 50 *e*P **P 02 10 13.4 +0.3**
W15A Williams 77.86 54 ⇑P **P 02 10 15.2 +1.4**
baz=78
X14A Yava 77.92 55 ⇓P **P 02 10 14.8 +0.7**
baz=78
CRVS Cervenica-Dubn 77.94 325 *e*P **P 02 10 14.7 +0.5**
NIE Niedzica 78.05 326 *e*P **P 02 10 15.7 +0.9**
Y14A Wickenburg 78.19 56 ⇓P **P 02 10 16.3 +0.7**
baz=78
BR131 Keskin Array S 78.25 312 *e*P **P 02 10 15.9 -0.1**
comp=Z,0.7nm,0.3s,mb4.1
BRTR Keskin Array B 78.25 312 P **P 02 10 16.4 +0.5**
comp=Z,3.3nm,1.1s,mb4.2,baz=72,slow=4.0,SNR=15
BRTR PP PP 02 13 10.6 -2.3
comp=Z,0.8nm,0.8s,baz=42,slow=4.7,SNR=3.5
BRTR LR LR 02 52 39.6
comp=Z,156nm,19.4s,MS4.3,baz=230,slow=42
BRTR Keskin Array B 78.25 312 P **P 02 10 16.5 +0.6**
BRTR 02 13 10.6
BRTR pmax pmax
comp=Z,3.0nm,1.1s
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR Keskin Array B 78.25 312 P **P 02 10 16.4 +0.5**
BRTR PP PP 02 13 10.6 -2.3
BRTR LR LR 02 52 39.6
X15A Humboldt 78.32 55 ⇓P **P 02 10 17.5 +1.2**
baz=78,SNR=6.0
MLR Muntele Rosu 78.34 320 ⇑*i*P **P 02 10 16.8 +0.4**
MLR Muntele Rosu 78.34 320 ⇑P **P 02 10 16.8 +0.4**
BSEG Bad Segeberg 78.35 334 *e*P **P 02 10 16.6 +0.1**
Z14A Wintersburg 78.60 56 ⇓P **P 02 10 17.9 +0.1**
baz=78
KSP Ksiaz 78.62 329 *e*P **P 02 10 18.8 +0.8**
ANTO Ankara 78.64 313 *e*P **P 02 10 18.4 +0.4**
ANTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ANTO Ankara 78.64 313 *e*P **P 02 10 18.4 +0.3**
comp=Z,5.7nm,0.8s,mb4.5
OKC Ostrava-Krasne 78.65 327 *e*P **P 02 10 18.9 +0.8**
OKC *e*pP pP 02 10 25.1 -2.5
OKC *e*S S 02 20 16.4 +3.2
OKC AMS AMS 02 48 20.0
comp=Z,400nm,15.6s
OKC Ostrava-Krasne 78.65 327 *e*P **P 02 10 18.9 +0.8**
OKC *e*pP pP 02 10 25.1 -2.5
OKC *e*S S 02 20 16.4 +3.2
KECS Kecovo 78.68 325 *e*P **P 02 10 18.6 +0.3**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 78.68 325 *e*P **P 02 10 18.6 +0.3**
comp=Z,2.2nm,0.9s,mb4.1
ISCO Idaho Springs 78.78 47 *e*P **P 02 10 19.5 +0.7**
VOIR 78.82 321 ⇑*i*P **P 02 10 19.7 +0.6**
VOIR 78.82 321 ⇑P **P 02 10 19.7 +0.6**
MORC Moravsky Berou 78.95 328 ⇓*i*P **P 02 10 20.5 +0.7**
MORC Moravsky Berou 78.95 328 *e*P **P 02 10 19.8 +0.1**
comp=Z,11nm,1.1s,mb4.7
DPC Dobruska-Polom 79.00 329 *e*P **P 02 10 20.9 +0.9**
DPC *e*pP pP 02 10 29.8 +0.3
DPC *e*S S 02 20 19.7 +2.8
DPC AMS AMS 02 50 20.0
comp=Z,700nm,17.3s
UPC Upice 79.00 329 *e*P **P 02 10 20.9 +0.9**
UPC *e*pP pP 02 10 29.2 -0.3
PSZ Piszkesteto 79.37 325 ⇑*e*P **P 02 10 22.9 +0.8**
PSZ Piszkesteto 79.37 325 ⇑*i*P **P 02 10 22.8 +0.7**
PSZ Piszkesteto 79.37 325 *e*P **P 02 10 22.3 +0.3**
comp=Z,28nm,1.5s,mb5.0
VYHS Vyhne 79.39 326 *i*P **P 02 10 22.6 +0.4**
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
VYHS Vyhne 79.39 326 *i*P **P 02 10 22.6 +0.4**
comp=Z,6.2nm,1.2s,mb4.4
VYHS *e*PP PP 02 13 15.3 -7.1
VYHS *e*S S 02 20 10.6 -10
115A Sonoran Desert 79.48 56 ⇓P **P 02 10 23.4 +0.7**
baz=79
BRG Berggiesshubel 79.52 330 *e*P **P 02 10 22.6 -0.3**
BRG Berggiesshubel 79.52 330 *e*P **P 02 10 22.8 -0.1**
comp=Z,3.8nm,1.0s,mb4.3
BRG S S 02 20 24.0 +1.6
BRG Berggiesshubel 79.52 330 *e*P **P 02 10 22.8 -0.1**
BRG S S 02 20 24.0 +1.6
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CLL Collm 79.52 331 *e*P **P 02 10 22.6 -0.3**
CLL Collm 79.52 331 ⇑P **P 02 10 22.6 -0.3**
comp=Z,logA/T=1.1,mb4.8
CLL *i* PCP PcP 02 10 31.2 +0.4
CLL *i* *PP pP 02 10 34.2 +1.8
CLL *i* 02 10 42.7
CLL *e*(PP) 02 13 36.0
CLL *e*S S 02 20 28.0 +5.5
CLL Collm 79.52 331 ⇑*i*P **P 02 10 22.6 -0.3**
comp=Z,13nm,1.0s,mb4.8
CLL *i* PcP PcP 02 10 31.2 +0.4
CLL *i* pP pP 02 10 34.2 +1.8
CLL *i* pPcP 02 10 42.7
CLL *e*(PP) 02 13 36.0
CLL *e*S S 02 20 28.0 +5.5
CLL Collm 79.52 331 ⇑*i*P **P 02 10 22.6 -0.3**
CLL *i* *PP pP 02 10 31.2 -1.2
CLL *i* *SP sP 02 10 34.2 -1.7
CLL *e*S S 02 20 28.0 +5.5
CLL pmax pmax
comp=Z,13nm,1.0s,mb4.8
CLL MLR MLR
comp=Z,600nm,14.7s,MS5.1
CLL Collm 79.52 331 ⇑*i*P **P 02 10 22.6 -0.3**
comp=Z,13nm,1.0s,mb4.8
CLL *i* pP pP 02 10 31.2 -1.2
CLL *i* sP sP 02 10 34.2 -1.7
CLL *e*S S 02 20 28.0 +5.5
CLL LR LR
comp=Z,600nm,14.7s,MS5.1
PVCC Panska Ves 79.55 330 *e*P **P 02 10 23.6 +0.6**
PVCC *e*S S 02 20 24.1 +1.4
PVCC AMS AMS 02 48 50.0
comp=Z,700nm,15.4s
NRDL Niedersach Rie 79.60 333 *e*P **P 02 10 23.4 +0.1**
VRAC Vranov 79.70 328 ⇑*i*P **P 02 10 24.7 +0.8**
VRAC Vranov 79.70 328 ⇑P **P 02 10 24.7 +0.8**
116A Eloy 79.91 56 ⇓P **P 02 10 26.3 +1.3**
baz=80
SMOL Smolenice 79.97 327 *e*P **P 02 10 26.2 +0.9**
PRU Pruhonice 79.99 329 *e*P **P 02 10 25.8 +0.4**
PRU *e*pP pP 02 10 34.6 -0.3
PRU *e*S S 02 20 29.9 +2.5
PRU AMS AMS 02 49 00.0
comp=Z,600nm,15.6s
TREC Trest 80.16 328 *e*P **P 02 10 26.6 +0.2**
TREC *e*pP pP 02 10 35.7 -0.2
TREC *e*S S 02 20 30.7 +1.5
TREC AMS AMS 02 51 20.0
comp=Z,700nm,15.7s
BZS Buzias 80.32 323 ⇓*i*P **P 02 10 27.3 +0.1**
BZS Buzias 80.32 323 ⇓P **P 02 10 27.3 +0.1**
IBBN Ibbenburen 80.56 334 *e*P **P 02 10 28.6 +0.1**
MOX Moxa 80.58 331 *e*P **P 02 10 28.4 -0.2**
MOX Moxa 80.58 331 *e*P **P 02 10 28.5 -0.1**
comp=Z,10.0nm,1.5s,mb4.5
MOX
comp=Z,400nm,20.0s
MOX Moxa 80.58 331 *e*P **P 02 10 28.5 -0.1**
MOX pmax pmax
comp=Z,34nm,1.5s,mb5.1
MOX MLR MLR
comp=Z,10μm,20.0s
NKC Novy Kostel 80.60 331 *e*P **P 02 10 28.6 -0.1**
NKC *e*SKS 02 20 45.3
NKC AMS AMS 02 51 30.0
comp=Z,600nm,14.2s
NKC Novy Kostel 80.60 331 *e*P **P 02 10 28.6 -0.1**
NKC *e*S S 02 20 45.3 +12
MANZ Manzenberg 80.93 331 *e*P **P 02 10 31.1 +0.6**
SOP Sopron 80.98 327 ⇑*e*P **P 02 10 31.7 +0.9**
KHC Kasperske Hory 81.05 329 *e*P **P 02 10 31.3 +0.2**
KHC *e*pP pP 02 10 40.1 -0.5
KHC *e*S S 02 20 40.0 +1.5
KHC AMS AMS 02 50 00.0
comp=Z,600nm,16.9s
ROTZ Rotzenmuhle 81.07 330 *e*P **P 02 10 32.0 +0.8**
PKSM Moragy 81.22 325 ⇓*i*P **P 02 10 32.1 +0.1**
PKSM Moragy 81.22 325 ⇓P **P 02 10 32.1 +0.1**
GEC2 GERESS Array S 81.23 329 *e*P **P 02 10 32.2 +0.1**
GEC2 GERESS Array S 81.23 329 *e*P **P 02 10 31.3 -0.8**
GERES GERESS Array B 81.23 329 P **P 02 10 32.4 +0.3**
comp=Z,1.7nm,0.8s,mb4.0,baz=34,slow=5.0,SNR=18
GERES GERESS Array B 81.23 329 P **P 02 10 32.4 +0.3**
GERES pmax pmax
comp=Z,2.0nm,0.8s
WET Wettzell 81.31 330 *e*P **P 02 10 33.0 +0.5**
GRA1 Grafenberg Arr 81.50 331 *e*P **P 02 10 34.0 +0.5**
comp=Z,25nm,1.3s,mb5.0
GRA1 *e*pP pP 02 10 42.5 -0.5
GRA1 *e*PP PP 02 13 36.3 -3.6
GRA1 *e*S S 02 20 49.8 +6.6
GRA1 LR LR
comp=Z,300nm,18.8s,MS4.7
GRF Grafenberg Arr 81.50 331 *e*P **P 02 10 34.0 +0.5**
comp=Z,25nm,1.3s,mb5.0
GRF *e*pP pP 02 10 42.5 -0.5
GRF *e*PP PP 02 13 36.3 -3.6
GRF *e*S S 02 20 49.8 +6.6
GRF *e*L 02 51 48.4
comp=Z,313nm,18.8s
GRF Grafenberg Arr 81.50 331 *e*P **P 02 10 34.0 +0.5**
GRF *e**PP pP 02 10 42.5 -0.5
GRF *e* 02 13 36.3
GRF *e*S S 02 20 49.8 +6.6
GRF pmax pmax
comp=Z,25nm,1.3s,mb5.0
GRF MLR MLR
comp=Z,300nm,18.8s,MS4.7
ANMO Albuquerque 81.57 51 *e*P **P 02 10 34.8 +0.9**
ANMO pmax pmax
comp=Z,7.0nm,1.2s
ANMO Albuquerque 81.57 51 *e*P **P 02 10 34.8 +0.9**
comp=Z,7.0nm,1.2s,mb4.5
MMAI Mount Meron Ar 81.70 306 P **P 02 10 36.1 +1.5**
comp=Z,7.3nm,0.9s,mb4.6,baz=33,slow=6.3,SNR=11
VTS Vitosha 81.81 320 ⇑*i*P **P 02 10 35.7 +0.6**
TNS Taunus Mts 82.07 333 *e*P **P 02 10 36.6 +0.1**
DIVS Divcibare 82.22 323 ⇓*i*P **P 02 10 37.3 0.0**
SCHQ Schefferville 82.25 17 P **P 02 10 37.4 -0.1**
comp=Z,2.1nm,0.9s,mb4.1,baz=294,slow=5.3,SNR=3.6
FUR Furstenfeldbru 82.73 330 *e*P **P 02 10 40.4 +0.4**
PDKS Podkum 82.92 327 *e*P **P 02 10 40.5 -0.4**
STU Stuttgart 83.01 332 *e*P **P 02 10 41.5 +0.1**
STU Stuttgart 83.01 332 *e*P **P 02 10 41.2 -0.2**
STU pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
STU Stuttgart 83.01 332 *e*P **P 02 10 41.2 -0.2**
comp=Z,6.3nm,0.8s,mb4.7
GIVF Givet 83.41 335 *e*P **P 02 10 43.0 -0.5**
BAIF Baives 83.65 335 ⇑*i*P **P 02 10 44.2 -0.5**
comp=Z,20nm,1.2s,mb4.8
BAIF Baives 83.65 335 ⇑*i*P **P 02 10 44.2 -0.5**
BAIF pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
BAIF Baives 83.65 335 ⇑*i*P **P 02 10 44.2 -0.5**
comp=Z,10nm,1.2s,mb4.8
BFO Black Forest 83.70 332 *e*P **P 02 10 44.9 -0.1**
CDF Champ du Feu 84.01 332 ⇑*i*P **P 02 10 46.2 -0.3**
comp=Z,20nm,1.1s,mb4.8
CDF Champ du Feu 84.01 332 ⇑*i*P **P 02 10 46.2 -0.3**
CDF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
CDF Champ du Feu 84.01 332 ⇑*i*P **P 02 10 46.2 -0.3**
comp=Z,9.8nm,1.1s,mb4.8
EIL Elat 84.24 304 *e*P **P 02 10 48.2 +0.5**
comp=Z,289nm,1.2s
PPT Papeete 84.43 118 *e*LR LR 02 36 21.1
comp=Z,339nm,22.8s,baz=318
PPT Papeete 84.43 118 *e*LR LR 02 10 27.8
comp=Z,62nm,25.2s
MNTX Cornudas Mount 84.46 53 *e*P **P 02 10 48.5 -0.4**
comp=Z,5.6nm,1.2s,mb4.6
HINF Hinteralfeld 84.66 332 *e*P **P 02 10 49.2 -0.7**
HAU Haudompre 84.68 333 *e*P **P 02 10 49.4 -0.6**
comp=Z,9.3nm,0.9s,mb4.6
HAU *e*R
comp=Z,428nm,18.0s

HAU Haudompre 84.68 333 *e*P **P 02 10 49.4 -0.6**
HAU pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
HAU MLR MLR
comp=Z,430nm,18.0s,MS4.9
HAU Haudompre 84.68 333 *e*P **P 02 10 49.4 -0.6**
comp=Z,4.7nm,0.9s,mb4.6
HAU LR LR
comp=Z,430nm,18.0s,MS4.9
MEZF Maizieres J'vi 84.71 334 *e*P **P 02 10 50.0 -0.1**
comp=Z,14nm,1.0s,mb4.7
MEZF Maizieres J'vi 84.71 334 *e*P **P 02 10 50.0 -0.1**
comp=Z,14nm,1.0s,mb5.1
TAOE Nuku Hiva Isla 85.28 106 *e*LR LR 02 36 44.4
comp=Z,840nm,20.9s
CABF La Chapelle 85.96 332 *e*P **P 02 10 56.1 -0.3**
comp=Z,83nm,1.8s,mb5.4
CABF La Chapelle 85.96 332 *e*P **P 02 10 56.1 -0.3**
CABF pmax pmax
comp=Z,42nm,1.8s,mb5.4
CABF La Chapelle 85.96 332 *e*P **P 02 10 56.1 -0.3**
comp=Z,42nm,1.8s,mb5.4
LOR Lormes 86.18 334⇑ *i*P **P 02 10 57.1 -0.3**
comp=Z,25nm,1.0s,mb5.1
LOR *e*R
comp=Z,476nm,19.8s
LOR Lormes 86.18 334⇑ *i*P **P 02 10 57.1 -0.3**
LOR pmax pmax
comp=Z,13nm,1.0s,mb5.1
LOR MLR MLR
comp=Z,480nm,19.8s,MS4.9
LOR Lormes 86.18 334⇑ *i*P **P 02 10 57.1 -0.3**
comp=Z,13nm,1.0s,mb5.1
LOR LR LR
comp=Z,480nm,19.8s,MS4.9
WMOK Wichita Mounta 86.20 47 *e*P **P 02 10 56.7 -0.8**
WMOK pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
WMOK Wichita Mounta 86.20 47 *e*P **P 02 10 56.7 -0.8**
comp=Z,2.8nm,0.7s,mb4.6
FLN La Foliniere 86.26 337⇑ *i*P **P 02 10 57.2 -0.6**
comp=Z,35nm,1.2s,mb5.2
FLN *e*R
comp=Z,376nm,22.5s
FLN La Foliniere 86.26 337⇑ *i*P **P 02 10 57.2 -0.6**
FLN pmax pmax
comp=Z,18nm,1.2s,mb5.2
FLN MLR MLR
comp=Z,380nm,22.5s,MS4.7
FLN La Foliniere 86.26 337⇑ *i*P **P 02 10 57.2 -0.6**
comp=Z,18nm,1.2s,mb5.2
FLN LR LR
comp=Z,380nm,22.5s,MS4.7
LDF La Druitiere 86.30 337 *e*P **P 02 10 57.9 -0.1**
comp=Z,16nm,1.0s,mb4.9
LDF La Druitiere 86.30 337 *e*P **P 02 10 57.9 -0.1**
LDF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
LDF La Druitiere 86.30 337 *e*P **P 02 10 57.9 -0.1**
comp=Z,8.1nm,1.0s,mb4.9
SSF Saint Saulge 86.48 334⇑ *i*P **P 02 10 58.6 -0.3**
comp=Z,24nm,1.1s,mb5.0
SSF Saint Saulge 86.48 334⇑ *i*P **P 02 10 58.6 -0.3**
SSF pmax pmax
comp=Z,12nm,1.1s,mb5.0
SSF Saint Saulge 86.48 334⇑ *i*P **P 02 10 58.6 -0.3**
comp=Z,12nm,1.1s,mb5.0
GRR Gorron 86.70 337⇑ *i*P **P 02 10 59.7 -0.3**
comp=Z,30nm,1.1s,mb5.1
GRR Gorron 86.70 337⇑ *i*P **P 02 10 59.7 -0.3**
GRR pmax pmax
comp=Z,15nm,1.1s,mb5.1
GRR Gorron 86.70 337⇑ *i*P **P 02 10 59.7 -0.3**
comp=Z,15nm,1.1s,mb5.1
SMF Signal de Mont 86.73 333⇑ *i*P **P 02 10 59.8 -0.3**
comp=Z,40nm,1.4s,mb5.2
SMF Signal de Mont 86.73 333⇑ *i*P **P 02 10 59.8 -0.3**
SMF pmax pmax
comp=Z,20nm,1.4s,mb5.2
SMF Signal de Mont 86.73 333⇑ *i*P **P 02 10 59.8 -0.3**
comp=Z,20nm,1.4s,mb5.2
AVF Avril sur Loir 86.77 334⇑ *i*P **P 02 11 00.1 -0.2**
comp=Z,31nm,1.0s,mb5.2
AVF Avril sur Loir 86.77 334⇑ *i*P **P 02 11 00.1 -0.2**
AVF pmax pmax
comp=Z,16nm,1.0s,mb5.2
AVF Avril sur Loir 86.77 334⇑ *i*P **P 02 11 00.1 -0.2**
comp=Z,16nm,1.0s,mb5.2
ORIF Oris-en-Rattie 87.48 331 *e*P **P 02 11 03.8 0.0**
comp=Z,4.3nm,0.8s,mb4.4
ORIF *e*R
comp=Z,409nm,19.5s
ORIF Oris-en-Rattie 87.48 331 *e*P **P 02 11 03.8 0.0**
ORIF pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
ORIF Oris-en-Rattie 87.48 331 *e*P **P 02 11 03.8 0.0**
comp=Z,2.2nm,0.8s,mb4.4
TCF Toulx Ste Croi 87.59 334⇑ *i*P **P 02 11 04.3 0.0**
comp=Z,24nm,1.2s,mb5.0
TCF Toulx Ste Croi 87.59 334⇑ *i*P **P 02 11 04.3 0.0**
TCF pmax pmax
comp=Z,12nm,1.2s,mb5.0
TCF Toulx Ste Croi 87.59 334⇑ *i*P **P 02 11 04.3 0.0**
comp=Z,12nm,1.2s,mb5.0
CCM Cathedral Cave 87.70 40 *e*P **P 02 11 04.4 -0.4**
CCM pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
CCM Cathedral Cave 87.70 40 *e*P **P 02 11 04.4 -0.5**
comp=Z,6.2nm,0.8s,mb4.9
MFF Saint Martin d 88.08 336⇑ *i*P **P 02 11 07.5 +0.9**
comp=Z,32nm,1.3s,mb5.1
MFF Saint Martin d 88.08 336⇑ *i*P **P 02 11 07.5 +0.9**
MFF pmax pmax
comp=Z,16nm,1.3s,mb5.1
MFF Saint Martin d 88.08 336⇑ *i*P **P 02 11 07.5 +0.9**
comp=Z,16nm,1.3s,mb5.1
RJF Les Rejaudoux 88.69 334⇑ *i*P **P 02 11 09.6 +0.1**
comp=Z,28nm,1.2s,mb5.2
RJF *e*R
comp=Z,555nm,19.8s
RJF Les Rejaudoux 88.69 334⇑ *i*P **P 02 11 09.6 +0.1**
RJF pmax pmax
comp=Z,14nm,1.3s,mb5.1
RJF MLR MLR
comp=Z,560nm,19.8s,MS5.0
RJF Les Rejaudoux 88.69 334⇑ *i*P **P 02 11 09.6 +0.1**
comp=Z,14nm,1.3s,mb5.1
RJF LR LR
comp=Z,560nm,19.8s,MS5.0
CAF Calviac 88.83 334⇑ *i*P **P 02 11 10.6 +0.4**
MIAR Mount Ida 89.20 44 *e*P **P 02 11 11.5 -0.4**
MIAR pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
MIAR Mount Ida 89.20 44 *e*P **P 02 11 11.5 -0.4**
comp=Z,5.7nm,1.1s,mb4.8
LFF La Frestale 89.27 335⇑ *i*P **P 02 11 12.6 +0.4**
comp=Z,21nm,1.0s,mb5.1
LFF La Frestale 89.27 335⇑ *i*P **P 02 11 12.6 +0.4**
LFF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
LFF La Frestale 89.27 335⇑ *i*P **P 02 11 12.6 +0.4**
comp=Z,10nm,1.0s,mb5.1
WCI Wyandotte Cave 89.95 37 *e*P **P 02 11 15.5 +0.1**
WCI pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
WCI Wyandotte Cave 89.95 37 *e*P **P 02 11 15.5 +0.1**
comp=Z,4.0nm,0.7s,mb4.9
ATD Arta Tunnel 90.75 286 LR LR 02 53 33.0
comp=Z,75nm,19.0s,MS4.2,baz=75,slow=36
RKT Rikitea 98.29 113 *e*LR LR 02 42 46.3
comp=Z,187nm,24.2s
TORD Torodi Ar. Bea 116.49 318 PKP PKPdf 02 16 59.0 -0.8
comp=Z,0.3nm,0.9s,baz=40,slow=1.6,SNR=6.6
TORD PP PP 02 18 04.3 -2.5
comp=Z,3.2nm,1.1s,baz=25,slow=6.3,SNR=9.8
SNAA Sanae 143.85 197 *e*PKPdf PKPdf 02 17 46.7 -4.6
SNAA *e* 02 17 47.5
SNAA *e* 02 17 49.5
SNAA *e* 02 17 54.3
SNAA *e* 02 18 08.3
SNAA Sanae 143.85 197 *e*PKPdf PKPdf 02 17 46.1 -5.1
VNA1 Neumayer--Stat 145.80 196 *e*PKPdf PKPdf 02 17 55.1 +0.4
VNA1 *e* 02 17 56.1
VNA1 *e* 02 17 57.5
VNA1 *e* 02 18 03.1
VNA1 *e* 02 18 18.6
LVC Limon Verde 147.65 68 *e*PKPbc PKPbc 02 18 01.0 +0.5

*ISCJB **20** 02:23:16.7±1.0, 657S±004×130.12E±007, h116km±11km, mb4.6/24, Error ellipse: s-maj=11.8km s-min=5.7km az=169.0*
*IDC **20** 02:23:16.2±3.5, 644S×13006E, h90km±32km, mb4.0/9, mb1 4.2/12, mb1mx4.1/16, mbtmp4.5/12, Error ellipse: s-maj=24.8km s-min=13.9km az=72.0*
*NEIC **20** 02:23:19.2±1.2, 647S×130.13E, h119km±12km, mb4.8/20, Error ellipse: s-maj=11.3km s-min=6.2km az=54.0*
ISC 20 02:23:18.0±0.9, **653S**±004×**13018E**±007, **h106**km±10km, **n51**, σ1=**31**/56, **mb4.6**/24, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**5.73**	**11**	P	**Pn**	**02 24 40.1**	**-0.6**
	0.0nm,0.0s						
KAKA	**Kakadu**	**6.53**	**160**	*e*P	**Pn**	**02 24 53.7**	**+2.1**
	206nm,0.3s						
KAKA				*e*S	**Sn**	**02 26 03.5**	**-1.1**
BAKI	**Biak**	**7.94**	**48**	P	**Pn**	**02 25 12.0**	**+1.3**
	0.0nm,0.0s						
JAY	**Jayapura**	**11.22**	**70**	P	**Pn**	**02 25 49.7**	**-5.4**
	0.0nm,0.0s						
PCI	**Palu**	**11.73**	**298**	P	**Pn**	**02 26 09.3**	**+7.4**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**12.32**	**201**	P	**Pn**	**02 26 09.6**	**-0.1**
	6.2nm,0.3s,baz=38,slow=11,SNR=147						
FITZ				S	**Sn**	**02 28 20.8**	**-4.5**
	7.9nm,0.3s,baz=216,slow=19,SNR=4.8						
FITZ	**Fitzroy Crossi**	**12.32**	**201**	*e*P	**Pn**	**02 26 09.5**	**-0.2**
	51nm,0.3s						
FITZ				*e*S	**Sn**	**02 28 20.7**	**-4.5**
WRAB	**Tennant Creek**	**13.93**	**163**	*e*Pn	**Pn**	**02 26 28.4**	**-2.3**
	62nm,0.6s						
WRAB				*e*Sn	**Sn**	**02 28 56.3**	**-7.7**
WRA	**Warramunga Arr**	**13.93**	**164**	P	**Pn**	**02 26 28.7**	**-2.1**
	6.3nm,0.3s,baz=346,slow=13,SNR=98						
WRA				S	**Sn**	**02 28 56.4**	**-7.7**
	20nm,0.3s,baz=354,slow=23,SNR=12						
WB2	**Warramunga Arr**	**13.94**	**163**	*e*P	**Pn**	**02 26 28.4**	**-2.4**
WB2				*e*S	**Sn**	**02 28 55.9**	**-8.3**
PMG	**Port Moresby**	**17.06**	**101**	P	**Pn**	**02 27 11.4**	**+1.5**
	1.9nm,0.3s,baz=345,slow=12,SNR=6.0						
PMG	**Port Moresby**	**17.06**	**101**	*e*P	**Pn**	**02 27 11.0**	**+1.2**
AS31	**Alice Springs**	**17.41**	**169**	*e*P	**Pn**	**02 27 15.0**	**+0.9**
AS31				*e*S	**S**	**02 30 19.4**	**-8.9**
ASAR	**Alice Springs**	**17.41**	**169**	P	**Pn**	**02 27 14.9**	**+0.8**
	7.5nm,0.3s,baz=351,slow=10,SNR=406						
ASAR				S	**S**	**02 30 20.6**	**-7.7**
	2.7nm,0.3s,baz=358,slow=28,SNR=12						
MBWA	**Marble Bar**	**17.71**	**214**	*e*P	**Pn**	**02 27 19.9**	**+2.1**
	12nm,0.6s						
MBWA				*e*Sn	**Sn**	**02 30 25.4**	**-10**
KKM	**Kota Kinabalu**	**18.71**	**312**	*e*P	**P**	**02 27 29.7**	**+1.6**
CTA	**Charters Tower**	**20.62**	**132**	P	**P**	**02 27 50.8**	**+2.0**
	9.9nm,0.8s,baz=320,slow=12,SNR=7.7						
CTA	**Charters Tower**	**20.62**	**132**	*e*P	**P**	**02 27 50.9**	**+2.1**
	6.5nm,0.7s						
CTA				*e*S	**S**	**02 31 35.3**	**+2.0**
CTAO	**Charters Tower**	**20.62**	**132**	*e*P	**P**	**02 27 50.6**	**+1.8**
	14nm,0.9s						
LEM	**Lembang**	**22.41**	**268**	P	**P**	**02 28 10.5**	**+2.7**
	74nm,0.9s,mb5.0						
CBJI	**Citeko**	**23.18**	**269**	P	**P**	**02 28 17.4**	**+2.1**
	304nm,0.5s,mb5.9						
FORT	**Forrest**	**24.20**	**184**	*e*P	**P**	**02 28 25.3**	**+0.7**
	25nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**27.38**	**159**	P	**P**	**02 28 53.9**	**+0.6**
	5.9nm,0.7s,mb4.2,baz=335,slow=9.4,SNR=8.3						
STKA	**Stephens Creek**	**27.38**	**159**	*e*P	**P**	**02 28 54.1**	**+0.8**
	4.6nm,0.7s,mb4.1						
STKA				*e*S	sS	02 34 07.4	+1.0
PSI	**Prapat**	**32.55**	**286**	P	**P**	**02 29 37.9**	**-1.0**
	5.6nm,0.7s,mb4.5,baz=94,slow=6.3,SNR=3.8						
CHTO	**Chiang Mai**	**39.78**	**310**	*e*P	**P**	**02 30 41.2**	**+0.8**
	3.7nm,0.4s,mb4.6						
MJAR	**Matsushiro Arr**	**43.50**	**9**	P	**P**	**02 31 08.6**	**-2.2**
	1.0nm,0.7s,mb3.7,baz=188,slow=8.9,SNR=5.6						
JIRN	**Jiri**	**54.41**	**311**	*e*P	**P**	**02 32 34.3**	**+0.3**
	17nm,0.8s,mb5.1						
GUN	**Gumba**	**54.78**	**311**	*e*P	**P**	**02 32 37.1**	**+0.4**
	34nm,0.8s,mb5.4						
PKI	**Pulchoki**	**54.96**	**310**	*e*P	**P**	**02 32 38.0**	**0.0**
	7.7nm,0.5s,mb5.0						
KKN	**Kakani**	**55.17**	**310**	*e*P	**P**	**02 32 39.4**	**-0.1**
	17nm,0.8s,mb5.1						
DMN	**Daman**	**55.21**	**310**	*e*P	**P**	**02 32 40.3**	**+0.5**
	34nm,1.1s,mb5.3						
GKN	**Gorkha**	**55.77**	**310**	*e*P	**P**	**02 32 43.8**	**0.0**
	16nm,0.6s,mb5.2						
KOLN	**Koldanda**	**56.44**	**309**	*e*P	**P**	**02 32 48.1**	**-0.5**
	33nm,1.1s,mb5.3						
SONM	**Songino Array**	**58.05**	**341**	P	**P**	**02 33 00.0**	**+0.1**
	1.7nm,0.6s,mb4.3,baz=158,slow=6.4,SNR=15						
MKAR	**Makanchi Array**	**67.93**	**327**	P	**P**	**02 34 05.3**	**+0.1**
	5.8nm,0.7s,mb4.5,baz=119,slow=8.2,SNR=55						
MKAR	**Makanchi Array**	**67.93**	**327**	P	**P**	**02 34 05.3**	**0.0**
YAK	**Yakutsk**	**68.36**	**360**	*e*P	**P**	**02 34 06.9**	**-1.1**
	19nm,0.7s,mb5.0						
AAK	**Ala-Archa**	**70.30**	**320**	*e*P	**P**	**02 34 20.0**	**+0.1**
	2.3nm,0.5s,mb4.3						
ZAL	**Zalesovo**	**71.24**	**334**	P	**P**	**02 34 23.5**	**-2.1**
	1.7nm,0.8s,mb4.0,baz=332,slow=4.4,SNR=7.6						
VNDA	**Vanda**	**72.89**	**173**	P	**P**	**02 34 35.8**	**+0.4**
	1.0nm,0.8s,mb3.7,baz=316,slow=9.9,SNR=9.0						
VNDA	**Vanda**	**72.89**	**173**	*e*P	**P**	**02 34 35.5**	**0.0**
	1.0nm,0.7s,mb3.8						
MAW	**Mawson**	**75.45**	**201**	P	**P**	**02 34 50.9**	**+0.6**
	2.7nm,0.7s,mb4.1,baz=85,slow=6.9,SNR=7.3						
BRVK	**Borovoye**	**77.83**	**328**	*e*P	**P**	**02 35 02.6**	**-1.1**
	2.0nm,0.8s,mb3.9						
CHKZ	**Chkalovo**	**77.96**	**328**	*e*P	**P**	**02 35 02.9**	**-1.5**
	2.4nm,1.0s,mb3.9						
ZRNK	**Zerenda**	**78.47**	**327**	*e*P	**P**	**02 35 06.0**	**-1.2**
	3.3nm,0.9s,mb4.1						
TORD	**Torodi Ar. Bea**	**128.89**	**282**	PKP	PKPdf	02 42 13.0	0.0
	1.0nm,0.6s,baz=64,slow=1.5,SNR=13						
TORD	**Torodi Ar. Bea**	**128.89**	**282**	PKP	PKPdf	02 42 13.0	0.0
CPUP	**Villa Florida**	**146.53**	**168**	PKPbc	PKPbc	02 42 47.5	+0.6
	1.4nm,0.7s,baz=240,slow=2.4,SNR=5.3						
CPUP	**Villa Florida**	**146.53**	**168**	PKPbc	PKPbc	02 42 47.5	+0.6
LPAZ	**La Paz**	**150.98**	**142**	PKPbc	PKPbc	02 43 00.3	+2.0
	0.9nm,0.5s,baz=17,slow=0.5,SNR=8.5						

*SZGRF **20** 02:37:10.1, 2162N×7147E, h33km, mb4.8, Southern India*
*NEIC **20** 02:37:17.9±0.6, 2326N×7072E, h10km, mb4.4/20, Error ellipse: s-maj=15.3km s-min=5.1km az=176.0*
*IDC **20** 02:37:18.7±0.8, 2340N×7039E, h0km, mb3.9/17, mb1 4.0/18, mb1mx3.9/25, mbtmp3.9/18, ML4.2/1, Error ellipse: s-maj=20.1km s-min=18.2km az=23.0*
*ISCJB **20** 02:37:21.0±0.8, 2355N±003×7049E±003, h25km±7km, mb4.1/37, Error ellipse: s-maj=5.8km s-min=4.0km az=150.5*
*NDI **20** 02:37:24.2±4.6, 2344N×7034E, h15km±30km, ML4.3, mb4.4(NEIC)*
ISC 20 02:37:21.0±1.0, **2347N**±004×**7049E**±003, **h14**km±6km, **n110**, σ1=**14**/124, **mb4.1**/37, **5C-2D, Southern India**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHJ	**Bhuj**	**0.80**	**255**	*e*P	**Pg**	**02 37 37.0**	**+0.5**
BHJ				*e*S	**Sg**	**02 37 46.1**	**-0.9**
BHV	**Bhavnagar**	**2.29**	**138**	*ex*	**Pn**	**02 37 59.5**	**+1.0**
BHV				*e*S	**Sn**	**02 38 32.0**	**+5.5**
JASL	**Jaisalmer**	**3.46**	**6**	*e*P	**Pn**	**02 38 14.6**	**+0.1**
JASL				*e*S	**Sn**	**02 38 55.0**	**-0.3**
AJM	**Ajmer**	**4.82**	**51**	*ex*	**Pn**	**02 38 36.2**	**+3.1**
AJM				*e*S	**Sn**	**02 39 31.1**	**+2.4**
AJM				AML	AML	02 39 54.0	
	comp=N,448nm,0.5s						
AJM				AML	AML	02 39 54.7	
	comp=E,698nm,0.3s						
BOM	**Bombay**	**5.04**	**154**	*e*P	**Pn**	**02 38 39.4**	**+3.2**
BOM				*ex*	x	02 39 27.0	
BHPL	**Bhopal**	**6.38**	**91**	*ex*	**Pn**	**02 38 55.1**	**+0.5**
BHPL				*e*S	**Sn**	**02 40 06.8**	**-0.4**
BHPL				AML	AML	02 40 50.4	
	comp=E,208nm,0.7s						
BHPL				AML	AML	02 40 52.6	
	comp=N,334nm,0.5s						
KHET	**Khetri**	**6.63**	**45**	*ex*	**Pn**	**02 38 57.4**	**-0.7**
KHET				*e*S	**Sn**	**02 40 13.9**	**+0.5**
KHET				AML	AML	02 40 54.9	
	comp=E,269nm,0.2s						
KHET				AML	AML	02 40 55.0	
	comp=N,257nm,0.6s						
AKL	**Akola**	**6.65**	**113**	*i* P	**Pn**	**02 39 02.1**	**+3.8**
AKL				*i* x	x	02 40 02.7	
KAD	**Karad**	**7.04**	**150**	*e*P	**Pn**	**02 39 06.7**	**+3.0**
KAD				*ex*	x	02 40 27.4	
KUDL	**Kundal**	**7.13**	**48**	*e*P	**Pn**	**02 39 09.7**	**+4.7**
KUDL				*e*S	**Sn**	**02 40 25.8**	**-0.1**
KUDL				AML	AML	02 41 14.1	
	comp=N,210nm,0.5s						
KUDL				AML	AML	02 41 15.8	
	comp=E,162nm,0.5s						
LATR	**Latur**	**7.58**	**130**	*e*P	**Pn**	**02 39 15.5**	**+4.4**
LATR				*ex*	x	02 41 01.0	
AGRA	**Agra**	**7.71**	**59**	*e*S	**Sn**	**02 40 39.1**	**-1.0**
AGRA				AML	AML	02 41 30.1	
	comp=E,306nm,0.2s						
AGRA				AML	AML	02 41 30.4	
	comp=N,251nm,0.5s						
NDI	**New Delhi**	**7.97**	**48**	*ex*	**Pn**	**02 39 16.0**	**-0.4**
NDI				*e*S	**Sn**	**02 40 47.0**	**+0.6**
DRP	**Derazinda**	**8.25**	**358**	P	**Pn**	**02 39 20.4**	**+0.2**
NGP	**Nagpur**	**8.26**	**105**	*ex*	**Pn**	**02 39 20.7**	**+0.3**
NGP				*ex*	x	02 40 54.1	
SBDP	**Sheikh Budin**	**8.80**	**2**	P	**Pn**	**02 39 28.1**	**+0.3**
THW	**Thamme Wali**	**9.36**	**7**	P	**Pn**	**02 39 34.3**	**-1.1**
BHK	**Bhakra**	**9.51**	**32**	*ex*	x	02 41 50.6	
HYB	**Hyderabad**	**9.66**	**127**	*i* P	**Pn**	**02 39 43.0**	**+3.3**
HYB				*e*S	**Sn**	**02 41 25.0**	**-3.0**
HYB	**Hyderabad**	**9.66**	**127**	*e*P	**Pn**	**02 39 43.0**	**+3.3**
HYB				*e*S	**Sn**	**02 41 25.0**	**-3.0**
PONG	**Pong**	**9.74**	**29**	*ex*	**Pn**	**02 39 40.0**	**-0.7**
SDNR	**Sundarnagar**	**9.85**	**34**	*ex*	**Pn**	**02 39 48.0**	**+5.8**
SDNR				*ex*	x	02 42 01.0	
DLH	**Dalhousie**	**10.25**	**27**	*e*P	**Pn**	**02 39 51.0**	**+3.3**
DLH				*e*S	**Sn**	**02 41 37.0**	**-5.4**
CEP	**Cherat**	**10.39**	**7**	P	**Pn**	**02 39 41.1**	**-8.5**
CEP				S	**Sn**	**02 41 42.0**	**-3.9**
CHCP	**Chirah Chowk**	**10.44**	**13**	P	**Pn**	**02 39 49.3**	**-1.0**
ALBI	**Allahabad**	**10.48**	**78**	*e*S	**Sn**	**02 41 43.5**	**-4.5**
LGTI	**Lohaghat**	**10.58**	**54**	*i* P	**Pn**	**02 39 55.3**	**+3.1**
LGTI				*e*S	**Sn**	**02 41 45.5**	**-4.9**
KLP	**Kalpa**	**10.58**	**39**	*ex*	**Pn**	**02 39 53.5**	**+1.3**
KLP				*ex*	x	02 42 02.9	
KLP				AML	AML	02 43 01.6	
	comp=N,219nm,0.9s						
KLP				AML	AML	02 43 09.0	
	comp=E,328nm,0.7s						
WSAR	**Wadi Sarin**	**10.90**	**271**	Pn	**Pn**	**02 39 55.4**	**-1.1**
	comp=E,1.9nm,0.3s,baz=83,slow=12,SNR=24						
WSAR				Sn	**Sn**	**02 41 49.4**	**-8.8**
	comp=E,0.4nm,0.3s,baz=49,slow=20,SNR=2.8						
WSAR	**Wadi Sarin**	**10.90**	**271**	Pn	**Pn**	**02 39 55.4**	**-1.1**
WSAR				Sn	**Sn**	**02 41 49.4**	**-8.8**
KOLN	**Koldanda**	**12.58**	**67**	*e*P	**Pn**	**02 40 16.2**	**-3.4**
GKN	**Gorkha**	**13.53**	**68**	*e*P	**Pn**	**02 40 28.9**	**-3.6**
DMN	**Daman**	**13.82**	**70**	*e*P	**Pn**	**02 40 32.4**	**-4.2**
KKN	**Kakani**	**14.02**	**69**	*e*P	**Pn**	**02 40 34.9**	**-4.3**
PKI	**Pulchoki**	**14.08**	**70**	*e*P	**Pn**	**02 40 35.4**	**-4.6**
BOK	**Bokaro**	**14.12**	**86**	*ex*	x	02 40 42.2	
BOK				*e*S	**Sn**	**02 43 09.7**	**-7.4**
BOK				AML	AML	02 43 34.4	
	comp=E,11nm,0.3s						
BOK				AML	AML	02 43 34.7	
	comp=N,20nm,0.5s						
GUN	**Gumba**	**14.56**	**69**	*e*P	**Pn**	**02 40 42.4**	**-4.2**
JIRN	**Jiri**	**14.77**	**70**	*e*P	**Pn**	**02 40 44.9**	**-4.6**
AAK	**Ala-Archa**	**19.40**	**9**	*e*P	**Pn**	**02 41 47.5**	**-0.3**
	comp=N,2.8nm,0.6s						
MKAR	**Makanchi Array**	**25.14**	**19**	P	**P**	**02 42 47.2**	**+1.6**
	comp=N,0.6nm,0.7s,mb3.2,baz=209,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**25.14**	**19**	P	**P**	**02 42 47.2**	**+1.6**
GNI	**Garni**	**27.34**	**314**	P	**P**	**02 43 06.2**	**+0.7**
	comp=N,1.8nm,0.3s,mb4.1,baz=165,slow=20,SNR=1.8						
AKTK	**Aktyubinsk**	**28.62**	**343**	P	**P**	**02 43 16.8**	**-0.2**
AKTO	**Aktyubinsk**	**28.62**	**343**	P	**P**	**02 43 16.8**	**-0.2**
	comp=N,0.4nm,0.5s,mb3.4,baz=146,slow=7.3,SNR=2.5						
ZRNK	**Zerenda**	**29.46**	**358**	P	**P**	**02 43 26.6**	**+2.2**
	comp=N,0.8nm,0.7s,mb3.6						
MALT	**Malatya**	**31.05**	**306**	*e*P	**P**	**02 43 39.6**	**+1.1**
	comp=N,2.9nm,1.1s,mb4.0						
ARU	**Arti**	**34.07**	**348**	*e*P	**P**	**02 44 05.4**	**+0.5**
	comp=N,1.5nm,0.5s,mb4.2						
BRTR	**Keskin Array B**	**35.04**	**306**	P	**P**	**02 44 13.6**	**+0.3**
	comp=N,0.3nm,0.6s,mb3.4,baz=106,slow=8.0,SNR=3.4						
SONM	**Songino Array**	**37.46**	**41**	P	**P**	**02 44 35.8**	**+1.7**
	comp=N,1.8nm,0.9s,mb3.9,baz=243,slow=8.7,SNR=8.1						
TIRR	**Tirgusor**	**40.14**	**312**⇑	*i*P	**P**	**02 44 56.7**	**+0.2**
CFR	**Carcaliu**	**40.54**	**313**⇑	*i*P	**P**	**02 45 00.5**	**+0.7**
PLOR	**Plostina**	**41.74**	**313**⇑	*i*P	**P**	**02 45 11.4**	**+1.7**
AKASG	**Malin Array Be**	**41.88**	**321**	P	**P**	**02 45 08.7**	**-2.1**
	comp=N,1.2nm,0.6s,mb3.7,baz=109,slow=6.6,SNR=4.8						
MLR	**Muntele Rosu**	**42.11**	**313**⇑	*i*P	**P**	**02 45 14.6**	**+1.9**
VOIR		**42.70**	**312**⇓	*i*P	**P**	**02 45 18.1**	**+0.6**
BURAR	**Bucovina Array**	**43.21**	**315**⇓	*i*P	**P**	**02 45 22.9**	**+1.3**
BZS	**Buzias**	**45.09**	**312**⇑	*i*P	**P**	**02 45 37.2**	**+0.5**
KOLS	**Kolonicke sedl**	**45.48**	**316**	*e*P	**P**	**02 45 40.9**	**+1.1**
CRVS	**Cervenica-Dubn**	**45.98**	**316**	*e*P	**P**	**02 45 45.4**	**+1.6**
JOF	**Joensuu**	**47.32**	**337**	*ep*	**P**	**02 45 52.7**	**-1.5**
	comp=N,1.5nm,0.5s,mb4.2						
VYHS	**Vyhne**	**47.57**	**315**	*e*P	**P**	**02 45 56.6**	**+0.4**
	comp=N,1.4nm,0.9s,mb4.0						
FINES	**FINESS Array B**	**48.51**	**333**	P	**P**	**02 46 02.8**	**-0.7**
	comp=N,1.4nm,0.7s,mb4.1,baz=86,slow=9.8,SNR=7.8						
MORC	**Moravsky Berou**	**48.68**	**316**	*e*P	**P**	**02 46 04.5**	**-0.3**
	comp=N,2.2nm,0.6s,mb4.4						
KAF	**Kangasniemi**	**48.77**	**334**	*ep*	**P**	**02 46 04.0**	**-1.4**
	comp=N,3.6nm,0.8s,mb4.5						
DPC	**Dobruska-Polom**	**49.57**	**317**	*e*P	**P**	**02 46 12.4**	**+0.8**
UPC	**Upice**	**49.80**	**317**	*e*P	**P**	**02 46 14.4**	**+1.1**
TREC	**Trest**	**49.90**	**315**	*e*P	**P**	**02 46 14.6**	**+0.5**
CEY	**Cerknica**	**50.08**	**311**	*i* P	**P**	**02 46 15.7**	**+0.2**
PRU	**Pruhonice**	**50.63**	**316**	*e*P	**P**	**02 46 19.9**	**+0.3**
GERES	**GERESS Array B**	**50.98**	**315**	P	**P**	**02 46 22.3**	**+0.1**
	comp=N,1.7nm,0.7s,mb4.1,baz=101,slow=6.9,SNR=19						
KHC	**Kasperske Hory**	**51.10**	**315**	*e*P	**P**	**02 46 23.3**	**+0.1**
BRG	**Berggiesshubel**	**51.16**	**317**

comp=Z,3.8nm,0.9s,mb4.4
RJF Les Rejaudoux 59.13 310 *e*P **P 02 47 20.5 -0.7**
comp=Z,19nm,1.3s,mb4.7
RJF Les Rejaudoux 59.13 310 *e*P **P 02 47 20.5 -0.7**
comp=Z,9.4nm,1.3s,mb4.7
LFF La Frestale 59.70 309 *e*P **P 02 47 24.4 -0.7**
comp=Z,5.9nm,0.6s,mb4.5
LFF La Frestale 59.70 309 *e*P **P 02 47 24.4 -0.7**
comp=Z,3.0nm,0.6s,mb4.5
ESDC Sonseca Array 63.78 304 P **P 02 47 51.8 -0.8**
comp=Z,0.6nm,0.5s,mb3.9,baz=66,slow=6.6,SNR=6.0
TORD Torodi Ar. Bea 65.60 274 P **P 02 48 04.6 +0.1**
comp=Z,3.0nm,0.9s,mb4.3,baz=73,slow=5.7,SNR=18
TORD Torodi Ar. Bea 65.60 274 P **P 02 48 04.6 +0.1**
BOSA Boshof 67.67 222 P **P 02 48 17.5 -0.2**
comp=Z,1.9nm,0.9s,mb4.1,baz=59,slow=5.9,SNR=3.1
BOSA Boshof 67.67 222 P **P 02 48 17.5 -0.2**
DBIC Dimbokro 73.95 270 P **P 02 48 56.0 +0.1**
comp=Z,4.6nm,1.0s,mb4.3,baz=95,slow=18,SNR=4.3
WRA Warramunga Arr 75.73 119 P **P 02 49 06.3 +0.1**
comp=Z,0.3nm,0.6s,mb3.4,baz=304,slow=7.0,SNR=3.4
ASAR Alice Springs 77.37 123 P **P 02 49 15.9 +0.5**
comp=Z,0.7nm,0.7s,mb3.7,baz=302,slow=5.4,SNR=4.6

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*NEIC **20** 02:44:41.6, 1077N×6109W, h25km, MD3.5(TRN), After TRN.*

TRN 20 02:44:41.6, 1077N×6109W, h25km, MD3.5, 2D, Trinidad

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.28 176**	⇓*i*P			Pb	02 44 48.3	0.0
TBH			*e*S			Sb	02 44 54.1	+1.2
TRN	**Trinidad (W)**	**0.33 250**	⇓*e*P			Pb	02 44 49.0	-0.1
TRN			*e*S			Sb	02 44 54.7	+0.5
TPR	**Prospect**	**0.52 36**	*e*P			Pb	02 44 51.9	-0.2
TPR			*e*S			Sb	02 45 00.3	+1.1
TPP	**Pointe-a-Pierr**	**0.57 219**	*e*P			Pb	02 44 53.1	+0.1
TCE	**Chacachacare**	**0.66 264**	*e*P			Pb	02 44 54.5	0.0
TCE			*e*S			Sb	02 45 04.6	+1.4
GRW	**Mount Saint Ca**	**1.50 338**	*e*P			Pn	02 45 06.6	-0.3
GRHS	**Sauteurs**	**1.55 339**	*e*P			Pn	02 45 08.8	+1.2
GRHS			*e*S			Sn	02 45 27.0	+0.1
GRIC	**Isle de Caille**	**1.59 342**	*e*P			Pn	02 45 08.1	0.0
GRIC			*e*S			Sn	02 45 29.3	+1.5
GRSS	**Sisters**	**1.61 341**	*e*P			Pn	02 45 08.1	-0.3
GRCU	**Cariacou**	**1.73 348**	*e*P			Pn	02 45 09.9	-0.2
GRCU			*e*S			Sn	02 45 32.0	+0.6

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*GUC **20** 02:51:12.4±1.0, 2903S×6860W, h148km±36km, MD4.2, ML5.1*
*BJI **20** 02:51:13.0, 2890S×6787W, h109km, mB5.1*
*ISCJB **20** 02:51:13.3±0.1, 2912S±002×6841W±003, h111km, mb4.9/59, Error ellipse: s-maj=4.3km s-min=2.6km az=35.6*
*HRVD **20** 02:51:14.5±0.7, 2929S×6845W, h130km±4km, MW5.0/30, Centroid moment Tensor Solution. LP body waves: s9,c10;Mantle waves: s30,c38; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.82±.27; $M_{\theta\theta}$2.45±.35; $M_{\phi\phi}$0.37±.45; $M_{r\theta}$0.49±.19; $M_{r\phi}$-3.08±.24; $M_{\theta\phi}$1.85±.27; Best double couple: $M_0$4.47300×10^{16} NP1:ϕ_s274.00000°, δ51.00000°, λ-140.00000°. NP2:ϕ_s156.00000°, δ60.00000°, λ-47.00000°. Principal axes: T 4.7280, Plg5.0000°, Azm217.0000°; N -0.5030, Plg37.0000°, Azm311.0000°; P -4.2190, Plg53.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **20** 02:51:14.7±0.5, 2900S×6843W, h108km±4km, mb4.6/11, mb1 4.7/13, mb1mx4.6/16, mbtmp4.9/13, MS3.7/1, Ms1 3.6/1, ms1mx3.0/23 Error ellipse: s-maj=19.9km s-min=13.1km az=84.0*
*NEIC **20** 02:51:14.5±0.1, 2912S×6846W, mb5.0/53, Error ellipse: s-maj=5.7km s-min=3.1km az=96.0*

ISC 20 02:51:15.0±0.2, 2914S±002×6845W±004, h112km, h112km±1.4km: pP-P, n365,s0s88/347, mb4.9/59, 89C-107D, San Juan Province

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.97 273**	⇑*i*P			**Pn**	**02 51 47.1**	**-0.6**
LCO			*i* S			**Sn**	**02 52 12.2**	**-0.4**
VACH	**Vallenar**	**2.10 285**	⇑*i*P			**Pn**	**02 51 48.7**	**-0.6**
VACH			*i* S			**Sn**	**02 52 14.7**	**-0.9**
VACH			AML			AML	02 52 16.9	
	comp=N,20μm,0.1s							
VACH	**Vallenar**	**2.10 285**	⇑*i*P			**Pn**	**02 51 48.7**	**-0.6**
VACH			*i* S			**Sn**	**02 52 14.7**	**-0.9**
TLL	**Tololo Astrono**	**2.29 243**	⇑*i*P			**Pn**	**02 51 52.1**	**+0.4**
TLL			*i* S			**Sn**	**02 52 21.5**	**+1.7**
TLL			AML			AML	02 52 25.6	
	comp=N,16μm,0.5s							
TLL	**Tololo Astrono**	**2.29 243**	⇑*i*P			**Pn**	**02 51 52.1**	**+0.4**
TLL			*i* S			**Sn**	**02 52 21.5**	**+1.7**
CPCH	**Copiapo**	**2.44 316**	*i* P			**Pn**	**02 51 49.4**	**-4.3**
CPCH			*i* S			**Sn**	**02 52 18.4**	**-5.0**
CFAA	**Coronel Fontan**	**2.46 176**	P			**Pn**	**02 51 55.0**	**+1.0**
	comp=N,44nm,0.3s,baz=353,slow=12,SNR=4329							
CFAA			S			**Sn**	**02 52 25.2**	**+1.3**
	comp=N,147nm,0.3s,baz=249,slow=14,SNR=36							
CFAA	**Coronel Fontan**	**2.46 176**	P			**Pn**	**02 51 55.0**	**+1.0**
CFAA			S			**Sn**	**02 52 25.2**	**+1.3**
LSCH	**La Serena**	**2.55 252**	⇑*i*P			**Pn**	**02 51 54.1**	**-1.0**
LSCH			*i* S			**Sn**	**02 52 24.7**	**-1.2**
LSCH			AML			AML	02 52 25.3	
	comp=N,615nm,0.3s							
LSCH	**La Serena**	**2.55 252**	⇑*i*P			**Pn**	**02 51 54.1**	**-1.0**
LSCH			*i* S			**Sn**	**02 52 24.7**	**-1.2**
OVCH	**Ovalle**	**2.80 238**	⇑*i*P			**Pn**	**02 51 57.4**	**-1.0**
OVCH			*i* S			**Sn**	**02 52 31.0**	**-0.7**
OVCH			AML			AML	02 52 36.7	
	comp=N,6μm,0.5s							
OVCH	**Ovalle**	**2.80 238**	⇑*i*P			**Pn**	**02 51 57.4**	**-1.0**
OVCH			*i* S			**Sn**	**02 52 31.0**	**-0.7**
CDCH	**Caldera**	**2.94 314**	⇑*i*P			**Pn**	**02 51 57.0**	**-3.2**
CDCH			AML			AML	02 52 42.1	
	comp=N,2μm,0.5s							
CMCH	**Combarbala**	**3.00 227**	⇓*i*P			**Pn**	**02 51 60.0**	**-1.0**
CMCH			*i* S			**Sn**	**02 52 37.0**	**+0.7**
CMCH			AML			AML	02 52 38.7	
	comp=N,14μm,0.5s							
CMCH	**Combarbala**	**3.00 227**	⇓*i*P			**Pn**	**02 51 60.0**	**-1.0**
CMCH			*i* S			**Sn**	**02 52 37.0**	**+0.7**
MDZ	**Mendoza**	**3.75 185**	*e*P			**Pn**	**02 52 11.7**	**+0.8**
MDZ			*i*				02 52 45.9	
MDZ			*e*S			Sn	02 53 20.9	+27
CHNG	**Los Chungos**	**3.79 223**	⇓*i*P			**Pn**	**02 52 10.3**	**-1.2**
CHNG			*i* S			**Sn**	**02 52 54.2**	**-1.1**
JACH	**Jahuel**	**3.98 207**	⇓*i*P			**Pn**	**02 52 14.3**	**+0.3**
ROCH	**El Roble**	**4.40 209**	⇑*i*P			**Pn**	**02 52 19.2**	**-0.6**
PEL	**Peldehue**	**4.42 205**	⇓*i*P			**Pn**	**02 52 19.4**	**-0.6**
FCH	**Farellones**	**4.46 200**	⇑*i*P			**Pn**	**02 52 21.5**	**+1.0**
CLCH	**Cerro Calan**	**4.60 202**	⇑*i*P			**Pn**	**02 52 22.3**	**-0.1**
DSCH	**Colegio Aleman**	**4.61 203**	*e*P			**Pn**	**02 52 22.1**	**-0.5**
SAN	**Santiago**	**4.70 203**	*e*P			**Pn**	**02 52 23.4**	**-0.3**
RCDM	**Rinconada Maip**	**4.78 204**	⇓*i*P			**Pn**	**02 52 24.0**	**-0.8**
RCDM			*i* S			**Sn**	**02 53 19.2**	**+0.1**
ANTU	**Antumapu**	**4.79 202**	⇓*i*P			**Pn**	**02 52 24.5**	**-0.5**
ANTU			*i* S			**Sn**	**02 53 20.2**	**+0.8**
PCH	**Pirque**	**4.80 201**	⇓*i*P			**Pn**	**02 52 25.1**	**0.0**
CPN1	**Cerro Paranal**	**4.82 338**	*e*P			**Pn**	**02 52 22.9**	**-2.4**
TACH	**Talagante**	**4.97 205**	⇓*i*P			**Pn**	**02 52 25.7**	**-1.7**
LCCH	**Las Cruces**	**5.08 211**	*i* P			**Pn**	**02 52 26.6**	**-2.2**
CHCH	**Chadas Angostu**	**5.13 201**	⇓*i*P			**Pn**	**02 52 28.5**	**-1.0**
ANCH	**Antofagasta**	**5.71 342**	⇑*i*P			**Pn**	**02 52 33.5**	**-3.9**
CEN1	**Los Morros**	**5.94 344**	⇑*i*P			**Pn**	**02 52 34.4**	**-6.1**
LVC	**Limon Verde**	**6.51 356**	P			**Pn**	**02 52 45.0**	**-3.3**
	comp=N,52nm,0.3s,baz=184,slow=8.3,SNR=382							
LVC			S			**Sn**	**02 53 53.6**	**-7.5**
	comp=N,44nm,0.3s,baz=77,slow=20,SNR=9.7							
LVC	**Limon Verde**	**6.51 356**	*e*Pn			**Pn**	**02 52 44.9**	**-3.3**
CCHI	**Chillan**	**8.04 201**	*e*P			**Pn**	**02 53 07.3**	**-1.7**
CPUP	**Villa Florida**	**10.25 77**	P			**Pn**	**02 53 34.1**	**-4.7**
	comp=N,11nm,0.3s,baz=236,slow=12,SNR=60							
CPUP	**Villa Florida**	**10.25 77**	*e*Pn			**Pn**	**02 53 34.2**	**-4.6**
TRQA	**Tornquist**	**10.40 150**	*e*Pn			**Pn**	**02 53 39.5**	**-1.4**
PLCA	**Paso Flores**	**11.69 188**	P			**Pn**	**02 53 56.0**	**-2.1**
	comp=N,1.2nm,0.3s,baz=357,slow=11,SNR=43							
PLCA	**Paso Flores**	**11.69 188**	*e*Pn			**Pn**	**02 53 55.6**	**-2.5**
LPAZ	**La Paz**	**12.80 1**	P			**Pn**	**02 54 08.5**	**-4.2**
	comp=N,1.8nm,0.3s,baz=186,slow=8.3,SNR=47							
LPAZ	**La Paz**	**12.80 1**	*e*Pn			**Pn**	**02 54 09.0**	**-3.7**
ARE	**Arequipa**	**12.93 347**	*e*P			**Pn**	**02 54 09.0**	**-5.4**
ARE			*e*				02 56 24.0	
SIV	**San Ignacio**	**14.75 29**	P			**Pn**	**02 54 32.3**	**-5.5**
	comp=N,0.7nm,0.3s,baz=214,slow=10.0,SNR=35							
NNA	**Nana**	**18.77 334**	*e*P			**P**	**02 55 24.6**	**-0.7**
	comp=N,12nm,0.7s							
SAML	**Samuel**	**20.69 15**	*e*Pn			**P**	**02 55 45.0**	**-1.0**
	comp=N,70nm,1.3s							
BDFB	**Brasilia**	**23.14 59**	P			**P**	**02 56 08.8**	**-2.5**
	comp=N,9.2nm,0.3s,mb4.6,baz=238,slow=6.8,SNR=30							
BDFB					LR	LR	03 05 55.3	
	comp=N,186nm,19.3s,baz=252,slow=38							
BAO	**Brasilia Array**	**23.16 59**	P			**P**	**02 56 08.0**	**-3.5**
BAO			*e*		pP		02 56 32.0	
CAM4	**Nova Friburgo**	**24.25 80**	*e*P			**P**	**02 56 20.9**	**-0.5**
CAM4			*i*				02 56 22.0	
CAM4			*i*				02 56 43.8	
CAM4			*i*				02 56 56.0	
CAM4			*i*				02 57 06.4	
PMSA	**Palmer Station**	**35.76 177**	*e*P			**P**	**02 58 02.1**	**-0.9**
	comp=N,32nm,1.3s,mb5.1							
SDV	**Santo Domingo**	**37.86 356**	*e*P			**P**	**02 58 19.2**	**-1.6**
	comp=N,28nm,0.9s,mb5.1							
SJG	**San Juan**	**47.03 3**	*e*P			**P**	**02 59 31.5**	**-3.5**
	comp=N,21nm,1.0s,mb4.8							
CBYP	**Canovanas**	**47.20 3**	*e*P			**P**	**02 59 33.5**	**-2.8**
VNA1	**Neumayer--Stat**	**53.01 159**	*e*P			**P**	**03 00 21.8**	**+1.7**
VNA1			*e*				03 00 23.8	
VNA1			*e*				03 01 10.1	
VNA1			*e*				03 01 29.0	
SNAA	**Sanae**	**54.98 159**	*e*P			**P**	**03 00 34.8**	**+0.3**
SNAA			*e*				03 00 36.4	
SNAA			*e*				03 01 06.5	
SNAA			*e*				03 01 22.1	
SNAA			*e*				03 01 35.6	
SNAA	**Sanae**	**54.98 159**	⇓*i*P			**P**	**03 00 34.1**	**-0.3**
	comp=N,29nm,1.1s,mb5.2							
QSPA	**South Pole Qui**	**61.08 180**	*e*P			**P**	**03 01 18.2**	**+1.2**
	comp=N,20nm,0.7s,mb5.2							
LRAL	**Lakeview Retre**	**64.29 343**	*e*P			**P**	**03 01 37.0**	**-1.3**
HKT	**Hockley**	**64.31 334**	*e*P			**P**	**03 01 38.4**	**0.0**
	comp=N,20nm,1.3s,mb4.8							
CNNC	**Cliffs of the**	**64.65 351**	*e*P			**P**	**03 01 40.0**	**-0.7**
NATX	**Nacogdoches**	**65.49 336**	*e*P			**P**	**03 01 46.7**	**+0.6**
MYNC	**Murphy**	**65.56 346**	*e*P			**P**	**03 01 45.8**	**-0.7**
	comp=N,20nm,1.0s,mb4.9							
CPCT	**Cooper Cave**	**66.01 346**	⇓*i*P			**P**	**03 01 48.0**	**-1.4**
SWET	**Sewanee**	**66.10 344**	⇓*i*P			**P**	**03 01 48.4**	**-1.6**
JCT	**Junction City**	**66.39 331**	⇓*i*P			**P**	**03 01 51.6**	**-0.2**
JCT			*e*			pP	03 02 20.7	+1.1
PLAL	**Pickwick Lake**	**66.41 342**	⇓*i*P			**P**	**03 01 49.8**	**-2.2**
	comp=N,17nm,1.2s,mb4.8							
TZTN	**Tazewell**	**66.86 347**	*e*P			**P**	**03 01 53.6**	**-1.2**
BLA	**Blacksburg**	**66.95 350**	⇓*i*P			**P**	**03 01 54.3**	**-1.1**
	comp=N,2.4nm,1.4s,mb3.8							
ELN	**Prospectdale**	**67.02 349**	*e*P			**P**	**03 01 54.8**	**-1.1**
WVT	**Waverly**	**67.44 343**	⇓*i*P			**P**	**03 01 56.6**	**-1.9**
	comp=N,32nm,0.9s,mb5.2							
MIAR	**Mount Ida**	**67.64 338**	*e*P			**P**	**03 01 59.0**	**-0.8**
	comp=N,23nm,1.1s,mb4.9							
PARMO	**Parma**	**68.45 342**	*e*P			**P**	**03 02 04.0**	**-0.8**
WCI	**Wyandotte Cave**	**69.06 345**	*e*P			**P**	**03 02 05.7**	**-2.9**
MVL	**Millersville**	**69.18 354**	⇓*i*P			**P**	**03 02 08.9**	**-0.4**
SYO	**Syowa Base**	**69.25 159**	⇑*i*P			**P**	**03 02 07.7**	**-2.1**
SYO	**Syowa Base**	**69.25 159**	⇓*e*PcP			PcP	03 02 32.6	-0.2
MCWV	**Mont Chateau**	**69.26 351**	⇓*i*P			**P**	**03 02 09.2**	**-0.7**
	comp=N,24nm,0.9s,mb5.0							
SIUC	**Southern Illin**	**69.29 343**	*e*P			**P**	**03 02 09.0**	**-1.0**
VNDA	**Vanda**	**69.43 190**	P			**P**	**03 02 12.5**	**+1.6**
	comp=N,4.2nm,1.1s,mb4.2,baz=126,slow=5.8,SNR=16							
VNDA					pP	pP	03 02 38.0	-0.8
	comp=N,0.9nm,0.6s,baz=151,slow=5.9,SNR=2.4							
VNDA	**Vanda**	**69.43 190**	*e*P			**P**	**03 02 12.5**	**+1.6**
	comp=N,7.3nm,1.2s,mb4.4							
WMOK	**Wichita Mounta**	**69.69 334**	⇓*i*P			**P**	**03 02 10.8**	**-1.6**
	comp=N,10.0nm,1.1s,mb4.6							
FVM	**French Village**	**69.87 342**	⇓*i*P			**P**	**03 02 11.9**	**-1.7**
	comp=N,56nm,0.9s,mb5.4							
GDL2	**Guadalupe Moun**	**69.89 328**	*e*P			**P**	**03 02 14.0**	**+0.3**
MNTX	**Cornudas Mount**	**69.95 327**	*e*P			**P**	**03 02 12.8**	**-1.3**
	comp=N,14nm,1.0s,mb4.7							
MNTX			*e*			pP	03 02 42.0	0.0
SSPA	**Standing Stone**	**69.97 352**	⇓*i*P			**P**	**03 02 13.4**	**-0.8**
	comp=N,20nm,1.0s,mb4.9							
BLO	**Bloomington**	**70.02 345**	*e*P			**P**	**03 02 12.4**	**-2.1**
	comp=N,20nm,0.8s,mb5.0							
CCM	**Cathedral Cave**	**70.17 341**	⇓*i*P			**P**	**03 02 14.1**	**-1.3**
	comp=N,56nm,1.0s,mb5.3							
ACSO	**Alum Creek Sta**	**70.33 348**	*e*P			**P**	**03 02 14.4**	**-2.0**
	comp=N,31nm,1.0s,mb5.1							
DBIC	**Dimbokro**	**70.70 71**	P			**P**	**03 02 19.1**	**+0.5**
	comp=N,6.3nm,0.4s,mb4.8,baz=201,slow=7.8,SNR=25							
DBIC					pP	pP	03 02 46.5	-0.1
	comp=N,5.7nm,0.7s,baz=227,slow=4.7,SNR=2.8							
DBIC	**Dimbokro**	**70.70 71**	⇓*i*P			**P**	**03 02 18.7**	**+0.1**
	comp=N,22nm,0.9s,mb5.0							
ALLY	**Allegheny Colle**	**71.26 351**	*e*P			**P**	**03 02 21.3**	**-0.7**
BINY	**Binghamton**	**71.32 354**	⇓*e*P			**P**	**03 02 21.8**	**-0.7**
	comp=N,18nm,1.0s,mb4.8							
HRV	**Harvard--Oak R**	**71.35 358**	*e*P			**P**	**03 02 22.2**	**-0.3**
ERPA	**Erie**	**71.70 351**	*e*P			**P**	**03 02 24.4**	**-0.2**
HNH	**Hanover**	**72.57 357**	*e*P			**P**	**03 02 29.5**	**-0.4**
	comp=N,1.6nm,1.3s							
Y22C	**IRIS PASSCAL I**	**72.64 327**	⇓P			**P**	**03 02 32.3**	**+2.0**
	baz=73							
LPM	**Los Pinos Moun**	**72.70 328**	*e*P			**P**	**03 02 31.8**	**+1.2**
KSU1	**Kansas State U**	**72.79 337**	*e*P			**P**	**03 02 30.1**	**-1.0**
NCB	**Newcomb**	**72.95 356**	*e*P			**P**	**03 02 31.1**	**-1.0**
	comp=N,5.3nm,1.0s,mb4.3							
LAZ	**Ladron**	**73.01 327**	*e*P			**P**	**03 02 33.5**	**+1.0**
LBNH	**Lisbon**	**73.09 357**	*e*P			**P**	**03 02 33.2**	**+0.2**
ANMO	**Albuquerque**	**73.14 328**	*e*P			**P**	**03 02 34.0**	**+0.7**
TUC	**Tucson**	**73.14 323**	*e*P			**P**	**03 02 33.5**	**+0.3**
FRNY	**Flat Rock**	**73.77 356**	*e*P			**P**	**03 02 36.4**	**-0.5**
PKME	**Peaks-Kenny Pk**	**74.05 359**	*e*P			**P**	**03 02 37.6**	**-1.0**
115A	**Sonoran Desert**	**74.21 323**	⇑P			**P**	**03 02 40.3**	**+0.9**
	baz=74							
JFWS	**Jewell Farm**	**74.45 344**	*e*P			**P**	**03 02 40.1**	**-0.7**
Z14A	**Wintersburg**	**75.10 323**	⇓P			**P**	**03 02 45.2**	**+0.6**
	baz=75							
Y14A	**Wickenburg**	**75.58 323**	⇑P			**P**	**03 02 47.9**	**+0.6**
	baz=76,SNR=9.7							
X15A	**Humboldt**	**75.60 324**	P			**P**	**03 02 48.6**	**+1.1**
	baz=76,SNR=20							
GLA	**Glamis**	**75.88 321**	*e*P			**P**	**03 02 50.1**	**+1.1**
GLA	**Glamis**	**75.88 321**	⇑P			**P**	**03 02 49.7**	**+0.7**
	baz=76							
X14A	**Yava**	**75.93 323**	⇑P			**P**	**03 02 50.0**	**+0.7**
	baz=76							
WUAZ	**Wupatki**	**75.97 325**	*e*P			**P**	**03 02 51.1**	**+1.5**
	comp=N,36nm,1.2s,mb5.0							
W15A	**Williams**	**76.16 324**	⇑P			**P**	**03 02 51.6**	**+1.0**
	baz=76							
Y12C	**Blythe**	**76.24 322**	⇑P			**P**	**03 02 51.9**	**+0.8**
	baz=76,SNR=5.4							
DVTC	**Desert V Tower**	**76.29 320**	⇓P			**P**	**03 02 52.0**	**+0.7**
	baz=76							
SWSC	**Sam W. Stewart**	**76.33 320**	⇓P			**P**	**03 02 52.3**	**+0.7**
	baz=77							
PDMCI	**Parker Dam,Lak**	**76.46 322**	⇑P			**P**	**03 02 53.1**	**+0.8**
	baz=77							
X13A	**Yucca**	**76.52 323**	P			**P**	**03 02 53.5**	**+0.9**
	baz=77,SNR=22							
W14A	**Seligman**	**76.60 324**	⇑P			**P**	**03 02 54.4**	**+1.2**
	baz=77,SNR=7.9							
MONP	**Monument Peak**	**76.64 320**	⇓P			**P**	**03 02 54.5**	**+1.2**
	baz=77							
PV01	**Paradox Valley**	**76.72 329**	*e*P			**P**	**03 02 54.5**	**+0.7**
ISCO	**Idaho Springs**	**76.81 331**	*e*P			**P**	**03 02 54.9**	**+0.6**
IRM	**Iron Mountain**	**76.89 322**	⇑P			**P**	**03 02 55.5**	**+0.7**
	baz=77,SNR=6.8							
MAW	**Mawson**	**76.93 163**	P			**P**	**03 02 55.7**	**+0.7**
	comp=N,17nm,0.9s,mb4.8,baz=225,slow=6.8,SNR=26							
MAW					pP	pP	03 03 22.8	-0.7
	comp=N,3.9nm,0.7s,baz=216,slow=5.2,SNR=2.5							
MAW	**Mawson**	**76.93 163**	⇓*i*P			**P**	**03 02 55.1**	**+0.1**
	comp=N,39nm,1.2s,mb5.0							
W13A	**Hualapai Mount**	**76.93 323**	⇓P			**P**	**03 02 56.0**	**+1.0**
	baz=77,SNR=6.4							
109C	**Camp Elliot, M**	**77.03 320**	⇑P			**P**	**03 02 56.2**	**+0.7**
	baz=77							
PV10	**Paradox Valley**	**77.13 328**	*e*P			**P**	**03 02 56.3**	**+0.2**
PFO	**Pinyon Flat Ob**	**77.20 321**	⇑P			**P**	**03 02 57.4**	**+0.9**
	baz=77							
BELC	**Belle Mtn.**	**77.24 321**	⇑P			**P**	**03 02 57.3**	**+0.7**
	baz=78							
TSUM	**Tsumeb**	**77.56 105**	*e*P			**P**	**03 02 59.8**	**+1.3**
	comp=N,22nm,1.0s,mb4.8							
MURC	**Murrieta**	**77.61 320**	⇑P			**P**	**03 02 59.7**	**+0.9**
	baz=78							
W12A	**Cal Nev Ari**	**77.61 323**	⇑P			**P**	**03 02 59.2**	**+0.5**
	baz=78							
GMRC	**Granite Mounta**	**77.64 322**	P			**P**	**03 02 60.0**	**+1.1**
	baz=78,SNR=8.6							
V12A	**Nelson**	**77.92 323**	P			**P**	**03 03 00.8**	**+0.3**
	baz=78,SNR=9.9							
PHWY	**Pilot Hill**	**78.00 332**	*e*P			**P**	**03 03 01.8**	**+0.8**
HEC	**Hector,Ludlow**	**78.04 321**	⇓P			**P**	**03 03 02.0**	**+0.8**
	baz=78							
CIS	**Catalina Islan**	**78.15 319**	⇓P			**P**	**03 03 02.4**	**+0.7**
	baz=78							
TUQ	**Turquoise Mtn.**	**78.27 322**	⇑P			**P**	**03 03 03.1**	**+0.6**
	baz=78,SNR=5.4							
U12A	**Valley of Fire**	**78.29 324**	⇑P			**P**	**03 03 03.1**	**+0.5**
	baz=78,SNR=8.4							
BFSC	**Mount Baldy St**	**78.33 320**	⇓P			**P**	**03 03 03.2**	**+0.4**
	baz=79							
SRU	**San Rafael**	**78.41 328**	*e*P			**P**	**03 03 03.9**	**+0.7**
CCUT	**Cedar City**	**78.56 325**	⇓*i*P			**P**	**03 03 05.2**	**+1.2**
CCUT			*e*P			pP	03 03 34.4	+1.8
GSC	**Goldstone**	**78.65 321**	*e*P			**P**	**03 03 05.7**	**+1.2**
GSC	**Goldstone**	**78.65 321**	⇑P			**P**	**03 03 04.9**	**+0.4**
	baz=79							
SHPR	**Sheep Range**	**78.67 323**	*e*P			**P**	**03 03 06.0**	**+1.3**
DECC	**Green Verdugo**	**78.72 320**	⇓P			**P**	**03 03 05.5**	**+0.6**
	baz=79							
MSU	**Marysvale**	**78.72 326**	*e*P			**P**	**03 03 05.8**	**+0.8**
SHOC	**Shoshone**	**78.81 322**	⇑P			**P**	**03 03 05.6**	**+0.2**
	baz=79							
TMUT	**Trail Mountain**	**78.88 328**	*e*P			**P**	**03 03 06.9**	**+1.2**
EDW2	**Edwards Air Fo**	**78.99 320**	⇓P			**P**	**03 03 06.5**	**+0.2**
	baz=79							
BLG	**Laguna Peak**	**79.03 319**	⇑P			**P**	**03 03 07.0**	**+0.3**
	baz=79							
RWWY	**Rawlins**	**79.05 331**	⇓*i*P			**P**	**03 03 07.1**	**+0.4**
	comp=N,58nm,1.0s,mb5.4							
OSI	**Osito Adit**	**79.21 320**	⇑P			**P**	**03 03 07.7**	**+0.1**
	baz=79							
U10A	**Ash Meadows, A**	**79.23 322**	⇓P			**P**	**03 03 08.2**	**+0.5**
	baz=80							
BSC	**Santa Cruz Isl**	**79.28 319**	⇓P			**P**	**03 03 08.6**	**+0.6**
	baz=80							
EYMN	**Ely**	**79.48 344**	*e*P			**P**	**03 03 08.0**	**-1.1**
FURC	**Furnace Creek,**	**79.55 322**	⇓P			**P**	**03 03 09.7**	**+0.3**
	baz=80							
BOSA	**Boshof**	**79.57 117**	P			**P**	**03 03 10.3**	**+0.8**
	comp=N,22nm,0.4s,mb5.4,baz=253,slow=4.0,SNR=97							
BOSA	**Boshof**	**79.57 117**	*e*P			**P**	**03 03 10.0**	**+0.5**
	comp=N,24nm,0.4s,mb5.4							
MPMC	**Manual Prospec**	**79.58 322**	⇓P			**P**	**03 03 10.0**	**+0.4**
	baz=80,SNR=7.8							
TOA0	**Torodi Ar. Sit**	**79.64 69**	⇓*i*P			**P**	**03 03 09.8**	**-0.1**
TOA0			*e*pP			pP	03 03 37.1	-1.4

baz=82,SNR=6.9
O10A **Cortez Mining,** 82.22 325 ⇓P P 03 03 23.6 0.0
baz=82
MOOW **Moose Ponds** 82.23 331 *e*P P 03 03 23.5 -0.2
comp=N,5.0nm,0.9s,mb4.3
N11A **Elko Archery C** 82.24 326 ⇓P P 03 03 23.9 +0.2
baz=82
M12A **Wells** 82.30 327 ⇓P P 03 03 23.8 -0.2
baz=83,SNR=8.2
PACP **Pacheco Peak** 82.37 320 ⇑P P 03 03 24.8 +0.4
baz=83
WAKR **Walker** 82.43 322 *e*P P 03 03 26.1 +1.4
R06C **Coleville** 82.45 322 ⇓P P 03 03 25.8 +1.0
baz=83,SNR=7.4
FLWY **Flagg Ranch** 82.48 331 ⇓*i*P P 03 03 25.2 +0.2
comp=N,96nm,1.6s,mb5.4
O09A **Fish Creek Ran** 82.48 324 ⇓P P 03 03 26.3 +1.3
baz=83
N10A **Dunphy** 82.55 325 ⇑P P 03 03 25.1 -0.2
baz=83
P08A **Dixie Valley** 82.58 324 ⇑P P 03 03 25.7 +0.2
baz=83
CMB **Columbia Colle** 82.61 321 *e*P P 03 03 25.9 +0.3
CMB **Columbia Colle** 82.61 321 ⇑P P 03 03 26.0 +0.4
baz=83
ULM **Lac du Bonnet** 82.70 343 P P 03 03 25.0 -1.1
comp=N,17nm,0.9s,mb4.9,baz=151,slow=4.7,SNR=31
ULM **Lac du Bonnet** 82.70 343 P P 03 03 25.0 -1.1
M11A **Holland Ranch,** 82.74 326 ⇑P P 03 03 26.7 +0.5
baz=83,SNR=18
S04C **Ingram Canyon,** 82.75 320 ⇑P P 03 03 28.0 +1.6
baz=83
YFT **Old Faithful** 82.84 331 *e*P P 03 03 29.1 +2.3
R05C **Kirkwood Meado** 82.92 322 ⇑P P 03 03 27.8 +0.6
baz=83
YMR **Madison River** 83.06 331 *e*P P 03 03 28.4 +0.4
comp=N,54nm,1.1s,mb5.3
R04C **Big Horse Ranc** 83.07 321 ⇓P P 03 03 28.3 +0.3
baz=83
M10A **I.L. Ranch, Tu** 83.17 326 ⇓P P 03 03 28.7 +0.2
baz=83
PAHR **Pah Rah Range** 83.28 323 ⇓*i*P P 03 03 29.5 +0.4
comp=N,36nm,1.5s,mb5.0
LAVA **Lava Cap Winer** 83.31 321 ⇑P P 03 03 29.3 +0.1
baz=84
O07A **Toulon** 83.34 324 ⇓P P 03 03 29.6 +0.2
baz=84,SNR=6.3
BDM **Black Diamond** 83.37 320 ⇓P P 03 03 30.5 +0.9
baz=84
QLMT **Earthquake Lak** 83.39 331 *e*P P 03 03 30.8 +1.2
GCMT **Greycliff** 83.43 332 *e*P P 03 03 29.6 -0.3
GCMT *e*pP pP 03 03 59.1 +0.4
P06A **Stead Airport,** 83.53 323 ⇑P P 03 03 30.9 +0.5
baz=84
M09A **Marrel Ranch,** 83.55 325 ⇓P P 03 03 31.4 +0.9
baz=84
P05C **Yuba Gap, Truc** 83.64 322 ⇑P P 03 03 31.4 +0.5
baz=84,SNR=5.6
SCHQ **Schefferville** 83.64 1 P P 03 03 29.2 -1.7
comp=N,10nm,1.0s,mb4.6,baz=162,slow=5.9,SNR=8.8
SCHQ **Schefferville** 83.64 1 *e*P P 03 03 29.1 -1.9
comp=N,23nm,1.2s,mb4.9
HLID **Hailey** 83.72 328 ⇓*i*P P 03 03 31.6 +0.3
comp=N,13nm,1.1s,mb4.7
Q04C **Lincoln** 83.72 321 ⇓P P 03 03 31.8 +0.4
baz=84
O06A **Flanigan** 83.84 323 ⇓P P 03 03 32.4 +0.4
baz=84
N07B **Gerlach** 83.84 324 ⇓P P 03 03 31.7 -0.2
baz=84
BEKR **Beckwourth** 83.91 322 P P 03 03 32.6 +0.4
baz=84,SNR=9.5
CVS **Carmenet Viney** 83.97 320 ⇑P P 03 03 32.6 0.0
baz=84
MCMT **McKenzie Canyo** 84.00 330 *e*P P 03 03 33.0 +0.2
MCMT *e*pP pP 03 04 02.0 +0.3
L09A **Wilkinson Ranc** 84.10 325 ⇓P P 03 03 33.3 0.0
baz=84
BOZ **Bozeman (W)** 84.13 331 ⇓*i*P P 03 03 32.5 -0.9
comp=N,36nm,2.0s,mb4.8
OHCM **Honcut** 84.14 321 *e*P P 03 03 34.0 +0.5
SUTB **Sutter Butte** 84.22 321 ⇑P P 03 03 33.7 -0.1
baz=84
N06A **Buffalo Meadow** 84.27 323 ⇑P P 03 03 34.1 -0.1
baz=84,SNR=9.3
O05C **Quincy** 84.28 322 ⇓P P 03 03 34.3 +0.1
baz=84,SNR=5.7
ORV **Oroville** 84.30 322 ⇓P P 03 03 34.4 +0.1
baz=84,SNR=7.3
DLMT **Dillon** 84.32 330 *e*P P 03 03 33.8 -0.6
comp=N,34nm,1.4s,mb5.0
MNRC **McLaughlin Nat** 84.34 321 ⇑P P 03 03 34.6 +0.1
baz=85
L08A **Fields** 84.57 325 ⇓P P 03 03 35.3 -0.4
baz=85
O04C **Chester** 84.62 322 ⇓P P 03 03 35.6 -0.3
baz=85
K09A **Rome** 84.64 326 ⇓P P 03 03 35.7 -0.3
baz=85,SNR=6.9
CASY **Casey** 84.88 180 *e*P P 03 03 37.5 +0.3
comp=N,14nm,1.0s,mb4.8
WVOR **Wild Horse Val** 84.89 325 *e*P P 03 03 36.6 -0.6
comp=N,9.1nm,1.4s,mb4.5
M06C **Likely Place G** 84.94 323 ⇑P P 03 03 37.6 +0.1
baz=85
L07A **Adell** 84.94 325 ⇑P P 03 03 37.7 +0.2
baz=85
GASB **Alder Springs** 85.03 321 ⇓P P 03 03 38.7 +0.7
baz=85,SNR=6.3
K08A **Mann Creek Ran** 85.04 325 ⇑P P 03 03 37.8 -0.2
baz=85,SNR=6.8
HRY **Holter Researc** 85.06 332 *e*P P 03 03 37.5 -0.6
HATC **Hat Creek Radi** 85.18 323 ⇑P P 03 03 38.5 -0.2
baz=85
P01C **Double 8 Ranch** 85.25 321 ⇑P P 03 03 39.1 +0.1
baz=86
EGMT **Eagleton** 85.29 334 *e*P P 03 03 38.2 -1.1
comp=N,44nm,1.9s,mb5.1
M05C **Lookout** 85.40 323 ⇓P P 03 03 39.5 -0.3
baz=86
O02C **Red Bluff** 85.44 321 ⇑P P 03 03 39.5 -0.5
baz=86
WDC **Whiskeytown Da** 85.59 322 *e*P P 03 03 40.2 -0.5
WDC **Whiskeytown Da** 85.59 322 ⇑P P 03 03 39.7 -1.0
baz=86
I09A **Lost Marbles R** 85.59 327 ⇑P P 03 03 40.8 0.0
baz=86,SNR=9.6
L05A **Lakeview** 85.73 324 ⇓P P 03 03 41.9 +0.5
baz=86,SNR=5.8
CHMT **Chamberlain Mo** 85.82 331 *e*P P 03 03 41.3 -0.5
M03C **McCloud** 85.85 322 ⇓P P 03 03 41.5 -0.5
baz=86
I08A **Drewsey** 85.95 326 ⇑P P 03 03 42.5 0.0
baz=86,SNR=5.1
K06A **Valley Falls** 85.97 325 ⇓P P 03 03 42.9 +0.3
baz=86,SNR=7.5
BMO **Blue Mountains** 86.05 328 *e*P P 03 03 42.1 -0.9
comp=N,20nm,1.7s,mb4.8
MSO **Missoula** 86.05 331 *e*P P 03 03 42.7 -0.3
comp=N,23nm,1.7s,mb4.8
M04C **Macdoel** 86.06 323 ⇑P P 03 03 43.0 -0.1
baz=86,SNR=5.4
N02C **Big Bar** 86.17 322 ⇑P P 03 03 43.4 -0.2
baz=86
J06A **Christmas Vall** 86.25 325 P P 03 03 44.4 +0.4
baz=86,SNR=9.9
M02C **Callahan** 86.33 322 ⇓P P 03 03 44.2 -0.2
baz=87
L04A **Klamath Falls** 86.37 323 ⇑P P 03 03 44.6 0.0
baz=87
H08A **Prairie City** 86.45 327 ⇓P P 03 03 44.6 -0.3
baz=87
YBH **Yreka Blue Hor** 86.49 323 ⇓P P 03 03 45.1 0.0
baz=87
I07A **Izee** 86.53 326 ⇑P P 03 03 45.5 +0.2
baz=87,SNR=7.8
I06A **Prineville** 86.78 325 P P 03 03 47.1 +0.6
baz=87,SNR=9.8
J05A **Fort Rock** 86.82 324 ⇓P P 03 03 46.9 +0.2
baz=87,SNR=7.2
BSMT **Bassoo Peak** 87.20 331 *e*P P 03 03 48.9 +0.2
L02A **Cave Junction** 87.26 322 ⇑P P 03 03 49.0 +0.2
baz=88
I05A **Bend** 87.47 325 ⇑P P 03 03 50.4 +0.5
baz=88
WALA **Waterton Lakes** 87.78 332 ⇓*i*P P 03 03 50.5 -0.8
comp=N,87nm,1.7s,mb5.5
J02A **Umpqua** 88.09 323 ⇓P P 03 03 53.4 +0.6
baz=88
G05A **Wamic** 88.26 326 ⇓P P 03 03 53.8 +0.1
baz=88
H04A **Detroit Lake** 88.30 325 ⇑P P 03 03 53.0 -0.8
baz=89,SNR=5.3
LSZ **Lusaka** 88.33 106 ⇓*i*P P 03 03 55.7 +1.7
comp=N,37nm,1.5s,mb5.2
LSZ *e*pP pP 03 04 23.6 +0.6
I03A **Eugene** 88.36 324 ⇑P P 03 03 53.3 -0.8
baz=89
NEW **Newport** 88.53 330 *e*P P 03 03 52.9 -2.1
comp=N,3.1nm,1.0s,mb4.3
I02A **Mapleton** 88.66 324 ⇓P P 03 03 55.5 -0.1
baz=89
F05A **White Salmon** 88.79 326 ⇑P P 03 03 55.9 -0.3
baz=89
G04A **Mulino** 88.82 325 ⇓P P 03 03 55.8 -0.5
baz=89
G03A **Yamhill** 89.30 325 ⇑P P 03 03 58.2 -0.3
baz=90
F04A **Amboy** 89.30 326 ⇑P P 03 03 57.8 -0.7
baz=90
D05A **Enumclaw** 89.98 327 ⇑P P 03 04 00.8 -0.9
baz=90
C05A **Tolt Reservoir** 90.20 327 ⇑P P 03 04 01.7 -1.0
baz=90
E03A **Lebam** 90.30 326 ⇓P P 03 04 02.7 -0.5
baz=90
B05A **Bryant** 90.80 327 ⇑P P 03 04 04.1 -1.4
baz=91
EDM **Edmonton** 90.83 335 *e*P P 03 04 03.1 -2.5
ESDC **Sonseca Array** 90.99 44 P P 03 04 06.0 -0.4
comp=N,0.3nm,0.3s,mb3.9,baz=243,slow=4.2,SNR=6.4
ESDC pP pP 03 04 35.1 -0.4
comp=N,0.7nm,0.6s,baz=234,slow=4.5,SNR=3.4
A05A **Maple Falls** 91.31 328 ⇑P P 03 04 06.6 -1.3
YKA **Yellowknife Ar** 98.49 340 P P 03 04 39.2 -1.4
comp=N,2.6nm,0.8s,mb4.8,baz=137,slow=4.2,SNR=7.5
YKA **Yellowknife Ar** 98.49 340 P P 03 04 39.2 -1.4
GERES **GERESS Array B** 106.55 43 PKiKP PKiKP 03 09 26.8 +0.1
comp=N,0.8nm,0.9s,baz=285,slow=4.5,SNR=4.6
KWP **Kalwaria** 112.31 45 *e*PKP PKiKP 03 09 36.8 -0.7
AKASG **Malin Array Be** 116.63 45 PKP PKPdf 03 09 44.9 -0.9
comp=N,0.5nm,0.4s,baz=268,slow=2.3,SNR=7.3
BR131 **Keskin Array S** 116.73 58 *e*PKPdf PKPdf 03 09 45.9 -0.1
BRTR **Keskin Array B** 116.73 58 PKP PKPdf 03 09 45.9 -0.1
comp=N,2.0nm,0.8s,baz=189,slow=4.1,SNR=13
FINES **FINESS Array B** 117.26 33 PKP PKPdf 03 09 46.2 -0.8
comp=N,0.2nm,0.4s,baz=311,slow=3.0,SNR=8.3
FINES PKKPbc PKKPbc 03 20 10.7 -0.1
comp=N,0.5nm,0.6s,baz=94,slow=5.7,SNR=3.5
FINES **FINESS Array B** 117.26 33 PKP PKPdf 03 09 46.2 -0.8
FINES PKKPbc PKKPbc 03 20 10.7 -0.1
KAF **Kangasniemi** 117.50 32 *e*p PKPdf 03 09 45.4 -2.1
comp=N,1.4nm,0.4s
ARCES **ARCESS Array B** 118.34 23 PKP PKPdf 03 09 48.0 -1.1
comp=N,1.7nm,0.9s,baz=257,slow=3.0,SNR=6.1
ARCES PKKPbc PKKPbc 03 20 07.3 +0.3
comp=N,3.2nm,1.0s,baz=87,slow=3.9,SNR=17
JOF **Joensuu** 119.91 31 *e*p PKPdf 03 09 50.3 -1.8
comp=N,1.4nm,0.4s
MALT **Malatya** 119.93 60 *e*PKPdf PKPdf 03 09 52.4 +0.3
ASAR **Alice Springs** 123.26 205 PKP PKPdf 03 09 58.5 0.0
comp=N,2.1nm,0.3s,baz=136,slow=1.7,SNR=44
ASAR pPKP pPKPdf 03 10 27.8 -1.2
comp=N,1.5nm,0.5s,baz=135,slow=1.9,SNR=6.3
ASAR PKKPbc PKKPbc 03 19 49.1 +0.5
comp=N,0.9nm,0.7s,baz=335,slow=3.3,SNR=5.7
AS31 **Alice Springs** 123.26 205 *e*P PKPdf 03 09 57.8 -0.7
KIV **Kislovodsk** 124.26 55 *e*PKPdf PKPdf 03 10 00.5 0.0
WB2 **Warramunga Arr** 126.47 207 *e*P PKPdf 03 10 04.9 +0.2
WRA **Warramunga Arr** 126.47 207 PKP PKPdf 03 10 05.2 +0.5
comp=N,3.7nm,0.3s,baz=155,slow=1.9,SNR=110
WRA pPKP pPKPdf 03 10 34.4 -0.8
comp=N,3.1nm,0.6s,baz=164,slow=1.6,SNR=7.4
WRAB **Tennant Creek** 126.48 207 *e*PKPdf PKPdf 03 10 05.1 +0.4
MBWA **Marble Bar** 129.38 190 *e*PKPdf PKPdf 03 10 10.9 +0.7
FITZ **Fitzroy Crossi** 131.10 198 PKP PKPdf 03 10 14.1 +0.6
comp=N,2.1nm,0.8s,baz=155,slow=10,SNR=7.6
ARU **Arti** 134.06 38 *e*PKPdf PKPdf 03 10 18.5 -0.6
ARU pmax pmax
comp=Z,84nm,0.9s
ARU **Arti** 134.06 38 ⇓*i*P PKPdf 03 10 18.7 -0.4
YAK **Yakutsk** 145.00 345 *e*PKPbc PKPdf 03 10 37.0 -1.9
HYB **Hyderabad** 147.63 104 *i* PKP PKPdf 03 10 47.0 +3.6
HYB **Hyderabad** 147.63 104 *e*P PKPdf 03 10 47.0 +3.6
ZAL **Zalesovo** 148.50 31 PKPbc PKPbc 03 10 48.4 -0.1
comp=Z,41nm,0.3s,baz=170,slow=3.0,SNR=20
MKAR **Makanchi Array** 151.21 44 PKPbc PKPbc 03 10 55.1 0.0
comp=Z,36nm,0.9s,baz=8.3,slow=2.0,SNR=10.0
WMQ **Urumqi** 155.98 46 *e*PKP PKPdf 03 10 54.0 -1.9
MDJ **Mudanjiang** 158.93 322 PKP PKPdf 03 10 59.4 -0.1
SONM **Songino Array** 160.91 11 PKPab PKPab 03 11 45.6 +0.7
comp=Z,4.3nm,0.8s,baz=350,slow=4.4,SNR=3.4
CN2 **Changchun** 161.62 327 *e*PKP PKPdf 03 11 00.8 -1.7
HHC **Hu-ho-hao-te** 168.32 360 *e*PKP PKPdf 03 11 07.3 -0.9
HHC APKP 03 11 34.3
HHC PKS 03 14 38.4
HHC PP PP 03 16 07.5 +0.9
HHC SKS SKSdf 03 17 59.3 -2.3
HHC PP PP
comp=Z,1μm,8.8s
KMI **Kunming** 171.19 115 PKP PKPdf 03 11 09.0 -0.9
CD2 **Chengdu** 173.02 73 *e*PKP PKPdf 03 11 07.3 -3.4
NJ2 **Nanjing** 173.06 297 *e*PKP PKPdf 03 11 10.5 -0.3
NJ2 PKS 03 14 42.0
NJ2 PP PP 03 16 32.0 +1.8
NJ2 SKS SKSdf 03 18 02.0 -1.6
NJ2 LR LR
comp=N,23μm,13.4s
NJ2 LR LR
comp=E,18μm,14.6s
NJ2 LR LR
comp=Z,19μm,16.8s
GYA **Guiyang** 174.92 121 PKP PKPdf 03 11 09.4 -2.0
GYA PP PP
comp=Z,120nm,8.7s

*NEIC **20** 02:54:15.9, 44.50N×6.20E, h5km, ML2.1(STR), ML2.5(LDG), After STR.*
*STR **20** 02:54:15.9±0.8, 44.50N×6.20E, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*ISCJB **20** 02:54:16.5±0.4, 44.47N±0.003×6.29E±0.003, h18km±15km, Error ellipse: s-maj=4.6km s-min=4.0km az=160.6*
*CSEM **20** 02:54:16.4±0.2, 44.45N×6.28E, h4km, Md2.5/3, Ml2.5/5*
ISC 20 02:54:15.8±0.5,**4445N**±002×**626E**±003,**h18**km±6km,**n32,**
σ0**97**/57,**France**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SURF	**Saint Ours**	**0.40**	**85**			**Pg**	**Pg**	**02 54 24.2**	**+0.2**
SURF						Sg	**Sg**	**02 54 30.0**	**+0.5**
MBDF	**Montbardon**	**0.46**	**53**			*e*Pg	**Pg**	**02 54 25.5**	**+0.4**
MBDF						*e*Sg	**Sg**	**02 54 30.1**	**-1.2**
5.1nm,0.2s									
MBDF	**Montbardon**	**0.46**	**53**			*e*Pg	**Pg**	**02 54 25.5**	**+0.4**
MBDF						*e*Sg	**Sg**	**02 54 30.1**	**-1.2**
2.5nm,0.2s									
ORIF	**Oris-en-Rattie**	**0.54**	**330**			*e*Pg	**Pg**	**02 54 27.0**	**+0.4**
ORIF						*e*Sg	**Sg**	**02 54 31.6**	**-2.3**
9.0nm,0.2s									
ORIF	**Oris-en-Rattie**	**0.54**	**330**			*e*Pg	**Pg**	**02 54 27.0**	**+0.4**
ORIF						*e*Sg	**Sg**	**02 54 31.6**	**-2.3**
4.5nm,0.2s									
SMRF	**Simiane la Rot**	**0.68**	**226**			*e*Pg	**Pg**	**02 54 29.2**	**0.0**
SMRF						*e*Sg	**Sg**	**02 54 36.9**	**-1.5**
6.7nm,0.2s									
SMRF	**Simiane la Rot**	**0.68**	**226**			*e*Pg	**Pg**	**02 54 29.2**	**0.0**
SMRF						*e*Sg	**Sg**	**02 54 36.9**	**-1.5**
3.3nm,0.2s									
VILF	**Villemus**	**0.71**	**213**			Pg	**Pg**	**02 54 30.9**	**+1.1**
TOUF	**Mont Tournerai**	**0.83**	**121**			Pg	**Pg**	**02 54 31.4**	**-0.6**
TAVF	**Tavernes**	**0.85**	**190**			Pg	**Pg**	**02 54 31.7**	**-0.6**
TAVF						Sg	**Sg**	**02 54 43.0**	**-0.4**
MVIF	**Mont Vial**	**0.85**	**130**			Pg	**Pg**	**02 54 32.5**	**+0.2**
MVIF						Sg	**Sg**	**02 54 47.5**	**+4.0**
FRF	**La Foret Royal**	**0.93**	**162**			*e*Pg	**Pg**	**02 54 33.1**	**-0.8**
FRF						*e*Sg	**Sg**	**02 54 45.4**	**-0.8**
13nm,0.2s									
FRF	**La Foret Royal**	**0.93**	**162**			*e*Pg	**Pg**	**02 54 33.1**	**-0.8**
FRF						*e*Sg	**Sg**	**02 54 45.4**	**-0.8**
6.3nm,0.2s									
AUTN	**L'Aution**	**0.95**	**118**			Pg	**Pg**	**02 54 34.5**	**+0.2**
AUTN						Sg	**Sg**	**02 54 50.6**	**+3.7**
LUCF	**Luceram**	**0.96**	**125**			Pg	**Pg**	**02 54 34.0**	**-0.4**
LUCF						Sg	**Sg**	**02 54 51.3**	**+4.2**
PUYF	**Puyloubier**	**1.00**	**204**			Pg	**Pg**	**02 54 35.2**	**0.0**
PUYF						Sg	**Sg**	**02 54 48.2**	**-0.2**
PRAF	**Pradon**	**1.02**	**231**			Pg	**Pg**	**02 54 36.5**	**+1.0**
SBF	**Sospel**	**1.03**	**124**			*e*Pg	**Pg**	**02 54 35.3**	**-0.4**
SBF						*e*Sg	**Sg**	**02 54 49.5**	**+0.2**
10nm,0.2s									
SBF	**Sospel**	**1.03**	**124**			*e*Pg	**Pg**	**02 54 35.3**	**-0.4**
SBF						*e*Sg	**Sg**	**02 54 49.5**	**+0.2**
5.2nm,0.2s									
SAOF	**Saorge**	**1.04**	**116**			Pg	**Pg**	**02 54 36.4**	**+0.5**
SAOF						Sg	**Sg**	**02 54 52.3**	**+2.7**
TREF	**Trevaresse**	**1.04**	**218**			Pg	**Pg**	**02 54 37.1**	**+1.2**
TREF						Sg	**Sg**	**02 54 52.5**	**+2.9**
REVF	**Revere**	**1.07**	**131**			Pg	**Pg**	**02 54 37.2**	**+0.7**
LMR	**La Mourre**	**1.13**	**171**			*e*Pg	**Pg**	**02 54 36.8**	**-0.9**
LMR						*e*Sg	**Sg**	**02 54 51.7**	**-0.8**
9.9nm,0.2s									
LMR	**La Mourre**	**1.13**	**171**			*e*Pg	**Pg**	**02 54 36.8**	**-0.9**
LMR						*e*Sg	**Sg**	**02 54 51.7**	**-0.8**
4.9nm,0.2s									
VIVF	**Saint-Julien-l**	**1.20**	**290**			*e*Pg	**Pg**	**02 54 39.4**	**+0.4**
VIVF						*e*Sg	**Sg**	**02 54 55.4**	**+0.6**
6.2nm,0.4s									
VIVF	**Saint-Julien-l**	**1.20**	**290**			*e*Pg	**Pg**	**02 54 39.4**	**+0.4**
VIVF						*e*Sg	**Sg**	**02 54 55.4**	**+0.6**
3.1nm,0.4s									
GELF	**Grande-Etoile**	**1.23**	**210**			Pg	**Pg**	**02 54 39.3**	**-0.1**
LASF	**Ste Croix**	**1.77**	**259**			*e*Pg	**Pg**	**02 54 48.9**	**-0.8**
LASF	**Ste Croix**	**1.77**	**259**			*e*Pn	**Pn**	**02 54 46.8**	**+1.4**
LASF						*e*Pg	**Pg**	**02 54 48.9**	**-0.8**
LASF	**Ste Croix**	**1.77**	**259**			*e*Pg	**Pg**	**02 54 48.9**	**-0.8**
PGF	**Pioggiola**	**2.75**	**133**			*e*Pn	**Pn**	**02 54 59.4**	**+0.4**
PGF						*e*Sn	**Sn**	**02 55 30.2**	**-1.6**
2.9nm,0.4s									
PGF	**Pioggiola**	**2.75**	**133**			*e*Pn	**Pn**	**02 54 59.4**	**+0.4**
PGF						*e*Sn	**Sn**	**02 55 30.2**	**-1.6**
1.5nm,0.4s									

*ISCJB **20** 02:55:08.6±0.7, 5990N±007×2137E±007, h0km, Error ellipse: s-maj=10.3km s-min=4.0km az=135.8*
*CSEM **20** 02:55:08.7±0.1, 5997N×2141E, h1km, ML2.5, Error ellipse: s-maj=4.9km s-min=2.3km az=157.0, Mining explosion.*
*HEL **20** 02:55:09.6±0.2, 5987N×2130E, h0km, ML1.3, ML2.5(UPP), Explosion*
*UPP **20** 02:55:11.9, 5996N×2091E, h0km, ML2.5, Mining explosion.*
ISC 20 02:55:08.9±0.7,**5988N**±006×**2137E**±008,**h0**km,**n16,**
σ1⁸**15**/23,**Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAF	**Rauma**	**1.17**	**9**			*e*P	**Pg**	**02 55 30.4**	**-0.9**
RAF						*e*S	**Sg**	**02 55 46.7**	**+0.2**
RAF	**Rauma**	**1.17**	**9**			P	**Pg**	**02 55 30.4**	**-0.9**
RAF						S	**Sg**	**02 55 46.6**	**+0.1**
NRTU	**Norrtaelje**	**1.40**	**263**			*e*P	**Pn**	**02 55 33.8**	**-1.9**
NRTU						*e*S	**Sg**	**02 55 56.0**	**+2.0**
GRAU	**Graesoe**	**1.49**	**289**			*e*P	**Pn**	**02 55 34.9**	**-2.1**
MEF	**Metsahovi**	**1.56**	**76**			*e*P	**Pn**	**02 55 37.4**	**-0.4**
MEF						*e*S	**Sn**	**02 55 57.4**	**-1.3**
FORU	**Forsmark**	**1.68**	**289**			*e*P	**Pn**	**02 55 38.1**	**-1.4**
FLYU	**Flymyra**	**1.77**	**280**			*e*P	**Pn**	**02 55 39.6**	**-1.2**
NYNU	**Nynaeshamn**	**1.93**	**245**			*e*P	**Pn**	**02 55 43.5**	**+0.5**
BACU	**Backbrunna**	**2.15**	**271**			*e*P	**Pn**	**02 55 46.6**	**+0.5**
OSTU	**Oestervaala**	**2.16**	**281**			*e*P	**Pn**	**02 55 46.4**	**+0.2**
OSTU	**Oestervaala**	**2.16**	**281**			P	**Pn**	**02 55 46.3**	**+0.2**
IGGU	**Iggoen**	**2.25**	**298**			*e*P	**Pn**	**02 55 48.2**	**+0.8**
ESKU	**Eskilstuna**	**2.62**	**258**			*e*P	**Pn**	**02 55 53.4**	**+1.0**
FIA0	**FINESS Array S**	**2.80**	**54**			*e*P	**Pn**	**02 55 56.7**	**+1.8**
FIA0						*e*S	**Sn**	**02 56 30.4**	**+1.0**
FIA0					MSG			02 56 39.1	
comp=Z,0.7nm,0.1s									
FIA0	**FINESS Array S**	**2.80**	**54**		P		**Pn**	**02 55 56.7**	**+1.7**
FIA0					S		**Sn**	**02 56 30.3**	**+0.9**
comp=Z,0.7nm,0.1s									
KAF	**Kangasniemi**	**3.29**	**45**			*e*P	**Pn**	**02 56 02.6**	**+1.0**
KAF						*e*S	**Sn**	**02 56 41.8**	**+0.3**
KAF					MSG			02 56 49.7	
comp=Z,0.6nm,0.1s									

*IDC **20** 03:00:58.2±0.3, 4990N×15640E, h0km, mb5.5/29, mb1 5.6/30, mb1mx5.6/31, mbtmp5.5/30, ML4.9/1, MS5.6/28, Ms1 5.6/28, ms1mx5.3/49, Error ellipse: s-maj=13.4km s-min=9.9km az=113.0*
*KRSC **20** 03:01:00, 4967N×15727E, h5km, ML5.8*
*BJI **20** 03:01:00.3, 4998N×15660E, h33km, mB5.8, mb5.4, Ms6.0, Msz5.8*
*MOS **20** 03:01:02.1±0.9, 4979N×15640E, h39km, mb5.8/145, MS5.8/69, Error ellipse: s-maj=5.8km s-min=3.1km az=92.5*
MOS Felt (IV-V) at Severo-Kuril'sk; (II) at Petropavlovsk-Kamchatskiy.
*HRVD **20** 03:01:02.4±0.1, 4958N×15687E, h36km, MW6.0/97, Centroid moment Tensor Solution. LP body waves: s97,c223;Mantle waves: s92,c304; Half duration: 2s4 Moment tensor: Scale 10¹⁸Nm; Mrr0.96±.01; Mθθ-0.46±.01; Mφφ-0.50±.01; Mrθ0.53±.01; Mrφ-0.58±.01; Mθφ0.27±.01; Best double couple: M0 1.17700×10¹⁸ NP1:φ213.00000°, δ31.00000°, λ71.00000°. NP2: φ54.00000°, δ60.00000°, λ101.00000°. Principal axes: T 1.1410, Plg72.0000°, Azm350.0000°; N 0.0720, Plg10.0000°, Azm229.0000°; P -1.2130, Plg15.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **20** 03:01:02.4±0.1, 4982N×15642E, h26km, mb5.8/246, ME5.5, MS5.7/89, MW5.9 Error ellipse: s-maj=3.1km s-min=2.0km az=175.0, Moment Tensor Solution. s84 Moment tensor: Scale 10¹⁷Nm; Mrr6.50; Mθθ-1.41; Mφφ-5.08; Mrθ4.87; Mrφ-4.39; Mθφ1.37; Best double couple: M0 8.90000×10¹⁷ NP1:φs56.00000°, δ63.00000°, λ115.00000°. NP2:φs191.00000°, δ36.00000°, λ51.00000°. Principal axes: T 8.8500, Plg63.0000°, Azm7.0000°; N 0.1700, Plg22.0000°, Azm224.0000°; P -9.0200, Plg15.0000°, Azm128.0000°; Broadband fault plane solution: P waves. NP1:φs35.00000°, δ60.00000°, λ90.00000°. NP2:φs215.00000°, δ30.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm305.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm125.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [V] at Severo-Kuril'sk and [II] at Petropavlovsk-Kamchatskiy.
*ISCJB **20** 03:01:03.5±0.1, 4978N±002×15645E±002, h48km, mb5.7/392, MS5.8/158 Error ellipse: s-maj=2.5km s-min=1.4km az=149.7*
*CRAAG **20** 03:01:04.8, 4987N×15650E, Mb5.8*
*BGS **20** 03:01:06.1±1.3, 5042N×156.10E, h25km, mb6.0*
*SZGRF **20** 03:01:13.6, 5107N×15492E, h33km, mb5.8, MS6.1, Northwest of Kuril Islands, Russia*
ISC 20 03:01:05.5±0.1,**4986N**±002×**15636E**±002,**h50**km,
h50km±1.3km:**pP-P,n1698,**σ0**89**/1810,**mb5.7**/392,
MS5.8/158,**711C-153D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.84**	**349**	κ	*i*PN		**Pn**	**03 01 18.5**	**-2.5**
SKR					*i* S		**Sn**	**03 01 30.0**	**-2.3**
SKR					pmax	pmax			
comp=Z,144nm,2.0s									
SKR					pmax	pmax			
comp=N,98μm,2.0s									
SKR					pmax	pmax			
comp=E,90μm,2.0s									
SKR					smax				
comp=N,409μm,2.0s									
SKR					smax				
comp=E,679μm,2.0s									

ALID Alaid 1.13 333 P **Pn** 03 01 29.2 +4.2
MIPR Malaya Ipel'ka 2.43 6 *e*P **Pn** 03 01 44.3 +1.6
MIPR *i* S **Sn** 03 02 16.2 +5.0
GRL Gorelyy 2.90 21 *e*P **Pn** 03 01 50.3 +1.2
GRL *i* S **Sn** 03 02 26.5 +3.8
RUS Russkaya 2.91 27 PN **Pn** 03 01 48.6 -0.6
RUS S **Sn** 03 02 23.5 +0.6
RUS Russkaya 2.91 27 *e*P **Pn** 03 01 48.6 -0.6
RUS *i* S **Sn** 03 02 23.5 +0.6
PET Petropavlovsk 3.48 23⇓ *i*PN **Pn** 03 01 57.2 +0.2
PET *e*S **Sn** 03 02 39.9 +3.0
PET pmax pmax
comp=N,6μm,1.9s
PET pmax pmax
comp=E,2μm,1.9s
PET pmax pmax
comp=Z,6μm,1.9s
PET pmax pmax
comp=Z,3μm,1.0s
PET pmax pmax
comp=N,3μm,1.1s
PET pmax pmax
comp=E,1μm,1.2s
PET smax
comp=E,27μm,3.5s
PET smax
comp=N,22μm,1.9s
PET smax
comp=E,17μm,0.8s
PET smax
comp=N,17μm,1.0s
PET MLR MLR
comp=Z,42μm,19.0s
PET MLR MLR
comp=Z,38μm,19.0s
PET Petropavlovsk 3.48 23 *e*Pn **Pn** 03 01 57.5 +0.5
PET Petropavlovsk 3.48 23 *e*P **Pn** 03 01 57.4 +0.4
PET *i* S **Sn** 03 02 38.9 +2.0
AVH Avacha 3.72 23 *e*P **Pn** 03 02 02.2 +1.9
NLC Nalytchevo 3.80 28 PN **Pn** 03 02 00.2 -1.3
NLC S **Sn** 03 02 43.7 -1.2
NLC Nalytchevo 3.80 28 *e*P **Pn** 03 02 00.2 -1.3
NLC *i* S **Sn** 03 02 43.7 -1.2
GNL Ganaly 3.96 14 *e*P **Pn** 03 02 06.3 +2.6
GNL *i* S **Sn** 03 02 54.3 +5.5
SPN Mys Shipunski 3.97 34 PN **Pn** 03 02 03.3 -0.4
SPN S **Sn** 03 02 49.1 +0.1
SPN Mys Shipunski 3.97 34 *e*P **Pn** 03 02 03.3 -0.4
SPN *i* S **Sn** 03 02 49.1 +0.1
KII Karymskiy 4.59 23 PN **Pn** 03 02 14.7 +2.3
KII S **Sn** 03 03 08.5 +4.1
KII Karymskiy 4.59 23 *e*P **Pn** 03 02 14.7 +2.3
KII *i* S **Sn** 03 03 08.5 +4.1
MKZ Mys Kozlova 5.74 33 PN **Pn** 03 02 26.6 -1.5
MKZ Mys Kozlova 5.74 33 *e*P **Pn** 03 02 26.6 -1.5
MKZ *i* S **Sn** 03 03 29.4 -3.2
TUMR Tumrok 5.90 22 *e*P **Pn** 03 02 32.0 +1.8
TUMR *i* S **Sn** 03 03 38.9 +2.4
KMNR Kamenistaya 6.35 20 *e*P **Pn** 03 02 38.2 +1.7
KPT Kopyto 6.54 19 *e*P **Pn** 03 02 40.0 +0.9
KOZ Kozyrevsk 6.56 18 *e*P **Pn** 03 02 40.6 +1.3
KOZR Kozyr 6.57 18 PN **Pn** 03 02 40.6 +1.2
ZLN Zelenaya 6.72 22 *e*P **Pn** 03 02 43.4 +1.9
ZLN S **Sn** 03 03 58.0 +1.3
SRDR Sredinnyy 6.77 16 *e*P **Pn** 03 02 43.9 +1.7
CIRR Tsirk 6.80 21 *e*P **Pn** 03 02 45.0 +2.4
KRSR Krestovskiy 6.85 20 *e*P **Pn** 03 02 44.2 +0.9
KRSR *i* S **Sn** 03 04 00.8 +0.9
KLY Klyuchi 6.96 20 PN **Pn** 03 02 46.3 +1.5
KLY Klyuchi 6.96 20 *e*P **Pn** 03 02 46.3 +1.5
BDR Baidarnaya 7.32 22 *e*P **Pn** 03 02 50.9 +1.2
KUR Kuril'sk 7.38 234 *b i*PN **Pn** 03 02 48.5 -2.0
KUR pmax pmax
comp=N,4μm,1.0s
KUR pmax pmax
comp=E,3μm,1.0s
KUR pmax pmax
comp=Z,7μm,1.0s
KUR pmax pmax
comp=N,11μm,2.0s
KUR pmax pmax
comp=E,18μm,2.0s
KUR pmax pmax
comp=Z,20μm,2.0s
KUR MLR MLR
comp=N,46μm,14.0s
KUR MLR MLR
comp=E,57μm,14.0s
KUR MLR MLR
comp=Z,76μm,14.0s
SRKR Sorokina 7.39 21 *e*P **Pn** 03 02 51.7 +1.1
SMKR Semkarok 7.39 23 *e*P **Pn** 03 02 51.5 +0.8
SMKR *i* S **Sn** 03 04 11.6 -1.6
KBTR Krutoberegovo 7.45 29 PN **Pn** 03 02 51.0 -0.5
KBTR Krutoberegovo 7.45 29 *e*P **Pn** 03 02 51.0 -0.5
KBTR *i* S **Sn** 03 04 11.3 -3.3
YUK Yuzh-Kuril'sk 9.24 235 *e*PN **Pn** 03 03 15.0 -1.1
YUK pmax pmax
comp=N,730nm,0.5s
YUK pmax pmax
comp=E,2μm,0.5s
YUK pmax pmax
comp=Z,4μm,0.5s
YUK MLR MLR
comp=N,35μm,18.0s
YUK MLR MLR
comp=E,65μm,18.0s
YUK MLR MLR
comp=Z,81μm,18.0s
UGL Uglegorsk 9.34 271⇑ *i*PN **Pn** 03 03 22.5 +5.1
UGL *e*S **Sn** 03 05 10.0 +8.9
UGL pmax pmax
comp=N,539nm,0.5s
UGL pmax pmax
comp=E,308nm,0.5s
UGL pmax pmax
comp=Z,2μm,0.5s
UGL pmax pmax
comp=E,4μm,4.0s
UGL pmax pmax
comp=Z,5μm,4.0s
UGL pmax pmax
comp=N,2μm,2.0s
UGL smax
comp=N,253nm,0.8s
UGL smax
comp=E,265nm,0.8s
UGL MLR MLR
comp=N,44μm,15.0s
UGL MLR MLR
comp=E,75μm,15.0s
UGL MLR MLR
comp=Z,60μm,15.0s
YSS Yuzh-Sakhalins 9.51 257 *be*PN **Pn** 03 03 22.8 +3.1
YSS *e*S **Sn** 03 05 10.0 +4.9
YSS pmax pmax
comp=Z,560nm,1.0s
YSS pmax pmax
comp=N,280nm,1.1s
YSS pmax pmax
comp=Z,2μm,3.0s
YSS smax
comp=N,740nm,0.9s
YSS smax
comp=E,470nm,1.0s
YSS MLR MLR
comp=Z,21μm,18.0s
YSS MLR MLR
comp=N,16μm,15.0s
YSS Yuzh-Sakhalins 9.51 257 *e*Pn **Pn** 03 03 22.7 +3.0
YSS *e*Sn **Sn** 03 05 08.2 +3.1
MA2 Magadan 10.25 344 *i* PN **Pn** 03 03 31.7 +1.8
MA2 *e* 03 05 35.9
MA2 pmax pmax
comp=Z,200nm,0.6s
MA2 pmax pmax
comp=N,100nm,0.5s
MA2 Magadan 10.25 344 *e*Pn **Pn** 03 03 29.8 0.0
comp=N,177nm,0.6s
ASAJ Asahikawa 11.01 244 Pn **Pn** 03 03 42.2 +1.9
comp=N,20nm,0.3s,baz=75,slow=14,SNR=163
ASAJ Sn **Sn** 03 05 58.4 +16
baz=265,slow=29,SNR=6.0
ASAJ LR LR 03 07 30.0
comp=N,33μm,20.1s,baz=57,slow=36

ASAJ Asahikawa 11.01 244 PN **Pn** 03 03 42.2 +1.9
ASAJ pmax pmax
comp=Z,20nm,0.3s
ASAJ MLR MLR
comp=Z,33μm,20.2s
SMY Shemya 11.47 69 *e*PN **Pn** 03 03 41.7 -4.8
SMY Shemya 11.47 69 *e*P **Pn** 03 03 42.4 -4.1
comp=Z,256nm,0.9s
ERM Erimo 12.07 234 Pn **Pn** 03 03 53.4 -1.3
comp=Z,5μm,0.5s,SNR=26
ERM Erimo 12.07 234 Pn **Pn** 03 03 54.0 -0.8
HABR Khabarovsk 14.01 272⇑ *i*P **Pn** 03 04 24.1 +3.0
HABR pmax pmax
comp=Z,338nm,1.2s
HABR MLR MLR
comp=Z,43μm,14.2s
AMKA Amchitka 14.63 75 *e*Pn **Pn** 03 04 27.6 -1.8
AMKA *e*Sn **Sn** 03 06 55.5 -15
KLR Kul'dur 15.97 277 *e*P **Pn** 03 04 46.0 -0.7
KLR pmax pmax
comp=E,480nm,2.4s
KLR pmax pmax
comp=Z,450nm,2.4s
KLR pmax pmax
comp=Z,3μm,7.0s
KLR MLR MLR
comp=E,28μm,14.0s
KLR MLR MLR
comp=Z,41μm,14.0s
MJAR Matsushiro Arr 18.70 231 P **Pn** 03 05 19.4 -1.1
comp=Z,3.7nm,0.3s,baz=29,slow=9.7,SNR=224
MJAR S **S** 03 08 45.3 -4.5
comp=Z,0.1nm,0.3s,baz=9.7,slow=8.9,SNR=2.4
MJAR LR LR 03 13 57.7
comp=Z,9μm,18.6s,baz=80,slow=42
MJAR Matsushiro Arr 18.70 231 P **Pn** 03 05 19.4 -1.1
MJAR S **S** 03 08 45.3 -4.5
MJAR pmax pmax
comp=Z,4.0nm,0.3s
MJAR MLR MLR
comp=Z,9μm,18.6s
MAJO Matsushiro 18.71 231 *e*P **Pn** 03 05 19.2 -1.3
MAJO pmax pmax
comp=Z,240nm,0.9s
MAJO Matsushiro 18.71 231 *e*P **Pn** 03 05 19.2 -1.3
comp=Z,242nm,0.8s
MAT Matsushiro 18.71 231 P **Pn** 03 05 18.7 -1.8
MAT S **S** 03 08 44.0 -5.8
MAT Matsushiro 18.71 231 *e*P **Pn** 03 05 19.0 -1.5
MAT *e*S **S** 03 08 44.0 -5.8
MAT pmax pmax
comp=Z,206nm,0.9s
MAT Matsushiro 18.71 231 *e*P **Pn** 03 05 19.0 -1.5
comp=Z,206nm,0.9s
MAT *e*S **S** 03 08 44.0 -5.8
MDJ Mudanjiang 18.87 264 P **Pn** 03 05 21.3 -1.1
MDJ AP pP 03 05 31.1 -1.8
MDJ XP sP 03 05 36.4 -2.8
MDJ S **S** 03 08 49.8 -3.4
MDJ AMB AMB
comp=Z,4μm,7.4s
MDJ LR LR
comp=N,14μm,18.5s
MDJ LR LR
comp=E,19μm,20.0s
MDJ LR LR
comp=Z,21μm,20.7s
BILL Bilibino 18.89 12 *c i*P **Pn** 03 05 20.2 -2.4
BILL *e*S **S** 03 08 51.6 -2.0
BILL pmax pmax
comp=Z,279nm,1.7s
BILL MLR MLR
comp=Z,59μm,16.0s
BILL Bilibino 18.89 12 *e*P **Pn** 03 05 20.8 -1.9
comp=Z,331nm,0.9s
YAK Yakutsk 19.10 320 *e*P **Pn** 03 05 24.2 -1.0
YAK *e*S **S** 03 08 59.5 +1.6
YAK pmax pmax
comp=Z,351nm,0.8s
YAK pmax pmax
comp=N,91nm,1.2s
YAK pmax pmax
comp=E,238nm,1.2s
YAK smax
comp=N,125nm,1.3s
YAK smax
comp=E,100nm,1.0s
YAK MLR MLR
comp=E,14μm,23.0s
YAK MLR MLR
comp=Z,22μm,23.0s
YAK MLR MLR
comp=N,7μm,18.0s
YAK Yakutsk 19.10 320 *e*P **Pn** 03 05 24.3 -0.9
comp=N,614nm,0.8s
CLNS Chul'man 19.90 303 *e*P **Pn** 03 05 34.7 0.0
CLNS *e*S **S** 03 09 05.6 -8.4
CLNS pmax pmax
comp=Z,233nm,0.7s
CLNS pmax pmax
comp=N,121nm,0.8s
CLNS pmax pmax
comp=E,63nm,0.8s
CLNS smax
comp=N,4μm,11.4s
CLNS smax
comp=Z,2μm,12.0s
CLNS smax
comp=E,2μm,13.0s
CLNS MLR MLR
comp=Z,39μm,19.0s
CLNS MLR MLR
comp=N,15μm,16.0s
CLNS MLR MLR
comp=E,31μm,18.0s
JHJ Hachijo jima 2 20.76 223 P **P** 03 05 42.2 +0.2
comp=E,786nm,0.9s,baz=134,slow=4.2,SNR=11
SPIA Saint Paul Isl 20.99 57 *e*P **P** 03 05 44.5 0.0
CN2 Changchun 21.90 266 *e*P **P** 03 05 50.8 -3.4
CN2 *e*XP sP 03 06 11.0 -1.2
CN2 *e*S **S** 03 09 44.0 -9.2
CN2 LR LR
comp=N,31μm,18.0s,MS5.8
CN2 LR LR
comp=E,16μm,18.0s,MS5.8
CN2 LR LR
comp=Z,23μm,19.0s,MS5.6
HIA Hailar 23.61 283 *e*P **P** 03 06 09.7 -2.1
HIA pmax pmax
comp=Z,60nm,0.6s
HIA Hailar 23.61 283 *e*P **P** 03 06 09.7 -2.2
comp=Z,60nm,0.6s,mb5.2
SNY Shenyang 24.06 263 ⇑P **P** 03 06 11.8 -4.1
SNY S **S** 03 10 32.1 +2.4
SNY LR LR
comp=N,11μm,14.4s,MS5.8
SNY LR LR
comp=E,20μm,15.3s,MS5.8
SNY LR LR
comp=Z,21μm,15.6s,MS5.7
TNA Tin City 24.24 36⇑ *i*P **P** 03 06 17.6 0.0
comp=Z,237nm,1.0s,mb5.6
INCN Inchon 24.63 251 *e*P **P** 03 06 21.4 +0.2
INCN LR LR
comp=Z,14μm,21.0s,MS5.4
TIXI Tiksi 25.18 340 *e*P **P** 03 06 23.7 -2.5
TIXI *e*S **S** 03 10 47.1 -0.7
TIXI pmax pmax
comp=N,120nm,0.9s
TIXI pmax pmax
comp=Z,289nm,0.9s,mb5.8
TIXI pmax pmax
comp=E,174nm,1.0s
TIXI pmax pmax
comp=Z,236nm,0.8s,mb5.8
TIXI MLR MLR
comp=Z,15μm,15.0s,MS5.6
TIXI Tiksi 25.18 340⇑ *i*P **P** 03 06 24.4 -1.8
CBIJ Chichi jima 25.21 211 LR LR 03 15 03.3
comp=Z,7μm,21.6s,MS5.2,baz=203,slow=34
BOD Bodaibo 25.85 304 *e*P **P** 03 06 31.7 -0.5
BOD *e* 03 11 01.3
BOD pmax pmax
comp=Z,84nm,1.5s,mb5.0
CIT Chita 26.78 291 *e*P **P** 03 06 39.7 -0.9
CIT *e* pP 03 06 56.9 +3.5

DL2 Dalian 26.90 259⇑ *i*P **P** 03 06 40.5 -1.1
DL2 PPP 03 07 44.8
DL2 S **S** 03 11 13.6 -1.3
DL2 XS sS 03 11 36.5 -0.2
DL2 AMB AMB
comp=Z,600nm,9.3s
DL2 LR LR
comp=N,7μm,18.2s,MS5.4
DL2 LR LR
comp=E,7μm,18.2s,MS5.4
DL2 LR LR
comp=Z,8μm,15.0s,MS5.4
CHGN Chignik 27.50 59 *e*P **P** 03 06 45.0 -2.0
TTA Tatalina 28.66 45 *e*P **P** 03 06 56.8 -0.6
TTA *e**PP pP 03 07 10.0 -0.4
TTA Tatalina 28.66 45 *e*P **P** 03 06 57.0 -0.4
SVW2 Sparrevohn 28.78 49 *e*P **P** 03 06 57.8 -0.6
BJI Beijing 29.77 266 *e*P **P** 03 07 07.1 -0.1
BJI S **S** 03 12 06.3 +6.3
BJI AMB AMB
comp=Z,916nm,7.4s
BJI LR LR
comp=N,20μm,24.5s,MS5.7
BJI LR LR
comp=E,9μm,24.5s,MS5.7
BJI LR LR
comp=Z,15μm,22.2s,MS5.6
IMA2 Indian Mountai 30.01 39 *e*P **P** 03 07 08.8 -0.6
KDAK Kodiak Island 30.50 55 P **P** 03 07 11.2 -2.4
comp=Z,469nm,0.8s,mb6.3,SNR=10
KDAK Kodiak Island 30.50 55 P **P** 03 07 11.6 -2.1
comp=Z,64nm,0.8s,mb5.4,baz=306,slow=2.5,SNR=28
KDAK Kodiak Island 30.50 55 *e*P **P** 03 07 11.4 -2.2
KDAK LR LR
comp=Z,4μm,20.0s,MS5.0
TIA Tai'an 31.38 259 *e*P **P** 03 07 23.1 +1.7
TIA S **S** 03 12 28.3 +3.1
TIA LR LR
comp=N,6μm,15.0s
SLKM Skilak Lake 31.42 50 *e*P **P** 03 07 20.4 -1.4
JOW Kunigami 31.52 234 P **P** 03 07 23.1 +0.4
comp=N,204nm,0.9s,mb5.9,baz=39,slow=7.6,SNR=45
JOW LR LR 03 20 33.4
comp=N,7μm,21.4s,MS5.3,baz=46,slow=37
WAKE Wake Island 31.60 161 PFAKE 03 07 30.0 +6.6
WAKE LR LR
comp=Z,18μm,21.0s,MS5.7
PMR Palmer 31.87 48 *e*P **P** 03 07 25.5 -0.3
PMR pmax pmax
comp=Z,73nm,1.6s,mb5.3
PMR MLR MLR
comp=Z,6μm,18.0s,MS5.3
PMR Palmer 31.87 48 *e*P **P** 03 07 25.5 -0.3
comp=Z,73nm,1.6s,mb5.3
PMR LR LR
comp=Z,6μm,18.0s,MS5.3
MCK McKinley 31.89 43⇑ *i*P **P** 03 07 24.9 -1.0
MCK pmax pmax
comp=Z,49nm,0.9s,mb5.3
MCK McKinley 31.89 43⇑ *i*P **P** 03 07 24.9 -1.0
comp=Z,49nm,0.9s,mb5.3
IRK Irkutsk 32.25 295 *e*P **P** 03 07 29.0 -0.1
IRK pmax pmax
comp=Z,104nm,2.9s,mb5.2
SSE Sheshan 32.27 248 P **P** 03 07 29.8 +0.6
SSE AP pP 03 07 44.8 +2.6
SSE S **S** 03 12 39.9 +0.8
SSE AMB AMB
comp=Z,83nm,0.9s,mb5.6
SSE AMB AMB
comp=Z,953nm,10.7s
SSE LR LR
comp=N,3μm,21.1s,MS5.2
SSE LR LR
comp=E,5μm,21.1s,MS5.2
SSE LR LR
comp=Z,8μm,19.9s,MS5.4
HHC Hu-ho-hao-te 32.32 271 *e*P **P** 03 07 29.8 +0.1
HHC AP pP 03 07 44.5 +1.8
HHC PP PP 03 08 39.8 -3.5
HHC AMB AMB
comp=Z,742nm,7.6s
HHC LR LR
comp=N,29μm,19.4s,MS6.0
HHC LR LR
comp=E,15μm,21.4s,MS6.0
HHC LR LR
comp=Z,19μm,18.2s,MS5.8
COLA College 32.36 41⇑ *i*P **P** 03 07 29.5 -0.5
COLA *e**PP pP 03 07 43.2 +0.2
COLA pmax pmax
comp=Z,170nm,0.8s,mb5.9
COLA MLR MLR
comp=Z,5μm,20.0s,MS5.2
COLA College 32.36 41⇑ *i*P **P** 03 07 29.5 -0.5
comp=Z,170nm,0.8s,mb5.9
COLA *e*pP pP 03 07 43.2 +0.2
COLA LR LR
comp=Z,5μm,20.0s,MS5.2
SONM Songino Array 32.45 286 P **P** 03 07 30.6 -0.3
comp=Z,2.6nm,0.4s,baz=75,slow=8.1,SNR=19
SONM PcP PcP 03 10 15.6 -1.4
comp=Z,18nm,0.8s,baz=101,slow=2.0,SNR=9.9
SONM LR LR 03 21 29.1
comp=Z,12μm,19.1s,MS5.6,baz=244,slow=38
TLY Talaya 32.79 294 *c i*P **P** 03 07 33.7 -0.1
TLY *e* 03 08 40.7
TLY *e*S **S** 03 12 48.3 +1.0
TLY pmax pmax
comp=Z,54nm,1.3s,mb5.3
TLY MLR MLR
comp=Z,20μm,18.0s,MS5.8
TLY Talaya 32.79 294 *e*P **P** 03 07 34.6 +0.8
comp=Z,60nm,1.2s,mb5.4
NJ2 Nanjing 33.01 252 *e*P **P** 03 07 35.9 +0.2
NJ2 AP pP 03 07 47.9 -0.9
NJ2 XP sP 03 07 53.3 -1.4
NJ2 PP PP 03 08 47.3 -3.7
NJ2 AMB AMB
comp=Z,60nm,0.5s,mb5.8
NJ2 AMB AMB
comp=Z,2μm,9.9s
NJ2 LR LR
comp=N,20μm,11.0s,MS6.2
NJ2 LR LR
comp=E,20μm,13.7s,MS6.2
NJ2 LR LR
comp=Z,19μm,12.8s,MS6.0
ZAK Zakamensk 33.43 292⇑ *i*P **P** 03 07 39.7 +0.3
ZAK *e* 03 10 22.0
ZAK pmax pmax
comp=Z,22nm,1.4s,mb4.9
BTO Baotou 33.45 272 *e*P **P** 03 07 42.5 +3.0
BTO S **S** 03 13 06.3 +8.9
BTO LR LR
comp=N,2μm,18.1s,MS5.0
BTO LR LR
comp=E,1μm,15.7s,MS5.0
DIV Divide 33.53 48 *e*P **P** 03 07 39.6 -0.6
comp=E,340nm,0.9s,mb6.3
DIV LR LR
comp=Z,25μm,20.0s,MS5.9
EYAK Cordova Ski Ar 33.62 49 *e*P **P** 03 07 39.2 -1.8
MENT Mentasta 34.28 45 *e*P **P** 03 07 46.9 +0.2
MOY Mondy 34.36 295 *e*P **P** 03 07 48.3 +0.9
MOY pmax pmax
comp=Z,65nm,2.4s,mb5.1
EGAK Eagle 35.22 41⇑ *i*P **P** 03 07 53.5 -1.4
EGAK *e*pP pP 03 08 07.4 -0.6
DAWY Dawson 36.07 42⇑ *i*P **P** 03 08 01.5 -0.7
TATO Taipei 36.68 240 *e*P **P** 03 08 08.0 +0.6
comp=Z,67nm,0.8s,mb5.5
TATO LR LR
comp=Z,9μm,19.0s,MS5.6
WHN Wuhan 36.84 254 ⇓P **P** 03 08 09.6 +0.9
WHN S **S** 03 13 55.0 +5.5
WHN AMB AMB
comp=Z,2μm,13.5s
WHN LR LR
comp=Z,14μm,17.1s,MS5.8
YHNB Yeheng 36.98 240 *e*P **P** 03 08 11.2 +1.3
GUMO Guam 37.38 199 P **P** 03 08 16.1 +2.9
comp=Z,36nm,0.7s,mb5.3,baz=166,slow=7.9,SNR=3.9
GUMO LR LR 03 22 39.3
comp=Z,3μm,19.8s,MS5.1,baz=29,slow=35
GUMO Guam 37.38 199 P **P** 03 08 16.1 +2.8

GUMO pmax pmax
comp=Z,36nm,0.7s,mb5.3
GUMO MLR MLR
comp=Z,3μm,19.8s,MS5.1
INK Inuvik 37.86 35⇑ iP P 03 08 17.4 +0.1
INK pmax pmax
comp=Z,90nm,1.0s
INK Inuvik 37.86 35⇑ iP P 03 08 17.4 0.0
comp=Z,90nm,1.0s,mb5.5
XAN Xi'an 37.98 264 P P **03 08 17.5 -0.8**
XAN PP PP 03 09 44.0 -1.8
XAN S S **03 13 59.4 -7.4**
XAN AMB AMB
comp=Z,692nm,8.6s
XAN LR LR
comp=N,5μm,21.4s,MS5.6
XAN LR LR
comp=E,9μm,19.9s,MS5.6
XAN LR LR
comp=Z,10μm,20.3s,MS5.6
QZH Quanzhou 38.36 244⇑ iP P 03 08 22.1 +0.5
QZH AP pP 03 08 34.1 -0.7
QZH S S **03 14 15.6 +3.0**
QZH XS sS 03 14 32.8 -2.0
QZH AMB AMB
comp=Z,220nm,0.9s,mb5.9
QZH AMB AMB
comp=Z,3μm,6.2s
QZH LR LR
comp=N,11μm,17.9s,MS5.9
QZH LR LR
comp=E,8μm,14.7s,MS5.9
QZH LR LR
comp=Z,12μm,17.3s,MS5.8
SKAG Skagway 38.96 49 eP P **03 08 27.3 +0.7**
comp=Z,796nm,2.5s,mb6.0
SKAG LR LR
comp=Z,9μm,20.0s,MS5.6
SIT Sitka 39.72 53 eP P **03 08 30.9 -2.0**
SIT pmax pmax
comp=Z,301nm,1.8s,mb5.7
SIT MLR MLR
comp=Z,3μm,18.0s,MS5.1
SIT Sitka 39.72 53 eP P **03 08 30.9 -2.0**
comp=Z,301nm,1.8s,mb5.7
SIT LR LR
comp=Z,3μm,18.0s,MS5.1
LZH Lanzhou 40.00 270 eP P **03 08 35.0 -0.2**
LZH AP pP 03 08 47.5 -1.0
LZH XP sP 03 08 51.0 -3.4
LZH PP PP 03 10 07.0 -0.9
LZH PCP PcP 03 10 38.1 -1.5
LZH eS S **03 14 33.1 -4.1**
LZH XS sS 03 14 59.0 -0.5
LZH SCS ScS 03 18 41.0 +3.4
LZH AMB AMB
comp=Z,3μm,6.1s
LZH LR LR
comp=N,18μm,15.8s
LZH LR LR
comp=Z,22μm,16.4s,MS6.1
GTA Gaotai 40.67 277 ⇑P P **03 08 40.8 0.0**
GTA AP pP 03 08 56.0 +1.9
GTA PP PP 03 10 17.8 +2.6
GTA PPP 03 10 40.3
GTA PCP PcP 03 10 44.9 +3.2
GTA SCP ScP 03 14 31.8 +4.8
GTA SCS ScS 03 18 43.3 +1.7
GTA AMB AMB
comp=Z,49nm,0.9s,mb5.1
GTA AMB AMB
comp=Z,777nm,6.8s
GTA LR LR
comp=N,11μm,16.7s,MS6.1
GTA LR LR
comp=E,19μm,16.7s,MS6.1
GTA LR LR
comp=Z,24μm,16.4s,MS6.1
CRAG Craig 41.45 54 eP P **03 08 48.3 +1.2**
comp=Z,178nm,1.8s,mb5.4
CRAG LR LR
comp=Z,7μm,21.0s,MS5.5
ZAL Zalesovo 42.62 304 P P **03 08 56.0 -0.7**
comp=Z,34nm,1.0s,mb5.0,baz=46,slow=8.3,SNR=67
ZAL LR LR 03 27 32.9
comp=Z,6μm,21.2s,MS5.5,baz=52,slow=37
ZAL Zalesovo 42.62 304 P P **03 08 56.1 -0.6**
ZAL pmax pmax
comp=Z,34nm,1.0s
ZAL MLR MLR
comp=Z,6μm,21.2s
HKC Hong Kong 42.97 246⇓ iP P 03 09 01.0 +1.4
NVS Novosibirsk 43.07 306⇑ iP P 03 09 00.0 -0.4
NVS e 03 10 45.1
NVS i S S **03 15 22.0 -0.7**
NVS eSSS 03 18 48.2
NVS pmax pmax
comp=Z,105nm,1.1s,mb5.5
NVS pmax pmax
comp=N,74nm,1.4s
NVS pmax pmax
comp=E,110nm,1.4s
NVS smax
comp=N,160nm,3.0s
NVS smax
comp=E,128nm,2.6s
CD2 Chengdu 43.32 264 eP P **03 09 02.4 0.0**
CD2 AP pP 03 09 17.8 +2.0
CD2 PP PP 03 10 45.9 +2.1
CD2 PCP PcP 03 10 50.5 0.0
CD2 AMB AMB
comp=Z,30nm,1.0s,mb5.0
CD2 AMB AMB
comp=Z,610nm,9.3s
CD2 LR LR
comp=E,5μm,21.6s
CD2 LR LR
comp=Z,5μm,21.6s,MS5.4
GYA Guiyang 44.51 257⇑ iP P 03 09 12.6 +0.6
GYA AP pP 03 09 24.8 -0.6
GYA XP sP 03 09 30.3 -1.0
GYA PP PP 03 10 58.5 +2.0
GYA AMB AMB
comp=Z,130nm,1.0s,mb5.7
GYA AMB AMB
comp=Z,2μm,10.8s
GYA LR LR
comp=N,3μm,16.9s,MS5.4
GYA LR LR
comp=E,3μm,17.4s,MS5.4
GYA LR LR
comp=Z,4μm,17.8s,MS5.3
WMQ Urumqi 45.86 290 P P **03 09 23.0 +0.4**
WMQ AMB AMB
comp=Z,34nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,203nm,5.0s
WMQ LR LR
comp=N,11μm,13.0s,MS6.1
WMQ LR LR
comp=E,8μm,13.0s,MS6.1
WMQ LR LR
comp=Z,8μm,12.0s,MS5.9
TGY Tagaytay City 45.87 232 P P **03 09 23.2 +0.4**
comp=Z,99nm,0.3s,baz=168,slow=9.7,SNR=5.7
TGY LR LR 03 27 20.0
comp=Z,9.6nm,21.0s,baz=12,slow=34
ALE Alert 46.41 7 P P **03 09 26.0 -1.0**
comp=Z,778nm,1.2s,mb6.5,SNR=52
OTRP Odiongan 46.82 229 eP P **03 09 32.0 +1.8**
YKW3 Yellowknife Ar 47.10 39 eP P **03 09 32.5 +0.1**
YKA Yellowknife Ar 47.14 39 P P **03 09 32.5 -0.1**
comp=Z,88nm,0.8s,mb5.7,baz=297,slow=7.7,SNR=89
YKA PcP PcP 03 11 03.8 +0.2
comp=Z,17nm,1.0s,baz=303,slow=3.6,SNR=5.5
YKA LR LR 03 30 47.6
comp=Z,5μm,22.0s,MS5.4,baz=275,slow=38
YKA Yellowknife Ar 47.14 39 P P **03 09 32.5 -0.1**
YKA 03 11 03.8
YKA pmax pmax
comp=Z,88nm,0.8s
YKA MLR MLR
comp=Z,5μm,22.0s
YKA Yellowknife Ar 47.14 39 P P **03 09 32.5 -0.1**
YKA PcP PcP 03 11 03.9 +0.2
YKA LR LR 03 30 47.6

RES Resolute Bay 47.18 20⇑ iP P 03 09 33.2 +0.2
RES e*PP pP 03 09 45.1 -1.4
RES pmax pmax
comp=Z,42nm,0.7s,mb5.5
RES Resolute Bay 47.18 20⇑ iP P 03 09 33.2 +0.2
comp=Z,42nm,0.7s,mb5.5
RES epP pP 03 09 45.1 -1.4
MK31 Makanchi Array 47.47 296 P P **03 09 34.3 -0.9**
MK31 pmax pmax
comp=Z,34nm,0.7s,mb5.4
MKAR Makanchi Array 47.47 296 P P **03 09 35.2 0.0**
comp=Z,35nm,0.7s,mb5.4,baz=46,slow=5.8,SNR=106
MKAR ScP ScP 03 15 00.5 +5.7
comp=Z,2.7nm,0.8s,baz=67,slow=4.8,SNR=3.9
MKAR Makanchi Array 47.47 296 P P **03 09 35.2 0.0**
MKAR ScP ScP 03 15 00.5 +5.7
KURK Kurchatov 47.48 303 P P **03 09 34.8 -0.5**
comp=Z,1μm,1.0s,mb6.8,SNR=25
KMI Kunming 47.95 259 P P **03 09 39.8 +0.9**
KMI AP pP 03 09 52.5 0.0
KMI XP sP 03 09 58.1 -0.2
KMI AMB AMB
comp=Z,61nm,1.5s,mb5.4
KMI AMB AMB
comp=Z,1μm,5.2s
KMI LR LR
comp=N,14μm,17.5s,MS6.1
KMI LR LR
comp=E,10μm,15.1s,MS6.1
KMI LR LR
comp=Z,6μm,18.6s,MS5.6
QIZ Qiongzhong 48.06 247 P P **03 09 41.0 +1.2**
QIZ AP pP 03 09 53.9 +0.5
QIZ XP sP 03 09 58.3 -0.9
QIZ S S **03 16 37.8 +3.3**
QIZ XS sS 03 16 56.6 -0.7
QIZ AMB AMB
comp=Z,86nm,1.4s,mb5.6
QIZ AMB AMB
comp=Z,1μm,9.3s
QIZ LR LR
comp=E,6μm,16.6s
QIZ LR LR
comp=Z,6μm,19.5s,MS5.6
SNPH Sibulan 48.87 226⇑ eP P 03 09 47.5 +1.5
C03A Quillayute Air 49.70 60⇓ P P 03 09 52.1 -0.2
baz=50
C03A ⇓S S **03 17 00.3 +2.8**
baz=50
KBS Kingsbay 49.74 352 eP P **03 09 50.7 -2.0**
KBS AMS AMS 03 29 42.9
comp=Z,2μm,23.1s,MS5.0
KBS Kingsbay 49.74 352 eP P **03 09 53.0 +0.3**
KBS pmax pmax
comp=Z,39nm,0.8s,mb5.5
KBS MLR MLR
comp=Z,3μm,21.0s,MS5.3
KBS Kingsbay 49.74 352 eP P **03 09 53.0 +0.3**
comp=Z,39nm,0.8s,mb5.5
KBS LR LR
comp=Z,3μm,21.0s,MS5.3
DAV Davao City (W) 49.83 222 PFAKE 03 10 10.0 +17
DAV LR LR
comp=Z,3μm,20.0s,MS5.2
OBC Olympics--Boni 49.92 60 P P **03 09 54.1 0.0**
SPB4 Spitsbergen Ar 49.93 350 eP P **03 09 53.0 -1.1**
SPB4 ePcP PcP 03 11 13.2 -0.6
CHKZ Chkalovo 50.11 309⇑ iP P 03 09 53.9 -1.6
CHKZ eS S **03 17 03.0 -0.3**
CHKZ pmax pmax
comp=Z,98nm,0.7s,mb6.0
CHKZ Chkalovo 50.11 309⇑ iP P 03 09 53.9 -1.6
comp=Z,98nm,0.7s,mb6.0
CHKZ eS S **03 17 03.0 -0.3**
PAGZ Pagadian 50.11 225 eP P **03 09 56.5 +1.0**
B04A Port Angeles 50.23 59⇓ P P 03 09 56.0 -0.4
baz=50,SNR=5.6
B04A ⇓S S **03 17 05.9 +0.9**
baz=50
A04A Legoe Bay, Lum 50.30 58⇓ P P 03 09 56.7 -0.2
baz=50
A04A ⇑S S **03 17 06.0 +0.1**
baz=50
VOSK Vostochnaya 50.45 308 P P **03 09 56.7 -1.3**
VOSK pmax pmax
comp=Z,18nm,1.0s,mb5.1
VDB Vedder Mountai 50.46 58 P P **03 09 57.2 -1.0**
A05A Maple Falls 50.49 58⇑ P P 03 09 57.5 -0.8
baz=50
A05A ⇑S S **03 17 07.8 -0.7**
baz=50
BVA0 Borovoye Array 50.58 309 i P P **03 09 58.0 -1.0**
BVA0 pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BVAR Borovoye Array 50.58 309 LR LR 03 32 42.2
comp=Z,8μm,20.2s,MS5.7,baz=139,slow=38
D03A Wishkah Elem. 50.61 60⇑ P P 03 09 58.8 -0.4
baz=50
D03A ⇓S S **03 17 08.8 -1.5**
baz=50
BRVK Borovoye 50.61 309 P P **03 09 58.4 -0.9**
comp=Z,548nm,0.8s,mb6.5,SNR=26
BRVK Borovoye 50.61 309⇓ P P 03 09 59.0 -0.3
SNR=30
BRVK Borovoye 50.61 309⇑ iP P 03 09 58.5 -0.8
comp=Z,45nm,0.8s,mb5.5
BRVK ePcP PcP 03 11 16.2 -0.1
BRVK LR LR
comp=Z,6μm,21.0s,MS5.6
MBW Mount Baker 50.71 58 P P **03 09 59.7 -0.3**
C04A Brinnon 50.72 59⇓ P P 03 09 59.8 -0.3
baz=50,SNR=5.5
GNW Green Mountain 50.88 60 eP P **03 10 01.5 +0.2**
B05A Bryant 50.89 58 P P **03 10 01.1 -0.3**
baz=51,SNR=18
B05A ⇓S S **03 17 13.9 -0.2**
baz=51
JCW Jim Creek 51.02 58 P P **03 10 02.0 -0.3**
E03A Lebam 51.05 61 P P **03 10 02.7 +0.1**
baz=51,SNR=5.5
E03A ⇓S S **03 17 15.9 -0.4**
baz=51
D04A Dobbs Creek Ra 51.16 60⇓ P P 03 10 03.6 +0.3
baz=51
ZRNK Zerenda 51.32 309 P P **03 10 03.5 -1.1**
ZRNK pmax pmax
comp=Z,47nm,0.9s,mb5.4
ZRNK Zerenda 51.32 309⇑ iP P 03 10 03.5 -1.1
comp=Z,33nm,0.6s,mb5.4
ZRNK ePcP PcP 03 11 17.9 -1.0
F03A Seaside 51.41 62⇑ P P 03 10 05.3 0.0
baz=51
C05A Tolt Reservoir 51.44 59⇓ P P 03 10 04.7 -0.8
baz=51,SNR=15
C05A ⇓S S **03 17 21.9 +0.1**
baz=51
E04A Onalaska 51.50 60⇓ P P 03 10 05.8 -0.1
baz=51,SNR=5.8
D05A Enumclaw 51.57 59⇑ P P 03 10 06.1 -0.3
baz=51,SNR=11
D05A ⇑S S **03 17 21.7 -1.8**
baz=51
PNT Penticton 51.64 56 P P **03 10 06.3 -0.7**
H02A Toledo 51.89 63⇓ S S 03 17 24.5 -3.4
baz=52
G03A Yamhill 51.92 62⇑ P P 03 10 09.1 0.0
baz=52
F04A Amboy 52.05 61⇓ P P 03 10 09.5 -0.6
baz=52,SNR=7.3
F04A ⇑S S **03 17 29.9 -0.2**
baz=52
E05A Randle 52.06 60⇑ P P 03 10 09.1 -0.9
baz=52,SNR=9.9
E05A ⇑S S **03 17 30.3 +0.1**
baz=52
LSA Lhasa 52.27 273 P P **03 10 13.0 +1.3**
LSA AP pP 03 10 21.3 -4.1
LSA XP sP 03 10 25.1 -6.1
LSA PP PP 03 12 09.6 -0.9
LSA S S **03 17 26.0 -7.2**
LSA SS SS 03 21 09.1 -2.1
LSA LR LR
comp=N,4μm,15.1s,MS6.0
LSA LR LR
comp=E,11μm,15.1s,MS6.0
LSA LR LR
comp=Z,18μm,15.1s,MS6.2
LSA Lhasa 52.27 273 eP P **03 10 12.2 +0.5**
LSA pmax pmax
comp=Z,24nm,0.8s,mb5.2
LSA Lhasa 52.27 273 eP P **03 10 12.2 +0.5**
comp=Z,24nm,0.8s,mb5.2
COR Corvallis 52.34 63 eP P **03 10 12.2 0.0**
COR pmax pmax
comp=Z,64nm,1.0s,mb5.5
COR MLR MLR
comp=Z,4μm,22.0s,MS5.4
COR Corvallis 52.34 63 eP P **03 10 12.2 0.0**
comp=Z,64nm,1.0s,mb5.5
COR LR LR
comp=Z,4μm,22.0s,MS5.4
I02A Mapleton 52.38 64 ⇑P P **03 10 12.4 -0.1**
baz=52
G04A Mulino 52.45 62 ⇓P P **03 10 12.5 -0.5**
baz=52
EBG Ellensburg 52.52 59 P P **03 10 13.3 -0.2**
EDM Edmonton 52.62 49⇑ iP P 03 10 13.7 -0.5
F05A White Salmon 52.62 61 ⇓P P **03 10 14.2 -0.1**
baz=52
F05A ⇓S S **03 17 38.7 +0.8**
baz=52
BJO Bjornoya 52.65 347 eP P **03 10 12.1 -2.4**
BJO AMS AMS 03 36 09.7
comp=Z,5μm,18.6s,MS5.6
BJO1 Bjornoya 52.68 347 eP P **03 10 12.1 -2.6**
I03A Eugene 52.72 63 ⇑P P **03 10 15.2 +0.2**
baz=52,SNR=5.8
EPH Ephrata 52.79 58 P P **03 10 14.7 -0.8**
J02A Umpqua 52.91 64 ⇑P P **03 10 16.7 +0.2**
baz=53,SNR=12
J02A ⇑S S **03 17 40.9 -1.0**
baz=53
H04A Detroit Lake 52.92 62 ⇓P P **03 10 16.0 -0.5**
baz=53,SNR=13
H04A ⇓S S **03 17 43.2 +1.2**
baz=53
SOKR Solikamsk 53.03 321 eP P **03 10 16.1 -1.2**
SOKR S S **03 17 39.7 -3.7**
SOKR pmax pmax
comp=Z,20nm,1.3s,mb4.9
SOKR MLR MLR
comp=Z,9μm,17.0s,MS5.9
SVE Sverdlovsk 53.03 317⇑ iP P 03 10 16.0 -1.3
SVE e 03 11 23.0
SVE e 03 12 27.0
SVE eSP 03 17 40.0
SVE eS S 03 18 08.0 +24
SVE pmax pmax
comp=Z,84nm,2.0s,mb5.3
SVE MLR MLR
comp=N,9μm,13.0s,MS6.1
SVE MLR MLR
comp=E,5μm,13.0s,MS6.1
SVE MLR MLR
comp=Z,34μm,13.0s,MS6.6
G05A Wamic 53.09 61 ⇑P P **03 10 17.4 -0.3**
baz=53,SNR=11
G05A ⇑S S **03 17 44.8 +0.6**
baz=53
KBO Bosley Butte 53.23 66 eP P **03 10 13.6 -5.1**
J03A Ideyld Park 53.26 64 P P **03 10 19.5 +0.5**
baz=53,SNR=9.7
IRO Indian Ridge 53.29 63 P P **03 10 19.2 0.0**
HAWA Hanford 53.40 59⇑ iP P 03 10 19.3 -0.7
comp=Z,3.3nm,1.1s
H05A Madras 53.49 62 ⇑P P **03 10 20.4 -0.2**
baz=53
M01C Crescent City 53.51 66 ⇓P P **03 10 21.1 +0.3**
baz=53
TKM2 Tokmak 2 53.59 296 P P **03 10 21.4 0.0**
SNR=42
TKM2 Tokmak 2 53.59 296 P P **03 10 21.1 -0.3**
TKM2 pmax pmax
comp=Z,22nm,0.8s,mb5.1
TKM2 Tokmak 2 53.59 296 i P P **03 10 21.1 -0.3**
NEW Newport 53.60 56⇑ iP P 03 10 20.4 -1.0
NEW e*PP pP 03 10 33.7 -1.5
NEW pmax pmax
comp=Z,121nm,1.7s
NEW Newport 53.60 56⇑ iP P 03 10 20.4 -1.1
comp=Z,121nm,1.7s,mb5.5
NEW epP pP 03 10 33.7 -1.5
DAG Danmarks Havn 53.60 359⇓ iP P 03 10 20.4 -1.1
comp=Z,143nm,1.1s,mb5.8
DAG
comp=Z,7μm,18.0s
DAG Danmarks Havn 53.60 359⇓ iP P 03 10 20.4 -1.1
DAG pmax pmax
comp=Z,143nm,1.1s,mb5.8
DAG MLR MLR
comp=Z,7μm,18.0s,MS5.8
ULHL Ulahol 53.62 295 P P **03 10 21.9 +0.3**
SNR=44
CHRT Chiangrai 53.62 257 ⇑P P **03 10 21.5 -0.1**
comp=Z,368nm,1.1s,mb6.2
L02A Cave Junction 53.63 65 P P **03 10 22.0 +0.3**
baz=53,SNR=14
I05A Bend 53.76 62 ⇑P P **03 10 22.6 0.0**
baz=54,SNR=7.8
KRMB Red Mountain 53.84 66⇑ iP P 03 10 23.2 +0.1
NANT Nan 53.84 256 ⇑P P **03 10 24.5 +1.3**
comp=Z,1μm,0.4s
JAY Jayapura 53.89 199 P P **03 10 24.4 +0.8**
VIPM Ingram Point 53.92 61 P P **03 10 23.9 +0.1**
USP Ospenovka 54.02 297 P P **03 10 25.2 +0.7**
SNR=29
CHMS Chumysh 54.03 296 P P **03 10 24.5 -0.1**
SNR=22
KBK Karagaybulak 54.13 296 P P **03 10 26.1 +0.7**
SNR=18
F08A Pendleton 54.18 59 ⇑P P **03 10 25.3 -0.4**
baz=54,SNR=9.2
ARU Arti 54.19 317 P P **03 10 24.2 -1.6**
comp=Z,557nm,0.6s,mb6.7,SNR=15
ARU Arti 54.19 317 e PcP 03 11 25.3 -4.4
ARU e 03 12 28.4
ARU eS S **03 17 49.5 -10**
ARU e 03 20 06.6
ARU eSS SS 03 21 42.4 +1.0
ARU MLR MLR
comp=Z,8μm,19.0s,MS5.8
ARU MLR MLR
comp=N,6μm,21.0s,MS5.8
ARU MLR MLR
comp=E,6μm,18.0s,MS5.8
ARU Arti 54.19 317⇑ iP P 03 10 24.0 -1.8
comp=E,72nm,0.8s,mb5.7
ARU LR LR
comp=Z,8μm,19.0s,MS5.8
JCC Jacoby Creek 54.20 67 ⇓P P **03 10 26.1 +0.2**
baz=54,SNR=6.2
JCC ⇓S S **03 18 04.5 +5.2**
baz=54
FRU Bishkek 54.21 296⇑ eP P 03 10 26.0 +0.1
FRU i 03 10 46.0
FRU e 03 18 03.0
FRU pmax pmax
comp=Z,60nm,2.0s,mb5.2
FRU MLR MLR
comp=N,23μm,16.0s,MS6.5
FRU MLR MLR
comp=E,25μm,16.0s,MS6.5
FRU MLR MLR
comp=Z,32μm,16.0s,MS6.5
KZA Kyzart 54.31 295 P P **03 10 27.7 +1.1**
SNR=17
J05A Fort Rock 54.32 63 P P **03 10 27.2 +0.6**
baz=54,SNR=64
J05A ⇑S S **03 18 04.5 +3.6**
baz=54
KHMM Horse Mountain 54.34 67 eP P **03 10 28.2 +1.4**
AAK Ala-Archa 54.41 296 P P **03 10 28.1 +0.7**
SNR=16
AAK Ala-Archa 54.41 296 P P **03 10 27.0 -0.3**
comp=Z,277nm,0.9s,mb6.2,SNR=11
AAK Ala-Archa 54.41 296⇑ iP P 03 10 26.0 -1.3
AAK pmax pmax
comp=Z,37nm,0.8s,mb5.4
AAK MLR MLR
comp=Z,22μm,20.0s,MS6.2
AAK Ala-Archa 54.41 296⇑ iP P 03 10 26.0 -1.4
comp=Z,37nm,0.8s,mb5.4

AAK LR LR
comp=Z,22µm,20.0s,MS6.2
YBH Yreka Blue Hor 54.41 65⇑*i*P P 03 10 27.9 +0.5
YBH *e**PP pP 03 10 43.6 +2.4
YBH pmax pmax
comp=Z,88nm,1.2s
YBH MLR MLR
comp=Z,4µm,21.0s
YBH Yreka Blue Hor 54.41 65⇑*i*P P 03 10 27.9 +0.5
comp=Z,88nm,1.2s,mb5.6
YBH *e*pP pP 03 10 43.6 +2.4
YBH LR LR
comp=Z,4µm,21.0s,MS5.5
YBH Yreka Blue Hor 54.41 65 P P 03 10 28.2 +0.8
baz=54,SNR=39
YBH ⇓S S **03 18 04.9 +2.7**
baz=54
K04A Chilquin 54.44 64⇑P P 03 10 27.9 +0.3
baz=54
K04A ⇑S S **03 18 05.1 +2.5**
baz=54
I06A Prineville 54.50 62⇑P P 03 10 28.1 +0.1
baz=54,SNR=22
I06A ⇑S S **03 18 03.6 +0.2**
baz=54
M02C Callahan 54.54 66⇓P P 03 10 29.0 +0.7
baz=54,SNR=33
M02C ⇑S S **03 18 04.7 +0.8**
baz=54
L04A Klamath Falls 54.62 64⇑P P 03 10 29.2 +0.3
baz=54,SNR=32
L04A ⇑S S **03 18 04.5 -0.5**
baz=54
N02C Big Bar 54.63 67⇑P P 03 10 29.0 +0.1
baz=54,SNR=21
N02C ⇓S S **03 18 04.9 -0.1**
baz=54
LVZ Lovozero 54.77 337⇑*e*P P 03 10 26.6 -3.3
LVZ *e* 03 12 33.9
LVZ *e*PPP 03 13 44.9
LVZ *e*S S **03 17 57.8 -9.1**
LVZ pmax pmax
comp=Z,16nm,0.9s,mb5.0
LVZ pmax pmax
comp=N,10.0nm,1.0s
LVZ MLR MLR
comp=Z,8µm,17.0s,MS5.9
LVZ MLR MLR
comp=N,4µm,18.0s,MS5.7
LVZ MLR MLR
comp=E,4µm,16.0s,MS5.7
LVZ Lovozero 54.77 337 *e*P P 03 10 28.7 -1.2
LVZ LR LR
comp=Z,9µm,19.0s,MS5.9
LHEM Herd Peak 54.77 65 P P 03 10 30.4 +0.4
EKS2 Erkin-Say 54.80 296 P P 03 10 30.4 +0.2
SNR=52
WALA Waterton Lakes 54.81 54⇑*i*P P 03 10 29.7 -0.6
comp=Z,113nm,1.3s,mb5.7
WALA *e*pP pP 03 10 42.9 -1.2
I07A Izee 54.82 61⇑P P 03 10 30.4 0.0
baz=55,SNR=17
I07A ⇑S S **03 18 07.0 -0.6**
baz=55
M04C Macdoel 54.89 65 P P 03 10 31.4 +0.5
baz=55,SNR=54
M04C ⇓S S **03 18 06.5 -2.2**
baz=55
SWI Sorong 54.93 211 P P 03 10 31.1 0.0
CHG Chiang Mai 54.94 257⇑P P 03 10 32.5 +1.3
comp=Z,150nm,1.0s,mb6.0
CHTO Chiang Mai 54.94 257 ⇓P P 03 10 32.9 +1.8
SNR=103
CHTO Chiang Mai 54.94 257⇑*i*P P 03 10 32.3 +1.1
CHTO pmax pmax
comp=Z,260nm,1.0s,mb6.2
CHTO MLR MLR
comp=Z,8µm,19.0s,MS5.8
CHTO Chiang Mai 54.94 257⇑*i*P P 03 10 32.3 +1.1
comp=Z,260nm,1.0s,mb6.2
CHTO LR LR
comp=Z,8µm,19.0s,MS5.8
J06A Christmas Vall 54.96 62 P P 03 10 31.7 +0.4
baz=55,SNR=106
J06A ⇑S S **03 18 09.6 0.0**
baz=55
H08A Prairie City 55.02 60 P P 03 10 31.6 -0.1
baz=55,SNR=27
H08A ⇑S S **03 18 09.6 -0.7**
baz=55
M03C McCloud 55.05 65 P P 03 10 32.5 +0.5
baz=55,SNR=20
M03C ⇓S S **03 18 09.9 -0.8**
baz=55
KEV Kevo 55.12 341 *e*p P 03 10 30.1 -2.4
comp=Z,9.3nm,0.6s,mb5.0
KEV Kevo 55.12 341 *e*P P 03 10 30.1 -2.4
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KKM Kota Kinabalu 55.13 231 P P 03 10 32.4 -0.2
KKM Kota Kinabalu 55.13 231⇑*i*P P 03 10 32.6 0.0
KIPM Iron Peak 55.16 68 *e*P P 03 10 33.5 +0.7
LASM Arnica Sink 55.16 65 P P 03 10 33.2 +0.4
AML Almayashu 55.18 296 P P 03 10 34.3 +1.3
SNR=17
K06A Valley Falls 55.19 63 P P 03 10 33.6 +0.7
baz=55,SNR=144
K06A ⇑S S **03 18 09.7 -2.8**
baz=55
CM31 Chiang Mai Arr 55.20 257 PFAKE 03 10 50.0 +17
CM31 LR LR
comp=Z,5µm,19.0s,MS5.6
WDC Whiskeytown Da 55.23 66⇑*i*P P 03 10 33.2 -0.1
WDC pmax pmax
comp=Z,78nm,1.2s,mb5.6
WDC Whiskeytown Da 55.23 66⇑*i*P P 03 10 33.2 -0.1
comp=Z,78nm,1.2s,mb5.6
WDC Whiskeytown Da 55.23 66 P P 03 10 33.5 +0.2
baz=55,SNR=35
WDC ⇑S S **03 18 12.8 -0.4**
baz=55
L05A Lakeview 55.32 64 P P 03 10 34.7 +0.8
baz=55,SNR=70
L05A ⇓S S **03 18 17.1 +2.8**
baz=55
APA Apatity 55.33 337⇓*i*P P 03 10 32.5 -1.5
APA *i* pP 03 10 41.0 -6.8
APA *i* 03 11 29.0
APA *i* S S **03 18 10.0 -4.5**
APA pmax pmax
comp=Z,22nm,1.2s,mb5.1
APA MLR MLR
comp=Z,9µm,16.0s,MS5.9
O02C Red Bluff 55.34 67 P P 03 10 34.7 +0.6
baz=55,SNR=32
O02C ⇓S S **03 18 17.0 +2.4**
baz=55
I08A Drewsey 55.45 61 P P 03 10 35.4 +0.4
baz=55,SNR=27
I08A ⇓S S **03 18 17.3 +1.2**
baz=55
P01C Double 8 Ranch 55.46 68 P P 03 10 35.1 +0.2
baz=55,SNR=21
P01C ⇓S S **03 18 16.7 +0.5**
baz=55
KSH Kashi 55.48 292 P P 03 10 36.5 +1.4
KSH PCP PcP 03 11 35.3 +0.6
KSH SCP ScP 03 15 26.5 -2.8
KSH PCS PcS 03 15 32.6 -2.2
KSH S S **03 18 14.8 -1.6**
KSH SCS ScS 03 20 15.3 -4.6
KSH SS SS 03 22 00.5 -1.2
KSH AMB AMB
comp=Z,35nm,0.3s,mb5.9
KSH AMB AMB
comp=Z,496nm,4.1s
KSH LR LR
comp=N,10µm,13.0s,MS6.2
KSH LR LR
comp=E,8µm,13.8s,MS6.2
KSH LR LR
comp=Z,10µm,14.7s,MS6.0
H09A Durkee 55.49 60 P P 03 10 35.5 +0.3
baz=55,SNR=26
H09A ⇑S S **03 18 17.2 +0.6**
baz=55
M05C Lookout 55.56 65 P P 03 10 36.1 +0.4
baz=55,SNR=55
M05C ⇓S S **03 18 19.7 +2.1**
baz=55
BMO Blue Mountains 55.58 59⇑*i*P P 03 10 35.6 -0.2
comp=Z,61nm,1.4s,mb5.4
BMO LR LR
comp=Z,2µm,20.0s,MS5.2
ARCES ARCESS Array B 55.62 341 P P 03 10 33.4 -2.7
comp=Z,40nm,0.7s,mb5.5,baz=40,slow=6.8,SNR=89
ARCES LR LR 03 40 42.7
comp=Z,11µm,18.4s,MS6.0,baz=34,slow=43
ARE0 ARCESS Array S 55.62 341 *e*P P 03 10 34.6 -1.4
ARE0 *e*PcP PcP 03 11 33.7 -1.5
GASB Alder Springs 55.71 67 P P 03 10 37.6 +0.9
baz=56,SNR=44
GASB ⇑S S **03 18 20.4 +0.9**
baz=56
HATC Hat Creek Radi 55.72 66⇓P P 03 10 37.0 +0.1
baz=56,SNR=21
TSM Tawau 55.82 229 P P 03 10 38.2 +0.7
I09A Lost Marbles R 55.88 60 P P 03 10 38.2 +0.2
baz=56,SNR=25
I09A ⇓S S **03 18 22.3 +0.5**
baz=56
O03C Acorn Hollow, 55.90 67⇓P P 03 10 37.6 -0.5
baz=56
O03C ⇓S S **03 18 21.0 -1.1**
baz=56
HOPS Hopland 55.92 68⇑*i*P P 03 10 38.1 -0.1
comp=Z,214nm,1.7s,mb5.9
HOPS Hopland 55.92 68 ⇓P P 03 10 37.9 -0.3
baz=56,SNR=11
HOPS ⇑S S **03 18 22.3 0.0**
baz=56
M06C Likely Place G 56.05 65 P P 03 10 39.7 +0.5
baz=56,SNR=24
M06C ⇑S S **03 18 24.7 +0.6**
baz=56
MSO Missoula 56.18 56⇑*i*P P 03 10 39.6 -0.5
comp=Z,53nm,1.3s,mb5.4
L07A Adell 56.20 63 P P 03 10 41.0 +0.7
baz=56,SNR=61
L07A ⇑S S **03 18 25.8 -0.3**
baz=56
K08A Mann Creek Ran 56.24 62 P P 03 10 41.0 +0.4
baz=56,SNR=112
K08A ⇓S S **03 18 26.8 +0.2**
baz=56
O04C Chester 56.26 66 P P 03 10 41.2 +0.6
baz=56,SNR=25
O04C ⇓S S **03 18 25.8 -1.0**
baz=56
ELFS Eagle Lake Fie 56.28 65⇑P P 03 10 41.1 +0.3
baz=56
ELFS ⇑S S **03 18 29.4 +2.3**
baz=56
WVOR Wild Horse Val 56.34 62⇑*i*P P 03 10 41.2 -0.1
WVOR *e**PP pP 03 10 53.1 -2.0
WVOR pmax pmax
comp=Z,106nm,0.9s,mb5.9
WVOR Wild Horse Val 56.34 62⇑*i*P P 03 10 41.2 0.0
comp=Z,106nm,0.9s,mb5.9
WVOR *e*pP pP 03 10 53.1 -2.0
MNRC McLaughlin Nat 56.37 68 P P 03 10 41.8 +0.4
baz=56,SNR=33
MNRC ⇑S S **03 18 29.0 +0.7**
baz=56
CHMT Chamberlain Mo 56.49 55 *e*P P 03 10 41.6 -0.8
ORV Oroville 56.50 67 P P 03 10 41.6 -0.8
baz=56,SNR=37
ORV ⇓S S **03 18 29.9 -0.1**
baz=56
NSHM Saint Helena R 56.50 68 *e*P P 03 10 42.3 -0.1
SUTB Sutter Butte 56.54 67⇑P P 03 10 41.8 -0.8
baz=56,SNR=13
SUTB ⇓S S **03 18 30.5 0.0**
baz=56
NST Nakhon Sawan 56.55 254 P P 03 10 45.0 +2.3
MCCM Marconi Confer 56.58 69 ⇓P P 03 10 42.2 -0.7
baz=56
MCCM ⇑S S **03 18 30.8 -0.2**
baz=56
O05C Quincy 56.58 66 P P 03 10 43.0 +0.1
baz=56,SNR=25
O05C ⇓S S **03 18 30.5 -0.7**
baz=56
OHCM Honcut 56.65 67 *e*P P 03 10 42.5 -0.9
OHCM *e*pP pP 03 10 56.3 -1.0
L08A Fields 56.66 62 ⇓P P 03 10 43.6 +0.1
baz=56,SNR=33
L08A ⇑S S **03 18 32.1 -0.1**
baz=56
K09A Rome 56.70 62 P P 03 10 43.8 +0.1
baz=56,SNR=55
K09A ⇑S S **03 18 34.6 +2.0**
baz=56
CVS Carmenet Viney 56.70 68⇑P P 03 10 43.2 -0.6
baz=56,SNR=5.9
CVS ⇑S S **03 18 34.0 +1.3**
baz=56
N06A Buffalo Meadow 56.72 65 P P 03 10 44.1 +0.2
baz=56,SNR=55
N06A ⇑S S **03 18 34.1 +1.1**
baz=56
FARB Farallon Islan 56.79 69⇑P P 03 10 43.5 -1.0
baz=57
FARB ⇑S S **03 18 35.4 +1.6**
baz=57
TRO Tromso 56.82 344 *e*P P 03 10 42.3 -2.4
TRO AMS AMS 03 39 24.7
comp=Z,3µm,20.3s,MS5.4
JIRN Jiri 56.85 275 *e*P P 03 10 45.5 +0.6
comp=Z,201nm,0.9s,mb6.1
GUN Gumba 56.88 275 *e*P P 03 10 45.7 +0.6
comp=Z,194nm,0.8s,mb6.2
FFC Flin Flon 56.97 43 P P 03 10 45.9 +0.2
comp=Z,539nm,0.8s,mb6.6,SNR=31
FFC Flin Flon 56.97 43 P P 03 10 45.7 0.0
BEKR Beckwourth 56.98 66 P P 03 10 45.6 -0.1
baz=57,SNR=60
Q04C Lincoln 57.03 67⇑P P 03 10 45.6 -0.6
baz=57
Q04C ⇓S S **03 18 37.1 +0.1**
baz=57
O06A Flanigan 57.10 65⇑P P 03 10 46.5 -0.1
baz=57
O06A ⇓S S **03 18 37.5 -0.4**
baz=57
M08A Happy Creek Ra 57.12 63⇓P P 03 10 47.4 +0.6
baz=57,SNR=42
M08A ⇑S S **03 18 39.9 +1.8**
baz=57
L09A Wilkinson Ranc 57.16 62 P P 03 10 47.5 +0.4
baz=57,SNR=22
L09A ⇓S S **03 18 40.2 +1.5**
baz=57
P05C Yuba Gap, Truc 57.19 66 P P 03 10 47.0 -0.2
baz=57,SNR=12
P05C ⇑S S **03 18 40.9 +1.8**
baz=57
N07B Gerlach 57.20 64 P P 03 10 47.8 +0.4
baz=57,SNR=20
N07B ⇓S S **03 18 39.0 -0.3**
baz=57
BDM Black Diamond 57.31 68⇑P P 03 10 47.9 -0.2
baz=57
BDM ⇓S S **03 18 39.5 -1.2**
baz=57
KKN Kakani 57.35 276 *e*P P 03 10 49.2 +0.8
comp=Z,192nm,0.6s,mb6.3
KKN Kakani 57.35 276 *e*P P 03 10 49.2 +0.8
KKN pmax pmax
comp=Z,192nm,0.6s,mb6.3
P06A Stead Airport, 57.37 66 ⇓P P 03 10 48.6 +0.1
baz=57,SNR=7.9
P06A ⇓S S **03 18 42.9 +1.4**
baz=57
HRY Holter Researc 57.38 55 *e*P P 03 10 48.4 -0.2
HRY *e*pP pP 03 11 02.2 -0.3
PKI Pulchoki 57.42 275 *e*P P 03 10 49.4 +0.5
comp=Z,137nm,0.9s,mb6.0
PKI Pulchoki 57.42 275 *e*P P 03 10 49.4 +0.5
PKI pmax pmax
comp=Z,137nm,0.9s,mb6.0
SUMG Summit 57.42 5⇑*i*P P 03 10 49.3 +0.4
comp=Z,255nm,0.8s,mb6.3
JRSC Jasper Ridge 57.44 69 ⇓P P 03 10 48.3 -0.8
baz=57
JRSC ⇓S S **03 18 44.2 +1.8**
baz=57
LAVA Lava Cap Winer 57.47 67 P P 03 10 48.8 -0.5
baz=57,SNR=33
LAVA ⇓S S **03 18 44.0 +1.2**
baz=57
DMN Daman 57.59 276 *e*P P 03 10 51.0 +0.9
comp=Z,389nm,0.8s,mb6.5
WENL Wente Brothers 57.59 69 ⇑P P 03 10 49.8 -0.3
baz=57,SNR=9.6
WENL ⇑S S **03 18 47.6 +3.2**
baz=57
EGMT Eagleton 57.62 52⇑*i*P P 03 10 49.6 -0.7
comp=Z,178nm,1.7s,mb5.8
EGMT *e*pP pP 03 11 03.1 -1.0
EGMT LR LR
comp=Z,3µm,19.0s,MS5.4
GKN Gorkha 57.62 276 *e*P P 03 10 50.6 +0.3
comp=Z,353nm,0.9s,mb6.4
PAHR Pah Rah Range 57.65 65⇑*i*P P 03 10 50.2 -0.3
comp=Z,98nm,1.3s,mb5.7
O07A Toulon 57.66 65 P P 03 10 50.9 +0.4
baz=57,SNR=48
O07A ⇑S S **03 18 46.8 +1.6**
baz=57
BNLO Ben Lomond (Sa 57.66 69 ⇑P P 03 10 49.6 -1.0
baz=58
BNLO ⇑S S **03 18 47.3 +2.0**
baz=58
M09A Marrel Ranch, 57.67 63 ⇑P P 03 10 50.9 +0.3
baz=57,SNR=11
M09A ⇓S S **03 18 46.9 +1.5**
baz=57
R04C Big Horse Ranc 57.67 68 ⇑P P 03 10 49.7 -0.9
baz=58
R04C ⇑S S **03 18 46.6 +1.1**
baz=58
WCN Washoe City 57.69 66 ⇑P P 03 10 50.9 0.0
baz=58,SNR=11
WCN ⇑S S **03 18 47.9 +2.1**
baz=58
DLMT Dillon 57.84 56⇑*i*P P 03 10 51.6 -0.3
comp=Z,138nm,1.5s,mb5.8
R05C Kirkwood Meado 57.89 67 P P 03 10 52.2 0.0
baz=58,SNR=19
R05C ⇑S S **03 18 49.7 +1.3**
baz=58
S04C Ingram Canyon, 57.92 68 ⇓P P 03 10 51.9 -0.5
baz=58,SNR=7.8
S04C ⇑S S **03 18 50.7 +1.9**
baz=58
O08A Rochester Mine 57.99 64 ⇓P P 03 10 53.3 +0.4
baz=58
N09A Rock Creek Ran 57.99 63 P P 03 10 53.3 +0.4
baz=58,SNR=36
N09A ⇓S S **03 18 53.8 +4.1**
baz=58
HLID Hailey 58.00 59⇑*i*P P 03 10 53.0 0.0
comp=Z,54nm,0.6s,mb5.8
HLID LR LR
comp=Z,3µm,19.0s,MS5.5
MCMT McKenzie Canyo 58.04 57 *e*P P 03 10 52.8 -0.5
MCMT *e*pP pP 03 11 05.6 -1.6
P07A Fallon 58.05 65 ⇓P P 03 10 53.6 +0.2
baz=58
P07A ⇓S S **03 18 52.3 +1.9**
baz=58
AB31 Akbulak array 58.09 310 *i* P P 03 10 52.5 -1.1
AB31 pmax pmax
comp=Z,28nm,0.7s,mb5.4
AB31 Akbulak array 58.09 310⇑*e*P P 03 10 52.5 -1.1
M10A I.L. Ranch, Tu 58.13 62 ⇓P P 03 10 54.2 +0.4
baz=58,SNR=19
CMB Columbia Colle 58.14 67⇑*i*P P 03 10 53.5 -0.5
comp=Z,80nm,1.4s,mb5.6
CMB LR LR
comp=Z,6µm,21.0s,MS5.7
CMB Columbia Colle 58.14 67 P P 03 10 53.7 -0.3
baz=58,SNR=46
CMB ⇑S S **03 18 54.9 +3.2**
baz=58
BOZ Bozeman (W) 58.17 56 PFAKE 03 11 10.0 +16
BOZ LR LR
comp=Z,3µm,19.0s,MS5.4
AKTK Aktyubinsk 58.26 312 *i* P P 03 10 53.5 -1.3
AKTO Aktyubinsk 58.26 312 P P 03 10 53.4 -1.4
AKTO pmax pmax
comp=Z,32nm,1.4s,mb5.2
PACP Pacheco Peak 58.27 69 P P 03 10 54.8 0.0
baz=58,SNR=18
PACP ⇑S S **03 18 55.8 +2.5**
baz=58
SAO San Andreas Ge 58.34 69 *e*P P 03 10 54.8 -0.5
SAO pmax pmax
comp=Z,17nm,0.9s,mb5.1
SAO MLR MLR
comp=Z,3µm,21.0s,MS5.3
SAO San Andreas Ge 58.34 69 *e*P P 03 10 54.8 -0.5
comp=Z,18nm,0.9s,mb5.1
SAO LR LR
comp=Z,3µm,21.0s,MS5.3
R06C Coleville 58.38 66 P P 03 10 56.0 +0.4
baz=58,SNR=54
R06C ⇑S S **03 18 56.5 +1.8**
baz=58
P08A Dixie Valley 58.42 65 ⇓P P 03 10 56.5 +0.6
baz=58,SNR=12
P08A ⇑S S **03 18 59.1 +3.8**
baz=58
BMN Battle Mountai 58.44 63⇑*i*P P 03 10 56.1 0.0
BMN pmax pmax
comp=Z,40nm,0.9s,mb5.5
BMN MLR MLR
comp=Z,3µm,21.0s,MS5.4
BMN Battle Mountai 58.44 63⇑*i*P P 03 10 56.1 0.0
comp=Z,40nm,0.9s,mb5.5
BMN LR LR
comp=Z,3µm,21.0s,MS5.4
KOLN Koldanda 58.45 277 *e*P P 03 10 56.4 +0.3
comp=Z,215nm,0.8s,mb6.2
Q07A Schurz 58.49 66 ⇓P P 03 10 56.4 +0.1
baz=58
Q07A ⇑S S **03 19 00.7 +4.6**
baz=58
HAST UC Hastings Re 58.52 70 ⇑P P 03 10 56.0 -0.6
baz=58,SNR=18
HAST ⇓S S **03 19 01.0 +4.5**
baz=58
S06C San Francisco 58.56 67 P P 03 10 56.7 -0.2
baz=58,SNR=60
S06C ⇑S S **03 19 00.9 +3.8**
baz=58
M11A Holland Ranch, 58.61 62 P P 03 10 58.2 +1.0
baz=58,SNR=16
M11A ⇓S S **03 18 59.2 +1.5**
baz=58
AAI Ambon 58.62 213 P P 03 10 58.3 +1.0
S05C Merced 58.63 68 ⇑P P 03 10 56.5 -0.8
baz=58,SNR=18
S05C ⇑S S **03 19 00.6 +2.6**
baz=58
O09A Fish Creek Ran 58.63 64 P P 03 10 57.8 +0.5
baz=58,SNR=58
O09A ⇑S S **03 19 00.1 +2.2**
baz=58
N10A Dunphy 58.67 63 ⇓P P 03 10 57.7 +0.1
baz=58
N10A ⇑S S **03 19 00.4 +1.9**
baz=58
T05C Eagle Field, D 58.72 69 ⇓P P 03 10 57.9 -0.1
baz=58
T05C ⇑S S **03 19 05.0 +5.9**
baz=58
QLMT Earthquake Lak 58.81 56 *e*P P 03 10 58.7 +0.1
LRV Little Rabbit 58.82 69 *e*P P 03 10 58.7 0.0
R07C Lee Vining 58.91 67 P P 03 10 59.7 +0.4
baz=59,SNR=30
R07C ⇑S S **03 19 06.7 +5.1**
baz=59
O10A Cortez Mining, 58.95 63 ⇓P P 03 11 00.0 +0.4
baz=59,SNR=21
O10A ⇓S S **03 19 05.8 +3.7**
baz=59
V03C Hunter Liggett 58.95 70 ⇑P P 03 10 59.4 -0.2
baz=59,SNR=8.6
V03C ⇓S S **03 19 05.5 +3.4**
baz=59
JMIC Jan Mayen 58.97 354 *e*P P 03 11 00.8 +1.1

JMIC eS S 03 19 06.6 +4.3
JMIC eSS SS 03 23 06.1 +10
U04C Hernandez Rese 59.00 69 ⇑P P 03 10 59.7 -0.3
baz=59,SNR=19
U04C ⇓S S 03 19 04.7 +1.9
baz=59
CAL Calcutta 59.04 269 *e*P P 03 10 58.6 -1.6
CAL *ex* x 03 18 59.8
N11A Elko Archery C 59.05 62 ⇓P P 03 11 00.7 +0.5
baz=59,SNR=8.8
N11A ⇓S S 03 19 06.0 +2.7
baz=59
Q08A Gabbs 59.06 65 ⇓P P 03 11 00.2 -0.1
baz=59,SNR=53
Q08A ⇓S S 03 19 05.8 +2.3
baz=59
P09A Austin 59.07 64 ⇑P P 03 11 00.8 +0.4
baz=59,SNR=10
P09A ⇓S S 03 19 06.6 +3.0
baz=59
LOF Lofoten 59.09 345 *e*P P 03 11 00.9 +0.3
LOF AMb AMB 03 11 04.7
comp=Z,95nm,1.1s,mb5.8
LOF Lofoten 59.09 345 *e*P P 03 11 00.9 +0.3
comp=Z,95nm,1.0s,mb5.8
GCMT Greycliff 59.12 54 *e*P P 03 11 01.1 +0.4
M12A Wells 59.12 61 ⇓P P 03 11 01.4 +0.7
baz=59,SNR=31
M12A ⇑S S 03 19 03.1 -1.2
baz=59
NVAR Mina Array Bea 59.12 66 P P 03 11 00.3 -0.4
comp=Z,20nm,0.8s,mb5.2,baz=297,slow=5.9,SNR=129
NVAR PKP2bc 03 40 37.7
comp=Z,0.7nm,0.9s,baz=145,slow=3.6,SNR=4.1
NVAR Mina Array Bea 59.12 66 P P 03 11 00.3 -0.4
NVAR ⇑*e* 03 40 37.7
HNR Honiara 59.12 176 LR LR 03 32 40.7
comp=Z,8μm,21.4s,MS5.8,baz=360,slow=32
HNR Honiara 59.12 176 PFAKE
HNR LR LR 03 11 10.0 +9.2
comp=Z,9μm,22.0s,MS5.9
OUL Oulu 59.16 338 P P 03 10 59.4 -1.6
NNT Nongplab 59.16 252 P P 03 11 02.0 +1.0
YMR Madison River 59.16 56⇑*i*P P 03 11 01.6 +0.5
comp=Z,156nm,1.3s,mb5.9
T06C Millerton Lake 59.23 68 ⇑P P 03 11 00.5 -1.0
baz=59,SNR=12
T06C ⇑S S 03 19 07.4 +1.7
baz=59
KCC Kaiser Creek 59.25 67 ⇓P P 03 11 01.3 -0.3
baz=59,SNR=24
KCC ⇑S S 03 19 07.9 +2.0
baz=59
YNR Norris Junctio 59.29 56⇑*i*P P 03 11 03.0 +1.1
R08A Mina 59.29 66 P P 03 11 02.4 +0.4
baz=59,SNR=14
R08A ⇑S S 03 19 12.8 +6.2
baz=59
MLAC Mammoth Lakes 59.33 67 ⇓P P 03 11 02.6 +0.4
baz=59
MLAC ⇓S S 03 19 11.6 +4.5
baz=59
ELK Elko 59.38 62⇑*i*P P 03 11 02.6 +0.1
ELK pmax pmax
comp=Z,39nm,0.9s
ELK MLR MLR
comp=Z,3μm,21.0s
ELK Elko 59.38 62⇑*i*P P 03 11 02.6 +0.1
comp=Z,40nm,0.9s,mb5.4
ELK LR LR
comp=Z,3μm,21.0s,MS5.4
YFT Old Faithful 59.38 56⇑*i*P P 03 11 04.0 +1.5
P10A Eureka 59.41 64 P P 03 11 03.2 +0.4
baz=59,SNR=23
P10A ⇑S S 03 19 13.6 +5.5
baz=59
N12A Clover Valley, 59.42 62 P P 03 11 03.5 +0.6
baz=59,SNR=19
N12A ⇑S S 03 19 12.4 +4.3
baz=59
U05C Westside ANR, 59.42 69 ⇑P P 03 11 02.9 +0.1
baz=59
U05C ⇓S S 03 19 08.4 +0.2
baz=59
PKD Parkfield 59.43 69 ⇑P P 03 11 02.3 -0.6
baz=59,SNR=7.5
PKD ⇓S S 03 19 08.1 -0.2
baz=59
V04C Ramage Ranch, 59.43 70 ⇑P P 03 11 02.6 -0.3
baz=59
PCI Palu 59.47 224 P P 03 11 02.6 -0.6
JOF Joensuu 59.49 334 *ep* P 03 11 01.8 -1.5
comp=Z,21nm,0.7s,mb5.3
JOF Joensuu 59.49 334 *e*P P 03 11 01.8 -1.5
JOF pmax pmax
comp=Z,21nm,0.7s,mb5.3
Q09A Carvers 59.52 65 ⇓P P 03 11 03.7 +0.2
baz=59,SNR=6.5
Q09A ⇓S S 03 19 11.2 +1.8
baz=59
LKWY Lake 59.54 56⇑*i*P P 03 11 05.2 +1.6
LKWY *e* pP 03 11 20.0 +2.4
LKWY pmax pmax
comp=Z,119nm,1.2s,mb5.8
LKWY MLR MLR
comp=Z,6μm,19.0s,MS5.7
LKWY Lake 59.54 56⇑*i*P P 03 11 05.2 +1.6
comp=Z,119nm,1.2s,mb5.8
LKWY *e* pP 03 11 20.0 +2.4
LKWY LR LR
comp=Z,6μm,19.0s,MS5.7
O11A Cowboy Ranch, 59.54 63 ⇓P P 03 11 03.7 0.0
baz=59,SNR=15
O11A ⇑S S 03 19 13.3 +3.5
baz=59
PMG Port Moresby 59.56 191 P P 03 11 04.4 +0.6
comp=Z,34nm,0.8s,mb5.4,baz=335,slow=7.5,SNR=6.1
PMG Port Moresby 59.56 191 *e*P P 03 11 04.4 +0.6
comp=Z,122nm,1.4s,mb5.7
PMG LR LR
comp=Z,4μm,22.0s,MS5.5
M13A Montello 59.58 61 P P 03 11 04.2 +0.3
baz=59,SNR=58
M13A ⇓S S 03 19 10.9 +0.6
baz=59
MTUM Tungsten Hills 59.68 67 *e*P P 03 11 04.9 +0.3
FLWY Flagg Ranch 59.70 56⇑*i*P P 03 11 05.7 +1.0
comp=Z,85nm,1.0s,mb5.7
BOK Bokaro 59.74 272 *e*P P 03 11 05.5 +0.5
BOK AMb AMB 03 11 09.0
comp=Z,56nm,1.1s,mb5.5
BOK *ex* x 03 19 09.8
DCID1 Drake Creek 59.76 57⇑*i*P P 03 11 06.0 +0.9
RRI2 Red Ridge 59.85 57⇑*i*P P 03 11 06.5 +0.8
comp=Z,62nm,0.8s,mb5.7
HELL Mitchell Peak, 59.85 68 P P 03 11 05.0 -0.8
baz=60,SNR=72
HELL ⇓S S 03 19 13.3 -0.5
baz=60
V05C Boulder Hill, 59.87 69 ⇓P P 03 11 05.8 -0.1
baz=60
P11A Circle Ranch, 59.87 63 ⇓P P 03 11 05.6 -0.3
baz=60,SNR=5.9
MOOW Moose Ponds 59.89 57⇑*i*P P 03 11 06.7 +0.6
comp=Z,46nm,1.1s,mb5.4
N13A Wendover, West 59.89 61 ⇓P P 03 11 06.6 +0.5
baz=60,SNR=16
N13A ⇑S S 03 19 13.8 -0.5
baz=60
TPAW Teton Pass 59.95 57⇑*i*P P 03 11 07.4 +0.9
comp=Z,139nm,1.3s,mb5.8
RCTC Rector, Farmer 59.97 68 ⇑P P 03 11 05.4 -1.2
baz=60,SNR=5.9
RCTC ⇓S S 03 19 15.6 +0.3
baz=60
R09A Tonopah 59.97 65 P P 03 11 06.5 -0.2
baz=60,SNR=87
R09A ⇓S S 03 19 16.3 +1.0
baz=60
O12A Currie 59.98 62 P P 03 11 06.9 +0.3
baz=60,SNR=62
O12A ⇓S S 03 19 14.4 -1.0
baz=60
TPH Tonopah 59.99 65⇑*i*P P 03 11 06.7 -0.1
TPH pmax pmax
comp=Z,86nm,1.1s,mb5.7
TPH Tonopah 59.99 65⇑*i*P P 03 11 06.7 -0.1
comp=Z,86nm,1.1s,mb5.7
LOHW Long Hollow 60.06 57⇑*i*P P 03 11 08.0 +0.8
comp=Z,167nm,1.4s,mb5.9
TIN Tinemaha 60.08 67 ⇑P P 03 11 07.5 +0.2
baz=60
TIN ⇓S S 03 19 17.8 +1.2
baz=60
HVU Hansel Valley 60.08 60⇑*i*P P 03 11 07.5 +0.1
HVU pmax pmax
comp=Z,25nm,1.1s,mb5.2
HVU Hansel Valley 60.08 60⇑*i*P P 03 11 07.5 +0.1
comp=Z,25nm,1.1s,mb5.2
REDW Red Top Meadow 60.09 57⇑*i*P P 03 11 08.2 +0.7
comp=Z,287nm,1.5s,mb6.1
SMMC Simmler 60.18 70 ⇑P P 03 11 07.6 -0.4
baz=60,SNR=6.3
SMMC ⇓S S 03 19 20.5 +2.6
baz=60
S09A Goldfield 60.23 66 P P 03 11 08.2 -0.1
baz=60,SNR=43
S09A ⇓S S 03 19 22.7 +4.1
baz=60
PECR Pechory 60.24 324 *i*P P 03 11 06.6 -1.9
PECR *e* 03 20 52.6
PECR pmax pmax
comp=Z,600nm,1.4s,mb6.4
PECR pmax pmax
comp=Z,700nm,10.0s
PECR MLR MLR
comp=Z,9μm,16.0s,MS6.0
PECR MLR MLR
comp=N,6μm,15.0s
LAO LASA Array 60.30 52⇑*i*P P 03 11 09.4 +0.5
comp=N,573nm,1.7s,mb6.3
LAO LR LR
comp=Z,4μm,22.0s,MS5.5
AHID Auburn Hatcher 60.35 58⇑*i*P P 03 11 09.3 0.0
comp=Z,82nm,1.2s,mb5.6
AHID LR LR
comp=Z,3μm,21.0s,MS5.3
VES Vestal, Richgr 60.38 69 P P 03 11 08.3 -1.1
baz=60,SNR=27
VES ⇑S S 03 19 20.3 -0.2
baz=60
R10A Warm Springs 60.39 65 ⇓P P 03 11 09.3 -0.2
baz=60,SNR=18
R10A ⇓S S 03 19 22.2 +1.6
baz=60
P12A McGill 60.41 63 P P 03 11 09.8 +0.2
baz=60,SNR=29
P12A ⇑S S 03 19 21.2 +0.3
baz=60
PKM Peak Mountain 60.57 70 ⇑P P 03 11 10.7 0.0
baz=60,SNR=13
PKM ⇑S S 03 19 25.9 +3.0
baz=60
CWC Cottonwood Cre 60.58 67 ⇓P P 03 11 10.5 -0.2
baz=60,SNR=7.8
SPUT South Promonto 60.58 60⇑*i*P P 03 11 10.7 -0.1
GRAC Grapevine Rang 60.62 66 ⇑P P 03 11 11.2 +0.1
baz=60,SNR=36
GRAC ⇑S S 03 19 25.8 +2.2
baz=60
MOR8 Moi Rana 60.68 343 *e*P P 03 11 08.6 -2.9
MOR8 AMb AMB 03 11 12.7
comp=Z,58nm,1.2s,mb5.6
MOR8 Moi Rana 60.68 343 *e*P P 03 11 08.6 -2.9
comp=Z,58nm,1.2s,mb5.6
Q12A Willow Creek R 60.74 63 ⇑P P 03 11 12.0 +0.1
baz=60,SNR=17
Q12A ⇓S S 03 19 26.9 +1.7
baz=60
TRCR Troy Canyon 60.77 64⇑*i*P P 03 11 11.8 -0.3
ISA Isabella 60.86 68⇑*i*P P 03 11 10.9 -1.8
comp=Z,0.1nm,1.7s
ISA LR LR
comp=Z,684nm,21.0s
ISA Isabella 60.86 68 ⇓P P 03 11 11.3 -1.4
baz=61,SNR=17
ISA ⇑S S 03 19 26.3 -0.4
baz=61
HWUT Hardware Ranch 60.87 59⇑*i*P P 03 11 12.9 +0.2
comp=Z,60nm,1.2s,mb5.6
HWUT LR LR
comp=Z,3μm,21.0s,MS5.4
SBC Santa Barbara 60.94 70 ⇓P P 03 11 12.8 -0.4
baz=61
DAC Darwin (Calif) 60.98 67⇑*i*P P 03 11 12.8 -0.7
DAC pmax pmax
comp=Z,25nm,1.1s,mb5.3
DAC MLR MLR
comp=Z,4μm,20.0s,MS5.6
DAC Darwin (Calif) 60.98 67⇑*i*P P 03 11 12.8 -0.6
comp=Z,25nm,1.1s,mb5.3
DAC LR LR
comp=Z,4μm,20.0s,MS5.6
ARVC Arvin 61.01 69 ⇓P P 03 11 12.7 -1.0
baz=61,SNR=7.3
ARVC ⇓S S 03 19 30.7 +2.2
baz=61
DUG Dugway 61.12 61⇑*i*P P 03 11 14.6 +0.1
DUG pmax pmax
comp=Z,94nm,1.3s,mb5.8
DUG MLR MLR
comp=Z,2μm,20.0s,MS5.4
DUG Dugway 61.12 61⇑*i*P P 03 11 14.6 +0.1
comp=Z,94nm,1.3s,mb5.8
DUG LR LR
comp=Z,2μm,20.0s,MS5.4
MPMC Manual Prospec 61.19 67 ⇑P P 03 11 14.5 -0.4
baz=61,SNR=33
MPMC ⇑S S 03 19 33.4 +2.7
baz=61
BW06 Boulder Array 61.19 57⇑*i*P P 03 11 15.1 +0.1
comp=Z,71nm,1.1s,mb5.7
BW06 LR LR
comp=Z,3μm,19.0s,MS5.4
PDAR Pinedale Array 61.19 57 P P 03 11 14.9 0.0
comp=Z,34nm,0.8s,mb5.5,baz=302,slow=2.8,SNR=119
PDAR PKPPKP 03 40 26.3
comp=Z,0.7nm,1.0s,baz=180,slow=1.3,SNR=4.8
NOQ North Oquirrh 61.21 60⇑*i*P P 03 11 15.1 +0.1
comp=Z,119nm,1.3s,mb5.9
FURC Furnace Creek, 61.28 67 ⇓P P 03 11 15.2 -0.3
baz=61,SNR=78
FURC ⇓S S 03 19 32.9 +0.9
baz=61
BSC Santa Cruz Isl 61.29 70 ⇓P P 03 11 14.6 -1.0
baz=61
TCUT Toone Canyon 61.29 59⇑*i*P P 03 11 15.8 +0.2
CTU Camp Tracy 61.39 60⇑*i*P P 03 11 16.2 0.0
comp=Z,43nm,1.2s,mb5.5
OSI Osito Adit 61.42 69 ⇑P P 03 11 15.9 -0.6
baz=61,SNR=6.0
OSI ⇓S S 03 19 35.1 +1.3
baz=61
LRMC Laurel Mountai 61.46 68 ⇑P P 03 11 16.1 -0.6
baz=61,SNR=9.8
LRMC ⇓S S 03 19 33.4 -0.8
baz=61
FUNA Funafuti 61.47 154 PFAKE
FUNA LR LR 03 11 30.0 +13
comp=Z,15μm,20.0s,MS6.2
KAF Kangasniemi 61.51 336 *ep* P 03 11 15.5 -1.6
comp=Z,9.7nm,0.5s,mb5.2
KAF Kangasniemi 61.51 336 *e*P P 03 11 15.5 -1.6
KAF pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
BLG Laguna Peak 61.56 70 ⇑P P 03 11 16.2 -1.2
baz=61
BLG ⇓S S 03 19 34.9 -0.6
baz=61
U10A Ash Meadows, A 61.63 66 ⇑P P 03 11 17.8 -0.1
baz=61,SNR=22
U10A ⇑S S 03 19 38.4 +1.9
baz=61
EDW2 Edwards Air Fo 61.68 69 ⇑P P 03 11 17.6 -0.7
baz=62,SNR=34
EDW2 ⇓S S 03 19 37.2 +0.1
baz=62
SFJD Kangerlussuaq 61.68 12⇑*i*P P 03 11 17.7 -0.6
comp=Z,117nm,1.0s,mb6.0
SFJD *i*S S 03 19 38.1 +1.0
comp=Z,7μm,18.0s
SFJD Kangerlussuaq 61.68 12⇑*i*P P 03 11 17.7 -0.6
SFJD *i*S S 03 19 38.1 +1.0
SFJD pmax pmax
comp=Z,117nm,1.0s,mb6.0
SFJD MLR MLR
comp=Z,7μm,18.0s,MS5.8
NLU North Lily Min 61.70 61⇑*i*P P 03 11 18.5 +0.1
DAU Daniels Canyon 61.85 60 *e*P P 03 11 19.8 +0.4
SNCC San Nicolas Is 61.86 71 ⇓P P 03 11 18.3 -1.2
baz=62
NDI New Delhi 61.89 282 *ex* x 03 10 51.1
NDI AMb AMB 03 10 54.2
comp=Z,86nm,0.8s,mb5.9
DECC Green Verdugo 61.91 69 ⇑P P 03 11 19.0 -0.8
baz=62,SNR=9.4
MPU Maple Canyon 61.91 60⇑*i*P P 03 11 20.1 +0.3
comp=Z,50nm,1.0s,mb5.6
SHOC Shoshone 62.01 67 ⇓P P 03 11 19.8 -0.6
baz=62,SNR=13
SHOC ⇓S S 03 19 42.5 +1.2
baz=62
KSM Kuching 62.07 235 *e*P P 03 11 21.7 +0.8
GSC Goldstone 62.11 68 P P 03 11 20.6 -0.5
baz=62,SNR=30
GSC ⇓S S 03 19 43.5 +1.0
baz=62
FIA1 FINESS Array S 62.13 336⇑*i*P P 03 11 18.8 -2.4
FINES FINESS Array B 62.13 336 P P 03 11 19.4 -1.8
comp=Z,5.8nm,0.4s,mb5.0,baz=35,slow=7.1,SNR=85
FINES PcP PcP 03 12 02.2 +1.1
comp=Z,14nm,0.9s,baz=48,slow=5.7,SNR=5.0
FINES PKPPKP 03 40 23.0
comp=Z,0.8nm,0.7s,baz=357,slow=7.6,SNR=4.6
FINES LR LR 03 40 55.4
comp=Z,8μm,21.8s,MS5.8,baz=24,slow=39
FINES FINESS Array B 62.13 336 P P 03 11 19.5 -1.7
FINES 03 12 02.2
FINES pmax pmax
comp=Z,6.0nm,0.4s
FINES FINESS Array B 62.13 336 P P 03 11 19.4 -1.8
FINES PcP PcP 03 12 02.2 +1.1
FINES PP' 03 40 23.0
FINES LR LR 03 40 55.4
U11A Corn Creek 62.19 66 ⇑P P 03 11 21.6 -0.1
baz=62
U11A ⇑S S 03 19 45.5 +2.0
baz=62
RRX Edison Barstow 62.28 68 ⇑P P 03 11 21.8 -0.5
baz=62
RRX ⇑S S 03 19 45.8 +1.2
baz=62
FMP Fort Macarthur 62.30 70 ⇑P P 03 11 21.0 -1.4
baz=62
FMP ⇓S S 03 19 47.9 +3.0
baz=62
PUL Pulkovo 62.30 332 *ce*P P 03 11 19.3 -3.1
PUL *e* 03 13 37.2
PUL *e*PPP 03 15 09.9
PUL *e*S S 03 19 38.1 -6.8
PUL smax
comp=N,86nm,0.4s
PUL MLR MLR
comp=Z,13μm,19.0s,MS6.1
PUL MLR MLR
comp=E,5μm,20.0s
BFSC Mount Baldy St 62.32 69 ⇑P P 03 11 21.7 -0.8
baz=62,SNR=17
BFSC ⇑S S 03 19 46.1 +1.0
baz=62
ARUT Antelope Range 62.40 63 *e*P P 03 11 23.1 +0.1
CIS Catalina Islan 62.44 70 ⇓P P 03 11 22.4 -0.9
baz=62
CIS ⇑S S 03 19 48.0 +1.4
baz=62
TUQ Turquoise Mtn. 62.54 67 ⇑P P 03 11 23.5 -0.5
baz=62,SNR=34
TUQ ⇑S S 03 19 47.9 0.0
baz=62
CCUT Cedar City 62.60 64⇑*i*P P 03 11 24.5 +0.1
MVU Marysvale 62.61 62 PFAKE 03 11 40.0 +16
MVU LR LR
comp=Z,4μm,22.0s,MS5.5
NSS Namsos 62.62 344 *e*P P 03 11 21.8 -2.7
MSU Marysvale 62.63 62 *e*P P 03 11 24.8 +0.2
TMUT Trail Mountain 62.64 61⇑*i*P P 03 11 24.9 +0.2
SCI San Clemente I 62.64 71 ⇑P P 03 11 23.3 -1.3
baz=62
U12A Valley of Fire 62.68 65 ⇑P P 03 11 24.9 0.0
baz=62,SNR=20
U12A ⇑S S 03 19 51.5 +1.8
baz=62
HEC Hector,Ludlow 62.71 68 ⇑P P 03 11 24.5 -0.6
baz=62,SNR=22
HEC ⇓S S 03 19 49.8 -0.2
baz=62
BBRC Big Bear Sol-O 62.75 68 ⇓P P 03 11 24.7 -0.7
baz=62
ULM Lac du Bonnet 62.76 43 P P 03 11 24.8 -0.6
comp=Z,18nm,0.8s,mb5.2,baz=309,slow=6.5,SNR=28
ULM LR LR 03 42 05.9
comp=Z,5μm,19.4s,MS5.7,baz=330,slow=39
SNG Songkhla 62.87 247 P P 03 11 28.0 +1.8
comp=Z,256nm,1.0s,mb6.3
V12A Nelson 62.98 66 P P 03 11 26.7 -0.2
baz=63,SNR=36
MURC Murrieta 63.03 69 ⇑P P 03 11 26.3 -1.0
baz=63,SNR=16
MOS Moscow 63.08 326⇓*i*P P 03 11 25.6 -2.0
MOS *e**PP pP 03 11 39.3 -2.3
MOS *e* 03 12 03.5
MOS *e* 03 13 49.0
MOS *e*PPP 03 15 13.6
MOS *e*S S 03 19 51.4 -3.3
MOS *e**SS sS 03 20 16.7 -1.5
MOS *e* 03 21 14.9
MOS pmax pmax
comp=Z,61nm,1.3s,mb5.6
MOS MLR MLR
comp=Z,9μm,19.0s,MS6.0
MOS MLR MLR
comp=N,5μm,20.0s,MS5.8
MOS MLR MLR
comp=E,3μm,17.0s,MS5.8
GMRC Granite Mounta 63.15 67 ⇑P P 03 11 27.7 -0.3
baz=63,SNR=41
SRU San Rafael 63.15 61⇑*i*P P 03 11 27.9 -0.2
SRU pmax pmax
comp=Z,70nm,0.9s,mb5.8
SRU San Rafael 63.15 61⇑*i*P P 03 11 27.9 -0.2
comp=Z,70nm,0.9s,mb5.8
RSSD Black Hills 63.18 53⇑*i*P P 03 11 27.9 -0.4
RSSD pmax pmax
comp=Z,58nm,0.8s,mb5.8
RSSD Black Hills 63.18 53⇑*i*P P 03 11 27.9 -0.4
comp=Z,58nm,0.8s,mb5.8
RWWY Rawlins 63.20 56⇑*i*P P 03 11 28.0 -0.3
comp=Z,90nm,1.3s,mb5.7
W12A Cal Nev Ari 63.26 66 ⇓P P 03 11 28.5 -0.3
baz=63,SNR=12
PFO Pinyon Flat Ob 63.48 69 *e*P P 03 11 29.5 -0.7
PFO pmax pmax
comp=Z,82nm,1.6s,mb5.6
PFO Pinyon Flat Ob 63.48 69 *e*P P 03 11 29.5 -0.7
comp=Z,82nm,1.6s,mb5.6
PFO Pinyon Flat Ob 63.48 69 ⇓P P 03 11 29.3 -1.0
baz=63,SNR=11
BELC Belle Mtn. 63.48 68 ⇑P P 03 11 29.3 -0.9
baz=63,SNR=19
109C Camp Elliot, M 63.58 70 ⇑P P 03 11 29.9 -1.0
baz=63,SNR=5.5
MEF Metsahovi 63.61 336 P P 03 11 30.2 -0.9
IRM Iron Mountain 63.88 67 P P 03 11 32.7 -0.2
baz=64,SNR=46
OBN Obninsk 63.95 326 *c*P P 03 11 31.3 -2.0
OBN *e**PP pP 03 11 47.5 +0.1
OBN *e* 03 12 04.2
OBN *e*S S 03 20 03.4 -2.0
OBN pmax pmax
comp=Z,66nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,6μm,20.0s,MS5.8
OBN Obninsk 63.95 326 *e*P P 03 11 31.9 -1.4
comp=Z,27nm,0.6s,mb5.5
W13A Hualapai Mount 63.98 66 ⇑P P 03 11 33.3 -0.3
baz=64,SNR=29
MONP Monument Peak 64.00 69 ⇓P P 03 11 33.1 -0.6
baz=64
SWSC Sam W. Stewart 64.34 69 ⇑P P 03 11 34.9 -1.0
baz=64,SNR=5.6

DVTC **Desert V Tower** 64.35 69 ⇑P P 03 11 35.4 -0.6
baz=64
KULM **Kulim** 64.35 246⇑*i*P P 03 11 37.2 +1.2
X13A **Yucca** 64.36 66 ⇑P P 03 11 35.4 -0.6
baz=64,SNR=44
W14A **Seligman** 64.38 65 P P 03 11 36.4 +0.3
baz=64,SNR=60
PDMCI **Parker Dam,Lak** 64.39 67 ⇓P P 03 11 35.6 -0.6
baz=64,SNR=28
PHWY **Pilot Hill** 64.41 56⇑*i*P P 03 11 35.9 -0.5
VSU **Vasula** 64.43 333⇑*i*P P 03 11 35.2 -1.3
PV10 **Paradox Valley** 64.50 60 *e*P P 03 11 36.8 -0.1
Y12C **Blythe** 64.54 67 ⇑P P 03 11 36.8 -0.4
baz=64,SNR=21
IPM **Ipoh** 64.78 245 P P 03 11 39.8 +1.1
GLA **Glamis** 64.84 68 ⇓P P 03 11 38.8 -0.4
baz=65,SNR=37
W15A **Williams** 64.88 65 ⇓P P 03 11 40.0 +0.6
baz=65,SNR=13
Y13A **Salome** 64.91 67 ⇑P P 03 11 39.1 -0.5
baz=65
PV01 **Paradox Valley** 64.93 60 *e*P P 03 11 39.5 -0.3
X14A **Yava** 65.01 66 ⇑P P 03 11 40.4 +0.1
baz=65,SNR=18
AJM **Ajmer** 65.06 282 *e*P P 03 11 40.6 +0.1
AJM AMb AMB 03 11 44.0
comp=Z,33nm,0.7s,mb5.5
SMCO **Snowmass** 65.09 58⇑*i*P P 03 11 40.8 +0.1
comp=Z,50nm,0.9s,mb5.5
VRHR **Novokhopersk** 65.11 321 *e*P P 03 11 41.3 +0.4
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.6
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR MLR MLR
comp=N,6µm,17.0s,MS5.9
VRHR MLR MLR
comp=Z,6µm,17.0s,MS5.9
VRHR MLR MLR
comp=E,1µm,14.0s,MS5.9
WUAZ **Wupatki** 65.16 64⇑*i*P P 03 11 41.2 -0.1
comp=E,193nm,1.6s,mb5.9
Y14A **Wickenburg** 65.31 66 ⇓P P 03 11 41.9 -0.3
baz=65,SNR=35
X15A **Humboldt** 65.38 65 P P 03 11 43.1 +0.4
baz=65,SNR=84
ISCO **Idaho Springs** 65.39 57 P P 03 11 43.3 +0.6
ISCO pmax pmax
comp=Z,250nm,1.7s,mb6.0
ISCO **Idaho Springs** 65.39 57⇑*i*P P 03 11 43.3 +0.6
comp=Z,252nm,1.7s,mb6.0
DOMB **Dombas** 65.43 344 *e*P P 03 11 42.4 -0.6
DOMB AMb AMB 03 11 45.7
comp=Z,96nm,1.1s,mb5.8
DOMB **Dombas** 65.43 344 *e*P P 03 11 42.4 -0.6
comp=Z,96nm,1.1s,mb5.7
KGM **Kluang** 65.45 241 P P 03 11 45.1 +2.0
VOR **Voronezh** 65.59 323 P P 03 11 42.0 -2.0
VOR pmax pmax
comp=Z,80nm,1.4s,mb5.6
BORG **Borgarnes** 65.72 359⇑*i*P P 03 11 46.2 +1.4
comp=Z,275nm,0.9s,mb6.3
BORG LR LR
comp=Z,3µm,20.0s,MS5.5
Z14A **Wintersburg** 65.75 67 ⇑P P 03 11 44.4 -0.6
baz=66,SNR=7.0
VIS **Vishakhapatnam** 65.75 269 *e*P P 03 11 45.7 +0.7
VIS AMb AMB 03 11 49.9
comp=Z,201nm,1.2s,mb6.0
KAKA **Kakadu** 65.76 206⇑*i*P P 03 11 44.0 -1.1
comp=Z,80nm,0.8s,mb5.8
NB2 **NORSAR Subarra** 65.95 342 P P 03 11 45.8 -0.5
comp=Z,72nm,0.8s,mb5.8,baz=24,slow=6.5
NOA **NORSAR Array B** 65.95 342 P P 03 11 44.6 -1.7
comp=Z,66nm,0.8s,mb5.7,baz=24,slow=6.5,SNR=196
NOA LR LR 03 45 28.9
comp=Z,6µm,18.8s,MS5.8,baz=30,slow=40
NOA **NORSAR Array B** 65.95 342 P P 03 11 44.6 -1.7
NOA pmax pmax
comp=Z,66nm,0.8s
NOA MLR MLR
comp=Z,6µm,18.8s
VRSR **Storozhevoye** 66.00 322*c* *i*P P 03 11 45.2 -1.4
VRSR *e*S S 03 20 26.1 -4.5
VRSR *e* 03 21 35.1
VRSR pmax pmax
comp=N,110nm,1.0s
VRSR pmax pmax
comp=Z,70nm,1.0s,mb5.7
VRSR pmax pmax
comp=E,70nm,0.9s
VRSR smax
comp=N,110nm,4.7s
VRSR smax
comp=Z,110nm,6.6s
VRSR smax
comp=E,150nm,6.3s
VRSR MLR MLR
comp=Z,6µm,20.0s,MS5.8
VRSR MLR MLR
comp=E,3µm,21.0s
NGP **Nagpur** 66.04 275⇑*e*P P 03 11 41.1 -5.8
NGP *ex* x 03 11 46.6
comp=Z,216nm,1.2s
NGP *e*S S 03 20 26.4 -4.7
NAO01 **NORSAR Array S** 66.20 342 *e*P P 03 11 47.0 -0.9
comp=Z,32nm,0.9s,mb5.4
HFA0 **Hagfors New Ar** 66.26 341 P P 03 11 46.4 -1.9
HFS **Hagfors** 66.27 341 LR LR 03 46 24.4
comp=Z,5µm,18.5s,MS5.8,baz=28,slow=41
EYMN **Ely** 66.40 43⇑*i*P P 03 11 48.4 -0.9
comp=Z,93nm,0.9s,mb5.8
EYMN LR LR
comp=Z,5µm,20.0s,MS5.8
115A **Sonoran Desert** 66.64 67 ⇑P P 03 11 50.8 0.0
baz=66,SNR=48
HYA **Hoyanger** 66.76 345 *e*P P 03 11 52.0 +0.6
HYA AMb AMB 03 11 55.8
comp=Z,82nm,1.3s,mb5.6
HYA **Hoyanger** 66.76 345 *e*P P 03 11 52.0 +0.6
comp=Z,82nm,1.3s,mb5.6
ABKT **Ailbek** 66.84 302 P P 03 11 52.4 +0.4
comp=Z,317nm,1.3s,mb6.2,SNR=12
TSI **Tuntungan** 67.02 247 P P 03 11 55.3 +2.2
116A **Eloy** 67.05 66 ⇑P P 03 11 53.0 -0.4
baz=67
PSI **Prapat** 67.36 246 LR LR 03 42 38.9
comp=Z,3µm,20.7s,MS5.6,baz=24,slow=37
MNK **Minsk** 67.41 330 *e*P P 03 11 53.0 -2.6
KONO **Kongsberg** 67.55 342 *e*P P 03 11 54.3 -2.2
KONO *e* 03 11 55.6
KONO *e*S S 03 20 49.2 -0.1
KONO **Kongsberg** 67.55 342⇑*i*P P 03 11 55.4 -1.1
KONO pmax pmax
comp=Z,57nm,0.9s,mb5.6
KONO MLR MLR
comp=Z,9µm,19.0s,MS6.0
KONO **Kongsberg** 67.55 342⇑*i*P P 03 11 55.4 -1.1
comp=Z,58nm,0.9s,mb5.6
KONO LR LR
comp=Z,9µm,19.0s,MS6.0
ASK **Askoy** 67.57 345 *e*P P 03 11 57.3 +0.7
BER **Bergen** 67.64 345 *e*P P 03 11 57.6 +0.5
BER *e*P 03 11 57.6
BER AMb AMB 03 11 59.9
comp=Z,84nm,1.2s,mb5.7
BER *e*S S 03 20 54.4 +3.9
BER AMS AMS 03 48 41.8
comp=Z,3µm,16.9s,MS5.7
BER **Bergen** 67.64 345 *e*P P 03 11 57.6 +0.6
comp=Z,84nm,1.2s,mb5.7
FVA **Vagar** 67.66 352 *e*P P 03 11 57.2 +0.1
FVA **Vagar** 67.66 352 *e*P P 03 11 57.2 +0.1
FTO **Torshavn** 67.66 352 *e*P P 03 11 56.9 -0.3
FTO **Torshavn** 67.66 352 *e*P P 03 11 56.9 -0.3
AKL **Akola** 67.67 276 *e*P P 03 11 58.7 +1.5
AKL *i* x x 03 12 00.8
AKL AMb AMB 03 12 02.8
comp=Z,137nm,1.0s,mb6.0
EGD **Espegrend** 67.76 345 *e*P P 03 11 58.1 +0.3
EGD **Espegrend** 67.76 345 *e*P P 03 11 58.5 +0.7
TUC **Tucson** 67.78 66⇑*i*P P 03 11 57.6 -0.3
TUC pmax pmax
comp=Z,31nm,1.3s,mb5.2
TUC MLR MLR
comp=Z,2µm,22.0s,MS5.3
TUC **Tucson** 67.78 66⇑*i*P P 03 11 57.6 -0.4
comp=Z,31nm,1.3s,mb5.2
TUC LR LR
comp=Z,2µm,22.0s,MS5.3
BLS5 **Blasjo** 68.35 344 *e*P P 03 12 02.2 +0.7
BLS5 AMb AMB 03 12 06.2
comp=Z,68nm,1.1s,mb5.6
BLS5 *e*pP pP 03 12 08.2 -7.6
BLS5 **Blasjo** 68.35 344 *e*P P 03 12 03.4 +1.8
comp=Z,68nm,1.1s,mb5.6
ANMO **Albuquerque** 68.39 61 P P 03 12 01.9 +0.2
ANMO S S 03 21 04.9 +5.5
ANMO **Albuquerque** 68.39 61⇑*i*P P 03 12 01.7 -0.1
ANMO pmax pmax
comp=Z,19nm,0.9s
ANMO MLR MLR
comp=Z,2µm,19.0s
ANMO **Albuquerque** 68.39 61⇑*i*P P 03 12 01.7 0.0
comp=Z,19nm,0.9s,mb5.1
ANMO LR LR
comp=Z,2µm,19.0s,MS5.3
LAZ **Ladron** 68.40 62 *e*P P 03 12 02.1 +0.3
MAK **Makhachkala** 68.65 312*c* *i*P P 03 12 01.0 -2.4
MAK *e* 03 12 28.1
MAK *i* 03 14 31.0
MAK *i* PPP 03 16 15.1
MAK *i* S S 03 20 59.1 -3.3
MAK *i* 03 21 55.6
MAK *i* SS SS 03 25 28.5 +1.0
LENM **Lemitar** 68.66 62 *e*P P 03 12 03.6 +0.2
LPM **Los Pinos Moun** 68.75 62 *e*P P 03 12 03.9 -0.1
Y22C **IRIS PASSCAL I** 68.76 62 ⇑P P 03 12 04.7 +0.6
baz=68
WAL1 **Walls** 68.80 348⇑*e*P P 03 12 03.9 -0.4
WAL1 **Walls** 68.80 348⇑*e*P P 03 12 03.9 -0.4
LRW **Lerwick** 68.86 348⇑*e*P P 03 12 03.8 -0.8
LRW **Lerwick** 68.86 348⇑*e*P P 03 12 03.8 -0.8
HYB **Hyderabad** 69.07 272⇑*i*P P 03 12 06.5 +0.5
comp=Z,240nm,1.0s,mb6.1
HYB *e* 03 12 37.5
HYB *e*S S 03 21 10.0 +2.6
HYB *e*LR LR 03 46 00.0
comp=Z,6.7nm,16.0s
HYB **Hyderabad** 69.07 272⇑*e*P P 03 12 06.5 +0.5
HYB *e*S S 03 21 10.0 +2.6
HYB pmax pmax
comp=Z,240nm,1.0s,mb6.1
HYB **Hyderabad** 69.07 272⇑*e*P P 03 12 06.5 +0.5
comp=Z,240nm,1.0s,mb6.1
HYB *e*S S 03 21 10.0 +2.6
HYB *e*LR LR 03 41 00.0
SNART **Snartemo** 69.23 343 *e*P P 03 12 07.0 0.0
SNART AMb AMB 03 12 10.6
comp=Z,92nm,0.9s,mb5.7
SUW **Suwalki** 69.27 333 *e*P P 03 12 05.8 -1.4
SUW *e*pP pP 03 12 16.4 -5.0
SUW *e*PcP PcP 03 12 28.8 -1.8
SUW *e*S S 03 21 08.5 -1.3
SUW L 03 45 08.3
comp=Z,14nm,20.7s
SUW **Suwalki** 69.27 333 *e*P P 03 12 05.8 -1.4
SUW *e*pP pP 03 12 16.4 -5.0
SUW *e*PcP PcP 03 12 28.8 -1.8
SUW *e*S S 03 21 08.5 -1.3
AFI **Afiamalu** 69.41 147 LR LR 03 39 38.2
comp=Z,4µm,19.6s,MS5.7,baz=322,slow=33
AFI **Afiamalu** 69.41 147 PFAKE 03 12 20.0 +12
AFI LR LR
comp=Z,4µm,21.0s,MS5.7
SCHQ **Schefferville** 69.58 25 P P 03 12 09.0 -0.2
comp=Z,76nm,0.8s,mb5.7,baz=335,slow=6.6,SNR=62
SCHQ LR LR 03 48 08.3
comp=Z,5µm,18.8s,MS5.8,baz=332,slow=41
SCHQ **Schefferville** 69.58 25⇑*i*P P 03 12 08.9 -0.3
comp=Z,148nm,1.0s,mb5.9
SCHQ *e* pP 03 12 21.2 -2.2
LATR **Latur** 69.62 275 *e*P P 03 12 10.2 +0.8
AKASG **Malin Array Be** 70.13 327 P P 03 12 11.3 -1.2
comp=Z,12nm,0.4s,mb5.1,baz=33,slow=6.2,SNR=66
AKASG LR LR 03 45 41.6
comp=Z,7µm,20.9s,MS5.9,baz=30,slow=38
AKASG **Malin Array Be** 70.13 327 P P 03 12 11.4 -1.1
AKASG pmax pmax
comp=Z,12nm,0.4s
AKASG MLR MLR
comp=Z,7µm,20.9s
AKBB **Malin Array Si** 70.13 327⇑*i*P P 03 12 10.5 -2.0
KIV **Kislovodsk** 70.15 315 P P 03 12 13.6 +1.0
comp=Z,287nm,0.7s,mb6.3,SNR=7.8
KIV **Kislovodsk** 70.15 315 ⇓P P 03 12 12.8 +0.2
SNR=8.8
KIV **Kislovodsk** 70.15 315*c* *i*P P 03 12 12.6 0.0
KIV *e**PP pP 03 12 27.5 +0.6
KIV *e* 03 12 32.8
KIV *e* 03 14 51.6
KIV *e*S S 03 21 17.3 -2.8
KIV *e*SS SS 03 25 47.7 -2.9
KIV pmax pmax
comp=Z,94nm,1.7s,mb5.4
KIV MLR MLR
comp=Z,6µm,23.0s,MS5.8
KIV **Kislovodsk** 70.15 315⇑*i*P P 03 12 12.4 -0.2
comp=Z,44nm,0.8s,mb5.4
KIV LR LR
comp=Z,3µm,19.0s,MS5.6
CTA **Charters Tower** 70.21 190 P P 03 12 12.3 -0.8
comp=Z,44nm,1.1s,mb5.3,baz=4.7,slow=7.9,SNR=13
CTA **Charters Tower** 70.21 190 *e*P P 03 12 12.1 -0.9
CTA pmax pmax
comp=Z,32nm,1.1s
CTA **Charters Tower** 70.21 190 *e*P P 03 12 12.1 -0.9
comp=Z,32nm,1.1s,mb5.2
CTAO **Charters Tower** 70.21 190 *e*P P 03 12 11.6 -1.4
CTAO pmax pmax
comp=Z,73nm,1.2s,mb5.5
CTAO MLR MLR
comp=Z,3µm,22.0s,MS5.5
CTAO **Charters Tower** 70.21 190 *e*P P 03 12 11.6 -1.5
comp=Z,72nm,1.2s,mb5.5
CTAO LR LR
comp=Z,3µm,22.0s,MS5.5
ZEI **Tsey** 70.50 314 *e*P P 03 12 13.6 -1.2
ZEI pmax pmax
comp=Z,23nm,0.7s,mb5.2
MUD **Monsted U'grnd** 70.60 341⇑*i*P P 03 12 15.3 -0.1
comp=Z,26nm,0.7s,mb5.3
MUD *e* 03 15 06.9
MUD *i*S S 03 21 19.9 -5.5
MUD *i* 03 26 33.8
MUD *i* 03 30 12.1
MUD
comp=Z,6µm,18.0s
MUD **Monsted U'grnd** 70.60 341⇑*i*P P 03 12 15.3 -0.1
MUD *i*S S 03 21 19.9 -5.5
MUD pmax pmax
comp=Z,26nm,0.7s,mb5.3
MUD **Monsted U'grnd** 70.60 341⇑*i*P P 03 12 15.3 -0.1
comp=Z,26nm,0.7s,mb5.3
MUD *e* 03 15 06.9
MUD *i*S S 03 21 19.9 -5.5
MUD *i* 03 26 33.8
MUD *i* 03 30 12.1
COP **Copenhagen** 70.61 339⇑*i*P P 03 12 14.7 -0.7
comp=Z,23nm,0.9s,mb5.1
COP *i* 03 13 51.5
COP *i* 03 15 03.7
COP *i* 03 16 36.4
COP *e*S S 03 20 54.6 -31
COP
comp=Z,4µm,20.0s
COP **Copenhagen** 70.61 339⇑*i*P P 03 12 14.7 -0.7
COP *i* 03 16 36.4
COP pmax pmax
comp=Z,23nm,0.9s,mb5.1
COP MLR MLR
comp=Z,4µm,20.0s,MS5.7
KSU1 **Kansas State U** 70.65 52⇑*i*P P 03 12 13.6 -2.1
DGRG **David-gareji** 70.82 312 P P 03 12 16.8 0.0
DGRG S SKSac 03 22 05.1 -10
JFWS **Jewell Farm** 70.83 46⇑*i*P P 03 12 15.0 -1.8
JFWS pmax pmax
comp=Z,15nm,0.7s,mb5.0
JFWS **Jewell Farm** 70.83 46⇑*i*P P 03 12 14.9 -1.8
comp=Z,15nm,0.7s,mb5.0
ONI **Oni** 70.86 314 P P 03 12 17.3 +0.3
ONI S S 03 21 28.4 0.0
TBLG **Delisi** 70.91 313 *e*P P 03 12 17.9 +0.6
TBLG **Delisi** 70.91 313 P P 03 12 17.9 +0.6
MTA **Mtatsminda** 70.91 313 P P 03 12 17.3 0.0
MTA S S 03 21 28.1 -0.9
MDRS **Chennai** 71.18 268 *e*P P 03 12 19.9 +1.0
MDRS AMb AMB 03 12 23.5
comp=Z,296nm,1.1s,mb6.1
POO **Poona** 71.29 277⇑*i*P P 03 12 19.0 -0.6
comp=Z,159nm,1.2s,mb5.8
MNTX **Cornudas Mount** 71.37 63⇑*i*P P 03 12 19.9 -0.2
comp=Z,46nm,1.2s,mb5.3
MNTX LR LR
comp=Z,2µm,22.0s,MS5.3
MVH1 **Achvaich** 71.39 349⇑*e*P P 03 12 19.4 -0.7
MVH1 **Achvaich** 71.39 349⇑*e*P P 03 12 19.4 -0.7
RGN **Rugen** 71.44 338⇑*i*P P 03 12 20.1 -0.3
comp=Z,110nm,1.0s,mb5.7
WAR **Warsaw** 71.45 333 *e*P P 03 12 20.8 +0.2
WAR *e*pP pP 03 12 29.1 -5.7
WAR *e*S S 03 21 30.7 -4.5
WAR *e*SKS 03 22 24.3
WAR L 03 46 25.2
comp=Z,12nm,20.9s
WAR **Warsaw** 71.45 333 *e*P P 03 12 20.8 +0.2
WAR *e**PP pP 03 12 29.1 -5.7
WAR *e*S S 03 21 30.7 -4.5
WAR *e* 03 22 24.3
WAR MLR MLR
comp=Z,12µm,20.9s,MS6.1
GKP **Gorka Klasztor** 71.60 336 *e*P P 03 12 21.2 -0.3
GKP *e*pP pP 03 12 30.5 -5.3
GKP L 03 46 59.7
comp=Z,10nm,21.0s
MCD **Coleburn Disti** 71.61 349⇑*e*P P 03 12 21.2 -0.3
MCD **Coleburn Disti** 71.61 349⇑*e*P P 03 12 21.2 -0.3
ANN **Anapa** 71.79 319 *e*P P 03 12 19.8 -2.8
ANN *e**PP pP 03 12 33.6 -3.3
ANN *e*S S 03 21 35.0 -4.2
ANN pmax pmax
comp=Z,69nm,1.8s,mb5.3
MME1 **Meikle Cairn** 71.83 348⇑*e*P P 03 12 22.0 -0.8
MME1 **Meikle Cairn** 71.83 348⇑*e*P P 03 12 22.0 -0.8
KAC **Achnashellach** 71.94 350⇑*i*P P 03 12 22.8 -0.7
KAC **Achnashellach** 71.94 350⇑*i*P P 03 12 22.8 -0.7
KARD **Karad** 71.97 276 *i*P P 03 12 24.6 +0.9
GNI **Garni** 72.13 312 *e*P P 03 12 25.8 +1.1
GNI **Garni** 72.13 312⇑*i*P P 03 12 25.8 +1.2
GNI pmax pmax
comp=Z,80nm,1.0s
GNI MLR MLR
comp=Z,2µm,22.0s
GNI **Garni** 72.13 312⇑*i*P P 03 12 25.8 +1.2
comp=Z,80nm,1.0s,mb5.6
GNI LR LR
comp=Z,2µm,22.0s,MS5.4
KPL **Plockton** 72.14 350⇑*e*P P 03 12 23.5 -1.1
KPL **Plockton** 72.14 350⇑*e*P P 03 12 23.5 -1.1
DZM **Mont Dzumac** 72.17 170 *e*P P 03 12 24.9 +0.1
DZM **Mont Dzumac** 72.17 170 P P 03 12 25.7 +0.8
comp=Z,28nm,1.0s,mb5.2,baz=42,slow=10,SNR=10
DZM LR LR 03 38 51.3
comp=Z,4µm,21.2s,MS5.6,baz=353,slow=32
WRAB **Tennant Creek** 72.17 202 P P 03 12 24.0 -0.9
comp=Z,795nm,1.1s,mb6.6,SNR=28
WRAB **Tennant Creek** 72.17 202 *e*P P 03 12 23.7 -1.2
WRAB pmax pmax
comp=Z,280nm,1.1s,mb6.1
WRAB **Tennant Creek** 72.17 202 *e*P P 03 12 23.6 -1.3
comp=Z,280nm,1.1s,mb6.1
WB2 **Warramunga Arr** 72.18 202 *e*P P 03 12 22.5 -2.5
WRA **Warramunga Arr** 72.19 202 P P 03 12 23.8 -1.2
comp=Z,107nm,1.0s,mb5.7,baz=20,slow=6.5,SNR=71
WRA LR LR 03 41 14.9
comp=Z,2µm,21.6s,MS5.3,baz=35,slow=34
KSB **Sheil Bridge** 72.23 350⇑*i*P P 03 12 24.9 -0.4
KSB **Sheil Bridge** 72.23 350⇑*i*P P 03 12 24.9 -0.4
KAR1 **Arisaig** 72.57 350⇑*e*P P 03 12 27.3 0.0
KAR1 **Arisaig** 72.57 350⇑*e*P P 03 12 27.3 0.0
DIGO **Kars** 72.58 313 *i*P P 03 12 27.7 +0.4
BCA **Borcka** 72.60 314 *e*P P 03 12 26.6 -0.9
LVV **L'vov** 72.63 330⇑*i*P P 03 12 26.7 -0.9
LVV *e* 03 12 46.7
LVV *e* 03 15 04.7
LVV *e*S S 03 21 40.1 -8.7
LVV MLR MLR
comp=E,3µm,17.0s,MS5.7
LVV MLR MLR
comp=Z,3µm,17.0s,MS5.6
LVV MLR MLR
comp=N,2µm,18.0s,MS5.7
BSEG **Bad Segeberg** 72.70 340 *e*P P 03 12 27.9 -0.1
comp=Z,41nm,0.9s,mb5.4
BSEG **Bad Segeberg** 72.70 340 *e*P P 03 12 27.9 -0.1
BSEG pmax pmax
comp=Z,41nm,0.9s,mb5.4
WMOK **Wichita Mounta** 72.80 56⇑*i*P P 03 12 27.7 -0.9
WMOK pmax pmax
comp=Z,39nm,1.0s,mb5.3
WMOK **Wichita Mounta** 72.80 56⇑*i*P P 03 12 27.7 -0.9
comp=Z,39nm,1.0s,mb5.3
FITZ **Fitzroy Crossi** 72.92 211 P P 03 12 29.2 -0.1
comp=Z,56nm,0.9s,mb5.5,baz=20,slow=5.4,SNR=59
FITZ **Fitzroy Crossi** 72.92 211⇑*i*P P 03 12 28.9 -0.4
comp=Z,98nm,0.9s,mb5.7
SIM **Simferopol'** 73.05 321 *e*P P 03 12 29.0 -1.1
SIM *e*S S 03 21 47.0 -6.5
SIM pmax pmax
comp=Z,34nm,0.8s,mb5.3
SIM MLR MLR
comp=Z,9µm,20.9s,MS6.0
EAB **Aberfoyle** 73.11 349⇑*i*P P 03 12 29.9 -0.5
EAB **Aberfoyle** 73.11 349⇑*i*P P 03 12 29.9 -0.5
ESY **Stoneypath** 73.14 348⇑*e*P P 03 12 29.8 -0.9
ESY **Stoneypath** 73.14 348⇑*e*P P 03 12 29.8 -0.9
RUE **Ruedersdorf** 73.22 337⇑*i*P P 03 12 30.5 -0.6
comp=Z,101nm,1.1s,mb5.7
KWP **Kalwaria** 73.22 331 *e*P P 03 12 31.0 -0.1
KWP *e*S S 03 21 56.4 +0.9
KWP *e*SKS 03 22 40.2
KWP L 03 48 18.7
comp=Z,5.5nm,21.1s
KWP **Kalwaria** 73.22 331 *e*P P 03 12 31.0 -0.1
KWP *e*S S 03 21 56.4 +0.9
KWP *e* 03 22 40.2
KWP MLR MLR
comp=Z,6µm,21.1s,MS5.8
KWP **Kalwaria** 73.22 331 *e*P P 03 12 31.0 -0.1
KWP *e*S S 03 21 56.4 +0.9
KWP *e*SKS 03 22 40.2
CLDR **Caldiran** 73.31 311 *e*P P 03 12 33.7 +2.1
EAU **Auchinoon** 73.33 348⇑*e*P P 03 12 31.6 -0.1
EAU **Auchinoon** 73.33 348⇑*e*P P 03 12 31.6 -0.1
EBL **Broad Law** 73.34 348⇑*i*P P 03 12 31.6 -0.3
EBL **Broad Law** 73.34 348⇑*i*P P 03 12 31.6 -0.3
KIS **Kishinev** 73.39 326*c* *i*P P 03 12 28.0 -4.1
KIS *e* pP 03 12 46.0 -0.4
KIS *e* 03 15 18.0
KIS *e*PPP 03 17 02.0
KIS *e*S S 03 21 53.0 -4.4
KIS pmax pmax
comp=Z,1µm,10.0s
KIS pmax pmax
comp=Z,1µm,18.0s
KIS MLR MLR
comp=Z,10µm,20.0s,MS6.1
KIS MLR MLR
comp=N,6µm,18.0s,MS6.0
KIS MLR MLR
comp=E,3µm,15.0s,MS6.0
KIS MLR MLR
comp=Z,10µm,20.0s
POB1 **Observatory** 73.45 349⇑*e*P P 03 12 32.4 0.0
POB1 **Observatory** 73.45 349⇑*e*P P 03 12 32.4 0.0
PMSU **Muirshiel** 73.49 349⇑*e*P P 03 12 32.4 -0.3
PMSU **Muirshiel** 73.49 349⇑*e*P P 03 12 32.4 -0.3
PGBU **Glenifferbraes** 73.49 349⇑*e*P P 03 12 32.1 -0.6
PGBU **Glenifferbraes** 73.49 349⇑*e*P P 03 12 32.1 -0.6
OJC **Ojcow** 73.60 333⇑*i*P P 03 12 33.0 -0.3
OJC *e*S S 03 21 59.6 -0.2
OJC *e*SS SS 03 26 44.4 +0.9

OJC MLR MLR
comp=Z,57µm,20.8s,MS6.8
ESK Eskdalemuir 73.81 348 *e*P **P 03 12 34.3 -0.3**
ESK Eskdalemuir 73.81 348 *e*P **P 03 12 34.3 -0.3**
ESK Eskdalemuir 73.81 348 *e*P **P 03 12 34.2 -0.4**
comp=Z,104nm,0.8s,mb5.8
ESK LR LR
comp=Z,2µm,19.0s,MS5.5
STHS Stebnicka Huta 73.87 331 *e*P **P 03 12 35.5 +0.6**
STHS pmax pmax
comp=Z,60nm,0.9s,mb5.5
STHS Stebnicka Huta 73.87 331 *e*P **P 03 12 35.5 +0.6**
comp=Z,60nm,0.9s,mb5.5
ECK Cauldkaine Hil 73.93 348⇑ *e*P **P 03 12 34.7 -0.6**
ECK AMb AMB 03 12 38.2
comp=Z,207nm,1.1s,mb6.0
ECK Cauldkaine Hil 73.93 348⇑ *e*P **P 03 12 34.7 -0.6**
ECK AMb AMB 03 12 38.2
comp=Z,207nm,1.1s,mb6.0
ERZM Erzurum 73.93 313 *i* P **P 03 12 37.0 +1.8**
EZM Erzurum 73.93 313 *e*P **P 03 12 37.2 +1.9**
KOLS Kolonicke sedl 73.97 330 *e*P **P 03 12 35.0 -0.5**
KOLS *e*S S 03 22 03.3 -0.6
KOLS *e* 03 57 28.9
KOLS Kolonicke sedl 73.97 330 *e*P **P 03 12 35.0 -0.5**
KOLS *e*S S 03 22 03.3 -0.6
VANB Van 74.00 311 *e*P **P 03 12 36.4 +0.8**
BWH Wardlaw 74.00 348⇑ *e*P **P 03 12 35.7 0.0**
BWH Wardlaw 74.00 348⇑ *e*P **P 03 12 35.7 0.0**
BHH Howats Hill 74.03 348⇑ *e*P **P 03 12 35.3 -0.5**
BHH Howats Hill 74.03 348⇑ *e*P **P 03 12 35.3 -0.5**
KSP Ksiaz 74.04 335 *e*P **P 03 12 35.9 0.0**
KSP *e*PcP PcP 03 12 46.7 -4.2
KSP *e*S S 03 22 05.9 +1.1
KSP *e*SKS 03 23 01.9
KSP L 03 48 12.8
comp=Z,22nm,22.2s
KSP Ksiaz 74.04 335 *e*P **P 03 12 35.5 -0.4**
KSP *e*S S 03 22 03.0 -1.8
KSP MLR MLR
comp=Z,25µm,22.2s,MS6.5
KSP Ksiaz 74.04 335 *e*P **P 03 12 35.5 -0.4**
KSP *e*S S 03 22 03.0 -1.8
KSP *e* 03 27 11.6
KSP LR LR
comp=Z,25µm,22.2s,MS6.5
NRDL Niedersach Rie 74.08 339 *e*P **P 03 12 35.8 -0.4**
XAL Allendale 74.11 347⇑ *e*P **P 03 12 36.1 -0.3**
XAL Allendale 74.11 347⇑ *e*P **P 03 12 36.1 -0.3**
CCM Cathedral Cave 74.14 49⇑ *i*P **P 03 12 35.1 -1.4**
CCM pmax pmax
comp=Z,49nm,1.0s,mb5.4
CCM MLR MLR
comp=Z,3µm,22.0s,MS5.5
CCM Cathedral Cave 74.14 49⇑ *i*P **P 03 12 35.0 -1.4**
comp=Z,49nm,1.0s,mb5.4
CCM LR LR
comp=Z,3µm,22.0s,MS5.5
BURAR Bucovina Array 74.14 328⇑ *i*P **P 03 12 35.9 -0.6**
BURAR Bucovina Array 74.14 328⇑ *i*P **P 03 12 35.9 -0.6**
NIE Niedzica 74.15 332 *e*P **P 03 12 37.1 +0.5**
SLM Saint Louis 74.17 48⇑ *i*P **P 03 12 35.7 -1.0**
SLM pmax pmax
comp=Z,110nm,1.1s,mb5.7
SLM Saint Louis 74.17 48⇑ *i*P **P 03 12 35.7 -1.0**
comp=Z,110nm,1.1s,mb5.7
RAC Raciborz 74.19 333 *e*P **P 03 12 37.2 +0.4**
RAC MLR MLR
comp=Z,14µm,21.1s,MS6.2
RAC MLR MLR
comp=N,6µm,18.9s,MS6.2
RAC MLR MLR
comp=E,10µm,18.3s,MS6.2
UZH Uzhgorod 74.23 330 *e*P **P 03 12 37.0 0.0**
UZH *e*S ScS 03 22 48.0 +4.6
UZH MLR MLR
comp=Z,2µm,17.0s,MS5.4
CRVS Cervenica-Dubn 74.25 331 *e*P **P 03 12 37.2 0.0**
CRVS *e*S S 03 22 05.6 -1.5
CRVS *e* 03 57 20.1
CRVS Cervenica-Dubn 74.25 331 *e*P **P 03 12 37.2 0.0**
CRVS *e*S S 03 22 05.6 -1.5
AAM Ann Arbor 74.26 42⇑ *i*P **P 03 12 36.8 -0.4**
AAM pmax pmax
comp=Z,106nm,0.9s,mb5.8
AAM MLR MLR
comp=Z,6µm,19.0s,MS5.9
AAM Ann Arbor 74.26 42⇑ *i*P **P 03 12 36.8 -0.4**
comp=Z,106nm,0.9s,mb5.8
AAM LR LR
comp=Z,6µm,19.0s,MS5.9
LWH Whinny Nab 74.40 346⇑ *e*P **P 03 12 38.5 +0.5**
LWH Whinny Nab 74.40 346⇑ *e*P **P 03 12 38.5 +0.5**
UPC Upice 74.42 335 *e*P **P 03 12 38.6 +0.5**
OKC Ostrava-Krasne 74.42 333 *e*P **P 03 12 38.7 +0.5**
OKC *e*PP PP 03 15 32.4 +7.5
OKC *ex* x 03 17 29.0
OKC *e*S S 03 22 09.2 +0.2
OKC *ex* x 03 27 17.5
OKC *ex* x 03 30 33.7
OKC AMS AMS 03 48 00.0
comp=Z,11µm,21.1s
OKC Ostrava-Krasne 74.42 333 *e*P **P 03 12 38.7 +0.5**
OKC *e* 03 15 32.4
OKC *e*S S 03 22 09.2 +0.2
OKC MLR MLR
comp=Z,11µm,21.1s,MS6.1
OKC Ostrava-Krasne 74.42 333 *e*P **P 03 12 38.7 +0.5**
OKC *e*PP PP 03 15 32.4 +7.5
OKC *e* 03 17 29.0
OKC *e*S S 03 22 09.2 +0.2
OKC *e*SS SS 03 27 17.5 +21
OKC *e* 03 30 33.7
DPC Dobruska-Polom 74.48 335 *e*P **P 03 12 39.1 +0.6**
DPC *e*pP pP 03 12 47.3 -5.5
DPC *e*PP PP 03 15 27.7 +2.4
DPC *ex* x 03 17 30.2
DPC *e*S S 03 22 08.3 -1.4
DPC *ex* x 03 27 11.1
DPC *ex* x 03 30 48.4
DPC AMS AMS 03 49 30.0
comp=Z,10µm,17.0s
DPC Dobruska-Polom 74.48 335 *e*P **P 03 12 39.1 +0.6**
DPC *e**PP pP 03 12 47.3 -5.5
DPC *e* 03 15 27.7
DPC *e*S S 03 22 08.3 -1.4
DPC MLR MLR
comp=Z,10µm,17.0s,MS6.2
CLL Collm 74.48 337⇑ *i*P **P 03 12 37.9 -0.6**
comp=Z,106nm,1.0s,mb5.7
CLL *e*pP pP 03 12 45.5 -7.4
CLL *e*PP PP 03 15 21.4 -4.0
CLL *e*PPP 03 17 14.4
CLL *e*S S 03 22 09.0 -0.7
CLL *e*PPS 03 23 06.1
CLL *e*SS SS 03 27 08.8 +12
CLL *e*SSS 03 30 25.5
CLL *e*SSSS 03 32 10.5
CLL *e*LQ 03 36 32.1
CLL *e*LR LR 03 41 03.0
CLL *e*L 03 47 38.1
comp=Z,10µm,22.0s
CLL Collm 74.48 337 ⇑P **P 03 12 37.8 -0.7**
comp=Z,logA/T=2.0,mb5.7
CLL *i* *PP pP 03 12 45.7 -7.2
CLL *e* 03 13 02.0
CLL *e*PP PP 03 15 24.0 -1.4
CLL *e* 03 17 25.0
CLL *e*S S 03 22 08.0 -1.7
CLL *e*PPS 03 23 03.0
CLL Collm 74.48 337⇑ *i*P **P 03 12 37.8 -0.7**
comp=Z,106nm,1.0s,mb5.7
CLL *i* pP pP 03 12 45.7 -7.2
CLL *e*pPcP 03 13 02.0
CLL *e*PP PP 03 15 24.0 -1.4
CLL *es*PPP 03 17 25.0
CLL *e*(S) S 03 22 08.0 -1.7
CLL *e*PPS 03 23 03.0
CLL *e*(SS) 03 27 42.0
CLL *e*(SSS) 03 30 54.0
CLL Collm 74.48 337⇑ *i*P **P 03 12 37.8 -0.7**
CLL *e*S S 03 22 08.0 -1.7
CLL pmax pmax
comp=Z,106nm,1.0s,mb5.7
CLL MLR MLR
comp=Z,9µm,17.5s,MS6.1
CLL Collm 74.48 337⇑ *i*P **P 03 12 37.8 -0.7**
comp=Z,106nm,1.0s,mb5.7
CLL *e*S S 03 22 08.0 -1.7
CLL LR LR
comp=Z,9µm,17.5s,MS6.1
FVM French Village 74.59 49⇑ *i*P **P 03 12 38.1 -1.0**
FVM *e* pP 03 12 53.1 -0.4
FVM pmax pmax
comp=Z,40nm,0.7s,mb5.5
FVM French Village 74.59 49⇑ *i*P **P 03 12 38.0 -1.1**
comp=Z,40nm,0.7s,mb5.5
FVM *e* pP 03 12 53.1 -0.4
HKR Hakkari 74.62 310 *e*P **P 03 12 39.1 -0.2**
BRG Berggiesshubel 74.64 336 *e*P **P 03 12 38.8 -0.6**
comp=Z,49nm,1.3s,mb5.3
BRG Berggiesshubel 74.64 336 *i* P **P 03 12 39.1 -0.3**
comp=Z,29nm,1.3s,mb5.0
BRG *i* 03 12 47.7
comp=Z,18nm,1.1s
BRG PP PP 03 15 25.0 -1.7
BRG *i* 03 17 25.0
BRG S S 03 22 14.0 +2.5
BRG SS SS 03 26 59.0 -0.3
BRG Berggiesshubel 74.64 336 *i* P **P 03 12 39.1 -0.3**
BRG *i* 03 12 47.7
BRG 03 15 25.0
BRG S S 03 22 14.0 +2.5
BRG SS SS 03 26 59.0 -0.3
BRG pmax pmax
comp=Z,29nm,1.3s,mb5.0
BRG MLR MLR
comp=N,4µm,18.0s,MS5.8
BRG MLR MLR
comp=E,2µm,15.7s,MS5.8
BRG MLR MLR
comp=Z,6µm,17.5s,MS5.9
BRG Berggiesshubel 74.64 336 *i* P **P 03 12 39.1 -0.3**
comp=Z,29nm,1.3s,mb5.0
BRG *i* 03 12 47.7
BRG PP PP 03 15 25.0 -1.7
BRG *i* 03 17 25.0
BRG S S 03 22 14.0 +2.5
BRG SS SS 03 26 59.0 -0.3
BRG LR LR
comp=Z,6µm,17.5s,MS5.9
MORC Moravsky Berou 74.65 334⇑ *i*P **P 03 12 39.6 +0.1**
MORC Moravsky Berou 74.65 334 P **P 03 12 39.1 -0.4**
MORC pmax pmax
comp=Z,110nm,1.0s,mb5.7
MORC Moravsky Berou 74.65 334⇑ *i*P **P 03 12 38.7 -0.8**
comp=Z,107nm,1.0s,mb5.7
KELT Kelkit 74.72 315 *i* P **P 03 12 40.3 +0.5**
EZC Erzincan 74.78 314 *e*P **P 03 12 42.4 +2.2**
IBBN Ibbenburen 74.78 341 *e*P **P 03 12 40.4 +0.2**
comp=Z,86nm,0.9s,mb5.7
MNGI Mangalore 74.78 272 *e*P **P 03 12 41.3 +1.0**
MNGI AMb AMB 03 12 43.5
comp=Z,415nm,1.1s,mb6.3
MNGI *i* x x 03 22 13.6
BNGL BINGOL 74.79 313 *i* P **P 03 12 41.5 +1.3**
PVCC Panska Ves 74.79 336 *e*P **P 03 12 40.6 +0.3**
PVCC *e*PP PP 03 15 33.3 +5.3
PVCC *ex* x 03 17 31.4
PVCC *e*S S 03 22 14.3 +1.2
PVCC *ex* x 03 27 42.5
PVCC *ex* x 03 31 05.7
PVCC AMS AMS 03 49 40.0
comp=Z,12µm,18.2s
PVCC Panska Ves 74.79 336 *e*P **P 03 12 40.6 +0.3**
PVCC *e* 03 15 33.3
PVCC *e*S S 03 22 14.3 +1.2
PVCC MLR MLR
comp=Z,12µm,18.2s,MS6.2
LIKS Likavka 74.84 332 *e*P **P 03 12 42.2 +1.6**
LIKS pmax pmax
comp=Z,66nm,1.0s,mb5.5
LIKS Likavka 74.84 332 *e*P **P 03 12 42.2 +1.6**
comp=Z,66nm,1.0s,mb5.5
KECS Kecovo 74.93 331 *e*P **P 03 12 41.0 -0.1**
KECS pmax pmax
comp=Z,20nm,1.1s,mb5.0
KECS Kecovo 74.93 331 *e*P **P 03 12 41.0 -0.1**
comp=Z,20nm,1.1s,mb5.0
CUKT Cukurca 74.95 310 *e*P **P 03 12 41.8 +0.6**
VRI Vrincioaia 75.11 326⇑ *i*P **P 03 12 41.7 -0.4**
VRI Vrincioaia 75.11 326⇑P **P 03 12 41.6 -0.5**
WIM Isle of Man 75.14 349⇑ *e*P **P 03 12 42.1 -0.2**
WIM Isle of Man 75.14 349⇑ *e*P **P 03 12 42.1 -0.2**
PLOR Plostina 75.15 326⇑ *i*P **P 03 12 43.1 +0.7**
CFR Carcaliu 75.19 325⇓ *i*P **P 03 12 42.5 -0.1**
CFR Carcaliu 75.19 325⇓P **P 03 12 42.5 -0.1**
BTMT Batman 75.23 312 *e*P **P 03 12 44.1 +1.3**
PALK Pallekele 75.23 264 P **P 03 12 44.8 +2.0**
comp=Z,551nm,0.9s,mb6.5,SNR=5.6
PALK Pallekele 75.23 264 *e*P **P 03 12 44.0 +1.1**
comp=Z,95nm,0.9s,mb5.7
PRA Prague 75.25 336 ⇑P **P 03 12 43.0 +0.1**
DIKM Dikmen 75.27 318 *e*P **P 03 12 44.2 +1.1**
PRU Pruhonice 75.29 336 *e*P **P 03 12 43.4 +0.2**
PRU *e*PP PP 03 15 35.2 +3.0
PRU *ex* x 03 17 24.3
PRU *e*S S 03 22 17.0 -1.7
PRU *ex* x 03 27 27.5
PRU *ex* x 03 31 15.2
PRU AMS AMS 03 49 50.0
comp=Z,10µm,18.1s
PRU Pruhonice 75.29 336 *e*P **P 03 12 43.4 +0.2**
PRU *e* 03 15 35.2
PRU *e* 03 17 24.3
PRU *e*S S 03 22 17.0 -1.7
PRU MLR MLR
comp=Z,10µm,18.1s,MS6.1
WTSB Winterswijk 75.30 341⇑ *e*P **P 03 12 42.6 -0.6**
comp=Z,108nm,1.1s,mb5.7
LHO Holmfirth 75.34 347⇑ *e*P **P 03 12 42.5 -1.0**
LHO Holmfirth 75.34 347⇑ *e*P **P 03 12 42.5 -1.0**
VRAC Vranov 75.34 334 LR LR 03 50 24.9
comp=Z,17µm,18.5s,MS6.4,baz=10,slow=39
VRAC Vranov 75.34 334⇑ *i*P **P 03 12 43.7 +0.2**
VRAC Vranov 75.34 334 ⇑P **P 03 12 43.6 +0.2**
SIUC Southern Illin 75.39 48 *e*P **P 03 12 42.7 -1.1**
comp=Z,16nm,0.8s,mb5.0
KVT Kavak 75.40 318 *e*P **P 03 12 44.4 +0.6**
VYHS Vyhne 75.42 332 *e*P **P 03 12 44.0 +0.1**
VYHS *e*S S 03 22 17.3 -2.8
VYHS Vyhne 75.42 332 *e*P **P 03 12 44.0 +0.1**
comp=Z,51nm,1.1s,mb5.4
VYHS *e*S S 03 22 17.3 -2.8
VYHS LR LR
comp=Z,3µm,15.3s,MS5.7
MOX Moxa 75.44 338 *e*P **P 03 12 43.7 -0.3**
comp=Z,56nm,0.8s,mb5.5
MOX Moxa 75.44 338 *e*P **P 03 12 44.1 +0.1**
comp=Z,123nm,1.5s,mb5.6
MOX
comp=Z,8µm,19.0s
TANN Tannenbergstha 75.44 337 *e*P **P 03 12 43.9 -0.1**
JCT Junction City 75.45 60 P **P 03 12 43.6 -0.5**
JCT pmax pmax
comp=Z,87nm,1.2s,mb5.6
JCT Junction City 75.45 60⇑ *i*P **P 03 12 43.3 -0.8**
comp=Z,87nm,1.3s,mb5.5
BLO Bloomington 75.50 46⇑ *i*P **P 03 12 43.3 -1.1**
BLO pmax pmax
comp=Z,37nm,0.9s,mb5.3
BLO Bloomington 75.50 46⇑ *i*P **P 03 12 43.3 -1.1**
comp=Z,37nm,0.9s,mb5.3
MSNY Massena 75.54 35 *e*P **P 03 12 43.8 -0.8**
MSNY *e* pP 03 12 57.9 -1.1
BZK Bozkurt 75.55 319 *e*P **P 03 12 44.7 0.0**
KBI1 Birley Grange 75.57 346⇑ *e*P **P 03 12 43.7 -1.0**
KBI1 Birley Grange 75.57 346⇑ *e*P **P 03 12 43.7 -1.0**
BEST Besiri 75.57 312 *i* P **P 03 12 45.9 +1.1**
NKC Novy Kostel 75.61 337 *e*P **P 03 12 45.6 +0.6**
NKC *e*PP PP 03 15 36.1 +1.2
NKC *ex* x 03 17 40.5
NKC *e*S S 03 22 22.7 +0.5
NKC MLR MLR
comp=Z,8µm,16.8s,MS6.1
NKC Novy Kostel 75.61 337 *e*P **P 03 12 45.6 +0.6**
NKC *e*PP PP 03 15 36.1 +1.2
NKC *e* 03 17 40.5
NKC *e*S S 03 22 22.7 +0.5
NKC *e*SS SS 03 27 34.0 +20
NKC *e* 03 31 11.2
PSZ Piszkesteto 75.61 331⇑ *i*P **P 03 12 45.3 +0.3**
PSZ Piszkesteto 75.61 331⇑ *i*P **P 03 12 45.0 0.0**
BOYT Boyabat 75.61 319 *i* P **P 03 12 46.4 +1.4**
BYBT Boyabat 75.63 319 *e*P **P 03 12 45.9 +0.7**
PTK Pertek 75.66 314 *e*P **P 03 12 45.5 +0.2**
TREC Trest 75.67 335 *e*P **P 03 12 45.6 +0.3**
TREC *e*PP PP 03 15 38.0 +2.6
TREC *ex* x 03 17 26.2
TREC *e*S S 03 22 23.9 +1.1
TREC *ex* x 03 27 34.4
TREC *ex* x 03 31 11.5
TREC AMS AMS 03 48 50.0
comp=Z,13µm,22.3s
TREC Trest 75.67 335 *e*P **P 03 12 45.6 +0.3**
TREC *e* 03 15 38.0
TREC *e* 03 17 26.2
TREC *e*S S 03 22 23.9 +1.1
TREC MLR MLR
comp=Z,13µm,22.3s,MS6.2
UBBA Unterbreizbach 75.67 339 *e*P **P 03 12 44.9 -0.4**
comp=Z,192nm,1.7s,mb5.8
HARR Harsova 75.68 325⇑ *i*P **P 03 12 45.9 +0.5**
TIRR Tirgusor 75.69 324⇑ *i*P **P 03 12 45.0 -0.5**
TIRR Tirgusor 75.69 324⇑ *i*P **P 03 12 44.6 -0.9**
BUG Bochum--Univer 75.70 341 *e*P **P 03 12 45.1 -0.4**
comp=Z,162nm,1.3s,mb5.8
BUG Bochum--Univer 75.70 341 P **P 03 12 44.5 -1.0**
MIAR Mount Ida 75.70 53 P **P 03 12 44.6 -0.9**
MIAR pmax pmax
comp=Z,51nm,1.1s,mb5.4
MIAR Mount Ida 75.70 53⇑ *i*P **P 03 12 44.4 -1.1**
comp=Z,51nm,1.1s,mb5.4
DRGR 75.70 329⇑ *i*P **P 03 12 45.0 -0.5**
DRGR 75.70 329 ⇑P **P 03 12 45.0 -0.5**
MLR Muntele Rosu 75.72 326 P **P 03 12 45.5 -0.1**
comp=Z,35nm,0.7s,mb5.4,baz=359,slow=4.9,SNR=52
MLR LR LR 03 48 56.9
comp=Z,9µm,21.4s,MS6.0,baz=41,slow=38
MLR Muntele Rosu 75.72 326⇑ *i*P **P 03 12 45.5 -0.1**
MLR Muntele Rosu 75.72 326 P **P 03 12 45.5 -0.1**
MLR pmax pmax
comp=Z,35nm,0.7s
MLR MLR MLR
comp=Z,9µm,21.4s
AEU East Anglia Un 75.74 345⇑ *e*P **P 03 12 45.9 +0.2**
AEU East Anglia Un 75.74 345⇑ *e*P **P 03 12 45.9 +0.2**
SMOL Smolenice 75.82 333 *e*P **P 03 12 46.3 +0.1**
SMOL Smolenice 75.82 333 *e*P **P 03 12 46.4 +0.2**
KWE Weaver Farm 75.85 347⇑ *e*P **P 03 12 45.7 -0.7**
KWE Weaver Farm 75.85 347⇑ *e*P **P 03 12 45.7 -0.7**
AS31 Alice Springs 75.87 201 *e*P **P 03 12 45.7 -0.8**
ASAR Alice Springs 75.87 201 P **P 03 12 46.2 -0.3**
comp=Z,22nm,0.7s,mb5.2,baz=14,slow=5.1,SNR=80
ASAR PKPPKP 03 40 04.5
comp=Z,1.0nm,0.9s,baz=161,slow=1.7,SNR=5.2
WCB1 Church Bay 75.88 348 *e*P **P 03 12 46.6 +0.1**
WCB1 AMb AMB 03 12 49.2
comp=Z,212nm,1.1s,mb6.0
WCB1 Church Bay 75.88 348 *e*P **P 03 12 46.6 +0.1**
WCB1 AMb AMB 03 12 49.2
comp=Z,212nm,1.1s,mb6.0
WPM1 Penmaenmawr 75.91 348 *e*P **P 03 12 46.5 -0.2**
WPM1 Penmaenmawr 75.91 348 *e*P **P 03 12 46.5 -0.2**
MANZ Manzenberg 75.92 337 *e*P **P 03 12 46.7 -0.1**
comp=Z,46nm,1.0s,mb5.4
SVSK Karacayir 75.92 316 *e*P **P 03 12 47.3 +0.5**
USIN University of 75.94 47⇑ *i*P **P 03 12 46.1 -0.7**
comp=Z,132nm,1.0s,mb5.8
USIN *e* pP 03 12 59.2 -2.0
WLF1 Llynfaes 75.94 348 *e*P **P 03 12 47.0 +0.1**
WLF1 Llynfaes 75.94 348 *e*P **P 03 12 47.0 +0.1**
MSL Mosul 75.96 310 *ex* x 03 12 49.0
MSL *ex* x 03 22 34.0
ERPA Erie 75.96 40⇑ *i*P **P 03 12 46.4 -0.6**
comp=Z,150nm,1.0s,mb5.9
ERPA LR LR
comp=Z,4µm,20.0s,MS5.7
PARMO Parma 75.96 49⇑ *i*P **P 03 12 46.4 -0.7**
LONY Lake Ozonia 75.97 35⇑ *i*P **P 03 12 45.6 -1.5**
LONY *e* pP 03 12 59.9 -1.5
SNX Sinaia 75.99 327 P **P 03 12 48.3 +1.2**
APAE Packway 76.00 344⇑ *e*P **P 03 12 47.7 +0.5**
APAE Packway 76.00 344⇑ *e*P **P 03 12 47.7 +0.5**
YRC Rhoscolyn 76.01 348 *e*P **P 03 12 46.7 -0.6**
YRC Rhoscolyn 76.01 348 *e*P **P 03 12 46.7 -0.6**
DIY Diyarbakir 76.07 313 *e*P **P 03 12 48.2 +0.6**
ROTZ Rotzenmuhle 76.10 337 *e*P **P 03 12 48.1 +0.3**
FRNY Flat Rock 76.15 34⇑ *i*P **P 03 12 46.5 -1.6**
BALT Daday 76.16 320 *i* P **P 03 12 49.7 +1.5**
SBD1 Bryn Du 76.16 347⇑ *e*P **P 03 12 48.1 0.0**
SBD1 AMb AMB 03 12 51.5
comp=Z,303nm,0.9s,mb6.2
SBD1 Bryn Du 76.16 347⇑ *e*P **P 03 12 48.1 0.0**
SBD1 AMb AMB 03 12 51.5
comp=Z,303nm,0.9s,mb6.2
ZST Bratislava 76.20 333 *e*P **P 03 12 48.2 -0.2**
ZST *e*S S 03 22 28.1 -0.6
ZST Bratislava 76.20 333 *e*P **P 03 12 48.2 -0.2**
comp=Z,81nm,1.1s,mb5.6
ZST *e*S S 03 22 28.1 -0.6
ZST LR LR
comp=Z,11µm,19.7s,MS6.2
DLF Lyons Farm 76.20 350⇑ *i*P **P 03 12 48.0 -0.4**
DSB Dublin 76.24 349 *e*P **P 03 12 48.4 -0.2**
comp=Z,277nm,0.8s,mb6.2
ACSO Alum Creek Sta 76.24 43⇑ *i*P **P 03 12 47.6 -1.0**
comp=Z,41nm,1.0s,mb5.3
ACSO LR LR
comp=Z,3µm,21.0s,MS5.6
DCN Croghan 76.24 350⇑ *i*P **P 03 12 48.6 0.0**
YRE Yr Eifl 76.25 348 *e*P **P 03 12 47.9 -0.7**
YRE AMb AMB 03 12 51.0
comp=Z,269nm,1.1s,mb6.1
YRE Yr Eifl 76.25 348 *e*P **P 03 12 47.9 -0.7**
YRE AMb AMB 03 12 51.0
comp=Z,269nm,1.1s,mb6.1
MTUR Matau 76.26 327 P **P 03 12 49.6 +0.9**
BUD Budapest 76.27 332⇑ *i*P **P 03 12 49.4 +0.7**
MARD Mardín 76.27 312 *i* P **P 03 12 49.6 +0.9**
ALLY Alegheny Colle 76.29 40⇑ *i*P **P 03 12 48.4 -0.5**
TOS Tosya 76.31 319 *e*P **P 03 12 49.5 +0.6**
KHC Kasperske Hory 76.33 336 *e*P **P 03 12 49.8 +0.7**
KHC *ex* x 03 15 52.1
KHC *ex* x 03 17 43.3
KHC *e*S S 03 22 31.3 +1.1
KHC *ex* x 03 27 41.4
KHC *ex* x 03 31 21.9
KHC AMS AMS 03 50 40.0
comp=Z,10µm,17.7s
KHC Kasperske Hory 76.33 336 *e*P **P 03 12 49.8 +0.7**
KHC *e*S S 03 22 31.3 +1.1
KHC MLR MLR
comp=Z,10µm,17.7s,MS6.2
WCI Wyandotte Cave 76.37 46⇑ *i*P **P 03 12 48.3 -1.0**
WCI pmax pmax
comp=Z,116nm,0.9s,mb5.8
WCI Wyandotte Cave 76.37 46⇑ *i*P **P 03 12 48.3 -1.0**
comp=Z,116nm,0.9s,mb5.8
HBAR Harrisburg 76.39 51 *e*P **P 03 12 49.0 -0.5**
GRA1 Grafenberg Arr 76.42 338 *e*P **P 03 12 49.8 +0.2**
comp=Z,227nm,1.1s,mb6.0
GRA1 *e*PP PP 03 15 48.7 +7.0
GRA1 *e*S S 03 22 21.2 -10
GRA1 LR LR
comp=Z,9µm,19.2s,MS6.1
GRF Grafenberg Arr 76.42 338 *e*P **P 03 12 49.8 +0.2**
comp=Z,227nm,1.1s,mb6.0
GRF *e*PP PP 03 15 48.7 +7.0
GRF *e*S S 03 22 21.2 -10
GRF *e*L 03 51 03.9
comp=Z,9µm,19.2s
GRF Grafenberg Arr 76.42 338 *e*P **P 03 12 49.8 +0.2**

GRF *e* 03 15 48.7
GRF *eS* S 03 22 21.2 -10
GRF pmax pmax
comp=Z,227nm,1.1s,mb6.0
GRF MLR MLR
comp=Z,9µm,19.2s,MS6.1
GRF Grafenberg Arr 76.42 338 *eP* **P 03 12 49.8 +0.2**
GRF *e* 03 15 48.7
GRF *eS* S 03 22 21.2 -10
GRF pmax pmax
comp=Z,227nm,1.1s,mb6.0
GRF MLR MLR
comp=Z,9µm,19.2s,MS6.1
HLM1 Long Mynd 76.49 347⇑ *eP* **P 03 12 50.0 0.0**
HLM1 AMb AMB 03 12 52.6
comp=Z,203nm,1.1s,mb6.0
HLM1 Long Mynd 76.49 347⇑ *eP* **P 03 12 50.0 0.0**
HLM1 AMb AMB 03 12 52.6
comp=Z,203nm,1.1s,mb6.0
WET Wettzell 76.50 336 *eP* **P 03 12 50.4 +0.3**
comp=Z,120nm,1.1s,mb5.7
WET Wettzell 76.50 336 *eP* **P 03 12 50.4 +0.3**
WET pmax pmax
comp=Z,120nm,1.1s,mb5.7
GLAT Glass 76.50 49⇑ *iP* **P 03 12 49.5 -0.5**
PKSN Nyarlorinc 76.53 331 *eP* **P 03 12 51.3 +1.1**
GEC2 GERESS Array S 76.56 336 *eP* **P 03 12 50.2 -0.2**
comp=Z,57nm,1.1s,mb5.4
GEC2 GERESS Array S 76.56 336 *eP* **P 03 12 50.2 -0.2**
GEC2 pmax pmax
comp=Z,57nm,1.1s,mb5.4
GERES GERESS Array B 76.56 336 P P **03 12 50.6 +0.2**
comp=Z,20nm,0.8s,mb5.1,baz=34,slow=5.0,SNR=82
GERES PKPPKP 03 39 49.5
comp=Z,0.3nm,0.7s,baz=264,slow=1.3,SNR=4.0
GERES LR LR 03 51 15.2
comp=Z,12µm,18.2s,MS6.2,baz=20,slow=39
MYA Malatya 76.56 314 *eP* **P 03 12 51.9 +1.5**
MALT Malatya 76.57 314⇑ *iP* **P 03 12 51.5 +1.0**
MALT Malatya 76.57 314⇑ *iP* **P 03 12 51.3 +0.8**
MALT pmax pmax
comp=Z,156nm,1.4s,mb5.8
MALT Malatya 76.57 314⇑ *iP* **P 03 12 51.3 +0.8**
comp=Z,156nm,1.4s,mb5.8
TNS Taunus Mts 76.58 339 *eP* **P 03 12 50.4 -0.1**
comp=Z,118nm,0.9s,mb5.8
TNS Taunus Mts 76.58 339 *eP* **P 03 12 50.4 -0.1**
TNS pmax pmax
comp=Z,118nm,0.9s,mb5.8
PKS7 Kunszentmiklos 76.61 331⇓ *eP* **P 03 12 51.6 +0.9**
HGN Heimansgroeve 76.62 341⇑ *eP* **P 03 12 50.0 -0.7**
comp=Z,198nm,1.1s,mb5.9
HGN *ePP* PP 03 15 55.8 +12
HGN *ePPP* 03 17 48.5
HGN *eS* S 03 22 38.7 +5.4
HGN *eSS* SS 03 26 58.4 -31
BEBN Eben Emael 76.64 341 P P **03 12 50.8 0.0**
NCB Newcomb 76.66 35⇑ *iP* **P 03 12 49.8 -1.2**
comp=Z,71nm,1.0s,mb5.5
BUC1 Bucharest 76.67 326 P P **03 12 50.9 -0.1**
SAFT Safranbolu 76.70 320 *eP* **P 03 12 53.0 +1.8**
TRD Trivandrum 76.72 267 *eP* **P 03 12 52.0 +0.8**
TRD AMb AMB 03 12 55.1
comp=Z,93nm,0.8s,mb5.8
MEM Membach 76.75 341 P P **03 12 51.6 +0.1**
CORM Corum 76.75 318 *eP* **P 03 12 49.9 -1.5**
CONA Conrad Observa 76.80 334 *iP* **P 03 12 52.5 +0.7**
comp=Z,102nm,1.4s,mb5.5,SNR=70
SOP Sopron 76.82 333⇑ *eP* **P 03 12 52.9 +1.0**
CANT Cankiri 76.83 319 *eP* **P 03 12 51.7 -0.2**
SSW Stow on the Wo 76.87 346⇑ *eP* **P 03 12 52.4 +0.3**
SSW Stow on the Wo 76.87 346⇑ *eP* **P 03 12 52.4 +0.3**
PKS6 Bocsa 76.89 331 *eP* **P 03 12 52.8 +0.6**
UCC Uccle 76.91 342 P P **03 12 52.1 -0.2**
SKP1 Kophill 76.95 346⇑ *eP* **P 03 12 52.2 -0.4**
SKP1 Kophill 76.95 346⇑ *eP* **P 03 12 52.2 -0.4**
HTR Trewern Hill 76.97 347⇑ *eP* **P 03 12 52.8 +0.1**
HTR AMb AMB 03 12 55.8
comp=Z,210nm,2.2s,mb5.7
HTR Trewern Hill 76.97 347⇑ *eP* **P 03 12 52.8 +0.1**
HTR AMb AMB 03 12 55.8
comp=Z,210nm,2.2s,mb5.7
MCH1 Michaelchurch 77.01 347⇑ *eP* **P 03 12 53.0 0.0**
MCH1 Michaelchurch 77.01 347⇑ *eP* **P 03 12 53.0 0.0**
ELDT Eldivan 77.01 319 *iP* **P 03 12 53.6 +0.7**
BCLA Clavier 77.08 341 P P **03 12 53.0 -0.3**
TOD Tromm 77.08 339⇑ *eP* **P 03 12 53.4 +0.1**
URFA Urfa 77.09 314 *eP* **P 03 12 54.4 +1.0**
BZS Buzias 77.10 329⇑ *iP* **P 03 12 52.6 -0.8**
BZS Buzias 77.10 329 ⇑P **P 03 12 52.6 -0.8**
ABH Alteburg 77.10 340⇑ *eP* **P 03 12 52.9 -0.5**
SIND Sindeldorf 77.13 338 P P **03 12 53.9 +0.3**
PRD Provadia 77.15 324 *iP* **P 03 12 53.5 -0.2**
PRD Provadia 77.15 324 *iP* **P 03 12 53.5 -0.2**
KDZE Karadeniz Ereo 77.16 321 *eP* **P 03 12 51.1 -2.6**
SNF Seneffe 77.20 342 P P **03 12 53.8 -0.1**
SWS Schriesheim-Wi 77.21 339 P **P 03 12 54.5 +0.4**
TSA1 Sevenoaks 77.25 345 *eP* **P 03 12 54.4 +0.1**
TSA1 Sevenoaks 77.25 345 *eP* **P 03 12 54.4 +0.1**
LBNH Lisbon 77.26 33⇑ *iP* **P 03 12 54.0 -0.3**
LBNH pmax pmax
comp=Z,94nm,1.3s,mb5.6
LBNH MLR MLR
comp=Z,5µm,20.0s,MS5.8
LBNH Lisbon 77.26 33⇑ *iP* **P 03 12 54.0 -0.3**
comp=Z,94nm,1.3s,mb5.6
LBNH LR LR
comp=Z,5µm,20.0s,MS5.8
PKME Peaks-Kenny Pk 77.28 31⇑ *iP* **P 03 12 54.1 -0.3**
NATX Nacogdoches 77.29 56 *eP* **P 03 12 54.1 -0.4**
comp=Z,457nm,1.6s,mb6.2
SWN1 Swindon 77.30 346⇑ *eP* **P 03 12 54.9 +0.3**
SWN1 Swindon 77.30 346⇑ *eP* **P 03 12 54.9 +0.3**
BNN Bunyan 77.31 316 *eP* **P 03 12 53.5 -1.2**
ATAB Bozova 77.32 314 *iP* **P 03 12 56.1 +1.5**
MOA Molln 77.32 335⇑ *iP* **P 03 12 54.8 +0.2**
comp=Z,458nm,3.1s,SNR=33
CDAG Cicekdag 77.32 318 *iP* **P 03 12 54.8 +0.1**
WVT Waverly 77.33 48⇑ *iP* **P 03 12 53.8 -0.9**
WVT pmax pmax
comp=Z,33nm,1.0s,mb5.2
WVT Waverly 77.33 48⇑ *iP* **P 03 12 53.8 -0.9**
comp=Z,33nm,1.0s,mb5.2
HGH Gray Hill 77.33 347⇑ *eP* **P 03 12 54.6 -0.2**
HGH AMb AMB 03 12 58.0
comp=Z,405nm,1.0s,mb6.3
HGH Gray Hill 77.33 347⇑ *eP* **P 03 12 54.6 -0.2**
HGH AMb AMB 03 12 58.0
comp=Z,405nm,1.0s,mb6.3
ACCN Adirondack Com 77.37 35⇑ *iP* **P 03 12 53.9 -1.0**
ACCN *ePP* PP 03 15 48.8 -1.0
RUP Ruppelstein 77.38 340⇑ *eP* **P 03 12 55.1 +0.1**
BIDO Bidbid 77.44 291 ⇑P **P 03 12 55.9 +0.5**
SNR=25
GIVF Givet 77.47 342⇑ *iP* **P 03 12 55.6 +0.1**
comp=Z,265nm,1.0s,mb5.8
GIVF Givet 77.47 342⇑ *iP* **P 03 12 55.6 +0.1**
GIVF pmax pmax
comp=Z,132nm,1.0s,mb5.8
GIVF Givet 77.47 342⇑ *iP* **P 03 12 55.6 +0.1**
comp=Z,132nm,1.0s,mb5.8
CRAR CRAIOVA 77.49 327 P P **03 12 56.5 +0.9**
BINY Binghamton 77.50 37⇑ *iP* **P 03 12 54.6 -1.1**
comp=Z,118nm,1.5s,mb5.6
BINY LR LR
comp=Z,5µm,20.0s,MS5.8
ZIMR 77.51 326⇑ *iP* **P 03 12 55.9 +0.2**
ZIMR 77.51 326 P P **03 12 55.4 -0.3**
ZIMR 77.51 326 ⇑P **P 03 12 55.9 +0.1**
ARSA Arzberg 77.51 334 *iP* **P 03 12 56.2 +0.5**
comp=Z,230nm,1.6s,mb5.9,SNR=84
SGKT Shrigoynuk 77.52 320 *iP* **P 03 12 56.9 +1.1**
PKSM Moragy 77.52 331⇑ *iP* **P 03 12 55.0 -0.8**
PKSM Moragy 77.52 331⇑ *iP* **P 03 12 55.1 -0.7**
DOU Dourbes 77.53 342 P P **03 12 55.6 -0.3**
BR131 Keskin Array S 77.56 318⇑ *eP* **P 03 12 55.8 -0.2**
comp=Z,20nm,0.7s,mb5.2
BR131 LR LR
comp=Z,1µm,20.0s,MS5.3
BRTR Keskin Array B 77.56 318 P P **03 12 56.5 +0.5**
comp=Z,53nm,1.0s,mb5.4,baz=58,slow=2.9,SNR=63
BRTR Keskin Array B 77.56 318 P P **03 12 56.5 +0.5**
BRTR pmax pmax
comp=Z,53nm,1.0s

MENF Mencas 77.56 343⇑ *eP* **P 03 12 56.1 +0.1**
HNH Hanover 77.60 34⇑ *iP* **P 03 12 56.0 -0.2**
comp=Z,4.3nm,1.0s
HNH *e* pP 03 13 10.4 -0.2
WLF Walferdange 77.61 341 *eP* **P 03 12 56.7 +0.4**
WLF Walferdange 77.61 341 P **P 03 12 56.5 +0.2**
WLF Walferdange 77.61 341⇑ *iP* **P 03 12 56.4 +0.1**
WLF pmax pmax
comp=Z,157nm,1.4s,mb5.8
WLF Walferdange 77.61 341⇑ *iP* **P 03 12 56.4 +0.1**
comp=Z,156nm,1.4s,mb5.8
BAIF Baives 77.64 342⇑ *iP* **P 03 12 56.7 +0.3**
comp=Z,265nm,0.9s,mb5.9
BAIF Baives 77.64 342⇑ *iP* **P 03 12 56.7 +0.3**
BAIF pmax pmax
comp=Z,132nm,0.9s,mb5.9
BAIF Baives 77.64 342⇑ *iP* **P 03 12 56.7 +0.3**
comp=Z,132nm,0.9s,mb5.9
HATD Hatta, Dubai 77.65 294 ⇑P **P 03 12 57.0 +0.5**
SNR=40
DJES Djerdap 77.66 328 *iP* **P 03 12 53.6 -2.9**
BHD Baghdad 77.68 307 *ix* x 03 12 55.0
BHD *ex* x 03 22 41.0
HDH Heidenheim-Cha 77.69 338 P **P 03 12 57.3 +0.5**
SWK Warminster 77.73 346⇑ *eP* **P 03 12 56.6 -0.4**
SWK Warminster 77.73 346⇑ *eP* **P 03 12 56.6 -0.4**
GZT Gaziantep 77.75 314 *iP* **P 03 12 57.9 +0.9**
STU Stuttgart 77.76 338 *eP* **P 03 12 56.9 -0.2**
STU Stuttgart 77.76 338⇑ *iP* **P 03 12 56.8 -0.3**
STU pmax pmax
comp=Z,104nm,1.0s,mb5.7
STU Stuttgart 77.76 338⇑ *iP* **P 03 12 56.8 -0.4**
comp=Z,104nm,1.0s,mb5.7
ANTO Ankara 77.80 319 *eP* **P 03 12 57.7 +0.4**
ANTO Ankara 77.80 319⇑ *iP* **P 03 12 58.0 +0.7**
ANTO Ankara 77.80 319 ⇓*iP* **P 03 12 58.5 +1.2**
SNR=24
ANTO Ankara 77.80 319⇑ *iP* **P 03 12 57.7 +0.4**
ANTO pmax pmax
comp=Z,145nm,1.3s,mb5.8
ANTO MLR MLR
comp=Z,3µm,19.0s,MS5.6
ANTO Ankara 77.80 319⇑ *iP* **P 03 12 57.7 +0.4**
comp=Z,145nm,1.3s,mb5.8
ANTO LR LR
comp=Z,3µm,19.0s,MS5.6
ASHO Ashiyiah 77.80 294 ⇑P **P 03 12 57.8 +0.4**
SNR=38
AVNT Avonos 77.81 317 *iP* **P 03 12 57.7 +0.3**
MBWA Marble Bar 77.81 215 *eP* **P 03 12 56.8 -0.5**
comp=Z,78nm,1.0s,mb5.6
MBWA LR LR
comp=Z,6µm,22.0s,MS5.9
FUR Furstenfeldbru 77.82 337 *eP* **P 03 12 57.6 +0.2**
comp=Z,170nm,1.0s,mb5.9
FUR Furstenfeldbru 77.82 337 *eP* **P 03 12 57.6 +0.2**
FUR pmax pmax
comp=Z,170nm,1.0s,mb5.9
KAMT Kaman 77.82 318 *eP* **P 03 12 58.0 +0.5**
LANF Langenberg 77.89 339⇑ *eP* **P 03 12 57.9 +0.1**
VAL Valentia 77.94 352 *eP* **P 03 12 58.4 +0.3**
LBG Lerchenberg 77.96 339 P **P 03 12 58.7 +0.5**
MDU Mudurnu 77.96 320 *eP* **P 03 12 58.6 +0.4**
FFD Franklin Falls 78.03 34⇑ *iP* **P 03 12 58.2 -0.4**
comp=Z,95nm,1.1s,mb5.6
KOGS Kog 78.03 333 P **P 03 12 58.8 +0.2**
HEX Exmoor 78.03 347⇑ *eP* **P 03 12 58.6 -0.1**
HEX Exmoor 78.03 347⇑ *eP* **P 03 12 58.6 -0.1**
HKT Hockley 78.06 58⇑ *iP* **P 03 12 58.4 -0.4**
HKT pmax pmax
comp=Z,73nm,1.8s,mb5.3
HKT MLR MLR
comp=Z,9µm,20.0s,MS6.1
HKT Hockley 78.06 58⇑ *iP* **P 03 12 58.4 -0.4**
comp=Z,73nm,1.8s,mb5.3
HKT LR LR
comp=Z,9µm,20.0s,MS6.1
GAZ Gaziantep 78.06 315 *eP* **P 03 12 57.5 -1.3**
SSPA Standing Stone 78.06 39⇑ *iP* **P 03 12 58.0 -0.8**
comp=Z,59nm,1.1s,mb5.4
MCWV Mont Chateau 78.07 41⇑ *iP* **P 03 12 58.4 -0.4**
comp=Z,71nm,1.0s,mb5.5
MCWV LR LR
comp=Z,5µm,19.0s,MS5.8
JMB Yambol 78.09 324 *eP* **P 03 12 58.1 -0.8**
JMB Yambol 78.09 324 *iP* **P 03 12 58.0 -0.9**
JMB Yambol 78.09 324 *iP* **P 03 12 58.0 -0.9**
PLAL Pickwick Lake 78.12 49⇑ *iP* **P 03 12 57.8 -1.3**
comp=Z,32nm,1.0s,mb5.2
KLYT Kilyos 78.17 322 *eP* **P 03 13 01.6 +2.2**
BEO Belgrade 78.18 330⇑ *iP* **P 03 12 59.6 +0.1**
BEO Belgrade 78.18 330 P **P 03 13 00.8 +1.3**
PERS Pernice 78.19 334 *iP* **P 03 12 59.7 +0.2**
PERS *i* 03 13 02.2
HTL Hartland 78.20 348⇑ *eP* **P 03 13 00.1 +0.6**
HTL Hartland 78.20 348⇑ *eP* **P 03 13 00.1 +0.6**
STR Strasbourg 78.27 339⇑ *eP* **P 03 13 00.1 +0.1**
KBA Koelnbreinsper 78.28 335 *iP* **P 03 13 01.0 +1.0**
comp=Z,367nm,1.4s,mb6.1,SNR=69
KBA Koelnbreinsper 78.28 335 *iP* **P 03 13 01.0 +1.0**
KBA pmax pmax
comp=Z,367nm,1.4s,mb6.1
HRT Hereke 78.29 322 *eP* **P 03 12 59.9 -0.2**
ISK Istanbul-Kandi 78.33 322 *eP* **P 03 13 00.5 +0.2**
BFO Black Forest 78.38 339 P **P 03 13 00.7 +0.1**
comp=Z,602nm,0.8s,mb6.6,SNR=56
BFO Black Forest 78.38 339 *eP* **P 03 13 00.3 -0.3**
comp=Z,124nm,1.0s,mb5.8
BFO Black Forest 78.38 339 *eP* **P 03 13 00.3 -0.3**
BFO pmax pmax
comp=Z,124nm,1.0s,mb5.8
SVIS Svilajnac 78.39 329⇑ *iP* **P 03 12 59.4 -1.2**
SVIS Svilajnac 78.39 329 P **P 03 13 02.0 +1.4**
GUT Gutenstein 78.44 338 P **P 03 13 01.4 +0.5**
KOZT Kozan 78.44 316 *eP* **P 03 13 01.2 +0.3**
OBKA Obir 78.46 334 *iP* **P 03 13 01.2 +0.2**
comp=Z,344nm,2.5s,mb5.8,SNR=92
SPAK Spaichingen-Ko 78.49 338⇑ *eP* **P 03 13 01.2 +0.1**
ELBA Catalca 78.50 323 *iP* **P 03 13 00.5 -0.7**
WATA Walderalm 78.51 336⇑ *iP* **P 03 13 02.0 +0.7**
comp=Z,258nm,1.3s,mb6.0,SNR=61
WATA Walderalm 78.51 336⇑ *iP* **P 03 13 02.0 +0.7**
WATA pmax pmax
comp=Z,258nm,1.3s,mb6.0
WLS Welschbruch 78.53 340⇑ *eP* **P 03 13 01.4 0.0**
ARQ Araqi 78.54 292 ⇓*iP* **P 03 13 02.0 +0.5**
SNR=22
CDF Champ du Feu 78.55 340⇑ *iP* **P 03 13 01.8 +0.3**
comp=Z,294nm,0.9s,mb5.9
CDF Champ du Feu 78.55 340⇑ *iP* **P 03 13 01.8 +0.3**
CDF pmax pmax
comp=Z,147nm,0.9s,mb5.9
CDF Champ du Feu 78.55 340⇑ *iP* **P 03 13 01.8 +0.3**
comp=Z,147nm,0.9s,mb5.9
BOLS Boljevac 78.56 328⇑ *iP* **P 03 13 01.1 -0.4**
EDRB Edirne 78.56 324 *eP* **P 03 13 01.7 +0.2**
WTTA Wattenberg 78.56 336 *iP* **P 03 13 02.3 +0.8**
comp=Z,477nm,1.6s,mb6.2,SNR=163
WTTA Wattenberg 78.56 336 *iP* **P 03 13 02.3 +0.8**
WTTA pmax pmax
comp=Z,477nm,1.6s,mb6.2
UBR Ueberruh 78.56 337 P **P 03 13 02.2 +0.7**
ADVT Abdulvahap 78.59 321 *eP* **P 03 13 01.8 +0.1**
MOTA Moosalm 78.62 337⇑ *iP* **P 03 13 02.3 +0.4**
comp=Z,179nm,1.0s,mb6.0,SNR=154
MOTA Moosalm 78.62 337⇑ *iP* **P 03 13 02.3 +0.4**
MOTA pmax pmax
comp=Z,179nm,1.0s,mb6.0
YLV Yalova 78.62 322 *eP* **P 03 13 01.6 -0.3**
DYA Yadsworthy 78.67 347⇑ *eP* **P 03 13 01.7 -0.4**
DYA Yadsworthy 78.67 347⇑ *eP* **P 03 13 01.7 -0.4**
SQTA Sankt Quirin 78.71 337⇑ *iP* **P 03 13 03.1 +0.7**
comp=Z,206nm,1.1s,mb6.0,SNR=163
SQTA Sankt Quirin 78.71 337⇑ *iP* **P 03 13 03.1 +0.7**
SQTA pmax pmax
comp=Z,206nm,1.1s,mb6.0
LIBD Limburg 78.72 339⇑ *eP* **P 03 13 02.5 +0.1**
PDKS Podkum 78.75 334 *eP* **P 03 13 02.4 -0.2**
ECH Echery 78.76 340⇑ *eP* **P 03 13 02.7 +0.1**
QUA2 Belchertown 78.81 35 *eP* **P 03 13 02.0 -0.9**
comp=Z,27nm,1.0s,mb5.1
QUA2 *e* pP 03 13 15.8 -1.6
GEMT Gemlik 78.81 322 *eP* **P 03 13 01.6 -1.3**
UMR Umm Al-Rimmam 78.83 303 *eP* **P 03 12 02.7 -0.3**

UMR AMb AMB 03 13 06.6
comp=Z,442nm,0.8s,mb6.4
CRES Cresnjev 78.83 333 P **P 03 13 03.2 +0.2**
KIZ Kirchzarten 78.83 339 P **P 03 13 03.3 +0.3**
MIB Mutribah 78.83 303 *eP* **P 03 13 03.0 0.0**
MIB AMb AMB 03 13 06.7
comp=Z,552nm,0.9s,mb6.5
SISB Singen-Schiene 78.83 338 P **P 03 13 03.8 +0.7**
DIM Dimitrovgrad 78.84 325 *iP* **P 03 13 02.6 -0.5**
DIM Dimitrovgrad 78.84 325 *iP* **P 03 13 02.6 -0.5**
CEYT Ceyhan 78.86 315 *eP* **P 03 13 04.0 +0.8**
SLE Schleitheim 78.87 339⇑ *iP* **P 03 12 02.4 -0.9**
comp=Z,147nm,0.9s,mb5.9
FVI Forni Avoltri 78.87 335 P **P 03 13 03.0 -0.3**
STEIN Stein am Rhein 78.87 338⇑ *iP* **P 03 12 02.9 -0.4**
comp=Z,593nm,1.6s,mb6.3
SEST Monte Rota 78.88 336 P **P 03 13 04.0 +0.7**
CSA1 St Austell 78.88 348⇑ *eP* **P 03 13 03.3 0.0**
CSA1 St Austell 78.88 348⇑ *eP* **P 03 13 03.3 0.0**
FELD Feldberg im Sc 78.88 339⇑ *eP* **P 03 13 03.3 0.0**
PTCC Patocco-Chiusa 78.89 335 P **P 03 12 02.9 -0.5**
LJU Ljubljana 78.89 334 *eP* **P 03 13 03.0 -0.4**
LJU *i* 03 13 05.5
LJU *e* pP 03 13 15.6 -2.3
LJU *e* 03 18 57.3
LJU *eS* S 03 22 57.1 -0.8
LJU Ljubljana 78.89 334 *eP* **P 03 13 03.0 -0.4**
LJU *e* pP 03 13 15.6 -2.3
LJU *eS* S 03 22 57.1 -0.8
HRV Harvard--Oak R 78.90 34⇑ *iP* **P 03 13 02.9 -0.5**
HRV *e* pP 03 13 17.5 -0.4
HRV pmax pmax
comp=Z,55nm,1.0s,mb5.4
HRV Harvard--Oak R 78.90 34⇑ *iP* **P 03 13 02.9 -0.5**
comp=Z,55nm,1.0s,mb5.4
HRV *e* pP 03 13 17.5 -0.4
PGB Panagyurishte 78.90 326 *iP* **P 03 13 02.9 -0.5**
PGB Panagyurishte 78.90 326 *iP* **P 03 13 02.9 -0.5**
ESKT Eskisehir 78.91 320 *eP* **P 03 13 04.2 +0.7**
ESKT Eskisehir 78.91 320 *iP* **P 03 13 03.2 +0.3**
GRUS Gruza 78.92 329 ⇓*iP* **P 03 13 02.8 -0.8**
TRULL Truellikon 78.94 338⇑ *iP* **P 03 13 03.3 -0.3**
comp=Z,336nm,1.4s,mb6.1
MEZF Maizieres J'vi 78.95 341⇑ *iP* **P 03 13 04.2 +0.5**
comp=Z,390nm,1.0s,mb6.0
MEZF Maizieres J'vi 78.95 341⇑ *iP* **P 03 13 04.2 +0.5**
comp=Z,390nm,1.0s,mb6.3
KARA Karaisali 78.97 316 *eP* **P 03 13 04.8 +1.0**
SWET Sewanee 78.97 48⇑ *iP* **P 03 13 02.7 -1.1**
WEIN Weingarten 78.98 338⇑ *iP* **P 03 13 03.5 -0.3**
comp=Z,585nm,1.6s,mb6.3
DIVS Divcibare 78.98 330⇑ *iP* **P 03 13 02.9 -0.9**
DIVS Divcibare 78.98 330 *eP* **P 03 13 03.0 -0.8**
DAVA Damuels 78.98 337⇑ *iP* **P 03 13 04.2 +0.3**
comp=Z,334nm,2.5s,mb5.8,SNR=154
THEF They Montfort 79.01 340⇑ *eP* **P 03 13 04.0 0.0**
TZTN Tazewell 79.01 45⇑ *iP* **P 03 13 03.5 -0.5**
TZTN *e* pP 03 13 18.0 -0.5
KIZT Kizilcal 79.01 319 *eP* **P 03 13 04.6 +0.6**
COBT Iskenderun 79.03 315 *iP* **P 03 13 05.2 +1.0**
GMNA Gemona 79.04 335 P **P 03 13 03.7 -0.5**
LIENZ Alp Oberkamor 79.07 338⇑ *iP* **P 03 13 04.9 +0.6**
comp=Z,170nm,1.6s,mb5.7
VOY Vojsko 79.08 334 *eP* **P 03 13 03.8 -0.6**
VOY *e* 03 13 10.2
VOY *e* 03 13 29.7
WES Weston 79.09 34⇑ *iP* **P 03 13 03.9 -0.6**
WES *e* pP 03 13 18.3 -0.6
WES pmax pmax
comp=Z,97nm,1.1s,mb5.7
WES Weston 79.09 34⇑ *iP* **P 03 13 03.9 -0.6**
comp=Z,97nm,1.1s,mb5.7
WES *e* pP 03 13 18.3 -0.6
PLD Plovdiv 79.10 326 *eP* **P 03 13 04.1 -0.4**
PLD Plovdiv 79.10 326 *iP* **P 03 13 04.1 -0.4**
PLD Plovdiv 79.10 326 *iP* **P 03 13 04.1 -0.4**
CRQ2 Rosemanowes 2 79.10 348 *eP* **P 03 13 05.1 +0.5**
CRQ2 AMb AMB 03 13 07.7
comp=Z,285nm,1.0s,mb6.2
CRQ2 Rosemanowes 2 79.10 348 *eP* **P 03 13 05.1 +0.5**
CRQ2 AMb AMB 03 13 07.7
comp=Z,285nm,1.0s,mb6.2
WILA Wila 79.10 338⇑ *iP* **P 03 13 04.3 -0.2**
comp=Z,376nm,1.4s,mb6.1
MOF Molkenrain 79.11 339⇑ *eP* **P 03 13 04.2 -0.3**
KBD Kabd 79.13 302 *eP* **P 03 13 04.7 0.0**
KBD AMb AMB 03 13 07.6
comp=Z,967nm,0.9s,mb6.7
HAU Haudompre 79.14 340⇑ *iP* **P 03 13 04.9 +0.2**
comp=Z,227nm,0.9s,mb5.8
HAU *eR* 03 13 21.8
comp=Z,5µm,21.8s
HAU Haudompre 79.14 340⇑ *iP* **P 03 13 04.9 +0.2**
HAU pmax pmax
comp=Z,114nm,0.9s,mb5.8
HAU MLR MLR
comp=Z,5µm,21.8s,MS5.8
HAU Haudompre 79.14 340⇑ *iP* **P 03 13 04.9 +0.2**
comp=Z,114nm,0.9s,mb5.8
HAU LR LR
comp=Z,5µm,21.8s,MS5.8
CGW Gweek 79.17 348⇑ *eP* **P 03 13 04.8 -0.1**
CGW Gweek 79.17 348⇑ *eP* **P 03 13 04.8 -0.1**
BOJS Bojanci 79.18 333 *eP* **P 03 13 04.8 -0.1**
BOJS *e* 03 13 07.2
BOJS *e* pP 03 13 18.5 -0.9
BOJS *e* 03 19 04.2
BOJS *eS* S 03 23 00.9 +0.1
CMA1 Manaccan 79.18 348⇑ *eP* **P 03 13 05.0 0.0**
CMA1 Manaccan 79.18 348⇑ *eP* **P 03 13 05.0 0.0**
SULZ Sulz-Cheisache 79.18 339⇑ *iP* **P 03 13 04.7 -0.3**
comp=Z,438nm,1.5s,mb6.2
HINF Hinteralfeld 79.20 340⇑ *iP* **P 03 13 05.0 -0.1**
comp=Z,104nm,0.9s,mb5.5
HINF Hinteralfeld 79.20 340⇑ *iP* **P 03 13 05.0 -0.1**
HINF pmax pmax
comp=Z,52nm,0.9s,mb5.5
HINF Hinteralfeld 79.20 340⇑ *iP* **P 03 13 05.0 -0.1**
comp=Z,52nm,0.9s,mb5.5
VTS Vitosha 79.21 327 *eP* **P 03 13 04.8 -0.3**
VTS Vitosha 79.21 327 *iP* **P 03 13 04.1 -1.0**
VTS Vitosha 79.21 327 *iP* **P 03 13 04.1 -1.0**
VTS Vitosha 79.21 327 ⇓*iP* **P 03 13 04.7 -0.4**
KDHN Kadinhani 79.21 319 *iP* **P 03 13 05.0 -0.1**
CGH1 Goonhilly 79.22 348⇑ *eP* **P 03 13 05.1 -0.1**
CGH1 Goonhilly 79.22 348⇑ *eP* **P 03 13 05.1 -0.1**
ZUR Zurich 79.22 338⇑ *iP* **P 03 13 04.7 -0.5**
comp=Z,360nm,0.9s,mb6.3
MVL Millersville 79.23 38⇑ *iP* **P 03 13 04.4 -0.8**
MVL *ePP* PP 03 16 04.6 -0.7
RST Umm Al-Ruwaisa 79.25 303 *eP* **P 03 13 04.8 -0.5**
RST AMb AMB 03 13 08.7
comp=Z,763nm,0.9s,mb6.6
ORLT Orhaneli 79.26 322 *eP* **P 03 13 06.1 +0.7**
MFT Murefte 79.26 323 *eP* **P 03 13 04.6 -0.8**
NAY Al-Naaiem 79.32 303 *eP* **P 03 13 05.5 -0.2**
NAY AMb AMB 03 13 09.2
comp=Z,352nm,0.8s,mb6.3
PAL Palisades 79.33 36⇑ *iP* **P 03 13 04.7 -1.0**
PAL *e* pP 03 13 18.9 -1.3
PAL pmax pmax
comp=Z,82nm,1.1s,mb5.6
PAL Palisades 79.33 36⇑ *iP* **P 03 13 04.7 -1.0**
comp=Z,82nm,1.1s,mb5.6
PAL *e* pP 03 13 18.9 -1.3
PLONS Plons 79.33 338⇑ *iP* **P 03 13 05.0 -0.8**
comp=Z,240nm,0.8s,mb6.2
QRN Al-Qurain 79.34 302 *eP* **P 03 13 05.8 0.0**
QRN AMb AMB 03 13 08.7
comp=Z,433nm,0.8s,mb6.4
BBLS Bajina Basta - 79.37 330⇑ *iP* **P 03 13 06.3 +0.3**
BNT Bandirma 79.38 322 *eP* **P 03 13 05.7 -0.3**
FWV Forest Hill 79.38 43 *eP* **P 03 13 05.0 -1.0**
BBS Basel-Blauen 79.39 339⇑ *eP* **P 03 13 06.1 0.0**
RKY Sarkoy-Tekirda 79.39 323 *eP* **P 03 13 05.8 -0.3**
APPI Appiano 79.39 336 P **P 03 13 05.7 -0.4**
KRTS Karatas 79.39 315 *eP* **P 03 13 07.0 +0.9**
RDF Al-Radifah 79.40 302 *eP* **P 03 13 06.2 0.0**
RDF AMb AMB 03 13 10.1
comp=Z,820nm,0.9s,mb6.7
HTY Hatay 79.42 315 *eP* **P 03 13 07.4 +1.1**
TRI Trieste 79.42 334 P **P 03 13 05.6 -0.6**
CPCT Cooper Cave 79.45 47⇑ *iP* **P 03 13 05.7 -0.7**

CPCT *e* pP 03 13 19.4 -1.5
DAVOX Davos 79.45 337⇑iP P 03 13 06.2 -0.2
comp=Z,211nm,0.8s,mb6.1
RZN Rozhen 79.45 325 *i* P **P 03 13 05.8 -0.6**
RZN Rozhen 79.45 325 *i* P **P 03 13 05.8 -0.6**
BALST Balsthal 79.46 339⇑iP P 03 13 05.3 -1.2
comp=Z,521nm,1.4s,mb6.3
CPNY Central Park 79.49 36 *eP* **P 03 13 05.4 -1.3**
BOURR Bourrignon 79.52 339⇑iP P 03 13 06.7 -0.1
comp=Z,202nm,0.9s,mb6.1
SDMD Soldier's Deli 79.53 39⇑iP P 03 13 07.8 +1.0
SDMD *e* pP 03 13 21.2 -0.1
MERS Mersin 79.53 316 *eP* **P 03 13 07.4 +0.5**
MUO Muotathal 79.58 338⇑iP P 03 13 06.9 -0.3
comp=Z,355nm,0.9s,mb6.3
KONT Konya--Tatoy 79.59 318 *eP* **P 03 13 07.6 +0.5**
JVM Valle D.L. Mar 79.60 346⇑eP P 03 13 07.4 +0.2
JVM Valle D.L. Mar 79.60 346⇑eP P 03 13 07.4 +0.2
JRS Jersey 79.60 346⇑eP P 03 13 07.2 0.0
JRS Jersey 79.60 346⇑eP P 03 13 07.2 0.0
LLS Linth-Limmern 79.61 338⇑iP P 03 13 07.2 -0.1
comp=Z,142nm,0.8s,mb6.0
BRMO Bormio 79.61 337 P **P 03 13 08.2 +0.9**
ALN Alexandroupoli 79.64 324 *eP* **P 03 13 07.1 -0.4**
LOMF Lomont 79.65 339⇑eP P 03 13 07.9 +0.4
CTI Castel Tesino 79.68 336 P **P 03 13 07.4 -0.3**
ELN Prospectdale 79.70 43 *eP* **P 03 13 07.1 -0.7**
ZAIG Zacatecas 79.71 67 *iP* **P 03 13 07.8 0.0**
BNALP Bannalp 79.73 338⇑iP P 03 13 07.5 -0.4
comp=Z,149nm,0.8s,mb6.0
ENEZ Enez 79.74 324 *eP* **P 03 13 04.6 -3.4**
DST Dursunbey 79.74 322 *eP* **P 03 13 06.9 -1.1**
FLN La Foliniere 79.75 345⇑iP P 03 13 08.3 +0.2
comp=Z,834nm,0.9s,mb6.3
FLN *eR*
comp=Z,7µm,19.2s
FLN La Foliniere 79.75 345⇑iP P 03 13 08.3 +0.2
FLN pmax pmax
comp=Z,417nm,0.9s,mb6.4
FLN MLR MLR
comp=Z,7µm,19.3s,MS6.0
FLN La Foliniere 79.75 345⇑iP P 03 13 08.3 +0.2
comp=Z,417nm,0.9s,mb6.4
FLN LR LR
comp=Z,7µm,19.3s,MS6.0
BERNI Berninapass 79.76 337⇑iP P 03 13 07.7 -0.4
comp=Z,214nm,1.1s,mb6.0
VDL Val di Lei 79.83 337⇑iP P 03 13 08.3 -0.2
comp=Z,363nm,1.0s,mb6.3
GDZ Gediz 79.84 321 *iP* **P 03 13 08.3 -0.2**
LDF La Druitiere 79.86 344⇑iP P 03 13 08.7 +0.1
comp=Z,559nm,0.9s,mb6.2
LDF La Druitiere 79.86 344⇑iP P 03 13 08.7 +0.1
LDF pmax pmax
comp=Z,279nm,0.9s,mb6.2
LDF La Druitiere 79.86 344⇑iP P 03 13 08.7 +0.1
comp=Z,279nm,0.9s,mb6.2
PLE Pljevlja 79.86 330⇑iP P 03 13 09.2 +0.6
BLA Blacksburg 79.86 43⇑iP P 03 13 08.1 -0.6
comp=Z,5.5nm,1.0s
BLA *e* pP 03 13 21.5 -1.6
BLA LR LR
comp=Z,394nm,20.0s,MS4.8
TUE Stuetta 79.88 338 P **P 03 13 09.5 +0.8**
KKB Krupnik 79.89 326 *iP* **P 03 13 08.8 0.0**
KKB Krupnik 79.89 326 *iP* **P 03 13 08.8 0.0**
HASLI Hasliberg 79.90 338⇑iP P 03 13 09.4 +0.5
comp=Z,280nm,0.9s,mb6.2
MMB Musomiste 79.90 326 *eP* **P 03 13 08.7 -0.1**
MMB Musomiste 79.90 326 *iP* **P 03 13 08.8 -0.1**
MMB Musomiste 79.90 326 *iP* **P 03 13 08.8 -0.1**
MEST Erdemli 79.94 316 *iP* **P 03 13 08.6 -0.4**
MYNC Murphy 79.94 46⇑iP P 03 13 08.3 -0.8
MYNC pmax pmax
comp=Z,45nm,0.9s,mb5.4
MYNC Murphy 79.94 46⇑iP P 03 13 08.3 -0.8
comp=Z,45nm,0.9s,mb5.4
MABI Malga Bissina 79.97 337 P **P 03 13 09.7 +0.5**
CANB Canakkale 80.01 323 *eP* **P 03 13 08.7 -0.8**
ARMA Armidale 80.03 184 *eP* **P 03 13 09.8 +0.2**
FUSIO Fusio 80.06 338⇑iP P 03 13 09.1 -0.6
comp=Z,671nm,1.5s,mb6.4
NVR Nevrokopi 80.06 326 *eP* **P 03 13 08.5 -1.2**
IVA Berane 80.10 329⇑iP P 03 13 09.9 -0.1
WIMIS Wimmis 80.11 339⇑iP P 03 13 10.7 +0.7
comp=Z,108nm,0.9s,mb5.8
BRANT Les Verrieres 80.12 340⇑iP P 03 13 09.2 -0.8
comp=Z,259nm,1.2s,mb6.0
UPM Unac-Piva 80.13 330⇑iP P 03 13 09.7 -0.4
NVLJ Novalja 80.15 333⇑iP P 03 13 09.3 -0.9
TORNY Torny 80.16 339⇑iP P 03 13 10.3 0.0
comp=Z,434nm,1.6s,mb6.1
GRR Gorron 80.18 345⇑iP P 03 13 10.8 +0.4
comp=Z,1µm,0.9s,mb6.5
GRR Gorron 80.18 345⇑iP P 03 13 10.8 +0.4
comp=Z,516nm,0.9s,mb6.5
MAGA Magasa 80.20 336 P **P 03 13 10.5 0.0**
LRAL Lakeview Retre 80.22 50⇑iP P 03 13 09.2 -1.4
comp=Z,12nm,0.8s,mb4.9
LRAL LR LR
comp=Z,4µm,21.0s,MS5.8
TAOE Nuku Hiva Isla 80.28 116 *eS* S 03 23 15.0 +2.5
comp=Z,8µm,28.2s
TAOE *e*LR LR 03 38 15.0
comp=Z,34µm,23.7s,baz=330
GADA Gvkgeada 80.31 324 *eP* **P 03 13 04.0 -7.1**
PVY Plav 80.32 329⇑iP P 03 13 10.1 -1.0
CBN Corbin 80.33 40⇑iP P 03 13 10.5 -0.7
comp=Z,57nm,0.9s,mb5.5
CBN LR LR
comp=Z,6µm,19.0s,MS6.0
HDMB Hadim 80.36 318 *eP* **P 03 13 11.0 -0.3**
STIP Stip 80.36 327 *eP* **P 03 13 10.5 -0.8**
STIP Stip 80.36 327⇑iP P 03 13 10.4 -0.9
comp=Z,20nm,0.7s,mb5.2
LOR Lormes 80.37 341⇑iP P 03 13 11.6 +0.2
comp=Z,445nm,1.0s,mb6.1
LOR *eR*
comp=Z,6µm,20.0s
LOR Lormes 80.37 341⇑iP P 03 13 11.6 +0.2
LOR pmax pmax
comp=Z,223nm,1.0s,mb6.0
LOR MLR MLR
comp=Z,6µm,20.0s,MS5.9
LOR Lormes 80.37 341⇑iP P 03 13 11.6 +0.2
comp=Z,223nm,1.0s,mb6.0
LOR LR LR
comp=Z,6µm,20.0s,MS5.9
LKBD Leukerbad 80.37 339⇑iP P 03 13 10.4 -1.0
comp=Z,264nm,1.0s,mb6.1
SKO Skopje 80.38 328 *eP* **P 03 13 11.7 +0.3**
SKO Skopje 80.38 328⇑iP P 03 13 12.1 +0.7
comp=Z,128nm,1.1s,mb5.8
TKTP Tekketepe 80.38 320 *iP* **P 03 13 10.5 -0.9**
IKL Isikli 80.43 316 *eP* **P 03 13 11.6 -0.1**
NKY Niksic 80.45 330⇑iP P 03 13 10.6 -1.2
ISP Isparta 80.46 319 *eP* **P 03 13 11.0 -0.9**
ISP Isparta 80.46 319 *eP* **P 03 13 11.6 -0.3**
ISP Isparta 80.46 319⇓iP P 03 13 12.1 +0.2
ISP Isparta 80.46 319 P **P 03 13 12.8 +0.9**
ISP pmax pmax
comp=Z,43nm,0.6s,mb5.6
MUGIO Muggio 80.47 338⇑iP P 03 13 11.9 0.0
comp=Z,363nm,0.9s,mb6.3
SENIN Lac Senin 80.47 339⇑iP P 03 13 10.6 -1.3
comp=Z,144nm,0.9s,mb5.9
CABF La Chapelle 80.51 340⇑iP P 03 13 12.7 +0.5
comp=Z,323nm,1.1s,mb5.9
CABF La Chapelle 80.51 340⇑iP P 03 13 12.7 +0.5
CABF pmax pmax
comp=Z,161nm,1.1s,mb5.9
CABF La Chapelle 80.51 340⇑iP P 03 13 12.7 +0.5
comp=Z,161nm,1.1s,mb5.9
BRY Bratogost 80.52 330⇑iP P 03 13 11.0 -1.2
GIMEL Gimel 80.55 340⇑iP P 03 13 11.7 -0.6
comp=Z,152nm,1.2s,mb5.8
VAY Valandovo 80.55 327 *eP* **P 03 13 11.8 -0.6**
VAY Valandovo 80.55 327⇑iP P 03 13 11.7 -0.6
comp=Z,128nm,0.8s,mb5.9
AIGLE Aigle 80.57 339⇑iP P 03 13 11.7 -0.8
comp=Z,272nm,1.4s,mb6.0
SGMF Saint Gilles 80.59 346⇑iP P 03 13 13.1 +0.5
comp=Z,697nm,0.9s,mb6.3
SGMF Saint Gilles 80.59 346⇑iP P 03 13 13.1 +0.5
SGMF pmax pmax
comp=Z,348nm,0.9s,mb6.3
SGMF Saint Gilles 80.59 346⇑iP P 03 13 13.1 +0.5
comp=Z,348nm,0.9s,mb6.3
MMK Mattmark 80.61 338⇑iP P 03 13 12.4 -0.3
comp=Z,266nm,0.9s,mb6.2
HYF Humbligny 80.62 342⇑iP P 03 13 13.4 +0.7
ROSF Rostrenen 80.62 346⇑iP P 03 13 13.3 +0.6
comp=Z,813nm,1.0s,mb6.3
ROSF Rostrenen 80.62 346⇑iP P 03 13 13.3 +0.6
ROSF pmax pmax
comp=Z,406nm,1.0s,mb6.3
ROSF Rostrenen 80.62 346⇑iP P 03 13 13.3 +0.6
comp=Z,406nm,1.0s,mb6.3
GRYON Gryon 80.62 339⇑iP P 03 13 12.6 -0.1
comp=Z,243nm,1.4s,mb5.9
SSF Saint Saulge 80.64 342⇑iP P 03 13 13.1 +0.3
comp=Z,236nm,0.9s,mb5.8
SSF Saint Saulge 80.64 342⇑iP P 03 13 13.1 +0.3
SSF pmax pmax
comp=Z,118nm,0.9s,mb5.8
SSF Saint Saulge 80.64 342⇑iP P 03 13 13.1 +0.3
comp=Z,118nm,0.9s,mb5.8
MCGN Macugnaga 80.69 338 P **P 03 13 14.0 +0.9**
AKHS Akhisar 80.69 322 *iP* **P 03 13 12.8 -0.3**
AKS Akhisar 80.69 322 *eP* **P 03 13 03.4 -10**
TTG Podgorica 80.71 329⇑iP P 03 13 12.5 -0.7
DIX Grande Dixence 80.71 339⇑iP P 03 13 12.7 -0.5
comp=Z,369nm,0.9s,mb6.3
SOH Sokhos 80.71 326 *eP* **P 03 13 12.6 -0.6**
RAR Rarotonga 80.73 139 LR LR 03 42 29.5
comp=Z,3µm,20.0s,MS5.7,baz=346,slow=31
SALAN Lac Salanfe 80.75 339⇑iP P 03 13 13.6 +0.2
comp=Z,152nm,0.9s,mb5.9
BCK Bucak 80.75 319 *eP* **P 03 13 12.8 -0.7**
LIA Limnos Island 80.84 324 *eP* **P 03 13 12.8 -1.1**
LOS Limnos 80.84 324 *eP* **P 03 13 13.1 -0.8**
EMV Vieux Emosson 80.85 339⇑iP P 03 13 13.5 -0.4
comp=Z,230nm,0.8s,mb6.2
OUR Ouranopolis 80.91 325 *eP* **P 03 13 13.7 -0.5**
AVF Avril sur Loir 80.93 342⇑iP P 03 13 14.8 +0.4
comp=Z,463nm,0.9s,mb6.1
AVF Avril sur Loir 80.93 342⇑iP P 03 13 14.8 +0.4
AVF pmax pmax
comp=Z,232nm,0.9s,mb6.1
AVF Avril sur Loir 80.93 342⇑iP P 03 13 14.8 +0.4
comp=Z,232nm,0.9s,mb6.1
GRG Griva 80.94 326 *eP* **P 03 13 13.9 -0.5**
BUM Brajici-Budva 80.94 329⇑iP P 03 13 13.5 -1.0
HCY Herceg Novi 80.94 330⇑iP P 03 13 13.5 -1.0
SMF Signal de Mont 80.97 341⇑iP P 03 13 15.0 +0.4
comp=Z,624nm,1.2s,mb6.1
SMF Signal de Mont 80.97 341⇑iP P 03 13 15.0 +0.4
SMF pmax pmax
comp=Z,312nm,1.2s,mb6.1
SMF Signal de Mont 80.97 341⇑iP P 03 13 15.0 +0.4
comp=Z,312nm,1.2s,mb6.1
HORT Hortiatis 81.00 326 *eP* **P 03 13 13.9 -0.8**
ORO Oropa 81.00 338 P **P 03 13 14.6 -0.2**
QUIF Quistinic 81.01 346⇑iP P 03 13 15.3 +0.5
comp=Z,364nm,0.9s,mb6.0
QUIF Quistinic 81.01 346⇑iP P 03 13 15.3 +0.5
QUIF pmax pmax
comp=Z,182nm,0.9s,mb6.0
QUIF Quistinic 81.01 346⇑iP P 03 13 15.3 +0.5
comp=Z,182nm,0.9s,mb6.0
THE Thessaloniki 81.02 326 *eP* **P 03 13 13.8 -1.0**
ULC Ulcinj 81.13 329⇑iP P 03 13 14.9 -0.5
DENT Denizli 81.16 320 *eP* **P 03 13 16.7 +1.1**
BGF Bois d'Agland 81.25 342⇑iP P 03 13 16.6 +0.5
comp=Z,150nm,0.8s,mb5.7
BGF Bois d'Agland 81.25 342⇑iP P 03 13 16.6 +0.5
BGF pmax pmax
comp=Z,75nm,0.8s,mb5.7
BGF Bois d'Agland 81.25 342⇑iP P 03 13 16.6 +0.5
comp=Z,75nm,0.8s,mb5.7
BIA Bitola 81.26 327 *eP* **P 03 13 15.1 -1.1**
BIA Bitola 81.26 327⇑iP P 03 13 14.8 -1.3
comp=Z,21nm,1.1s,mb5.0
PESA Pesaro 81.30 334 P **P 03 13 17.0 +0.6**
IZM Izmir 81.32 322 *eP* **P 03 13 16.4 -0.1**
OHR Ohrid 81.36 328 *eP* **P 03 13 15.6 -1.0**
OHR Ohrid 81.36 328⇑iP P 03 13 15.7 -0.9
comp=Z,120nm,1.0s,mb5.8
PAIG Paliouri 81.37 325 *eP* **P 03 13 15.9 -0.8**
GOLH Golhisar 81.38 320 *iP* **P 03 13 16.1 -0.6**
RSM Repubblica di 81.42 335 P **P 03 13 18.2 +1.2**
BLCB Balcova 81.42 322 *eP* **P 03 13 13.3 -3.7**
ZCCA Zocca 81.43 336 P **P 03 13 18.9 +1.9**
AOI Ancona 81.44 334 P **P 03 13 17.3 +0.2**
BOB Bobbio (Coli) 81.44 337 P **P 03 13 18.0 +0.9**
FNA Florina 81.45 327 *eP* **P 03 13 16.7 -0.5**
BHL Bhannes 81.47 314 *eP* **P 03 13 16.8 -0.5**
TIR Tirane 81.47 328 *eP* **P 03 13 16.9 -0.4**
ERBM Eremo 81.52 336 P **P 03 13 18.9 +1.4**
MAMC Mammari 81.53 316 P **P 03 13 17.1 -0.5**
GSCL Gusciola 81.53 336 P **P 03 13 19.0 +1.4**
FSSB Fossombrone 81.55 334 P **P 03 13 18.2 +0.5**
FNVD Fontana Vidola 81.56 335 P **P 03 13 19.2 +1.5**
SEI Scarperia 81.61 335 P **P 03 13 19.3 +1.3**
SFI Santa Sofia 81.61 335 P **P 03 13 18.9 +0.9**
RSP Reno Superiore 81.62 338 P **P 03 13 17.8 -0.2**
TCF Toulx Ste Croi 81.64 342⇑iP P 03 13 18.8 +0.7
comp=Z,333nm,0.9s,mb6.0
TCF Toulx Ste Croi 81.64 342⇑iP P 03 13 18.8 +0.7
TCF pmax pmax
comp=Z,167nm,0.9s,mb6.0
TCF Toulx Ste Croi 81.64 342⇑iP P 03 13 18.8 +0.7
comp=Z,167nm,0.9s,mb6.0
ELL Elmali 81.64 319 *eP* **P 03 13 18.5 +0.3**
CSS Prodhromos 81.65 316 P **P 03 13 18.5 +0.3**
comp=Z,2.2nm,1.2s
LIT Litokhoron 81.66 326 *eP* **P 03 13 17.1 -1.1**
PLDF La Plantade 81.66 341⇑eP P 03 13 19.2 +1.0
AGO Saint Agoulin 81.68 342⇑eP P 03 13 19.2 +0.8
AYDN Tasoluk 81.71 321 *iP* **P 03 13 18.9 +0.4**
CING Cingoli 81.72 334 P **P 03 13 18.4 -0.2**
VLC Villacollemand 81.77 336⇑iP P 03 13 19.1 +0.3
comp=Z,243nm,0.9s,mb6.1
MFF Saint Martin d 81.78 344⇑iP P 03 13 20.7 +1.8
comp=Z,449nm,1.0s,mb6.1
MFF Saint Martin d 81.78 344⇑iP P 03 13 20.7 +1.8
MFF pmax pmax
comp=Z,224nm,1.0s,mb6.0
MFF Saint Martin d 81.78 344⇑iP P 03 13 20.7 +1.8
comp=Z,224nm,1.0s,mb6.0
BDI Bagni Di Lucca 81.80 336 P **P 03 13 19.0 0.0**
ALFC Alevga 81.82 317 P **P 03 13 18.6 -0.5**
GDM Grand'Maison 81.84 339⇑eP P 03 13 20.2 +1.0
GDM Grand'Maison 81.84 339⇑eP P 03 13 20.2 +1.0
CRE Caprese Michel 81.84 335 P **P 03 13 20.0 +0.8**
BNI Bardonecchia 81.85 339 P **P 03 13 20.3 +1.0**
BNI pmax pmax
comp=Z,92nm,0.8s,mb5.8
BNI Bardonecchia 81.85 339⇑iP P 03 13 20.3 +1.1
comp=Z,92nm,0.8s,mb5.8
BADI Badiali 81.86 334 P **P 03 13 20.3 +1.0**
GRN Grenoble 81.89 340⇑eP P 03 13 20.5 +1.1
GRN Grenoble 81.89 340⇑eP P 03 13 20.5 +1.1
SNTG Esanatoglia 81.90 334 P **P 03 13 20.0 +0.5**
CDCA Citt' di Caste 81.92 334 P **P 03 13 20.7 +1.1**
JSC Jenkinsville 81.92 45 *eP* **P 03 13 19.3 -0.3**
JSC *e* pP 03 13 34.0 -0.2
AOS Alonnisos 81.96 325 *eP* **P 03 13 18.8 -1.1**
OFFI Offida 81.98 333 P **P 03 13 21.0 +1.0**
YER Yerkesik 81.99 321 *eP* **P 03 13 18.6 -1.4**
PYM Petit Puy Mans 81.99 342 *eP* **P 03 13 21.0 +1.0**
RAO Raoul Island 82.02 157 LR LR 03 45 12.3
comp=Z,4µm,19.6s,MS5.8,baz=12,slow=32
RAO Raoul Island 82.02 157 PFAKE 03 13 30.0 +10
RAO LR LR
comp=Z,5µm,20.0s,MS5.8
XOR Xorichti 82.05 325 *eP* **P 03 13 19.2 -1.1**
KSDI Kefar Szold 82.05 313 P **P 03 13 22.0 +1.7**
COLF Collangettes 82.07 341⇑eP P 03 13 21.2 +0.8
COLF Collangettes 82.07 341⇑eP P 03 13 21.2 +0.8
MBDF Montbardon 82.14 339⇑iP P 03 13 21.4 +0.6
comp=Z,172nm,0.9s,mb5.7
MBDF Montbardon 82.14 339⇑iP P 03 13 21.4 +0.6
MBDF pmax pmax
comp=Z,86nm,0.9s,mb5.7
MBDF Montbardon 82.14 339⇑iP P 03 13 21.4 +0.6
comp=Z,86nm,0.9s,mb5.7
PII Pisa 82.14 336 P **P 03 13 20.0 -0.8**
DALT Dalyan (Mudla) 82.16 320 *eP* **P 03 13 21.7 +0.8**
PPCY Paphos 82.16 317 P **P 03 13 20.2 -0.7**
comp=Z,7.5nm,0.9s
ASS Assisi 82.16 334 P **P 03 13 21.4 +0.5**
CSNT Castellina Chi 82.16 335 P **P 03 13 20.6 -0.3**
ORIF Oris-en-Rattie 82.16 339⇑iP P 03 13 22.0 +1.1
comp=Z,309nm,1.0s,mb5.9
ORIF *eR*
comp=Z,6µm,19.8s
ORIF Oris-en-Rattie 82.16 339⇑iP P 03 13 22.0 +1.1
ORIF pmax pmax
comp=Z,155nm,1.0s,mb5.9
ORIF Oris-en-Rattie 82.16 339⇑iP P 03 13 22.0 +1.1
comp=Z,155nm,1.0s,mb5.9
AKAS Kas 82.21 319 *iP* **P 03 13 19.9 -1.3**
DOI San Damiano 82.23 338 P **P 03 13 20.1 -1.2**
FIN Finale Ligure 82.28 337 P **P 03 13 21.1 -0.4**
TERO Teramo 82.29 333 P **P 03 13 22.0 +0.4**
ASF Jabal al Asfar 82.30 312 P **P 03 13 22.6 +1.0**
comp=Z,97nm,0.8s,mb5.8,baz=251,slow=1.3,SNR=82
ASF Jabal al Asfar 82.30 312 P **P 03 13 22.6 +1.0**
ASF pmax pmax
comp=Z,97nm,0.8s
PPT Papeete 82.32 129 *eLQ* 03 35 35.8
comp=Z,2µm,24.8s
PPT Papeete 82.32 129 *ePP* PP 03 16 23.8 -7.0
comp=Z,244nm,32.0s
PPT Papeete 82.32 129 *eLR* LR 03 38 59.1
comp=Z,4µm,21.5s,baz=334
SURF Saint Ours 82.36 339⇑eP P 03 13 22.8 +0.9
SURF Saint Ours 82.36 339⇑eP P 03 13 22.8 +0.9
MEV Metsovon 82.39 327 *eP* **P 03 13 21.6 -0.5**
BDRM Kayabasi 82.40 321 *iP* **P 03 13 21.5 -0.6**
FGMS Monte Sant'Ang 82.42 331 P **P 03 13 21.9 -0.3**
STKA Stephens Creek 82.43 193 P **P 03 13 22.3 0.0**
comp=Z,13nm,1.0s,mb4.8,baz=342,slow=7.2,SNR=8.9
STKA Stephens Creek 82.43 193 *eP* **P 03 13 21.7 -0.6**
MSAG Monte S. Angel 82.43 331 P **P 03 13 21.7 -0.6**
FRNF Fournols 82.43 342 *eP* **P 03 13 23.3 +1.0**
FRNF Fournols 82.43 342 *eP* **P 03 13 23.3 +1.0**
LBL Lubilhac 82.44 341 *eP* **P 03 13 23.4 +1.1**
SGRT San Giovanni R 82.44 331 P **P 03 13 22.0 -0.4**
BODT Bodrum 82.45 321 *eP* **P 03 13 14.5 -7.9**
VIVF Saint-Julien-l 82.49 340⇑iP P 03 13 23.5 +0.9
comp=Z,326nm,1.0s,mb5.9
VIVF Saint-Julien-l 82.49 340⇑iP P 03 13 23.5 +0.9
VIVF pmax pmax
comp=Z,163nm,1.0s,mb5.9
VIVF Saint-Julien-l 82.49 340⇑iP P 03 13 23.5 +0.9
comp=Z,163nm,1.0s,mb5.9
MATF Mathat 82.55 344 *eP* **P 03 13 23.9 +1.0**
MATF Mathat 82.55 344 *eP* **P 03 13 23.9 +1.0**
RGNG Rignano Grg 82.56 331 P **P 03 13 22.5 -0.5**
FG2 Serracapriola 82.58 332 P **P 03 13 23.0 -0.1**
AQU L'Aquila 82.60 333⇑iP P 03 13 23.9 +0.7
AQU L'Aquila 82.60 333⇑iP P 03 13 23.6 +0.4
AQU pmax pmax
comp=Z,126nm,0.9s,mb6.0
AQU L'Aquila 82.60 333⇑iP P 03 13 23.6 +0.5
comp=Z,126nm,0.9s,mb6.0
OCF Saint Nazaire 82.62 340⇑eP P 03 13 24.3 +1.0
OG26 St.-Nazaire-De 82.62 340⇑eP P 03 13 24.3 +1.0
OG26 St.-Nazaire-De 82.62 340⇑eP P 03 13 24.3 +1.0
CNNC Cliffs of the 82.62 42⇑iP P 03 13 23.0 -0.3
DAT Datca 82.63 321 *eP* **P 03 13 22.4 -0.9**
OLEF Ile d'Oleron 82.63 345 *eP* **P 03 13 24.2 +0.9**
OLEF Ile d'Oleron 82.63 345 *eP* **P 03 13 24.2 +0.9**
SAOF Saorge 82.65 338⇑eP P 03 13 23.5 +0.1
AGG Agios Georgios 82.67 326 *eP* **P 03 13 21.6 -1.9**
AUTN L'Aution 82.67 338⇑eP P 03 13 24.0 +0.5
TOUF Mont Tournerai 82.69 338⇑eP P 03 13 24.0 +0.3
RJF Les Rejaudoux 82.72 342⇑iP P 03 13 24.4 +0.6
comp=Z,464nm,1.1s,mb6.1
RJF *eR*
comp=Z,9µm,18.5s
RJF Les Rejaudoux 82.72 342⇑iP P 03 13 24.4 +0.6
RJF pmax pmax
comp=Z,232nm,1.1s,mb6.1
RJF MLR MLR
comp=Z,9µm,18.5s,MS6.2
RJF Les Rejaudoux 82.72 342⇑iP P 03 13 24.4 +0.6
comp=Z,232nm,1.1s,mb6.1
RJF LR LR
comp=Z,9µm,18.5s,MS6.2
LKR Lokris 82.75 325 *eP* **P 03 13 22.0 -1.9**
FIAM Fiamignano 82.76 333 P **P 03 13 24.5 +0.5**
INTR Introdacqua 82.77 333 P **P 03 13 22.9 -1.1**
MNS Montasola 82.78 334 P **P 03 13 23.7 -0.4**
MMLI Mount Malkishu 82.78 313 P **P 03 13 25.3 +1.2**
LUCF Luceram 82.79 338⇑eP P 03 13 24.5 +0.4
CIGN Sant'Elia a Pi 82.79 332 P **P 03 13 24.8 +0.6**
SBF Sospel 82.79 338⇑iP P 03 13 24.4 +0.2
comp=Z,344nm,0.8s,mb6.1
SBF Sospel 82.79 338⇑iP P 03 13 24.4 +0.2
SBF pmax pmax
comp=Z,172nm,0.8s,mb6.1
SBF Sospel 82.79 338⇑iP P 03 13 24.4 +0.2
comp=Z,172nm,0.8s,mb6.1
LATE Laterza 82.82 334 P **P 03 13 24.3 0.0**
MVIF Mont Vial 82.83 338⇑eP P 03 13 24.6 +0.2
OFRI 'Ofer 82.84 313 P **P 03 13 25.0 +0.6**
ARG Arkhangelos 82.84 320 *eP* **P 03 13 26.0 +1.6**
HMDT Nahal Hemdat 82.89 313 P **P 03 13 25.6 +0.9**
REVF Revere 82.92 338⇑eP P 03 13 25.0 +0.1
IGT Igoumenitsa 82.93 327 *eP* **P 03 13 24.0 -0.8**
EVR Evrytania 82.95 326 *eP* **P 03 13 25.0 0.0**
PTL Penteli 82.95 324 *eP* **P 03 13 23.5 -1.5**
KEK Kerkira 82.95 328 *eP* **P 03 13 24.5 -0.5**
LCI Lecce 82.97 329 P **P 03 13 24.9 -0.2**
CAF Calviac 82.97 342⇑iP P 03 13 26.2 +1.1
comp=Z,419nm,1.1s,mb6.1
CAF Calviac 82.97 342⇑iP P 03 13 26.2 +1.1
CAF pmax pmax
comp=Z,210nm,1.1s,mb6.1
CAF Calviac 82.97 342⇑iP P 03 13 26.2 +1.1
comp=Z,210nm,1.1s,mb6.1
RNI2 Rionero Sannit 82.97 332 P **P 03 13 25.9 +0.8**
VVLD Villa Vallelon 82.98 333 P **P 03 13 25.0 -0.1**
MIDA Miranda 83.00 332 P **P 03 13 25.7 +0.4**
FG5 Orsara di Pugl 83.02 332 P **P 03 13 25.9 +0.5**
STOF St-Etienne Org 83.03 339⇑eP P 03 13 25.8 +0.4
SDI San Donato 83.07 333 P **P 03 13 25.5 -0.1**
FG4 Candela 83.08 331 P **P 03 13 25.8 +0.1**
CERT Cerreto 83.09 333 P **P 03 13 25.5 -0.2**
MTCE Montecelio 83.09 334 P **P 03 13 25.4 -0.3**
SMRF Simiane la Rot 83.12 339⇑iP P 03 13 27.1 +1.2
comp=Z,464nm,1.2s,mb6.1
SMRF Simiane la Rot 83.12 339⇑iP P 03 13 27.1 +1.2
comp=Z,464nm,1.2s,mb6.4
SLTI Sal'it 83.13 313 P **P 03 13 27.4 +1.5**
VILF Villemus 83.21 339⇑eP P 03 13 27.3 +1.0
PSB1 Pescosannita 83.21 332 P **P 03 13 26.4 0.0**
LFF La Frestale 83.22 343⇑iP P 03 13 27.3 +0.9
comp=Z,664nm,1.1s,mb6.3
LFF La Frestale 83.22 343⇑iP P 03 13 27.3 +0.9
LFF pmax pmax
comp=Z,332nm,1.1s,mb6.3
LFF La Frestale 83.22 343⇑iP P 03 13 27.3 +0.9
comp=Z,332nm,1.1s,mb6.3
FRF La Foret Royal 83.27 338⇑iP P 03 13 26.9 +0.3
comp=Z,396nm,1.2s,mb6.0
FRF La Foret Royal 83.27 338⇑iP P 03 13 26.9 +0.3
FRF pmax pmax
comp=Z,198nm,1.2s,mb6.0
FRF La Foret Royal 83.27 338⇑iP P 03 13 26.9 +0.3
comp=Z,198nm,1.2s,mb6.0
TOLF Tolfa 83.27 334 P **P 03 13 26.8 +0.2**
RDP Rocca di Papa 83.35 333 P **P 03 13 25.5 -1.5**
MA9 Marino 83.35 334 P **P 03 13 27.7 +0.6**
TAVF Tavernes 83.35 339⇑eP P 03 13 27.8 +0.7
PRAF Pradon 83.38 339⇑eP P 03 13 28.6 +1.4
RFI Roccamonfina 83.39 332 P **P 03 13 27.6 +0.3**
LASF Ste Croix 83.41 340⇑iP P 03 13 28.5 +1.1
comp=Z,271nm,1.2s,mb5.8
MRLC Muro Lucano 83.43 331 P **P 03 13 27.4 -0.1**
DRGI Dragot 83.50 313 P **P 03 13 28.6 +0.8**
TREF Trevaresse 83.50 339⇑eP P 03 13 29.1 +1.3
LMR La Mourre 83.51 338⇑iP P 03 13 28.3 +0.4
comp=Z,586nm,1.0s,mb6.4
LMR La Mourre 83.51 338⇑iP P 03 13 28.3 +0.4
LMR pmax pmax
comp=Z,293nm,1.0s,mb6.4
LMR La Mourre 83.51 338⇑iP P 03 13 28.3 +0.4
comp=Z,293nm,1.0s,mb6.4
PUYF Puyloubier 83.52 339⇑eP P 03 13 28.9 +1.0

PGF	**Pioggiola**	**83.63 336**	⇑*iP*	**P**	**03 13 28.8 +0.3**			
	comp=Z,316nm,0.8s,mb6.2							
PGF	**Pioggiola**	**83.63 336**	⇑*iP*	**P**	**03 13 28.8 +0.3**			
PGF			pmax	pmax				
	comp=Z,158nm,0.8s,mb6.2							
PGF	**Pioggiola**	**83.63 336**	*iP*	**P**	**03 13 28.8 +0.3**			
	comp=Z,158nm,0.8s,mb6.2							
SLCN	**Sala Consilina**	**83.72 331**	P	**P**	**03 13 29.0 +0.1**			
GELF	**Grande-Etoile**	**83.72 339**	⇑*eP*	**P**	**03 13 29.9 +0.9**			
BERF	**Bertagne**	**83.73 339**	⇑*eP*	**P**	**03 13 30.1 +1.1**			
MZDA	**Masada**	**83.75 312**	P	**P**	**03 13 29.9 +0.8**			
ORI	**Oriolo Calabro**	**83.76 330**	P	**P**	**03 13 29.9 +0.8**			
RLS	**Riolos of Patr**	**83.83 326**	*eP*	**P**	**03 13 28.5 -1.0**			
CUC	**Castrocucco**	**84.02 331**	P	**P**	**03 13 29.7 -0.8**			
VLS	**Valsamata**	**84.04 326**	*eP*	**P**	**03 13 30.0 -0.6**			
FORT	**Forrest**	**84.13 204**	*eP*	**P**	**03 13 30.5 -0.6**			
	comp=Z,135nm,0.7s,mb6.2							
MASH	**Mash'abbe Sade**	**84.28 313**	P	**P**	**03 13 32.5 +0.7**			
ITM	**Ithomi**	**84.44 325**	*eP*	**P**	**03 13 32.0 -0.6**			
MTLF	**Montolieu**	**84.46 341**	⇑*iP*	**P**	**03 13 33.5 +0.8**			
	comp=Z,237nm,1.1s,mb5.9							
MTLF	**Montolieu**	**84.46 341**	⇑*iP*	**P**	**03 13 33.5 +0.8**			
MTLF			pmax	pmax				
	comp=Z,118nm,1.1s,mb5.9							
MTLF	**Montolieu**	**84.46 341**	⇑*iP*	**P**	**03 13 33.5 +0.8**			
	comp=Z,118nm,1.1s,mb5.9							
VLI	**Veliai**	**84.47 324**	*eP*	**P**	**03 13 30.0 -2.8**			
KZIT	**Kziot**	**84.54 313**	P	**P**	**03 13 33.7 +0.6**			
ZKR	**Zakros**	**84.58 321**	*eP*	**P**	**03 13 32.3 -1.1**			
NPS	**Neapolis**	**84.69 321**	*eP*	**P**	**03 13 34.5 +0.6**			
PRNI	**Paran**	**84.71 312**	P	**P**	**03 13 34.7 +0.7**			
LRDF	**Laroque-de-Fa**	**84.78 341**	⇑*eP*	**P**	**03 13 35.0 +0.7**			
GRI	**Girifalco**	**84.89 330**	P	**P**	**03 13 35.0 +0.1**			
XRY	**Khrisi**	**85.00 321**	*eP*	**P**	**03 13 35.0 -0.4**			
MLS	**Moulis**	**85.06 342**	*eP*	**P**	**03 13 36.9 +1.2**			
CARF	**Carcanieres**	**85.09 341**	*eP*	**P**	**03 13 36.4 +0.5**			
VAM	**Vamos**	**85.13 323**	*eP*	**P**	**03 13 33.5 -2.6**			
EPF	**Esparros**	**85.14 343**	⇑*iP*	**P**	**03 13 36.4 +0.3**			
	comp=Z,60nm,0.7s,mb5.6							
EPF	**Esparros**	**85.14 343**	⇑*iP*	**P**	**03 13 36.4 +0.3**			
EPF			pmax	pmax				
	comp=Z,30nm,0.6s,mb5.6							
EPF	**Esparros**	**85.14 343**	*iP*	**P**	**03 13 36.4 +0.3**			
	comp=Z,30nm,0.6s,mb5.6							
FILF	**Fillols**	**85.14 341**	*eP*	**P**	**03 13 37.1 +1.0**			
SJAF	**Saint Jean de**	**85.14 341**	*eP*	**P**	**03 13 38.0 +1.8**			
LABF	**Labassere**	**85.17 343**	*eP*	**P**	**03 13 38.2 +1.9**			
EJON	**La Jonquera**	**85.18 341**	P	**P**	**03 13 37.8 +1.4**			
	comp=Z,112nm,1.0s,mb6.0							
MELF	**Melles**	**85.21 342**	*eP*	**P**	**03 13 36.2 -0.3**			
MBH	**Mount Berech**	**85.22 312**	P	**P**	**03 13 37.0 +0.5**			
SIVA	**Sivas**	**85.23 322**	*eP*	**P**	**03 13 36.0 -0.6**			
KARN	**Karanos**	**85.25 323**	*eP*	**P**	**03 13 36.0 -0.7**			
EALK	**Alkurruntz**	**85.30 344**	P	**P**	**03 13 38.1 +1.1**			
	comp=Z,106nm,1.0s,mb5.9							
EIL	**Elat**	**85.30 312**	*iP*	**P**	**03 13 37.0 0.0**			
	comp=Z,2μm,0.9s							
VIEF	**Viey**	**85.34 343**	*eP*	**P**	**03 13 37.8 +0.7**			
SJPF	**Ste Jean**	**85.35 344**	⇑*iP*	**P**	**03 13 38.2 +1.0**			
	comp=Z,23nm,0.6s,mb5.2							
SJPF	**Ste Jean**	**85.35 344**	⇑*iP*	**P**	**03 13 38.2 +1.0**			
SJPF			pmax	pmax				
	comp=Z,11nm,0.6s,mb5.2							
SJPF	**Ste Jean**	**85.35 344**	⇑*iP*	**P**	**03 13 38.2 +1.0**			
	comp=Z,11nm,0.6s,mb5.2							
ELIZ	**Elizondo**	**85.36 344**	P	**P**	**03 13 37.6 +0.4**			
ELIZ			pmax	pmax				
	comp=Z,68nm,1.2s,mb5.7							
ELIZ	**Elizondo**	**85.36 344**	P	**P**	**03 13 37.6 +0.4**			
	comp=Z,68nm,1.2s,mb5.7							
LARF	**Larrau**	**85.38 344**	*eP*	**P**	**03 13 38.2 +0.9**			
VALF	**Valcebollere**	**85.41 341**	*eP*	**P**	**03 13 38.7 +1.2**			
ETSF	**Etsaut**	**85.44 343**	⇑*iP*	**P**	**03 13 38.9 +1.3**			
	comp=Z,49nm,0.7s,mb5.5							
ETSF	**Etsaut**	**85.44 343**	⇑*iP*	**P**	**03 13 38.9 +1.3**			
ETSF			pmax	pmax				
	comp=Z,24nm,0.7s,mb5.4							
ETSF	**Etsaut**	**85.44 343**	*iP*	**P**	**03 13 38.9 +1.3**			
	comp=Z,24nm,0.7s,mb5.4							
EBIE	**Bielsa**	**85.51 343**	P	**P**	**03 13 40.0 +2.0**			
	comp=Z,235nm,1.8s,mb6.1							
DGI	**Dorgali Grotta**	**85.56 335**	P	**P**	**03 13 38.8 +0.6**			
ELAN	**Lanestosa**	**85.62 345**	P	**P**	**03 13 39.8 +1.3**			
	comp=Z,155nm,1.6s,mb6.0							
SLNA	**Salina**	**85.64 331**	P	**P**	**03 13 38.0 -0.6**			
GVD	**Gavdhos**	**85.67 322**	*eP*	**P**	**03 13 39.0 +0.3**			
	comp=Z,152nm,1.0s,mb6.2							
SOI	**Samo**	**85.69 330**	P	**P**	**03 13 38.5 -0.4**			
EARI	**Arriondas**	**85.83 347**	P	**P**	**03 13 41.4 +1.8**			
	comp=Z,141nm,1.5s,mb6.0							
MTTG	**Motta San Giov**	**85.87 330**	P	**P**	**03 13 38.9 -0.9**			
USI	**Ustica**	**86.02 332**	P	**P**	**03 13 40.5 0.0**			
EPON	**Pontenova**	**86.08 348**	P	**P**	**03 13 41.1 +0.3**			
	comp=Z,318nm,1.9s,mb6.2							
MNO	**Monte Soro**	**86.26 331**	P	**P**	**03 13 42.0 +0.3**			
VSL	**Villasalto**	**86.39 335**	⇑*iP*	**P**	**03 13 42.3 0.0**			
	comp=Z,191nm,1.0s,mb6.3							
GIB	**Gibilmanna**	**86.42 331**	P	**P**	**03 13 41.0 -1.5**			
ESAC	**San Caprasio**	**86.56 343**	P	**P**	**03 13 45.3 +2.2**			
	comp=Z,119nm,0.8s,mb6.2							
EPOB	**Poblet**	**86.61 342**	P	**P**	**03 13 45.0 +1.6**			
	comp=Z,146nm,1.7s,mb5.9							
EMAZ	**Mazaricos**	**86.68 349**	P	**P**	**03 13 45.1 +1.3**			
	comp=Z,161nm,1.8s,mb6.0							
STS	**Santiago**	**86.69 349**	P	**P**	**03 13 44.0 +0.2**			
STS			pmax	pmax				
	comp=Z,109nm,1.4s,mb5.9							
STS	**Santiago**	**86.69 349**	P	**P**	**03 13 44.0 +0.1**			
	comp=Z,109nm,1.4s,mb5.9							
AGST	**Augusta-Monte**	**86.70 330**	P	**P**	**03 13 43.2 -0.7**			
ERC	**Erice**	**86.81 332**	P	**P**	**03 13 44.9 +0.5**			
SSY	**Sortino**	**86.85 330**	P	**P**	**03 13 44.4 -0.2**			
HVZN	**Vizzini**	**86.94 330**	P	**P**	**03 13 44.6 -0.4**			
DWPF	**Disney**	**86.98 48**	PFAKE		03 14 00.0 +15			
DWPF			LR	LR				
	comp=Z,4μm,22.0s,MS5.8							
HAVL	**Avola**	**87.01 330**	P	**P**	**03 13 45.6 +0.3**			
RAFF	**Raffo Rosso**	**87.01 331**	P	**P**	**03 13 44.7 -0.7**			
HMDC	**Modica**	**87.12 330**	P	**P**	**03 13 46.1 +0.2**			
FAVR	**Favara**	**87.19 331**	P	**P**	**03 13 48.1 +1.9**			
TBI	**Tubuai**	**87.27 132**	*e*SKSac	SKSac	03 24 10.3 +0.4			
	comp=Z,3μm,28.0s							
TBI			*e*SS	SS	03 30 09.0 +1.4			
TBI	comp=Z,1μm,25.8s		*e*LR	LR	03 41 04.1			
	comp=Z,7μm,30.8s,baz=330							
ECAL	**Calabor**	**87.38 347**	P	**P**	**03 13 46.8 -0.4**			
	comp=Z,225nm,2.2s,mb6.0							
PBRG	**Braganca**	**87.52 347**	*eP*	**P**	**03 13 47.6 -0.2**			
	comp=Z,36nm,1.4s,mb5.4							
TOO	**Toolangi**	**87.59 189**	*eP*	**P**	**03 13 47.8 -0.3**			
TOO			pmax	pmax				
	comp=Z,14nm,0.9s,mb5.2							
TOO	**Toolangi**	**87.59 189**	*eP*	**P**	**03 13 47.8 -0.3**			
	comp=Z,14nm,0.9s,mb5.2							
ELOB	**Lobios**	**87.63 348**	P	**P**	**03 13 48.3 0.0**			
	comp=Z,259nm,2.6s,mb6.0							
ETOS	**Mallorca**	**87.76 340**	P	**P**	**03 13 49.6 +0.6**			
	comp=Z,112nm,1.5s,mb5.9							
PCAB	**Cabril**	**87.78 348**	*eP*	**P**	**03 13 48.8 -0.3**			
	comp=Z,41nm,1.5s,mb5.4							
EMOS	**Mosqueruela**	**87.87 342**	P	**P**	**03 13 50.1 +0.6**			
	comp=Z,73nm,1.2s,mb5.8							
KLBR	**Kellerberrin**	**88.04 212**	*eP*	**P**	**03 13 49.7 -0.6**			
	comp=Z,65nm,0.8s,mb5.9							
PTS	**Pantelleria**	**88.13 332**	P	**P**	**03 13 51.8 +1.1**			
PVRL	**Vila Real**	**88.17 348**	*eP*	**P**	**03 13 50.9 0.0**			
	comp=Z,32nm,0.8s,mb5.6							
GUD	**Guadarrama**	**88.26 345**	P	**P**	**03 13 50.8 -0.5**			
GUD			pmax	pmax				
	comp=Z,9.0nm,0.7s,mb5.1							
GUD	**Guadarrama**	**88.26 345**	P	**P**	**03 13 50.8 -0.6**			
	comp=Z,9.1nm,0.7s,mb5.1							
ECHE	**Chera**	**88.71 343**	P	**P**	**03 13 54.6 +1.1**			
ECHE			pmax	pmax				
	comp=Z,10.0nm,1.0s,mb5.1							
ECHE	**Chera**	**88.71 343**	P	**P**	**03 13 54.6 +1.2**			
	comp=Z,10nm,1.0s,mb5.1							
PVIS	**Viseu**	**88.75 348**	*eP*	**P**	**03 13 53.5 -0.1**			
	comp=Z,25nm,2.0s,mb5.2							
MTE	**Manteigas**	**89.01 348**	*eP*	**P**	**03 13 54.1 -0.8**			
	comp=Z,22nm,0.9s,mb5.5							
MTE	**Manteigas**	**89.01 348**	*e*PP	PP	03 17 23.4 -1.6			
MTE			*e*SKS		03 24 21.3			
MTE			*e*SS	SS	03 30 56.9 +24			
MTE	**Manteigas**	**89.01 348**	*e*LR	LR	03 44 27.6			
MTE	**Manteigas**	**89.01 348**	*eP*	**P**	**03 13 54.8 -0.1**			
	comp=Z,32nm,0.8s,mb5.7							
ESDC	**Sonseca Array**	**89.17 345**	P	**P**	**03 13 55.0 -0.6**			
	comp=Z,30nm,1.0s,mb5.6,baz=5.4,slow=3.7,SNR=58							
ESDC	**Sonseca Array**	**89.17 345**	P	**P**	**03 13 55.1 -0.5**			
	comp=Z,11nm,0.6s,mb5.4							
ESLA	**Sonseca Array**	**89.17 345**	⇑*iP*	**P**	**03 13 54.8 -0.8**			
	comp=Z,15nm,1.2s,mb5.2							
ESLA			*e*	pP	03 14 07.3 -3.0			
ESLA			LR	LR				
	comp=Z,42μm,21.0s,MS6.8							
EBEN	**Beniarda**	**89.42 342**	P	**P**	**03 13 58.2 +1.4**			
	comp=Z,145nm,1.8s,mb6.0							
NWAO	**Narrogin (SRO)**	**89.44 212**	P	**P**	**03 13 55.8 -1.1**			
	comp=Z,47nm,0.9s,mb5.8,baz=46,slow=1.0,SNR=10							
NWAO	**Narrogin (SRO)**	**89.44 212**	P	**P**	**03 13 55.8 -1.1**			
NWAO			pmax	pmax				
	comp=Z,47nm,0.9s							
PCBR	**Castelo Branco**	**89.55 348**	*eP*	**P**	**03 13 57.1 -0.3**			
	comp=Z,32nm,1.2s,mb5.5							
CMAH	**Djebel Manchou**	**89.61 335**	P	**P**	**03 14 01.0 +3.3**			
ETOB	**Tobarra**	**89.74 343**	P	**P**	**03 13 58.9 +0.6**			
	comp=Z,42nm,0.9s,mb5.8							
CGMA	**Guelma**	**89.78 335**	P	**P**	**03 13 58.0 -0.5**			
PTOM	**Tomar**	**89.89 348**	*eP*	**P**	**03 13 59.0 0.0**			
	comp=Z,39nm,1.7s,mb5.5							
KEST	**Kesra**	**89.91 334**	P	**P**	**03 13 59.4 +0.3**			
	comp=Z,21nm,0.8s,mb5.5,baz=234,slow=0.7,SNR=66							
ABSA	**Djebel Ababsia**	**89.92 335**	P	**P**	**03 14 01.0 +1.9**			
EVIA	**Vianos**	**89.92 344**	P	**P**	**03 13 59.9 +0.8**			
EVIA			pmax	pmax				
	comp=Z,17nm,0.6s,mb5.5							
EVIA	**Vianos**	**89.92 344**	P	**P**	**03 13 59.9 +0.8**			
	comp=Z,17nm,0.6s,mb5.5							
DFRA	**Djebel Bou Aff**	**90.09 337**	P	**P**	**03 14 03.0 +3.1**			
BBSR	**BB Station**	**90.39 34**	PFAKE		03 14 10.0 +8.7			
BBSR			LR	LR				
	comp=Z,7μm,20.0s,MS6.1							
EMUR	**La Murta**	**90.46 342**	P	**P**	**03 14 01.5 -0.2**			
	comp=Z,90nm,2.0s,mb5.8							
PESTR	**Estremoz**	**90.52 348**	*eP*	**P**	**03 14 02.0 +0.1**			
	comp=Z,23nm,1.2s,mb5.4							
PESTR	**Estremoz**	**90.52 348**	*e*PP	PP	03 17 06.6 -30			
PESTR			*e*SKS		03 24 34.5			
PESTR			*e*SS	SS	03 31 05.1 +10			
PESTR	**Estremoz**	**90.52 348**	*e*LR	LR	03 45 09.4			
ABA	**Alger-Bouzarea**	**90.54 339**	P	pP	03 14 15.0 -1.7			
EBAD	**Badajoz**	**90.55 347**	P	**P**	**03 14 01.7 -0.4**			
	comp=Z,34nm,1.1s,mb5.6							
EBAN	**Banos Encina**	**90.61 344**	P	**P**	**03 14 02.8 +0.4**			
EBAN			pmax	pmax				
	comp=Z,14nm,0.8s,mb5.3							
EBAN	**Banos Encina**	**90.61 344**	P	**P**	**03 14 02.8 +0.5**			
	comp=Z,14nm,0.8s,mb5.3							
PMAFR	**Mafra**	**90.66 349**	*eP*	**P**	**03 14 01.1 -1.5**			
PMAFR	**Mafra**	**90.66 349**	*e*PP	PP	03 17 37.1 -1.1			
PMAFR			*e*SKS		03 24 34.6			
PMAFR			*e*SS	SS	03 31 13.8 +17			
PMAFR			*e*LQ		03 40 43.5			
PMAFR			*e*LR	LR	03 44 55.4			
PLOU	**Loures**	**90.71 349**	*eP*	**P**	**03 14 03.3 +0.5**			
	comp=Z,79nm,1.4s,mb5.8							
EHUE	**Huescar**	**90.74 343**	P	**P**	**03 14 03.0 +0.1**			
EHUE			pmax	pmax				
	comp=Z,15nm,0.8s,mb5.4							
EHUE	**Huescar**	**90.74 343**	P	**P**	**03 14 03.0 +0.1**			
	comp=Z,15nm,0.8s,mb5.4							
EADA	**Adamuz**	**90.75 345**	P	**P**	**03 14 03.2 +0.2**			
	comp=Z,104nm,2.2s,mb5.8							
EQES	**Quesada**	**90.84 344**	P	**P**	**03 14 03.1 -0.3**			
	comp=Z,40nm,1.5s,mb5.5							
CMER	**Merouana**	**90.96 336**	P	**P**	**03 14 08.0 +4.0**			
EMHD	**Djebel Mahouad**	**91.13 339**	P	**P**	**03 14 13.0 +8.2**			
ELUQ	**Luque**	**91.28 345**	P	**P**	**03 14 04.3 -1.2**			
EBNR	**Beni Rached**	**91.37 340**	P	**P**	**03 14 10.0 +4.1**			
PBEJ	**Beja**	**91.39 348**	*eP*	**P**	**03 14 04.3 -1.6**			
	comp=Z,30nm,1.5s,mb5.4							
ECOG	**Cogollos-Vega**	**91.44 344**	P	**P**	**03 14 06.0 -0.2**			
ECOG			pmax	pmax				
	comp=Z,9.0nm,0.6s,mb5.3							
ECOG	**Cogollos-Vega**	**91.44 344**	P	**P**	**03 14 06.0 -0.2**			
	comp=Z,9.0nm,0.6s,mb5.3							
EMIN	**Mina Concepcio**	**91.47 347**	P	**P**	**03 14 05.5 -0.8**			
	comp=Z,160nm,2.4s,mb5.9							
ENIJ	**Nijar**	**91.49 343**	P	**P**	**03 14 04.7 -1.7**			
ENIJ			pmax	pmax				
	comp=Z,9.0nm,0.8s,mb5.2							
ENIJ	**Nijar**	**91.49 343**	P	**P**	**03 14 04.7 -1.7**			
	comp=Z,8.5nm,0.8s,mb5.1							
ELOJ	**Sierra Loja**	**91.67 345**	P	**P**	**03 14 07.5 +0.3**			
ELOJ			pmax	pmax				
	comp=Z,17nm,0.8s,mb5.4							
ELOJ	**Sierra Loja**	**91.67 345**	P	**P**	**03 14 07.5 +0.3**			
	comp=Z,17nm,0.8s,mb5.4							
EBER	**Berja**	**91.69 343**	P	**P**	**03 14 08.0 +0.7**			
	comp=Z,8.5nm,0.6s,mb5.2							
DGAR	**Diego Garcia**	**91.69 261**	PFAKE		03 14 20.0 +13			
DGAR			LR	LR				
	comp=Z,5μm,19.0s,MS6.0							
ERON	**Agron**	**91.73 344**	P	**P**	**03 14 06.3 -1.2**			
	comp=Z,18nm,0.7s,mb5.5							
EANR	**'Ain N'Sour**	**91.80 340**	P	**P**	**03 14 08.0 +0.2**			
EGUA	**Guajares**	**91.87 344**	P	**P**	**03 14 07.1 -1.1**			
EGUA			pmax	pmax				
	comp=Z,2.0nm,0.5s,mb4.7							
EGUA	**Guajares**	**91.87 344**	P	**P**	**03 14 07.1 -1.1**			
	comp=Z,1.7nm,0.5s							
SNZO	**South Karori**	**92.21 166**	PFAKE		03 14 20.0 +10			
SNZO			LR	LR				
	comp=Z,10μm,22.0s,MS6.2							
ESPR	**Espera**	**92.22 346**	P	**P**	**03 14 11.1 +1.3**			
	comp=Z,46nm,1.2s,mb5.7							
ETRT	**Tiaret**	**92.29 340**	P	**P**	**03 14 09.0 -1.1**			
EMIJ	**Mijas**	**92.34 345**	P	**P**	**03 14 09.9 -0.5**			
	comp=Z,26nm,1.0s,mb5.5							
EJIF	**Jimena Fronter**	**92.57 345**	P	**P**	**03 14 12.3 +0.9**			
EJIF			pmax	pmax				
	comp=Z,22nm,0.7s,mb5.7							
EJIF	**Jimena Fronter**	**92.57 345**	P	**P**	**03 14 12.3 +0.9**			
	comp=Z,22nm,0.7s,mb5.7							
RPZ	**Rata Peaks**	**94.08 169**	LR	LR	03 51 23.8			
	comp=Z,10μm,21.8s,MS6.2,baz=357,slow=32							
RKT	**Rikitea**	**94.64 121**	*e*SKSac	SKSac	03 24 53.9 +1.8			
	comp=Z,2μm,28.2s							
RKT			*e*SP	SP	03 26 49.0 +3.3			
	comp=Z,2μm,30.0s							
RKT			*e*SS	SS	03 31 54.6 +0.6			
	comp=Z,2μm,26.8s							
RKT			*e*LR	LR	03 44 25.2			
	comp=Z,5μm,34.0s,baz=317							
PTCN	**Pitcairn Islan**	**98.92 118**	PFAKE		03 14 50.0 +10			
PTCN			LR	LR				
	comp=Z,65μm,20.0s							
SJG	**San Juan**	**102.60 41**	PFAKE		03 15 10.0 +13			
SJG			LR	LR				
	comp=Z,18μm,20.0s,MS6.6							
PAYG	**Puerto Ayora**	**105.39 72**	PFAKE		03 19 30.0 +7.3			
PAYG			LR	LR				
	comp=Z,89μm,20.0s							
TORD	**Torodi Ar. Bea**	**113.42 333**	Pdiff	Pdif	03 15 44.2 -0.5			
	comp=Z,0.3nm,0.5s,baz=13,slow=4.9,SNR=9.0							
TORD			PKiKP	PKiKP	03 19 37.1 -0.6			
	comp=Z,2.5nm,0.8s,baz=5.0,slow=2.8,SNR=8.7							
TORD			PP	PP	03 20 25.4 -3.8			
	comp=Z,1.9nm,0.7s,baz=2.9,slow=5.1,SNR=5.4							
TORD			PKKPbc	PKKPbc	03 30 20.0 -2.0			
	comp=Z,0.8nm,0.8s,baz=177,slow=4.6,SNR=5.9							
TORD	**Torodi Ar. Bea**	**113.42 333**	Pdif	Pdif	03 15 44.2 -0.5			
TORD			PKPdf	PKiKP	03 19 37.1 -0.6			
TORD			PP	PP	03 20 25.4 -3.8			
TORD			PKKPbc	PKKPbc	03 30 20.0 -2.0			
DRV	**Dumont d'Urvil**	**116.86 187**	PP	PP	03 20 54.0 +0.5			
DRV			SP	SP	03 30 37.0 +6.0			
DRV			SS	SS	03 37 02.0 +5.0			
CASY	**Casey**	**120.98 200**	*eP*	PKPdf	03 19 50.1 -2.2			
CASY			LR	LR				
	comp=Z,102μm,19.0s							
DBIC	**Dimbokro**	**121.38 338**	PKP	PKPdf	03 19 53.4 +0.4			
	comp=Z,13nm,0.8s,baz=78,slow=2.0,SNR=12							
DBIC	**Dimbokro**	**121.38 338**	PKP	PKPdf	03 19 53.4 +0.4			
DBIC			LR	LR				
	comp=Z,38μm,20.0s							
LIC	**Lamto**	**121.85 338**	*e*PKIKP	PKPdf	03 19 53.8 -0.1			
	comp=Z,69nm,1.2s							
LSZ	**Lusaka**	**125.85 291**	*e*PKIKP	PKPdf	03 20 02.5 +0.9			
VNDA	**Vanda**	**127.15 179**	PKP	PKPdf	03 20 02.0 -2.1			
	comp=Z,3.9nm,0.8s,baz=324,slow=4.3,SNR=23							
VNDA	**Vanda**	**127.15 179**	*e*PKPdf	PKPdf	03 20 01.6 -2.5			
SBA	**Scott Base**	**127.61 177**	*e*PKIKP	PKPdf	03 20 03.0 -2.0			
SAML	**Samuel**	**127.65 53**	*e*PKPdf	PKPdf	03 20 04.9 -0.1			
LPAZ	**La Paz**	**130.98 63**	PKP	PKPdf	03 20 12.8 +1.4			
	comp=Z,12nm,0.9s,baz=8.5,slow=5.8,SNR=36							
LPAZ	**La Paz**	**130.98 63**	*e*PKPdf	PKPdf	03 20 12.5 +1.1			
SIV	**San Ignacio**	**134.67 55**	PKhKP		03 20 04.4			
	comp=Z,3.5nm,0.8s,baz=316,slow=4.0,SNR=15							
SIV			PKP	PKPdf	03 20 18.2 -0.1			
	comp=Z,2.6nm,0.6s,baz=348,slow=5.8,SNR=6.4							
SIV			SKPbc	SKPbc	03 23 48.4 +4.2			
	comp=Z,4.2nm,1.1s,baz=302,slow=5.9,SNR=4.7							
LBTB	**Lobatse**	**134.75 285**	*e*PKIKP	PKPdf	03 20 19.7 +1.2			
TSUM	**Tsumeb**	**135.17 298**	*e*PKPdf	PKPdf	03 20 19.9 +0.7			
LVC	**Limon Verde**	**135.42 69**	PKP	PKPdf	03 20 19.8 +0.1			
	comp=Z,7.1nm,0.8s,baz=240,slow=3.0,SNR=9.2							
LVC	**Limon Verde**	**135.42 69**	*e*PKPdf	PKPdf	03 20 20.7 +1.0			
LVC			LR	LR				
	comp=Z,114μm,20.0s							
MAW	**Mawson**	**135.99 213**	PKP	PKPdf	03 20 20.1 -0.7			
	comp=Z,6.4nm,0.8s,baz=62,slow=4.3,SNR=11							
MAW			SKP		03 23 49.6			
	comp=Z,6.3nm,1.1s,baz=81,slow=4.2,SNR=4.8							
MAW	**Mawson**	**135.99 213**	PKIKP	PKPdf	03 20 20.1 -0.7			
MAW			pmax	pmax				
	comp=Z,6.0nm,0.8s							
MAW			pmax	pmax				
	comp=N,6.0nm,1.1s							
MAW	**Mawson**	**135.99 213**	*eP*	PKPdf	03 20 19.3 -1.5			
ASCN	**Ascension**	**137.49 346**	PFAKE		03 20 40.0 +16			
ASCN			LR	LR				
	comp=Z,29μm,19.0s							
BOSA	**Boshof**	**137.50 281**	PKhKP		03 20 12.3			
	comp=Z,4.2nm,0.8s,baz=2.2,slow=6.5,SNR=6.5							
BOSA			PKP	PKPdf	03 20 24.4 +0.8			
	comp=Z,14nm,0.9s,baz=108,slow=1.6,SNR=12							
BOSA	**Boshof**	**137.50 281**	PKIKP	PKPdf	03 20 24.4 +0.8			
BOSA			pmax	pmax				
	comp=Z,14nm,0.9s							
BOSA	**Boshof**	**137.50 281**	PKP		03 20 12.3			
BOSA			PKP	PKPdf	03 20 24.4 +0.8			
BOSA			LR	LR				
	comp=Z,58μm,20.0s							
QSPA	**South Pole Qui**	**139.60 180**	*eP*		03 20 19.1			
BDFB	**Brasilia**	**140.55 39**	PKhKP		03 20 23.2			
	comp=Z,6.6nm,0.7s,baz=15,slow=2.5,SNR=7.1							
BDFB			PKP	PKPdf	03 20 29.3 +0.2			
	comp=Z,18nm,0.9s,baz=31,slow=2.2,SNR=14							
BDFB	**Brasilia**	**140.55 39**	PKIKP	PKPdf	03 20 29.3 +0.1			
BDFB			pmax	pmax				
	comp=Z,18nm,0.9s							
BDFB	**Brasilia**	**140.55 39**	PKP		03 20 23.2			
BDFB			PKP	PKPdf	03 20 29.3 +0.2			
BDFB			LR	LR				
	comp=Z,130μm,19.0s							
CFAA	**Coronel Fontan**	**142.26 78**	PKhKP		03 20 26.4			
	comp=Z,0.8nm,0.8s,baz=291,slow=3.5,SNR=9.8							
SYO	**Syowa Base**	**144.70 214**	*e*PKPbc		03 20 32.6			
SYO	**Syowa Base**	**144.70 214**	⇑*i*PKPab	PKPdf	03 20 35.8 -0.7			
CPUP	**Villa Florida**	**145.04 60**	PKPbc	PKPbc	03 20 35.8 -0.8			
	comp=Z,49nm,0.8s,baz=286,slow=3.8,SNR=69							
CPUP	**Villa Florida**	**145.04 60**	PKIKP	PKPdf	03 20 35.8 -1.3			
CPUP			pmax	pmax				
	comp=Z,49nm,0.8s							
CPUP	**Villa Florida**	**145.04 60**	*e*PKPdf	PKPdf	03 20 35.6 -1.5			
CPUP			LR	LR				
	comp=Z,13μm

TAP] in P'eng-hu, P'ing-tung and Yun-lin Counties.
*IDC **20** 03:21:23.3±3.0, 21 40N×121 98E, h140km±29km, mb3.8/10, mb1 3.9/11, mb1mx3.7/20, mbtmp4.2/11, Error ellipse: s-maj=42.9km s-min=12.0km az=65.0*
*MAN **20** 03:21:43.7, 1975N×121 58E, h103km*
ISC 20 03:21:22.2±0.4, 2142N±003×1219E±01, h129km±5km, n44, σ0§74/48, mb4.1/21, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**2.75**	**354**	⇓*i*Pn	**Pn**	**03 22 04.5**	**-1.0**
NACB				*e*Sn	**Sn**	**03 22 39.5**	**+2.0**
SGCP	**Mt. Cagua**	**3.17**	**177**	*e*P	**Pn**	**03 22 10.6**	**-0.3**
YHNB	**Yeheng**	**3.27**	**352**	*e*Pn	**Pn**	**03 22 11.8**	**-0.5**
TATO	**Taipei**	**3.56**	**354**	*e*Pn	**Pn**	**03 22 16.4**	**+0.4**
APYP	**Conner**	**3.59**	**190**	*e*P	**Pn**	**03 22 16.1**	**-0.5**
ABRA	**Dolores**	**3.91**	**197**	*e*P	**Pn**	**03 22 20.6**	**-0.2**
PALP	**Palanan**	**4.37**	**173**	*e*P	**Pn**	**03 22 28.6**	**+1.8**
CAUP	**Cauayan**	**4.46**	**181**	*e*P	**Pn**	**03 22 29.3**	**+1.3**
QZH	**Quanzhou**	**4.64**	**320**	P	**Pn**	**03 22 27.6**	**-2.8**
QZH				S	**Sn**	**03 23 17.0**	**-6.0**
QZH				Smax			
	comp=N,680nm,0.8s						
QZH				Smax			
	comp=E,650nm,0.4s						
BOLP	**Bolinao**	**5.35**	**201**	*e*P	**Pn**	**03 22 40.0**	**+0.1**
BALP	**Baler**	**5.66**	**183**	*e*P	**Pn**	**03 22 43.8**	**-0.3**
SCZP	**Santa Cruz**	**5.92**	**199**	*e*P	**Pn**	**03 22 47.4**	**-0.2**
POLP	**Polilio Island**	**6.66**	**180**	*e*P	**Pn**	**03 22 57.5**	**0.0**
JOW	**Kunigami**	**7.94**	**46**	P	**Pn**	**03 23 15.5**	**+0.7**
	comp=E,1.9nm,0.3s,baz=202,slow=17,SNR=7.0						
NJ2	**Nanjing**	**10.93**	**346**	*e*P	**Pn**	**03 23 55.4**	**+0.5**
NJ2				XP		03 24 28.0	
NJ2				S	**Sn**	**03 25 54.3**	**-1.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,3.5s						
NJ2				LR	LR		
	comp=N,10μm,15.8s						
NJ2				LR	LR		
	comp=E,14μm,15.7s						
NJ2				LR	LR		
	comp=Z,14μm,14.6s						
KKM	**Kota Kinabalu**	**16.25**	**201**	*e*P	**Pn**	**03 25 03.8**	**+0.9**
MJAR	**Matsushiro Arr**	**20.71**	**40**	P	**P**	**03 25 56.9**	**+4.7**
	comp=Z,3.9nm,0.9s,baz=243,slow=12,SNR=8.3						
HHC	**Hu-ho-hao-te**	**21.26**	**338**	*e*P	**P**	**03 25 58.3**	**+0.2**
HHC				AP		03 26 22.9	
HHC				PP		03 26 28.8	
HHC				XP	sP	03 26 38.6	+0.9
HHC				S	**S**	**03 29 42.3**	**-4.6**
HHC				PCP	PcP	03 29 59.0	+1.3
HHC				SCP	ScP	03 33 20.6	-2.1
HHC				PCS	PcS	03 33 33.9	-2.0
HHC				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.3						
HHC				LR	LR		
	comp=N,2μm,13.5s						
HHC				LR	LR		
	comp=E,2μm,15.3s						
HHC				LR	LR		
	comp=Z,3μm,16.1s						
SONM	**Songino Array**	**29.16**	**338**	P	**P**	**03 27 11.7**	**+0.5**
	comp=Z,3.0nm,0.7s,mb4.1,baz=154,slow=9.5,SNR=19						
FITZ	**Fitzroy Crossi**	**39.45**	**174**	*e*P	**P**	**03 28 38.5**	**-1.2**
	comp=Z,8.9nm,1.8s,mb4.1						
MKAR	**Makanchi Array**	**40.79**	**318**	P	**P**	**03 28 51.7**	**+1.0**
	comp=Z,5.6nm,0.6s,mb4.4,baz=114,slow=9.7,SNR=56						
MKAR	**Makanchi Array**	**40.79**	**318**	P	**P**	**03 28 51.7**	**+1.0**
WRAB	**Tennant Creek**	**42.87**	**163**	*e*P	**P**	**03 29 06.5**	**-1.1**
	comp=Z,7.4nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**42.88**	**163**	P	**P**	**03 29 06.8**	**-0.9**
	comp=Z,5.1nm,0.6s,mb4.3,baz=344,slow=9.0,SNR=54						
WB2	**Warramunga Arr**	**42.88**	**163**	*e*P	**P**	**03 29 06.8**	**-0.9**
AAK	**Ala-Archa**	**44.73**	**309**	*e*P	**P**	**03 29 22.7**	**+0.3**
	comp=Z,3.1nm,0.6s,mb4.1						
AS31	**Alice Springs**	**46.32**	**165**	*e*P	**P**	**03 29 34.7**	**-0.3**
ASAR	**Alice Springs**	**46.32**	**165**	P	**P**	**03 29 35.1**	**+0.1**
	comp=Z,1.4nm,0.3s,mb4.0,baz=342,slow=7.4,SNR=65						
ASAR				ScP	ScP	03 34 48.2	-1.2
	comp=Z,0.3nm,0.6s,baz=344,slow=3.8,SNR=5.3						
BVAR	**Borovoye Array**	**50.23**	**322**	P	**P**	**03 30 05.9**	**+0.9**
	comp=Z,0.7nm,0.3s,mb3.8,baz=101,slow=6.3,SNR=6.3						
BVAR				PcP	PcP	03 31 21.9	-0.3
	comp=Z,0.6nm,0.5s,baz=128,slow=4.0,SNR=3.6						
BRVK	**Borovoye**	**50.30**	**322**	*e*P	**P**	**03 30 06.1**	**+0.5**
	comp=Z,1.6nm,0.8s,mb3.7						
CHKZ	**Chkalovo**	**50.31**	**323**	*e*P	**P**	**03 30 05.8**	**+0.1**
	comp=Z,1.7nm,0.5s,mb3.9						
ZRNK	**Zerenda**	**51.00**	**322**	*e*P	**P**	**03 30 11.1**	**+0.2**
	comp=Z,4.0nm,1.1s,mb4.2						
FORT	**Forrest**	**52.24**	**173**	*e*P	**P**	**03 30 20.1**	**+0.1**
	comp=Z,29nm,1.5s,mb4.7						
KLBR	**Kellerberrin**	**52.86**	**184**	*e*P	**P**	**03 30 24.0**	**-0.6**
	comp=Z,48nm,1.4s,mb5.0						
STKA	**Stephens Creek**	**56.26**	**160**	P	**P**	**03 30 49.3**	**+0.2**
	comp=Z,2.8nm,0.5s,mb4.4,baz=318,slow=5.7,SNR=7.2						
STKA	**Stephens Creek**	**56.26**	**160**	*e*P	**P**	**03 30 49.1**	**0.0**
	comp=Z,2.9nm,0.6s,mb4.3						
ARU	**Arti**	**57.71**	**324**	*e*P	**P**	**03 30 59.3**	**0.0**
	comp=Z,3.2nm,0.5s,mb4.4						
ARCES	**ARCESS Array B**	**72.33**	**338**	P	**P**	**03 32 33.8**	**-0.1**
	comp=Z,1.9nm,0.8s,mb3.9,baz=121,slow=2.1,SNR=5.6						
FINES	**FINESS Array B**	**74.15**	**330**	P	**P**	**03 32 43.9**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.4,baz=99,slow=6.0,SNR=4.1						
FINES	**FINESS Array B**	**74.15**	**330**	P	**P**	**03 32 43.9**	**-0.6**
BR131	**Keskin Array S**	**75.34**	**307**	*e*P	**P**	**03 32 51.5**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.5						
BRTR	**Keskin Array B**	**75.34**	**307**	P	**P**	**03 32 51.7**	**+0.3**
	comp=Z,0.8nm,0.5s,mb3.6,baz=136,slow=3.0,SNR=7.6						
CSS	**Prodhromos**	**76.92**	**303**	*e*P	**P**	**03 33 00.2**	**0.0**
	comp=Z,7.2nm,0.6s,mb4.5						
GERES	**GERESS Array B**	**85.39**	**321**	P	**P**	**03 33 45.7**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.5,baz=54,slow=6.9,SNR=5.1						

*ISCJB **20** 03:25:22.6±0.6, 36.15N±005×28 86E±004, h10km, Error ellipse: s-maj=6.5km s-min=4.4km az=167.1*
*CSEM **20** 03:25:22.5±0.3, 36 20N×28 96E, h10km, MD3.2, Error ellipse: s-maj=7.0km s-min=4.4km az=168.0*
*ISK **20** 03:25:22.4, 36.19N×28 94E, h16km, MD3.2*
*ATH **20** 03:25:24.0, 36 20N×28 81E, h28km±4km, MD3.2/3*
ISC 20 03:25:23.4±0.8, 3617N±005×2889E±004, h9km±6km, n14, σ1§17/22, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSL	**Kastellorizon**	**0.56**	**91**	*e*PN	**Pg**	**03 25 36.8**	**+2.6**
AKAS	**Kas**	**0.58**	**83**	*i*P	**Pg**	**03 25 34.3**	**-0.3**
AKAS				*i*S	**Sg**	**03 25 44.3**	**+2.1**
ARG	**Arkhangelos**	**0.62**	**275**	*e*PN	**Pg**	**03 25 36.0**	**+0.6**
ARG				*e*SN	**Sg**	**03 25 43.9**	**+0.4**
DALT	**Dalyan (Mudla)**	**0.64**	**341**	PG	**Pg**	**03 25 35.0**	**-0.7**
ELL	**Elmali**	**1.00**	**54**	PG	**Pg**	**03 25 41.3**	**-1.3**
YER	**Yerkesik**	**1.08**	**333**	PG	**Pg**	**03 25 43.0**	**-1.1**
YER				SG	**Sg**	**03 25 58.8**	**+0.5**
GOLH	**Golhisar**	**1.20**	**26**	*i*P	**Pb**	**03 25 44.4**	**-1.8**
GOLH				*i*S	**Sg**	**03 26 02.2**	**+0.4**
DAT	**Datca**	**1.20**	**298**	PN	**Pn**	**03 25 45.7**	**-0.6**
BDRM	**Kayabasi**	**1.47**	**308**	*i*P	**Pn**	**03 25 50.5**	**+0.5**
BDRM				*i*S	**Sn**	**03 26 12.0**	**+2.6**
KARP	**Karpathos**	**1.54**	**247**	*e*PN	**Pn**	**03 25 51.0**	**+0.1**
KARP				*e*SN	**Sn**	**03 26 10.4**	**-0.6**
BODT	**Bodrum**	**1.56**	**306**	*e*PN	**Pn**	**03 25 49.5**	**-1.7**
DENT	**Denizli**	**1.59**	**4**	*e*PN	**Pn**	**03 25 50.3**	**-1.3**
AYDN	**Tasoluk**	**1.70**	**332**	*i*P	**Pn**	**03 25 53.5**	**+0.4**
AYDN				*i*S	**Sn**	**03 26 16.4**	**+1.4**
TKTP	**Tekketepe**	**2.19**	**31**	*i*P	**Pn**	**03 25 59.8**	**-0.1**
TKTP				*i*S	**Sn**	**03 26 32.7**	**+5.6**

*SZGRF **20** 03:41:01.1, 68 55S×35 67W, h33km, mb6.6, Southwestern Atlantic Ocean*
*BJI **20** 03:41:44.7, 60 82S×33 66W, h10km, mB6.8, Ms6.9, Msz6.8*
*IDC **20** 03:41:45.6±0.3, 60 93S×34 45W, h0km, mb5.9/27, mb1 5.9/30, mb1mx5.9/30, mbtmp5.9/30, ML5.6/3, MS6.7/20, Ms1 6.7/20, ms1mx6.7/22, Error ellipse: s-maj=9.4km s-min=7.8km az=49.0*
*IGIL **20** 03:41:46.9, 61 01S×34 38W, h10km, MS6.6*
*ISCJB **20** 03:41:46.2±0.2, 60 96S±003×34 23W±008, h10km, mb6.1/53, MS6.8/192, Error ellipse: s-maj=6.4km s-min=3.6km az=119.0*
*MOS **20** 03:41:47.0±1.0, 61 20S×34 62W, h10km, mb6.0/35, MS6.7/51, Error ellipse: s-maj=21.1km s-min=8.5km az=101.3*
*HRVD **20** 03:41:47.5±0.1, 61 27S×34 52W, h17km, MW7.0/109, Centroid moment Tensor Solution. LP body waves: s109,c273;Mantle waves: s106,c519; Half duration: 7§6 Moment tensor: Scale 10¹⁹Nm; Mrr=1.36±.02; Mθθ 1.17±.01; Mθφ 0.18±.01; Mrθ 0.40±.05; Mφφ 3.68±.01; Mrφ 0.02±.05; Best double couple: M₀3.74000×10¹⁹ NP1:φs4.00000°, δ82.00000°, λ-176.00000°. NP2: φs273.00000°, δ86.00000°, λ-8.00000°. Principal axes: T 4.4090, Plg3.0000°, Azm319.0000°; N -1.3400, Plg81.0000°, Azm69.0000°; P -3.0710, Plg8.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **20** 03:41:48.0±0.1, 61 03S×34 37W, h13km, mb6.4/38, ME7.6, MS6.8/144, MW7.0 Error ellipse: s-maj=5.9km s-min=4.3km az=52.0, Moment Tensor Solution. s16 Moment tensor: Scale 10¹⁹Nm; Mrr 0.22; Mθθ -0.56; Mφφ 0.34; Mrθ 0.30; Mθφ 3.40; Mφr 0.47; Best double couple: M₀3.50000×10¹⁹ NP1:φs356.00000°, δ84.00000°, λ172.00000°. NP2:φs87.00000°, δ82.00000°, λ 6.00000°. Principal axes: T 3.4200, Plg10.0000°, Azm311.0000°; N 0.1300, Plg80.0000°, Azm139.0000°; P -3.5500, Plg1.0000°, Azm41.0000°; Broadband fault plane solution: P waves. NP1:φs275.00000°, δ85.00000°, λ-5.00000°. NP2:φs5.00000°, δ85.00000°, λ-175.00000°. Principal axes: T Plg0.0000°, Azm320.0000°; N Plg0.0000°, Azm0.0000°; P Plg7.0000°, Azm230.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
ISC 20 03:41:45.9±1.6, 6102S±003×3429W±008, h1km±9km, n1050, σ1§12/222, mb6.2/53, MS6.8/192, 126C-149D, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.85**	**349**	Pn	**Pn**	**03 43 29.9**	**+2.3**
	36μm,0.5s,SNR=74						
HOPE	**Hope Point**	**6.85**	**349**	*e*Pn	**Pn**	**03 43 27.4**	**-0.2**
HOPE				*e*Sn	**Sn**	**03 44 45.5**	**-0.7**
PMSA	**Palmer Station**	**14.00**	**242**	Pn	**Pn**	**03 45 03.8**	**-1.7**
	50nm,0.3s,baz=89,slow=15,SNR=233						
PMSA				Sn	**Sn**	**03 47 52.4**	**+11**
	baz=186,slow=19,SNR=2.0						
PMSA	**Palmer Station**	**14.00**	**242**	*e*Pn	**Pn**	**03 45 04.9**	**-0.6**
	5μm,1.0s						
VNA1	**Neumayer--Stat**	**14.23**	**143**	*e*Pn	**Pn**	**03 45 05.8**	**-2.8**
VNA1				*e*		03 45 09.7	
VNA1				*e*		03 45 11.7	
VNA1				*e*		03 45 16.7	
VNA1				*e*		03 45 19.2	
VNA1				*e*		03 45 34.9	
VNA1				*e*		03 45 47.3	
VNA1				*e*		03 46 06.4	
VNA1				*e*S	**Sn**	**03 47 46.7**	**-0.5**
VNA1				*e*		03 47 51.5	
VNA1				*e*		03 47 54.4	
VNA1				*e*		03 48 01.8	
VNA1				*e*		03 57 24.2	
VNA1				*e*		03 57 34.0	
VNA1				*e*		03 57 41.1	
VNA1				*e*		03 57 57.4	
VNA1				*e*		03 58 26.1	
EFI	**East Falkland**	**16.07**	**295**	Pn	**Pn**	**03 45 33.1**	**0.0**
	43μm,0.7s,SNR=82						
EFI	**East Falkland**	**16.07**	**295**	*e*P	**Pn**	**03 45 32.4**	**-0.7**
EFI				pmax	pmax		
	comp=Z,4μm,0.6s						
EFI	**East Falkland**	**16.07**	**295**	*e*Pn	**Pn**	**03 45 32.5**	**-0.7**
SNAA	**Sanae**	**16.27**	**144**	Pn	**Pn**	**03 45 34.9**	**-0.8**
	comp=Z,4.0nm,0.3s,baz=310,slow=15,SNR=119						
SNAA				Sn	**Sn**	**03 48 46.0**	**+9.3**
	comp=Z,6.3nm,0.3s,baz=193,slow=20,SNR=3.3						
SNAA				LR	LR	03 50 31.9	
	comp=Z,188μm,21.3s,baz=288,slow=32						
SNAA	**Sanae**	**16.27**	**144**	*e*Pn	**Pn**	**03 45 33.4**	**-2.3**
SNAA				*e*		03 45 37.5	
SNAA				*e*		03 45 38.8	
SNAA				*e*		03 45 42.5	
SNAA				*e*		03 45 46.7	
SNAA				*e*		03 45 53.2	
SNAA				*e*S	**Sn**	**03 48 36.1**	**-0.6**
SNAA				*e*		03 48 40.6	
SNAA				*e*		03 57 42.7	
SNAA				*e*		03 58 18.0	
SNAA	**Sanae**	**16.27**	**144**	P	**Pn**	**03 45 34.9**	**-0.8**
SNAA				SN	**Sn**	**03 48 46.0**	**+9.3**
SNAA	**Sanae**	**16.27**	**144**	*e*Pn	**Pn**	**03 45 34.8**	**-0.9**
	comp=Z,8μm,1.4s						
SNAA				*e*Sn	**Sn**	**03 48 37.9**	**+1.2**
USHA	**Ushuaia**	**18.99**	**274**	P	**Pn**	**03 46 08.6**	**-0.9**
	comp=Z,5.7nm,0.3s,baz=97,slow=12,SNR=37						
USHA				S	**Sn**	**03 49 42.5**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=32,slow=7.1,SNR=2.5						
USHA				LR	LR	03 51 46.4	
	comp=Z,970μm,19.0s,baz=99,slow=32						
MAIT	**Maitri**	**20.59**	**137**	*e*P	**P**	**03 46 21.9**	**-4.5**
MAIT				*e*S	**S**	**03 50 13.4**	**-4.0**
NVL	**N'lazarevskaya**	**20.63**	**137**	*c i*P	**P**	**03 46 26.6**	**-0.2**
NVL				*i* *PP		03 46 31.9	
NVL				*i* S	**S**	**03 50 21.8**	**+3.7**
NVL				*e*SS	sS	03 50 40.4	+22
NVL				*e*SS		03 50 45.9	
NVL				pmax	pmax		
	comp=Z,2μm,0.9s						
NVL				MLR	MLR		
	comp=Z,452μm,24.6s,MS6.8						
TRIS	**Tristan da Cun**	**27.69**	**40**	*e*P	**P**	**03 47 37.5**	**+1.9**
	comp=Z,974nm,1.4s,mb6.4						
TRIS				LR	LR		
	comp=Z,91μm,20.0s,MS6.3						
TRQA	**Tornquist**	**28.77**	**310**	*e*P	**P**	**03 47 45.4**	**+0.2**
	comp=Z,2μm,1.9s,mb6.6						
TRQA				LR	LR		
	comp=Z,130μm,19.0s,MS6.6						
QSPA	**South Pole Qui**	**29.22**	**180**	*e*P	**P**	**03 47 49.2**	**0.0**
	comp=Z,9μm,1.5s						
QSPA				*e*pP		03 48 03.5	
QSPA				LR	LR		
	comp=Z,19nm,22.0s						
PLCA	**Paso Flores**	**29.99**	**296**	P	**P**	**03 47 55.4**	**-0.6**
	comp=Z,52nm,0.8s,mb5.4,baz=150,slow=8.1,SNR=63						
PLCA				S	**S**	**03 52 51.1**	**-3.6**
	comp=Z,16nm,0.9s,baz=344,slow=17,SNR=1.9						
PLCA				LR	LR	03 59 30.6	
	comp=Z,293μm,18.9s,MS6.9,baz=144,slow=36						
PLCA	**Paso Flores**	**29.99**	**296**	P	**P**	**03 47 55.4**	**-0.6**
PLCA				S	**S**	**03 52 51.2**	**-3.5**
PLCA				pmax	pmax		
	comp=Z,52nm,0.8s						
PLCA				smax			
	comp=N,16nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,293μm,18.9s						
PLCA	**Paso Flores**	**29.99**	**296**	*e*P	**P**	**03 47 55.3**	**-0.7**
	comp=Z,286nm,1.3s,mb5.9						
PLCA				LR	LR		
	comp=Z,278μm,19.0s,MS6.9						
LPA	**La Plata**	**30.20**	**319**	*ce*P	**P**	**03 47 58.0**	**+0.1**
LPA				*e*PP	PP	03 48 57.0	-8.9
SYO	**Syowa Base**	**30.30**	**137**	⇓*e*P	**P**	**03 47 56.8**	**-1.9**
SYO	**Syowa Base**	**30.30**	**137**	⇓*i*pP	pP	03 47 59.5	+0.6
CCHI	**Chillan**	**34.08**	**298**	⇑*i*P	**P**	**03 48 31.7**	**-0.3**
NICH	**Los Niches**	**35.09**	**301**	⇑*e*P	**P**	**03 48 39.4**	**-1.3**
MDZ	**Mendoza**	**35.96**	**306**	*e*P	**P**	**03 48 48.9**	**+0.7**
FCH	**Farellones**	**36.15**	**303**	⇑*i*P	**P**	**03 48 49.6**	**-0.2**
CLCH	**Cerro Calan**	**36.19**	**303**	⇑*i*P	**P**	**03 48 50.0**	**-0.1**
PEL	**Peldehue**	**36.47**	**303**	⇑*e*P	**P**	**03 48 49.9**	**-2.7**
PEL	**Peldehue**	**36.47**	**303**	⇓*i*P	**P**	**03 48 52.5**	**-0.1**
CFAA	**Coronel Fontan**	**36.85**	**307**	S	**S**	**03 54 38.0**	**-3.2**
	comp=Z,1.3nm,1.0s,baz=271,slow=21,SNR=2.2						
CFAA				LR	LR	04 05 07.9	
	comp=Z,13μm,18.0s,MS5.8,baz=161,slow=38						
CPUP	**Villa Florida**	**38.05**	**325**	P	**P**	**03 49 04.7**	**-1.2**
	comp=Z,395nm,0.9s,mb6.1,baz=143,slow=7.4,SNR=220						
CPUP				S	**S**	**03 54 59.0**	**-0.3**
	comp=Z,9.0nm,1.0s,baz=119,slow=8.4,SNR=1.4						
CPUP				LR	LR	04 03 00.7	
	comp=Z,141μm,21.9s,MS6.7,baz=147,slow=34						
CPUP				PKPPKP		04 21 47.8	
	comp=Z,1.1nm,0.5s,baz=308,slow=1.4,SNR=3.5						
CPUP	**Villa Florida**	**38.05**	**325**	*e*P	**P**	**03 49 05.8**	**-0.1**
	comp=Z,1μm,0.9s,mb6.7						
CPUP				LR	LR		
	comp=Z,29μm,22.0s,MS6.0						
CMCH	**Combarbala**	**38.33**	**304**	⇑*i*P	**P**	**03 49 07.7**	**-0.5**
CMCH	**Combarbala**	**38.33**	**304**	⇓*i*P	**P**	**03 49 08.1**	**-0.2**
MAW	**Mawson**	**38.42**	**142**	P	**P**	**03 49 08.8**	**-0.3**
	comp=Z,178nm,1.1s,mb5.7,baz=235,slow=8.8,SNR=133						
MAW				S	**S**	**03 54 58.1**	**-6.8**
	comp=Z,15nm,1.2s,baz=54,slow=23,SNR=1.5						
MAW				LR	LR	04 03 47.2	
	comp=Z,92μm,20.7s,MS6.6,baz=236,slow=34						
MAW	**Mawson**	**38.42**	**142**	P	**P**	**03 49 08.8**	**-0.3**
MAW				S	**S**	**03 54 58.1**	**-6.9**
MAW				pmax	pmax		
	comp=Z,178nm,1.1s						
MAW				smax			
	comp=N,15nm,1.2s						
MAW				MLR	MLR		
	comp=Z,92μm,20.7s						
MAW	**Mawson**	**38.42**	**142**	*e*P	**P**	**03 49 08.2**	**-0.9**
	comp=Z,140nm,1.0s,mb5.7						
MAW				LR	LR		
	comp=Z,128μm,20.0s,MS6.7						
CAM4	**Nova Friburgo**	**39.06**	**348**	⇓*i*P	**P**	**03 49 16.5**	**+2.1**
CAM4				*i*		03 49 18.4	
CAM4				*i*		03 49 26.0	
CAM4				*i*		03 49 36.9	
CAM4				*i*		03 49 54.7	
CAM4				*i*		03 50 55.3	
TLL	**Tololo Astrono**	**39.13**	**305**	⇑*i*P	**P**	**03 49 15.9**	**+0.8**
SBA	**Scott Base**	**40.78**	**187**	*e*P	**P**	**03 49 29.0**	**+0.3**
SBA				pmax	pmax		
	comp=Z,2μm,1.8s,mb6.6						
SBA	**Scott Base**	**40.78**	**187**	*e*P	**P**	**03 49 29.4**	**+0.7**
	comp=Z,2μm,1.9s,mb6.6						
SBA				*e*		03 51 11.3	
SBA				LR	LR		
	comp=Z,90μm,19.0s,MS6.7						
VNDA	**Vanda**	**41.35**	**185**	P	**P**	**03 49 33.1**	**-0.3**
VNDA	**Vanda**	**41.35**	**185**	P	**P**	**03 49 33.2**	**-0.2**
	comp=Z,109nm,1.0s,mb5.5,baz=181,slow=7.5,SNR=150						
VNDA				S	**S**	**03 55 51.5**	**+2.6**
	comp=Z,5.3nm,0.9s,baz=246,slow=17,SNR=1.6						
VNDA	**Vanda**	**41.35**	**185**	P	**P**	**03 49 33.2**	**-0.2**
VNDA				S	**S**	**03 55 51.5**	**+2.6**
VNDA				pmax	pmax		
	comp=Z,109nm,1.0s						
VNDA				smax			
	comp=N,5.0nm,0.9s						
VNDA	**Vanda**	**41.35**	**185**	*e*P	**P**	**03 49 33.2**	**-0.2**
	comp=N,286nm,1.3s,mb5.8						
VNDA				LR	LR		
	comp=Z,63μm,19.0s,MS6.5						
CEN1	**Los Morros**	**44.99**	**310**	⇓*i*P	**P**	**03 50 01.2**	**-1.7**
LVC	**Limon Verde**	**45.23**	**312**	S	**S**	**03 56 44.9**	**-0.8**
	comp=Z,5.0nm,1.1s,baz=310,slow=16,SNR=1.7						
LVC				LR	LR	04 08 52.5	
	comp=Z,117μm,18.9s,MS6.8,baz=170,slow=36						
LVC	**Limon Verde**	**45.23**	**312**	*e*P	**P**	**03 50 05.4**	**+0.6**
	comp=Z,405nm,0.9s,mb6.3						
LVC				*e*S	**S**	**03 56 40.8**	**-5.0**
LVC				LR	LR		
	comp=Z,114μm,20.0s,MS6.8						
SUR	**Sutherland**	**45.47**	**77**	P	**P**	**03 50 07.7**	**+1.1**
	comp=Z,66nm,0.7s,mb5.7,baz=218,slow=6.6,SNR=35						
SUR				S	**S**	**03 56 52.1**	**+2.9**
	comp=Z,11nm,1.1s,baz=322,slow=22,SNR=2.4						
SUR	**Sutherland**	**45.47**	**77**	*e*P	**P**	**03 50 08.0**	**+1.3**
	comp=Z,1μm,1.5s,mb6.5						
SUR				LR	LR		
	comp=Z,18μm,20.0s,MS6.0						
BDFB	**Brasilia**	**46.38**	**342**	P	**P**	**03 50 13.2**	**-0.6**
	comp=Z,202nm,1.2s,mb6.0,baz=174,slow=6.0,SNR=46						
BDFB				S	**S**	**03 57 00.2**	**-2.1**
	comp=Z,9.2nm,0.9s,baz=176,slow=19,SNR=2.0						
BDFB				LR	LR	04 07 11.2	
	comp=Z,88μm,18.7s,MS6.7,baz=18,slow=33						
BDFB	**Brasilia**	**46.38**	**342**	P	**P**	**03 50 13.3**	**-0.6**
BDFB				S	**S**	**03 57 00.2**	**-2.1**
BDFB				pmax	pmax		
	comp=Z,202nm,1.3s						
BDFB				smax			
	comp=N,9.0nm,0.9s						
BAO	**Brasilia Array**	**46.38**	**342**	P	**P**	**03 50 13.0**	**-0.9**
MIR	**Mirnyy**	**46.98**	**154**	*c i*P	**P**	**03 50 19.0**	**+0.4**
MIR				pmax	pmax		
	comp=Z,4μm,16.0s						
CASY	**Casey**	**50.38**	**162**	*e*P	**P**	**03 50 44.0**	**-0.7**
CASY				LR	LR		
	comp=Z,102μm,19.0s,MS6.8						
BOSA	**Boshof**	**50.72**	**78**	P	**P**	**03 50 48.1**	**+0.8**
BOSA	**Boshof**	**50.72**	**78**	P	**P**	**03 50 48.0**	**+0.8**
	comp=Z,100nm,0.9s,mb5.8,baz=216,slow=7.4,SNR=68						
BOSA				S	**S**	**03 57 56.4**	**-7.1**
	comp=Z,2.5nm,0.9s,baz=71,slow=12,SNR=2.1						
BOSA				LR	LR	04 07 34.8	
	comp=Z,62μm,20.7s,MS6.6,baz=216,slow=30						
BOSA	**Boshof**	**50.72**	**78**	P	**P**	**03 50 48.0**	**+0.7**
BOSA				S	**S**	**03 57 56.4**	**-7.1**
BOSA				pmax	pmax		
	comp=Z,100nm,0.9s,mb5.8						
BOSA				smax			
	comp=N,3.0nm,0.9s						
BOSA	**Boshof**	**50.72**	**78**	*e*P	**P**	**03 50 47.9**	**+0.6**
	comp=N,627nm,1.2s,mb6.4						
BOSA				LR	LR		
	comp=Z,58μm,20.0s,MS6.6						
LPAZ

NNA Nana 57.91 309 P **P** 03 51 39.7 +0.1
comp=Z,2µm,1.1s,mb7.0,SNR=25
NNA Nana 57.91 309 P **P** 03 51 39.3 -0.4
comp=Z,198nm,0.9s,mb6.1,baz=165,slow=6.1,SNR=26
NNA S **S** 03 59 34.6 -5.9
comp=Z,1.9nm,0.4s,baz=284,slow=22,SNR=1.9
NNA Nana 57.91 309 *e*P **P** 03 51 39.4 -0.2
comp=Z,568nm,1.2s,mb6.5
NNA *e*PP PP 03 53 47.6 -0.3
NNA LR LR
comp=Z,69µm,20.0s,MS6.8
RPN Rapa Nui 59.46 269 LR LR 04 09 39.9
comp=Z,48µm,19.7s,MS6.6,baz=146,slow=28
RPN Rapa Nui 59.46 269 *e*P **P** 03 51 48.7 -1.8
comp=Z,2µm,1.7s,mb6.8
RPN LR LR
comp=Z,61µm,21.0s,MS6.7
ATAH Atahualpa 63.07 309 P **P** 03 52 14.6 -0.3
comp=Z,175nm,1.1s,mb6.1,baz=166,slow=5.6,SNR=75
ATAH S **S** 04 00 37.5 -9.1
comp=Z,1.3nm,0.3s,baz=82,slow=21,SNR=1.9
LSZ Lusaka 63.52 73 *e*P **P** 03 52 17.9 0.0
LSZ *e*S **S** 04 00 50.7 -1.5
LSZ pmax pmax
comp=Z,508nm,1.0s,mb6.7
LSZ MLR MLR
comp=Z,67µm,21.0s,MS6.8
LSZ Lusaka 63.52 73 *e*P **P** 03 52 17.9 0.0
comp=Z,508nm,1.0s,mb6.7
LSZ *e*S **S** 04 00 50.7 -1.6
LSZ LR LR
comp=Z,67µm,21.0s,MS6.8
LIC Lamto 70.83 31 *e*P **P** 03 53 02.7 -1.6
comp=Z,960nm,1.2s,mb6.5
LIC Lamto 70.83 31 *e*P **P** 03 53 02.7 -1.6
comp=Z,480nm,1.2s,mb6.5
PTCN Pitcairn Islan 71.14 252 PFAKE 03 53 20.0 +14
PTCN LR LR
comp=Z,65µm,20.0s,MS6.9
DBIC Dimbokro 71.30 31 P **P** 03 53 07.6 +0.4
DBIC S S 04 02 24.7 -1.1
DBIC Dimbokro 71.30 31 P **P** 03 53 07.4 +0.2
comp=Z,64nm,0.9s,mb5.7,baz=173,slow=6.9,SNR=51
DBIC S S 04 02 21.6 -4.2
comp=Z,4.7nm,1.1s,baz=190,slow=13,SNR=2.4
DBIC LR LR 04 16 50.1
comp=Z,23µm,20.9s,MS6.4,baz=172,slow=30
DBIC PKPPKP 04 21 01.9
comp=Z,5.8nm,1.1s,baz=355,slow=4.1,SNR=3.9
DBIC Dimbokro 71.30 31 *e*P **P** 03 53 06.7 -0.5
comp=Z,346nm,1.2s,mb6.4
DBIC *e*S S 04 02 20.3 -5.5
DBIC LR LR
comp=Z,38µm,20.0s,MS6.7
ROSC El Rosal 72.66 318 P **P** 03 53 16.2 +0.9
comp=Z,44nm,0.8s,mb5.7,baz=115,slow=3.8,SNR=80
ROSC LR LR 04 25 06.0
comp=Z,81µm,19.4s,MS7.0,baz=187,slow=36
ROSC El Rosal 72.66 318 *e*P **P** 03 53 15.8 +0.5
PAYG Puerto Ayora 73.59 300 *e*P **P** 03 53 20.9 +0.1
comp=Z,5µm,3.8s
PAYG LR LR
comp=Z,89µm,20.0s,MS7.0
RPZ Rata Peaks 73.61 199 P **P** 03 53 22.1 +1.2
comp=Z,203nm,0.9s,mb6.1,baz=159,slow=5.8,SNR=38
RPZ Rata Peaks 73.61 199 PN **P** 03 53 22.3 +1.3
TPP Puerto-a-Pier 74.27 332 *e* **P** 03 53 28.6 +3.8
LTZ Lake Taylor 74.32 200 PN **P** 03 53 25.4 +0.3
TBH Brigand Hill 74.35 333 *e* **P** 03 53 27.4 +2.1
TCE Chacachacare 74.71 332 *e* **P** 03 53 29.3 +1.9
PCRV Puerto La Cruz 74.90 329 P **P** 03 53 28.6 +0.1
comp=Z,410nm,1.1s,mb6.4,baz=153,slow=2.3,SNR=40
PCRV S S 04 02 57.6 -9.1
comp=Z,3.4nm,0.6s,baz=286,slow=13,SNR=1.9
BOT Bacolet 74.93 333 *e* **P** 03 53 30.2 +1.6
TPR Prospect 74.96 333 *e* **P** 03 53 30.0 +1.1
RKT Rikitea 75.06 249 *e*P **P** 03 53 30.9 +1.5
comp=Z,821nm,1.1s,mb6.7
RKT Rikitea 75.06 249 *e*S S 04 03 08.3 -0.2
comp=Z,40µm,33.5s
RKT *e*LQ 04 13 25.1
comp=Z,180µm,32.8s
RKT *e*LR LR 04 16 30.5
comp=Z,167µm,25.5s,baz=149
SDV Santo Domingo 75.31 323 P **P** 03 53 31.1 +0.3
comp=Z,167nm,0.9s,mb6.0,baz=191,slow=4.3,SNR=69
SDV S S 04 03 05.8 -5.5
comp=Z,20nm,0.4s,baz=54,slow=2.8,SNR=2.3
SDV Santo Domingo 75.31 323 *e*P **P** 03 53 30.9 +0.1
comp=Z,721nm,1.3s,mb6.5
SDV *e*S S 04 03 09.6 -1.7
SDV LR LR
comp=Z,40µm,20.0s,MS6.7
SNZO South Karori 75.32 202 *e*P **P** 03 53 30.1 -0.8
comp=Z,6µm,4.2s
SNZO LR LR
comp=Z,60µm,20.0s,MS6.9
NNZ Nelson 75.65 201 PN **P** 03 53 32.7 -0.1
GRW Mount Saint Ca 76.10 332 *e* **P** 03 53 36.5 +1.1
GRHS Sauteurs 76.16 332 *e*P **P** 03 53 35.8 +0.1
GRIC Isle de Caille 76.21 333 *e*P **P** 03 53 35.0 -1.0
GRSS Sisters 76.23 332 *e*P **P** 03 53 34.5 -1.6
GRCU Cariacou 76.36 333 *e*P **P** 03 53 34.6 -2.2
TAU Tasmania Unive 76.42 181 PFAKE 03 53 50.0 +13
TAU LR LR
comp=Z,73µm,20.0s,MS7.0
URZ Urewera 77.80 205 P **P** 03 53 45.8 +0.9
comp=Z,116nm,1.1s,mb5.9,baz=142,slow=1.7,SNR=24
URZ S S 04 03 35.2 -3.4
comp=Z,5.3nm,0.8s,baz=358,slow=22,SNR=1.8
EDRZ Edgecumbe 78.03 205 PN **P** 03 53 46.8 +0.6
TGRZ Tauranga 78.49 204 PN **P** 03 53 49.5 +0.7
TOA0 Torodi Ar. Sit 79.25 36 *e*P **P** 03 53 52.2 -0.8
TORD Torodi Ar. Bea 79.25 36 P **P** 03 53 53.4 +0.5
comp=Z,138nm,1.1s,mb5.9,baz=199,slow=3.4,SNR=197
TORD S S 04 03 51.6 -2.5
comp=Z,1.4nm,1.0s,baz=286,slow=4.1,SNR=2.2
TORD PKKPbc PKKPbc 04 12 44.0 +0.7
comp=Z,1.6nm,1.0s,baz=348,slow=3.3,SNR=4.0
TORD PKPPKP 04 20 45.9
comp=Z,1.8nm,1.2s,baz=322,slow=6.4,SNR=3.8
TORD LR LR 04 22 14.9
comp=Z,55µm,20.8s,MS6.9,baz=205,slow=31
DWS Wesley 79.33 334 *e*P **P** 03 53 54.2 +0.8
TBG Guadaloupe-3 79.67 333 *e*P **P** 03 53 55.3 0.0
LZG Guadaloupe-1 79.98 333 *e*P **P** 03 53 55.5 -1.4
DEG La Desirade 79.99 334 *e*P **P** 03 53 56.5 -0.5
KMBO Kilima Mbogo 80.14 74 P **P** 03 54 02.0 +4.2
comp=Z,24nm,1.1s,mb5.1,baz=205,slow=5.0,SNR=23
KMBO S S 04 04 16.4 +13
comp=Z,0.3nm,0.5s,baz=73,slow=21,SNR=2.1
KMBO PKPPKP 04 20 46.4
comp=Z,3.2nm,1.2s,baz=241,slow=4.0,SNR=5.9
KMBO LR LR 04 26 17.4
comp=Z,59µm,20.0s,MS6.9,baz=186,slow=33
KMBO Kilima Mbogo 80.14 74 P **P** 03 54 02.0 +4.2
KMBO S S 04 04 16.5 +13
KMBO pmax pmax
comp=Z,24nm,1.1s
KMBO Kilima Mbogo 80.14 74 P **P** 03 54 02.0 +4.2
KMBO S S 04 04 16.4 +13
KMBO P'P' 04 20 46.4
KMBO LR LR 04 26 17.4
SEG Port Louis 80.18 334 *e*P **P** 03 53 57.4 -0.6
BPA Boggy Peak 80.88 333 *e*P **P** 03 54 03.2 +1.4
BPA *e* 03 56 56.6
BPA *e* 04 04 04.6
TBI Tubuai 81.16 237 *e*LQ 04 15 54.3
comp=Z,76µm,35.0s
TBI Tubuai 81.16 237 *e*P **P** 03 54 05.2 +2.0
comp=Z,1µm,1.1s,mb6.8
TBI Tubuai 81.16 237 *e*PP PP 03 56 56.2 -12
comp=Z,3µm,25.8s
TBI Tubuai 81.16 237 *e*S S 04 04 13.1 -1.1
comp=Z,76µm,29.8s
TBI *e*LR LR 04 19 26.2
comp=Z,193µm,23.2s,baz=157
OUZ Omahuta 81.44 203 PN **P** 03 54 03.7 -1.0
CPB Codrington 81.44 334 *e*P **P** 03 54 02.7 -2.1
CPB *e* 03 57 00.6
TOO Toolangi 81.76 180⇓*i*P **P** 03 54 06.6 +0.2
TOO pmax pmax
comp=Z,89nm,0.8s,mb6.0
TOO Toolangi 81.76 180⇓*i*P **P** 03 54 06.6 +0.2
comp=Z,89nm,0.8s,mb6.0
MTP Monte Pirata 82.74 330 *e*P **P** 03 54 10.2 -1.4
MTP *e*PP PP 03 57 21.5 +0.2
CPD Cerro la Pandu 82.77 330 *e*P **P** 03 54 10.2 -1.5
HUMP Col San Antoni 82.86 330 *e*P **P** 03 54 12.9 +0.8
SJG San Juan 82.90 330 P **P** 03 54 10.1 -2.3
comp=Z,100nm,1.1s,mb6.0,baz=136,slow=1.5,SNR=24
SJG San Juan 82.90 330 *e*P **P** 03 54 10.6 -1.8
SJG *e* 03 57 24.4
SJG pmax pmax
comp=Z,357nm,1.3s
SJG MLR MLR
comp=Z,45µm,22.0s
SJG San Juan 82.90 330 *e*P **P** 03 54 10.6 -1.8
comp=Z,357nm,1.3s,mb6.4
SJG *e*PP PP 03 57 24.4 +1.7
SJG LR LR
comp=Z,45µm,22.0s,MS6.8
CBYP Canovanas 82.98 330 *e*P **P** 03 54 10.6 -2.2
MPR Mayaguez 83.25 329 *e*P **P** 03 54 12.7 -1.5
NWAO Narrogin (SRO) 83.55 156 P **P** 03 54 14.9 -0.8
comp=Z,97nm,1.1s,mb6.0,baz=193,slow=4.2,SNR=10
NWAO Narrogin (SRO) 83.55 156 P **P** 03 54 15.0 -0.7
NWAO pmax pmax
comp=Z,97nm,1.1s
NWAO Narrogin (SRO) 83.55 156 *e*P **P** 03 54 15.3 -0.4
comp=Z,585nm,1.7s,mb6.5
NWAO LR LR
comp=Z,36µm,19.0s,MS6.8
CNB Canberra Magne 83.97 183 *e*P **P** 03 54 17.4 -0.5
comp=Z,400nm,1.5s,mb6.4
CNB *e*SKS
MUN Mundaring 84.26 155 *e*P **P** 03 54 19.4 0.0
KLBR Kellerberrin 84.94 156 *e*P **P** 03 54 23.1 +0.3
comp=Z,560nm,1.3s,mb6.6
CNCH Conchagua 85.27 308 *e*P x 03 54 45.5
RAO Raoul Island 85.31 211 PFAKE 03 54 30.0 +5.4
RAO LR LR
comp=Z,29µm,21.0s,MS6.6
RIV Riverview 85.39 185 *e*P **P** 03 54 25.1 0.0
VSM San Miguel 85.58 308 *e*P x 03 54 46.7
PCJ Portland Cotta 85.66 319⇓*e*P **P** 03 54 24.7 -1.7
HOJ Hope 85.78 320⇓*e*P **P** 03 54 29.6 +2.6
GWJ Greenwich 85.84 320⇓*e*P **P** 03 54 29.5 +2.2
STH Stony Hill 85.86 320⇓*e*P **P** 03 54 29.9 +2.5
MCJ Malvern 86.00 319⇓*e*P **P** 03 54 30.8 +2.7
TVO Taravao 86.03 240 *e*P **P** 03 54 30.2 +1.9
comp=Z,1µm,1.1s,mb7.0
LCBS La Ceiba 86.06 307 *e*P x 03 54 49.4
LFRS El Faro 86.06 307 *e*P x 03 54 49.9
LBRS Las Brisas 86.16 307 *e*P x 03 54 49.4
PAE Paea 86.28 240 *e*P **P** 03 54 30.9 +1.4
comp=Z,223nm,1.1s,mb6.2
PPT Papeete 86.36 240 *e*P **P** 03 54 31.7 +1.8
comp=Z,100nm,1.2s,mb5.8
PPT Papeete 86.36 240 *e*LQ 04 17 59.1
comp=Z,115µm,37.2s
PPT Papeete 86.36 240 *e*PP PP 03 57 50.0 -0.8
comp=Z,4µm,24.5s
PPT Papeete 86.36 240 *e*S S 04 05 06.1 -0.5
comp=Z,93µm,27.5s
PPT *e*SS SS 04 09 59.4 -47
comp=Z,43µm,27.8s
PPT *e*LR LR 04 21 46.6
comp=Z,241µm,25.5s,baz=157
PPT Papeete 86.36 240 P **P** 03 54 29.0 -0.9
comp=Z,71nm,0.9s,mb5.8,baz=53,slow=9.6,SNR=3.6
PPT LR LR 04 23 51.8
comp=Z,50nm,20.0s,MS6.9,baz=160,slow=29
SBLS San Blas 86.47 307 *e*P x 03 54 50.9
SNJE San Jose 86.49 307 *e*P x 03 54 51.1
RBDL Robledal 86.75 307 *e*P x 03 54 52.8
MASC Masc 87.06 323 *e*P **P** 03 54 35.1 +1.8
RAR Rarotonga 87.11 230 P **P** 03 54 34.0 +0.5
comp=Z,174nm,1.1s,mb6.2,baz=242,slow=8.2,SNR=6.0
RAR Rarotonga 87.11 230 P **P** 03 54 34.0 +0.4
RAR pmax pmax
comp=Z,174nm,1.1s
RAR Rarotonga 87.11 230 P **P** 03 54 34.0 +0.5
STKA Stephens Creek 87.38 176 P **P** 03 54 35.1 +0.3
comp=Z,61nm,1.1s,mb5.8,baz=163,slow=5.2,SNR=46
STKA S S 04 04 59.9 -17
comp=Z,1.9nm,0.8s,baz=69,slow=17,SNR=2.4
STKA LR LR 04 32 16.4
comp=Z,82µm,19.9s,MS7.1,baz=177,slow=35
STKA Stephens Creek 87.38 176⇓*i*P **P** 03 54 34.9 0.0
comp=Z,135nm,1.9s,mb5.8
STKA *e*S S 04 05 14.9 -1.6
FORT Forrest 87.41 165 *e*P **P** 03 54 35.4 +0.4
comp=Z,270nm,0.9s,mb6.5
VAH Vaihoa 87.61 243 *e*P **P** 03 54 37.5 +1.6
comp=Z,469nm,1.1s,mb6.7
MOAC Moa 87.73 322 *e*P **P** 03 54 38.1 +1.6
PMOR Pomariorio Ree 87.93 242 *e*P **P** 03 54 39.1 +1.6
comp=Z,215nm,1.1s,mb6.4
ARMA Armidale 88.77 185⇓*i*P **P** 03 54 41.7 +0.2
FURI Furi 89.61 71 *e*P **P** 03 54 49.6 +4.2
FURI S S 04 05 07.3 -30
TAOE Nuku Hiva Isla 89.89 252 *e*S S 04 05 38.9 -1.3
comp=Z,84µm,27.3s
TAOE *e*SS SS 04 11 37.9 +0.6
comp=Z,67µm,30.7s
TAOE *e*LQ 04 19 40.5
comp=Z,304µm,30.4s
TAOE *e*LR LR 04 23 29.2
comp=Z,359µm,24.2s,baz=171
HUIG Huatulco 90.83 302 *i*P **P** 03 54 50.7 -0.3
CMIG Matias Romero 91.51 304 P **P** 03 54 54.6 +0.4
comp=Z,35nm,1.0s,mb5.6,baz=164,slow=3.7,SNR=26
CMIG S S 04 05 31.2 -24
comp=Z,0.9nm,0.6s,baz=329,slow=16,SNR=3.3
DGAR Diego Garcia 91.56 108 PFAKE 03 55 00.0 +5.5
DGAR LR LR
comp=Z,32µm,20.0s,MS6.8
TEIG Tepich 91.79 311 P **P** 03 54 55.1 -0.5
DESE Dese 92.00 71 *e*P **P** 03 55 02.1 +5.6
TUIG Tuzandepetl 92.18 304 *i*P **P** 03 54 57.7 +0.3
VHO Vista Hermosa 92.25 302 *i*P **P** 03 54 58.8 +1.1
CAIG El Cayaco 93.72 299 *i*P **P** 03 55 04.3 -0.2
LVIG Laguna Verde 94.50 303 *i*P **P** 03 55 07.6 -0.4
PLIG Platanillo 94.59 300 *i*P **P** 03 55 09.1 +0.6
ZIIG Zihuatanejo 94.73 298 *i*P **P** 03 55 09.3 +0.2
PPM Popocatepetl 94.83 301 *i*P **P** 03 55 10.9 +1.4
YAIG Yautepec 94.83 301 *i*P **P** 03 55 10.1 +0.5
ASAR Alice Springs 95.08 169 P **P** 03 55 10.2 -0.5
comp=Z,35nm,0.9s,mb5.8,baz=186,slow=4.4,SNR=131
ASAR PP PP 03 58 57.5 -2.5
comp=Z,24nm,1.1s,baz=187,slow=7.3,SNR=4.8
ASAR S SKSac 04 05 42.1 -5.5
comp=Z,0.4nm,0.8s,baz=185,slow=9.1,SNR=2.8
ASAR PKKPbc PKKPbc 04 12 05.3 +0.3
comp=Z,1.8nm,0.8s,baz=5.0,slow=2.3,SNR=5.2
ASAR PKPPKP 04 20 13.4
comp=Z,1.9nm,1.1s,baz=30,slow=1.2,SNR=4.5
ASAR LR LR 04 38 31.5
comp=Z,30µm,18.4s,MS6.8,baz=186,slow=36
ASAR Alice Springs 95.08 169 P **P** 03 55 10.2 -0.5
ASAR 03 58 57.5
ASAR S SKSac 04 05 42.1 -5.5
ASAR pmax pmax
comp=Z,35nm,0.9s
ASAR pmax pmax
comp=Z,24nm,1.2s
AS31 Alice Springs 95.08 169⇓*i*P **P** 03 55 09.7 -1.0
MBWA Marble Bar 95.47 156 *e*P **P** 03 55 12.6 +0.1
comp=Z,233nm,1.6s,mb6.4
MBWA LR LR
comp=Z,74µm,22.0s,MS7.1
DZM Mont Dzumac 95.53 199 *e*P **P** 03 55 09.6 -3.1
DZM Mont Dzumac 95.53 199 P **P** 03 55 13.1 +0.4
comp=Z,35nm,1.0s,mb5.9,baz=89,slow=7.4,SNR=16
BBSR BB Station 96.31 334 *e*P **P** 03 55 15.8 -0.5
comp=Z,18nm,0.8s,mb5.6
BBSR *e*PP PP 03 59 08.0 -1.6
BBSR LR LR
comp=Z,24µm,20.0s,MS6.7
MOIG Morelia 96.45 299 *i*P **P** 03 55 17.9 +1.0
MDT Midelt 96.59 25 P **P** 03 55 17.9 +0.3
comp=Z,15nm,1.2s,mb5.5,baz=220,slow=3.5,SNR=5.5
MDT PP PP 03 59 13.0 +1.3
comp=Z,16nm,1.3s,baz=175,slow=7.1,SNR=3.6
DWPF Disney 96.70 319 PFAKE 03 55 30.0 +12
DWPF LR LR
comp=Z,22µm,20.0s,MS6.6
CJM Chamela 97.95 296 *i*P **P** 03 55 22.4 -1.3
AFI Afiamalu 98.05 222 PFAKE 03 55 30.0 +5.8
AFI LR LR
comp=Z,37µm,19.0s,MS6.9
PDA Ponta Delgada 98.66 7 *e*SS SS 04 13 30.0 -13
PDA Ponta Delgada 98.66 7 *i*LR LR 04 27 00.0
WRA Warramunga Arr 98.81 169 P **P** 03 55 25.9 -1.7
comp=Z,22nm,1.0s,mb5.8,baz=193,slow=4.1,SNR=61
WRA PP PP 03 59 30.0 +1.2
comp=Z,10nm,1.1s,baz=187,slow=4.0,SNR=4.0
WRA S SKSac 04 06 02.6 -4.3
comp=Z,1.1nm,1.1s,baz=190,slow=4.2,SNR=2.2
WRA PKKPbc PKKPbc 04 11 59.4 +4.5
comp=Z,1.3nm,0.5s,baz=3.6,slow=2.9,SNR=4.8
WRA PKPPKP 04 20 01.1
comp=Z,1.4nm,1.1s,baz=320,slow=1.1,SNR=4.7
WRA LR LR 04 40 08.5
comp=Z,57µm,19.6s,MS7.1,baz=175,slow=35
WRA Warramunga Arr 98.81 169 P **P** 03 55 25.9 -1.7
WRA 03 59 30.0
WRA S SKSac 04 06 02.6 -4.3
WRA pmax pmax
comp=Z,22nm,1.0s
WRA pmax pmax
comp=Z,10.0nm,1.1s
WB2 Warramunga Arr 98.81 169⇓*i*P **P** 03 55 26.7 -0.9
WB2 *e*SKS 04 05 58.1
WRAB Tennant Creek 98.82 169 *e*P **P** 03 55 27.0 -0.6
comp=Z,5.2nm,0.8s,mb5.3
WRAB *e*PPP 03 59 28.2
WRAB LR LR
comp=Z,66µm,20.0s,MS7.1
CTA Charters Tower 99.18 181⇓*i*P **P** 03 55 29.2 0.0
CTA pmax pmax
comp=Z,30nm,1.8s
CTA Charters Tower 99.18 181⇓*i*P **P** 03 55 29.2 0.0
comp=Z,30nm,1.8s,mb5.7
CTAO Charters Tower 99.18 181 *e*P **P** 03 55 29.2 0.0
CTAO pmax pmax
comp=Z,190nm,1.8s,mb6.5
CTAO MLR MLR
comp=Z,36µm,19.0s,MS6.9
CTAO Charters Tower 99.18 181 *e*P **P** 03 55 29.2 0.0
comp=Z,190nm,1.8s,mb6.5
CTAO LR LR
comp=Z,36µm,19.0s,MS6.9
ADH Angra Heroismo 99.49 6 *e* SP 04 08 30.0 -0.9
ADH *e*SS SS 04 13 17.5 -37
ADH Angra Heroismo 99.49 6 *i*LR LR 04 28 00.0
FITZ Fitzroy Crossi 99.52 161 *e*P **P** 03 55 31.3 +0.6
comp=Z,16nm,0.8s,mb5.7
FITZ *e*SKS 04 06 06.1
ZAIG Zacatecas 99.77 300 *i*P Pdif 03 55 32.9 +1.1
MORF Marmelete 100.19 21 *e*PP PP 03 59 38.7 -0.6
MORF *e*SS SS 04 14 03.7 -0.2
MORF *e*SS SS 04 14 03.7 -0.2
MORF AMS AMS 04 36 18.4
comp=Z,12µm,16.9s,MS6.5
MORF Marmelete 100.19 21 *e*PP PP 03 59 38.7 -0.6
MORF Marmelete 100.19 21 *e*SS SS 04 14 03.7 -0.2
MORF Marmelete 100.19 21 *e*PP PP 03 59 38.7 -0.6
MORF Marmelete 100.19 21 *e*SS SS 04 14 03.7 -0.2
PTEO Sao Teotonio 100.41 20 *e*PP PP 03 59 40.4 -0.6
PBEJ Beja 101.03 21 *e*PP PP 03 59 45.2 -0.4
LIS Lisbon 101.48 20 *e*PP PP 03 59 48.7 -0.4
LIS *e*SS SS 04 14 22.2 +0.4
LIS *e*SS SS 04 14 22.3 +0.4
LIS AMS AMS 04 36 04.3
comp=Z,18µm,17.6s,MS6.7
LIS Lisbon 101.48 20 *e*PP PP 03 59 48.7 -0.4
LIS Lisbon 101.48 20 *e*SS SS 04 14 22.3 +0.4
LIS Lisbon 101.48 20 *e*PP PP 03 59 48.7 -0.4
LIS Lisbon 101.48 20 *e*SS SS 04 14 22.3 +0.4
PLOU Loures 101.65 20 *e*PP PP 03 59 51.4 +1.1
PMAFR Mafra 101.69 20 *e*PP PP 03 59 52.3 +1.6
PESTR Estremoz 101.89 21 *e*PP PP 04 00 00.0 +7.8
JSC Jenkinsville 102.39 322 P Pdif 03 55 45.3 +1.8
JSC Jenkinsville 102.39 322 *e*Pdif Pdif 03 55 42.6 -0.9
PTOM Tomar 102.48 20 *e*PP PP 03 59 57.1 +0.5
KEST Kesra 102.76 35 P Pdif 03 55 44.1 -1.0
comp=Z,0.3nm,0.7s,baz=194,slow=4.2,SNR=1.9
KEST PP PP 03 59 55.6 -3.1
comp=Z,6.5nm,1.1s,baz=203,slow=5.2,SNR=3.6
PCBR Castelo Branco 102.86 21 *e*PP PP 04 00 03.5 +4.1
LRAL Lakeview Retre 103.06 317 *e*Pdif Pdif 03 55 46.3 -0.2
LRAL LR LR
comp=Z,62µm,22.0s,MS7.1
ESDC Sonseca Array 103.35 24 Pdiff Pdif 03 55 51.3 +3.5
comp=Z,0.2nm,0.4s,baz=333,slow=18,SNR=4.1
ESDC PKKPbc PKKPbc 04 11 41.8 0.0
comp=Z,1.7nm,1.0s,baz=358,slow=3.7,SNR=6.5
ESLA Sonseca Array 103.35 24 PFAKE 03 56 00.0 +12
ESLA LR LR
comp=Z,151µm,20.0s,MS7.5
MTE Manteigas 103.39 21 *e*PP PP 04 00 03.5 +0.1
MTE *e*SKS 04 06 44.6
MTE *e*SS SS 04 14 47.0 -1.3
MTE *e*LQ 04 24 28.3
HKT Hockley 103.44 308 *e*P Pdif 03 55 48.0 -0.2
HKT *e* 04 00 02.1
HKT pmax pmax
comp=Z,58nm,1.7s
HKT MLR MLR
comp=Z,24µm,22.0s,MS6.7
HKT Hockley 103.44 308 *e*Pdif Pdif 03 55 48.0 -0.1
comp=Z,58nm,1.7s
HKT *e* 04 00 02.1
HKT LR LR
comp=Z,24µm,22.0s,MS6.7
PVIS Viseu 103.64 20 *e*PP PP 04 00 04.5 -0.8
MYNC Murphy 104.00 320 P Pdif 03 55 50.8 +0.1
MYNC pmax pmax
comp=Z,72nm,1.5s
MYNC Murphy 104.00 320 *e*Pdif Pdif 03 55 48.8 -1.9
comp=Z,64nm,1.6s
MYNC LR LR
comp=Z,48µm,21.0s,MS7.0
CPCT Cooper Cave 104.47 320 *e*Pdif Pdif 03 55 51.5 -1.2
PCAB Cabril 104.59 20 *e*PP PP 04 00 16.8 +4.5
NATX Nacogdoches 104.62 310 PFAKE 03 56 00.0 +6.6
NATX LR LR
comp=Z,20µm,21.0s,MS6.6
SWET Sewanee 104.71 318 *e*Pdif Pdif 03 55 52.8 -1.0
SWET *e*PP PP 04 00 12.1 -1.1
BLA Blacksburg 104.86 323 PFAKE 03 56 00.0 +5.5
BLA LR LR
comp=Z,24µm,21.0s,MS6.7
PBRG Braganca 104.90 21 *e*PP PP 04 00 14.8 +0.2
CBN Corbin 104.93 326 PFAKE 03 56 00.0 +5.2
CBN LR LR
comp=Z,37µm,22.0s,MS6.9
TZTN Tazewell 105.18 321 *e*Pdif Pdif 03 55 55.5 -0.4
PLAL Pickwick Lake 105.20 317 *e*Pdif Pdif 03 55 54.6 -1.4
comp=Z,16nm,1.1s
PLAL *e*PP PP 04 00 14.3 -2.5
PLAL LR LR
comp=Z,46µm,22.0s,MS7.0
OXF Oxford 105.22 315 *e*P Pdif 03 55 54.7 -1.4
OXF *e* 04 00 17.2
OXF pmax pmax
comp=Z,103nm,1.7s
OXF MLR MLR
comp=Z,19µm,22.0s,MS6.6
OXF Oxford 105.22 315 *e*Pdif Pdif 03 55 54.7 -1.4
comp=Z,103nm,1.7s
OXF *e*PP PP 04 00 17.2 +0.2
OXF LR LR
comp=Z,19µm,22.0s,MS6.6
FWV Forest Hill 105.32 323 *e*Pdif Pdif 03 55 56.0 -0.5
FWV *e*PP PP 04 00 17.4 -0.3
FAVR Favara 105.45 38 P PP 04 00 20.1 +1.4
JCT Junction City 105.46 305 *e*Pdif Pdif 03 55 56.4 -0.7
JCT LR LR
comp=Z,18µm,20.0s,MS6.6
HAVL Avola 105.61 39 P PP 04 00 20.2 +0.3
FUNA Funafuti 105.85 215 PFAKE 04 00 20.0 +8.5
FUNA LR LR
comp=Z,24µm,21.0s,MS6.7
VAE Valguarnera 105.87 38 PP PP 04 00 22.4 +0.6
comp=Z,1.8nm,0.3s,baz=97,slow=7.1,SNR=4.5
CGL Cagliari Serpe 106.15 34 P PP 04 00 28.2 +4.3
WVT Waverly 106.16 317 *e*PKP PKiKP 04 00 10.9 -1.1
WVT LR LR
comp=Z,43µm,22.0s,MS7.0
CSLB Castelbuono 106.18 38 P PP 04 00 24.9 +0.8
EIL Elat 106.25 58 *e*PKP PKiKP 04 00 11.8 -0.4
EIL *e*PP PP 04 00 24.8 +0.2

BJII Banjamegara 106.27 143 ⇓ *e*P PKiKP 04 00 09.7 -2.6
MVL Millersville 106.34 328 *e*PKP PKiKP 04 00 07.3 -5.1
MVL *e*PP PP 04 00 25.4 +0.1
CPNY Central Park 106.48 330 *e*PKP PKiKP 04 00 11.1 -1.5
CPNY *e*PP PP 04 00 26.5 +0.2
USI Ustica 106.64 37 P PP 04 00 27.5 0.0
PAL Palisades 106.67 330 *e*PKP PKiKP 04 00 13.4 +0.4
PAL *e*PP PP 04 00 27.2 -0.5
MIAR Mount Ida 106.72 312 *e*P Pdif 03 56 02.8 +0.1
MIAR Mount Ida 106.72 312 *e*Pdif Pdif 03 56 02.3 -0.4
MIAR LR LR
comp=Z,24µm,20.0s,MS6.8
SOI Samo 106.92 39 P PP 04 00 30.1 +0.6
MCWV Mont Chateau 106.97 325 PFAKE 04 00 20.0 +6.4
MCWV LR LR
comp=Z,27µm,21.0s,MS6.8
VAM Vamos 107.20 47 *e*P PKiKP 04 00 18.0 +4.0
XRY Khrisi 107.26 48 *e*P PKiKP 04 00 22.0 +7.9
SSPA Standing Stone 107.35 327 PFAKE 04 00 20.0 +5.7
SSPA LR LR
comp=Z,32µm,22.0s,MS6.8
WES Weston 107.37 332 *e*PKP PKiKP 04 00 13.3 -1.0
WES *e*PP PP 04 00 32.7 -0.1
WES LR LR
comp=Z,19µm,22.0s,MS6.6
QUA2 Belchertown 107.50 331 *e*PP PP 04 00 32.2 -1.6
HRV Harvard--Oak R 107.54 332 *e*PP PP 04 00 34.0 -0.1
HRV LR LR
comp=Z,28µm,22.0s,MS6.8
NPS Neapolis 107.58 48 *e*P PKiKP 04 00 20.0 +5.3
WCI Wyandotte Cave 107.58 319 PFAKE 04 00 20.0 +5.3
WCI LR LR
comp=Z,20µm,20.0s,MS6.7
GRI Girifalco 107.72 39 P PP 04 00 34.2 -1.2
VLI Veliai 107.94 45 *e*P PP 04 00 38.5 +1.5
ITM Ithomi 108.01 44 *e*P PKiKP 04 00 24.0 +8.5
SIUC Southern Illin 108.06 317 *e*PKP PKiKP 04 00 11.2 -4.3
SIUC *e*PP PP 04 00 37.8 -0.1
PALK Pallekele 108.30 109 PFAKE 04 00 30.0 +14
PALK LR LR
comp=Z,29µm,22.0s,MS6.8
BINY Binghamton 108.32 329 *e*PKP PKiKP 04 00 15.5 -0.6
BINY *e*PP PP 04 00 36.4 -3.4
BINY LR LR
comp=Z,50µm,22.0s,MS7.0
ACSO Alum Creek Sta 108.41 323 *e*PP PP 04 00 37.5 -2.9
ACSO LR LR
comp=Z,26µm,20.0s,MS6.8
VLS Valsamata 108.46 43 *e*P PP 04 00 34.0 -6.8
FFD Franklin Falls 108.47 332 *e*PP PP 04 00 41.4 +0.5
RLS Riolos of Patr 108.65 44 *e*P PKiKP 04 00 26.0 +9.3
FVM French Village 108.71 316 P Pdif 03 56 20.5 +8.9
FVM pmax pmax
comp=Z,10.0nm,1.3s
MNTX Cornudas Mount 108.79 302 PFAKE 04 00 30.0 +13
MNTX LR LR
comp=Z,67µm,20.0s,MS7.2
WMOK Wichita Mounta 108.83 308 *e*P Pdif 03 56 10.7 -1.4
WMOK *e* 04 00 42.0
WMOK pmax pmax
comp=Z,10.0nm,1.2s
WMOK MLR MLR
comp=Z,16µm,22.0s,MS6.5
WMOK Wichita Mounta 108.83 308 *e*Pdif Pdif 03 56 10.7 -1.5
comp=Z,10nm,1.2s
WMOK *e*PKP PKiKP 04 00 16.9 -0.2
WMOK *e*PP PP 04 00 42.0 -1.5
WMOK LR LR
comp=Z,16µm,22.0s,MS6.5
HNH Hanover 108.84 332 *e*PP PP 04 00 43.5 -0.1
ACCN Adirondack Com 108.86 331 *e*PP PP 04 00 44.1 +0.3
HNR Honiara 108.88 195 PFAKE 04 00 30.0 +13
HNR LR LR
comp=Z,37µm,19.0s,MS7.0
ALLY Alegheny Colle 108.91 325 *e*PP PP 04 00 42.5 -1.5
CCM Cathedral Cave 109.06 316 P Pdif 03 56 16.0 +2.9
CCM Cathedral Cave 109.06 316 *e*Pdif Pdif 03 56 13.1 0.0
CCM LR LR
comp=Z,31µm,22.0s,MS6.8
APE Apeiranthos 109.17 47 *e*P PP 04 00 41.5 -4.5
ASF Jabal al Asfar 109.24 58 PP PP 04 00 48.0 +1.5
comp=Z,6.5nm,1.1s,baz=66,slow=3.4,SNR=3.1
LBNH Lisbon 109.27 332 *e*PP PP 04 00 45.8 -0.9
LBNH LR LR
comp=Z,22µm,21.0s,MS6.7
ERPA Erie 109.30 326 PFAKE 04 00 30.0 +12
ERPA LR LR
comp=Z,17µm,20.0s,MS6.6
ATH Athens Observa 109.34 45 *e*P PKiKP 04 00 26.5 +8.5
ARG Arkhangelos 109.35 49 *e*P PP 04 00 42.5 -4.8
MMAI Mount Meron Ar 109.36 57 PP PP 04 00 51.0 +3.6
comp=Z,0.7nm,0.3s,baz=73,slow=5.6,SNR=6.5
EVR Evrytania 109.54 43 *e*P PKiKP 04 00 27.5 +9.1
NCB Newcomb 109.55 331 PFAKE 04 00 30.0 +12
NCB LR LR
comp=Z,38µm,21.0s,MS6.9
KEK Kerkira 109.60 42 *e*P PKiKP 04 00 20.5 +2.0
LCI Lecce 109.63 40 P PP 04 00 45.5 -3.8
PKME Peaks-Kenny Pk 109.67 335 *e*PKP PKiKP 04 00 16.2 -2.4
PKME *e*PP PP 04 00 46.2 -3.4
PMG Port Moresby 109.80 182 *e*PKP PKiKP 04 00 16.5 -2.3
PMG *e*PP PP 04 00 51.0 +0.5
PMG LR LR
comp=Z,39µm,20.0s,MS7.0
TOUF Mont Tournerai 109.98 31 *e*P PKiKP 04 00 22.2 +3.0
AUTN L'Aution 110.00 31 *e*P PKiKP 04 00 21.1 +1.9
SAOF Saorge 110.03 31 *e*P PKiKP 04 00 21.1 +1.8
OCF Saint Nazaire 110.04 29 PKP PP 04 00 47.8 -4.5
OG26 St.-Nazaire-De 110.04 29 *e*P PP 04 00 47.3 -5.0
AQU L'Aquila 110.07 36 ⇑ *i*P PP 04 00 52.5 0.0
LBL Lubilhac 110.19 27 *e*P PKiKP 04 00 30.2 +11
LBL Lubilhac 110.19 27 PKP PKiKP 04 00 30.5 +11
SMG Samos 110.20 48 *e*P PP 04 00 42.5 -11
NEO Neokhori 110.37 44 *e*P PP 04 00 40.5 -14
MNGI Mangalore 110.47 100 *ex* PP 04 00 40.3 -15
MNGI *ex* x 04 36 45.0
comp=Z,13µm,23.0s
AAM Ann Arbor 110.51 323 PFAKE 04 00 30.0 +10
AAM LR LR
comp=Z,33µm,21.0s,MS6.9
MBDF Montbardon 110.53 30 *e*P Pdif 03 56 18.8 -0.9
comp=Z,27nm,1.5s
PYM Petit Puy Mans 110.62 27 *e*P PKiKP 04 00 30.7 +10
PYM Petit Puy Mans 110.62 27 PKP PKiKP 04 00 30.9 +10
AGO Saint Agoulin 110.94 27 *e*P PKiKP 04 00 29.7 -0.3
PLDF La Plantade 110.97 27 *e*P PKiKP 04 00 26.1 +5.0
PLDF La Plantade 110.97 27 PKP PKiKP 04 00 29.8 +8.7
OHR Ohrid 111.19 42 *e*PKi PKiKP 04 00 20.1 -1.3
BIA Bitola 111.27 42 *e*PKi PKiKP 04 00 20.3 -1.3
PRK Paraskevi 111.37 47 *e*P PP 04 00 59.5 -2.4
Y22C IRIS PASSCAL I 111.49 302 ⇓ P PKiKP 04 00 20.1 -2.0
baz=112
SADO Sadowa 111.53 327 PP PP 04 01 02.9 -0.2
comp=Z,33nm,1.1s,baz=179,slow=8.0,SNR=6.3
LIA Limnos Island 111.57 45 *e*P PP 04 00 54.5 -8.8
TUC Tucson 111.61 298 *e*PKIKP PKiKP 04 00 21.9 -0.4
TUC *e* 04 01 05.9
TUC MLR MLR
comp=Z,30µm,19.0s,MS6.9
VAY Valandovo 111.95 43 *e*PKi PKiKP 04 00 21.6 -1.3
VAY *e*PS PS 04 10 40.2 +1.4
ANMO Albuquerque 112.06 302 PP PP 04 01 03.9 -3.0
comp=Z,9.3nm,1.1s,baz=155,slow=7.4,SNR=7.0
ANMO PKKPbc PKKPbc 04 11 17.6 +3.1
comp=Z,2.9nm,1.0s,baz=319,slow=3.3,SNR=5.1
ANMO Albuquerque 112.06 302 *e*PKIKP PKiKP 04 00 21.0 -2.1
ANMO *e* 04 01 06.9
ANMO MLR MLR
comp=Z,54µm,19.0s
STIP Stip 112.16 42 *e*PKi PKiKP 04 00 22.0 -1.3
SKO Skopje 112.17 42 *e*PKi PKiKP 04 00 22.0 -1.3
116A Eloy 112.22 297 ⇓ P PKiKP 04 00 21.7 -1.8
baz=112
LOR Lormes 112.25 27 *e*P Pdif 03 56 27.0 -0.3
comp=Z,20nm,1.4s
NVR Nevrokopi 112.41 44 *e*P PP 04 00 43.0 -26
115A Sonoran Desert 112.57 297 ⇓ P PKiKP 04 00 23.0 -1.1
baz=113
KGM Kluang 112.95 133 P PKiKP 04 00 29.4 +4.6
LOMF Lomont 113.01 29 *e*P PKiKP 04 00 22.9 -2.0
LOMF Lomont 113.01 29 PKP PKiKP 04 00 23.1 -1.8
JFWS Jewell Farm 113.09 319 PFAKE 04 00 30.0 +4.9
JFWS LR LR
comp=Z,31µm,20.0s,MS6.9
MDRS Chennai 113.16 105 *i* x PP 04 01 25.7 +11
MDRS *ex* x 04 01 27.9
MDRS AMS AMS 04 37 55.0
comp=Z,15µm,22.7s,MS6.5
BBLS Bajina Basta - 113.24 39 ⇓ *i*PKP PKiKP 04 00 13.6 -12
BBS Basel-Blauen 113.28 29 PKIKP PKiKP 04 00 21.6 -3.8
VTS Vitosha 113.30 43 ⇓ *i*P PKiKP 04 00 25.6 +0.1
VTS Vitosha 113.30 43 ⇓ P PKiKP 04 00 25.6 +0.1
BHD Baghdad 113.37 63 *ex* x 03 56 34.0
BHD *ex* x 04 00 30.0
BHD *i* x 04 01 15.0
BHD *ex* x 04 07 14.0
BHD *ex* x 04 08 22.0
Z14A Wintersburg 113.45 297 ⇑ P PKiKP 04 00 24.8 -0.9
baz=114
BOJS Bojanci 113.49 36 *e*PP PP 04 01 16.2 -0.8
MOF Molkenrain 113.55 29 *e*P PKiKP 04 00 26.3 +0.3
MOF Molkenrain 113.55 29 PKP PKiKP 04 00 25.7 -0.3
VOY Vojsko 113.59 35 *e*P PKiKP 04 00 25.8 -0.2
VOY *e* 04 00 35.1
VOY *e* 04 01 22.5
DIVS Divcibare 113.62 40 ⇓ *i*PKP PKiKP 04 00 24.0 -2.1
THEF They Montfort 113.63 28 *e*P PKiKP 04 00 25.0 -1.1
THEF They Montfort 113.63 28 PKP PKiKP 04 00 25.2 -0.9
GRUS Gruza 113.66 40 *e*PKP PKiKP 04 00 21.3 -4.9
DAVA Damuels 113.69 31 ⇑ *i*P PKiKP 04 00 26.4 +0.1
comp=Z,2µm,6.3s
FELD Feldberg im Sc 113.78 30 PKP PKiKP 04 00 25.0 -1.4
LJU Ljubljana 113.78 35 *e*PP PP 04 01 20.8 +1.7
ECH Echery 113.90 29 *e*P PKiKP 04 00 27.2 +0.6
ECH Echery 113.90 29 PKP PKiKP 04 00 25.7 -0.9
Y14A Wickenburg 113.96 297 ⇑ P PKiKP 04 00 25.6 -1.1
baz=114
SQTA Sankt Quirin 113.97 32 ⇑ *i*P PKiKP 04 00 26.6 -0.2
comp=Z,182nm,1.5s
GLA Glamis 114.01 295 ⇑ P PKiKP 04 00 26.5 -0.3
baz=114
MOTA Moosalm 114.06 32 ⇑ *i*P PKiKP 04 00 25.6 -1.3
comp=Z,1µm,3.6s
SDCO Great Sand Dun 114.08 305 *e*PP PP 04 01 21.3 0.0
SDCO LR LR
comp=Z,47µm,19.0s,MS7.1
X15A Humboldt 114.10 298 ⇑ P PKiKP 04 00 26.5 -0.5
baz=114
WTTA Wattenberg 114.12 32 ⇑ *i*P PKiKP 04 00 27.4 +0.3
comp=Z,3µm,7.3s
WLS Welschbruch 114.13 29 *e*P PKiKP 04 00 27.2 +0.1
WATA Walderalm 114.17 32 ⇑ *i*P PKiKP 04 00 26.2 -0.9
comp=Z,82nm,1.4s
SVIS Svilajnac 114.19 40 *i* PKP PKiKP 04 00 28.4 +1.3
OBKA Obir 114.21 35 ⇑ *i*P PKiKP 04 00 28.1 +0.8
comp=Z,7µm,9.2s
VAL Valentia 114.24 16 *e*P Pdif 03 56 35.1 -1.1
VAL *e*pP PP 04 01 06.5 -16
DVTC Desert V Tower 114.24 294 ⇑ P PKiKP 04 00 26.6 -0.7
baz=114
BFO Black Forest 114.28 30 *e*PP PP 04 01 19.4 -3.2
BFO *e*SP SP 04 11 05.3 +5.1
ANTO Ankara 114.31 51 ⇓ P PP 04 01 28.2 +5.4
ANTO Ankara 114.31 51 *e*PKIKP PKiKP 04 00 25.9 -1.5
ANTO *e* 04 01 23.5
ANTO MLR MLR
comp=Z,12µm,20.0s,MS6.5
SWSC Sam W. Stewart 114.34 294 ⇑ P PKiKP 04 00 27.8 +0.3
baz=114
X14A Yava 114.36 297 ⇓ P PKiKP 04 00 26.9 -0.6
baz=115
IPM Ipoh 114.39 130 P PKiKP 04 00 32.4 +4.8
BEO Belgrade 114.42 40 *e*PKP PKiKP 04 00 26.5 -1.1
Y12C Blythe 114.47 296 ⇑ P PKiKP 04 00 26.7 -1.0
baz=115
PERS Pernice 114.49 35 *e*PP PP 04 01 21.2 -2.9
BRTR Keskin Array B 114.50 52 Pdiff Pdif 03 56 45.0 +7.6
comp=Z,1.0nm,0.9s,baz=214,slow=4.2,SNR=5.6
BRTR PKhKP 04 00 13.7
comp=Z,0.4nm,0.6s,baz=112,slow=1.3,SNR=3.7
BRTR PKP PKiKP 04 00 26.1 -1.7
comp=Z,3.8nm,1.0s,baz=183,slow=3.2,SNR=8.5
BRTR PP PP 04 01 23.3 -0.9
comp=Z,2.8nm,0.9s,baz=190,slow=4.0,SNR=2.7
BRTR PKKPbc PKKPbc 04 11 06.0 -0.3
comp=Z,2.4nm,0.9s,baz=70,slow=2.5,SNR=7.5
BRTR Keskin Array B 114.50 52 PKIKP PKiKP 04 00 26.1 -1.7
BRTR 04 01 23.3
BRTR 04 11 06.0
BRTR pmax pmax
comp=Z,4.0nm,1.0s
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 114.50 52 Pdif Pdif 03 56 45.0 +7.6
BRTR PKP PKiKP 04 00 13.7 -14
BRTR PKP PKiKP 04 00 26.1 -1.7
BRTR ⇑ *e*PKP PKiKP 04 00 27.1 -0.7
BRTR PP PP 04 01 23.3 -0.9
BRTR PKKPbc PKKPbc 04 11 06.0 -0.3
BR131 Keskin Array S 114.50 52 *e*PKP PKiKP 04 00 26.5 -1.3
BR131 LR LR
comp=Z,8µm,19.0s,MS6.3
MONP Monument Peak 114.58 294 ⇓ P PKiKP 04 00 28.0 +0.1
baz=115
WUAZ Wupatki 114.60 299 *e*PKP PKiKP 04 00 27.5 -0.4
WUAZ *e*PP PP 04 01 26.6 +1.7
WUAZ LR LR
comp=Z,21µm,20.0s,MS6.7
W15A Williams 114.70 298 ⇑ P PKiKP 04 00 27.3 -0.9
baz=115
PDMCI Parker Dam,Lak 114.76 296 ⇑ P PKiKP 04 00 27.4 -0.9
baz=115,SNR=5.4
LANF Langenberg 114.76 29 *e*P PKiKP 04 00 27.6 -0.7
POO Poona 114.82 97 *e*P PKiKP 04 00 28.0 -0.4
POO AMS AMS 04 39 28.0
comp=Z,21µm,23.9s,MS6.7
FUR Furstenfeldbru 114.86 32 *e*PKiKP PKiKP 04 00 27.1 -1.4
FUR *e*PP PP 04 01 24.1 -2.7
FUR *e*SP SP 04 11 12.1 +6.6
FUR Furstenfeldbru 114.86 32 *i* PKIKP PKiKP 04 00 27.1 -1.4
FUR *e*SP SP 04 11 12.1 +6.6
FUR Furstenfeldbru 114.86 32 *e*PKPdif PKiKP 04 00 27.1 -1.4
FUR *e*PP PP 04 01 24.2 -2.6
FUR *e*SP SP 04 11 12.1 +6.6
X13A Yucca 114.88 297 ⇓ P PKiKP 04 00 27.7 -0.8
baz=115
109C Camp Elliot, M 114.88 293 ⇓ P PKiKP 04 00 27.1 -1.4
baz=115
STU Stuttgart 114.90 30 *e*PP PP 04 01 24.8 -2.2
STU *e*SP SP 04 11 11.9 +6.0
KULM Kulim 115.00 129 *e*PKP PKiKP 04 00 29.4 +0.6
KULM *e*PP PP 04 01 28.5 +0.9
WLF Walferdange 115.02 28 *e*SP SP 04 11 14.9 +8.0
WLF Walferdange 115.02 28 *e*PKIKP PKiKP 04 00 28.6 -0.2
W14A Seligman 115.08 298 ⇓ P PKiKP 04 00 28.4 -0.5
baz=115,SNR=8.9
IRM Iron Mountain 115.09 295 ⇑ P PKiKP 04 00 28.5 -0.4
baz=115
PKSM Moragy 115.12 38 ⇑ *i*P PKiKP 04 00 28.0 -1.0
PKSM Moragy 115.12 38 ⇑ P PKiKP 04 00 28.0 -1.0
ARSA Arzberg 115.16 35 ⇑ *i*P PKiKP 04 00 23.0 -6.1
comp=Z,2µm,5.1s
MALT Malatya 115.17 56 ⇓ *i*P PKiKP 04 00 29.2 +0.1
MALT Malatya 115.17 56 *e*PKP PKiKP 04 00 28.6 -0.4
PFO Pinyon Flat Ob 115.20 294 *e*PKIKP PKiKP 04 00 28.8 -0.3
PFO *e* 04 01 28.6
PFO MLR MLR
comp=Z,30µm,21.0s,MS6.9
PFO Pinyon Flat Ob 115.20 294 ⇑ P PKiKP 04 00 28.4 -0.8
baz=115
BELC Belle Mtn. 115.33 295 ⇓ P PKiKP 04 00 29.1 -0.2
baz=116,SNR=6.7
W13A Hualapai Mount 115.33 297 ⇑ P PKiKP 04 00 29.0 -0.4
baz=116,SNR=8.9
MOA Molln 115.36 34 ⇓ *i*P PKiKP 04 00 27.1 -2.3
comp=Z,1µm,5.2s
MSL Mosul 115.38 61 *ex* x 03 56 38.0
MSL *ex* x 04 00 27.0
MSL *ex* x 04 01 28.0
MSL *ex* x 04 07 17.0
BZS Buzias 115.50 40 ⇑ *i*P PKPdf 04 00 29.1 -0.6
BZS Buzias 115.50 40 ⇑ P PKPdf 04 00 29.1 -0.6
MURC Murrieta 115.53 293 ⇓ P PKPdf 04 00 29.4 -0.3
baz=116
TOD Tromm 115.58 30 PKIKP PKPdf 04 00 33.0 +3.1
SCI San Clemente I 115.61 292 ⇑ P PKPdf 04 00 29.2 -0.7
baz=116
PV01 Paradox Valley 115.66 303 *e*PKPdf PKPdf 04 00 29.4 -0.6
PV01 *e*PP PP 04 01 35.1 +2.7
GMRC Granite Mounta 115.84 295 ⇓ P PKPdf 04 00 29.2 -1.2
baz=116
CONA Conrad Observa 115.88 35 ⇑ *i*PKPdf PKPdf 04 00 23.3 -7.1
comp=Z,2µm,8.0s
ISCO Idaho Springs 115.89 306 PKIKP PKPdf 04 00 30.5 0.0
ISCO Idaho Springs 115.89 306 *e*PKPdf PKPdf 04 00 30.0 -0.5
ISCO *e*PP PP 04 01 33.0 -1.0
ISCO LR LR
comp=Z,33µm,22.0s,MS6.9
SMCO Snowmass 115.90 304 *e*PKP PKPdf 04 00 28.6 -1.8
SMCO *e*PP PP 04 01 34.3 +0.2
CIS Catalina Islan 115.90 292 ⇓ P PKPdf 04 00 29.8 -0.7
baz=116
W12A Cal Nev Ari 115.93 296 ⇓ P PKPdf 04 00 29.3 -1.2
baz=116
BBRC Big Bear Sol-O 115.96 294 ⇑ P PKPdf 04 00 29.8 -0.8
baz=116
HGN Heimansgroeve 116.00 27 *e*PKiKP PKiKP 04 00 27.5 -3.2
*e*PKiKP PKiKP 04 00 32.5 +1.8
HGN *ex* x 04 01 33.7
HGN *e*ScSP 04 09 46.0
HGN *ex* x 04 11 26.8
HGN *e*SS SS 04 17 44.1 +6.4
PV10 Paradox Valley 116.06 302 *e*PKPdf PKPdf 04 00 30.9 +0.1
PV10 *e*PP PP 04 01 32.3 -2.8
TNS Taunus Mts 116.07 29 *e*PKiKP PKiKP 04 00 30.1 -0.7
TNS *e*PP PP 04 01 33.2 -2.1
TNS Taunus Mts 116.07 29 *i* PKIKP PKPdf 04 00 30.1 -0.7
DLF Lyons Farm 116.09 18 ⇓ *i*P PP 04 01 40.6 +5.2
FMP Fort Macarthur 116.11 293 ⇓ P PKPdf 04 00 29.7 -1.1
baz=116
GEC2 GERESS Array S 116.12 33 *e*PKiKP PKiKP 04 00 29.1 -1.8
GEC2 *e*PP PP 04 01 30.1 -5.5
GEC2 GERESS Array S 116.12 33 *i* PKIKP PKPdf 04 00 29.1 -1.8
GERES GERESS Array B 116.12 33 Pdiff Pdif 03 56 53.3 +8.8
comp=Z,0.1nm,0.3s,baz=230,slow=14,SNR=3.0
GERES PKhKP 04 00 25.0
comp=Z,1.3nm,0.8s,baz=210,slow=7.7,SNR=3.6
GERES PKP PKPdf 04 00 29.7 -1.2
comp=Z,6.1nm,1.0s,baz=198,slow=0.8,SNR=12
GERES PP PP 04 01 34.6 -1.0
comp=Z,17nm,1.1s,baz=190,slow=6.8,SNR=7.4
GERES PKKPbc PKKPbc 04 11 05.5 +4.9
comp=Z,1.3nm,0.8s,baz=36,slow=5.0,SNR=6.0
GERES GERESS Array B 116.12 33 PKIKP PKPdf 04 00 29.7 -1.2
GERES 04 01 34.6
GERES pmax pmax
comp=Z,6.0nm,1.0s
GERES pmax pmax
comp=Z,17nm,1.1s
HYB Hyderabad 116.12 101 *i* PKP PKPdf 04 00 29.0 -1.9
HYB *e*PP PP 04 01 42.0 +6.4
HYB *e*SKS SKSdf 04 07 20.0 -24
HYB *e* 04 07 44.0
HYB *e*PS PS 04 11 20.0 +3.0
HYB LR LR 04 52 48.0
comp=Z,23nm,18.0s
HYB Hyderabad 116.12 101 *e*P PKPdf 04 00 29.0 -1.9
HYB *e*LR LR 04 52 48.0
HEC Hector,Ludlow 116.17 295 ⇓ P PKPdf 04 00 30.6 -0.4
baz=116
WET Wettzell 116.18 32 *e*PKiKP PKiKP 04 00 29.5 -1.5
WET *e*PP PP 04 01 30.8 -5.2
WET Wettzell 116.18 32 *i* PKIKP PKPdf 04 00 29.5 -1.5
GRA1 Grafenberg Arr 116.26 31 *e*PKPdf PKPdf 04 00 29.9 -1.3
GRA1 *e*PP PP 04 01 33.4 -3.2
GRA1 *e*PKKPbc PKKPbc 04 10 58.4 -1.8
GRA1 *e*SP SP 04 11 26.8 +8.6
GRA1 *e*SS SS 04 18 00.8 +20
GRA1 *e*SSS 04 22 07.1
GRA1 *e*L 04 43 03.3
comp=Z,15µm,21.7s,MS6.6
GRF Grafenberg Arr 116.26 31 *e*PKiKP PKiKP 04 00 29.9 -1.3
GRF *e*PP PP 04 01 33.4 -3.2
GRF *e*PKKPbc PKKPbc 04 10 58.4 -1.8
GRF *e*SP SP 04 11 26.8 +8.6
GRF *e*SS SS 04 18 00.8 +20
GRF *e*SSS 04 22 07.1
GRF *e*L 04 43 03.3
comp=Z,15µm,21.7s
GRF Grafenberg Arr 116.26 31 *i* PKIKP PKPdf 04 00 29.9 -1.3
GRF *e*SP SP 04 11 26.8 +8.6
GRF *e*SS SS 04 18 00.8 +20
GRF *e*SSS 04 22 07.1
BFSC Mount Baldy St 116.27 293 ⇑ P PKPdf 04 00 30.3 -0.9
baz=116
SNCC San Nicolas Is 116.28 291 PFAKE 04 00 40.0 +8.8
SNCC LR LR
comp=Z,29µm,21.0s,MS6.9
SNCC San Nicolas Is 116.28 291 ⇑ P PKPdf 04 00 30.5 -0.7
baz=116
V12A Nelson 116.28 296 ⇑ P PKPdf 04 00 30.3 -0.9
baz=116,SNR=5.6
KHC Kasperske Hory 116.35 33 *e*PKPdf PKPdf 04 00 30.0 -1.3
KHC *ex* x 04 00 41.6
KHC *e*PP PP 04 01 45.2 +8.0
KHC *e*PKKP PKKPbc 04 11 27.9 +28
KHC *e*SS SS 04 18 02.2 +20
KHC *ex* x 04 21 59.4
KHC AMS AMS 04 38 00.0
comp=Z,48µm,43.3s
KHC Kasperske Hory 116.35 33 *e*PKIKP PKPdf 04 00 30.0 -1.3
KHC *e* 04 01 45.2
KHC *e*PS PS 04 11 27.9 +8.8
KHC *e*SS SS 04 18 02.2 +20
KHC *e* 04 21 59.4
ZST Bratislava 116.47 36 *e*PKP PKPdf 04 00 29.5 -2.1
ZST *e*PP PP 04 01 31.7 -6.3
ZST Bratislava 116.47 36 *e*PKP PKPdf 04 00 29.5 -2.1
ZST *e*PP PP 04 01 31.7 -6.3
ZST LR LR
comp=Z,11µm,20.2s,MS6.5
TUQ Turquoise Mtn. 116.50 295 ⇓ P PKPdf 04 00 31.3 -0.4
baz=117
RRX Edison Barstow 116.51 294 ⇓ P PKPdf 04 00 31.0 -0.6
baz=117
DECC Green Verdugo 116.58 293 P PKPdf 04 00 31.0 -0.8
baz=117
ROTZ Rotzenmuhle 116.58 32 *e*PKiKP PKiKP 04 00 30.3 -1.5
ROTZ *e*PP PP 04 01 36.2 -2.6
ROTZ *e*PKKPbc PKKPbc 04 10 58.7 -0.3
ROTZ *e*SP SP 04 11 29.1 +8.0
TIRR Tirgusor 116.72 45 ⇓ *i*P PKPdf 04 00 31.2 -0.8
TIRR Tirgusor 116.72 45 *e*PKPdf PKPdf 04 00 30.4 -1.7
TIRR *e*PP PP 04 01 34.5 -5.3
U12A Valley of Fire 116.74 297 ⇑ P PKPdf 04 00 31.4 -0.7
baz=117
HARR Harsova 116.75 45 ⇓ *i*P PKPdf 04 00 33.7 +1.6
HARR Harsova 116.75 45 PKIKP PKPdf 04 00 31.2 -0.9
MANZ Manzenberg 116.75 32 *e*PKiKP PKiKP 04 00 30.7 -1.4
MANZ *e*PP PP 04 01 37.4 -2.6
GSC Goldstone 116.78 295 ⇓ P PKPdf 04 00 31.1 -1.1
baz=117,SNR=7.2
MLR Muntele Rosu 116.78 43 Pdiff Pdif 03 56 55.7 +8.2
comp=Z,2.5nm,0.9s,baz=189,slow=1.5,SNR=3.3
MLR PKP PKPdf 04 00 30.3 -1.9
comp=Z,6.5nm,0.6s,baz=232,slow=3.0,SNR=11
MLR PP PP 04 01 39.2 -1.1
comp=Z,62nm,1.3s,baz=192,slow=6.7,SNR=4.2
MLR PKKPbc PKKPbc 04 11 03.4 +5.0
comp=Z,7.1nm,1.1s,baz=80,slow=6.1,SNR=4.6
MLR Muntele Rosu 116.78 43 ⇓ *i*P PKPdf 04 00 31.3 -0.9
MLR Muntele Rosu 116.78 43 PKIKP PKPdf 04 00 30.3 -1.9
MLR pmax pmax
comp=Z,7.0nm,0.6s
MLR Muntele Rosu 116.78 43 Pdif Pdif 03 56 55.7 +8.2
MLR PKP PKPdf 04 00 30.3 -1.9
MLR ⇓ P 04 00 31.3
MLR PP PP 04 01 39.2 -1.1
MLR PKKPbc PKKPbc 04 11 03.4 +5.1
BLG Laguna Peak 116.79 292 ⇑ P PKPdf 04 00 31.8 -0.4
baz=117
DRGR 116.89 40 PKIKP PKPdf 04 00 32.6 +0.2
BUG Bochum--Univer 116.94 28 *e*PKiKP PKiKP 04 00 31.7 -0.8
BUG *e*PP PP 04 01 39.2 -2.1
BUG *e*PKKPbc PKKPbc 04 10 55.5 -2.3
BSC Santa Cruz Isl 116.95 292 ⇓ P PKPdf 04 00 32.0 -0.5
baz=117
EDW2 Edwards Air Fo 116.95 294 ⇑ P PKPdf 04 00 32.1 -0.4
baz=117,SNR=9.3
UBBA Unterbreizbach 117.00 30 *e*PKiKP PKiKP 04 00 31.4 -1.2

UBBA *e*PP PP 04 01 38.5 -3.2
TREC Trest 117.02 34 *e*PKPdf PKPdf 04 00 32.5 -0.1
TREC *ex* x 04 00 43.3
TREC *e*PP PP 04 01 50.2 +8.3
TREC *e*PS PS 04 11 35.3 +10
TREC *ex* x 04 18 15.1
TREC *ex* x 04 22 08.4
TREC AMS AMS 04 41 20.0
comp=Z,34µm,24.2s
TREC Trest 117.02 34 *i* PKIKP PKPdf 04 00 32.5 -0.1
TREC *e* 04 01 50.2
TREC *e*PS PS 04 11 35.3 +10
TREC *e*SS SS 04 18 15.1 +24
TREC MLR MLR
comp=Z,34µm,24.2s,MS6.9
PSZ Piszkesteto 117.03 38⇑ *i*P PKPdf 04 00 32.5 -0.2
PSZ Piszkesteto 117.03 38 *e*PKPdf PKPdf 04 00 32.2 -0.5
SHOC Shoshone 117.05 295⇑P PKPdf 04 00 31.9 -0.8
baz=117
OSI Osito Adit 117.06 293⇓P PKPdf 04 00 32.1 -0.6
baz=117
NKC Novy Kostel 117.07 32 *e*PKPdf PKPdf 04 00 32.7 0.0
NKC *ex* x 04 00 43.9
NKC *e*PP PP 04 01 38.8 -3.4
NKC *ex* x 04 11 37.1
NKC *ex* x 04 18 15.2
NKC *ex* x 04 22 10.3
NKC AMS AMS 04 38 20.0
comp=Z,34µm,36.8s
NKC Novy Kostel 117.07 32 *e*Pdif PKiKP 04 00 32.7 0.0
NKC *e* 04 00 43.9
NKC *e*PP PP 04 01 38.8 -3.4
NKC *e*PS PS 04 11 37.1 +11
NKC *e*SS SS 04 18 15.2 +24
NKC *e* 04 22 10.3
U11A Corn Creek 117.10 296⇓P PKPdf 04 00 31.8 -1.0
baz=117
PHWY Pilot Hill 117.12 307 *e*PKPdf PKPdf 04 00 31.7 -1.1
PHWY *e*PP PP 04 01 43.1 +0.5
CCUT Cedar City 117.17 299 *e*PKPdf PKPdf 04 00 32.4 -0.5
CCUT *e*PP PP 04 01 39.4 -3.5
MOX Moxa 117.24 31 *e*PKiKP PKiKP 04 00 31.5 -1.6
MOX *e*PP PP 04 01 39.5 -3.9
MOX *e*PKKPbc PKKPbc 04 10 55.0 -1.7
MOX *e*SP SP 04 11 35.8 +8.7
MOX Moxa 117.24 31 *e*PKP PKPdf 04 00 32.5 -0.5
comp=Z,102nm,2.2s
MOX *e* 04 01 40.3
MOX *e* 04 10 55.7
MOX
comp=Z,13µm,20.0s
MOX Moxa 117.24 31 *e*PKIKP PKPdf 04 00 32.5 -0.5
MOX pmax pmax
comp=Z,8.0nm,2.2s
MOX MLR MLR
comp=Z,102µm,20.0s,MS7.4
VYHS Vyhne 117.24 37 *e*P Pdif 03 57 01.2 +12
VYHS *e*PKP PKPdf 04 00 31.0 -2.0
VYHS *e*PP PP 04 01 44.9 +1.5
VYHS *e* 04 11 36.9
VYHS *e*SS SS 04 17 56.6 +2.8
VYHS LR LR
comp=Z,24µm,47.1s,MS6.4
TANN Tannenbergstha 117.24 32 *e*PKiKP PKiKP 04 00 31.7 -1.4
TANN *e*PP PP 04 01 39.7 -3.7
TANN *e*PKKPbc PKKPbc 04 10 56.0 -0.7
CFR Carcaliu 117.25 45⇑ *i*P PKPdf 04 00 32.0 -1.1
CFR Carcaliu 117.25 45⇑P PKPdf 04 00 32.0 -1.1
SRU San Rafael 117.29 302 *e*PKPdf PKPdf 04 00 31.5 -1.7
SRU *e*PP PP 04 01 43.9 +0.1
LRMC Laurel Mountai 117.32 294⇓P PKPdf 04 00 32.3 -0.9
baz=118
WTSB Winterswijk 117.32 27 *ex* x 04 01 42.8
VRAC Vranov 117.33 35 PKP PKPdf 04 00 31.4 -1.8
comp=Z,1.9nm,0.3s,baz=194,slow=19,SNR=11
VRAC PKKPbc PKKPbc 04 10 57.5 +1.1
comp=Z,4.2nm,0.3s,baz=61,slow=20,SNR=5.3
VRAC Vranov 117.33 35⇑ *i*P PKPdf 04 00 32.0 -1.2
VRAC Vranov 117.33 35⇑P PKPdf 04 00 32.0 -1.2
PLOR Plostina 117.34 43⇑ *i*P PKPdf 04 00 33.3 +0.1
VRI Vrincioaia 117.38 43⇓ *i*P PKPdf 04 00 34.0 +0.7
VRI Vrincioaia 117.38 43 PKIKP PKPdf 04 00 33.0 -0.3
PRU Pruhonice 117.39 33 *e*PKPdf PKPdf 04 00 32.9 -0.4
PRU *ex* x 04 00 43.9
PRU *e*PP PP 04 01 42.3 -2.2
PRU *ex* x 04 11 40.2
PRU *ex* x 04 18 13.6
PRU *ex* x 04 22 17.5
PRU AMS AMS 04 38 50.0
comp=Z,41µm,42.1s
PRU Pruhonice 117.39 33 *e*PKIKP PKPdf 04 00 32.9 -0.4
PRU *e*SS SS 04 18 13.6 +18
PRU *e* 04 22 17.5
ARUT Antelope Range 117.41 299 *e*PKIKP PKPdf 04 00 32.8 -0.6
ARUT *e* 04 01 42.3
PRA Prague 117.44 33 PKPdf PKPdf 04 00 33.0 -0.4
MSU Marysvale 117.48 300 *e*PKIKP PKPdf 04 00 33.1 -0.4
MSU *e* 04 01 43.8
MVU Marysvale 117.49 300 PFAKE 04 00 40.0 +6.5
MVU LR LR
comp=Z,28µm,20.0s,MS6.9
U10A Ash Meadows, A 117.51 296⇑P PKPdf 04 00 33.0 -0.6
baz=118,SNR=9.5
ARVC Arvin 117.54 293⇓P PKPdf 04 00 32.8 -0.8
baz=118
KECS Kecovo 117.71 38 *e*PKP PKPdf 04 00 32.9 -1.1
KECS *e*PP PP 04 01 47.4 +0.7
MPMC Manual Prospec 117.72 295⇑P PKPdf 04 00 33.4 -0.6
baz=118,SNR=11
TMUT Trail Mountain 117.73 301 *e*PKPdf PKPdf 04 00 33.7 -0.3
TMUT *e*PP PP 04 01 46.6 -0.3
FURC Furnace Creek, 117.78 295⇓P PKPdf 04 00 34.2 +0.1
baz=118,SNR=8.4
PKM Peak Mountain 117.79 292⇑P PKPdf 04 00 33.7 -0.4
baz=118
ISA Isabella 117.82 294 PFAKE 04 00 40.0 +5.8
ISA LR LR
comp=Z,8µm,22.0s,MS6.3
ISA Isabella 117.82 294 P PKPdf 04 00 33.9 -0.2
baz=118,SNR=11
IBBN Ibbenburen 117.86 28 *e*PKiKP PKiKP 04 00 33.3 -1.0
IBBN *e*PKKPbc PKKPbc 04 10 55.6 +1.1
PVCC Panska Ves 117.89 33 *e*PKPdf PKPdf 04 00 33.2 -1.1
PVCC *ex* x 04 00 45.1
PVCC *ex* x 04 01 59.1
PVCC *ex* x 04 11 41.7
PVCC *e*SKKS SS 04 18 18.4 +16
PVCC *ex* x 04 22 28.1
PVCC AMS AMS 04 39 00.0
comp=Z,47µm,42.0s
PVCC Panska Ves 117.89 33 *e*PKIKP PKPdf 04 00 33.2 -1.1
PVCC *e* 04 01 59.1
PVCC *e*PS PS 04 11 41.7 +8.6
PVCC *e*SS SS 04 18 18.4 +16
PVCC *e* 04 22 28.1
DAC Darwin (Calif) 117.95 295 *e*PKPdf PKPdf 04 00 34.6 +0.2
DAC *e*PP PP 04 01 43.8 -4.6
DAC LR LR
comp=Z,28µm,22.0s,MS6.8
EYMN Ely 117.98 320 *e*PKPdf PKPdf 04 00 32.8 -1.7
EYMN *e*PP PP 04 01 46.4 -2.1
EYMN LR LR
comp=Z,608µm,21.0s
MORC Moravsky Berou 118.02 35⇓ *i*P PKPdf 04 00 34.3 -0.3
MORC Moravsky Berou 118.02 35 *e*PKPdf PKPdf 04 00 32.3 -2.3
MORC *e*PP PP 04 01 48.4 -0.4
BRG Berggiesshubel 118.04 32 *e*PKiKP PKiKP 04 00 33.1 -1.5
BRG *e*PP PP 04 01 45.6 -3.4
BRG *e*PKKPbc PKKPbc 04 10 54.7 +0.9
BRG Berggiesshubel 118.04 32 *i* PKP PKPdf 04 00 33.7 -0.9
comp=Z,14nm,1.5s
BRG *i* 04 00 44.7
comp=Z,88nm,2.2s
BRG *i* PP PP 04 01 39.5 -10
comp=Z,33nm,1.7s
BRG *i* 04 02 07.0
BRG S SP 04 11 49.0 +15
BRG *i* 04 12 58.0
BRG *i* 04 14 46.8
comp=Z,20nm,1.7s
BRG SS SS 04 18 04.0 -0.2
BRG *e*PKPPKP 04 25 47.3
comp=Z,17nm,2.6s
BRG
comp=N,10µm,22.9s
BRG
comp=E,4µm,27.3s
BRG
comp=Z,11µm,24.9s
BRG Berggiesshubel 118.04 32 *i* PKIKP PKPdf 04 00 33.7 -0.9
BRG *i* 04 12 58.0
BRG SS SS 04 18 04.0 -0.2
BRG pmax pmax
comp=Z,14nm,1.5s
BRG MLR MLR
comp=N,10µm,22.9s
BRG MLR MLR
comp=Z,11µm,24.9s,MS6.4
BRG Berggiesshubel 118.04 32 *i* PKP PKPdf 04 00 33.7 -0.9
BRG *i* 04 00 44.7
BRG *i* PP PP 04 01 39.5 -10
BRG *i* 04 02 07.0
BRG S SP 04 11 49.0 +15
BRG *i* 04 12 58.0
BRG *i* 04 14 46.0
BRG SS SS 04 18 04.0 -0.2
BRG *e*P'P' 04 25 47.3
BRG LR LR
comp=Z,11µm,24.9s,MS6.4
RWWY Rawlins 118.14 306 *e*PKPdf PKPdf 04 00 33.2 -1.6
RWWY *e*PP PP 04 01 49.1 -0.6
CLL Collm 118.20 32 *e*PKiKP PKiKP 04 00 33.2 -1.7
CLL *e*PKPdf PKPdf 04 00 33.8 -1.1
CLL *e* 04 00 44.7
CLL *e*PP PP 04 01 45.6 -4.5
CLL *e*PP PP 04 01 58.0 +7.9
CLL *e*PPP 04 04 22.8
CLL *e*Sdiff Sdif 04 09 47.4 +7.0
CLL *e*PKKPbc PKKPbc 04 10 51.5 -1.8
CLL *e*PKKPbc PKKPbc 04 11 52.4 -0.9
CLL *e*PKKPab PKKPab 04 10 55.7 -0.7
CLL *e*PKKPdf PKKPdf 04 11 22.8 +0.6
CLL *e*SP SP 04 11 43.4 +7.6
CLL *e*PS PS 04 11 44.4 +8.6
CLL *e*PPS 04 12 56.4
CLL *e*SS SS 04 18 09.7 +3.4
CLL *e*PSPS 04 18 28.7
CLL *e*SSS 04 22 35.8
CLL *e*SSSS 04 25 56.5
CLL *e*LR LR 04 33 04.1
CLL *e*L 04 45 51.0
comp=Z,17µm,22.0s
CLL Collm 118.20 32 *i* PKIKP PKPdf 04 00 33.7 -1.2
comp=Z,logA/T=1.4
CLL *i* 04 00 44.6
CLL *e* 04 01 32.0
CLL *i* PP PP 04 01 47.0 -3.1
CLL *e* 04 02 15.0
CLL *e*PPP 04 04 17.0
CLL *i* PKKP PKKPbc 04 10 52.2 -1.1
CLL *i* 04 11 07.8
CLL *e*PKKP PKKPbc 04 11 23.0 +30
CLL *e*SKSP 04 11 43.0
CLL *e*PPS 04 13 02.0
CLL *e*SS SS 04 18 12.0 +5.7
CLL *e* 04 18 36.0
CLL *e*SSS 04 22 36.0
CLL *e* 04 26 20.0
CLL Collm 118.20 32 *i* PKPdf PKPdf 04 00 33.7 -1.2
comp=Z,55nm,2.0s
CLL *i* x x 04 00 44.6
comp=Z,214nm,2.5s
CLL *ex* x 04 01 32.0
CLL *i* PP PP 04 01 47.0 -3.1
CLL *ex* x 04 02 15.0
CLL *e*PPP 04 04 17.0
CLL *i* PKKPab PKKPab 04 10 52.2 -4.2
comp=Z,17nm,1.3s
CLL *i* x x 04 11 07.8
CLL *e*PKKPdf PKKPdf 04 11 23.0 +0.8
CLL *e*SKSP 04 11 43.0
CLL *e*PPS 04 13 02.0
CLL *e*SS SS 04 18 12.0 +5.7
CLL *e*PSPS 04 18 36.0
CLL *e*SSS 04 22 36.0
CLL *ex* x 04 26 20.0
CLL Collm 118.20 32 *i* PKIKP PKPdf 04 00 33.7 -1.2
CLL pmax pmax
comp=Z,55nm,2.0s
CLL MLR MLR
comp=Z,17µm,23.2s,MS6.6
CLL Collm 118.20 32 *i* PKP PKPdf 04 00 33.7 -1.2
CLL *i* 04 00 44.6
CLL *i* PP PP 04 01 47.0 -3.1
CLL LR LR
comp=Z,17µm,23.2s,MS6.6
DPC Dobruska-Polom 118.20 34 *e*PKPdf PKPdf 04 00 35.1 +0.2
DPC *ex* x 04 00 46.0
DPC *e*PP PP 04 01 46.7 -3.4
DPC *ex* x 04 11 45.1
DPC *e*SKKS SS 04 18 23.9 +18
DPC *ex* x 04 22 27.6
DPC AMS AMS 04 40 30.0
comp=Z,30µm,30.4s
DPC Dobruska-Polom 118.20 34 *e*PKIKP PKPdf 04 00 35.1 +0.2
DPC *e*PS PS 04 11 45.1 +9.2
DPC *e*SS SS 04 18 23.9 +18
DPC *e* 04 22 27.6
AKL Akola 118.20 98 *e*P PKPdf 04 00 35.1 +0.2
SMMC Simmler 118.21 292⇑P PKPdf 04 00 34.8 -0.1
baz=118
VES Vestal, Richgr 118.24 293⇓P PKPdf 04 00 34.2 -0.7
baz=118
OKC Ostrava-Krasne 118.25 36 *e*PKPdf PKPdf 04 00 33.9 -1.1
OKC *ex* x 04 00 46.1
OKC *e*PP PP 04 01 52.5 +2.1
OKC *e*PS PS 04 11 51.1 +15
OKC *e*SKKS SS 04 18 23.6 +17
OKC *ex* x 04 22 43.1
OKC AMS AMS 04 42 20.0
comp=Z,11µm,24.1s
OKC Ostrava-Krasne 118.25 36 *e*PKIKP PKPdf 04 00 33.9 -1.1
OKC *e* 04 01 52.5
OKC *e*SS SS 04 18 23.6 +17
OKC MLR MLR
comp=Z,11µm,24.1s,MS6.4
OKC Ostrava-Krasne 118.25 36 *e*Pdif PKiKP 04 00 33.9 -1.1
OKC *e* 04 00 46.1
OKC *e*PP PP 04 01 52.5 +2.1
OKC *e*PS PS 04 11 51.1 +15
OKC *e*SS SS 04 18 23.6 +17
OKC *e* 04 22 43.1
UPC Upice 118.26 34 *e*PKPdf PKPdf 04 00 35.2 +0.2
UPC *ex* x 04 00 46.0
UPC *e*PP PP 04 01 48.8 -1.7
CWC Cottonwood Cre 118.30 294⇑P PKPdf 04 00 34.5 -0.6
baz=118
SCHQ Schefferville 118.35 339 PKP PKPdf 04 00 32.8 -2.4
comp=Z,9.8nm,0.9s,baz=110,slow=3.1,SNR=8.9
SCHQ PKKPbc PKKPbc 04 10 50.4 -2.4
comp=Z,6.7nm,0.9s,baz=321,slow=8.3,SNR=6.7
SCHQ Schefferville 118.35 339 *e*PKPdf PKPdf 04 00 32.6 -2.5
SCHQ *e*PP PP 04 01 50.1 -1.0
SCHQ LR LR
comp=Z,29µm,20.0s,MS6.9
CRVS Cervenica-Dubn 118.38 38 *e*PKP PKPdf 04 00 34.8 -0.4
CRVS *e*PP PP 04 01 53.4 +2.1
CRVS *e* 04 10 57.4
CRVS *e* 04 11 52.4
CRVS *e*SS SS 04 18 12.5 +3.8
BURAR Bucovina Array 118.42 42⇓ *i*P PKPdf 04 00 35.5 +0.2
BURAR Bucovina Array 118.42 42 PKIKP PKPdf 04 00 35.3 0.0
BURAR Bucovina Array 118.42 42⇓P PKPdf 04 00 35.5 +0.2
GRAC Grapevine Rang 118.45 295⇑P PKPdf 04 00 35.1 -0.2
baz=119
RAC Raciborz 118.48 36 *e*PKPdf PKPdf 04 00 34.7 -0.7
RAC LR LR
comp=Z,14µm,20.2s,MS6.6
NIE Niedzica 118.50 37 *e*PKPdf PKPdf 04 00 35.4 -0.1
MPU Maple Canyon 118.52 301 *e*PKPdf PKPdf 04 00 34.4 -1.1
MPU *e*PP PP 04 01 47.8 -4.4
MPU LR LR
comp=Z,34µm,21.0s,MS7.0
ESK Eskdalemuir 118.56 20 *e*PKIKP PKPdf 04 00 34.3 -1.3
ESK *e* 04 01 53.8
ESK MLR MLR
comp=Z,19µm,21.0s,MS6.7
NRDL Niedersach Rie 118.57 29 *e*PKiKP PKiKP 04 00 34.6 -1.1
NRDL *e*PKKPbc PKKPbc 04 10 51.1 -0.8
PTRM Twissleman Ran 118.60 292 *e*PKPdf PKPdf 04 00 36.4 +0.7
KSP Ksiaz 118.64 34 *e*PKP PKPdf 04 00 34.0 -1.7
KSP *e*PP PP 04 02 01.3 +8.2
KSP *e*SKS SKSdf 04 07 33.5 -15
KSP *e*PS PS 04 11 53.0 +13
KSP *e*SS SS 04 18 37.5 +26
KSP L 04 41 20.1
comp=Z,55nm,30.9s
KSP Ksiaz 118.64 34 *e*PKIKP PKPdf 04 00 35.9 +0.2
KSP *e* 04 01 58.4
KSP *e*PS PS 04 11 49.1 +9.3
KSP *e*SS SS 04 18 19.3 +7.3
KSP Ksiaz 118.64 34 *e*PKPdf PKPdf 04 00 35.9 +0.2
KSP *e* 04 00 47.0
KSP *e*PP PP 04 01 58.4 +5.3
KSP *e*PS PS 04 11 49.1 +9.3
KSP *e*SS SS 04 18 19.3 +7.3
KSP LR LR
comp=Z,63µm,30.9s,MS7.0
VIS Vishakhapatnam 118.65 106 *e*P PKPdf 04 00 37.9 +2.1
NLU North Lily Min 118.65 301 *e*PKPdf PKPdf 04 00 35.4 -0.3
NLU *e*PP PP 04 01 53.3 +0.1
KOLS Kolonicke sedl 118.66 39 *e*PKP PKPdf 04 00 34.4 -1.4
KOLS *e*PP PP 04 02 01.8 +8.6
KOLS Kolonicke sedl 118.66 39 *e*PKIKP PKPdf 04 00 34.4 -1.4
KOLS *e* 04 02 01.8
KOLS *e*SS SS 04 18 20.0 +7.8
KOLS Kolonicke sedl 118.66 39 *e*PKP PKPdf 04 00 34.4 -1.4
KOLS *e*PP PP 04 02 01.8 +8.6
KOLS *e* 04 12 01.2
KOLS *e*SS SS 04 18 20.0 +7.8
DAU Daniels Canyon 118.69 302 *e*PKPdf PKPdf 04 00 35.6 -0.2
DAU *e*PP PP 04 01 53.9 +0.3
RCTC Rector, Farmer 118.70 293⇑P PKPdf 04 00 34.8 -1.0
baz=119
STHS Stebnicka Huta 118.77 38 *e*PKP PKPdf 04 00 33.6 -2.4
TIN Tinemaha 118.88 295⇓P PKPdf 04 00 35.8 -0.4
baz=119
V04C Ramage Ranch, 118.88 292⇑P PKPdf 04 00 35.7 -0.5
baz=119
HELL Mitchell Peak, 118.92 294⇓P PKPdf 04 00 35.4 -0.9
baz=119,SNR=8.3
RSSD Black Hills 118.98 309 PKIKP PKPdf 04 00 34.0 -2.4
RSSD Black Hills 118.98 309 *e*PKPdf PKPdf 04 00 35.4 -1.0
RSSD *e*PP PP 04 01 55.0 -0.5
RSSD *e*SKPdf SKPdf 04 04 07.2 -5.8
RSSD *e*PKKPab PKKPab 04 10 52.1 -0.9
RSSD LR LR
comp=Z,36µm,22.0s,MS7.0
PKD Parkfield 118.99 292⇓P PKPdf 04 00 36.3 -0.1
baz=119,SNR=5.5
S09A Goldfield 118.99 296⇓P PKPdf 04 00 36.2 -0.3
baz=119,SNR=22
Q12A Willow Creek R 119.05 299 P PKPdf 04 00 35.9 -0.6
baz=119,SNR=19
R10A Warm Springs 119.06 297⇓P PKPdf 04 00 36.4 -0.1
baz=119,SNR=7.4
OJC Ojcow 119.06 37 *e*PKIKP PKPdf 04 00 35.5 -1.1
OJC *e* 04 01 54.9
OJC *e* 04 07 31.6
OJC *e*SP SP 04 11 46.0 +2.4
OJC *e*SS SS 04 18 23.7 +6.2
OJC Ojcow 119.06 37 *e*PKPdf PKPdf 04 00 35.5 -1.1
OJC *e*PP PP 04 01 54.9 -1.2
OJC *e*SKSac SKSac 04 07 31.6 -1.4
OJC *e*SP SP 04 11 46.0 +2.4
OJC *e*SS SS 04 18 23.7 +6.2
OJC LR LR
comp=Z,80µm,20.7s,MS7.3
KIS Kishinev 119.07 44 *i* PKIKP PKPdf 04 00 42.0 +5.4
KIS *i* 04 02 05.0
KIS *i* PPP 04 04 35.0
KIS pmax pmax
comp=Z,6µm,10.0s
KIS pmax pmax
comp=Z,6µm,12.0s
KIS MLR MLR
comp=Z,10µm,20.0s,MS6.4
KIS MLR MLR
comp=Z,12µm,20.0s
U05C Westside ANR, 119.12 293⇑P PKPdf 04 00 37.1 +0.4
baz=119
CTU Camp Tracy 119.13 302 *e*PKPdf PKPdf 04 00 35.6 -1.1
CTU *e*PP PP 04 01 57.4 +0.9
DUG Dugway 119.16 301 *e*PKIKP PKPdf 04 00 35.6 -1.1
DUG *e* 04 01 55.5
DUG MLR MLR
comp=Z,22µm,21.0s,MS6.8
DUG Dugway 119.16 301 *e*PKPdf PKPdf 04 00 35.6 -1.1
DUG *e*PP PP 04 01 55.5 -1.2
DUG *e*PKKPab PKKPab 04 10 50.2 -1.9
DUG LR LR
comp=Z,22µm,21.0s,MS6.8
SIM Simferopol' 119.18 49 *i* PKIKP PKPdf 04 00 37.0 +0.2
SIM *e* 04 02 06.0
SIM *e*SSS 04 22 53.0
SIM pmax pmax
comp=Z,2µm,9.0s
NOQ North Oquirrh 119.25 302 *e*PKPdf PKPdf 04 00 36.3 -0.7
NOQ *e*PP PP 04 01 56.1 -1.2
MTUM Tungsten Hills 119.27 295 *e*PKPdf PKPdf 04 00 36.6 -0.3
TPH Tonopah 119.28 296 PFAKE 04 00 50.0 +13
TPH LR LR
comp=Z,5µm,22.0s,MS6.1
GNI Garni 119.33 60 PKP PKPdf 04 00 36.3 -0.8
comp=Z,11nm,0.7s,baz=321,slow=5.4,SNR=13
GNI PKKPbc PKKPbc 04 10 50.2 +1.0
comp=Z,4.4nm,0.5s,baz=301,slow=5.9,SNR=4.6
GNI Garni 119.33 60 *e*PKPdf PKPdf 04 00 36.9 -0.2
GNI LR LR
comp=Z,28µm,20.0s,MS6.9
TCUT Toone Canyon 119.35 302 *e*PKPdf PKPdf 04 00 36.4 -0.7
TCUT *e*PP PP 04 01 58.4 +0.3
R09A Tonopah 119.35 296⇑P PKPdf 04 00 36.6 -0.5
baz=120,SNR=9.8
V03C Hunter Liggett 119.36 292⇓P PKPdf 04 00 37.5 +0.3
baz=120
KWP Kalwaria 119.41 39 *e*PKP PKPdf 04 00 36.5 -0.7
KWP *e*PP PP 04 01 57.5 -0.9
KWP Kalwaria 119.41 39 *e*PS PS 04 12 08.5 +22
KWP *e*SS SS 04 18 41.8 +20
KWP L 04 39 34.6
comp=Z,42nm,45.3s
KWP Kalwaria 119.41 39 *e*PKIKP PKPdf 04 00 36.5 -0.7
KWP *e* 04 01 57.5
KWP *e*SS SS 04 18 41.8 +20
KWP Kalwaria 119.41 39 *e*PKP PKPdf 04 00 36.5 -0.7
KWP *e*PP PP 04 01 57.5 -0.9
KWP *e*PS PS 04 12 08.5 +22
KWP *e*SS SS 04 18 41.8 +20
U04C Hernandez Rese 119.44 292⇓P PKPdf 04 00 37.5 +0.2
baz=120,SNR=7.3
P12A McGill 119.44 299⇑P PKPdf 04 00 36.5 -0.8
baz=120,SNR=12
T06C Millerton Lake 119.49 294⇓P PKPdf 04 00 37.0 -0.4
baz=120,SNR=11
NGP Nagpur 119.56 100 *ex* PKPdf 04 00 32.6 -4.9
KCC Kaiser Creek 119.58 294⇓P PKPdf 04 00 37.9 +0.3
baz=120,SNR=6.1
MLAC Mammoth Lakes 119.62 295⇑P PKPdf 04 00 38.2 +0.6
baz=120
TSM Tawau 119.63 148 P PKPdf 04 00 39.4 +1.7
HAST UC Hastings Re 119.81 292⇑P PKPdf 04 00 37.5 -0.5
baz=120,SNR=5.2
HWUT Hardware Ranch 119.82 303 *e*PKPdf PKPdf 04 00 36.0 -2.0
HWUT *e*PP PP 04 02 01.6 +0.3
HWUT LR LR
comp=Z,27µm,21.0s,MS6.9
T05C Eagle Field, D 119.83 293⇓P PKPdf 04 00 37.4 -0.6
baz=120
P11A Circle Ranch, 119.87 298⇑P PKPdf 04 00 37.8 -0.3
baz=120
Q09A Carvers 119.89 297⇑P PKPdf 04 00 37.8 -0.3
baz=120
R08A Mina 119.89 296⇓P PKPdf 04 00 38.0 -0.2
baz=120,SNR=17
SPUT South Promonto 119.94 302 *e*PKPdf PKPdf 04 00 36.2 -2.0
SPUT *e*PP PP 04 02 03.7 +1.6
BSEG Bad Segeberg 119.95 29 *e*PKiKP PKiKP 04 00 36.9 -1.4

BSEG ePKKPbc PKKPbc 04 10 48.4 +1.5
BSEG Bad Segeberg 119.95 29 *i* PKIKP PKPdf 04 00 36.9 -1.4
LVV L'vov 119.98 40 *e*PKIKP PKPdf 04 00 37.1 -1.2
LVV *e* 04 02 10.3
LVV *e*SS SS 04 18 38.2 +8.9
LVV MLR MLR
comp=E,12µm,23.0s,MS6.6
LVV MLR MLR
comp=Z,13µm,23.0s,MS6.5
LVV MLR MLR
comp=N,11µm,22.0s,MS6.6
BW06 Boulder Array 119.98 305 *e*PKPdf PKPdf 04 00 35.6 -2.8
BW06 *e*PP PP 04 02 02.2 -0.2
BW06 LR LR
comp=Z,54µm,20.0s,MS7.2
PDAR Pinedale Array 119.98 305 PKP PKPdf 04 00 35.1 -3.2
comp=Z,8.0nm,1.0s,baz=144,slow=3.3,SNR=19
PDAR PP PP 04 02 03.5 +1.2
comp=Z,5.4nm,1.1s,baz=146,slow=5.5,SNR=2.3
PDAR PKKPab PKKPab 04 10 48.0 -0.5
comp=Z,1.8nm,0.9s,baz=34,slow=2.3,SNR=6.5
PDAR SKKP 04 14 50.0
comp=Z,2.4nm,1.2s,baz=304,slow=3.9,SNR=3.7
PDAR PKPPKP 04 19 35.4
comp=Z,0.4nm,0.6s,baz=46,slow=5.2,SNR=4.3
O12A Currie 120.03 299 ⇓P PKPdf 04 00 37.8 -0.6
baz=120,SNR=25
NVAR Mina Array Bea 120.05 296 PKP PKPdf 04 00 38.1 -0.4
comp=Z,8.5nm,0.9s,baz=134,slow=3.7,SNR=24
NVAR PKKPbc PKKPbc 04 10 46.5 0.0
comp=Z,1.1nm,0.8s,baz=279,slow=6.9,SNR=5.1
NVAR SKKPbc 04 14 18.4
comp=Z,12nm,1.3s,baz=325,slow=1.3,SNR=4.1
S05C Merced 120.05 293 ⇑P PKPdf 04 00 38.0 -0.4
baz=120,SNR=7.1
SAO San Andreas Ge 120.07 292 PKIKP PKPdf 04 00 39.0 +0.5
SAO *e* 04 00 44.0
SAO San Andreas Ge 120.07 292 *e*PKPdf PKPdf 04 00 38.1 -0.4
SAO LR LR
comp=Z,21µm,19.0s,MS6.8
R07C Lee Vining 120.09 295 ⇑P PKPdf 04 00 38.4 -0.2
baz=120,SNR=7.3
PACP Pacheco Peak 120.20 292 ⇓P PKPdf 04 00 38.6 -0.1
baz=120,SNR=6.6
P10A Eureka 120.23 298 ⇑P PKPdf 04 00 38.5 -0.3
baz=120
Q08A Gabbs 120.24 296 ⇑P PKPdf 04 00 38.3 -0.5
baz=120,SNR=10
S06C San Francisco 120.28 294 ⇑P PKPdf 04 00 38.6 -0.3
baz=120,SNR=16
N13A Wendover, West 120.29 300 ⇓P PKPdf 04 00 38.4 -0.6
baz=120,SNR=10
ANN Anapa 120.30 52 *i* PKIKP PKPdf 04 00 38.8 -0.1
ANN *e* 04 02 08.8
ANN *e* 04 07 35.1
ANN pmax pmax
comp=Z,142nm,1.3s
O11A Cowboy Ranch, 120.31 299 ⇓P PKPdf 04 00 37.7 -1.2
baz=120,SNR=11
HVU Hansel Valley 120.47 302 *e*PKIKP PKPdf 04 00 38.7 -0.6
HVU *e* 04 02 05.3
P09A Austin 120.47 297 ⇓P PKPdf 04 00 38.8 -0.4
baz=121
AHID Auburn Hatcher 120.60 304 PFAKE 04 00 50.0 +10
AHID LR LR
comp=Z,35µm,20.0s,MS7.0
S04C Ingram Canyon, 120.63 293 ⇓P PKPdf 04 00 39.4 -0.2
baz=121,SNR=10.0
R06C Coleville 120.63 295 ⇓P PKPdf 04 00 39.7 +0.2
baz=121,SNR=13
ELK Elko 120.64 299 *e*PKIKP PKPdf 04 00 39.2 -0.4
ELK *e* 04 02 05.1
CMB Columbia Colle 120.64 294 *e*PKIKP PKPdf 04 00 38.9 -0.7
CMB MLR MLR
comp=Z,31µm,21.0s,MS6.9
CMB Columbia Colle 120.64 294 ⇓P PKPdf 04 00 39.2 -0.4
baz=121,SNR=37
N12A Clover Valley, 120.64 300 ⇑P PKPdf 04 00 39.0 -0.6
baz=121,SNR=16
DGRG David-gareji 120.68 59 P PKPdf 04 00 37.3 -2.3
Q07A Schurz 120.69 295 ⇑P PKPdf 04 00 39.3 -0.4
baz=121
M13A Montello 120.70 300 ⇑P PKPdf 04 00 39.2 -0.5
baz=121,SNR=8.1
BNLO Ben Lomond (Sa 120.70 292 ⇓P PKPdf 04 00 39.6 -0.1
baz=121
O10A Cortez Mining, 120.80 298 ⇑P PKPdf 04 00 39.4 -0.5
baz=121
ONI Oni 120.82 57 P PKPdf 04 00 39.1 -0.8
KKM Kota Kinabalu 120.86 145 P PKPdf 04 00 42.4 +2.4
KKM Kota Kinabalu 120.86 145 *e*PKPdf PKPdf 04 00 39.2 -0.8
N11A Elko Archery C 120.91 299 ⇓P PKPdf 04 00 39.8 -0.4
baz=121
WENL Wente Brothers 120.92 292 ⇓P PKPdf 04 00 40.0 -0.1
baz=121
JRSC Jasper Ridge 120.96 292 ⇑P PKPdf 04 00 39.2 -1.0
baz=121
P08A Dixie Valley 121.00 297 ⇓P PKPdf 04 00 39.8 -0.4
baz=121
REDW Red Top Meadow 121.00 304 *e*PKPdf PKPdf 04 00 39.7 -0.6
REDW *e*PP PP 04 02 08.4 -1.0
O09A Fish Creek Ran 121.00 297 ⇓P PKPdf 04 00 39.9 -0.4
baz=121,SNR=20
R05C Kirkwood Meado 121.06 294 ⇓P PKPdf 04 00 40.5 +0.1
baz=121,SNR=27
M12A Wells 121.06 300 ⇓P PKPdf 04 00 40.1 -0.3
baz=121,SNR=12
R04C Big Horse Ranc 121.07 293 ⇑P PKPdf 04 00 40.0 -0.5
baz=121
GKP Gorka Klasztor 121.08 33 *e*PKP PKPdf 04 00 40.3 -0.1
GKP *e*PP PP 04 02 15.4 +5.5
GKP *e*SKS SKSdf 04 07 38.9 -15
GKP Gorka Klasztor 121.08 33 *e*PS PS 04 12 16.5 +15
GKP *e*SS SS 04 19 13.8 +30
GKP L 04 43 15.7
comp=Z,29nm,27.4s
GKP Gorka Klasztor 121.08 33 *e*PKP PKPdf 04 00 40.3 -0.1
GKP *e*PP PP 04 02 15.4 +5.5
GKP *e*SKS SKSdf 04 07 38.9 -15
GKP *e*PS PS 04 12 16.5 +15
GKP *e*SS SS 04 19 13.8 +30
GKP LR LR
comp=Z,29µm,27.4s,MS6.8
TPAW Teton Pass 121.14 304 *e*PKPdf PKPdf 04 00 39.7 -0.8
N10A Dunphy 121.16 298 ⇓P PKPdf 04 00 40.1 -0.5
baz=121,SNR=5.7
ZEI Tsey 121.16 57 *e*PKIKP PKPdf 04 00 40.8 +0.2
RRI2 Red Ridge 121.17 304 *e*PKPdf PKPdf 04 00 39.6 -1.0
WAR Warsaw 121.22 36 *e*PKP PKPdf 04 00 42.2 +1.5
WAR *e*PKiKP PKiKP 04 00 47.8 +7.0
WAR *e*PP PP 04 02 17.9 +7.1
WAR Warsaw 121.22 36 *e*PS PS 04 12 20.4 +17
WAR L 04 41 11.4
comp=Z,35nm,39.5s
WAR Warsaw 121.22 36 *e*PKP PKPdf 04 00 42.2 +1.5
WAR *e*PKPdf PKPdf 04 00 47.8 +7.1
WAR *e*PP PP 04 02 17.9 +7.1
WAR *e*PS PS 04 12 20.4 +17
WAR LR LR
comp=Z,35µm,39.5s,MS6.7
P07A Fallon 121.22 296 ⇓P PKPdf 04 00 41.0 +0.3
baz=121
BMN Battle Mountai 121.23 298 PKIKP PKPdf 04 00 40.9 +0.2
BMN Battle Mountai 121.23 298 PFAKE 04 00 50.0 +9.3
BMN LR LR
comp=Z,6µm,19.0s,MS6.3
BDM Black Diamond 121.24 293 ⇑P PKPdf 04 00 40.5 -0.3
baz=121
MOOW Moose Ponds 121.28 304 *e*PKPdf PKPdf 04 00 39.3 -1.5
MOOW *e*PP PP 04 02 09.7 -1.6
ULM Lac du Bonnet 121.39 319 PKP PKPdf 04 00 39.0 -2.0
comp=Z,16nm,0.8s,baz=200,slow=0.7,SNR=15
ULM PP PP 04 02 10.5 -1.5
comp=Z,16nm,1.0s,baz=115,slow=7.6,SNR=4.5
ULM PKKPbc PKKPbc 04 10 42.0 +0.5
comp=Z,4.1nm,0.9s,baz=333,slow=6.2,SNR=5.0
ULM SKKPbc 04 14 36.0
comp=Z,15nm,1.3s,baz=330,slow=6.0,SNR=4.9
ULM Lac du Bonnet 121.39 319 *e*PKPdf PKPdf 04 00 39.0 -2.0
ULM *e*PP PP 04 02 09.4 -2.6
ULM LR LR
comp=Z,46µm,20.0s,MS7.1
LAVA Lava Cap Winer 121.39 294 ⇓P PKPdf 04 00 40.7 -0.3
baz=122,SNR=20
WCN Washoe City 121.41 295 ⇓P PKPdf 04 00 41.0 -0.1
baz=122
M11A Holland Ranch, 121.44 299 P PKPdf 04 00 41.1 -0.1
baz=122,SNR=33
O08A Rochester Mine 121.52 297 ⇑P PKPdf 04 00 40.2 -1.0
baz=122
FLWY Flagg Ranch 121.53 305 *e*PKPdf PKPdf 04 00 40.4 -0.9
FLWY *e*PP PP 04 02 12.8 -0.2
FARB Farallon Islan 121.54 291 ⇑P PKPdf 04 00 40.4 -0.9
baz=122
PAHR Pah Rah Range 121.58 296 *e*PKPdf PKPdf 04 00 41.0 -0.4
KIV Kislovodsk 121.65 56 ⇑P PKPdf 04 00 40.7 -0.9
SNR=23
KIV Kislovodsk 121.65 56 ⇑ *i*PKIKP PKPdf 04 00 40.3 -1.2
KIV *e* 04 02 17.1
KIV *e*SS SS 04 19 18.1 +27
KIV pmax pmax
comp=Z,133nm,1.4s
KIV MLR MLR
comp=Z,14µm,19.0s,MS6.6
KIV Kislovodsk 121.65 56 *e*PKPdf PKPdf 04 00 40.0 -1.6
KIV *e*PP PP 04 02 13.4 -0.5
KIV LR LR
comp=Z,14µm,19.0s,MS6.6
N09A Rock Creek Ran 121.71 298 ⇓P PKPdf 04 00 41.3 -0.3
baz=122,SNR=18
O07A Toulon 121.73 296 ⇓P PKPdf 04 00 41.7 0.0
baz=122,SNR=35
Q04C Lincoln 121.75 293 ⇓P PKPdf 04 00 41.6 -0.1
baz=122
P06A Stead Airport, 121.78 295 ⇓P PKPdf 04 00 41.5 -0.3
baz=122
P05C Yuba Gap, Truc 121.78 294 ⇓P PKPdf 04 00 41.8 0.0
baz=122,SNR=15
LKWY Lake 121.82 305 *e*PKIKP PKPdf 04 00 42.1 +0.2
LKWY *e* 04 02 12.2
LKWY MLR MLR
comp=Z,63µm,19.0s,MS7.3
CVS Carmenet Viney 121.83 292 ⇑P PKPdf 04 00 41.7 -0.2
baz=122,SNR=7.7
M10A LL. Ranch, Tu 121.83 299 ⇓P PKPdf 04 00 41.9 0.0
baz=122,SNR=10
MCCM Marconi Confer 121.86 292 ⇓P PKPdf 04 00 41.3 -0.7
baz=122
BLSP Bilaspur 121.87 102 *ex* PKiKP 04 00 47.0 +4.9
YFT Old Faithful 121.90 305 *e*PKPdf PKPdf 04 00 42.2 +0.2
AJM Ajmer 121.93 93 *e*P PKPdf 04 00 41.1 -1.0
AJM AMS AMS 04 50 54.5
comp=Z,13µm,23.4s,MS6.5
LAO LASA Array 121.97 310 *e*PKPdf PKPdf 04 00 40.0 -2.1
LAO LR LR
comp=Z,41µm,20.0s,MS7.1
MUD Monsted U'grnd 122.01 27 *i* P PKPdf 04 00 42.2 0.0
comp=Z,69nm,1.2s
MUD *i* 04 02 22.7
MUD *i* 04 12 11.7
MUD *e* 04 13 52.4
MUD *i* 04 19 02.4
MUD
comp=Z,24µm,21.0s
MUD Monsted U'grnd 122.01 27 *e*PKIKP PKPdf 04 00 42.2 0.0
MUD *i* 04 02 22.7
MUD *i* 04 12 11.7
MUD *i* 04 19 02.4
MUD Monsted U'grnd 122.01 27 *e*P PKPdf 04 00 42.2 0.0
MUD *i* 04 02 22.7
MUD *i* 04 12 11.7
MUD *e* 04 13 52.4
MUD *i* 04 19 02.4
NSHM Saint Helena R 122.04 292 *e*PKPdf PKPdf 04 00 41.8 -0.5
COP Copenhagen 122.05 29 *i* P PKPdf 04 00 43.6 +1.3
COP *i* 04 02 23.9
COP *i* 04 12 38.2
COP
comp=Z,7µm,20.0s
COP Copenhagen 122.05 29 *e*PKIKP PKPdf 04 00 43.6 +1.3
COP *i* 04 02 23.9
COP MLR MLR
comp=Z,7µm,20.0s,MS6.3
COP Copenhagen 122.05 29 *e*P PKPdf 04 00 43.6 +1.3
COP *i* 04 02 23.9
COP *i* 04 12 38.2
COP LR LR
comp=Z,7µm,20.0s,MS6.3
YNR Norris Junctio 122.05 305 *e*PKPdf PKPdf 04 00 41.7 -0.6
YNR *e*PP PP 04 02 13.9 -2.6
POHA Pohakuloa 122.10 252 PFAKE 04 00 50.0 +7.6
POHA LR LR
comp=Z,49µm,20.0s,MS7.2
YMR Madison River 122.13 305 *e*PKPdf PKPdf 04 00 41.6 -0.9
YMR LR LR
comp=Z,48µm,21.0s,MS7.1
BEKR Beckwourth 122.14 295 ⇑P PKPdf 04 00 42.0 -0.4
baz=122,SNR=19
M09A Marrel Ranch, 122.14 298 ⇓P PKPdf 04 00 42.0 -0.5
baz=122,SNR=16
O06A Flanigan 122.15 296 ⇓P PKPdf 04 00 42.2 -0.3
baz=122,SNR=24
OHCM Honcut 122.20 294 *e*PKPdf PKPdf 04 00 41.8 -0.8
SUTB Sutter Butte 122.25 293 ⇑P PKPdf 04 00 41.8 -0.9
baz=122,SNR=11
MNRC McLaughlin Nat 122.26 293 ⇓P PKPdf 04 00 42.6 -0.1
baz=122,SNR=13
N07B Gerlach 122.27 297 ⇓P PKPdf 04 00 42.7 0.0
baz=122,SNR=19
ORV Oroville 122.39 294 ⇓P PKPdf 04 00 42.0 -1.0
baz=123,SNR=7.6
AKASG Malin Array Be 122.40 42 PKP PKPdf 04 00 40.8 -2.2
comp=Z,11nm,0.7s,baz=235,slow=1.5,SNR=34
AKASG PP PP 04 02 16.8 -2.1
comp=Z,11nm,1.1s,baz=220,slow=6.6,SNR=5.7
AKASG PKKPbc PKKPbc 04 10 37.8 +0.2
comp=Z,0.9nm,0.6s,baz=30,slow=3.9,SNR=5.4
AKASG SKKPbc 04 14 16.9
comp=Z,0.2nm,0.3s,baz=17,slow=3.8,SNR=4.8
AKBB Malin Array Si 122.40 42 *e*PKPdf PKPdf 04 00 40.8 -2.2
AKBB *e*PP PP 04 02 15.6 -3.3
QLMT Earthquake Lak 122.45 305 *e*PKPdf PKPdf 04 00 42.6 -0.4
QLMT *e*PP PP 04 02 18.9 -0.4
O05C Quincy 122.46 295 ⇓P PKPdf 04 00 42.8 -0.3
baz=123,SNR=18
GCMT Greycliff 122.55 307 *e*PKPdf PKPdf 04 00 42.1 -1.1
M08A Happy Creek Ra 122.56 297 ⇓P PKPdf 04 00 43.4 +0.1
baz=123,SNR=23
HLID Hailey 122.62 302 *e*PKPdf PKPdf 04 00 42.1 -1.2
HLID *e*PP PP 04 02 14.9 -5.4
HLID *e*PKKPbc PKKPbc 04 10 38.7 +1.9
HLID LR LR
comp=Z,20µm,22.0s,MS6.7
N06A Buffalo Meadow 122.63 296 ⇓P PKPdf 04 00 43.3 -0.1
baz=123,SNR=22
HOPS Hopland 122.63 292 *e*PKPdf PKPdf 04 00 42.2 -1.2
HOPS *e*PP PP 04 02 20.1 -0.4
HOPS LR LR
comp=Z,44µm,22.0s,MS7.1
HOPS Hopland 122.63 292 ⇑P PKPdf 04 00 43.0 -0.4
baz=123,SNR=5.7
L09A Wilkinson Ranc 122.72 298 ⇓P PKPdf 04 00 43.2 -0.4
baz=123,SNR=25
MAK Makhachkala 122.82 60 *i* PKIKP PKPdf 04 00 43.1 -0.7
MAK *i* 04 02 27.6
MAK *i* 04 07 52.3
MAK pmax pmax
comp=Z,8.0nm,1.6s
O04C Chester 122.83 295 ⇓P PKPdf 04 00 43.4 -0.4
baz=123,SNR=14
ELFS Eagle Lake Fie 122.91 295 ⇓P PKPdf 04 00 43.6 -0.4
baz=123
O03C Acorn Hollow, 122.98 294 ⇑P PKPdf 04 00 43.9 -0.2
baz=123
GASB Alder Springs 123.01 293 P PKPdf 04 00 44.3 +0.2
baz=123,SNR=18
MCMT McKenzie Canyo 123.02 304 *e*PKPdf PKPdf 04 00 43.8 -0.3
P01C Double 8 Ranch 123.14 292 ⇓P PKPdf 04 00 44.4 0.0
baz=123,SNR=9.6
L08A Fields 123.16 298 ⇑P PKPdf 04 00 44.1 -0.3
baz=123,SNR=28
BOZ Bozeman (W) 123.20 305 *e*PKIKP PKPdf 04 00 42.7 -1.8
BOZ *e* 04 02 24.1
BOZ MLR MLR
comp=Z,33µm,21.0s,MS7.0
M06C Likely Place G 123.28 296 ⇑P PKPdf 04 00 44.5 -0.2
baz=124,SNR=17
K09A Rome 123.31 299 ⇓P PKPdf 04 00 44.6 -0.1
baz=124,SNR=17
DLMT Dillon 123.35 304 *e*PKPdf PKPdf 04 00 44.2 -0.6
SUW Suwalki 123.40 37 *e*PKP PKPdf 04 00 42.9 -2.0
SUW *e*PKiKP PKiKP 04 00 44.6 -0.5
SUW Suwalki 123.40 37 *e*PS PS 04 12 41.0 +19
SUW *e*SS SS 04 19 31.6 +19
SUW L 04 42 06.3
comp=Z,28nm,33.0s
SUW Suwalki 123.40 37 *i* PKIKP PKPdf 04 00 44.6 -0.3
SUW *e*SS SS 04 19 31.6 +19
SUW Suwalki 123.40 37 *e*PKP PKPdf 04 00 42.9 -2.0
SUW *e*PKPdf PKPdf 04 00 44.6 -0.3
SUW *e*PS PS 04 12 41.0 +19
SUW *e*SS SS 04 19 31.6 +19
HATC Hat Creek Radi 123.40 295 ⇓P PKPdf 04 00 44.3 -0.6
baz=124,SNR=12
L07A Adell 123.44 297 ⇓P PKPdf 04 00 45.1 +0.2
baz=124,SNR=37
O02C Red Bluff 123.47 293 ⇓P PKPdf 04 00 43.9 -1.1
baz=124
WVOR Wild Horse Val 123.48 298 *e*PKIKP PKPdf 04 00 44.2 -0.8
WVOR *e* 04 02 26.1
WVOR MLR MLR
comp=Z,49µm,20.0s,MS7.2
WVOR Wild Horse Val 123.48 298 *e*PKPdf PKPdf 04 00 44.2 -0.8
WVOR *e*PP PP 04 02 26.1 -0.1
WVOR *e*PKKPab PKKPab 04 10 30.2 -3.4
WVOR LR LR
comp=Z,38µm,20.0s,MS7.0
KIPM Iron Peak 123.48 293 *e*PKPdf PKPdf 04 00 44.4 -0.6
KIPM *e*PP PP 04 02 25.4 -0.8
K08A Mann Creek Ran 123.66 298 ⇑P PKPdf 04 00 45.2 -0.2
baz=124,SNR=20
WDC Whiskeytown Da 123.69 294 *e*PKIKP PKPdf 04 00 44.2 -1.2
WDC *e* 04 02 26.0
WDC MLR MLR
comp=Z,14µm,20.0s,MS6.6
WDC Whiskeytown Da 123.69 294 ⇓P PKPdf 04 00 44.0 -1.4
baz=124,SNR=14
M05C Lookout 123.70 295 ⇑P PKPdf 04 00 44.7 -0.8
baz=124,SNR=24
KHET Khetri 123.83 93 *e*P PKPdf 04 00 45.7 0.0
M03C McCloud 124.06 295 ⇑P PKPdf 04 00 45.2 -1.0
baz=124
LASM Arnica Sink 124.08 295 P PKPdf 04 00 46.5 +0.3
DAV Davao City (W) 124.10 156 PFAKE 04 01 00.0 +14
DAV LR LR
comp=Z,14µm,22.0s,MS6.6
L05A Lakeview 124.12 296 ⇓P PKPdf 04 00 46.3 0.0
baz=124,SNR=22
HRY Holter Researc 124.16 306 *e*PKPdf PKPdf 04 00 44.6 -1.7
AGRA Agra 124.16 95 *e*P PKPdf 04 00 46.0 -0.4
BLS5 Blasjo 124.19 24 *e*P PKPdf 04 00 47.2 +0.8
BLS5 AMb AMB 04 00 53.6
comp=Z,112nm,1.4s
KUDL Kundal 124.22 93 *e*P PKPdf 04 00 45.9 -0.6
KUDL *i* x x 04 02 37.3
N02C Big Bar 124.22 293 ⇓P PKPdf 04 00 45.9 -0.5
baz=124,SNR=9.6
NST Nakhon Sawan 124.25 124 P PKPdf 04 00 46.5 0.0
I09A Lost Marbles R 124.35 300 ⇑P PKPdf 04 00 45.7 -1.0
baz=125,SNR=14
M04C Macdoel 124.35 295 ⇓P PKPdf 04 00 46.1 -0.6
baz=124,SNR=16
EGMT Eagleton 124.42 308 *e*PKPdf PKPdf 04 00 45.3 -1.5
EGMT *e*PP PP 04 02 31.3 -1.2
EGMT LR LR
comp=Z,43µm,22.0s,MS7.1
KHMM Horse Mountain 124.45 293 *e*PKPdf PKPdf 04 00 46.2 -0.7
KHMM *e*PP PP 04 02 28.8 -3.9
K06A Valley Falls 124.47 297 ⇓P PKPdf 04 00 46.6 -0.3
baz=125,SNR=20
M02C Callahan 124.48 294 ⇑P PKPdf 04 00 46.2 -0.7
baz=125,SNR=10
JCC Jacoby Creek 124.54 293 ⇓P PKPdf 04 00 45.7 -1.4
baz=125
I08A Drewsey 124.65 299 ⇑P PKPdf 04 00 46.5 -0.8
baz=125,SNR=11
HOG Hogback Mounta 124.66 296 P PKPdf 04 00 47.5 +0.2
L04A Klamath Falls 124.69 295 ⇑P PKPdf 04 00 46.3 -1.1
baz=125
KIP Kipapa 124.69 250 PFAKE 04 01 00.0 +13
KIP LR LR
comp=Z,22µm,20.0s,MS6.8
YBH Yreka Blue Hor 124.69 294 PKIKP PKPdf 04 00 46.8 -0.6
YBH Yreka Blue Hor 124.69 294 *e*PKPdf PKPdf 04 00 45.1 -2.3
YBH LR LR
comp=Z,21µm,22.0s,MS6.8
YBH Yreka Blue Hor 124.69 294 ⇑P PKPdf 04 00 46.9 -0.5
baz=125,SNR=5.2
J06A Christmas Vall 124.80 297 ⇑P PKPdf 04 00 46.7 -0.8
baz=125,SNR=22
AYAN Aya Nagar 124.81 93 *ex* PKiKP 04 00 41.6 -6.3
BER Bergen 124.86 23 *e*P PKPdf 04 00 51.4 +3.7
BER *e*PP PP 04 02 35.0 -0.5
BER *i* 04 24 47.2
BER AMS AMS 04 43 21.5
comp=Z,11µm,24.0s,MS6.4
H09A Durkee 124.87 300 ⇑P PKPdf 04 00 46.8 -0.9
baz=125,SNR=12
BMO Blue Mountains 124.88 301 PKIKP PKPdf 04 00 45.3 -2.4
BMO Blue Mountains 124.88 301 *e*PKPdf PKPdf 04 00 45.6 -2.1
BMO LR LR
comp=Z,27µm,21.0s,MS6.9
CHMT Chamberlain Mo 124.89 305 *e*PKPdf PKPdf 04 00 46.7 -1.0
CHMT *e*PP PP 04 02 36.8 +1.1
K04A Chilquin 124.97 296 ⇓P PKPdf 04 00 47.4 -0.5
baz=125
NDI New Delhi 125.02 93 *e*P PKPdf 04 00 45.0 -3.0
NDI *e*P 04 00 47.0
KONO Kongsberg 125.04 25 *e*P PKPdf 04 00 45.0 -3.1
KONO *e*PP PP 04 02 36.6 0.0
KONO Kongsberg 125.04 25 *e*PKIKP PKPdf 04 00 47.3 -0.7
KONO Kongsberg 125.04 25 *e*PKPdf PKPdf 04 00 46.4 -1.6
KONO LR LR
comp=Z,16µm,21.0s,MS6.7
BOK Bokaro 125.07 105 *e*P PKPdf 04 00 46.8 -1.3
MSO Missoula 125.09 304 *e*PKPdf PKPdf 04 00 46.6 -1.5
MSO *e*PP PP 04 02 35.8 -1.3
MSO LR LR
comp=Z,24µm,19.0s,MS6.9
CAL Calcutta 125.14 108 *e*P PKPdf 04 00 47.6 -0.7
CAL ⇑ *i*x x 04 02 47.2
H08A Prairie City 125.18 299 ⇑P PKPdf 04 00 47.5 -0.8
baz=125,SNR=7.6
I07A Izee 125.19 299 ⇓P PKPdf 04 00 47.8 -0.5
baz=125,SNR=22
MNK Minsk 125.21 39 *e*PKIKP PKPdf 04 00 44.0 -4.4
J05A Fort Rock 125.29 297 ⇓P PKPdf 04 00 48.0 -0.5
baz=126,SNR=20
I06A Prineville 125.38 298 ⇓P PKPdf 04 00 48.6 -0.1
baz=126,SNR=14
M01C Crescent City 125.41 294 ⇓P PKPdf 04 00 48.2 -0.5
baz=126
L02A Cave Junction 125.43 294 ⇑P PKPdf 04 00 48.5 -0.2
baz=126
BORG Borgarnes 125.83 7 PKP PKPdf 04 00 48.4 -1.1
comp=Z,28nm,1.0s,baz=128,slow=1.9,SNR=6.0
BORG Borgarnes 125.83 7 *e*PKPdf PKPdf 04 00 47.0 -2.5
BORG *e*PP PP 04 02 40.5 -1.4
BORG LR LR
comp=Z,10µm,20.0s,MS6.5
KKTK Khon Kaen 125.93 126 P PKPdf 04 00 50.0 +0.3
I05A Bend 126.01 297 ⇓P PKPdf 04 00 48.6 -1.3
baz=126,SNR=11
J03A Ideyld Park 126.12 296 ⇑P PKPdf 04 00 49.3 -0.8
baz=126,SNR=12
HBO Huckleberry Mo 126.21 296 P PKPdf 04 00 49.9 -0.3
F08A Pendleton 126.25 300 ⇑P PKPdf 04 00 48.8 -1.5
baz=126,SNR=15
CM31 Chiang Mai Arr 126.26 121 *e*PKPdf PKPdf 04 00 50.4 0.0
CM31 LR LR
comp=Z,11µm,19.0s,MS6.5
VRSR Storozhevoye 126.29 48 *d i*PKIKP PKPdf 04 00 46.1 -4.3
VRSR *e* 04 02 45.5
VRSR *e*SS SS 04 20 17.6 +28
VRSR pmax pmax
comp=Z,70nm,1.5s
VRSR pmax pmax
comp=N,20nm,1.0s
VRSR pmax pmax
comp=E,10.0nm,0.8s
VRSR MLR MLR
comp=N,5µm,19.0s
H05A Madras 126.38 298 ⇑P PKPdf 04 00 49.9 -0.7
baz=127,SNR=5.7
J02A Umpqua 126.38 295 ⇓P PKPdf 04 00 50.0 -0.6

baz=127
NAO01 NORSAR Array S 126.39 26 *e*PKPdf PKPdf 04 00 48.4 -2.3
NAO01 LR LR
comp=Z,13μm,20.0s,MS6.6
CHG Chiang Mai 126.58 121 ⇓P PKPdf 04 00 50.9 -0.1
comp=Z,32nm,1.3s
CHTO Chiang Mai 126.58 121 *e*PKPdf PKPdf 04 00 50.8 -0.1
CHTO *e*PP PP 04 02 42.4 -4.5
CHTO LR LR
comp=Z,14μm,19.0s,MS6.7
NB2 NORSAR Subarra126.64 26 PKPdi PKPdf 04 00 47.8 -3.3
comp=Z,138nm,1.7s,baz=206,slow=2.0
NB2 NORSAR Subarra126.64 26 PKPdi PKPdf 04 00 47.8 -3.3
baz=206,slow=2.0
NOA NORSAR Array B 126.64 26 PKP PKPdf 04 00 47.9 -3.2
comp=Z,8.0nm,0.7s,baz=207,slow=2.0,SNR=42
NOA SKKPbc 04 14 12.7
comp=Z,1.3nm,0.9s,baz=36,slow=5.1,SNR=3.3
VOR Voronezh 126.71 48 *e*PKIKP PKIKPdf 04 00 50.0 -1.2
VOR pmax pmax
comp=Z,200nm,2.0s
VOR pmax pmax
comp=N,50nm,1.7s
VOR pmax pmax
comp=E,140nm,1.6s
I03A Eugene 126.73 296 ⇑P PKPdf 04 00 50.5 -0.8
baz=127
H04A Detroit Lake 126.82 297 ⇓P PKPdf 04 00 50.2 -1.2
baz=127,SNR=11
WALA Waterton Lakes 126.88 306 *e*PKPdf PKPdf 04 00 49.3 -2.2
G05A Wamic 126.89 298 ⇓P PKPdf 04 00 50.8 -0.8
baz=127,SNR=6.5
PRW Prosser 126.97 300 P PKPdf 04 00 51.8 +0.1
I02A Mapleton 127.00 295 ⇑P PKPdf 04 00 51.3 -0.5
baz=127
HAWA Hanford 127.04 300 *e*PKPdf PKPdf 04 00 50.7 -1.2
HAWA *e*PP PP 04 02 48.2 -1.8
HAWA LR LR
comp=Z,31μm,21.0s,MS7.0
RSW Rattlesnake Hi 127.07 300 P PKPdf 04 00 51.9 0.0
VRHR Novokhopersk 127.09 50 *e*PKIKP PKPdf 04 00 54.5 +2.5
VRHR *e*SP SP 04 12 55.6 +0.9
VRHR pmax pmax
comp=Z,1μm,8.2s
VRHR pmax pmax
comp=N,210nm,6.9s
VRHR pmax pmax
comp=E,420nm,12.2s
FRB Frobisher Bay 127.10 342 PKP PKPdf 04 00 49.5 -2.4
comp=E,47nm,1.0s,baz=119,slow=2.7,SNR=9.5
FRB PP PP 04 02 51.7 +1.3
comp=E,26nm,1.1s,baz=166,slow=8.0,SNR=2.6
FRB Frobisher Bay 127.10 342 PKIKP PKPdf 04 00 49.5 -2.5
FRB 04 02 51.7
FRB pmax pmax
comp=Z,47nm,1.0s
FRB pmax pmax
comp=Z,27nm,1.1s
FRB Frobisher Bay 127.10 342 PKP PKPdf 04 00 49.5 -2.4
FRB PP PP 04 02 51.7 +1.3
COR Corvallis 127.23 296 PFAKE 04 01 00.0 +7.8
COR LR LR
comp=Z,22μm,21.0s,MS6.8
MPOR Mary's Peak 127.27 296 P PKPdf 04 00 52.7 +0.4
NANT Nan 127.30 123 ⇓P PKPdf 04 00 52.0 -0.3
comp=Z,400nm,0.9s
KOLN Koldanda 127.35 100 *e*P PKPdf 04 00 52.2 -0.2
comp=Z,609nm,1.5s
G04A Mulino 127.36 297 ⇑P PKPdf 04 00 51.4 -1.1
baz=128,SNR=8.7
F05A White Salmon 127.46 298 ⇓P PKPdf 04 00 52.0 -0.7
baz=128,SNR=9.1
OD2 Odessa Site #2 127.49 302 P PKPdf 04 00 51.4 -1.4
NEW Newport 127.53 303 PP PP 04 02 53.5 +0.3
comp=Z,12nm,1.1s,baz=146,slow=8.1,SNR=1.5
NEW SKKPbc 04 14 05.3
comp=Z,0.6nm,0.3s,baz=27,slow=2.2,SNR=3.6
NEW Newport 127.53 303 *e*PKPdf PKPdf 04 00 50.7 -2.1
NEW *e*PP PP 04 02 53.5 +0.3
NEW LR LR
comp=Z,30μm,22.0s,MS6.9
H02A Toledo 127.61 296 ⇑P PKPdf 04 00 53.4 +0.4
baz=128
G03A Yamhill 127.80 297 ⇓P PKPdf 04 00 52.9 -0.4
baz=128,SNR=6.8
CHRT Chiangrai 127.87 121 ⇓P PKPdf 04 00 53.0 -0.4
comp=Z,263nm,1.9s
KLP Kalpa 127.87 92 *e*P PKPdf 04 00 54.0 +0.6
EBG Ellensburg 127.89 300 P PKPdf 04 00 53.4 -0.1
F04A Amboy 127.91 298 ⇑P PKPdf 04 00 52.3 -1.2
baz=128,SNR=9.0
DMN Daman 127.93 101 *e*P PKPdf 04 00 53.0 -0.6
comp=Z,412nm,1.4s
GKN Gorkha 128.04 101 *e*P PKPdf 04 00 52.7 -1.1
comp=Z,614nm,1.5s
PKI Pulchoki 128.04 102 *e*P PKPdf 04 00 53.0 -0.8
comp=Z,854nm,1.7s
TBM Table Mountain 128.11 300 P PKPdf 04 00 53.5 -0.4
E05A Randle 128.12 299 ⇑P PKPdf 04 00 52.6 -1.3
baz=128,SNR=17
KKN Kakani 128.17 101 *e*P PKPdf 04 00 54.1 +0.1
VSU Vasula 128.24 36 *i* PKIKP PKPdf 04 00 52.4 -1.7
VSU Vasula 128.24 36 *i* PKPr 04 00 52.4
SFJD Kangerlussuaq 128.27 352 PKP PKPdf 04 00 51.5 -2.7
comp=Z,52nm,1.2s,baz=158,slow=4.0,SNR=7.6
SFJD PP PP 04 02 58.9 +0.8
comp=Z,9.3nm,0.8s,baz=172,slow=12,SNR=2.2
SFJD Kangerlussuaq 128.27 352 *i* P PKPdf 04 00 50.7 -3.5
comp=Z,164nm,1.5s
SFJD *i* 04 20 14.3
SFJD *i* 04 34 26.0
SFJD *i* 04 41 42.2
SFJD
comp=Z,12μm,22.0s
SFJD Kangerlussuaq 128.27 352 PKIKP PKPdf 04 00 51.5 -2.7
SFJD 04 02 58.9
SFJD pmax pmax
comp=Z,52nm,1.2s
SFJD pmax pmax
comp=Z,9.0nm,0.8s
SFJD Kangerlussuaq 128.27 352 *i* P PKPdf 04 00 50.7 -3.5
SFJD *i* 04 20 14.3
F03A Seaside 128.40 297 ⇑P PKPdf 04 00 53.0 -1.4
baz=129
JIRN Jiri 128.49 102 *e*P PKPdf 04 00 54.0 -0.6
comp=Z,604nm,1.4s
OBN Obninsk 128.54 44 *de*PKIKP PKPdf 04 00 53.0 -1.7
OBN *e* 04 03 05.1
OBN *e* 04 07 57.4
OBN *e*SS SS 04 20 19.6 +2.2
OBN pmax pmax
comp=Z,235nm,1.3s
OBN Obninsk 128.54 44 *i* PKPr PKPdf 04 00 53.0 -1.7
OBN LR LR
comp=Z,17μm,24.0s,MS6.7
GUN Gumba 128.56 102 *e*P PKPdf 04 00 54.3 -0.4
comp=Z,2μm,1.9s
E04A Onalaska 128.56 298 ⇑P PKPdf 04 00 53.4 -1.3
baz=129
D05A Enumclaw 128.71 299 ⇑P PKPdf 04 00 54.4 -0.7
baz=129,SNR=13
C05A Tolt Reservoir 128.98 300 ⇑P PKPdf 04 00 54.1 -1.5
baz=129,SNR=12
D04A Dobbs Creek Ra 129.00 299 ⇑P PKPdf 04 00 55.5 -0.1
baz=129
SHL Shillong 129.38 109 *e*P PKPdf 04 00 55.0 -1.3
MOS Moscow 129.40 44 *e*PKIKP PKPdf 04 00 54.0 -2.4
MOS *e* 04 03 10.7
MOS *e*PPP 04 05 53.6
MOS *e* 04 08 05.4
MOS *i* SS SS 04 20 28.8 +0.8
MOS pmax pmax
comp=Z,403nm,1.5s
MOS MLR MLR
comp=Z,11μm,20.0s,MS6.5
D03A Wishkah Elem. 129.42 298 ⇓P PKPdf 04 00 56.2 -0.2
baz=130
C04A Brinnon 129.54 299 ⇑P PKPdf 04 00 56.2 -0.5
baz=130,SNR=16
B05A Bryant 129.59 300 ⇓P PKPdf 04 00 55.6 -1.1
baz=130,SNR=27
NSS Namsos 129.93 24 *e*P PKPdf 04 00 54.3 -3.0
NSS AMb AMB 04 01 08.8
comp=Z,246nm,1.8s
NSS *e*PP PP 04 03 08.6 -0.4
NSS AMS AMS 04 52 12.3
comp=Z,19μm,22.3s,MS6.7
NSS Namsos 129.93 24 *e*P PKPdf 04 00 54.3 -3.0
NSS *i* 04 03 08.6
OSD Olympics--Snow 129.93 298 P PKPdf 04 00 57.8 +0.4
EDM Edmonton 129.96 310 PKIKP PKPdf 04 00 55.0 -2.4
EDM Edmonton 129.96 310 *e*PKPdf PKPdf 04 00 54.5 -3.0
B04A Port Angeles 130.03 299 ⇑P PKPdf 04 00 57.1 -0.5
baz=130,SNR=6.8
A05A Maple Falls 130.16 301 ⇓P PKPdf 04 00 56.4 -1.4
baz=130,SNR=20
PUL Pulkovo 130.36 37 ⇓*i* PKIKP PKPdf 04 00 57.6 -0.6
PUL *e* 04 03 14.8
PUL Pulkovo 130.36 37 ⇑*e*PKP PKPdf 04 00 58.6 +0.4
C03A Quillayute Air 130.40 298 ⇑P PKPdf 04 00 58.5 +0.3
baz=131
FINES FINESS Array B 130.56 33 PKhKP 04 00 42.8
comp=Z,1.2nm,0.8s,baz=93,slow=3.8,SNR=4.7
FINES PKP PKPdf 04 00 55.9 -2.7
comp=Z,126nm,1.3s,baz=122,slow=2.5,SNR=36
FINES FINESS Array B 130.56 33 PKIKP PKPdf 04 00 55.9 -2.6
FINES pmax pmax
comp=Z,126nm,1.3s
FIA1 FINESS Array S 130.56 33 *e*PKPdf PKPdf 04 00 56.4 -2.1
QIZ Qiongzhong 131.03 133 PKP PKPdf 04 00 58.9 -0.5
QIZ PP PP 04 03 18.5 +2.4
QIZ SS SS 04 20 42.4 -5.6
QIZ LR LR
comp=N,12μm,25.2s
QIZ LR LR
comp=Z,49μm,41.2s
KAF Kangasniemi 131.17 33 *e*p PKPdf 04 00 58.1 -1.6
MOR8 Moi Rana 131.87 24 *e*P PKPdf 04 00 58.9 -2.1
MOR8 AMb AMB 04 01 13.6
comp=Z,108nm,2.1s
PECR Pechory 132.11 47 *e*PKIKP PKPdf 04 01 00.0 -1.5
PECR *i* 04 03 31.5
PECR pmax pmax
comp=Z,850nm,2.0s
PECR pmax pmax
comp=Z,3μm,9.0s
LSA Lhasa 132.55 106 PKP PKPdf 04 01 03.0 +0.7
LSA LR LR
comp=N,2μm,15.7s,MS6.2
LSA LR LR
comp=E,4μm,15.7s,MS6.2
LSA LR LR
comp=Z,8μm,22.7s
LSA Lhasa 132.55 106 *e*PKPdf PKPdf 04 01 02.8 +0.5
LSA *e*PP PP 04 03 24.3 -1.5
LSA LR LR
comp=Z,23μm,19.0s,MS6.9
JMIC Jan Mayen 132.95 11 PKP PKPdf 04 01 01.5 -1.6
comp=Z,52nm,0.8s,baz=162,slow=4.5,SNR=2.3
JMIC Jan Mayen 132.95 11 *e*P PKPdf 04 01 02.2 -0.9
JMIC AMb AMB 04 01 19.3
comp=Z,421nm,1.9s
JMIC AMS AMS 04 47 41.8
comp=Z,7μm,14.9s,MS6.5
AB31 Akbulak array 133.10 64 *i* PKHKP 04 00 48.2
AKTO Aktyubinsk 133.15 61 PKIKP PKPdf 04 01 01.8 -1.7
AKTO pmax pmax
comp=Z,108nm,2.0s
KSH Kashi 133.15 84 PKP PKPdf 04 01 06.0 +2.5
KSH PP PP
comp=Z,1μm,4.8s
KSH LR LR
comp=N,7μm,14.6s,MS6.7
KSH LR LR
comp=E,9μm,16.4s,MS6.7
KSH LR LR
comp=Z,18μm,28.2s
JOF Joensuu 133.19 35 *e*p PKPdf 04 01 01.5 -2.0
comp=Z,22nm,0.7s
JOF Joensuu 133.19 35 *e*PKIKP PKPdf 04 01 01.5 -2.0
JOF pmax pmax
comp=Z,22nm,0.7s
SUMG Summit 133.35 358 *e*PKPdf PKPdf 04 01 02.5 -1.3
SUMG *e*PP PP 04 03 30.4 -0.5
LOF Lofoten 133.41 22 *e*P PKPdf 04 01 04.6 +0.7
KMI Kunming 133.77 121 PKP PKPdf 04 01 06.1 +1.5
AML Almayashu 134.07 80 P PKPdf 04 01 06.0 +0.8
SNR=18
EKS2 Erkin-Say 134.51 80 P PKPdf 04 01 06.6 +0.6
SNR=26
UCH Uchtor 134.54 81 P PKPdf 04 01 08.8 +2.7
SNR=6.8
KZA Kyzart 134.78 81 P PKPdf 04 01 09.3 +2.8
SNR=35
AAK Ala-Archa 134.84 80 P PKPdf 04 01 11.1 +4.5
SNR=12
AAK Ala-Archa 134.84 80 ⇑P 04 00 59.1
SNR=44
AAK Ala-Archa 134.84 80 *e*PKIKP 04 00 58.9
AAK *e* 04 01 06.0
AAK MLR MLR
comp=Z,17μm,22.0s,MS6.7
AAK Ala-Archa 134.84 80 *e*PKPpre 04 00 58.9
AAK *e*PKPdf PKPdf 04 01 06.0 -0.6
AAK *e*PKP PKPdf 04 01 07.9 +1.3
AAK LR LR
comp=Z,17μm,22.0s,MS6.7
FRU Bishkek 135.05 80 ⇓*e*PKIKP 04 01 02.0
FRU *e* 04 01 06.0
FRU *i* 04 01 09.0
FRU *i* 04 03 46.0
FRU MLR MLR
comp=Z,12μm,22.0s,MS6.6
KBK Karagaybulak 135.07 80 P PKPdf 04 01 09.5 +2.4
SNR=11
CHMS Chumysh 135.24 80 P PKPdf 04 01 06.9 -0.5
SNR=9.4
USP Ospenovka 135.32 80 P PKPdf 04 01 07.0 -0.5
SNR=18
ULHL Ulahol 135.38 82 P PKPdf 04 01 09.2 +1.6
SNR=12
TKM2 Tokmak 2 135.58 81 P PKPdf 04 01 06.2 -1.8
SNR=7.1
TKM2 Tokmak 2 135.58 81 PKIKP 04 01 02.1
TKM2 pmax pmax
comp=Z,307nm,1.9s
TRO Tromso 135.72 24 *e*P 04 01 04.7
TRO *e*PP PP 04 03 46.1 +0.1
TRO *e*SS SS 04 21 46.4 +1.5
TRO AMS AMS 04 57 52.6
comp=Z,8μm,13.6s,MS6.6
TRO Tromso 135.72 24 *e*P PKPdf 04 01 04.7 -3.6
TRO *i* 04 03 46.4
TRO LR LR
comp=Z,8μm,13.6s,MS6.6
WAKE Wake Island 135.76 209 PFAKE 04 01 20.0 +12
WAKE LR LR
comp=Z,22μm,20.0s,MS6.9
GZH Guangzhou 136.00 135 PKP PKPdf 04 01 11.4 +2.6
GZH LR LR
comp=N,10μm,29.8s
GZH LR LR
comp=E,7μm,18.6s
GZH LR LR
comp=Z,42μm,43.5s
GYA Guiyang 136.56 125 PKP PKPdf 04 01 08.5 -1.3
GYA PKS 04 04 43.9
GYA PPP 04 08 17.8
GYA SKKS SKKSac 04 10 45.6 -1.9
GYA SS SS 04 21 51.0 -3.9
GYA PP PP
comp=Z,2μm,7.5s
GYA LR LR
comp=N,4μm,20.1s,MS6.6
GYA LR LR
comp=E,10μm,20.1s,MS6.6
GYA LR LR
comp=Z,9μm,19.8s,MS6.5
ARCES ARCESS Array B 137.00 26 PKhKP 04 00 57.9
comp=Z,2.7nm,0.6s,baz=239,slow=1.9,SNR=15
ARCES PKP PKPdf 04 01 08.4 -2.3
comp=Z,11nm,0.7s,baz=195,slow=2.7,SNR=13
ARCES PP PP 04 03 49.5 -4.5
comp=Z,7.5nm,0.9s,baz=234,slow=4.3,SNR=4.1
ARCES ARCESS Array B 137.00 26 PKIKP PKPdf 04 01 08.4 -2.2
ARCES pmax pmax
comp=Z,11nm,0.7s
ARE0 ARCESS Array S 137.00 26 *e*PKPpre 04 01 01.2
ARE0 *e*PKPdf PKPdf 04 01 08.0 -2.6
ARE0 *e*PP PP 04 03 49.1 -4.9
YKA Yellowknife Ar 137.35 318 PKhKP 04 00 58.4
comp=Z,4.6nm,0.9s,baz=122,slow=4.4,SNR=8.9
YKA PKP PKPdf 04 01 09.4 -1.8
comp=Z,22nm,0.7s,baz=135,slow=2.1,SNR=27
YKA PP PP 04 03 50.5 -5.7
comp=Z,7.0nm,0.9s,baz=130,slow=6.2,SNR=4.5
YKA Yellowknife Ar 137.35 318 PKIKP PKPdf 04 01 09.4 -1.9
YKA pmax pmax
comp=Z,23nm,0.7s
YKA Yellowknife Ar 137.35 318 PKP 04 00 58.4
YKA PKP PKPdf 04 01 09.4 -1.8
YKA PP PP 04 03 50.5 -5.7
APA Apatity 137.35 32 ⇓*i* PKIKP PKPdf 04 01 05.0 -6.3
APA *i* 04 01 12.4
KEV Kevo 137.50 27 *e*p 04 01 00.2
comp=Z,5.8nm,0.8s
KEV Kevo 137.50 27 PKIKP PKPdf 04 01 11.8 +0.2
KEV Kevo 137.50 27 *e*P 04 01 00.2
KEV *e*PKPdf PKPdf 04 01 11.0 -0.5
KEV *e*PP PP 04 03 52.3 -4.9
KEV LR LR
comp=Z,19μm,22.0s,MS6.8
ARU Arti 137.70 56 *i* PKHKP 04 00 58.1
ARU *e* 04 04 11.2
ARU MLR MLR
comp=N,7μm,20.0s,MS6.5
ARU MLR MLR
comp=Z,17μm,20.0s,MS6.8
ARU MLR MLR
comp=E,4μm,19.0s,MS6.5
ARU Arti 137.70 56 PFAKE 04 01 20.0 +8.1
ARU LR LR
comp=Z,18μm,21.0s,MS6.8
DAG Danmarks Havn 137.89 5 ⇑*i* P PKPdf 04 01 03.0 -9.3
comp=Z,33nm,1.2s
DAG Danmarks Havn 137.89 5 ⇑*e*P PKPdf 04 01 03.0 -9.3
LVZ Lovozero 137.92 32 ⇓*i* PKIKP PKPdf 04 01 09.7 -2.6
LVZ *e* 04 04 12.2
LVZ *e*PS PS 04 14 20.2 -7.5
LVZ Lovozero 137.92 32 ⇑*e*PKP PKPdf 04 01 09.3 -3.0
LVZ LR LR
comp=Z,12μm,22.0s,MS6.6
SVE Sverdlovsk 138.81 56 *i* PKHKP 04 01 02.0
SVE *e* 04 01 11.7
SVE *e* 04 01 15.0
SVE *e* 04 16 18.0
SOKR Solikamsk 139.15 51 *i* PKHKP 04 01 05.0
SOKR PPP 04 04 09.5
SOKR pmax pmax
comp=Z,20nm,1.4s
CD2 Chengdu 139.26 118 *e*PKP PKPdf 04 01 11.3 -3.5
CD2 XPKP 04 01 17.5
CD2 PP PP 04 04 09.8 +1.7
CD2 PKS 04 04 45.9
CD2 SKS SKSdf 04 08 16.3 -10
CD2 SKKS SKKSac 04 10 55.6 -8.0
CD2 SS SS 04 22 22.1 -4.8
CD2 PP PP
comp=Z,3μm,7.4s
CD2 LR LR
comp=E,10μm,20.4s
CD2 LR LR
comp=Z,8μm,21.6s,MS6.5
QZH Quanzhou 139.45 140 ⇑*i* PKP PKPdf 04 01 10.0 -5.1
QZH PP PP 04 04 08.0 -1.2
QZH PP PP
comp=Z,12μm,10.1s
QZH LR LR
comp=N,53μm,29.6s
QZH LR LR
comp=E,11μm,22.4s
QZH LR LR
comp=Z,89μm,43.7s
CRAG Craig 139.51 300 *e*PKPdf PKPdf 04 01 14.0 -1.3
BJO1 Bjornoya 139.72 19 *e*P PKPdf 04 01 08.8 -6.8
ZRNK Zerenda 139.74 66 *e*PKHKP 04 01 06.4
ZRNK *e* 04 01 14.5
BJO Bjornoya 139.75 20 *e*P PKPdf 04 01 08.8 -6.9
BJO AMS AMS 04 51 49.6
comp=Z,9μm,22.0s,MS6.5
DLBC Dease Lake 140.21 305 PP PP 04 04 14.9 +0.9
comp=Z,21nm,1.2s,baz=125,slow=5.4,SNR=3.5
TATO Taipei 140.34 144 PFAKE 04 01 30.0 +13
TATO LR LR
comp=Z,14μm,22.0s,MS6.7
BRVK Borovoye 140.38 66 *e*PKHKP 04 01 09.5
BRVK *e* 04 01 14.1
BRVK MLR MLR
comp=Z,10μm,22.0s,MS6.5
BVA0 Borovoye Array 140.40 66 *i* PKHKP 04 01 07.2
BVA0 pmax pmax
comp=Z,41nm,1.4s
VOSK Vostochnaya 140.46 67 PKHKP 04 01 07.1
VOSK pmax pmax
comp=Z,199nm,1.6s
CHKZ Chkalovo 140.94 66 *e*PKHKP 04 01 09.6
CHKZ *e* 04 01 16.1
RES Resolute Bay 141.12 338 *e*PKIKP PKPdf 04 01 17.4 -0.8
RES Resolute Bay 141.12 338 *e*PKPdf PKPdf 04 01 15.6 -2.5
SIT Sitka 141.48 301 *e*PKIKP PKPdf 04 01 17.0 -1.8
SIT MLR MLR
comp=Z,42μm,21.0s,MS7.2
MK31 Makanchi Array 141.66 82 PKHKP 04 01 10.7
MK31 pmax pmax
comp=Z,133nm,1.0s
MKAR Makanchi Array 141.66 82 PKP PKPdf 04 01 15.9 -3.3
comp=Z,17nm,0.9s,baz=232,slow=6.1,SNR=12
MKAR Makanchi Array 141.66 82 PKIKP PKPdf 04 01 15.9 -3.2
MKAR pmax pmax
comp=Z,17nm,0.9s
WMQ Urumqi 142.12 90 PKP PKPdf 04 01 17.0 -3.0
WMQ PP PP 04 04 27.0 +1.4
WMQ SKS SKSdf 04 08 23.0 -8.0
WMQ SKKS SKKSac 04 11 14.0 -6.2
WMQ SS SS 04 23 00.0 -0.3
WMQ PP PP
comp=Z,3μm,8.0s
WMQ LR LR
comp=N,45μm,20.0s,MS7.3
WMQ LR LR
comp=E,31μm,20.0s,MS7.3
WMQ LR LR
comp=Z,27μm,18.0s,MS7.0
SPB4 Spitsbergen Ar 142.27 15 *e*PKPpre 04 01 13.3
SPB4 *e*PKPdf PKPdf 04 01 17.4 -2.9
KBS Kingsbay 142.35 13 *e*P PKPdf 04 01 16.1 -4.2
KBS AMb AMB 04 01 23.7
comp=Z,124nm,1.4s
KBS AMS AMS 04 52 12.2
comp=Z,6μm,22.0s,MS6.3
KBS Kingsbay 142.35 13 *e*P PKPdf 04 01 11.8 -8.6
WHN Wuhan 143.17 131 ⇑PKP PKPdf 04 01 19.3 -2.5
WHN LR LR
comp=Z,62μm,24.5s,MS7.3
LZH Lanzhou 143.70 114 *e*PKP PKPdf 04 01 20.3 -2.5
LZH PP PP 04 04 38.0 +2.9
LZH PKS 04 04 57.4
LZH SKKS SKKSac 04 11 22.3 -7.0
LZH SS SS 04 23 18.0 -0.6
LZH PP PP
comp=Z,4μm,6.2s
LZH LR LR
comp=E,14μm,19.5s
LZH LR LR
comp=Z,17μm,20.8s,MS6.8
JOW Kunigami 143.84 153 PKP PKPdf 04 01 20.6 -2.4
comp=Z,132nm,1.0s,baz=204,slow=4.0,SNR=2.9
XAN Xi'an 144.15 122 PKP PKPdf 04 01 20.6 -2.9
XAN LR LR
comp=N,10μm,29.6s,MS6.5
XAN LR LR
comp=E,8μm,31.1s,MS6.5
XAN LR LR
comp=Z,29μm,31.1s,MS6.8
GTA Gaotai 144.57 106 PKP PKPdf 04 01 23.0 -1.3
GTA PP PP
comp=Z,14μm,6.5s
GTA LR LR
comp=N,13μm,30.4s,MS6.6
GTA LR LR
comp=E,8μm,28.5s,MS6.6
GTA LR LR
comp=Z,24μm,28.1s,MS6.8
SSE Sheshan 145.99 140 PKP PKPdf 04 01 27.8 +1.1
SSE LR LR
comp=N,16μm,17.5s,MS7.0

SSE				LR	LR			
	comp=E,12μm,17.5s,MS7.0							
SSE				LR	LR			
	comp=Z,23μm,18.2s,MS7.0							
CBIJ	**Chichi jima**	**146.00**	**174**	PKPbc	PKPbc	04 01 25.9	-1.6	
	comp=Z,406nm,1.0s,baz=230,slow=0.8,SNR=15							
NJ2	**Nanjing**	**146.12**	**137**	*e*PKP	PKPdf	04 01 28.6	+1.7	
NJ2				PKP2	PKPab	04 01 32.6	+4.1	
NJ2				PKS		04 05 03.0		
NJ2				SKS	SKSdf	04 08 32.0	-5.1	
NJ2				SKKS	SKKSac	04 11 41.0	-2.1	
NJ2				PP	PP			
	comp=Z,13μm,7.0s							
NJ2				LR	LR			
	comp=N,50μm,38.8s							
NJ2				LR	LR			
	comp=E,125μm,33.2s							
NJ2				LR	LR			
	comp=Z,107μm,38.0s,MS7.3							
INK	**Inuvik**	**147.12**	**317**	PKPbc	PKPbc	04 01 28.0	-2.7	
INK	**Inuvik**	**147.12**	**317**	PKPbc	PKPbc	04 01 28.0	-2.7	
DAWY	**Dawson**	**147.16**	**308**	*e*PKPdf	PKPdf	04 01 24.9	-3.8	
DAWY				*e*PKPbc	PKPbc	04 01 28.4	-2.4	
NVS	**Novosibirsk**	**147.42**	**72**	*i* PKP2	PKPab	04 01 30.8	-2.7	
NVS				*e*		04 05 02.0		
NVS				pmax	pmax			
	comp=Z,3μm,2.1s							
NVS				pmax	pmax			
	comp=N,1μm,2.2s							
NVS				pmax	pmax			
	comp=E,330nm,1.8s							
ZAL	**Zalesovo**	**147.60**	**75**	PKP	PKPdf	04 01 26.6	-2.8	
	comp=E,38nm,0.4s,baz=238,slow=2.3,SNR=35							
ZAL				PKPbc	PKPbc	04 01 30.9	-1.2	
	comp=E,41nm,0.4s,baz=262,slow=2.7,SNR=40							
EGAK	**Eagle**	**148.18**	**309**	*e*PKPdf	PKPdf	04 01 26.1	-4.3	
EGAK				*e*PKPbc	PKPbc	04 01 31.5	-2.1	
DIV	**Divide**	**148.23**	**301**	*e*PKPdf	PKPdf	04 01 28.0	-2.4	
DIV				*e*PKPbc	PKPbc	04 01 33.1	-0.7	
DIV				LR	LR			
	comp=Z,52μm,20.0s,MS7.3							
TIA	**Tai'an**	**149.27**	**131**	PKP	PKPdf	04 01 31.4	-0.7	
TIA				LR	LR			
	comp=N,26μm,24.0s,MS7.0							
TIA				LR	LR			
	comp=E,10μm,24.0s,MS7.0							
KDAK	**Kodiak Island**	**149.45**	**292**	PKP	PKPdf	04 01 27.7	-4.7	
	comp=E,31nm,1.3s,baz=142,slow=4.3,SNR=5.8							
KDAK				PKPbc	PKPbc	04 01 33.7	-3.1	
	comp=E,95nm,1.0s,baz=125,slow=2.4,SNR=23							
KDAK	**Kodiak Island**	**149.45**	**292**	*e*PKPdf	PKPdf	04 01 29.1	-3.3	
KDAK				*e*PKPbc	PKPbc	04 01 35.0	-1.9	
KDAK				LR	LR			
	comp=Z,9μm,20.0s,MS6.5							
SLKM	**Skilak Lake**	**149.81**	**298**	*e*PKPbc	PKPbc	04 01 36.5	-1.3	
SLKM				*e*PKPab	PKPab	04 01 42.6	-0.5	
PMR	**Palmer**	**149.87**	**300**	*e*PKIKP	PKPdf	04 01 29.1	-4.0	
PMR				MLR	MLR			
	comp=Z,39μm,22.0s,MS7.2							
BTO	**Baotou**	**150.16**	**117**	*e*PKP	PKPdf	04 01 31.5	-2.1	
MCK	**McKinley**	**150.75**	**304**	PKIKP	PKPdf	04 01 29.9	-4.6	
MCK	**McKinley**	**150.75**	**304**	*e*PKPbc	PKPbc	04 01 38.2	-1.8	
MCK				*e*PKPab	PKPab	04 01 46.0	-1.0	
MCK				LR	LR			
	comp=Z,11μm,21.0s,MS6.6							
COLA	**College**	**150.80**	**307**	*e*PKIKP	PKPdf	04 01 30.3	-4.3	
COLA				*e*		04 01 37.4		
COLA				*e*		04 01 45.5		
COLA				MLR	MLR			
	comp=Z,20μm,21.0s,MS6.9							
HHC	**Hu-ho-hao-te**	**151.02**	**118**	*e*PKP	PKPdf	04 01 33.8	-1.1	
HHC				PKS		04 05 07.1		
HHC				PP	PP	04 05 21.3	+3.1	
HHC				SKS	SKSdf	04 08 40.0	-3.7	
HHC				SKKS	SKKSac	04 12 09.3	-1.1	
HHC				SS	SS	04 24 39.8	-1.5	
HHC				PP	PP			
	comp=Z,4μm,9.3s							
HHC				LR	LR			
	comp=N,13μm,25.5s,MS6.7							
HHC				LR	LR			
	comp=E,9μm,30.0s,MS6.7							
HHC				LR	LR			
	comp=Z,21μm,31.9s,MS6.7							
BEH	**Bench**	**151.99**	**308**	*e*P	PKPdf	04 01 32.7	-3.7	
BJI	**Beijing**	**152.25**	**126**	PKP	PKPdf	04 01 35.8	-0.9	
BJI				PP	PP			
	comp=Z,8μm,10.0s							
BJI				LR	LR			
	comp=N,11μm,20.0s,MS6.9							
BJI				LR	LR			
	comp=E,14μm,19.3s,MS6.9							
BJI				LR	LR			
	comp=Z,23μm,27.0s							
SVW2	**Sparrevohn**	**152.41**	**296**	*e*PKPdf	PKPdf	04 01 35.0	-2.0	
SVW2				*e*PKPbc	PKPbc	04 01 40.6	-3.3	
SVW2				*e*PKPab	PKPab	04 01 49.8	-4.1	
DL2	**Dalian**	**153.28**	**135**	*i* PKPR		04 01 37.3		
DL2				PKP2	PKPab	04 01 57.6	0.0	
DL2				PP	PP	04 05 35.0	+4.0	
DL2				PPP		04 09 05.8		
DL2				PP	PP			
	comp=Z,4μm,9.9s							
DL2				LR	LR			
	comp=N,4μm,20.3s,MS6.4							
DL2				LR	LR			
	comp=E,4μm,22.2s,MS6.4							
DL2				LR	LR			
	comp=Z,10μm,24.2s,MS6.6							
TTA	**Tatalina**	**153.35**	**300**	PKIKP	PKPbc	04 01 45.9	0.0	
IMA2	**Indian Mountai**	**153.50**	**307**	*e*PKPdf	PKPdf	04 01 33.4	-5.2	
IMA2				*e*PKPbc	PKPbc	04 01 45.2	-1.0	
IMA2				*e*PKPab	PKPab	04 01 57.2	-1.3	
INCN	**Inchon**	**153.56**	**144**	*e*PKPdf	PKPdf	04 01 37.9	-0.8	
INCN				*e*PKPbc	PKPbc	04 01 46.5	+0.1	
INCN				*e*PKPab	PKPab	04 01 56.9	-1.9	
INCN				LR	LR			
	comp=Z,18μm,22.0s,MS6.8							
AKUT	**Akutan**	**153.64**	**277**	*e*PKPbc	PKPbc	04 01 44.6	-1.9	
AKUT				*e*PKPab	PKPab	04 01 57.5	-1.6	
UNV	**Unalaska Valle**	**153.83**	**276**	PFAKE		04 01 50.0	+11	
UNV				LR	LR			
	comp=Z,65μm,21.0s,MS7.4							
MOY	**Mondy**	**154.01**	**91**	*e*PKIKP	PKPdf	04 01 38.4	-0.9	
MOY				pmax	pmax			
	comp=Z,768nm,2.7s							
SONM	**Songino Array**	**154.06**	**103**	PKP	PKPdf	04 01 37.6	-1.8	
	comp=Z,6.8nm,0.9s,baz=199,slow=1.1,SNR=34							
SONM				PKPbc	PKPbc	04 01 47.2	-0.3	
	comp=Z,8.2nm,0.5s,baz=204,slow=2.4,SNR=28							
ZAK	**Zakamensk**	**154.30**	**95**⇓	*e*PKIKP	PKPdf	04 01 38.3	-1.4	
ZAK				pmax	pmax			
	comp=Z,125nm,1.6s							
NIKO	**Nikolski**	**154.46**	**272**	*e*PKPab	PKPab	04 02 00.9	-1.7	
NIKO				*e*SKPdf	SKPdf	04 05 09.4	-4.6	
MAJO	**Matsushiro**	**155.04**	**166**	*e*PKPdf	PKPdf	04 01 39.2	-1.5	
MAJO				*e*PKPbc	PKPdf	04 01 48.3	+7.6	
MAJO				*e*PKPab	PKPab	04 02 05.0	-0.1	
MAJO				LR	LR			
	comp=Z,19μm,22.0s,MS6.9							
MAT	**Matsushiro**	**155.04**	**166**	PKP	PKPdf	04 01 38.8	-1.9	
MAT	**Matsushiro**	**155.04**	**166**	*e*PKP	PKPdf	04 01 39.0	-1.7	
MAT				LR	LR			
	comp=Z,15μm,20.0s,MS6.8							
MJAR	**Matsushiro Arr**	**155.04**	**166**	PKP	PKPdf	04 01 39.4	-1.3	
	comp=Z,5.3nm,1.2s,baz=237,slow=1.3,SNR=11							
MJAR	**Matsushiro Arr**	**155.04**	**166**	PKIKP	PKPdf	04 01 39.4	-1.3	
MJAR				pmax	pmax			
	comp=Z,5.0nm,1.2s							
TLY	**Talaya**	**155.31**	**93**	⇓P	PKPdf	04 01 41.0	-0.1	
	SNR=131							
TLY	**Talaya**	**155.31**	**93**	*i* PKIKP	PKPdf	04 01 39.2	-1.9	
TLY				pmax	pmax			
	comp=Z,222nm,1.5s							
TLY	**Talaya**	**155.31**	**93**	PFAKE		04 01 50.0	+8.9	
TLY				LR	LR			
	comp=Z,22μm,20.0s,MS7.0							
IRK	**Irkutsk**	**155.96**	**93**	*e*PKIKP	PKPdf	04 01 39.6	-2.4	
IRK				*e*		04 05 57.3		
IRK				pmax	pmax			
	comp=Z,429nm,3.5s							
SNY	**Shenyang**	**156.56**	**135**	PKP	PKPdf	04 01 38.5	-4.3	
SNY				PP	PP	04 05 49.0	-0.4	
SNY				LR	LR			
	comp=N,20μm,28.2s,MS6.8							
SNY				LR	LR			
	comp=E,8μm,28.2s,MS6.8							
SNY				LR	LR			
	comp=Z,19μm,26.4s,MS6.8							
CN2	**Changchun**	**158.94**	**136**	*e*PKP	PKPdf	04 01 44.4	-1.3	
CN2				*e*PP	PP	04 06 05.1	+2.6	
CN2				*e*SS	SS	04 26 04.1	-3.1	
CN2				LR	LR			
	comp=N,10μm,22.0s,MS6.8							
CN2				LR	LR			
	comp=E,12μm,22.0s,MS6.8							
CN2				LR	LR			
	comp=Z,10μm,21.0s,MS6.6							
TNA	**Tin City**	**159.07**	**303**	PFAKE		04 01 50.0	+4.1	
TNA				LR	LR			
	comp=Z,16μm,20.0s,MS6.8							
VLA	**Vladivostok**	**160.24**	**149**	*e*PKIKP	PKPdf	04 01 44.5	-2.7	
VLA				*e*		04 02 26.0		
VLA						04 06 11.0		
VLA				pmax	pmax			
	comp=E,61nm,1.5s							
MDJ	**Mudanjiang**	**161.00**	**142**	PKP	PKPdf	04 01 46.6	-1.4	
MDJ				PKS		04 05 21.3		
MDJ				PP	PP	04 06 14.5	+0.9	
MDJ				PP	PP			
	comp=E,6μm,10.6s							
MDJ				LR	LR			
	comp=N,31μm,43.6s							
MDJ				LR	LR			
	comp=E,10μm,36.3s							
MDJ				LR	LR			
	comp=Z,36μm,49.4s							
HIA	**Hailar**	**161.21**	**117**	*e*PKPdf	PKPdf	04 01 47.0	-1.2	
HIA				*e*PKPdif		04 01 57.1		
HIA				*e*PKPab	PKPab	04 02 32.9	+1.2	
HIA				LR	LR			
	comp=Z,27μm,20.0s							
SMY	**Shemya**	**162.53**	**254**	PFAKE		04 02 00.0	+10	
SMY				LR	LR			
	comp=Z,30μm,21.0s							
ASAJ	**Asahikawa**	**162.97**	**172**	PKP	PKPdf	04 01 48.9	-1.1	
	comp=Z,15nm,1.2s,baz=269,slow=25,SNR=4.3							
ASAJ				PKPab	PKPab	04 02 39.4	-0.1	
	comp=Z,24nm,0.9s,baz=241,slow=16,SNR=5.7							
YUK	**Yuzh-Kuril'sk**	**162.99**	**180**	*e*PKIKP	PKPdf	04 01 48.5	-1.6	
BOD	**Bodaibo**	**163.64**	**87**	*e*PKIKP	PKPdf	04 01 47.2	-3.5	
BOD				*e*		04 02 42.5		
BOD				pmax	pmax			
	comp=Z,145nm,1.7s							
BOD				pmax	pmax			
	comp=Z,80nm,1.7s							
KLR	**Kul'dur**	**165.79**	**140**	*e*PKIKP	PKPdf	04 01 47.3	-5.2	
KLR				*e*		04 02 49.8		
KLR				pmax	pmax			
	comp=Z,170nm,2.0s							
KLR				pmax	pmax			
	comp=Z,8μm,8.0s							
YSS	**Yuzh-Sakhalins**	**165.81**	**172**κ	*i*PKIKP	PKPdf	04 01 50.9	-1.7	
YSS				*e*		04 06 46.0		
YSS				*e*		04 20 25.0		
YSS				pmax	pmax			
	comp=Z,210nm,1.6s							
YSS				pmax	pmax			
	comp=Z,4μm,7.0s							
YSS				pmax	pmax			
	comp=N,2μm,10.0s							
YSS				pmax	pmax			
	comp=Z,5μm,10.0s							
YSS	**Yuzh-Sakhalins**	**165.81**	**172**	*e*PKPdf	PKPdf	04 01 51.1	-1.5	
YSS				*e*PKPab	PKPab	04 02 50.3	-1.6	
YSS				*e*PP	PP	04 06 38.3	-0.7	
YSS				LR	LR			
	comp=Z,31μm,22.0s							
HABR	**Khabarovsk**	**166.03**	**149**⇓	*i*PKIKP	PKPdf	04 01 51.8	-0.9	
TIXI	**Tiksi**	**167.44**	**25**	*e*PKP2	PKPab	04 02 57.5	-1.6	
TIXI				pmax	pmax			
	comp=Z,54nm,1.4s							
TIXI	**Tiksi**	**167.44**	**25**	PFAKE		04 02 00.0	+6.2	
TIXI				LR	LR			
	comp=Z,22μm,21.0s							
SKR	**Severo-Kuril's**	**168.13**	**214**	PKIKP	PKPdf	04 01 50.0	-4.3	
SKR				pmax	pmax			
	comp=Z,180nm,1.0s							
CLNS	**Chul'man**	**168.48**	**102**	*e*PKIKP	PKPdf	04 01 51.4	-3.1	
CLNS				pmax	pmax			
	comp=E,14nm,1.1s							
CLNS				pmax	pmax			
	comp=Z,86nm,1.1s							
CLNS				pmax	pmax			
	comp=N,44nm,1.2s							
CLNS				pmax	pmax			
	comp=E,4μm,11.3s							
CLNS				pmax	pmax			
	comp=Z,4μm,12.5s							
CLNS				pmax	pmax			
	comp=N,2μm,12.4s							
BILL	**Bilibino**	**168.75**	**317**	*e*PKIKP	PKPdf	04 01 51.6	-3.1	
BILL				*e*		04 06 55.0		
BILL				*e*		04 08 52.2		
BILL				pmax	pmax			
	comp=Z,16nm,1.3s							
BILL	**Bilibino**	**168.75**	**317**	*e*PKPdf	PKPdf	04 01 52.7	-2.0	
BILL				*e*PKPab	PKPab	04 03 04.5	-0.4	
BILL				*e*PP	PP	04 06 53.8	-0.3	
BILL				LR	LR			
	comp=Z,35μm,22.0s							
PET	**Petropavlovsk**	**169.35**	**227**	*e*PKIKP	PKPdf	04 01 52.3	-2.8	
PET				*e*		04 03 06.1		
PET				MLR	MLR			
	comp=Z,44μm,22.0s							
YAK	**Yakutsk**	**172.27**	**75**	*e*PKIKP	PKPdf	04 01 52.8	-3.8	
YAK				*e*		04 03 19.1		
YAK				*e*		04 07 16.1		
YAK				pmax	pmax			
	comp=E,15nm,1.4s							
YAK				pmax	pmax			
	comp=Z,44nm,1.4s							
YAK				pmax	pmax			
	comp=N,9.0nm,1.3s							
YAK				pmax	pmax			
	comp=N,43nm,1.6s							
YAK				pmax	pmax			
	comp=E,53nm,1.6s							
YAK				pmax	pmax			
	comp=Z,86nm,1.6s							
YAK				pmax	pmax			
	comp=Z,36nm,1.3s							
YAK				pmax	pmax			
	comp=N,30nm,1.6s							
YAK				pmax	pmax			
	comp=E,27nm,1.4s							
YAK	**Yakutsk**	**172.27**	**75**	*e*PKPdf	PKPdf	04 01 53.1	-3.5	
YAK				*e*PKPab	PKPab	04 03 19.7	-0.9	
YAK				LR	LR			
	comp=Z,32μm,22.0s							
MA2	**Magadan**	**177.10**	**242**	*e*PKIKP	PKPdf	04 01 58.6	+0.5	
MA2				*e*		04 03 40.2		

*ISCJB **20** 04:12:24.9±5.8, 56.03S±0.09×275W±0.2, h61km±55km, mb4.7/17, Error ellipse: s-maj=17.0km s-min=12.0km az=82.7*
*IDC **20** 04:12:34.3±1.6, 56.10S×2752W, h135km±13km, mb4.3/11, mb1 4.3/12, mb1mx4.2/18, mbtmp4.7/12, Error ellipse: s-maj=15.7km s-min=12.3km az=58.0*
*NEIC **20** 04:12:34.2±2.0, 56.07S×2757W, h137km±18km, mb4.7/13, Error ellipse: s-maj=9.1km s-min=6.8km az=222.0*
ISC 20 04:12:26.6±3.9, 5611S±0.09×275W±0.2, h62km±38km, n41, σ0§44/27, mb4.7/17, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**18.77**	**156**	P		**P**	**04 16 41.5**	**-0.2**
	3.6nm,0.3s,baz=305,slow=11,SNR=74							
SNAA				ScP	ScP	04 24 25.8	-10
	0.0nm,0.3s,baz=253,slow=6.8,SNR=3.5							
SNAA	**Sanae**	**18.77**	**156**	*e*P		**Pn**	**04 16 41.4**	**-0.3**
	38nm,0.5s							
PMSA	**Palmer Station**	**19.71**	**229**	P		**Pn**	**04 16 53.2**	**+0.3**
TRQA	**Tornquist**	**29.16**	**294**	*e*P		**P**	**04 18 21.5**	**-0.4**
	3.9nm,0.5s,mb4.4							
CPUP	**Villa Florida**	**36.70**	**312**	P		**P**	**04 19 27.0**	**-0.6**
	6.6nm,0.5s,mb4.7,baz=130,slow=7.3,SNR=36							
CPUP				ScP	ScP	04 25 21.5	-8.8
	2.0nm,0.8s,baz=150,slow=6.3,SNR=4.4							
CPUP	**Villa Florida**	**36.70**	**312**	*e*P		**P**	**04 19 26.8**	**-0.8**
	38nm,0.6s,mb5.4							
MAW	**Mawson**	**40.22**	**144**	P		**P**	**04 19 57.0**	**-0.1**
	2.3nm,0.6s,mb4.1,baz=260,slow=7.2,SNR=8.8							
MAW				ScP	ScP	04 25 34.5	-9.4
	3.7nm,1.0s,baz=225,slow=1.4,SNR=3.9							
BDFB	**Brasilia**	**43.31**	**331**	P		**P**	**04 20 23.0**	**+0.7**
	5.6nm,0.6s,mb4.5,baz=153,slow=3.4,SNR=14							
LVC	**Limon Verde**	**45.16**	**301**	*e*P		**P**	**04 20 37.2**	**+0.1**
	24nm,0.6s,mb5.2							
SBA	**Scott Base**	**46.01**	**184**	*e*P		**P**	**04 20 44.3**	**+0.5**
	475nm,3.1s							
BOSA	**Boshof**	**46.17**	**76**	P		**P**	**04 20 44.5**	**-0.6**
	2.3nm,0.9s,mb4.1,baz=213,slow=8.0,SNR=4.4							
BOSA	**Boshof**	**46.17**	**76**	*e*P		**P**	**04 20 45.0**	**-0.1**
	2.3nm,0.8s,mb4.2							
VNDA	**Vanda**	**46.51**	**183**	P		**P**	**04 20 47.8**	**0.0**
	7.7nm,0.6s,mb4.8,baz=189,slow=5.6,SNR=51							
VNDA				ScP	ScP	04 25 58.8	-10
	0.9nm,0.7s,baz=220,slow=1.9,SNR=5.5							
VNDA	**Vanda**	**46.51**	**183**	*e*P		**P**	**04 20 47.6**	**-0.1**
	8.3nm,0.7s,mb4.8							
LBTB	**Lobatse**	**49.21**	**73**	P		**P**	**04 21 09.2**	**+0.5**
	4.1nm,0.6s,mb4.6,baz=246,slow=7.7,SNR=8.7							
LBTB	**Lobatse**	**49.21**	**73**	*e*P		**P**	**04 21 08.5**	**-0.1**
	4.5nm,0.7s,mb4.6							
TSUM	**Tsumeb**	**49.88**	**61**	*e*P		**P**	**04 21 14.1**	**+0.4**
	2.8nm,0.7s,mb4.4							
LPAZ	**La Paz**	**50.25**	**306**	P		**P**	**04 21 17.4**	**+1.0**
	17nm,0.5s,mb5.3,baz=137,slow=5.0,SNR=113							
LPAZ	**La Paz**	**50.25**	**306**	*e*P		**P**	**04 21 16.8**	**+0.4**
	17nm,0.6s,mb5.3							
CASY	**Casey**	**53.92**	**160**	*e*P		**P**	**04 21 43.8**	**0.0**
	5.6nm,0.9s,mb4.5							
SAML	**Samuel**	**54.70**	**315**	*e*P		**P**	**04 21 48.5**	**-0.9**
	12nm,0.8s,mb5.0							
LSZ	**Lusaka**	**58.58**	**69**	*e*P		**P**	**04 22 17.0**	**+0.1**
	6.2nm,0.8s,mb4.7							
DBIC	**Dimbokro**	**65.30**	**25**	P		**P**	**04 23 02.0**	**0.0**
	9.4nm,0.5s,mb5.1,baz=168,slow=8.0,SNR=37							
DBIC	**Dimbokro**	**65.30**	**25**	*e*P		**P**	**04 23 01.5**	**-0.5**
	11nm,0.6s,mb5.1							
ROSC	**El Rosal**	**71.78**	**310**	P		**P**	**04 23 42.7**	**+0.3**
	3.1nm,0.7s,mb4.3,baz=161,slow=1.9,SNR=5.4							
TORD	**Torodi Ar. Bea**	**73.20**	**30**	P		**P**	**04 23 50.9**	**0.0**
	25nm,0.6s,mb5.3,baz=200,slow=6.5,SNR=398							
ASAR	**Alice Springs**	**99.00**	**163**	P		**P**	**04 26 00.0**	**-0.4**
	1.2nm,0.7s,mb4.5,baz=180,slow=4.0,SNR=17							
NOA	**NORSAR Array B**	**120.73**	**21**	PKP	PKPdf	04 31 08.4	-3.1	
	0.5nm,0.8s,baz=208,slow=1.9,SNR=3.2							
NVAR	**Mina Array Bea**	**121.23**	**293**	PKP	PKPdf	04 31 11.2	-1.3	
	0.3nm,0.6s,baz=123,slow=3.3,SNR=5.1							
FINES	**FINESS Array B**	**124.52**	**28**	PKP	PKPdf	04 31 15.1	-3.7	
	1.5nm,0.5s,baz=109,slow=0.3,SNR=21							
KAF	**Kangasniemi**	**125.14**	**28**	*ep*	PKPdf	04 31 15.6	-4.4	
	1.4nm,0.4s							
JOF	**Joensuu**	**127.14**	**29**	*ep*	PKPdf	04 31 19.6	-4.2	
	1.5nm,0.5s							
ARCES	**ARCESS Array B**	**131.07**	**22**	PKP	PKPdf	04 31 27.6	-3.7	
	1.4nm,0.5s,baz=210,slow=1.0,SNR=16							
CHKZ	**Chkalovo**	**135.49**	**57**	*e*PKPdf	PKPdf	04 31 36.3	-3.2	
YKA	**Yellowknife Ar**	**136.08**	**318**	PKP	PKPdf	04 31 37.3	-3.4	
	1.5nm,0.6s,baz=124,slow=2.4,SNR=11							
YKA	**Yellowknife Ar**	**136.08**	**318**	PKP	PKPdf	04 31 37.3	-3.4	
MKAR	**Makanchi Array**	**137.09**	**72**	PKP	PKPdf	04 31 40.7	-1.8	
	0.6nm,0.6s,baz=220,slow=1.6,SNR=5.1							
MKAR				SKPbc	SKPbc	04 34 59.0	-11	
	0.4nm,0.5s,baz=230,slow=1.9,SNR=6.8							
MKAR	**Makanchi Array**	**137.09**	**72**	PKP	PKPdf	04 31 40.7	-1.8	
MKAR				SKPbc	SKPbc	04 34 59.0	-11	
DAWY	**Dawson**	**146.68**	**312**	*e*PKPbc	PKPbc	04 31 57.5	-3.9	
EGAK	**Eagle**	**147.63**	**313**	*e*PKPbc	PKPbc	04 32 00.1	-3.8	
SONM	**Songino Array**	**150.93**	**87**	PKPbc	PKPbc	04 32 09.7	-2.5	
	5.1nm,0.5s,baz=224,slow=3.2,SNR=33							
SONM				PKPab	PKPab	04 32 15.9	-3.8	
	1.1nm,0.5s,baz=210,slow=3.5,SNR=5.0							

*NEIC **20** 04:36:12.8, 1954N×6340W, h25km, MD3.6(RSPR), After RSPR.*
RSPR 20 04:36:12.8, 1954N×6340W, h25km±16km, MD3.6/6, MD3.6/6, 16C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**1.19**	**228**↑	*e*P		Pn	04 36 31.4	-2.4
TBVI	**Tortola**	**1.60**	**226**↑	*e*P		Pn	04 36 37.4	-2.0
CULB	**Culebra**	**2.20**	**237**↑	*e*P		Pn	04 36 45.5	-2.1
CULB	**Culebra**	**2.20**	**237**	*e*S		Sn	04 37 11.6	-2.4
MTP	**Monte Pirata**	**2.50**	**235**↑	*e*P		Pn	04 36 50.2	-1.5
MTP				*e*S		Sn	04 37 18.7	-2.6
CBYP	**Canovanas**	**2.64**	**242**↑	*e*P		Pn	04 36 52.1	-1.6
CBYP				*e*S		Sn	04 37 23.1	-1.9
HUMP	**Col San Antoni**	**2.70**	**239**↑	*e*P		Pn	04 36 52.8	-1.7
HUMP				*e*S		Sn	04 37 24.2	-2.2
CPD	**Cerro la Pandu**	**2.81**	**238**↑	*e*P		Pn	04 36 54.6	-1.4
CPD				*e*S		Sn	04 37 27.1	-2.0
SJG	**San Juan**	**2.96**	**242**↑	*e*P		Pn	04 36 56.6	-1.5
SJG				*e*S		Sn	04 37 31.1	-1.8
CELP	**Cerrillos**	**3.34**	**245**↑	*e*P		Pn	04 37 02.0	-1.4
ICM	**Isla Caja Muer**	**3.38**	**242**↑	*e*P		Pn	04 37 02.8	-1.1
AOPR	**Arecibo Observ**	**3.38**	**250**↑	*e*P		Pn	04 37 02.3	-1.6
AOPR				*e*S		Sn	04 37 41.8	-1.4
LRS	**Lares**	**3.49**	**250**↑	*e*P		Pn	04 37 04.0	-1.3
LRS				*e*S		Sn	04 37 44.0	-1.8
AGPR	**Aguadilla, PR**	**3.67**	**254**↑	*e*P		Pn	04 37 06.7	-1.1
AGPR				*e*S		Sn	04 37 48.1	-2.1
LSP	**Las Mesas**	**3.74**	**249**↑	*e*P		Pn	04 37 07.7	-1.1
LSP				*e*S		Sn	04 37 50.2	-1.9
MGP	**Maguayo**	**3.81**	**247**↑	*e*P		Pn	04 37 08.7	-1.1
CRPR	**Cabo Rojo, PR**	**3.83**	**247**↑	*e*P		Pn	04 37 08.8

	comp=N,2.5nm,0.4s							
MEV				*e*Sg		**Sg**	**04 41 05.9**	**+1.0**
GRG	**Griva**	**1.27**	**87**	*e*Pg		**Pg**	**04 40 50.0**	**-1.0**
GRG				*e*Sg		**Sg**	**04 41 09.0**	**+1.6**
STIP	**Stip**	**1.35**	**54**	*e*Pg		**Pg**	**04 40 51.6**	**-1.0**
STIP				*e*Sg		**Sg**	**04 41 11.4**	**+1.4**
STIP	**Stip**	**1.35**	**54**	*e*Pg		**Pn**	**04 40 51.0**	**-0.9**
STIP				*e*Sg		**Sg**	**04 41 10.9**	**+0.8**
STIP				*e*Lg			04 41 11.8	
	comp=E,8.5nm,0.4s							
STIP				*e*Lg			04 41 12.2	
	comp=N,14nm,0.6s							
STIP	**Stip**	**1.35**	**54**	*e*Pg		**Pn**	**04 40 51.0**	**-0.9**
STIP				*e*Sg		**Sg**	**04 41 11.4**	**+1.4**
IGT	**Igoumenitsa**	**1.41**	**193**	*e*Pg		**Pg**	**04 40 53.8**	**0.0**
VAY	**Valandovo**	**1.45**	**73**	*e*Pg		**Pn**	**04 40 51.9**	**-1.3**
VAY				*e*Sg		**Sg**	**04 41 12.3**	**-1.0**
VAY				*e*Lg			04 41 13.7	
	comp=E,14nm,0.8s							
VAY				*e*Lg			04 41 13.8	
	comp=N,11nm,0.6s							
VAY	**Valandovo**	**1.45**	**73**	*e*Pg		**Pn**	**04 40 51.9**	**-1.4**
VAY				*e*Sg		**Sg**	**04 41 12.3**	**-1.0**
LIT	**Litokhoron**	**1.56**	**121**	*e*Pg		**Pg**	**04 40 55.6**	**-1.2**
LIT				*e*Sg		**Sg**	**04 41 17.4**	**+0.3**
HORT	**Hortiatis**	**1.82**	**99**	*e*Pb		**Pn**	**04 40 58.7**	**+0.2**
AGG	**Agios Georgios**	**2.25**	**146**	*e*Pn		**Pn**	**04 41 05.1**	**+0.8**
AGG				*e*Sn		**Sn**	**04 41 33.8**	**+1.5**
PAIG	**Paliouri**	**2.46**	**113**	*e*Pn		**Pn**	**04 41 07.0**	**-0.1**

*ISCJB **20** 04:43:05.7±0.9, 181N±0.1×7668W±0.07, h26km±8km, Error ellipse: s-maj=20.2km s-min=7.7km az=124.3*
*JSN **20** 04:43:06.9±0.7, 1809N×7668W, h21km±2km, MD3.3*
*SSNC **20** 04:43:09.8, 1770N×7544W, h25km, MD3.3, ML3.2*

ISC 20 04:43:06.2±0.9, 181N±01×7670W±007, h25km±7km, n8, σ0§57/13, 5C-3D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GWJ	**Greenwich**	**0.06**	**211**	⇑*i*P	**Pb**	**04 43 10.4**	**-0.1**
STH	**Stony Hill**	**0.12**	**247**	⇑*i*P	**Pb**	**04 43 10.8**	**-0.1**
STH				⇓*i*S	**Sb**	**04 43 14.1**	**0.0**
HOJ	**Hope**	**0.13**	**203**	⇑*i*P	**Pb**	**04 43 10.9**	**-0.1**
PCJ	**Portland Cotta**	**0.58**	**229**	⇑*i*P	**Pb**	**04 43 17.4**	**-0.3**
PCJ				*e*S	**Sb**	**04 43 25.2**	**-0.3**
CVJ	**Coleyville**	**0.80**	**278**	⇑*i*P	**Pb**	**04 43 21.7**	**+0.2**
MCJ	**Malvern**	**0.96**	**258**	⇑*i*P	**Pn**	**04 43 24.4**	**+0.3**
MCJ				*e*S	**Sb**	**04 43 36.9**	**+0.5**
MBJ	**Montego Bay**	**1.14**	**284**	⇓*e*P	**Pn**	**04 43 26.4**	**-0.2**
MBJ				*e*S	**Sn**	**04 43 41.0**	**-0.4**
MOAC	**Moa**	**3.01**	**33**	*e*P	**Pn**	**04 43 53.9**	**+1.6**
	baz=189						
MOAC				*e*S	**Sn**	**04 44 26.5**	**-1.0**
	comp=N,48nm,0.2s						
MOAC				*e*			
	comp=E,55nm,0.5s						

*NEIC **20** 05:20:07.5, 3977S×17707E, h40km, ML3.7(WEL), After WEL.*
NEIC Felt in the Hawke's Bay area.

WEL 20 05:20:07.6±0.2, 3977S×17712E, h33km, ML3.6/30, 1D, Error ellipse: s-maj=2.3km s-min=1.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.33**	**217**	P*	Pb	05 20 15.9	+0.2
PXZ				S*	Sb	05 20 22.1	+0.9
BKZ	**Black Stump Fm**	**0.77**	**321**	P	Pn	05 20 21.4	-0.7
BKZ	**Black Stump Fm**	**0.77**	**321**	PN	Pn	05 20 21.4	-0.7
BKZ				SN	Sn	05 20 31.7	-0.9
KNZ	**Kokohu**	**0.86**	**30**	P	Pn	05 20 23.4	+0.1
KNZ	**Kokohu**	**0.86**	**30**	PN	Pn	05 20 23.4	+0.1
TSZ	**Takapari Road**	**0.94**	**252**	P	Pn	05 20 23.4	-1.0
TSZ	**Takapari Road**	**0.94**	**252**	⇓PN	Pn	05 20 23.4	-1.0
MOVZ	**Moawhango**	**1.12**	**288**	PN	Pn	05 20 26.2	-0.7
BFZ	**Birch Farm**	**1.13**	**216**	P	Pn	05 20 26.0	-1.1
BFZ	**Birch Farm**	**1.13**	**216**	PN	Pn	05 20 26.0	-1.0
TUVZ	**Tukino**	**1.24**	**293**	PN	Pn	05 20 28.7	+0.2
WNVZ	**Wahianoa**	**1.26**	**290**	PN	Pn	05 20 28.7	-0.1
RITZ	**Rihia Road**	**1.26**	**309**	P	Pn	05 20 29.1	+0.3
RITZ	**Rihia Road**	**1.26**	**309**	ePN	Pn	05 20 29.1	+0.3
OTVZ	**Oturere**	**1.28**	**298**	ePN	Pn	05 20 29.2	+0.1
DRZ	**Dome Shelter**	**1.30**	**292**	P	Pn	05 20 30.4	+1.0
DRZ	**Dome Shelter**	**1.30**	**292**	ePN	Pn	05 20 29.8	+0.4
FWVZ	**Far West T-bar**	**1.32**	**292**	*e*P	Pn	05 20 29.5	-0.1
FWVZ	**Far West T-bar**	**1.32**	**292**	PN	Pn	05 20 29.2	-0.4
NGZ	**Ngauruhoe**	**1.32**	**296**	P	Pn	05 20 30.0	+0.4
NGZ	**Ngauruhoe**	**1.32**	**296**	ePN	Pn	05 20 29.7	+0.1
KRVZ	**Karewarewa**	**1.33**	**300**	ePN	Pn	05 20 29.7	0.0
WPVZ	**Whakapapa**	**1.34**	**294**	P	Pn	05 20 30.4	+0.4
WTVZ	**West Tongariro**	**1.35**	**298**	P	Pn	05 20 30.8	+0.7
WTVZ	**West Tongariro**	**1.35**	**298**	ePN	Pn	05 20 30.5	+0.4
KATZ	**Kakaramea**	**1.36**	**305**	P	Pn	05 20 30.2	0.0
RATZ	**Rangitukua**	**1.38**	**310**	P	Pn	05 20 32.0	+1.5
TIWZ	**Tintock**	**1.38**	**223**	ePN	Pn	05 20 29.3	-1.1
MWZ	**Matawai**	**1.47**	**13**	P	Pn	05 20 31.2	-0.5
MWZ	**Matawai**	**1.47**	**13**	PN	Pn	05 20 31.1	-0.6
TWVZ	**Taurewa**	**1.48**	**298**	P	Pn	05 20 33.1	+1.3
MRZ	**Mangatainoka R**	**1.48**	**232**	ePN	Pn	05 20 30.4	-1.5
URZ	**Urewera**	**1.51**	**360**	P	Pn	05 20 31.8	-0.4
URZ	**Urewera**	**1.51**	**360**	PN	Pn	05 20 31.8	-0.5
WATZ	**Wairara**	**1.51**	**314**	P	Pn	05 20 34.6	+2.3
EDRZ	**Edgecumbe**	**1.69**	**350**	P	Pn	05 20 34.6	-0.1
EDRZ	**Edgecumbe**	**1.69**	**350**	ePN	Pn	05 20 34.3	-0.4
MTW	**Mount Morrison**	**1.86**	**221**	P	Pn	05 20 35.0	-2.1
MTW	**Mount Morrison**	**1.86**	**221**	PN	Pn	05 20 34.8	-2.2
PUZ	**Puketiti**	**1.91**	**28**	P	Pn	05 20 36.8	-1.0
PUZ	**Puketiti**	**1.91**	**28**	PN	Pn	05 20 36.6	-1.2
TRWZ	**Traveller**	**1.96**	**213**	ePN	Pn	05 20 35.8	-2.7
CAW	**Cannon Point**	**2.06**	**229**	P	Pn	05 20 38.2	-1.6
PAWZ	**Paruwai Farm**	**2.06**	**218**	P	Pn	05 20 37.6	-2.3
MSWZ	**Moikau Station**	**2.18**	**220**	P	Pn	05 20 38.9	-2.5
MSWZ	**Moikau Station**	**2.18**	**220**	PN	Pn	05 20 38.7	-2.7
MRW	**Makara Radio**	**2.35**	**231**	P	Pn	05 20 41.8	-2.1
TCW	**Tory Channel**	**2.60**	**235**	P	Pn	05 20 45.0	-2.3
BSWZ	**Blackbirch Sta**	**3.14**	**231**	P	Pn	05 20 52.1	-2.6
QRZ	**Quartz Range**	**3.67**	**252**	PN	Pn	05 20 59.8	-2.2
LTZ	**Lake Taylor**	**4.74**	**229**	*e*P	Pn	05 21 12.9	-3.7
MQZ	**McQueen's Vall**	**5.16**	**219**	*e*P	Pn	05 21 18.9	-3.6
LBZ	**Lake Benmore**	**6.92**	**226**	*e*P	Pn	05 21 43.3	-3.3
ODZ	**Otahua Downs**	**7.12**	**220**	*e*P	Pn	05 21 46.0	-3.4

WEL 20 05:34:09.2±0.2, 3979S×17715E, h33km, ML3.5/24, Error ellipse: s-maj=2.8km s-min=1.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.33**	**222**	P*	Pb	05 34 17.7	+0.5
PXZ				S*	Sb	05 34 24.6	+1.8
BKZ	**Black Stump Fm**	**0.80**	**320**	PN	Pn	05 34 23.2	-0.9
KNZ	**Kokohu**	**0.86**	**28**	PN	Pn	05 34 25.2	+0.2
TSZ	**Takapari Road**	**0.95**	**253**	PN	Pn	05 34 25.3	-0.9
BFZ	**Birch Farm**	**1.13**	**217**	PN	Pn	05 34 27.9	-0.7
MOVZ	**Moawhango**	**1.14**	**289**	PN	Pn	05 34 28.0	-0.8
TUVZ	**Tukino**	**1.27**	**294**	PN	Pn	05 34 30.6	+0.1
WNVZ	**Wahianoa**	**1.28**	**290**	ePN	Pn	05 34 31.2	+0.5
OTVZ	**Oturere**	**1.30**	**298**	PN	Pn	05 34 31.4	+0.4
FWVZ	**Far West T-bar**	**1.34**	**293**	PN	Pn	05 34 31.4	-0.2
NGZ	**Ngauruhoe**	**1.34**	**296**	PN	Pn	05 34 31.6	0.0
TIWZ	**Tintock**	**1.38**	**224**	PN	Pn	05 34 31.1	-1.0
MWZ	**Matawai**	**1.48**	**12**	PN	Pn	05 34 32.6	-0.8
MRZ	**Mangatainoka R**	**1.49**	**233**	PN	Pn	05 34 32.5	-1.1
URZ	**Urewera**	**1.52**	**359**	PN	Pn	05 34 33.6	-0.4
MTW	**Mount Morrison**	**1.86**	**222**	PN	Pn	05 34 36.7	-2.0
PUZ	**Puketiti**	**1.92**	**27**	PN	Pn	05 34 38.5	-0.9
PUZ				SN	Sn	05 35 01.7	-0.7
TRWZ	**Traveller**	**1.96**	**214**	PN	Pn	05 34 37.9	-2.2
PAWZ	**Paruwai Farm**	**2.06**	**219**	PN	Pn	05 34 39.4	-2.1
CAW	**Cannon Point**	**2.07**	**230**	ePN	Pn	05 34 39.5	-2.0
MSWZ	**Moikau Station**	**2.18**	**221**	PN	Pn	05 34 40.3	-2.7
MRW	**Makara Radio**	**2.36**	**232**	ePN	Pn	05 34 43.3	-2.3
BHW	**Baring Head**	**2.37**	**226**	ePN	Pn	05 34 43.1	-2.7
MXZ	**Matakaoa Point**	**2.40**	**23**	ePN	Pn	05 34 45.7	-0.4
TCW	**Tory Channel**	**2.61**	**236**	PN	Pn	05 34 46.6	-2.5
TUWZ	**Tuamarina**	**2.94**	**235**	ePN	Pn	05 34 50.8	-2.7
BSWZ	**Blackbirch Sta**	**3.15**	**231**	ePN	Pn	05 34 53.4	-2.9
THZ	**Tophouse**	**3.78**	**237**	PN	Pn	05 35 02.1	-3.0

*ISCJB **20** 05:56:40.5±1.2, 144S±02×662E±02, h10km, mb4.0/13, Error ellipse: s-maj=43.9km s-min=17.4km az=83.6*
*IDC **20** 05:56:40.5±1.4, 1447S×66.13E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/21, mbtmp3.9/9, Error ellipse: s-maj=52.4km s-min=22.7km az=40.0*
*NEIC **20** 05:56:42.2±0.7, 1443S×66.15E, h10km, mb4.5/4, Error ellipse: s-maj=27.1km s-min=11.2km az=222.0*

ISC 20 05:56:42.7±1.2, 143S±02×662E±02, h10km, n21, σ0§76/18, mb4.0/13, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**61.71**	**332**	P	**P**	**06 07 02.2**	**+1.1**
	0.3nm,0.4s,mb3.8,baz=357,slow=2.5,SNR=4.7						
MKAR	**Makanchi Array**	**62.54**	**12**	P	**P**	**06 07 06.8**	**+0.2**
	1.3nm,0.8s,mb4.1,baz=205,slow=7.7,SNR=7.5						
ASAR	**Alice Springs**	**64.24**	**110**	P	**P**	**06 07 17.7**	**-0.2**
	1.0nm,0.8s,mb3.9,baz=275,slow=6.1,SNR=7.3						
WRA	**Warramunga Arr**	**65.03**	**106**	P	**P**	**06 07 23.2**	**+0.2**
	3.2nm,1.1s,mb4.3,baz=269,slow=5.9,SNR=11						
WRAB	**Tennant Creek**	**65.04**	**106**	*e*P	**P**	**06 07 23.0**	**-0.2**
	3.3nm,0.8s,mb4.4						
ZRNK	**Zerenda**	**67.05**	**2**	*e*P	**P**	**06 07 35.7**	**-0.3**
	2.0nm,1.0s,mb4.1						
BRVK	**Borovoye**	**67.20**	**3**	*e*P	**P**	**06 07 36.4**	**-0.7**
	4.4nm,1.4s,mb4.3						
CHKZ	**Chkalovo**	**67.83**	**3**	*e*P	**P**	**06 07 40.6**	**-0.4**
	3.8nm,1.2s,mb4.3						
ZAL	**Zalesovo**	**69.83**	**12**	P	**P**	**06 07 53.5**	**0.0**
	0.8nm,0.7s,mb3.8,baz=259,slow=16,SNR=4.0						
ZAL	**Zalesovo**	**69.83**	**12**	P	**P**	**06 07 53.5**	**0.0**
SONM	**Songino Array**	**71.53**	**27**	P	**P**	**06 08 05.0**	**+1.2**
	1.6nm,1.0s,mb3.9,baz=223,slow=6.1,SNR=5.7						
AKASG	**Malin Array Be**	**72.36**	**336**	P	**P**	**06 08 08.1**	**-0.7**
	0.8nm,0.7s,mb3.8,baz=142,slow=5.1,SNR=6.0						
KOLS	**Kolonicke sedl**	**73.98**	**332**	*e*P	**P**	**06 08 15.2**	**-3.2**
KOLS	**Kolonicke sedl**	**73.98**	**332**	*e*P	**P**	**06 08 15.3**	**-3.1**
KECS	**Kecovo**	**74.51**	**330**	*e*P	**P**	**06 08 16.8**	**-4.6**
VYHS	**Vyhne**	**75.31**	**330**	*e*pP	pP	06 08 26.2	-3.2
CLL	**Collm**	**80.01**	**329**	*e*P	**P**	**06 08 53.0**	**+0.7**
ESDC	**Sonseca Array**	**84.37**	**313**	P	**P**	**06 09 15.5**	**+0.4**
	1.2nm,0.7s,mb4.1,baz=104,slow=4.8,SNR=12						
MJAR	**Matsushiro Arr**	**84.57**	**50**	P	**P**	**06 09 16.2**	**0.0**
	0.8nm,0.6s,mb4.0,baz=251,slow=4.5,SNR=6.1						
PDAR	**Pinedale Array**	**151.42**	**353**	PKPbc	PKPbc	06 16 37.0	+0.2
	2.6nm,0.8s,baz=43,slow=2.5,SNR=25						
NVAR	**Mina Array Bea**	**155.67**	**9**	PKPab	PKPab	06 17 03.9	+0.8
	0.3nm,0.7s,baz=22,slow=2.9,SNR=4.1						

*NEIC **20** 06:06:12.4, 1678N×9655W, h62km, MD3.8(MEX), After MEX.*

MEX 20 06:06:12.9±0.9, 1678N×9654W, h57km±10km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.35**	**327**	*i* P	Pn	06 06 21.4	-1.7
VHO				*i* S	Sn	06 06 29.0	-1.5
OXX	**Oaxaca**	**0.35**	**329**	*i* P	Pn	06 06 22.0	-1.2
OXX				*i* S	Sn	06 06 29.5	-1.1
HUIG	**Huatulco**	**1.09**	**158**	*i* P	Pn	06 06 30.8	-1.2
HUIG				*i* S	Sn	06 06 44.3	-1.8
UTMO	**Huajuapan**	**1.60**	**311**	*i* P	Pn	06 06 38.5	-0.3
UTMO				*i* S	Sn	06 06 56.6	-1.8
CMIG	**Matias Romero**	**1.61**	**79**	*i* P	Pn	06 06 37.2	-1.8
CMIG				*i* S	Sn	06 06 56.9	-1.8
TUIG	**Tuzandepetl**	**2.37**	**58**	*i* S	Sn	06 07 17.4	+0.1

IDC 20 06:33:53.3±17.0, 2173S×17507W, h0km, mb4.6/5, mb1 4.7/5, mb1mx4.1/16, mbtmp4.6/5, MS4.0/1, Ms1 4.0/1, ms1mx3.4/25, Error ellipse: s-maj=313.8km s-min=136.3km az=81.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**17.16**	**265**	LR	LR	06 42 40.4	
	comp=Z,489nm,19.0s,baz=32,slow=31						
CTA	**Charters Tower**	**36.11**	**265**	P	P	06 40 58.7	+1.9
	8.9nm,0.3s,baz=95,slow=11,SNR=28						
STKA	**Stephens Creek**	**39.76**	**246**	P	P	06 41 26.7	-0.9
	3.3nm,0.6s,baz=71,slow=7.1,SNR=8.8						
ASAR	**Alice Springs**	**46.91**	**257**	P	P	06 42 24.9	-0.6
	2.4nm,0.4s,baz=95,slow=7.4,SNR=38						
WRA	**Warramunga Arr**	**47.15**	**263**	P	P	06 42 27.1	-0.2
	3.7nm,0.3s,baz=93,slow=8.4,SNR=46						
FITZ	**Fitzroy Crossi**	**55.58**	**262**	P	P	06 43 31.8	+1.3
	3.1nm,0.6s,baz=103,slow=8.0,SNR=9.6						

IDC 20 06:45:32.5±0.8, 1088S×6666E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/22, mbtmp3.9/8, MS4.2/1, Ms1 4.2/1, ms1mx3.7/23, Error ellipse: s-maj=31.0km s-min=21.4km az=12.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**34.80**	**347**	LR	LR	07 02 26.3	
	comp=Z,323nm,18.7s,baz=178,slow=29						
LSZ	**Lusaka**	**37.69**	**259**	P	P	06 52 50.9	+1.3
	8.2nm,1.1s,baz=84,slow=6.6,SNR=9.3						
MKAR	**Makanchi Array**	**59.09**	**12**	P	P	06 55 35.0	+0.5
	0.3nm,0.6s,baz=208,slow=8.3,SNR=2.7						
ASAR	**Alice Springs**	**64.96**	**111**	P	P	06 56 14.6	+0.6
	0.9nm,0.8s,baz=276,slow=6.2,SNR=7.1						
WRA	**Warramunga Arr**	**65.51**	**107**	P	P	06 56 18.1	+0.5
	1.1nm,0.8s,baz=278,slow=5.6,SNR=11						
SONM	**Songino Array**	**68.26**	**28**	P	P	06 56 35.5	+0.4
	1.3nm,0.9s,baz=226,slow=6.4,SNR=7.4						
AKASG	**Malin Array Be**	**69.43**	**336**	P	P	06 56 41.5	-0.9
	0.1nm,0.3s,baz=152,slow=4.9,SNR=4.6						
DBIC	**Dimbokro**	**73.28**	**280**	P	P	06 57 06.4	+0.7
	7.0nm,1.1s,baz=112,slow=10,SNR=3.2						
ESDC	**Sonseca Array**	**82.39**	**313**	P	P	06 57 55.9	-0.5
	1.7nm,1.0s,baz=100,slow=4.4,SNR=7.0						
PDAR	**Pinedale Array**	**148.06**	**355**	PKPbc	PKPbc	07 05 19.3	-0.7
	1.3nm,1.1s,baz=42,slow=2.4,SNR=8.1						
NVAR	**Mina Array Bea**	**152.20**	**8**	PKPbc	PKPbc	07 05 30.6	+0.5
	0.6nm,0.8s,baz=268,slow=1.2,SNR=5.6						
NVAR				PKPab	PKPab	07 05 42.2	+2.5
	0.6nm,0.8s,baz=276,slow=0.5,SNR=5.0						

JMA 20 07:56:21.7±0.8, 3294N×14272E, h0km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHU	**Hanno**	**4.06**	**317**	P	Pn	07 57 28.3	+3.2
JHU				*e*S	Sn	07 58 16.1	+2.7
JHO	**Hitachi**	**4.07**	**335**	P	Pn	07 57 26.7	+1.5
JHO				*e*S	Sn	07 58 15.0	+1.5
JAG	**Ashikaga**	**4.40**	**323**	P	Pn	07 57 31.6	+1.9
JAG				*e*S	Sn	07 58 23.5	+1.9
JRY	**Ryogami san**	**4.40**	**315**	P	Pn	07 57 32.7	+3.0
JRY				*e*S	Sn	07 58 25.4	+3.7
JFK	**Kawauchi**	**4.67**	**342**	S	Sn	07 58 27.3	-1.0
JMM	**Marumori**	**5.16**	**343**	P	Pn	07 57 42.1	+1.9
JMM				S	Sn	07 58 40.1	-0.3
JMK	**Ichinoseki**	**6.12**	**349**	P	Pn	07 57 55.8	+2.4
JMK				S	Sn	07 59 03.9	-0.2

NDI 20 07:58:06.6±2.4, 3168N×7137E, h10km, ML3.9, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**4.00**	**76**	*e*P	Pn	07 59 08.0	+0.1
DLH				*e*S	Sn	07 59 52.0	-2.8
SDNR	**Sundarnagar**	**4.79**	**91**	*ex*	x	07 59 56.0	
SDNR				*e*S	Sn	08 00 13.0	-1.2
SMLA	**Simla**	**4.99**	**95**	*e*P	Pn	07 59 31.9	+10
SMLA				*e*S	Sn	08 00 26.1	+6.9
	264nm,0.3s						
KLP	**Kalpa**	**5.88**	**90**	*e*P	Pn	07 59 33.0	-0.7
KLP				*e*S	Sn	08 00 36.6	-4.4
KLP				AML	AML	08 01 01.3	
	comp=E,162nm,0.3s						
KLP				AML	AML	08 01 01.5	
	comp=N,165nm,0.3s						
KOLN	**Koldanda**	**11.32**	**107**	*e*P	Pn	08 00 55.5	+7.1
	comp=N,8.1nm,0.4s						
GKN	**Gorkha**	**12.09**	**104**	*e*P	Pn	08 01 02.9	+4.0
	comp=N,9.9nm,0.3s						
DMN	**Daman**	**12.62**	**105**	*e*P	Pn	08 01 10.9	+4.8
	comp=N,9.2nm,0.4s						
KKN	**Kakani**	**12.70**	**104**	*e*P	Pn	08 01 10.4	+3.2
	comp=N,8.3nm,0.4s						
GUN	**Gumba**	**13.15**	**103**	*e*P	Pn	08 01 16.0	+2.6
JIRN	**Jiri**	**13.50**	**104**	*e*P	Pn	08 01 20.3	+2.2
	comp=N,19nm,0.5s						

IDC 20 08:01:51.4±3.8, 743S×10586E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/18, mbtmp3.5/3, Error ellipse: s-maj=187.2km s-min=28.0km az=49.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.27**	**117**	P	P	08 08 05.0	+0.9
	0.2nm,0.4s,baz=289,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**31.37**	**124**	P	P	08 08 13.8	0.0
	0.4nm,0.6s,baz=305,slow=7.7,SNR=4.5						
MKAR	**Makanchi Array**	**57.91**	**341**	P	P	08 11 45.3	0.0
	0.5nm,0.5s,baz=157,slow=7.8,SNR=7.6						

*ISCJB **20** 08:36:49.9±1.0, 7727N±005×244E±04, h10km, Error ellipse: s-maj=12.7km s-min=5.3km az=133.9*
*CSEM **20** 08:36:50.7±0.7, 7733N×2487E, h15km, ML2.4, Error ellipse: s-maj=26.4km s-min=7.9km az=59.0*
*HEL **20** 08:36:54.9±0.5, 7723N×2221E, h10km, ML3.0, MD3.1(BER), ML2.7(BER)*
*BER **20** 08:36:55.3±4.7, 7747N×2439E, h15km±23km, MD2.5, ML2.7, ML2.4(NAO)*
*NAO **20** 08:36:56.1±2.7, 7726N×2281E, h23km±16km, ML2.4*

ISC 20 08:36:51.7±1.0, 7735N±005×242E±04, h10km, n20, σ1§05/37, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPEN	**Hopen**	**0.86**	**168**	*e*P	**Pg**	**08 37 12.3**	**+3.9**
HOPEN				*e*Sg	**Sg**	**08 37 25.4**	**+5.8**
HOPEN				AML	AML	08 37 26.4	
	comp=N,1µm,0.4s						
SPA0	**Spitsbergen Ar**	**1.87**	**300**	*e*PG	**Pn**	**08 37 23.3**	**-0.4**
SPA0	**Spitsbergen Ar**	**1.87**	**300**	Pn	**Pn**	**08 37 23.3**	**-0.4**
	baz=122,slow=18						
SPA0				Pg	**Pg**	**08 37 27.1**	**-0.4**
	baz=129,slow=18						
SPA0				S	**Sn**	**08 37 48.9**	**+1.6**
	baz=116,slow=37						
SPA0	**Spitsbergen Ar**	**1.87**	**300**	Pg	**Pg**	**08 37 27.1**	**-0.4**
SPA0				S	**Sn**	**08 37 48.9**	**+1.6**
	SNR=55						
KBS	**Kingsbay**	**2.98**	**308**	Pn	**Pn**	**08 37 38.4**	**-0.7**
KBS				Sn	**Sn**	**08 38 11.1**	**-3.8**
KBS				Lg		08 38 22.7	
KBS	**Kingsbay**	**2.98**	**308**	*e*P	**Pn**	**08 37 38.4**	**-0.7**
KBS				*e*S	**Sn**	**08 38 10.8**	**-4.0**
KBS	**Kingsbay**	**2.98**	**308**	*e*P	**Pn**	**08 37 38.3**	**-0.7**
KBS				*e*		08 37 39.2	
	baz=116,slow=8.6						
KBS				*e*S	**Sn**	**08 38 12.5**	**-2.4**
KBS				AML	AML	08 38 24.9	
	comp=Z,36nm,0.3s						
KBS	**Kingsbay**	**2.98**	**308**	Pn	**Pn**	**08 37 38.4**	**-0.7**
KBS				Sn	**Sn**	**08 38 11.1**	**-3.8**
KBS				*e*S	**Sn**	**08 38 12.5**	**-2.4**
	comp=Z,36nm,0.3s,SNR=55						
BJO	**Bjornoya**	**3.11**	**206**	*e*Pg	**Pg**	**08 37 52.3**	**+0.9**
BJO				*e*Sg	**Sg**	**08 38 31.0**	**-0.6**
BJO				AML	AML	08 38 38.5	
	comp=Z,26nm,0.7s						
BJO	**Bjornoya**	**3.11**	**206**	*e*Pg	**Pg**	**08 37 52.3**	**+1.0**
	SNR=91						
BJO				*e*Sg	**Sg**	**08 38 31.0**	**-0.7**
	SNR=91						
BJO1	**Bjornoya**	**3.13**	**207**	*e*	**Pg**	**08 37 52.3**	**+0.5**
BJO1				*e*		08 38 31.0	
BJO1				AML	AML	08 38 38.5	
	comp=Z,26nm,0.7s						
KEV	**Kevo**	**7.68**	**173**	*e*P	**Pn**	**08 38 44.7**	**+1.2**
KEV				MPN		08 38 49.5	
	comp=Z,0.6nm,0.2s						
KEV				*e*S	**Sn**	**08 40 08.6**	**-1.9**
KEV	**Kevo**	**7.68**	**173**	P	**Pn**	**08 38 44.7**	**+1.2**
	comp=Z,0.6nm,0.2s						
ARA0	**ARCESS Array S**

KAKA	**Kakadu**	**8.85**	**127**	*e*P		**Pn**	**11 12 15.8**	**+0.4**
	287nm,0.8s								
FITZ	**Fitzroy Crossi**	**10.57**	**178**	P		**Pn**	**11 12 36.0**	**+0.2**
	5.0nm,0.3s,baz=14,slow=8.9,SNR=201								
FITZ	**Fitzroy Crossi**	**10.57**	**178**	*e*P		**Pn**	**11 12 35.9**	**+0.1**
	41nm,0.6s								
WRAB	**Tennant Creek**	**15.25**	**145**	*e*P		**P**	**11 13 27.8**	**-0.3**
	55nm,0.5s								
WRAB				*e*S		**S**	**11 16 10.7**	**-0.7**
WRA	**Warramunga Arr**	**15.25**	**145**	P		**P**	**11 13 28.2**	**+0.1**
	7.0nm,0.3s,baz=318,slow=13,SNR=160								
WRA				S		**S**	**11 16 12.0**	**+0.6**
	0.6nm,0.3s,baz=316,slow=22,SNR=14								
WB2	**Warramunga Arr**	**15.26**	**145**	*e*P		**P**	**11 13 27.2**	**-1.0**
AS31	**Alice Springs**	**18.15**	**153**	*e*P		**P**	**11 13 59.0**	**-0.2**
AS31				*e*P			11 13 59.3		
AS31				*e*S		**S**	**11 17 09.3**	**+1.1**
ASAR	**Alice Springs**	**18.15**	**153**	P		**P**	**11 13 59.1**	**-0.1**
	2.1nm,0.3s,baz=342,slow=15,SNR=152								
ASAR				S		**S**	**11 17 09.1**	**+0.8**
	0.2nm,0.3s,baz=348,slow=24,SNR=9.7								
NWAO	**Narrogin (SRO)**	**26.37**	**195**	P		**P**	**11 15 15.0**	**-1.0**
	2.2nm,0.3s,mb3.9,baz=30,slow=6.9,SNR=8.4								
STKA	**Stephens Creek**	**28.70**	**150**	P		**P**	**11 15 36.6**	**0.0**
	5.2nm,0.5s,mb4.0,baz=320,slow=9.3,SNR=18								
STKA				pP			11 16 44.5		
	6.5nm,0.6s,baz=311,slow=11,SNR=6.2								
STKA	**Stephens Creek**	**28.70**	**150**	*e*P		**P**	**11 15 36.6**	**+0.1**
	3.2nm,0.4s,mb3.9								
HNR	**Honiara**	**34.45**	**96**	P		**P**	**11 16 26.2**	**-0.1**
	34nm,0.3s,mb5.0,baz=95,slow=10,SNR=11								
MJAR	**Matsushiro Arr**	**45.47**	**15**	P		**P**	**11 17 56.0**	**+0.1**
	4.1nm,0.7s,mb3.7,baz=189,slow=8.6,SNR=17								
JIRN	**Jiri**	**51.39**	**314**	*e*P		**P**	**11 18 41.5**	**+1.0**
	9.0nm,0.4s,mb4.4								
GUN	**Gumba**	**51.76**	**314**	*e*P		**P**	**11 18 44.0**	**+0.8**
	36nm,0.7s,mb4.8								
PKI	**Pulchoki**	**51.89**	**314**	*e*P		**P**	**11 18 44.7**	**+0.5**
	12nm,0.4s,mb4.6								
KKN	**Kakani**	**52.11**	**314**	*e*P		**P**	**11 18 45.9**	**+0.1**
DMN	**Daman**	**52.13**	**314**	*e*P		**P**	**11 18 46.6**	**+0.6**
GKN	**Gorkha**	**52.70**	**314**	*e*P		**P**	**11 18 50.6**	**+0.5**
	22nm,0.3s,mb5.0								
KOLN	**Koldanda**	**53.31**	**313**	*e*P		**P**	**11 18 55.0**	**+0.5**
	10nm,0.3s,mb4.7								
SONM	**Songino Array**	**57.52**	**345**	P		**P**	**11 19 24.7**	**+0.5**
	0.8nm,0.5s,mb3.3,baz=160,slow=9.2,SNR=7.2								
MKAR	**Makanchi Array**	**66.09**	**329**	P		**P**	**11 20 20.8**	**0.0**
	2.2nm,0.5s,mb4.2,baz=128,slow=7.9,SNR=36								
MKAR	**Makanchi Array**	**66.09**	**329**	P		**P**	**11 20 20.8**	**0.0**
ZAL	**Zalesovo**	**69.97**	**336**	P		**P**	**11 20 43.9**	**-0.8**
	1.4nm,0.3s,mb4.1,baz=348,slow=3.6,SNR=4.7								
VNDA	**Vanda**	**72.59**	**172**	P		**P**	**11 20 59.2**	**-1.1**
	0.4nm,0.5s,mb3.4,baz=323,slow=8.6,SNR=8.3								
VNDA	**Vanda**	**72.59**	**172**	P		**P**	**11 20 59.2**	**-1.1**
MAW	**Mawson**	**72.78**	**201**	P		**P**	**11 21 01.0**	**-0.3**
	0.5nm,0.4s,mb3.6,baz=84,slow=10,SNR=2.6								
BVAR	**Borovoye Array**	**75.97**	**329**	P		**P**	**11 21 18.4**	**-1.1**
	0.7nm,0.5s,mb3.6,baz=126,slow=7.3,SNR=7.3								
CHKZ	**Chkalovo**	**76.22**	**330**	*e*P		**P**	**11 21 20.2**	**-0.7**
	2.2nm,0.9s,mb3.9								
ZRNK	**Zerenda**	**76.63**	**329**	*e*P		**P**	**11 21 22.7**	**-0.5**
	1.6nm,0.8s,mb3.8								
NVAR	**Mina Array Bea**	**115.33**	**51**	PKP		PKPdf	11 28 11.7	+1.2
	0.2nm,0.5s,baz=258,slow=3.6,SNR=4.0								
TPAW	**Teton Pass**	**119.41**	**44**	*e*PKPdf		PKPdf	11 28 19.6	+1.2
REDW	**Red Top Meadow**	**119.52**	**44**	*e*PKPdf		PKPdf	11 28 18.9	+0.3
PDAR	**Pinedale Array**	**120.61**	**44**	PKP		PKPdf	11 28 21.1	+0.3
	0.6nm,0.4s,baz=96,slow=2.4,SNR=9.9								
TORD	**Torodi Ar. Bea**	**124.19**	**281**	PKP		PKPdf	11 28 27.8	+0.2
	0.3nm,0.5s,baz=100,slow=1.6,SNR=3.8								
ULM	**Lac du Bonnet**	**125.40**	**31**	PKP		PKPdf	11 28 29.2	-0.7
	0.8nm,0.4s,baz=255,slow=2.0,SNR=4.3								
JCT	**Junction City**	**132.14**	**55**	*e*PKPdf		PKPdf	11 28 44.2	+1.5
SSPA	**Standing Stone**	**141.10**	**28**	*e*P		Pdif	11 26 17.9	-0.9
CPUP	**Villa Florida**	**146.31**	**176**	PKPbc		PKPbc	11 29 10.6	+0.4
	1.4nm,0.4s,baz=164,slow=2.9,SNR=7.5								
LPAZ	**La Paz**	**152.97**	**151**	PKPbc		PKPbc	11 29 28.8	+2.3
	0.5nm,0.4s,baz=352,slow=2.6,SNR=6.1								
LPAZ				PKPab		PKPab	11 29 41.7	+2.4
	0.2nm,0.3s,baz=185,slow=5.2,SNR=5.0								
LPAZ	**La Paz**	**152.97**	**151**	PKPbc		PKPbc	11 29 28.8	+2.3
LPAZ				PKPab		PKPab	11 29 41.7	+2.4

*ISCJB **20** 11:42:38.7±0.5,3110N±003×35.13E±005,h10km±5km, Error ellipse: s-maj=7.9km s-min=4.7km az=42.7*
*GII **20** 11:42:38.1±0.2,3111N×3514E,h0km±1km,ML2.3/8*
*HLW **20** 11:42:39.9,3118N×3508E,h14km,Mb2.9*
ISC 20 11:42:39.2±0.5,**3110N**±003×**3513E**±005,**h10**km±5km,**n23,** σ0°**51**/27,**2C-5D,Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MZDA	**Masada**	**0.29**	**44**	Pg	**Pg**	**11 42 44.4**	**-0.6**
MZDA				Sg	**Sg**	**11 42 49.7**	**+0.9**
MASH	**Mash'abbe Sade**	**0.32**	**250**	Pg	**Pg**	**11 42 45.7**	**+0.2**
AMAZ	**Amatzia**	**0.47**	**337**	Pg	**Pg**	**11 42 48.3**	**0.0**
AMAZ				Sg	**Sg**	**11 42 55.5**	**+1.1**
SVTA	**Shivta**	**0.47**	**249**	Pg	**Pg**	**11 42 48.5**	**+0.1**
DRGI	**Dragot**	**0.54**	**25**	Pg	**Pg**	**11 42 49.1**	**-0.5**
ZFRI	**Zfri**	**0.55**	**176**	Pg	**Pg**	**11 42 49.7**	**-0.2**
MKRJ	**Makawir**	**0.63**	**44**	Pg	**Pg**	**11 42 51.5**	**+0.1**
KZIT	**Kziot**	**0.66**	**253**	Pg	**Pg**	**11 42 51.7**	**-0.3**
PRNI	**Paran**	**0.76**	**188**	Pg	**Pg**	**11 42 54.0**	**+0.2**
HRFI	**Mount Harif**	**1.07**	**184**	Pg	**Pg**	**11 42 59.4**	**-0.3**
SLTI	**Sal'it**	**1.14**	**356**	Pg	**Pg**	**11 43 00.5**	**-0.5**
HMDT	**Nahal Hemdat**	**1.20**	**16**	Pg	**Pg**	**11 43 01.2**	**-0.9**
HMDT	**Nahal Hemdat**	**1.20**	**16**	Pg	**Pg**	**11 43 01.2**	**-1.0**
MBH	**Mount Berech**	**1.32**	**188**	Pn	**Pn**	**11 43 03.6**	**-0.1**
MMLI	**Mount Malkishu**	**1.35**	**10**	Pn	**Pn**	**11 43 03.8**	**-0.3**
OFRI	**'Ofer**	**1.52**	**355**	Pn	**Pn**	**11 43 06.8**	**+0.4**
HNKL	**Nakhl**	**1.53**	**221**	⇓P	**Pn**	**11 43 06.6**	**0.0**
HNKL				S	**Sn**	**11 43 26.2**	**-0.4**
AMAG	**Maghara**	**1.71**	**255**	⇑P	**Pn**	**11 43 08.5**	**-0.6**
HBST	**Basata**	**1.91**	**190**	⇓P	**Pn**	**11 43 12.8**	**+1.0**
SUZ		**2.35**	**238**	⇓P	**Pn**	**11 43 17.4**	**-0.4**
HDHB	**Dhahab**	**2.41**	**191**	⇑P	**Pn**	**11 43 19.1**	**+0.4**
HKAT	**Jabal Katrina**	**2.75**	**201**	⇓P	**Pn**	**11 43 23.9**	**+0.5**
HKAT				S	**Sn**	**11 43 56.5**	**-0.2**
TR2		**2.97**	**205**	⇓P	**Pn**	**11 43 27.0**	**+0.6**

*ISCJB **20** 11:45:33.5±2.1,363N±0.1×708E±02,h222km±44km, Error ellipse: s-maj=29.4km s-min=9.0km az=113.0*
*NNC **20** 11:45:36.3±20.0,3662N×7002E,h77km±517km,mb3.6, mpv3.7, Error ellipse: s-maj=159.5km s-min=137.9km az=165.0*
ISC 20 11:45:33.3±2.9,**362N**±02×**709E**±02,**h157**km±61km,**n15,** σ0°**68**/19,**2C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.32**	**20**	P	**Pn**	**11 47 04.7**	**+0.4**
	SNR=38						
UCH	**Uchtor**	**6.65**	**24**	P	**Sn**	**11 48 22.0**	**-1.5**
	SNR=8.4						
EKS2	**Erkin-Say**	**6.83**	**18**	P	**Pn**	**11 47 11.7**	**+0.6**
	SNR=16						
KK31	**Karatay Array**	**6.90**	**358**	⇓P	**Pn**	**11 47 10.9**	**-1.0**
	5.2nm,0.5s,baz=210,slow=60,SNR=64						
KK31				S	**Sn**	**11 48 24.2**	**-5.2**
	33nm,0.8s,baz=211,slow=100,SNR=8.0						
SDNR	**Sundarnagar**	**6.92**	**131**	*e*P	**Pn**	**11 47 24.0**	**+12**
SDNR				*e*S	**Sn**	**11 48 25.0**	**-4.9**
CHMS	**Chumysh**	**7.42**	**23**	P	**Pn**	**11 47 19.7**	**+0.8**
	SNR=11						
USP	**Ospenovka**	**7.59**	**21**	P	**Pn**	**11 47 21.1**	**-0.1**
	SNR=7.1						
TKM2	**Tokmak 2**	**7.64**	**27**	P	**Pn**	**11 47 23.1**	**+1.3**
	SNR=14						
TKM2	**Tokmak 2**	**7.64**	**27**	⇑P	**Pn**	**11 47 22.7**	**+0.9**
	1.8nm,0.8s						
TKM2				⇑S	**Sn**	**11 48 47.5**	**+0.3**
	2.8nm,0.9s						
KOLN	**Koldanda**	**13.69**	**124**	*e*P	**Pn**	**11 48 40.2**	**-0.7**
GKN	**Gorkha**	**14.24**	**121**	*e*P	**Pn**	**11 48 47.9**	**0.0**
DMN	**Daman**	**14.81**	**121**	*e*P	**Pn**	**11 48 54.8**	**-0.2**
PKI	**Pulchoki**	**15.05**	**121**	*e*P	**Pn**	**11 48 58.3**	**+0.4**
AB31	**Akbulak array**	**15.29**	**332**	P	**Pn**	**11 49 00.7**	**-0.2**
	1.6nm,0.5s,baz=160,slow=12,SNR=26						
AB31				S	**S**	**11 51 38.8**	**-12**
	2.3nm,0.8s,baz=149,slow=22,SNR=6.2						
JIRN	**Jiri**	**15.54**	**119**	*e*P	**Pn**	**11 49 03.9**	**-0.1**

*ISCJB **20** 11:49:47.5±5.4,2163S×0.10E×178.1W±02,h306km±53km, mb3.6/8, Error ellipse: s-maj=25.2km s-min=15.4km az=14.5*
*IDC **20** 11:49:57.6±6.8,2184S×17807W,h404km±74km,mb3.3/7, mb1 3.5/8,mb1mx3.4/14,mbtmp4.1/8, Error ellipse: s-maj=34.7km s-min=24.5km az=177.0*
*NEIC **20** 11:49:57.0±5.1,2186S×17804W,h400km±55km,mb3.6/2, Error ellipse: s-maj=35.7km s-min=15.8km az=182.0*
ISC 20 11:49:54.2±4.6,**218S**±01×**1780W**±02,**h363**km±48km,**n16,** σ0°**40**/13,**mb3.5**/8,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**16.94**	**193**	P	**P**	**11 53 28.9**	**-0.2**
	1.3nm,0.3s,baz=18,slow=6.4,SNR=8.2						
URZ				S	**S**	**11 56 27.2**	**-0.1**
	0.3nm,0.3s,baz=28,slow=17,SNR=3.8						
CTA	**Charters Tower**	**33.35**	**266**	P	**P**	**11 56 00.1**	**+0.5**
	3.2nm,0.5s,mb3.8,baz=90,slow=7.1,SNR=4.6						
STKA	**Stephens Creek**	**37.22**	**246**	P	**P**	**11 56 32.0**	**-0.1**
	2.8nm,0.8s,mb3.6,baz=66,slow=8.1,SNR=6.3						
STKA	**Stephens Creek**	**37.22**	**246**	*e*P	**P**	**11 56 32.7**	**+0.5**
	1.4nm,0.5s,mb3.5						
AS31	**Alice Springs**	**44.21**	**258**	*e*P	**P**	**11 57 28.9**	**+0.2**
ASAR	**Alice Springs**	**44.21**	**258**	P	**P**	**11 57 29.1**	**+0.4**
	1.1nm,0.4s,mb3.3,baz=91,slow=8.5,SNR=43						
WB2	**Warramunga Arr**	**44.40**	**263**	*e*P	**P**	**11 57 29.9**	**-0.2**
WRA	**Warramunga Arr**	**44.41**	**263**	P	**P**	**11 57 29.9**	**-0.3**
	0.9nm,0.4s,mb3.3,baz=96,slow=7.6,SNR=53						
FITZ	**Fitzroy Crossi**	**52.84**	**263**	*e*P	**P**	**11 58 33.7**	**0.0**
	5.0nm,1.5s,mb3.6						
MJAR	**Matsushiro Arr**	**71.22**	**324**	P	**P**	**12 00 33.7**	**-1.0**
	0.6nm,0.5s,mb3.5,baz=155,slow=5.3,SNR=4.6						
NVAR	**Mina Array Bea**	**81.98**	**43**	P	**P**	**12 01 34.5**	**+0.2**
	0.5nm,0.7s,mb3.5,baz=217,slow=5.7,SNR=6.5						
PDAR	**Pinedale Array**	**89.92**	**43**	P	**P**	**12 02 13.2**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=222,slow=4.5,SNR=6.2						
ARCES	**ARCESS Array B**	**130.17**	**349**	PKP	PKPdf	12 08 18.9	-2.6
	2.6nm,0.9s,baz=24,slow=1.5,SNR=8.4						
NOA	**NORSAR Array B**	**140.25**	**353**	PKP	PKPdf	12 08 39.3	-0.9
	0.5nm,0.9s,baz=15,slow=4.8,SNR=2.2						
AKASG	**Malin Array Be**	**144.11**	**330**	PKP	PKPdf	12 08 44.0	-3.1
	0.6nm,0.4s,baz=41,slow=4.1,SNR=6.5						
AKASG	**Malin Array Be**	**144.11**	**330**	PKP	PKPdf	12 08 44.0	-3.1

IDC 20 11:56:04.2±1.9,**3284N×3949W,h0**km,**mb3.7**/6, **mb1 3.8**/6,**mb1mx3.6**/25,**mbtmp3.7**/6,**Error ellipse: s-maj=56.3km s-min=30.6km az=17.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**42.34**	**108**	P	P	12 03 59.8	-0.1
	1.7nm,0.9s,baz=296,slow=7.0,SNR=7.3						
FINES	**FINESS Array B**	**50.16**	**35**	P	P	12 05 00.4	-1.0
	1.2nm,0.9s,baz=230,slow=4.7,SNR=4.5						
AKASG	**Malin Array Be**	**52.34**	**48**	P	P	12 05 17.5	-0.3
	0.2nm,0.3s,baz=280,slow=6.2,SNR=5.5						
PDAR	**Pinedale Array**	**54.80**	**302**	P	P	12 05 36.1	+0.3
	0.4nm,0.8s,baz=79,slow=4.7,SNR=4.9						
BRTR	**Keskin Array B**	**57.86**	**61**	P	P	12 05 58.8	+1.1
	0.3nm,0.4s,baz=240,slow=5.0,SNR=3.6						
MKAR	**Makanchi Array**	**84.98**	**36**	P	P	12 08 41.7	+0.3
	0.8nm,0.8s,baz=328,slow=4.3,SNR=3.9						

*ISCJB **20** 12:00:01.2±0.9,326N±02×400W±02,h10km,mb3.8/9, Error ellipse: s-maj=23.5km s-min=19.4km az=124.6*
*IDC **20** 12:00:01.5±1.0,3261N×4007W,h0km,mb3.8/9,mb1 3.9/9, mb1mx3.7/26,mbtmp3.8/9, Error ellipse: s-maj=32.6km s-min=22.8km az=145.0*
*NEIC **20** 12:00:02.9±0.6,3254N×4000W,h10km, Error ellipse: s-maj=17.8km s-min=14.7km az=151.0*
ISC 20 12:00:03.4±0.9,**326N**±02×**400W**±02,**h10**km,**n11,** σ0°**56**/11, **mb3.8**/9,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOA0	**Torodi Ar. Sit**	**42.68**	**107**	*e*P	**P**	**12 07 59.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**42.68**	**107**	P	**P**	**12 08 00.8**	**+0.5**
	2.1nm,0.9s,mb3.9,baz=295,slow=6.4,SNR=9.3						
GERES	**GERESS Array B**	**42.86**	**51**	P	**P**	**12 08 01.9**	**+0.1**
	0.5nm,0.6s,mb3.4,baz=269,slow=12,SNR=3.4						
HFS	**Hagfors**	**44.38**	**35**	P	**P**	**12 08 14.2**	**+0.3**
	1.7nm,1.0s,mb3.7,baz=223,slow=9.9,SNR=3.7						
FINES	**FINESS Array B**	**50.57**	**35**	P	**P**	**12 09 01.5**	**-0.6**
	0.9nm,0.7s,mb3.8,baz=270,slow=5.7,SNR=5.2						
FINES	**FINESS Array B**	**50.57**	**35**	P	**P**	**12 09 01.5**	**-0.6**
AKASG	**Malin Array Be**	**52.80**	**48**	P	**P**	**12 09 18.1**	**-0.7**
	0.5nm,0.4s,mb3.8,baz=275,slow=6.4,SNR=7.4						
PDAR	**Pinedale Array**	**54.55**	**302**	P	**P**	**12 09 31.4**	**-0.2**
	0.6nm,0.9s,mb3.6,baz=93,slow=8.9,SNR=5.0						
LPAZ	**La Paz**	**55.60**	**213**	P	**P**	**12 09 39.3**	**+0.1**
	1.0nm,0.6s,mb4.0,baz=42,slow=4.5,SNR=6.5						
BRTR	**Keskin Array B**	**58.33**	**60**	P	**P**	**12 09 59.4**	**+0.9**
	0.9nm,0.9s,mb3.8,baz=306,slow=5.2,SNR=4.3						
MKAR	**Makanchi Array**	**85.39**	**36**	P	**P**	**12 12 41.4**	**+0.5**
	1.3nm,0.9s,mb4.1,baz=304,slow=5.2,SNR=9.9						

*HLW **20** 12:02:20.5,3192N×3599E,h10km,Mb3.0*
*GII **20** 12:02:33.8±4.8,3111N×3514E,h0km±30km,ML2.1/1*
*ISCJB **20** 12:02:34.2±0.7,3108N±005×35.15E±009,h10km±7km, Error ellipse: s-maj=14.1km s-min=6.6km az=62.4*
ISC 20 12:02:34.5±0.7,**3108N**±005×**3515E**±008,**h10**km±6km,**n15,** σ0°**60**/17,**4C-2D,Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MZDA	**Masada**	**0.30**	**39**	Pg	**Pg**	**12 02 40.0**	**-0.5**
MASH	**Mash'abbe Sade**	**0.32**	**255**	Pg	**Pg**	**12 02 41.2**	**+0.3**
SVTA	**Shivta**	**0.48**	**252**	Pg	**Pg**	**12 02 44.0**	**+0.2**
DRGI	**Dragot**	**0.56**	**22**	Pg	**Pg**	**12 02 45.1**	**-0.1**
MKRJ	**Makawir**	**0.63**	**42**	Pg	**Pg**	**12 02 47.1**	**+0.3**
PRNI	**Paran**	**0.73**	**190**	Pg	**Pg**	**12 02 49.2**	**+0.6**
PRNI				Sg	**Sg**	**12 03 03.5**	**+5.2**
HMDT	**Nahal Hemdat**	**1.22**	**15**	Pg	**Pn**	**12 02 56.7**	**-0.9**
MBH	**Mount Berech**	**1.30**	**189**	Pn	**Pn**	**12 02 59.4**	**+0.7**
HNKL	**Nakhl**	**1.52**	**222**	⇓P	**Pn**	**12 03 02.2**	**+0.4**
OFRI	**'Ofer**	**1.54**	**355**	Pn	**Pn**	**12 03 02.9**	**+0.8**
AMAG	**Maghara**	**1.72**	**256**	⇑P	**Pn**	**12 03 03.4**	**-1.2**
HBST	**Basata**	**1.89**	**191**	⇑P	**Pn**	**12 03 06.3**	**-0.5**
SUZ		**2.35**	**239**	⇑P	**Pn**	**12 03 13.3**	**+0.2**
HKAT	**Jabal Katrina**	**2.74**	**202**	⇑P	**Pn**	**12 03 18.8**	**+0.3**
HKAT				S	**Sg**	**12 04 01.4**	**-1.0**
TR2		**2.96**	**205**	⇓P	**Pn**	**12 03 21.6**	**+0.1**

*ISCJB **20** 12:09:03.1±0.5,326N±0.1×3998W±009,h10km,mb4.2/28, MS3.7/9, Error ellipse: s-maj=17.0km s-min=9.4km az=137.9*
*IDC **20** 12:09:03.3±1.0,3263N×3992W,h0km,mb3.9/11, mb1 4.1/11,mb1mx3.9/26,mbtmp3.9/11,MS3.7/7, Ms1 3.7/7,ms1mx3.3/22, Error ellipse: s-maj=29.9km s-min=20.3km az=164.0*
*NEIC **20** 12:09:04.9±0.4,3253N×3997W,h10km,mb4.4/17, Error ellipse: s-maj=11.8km s-min=6.5km az=159.0*
*CSEM **20** 12:09:06.4±0.1,3257N×3998W,h33km,mb4.4/17,Ms3.3, Error ellipse: s-maj=4.2km s-min=2.4km az=158.0*
ISC 20 12:09:05.2±0.5,**326N**±01×**3996W**±009,**h10**km,**n59,** σ0°**67**/55,**mb4.2**/28,**MS3.7**/9,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**29.66**	**80**	LR	LR	12 24 23.9	
	comp=Z,231nm,19.8s,MS3.8,baz=61,slow=31						
PCRV	**Puerto La Cruz**	**31.87**	**231**	LR	LR	12 24 31.1	
	comp=Z,46nm,21.3s,MS3.1,baz=40,slow=29						
SJPF	**Ste Jean**	**32.09**	**60**	*e*P	**P**	**12 15 32.9**	**+0.5**
	21nm,1.1s,mb4.6						
SJPF	**Ste Jean**	**32.09**	**60**	*e*P	**P**	**12 15 32.9**	**+0.5**
	10nm,1.1s,mb4.6						
ETSF	**Etsaut**	**32.55**	**60**	*e*P	**P**	**12 15 37.3**	**+0.9**
	23nm,1.3s,mb4.6						
ETSF	**Etsaut**	**32.55**	**60**	*e*P	**P**	**12 15 37.3**	**+0.9**
	12nm,1.3s,mb4.6						
EPF	**Esparros**	**33.22**	**60**	*e*P	**P**	**12 15 42.5**	**+0.2**
LFF	**La Frestale**	**33.70**	**57**	*e*P	**P**	**12 15 47.5**	**+1.0**
	13nm,0.9s,mb4.5						
LFF	**La Frestale**	**33.70**	**57**	*e*P	**P**	**12 15 47.5**	**+1.0**
	6.6nm,0.9s,mb4.5						
MTLF	**Montolieu**	**34.61**	**60**	*e*P	**P**	**12 15 54.5**	**+0.1**
	14nm,1.0s,mb4.5						
MTLF	**Montolieu**	**34.61**	**60**	*e*P	**P**	**12 15 54.5**	**+0.1**
	6.8nm,1.0s,mb4.5						
CAF	**Calviac**	**34.64**	**57**	*e*P	**P**	**12 15 55.6**	**+1.0**
	12nm,1.0s,mb4.5						
CAF	**Calviac**	**34.64**	**57**	*e*P	**P**	**12 15 55.6**	**+1.0**
	6.1nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**34.90**	**54**	*e*P	**P**	**12 15 57.2**	**+0.3**
	26nm,1.1s,mb4.8						
TCF	**Toulx Ste Croi**	**34.90**	**54**	*e*P	**P**	**12 15 57.2**	**+0.3**
	13nm,1.1s,mb4.8						
BGF	**Bois d'Agland**	**35.38**	**54**	*e*P	**P**	**12 16 01.6**	**+0.6**
	9.3nm,0.8s,mb4.5						
BGF	**Bois d'Agland**	**35.38**	**54**	*e*P	**P**	**12 16 01.6**	**+0.6**
	4.7nm,0.8s,mb4.5						
SSF	**Saint Saulge**	**35.90**	**53**	*e*P	**P**	**12 16 05.4**	**0.0**
SMF	**Signal de Mont**	**36.07**	**54**	*e*P	**P**	**12 16 07.2**	**+0.3**
	13nm,1.0s,mb4.5						
SMF	**Signal de Mont**	**36.07**	**54**	*e*P	**P**	**12 16 07.2**	**+0.3**
	6.6nm,1.0s,mb4.5						
LOR	**Lormes**	**36.16**	**53**	*e*P	**P**	**12 16 07.7**	**0.0**
	5.7nm,0.7s,mb4.3						
LOR				*e*R			
	137nm,22.2s						
LOR	**Lormes**	**36.16**	**53**	*e*P	**P**	**12 16 07.7**	**0.0**
	2.8nm,0.7s,mb4.3						
LOR				LR	LR		
	comp=Z,140nm,22.3s,MS3.7						
BAIF	**Baives**	**36.85**	**48**	*e*P	**P**	**12 16 13.4**	**-0.2**
	comp=Z,5.8nm,0.9s,mb4.1						
BAIF	**Baives**	**36.85**	**48**	*e*P	**P**	**12 16 13.4**	**-0.2**
	comp=Z,2.9nm,0.9s,mb4.1						
MEZF	**Maizieres J'vi**	**37.13**	**51**	*e*P	**P**	**12 16 16.0**	**0.0**
	comp=Z,18nm,1.0s,mb4.5						
MEZF	**Maizieres J'vi**	**37.13**	**51**	*e*P	**P**	**12 16 16.0**	**0.0**
	comp=Z,8.8nm,1.0s,mb4.5						
CABF	**La Chapelle**	**37.60**	**54**	*e*P	**P**	**12 16 20.6**	**+0.6**
	comp=Z,8.5nm,0.9s,mb4.2						
CABF	**La Chapelle**	**37.60**	**54**	*e*P	**P**	**12 16 20.6**	**+0.6**
	comp=Z,4.2nm,0.9s,mb4.2						
HAU	**Haudompre**	**37.92**	**52**	*e*P	**P**	**12 16 22.4**	**-0.3**
HAU				*e*R			
	comp=Z,125nm,23.0s						
HAU	**Haudompre**	**37.92**	**52**	*e*P	**P**	**12 16 22.4**	**-0.3**
HAU				LR	LR		
	comp=Z,120nm,23.0s,MS3.6						
MBDF	**Montbardon**	**37.96**	**58**	*e*P	**P**	**12 16 23.3**	**+0.3**
	comp=Z,11nm,1.1s,mb4.2						
MBDF	**Montbardon**	**37.96**	**58**	*e*P	**P**	**12 16 23.3**	**+0.3**
	comp=Z,5.4nm,1.1s,mb4.2						
HINF	**Hinteralfeld**	**38.24**	**53**	*e*P	**P**	**12 16 25.2**	**-0.2**
CDF	**Champ du Feu**	**38.59**	**52**	*e*P	**P**	**12 16 28.3**	**0.0**
	comp=Z,8.2nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**38.59**	**52**	*e*P	**P**	**12 16 28.3**	**0.0**
	comp=Z,4.1nm,0.9s,mb4.2						
DBIC	**Dimbokro**	**41.60**	**121**	LR	LR	12 31 10.8	
	comp=Z,110nm,20.2s,MS3.7,baz=215,slow=32						
CLL	**Collm**	**42.57**	**48**	*e*P	**P**	**12 17 00.0**	**-1.2**
TOA0	**Torodi Ar. Sit**	**42.65**	**107**	*e*

MAN 20 12:26:05.3, 985N×12651E, h1km, mb2.5, ML4.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.00**	**266**	*eP*	Pg	12 26 23.6	-0.9
SCPH				*eS*	Sg	12 26 33.9	-3.7
BUTP	**Butuan**	**1.24**	**225**	*eP*	Pg	12 26 28.9	-0.2
MSLP	**Maasin**	**1.65**	**280**	*eP*	Pn	12 26 35.4	+0.1
BESP	**Borongan**	**2.03**	**329**	*eP*	Pn	12 26 40.9	+0.3

*MOS **20** 13:06:07.8±0.3, 5304N×15581E, h460km, mb4.1/1, Error ellipse: s-maj=99.9km s-min=56.0km az=138.8*

KRSC 20 13:06:08, 5307N×15592E, h444km, ML4.2, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**0.94**	**147**	P	P	13 07 05.1	+1.7
GNL	**Ganaly**	**1.36**	**62**	*i* P	P	13 07 06.4	+1.5
PET	**Petropavlovsk**	**1.65**	**91**	PN	P	13 07 08.5	+2.4
PET	**Petropavlovsk**	**1.65**	**91**	*eP*	P	13 07 08.5	+2.4
RUS	**Russkaya**	**1.70**	**111**	PN	P	13 07 08.4	+2.0
RUS				S	S	13 07 52.6	-1.1
RUS	**Russkaya**	**1.70**	**111**	*i* P	P	13 07 08.4	+2.0
RUS				S	S	13 07 52.6	-1.1
SDLR	**Sedlovina**	**1.80**	**82**	P	P	13 07 10.0	+3.2
NLC	**Nalytchevo**	**2.07**	**86**	S	S	13 07 57.0	-0.2
SPN	**Mys Shipunski**	**2.48**	**88**	PN	P	13 07 12.9	+2.1
SPN				S	S	13 07 59.9	-1.9
SPN	**Mys Shipunski**	**2.48**	**88**	*i* P	P	13 07 12.9	+2.1
SPN				*eS*	S	13 07 59.9	-1.9
MKZ	**Mys Kozlova**	**3.75**	**64**	PN	P	13 07 23.0	+2.4
MKZ	**Mys Kozlova**	**3.75**	**64**	*i* P	P	13 07 23.0	+2.4
MKZ				*eS*	S	13 08 16.4	-3.2
KBTR	**Krutoberegovo**	**5.09**	**49**	PN	P	13 07 34.8	+1.9
KBTR	**Krutoberegovo**	**5.09**	**49**	*eP*	P	13 07 34.8	+1.9

*SZGRF **20** 13:34:33.9, 6376S×3895W, h33km, mb5.4, Southwestern Atlantic Ocean*
*ISCJB **20** 13:34:57.4±0.2, 6088S±004×3403W±009, h10km, mb5.2/34, MS5.5/158, Error ellipse: s-maj=6.8km s-min=5.2km az=95.1*
*IDC **20** 13:34:58.4±0.4, 6086S×3406W, h0km, mb5.0/22, mb1 5.1/25, mb1mx5.1/26, mbtmp5.1/25, ML5.1/3, MS5.4/27, Ms1 5.4/27, ms1mx5.3/30, Error ellipse: s-maj=14.7km s-min=8.8km az=16.0*
*NEIC **20** 13:34:60.0±0.2, 6091S×3406W, h10km, mb5.5/24, MS5.5/123, MW5.9, Error ellipse: s-maj=9.4km s-min=6.8km az=225.0, Moment Tensor Solution. s8 Moment tensor: Scale 10^{17}Nm; M_{rr}0.36; $M_{\theta\theta}$0.67; $M_{\phi\phi}$-1.03; $M_{r\theta}$0.17; $M_{\theta\phi}$8.86; $M_{\phi r}$0.97; Best double couple: $M_0$9.00000×10^{17} NP1:ϕ_s3.00000°, δ89.00000°, λ174.00000°. NP2:ϕ_s93.00000°, δ84.00000°, λ1.00000°. Principal axes: T 8.7900, Plg5.0000°, Azm318.0000°; N 0.3300, Plg84.0000°, Azm172.0000°; P -9.1200, Plg4.0000°, Azm48.0000°;*
*MOS **20** 13:34:59.6±1.8, 6099S×3423W, h10km, mb5.3/34, MS5.4/26 Error ellipse: s-maj=25.1km s-min=10.1km az=104.0*
*BJI **20** 13:34:59.9, 6090S×34.10W, h10km, mB5.7, Ms5.7, Msz5.6*
*HRVD **20** 13:35:00.0±0.1, 61.12S×34.10W, h12km, MW5.8/99, Centroid moment Tensor Solution. LP body waves: s96,c209; Mantle waves: s99,c268; Half duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.09±.06; $M_{\theta\theta}$-2.86±.06; $M_{\phi\phi}$2.95±.06; $M_{r\theta}$0.01±.15; $M_{\theta\phi}$6.69±.05; $M_{\phi r}$0.69±.15; Best double couple: $M_0$7.32600×10^{17} NP1:ϕ_s78.00000°, δ85.00000°, λ1.00000°. NP2: ϕ_s348.00000°, δ89.00000°, λ175.00000°. Principal axes: T 7.3850, Plg4.0000°, Azm303.0000°; N -0.1140, Plg85.0000°, Azm157.0000°; P -7.2680, Plg3.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 20 13:34:57.6±2.2, 6090S±004×3398W±008, h2km±13km, n518, σ1§07/98, mb5.2/34, MS5.5/158, 73C-65D, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point** 5μm,0.9s	**6.77**	**347**	Pn	**Pn**	**13 36 39.1**	**+1.1**
HOPE	**Hope Point** 1μm,1.0s	**6.77**	**347**	*e*P	**Pn**	**13 36 38.5**	**+0.5**
HOPE				*eS*	**Sn**	**13 37 52.7**	**-2.9**
PMSA	**Palmer Station** 20nm,0.3s,baz=85,slow=14,SNR=35	**14.19**	**241**	Pn	**Pn**	**13 38 20.0**	**+0.5**
PMSA	0.9nm,0.3s,baz=72,slow=6.5,SNR=2.7			Sn	**Sn**	**13 40 58.2**	**+0.7**
PMSA	**Palmer Station** 178nm,0.7s	**14.19**	**241**	*eP*	**Pn**	**13 38 19.7**	**+0.2**
VNA1	**Neumayer--Stat**	**14.24**	**144**	*e*Pn	**Pn**	**13 38 16.0**	**-4.2**
VNA1				*e*		13 38 16.4	
VNA1				*e*		13 38 18.1	
VNA1				*e*		13 38 23.2	
VNA1				*e*		13 38 30.0	
VNA1				*e*		13 38 32.6	
VNA1				*e*		13 38 39.4	
VNA1				*e*		13 38 43.2	
VNA1				*e*		13 39 05.2	
VNA1				*e*		13 39 21.3	
VNA1				*e*		13 40 49.8	
VNA1				*e*		13 40 54.4	
VNA1				*e*		13 40 56.1	
VNA1				*e*		13 40 58.4	
EFI	**East Falkland** 7μm,1.0s	**16.16**	**294**	Pn	**Pn**	**13 38 46.0**	**+0.2**
EFI	**East Falkland**	**16.16**	**294**	*e*P	**Pn**	**13 38 45.3**	**-0.5**
EFI	comp=Z,888nm,0.8s			pmax	pmax		
EFI	**East Falkland** comp=Z,888nm,0.8s	**16.16**	**294**	*e*P	**Pn**	**13 38 45.3**	**-0.5**
SNAA	**Sanae** comp=Z,1.9nm,0.3s,baz=304,slow=10,SNR=44	**16.27**	**144**	Pn	**Pn**	**13 38 47.8**	**+0.5**
SNAA	comp=Z,0.4nm,0.3s,baz=275,slow=20,SNR=2.2			Sn	**Sn**	**13 41 53.5**	**+5.2**
SNAA	comp=Z,8μm,18.6s,baz=311,slow=32			LR	LR	13 43 48.5	
SNAA	**Sanae**	**16.27**	**144**	*e*Pn	**Pn**	**13 38 44.8**	**-2.5**
SNAA				*e*		13 38 47.5	
SNAA				*e*		13 38 48.2	
SNAA				*e*		13 38 53.4	
SNAA				*e*		13 38 54.7	
SNAA				*e*		13 38 59.0	
SNAA				*e*		13 39 04.9	
SNAA				*e*		13 41 39.1	
SNAA				*e*		13 41 42.1	
SNAA				*e*		13 41 44.0	
SNAA				*e*		13 41 46.0	
SNAA	**Sanae**	**16.27**	**144**	P	**Pn**	**13 38 47.8**	**+0.5**
SNAA						13 41 53.5	
SNAA	comp=Z,2.0nm,0.3s			pmax	pmax		
SNAA	comp=Z,8μm,18.7s			MLR	MLR		
USHA	**Ushuaia** comp=Z,1.3nm,0.3s,baz=98,slow=14,SNR=16	**19.14**	**273**	P	**Pn**	**13 39 23.0**	**+0.2**
USHA	comp=Z,0.1nm,0.3s,baz=119,slow=5.4,SNR=2.6			S	**Sn**	**13 42 58.8**	**+1.2**
USHA	comp=Z,31μm,20.6s,baz=99,slow=31			LR	LR	13 44 52.5	
MAIT	**Maitri**	**20.58**	**138**	*e*P	**P**	**13 39 37.8**	**+0.1**
NVL	**N'lazarevskaya**	**20.61**	**138**	*c i*P	**P**	**13 39 37.9**	**-0.2**
NVL				*i* S	**S**	**13 43 30.5**	**+1.4**
NVL				*i* SS		13 43 53.1	
NVL				*i* SSS		13 44 14.7	
NVL	comp=Z,819nm,2.2s			pmax	pmax		
NVL	comp=N,128nm,2.3s			pmax	pmax		
NVL	comp=E,764nm,2.3s			pmax	pmax		
NVL	comp=Z,31μm,24.1s,MS5.6			MLR	MLR		
TRIS	**Tristan da Cun**	**27.50**	**40**	PFAKE			13 41 00.0 +15
TRIS	comp=Z,6μm,19.0s,MS5.2			LR	LR		
TRQA	**Tornquist** comp=Z,63nm,0.5s,mb5.6	**28.81**	**310**	*e*P	**P**	**13 40 56.5**	**-0.5**
TRQA	comp=Z,7μm,20.0s,MS5.2			LR	LR		
QSPA	**South Pole Qui** comp=Z,225nm,1.2s,mb5.8	**29.34**	**180**	*e*P	**P**	**13 41 02.6**	**+0.9**
PLCA	**Paso Flores** comp=Z,12nm,0.8s,mb4.7,baz=140,slow=7.0,SNR=30	**30.07**	**295**	P	**P**	**13 41 07.4**	**-0.9**
PLCA	comp=Z,6.4nm,1.2s,baz=52,slow=12,SNR=2.0			S	**S**	**13 46 09.0**	**+1.6**
PLCA	comp=Z,9μm,20.8s,MS5.4,baz=150,slow=35			LR	LR	13 52 15.7	
PLCA	**Paso Flores**	**30.07**	**295**	P	**P**	**13 41 07.4**	**-0.8**
PLCA				S	**S**	**13 46 09.0**	**+1.6**
PLCA	comp=Z,13nm,0.8s			pmax	pmax		
PLCA	comp=N,6.0nm,1.2s			smax			
PLCA	comp=Z,9μm,20.8s			MLR	MLR		
PLCA	**Paso Flores** comp=Z,206nm,2.0s,mb5.5	**30.07**	**295**	*e*P	**P**	**13 41 06.6**	**-1.6**
PLCA	comp=Z,9nm,21.0s,MS5.4			LR	LR		
LPA	**La Plata**	**30.22**	**318**	*ce*P	**P**	**13 41 08.0**	**-1.5**
LPA	comp=Z,6μm,20.0s						
SYO	**Syowa Base**	**30.28**	**137**	‖e P	**P**	**13 41 09.0**	**-1.1**
CCHI	**Chillan**	**34.16**	**298**	*e*P	**P**	**13 41 42.1**	**-2.0**
MDZ	**Mendoza**	**36.02**	**305**	*e*P	**P**	**13 41 55.6**	**-4.5**
FCH	**Farellones**	**36.21**	**303**	⇑*i*P	**P**	**13 42 03.6**	**+1.8**
CLCH	**Cerro Calan**	**36.25**	**303**	⇑*i*P	**P**	**13 42 03.4**	**+1.3**
CFAA	**Coronel Fontan** comp=Z,4.6nm,0.7s,mb4.4,baz=156,slow=8.3,SNR=51	**36.90**	**307**	P	**P**	**13 42 06.6**	**-1.1**
CFAA	comp=Z,0.9nm,0.7s,baz=82,slow=7.1,SNR=3.0			PcP	PcP	13 44 31.4	+2.1
CFAA	comp=Z,514nm,18.1s,MS4.4,baz=155,slow=36			LR	LR	13 57 17.6	
CFAA	**Coronel Fontan**	**36.90**	**307**	P	**P**	**13 42 06.6**	**-1.1**
CFAA				PcP	PcP	13 44 31.4	+2.1
CFAA				LR	LR	13 57 17.6	
CPUP	**Villa Florida** comp=Z,54nm,0.7s,mb5.4,baz=147,slow=7.6,SNR=64	**38.04**	**325**	P	**P**	**13 42 17.2**	**-0.1**
CPUP	comp=Z,4μm,18.9s,MS5.3,baz=148,slow=35			LR	LR	13 57 02.4	
CPUP	**Villa Florida**	**38.04**	**325**	P	**P**	**13 42 17.2**	**-0.1**
CPUP	comp=Z,55nm,0.7s			pmax	pmax		
CPUP	comp=Z,4μm,18.9s			MLR	MLR		
CPUP	**Villa Florida** comp=Z,218nm,0.8s,mb5.9	**38.04**	**325**	*e*P	**P**	**13 42 17.0**	**-0.3**
CPUP	comp=Z,890nm,19.0s,MS4.6			LR	LR		
CMCH	**Combarbala**	**38.38**	**304**	‖e P	**P**	**13 42 19.0**	**-1.2**
MAW	**Mawson** comp=Z,19nm,0.9s,mb4.8,baz=225,slow=9.0,SNR=32	**38.42**	**142**	P	**P**	**13 42 21.2**	**+0.7**
MAW	comp=Z,7μm,20.3s,MS5.5,baz=240,slow=32			LR	LR	13 55 25.1	
MAW	**Mawson** comp=Z,30nm,0.8s,mb5.1	**38.42**	**142**	*e*P	**P**	**13 42 20.2**	**-0.4**
CAM4	**Nova Friburgo**	**38.98**	**347**	⇑*i*P	**P**	**13 42 25.5**	**+0.3**
CAM4				*i*		13 42 25.5	
CAM4				*i*		13 42 27.2	
CAM4				*i*		13 42 35.1	
CAM4				*i*		13 42 43.9	
CAM4				*i*		13 42 53.0	
TLL	**Tololo Astrono**	**39.19**	**305**	‖*i*P	**P**	**13 42 27.6**	**+0.6**
SBA	**Scott Base** comp=Z,39nm,1.1s,mb5.0	**40.91**	**187**	*e*P	**P**	**13 42 42.1**	**+0.8**
SBA	comp=Z,2μm,20.0s,MS5.0			LR	LR		
VNDA	**Vanda** comp=Z,12nm,1.0s,mb4.5,baz=181,slow=7.1,SNR=45	**41.48**	**185**	P	**P**	**13 42 46.5**	**+0.6**
VNDA	comp=Z,3μm,19.6s,MS5.1,baz=175,slow=34			LR	LR	13 58 37.3	
VNDA	**Vanda**	**41.48**	**185**	P	**P**	**13 42 46.7**	**+0.7**
VNDA	comp=Z,39nm,1.1s			pmax	pmax		
VNDA	**Vanda** comp=Z,39nm,1.1s,mb5.0	**41.48**	**185**	*e*P	**P**	**13 42 46.5**	**+0.6**
VNDA	comp=Z,3μm,20.0s,MS5.1			LR	LR		
LVC	**Limon Verde** comp=Z,16nm,0.9s,mb4.9,baz=172,slow=5.6,SNR=21	**45.27**	**312**	P	**P**	**13 43 16.9**	**+0.4**
LVC	**Limon Verde** comp=Z,45nm,1.0s,mb5.2	**45.27**	**312**	*e*P	**P**	**13 43 16.7**	**+0.2**
LVC	comp=Z,5μm,20.0s,MS5.4			LR	LR		
SUR	**Sutherland** comp=Z,24nm,0.7s,mb5.1,baz=202,slow=9.2,SNR=24	**45.30**	**77**	P	**P**	**13 43 17.5**	**+0.7**
SUR	comp=Z,6μm,19.3s,MS5.5,baz=216,slow=30			LR	LR	13 57 45.5	
SUR	**Sutherland** comp=Z,132nm,1.4s,mb5.6	**45.30**	**77**	P	**P**	**13 43 16.3**	**-0.5**
SUR	comp=Z,6μm,19.0s,MS5.5			LR	LR		
BDFB	**Brasilia** comp=Z,15nm,1.0s,mb4.9,baz=184,slow=3.4,SNR=12	**46.32**	**341**	P	**P**	**13 43 24.9**	**0.0**
BDFB	comp=Z,2μm,18.9s,MS5.1,baz=337,slow=32			LR	LR	13 59 43.5	
MIR	**Mirnyy**	**47.02**	**154**	*d i*P	**P**	**13 43 33.0**	**+2.7**
MIR				*e*		13 45 19.0	
MIR	comp=Z,300nm,1.5s,mb6.0			pmax	pmax		
MIR	comp=Z,600nm,4.0s			pmax	pmax		
SIV	**San Ignacio** comp=Z,29nm,0.9s,mb5.3,baz=163,slow=9.4,SNR=45	**48.90**	**324**	P	**P**	**13 43 44.1**	**-0.7**
CASY	**Casey**	**50.45**	**162**	*e*P	**P**	**13 43 55.8**	**-0.9**
BOSA	**Boshof** comp=Z,49nm,0.8s,mb5.5,baz=206,slow=7.7,SNR=55	**50.55**	**78**	P	**P**	**13 43 58.4**	**+0.9**
BOSA	comp=Z,5μm,18.7s,MS5.5,baz=217,slow=32			LR	LR	14 01 30.6	
BOSA	**Boshof** comp=Z,52nm,0.8s,mb5.5	**50.55**	**78**	*e*P	**P**	**13 43 57.9**	**+0.4**
BOSA	comp=Z,5μm,19.0s,MS5.5			LR	LR		
LPAZ	**La Paz** comp=Z,19nm,0.8s,mb5.1,baz=143,slow=6.8,SNR=40	**50.83**	**316**	P	**P**	**13 44 00.5**	**+0.9**
LPAZ	comp=Z,3μm,18.1s,MS5.4,baz=15,slow=37			LR	LR	14 06 37.5	
LPAZ	**La Paz**	**50.83**	**316**	P	**P**	**13 44 00.5**	**+0.9**
LPAZ	comp=Z,19nm,0.8s			pmax	pmax		
LPAZ	comp=Z,3μm,18.1s			MLR	MLR		
LPAZ	**La Paz** comp=Z,33nm,0.9s,mb5.3	**50.83**	**316**	*e*P	**P**	**13 44 00.2**	**+0.7**
LPAZ	comp=Z,4μm,19.0s,MS5.5			LR	LR		
ARE	**Arequipa**	**51.85**	**312**	*e*P	**P**	**13 44 07.0**	**-0.2**
DRV	**Dumont d'Urvil**	**52.66**	**177**	P	**P**	**13 44 14.0**	**+0.7**
DRV	**Dumont d'Urvil**	**52.66**	**177**	PP	PP	13 46 10.0	-2.3
DRV				S	**S**	**13 51 39.0**	**-2.6**
DRV				SS	SS	13 55 17.0	-2.9
DRV				R		14 00 00.0	
LBTB	**Lobatse** comp=Z,57nm,0.6s,mb5.7,baz=223,slow=7.9,SNR=77	**53.74**	**76**	P	**P**	**13 44 22.0**	**+0.8**
LBTB	**Lobatse** comp=Z,57nm,0.6s,mb5.7	**53.74**	**76**	P	**P**	**13 44 22.0**	**+0.8**
LBTB				pmax	pmax		
LBTB	**Lobatse** comp=Z,58nm,0.7s,mb5.6	**53.74**	**76**	*e*P	**P**	**13 44 21.4**	**+0.2**
LBTB	comp=Z,6nm,20.0s,MS5.7			LR	LR		
ASCN	**Ascension**	**54.85**	**24**	PFAKE		13 44 40.0	+11
ASCN				LR	LR		
TSUM	**Tsumeb** comp=Z,2μm,22.0s,MS5.2	**55.08**	**65**	P	**P**	**13 44 31.6**	**+0.6**
TSUM	**Tsumeb** comp=Z,9.6nm,1.0s,mb4.8,baz=191,slow=4.5,SNR=7.9	**55.08**	**65**	P	**P**	**13 44 31.2**	**+0.2**
TSUM	comp=Z,31nm,1.1s,mb5.2			LR	LR		
SAML	**Samuel** comp=Z,50nm,0.9s,mb5.5	**56.19**	**325**	*e*P	**P**	**13 44 38.0**	**-1.0**
SAML	comp=Z,3μm,21.0s,MS5.4			LR	LR		
NNA	**Nana** comp=Z,177nm,1.3s,mb5.9	**57.95**	**308**	*e*P	**P**	**13 44 50.3**	**-1.1**
NNA	comp=Z,5μm,22.0s,MS5.5			LR	LR		
MATP	**Matopo** comp=Z,29nm,0.8s,mb5.4,baz=208,slow=6.7,SNR=46	**59.03**	**76**	P	**P**	**13 44 59.5**	**+0.5**
RPN	**Rapa Nui**	**59.62**	**268**	PFAKE		13 45 20.0	+17
RPN	comp=Z,2μm,19.0s,MS5.3			LR	LR		
LSZ	**Lusaka** comp=Z,39nm,0.8s,mb5.6	**63.34**	**73**	*e*P	**P**	**13 45 28.5**	**+0.4**
LSZ	comp=Z,5μm,20.0s,MS5.7			LR	LR		
DBIC	**Dimbokro** comp=Z,23nm,0.7s,mb5.2,baz=174,slow=6.5,SNR=28	**71.12**	**31**	P	**P**	**13 46 18.4**	**+0.8**
DBIC	comp=Z,2μm,20.3s,MS5.3,baz=170,slow=31			LR	LR	14 11 22.2	
DBIC	**Dimbokro** comp=Z,83nm,1.1s	**71.12**	**31**	P	**P**	**13 46 20.0**	**+2.4**
DBIC				pmax	pmax		
DBIC	**Dimbokro** comp=Z,83nm,1.1s,mb5.6	**71.12**	**31**	*e*P	**P**	**13 46 18.1**	**+0.6**
DBIC	comp=Z,2μm,20.0s,MS5.3			LR	LR		
ROSC	**El Rosal** comp=Z,3.7nm,0.4s,mb4.7,baz=121,slow=22,SNR=11	**72.67**	**317**	P	**P**	**13 46 28.3**	**+1.4**
ROSC	comp=Z,3μm,19.1s,MS5.5,baz=186,slow=38			LR	LR	14 21 05.8	
ROSC	**El Rosal**	**72.67**	**317**	*e*P	**P**	**13 46 27.8**	**+0.9**
PAYG	**Puerto Ayora**	**73.66**	**300**	PFAKE		13 46 50.0	+17
PAYG	comp=Z,4μm,20.0s,MS5.7			LR	LR		
RPZ	**Rata Peaks** comp=Z,3μm,18.1s,MS5.6,baz=186,slow=35	**73.76**	**199**	LR	LR	14 18 13.2	
RKT	**Rikitea** comp=Z,1μm,30.2s	**75.24**	**249**	*e*S	S	13 56 22.4	+0.6
RKT	comp=Z,5μm,33.0s			*e*LQ		14 06 39.6	
RKT				*e*LR	LR	14 10 00.7	
SDV	**Santo Domingo** comp=Z,34nm,0.8s,mb5.3	**75.31**	**322**	*e*P	**P**	**13 46 42.2**	**-0.1**
SDV	comp=Z,2μm,19.0s,MS5.4			LR	LR		
SNZO	**South Karori**	**75.49**	**202**	PFAKE		13 47 00.0	+17
SNZO	comp=Z,2μm,19.0s,MS5.5			LR	LR		
TAU	**Tasmania Unive**	**76.54**	**181**	PFAKE		13 47 00.0	+11
TAU	comp=Z,2μm,19.0s,MS5.3			LR	LR		
URZ	**Urewera** comp=Z,2μm,21.1s,MS5.3,baz=357,slow=33	**77.97**	**205**	LR	LR	14 17 39.0	
TOA0	**Torodi Ar. Sit**	**79.07**	**35**	*e*P	**P**	**13 47 04.0**	**+0.6**
TORD	**Torodi Ar. Bea** comp=Z,35nm,1.0s,mb5.3,baz=198,slow=4.8,SNR=44	**79.07**	**35**	*e*P	**P**	**13 47 03.9**	**+0.5**
TORD	comp=Z,4μm,21.1s,MS5.7,baz=190,slow=30			LR	LR	14 14 39.8	
KMBO	**Kilima Mbogo** comp=Z,1.7nm,0.8s,mb4.0,baz=199,slow=21,SNR=4.0	**79.96**	**74**	P	**P**	**13 47 10.9**	**+2.6**
KMBO	comp=Z,2μm,18.4s,MS5.6,baz=106,slow=34			LR	LR	14 19 55.0	
TBI	**Tubuai** comp=Z,2μm,29.5s	**81.34**	**237**	*e*S	S	13 57 28.3	+0.9
TBI	comp=Z,5μm,33.2s			*e*LQ		14 09 05.2	
TBI				*e*LR	LR	14 12 43.5	
TOO	**Toolangi** comp=Z,5μm,23.2s,baz=160	**81.88**	**180**	*e*P	**P**	**13 47 16.7**	**-1.8**
TOO	comp=Z,19nm,0.9s,mb5.0			pmax	pmax		
TOO	**Toolangi** comp=Z,19nm,0.9s,mb5.0	**81.88**	**180**	*e*P	**P**	**13 47 16.7**	**-1.8**
MTP	**Monte Pirata**	**82.72**	**330**	P	**P**	**13 47 23.9**	**+1.0**
SJG	**San Juan**	**82.88**	**329**	PFAKE		13 47 40.0	+16
SJG	comp=Z,2μm,22.0s,MS5.5			LR	LR		
NWAO	**Narrogin (SRO)**	**83.59**	**156**	PFAKE		13 47 40.0	+13
NWAO	comp=Z,2μm,19.0s,MS5.6			LR	LR		
MUN	**Mundaring**	**84.30**	**155**	*e*P	**P**	**13 47 29.7**	**-1.3**
KLBR	**Kellerberrin** comp=Z,70nm,1.0s,mb5.8	**84.99**	**156**	*e*P	**P**	**13 47 34.1**	**-0.4**
RAO	**Raoul Island** comp=Z,584nm,18.5s,MS5.0,baz=146,slow=35	**85.48**	**211**	LR	LR	14 24 29.3	
RAO	**Raoul Island**	**85.48**	**211**	PFAKE		13 47 50.0	+13
RAO	comp=Z,1μm,20.0s,MS5.3			LR	LR		
PPT	**Papeete** comp=Z,2μm,27.5s	**86.55**	**240**	*e*S	S	13 58 19.1	-0.6
PPT				*e*LQ		14 10 57.8	
PPT	comp=Z,8μm,32.8s			*e*LR	LR	14 15 12.5	
PPT	**Papeete** comp=Z,9μm,26.0s,baz=157	**86.55**	**240**	LR	LR	14 18 08.8	
RAR	**Rarotonga** comp=Z,1μm,18.5s,MS5.3,baz=156,slow=30	**87.31**	**229**	LR	LR	14 24 03.6	
FORT	**Forrest** comp=Z,1μm,18.7s,MS5.4,baz=224,slow=34	**87.48**	**165**	*e*P	**P**	**13 47 46.5**	**-0.3**
STKA	**Stephens Creek** comp=Z,83nm,0.9s,mb6.0	**87.49**	**176**	P	**P**	**13 47 46.1**	**-0.7**
STKA	comp=Z,5.2nm,0.7s,mb4.9,baz=139,slow=0.6,SNR=6.2			LR	LR	14 24 50.4	
STKA	**Stephens Creek** comp=Z,2.0nm,1.1s,mb5.3	**87.49**	**176**	*e*P	**P**	**13 47 45.8**	**-1.0**
ARMA	**Armidale**	**88.90**	**185**	*e*P	**P**	**13 47 52.9**	**-0.6**
TAOE	**Nuku Hiva Isla** comp=Z,3μm,27.8s	**90.06**	**252**	*e*S	S	13 58 53.0	-0.1
TAOE				*e*LQ		14 13 11.9	
TAOE	comp=Z,8μm,30.0s			*e*LR	LR	14 16 50.0	
DGAR	**Diego Garcia** comp=Z,6μm,23.5s,baz=171	**91.45**	**108**	PFAKE		13 48 20.0	+15
DGAR	comp=Z,4μm,22.0s,MS5.8			LR	LR		
CMIG	**Matias Romero** comp=Z,7.1nm,0.8s,mb5.0,baz=128,slow=1.7,SNR=9.8	**91.57**	**303**	P	**P**	**13 48 07.1**	**+1.1**
CMIG	**Matias Romero**	**91.57**	**303**	P	**P**	**13 48 07.1**	**+1.1**
ASAR	**Alice Springs** comp=Z,5.9nm,0.8s,mb5.1,baz=184,slow=3.3,SNR=28	**95.17**	**169**	P	**P**	**13 48 21.6**	**-0.9**
ASAR	comp=Z,2.5nm,0.9s,baz=187,slow=5.1,SNR=4.8			PP	PP	13 52 11.4	-0.7
ASAR	comp=Z,0.6nm,0.8s,baz=36,slow=1.3,SNR=5.3			PKKPbc	PKKPbc	14 05 16.2	-0.1
ASAR	comp=Z,2μm,20.6s,MS5.6,baz=187,slow=34			LR	LR	14 28 54.5	
ASAR	**Alice Springs**	**95.17**	**169**	P	**P**	**13 48 21.7**	**-0.8**
ASAR						13 52 11.5	
ASAR	comp=Z,6.0nm,0.8s			pmax	pmax		
ASAR	comp=Z,3.0nm,0.9s			pmax	pmax		
ASAR	comp=Z,1.0nm,0.8s			pmax	pmax		
AS31	**Alice Springs**	**95.17**	**169**	⇑*i*P	**P**	**13 48 21.3**	**-1.3**
MBWA	**Marble Bar**	**95.51**	**155**	PFAKE		13 48 40.0	+16
MBWA	comp=Z,4μm,20.0s,MS5.9			LR	LR		
DZM	**Mont Dzumac** comp=Z,2μm,18.4s,MS5.6,baz=188,slow=34	**95.68**	**199**	LR	LR	14 29 53.3	
BBSR	**BB Station** comp=Z,2μm,21.0s,MS5.5	**96.27**	**334**	PFAKE		13 48 40.0	+12
BBSR				LR	LR		
DWPF	**Disney** comp=Z,1μm,19.0s,MS5.3	**96.71**	**319**	PFAKE		13 48 40.0	+10
DWPF				LR	LR		
AFI	**Afiamalu** comp=Z,1μm,21.0s,MS5.3,baz=263,slow=31	**98.24**	**221**	LR	LR	14 25 16.3	
AFI	**Afiamalu**	**98.24**	**221**	PFAKE		13 48 50.0	+14
AFI	comp=Z,903nm,19.0s,MS5.3			LR	LR		
WRA	**Warramunga Arr** comp=Z,4.0nm,0.7s,mb5.0,baz=191,slow=4.1,SNR=15	**98.89**	**169**	P	**P**	**13 48 38.4**	**-1.0**
WRA	comp=Z,2.3nm,1.0s,baz=188,slow=6.3,SNR=6.1			PP	PP	13 52 41.2	+0.3
WRA	comp=Z,2μm,20.9s,MS5.6,baz=160,slow=34			LR	LR	14 30 57.6	
WRA	**Warramunga Arr**	**98.89**	**169**	P	**P**	**13 48 38.4**	**-1.0**
WRA						13 52 41.2	
WRA	comp=Z,4.0nm,0.7s			pmax	pmax		
WRA	comp=Z,2.0nm,1.0s			pmax	pmax		
WRA	comp=Z,2μm,20.9s			MLR	MLR		
WB2	**Warramunga Arr**	**98.89**	**169**	*e*P	**P**	**13 48 37.9**	**-1.5**
WRAB	**Tennant Creek**	**98.90**	**169**	PFAKE		13 48 50.0	+11
WRAB	comp=Z,2μm,21.0s,MS5.7			LR	LR		
CTA	**Charters Tower** comp=Z,2μm,18.1s,MS5.6,baz=284,slow=36	**99.30**	**180**	LR	LR	14 35 13.6	
CTAO	**Charters Tower**	**99.30**	**180**	PFAKE		13 48 50.0	+8.8
CTAO	comp=Z,2μm,19.0s,MS5.5			LR	LR		
FITZ	**Fitzroy Crossi** comp=Z,3μm,19.3s,MS5.8,baz=28,slow=34	**99.58**	**160**	LR	LR	14 31 37.6	

FITZ	Fitzroy Crossi	99.58	160	eP		P		13 48 45.8	+3.3
	comp=Z,14nm,2.0s,mb5.0								
PMAFR	Mafra	101.53	19	e-				14 02 13.6	
PMAFR	Mafra	101.53	19	eLQ				14 17 11.3	
PMAFR				eLR		LR		14 22 22.8	
PESTR	Estremoz	101.73	21	ePP		PP		13 53 00.1	-2.3
PESTR				eSKS				13 59 40.2	
PESTR				e-				14 02 10.8	
PESTR				eSS		SS		14 07 43.7	+7.0
PESTR				eLQ				14 17 20.4	
PESTR				eLR		LR		14 22 27.7	
LRAL	Lakeview Retre	103.08	316		PFAKE			13 49 10.0	+12
LRAL					LR	LR			
	comp=Z,1µm,22.0s,MS5.5								
ESLA	Sonseca Array	103.18	23		PFAKE			13 49 10.0	+12
ESLA					LR	LR			
	comp=Z,9µm,19.0s,MS6.3								
MTE	Manteigas	103.23	20	ePP		PP		13 53 13.8	+0.1
MTE				eSKS				13 59 44.3	
MTE				e-				14 02 30.5	
MTE				e-				14 08 04.2	
MTE				eSS		SS		14 08 05.9	+8.5
MTE				eLQ				14 17 50.8	
MTE				eLR		LR		14 23 10.5	
	comp=Z,1µm,19.7s								
HKT	Hockley	103.48	308		PFAKE			13 49 10.0	+10
HKT					LR	LR			
	comp=Z,826nm,22.0s,MS5.2								
MYNC	Murphy	104.01	320		PFAKE			13 49 10.0	+7.8
MYNC					LR	LR			
	comp=Z,772nm,19.0s,MS5.3								
NATX	Nacogdoches	104.66	310		PFAKE			13 49 20.0	+15
NATX					LR	LR			
	comp=Z,744nm,22.0s,MS5.2								
BLA	Blacksburg	104.86	323		PFAKE			13 49 20.0	+14
BLA					LR	LR			
	comp=Z,99nm,22.0s								
CBN	Corbin	104.92	326		PFAKE			13 49 20.0	+14
CBN					LR	LR			
	comp=Z,3µm,22.0s,MS5.8								
PLAL	Pickwick Lake	105.22	316		PFAKE			13 53 30.0	+8.2
PLAL					LR	LR			
	comp=Z,1µm,22.0s,MS5.3								
OXF	Oxford	105.25	315		PFAKE			13 53 30.0	+8.2
OXF					LR	LR			
	comp=Z,943nm,21.0s,MS5.3								
JCT	Junction City	105.51	305		PFAKE			13 53 30.0	+7.7
JCT					LR	LR			
	comp=Z,507nm,22.0s,MS5.0								
FUNA	Funafuti	106.03	214		PFAKE			13 53 40.0	+17
FUNA					LR	LR			
	comp=Z,23µm,19.0s								
WVT	Waverly	106.18	317		PFAKE			13 53 40.0	+16
WVT					LR	LR			
	comp=Z,2µm,22.0s,MS5.6								
MIAR	Mount Ida	106.75	312		PFAKE			13 53 40.0	+15
MIAR					LR	LR			
	comp=Z,966nm,20.0s,MS5.3								
MCWV	Mont Chateau	106.96	325		PFAKE			13 53 40.0	+15
MCWV					LR	LR			
	comp=Z,1µm,22.0s,MS5.5								
SSPA	Standing Stone	107.33	326		PFAKE			13 53 40.0	+14
SSPA					LR	LR			
	comp=Z,1µm,22.0s,MS5.5								
WES	Weston	107.33	332		PFAKE			13 53 40.0	+14
WES					LR	LR			
	comp=Z,1µm,21.0s,MS5.4								
HRV	Harvard--Oak R	107.50	332		PFAKE			13 53 40.0	+14
HRV					LR	LR			
	comp=Z,1µm,22.0s,MS5.4								
WCI	Wyandotte Cave	107.59	319		PFAKE			13 53 40.0	+14
WCI					LR	LR			
	comp=Z,1µm,21.0s,MS5.4								
PALK	Pallekele	108.19	108		PFAKE			13 53 40.0	+13
PALK					LR	LR			
	comp=Z,3µm,21.0s,MS5.9								
ACSO	Alum Creek Sta	108.40	322		PFAKE			13 53 40.0	+12
ACSO					LR	LR			
	comp=Z,880nm,22.0s,MS5.3								
MNTX	Cornudas Mount	108.86	301		PFAKE			13 53 40.0	+11
MNTX					LR	LR			
	comp=Z,3µm,22.0s,MS5.8								
WMOK	Wichita Mounta	108.87	308		PFAKE			13 53 40.0	+11
WMOK					LR	LR			
	comp=Z,678nm,19.0s,MS5.2								
HNR	Honiara	109.03	195		PFAKE			13 53 40.0	+11
HNR					LR	LR			
	comp=Z,1µm,19.0s,MS5.5								
CCM	Cathedral Cave	109.08	315		PFAKE			13 53 40.0	+11
CCM					LR	LR			
	comp=Z,957nm,21.0s,MS5.3								
LBNH	Lisbon	109.23	332		PFAKE			13 53 40.0	+11
LBNH					LR	LR			
	comp=Z,1µm,20.0s,MS5.5								
ERPA	Erie	109.29	325		PFAKE			13 53 40.0	+11
ERPA					LR	LR			
	comp=Z,904nm,22.0s,MS5.3								
NCB	Newcomb	109.52	330		PFAKE			13 53 40.0	+10
NCB					LR	LR			
	comp=Z,1µm,21.0s,MS5.5								
PMG	Port Moresby	109.92	181		PFAKE			13 53 40.0	+9.5
PMG					LR	LR			
	comp=Z,2µm,19.0s,MS5.6								
TUC	Tucson	111.69	297		PFAKE			13 53 50.0	+16
TUC					LR	LR			
	comp=Z,1µm,21.0s,MS5.5								
ANMO	Albuquerque	112.12	302		PKiKP		PKiKP	13 53 36.6	+1.9
	comp=Z,0.2nm,0.3s,baz=269,slow=2.6,SNR=3.0								
ANMO	Albuquerque	112.12	302	i	PKiKP		PKiKP	13 53 36.6	+1.9
ANMO	Albuquerque	112.12	302		PKPdf		PKiKP	13 53 36.6	+1.9
ANMO					LR	LR			
	comp=Z,2µm,21.0s,MS5.8								
JFWS	Jewell Farm	113.11	318		PFAKE			13 53 50.0	+13
JFWS					LR	LR			
	comp=Z,1µm,22.0s,MS5.4								
BHD	Baghdad	113.18	63	ex		x		13 53 53.0	
Y14A	Wickenburg	114.04	297	⇓P		PKiKP		13 53 40.2	+1.9
	baz=114								
BFO	Black Forest	114.11	29	ePP		PP		13 54 32.4	-0.5
ANTO	Ankara	114.12	51		PFAKE			13 53 50.0	+11
ANTO					LR	LR			
	comp=Z,931nm,22.0s,MS5.3								
SDCO	Great Sand Dun	114.14	305		PFAKE			13 53 50.0	+11
SDCO					LR	LR			
	comp=Z,2µm,20.0s,MS5.7								
X15A	Humboldt	114.17	298	⇑P		PKiKP		13 53 40.8	+2.2
	baz=114								
BR131	Keskin Array S	114.31	51		PFAKE			13 53 50.0	+11
BR131					LR	LR			
	comp=Z,505nm,20.0s,MS5.1								
BRTR	Keskin Array B	114.31	51		PKP		PKiKP	13 53 39.5	+0.7
	comp=Z,0.2nm,0.3s,baz=204,slow=2.7,SNR=3.9								
BRTR					PP		PP	13 54 37.0	+2.6
	comp=Z,1.7nm,1.0s,baz=191,slow=5.0,SNR=4.7								
BRTR	Keskin Array B	114.31	51		PKiKP		PKiKP	13 53 39.6	+0.7
BRTR								13 54 37.0	
BRTR					pmax		pmax		
	comp=Z,2.0nm,1.0s								
WUAZ	Wupatki	114.68	299		PFAKE			13 53 50.0	+10
WUAZ					LR	LR			
	comp=Z,1µm,20.0s,MS5.5								
FUR	Furstenfeldbru	114.69	32	ePP		PP		13 54 35.7	-1.3
STU	Stuttgart	114.73	30	ePP		PP		13 54 36.7	-0.6
WLF	Walferdange	114.85	27	ePP		PP		13 54 37.8	-0.3
X13A	Yucca	114.96	296	⇑P		PKiKP		13 53 41.8	+1.7
	baz=115								
W14A	Seligman	115.16	297	⇑P		PKiKP		13 53 42.6	+2.1
	baz=115								
IRM	Iron Mountain	115.17	295	⇓P		PKiKP		13 53 43.2	+2.7
	baz=115								
PFO	Pinyon Flat Ob	115.29	294		PFAKE			13 53 50.0	+9.2
PFO					LR	LR			
	comp=Z,2µm,22.0s,MS5.6								
W13A	Hualapai Mount	115.41	297	⇑P		PKiKP		13 53 43.3	+2.3
	baz=116								
BELC	Belle Mtn.	115.42	294	⇓P		PKPdf		13 53 42.6	+1.6
	baz=116								
PV01	Paradox Valley	115.72	302		PKPdf	PKPdf		13 53 42.7	+1.1
HGN	Heimansgroeve	115.83	27	ePKiKP		PP		13 54 46.1	+1.1
TNS	Taunus Mts	115.90	29	ePP		PP		13 54 45.3	-0.2
GEC2	GERESS Array S	115.94	33	ePP		PP		13 54 44.8	-1.0
GEC2	GERESS Array S	115.94	33	PKIKP		PKPdf		13 53 44.8	+2.8
GERES	GERESS Array B	115.94	33	PKP		PKPdf		13 53 40.9	-1.1
	comp=Z,1.3nm,0.9s,baz=195,slow=4.1,SNR=7.8								
GERES					PP	PP		13 54 47.3	+1.4
	comp=Z,0.9nm,0.9s,baz=190,slow=6.2,SNR=6.1								
GERES					PKKPab	PKKPab		14 04 19.9	+2.2
	comp=Z,0.2nm,0.6s,baz=2.9,slow=5.3,SNR=3.7								
GERES	GERESS Array B	115.94	33		PKIKP	PKPdf		13 53 40.9	-1.1
GERES								13 54 47.3	
GERES					pmax	pmax			
	comp=Z,1.0nm,0.9s								
GERES					pmax	pmax			
	comp=Z,1.0nm,0.9s								
ISCO	Idaho Springs	115.95	306		PKIKP	PKPdf		13 53 45.1	+3.1
ISCO	Idaho Springs	115.95	306		PFAKE			13 53 50.0	+8.0
ISCO					LR	LR			
	comp=Z,905nm,20.0s,MS5.4								
WET	Wettzell	116.00	32	ePP		PP		13 54 45.9	-0.3
GRF	Grafenberg Arr	116.08	31	ePP		PP		13 54 46.2	-0.6
GRF				eSP		SP		14 04 22.5	-5.4
GRF				eSS		SS		14 11 10.9	+21
GRF				eL				14 38 48.4	
	comp=Z,786nm,19.5s								
PV10	Paradox Valley	116.12	302	ePKPdf		PKPdf		13 53 42.9	+0.6
KHC	Kasperske Hory	116.17	33	ePKP		PKPdf		13 53 57.6	+15
KHC				ePP		PP		13 54 52.1	+4.7
KHC				ePS		PS		14 04 36.1	+7.1
KHC				eSS		SS		14 11 03.3	+12
KHC				AMS		AMS		14 35 50.0	
	comp=Z,3µm,24.4s								
KHC	Kasperske Hory	116.17	33	⇑ePKIKP		PKPdf		13 53 39.8	-2.7
KHC				e				13 54 52.1	
KHC				ePS		PS		14 04 36.1	+7.1
KHC				eSS		SS		14 11 03.3	+12
KHC				MLR		MLR			
	comp=Z,3µm,24.4s,MS5.8								
V12A	Nelson	116.36	296	⇑P		PKPdf		13 53 44.9	+2.1
	baz=117								
SNCC	San Nicolas Is	116.37	291		PFAKE			13 53 50.0	+7.2
SNCC					LR	LR			
	comp=Z,1µm,20.0s,MS5.6								
ROTZ	Rotzenmuhle	116.40	31	ePP		PP		13 54 48.2	-0.8
MANZ	Manzenberg	116.58	31	ePP		PP		13 54 49.8	-0.5
TUQ	Turquoise Mtn.	116.59	295	⇑P		PKPdf		13 53 46.2	+2.9
	baz=117								
BUG	Bochum--Univer	116.77	28	ePP		PP		13 54 50.8	-0.8
UBBA	Unterbreizbach	116.82	30	ePP		PP		13 54 50.5	-1.5
TREC	Trest	116.83	34	ePP		PP		13 54 45.8	-6.3
TREC				ePS		PS		14 04 40.8	+5.8
TREC				eSS		SS		14 10 59.5	-0.4
TREC				AMS		AMS		14 31 30.0	
	comp=Z,3µm,39.1s								
GSC	Goldstone	116.87	295	⇑P		PKPdf		13 53 45.6	+1.8
	baz=117								
NKC	Novy Kostel	116.89	31	ePP		PP		13 54 50.9	-1.6
NKC				ePS		PS		14 04 41.3	+5.8
NKC				ex		x		14 11 20.7	
NKC				AMS		AMS		14 31 30.0	
EDW2	Edwards Air Fo	117.04	293	⇓P		PKPdf		13 53 45.7	+1.6
	baz=117								
MOX	Moxa	117.06	31	ePP		PP		13 54 53.4	-0.2
MOX	Moxa	117.06	31	ePP		PP		13 54 52.7	-0.9
MOX									
	comp=Z,1µm,22.0s								
TANN	Tannenbergstha	117.06	31	ePP		PP		13 54 53.2	-0.4
SHOC	Shoshone	117.14	295	⇑P		PKPdf		13 53 45.3	+1.0
	baz=117								
PRU	Pruhonice	117.21	33	ePKP		PKPdf		13 53 53.4	+8.9
PRU				ePP		PP		13 54 53.7	-1.0
PRU				ePS		PS		14 04 47.3	+8.9
PRU				eSS		SS		14 11 18.2	+13
PRU				AMS		AMS		14 35 30.0	
	comp=Z,2µm,24.4s								
CCUT	Cedar City	117.25	299	PKPdf		PKPdf		13 53 45.7	+1.2
SRU	San Rafael	117.36	302	ePKIKP		PKPdf		13 53 44.7	0.0
LRMC	Laurel Mountai	117.41	294	⇑P		PKPdf		13 53 46.4	+1.6
	baz=118								
MSU	Marysvale	117.55	300	ePKIKP		PKPdf		13 53 45.2	+0.1
MVU	Marysvale	117.56	300	PFAKE				13 54 00.0	+15
MVU					LR	LR			
	comp=Z,2µm,21.0s,MS5.6								
U10A	Ash Meadows, A	117.59	296	⇓P		PKPdf		13 53 47.0	+1.8
	baz=118								
PVCC	Panska Ves	117.71	33	ePP		PP		13 55 08.8	+11
PVCC				ePS		PS		14 04 50.6	+7.7
PVCC				eSKKS		SS		14 11 32.1	+21
PVCC				AMS		AMS		14 34 10.0	
	comp=Z,2µm,27.2s								
TMUT	Trail Mountain	117.80	301	ePKPdf		PKPdf		13 53 47.1	+1.5
MPMC	Manual Prospec	117.81	294	⇓P		PKPdf		13 53 46.3	+0.8
	baz=118								
BRG	Berggiesshubel	117.86	32	ePP		PP		13 54 58.3	-0.9
ISA	Isabella	117.91	293		PFAKE			13 54 00.0	+14
ISA					LR	LR			
	comp=Z,296nm,21.0s,MS4.9								
ISA	Isabella	117.91	293	⇑P		PKPdf		13 53 47.2	+1.4
	baz=118								
EYMN	Ely	117.99	320		PFAKE			13 54 00.0	+14
EYMN					LR	LR			
	comp=Z,2µm,22.0s,MS5.7								
CLL	Collm	118.02	31	ePP		PP		13 54 59.6	-0.7
CLL	Collm	118.02	31	i		PKPdf		13 53 54.6	+8.6
CLL				i PP		PP		13 54 58.3	-2.0
CLL				e				13 55 15.0	
CLL				ePPP				13 57 31.0	
CLL				e				14 02 52.0	
CLL				ePS		PS		14 04 51.0	+5.3
CLL				ePPS				14 06 05.0	
CLL				e				14 11 40.0	
CLL				eSSS				14 15 42.0	
CLL				e				14 19 09.0	
CLL	Collm	118.02	31	i sPKPdf				13 53 54.6	
	comp=Z,6.0nm,1.1s								
CLL				i PP		PP		13 54 58.3	-2.0
CLL				ex		x		13 55 15.0	
CLL				ePPP				13 57 31.0	
CLL				eSdif		Sdif		14 02 52.0	+1.8
CLL				ePS		PS		14 04 51.0	+5.3
CLL				ePPS				14 06 05.0	
CLL				ePSPS				14 11 40.0	
CLL				eSSS				14 15 42.0	
CLL				eSSSS				14 19 09.0	
CLL	Collm	118.02	31	i PKIKP		PKPdf		13 53 54.6	+8.6
CLL				pmax		pmax			
	comp=Z,6.0nm,1.1s								
CLL				MLR		MLR			
	comp=Z,1µm,22.0s,MS5.4								
CLL	Collm	118.02	31	i PKP		PKPdf		13 53 54.6	+8.6
CLL				i PP		PP		13 54 58.3	-2.0
CLL				eSdif		Sdif		14 02 52.0	+1.8
CLL				LR		LR			
	comp=Z,1µm,22.0s,MS5.4								
DPC	Dobruska-Polom	118.02	34	ePKP		PKPdf		13 53 55.1	+9.1
DPC				ePP		PP		13 54 59.8	-0.5
DPC				ePS		PS		14 04 52.3	+6.6
DPC				eSKKS		SS		14 11 29.8	+14
DPC				AMS		AMS		14 32 00.0	
	comp=Z,2µm,33.5s								
DAC	Darwin (Calif)	118.03	295		PFAKE			13 54 00.0	+14
DAC					LR	LR			
	comp=Z,840nm,22.0s,MS5.3								
OKC	Ostrava-Krasne	118.07	35	ePP		PP		13 54 56.9	-3.7
OKC				ePS		PS		14 04 52.1	+6.0
OKC				eSKKS		SS		14 11 35.7	+20
OKC				AMS		AMS		14 32 20.0	
UPC	Upice	118.08	34	ex		x		13 54 05.2	
UPC				ePP		PP		13 55 06.0	+5.3
RWWY	Rawlins	118.19	306	ePKPdf		PKPdf		13 53 48.1	+1.8
SCHQ	Schefferville	118.29	339	PKP		PKPdf		13 53 47.0	+0.5
	comp=Z,2.0nm,0.6s,baz=56,slow=11,SNR=3.4								
SCHQ	Schefferville	118.29	339	PKP		PKPdf		13 53 47.0	+0.5
SCHQ					LR	LR			
	comp=Z,2µm,21.0s,MS5.7								
VES	Vestal, Richgr	118.33	293	⇓P		PKPdf		13 53 47.8	+1.2
	baz=118								
CWC	Cottonwood Cre	118.39	294	⇓P		PKPdf		13 53 48.8	+2.0
	baz=119								
NRDL	Niedersach Rie	118.40	29	ePP		PP		13 55 02.9	0.0
ESK	Eskdalemuir	118.41	19	PFAKE				13 54 00.0	+13
ESK					LR	LR			
	comp=Z,1µm,21.0s,MS5.5								
KSP	Ksiaz	118.46	34	ePKIKP		PKPdf		13 53 51.6	+4.7
KSP				e				13 55 06.5	
KSP				ePS		PS		14 04 49.5	-0.2
KSP				eSS		SS		14 11 28.3	+7.3
KSP	Ksiaz	118.46	34	ePKPdf		PKPdf		13 53 51.6	+4.7
KSP				ePP		PP		13 55 06.5	+3.1
KSP				ePS		PS		14 04 49.5	-0.2
KSP				eSS		SS		14 11 28.3	+7.3
KSP				LR		LR			
	comp=Z,5µm,37.7s,MS5.9								
MPU	Maple Canyon	118.58	301		PFAKE			13 54 00.0	+13
MPU					LR	LR			
	comp=Z,1µm,20.0s,MS5.6								
HELL	Mitchell Peak,	119.01	294	⇓P		PKPdf		13 53 49.2	+1.3
	baz=119								
RSSD	Black Hills	119.02	309	ePKIKP		PKPdf		13 53 48.1	+0.2
RSSD					MLR	MLR			
	comp=Z,394nm,22.0s,MS5.0								
S09A	Goldfield	119.07	296	⇑P		PKPdf		13 53 49.2	+1.2
	baz=119								
Q12A	Willow Creek R	119.12	298	⇑P		PKPdf		13 53 49.8	+1.7
	baz=119								
R10A	Warm Springs	119.14	297	⇑P		PKPdf		13 53 49.7	+1.6
	baz=119								
GNI	Garni	119.14	59	⇓ePKIKP		PKPdf		13 53 47.6	-0.6
GNI					MLR	MLR			
	comp=Z,1µm,20.0s								
DUG	Dugway	119.23	301	ePKIKP		PKPdf		13 53 49.0	+0.7
DUG					MLR	MLR			
	comp=Z,840nm,20.0s,MS5.4								
TPH	Tonopah	119.36	296		PFAKE			13 54 00.0	+11
TPH					LR	LR			
	comp=Z,806nm,20.0s,MS5.3								
TCUT	Toone Canyon	119.41	302		PKPdf	PKPdf		13 53 50.4	+1.7
R09A	Tonopah	119.43	296	⇓P		PKPdf		13 53 50.9	+2.2
	baz=120								
P12A	McGill	119.52	299	⇓P		PKPdf		13 53 51.1	+2.2
	baz=120								
U04C	Hernandez Rese	119.53	292	⇓P		PKPdf		13 53 51.2	+2.3
	baz=120								
T06C	Millerton Lake	119.58	293	⇓P		PKPdf		13 53 50.8	+1.8
	baz=120								
KCC	Kaiser Creek	119.67	294	⇑P		PKPdf		13 53 51.7	+2.5
	baz=120								
BSEG	Bad Segeberg	119.78	28	ePP		PP		13 55 10.4	-2.1
HWUT	Hardware Ranch	119.89	302	ePKPdf		PKPdf		13 53 50.1	+0.5
HWUT					LR	LR			
	comp=Z,2µm,22.0s,MS5.7								
R08A	Mina	119.98	295	⇑P		PKPdf		13 53 50.8	+1.1
	baz=120								
SPUT	South Promonto	120.00	302	ePKPdf		PKPdf		13 53 51.1	+1.2
BW06	Boulder Array	120.04	305		PFAKE			13 54 00.0	+10
BW06					LR	LR			
	comp=Z,3µm,21.0s,MS5.9								
PDAR	Pinedale Array	120.04	305	PKP		PKPdf		13 53 49.6	-0.2
	comp=Z,2.0nm,1.0s,baz=132,slow=2.2,SNR=13								
PDAR					PKKPab	PKKPab		14 04 00.0	+0.2
	comp=Z,0.5nm,0.9s,baz=46,slow=4.3,SNR=4.0								
O12A	Currie	120.11	299	⇑P		PKPdf		13 53 51.5	+1.5
	baz=120								
NVAR	Mina Array Bea	120.13	295	PKP		PKPdf		13 53 50.6	+0.5
	comp=Z,1.8nm,0.9s,baz=121,slow=3.2,SNR=12								
S05C	Merced	120.14	293	⇓P		PKPdf		13 53 51.1	+1.1
	baz=120								
SAO	San Andreas Ge	120.17	292		PFAKE			13 54 00.0	+10
SAO					LR	LR			
	comp=Z,809nm,22.0s,MS5.3								
P10A	Eureka	120.31	297	⇓P		PKPdf		13 53 51.3	+0.8
	baz=120								
Q08A	Gabbs	120.33	296	⇑P		PKPdf		13 53 51.4	+1.0
	baz=120								
S06C	San Francisco	120.37	294	⇑P		PKPdf		13 53 51.9	+1.4
	baz=121								
O11A	Cowboy Ranch,	120.39	298	⇑P		PKPdf		13 53 52.1	+1.6
	baz=121								
AHID	Auburn Hatcher	120.66	303		PFAKE			13 54 00.0	+8.9
AHID					LR	LR			
	comp=Z,2µm,21.0s,MS5.7								
ELK	Elko	120.71	299		PFAKE			13 54 00.0	+8.8
ELK					LR	LR			
	comp=Z,1µm,19.0s,MS5.6								
N12A	Clover Valley,	120.72	299	⇑P		PKPdf		13 53 53.2	+2.1
	baz=121								
R06C	Coleville	120.72	295	⇓P		PKPdf		13 53 53.1	+1.9
	baz=121								
S04C	Ingram Canyon,	120.72	292	⇓P		PKPdf		13 53 53.2	+2.0
	baz=121								
CMB	Columbia Colle	120.73	294	ePKIKP		PKPdf		13 53 51.5	+0.3
CMB					MLR	MLR			
	comp=Z,1µm,22.0s,MS5.6								
CMB	Columbia Colle	120.73	294	⇓P		PKPdf		13 53 52.6	+1.4
	baz=121,SNR=7.0								
O10A	Cortez Mining,	120.88	298	⇑P		PKPdf		13 53 54.0	+2.5
	baz=121								
N11A	Elko Archery C	120.98	299	⇑P		PKPdf		13 53 54.5	+2.8
	baz=121								
O09A	Fish Creek Ran	121.08	297	⇑P		PKPdf		13 53 53.7	+1.8
	baz=121								
M12A	Wells	121.13	300	⇓P		PKPdf		13 53 53.4	+1.5
	baz=121								
R05C	Kirkwood Meado	121.14	294	⇓P		PKPdf		13 53 53.4	+1.4
	baz=121,SNR=8.2								
LOHW	Long Hollow	121.16	304	ePKPdf		PKPdf		13 53 50.6	-1.4
TPAW	Teton Pass	121.20	304	ePKPdf		PKPdf		13 53 51.9	-0.2
BMN	Battle Mountai	121.31	297	PKIKP		PKPdf		13 53 56.3	+4.0
BMN	Battle Mountai	121.31	297		PFAKE			13 54 00.0	+7.7
BMN					LR	LR			
	comp=Z,1µm,21.0s,MS5.5								
MOOW	Moose Ponds	121.33	304	ePKPdf		PKPdf		13 53 53.0	+0.6
ULM	Lac du Bonnet	121.40	318	PKP		PKPdf		13 53 52.4	-0.2
	comp=Z,2.6nm,0.6s,baz=235,slow=0.5,SNR=6.4								
ULM	Lac du Bonnet	121.40	318		PKPdf	PKPdf		13 53 52.3	-0.2
ULM					LR	LR			
	comp=Z,2µm,19.0s,MS5.7								
KIV	Kislovodsk	121.46	55	⇓iPKIKP		PKPdf		13 53 49.9	-2.7
KIV					MLR	MLR			
	comp=Z,986nm,19.0s,MS5.5								
LAVA	Lava Cap Winer	121.48	294	⇓P		PKPdf		13 53 53.5	+0.8
	baz=122,SNR=7.4								
WCN	Washoe City	121.49	295	⇓P	

comp=Z,7.0nm,1.3s
M08A Happy Creek Ra 122.64 297 ⇑P PKPdf 13 53 57.3 +2.4
baz=123
HLID Hailey 122.68 302 *e*PKPdf PKPdf 13 53 56.7 +1.8
HLID LR LR
comp=Z,1μm,21.0s,MS5.5
N06A Buffalo Meadow 122.71 296 P PKPdf 13 53 57.0 +2.0
baz=123,SNR=7.6
HOPS Hopland 122.73 292 PFAKE 13 54 10.0 +15
HOPS LR LR
comp=Z,2μm,20.0s,MS5.7
L09A Wilkinson Ranc 122.80 298 ⇓P PKPdf 13 53 57.3 +2.1
baz=123
O04C Chester 122.92 295 ⇓P PKPdf 13 53 57.3 +1.9
baz=123
ELFS Eagle Lake Fie 123.00 295 ⇑P PKPdf 13 53 57.9 +2.4
baz=123
GASB Alder Springs 123.10 293 ⇑P PKPdf 13 53 57.5 +1.8
baz=123
L08A Fields 123.23 298 ⇓P PKPdf 13 53 57.9 +1.9
baz=123,SNR=6.8
P01C Double 8 Ranch 123.23 292 ⇑P PKPdf 13 53 57.5 +1.5
baz=123
BOZ Bozeman (W) 123.26 305 PKIKP PKPdf 13 53 58.1 +2.0
BOZ Bozeman (W) 123.26 305 PFAKE 13 54 10.0 +14
BOZ LR LR
comp=Z,2μm,21.0s,MS5.8
M06C Likely Place G 123.36 296 ⇓P PKPdf 13 53 57.6 +1.3
baz=124
K09A Rome 123.38 299 ⇓P PKPdf 13 53 58.0 +1.7
baz=124,SNR=7.7
DLMT Dillon 123.41 304 *e*PKPdf PKPdf 13 53 57.5 +1.2
HATC Hat Creek Radi 123.48 295 ⇑P PKPdf 13 53 58.1 +1.6
baz=124
L07A Adell 123.53 297 ⇓P PKPdf 13 53 58.4 +1.8
baz=124
WVOR Wild Horse Val 123.56 298 *e*PKIKP PKPdf 13 53 57.5 +0.9
WVOR MLR MLR
comp=Z,1μm,19.0s,MS5.5
O02C Red Bluff 123.56 293 ⇑P PKPdf 13 53 58.6 +2.0
baz=124
K08A Mann Creek Ran 123.73 298 ⇑P PKPdf 13 53 59.2 +2.3
baz=124,SNR=6.7
WDC Whiskeytown Da 123.78 294 PFAKE 13 54 10.0 +13
WDC LR LR
comp=Z,650nm,20.0s,MS5.3
WDC Whiskeytown Da 123.78 294 ⇑P PKPdf 13 53 59.0 +2.0
baz=124
M05C Lookout 123.78 295 ⇓P PKPdf 13 53 58.7 +1.6
baz=124
K07A Rock Creek Ran 124.03 298 ⇑P PKPdf 13 53 58.8 +1.3
baz=124
DAV Davao City (W) 124.14 155 PFAKE 13 54 10.0 +12
DAV LR LR
comp=Z,1μm,19.0s,MS5.6
M03C McCloud 124.15 294 ⇑P PKPdf 13 53 59.4 +1.6
baz=124
L05A Lakeview 124.20 296 ⇑P PKPdf 13 53 59.5 +1.6
baz=124
HRY Holter Researc 124.21 306 *e*PKPdf PKPdf 13 53 59.5 +1.6
N02C Big Bar 124.31 293 ⇑P PKPdf 13 54 00.2 +2.1
baz=124
I09A Lost Marbles R 124.42 300 ⇓P PKPdf 13 54 00.2 +1.9
baz=125
M04C Macdoel 124.43 295 ⇓P PKPdf 13 54 00.1 +1.7
baz=125
EGMT Eagleton 124.47 308 *e*PKPdf PKPdf 13 53 58.7 +0.3
EGMT LR LR
comp=Z,1μm,22.0s,MS5.4
K06A Valley Falls 124.55 297 ⇓P PKPdf 13 54 00.3 +1.8
baz=125
M02C Callahan 124.57 294 ⇑P PKPdf 13 54 00.3 +1.7
baz=125
I08A Drewsey 124.72 299 ⇓P PKPdf 13 54 00.8 +1.9
baz=125
L04A Klamath Falls 124.77 295 ⇑P PKPdf 13 54 00.8 +1.9
baz=125
YBH Yreka Blue Hor 124.78 294 PKP PKPdf 13 54 00.7 +1.7
comp=Z,5.8nm,1.3s,baz=309,slow=0.4,SNR=3.1
YBH Yreka Blue Hor 124.78 294 PKP PKPdf 13 54 00.7 +1.7
YBH LR LR
comp=Z,768nm,21.0s,MS5.3
YBH Yreka Blue Hor 124.78 294 ⇓P PKPdf 13 54 00.4 +1.4
baz=125
KONO Kongsberg 124.87 25 *e*P PKPdf 13 54 04.6 +5.4
KONO eSS SS 14 12 46.6 +3.8
KONO Kongsberg 124.87 25⇑ *e*PKP PKPdf 13 53 57.5 -1.7
KONO LR LR
comp=Z,1μm,21.0s,MS5.5
KIP Kipapa 124.87 250 PFAKE 13 54 10.0 +11
KIP LR LR
comp=Z,1μm,19.0s,MS5.6
J06A Christmas Vall 124.87 297 ⇑P PKPdf 13 54 00.4 +1.3
baz=125
CHMT Chamberlain Mo 124.94 305 *e*PKPdf PKPdf 13 54 00.2 +0.9
BMO Blue Mountains 124.94 300 PFAKE 13 54 10.0 +11
BMO LR LR
comp=Z,1μm,20.0s,MS5.5
H09A Durkee 124.94 300 ⇓P PKPdf 13 54 00.8 +1.5
baz=125
K04A Chilquin 125.05 296 ⇑P PKPdf 13 54 01.1 +1.6
baz=125
MSO Missoula 125.15 304 *e*PKPdf PKPdf 13 54 00.7 +1.0
MSO LR LR
comp=Z,961nm,22.0s,MS5.4
H08A Prairie City 125.25 299 ⇓P PKPdf 13 54 01.5 +1.6
baz=126
I07A Izee 125.26 298 ⇓P PKPdf 13 54 01.4 +1.5
baz=126
J05A Fort Rock 125.37 297 ⇑P PKPdf 13 54 01.6 +1.5
baz=126
I06A Prineville 125.45 298 ⇑P PKPdf 13 54 01.5 +1.3
baz=126
L02A Cave Junction 125.52 294 ⇓P PKPdf 13 54 01.9 +1.5
baz=126
BORG Borgarnes 125.69 7 PFAKE 13 54 10.0 +9.3
BORG LR LR
comp=Z,913nm,21.0s,MS5.4
I05A Bend 126.09 297 ⇓P PKPdf 13 54 03.0 +1.5
baz=126
HFS Hagfors 126.19 27 PKP PKPdf 13 54 01.4 -0.3
comp=Z,3.7nm,0.7s,baz=134,slow=4.3,SNR=9.0
HFS Hagfors 126.19 27 PKIKP PKPdf 13 54 01.4 -0.3
HFS pmax pmax
comp=Z,4.0nm,0.7s
CM31 Chiang Mai Arr 126.19 121 PFAKE 13 54 10.0 +8.3
CM31 LR LR
comp=Z,843nm,19.0s,MS5.4
J03A Ideyld Park 126.20 295 ⇓P PKPdf 13 54 03.5 +1.8
baz=126
NAO01 NORSAR Array S 126.22 25 PFAKE 13 54 10.0 +8.2
NAO01 LR LR
comp=Z,1μm,21.0s,MS5.5
F08A Pendleton 126.32 300 ⇓P PKPdf 13 54 02.7 +0.8
baz=126
H05A Madras 126.46 298 ⇑P PKPdf 13 54 03.3 +1.1
baz=127
NB2 NORSAR Subarra 126.47 25 PKPd PKPdf 13 54 03.1 +0.9
comp=Z,5.7nm,0.9s,baz=206,slow=2.0
NB2 NORSAR Subarra 126.47 25 PKPd PKPdf 13 54 03.1 +0.9
baz=206,slow=2.0
NOA NORSAR Array B 126.47 25 PKP PKPdf 13 54 03.0 +0.8
comp=Z,2.6nm,0.7s,baz=206,slow=2.0,SNR=21
NOA NORSAR Array B 126.47 25 PKIKP PKPdf 13 54 03.1 +0.9
NOA pmax pmax
comp=Z,3.0nm,0.7s
CHG Chiang Mai 126.51 120 P PKPdf 13 54 05.2 +2.9
CHTO Chiang Mai 126.51 120 *e*PKIKP PKPdf 13 54 03.8 +1.5
CHTO MLR MLR
comp=Z,1μm,22.0s,MS5.5
VOR Voronezh 126.52 48 PKIKP PKPdf 13 54 02.0 -0.3
VOR pmax pmax
comp=Z,60nm,2.0s
I03A Eugene 126.82 296 ⇓P PKPdf 13 54 04.0 +1.1
baz=127
H04A Detroit Lake 126.90 297 ⇑P PKPdf 13 54 04.0 +1.0
baz=127
WALA Waterton Lakes 126.93 306 PKPdf PKPdf 13 54 03.4 +0.3
G05A Wamic 126.97 298 ⇑P PKPdf 13 54 04.8 +1.6
baz=127
HAWA Hanford 127.11 300 *e*PKPdf PKPdf 13 54 03.5 0.0
HAWA LR LR
comp=Z,98nm,20.0s,MS4.5
KOLN Koldanda 127.22 99 *e*P PKPdf 13 54 04.3 +0.6
comp=Z,45nm,1.3s
NANT Nan 127.23 122 P PKPdf 13 54 07.0 +3.3
COR Corvallis 127.31 296 PFAKE 13 54 20.0 +16
COR LR LR
comp=Z,248nm,21.0s,MS4.9
G04A Mulino 127.44 297 ⇑P PKPdf 13 54 05.5 +1.5
baz=128
F05A White Salmon 127.53 298 ⇑P PKPdf 13 54 05.6 +1.4
baz=128
NEW Newport 127.59 303 PKP PKPdf 13 54 04.8 +0.5
comp=Z,6.3nm,1.0s,baz=124,slow=2.1,SNR=8.6
NEW Newport 127.59 303 *e*PKPdf PKPdf 13 54 04.5 +0.1
NEW LR LR
comp=Z,1μm,21.0s,MS5.5
H02A Toledo 127.69 296 ⇑P PKPdf 13 54 05.8 +1.2
baz=128
DMN Daman 127.81 101 *e*P PKPdf 13 54 05.7 +0.9
comp=Z,70nm,1.4s
G03A Yamhill 127.88 297 ⇓P PKPdf 13 54 06.1 +1.2
baz=128
GKN Gorkha 127.91 100 *e*P PKPdf 13 54 06.7 +1.7
comp=Z,61nm,1.3s
PKI Pulchoki 127.92 101 *e*P PKPdf 13 54 05.5 +0.5
comp=Z,30nm,1.1s
F04A Amboy 127.99 298 ⇑P PKPdf 13 54 06.7 +1.6
baz=128
KKN Kakani 128.04 101 *e*P PKPdf 13 54 06.8 +1.6
comp=Z,21nm,0.8s
VSU Vasula 128.06 36⇑ *e*PKIKP PKPdf 13 54 00.6 -4.7
E05A Randle 128.20 299 ⇑P PKPdf 13 54 06.9 +1.3
baz=128
OBN Obninsk 128.35 44⇑ *i*PKIKP PKPdf 13 54 04.1 -1.7
OBN *e* 14 01 08.0
OBN *e*SS SS 14 13 27.7 +1.4
OBN pmax pmax
comp=Z,17nm,0.9s
OBN Obninsk 128.35 44⇑ *e*PKP PKPdf 13 54 04.1 -1.7
OBN LR LR
comp=Z,600nm,21.0s,MS5.3
JIRN Jiri 128.37 102 *e*P PKPdf 13 54 07.3 +1.5
comp=Z,31nm,0.8s
GUN Gumba 128.43 102 *e*P PKPdf 13 54 08.0 +2.0
comp=Z,107nm,1.4s
F03A Seaside 128.48 297 ⇑P PKPdf 13 54 07.3 +1.2
baz=129
D05A Enumclaw 128.78 299 ⇓P PKPdf 13 54 07.8 +1.2
baz=129
C05A Tolt Reservoir 129.05 300 ⇓P PKPdf 13 54 08.7 +1.6
baz=129
MOS Moscow 129.21 44 *e*PKIKP PKPdf 13 54 08.4 +0.9
MOS *i* 13 54 15.2
MOS MLR MLR
comp=Z,1μm,22.0s,MS5.5
D03A Wishkah Elem. 129.50 298 ⇑P PKPdf 13 54 09.5 +1.6
baz=130
B05A Bryant 129.66 300 ⇓P PKPdf 13 54 09.8 +1.4
baz=130
NSS Namsos 129.76 24 *e*P PKPdf 13 54 09.3 +0.8
NSS Namsos 129.76 24 *e*P PKPdf 13 54 09.8 +1.3
EDM Edmonton 130.00 310 *e*PKIKP PKPdf 13 54 08.1 -0.9
B04A Port Angeles 130.11 299 ⇓P PKPdf 13 54 10.5 +1.3
baz=130
PUL Pulkovo 130.18 37*c i*PKIKP PKPdf 13 54 10.0 +0.7
PUL *e*PPP 13 59 11.2
PUL *e* 14 01 10.2
PUL Pulkovo 130.18 37⇓ *e*P PKPdf 13 54 06.6 -2.7
A05A Maple Falls 130.23 300 ⇑P PKPdf 13 54 10.8 +1.4
baz=130
FINES FINESS Array B 130.38 33 PKP PKPdf 13 54 08.8 -0.8
comp=Z,5.2nm,0.8s,baz=104,slow=0.8,SNR=23
FINES FINESS Array B 130.38 33 PKIKP PKPdf 13 54 08.9 -0.8
FINES pmax pmax
comp=Z,5.0nm,0.8s
FIA1 FINESS Array S 130.38 33 *e*PKPdf PKPdf 13 54 09.7 +0.1
KAF Kangasniemi 130.99 33 *e*p PKPdf 13 54 12.4 +1.6
comp=Z,9.6nm,0.7s
KAF Kangasniemi 130.99 33 *e*PKIKP PKPdf 13 54 12.4 +1.6
KAF pmax pmax
comp=Z,10.0nm,0.7s
QIZ Qiongzhong 131.00 132 PKP PKPdf 13 54 07.9 -2.9
QIZ PP PP 13 56 31.9 +4.6
QIZ SS SS 14 13 57.3 -1.6
QIZ LR LR
comp=N,814nm,23.8s
QIZ LR LR
comp=Z,1μm,26.8s,MS5.5
PECR Pechory 131.92 47 *e*PKIKP PKPdf 13 54 13.4 +0.8
PECR pmax pmax
comp=Z,140nm,2.0s
PECR pmax pmax
comp=Z,200nm,2.6s
PECR MLR MLR
comp=Z,800nm,20.0s,MS5.4
LSA Lhasa 132.44 105 PKP PKPdf 13 54 18.0 +4.4
LSA Lhasa 132.44 105 PKPdf PKPdf 13 54 17.4 +3.9
JMIC Jan Mayen 132.81 11 *e*P PKPdf 13 54 15.4 +1.1
JMIC AMS AMS 14 46 02.7
comp=Z,619nm,20.9s,MS5.3
AB31 Akbulak array 132.92 63 *i* PKIKP PKPdf 13 54 16.0 +1.5
AKTK Aktyubinsk 132.97 61 PKP PKPdf 13 54 16.0 +1.5
AKTO Aktyubinsk 132.97 61 PKP PKPdf 13 54 16.0 +1.5
comp=Z,3.1nm,0.8s,baz=311,slow=6.0,SNR=10
AKTO Aktyubinsk 132.97 61 PKIKP PKPdf 13 54 14.2 -0.4
AKTO pmax pmax
comp=Z,11nm,1.8s
JOF Joensuu 133.01 35 *e*p PKPdf 13 54 15.3 +0.7
comp=Z,8.6nm,0.6s
JOF Joensuu 133.01 35 *e*PKIKP PKPdf 13 54 15.3 +0.7
JOF pmax pmax
comp=Z,9.0nm,0.6s
KMI Kunming 133.70 121 PKP PKPdf 13 54 19.0 +3.1
AAK Ala-Archa 134.67 80 *e*PKIKP PKPdf 13 54 19.2 +1.4
AAK MLR MLR
comp=Z,1μm,21.0s,MS5.6
FRU Bishkek 134.88 80 *e*PKIKP PKPdf 13 54 21.0 +2.9
FRU *e* 13 54 24.0
FRU *e* 13 54 28.0
FRU *e* 13 56 58.0
FRU MLR MLR
comp=Z,1μm,21.0s,MS5.6
TKM2 Tokmak 2 135.42 80 *i* PKP PKPdf 13 54 15.4 -3.8
TRO Tromso 135.56 24 *e*PP PP 13 56 57.0 +0.6
TRO eSS SS 14 14 55.4 +1.2
TRO AMS AMS 14 49 55.3
comp=Z,442nm,16.2s,MS5.3
WAKE Wake Island 135.93 209 PFAKE 13 54 30.0 +10
WAKE LR LR
comp=Z,1μm,21.0s,MS5.6
GYA Guiyang 136.50 124 PKP PKPdf 13 54 26.4 +5.2
GYA PKS 13 57 59.8
GYA PP PP
comp=Z,160nm,7.6s
GYA LR LR
comp=N,670nm,20.6s,MS5.6
GYA LR LR
comp=E,840nm,20.7s,MS5.6
GYA LR LR
comp=Z,740nm,21.4s,MS5.4
ARCES ARCESS Array B 136.83 26 PKhKP 13 54 12.5
comp=Z,2.3nm,0.8s,baz=298,slow=2.6,SNR=4.8
ARCES PP PP 13 57 10.3 +5.8
comp=Z,5.2nm,0.9s,baz=206,slow=5.3,SNR=6.1
ARCES ARCESS Array B 136.83 26 *i* PKHKP 13 54 12.5
ARCES 13 57 10.3
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES pmax pmax
comp=Z,5.0nm,0.9s
APA Apatity 137.17 31⇓ *i*PKIKP PKPdf 13 54 20.0 -2.4
APA *e*SS SS 14 15 14.0 +0.5
APA pmax pmax
comp=Z,16nm,1.4s
KEV Kevo 137.33 27 *e*p PKPdf 13 54 25.0 +2.3
comp=Z,6.5nm,0.8s
KEV Kevo 137.33 27 *e*P PKPdf 13 54 25.0 +2.3
KEV LR LR
comp=Z,946nm,22.0s,MS5.5
YKA Yellowknife Ar 137.36 317 PKP PKPdf 13 54 20.9 -1.8
comp=Z,6.2nm,0.7s,baz=131,slow=2.3,SNR=10
YKA Yellowknife Ar 137.36 317 PKIKP PKPdf 13 54 20.9 -1.9
YKA pmax pmax
comp=Z,6.0nm,0.7s
YKA Yellowknife Ar 137.36 317 PKP PKPdf 13 54 20.9 -1.8
ARU Arti 137.51 55 *i* PKHKP 13 54 12.0
ARU *e* 13 57 20.6
ARU MLR MLR
comp=N,400nm,20.0s,MS5.3
ARU MLR MLR
comp=Z,800nm,20.0s,MS5.5
ARU MLR MLR
comp=E,400nm,18.0s,MS5.3
ARU Arti 137.51 55 *e*PKPpre 13 54 13.3
ARU LR LR
comp=Z,910nm,20.0s,MS5.5
LVZ Lovozero 137.74 32⇑ *i*PKIKP PKPdf 13 54 21.9 -1.6
LVZ *e* 13 57 11.9
LVZ *e* 14 09 22.5
LVZ eSS SS 14 16 03.3 +43
LVZ eSSS 14 20 36.6
LVZ Lovozero 137.74 32⇓ *i*PKP PKPdf 13 54 21.9 -1.6
LVZ LR LR
comp=Z,853nm,22.0s,MS5.4
DAG Danmarks Havn 137.76 5⇑ *i*P PKPdf 13 54 24.4 +0.9
comp=Z,3.0nm,0.8s
DAG Danmarks Havn 137.76 5⇑ *e*P PKPdf 13 54 24.4 +0.9
SVE Sverdlovsk 138.62 56 *i* PKIKP PKPdf 13 54 24.0 -1.1
SVE *e* 13 57 18.0
SVE *e* 14 01 32.0
SVE *e* 14 15 28.0
SVE MLR MLR
comp=N,500nm,18.0s,MS5.3
SVE MLR MLR
comp=E,200nm,18.0s,MS5.3
SVE MLR MLR
comp=Z,500nm,18.0s,MS5.3
CD2 Chengdu 139.19 118 *e*PKP PKPdf 13 54 25.3 -0.8
CD2 XPKP 13 54 31.5
CD2 PP PP 13 57 24.8 +5.7
CD2 PKS 13 57 59.9
CD2 PP PP
comp=Z,120nm,10.4s
CD2 LR LR
comp=E,470nm,19.2s
CD2 LR LR
comp=Z,480nm,19.2s,MS5.3
ZRNK Zerenda 139.55 65 PKIKP PKPdf 13 54 24.8 -2.0
ZRNK pmax pmax
comp=Z,38nm,1.8s
CRAG Craig 139.58 300 *e*PKPdf PKPdf 13 54 28.1 +1.2
BRVK Borovoye 140.19 66⇑ *e*PKIKP PKPdf 13 54 23.1 -4.8
BRVK *e* 13 54 29.3
BRVK MLR MLR
comp=Z,1μm,22.0s,MS5.5
BVA0 Borovoye Array 140.22 66 *i* PKHKP 13 54 22.9
BVA0 pmax pmax
comp=Z,5.0nm,1.2s
VOSK Vostochnaya 140.28 67 PKHKP 13 54 22.4
VOSK pmax pmax
comp=Z,17nm,1.2s
TATO Taipei 140.35 144 PFAKE 13 54 40.0 +12
TATO LR LR
comp=Z,991nm,22.0s,MS5.5
CHKZ Chkalovo 140.76 66 *e*PKHKP 13 54 21.5
MK31 Makanchi Array 141.49 82 PKHKP 13 54 23.9
MK31 pmax pmax
comp=Z,9.0nm,0.9s
SIT Sitka 141.55 301 PFAKE 13 54 40.0 +10
SIT LR LR
comp=Z,1μm,19.0s,MS5.8
WMQ Urumqi 141.97 89 *e*PKP PKPdf 13 54 29.0 -2.1
WMQ PP PP 13 57 39.0 +2.8
WMQ SKS SKSdf 14 01 35.0 -7.1
WMQ SKKS SKKSac 14 04 26.0 -4.6
WMQ SS SS 14 16 11.0 +1.1
WMQ PP PP
comp=Z,1μm,8.0s
WMQ LR LR
comp=N,2μm,18.0s,MS6.0
WMQ LR LR
comp=E,1μm,18.0s,MS6.0
WMQ LR LR
comp=Z,1μm,18.0s,MS5.7
KBS Kingsbay 142.20 13 *e*P PKPdf 13 54 36.5 +4.9
KBS AMS AMS 14 53 46.7
comp=Z,456nm,19.0s,MS5.2
KBS Kingsbay 142.20 13⇑ *i*PKP PKPdf 13 54 29.0 -2.6
KBS LR LR
comp=Z,780nm,20.0s,MS5.5
SKAG Skagway 143.05 304 *e*PKPdf PKPdf 13 54 32.0 -1.1
WHN Wuhan 143.13 131 PKPR PKPdf 13 54 36.0 +2.8
WHN LR LR
comp=Z,4μm,23.0s,MS6.1
LZH Lanzhou 143.61 114 *e*PKP PKPdf 13 54 34.0 -0.1
LZH APKP 13 54 40.5
LZH XPKP 13 54 44.5
LZH PP PP 13 57 50.0 +3.9
LZH PKS 13 58 05.0
LZH SKKS SKKSac 14 04 42.0 +1.9
LZH SS SS 14 16 31.1 +2.3
LZH PP PP
comp=Z,265nm,7.3s
LZH LR LR
comp=N,768nm,18.8s
LZH LR LR
comp=Z,2μm,20.8s,MS5.9
XAN Xi'an 144.08 121 PKP PKPdf 13 54 32.3 -2.6
XAN LR LR
comp=N,602nm,28.3s,MS5.3
XAN LR LR
comp=E,379nm,29.5s,MS5.3
XAN LR LR
comp=Z,1μm,28.3s,MS5.6
GTA Gaotai 144.46 106 PKP PKPdf 13 54 34.5 -1.0
GTA APKP 13 54 43.3
GTA SS SS 14 16 41.1 +2.5
GTA PP PP
comp=Z,225nm,8.4s
GTA LR LR
comp=N,635nm,22.8s,MS5.4
GTA LR LR
comp=E,516nm,25.5s,MS5.4
GTA LR LR
comp=Z,1μm,25.9s,MS5.5
SSE Sheshan 145.99 140 PKP PKPdf 13 54 40.8 +2.6
SSE PP PP 13 58 06.5 +6.3
SSE SS SS 14 17 00.8 +4.8
SSE LR LR
comp=N,421nm,27.0s,MS5.3
SSE LR LR
comp=E,548nm,27.0s,MS5.3
SSE LR LR
comp=Z,876nm,29.4s,MS5.4
NJ2 Nanjing 146.10 136 *e*PKP PKPdf 13 54 42.0 +3.6
NJ2 PKP2 PKPab 13 54 46.1 +6.3
NJ2 PP PP 13 58 10.0 +9.1
NJ2 PKS 13 58 16.0
NJ2 SKS SKSdf 14 01 46.0 -2.3
NJ2 SKKS SKKSac 14 04 55.0 +0.7
NJ2 PP PP
comp=Z,540nm,9.5s
NJ2 LR LR
comp=N,1μm,26.0s,MS5.9
NJ2 LR LR
comp=E,2μm,22.7s,MS5.9
NJ2 LR LR
comp=Z,3μm,26.1s,MS5.9
INK Inuvik 147.14 317 PKPbc PKPbc 13 54 39.3 -3.0
comp=Z,27nm,0.8s,baz=115,slow=3.3,SNR=15
INK Inuvik 147.14 317 PKIKP PKPdf 13 54 39.3 -0.8
INK pmax pmax
comp=Z,27nm,0.8s
INK Inuvik 147.14 317 *e*PKPdf PKPdf 13 54 39.8 -0.3
DAWY Dawson 147.21 308 *e*PKPdf PKPdf 13 54 39.0 -1.2
NVS Novosibirsk 147.24 72 *e*PKP2 PKPab 13 54 41.8 -2.5
NVS pmax pmax
comp=N,117nm,1.6s
NVS pmax pmax
comp=Z,260nm,1.6s
NVS pmax pmax
comp=E,99nm,1.7s
ZAL Zalesovo 147.43 74 PKPbc PKPbc 13 54 43.0 0.0
comp=E,6.3nm,0.8s,baz=207,slow=2.9,SNR=19
ZAL Zalesovo 147.43 74 PKP2 PKPab 13 54 43.0 -2.0
ZAL pmax pmax
comp=Z,6.0nm,0.8s
EYAK Cordova Ski Ar 147.99 300 PKPbc PKPbc 13 54 45.5 +0.9
EGAK Eagle 148.22 309 *e*PKPdf PKPdf 13 54 41.7 -0.2
TIA Tai'an 149.23 130 *e*PKP PKPbc 13 54 47.3 -0.5
KDAK Kodiak Island 149.54 292 PKPbc PKPbc 13 54 47.9 -0.7
comp=Z,52nm,1.2s,baz=148,slow=7.0,SNR=7.2
SLKM Skilak Lake 149.89 298 PKP2 PKPbc 13 54 52.0 +2.6
SLKM Skilak Lake 149.89 298 PKPbc PKPbc 13 54 49.9 +0.5
PMR Palmer 149.94 300 PKP2 PKPbc 13 54 49.6 +0.1
PMR Palmer 149.94 300 *e*PKPbc PKPbc 13 54 49.5 0.0

BTO	**Baotou**	**150.07**	**116**	*e*PKP	PKPbc	13 54 50.5	+0.6	
BJT	**Baijiatuan**	**152.17**	**125**	*e*PKIKP	PKPbc	13 54 55.4	+0.6	
BJI	**Beijing**	**152.19**	**125**	PKP	PKPdf	13 54 51.4	+3.3	
BJI				PP	PP	13 58 45.8	+9.5	
BJI				SKKS	SKKSac	14 05 29.9	+1.9	
BJI				PP	PP			
	comp=Z,383nm,6.8s							
BJI				LR	LR			
	comp=N,581nm,21.6s,MS5.5							
BJI				LR	LR			
	comp=E,487nm,20.7s,MS5.5							
BJI				LR	LR			
	comp=Z,896nm,28.1s							
KRAR	**Krasnoyarsk**	**152.43**	**76**	*i* PKIKP	PKPbc	13 54 52.5	-2.8	
SVW2	**Sparrevohn**	**152.49**	**296**	*e*PKPbc	PKPbc	13 54 56.5	+1.0	
DL2	**Dalian**	**153.25**	**134**	⇑PKP	PKPdf	13 54 53.4	+3.7	
DL2				PKP2	PKPab	13 55 12.6	+3.6	
DL2				PP	PP	13 58 47.1	+4.8	
DL2				SS	SS	14 18 23.5	+6.3	
DL2				PP	PP			
	comp=Z,170nm,4.4s							
DL2				LR	LR			
	comp=N,370nm,21.9s,MS5.2							
DL2				LR	LR			
	comp=E,160nm,21.7s,MS5.2							
DL2				LR	LR			
	comp=Z,490nm,22.7s,MS5.3							
TTA	**Tatalina**	**153.42**	**300**	*e*PKIKP	PKPbc	13 54 57.5	0.0	
IMA2	**Indian Mountai**	**153.55**	**307**	*e*PKPdf	PKPdf	13 54 51.2	+1.1	
MOY	**Mondy**	**153.86**	**90**	*e*PKIKP	PKPdf	13 54 54.2	+3.7	
SONM	**Songino Array**	**153.94**	**102**	PKP	PKPdf	13 54 51.9	+1.2	
	comp=Z,1.7nm,0.8s,baz=202,slow=1.3,SNR=12							
SONM				PKPbc	PKPbc	13 54 58.9	+0.3	
	comp=Z,2.5nm,0.6s,baz=213,slow=2.9,SNR=13							
ZAK	**Zakamensk**	**154.16**	**95**	*e*PKIKP	PKPdf	13 54 52.1	+1.1	
ZAK				pmax	pmax			
	comp=Z,12nm,2.0s							
ZAK				pmax	pmax			
	comp=Z,9.0nm,1.3s							
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.4s							
MJAR	**Matsushiro Arr**	**155.12**	**165**	PKP	PKPdf	13 54 51.9	-0.4	
	comp=Z,0.2nm,0.3s,baz=81,slow=16,SNR=2.7							
MJAR				PKPbc	PKPdf	13 55 00.8	+8.5	
	comp=Z,2.4nm,1.0s,baz=154,slow=2.3,SNR=10							
MJAR	**Matsushiro Arr**	**155.12**	**165**	PKP	PKPdf	13 54 51.9	-0.4	
MJAR				PKPbc	PKPdf	13 55 00.8	+8.5	
MAJO	**Matsushiro**	**155.12**	**165**	*e*PKIKP	PKPdf	13 55 00.4	+8.1	
MAT	**Matsushiro**	**155.12**	**165**	*e*PKP	PKPdf	13 54 59.9	+7.6	
MAT	**Matsushiro**	**155.12**	**165**	PKP	PKPdf	13 55 00.0	+7.7	
MAT				LR	LR			
	comp=Z,710nm,20.0s,MS5.5							
TLY	**Talaya**	**155.16**	**93**	*i* PKIKP	PKPdf	13 54 54.1	+1.7	
TLY				*e*		13 58 53.6		
TLY				pmax	pmax			
	comp=Z,22nm,1.7s							
IRK	**Irkutsk**	**155.81**	**92**	*e*PKIKP	PKPdf	13 54 52.8	-0.4	
IRK				*e*		13 59 03.0		
IRK				pmax	pmax			
	comp=Z,49nm,2.4s							
CN2	**Changchun**	**158.92**	**135**	*e*PKP	PKPdf	13 54 55.3	-1.8	
CIT	**Chita**	**160.18**	**102**	*e*PKIKP	PKPdf	13 55 00.8	+2.2	
VLA	**Vladivostok**	**160.26**	**148**	PKIKP	PKPdf	13 55 06.0	+7.3	
MDJ	**Mudanjiang**	**161.00**	**142**	PKP	PKPdf	13 55 00.4	+0.9	
MDJ				PP	PP	13 59 26.8	+1.8	
MDJ				SS	SS	14 19 42.9	+2.8	
MDJ				PP	PP			
	comp=Z,189nm,6.9s							
MDJ				LR	LR			
	comp=N,833nm,27.0s							
MDJ				LR	LR			
	comp=E,586nm,20.9s							
MDJ				LR	LR			
	comp=Z,1μm,23.3s							
BOD	**Bodaibo**	**163.49**	**87**	*e*PKIKP	PKPdf	13 54 55.4	-6.6	
BOD				pmax	pmax			
	comp=Z,16nm,1.8s							
BOD				pmax	pmax			
	comp=Z,16nm,1.4s							
KLR	**Kul'dur**	**165.78**	**139**	*e*PKIKP	PKPdf	13 55 02.8	-1.2	
KLR				pmax	pmax			
	comp=Z,120nm,2.2s							
YSS	**Yuzh-Sakhalins**	**165.90**	**171**	*i* PKIKP	PKPdf	13 55 04.0	-0.1	
YSS				*e*		13 55 11.5		
YSS				*e*PPS		14 13 38.0		
YSS				*e*SS	SS	14 20 33.0	+2.2	
BILL	**Bilibino**	**168.76**	**318**	*e*PKIKP	PKPdf	13 55 04.2	-2.0	
BILL				*i*		13 55 08.7		
BILL				pmax	pmax			
	comp=Z,3.0nm,1.1s							
YAK	**Yakutsk**	**172.09**	**75**	*e*PKIKP	PKPdf	13 55 07.7	-0.3	
YAK				pmax	pmax			
	comp=N,5.0nm,1.4s							
YAK				pmax	pmax			
	comp=E,6.0nm,1.4s							
YAK				pmax	pmax			
	comp=Z,14nm,1.4s							

*ISCJB **20** 14:05:45.6±5.3, 46S±03×1528E±04, h89km±38km, mb3.8/6, Error ellipse: s-maj=69.2km s-min=32.3km az=60.4*

*NEIC **20** 14:05:48.0±4.4, 456S×15272E, h97km±26km, mb4.3/2, Error ellipse: s-maj=62.1km s-min=25.6km az=106.0*

*IDC **20** 14:05:49.7±8.2, 461S×15266E, h109km±56km, mb3.4/4, mb1 3.6/5, mb1mx3.4/15, mbtmp3.8/5, Error ellipse: s-maj=90.5km s-min=38.7km az=109.0*

ISC 20 14:05:47.1±4.9, 46S±03×1529E±04, h91km±32km, n12, σ0≤58/13, mb3.8/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.41**	**229**	P	**Pn**	**14 07 32.5**	**0.0**
	0.5nm,0.3s,baz=90,slow=12,SNR=4.2						
PMG				S	**Sn**	**14 08 55.3**	**+0.3**
	5.4nm,0.3s,baz=156,slow=15,SNR=9.6						
PMG	**Port Moresby**	**7.41**	**229**	*e*Pn	**Pn**	**14 07 32.2**	**-0.3**
PMG				S	**Sn**	**14 08 55.3**	**+0.3**
KAKA	**Kakadu**	**21.73**	**247**	*e*P	**P**	**14 10 30.9**	**+0.1**
	13nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**23.62**	**228**	*e*P	**P**	**14 10 48.9**	**-0.8**
	3.7nm,0.4s,mb4.1						
WB2	**Warramunga Arr**	**23.62**	**228**	*e*P	**P**	**14 10 49.6**	**-0.2**
WRA	**Warramunga Arr**	**23.63**	**228**	P	**P**	**14 10 50.1**	**+0.3**
	1.6nm,0.4s,mb3.7,baz=52,slow=9.7,SNR=16						
AS31	**Alice Springs**	**26.34**	**222**	*e*P	**P**	**14 11 15.8**	**+1.3**
ASAR	**Alice Springs**	**26.35**	**222**	P	**P**	**14 11 14.2**	**-0.3**
	0.6nm,0.6s,mb3.2,baz=51,slow=9.3,SNR=12						
FITZ	**Fitzroy Crossi**	**29.81**	**241**	P	**P**	**14 11 44.9**	**-0.5**
	0.9nm,0.3s,mb3.9,baz=46,slow=10.0,SNR=15						
FITZ	**Fitzroy Crossi**	**29.81**	**241**	*e*P	**P**	**14 11 44.4**	**-1.0**
	38nm,5.0s						
MKAR	**Makanchi Array**	**80.20**	**319**	P	**P**	**14 17 47.9**	**+0.4**
	0.2nm,0.5s,mb3.2,baz=89,slow=7.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.29**	**289**	PKPbc	PKPbc	14 25 28.3	+0.7
	0.6nm,0.6s,baz=82,slow=1.6,SNR=6.3						

*IDC **20** 14:10:36.3±7.7, 3620S×17892E, h54km±73km, mb3.5/2, mb1 3.9/3, mb1mx3.6/12, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=68.5km s-min=52.2km az=142.0*

*ISCJB **20** 14:10:38.8±1.1, 3661S±007×1788E±01.0, h132km±11km, mb3.7/2, Error ellipse: s-maj=15.6km s-min=9.3km az=116.4*

*NEIC **20** 14:10:38.7, 3630S×17887E, h21km, ML4.4(WEL), After WEL.*

*WEL **20** 14:10:39.0±0.8, 3631S×17889E, h33km, ML4.4/17, Error ellipse: s-maj=5.6km s-min=4.5km az=0.0*

ISC 20 14:10:39.7±1.1, 3656S±007×1789E±01, h103km±12km, n71, σ1≤38/80, mb3.8/2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.11**	**205**	P	**Pn**	**14 11 00.9**	**-0.6**
MXZ	**Matakaoa Point**	**1.11**	**205**	P*	**Pn**	**14 11 00.6**	**-1.0**
PUZ	**Puketiti**	**1.60**	**199**	P	**Pn**	**14 11 08.5**	**+1.2**
PUZ	**Puketiti**	**1.60**	**199**	PN	**Pn**	**14 11 08.3**	**+1.0**
WIZ	**White Island**	**1.68**	**234**	P	**Pn**	**14 11 08.0**	**-0.3**
WIZ	**White Island**	**1.68**	**234**	P*	**Pn**	**14 11 07.6**	**-0.7**
MWZ	**Matawai**	**2.08**	**211**	P	**Pn**	**14 11 14.8**	**+1.4**
MWZ	**Matawai**	**2.08**	**211**	P*	**Pn**	**14 11 14.7**	**+1.3**
URZ	**Urewera**	**2.22**	**219**	P	**Pn**	**14 11 16.1**	**+0.9**
	24nm,0.3s,baz=21,slow=6.8,SNR=100						
URZ				S	**Sn**	**14 11 44.5**	**+2.2**
	41nm,0.3s,baz=302,slow=23,SNR=9.4						
URZ	**Urewera**	**2.22**	**219**	P	**Pn**	**14 11 16.1**	**+0.9**
URZ	**Urewera**	**2.22**	**219**	P*	**Pn**	**14 11 15.9**	**+0.7**
MYRZ	**Mayor Island**	**2.25**	**250**	P*	**Pn**	**14 11 14.8**	**-0.8**
MYRZ				S*	**Sn**	**14 11 42.3**	**-0.8**
EDRZ	**Edgecumbe**	**2.32**	**227**	P	**Pn**	**14 11 18.0**	**+1.5**
EDRZ	**Edgecumbe**	**2.32**	**227**	P*	**Pn**	**14 11 17.9**	**+1.5**
TGRZ	**Tauranga**	**2.41**	**240**	P	**Pn**	**14 11 17.9**	**+0.2**
TGRZ				S	**Sn**	**14 11 48.3**	**+1.4**
TGRZ	**Tauranga**	**2.41**	**240**	P*	**Pn**	**14 11 17.8**	**+0.1**
TGRZ				S*	**Sn**	**14 11 47.7**	**+0.8**
LIRZ	**Lichensteins R**	**2.47**	**234**	*e*P*	**Pn**	**14 11 19.2**	**+0.7**
TAZ	**Tarawera**	**2.54**	**228**	P	**Pn**	**14 11 21.5**	**+2.2**
TAZ	**Tarawera**	**2.54**	**228**	*e*P*	**Pn**	**14 11 21.5**	**+2.1**
KUZ	**Kuaotunu**	**2.56**	**265**	P	**Pn**	**14 11 18.5**	**-1.2**
KUZ				S	**Sn**	**14 11 48.6**	**-1.9**
KUZ	**Kuaotunu**	**2.56**	**265**	PN	**Pn**	**14 11 18.4**	**-1.3**
KUZ				SN	**Sn**	**14 11 46.3**	**-4.2**
KUZ				SN	**Sn**	**14 11 48.1**	**-2.4**
KARZ	**Kaharoa**	**2.57**	**235**	P	**Pn**	**14 11 20.7**	**+0.9**
KARZ	**Kaharoa**	**2.57**	**235**	P*	**Pn**	**14 11 20.1**	**+0.3**
KNZ	**Kokohu**	**2.65**	**201**	P	**Pn**	**14 11 20.9**	**+0.1**
KNZ	**Kokohu**	**2.65**	**201**	PN	**Pn**	**14 11 20.9**	**+0.1**
PATZ	**Paeroa**	**2.78**	**228**	P	**Pn**	**14 11 25.2**	**+2.6**
PATZ	**Paeroa**	**2.78**	**228**	P*	**Pn**	**14 11 24.4**	**+1.8**
TOZ	**Tahuroa Road**	**2.96**	**246**	*e*P	**Pn**	**14 11 25.5**	**+0.6**
TOZ				S	**Sn**	**14 12 00.0**	**+0.2**
TOZ	**Tahuroa Road**	**2.96**	**246**	P*	**Pn**	**14 11 25.2**	**+0.3**
TOZ				S*	**Sn**	**14 11 59.8**	**0.0**
MKAZ	**Moumakai**	**3.05**	**258**	P	**Pn**	**14 11 26.1**	**0.0**
MKAZ	**Moumakai**	**3.05**	**258**	PN	**Pn**	**14 11 26.1**	**0.0**
MTAZ	**Motutapu**	**3.22**	**265**	P	**Pn**	**14 11 26.4**	**-2.0**
OTAZ	**Otara**	**3.22**	**262**	P	**Pn**	**14 11 28.9**	**+0.5**
OTAZ	**Otara**	**3.22**	**262**	PN	**Pn**	**14 11 28.7**	**+0.3**
BKZ	**Black Stump Fm**	**3.23**	**215**	P*	**Pn**	**14 11 28.6**	**+0.1**
KAAZ	**Kauri Point**	**3.38**	**264**	P	**Pn**	**14 11 31.8**	**+1.2**
KAAZ	**Kauri Point**	**3.38**	**264**	PN	**Pn**	**14 11 31.7**	**+1.1**
WTAZ	**Waiatarua**	**3.50**	**263**	P	**Pn**	**14 11 32.5**	**+0.4**
TUVZ	**Tukino**	**3.73**	**223**	P	**Pn**	**14 11 36.9**	**+1.6**
TUVZ	**Tukino**	**3.73**	**223**	*e*P*	**Pn**	**14 11 36.8**	**+1.5**
WCZ	**Waipu Caves**	**3.73**	**278**	P	**Pn**	**14 11 34.5**	**-0.8**
WCZ	**Waipu Caves**	**3.73**	**278**	PN	**Pn**	**14 11 34.5**	**-0.8**
HIZ	**Hauiti**	**3.76**	**238**	*e*PN	**Pn**	**14 11 37.7**	**+2.0**
FWVZ	**Far West T-bar**	**3.78**	**224**	*e*P	**Pn**	**14 11 37.5**	**+1.6**
MOVZ	**Moawhango**	**3.78**	**220**	P	**Pn**	**14 11 36.1**	**+0.2**
MOVZ	**Moawhango**	**3.78**	**220**	*e*P*	**Pn**	**14 11 35.5**	**-0.4**
DRZ	**Dome Shelter**	**3.79**	**223**	P	**Pn**	**14 11 40.4**	**+4.4**
DRZ	**Dome Shelter**	**3.79**	**223**	*e*P*	**Pn**	**14 11 39.9**	**+3.9**
WNVZ	**Wahianoa**	**3.80**	**222**	P	**Pn**	**14 11 37.2**	**+1.0**
WNVZ	**Wahianoa**	**3.80**	**222**	*e*P*	**Pn**	**14 11 36.8**	**+0.5**
PXZ	**Pawanui**	**3.82**	**204**	*e*PN	**Pn**	**14 11 34.7**	**-1.8**
TSZ	**Takapari Road**	**4.19**	**213**	*e*PN	**Pn**	**14 11 40.7**	**-0.8**
WAZ	**Wanganui**	**4.44**	**223**	*e*PN	**Pn**	**14 11 44.7**	**-0.1**
OUZ	**Omahuta**	**4.51**	**286**	PN	**Pn**	**14 11 44.6**	**-1.1**
MRZ	**Mangatainoka R**	**4.85**	**211**	*e*PN	**Pn**	**14 11 47.1**	**-3.3**
MRZ				SN	**Sn**	**14 12 43.8**	**-1.6**
MTW	**Mount Morrison**	**5.30**	**209**	P	**Pn**	**14 11 54.2**	**-2.3**
MTW	**Mount Morrison**	**5.30**	**209**	*e*PN	**Pn**	**14 11 53.8**	**-2.7**
KIW	**Kapiti Island**	**5.31**	**215**	P	**Pn**	**14 11 54.8**	**-1.8**
KIW	**Kapiti Island**	**5.31**	**215**	*e*PN	**Pn**	**14 11 54.7**	**-1.9**
CAW	**Cannon Point**	**5.44**	**212**	P	**Pn**	**14 11 56.7**	**-1.7**
CAW	**Cannon Point**	**5.44**	**212**	*e*PN	**Pn**	**14 11 55.4**	**-2.9**
SNZO	**South Karori**	**5.76**	**213**	*e*PN	**Pn**	**14 11 59.1**	**-3.6**
TCW	**Tory Channel**	**5.88**	**216**	P	**Pn**	**14 12 01.7**	**-2.7**
TCW	**Tory Channel**	**5.88**	**216**	*e*PN	**Pn**	**14 12 00.6**	**-3.8**
NNZ	**Nelson**	**6.34**	**221**	*e*PN	**Pn**	**14 12 07.8**	**-2.8**
THZ	**Tophouse**	**6.98**	**220**	*e*P	**Pn**	**14 12 19.0**	**-0.2**
THZ	**Tophouse**	**6.98**	**220**	*e*PN	**Pn**	**14 12 16.3**	**-2.9**
KHZ	**Kahutara**	**7.17**	**214**	*e*PN	**Pn**	**14 12 18.6**	**-3.2**
ASAR	**Alice Springs**	**40.65**	**276**	P	**P**	**14 18 12.3**	**+2.8**
	1.1nm,0.5s,mb3.9,baz=117,slow=7.7,SNR=34						
WRA	**Warramunga Arr**	**42.20**	**281**	P	**P**	**14 18 22.7**	**+0.4**
	0.6nm,0.4s,mb3.7,baz=120,slow=7.7,SNR=11						
FINES	**FINESS Array B**	**149.80**	**334**	PKPbc	PKPbc	14 30 17.4	-0.2
	0.5nm,0.6s,baz=28,slow=6.3,SNR=2.9						

*LDG **20** 14:18:11.1±0.7, 1402S×17129E, h610km, Mb4.0/2, Error ellipse: s-maj=118.4km s-min=6.4km az=109.0*

*ISCJB **20** 14:18:13.7±0.9, 1395S±008×17032E±008, h637km±12km, mb4.2/32, Error ellipse: s-maj=13.5km s-min=10.7km az=114.0*

*NEIC **20** 14:18:14.0±1.2, 1391S×17037E, h628km±13km, mb4.5/13, Error ellipse: s-maj=10.9km s-min=9.5km az=153.0*

*BJI **20** 14:18:14.0, 1390S×17040E, h627km, mb4.3*

*IDC **20** 14:18:15.8±1.5, 1403S×17031E, h650km±18km, mb3.5/20, mb1 3.7/21, mb1mx3.7/24, mbtmp4.5/21, Error ellipse: s-maj=14.1km s-min=10.3km az=154.0*

ISC 20 14:18:14.6±0.9, 1397S±008×17037E±007, h631km±11km, n112, σ0≤95/53, mb4.2/31, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKM	**Butte a Klehm**	**4.21**	**209**	*i* P	**P**	**14 19 43.3**	**-0.4**
DZM	**Mont Dzumac**	**8.88**	**204**	*e*P	**P**	**14 20 22.9**	**-0.2**
DZM				*e*S	**S**	**14 22 07.0**	**-1.6**
DZM	**Mont Dzumac**	**8.88**	**204**	P	**P**	**14 20 23.5**	**+0.4**
	4.5nm,0.3s,baz=48,slow=10,SNR=44						
DZM				S	**S**	**14 22 10.2**	**+1.7**
	0.5nm,0.3s,baz=272,slow=23,SNR=3.9						
HNR	**Honiara**	**11.16**	**293**	*e*P	**P**	**14 20 36.7**	**-8.5**
ARMA	**Armidale**	**23.80**	**223**	*e*P	**P**	**14 22 41.8**	**+1.2**
CTA	**Charters Tower**	**23.84**	**252**	P	**P**	**14 22 41.6**	**+0.6**
	12nm,0.8s,mb4.6,baz=76,slow=8.7,SNR=7.8						
URZ	**Urewera**	**24.92**	**167**	P	**P**	**14 22 49.8**	**-0.8**
	13nm,0.7s,mb4.7,baz=38,slow=2.4,SNR=8.5						
CNB	**Canberra Magne**	**28.45**	**218**	*e*P	**P**	**14 23 21.8**	**+0.5**
	42nm,0.8s,mb5.1						
RPZ	**Rata Peaks**	**29.65**	**179**	P	**P**	**14 23 29.6**	**-2.0**
	12nm,0.8s,mb4.5,baz=62,slow=10.0,SNR=3.2						
STKA	**Stephens Creek**	**31.79**	**231**	P	**P**	**14 23 50.8**	**+1.0**
	21nm,0.6s,mb5.0,baz=55,slow=7.5,SNR=48						
STKA				PcP	PcP	14 26 19.7	-0.9
	1.8nm,0.7s,baz=100,slow=4.5,SNR=2.9						
STKA	**Stephens Creek**	**31.79**	**231**	*e*P	**P**	**14 23 50.8**	**+1.0**
	19nm,0.7s,mb4.8						
TOO	**Toolangi**	**32.28**	**219**	*e*P	**P**	**14 23 54.6**	**+0.7**
	28nm,0.6s,mb5.1						
WB2	**Warramunga Arr**	**34.92**	**255**	*e*P	**P**	**14 24 15.2**	**-0.7**
WRAB	**Tennant Creek**	**34.92**	**255**	*e*P	**P**	**14 24 15.4**	**-0.5**
	29nm,1.1s,mb4.8						
WRA	**Warramunga Arr**	**34.93**	**255**	P	**P**	**14 24 15.4**	**-0.6**
	4.9nm,0.5s,mb4.4,baz=80,slow=6.0,SNR=107						
WRA				PcP	PcP	14 26 29.9	+0.2
	2.3nm,0.8s,baz=88,slow=3.0,SNR=5.9						
WRA				S	**S**	**14 29 02.2**	**-2.4**
	1.6nm,0.9s,baz=89,slow=15,SNR=6.8						
AS31	**Alice Springs**	**35.75**	**249**	*e*P	**P**	**14 24 22.5**	**-0.2**
ASAR	**Alice Springs**	**35.75**	**249**	P	**P**	**14 24 22.6**	**-0.1**
	17nm,0.6s,mb4.8,baz=72,slow=9.7,SNR=320						
ASAR				PcP	PcP	14 26 32.9	+0.7
	2.2nm,0.7s,baz=95,slow=2.3,SNR=8.5						
ASAR				S	**S**	**14 29 14.9**	**-1.9**
	2.0nm,0.6s,baz=79,slow=16,SNR=11						
KAKA	**Kakadu**	**36.91**	**267**	*e*P	**P**	**14 24 31.8**	**-0.4**
	9.6nm,0.6s,mb4.5						
FORT	**Forrest**	**42.27**	**239**	*e*P	**P**	**14 25 14.7**	**-0.1**
	18nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**43.11**	**258**	P	**P**	**14 25 22.2**	**+0.8**
	3.3nm,0.7s,mb4.0,baz=111,slow=12,SNR=15						
FITZ	**Fitzroy Crossi**	**43.11**	**258**	*e*P	**P**	**14 25 22.0**	**+0.6**
	7.5nm,0.9s,mb4.2						
MBWA	**Marble Bar**	**48.65**	**254**	*e*P	**P**	**14 26 03.5**	**+0.5**
	6.5nm,0.6s,mb4.2						
NWAO	**Narrogin (SRO)**	**51.72**	**239**	P	**P**	**14 26 24.9**	**-0.4**
	10nm,1.0s,mb4.1,baz=150,slow=6.4,SNR=5.5						
PALP	**Palanan**	**56.49**	**302**	*e*P	**P**	**14 27 03.7**	**+5.0**
CAUP	**Cauayan**	**56.94**	**301**	*e*P	**P**	**14 27 04.5**	**+2.8**
MJAR	**Matsushiro Arr**	**58.69**	**330**	P	**P**	**14 27 13.0**	**-0.5**
	1.5nm,0.4s,mb3.5,baz=160,slow=7.3,SNR=11						
MAT	**Matsushiro**	**58.70**	**330**	P	**P**	**14 27 12.6**	**-0.9**
MAT	**Matsushiro**	**58.70**	**330**	P	**P**	**14 27 13.0**	**-0.5**
ASAJ	**Asahikawa**	**63.11**	**338**	P	**P**	**14 27 43.4**	**+1.1**
	6.6nm,0.8s,mb4.0,baz=272,slow=19,SNR=7.8						
VNDA	**Vanda**	**63.70**	**182**	P	**P**	**14 27 46.2**	**+0.2**
	1.0nm,0.5s,mb3.4,baz=44,slow=8.9,SNR=3.5						
VNDA	**Vanda**	**63.70**	**182**	*e*P	**P**	**14 27 45.4**	**-0.7**
	1.0nm,0.6s,mb3.3						
SBA	**Scott Base**	**63.92**	**181**	*e*P	**P**	**14 27 48.6**	**+1.2**
PSI	**Prapat**	**72.73**	**277**	P	**P**	**14 28 40.0**	**-0.4**
	6.5nm,0.8s,mb4.2,baz=101,slow=3.4,SNR=9.1						
QSPA	**South Pole Qui**	**76.05**	**180**	*e*P	**P**	**14 28 59.4**	**+0.4**
	6.4nm,0.8s,mb4.1						
PBA	**Port Blair**	**81.05**	**284**	*e*P	x	14 28 27.7	
PBA				*ex*	x	14 28 41.7	
	comp=Z,97nm,1.2s						
PBA				*e*S	x	14 32 41.0	
YBH	**Yreka Blue Hor**	**82.77**	**44**	P	**P**	**14 29 34.8**	**+0.7**
	comp=Z,3.3nm,0.8s,mb3.9,baz=262,slow=4.6,SNR=7.2						
CMB	**Columbia Colle**	**82.85**	**48**	*e*P	**P**	**14 29 34.0**	**-0.5**
	comp=Z,6.4nm,1.1s,mb4.1						
MAW	**Mawson**	**83.70**	**202**	P	**P**	**14 29 39.4**	**+0.7**
	comp=Z,2.6nm,0.9s,mb3.8,baz=124,slow=9.1,SNR=4.1						
SONM	**Songino Array**	**83.70**	**322**	P	**P**	**14 29 39.4**	**+0.7**
	comp=Z,2.1nm,1.1s,mb3.6,baz=129,slow=5.0,SNR=4.6						
MTUM	**Tungsten Hills**	**83.91**	**49**	P	**P**	**14 29 40.7**	**+1.0**
GTA	**Gaotai**	**84.34**	**313**	*e*P	**P**	**14 29 42.8**	**+1.0**
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.2						
NVAR	**Mina Array Bea**	**84.51**	**48**	P	**P**	**14 29 42.9**	**+0.2**
	comp=Z,3.4nm,0.9s,mb4.0,baz=216,slow=5.7,SNR=20						
COLA	**College**	**84.71**	**17**	*e*P	**P**	**14 29 42.0**	**-1.7**
	comp=Z,5.8nm,1.1s,mb4.1						
EGAK	**Eagle**	**86.61**	**19**	*e*P	**P**	**14 29 51.2**	**-1.4**
WUAZ	**Wupatki**	**88.71**	**53**	*e*P	**P**	**14 30 03.9**	**+1.5**
	comp=Z,10nm,1.1s,mb4.6						
NEW	**Newport**	**89.05**	**40**	P	**P**	**14 30 03.0**	**-1.0**
	comp=Z,2.2nm,0.9s,mb4.0,baz=189,slow=6.0,SNR=3.1						
HLID	**Hailey**	**89.12**	**45**	*e*P	**P**	**14 30 04.7**	**+0.4**
	comp=Z,4.0nm,1.2s,mb4.1						
PDAR	**Pinedale Array**	**92.23**	**47**	P	**P**	**14 30 17.3**	**-1.4**
	comp=Z,0.4nm,0.5s,mb3.7,baz=212,slow=5.8,SNR=4.4						
ANMO	**Albuquerque**	**92.40**	**55**	P	**P**	**14 30 19.2**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=251,slow=5.1,SNR=3.3						
ANMO	**Albuquerque**	**92.40**	**55**	P	**P**	**14 30 19.2**	**-0.3**
MKAR	**Makanchi Array**	**98.74**	**316**	P	Pdif	14 30 48.4	+0.4
	comp=Z,0.3nm,0.3s,baz=93,slow=7.3,SNR=6.5						
KEV	**Kevo**	**119.74**	**346**	*ep*	PKPdf	14 35 51.0	-3.4
	comp=Z,5.4nm,0.8s						
ARCES	**ARCESS Array B**	**120.25**	**346**	PKP	PKPdf	14 35 53.9	-1.4
	comp=Z,2.3nm,0.3s,baz=78,slow=2.5,SNR=72						
ARCES	**ARCESS Array B**	**120.25**	**346**	PKP	PKPdf	14 35 53.9	-1.4
JOF	**Joensuu**	**123.30**	**339**	*ep*	PKPdf	14 35 59.1	-2.1
	comp=Z,3.5nm,0.5s						
KAF	**Kangasniemi**	**125.54**	**340**	*ep*	PKPdf	14 36 03.7	-1.8
	comp=Z,1.2nm,0.4s						
BOSA	**Boshof**	**125.87**	**218**	PKP	PKPdf	14 36 06.9	+0.8
	comp=Z,4.5nm,0.9s,baz=100,slow=6.4,SNR=4.5						
FINES	**FINESS Array B**	**126.10**	**340**	PKP	PKPdf	14 36 05.3	-1.2
	comp=Z,0.9nm,0.4s,baz=116,slow=1.4,SNR=9.1						
NOA	**NORSAR Array B**	**130.63**	**347**	PKP	PKPdf	14 36 13.9	-1.3
	comp=Z,0.4nm,0.6s,baz=32,slow=3.0,SNR=3.4						
KMBO	**Kilima Mbogo**	**131.21**	**256**	PKP	PKPdf	14 36 17.9	+1.6
	comp=Z,1.3nm,0.7s,baz=47,slow=16,SNR=3.8						
BRTR	**Keskin Array B**	**134.26**	**312**	PKP	PKPdf	14 36 22.4	+0.4
	comp=Z,0.5nm,0.5s,baz=92,slow=3.0,SNR=4.4						
GERES	**GERESS Array B**	**140.26**	**336**	PKP	PKPdf	14 36 33.9	+0.8
	comp=Z,0.8nm,0.7s,baz=26,

s-min=12.4km az=72.0
*NEIC **20** 14:23:47.0±0.6,2499N×12333E,h120km±6km,mb4.5/2, Error ellipse: s-maj=10.3km s-min=8.3km az=60.0*
*JMA **20** 14:23:48.1±0.1,2489N×12333E,h109km±2km,M4.0*

ISC 20 14:23:46.9±0.3,2496N±004×12334E±003,h117km±3km, n46,σ0996/63,mb4.0/12,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.57**	**212**	P		**Pn**	**14 24 05.0**	**-0.1**
YOJ				S		**Sn**	**14 24 17.6**	**-1.1**
IRIF	**Iriomote-Funau**	**0.71**	**150**	P		**Pn**	**14 24 05.9**	**-0.2**
IRIF				*e*S		**Sn**	**14 24 20.0**	**-0.5**
JIJ	**Ishigaki jima**	**0.94**	**129**	P		**Pn**	**14 24 08.1**	**0.0**
JIJ				S		**Sn**	**14 24 23.0**	**-1.1**
JKRS	**Kuro-shima**	**0.94**	**139**	P		**Pn**	**14 24 08.4**	**+0.3**
JKRS				S		**Sn**	**14 24 23.8**	**-0.3**
HATJ	**Hateruma jima**	**0.99**	**155**	P		**Pn**	**14 24 08.7**	**+0.1**
HATJ				*e*S		**Sn**	**14 24 23.8**	**-1.2**
JTJ	**Tarama**	**1.28**	**104**	P		**Pn**	**14 24 12.4**	**+0.8**
JTJ				S		**Sn**	**14 24 30.5**	**+0.2**
TATO	**Taipei**	**1.68**	**271**	*e*Pn		**Pn**	**14 24 17.2**	**+0.8**
TATO				*e*Sn		**Sn**	**14 24 39.1**	**+0.3**
NACB	**Ninganchiao**	**1.77**	**244**	*e*Pn		**Pn**	**14 24 16.4**	**-1.0**
JMJ	**Miyako jima 2**	**1.78**	**94**	P		**Pn**	**14 24 18.6**	**+1.1**
JMJ				S		**Sn**	**14 24 41.6**	**+0.8**
YHNB	**Yeheng**	**1.81**	**261**	*e*Pn		**Pn**	**14 24 18.7**	**+0.8**
YHNB				*e*Sn		**Sn**	**14 24 41.8**	**+0.4**
JOGS	**Gusukube**	**1.89**	**95**	P		**Pn**	**14 24 20.2**	**+1.4**
JOGS				*e*S		**Sn**	**14 24 44.4**	**+1.2**
JKE	**Kume jima 2**	**3.40**	**66**	P		**Pn**	**14 24 39.9**	**+1.6**
JKE				*e*S		**Sn**	**14 25 19.1**	**+1.0**
JAGN	**Aguni-jima**	**3.88**	**64**	P		**Pn**	**14 24 45.8**	**+1.1**
JAGN				*e*S		**Sn**	**14 25 28.6**	**-0.9**
JJT2	**Tamagusuku 2**	**4.15**	**73**	P		**Pn**	**14 24 49.5**	**+1.1**
JJT2				*e*S		**Sn**	**14 25 36.4**	**+0.3**
JIH	**Iheya**	**4.65**	**63**	P		**Pn**	**14 24 55.7**	**+0.6**
JIH				S		**Sn**	**14 25 46.9**	**-1.2**
JOW	**Kunigami**	**4.82**	**66**	P		**Pn**	**14 24 57.4**	**-0.1**
	27nm,0.3s,baz=219,slow=8.0,SNR=217							
JOW				S		**Sn**	**14 25 49.7**	**-2.5**
	14nm,0.3s,baz=133,slow=28,SNR=8.7							
JOW				LR		LR	14 26 32.5	
	comp=Z,181nm,21.5s,baz=232,slow=35							
JOW	**Kunigami**	**4.82**	**66**	P		**Pn**	**14 24 57.4**	**0.0**
JOW				*e*S		**Sn**	**14 25 50.8**	**-1.4**
JOW	**Kunigami**	**4.82**	**66**	P		**Pn**	**14 24 57.4**	**-0.1**
JOW				S		**Sn**	**14 25 49.7**	**-2.5**
JTK	**Tokunoshima**	**5.77**	**60**	P		**Pn**	**14 25 09.5**	**-0.7**
JAM	**Amami Oshima**	**6.58**	**57**	P		**Pn**	**14 25 20.1**	**-1.0**
JMZ	**Minamidaito 2**	**7.18**	**81**	P		**Pn**	**14 25 26.7**	**-2.6**
JMZ				*e*S		**Sn**	**14 26 41.1**	**-8.1**
APYP	**Conner**	**7.32**	**196**	*e*P		**Pn**	**14 25 30.9**	**-0.3**
APYP	**Conner**	**7.32**	**196**	*e*P		**Sn**	**14 26 45.8**	**-6.9**
XAN	**Xi'an**	**15.46**	**309**	P		**Pn**	**14 27 22.9**	**+4.3**
XAN				AMB		AMB		
	comp=Z,7.0nm,1.3s							
LZH	**Lanzhou**	**20.09**	**308**	*e*P		**P**	**14 28 13.5**	**+2.3**
LZH				AMB		AMB		
	comp=Z,14nm,1.0s							
LZH				AMB		AMB		
	comp=Z,134nm,5.3s							
CAL	**Calcutta**	**32.09**	**273**	*ex*		PcP	14 32 50.3	+0.9
MKAR	**Makanchi Array**	**39.18**	**314**	P		**P**	**14 31 03.0**	**-0.3**
	comp=Z,2.3nm,0.5s,mb4.3,baz=99,slow=10,SNR=33							
MKAR				PcP		PcP	14 33 07.7	-2.7
	comp=Z,0.3nm,0.5s,baz=111,slow=5.3,SNR=4.5							
FITZ	**Fitzroy Crossi**	**42.85**	**177**	P		**P**	**14 31 33.2**	**-0.2**
	comp=Z,4.2nm,0.8s,mb4.2,baz=1.4,slow=9.7,SNR=10							
FITZ	**Fitzroy Crossi**	**42.85**	**177**	*e*P		**P**	**14 31 33.0**	**-0.4**
	comp=Z,6.6nm,0.7s,mb4.5							
WRAB	**Tennant Creek**	**45.88**	**166**	*e*P		**P**	**14 31 58.0**	**+0.5**
	comp=Z,7.6nm,0.8s,mb4.5							
WRA	**Warramunga Arr**	**45.89**	**166**	P		**P**	**14 31 58.2**	**+0.7**
	comp=Z,2.3nm,0.3s,mb4.3,baz=347,slow=8.6,SNR=57							
WB2	**Warramunga Arr**	**45.89**	**166**	*e*P		**P**	**14 31 57.9**	**+0.3**
BVAR	**Borovoye Array**	**48.34**	**320**	P		**P**	**14 32 15.8**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.7,baz=108,slow=8.1,SNR=6.1							
BVAR				PcP		PcP	14 33 41.0	-0.4
	comp=Z,1.1nm,0.5s,baz=127,slow=2.7,SNR=8.3							
BVAR				ScP		ScP	14 37 24.2	-1.0
	comp=Z,0.3nm,0.5s,baz=42,slow=2.3,SNR=3.8							
AS31	**Alice Springs**	**49.40**	**167**	*e*P		**P**	**14 32 25.5**	**+0.8**
ASAR	**Alice Springs**	**49.41**	**167**	P		**P**	**14 32 25.9**	**+1.2**
	comp=Z,1.5nm,0.4s,mb4.3,baz=353,slow=7.4,SNR=70							
STKA	**Stephens Creek**	**59.14**	**162**	P		**P**	**14 33 34.1**	**-1.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=40,slow=13,SNR=6.5							
STKA	**Stephens Creek**	**59.14**	**162**	*e*P		**P**	**14 33 33.9**	**-1.3**
JOF	**Joensuu**	**69.00**	**331**	*e*p		**P**	**14 34 37.6**	**-2.1**
FINES	**FINESS Array B**	**71.77**	**330**	P		**P**	**14 34 55.7**	**-0.8**
	comp=Z,0.3nm,0.4s,mb3.5,baz=45,slow=6.2,SNR=5.7							
FINES	**FINESS Array B**	**71.77**	**330**	P		**P**	**14 34 55.7**	**-0.8**
BRTR	**Keskin Array B**	**74.29**	**307**	P		**P**	**14 35 11.9**	**+0.6**
	comp=Z,0.9nm,0.6s,mb3.6,baz=96,slow=5.6,SNR=5.7							
NB2	**NORSAR Subarra**	**78.46**	**333**	P		**P**	**14 35 33.4**	**-1.5**
	comp=Z,0.6nm,0.5s,mb3.6,baz=57,slow=5.3							
NOA	**NORSAR Array B**	**78.46**	**333**	P		**P**	**14 35 34.4**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.3,baz=53,slow=5.5,SNR=4.8							
YKA	**Yellowknife Ar**	**81.49**	**23**	P		**P**	**14 35 51.3**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.8,baz=335,slow=3.7,SNR=4.0							
YKA	**Yellowknife Ar**	**81.49**	**23**	P		**P**	**14 35 51.3**	**+0.1**
GERES	**GERESS Array B**	**83.49**	**321**	P		**P**	**14 36 00.6**	**-1.0**
	comp=Z,0.5nm,0.7s,mb3.5,baz=57,slow=13,SNR=2.8							

*BJI **20** 14:27:50.0,970S×107.10E,h10km,mb4.5*
*IDC **20** 14:27:55.0±1.4,928S×10741E,h0km,mb4.0/6,mb1 4.0/7, mb1mx3.8/19,mbtmp3.9/7,ML3.5/1,Error ellipse: s-maj=73.6km s-min=18.6km az=47.0*
*NEIC **20** 14:27:55.0±0.9,970S×107.13E,h10km,mb4.8/7,Error ellipse: s-maj=47.4km s-min=7.4km az=46.0*
*ISCJB **20** 14:27:58.1±1.0,93S±02×1075E±02,h33km,mb4.3/15, Error ellipse: s-maj=47.4km s-min=9.7km az=89.1*

ISC 20 14:28:01.4±6.0,93S±03×1075E±03,h46km±57km,n21, σ0962/21,mb4.3/15,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MBWA	**Marble Bar**	**16.65**	**136**	*e*P		**Pn**	**14 31 46.2**	**-5.2**
	2.3nm,0.5s							
FITZ	**Fitzroy Crossi**	**19.66**	**118**	P		**Pn**	**14 32 27.3**	**-0.8**
	0.1nm,0.3s,baz=293,slow=6.9,SNR=4.5							
WRA	**Warramunga Arr**	**28.00**	**115**	P		**P**	**14 33 47.8**	**-0.1**
	0.5nm,0.5s,mb3.4,baz=288,slow=11,SNR=4.5							
WRA				PcP		PcP	14 37 03.1	+1.1
	0.3nm,0.5s,baz=299,slow=2.0,SNR=6.2							
WRAB	**Tennant Creek**	**28.00**	**115**	P		**P**	**14 33 48.0**	**0.0**
ASAR	**Alice Springs**	**28.99**	**123**	P		**P**	**14 33 57.9**	**+1.2**
	0.6nm,0.7s,mb3.4,baz=301,slow=8.3,SNR=7.1							
ASAR				PcP		PcP	14 37 05.8	+1.3
	0.2nm,0.4s,baz=291,slow=2.3,SNR=5.3							
CHTO	**Chiang Mai**	**29.22**	**343**	*e*P		**P**	**14 33 58.6**	**-0.1**
	5.6nm,0.8s,mb4.3							
JIRN	**Jiri**	**42.17**	**331**	*e*P		**P**	**14 35 49.9**	**+0.4**
PKI	**Pulchoki**	**42.47**	**330**	*e*P		**P**	**14 35 52.2**	**+0.3**
GUN	**Gumba**	**42.53**	**331**	*e*P		**P**	**14 35 52.8**	**+0.4**
	21nm,0.7s,mb5.0							
DMN	**Daman**	**42.65**	**330**	*e*P		**P**	**14 35 53.5**	**+0.1**
	11nm,0.6s,mb4.8							
KKN	**Kakani**	**42.72**	**330**	*e*P		**P**	**14 35 54.0**	**+0.1**
	19nm,0.9s,mb4.8							
XAN	**Xi'an**	**43.16**	**2**	P		**P**	**14 35 56.9**	**-0.7**
XAN				AMB		AMB		
	comp=Z,12nm,0.8s,mb4.7							
GKN	**Gorkha**	**43.21**	**330**	*e*P		**P**	**14 35 57.9**	**0.0**
KOLN	**Koldanda**	**43.54**	**329**	*e*P		**P**	**14 36 00.7**	**+0.1**
	comp=Z,24nm,0.8s,mb5.0							
GTA	**Gaotai**	**49.02**	**352**	*e*P		**P**	**14 36 45.3**	**+1.7**
GTA				AMB		AMB		
	comp=Z,4.0nm,0.9s,mb4.5							
SONM	**Songino Array**	**56.93**	**359**	P		**P**	**14 37 42.0**	**+0.1**
	comp=Z,0.9nm,0.6s,mb4.0,baz=171,slow=8.6,SNR=4.7							
MKAR	**Makanchi Array**	**60.24**	**340**	P		**P**	**14 38 04.7**	**-0.2**
	comp=Z,1.8nm,0.6s,mb4.3,baz=142,slow=7.8,SNR=27							
BVAR	**Borovoye Array**	**69.70**	**337**	P		**P**	**14 39 05.8**	**-0.6**
	comp=Z,2.8nm,0.6s,mb4.4,baz=148,slow=8.6,SNR=24							
CHKZ	**Chkalovo**	**70.12**	**338**	*e*P		**P**	**14 39 08.2**	**-0.7**
	comp=Z,3.9nm,0.6s,mb4.5							
ZRNK	**Zerenda**	**70.18**	**336**	*e*P		**P**	**14 39 08.2**	**-1.1**
	comp=Z,2.9nm,0.8s,mb4.3							
BRTR	**Keskin Array B**	**83.73**	**312**	P		**P**	**14 40 25.4**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.9,baz=131,slow=7.9,SNR=5.3							

SKHL 20 14:38:22.0±0.3,5437N×12261E,h22km±3km,mb3.8/4, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TUP	**Tupik**	**1.55**	**273**	*e*Pg		Pn	14 38 50.7	+2.4
TUP				AMB		AMB	14 38 52.9	
	70nm,0.3s							
TUP				pPg			14 38 55.8	
TUP				*e*Sg		Sn	14 39 12.0	+4.2
TUP				A			14 39 12.6	
	272nm,0.3s							
KROS	**Kirovskiy**	**2.55**	**87**	*e*Pn		Pn	14 39 02.5	+0.5
KROS				*e*Pg		Pn	14 39 08.7	+6.7
KROS				AMB		AMB	14 39 11.5	
	6.0nm,0.5s							
KROS				AMB		AMB	14 39 11.5	
	28nm,0.5s							
KROS				AMB		AMB	14 39 11.5	
	32nm,0.5s							
KROS				pPg			14 39 15.5	
KROS				*e*Sg		Sn	14 39 42.5	+10
KROS				A			14 39 45.2	
	56nm,0.5s							
KROS				A			14 39 45.2	
	22nm,0.5s							
KROS				A			14 39 45.2	
	30nm,0.5s							
CLNS	**Chul'man**	**2.79**	**27**	*e*Sg		Sn	14 39 51.5	+13
CLNS				A			14 39 52.7	
	122nm,0.3s							
CLNS				A			14 39 52.7	
	91nm,0.3s							
CLNS				A			14 39 52.7	
	32nm,0.3s							
ZEA	**Zeya**	**2.81**	**101**	*e*Pn		Pn	14 39 07.2	+1.6
ZEA				*e*rx		rx	14 39 15.8	
ZEA				*e*S		Sn	14 39 38.9	+0.2
ZEA				*e*Sg		Sn	14 39 49.4	+11
ZEA				A			14 39 52.1	
	68nm,0.7s							
ZEA				A			14 39 52.1	
	98nm,0.7s							
YASR	**Yasnyy**	**3.36**	**107**	*e*Pn		Pn	14 39 14.6	+1.4
YASR				*e*Pg		Pn	14 39 22.0	+8.8
YASR				sPg			14 39 32.7	
YASR				AMB		AMB	14 39 33.7	
	9.0nm,0.6s							
YASR				*e*Sg		Sn	14 40 06.3	+14
YASR				A			14 40 13.7	
	34nm,0.5s							
YASR				A			14 40 13.7	
	52nm,0.5s							
CRS	**Chara**	**3.53**	**318**	*e*Pg		Pn	14 39 28.3	+13
CRS				AMB		AMB	14 39 32.7	
	23nm,0.9s							
CRS				*e*Sg		Sn	14 40 13.3	+17
CRS				A			14 40 17.7	
	117nm,1.5s							
BMKR	**Bomnak**	**3.65**	**82**	*e*rx		rx	14 39 25.0	
BMKR				*e*Pg		Pn	14 39 28.6	+12
BMKR				AMB		AMB	14 39 30.5	
	7.0nm,0.5s							
BMKR				pPg			14 39 35.1	
BMKR				*e*Sg		Sn	14 40 17.5	+18
BMKR				A			14 40 28.5	
	47nm,0.5s							
BMKR				A			14 40 28.5	
	40nm,0.5s							
EKMR	**Ekimchan**	**6.28**	**98**	*e*Pn		Pn	14 39 53.5	+0.3
EKMR				*e*Sg		Sn	14 41 38.6	+34
EKMR				A			14 41 49.1	
	9.0nm,0.5s							
EKMR				A			14 41 49.1	
	5.0nm,0.5s							

*MOS **20** 15:11:35.5±0.9,3387N×13699E,h343km,mb4.0/21,Error ellipse: s-maj=15.6km s-min=8.0km az=95.5*
*BJI **20** 15:11:36.2,3386N×137.12E,h352km,mB4.6,mb4.3*
*IDC **20** 15:11:36.4±0.6,3389N×137.17E,h338km±5km,mb3.6/18, mb1 3.7/23,mb1mx3.6/29,mbtmp4.3/23,Error ellipse: s-maj=11.8km s-min=8.1km az=87.0*
*ISCJB **20** 15:11:36.9±0.2,3386N±004×137.14E±003,h345km±1km, mb4.0/48,Error ellipse: s-maj=6.5km s-min=4.3km az=149.2*
*NEIC **20** 15:11:37.3±0.4,3387N×13709E,h344km±4km,mb4.2/25, Error ellipse: s-maj=7.0km s-min=5.0km az=124.0*
*JMA **20** 15:11:37.8±0.2,3397N×137.17E,h353km±2km,M3.6*

ISC 20 15:11:37.8±0.2,3391N±004×13713E±003,h340km±1km, h363km±6.6km:pP-P,n241,σ080/260,mb4.0/48,47C-47D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.52**	**86**	P		**Pn**	**15 12 22.0**	**+1.0**
JIE	**Ise**	**0.60**	**324**	P		**Pn**	**15 12 21.9**	**+0.7**
JIE				S		**S**	**15 12 56.6**	**+0.8**
JAA	**Atsumi**	**0.72**	**1**	P		**Pn**	**15 12 22.3**	**+0.8**
JAA				S		**S**	**15 12 57.4**	**+0.9**
JWZ	**Kozaga**	**1.24**	**253**	P		**Pn**	**15 12 24.0**	**+0.5**
JWZ				S		**S**	**15 13 00.9**	**+0.7**
JWY	**Kouya**	**1.31**	**284**	P		**Pn**	**15 12 24.8**	**+0.9**
JWY				S		**S**	**15 13 01.8**	**+0.9**
JGM	**Miyama**	**1.82**	**349**	P		**Pn**	**15 12 27.4**	**+0.5**
JGM				S		**S**	**15 13 06.7**	**+0.4**
JYN	**Shimobi**	**1.97**	**36**	P		**Pn**	**15 12 28.4**	**+0.5**
JWT	**Wachi**	**1.98**	**314**	P		**Pn**	**15 12 28.5**	**+0.5**
JWT				S		**S**	**15 13 08.1**	**-0.2**
JIM2	**Oshima 2**	**2.07**	**66**	P		**Pn**	**15 12 28.3**	**-0.4**
JOD2	**Odawara 2**	**2.11**	**50**	P		**Pn**	**15 12 28.8**	**-0.1**
JOD2				S		**S**	**15 13 09.7**	**-0.2**
JAI	**Aioi**	**2.23**	**268**	P		**Pn**	**15 12 30.5**	**+0.6**
JAI				S		**S**	**15 13 12.4**	**+0.7**
JHJ	**Hachijo jima 2**	**2.35**	**109**	P		**Pn**	**15 12 30.5**	**-0.3**
	42nm,0.3s,baz=194,slow=22,SNR=13							
JHJ				S		**S**	**15 13 10.4**	**-3.0**
	14nm,0.3s,baz=243,slow=21,SNR=3.2							
JHJ2	**Mitsune**	**2.38**	**109**	P		**Pn**	**15 12 31.5**	**+0.4**
JKG	**Kaga**	**2.45**	**345**	P		**Pn**	**15 12 31.8**	**+0.2**
JRY	**Ryogami san**	**2.56**	**34**	P		**Pn**	**15 12 32.5**	**0.0**
JRY				S		**S**	**15 13 16.1**	**-0.3**
JMN	**Monobe**	**2.71**	**267**	P		**Pn**	**15 12 34.6**	**+0.8**
JMN				S		**S**	**15 13 19.7**	**+0.9**
MAJO	**Matsushiro**	**2.77**	**18**	*e*P		**Pn**	**15 12 34.0**	**-0.4**
MAJO				*e*S		**S**	**15 13 18.1**	**-1.7**
MAT	**Matsushiro**	**2.77**	**18**	P		**Pn**	**15 12 33.9**	**-0.5**
MAT				S		**S**	**15 13 17.9**	**-1.9**
MAT	**Matsushiro**	**2.77**	**18**	P		**Pn**	**15 12 34.0**	**-0.4**
MAT				S		**S**	**15 13 18.0**	**-1.8**
MAT	**Matsushiro**	**2.77**	**18**	*e*P		**Pn**	**15 12 34.0**	**-0.4**
MAT				*e*S		**S**	**15 13 18.0**	**-1.8**
MJAR	**Matsushiro Arr**	**2.77**	**18**	P		**Pn**	**15 12 34.0**	**-0.4**
	7.2nm,0.3s,baz=186,slow=8.0,SNR=170							
MJAR				S		**S**	**15 13 17.9**	**-1.9**
	baz=184,slow=14,SNR=5.7							
MJAR	**Matsushiro Arr**	**2.77**	**18**	P		**Pn**	**15 12 34.0**	**-0.4**
MJAR				S		**S**	**15 13 17.9**	**-1.9**
MJAR				pmax		pmax		
	comp=Z,7.0nm,0.3s							
BSO1	**Boso 1**	**3.27**	**76**	P		**Pn**	**15 12 36.4**	**-2.5**
BSO1				S		**S**	**15 13 24.8**	**-3.3**
JHS	**Saijyo**	**3.49**	**289**	P		**Pn**	**15 12 41.9**	**+0.8**
JTO	**Tosashimizu**	**3.77**	**255**	P		**Pn**	**15 12 44.4**	**+0.6**
CBIJ	**Chichi jima**	**8.07**	**146**	P		**Pn**	**15 13 29.4**	**-3.2**
	comp=Z,9.6nm,0.3s,baz=272,slow=20,SNR=4.6							
CBIJ				S		**S**	**15 14 56.1**	**-10**
	comp=Z,17nm,0.3s,baz=269,slow=20,SNR=8.0							
INCN	**Inchon**	**9.25**	**296**	*e*P		**Pn**	**15 13 47.5**	**+0.7**
	comp=Z,33nm,0.8s							
JOW	**Kunigami**	**10.40**	**230**	P		**Pn**	**15 14 00.5**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=52,slow=13,SNR=15							
ASAJ	**Asahikawa**	**11.04**	**21**	P		**Pn**	**15 14 06.0**	**-2.2**
	comp=Z,1.1nm,0.3s,baz=211,slow=12,SNR=10							
ASAJ				S		**S**	**15 16 03.9**	**-7.9**
	comp=Z,0.4nm,0.3s,baz=87,slow=31,SNR=4.8							
ASAJ	**Asahikawa**	**11.04**	**21**	P		**Pn**	**15 14 06.0**	**-2.2**
ASAJ				S		**S**	**15 16 03.9**	**-7.9**
ASAJ				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MDJ	**Mudanjiang**	**12.18**	**334**	P		**Pn**	**15 14 21.6**	**-0.1**
MDJ				AMB		AMB		
	comp=Z,10.0nm,1.4s							
MDJ				AMB		AMB		
	comp=Z,322nm,7.7s							
CN2	**Changchun**	**13.42**	**321**	*e*P		**Pn**	**15 14 37.0**	**+0.6**
YSS	**Yuzh-Sakhalins**	**13.71**	**16**	*e*P		**Pn**	**15 14 38.0**	**-1.9**
YSS				pmax		pmax		
	comp=Z,20nm,0.7s							
YSS	**Yuzh-Sakhalins**	**13.71**	**16**	*e*P		**Pn**	**15 14 38.4**	**-1.4**
	comp=Z,14nm,0.4s							
NJ2	**Nanjing**	**15.45**	**268**	*e*P		**P**	**15 14 59.3**	**+1.6**
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.5s							
YHNB	**Yeheng**	**16.53**	**240**	*e*P		**P**	**15 15 08.8**	**-0.6**
WHN	**Wuhan**	**19.56**	**266**	P		**P**	**15 15 40.8**	**-0.8**
HIA	**Hailar**	**20.04**	**325**	*e*P		**P**	**15 15 47.4**	**+0.7**
HIA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
HIA	**Hailar**	**20.04**	**325**	*e*P		**P**	**15 15 47.4**	**+0.7**
	comp=Z,9.6nm,1.0s							
HHC	**Hu-ho-hao-te**	**21.42**	**296**	*e*P		**P**	**15 16 00.1**	**+0.7**
HHC				XP		sP	15 17 40.9	+5.0
HHC				S		**S**	**15 19 32.6**	**-0.5**
HHC				PCP		PcP	15 19 48.8	0.0
HHC				SCP		ScP	15 22 51.8	-1.0
HHC				PCS		PcS	15 23 26.5	-0.7
HHC				SCS		ScS	15 26 35.1	-2.2
HHC				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.0							
HHC				AMB		AMB		
	comp=Z,427nm,8.6s							
XAN	**Xi'an**	**23.37**	**278**	P		**P**	**15 16 15.8**	**-1.3**
XAN				AMB		AMB		
	comp=Z,16nm,0.7s,mb4.4							
SONM	**Songino Array**	**26.88**	**310**	P		**P**	**15 16 48.9**	**+0.4**
	comp=Z,1.7nm,0.4s,mb3.6,baz=116,slow=7.3,SNR=22							
SONM				S		**S**	**15 20 53.4**	**-6.2**
	comp=Z,0.5nm,0.6s,baz=228,slow=44,SNR=4.0							
SONM				ScP		ScP	15 23 04.8	-3.1
	comp=Z,0.8nm,0.8s,baz=174,slow=4.5,SNR=3.8							
SONM	**Songino Array**	**26.88**	**310**	P		**P**	**15 16 48.9**	**+0.4**
SONM				S		**S**	**15 20 53.4**	**-6.2**
SONM				pmax		pmax		
	comp=Z,2.0nm,0.4s							
SONM				smax				
	comp=N,1.0nm,0.6s							
SONM				pmax		pmax		
	comp=N,1.0nm,0.8s							
LZH	**Lanzhou**	**27.28**	**284**	*e*P		**P**	**15 16 55.5**	**+3.5**
LZH				*e*S		**S**	**15 21 07.8**	**+1.9**
LZH				XS		sS	15 23 02.4	+0.2
LZH				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.0							
LZH				AMB		AMB		
	comp=Z,118nm,7.6s							
GYA	**Guiyang**	**27.29**	**262**	⇑P		**P**	**15 16 49.9**	**-2.2**
GYA				AP			15 17 53.8	
GYA				XP		sP	15 18 34.9	-0.3
GYA				PCP		PcP	15 20 02.4	+0.6
GYA				S		**S**	**15 21 01.8**	**-4.2**
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.1							
GYA				AMB		AMB		
	comp=Z,70nm,4.0s							
ZAK	**Zakamensk**	**29.69**	**314**	*e*P		**P**	**15 17 13.0**	**-0.2**
ZAK				pmax		pmax		
	comp=Z,2.0nm,1.2s,mb3.2							
GTA	**Gaotai**	**30.29**	**291**	*e*P		**P**	**15 17 17.6**	**-0.9**
GTA				AP		pP	15 18 27.8	+5.3
GTA				XP		sP	15 19 04.0	+2.0
GTA				AMB		AMB		
	comp=Z,11nm,0.8s,mb4.1							
KMI	**Kunming**	**31.07**	**263**	P		**P**	**15 17 24.4**	**-0.9**
KMI				AMB		AMB		
	comp=Z,6.0nm,0.8s,mb3.9							
BILL	**Bilibino**	**38.03**	**17**	*e*P		**P**	**15 18 24.2**	**-0.2**
BILL				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb4.0							
BILL	**Bilibino**	**38.03**	**17**	P		**P**	**15 18 24.1**	**-0.3**
	comp=Z,6.8nm,0.8s,mb3.9							
WMQ	**Urumqi**	**39.23**	**300**	*e*P		**P**	**15 18 34.0**	**-0.3**
WMQ				AP		pP	15 19 43.0	+2.1
WMQ				PP		PP	15 20 15.0	+2.3
WMQ				S		**S**	**15 24 09.0**	**+0.2**
WMQ				SS		SS	15 27 11.0	-7.1
WMQ				AMB		AMB		
	comp=Z,16nm,1.0s,mb4.2							
WMQ				LR		LR		
	comp=N,287nm,12.0s							
WMQ				LR		LR		
	comp=E,242nm,12.0s							
WMQ				LR		LR		
	comp=Z,463nm,13.0s							
ZAL	**Zalesovo**	**41.56**	**315**	ScP		ScP	15 23 57.1	-3.1
	comp=Z,1.0nm,0.4s,baz=178,slow=24,SNR=3.1							
MKAR	**Makanchi Array**	**42.90**	**304**	P		**P**	**15 19 03.1**	**-0.8**
	comp=Z,1.9nm,0.4s,mb3.6,baz=90,slow=9.8,SNR=40							
MKAR				ScP		ScP	15 24 02.7

ARCES					pmax	pmax			
	comp=Z,2.0nm,0.8s								
JOF	**Joensuu**	**67.05**	**331**	*ep*	**P**		**15 21 52.9**	**-2.3**	
	comp=Z,0.7nm,0.3s,mb3.9								
JOF	**Joensuu**	**67.05**	**331**	*eP*	**P**		**15 21 52.9**	**-2.3**	
JOF					pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.0								
YKA	**Yellowknife Ar**	**68.24**	**28**	P	**P**		**15 22 01.1**	**-1.4**	
	comp=Z,2.8nm,0.9s,mb4.0,baz=299,slow=5.9,SNR=6.3								
YKA	**Yellowknife Ar**	**68.24**	**28**	P	**P**		**15 22 01.1**	**-1.4**	
YKA					pmax	pmax			
	comp=Z,3.0nm,0.9s								
YKA	**Yellowknife Ar**	**68.24**	**28**	P	**P**		**15 22 01.1**	**-1.4**	
KAF	**Kangasniemi**	**69.45**	**332**	*ep*	**P**		**15 22 07.0**	**-2.9**	
	comp=Z,1.6nm,0.4s,mb4.1								
KAF	**Kangasniemi**	**69.45**	**332**	*eP*	**P**		**15 22 07.0**	**-2.9**	
KAF					pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.2								
FINES	**FINESS Array B**	**69.92**	**331**	P	**P**		**15 22 11.0**	**-1.7**	
	comp=Z,1.3nm,0.4s,mb4.0,baz=64,slow=6.1,SNR=28								
FINES	**FINESS Array B**	**69.92**	**331**	P	**P**		**15 22 11.0**	**-1.7**	
FINES					pmax	pmax			
	comp=Z,1.0nm,0.4s								
FINES	**FINESS Array B**	**69.92**	**331**	P	**P**		**15 22 11.0**	**-1.7**	
B05A	**Bryant**	**71.99**	**44**	⇑P	**P**		**15 22 25.2**	**+0.1**	
	baz=72								
C05A	**Tolt Reservoir**	**72.51**	**44**	⇓P	**P**		**15 22 28.8**	**+0.6**	
	baz=72								
H04A	**Detroit Lake**	**73.79**	**47**	⇓P	**P**		**15 22 35.8**	**+0.2**	
	baz=74								
EDM	**Edmonton**	**73.94**	**36**	*eP*	**P**		**15 22 36.2**	**-0.3**	
M01C	**Crescent City**	**74.06**	**50**	⇓P	**P**		**15 22 37.6**	**+0.4**	
	baz=74								
YBH	**Yreka Blue Hor**	**75.02**	**50**	⇓P	**P**		**15 22 43.1**	**+0.4**	
	baz=75								
M02C	**Callahan**	**75.11**	**50**	⇓P	**P**		**15 22 43.6**	**+0.4**	
	baz=75								
J05A	**Fort Rock**	**75.11**	**48**	⇑P	**P**		**15 22 43.8**	**+0.6**	
	baz=75								
K04A	**Chiloquin**	**75.17**	**49**	⇓P	**P**		**15 22 44.0**	**+0.5**	
	baz=75								
F08A	**Pendleton**	**75.22**	**45**	⇑P	**P**		**15 22 44.0**	**+0.3**	
	baz=75								
L04A	**Klamath Falls**	**75.30**	**49**	⇑P	**P**		**15 22 44.9**	**+0.7**	
	baz=75								
I06A	**Prineville**	**75.38**	**47**	⇑P	**P**		**15 22 45.4**	**+0.7**	
	baz=75								
M04C	**Macdoel**	**75.55**	**49**	P	**P**		**15 22 46.1**	**+0.6**	
	baz=75,SNR=5.6								
M03C	**McCloud**	**75.64**	**50**	⇑P	**P**		**15 22 46.7**	**+0.5**	
	baz=76								
NB2	**NORSAR Subarra**	**75.66**	**336**	P	**P**		**15 22 44.4**	**-1.8**	
	comp=Z,5.5nm,1.1s,mb4.2,baz=44,slow=5.9								
NOA	**NORSAR Array B**	**75.66**	**336**	P	**P**		**15 22 44.4**	**-1.9**	
	comp=Z,1.9nm,0.8s,mb3.9,baz=44,slow=5.6,SNR=11								
NOA	**NORSAR Array B**	**75.66**	**336**	P	**P**		**15 22 44.4**	**-1.8**	
NOA					pmax	pmax			
	comp=Z,2.0nm,0.8s								
I07A	**Izee**	**75.73**	**46**	⇓P	**P**		**15 22 46.7**	**0.0**	
	baz=76								
WDC	**Whiskeytown Da**	**75.75**	**51**	⇑P	**P**		**15 22 47.0**	**+0.3**	
	baz=76								
J06A	**Christmas Vall**	**75.80**	**47**	⇓P	**P**		**15 22 47.7**	**+0.7**	
	baz=76								
K06A	**Valley Falls**	**75.98**	**48**	⇓P	**P**		**15 22 48.8**	**+0.7**	
	baz=76								
H08A	**Prairie City**	**75.99**	**46**	⇑P	**P**		**15 22 48.3**	**+0.2**	
	baz=76								
L05A	**Lakeview**	**76.03**	**49**	⇓P	**P**		**15 22 49.2**	**+0.9**	
	baz=76								
WALA	**Waterton Lakes**	**76.08**	**40**	*eP*	**P**		**15 22 47.5**	**-1.1**	
	comp=Z,7.5nm,1.0s,mb4.4								
HATC	**Hat Creek Radi**	**76.31**	**50**	⇑P	**P**		**15 22 50.1**	**+0.2**	
	baz=76								
I08A	**Drewsey**	**76.39**	**46**	⇑P	**P**		**15 22 50.8**	**+0.5**	
	baz=76								
H09A	**Durkee**	**76.50**	**45**	⇓P	**P**		**15 22 51.3**	**+0.3**	
	baz=76								
BMO	**Blue Mountains**	**76.61**	**45**	*eP*	**P**		**15 22 51.3**	**-0.2**	
	comp=Z,5.8nm,1.2s,mb4.2								
K07A	**Rock Creek Ran**	**76.66**	**47**	⇓P	**P**		**15 22 52.4**	**+0.6**	
	baz=76								
M06C	**Likely Place G**	**76.72**	**49**	⇑P	**P**		**15 22 53.0**	**+0.8**	
	baz=76								
MNRC	**McLaughlin Nat**	**76.72**	**52**	⇑P	**P**		**15 22 52.9**	**+0.8**	
	baz=77								
O04C	**Chester**	**76.82**	**50**	P	**P**		**15 22 53.2**	**+0.6**	
	baz=77,SNR=7.5								
I09A	**Lost Marbles R**	**76.85**	**46**	⇓P	**P**		**15 22 53.5**	**+0.6**	
	baz=77								
ORV	**Oroville**	**76.97**	**51**	⇓P	**P**		**15 22 53.2**	**-0.3**	
	baz=77								
L07A	**Adell**	**76.98**	**48**	P	**P**		**15 22 54.5**	**+0.9**	
	baz=77,SNR=12								
K08A	**Mann Creek Ran**	**77.10**	**47**	⇑P	**P**		**15 22 54.8**	**+0.5**	
	baz=77								
O05C	**Quincy**	**77.12**	**50**	⇑P	**P**		**15 22 54.4**	**+0.1**	
	baz=77								
WVOR	**Wild Horse Val**	**77.18**	**47**	*eP*	**P**		**15 22 55.0**	**+0.3**	
WVOR					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8								
WVOR	**Wild Horse Val**	**77.18**	**47**	*eP*	**P**		**15 22 55.0**	**+0.3**	
	comp=Z,0.7nm,0.5s,mb3.6								
N06A	**Buffalo Meadow**	**77.38**	**49**	⇓P	**P**		**15 22 56.0**	**+0.2**	
	baz=77,SNR=5.7								
L08A	**Fields**	**77.50**	**47**	⇑P	**P**		**15 22 56.8**	**+0.4**	
	baz=77								
BEKR	**Beckwourth**	**77.53**	**50**	P	**P**		**15 22 56.9**	**+0.3**	
	baz=77,SNR=10								
K09A	**Rome**	**77.58**	**47**	⇓P	**P**		**15 22 56.7**	**-0.2**	
	baz=77								
P05C	**Yuba Gap, Truc**	**77.69**	**51**	⇓P	**P**		**15 22 57.0**	**-0.4**	
	baz=78								
O06A	**Flanigan**	**77.71**	**50**	P	**P**		**15 22 58.1**	**+0.6**	
	baz=78,SNR=5.6								
M08A	**Happy Creek Ra**	**77.89**	**48**	⇓P	**P**		**15 22 59.2**	**+0.6**	
	baz=78								
N07B	**Gerlach**	**77.90**	**49**	⇑P	**P**		**15 22 59.2**	**+0.5**	
	baz=78								
LAVA	**Lava Cap Winer**	**77.91**	**51**	P	**P**		**15 22 58.1**	**-0.6**	
	baz=78,SNR=7.0								
L09A	**Wilkinson Ranc**	**78.01**	**47**	⇑P	**P**		**15 22 59.3**	**+0.1**	
	baz=78								
WCN	**Washoe City**	**78.23**	**51**	⇑P	**P**		**15 23 00.8**	**+0.4**	
	baz=78								
BRTR	**Keskin Array B**	**78.24**	**310**	P	**P**		**15 23 00.4**	**-0.1**	
	comp=Z,0.5nm,0.7s,mb3.3,baz=64,slow=6.6,SNR=3.4								
BRTR	**Keskin Array B**	**78.24**	**310**	P	**P**		**15 23 00.4**	**-0.1**	
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.7s								
O07A	**Toulon**	**78.31**	**49**	P	**P**		**15 23 01.2**	**+0.4**	
	baz=78,SNR=5.2								
R05C	**Kirkwood Meado**	**78.36**	**51**	⇓P	**P**		**15 23 01.1**	**0.0**	
	baz=78								
N08A	**GE Springer Mi**	**78.42**	**49**	⇑P	**P**		**15 23 01.9**	**+0.4**	
	baz=78								
PACP	**Pacheco Peak**	**78.51**	**53**	⇑P	**P**		**15 23 02.1**	**+0.1**	
	baz=78								
CMB	**Columbia Colle**	**78.54**	**52**	P	**P**		**15 23 02.1**	**0.0**	
	baz=78,SNR=5.3								
HAST	**UC Hastings Re**	**78.68**	**54**	⇑P	**P**		**15 23 03.2**	**+0.3**	
	baz=78								
N09A	**Rock Creek Ran**	**78.76**	**48**	⇑P	**P**		**15 23 03.6**	**+0.2**	
	baz=79								
R06C	**Coleville**	**78.87**	**51**	⇓P	**P**		**15 23 04.2**	**+0.3**	
	baz=79								
S06C	**San Francisco**	**78.97**	**52**	⇑P	**P**		**15 23 04.3**	**-0.1**	
	baz=79								
M10A	**I.L. Ranch, Tu**	**78.98**	**47**	⇓P	**P**		**15 23 05.3**	**+0.8**	
	baz=79								
DLMT	**Dillon**	**79.01**	**42**	*eP*	**P**		**15 23 04.6**	**0.0**	
	comp=Z,9.3nm,1.0s,mb4.5								
HLID	**Hailey**	**79.05**	**45**	*eP*	**P**		**15 23 05.5**	**+0.6**	
	comp=Z,1.7nm,1.0s,mb3.7								
O09A	**Fish Creek Ran**	**79.36**	**49**	P	**P**		**15 23 07.2**	**+0.7**	
	baz=79,SNR=5.2								
BOZ	**Bozeman (W)**	**79.37**	**42**	*eP*	**P**		**15 23 06.4**	**-0.2**	
BOZ					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.9								
BOZ	**Bozeman (W)**	**79.37**	**42**	*eP*	**P**		**15 23 06.4**	**-0.2**	
	comp=Z,2.4nm,0.8s,mb4.0								
M11A	**Holland Ranch,**	**79.49**	**47**	⇑P	**P**		**15 23 07.8**	**+0.6**	
	baz=79								
T06C	**Millerton Lake**	**79.56**	**52**	⇓P	**P**		**15 23 07.7**	**+0.1**	
	baz=79								
PKD	**Parkfield**	**79.61**	**54**	⇓P	**P**		**15 23 08.5**	**+0.7**	
	baz=79								
KCC	**Kaiser Creek**	**79.64**	**52**	⇑P	**P**		**15 23 08.5**	**+0.5**	
	baz=80								
Q08A	**Gabbs**	**79.65**	**50**	⇓P	**P**		**15 23 08.6**	**+0.6**	
	baz=80								
NVAR	**Mina Array Bea**	**79.66**	**51**	P	**P**		**15 23 08.3**	**+0.1**	
	comp=Z,3.0nm,0.8s,mb4.1,baz=275,slow=7.5,SNR=21								
NVAR	**Mina Array Bea**	**79.66**	**51**	P	**P**		**15 23 08.3**	**+0.1**	
O10A	**Cortez Mining,**	**79.72**	**48**	⇑P	**P**		**15 23 09.6**	**+1.1**	
	baz=80								
P09A	**Austin**	**79.76**	**49**	⇑P	**P**		**15 23 09.4**	**+0.7**	
	baz=80								
MLAC	**Mammoth Lakes**	**79.78**	**52**	⇓P	**P**		**15 23 09.5**	**+0.8**	
	baz=80								
P10A	**Eureka**	**80.14**	**49**	⇓P	**P**		**15 23 11.5**	**+0.8**	
	baz=80								
Q09A	**Carvers**	**80.15**	**50**	⇓P	**P**		**15 23 11.5**	**+0.7**	
	baz=80								
HELL	**Mitchell Peak,**	**80.20**	**52**	⇓P	**P**		**15 23 10.8**	**-0.2**	
	baz=80								
N12A	**Clover Valley,**	**80.29**	**47**	⇑P	**P**		**15 23 12.2**	**+0.7**	
	baz=80								
O11A	**Cowboy Ranch,**	**80.34**	**48**	⇑P	**P**		**15 23 12.3**	**+0.5**	
	baz=80								
M13A	**Montello**	**80.52**	**46**	⇓P	**P**		**15 23 13.1**	**+0.4**	
	baz=80								
R09A	**Tonopah**	**80.56**	**50**	P	**P**		**15 23 13.1**	**+0.2**	
	baz=80,SNR=11								
VES	**Vestal, Richgr**	**80.64**	**53**	⇑P	**P**		**15 23 12.7**	**-0.6**	
	baz=80								
S09A	**Goldfield**	**80.77**	**51**	P	**P**		**15 23 14.2**	**+0.2**	
	baz=81,SNR=8.3								
N13A	**Wendover, West**	**80.80**	**47**	⇓P	**P**		**15 23 14.3**	**+0.1**	
	baz=81								
O12A	**Currie**	**80.82**	**47**	⇑P	**P**		**15 23 14.8**	**+0.5**	
	baz=81								
FLWY	**Flagg Ranch**	**80.86**	**43**	*eP*	**P**		**15 23 15.8**	**+1.3**	
	comp=Z,3.8nm,0.6s,mb4.3								
CWC	**Cottonwood Cre**	**80.96**	**52**	⇓P	**P**		**15 23 15.2**	**+0.2**	
	baz=81								
RRI2	**Red Ridge**	**80.97**	**43**	*eP*	**P**		**15 23 15.4**	**+0.4**	
	comp=Z,2.3nm,0.6s,mb4.1								
GRAC	**Grapevine Rang**	**81.09**	**51**	⇑P	**P**		**15 23 15.5**	**-0.2**	
	baz=81,SNR=5.6								
ISA	**Isabella**	**81.15**	**53**	⇑P	**P**		**15 23 14.9**	**-1.1**	
	baz=81								
P12A	**McGill**	**81.19**	**48**	⇓P	**P**		**15 23 16.5**	**+0.2**	
	baz=81								
LOHW	**Long Hollow**	**81.21**	**43**	*eP*	**P**		**15 23 16.6**	**+0.2**	
	comp=Z,2.6nm,0.9s,mb4.0								
DAC	**Darwin (Calif)**	**81.37**	**52**	*eP*	**P**		**15 23 17.1**	**0.0**	
DAC					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.1								
DAC	**Darwin (Calif)**	**81.37**	**52**	*eP*	**P**		**15 23 17.1**	**-0.1**	
	comp=Z,3.0nm,0.8s,mb4.1								
Q12A	**Willow Creek R**	**81.50**	**48**	⇑P	**P**		**15 23 18.3**	**+0.4**	
	baz=81								
MPMC	**Manual Prospec**	**81.56**	**52**	P	**P**		**15 23 18.2**	**+0.1**	
	baz=81,SNR=5.5								
LAO	**LASA Array**	**81.61**	**38**	*eP*	**P**		**15 23 17.6**	**-0.7**	
	comp=Z,4.7nm,0.8s,mb4.4								
FURC	**Furnace Creek,**	**81.74**	**52**	P	**P**		**15 23 19.5**	**+0.5**	
	baz=82,SNR=5.5								
LRMC	**Laurel Mountai**	**81.77**	**53**	⇓P	**P**		**15 23 19.1**	**-0.1**	
	baz=82								
HWUT	**Hawaire Ranch**	**81.91**	**45**	*eP*	**P**		**15 23 20.1**	**+0.2**	
	comp=Z,19nm,1.5s,mb4.7								
EDW2	**Edwards Air Fo**	**81.92**	**53**	⇓P	**P**		**15 23 20.1**	**+0.1**	
	baz=82								
CLL	**Collm**	**81.99**	**328**	*i* P	**P**		**15 23 17.8**	**-2.5**	
DUG	**Dugway**	**82.04**	**47**	*eP*	**P**		**15 23 20.5**	**-0.1**	
DUG					pmax	pmax			
	comp=Z,5.0nm,1.2s,mb4.2								
DUG	**Dugway**	**82.04**	**47**	*eP*	**P**		**15 23 20.5**	**-0.1**	
	comp=Z,5.5nm,1.2s,mb4.3								
U10A	**Ash Meadows, A**	**82.11**	**51**	⇑P	**P**		**15 23 21.3**	**+0.4**	
	baz=82								
PDAR	**Pinedale Array**	**82.34**	**43**	P	**P**		**15 23 21.8**	**-0.4**	
	comp=Z,3.8nm,0.9s,mb4.2,baz=313,slow=2.8,SNR=30								
SHOC	**Shoshone**	**82.45**	**52**	⇑P	**P**		**15 23 22.9**	**+0.2**	
	baz=82								
GSC	**Goldstone**	**82.46**	**52**	⇑P	**P**		**15 23 22.8**	**0.0**	
	baz=82,SNR=5.2								
BFSC	**Mount Baldy St**	**82.52**	**54**	⇓P	**P**		**15 23 23.3**	**+0.2**	
	baz=82								
TUQ	**Turquoise Mtn.**	**82.96**	**52**	P	**P**		**15 23 25.7**	**+0.4**	
	baz=83,SNR=7.4								
HEC	**Hector,Ludlow**	**83.05**	**53**	⇓P	**P**		**15 23 26.1**	**+0.3**	
	baz=83								
MURC	**Murrieta**	**83.20**	**54**	⇓P	**P**		**15 23 26.8**	**+0.2**	
	baz=83								
U12A	**Valley of Fire**	**83.26**	**50**	⇓P	**P**		**15 23 26.9**	**+0.1**	
	baz=83								
GERES	**GERESS Array B**	**83.44**	**326**	P	**P**		**15 23 26.0**	**-1.8**	
	comp=Z,0.8nm,0.7s,mb3.7,baz=15,slow=5.5,SNR=5.3								
GERES	**GERESS Array B**	**83.44**	**326**	P	**P**		**15 23 26.0**	**-1.8**	
GERES					pmax	pmax			
	comp=Z,1.0nm,0.7s								
V12A	**Nelson**	**83.48**	**51**	⇑P	**P**		**15 23 28.3**	**+0.4**	
	baz=83								
109C	**Camp Elliot, M**	**83.69**	**55**	⇑P	**P**		**15 23 28.3**	**-0.7**	
	baz=84								
PFO	**Pinyon Flat Ob**	**83.70**	**54**	*eP*	**P**		**15 23 28.4**	**-0.6**	
PFO					pmax	pmax			
	comp=Z,18nm,1.4s,mb4.7								
PFO	**Pinyon Flat Ob**	**83.70**	**54**	*eP*	**P**		**15 23 28.4**	**-0.6**	
	comp=Z,18nm,1.4s,mb4.7								
PFO	**Pinyon Flat Ob**	**83.70**	**54**	⇓P	**P**		**15 23 28.6**	**-0.4**	
	baz=84,SNR=7.5								
W12A	**Cal Nev Ari**	**83.73**	**52**	⇑P	**P**		**15 23 28.8**	**-0.4**	
	baz=84								
BELC	**Belle Mtn.**	**83.77**	**53**	P	**P**		**15 23 29.2**	**-0.2**	
	baz=84,SNR=5.3								
ULM	**Lac du Bonnet**	**84.00**	**31**	P	**P**		**15 23 29.0**	**-1.6**	
	comp=Z,1.5nm,0.6s,mb4.0,baz=17,slow=17,SNR=3.0								
SRU	**San Rafael**	**84.10**	**46**	*eP*	**P**		**15 23 30.9**	**-0.1**	
SRU					pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.5								
SRU	**San Rafael**	**84.10**	**46**	*eP*	**P**		**15 23 30.9**	**-0.2**	
	comp=Z,7.3nm,0.8s,mb4.6								
MONP	**Monument Peak**	**84.15**	**54**	⇓P	**P**		**15 23 31.3**	**0.0**	
	baz=84								
IRM	**Iron Mountain**	**84.23**	**53**	⇓P	**P**		**15 23 31.8**	**+0.1**	
	baz=84								
W13A	**Hualapai Mount**	**84.49**	**51**	⇑P	**P**		**15 23 33.0**	**0.0**	
	baz=84								
DVTC	**Desert V Tower**	**84.50**	**54**	⇑P	**P**		**15 23 32.9**	**-0.2**	
	baz=84								
PDMCI	**Parker Dam,Lak**	**84.81**	**52**	⇓P	**P**		**15 23 34.4**	**-0.2**	
	baz=85								
X13A	**Yucca**	**84.84**	**52**	⇑P	**P**		**15 23 34.4**	**-0.3**	
	baz=85								
Y12C	**Blythe**	**84.90**	**53**	⇓P	**P**		**15 23 35.1**	**+0.1**	
	baz=85								
W14A	**Seligman**	**84.94**	**51**	⇑P	**P**		**15 23 35.4**	**+0.2**	
	baz=85								
GLA	**Glamis**	**85.12**	**53**	⇓P	**P**		**15 23 36.0**	**-0.1**	
	baz=85								
Y13A	**Salome**	**85.31**	**52**	⇑P	**P**		**15 23 37.4**	**+0.3**	
	baz=85								
PV10	**Paradox Valley**	**85.46**	**46**	*eP*	**P**		**15 23 38.5**	**+0.7**	
W15A	**Williams**	**85.48**	**50**	⇓P	**P**		**15 23 38.7**	**+0.8**	
	baz=85								
X14A	**Yava**	**85.52**	**51**	⇓P	**P**		**15 23 38.6**	**+0.5**	
	baz=85								
Y14A	**Wickenburg**	**85.78**	**52**	⇑P	**P**		**15 23 39.5**	**+0.2**	
	baz=86								
PV01	**Paradox Valley**	**85.89**	**46**	*eP*	**P**		**15 23 40.5**	**+0.5**	
X15A	**Humboldt**	**85.94**	**51**	⇓P	**P**		**15 23 40.5**	**+0.4**	
	baz=86								
SMCO	**Snowmass**	**86.16**	**44**	*eP*	**P**		**15 23 41.7**	**+0.5**	
	comp=Z,5.2nm,0.8s,mb4.4								
ISCO	**Idaho Springs**	**86.53**	**43**	*eP*	**P**		**15 23 43.1**	**+0.1**	
ISCO					pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.1								
ISCO	**Idaho Springs**	**86.53**	**43**	*eP*	**P**		**15 23 43.1**	**+0.2**	
	comp=Z,2.7nm,0.9s,mb4.1								
QSPA	**South Pole Qui**	**123.66**	**180**	*eP*	PKPdf		15 29 53.0	-2.2	
SNAA	**Sanae**	**136.74**	**197**	*ePdiff*	Pdif		15 27 25.9	-2.1	
SNAA				*e*			15 28 47.4		
VNA1	**Neumayer--Stat**	**138.74**	**197**	*ePdiff*	Pdif		15 27 35.6	-1.3	
VNA1				*e*			15 28 53.4		
SAML	**Samuel**	**148.91**	**42**	*e*PKPbc	PKPbc		15 30 45.2	-0.5	
LPAZ	**La Paz**	**151.29**	**59**	PKPbc	PKPbc		15 30 51.5	+0.2	
	comp=Z,1.9nm,0.8s,baz=12,slow=4.9,SNR=12								
LPAZ	**La Paz**	**151.29**	**59**	PKIKP	PKPbc		15 30 51.5	+0.2	
LPAZ					pmax	pmax			
	comp=Z,2.0nm,0.8s								
LPAZ	**La Paz**	**151.29**	**59**	PKPbc	PKPbc		15 30 51.5	+0.2	

NEIC 20 15:24:31.7, 5405N×16421W, h38km, ML3.6(AEIC), **After AEIC., Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKUT	**Akutan**	**0.92**	**276**	P	Pn	15 24 47.4	-0.8
AKUT				S	Sn	15 25 01.2	+1.0
AKLV	**Akutan Long Va**	**1.03**	**277**	P	Pn	15 24 49.0	-0.7
AKLV				S	Sn	15 25 03.7	+0.8
OKCD	**Okmok Cone D**	**2.40**	**257**	P	Pn	15 25 09.0	+0.5
SDPT	**Sand Point**	**2.53**	**57**	*e*Pn	Pn	15 25 08.0	-2.3
SDPT				*e*S	Sn	15 25 40.3	+0.4
NIKO	**Nikolski**	**2.97**	**251**	P	Pn	15 25 15.2	-1.2
CHGN	**Chignik**	**4.02**	**53**	P	Pn	15 25 29.2	-1.5
SPIA	**Saint Paul Isl**	**4.64**	**315**	P	Pn	15 25 39.3	0.0
SVW2	**Sparrevohn**	**8.45**	**30**	*e*Pn	Pn	15 26 30.9	-0.7
TTA	**Tatalina**	**9.88**	**22**	*e*Pn	Pn	15 26 50.9	-0.3
EGAK	**Eagle**	**15.80**	**38**	*e*P	Pn	15 28 10.4	-0.9
DAWY	**Dawson**	**16.12**	**42**	*e*P	Pn	15 28 13.7	-1.7

*NEIC **20** 15:49:05.3, 1836N×101.11W, h69km, MD3.9(MEX), After MEX.*

MEX 20 15:49:06.1±0.6, 1835N×10113W, h65km±12km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.81**	**203**	*i* P	Pn	15 49 20.3	-1.6
ZIIG				*i* S	Sn	15 49 32.0	-1.5
ZIIG	**Zihuatanejo**	**0.81**	**203**	*i* P	Pn	15 49 19.9	-2.0
ZIIG				*i* S	Sn	15 49 32.0	-1.5
MOIG	**Morelia**	**1.32**	**358**	*i* P	Pn	15 49 27.1	-1.4
MOIG				*i* S	Sn	15 49 44.1	-1.2
MOIG	**Morelia**	**1.32**	**358**	*i* P	Pn	15 49 27.1	-1.4
MOIG				*i* S	Sn	15 49 42.6	-2.6
MEIG	**Mezcala**	**1.50**	**106**	*i* P	Pn	15 49 29.4	-1.5
MEIG				*i* S	Sn	15 49 47.7	-1.9
CAIG	**El Cayaco**	**1.54**	**147**	*e*P	Pn	15 49 29.8	-1.6
CAIG				*i* S	Sn	15 49 49.5	-1.0
CAIG	**El Cayaco**	**1.54**	**147**	*e*P	Pn	15 49 29.8	-1.6
CAIG				*i* S	Sn	15 49 45.0	-5.5
PLIG	**Platanillo**	**1.55**	**88**	*i* P	Pn	15 49 29.3	-2.2
PLIG				*i* S	Sn	15 49 49.4	-1.3
PLIG	**Platanillo**	**1.55**	**88**	*i* P	Pn	15 49 29.3	-2.2
PLIG				*i* S	Sn	15 49 47.4	-3.3
ACX	**Acapulco**	**1.88**	**142**	*i* P	Pn	15 49 35.0	-1.0
IIZ	**Mezontepec**	**1.98**	**65**	*e*P	Pn	15 49 36.0	-1.3
IIZ				*e*S	Sn	15 50 00.1	-0.9
MMIG	**Aquila**	**2.10**	**269**	*i* P	Pn	15 49 36.5	-2.5
MMIG				*i* S	Sn	15 50 03.2	-0.9
UTMO	**Huajuapan**	**3.21**	**99**	*i* P	Pn	15 49 55.8	+1.7
UTMO				*i* S	Sn	15 50 30.6	-0.5

*ISCJB **20** 16:01:51.8±1.9, 586S×005×15243E×004, h20km±13km, mb4.8/69, MS4.0/16, Error ellipse: s-maj=8.6km s-min=5.8km az=153.4*
*MOS **20** 16:01:53.4±1.0, 581S×15252E, h33km, mb5.2/24, Error ellipse: s-maj=10.1km s-min=7.5km az=88.2*
*BJI **20** 16:01:54.1, 562S×15231E, h25km, mB5.1, mb4.8, Ms4.8, Msz4.3*
*IDC **20** 16:01:55.9±2.0, 589S×15255E, h44km±18km, mb4.6/21, mb1 4.7/24, mb1mx4.7/25, mbtmp4.8/24, ML4.1/3, MS3.9/9, Ms1 3.9/9, ms1mx3.5/30, Error ellipse: s-maj=15.1km s-min=10.5km az=124.0*
*NEIC **20** 16:01:56.0±1.0, 591S×15249E, h46km±9km, mb5.0/33, Error ellipse: s-maj=7.2km s-min=5.8km az=137.0*

ISC 20 16:01:56.1±1.0, 590S±005×15247E±003, h38km±9km, h40km±2.3km:pP-P, n220, σ1s90/207, mb4.8/67, MS4.0/16, 37C-35D, New Britain region

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

NJ2 AMB AMB
comp=Z,30nm,1.0s,mb5.3
NJ2 AMB AMB
comp=Z,170nm,3.9s
NJ2 LR LR
comp=N,210nm,19.2s,MS4.9
NJ2 LR LR
comp=E,1µm,19.3s,MS4.9
NJ2 LR LR
comp=Z,360nm,26.9s
WHN Wuhan 51.43 317 P **P** **16 10 58.4 +1.1**
MDJ Mudanjiang 54.33 340 P **P** **16 11 19.4 +0.7**
MDJ AMB AMB
comp=Z,9.0nm,1.2s,mb4.6
MDJ AMB AMB
comp=Z,66nm,4.2s
GYA Guiyang 54.80 308 P **P** **16 11 20.3 -1.8**
GYA AP pP 16 11 32.8 -0.6
GYA XP sP 16 11 38.1 +0.3
GYA PP PP 16 13 24.0 -1.1
GYA S **S** **16 18 53.6 -6.7**
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,140nm,5.0s
GYA LR LR
comp=N,450nm,18.4s,MS4.7
GYA LR LR
comp=E,370nm,17.8s,MS4.7
GYA LR LR
comp=Z,360nm,18.0s,MS4.5
CN2 Changchun 55.17 336 *e*P **P** **16 11 27.5 +2.7**
HABR Khabarovsk 56.26 346 *e*P **P** **16 11 32.3 -0.3**
XAN Xi'an 57.19 317 P **P** **16 11 38.9 -0.3**
XAN AP pP 16 11 44.8 -5.7
XAN AMB AMB
comp=Z,9.0nm,1.2s,mb4.7
KMI Kunming 57.33 305 P **P** **16 11 40.3 +0.1**
KMI AP pP 16 11 50.0 -1.5
KMI XP sP 16 11 54.1 -1.9
KMI S **S** **16 19 35.3 +1.4**
KMI AMB AMB
comp=Z,3.0nm,1.1s,mb4.2
KMI LR LR
comp=N,104nm,13.9s,MS4.2
KMI LR LR
comp=E,96nm,17.3s,MS4.2
KMI LR LR
comp=Z,80nm,20.1s,MS3.8
KLR Kul'dur 57.81 344 *e*P **P** **16 11 39.0 -4.5**
CD2 Chengdu 59.21 311 *e*P **P** **16 11 53.3 0.0**
CD2 AP pP 16 12 03.3 -1.3
CD2 XP sP 16 12 07.3 -1.8
CD2 PP PP 16 14 05.8 +1.5
CD2 S **S** **16 19 56.9 -1.4**
CD2 XS sS 16 20 13.8 -3.3
CD2 SS SS 16 23 53.0 0.0
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,70nm,10.8s
CD2 LR LR
comp=E,90nm,14.4s
CD2 LR LR
comp=Z,70nm,14.4s,MS3.9
HHC Hu-ho-hao-te 59.75 325 *e*P **P** **16 11 57.3 +0.3**
HHC AP pP 16 12 07.4 -1.0
HHC XP sP 16 12 11.3 -1.5
HHC PCP PcP 16 12 43.5 -0.1
HHC PP PP 16 14 11.3 +2.2
HHC SCP ScP 16 16 40.5 -0.9
HHC PCS PcS 16 16 44.3 -1.5
HHC S **S** **16 20 04.5 -0.9**
HHC XS sS 16 20 21.6 -2.5
HHC PS 16 20 24.3
HHC SCS ScS 16 21 41.3 -3.0
HHC SS SS 16 24 02.0 +0.4
HHC AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
HHC AMB AMB
comp=Z,122nm,5.4s
HHC LR LR
comp=N,105nm,24.7s,MS4.0
HHC LR LR
comp=E,122nm,25.6s,MS4.0
HHC LR LR
comp=Z,120nm,23.7s,MS4.0
LZH Lanzhou 61.79 316 *e*P **P** **16 12 11.5 +0.6**
LZH AP pP 16 12 25.0 +2.7
LZH AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,96nm,4.3s
MA2 Magadan 65.28 359 *e*P **P** **16 12 32.9 -1.1**
MA2 *e* pP 16 12 45.2 -0.2
MA2 pmax pmax
comp=Z,100nm,0.6s
GTA Gaotai 66.24 318 *e*P **P** **16 12 41.3 +1.2**
GTA AP pP 16 12 52.0 +0.4
GTA XP sP 16 12 57.6 +1.6
GTA PP PP 16 15 10.6 +4.4
GTA PPP 16 16 47.1
GTA S S 16 21 29.4 +2.8
GTA PS 16 21 57.0
GTA AMB AMB
comp=Z,6.0nm,1.0s,mb4.6
GTA AMB AMB
comp=Z,125nm,5.3s
GTA LR LR
comp=N,69nm,18.6s,MS4.1
GTA LR LR
comp=E,69nm,16.7s,MS4.1
GTA LR LR
comp=Z,76nm,16.4s,MS4.0
SONM Songino Array 67.08 328 P **P** **16 12 46.2 +0.7**
comp=Z,7.7nm,0.8s,mb4.8,baz=133,slow=4.9,SNR=39
YAK Yakutsk 69.98 349 *e*P **P** **16 13 00.6 -3.0**
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=Z,13nm,1.4s,mb4.7
YAK pmax pmax
comp=E,4.0nm,1.7s
YAK Yakutsk 69.98 349 *e*P **P** **16 13 02.8 -0.9**
comp=E,12nm,0.8s,mb4.9
ZAK Zakamensk 70.26 329⇓ *i*P **P** **16 13 05.9 +0.6**
ZAK *e* pP 16 13 17.8 +0.9
ZAK pmax pmax
comp=Z,18nm,0.9s,mb5.0
BOD Bodaibo 70.70 339 *e*P **P** **16 13 03.8 -4.2**
BOD pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
TLY Talaya 70.86 330 *e*P **P** **16 13 09.2 +0.2**
TLY *e* 16 13 28.4
TLY pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
VNDA Vanda 71.75 178 P **P** **16 13 13.1 -1.2**
comp=Z,2.6nm,0.8s,mb4.2,baz=326,slow=6.6,SNR=18
VNDA Vanda 71.75 178 *e*P **P** **16 13 12.8 -1.5**
VNDA pmax pmax
comp=Z,4.0nm,0.9s
VNDA Vanda 71.75 178 *e*P **P** **16 13 12.8 -1.5**
comp=Z,3.7nm,0.9s,mb4.3
MOY Mondy 72.19 329 *e*P **P** **16 13 17.6 +0.6**
MOY pmax pmax
comp=Z,29nm,2.0s,mb4.9
GUN Gumba 72.41 302 *e*P **P** **16 13 19.7 +1.4**
comp=Z,19nm,0.5s,mb5.2
PKI Pulchoki 72.71 301 *e*P **P** **16 13 20.7 +0.6**
KKN Kakani 72.89 301 *e*P **P** **16 13 21.9 +0.8**
comp=Z,22nm,0.9s,mb5.1
KKN Kakani 72.89 301 *e*P **P** **16 13 21.9 +0.8**
KKN pmax pmax
comp=Z,22nm,0.9s,mb5.1
DMN Daman 72.98 301 *e*P **P** **16 13 22.7 +1.0**
comp=Z,44nm,1.2s,mb5.3
GKN Gorkha 73.49 301 *e*P **P** **16 13 25.1 +0.4**
comp=Z,38nm,1.1s,mb5.2
KOLN Koldanda 74.31 301 *e*P **P** **16 13 30.1 +0.6**
comp=Z,29nm,1.1s,mb5.1
BILL Bilibino 74.41 5 *d i*P **P** **16 13 29.3 -0.8**
BILL *e* 16 13 44.1
BILL pmax pmax
comp=Z,21nm,1.0s,mb5.0
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.2
BILL Bilibino 74.41 5 *e*P **P** **16 13 29.6 -0.5**
comp=Z,9.3nm,0.8s,mb4.8
BILL *e*PcP PcP 16 13 43.4 -1.2
WMQ Urumqi 76.33 318 P **P** **16 13 42.0 +0.9**
WMQ AP pP 16 13 55.0 +2.3
WMQ PP PP 16 16 35.0 +2.2
WMQ S S 16 23 22.0 -1.2
WMQ SS SS 16 28 20.0 +2.3
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.0
WMQ LR LR
comp=N,35nm,14.0s,MS4.0
WMQ LR LR
comp=E,33nm,14.0s,MS4.0
WMQ LR LR
comp=Z,27nm,13.0s,MS3.7
KDAK Kodiak Island 77.30 27 LR LR 16 39 54.6
comp=Z,85nm,21.9s,MS4.0,baz=358,slow=30
SVW2 Sparrevohn 77.96 23 *e*P **P** **16 13 48.8 -1.4**
TTA Tatalina 78.91 21 *e*P **P** **16 13 54.5 -1.0**
TIXI Tiksi 78.94 353 *e*P **P** **16 13 55.6 0.0**
TIXI pmax pmax
comp=Z,24nm,1.7s,mb4.8
PMR Palmer 80.82 24 *e*P **P** **16 14 03.9 -1.9**
PMR pmax pmax
comp=Z,36nm,1.0s,mb5.3
PMR Palmer 80.82 24 *e*P **P** **16 14 03.9 -1.9**
comp=Z,36nm,1.0s,mb5.3
MK31 Makanchi Array 80.94 319 P **P** **16 14 06.7 +0.3**
MK31 pmax pmax
comp=Z,24nm,1.0s,mb5.1
MKAR Makanchi Array 80.94 319 P **P** **16 14 06.7 +0.3**
comp=Z,12nm,0.8s,mb4.9,baz=107,slow=5.6,SNR=89
MKAR Makanchi Array 80.94 319 P **P** **16 14 06.7 +0.3**
IMA2 Indian Mountai 81.60 19 *e*P **P** **16 14 08.9 -1.0**
ZAL Zalesovo 81.89 326 P **P** **16 14 10.1 -1.4**
comp=Z,4.6nm,0.7s,mb4.5,baz=7,slow=6.9,SNR=25
NVS Novosibirsk 83.07 327 *e*P **P** **16 14 16.5 -1.1**
NVS pmax pmax
comp=Z,27nm,1.5s,mb5.1
NVS pmax pmax
comp=N,9.0nm,1.4s
NVS pmax pmax
comp=E,25nm,1.7s
MENT Mentasta 83.69 24 *e*P **P** **16 14 19.7 -1.1**
QSPA South Pole Qui 84.06 180 *e*P **P** **16 14 21.5 -1.2**
comp=E,8.7nm,1.0s,mb4.8
KURK Kurchatov 84.43 322 P **P** **16 14 24.1 -0.5**
comp=E,151nm,0.9s,SNR=13
MAW Mawson 84.43 203 P **P** **16 14 23.4 -1.2**
comp=E,2.5nm,0.7s,mb4.5,baz=98,slow=7.0,SNR=7.3
TKM2 Tokmak 2 84.45 314 P **P** **16 14 25.6 +0.9**
SNR=19
KZA Kyzart 84.51 313 P **P** **16 14 27.2 +2.2**
SNR=23
KBK Karagaybulak 84.86 314 P **P** **16 14 28.1 +1.3**
SNR=8.2
CHMS Chumysh 85.08 314 P **P** **16 14 28.7 +0.9**
SNR=15
FRU Bishkek 85.14 314 *e*P **P** **16 14 29.0 +0.8**
FRU pmax pmax
comp=Z,50nm,1.8s,mb5.3
AAK Ala-Archa 85.18 314 P **P** **16 14 29.6 +1.3**
SNR=8.0
AAK Ala-Archa 85.18 314 *e*P **P** **16 14 28.6 +0.2**
AAK pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
AAK Ala-Archa 85.18 314 *e*P **P** **16 14 28.6 +0.2**
comp=Z,8.2nm,0.6s,mb5.0
USP Ospenovka 85.31 314 P **P** **16 14 29.7 +0.7**
SNR=24
EGAK Eagle 85.50 23 *e*P **P** **16 14 29.3 -0.6**
AML Almayashu 85.66 313 P **P** **16 14 32.6 +1.8**
SNR=32
EKS2 Erkin-Say 85.70 314 P **P** **16 14 32.3 +1.4**
SNR=15
DAWY Dawson 85.92 24 *e*P **P** **16 14 31.9 -0.2**
SKAG Skagway 86.13 29 *e*P **P** **16 14 32.0 -1.1**
comp=Z,29nm,1.2s,mb5.4
DLBC Dease Lake 88.49 31 P **P** **16 14 44.0 -0.4**
comp=Z,8.7nm,1.0s,mb4.9,baz=246,slow=5.0,SNR=10.0
DLBC LR LR 16 49 30.1
comp=Z,108nm,19.1s,MS4.3,baz=195,slow=32
P01C Double 8 Ranch 89.24 50⇑ P **P** **16 14 47.9 -0.1**
baz=89
L02A Cave Junction 89.43 48⇓ P **P** **16 14 49.0 +0.1**
baz=90
VOSK Vostochnaya 89.52 323 P **P** **16 14 49.7 +0.4**
VOSK pmax pmax
comp=Z,1.0nm,0.7s,mb4.2
I02A Mapleton 89.54 46⇑ P **P** **16 14 50.1 +0.7**
baz=90
INK Inuvik 89.60 21 P **P** **16 14 48.4 -1.3**
comp=Z,7.6nm,0.9s,mb5.0,baz=237,slow=6.9,SNR=10
INK LR LR 16 53 56.9
comp=Z,49nm,18.6s,MS4.0,baz=330,slow=35
INK Inuvik 89.60 21 *e*P **P** **16 14 48.4 -1.3**
INK pmax pmax
comp=Z,13nm,1.0s
INK Inuvik 89.60 21 *e*P **P** **16 14 48.4 -1.3**
comp=Z,13nm,1.0s,mb5.2
GASB Alder Springs 89.74 50⇑ P **P** **16 14 51.8 +1.5**
baz=90
O02C Red Bluff 89.76 50⇓ P **P** **16 14 51.5 +1.1**
baz=90
MNRC McLaughlin Nat 89.85 51⇓ P **P** **16 14 51.5 +0.7**
baz=90
M02C Callahan 89.88 49⇓ P **P** **16 14 51.8 +0.8**
baz=90
CHKZ Chkalovo 89.90 324 *e*P **P** **16 14 49.3 -1.8**
CHKZ pmax pmax
comp=Z,9.0nm,0.7s,mb5.2
CHKZ Chkalovo 89.90 324 *e*P **P** **16 14 49.3 -1.8**
comp=Z,9.4nm,0.7s,mb5.2
BVA0 Borovoye Array 89.92 323 *i* P **P** **16 14 50.1 -1.1**
BVA0 pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
BVAR Borovoye Array 89.92 323 P **P** **16 14 50.0 -1.2**
comp=Z,13nm,0.7s,mb5.4,baz=105,slow=5.7,SNR=79
I03A Eugene 89.93 46⇑ P **P** **16 14 51.6 +0.4**
baz=90
BRVK Borovoye 89.99 323 *e*P **P** **16 14 49.7 -1.8**
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
BRVK Borovoye 89.99 323 *e*P **P** **16 14 49.7 -1.8**
comp=Z,6.1nm,0.8s,mb5.0
F03A Seaside 90.02 44⇓ P **P** **16 14 52.4 +0.8**
baz=90
YBH Yreka Blue Hor 90.03 48 P **P** **16 14 51.0 -0.7**
comp=Z,3.1nm,0.8s,mb4.7,baz=172,slow=3.1,SNR=7.0
YBH LR LR 16 47 13.1
comp=Z,53nm,20.3s,MS4.0,baz=215,slow=30
YBH Yreka Blue Hor 90.03 48⇑ P **P** **16 14 52.0 +0.3**
baz=90
D03A Wishkah Elem. 90.05 43⇑ P **P** **16 14 51.8 0.0**
baz=90
J03A Ideyld Park 90.07 47⇑ P **P** **16 14 52.7 +0.8**
baz=90
V03C Hunter Liggett 90.44 54⇓ P **P** **16 14 54.9 +1.3**
baz=90
PACP Pacheco Peak 90.52 53⇓ P **P** **16 14 54.6 +0.6**
baz=91
M04C Macdoel 90.68 48⇑ P **P** **16 14 55.2 +0.4**
baz=91
ZRNK Zerenda 90.73 323 P **P** **16 14 54.0 -1.0**
ZRNK pmax pmax
comp=Z,2.0nm,1.2s,mb4.3
ZRNK Zerenda 90.73 323 *e*P **P** **16 14 53.3 -1.6**
comp=Z,6.4nm,0.6s,mb5.1
U04C Hernandez Rese 90.85 54⇓ P **P** **16 14 56.3 +0.8**
baz=91
PKD Parkfield 90.99 54⇑ P **P** **16 14 57.0 +0.8**
baz=91
M05C Lookout 91.15 49⇑ P **P** **16 14 57.2 +0.3**
baz=91
D05A Enumclaw 91.26 43⇓ P **P** **16 14 57.7 +0.3**
baz=91
J05A Fort Rock 91.31 47⇓ P **P** **16 14 58.2 +0.5**
baz=91
E05A Randle 91.34 43⇑ P **P** **16 14 57.5 -0.2**
baz=91
L05A Lakeview 91.46 48⇓ P **P** **16 14 59.0 +0.7**
baz=92
PKM Peak Mountain 91.46 55⇓ P **P** **16 14 59.3 +0.9**
baz=92
H05A Madras 91.48 45⇓ P **P** **16 14 59.3 +0.9**
baz=92
BEKR Beckwourth 91.57 50⇑ P **P** **16 14 59.3 +0.4**
baz=92
R05C Kirkwood Meado 91.67 51⇓ P **P** **16 14 59.7 +0.4**
baz=92
S06C San Francisco 91.76 52⇑ P **P** **16 14 59.8 +0.1**
baz=92
K06A Valley Falls 91.97 47⇑ P **P** **16 15 00.3 -0.4**
baz=92
WCN Washoe City 91.98 51⇓ P **P** **16 15 01.7 +0.9**
baz=92
O06A Flanigan 92.01 50⇑ P **P** **16 15 00.6 -0.3**
baz=92
J06A Christmas Vall 92.09 47⇓ P **P** **16 15 00.3 -0.9**
baz=92
I06A Prineville 92.12 46⇑ P **P** **16 15 01.4 0.0**
baz=92
R06C Coleville 92.13 52⇓ P **P** **16 15 01.7 +0.3**
baz=92
VES Vestal, Richgr 92.16 54⇑ P **P** **16 15 01.0 -0.5**
baz=92
HELL Mitchell Peak, 92.29 54⇑ P **P** **16 15 02.0 -0.2**
baz=92
SYO Syowa Base 92.52 199⇑ *e*PcP PcP 16 15 04.6 +0.6
L07A Adell 92.56 48⇑ P **P** **16 15 03.4 -0.1**
baz=93
ISA Isabella 92.64 55⇑ P **P** **16 15 03.1 -0.6**
baz=93
I07A Izee 92.64 46⇓ P **P** **16 15 03.5 -0.3**
baz=93
K07A Rock Creek Ran 92.70 48⇓ P **P** **16 15 04.2 +0.2**
baz=93
MTUM Tungsten Hills 92.72 53 *e*P **P** **16 15 05.0 +0.9**
N07B Gerlach 92.72 49⇓ P **P** **16 15 04.2 0.0**
baz=93
O07A Toulon 92.73 50⇓ P **P** **16 15 04.5 +0.3**
baz=93
HAWA Hanford 92.85 44 *e*P **P** **16 15 03.9 -0.8**
comp=Z,0.5nm,1.0s,mb3.9
EDW2 Edwards Air Fo 92.96 55⇑ P **P** **16 15 05.5 +0.2**
baz=93
NVAR Mina Array Bea 93.02 52 P **P** **16 15 05.8 +0.2**
comp=Z,5.1nm,0.7s,mb5.0,baz=256,slow=4.9,SNR=45
WVOR Wild Horse Val 93.12 48 *e*P **P** **16 15 05.8 -0.2**
WVOR pmax pmax
comp=Z,21nm,1.9s,mb5.2
WVOR Wild Horse Val 93.12 48 *e*P **P** **16 15 05.8 -0.2**
comp=Z,21nm,1.9s,mb5.2
M08A Happy Creek Ra 93.23 49⇑ P **P** **16 15 06.1 -0.4**
baz=93
LRMC Laurel Mountai 93.26 55⇓ P **P** **16 15 07.6 +0.9**
baz=93
H08A Prairie City 93.28 46⇓ P **P** **16 15 06.5 -0.3**
baz=93
I08A Dewsey 93.30 46⇑ P **P** **16 15 07.1 +0.3**
baz=93
P08A Dixie Valley 93.30 51⇓ P **P** **16 15 07.9 +1.0**
baz=93
F08A Pendleton 93.32 44⇑ P **P** **16 15 07.0 0.0**
baz=93
Q08A Gabbs 93.35 51⇓ P **P** **16 15 07.4 +0.3**
baz=93
DAC Darwin (Calif) 93.40 54 *e*P **P** **16 15 07.2 -0.1**
DAC pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
DAC Darwin (Calif) 93.40 54 *e*P **P** **16 15 07.2 -0.1**
comp=Z,5.8nm,0.8s,mb5.1
MPMC Manual Prospec 93.47 54⇑ P **P** **16 15 07.4 -0.2**
baz=94
S09A Goldfield 93.81 53⇓ P **P** **16 15 09.2 0.0**
baz=94
K09A Rome 93.82 48⇑ P **P** **16 15 09.4 +0.2**
baz=94
R09A Tonopah 93.97 52⇑ P **P** **16 15 09.7 -0.2**
baz=94
FURC Furnace Creek, 94.01 54⇑ P **P** **16 15 10.4 +0.3**
baz=94
O09A Fish Creek Ran 94.03 50⇓ P **P** **16 15 10.7 +0.6**
baz=94
MONP Monument Peak 94.10 57⇓ P **P** **16 15 10.6 +0.1**
baz=94
PFO Pinyon Flat Ob 94.12 57⇑ P **P** **16 15 11.5 +0.8**
baz=94
U10A Ash Meadows, A 94.43 54⇑ P **P** **16 15 13.0 +1.0**
baz=94
SHOC Shoshone 94.43 55⇑ P **P** **16 15 12.6 +0.5**
baz=94
BELC Belle Mtn. 94.53 56⇑ P **P** **16 15 12.9 +0.4**
baz=95
NEW Newport 94.63 42 P **P** **16 15 11.7 -1.2**
comp=Z,3.7nm,0.7s,mb4.9,baz=229,slow=4.9,SNR=9.4
NEW Newport 94.63 42 *e*P **P** **16 15 11.8 -1.2**
NEW pmax pmax
comp=Z,3.0nm,1.0s
NEW Newport 94.63 42 *e*P **P** **16 15 11.8 -1.1**
comp=Z,3.4nm,1.0s,mb4.7
IRM Iron Mountain 95.24 56⇑ P **P** **16 15 16.5 +0.7**
baz=95
GLA Glamis 95.44 57⇑ P **P** **16 15 18.7 +2.0**
baz=96
V12A Nelson 95.58 55⇓ P **P** **16 15 18.7 +1.4**
baz=96
Y12C Blythe 95.74 57⇓ P **P** **16 15 18.7 +0.7**
baz=96
Q12A Willow Creek R 95.77 51⇓ P **P** **16 15 19.0 +0.8**
baz=96
O12A Currie 95.90 50⇑ P **P** **16 15 18.9 +0.1**
baz=96
AB31 Akbulak array 96.08 319 *i* P **P** **16 15 17.5 -2.1**
AB31 pmax pmax
comp=Z,1.0nm,0.7s,mb4.3
HLID Hailey 96.29 47 *e*P **P** **16 15 20.4 -0.1**
comp=Z,2.1nm,0.8s,mb4.6
M13A Montello 96.39 49⇓ P **P** **16 15 20.7 -0.2**
baz=96
YKA Yellowknife Ar 96.55 28 P **P** **16 15 20.3 -1.4**
comp=Z,2.0nm,0.6s,mb4.7,baz=271,slow=4.8,SNR=5.4
WALA Waterton Lakes 96.79 41 *e*P **P** **16 15 23.0 +0.2**
comp=Z,4.5nm,0.9s,mb4.9
CCUT Cedar City 96.86 53 *e*P **P** **16 15 24.3 +1.2**
ARU Arti 97.04 326⇓ *i*P **P** **16 15 22.3 -1.6**
ARU *e* 16 19 17.3
ARU *e*S SKSac 16 25 53.4 -4.6
ARU *e*SS SS 16 33 13.0 -7.9
ARU pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
ARU Arti 97.04 326 *e*P **P** **16 15 21.6 -2.4**
comp=Z,5.5nm,1.1s,mb4.9
EDM Edmonton 97.19 37 *e*P **P** **16 15 22.1 -2.5**
AKTK Aktyubinsk 97.35 320 P **P** **16 15 23.2 -2.1**
AKTO Aktyubinsk 97.35 320 P **P** **16 15 23.2 -2.1**
comp=Z,0.8nm,0.5s,mb4.4,baz=136,slow=6.8,SNR=4.2
BOZ Bozeman (W) 98.31 45 *e*P **P** **16 15 29.2 -0.4**
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.7
BOZ Bozeman (W) 98.31 45 *e*P **P** **16 15 29.2 -0.4**
comp=Z,2.0nm,0.8s,mb4.7
PDAR Pinedale Array 99.83 48 P Pdif 16 15 35.9 -0.5
comp=Z,1.6nm,0.8s,baz=271,slow=2.0,SNR=15
PDAR LR LR 16 50 29.5
comp=Z,54nm,21.8s,MS4.0,baz=337,slow=29
OBN Obninsk 109.47 327⇑ *e*P Pdif 16 16 18.3 -1.0
OBN pmax pmax
comp=Z,2.0nm,0.7s
OBN pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 115.19 324 PKP PKiKP 16 20 31.9 -1.4
comp=Z,0.3nm,0.4s,baz=122,slow=1.2,SNR=6.9
NB2 NORSAR Subarra117.83 340 PKPd PKPdf 16 20 36.9 -1.4
comp=Z,1.5nm,0.6s,baz=45,slow=2.0
NOA NORSAR Array B117.83 340 PKP PKPdf 16 20 37.1 -1.2
comp=Z,1.3nm,0.7s,baz=46,slow=1.9,SNR=9.4
PLCA Paso Flores 119.10 144 PKP PKPdf 16 20 40.4 -0.4
comp=Z,1.8nm,0.9s,baz=338,slow=20,SNR=3.8
CLL Collm 123.65 331 *i* PKIKP PKPdf 16 20 49.1 -0.4
comp=Z,logA/T=0.7
CLL *i* 16 20 56.5
CLL *i* 16 21 10.6
CLL Collm 123.65 331 *i* PKPdf PKPdf 16 20 49.1 -0.4
comp=Z,3.0nm,0.6s
CLL *i* x x 16 20 56.5
CLL *i* sPKiKP 16 21 10.6
CLL Collm 123.65 331 *i* PKIKP PKPdf 16 20 49.1 -0.4
CLL *i* 16 20 56.5
CLL pmax pmax
comp=Z,3.0nm,0.6s
CLL Collm 123.65 331 *i* PKP PKPdf 16 20 49.1 -0.4

CLL				*i*			16 20 56.5		
KHC	**Kasperske Hory**	**124.71**	**328**	*e*PKPdf	PKPdf		16 20 51.0	-0.5	
GERES	**GERESS Array B**	**124.81**	**328**	PKP	PKPdf		16 20 51.0	-0.7	
	comp=Z,0.8nm,0.7s,baz=4.1,slow=1.9,SNR=5.3								
LPAZ	**La Paz**	**134.18**	**119**	PKP	PKPdf		16 21 11.5	+2.0	
	comp=Z,1.5nm,0.5s,baz=263,slow=0.8,SNR=11								
SDV	**Santo Domingo**	**137.17**	**83**	*e*PKPdf	PKPdf		16 21 16.1	+1.0	
SAML	**Samuel**	**141.52**	**112**	*e*PKPpre			16 21 17.3		
SAML				*e*PKPdf	PKPdf		16 21 23.6	+0.5	
TOAO	**Torodi Ar. Sit**	**150.31**	**286**	*e*PKPbc	PKPbc		16 21 43.3	+0.1	
TORD	**Torodi Ar. Bea**	**150.31**	**286**	PKP	PKPdf		16 21 37.4	-0.5	
	comp=Z,6.3nm,1.1s,baz=107,slow=1.0,SNR=3.7								
TORD					PKPbc	PKPbc	16 21 43.3	+0.1	
	comp=Z,16nm,0.7s,baz=72,slow=2.6,SNR=97								
TORD	**Torodi Ar. Bea**	**150.31**	**286**	PKP	PKPdf		16 21 37.4	-0.5	
TORD					PKPbc	PKPbc	16 21 43.3	+0.1	
BDFB	**Brasilia**	**150.51**	**137**	PKP	PKPdf		16 21 39.3	+1.0	
	comp=Z,12nm,0.8s,baz=234,slow=0.7,SNR=3.5								
BDFB					PKPbc	PKPbc	16 21 44.2	+0.6	
	comp=Z,12nm,0.8s,baz=200,slow=2.8,SNR=15								
DBIC	**Dimbokro**	**157.45**	**273**	PKPab	PKPab		16 22 21.0	+1.3	
	comp=Z,4.3nm,0.8s,baz=318,slow=4.8,SNR=6.6								

ISCJB ***20*** *17:13:56.7±0.5, 7146N×003W×009, h10km, mb3.2/1, MS3.0/1, Error ellipse: s-maj=5.0km s-min=3.6km az=110.4*

BER ***20*** *17:14:00.2±1.3, 6996N×747W, h10km, MD4.5, ML3.6, MW3.6*

NEIC ***20*** *17:14:02.1±0.7, 7175N×1108W, h10km, ML3.5(BER), Error ellipse: s-maj=11.4km s-min=10.1km az=158.0*

CSEM ***20*** *17:14:02.1±0.3, 7025N×782W, h10km, ML3.6, Error ellipse: s-maj=10.2km s-min=1.8km az=104.0*

REY ***20*** *17:14:04.1, 7044N×898W, h3km, ML3.8, ML3.3*

IDC ***20*** *17:14:05.0±17.0, 7148N×976W, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.3/22, mbtmp3.5/3, ML3.1/2, MS3.0/3, Ms1 3.0/3, ms1mx2.8/21, Error ellipse: s-maj=275.5km s-min=52.3km az=133.0*

ISC 20 17:13:59.8±0.5, 7141N±003×1117W±009, h10km, n31, σ1§16/43, mb3.2/1, MS3.0/1, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMI	**Jan Mayen**	**0.93**	**120**	*e*P	**Pg**	**17 14 17.9**	**+0.2**
JMI				*e*S	**Sg**	**17 14 30.3**	**+0.5**
JMI				AML	AML	17 14 31.6	
	comp=Z,2μm,0.4s						
JMI	**Jan Mayen**	**0.93**	**120**	*e*P	**Pg**	**17 14 17.9**	**+0.2**
	SNR=53						
JMI				*e*S	**Sg**	**17 14 30.3**	**+0.5**
	comp=Z,2μm,0.4s,SNR=53						
JMIC	**Jan Mayen**	**0.96**	**115**	*e*P	**Pg**	**17 14 17.9**	**-0.4**
JMIC				*e*S	**Sg**	**17 14 30.4**	**-0.4**
JMIC				AML	AML	17 14 32.3	
	comp=Z,2μm,0.5s						
JMIC	**Jan Mayen**	**0.96**	**115**	*e*P	**Pg**	**17 14 17.9**	**-0.4**
	SNR=53						
JMIC				*e*S	**Sg**	**17 14 30.4**	**-0.4**
	comp=Z,2μm,0.5s,SNR=53						
JNW	**Jan Mayen West**	**0.97**	**112**	*e*P	**Pg**	**17 14 17.9**	**-0.6**
JNW				*e*S	**Sg**	**17 14 32.2**	**+1.2**
JNW				AML	AML	17 14 33.3	
	comp=Z,2μm,0.2s						
JNW	**Jan Mayen West**	**0.97**	**112**	*e*P	**Pg**	**17 14 17.9**	**-0.5**
	SNR=53						
JNW				*e*S	**Sg**	**17 14 32.2**	**+1.2**
	comp=Z,2μm,0.2s,SNR=53						
JNE	**Jan Mayen East**	**1.02**	**113**	*e*P	**Pg**	**17 14 18.0**	**-1.5**
JNE				AML	AML	17 14 38.5	
	comp=Z,2μm,0.2s						
ILEI	**Leirhofn**	**5.38**	**203**	P	**Pn**	**17 15 19.7**	**-0.4**
ILEI				S	**Sn**	**17 16 20.6**	**-1.5**
DAG	**Danmarks Havn**	**5.76**	**343**	⇑*i*P	**Pn**	**17 15 21.3**	**-4.0**
	comp=Z,133nm,0.4s						
DAG				*i*		17 16 20.4	
IHED	**Heoinshofoi**	**5.80**	**206**	P	**Pn**	**17 15 25.7**	**-0.2**
IHED				S	**Sn**	**17 16 31.0**	**-1.4**
IFLA	**Flatey**	**5.80**	**208**	P	**Pn**	**17 15 27.5**	**+1.6**
IFLA				S	**Sn**	**17 16 32.0**	**-0.5**
IBRE	**Brettingsstaoi**	**5.85**	**208**	P	**Pn**	**17 15 27.5**	**+1.0**
IBRE				S	**Sn**	**17 16 32.5**	**-1.1**
ISIG	**Siglufjorour**	**6.00**	**212**	P	**Pn**	**17 15 30.9**	**+2.3**
IGRS	**Grimsstaoir**	**6.08**	**200**	S	**Sn**	**17 16 38.2**	**-1.1**
IHLA	**Hella**	**6.09**	**209**	P	**Pn**	**17 15 31.1**	**+1.3**
IHLA				S	**Sn**	**17 16 39.6**	**+0.1**
IHRN	**Hraun**	**6.23**	**216**	P	**Pn**	**17 15 34.6**	**+2.8**
BORG	**Borgarnes**	**7.68**	**214**	*e*P	**Pn**	**17 15 58.6**	**+6.9**
	comp=Z,12nm,0.7s						
SUMG	**Summit**	**8.49**	**291**	*e*Pn	**Pn**	**17 16 04.2**	**+1.4**
	comp=Z,16nm,0.8s						
SUMG				*e*Sn	Sn	17 17 10.9	-28
HSP	**Hornsund**	**9.09**	**40**	*e*Pg	**Pn**	**17 16 09.0**	**-2.0**
HSP	**Hornsund**	**9.09**	**40**	*e*Pg	**Pn**	**17 16 09.3**	**-1.8**
BJO	**Bjornoya**	**9.35**	**57**	*e*Pn	**Pn**	**17 16 15.2**	**+0.6**
KBS	**Kingsbay**	**9.48**	**27**	*e*Pn	**Pn**	**17 16 14.4**	**-1.9**
KBS				*e*Sn	**Sn**	**17 17 51.0**	**-12**
KBS	**Kingsbay**	**9.48**	**27**	*e*P	**Pn**	**17 16 15.6**	**-0.8**
KBS	**Kingsbay**	**9.48**	**27**	*e*Pn	**Pn**	**17 16 14.4**	**-2.0**
	SNR=53						
KBS				*e*Sn	**Sn**	**17 17 51.0**	**-12**
	SNR=53						
SPB4	**Spitsbergen Ar**	**9.78**	**34**	*e*P	**Pn**	**17 16 19.6**	**-0.8**
HOPEN	**Hopen**	**11.04**	**46**	*e*Pn	**Pn**	**17 16 37.5**	**-0.3**
ARCES	**ARCESS Array B**	**12.28**	**81**	Pn	**Pn**	**17 16 55.4**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=290,slow=12,SNR=28						
ARCES				LR	LR	17 20 58.1	
	comp=Z,65nm,21.0s,baz=293,slow=35						
KEV	**Kevo**	**12.66**	**79**	*e*P	**Pn**	**17 17 00.6**	**+0.8**
NOA	**NORSAR Array B**	**13.65**	**128**	LR	LR	17 21 47.5	
	comp=Z,58nm,20.7s,baz=325,slow=35						
FINES	**FINESS Array B**	**17.57**	**106**	P	**Pn**	**17 18 06.0**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=325,slow=16,SNR=6.2						
GERES	**GERESS Array B**	**25.41**	**140**	P	**P**	**17 19 31.7**	**+4.3**
	comp=Z,0.6nm,0.7s,mb3.2,baz=338,slow=9.5,SNR=6.8						
GERES				LR	LR	17 29 14.5	
	comp=Z,39nm,18.7s,MS3.0,baz=305,slow=36						

IDC ***20*** *17:24:35.6±0.8, 1024S×10876E, h0km, mb4.0/8, mb1 4.0/9, mb1mx3.9/17, mbtmp3.9/9, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/25, Error ellipse: s-maj=33.4km s-min=17.5km az=54.0*

NEIC ***20*** *17:24:37.3±0.4, 1024S×10878E, h10km, mb4.2/5, Error ellipse: s-maj=17.4km s-min=6.8km az=46.0*

ISCJB ***20*** *17:24:38.8±0.6, 102S±0.1×1088E±0.1, h33km, mb4.0/12, Error ellipse: s-maj=26.5km s-min=10.2km az=91.2*

ISC 20 17:24:41.1±0.6, 103S±0.1×1088E±0.1, h35km, n19, σ0§56/20, mb4.0/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBWA	**Marble Bar**	**15.11**	**137**	*e*P	**Pn**	**17 28 06.7**	**-5.1**
PSI	**Prapat**	**16.27**	**322**	LR	LR	17 34 37.1	
	comp=Z,179nm,18.5s,baz=77,slow=37						
FITZ	**Fitzroy Crossi**	**18.10**	**117**	P	**Pn**	**17 28 48.8**	**-0.8**
	0.3nm,0.3s,baz=118,slow=10,SNR=16						
FITZ				S	**S**	**17 31 57.0**	**-18**
	0.1nm,0.3s,baz=184,slow=21,SNR=4.5						
FITZ	**Fitzroy Crossi**	**18.10**	**117**	*e*P	**Pn**	**17 28 48.9**	**-0.7**
	1.7nm,0.3s						
FITZ				*e*S	**S**	**17 31 57.5**	**-18**
WRA	**Warramunga Arr**	**26.45**	**114**	P	**P**	**17 30 14.6**	**-0.1**
	1.6nm,0.6s,mb3.7,baz=286,slow=11,SNR=17						
WRAB	**Tennant Creek**	**26.46**	**114**	*e*P	**P**	**17 30 14.9**	**+0.1**
	2.9nm,0.6s,mb4.0						
WB2	**Warramunga Arr**	**26.46**	**114**	*e*P	**P**	**17 30 14.9**	**+0.1**
AS31	**Alice Springs**	**27.42**	**122**	*e*P	**P**	**17 30 23.8**	**+0.4**
ASAR	**Alice Springs**	**27.42**	**122**	P	**P**	**17 30 23.6**	**+0.2**
	0.7nm,0.6s,mb3.4,baz=292,slow=8.4,SNR=20						
ASAR				Sn	S	17 35 45.8	+44
	1.2nm,1.0s,baz=284,slow=24,SNR=5.7						
STKA	**Stephens Creek**	**37.18**	**130**	P	**P**	**17 31 49.6**	**+0.9**
	3.4nm,0.8s,mb4.2,baz=297,slow=12,SNR=5.0						
STKA	**Stephens Creek**	**37.18**	**130**	*e*P	**P**	**17 31 49.4**	**+0.7**
LSA	**Lhasa**	**43.21**	**337**	P	**P**	**17 32 39.9**	**+1.2**
	3.0nm,0.6s,mb4.2						
SONM	**Songino Array**	**57.88**	**358**	P	**P**	**17 34 28.7**	**-0.7**
	0.8nm,0.6s,mb4.0,baz=148,slow=8.7,SNR=7.2						
MKAR	**Makanchi Array**	**61.54**	**340**	P	**P**	**17 34 54.8**	**+0.3**
	2.6nm,0.6s,mb4.6,baz=145,slow=7.3,SNR=26						
MAW	**Mawson**	**64.78**	**198**	P	**P**	**17 35 16.2**	**+0.1**
	1.3nm,0.5s,mb4.2,baz=50,slow=5.3,SNR=6.1						
CHKZ	**Chkalovo**	**71.45**	**337**	*e*P	**P**	**17 35 57.6**	**-0.3**
	2.8nm,0.8s,mb4.2						
ZRNK	**Zerenda**	**71.53**	**336**	*e*P	**P**	**17 35 57.7**	**-0.7**
	2.2nm,0.8s,mb4.1						
VNDA	**Vanda**	**72.45**	**169**	P	**P**	**17 36 03.1**	**-0.8**
	0.3nm,0.5s,mb3.5,baz=292,slow=3.8,SNR=3.2						
BRTR	**Keskin Array B**	**85.30**	**312**	P	**P**	**17 37 14.4**	**+0.1**
	0.5nm,0.7s,mb3.8,baz=140,slow=8.5,SNR=4.6						

BER 20 17:26:49.4±0.5, 7108N×1170W, h15km, MD3.6, ML2.8, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.04**	**94**	*e*P	Pb	17 27 06.2	-3.0
JMIC				*e*S	Sb	17 27 18.5	-4.2
JMIC				AML	AML	17 27 20.4	
	comp=Z,401nm,0.2s						
JMIC	**Jan Mayen**	**1.04**	**94**	*e*P	Pb	17 27 06.2	-3.0
	SNR=53						
JMIC				*e*S	Sb	17 27 18.5	-4.2
	comp=Z,401nm,0.2s,SNR=53						
JNW	**Jan Mayen West**	**1.07**	**91**	*e*P	Pb	17 27 06.2	-3.4
JNW				*e*S	Sb	17 27 19.1	-4.3
JNW				AML	AML	17 27 21.4	
	comp=Z,312nm,0.3s						
JNW	**Jan Mayen West**	**1.07**	**91**	*e*P	Pb	17 27 06.2	-3.4
	SNR=53						
JNW				*e*S	Sb	17 27 19.0	-4.4
	comp=Z,312nm,0.3s,SNR=53						
JNE	**Jan Mayen East**	**1.12**	**93**	*e*P	Pb	17 27 07.3	-3.1
JNE				*e*S	Sb	17 27 19.8	-5.0
JNE				AML	AML	17 27 26.5	
	comp=Z,280nm,0.3s						
JNE	**Jan Mayen East**	**1.12**	**93**	*e*P	Pb	17 27 07.3	-3.1
	SNR=53						
JNE				*e*S	Sb	17 27 19.8	-4.9
	comp=Z,280nm,0.3s,SNR=53						
DAG	**Danmarks Havn**	**6.03**	**345**	⇑*i*P	Pn	17 28 10.2	-7.9
	comp=Z,10nm,0.3s						

IDC ***20*** *17:37:18.7±0.4, 675N×7295W, h158km±4km, mb4.1/20, mb1 4.3/26, mb1mx4.2/31, mbtmp4.6/26, Error ellipse: s-maj=8.6km s-min=5.6km az=111.0*

ISCJB ***20*** *17:37:19.3±0.4, 681N±003×7291W±003, h177km±4km, mb4.5/59, Error ellipse: s-maj=6.0km s-min=4.9km az=86.2*

NEIC ***20*** *17:37:19.3±0.1, 675N×7294W, mb4.5/47, Error ellipse: s-maj=5.0km s-min=3.4km az=58.0*

BJI ***20*** *17:37:19.3, 670N×7290W, h162km, mB5.0*

FUNV ***20*** *17:37:20.8, 692N×7311W, h174km, MW4.8*

ISC 20 17:37:20.6±0.4, 680N±003×7286W±003, h171km±3km, h164km±1.2km; pP-P, n313, σ0§73/311, mb4.5/59, 77C-69D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.19**	**27**	*e*P	**Pn**	**17 37 48.5**	**-0.5**
CAPV				*e*S	**Sn**	**17 38 10.0**	**-0.8**
ROSC	**El Rosal**	**2.42**	**217**	P	**Pn**	**17 38 00.6**	**-1.1**
	742nm,0.3s,baz=101,slow=16,SNR=186						
ROSC				S	**Sn**	**17 38 28.6**	**-5.0**
	509nm,0.3s,baz=103,slow=16,SNR=9.9						
ROSC	**El Rosal**	**2.42**	**217**	*e*Pn	**Pn**	**17 38 00.5**	**-1.2**
ROSC				*e*Sn	**Sn**	**17 38 27.5**	**-6.2**
SOCV	**Socops**	**2.48**	**53**	*e*P	**Pn**	**17 38 03.6**	**+1.1**
SOCV				*e*S	**Sn**	**17 38 35.9**	**+1.0**
VIGV	**El Vigia**	**2.52**	**36**	*e*P	**Pn**	**17 38 03.4**	**+0.4**
VIGV				*e*S	**Sn**	**17 38 34.6**	**-1.1**
SDV	**Santo Domingo**	**3.03**	**47**	P	**Pn**	**17 38 09.0**	**-0.2**
	311nm,0.3s,baz=257,slow=5.3,SNR=237						
SDV				S	**Sn**	**17 38 46.5**	**-0.5**
	346nm,0.3s,baz=266,slow=22,SNR=34						
SDV	**Santo Domingo**	**3.03**	**47**	*e*Pn	**Pn**	**17 38 10.0**	**+0.8**
SDV				*e*Sn	**Sn**	**17 38 47.8**	**+0.8**
ELOV	**Elorza**	**3.36**	**86**	*e*P	**Pn**	**17 38 14.9**	**+1.7**
ELOV				*e*S	**Sn**	**17 38 56.7**	**+2.4**
VIRV	**Villa del Rosa**	**3.71**	**7**	*e*P	**Pn**	**17 38 15.7**	**-2.0**
VIRV				*e*S	**Sn**	**17 38 56.1**	**-6.1**
QARV	**Quebrada Arrib**	**4.10**	**34**	*e*P	**Pn**	**17 38 23.1**	**+0.4**
SANV	**Sanarito**	**4.25**	**51**	*e*P	**Pn**	**17 38 24.8**	**+0.2**
CURV	**Curarigua**	**4.30**	**42**	*e*P	**Pn**	**17 38 25.5**	**+0.3**
CURV				*e*S	**Sn**	**17 39 12.3**	**-3.3**
TEPV	**Terepaima**	**4.81**	**49**	*e*P	**Pn**	**17 38 32.3**	**+0.5**
TEPV				*e*S	**Sn**	**17 39 24.9**	**-2.7**
SIQV	**Siquisique**	**4.88**	**38**	*e*P	**Pn**	**17 38 32.6**	**-0.1**
BAUV	**El Baul**	**5.23**	**66**	*e*S	**Sn**	**17 39 34.7**	**-2.8**
TURV	**Turiamo**	**6.15**	**53**	*e*P	**Pn**	**17 38 49.4**	**0.0**
CAOV	**Caicara del Or**	**6.51**	**85**	*e*S	**Sn**	**17 40 05.2**	**-2.6**
PCRV	**Puerto La Cruz**	**8.80**	**67**	P	**Pn**	**17 39 25.7**	**+1.4**
	4.0nm,0.3s,baz=232,slow=7.7,SNR=22						
PCRV				S	**Sn**	**17 41 01.9**	**-0.6**
	4.1nm,0.3s,baz=250,slow=16,SNR=2.3						
TCE	**Chacachacare**	**11.64**	**70**	⇑*i*P	**Pn**	**17 40 12.0**	**+10**
PCJ	**Portland Cotta**	**11.66**	**339**	⇑*e*P	**Pn**	**17 40 02.0**	**+0.3**
PCJ				*e*S	**Sn**	**17 41 58.6**	**-12**
HOJ	**Hope**	**11.77**	**342**	⇑*i*P	**Pn**	**17 40 04.7**	**+1.5**
TPP	**Pointe-a-Pierr**	**11.81**	**72**	*e*P	**Pn**	**17 40 14.6**	**+11**
STH	**Stony Hill**	**11.86**	**341**	⇑*e*P	**Pn**	**17 40 04.9**	**+0.7**
STH				*e*S	**Sn**	**17 42 01.0**	**-15**
TRN	**Trinidad (W)**	**11.96**	**71**	⇓*i*P	**Pn**	**17 40 14.6**	**+9.0**
TBH	**Brigand Hill**	**12.22**	**72**	⇑*i*P	**Pn**	**17 40 19.2**	**+10**
GRW	**Mount Saint Ca**	**12.27**	**63**	⇑*i*P	**Pn**	**17 40 18.8**	**+9.3**
MBJ	**Montego Bay**	**12.52**	**338**	⇑*e*P	**Pn**	**17 40 14.4**	**+1.5**
TPR	**Prospect**	**12.71**	**69**	⇑*e*P	**Pn**	**17 40 22.8**	**+7.6**
SJG	**San Juan**	**13.01**	**30**	P	**Pn**	**17 40 18.9**	**-0.2**
	10nm,0.3s,baz=210,slow=10,SNR=26						
SJG				S	**Sn**	**17 42 32.4**	**-11**
	0.9nm,0.3s,baz=57,slow=22,SNR=5.6						
SJG	**San Juan**	**13.01**	**30**	*e*Pn	**Pn**	**17 40 17.7**	**-1.4**
	31nm,0.5s						
SJG				*e*Sn	**Sn**	**17 42 31.8**	**-12**
CPD	**Cerro la Pandu**	**13.07**	**31**	*e*Pn	**Pn**	**17 40 18.8**	**-1.0**
MASC	**Masc**	**13.37**	**354**	*e*P	**Pn**	**17 40 26.1**	**+2.5**
RCC	**Rio Carpintero**	**13.41**	**348**	*e*PG	**Pn**	**17 40 24.6**	**+0.5**
RCC				*e*SG	**Sn**	**17 42 34.9**	**-18**
	comp=N,173nm,24.6s						
RCC				*e*			
	comp=E,157nm,21.1s						
MOAC	**Moa**	**13.93**	**352**	*e*P	**Pn**	**17 40 35.1**	**+4.4**
MOAC				*e*S	**Sn**	**17 42 59.1**	**-6.4**
	comp=N,11nm,0.4s						
MOAC				*e*			
	comp=E,11nm,0.4s						
ATAH	**Atahualpa**	**14.77**	**202**	P	**Pn**	**17 40 42.8**	**+1.6**
	comp=E,3.6nm,0.3s,baz=2.2,slow=4.4,SNR=13						
ATAH				S	**Sn**	**17 43 34.7**	**+9.1**
	comp=E,0.1nm,0.3s,baz=177,slow=13,SNR=4.4						
MGV	**Manicaragua**	**16.70**	**336**	*e*P	**Pn**	**17 41 13.4**	**+8.7**
SAML	**Samuel**	**18.38**	**148**	*e*P	**P**	**17 41 22.9**	**+0.6**
	comp=E,0.4nm,0.5s						
SAML				*e*S	**S**	**17 44 49.6**	**+6.4**
PAYG	**Puerto Ayora**	**18.90**	**248**	P	**P**	**17 41 27.9**	**-0.2**
NNA	**Nana**	**19.07**	**192**	P	**P**	**17 41 28.4**	**-1.5**
	comp=E,1.0nm,0.3s,baz=330,slow=9.7,SNR=9.2						
NNA				S	**S**	**17 45 02.7**	**+5.7**
	comp=E,0.2nm,0.3s,baz=269,slow=22,SNR=2.8						
NNA	**Nana**	**19.07**	**192**	*e*P	**P**	**17 41 28.6**	**-1.2**
	comp=E,15nm,0.6s						
LPAZ	**La Paz**	**23.41**	**168**	P	**P**	**17 42 14.2**	**+0.2**
	comp=E,3.1nm,0.7s,mb3.8,baz=5.6,slow=11,SNR=23						
LPAZ				S	**S**	**17 46 15.3**	**+1.1**
	comp=E,3.6nm,0.9s,baz=114,slow=21,SNR=4.3						
LPAZ	**La Paz**	**23.41**	**168**	*e*P	**P**	**17 42 14.9**	**+0.9**
	comp=E,10nm,0.7s,mb4.4						
LPAZ				*e*pP		17 42 48.2	
CMIG	**Matias Romero**	**23.82**	**297**	P	**P**	**17 42 13.1**	**-4.7**
	comp=E,1.0nm,0.3s,mb3.8,baz=87,slow=7.7,SNR=4.1						
SIV	**San Ignacio**	**25.47**	**153**	P	**P**	**17 42 32.4**	**-0.3**
	comp=E,3.7nm,0.9s,mb3.9,baz=332,slow=9.1,SNR=18						
LVC	**Limon Verde**	**29.48**	**173**	P	**P**	**17 43 06.4**	**-2.0**
	comp=E,1.3nm,0.4s,mb4.0,baz=23,slow=7.2,SNR=5.2						
LVC				ScP	ScP	17 49 36.7	+1.6
	comp=E,1.6nm,0.6s,baz=333,slow=2.3,SNR=3.6						
SWET	**Sewanee**	**30.73**	**339**	*e*P	**P**	**17 43 20.3**	**+0.9**
PLAL	**Pickwick Lake**	**31.36**	**336**	*e*P	**P**	**17 43 25.4**	**+0.5**
	comp=E,11nm,0.7s,mb4.7						
WVT	**Waverly**	**32.26**	**337**	*e*P	**P**	**17 43 32.8**	**0.0**
	comp=E,14nm,0.5s,mb4.9						
BDFB	**Brasilia**	**33.21**	**132**	P	**P**	**17 43 42.1**	**+1.1**
	comp=E,10nm,0.6s,mb4.7,baz=303,slow=11,SNR=17						
BDFB	**Brasilia**	**33.21**	**132**	*e*P	**P**	**17 43 42.9**	**+1.9**
WCI	**Wyandotte Cave**	**33.58**	**341**	*e*P	**P**	**17 43 44.7**	**+0.4**
	comp=E,15nm,0.6s,mb4.9						
MIAR	**Mount Ida**	**33.58**	**328**	*e*P	**P**	**17 43 43.3**	**-1.0**
	comp=E,4.7nm,0.8s,mb4.3						
CCM	**Cathedral Cave**	**35.30**	**334**	*e*P	**P**	**17 43 57.8**	**-1.3**
	comp=E,42nm,0.7s,mb5.2						
CPUP	**Villa Florida**	**36.21**	**156**	P	**P**	**17 44 07.2**	**+0.3**
	comp=E,0.5nm,0.5s,mb3.4,baz=325,slow=10,SNR=3.0						
WMOK	**Wichita Mounta**	**36.65**	**323**	*e*P	**P**	**17 44 08.9**	**-1.6**
	comp=E,7.1nm,0.7s,mb4.4						
NCB	**Newcomb**	**37.05**	**358**	*e*P	**P**	**17 44 14.9**	**+1.0**
	comp=E,5.3nm,0.5s,mb4.4						
CFAA	**Coronel Fontan**	**38.44**	**174**	ScP	ScP	17 50 06.6	-0.2
	comp=E,0.3nm,0.6s,baz=27,slow=4.5,SNR=5.6						
KSU1	**Kansas State U**	**38.64**	**330**	*e*P	**P**	**17 44 25.1**	**-2.1**
JFWS	**Jewell Farm**	**39.11**	**340**	*e*P	**P**	**17 44 30.4**	**-0.6**
	comp=E,36nm,0.6s,mb5.2						
MNTX	**Cornudas Mount**	**39.17**	**313**	*e*P	**P**	**17 44 31.1**	**-0.5**
	comp=E,12nm,0.7s,mb4.6						
MNTX				*e*PcP	PcP	17 46 37.8	+0.3
ANMO	**Albuquerque**	**41.71**	**317**	P	**P**	**17 44 53.3**	**+0.8**
	comp=E,1.6nm,0.5s,mb3.9,baz=137,slow=9.7,SNR=6.2						
ANMO				PcP	PcP	17 46 45.5	-0.2
	comp=E,1.6nm,0.7s,baz=157,slow=6.1,SNR=3.9						
ANMO	**Albuquerque**	**41.71**	**317**	*e*P	**P**	**17 44 53.0**	**+0.5**
	comp=E,1.7nm,0.6s,mb3.9						
TUC	**Tucson**	**43.46**	**311**	*e*P	**P**	**17 45 06.3**	**-0.2**
	comp=E,4.4nm,0.8s,mb4.1						
TUC				*e*pP	pP	17 45 41.0	-3.0
EYMN	**Ely**	**43.97**	**342**	*e*P	**P**	**17 45 10.2**	**-0.4**
	comp=E,30nm,0.6s,mb5.1						
EYMN				*e*pP	pP	17 45 46.4	-1.8
ISCO	**Idaho Springs**	**44.08**	**323**	*e*P	**P**	**17 45 12.1**	**+0.7**
	comp=E,11nm,0.9s,mb4.5						
116A	**Eloy**	**44.27**	**311**	⇓P	**P**	**17 45 12.8**	**-0.2**
	baz=44						
SMCO	**Snowmass**	**44.52**	**322**	*e*P	**P**	**17 45 15.6**	**+0.6**
	comp=E,3.2nm,0.5s,mb4.2						
115A	**Sonoran Desert**	**44.72**	**311**	⇓P	**P**	**17 45 16.6**	**0.0**
	baz=45,SNR=6.7						
PV01	**Paradox Valley**	**44.91**	**319**	*e*P	**P**	**17 45 18.8**	**+0.7**
PHWY	**Pilot Hill**	**44.96**	**325**	*e*P	**P**	**17 45 18.5**	**+0.1**
WUAZ	**Wupatki**	**45.42**	**315**	*e*P	**P**	**17 45 22.5**	**+0.4**
	comp=E,25nm,0.9s,mb4.8						
X15A	**Humboldt**	**45.55**	**313**	⇑P	**P**	**17 45 23.5**	**+0.5**
	baz=46,SNR=10						
Z14A	**Wintersburg**	**45.56**	**311**	⇓P	**P**	**17 45 23.5**	**+0.4**
	baz=46						
Y14A	**Wickenburg**	**45.86**	**312**	⇓P	**P**	**17 45 25.6**	**+0.1**
	baz=46,SNR=17						
W15A	**Williams**	**45.89**	**314**	⇓P	**P**	**17 45 26.6**	**+0.8**
	baz=46						
X14A	**Yava**	**46.02**	**312**	⇑P	**P**	**17 45 27.1**	**+0.3**
	baz=46,SNR=5.6						
RWWY	**Rawlins**	**46.21**	**324**	*e*P	**P**	**17 45 28.2**	**-0.1**
	comp=E,4.9nm,0.7s,mb4.2						
Y13A	**Salome**	**46.42**	**311**	⇑P	**P**	**17 45 30.1**	**+0.3**
	baz=46						
W14A	**Seligman**	**46.50**	**313**	⇑P	**P**	**17 45 31.1**	**+0.6**
	baz=46,SNR=8.6						
SRU	**San Rafael**	**46.73**	**319**	*e*P	**P**	**17 45 32.4**	**+0.1**
	comp=E,13nm,1.0s,mb4.5						
X13A	**Yucca**	**46.76**	**312**	⇑P	**P**	**17 45 32.7**	**+0.2**
	baz=47						
GLA	**Glamis**	**46.85**	**310**	⇑P	**P**	**17 45 33.5**	**+0.3**
	baz=47,SNR=12						
PDMCI	**Parker Dam,Lak**	**46.86**	**312**	⇓P	**P**	**17 45 33.2**	**-0.1**
	baz=47						
Y12C	**Blythe**	**46.91**	**311**	⇓P	**P**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=50,SNR=7.2						
EDW2	Edwards Air Fo	49.99	310	⇓P	P	17 45 57.1	-0.1
	baz=50,SNR=5.0						
LRMC	Laurel Mountai	50.00	311	⇓P	P	17 45 57.3	0.0
	baz=50						
MPMC	Manual Prospec	50.09	312	⇑P	P	17 45 58.0	0.0
	baz=50						
O12A	Currie	50.10	318	⇓P	P	17 45 58.4	+0.3
	baz=50						
GCMT	Greycliff	50.19	327	*e*P	P	17 45 59.2	+0.5
R10A	Warm Springs	50.21	315	⇓P	P	17 45 59.8	+0.9
	baz=50,SNR=6.3						
M13A	Montello	50.29	320	⇑P	P	17 45 59.4	0.0
	baz=50,SNR=30						
GRAC	Grapevine Rang	50.40	313	⇑P	P	17 46 00.8	+0.4
	baz=50						
P11A	Circle Ranch,	50.43	317	⇑P	P	17 46 00.8	+0.3
	baz=50						
QLMT	Earthquake Lak	50.58	325	*e*P	P	17 46 02.3	+0.7
N12A	Clover Valley,	50.59	319	⇑P	P	17 46 01.7	-0.1
	baz=51						
S09A	Goldfield	50.61	314	⇑P	P	17 46 01.9	+0.1
	baz=51,SNR=7.0						
M12A	Wells	50.80	319	⇑P	P	17 46 03.1	-0.1
	baz=51,SNR=11						
P10A	Eureka	50.94	317	⇑P	P	17 46 04.2	-0.1
	baz=51						
TIN	Tinemaha	51.05	313	⇓P	P	17 46 05.2	+0.1
	baz=51						
VES	Vestal, Richgr	51.19	311	⇑P	P	17 46 06.5	+0.4
	baz=51,SNR=6.0						
O10A	Cortez Mining,	51.28	317	⇓P	P	17 46 07.1	+0.2
	baz=51						
P09A	Austin	51.37	316	⇑P	P	17 46 08.3	+0.8
	baz=51						
M11A	Holland Ranch,	51.37	319	⇓P	P	17 46 07.5	-0.1
	baz=51,SNR=6.1						
MCMT	McKenzie Canyo	51.39	324	*e*P	P	17 46 08.4	+0.7
HELL	Mitchell Peak,	51.48	312	⇑P	P	17 46 08.6	+0.3
	baz=52,SNR=21						
RCTC	Rector, Farmer	51.49	312	⇓P	P	17 46 08.4	-0.1
	baz=52						
N10A	Dunphy	51.49	318	⇑P	P	17 46 09.0	+0.6
	baz=52						
R08A	Mina	51.51	314	⇓P	P	17 46 09.2	+0.6
	baz=52						
DLMT	Dillon	51.55	325	*e*P	P	17 46 09.6	+0.6
	comp=E,8.3nm,1.3s,mb4.2						
Q08A	Gabbs	51.61	315	⇑P	P	17 46 09.5	+0.1
	baz=52,SNR=9.2						
HLID	Hailey	51.62	322	*e*P	P	17 46 09.3	0.0
	comp=E,5.9nm,0.7s,mb4.3						
SMMC	Simmler	51.67	310	⇓P	P	17 46 10.0	+0.2
	baz=52						
NVAR	Mina Array Bea	51.68	314	P	P	17 46 09.9	0.0
	comp=E,3.2nm,0.6s,mb4.1,baz=120,slow=7.9,SNR=27						
NVAR				PcP	PcP	17 47 22.1	+1.2
	comp=E,2.0nm,0.5s,baz=178,slow=4.0,SNR=7.5						
O09A	Fish Creek Ran	51.69	317	⇑P	P	17 46 10.4	+0.5
	baz=52,SNR=24						
BMN	Battle Mountai	51.84	317	*e*P	P	17 46 11.2	+0.2
	comp=E,6.4nm,1.0s,mb4.2						
M10A	I.L. Ranch, Tu	51.91	319	⇓P	P	17 46 11.5	0.0
	baz=52						
KCC	Kaiser Creek	51.95	313	⇑P	P	17 46 11.0	-0.9
	baz=52						
R07C	Lee Vining	52.07	314	⇓P	P	17 46 12.9	+0.2
	baz=52,SNR=9.0						
T06C	Millerton Lake	52.11	312	⇓P	P	17 46 11.8	-1.2
	baz=52						
N09A	Rock Creek Ran	52.24	318	⇑P	P	17 46 13.6	-0.3
	baz=52,SNR=8.1						
PKD	Parkfield	52.32	311	⇓P	P	17 46 13.9	-0.6
	baz=52						
M09A	Marrel Ranch,	52.46	318	⇑P	P	17 46 15.8	+0.2
	baz=52						
R06C	Coleville	52.54	314	⇓P	P	17 46 16.2	0.0
	baz=53						
S06C	San Francisco	52.56	313	⇑P	P	17 46 16.4	0.0
	baz=53,SNR=16						
P07A	Fallon	52.58	316	⇓P	P	17 46 16.0	-0.5
	baz=53						
U04C	Hernandez Rese	52.66	311	⇑P	P	17 46 17.0	-0.1
	baz=53						
CHMT	Chamberlain Mo	52.84	326	*e*P	P	17 46 17.6	-0.7
O07A	Toulon	52.84	316	⇓P	P	17 46 18.2	-0.2
	baz=53						
V03C	Hunter Liggett	52.87	311	⇑P	P	17 46 18.5	-0.2
	baz=53						
L09A	Wilkinson Ranc	52.88	319	⇓P	P	17 46 18.6	-0.1
	baz=53,SNR=23						
PAHR	Pah Rah Range	52.99	315	*e*P	P	17 46 19.5	0.0
	comp=E,5.8nm,0.7s,mb4.4						
CMB	Columbia Colle	53.01	313	⇑P	P	17 46 19.2	-0.5
	baz=53						
R05C	Kirkwood Meado	53.06	314	⇑P	P	17 46 20.2	+0.2
	baz=53,SNR=5.7						
WCN	Washoe City	53.08	315	⇓P	P	17 46 20.6	+0.5
	baz=53						
M08A	Happy Creek Ra	53.09	318	⇑P	P	17 46 20.2	0.0
	baz=53,SNR=7.7						
MSO	Missoula	53.17	326	*e*P	P	17 46 20.4	-0.4
	comp=E,2.2nm,0.8s,mb3.9						
N07B	Gerlach	53.18	317	⇑P	P	17 46 20.1	-0.8
	baz=53						
HAST	UC Hastings Re	53.24	311	⇑P	P	17 46 21.1	-0.2
	baz=53						
K09A	Rome	53.25	320	⇑P	P	17 46 21.3	-0.1
	baz=53,SNR=34						
PACP	Pacheco Peak	53.27	312	⇑P	P	17 46 21.7	+0.1
	baz=53,SNR=5.8						
P06A	Stead Airport,	53.34	315	⇑P	P	17 46 22.5	+0.4
	baz=53						
L08A	Fields	53.41	319	⇑P	P	17 46 22.4	-0.1
	baz=54,SNR=57						
S04C	Ingram Canyon,	53.49	312	⇓P	P	17 46 23.5	+0.3
	baz=54						
O06A	Flanigan	53.50	316	P	P	17 46 23.1	-0.1
	baz=54,SNR=8.5						
R04C	Big Horse Ranc	53.50	313	⇑P	P	17 46 22.5	-0.7
	baz=54						
LAVA	Lava Cap Winer	53.55	314	⇑P	P	17 46 23.7	+0.1
	baz=54						
P05C	Yuba Gap, Truc	53.68	315	⇑P	P	17 46 24.8	+0.3
	baz=54,SNR=7.3						
WVOR	Wild Horse Val	53.72	319	*e*P	P	17 46 24.6	-0.2
	comp=E,8.1nm,0.6s,mb4.6						
BEKR	Beckwourth	53.74	315	⇑P	P	17 46 24.9	-0.1
	baz=54,SNR=9.3						
N06A	Buffalo Meadow	53.76	316	⇑P	P	17 46 24.1	-1.0
	baz=54						
K08A	Mann Creek Ran	53.76	319	⇓P	P	17 46 25.0	-0.1
	baz=54,SNR=17						
WENL	Wente Brothers	53.85	312	⇑P	P	17 46 26.6	+0.9
	baz=54						
L07A	Adell	53.99	318	⇓P	P	17 46 26.7	-0.1
	baz=54,SNR=12						
Q04C	Lincoln	54.05	314	⇓P	P	17 46 27.7	+0.6
	baz=54						
JRSC	Jasper Ridge	54.13	312	⇓P	P	17 46 28.7	+0.9
	baz=54						
O05C	Quincy	54.17	315	⇓P	P	17 46 28.3	+0.2
	baz=54,SNR=8.0						
H09A	Durkee	54.19	322	⇓P	P	17 46 28.0	-0.2
	baz=54						
I08A	Drewsey	54.38	320	⇑P	P	17 46 29.3	-0.2
	baz=54						
M06C	Likely Place G	54.39	317	⇑P	P	17 46 28.8	-0.9
	baz=54						
ORV	Oroville	54.42	314	⇓P	P	17 46 29.8	-0.1
	baz=54						
O04C	Chester	54.44	315	⇓P	P	17 46 30.0	0.0
	baz=54						
WALA	Waterton Lakes	54.47	328	*e*P	P	17 46 29.6	-0.6
WALA				*e*PcP	PcP	17 47 32.0	+0.5
SUTB	Sutter Butte	54.49	314	⇑P	P	17 46 30.3	-0.1
	baz=54						
CVS	Carmenet Viney	54.64	313	⇓P	P	17 46 31.4	-0.1
	baz=55						
H08A	Prairie City	54.74	321	⇓P	P	17 46 31.5	-0.7
	baz=55,SNR=15						
MNRC	McLaughlin Nat	54.83	313	⇑P	P	17 46 33.3	+0.5
	baz=55						
MCCM	Marconi Confer	54.87	312	⇑P	P	17 46 33.0	-0.1
	baz=55						
HATC	Hat Creek Radi	54.90	316	⇑P	P	17 46 33.1	-0.3
	baz=55						
K06A	Valley Falls	54.94	319	⇓P	P	17 46 33.1	-0.5
	baz=55						
L05A	Lakeview	55.00	318	⇓P	P	17 46 34.2	+0.1
	baz=55						
I07A	Izee	55.05	320	⇓P	P	17 46 34.0	-0.4
	baz=55,SNR=14						
J06A	Christmas Vall	55.08	319	P	P	17 46 34.0	-0.6
	baz=55,SNR=6.0						
LNOR	Lincton Mounta	55.17	323	P	P	17 46 35.2	-0.1
GASB	Alder Springs	55.32	314	⇑P	P	17 46 37.2	+0.8
	baz=55						
HOPS	Hopland	55.33	313	⇑P	P	17 46 36.7	+0.3
	baz=55						
F08A	Pendleton	55.44	322	⇓P	P	17 46 36.7	-0.5
	baz=56						
I06A	Prineville	55.44	320	⇑P	P	17 46 37.1	-0.1
	baz=56,SNR=7.9						
M03C	McCloud	55.55	316	⇓P	P	17 46 37.2	-0.8
	baz=56						
WDC	Whiskeytown Da	55.56	315	⇓P	P	17 46 36.3	-1.7
	baz=56						
M04C	Macdoel	55.56	317	⇓P	P	17 46 37.7	-0.4
	baz=56,SNR=8.4						
O02C	Red Bluff	55.57	315	⇑P	P	17 46 37.1	-1.0
	baz=56						
P01C	Double 8 Ranch	55.69	314	⇑P	P	17 46 39.4	+0.4
	baz=56						
NEW	Newport	55.76	326	*e*P	P	17 46 38.5	-1.0
	comp=E,3.1nm,0.8s,mb4.2						
L04A	Klamath Falls	55.76	317	⇓P	P	17 46 39.2	-0.2
	baz=56,SNR=6.7						
J05A	Fort Rock	55.80	319	⇓P	P	17 46 39.9	+0.1
	baz=56,SNR=16						
K04A	Chilquin	55.84	318	⇓P	P	17 46 39.5	-0.5
	baz=56						
VIPM	Ingram Point	55.96	320	P	P	17 46 41.2	+0.3
M02C	Callahan	56.10	316	⇓P	P	17 46 40.5	-1.4
	baz=56						
YBH	Yreka Blue Hor	56.13	316	P	P	17 46 40.6	-1.6
	comp=E,5.7nm,0.6s,mb4.6,baz=112,slow=2.8,SNR=25						
YBH				PcP	PcP	17 47 37.3	-0.6
	comp=E,1.8nm,0.8s,baz=114,slow=4.0,SNR=3.0						
YBH	Yreka Blue Hor	56.13	316	*e*P	P	17 46 40.5	-1.7
	comp=E,4.4nm,0.6s,mb4.5						
YBH	Yreka Blue Hor	56.13	316	⇑P	P	17 46 40.6	-1.6
	baz=56,SNR=6.0						
N02C	Big Bar	56.19	315	⇓P	P	17 46 41.2	-1.3
	baz=56						
H05A	Madras	56.41	320	⇓P	P	17 46 44.6	+0.6
	baz=56						
KHMM	Horse Mountain	56.50	315	*e*P	P	17 46 45.0	+0.2
JCC	Jacoby Creek	56.69	315	⇓P	P	17 46 47.1	+1.1
	baz=57						
G05A	Wamic	56.74	321	⇑P	P	17 46 47.4	+1.0
	baz=57						
HBO	Huckleberry Mo	56.76	319	P	P	17 46 46.4	-0.1
EDM	Edmonton	56.77	332	*e*P	P	17 46 45.4	-1.2
J03A	Ideyld Park	56.98	318	⇑P	P	17 46 46.8	-1.3
	baz=57						
BROR	Big Rock Looko	57.03	319	P	P	17 46 47.9	-0.5
H04A	Detroit Lake	57.04	320	⇑P	P	17 46 48.5	0.0
	baz=57						
F05A	White Salmon	57.12	321	⇑P	P	17 46 49.3	+0.2
	baz=57						
M01C	Crescent City	57.15	316	⇑P	P	17 46 49.5	+0.2
	baz=57						
J02A	Umpqua	57.38	318	⇑P	P	17 46 50.7	-0.2
	baz=57						
I03A	Eugene	57.44	319	⇑P	P	17 46 50.8	-0.5
	baz=58						
G04A	Mulino	57.45	320	⇑P	P	17 46 51.0	-0.4
	baz=58						
I02A	Mapleton	57.81	319	⇓P	P	17 46 54.0	+0.1
	baz=58						
G03A	Yamhill	58.01	320	⇑P	P	17 46 55.4	+0.1
	baz=58						
D05A	Enumclaw	58.05	323	⇓P	P	17 46 55.1	-0.4
	baz=58						
F03A	Seaside	58.45	321	⇓P	P	17 46 58.5	+0.1
	baz=58						
B05A	Bryant	58.62	324	⇓P	P	17 46 58.6	-0.9
	baz=59						
HDW	Hoodsport	58.90	323	P	P	17 47 01.0	-0.5
A05A	Maple Falls	58.96	324	⇑P	P	17 47 00.7	-1.2
	baz=59						
A04A	Legoe Bay, Lum	59.19	324	⇑P	P	17 47 02.8	-0.7
	baz=59						
B04A	Port Angeles	59.36	323	⇑P	P	17 47 05.0	+0.4
	baz=59						
OSD	Olympics--Snow	59.37	323	P	P	17 47 05.6	+0.9
USHA	Ushuaia	61.51	177	P	P	17 47 17.4	-1.7
	comp=E,4.0nm,0.7s,mb4.3,baz=0.0,slow=4.0,SNR=4.1						
YKA	Yellowknife Ar	63.38	340	P	P	17 47 31.0	-0.5
	comp=E,18nm,0.6s,mb5.1,baz=133,slow=6.6,SNR=66						
YKA				pP	pP	17 48 08.4	-3.3
	comp=E,3.8nm,0.7s,baz=130,slow=6.5,SNR=2.3						
YKA	Yellowknife Ar	63.38	340	P	P	17 47 31.0	-0.5
YKA				pP	pP	17 48 08.4	-3.3
DBIC	Dimbokro	67.48	86	P	P	17 47 58.7	+0.8
	comp=E,21nm,0.7s,mb5.1,baz=256,slow=6.3,SNR=44						
DBIC				pP	pP	17 48 38.1	-0.4
	comp=E,4.3nm,0.7s,baz=230,slow=7.9,SNR=2.3						
DBIC	Dimbokro	67.48	86	*e*P	P	17 47 58.5	+0.6
	comp=E,17nm,0.7s,mb5.0						
SUMG	Summit	68.97	11	*e*P	P	17 48 07.4	+0.3
	comp=E,45nm,0.6s,mb5.4						
INK	Inuvik	73.14	340	*e*P	P	17 48 31.8	-0.5
	comp=E,7.2nm,0.7s,mb4.5						
TOA0	Torodi Ar. Sit	73.49	78	*e*P	P	17 48 34.6	+0.3
TORD	Torodi Ar. Bea	73.49	78	P	P	17 48 34.0	-0.3
	comp=E,2.0nm,0.4s,mb4.2,baz=286,slow=6.5,SNR=54						
TORD	Torodi Ar. Bea	73.49	78	P	P	17 48 34.0	-0.3
DAWY	Dawson	73.77	335	*e*P	P	17 48 35.6	-0.4
EGAK	Eagle	74.72	336	*e*P	P	17 48 41.2	-0.2
MENT	Mentasta	75.32	333	*e*P	P	17 48 48.3	+3.5
IMA2	Indian Mountai	80.10	336	*e*P	P	17 49 11.6	+0.3
SVW2	Sparrevohn	80.57	331	*e*P	P	17 49 12.4	-1.4
TTA	Tatalina	80.87	333	*e*P	P	17 49 15.3	-0.1
NB2	NORSAR Subarra	81.23	29	P	P	17 49 17.6	+0.3
	comp=Z,4.1nm,0.7s,mb4.2,baz=268,slow=5.6						
NOA	NORSAR Array B	81.23	29	P	P	17 49 18.0	+0.7
	comp=Z,4.5nm,0.8s,mb4.2,baz=268,slow=5.3,SNR=22						
NOA				pP	pP	17 49 57.6	-1.7
	comp=Z,1.0nm,0.8s,baz=270,slow=5.3,SNR=1.7						
KHC	Kasperske Hory	82.58	41	*e*P	P	17 49 25.3	+1.0
GEC2	GERESS Array S	82.67	42	*e*P	P	17 49 24.8	0.0
GERES	GERESS Array B	82.67	42	P	P	17 49 25.4	+0.6
	comp=Z,2.0nm,0.6s,mb4.0,baz=265,slow=4.0,SNR=19						
PVCC	Panska Ves	83.17	40	*e*P	P	17 49 28.3	+0.9
PRU	Pruhonice	83.18	40	*e*P	P	17 49 28.1	+0.7
UPC	Upice	84.09	40	*e*P	P	17 49 33.4	+1.4
DPC	Dobruska-Polom	84.30	40	*e*P	P	17 49 33.7	+0.6
ARCES	ARCESS Array B	86.61	20	P	P	17 49 44.6	+0.1
	comp=Z,3.3nm,0.5s,mb4.4,baz=268,slow=3.7,SNR=26						
VNA1	Neumayer--Stat	88.21	162	*e*P	P	17 49 51.9	-0.3
VNA1				*e*		17 49 52.3	
VNA1				*e*		17 50 00.8	
VNA1				*e*		17 50 28.6	
KAF	Kangasniemi	88.32	28	*e*p	P	17 49 51.0	-1.7
FINES	FINESS Array B	88.34	28	P	P	17 49 53.0	+0.3
	comp=Z,4.5nm,1.1s,mb4.2,baz=287,slow=3.9,SNR=8.0						
SNAA	Sanae	90.24	163	*e*P	P	17 50 00.2	-1.4
SNAA				*e*		17 50 00.9	
SNAA	Sanae	90.24	163	*e*P	P	17 50 00.2	-1.4
	comp=Z,1.1nm,0.4s,mb4.1						
ZAL	Zalesovo	116.64	15	PKP	PKPdf	17 55 44.1	-0.1
	comp=Z,3.9nm,0.6s,baz=192,slow=2.4,SNR=19						
MKAR	Makanchi Array	122.26	20	PKP	PKPdf	17 55 55.1	+0.1
	comp=Z,3.1nm,0.4s,baz=297,slow=2.7,SNR=28						
MDJ	Mudanjiang	124.97	341	PKP	PKPdf	17 56 00.3	+0.1
SONM	Songino Array	125.60	1	PKP	PKPdf	17 56 01.5	+0.1
	comp=Z,2.8nm,0.5s,baz=317,slow=1.4,SNR=6.7						
WMQ	Urumqi	126.64	17	*e*PKP	PKPdf	17 56 03.4	0.0
MJAR	Matsushiro Arr	127.98	328	PKP	PKPdf	17 56 05.2	-0.7
	comp=Z,0.8nm,0.7s,baz=85,slow=0.7,SNR=5.6						
HHC	Hu-ho-hao-te	132.42	355	*e*PKP	PKPdf	17 56 14.5	+0.2
HHC				XPKP		17 57 13.6	
HHC				PP	PP	17 58 42.8	+3.3
HHC				PKS		17 59 49.4	
HHC				SKS	SKSdf	18 03 08.0	-1.5
HHC				SKKS	SKKSac	18 05 15.9	-2.5
HHC				PP	PP		
	comp=Z,55nm,4.7s						
HHC				LR	LR		
	comp=N,108nm,20.2s						
HHC				LR	LR		
	comp=E,119nm,20.2s						
HHC				LR	LR		
	comp=Z,55nm,21.4s						
GTA	Gaotai	133.53	8	*e*PKP	PKPdf	17 56 18.3	+1.9
LZH	Lanzhou	137.24	4	*e*PKP	PKPdf	17 56 26.0	+2.7
LZH				LR	LR		
	comp=N,136nm,19.6s						
LZH				LR	LR		
	comp=Z,252nm,20.4s						
STKA	Stephens Creek	139.32	228	PKhKP		17 56 23.7	
	comp=Z,4.7nm,0.8s,baz=104,slow=5.6,SNR=5.4						
STKA				PKP	PKPdf	17 56 28.2	+1.1
	comp=Z,4.0nm,0.7s,baz=71,slow=2.3,SNR=7.5						
STKA	Stephens Creek	139.32	228	*e*P	PKPdf	17 56 23.7	-3.5
STKA				PKP	PKPdf	17 56 28.2	+1.1
NJ2	Nanjing	139.79	345	*e*PKP	PKPdf	17 56 28.8	+0.8
NJ2				XPKP		17 57 28.0	
NJ2				PP	PP	17 59 30.0	+4.4
NJ2				PKS		18 00 04.0	
NJ2				SKS	SKSdf	18 03 21.0	-1.1
NJ2				SKKS	SKKSac	18 06 03.0	+0.6
NJ2				PP	PP		
	comp=Z,510nm,9.7s						
NJ2				LR	LR		
	comp=N,1µm,26.5s						
NJ2				LR	LR		
	comp=E,1µm,22.7s						
NJ2				LR	LR		
	comp=Z,2µm,26.4s						
CD2	Chengdu	142.37	5	*e*PKP	PKPdf	17 56 30.1	-2.5
KMI	Kunming	147.99	8	PKP	PKPdf	17 56 43.0	+0.7
KMI				PP	PP		
	comp=Z,37nm,5.3s						
KMI				LR	LR		
	comp=Z,43nm,20.6s						
FORT	Forrest	149.11	217	*e*P	PKPbc	17 56 48.2	-0.3
AS31	Alice Springs	149.30	234	*e*P	PKPdf	17 56 45.3	+0.9
ASAR	Alice Springs	149.30	234	PKP	PKPdf	17 56 44.9	+0.5
	comp=Z,21nm,0.6s,baz=118,slow=3.5,SNR=78						
ASAR				PKPbc	PKPbc	17 56 48.6	-0.3
	comp=Z,20nm,0.6s,baz=120,slow=2.4,SNR=237						
WB2	Warramunga Arr	150.54	241	*e*P	PKPdf	17 56 47.3	+0.9
WRAB	Tennant Creek	150.54	241	*e*PKPdf	PKPdf	17 56 47.1	+0.7
WRAB				*e*PKPbc	PKPbc	17 56 52.0	+0.1
WRA	Warramunga Arr	150.55	241	PKP	PKPdf	17 56 46.8	+0.4
	comp=Z,2.0nm,0.6s,baz=106,slow=2.6,SNR=49						
WRA				PKPbc	PKPbc	17 56 52.2	+0.3
	comp=Z,18nm,0.4s,baz=109,slow=2.6,SNR=208						
WRA				pPKPbc	pPKPbc	17 57 33.4	-3.3
	comp=Z,7.4nm,0.5s,baz=110,slow=2.5,SNR=4.6						
CHTO	Chiang Mai	153.30	17	*e*PKPdf	PKPdf	17 56 52.1	+1.6
CHTO				*e*PKPbc	PKPbc	17 56 58.9	+0.8
KAKA	Kakadu	154.39	255	*e*P	PKPbc	17 57 00.9	+0.4
FITZ	Fitzroy Crossi	158.75	236	PKPab	PKPab	17 57 35.0	+0.9
	comp=Z,4.8nm,0.8s,baz=164,slow=6.6,SNR=8.2						

ISC 20 17:39:16.1±2.4**, 367N**±02×**721E**±02**, h199**km±31km**, n11,**
σ**0s95**/16**, 2C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.84**	**184**	P	**Pn**	**17 40 02.9**	**-0.9**
CEP				S	**Sn**	**17 40 42.0**	**+0.9**
CHCP	**Chirah Chowk**	**3.14**	**163**	⇑P	**Pn**	**17 40 08.2**	**+0.9**
THW	**Thamme Wali**	**3.88**	**185**	⇑P	**Pn**	**17 40 15.6**	**-0.6**
THW				S	**Sn**	**17 41 04.0**	**+0.5**
SBDP	**Sheikh Budin**	**4.49**	**195**	P	**Pn**	**17 40 22.6**	**-1.3**
SARP	**Sargodha**	**4.75**	**175**	P	**Pn**	**17 40 27.0**	**-0.2**
DLH	**Dalhousie**	**5.19**	**141**	*e*P	**Pn**	**17 40 32.0**	**-0.8**
DLH				*e*S	**Sn**	**17 41 34.0**	**+0.7**
KOLN	**Koldanda**	**13.14**	**129**	*e*P	**Pn**	**17 42 16.0**	**+0.8**
	4.9nm,0.4s						
KOLN				*e*S	**Sn**	**17 44 39.8**	**-1.9**
GKN	**Gorkha**	**13.64**	**126**	*e*P	**Pn**	**17 42 22.1**	**+0.7**
	13nm,0.4s						
GKN				*e*S	**Sn**	**17 44 50.1**	**-3.6**
KKN	**Kakani**	**14.20**	**125**	*e*P	**Pn**	**17 42 28.0**	**-0.4**
DMN	**Daman**	**14.21**	**126**	*e*P	**Pn**	**17 42 29.2**	**+0.7**
PKI	**Pulchoki**	**14.43**	**125**	*e*P	**Pn**	**17 42 32.3**	**+1.0**

*SZGRF **20** 17:39:10.6, 2548S×17964W, h33km, South of Fiji Islands*
*IDC **20** 17:40:07.9±1.0, 2428S×17995E, h503km±9km, mb4.0/10, mb1 4.1/11, mb1mx4.0/14, mbtmp4.9/11, Error ellipse: s-maj=13.4km s-min=11.9km az=9.0*
*ISCJB **20** 17:40:07.5±0.7, 2429S±004×17996E±009, h512km±9km, mb4.5/19, Error ellipse: s-maj=12.6km s-min=6.3km az=170.2*
*NEIC **20** 17:40:08.6±0.8, 2429S×17994W, h517km±8km, mb4.8/11, Error ellipse: s-maj=9.9km s-min=8.3km az=195.0*
*BJI **20** 17:40:08.5, 2430S×17990W, h516km, mB4.9, mb4.7*
*MOS **20** 17:40:10.7±2.9, 2452S×179.18E, h482km, mb5.2/4, Error ellipse: s-maj=16.6km s-min=13.2km az=14.5*
ISC 20 17:40:09.3±0.7**, 2448S**±004×**17994W**±009**, h523**km±8km**,**
n139, σ**1s09**/64**, mb4.5**/19**, 14C-9D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.08**	**160**	P	**P**	**17 41 37.9**	**-0.3**
	185nm,0.3s,baz=72,slow=16,SNR=12						
RAO				S	**S**	**17 42 50.1**	**-0.7**
	77nm,0.3s,baz=78,slow=21,SNR=3.6						
RAO	**Raoul Island**	**5.08**	**160**	*e*P	**P**	**17 41 38.1**	**0.0**
RAO				S	**S**	**17 42 50.1**	**-0.7**
DZM	**Mont Dzumac**	**12.74**	**278**	P	**P**	**17 42 56.1**	**+0.6**
	1.4nm,0.3s,baz=82,slow=16,SNR=18						
URZ	**Urewera**	**13.96**	**190**	P	**P**	**17 43 08.7**	**+0.4**
	3.0nm,0.3s,baz=322,slow=2.3,SNR=14						
URZ	**Urewera**	**13.96**	**190**	*e*PN	**P**	**17 43 07.6**	**-0.6**
URZ				SN	**S**	**17 45 36.3**	**+0.6**
MWZ	**Matawai**	**13.98**	**188**	SN	**S**	**17 45 38.5**	**+2.5**
KNZ	**Kokohu**	**14.63**	**187**	SN	**S**	**17 45 49.7**	**+1.2**
BKZ	**Black Stump Fm**	**14.95**	**191**	*e*PN	**P**	**17 43 18.0**	**-0.5**
BKZ				SN	**S**	**17 45 52.3**	**-2.1**
PXZ	**Pawanui**	**15.74**	**189**	SN	**S**	**17 46 06.6**	**-2.6**
TSZ	**Takapari Road**	**15.91**	**192**	SN	**S**	**17 46 10.0**	**-2.5**
MRZ	**Mangatainoka R**	**16.57**	**192**	SN	**S**	**17 46 21.0**	**-2.4**
TCW	**Tory Channel**	**17.37**	**195**	SN	**S**	**17 46 36.2**	**-0.4**
NNZ	**Nelson**	**17.60**	**197**	SN	**S**	**17 46 40.6**	**+0.3**
TUWZ	**Tuamarina**	**17.66**	**195**	SN	**S**	**17 46 42.5**	**+1.2**
THZ	**Tophouse**	**18.23**	**197**	PN	**P**	**17 43 50.0**	**-0.5**
KHZ	**Kahutara**	**18.68**	**195**	PN	**P**	**17 43 53.9**	**-0.7**
RPZ	**Rata Peaks**	**20.56**	**199**	P	**P**	**17 44 12.2**	**+0.5**
	11nm,0.5s,baz=49,slow=3.3,SNR=14						
ARMA	**Armidale**	**25.88**	**250**	*e*P	**P**	**17 45 01.0**	**+1.9**
CNB	**Canberra Magne**	**28.61**	**241**	⇑*i*P	**P**	**17 45 25.0**	**+1.9**
	14nm,0.7s,mb4.7						
CTA	**Charters Tower**	**31.54**	**271**	P	**P**	**17 45 48.6**	**+0.2**
	69nm,0.5s,mb5.4,baz=94,slow=11,SNR=136						
CTA	**Charters Tower**	**31.54**	**271**	*e*P	**P**	**17 45 49.0**	**+0.6**
CTA				pmax	pmax		
	comp=Z,37nm,0.3s						
CTA	**Charters Tower**	**31.54**	**271**	*e*P	**P**	**17 45 49.0**	**+0.6**
	comp=Z,37nm,0.3s,mb5.4						
CTAO	**Charters Tower**	**31.54**	**271**	*e*P	**P**	**17 45 49.0**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,32nm,0.4s,mb5.2						
CTAO	**Charters Tower**	**31.54**	**271**	*e*P	**P**	**17 45 49.0**	**+0.6**
	comp=Z,32nm,0.4s,mb5.2						
TOO	**Toolangi**	**32.18**	**238**	*e*P	**P**	**17 45 55.1**	**+1.3**
TOO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
TOO	**Toolangi**	**32.18**	**238**	*e*P	**P**	**17 45 55.1**	**+1.3**
	comp=Z,10nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**34.56**	**249**	P	**P**	**17 46 14.8**	**+0.9**
	comp=Z,12nm,0.5s,mb4.7,baz=92,slow=10.0,SNR=60						
STKA	**Stephens Creek**	**34.56**	**249**	*e*P	**P**	**17 46 14.8**	**+0.9**
PMG	**Port Moresby**	**34.74**	**290**	P	**P**	**17 46 14.9**	**-0.5**
	comp=Z,29nm,0.7s,mb4.9,baz=135,slow=4.5,SNR=11						
PMG	**Port Moresby**	**34.74**	**290**	*e*P	**P**	**17 46 15.1**	**-0.3**
AS31	**Alice Springs**	**42.00**	**261**	⇓*i*P	**P**	**17 47 14.6**	**+0.2**
AS31				*e*S	**S**	**17 52 55.0**	**-0.1**
ASAR	**Alice Springs**	**42.00**	**261**	P	**P**	**17 47 14.5**	**+0.1**
	comp=Z,9.2nm,0.5s,mb4.5,baz=94,slow=6.7,SNR=401						
ASAR				ScP	ScP	17 52 00.9	+3.1
	comp=Z,2.2nm,0.9s,baz=105,slow=3.6,SNR=7.5						
ASAR				S	**S**	**17 52 54.8**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=93,slow=16,SNR=3.6						
WB2	**Warramunga Arr**	**42.42**	**267**	*e*P	**P**	**17 47 17.3**	**-0.3**
WB2				*e*S	**S**	**17 53 00.4**	**-0.7**
WRAB	**Tennant Creek**	**42.42**	**267**	*e*P	**P**	**17 47 17.3**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.1						

WRAB Tennant Creek 42.42 267 *e*P **P** 17 47 17.3 -0.4
comp=Z,48nm,0.8s,mb5.1
WRA Warramunga Arr 42.43 267 P **P** 17 47 16.8 -0.9
comp=Z,22nm,0.4s,mb5.0,baz=100,slow=8.2,SNR=362
WRA PcP PcP 17 48 59.7 +0.9
comp=Z,1.3nm,0.5s,baz=96,slow=3.3,SNR=5.2
WRA ScP ScP 17 52 02.0 +2.5
comp=Z,4.4nm,1.0s,baz=104,slow=4.2,SNR=14
WRA S **S** **17 52 59.1 -2.2**
comp=Z,2.2nm,1.0s,baz=104,slow=14,SNR=3.4
WRA Warramunga Arr 42.43 267 P **P** **17 47 16.8 -0.9**
WRA 17 48 59.7
WRA S **S** **17 52 59.1 -2.2**
FORT Forest 46.16 250 ⇓*i*P **P** **17 47 46.2 -0.4**
comp=Z,52nm,0.5s,mb5.3
KAKA Kakadu 46.42 276 *e*P **P** **17 47 47.8 -0.7**
comp=Z,14nm,0.3s,mb5.0
FITZ Fitzroy Crossi 50.84 266 ⇓*i*P **P** **17 48 21.7 +0.3**
comp=Z,34nm,0.6s,mb4.8
VNDA Vanda 53.81 185 P **P** **17 48 44.8 +2.1**
comp=Z,0.4nm,0.6s,baz=359,slow=5.4,SNR=4.1
VNDA ScP ScP 17 52 50.2 +2.4
comp=Z,1.0nm,0.7s,baz=31,slow=5.9,SNR=5.7
KLBR Kellerberrin 54.82 248 *e*P **P** **17 48 48.7 -1.1**
comp=Z,14nm,0.6s,mb4.4
NWAO Narrogin (SRO) 55.05 246 P **P** **17 48 51.4 0.0**
comp=Z,6.1nm,0.6s,mb4.0,baz=325,slow=10.0,SNR=8.3
MUN Mundaring 56.05 247 *e*P **P** **17 48 58.9 +0.5**
CASY Casey 59.61 206 *e*P **P** **17 49 22.7 +0.1**
QSPA South Pole Qui 65.60 180 *e*P **P** **17 50 03.2 +1.9**
comp=Z,3.0nm,0.6s,mb4.0
MJAR Matsushiro Arr 72.41 326 P **P** **17 50 41.2 -1.0**
comp=Z,4.3nm,0.8s,mb4.0,baz=157,slow=5.9,SNR=24
MAJO Matsushiro 72.41 326 *e*P **P** **17 50 41.3 -0.9**
comp=Z,4.0nm,0.9s,mb3.9
MAT Matsushiro 72.41 326 P **P** **17 50 41.0 -1.2**
MAT Matsushiro 72.41 326 *e*P **P** **17 50 41.0 -1.2**
MAW Mawson 77.23 200 P **P** **17 51 10.4 +1.2**
comp=Z,4.7nm,0.6s,mb4.1,baz=150,slow=2.4,SNR=14
YSS Yuzh-Sakhalins 78.68 335 *e*P **P** **17 51 17.0 -0.1**
NVAR Mina Array Bea 85.13 44 P **P** **17 51 50.1 +0.2**
comp=Z,0.3nm,0.6s,baz=218,slow=8.7,SNR=3.2
XAN Xi'an 89.14 308 P **P** **17 52 09.8 +1.0**
XAN AMB AMB
comp=Z,9.0nm,0.8s,mb4.7
PDAR Pinedale Array 93.07 44 P **P** **17 52 26.4 -0.6**
comp=Z,0.5nm,0.8s,mb3.6,baz=247,slow=3.1,SNR=5.2
MKAR Makanchi Array 112.59 312 PKiKP PKiKP 17 57 44.8 -1.2
comp=Z,0.4nm,0.4s,baz=20,slow=3.9,SNR=4.5
ARU Arti 127.38 323 *e*PKiKP PKPdf 17 58 13.7 -0.7
ARU Arti 127.38 323 *e*P PKPdf 17 58 13.7 -0.7
KEV Kevo 132.00 348 *e*p PKPdf 17 58 21.5 -1.6
ARCES ARCESS Array B 132.47 348 PKP PKPdf 17 58 22.4 -1.6
comp=Z,1.6nm,0.5s,baz=40,slow=1.2,SNR=13
ARCES SKPbc SKPbc 18 01 02.5 +0.5
comp=Z,2.1nm,0.8s,baz=28,slow=5.5,SNR=5.5
ARCES ARCESS Array B 132.47 348 PKP PKPdf 17 58 22.4 -1.6
ARCES SKPbc SKPbc 18 01 02.5 +0.5
JOF Joensuu 136.30 340 *e*p PKPdf 17 58 24.6 -6.6
KAF Kangasniemi 138.41 342 *e*p PKPdf 17 58 25.1 -10
FINES FINESS Array B 139.01 341 PKhKP 17 58 25.4
comp=Z,0.9nm,0.5s,baz=84,slow=3.8,SNR=11
FINES PKP PKPdf 17 58 36.9 +0.7
comp=Z,1.1nm,0.4s,baz=69,slow=6.5,SNR=4.1
FINES SKPbc SKPbc 18 01 23.1 +1.2
comp=Z,2.7nm,0.7s,baz=47,slow=3.4,SNR=12
NB2 NORSAR Subarra142.66 351 PKPa 17 58 38.0
comp=Z,3.0nm,0.8s,baz=9.8,slow=3.0
NOA NORSAR Array B 142.66 351 PKhKP 17 58 38.1
comp=Z,3.0nm,0.9s,baz=29,slow=2.5,SNR=11
NOA SKPbc SKPbc 18 01 32.8 +1.6
comp=Z,0.8nm,0.8s,baz=17,slow=4.2,SNR=3.3
KONO Kongsberg 144.23 352 *e*PKHKP 17 58 43.4
ELZG Elazig 144.26 302 *i*P PKPdf 17 58 46.6 +1.1
MALT Malatya 144.73 302 ⇓*i*P PKPdf 17 58 47.5 +1.2
MALT Malatya 144.73 302 *e*P PKPdf 17 58 47.4 +1.1
AKASG Malin Array Be 145.49 327 PKPbc PKPbc 17 58 47.5 -1.4
AKASG SKPbc SKPbc 18 01 40.0 +2.2
comp=Z,1.4nm,0.6s,baz=45,slow=2.6,SNR=6.7
AKBB Malin Array Si 145.49 327 *e*PKHKP 17 58 47.6
GZT Gaziantep 145.59 301 *i*P PKPdf 17 58 49.7 +1.9
SUW Suwalki 145.82 336 *e*PKHKP PKPdf 17 58 49.9 +0.8
BOYT Boyabat 146.51 309 *i*P PKPbc 17 58 52.4 +0.6
COBT Iskenderun 146.78 300 *i*P PKPbc 17 58 53.5 +1.1
ELDT Eldivan 147.88 308 *i*P PKPbc 17 58 55.8 +0.4
BR131 Keskin Array S 147.97 306 PKPbc PKPbc 17 58 55.4 -0.2
BR131 *e*PKPab PKPab 17 59 00.1 -0.1
BRTR Keskin Array B 147.97 306 PKPbc PKPbc 17 58 55.4 -0.2
comp=Z,4.1nm,0.7s,baz=140,slow=4.7,SNR=28
MEST Erdemli 148.42 301 *i*P PKPbc 17 58 57.0 +0.3
ANTO Ankara 148.54 307 *e*PKHKP PKPbc 17 58 57.1 +0.1
ANTO *e* 17 59 02.4
EIL Elat 148.59 287 *e*PKPbc PKPbc 17 58 57.6 +0.5
SGKT Sivrigoynuk 148.83 309 *i*P PKPbc 17 58 57.7 0.0
CFR Carcaliu 149.31 319 ⇑*i*P PKPbc 17 58 58.7 -0.2
KDHN Kadinhani 149.47 305 *i*P PKPbc 17 58 59.0 -0.3
BURAR Bucovina Array 149.48 326 ⇑*i*P PKPbc 17 59 03.4 +0.1
HENT Hendek 149.55 310 *i*P PKPbc 17 58 58.7 -0.7
BSEG Bad Segeberg 149.60 348 *e*PKPbc PKPbc 17 58 59.4 -0.2
BSEG *e*PKPab PKPab 17 59 06.0 -0.9
VRI Vrincioaia 149.74 322 ⇑*i*P PKPbc 17 58 59.7 -0.2
KOLS Kolonicke sedl 150.00 330 *e*PKP PKPbc 17 59 00.8 +0.3
KOLS *e* 17 59 08.4
ESKT Eskisehir 150.07 307 *i*P PKPbc 17 59 00.7 +0.1
OJC Ojcow 150.08 334 *e*PX PKPbc 17 59 00.3 -0.4
STHS Stebnicka Huta 150.10 332 *i*PKP PKPbc 17 59 01.2 +0.5
CRVS Cervenica-Dubn 150.39 331 *e*PKP PKPbc 17 59 01.1 -0.3
MLR Muntele Rosu 150.41 322 ⇓*i*P PKPbc 17 59 00.8 -0.7
NIE Niedzica 150.50 333 *e*P PKPbc 17 59 02.1 +0.4
KSP Ksiaz 150.85 339 *e*PKIKP PKPbc 17 59 01.8 -0.7
NRDL Niedersach Rie 151.00 347 *e*PKPbc PKPbc 17 59 02.6 -0.2
OKC Ostrava-Krasne 151.03 335 ⇑*e*PKPB PKPbc 17 59 02.8 -0.1
ULDT Uludag 151.06 310 *i*P PKPbc 17 59 02.7 -0.2
KECS Kecovo 151.14 331 *e*PKP PKPbc 17 59 03.8 +0.7
KECS Kecovo 151.14 331 *e*PKP PKPbc 17 59 03.9 +0.8
UPC Upice 151.23 339 ⇑*e*PKPB PKPbc 17 59 03.4 +0.1
DPC Dobruska-Polom 151.26 338 ⇑*e*PKPB PKPbc 17 59 03.5 +0.1
DPC *e*PKPAB PKPab 17 59 13.8 0.0
MORC Moravsky Berou 151.31 336 ⇑*i*P PKPbc 17 59 03.2 -0.3
CLL Collm 151.43 343 *e*PKPbc PKPbc 17 59 03.4 -0.4
CLL *e*PKPab PKPab 17 59 13.6 -0.9
CLL Collm 151.43 343 ⇓*i*PKPbc PKPbc 17 59 03.2 -0.6
comp=Z,18nm,0.8s
CLL *i* PKPab PKPab 17 59 13.5 -1.0
CLL Collm 151.43 343 ⇓*i*PKIKP PKPbc 17 59 03.2 -0.6
CLL *i* 17 59 13.5
CLL pmax pmax
comp=Z,18nm,0.8s
BRG Berggiesshubel 151.56 341 *e*PKPbc PKPbc 17 59 03.8 -0.3
BRG Berggiesshubel 151.56 341 *i*PKP PKPbc 17 59 03.8 -0.3
comp=Z,7.5nm,0.5s
BRG *e* 17 59 14.4
comp=Z,4.4nm,1.2s
BRG Berggiesshubel 151.56 341 *i*PKIKP PKPbc 17 59 03.8 -0.3
BRG *e* 17 59 14.4
BRG pmax pmax
comp=Z,8.0nm,0.5s
BRG pmax pmax
comp=Z,4.0nm,1.2s
IBBN Ibbenburen 151.60 350 *e*PKPbc PKPbc 17 59 04.5 +0.3
IBBN *e*PKPab PKPab 17 59 14.3 -1.0
PVCC Panska Ves 151.67 340 ⇑*e*PKPB PKPbc 17 59 04.2 -0.1
PRU Pruhonice 152.15 340 ⇑*e*PKPB PKPbc 17 59 04.9 -0.5
PRU *e*PKPAB PKPab 17 59 17.1 -0.5
TREC Trest 152.44 338 ⇑*e*PKPB PKPbc 17 59 05.4 -0.6
TREC *e*PKPAB PKPab 17 59 18.8 0.0
BUG Bochum--Univer 152.52 350 *e*PKPbc PKPbc 17 59 05.7 -0.5
NKC Novy Kostel 152.55 343 ⇑*e*PKPB PKPbc 17 59 06.0 -0.3
BZS Buzias 152.66 326 ⇓*i*P PKPbc 17 59 06.0 -0.5
KHC Kasperske Hory 153.21 340 ⇑*e*PKPB PKPbc 17 59 07.5 -0.2
KHC *e*PKPAB PKPab 17 59 22.0 -0.1
GRA1 Grafenberg Arr 153.37 344 *e*PKPbc PKPbc 17 59 06.7 -1.3
GRF Grafenberg Arr 153.37 344 *e*PKPbc PKPbc 17 59 06.7 -1.3
GERES GERESS Array B 153.42 340 PKPbc PKPbc 17 59 07.8 -0.4
comp=Z,1.3nm,0.7s,baz=45,slow=2.9,SNR=7.9
GERES PKPab PKPab 17 59 22.4 -0.6
comp=Z,0.5nm,0.5s,baz=355,slow=4.4,SNR=5.4
TNS Taunus Mts 153.49 348 *e*PKPbc PKPbc 17 59 07.9 -0.4
TNS *e*PKPab PKPab 17 59 22.2 -1.1
TNS Taunus Mts 153.49 348 *e*PKPbc PKPbc 17 59 08.0 -0.3
TNS *e*PKPab PKPab 17 59 22.2 -1.1
PKSM Moragy 153.67 330 ⇑*i*P PKPbc 17 59 07.9 -0.8

VTS Vitosha 153.71 319 ⇓*i*P PKPbc 17 59 09.0 +0.2
CDF Champ du Feu 155.45 348 *e*PKP2 PKPab 17 59 30.1 -1.6
comp=Z,8.5nm,1.0s
MEZF Maizieres J'vi 155.71 352 *e*PKP2 PKPab 17 59 31.3 -1.5
comp=Z,6.1nm,0.7s
HAU Haudompre 156.00 350 *e*PKP2 PKPab 17 59 32.4 -1.7
HINF Hinteralfeld 156.10 349 *e*PKP2 PKPab 17 59 32.6 -1.9
SSF Saint Saulge 157.30 354 *e*PKP2 PKPab 17 59 38.2 -1.5
comp=Z,7.2nm,0.8s
CABF La Chapelle 157.40 349 *e*PKP2 PKPab 17 59 38.9 -1.3
SMF Signal de Mont 157.68 353 *e*PKP2 PKPab 17 59 39.8 -1.6
comp=Z,11nm,0.9s
MFF Saint Martin d 157.93 0 *e*PKP2 PKPab 17 59 37.9 -4.6
comp=Z,17nm,1.2s
TCF Toulx Ste Croi 158.17 356 *e*PKP2 PKPab 17 59 41.7 -1.8
ORIF Oris-en-Rattie 159.07 348 *e*PKP2 PKPab 17 59 46.6 -0.9
comp=Z,9.1nm,0.8s
LFF La Frestale 159.58 359 *e*PKP2 PKPab 17 59 45.9 -3.8
TORD Torodi Ar. Bea 168.62 188 PKP PKPdf 17 59 16.2 +0.3
comp=Z,1.5nm,1.1s,baz=228,slow=0.8,SNR=5.7
TORD PKPab PKPab 18 00 30.4 +0.9
comp=Z,0.5nm,0.7s,baz=164,slow=3.8,SNR=6.2
TORD Torodi Ar. Bea 168.62 188 PKP PKPdf 17 59 16.2 +0.3
TORD PKPab PKPab 18 00 30.4 +0.9

CASC 20 17:52:20.1±2.0, 1373N×9065W, h88km±49km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SBLS	**San Blas**	**1.00**	**84**	*e*P		x	17 52 42.7	
SBLS				*e*S		x	17 52 57.8	
RBDL	**Robledal**	**1.01**	**68**	*e*P		x	17 52 42.3	
SNJE	**San Jose**	**1.02**	**82**	*e*P		x	17 52 42.8	
SNJE				*e*S		x	17 52 57.9	
TP2	**Tecpan 2**	**1.11**	**341**	*e*P		Pn	17 52 41.3	+0.4
TP2				*e*S		Sn	17 52 58.6	+2.1
LFRS	**El Faro**	**1.55**	**94**	*e*P		x	17 52 50.0	
LFRS				*e*S		x	17 53 09.9	

IDC 20 18:16:05.7±4.1, 1808S×17885W, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.6/13, mbtmp3.4/3, Error ellipse: s-maj=317.9km s-min=32.8km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.19**	**260**	P		P	18 24 16.4	+0.1
	0.2nm,0.7s,baz=96,slow=7.5,SNR=6.6							
ASAR	**Alice Springs**	**44.34**	**254**	P		P	18 24 18.1	+0.6
	0.2nm,0.4s,baz=92,slow=7.7,SNR=14							
PDAR	**Pinedale Array**	**87.77**	**44**	P		P	18 28 57.0	+0.4
	0.5nm,1.0s,baz=194,slow=7.0,SNR=4.0							

MAN 20 18:25:15.7, 838N×12212E, h36km, mb2.5, ML4.0, MS4.1, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.74**	**143**	⇓*e*P		Pn	18 25 30.8	+1.1
IPIL				*e*S		Sn	18 25 41.1	+1.4
IPIL	**Ipil**	**0.74**	**143**	*e*P		Pn	18 25 30.7	+1.0
IPIL				*e*S		Sn	18 25 40.7	+1.0
DCPH	**Dipolog City**	**1.24**	**81**	⇓*e*P		Pn	18 25 36.6	+0.1
DCPH				*i* S		Sn	18 25 52.5	+0.5
PAGZ	**Pagadian**	**1.36**	**113**	*e*P		Pn	18 25 39.5	+1.4
PAGZ				*e*S		Sn	18 25 55.4	+0.4
SNPH	**Sibulan**	**1.46**	**49**	*i* P		Pn	18 25 41.0	+1.4
GUIM	**Jordan**	**2.28**	**12**	*e*P		Pn	18 25 51.8	+1.0
CUYO	**Cuyo Island**	**2.68**	**336**	*e*P		Pn	18 25 57.4	+1.0
ENPP	**El Nido**	**3.86**	**317**	*e*P		Pn	18 26 13.7	+1.1

RSPR 20 18:30:51.2, 2103N×6971W, h6km±40km, MD4.4/3, MD4.4/3, 2C-1D, Bahama Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**3.88**	**140**	*e*S		Sn	18 32 34.3	-3.1
CBYP	**Canovanas**	**4.55**	**126**	⇑*e*P		Pn	18 31 58.4	-2.2
CBYP	**Canovanas**	**4.55**	**126**	*e*S		Sn	18 32 50.6	-3.3
HUMP	**Col San Antoni**	**4.64**	**128**	⇓*e*P		Pn	18 31 58.9	-2.9
HUMP	**Col San Antoni**	**4.64**	**128**	*e*S		Sn	18 32 53.9	-2.1
MTP	**Monte Pirata**	**4.88**	**126**	⇑*e*P		Pn	18 32 04.4	-0.9
MTP	**Monte Pirata**	**4.88**	**126**	*e*S		Sn	18 33 02.5	+0.4

*IDC **20** 18:41:34.6±1.0, 2006S×16901E, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.2/13, mbtmp4.1/9, ML3.6/1, MS3.7/4, Ms1 3.7/4, ms1mx3.1/19, Error ellipse: s-maj=32.5km s-min=22.6km az=142.0*
*LDG **20** 18:41:36.1±0.3, 1997S×16895E, h10km, Mb4.6/2, Error ellipse: s-maj=29.4km s-min=4.9km az=128.0*
*ISCJB **20** 18:41:39.6±1.8, 20.18S±0.07°×1688E±0.1, h41km±14km, mb4.1/10, MS3.9/2, Error ellipse: s-maj=21.9km s-min=8.7km az=38.2*
*NEIC **20** 18:41:40.2±0.5, 2004S×16884E, h35km, mb4.2/5, Error ellipse: s-maj=18.4km s-min=11.2km az=138.0*

ISC 20 18:41:39.1±4.5, 2019S±006×1689E±01, h23km±32km, n57, σ0.973/21, mb4.1/10, MS3.9/2, 10C-1D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BKM	**Butte a Klehm**	**2.58**	**346**	⇓*i*P		**Pn**	**18 42 19.0**	**-0.4**
BKM				S		**Sn**	**18 42 50.4**	**+0.5**
DZM	**Mont Dzumac**	**2.94**	**230**	*e*P		**Pn**	**18 42 24.3**	**-0.2**
DZM				*e*S		**Sn**	**18 42 58.6**	**-0.4**
DZM	**Mont Dzumac**	**2.94**	**230**	Pn		**Pn**	**18 42 24.5**	**0.0**
	7.0nm,0.3s,baz=62,slow=18,SNR=137							
DZM				Sn		**Sn**	**18 42 58.5**	**-0.5**
	15nm,0.3s,baz=148,slow=22,SNR=6.3							
URZ	**Urewera**	**19.38**	**160**	LR		LR	18 51 42.4	
	comp=Z,165nm,19.8s,baz=31,slow=31							
AFI	**Afiamalu**	**19.52**	**74**	LR		LR	18 51 45.7	
	comp=Z,118nm,18.5s,baz=106,slow=32							
CTA	**Charters Tower**	**21.24**	**266**	P		**P**	**18 46 25.6**	**+2.3**
	6.9nm,0.7s,mb4.1,baz=82,slow=12,SNR=7.6							
CTA	**Charters Tower**	**21.24**	**266**	*e*P		**P**	**18 46 27.6**	**+4.2**
	3.2nm,0.4s,mb4.0							
CTAO	**Charters Tower**	**21.24**	**266**	*e*P		**P**	**18 46 27.3**	**+3.9**
	6.0nm,0.7s,mb4.0							
STKA	**Stephens Creek**	**27.06**	**239**	P		**P**	**18 47 21.6**	**+1.9**
	1.4nm,0.8s,mb3.5,baz=90,slow=12,SNR=3.7							
WB2	**Warramunga Arr**	**32.40**	**264**	*e*P		**P**	**18 48 06.2**	**-0.8**
WRAB	**Tennant Creek**	**32.40**	**264**	*e*P		**P**	**18 48 06.5**	**-0.5**
	9.3nm,1.2s,mb4.5							
WRA	**Warramunga Arr**	**32.41**	**264**	P		**P**	**18 48 06.6**	**-0.5**
	1.2nm,0.6s,mb3.9,baz=90,slow=8.5,SNR=15							
AS31	**Alice Springs**	**32.58**	**257**	*e*P		**P**	**18 48 08.5**	**-0.1**
ASAR	**Alice Springs**	**32.58**	**257**	P		**P**	**18 48 08.7**	**+0.1**
	5.4nm,0.6s,mb4.7,baz=83,slow=8.9,SNR=165							
ASAR				LR		LR	19 01 41.3	
	comp=Z,126nm,20.6s,MS3.6,baz=353,slow=37							
VNDA	**Vanda**	**57.48**	**182**	P		**P**	**18 51 26.1**	**-0.2**
	0.7nm,0.8s,mb3.7,baz=15,slow=4.8,SNR=4.9							
VNDA	**Vanda**	**57.48**	**182**	*e*P		**P**	**18 51 25.8**	**-0.4**
	0.8nm,0.8s,mb3.8							
SBA	**Scott Base**	**57.72**	**181**	*e*P		**P**	**18 51 28.6**	**+0.7**
	3.3nm,0.9s,mb4.4							
RPN	**Rapa Nui**	**74.03**	**113**	LR		LR	19 18 49.2	
	comp=Z,147nm,18.9s,MS4.3,baz=297,slow=30							
MAW	**Mawson**	**77.43**	**202**	P		**P**	**18 53 32.7**	**+0.3**
	1.7nm,0.7s,mb4.1,baz=350,slow=12,SNR=3.6							
SONM	**Songino Array**	**87.77**	**323**	P		**P**	**18 54 26.1**	**-0.1**
	2.2nm,0.8s,mb4.4,baz=142,slow=6.0,SNR=18							
NVAR	**Mina Array Bea**	**89.68**	**49**	P		**P**	**18 54 34.4**	**-0.8**
	0.6nm,0.8s,mb4.0,baz=210,slow=6.6,SNR=3.8							
ARCES	**ARCESS Array B**	**125.89**	**345**	PKP		PKPdf	19 00 36.7	-2.3
	1.5nm,0.7s,baz=85,slow=2.6,SNR=14							
KOLS	**Kolonicke sedl**	**140.81**	**325**	*e*PKP		PKPdf	19 01 07.7	+0.8
STHS	**Stebnicka Huta**	**141.07**	**326**	*e*PKP		PKPdf	19 01 08.1	+0.7
VYHS	**Vyhne**	**142.89**	**327**	*e*PKP		pPKPdf	19 01 21.8	+3.2
PRU	**Pruhonice**	**143.95**	**332**	*e*PKP		pPKPdf	19 01 20.2	-0.2
EKA	**Eskdalemuir Ar**	**144.40**	**352**	PKP		PKPdf	19 01 09.9	-3.4
	0.9nm,0.7s,baz=353,slow=2.9,SNR=5.0							
NKC	**Novy Kostel**	**144.67**	**334**	*e*PKP		PKPdf	19 01 11.9	-1.9
MOX	**Moxa**	**144.69**	**335**	*e*P		PKPdf	19 01 11.6	-2.2
	8.0nm,1.0s							
KHC	**Kasperske Hory**	**145.00**	**331**	*e*PKP		PKPdf	19 01 13.0	-1.4
GEC2	**GERESS Array S**	**145.16**	**331**	*e*PKP		PKPdf	19 01 13.4	-1.2
GERES	**GERESS Array B**	**145.16**	**331**	PKPbc		PKPbc	19 01 13.4	-0.8
	2.1nm,0.7s,baz=40,slow=4.4,SNR=26							
GRA1	**Grafenberg Arr**	**145.59**	**334**	*e*PKP		PKPdf	19 01 15.2	-0.2
GRF	**Grafenberg Arr**	**145.59**	**334**	*e*PKP		PKPdf	19 01 15.2	-0.2
WLF	**Walferdange**	**147.52**	**339**	*e*PKPbc		PKPbc	19 01 20.7	-0.5
GIVF	**Givet**	**147.57**	**341**	⇑*i*PKP1		PKPbc	19 01 20.1	-1.3
	24nm,1.0s							
BAIF	**Baives**	**147.79**	**341**	⇑*i*PKP1		PKPbc	19 01 20.8	-1.2
	23nm,0.9s							
BFO	**Black Forest**	**147.84**	**335**	*e*PKPbc		PKPbc	19 01 20.9	-1.2
CDF	**Champ du Feu**	**148.17**	**336**	⇑*i*PKP1		PKPbc	19 01 21.7	-1.3
	13nm,1.0s							
HINF	**Hinteralfeld**	**148.82**	**336**	⇑*i*PKP1		PKPbc	19 01 22.3	-2.4
	5.4nm,0.9s							
HAU	**Haudompre**	**148.85**	**337**	⇑*i*PKP1		PKPbc	19 01 23.4	-1.3
	14nm,0.9s							
MEZF	**Maizieres J'vi**	**148.89**	**339**	⇑*i*PKP1		PKPbc	19 01 23.9	-0.9
	53nm,1.2s							
CABF	**La Chapelle**	**150.12**	**336**	⇑*i*PKP1		PKPbc	19 01 27.1	-0.8
	12nm,0.8s							
FLN	**La Foliniere**	**150.23**	**346**	*e*PKP1		PKPbc	19 01 26.5	-1.6
	5.0nm,0.4s							
LDF	**La Druitiere**	**150.31**	**345**	*e*PKP1		PKPbc	19 01 26.5	-1.8
	13nm,0.8s							
LOR	**Lormes**	**150.36**	**339**	⇑*i*PKP1		PKPbc	19 01 27.1	-1.3
	17nm,0.9s							
SSF	**Saint Saulge**	**150.66**	**339**	⇑*i*PKP1		PKPbc	19 01 27.9	-1.3
	16nm,1.0s							
GRR	**Gorron**	**150.67**	**346**	*e*PKP1		PKPbc	19 01 27.1	-2.1
SMF	**Signal de Mont**	**150.91**	**339**	*e*PKP1		PKPbc	19 01 28.2	-1.5
AVF	**Avril sur Loir**	**150.94**	**339**	*e*PKP1		PKPbc	19 01 28.1	-1.7
BGF	**Bois d'Agland**	**151.32**	**340**	*e*PKP1		PKPbc	19 01 29.3	-1.4
	14nm,0.9s							
ORIF	**Oris-en-Rattie**	**151.59**	**334**	*e*PKP1		PKPbc	19 01 30.0	-1.3
	11nm,0.9s							
SBF	**Sospel**	**151.76**	**331**	*e*PKP1		PKPbc	19 01 30.3	-1.4
TCF	**Toulx Ste Croi**	**151.76**	**340**	⇑*i*PKP1		PKPbc	19 01 30.3	-1.4
	9.0nm,0.9s							
PGF	**Pioggiola**	**151.99**	**327**	*e*PKP1		PKPbc	19 01 30.8	-1.4
	27nm,0.9s							
MFF	**Saint Martin d**	**152.16**	**344**	*e*PKP1		PKPbc	19 01 30.8	-1.8
	17nm,1.1s							
FRF	**La Foret Royal**	**152.35**	**331**	*e*PKP1		PKPbc	19 01 31.3	-1.8

*ISCJB **20** 18:59:24.7±1.0, 248S±0.1°×17967E±008, h522km±12km, mb4.2/19, Error ellipse: s-maj=15.8km s-min=10.8km az=23.5*
*IDC **20** 18:59:24.2±1.2, 2468S×17969E, h502km±10km, mb3.6/12, mb1 3.8/13, mb1mx3.8/15, mbtmp4.5/13, Error ellipse: s-maj=14.7km s-min=12.0km az=8.0*
*NEIC **20** 18:59:24.9±1.0, 2469S×17975E, h514km±10km, mb4.5/11, Error ellipse: s-maj=13.1km s-min=9.7km az=201.0*

ISC 20 18:59:25.6±1.0, 248S±01°×17975E±008, h522km±1km, n45, σ0.988/38, mb4.2/19, 1C-3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.91**	**155**	P		**P**	**19 00 51.9**	**-1.1**
	60nm,0.3s,baz=82,slow=23,SNR=4.3							
RAO	**Raoul Island**	**4.91**	**155**	*e*P		**P**	**19 00 51.5**	**-1.4**
DZM	**Mont Dzumac**	**12.51**	**280**	P		**P**	**19 02 10.6**	**+1.3**
	0.6nm,0.3s,baz=82,slow=22,SNR=7.9							
RPZ	**Rata Peaks**	**20.19**	**199**	P		**P**	**19 03 24.4**	**-0.3**
	10nm,0.7s,baz=0.0,slow=6.1,SNR=5.8							
ARMA	**Armidale**	**25.51**	**251**	*e*P		**P**	**19 04 14.1**	**+1.9**
CTA	**Charters Tower**	**31.26**	**272**	P		**P**	**19 05 03.2**	**+0.8**
	35nm,0.6s,mb5.1,baz=97,slow=10,SNR=58							
CTA	**Charters Tower**	**31.26**	**272**	⇓*i*P		**P**	**19 05 03.2**	**+0.8**
	28nm,0.6s,mb5.0							
CTAO	**Charters Tower**	**31.26**	**272**	*e*P		**P**	**19 05 03.3**	**+0.9**
	30nm,0.7s,mb4.9							
STKA	**Stephens Creek**	**34.19**	**249**	P		**P**	**19 05 27.4**	**+0.2**
	4.9nm,0.8s,mb4.1,baz=86,slow=8.9,SNR=11							
STKA	**Stephens Creek**	**34.19**	**249**	*e*P		**P**	**19 05 27.7**	**+0.5**
	3.3nm,0.6s,mb4.0							
PMG	**Port Moresby**	**34.58**	**291**	P		**P**	**19 05 30.7**	**+0.3**
	30nm,0.8s,mb4.9,baz=125,slow=6.7,SNR=7.4							
AS31	**Alice Springs**	**41.67**	**262**	⇓*i*P		**P**	**19 06 28.2**	**0.0**
AS31				*e*S		**S**	**19 12 07.1**	**+0.2**
ASAR	**Alice Springs**	**41.67**	**262**	P		**P**	**19 06 28.3**	**+0.1**
	7.4nm,0.9s,mb4.2,baz=97,slow=8.1,SNR=48							
ASAR				S	ScP	ScP	19 11 17.6	+4.5
	0.7nm,0.8s,baz=110,slow=4.7,SNR=4.9							
ASAR				S		**S**	**19 12 07.1**	**+0.2**
	0.9nm,0.9s,baz=98,slow=14,SNR=6.9							
WB2	**Warramunga Arr**	**42.12**	**267**	⇓*i*P		**P**	**19 06 31.2**	**-0.5**
WB2				*e*S		**S**	**19 12 11.5**	**-1.8**
WRAB	**Tennant Creek**	**42.12**	**267**	*e*P		**P**	**19 06 31.1**	**-0.6**
	40nm,1.2s,mb4.8							
WRA	**Warramunga Arr**	**42.13**	**267**	P		**P**	**19 06 31.3**	**-0.4**
	16nm,0.7s,mb4.7,baz=103,slow=8.1,SNR=131							
WRA				S	ScP	ScP	19 11 19.7	+4.8
	4.8nm,1.0s,baz=103,slow=4.2,SNR=15							
WRA				S		**S**	**19 12 13.7**	**+0.2

NEIC ***20*** *19:07:26.8±1.6, 7153N×1100W, h1km±14km, mb3.4/1, ML3.2(BER), Error ellipse: s-maj=16.9km s-min=9.7km az=213.0*
ISCJB ***20*** *19:07:27.2±0.6, 7168N±004×107W±02, h10km, mb3.3/3, MS3.0/4, Error ellipse: s-maj=8.7km s-min=4.6km az=113.6*
BER ***20*** *19:07:28.0±1.0, 7169N×1093W, h5km, MD3.8, ML3.1, ML2.4(NAO)*
NAO ***20*** *19:07:28.2±9.9, 7145N×1091W, h7km±78km, ML2.4*
CSEM ***20*** *19:07:30.6±0.2, 7129N×1083W, h25km, mb3.4/1, Error ellipse: s-maj=6.4km s-min=2.8km az=26.0*
IDC ***20*** *19:07:32.9±2.4, 7140N×926W, h0km, mb3.4/3, mb1 3.7/6, mb1mx3.4/23, mbtmp3.5/6, ML3.3/3, MS3.0/8, Ms1 3.0/8, ms1mx2.9/25, Error ellipse: s-maj=39.3km s-min=20.9km az=87.0*

ISC 20 19:07:29.6±0.6, 7159N±004×106W±02, h10km, n36, σ1§39/46, mb3.3/3, MS3.0/4, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMI	**Jan Mayen**	**0.90**	**137**	*e*P	**Pg**	**19 07 45.8**	**-1.0**
JMI				*e*S	**Sg**	**19 07 58.3**	**-0.2**
JMI				AML	AML	19 08 03.5	
	comp=Z,718nm,0.4s						
JMI	**Jan Mayen**	**0.90**	**137**	*e*P	**Pg**	**19 07 45.8**	**-1.0**
JMI				*e*S	**Sg**	**19 07 58.3**	**-0.2**
JMI	**Jan Mayen**	**0.90**	**137**	*e*P	**Pg**	**19 07 45.8**	**-1.0**
	SNR=53						
JMI				*e*S	**Sg**	**19 07 58.3**	**-0.2**
	comp=Z,718nm,0.4s,SNR=53						
JNW	**Jan Mayen West**	**0.90**	**128**	*e*P	**Pg**	**19 07 45.8**	**-1.1**
JNW				*e*S	**Sg**	**19 07 58.9**	**+0.4**
JNW				AML	AML	19 08 01.9	
	comp=Z,456nm,0.2s						
JNW	**Jan Mayen West**	**0.90**	**128**	*e*P	**Pg**	**19 07 45.8**	**-1.1**
JNW				*e*S	**Sg**	**19 07 58.9**	**+0.4**
JNW	**Jan Mayen West**	**0.90**	**128**	*e*P	**Pg**	**19 07 45.8**	**-1.0**
	SNR=53						
JNW				*e*S	**Sg**	**19 07 58.9**	**+0.4**
	comp=Z,456nm,0.2s,SNR=53						
JMIC	**Jan Mayen**	**0.90**	**131**	Pg	**Pg**	**19 07 45.8**	**-1.1**
JMIC				Lg		19 07 58.6	
JMIC	**Jan Mayen**	**0.90**	**131**	Pn	**Pn**	**19 07 45.6**	**-2.7**
	comp=Z,57nm,0.3s,baz=202,slow=2.3,SNR=70						
JMIC				Sn	**Sn**	**19 07 57.8**	**-3.5**
	comp=Z,150nm,0.3s,baz=102,slow=22,SNR=89						
JMIC	**Jan Mayen**	**0.90**	**131**	*e*P	**Pg**	**19 07 45.8**	**-1.1**
JMIC				*e*S	**Sg**	**19 07 59.0**	**+0.3**
JMIC	**Jan Mayen**	**0.90**	**131**	Pg	**Pg**	**19 07 45.8**	**-1.1**
JMIC				Sn	**Sn**	**19 07 57.8**	**-3.5**
JMIC				*e*S	**Sg**	**19 07 59.0**	**+0.3**
	SNR=53						
JNE	**Jan Mayen East**	**0.95**	**128**	*e*P	**Pg**	**19 07 46.0**	**-1.9**
JNE				*e*S	**Sg**	**19 07 59.3**	**-1.0**
JNE				AML	AML	19 08 12.3	
	comp=Z,834nm,0.6s						
JNE	**Jan Mayen East**	**0.95**	**128**	*e*P	**Pg**	**19 07 46.0**	**-1.9**
JNE				*e*S	**Sg**	**19 07 59.3**	**-1.0**
JNE	**Jan Mayen East**	**0.95**	**128**	*e*P	**Pg**	**19 07 46.0**	**-1.9**
	SNR=53						
JNE				*e*S	**Sg**	**19 07 59.3**	**-1.1**
	comp=Z,834nm,0.6s,SNR=53						
DAG	**Danmarks Havn**	**5.65**	**341**	⇑*i*P	**Pn**	**19 08 50.6**	**-3.0**
	comp=Z,62nm,0.6s						
DAG				*i*		19 09 48.2	
BORG	**Borgarnes**	**7.94**	**215**	*e*P	**Pn**	**19 09 26.0**	**+1.0**
SUMG	**Summit**	**8.60**	**290**	*e*Pn	**Pn**	**19 09 32.0**	**-2.1**
	comp=Z,21nm,0.9s						
SUMG	**Summit**	**8.60**	**290**	*e*Pn	**Pn**	**19 09 32.0**	**-2.1**
	comp=Z,21nm,0.9s						
KBS	**Kingsbay**	**9.24**	**27**	*e*Pn	**Pn**	**19 09 41.4**	**-1.5**
	comp=Z,13nm,0.8s						
KBS				*e*Sn	**Sn**	**19 11 17.2**	**-10**
KBS	**Kingsbay**	**9.24**	**27**	*e*Pn	**Pn**	**19 09 41.3**	**-1.5**
	comp=Z,13nm,0.8s						
SPB4	**Spitsbergen Ar**	**9.53**	**34**	*e*P	**Pn**	**19 09 47.4**	**+0.6**
SPA0	**Spitsbergen Ar**	**9.53**	**34**	Pn	**Pn**	**19 09 47.6**	**+0.8**
	baz=234,slow=12						
ARA0	**ARCESS Array S**	**12.07**	**82**	Pn	**Pn**	**19 10 22.9**	**+1.3**
	baz=287,slow=12						
ARCES	**ARCESS Array B**	**12.07**	**82**	Pn	**Pn**	**19 10 21.9**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=297,slow=11,SNR=10						
ARCES				LR	LR	19 14 25.7	
	comp=Z,47nm,22.0s,baz=292,slow=35						
KEV	**Kevo**	**12.44**	**80**	P	**Pn**	**19 10 27.1**	**+0.4**
NOA	**NORSAR Array B**	**13.62**	**130**	LR	LR	19 15 15.5	
	comp=Z,50nm,21.3s,baz=330,slow=35						
HFS	**Hagfors**	**15.02**	**127**	Pn	**Pn**	**19 11 03.7**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=299,slow=6.5,SNR=2.4						
HFS				LR	LR	19 16 09.7	
	comp=Z,79nm,21.6s,baz=328,slow=36						
EKA	**Eskdalemuir Ar**	**16.63**	**165**	Pn	**Pn**	**19 11 24.4**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=348,slow=13,SNR=8.9						
KAF	**Kangasniemi**	**17.00**	**105**	*e*p	**Pn**	**19 11 29.5**	**+2.1**
	comp=Z,2.1nm,0.6s						
FINES	**FINESS Array B**	**17.45**	**107**	Pn	**Pn**	**19 11 32.2**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=322,slow=8.8,SNR=9.8						
FINES				LR	LR	19 16 59.8	
	comp=Z,54nm,18.3s,baz=123,slow=33						
CLL	**Collm**	**22.94**	**140**	*e*(P)	**P**	**19 12 35.0**	**+1.1**
GERES	**GERESS Array B**	**25.43**	**141**	P	**P**	**19 12 59.7**	**+2.4**
	comp=Z,0.2nm,0.7s,mb2.8,baz=24,slow=13,SNR=3.0						
GERES				LR	LR	19 21 26.5	
	comp=Z,32nm,20.4s,MS2.8,baz=340,slow=33						
VRAC	**Vranov**	**25.60**	**136**	LR	LR	19 21 21.4	
	comp=Z,35nm,21.8s,MS2.8,baz=256,slow=33						
YKA	**Yellowknife Ar**	**36.48**	**311**	LR	LR	19 29 43.8	
	comp=Z,32nm,19.6s,MS3.1,baz=90,slow=36						
BRTR	**Keskin Array B**	**38.82**	**121**	LR	LR	19 30 28.3	
	comp=Z,32nm,18.5s,MS3.2,baz=218,slow=36						
MKAR	**Makanchi Array**	**47.32**	**69**	P	**P**	**19 16 03.9**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.4,baz=340,slow=6.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**58.89**	**166**	P	**P**	**19 17 32.2**	**+3.7**
	comp=Z,0.7nm,0.8s,mb3.7,baz=353,slow=6.8,SNR=3.8						

ISCJB ***20*** *19:09:29.8±3.6, 716N±02×11.1W±08, h10km, Error ellipse: s-maj=44.5km s-min=10.5km az=118.2*
NAO ***20*** *19:09:32.5±7.1, 7153N×1064W, ML1.9*
BER ***20*** *19:09:33.1±1.1, 7031N×1040W, h0km±7km, ML2.5, ML1.9(NAO)*

ISC 20 19:09:30.4±3.6, 714N±04×113W±08, h5km±38km, n6, σ0§56/8, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**0.99**	**114**	Pg	**Pg**	**19 09 49.4**	**+0.1**
JMIC				Lg		19 10 02.0	
JMIC	**Jan Mayen**	**0.99**	**114**	Pg	**Pg**	**19 09 49.4**	**+0.1**
JMIC				*e*P		19 09 49.5	
JMIC				*e*S	**Sg**	**19 10 01.5**	**-0.7**
JMIC				Lg		19 10 02.0	
JMIC				AML	AML	19 10 03.4	
	comp=Z,134nm,0.3s						
JNW	**Jan Mayen West**	**1.00**	**111**	*e*P	**Pg**	**19 09 49.8**	**+0.3**
JNW				*e*S	**Sg**	**19 10 03.1**	**+0.6**
JNW				AML	AML	19 10 04.8	
	comp=Z,204nm,0.2s						
JNE	**Jan Mayen East**	**1.05**	**112**	*e*P	**Pg**	**19 09 50.3**	**-0.3**
JNE				AML	AML	19 10 05.1	
	comp=Z,170nm,0.3s						
SPA0	**Spitsbergen Ar**	**9.80**	**34**	Pn	**Pn**	**19 11 51.7**	**-0.2**
	baz=232,slow=16						
ARA0	**ARCESS Array S**	**12.31**	**81**	Pn	**Pn**	**19 12 26.4**	**+0.2**
	baz=294,slow=12						

CSEM ***20*** *19:28:06.3±0.1, 4482N×882E, h6km, ML2.7/7, Error ellipse: s-maj=2.1km s-min=1.6km az=162.0*
ROM ***20*** *19:28:08.7±0.7, 4471N×879E, h7km±7km, Md2.6/7, Ml1.9/3, Error ellipse: s-maj=3.1km s-min=2.6km az=4.0*
NEIC ***20*** *19:28:08.7, 4471N×879E, h7km, ML1.9(ROM), ML2.5(LDG), After ROM.*
STR ***20*** *19:28:09.6±0.9, 4432N×896E, h5km±1km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
GEN ***20*** *19:28:09.1, 4470N×884E, h7km, ML2.0*
LDG ***20*** *19:28:09.3±0.4, 4472N×863E, h5km, Ml2.5/6, Error ellipse: s-maj=8.3km s-min=5.7km az=48.0*
ISCJB ***20*** *19:28:09.3±0.3, 4468N±002×882E±003, h15km±7km, Error ellipse: s-maj=3.7km s-min=3.0km az=158.8*

ISC 20 19:28:08.2±0.3, 4470N±002×876E±002, h17km±3km, n50, σ1§12/87, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCP	**Pian Castagno**	**0.22**	**224**	P	**Pg**	**19 28 14.6**	**+1.2**
GENL	**Genova Univers**	**0.33**	**153**	P	**Pg**	**19 28 15.3**	**+0.1**
BOB	**Bobbio (Coli)**	**0.49**	**82**	Pg	**Pg**	**19 28 18.2**	**+0.1**
BOB				Sg	**Sg**	**19 28 25.4**	**+0.6**
	78nm,0.4s						
SC2M	**Scurtabr**	**0.63**	**118**	P	**Pg**	**19 28 19.5**	**-1.1**
FIN	**Finale Ligure**	**0.63**	**219**	Pg	**Pg**	**19 28 21.4**	**+0.7**
FIN				Sg	**Sg**	**19 28 31.5**	**+2.4**
	33nm,0.4s						
FIN	**Finale Ligure**	**0.63**	**219**	P	**Pg**	**19 28 21.1**	**+0.4**
FIN	**Finale Ligure**	**0.63**	**219**	Pg	**Pg**	**19 28 21.4**	**+0.7**
FIN				Sg	**Sg**	**19 28 31.5**	**+2.4**
	33nm,0.4s						
ROB	**Roburent**	**0.76**	**238**	P	**Pg**	**19 28 23.6**	**+0.6**
RORO		**0.77**	**220**	P	**Pb**	**19 28 24.2**	**+1.0**
RORO				S	**Sg**	**19 28 35.0**	**+1.5**
GRAM		**0.96**	**102**	P	**Pb**	**19 28 25.8**	**-0.5**
BACM		**1.03**	**114**	P	**Pb**	**19 28 27.2**	**-0.4**
BACM				S	**Sb**	**19 28 39.2**	**-1.6**
ENR	**Entracque**	**1.07**	**244**	P	**Pb**	**19 28 29.6**	**+1.3**
ORO	**Oropa**	**1.08**	**330**	Pg	**Pg**	**19 28 29.9**	**+0.8**
ORO				Sg	**Sg**	**19 28 44.9**	**+1.7**
	30nm,0.2s						
ORX	**Oropa**	**1.08**	**330**	P	**Pb**	**19 28 30.0**	**+1.6**
ORX				S	**Sb**	**19 28 44.2**	**+1.9**
DOI	**San Damiano**	**1.10**	**260**	Pg	**Pg**	**19 28 30.7**	**+1.2**
	23nm,0.4s						
SAOF	**Saorge**	**1.12**	**231**	Pg	**Pg**	**19 28 30.2**	**+0.3**
SAOF				Sg	**Sg**	**19 28 44.1**	**-0.5**
STV	**Sta Anna Valdi**	**1.12**	**247**	P	**Pb**	**19 28 30.6**	**+1.4**
NEGI	**Negi**	**1.14**	**222**	P	**Pn**	**19 28 29.9**	**+0.5**
VINC	**Vinca**	**1.14**	**119**	P	**Pn**	**19 28 29.3**	**-0.1**
VINC				S	**Sb**	**19 28 43.0**	**-1.1**
RSP	**Reno Superiore**	**1.16**	**293**	Pg	**Pg**	**19 28 30.1**	**-0.5**
RSP				Sg	**Sg**	**19 28 46.1**	**+0.3**
	11nm,0.4s						
AUTN	**L'Aution**	**1.19**	**234**	Pg	**Pg**	**19 28 31.2**	**0.0**
PZZ	**Prazzo**	**1.20**	**261**	P	**Pn**	**19 28 31.0**	**+0.8**
ERBM	**Eremo**	**1.21**	**103**	Pg	**Pg**	**19 28 31.8**	**+0.1**
ERBM				Sg	**Sg**	**19 28 48.4**	**+0.8**
MUGIO	**Muggio**	**1.24**	**9**	Pg	**Pg**	**19 28 30.9**	**-1.2**
MDI	**Monti di Nese**	**1.27**	**32**	Pg	**Pg**	**19 28 32.6**	**-0.1**
MDI				Sg	**Sg**	**19 28 49.0**	**-0.3**
	23nm,0.4s						
SBF	**Sospel**	**1.27**	**229**	*e*Pg	**Pg**	**19 28 33.7**	**+1.0**
SBF				*e*Sg	**Sg**	**19 28 48.0**	**-1.3**
	21nm,0.3s						
SBF	**Sospel**	**1.27**	**229**	*e*Pn	**Pn**	**19 28 32.3**	**+1.2**
SBF				*e*Pg	**Pg**	**19 28 33.7**	**+1.0**
SBF				*e*Sg	**Sg**	**19 28 48.0**	**-1.3**
SBF	**Sospel**	**1.27**	**229**	*e*Pg	**Pg**	**19 28 33.7**	**+1.0**
SBF				*e*Sg	**Sg**	**19 28 48.0**	**-1.3**
	11nm,0.3s						
SARO	**Sassorosso**	**1.28**	**113**	P	**Pn**	**19 28 31.6**	**+0.3**
TOUF	**Mont Tournerai**	**1.28**	**238**	Pg	**Pg**	**19 28 32.8**	**-0.2**
TOUF				Sg	**Sg**	**19 28 51.5**	**+1.7**
LUCF	**Luceram**	**1.30**	**232**	Pg	**Pg**	**19 28 33.0**	**-0.3**
MBDF	**Montbardon**	**1.42**	**272**	*e*Pg	**Pg**	**19 28 34.2**	**-1.3**
MBDF				*e*Sg	**Sg**	**19 28 51.3**	**-2.7**
	10nm,0.3s						
MBDF	**Montbardon**	**1.42**	**272**	*e*Pg	**Pg**	**19 28 34.2**	**-1.3**
MBDF				*e*Sg	**Sg**	**19 28 51.3**	**-2.7**
	5.1nm,0.3s						
MMK	**Mattmark**	**1.46**	**338**	Pg	**Pg**	**19 28 35.6**	**-0.8**
MMK				Sg	**Sg**	**19 28 55.2**	**-0.2**
FRF	**La Foret Royal**	**1.90**	**234**	*e*Pg	**Pg**	**19 28 43.4**	**-1.4**
FRF				*e*Sg	**Sg**	**19 29 06.4**	**-3.1**
	9.6nm,0.3s						
FRF	**La Foret Royal**	**1.90**	**234**	*e*Pn	**Pn**	**19 28 39.3**	**-0.5**
FRF				*e*Pg	**Pg**	**19 28 43.4**	**-1.4**
FRF				*e*Sg	**Sg**	**19 29 06.4**	**-3.1**
FRF	**La Foret Royal**	**1.90**	**234**	*e*Pg	**Pg**	**19 28 43.4**	**-1.4**
FRF				*e*Sg	**Sg**	**19 29 06.4**	**-3.1**
	4.8nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.06**	**277**	*e*Pg	**Pg**	**19 28 45.2**	**-2.6**
ORIF				*e*Sg	**Sg**	**19 29 13.3**	**-1.3**
	12nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.06**	**277**	*e*Pn	**Pn**	**19 28 41.5**	**-0.5**
ORIF				*e*Pg	**Pg**	**19 28 45.2**	**-2.6**
ORIF				*e*Sg	**Sg**	**19 29 13.3**	**-1.3**
ORIF	**Oris-en-Rattie**	**2.06**	**277**	*e*Pg	**Pg**	**19 28 45.2**	**-2.6**
ORIF				*e*Sg	**Sg**	**19 29 13.3**	**-1.3**
	5.8nm,0.3s						
LMR	**La Mourre**	**2.12**	**231**	*e*Pg	**Pg**	**19 28 47.7**	**-1.3**
LMR				*e*Sn	**Sn**	**19 29 08.3**	**-0.5**
	4.9nm,0.3s						
LMR	**La Mourre**	**2.12**	**231**	*e*Pn	**Pn**	**19 28 43.3**	**+0.4**
LMR				*e*Pg	**Pg**	**19 28 47.7**	**-1.3**
LMR				*e*Sn	**Sn**	**19 29 08.3**	**-0.5**
LMR	**La Mourre**	**2.12**	**231**	*e*Pg	**Pg**	**19 28 47.7**	**-1.3**
LMR				*e*Sn	**Sn**	**19 29 08.3**	**-0.5**
	2.5nm,0.3s						
PGF	**Pioggiola**	**2.16**	**175**	*e*Pn	**Pn**	**19 28 44.3**	**+0.9**
SMRF	**Simiane la Rot**	**2.40**	**254**	*e*Pg	**Pg**	**19 28 51.9**	**-2.3**
SMRF	**Simiane la Rot**	**2.40**	**254**	*e*Pn	**Pn**	**19 28 46.4**	**-0.2**
SMRF				*e*Pg	**Pg**	**19 28 51.9**	**-2.3**
SMRF	**Simiane la Rot**	**2.40**	**254**	*e*Pg	**Pg**	**19 28 51.9**	**-2.3**
VIVF	**Saint-Julien-l**	**2.92**	**274**	*e*Pg	**Pg**	**19 29 00.3**	**-3.8**
VIVF				*e*Sn	**Sn**	**19 29 26.7**	**-1.7**
	1.1nm,0.2s						
VIVF	**Saint-Julien-l**	**2.92**	**274**	*e*Pn	**Pn**	**19 28 53.9**	**+0.1**
VIVF				*e*Pg	**Pg**	**19 29 00.3**	**-3.8**
VIVF				*e*Sn	**Sn**	**19 29 26.7**	**-1.7**
VIVF	**Saint-Julien-l**	**2.92**	**274**	*e*Pg	**Pg**	**19 29 00.3**	**-3.8**
VIVF				*e*Sn	**Sn**	**19 29 26.7**	**-1.7**
	0.6nm,0.2s						

NEIC ***20*** *19:41:45.3, 2852S×6962W, h123km, MG3.7(GUC), After GUC.*

GUC 20 19:41:45.3±0.7, 2852S×6962W, h123km±14km, ML3.7, 9C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VACH	**Vallenar**	**1.00**	**266**	⇑*i*P	Pn	19 42 09.6	+2.0
VACH				*i* S	Sn	19 42 27.0	+2.4
VACH				AML	AML	19 42 28.3	
	comp=N,3μm,0.1s						
VACH	**Vallenar**	**1.00**	**266**	⇑*i*P	Pn	19 42 09.6	+2.0
VACH				*i* S	Sn	19 42 27.0	+2.4
LCO	**Las Campanas**	**1.07**	**242**	⇑*i*P	Pn	19 42 09.4	+1.1
LCO				*i* S	Sn	19 42 27.2	+1.4
CPCH	**Copiapo**	**1.32**	**330**	⇓*i*P	Pn	19 42 11.3	+0.3
CPCH				*i* S	Sn	19 42 30.7	+0.3
CPCH				AML	AML	19 42 34.0	
	comp=N,12μm,0.1s						
CPCH	**Copiapo**	**1.32**	**330**	⇓*i*P	Pn	19 42 11.3	+0.3
CPCH				*i* S	Sn	19 42 30.7	+0.3
CDCH	**Caldera**	**1.79**	**323**	⇑*i*P	Pn	19 42 17.7	+1.3
CDCH				*i* S	Sn	19 42 41.6	+1.5
CDCH				AML	AML	19 42 47.2	
	comp=N,535nm,0.6s						
CDCH	**Caldera**	**1.79**	**323**	⇑*i*P	Pn	19 42 17.7	+1.3
CDCH				*i* S	Sn	19 42 41.6	+1.5
TLL	**Tololo Astrono**	**1.94**	**212**	⇑*i*P	Pn	19 42 19.1	+0.8
TLL				*i* S	Sn	19 42 45.1	+1.7
TLL				AML	AML	19 42 52.9	
	comp=N,499nm,0.7s						
TLL	**Tololo Astrono**	**1.94**	**212**	⇑*i*P	Pn	19 42 19.1	+0.8
TLL				*i* S	Sn	19 42 45.1	+1.7
LSCH	**La Serena**	**1.99**	**225**	⇑*i*P	Pn	19 42 19.3	+0.6
LSCH				*i* S	Sn	19 42 44.3	-0.1
LSCH				AML	AML	19 42 48.6	
	comp=E,19nm,0.5s						
LSCH	**La Serena**	**1.99**	**225**	⇑*i*P	Pn	19 42 19.3	+0.6
LSCH				*i* S	Sn	19 42 44.3	-0.1
CPN1	**Cerro Paranal**	**3.94**	**350**	*i* S	Sn	19 43 31.1	+1.5
CPN1				AML	AML	19 43 33.0	
	comp=N,80nm,0.5s						

TRN 20 20:03:22.3, 1584N×6065W, h26km, MD3.6, M2.8(FDF), 2C-7D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEG	**La Desirade**	**0.61**	**321**	*e*P	Pb	20 03 35.4	+1.0
DEG				*e*S	Sb	20 03 43.9	+1.2
MGG	**Marie-Galante**	**0.64**	**277**	*e*P	Pb	20 03 36.8	+1.9
MGG				*e*S	Sb	20 03 46.0	+2.5
DWS	**Wesley**	**0.69**	**247**	⇓*i*P	Pb	20 03 38.5	+2.9
DWS				*e*S	Sb	20 03 49.5	+4.8
DOG	**Dongo Capester**	**0.95**	**282**	⇓*e*P	Pn	20 03 41.8	+2.0
TBG	**Guadaloupe-3**	**0.95**	**271**	⇑*e*P	Pn	20 03 41.6	+1.6
TBG				*e*S	Sb	20 03 54.6	+2.3
PHG	**Guadaloupe-2**	**0.97**	**281**	⇓*e*P	Pn	20 03 42.1	+2.0
SEG	**Port Louis**	**0.99**	**305**	⇓*e*P	Pn	20 03 42.1	+1.6
SCG	**Saint Claude**	**1.01**	**281**	⇓*e*P	Pn	20 03 42.6	+1.9
HMG	**Houelmont**	**1.02**	**278**	*e*P	Pn	20 03 42.6	+1.8
LZG	**Guadaloupe-1**	**1.12**	**286**	*e*P	Pn	20 03 44.1	+1.9
FDF	**Fort de France**	**1.20**	**204**	⇑*e*P	Pn	20 03 44.8	+1.5
FDF				*e*S	Sn	20 04 01.0	+2.3
MVM	**Montagne Vaucl**	**1.30**	**190**	⇓*e*P	Pn	20 03 46.1	+1.5
BIM	**Bigot**	**1.37**	**197**	⇓*e*P	Pn	20 03 47.3	+1.6
BIM				*e*S	Sn	20 04 05.3	+2.3

ISCJB ***20*** *20:09:57.8±0.3, 4982N±003×1846E±003, h0km, Error ellipse: s-maj=3.9km s-min=2.3km az=19.6*
CSEM ***20*** *20:09:58.8±0.2, 4988N×1852E, h1km, ML3.2/5, Error ellipse: s-maj=2.9km s-min=1.4km az=2.0*
IPEC ***20*** *20:09:58.6±0.2, 4986N×1856E, h0km±3km, ML2.0/4, Error ellipse: s-maj=2.2km s-min=1.1km az=161.0*
NEIC ***20*** *20:09:58.5±0.6, 4988N×1854E, h5km, ML2.8(BUC), Error ellipse: s-maj=9.3km s-min=4.3km az=13.0*
PRU ***20*** *20:09:59.8, 4988N×1846E, h0km*
VIE ***20*** *20:09:60.0±0.5, 4968N×1846E, h0km, mb1.8/3, ML2.6/4, Error ellipse: s-maj=3.2km s-min=2.1km az=83.0 23 km SE of Ostrava Suspected Mining induced.*

ISC 20 20:09:58.8±0.3, 4981N±002×1850E±002, h0km, n43, σ1§15/75, 13C-4D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.23**	**277**	*e*Pg	**Pg**	**20 10 04.5**	**+1.3**
OKC				*e*Sg	**Sg**	**20 10 08.6**	**+2.4**
	128nm,0.5s						
OKC	**Ostrava-Krasne**	**0.23**	**277**	*e*Pg	**Pg**	**20 10 04.0**	**+0.8**
OKC				*e*Sg	**Sg**	**20 10 08.6**	**+2.4**
RAC	**Raciborz**	**0.34**	**325**	*e*Pg	**Pg**	**20 10 06.5**	**+1.2**
RAC				*e*Sg	**Sg**	**20 10 12.3**	**+2.6**
MORC	**Moravsky Berou**	**0.62**	**267**	⇑*i*P	**Pg**	**20 10 11.8**	**+1.1**
MORC				S	**Sg**	**20 10 20.4**	**+1.7**
MORC	**Moravsky Berou**	**0.62**	**267**	⇑P	**Pg**	**20 10 11.8**	**+1.1**
MORC				S	**Sg**	**20 10 20.4**	**+1.6**
MORC	**Moravsky Berou**	**0.62**	**267**	*e*Pg	**Pg**	**20 10 11.4**	**+0.7**
MORC				*e*Sg	**Sg**	**20 10 19.3**	**+0.6**
	22nm,0.1s						
MORC				S	**Sg**	**20 10 20.4**	**+1.7**
LIKS	**Likavka**	**0.86**	**152**	*e*PN	**Pn**	**20 10 17.1**	**-1.1**
LIKS				*e*		20 10 32.5	
OJC	**Ojcow**	**0.94**	**63**	*e*Pg	**Pg**	**20 10 15.7**	**-1.1**
OJC				*e*Sg	**Sg**	**20 10 27.8**	**-1.1**
JAVC	**Velka Javorina**	**1.09**	**210**	*e*Pg	**Pg**	**20 10 21.6**	**+1.8**
JAVC				*e*Sg	**Sg**	**20 10 38.2**	**+4.2**
	16nm,0.2s						
NIE	**Niedzica**	**1.24**	**108**	*e*Pg	**Pg**	**20 10 22.2**	**-0.5**
NIE				*e*Sg	**Sg**	**20 10 39.1**	**+0.3**
VYHS	**Vyhne**	**1.33**	**170**	*e*PN	**Pn**	**20 10 23.9**	**-0.8**
VYHS				*e*SN	**Sn**	**20 10 42.8**	**-0.4**
VRAC	**Vranov**	**1.34**	**249**	⇑*i*P	**Pg**	**20 10 24.3**	**-0.2**
VRAC	**Vranov**	**1.34**	**249**	⇑P	**Pg**	**20 10 24.2**	**-0.2**
VRAC				S	**Sg**	**20 10 42.6**	**+0.8**
VRAC	**Vranov**	**1.34**	**249**	*e*Pg	**Pg**	**20 10 24.5**	**0.0**
VRAC				*e*Sg	**Sg**	**20 10 41.9**	**+0.1**
	22nm,0.2s						
VRAC				S	**Sg**	**20 10 42.6**	**+0.8**
DPC	**Dobruska-Polom**	**1.50**	**292**	*e*PG	**Pg**	**20 10 26.6**	**-1.0**
DPC				*e*SG	**Sg**	**20 10 46.7**	**-0.4**
	32nm,0.4s						
DPC	**Dobruska-Polom**	**1.50**	**292**	*e*Pg	**Pg**	**20 10 26.5**	**-1.1**
DPC				*e*Sg	**Sg**	**20 10 46.1**	**-1.0**
KRUC	**Moravsky**	**1.56**	**242**	*e*Pg	**Pg**	**20 10 28.1**	**-0.7**
KRUC				*e*Sg	**Sg**	**20 10 49.5**	**+0.5**
	27nm,0.2s						
KSP	**Ksiaz**	**1.75**	**307**	Pn	**Pn**	**20 10 30.3**	**-0.2**
KSP				*e*Pg	**Pg**	**20 10 33.0**	**+0.6**
KSP				*e*Sg	**Sg**	**20 10 54.5**	**-0.6**
KSP	**Ksiaz**	**1.75**	**307**	*e*Pn	**Pn**	**20 10 30.2**	**-0.3**
STHS	**Stebnicka Huta**	**1.83**	**101**	*e*PN	**Pn**	**20 10 33.9**	**+2.4**
STHS				*e*SN	**Sn**	**20 10 59.7**	**+4.3**
ZST	**Bratislava**	**1.86**	**210**	*e*PN	**Pn**	**20 10 31.6**	**-0.3**
ZST				*e*SN	**Sn**	**20 10 55.3**	**-0.8**

STKA	**Stephens Creek**	**57.93**	**180**	*eP*	**P**	**20 25 43.4**	**-0.5**
DAWY	**Dawson**	**61.76**	**29**	P	**P**	**20 26 10.5**	**+0.4**
NWAO	**Narrogin (SRO)**	**63.43**	**203**	P	**P**	**20 26 20.2**	**-1.1**
FINES	**FINESS Array B**	**78.43**	**334**	P	**P**	**20 27 52.9**	**+0.8**
	0.4nm,0.4s,mb3.5,baz=85,slow=3.2,SNR=8.5						

*ISCJB **20** 20:17:41.6±0.6, 7171W±005×108W±02, h10km, mb3.8/2, MS3.0/5, Error ellipse: s-maj=9.3km s-min=5.4km az=111.2*
*CSEM **20** 20:17:41.1±0.4, 7120N×1133W, h10km, ML3.1, Error ellipse: s-maj=13.5km s-min=5.5km az=28.0*
*BER **20** 20:17:42.6±1.6, 6988N×870W, h10km, MD4.1, ML3.1*
*NEIC **20** 20:17:45.8±0.9, 7159N×1029W, h10km, ML3.1(BER), Error ellipse: s-maj=13.3km s-min=8.4km az=105.0*
*IDC **20** 20:17:47.0±3.5, 7131N×971W, h0km, mb3.2/1, mb1 3.7/4, mb1mx3.3/23, mbtmp3.5/4, ML3.5/2, MS3.0/8, Ms1 3.0/8, ms1mx2.9/18, Error ellipse: s-maj=44.0km s-min=35.4km az=53.0*

ISC 20 20:17:43.8±0.7,**7161N**±005×**106W**±02,**h10**km,**n31,** σ1§**49**/38,**mb3.8/2,MS3.0/5,1C,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.92**	**128**	*eP*	**Pg**	**20 18 00.6**	**-0.9**
JNW				*eS*	**Sg**	**20 18 14.2**	**+0.8**
JNW				AML	AML	20 18 15.6	
	comp=Z,635nm,0.3s						
JNW	**Jan Mayen West**	**0.92**	**128**	*eP*	**Pg**	**20 18 00.6**	**-0.9**
	SNR=53						
JNW				*eS*	**Sg**	**20 18 14.2**	**+0.8**
	comp=Z,635nm,0.3s,SNR=53						
JMI	**Jan Mayen**	**0.92**	**137**	*eP*	**Pg**	**20 18 00.3**	**-1.2**
JMI				*eS*	**Sg**	**20 18 12.8**	**-0.6**
JMI				AML	AML	20 18 15.9	
	comp=Z,393nm,0.2s						
JMI	**Jan Mayen**	**0.92**	**137**	*eP*	**Pg**	**20 18 00.3**	**-1.2**
JMI				*eS*	**Sg**	**20 18 12.8**	**-0.6**
JMI	**Jan Mayen**	**0.92**	**137**	*eP*	**Pg**	**20 18 00.3**	**-1.2**
	SNR=53						
JMI				*eS*	**Sg**	**20 18 12.8**	**-0.7**
	comp=Z,393nm,0.2s,SNR=53						
JMIC	**Jan Mayen**	**0.92**	**131**	Pn	**Pn**	**20 18 00.5**	**-2.4**
	comp=Z,79nm,0.3s,baz=206,slow=1.5,SNR=130						
JMIC				Sn	**Sn**	**20 18 12.9**	**-3.3**
	comp=Z,179nm,0.3s,baz=117,slow=19,SNR=59						
JNE	**Jan Mayen East**	**0.98**	**128**	*eP*	**Pg**	**20 18 01.3**	**-1.3**
JNE				*eS*	**Sg**	**20 18 15.0**	**-0.3**
JNE				AML	AML	20 18 18.2	
	comp=Z,692nm,0.4s						
JNE	**Jan Mayen East**	**0.98**	**128**	*eP*	**Pg**	**20 18 01.3**	**-1.3**
JNE				*eS*	**Sg**	**20 18 15.0**	**-0.3**
JNE	**Jan Mayen East**	**0.98**	**128**	*eP*	**Pg**	**20 18 01.3**	**-1.3**
	SNR=53						
JNE				*eS*	**Sg**	**20 18 15.0**	**-0.3**
	comp=Z,692nm,0.4s,SNR=53						
DAG	**Danmarks Havn**	**5.63**	**341**	⇑*iP*	**Pn**	**20 19 04.3**	**-3.2**
	comp=Z,32nm,0.6s						
DAG				*i*		20 20 01.1	
BORG	**Borgarnes**	**7.94**	**215**	*ePn*	**Pn**	**20 19 42.1**	**+2.7**
SUMG	**Summit**	**8.58**	**290**	*ePn*	**Pn**	**20 19 45.2**	**-2.9**
	comp=Z,18nm,0.8s						
SUMG				*eSn*	**Sn**	**20 21 12.5**	**-13**
SUMG	**Summit**	**8.58**	**290**	*ePn*	**Pn**	**20 19 45.2**	**-2.9**
	comp=Z,18nm,0.8s						
SUMG				*eSn*	**Sn**	**20 21 12.5**	**-12**
KBS	**Kingsbay**	**9.23**	**28**	*ePn*	**Pn**	**20 19 56.3**	**-0.6**
	comp=Z,8.9nm,0.6s						
KBS				*eSn*	**Sn**	**20 21 32.2**	**-8.6**
KBS	**Kingsbay**	**9.23**	**28**	*ePn*	**Pn**	**20 19 56.3**	**-0.6**
	comp=Z,8.9nm,0.6s						
SPB4	**Spitsbergen Ar**	**9.52**	**34**	*ePn*	**Pn**	**20 20 01.8**	**+0.9**
SPB4	**Spitsbergen Ar**	**9.52**	**34**	*ePn*	**Pn**	**20 20 01.8**	**+0.9**
ARCES	**ARCESS Array B**	**12.08**	**82**	Pn	**Pn**	**20 20 37.8**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=291,slow=12,SNR=16						
ARCES				LR	LR	20 24 40.0	
	comp=Z,51nm,18.6s,baz=113,slow=35						
KEV	**Kevo**	**12.45**	**80**	Pn	**Pn**	**20 20 41.9**	**+0.8**
KEV	**Kevo**	**12.45**	**80**	Pn	**Pn**	**20 20 41.9**	**+0.8**
NOA	**NORSAR Array B**	**13.64**	**130**	LR	LR	20 25 41.2	
	comp=Z,40nm,20.6s,baz=325,slow=36						
HFS	**Hagfors**	**15.04**	**127**	Pn	**Pn**	**20 21 20.6**	**+4.1**
	comp=Z,0.0nm,0.3s,baz=312,slow=8.7,SNR=3.0						
HFS				LR	LR	20 26 36.1	
	comp=Z,62nm,19.6s,baz=325,slow=36						
EKA	**Eskdalemuir Ar**	**16.65**	**165**	Pn	**Pn**	**20 21 38.6**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=349,slow=12,SNR=12						
ESK	**Eskdalemuir**	**16.66**	**165**	Pn	**Pn**	**20 21 38.1**	**+0.7**
	comp=Z,1.4nm,0.6s						
FINES	**FINESS Array B**	**17.46**	**107**	P	**Pn**	**20 21 48.8**	**+1.3**
	baz=314,slow=16,SNR=3.4						
STU	**Stuttgart**	**24.68**	**147**	*eP*	**P**	**20 23 05.7**	**+0.9**
	comp=Z,7.4nm,0.3s,mb4.7						
GERES	**GERESS Array B**	**25.45**	**141**	P	**P**	**20 23 13.2**	**+1.4**
	comp=Z,0.2nm,0.5s,mb2.9,baz=341,slow=7.5,SNR=4.7						
GERES				LR	LR	20 31 52.4	
	comp=Z,37nm,21.2s,MS2.9,baz=280,slow=34						
VRAC	**Vranov**	**25.62**	**136**	LR	LR	20 32 23.3	
	comp=Z,28nm,18.6s,MS2.8,baz=356,slow=35						
SCHQ	**Schefferville**	**28.88**	**265**	LR	LR	20 34 00.0	
	comp=Z,54nm,19.2s,MS3.2,baz=150,slow=33						
YKA	**Yellowknife Ar**	**36.46**	**311**	LR	LR	20 39 10.5	
	comp=Z,31nm,18.7s,MS3.1,baz=90,slow=35						
ZAL	**Zalesovo**	**41.67**	**62**	LR	LR	20 46 06.5	
	comp=Z,29nm,18.2s,MS3.2,baz=305,slow=41						

*ISCJB **20** 20:27:26.7±0.3, 1580S±005×7472W±005, h31km, mb4.4/23, MS4.2/11, Error ellipse: s-maj=8.6km s-min=6.0km az=82.6*
*IDC **20** 20:27:28.2±5.9, 1587S×7479W, h28km±41km, mb3.9/13, mb1 4.0/18, mb1mx4.0/22, mbtmp4.1/18, ML4.3/5, MS4.1/13, Ms1 4.1/13, ms1mx3.8/30, Error ellipse: s-maj=23.1km s-min=13.6km az=67.0*
*NEIC **20** 20:27:28.5±0.3, 1585S×7476W, mb4.7/12, Error ellipse: s-maj=9.7km s-min=5.2km az=50.0*
*BJI **20** 20:27:30.4, 1590S×7480W, h31km*
ISC 20 20:27:29.0±0.3,**1585S**±005×**7475W**±005,**h33**km, **h33**km±1.6km:**pP-P,n71,**σ0§**96**/63,**mb4.4**/23,**MS4.2**/11, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**3.19**	**101**	*eP*	**Pn**	**20 28 17.0**	**+0.2**
ARE				*eS*	**Sn**	**20 29 01.0**	**+7.3**
NNA	**Nana**	**4.34**	**332**	Pn	**Pn**	**20 28 32.2**	**-0.5**
	6.5nm,0.3s,baz=116,slow=14,SNR=9.1						
NNA				Sn	**Sn**	**20 29 29.8**	**+7.6**
	75nm,0.3s,baz=163,slow=14,SNR=5.8						
NNA				LR	LR	20 30 14.2	
	comp=Z,808nm,19.7s,baz=158,slow=38						
LPAZ	**La Paz**	**6.38**	**95**	Pn	**Pn**	**20 29 06.8**	**+6.1**
	9.7nm,0.3s,baz=286,slow=9.1,SNR=92						
LPAZ				Sn	**Sn**	**20 30 22.3**	**+10**
	baz=259,slow=16,SNR=1.3						
LPAZ	**La Paz**	**6.38**	**95**	Pn	**Pn**	**20 29 06.8**	**+6.1**
LPAZ				Sn	**Sn**	**20 30 22.3**	**+10**
LVC	**Limon Verde**	**8.70**	**142**	Pn	**Pn**	**20 29 33.4**	**+0.9**
	8.8nm,0.3s,baz=317,slow=12,SNR=2.7						
LVC				Sn	**Sn**	**20 31 02.2**	**-7.2**
	3.5nm,0.3s,baz=37,slow=15,SNR=2.0						
ATAH	**Atahualpa**	**9.49**	**337**	Pn	**Pn**	**20 29 50.5**	**+7.2**
	1.5nm,0.3s,baz=196,slow=2.9,SNR=11						
ATAH				Sn	**Sn**	**20 31 39.5**	**+11**
	1.1nm,0.3s,baz=312,slow=21,SNR=2.5						
SIV	**San Ignacio**	**13.16**	**92**	Pn	**Pn**	**20 30 32.0**	**-1.5**
	0.6nm,0.3s,baz=276,slow=13,SNR=10						
SIV				Sn	**Sn**	**20 33 10.5**	**+12**
	0.2nm,0.3s,baz=200,slow=21,SNR=2.8						
SAML	**Samuel**	**13.21**	**60**	*ePn*	**Pn**	**20 30 34.3**	**+0.1**
	11nm,0.8s						
SAML				*eSn*	**Sn**	**20 32 59.7**	**-0.2**
CFAA	**Coronel Fontan**	**16.77**	**160**	Pn	**Pn**	**20 31 21.0**	**-0.3**
	0.1nm,0.3s,baz=337,slow=12,SNR=12						
CFAA	**Coronel Fontan**	**16.77**	**160**	Pn	**Pn**	**20 31 21.0**	**-0.3**
CPUP	**Villa Florida**	**19.29**	**126**	P	**Pn**	**20 31 51.4**	**-0.8**
	0.3nm,0.3s,baz=294,slow=9.7,SNR=4.2						
CPUP				LR	LR	20 41 00.3	
	comp=Z,319nm,19.3s,baz=284,slow=42						
CPUP	**Villa Florida**	**19.29**	**126**	P	**Pn**	**20 31 51.4**	**-0.8**
CPUP				LR	LR	20 41 00.3	
ROSC	**El Rosal**	**20.58**	**1**	P	**P**	**20 32 06.9**	**+1.9**
	2.4nm,0.4s,baz=287,slow=19,SNR=2.1						
ROSC				LR	LR	20 40 51.3	
	comp=Z,438nm,18.6s,MS3.9,baz=358,slow=39						
ROSC	**El Rosal**	**20.58**	**1**	*eP*	**P**	**20 32 07.2**	**+2.2**
PAYG	**Puerto Ayora**	**21.50**	**313**	P	**P**	**20 32 15.6**	**+0.6**
SDV	**Santo Domingo**	**24.91**	**10**	P	**P**	**20 32 49.1**	**+0.1**
	5.0nm,0.3s,mb4.5,baz=338,slow=20,SNR=3.6						
SDV				LR	LR	20 42 08.3	
	comp=Z,502nm,20.7s,MS4.0,baz=51,slow=35						
SDV	**Santo Domingo**	**24.91**	**10**	*eP*	**P**	**20 32 49.5**	**+0.6**
	5.2nm,0.3s,mb4.5						
PLCA	**Paso Flores**	**25.06**	**172**	P	**P**	**20 32 49.5**	**-0.8**
	1.7nm,0.4s,mb3.9,baz=319,slow=8.9,SNR=9.1						
PLCA	**Paso Flores**	**25.06**	**172**	*eP*	**P**	**20 32 49.7**	**-0.6**
	2.1nm,0.4s,mb4.0						
PLCA				*e*	pP	20 32 59.9	+0.3
BDFB	**Brasilia**	**25.73**	**93**	P	**P**	**20 32 57.7**	**+1.3**
	7.6nm,0.8s,mb4.3,baz=268,slow=14,SNR=9.6						
BDFB				LR	LR	20 44 40.6	
	comp=Z,319nm,18.3s,MS3.9,baz=318,slow=40						
PCRV	**Puerto La Cruz**	**27.73**	**22**	LR	LR	20 44 03.9	
	comp=Z,445nm,18.8s,MS4.1,baz=23,slow=36						
TEIG	**Tepich**	**38.23**	**339**	P	**P**	**20 34 46.1**	**+0.2**
LRAL	**Lakeview Retre**	**50.00**	**347**	*eP*	**P**	**20 36 18.6**	**-1.5**
	22nm,1.4s,mb5.0						
LRAL				*e*	pP	20 36 28.9	-1.0
SWET	**Sewanee**	**51.88**	**348**	*eP*	**P**	**20 36 33.3**	**-1.0**
TZTN	**Tazewell**	**52.77**	**351**	*eP*	**P**	**20 36 40.3**	**-0.5**
ELN	**Prospectdale**	**53.09**	**354**	*eP*	**P**	**20 36 43.3**	**0.0**
WCI	**Wyandotte Cave**	**54.87**	**349**	*eP*	**P**	**20 36 55.2**	**-1.0**
	26nm,1.0s,mb5.2						
WMOK	**Wichita Mounta**	**55.25**	**336**	*eP*	**P**	**20 36 58.1**	**-0.8**
	4.9nm,1.4s,mb4.3						
WMOK				*epP*	pP	20 37 07.7	-1.2
ACSO	**Alum Creek Sta**	**56.31**	**352**	*eP*	**P**	**20 37 05.8**	**-0.8**
RKT	**Rikitea**	**56.91**	**253**	*eS*	**S**	**20 45 02.3**	**-0.1**
	120nm,29.5s						
RKT				*e*LR	LR	20 53 55.0	
	330nm,27.0s						
LAZ	**Ladron**	**58.71**	**329**	*eP*	**P**	**20 37 24.5**	**+1.1**
ANMO	**Albuquerque**	**58.81**	**330**	*eP*	**P**	**20 37 24.2**	**0.0**
	4.7nm,1.1s,mb4.4						
ANMO				*epP*	pP	20 37 34.0	-0.1
SADO	**Sadowa**	**60.46**	**356**	LR	LR	21 04 19.8	
	comp=Z,110nm,21.2s,MS4.0,baz=198,slow=37						
PV01	**Paradox Valley**	**62.38**	**330**	*eP*	**P**	**20 37 49.6**	**+1.2**
SMCO	**Snowmass**	**62.48**	**332**	*eP*	**P**	**20 37 49.7**	**+0.6**
	5.7nm,1.1s,mb4.6						
SMCO				*e*PP	PP	20 40 02.3	-4.4
TAOE	**Nuku Hiva Isla**	**64.06**	**268**	*e*LR	LR	20 57 09.6	
	967nm,24.5s						
MSU	**Marysvale**	**64.45**	**328**	*eP*	**P**	**20 38 03.1**	**+0.9**
RSSD	**Black Hills**	**65.40**	**337**	*eP*	**P**	**20 38 08.3**	**-0.1**
RSSD				*epP*	pP	20 38 17.1	-1.3
DUG	**Dugway**	**66.05**	**329**	*eP*	**P**	**20 38 11.3**	**-1.2**
	7.8nm,1.1s,mb4.7						
PDAR	**Pinedale Array**	**66.53**	**333**	P	**P**	**20 38 15.7**	**+0.1**
	0.5nm,0.6s,mb3.7,baz=148,slow=8.6,SNR=7.7						
HWUT	**Hardware Ranch**	**66.53**	**331**	*eP*	**P**	**20 38 15.3**	**-0.3**
	5.6nm,1.3s,mb4.4						
HWUT				*epP*	pP	20 38 25.0	-0.7
NVAR	**Mina Array Bea**	**67.68**	**324**	P	**P**	**20 38 24.7**	**+1.8**
	0.2nm,0.4s,mb3.5,baz=137,slow=9.9,SNR=6.5						
RRI2	**Red Ridge**	**67.77**	**332**	*eP*	**P**	**20 38 24.4**	**+0.9**
	13nm,1.0s,mb4.9						
FLWY	**Flagg Ranch**	**68.08**	**333**	*eP*	**P**	**20 38 26.6**	**+1.1**
	14nm,1.0s,mb5.0						
FLWY				*epP*	pP	20 38 32.4	-3.1
ULM	**Lac du Bonnet**	**68.39**	**346**	P	**P**	**20 38 26.1**	**-1.3**
	2.7nm,0.7s,mb4.4,baz=134,slow=8.0,SNR=4.0						
ULM				LR	LR	21 11 29.1	
	comp=Z,100nm,19.1s,MS4.1,baz=84,slow=39						
GCMT	**Greycliff**	**69.00**	**335**	*eP*	**P**	**20 38 30.3**	**-0.9**
GCMT				*epP*	pP	20 38 41.1	-0.2
SNAA	**Sanae**	**69.39**	**161**	P	**P**	**20 38 33.0**	**-0.6**
	0.5nm,0.5s,mb3.8,baz=301,slow=5.9,SNR=6.3						
MCMT	**McKenzie Canyo**	**69.62**	**332**	*eP*	**P**	**20 38 36.6**	**+1.6**
MCMT				*epP*	pP	20 38 45.7	+0.6
TBI	**Tubuai**	**70.11**	**251**	*e*LR	LR	21 00 03.8	
	193nm,26.0s						
SCHQ	**Schefferville**	**70.72**	**5**	P	**P**	**20 38 40.1**	**-1.7**
	3.9nm,0.9s,mb4.3,baz=280,slow=5.0,SNR=4.0						
PPT	**Papeete**	**71.23**	**257**	*e*LR	LR	21 00 23.8	
	238nm,24.0s						
MSO	**Missoula**	**71.65**	**333**	*eP*	**P**	**20 38 47.1**	**-0.3**
	7.2nm,1.2s,mb4.5						
YBH	**Yreka Blue Hor**	**72.40**	**324**	LR	LR	21 10 25.7	
	comp=Z,126nm,18.5s,MS4.2,baz=142,slow=36						
DBIC	**Dimbokro**	**72.70**	**78**	P	**P**	**20 38 54.6**	**+0.9**
	6.7nm,0.6s,mb4.8,baz=219,slow=6.3,SNR=26						
DBIC				LR	LR	21 10 09.1	
	comp=Z,526nm,18.1s,MS4.8,baz=222,slow=35						
WALA	**Waterton Lakes**	**73.35**	**334**	P	**P**	**20 38 55.9**	**-1.6**
NEW	**Newport**	**74.15**	**332**	LR	LR	21 11 02.0	
	comp=Z,139nm,21.0s,MS4.2,baz=350,slow=35						
TOA0	**Torodi Ar. Sit**	**80.88**	**74**	*eP*	**P**	**20 39 41.2**	**+1.4**
TOA0				*eP*cP	PcP	20 39 47.5	+1.2
TORD	**Torodi Ar. Bea**	**80.88**	**74**	P	**P**	**20 39 41.3**	**+1.5**
	17nm,0.6s,mb5.2,baz=265,slow=5.5,SNR=388						
VNDA	**Vanda**	**81.39**	**191**	P	**P**	**20 39 42.6**	**+0.1**
	0.4nm,0.7s,mb3.5,baz=91,slow=4.4,SNR=3.5						
MDT	**Midelt**	**82.59**	**53**	LR	LR	21 15 56.3	
	comp=Z,154nm,18.0s,MS4.4,baz=325,slow=35						
YKA	**Yellowknife Ar**	**84.11**	**343**	P	**P**	**20 39 55.7**	**-0.9**
	0.8nm,0.7s,mb4.0,baz=132,slow=6.8,SNR=3.6						
YKA				LR	LR	21 23 57.4	
	comp=Z,70nm,18.2s,MS4.1,baz=150,slow=40						
YKA	**Yellowknife Ar**	**84.11**	**343**	P	**P**	**20 39 55.7**	**-0.9**
YKA				LR	LR	21 23 57.4	
ESDC	**Sonseca Array**	**85.88**	**47**	P	**P**	**20 40 05.2**	**-0.3**
	0.9nm,0.7s,mb4.1,baz=267,slow=4.9,SNR=6.8						
ASAR	**Alice Springs**	**131.77**	**216**	PKP	PKPdf	20 46 39.0	+0.3
	0.4nm,0.4s,baz=117,slow=1.7,SNR=14						
WRA	**Warramunga Arr**	**134.37**	**220**	PKP	PKPdf	20 46 44.3	+0.7
	1.7nm,0.7s,baz=133,slow=1.8,SNR=30						
ZAL	**Zalesovo**	**138.77**	**18**	PKP	PKPdf	20 46 51.6	-0.1
	2.7nm,1.0s,baz=190,slow=4.3,SNR=12						
MKAR	**Makanchi Array**	**143.72**	**27**	PKP	PKPdf	20 46 58.3	-2.3
	0.9nm,0.6s,baz=317,slow=3.1,SNR=7.5						
MJAR	**Matsushiro Arr**	**144.22**	**311**	PKP	PKPdf	20 46 59.3	-2.2
	1.2nm,0.8s,baz=82,slow=0.9,SNR=6.9						
SONM	**Songino Array**	**148.09**	**359**	PKPbc	PKPbc	20 47 12.0	+0.7
	3.1nm,0.7s,baz=335,slow=1.4,SNR=17						
WMQ	**Urumqi**	**148.37**	**25**	*e*PKP	PKPbc	20 47 13.0	+1.0
GTA	**Gaotai**	**156.05**	**10**	*e*PKP	PKPdf	20 47 17.8	-2.1

*ISCJB **20** 20:32:40.0±0.9, 6116S×3477W±0.4, h10km, mb4.2/7, MS4.3/3, Error ellipse: s-maj=26.8km s-min=12.7km az=158.2*
*IDC **20** 20:32:40.8±1.4, 6128S×3423W, h0km, mb4.2/4, mb1 4.1/5, mb1mx3.8/17, mbtmp4.1/5, ML3.3/1, MS4.0/4, Ms1 4.0/4, ms1mx3.4/29, Error ellipse: s-maj=45.6km s-min=33.8km az=43.0*
*NEIC **20** 20:32:41.5±0.6, 6120S×3488W, h10km, mb4.3/6, Error ellipse: s-maj=20.1km s-min=9.8km az=81.0*
ISC 20 20:32:41.3±0.9,**6123S**±009×**348W**±04,**h10**km,**n21,** σ0§**84**/16,**mb4.2/7,MS4.3**/3,**Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.02**	**352**	*ePn*	**Pn**	**20 34 23.9**	**-0.3**
	58nm,0.6s						
SNAA	**Sanae**	**16.25**	**143**	Pn	**Pn**	**20 36 28.4**	**-1.2**
	0.1nm,0.3s,baz=297,slow=12,SNR=13						
SNAA				LR	LR	20 40 57.0	
	comp=Z,69nm,20.0s,baz=23,slow=31						
SNAA	**Sanae**	**16.25**	**143**	*eP*	**Pn**	**20 36 31.2**	**+1.6**
	7.3nm,1.0s						
SNAA				*e*		20 36 39.6	
QSPA	**South Pole Qui**	**29.01**	**180**	*eP*	**P**	**20 38 47.0**	**+5.8**
	5.6nm,1.0s,mb4.2						
PLCA	**Paso Flores**	**29.86**	**297**	LR	LR	20 50 31.0	
	comp=Z,69nm,18.3s,MS3.3,baz=279,slow=36						
MAW	**Mawson**	**38.41**	**142**	P	**P**	**20 40 01.2**	**-1.6**
SBA	**Scott Base**	**40.53**	**187**	P	**P**	**20 40 21.1**	**+0.5**
LPAZ	**La Paz**	**50.79**	**317**	P	**P**	**20 41 46.2**	**+4.6**
	0.7nm,0.7s,mb3.7,baz=152,slow=7.3,SNR=3.7						
LPAZ				LR	LR	21 02 43.1	
	comp=Z,598nm,19.6s,MS4.6,baz=272,slow=35						
BOSA	**Boshof**	**51.01**	**79**	*eP*	**P**	**20 41 43.6**	**+0.3**
	0.6nm,0.4s,mb3.9						
LBTB	**Lobatse**	**54.21**	**77**	P	**P**	**20 42 07.2**	**+0.1**
	4.7nm,0.8s,mb4.5,baz=218,slow=9.0,SNR=7.6						
LBTB	**Lobatse**	**54.21**	**77**	*eP*	**P**	**20 42 07.5**	**+0.4**
	4.3nm,0.7s,mb4.5						
LSZ	**Lusaka**	**63.82**	**73**	*eP*	**P**	**20 43 14.3**	**+0.5**
	2.9nm,0.6s,mb4.5						
DBIC	**Dimbokro**	**71.61**	**32**	P	**P**	**20 44 01.2**	**-1.7**
	3.9nm,1.0s,mb4.3,baz=150,slow=6.5,SNR=4.0						
DBIC	**Dimbokro**	**71.61**	**32**	*eP*	**P**	**20 44 03.0**	**+0.1**
	2.6nm,0.7s,mb4.3						
TORD	**Torodi Ar. Bea**	**79.57**	**36**	P	**P**	**20 44 49.0**	**+0.5**
	2.5nm,0.9s,mb4.2,baz=159,slow=7.0,SNR=12						
TORD	**Torodi Ar. Bea**	**79.57**	**36**	P	**P**	**20 44 49.0**	**+0.5**
SJG	**San Juan**	**82.96**	**330**	LR	LR	21 20 29.6	
	comp=Z,684nm,19.3s,MS5.0,baz=90,slow=34						
WRAB	**Tennant Creek**	**98.65**	**170**	P	**P**	**20 46 20.9**	**+0.3**
ZAL	**Zalesovo**	**147.90**	**75**	PKPbc	PKPbc	20 52 25.8	-0.9
	1.1nm,0.6s,baz=309,slow=5.0,SNR=4.2						
SONM	**Songino Array**	**154.26**	**104**	PKPbc	PKPbc	20 52 40.8	-0.8
	0.3nm,0.5s,baz=233,slow=2.4,SNR=4.0						
MJAR	**Matsushiro Arr**	**154.90**	**167**	PKPbc	PKPbc	20 52 41.8	-1.2
	0.8nm,0.4s,baz=189,slow=9.0,SNR=5.6						

*IDC **20** 20:56:12.9±1.1, 3723N×7466E, h0km, mb3.7/7, mb1 3.8/11, mb1mx3.6/24, mbtmp3.7/11, ML3.4/4, MS4.0/1, Ms1 4.0/1, ms1mx2.6/32, Error ellipse: s-maj=23.2km s-min=20.1km az=11.0*
*MOS **20** 20:56:16.2±2.0, 3725N×7479E, h33km, mb4.0/6, Error ellipse: s-maj=16.2km s-min=8.5km az=106.3*
*NEIC **20** 20:56:19.3±1.2, 3731N×7481E, h50km±16km, mb3.6/3, Error ellipse: s-maj=18.9km s-min=7.6km az=69.0*
*BJI **20** 20:56:20.6, 3758N×7468E, h34km, mb4.2, ML3.8, Ms3.5, Msz3.4*
*ISCJB **20** 20:56:20.4±0.5, 3738N±003×7474E±006, h78km±8km, mb3.6/9, Error ellipse: s-maj=8.4km s-min=4.6km az=1.8*
*NNC **20** 20:56:23.9±1.2, 3795N×7376E, h0km, mb3.3, mpv3.1, Error ellipse: s-maj=11.2km s-min=5.7km az=136.0*
ISC 20 20:56:22.3±0.4,**3741N**±003×**7466E**±007,**h71**km±7km,**n56,** σ1§**28**/67,**mb3.6/9,4C-1D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.34**	**26**	*i*P	**Pn**	**20 56 59.0**	**+0.4**
KSH				S	**Sn**	**20 57 29.9**	**+3.5**
KSH				Smax			
	comp=N,676nm,0.3s						
KSH				Smax			
	comp=E,1μm,0.4s						
CHCP	**Chirah Chowk**	**3.91**	**197**	P	**Pn**	**20 57 22.0**	**+2.1**
CEP	**Cherat**	**4.22**	**213**	P	**Pn**	**20 57 25.0**	**+0.9**
CEP				S	**Sn**	**20 58 18.0**	**+5.8**
KZA	**Kyzart**	**4.69**	**5**	P	**Pn**	**20 57 30.1**	**-0.4**
	SNR=24						
AML	**Almayashu**	**4.78**	**351**	P	**Pn**	**20 57 32.6**	**+0.9**
	SNR=39						
DLH	**Dalhousie**	**4.97**	**167**	*eP*	**Pn**	**20 57 34.0**	**-0.4**
DLH				*eS*	**Sn**	**20 58 35.0**	**+4.5**
THW	**Thamme Wali**	**5.19**	**208**	P	**Pn**	**20 57 37.5**	**+0.2**
AAK	**Ala-Archa**	**5.22**	**359**	*e*PN	**Pn**	**20 57 38.3**	**+0.5**
AAK				pmax	pmax		
	comp=Z,18nm,0.6s						
AAK	**Ala-Archa**	**5.22**	**359**	*ePn*	**Pn**	**20 57 38.3**	**+0.5**
	comp=Z,18nm,0.6s						
KBK	**Karagaybulak**	**5.25**	**2**	P	**Pn**	**20 57 39.6**	**+1.4**
	SNR=11						
EKS2	**Erkin-Say**	**5.29**	**353**	P	**Pn**	**20 57 41.6**	**+2.8**
	SNR=21						
TKM2	**Tokmak 2**	**5.55**	**7**	P	**Pn**	**20 57 43.0**	**+0.7**
	SNR=18						
TKM2	**Tokmak 2**	**5.55**	**7**	⇓*ePn*	**Pn**	**20 57 42.4**	**0.0**
	comp=Z,1.3nm,0.5s						
TKM2				⇑Sn	**Sn**	**20 58 44.7**	**-0.2**
	comp=Z,3.2nm,0.7s						
TKM2				⇑Lg		20 59 07.9	
	comp=Z,5.2nm,0.9s						
CHMS	**Chumysh**	**5.59**	**1**	P	**Pn**	**20 57 43.0**	**+0.2**
	SNR=11						
SARP	**Sargodha**	**5.71**

ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	**NORSAR Subarra**	**45.44 322**		P	**P**	**21 04 34.1**	**0.0**
	comp=Z,0.4nm,0.7s,mb3.3,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**45.44 322**		P	**P**	**21 04 34.0**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.3,baz=92,slow=7.8,SNR=2.9						
KMBO	**Kilima Mbogo**	**51.64 231**		LR	LR	21 29 14.3	
	comp=Z,138nm,19.7s,baz=98,slow=38						
TORD	**Torodi Ar. Bea**	**68.66 270**		P	**P**	**21 07 17.5**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.8,baz=43,slow=4.4,SNR=27						
WRA	**Warramunga Arr**	**80.03 124**		P	**P**	**21 08 25.0**	**+1.0**
	comp=Z,0.4nm,0.7s,mb3.4,baz=329,slow=5.4,SNR=4.7						

IDC ***20*** *20:57:13.6±0.5, 1588S×7490W, h0km, mb4.5/21, mb1 4.6/26,mb1mx4.6/28,mbtmp4.5/26,ML4.3/5,MS4.2/16, Ms1 4.1/16,ms1mx4.1/22,Error ellipse: s-maj=19.0km s-min=10.5km az=65.0*

ISCJB ***20*** *20:57:17.3±0.2, 1576S±004×7471W±004, h32km, mb4.7/59,MS4.3/15,Error ellipse: s-maj=6.9km s-min=4.0km az=100.1*

BJI ***20*** *20:57:18.9, 1580S×7480W, h35km, mB5.2, Ms5.0, Msz4.8*

NEIC ***20*** *20:57:18.9±0.2, 1584S×7478W, h35km, mb4.9/35, Error ellipse: s-maj=9.0km s-min=4.9km az=54.0*

HRVD ***20*** *20:57:19.0±0.4, 1597S×75.15W, h25km± 1km, MW5.0/56, Centroid moment Tensor Solution. LP body waves: s23,c26;Mantle waves: s56,c74; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.38±.21; $M_{\theta\theta}$-0.48±.11; $M_{\phi\phi}$-2.90±.15; $M_{r\theta}$0.79±.23; $M_{\theta\phi}$1.04±.09; $M_{\phi r}$-2.81±.27; Best double couple: M_o4.43000×10^{16} NP1:ϕ_s337.00000°, δ24.00000°, λ85.00000°. NP2: ϕ_s163.00000°, δ66.00000°, λ92.00000°. Principal axes: T 4.4810, Plg69.0000°, Azm78.0000°; N -0.1030, Plg2.0000°, Azm342.0000°; P -4.3780, Plg21.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 20 20:57:19.5±0.2, 1584S±004×7470W±004, h34km, h34km± 5km:pP-P,n255,σ0=89/232,mb4.7/59,MS4.3/15, 59C-48D,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**3.15**	**102**	*e*P	**Pn**	**20 58 07.0**	**+0.4**
ARE				*e*S	**Sn**	**20 58 55.0**	**+12**
NNA	**Nana**	**4.36**	**331**	Pn	**Pn**	**20 58 20.3**	**-3.0**
	4.3nm,0.3s,baz=168,slow=16,SNR=13						
NNA				Lg		20 59 24.7	
	292nm,0.3s,baz=227,slow=20,SNR=9.5						
NNA	**Nana**	**4.36**	**331**	*e*Pn	**Pn**	**20 58 19.8**	**-3.5**
NNA				*e*Sn	**Sn**	**20 59 11.5**	**-1.3**
LPAZ	**La Paz**	**6.33**	**95**	Pn	**Pn**	**20 58 55.4**	**+5.0**
	3.2nm,0.3s,baz=284,slow=8.6,SNR=125						
LPAZ				Sn	**Sn**	**21 00 15.7**	**+14**
	baz=215,slow=5.1,SNR=0.9						
LPAZ	**La Paz**	**6.33**	**95**	*e*Pn	**Pn**	**20 58 55.4**	**+5.0**
	216nm,1.0s						
CEN1	**Los Morros**	**8.62**	**151**	*e*P	**Pn**	**20 59 18.7**	**-3.2**
LVC	**Limon Verde**	**8.68**	**142**	Pn	**Pn**	**20 59 22.2**	**-0.4**
	7.2nm,0.3s,baz=309,slow=10,SNR=166						
LVC				Sn	**Sn**	**21 01 05.8**	**+6.6**
	3.0nm,0.3s,baz=311,slow=14,SNR=2.6						
LVC				Lg		21 02 00.8	
	2.9nm,0.3s,baz=166,slow=20,SNR=10.0						
LVC	**Limon Verde**	**8.68**	**142**	*e*Pn	**Pn**	**20 59 22.3**	**-0.3**
	169nm,0.9s						
LVC				*e*Sn	**Sn**	**21 00 58.8**	**-0.4**
ATAH	**Atahualpa**	**9.50**	**337**	Pn	**Pn**	**20 59 39.4**	**+5.5**
	2.0nm,0.3s,baz=156,slow=8.8,SNR=23						
ATAH				Sn	**Sn**	**21 01 20.2**	**+0.8**
	1.0nm,0.3s,baz=112,slow=9.1,SNR=1.6						
ATAH				LR	LR	21 03 43.1	
	comp=Z,1μm,19.3s,baz=8.1,slow=42						
SIV	**San Ignacio**	**13.11**	**93**	Pn	**Pn**	**21 00 22.4**	**-0.9**
	0.4nm,0.3s,baz=277,slow=11,SNR=21						
SIV				Sn	**Sn**	**21 02 58.1**	**+10**
	0.3nm,0.3s,baz=218,slow=21,SNR=3.4						
SIV				Lg		21 04 30.0	
	0.1nm,0.3s,baz=215,slow=22,SNR=3.0						
SAML	**Samuel**	**13.17**	**60**	*e*Pn	**Pn**	**21 00 23.0**	**-1.0**
	586nm,1.2s						
SAML				*e*Sn	**Sn**	**21 02 49.1**	**0.0**
TLL	**Tololo Astrono**	**14.70**	**167**	*e*P	**Pn**	**21 00 50.8**	**+5.8**
TLL	**Tololo Astrono**	**14.70**	**167**	*i* P	**Pn**	**21 00 51.9**	**+6.9**
CFAA	**Coronel Fontan**	**16.76**	**161**	Pn	**Pn**	**21 01 10.6**	**-1.0**
	0.1nm,0.3s,baz=335,slow=11,SNR=56						
CFAA				Lg		21 06 06.9	
	0.0nm,0.3s,baz=140,slow=12,SNR=5.1						
CFAA				LR	LR	21 06 30.2	
	comp=Z,65nm,18.3s,baz=331,slow=33						
CFAA	**Coronel Fontan**	**16.76**	**161**	Pn	**Pn**	**21 01 10.6**	**-1.0**
CFAA				Lg		21 06 06.9	
CFAA				LR	LR	21 06 30.2	
FCH	**Farellones**	**17.86**	**168**	*e*P	**Pn**	**21 01 26.5**	**+1.2**
CPUP	**Villa Florida**	**19.26**	**126**	P	**Pn**	**21 01 40.9**	**-1.3**
	0.5nm,0.3s,baz=288,slow=9.7,SNR=14						
CPUP				LR	LR	21 10 09.8	
	comp=Z,284nm,19.7s,baz=285,slow=40						
CPUP	**Villa Florida**	**19.26**	**126**	*e*P	**Pn**	**21 01 42.6**	**+0.4**
	75nm,1.1s						
ROSC	**El Rosal**	**20.57**	**1**	P	**P**	**21 02 03.3**	**+8.0**
	4.4nm,0.4s,baz=80,slow=19,SNR=3.3						
ROSC	**El Rosal**	**20.57**	**1**	Pn	**P**	**21 02 03.7**	**+8.4**
SDV	**Santo Domingo**	**24.89**	**10**	P	**P**	**21 02 40.8**	**+1.7**
	13nm,0.6s,mb4.7,baz=327,slow=9.8,SNR=7.1						
SDV	**Santo Domingo**	**24.89**	**10**	*e*P	**P**	**21 02 40.9**	**+1.7**
	34nm,0.9s,mb4.9						
PLCA	**Paso Flores**	**25.06**	**173**	P	**P**	**21 02 39.7**	**-0.9**
	8.2nm,0.8s,mb4.3,baz=332,slow=12,SNR=18						
PLCA	**Paso Flores**	**25.06**	**173**	*e*P	**P**	**21 02 39.8**	**-0.8**
	48nm,1.4s,mb4.8						
BDFB	**Brasilia**	**25.68**	**93**	P	**P**	**21 02 47.9**	**+1.7**
	30nm,0.8s,mb4.8,baz=266,slow=11,SNR=30						
BDFB				LR	LR	21 14 29.9	
	comp=Z,394nm,21.1s,MS3.9,baz=265,slow=40						
PCRV	**Puerto La Cruz**	**27.70**	**22**	Lg		21 12 00.3	
	8.4nm,0.9s,baz=201,slow=20,SNR=4.2						
RPN	**Rapa Nui**	**34.02**	**245**	LR	LR	21 14 38.3	
	comp=Z,431nm,18.5s,MS4.2,baz=314,slow=31						
SJG	**San Juan**	**34.77**	**14**	P	**P**	**21 04 05.5**	**-1.1**
	9.7nm,0.7s,mb4.9,baz=258,slow=3.3,SNR=3.8						
CMIG	**Matias Romero**	**38.30**	**328**	P	**P**	**21 04 34.9**	**-1.8**
	2.4nm,0.9s,mb3.9,baz=108,slow=3.2,SNR=2.5						
CMIG				LR	LR	21 18 15.2	
	comp=Z,428nm,19.1s,MS4.3,baz=141,slow=33						
CMIG	**Matias Romero**	**38.30**	**328**	P	**P**	**21 04 34.9**	**-1.8**
CMIG				LR	LR	21 18 15.2	
USHA	**Ushuaia**	**39.21**	**174**	P	**P**	**21 04 42.8**	**-1.6**
	8.9nm,0.8s,mb4.6,baz=296,slow=7.7,SNR=4.3						
HKT	**Hockley**	**49.88**	**336**	*e*P	**P**	**21 06 08.9**	**-0.6**
	16nm,1.4s,mb4.8						
HKT				*e*pP	pP	21 06 18.2	-1.4
HKT				*e*sP	sP	21 06 24.4	+0.7
HKT				*e*PcP	PcP	21 07 30.0	+0.4
LRAL	**Lakeview Retre**	**50.00**	**346**	*e*P	**P**	**21 06 09.1**	**-1.3**
	28nm,1.3s,mb5.1						
JSC	**Jenkinsville**	**50.23**	**353**	*e*P	**P**	**21 06 11.4**	**-0.8**
JSC				*e*pP	pP	21 06 21.7	-0.6
JSC				*e*sP	sP	21 06 26.7	+0.3
JSC				*e*PcP	PcP	21 07 30.5	-0.4
MYNC	**Murphy**	**51.42**	**350**	*e*P	**P**	**21 06 19.7**	**-1.4**
	30nm,1.3s,mb5.1						
CPCT	**Cooper Cave**	**51.85**	**350**	*e*P	**P**	**21 06 23.1**	**-1.3**
CPCT				*e*PcP	PcP	21 07 36.3	-0.6
SWET	**Sewanee**	**51.88**	**348**	*e*P	**P**	**21 06 23.1**	**-1.5**
OXF	**Oxford**	**51.99**	**345**	*e*P	**P**	**21 06 24.0**	**-1.4**
	48nm,1.4s,mb5.2						
OXF				*e*PcP	PcP	21 07 36.4	-1.0
TZTN	**Tazewell**	**52.76**	**351**	*e*P	**P**	**21 06 29.9**	**-1.2**
TZTN				*e*PcP	PcP	21 07 40.3	0.0
BLA	**Blacksburg**	**53.04**	**354**	*e*P	**P**	**21 06 32.4**	**-0.7**
	1.8nm,1.3s,mb3.8						
BLA				*e*pP	pP	21 06 44.6	+1.2
BLA				*e*sP	sP	21 06 48.3	+0.8
BLA				*e*PcP	PcP	21 07 40.3	-1.0
BLA				*e*PP	PP	21 08 33.2	+0.2
ELN	**Prospectdale**	**53.09**	**354**	*e*P	**P**	**21 06 33.2**	**-0.3**
WVT	**Waverly**	**53.16**	**347**	*e*P	**P**	**21 06 31.7**	**-2.3**
	15nm,1.3s,mb4.8						
MIAR	**Mount Ida**	**53.22**	**341**	*e*P	**P**	**21 06 33.3**	**-1.2**
	25nm,1.3s,mb5.0						
MIAR				*e*pP	pP	21 06 45.1	+0.4
FWV	**Forest Hill**	**53.44**	**354**	*e*P	**P**	**21 06 35.3**	**-0.9**

WCI	**Wyandotte Cave**	**54.87**	**349**	*e*P	**P**	**21 06 44.7**	**-1.8**
	75nm,1.2s,mb5.6						
WCI				*e*pP	pP	21 06 55.0	-1.8
USIN	**University of**	**54.89**	**347**	*e*P	**P**	**21 06 45.2**	**-1.4**
	53nm,0.9s,mb5.6						
USIN				*e*pP	pP	21 06 54.5	-2.4
WMOK	**Wichita Mounta**	**55.26**	**336**	*e*P	**P**	**21 06 47.8**	**-1.5**
	13nm,1.3s,mb4.8						
WMOK				*e*pP	pP	21 06 57.7	-1.9
MNTX	**Cornudas Mount**	**55.68**	**328**	*e*P	**P**	**21 06 50.9**	**-1.4**
	9.5nm,1.2s,mb4.7						
MNTX				*e*pP	pP	21 07 00.1	-2.6
MNTX				*e*PcP	PcP	21 07 50.5	-0.9
CCM	**Cathedral Cave**	**55.81**	**344**	*e*P	**P**	**21 06 51.6**	**-1.7**
	12nm,1.1s,mb4.8						
RKT	**Rikitea**	**56.95**	**253**	*e*S	**S**	**21 14 51.4**	**-1.8**
	169nm,28.0s						
RKT				*e*LR	LR	21 23 43.8	
	372nm,29.0s						
BINY	**Binghamton**	**57.76**	**359**	*e*P	**P**	**21 07 07.3**	**+0.2**
	49nm,1.4s,mb5.3						
BINY				*e*pP	pP	21 07 16.8	-0.6
ERPA	**Erie**	**57.87**	**355**	*e*P	**P**	**21 07 07.5**	**-0.3**
ERPA				*e*pP	pP	21 07 18.6	+0.4
LPM	**Los Pinos Moun**	**58.40**	**329**	*e*P	**P**	**21 07 10.8**	**-0.8**
LPM				*e*pP	pP	21 07 21.4	-0.6
LAZ	**Ladron**	**58.73**	**329**	*e*P	**P**	**21 07 14.1**	**+0.3**
LAZ				*e*pP	pP	21 07 23.4	-0.8
ANMO	**Albuquerque**	**58.83**	**330**	P	**P**	**21 07 14.6**	**0.0**
	4.1nm,1.0s,mb4.4,baz=154,slow=8.7,SNR=8.3						
TUC	**Tucson**	**59.04**	**324**	*e*P	**P**	**21 07 15.3**	**-0.7**
	8.3nm,1.3s,mb4.6						
TUC				*e*pP	pP	21 07 25.5	-0.9
116A	**Eloy**	**59.75**	**324**	⇑P	**P**	**21 07 19.8**	**-1.1**
	baz=60						
115A	**Sonoran Desert**	**60.15**	**324**	⇓P	**P**	**21 07 22.6**	**-1.1**
	baz=60						
X15A	**Humboldt**	**61.47**	**325**	⇓P	**P**	**21 07 32.5**	**-0.2**
	baz=62,SNR=8.3						
Y14A	**Wickenburg**	**61.50**	**324**	⇑P	**P**	**21 07 31.9**	**-0.9**
	baz=62						
WUAZ	**Wupatki**	**61.78**	**326**	*e*P	**P**	**21 07 33.5**	**-1.2**
	16nm,1.2s,mb5.0						
WUAZ				*e*pP	pP	21 07 45.3	+0.2
X14A	**Yava**	**61.82**	**325**	⇑P	**P**	**21 07 34.7**	**-0.4**
	baz=62,SNR=9.2						
Y13A	**Salome**	**61.88**	**323**	⇑P	**P**	**21 07 35.6**	**+0.2**
	baz=62						
GLA	**Glamis**	**61.91**	**322**	⇓P	**P**	**21 07 35.3**	**-0.3**
	baz=62						
W15A	**Williams**	**62.00**	**326**	⇓P	**P**	**21 07 35.5**	**-0.7**
	baz=62						
PV01	**Paradox Valley**	**62.39**	**330**	P	**P**	**21 07 38.9**	**+0.1**
PV01				*e*pP	pP	21 07 49.1	-0.2
X13A	**Yucca**	**62.44**	**324**	⇓P	**P**	**21 07 38.9**	**-0.3**
	baz=63						
W14A	**Seligman**	**62.48**	**325**	⇑P	**P**	**21 07 39.5**	**+0.1**
	baz=63						
SMCO	**Snowmass**	**62.49**	**332**	*e*P	**P**	**21 07 39.0**	**-0.5**
	6.6nm,0.9s,mb4.8						
SMCO				*e*pP	pP	21 07 50.7	+0.7
MONP	**Monument Peak**	**62.75**	**321**	⇓P	**P**	**21 07 41.6**	**+0.4**
	baz=63						
W13A	**Hualapai Mount**	**62.84**	**324**	⇓P	**P**	**21 07 41.4**	**-0.5**
	baz=63						
IRM	**Iron Mountain**	**62.89**	**323**	⇓P	**P**	**21 07 41.2**	**-1.0**
	baz=63						
PFO	**Pinyon Flat Ob**	**63.27**	**322**	⇓P	**P**	**21 07 45.1**	**+0.4**
	baz=63						
BELC	**Belle Mtn.**	**63.27**	**322**	⇑P	**P**	**21 07 44.0**	**-0.7**
	baz=63						
V12A	**Nelson**	**63.84**	**324**	⇓P	**P**	**21 07 48.4**	**0.0**
	baz=64						
SRU	**San Rafael**	**64.10**	**330**	*e*P	**P**	**21 07 50.3**	**+0.1**
	11nm,1.1s,mb4.8						
SRU				*e*pP	pP	21 07 59.9	-0.8
TAOE	**Nuku Hiva Isla**	**64.11**	**268**	*e*LR	LR	21 26 59.7	
	2μm,26.6s						
U12A	**Valley of Fire**	**64.17**	**325**	⇑P	**P**	**21 07 50.6**	**0.0**
	baz=64						
TUQ	**Turquoise Mtn.**	**64.24**	**323**	⇑P	**P**	**21 07 50.6**	**-0.5**
	baz=64						
CCUT	**Cedar City**	**64.36**	**327**	*e*P	**P**	**21 07 52.6**	**+0.7**
CCUT				*e*pP	pP	21 08 02.1	-0.3
MSU	**Marysvale**	**64.47**	**328**	*e*P	**P**	**21 07 53.2**	**+0.6**
MSU				*e*pP	pP	21 08 03.0	0.0
ARUT	**Antelope Range**	**64.58**	**327**	*e*P	**P**	**21 07 50.7**	**-2.6**
GSC	**Goldstone**	**64.66**	**323**	⇑P	**P**	**21 07 53.1**	**-0.7**
	baz=65						
SHOC	**Shoshone**	**64.77**	**323**	⇓P	**P**	**21 07 54.7**	**+0.1**
	baz=65						
U10A	**Ash Meadows, A**	**65.17**	**324**	⇑P	**P**	**21 07 57.5**	**+0.4**
	baz=65						
DAU	**Daniels Canyon**	**65.47**	**330**	*e*P	**P**	**21 07 58.6**	**-0.4**
DAU				*e*pP	pP	21 08 08.7	-0.9
FURC	**Furnace Creek,**	**65.50**	**324**	⇓P	**P**	**21 07 58.8**	**-0.5**
	baz=66,SNR=5.6						
MPMC	**Manual Prospec**	**65.58**	**323**	⇓P	**P**	**21 08 00.3**	**+0.5**
	baz=66						
DAC	**Darwin (Calif)**	**65.79**	**323**	*e*P	**P**	**21 07 59.9**	**-1.3**
	5.9nm,1.2s,mb4.5						
DAC				*e*pP	pP	21 08 11.0	-0.7
ISA	**Isabella**	**65.89**	**322**	⇑P	**P**	**21 08 01.9**	**+0.1**
	baz=66						
DUG	**Dugway**	**66.06**	**329**	*e*P	**P**	**21 08 03.6**	**+0.7**
PKM	**Peak Mountain**	**66.18**	**320**	⇑P	**P**	**21 08 04.4**	**+0.7**
	baz=66						
Q12A	**Willow Creek R**	**66.24**	**327**	⇑P	**P**	**21 08 04.2**	**+0.2**
	baz=66						
VES	**Vestal, Richgr**	**66.37**	**322**	⇑P	**P**	**21 08 05.5**	**+0.6**
	baz=66						
R10A	**Warm Springs**	**66.48**	**325**	⇑P	**P**	**21 08 06.2**	**+0.6**
	baz=67						
PDAR	**Pinedale Array**	**66.54**	**333**	P	**P**	**21 08 05.4**	**-0.6**
	2.8nm,1.1s,mb4.2,baz=145,slow=5.4,SNR=13						
PDAR				LR	LR	21 38 25.0	
	comp=Z,91nm,18.4s,MS4.0,baz=337,slow=37						
HWUT	**Hardware Ranch**	**66.54**	**331**	*e*P	**P**	**21 08 03.2**	**-2.8**
	15nm,1.1s,mb4.9						
HWUT				*e*pP	pP	21 08 14.6	-1.9
HWUT				*e*PcP	PcP	21 08 34.4	-0.8
P12A	**McGill**	**66.59**	**327**	⇑P	**P**	**21 08 06.5**	**+0.2**
	baz=67						
S09A	**Goldfield**	**66.59**	**324**	⇓P	**P**	**21 08 06.8**	**+0.5**
	baz=67						
HELL	**Mitchell Peak,**	**66.91**	**322**	⇑P	**P**	**21 08 08.2**	**-0.1**
	baz=67						
O12A	**Currie**	**67.10**	**328**	⇑P	**P**	**21 08 09.6**	**0.0**
	baz=67,SNR=8.0						
MTUM	**Tungsten Hills**	**67.10**	**323**	*e*P	**P**	**21 08 10.2**	**+0.7**
HVU	**Hansel Valley**	**67.25**	**330**	P	**P**	**21 08 10.2**	**-0.3**
Q09A	**Carvers**	**67.36**	**325**	⇑P	**P**	**21 08 11.6**	**+0.5**
	baz=68						
VNA1	**Neumayer--Stat**	**67.42**	**161**	*e*	**P**	**21 08 11.4**	**-0.2**
VNA1				*e*	pP	21 08 20.6	-1.5
O11A	**Cowboy Ranch,**	**67.47**	**327**	⇑P	**P**	**21 08 11.6**	**-0.2**
	baz=68						
KCC	**Kaiser Creek**	**67.52**	**323**	⇓P	**P**	**21 08 12.4**	**+0.2**
	baz=68						
P10A	**Eureka**	**67.53**	**326**	⇓P	**P**	**21 08 12.2**	**0.0**
	baz=68						
M13A	**Montello**	**67.62**	**329**	⇓P	**P**	**21 08 11.9**	**-0.9**
	baz=68						
LOHW	**Long Hollow**	**67.67**	**333**	*e*P	**P**	**21 08 13.2**	**+0.1**
	7.1nm,1.1s,mb4.6						
LOHW				*e*pP	pP	21 08 21.8	-2.0
N12A	**Clover Valley,**	**67.68**	**328**	⇑P	**P**	**21 08 12.5**	**-0.7**
	baz=68						
NVAR	**Mina Array Bea**	**67.70**	**324**	P	**P**	**21 08 13.9**	**+0.6**
	2.1nm,1.1s,mb4.1,baz=135,slow=6.7,SNR=6.5						
TPAW	**Teton Pass**	**67.73**	**332**	*e*P	**P**	**21 08 13.3**	**-0.2**
	15nm,2.0s,mb4.7						
TPAW				*e*pP	pP	21 08 22.6	-1.5
TPAW				*e*sP	sP	21 08 28.5	+0.4
U04C	**Hernandez Rese**	**67.74**	**321**	⇑P	**P**	**21 08 14.5**	**+0.9**
	baz=68						
RRI2	**Red Ridge**	**67.79**	**332**	*e*P	**P**	**21 08 14.1**	**+0.2**
	370nm,3.5s						
RRI2				*e*pP	pP	21 08 23.5	-0.9
Q08A	**Gabbs**	**67.79**	**325**	⇑P	**P**	**21 08 14.0**	**+0.1**
	baz=68						
MOOW	**Moose Ponds**	**67.85**	**333**	*e*P	**P**	**21 08 14.5**	**+0.3**
	6.6nm,1.0s,mb4.6						
R07C	**Lee Vining**	**67.88**	**323**	⇓P	**P**	**21 08 15.0**	**+0.6**
	baz=68						
O10A	**Cortez Mining,**	**68.03**	**327**	⇑P	**P**	**21 08 15.5**	**+0.1**

	baz=68						
M12A	**Wells**	**68.03**	**328**	⇓P	**P**	**21 08 14.8**	**-0.7**
	baz=68						
FLWY	**Flagg Ranch**	**68.09**	**333**	*e*P	**P**	**21 08 15.6**	**-0.2**
	16nm,0.8s,mb5.1						
FLWY				*e*pP	pP	21 08 26.2	-0.1
S05C	**Merced**	**68.12**	**322**	⇓P	**P**	**21 08 17.2**	**+1.2**
	baz=68						
S06C	**San Francisco**	**68.20**	**323**	P	**P**	**21 08 17.2**	**+0.7**
	baz=68,SNR=8.2						
HAST	**UC Hastings Re**	**68.23**	**321**	⇑P	**P**	**21 08 17.6**	**+0.9**
	baz=68						
O09A	**Fish Creek Ran**	**68.31**	**326**	⇑P	**P**	**21 08 17.4**	**+0.3**
	baz=68						
ULM	**Lac du Bonnet**	**68.39**	**346**	P	**P**	**21 08 15.4**	**-2.3**
	3.3nm,0.7s,mb4.5,baz=132,slow=8.2,SNR=4.5						
ULM				LR	LR	21 41 28.1	
	comp=Z,142nm,19.5s,MS4.2,baz=269,slow=39						
R06C	**Coleville**	**68.41**	**324**	⇓P	**P**	**21 08 17.8**	**0.0**
	baz=69						
PACP	**Pacheco Peak**	**68.47**	**321**	⇑P	**P**	**21 08 18.4**	**+0.2**
	baz=69						
M11A	**Holland Ranch,**	**68.49**	**328**	⇓P	**P**	**21 08 18.3**	**0.0**
	baz=69,SNR=7.1						
CMB	**Columbia Colle**	**68.62**	**323**	*e*P	**P**	**21 08 19.0**	**-0.1**
	4.5nm,1.2s,mb4.3						
CMB				*e*pP	pP	21 08 29.0	-0.7
CMB	**Columbia Colle**	**68.62**	**323**	⇓P	**P**	**21 08 19.8**	**+0.7**
	baz=69						
R05C	**Kirkwood Meado**	**68.89**	**323**	⇑P	**P**	**21 08 21.3**	**+0.5**
	baz=69						
M10A	**I.L. Ranch, Tu**	**68.94**	**328**	⇓P	**P**	**21 08 21.4**	**+0.3**
	baz=69						
GCMT	**Greycliff**	**69.02**	**335**	*e*P	**P**	**21 08 21.4**	**-0.2**
GCMT				*e*pP	pP	21 08 31.7	-0.4
GCMT				*e*sP	sP	21 08 36.4	+0.3
WCN	**Washoe City**	**69.12**	**324**	⇑P	**P**	**21 08 23.1**	**+1.0**
	baz=69						
PAHR	**Pah Rah Range**	**69.19**	**325**	*e*P	**P**	**21 08 23.5**	**+0.9**
PAHR				*e*pP	pP	21 08 33.1	0.0
O07A	**Toulon**	**69.22**	**325**	P	**P**	**21 08 23.2**	**+0.4**
	baz=69,SNR=7.6						
N08A	**GE Springer Mi**	**69.25**	**326**	⇓P	**P**	**21 08 22.6**	**-0.4**
	baz=69						
LAVA	**Lava Cap Winer**	**69.31**	**323**	⇑P	**P**	**21 08 23.5**	**+0.1**
	baz=70						
M09A	**Marrel Ranch,**	**69.34**	**327**	⇑P	**P**	**21 08 24.0**	**+0.4**
	baz=70						
SNAA	**Sanae**	**69.38**	**161**	P	**P**	**21 08 22.7**	**-1.1**
	2.8nm,0.8s,mb4.2,baz=279,slow=5.3,SNR=23						
SNAA	**Sanae**	**69.38**	**161**	*e*	**P**	**21 08 22.9**	**-0.9**
SNAA				*e*	pP	21 08 32.6	-1.8
HLID	**Hailey**	**69.39**	**330**	*e*P	**P**	**21 08 23.8**	**-0.1**
HLID				*e*pP	pP	21 08 34.2	-0.3
HLID				*e*sP	sP	21 08 39.8	+1.4
P05C	**Yuba Gap, Truc**	**69.60**	**324**	⇑P	**P**	**21 08 26.1**	**+1.0**
	baz=70						
N07B	**Gerlach**	**69.70**	**326**	⇑P	**P**	**21 08 26.4**	**+0.6**
	baz=70,SNR=7.7						
BOZ	**Bozeman (W)**	**69.73**	**333**	*e*P	**P**	**21 08 25.7**	**-0.3**
	6.2nm,1.0s,mb4.5						
BOZ				*e*pP	pP	21 08 35.1	-1.4
Q04C	**Lincoln**	**69.74**	**323**	⇓P	**P**	**21 08 26.7**	**+0.6**
	baz=70						
O06A	**Flanigan**	**69.75**	**325**	⇓P	**P**	**21 08 26.6**	**+0.5**
	baz=70						
BEKR	**Beckwourth**	**69.84**	**324**	⇑P	**P**	**21 08 27.4**	**+0.7**
	baz=70						
M08A	**Happy Creek Ra**	**69.85**	**326**	⇑P	**P**	**21 08 27.4**	**+0.6**
	baz=70						
L09A	**Wilkinson Ranc**	**69.88**	**327**	P	**P**	**21 08 27.6**	**+0.6**
	baz=70,SNR=12						
FARB	**Farallon Islan**	**69.96**	**321**	⇑P	**P**	**21 08 29.4**	**+2.0**
	baz=70						
Q03C	**Winters**	**69.97**	**322**	⇓P	**P**	**21 08 28.9**	**+1.4**
	baz=70						
CVS	**Carmenet Viney**	**70.05**	**322**	⇑P	**P**	**21 08 28.3**	**+0.3**
	baz=70						
OHCM	**Honcut**	**70.13**	**323**	*e*P	**P**	**21 08 28.4**	**0.0**
OHCM				*e*pP	pP	21 08 38.1	-0.9
N06A	**Buffalo Meadow**	**70.15**	**325**	⇓P	**P**	**21 08 29.2**	**+0.6**
	baz=70,SNR=16						
TBI	**Tubuai**	**70.16**	**251**	*e*LR	LR	21 29 52.2	
	229nm,27.8s						
O05C	**Quincy**	**70.22**	**324**	⇑P	**P**	**21 08 29.6**

DBIC					LR	LR	21 39 39.8		
F08A	**Pendleton**	**73.14**	**329**	⇑	P	**P**	**21 08 46.4**	**-0.1**	
	baz=73								
I05A	**Bend**	**73.27**	**327**	⇓	P	**P**	**21 08 48.1**	**+0.8**	
	baz=73								
WALA	**Waterton Lakes**	**73.36**	**334**		*e*P	**P**	**21 08 47.9**	**0.0**	
	8.9nm,1.1s,mb4.6								
WALA					*ep*P	pP	21 08 58.1	-0.4	
HAWA	**Hanford**	**73.94**	**329**		*e*P	**P**	**21 08 51.7**	**+0.5**	
	1.1nm,1.1s,mb3.7								
HAWA					*ep*P	pP	21 09 00.8	-1.0	
J02A	**Umpqua**	**73.97**	**325**	⇑	P	**P**	**21 08 51.5**	**0.0**	
	baz=74								
NEW	**Newport**	**74.16**	**332**		P	**P**	**21 08 51.4**	**-1.2**	
	3.0nm,1.0s,mb4.2,baz=152,slow=2.6,SNR=4.9								
I03A	**Eugene**	**74.21**	**326**	⇑	P	**P**	**21 08 52.8**	**0.0**	
	baz=74								
QSPA	**South Pole Qui**	**74.32**	**180**		*e*P	**P**	**21 08 52.7**	**-0.8**	
	9.9nm,0.9s,mb4.7								
F04A	**Amboy**	**75.07**	**328**	⇓	P	**P**	**21 08 57.9**	**+0.1**	
	baz=75								
E05A	**Randle**	**75.16**	**328**	⇑	P	**P**	**21 08 58.9**	**+0.6**	
	baz=75								
D05A	**Enumclaw**	**75.70**	**329**	⇑	P	**P**	**21 09 01.8**	**+0.3**	
	baz=76								
C05A	**Tolt Reservoir**	**75.90**	**329**	⇓	P	**P**	**21 09 02.7**	**+0.1**	
	baz=76								
EDM	**Edmonton**	**76.39**	**337**		*e*P	**P**	**21 09 04.1**	**-1.2**	
B05A	**Bryant**	**76.49**	**330**	⇓	P	**P**	**21 09 06.0**	**+0.1**	
	baz=77								
C04A	**Brinnon**	**76.55**	**329**	⇑	P	**P**	**21 09 07.4**	**+1.1**	
	baz=77								
A05A	**Maple Falls**	**76.99**	**330**	⇓	P	**P**	**21 09 09.3**	**+0.6**	
	baz=77								
TOA0	**Torodi Ar. Sit**	**80.84**	**74**		*e*P	**P**	**21 09 30.9**	**+1.1**	
TOA0					*ep*P	pP	21 09 40.9	+0.3	
TORD	**Torodi Ar. Bea**	**80.84**	**74**		P	**P**	**21 09 30.9**	**+1.1**	
	77nm,0.8s,mb5.7,baz=257,slow=4.7,SNR=353								
TORD					LR	LR	21 44 36.9		
	comp=Z,473nm,18.7s,MS4.9,baz=250,slow=35								
VNDA	**Vanda**	**81.41**	**191**		P	**P**	**21 09 32.5**	**-0.4**	
	2.3nm,0.9s,mb4.1,baz=129,slow=3.8,SNR=9.4								
VNDA					LR	LR	21 41 30.2		
	comp=Z,107nm,19.8s,MS4.2,baz=268,slow=33								
MDT	**Midelt**	**82.55**	**53**		P	**P**	**21 09 41.3**	**+2.4**	
	2.9nm,0.8s,mb4.3,baz=183,slow=7.1,SNR=3.7								
PESTR	**Estremoz**	**82.95**	**46**		*e*P	**P**	**21 09 42.9**	**+2.0**	
	20nm,1.5s,mb4.9								
PCBR	**Castelo Branco**	**83.46**	**46**		*e*P	**P**	**21 09 45.0**	**+1.4**	
	24nm,1.2s,mb5.1								
SYO	**Syowa Base**	**83.67**	**161**	⇑	*e*P	**P**	**21 09 43.6**	**-1.0**	
SYO	**Syowa Base**	**83.67**	**161**	⇓	*ep*P	pP	21 09 52.5	-2.9	
MTE	**Manteigas**	**83.67**	**45**		*e*P	**P**	**21 09 45.2**	**+0.5**	
	22nm,1.2s,mb5.2								
PVRL	**Vila Real**	**83.95**	**44**		*e*P	**P**	**21 09 46.5**	**+0.4**	
	27nm,1.6s,mb5.1								
YKA	**Yellowknife Ar**	**84.11**	**343**		P	**P**	**21 09 45.3**	**-1.6**	
	1.4nm,0.7s,mb4.2,baz=139,slow=4.6,SNR=6.0								
YKA					LR	LR	21 48 26.2		
	comp=Z,88nm,19.0s,MS4.2,baz=175,slow=36								
YKA	**Yellowknife Ar**	**84.11**	**343**		P	**P**	**21 09 45.3**	**-1.6**	
YKA					LR	LR	21 48 26.2		
ESDC	**Sonseca Array**	**85.84**	**47**		P	**P**	**21 09 56.7**	**+1.1**	
	1.6nm,0.6s,mb4.4,baz=262,slow=4.1,SNR=14								
ESDC					LR	LR	21 48 39.0		
	comp=Z,204nm,18.2s,MS4.6,baz=225,slow=36								
TSUM	**Tsumeb**	**87.00**	**109**		*e*P	**P**	**21 10 02.7**	**+1.4**	
	6.7nm,1.0s,mb4.8								
TSUM					*ep*P	pP	21 10 12.6	+0.5	
TSUM					*es*P	sP	21 10 18.1	+2.1	
BOSA	**Boshof**	**90.98**	**120**		P	**P**	**21 10 20.5**	**+0.5**	
	3.9nm,0.9s,mb4.8,baz=250,slow=15,SNR=5.0								
BOSA					LR	LR	21 47 00.5		
	comp=Z,206nm,18.7s,MS4.6,baz=212,slow=33								
MAW	**Mawson**	**91.24**	**165**		P	**P**	**21 10 20.4**	**-0.9**	
	4.9nm,0.8s,mb4.9,baz=198,slow=3.8,SNR=9.9								
SUMG	**Summit**	**91.42**	**10**		*e*P	**P**	**21 10 21.8**	**-0.2**	
	27nm,1.3s,mb5.4								
SUMG					*ep*P	pP	21 10 31.5	-1.5	
INK	**Inuvik**	**93.81**	**341**		*e*P	**P**	**21 10 32.6**	**-0.6**	
	8.9nm,1.2s,mb5.1								
KEST	**Kesra**	**94.39**	**54**		LR	LR	21 53 00.2		
	comp=Z,102nm,20.7s,MS4.3,baz=173,slow=35								
STKA	**Stephens Creek**	**121.16**	**216**		PKP	PKPdf	21 16 08.4	-0.3	
	2.0nm,0.7s,baz=191,slow=5.2,SNR=6.8								
STKA	**Stephens Creek**	**121.16**	**216**		*e*PKP	PKPdf	21 16 08.3	-0.4	
AKTK	**Aktyubinsk**	**128.76**	**37**		PKP	PKPdf	21 16 23.8	+0.6	
AKTO	**Aktyubinsk**	**128.76**	**37**		PKP	PKPdf	21 16 23.8	+0.6	
	3.1nm,0.9s,baz=320,slow=3.9,SNR=7.5								
ASAR	**Alice Springs**	**131.80**	**216**		PKP	PKPdf	21 16 28.8	-0.2	
	8.1nm,1.1s,baz=145,slow=2.3,SNR=22								
ZRNK	**Zerenda**	**133.26**	**29**		*e*PKPdf	PKPdf	21 16 32.2	+0.4	
ZRNK					*ep*PKPdf	pPKPdf	21 16 41.6	-1.3	
WB2	**Warramunga Arr**	**134.40**	**220**		*e*PKP	PKPdf	21 16 33.4	-0.5	
WRA	**Warramunga Arr**	**134.40**	**220**		PKP	PKPdf	21 16 34.1	+0.2	
	4.1nm,0.7s,baz=144,slow=1.8,SNR=39								
ZAL	**Zalesovo**	**138.75**	**18**		PKP	PKPdf	21 16 42.4	+0.4	
	11nm,1.1s,baz=172,slow=2.5,SNR=23								
FITZ	**Fitzroy Crossi**	**140.77**	**212**		PKP	PKPdf	21 16 46.5	+0.9	
	1.4nm,0.8s,baz=219,slow=3.0,SNR=5.5								
FITZ	**Fitzroy Crossi**	**140.77**	**212**		*e*PKP	PKPdf	21 16 46.0	+0.4	
MKAR	**Makanchi Array**	**143.69**	**27**		PKP	PKPdf	21 16 49.0	-1.8	
	1.3nm,0.6s,baz=334,slow=3.5,SNR=12								
MJAR	**Matsushiro Arr**	**144.25**	**312**		PKP	PKPdf	21 16 49.1	-2.7	
	6.5nm,1.0s,baz=86,slow=1.7,SNR=17								
MAJO	**Matsushiro**	**144.25**	**312**		*e*PKPdf	PKPdf	21 16 49.0	-2.9	
MAT	**Matsushiro**	**144.25**	**312**		PKP	PKPdf	21 16 48.8	-3.0	
MAT	**Matsushiro**	**144.25**	**312**		*e*PKP	PKPdf	21 16 49.0	-2.8	
MDJ	**Mudanjiang**	**144.73**	**329**		PKP	PKPdf	21 16 53.0	+0.4	
SONM	**Songino Array**	**148.08**	**359**		PKPbc	PKPbc	21 17 01.7	+0.1	
	8.7nm,0.7s,baz=337,slow=1.4,SNR=54								
SONM					PP	PP	21 20 27.3	-2.1	
	1.3nm,1.1s,baz=328,slow=5.3,SNR=4.0								
WMQ	**Urumqi**	**148.34**	**25**		*e*PKP	PKPdf	21 16 59.0	+0.3	
WMQ					SKS	SKSdf	21 24 02.0	-2.5	
WMQ					SKKS	SKKSac	21 27 19.0	-1.0	
WMQ					SS	SS	21 39 36.0	-0.3	
WMQ					PP	PP			
	comp=Z,297nm,8.0s								
WMQ					LR	LR			
	comp=N,79nm,20.0s,MS4.6								
WMQ					LR	LR			
	comp=E,71nm,20.0s,MS4.6								
WMQ					LR	LR			
	comp=Z,65nm,20.0s,MS4.4								
HHC	**Hu-ho-hao-te**	**154.49**	**349**		*e*PKP	PKPdf	21 17 08.1	0.0	
HHC					APKP		21 17 18.9		
HHC					XPKP		21 17 22.6		
HHC					PKS		21 20 41.1		
HHC					PP	PP	21 21 09.9	+3.7	
HHC					SKS	SKSdf	21 24 09.8	-2.4	
HHC					SKKS	SKKSac	21 27 53.6	-0.1	
HHC					SS	SS	21 40 44.3	0.0	
HHC					PP	PP			
	comp=Z,67nm,7.6s								
HHC					LR	LR			
	comp=N,65nm,33.3s,MS4.6								
HHC					LR	LR			
	comp=E,121nm,32.1s,MS4.6								
HHC					LR	LR			
	comp=Z,99nm,33.3s,MS4.4								
GTA	**Gaotai**	**156.03**	**11**		*e*PKP	PKPdf	21 17 11.0	+0.8	
BJII	**Banjamegara**	**156.57**	**191**	⇓	*e*P	PKPdf	21 17 13.4	+2.5	
LSA	**Lhasa**	**161.04**	**41**		*e*PKPdf	PKPdf	21 17 18.1	+2.0	
KMI	**Kunming**	**170.46**	**14**		PKP	PKPdf	21 17 25.3	+1.5	

*ISCJB **20** 21:17:24.9±0.4, 4244N±003×162E±003, h0km, Error ellipse: s-maj=4.1km s-min=2.9km az=18.8*
*LDG **20** 21:17:25.6±0.2, 4243N×165E, h3km, Ml2.0/3, Error ellipse: s-maj=4.2km s-min=1.8km az=7.0*
*STR **20** 21:17:25.7±0.2, 4245N×164E, h2km±1km, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*MDD **20** 21:17:26.2±0.2, 4244N×166E, h0km, mbLg1.3/14, Error ellipse: s-maj=2.0km s-min=1.4km az=4.0, PRXIMO*

ISC 20 21:17:25.3±0.8, 4244N±003×164E±003, h14km±17km, n28, σ0§53/35, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLLI	**Llivia**	**0.25**	**81**	Pg		**Pg**	**Pg**	**21 17 30.6**	**-0.1**
CLLI				Lg				21 17 33.7	
	4.0nm,0.1s								
VALF	**Valcebollere**	**0.28**	**98**	Pg		**Pg**	**Pg**	**21 17 31.1**	**-0.1**
VALF				Sg			**Sg**	**21 17 34.8**	**-0.4**
VALF	**Valcebollere**	**0.28**	**98**	Pg		**Pg**	**Pg**	**21 17 31.2**	**0.0**
VALF				Lg				21 17 34.8	
CORG	**Organya**	**0.32**	**229**	Pg		**Pg**	**Pg**	**21 17 32.2**	**+0.3**
CORG				Lg				21 17 37.4	
	5.3nm,0.1s								
CSOR	**Sort**	**0.38**	**260**	Pg		**Pg**	**Pg**	**21 17 33.2**	**+0.2**
CSOR				Lg				21 17 38.7	
	4.0nm,0.2s								
GRBF	**Gourbit**	**0.41**	**349**	Pg		**Pg**	**Pg**	**21 17 34.0**	**+0.5**
GRBF				Lg				21 17 39.5	
CBRU	**Bruguera**	**0.43**	**111**	Pg		**Pg**	**Pg**	**21 17 33.8**	**-0.1**
CBRU				Lg				21 17 39.2	
	3.5nm,0.1s								
CARF	**Carcanieres**	**0.44**	**51**	Pg		**Pg**	**Pg**	**21 17 34.2**	**+0.1**
CARF				Sg		**Sg**	**Sg**	**21 17 39.9**	**-0.1**
CARF	**Carcanieres**	**0.44**	**51**	Pg		**Pg**	**Pg**	**21 17 34.2**	**+0.2**
CARF				Lg				21 17 40.1	
SALF	**Salau**	**0.46**	**314**	Pg		**Pg**	**Pg**	**21 17 34.8**	**+0.3**
SALF				Lg				21 17 40.5	
MLS	**Moulis**	**0.66**	**322**	Pg		**Pg**	**Pg**	**21 17 38.5**	**+0.4**
MLS				Sg		**Sg**	**Sg**	**21 17 46.8**	**0.0**
MLS	**Moulis**	**0.66**	**322**	Pg		**Pg**	**Pg**	**21 17 38.6**	**+0.5**
MLS				Lg				21 17 46.9	
MELF	**Melles**	**0.78**	**304**	Pg		**Pg**	**Pg**	**21 17 40.5**	**0.0**
MELF				Sg		**Sg**	**Sg**	**21 17 50.8**	**+0.1**
MELF	**Melles**	**0.78**	**304**	Pg		**Pg**	**Pg**	**21 17 40.9**	**+0.4**
MELF				Lg				21 17 50.9	
CAVN	**Les Avellanes**	**0.86**	**230**	Pg		**Pg**	**Pg**	**21 17 42.4**	**+0.3**
CAVN				Lg				21 17 53.9	
	2.7nm,0.1s								
CFON	**Fontmartina**	**0.90**	**139**	Pg		**Pg**	**Pg**	**21 17 42.7**	**0.0**
CFON				Lg				21 17 54.7	
	11nm,0.1s								
EJON	**La Jonquera**	**0.92**	**89**	Pg		**Pg**	**Pg**	**21 17 44.2**	**+1.1**
	0.3nm,0.1s,SNR=7.9								
EJON				Lg				21 17 55.2	
	1.3nm,0.1s,SNR=7.9								
MTLF	**Montolieu**	**0.99**	**25**	*e*Pg		**Pg**	**Pg**	**21 17 44.9**	**+0.4**
MTLF				*e*Sg		**Sg**	**Sg**	**21 17 56.7**	**-0.8**
	3.2nm,0.2s								
MTLF	**Montolieu**	**0.99**	**25**	Pg		**Pg**	**Pg**	**21 17 44.9**	**+0.4**
MTLF				Lg				21 17 56.7	
	1.6nm,0.2s								
EPF	**Esparros**	**1.13**	**302**	*e*Pg		**Pg**	**Pg**	**21 17 46.2**	**-0.8**
EPF				*e*Sg		**Sg**	**Sg**	**21 18 00.9**	**-0.8**
	2.2nm,0.2s								
EPF	**Esparros**	**1.13**	**302**	Pg		**Pg**	**Pg**	**21 17 46.2**	**-0.8**
EPF				Lg				21 18 00.9	
	1.1nm,0.2s								
EBIE	**Bielsa**	**1.13**	**283**	Pg		**Pg**	**Pg**	**21 17 48.1**	**+0.9**
	1.4nm,0.5s,SNR=7.7								
EBIE				Lg				21 18 03.6	
	0.5nm,0.1s,SNR=9.0								
EPOB	**Poblet**	**1.17**	**201**	Pg		**Pg**	**Pg**	**21 17 47.5**	**-0.2**
	0.5nm,0.3s,SNR=12								
EPOB				Lg				21 18 02.8	
	2.7nm,0.1s,SNR=17								
CGAR	**Garraf**	**1.21**	**198**	Pg		**Pg**	**Pg**	**21 17 47.4**	**-1.1**
CGAR				Lg				21 18 02.6	
ETSF	**Etsaut**	**1.69**	**286**	*e*Pg		**Pg**	**Pg**	**21 17 57.1**	**-0.6**
ETSF				*e*Sg		**Sg**	**Sg**	**21 18 19.9**	**+0.3**
	1.8nm,0.2s								
ETSF	**Etsaut**	**1.69**	**286**	Pg		**Pg**	**Pg**	**21 17 57.1**	**-0.6**
ETSF				Lg				21 18 19.9	
	0.9nm,0.2s								
ESAC	**San Caprasio**	**1.73**	**246**	Pg		**Pg**	**Pg**	**21 17 59.0**	**+0.5**
	3.3nm,1.5s,SNR=7.9								
ESAC				Lg				21 18 21.6	
	9.7nm,0.3s,SNR=6.1								
EALK	**Alkurruntz**	**2.44**	**290**	Pg		**Pg**	**Pg**	**21 18 11.3**	**-0.8**
	0.1nm,0.1s,SNR=7.9								
EALK				Lg				21 18 44.5	
	0.5nm,0.3s,SNR=7.9								

*NIED **20** 21:41:00, 4420N×149.10E, h26km, Mw4.0 Best double couple: M0 1.14000×10^15 NP1:φs60.00000°, δ78.00000°, λ134.00000°. NP2:φs162.00000°, δ45.00000°, λ17.00000°.*
*IDC **20** 21:41:43.1±0.7, 4398N×14903E, h0km, mb4.1/12, mb1 4.2/13, mb1mx4.1/21, mbtmp4.0/13, ML3.4/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=21.7km s-min=17.9km az=110.0*
*MOS **20** 21:41:43.8±1.4, 4401N×149.11E, h23km, mb4.4/16, Error ellipse: s-maj=12.6km s-min=9.0km az=111.0*
*BJI **20** 21:41:44.1, 4390N×149.00E, h35km, mB4.2, mb4.4, Ms3.5, Msz3.5*
*JMA **20** 21:41:45.9±0.5, 4421N×149.12E, h30km, M4.2*
*ISCJB **20** 21:41:46.0±0.9, 4388N±005×14903E±007, h37km±8km, mb4.1/20, Error ellipse: s-maj=9.2km s-min=7.2km az=95.2*
*NEIC **20** 21:41:48.2±0.5, 4394N×14899E, h35km, mb4.2/4, Error ellipse: s-maj=13.5km s-min=9.0km az=132.0*

ISC 20 21:41:47.7±1.5, 4397N±005×14902E±005, h34km±11km, n77, σ1§12/94, mb4.1/20, 1C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.51**	**327**	*i* P		N	**Pn**	**21 42 09.0**	**-3.4**
KUR				*i* S		N	**Sn**	**21 42 30.0**	**-0.9**
KUR				pmax		pmax			
	comp=N,330nm,0.5s								
KUR				pmax		pmax			
	comp=E,250nm,0.5s								
KUR				pmax		pmax			
	comp=Z,1μm,0.5s								
KUR				pmax		pmax			
	comp=Z,2μm,1.0s								
KUR				smax					
	comp=N,8μm,1.0s								
KUR				smax					
	comp=E,4μm,1.0s								
KUR				smax					
	comp=N,3μm,0.6s								
KUR				smax					
	comp=E,1μm,0.6s								
YUK	**Yuzh-Kuril'sk**	**2.28**	**273**	*e*PN		**Pn**	**Pn**	**21 42 22.0**	**-1.0**
YUK				*e*S		**Sn**	**Sn**	**21 42 49.8**	**-0.1**
YUK				pmax		pmax			
	comp=Z,250nm,0.4s								
YUK				smax					
	comp=N,2μm,1.0s								
YUK				smax					
	comp=E,3μm,1.0s								
YUK				smax					
	comp=N,1μm,0.7s								
YUK				smax					
	comp=E,1μm,0.5s								
NEM2	**Nemuro 2**	**2.45**	**257**	P		**Pn**	**Pn**	**21 42 24.6**	**-0.7**
NEM2				*e*S		**Sn**	**Sn**	**21 42 53.4**	**-0.7**
JRA	**Rausu**	**2.82**	**271**	P		**Pn**	**Pn**	**21 42 31.1**	**+0.8**
JNK	**Nakash**	**3.14**	**265**	P		**Pn**	**Pn**	**21 42 34.8**	**0.0**
JNK				*e*S		**Sn**	**Sn**	**21 43 11.3**	**+0.2**
JAK	**Akkeshi**	**3.29**	**254**	P		**Pn**	**Pn**	**21 42 36.6**	**-0.3**
JAK				*e*S		**Sn**	**Sn**	**21 43 14.2**	**-0.7**
JTKR	**Abashiri--Toko**	**3.69**	**272**	P		**Pn**	**Pn**	**21 42 43.7**	**+1.4**
JAR	**Ashorobuto**	**3.87**	**262**	P		**Pn**	**Pn**	**21 42 45.4**	**+0.6**
JAR				*e*S		**Sn**	**Sn**	**21 43 30.1**	**+1.0**
JOB	**Onbets**	**3.92**	**256**	P		**Pn**	**Pn**	**21 42 46.2**	**+0.7**
JOB				*e*S		**Sn**	**Sn**	**21 43 30.3**	**-0.1**
JMP	**Maruseppu**	**4.09**	**273**	P		**Pn**	**Pn**	**21 42 49.4**	**+1.6**
JCH	**Churui**	**4.35**	**254**	P		**Pn**	**Pn**	**21 42 51.9**	**+0.6**
JCH				*e*S		**Sn**	**Sn**	**21 43 40.4**	**-0.4**
ASAJ	**Asahikawa**	**4.63**	**274**	Pn		**Pn**	**Pn**	**21 42 58.2**	**+2.9**
	comp=E,2.2nm,0.3s,baz=110,slow=17,SNR=14								
ASAJ				Sn			**Sn**	**21 43 45.1**	**-2.8**
	comp=E,2.2nm,0.3s,baz=106,slow=18,SNR=2.5								
ASAJ				LR			LR	21 45 01.9	
	comp=E,342nm,19.0s,baz=155,slow=43								
JEM	**Erimo**	**4.72**	**248**	P		**Pn**	**Pn**	**21 42 57.8**	**+1.3**
JEM				*e*S		**Sn**	**Sn**	**21 43 51.3**	**+1.2**
JFR	**Furan**	**4.74**	**262**	P		**Pn**	**Pn**	**21 42 58.6**	**+1.8**
JFR				*e*S		**Sn**	**Sn**	**21 43 51.2**	**+0.7**
JNBK	**Urakawa-nobuka**	**4.89**	**252**	P		**Pn**	**Pn**	**21 42 59.3**	**+0.5**
JBT2	**Biratori 2**	**5.00**	**259**	P		**Pn**	**Pn**	**21 43 00.6**	**+0.3**
YSS	**Yuzh-Sakhalins**	**5.33**	**306**	*e*PN		**Pn**	**Pn**	**21 43 03.4**	**-1.4**
JEW	**Eniwo**	**5.63**	**261**	P		**Pn**	**Pn**	**21 43 11.5**	**+2.5**
JNB	**Noboribetsu**	**6.02**	**258**	P		**Pn**	**Pn**	**21 43 15.2**	**+0.8**
JNB				*e*S		**Sn**	**Sn**	**21 44 22.0**	**-0.1**
JKB	**Kayabe**	**6.22**	**253**	P		**Pn**	**Pn**	**21 43 16.6**	**-0.5**
JKB				*e*S		**Sn**	**Sn**	**21 44 23.4**	**-3.6**
JSK	**Shakotan**	**6.23**	**267**	P		**Pn**	**Pn**	**21 43 19.5**	**+2.3**
JANG	**Nango**	**6.63**	**240**	P		**Pn**	**Pn**	**21 43 21.0**	**-1.7**
JANG				*e*S		**Sn**	**Sn**	**21 44 30.7**	**-6.4**
JTH	**Tanohata**	**6.68**	**235**	P		**Pn**	**Pn**	**21 43 21.0**	**-2.4**
JTH				*e*S		**Sn**	**Sn**	**21 44 30.2**	**-8.2**
JTM	**Tenmabayashi**	**6.69**	**244**	P		**Pn**	**Pn**	**21 43 23.0**	**-0.6**
JTM				*e*S		**Sn**	**Sn**	**21 44 33.0**	**-5.6**
JOSM	**Okushiri--Mats**	**7.25**	**258**	P		**Pn**	**Pn**	**21 43 32.2**	**+1.0**
OFUJ	**Ofunato**	**7.37**	**231**	P		**Pn**	**Pn**	**21 43 30.7**	**-2.1**
OFUJ				*e*S		**Sn**	**Sn**	**21 44 47.2**	**-8.0**
JRG	**Rokugo**	**7.76**	**237**	P		**Pn**	**Pn**	**21 43 37.5**	**-0.7**
JIO	**Ouri**	**7.98**	**229**	P		**Pn**	**Pn**	**21 43 38.9**	**-2.4**
JIO				*e*S		**Sn**	**Sn**	**21 45 01.0**	**-9.4**
SKR	**Severo-Kuril's**	**8.27**	**33**	*e*PN		**Pn**	**Pn**	**21 43 40.8**	**-4.4**
SKR				MLR		MLR	MLR		
	comp=Z,1μm,14.0s								
MAJO	**Matsushiro**	**11.10**	**232**	*e*PN		**Pn**	**Pn**	**21 44 23.5**	**-0.4**
MJAR	**Matsushiro Arr**	**11.10**	**232**	Pn		**Pn**	**Pn**	**21 44 22.6**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=32,slow=14,SNR=5.0								
YAK	**Yakutsk**	**21.36**	**335**	P		**P**	**P**	**21 46 29.3**	**-2.7**
NJ2	**Nanjing**	**26.43**	**253**	*e*P		**P**	**P**	**21 47 20.1**	**-1.2**
NJ2				AMB		AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6								
SONM	**Songino Array**	**29.64**	**293**	P		P	**P**	**21 47 50.8**	**+0.9**
	comp=Z,1.0nm,0.6s,mb3.7,baz=82,slow=8.1,SNR=8.4								
SONM	**Songino Array**	**29.64**	**293**	P		P	**P**	**21 47 50.8**	**+0.9**
SONM				pmax		pmax			
	comp=Z,1.0nm,0.6s								
KRAR	**Krasnoyarsk**	**37.03**	**309**	*e*P		**P**	**P**	**21 48 53.6**	**-0.6**
KDAK	**Kodiak Island**	**38.10**	**48**	P		P	**P**	**21 49 03.2**	**-0.1**
	comp=Z,1.1nm,0.8s,mb4.7,baz=315,slow=17,SNR=6.1								
KDAK	**Kodiak Island**	**38.10**	**48**	P		P	**P**	**21 49 03.2**	**-0.1**
INK	**Inuvik**	**45.53**	**31**	P		P	**P**	**21 50 04.5**	**+0.5**
	comp=Z,2.4nm,0.7s,mb4.2,baz=254,slow=10,SNR=6.4								
INK	**Inuvik**	**45.53**	**31**	*e*P		P	**P**	**21 50 04.8**	**+0.8**
INK				pmax		pmax			
	comp=Z,2.0nm,0.5s								
INK	**Inuvik**	**45.53**	**31**	*e*P		P	**P**	**21 50 04.8**	**+0.8**
	comp=Z,1.8nm,0.5s,mb4.3								
MKAR	**Makanchi Array**	**45.68**	**298**	P		P	**P**	**21 50 05.9**	**+0.7**
	comp=Z,3.8nm,0.7s,mb4.4,baz=72,slow=9.1,SNR=37								
MKAR	**Makanchi Array**	**45.68**	**298**	P		P	**P**	**21 50 05.9**	**+0.7**
MKAR				pmax		pmax			
	comp=Z,4.0nm,0.7s								
CHKZ	**Chkalovo**	**50.03**	**310**	*e*P		P	**P**	**21 50 39.0**	**+0.1**
CHKZ				pmax		pmax			
	comp=Z,1.0nm,0.6s,mb4.0								
CHKZ	**Chkalovo**	**50.03**	**310**	*e*P		P	**P**	**21 50 39.0**	**+0.2**
	comp=Z,1.5nm,0.6s,mb4.2								
ZRNK	**Zerenda**	**51.21**	**310**	*e*P		P	**P**	**21 50 47.0**	**-0.7**
ZRNK				pmax		pmax			
	comp=Z,1.0nm,0.5s,mb4.0								
ZRNK	**Zerenda**	**51.21**	**310**	*e*P		P	**P**	**21 50 47.0**	**-0.7**
	comp=Z,1.2nm,0.5s,mb4.1								
AAK	**Ala-Archa**	**52.48**	**296**	*e*P		P	**P**	**21 50 56.6**	**-0.7**
AAK				pmax		pmax			
	comp=Z,9.0nm,2.5s,mb4.3								
ARU	**Arti**	**55.11**	**317**	*e*P		P	**P**	**21 51 16.3**	**-0.2**
ARU				pmax		pmax			
	comp=Z,3.0nm,1.6s,mb4.1								
JOF	**Joensuu**	**62.52**	**333**	*e*p		P	**P**	**21 52 07.4**	**-0.6**
	comp=Z,2.9nm,0.5s,mb4.7								
JOF	**Joensuu**	**62.52**	**333**	*e*P		P	**P**	**21 52 07.4**	**-0.6**
JOF				pmax		pmax			
	comp=Z,3.0nm,0.5s,mb4.7								
KAF	**Kangasniemi**	**64.72**	**334**	*e*p		P	**P**	**21 52 20.3**	**-2.2**
WRAB	**Tennant Creek**	**64.

MSNA				AML	AML	22 17 03.6
	comp=Z,106nm,0.5s					
POGA	**Pongola**	**6.06**	**197**	*e*P	Pn	22 16 41.8 0.0
POGA				*e*S	Sn	22 17 48.4 -3.2
POGA				AML	AML	22 18 34.0
	comp=Z,26nm,0.6s					
SWZ	**Schweizer**	**9.41**	**232**	*e*P	Pn	22 17 29.0 +1.3
SWZ				*e*S	Sn	22 19 09.6 -4.4
SWZ				AML	AML	22 20 20.7
	comp=Z,8.2nm,0.6s					

NEIC ***20*** *22:20:05.6, 1649N×9426W, h111km, MD3.8(MEX), After MEX.*

MEX 20 22:20:05.5±1.0**, 1646N×9425W, h108**km±17km**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.88**	**316**	*i* P	Pn	22 20 24.1	-1.2
CMIG				*i* S	Sn	22 22 38.3	-1.9
HUIG	**Huatulco**	**1.92**	**249**	*i* P	Pn	22 20 35.5	-1.9
HUIG				*i* S	Sn	22 21 00.8	-0.8
OXX	**Oaxaca**	**2.45**	**285**	*e*P	Pn	22 20 45.0	+0.8
OXX				*i* S	Sn	22 21 10.0	-3.9
VHO	**Vista Hermosa**	**2.46**	**285**	*i* P	Pn	22 20 44.5	+0.2
VHO				*i* S	Sn	22 21 12.8	-1.3
VHO	**Vista Hermosa**	**2.46**	**285**	*i* P	Pn	22 20 45.0	+0.7
VHO				*i* S	Sn	22 21 12.8	-1.3
TPIG	**Tehuac#an**	**3.56**	**304**	*i* S	Sn	22 21 38.1	-1.9
UTMO	**Huajupan**	**3.66**	**292**	*i* P	Pn	22 21 00.3	0.0
UTMO				*i* S	Sn	22 21 39.1	-3.5

STR ***20*** *23:44:39.7±1.2, 4590N×279E, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG 20 23:44:42.8±0.2**, 4581N×295E, h19**km**, Md2.0/3, Ml1.8/4, Error ellipse: s-maj=4.2km s-min=2.1km az=150.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYM	**Petit Puy Mans**	**0.07**	**144**	Pg	Pg	23 44 44.4	-1.9
PYM				Sg	Sg	23 44 48.0	-0.7
PLDF	**La Plantade**	**0.50**	**70**	Pg	Pg	23 44 50.2	-2.7
PLDF				Sg	Sg	23 44 59.5	-0.1
LBL	**Lubilhac**	**0.61**	**160**	Pg	Pg	23 44 54.6	-0.3
LBL				Sg	Sg	23 45 03.5	+0.4
TCF	**Toulx Ste Croi**	**0.71**	**313**	*e*Pg	Pg	23 44 56.7	0.0
TCF				*e*Sg	Sg	23 45 05.9	-0.2
	7.6nm,0.3s						
BGF	**Bois d'Agland**	**0.76**	**355**	*e*Pg	Pg	23 44 56.4	-1.2
BGF				*e*Sg	Sg	23 45 07.3	-0.4
	26nm,0.5s						
AVF	**Avril sur Loir**	**1.02**	**16**	*e*Pg	Pg	23 45 02.0	-0.7
AVF				*e*Sg	Sg	23 45 15.5	-0.7
	5.0nm,0.4s						
SMF	**Signal de Mont**	**1.04**	**36**	*e*Sg	Sg	23 45 16.7	-0.1
	1.2nm,0.2s						
SSF	**Saint Saulge**	**1.31**	**17**	*e*Sg	Sg	23 45 24.9	-0.5
	2.1nm,0.4s						
HYF	**Humbligny**	**1.48**	**352**	*e*Pn	Pn	23 45 06.7	-1.7
HYF				*e*Sg	Sg	23 45 29.8	-0.8
LOR	**Lormes**	**1.59**	**23**	*e*Sg	Sg	23 45 33.2	-1.0
	1.7nm,0.3s						

WEL 20 23:55:53.4±0.5**, 3834S×17601E, h159**km±4km**, ML3.6**/12**, Error ellipse: s-maj=3.9km s-min=3.9km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.87**	**85**	PN	Pn	23 56 18.0	0.0
URZ				SN	Sn	23 56 36.9	+0.1
BKZ	**Black Stump Fm**	**0.91**	**156**	PN	Pn	23 56 18.7	+0.3
FWVZ	**Far West T-bar**	**0.99**	**201**	*e*PN	Pn	23 56 19.4	+0.4
MOVZ	**Moawhango**	**1.09**	**191**	PN	Pn	23 56 19.6	-0.2
MWZ	**Matawai**	**1.19**	**90**	*e*PN	Pn	23 56 20.9	+0.2
MWZ				SN	Sn	23 56 41.5	-0.1
KNZ	**Kokohu**	**1.47**	**118**	PN	Pn	23 56 23.7	+0.4
TSZ	**Takapari Road**	**1.72**	**181**	PN	Pn	23 56 25.5	-0.5
PUZ	**Puketiti**	**1.79**	**82**	PN	Pn	23 56 26.4	-0.3
PUZ				SN	Sn	23 56 51.2	-1.1
PXZ	**Pawanui**	**1.82**	**159**	PN	Pn	23 56 27.0	-0.1
MXZ	**Matakaoa Point**	**1.97**	**68**	PN	Pn	23 56 28.5	-0.3
MRZ	**Mangatainoka R**	**2.35**	**188**	PN	Pn	23 56 31.3	-1.8
MRZ				SN	Sn	23 57 00.6	-3.2
TIWZ	**Tintock**	**2.44**	**182**	SN	Sn	23 57 02.8	-3.0
KIW	**Kapiti Island**	**2.66**	**198**	PN	Pn	23 56 34.5	-2.4
CAW	**Cannon Point**	**2.86**	**194**	PN	Pn	23 56 36.7	-2.7
CAW				SN	Sn	23 57 11.3	-3.7
MRW	**Makara Radio**	**3.06**	**199**	SN	Sn	23 57 14.2	-5.3
TCW	**Tory Channel**	**3.17**	**204**	*e*PN	Pn	23 56 39.9	-3.4
TCW				SN	Sn	23 57 16.6	-5.3
THZ	**Tophouse**	**4.17**	**214**	*e*PN	Pn	23 56 53.0	-3.1
THZ				SN	Sn	23 57 39.7	-5.3
KHZ	**Kahutara**	**4.49**	**204**	PN	Pn	23 56 56.7	-3.7
KHZ				SN	Sn	23 57 47.5	-5.0
MQZ	**McQueen's Vall**	**5.94**	**204**	SN	Sn	23 58 16.2	-10

NEIC ***21*** *00:57:45.9, 1592N×9752W, h15km, MD4.1(MEX), After MEX.*

MEX 21 00:57:45.9±0.3**, 1598N×9754W, h28**km±9km**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.33**	**35**	*i* P	Pn	00 58 06.2	-2.5
VHO				*i* S	Sn	00 58 22.5	-2.9
VHO	**Vista Hermosa**	**1.33**	**35**	*e*P	Pn	00 58 06.0	-2.6
VHO				*i* S	Sn	00 58 24.7	-0.8
OXX	**Oaxaca**	**1.34**	**35**	*i* P	Pn	00 58 06.5	-2.3
OXX				*i* S	Sn	00 58 23.0	-2.7
OXX	**Oaxaca**	**1.34**	**35**	*i* P	Pn	00 58 06.5	-2.3
OXX				*i* S	Sn	00 58 24.0	-1.7
HUIG	**Huatulco**	**1.39**	**99**	*i* P	Pn	00 58 07.3	-2.1
HUIG				*i* S	Sn	00 58 23.8	-3.1
HUIG	**Huatulco**	**1.39**	**99**	*i* P	Pn	00 58 07.3	-2.1
HUIG				*i* S	Sn	00 58 23.9	-3.0
UTMO	**Huajupan**	**1.86**	**352**	*e*P	Pn	00 58 14.2	-1.7
UTMO				*i* S	Sn	00 58 35.9	-2.5
TPIG	**Tehuac#an**	**2.43**	**4**	*i* P	Pn	00 58 22.1	-1.7
TPIG				*i* S	Sn	00 58 50.4	-2.2
ACX	**Acapulco**	**2.45**	**291**	*e*P	Pn	00 58 22.0	-2.0
ACX				*i* S	Sn	00 58 50.0	-3.0
ACX	**Acapulco**	**2.45**	**291**	*i* P	Pn	00 58 26.0	+2.0
ACX				*i* S	Sn	00 58 55.0	+2.0
CMIG	**Matias Romero**	**2.77**	**66**	*i* P	Pn	00 58 26.4	-2.1
CMIG				*i* S	Sn	00 58 57.8	-3.2
CMIG	**Matias Romero**	**2.77**	**66**	*i* P	Pn	00 58 27.4	-1.1
MEIG	**Mezcala**	**2.78**	**314**	*i* P	Pn	00 58 26.9	-1.7
MEIG				*i* S	Sn	00 58 59.1	-2.1
CAIG	**El Cayaco**	**2.83**	**292**	*e*P	Pn	00 58 27.5	-1.8
CAIG				*i* S	Sn	00 58 59.6	-2.8
CAIG	**El Cayaco**	**2.83**	**292**	*i* P	Pn	00 58 30.4	+1.2
CAIG				*i* S	Sn	00 59 01.6	-0.8
PLIG	**Platanillo**	**3.05**	**322**	*e*P	Pn	00 58 31.1	-1.2
PLIG				*i* S	Sn	00 59 05.4	-2.4
PLIG	**Platanillo**	**3.05**	**322**	*i* P	Pn	00 58 31.7	-0.6
PLIG				*i* S	Sn	00 59 08.5	+0.7
YAIG	**Yautepec**	**3.22**	**333**	*e*P	Pn	00 58 33.4	-1.2
YAIG				*i* S	Sn	00 59 10.5	-1.5
YAIG	**Yautepec**	**3.22**	**333**	*i* P	Pn	00 58 36.4	+1.8
YAIG				*i* S	Sn	00 59 12.3	+0.3
PPM	**Popocatepetl**	**3.24**	**341**	*i* P	Pn	00 58 33.9	-1.0
PPM				*e*P		00 58 40.0	
PPM				*i* S	Sn	00 59 11.2	-1.4
PPM	**Popocatepetl**	**3.24**	**341**	*i* P	Pn	00 58 33.2	-1.7
PPM				*e*P		00 58 40.0	
PPM				*i* S	Sn	00 59 12.2	-0.4
IIZ	**Mezontepec**	**3.58**	**333**	*e*P	Pn	00 58 37.2	-2.4
IIZ				*i* S	Sn	00 59 15.7	-5.2
LVIG	**Laguna Verde**	**3.87**	**16**	*i* P	Pn	00 58 41.6	-2.0
LVIG				*i* S	Sn	00 59 26.3	-1.8
LVIG	**Laguna Verde**	**3.87**	**16**	*i* P	Pn	00 58 43.8	+0.2
LVIG				*i* S	Sn	00 59 27.2	-0.9

ISCJB ***21*** *01:18:54.9±0.8, 1439N±007×9269W±004, h119km±10km, Error ellipse: s-maj=12.6km s-min=5.7km az=43.6*
CASC ***21*** *01:18:57.0±2.5, 1445N×9261W, h86km±57km, MD4.4, mb4.1(NEIC)*
MEX ***21*** *01:18:58.9±0.7, 1443N×9278W, h130km±36km, MD4.6*
NEIC ***21*** *01:18:59.8, 1474N×9288W, h182km, mb4.1/2, MD4.6(MEX), After MEX.*

ISC 21 01:18:55.4±0.8**, 1440N**±007×**9264W**±004**, h129**km±9km**, n39**, σ1°39/41, 11C-1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.97**	**95**	⇑*e*P	Pn	**01 19 16.4**	**-1.6**
TP2	**Tecpan 2**	**1.61**	**76**	⇑*e*P	Pn	**01 19 24.2**	**-0.5**
TP2				*e*S	Sn	**01 19 45.3**	**-1.7**
FUG	**Fuego 3**	**1.74**	**88**	⇑*e*P	Pn	**01 19 25.9**	**-0.4**
TER	**Terranova**	**1.90**	**93**	⇑*e*P	Pn	**01 19 27.8**	**-0.3**
PCG	**Pacaya**	**1.97**	**90**	⇑*e*P	Pn	**01 19 31.0**	**+2.1**
SCX	**San Cristobal**	**2.32**	**0**	*i* P	Pn	**01 19 35.5**	**+2.2**
SCX				*i* S	Sn	**01 20 04.5**	**+2.1**
RBDL	**Robledal**	**2.88**	**95**	⇓*e*P	x	01 19 46.0	
RBDL				*e*S	x	01 20 20.8	
RTR	**El Retiro**	**2.95**	**99**	⇑*e*P	x	01 19 47.4	
RTR				*e*S	x	01 20 23.7	
SBLS	**San Blas**	**2.98**	**100**	⇑*e*P	x	01 19 47.3	
SBLS				*e*S	x	01 20 23.4	
SNJE	**San Jose**	**2.99**	**100**	⇑*e*P	x	01 19 47.7	
SNJE				*e*S	x	01 20 23.6	
BOQS	**Boqueron**	**3.33**	**101**	*e*P	x	01 19 52.5	
BOQS				*e*S	x	01 20 31.6	
CMIG	**Matias Romero**	**3.44**	**321**	*i* P	Pn	**01 19 48.3**	**+0.6**
CMIG				*i* S	Sn	**01 20 26.9**	**-1.2**
LBRS	**Las Brisas**	**3.55**	**100**	*e*P	x	01 19 55.2	
LBRS				*e*S	x	01 20 37.7	
LFRS	**El Faro**	**3.56**	**102**	⇑*e*P	x	01 19 55.3	
LFRS				*e*S	x	01 20 37.5	
HUIG	**Huatulco**	**3.62**	**292**	*i* P	Pn	**01 19 51.0**	**+0.9**
HUIG				*i* S	Sn	**01 20 31.3**	**-1.0**
LCBS	**La Ceiba**	**3.63**	**101**	*e*P	x	01 19 56.5	
LCBS				*e*S	x	01 20 38.1	
SNVI	**San Vicente**	**3.77**	**102**	⇑*e*P	x	01 20 00.3	
SNVI				*e*S	x	01 20 43.4	
TUIG	**Tuzandepetl**	**4.00**	**335**	*i* P	Pn	**01 19 56.6**	**+1.5**
TUIG				*i* S	Sn	**01 20 42.2**	**+0.8**
TUIG	**Tuzandepetl**	**4.00**	**335**	*i* P	Pn	**01 19 54.1**	**-1.0**
VSM	**San Miguel**	**4.35**	**102**	⇑*e*P	x	01 20 08.5	
VSM				*e*S	x	01 20 58.6	
OXX	**Oaxaca**	**4.75**	**305**	*e*P	Pn	**01 20 06.0**	**+0.9**
VHO	**Vista Hermosa**	**4.75**	**304**	*i* P	Pn	**01 20 06.2**	**+1.0**
VHO				*i* S	Sn	**01 20 59.0**	**-0.4**
CNCH	**Conchagua**	**4.80**	**103**	*e*P	x	01 20 12.8	
UTMO	**Huajupan**	**6.02**	**305**	*i* P	Pn	**01 20 25.8**	**+3.6**
UTMO				*i* S	Sn	**01 21 28.2**	**-1.7**
TPIG	**Tehuac#an**	**6.04**	**312**	*i* P	Pn	**01 20 23.8**	**+1.3**
TPIG				*i* S	Sn	**01 21 29.0**	**-1.4**
LVIG	**Laguna Verde**	**6.41**	**326**	*i* P	Pn	**01 20 27.4**	**0.0**
LVIG				*i* S	Sn	**01 21 37.6**	**-1.6**
LVIG	**Laguna Verde**	**6.41**	**326**	*i* P	Pn	**01 20 26.9**	**-0.5**
PPM	**Popocatepetl**	**7.38**	**310**	*e*P	Pn	**01 20 39.5**	**-1.0**
PPM				*i* P		01 20 44.7	
PPM				*i* S	Sn	**01 22 05.9**	**+3.3**
PPM	**Popocatepetl**	**7.38**	**310**	*e*P	Pn	**01 20 39.5**	**-1.0**
PPM				*i* P		01 20 39.9	
MEIG	**Mezcala**	**7.57**	**299**	*i* P	Pn	**01 20 44.6**	**+1.6**
MEIG				*i* S	Sn	**01 22 05.3**	**-1.9**
PLIG	**Platanillo**	**7.69**	**302**	*i* P	Pn	**01 20 48.0**	**+3.3**
PLIG				*i* S	Sn	**01 22 11.7**	**+1.5**
PLIG	**Platanillo**	**7.69**	**302**	*i* P	Pn	**01 20 43.3**	**-1.4**
MOIG	**Morelia**	**9.71**	**304**	*i* P	Pn	**01 21 13.8**	**+1.9**
MOIG	**Morelia**	**9.71**	**304**	*i* P	Pn	**01 21 08.1**	**-3.9**
NATX	**Nacogdoches**	**17.38**	**354**	*e*P	Pn	**01 22 45.4**	**-4.5**
	12nm,0.2s						
MIAR	**Mount Ida**	**20.07**	**358**	*e*P	**P**	**01 23 28.7**	**+10**
MIAR				*e*S	**S**	**01 26 56.2**	**-0.8**
MNTX	**Cornudas Mount**	**20.80**	**328**	*e*P	**P**	**01 23 35.8**	**+9.4**
WMOK	**Wichita Mounta**	**20.99**	**346**	*e*P	**P**	**01 23 24.0**	**-4.5**
	0.6nm,0.6s						
SWET	**Sewanee**	**21.59**	**15**	P	**P**	**01 23 33.6**	**-1.2**

ISCJB ***21*** *01:36:59.6±0.6, 1456N±007×9269W±005, h93km±13km, Error ellipse: s-maj=12.9km s-min=5.1km az=63.4*
CASC ***21*** *01:37:02.2±2.7, 1438N×9227W, h0km±102km, MD4.2, ML3.3, mb3.8(NEIC)*
NEIC ***21*** *01:37:06.8, 1484N×9285W, h126km, mb3.8/2, MD4.4(MEX), After MEX.*
MEX ***21*** *01:37:07.1±0.9, 1483N×9286W, h116km±41km, MD4.4*

ISC 21 01:37:01.2±0.6**, 1460N**±007×**9267W**±005**, h90**km±14km**, n30**, σ1°24/33, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**2.12**	**1**	*i* P	Pn	**01 37 39.0**	**+4.0**
SCX				*i* S	Sn	**01 38 02.0**	**+1.1**
SBLS	**San Blas**	**3.05**	**104**	*e*P	x	01 37 51.0	
SBLS				*e*S	x	01 38 26.4	
SNJE	**San Jose**	**3.06**	**103**	*e*P	x	01 37 51.0	
CMIG	**Matias Romero**	**3.27**	**320**	*i* P	Pn	**01 37 51.8**	**+1.5**
CMIG				*i* S	Sn	**01 38 27.4**	**-0.7**
BOQS	**Boqueron**	**3.40**	**104**	*e*P	x	01 37 56.6	
BOQS				*e*S	x	01 38 35.1	
HUIG	**Huatulco**	**3.51**	**290**	*i* P	Pn	**01 37 54.9**	**+1.3**
HUIG				*i* S	Sn	**01 38 34.2**	**+0.1**
LBRS	**Las Brisas**	**3.62**	**103**	*e*P	x	01 37 58.6	
LFRS	**El Faro**	**3.64**	**105**	*e*P	x	01 37 58.7	
LFRS				*e*S	x	01 38 38.3	
LCBS	**La Ceiba**	**3.71**	**104**	*e*P	x	01 37 59.8	
LCBS				*e*S	x	01 38 41.6	
TUIG	**Tuzandepetl**	**3.81**	**334**	*i* P	Pn	**01 37 58.5**	**+0.9**
TUIG				*i* S	Sn	**01 38 39.5**	**-1.7**
SNVI	**San Vicente**	**3.85**	**104**	*e*P	x	01 38 03.6	
SNVI				*e*S	x	01 38 45.1	
VSM	**San Miguel**	**4.43**	**105**	*e*P	x	01 38 10.8	
OXX	**Oaxaca**	**4.61**	**303**	*e*P	Pn	**01 38 08.0**	**-0.5**
VHO	**Vista Hermosa**	**4.62**	**303**	*i* P	Pn	**01 38 10.6**	**+2.0**
VHO				*i* S	Sn	**01 38 58.8**	**-2.1**
VHO	**Vista Hermosa**	**4.62**	**303**	*i* P	Pn	**01 38 10.0**	**+1.5**
VHO				*i* S	Sn	**01 38 58.9**	**-2.1**
UTMO	**Huajupan**	**5.88**	**304**	*i* P	Pn	**01 39 27.6**	**+1.8**
UTMO				*i* S	Sn	**01 39 28.5**	**-3.3**
TPIG	**Tehuac#an**	**5.88**	**311**	*i* P	Pn	**01 38 25.7**	**-0.1**
TPIG				*i* S	Sn	**01 39 30.3**	**-1.6**
LEON	**Leon**	**6.03**	**110**	*e*P	Pn	**01 38 27.0**	**-0.8**
LEON				*e*S	Sn	**01 39 27.9**	**-7.4**
LEON				*i*		01 39 46.8	
	comp=Z,48nm,0.6s						
CNGN	**Cerro Negro**	**6.17**	**109**	*e*P	Pn	**01 38 28.6**	**-1.2**
MIRN	**Miramar**	**6.18**	**110**	*e*P	Pn	**01 38 27.9**	**-2.0**
COPN	**Copaltepe**	**6.39**	**111**	*e*P	Pn	**01 38 33.1**	**+0.4**
APYN	**Apoyeque**	**6.59**	**110**	*e*P	Pn	**01 38 35.4**	**0.0**
TICN	**Ticuantepe**	**6.77**	**111**	*e*P	Pn	**01 38 38.8**	**+0.9**
PPM	**Popocatepetl**	**7.22**	**309**	*i* P	Pn	**01 38 46.4**	**+2.3**
PPM				*e*P		01 38 51.0	
PPM				*i* S	Sn	**01 40 06.3**	**+1.7**
PPM	**Popocatepetl**	**7.22**	**309**	*i* P	Pn	**01 38 42.9**	**-1.2**
PPM				*e*P		01 38 51.0	
PPM				*i* S	Sn	**01 39 59.8**	**-4.8**
CAIG	**El Cayaco**	**7.70**	**289**	*i* P	Pn	**01 38 51.0**	**+0.4**
CAIG	**El Cayaco**	**7.70**	**289**	*i* P	Pn	**01 38 49.8**	**-0.8**
JCT	**Junction City**	**17.11**	**339**	*e*Pn	Pn	**01 40 54.0**	**-0.7**
MIAR	**Mount Ida**	**19.88**	**358**	*e*P	Pn	**01 41 28.0**	**+0.4**
	comp=Z,4.6nm,0.6s						
MNTX	**Cornudas Mount**	**20.61**	**328**	*e*P	**P**	**01 41 33.7**	**+0.6**
	comp=Z,0.8nm,0.4s						

IDC ***21*** *02:08:46.1±7.3, 630S×13031E, h69km±77km, mb3.6/3, mb1 4.1/6, mb1mx3.8/14, mbtmp4.2/6, ML4.4/3, Error ellipse: s-maj=67.0km s-min=27.6km az=55.0*
ISCJB ***21*** *02:08:47.7±2.1, 648S±009×1301E±0.1, h110km±23km, mb3.8/2, Error ellipse: s-maj=21.5km s-min=12.5km az=130.4*
NEIC ***21*** *02:08:48.8±2.8, 641S×13013E, h109km±28km, mb4.6/4, Error ellipse: s-maj=31.7km s-min=17.3km az=54.0*

ISC 21 02:08:54.4±1.8**, 68S**±01×**1301E**±01**, h149**km±16km**, n14, σ1°43/21, mb3.8/2, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.31**	**159**	*e*P	Pn	**02 10 25.8**	**+0.6**
	57nm,0.5s						
KAKA				*e*S	Sn	**02 11 35.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**12.04**	**201**	P	Pn	**02 11 42.7**	**+1.6**
	1.2nm,0.3s,baz=35,slow=12,SNR=34						
FITZ				S	Sn	**02 13 50.9**	**-3.3**
	2.1nm,0.3s,baz=98,slow=24,SNR=10						
FITZ	**Fitzroy Crossi**	**12.04**	**201**	*e*P	Pn	**02 11 41.5**	**+0.3**
	7.1nm,0.4s						
FITZ				*e*S	Sn	**02 13 53.6**	**-0.6**
WRAB	**Tennant Creek**	**13.69**	**163**	*e*Pn	Pn	**02 12 01.8**	**-0.6**
	13nm,0.5s						
WRAB				*e*Sn	Sn	**02 14 28.5**	**-5.3**
WRA	**Warramunga Arr**	**13.69**	**163**	P	Pn	**02 12 01.6**	**-0.9**
	1.4nm,0.3s,baz=348,slow=13,SNR=36						
WRA				S	Sn	**02 14 28.6**	**-5.4**
	2.4nm,0.3s,baz=344,slow=25,SNR=7.6						
WB2	**Warramunga Arr**	**13.70**	**163**	*e*P	Pn	**02 12 00.9**	**-1.6**
WB2				*e*S	Sn	**02 14 29.2**	**-4.9**
AS31	**Alice Springs**	**17.16**	**168**	*e*P	Pn	**02 12 48.3**	**+3.2**
ASAR	**Alice Springs**	**17.16**	**168**	P	Pn	**02 12 47.4**	**+2.2**
	2.8nm,0.3s,baz=344,slow=11,SNR=91						
ASAR				S	**S**	**02 15 54.7**	**-0.8**
	0.4nm,0.3s,baz=359,slow=29,SNR=7.3						
MBWA	**Marble Bar**	**17.44**	**214**	*e*P	Pn	**02 12 49.6**	**+1.0**
	2.4nm,0.7s						
KKM	**Kota Kinabalu**	**18.84**	**312**	*e*P	**P**	**02 12 57.4**	**-5.4**
CTA	**Charters Tower**	**20.50**	**132**	P	**P**	**02 13 21.1**	**+0.4**
	1.8nm,0.4s,baz=314,slow=10,SNR=4.2						
STKA	**Stephens Creek**	**27.16**	**158**	P	**P**	**02 14 26.2**	**+2.5**
	1.6nm,0.5s,mb3.9,baz=326,slow=9.9,SNR=6.8						
STKA	**Stephens Creek**	**27.16**	**158**	*e*P	**P**	**02 14 25.7**	**+2.0**
SONM	**Songino Array**	**58.29**	**341**	P	**P**	**02 18 30.8**	**-2.7**
	0.5nm,0.4s,mb3.7,baz=165,slow=5.3,SNR=6.3						

ISCJB ***21*** *02:16:05.0±1.6, 4147N±005×81.12E±005, h2km±11km, mb3.7/6, Error ellipse: s-maj=8.4km s-min=6.3km az=144.2*
IDC ***21*** *02:16:06.2±1.2, 4153N×8109E, h0km, mb3.8/4, mb1 3.9/8, mb1mx3.6/25, mbtmp3.7/8, ML3.5/4, Error ellipse: s-maj=25.4km s-min=16.7km az=97.0*
BJI ***21*** *02:16:08.5, 4140N×81.17E, h26km, ML3.7*
MOS ***21*** *02:16:09.3±1.2, 4156N×81.14E, h33km, mb4.5/5, Error ellipse: s-maj=17.3km s-min=8.5km az=109.6*
NEIC ***21*** *02:16:12.0±1.2, 4159N×81.17E, h35km, mb3.8/2, Error ellipse: s-maj=19.0km s-min=15.2km az=190.0*
NNC ***21*** *02:16:12.1±1.7, 4182N×8078E, h0km, mb4.1, mpv4.0, Error ellipse: s-maj=15.1km s-min=6.3km az=159.0*

ISC 21 02:16:07.0±1.5**, 4148N**±004×**8106E**±005**, h0**km±10km**, n47, σ1°26/55, mb3.8/6, 10C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**3.49**	**301**	⇑Pg	**Pb**	**02 17 09.8**	**+0.1**
	94nm,0.6s						
KNDC				⇓Lg		02 17 53.0	
	423nm,0.9s						
AAA	**Alma-Ata**	**3.53**	**302**	*e*PN	**Pb**	**02 17 10.7**	**+0.4**
AAA				*e*S	**Sb**	**02 17 54.3**	**+0.6**
TKM2	**Tokmak 2**	**4.30**	**291**	⇑Pn	**Pn**	**02 17 14.6**	**+0.9**
	5.0nm,0.7s						
TKM2				⇑Lg		02 18 18.2	
	15nm,0.7s						
TKM2	**Tokmak 2**	**4.30**	**291**	PN	**Pn**	**02 17 14.6**	**+0.9**
TKM2						02 18 19.6	
TKM2				pmax	pmax		
	comp=Z,31nm,0.7s						
TKM2				smax			
	comp=Z,95nm,0.7s						
KSH	**Kashi**	**4.34**	**245**	*e*PG	**Pg**	**02 17 29.4**	**-0.9**
KSH				SG	**Sg**	**02 18 21.6**	**-5.0**
KSH				Smax			
	comp=N,87nm,0.5s						
KSH				Smax			
	comp=E,135nm,0.7s						
AAK	**Ala-Archa**	**5.02**	**285**	*e*PN	**Pn**	**02 17 26.7**	**+3.2**
AAK				*e*		02 18 24.7	
AAK				pmax	pmax		
	comp=Z,34nm,0.6s						
AAK	**Ala-Archa**	**5.02**	**285**	*e*Pn	**Pn**	**02 17 26.7**	**+3.2**
	comp=Z,34nm,0.6s						
AAK				*e*Sn	**Sn**	**02 18 24.7**	**+2.5**
MK05	**Makanchi Array**	**5.38**	**9**	⇑Pn	**Pn**	**02 17 29.0**	**+0.5**
	comp=Z,9.9nm,0.6s,baz=197,slow=13						
MK05				⇑Sn	**Sn**	**02 18 31.0**	**-0.2**
	comp=Z,31nm,0.8s,baz=187,slow=25						
MK05				⇑Lg		02 18 52.1	
	comp=Z,49nm,0.8s,baz=189,slow=28						
MK31	**Makanchi Array**	**5.38**	**9**	PN	**Pn**	**02 17 28.6**	**+0.1**
MK31						02 18 30.7	
MK31						02 18 53.8	
MK31				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MK31				smax			
	comp=Z,7.0nm,0.4s						
MKAR	**Makanchi Array**	**5.38**	**9**	Pn	**Pn**	**02 17 29.0**	**+0.4**
	comp=Z,3.4nm,0.3s,baz=190,slow=14,SNR=59						
MKAR				Sn	**Sn**	**02 18 31.1**	**-0.1**
	comp=Z,8.8nm,0.3s,baz=189,slow=23,SNR=9.1						
MKAR				Lg		02 18 55.2	
	comp=Z,3.9nm,0.3s,baz=192,slow=28,SNR=6.6						
MKAR	**Makanchi Array**	**5.38**	**9**	PN	**Pn**	**02 17 29.0**	**+0.5**
MKAR						02 18 31.1	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR				smax			
	comp=N,9.0

comp=Z,3.0nm,0.7s
ZRNK Zerenda 14.07 329 *e*Pn **Pn 02 19 28.0 +0.4**
comp=Z,2.6nm,0.7s
AB31 Akbulak array 16.71 305 ⇓P **Pn 02 20 02.5 +0.1**
comp=Z,0.9nm,0.7s,baz=105,slow=12,SNR=8.6
AKTK Aktyubinsk 18.29 307 P **Pn 02 20 19.8 -2.3**
AKTO Aktyubinsk 18.29 307 P **Pn 02 20 19.8 -2.3**
comp=Z,0.2nm,0.3s,baz=46,slow=8.1,SNR=2.5
SONM Songino Array 19.06 62 P **Pn 02 20 30.9 -0.6**
comp=Z,0.1nm,0.3s,baz=258,slow=12,SNR=8.0
ARU Arti 20.88 323 *e*P **P 02 20 51.0 +0.4**
ARU pmax pmax
comp=Z,7.0nm,0.9s
ARU Arti 20.88 323 *e*P **P 02 20 51.0 +0.4**
comp=Z,6.9nm,0.9s
MLR Muntele Rosu 39.53 295 P **P 02 23 42.5 +3.0**
comp=Z,1.5nm,0.5s,mb3.8,baz=96,slow=9.2,SNR=3.3
MLR Muntele Rosu 39.53 295 P **P 02 23 42.5 +3.1**
MLR pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 39.90 333 P **P 02 23 40.3 -2.3**
comp=Z,1.6nm,0.8s,mb3.7,baz=108,slow=7.8,SNR=6.5
ARCES ARCESS Array B 39.90 333 P **P 02 23 40.3 -2.2**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
MORC Moravsky Berou 43.97 303 P **P 02 24 15.9 0.0**
MORC pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
MORC Moravsky Berou 43.97 303 P **P 02 24 15.9 +0.1**
comp=Z,0.5nm,0.5s,mb3.5
NB2 NORSAR Subarra 45.38 320 P **P 02 24 24.9 -2.1**
comp=Z,1.1nm,0.6s,mb4.0,baz=83,slow=7.9
NOA NORSAR Array B 45.38 320 P **P 02 24 25.1 -1.9**
comp=Z,1.0nm,0.6s,mb3.9,baz=83,slow=7.9,SNR=6.6
NOA NORSAR Array B 45.38 320 P **P 02 24 25.2 -1.8**
NOA pmax pmax
comp=Z,1.0nm,0.6s
TORD Torodi Ar. Bea 73.48 273 P **P 02 27 42.8 +1.5**
comp=Z,0.3nm,0.5s,mb3.7,baz=52,slow=4.5,SNR=4.2
WRA Warramunga Arr 78.53 130 P **P 02 28 08.9 -1.2**
comp=Z,0.3nm,0.3s,mb3.8,baz=330,slow=5.2,SNR=3.7

MEX 21 02:38:15.5±0.3, 1684N×10033W, h5km±2km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.21**	**16**	*i* P	Pg	02 38 19.4	-0.2
CAIG				*i* S	Sg	02 38 22.6	+0.2
ACX	**Acapulco**	**0.40**	**87**	*i* P	Pg	02 38 23.0	-0.1
ACX				*i* S	Sg	02 38 28.5	+0.2
MEIG	**Mezcala**	**1.27**	**32**	*i* P	Pg	02 38 36.3	-3.6
MEIG				*i* S	Sg	02 38 52.5	-3.9

IDC 21 02:54:56.5±4.6, 1929S×17417W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.7/14, mbtmp3.6/3, Error ellipse: s-maj=297.9km s-min=31.4km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**48.31**	**255**	P	P	03 03 39.9	+0.4
	0.3nm,0.4s,baz=96,slow=7.9,SNR=7.4						
WRA	**Warramunga Arr**	**48.35**	**260**	P	P	03 03 40.1	+0.2
	0.3nm,0.3s,baz=97,slow=7.7,SNR=9.7						
NVAR	**Mina Array Bea**	**77.70**	**42**	P	P	03 06 55.4	+0.3
	0.5nm,0.8s,baz=198,slow=8.4,SNR=4.4						
AKASG	**Malin Array Be**	**143.58**	**335**	PKP	PKPdf	03 14 31.1	-2.1
	0.2nm,0.3s,baz=37,slow=4.1,SNR=5.4						
BRTR	**Keskin Array B**	**148.58**	**316**	PKPbc	PKPbc	03 14 46.1	+0.8
	0.5nm,0.7s,baz=73,slow=2.1,SNR=4.6						

CASC 21 03:09:55.1±3.4, 903N×8348W, h0km±10km, MD3.6, 5C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUS	**Buena Vista**	**0.59**	**332**⇑	*e*P	Pg	03 10 08.1	+1.7
LCR2	**La Lucha 2**	**0.88**	**324**	*e*P	Pg	03 10 12.7	+0.8
BRU	**Baru**	**0.93**	**104**	*e*P	Pg	03 10 14.7	+1.7
ICR	**Volcan Irazu**	**1.01**	**340**⇑	*e*P	Pg	03 10 14.7	+0.3
LAJ	**Bijagual**	**1.04**	**323**	*e*P	Pg	03 10 19.4	+4.3
DVD	**David**	**1.18**	**120**⇑	*e*P	Pg	03 10 17.6	-0.1
PRS1	**Puriscal**	**1.25**	**319**⇑	*e*P	Pg	03 10 18.1	-1.1
CGA2	**Cerro Gallo 2**	**1.38**	**315**⇑	*e*P	Pg	03 10 21.4	-0.2
CGA2				*e*S	Sg	03 10 43.8	+4.3

IDC 21 03:20:41.0±2.2, 246N×12795E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/23, Error ellipse: s-maj=147.3km s-min=26.0km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.12**	**165**	P	P	03 25 49.1	+0.4
	0.5nm,0.3s,baz=344,slow=11,SNR=18						
JOW	**Kunigami**	**24.24**	**1**	LR	LR	03 34 31.6	
	comp=Z,33nm,20.4s,baz=154,slow=34						
ASAR	**Alice Springs**	**26.60**	**168**	P	P	03 26 21.0	+0.1
	0.5nm,0.5s,baz=356,slow=8.1,SNR=7.4						
MKAR	**Makanchi Array**	**59.29**	**325**	P	P	03 30 44.7	+0.3
	0.3nm,0.4s,baz=116,slow=8.0,SNR=5.0						

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*BJI **21** 03:26:08.6, 2181N×14380E, h115km, mB4.8, mb4.7*
*ISCJB **21** 03:26:10.2±0.8, 2175N±004×14382E±004, h133km±6km, mb4.5/70, Error ellipse: s-maj=5.8km s-min=5.5km az=4.1*
*NEIC **21** 03:26:10.4±0.2, 2179N×14390E, mb4.7/34, Error ellipse: s-maj=5.3km s-min=4.8km az=103.0*
*MOS **21** 03:26:10.5±0.9, 2181N×14379E, h136km, mb5.2/31, Error ellipse: s-maj=12.8km s-min=6.8km az=112.3*
*IDC **21** 03:26:11.6±1.8, 2176N×14384E, h135km±16km, mb4.1/19, mb1 4.2/22, mb1mx4.2/27, mbtmp4.5/22, MS3.3/5, Ms1 3.3/5, ms1mx2.9/36, Error ellipse: s-maj=15.7km s-min=9.0km az=94.0*

ISC 21 03:26:11.8±0.7, 2180N±004×14384E±003, h132km±6km, h126km±2.3km; pP-P, n295, s0±79/296, mb4.5/70, 65C-72D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**5.04**	**343**	P	**Pn**	**03 27 26.3**	**+0.8**
JHHJ				S	**Sn**	**03 28 24.3**	**+1.5**
CBIJ	**Chichi jima**	**5.49**	**344**	P	**Pn**	**03 27 32.2**	**+0.8**
	64nm,0.3s,baz=122,slow=21,SNR=74						
CBIJ				S	**Sn**	**03 28 33.5**	**0.0**
	101nm,0.3s,baz=271,slow=22,SNR=12						
CBIJ	**Chichi jima**	**5.49**	**344**	P	**Pn**	**03 27 31.8**	**+0.4**
CBIJ				S	**Sn**	**03 28 33.8**	**+0.3**
GUMO	**Guam**	**8.22**	**173**	P	**Pn**	**03 28 08.5**	**+0.2**
	9.1nm,0.3s,baz=91,slow=3.5,SNR=7.2						
JHJ	**Hachijo jima 2**	**11.84**	**343**	LR	LR	03 32 14.6	
	comp=Z,35nm,19.7s,baz=170,slow=31						
BSO1	**Boso 1**	**13.05**	**349**	P	**Pn**	**03 29 13.1**	**+0.9**
BSO3	**Boso 3**	**13.28**	**348**	P	**Pn**	**03 29 16.1**	**+0.9**
JIM2	**Oshima 3**	**13.44**	**344**	P	**Pn**	**03 29 18.8**	**+1.6**
BSO4	**Boso 4**	**13.50**	**348**	P	**Pn**	**03 29 18.6**	**+0.6**
JOD2	**Odawara 2**	**14.05**	**344**	P	**Pn**	**03 29 24.6**	**-0.4**
JKN2	**Miekihoku**	**14.07**	**333**	P	**Pn**	**03 29 26.7**	**+1.4**
HMMJ	**Hamamatsu 2**	**14.07**	**339**	P	**Pn**	**03 29 24.9**	**-0.4**
JNY	**Yasuok**	**14.49**	**340**	P	**Pn**	**03 29 30.1**	**-0.5**
JHU	**Hanno**	**14.56**	**345**	P	**Pn**	**03 29 29.6**	**-1.8**
JAO	**Obara**	**14.61**	**338**	P	**Pn**	**03 29 31.9**	**-0.1**
JRY	**Ryogami san**	**14.81**	**344**	P	**Pn**	**03 29 33.4**	**-1.2**
JHO	**Hitachi**	**15.03**	**350**	P	**Pn**	**03 29 37.6**	**+0.2**
JHO				*e*S	**S**	**03 32 19.0**	**-13**
JOW	**Kunigami**	**15.05**	**293**	P	**Pn**	**03 29 43.2**	**+5.6**
	2.6nm,0.3s,baz=114,slow=12,SNR=11						
JAG	**Ashikaga**	**15.07**	**346**	P	**Pn**	**03 29 36.0**	**-1.8**
MJAR	**Matsushiro Arr**	**15.49**	**343**	P	**Pn**	**03 29 42.1**	**-0.9**
	0.5nm,0.3s,baz=172,slow=12,SNR=21						
MJAR				LR	LR	03 36 03.2	
	comp=Z,69nm,18.4s,baz=160,slow=38						
MAJO	**Matsushiro**	**15.49**	**343**	*e*P	**Pn**	**03 29 41.2**	**-1.9**
MAJO				*e*		03 32 33.3	
MAJO				pmax	pmax		
	comp=Z,51nm,1.3s						
MAJO	**Matsushiro**	**15.49**	**343**	*e*Pn	**Pn**	**03 29 41.2**	**-1.8**
	comp=Z,51nm,1.3s						
MAJO				*e*Sn	**Sn**	**03 32 33.3**	**-1.6**
MAT	**Matsushiro**	**15.49**	**343**	P	**Pn**	**03 29 41.5**	**-1.6**
MAT				S	**S**	**03 32 39.2**	**-1.8**
MAT	**Matsushiro**	**15.49**	**343**	*e*P	**Pn**	**03 29 42.0**	**-1.1**
MAT				pmax	pmax		
	comp=Z,28nm,1.5s						
MAT	**Matsushiro**	**15.49**	**343**	*e*P	**Pn**	**03 29 42.0**	**-1.1**
	comp=Z,28nm,1.5s						
MAT				*e*S	**S**	**03 32 56.0**	**+15**
NACB	**Ninganchiao**	**20.62**	**281**	*e*P	**P**	**03 30 41.0**	**+0.4**
SSE	**Sheshan**	**22.26**	**299**	*e*P	**P**	**03 30 55.8**	**-2.3**
SSE				AMB	AMB		
	comp=Z,47nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,57nm,4.3s						
SSE				LR	LR		
	comp=N,67nm,33.1s						
SSE				LR	LR		
	comp=E,49nm,33.0s						
SSE				LR	LR		
	comp=Z,62nm,29.6s						
ASAJ	**Asahikawa**	**22.28**	**358**	P	**P**	**03 31 01.4**	**+3.2**
	comp=Z,1.8nm,0.4s,mb3.9,baz=170,slow=11,SNR=2.7						
NJ2	**Nanjing**	**24.46**	**300**	*e*P	**P**	**03 31 18.6**	**+0.2**
NJ2				AP		03 31 44.8	
NJ2				XP	sP	03 31 59.9	-1.7
NJ2				PP		03 32 00.9	
NJ2				S	**S**	**03 35 29.0**	**+0.2**
NJ2				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,290nm,3.5s						
NJ2				LR	LR		
	comp=N,180nm,14.1s						
NJ2				LR	LR		
	comp=E,240nm,18.7s						
NJ2				LR	LR		
	comp=Z,310nm,19.0s						
SNY	**Shenyang**	**26.25**	**324**	⇑P	**P**	**03 31 33.8**	**-0.8**
SNY				AP	pP	03 31 57.1	-5.5
SNY				XP	sP	03 32 11.3	-6.6
SNY				PP		03 32 22.1	
SNY				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.4						
HABR	**Khabarovsk**	**27.53**	**347**	*e*P	**P**	**03 31 42.3**	**-3.7**
HABR				*e*S	**S**	**03 36 17.1**	**-0.2**
KLR	**Kul'dur**	**29.01**	**344**	*e*P	**P**	**03 31 56.7**	**-2.5**
PMG	**Port Moresby**	**31.18**	**174**	LR	LR	03 44 25.1	
	comp=Z,88nm,18.5s,baz=225,slow=35						
HHC	**Hu-ho-hao-te**	**33.22**	**312**	*e*P	**P**	**03 32 38.8**	**+2.7**
HHC				AP	pP	03 33 07.3	+2.6
HHC				PP	PP	03 33 54.4	+0.6
HHC				PCP	PcP	03 35 18.8	+3.2
HHC				S	**S**	**03 37 51.1**	**+4.9**
HHC				XS	sS	03 38 36.5	+0.3
HHC				SCP	ScP	03 38 48.1	+0.5
HHC				PCS	PcS	03 39 03.6	+2.3
HHC				SS	SS	03 39 58.6	-16
HHC				SCS	ScS	03 42 49.5	+1.0
HHC				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,71nm,4.6s						
HHC				LR	LR		
	comp=N,108nm,19.0s						
HHC				LR	LR		
	comp=E,84nm,19.0s						
HHC				LR	LR		
	comp=Z,78nm,17.8s						
CD2	**Chengdu**	**36.88**	**293**	*e*P	**P**	**03 33 05.3**	**-2.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
CD2				AMB	AMB		
	comp=Z,30nm,5.4s						
LZH	**Lanzhou**	**37.52**	**301**	*e*P	**P**	**03 33 15.0**	**+2.1**
LZH				AMB	AMB		
	comp=Z,29nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,69nm,4.5s						
KMI	**Kunming**	**37.75**	**283**	P	**P**	**03 33 15.8**	**+1.0**
KMI				AP	pP	03 33 41.8	-2.1
KMI				XP	sP	03 33 56.5	-2.5
KMI				S	**S**	**03 38 56.8**	**+1.3**
KMI				XS	sS	03 39 42.1	-4.1
KMI				SS	SS	03 41 39.3	-7.3
KMI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.3						
KMI				AMB	AMB		
	comp=Z,104nm,5.5s						
KMI				LR	LR		
	comp=N,77nm,14.7s						
KMI				LR	LR		
	comp=E,65nm,13.3s						
KMI				LR	LR		
	comp=Z,44nm,21.4s						
SONM	**Songino Array**	**39.65**	**320**	P	**P**	**03 33 31.5**	**+0.8**
	comp=Z,1.0nm,0.3s,mb3.9,baz=126,slow=7.2,SNR=14						
SONM				PcP	PcP	03 35 33.8	-1.2
	comp=Z,1.1nm,0.8s,baz=161,slow=3.3,SNR=4.3						
GTA	**Gaotai**	**41.31**	**305**	*e*P	**P**	**03 33 45.8**	**+1.5**
GTA				PCP	PcP	03 35 40.8	+0.5
GTA				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**42.50**	**193**	*e*P	**P**	**03 33 53.0**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.3s,mb4.8						
WRAB	**Tennant Creek**	**42.50**	**193**	*e*P	**P**	**03 33 53.0**	**-1.0**
	comp=Z,7.6nm,0.3s,mb4.8						
WB2	**Warramunga Arr**	**42.51**	**193**	⇓*i*P	**P**	**03 33 53.0**	**-1.1**
WRA	**Warramunga Arr**	**42.51**	**193**	P	**P**	**03 33 53.1**	**-1.0**
	comp=Z,2.5nm,0.3s,mb4.2,baz=15,slow=9.0,SNR=60						
WRA				PcP	PcP	03 35 44.1	-0.2
	comp=Z,1.1nm,0.8s,baz=15,slow=3.3,SNR=5.0						
ZAK	**Zakamensk**	**42.64**	**322**	*e*P	**P**	**03 33 54.8**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
TLY	**Talaya**	**43.04**	**324**	*e*P	**P**	**03 33 58.6**	**+0.3**
TLY				*e*		03 34 49.4	
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
TLY	**Talaya**	**43.04**	**324**	*e*P	**P**	**03 33 57.5**	**-0.8**
	comp=Z,5.1nm,1.0s,mb4.1						
FITZ	**Fitzroy Crossi**	**43.48**	**206**	P	**P**	**03 34 01.7**	**-0.1**
	comp=Z,5.6nm,0.8s,mb4.2,baz=28,slow=8.5,SNR=17						
FITZ	**Fitzroy Crossi**	**43.48**	**206**	*e*P	**P**	**03 34 01.4**	**-0.4**
	comp=Z,9.3nm,0.9s,mb4.4						
KULM	**Kulim**	**44.89**	**255**	*e*P	**P**	**03 34 13.6**	**+0.5**
AS31	**Alice Springs**	**46.21**	**193**	*e*P	**P**	**03 34 22.5**	**-1.0**
ASAR	**Alice Springs**	**46.22**	**193**	P	**P**	**03 34 22.2**	**-1.3**
	comp=Z,1.4nm,0.4s,mb3.9,baz=14,slow=8.1,SNR=18						
ASAR				PcP	PcP	03 35 55.5	-1.5
	comp=Z,2.0nm,1.0s,baz=18,slow=2.1,SNR=5.8						
ASAR				LR	LR	03 52 57.2	
	comp=Z,67nm,18.2s,baz=175,slow=35						
ASAR	**Alice Springs**	**46.22**	**193**	P	**P**	**03 34 22.3**	**-1.2**
ASAR						03 35 55.6	
PSI	**Prapat**	**47.53**	**253**	P	**P**	**03 34 35.1**	**+1.4**
	comp=Z,7.7nm,0.7s,mb4.5,baz=78,slow=3.6,SNR=6.9						
BILL	**Bilibino**	**48.30**	**11**⇑	*e*P	**P**	**03 34 39.4**	**-0.2**
BILL				*e*		03 36 00.7	
BILL				*e*		03 36 29.7	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2						
BILL				MLR	MLR		
	comp=Z,800nm,17.0s						
MBWA	**Marble Bar**	**48.76**	**210**	*e*P	**P**	**03 34 42.6**	**-0.5**
	comp=Z,27nm,1.5s,mb4.7						
JIRN	**Jiri**	**52.30**	**289**	*e*P	**P**	**03 35 11.7**	**+2.0**
	comp=Z,8.3nm,0.4s,mb4.8						
GUN	**Gumba**	**52.54**	**289**	*e*P	**P**	**03 35 13.1**	**+1.6**
	comp=Z,8.6nm,0.3s,mb4.9						
PKI	**Pulchoki**	**53.00**	**289**	*e*P	**P**	**03 35 16.0**	**+1.1**
KKN	**Kakani**	**53.08**	**289**	*e*P	**P**	**03 35 16.9**	**+1.4**
	comp=Z,6.7nm,0.2s,mb4.9						
KKN	**Kakani**	**53.08**	**289**	*e*P	**P**	**03 35 16.9**	**+1.4**
KKN				pmax	pmax		
	comp=Z,7.0nm,0.3s,mb4.9						
DMN	**Daman**	**53.26**	**289**	*e*P	**P**	**03 35 17.9**	**+1.1**
STKA	**Stephens Creek**	**53.41**	**182**	P	**P**	**03 35 15.8**	**-2.1**
	comp=Z,4.0nm,0.7s,mb4.2,baz=0.9,slow=4.4,SNR=7.4						
STKA	**Stephens Creek**	**53.41**	**182**	*e*P	**P**	**03 35 15.7**	**-2.2**
	comp=Z,3.2nm,0.6s,mb4.2						
GKN	**Gorkha**	**53.62**	**289**	*e*P	**P**	**03 35 20.3**	**+0.9**
	comp=Z,12nm,0.4s,mb5.0						
ZAL	**Zalesovo**	**54.52**	**321**	P	**P**	**03 35 25.8**	**-0.2**
	comp=Z,4.4nm,0.5s,mb4.5,baz=13,slow=8.7,SNR=11						
ZAL	**Zalesovo**	**54.52**	**321**	P	**P**	**03 35 25.8**	**-0.2**
KOLN	**Koldanda**	**54.56**	**289**	*e*P	**P**	**03 35 27.6**	**+1.4**
	comp=Z,6.6nm,0.3s,mb4.9						
MK31	**Makanchi Array**	**55.08**	**313**	P	**P**	**03 35 29.8**	**-0.2**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
MKAR	**Makanchi Array**	**55.08**	**313**	P	**P**	**03 35 30.9**	**+0.9**
	comp=Z,8.7nm,0.8s,mb4.5,baz=94,slow=9.9,SNR=50						
MKAR				PcP	PcP	03 36 28.2	-1.5
	comp=Z,3.0nm,0.8s,baz=88,slow=3.6,SNR=6.7						
MKAR	**Makanchi Array**	**55.08**	**313**	P	**P**	**03 35 30.9**	**+0.9**
MKAR				PcP	PcP	03 36 28.2	-1.5
NVS	**Novosibirsk**	**55.60**	**322**	*e*P	**P**	**03 35 31.9**	**-1.8**
KDAK	**Kodiak Island**	**57.77**	**35**	P	**P**	**03 35 48.5**	**-0.5**
	comp=Z,3.3nm,0.3s,mb4.6,baz=319,slow=12,SNR=12						
TKM2	**Tokmak 2**	**59.77**	**308**	P	**P**	**03 36 03.7**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
AAK	**Ala-Archa**	**60.59**	**308**	*e*P	**P**	**03 36 08.8**	**+0.4**
AAK				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.1						
AAK	**Ala-Archa**	**60.59**	**308**	*e*P	**P**	**03 36 08.8**	**+0.4**
	comp=Z,2.5nm,0.6s,mb4.2						
VOSK	**Vostochnaya**	**62.64**	**319**	P	**P**	**03 36 20.0**	**-2.2**
VOSK				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.6						
CHKZ	**Chkalovo**	**62.85**	**320**	*e*P	**P**	**03 36 22.9**	**-0.7**
CHKZ				*e**PP	pP	03 36 52.2	-3.1
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
CHKZ	**Chkalovo**	**62.85**	**320**	*e*P	**P**	**03 36 22.9**	**-0.7**
	comp=Z,7.0nm,0.8s,mb4.5						
CHKZ				*e*pP	pP	03 36 52.2	-3.1
BVA0	**Borovoye Array**	**62.99**	**319**	*e*P	**P**	**03 36 24.8**	**+0.3**
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.2						
BRVK	**Borovoye**	**63.06**	**320**	⇑P	**P**	**03 36 25.5**	**+0.6**
	SNR=8.1						
BRVK	**Borovoye**	**63.06**	**320**	*e*P	**P**	**03 36 24.8**	**-0.1**
BRVK				*e**PP	pP	03 36 53.8	-2.9
BRVK				*e*	pP	03 37 00.0	+3.3
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
BRVK	**Borovoye**	**63.06**	**320**	*e*P	**P**	**03 36 24.8**	**-0.1**
	comp=Z,10nm,1.1s,mb4.6						
BRVK				*e*pP	pP	03 36 53.8	-2.9
BRVK				*e*PcP	PcP	03 36 60.0	-1.6
KKAR	**Karatay Array**	**63.47**	**308**	*i* P	**P**	**03 36 28.8**	**+1.1**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
ZRNK	**Zerenda**	**63.83**	**319**	*e*P	**P**	**03 36 29.9**	**-0.1**
ZRNK				*e**PP	pP	03 36 59.6	-2.3
ZRNK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
ZRNK	**Zerenda**	**63.83**	**319**	*e*P	**P**	**03 36 29.9**	**-0.1**
	comp=Z,12nm,1.0s,mb4.7						
ZRNK				*e*pP	pP	03 36 59.6	-2.3
DAWY	**Dawson**	**64.84**	**28**	*e*P	**P**	**03 36 35.6**	**-1.0**
DAWY				*e*	pP	03 37 07.4	-1.1
INK	**Inuvik**	**67.23**	**24**	P	**P**	**03 36 51.3**	**-0.6**
	comp=Z,4.0nm,0.5s,mb4.5,baz=290,slow=7.1,SNR=19						
INK	**Inuvik**	**67.23**	**24**	*e*P	**P**	**03 36 51.1**	**-0.8**
INK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
INK	**Inuvik**	**67.23**	**24**	*e*P	**P**	**03 36 51.1**	**-0.7**
	comp=Z,10nm,1.0s,mb4.6						
ARU	**Arti**	**69.55**	**324**⇓	*i*P	**P**	**03 37 04.8**	**-1.5**
ARU				*e*PPP		03 41 20.1	
ARU				*e*S	S	03 46 05.4	+1.9
ARU				*e*SS	SS	03 50 34.7	+1.1
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
DLBC	**Dease Lake**	**69.69**	**34**	P	**P**	**03 37 07.5**	**+0.4**
	comp=Z,6.1nm,0.9s,mb4.3,baz=261,slow=8.3,SNR=7.6						
AB31	**Akbulak array**	**69.90**	**316**	*i* P	**P**	**03 37 08.2**	**-0.3**
AB31				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.8						
YKA	**Yellowknife Ar**	**76.08**	**28**	P	**P**	**03 37 44.2**	**-0.6**
	comp=Z,1.7nm,0.3s,mb4.1,baz=288,slow=5.6,SNR=22						
YKA	**Yellowknife Ar**	**76.08**	**28**	P	**P**	**03 37 44.2**	**-0.6**
A04A	**Legoe Bay, Lum**	**76.14**	**43**	⇑P	**P**	**03 37 45.6**	**+0.5**
	baz=76						
E03A	**Lebam**	**76.22**	**45**	⇑P	**P**	**03 37 46.1**	**+0.5**
	baz=76						
D05A	**Enumclaw**	**77.06**	**44**	⇓P	**P**	**03 37 50.9**	**+0.6**
	baz=77						
C05A	**Tolt Reservoir**	**77.09**	**44**	⇓P	**P**	**03 37 50.9**	**+0.3**
	baz=77						
F04A	**Amboy**	**77.17**	**46**	⇑P	**P**	**03 37 51.0**	**+0.1**
	baz=77						
G04A	**Mulino**	**77.35**	**46**	⇓P	**P**	**03 37 52.4**	**+0.4**
	baz=77						
E05A	**Randle**	**77.40**	**45**	⇓P	**P**	**03 37 52.0**	**-0.2**
	baz=77						
J03A	**Ideyld Park**	**77.59**	**48**	⇓P	**P**	**03 37 53.0**	**-0.3**
	baz=77						
H04A	**Detroit Lake**	**77.71**	**47**	⇑P	**P**	**03 37 53.8**	**-0.2**
	baz=78						
F05A	**White Salmon**	**77.82**	**45**	⇓P	**P**	**03 37 55.2**	**+0.7**
	baz=78						
N02C	**Big Bar**	**78.15**	**51**	⇑P	**P**	**03 37 55.8**	**-0.6**
	baz=78						
YBH	**Yreka Blue Hor**	**78.28**	**50**	*e*P	**P**	**03 37 57.9**	**+0.8**
YBH				pmax	pmax		
	comp=Z,12nm,1.3s						
YBH	**Yreka Blue Hor**	**78.28**	**50**	*e*P	**P**	**03 37 57.9**	**+0.8**
	comp=Z,12nm,1.3s,mb4.4						
YBH	**Yreka Blue Hor**	**78.28**	**50**	⇓P	**P**	**03 37 57.3**	**+0.2**
	baz=78,SNR=6.7						
M02C	**Callahan**	**78.29**	**50**	⇑P	**P**	**03 37 57.1**	**-0.1**
	baz=78						
H05A	**Madras**	**78.37**	**47**	⇑P	**P**	**03 37 57.4**	**-0.2**
	baz=78						
KEV	**Kevo**	**78.46**	**342**	*e*p	**P**	**03 37 56.3**	**-1.8**
	comp=Z,8.0nm,1.0s,mb4.3						
KEV	**Kevo**	**78.46**	**342**	*e*P	**P**	**03 37 56.3**	**-1.8**
KEV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
**I05A

baz=80,SNR=6.9
OHCM Honcut 79.96 52 *e*P P 03 38 05.6 -0.6
M06C Likely Place G 80.04 50 ⇑P P 03 38 07.1 +0.4
baz=80
H08A Prairie City 80.13 46 ⇓P P 03 38 07.4 +0.2
baz=80
EDM Edmonton 80.15 37 *e*P P 03 38 07.1 -0.1
O05C Quincy 80.16 51 ⇑P P 03 38 07.3 0.0
baz=80
Q04C Lincoln 80.20 52 ⇓P P 03 38 07.4 -0.2
baz=80
WENL Wente Brothers 80.34 53 ⇓P P 03 38 07.6 -0.7
baz=80
K07A Rock Creek Ran 80.39 48 P P 03 38 09.0 +0.5
baz=80,SNR=9.0
I08A Drewsey 80.42 47 ⇓P P 03 38 08.8 +0.1
baz=80
JOF Joensuu 80.49 335 *ep* P 03 38 07.7 -1.4
comp=Z,2.8nm,0.3s,mb4.4
JOF Joensuu 80.49 335 *e*P P 03 38 07.7 -1.4
JOF pmax pmax
comp=Z,3.0nm,0.3s,mb4.4
L07A Adell 80.56 49 ⇑P P 03 38 10.0 +0.5
baz=80,SNR=13
BEKR Beckwourth 80.59 51 P P 03 38 09.8 +0.2
baz=80,SNR=15
P05C Yuba Gap, Truc 80.61 52 ⇑P P 03 38 09.0 -0.7
baz=80
VRHR Novokhopersk 80.65 321 *e*P P 03 38 09.5 -0.4
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
VRHR pmax pmax
comp=N,4.0nm,0.3s
VRHR pmax pmax
comp=E,6.0nm,0.5s
N06A Buffalo Meadow 80.66 50 ⇑P P 03 38 09.8 -0.2
baz=80,SNR=9.7
S04C Ingram Canyon, 80.70 53 ⇑P P 03 38 10.3 +0.1
baz=80
LAVA Lava Cap Winer 80.70 52 ⇓P P 03 38 10.1 -0.1
baz=80,SNR=6.3
H09A Durkee 80.75 46 ⇑P P 03 38 10.7 +0.3
baz=81
O06A Flanigan 80.87 50 ⇑P P 03 38 11.2 +0.1
baz=81,SNR=12
K08A Mann Creek Ran 80.90 48 P P 03 38 11.6 +0.4
baz=81,SNR=9.6
WVOR Wild Horse Val 80.90 48 *e*P P 03 38 10.2 -1.1
WVOR pmax pmax
comp=Z,17nm,1.5s,mb4.5
WVOR Wild Horse Val 80.90 48 *e*P P 03 38 10.2 -1.1
comp=Z,17nm,1.5s,mb4.5
PACP Pacheco Peak 80.90 54 ⇓P P 03 38 10.9 -0.4
baz=81
HAST UC Hastings Re 80.92 55 ⇓P P 03 38 10.0 -1.4
baz=81
I09A Lost Marbles R 80.95 46 ⇑P P 03 38 11.8 +0.3
baz=81,SNR=5.4
P06A Stead Airport, 80.99 51 ⇑P P 03 38 11.9 +0.2
baz=81
L08A Fields 81.19 48 ⇑P P 03 38 13.3 +0.5
baz=81,SNR=9.8
R05C Kirkwood Meado 81.21 52 ⇑P P 03 38 12.8 -0.1
baz=81
CMB Columbia Colle 81.21 53 *e*P P 03 38 12.9 0.0
CMB pmax pmax
comp=Z,18nm,1.3s,mb4.5
CMB Columbia Colle 81.21 53 *e*P P 03 38 12.9 0.0
comp=Z,18nm,1.3s,mb4.5
CMB Columbia Colle 81.21 53 ⇓P P 03 38 12.9 0.0
baz=81,SNR=11
WCN Washoe City 81.23 51 ⇓P P 03 38 13.1 +0.2
baz=81
K09A Rome 81.43 48 P P 03 38 14.2 +0.1
baz=81,SNR=7.9
M08A Happy Creek Ra 81.44 49 ⇑P P 03 38 14.5 +0.4
baz=81
S05C Merced 81.50 53 ⇑P P 03 38 14.2 -0.2
baz=81
U04C Hernandez Rese 81.51 54 ⇑P P 03 38 13.1 -1.4
baz=81
O07A Toulon 81.55 50 ⇑P P 03 38 14.8 +0.1
baz=81
S06C San Francisco 81.66 53 ⇓P P 03 38 14.4 -0.9
baz=82
L09A Wilkinson Ranc 81.72 48 ⇑P P 03 38 16.0 +0.4
baz=82
R06C Coleville 81.73 52 ⇑P P 03 38 16.0 +0.4
baz=82,SNR=5.1
OBN Obninsk 81.74 326 ⇓*i*P P 03 38 15.5 -0.2
OBN pmax pmax
comp=Z,24nm,1.7s,mb4.5
P07A Fallon 81.77 51 ⇑P P 03 38 15.3 -0.5
baz=82
PKD Parkfield 81.84 55 ⇓P P 03 38 16.4 +0.2
baz=82
N08A GE Springer Mi 81.85 49 ⇓P P 03 38 16.5 +0.2
baz=82,SNR=7.0
VRSR Storozhevoye 82.00 322 *d i*P P 03 38 16.5 -0.6
VRSR pmax pmax
comp=Z,30nm,1.0s,mb4.9
VRSR pmax pmax
comp=N,10.0nm,0.9s
VRSR pmax pmax
comp=E,20nm,1.0s
T06C Milleton Lake 82.08 53 ⇑P P 03 38 17.1 -0.4
baz=82,SNR=11
M09A Marrel Ranch, 82.09 49 ⇑P P 03 38 17.9 +0.4
baz=82
N09A Rock Creek Ran 82.25 49 ⇑P P 03 38 18.6 +0.3
baz=82,SNR=5.5
KCC Kaiser Creek 82.26 53 ⇓P P 03 38 17.9 -0.5
baz=82
P08A Dixie Valley 82.29 50 ⇑P P 03 38 19.2 +0.6
baz=82
ZEI Tsey 82.44 313 *e*P P 03 38 19.5 +0.2
ZEI pmax pmax
comp=Z,28nm,1.1s,mb4.8
MLAC Mammoth Lakes 82.50 53 ⇑P P 03 38 19.1 -0.6
baz=82
NVAR Mina Array Bea 82.60 52 P P 03 38 20.7 +0.5
comp=Z,5.4nm,0.8s,mb4.3,baz=271,slow=4.2,SNR=49
NVAR Mina Array Bea 82.60 52 P P 03 38 20.7 +0.5
RCTC Rector, Farmer 82.69 54 ⇑P P 03 38 19.9 -0.7
baz=82
Q08A Gabbs 82.71 51 ⇓P P 03 38 21.0 +0.3
baz=82
HELL Mitchell Peak, 82.71 54 ⇓P P 03 38 20.3 -0.5
baz=82,SNR=8.9
O09A Fish Creek Ran 82.75 50 ⇓P P 03 38 21.4 +0.5
baz=83,SNR=5.1
PKM Peak Mountain 82.77 55 ⇓P P 03 38 19.8 -1.2
baz=83
R08A Mina 82.77 52 ⇓P P 03 38 21.3 +0.2
baz=83
KIV Kislovodsk 82.79 314 ⇑P P 03 38 21.7 +0.6
SNR=6.2
KIV Kislovodsk 82.79 314 *d i*P P 03 38 22.5 +1.3
KIV *e* 03 41 33.5
KIV pmax pmax
comp=Z,32nm,1.0s,mb5.0
KIV Kislovodsk 82.79 314 *e*P P 03 38 21.8 +0.6
comp=Z,34nm,1.0s,mb5.0
MTUM Tungsten Hills 82.81 53 *e*P P 03 38 21.7 +0.4
GNI Garni 82.85 310 ⇓P P 03 38 23.6 +2.2
SNR=5.5
GNI Garni 82.85 310 *e*P P 03 38 22.3 +0.8
GNI pmax pmax
comp=Z,15nm,1.0s
GNI Garni 82.85 310 *e*P P 03 38 22.3 +0.9
comp=Z,15nm,1.0s,mb4.7
KAF Kangasniemi 82.89 335 *ep* P 03 38 19.9 -1.8
comp=Z,1.2nm,0.4s,mb4.0
KAF Kangasniemi 82.89 335 *e*P P 03 38 19.9 -1.8
KAF pmax pmax
comp=Z,10.0nm,0.4s,mb4.9
VES Vestal, Richgr 82.98 54 ⇑P P 03 38 20.8 -1.3
baz=83,SNR=5.4
N10A Dunphy 83.02 49 ⇑P P 03 38 22.8 +0.5
baz=83
TIN Tinemaha 83.17 53 ⇑P P 03 38 22.8 -0.3
baz=83
O10A Cortez Mining, 83.19 49 ⇑P P 03 38 23.9 +0.7
baz=83
M11A Holland Ranch, 83.24 48 ⇓P P 03 38 24.1 +0.7
baz=83
HLID Hailey 83.34 46 *e*P P 03 38 24.1 +0.1
comp=Z,7.0nm,1.5s,mb4.2
FINES FINESS Array B 83.35 335 P P 03 38 22.6 -1.4
comp=Z,1.6nm,0.4s,mb4.2,baz=71,slow=5.2,SNR=34
P10A Eureka 83.47 50 ⇑P P 03 38 24.8 +0.2
baz=83
ISA Isabella 83.50 54 ⇑P P 03 38 24.0 -0.8
baz=83
CWC Cottonwood Cre 83.51 53 ⇑P P 03 38 24.1 -0.8
baz=83
N11A Elko Archery C 83.52 49 ⇓P P 03 38 25.5 +0.6
baz=83
R09A Tonopah 83.57 51 ⇓P P 03 38 25.3 +0.1
baz=83,SNR=13
S09A Goldfield 83.65 52 ⇑P P 03 38 25.7 +0.1
baz=84,SNR=10
HRY Holter Researc 83.70 42 *e*P P 03 38 25.8 0.0
HRY *e* pP 03 38 59.4 +0.2
GRAC Grapevine Rang 83.82 53 ⇑P P 03 38 26.5 +0.1
baz=84
O11A Cowboy Ranch, 83.85 49 ⇑P P 03 38 26.8 +0.2
baz=84
M12A Wells 83.85 48 ⇑P P 03 38 27.2 +0.6
baz=84,SNR=6.3
DAC Darwin (Calif) 83.93 53 *e*P P 03 38 26.9 -0.1
DAC *e**PP pP 03 38 59.4 -1.0
DAC pmax pmax
comp=Z,6.0nm,1.4s,mb4.1
DAC Darwin (Calif) 83.93 53 *e*P P 03 38 26.9 -0.1
comp=Z,5.9nm,1.4s,mb4.1
DAC *ep*P pP 03 38 59.4 -1.0
N12A Clover Valley, 83.99 48 ⇓P P 03 38 27.7 +0.4
baz=84
P11A Circle Ranch, 84.00 50 ⇓P P 03 38 27.7 +0.3
baz=84
MPMC Manual Prospec 84.09 54 ⇓P P 03 38 28.1 +0.2
baz=84,SNR=7.4
R10A Warm Springs 84.11 51 ⇓P P 03 38 28.2 +0.3
baz=84
EDW2 Edwards Air Fo 84.17 55 ⇑P P 03 38 27.3 -0.9
baz=84
LRMC Laurel Mountai 84.17 54 ⇓P P 03 38 28.3 +0.1
baz=84,SNR=9.1
M13A Montello 84.39 48 ⇑P P 03 38 29.5 +0.2
baz=84
FURC Furnace Creek, 84.41 53 P P 03 38 29.7 +0.3
baz=84,SNR=6.0
O12A Currie 84.43 49 P P 03 38 29.9 +0.4
baz=84,SNR=7.4
P12A McGill 84.64 50 ⇓P P 03 38 30.9 +0.4
baz=84
QLMT Earthquake Lak 84.76 44 *e*P P 03 38 31.9 +0.7
U10A Ash Meadows, A 84.82 53 ⇑P P 03 38 31.8 +0.4
baz=85,SNR=5.6
Q12A Willow Creek R 84.87 50 ⇑P P 03 38 32.0 +0.3
baz=85
GSC Goldstone 84.90 54 ⇓P P 03 38 31.7 -0.2
baz=85,SNR=5.8
SHOC Shoshone 85.06 53 ⇓P P 03 38 32.5 -0.2
baz=85
HEC Hector,Ludlow 85.44 54 ⇓P P 03 38 34.4 -0.1
baz=85
TUQ Turquoise Mtn. 85.51 54 ⇓P P 03 38 35.1 +0.2
baz=85,SNR=7.8
SPUT South Promonto 85.59 47 *e*P P 03 38 35.0 -0.3
109C Camp Elliot, M 85.61 56 ⇓P P 03 38 34.5 -0.9
baz=85
DUG Dugway 85.81 48 *e*P P 03 38 36.3 -0.1
DUG pmax pmax
comp=Z,21nm,1.3s,mb4.7
DUG Dugway 85.81 48 *e*P P 03 38 36.3 -0.1
comp=Z,21nm,1.3s,mb4.7
LOHW Long Hollow 85.83 45 *e*P P 03 38 36.1 -0.4
comp=Z,6.4nm,1.3s,mb4.2
PFO Pinyon Flat Ob 85.83 56 ⇓P P 03 38 36.2 -0.3
baz=86,SNR=5.8
GMRC Granite Mounta 85.97 54 ⇑P P 03 38 37.2 +0.1
baz=86
BELC Belle Mtn. 86.02 55 ⇓P P 03 38 37.2 -0.3
baz=86
HWUT Hardware Ranch 86.06 47 *e*P P 03 38 37.6 -0.1
comp=Z,15nm,1.1s,mb4.7
U12A Valley of Fire 86.14 52 ⇓P P 03 38 38.2 +0.2
baz=86
MONP Monument Peak 86.14 56 ⇓P P 03 38 36.9 -1.1
baz=86
V12A Nelson 86.19 53 ⇓P P 03 38 38.7 +0.5
baz=86,SNR=7.4
DVTC Desert V Tower 86.48 56 ⇓P P 03 38 40.0 +0.3
baz=86
CCUT Cedar City 86.53 51 *e*P P 03 38 40.2 +0.3
SWSC Sam W. Stewart 86.60 56 ⇓P P 03 38 39.9 -0.4
baz=86
IRM Iron Mountain 86.60 55 ⇑P P 03 38 40.4 +0.1
baz=86
DAU Daniels Canyon 86.79 48 *e*P P 03 38 41.5 +0.3
PDAR Pinedale Array 86.89 45 P P 03 38 41.4 -0.3
comp=Z,1.5nm,0.3s,mb3.8,baz=286,slow=1.8,SNR=12
MSU Marysvale 86.97 50 *e*P P 03 38 42.6 +0.5
MSU *e**PP pP 03 39 16.8 +1.1
W13A Hualapai Mount 87.17 53 ⇓P P 03 38 43.2 +0.2
baz=87
Y12C Blythe 87.25 55 ⇓P P 03 38 43.6 +0.2
baz=87
GLA Glamis 87.30 56 ⇓P P 03 38 44.0 +0.4
baz=87,SNR=6.4
PDMCI Parker Dam,Lak 87.31 54 ⇑P P 03 38 43.9 +0.2
baz=87,SNR=6.5
X13A Yucca 87.42 54 ⇑P P 03 38 44.5 +0.3
baz=87,SNR=7.0
W14A Seligman 87.72 53 ⇓P P 03 38 46.2 +0.6
baz=88,SNR=5.6
Y13A Salome 87.75 54 ⇑P P 03 38 46.2 +0.4
baz=88,SNR=5.5
AKASG Malin Array Be 87.78 325 P P 03 38 44.0 -1.9
comp=Z,0.3nm,0.3s,mb3.6,baz=45,slow=4.7,SNR=13
X14A Yava 88.18 54 ⇑P P 03 38 48.6 +0.8
baz=88,SNR=5.6
Y14A Wickenburg 88.32 54 ⇓P P 03 38 48.9 +0.4
baz=88,SNR=11
W15A Williams 88.34 53 ⇓P P 03 38 49.5 +1.0
baz=88
Z14A Wintersburg 88.61 55 ⇓P P 03 38 50.2 +0.3
baz=88
X15A Humboldt 88.66 53 ⇑P P 03 38 50.9 +0.8
baz=88,SNR=10
WUAZ Wupatki 88.85 52 *e*P P 03 38 51.9 +0.9
comp=Z,17nm,1.4s,mb4.8
WUAZ *ep*P pP 03 39 25.7 +1.0
NB2 NORSAR Subarra 89.07 339 P P 03 38 49.8 -2.2
comp=Z,0.2nm,0.7s,mb3.2,baz=54,slow=5.3
NOA NORSAR Array B 89.07 339 P P 03 38 49.6 -2.4
comp=Z,1.1nm,0.8s,mb3.8,baz=52,slow=4.4,SNR=6.2
NOA LR LR 04 19 16.4
comp=Z,15nm,18.6s,baz=30,slow=36
PV10 Paradox Valley 89.24 49 *e*P P 03 38 52.7 -0.1
115A Sonoran Desert 89.43 55 ⇓P P 03 38 54.5 +0.8
baz=89
PV01 Paradox Valley 89.68 49 *e*P P 03 38 54.7 -0.1
PV01 *ep*P pP 03 39 25.6 -3.0
116A Eloy 89.89 55 ⇑P P 03 38 56.4 +0.6
baz=90
SMCO Snowmass 90.29 47 *e*P P 03 38 58.3 +0.6
comp=Z,8.7nm,1.0s,mb4.6
SMCO *ep*P pP 03 39 29.6 -1.9
BR131 Keskin Array S 90.72 314 *e*P P 03 38 58.9 -0.8
comp=Z,1.8nm,0.8s,mb4.2
BRTR Keskin Array B 90.72 314 P P 03 38 58.6 -1.1
comp=Z,2.9nm,1.0s,mb4.3,baz=116,slow=2.9,SNR=12
ISCO Idaho Springs 90.91 46 *e*P P 03 39 01.1 +0.5
ISCO *e**PP pP 03 39 33.0 -1.4
ISCO pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
ISCO Idaho Springs 90.91 46 *e*P P 03 39 01.1 +0.5
comp=Z,6.7nm,1.2s,mb4.5
ISCO *ep*P pP 03 39 33.0 -1.3
TORD Torodi Ar. Bea 129.15 310 PKP PKPdf 03 45 04.6 +0.4
comp=Z,0.5nm,0.3s,baz=38,slow=1.6,SNR=25
DBIC Dimbokro 138.26 309 PKP PKPdf 03 45 23.3 +2.0
comp=Z,0.8nm,0.3s,baz=186,slow=11,SNR=6.8
PLCA Paso Flores 145.36 131 PKPbc PKPbc 03 45 33.5 -0.6
comp=Z,2.9nm,0.4s,baz=230,slow=4.8,SNR=21
PLCA Paso Flores 145.36 131 *e*PKPdf PKPdf 03 45 33.5 -0.4
EFI East Falkland 145.67 156 *e*PKP2 PKPab 03 45 34.2 -1.3
LPAZ La Paz 149.32 85 PKP PKPdf 03 45 42.0 +1.5
comp=Z,8.2nm,0.7s,baz=319,slow=2.8,SNR=6.3
LPAZ PKPbc PKPbc 03 45 46.4 +1.3
comp=Z,8.2nm,0.7s,baz=333,slow=3.3,SNR=31
LPAZ La Paz 149.32 85 *e*PKPdf PKPdf 03 45 41.6 +1.1
LPAZ *e*PKPbc PKPbc 03 45 46.3 +1.3
SAML Samuel 151.04 68 *e*PKPdf PKPdf 03 45 43.3 0.0
SAML *e*PKPbc PKPbc 03 45 48.8 -0.3
SAML *e*PKPab PKPab 03 45 55.9 -1.2

IDC ***21*** *03:34:02.6±1.2,2680N×9271E,h0km,mb3.7/4,mb1 3.9/4, mb1mx3.5/20,mbtmp3.7/4,MS3.0/1,Ms1 3.0/1, ms1mx2.3/26,Error ellipse: s-maj=79.9km s-min=25.1km az=52.0*
ISCJB ***21*** *03:34:14.3±2.3,271N±0.1×932E±0.3,h110km±22km, mb3.7/5,Error ellipse: s-maj=39.3km s-min=20.4km az=158.1*

ISC 21 03:34:16.6±2.1,272N±01×931E±03,h115km±22km,n8, σ1§05/8,mb3.7/5,Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TURI	**Tura**	**2.92**	**237**	*e*PN		Pn		**03 35 01.5**	**-0.2**
TURI				*e*SN		Sn		**03 35 46.5**	**+10**
LSA	**Lhasa**	**3.03**	**327**	*e*P		Pn		**03 35 03.5**	**+0.3**
MKAR	**Makanchi Array**	**21.36**	**339**	P		P		**03 38 54.0**	**-0.6**
	2.7nm,0.7s,mb3.7,baz=142,slow=11,SNR=14								
SONM	**Songino Array**	**23.13**	**23**	LR		LR		03 50 10.8	
	comp=Z,34nm,19.8s,baz=314,slow=41								
AKASG	**Malin Array Be**	**53.11**	**314**	P		P		**03 43 26.8**	**+4.6**
	0.4nm,0.4s,mb3.8,baz=80,slow=6.9,SNR=4.2								
WRA	**Warramunga Arr**	**61.58**	**135**	P		P		**03 44 22.7**	**+0.9**
	1.1nm,0.5s,mb4.1,baz=324,slow=7.3,SNR=10								
ASAR	**Alice Springs**	**64.11**	**138**	P		P		**03 44 37.5**	**-0.9**
	0.5nm,0.4s,mb3.7,baz=324,slow=6.2,SNR=9.3								
TORD	**Torodi Ar. Bea**	**85.29**	**282**	P		P		**03 46 40.9**	**+0.3**
	0.4nm,0.9s,mb3.3,baz=53,slow=4.2,SNR=4.4								

BJI ***21*** *03:39:34.9,6300N×150.30W,h105km,mB4.9,mb4.8*
ISCJB ***21*** *03:39:36.2±0.2,6302N±002×15050W±005,h107km, mb4.3/54,Error ellipse: s-maj=3.5km s-min=3.2km az=104.4*
NEIC ***21*** *03:39:38.0,6297N×150.34W,h105km,mb4.4/26,After AEIC.*
IDC ***21*** *03:39:38.6±0.6,6316N×150.45W,h110km±3km,mb3.8/21, mb1 4.0/22,mb1mx3.9/25,mbtmp4.2/22,MS3.1/6, Ms1 3.1/6,ms1mx2.8/31,Error ellipse: s-maj=15.2km s-min=8.3km az=39.0*

ISC 21 03:39:37.5±0.2,6301N±002×15050W±005,h109km, h109km±1.1km;pP-P,n116,σ1§22/118,mb4.3/54,6C-7D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	**0.58**	**341**	P		Pn		**03 39 55.3**	**+0.5**
KTH				S		Sn		**03 40 07.5**	**-0.2**
PMR	**Palmer**	**1.56**	**155**	⇓*e*Pn		Pn		**03 40 04.3**	**-0.6**
PMR				*e*Sn		Sn		**03 40 25.1**	**-0.6**
FIB	**Fire Island**	**1.85**	**175**	P		Pn		**03 40 09.3**	**+0.8**
RC01	**Rabbit Creek A**	**1.96**	**169**	P		Pn		**03 40 09.4**	**-0.4**
RC01				S		Sn		**03 40 33.1**	**-1.5**
COLA	**College**	**2.21**	**31**	*e*Pn		Pn		**03 40 12.8**	**-0.3**
COLA				*e*Sn		Sn		**03 40 38.5**	**-1.9**
SLKM	**Skilak Lake**	**2.51**	**177**	*e*Pn		Pn		**03 40 16.6**	**-0.3**
SLKM				*e*Sn		Sn		**03 40 45.2**	**-2.0**
TTA	**Tatalina**	**2.52**	**271**	⇓*i*Pn		Pn		**03 40 17.8**	**+0.7**
TTA				*e*Sn		Sn		**03 40 44.6**	**-2.9**
DIV	**Divide**	**2.91**	**128**	P		Pn		**03 40 20.8**	**-1.5**
DIV				S		Sn		**03 40 54.0**	**-2.8**
SEW	**Seward**	**2.96**	**170**	P		Pn		**03 40 22.1**	**-0.7**
SEW				S		Sn		**03 40 53.8**	**-3.9**
SVW2	**Sparrevohn**	**3.06**	**234**	*e*Pn		Pn		**03 40 24.6**	**+0.4**
SVW2				*e*Sn		Sn		**03 40 59.9**	**-0.5**
MENT	**Mentasta**	**3.10**	**88**	*e*P		Pn		**03 40 24.4**	**-0.3**
IMA2	**Indian Mountai**	**3.37**	**337**	*e*Pn		Pn		**03 40 29.0**	**+0.7**
IMA2				*e*Sn		Sn		**03 41 02.2**	**-5.5**
BMRM	**Bremner River**	**3.45**	**124**	P		Pn		**03 40 28.1**	**-1.3**
COLD	**Coldfoot**	**4.24**	**2**	P		Pn		**03 40 40.8**	**+0.8**
COLD				S		Sn		**03 41 27.3**	**-1.2**
EGAK	**Eagle**	**4.49**	**63**	*e*Pn		Pn		**03 40 42.6**	**-0.8**
EGAK				*e*				03 41 20.9	
DAWY	**Dawson**	**5.08**	**73**	⇓*e*Pn		Pn		**03 40 50.9**	**-0.5**
DAWY				*e*Sn		Sn		**03 41 49.2**	**+0.4**
KDAK	**Kodiak Island**	**5.34**	**192**	P		Pn		**03 40 53.5**	**-1.4**
	93nm,0.3s,baz=41,slow=7.8,SNR=2074								
KDAK				S		Sn		**03 41 52.4**	**-2.7**
	57nm,0.3s,baz=300,slow=21,SNR=17								
KDAK	**Kodiak Island**	**5.34**	**192**	⇑*i*Pn		Pn		**03 40 53.8**	**-1.0**
	315nm,0.6s								
KDAK				*e*Sn		Sn		**03 41 52.2**	**-2.9**
PNL	**Peninsula**	**6.30**	**117**	P		Pn		**03 41 07.1**	**-0.7**
WHY	**Whitehorse**	**7.75**	**101**	P		Pn		**03 41 25.6**	**-1.9**
CHGN	**Chignik**	**7.82**	**214**	*e*P		Pn		**03 41 27.3**	**-1.2**
TNA	**Tin City**	**7.99**	**296**	P		Pn		**03 41 32.7**	**+1.9**
SKAG	**Skagway**	**8.13**	**109**	*e*Pn		Pn		**03 41 31.4**	**-1.3**
SKAG				Sn		Sn		**03 42 59.2**	**-3.6**
INK	**Inuvik**	**8.78**	**45**	P		Pn		**03 41 39.9**	**-1.6**
	5.5nm,0.3s,baz=239,slow=16,SNR=146								
INK				LR		LR		03 45 29.5	
	comp=Z,90nm,21.2s,baz=125,slow=41								
INK	**Inuvik**	**8.78**	**45**	⇑*i*Pn		Pn		**03 41 41.2**	**-0.2**
	264nm,1.0s								
INK				*e*Sn		Sn		**03 43 16.2**	**-2.3**
SIT	**Sitka**	**9.64**	**121**	P		Pn		**03 41 51.9**	**-1.2**
DLBC	**Dease Lake**	**10.99**	**105**	P		Pn		**03 42 10.1**	**-1.3**
	0.2nm,0.3s,baz=279,slow=9.5,SNR=3.4								
DLBC				LR		LR		03 46 18.0	
	comp=Z,127nm,18.9s,baz=158,slow=36								
YKA	**Yellowknife Ar**	**16.32**	**76**	P		Pn		**03 43 18.9**	**-1.2**
	baz=283,slow=9.4,SNR=32								
YKA				pP		pP		03 43 42.0	+1.0
	baz=286,slow=10,SNR=4.4								
YKA				LR		LR		03 49 58.8	
	comp=Z,41nm,20.5s,baz=280,slow=38								
YKA				ScP		ScP		03 51 29.6	-1.7
	baz=290,slow=2.1,SNR=11								
YKA	**Yellowknife Ar**	**16.32**	**76**	P		Pn		**03 43 18.9**	**-1.2**
YKA				pP		pP		03 43 42.0	+1.1
YKA				LR		LR		03 49 58.8	
YKA				ScP		ScP		03 51 29.6	-1.7
EDM	**Edmonton**	**21.61**	**100**	⇓*e*P		P		**03 44 19.1**	**+0.5**
EDM				*e*S		S		**03 48 12.2**	**+0.5**
EDM				*e*PcP		PcP		03 48 16.6	+0.6
NEW	**Newport**	**23.56**	**113**	P		P		**03 44 37.7**	**-0.2**
	1.8nm,0.5s,mb3.6,baz=345,slow=6.9,SNR=4.8								
NEW				pP				03 45 02.6	
	7.8nm,1.0s,baz=338,slow=6.4,SNR=4.8								
NEW				LR		LR		03 53 48.5	
	comp=Z,46nm,20.9s,baz=181,slow=36								
NEW	**Newport**	**23.56**	**113**	*e*P		P		**03 44 37.5**	**-0.4**
	3.3nm,0.8s,mb3.7								
WALA	**Waterton Lakes**	**24.32**	**108**	*e*P		P		**03 44 46.4**	**+1.5**
	7.6nm,1.5s,mb4.0								
MSO	**Missoula**	**26.03**	**111**	*e*P		P		**03 45 01.2**	**+0.9**
	1.6nm,0.7s,mb3.6								
YBH	**Yreka Blue Hor**	**26.84**	**129**	P		P		**03 45 09.1**	**+1.4**
	1.6nm,0.6s,mb3.7,baz=333,slow=4.2,SNR=6.5								
YBH				pP		pP		03 45 33.8	+2.4
	1.7nm,0.8s,baz=251,slow=1.6,SNR=3.1								
EGMT	**Eagleton**	**26.93**	**105**	*e*P		P		**03 45 09.4**	**+1.1**
	2.8nm,0.6s,mb4.0								
MCMT	**McKenzie Canyo**	**28.08**	**113**	*e*P		P		**03 45 20.2**	**+1.6**
FLWY	**Flagg Ranch**	**29.59**	**111**	*e*P		P		**03 45 34.5**	**+2.4**
	4.1nm,0.8s,mb4.1								
FLWY				*ep*P		pP		03 45 56.8	+0.7
RRI2	**Red Ridge**	**29.93**	**113**	*e*P		P		**03 45 37.6**	**+2.6**
	2.5nm,0.7s,mb4.0								
RRI2				*ep*P		pP		03 46 01.1	+1.9
RRI2				*es*P		sP		03 46 14.9	+3.2
RRI2				*e*PcP		PcP		03 48 35.9	+0.8
TPAW	**Teton Pass**	**29.97**	**112**	*e*P		P		**03 45 37.8**	**+2.5**
	13nm,1.3s,mb4.4								
TPAW				*ep*P		pP		03 46 02.2	+2.8
TPAW				*e*PcP		PcP		03 48 35.6	+0.4
REDW	**Red Top Meadow**	**30.11**	**112**	*e*P		P		**03 45 36.3**	**-0.3**
	9.0nm,1.4s,mb4.2								
REDW				*ep*P		pP		03 46 03.1	+2.4
REDW				*es*P		sP		03 46 18.0	+4.6
REDW				*e*PP		PP		03 46 48.8	+2.2
PDAR	**Pinedale Array**	**31.15**	**111**	P		P		**03 45 47.8**	**+2.0**
	1.0nm,0.5s,mb3.8,baz=328,slow=5.3,SNR=12								
PDAR				pP		pP		03 46 11.2	+1.2
	1.8nm,0.8s,baz=325,slow=7.2,SNR=6.5								
PDAR				PcP		PcP		03 48 38.0	-0.3
	1.1nm,0.6s,baz=92,slow=0.3,SNR=6.1								

PDAR					ScP	ScP	03 52 10.6	-0.6		
	0.7nm,0.9s,baz=347,slow=2.0,SNR=5.3									
NVAR	**Mina Array Bea**	**31.34**	**126**		P	**P**	**03 45 49.9**	**+2.4**		
	1.7nm,0.7s,mb3.9,baz=325,slow=7.1,SNR=18									
NVAR					pP	pP	03 46 12.7	+1.1		
	2.0nm,1.0s,baz=316,slow=7.6,SNR=5.5									
NVAR					PP	PP	03 46 58.1	-2.2		
	1.2nm,0.8s,baz=330,slow=6.5,SNR=4.0									
NVAR					PcP	PcP	03 48 40.2	+1.4		
	2.3nm,0.7s,baz=338,slow=1.1,SNR=16									
NVAR					ScP	ScP	03 52 11.9	+0.1		
	0.3nm,0.6s,baz=270,slow=7.6,SNR=5.1									
NVAR	**Mina Array Bea**	**31.34**	**126**		P	**P**	**03 45 49.9**	**+2.4**		
NVAR					pP	pP	03 46 12.7	+1.1		
NVAR					PP	PP	03 46 58.1	-2.2		
NVAR					PcP	PcP	03 48 40.2	+1.4		
NVAR					ScP	ScP	03 52 11.9	+0.1		
ULM	**Lac du Bonnet**	**31.59**	**88**		P	**P**	**03 45 50.6**	**+1.0**		
	1.4nm,0.4s,mb4.0,baz=312,slow=8.6,SNR=5.5									
ULM					pP	pP	03 46 14.2	+0.3		
	1.7nm,0.5s,baz=333,slow=8.5,SNR=2.5									
ULM					PcP	PcP	03 48 39.1	-0.4		
	1.5nm,0.5s,baz=4.0,slow=5.7,SNR=3.3									
RSSD	**Black Hills**	**32.47**	**103**		*e*P	**P**	**03 45 59.0**	**+1.6**		
	4.9nm,0.6s,mb4.4									
RSSD					*e*pP	pP	03 46 22.9	+1.4		
MSU	**Marysvale**	**33.63**	**119**		*e*P	**P**	**03 46 10.0**	**+2.6**		
MSU					*e*pP	pP	03 46 33.1	+1.3		
MSU					*e*PcP	PcP	03 48 46.9	+1.7		
SRU	**San Rafael**	**33.79**	**116**		*e*P	**P**	**03 46 11.0**	**+2.2**		
	4.8nm,0.7s,mb4.4									
SRU					*e*pP	pP	03 46 34.6	+1.5		
CCUT	**Cedar City**	**33.99**	**121**		*e*P	**P**	**03 46 12.7**	**+2.2**		
CCUT					*e*pP	pP	03 46 37.3	+2.4		
CCUT					*e*sP	sP	03 46 50.5	+3.0		
EYMN	**Ely**	**35.24**	**87**		*e*P	**P**	**03 46 22.1**	**+0.8**		
	15nm,0.9s,mb4.8									
EYMN					*e*pP	pP	03 46 46.2	+0.4		
WUAZ	**Wupatki**	**36.54**	**120**		*e*P	**P**	**03 46 34.7**	**+2.3**		
	14nm,1.0s,mb4.8									
WUAZ					pP	pP	03 46 56.5	-0.5		
DAG	**Danmarks Havn**	**37.27**	**16**	⇓	*i*P	**P**	**03 46 38.1**	**-0.5**		
	10nm,0.4s,mb5.1									
SFJD	**Kangerlussuaq**	**38.05**	**39**		P	**P**	**03 46 45.2**	**0.0**		
	7.7nm,0.5s,mb4.8,baz=315,slow=9.4,SNR=3.2									
ANMO	**Albuquerque**	**39.02**	**115**		P	**P**	**03 46 54.4**	**+1.1**		
	0.4nm,0.4s,mb3.6,baz=328,slow=7.2,SNR=7.5									
ANMO					pP	pP	03 47 19.9	+1.8		
	0.5nm,0.4s,baz=326,slow=10,SNR=3.1									
ANMO					PcP	PcP	03 49 01.9	+0.6		
	1.1nm,0.6s,baz=312,slow=4.6,SNR=4.6									
ANMO					ScP	ScP	03 52 40.7	+1.1		
	2.2nm,0.8s,baz=278,slow=5.2,SNR=8.2									
ANMO	**Albuquerque**	**39.02**	**115**		P	**P**	**03 46 54.4**	**+1.1**		
ANMO					pP	pP	03 47 19.9	+1.8		
ANMO					PcP	PcP	03 49 01.9	+0.6		
ANMO					ScP	ScP	03 52 40.7	+1.1		
KSU1	**Kansas State U**	**39.81**	**101**	⇓	*i*P	**P**	**03 47 00.2**	**+0.4**		
SCHQ	**Schefferville**	**40.98**	**61**		P	**P**	**03 47 09.7**	**+0.1**		
	12nm,0.6s,mb4.9,baz=323,slow=7.7,SNR=75									
SCHQ					PP	PP	03 48 49.5	+3.3		
	4.1nm,0.8s,baz=326,slow=9.9,SNR=4.6									
SCHQ					LR	LR	04 04 39.1			
	comp=Z,37nm,19.1s,baz=59,slow=37									
SCHQ	**Schefferville**	**40.98**	**61**	⇓	*i*P	**P**	**03 47 09.5**	**0.0**		
	8.0nm,0.3s,mb5.0									
SCHQ					*e*PP	PP	03 48 48.6	+2.4		
ASAJ	**Asahikawa**	**41.74**	**276**		P	**P**	**03 47 14.9**	**-0.7**		
	3.9nm,0.6s,mb4.3,baz=99,slow=8.6,SNR=5.0									
ASAJ					LR	LR	04 04 10.9			
	comp=Z,35nm,19.3s,baz=350,slow=35									
MNTX	**Cornudas Mount**	**42.29**	**116**		*e*P	**P**	**03 47 22.1**	**+1.9**		
	1.5nm,0.9s,mb3.7									
WMOK	**Wichita Mounta**	**42.48**	**107**		*e*P	**P**	**03 47 22.3**	**+0.6**		
	3.4nm,0.8s,mb4.1									
WMOK					*e*pP	pP	03 47 47.2	+0.4		
JCT	**Junction City**	**45.68**	**111**		*e*P	**P**	**03 47 48.4**	**+1.1**		
	9.7nm,0.8s,mb4.6									
OXF	**Oxford**	**46.84**	**98**		*e*P	**P**	**03 47 57.2**	**+0.8**		
MCWV	**Mont Chateau**	**46.98**	**85**		*e*P	**P**	**03 47 57.8**	**+0.5**		
	8.4nm,0.5s,mb4.7									
PLAL	**Pickwick Lake**	**47.05**	**96**		*e*P	**P**	**03 47 58.4**	**+0.4**		
	2.9nm,0.8s,mb4.1									
MDJ	**Mudanjiang**	**47.16**	**286**		P	**P**	**03 47 59.0**	**+0.2**		
MDJ					AMB	AMB				
	comp=Z,6.0nm,0.8s,mb4.4									
MDJ					AMB	AMB				
	comp=Z,56nm,3.0s									
KEV	**Kevo**	**47.51**	**1**		*e*p	**P**	**03 48 00.0**	**-1.5**		
	comp=Z,1.9nm,0.3s,mb4.4									
HIA	**Hailar**	**47.66**	**298**		*e*P	**P**	**03 48 02.8**	**+0.1**		
	comp=Z,10nm,0.6s,mb4.8									
ARCES	**ARCESS Array B**	**47.71**	**2**		P	**P**	**03 48 01.9**	**-1.2**		
	comp=Z,2.3nm,0.7s,mb4.2,baz=346,slow=6.1,SNR=31									
ARCES	**ARCESS Array B**	**47.71**	**2**		P	**P**	**03 48 01.9**	**-1.2**		
ELN	**Prospectdale**	**48.54**	**88**		*e*P	**P**	**03 48 09.5**	**0.0**		
ELN					*e*pP	pP	03 48 34.8	-0.3		
CN2	**Changchun**	**49.61**	**289**	⇑	P	**P**	**03 48 17.9**	**+0.3**		
CN2					*e*AP	pP	03 48 43.0	-0.4		
CN2					*e*S	**S**	**03 55 16.9**	**-0.7**		
CN2					AMB	AMB				
	comp=Z,30nm,0.7s,mb5.3									
CN2					AMB	AMB				
	comp=Z,200nm,4.0s									
MAJO	**Matsushiro**	**49.81**	**273**		*e*P	**P**	**03 48 19.5**	**+0.4**		
	comp=Z,3.1nm,0.6s,mb4.4									
MJAR	**Matsushiro Arr**	**49.81**	**273**		P	**P**	**03 48 19.9**	**+0.8**		
	comp=Z,4.5nm,0.9s,mb4.4,baz=18,slow=8.5,SNR=14									
SONM	**Songino Array**	**54.00**	**306**		P	**P**	**03 48 51.7**	**+1.5**		
	comp=Z,4.5nm,0.7s,mb4.6,baz=23,slow=7.0,SNR=31									
JOF	**Joensuu**	**54.38**	**359**		*e*p	**P**	**03 48 51.5**	**-1.5**		
	comp=Z,2.5nm,0.5s,mb4.5									
KAF	**Kangasniemi**	**55.18**	**2**		*e*p	**P**	**03 48 58.2**	**-0.5**		
	comp=Z,0.7nm,0.3s,mb4.2									
NB2	**NORSAR Subarra**	**55.50**	**11**		P	**P**	**03 48 59.4**	**-1.6**		
	comp=Z,1.6nm,0.6s,mb4.2,baz=350,slow=7.4									
NOA	**NORSAR Array B**	**55.50**	**11**		P	**P**	**03 48 59.3**	**-1.7**		
	comp=Z,1.4nm,0.6s,mb4.2,baz=350,slow=7.3,SNR=9.2									
NOA					pP	pP	03 49 26.5	-0.8		
	comp=Z,2.5nm,1.0s,baz=349,slow=7.2,SNR=5.1									
ZAL	**Zalesovo**	**55.67**	**324**		P	**P**	**03 49 01.9**	**-0.4**		
	comp=Z,2.3nm,0.8s,mb4.3,baz=84,slow=6.9,SNR=11									
ZAL					pP	pP	03 49 28.4	0.0		
	comp=Z,1.3nm,0.4s,baz=98,slow=8.5,SNR=1.6									
ZAL	**Zalesovo**	**55.67**	**324**		P	**P**	**03 49 01.9**	**-0.4**		
ZAL					pP	pP	03 49 28.4	-0.1		
FINES	**FINESS Array B**	**55.84**	**2**		P	**P**	**03 49 02.2**	**-1.3**		
	comp=Z,1.5nm,0.7s,mb4.2,baz=4.9,slow=6.7,SNR=9.1									
FINES					pP	pP	03 49 29.8	+0.1		
	comp=Z,2.3nm,0.6s,baz=0.0,slow=5.9,SNR=5.1									
FINES	**FINESS Array B**	**55.84**	**2**		P	**P**	**03 49 02.2**	**-1.3**		
FINES					pP	pP	03 49 29.8	+0.1		
ARU	**Arti**	**58.78**	**342**		*e*P	**P**	**03 49 23.9**	**-0.2**		
	comp=Z,4.6nm,0.4s,mb4.9									
CHKZ	**Chkalovo**	**59.29**	**333**		*e*P	**P**	**03 49 26.4**	**-1.2**		
	comp=Z,2.5nm,0.6s,mb4.4									
CHKZ					*e*pP	pP	03 49 53.5	-0.7		
BVAR	**Borovoye Array**	**59.95**	**333**		P	**P**	**03 49 31.7**	**-0.4**		
	comp=Z,1.1nm,0.3s,mb4.3,baz=36,slow=5.8,SNR=9.7									
BVAR					pP	pP	03 49 58.7	-0.1		
	comp=Z,2.9nm,0.8s,baz=40,slow=7.8,SNR=5.7									
ZRNK	**Zerenda**	**60.31**	**334**		*e*P	**P**	**03 49 34.0**	**-0.6**		
	comp=Z,4.4nm,0.9s,mb4.5									
ZRNK					*e*pP	pP	03 50 01.0	-0.2		
NJ2	**Nanjing**	**62.26**	**286**		*e*P	**P**	**03 49 52.9**	**+5.2**		
NJ2					AMB	AMB				
	comp=Z,10.0nm,0.5s,mb5.1									
MKAR	**Makanchi Array**	**62.81**	**322**		P	**P**	**03 49 50.5**	**-0.9**		
	comp=Z,1.6nm,0.6s,mb4.2,baz=43,slow=6.6,SNR=20									
MKAR	**Makanchi Array**	**62.81**	**322**		P	**P**	**03 49 50.5**	**-1.0**		
GTA	**Gaotai**	**63.67**	**306**		*e*P	**P**	**03 49 58.0**	**+0.9**		
GTA					AMB	AMB				
	comp=Z,9.0nm,0.6s,mb4.8									
AKTK	**Aktyubinsk**	**64.68**	**340**		P	**P**	**03 50 03.5**	**-0.2**		
AKTO	**Aktyubinsk**	**64.68**	**340**		P	**P**	**03 50 03.5**	**-0.2**		
	comp=Z,3.1nm,0.6s,mb4.3,baz=40,slow=8.9,SNR=16									
LZH	**Lanzhou**	**65.04**	**301**		*e*P	**P**	**03 50 07.0**	**+1.0**		
LZH					AP	pP	03 50 33.0	+0.1		
LZH					XP	sP	03 50 42.5	-2.3		
LZH					PP	PP	03 52 32.4	+2.1		
LZH					AMB	AMB				
	comp=Z,6.0nm,1.0s,mb4.4									
LZH					AMB	AMB				
	comp=Z,90nm,4.2s									
CLL	**Collm**	**65.29**	**11**	⇑	*i**PP	pP	03 50 34.3	-0.3		
CLL	**Collm**	**65.29**	**11**	⇑	*i*pP	pP	03 50 34.3	-0.3		
	comp=Z,8.0nm,1.0s									
PVCC	**Panska Ves**	**66.20**	**10**		*e*pP	pP	03 50 40.8	+0.3		
NKC	**Novy Kostel**	**66.31**	**12**		*e*pP	pP	03 50 41.4	+0.2		
DPC	**Dobruska-Polom**	**66.51**	**9**		*e*pP	pP	03 50 43.3	+0.8		
AKASG	**Malin Array Be**	**66.64**	**0**		P	**P**	**03 50 15.2**	**-1.0**		
	comp=Z,1.6nm,0.5s,mb4.1,baz=0.9,slow=6.3,SNR=14									
AKASG					pP	pP	03 50 42.8	-0.5		
	comp=Z,1.1nm,0.5s,baz=356,slow=6.1,SNR=3.3									
PRU	**Pruhonice**	**66.73**	**10**		*e*pP	pP	03 50 44.3	+0.4		
OKC	**Ostrava-Krasne**	**67.15**	**8**		*e*pP	pP	03 50 46.9	+0.3		
TREC	**Trest**	**67.50**	**10**		*e*pP	pP	03 50 49.0	+0.2		
KHC	**Kasperske Hory**	**67.50**	**11**		*e*pP	pP	03 50 49.6	+0.8		
STHS	**Stebnicka Huta**	**67.73**	**6**		*e*pP	pP	03 50 50.6	+0.3		
GERES	**GERESS Array B**	**67.80**	**11**		pP	pP	03 50 50.5	-0.2		
	comp=Z,1.8nm,0.8s,baz=357,slow=4.5,SNR=9.9									
KOLS	**Kolonicke sedl**	**68.26**	**5**		*e*pP	pP	03 50 53.5	-0.2		
VYHS	**Vyhne**	**68.53**	**8**		*e*pP	pP	03 50 55.2	-0.1		
AAK	**Ala-Archa**	**68.76**	**326**		*e*P	**P**	**03 50 33.1**	**+3.5**		
	comp=Z,3.6nm,0.7s,mb4.3									
AAK					*e*pP	sP	03 51 14.1	+5.5		
GYA	**Guiyang**	**72.34**	**293**	⇓	*i*P	**P**	**03 50 51.6**	**+0.3**		
GYA					AMB	AMB				
	comp=Z,10.0nm,0.6s,mb4.8									
ESDC	**Sonseca Array**	**74.22**	**26**		P	**P**	**03 51 01.9**	**-0.5**		
	comp=Z,0.4nm,0.5s,mb3.4,baz=349,slow=5.6,SNR=5.6									
ESDC					pP	pP	03 51 28.8	-1.1		
	comp=Z,0.9nm,0.8s,baz=342,slow=5.6,SNR=2.9									
KMI	**Kunming**	**75.14**	**296**		P	**P**	**03 51 10.8**	**+3.1**		
KMI					AMB	AMB				
	comp=Z,7.0nm,0.7s,mb4.5									
BRTR	**Keskin Array B**	**77.56**	**357**		P	**P**	**03 51 22.5**	**+1.1**		
	comp=Z,0.5nm,0.6s,mb3.4,baz=54,slow=7.3,SNR=3.5									
BRTR					pP	pP	03 51 49.5	+0.4		
	comp=Z,0.7nm,1.0s,baz=35,slow=4.5,SNR=2.4									
VNDA	**Vanda**	**143.28**	**196**		PKhKP		03 58 54.5			
	comp=Z,1.4nm,0.8s,baz=332,slow=2.9,SNR=10									
BOSA	**Boshof**	**145.49**	**7**		PKPbc	PKPbc	03 59 02.7	-0.2		
	comp=Z,1.3nm,0.5s,baz=301,slow=4.3,SNR=6.0									
QSPA	**South Pole Qui**	**152.82**	**180**		*e*P	PKPbc	03 59 20.4	-1.2		

NIED ***21*** *03:44:00,2760N×130.90E,h5km,Mw3.8 Best double couple: M0 5.31000×10^14 NP1:φ=22.00000°,δ71.00000°, λ-71.00000°. NP2:φ=157.00000°,δ27.00000°, λ-133.00000°.*

IDC ***21*** *03:44:55.5±0.8,2767N×130.78E,h0km,mb3.9/8, mb1 4.0/10,mb1mx3.8/23,mbtmp3.8/10,ML3.7/2,MS3.1/1, Ms1 3.1/1,ms1mx2.2/37,Error ellipse: s-maj=30.1km s-min=16.0km az=66.0*

ISCJB ***21*** *03:44:57.4±1.6,2764N±003×13085E±004,h32km±13km, mb3.8/8,Error ellipse: s-maj=6.1km s-min=4.4km az=39.9*

JMA ***21*** *03:44:57.5±0.1,2761N×130.89E,h68km±3km,M3.7*

NEIC ***21*** *03:45:00.7±0.7,2767N×130.76E,h35km,MG3.7(JMA), Error ellipse: s-maj=16.2km s-min=14.2km az=103.0*

ISC 21 03:44:59.3±1.3,2766N±003×13080E±004,h33km±10km, n27,σ1§02/41,mb3.8/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.98**	**312**		P	**Pn**	**03 45 17.1**	**+0.4**
JZK					*e*S	**Sb**	**03 45 31.2**	**+0.8**
JAM	**Amami Oshima**	**1.29**	**306**		P	**Pn**	**03 45 21.5**	**+0.4**
JAM					S	**Sn**	**03 45 38.8**	**+1.6**
JTK	**Tokunoshima**	**1.64**	**275**		P	**Pn**	**03 45 26.3**	**+0.4**
JTK					*e*S	**Sn**	**03 45 45.8**	**0.0**
JMZ	**Minamidaito 2**	**1.87**	**168**		P	**Pn**	**03 45 27.0**	**-2.1**
JMZ					*e*S	**Sn**	**03 45 48.2**	**-3.4**
JNN	**Nakanoshima**	**2.32**	**340**		P	**Pn**	**03 45 35.0**	**-0.2**
JNN					*e*S	**Sn**	**03 46 02.3**	**-0.2**
JOW	**Kunigami**	**2.39**	**250**		Pn	**Pn**	**03 45 35.9**	**-0.3**
	35nm,0.3s,baz=106,slow=13,SNR=108							
JOW					Sn	**Sn**	**03 46 02.8**	**-1.6**
	19nm,0.3s,baz=105,slow=25,SNR=4.5							
JOW	**Kunigami**	**2.39**	**250**		P	**Pn**	**03 45 36.0**	**-0.2**
JOW					*e*S	**Sn**	**03 46 03.9**	**-0.5**
JIH	**Iheya**	**2.59**	**257**		P	**Pn**	**03 45 38.9**	**-0.1**
JIH					*e*S	**Sn**	**03 46 08.1**	**-1.2**
JKC	**Kuchinoerabu**	**2.84**	**349**		P	**Pn**	**03 45 42.1**	**-0.2**
JKC					*e*S	**Sn**	**03 46 14.5**	**-0.9**
JTN	**Tanegashima 3**	**2.99**	**3**		P	**Pn**	**03 45 43.7**	**-0.7**
JJT2	**Tamagusuku 2**	**3.12**	**242**		P	**Pn**	**03 45 46.2**	**+0.1**
JJT2					*e*S	**Sn**	**03 46 22.4**	**+0.2**
JAGN	**Aguni-jima**	**3.34**	**252**		P	**Pn**	**03 45 49.0**	**-0.3**
JAGN					*e*S	**Sn**	**03 46 27.0**	**-0.8**
JTSR	**Tashiro 2**	**3.49**	**2**		P	**Pn**	**03 45 51.1**	**-0.2**
JTSR					*e*S	**Sn**	**03 46 30.5**	**-1.0**
JKE	**Kume jima 2**	**3.82**	**251**		P	**Pn**	**03 45 55.2**	**-0.6**
JSU	**Suzuyama**	**3.84**	**356**		P	**Pn**	**03 45 56.5**	**+0.4**
JNAR	**Kushima--Naru**	**3.87**	**6**		P	**Pn**	**03 45 56.8**	**+0.2**
JNAR					S	**Sn**	**03 46 40.0**	**-0.9**
JTZ	**Takazaki**	**4.23**	**3**		P	**Pn**	**03 46 01.4**	**-0.1**
JTZ					*e*S	**Sn**	**03 46 47.7**	**-2.1**
MJAR	**Matsushiro Arr**	**10.85**	**33**		Pn	**Pn**	**03 47 32.5**	**+0.1**
	0.4nm,0.3s,baz=206,slow=13,SNR=4.5							
MKAR	**Makanchi Array**	**42.33**	**310**		P	**P**	**03 52 50.0**	**0.0**
	0.4nm,0.7s,mb3.2,baz=112,slow=9.4,SNR=3.9							
ZAL	**Zalesovo**	**42.55**	**321**		P	**P**	**03 52 53.9**	**+2.0**
	1.0nm,0.3s,mb4.0,baz=1.6,slow=7.3,SNR=3.2							
HNR	**Honiara**	**46.44**	**138**		P	**P**	**03 53 25.2**	**+2.3**
	38nm,0.3s,baz=296,slow=2.9,SNR=2.9							
WRA	**Warramunga Arr**	**47.45**	**175**		P	**P**	**03 53 31.7**	**+0.9**
	1.0nm,0.6s,mb3.9,baz=354,slow=8.6,SNR=14							
BVAR	**Borovoye Array**	**50.76**	**317**		P	**P**	**03 53 58.1**	**+2.0**
	1.9nm,0.8s,mb4.0,baz=149,slow=6.1,SNR=8.1							
ASAR	**Alice Springs**	**51.12**	**176**		P	**P**	**03 54 00.4**	**+1.6**
	1.2nm,0.5s,mb4.0,baz=3.7,slow=11,SNR=20							
STKA	**Stephens Creek**	**60.09**	**169**		P	**P**	**03 55 03.8**	**+0.5**
	1.2nm,0.5s,mb4.2,baz=322,slow=12,SNR=3.9							
FINES	**FINESS Array B**	**72.74**	**331**		P	**P**	**03 56 24.6**	**+0.4**
	1.1nm,0.8s,mb3.8,baz=64,slow=6.5,SNR=4.5							
NOA	**NORSAR Array B**	**79.03**	**334**		P	**P**	**03 57 00.3**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=49,slow=5.4,SNR=2.9							

MAN 21 04:02:34.1,1798N×12074E,h58km,mb2.5,ML4.0,MS2.1, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.33**	**185**		*e*P	Pn	04 02 46.1	+1.8
ABRA					*e*S	Sn	04 02 54.8	+3.2
PIP	**Pasuquin**	**0.36**	**341**	⇓	*e*P	Pn	04 02 46.2	+1.6
PIP					*e*S	Sn	04 02 55.9	+3.9
APYP	**Conner**	**0.49**	**104**		*e*P	Pn	04 02 47.4	+1.6
APYP					*e*S	Sn	04 02 58.0	+3.7
CAUP	**Cauayan**	**1.46**	**135**		*e*P	Pn	04 03 00.1	+1.9

WEL 21 04:37:49.8±0.1,4173S×17226E,h5km,ML3.5/15,2C-1D, Error ellipse: s-maj=1.1km s-min=0.8km az=90.0,South Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DSZ	**Denniston Nort**	**0.34**	**267**	⇑	P	Pg	04 37 56.8	+0.3
DSZ					S	Sg	04 38 01.6	+0.7
THZ	**Tophouse**	**0.48**	**94**		PG	Pg	04 37 59.0	-0.1
THZ					SG	Sg	04 38 05.4	+0.1
QRZ	**Quartz Range**	**0.92**	**13**	⇓	P*	Pb	04 38 07.6	-0.7
QRZ					S*	Sb	04 38 20.0	-0.9
NNZ	**Nelson**	**0.98**	**59**		P*	Pb	04 38 08.0	-1.2
NNZ					S*	Sb	04 38 21.4	-1.1
LTZ	**Lake Taylor**	**1.05**	**180**		P*	Pb	04 38 09.3	-1.2
LTZ					S*	Sb	04 38 22.4	-2.2
KHZ	**Kahutara**	**1.18**	**126**		P*	Pb	04 38 12.1	-0.4
BSWZ	**Blackbirch Sta**	**1.21**	**90**	⇑	P*	Pb	04 38 12.5	-0.6
BSWZ					S*	Sb	04 38 28.4	-0.6
TUWZ	**Tuamarina**	**1.30**	**77**		P*	Pb	04 38 13.4	-1.2
TUWZ					S*	Sb	04 38 31.7	+0.1
DUWZ	**D'Urville Isla**	**1.56**	**54**		PN	Pn	04 38 17.9	-0.2
DUWZ					SN	Sn	04 38 38.7	0.0
TCW	**Tory Channel**	**1.60**	**72**		PN	Pn	04 38 18.5	-0.2
TCW					SN	Sn	04 38 39.7	0.0
WVZ	**Waitaha Valley**	**1.76**	**219**		ePN	Pn	04 38 18.5	-2.4
WVZ					SN	Sn	04 38 43.4	-0.3
SNZO	**South Karori**	**1.88**	**78**		ePN	Pn	04 38 22.7	+0.1
MRW	**Makara Radio**	**1.90**	**76**		ePN	Pn	04 38 23.2	+0.3
BHW	**Baring Head**	**1.98**	**82**		PN	Pn	04 38 24.2	+0.2
MQZ	**McQueen's Vall**	**2.00**	**172**		ePN	Pn	04 38 21.9	-2.2
KIW	**Kapiti Island**	**2.17**	**67**		PN	Pn	04 38 28.1	+1.5
RPZ	**Rata Peaks**	**2.18**	**204**		ePN	Pn	04 38 24.9	-1.7
CAW	**Cannon Point**	**2.20**	**75**		PN	Pn	04 38 27.4	+0.5
MSWZ	**Moikau Station**	**2.26**	**83**		PN	Pn	04 38 27.3	-0.5
MTW	**Mount Morrison**	**2.50**	**78**		PN	Pn	04 38 30.3	-0.8
FOZ	**Fox Glacier**	**2.64**	**225**		ePN	Pn	04 38 29.3	-3.7
JCZ	**Jackson Bay**	**3.48**	**226**		ePN	Pn	04 38 41.5	-3.0
ODZ	**Otahua Downs**	**3.52**	**199**		PN	Pn	04 38 43.0	-2.1

ISCJB ***21*** *04:54:14.2±0.2,4916N±001×684E±002,h0km,Error ellipse: s-maj=2.3km s-min=1.9km az=173.9*

BGR ***21*** *04:54:15.8±0.3,4919N×690E,h1km,ML2.2/5,Error ellipse: s-maj=3.3km s-min=3.3km az=120.0*

NEIC ***21*** *04:54:16.3,4915N×687E,h1km,MD2.6(LDG), ML2.5(STR),After LDG.*

CSEM ***21*** *04:54:16.2±0.1,4916N×689E,h1km,ML3.0/13,Error ellipse: s-maj=1.0km s-min=1.0km az=99.0*

LDG ***21*** *04:54:16.3±0.1,4915N×687E,h1km,Md2.6/1,Ml3.0/13, Error ellipse: s-maj=1.8km s-min=1.6km az=50.0, Suspected Mining induced.*

STR ***21*** *04:54:16.0±0.4,4916N×687E,h1km±1km,Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

BNS ***21*** *04:54:18.0±0.7,4926N×682E,h1km,ML1.9*

ISC 21 04:54:15.1±0.2,4916N±001×687E±002,h0km,n67,
σ1§15/123,1D,Germany

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LANF	**Langenberg**	**0.64**	**106**		*e*Pg	**Pg**	**04 54 28.3**	**+0.9**
	SNR=15							
LANF	**Langenberg**	**0.64**	**106**		Pg	**Pg**	**04 54 28.6**	**+1.2**
LANF					Sg	**Sg**	**04 54 38.3**	**+2.5**
LANF	**Langenberg**	**0.64**	**106**		Pg	**Pg**	**04 54 28.3**	**+0.9**
	SNR=15							
LANF					Sg	**Sg**	**04 54 38.3**	**+2.5**
WLF	**Walferdange**	**0.69**	**317**		*e*Pg	**Pg**	**04 54 29.6**	**+1.4**
	SNR=9.8							
WLF					*e*Sg	**Sg**	**04 54 37.0**	**-0.1**
	SNR=6.4							
WLF	**Walferdange**	**0.69**	**317**		P	**Pg**	**04 54 29.7**	**+1.4**
WLF	**Walferdange**	**0.69**	**317**	⇓	*i*Pg	**Pg**	**04 54 29.7**	**+1.4**
WLF					*e*Sg	**Sg**	**04 54 39.0**	**+1.9**
WLF	**Walferdange**	**0.69**	**317**		Pg	**Pg**	**04 54 29.6**	**+1.4**
	SNR=9.8							
WLF					*e*Sg	**Sg**	**04 54 39.0**	**+1.9**
CDF	**Champ du Feu**	**0.80**	**160**		*e*Pg	**Pg**	**04 54 30.9**	**+0.5**
CDF					*e*Sg	**Sg**	**04 54 41.5**	**+0.7**
CDF					*e*Sn	**Sg**	**04 54 44.7**	**+3.9**
	40nm,0.3s							
CDF	**Champ du

LOR				*e*Sn	**Sn**	**04 55 31.9**	**-2.8**
LOR				*e*Sg	**Sg**	**04 55 42.8**	**-1.2**
	18nm,0.4s						
LOR	**Lormes**	**2.77**	**228**	*e*Pn	**Pn**	**04 54 59.1**	**-1.6**
LOR				*e*Sn	**Sn**	**04 55 31.9**	**-2.8**
LOR				*e*Sg	**Sg**	**04 55 42.8**	**-1.2**
	8.8nm,0.4s						
SSF	**Saint Saulge**	**3.08**	**228**	*e*Pn	**Pn**	**04 55 03.4**	**-1.6**
SSF				*e*Sn	**Sn**	**04 55 39.9**	**-2.7**
SSF				*e*Sg	**Sg**	**04 55 53.1**	**-1.0**
	7.9nm,0.4s						
SSF	**Saint Saulge**	**3.08**	**228**	*e*Pn	**Pn**	**04 55 03.4**	**-1.6**
SSF				*e*Sn	**Sn**	**04 55 39.9**	**-2.7**
SSF				*e*Sg	**Sg**	**04 55 53.1**	**-1.0**
	4.0nm,0.4s						
SMF	**Signal de Mont**	**3.24**	**220**	*e*Pn	**Pn**	**04 55 06.6**	**-0.6**
SMF				*e*Sn	**Sn**	**04 55 42.4**	**-4.1**
	4.4nm,0.4s						
SMF	**Signal de Mont**	**3.24**	**220**	*e*Pn	**Pn**	**04 55 06.6**	**-0.6**
SMF				*e*Sn	**Sn**	**04 55 42.4**	**-4.1**
	2.2nm,0.4s						
AVF	**Avril sur Loir**	**3.35**	**226**	*e*Pn	**Pn**	**04 55 07.3**	**-1.4**
AVF				*e*Pg	**Pg**	**04 55 19.5**	**+0.2**
AVF				*e*Sn	**Sn**	**04 55 46.5**	**-2.6**
GUNZ	**Gunzen**	**3.74**	**69**	*e*Sg	**Sg**	**04 56 13.8**	**-1.5**
	SNR=1.5						
BGF	**Bois d'Agland**	**3.76**	**228**	*e*Pn	**Pn**	**04 55 13.1**	**-1.2**
BGF				*e*Sn	**Sn**	**04 55 55.8**	**-3.5**
	14nm,0.3s						
BGF	**Bois d'Agland**	**3.76**	**228**	*e*Pn	**Pn**	**04 55 13.1**	**-1.2**
BGF				*e*Sn	**Sn**	**04 55 55.8**	**-3.5**
	7.2nm,0.3s						
TANN	**Tannenbergstha**	**3.83**	**69**	*e*Sg	**Sg**	**04 56 15.9**	**-2.5**
	SNR=2.2						
GEC2	**GERESS Array S**	**4.51**	**91**	*e*Pn	**Pn**	**04 55 25.1**	**+0.5**
	SNR=3.8						
GEC2				*e*Sg	**Sg**	**04 56 38.6**	**-1.4**
	SNR=1.4						

PRE 21 04:56:10.2±0.5, 2175S×3370E, h5km, ML3.7, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.46**	**259**	*e*P	Pn	04 57 05.4	+0.7
MSNA				*e*S	Sn	04 57 46.3	+0.3
MSNA				AML	AML	04 58 01.5	
	comp=Z,118nm,0.7s						
POGA	**Pongola**	**5.91**	**198**	*e*P	Pn	04 57 38.8	+0.4
POGA				*e*S	Sn	04 58 43.0	-3.4
POGA				AML	AML	04 59 37.2	
	comp=Z,17nm,0.5s						
LBTB	**Lobatse**	**8.12**	**245**	*e*P	Pn	04 58 09.9	+1.2
LBTB				*e*S	Sn	04 59 37.1	-3.7
LBTB				AML	AML	05 00 29.5	
	comp=Z,11nm,0.6s						
BOSA	**Boshof**	**10.25**	**226**	*e*P	Pn	04 58 39.5	+1.6
BOSA				*e*S	Sn	05 00 28.4	-4.8
BOSA				AML	AML	05 01 13.9	
	comp=Z,2.1nm,0.6s						

*NEIC **21** 05:28:20.6, 1690N×9852W, h120km, MD3.7(MEX), After MEX.*

MEX 21 05:28:24.9±0.9, 1688N×9848W, h30km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UTMO	**Huajuapan**	**1.14**	**34**	*i* P	Pn	05 28 43.4	-1.4
UTMO				*i* S	Sn	05 28 55.9	-3.6
ACX	**Acapulco**	**1.38**	**270**	*i* P	Pn	05 28 45.0	-3.1
ACX				*i* S	Sn	05 29 03.0	-2.3
MEIG	**Mezcala**	**1.51**	**314**	*e*P	Pn	05 28 47.7	-2.1
MEIG				*i* S	Sn	05 29 07.1	-1.4
VHO	**Vista Hermosa**	**1.68**	**83**	*i* P	Pn	05 28 50.5	-1.7
VHO				*i* S	Sn	05 29 11.8	-1.0
OXX	**Oaxaca**	**1.69**	**83**	*e*P	Pn	05 28 50.5	-1.9
OXX				*i* S	Sn	05 29 11.5	-1.5
OXX	**Oaxaca**	**1.69**	**83**	*e*P	Pn	05 28 46.5	-5.9
OXX				*i* S	Sn	05 29 11.5	-1.5
TPIG	**Tehuac#an**	**1.86**	**35**	*i* P	Pn	05 28 52.4	-2.4
TPIG				*i* S	Sn	05 29 15.4	-1.8
PPM	**Popocatepetl**	**2.18**	**356**	*e*P	Pn	05 28 56.0	-3.1
PPM	**Popocatepetl**	**2.18**	**356**	*e*P	Pn	05 28 53.0	-6.1
IIZ	**Mezontepec**	**2.41**	**343**	*i* P	Pn	05 28 59.9	-2.3
IIZ				*i* S	Sn	05 29 26.3	-4.4

CASC 21 05:48:11.3±1.8, 1213N×8810W, h20km±7km, MD3.5, ML2.8, 4C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.17**	**13**⇓	*e*P	x	05 48 38.6	
CNCH				*e*S	x	05 48 54.8	
CRIN	**San Cristobal**	**1.17**	**61**	*e*P	Pn	05 48 32.3	-0.2
CRIN				*e*S	Sb	05 48 48.4	+0.8
LEON	**Leon**	**1.21**	**76**	*e*P	Pn	05 48 32.4	-0.7
VSM	**San Miguel**	**1.30**	**353**⇓	*e*P	x	05 48 40.8	
VSM				*e*S	x	05 49 00.5	
BLLM	**Bellamira**	**1.31**	**354**	*e*P	x	05 48 39.9	
BLLM				*e*S	x	05 48 58.8	
MIRN	**Miramar**	**1.39**	**77**	*e*P	Pn	05 48 34.9	-0.6
MIRN				*e*S	Sn	05 48 54.2	+0.9
CNGN	**Cerro Negro**	**1.42**	**75**	*e*P	Pn	05 48 36.5	+0.6
CNGN				*e*S	Sn	05 48 54.8	+0.9
CNGN				*i*		05 49 01.0	
	comp=N,242nm,1.5s						
COPN	**Copaltepe**	**1.48**	**88**⇑	*e*P	Pn	05 48 36.7	+0.1
COPN				*e*S	Sn	05 48 56.3	+0.9
MOMJ	**Momotombo**	**1.55**	**80**⇑	*e*P	Pn	05 48 37.2	-0.5
MOMJ				*e*S	Sn	05 48 57.8	+0.7
APYN	**Apoyeque**	**1.71**	**86**	*e*P	Pn	05 48 40.8	+0.8
LCBS	**La Ceiba**	**1.74**	**331**⇑	*e*P	x	05 48 47.0	
LCBS				*e*S	x	05 49 08.6	
LFRS	**El Faro**	**1.75**	**328**⇑	*e*P	x	05 48 46.7	
LFRS				*e*S	x	05 49 08.9	
MGAN	**Managua**	**1.81**	**89**	*e*P	Pn	05 48 41.6	+0.4
MGAN				*e*S	Sn	05 49 04.0	+0.4
MGAN				*i*		05 49 07.1	
	comp=N,116nm,0.3s						
LBRS	**Las Brisas**	**1.84**	**330**	*e*P	x	05 48 49.0	
LBRS				*e*S	x	05 49 12.6	

*NEIC **21** 06:16:16.2, 1993N×6528W, h126km, MD3.7(RSPR), After RSPR.*

RSPR 21 06:16:16.2, 1993N×6528W, h126km±12km, MD3.7/6, MD3.7/6, 9C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.64**	**157**⇑	*e*P	Pn	06 16 46.0	+0.4
TBVI				*e*S	Sn	06 17 08.1	0.0
CBYP	**Canovanas**	**1.74**	**198**⇑	*e*P	Pn	06 16 46.1	-0.7
CBYP				*e*S	Sn	06 17 09.9	-0.3
MTP	**Monte Pirata**	**1.85**	**188**⇑	*e*P	Pn	06 16 48.0	-0.1
MTP				*e*S	Sn	06 17 12.9	+0.4
HUMP	**Col San Antoni**	**1.86**	**197**⇑	*e*P	Pn	06 16 47.4	-0.9
HUMP				*e*S	Sn	06 17 12.6	-0.2
CPD	**Cerro la Pandu**	**1.98**	**198**⇑	*e*P	Pn	06 16 49.3	-0.4
CPD				*e*S	Sn	06 17 15.9	+0.6
AOPR	**Arecibo Observ**	**2.10**	**222**⇑	*e*P	Pn	06 16 50.8	-0.5
AOPR				*e*S	Sn	06 17 19.0	+0.9
AGPR	**Aguadilla, PR**	**2.26**	**230**⇑	*e*P	Pn	06 16 53.3	0.0
AGPR				*e*S	Sn	06 17 21.8	+0.1
LSP	**Las Mesas**	**2.44**	**225**⇑	*e*P	Pn	06 16 56.3	+0.8
LSP				*e*S	Sn	06 17 25.9	+0.2
CRPR	**Cabo Rojo, PR**	**2.58**	**222**⇑	*e*P	Pn	06 16 57.2	-0.1
CRPR				*e*S	Sn	06 17 29.7	+0.8

*ISCJB **21** 06:56:52.0±0.8, 3933N×003W×920W±006, h10km±4km, Error ellipse: s-maj=7.9km s-min=4.3km az=29.0*
*CSEM **21** 06:56:53.4±0.1, 3934N×9.15W, h0km±1km, ML2.5/5, Error ellipse: s-maj=2.8km s-min=1.7km az=105.0*
*IGIL **21** 06:56:53.8, 3928N×9.20W, h0km, ML1.7*
*MDD **21** 06:56:54.7±0.7, 3927N×9.14W, h11km±1km, mbLg2.0/9, Error ellipse: s-maj=6.0km s-min=3.0km az=116.0, PRXIMO*

*INMG **21** 06:56:54.5±1.5, 3928N×9.16W, h9km±5km, ML1.6, Error ellipse: s-maj=8.3km s-min=2.6km az=117.0*

ISC 21 06:56:53.1±0.8, 3929N±003×917W±006, h13km±4km, n27, σ0994/42, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**0.35**	**194**	*e*Pg	**Pg**	**06 57 00.7**	**+0.5**
PMAFR				*e*Sg	**Sg**	**06 57 05.8**	**+0.9**
PLOU	**Loures**	**0.41**	**178**	*e*Pg	**Pg**	**06 57 01.8**	**+0.5**
PLOU				*e*Sg	**Sg**	**06 57 07.6**	**+0.8**
PLOU							
	58nm,0.1s						
PLOU	**Loures**	**0.41**	**178**	*e*Pg	**Pg**	**06 57 01.8**	**+0.5**
PLOU				*e*Sg	**Sg**	**06 57 07.6**	**+0.8**
	58nm,0.1s						
ALMR	**Almeirim**	**0.48**	**106**	*e*P	**Pg**	**06 57 02.8**	**+0.2**
ALMR				*e*S	**Sg**	**06 57 09.3**	**+0.2**
ALMR				*e*S	**Sg**	**06 57 09.3**	**+0.2**
ALMR				AML	AML	06 57 10.2	
	comp=E,42nm,0.2s						
ALMR	**Almeirim**	**0.48**	**106**	*e*P	**Pg**	**06 57 02.8**	**+0.1**
ALMR				*e*S	**Sg**	**06 57 09.3**	**+0.2**
PTOM	**Tomar**	**0.67**	**61**	*e*P	**Pg**	**06 57 06.8**	**+0.6**
PTOM				*e*S	**Sg**	**06 57 16.8**	**+1.7**
PTOM							
	comp=E,22nm,0.1s						
PESTR	**Estremoz**	**1.30**	**109**	*e*P	**Pn**	**06 57 17.2**	**+0.2**
PESTR				*e*S	**Sb**	**06 57 34.1**	**0.0**
PESTR							
	comp=E,9.2nm,0.2s						
PCBR	**Castelo Branco**	**1.42**	**67**	*e*Sn	**Sn**	**06 57 37.2**	**+0.1**
PCBR							
	comp=E,2.6nm,0.3s						
PCBR	**Castelo Branco**	**1.42**	**67**	*e*Sn	**Sn**	**06 57 37.2**	**+0.1**
	comp=E,2.6nm,0.3s						
PBEJ	**Beja**	**1.63**	**141**	*e*Sn	**Sn**	**06 57 43.5**	**+1.2**
PBEJ							
	comp=E,2.4nm,0.1s						
PBEJ	**Beja**	**1.63**	**141**	*e*Sn	**Sn**	**06 57 43.5**	**+1.2**
	comp=E,2.4nm,0.1s						
MTE	**Manteigas**	**1.67**	**48**	Sg	**Sn**	**06 57 44.8**	**+1.5**
MTE							
	comp=E,3.1nm,0.4s						
MTE	**Manteigas**	**1.67**	**48**	Sn	**Sn**	**06 57 44.8**	**+1.5**
	comp=E,1.6nm,0.4s						
PVIS	**Viseu**	**1.73**	**34**	*e*Sg	**Sg**	**06 57 48.0**	**-0.7**
PVIS							
	comp=E,6.3nm,0.1s						
PVIS							
	comp=E,6.4nm,0.1s						
PVIS	**Viseu**	**1.73**	**34**	Lg		06 57 48.0	
	comp=E,3.2nm,0.1s						
EBAD	**Badajoz**	**1.77**	**107**	Pg	**Pg**	**06 57 25.4**	**-1.6**
	comp=E,3.2nm,0.1s,SNR=19						
EBAD				Lg		06 57 48.0	
	comp=E,8.9nm,0.1s,SNR=13						
EBAD	**Badajoz**	**1.77**	**107**	Pg	**Pg**	**06 57 25.4**	**-1.6**
	comp=E,3.2nm,0.1s,SNR=19						
PTEO	**Sao Teotonio**	**1.78**	**168**	*e*Pg	**Pg**	**06 57 26.5**	**-0.8**
PTEO				*e*Sg	**Sg**	**06 57 49.0**	**-1.4**
PTEO							
	comp=E,5.7nm,0.3s						
EGRO	**El Granado**	**2.20**	**142**	Pg	**Pg**	**06 57 34.3**	**-1.1**
	comp=E,0.5nm,0.1s,SNR=7.9						
EGRO				Lg		06 58 02.3	
	comp=E,2.7nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.20**	**142**	Pg	**Pg**	**06 57 34.7**	**-0.7**
	comp=E,0.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.48**	**127**	Pn	**Pn**	**06 57 33.6**	**+0.3**
	comp=E,0.1nm,0.1s,SNR=7.9						
EMIN				Pg	**Pg**	**06 57 39.0**	**-1.7**
	comp=E,0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**06 58 02.2**	**-1.3**
	comp=E,1.7nm,0.2s,SNR=7.9						
EMIN				Lg		06 58 10.7	
	comp=E,0.9nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.48**	**127**	Pn	**Pn**	**06 57 33.6**	**+0.3**
	comp=E,0.1nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.48**	**127**	Pg	**Pg**	**06 57 39.0**	**-1.8**
	comp=E,0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**06 58 04.3**	**+0.9**
	comp=E,1.7nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**2.71**	**18**	Pn	**Pn**	**06 57 36.5**	**+0.2**
	comp=E,0.3nm,0.1s,SNR=7.9						
ELOB				Sn	**Sn**	**06 58 07.7**	**-1.2**
	comp=E,0.3nm,0.1s,SNR=7.9						
ELOB				Lg		06 58 19.0	
	comp=E,1.2nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**2.71**	**18**	Pn	**Pn**	**06 57 36.5**	**+0.2**
	comp=E,0.3nm,0.1s,SNR=7.9						
ELOB				Sn	**Sn**	**06 58 07.7**	**-1.2**
	comp=E,0.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**3.23**	**34**	Pn	**Pn**	**06 57 44.2**	**+0.7**
	comp=E,0.5nm,0.1s,SNR=7.9						
ECAL				Sn	**Sn**	**06 58 20.6**	**-1.2**
	comp=E,2.1nm,0.3s,SNR=7.9						
ECAL				Lg		06 58 35.8	
	comp=E,0.9nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**3.23**	**34**	Pn	**Pn**	**06 57 44.2**	**+0.7**
	comp=E,0.5nm,0.1s,SNR=7.9						
ECAL				Sn	**Sn**	**06 58 21.0**	**-0.8**
	comp=E,2.1nm,0.3s,SNR=7.9						

*SZGRF **21** 07:05:02.3, 2928N×4269W, h33km, mb4.8, MS3.6, Northern Mid-Atlantic Ridge*
*BJI **21** 07:05:17.9, 3170N×4090W, h10km, mB5.4, mb5.3, Ms5.1, Msz4.6*
*ISCJB **21** 07:05:19.2±0.3, 3170N±006×4096W±003, h10km, mb4.6/118, MS3.7/33, Error ellipse: s-maj=8.5km s-min=3.5km az=162.1*
*MOS **21** 07:05:19.5±0.8, 3179N×4096W, h10km, mb5.0/56, Error ellipse: s-maj=9.5km s-min=4.9km az=137.9*
*IDC **21** 07:05:19.5±0.5, 3174N×4096W, h0km, mb4.3/23, mb1 4.4/23, mb1mx4.3/29, mbtmp4.3/23, MS3.7/26, Ms1 3.7/26, ms1mx3.7/29, Error ellipse: s-maj=16.2km s-min=11.9km az=143.0*
*NEIC **21** 07:05:21.0±0.2, 3169N×4093W, h10km, mb4.7/86, Error ellipse: s-maj=5.9km s-min=2.6km az=171.0*
*HRVD **21** 07:05:21.0±0.6, 3152N×4093W, h12km, MW4.8/55, Centroid moment Tensor Solution. LP body waves: s14,c14;Mantle waves: s55,c70; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.48±.06; $M_{\theta\theta}$0.36±.07; $M_{\phi\phi}$1.12±.06; $M_{r\theta}$-0.99±.34; $M_{\theta\phi}$0.47±.05; $M_{\phi r}$-0.68±.26; Best double couple: $M_0$1.84700×10^{16} NP1:ϕs194.00000°, δ28.00000°, λ-116.00000°. NP2: ϕs43.00000°, δ65.00000°, λ-77.00000°. Principal axes: T 1.7150, Plg19.0000°, Azm123.0000°; N 0.2650, Plg12.0000°, Azm218.0000°; P -1.9780, Plg67.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 21 07:05:21.3±0.3, 3173N±006×4092W±003, h10km, n252, σ0875/241, mb4.6/118, MS3.7/33, 21C-12D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSR	**BB Station**	**20.16**	**278**	*e*P	**P**	**07 09 55.4**	**-0.2**
	20nm,1.0s						
SJG	**San Juan**	**26.51**	**245**	P	**P**	**07 10 57.4**	**-1.4**
	7.9nm,0.2s,mb4.8,baz=318,slow=20,SNR=6.2						
SCHQ	**Schefferville**	**29.51**	**329**	P	**P**	**07 11 25.4**	**-0.3**
	2.3nm,0.7s,mb4.0,baz=141,slow=9.1,SNR=5.5						
SCHQ				LR	LR	07 22 30.0	
	comp=Z,433nm,19.8s,MS4.1,baz=333,slow=35						
SCHQ	**Schefferville**	**29.51**	**329**	*e*P	**P**	**07 11 24.8**	**-0.9**
	9.0nm,1.1s,mb4.4						
PCRV	**Puerto La Cruz**	**30.69**	**231**	LR	LR	07 21 22.7	
	comp=Z,103nm,20.1s,MS3.5,baz=37,slow=31						
ESDC	**Sonseca Array**	**30.88**	**65**	P	**P**	**07 11 38.5**	**+0.7**
	0.2nm,0.3s,mb3.4,baz=262,slow=8.9,SNR=6.3						
ESDC				LR	LR	07 21 00.2	
	comp=Z,77nm,20.1s,MS3.4,baz=135,slow=30						
QUIF	**Quistinic**	**32.82**	**49**	*e*P	**P**	**07 11 54.0**	**-0.8**
ROSF	**Rostrenen**	**32.86**	**49**	*e*P	**P**	**07 11 54.5**	**-0.7**
	65nm,1.4s,mb5.1						
ROSF	**Rostrenen**	**32.86**	**49**	*e*P	**P**	**07 11 54.5**	**-0.7**
ROSF				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.1						
ROSF	**Rostrenen**	**32.86**	**49**	*e*P	**P**	**07 11 54.5**	**-0.7**
	comp=Z,33nm,1.4s,mb5.1						
SJPF	**Ste Jean**	**33.23**	**59**	*e*P	**P**	**07 11 58.0**	**-0.4**
	comp=Z,58nm,1.4s,mb5.0						
SJPF	**Ste Jean**	**33.23**	**59**	*e*P	**P**	**07 11 58.0**	**-0.4**
SJPF				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0						
SJPF	**Ste Jean**	**33.23**	**59**	*e*P	**P**	**07 11 58.0**	**-0.4**
	comp=Z,29nm,1.4s,mb5.0						
ETSF	**Etsaut**	**33.69**	**59**	*e*P	**P**	**07 12 02.5**	**+0.1**
	comp=Z,52nm,1.4s,mb5.0						
ETSF	**Etsaut**	**33.69**	**59**	*e*P	**P**	**07 12 02.5**	**+0.1**
ETSF				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
ETSF	**Etsaut**	**33.69**	**59**	*e*P	**P**	**07 12 02.5**	**+0.1**
	comp=Z,26nm,1.4s,mb5.0						
EPF	**Esparros**	**34.36**	**59**	*e*P	**P**	**07 12 08.3**	**+0.1**
	comp=Z,19nm,1.0s,mb4.7						
EPF	**Esparros**	**34.36**	**59**	*e*P	**P**	**07 12 08.3**	**+0.1**
EPF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
EPF	**Esparros**	**34.36**	**59**	*e*P	**P**	**07 12 08.3**	**+0.1**
	comp=Z,9.4nm,1.0s,mb4.7						
GRR	**Gorron**	**34.43**	**49**	*e*P	**P**	**07 12 08.5**	**-0.4**
	comp=Z,46nm,1.2s,mb5.0						
GRR	**Gorron**	**34.43**	**49**	*e*P	**P**	**07 12 08.5**	**-0.4**
GRR				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
GRR	**Gorron**	**34.43**	**49**	*e*P	**P**	**07 12 08.5**	**-0.4**
	comp=Z,23nm,1.2s,mb5.0						
MFF	**Saint Martin d**	**34.52**	**53**	*e*P	**P**	**07 12 10.4**	**+0.8**
	comp=Z,85nm,1.3s,mb5.2						
MFF	**Saint Martin d**	**34.52**	**53**	*e*P	**P**	**07 12 10.4**	**+0.8**
MFF				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.2						
MFF	**Saint Martin d**	**34.52**	**53**	*e*P	**P**	**07 12 10.4**	**+0.8**
	comp=Z,42nm,1.3s,mb5.2						
ACSO	**Alum Creek Sta**	**34.81**	**296**	*e*P	**P**	**07 12 14.5**	**+2.3**
	comp=Z,4.4nm,0.8s,mb4.4						
LFF	**La Frestale**	**34.86**	**56**	*e*P	**P**	**07 12 11.9**	**-0.7**
LDF	**La Druitiere**	**34.96**	**49**	*e*P	**P**	**07 12 13.0**	**-0.4**
	comp=Z,30nm,1.1s,mb4.8						
LDF	**La Druitiere**	**34.96**	**49**	*e*P	**P**	**07 12 13.0**	**-0.4**
LDF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
LDF	**La Druitiere**	**34.96**	**49**	*e*P	**P**	**07 12 13.0**	**-0.4**
	comp=Z,15nm,1.0s,mb4.9						
BORG	**Borgarnes**	**35.21**	**14**	P	**P**	**07 12 14.2**	**-1.4**
	comp=Z,10nm,0.9s,mb4.7,baz=106,slow=18,SNR=3.0						
RJF	**Les Rejaudoux**	**35.46**	**55**	*e*P	**P**	**07 12 16.9**	**-0.8**
	comp=Z,41nm,1.2s,mb4.9						
RJF				*e*R			
	comp=Z,62nm,18.2s						
RJF	**Les Rejaudoux**	**35.46**	**55**	*e*P	**P**	**07 12 16.9**	**-0.8**
	comp=Z,21nm,1.2s,mb4.9						
RJF				LR	LR		
	comp=Z,60nm,18.3s,MS3.4						
SDV	**Santo Domingo**	**35.74**	**237**	P	**P**	**07 12 20.5**	**+0.4**
	comp=Z,11nm,0.7s,mb4.9,baz=1.7,slow=22,SNR=7.7						
SDV	**Santo Domingo**	**35.74**	**237**	*e*P	**P**	**07 12 20.2**	**+0.1**
	comp=Z,20nm,0.8s,mb5.1						
MTLF	**Montolieu**	**35.75**	**59**	*e*P	**P**	**07 12 19.4**	**-0.9**
	comp=Z,47nm,1.4s,mb4.9						
MTLF	**Montolieu**	**35.75**	**59**	*e*P	**P**	**07 12 19.4**	**-0.9**
MTLF				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
MTLF	**Montolieu**	**35.75**	**59**	*e*P	**P**	**07 12 19.4**	**-0.9**
	comp=Z,24nm,1.4s,mb4.9						
SFJD	**Kangerlussuaq**	**35.78**	**353**	LR	LR	07 22 23.8	
	comp=Z,37nm,21.7s,MS3.1,baz=160,slow=29						
CAF	**Calviac**	**35.79**	**56**	*e*P	**P**	**07 12 20.0**	**-0.6**
	comp=Z,28nm,1.2s,mb4.8						
CAF	**Calviac**	**35.79**	**56**	*e*P	**P**	**07 12 20.0**	**-0.6**
CAF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
CAF	**Calviac**	**35.79**	**56**	*e*P	**P**	**07 12 20.0**	**-0.6**
	comp=Z,14nm,1.2s,mb4.8						
TCF	**Toulx Ste Croi**	**36.07**	**54**	*e*P	**P**	**07 12 22.5**	**-0.5**
	comp=Z,49nm,0.9s,mb5.1						
TCF	**Toulx Ste Croi**	**36.07**	**54**	*e*P	**P**	**07 12 22.5**	**-0.5**
TCF				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
TCF	**Toulx Ste Croi**	**36.07**	**54**	*e*P	**P**	**07 12 22.5**	**-0.5**
	comp=Z,24nm,0.9s,mb5.1						
FRB	**Frobisher Bay**	**36.44**	**340**	P	**P**	**07 12 25.2**	**-1.0**
	comp=Z,7.3nm,0.8s,mb4.6,baz=114,slow=5.9,SNR=4.4						
FRB	**Frobisher Bay**	**36.44**	**340**	P	**P**	**07 12 25.2**	**-1.0**
BGF	**Bois d'Agland**	**36.55**	**53**	*e*P	**P**	**07 12 26.3**	**-0.7**
AVF	**Avril sur Loir**	**36.92**	**53**	*e*P	**P**	**07 12 29.4**	**-0.9**
SSF	**Saint Saulge**	**37.07**	**53**	*e*P	**P**	**07 12 30.8**	**-0.7**
	comp=Z,30nm,1.1s,mb4.7						
SSF	**Saint Saulge**	**37.07**	**53**	*e*P	**P**	**07 12 30.8**	**-0.7**
SSF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
SSF	**Saint Saulge**	**37.07**	**53**	*e*P	**P**	**07 12 30.8**	**-0.7**
	comp=Z,15nm,1.1s,mb4.7						
SMF	**Signal de Mont**	**37.24**	**53**	*e*P	**P**	**07 12 32.5**	**-0.4**
	comp=Z,87nm,1.2s,mb5.2						
SMF	**Signal de Mont**	**37.24**	**53**	*e*P	**P**	**07 12 32.5**	**-0.4**
SMF				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.2						
SMF	**Signal de Mont**	**37.24**	**53**	*e*P	**P**	**07 12 32.5**	**-0.4**
	comp=Z,43nm,1.2s,mb5.2						
LOR	**Lormes**	**37.34**	**52**	*e*P	**P**	**07 12 33.1**	**-0.7**
	comp=Z,43nm,1.1s,mb4.9						
LOR				*e*R			
	comp=Z,53nm,18.5s						
LOR	**Lormes**	**37.34**	**52**	*e*P	**P**	**07 12 33.1**	**-0.7**
	comp=Z,22nm,1.1s,mb4.9						
LOR				LR	LR		
	comp=Z,50nm,18.5s,MS3.3						
BAIF	**Baives**	**38.04**	**48**	*e*P	**P**	**07 12 38.8**	**-0.9**
MEZF	**Maizieres J'vi**	**38.31**	**50**	*e*P	**P**	**07 12 41.5**	**-0.5**
	comp=Z,37nm,0.6s,mb5.0						
MEZF	**Maizieres J'vi**	**38.31**	**50**	*e*P	**P**	**07 12 41.5**	**-0.5**
	comp=Z,37nm,0

OXF Oxford 40.40 287 eP P 07 12 59.3 -0.1
comp=Z,9.8nm,0.7s,mb4.7
BFO Black Forest 40.45 51 eP P 07 13 00.3 +0.4
comp=Z,18nm,1.1s,mb4.7
BFO Black Forest 40.45 51 eP P 07 13 00.3 +0.4
BFO pmax pmax
comp=Z,18nm,1.1s,mb4.7
IBBN Ibbenburen 40.67 45 eP P 07 13 02.5 +0.8
comp=Z,19nm,0.6s,mb4.9
TNS Taunus Mts 40.76 48 eP P 07 13 03.6 +1.2
comp=Z,9.0nm,1.1s,mb4.3
TNS Taunus Mts 40.76 48 eP P 07 13 03.6 +1.2
TNS pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
ROSC El Rosal 41.16 236 P P 07 13 06.4 +0.6
comp=Z,3.2nm,0.5s,mb4.2,baz=105,slow=16,SNR=4.3
ROSC LR LR 07 29 00.4
comp=Z,62nm,20.2s,MS3.5,baz=18,slow=34
CCM Cathedral Cave 41.35 293 eP P 07 13 06.7 -0.6
comp=Z,2.6nm,0.6s,mb4.0
DAVA Damuels 41.41 53⇓iP P 07 13 08.7 +0.9
comp=Z,20nm,1.1s,mb4.7
KEST Kesra 41.63 70 LR LR 07 27 12.7
comp=Z,35nm,20.5s,MS3.2,baz=249,slow=32
DBIC Dimbokro 41.87 119 P P 07 13 11.2 -0.4
comp=Z,3.0nm,0.8s,mb4.0,baz=341,slow=5.6,SNR=2.8
DBIC LR LR 07 28 50.5
comp=Z,256nm,18.2s,MS4.1,baz=333,slow=34
LIC Lamto 42.04 119 eP P 07 13 11.9 -1.0
comp=Z,42nm,1.2s,mb4.6
LIC Lamto 42.04 119 eP P 07 13 11.9 -1.0
comp=Z,21nm,1.2s,mb4.6
NRDL Niedersach Rie 42.12 45 eP P 07 13 14.8 +1.2
comp=Z,37nm,1.2s,mb4.9
SQTA Sankt Quirin 42.32 53⇑iP P 07 13 16.5 +1.3
comp=Z,17nm,1.2s,mb4.5
SQTA Sankt Quirin 42.32 53⇑iP P 07 13 16.5 +1.3
SQTA pmax pmax
comp=Z,17nm,1.2s,mb4.5
GRA1 Grafenberg Arr 42.48 49 eP P 07 13 17.1 +0.6
comp=Z,17nm,0.9s,mb4.7
GRA1 LR LR
comp=Z,100nm,18.7s,MS3.7
GRF Grafenberg Arr 42.48 49 eP P 07 13 17.1 +0.6
comp=Z,17nm,0.9s,mb4.7
GRF eL 07 28 12.5
comp=Z,68nm,18.7s
BSEG Bad Segeberg 42.48 43 eP P 07 13 17.5 +1.0
comp=Z,71nm,1.0s,mb5.2
BSEG Bad Segeberg 42.48 43 eP P 07 13 17.5 +1.0
BSEG pmax pmax
comp=Z,71nm,1.0s,mb5.2
WTTA Wattenberg 42.61 53⇑iP P 07 13 21.5 +3.9
comp=Z,22nm,1.4s,mb4.7
WTTA Wattenberg 42.61 53⇑iP P 07 13 21.5 +3.9
WTTA pmax pmax
comp=Z,23nm,1.4s,mb4.7
MOX Moxa 42.82 48 eP P 07 13 19.9 +0.6
comp=Z,18nm,1.5s,mb4.6
MANZ Manzenberg 43.07 49 eP P 07 13 21.5 +0.2
comp=Z,12nm,1.0s,mb4.6
ROTZ Rotzenmuhle 43.12 49 eP P 07 13 21.9 +0.2
comp=Z,7.0nm,1.1s,mb4.3
TOA0 Torodi Ar. Sit 43.19 105⇓eP P 07 13 20.5 -1.7
TORD Torodi Ar. Bea 43.19 105 P P 07 13 20.9 -1.3
comp=Z,8.5nm,1.1s,mb4.4,baz=303,slow=4.3,SNR=25
TORD LR LR 07 31 25.0
comp=Z,101nm,18.2s,MS3.8,baz=295,slow=36
TORD Torodi Ar. Bea 43.19 105 P P 07 13 20.9 -1.3
TORD LR LR 07 31 25.0
WERD Werda 43.24 48 eP P 07 13 22.6 -0.1
comp=Z,7.0nm,1.0s,mb4.3
GUNZ Gunzen 43.25 49 eP P 07 13 23.1 +0.4
comp=Z,7.0nm,1.0s,mb4.3
WERN Wernitzgruen 43.27 49 eP P 07 13 23.6 +0.7
comp=Z,12nm,1.2s,mb4.5
NKC Novy Kostel 43.31 49 eP P 07 13 24.2 +0.9
TANN Tannenbergstha 43.34 48 eP P 07 13 23.7 +0.3
comp=Z,5.0nm,1.0s,mb4.2
CLL Collm 43.75 47 eP P 07 13 27.3 +0.5
comp=Z,16nm,1.1s,mb4.7
CLL Collm 43.75 47 ⇓P P 07 13 26.9 +0.1
comp=Z,logA/T=1.2,mb4.7
CLL *SP sP 07 13 30.7 -0.5
CLL eS S 07 19 59.0 +1.9
CLL Collm 43.75 47⇓iP P 07 13 26.9 +0.1
comp=Z,16nm,1.1s,mb4.7
CLL iSP sP 07 13 30.7 -0.5
CLL eS S 07 19 59.0 +1.9
CLL Collm 43.75 47⇓iP P 07 13 26.9 +0.1
CLL i pP 07 13 30.7 +0.8
CLL eS S 07 19 59.0 +1.9
CLL pmax pmax
comp=Z,16nm,1.1s,mb4.7
CLL MLR MLR
comp=Z,100nm,22.9s,MS3.7
CLL Collm 43.75 47⇓iP P 07 13 26.9 +0.1
comp=Z,16nm,1.1s,mb4.7
CLL i pP 07 13 30.7 +0.8
CLL eS S 07 19 59.0 +1.9
CLL LR LR
comp=Z,100nm,22.9s,MS3.7
MIAR Mount Ida 43.77 288⇓eP P 07 13 27.2 +0.2
MIAR pmax pmax
comp=Z,13nm,1.4s,mb4.5
MIAR Mount Ida 43.77 288⇓eP P 07 13 27.2 +0.3
comp=Z,13nm,1.4s,mb4.5
MIAR e 07 13 45.1
FBE Freiberg 43.94 48 eP P 07 13 28.9 +0.6
comp=Z,12nm,0.9s,mb4.6
KHC Kasperske Hory 43.98 50 eP P 07 13 28.7 +0.1
KHC epP pP 07 13 34.0 +2.2
KHC AMS AMS 07 31 50.0
comp=Z,100nm,10.3s
GEC2 GERESS Array S 44.05 51 eP P 07 13 29.2 0.0
comp=Z,5.0nm,1.0s,mb4.2
GEC2 GERESS Array S 44.05 51 eP P 07 13 29.2 0.0
GEC2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
GERES GERESS Array B 44.05 51 P P 07 13 29.4 +0.2
comp=Z,2.5nm,0.7s,mb4.1,baz=264,slow=7.9,SNR=12
BRG Berggiesshubel 44.31 48 eP P 07 13 31.4 +0.1
comp=Z,7.0nm,1.0s,mb4.3
BRG Berggiesshubel 44.31 48 eP P 07 13 30.9 -0.3
comp=Z,3.3nm,1.1s,mb4.0
BRG
comp=N,45nm,21.6s
BRG
comp=E,68nm,17.2s
BRG
comp=Z,92nm,24.9s
BRG Berggiesshubel 44.31 48 eP P 07 13 31.0 -0.3
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
BRG MLR MLR
comp=N,45nm,21.6s,MS3.7
BRG MLR MLR
comp=E,68nm,17.2s,MS3.7
BRG MLR MLR
comp=Z,92nm,24.9s
ULM Lac du Bonnet 44.33 311 P P 07 13 30.5 -0.9
comp=Z,3.2nm,0.7s,mb4.2,baz=102,slow=9.6,SNR=5.7
ULM LR LR 07 30 06.7
comp=Z,94nm,20.5s,MS3.7,baz=69,slow=34
OBKA Obir 44.60 54⇑iP P 07 13 33.6 0.0
comp=Z,17nm,0.8s,mb4.9
NB2 NORSAR Subarra 44.63 33 P P 07 13 33.9 +0.1
comp=Z,3.7nm,1.0s,mb4.2,baz=254,slow=8.6
NOA NORSAR Array B 44.63 33 P P 07 13 34.0 +0.2
comp=Z,2.1nm,0.8s,mb4.0,baz=254,slow=8.1,SNR=5.1
NOA LR LR 07 28 35.8
comp=Z,55nm,21.2s,MS3.5,baz=260,slow=31
PRU Pruhonice 44.64 49 eP P 07 13 34.3 +0.4
PRU AMS AMS 07 30 40.0
comp=Z,100nm,21.2s
PVCC Panska Ves 44.69 48 AMS AMS 07 29 30.0
comp=Z,100nm,13.0s
ARSA Arzberg 45.26 53⇓iP P 07 13 37.9 -0.9
comp=Z,14nm,1.6s,mb4.5
UPC Upice 45.61 48 eP P 07 13 42.2 +0.6
SAML Samuel 45.71 212 eP P 07 13 40.4 -2.0
comp=Z,9.6nm,1.2s,mb4.6
DPC Dobruska-Polom 45.80 49 eP P 07 13 43.6 +0.5
DPC AMS AMS 07 30 30.0
comp=Z,100nm,19.6s
MORC Moravsky Berou 46.58 50⇓iP P 07 13 51.3 +2.0
MORC Moravsky Berou 46.58 50 eP P 07 13 49.5 +0.2
MORC pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
MORC Moravsky Berou 46.58 50 eP P 07 13 49.5 +0.3
comp=Z,8.3nm,1.1s,mb4.6
OKC Ostrava-Krasne 46.97 49 eP P 07 13 55.0 +2.7
OKC AMS AMS 07 32 40.0
comp=Z,100nm,20.9s
PKSM Moragy 47.44 54⇓iP P 07 13 56.1 +0.1
VYHS Vyhne 47.45 51 eP P 07 13 55.4 -0.7
BDFB Brasilia 47.58 189 P P 07 13 58.1 +1.0
comp=Z,5.4nm,0.9s,mb4.6,baz=190,slow=13,SNR=4.4
BDFB LR LR 07 30 51.8
comp=Z,107nm,19.7s,MS3.8,baz=18,slow=32
WMOK Wichita Mounta 47.92 290⇑eP P 07 13 59.2 -0.5
WMOK pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
WMOK Wichita Mounta 47.92 290⇑eP P 07 13 59.2 -0.5
comp=Z,7.4nm,0.9s,mb4.7
OJC Ojcow 48.03 49 eP P 07 14 01.3 +0.7
DIVS Divcibare 48.60 57 eP P 07 14 04.3 -0.6
STHS Stebnicka Huta 48.99 50 eP P 07 14 08.9 +0.9
STHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
STHS Stebnicka Huta 48.99 50 eP P 07 14 08.9 +0.9
comp=Z,6.5nm,1.1s,mb4.6
CRVS Cervenica-Dubn 49.17 51 eP P 07 14 09.8 +0.5
BZS Buzias 49.57 55⇑iP P 07 14 13.0 +0.6
KOLS Kolonicke sedl 49.70 51 eP P 07 14 14.2 +0.8
JCT Junction City 49.89 285 eP P 07 14 14.0 -0.8
JCT pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
JCT Junction City 49.89 285 eP P 07 14 13.9 -0.9
comp=Z,9.8nm,1.0s,mb4.8
KWP Kalwaria 49.93 50 eP P 07 14 16.2 +1.0
KWP pmax pmax
comp=Z,26nm,1.1s,mb5.2
KWP Kalwaria 49.93 50 eP P 07 14 16.2 +1.0
comp=Z,26nm,1.1s,mb5.2
LAO LASA Array 51.34 307 eP P 07 14 25.7 -0.1
comp=Z,7.2nm,0.9s,mb4.6
FINES FINESS Array B 51.76 34 P P 07 14 28.3 -0.7
comp=Z,2.7nm,0.9s,mb4.2,baz=212,slow=6.8,SNR=5.9
FINES LR LR 07 35 08.6
comp=Z,25nm,18.9s,MS3.3,baz=176,slow=35
FINES FINESS Array B 51.76 34 P P 07 14 28.3 -0.7
FINES LR LR 07 35 08.6
BURAR Bucovina Array 51.79 52⇓iP P 07 14 30.7 +1.5
VOIR 51.98 55⇑iP P 07 14 31.4 +0.8
ISCO Idaho Springs 52.10 298 eP P 07 14 31.5 0.0
ISCO pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
ISCO Idaho Springs 52.10 298 eP P 07 14 31.5 0.0
comp=Z,5.2nm,1.1s,mb4.4
ISCO e 07 14 45.2
ARCES ARCESS Array B 52.43 24 P P 07 14 34.2 +0.3
comp=Z,3.3nm,0.8s,mb4.3,baz=257,slow=8.1,SNR=9.9
ARCES LR LR 07 33 24.1
comp=Z,30nm,19.0s,MS3.4,baz=226,slow=32
MLR Muntele Rosu 52.60 55⇑iP P 07 14 36.2 +1.0
RWWY Rawlins 52.89 301 eP P 07 14 37.7 +0.4
comp=Z,3.2nm,0.8s,mb4.3
SMCO Snowmass 53.27 298 eP P 07 14 41.5 +1.4
comp=Z,4.4nm,1.1s,mb4.3
EGMT Eagleton 53.53 309 eP P 07 14 41.6 -0.4
comp=Z,16nm,1.0s,mb4.9
GCMT Greycliff 53.84 306 eP P 07 14 43.8 -0.5
ANMO Albuquerque 53.97 292 eP P 07 14 46.0 +0.8
comp=Z,4.0nm,1.0s,mb4.3
AKASG Malin Array Be 53.99 48 P P 07 14 44.6 -0.9
comp=Z,7.0nm,0.8s,mb4.6,baz=274,slow=6.6,SNR=24
AKASG LR LR 07 36 08.4
comp=Z,56nm,19.0s,MS3.6,baz=280,slow=34
AKBB Malin Array Si 53.99 48 eP P 07 14 44.5 -0.9
LPM Los Pinos Moun 54.28 292 eP P 07 14 48.5 +1.0
PDAR Pinedale Array 54.36 302 P P 07 14 47.8 -0.4
comp=Z,7.6nm,1.0s,mb4.6,baz=76,slow=7.9,SNR=33
PDAR LR LR 07 37 25.6
comp=Z,285nm,18.4s,MS4.4,baz=116,slow=35
BW06 Boulder Array 54.37 302⇑eP P 07 14 47.6 -0.5
comp=Z,12nm,1.0s,mb4.8
LPAZ La Paz 54.41 213 P P 07 14 49.3 +0.8
comp=Z,3.4nm,0.8s,mb4.3,baz=2.6,slow=5.1,SNR=10
LPAZ LR LR 07 35 04.9
comp=Z,74nm,19.5s,MS3.8,baz=242,slow=33
LPAZ La Paz 54.41 213 eP P 07 14 50.7 +2.2
comp=Z,3.8nm,0.9s,mb4.3
LENM Lemitar 54.60 292 eP P 07 14 50.5 +0.7
LAZ Ladron 54.66 292 eP P 07 14 50.9 +0.6
PV01 Paradox Valley 54.74 297 eP P 07 14 51.7 +0.8
FLWY Flagg Ranch 54.90 304 eP P 07 14 51.9 -0.1
comp=Z,6.4nm,1.0s,mb4.6
YKA Yellowknife Ar 54.93 327 LR LR 07 37 32.1
comp=Z,240nm,20.0s,MS4.3,baz=90,slow=35
LOHW Long Hollow 54.93 304 eP P 07 14 52.0 -0.3
comp=Z,5.0nm,1.0s,mb4.5
YMR Madison River 54.96 305 eP P 07 14 53.1 +0.6
comp=Z,24nm,1.1s,mb5.1
EDM Edmonton 55.05 316 eP P 07 14 52.2 -0.9
HRY Holter Researc 55.15 308 eP P 07 14 53.2 -0.6
REDW Red Top Meadow 55.16 303⇑eP P 07 14 53.5 -0.4
comp=Z,14nm,1.1s,mb4.9
TPAW Teton Pass 55.20 304 eP P 07 14 54.3 +0.1
comp=Z,12nm,1.1s,mb4.8
BOZ Bozeman (W) 55.22 306 eP P 07 14 53.5 -0.8
comp=Z,4.5nm,1.1s,mb4.4
AHID Auburn Hatcher 55.47 303 eP P 07 14 56.9 +0.8
comp=Z,10nm,0.6s,mb5.0
RRI2 Red Ridge 55.50 303⇑eP P 07 14 56.4 +0.1
comp=Z,11nm,1.1s,mb4.8
DLMT Dillon 55.94 306 eP P 07 14 59.6 0.0
comp=Z,13nm,1.1s,mb4.9
SRU San Rafael 55.96 298 eP P 07 14 59.6 0.0
comp=Z,4.2nm,0.9s,mb4.5
CHMT Chamberlain Mc 56.06 308 eP P 07 14 59.7 -0.6
WALA Waterton Lakes 56.08 311 eP P 07 14 59.1 -1.4
comp=Z,7.3nm,1.0s,mb4.7
HWUT Hardware Ranch 56.08 302 eP P 07 15 00.4 -0.1
comp=Z,4.9nm,0.9s,mb4.5
MSO Missoula 56.54 308 eP P 07 15 03.0 -0.8
comp=Z,2.4nm,0.9s,mb4.2
MSU Marysvale 57.36 298 eP P 07 15 10.3 +0.7
DUG Dugway 57.37 300 eP P 07 15 09.9 +0.3
comp=Z,5.8nm,1.1s,mb4.5
HLID Hailey 57.63 304 eP P 07 15 12.0 +0.4
WUAZ Wupatki 57.64 294⇑eP P 07 15 12.4 +0.9
comp=Z,8.1nm,1.0s,mb4.7
OBN Obninsk 57.70 42 eP P 07 15 11.4 -0.6
OBN pmax pmax
comp=Z,17nm,1.0s,mb5.0
TUC Tucson 58.21 291 eP P 07 15 15.3 -0.3
TUC pmax pmax
comp=Z,20nm,1.0s,mb5.1
TUC Tucson 58.21 291 eP P 07 15 15.3 -0.3
comp=Z,2.1nm,1.0s,mb4.1
NEW Newport 58.32 310⇑eP P 07 15 15.5 -0.9
NEW pmax pmax
comp=Z,13nm,1.0s
NEW Newport 58.32 310⇑eP P 07 15 15.5 -0.8
comp=Z,13nm,1.0s,mb4.9
CCUT Cedar City 58.54 297⇑eP P 07 15 18.5 +0.6
BR131 Keskin Array S 59.47 60 eP P 07 15 24.3 0.0
comp=Z,1.1nm,0.6s,mb4.1
BRTR Keskin Array B 59.47 60 P P 07 15 24.4 +0.1
comp=Z,1.4nm,0.7s,mb4.1,baz=284,slow=5.0,SNR=9.4
BRTR LR LR 07 38 15.7
comp=Z,24nm,20.1s,MS3.3,baz=293,slow=33
BRTR Keskin Array B 59.47 60 P P 07 15 24.4 +0.1
BRTR LR LR 07 38 15.7
CPUP Villa Florida 59.82 197 LR LR 07 37 53.2
comp=Z,63nm,18.4s,MS3.8,baz=255,slow=33
VRSR Storozhevoye 60.08 46 eP P 07 15 28.7 +0.2
VRSR pmax pmax
comp=N,20nm,0.9s
VRSR pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
VRSR pmax pmax
comp=E,6.0nm,1.2s
HAWA Hanford 60.39 309 eP P 07 15 30.6 -0.1
comp=E,1.4nm,1.2s,mb3.9
WVOR Wild Horse Val 60.92 304 eP P 07 15 34.7 +0.4
comp=E,7.1nm,1.2s,mb4.7
INK Inuvik 61.87 335⇑eP P 07 15 40.0 -0.7
INK pmax pmax
comp=Z,13nm,1.2s
INK Inuvik 61.87 335⇑eP P 07 15 40.0 -0.8
comp=Z,13nm,1.2s,mb4.9
NVAR Mina Array Bea 61.96 300 P P 07 15 40.7 -0.6
comp=Z,1.5nm,0.9s,mb4.1,baz=77,slow=7.1,SNR=12
NVAR Mina Array Bea 61.96 300 P P 07 15 40.7 -0.6
DAC Darwin (Calif) 62.16 297 eP P 07 15 43.8 +1.1
DAC pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
DAC Darwin (Calif) 62.16 297 eP P 07 15 43.8 +1.1
comp=Z,9.3nm,1.2s,mb4.8
MALT Malatya 63.45 60 eP P 07 15 50.9 -0.4
MALT pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
MALT Malatya 63.45 60 eP P 07 15 50.9 -0.4
comp=Z,3.8nm,0.5s,mb4.8
OHCM Honcut 63.98 302 eP P 07 15 54.3 -0.4
KIV Kislovodsk 64.50 53 eP P 07 15 58.2 0.0
KIV e 07 18 19.5
KIV pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
EGAK Eagle 65.93 332 eP P 07 16 07.1 -0.3
ARU Arti 69.08 36 eP P 07 16 26.6 -0.7
ARU e 07 19 00.2
ARU eS S 07 25 29.8 -2.8
ARU eSS SS 07 29 57.3 -1.2
ARU Arti 69.08 36 eP P 07 16 27.2 -0.2
comp=Z,20nm,1.9s,mb4.7
AKTO Aktyubinsk 71.48 42 LR LR 07 46 16.9
comp=Z,44nm,19.5s,MS3.7,baz=306,slow=34
ZRNK Zerenda 76.06 36 eP P 07 17 09.1 +0.2
comp=Z,4.2nm,1.2s,mb4.2
CHKZ Chkalovo 76.44 35 eP P 07 17 11.4 +0.3
CHKZ pmax pmax
comp=Z,18nm,2.0s,mb4.7
CHKZ Chkalovo 76.44 35 eP P 07 17 11.4 +0.4
comp=Z,18nm,2.0s,mb4.6
BRVK Borovoye 76.64 35 eP P 07 17 12.6 +0.4
comp=Z,3.4nm,1.2s,mb4.2
BVAR Borovoye Array 76.71 35 LR LR 07 49 36.2
comp=Z,42nm,18.6s,MS3.8,baz=232,slow=35
PLCA Paso Flores 77.13 203 P P 07 17 15.9 +1.0
comp=Z,3.4nm,1.0s,mb4.2,baz=44,slow=5.8,SNR=4.2
PLCA LR LR 07 49 43.9
comp=Z,49nm,18.3s,MS3.9,baz=268,slow=34
BILL Bilibino 78.48 350 eP P 07 17 22.4 -0.1
BILL pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KMBO Kilima Mbogo 80.54 97 LR LR 07 52 47.5
comp=Z,237nm,19.2s,MS4.6,baz=96,slow=35
LSZ Lusaka 81.01 114 eP P 07 17 36.7 +0.5
LSZ pmax pmax
comp=Z,12nm,1.4s,mb4.6
LSZ Lusaka 81.01 114 eP P 07 17 36.6 +0.4
comp=Z,12nm,1.4s,mb4.6
ZAL Zalesovo 82.66 29 P P 07 17 45.8 +0.9
comp=Z,2.1nm,0.3s,mb4.7,baz=343,slow=5.4,SNR=6.0
ZAL LR LR 07 53 40.2
comp=Z,47nm,18.4s,MS3.9,baz=264,slow=35
MKAR Makanchi Array 86.59 35 P P 07 18 05.2 +0.5
comp=Z,1.9nm,1.0s,mb4.3,baz=328,slow=4.3,SNR=10
MKAR Makanchi Array 86.59 35 P P 07 18 05.2 +0.5
BOSA Boshof 86.94 126 LR LR 07 57 34.7
comp=Z,120nm,18.0s,MS4.3,baz=127,slow=36
WMQ Urumqi 91.37 34 eP P 07 18 27.0 -0.4
WMQ XP sP 07 18 34.0 +2.1
WMQ PP PP 07 22 07.0 +2.2
WMQ SKS 07 28 57.0
WMQ S S 07 29 24.0 -2.5
WMQ SS SS 07 35 32.0 +0.3
WMQ AMB AMB
comp=Z,18nm,1.0s,mb5.4
WMQ LR LR
comp=N,125nm,15.0s,MS5.0
WMQ LR LR
comp=E,423nm,15.0s,MS5.0
WMQ LR LR
comp=Z,75nm,14.0s,MS4.3
SONM Songino Array 95.54 21 LR LR 08 06 40.2
comp=Z,39nm,18.3s,MS3.9,baz=110,slow=38
KMI Kunming 113.66 36 PKP PKiKP 07 23 58.8 -1.1
SSE Sheshan 115.26 17 ePKP PKiKP 07 23 58.0 -5.0
VNDA Vanda 132.97 187 PKP PKPdf 07 24 35.8 -1.0
comp=Z,1.8nm,1.0s,baz=210,slow=2.4,SNR=6.8
ASAR Alice Springs 170.76 31 PKP PKPdf 07 25 29.2 -0.4
comp=Z,0.9nm,0.9s,baz=13,slow=1.3,SNR=6.7
ASAR PKPab PKPab 07 26 48.2 +0.6
comp=Z,2.9nm,1.0s,baz=324,slow=4.2,SNR=12

NIED ***21*** *07:33:00,37.90N×142.40E,h17km,Mw3.2 Best double couple: M₀8.01000×10¹³ NP1:φ=203.00000°, δ=75.00000°, λ=72.00000°. NP2:φ=75.00000°, δ=23.00000°, λ=140.00000°.*
JMA 21 07:33:22.5±0.2,3794N×14243E,h39km±3km,M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	0.99	301	P	Pn	07 33 40.4	+0.4
JIO				eS	Sn	07 33 52.8	0.0
OFUJ	Ofunato	1.28	333	P	Pn	07 33 44.1	+0.2
JMM	Marumori	1.30	267	P	Pn	07 33 44.6	+0.5
JMM				eS	Sn	07 34 00.1	-0.1
JFK	Kawauchi	1.36	246	P	Pn	07 33 45.3	+0.3
JFK				eS	Sn	07 34 01.3	-0.5
JMK	Ichinoseki	1.39	317	P	Pn	07 33 46.1	+0.8
JOU	Okura	1.46	288	P	Pn	07 33 47.6	+1.3
JOM	Ohasama	1.77	330	P	Pn	07 33 51.8	+1.2

ISCJB ***21*** *08:34:21.4±0.3,2897S±006×6161E±006,h10km, mb4.7/56,MS4.0/23,Error ellipse: s-maj=8.3km s-min=7.9km az=21.6*
BJI ***21*** *08:34:21.0,2873S×61.11E,h11km,mB5.1,mb5.0,Ms4.8, Msz4.5*
IDC ***21*** *08:34:21.4±0.5,2889S×6160E,h0km,mb4.3/18, mb1 4.4/19,mb1mx4.3/28,mbtmp4.3/19,ML3.9/1,MS3.8/19, Ms1 3.8/19,ms1mx3.7/32,Error ellipse: s-maj=16.6km s-min=14.4km az=26.0*
MOS ***21*** *08:34:21.2±0.8,2896S×6161E,h10km,mb5.0/22,Error ellipse: s-maj=16.7km s-min=9.8km az=90.2*
NEIC ***21*** *08:34:22.9±0.2,2895S×6158E,h10km,mb4.9/24,Error ellipse: s-maj=6.3km s-min=5.5km az=194.0*
ISC 21 08:34:23.2±0.3,2894S±006×6156E±006,h10km, (h15km±1.0km:pP-P),n121,s0s69/102,mb4.7/56,MS4.0/23, 2C-13D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	Ambohidratompo	16.70	305	Pn	Pn	08 38 17.5	+0.2
	0.5nm,0.3s,baz=117,slow=18,SNR=3.4						
OPO				Sn	Sn	08 41 07.9	-15
	0.5nm,0.3s,baz=158,slow=19,SNR=3.4						
BOSA	Boshof	31.74	262	P	P	08 40 47.6	+0.3
	7.5nm,0.9s,mb4.5,baz=94,slow=8.1,SNR=5.6						
BOSA				LR	LR	08 53 17.9	
	comp=Z,96nm,18.3s,MS3.5,baz=290,slow=36						
BOSA	Boshof	31.74	262	eP	P	08 40 47.6	+0.3
BOSA				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
BOSA	Boshof	31.74	262	eP	P	08 40 47.6	+0.2
	comp=Z,18nm,1.1s,mb4.8						
LBTB	Lobatse	32.21	268	P	P	08 40 51.4	-0.1
	comp=Z,4.6nm,0.8s,mb4.4,baz=133,slow=6.0,SNR=6.4						
LBTB	Lobatse	32.21	268	eP	P	08 40 51.3	-0.1
	comp=Z,3.4nm,0.6s,mb4.3						
LSZ	Lusaka	33.64	287	eP	P	08 41 04.6	+0.7
LSZ				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
LSZ	Lusaka	33.64	287	eP	P	08 41 04.6	+0.6
	comp=Z,21nm,0.9s,mb5.1						
SUR	Sutherland	35.07	254	P	P	08 41 17.4	+1.1
	comp=Z,8.0nm,0.9s,mb4.6,baz=114,slow=13,SNR=3.7						
KMBO	Kilima Mbogo	36.09	316	LR	LR	08 53 37.9	
	comp=Z,152nm,18.3s,MS3.8,baz=104,slow=32						
MAW	Mawson	38.70	179	P	P	08 41 47.5	+0.3
	comp=Z,2.9nm,0.8s,mb4.1,baz=351,slow=9.4,SNR=7.9						
MAW				LR	LR	08 55 09.5	
	comp=Z,150nm,19.8s,MS3.8,baz=46,slow=32						
MAW	Mawson	38.70	179	eP	P	08 41 47.6	+0.4
	comp=Z,3.2nm,0.8s,mb4.1						
TSUM	Tsumeb	41.10	274	P	P	08 42 08.0	+0.8
	comp=Z,2.9nm,0.8s,mb4.0,baz=92,slow=7.0,SNR=7.9						
TSUM	Tsumeb	41.10	274	eP	P	08 42 08.2	+1.1
	comp=Z,4.7nm,1.2s,mb4.0						
SYO	Syowa Base	42.10	192⇑	eP	P	08 42 15.6	+0.2
MBWA	Marble Bar	52.83	96	eP	P	08 43 39.6	+0.7

SNAA	**Sanae**	**54.79**	**200**	P		**P**	**08 43 52.5**	**-0.7**
	comp=Z,1.6nm,0.9s,mb4.0,baz=56,slow=8.3,SNR=10							
SNAA	**Sanae**	**54.79**	**200**	*e*P		**P**	**08 43 53.0**	**-0.2**
SNAA				*e*		pP	08 43 56.4	0.0
SNAA				*e*			08 44 01.2	
SNAA	**Sanae**	**54.79**	**200**	*e*P		**P**	**08 43 52.8**	**-0.4**
SNAA				pmax		pmax		
	comp=Z,6.0nm,1.0s							
SNAA	**Sanae**	**54.79**	**200**	*e*P		**P**	**08 43 52.8**	**-0.4**
	comp=Z,6.4nm,1.0s,mb4.6							
FITZ	**Fitzroy Crossi**	**59.13**	**95**	*e*P		**P**	**08 44 24.1**	**+0.1**
	comp=Z,7.3nm,0.9s,mb4.7							
KOLN	**Koldanda**	**60.21**	**23**	*e*P		**P**	**08 44 31.5**	**+0.1**
DMN	**Daman**	**60.59**	**24**	*e*P		**P**	**08 44 34.2**	**+0.3**
	comp=Z,41nm,0.9s,mb5.5							
PKI	**Pulchoki**	**60.66**	**24**	*e*P		**P**	**08 44 34.4**	**0.0**
GKN	**Gorkha**	**60.78**	**23**	*e*P		**P**	**08 44 35.2**	**-0.1**
	comp=Z,69nm,0.9s,mb5.8							
KKN	**Kakani**	**60.81**	**24**	*e*P		**P**	**08 44 35.7**	**+0.2**
	comp=Z,45nm,1.0s,mb5.6							
KKN	**Kakani**	**60.81**	**24**	*e*P		**P**	**08 44 35.7**	**+0.2**
KKN				pmax		pmax		
	comp=Z,45nm,1.0s,mb5.5							
JIRN	**Jiri**	**61.03**	**25**	*e*P		**P**	**08 44 37.2**	**+0.3**
	comp=Z,29nm,0.7s,mb5.5							
GUN	**Gumba**	**61.14**	**25**	*e*P		**P**	**08 44 38.3**	**+0.6**
	comp=Z,51nm,0.9s,mb5.6							
QSPA	**South Pole Qui**	**61.22**	**180**	*e*P		**P**	**08 44 37.6**	**-0.6**
	comp=Z,9.0nm,1.1s,mb4.8							
ASAR	**Alice Springs**	**64.16**	**104**	P		**P**	**08 44 57.8**	**-0.1**
	comp=Z,3.6nm,0.8s,mb4.4,baz=244,slow=6.3,SNR=39							
ASAR				LR		LR	09 08 52.7	
	comp=Z,72nm,18.4s,MS3.9,baz=7.6,slow=32							
AS31	**Alice Springs**	**64.16**	**104**	*e*P		**P**	**08 44 57.8**	**-0.1**
VNDA	**Vanda**	**64.17**	**166**	P		**P**	**08 44 58.0**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.7,baz=245,slow=7.3,SNR=5.3							
VNDA				LR		LR	09 10 39.0	
	comp=Z,142nm,19.7s,MS4.2,baz=259,slow=34							
VNDA	**Vanda**	**64.17**	**166**	*e*P		**P**	**08 44 57.5**	**-0.3**
	comp=Z,2.1nm,1.1s,mb4.1							
LSA	**Lhasa**	**64.80**	**28**	*e*P		**P**	**08 45 03.5**	**+1.5**
LSA				pmax		pmax		
	comp=Z,6.0nm,0.5s,mb4.9							
LSA	**Lhasa**	**64.80**	**28**	*e*P		**P**	**08 45 03.5**	**+1.5**
	comp=Z,5.8nm,0.5s,mb4.9							
WRA	**Warramunga Arr**	**65.97**	**100**	P		**P**	**08 45 10.0**	**+0.4**
	comp=Z,2.1nm,0.6s,mb4.3,baz=248,slow=5.8,SNR=34							
WB2	**Warramunga Arr**	**65.97**	**100**	*e*P		**P**	**08 45 09.9**	**+0.2**
WRAB	**Tennant Creek**	**65.98**	**100**	*e*P		**P**	**08 45 08.3**	**-1.4**
WRAB				pmax		pmax		
	comp=Z,8.0nm,0.9s,mb4.8							
WRAB	**Tennant Creek**	**65.98**	**100**	*e*P		**P**	**08 45 08.3**	**-1.4**
	comp=Z,8.4nm,0.9s,mb4.8							
KMI	**Kunming**	**66.75**	**41**	P		**P**	**08 45 16.5**	**+1.9**
KMI				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb5.0							
KMI				LR		LR		
	comp=Z,41nm,28.7s,MS3.5							
STKA	**Stephens Creek**	**67.54**	**115**	P		**P**	**08 45 19.0**	**-0.7**
	comp=Z,2.1nm,0.7s,mb4.3,baz=220,slow=4.4,SNR=5.0							
STKA				LR		LR	09 08 29.4	
	comp=Z,81nm,20.0s,MS3.9,baz=25,slow=30							
TORD	**Torodi Ar. Bea**	**71.34**	**297**	P		**P**	**08 45 43.1**	**0.0**
	comp=Z,3.8nm,0.8s,mb4.4,baz=118,slow=5.0,SNR=24							
TORD				LR		LR	09 16 39.3	
	comp=Z,142nm,18.1s,MS4.3,baz=130,slow=36							
AML	**Almayashu**	**71.60**	**9**	P		**P**	**08 45 46.0**	**+1.3**
SNR=8.0								
CD2	**Chengdu**	**71.82**	**37**	*e*P		**P**	**08 45 46.4**	**+0.4**
CD2				AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.8							
CD2				AMB		AMB		
	comp=Z,30nm,8.4s							
ULHL	**Ulahol**	**72.11**	**11**	P		**P**	**08 45 48.8**	**+1.0**
SNR=5.1								
EKS2	**Erkin-Say**	**72.13**	**9**	P		**P**	**08 45 48.8**	**+0.9**
SNR=16								
KKAR	**Karatay Array**	**72.16**	**7**	P		**P**	**08 45 48.5**	**+0.4**
KKAR				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.6							
AAK	**Ala-Archa**	**72.21**	**10**	*e*P		**P**	**08 45 48.0**	**-0.4**
AAK				pmax		pmax		
	comp=Z,9.0nm,1.0s,mb4.7							
AAK	**Ala-Archa**	**72.21**	**10**	*e*P		**P**	**08 45 48.0**	**-0.3**
	comp=Z,8.8nm,1.0s,mb4.6							
TKM2	**Tokmak 2**	**72.66**	**11**	P		**P**	**08 45 51.8**	**+0.8**
SNR=7.7								
TKM2	**Tokmak 2**	**72.66**	**11**	P		**P**	**08 45 48.9**	**-2.2**
TKM2				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.7							
USP	**Ospenovka**	**72.83**	**10**	P		**P**	**08 45 52.3**	**+0.3**
SNR=20								
DBIC	**Dimbokro**	**72.97**	**288**	LR		LR	09 14 04.0	
	comp=Z,40nm,19.0s,MS3.7,baz=119,slow=33							
BRTR	**Keskin Array B**	**73.09**	**338**	P		**P**	**08 45 53.1**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=161,slow=7.9,SNR=11							
BRTR				LR		LR	09 14 31.4	
	comp=Z,31nm,18.3s,MS3.6,baz=354,slow=33							
KIV	**Kislovodsk**	**74.57**	**346**	*e*P		**P**	**08 46 02.3**	**0.0**
KIV				*e*SS		SS	09 00 28.0	+3.4
KIV				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
LZH	**Lanzhou**	**75.94**	**34**	*e*P		**P**	**08 46 10.0**	**-0.2**
LZH				AP		pP	08 46 14.0	+0.5
LZH				XP		sP	08 46 16.0	+1.3
LZH				PP		PP	08 49 02.9	+2.4
LZH				AMB		AMB		
	comp=Z,6.0nm,1.0s,mb4.5							
LZH				AMB		AMB		
	comp=Z,60nm,4.4s							
WMQ	**Urumqi**	**76.27**	**19**	*e*P		**P**	**08 46 12.0**	**0.0**
WMQ				XP		sP	08 46 19.0	+2.5
WMQ				PP		PP	08 49 05.0	+1.8
WMQ				S		S	08 55 55.0	-1.6
WMQ				SS		SS	09 00 52.0	+1.7
WMQ				AMB		AMB		
	comp=Z,20nm,1.0s,mb5.0							
WMQ				AMB		AMB		
	comp=Z,98nm,5.0s							
WMQ				LR		LR		
	comp=N,105nm,15.0s,MS4.5							
WMQ				LR		LR		
	comp=E,142nm,15.0s,MS4.5							
WMQ				LR		LR		
	comp=Z,89nm,15.0s,MS4.2							
GTA	**Gaotai**	**76.77**	**30**	P		**P**	**08 46 15.3**	**+0.4**
GTA				AP		pP	08 46 20.6	+2.4
GTA				XP		sP	08 46 23.8	+4.4
GTA				AMB		AMB		
	comp=Z,13nm,1.1s,mb4.8							
MK31	**Makanchi Array**	**77.68**	**14**	P		**P**	**08 46 19.1**	**-0.9**
MK31				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
MKAR	**Makanchi Array**	**77.68**	**14**	P		**P**	**08 46 19.8**	**-0.2**
	comp=Z,5.2nm,0.8s,mb4.5,baz=191,slow=5.7,SNR=36							
AB31	**Akbulak array**	**77.86**	**359**	*i* P		**P**	**08 46 20.6**	**-0.4**
AB31				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.5							
TIRR	**Tirgusor**	**79.07**	**336**	⇓*i* P		**P**	**08 46 27.2**	**-0.5**
MLR	**Muntele Rosu**	**80.85**	**335**	⇓*i* P		**P**	**08 46 37.1**	**-0.2**
VRI	**Vrincioaia**	**80.89**	**336**	⇓*i* P		**P**	**08 46 37.5**	**0.0**
VOIR		**81.13**	**335**	⇓*i* P		**P**	**08 46 37.9**	**-0.9**
NJ2	**Nanjing**	**81.50**	**46**	*e*P		**P**	**08 46 41.9**	**+1.2**
NJ2				AP		pP	08 46 46.6	+2.6
NJ2				XP		sP	08 46 48.9	+3.7
NJ2				PP		PP	08 49 50.6	+3.7
NJ2				S		S	08 56 50.0	-2.4
NJ2				AMB		AMB		
	comp=Z,40nm,0.6s,mb5.5							
NJ2				AMB		AMB		
	comp=Z,190nm,3.9s							
NJ2				LR		LR		
	comp=N,110nm,12.9s							
NJ2				LR		LR		
	comp=E,160nm,23.5s							
NJ2				LR		LR		
	comp=Z,200nm,16.5s,MS4.6							
ZRNK	**Zerenda**	**81.80**	**5**	⇓*e*P		**P**	**08 46 41.7**	**-0.6**
ZRNK				pmax		pmax		
	comp=Z,7.0nm,0.8s,mb4.6							
ZRNK	**Zerenda**	**81.80**	**5**	⇓*e*P		**P**	**08 46 41.7**	**-0.7**
	comp=Z,7.0nm,0.8s,mb4.6							
BVA0	**Borovoye Array**	**81.98**	**5**	*i* P		**P**	**08 46 42.5**	**-0.8**
BVA0				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.8							
BRVK	**Borovoye**	**82.00**	**5**	*e*P		**P**	**08 46 42.7**	**-0.7**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.2							
BRVK	**Borovoye**	**82.00**	**5**	*e*P		**P**	**08 46 42.7**	**-0.7**
	comp=Z,2.4nm,0.7s,mb4.2							
VRSR	**Storozhevoye**	**82.21**	**346**	*e*P		**P**	**08 46 44.1**	**-0.4**
VRSR				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
VRSR				pmax		pmax		
	comp=N,20nm,0.9s							
VRSR				pmax		pmax		
	comp=E,8.0nm,0.8s							
SSE	**Sheshan**	**82.37**	**48**	*e*P		**P**	**08 46 44.9**	**-0.4**
SSE				AMB		AMB		
	comp=Z,26nm,0.7s,mb5.3							
SSE				AMB		AMB		
	comp=Z,20nm,6.1s							
BZS	**Buzias**	**82.60**	**333**	⇓*i* P		**P**	**08 46 46.2**	**-0.3**
CHKZ	**Chkalovo**	**82.64**	**5**	*e*P		**P**	**08 46 46.1**	**-0.7**
CHKZ				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.6							
CHKZ	**Chkalovo**	**82.64**	**5**	*e*P		**P**	**08 46 46.1**	**-0.6**
	comp=Z,6.3nm,1.0s,mb4.6							
BURAR	**Bucovina Array**	**82.92**	**336**	⇓*i* P		**P**	**08 46 48.8**	**+0.6**
RPZ	**Rata Peaks**	**83.14**	**136**	LR		LR	09 15 26.0	
	comp=Z,187nm,20.9s,MS4.4,baz=83,slow=30							
HHC	**Hu-ho-hao-te**	**83.47**	**36**	*e*P		**P**	**08 46 52.1**	**+1.1**
HHC				AP		pP	08 46 56.9	+2.5
HHC				XP		sP	08 46 59.1	+3.5
HHC				PP		PP	08 50 07.1	+4.0
HHC				SKS			08 57 10.5	
HHC				S		S	08 57 13.1	+0.5
HHC				XS		sS	08 57 21.0	+2.9
HHC				PS			08 58 08.1	
HHC				SS		SS	09 02 42.8	+4.6
HHC				AMB		AMB		
	comp=Z,14nm,1.1s,mb4.9							
HHC				AMB		AMB		
	comp=Z,91nm,6.0s							
HHC				LR		LR		
	comp=N,79nm,18.0s,MS4.2							
HHC				LR		LR		
	comp=E,71nm,19.9s,MS4.2							
HHC				LR		LR		
	comp=Z,54nm,19.0s,MS3.9							
AKASG	**Malin Array Be**	**84.29**	**340**	P		**P**	**08 46 54.6**	**-0.6**
	comp=Z,2.3nm,0.6s,mb4.5,baz=156,slow=4.2,SNR=14							
AKASG				LR		LR	09 24 30.7	
	comp=Z,24nm,19.8s,MS3.6,baz=105,slow=36							
AKBB	**Malin Array Si**	**84.29**	**340**	*e*P		**P**	**08 46 54.2**	**-1.0**
ZAL	**Zalesovo**	**84.95**	**14**	P		**P**	**08 46 58.4**	**-0.2**
	comp=Z,8.5nm,0.9s,mb4.9,baz=274,slow=3.9,SNR=38							
ZAL				LR		LR	09 21 55.0	
	comp=Z,63nm,19.3s,MS4.0,baz=98,slow=34							
ARU	**Arti**	**85.07**	**358**	⇓*i* P		**P**	**08 46 58.9**	**-0.2**
ARU				*e*			08 50 18.0	
ARU				*e*S		S	08 57 20.9	-7.7
ARU				pmax		pmax		
	comp=Z,22nm,1.1s,mb5.2							
ARU	**Arti**	**85.07**	**358**	*e*P		**P**	**08 46 59.5**	**+0.3**
	comp=Z,34nm,1.3s,mb5.3							
BJI	**Beijing**	**85.34**	**39**	*e*P		**P**	**08 46 59.0**	**-1.5**
BJI				AMB		AMB		
	comp=Z,5.0nm,0.6s,mb4.8							
NVS	**Novosibirsk**	**85.50**	**12**	*e*P		**P**	**08 47 01.0**	**-0.3**
NVS				pmax		pmax		
	comp=Z,18nm,1.1s,mb5.1							
NVS				pmax		pmax		
	comp=N,14nm,1.6s							
USHA	**Ushuaia**	**86.17**	**206**	LR		LR	09 18 49.9	
	comp=N,51nm,18.4s,MS4.0,baz=302,slow=31							
SONM	**Songino Array**	**86.39**	**28**	P		**P**	**08 47 04.9**	**-0.8**
	comp=N,1.8nm,1.0s,mb4.3,baz=214,slow=3.8,SNR=10							
SONM				LR		LR	09 23 07.5	
	comp=N,40nm,19.7s,MS3.8,baz=248,slow=34							
OBN	**Obninsk**	**86.42**	**346**	*d i* P		**P**	**08 47 05.7**	**-0.2**
OBN				*e*			08 50 25.7	
OBN				*e*SS		SS	09 03 23.2	+1.6
OBN				pmax		pmax		
	comp=Z,64nm,1.5s,mb5.6							
MOS	**Moscow**	**86.78**	**347**	*e*P		**P**	**08 47 07.7**	**0.0**
CONA	**Conrad Observa**	**86.82**	**331**	⇓*i* P		**P**	**08 47 06.6**	**-1.2**
	comp=Z,10nm,1.2s,mb4.9							
GERES	**GERESS Array B**	**88.44**	**331**	P		**P**	**08 47 14.3**	**-1.3**
	comp=Z,1.0nm,0.6s,mb4.2,baz=207,slow=14,SNR=4.2							
GERES				LR		LR	09 26 49.2	
	comp=Z,29nm,18.2s,MS3.7,baz=282,slow=36							
KSP	**Ksiaz**	**88.92**	**333**	*e*P		**P**	**08 47 18.1**	**+0.2**
DAVA	**Damuels**	**89.00**	**328**	⇑*i* P		**P**	**08 47 17.7**	**-0.6**
	comp=Z,13nm,1.0s,mb5.2							
SUW	**Suwalki**	**89.03**	**339**	*e*P		**P**	**08 47 18.5**	**+0.1**
BRG	**Berggiesshubel**	**89.89**	**332**	*e*P		**P**	**08 47 22.7**	**+0.3**
	comp=Z,4.7nm,1.0s,mb4.8							
BRG	**Berggiesshubel**	**89.89**	**332**	*e*P		**P**	**08 47 22.7**	**+0.3**
BRG				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb4.8							
URZ	**Urewera**	**90.05**	**135**	LR		LR	09 22 11.9	
	comp=Z,113nm,18.4s,MS4.3,baz=158,slow=32							
CLL	**Collm**	**90.61**	**332**	P		**P**	**08 47 26.0**	**+0.3**
	comp=Z,logA/T=0.9,mb5.0							
CLL	**Collm**	**90.61**	**332**	*e*P		**P**	**08 47 26.0**	**+0.3**
	comp=Z,9.0nm,1.2s,mb5.0							
CLL	**Collm**	**90.61**	**332**	*e*P		**P**	**08 47 26.0**	**+0.3**
CLL				pmax		pmax		
	comp=Z,9.0nm,1.2s,mb5.0							
SNY	**Shenyang**	**90.72**	**41**	*e*P		**P**	**08 47 25.1**	**-1.2**
SNY				AMB		AMB		
	comp=Z,12nm,3.0s							
ESDC	**Sonseca Array**	**91.48**	**315**	P		**P**	**08 47 30.6**	**+0.8**
	comp=Z,0.4nm,0.4s,mb4.1,baz=118,slow=3.4,SNR=9.1							
CN2	**Changchun**	**93.02**	**41**	*e*P		**P**	**08 47 38.0**	**+1.1**
FINES	**FINESS Array B**	**94.54**	**344**	LR		LR	09 30 30.8	
	comp=Z,24nm,20.7s,MS3.6,baz=171,slow=36							
MDJ	**Mudanjiang**	**95.90**	**42**	P		**P**	**08 47 50.8**	**+0.7**
MDJ				AMB		AMB		
	comp=Z,5.0nm,0.8s,mb5.0							
PLCA	**Paso Flores**	**97.68**	**215**	LR		LR	09 23 16.5	
	comp=Z,53nm,21.2s,MS4.0,baz=161,slow=30							
BDFB	**Brasilia**	**98.85**	**247**	LR		LR	09 22 47.8	
	comp=Z,51nm,20.3s,MS4.0,baz=198,slow=29							
ARCES	**ARCESS Array B**	**101.62**	**348**	P		Pdif	08 48 13.4	-2.4
	comp=Z,4.0nm,0.9s,baz=161,slow=5.7,SNR=5.4							
BILL	**Bilibino**	**121.99**	**25**	*e*PKIKP		PKPdf	08 53 16.0	-1.8
BILL				pmax		pmax		
	comp=Z,2.0nm,0.8s							
SSPA	**Standing Stone**	**145.00**	**300**	*e*PKPbc		PKPdf	08 53 58.5	-2.2
YKA	**Yellowknife Ar**	**146.35**	**357**	PKPbc		PKPbc	08 54 03.1	-1.0
	comp=Z,8.3nm,0.9s,baz=357,slow=3.7,SNR=10							
YKA	**Yellowknife Ar**	**146.35**	**357**	PKPbc		PKPbc	08 54 03.1	-1.0
ELN	**Prospectdale**	**147.52**	**295**	*e*PKPdf		PKPdf	08 54 03.4	-1.5
EYMN	**Ely**	**151.84**	**320**	*e*PKPbc		PKPbc	08 54 17.2	-1.0
ULM	**Lac du Bonnet**	**152.71**	**327**	PKPbc		PKPbc	08 54 18.8	-1.4
	comp=Z,5.4nm,0.8s,baz=347,slow=3.1,SNR=7.0							
ULM	**Lac du Bonnet**	**152.71**	**327**	PKPbc		PKPbc	08 54 18.8	-1.4
EDM	**Edmonton**	**155.45**	**353**	*e*PKP2		PKPab	08 54 41.8	-0.7
PDAR	**Pinedale Array**	**164.45**	**335**	PKP		PKPdf	08 54 26.2	-0.9
	comp=Z,0.7nm,0.9s,baz=80,slow=1.7,SNR=5.3							
PDAR				PKPab		PKPab	08 55 21.1	-0.5
	comp=Z,1.8nm,0.8s,baz=38,slow=4.3,SNR=16							
NVAR	**Mina Array Bea**	**170.53**	**359**	PKPab		PKPab	08 55 48.6	0.0
	comp=Z,0.8nm,0.8s,baz=34,slow=4.1,SNR=8.0							

MAN 21 08:48:51.9, 1359N×11966E, h112km, mb1.8, ML3.6, MS4.3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.59**	**76**	*e*P	Pn	08 49 11.0	+1.5
PGP	**Puerto Galera**	**1.26**	**94**	*e*P	Pn	08 49 14.0	-2.1
BUSP	**Coron**	**1.66**	**161**	*e*P	Pn	08 49 23.0	+2.2
BUSP				*e*S	Sn	08 49 38.4	-4.4
BOAC	**Boac**	**2.13**	**93**	*e*P	Pn	08 49 27.4	+0.8
ENPP	**El Nido**	**2.38**	**186**	*e*P	Pn	08 49 30.4	+0.6
OTRP	**Odiongan**	**2.61**	**118**	*e*P	Pn	08 49 33.6	+0.8
PVCP	**Virac**	**4.37**	**89**	*e*P	Pn	08 50 02.8	+6.6

*ISCJB **21** 08:51:31.7±0.5, 2872S×6933W×009, h115km±12km, mb3.3/1, Error ellipse: s-maj=12.9km s-min=5.5km az=176.3*
*IDC **21** 08:51:32.4±1.8, 2868S×6934W, h95km±14km, mb3.3/1, mb1 3.2/6, mb1mx3.2/20, mbtmp3.5/6, Error ellipse: s-maj=42.3km s-min=10.3km az=86.0*
*NEIC **21** 08:51:33.1, 2871S×6956W, h123km, MG3.8(GUC), After GUC.*
*GUC **21** 08:51:33.1±0.8, 2871S×6956W, h123km±14km, ML3.8*

ISC 21 08:51:32.7±0.5, 2872S×003×6935W×009, h111km±13km, n20, σ0°93/31, mb3.3/1, 6C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**1.22**	**256**	⇑*i* P	Pn	**08 51 57.0**	**+0.6**
LCO				*i* S	Sn	**08 52 15.1**	**+0.8**
VACH	**Vallenar**	**1.25**	**276**	⇑*i* P	Pn	**08 51 58.1**	**+1.4**
VACH				*i* S	Sn	**08 52 15.8**	**+1.0**
VACH				AML	AML	08 52 19.2	
	comp=N,3μm,0.3s						
VACH	**Vallenar**	**1.25**	**276**	⇑*i* P	Pn	**08 51 58.1**	**+1.4**
VACH				*i* S	Sn	**08 52 15.8**	**+1.0**
CPCH	**Copiapo**	**1.62**	**326**	⇓*i* P	Pn	**08 52 01.1**	**+0.1**
CPCH				*i* S	Sn	**08 52 22.2**	**-0.4**
CPCH				AML	AML	08 52 23.7	
	comp=E,5μm,0.2s						
CPCH	**Copiapo**	**1.62**	**326**	⇓*i* P	Pn	**08 52 01.1**	**+0.1**
CPCH				*i* S	Sn	**08 52 22.2**	**-0.4**
TLL	**Tololo Astrono**	**1.92**	**221**	⇑*i* P	Pn	**08 52 05.3**	**+0.6**
TLL				*i* S	Sn	**08 52 29.8**	**+0.6**
TLL				AML	AML	08 52 33.3	
	comp=N,449nm,0.6s						
TLL	**Tololo Astrono**	**1.92**	**221**	⇑*i* P	Pn	**08 52 05.3**	**+0.6**
TLL				*i* S	Sn	**08 52 29.8**	**+0.6**
LSCH	**La Serena**	**2.04**	**234**	⇑*i* P	Pn	**08 52 05.8**	**-0.4**
LSCH				*i* S	Sn	**08 52 30.3**	**-1.5**
CDCH	**Caldera**	**2.10**	**321**	*e*P	Pn	**08 52 07.2**	**+0.2**
CDCH				*i* S	Sn	**08 52 32.2**	**-1.0**
CDCH				AML	AML	08 52 37.0	
	comp=N,266nm,0.5s						
CDCH	**Caldera**	**2.10**	**321**	*e*P	Pn	**08 52 07.2**	**+0.2**
CDCH				*i* S	Sn	**08 52 32.2**	**-1.0**
CFAA	**Coronel Fontan**	**3.03**	**162**	P	Pn	**08 52 19.6**	**+0.4**
	comp=N,0.6nm,0.3s,baz=336,slow=13,SNR=160						
CFAA				S	Sn	**08 52 55.3**	**+0.4**
	comp=N,1.7nm,0.3s,baz=119,slow=19,SNR=21						
CHNG	**Los Chungos**	**3.66**	**210**	*e*P	Pn	**08 52 26.8**	**-0.8**
CHNG				*i* S	Sn	**08 53 08.1**	**-1.8**
CHNG				AML	AML	08 53 17.0	
	comp=E,100nm,0.5s						
LVC	**Limon Verde**	**6.09**	**4**	P	Pn	**08 53 00.5**	**+0.2**
	comp=E,3.1nm,0.3s,baz=175,slow=7.8,SNR=33						
LVC				S	Sn	**08 54 08.3**	**-0.4**
	comp=E,0.9nm,0.3s,baz=210,slow=20,SNR=3.8						
CPUP	**Villa Florida**	**10.93**	**80**	P	Pn	**08 54 04.3**	**-1.4**
	comp=E,0.3nm,0.3s,baz=250,slow=14,SNR=3.1						
LPAZ	**La Paz**	**12.42**	**5**	P	Pn	**08 54 24.7**	**-1.0**
	comp=E,0.1nm,0.3s,baz=172,slow=6.5,SNR=3.2						
LPAZ	**La Paz**	**12.42**	**5**	P	Pn	**08 54 24.7**	**-1.0**
SIV	**San Ignacio**	**14.79**	**33**	P	Pn	**08 54 56.9**	**+0.6**
	comp=E,0.1nm,0.3s,baz=238,slow=13,SNR=4.7						
TORD	**Torodi Ar. Bea**	**80.22**	**69**	P	P	**09 03 32.8**	**+1.9**
	comp=E,0.3nm,0.6s,mb3.3,baz=225,slow=3.9,SNR=4.7						
WRA	**Warramunga Arr**	**126.49**	**208**	PKP	PKPdf	09 10 24.3	+1.6
	comp=E,0.6nm,0.5s,baz=162,slow=1.7,SNR=17						
MKAR	**Makanchi Array**	**151.45**	**43**	PKPbc	PKPbc	09 11 15.0	+1.4
	comp=E,0.7nm,0.5s,baz=275,slow=2.2,SNR=9.4						
MKAR				PKPab	PKPab	09 11 23.6	+1.4
	comp=E,0.3nm,0.7s,baz=270,slow=2.9,SNR=3.0						

IDC 21 09:08:07.6±9.9, 1687S×17909W, h598km±50km, mb3.1/5, mb1 3.3/5, mb1mx3.0/13, mbtmp4.1/5, Error ellipse: s-maj=156.7km s-min=31.3km az=34.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.57**	**240**	P	P	09 14 40.5	0.0
	2.5nm,1.0s,baz=83,slow=16,SNR=2.9						
WRA	**Warramunga Arr**	**44.19**	**259**	P	P	09 15 25.0	+0.2
	0.8nm,0.6s,baz=92,slow=8.1,SNR=2.6						
ASAR	**Alice Springs**	**44.46**	**253**	P	P	09 15 27.2	+0.4
	4.8nm,0.6s,baz=87,slow=8.3,SNR=106						
ASAR				ScP	ScP	09 19 52.6	0.0
	0.3nm,0.9s,baz=106,slow=5.2,SNR=4.4						
VNDA	**Vanda**	**61.42**	**185**	P	P	09 17 26.2	-0.6
	0.7nm,0.7s,baz=5.4,slow=8.1,SNR=5.5						
MAW	**Mawson**	**84.61**	**200**	P	P	09 19 38.7	-0.3
	1.2nm,0.8s,baz=126,slow=5.7,SNR=6.1						

*NEIC **21** 09:43:22.1, 1956N×6371W, h25km, MD3.8(RSPR), After RSPR.*

RSPR 21 09:43:22.1, 1956N×6371W, h25km±29km, MD3.8/6, MD3.8/6, 15C-1D, Leeward Islands

| Code |

IDC 21 10:12:52.3±2.9, 1593S×17430W, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.7/14, mbtmp3.9/4, ML1.0/1, Error ellipse: s-maj=186.6km s-min=29.4km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.16**	**51**	Pn	Pn	10 13 43.4	+0.1
	1.0nm,0.3s,baz=121,slow=17,SNR=3.0						
AFI				Sn	Sn	10 14 29.1	+7.3
	0.7nm,0.3s,baz=208,slow=19,SNR=3.2						
STKA	**Stephens Creek**	**43.02**	**240**	P	P	10 20 54.0	+0.5
	2.1nm,0.9s,baz=94,slow=13,SNR=3.8						
WRA	**Warramunga Arr**	**48.88**	**257**	P	P	10 21 40.2	+0.4
	0.4nm,0.3s,baz=94,slow=7.3,SNR=30						
ASAR	**Alice Springs**	**49.12**	**252**	P	P	10 21 41.9	+0.2
	1.8nm,0.5s,baz=87,slow=8.8,SNR=42						

*NEIC **21** 10:41:13.2±0.8, 2149S×3348E, h10km, mb4.2/1, Error ellipse: s-maj=14.5km s-min=11.2km az=161.0*
*PRE **21** 10:41:22.8±1.5, 2197S×3283E, h5km, ML4.4*

IDC 21 10:41:12.2±1.2, 2148S×3347E, h0km, mb4.2/3, mb1 4.3/9, mb1mx4.0/26, mbtmp4.3/9, ML4.2/6, MS3.5/11, Ms1 3.5/11, ms1mx3.2/34, Error ellipse: s-maj=29.6km s-min=23.7km az=10.0, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.32**	**254**	*e*P	Pn	10 42 07.6	+2.3
MSNA				*e*S	Sn	10 42 39.3	-6.1
MSNA				AML	AML	10 43 02.9	
	comp=Z,636nm,0.6s						
MATP	**Matopo**	**4.76**	**282**	Pn	Pn	10 42 25.7	+0.6
	comp=Z,6.6nm,0.3s,baz=99,slow=13,SNR=26						
MATP				Sn	Sn	10 43 17.0	-4.1
	comp=Z,42nm,0.3s,baz=226,slow=22,SNR=17						
MATP				Lg		10 43 35.5	
	comp=Z,66nm,0.3s,baz=190,slow=22,SNR=12						
MATP				LR	LR	10 44 24.7	
	comp=Z,729nm,18.3s,baz=106,slow=40						
MATP	**Matopo**	**4.76**	**282**	Pn	Pn	10 42 25.7	+0.6
MATP				Sn	Sn	10 43 17.0	-4.1
MATP				Lg		10 43 35.5	
MATP				LR	LR	10 44 24.7	
POGA	**Pongola**	**6.11**	**196**	*e*P	Pn	10 42 45.6	+2.0
POGA				*e*S	Sn	10 43 46.6	-7.6
POGA				AML	AML	10 44 38.8	
	comp=Z,102nm,0.6s						
SLR	**Silverton**	**6.37**	**227**	*e*P	Pn	10 42 46.8	-0.4
SLR				*e*S	Sn	10 43 49.1	-12
SLR				AML	AML	10 44 50.7	
	comp=Z,169nm,0.6s						
ERPM	**east rand prop**	**6.74**	**224**	*e*S	Sn	10 43 57.9	-12
ERPM				AML	AML	10 44 53.7	
	comp=Z,127nm,0.8s						
KSR	**Koster**	**7.43**	**233**	*e*P	Pn	10 43 02.1	+0.3
KSR				*e*S	Sn	10 44 15.8	-11
KSR				AML	AML	10 45 06.7	
	comp=Z,62nm,0.6s						
LSZ	**Lusaka**	**7.95**	**320**	Pn	Pn	10 43 08.0	-0.9
	comp=Z,6.7nm,0.3s,baz=144,slow=13,SNR=30						
LSZ				Sn	Sn	10 44 30.0	-10
	comp=Z,11nm,0.3s,baz=219,slow=21,SNR=11						
LSZ				Lg		10 45 17.5	
	comp=Z,25nm,0.3s,baz=58,slow=20,SNR=16						
LSZ				LR	LR	10 45 44.3	
	comp=Z,64nm,22.0s,baz=303,slow=34						
LSZ	**Lusaka**	**7.95**	**320**	Pn	Pn	10 43 08.0	-0.9
LSZ				Sn	Sn	10 44 30.0	-10
LSZ				Lg		10 45 17.5	
LSZ				LR	LR	10 45 44.3	
LBTB	**Lobatse**	**8.05**	**243**	*e*P	Pn	10 43 11.3	+1.0
LBTB				*e*S	Sn	10 44 30.0	-12
LBTB				AML	AML	10 45 28.8	
	comp=Z,73nm,0.6s						
LBTB	**Lobatse**	**8.05**	**243**	Pn	Pn	10 43 10.6	+0.3
	comp=Z,3.5nm,0.3s,baz=69,slow=12,SNR=11						
LBTB				Sn	Sn	10 44 37.7	-4.4
	comp=Z,8.3nm,0.3s,baz=144,slow=21,SNR=6.5						
LBTB				Lg		10 45 19.8	
	comp=Z,13nm,0.3s,baz=172,slow=23,SNR=8.3						
LBTB	**Lobatse**	**8.05**	**243**	*e*Pn	Pn	10 43 10.0	-0.3
LBTB				*e*Sn	Sn	10 44 40.4	-1.7
SWZ	**Schweizer**	**9.34**	**231**	*e*P	Pn	10 43 28.6	+0.6
SWZ				*e*S	Sn	10 45 01.0	-13
SWZ				AML	AML	10 45 17.8	
	comp=Z,22nm,0.4s						
KSD	**Kokstad**	**9.73**	**201**	*e*P	Pn	10 43 35.3	+1.9
KSD				*e*S	Sn	10 45 12.6	-11
KSD				AML	AML	10 46 27.1	
	comp=Z,26nm,0.8s						
BOSA	**Boshof**	**10.29**	**225**	*e*P	Pn	10 43 42.0	+1.0
BOSA				*e*S	Sn	10 45 23.5	-14
BOSA				AML	AML	10 46 44.5	
	comp=Z,43nm,0.7s						
BOSA	**Boshof**	**10.29**	**225**	Pn	Pn	10 43 40.7	-0.3
	comp=Z,1.5nm,0.3s,baz=50,slow=12,SNR=7.1						
BOSA				Sn	Sn	10 45 30.1	-7.0
	comp=Z,2.1nm,0.3s,baz=336,slow=15,SNR=7.6						
BOSA				Lg		10 46 33.5	
	comp=Z,1.6nm,0.3s,baz=128,slow=19,SNR=4.0						
BOSA				LR	LR	10 47 56.4	
	comp=Z,362nm,20.3s,baz=56,slow=39						
UPI	**Upington**	**13.03**	**236**	*e*P	Pn	10 44 18.8	+0.3
OPO	**Ambohidratompo**	**13.21**	**80**	Pn	Pn	10 44 19.8	-1.2
	comp=Z,1.5nm,0.3s,baz=222,slow=3.6,SNR=12						
OPO				Sn	Sn	10 46 38.9	-10
	comp=Z,0.5nm,0.3s,baz=342,slow=20,SNR=3.2						
TSUM	**Tsumeb**	**15.07**	**276**	Pn	Pn	10 44 43.3	-3.0
	comp=Z,0.6nm,0.3s,baz=79,slow=16,SNR=14						
TSUM				Sn	Sn	10 47 23.9	-10
	comp=Z,0.4nm,0.3s,baz=319,slow=20,SNR=3.3						
TSUM				Lg		10 49 04.6	
	comp=Z,0.8nm,0.3s,baz=170,slow=15,SNR=6.8						
TSUM				LR	LR	10 50 34.2	
	comp=Z,227nm,19.2s,baz=140,slow=37						
TSUM	**Tsumeb**	**15.07**	**276**	*e*Pn	Pn	10 44 43.5	-2.9
	comp=Z,6.9nm,0.7s						
TSUM				*e*Sn	Sn	10 47 30.2	-3.8
TSUM				*e*Lg		10 49 05.8	
SUR	**Sutherland**	**15.65**	**223**	*e*P	Pn	10 44 55.9	+2.0
SUR				*e*S	Sn	10 47 31.2	-17
SUR	**Sutherland**	**15.65**	**223**	Pn	Pn	10 44 53.6	-0.4
	comp=Z,0.5nm,0.3s,baz=45,slow=16,SNR=6.1						
SUR				Sn	Sn	10 47 37.0	-11
	comp=Z,0.3nm,0.3s,baz=118,slow=18,SNR=3.6						
SUR				Lg		10 49 20.9	
	comp=Z,0.9nm,0.3s,baz=324,slow=18,SNR=5.0						
SUR				LR	LR	10 51 00.6	
	comp=Z,343nm,18.6s,baz=15,slow=38						
SUR	**Sutherland**	**15.65**	**223**	Pn	Pn	10 44 53.6	-0.4
SUR				Sn	Sn	10 47 37.0	-11
SUR				Lg		10 49 20.9	
SUR				LR	LR	10 51 00.6	
KMBO	**Kilima Mbogo**	**20.56**	**11**	LR	LR	10 54 36.0	
	comp=Z,52nm,18.7s,baz=90,slow=39						
TORD	**Torodi Ar. Bea**	**46.45**	**315**	P	P	10 49 41.8	+1.1
	comp=Z,4.5nm,0.9s,baz=128,slow=6.8,SNR=22						
TORD				LR	LR	11 08 32.3	
	comp=Z,27nm,18.9s,baz=125,slow=35						
DBIC	**Dimbokro**	**46.86**	**302**	P	P	10 49 44.6	+0.7
	comp=Z,4.7nm,1.1s,baz=94,slow=5.1,SNR=2.5						
BDFB	**Brasilia**	**76.68**	**258**	P	P	10 53 09.9	+5.0
	comp=Z,3.9nm,0.6s,baz=104,slow=6.5,SNR=4.8						
BDFB				LR	LR	11 21 47.3	
	comp=Z,80nm,18.3s,baz=20,slow=32						
CPUP	**Villa Florida**	**81.44**	**245**	LR	LR	11 25 18.9	
	comp=Z,57nm,20.1s,baz=276,slow=32						
CFAA	**Coronel Fontan**	**88.36**	**237**	LR	LR	11 28 38.1	
	comp=Z,6.2nm,20.2s,baz=126,slow=32						
ASAR	**Alice Springs**	**90.54**	**116**	P	P	10 54 17.9	+1.9
	comp=Z,0.8nm,0.9s,baz=234,slow=4.5,SNR=6.7						
LVC	**Limon Verde**	**92.60**	**245**	LR	LR	11 33 16.0	
	comp=Z,32nm,19.6s,baz=174,slow=34						
NVAR	**Mina Array Bea**	**150.44**	**311**	PKPbc	PKPbc	11 01 04.3	-1.3
	comp=Z,1.0nm,0.9s,baz=108,slow=3.6,SNR=7.7						

*PRU **21** 10:48:57.1, 4434N×1841E, h0km*
*SZGRF **21** 10:48:58.2, 4419N×1849E, h10km, mb4.5, Northwestern Balkan Peninsula*
*IDC **21** 10:49:00.8±0.8, 4455N×1834E, h0km, mb4.1/4, mb1 3.9/11, mb1mx3.8/24, mbtmp3.8/11, ML3.7/7, MS3.2/6, Ms1 3.2/6, ms1mx2.8/34, Error ellipse: s-maj=12.5km s-min=11.2km az=34.0*
*BEO **21** 10:49:00.5±0.3, 4470N×1841E, h12km*
*MOS **21** 10:49:00.0±0.9, 4466N×1831E, h10km, mb4.6/3, Error ellipse: s-maj=4.5km s-min=3.0km az=113.2*
*CSEM **21** 10:49:00.2±0.1, 4470N×1849E, h1km, mb4.0/2, ML3.8/5, Error ellipse: s-maj=1.8km s-min=1.0km az=72.0*
*ISCJB **21** 10:49:00.5±0.1, 4474N±001×1839E±002, h10km, mb3.9/4, MS3.6/2, Error ellipse: s-maj=2.0km s-min=1.4km az=121.4*
*PDG **21** 10:49:01.0±0.8, 4470N×1852E, h11km±2km*
*NEIC **21** 10:49:01.2±0.2, 4468N×1846E, h5km, ML3.8(STR), ML3.9(LDG), ML3.9(PDG), ML4.1(BUC), Error ellipse: s-maj=2.6km s-min=2.2km az=63.0*
*SKO **21** 10:49:03.0, 4481N×1871E, h17km*
*LDG **21** 10:49:04.7±0.2, 4472N×1829E, h2km, Ml3.9/9, Error ellipse: s-maj=5.0km s-min=3.9km az=102.0*
*STR **21** 10:49:46.5±0.7, 4637N×1440E, h10km±1km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 21 10:49:01.4±0.4, 4472N±001×1842E±002, h4km±3km, n238, σ1s14/327, mb3.9/4, MS3.6/2, 35C-22D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.89**	**272**	P	**Pg**	**10 49 17.5**	**-0.8**
FGSL	**Fruska Gora**	**1.08**	**65**	Pg	**Pg**	**10 49 21.4**	**-0.6**
FGSL				Sg	**Sg**	**10 49 36.5**	**+0.5**
BBLS	**Bajina Basta -**	**1.10**	**140**	*i* Pg	**Pg**	**10 49 20.8**	**-1.7**
BBLS				Sg	**Sg**	**10 49 37.3**	**+0.4**
RHK3	**Tenkes**	**1.18**	**354**	*e*P	**Pg**	**10 49 24.6**	**+0.7**
RHK3				*e*S	**Sg**	**10 49 42.8**	**+3.6**
	136nm,0.5s						
DIVS	**Divcibare**	**1.28**	**118**	*i* Pg	**Pg**	**10 49 23.9**	**-2.0**
DIVS				Sg	**Sg**	**10 49 41.2**	**-1.4**
BEO	**Belgrade**	**1.45**	**85**	*i* Pn	**Pn**	**10 49 28.7**	**+0.3**
BEO				Sg	**Sg**	**10 49 48.0**	**0.0**
PKSM	**Moragy**	**1.50**	**6**	↑*i*P	**Pn**	**10 49 28.3**	**-0.8**
PKSM	**Moragy**	**1.50**	**6**	S	**Sn**	**10 49 47.5**	**-1.6**
PKSM	**Moragy**	**1.50**	**6**	↓*e*Pn	**Pn**	**10 49 28.2**	**-0.9**
PKSM				*e*Pg	**Pg**	**10 49 31.5**	**+1.3**
PKSM				*e*Sn	**Sn**	**10 49 51.7**	**+2.5**
PKSM	**Moragy**	**1.50**	**6**	*e*Pg	**Pg**	**10 49 31.5**	**+1.3**
PKSM				*e*Sn	**Sn**	**10 49 51.7**	**+2.5**
PLE	**Pljevlja**	**1.55**	**153**	↓*i*Pg	**Pg**	**10 49 28.6**	**-2.6**
PLE				*e*Sg	**Sg**	**10 49 51.2**	**-0.1**
PLE	**Pljevlja**	**1.55**	**153**	↓*i*Pg	**Pg**	**10 49 28.5**	**-2.6**
PLE				*e*Sg	**Sg**	**10 49 51.2**	**-0.1**
UPM	**Unac-Piva**	**1.55**	**167**	↓*i*Pg	**Pg**	**10 49 28.6**	**-2.5**
UPM				*e*Sg	**Sg**	**10 49 51.9**	**+0.6**
SJES	**Sjenica**	**1.81**	**142**	Pn	**Pn**	**10 49 33.7**	**+0.3**
BRY	**Bratogost**	**1.82**	**177**	↑*i*Pn	**Pn**	**10 49 32.6**	**-0.9**
BRY				*e*Sn	**Sn**	**10 49 58.7**	**+1.8**
GRUS	**Gruza**	**1.84**	**116**	*i* Pn	**Pn**	**10 49 34.4**	**+0.7**
GRUS				Sg	**Sg**	**10 49 59.1**	**-1.4**
PKS9	**Tamasi**	**1.87**	**357**	↑*e*P	**Pn**	**10 49 34.1**	**-0.1**
NKY	**Niksic**	**1.95**	**167**	↑*i*Pn	**Pn**	**10 49 34.6**	**-0.6**
NKY				*e*Sn	**Sn**	**10 50 01.5**	**+1.3**
TREB	**Trebinje**	**2.00**	**182**	P	**Pn**	**10 49 35.3**	**-0.6**
TREB				S	**Sn**	**10 50 02.7**	**+1.3**
SVIS	**Svilajnac**	**2.04**	**101**	↓*i*Pn	**Pn**	**10 49 37.3**	**+0.7**
SVIS				Sn	**Sn**	**10 50 04.3**	**+1.7**
PKS6	**Bocsa**	**2.05**	**23**	↑*e*P	**Pn**	**10 49 36.1**	**-0.5**
IVA	**Berane**	**2.13**	**149**	↑*i*Pn	**Pn**	**10 49 36.5**	**-1.3**
IVA				*e*Sn	**Sn**	**10 50 05.5**	**+0.9**
HCY	**Herceg Novi**	**2.27**	**179**	↑*i*Pn	**Pn**	**10 49 39.7**	**0.0**
HCY				*e*Sn	**Sn**	**10 50 10.0**	**+1.9**
GCIS	**Gornji Cirnik**	**2.29**	**301**	*e*Pn	**Pn**	**10 49 39.9**	**0.0**
GCIS				*e*Sn	**Sn**	**10 50 06.4**	**-2.1**
GCIS							
	comp=Z,235nm,0.3s						
KOGS	**Kog**	**2.31**	**319**	*i* Pn	**Pn**	**10 49 40.1**	**-0.1**
KOGS				*e*Sn	**Sn**	**10 50 08.1**	**-0.9**
TTG	**Podgorica**	**2.37**	**165**	↓*i*Pn	**Pn**	**10 49 40.8**	**-0.1**
TTG				*e*Sn	**Sn**	**10 50 11.2**	**+0.8**
BOJS	**Bojanci**	**2.38**	**290**	*e*Pn	**Pn**	**10 49 41.7**	**+0.5**
BOJS				*e*Sn	**Sn**	**10 50 08.6**	**-2.2**
BOJS							
	comp=Z,361nm,0.4s						
BOJS	**Bojanci**	**2.38**	**290**	*e*Pn	**Pn**	**10 49 41.7**	**+0.5**
BOJS				*e*Sn	**Sn**	**10 50 08.6**	**-2.2**
	comp=Z,361nm,0.4s						
PVY	**Plav**	**2.40**	**152**	↓*i*Pn	**Pn**	**10 49 40.2**	**-1.2**
PVY				*e*Sn	**Sn**	**10 50 11.7**	**+0.4**
PKSN	**Nyarlorinc**	**2.40**	**24**	↑*e*P	**Pn**	**10 49 48.9**	**+7.4**
BZS	**Buzias**	**2.43**	**67**	↓*i*P	**Pn**	**10 49 39.8**	**-2.1**
BZS	**Buzias**	**2.43**	**67**	↓P	**Pn**	**10 49 39.8**	**-2.0**
BZS	**Buzias**	**2.43**	**67**	P	**Pn**	**10 49 39.8**	**-2.1**
BZS				S	**Sn**	**10 50 16.0**	**+3.9**
BUM	**Brajici-Budva**	**2.44**	**172**	↑*i*Pn	**Pn**	**10 49 41.8**	**-0.2**
BUM				*e*Sn	**Sn**	**10 50 13.3**	**+1.0**
NVLJ	**Novalja**	**2.54**	**268**	↑*i*Pn	**Pn**	**10 49 43.8**	**+0.5**
NVLJ				*i* Sn	**Sn**	**10 50 16.9**	**+2.1**
PKSG		**2.68**	**360**	↑*e*P	**Pn**	**10 49 45.4**	**+0.2**
BUD	**Budapest**	**2.80**	**8**	*e*Pn	**Pn**	**10 49 46.8**	**-0.1**
BUD				*e*Pg	**Pg**	**10 49 56.5**	**+1.5**
BUD				*e*Sg	**Sg**	**10 50 35.3**	**+4.0**
ULC	**Ulcinj**	**2.82**	**167**	↓*i*Pn	**Pn**	**10 49 47.3**	**+0.1**
ULC				*e*Sn	**Sn**	**10 50 22.2**	**+0.6**
SOP	**Sopron**	**3.24**	**337**	↓*e*Pn	**Pn**	**10 49 53.5**	**+0.5**
SOP				*e*Sg	**Sg**	**10 50 45.1**	**-0.3**
ARSA	**Arzberg**	**3.24**	**322**	*i* Pn	**Pn**	**10 49 53.5**	**+0.5**
	SNR=301						
ARSA				↑*i*Sn	**Sn**	**10 50 31.2**	**-0.9**
ARSA	**Arzberg**	**3.24**	**322**	Pn	**Pn**	**10 49 53.5**	**+0.5**
	comp=Z,300nm,9.0s						
ARSA				Sn	**Sn**	**10 50 31.2**	**-0.9**
OBKA	**Obir**	**3.26**	**305**	↓*i*Pn	**Pn**	**10 49 53.4**	**+0.2**
	SNR=12						
OBKA				↓*i*Sn	**Sn**	**10 50 31.5**	**-0.9**
OBKA	**Obir**	**3.26**	**305**	Pn	**Pn**	**10 49 53.4**	**+0.2**
	comp=Z,12nm,5.0s						
OBKA				Sn	**Sn**	**10 50 31.5**	**-0.9**
PSZ	**Piszkesteto**	**3.36**	**17**	↓*e*Pn	**Pn**	**10 49 53.6**	**-1.0**
PSZ				*e*Pg	**Pg**	**10 50 05.9**	**+0.1**
PSZ				*e*Sg	**Sg**	**10 50 51.8**	**+2.5**
PSZ	**Piszkesteto**	**3.36**	**17**	↑*i*P	**Pn**	**10 49 53.6**	**-1.0**
PSZ	**Piszkesteto**	**3.36**	**17**	↑P	**Pn**	**10 49 53.6**	**-1.0**
PSZ				S	**Sn**	**10 50 33.0**	**-2.0**
PSZ	**Piszkesteto**	**3.36**	**17**	*e*Pg	**Pg**	**10 50 05.9**	**+0.1**
PSZ				S	**Sn**	**10 50 33.0**	**-2.0**
TRI	**Trieste**	**3.44**	**288**	Pn	**Pn**	**10 49 57.1**	**+1.4**
VOY	**Vojsko**	**3.45**	**294**	*e*Pn	**Pn**	**10 49 56.2**	**+0.3**
VOY				*e*		10 49 58.0	
VOY				*e*Sn	**Sn**	**10 50 36.5**	**-0.8**
FGMS	**Monte Sant'Ang**	**3.51**	**212**	Pn	**Pn**	**10 50 05.0**	**+8.3**
SKO	**Skopje**	**3.52**	**140**	*e*Pn	**Pn**	**10 49 57.4**	**+0.6**
SKO	**Skopje**	**3.52**	**140**	*e*Pn	**Pn**	**10 49 57.3**	**+0.5**
ZST	**Bratislava**	**3.60**	**346**	*e*PN	**Pn**	**10 49 58.4**	**+0.5**
ZST				*e*SN	**Sn**	**10 50 38.0**	**-2.9**
ZST	**Bratislava**	**3.60**	**346**	*e*P	**Pn**	**10 49 58.4**	**+0.5**
ZST				*e*		10 50 38.0	
ZST				pmax	pmax		
	comp=N,181nm,0.3s						
DRGR		**3.65**	**54**	↓*i*P	**Pn**	**10 49 56.4**	**-2.2**
CONA	**Conrad Observa**	**3.67**	**332**	*i* Pn	**Pn**	**10 49 59.2**	**+0.3**
	SNR=122						
CONA				↓*i*Sn	**Sn**	**10 50 42.1**	**-0.5**
RGNG	**Rignano Grg**	**3.68**	**215**	Pn	**Pn**	**10 49 58.8**	**-0.3**
VYHS	**Vyhne**	**3.79**	**4**	*e*PN	**Pn**	**10 50 00.3**	**-0.2**
VYHS				*e*SN	**Sn**	**10 50 46.9**	**+1.3**
VYHS	**Vyhne**	**3.79**	**4**	*e*P	**Pn**	**10 50 00.3**	**-0.2**
VYHS				*e*		10 50 46.9	
VYHS				pmax	pmax		
	comp=N,77nm,0.6s						
VYHS	**Vyhne**	**3.79**	**4**	*e*Pn	**Pn**	**10 50 00.3**	**-0.2**
VYHS				*e*Sn	**Sn**	**10 50 46.9**	**+1.3**
SMOL	**Smolenice**	**3.86**	**350**	*e*PN	**Pn**	**10 50 02.3**	**+0.8**
PTCC	**Patocco-Chiusa**	**3.94**	**297**	Pn	**Pn**	**10 50 03.4**	**+0.8**
GMNA	**Gemona**	**3.97**	**295**	Pn	**Pn**	**10 50 05.0**	**+2.0**
CIGN	**Sant'Elia a Pi**	**4.00**	**221**	Pn	**Pn**	**10 50 07.3**	**+3.9**
CING	**Cingoli**	**4.00**	**252**	Pn	**Pn**	**10 50 04.1**	**+0.6**
OHR	**Ohrid**	**4.00**	**153**	*e*Pn	**Pn**	**10 50 04.5**	**+1.0**
OHR	**Ohrid**	**4.00**	**153**	P	**Pn**	**10 50 03.2**	**-0.3**
OHR				S	**Sn**	**10 50 51.8**	**+0.9**
OHR	**Ohrid**	**4.00**	**153**	*e*Pn	**Pn**	**10 50 04.4**	**+0.9**
OHR				S	**Sn**	**10 50 51.8**	**+0.9**
KECS	**Kecovo**	**4.03**	**20**	*e*PN	**Pn**	**10 50 04.9**	**+1.1**
VTS	**Vitosha**	**4.07**	**120**	↑*i*P	**Pn**	**10 50 03.3**	**-1.1**
VTS	**Vitosha**	**4.07**	**120**	P	**Pn**	**10 50 03.5**	**-0.9**
VTS	**Vitosha**	**4.07**	**120**	P	**Pn**	**10 50 03.5**	**-0.9**
TERO	**Teramo**	**4.08**	**241**	Pn	**Pn**	**10 50 05.7**	**+1.2**
FG5	**Orsara di Pugl**	**4.14**	**215**	Pn	**Pn**	**10 50 06.0**	**+0.6**
SNTG	**Esanatoglia**	**4.22**	**252**	Pn	**Pn**	**10 50 05.7**	**-0.7**
MOA	**Molln**	**4.26**	**319**	*i* Pn	**Pn**	**10 50 08.3**	**+1.3**
	SNR=57						
MOA				↑*i*Sn	**Sn**	**10 50 57.5**	**+0.3**
KBA	**Koelnbreinsper**	**4.26**	**305**	↑*i*Pn	**Pn**	**10 50 07.6**	**+0.6**
KBA				↑*i*Sn	**Sn**	**10 50 57.1**	**-0.1**
INTR	**Introdacqua**	**4.26**	**232**	Pn	**Pn**	**10 50 11.2**	**+4.2**
BIA	**Bitola**	**4.27**	**149**	*e*Pn	**Pn**	**10 50 05.0**	**-2.1**
BIA	**Bitola**	**4.27**	**149**	*e*Pn	**Pn**	**10 50 04.9**	**-2.2**
MIDA	**Miranda**	**4.33**	**226**	Pn	**Pn**	**10 50 08.6**	**+0.6**
AQU	**L'Aquila**	**4.35**	**239**	↑*i*P	**Pn**	**10 50 09.0**	**+0.8**
AQU	**L'Aquila**	**4.35**	**239**	↑P	**Pn**	**10 50 09.0**	**+0.8**
FVI	**Forni Avoltri**	**4.38**	**297**	Pn	**Pn**	**10 50 09.9**	**+1.2**
PSB1	**Pescosannita**	**4.38**	**218**	Pn	**Pn**	**10 50 10.8**	**+2.1**
ASS	**Assisi**	**4.49**	**250**	Pn	**Pn**	**10 50 10.1**	**0.0**
FNA	**Florina**	**4.49**	**150**	P	**Pn**	**10 50 10.2**	**0.0**
MRLC	**Muro Lucano**	**4.51**	**210**	Pn	**Pn**	**10 50 09.7**	**-0.7**
VVLD	**Villa Vallelon**	**4.51**	**233**	Pn	**Pn**	**10 50 10.2**	**-0.3**
SDI	**San Donato**	**4.52**	**230**	Pn	**Pn**	**10 50 10.1**	**-0.5**
VAY	**Valandovo**	**4.56**	**137**	*e*Pn	**Pn**	**10 50 09.8**	**-1.3**
VAY	**Valandovo**	**4.56**	**137**	P	**Pn**	**10 50 09.7**	**-1.4**
FIAM	**Fiamignano**	**4.57**	**239**	Pn	**Pn**	**10 50 12.4**	**+1.1**
CRVS	**Cervenica-Dubn**	**4.68**	**25**	*e*PN	**Pn**	**10 50 14.0**	**+1.3**
CRVS				*e*		10 50 34.2	
CRVS	**Cervenica-Dubn**	**4.68**	**25**	*e*SG	**Sg**	**10 51 44.0**	**+12**
CRVS	**Cervenica-Dubn**	**4.68**	**25**	*e*P	**Pn**	**10 50 14.0**	**+1.3**
CRVS				pmax	pmax		
	comp=N,11nm,1.1s						
CRVS	**Cervenica-Dubn**	**4.68**	**25**	*e*Pn	**Pn**	**10 50 14.0**	**+1.3**
CRVS				*e*		10 50 34.2	
CRVS				*e*Sg	**Sg**	**10 51 44.0**	**+12**
RFI	**Roccamonfina**	**4.72**	**225**	Pn	**Pn**	**10 50 13.6**	**+0.3**
UZH	**Uzhgorod**	**4.73**	**33**	*e*P	**Pg**	**10 50 31.4**	**-0.7**
VOIR		**4.75**	**79**	↑*i*P	**Pn**	**10 50 13.5**	**-0.2**
GRG	**Griva**	**4.76**	**141**	P	**Pn**	**10 50 13.6**	**-0.3**
VRAC	**Vranov**	**4.76**	**345**	Pn	**Pn**	**10 50 16.2**	**+2.3**
	comp=N,2.6nm,0.3s,baz=184,slow=14,SNR=6.8						
VRAC				Sn	**Sn**	**10 51 08.9**	**-0.6**
	comp=N,4.6nm,0.3s,baz=241,slow=14,SNR=10						
VRAC	**Vranov**	**4.76**	**345**	↓*i*P	**Pn**	**10 50 13.9**	**0.0**
VRAC	**Vranov**	**4.76**	**345**	P	**Pn**	**10 50 16.2**	**+2.3**
VRAC						10 51 08.9	
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.3s						
VRAC				smax			
	comp=N,5.0nm,0.3s						
VRAC	**Vranov**	**4.76**	**345**	*e*Pn	**Pn**	**10 50 13.9**	**0.0**
VRAC	**Vranov**	**4.76**	**345**	P	**Pn**	**10 50 16.2**	**+2.3**
	comp=N,3.0nm,0.3s						
VRAC				*e*Sn	**Sn**	**10 51 07.2**	**-2.3**
MNS	**Montasola**	**4.78**	**243**	Pn	**Pn**	**10 50 14.1**	**-0.1**
CRE	**Caprese Michel**	**4.79**	**259**	Pn	**Pn**	**10 50 15.8**	**+1.6**
SFI	**Santa Sofia**	**4.79**	**263**	Pn	**Pn**	**10 50 16.7**	**+2.4**
CERT	**Cerreto**	**4.84**	**237**	Pn	**Pn**	**10 50 16.1**	**+1.1**
NIE	**Niedzica**	**4.88**	**15**	*e*Pn	**Pn**	**10 50 17.0**	**+1.5**
MTCE	**Montecelio**	**4.94**	**239**	Pn	**Pn**	**10 50 16.6**	**+0.2**
CTI	**Castel Tesino**	**4.96**	**288**	Pn	**Pn**	**10 50 17.6**	**+1.0**
KOLS	**Kolonicke sedl**	**4.98**	**31**	*e*PN	**Pn**	**10 50 18.1**	**+1.2**
MMB	**Musomiste**	**4.98**	**127**	P	**Pn**	**10 50 16.8**	**-0.1**
TREC	**Trest**	**5.00**	**337**	*e*PN	**Pn**	**10 50 18.0**	**+0.8**
TREC				*e*SN	**Sn**	**10 51 12.9**	**-2.6**
TREC				AMS	AMS	10 52 30.0	
	comp=N,400nm,7.2s						
TREC	**Trest**	**5.00**

PRU	**Pruhonice**	**5.90**	**335**	*e*P		**Pn**	**10 50 30.1**	**+0.6**
	comp=N,500nm,6.7s							
PRU				*e*Sn		**Sn**	**10 51 33.8**	**-3.7**
OUR	**Ouranopolis**	**6.00**	**135**	P		**Pn**	**10 50 30.0**	**-1.0**
UPC	**Upice**	**6.02**	**345**	*e*PN		**Pn**	**10 50 32.9**	**+1.7**
UPC				*e*SN		**Sn**	**10 51 37.7**	**-2.8**
PAIG	**Paliouri**	**6.17**	**139**	P		**Pn**	**10 50 32.7**	**-0.6**
KSP	**Ksiaz**	**6.29**	**348**	*e*Pn		**Pn**	**10 50 36.3**	**+1.3**
KSP				*e*Sn		**Sn**	**10 51 44.5**	**-2.9**
DAVA	**Damuels**	**6.48**	**296**	⇑*i*Sn		**Sn**	**10 51 51.2**	**-0.7**
DAVA	**Damuels**	**6.48**	**296**	⇑*i*Pn		**Pn**	**10 50 38.8**	**+1.2**
	SNR=12							
DAVA				⇑*i*Sn		**Sn**	**10 51 51.2**	**-0.7**
DAVA	**Damuels**	**6.48**	**296**	Pn		**Pn**	**10 50 38.8**	**+1.3**
	comp=N,11nm,5.0s							
MANZ	**Manzenberg**	**6.79**	**323**	*e*Pn		**Pn**	**10 50 43.0**	**+1.2**
BRG	**Berggiesshubel**	**6.86**	**336**	*e*		**Pb**	**10 51 02.4**	**+1.3**
BRG				*e*			10 51 51.0	
BRG	**Berggiesshubel**	**6.86**	**336**	SG		**Sn**	**10 52 19.3**	**+18**
	comp=N,16nm,0.7s							
BRG								
	comp=N,147nm,9.5s							
BRG								
	comp=E,310nm,10.2s							
BRG								
	comp=Z,169nm,9.9s							
WERN	**Wernitzgruen**	**6.92**	**326**	*e*Pn		**Pn**	**10 50 44.5**	**+1.0**
GRA1	**Grafenberg Arr**	**6.99**	**318**	*e*P		**Pn**	**10 50 46.1**	**+1.6**
GRF	**Grafenberg Arr**	**6.99**	**318**	*e*Pn		**Pn**	**10 50 46.1**	**+1.6**
GUNZ	**Gunzen**	**6.99**	**326**	*e*Pn		**Pn**	**10 50 45.3**	**+0.8**
WERD	**Werda**	**7.07**	**326**	*e*Pn		**Pn**	**10 50 46.6**	**+1.0**
PGF	**Pioggiola**	**7.17**	**256**	*e*Pn		**Pn**	**10 50 47.3**	**+0.3**
PGF				*e*Pg		**Pg**	**10 51 13.8**	**-5.0**
SPAK	**Spaichingen-Ko**	**7.47**	**300**	P		**Pn**	**10 50 51.2**	**+0.1**
MOX	**Moxa**	**7.50**	**325**	*e*Pn		**Pn**	**10 50 52.4**	**+0.9**
MOX	**Moxa**	**7.50**	**325**	*e*PN		**Pn**	**10 50 52.3**	**+0.8**
MOX				(SN)		**Sb**	**10 52 44.3**	**+2.5**
MOX								
	comp=Z,100nm,14.0s							
MOX	**Moxa**	**7.50**	**325**	*e*P		**Pn**	**10 50 52.3**	**+0.8**
	comp=Z,100nm,14.0s							
CLL	**Collm**	**7.53**	**333**	*e*Pn		**Pn**	**10 50 54.4**	**+2.5**
CLL	**Collm**	**7.53**	**333**	*i* PN		**Pn**	**10 50 52.5**	**+0.6**
CLL				*i*			10 51 04.0	
CLL				*e*SN		**Sn**	**10 52 28.0**	**+10**
CLL				*e*			10 52 44.0	
CLL				*e*SG		**Sg**	**10 53 07.0**	**+3.9**
CLL	**Collm**	**7.53**	**333**	*i* P		**Pn**	**10 50 52.5**	**+0.6**
CLL				*e*			10 52 28.0	
FELD	**Feldberg im Sc**	**7.88**	**297**	P		**Pn**	**10 50 56.5**	**-0.2**
SBF	**Sospel**	**7.93**	**268**	*e*Pn		**Pn**	**10 50 55.6**	**-1.9**
SBF				*e*Sn		**Sn**	**10 52 19.4**	**-8.3**
	comp=Z,43nm,0.7s							
BBS	**Basel-Blauen**	**8.07**	**294**	P		**Pn**	**10 50 59.2**	**-0.1**
TOD	**Tromm**	**8.18**	**310**	P		**Pn**	**10 51 01.4**	**+0.6**
MBDF	**Montbardon**	**8.30**	**274**	*e*Pn		**Pn**	**10 51 00.9**	**-1.6**
MBDF				*e*Sn		**Sn**	**10 52 31.5**	**-5.2**
	comp=Z,20nm,0.7s							
MOF	**Molkenrain**	**8.43**	**296**	P		**Pn**	**10 51 04.1**	**-0.1**
LANF	**Langenberg**	**8.43**	**304**	P		**Pn**	**10 51 02.7**	**-1.6**
WLS	**Welschbruch**	**8.48**	**300**	P		**Pn**	**10 51 03.8**	**-1.1**
LOMF	**Lomont**	**8.49**	**292**	P		**Pn**	**10 51 05.4**	**+0.3**
CDF	**Champ du Feu**	**8.52**	**300**	*e*Pn		**Pn**	**10 51 05.0**	**-0.6**
CDF				*e*Sn		**Sn**	**10 52 35.8**	**-6.4**
	comp=Z,5.3nm,0.4s							
CDF				*e*Sg		**Sg**	**10 53 28.3**	**-6.6**
CDF	**Champ du Feu**	**8.52**	**300**	*e*P		**Pn**	**10 51 05.0**	**-0.6**
CDF				*e*			10 52 35.8	
CDF	**Champ du Feu**	**8.52**	**300**	*e*Pn		**Pn**	**10 51 05.0**	**-0.6**
CDF				*e*Sn		**Sn**	**10 52 35.8**	**-6.4**
	comp=Z,2.7nm,0.4s							
CDF				*e*Sg		**Sg**	**10 53 28.3**	**-6.6**
ECH	**Echery**	**8.53**	**298**	P		**Pn**	**10 51 04.5**	**-1.1**
FRF	**La Foret Royal**	**8.55**	**266**	*e*Pn		**Pn**	**10 51 04.5**	**-1.4**
FRF				*e*Sn		**Sn**	**10 52 34.0**	**-8.9**
	comp=Z,34nm,1.0s							
HINF	**Hinteralfeld**	**8.60**	**295**	*e*Pn		**Pn**	**10 51 06.1**	**-0.4**
HINF				*e*Sn		**Sn**	**10 52 37.4**	**-6.6**
	comp=Z,7.2nm,0.4s							
HINF				*e*Sg		Sg	10 53 30.3	-6.9
HINF	**Hinteralfeld**	**8.60**	**295**	*e*P		**Pn**	**10 51 06.1**	**-0.4**
HINF				*e*			10 52 37.4	
HINF	**Hinteralfeld**	**8.60**	**295**	*e*Pn		**Pn**	**10 51 06.1**	**-0.4**
HINF				*e*Sn		**Sn**	**10 52 37.4**	**-6.6**
	comp=Z,3.6nm,0.4s							
HINF				*e*Sg		Sg	10 53 30.3	-6.9
LMR	**La Mourre**	**8.70**	**265**	*e*Pn		**Pn**	**10 51 05.5**	**-2.5**
LMR				*e*Pg		Pn	10 51 41.4	+33
CABF	**La Chapelle**	**8.85**	**287**	*e*Pn		**Pn**	**10 51 09.5**	**-0.5**
CABF				*e*Sg		Sn	10 53 37.1	+47
ORIF	**Oris-en-Rattie**	**8.92**	**276**	*e*Pn		**Pn**	**10 51 11.0**	**0.0**
ORIF				*e*Sn		**Sn**	**10 52 45.8**	**-6.2**
	comp=Z,11nm,0.4s							
HAU	**Haudompre**	**8.97**	**296**	*e*Pn		**Pn**	**10 51 11.5**	**-0.3**
HAU				*e*Sn		**Sn**	**10 52 44.5**	**-8.8**
	comp=Z,11nm,0.4s							
HAU	**Haudompre**	**8.97**	**296**	*e*Pn		**Pn**	**10 51 11.5**	**-0.3**
HAU				*e*Sn		**Sn**	**10 52 44.5**	**-8.8**
	comp=Z,5.4nm,0.4s							
ABH	**Alteburg**	**9.01**	**309**	P		**Pn**	**10 51 11.9**	**-0.4**
SMRF	**Simiane la Rot**	**9.24**	**270**	*e*Pn		**Pn**	**10 51 14.7**	**-0.7**
SMRF				*e*Sn		**Sn**	**10 52 52.3**	**-7.5**
	comp=Z,15nm,0.8s							
SMRF	**Simiane la Rot**	**9.24**	**270**	*e*Pn		**Pn**	**10 51 14.7**	**-0.7**
SMRF				*e*Sn		**Sn**	**10 52 52.3**	**-7.5**
	comp=Z,7.3nm,0.8s							
AKASG	**Malin Array Be**	**9.42**	**47**	Pn		**Pn**	**10 51 19.0**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=35,slow=17,SNR=7.3							
AKASG				Lg			10 54 03.6	
	comp=Z,0.4nm,0.3s,baz=226,slow=28,SNR=4.0							
VIVF	**Saint-Julien-l**	**9.78**	**276**	*e*Pn		**Pn**	**10 51 21.8**	**-1.0**
VIVF				*e*Pg		Pn	10 52 01.6	+39
VIVF				*e*Sn		**Sn**	**10 53 05.9**	**-7.2**
SMF	**Signal de Mont**	**10.39**	**286**	*e*Pn		**Pn**	**10 51 30.9**	**-0.2**
SMF				*e*Sn		**Sn**	**10 53 19.9**	**-8.1**
	comp=Z,5.4nm,0.4s							
LOR	**Lormes**	**10.45**	**289**	*e*Pn		**Pn**	**10 51 30.8**	**-1.2**
LOR				*e*Pg		Pn	10 52 14.7	+43
SSF	**Saint Saulge**	**10.66**	**288**	*e*Pn		**Pn**	**10 51 34.5**	**-0.4**
AVF	**Avril sur Loir**	**10.74**	**286**	*e*Pn		**Pn**	**10 51 35.4**	**-0.5**
BAIF	**Baives**	**11.02**	**304**	*e*Pn		**Pn**	**10 51 40.4**	**+0.7**
BGF	**Bois d'Agland**	**11.06**	**285**	*e*Pn		**Pn**	**10 51 38.5**	**-1.9**
HYF	**Humbligny**	**11.28**	**289**	*e*Pn		**Pn**	**10 51 43.6**	**+0.3**
TCF	**Toulx Ste Croi**	**11.49**	**284**	*e*Pn		**Pn**	**10 51 46.0**	**-0.2**
CAF	**Calviac**	**11.62**	**277**	*e*Pn		**Pn**	**10 51 47.4**	**-0.7**
MTLF	**Montolieu**	**11.75**	**269**	*e*Pn		**Pn**	**10 51 48.4**	**-1.4**
MTLF				*e*Pg		Pn	10 52 38.0	+48
RJF	**Les Rejaudoux**	**11.99**	**279**	*e*Pn		**Pn**	**10 51 52.1**	**-0.9**
MFF	**Saint Martin d**	**13.13**	**285**	*e*Pn		**Pn**	**10 52 07.1**	**-1.5**
EPF	**Esparros**	**13.16**	**269**	*e*Pn		**Pn**	**10 52 07.4**	**-1.6**
EPF				*e*Pg		Pn	10 53 04.5	+55
FLN	**La Foliniere**	**13.58**	**294**	*e*Pn		**Pn**	**10 52 13.7**	**-1.0**
FLN	**La Foliniere**	**13.58**	**294**	*e*Pg		Px	10 53 13.4	
GRR	**Gorron**	**13.76**	**292**	*e*Pn		**Pn**	**10 52 17.1**	**-0.2**
SGMF	**Saint Gilles**	**14.87**	**291**	*e*Pn		**Pn**	**10 52 32.6**	**+0.2**
QUIF	**Quistinic**	**15.25**	**290**	*e*Pn		**Pn**	**10 52 36.3**	**-1.2**
QUIF	**Quistinic**	**15.25**	**290**	*e*Pg		Px	10 53 43.0	
HFS	**Hagfors**	**15.70**	**351**	Pn		**Pn**	**10 52 44.5**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=184,slow=20,SNR=2.3							
HFS				LR		LR	10 58 57.6	
	comp=Z,49nm,19.8s,baz=346,slow=38							
NOA	**NORSAR Array B**	**16.90**	**348**	LR		LR	10 59 41.5	
	comp=Z,41nm,18.2s,baz=170,slow=38							
ESDC	**Sonseca Array**	**17.32**	**261**	Pn		**Pn**	**10 53 04.4**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=66,slow=12,SNR=7.5							
FINES	**FINESS Array B**	**17.35**	**12**	Pn		**Pn**	**10 53 02.7**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=201,slow=14,SNR=4.2							
FINES				LR		LR	11 00 08.8	
	comp=Z,51nm,20.7s,baz=170,slow=38							
FINES	**FINESS Array B**	**17.35**	**12**	Pn		**Pn**	**10 53 02.7**	**-1.8**
FINES				LR		LR	11 00 08.8	
KLMR	**Klimovskoe**	**20.43**	**30**	*e*P		**P**	**10 53 36.2**	**-3.5**
KLMR				pmax		pmax		
	comp=Z,10.0nm,1.9s							
ARCES	**ARCESS Array B**	**25.14**	**6**	P		**P**	**10 54 30.2**	**+2.6**
	comp=Z,0.7nm,0.5s,mb3.5,baz=188,slow=6.1,SNR=7.7							
ARCES				LR		LR	11 05 01.9	
	comp=Z,61nm,18.8s,MS3.1,baz=97,slow=38							
ARCES	**ARCESS Array B**	**25.14**	**6**	P		**P**	**10 54 30.2**	**+2.7**
ARCES				pmax		pmax		
	comp=Z,10.0nm,0.5s							
ARCES				MLR		MLR		
	comp=Z,61nm,18.8s							

ARCES	**ARCESS Array B**	**25.14**	**6**	P		**P**	**10 54 30.2**	**+2.6**
ARCES				LR		LR	11 05 01.9	
TORD	**Torodi Ar. Bea**	**34.55**	**210**	P		**P**	**10 55 50.3**	**-0.7**
	comp=Z,5.4nm,0.8s,mb4.5,baz=18,slow=8.9,SNR=17							
DBIC	**Dimbokro**	**42.99**	**215**	P		**P**	**10 57 00.5**	**-1.3**
	comp=Z,2.4nm,0.6s,mb4.1,baz=9.0,slow=11,SNR=6.1							
DBIC	**Dimbokro**	**42.99**	**215**	P		**P**	**10 57 00.5**	**-1.3**
DBIC				pmax		pmax		
	comp=Z,2.0nm,0.6s							
DBIC	**Dimbokro**	**42.99**	**215**	P		**P**	**10 57 00.5**	**-1.3**
PDAR	**Pinedale Array**	**81.30**	**324**	P		**P**	**11 01 18.8**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=56,slow=6.1,SNR=7.1							
ATAH	**Atahualpa**	**99.73**	**270**	LR		LR	11 41 13.4	
	comp=Z,66nm,21.4s,MS4.1,baz=289,slow=31							
ASAR	**Alice Springs**	**124.13**	**91**	PKP		PKPdf	11 07 59.0	-2.1
	comp=Z,0.4nm,0.8s,baz=306,slow=1.3,SNR=5.3							

PDG ***21*** *10:55:50.6±0.3, 3987N×1954E, h18km±1km*
ISCJB ***21*** *10:55:54.0±0.4, 4013N±002×1978E±003, h10km, Error ellipse: s-maj=4.0km s-min=2.5km az=115.8*
NEIC ***21*** *10:55:53.1, 4013N×1965E, h16km, MD3.1(PDG), MD3.6(ATH), After ATH.*
TIR ***21*** *10:55:53.2, 4015N×1984E, h14km, Ml3.2*
ATH ***21*** *10:55:53.1, 4013N×1965E, h16km±2km, MD3.6/5*
THE ***21*** *10:55:53.9, 4016N×1966E, h0km, ML3.4*
CSEM ***21*** *10:55:54.3±0.2, 4007N×1961E, h2km, MD3.6, Error ellipse: s-maj=5.8km s-min=2.8km az=53.0*
SKO ***21*** *10:55:56.7, 4017N×2001E, h5km*

ISC 21 10:55:54.5±0.4, 4010N±002×1980E±003, h10km, n54, σ1º56/90, 4C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TPE	**Tepelena**	**0.25**	**40**	*i* Pg		**Pg**	**10 55 57.8**	**-1.8**
TPE				*i* Sg		**Sg**	**10 56 02.1**	**-1.0**
TPE	**Tepelena**	**0.25**	**40**	*i* Pg		**Pg**	**10 55 57.7**	**-1.9**
TPE				*i* Sg		**Sg**	**10 56 02.7**	**-0.4**
SRN	**Sarande**	**0.27**	**145**	*i* Pg		**Pg**	**10 55 59.6**	**-0.4**
SRN				*i* Sg		**Sg**	**10 56 06.0**	**+2.3**
KEK	**Kerkira**	**0.39**	**180**	*e*PB		**Pg**	**10 56 01.9**	**-0.3**
VLO	**Vlora**	**0.43**	**328**	*i* Pg		**Pg**	**10 56 01.8**	**-1.2**
VLO				*i* Sg		**Sg**	**10 56 08.8**	**+0.1**
VLO	**Vlora**	**0.43**	**328**	*i* Sg		**Sg**	**10 56 11.2**	**+2.5**
LSK	**Leskovik**	**0.62**	**85**	*i* Pg		**Pg**	**10 56 05.6**	**-0.8**
LSK				*i* Sg		**Sg**	**10 56 15.9**	**+1.4**
IGT	**Igoumenitsa**	**0.70**	**144**	*e*Pg		**Pg**	**10 56 07.9**	**-0.2**
IGT				*e*Sg		**Sg**	**10 56 20.6**	**+3.3**
IGT	**Igoumenitsa**	**0.70**	**144**	P		**Pg**	**10 56 07.9**	**-0.2**
IGT				S		**Sg**	**10 56 25.7**	**+8.4**
IGT	**Igoumenitsa**	**0.70**	**144**	*e*Pg		**Pg**	**10 56 07.9**	**-0.2**
IGT				*e*Sg		**Sg**	**10 56 20.6**	**+3.3**
IGT				S		**Sg**	**10 56 25.7**	**+8.4**
KBN	**Korca**	**0.92**	**55**	*i* Pn		**Pn**	**10 56 10.6**	**-2.8**
JAN	**Janina**	**0.92**	**119**	*e*PN		**Pn**	**10 56 12.5**	**-1.0**
JAN				*e*SN		**Sn**	**10 56 27.0**	**+0.1**
MEV	**Metsovon**	**1.14**	**106**	*e*Pg		**Pg**	**10 56 17.8**	**+1.3**
MEV	**Metsovon**	**1.14**	**106**	P		**Pg**	**10 56 18.7**	**+2.2**
MEV	**Metsovon**	**1.14**	**106**	P		**Pg**	**10 56 18.7**	**+2.2**
TIR	**Tirane**	**1.24**	**2**	*e*Pg		**Pg**	**10 56 16.6**	**-1.8**
OHR	**Ohrid**	**1.26**	**37**	*e*Pg		**Pg**	**10 56 18.1**	**-0.6**
OHR				*e*Sg		**Sg**	**10 56 37.1**	**+2.0**
OHR	**Ohrid**	**1.26**	**37**	*e*Pg		**Pg**	**10 56 16.6**	**-2.2**
OHR				*e*Sg		**Sg**	**10 56 32.4**	**-2.8**
OHR	**Ohrid**	**1.26**	**37**	P		**Pn**	**10 56 16.7**	**-1.5**
OHR	**Ohrid**	**1.26**	**37**	*e*Pg		**Pg**	**10 56 16.5**	**-2.2**
OHR	**Ohrid**	**1.26**	**37**	P		**Pn**	**10 56 16.7**	**-1.5**
OHR				*e*Sg		**Sg**	**10 56 37.1**	**+2.0**
LCI	**Lecce**	**1.31**	**281**	Pn		**Pn**	**10 56 17.3**	**-1.6**
FNA	**Florina**	**1.38**	**60**	P		**Pg**	**10 56 19.8**	**-1.2**
FNA	**Florina**	**1.38**	**60**	P		**Pg**	**10 56 19.8**	**-1.2**
BIA	**Bitola**	**1.48**	**51**	*e*Pg		**Pn**	**10 56 21.0**	**-0.1**
BIA				*e*Sg		**Sg**	**10 56 42.7**	**+0.6**
BIA	**Bitola**	**1.48**	**51**	*e*Pg		**Pg**	**10 56 20.4**	**-2.4**
BIA				*e*Sg		**Sg**	**10 56 38.1**	**-4.0**
BIA	**Bitola**	**1.48**	**51**	P		**Pn**	**10 56 21.0**	**-0.1**
BIA				S		**Sn**	**10 56 45.3**	**+4.7**
BIA	**Bitola**	**1.48**	**51**	*e*Pg		**Pg**	**10 56 20.4**	**-2.5**
BIA				*e*Sg		**Sg**	**10 56 42.7**	**+0.6**
BIA				S		**Sn**	**10 56 45.3**	**+4.8**
KZN	**Kozani**	**1.52**	**82**	*e*PN		**Pg**	**10 56 23.5**	**-0.2**
KZN				*e*SN		**Sg**	**10 56 45.7**	**+2.2**
LKD	**Levkas**	**1.54**	**154**	*e*Pb		**Pb**	**10 56 23.1**	**-0.1**
LKD				*e*Sb		**Sb**	**10 56 46.3**	**+3.6**
ULC	**Ulcinj**	**1.90**	**348**	⇓*i*Pn		**Pn**	**10 56 25.5**	**-1.5**
ULC				*e*Sn		**Sn**	**10 56 53.4**	**+2.4**
EVR	**Evrytania**	**1.96**	**127**	*e*PN		**Pn**	**10 56 30.2**	**+2.5**
VLS	**Valsamata**	**2.02**	**162**	*e*PN		**Pn**	**10 56 29.6**	**+1.0**
LIT	**Litokhoron**	**2.06**	**89**	*e*Pn		**Pg**	**10 56 31.3**	**-2.8**
LIT				*e*Sn		**Sg**	**10 56 59.4**	**-1.4**
LIT	**Litokhoron**	**2.06**	**89**	P		**Pn**	**10 56 31.8**	**+2.6**
LIT				S		**Sn**	**10 57 02.5**	**+7.5**
LIT	**Litokhoron**	**2.06**	**89**	P		**Pg**	**10 56 31.8**	**-2.3**
LIT				*e*Sn		**Sg**	**10 56 59.4**	**-1.4**
LIT				S		**Sn**	**10 57 02.5**	**+7.5**
GRG	**Griva**	**2.16**	**66**	*e*Pn		**Pn**	**10 56 31.4**	**+0.9**
GRG	**Griva**	**2.16**	**66**	P		**Pn**	**10 56 32.5**	**+2.0**
AGG	**Agios Georgios**	**2.23**	**118**	*e*Pn		**Pg**	**10 56 34.1**	**-3.2**
AGG				*e*Sn		**Sg**	**10 57 04.5**	**-1.8**
AGG	**Agios Georgios**	**2.23**	**118**	P		**Pn**	**10 56 34.2**	**+2.7**
AGG				S		**Sn**	**10 57 08.0**	**+8.8**
AGG	**Agios Georgios**	**2.23**	**118**	*e*Pn		**Pn**	**10 56 34.1**	**+2.5**
AGG				*e*Sn		**Sn**	**10 57 04.5**	**+5.3**
AGG				S		**Sn**	**10 57 08.0**	**+8.8**
BUM	**Brajici-Budva**	**2.30**	**343**	⇑*i*Pn		**Pn**	**10 56 31.2**	**-1.2**
BUM				*e*Sn		**Sn**	**10 57 02.9**	**+2.1**
TTG	**Podgorica**	**2.36**	**350**	⇓*i*Pn		**Pn**	**10 56 33.0**	**-0.3**
TTG				*e*Sn		**Sn**	**10 57 04.7**	**+2.4**
RLS	**Riolos of Patr**	**2.42**	**147**	*e*PB		**Pb**	**10 56 35.7**	**-2.4**
VAY	**Valandovo**	**2.43**	**59**	*e*Pn		**Pn**	**10 56 35.4**	**+1.2**
VAY	**Valandovo**	**2.43**	**59**	*e*Pn		**Pn**	**10 56 34.6**	**+0.3**
PVY	**Plav**	**2.49**	**3**	⇑*i*Pn		**Pn**	**10 56 34.9**	**-0.2**
PVY				*e*Sn		**Sn**	**10 57 09.2**	**+3.7**
HCY	**Herceg Novi**	**2.54**	**338**	⇓*i*Pn		**Pn**	**10 56 35.0**	**-0.7**
HCY				*e*Sn		**Sn**	**10 57 07.8**	**+1.1**
IVA	**Berane**	**2.77**	**2**	⇑*i*Pn		**Pn**	**10 56 39.4**	**+0.5**
IVA				*e*Sn		**Sn**	**10 57 15.4**	**+3.1**
NKY	**Niksic**	**2.77**	**348**	⇓*i*Pn		**Pn**	**10 56 37.6**	**-1.3**
NKY				*e*Sn		**Sn**	**10 57 14.4**	**+1.9**
BRY	**Bratogost**	**2.95**	**342**	⇑*i*Pn		**Pn**	**10 56 40.2**	**-1.2**
BRY				*e*Sn		**Sn**	**10 57 18.2**	**+1.4**
SLCN	**Sala Consilina**	**3.20**	**276**	Pn		**Pn**	**10 56 45.0**	**+0.1**
BBLS	**Bajina Basta -**	**3.77**	**356**	*e*Pn		**Pn**	**10 56 52.1**	**-0.6**
DIVS	**Divcibare**	**3.99**	**2**	*e*Pn		**Pn**	**10 56 54.5**	**-1.2**

IDC ***21*** *11:15:48.8±1.5, 4705N×12686E, h0km, mb4.2/5, mb1 4.4/6, mb1mx4.1/16, mbtmp4.3/6, ML4.0/1, MS3.6/4, Ms1 3.6/4, ms1mx3.0/22, Error ellipse: s-maj=66.7km s-min=20.2km az=76.0*
ISCJB ***21*** *11:15:50.6±1.0, 4895±010×1267E±03, h33km, mb4.0/4, MS3.6/4, Error ellipse: s-maj=36.9km s-min=12.4km az=156.2*
NEIC ***21*** *11:15:50.0±1.0, 4885×12677E, h15km, mb4.6/1, Error ellipse: s-maj=37.9km s-min=12.8km az=79.0*

ISC 21 11:15:53.2±1.0, 4865±010×1268E±03, h35km, n14, σ1º42/11, mb4.0/4, MS3.6/4, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.20**	**185**	Pn		**Pn**	**11 18 57.9**	**-0.2**
	0.6nm,0.3s,baz=19,slow=10,SNR=24							
FITZ	**Fitzroy Crossi**	**13.20**	**185**	*e*P		**Pn**	**11 18 57.0**	**-1.1**
	11nm,0.9s							
WRAB	**Tennant Creek**	**16.70**	**154**	*e*P		**Pn**	**11 19 43.2**	**-1.2**
	42nm,0.9s							
WRA	**Warramunga Arr**	**16.70**	**154**	Pn		**Pn**	**11 19 42.7**	**-1.7**
	0.3nm,0.3s,baz=324,slow=14,SNR=20							
WB2	**Warramunga Arr**	**16.70**	**154**	*e*P		**Pn**	**11 19 42.4**	**-2.1**
AS31	**Alice Springs**	**19.91**	**160**	⇑*i*P		**Pn**	**11 20 25.6**	**+2.0**
ASAR	**Alice Springs**	**19.92**	**160**	P		**Pn**	**11 20 25.4**	**+1.7**
	44nm,0.9s,baz=340,slow=11,SNR=277							
CTA	**Charters Tower**	**24.25**	**130**	P		**P**	**11 21 08.2**	**+1.3**
	2.1nm,0.6s,mb3.7,baz=294,slow=10.0,SNR=2.3							
NWAO	**Narrogin (SRO)**	**29.31**	**197**	LR		LR	11 35 12.3	
	comp=Z,89nm,18.5s,MS3.4,baz=44,slow=40							
STKA	**Stephens Creek**	**30.25**	**154**	P		**P**	**11 22 02.0**	**+1.3**
	4.4nm,0.7s,mb4.3,baz=328,slow=9.5,SNR=6.4							
STKA				LR		LR	11 35 56.2	
	comp=Z,83nm,18.0s,MS3.4,baz=24,slow=40							

MJAR	**Matsushiro Arr**	**42.56**	**14**	P		**P**	**11 23 44.4**	**-1.1**
	2.0nm,1.0s,mb3.8,baz=188,slow=9.1,SNR=4.8							
SONM	**Songino Array**	**55.45**	**343**	P		**P**	**11 25 24.7**	**+0.4**
	1.3nm,0.8s,mb4.0,baz=165,slow=7.4,SNR=5.5							
VNDA	**Vanda**	**74.95**	**173**	LR		LR	11 58 55.3	
	comp=Z,60nm,21.2s,MS3.9,baz=282,slow=34							
KMBO	**Kilima Mbogo**	**89.43**	**269**	LR		LR	12 09 00.2	
	comp=Z,39nm,18.5s,MS3.9,baz=90,slow=36							

HLW ***21*** *11:16:44.3, 2965N×3797E, h20km, Mb3.4*
GII ***21*** *11:16:57.7±0.5, 2992N×3631E, h0km±18km, ML2.2/1*
ISCJB ***21*** *11:16:58.1±1.5, 2985N±007×3632E±008, h10km, Error ellipse: s-maj=10.7km s-min=8.9km az=95.5*

ISC 21 11:16:58.2±1.6, 2987N±006×3637E±008, h10km, n10, σ0º94/16, 3C-1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.17**	**279**	Pg		**Pg**	**11 17 19.1**	**-1.5**
HRFI				Sg		**Sg**	**11 17 36.2**	**+0.4**
ZFRI	**Zfri**	**1.24**	**304**	Pg		**Pg**	**11 17 20.5**	**-1.5**
ZFRI				Sg		**Sg**	**11 17 38.5**	**+0.5**
EIL	**Elat**	**1.25**	**261**	Pg		**Pg**	**11 17 21.4**	**-0.7**
EIL				Sg		**Sg**	**11 17 38.7**	**+0.3**
MBH	**Mount Berech**	**1.27**	**267**	Pg		**Pg**	**11 17 21.9**	**-0.6**
MBH				Sg		**Sg**	**11 17 39.6**	**+0.7**
KMTI	**Karmit**	**1.45**	**280**	Pn		**Pn**	**11 17 24.4**	**0.0**
KMTI				Sn		**Sn**	**11 17 43.8**	**+0.4**
HBST	**Basata**	**1.57**	**246**	⇓P		**Pn**	**11 17 27.6**	**+1.6**
HKAT	**Jabal Katrina**	**2.47**	**238**	⇑*i*P		**Pn**	**11 17 39.0**	**+0.6**
TR2		**2.75**	**238**	⇑P		**Pn**	**11 17 42.5**	**+0.3**
TR2				S		**Sg**	**11 18 25.3**	**-1.1**
TR2		**2.75**	**238**	P		**Pn**	**11 17 42.5**	**+0.3**
AMAG	**Maghara**	**2.84**	**287**	⇑*i*P		**Pn**	**11 17 47.0**	**+3.5**

BJI 21 11:35:23.5, 3576N×12108E, h25km, ML3.9, 1C, Yellow Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DL2	**Dalian**	**3.17**	**8**	P		**Pn**	**11 36

YUK				pmax	pmax		
	comp=Z,760nm,0.4s						
YUK				pmax	pmax		
	comp=N,190nm,0.5s						
NEM2	**Nemuro 2**	**1.32**	**263**	P	**Pn**	**11 50 14.2**	**-0.9**
NEM2				S	**Sn**	**11 50 30.8**	**-1.2**
KUR	**Kuril'sk**	**1.71**	**8**	*e*PN	**Pn**	**11 50 14.5**	**-5.8**
KUR				pmax	pmax		
	comp=Z,180nm,0.4s						
JRA	**Rausu**	**1.79**	**284**	P	**Pn**	**11 50 21.3**	**-0.2**
JRA				S	**Sn**	**11 50 43.4**	**+0.1**
JNK	**Nakash**	**2.05**	**272**	P	**Pn**	**11 50 24.4**	**-0.5**
JNK				*e*S	**Sn**	**11 50 49.2**	**-0.2**
JAK	**Akkeshi**	**2.15**	**256**	P	**Pn**	**11 50 25.8**	**-0.4**
JAK				S	**Sn**	**11 50 51.3**	**-0.5**
JTKR	**Abashiri--Toko**	**2.66**	**280**	P	**Pn**	**11 50 33.9**	**+0.7**
JAR	**Ashorobuto**	**2.75**	**266**	P	**Pn**	**11 50 34.9**	**+0.4**
JAR				*e*S	**Sn**	**11 51 06.8**	**+0.2**
JOB	**Onbets**	**2.78**	**258**	P	**Pn**	**11 50 35.1**	**+0.3**
JOB				*e*S	**Sn**	**11 51 07.2**	**0.0**
JMP	**Maruseppu**	**3.06**	**280**	P	**Pn**	**11 50 39.7**	**+1.1**
JCH	**Churui**	**3.19**	**255**	P	**Pn**	**11 50 40.7**	**+0.2**
JCH				*e*S	**Sn**	**11 51 15.9**	**-1.5**
ASAJ	**Asahikawa**	**3.62**	**281**	Pn	**Pn**	**11 50 48.0**	**+1.7**
	comp=Z,1.3nm,0.3s,baz=100,slow=15,SNR=11						
ASAJ				Sn	**Sn**	**11 51 36.0**	**+8.2**
	comp=Z,3.2nm,0.3s,baz=342,slow=25,SNR=5.7						
JFR	**Furan**	**3.62**	**266**	P	**Pn**	**11 50 48.0**	**+1.6**
JFR				*e*S	**Sn**	**11 51 29.1**	**+1.2**
JNBK	**Urakawa-nobuka**	**3.73**	**252**	P	**Pn**	**11 50 48.3**	**+0.5**
JSE	**Soyaes**	**3.83**	**293**	P	**Pn**	**11 50 49.8**	**+0.7**
YSS	**Yuzh-Sakhalins**	**4.80**	**317**	*e*PN	**Pn**	**11 51 02.0**	**-0.4**
SONM	**Songino Array**	**28.81**	**293**	P	**P**	**11 55 45.2**	**+0.9**
	comp=Z,0.9nm,0.5s,mb3.6,baz=79,slow=7.9,SNR=4.6						
SONM	**Songino Array**	**28.81**	**293**	P	**P**	**11 55 45.2**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**49.85**	**310**	P	**P**	**11 58 38.5**	**-0.4**
	comp=Z,0.4nm,0.3s,mb3.8,baz=76,slow=6.1,SNR=2.4						
ARCES	**ARCESS Array B**	**59.54**	**340**	P	**P**	**11 59 45.4**	**-3.6**
	comp=Z,3.4nm,0.9s,mb4.4,baz=46,slow=6.8,SNR=7.6						
ARCES	**ARCESS Array B**	**59.54**	**340**	P	**P**	**11 59 45.4**	**-3.7**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**64.32**	**194**	P	pP	12 00 41.0	+2.1
	comp=Z,0.7nm,0.7s,baz=14,slow=7.2,SNR=5.1						
WRA	**Warramunga Arr**	**64.32**	**194**	P	pP	12 00 41.0	+2.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**65.19**	**333**	P	**P**	**12 00 25.7**	**-1.1**
	comp=Z,1.7nm,0.7s,mb4.0,baz=45,slow=8.4,SNR=7.1						
FINES	**FINESS Array B**	**65.19**	**333**	P	**P**	**12 00 25.7**	**-1.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**65.19**	**333**	P	**P**	**12 00 25.7**	**-1.1**
NVAR	**Mina Array Bea**	**67.45**	**58**	P	**P**	**12 00 42.0**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.4,baz=303,slow=5.3,SNR=6.0						
NVAR	**Mina Array Bea**	**67.45**	**58**	P	**P**	**12 00 42.0**	**+0.7**
ASAR	**Alice Springs**	**68.04**	**193**	P	pP	12 01 04.5	+1.6
	comp=Z,0.2nm,0.9s,baz=7.5,slow=6.5,SNR=4.9						
PDAR	**Pinedale Array**	**69.83**	**50**	P	**P**	**12 00 55.7**	**-0.3**
	comp=Z,0.3nm,0.5s,mb3.4,baz=159,slow=0.7,SNR=4.3						
NB2	**NORSAR Subarra**	**69.90**	**339**	P	**P**	**12 00 55.5**	**-1.0**
	comp=Z,1.3nm,0.5s,mb4.0,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.90**	**339**	P	**P**	**12 00 55.6**	**-0.9**
	comp=Z,1.9nm,0.4s,mb4.3,baz=31,slow=6.3,SNR=8.4						
NOA	**NORSAR Array B**	**69.90**	**339**	P	**P**	**12 00 55.6**	**-0.9**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	**71.91**	**324**	P	**P**	**12 01 08.1**	**-0.6**
	comp=Z,1.4nm,0.5s,mb4.1,baz=38,slow=6.2,SNR=8.0						
AKASG	**Malin Array Be**	**71.91**	**324**	P	**P**	**12 01 08.1**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**71.91**	**324**	P	**P**	**12 01 08.1**	**-0.6**
BRTR	**Keskin Array B**	**77.89**	**314**	P	**P**	**12 01 44.2**	**+1.0**
	comp=Z,0.4nm,0.5s,mb3.4,baz=39,slow=7.4,SNR=3.9						

NEIC ***21*** *12:02:52.6, 32.10S×70.48W, h13km, ML2.5(GUC), After GUC.*

GUC 21 12:02:52.6±0.6, 3210S×7048W, h13km±4km, MD3.6, ML2.5, 1C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.59**	**190**	⇑*i*P	Pg	12 03 03.7	-0.4
JACH				*i* S	Sg	12 03 12.6	+0.8
CHNG	**Los Chungos**	**0.90**	**284**	*e*P	Pg	12 03 08.6	-1.3
CHNG				*i* S	Sg	12 03 21.1	-0.6
ROCH	**El Roble**	**0.98**	**207**	⇓*i*P	Pb	12 03 10.6	-0.7
ROCH				*i* S	Sb	12 03 24.4	+0.2
FCH	**Farellones**	**1.23**	**173**	⇓*i*P	Pn	12 03 14.8	-0.6
FCH				*i* S	Sb	12 03 31.9	+0.4
FCH				AML	AML	12 03 32.7	
	comp=E,95nm,0.1s						
RCDM	**Rinconada Maip**	**1.41**	**191**	⇓*e*P	Pn	12 03 17.4	-0.5
RCDM				*i* S	Sn	12 03 37.6	+1.2
RCDM				AML	AML	12 03 39.2	
	comp=E,197nm,0.1s						
RCDM	**Rinconada Maip**	**1.41**	**191**	⇓*e*P	Pn	12 03 17.4	-0.5
RCDM				S	Sn	12 03 37.6	+1.2
LCCH	**Las Cruces**	**1.65**	**214**	⇓*e*P	Pn	12 03 21.0	-0.2
TLL	**Tololo Astrono**	**1.95**	**352**	*e*P	Pn	12 03 26.2	+0.9
TLL				*i* S	Sn	12 03 51.5	+1.8
TLL				AML	AML	12 03 56.5	
	comp=E,102nm,0.4s						
TLL	**Tololo Astrono**	**1.95**	**352**	*e*P	Pn	12 03 26.2	+0.9
TLL				*i* S	Sn	12 03 51.5	+1.8

SKHL ***21*** *12:09:57.4±1.9, 44.00N×150.00E, h43km±12km, mb5.0/3, ms3.3/1*

ISCJB ***21*** *12:10:00.9±0.8, 4389N±006×14948E±008, h33km, mb4.2/7, MS3.2/3, Error ellipse: s-maj=9.4km s-min=7.0km az=104.3*

NIED ***21*** *12:10:00, 44.30N×149.40E, h23km, Mw4.0 Best double couple: M0 1.06000×10^15 NP1:φ=46.00000°, δ64.00000°, λ103.00000°. NP2:φ=198.00000°, δ29.00000°, λ65.00000°.*

MOS ***21*** *12:10:02.0±1.6, 4445N×14942E, h26km, mb4.4/7, Error ellipse: s-maj=16.4km s-min=14.6km az=129.2*

JMA ***21*** *12:10:02.1±0.5, 4435N×14941E, h30km, M4.2*

IDC ***21*** *12:10:17.0±3.8, 4458N×14826E, h107km±34km, mb3.6/8, mb1 3.7/9, mb1mx3.5/22, mbtmp3.9/9, MS3.1/4, Ms1 3.2/4, ms1mx2.6/38, Error ellipse: s-maj=26.1km s-min=23.7km az=108.0*

NEIC ***21*** *12:10:17.2±2.7, 4438N×148.10E, h117km±23km, Error ellipse: s-maj=32.1km s-min=18.4km az=99.0*

ISC 21 12:10:04.8±0.9, 4380N±006×14932E±008, h35km, n53, σ1§24/66, mb4.2/7, MS3.2/3, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.77**	**325**	*i* P	**Pn**	**12 10 25.5**	**-7.4**
KUR				AMB	AMB	12 10 26.0	
	3μm,1.7s						
KUR				AMB	AMB	12 10 28.7	
	260nm,0.4s						
KUR				AMB	AMB	12 10 28.7	
	100nm,0.4s						
KUR				AMB	AMB	12 10 28.7	
	650nm,0.4s						
KUR				*e*S	**Sn**	**12 10 48.0**	**-6.2**
KUR				A		12 10 51.0	
	3μm,1.5s						
KUR				A		12 10 54.0	
	2μm,0.4s						
KUR				A		12 10 54.0	
	2μm,0.4s						
KUR	**Kuril'sk**	**1.77**	**325**	⇑*i*PN	**Pn**	**12 10 25.5**	**-7.4**
KUR				*e*S	**Sn**	**12 10 48.0**	**-6.2**
KUR				pmax	pmax		
	comp=Z,3μm,1.7s						
KUR				pmax	pmax		
	comp=N,260nm,0.4s						
KUR				pmax	pmax		
	comp=E,100nm,0.4s						
KUR				pmax	pmax		
	comp=Z,650nm,0.4s						
KUR				smax			
	comp=N,3μm,1.5s						
KUR				smax			
	comp=E,3μm,1.5s						
KUR				smax			
	comp=N,2μm,0.4s						
KUR				smax			
	comp=E,2μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.51**	**277**	*e*P	**Pn**	**12 10 41.1**	**-2.0**
YUK				AMB	AMB	12 10 42.3	
	comp=E,230nm,0.5s						
YUK				*e*S	**Sn**	**12 11 12.5**	**0.0**
YUK				A		12 11 14.3	
	comp=E,400nm,0.5s						
YUK				A		12 11 14.3	
	comp=E,420nm,0.5s						
YUK				A		12 11 28.9	
	comp=E,4μm,1.0s						
YUK				A		12 11 28.9	
	comp=E,2μm,1.0s						
NEM2	**Nemuro 2**	**2.63**	**262**	P	**Pn**	**12 10 44.2**	**-0.6**
NEM2				*e*S	**Sn**	**12 11 15.6**	**0.0**
JRA	**Rausu**	**3.04**	**274**	P	**Pn**	**12 10 50.3**	**-0.1**
JNK	**Nakash**	**3.34**	**268**	P	**Pn**	**12 10 54.3**	**-0.3**
JAK	**Akkeshi**	**3.46**	**258**	P	**Pn**	**12 10 56.1**	**-0.1**
JAK				*e*S	**Sn**	**12 11 36.2**	**+0.2**
JTKR	**Abashiri--Toko**	**3.92**	**274**	P	**Pn**	**12 11 02.7**	**+0.3**
JAR	**Ashorobuto**	**4.07**	**265**	P	**Pn**	**12 11 04.9**	**+0.4**
JOB	**Onbets**	**4.10**	**259**	P	**Pn**	**12 11 05.5**	**+0.5**
JMP	**Maruseppu**	**4.31**	**275**	P	**Pn**	**12 11 08.4**	**+0.5**
JCH	**Churui**	**4.51**	**257**	P	**Pn**	**12 11 11.3**	**+0.6**
JCH				*e*S	**Sn**	**12 12 03.6**	**+1.7**
JKK2	**Kamakawa 2**	**4.75**	**273**	P	**Pn**	**12 11 15.2**	**+1.2**
ASAJ	**Asahikawa**	**4.86**	**276**	P	**Pn**	**12 11 16.7**	**+1.2**
	comp=E,2.1nm,0.3s,baz=82,slow=16,SNR=12						
ASAJ				LR	LR	12 13 11.0	
	comp=E,181nm,20.7s,baz=10,slow=43						
JEM	**Erimo**	**4.87**	**251**	P	**Pn**	**12 11 17.5**	**+2.0**
JFR	**Furan**	**4.94**	**265**	P	**Pn**	**12 11 17.7**	**+1.2**
JNBK	**Urakawa-nobuka**	**5.05**	**255**	P	**Pn**	**12 11 18.5**	**+0.5**
JNBK				*e*S	**Sn**	**12 12 15.7**	**+0.6**
JBT2	**Biratori 2**	**5.18**	**261**	P	**Pn**	**12 11 20.3**	**+0.5**
YSS	**Yuzh-Sakhalins**	**5.60**	**307**	*e*P	**Pn**	**12 11 25.0**	**-0.5**
YSS				*e*S	**Sn**	**12 12 28.5**	**-0.1**
YSS				AMS	AMS	12 13 34.0	
	comp=E,200nm,18.0s						
YSS				AMS	AMS	12 13 34.0	
	comp=E,300nm,18.0s						
YSS	**Yuzh-Sakhalins**	**5.60**	**307**	*e*P	**Pn**	**12 11 25.1**	**-0.5**
JEW	**Eniwo**	**5.82**	**263**	P	**Pn**	**12 11 30.5**	**+1.9**
JNB	**Noboribetsu**	**6.20**	**260**	P	**Pn**	**12 11 34.6**	**+0.7**
JNB				*e*S	**Sn**	**12 12 42.2**	**-1.4**
JKB	**Kayabe**	**6.38**	**255**	P	**Pn**	**12 11 36.9**	**+0.5**
JKB				*e*S	**Sn**	**12 12 45.7**	**-2.3**
JANG	**Nango**	**6.74**	**242**	P	**Pn**	**12 11 41.2**	**0.0**
JANG				*e*S	**Sn**	**12 12 52.6**	**-4.1**
JTH	**Tanohata**	**6.77**	**238**	P	**Pn**	**12 11 41.1**	**-0.6**
JTH				*e*S	**Sn**	**12 12 52.3**	**-5.2**
JYM2	**Yakumo 2**	**6.78**	**259**	P	**Pn**	**12 11 42.7**	**+0.9**
JTM	**Tenmabayashi**	**6.82**	**247**	P	**Pn**	**12 11 43.1**	**+0.8**
JTM				*e*S	**Sn**	**12 12 55.3**	**-3.4**
JOSM	**Okushiri--Mats**	**7.42**	**260**	P	**Pn**	**12 11 51.3**	**+0.7**
OFUJ	**Ofunato**	**7.43**	**233**	P	**Pn**	**12 11 50.9**	**+0.2**
OFUJ				*e*S	**Sn**	**12 13 10.0**	**-3.8**
JRG	**Rokugo**	**7.86**	**239**	P	**Pn**	**12 11 57.8**	**+1.3**
JRG				*e*S	**Sn**	**12 13 22.4**	**-1.8**
JIO	**Ouri**	**8.04**	**231**	P	**Pn**	**12 11 58.6**	**-0.5**
JIO				*e*S	**Sn**	**12 13 24.6**	**-4.2**
SKR	**Severo-Kuril's**	**8.29**	**31**	*e*P	**Pn**	**12 11 54.2**	**-8.3**
SKR				AMB	AMB	12 11 57.6	
	comp=E,80nm,0.8s						
MJAR	**Matsushiro Arr**	**11.16**	**233**	P	**Pn**	**12 12 47.7**	**+5.8**
	comp=E,0.2nm,0.3s,baz=33,slow=12,SNR=4.2						
SONM	**Songino Array**	**29.90**	**293**	P	**P**	**12 16 07.7**	**-1.5**
	comp=E,0.4nm,0.3s,mb3.6,baz=96,slow=10,SNR=4.0						
ZAL	**Zalesovo**	**42.23**	**307**	LR	LR	12 37 05.8	
	comp=E,31nm,18.0s,MS3.2,baz=98,slow=39						
INK	**Inuvik**	**45.57**	**31**	P	**P**	**12 18 24.8**	**+3.5**
	comp=E,1.2nm,0.5s,mb4.1,baz=278,slow=7.1,SNR=5.3						
INK	**Inuvik**	**45.57**	**31**	P	**P**	**12 18 24.8**	**+3.6**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**45.57**	**31**	P	**P**	**12 18 24.8**	**+3.5**
AKTK	**Aktyubinsk**	**58.69**	**312**	P	**P**	**12 19 54.3**	**-4.5**
AKTO	**Aktyubinsk**	**58.69**	**312**	P	**P**	**12 19 54.3**	**-4.5**
	comp=Z,0.6nm,0.5s,mb3.9,baz=45,slow=8.7,SNR=6.6						
AKTO	**Aktyubinsk**	**58.69**	**312**	P	**P**	**12 19 54.3**	**-4.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
JOF	**Joensuu**	**62.77**	**333**	*e*p	**P**	**12 20 23.0**	**-3.6**
	comp=Z,2.2nm,0.3s,mb4.8						
JOF	**Joensuu**	**62.77**	**333**	*e*P	**P**	**12 20 23.0**	**-3.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.7						
FINES	**FINESS Array B**	**65.53**	**334**	P	**P**	**12 20 41.0**	**-3.7**
	comp=Z,2.4nm,0.6s,mb4.4,baz=43,slow=8.6,SNR=12						
FINES				LR	LR	12 51 59.7	
	comp=Z,24nm,18.5s,MS3.4,baz=359,slow=39						
FINES	**FINESS Array B**	**65.53**	**334**	P	**P**	**12 20 41.0**	**-3.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,24nm,18.5s						
FINES	**FINESS Array B**	**65.53**	**334**	P	**P**	**12 20 41.0**	**-3.7**
FINES				LR	LR	12 51 59.7	
ASAR	**Alice Springs**	**68.61**	**195**	P	pP	12 21 12.0	-3.1
	comp=Z,0.2nm,0.5s,baz=12,slow=7.2,SNR=3.2						
PDAR	**Pinedale Array**	**68.67**	**51**	P	pP	12 21 08.8	-6.6
	comp=Z,0.4nm,0.9s,baz=272,slow=3.5,SNR=2.9						
NB2	**NORSAR Subarra**	**70.11**	**340**	P	**P**	**12 21 10.7**	**-2.8**
	comp=Z,2.5nm,0.5s,mb4.4,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**70.11**	**340**	P	**P**	**12 21 11.2**	**-2.4**
	comp=Z,2.2nm,0.5s,mb4.3,baz=31,slow=6.3,SNR=12						
NOA				LR	LR	12 58 10.2	
	comp=Z,9.7nm,18.8s,MS3.1,baz=50,slow=42						
NOA	**NORSAR Array B**	**70.11**	**340**	P	**P**	**12 21 11.2**	**-2.4**
NOA				LR	LR	12 58 10.2	
AKASG	**Malin Array Be**	**72.46**	**325**	P	**P**	**12 21 25.5**	**-2.2**
	comp=Z,1.1nm,0.4s,mb4.1,baz=39,slow=6.3,SNR=6.0						
AKASG	**Malin Array Be**	**72.46**	**325**	P	**P**	**12 21 25.5**	**-2.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						

ISCJB ***21*** *12:25:29.4±0.6, 6095S±009×337W±03, h10km, mb4.0/8, MS3.7/7, Error ellipse: s-maj=21.3km s-min=9.1km az=122.4*

IDC ***21*** *12:25:30.6±0.9, 6089S×345.2W, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.9/15, mbtmp3.9/6, MS3.7/10, Ms1 3.7/10, ms1mx3.6/22, Error ellipse: s-maj=37.9km s-min=22.7km az=69.0*

NEIC ***21*** *12:25:33.5±4.1, 6095S×340.3W, h21km±30km, mb4.5/4, Error ellipse: s-maj=23.5km s-min=11.3km az=62.0*

ISC 21 12:25:30.9±0.6, 6101S±009×338W±03, h10km, n23, σ1§43/17, mb4.0/8, MS3.7/7, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.91**	**347**	*e*P	**Pn**	**12 27 11.8**	**-0.4**
	48nm,0.8s						
VNA3	**Neumayer Olymp**	**14.01**	**147**	*e*	**Pn**	**12 28 46.9**	**-2.6**
VNA3				*e*		12 28 47.5	
VNA3				*e*		12 28 48.0	
VNA3				*e*		12 28 50.4	
VNA3				*e*		12 28 54.6	
VNA3				*e*		12 28 57.2	
VNA3				*e*		12 31 14.3	
VNA3				*e*		12 31 20.2	
VNA1	**Neumayer--Stat**	**14.08**	**144**	*e*	**Pn**	**12 28 48.9**	**-1.5**
VNA1				*e*		12 28 50.3	
VNA1				*e*		12 28 52.5	
VNA1				*e*		12 28 58.7	
VNA1				*e*		12 31 15.8	
PMSA	**Palmer Station**	**14.23**	**242**	LR	LR	12 33 27.6	
	comp=Z,377nm,19.9s,baz=302,slow=34						
SNAA	**Sanae**	**16.12**	**144**	Pn	**Pn**	**12 29 18.6**	**+1.1**
	0.1nm,0.3s,baz=308,slow=12,SNR=19						
SNAA				Sn	**Sn**	**12 32 06.5**	**-10**
	0.0nm,0.3s,baz=338,slow=20,SNR=3.4						
SNAA				LR	LR	12 34 17.3	
	comp=Z,173nm,18.5s,baz=11,slow=32						
SNAA	**Sanae**	**16.12**	**144**	*e*	**Pn**	**12 29 19.5**	**+2.0**
SNAA				*e*		12 29 25.3	
SNAA				*e*		12 29 28.9	
SNAA				*e*		12 32 08.8	
SNAA				*e*		12 32 15.8	
EFI	**East Falkland**	**16.30**	**294**	*e*P	**Pn**	**12 29 21.0**	**+1.0**
USHA	**Ushuaia**	**19.25**	**273**	LR	LR	12 35 20.5	
	comp=Z,372nm,21.3s,baz=100,slow=31						
QSPA	**South Pole Qui**	**29.22**	**180**	*e*P	**P**	**12 31 33.7**	**+0.9**
	10nm,1.0s,mb4.5						
PLCA	**Paso Flores**	**30.22**	**295**	LR	LR	12 42 31.1	
	comp=Z,145nm,18.6s,MS3.6,baz=150,slow=34						
CPUP	**Villa Florida**	**38.19**	**325**	P	**P**	**12 32 48.0**	**-2.6**
	2.9nm,0.7s,mb4.1,baz=148,slow=8.8,SNR=5.9						
CPUP				LR	LR	12 47 04.0	
	comp=Z,107nm,19.7s,MS3.7,baz=154,slow=34						
CPUP	**Villa Florida**	**38.19**	**325**	*e*P	**P**	**12 32 49.2**	**-1.5**
	12nm,0.7s,mb4.7						
CPUP				LR	LR	12 47 04.0	
MAW	**Mawson**	**38.27**	**142**	P	**P**	**12 32 54.5**	**+3.2**
	2.1nm,0.8s,mb3.9,baz=260,slow=11,SNR=4.4						
MAW				LR	LR	12 48 34.4	
	comp=Z,68nm,19.0s,MS3.5,baz=253,slow=36						
VNDA	**Vanda**	**41.38**	**185**	P	**P**	**12 33 17.6**	**+0.4**
	0.8nm,0.9s,mb3.3,baz=170,slow=6.1,SNR=5.0						
VNDA				LR	LR	12 48 04.6	
	comp=Z,66nm,19.1s,MS3.5,baz=173,slow=33						
LPAZ	**La Paz**	**50.99**	**316**	P	**P**	**12 34 32.6**	**-0.2**
	0.6nm,0.6s,mb3.7,baz=117,slow=5.2,SNR=4.0						
LPAZ				LR	LR	12 56 40.0	
	comp=Z,57nm,19.6s,MS3.6,baz=224,slow=37						
SAML	**Samuel**	**56.35**	**324**	*e*P	**P**	**12 35 10.5**	**-1.7**
	7.5nm,1.4s,mb4.5						
DBIC	**Dimbokro**	**71.17**	**30**	P	**P**	**12 36 51.1**	**+1.3**
	1.1nm,0.6s,mb4.0,baz=168,slow=12,SNR=3.3						
ROSC	**El Rosal**	**72.83**	**317**	LR	LR	13 07 42.1	
	comp=Z,42nm,19.7s,MS3.7,baz=17,slow=35						
TORD	**Torodi Ar. Bea**	**79.10**	**35**	P	**P**	**12 37 37.0**	**+1.4**
	1.1nm,0.9s,mb3.8,baz=189,slow=7.2,SNR=4.7						
TORD				LR	LR	13 05 04.3	
	comp=Z,80nm,21.3s,MS4.0,baz=160,slow=30						
TORD	**Torodi Ar. Bea**	**79.10**	**35**	P	**P**	**12 37 37.0**	**+1.4**
TORD				LR	LR	13 05 04.3	
INK	**Inuvik**	**147.29**	**317**	PKPbc	PKPbc	12 45 13.2	-1.4
	3.7nm,1.0s,baz=146,slow=3.6,SNR=2.8						
ZAL	**Zalesovo**	**147.35**	**74**	PKPbc	PKPbc	12 45 16.1	+1.3
	0.9nm,0.6s,baz=326,slow=3.6,SNR=3.4						
COLA	**College**	**151.00**	**306**	*e*PKPbc	PKPbc	12 45 20.9	-3.1

PRE 21 12:31:52.9±1.2, 2179S×3342E, h5km, ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.20**	**259**	*e*P	Pn	12 32 45.7	+1.9
MSNA				*e*S	Sn	12 33 22.1	-0.2
MSNA				AML	AML	12 33 37.8	
	comp=Z,98nm,0.2s						
LBTB	**Lobatse**	**7.87**	**244**	*e*P	Pn	12 33 48.8	+0.8
LBTB				*e*S	Sn	12 35 14.2	-3.2
LBTB				AML	AML	12 36 05.9	
	comp=Z,16nm,0.6s						
SWZ	**Schweizer**	**9.11**	**232**	*e*P	Pn	12 34 05.9	+0.9
SWZ				*e*S	Sn	12 35 43.7	-4.2
SWZ				AML	AML	12 37 01.1	
	comp=Z,6.7nm,0.7s						
BOSA	**Boshof**	**10.04**	**226**	*e*P	Pn	12 34 19.1	+1.4
BOSA				*e*S	Sn	12 36 06.3	-4.3
BOSA				AML	AML	12 37 22.2	
	comp=Z,4.4nm,0.8s						

NEIC ***21*** *12:32:09.8, 4447S×168.25E, h5km, ML3.9(WEL), After WEL.*

NEIC Felt at Queenstown.

WEL 21 12:32:09.6±0.1, 4447S×168.29E, h5km, ML3.8/11, 3C-5D, Error ellipse: s-maj=1.5km s-min=1.0km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.33**	**232**	⇑PG	Pg	12 32 16.8	+0.9
MSZ				SG	Sg	12 32 21.6	+1.4
JCZ	**Jackson Bay**	**0.52**	**41**	P	Pg	12 32 20.4	+0.7
JCZ				S	Sg	12 32 27.7	+1.3
JCZ	**Jackson Bay**	**0.52**	**41**	PG	Pg	12 32 20.4	+0.8
JCZ				SG	Sg	12 32 27.4	+1.0
JCZ				SG	Sg	12 32 27.7	+1.3
WKZ	**Wanaka**	**0.63**	**125**	⇓P	Pg	12 32 22.5	+0.7
WKZ				S	Sg	12 32 30.3	+0.3
WKZ	**Wanaka**	**0.63**	**125**	⇓P*	Pb	12 32 22.5	-0.6
WKZ				SG	Sg	12 32 30.3	+0.3
MLZ	**Mavora Lakes**	**0.88**	**185**	⇑P	Pg	12 32 26.9	+0.4
MLZ	**Mavora Lakes**	**0.88**	**185**	⇑P*	Pb	12 32 26.9	-0.5
EAZ	**Earnscleugh**	**1.05**	**137**	⇓P	Pg	12 32 29.7	-0.1
EAZ	**Earnscleugh**	**1.05**	**137**	⇓P*	Pb	12 32 29.7	-0.6
DCZ	**Deep Cove**	**1.29**	**218**	P	Pn	12 32 32.8	-1.5
DCZ	**Deep Cove**	**1.29**	**218**	P*	Pb	12 32 32.8	-1.5
DCZ				S*	Sb	12 32 50.1	-1.1
FOZ	**Fox Glacier**	**1.36**	**49**	*e*P	Pn	12 32 36.3	+1.1
FOZ	**Fox Glacier**	**1.36**	**49**	*e*PN	Pn	12 32 36.3	+1.1
LBZ	**Lake Benmore**	**1.36**	**87**	⇓P	Pn	12 32 36.1	+0.8
LBZ				S	Sb	12 32 53.2	-0.1
LBZ	**Lake Benmore**	**1.36**	**87**	*e*PN	Pn	12 32 35.5	+0.3
LBZ				S*	Sb	12 32 53.2	-0.1
WHZ	**Wether Hill Ro**	**1.44**	**189**	P	Pn	12

Msz4.5
CSEM ***21*** *12:49:13.0,287S×12628E,h10km,mb5.5*
ISCJB ***21*** *12:49:13.3±0.2,283S±002×12627E±003,h15km, mb5.3/109,MS4.5/46,Error ellipse: s-maj=4.6km s-min=3.0km az=142.0*
HRVD ***21*** *12:49:14.4±0.1,271S×12623E,h13km,MW5.3/91, Centroid moment Tensor Solution. LP body waves: s81,c137;Mantle waves: s91,c165; Half duration: 1§1 Moment tensor: Scale 10¹⁷Nm; Mrr 1.15±.02; Mθθ 0.28±.01; Mφφ -0.87±.02; Mrθ -0.05±.04; Mθφ 0.66±.01; Mφr 0.32±.04; Best double couple: M₀1.26900×10¹⁷ NP1:φs140.00000°,δ39.00000°,λ79.00000°. NP2: φs334.00000°,δ52.00000°,λ99.00000°. Principal axes: T 1.2020, Plg80.0000°, Azm284.0000°; N 0.1310, Plg7.0000°, Azm148.0000°; P -1.3360, Plg7.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***21*** *12:49:14.4±0.1,287S×12621E,h10km,mb5.4/51, MS4.4/9 Error ellipse: s-maj=6.0km s-min=3.5km az=68.0*
NEIC Felt [IV] in Kepulauan Sula.
IDC ***21*** *12:49:16.9±3.0,292S×12623E,h26km±19km,mb5.0/20, mb1 5.0/23,mb1mx5.0/25,mbtmp5.1/23,ML4.9/3,MS4.3/17, Ms1 4.3/17,ms1mx4.1/32,Error ellipse: s-maj=15.2km s-min=7.5km az=71.0*
MOS ***21*** *12:49:16.4±1.5,283S×12622E,h33km,mb5.5/55,Error ellipse: s-maj=10.1km s-min=5.2km az=111.5*
ISC 21 12:49:15.3±0.2,287S±002×12630E±003,h16km±1.1km:pP-P,n387,σ1§12/333,mb5.3/109,MS4.5/46, 31C-11D,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.06**	**113**	P	**Pn**	**12 49 53.0**	**+3.7**
	3μm,0.9s						
SWI	**Sorong**	**5.35**	**68**	P	**Pn**	**12 50 36.9**	**+2.4**
	2μm,0.8s						
PCI	**Palu**	**6.74**	**287**	P	**Pn**	**12 50 53.0**	**-0.6**
	3μm,0.9s						
WSI	**Waingapu**	**9.01**	**221**	P	**Pn**	**12 51 28.3**	**+3.6**
	1μm,1.1s						
DAV	**Davao City (W)**	**9.90**	**356**	*e*P	**Pn**	**12 51 37.0**	**+0.1**
DAV	**Davao City (W)**	**9.90**	**356**	Pn	**Pn**	**12 51 36.2**	**-0.7**
	269nm,0.6s						
BAKI	**Biak**	**9.95**	**81**	P	**Pn**	**12 51 39.8**	**+2.2**
	780nm,1.1s						
BUKP	**Musuan**	**10.74**	**353**	*e*P	**Pn**	**12 51 47.8**	**-0.7**
TSM	**Tawau**	**11.02**	**310**	P	**Pn**	**12 51 50.5**	**-1.8**
PAGZ	**Pagadian**	**11.03**	**345**	*e*P	**Pn**	**12 51 51.0**	**-1.5**
IPIL	**Ipil**	**11.22**	**341**	*e*P	**Pn**	**12 51 54.3**	**-0.6**
KAKA	**Kakadu**	**11.52**	**148**	*e*P	**Pn**	**12 52 02.9**	**+3.8**
	229nm,0.6s						
BUTP	**Butuan**	**11.78**	**357**	*e*P	**Pn**	**12 52 01.2**	**-1.4**
SNPH	**Sibulan**	**12.51**	**346**	*e*P	**Pn**	**12 52 15.0**	**+2.4**
SCPH	**Surigao**	**12.59**	**356**	*e*P	**Pn**	**12 52 13.7**	**-0.1**
KMMI	**Kalianget**	**12.96**	**251**	P	**Pn**	**12 52 23.2**	**+4.3**
	177nm,1.6s						
KKM	**Kota Kinabalu**	**13.40**	**311**	P	**Pn**	**12 52 24.8**	**-0.1**
KKM	**Kota Kinabalu**	**13.40**	**311**	*e*P	**Pn**	**12 52 24.6**	**-0.3**
OCLP	**Ormoc**	**13.93**	**353**	*e*P	**Pn**	**12 52 31.8**	**-0.2**
BATP	**Bataraza**	**14.35**	**324**	*e*P	**Pn**	**12 52 37.9**	**+0.1**
BATP	**Bataraza**	**14.35**	**324**	*e*P	**Pn**	**12 52 38.4**	**+0.6**
CUYO	**Cuyo Island**	**14.60**	**339**	*e*P	**Pn**	**12 52 42.4**	**+1.1**
CUYO	**Cuyo Island**	**14.60**	**339**	*e*P	**Pn**	**12 52 41.4**	**+0.2**
KRKI	**Karangkates**	**14.74**	**249**	P	**Pn**	**12 52 47.9**	**+4.8**
	2μm,1.2s						
FITZ	**Fitzroy Crossi**	**15.15**	**182**	Pn	**Pn**	**12 52 47.9**	**-0.8**
	1.5nm,0.3s,baz=17,slow=13,SNR=40						
FITZ				LR	LR	12 58 44.8	
	comp=Z,1μm,21.8s,baz=5.6,slow=38						
FITZ	**Fitzroy Crossi**	**15.15**	**182**	⇓*i*P	**Pn**	**12 52 47.7**	**-1.0**
	47nm,0.6s						
FITZ				*i*		12 52 55.4	
OTRP	**Odiongan**	**15.71**	**344**	*e*P	**Pn**	**12 52 58.7**	**+2.7**
BUSP	**Coron**	**15.97**	**338**	*e*P	**Pn**	**12 53 01.5**	**+2.3**
BUSP	**Coron**	**15.97**	**338**	*e*P	**Pn**	**12 53 01.1**	**+1.9**
PVCP	**Virac**	**16.49**	**353**	⇓*e*P	**Pn**	**12 53 04.7**	**-1.3**
PVCP	**Virac**	**16.49**	**353**	*e*P	**Pn**	**12 53 02.8**	**-3.2**
PVCP	**Virac**	**16.49**	**353**	*e*P	**Pn**	**12 53 02.9**	**-3.1**
KSM	**Kuching**	**16.55**	**285**	*e*P	**Pn**	**12 53 07.3**	**+0.6**
BJII	**Banjamegara**	**17.10**	**254**	P	**Pn**	**12 53 16.2**	**+2.5**
	448nm,2.1s						
BJII	**Banjamegara**	**17.10**	**254**	⇑*i*P	**Pn**	**12 53 23.0**	**+9.3**
LUBP	**Lubang**	**17.55**	**340**	*e*P	**Pn**	**12 53 17.1**	**-2.1**
LUBP	**Lubang**	**17.55**	**340**	*e*P	**Pn**	**12 53 17.3**	**-2.0**
TGY	**Tagaytay City**	**17.68**	**343**	P	**Pn**	**12 53 20.3**	**-0.6**
	7.8nm,0.3s,baz=109,slow=14,SNR=2.6						
TGY	**Tagaytay City**	**17.68**	**343**	P	**Pn**	**12 53 20.3**	**-0.5**
TGY				pmax	pmax		
	comp=Z,8.0nm,0.3s						
JCJI	**Jatiwangi**	**18.32**	**258**	P	**Pn**	**12 53 35.1**	**+6.4**
	comp=Z,469nm,0.9s						
WRAB	**Tennant Creek**	**18.70**	**156**	P	**Pn**	**12 53 33.0**	**-0.3**
	comp=Z,3μm,0.8s,SNR=77						
WRAB	**Tennant Creek**	**18.70**	**156**	*e*P	**Pn**	**12 53 33.5**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,473nm,0.8s						
WRAB	**Tennant Creek**	**18.70**	**156**	*e*P	**Pn**	**12 53 33.5**	**+0.2**
	comp=Z,473nm,0.8s						
WRA	**Warramunga Arr**	**18.70**	**156**	P	**Pn**	**12 53 33.0**	**-0.4**
	comp=Z,5.0nm,0.3s,baz=335,slow=11,SNR=264						
WRA				S	**Sn**	**12 57 01.1**	**-1.1**
	baz=338,slow=16,SNR=3.5						
WRA	**Warramunga Arr**	**18.70**	**156**	P	**Pn**	**12 53 33.0**	**-0.4**
WRA				S	**Sn**	**12 57 01.1**	**-1.1**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.3s						
WB2	**Warramunga Arr**	**18.71**	**156**	⇑*i*P	**Pn**	**12 53 33.6**	**+0.2**
WB2				*e*S	**Sn**	**12 57 03.4**	**+1.1**
LEM	**Lembang**	**19.02**	**257**	P	**Pn**	**12 53 38.2**	**+1.0**
	comp=Z,358nm,1.0s						
BALP	**Baler**	**19.07**	**346**	*e*P	**Pn**	**12 53 39.0**	**+1.2**
MBWA	**Marble Bar**	**19.27**	**199**	*e*P	**Pn**	**12 53 39.5**	**-0.7**
	comp=Z,66nm,0.8s						
SCZP	**Santa Cruz**	**19.57**	**341**	*e*P	**Pn**	**12 53 40.6**	**-3.2**
SCZP	**Santa Cruz**	**19.57**	**341**	*e*P	**Pn**	**12 53 41.0**	**-2.9**
CBJI	**Citeko**	**19.70**	**259**	P	**Pn**	**12 53 44.7**	**-0.6**
	comp=Z,514nm,1.0s						
BCPH	**Baguio City Da**	**19.94**	**344**	⇓*e*P	**Pn**	**12 53 45.0**	**-3.2**
BOLP	**Bolinao**	**20.14**	**342**	*e*P	**P**	**12 53 43.8**	**-4.9**
BOLP	**Bolinao**	**20.14**	**342**	*e*P	**P**	**12 53 44.7**	**-4.0**
CAUP	**Cauayan**	**20.17**	**348**	*e*P	**P**	**12 53 47.3**	**-1.8**
CAUP	**Cauayan**	**20.17**	**348**	*e*P	**P**	**12 53 47.4**	**-1.7**
SBJI	**Serang**	**20.36**	**260**	P	**P**	**12 53 52.2**	**+1.1**
	comp=Z,364nm,1.0s						
CVP	**Callao Caves**	**20.91**	**348**	*e*P	**P**	**12 53 58.0**	**+0.9**
ABRA	**Dolores**	**21.12**	**345**	*e*P	**P**	**12 54 00.8**	**+1.6**
ABRA	**Dolores**	**21.12**	**345**	*e*P	**P**	**12 53 59.4**	**+0.2**
APYP	**Conner**	**21.19**	**347**	*e*P	**P**	**12 53 59.0**	**-1.0**
APYP	**Conner**	**21.19**	**347**	*e*P	**P**	**12 53 59.3**	**-0.8**
KLI	**Kotabumi**	**21.48**	**264**	P	**P**	**12 54 05.3**	**+2.1**
	comp=Z,683nm,1.1s,mb5.9						
PMG	**Port Moresby**	**21.73**	**108**	P	**P**	**12 54 06.2**	**+0.3**
	comp=Z,153nm,0.9s,mb5.5,baz=336,slow=3.2,SNR=14						
PMG	**Port Moresby**	**21.73**	**108**	P	**P**	**12 54 06.2**	**+0.4**
PMG				pmax	pmax		
	comp=Z,153nm,0.9s						
PMG	**Port Moresby**	**21.73**	**108**	*e*P	**P**	**12 54 07.7**	**+1.8**
	comp=Z,192nm,0.9s,mb5.5						
AS31	**Alice Springs**	**21.95**	**161**	⇑*i*P	**P**	**12 54 08.8**	**+0.6**
ASAR	**Alice Springs**	**21.95**	**161**	P	**P**	**12 54 08.8**	**+0.5**
	comp=Z,222nm,0.8s,mb5.6,baz=343,slow=12,SNR=1362						
ASAR				S	**S**	**12 58 08.8**	**-1.2**
	comp=Z,32nm,0.9s,baz=348,slow=21,SNR=8.3						
ASAR	**Alice Springs**	**21.95**	**161**	P	**P**	**12 54 08.8**	**+0.6**
ASAR				S	**S**	**12 58 08.8**	**-1.2**
ASAR				pmax	pmax		
	comp=Z,222nm,0.8s						
ASAR				smax			
	comp=N,32nm,0.9s						
KGM	**Kluang**	**23.48**	**282**	P	**P**	**12 54 25.3**	**+0.9**
KSI	**Kapahiang**	**23.68**	**267**	P	**P**	**12 54 26.9**	**+0.6**
	comp=N,440nm,1.0s,mb5.8						
GUMO	**Guam**	**24.64**	**48**	P	**P**	**12 54 36.3**	**+1.3**
	comp=N,189nm,1.1s,mb5.5,baz=216,slow=4.2,SNR=7.6						
GUMO	**Guam**	**24.64**	**48**	P	**P**	**12 54 36.3**	**+1.3**
GUMO				pmax	pmax		
	comp=Z,189nm,1.1s,mb5.5						
CTA	**Charters Tower**	**25.93**	**133**	P	**P**	**12 54 48.5**	**+1.8**
	comp=Z,84nm,1.0s,mb5.2,baz=314,slow=11,SNR=40						
CTA	**Charters Tower**	**25.93**	**133**	*e*P	**P**	**12 54 47.2**	**+0.4**
CTA				*e*		12 54 58.5	
CTA				pmax	pmax		
	comp=Z,61nm,1.0s						
CTA	**Charters Tower**	**25.93**	**133**	*e*P	**P**	**12 54 47.2**	**+0.4**
	comp=Z,61nm,1.0s,mb5.1						
CTA				*e*		12 54 58.5	
CTA				*e*S	**S**	**12 59 31.1**	**+15**
CTAO	**Charters Tower**	**25.93**	**133**	*e*P	**P**	**12 54 47.3**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,122nm,1.0s,mb5.4						
CTAO				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.5						
CTAO	**Charters Tower**	**25.93**	**133**	*e*P	**P**	**12 54 47.3**	**+0.5**
	comp=Z,122nm,1.0s,mb5.4						
CTAO				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
PPI	**Padang Panjang**	**26.00**	**275**	P	**P**	**12 54 48.1**	**+0.7**
	comp=Z,373nm,1.0s,mb5.9						
IPM	**Ipoh**	**26.28**	**286**	P	**P**	**12 54 51.3**	**+1.3**
KULM	**Kulim**	**26.87**	**288**	*e*P	**P**	**12 54 56.3**	**+1.0**
QIZ	**Qiongzhong**	**27.12**	**324**	P	**P**	**12 54 57.5**	**0.0**
QIZ				S	**S**	**12 59 35.8**	**+0.6**
QIZ				XS	sS	12 59 45.3	+2.3
QIZ				AMB	AMB		
	comp=Z,47nm,2.1s,mb4.7						
QIZ				LR	LR		
	comp=N,650nm,20.0s						
QIZ				LR	LR		
	comp=Z,698nm,14.0s						
QIZ	**Qiongzhong**	**27.12**	**324**	*e*P	**P**	**12 54 57.1**	**-0.4**
	comp=Z,166nm,1.7s,mb5.3						
YHNB	**Yeheng**	**27.79**	**350**	*e*P	**P**	**12 55 04.3**	**+0.8**
FORT	**Forrest**	**27.81**	**177**	⇑*i*P	**P**	**12 55 03.4**	**-0.3**
	comp=Z,202nm,0.7s,mb5.9						
FORT				*e*		12 55 12.2	
PSI	**Prapat**	**27.93**	**281**	P	**P**	**12 55 04.7**	**-0.1**
	comp=Z,63nm,0.9s,mb5.2,baz=98,slow=3.9,SNR=36						
PSI	**Prapat**	**27.93**	**281**	P	**P**	**12 55 04.7**	**-0.1**
PSI				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.2						
PSI	**Prapat**	**27.93**	**281**	P	**P**	**12 55 04.7**	**-0.1**
QZH	**Quanzhou**	**28.64**	**345**	P	**P**	**12 55 10.1**	**-1.0**
QZH				S	**S**	**12 59 53.0**	**-6.1**
QZH				AMB	AMB		
	comp=Z,960nm,7.2s						
QZH				LR	LR		
	comp=N,1μm,6.2s						
QZH				LR	LR		
	comp=E,880nm,8.7s						
QZH				LR	LR		
	comp=Z,1μm,13.4s,MS4.7						
GZH	**Guangzhou**	**28.72**	**335**	P	**P**	**12 55 15.1**	**+3.2**
GZH				S	**S**	**13 00 06.8**	**+6.4**
GZH				LR	LR		
	comp=N,749nm,11.5s,MS4.6						
GZH				LR	LR		
	comp=E,581nm,12.4s,MS4.6						
GZH				LR	LR		
	comp=Z,1μm,18.3s						
JOW	**Kunigami**	**29.59**	**4**	P	**P**	**12 55 20.2**	**+0.7**
	comp=Z,27nm,1.0s,mb4.9,baz=193,slow=9.4,SNR=4.4						
JOW				LR	LR	13 07 38.6	
	comp=Z,512nm,18.2s,MS4.2,baz=171,slow=37						
KLBR	**Kellerberrin**	**29.68**	**195**	*e*P	**P**	**12 55 19.6**	**-0.8**
	comp=Z,86nm,0.9s,mb5.5						
KKTK	**Khon Kaen**	**30.04**	**310**	P	**P**	**12 55 24.3**	**+0.8**
	comp=Z,370nm,0.6s,mb6.3						
MUN	**Mundaring**	**30.47**	**197**	*e*P	**P**	**12 55 26.6**	**-0.8**
NNT	**Nongplab**	**30.53**	**301**	P	**P**	**12 55 27.0**	**-0.8**
NWAO	**Narrogin (SRO)**	**31.09**	**195**	P	**P**	**12 55 32.4**	**-0.4**
	comp=Z,63nm,0.9s,mb5.5,baz=23,slow=9.3,SNR=22						
NWAO				LR	LR	13 07 37.1	
	comp=Z,598nm,18.7s,MS4.3,baz=9.2,slow=36						
NWAO	**Narrogin (SRO)**	**31.09**	**195**	*e*P	**P**	**12 55 32.1**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,62nm,0.9s						
NWAO	**Narrogin (SRO)**	**31.09**	**195**	*e*P	**P**	**12 55 32.1**	**-0.7**
	comp=Z,62nm,0.9s,mb5.4						
NST	**Nakhon Sawan**	**31.77**	**306**	P	**P**	**12 55 38.4**	**-0.4**
BSI	**Banda Aceh**	**32.06**	**285**	P	**P**	**12 55 38.7**	**-2.6**
	comp=Z,49nm,1.4s,mb5.2						
STKA	**Stephens Creek**	**32.25**	**155**	P	**P**	**12 55 42.7**	**-0.3**
	comp=Z,62nm,0.9s,mb5.4,baz=327,slow=8.4,SNR=44						
STKA	**Stephens Creek**	**32.25**	**155**	⇑*i*P	**P**	**12 55 42.5**	**-0.5**
	comp=Z,52nm,1.2s,mb5.2						
NANT	**Nan**	**33.14**	**312**	⇑P	**P**	**12 55 52.0**	**+1.2**
	comp=Z,412nm,0.4s						
CBIJ	**Chichi jima**	**33.50**	**26**	LR	LR	13 07 17.3	
	comp=Z,457nm,19.1s,MS4.2,baz=173,slow=32						
ADE	**Adelaide**	**33.96**	**162**	*e*P	**P**	**12 55 57.6**	**-0.3**
HNR	**Honiara**	**34.07**	**103**	P	**P**	**12 55 59.4**	**+0.5**
	comp=Z,136nm,0.9s,mb5.9,baz=245,slow=2.1,SNR=5.7						
HNR	**Honiara**	**34.07**	**103**	P	**P**	**12 55 59.4**	**+0.5**
HNR				pmax	pmax		
	comp=Z,136nm,0.9s,mb5.9						
HNR	**Honiara**	**34.07**	**103**	*e*P	**P**	**12 56 00.7**	**+1.8**
	comp=Z,237nm,0.9s,mb6.1						
SSE	**Sheshan**	**34.12**	**352**	⇓P	**P**	**12 55 59.9**	**+0.5**
SSE				AP	pP	12 56 03.8	-0.4
SSE				PP	PP	12 57 17.5	+0.9
SSE				PCP	PcP	12 58 39.3	+2.9
SSE				S	**S**	**13 01 26.8**	**+2.0**
SSE				AMB	AMB		
	comp=Z,33nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,258nm,4.7s						
SSE				LR	LR		
	comp=N,141nm,35.7s,MS3.8						
SSE				LR	LR		
	comp=E,301nm,35.6s,MS3.8						
SSE				LR	LR		
	comp=Z,358nm,16.8s						
CHG	**Chiang Mai**	**34.48**	**310**	⇑P	**P**	**12 56 02.7**	**+0.3**
	comp=Z,45nm,1.1s,mb5.3						
CHTO	**Chiang Mai**	**34.48**	**310**	⇓P	**P**	**12 56 02.7**	**+0.3**
	SNR=24						
CHTO	**Chiang Mai**	**34.48**	**310**	*e*P	**P**	**12 56 02.6**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.4						
CHTO				MLR	MLR		
	comp=Z,699nm,22.0s,MS4.3						
CHTO	**Chiang Mai**	**34.48**	**310**	*e*P	**P**	**12 56 02.6**	**+0.2**
	comp=Z,60nm,1.3s,mb5.4						
CHTO				LR	LR		
	comp=Z,699nm,22.0s,MS4.3						
GYA	**Guiyang**	**34.79**	**328**	⇑*i*P	**P**	**12 56 05.3**	**+0.2**
GYA				AP	pP	12 56 10.9	+1.0
GYA				XP	sP	12 56 14.0	+2.1
GYA				PP	PP	12 57 20.1	-3.9
GYA				PPP		12 57 38.4	
GYA				PCP	PcP	12 58 40.0	+1.7
GYA				S	**S**	**13 01 31.4**	**-3.6**
GYA				SCP	ScP	13 02 24.8	+1.7
GYA				SCS	ScS	13 06 25.5	-0.9
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
GYA				AMB	AMB		
	comp=Z,300nm,5.7s						
GYA				LR	LR		
	comp=N,570nm,13.8s,MS4.6						
GYA				LR	LR		
	comp=E,510nm,14.2s,MS4.6						
GYA				LR	LR		
	comp=Z,490nm,14.2s,MS4.4						
WHN	**Wuhan**	**35.13**	**342**	P	**P**	**12 56 09.5**	**+1.5**
WHN				S	**S**	**13 01 38.0**	**-2.2**
WHN				LR	LR		
	comp=Z,940nm,16.6s,MS4.6						
NJ2	**Nanjing**	**35.44**	**349**	*e*P	**P**	**12 56 11.3**	**+0.6**
NJ2				AP	pP	12 56 15.6	+0.1
NJ2				XP	sP	12 56 18.3	+0.8
NJ2				PP	PP	12 57 27.3	-3.9
NJ2				S	**S**	**13 01 38.0**	**-7.0**
NJ2				AMB	AMB		
	comp=Z,60nm,0.5s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,150nm,6.0s						
NJ2				LR	LR		
	comp=N,680nm,16.0s,MS4.8						
NJ2				LR	LR		
	comp=E,870nm,13.5s,MS4.8						
NJ2				LR	LR		
	comp=Z,890nm,13.5s,MS4.7						
KMI	**Kunming**	**36.01**	**322**	P	**P**	**12 56 16.8**	**+1.2**
KMI				AP	pP	12 56 21.4	+1.0
KMI				XP	sP	12 56 23.0	+0.6
KMI				PP	PP	12 57 39.9	+2.4
KMI				PPP		12 57 57.8	
KMI				PCP	PcP	12 58 42.6	+0.7
KMI				S	**S**	**13 01 55.3**	**+1.6**
KMI				PCS	PcS	13 02 28.8	-0.6
KMI				SS	SS	13 04 16.3	-14
KMI				SSS		13 04 46.4	
KMI				SCS	ScS	13 06 31.3	-1.7
KMI				AMB	AMB		
	comp=Z,22nm,1.8s,mb4.8						
KMI				AMB	AMB		
	comp=Z,344nm,3.1s						
KMI				LR	LR		
	comp=N,559nm,15.6s,MS4.5						
KMI				LR	LR		
	comp=E,415nm,19.0s,MS4.5						
KMI				LR	LR		
	comp=Z,567nm,14.9s,MS4.5						
ARMA	**Armidale**	**36.41**	**141**	⇑*i*P	**P**	**12 56 19.5**	**+0.5**
JHJ	**Hachijo jima 2**	**38.00**	**19**	LR	LR	13 10 46.6	
	comp=Z,736nm,18.4s,MS4.5,baz=216,slow=34						
CNB	**Canberra Magne**	**38.73**	**149**	*e*P	**P**	**12 56 39.9**	**+1.2**
	comp=Z,27nm,0.6s,mb5.2						
TOO	**Toolangi**	**38.77**	**155**	*e*P	**P**	**12 56 40.3**	**+1.3**
TOO				*i*		12 56 50.2	
TOO				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.3						
TOO	**Toolangi**	**38.77**	**155**	*e*P	**P**	**12 56 40.3**	**+1.3**
	comp=Z,58nm,1.0s,mb5.3						
TOO				*i*		12 56 50.2	
TOO				*e*		12 56 59.6	
TIA	**Tai'an**	**39.81**	**348**	*e*P	**P**	**12 56 46.9**	**-0.8**
TIA				AMB	AMB		
	comp=Z,264nm,7.0s						
CD2	**Chengdu**	**39.87**	**329**	⇑*i*P	**P**	**12 56 48.4**	**+0.2**
CD2				AP	pP	12 56 52.9	-0.2
CD2				XP	sP	12 56 55.8	+0.8
CD2				PP	PP	12 58 24.8	+4.9
CD2				PCP	PcP	12 58 54.0	+0.2
CD2				SCP	ScP	13 02 41.3	-0.9
CD2				PCS	PcS	13 02 45.0	+1.0
CD2				S	**S**	**13 02 53.4**	**+1.1**
CD2				SS	SS	13 05 43.9	-4.8
CD2				SCS	ScS	13 06 53.1	-2.0
CD2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
CD2				AMB	AMB		
	comp=Z,250nm,7.2s						
CD2				LR	LR		
	comp=N,400nm,12.6s						
CD2				LR	LR		
	comp=Z,360nm,12.0s,MS4.4						
XAN	**Xi'an**	**40.20**	**337**	P	**P**	**12 56 50.3**	**-0.6**
XAN				S	**S**	**13 02 54.3**	**-2.8**
XAN				AMB	AMB		
	comp=Z,33nm,1.1s,mb5.0						
XAN				AMB	AMB		
	comp=Z,340nm,5.9s						
XAN				LR	LR		
	comp=N,232nm,11.0s,MS4.5						
XAN				LR	LR		
	comp=E,359nm,12.7s,MS4.5						
XAN				LR	LR		
	comp=Z,441nm,14.4s,MS4.5						
MAJO	**Matsushiro**	**40.75**	**15**	*e*P	**P**	**12 56 54.4**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,211nm,1.8s,mb5.5						
MAJO				MLR	MLR		
	comp=Z,651nm,20.0s,MS4.5						
MAJO	**Matsushiro**	**40.75**	**15**	*e*P	**P**	**12 56 54.4**	**-1.1**
	comp=Z,211nm,1.8s,mb5.5						
MAJO				LR	LR		
	comp=Z,651nm,20.0s,MS4.5						
MAT	**Matsushiro**	**40.75**	**15**	P	**P**	**12 56 54.4**	**-1.1**
MAT				S	**S**	**13 03 01.0**	**-4.4**
MAT	**Matsushiro**	**40.75**	**15**	*e*P	**P**	**12 56 54.0**	**-1.5**
MAT				*e*S	**S**	**13 03 02.0**	**-3.4**
MAT				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.1						
MAT				MLR	MLR		
	comp=Z,710nm,20.0s,MS4.5						
MAT	**Matsushiro**	**40.75**	**15**	*e*P	**P**	**12 56 54.0**	**-1.5**
	comp=Z,62nm,1.3s,mb5.1						
MAT				*e*S	**S**	**13 03 02.0**	**-3.4**
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS4.5						
MJAR	**Matsushiro Arr**	**40.75**	**15**	P	**P**	**12 56 54.3**	**-1.2**
	comp=Z,9.5nm,0.7s,mb4.5,baz=193,slow=8.2,SNR=34						
MJAR				S	**S**	**13 03 05.6**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=213,slow=13,SNR=4.5						
MJAR				LR	LR	13 12 25.1	
	comp=Z,622nm,19.1s,MS4.5,baz=195,slow=34						
MJAR	**Matsushiro Arr**	**40.75**	**15**	P	**P**	**12 56 54.3**	**-1.2**
MJAR				S	**S**	**13 03 05.6**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MJAR				smax			
	comp=N,1.0nm,0.6s						
DL2	**Dalian**	**41.79**	**355**	P	**P**	**12 57 05.3**	**+1.3**
DL2				S	**S**	**13 03 25.3**	**+4.5**
DL2				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.9						
DL2				AMB	AMB		
	comp=Z,130nm,6.6s						
DL2				LR	LR		
	comp=N,260nm,11.2s,MS4.5						
DL2				LR	LR		
	comp=E,210nm,11.7s,MS4.5						
DL2				LR	LR		
	comp=Z,260nm,14.4s,MS4.2						
DZM	**Mont Dzumac**	**43.39**	**119**	*e*P	**P**	**12 57 18.5**	**+1.4**
DZM	**Mont Dzumac**	**43.39**	**119**	P	**P**	**12 57 18.5**	**+1.5**
	comp=Z,33nm,0.8s,mb5.1,baz=298,slow=13,SNR=13						
BJT	**Baijiatuau**	**43.68**	**349**	*e*P	**P**	**12 57 19.2**	**-0.2**
BJT				pmax	pmax		
	comp=Z,91nm,1.2s						
BJT				MLR	MLR		
	comp=Z,396nm,20.0s						
BJT	**Baijiatuau**	**43.68**	**349**	*e*P	**P**	**12 57 19.2**	**-0.2**
	comp=Z,92nm,1.2s,mb5.4						
BJT				LR	LR		
	comp=Z,396nm,20.0s,MS4.3						
BJI	**Beijing**	**43.70**	**349**	*e*P	**P**	**12 57 19.3**	**-0.2**
BJI	

HHC PP PP 12 59 21.4 +0.5
HHC SCP ScP 13 03 03.0 -2.0
HHC S **S** **13 04 15.8 +0.1**
HHC SCS ScS 13 07 27.4 -2.7
HHC SS SS 13 07 32.4 -7.3
HHC AMB AMB
comp=Z,15nm,1.1s,mb4.8
HHC AMB AMB
comp=Z,514nm,5.0s
HHC LR LR
comp=N,294nm,14.7s,MS4.5
HHC LR LR
comp=E,246nm,13.9s,MS4.5
HHC LR LR
comp=Z,424nm,14.1s,MS4.5
BTO Baotou 45.75 343 *e*P **P** **12 57 35.4 -0.5**
CN2 Changchun 46.46 359 *e*P **P** **12 57 44.5 +3.0**
CN2 *e*XP sP 12 57 51.0 +2.6
CN2 *e*S **S** **13 04 32.8 +3.9**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,300nm,16.0s,MS4.5
CN2 LR LR
comp=E,300nm,16.0s,MS4.5
CN2 LR LR
comp=Z,500nm,18.0s,MS4.5
LSA Lhasa 46.68 316 P **P** **12 57 44.3 +1.1**
LSA Lhasa 46.68 316 *e*P **P** **12 57 44.9 +1.7**
LSA pmax pmax
comp=Z,51nm,0.9s,mb5.5
LSA MLR MLR
comp=Z,345nm,21.0s,MS4.3
LSA Lhasa 46.68 316 *e*P **P** **12 57 44.9 +1.7**
comp=Z,51nn,0.9s,mb5.5
LSA LR LR
comp=Z,345nm,21.0s,MS4.3
MDJ Mudanjiang 47.36 3 P **P** **12 57 48.5 0.0**
MDJ AP pP 12 57 51.6 -1.9
MDJ PP PP 12 59 39.1 -0.6
MDJ SCP ScP 13 03 13.0 +0.4
MDJ PCS PcS 13 03 14.4 0.0
MDJ S **S** **13 04 42.8 +1.0**
MDJ AMB AMB
comp=Z,23nm,1.2s,mb5.0
MDJ AMB AMB
comp=Z,178nm,4.8s
MDJ LR LR
comp=N,245nm,21.1s
MDJ LR LR
comp=E,114nm,34.5s
MDJ LR LR
comp=Z,352nm,21.1s,MS4.3
MDJ Mudanjiang 47.36 3 *e*P **P** **12 57 47.3 -1.2**
comp=Z,41nm,0.9s,mb5.4
MDRS Chennai 48.37 290 *ex* x 12 54 32.0
MDRS *ex* x 12 57 58.0
MDRS *ex* x 13 00 15.0
MDRS *ex* x 13 03 09.0
MDRS *ex* x 13 05 07.0
GTA Gaotai 48.61 333 P **P** **12 57 59.1 +0.9**
GTA AP pP 12 58 02.3 -0.9
GTA XP sP 12 58 05.3 +0.2
GTA PCP PcP 12 59 25.4 +1.8
GTA PP PP 12 59 51.8 +0.7
GTA S **S** **13 04 58.6 -0.9**
GTA SCS ScS 13 07 48.9 -1.4
GTA SS SS 13 08 23.3 -6.3
GTA AMB AMB
comp=Z,30nm,1.7s,mb5.0
GTA AMB AMB
comp=Z,503nm,6.5s
GTA LR LR
comp=N,359nm,16.1s,MS4.6
GTA LR LR
comp=E,458nm,17.2s,MS4.6
GTA LR LR
comp=Z,477nm,14.1s,MS4.6
JIRN Jiri 49.11 311 *e*P **P** **12 58 03.0 +1.0**
comp=Z,286nm,1.0s,mb6.3
GUN Gumba 49.47 311 *e*P **P** **12 58 05.7 +0.9**
comp=Z,319nm,0.8s,mb6.4
PKI Pulchoki 49.65 310 *e*P **P** **12 58 06.7 +0.5**
comp=Z,140nm,1.0s,mb5.9
PKI Pulchoki 49.65 310 *e*P **P** **12 58 06.7 +0.5**
PKI pmax pmax
comp=Z,140nm,1.0s,mb6.0
KKN Kakani 49.86 310 *e*P **P** **12 58 08.3 +0.5**
comp=Z,164nm,0.9s,mb6.0
KKN Kakani 49.86 310 *e*P **P** **12 58 08.3 +0.5**
KKN pmax pmax
comp=Z,164nm,0.9s,mb6.1
DMN Daman 49.90 310 *e*P **P** **12 58 08.8 +0.7**
comp=Z,214nm,1.0s,mb6.2
GKN Gorkha 50.46 310 *e*P **P** **12 58 12.8 +0.5**
comp=Z,242nm,1.0s,mb6.2
TRD Trivandrum 50.47 283‖ *ex* x 12 58 17.1
KOLN Koldanda 51.14 309 *e*P **P** **12 58 18.3 +0.9**
comp=Z,319nm,0.9s,mb6.3
HYB Hyderabad 51.21 295 *i* P **P** **12 58 18.0 0.0**
comp=Z,80nm,1.0s,mb5.6
HYB *e*S **S** **13 05 36.0 +0.2**
HYB Hyderabad 51.21 295 *e*P **P** **12 58 18.0 0.0**
HYB *e*S **S** **13 05 36.0 +0.2**
HYB pmax pmax
comp=Z,80nm,1.0s,mb5.6
HYB Hyderabad 51.21 295 *e*P **P** **12 58 18.0 0.0**
comp=Z,80nm,1.0s,mb5.6
HYB *e*S **S** **13 05 36.0 +0.2**
YSS Yuzh-Sakhalins 51.69 14 *αe*P **P** **12 58 21.3 -0.2**
YSS *e* 12 58 30.0
YSS *e* 12 59 29.2
YSS *e*PPP 13 01 19.0
YSS *e*S **S** **13 05 38.0 -4.3**
YSS *e*PS 13 05 51.0
YSS pmax pmax
comp=Z,50nm,1.2s,mb5.3
YSS smax
comp=N,500nm,9.0s
YSS smax
comp=E,300nm,5.0s
YSS Yuzh-Sakhalins 51.69 14 *e*P **P** **12 58 21.0 -0.5**
comp=E,47nm,0.9s,mb5.4
HABR Khabarovsk 51.70 7⇑ *i*P **P** **12 58 23.0 +1.4**
HABR *e*S **S** **13 05 43.6 +1.1**
HABR pmax pmax
comp=Z,82nm,1.1s,mb5.6
NGP Nagpur 52.04 300 *e*P **P** **12 58 20.4 -3.7**
NGP AMb AMB 12 58 24.1
comp=Z,107nm,1.7s,mb5.5
KLR Kul'dur 52.10 5 *e*P **P** **12 58 20.2 -4.4**
HIA Hailar 52.23 355 *e*P **P** **12 58 25.8 +0.2**
HIA pmax pmax
comp=Z,25nm,1.0s
HIA Hailar 52.23 355 *e*P **P** **12 58 25.8 +0.1**
comp=Z,25nm,1.0s,mb5.1
SONM Songino Array 53.41 343 P **P** **12 58 34.6 +0.3**
comp=Z,9.1nm,1.0s,mb4.7,baz=160,slow=6.0,SNR=26
SONM LR LR 13 22 54.8
comp=Z,320nm,18.8s,MS4.4,baz=52,slow=38
SONM Songino Array 53.41 343 P **P** **12 58 34.6 +0.3**
SONM pmax pmax
comp=Z,9.0nm,1.0s
SONM MLR MLR
comp=Z,320nm,18.8s
AKL Akola 53.66 298 *e*P **P** **12 58 36.2 +0.1**
AKL AMb AMB 12 58 42.0
comp=Z,145nm,1.4s,mb5.7
LGTI Lohaghat 54.53 310 *i* P **P** **12 58 43.0 +0.5**
KAD Karad 55.16 293 *e*P **P** **12 58 47.0 -0.1**
CIT Chita 55.74 351 *e*P **P** **12 58 51.3 +0.1**
CIT *e* 12 59 48.8
CIT *e* 13 01 01.5
POO Poona 55.81 295 *e*P **P** **12 58 51.0 -0.7**
NDI New Delhi 56.56 307 *e*P **P** **12 58 56.2 -0.8**
NDI AMb AMB 12 59 00.2
comp=Z,116nm,1.9s,mb5.6
ZAK Zakamensk 56.61 343⇑ *i*P **P** **12 58 57.3 -0.1**
ZAK pmax pmax
comp=Z,17nm,1.6s,mb4.8
TLY Talaya 57.66 344 P **P** **12 59 05.8 +1.0**
comp=Z,86nm,1.0s,mb5.7,SNR=9.5
TLY Talaya 57.66 344 *e*P **P** **12 59 05.2 +0.4**
TLY *e*S **S** **13 07 01.5 -1.1**
TLY *e*SS SS 13 10 55.6 +2.8
TLY pmax pmax
comp=Z,66nm,2.5s,mb5.2
TLY MLR MLR
comp=Z,223nm,21.0s,MS4.2
TLY Talaya 57.66 344 *e*P **P** **12 59 04.7 -0.1**
comp=Z,28nm,1.1s,mb5.2
SMLA Simla 57.66 310 *e*P **P** **12 59 05.4 +0.5**
AJM Ajmer 57.77 304 *i* P **P** **12 59 05.0 -0.6**
WMQ Urumqi 57.95 328⇑ *i*P **P** **12 59 07.5 +0.6**
WMQ XP sP 12 59 15.0 +1.2
WMQ PP PP 13 01 18.0 +2.7
WMQ S **S** **13 07 05.0 -1.4**
WMQ SCS ScS 13 08 53.0 -2.9
WMQ SS SS 13 10 58.0 +0.6
WMQ AMB AMB
comp=Z,62nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,632nm,5.0s
WMQ LR LR
comp=N,702nm,15.0s,MS5.0
WMQ LR LR
comp=E,356nm,15.0s,MS5.0
WMQ LR LR
comp=Z,298nm,14.0s,MS4.5
SDNR Sundarnagar 57.98 310 *e*P **P** **12 59 07.4 +0.3**
IRK Irkutsk 57.98 344⇑ *i*P **P** **12 59 06.4 -0.7**
IRK *e* 13 01 15.7
IRK pmax pmax
comp=Z,91nm,2.2s,mb5.4
MOY Mondy 58.43 342 *e*P **P** **12 59 10.3 0.0**
MOY pmax pmax
comp=Z,123nm,2.4s,mb5.5
THN Thein Dam 59.35 311 *e*P **P** **12 59 15.7 -0.9**
CLNS Chul'man 59.52 359 *e*P **P** **12 59 16.9 -0.9**
CLNS pmax pmax
comp=Z,26nm,0.8s,mb5.3
CLNS pmax pmax
comp=N,23nm,1.6s
CLNS pmax pmax
comp=E,12nm,1.1s
BOD Bodaibo 61.30 353 *e*P **P** **12 59 28.9 -1.1**
BOD pmax pmax
comp=Z,27nm,1.4s,mb5.2
PET Petropavlovsk 61.96 21 *c i*P **P** **12 59 35.0 +0.5**
PET *e* 13 00 13.0
PET *e* 13 01 58.8
PET *i* S **S** **13 08 00.2 +2.1**
PET *e*PS 13 08 20.4
PET *e*SS SS 13 11 59.7 -0.7
PET pmax pmax
comp=Z,37nm,2.0s,mb5.2
PET pmax pmax
comp=Z,300nm,6.7s
PET pmax pmax
comp=Z,200nm,7.6s
PET smax
comp=N,500nm,12.5s
PET smax
comp=N,500nm,19.6s
PET MLR MLR
comp=Z,300nm,20.0s,MS4.5
PET MLR MLR
comp=Z,300nm,20.0s
PET Petropavlovsk 61.96 21 *e*P **P** **12 59 35.0 +0.5**
comp=Z,41nn,1.0s,mb5.5
KSH Kashi 62.50 318 P **P** **12 59 39.6 +1.6**
KSH AP pP 12 59 44.3 +1.2
KSH XP sP 12 59 46.3 +1.3
KSH PCP PcP 13 00 18.9 +1.7
KSH PP PP 13 01 58.9 +3.4
KSH PPP 13 03 29.3
KSH SCP ScP 13 04 18.6 0.0
KSH PCS PcS 13 04 20.6 +0.1
KSH S **S** **13 08 04.6 -0.2**
KSH SCS ScS 13 09 27.3 -2.5
KSH SS SS 13 12 11.8 +3.0
KSH AMB AMB
comp=Z,280nm,1.6s,mb6.1
KSH LR LR
comp=N,457nm,6.6s
KSH LR LR
comp=E,479nm,6.0s
KSH LR LR
comp=Z,532nm,8.5s
MK31 Makanchi Array 62.77 328 P **P** **12 59 39.5 -0.4**
MK31 pmax pmax
comp=Z,40nm,0.9s,mb5.5
ULHL Ulahol 63.71 321 P **P** **12 59 47.7 +1.6**
SNR=9.7
CASY Casey 64.26 187 *e*P **P** **12 59 48.3 -1.4**
comp=Z,9.5nm,1.0s,mb4.8
KZA Kyzart 64.26 320 P **P** **12 59 51.3 +1.6**
SNR=33
TKM2 Tokmak 2 64.47 321 P **P** **12 59 52.0 +0.9**
SNR=14
KBK Karagaybulak 64.74 320 P **P** **12 59 54.1 +1.2**
SNR=7.8
YAK Yakutsk 64.77 2 *c i*P **P** **12 59 53.5 +0.5**
YAK *e**PP pP 13 00 00.0 +1.9
YAK *e* 13 02 18.1
YAK *e*S **S** **13 08 31.3 -1.8**
YAK *e* 13 09 39.3
YAK pmax pmax
comp=Z,58nm,0.8s,mb5.7
YAK pmax pmax
comp=N,51nm,1.4s
YAK pmax pmax
comp=E,16nm,1.4s
YAK smax
comp=N,184nm,11.3s
YAK smax
comp=Z,138nm,12.0s
YAK smax
comp=E,405nm,18.4s
YAK MLR MLR
comp=Z,453nm,17.0s,MS4.7
YAK MLR MLR
comp=N,463nm,38.0s
YAK MLR MLR
comp=E,1μm,44.0s
YAK Yakutsk 64.77 2 *e*P **P** **12 59 52.9 -0.2**
comp=E,208nm,0.9s,mb6.2
YAK LR LR
comp=Z,344nm,19.0s,MS4.6
AAK Ala-Archa 65.02 320 P **P** **12 59 55.9 +1.2**
SNR=7.6
AAK Ala-Archa 65.02 320 P **P** **12 59 54.9 +0.2**
comp=Z,197nm,1.0s,mb6.1,SNR=19
AAK Ala-Archa 65.02 320⇑P **P** **12 59 54.8 +0.1**
SNR=35
AAK Ala-Archa 65.02 320 *e*P **P** **12 59 54.1 -0.6**
AAK pmax pmax
comp=Z,93nm,1.5s,mb5.6
AAK Ala-Archa 65.02 320 *e*P **P** **12 59 54.1 -0.6**
comp=Z,93nm,1.5s,mb5.6
CHMS Chumysh 65.04 321 P **P** **12 59 55.6 +0.8**
SNR=5.0
FRU Bishkek 65.04 320 *e*P **P** **12 59 55.5 +0.7**
FRU pmax pmax
comp=Z,277nm,2.5s,mb5.8
MA2 Magadan 65.17 13 *e*P **P** **12 59 56.9 +1.2**
MA2 *e* 13 02 19.1
MA2 *i* S S 13 08 40.9 +2.9
MA2 *e*PS 13 09 01.3
MA2 *e* 13 09 48.9
MA2 *e*SSS 13 15 41.4
MA2 pmax pmax
comp=Z,100nm,1.8s,mb5.5
MA2 MLR MLR
comp=Z,300nm,19.4s,MS4.5
AML Almayashu 65.29 319 P **P** **12 59 57.8 +1.4**
SNR=25
USP Ospenovka 65.34 321 P **P** **12 59 57.2 +0.5**
SNR=21
EKS2 Erkin-Say 65.50 320 P **P** **12 59 58.9 +1.1**
SNR=13
ZAL Zalesovo 66.28 335 P **P** **13 00 02.0 -0.8**
comp=Z,4.8nm,0.8s,mb4.6,baz=352,slow=5.1,SNR=30
ZAL LR LR 13 30 21.2
comp=Z,292nm,18.4s,MS4.5,baz=166,slow=37
ZAL Zalesovo 66.28 335 P **P** **13 00 02.1 -0.7**
ZAL pmax pmax
comp=Z,50nm,0.8s
ZAL MLR MLR
comp=Z,292nm,18.4s
KURK Kurchatov 67.10 329 P **P** **13 00 07.0 -1.0**
comp=Z,319nm,0.7s,SNR=27
NVS Novosibirsk 67.57 335 *e*P **P** **13 00 07.4 -3.6**
NVS *e*S S 13 08 59.9 -7.2
NVS pmax pmax
comp=N,61nm,1.7s
NVS pmax pmax
comp=E,47nm,1.7s
NVS pmax pmax
comp=Z,81nm,1.7s,mb5.5
NVS smax
comp=N,61nm,2.3s
NVS smax
comp=E,64nm,2.3s
KK31 Karatay Array 67.82 319 *i* P **P** **13 00 12.1 -0.5**
KKAR Karatay Array 67.82 319 *i* P **P** **13 00 12.1 -0.5**
KKAR pmax pmax
comp=Z,11nm,0.8s,mb4.9
SMDO Samad 71.24 295⇓P **P** **13 00 34.0 +0.3**
SNR=14
BIDO Bidbid 71.26 296⇑P **P** **13 00 34.3 +0.5**
SNR=17
BSY Bisya 71.95 295⇓P **P** **13 00 38.5 +0.5**
SNR=9.9
VOSK Vostochnaya 72.17 328 P **P** **13 00 37.4 -1.9**
VOSK pmax pmax
comp=Z,18nm,0.9s,mb5.0
BVA0 Borovoye Array 72.63 328 *i* P **P** **13 00 41.2 -0.8**
BVA0 pmax pmax
comp=Z,41nm,2.1s,mb5.0
ARQ Araqi 72.67 295⇓P **P** **13 00 42.7 +0.4**
SNR=13
BRVK Borovoye 72.70 328 P **P** **13 00 42.9 +0.4**
comp=Z,256nm,0.9s,mb6.2,SNR=23
BRVK Borovoye 72.70 328 P **P** **13 00 42.2 -0.3**
SNR=36
BRVK Borovoye 72.70 328 *e*P **P** **13 00 41.4 -1.1**
BRVK pmax pmax
comp=Z,61nm,1.4s,mb5.3
BRVK MLR MLR
comp=Z,142nm,20.0s,MS4.2
BRVK Borovoye 72.70 328 *e*P **P** **13 00 41.4 -1.0**
comp=Z,61nm,1.4s,mb5.3
BRVK LR LR
comp=Z,142nm,20.0s,MS4.2
CHKZ Chkalovo 72.84 329 P **P** **13 00 41.7 -1.6**
CHKZ pmax pmax
comp=Z,21nm,1.5s,mb4.8
CHKZ Chkalovo 72.84 329 *e*P **P** **13 00 42.3 -1.0**
comp=Z,88nm,1.5s,mb5.5
ZRNK Zerenda 73.32 328 P **P** **13 00 43.7 -2.4**
ZRNK pmax pmax
comp=Z,55nm,2.1s,mb5.1
ZRNK Zerenda 73.32 328 *e*P **P** **13 00 45.3 -0.9**
comp=Z,51nm,1.0s,mb5.4
TIXI Tiksi 74.40 1 *e*P **P** **13 00 49.8 -2.7**
TIXI *e*S S 13 10 16.1 -10
TIXI pmax pmax
comp=Z,38nm,1.0s,mb5.3
TIXI Tiksi 74.40 1⇑ *i*P **P** **13 00 51.5 -1.0**
ABKT Ailbek 74.74 310 P **P** **13 00 55.3 +0.9**
comp=Z,180nm,1.0s,mb6.0,SNR=12
BILL Bilibino 76.00 14⇓ *i*P **P** **13 01 01.4 -0.3**
BILL *e* 13 01 11.6
BILL *e*SS SS 13 15 33.5 -3.5
BILL pmax pmax
comp=Z,27nm,2.5s,mb4.7
BILL MLR MLR
comp=Z,200nm,19.0s,MS4.4
VNDA Vanda 76.98 173 P **P** **13 01 05.3 -1.9**
comp=Z,12nn,0.8s,mb4.9,baz=311,slow=6.3,SNR=68
VNDA LR LR 13 32 29.2
comp=Z,247nm,20.0s,MS4.5,baz=327,slow=34
VNDA Vanda 76.98 173 *e*P **P** **13 01 05.0 -2.2**
VNDA pmax pmax
comp=Z,11nm,0.8s
VNDA MLR MLR
comp=Z,315nm,20.0s
VNDA Vanda 76.98 173 *e*P **P** **13 01 05.0 -2.2**
comp=Z,10nm,0.8s,mb4.8
VNDA LR LR
comp=Z,315nm,20.0s,MS4.6
AB31 Akbulak array 77.00 322 *i* P **P** **13 01 05.9 -1.4**
AB31 pmax pmax
comp=Z,147nm,1.7s,mb5.6
AB31 Akbulak array 77.00 322 *i* P **P** **13 01 05.0 -2.3**
MAW Mawson 77.46 201 P **P** **13 01 08.9 -1.0**
comp=Z,7.6nm,0.9s,mb4.6,baz=61,slow=6.2,SNR=19
MAW PKPPKP 13 28 19.6
comp=Z,1.3nm,0.5s,baz=151,slow=8.5,SNR=4.5
MAW LR LR 13 35 10.5
comp=Z,98nm,18.2s,MS4.2,baz=58,slow=36
MAW Mawson 77.46 201⇑ *i*P **P** **13 01 08.6 -1.3**
comp=Z,4.4nm,0.6s,mb4.6
SBA Scott Base 77.91 172 *e*P **P** **13 01 11.4 -1.0**
comp=Z,8.0nm,0.8s,mb4.7
ARU Arti 80.27 329 P **P** **13 01 23.9 -1.5**
comp=Z,105nm,0.7s,mb5.9,SNR=8.8
ARU Arti 80.27 329⇑ *i*P **P** **13 01 23.9 -1.5**
ARU *e* 13 04 26.8
ARU *e*PPP 13 06 19.6
ARU *e*S S 13 11 28.0 -2.2
ARU *e*SS SS 13 16 33.3 -8.0
ARU pmax pmax
comp=Z,24nm,1.1s,mb5.0
ARU Arti 80.27 329 *e*P **P** **13 01 22.8 -2.6**
comp=Z,13nm,0.8s,mb4.9
KBD Kabd 81.46 300 *e*P **P** **13 01 31.2 -0.5**
KBD AMb AMB 13 01 34.9
comp=Z,164nm,1.3s,mb5.8
UMR Umm Al-Rimmam 81.49 300 *e*P **P** **13 01 31.2 -0.6**
UMR AMb AMB 13 01 35.0
comp=Z,90nm,1.3s,mb5.5
RDF Al-Radifah 81.55 300 *e*P **P** **13 01 31.9 -0.3**
RDF AMb AMB 13 01 33.4
comp=Z,52nm,0.8s,mb5.5
MIB Mutribah 81.85 300 *e*P **P** **13 01 33.4 -0.4**
MIB AMb AMB 13 01 35.4
comp=Z,85nm,0.8s,mb5.7
NAY Al-Naaiem 81.86 300 *e*P **P** **13 01 33.2 -0.7**
NAY AMb AMB 13 01 34.9
comp=Z,35nm,0.8s,mb5.4
SDPT Sand Point 82.89 33 *e*P **P** **13 01 39.7 +0.5**
PPT Papeete 83.55 107 LR LR 13 31 39.8
comp=Z,247nm,20.0s,MS4.6,baz=278,slow=30
ATD Arta Tunnel 84.16 282 LR LR 13 35 57.4
comp=Z,136nm,20.5s,MS4.3,baz=65,slow=33
BHD Baghdad 84.81 304 *ex* x 13 01 45.0
BHD *ex* x 13 01 56.0
BHD Baghdad 84.81 304 *ex* x 13 12 16.0
DGRG David-gareji 85.08 312 P **P** **13 01 51.5 +1.1**
GNI Garni 85.38 310 P **P** **13 01 50.5 -1.4**
GNI pmax pmax
comp=Z,21nm,0.9s
GNI Garni 85.38 310 P **P** **13 01 50.5 -1.4**
comp=Z,21nn,0.9s,mb5.3
MTA Mtatsminda 85.55 312 P **P** **13 01 53.1 +0.4**
TBLG Delisi 85.59 312 P **P** **13 01 54.0 +1.1**
SYO Syowa Base 86.16 201⇑ *e*P **P** **13 01 54.2 -1.5**
SYO Syowa Base 86.16 201⇑ *es*P sP 13 02 02.1 -0.7
MSL Mosul 86.20 306 *ex* x 13 01 58.0
MSL Mosul 86.20 306 *ex* x 13 01 58.0
ZEI Tsey 86.35 313 *e*P **P** **13 01 57.4 +0.7**
ZEI *e**PP pP 13 02 08.5 +6.6
ZEI pmax pmax
comp=Z,13nm,0.6s,mb5.3
ONI Oni 86.65 313 P **P** **13 01 58.8 +0.6**
SVW2 Sparrevohn 86.77 28 *e*P **P** **13 01 56.6 -2.1**
TTA Tatalina 86.95 27 *e*P **P** **13 02 00.7 +1.1**
TTA *e* 13 02 08.2
TTA pmax pmax
comp=Z,16nm,1.1s,mb5.2
TTA Tatalina 86.95 27 *e*P **P** **13 02 00.7 +1.1**
comp=Z,16nn,1.1s,mb5.2
TTA *e* 13 02 08.2
QSPA South Pole Qui 87.08 180 *e*P **P** **13 01 58.7 -1.6**
comp=Z,25nm,0.9s,mb5.4
KIV Kislovodsk 87.37 314 P **P** **13 02 01.6 0.0**
SNR=7.7
KIV Kislovodsk 87.37 314 *c i*P **P** **13 02 01.6 -0.1**
KIV pmax pmax
comp=Z,32nm,1.6s,mb5.3
KDAK Kodiak Island 87.67 32 P **P** **13 02 03.1 -0.1**
IMA2 Indian Mountai 88.55 24 *e*P **P** **13 02 07.5 +0.2**
KMBO Kilima Mbogo 88.99 269 P **P** **13 02 11.1 +1.8**

comp=Z,5.4nm,0.8s,mb4.9,baz=48,slow=7.1,SNR=11
KMBO LR LR 13 37 43.6
comp=Z,276nm,19.2s,MS4.7,baz=95,slow=33
SLKM Skilak Lake 89.26 29 *eP* **P 13 02 10.1 -0.5**
MALT Malatya 90.08 308 *eP* **P 13 02 15.2 +0.7**
MALT pmax pmax
comp=Z,17nm,1.1s,mb5.3
MALT Malatya 90.08 308 *eP* **P 13 02 15.2 +0.7**
comp=Z,17nm,1.1s,mb5.3
VRSR Storozhevoye 90.39 321 *eP* **P 13 02 14.5 -1.4**
VRSR pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
VRSR pmax pmax
comp=N,7.0nm,0.9s
VRSR pmax pmax
comp=E,10.0nm,0.9s
COLA College 90.81 25 *eP* **P 13 02 17.0 -0.8**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
COLA College 90.81 25 *eP* **P 13 02 17.0 -0.8**
comp=Z,6.0nm,0.8s,mb5.0
KLMR Klimovskoe 90.91 331 *eP* **P 13 02 15.8 -2.5**
KLMR pmax pmax
comp=Z,30nm,1.7s,mb5.3
MOS Moscow 91.60 326 *eP* **P 13 02 25.0 +3.5**
MOS *e* 13 06 07.2
OBN Obninsk 92.17 325*c iP* **P 13 02 22.7 -1.5**
OBN *e* 13 12 53.3
OBN pmax pmax
comp=Z,62nm,2.1s,mb5.6
EGAK Eagle 93.66 25 *eP* **P 13 02 31.0 -0.1**
BRTR Keskin Array B 93.86 309 P **P 13 02 30.4 -1.5**
comp=Z,0.5nm,0.5s,mb4.2,baz=138,slow=6.4,SNR=3.7
BRTR PP PP 13 06 19.9 +2.3
comp=Z,1.2nm,0.9s,baz=134,slow=8.8,SNR=3.6
BRTR LR LR 13 53 12.6
comp=Z,73nm,20.1s,MS4.1,baz=104,slow=41
BRTR Keskin Array B 93.86 309 P **P 13 02 30.5 -1.5**
BRTR 13 06 19.9
DAWY Dawson 94.45 26 *eP* **P 13 02 35.6 +0.9**
INK Inuvik 96.42 22 *eP* **P 13 02 42.6 -1.0**
INK pmax pmax
comp=Z,23nm,1.3s
INK Inuvik 96.42 22 *eP* **P 13 02 42.6 -1.0**
comp=Z,23nm,1.3s,mb5.4
ARCES ARCESS Array B 96.45 340 P **P 13 02 42.1 -1.7**
comp=Z,5.0nm,0.9s,mb5.0,baz=72,slow=4.0,SNR=8.1
ARCES LR LR 13 52 52.9
comp=Z,128nm,18.5s,MS4.4,baz=92,slow=40
AKASG Malin Array Be 96.69 321 P **P 13 02 43.0 -1.9**
comp=Z,2.2nm,0.8s,mb4.7,baz=73,slow=4.0,SNR=12
AKASG LR LR 13 51 55.7
comp=Z,88nm,20.2s,MS4.2,baz=65,slow=39
SKAG Skagway 96.72 31 *eP* **P 13 02 45.8 +0.8**
SPB4 Spitsbergen Ar 96.83 349 *eP* **P 13 02 44.2 -1.3**
LSZ Lusaka 97.06 254 *eP* **P 13 02 47.4 +0.8**
LSZ pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
LSZ Lusaka 97.06 254 *eP* **P 13 02 47.4 +0.8**
comp=Z,6.1nm,0.8s,mb5.1
FINES FINESS Array B 97.39 332 P **P 13 02 48.4 +0.4**
comp=Z,1.4nm,0.6s,mb4.6,baz=261,slow=9.5,SNR=6.2
FINES LR LR 13 51 49.0
comp=Z,119nm,19.4s,MS4.4,baz=117,slow=38
FINES FINESS Array B 97.39 332 P **P 13 02 48.4 +0.4**
FINES LR LR 13 51 49.0
SNAA Sanae 98.76 194 *e*Pdiff **P 13 02 51.7 -2.5**
SNAA *e* 13 02 53.6
SNAA *e* pP 13 02 55.9 -3.6
SNAA *e* pP 13 02 57.4 -2.1
SNAA Sanae 98.76 194 *eP* **P 13 02 53.1 -1.1**
SNAA pmax pmax
comp=Z,7.0nm,1.6s
SNAA Sanae 98.76 194 *eP* **P 13 02 53.1 -1.1**
comp=Z,7.0nm,1.6s,mb4.9
VNA1 Neumayer--Stat 100.76 194 *e*Pdiff Pdif 13 03 02.3 -0.8
VNA1 *e* 13 03 05.4
VNA1 *e* 13 03 06.3
KECS Kecovo 102.60 319 PDIF Pdif 13 03 10.9 -0.4
KECS Kecovo 102.60 319 *e*Pdif Pdif 13 03 10.9 -0.4
OJC Ojcow 102.72 321 *eP* PKiKP 13 07 30.4 -2.1
VYHS Vyhne 103.68 319 PDIF Pdif 13 03 14.6 -1.5
VYHS *e*PP PP 13 07 34.0 +1.5
VYHS Vyhne 103.68 319 *eP* Pdif 13 03 14.6 -1.5
VYHS *e*PP PP 13 07 34.0 +1.5
DAG Danmarks Havn 103.69 352*i iP* Pdif 13 03 14.7 -1.4
comp=Z,2.7nm,0.7s
DAG Danmarks Havn 103.69 352*i iP* Pdif 13 03 14.7 -1.4
DAG pmax pmax
comp=Z,3.0nm,0.7s
OKC Ostrava-Krasne 103.84 321 *e*PP PP 13 07 39.4 +5.6
DPC Dobruska-Polom 104.88 321 *e*PP PP 13 07 43.4 +2.0
DPC *ex* x 13 17 45.1
DPC AMS AMS 13 58 30.0
comp=Z,200nm,19.9s
UPC Upice 105.03 322 *e*PP PP 13 07 59.0 +16
TREC Trest 105.66 321 *e*PP PP 13 07 52.9 +5.7
TREC *e*SP SP 13 17 05.1 +3.7
TREC AMS AMS 13 57 30.0
comp=Z,100nm,14.7s
PVCC Panska Ves 105.92 322 *e*PP PP 13 07 52.7 +3.6
PVCC *ex* x 13 17 39.2
PRU Pruhonice 106.07 321 *e*PP PP 13 07 52.8 +2.5
PRU *ex* x 13 17 57.3
PRU AMS AMS 14 04 50.0
comp=Z,100nm,21.4s
CLL Collm 106.65 323 *e*PP PP 13 08 03.0 +8.4
CLL *e* 13 08 09.0
CLL Collm 106.65 323 *e*(PP) PP 13 08 03.0 +8.4
CLL *ex* x 13 08 09.0
KHC Kasperske Hory 106.91 321 *e*PP PP 13 07 57.7 +1.3
KHC *e*SP SP 13 17 23.7 +9.3
KHC AMS AMS 14 03 20.0
comp=Z,100nm,12.1s
NKC Novy Kostel 107.30 322 *e*PP PP 13 08 07.6 +8.3
NKC *e*SP SP 13 17 19.9 +1.4
CDF Champ du Feu 111.09 321 *e*PKP1 PKiKP 13 07 48.5 +0.4
HINF Hinteralfeld 111.57 321 *e*PKP1 PKiKP 13 07 49.5 +0.5
CABF La Chapelle 112.48 320 *e*PKP1 PKiKP 13 07 50.3 -0.4
comp=Z,18nm,1.0s
HLID Hailey 112.91 43 *e*PKiKP PKiKP 13 07 54.2 +2.6
LOR Lormes 113.65 321 *e*PKP1 PKiKP 13 07 53.0 +0.1
SMF Signal de Mont 113.91 321 *e*PKP1 PKiKP 13 07 53.4 0.0
SSF Saint Saulge 113.96 321 *e*PKP1 PKiKP 13 07 53.8 +0.3
comp=Z,16nm,0.9s
AVF Avril sur Loir 114.16 321 *e*PKP1 PKiKP 13 07 54.6 +0.7
comp=Z,7.2nm,0.9s
BGF Bois d'Agland 114.57 321 *e*PKP1 PKiKP 13 07 55.1 +0.4
comp=Z,14nm,0.7s
TCF Toulx Ste Croi 115.08 321 *e*PKP1 PKiKP 13 07 56.1 +0.4
comp=Z,8.5nm,0.7s
TPAW Teton Pass 115.30 43 *e*PKPdf PKPdf 13 07 58.1 +2.0
REDW Red Top Meadow 115.41 43 *e*PKPdf PKPdf 13 07 57.8 +1.5
LOHW Long Hollow 115.49 42 *e*PKPdf PKPdf 13 07 57.5 +1.0
CAF Calviac 115.73 319 *e*PKP1 PKPdf 13 07 57.6 +0.7
MSU Marysvale 116.14 48 *e*PKIKP PKPdf 13 08 00.9 +3.2
MFF Saint Martin d 116.43 322 *e*PKP1 PKPdf 13 07 59.3 +1.0
comp=Z,12nm,0.7s
PDAR Pinedale Array 116.52 43 PKP PKPdf 13 08 00.1 +1.7
comp=Z,0.9nm,0.8s,baz=167,slow=1.0,SNR=9.5
PDAR PKKPbc PKKPbc 13 18 26.9 +0.8
comp=Z,0.5nm,0.8s,baz=123,slow=5.5,SNR=4.3
SRU San Rafael 117.16 47 *e*PKIKP PKPdf 13 08 00.9 +1.2
WUAZ Wupatki 117.68 51 PKPdf PKPdf 13 08 02.0 +1.3
ETSF Etsaut 118.29 318 *e*PKP1 PKPdf 13 08 02.9 +1.0
comp=Z,8.1nm,0.8s
PV10 Paradox Valley 118.50 47 *e*PKPdf PKPdf 13 08 04.4 +2.1
RWWY Rawlins 118.54 43 *e*PKPdf PKPdf 13 08 01.9 -0.4
SJPF Ste Jean 118.64 319 *e*PKP1 PKPdf 13 08 03.4 +0.9
PV01 Paradox Valley 118.94 47 *e*PDiff PKPdf 13 08 05.2 +2.1
TUC Tucson 119.08 54 *e*PKIKP PKPdf 13 08 06.0 +2.6
RSSD Black Hills 119.58 40 *e*PKIKP PKPdf 13 08 04.7 +0.4
ISCO Idaho Springs 120.42 45 *e*PKIKP PKPdf 13 08 07.7 +1.7
ULM Lac du Bonnet 120.89 30 PKP PKPdf 13 08 07.2 +0.4
comp=Z,3.8nm,0.8s,baz=253,slow=4.6,SNR=4.6
LAZ Ladron 121.33 51 *e*PKPdf PKPdf 13 08 10.5 +2.8
ANMO Albuquerque 121.66 50 *e*PKIKP PKPdf 13 08 10.1 +1.8
LPM Los Pinos Moun 121.75 51 *e*PKPdf PKPdf 13 08 10.6 +2.1
ESDC Sonseca Array 121.99 316 PKP PKPdf 13 08 08.6 -0.3
comp=Z,0.4nm,0.4s,baz=16,slow=4.3,SNR=4.5
MNTX Cornudas Mount 123.64 53 *e*PKPdf PKPdf 13 08 14.0 +1.9
TORD Torodi Ar. Bea 124.31 284 PKP PKPdf 13 08 14.6 +1.1
comp=Z,6.0nm,0.8s,baz=55,slow=2.0,SNR=33
TORD PKKPbc 13 18 00.8
comp=Z,8.9nm,0.9s,baz=287,slow=3.1,SNR=30
TORD Torodi Ar. Bea 124.31 284 PKP PKPdf 13 08 14.6 +1.1
TORD PKKPbc 13 18 00.8
SCHQ Schefferville 127.11 9 PKP PKPdf 13 08 19.7 +1.0
comp=Z,6.9nm,0.9s,baz=330,slow=1.8,SNR=9.9
SCHQ Schefferville 127.11 9 *e*PKPdf PKPdf 13 08 19.1 +0.3
WMOK Wichita Mounta 127.52 47 *e*PKIKP PKPdf 13 08 19.7 +0.1
JCT Junction City 128.53 53 PKIKP PKPdf 13 08 23.4 +1.9
CCM Cathedral Cave 130.97 40 *e*PKIKP PKPdf 13 08 26.9 +0.8
DBIC Dimbokro 131.19 276 PKP PKPdf 13 08 29.3 +2.8
comp=Z,4.4nm,0.9s,baz=91,slow=5.8,SNR=5.3
DBIC Dimbokro 131.19 276 PKIKP PKPdf 13 08 29.3 +2.8
DBIC pmax pmax
comp=Z,4.0nm,0.9s
MIAR Mount Ida 131.36 45 *e*PKIKP PKPdf 13 08 29.3 +2.4
LIC Lamto 131.38 276 *e*PKIKP PKPdf 13 08 28.9 +2.0
comp=Z,15nm,0.9s
PLCA Paso Flores 133.96 162 PKP PKPdf 13 08 34.5 +2.7
comp=Z,7.6nm,0.9s,baz=177,slow=5.1,SNR=11
PLCA Paso Flores 133.96 162 *e*PKPdf PKPdf 13 08 34.2 +2.5
WVT Waverly 134.31 39 *e*PKIKP PKPdf 13 08 33.0 +0.6
PLAL Pickwick Lake 134.85 41 *e*PKPdf PKPdf 13 08 35.2 +1.8
MYNC Murphy 137.29 38 PKIKP PKPdf 13 08 39.0 +1.0
TLL Tololo Astrono 143.31 155*i* *e*P PKPdf 13 08 46.2 -2.6
BBSR BB Station 148.89 18 *e*PKPbc PKPbc 13 09 03.6 +1.4
LVC Limon Verde 150.64 150 *e*PKPdf PKPdf 13 09 04.5 +3.4
LVC *e*PKPbc PKPbc 13 09 10.1 +3.5
CPUP Villa Florida 150.76 173 PKP PKPdf 13 09 03.5 +2.2
comp=Z,36nm,1.1s,baz=144,slow=1.8,SNR=12
CPUP PKPbc PKPbc 13 09 09.2 +2.4
comp=Z,69nm,0.8s,baz=166,slow=1.2,SNR=64
CPUP Villa Florida 150.76 173 *e*PKPdf PKPdf 13 09 03.8 +2.6
CPUP *e*PKPbc PKPbc 13 09 08.3 +1.5
NNA Nana 152.67 123 *e*PKPdf PKPdf 13 09 05.2 +1.0
NNA PKPbc PKPbc 13 09 12.5 +1.3
ARE Arequipa 153.97 138 *e*PKIKP PKPdf 13 09 17.0 +11
LPAZ La Paz 156.22 144 PKP PKPdf 13 09 12.3 +3.2
comp=Z,11nm,0.9s,baz=237,slow=0.4,SNR=35
LPAZ PKPab PKPab 13 09 40.2 +3.3
comp=Z,24nm,0.9s,baz=228,slow=2.9,SNR=6.8
LPAZ La Paz 156.22 144 PKP2 PKPab 13 09 40.3 +3.3
LPAZ pmax pmax
comp=Z,25nm,0.9s
LPAZ La Paz 156.22 144 *e*PKPdf PKPdf 13 09 12.1 +3.0
LPAZ *e* 13 09 22.2
LPAZ *e*PKPab PKPab 13 09 40.4 +3.4
ROSC El Rosal 159.33 84 PKP PKPdf 13 09 15.8 +2.8
comp=Z,1.5nm,0.3s,baz=95,slow=24,SNR=5.0
ROSC PKPab PKPab 13 09 54.2 +3.8
comp=Z,18nm,0.7s,baz=101,slow=7.6,SNR=11
BDFB Brasilia 160.77 197 PKP PKPdf 13 09 16.6 +2.1
comp=Z,9.1nm,1.0s,baz=172,slow=2.9,SNR=5.1
BDFB PKPab PKPab 13 09 57.0 +0.3
comp=Z,5.2nm,0.7s,baz=334,slow=3.2,SNR=3.5
SDV Santo Domingo 162.14 70 *e*PKPdf PKPdf 13 09 18.2 +2.2
SAML Samuel 164.93 141 *e*PKPdf PKPdf 13 09 20.9 +2.3
SAML *e*PKPab PKPab 13 10 15.9 +0.9
SAML *e* 13 10 24.8

PGC 21 12:49:17.8, 4885N×12919W, h10km, MLSn3.0/1, Mw3.6, 241km southwest of Tofino, Bc West of Vancouver Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.60**	**35**	Pn	Pn	12 49 44.0	-2.2
BPBC				Sn	Sn	12 50 02.9	-4.0
	comp=Z,126nm,0.3s						
BPBC				Trac		12 50 03.6	
	comp=Z,126nm,0.3s						
EDB	**Eliza Dome**	**1.70**	**52**	Pn	Pn	12 49 45.3	-2.2
EDB				Sn	Sn	12 50 04.7	-4.6
EDB				Trac		12 50 06.0	
	comp=Z,11nm,0.2s						
ETB	**Estevan Point**	**1.82**	**72**	Pn	Pn	12 49 47.5	-1.7
HOLB	**Holberg**	**1.92**	**21**	Pn	Pn	12 49 48.8	-1.8
HOLB				Sn	Sn	12 50 10.8	-4.0
HOLB				Trac		12 50 14.8	
	comp=Z,24nm,0.2s						
MAYB	**Maynard**	**2.03**	**39**	Pn	Pn	12 49 50.2	-1.9
MAYB				Trac		12 50 14.7	
	comp=Z,13nm,0.3s						
WOSB	**Woss**	**2.15**	**52**	Pn	Pn	12 49 52.5	-1.3
WOSB				Sn	Sn	12 50 17.5	-3.0
	comp=Z,24nm,0.3s						
WOSB				Trac		12 50 20.2	
	comp=Z,24nm,0.3s						
PHC	**Port Hardy**	**2.18**	**31**	Pn	Pn	12 49 52.7	-1.5
PHC				Sn	Sn	12 50 17.0	-4.2
PHC				Trac		12 50 18.6	
	comp=Z,8.0nm,0.2s						
GDR	**Gold River**	**2.27**	**65**	Pn	Pn	12 49 53.5	-1.8
GDR				Sn	Sn	12 50 19.7	-3.6
	comp=Z,4.0nm,0.3s						
GDR				Trac		12 50 21.8	
	comp=Z,4.0nm,0.3s						
OZB	**Mount Ozzard**	**2.44**	**86**	Pn	Pn	12 49 55.4	-2.3
OZB				Sn	Sn	12 50 23.1	-4.5
OZB				Trac		12 50 25.3	
	comp=Z,11nm,0.2s						
BTB	**Buttle Lake**	**2.49**	**74**	Pn	Pn	12 49 57.0	-1.4
BTB				Sn	Sn	12 50 25.9	-2.8
	comp=Z,32nm,0.3s						
BTB				Trac		12 50 28.0	
	comp=Z,32nm,0.3s						
NCRB	**Newcastle Ridg**	**2.56**	**51**	Pn	Pn	12 49 58.7	-0.7
NCRB				Sn	Sn	12 50 28.5	-2.1
	comp=Z,32nm,0.4s						
NCRB				Trac		12 50 30.2	
	comp=Z,32nm,0.4s						
CBB	**Campbell River**	**2.76**	**63**	Pn	Pn	12 50 01.1	-1.0
CBB				Sn	Sn	12 50 32.8	-2.8
CBB				Trac		12 50 35.6	
	comp=Z,5.0nm,0.2s						
ALB	**Alberni**	**2.90**	**80**	Pn	Pn	12 50 02.6	-1.5
MGB	**Mount Grey**	**2.97**	**85**	Pn	Pn	12 50 02.9	-2.1
MGB				Sn	Sn	12 50 36.3	-4.4
MGB				Trac		12 50 38.4	
	comp=Z,4.0nm,0.2s						
PFB	**Port Renfrew**	**3.16**	**93**	Trac		12 50 44.8	
	comp=Z,2.0nm,0.2s						
TXB	**Texada**	**3.23**	**73**	Pn	Pn	12 50 07.7	-0.8
TXB				Sn	Sn	12 50 45.7	-1.3
	comp=Z,5.0nm,0.3s						
TXB				Trac		12 50 46.1	
	comp=Z,5.0nm,0.3s						
BBB	**Bella Bella**	**3.41**	**11**	Pn	Pn	12 50 10.2	-0.8
BBB				Sn	Sn	12 50 46.8	-4.7
BBB				Trac		12 50 50.4	
	comp=Z,10.0nm,0.2s						
NLLB	**Nanaimo Lost L**	**3.44**	**82**	Pn	Pn	12 50 10.7	-0.8
NLLB				Sn	Sn	12 50 50.1	-2.3
NLLB				Trac		12 50 52.1	
	comp=Z,4.0nm,0.3s						
LZB	**Mount Lazard**	**3.56**	**92**	Trac		12 50 55.1	
LZB	**Mount Lazard**	**3.56**	**92**	Pn	Pn	12 50 11.4	-1.7
LZB				Sn	Sn	12 50 50.6	-4.7
SHB	**Sechelt**	**3.56**	**76**	Pn	Pn	12 50 12.8	-0.4
SHB				Sn	Sn	12 50 52.8	-2.6
SHB				Trac		12 50 56.9	
	comp=Z,3.0nm,0.2s						
GOBB	**Galiano Island**	**3.75**	**86**	Pn	Pn	12 50 16.0	+0.3
BIB	**Bowen Island**	**3.90**	**80**	Pn	Pn	12 50 17.2	-0.7
BIB				Sn	Sn	12 51 02.0	-1.8
	comp=Z,2.0nm,0.3s						
BIB				Trac		12 51 04.7	
	comp=Z,2.0nm,0.3s						
WPB	**Watts Point**	**4.00**	**76**	Pn	Pn	12 50 18.9	-0.2
WSLR	**Whistler**	**4.28**	**70**	Pn	Pn	12 50 23.4	+0.3
HNB	**Haney**	**4.37**	**82**	Pn	Pn	12 50 22.6	-1.6
VDB	**Vedder Mountai**	**4.67**	**85**	Pn	Pn	12 50 28.3	-0.1
LLLB	**Lillooet**	**5.06**	**67**	Pn	Pn	12 50 34.1	+0.4
PNT	**Penticton**	**6.31**	**82**	Pn	Pn	12 50 49.9	-1.0
FSB	**Fort Saint Jam**	**6.39**	**26**	Pn	Pn	12 50 53.1	+1.1

*IDC **21** 13:05:21.7±0.8, 332S×12536E, h0km, mb4.1/7, mb1 4.4/8, mb1mx4.2/16, mbtmp4.2/8, ML4.6/1, Error ellipse: s-maj=67.0km s-min=16.6km az=71.0*
*ISCJB **21** 13:05:24.8±0.4, 322S±008×1258E±0.1, h33km, mb4.5/21, Error ellipse: s-maj=23.7km s-min=6.4km az=127.0*
*NEIC **21** 13:05:26.1±3.3, 323S×12564E, h27km±24km, mb4.5/9, Error ellipse: s-maj=23.8km s-min=7.1km az=60.0*
*BJI **21** 13:05:32.1, 320S×12560E, h26km, mb4.8*

ISC 21 13:05:24.5±3.2, 320S±008×1257E±01, h14km±20km, n34, σ1§28/33, mb4.5/21, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.56**	**145**	*eP*	**Pn**	**13 08 11.1**	**+2.1**
	19nm,0.6s						
KKM	**Kota Kinabalu**	**13.21**	**314**	P	**Pn**	**13 08 29.8**	**-1.7**
FITZ	**Fitzroy Crossi**	**14.81**	**180**	Pn	**Pn**	**13 08 54.1**	**+0.7**
	0.1nm,0.3s,baz=13,slow=15,SNR=4.2						
WRAB	**Tennant Creek**	**18.64**	**154**	*eP*	**Pn**	**13 09 41.5**	**-0.5**
	11nm,0.5s						
WRA	**Warramunga Arr**	**18.65**	**154**	P	**Pn**	**13 09 41.5**	**-0.6**
	2.0nm,0.3s,baz=334,slow=11,SNR=172						
WB2	**Warramunga Arr**	**18.65**	**154**	*eP*	**Pn**	**13 09 41.2**	**-1.0**
WB2				*eS*	**Sn**	**13 13 11.1**	**+0.6**
AS31	**Alice Springs**	**21.83**	**159**	*eP*	**P**	**13 10 16.7**	**+0.3**
AS31				*eS*	**S**	**13 14 17.7**	**+0.4**
ASAR	**Alice Springs**	**21.83**	**159**	P	**P**	**13 10 16.7**	**+0.3**
	19nm,0.7s,mb4.7,baz=343,slow=12,SNR=245						
ASAR				PcP	PcP	13 14 15.8	-0.2
	0.8nm,0.4s,baz=349,slow=2.0,SNR=7.5						
FORT	**Forrest**	**27.52**	**176**	*eP*	**P**	**13 11 11.2**	**+0.6**
	24nm,0.5s,mb5.1						
STKA	**Stephens Creek**	**32.20**	**154**	P	**P**	**13 11 50.7**	**-1.3**
	2.0nm,0.4s,mb4.3,baz=324,slow=8.5,SNR=12						
STKA	**Stephens Creek**	**32.20**	**154**	*eP*	**P**	**13 11 50.6**	**-1.4**
	2.7nm,0.6s,mb4.2						
MJAR	**Matsushiro Arr**	**41.22**	**15**	P	**P**	**13 13 09.8**	**+1.1**
	1.6nm,0.8s,mb3.7,baz=186,slow=9.8,SNR=4.1						
MJAR	**Matsushiro Arr**	**41.22**	**15**	P	**P**	**13 13 09.8**	**+1.1**
LZH	**Lanzhou**	**44.11**	**334**	*eP*	**P**	**13 13 41.0**	**+8.8**
LZH				AP	pP	13 13 46.3	+10
LZH				XP	sP	13 13 49.4	+11
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.7						
GTA	**Gaotai**	**48.64**	**333**	*eP*	**P**	**13 14 16.3**	**+8.4**
GTA				AP	pP	13 14 21.8	+9.4
GTA				XP	sP	13 14 25.8	+12
GTA				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.3						
JIRN	**Jiri**	**48.89**	**311**	*eP*	**P**	**13 14 11.0**	**+1.2**
	comp=Z,13nm,0.6s,mb5.1						
GUN	**Gumba**	**49.26**	**312**	*eP*	**P**	**13 14 13.8**	**+1.2**
	comp=Z,19nm,0.5s,mb5.4						
KKN	**Kakani**	**49.64**	**311**	*eP*	**P**	**13 14 16.4**	**+0.9**
	comp=Z,9.6nm,0.7s,mb5.0						
DMN	**Daman**	**49.68**	**311**	*eP*	**P**	**13 14 16.9**	**+1.1**
	comp=Z,18nm,0.8s,mb5.2						
GKN	**Gorkha**	**50.24**	**311**	*eP*	**P**	**13 14 20.8**	**+0.7**
	comp=Z,15nm,0.6s,mb5.2						
KOLN	**Koldanda**	**50.91**	**310**	*eP*	**P**	**13 14 26.1**	**+1.0**
	comp=Z,20nm,0.7s,mb5.2						
ULN	**Ulaanbaatar**	**53.42**	**344**	*eP*	**P**	**13 14 45.4**	**+1.6**
	comp=Z,5.3nm,1.0s,mb4.4						
SONM	**Songino Array**	**53.57**	**344**	P	**P**	**13 14 45.7**	**+0.8**
	comp=Z,0.7nm,0.6s,mb3.7,baz=142,slow=10,SNR=2.5						
CASY	**Casey**	**63.86**	**187**	*eP*	**P**	**13 15 54.5**	**-2.0**
	comp=Z,1.2nm,0.6s,mb4.1						
ZAL	**Zalesovo**	**66.33**	**335**	P	**P**	**13 16 11.5**	**-1.1**
	comp=Z,1.3nm,0.3s,mb4.4,baz=18,slow=14,SNR=2.7						
WSAR	**Wadi Sarin**	**70.38**	**296**	P	**P**	**13 16 39.5**	**+1.6**
	comp=Z,3.4nm,0.6s,mb4.4,baz=99,slow=4.2,SNR=4.7						
BVAR	**Borovoye Array**	**72.61**	**329**	P	**P**	**13 16 49.8**	**-1.5**
	comp=Z,2.0nm,0.8s,mb4.1,baz=133,slow=8.3,SNR=9.7						
BRVK	**Borovoye**	**72.68**	**329**	*eP*	**P**	**13 16 49.3**	**-2.5**
CHKZ	**Chkalovo**	**72.83**	**329**	*eP*	**P**	**13 16 50.3**	**-2.3**
	comp=Z,2.1nm,0.8s,mb4.1						
ZRNK	**Zerenda**	**73.30**	**328**	*eP*	**P**	**13 16 53.5**	**-1.9**
	comp=Z,3.5nm,0.8s,mb4.3						
VNDA	**Vanda**	**76.73**	**172**	P	**P**	**13 17 13.9**	**-1.4**
	comp=Z,1.0nm,0.7s,mb3.8,baz=308,slow=6.9,SNR=9.8						
CPUP	**Villa Florida**	**150.50**	**174**	PKPbc	PKPbc	13 25 16.6	+0.9
	comp=Z,3.2nm,0.7s,baz=339,slow=0.9,SNR=8.2						
LVC	**Limon Verde**	**150.64**	**152**	*e*PKPbc	PKPbc	13 25 17.9	+1.9
LPAZ	**La Paz**	**156.29**	**145**	PKPab	PKPab	13 25 48.9	+2.2
	comp=Z,1.6nm,0.7s,baz=212,slow=6.6,SNR=6.0						

*NEIC **21** 13:13:30.6, 2485S×6943W, h74km, MG3.4(GUC), After GUC.*

GUC 21 13:13:30.6±0.6, 2485S×6943W, h74km±21km, MD3.9, ML3.4, 3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**0.92**	**284**	*i iP*	Pn	13 13 49.5	+1.2
CPN1				*i* S	Sn	13 14 03.3	+1.9
CPN1				AML	AML	13 14 08.1	
	comp=E,1μm,0.5s						
ANCH	**Antofagasta**	**1.47**	**322**	*eP*	Pn	13 13 55.9	+0.6
ANCH				*i* S	Sn	13 14 14.8	+1.0
ANCH				AML	AML	13 14 19.6	
	comp=N,928nm,0.5s						
ANCH	**Antofagasta**	**1.47**	**322**	*eP*	Pn	13 13 55.9	+0.6
ANCH				*i* S	Sn	13 14 14.8	+1.0
CEN1	**Los Morros**	**1.61**	**334**	*i iP*	Pn	13 13 56.4	-0.8
CEN1				*i* S	Sn	13 14 15.9	-1.4
CEN1				AML	AML	13 14 18.4	
	comp=E,404nm,0.5s						
LVC	**Limon Verde**	**2.28**	**12**	*e*Pn	Pn	13 14 05.8	-0.3
CDCH	**Caldera**	**2.55**	**209**	*i eP*	Pn	13 14 10.0	+0.3
CDCH				*i* S	Sn	13 14 41.2	+1.5
CDCH				AML	AML	13 14 49.5	
	comp=E,282nm,0.4s						
CDCH	**Caldera**	**2.55**	**209**	P	Pn	13 14 10.0	+0.3
CDCH				*i* S	Sn	13 14 41.2	+1.5
CPCH	**Copiapo**	**2.63**	**198**	*eP*	Pn	13 14 11.8	+0.9
CPCH				*i* S	Sn	13 14 44.6	+2.9

*PRE **21** 13:21:45.6±0.8, 2162S×3364E, h5km, ML5.0*
*IDC **21** 13:21:49.6±1.2, 2149S×3325E, h0km, mb4.0/4, mb1 4.4/10, mb1mx4.0/28, mbtmp4.3/10, ML3.8/6, MS3.4/2, Ms1 3.3/2, ms1mx3.1/26, Error ellipse: s-maj=23.7km s-min=18.8km az=173.0*
*ISCJB **21** 13:21:51.6±2.2, 2169S±005×3319E±007, h29km±17km, mb4.0/4, Error ellipse: s-maj=11.5km s-min=7.5km az=71.2*
*NEIC **21** 13:21:51.3±0.9, 2150S×3322E, h10km, Error ellipse: s-maj=19.3km s-min=13.8km az=117.0*

ISC 21 13:21:52.6±2.3, 2159S±005×3318E±006, h17km±15km, n31, σ1§15/48, mb4.0/4, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.03**	**255**	*eP*	**Pn**	**13 22 40.4**	**+0.7**
MSNA				*eS*	**Sn**	**13 23 21.2**	**+5.7**
MSNA				AML	AML	13 23 37.9	
	comp=Z,962nm,0.9s						
MATP	**Matopo**	**4.52**	**284**	Pn	**Pn**	**13 23 01.2**	**+0.9**
	comp=Z,6.5nm,0.3s,baz=103,slow=14,SNR=83						
MATP				Sn	**Sn**	**13 23 53.2**	**+0.8**
	comp=Z,25nm,0.3s,baz=200,slow=22,SNR=16						
MATP				Lg		13 24 12.2	
	comp=Z,51nm,0.3s,baz=10,slow=23,SNR=12						
POGA	**Pongola**	**5.93**	**194**	*eP*	**Pn**	**13 23 15.7**	**-3.9**
POGA				*eS*	**Sn**	**13 24 20.8**	**-6.4**
POGA				AML	AML	13 25 06.7	
	comp=Z,282nm,0.6s						
SLR	**Silverton**	**6.10**	**226**	*eP*	**Pn**	**13 23 21.8**	**-0.1**
SL

LBTB				*e*Sn		**Sn**	**13 25 14.3**	**+2.2**
LBTB				Lg			13 25 53.6	
LBTB				*e*Sg		Sn	13 25 56.5	+44
LSZ	**Lusaka**	**7.86**	**322**	Pn		**Pn**	**13 23 43.9**	**-2.2**
comp=Z,4.8nm,0.3s,baz=147,slow=12,SNR=42								
LSZ				Sn		**Sn**	**13 25 07.0**	**-7.7**
comp=Z,6.2nm,0.3s,baz=55,slow=22,SNR=12								
LSZ				Lg			13 25 52.8	
comp=Z,20nm,0.3s,baz=49,slow=20,SNR=15								
LSZ				LR		LR	13 26 21.0	
comp=Z,127nm,19.6s,baz=314,slow=35								
LSZ	**Lusaka**	**7.86**	**322**	*e*Pn		**Pn**	**13 23 43.0**	**-3.1**
LSZ				*e*Sn		**Sn**	**13 25 07.0**	**-7.7**
LSZ				*e*Sg		Sn	13 25 49.5	+35
LSZ				Lg			13 25 52.8	
LSZ				LR		LR	13 26 21.0	
SWZ	**Schweizer**	**9.06**	**231**	*e*P		**Pn**	**13 24 02.6**	**+0.1**
SWZ				*e*S		**Sn**	**13 25 42.8**	**-1.4**
SWZ				AML		AML	13 26 54.0	
comp=Z,109nm,0.7s								
BOSA	**Boshof**	**10.02**	**224**	*e*P		**Pn**	**13 24 15.0**	**-0.7**
BOSA				*e*S		**Sn**	**13 26 04.8**	**-2.9**
BOSA				AML		AML	13 27 21.8	
comp=Z,112nm,0.7s								
BOSA	**Boshof**	**10.02**	**224**	Pn		**Pn**	**13 24 16.4**	**+0.7**
comp=Z,2.3nm,0.3s,baz=52,slow=13,SNR=23								
BOSA				Sn		**Sn**	**13 26 06.4**	**-1.4**
comp=Z,3.9nm,0.3s,baz=337,slow=14,SNR=11								
BOSA				Lg			13 27 05.5	
comp=Z,6.0nm,0.3s,baz=321,slow=21,SNR=5.3								
BOSA				LR		LR	13 28 32.5	
comp=Z,411nm,20.7s,baz=57,slow=40								
BOSA	**Boshof**	**10.02**	**224**	Pn		**Pn**	**13 24 16.4**	**+0.7**
BOSA				Sn		**Sn**	**13 26 06.4**	**-1.4**
BOSA				Lg			13 27 05.5	
BOSA				LR		LR	13 28 32.5	
OPO	**Ambohidratompo**	**13.50**	**80**	Pn		**Pn**	**13 24 57.5**	**-5.7**
comp=Z,0.3nm,0.3s,baz=254,slow=15,SNR=3.4								
OPO				Sn		**Sn**	**13 27 16.0**	**-17**
comp=Z,0.9nm,0.3s,baz=342,slow=20,SNR=5.0								
TSUM	**Tsumeb**	**14.81**	**276**	Pn		**Pn**	**13 25 19.7**	**-1.5**
comp=Z,0.6nm,0.3s,baz=107,slow=12,SNR=15								
TSUM				Sn		**Sn**	**13 27 59.9**	**-5.1**
comp=Z,0.2nm,0.3s,baz=102,slow=22,SNR=4.4								
TSUM				Lg			13 29 35.7	
comp=Z,0.7nm,0.3s,baz=228,slow=7.9,SNR=5.0								
TSUM	**Tsumeb**	**14.81**	**276**	*e*Pn		**Pn**	**13 25 19.0**	**-2.2**
TSUM				*e*Sn		**Sn**	**13 28 00.9**	**-4.1**
TSUM				Lg			13 29 35.7	
SUR	**Sutherland**	**15.38**	**223**	*e*P		**Pn**	**13 25 29.7**	**+1.0**
SUR				*e*S		**Sn**	**13 28 12.9**	**-5.9**
SUR	**Sutherland**	**15.38**	**223**	Pn		**Pn**	**13 25 30.0**	**+1.3**
comp=Z,1.5nm,0.3s,baz=56,slow=16,SNR=13								
SUR				Sn		**Sn**	**13 28 14.7**	**-4.0**
comp=Z,1.1nm,0.3s,baz=344,slow=10,SNR=4.3								
SUR				Lg			13 30 02.0	
comp=Z,2.3nm,0.3s,baz=69,slow=19,SNR=5.6								
SUR	**Sutherland**	**15.38**	**223**	*e*Pn		**Pn**	**13 25 28.1**	**-0.7**
SUR				Sn		**Sn**	**13 28 14.7**	**-4.0**
SUR				Lg			13 30 02.0	
TORD	**Torodi Ar. Bea**	**46.33**	**315**	P		**P**	**13 30 17.9**	**+0.3**
comp=Z,3.8nm,0.9s,mb4.3,baz=126,slow=5.9,SNR=12								
SNAA	**Sanae**	**54.19**	**193**	*e*		**P**	**13 31 17.8**	**+0.8**
SNAA				*e*			13 31 24.8	
VNA1	**Neumayer--Stat**	**54.73**	**196**	*e*		**P**	**13 31 22.4**	**+1.4**
VNA1				*e*		pP	13 31 25.6	-0.8
VNA1				*e*		pP	13 31 28.9	+2.5
VNA3	**Neumayer Olymp**	**55.47**	**195**	*e*		**P**	**13 31 27.0**	**+0.7**
VNA3				*e*			13 31 29.9	
VNA3				*e*			13 31 35.3	
BRTR	**Keskin Array B**	**60.99**	**0**	P		**P**	**13 32 03.6**	**-1.4**
comp=Z,0.4nm,0.6s,mb3.7,baz=189,slow=8.2,SNR=3.3								
ESDC	**Sonseca Array**	**70.12**	**330**	P		**P**	**13 33 04.6**	**+0.6**
comp=Z,0.4nm,0.4s,mb3.7,baz=139,slow=6.1,SNR=3.4								
ASAR	**Alice Springs**	**90.73**	**116**	P		**P**	**13 34 54.2**	**-0.3**
comp=Z,1.8nm,1.0s,mb4.3,baz=247,slow=3.7,SNR=12								
PDAR	**Pinedale Array**	**142.46**	**313**	PKP		PKPdf	13 41 25.1	+0.7
comp=Z,0.5nm,0.8s,baz=96,slow=6.0,SNR=4.3								
HLID	**Hailey**	**145.32**	**317**	*e*PKP		PKPdf	13 41 30.7	+1.3
MSU	**Marysvale**	**145.85**	**307**	*e*PKP		PKPdf	13 41 32.6	+2.3

*SOF **21** 13:31:52.4, 40.10N×23.13E, h10km, MD2.8*
*NEIC **21** 13:32:44.8, 39.45N×22.86E, h22km, ML3.3(ATH), ML3.9(THE), After ATH.*
*ATH **21** 13:32:44.8, 39.45N×22.86E, h22km±1km, MD3.5/9, ML3.3*
*ISCJB **21** 13:32:45.6±0.4, 39.45N±0.002×22.88E±0.004, h18km±5km, Error ellipse: s-maj=4.8km s-min=3.2km az=171.9*
*CSEM **21** 13:32:45.7±0.1, 39.47N×22.86E, h20km, ML3.4, Error ellipse: s-maj=3.2km s-min=1.7km az=84.0*
*THE **21** 13:32:45.5, 39.49N×22.87E, h2km, ML3.4*
*SKO **21** 13:32:47.0, 39.73N×23.18E, h4km*

ISC 21 13:32:45.2±0.4, 3948N±002×2288E±004, h15km±3km, n36, σ1§06/49, 4C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XOR	**Xorichti**	**0.27**	**115**	*e*Pg	**Pg**	**13 32 51.0**	**0.0**
NEO	**Neokhori**	**0.32**	**123**	*e*PB	**Pg**	**13 32 51.7**	**-0.2**
NEO				*e*SB	**Sg**	**13 32 56.9**	**+0.5**
AGG	**Agios Georgios**	**0.62**	**223**	*e*Pg	**Pg**	**13 32 56.3**	**-1.1**
AGG				*e*Sg	**Sg**	**13 33 06.6**	**+0.8**
LIT	**Litokhoron**	**0.69**	**334**	*e*Pg	**Pg**	**13 32 57.9**	**-0.8**
LIT				*e*Sg	**Sg**	**13 33 08.8**	**+1.1**
PAIG	**Paliouri**	**0.76**	**54**	*e*Pg	**Pg**	**13 33 00.8**	**+0.7**
PAIG				*e*Sg	**Sg**	**13 33 10.5**	**+0.4**
LKR	**Lokris**	**0.84**	**173**	*e*PN	**Pn**	**13 33 00.6**	**-1.9**
LKR				*e*SN	**Sn**	**13 33 12.3**	**-2.3**
AOS	**Alonnisos**	**0.84**	**111**	*e*Pg	**Pg**	**13 33 01.9**	**+0.3**
AOS				*e*Sg	**Sg**	**13 33 13.3**	**+0.8**
PLG	**Polygyros**	**0.99**	**26**	↑*i*PN	**Pn**	**13 33 04.3**	**-0.4**
PLG				*e*SN	**Sn**	**13 33 18.5**	**+0.1**
EVR	**Evrytania**	**1.00**	**236**	*e*PN	**Pn**	**13 33 03.5**	**-1.3**
HORT	**Hortiatis**	**1.13**	**9**	*e*Pg	**Pg**	**13 33 06.4**	**-0.6**
HORT				*e*Sg	**Sg**	**13 33 22.0**	**+0.3**
THE	**Thessaloniki**	**1.15**	**3**	*e*Pg	**Pg**	**13 33 06.2**	**-1.2**
comp=Z,6.0nm,0.5s							
THE				*e*Sg	**Sg**	**13 33 24.2**	**+1.7**
KZN	**Kozani**	**1.18**	**314**	*e*PN	**Pn**	**13 33 07.2**	**-0.1**
KZN				*e*SN	**Sn**	**13 33 24.2**	**+1.0**
OUR	**Ouranopolis**	**1.20**	**45**	*e*Pg	**Pg**	**13 33 07.9**	**-0.5**
SOH	**Sokhos**	**1.39**	**15**	*e*Pg	**Pg**	**13 33 10.8**	**-1.1**
SOH				*e*Sg	**Sg**	**13 33 30.0**	**0.0**
GRG	**Griva**	**1.52**	**346**	*e*Pg	**Pg**	**13 33 12.7**	**-1.7**
GRG				*e*Sg	**Sg**	**13 33 33.8**	**-0.3**
JAN	**Janina**	**1.57**	**277**	*e*PN	**Pn**	**13 33 14.1**	**+1.4**
PTL	**Penteli**	**1.63**	**151**	*e*PN	**Pn**	**13 33 13.5**	**+0.1**
ATH	**Athens Observa**	**1.65**	**156**	*e*PN	**Pn**	**13 33 13.6**	**0.0**
KNT	**Kendrikon**	**1.68**	**1**	*e*Pb	**Pb**	**13 33 15.0**	**-0.9**
comp=Z,16nm,0.3s							
FNA	**Florina**	**1.74**	**319**	*e*Pb	**Pb**	**13 33 16.0**	**-0.8**
comp=Z,5.3nm,0.5s							
NAIG	**Nisos Aigina**	**1.79**	**164**	*e*PN	**Pn**	**13 33 15.7**	**+0.1**
KVR	**Kavouri**	**1.79**	**157**	*e*PN	**Pn**	**13 33 16.0**	**+0.3**
RLS	**Riolos of Patr**	**1.80**	**218**	*e*PN	**Pn**	**13 33 17.3**	**+1.5**
VAY	**Valandovo**	**1.85**	**353**	*e*Pn	**Pn**	**13 33 16.9**	**+0.5**
VAY				*e*Sn	**Sn**	**13 33 38.4**	**-1.2**
NVR	**Nevrokopi**	**2.01**	**22**	*e*PB	**Pb**	**13 33 19.3**	**-2.2**
MMB	**Musomiste**	**2.20**	**17**	*i* P	**Pn**	**13 33 21.3**	**0.0**
VLS	**Valsamata**	**2.21**	**235**	*e*PN	**Pn**	**13 33 23.1**	**+1.7**
OHR	**Ohrid**	**2.27**	**316**	*e*Pn	**Pn**	**13 33 25.6**	**+3.3**
KKB	**Krupnik**	**2.39**	**4**	*i* P	**Pn**	**13 33 24.9**	**+1.0**
RZN	**Rozhen**	**2.61**	**32**	*i* P	**Pn**	**13 33 28.0**	**+1.1**
VLI	**Veliai**	**2.76**	**179**	*e*PN	**Pn**	**13 33 29.0**	**0.0**
VTS	**Vitosha**	**3.12**	**5**	*i* P	**Pn**	**13 33 33.1**	**-0.8**
VOIR		**6.16**	**14**	↑*i*P	**Pn**	**13 34 20.1**	**+4.3**
MLR	**Muntele Rosu**	**6.42**	**20**	↑*i*P	**Pn**	**13 34 21.9**	**+2.6**
PLOR	**Plostina**	**6.95**	**22**	↓*i*P	**Pn**	**13 34 30.4**	**+3.9**
VRI	**Vrincioaia**	**6.98**	**23**	↑*i*P	**Pn**	**13 34 31.9**	**+4.9**

*MDD **21** 13:37:36.9±2.1, 39.26N×12.41W, h101km±80km, mb2.9/8, Error ellipse: s-maj=30.8km s-min=12.7km az=88.0, PRXIMO*
*NEIC **21** 13:37:37.8, 39.40N×12.02W, h0km, MN2.8(MDD), After MDD.*
*ISCJB **21** 13:37:37.5±1.2, 39.37N±0.004×11.88W±0.009, h10km, Error ellipse: s-maj=10.1km s-min=5.9km az=149.0*
*IGIL **21** 13:37:37.6, 39.41N×12.00W, h11km, ML2.5*
*INMG **21** 13:37:38.6±1.3, 39.06N×12.65W, h10km, ML2.3, Error ellipse: s-maj=11.3km s-min=10.0km az=64.0*
*CSEM **21** 13:37:40.8±0.8, 39.52N×11.74W, h30km, ML2.3, Error ellipse: s-maj=16.2km s-min=7.6km az=77.0*

ISC 21 13:37:38.4±1.1, 3938N±005×1197W±008, h10km, n35, σ1§40/63, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	**2.13**	**101**	*e*Pn	**Pn**	**13 38 15.2**	**+1.2**
PMAFR				*e*Sn	**Sn**	**13 38 42.8**	**+2.3**
PLOU	**Loures**	**2.24**	**102**	*e*Pn	**Pn**	**13 38 17.0**	**+1.4**
PLOU				*e*Sn	**Sn**	**13 38 45.8**	**+2.5**
PLOU							
23nm,0.2s							
PTOM	**Tomar**	**2.76**	**84**	*e*Pn	**Pn**	**13 38 24.5**	**+1.8**
PTOM				*e*Sn	**Sn**	**13 38 59.1**	**+3.0**
PTOM							
9.9nm,0.1s							
PTEO	**Sao Teotonio**	**3.13**	**125**	*e*Pn	**Pn**	**13 38 26.5**	**-1.4**
PTEO				*e*Sn	**Sn**	**13 39 01.8**	**-3.5**
PTEO							
9.4nm,0.1s							
MORF	**Marmelete**	**3.33**	**127**	*e*P	**Pn**	**13 38 28.4**	**-2.1**
MORF				*e*S	**Sn**	**13 39 05.6**	**-4.5**
MORF				*e*S	**Sn**	**13 39 05.6**	**-4.5**
MORF				AML	AML	13 39 09.2	
comp=N,14nm,0.0s							
MORF	**Marmelete**	**3.33**	**127**	*e*P	**Pn**	**13 38 28.4**	**-2.1**
MORF				*e*S	**Sn**	**13 39 05.6**	**-4.5**
PESTR	**Estremoz**	**3.44**	**97**	*e*Pn	**Pn**	**13 38 33.0**	**+0.9**
PESTR				*e*Sn	**Sn**	**13 39 14.2**	**+1.3**
PESTR							
comp=N,2.5nm,0.1s							
PBEJ	**Beja**	**3.48**	**112**	*e*Sn	**Sn**	**13 39 13.4**	**-0.4**
PCBR	**Castelo Branco**	**3.50**	**81**	*e*Pn	**Pn**	**13 38 34.1**	**+1.3**
PCBR				*e*Sn	**Sn**	**13 39 15.4**	**+1.1**
PCBR							
comp=N,2.5nm,0.1s							
PVRL	**Vila Real**	**3.76**	**58**	*e*Sn	**Sn**	**13 39 21.3**	**+0.6**
PCAB	**Cabril**	**3.80**	**51**	*e*Pn	**Pn**	**13 38 37.0**	**0.0**
PCAB				*e*Sn	**Sn**	**13 39 20.6**	**-1.1**
PCAB							
comp=N,8.5nm,0.1s							
ELOB	**Lobios**	**3.87**	**49**	P	**Pn**	**13 38 37.7**	**-0.3**
comp=N,0.7nm,0.0s,SNR=12							
ELOB				S	**Sn**	**13 39 21.6**	**-1.9**
comp=N,2.3nm,0.1s,SNR=5.7							
ELOB	**Lobios**	**3.87**	**49**	P	**Pn**	**13 38 37.7**	**-0.3**
ELOB				S	**Sn**	**13 39 21.3**	**-2.3**
ELOB	**Lobios**	**3.87**	**49**	P	**Pn**	**13 38 37.7**	**-0.3**
comp=N,0.7nm,0.0s,SNR=12							
ELOB				S	**Sn**	**13 39 21.3**	**-2.2**
comp=N,2.3nm,0.1s,SNR=5.7							
EBAD	**Badajoz**	**3.90**	**98**	P	**Pn**	**13 38 37.7**	**-0.7**
comp=N,0.6nm,0.0s,SNR=11							
EBAD				S	**Sn**	**13 39 24.1**	**-0.2**
comp=N,1.8nm,0.1s,SNR=5.0							
EBAD	**Badajoz**	**3.90**	**98**	P	**Pn**	**13 38 37.7**	**-0.7**
EBAD				S	**Sn**	**13 39 24.0**	**-0.4**
EBAD	**Badajoz**	**3.90**	**98**	P	**Pn**	**13 38 37.7**	**-0.7**
comp=N,0.6nm,0.0s,SNR=11							
EBAD				S	**Sn**	**13 39 24.0**	**-0.3**
comp=N,1.8nm,0.1s,SNR=5.0							
EGRO	**El Granado**	**3.97**	**116**	S	**Sn**	**13 39 23.8**	**-2.2**
comp=N,3.0nm,0.1s,SNR=7.9							
EGRO	**El Granado**	**3.97**	**116**	S	**Sn**	**13 39 23.8**	**-2.2**
comp=N,3.0nm,0.1s,SNR=7.9							
EMAZ	**Mazaricos**	**4.22**	**31**	P	**Pn**	**13 38 41.7**	**-1.1**
comp=N,3.0nm,0.1s,SNR=5.8							
EMAZ				S	**Sn**	**13 39 26.5**	**-5.6**
comp=N,3.8nm,0.1s							
EMAZ	**Mazaricos**	**4.22**	**31**	P	**Pn**	**13 38 41.7**	**-1.1**
EMAZ				S	**Sn**	**13 39 26.7**	**-5.3**
EMAZ	**Mazaricos**	**4.22**	**31**	P	**Pn**	**13 38 41.7**	**-1.1**
comp=N,3.0nm,0.1s,SNR=5.8							
EMAZ				S	**Sn**	**13 39 26.7**	**-5.4**
comp=N,3.8nm,0.1s							
EMIN	**Mina Concepcio**	**4.45**	**110**	P	**Pn**	**13 38 46.2**	**+0.3**
comp=N,0.3nm,0.1s,SNR=4.0							
EMIN				S	**Sn**	**13 39 35.4**	**-2.3**
comp=N,0.5nm,0.1s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.45**	**110**	P	**Pn**	**13 38 46.2**	**+0.3**
comp=N,0.3nm,0.1s,SNR=4.0							
EMIN				S	**Sn**	**13 39 35.4**	**-2.4**
comp=N,0.5nm,0.1s,SNR=7.9							
PBRG	**Braganca**	**4.66**	**57**	*e*Pn	**Pn**	**13 38 49.7**	**+0.9**
ECAL	**Calabor**	**4.73**	**56**	P	**Pn**	**13 38 50.4**	**+0.6**
comp=N,1.1nm,0.2s,SNR=8.7							
ECAL				S	**Sn**	**13 39 43.1**	**-1.5**
comp=N,2.4nm,0.2s							
ECAL	**Calabor**	**4.73**	**56**	P	**Pn**	**13 38 50.4**	**+0.6**
comp=N,1.1nm,0.2s,SNR=8.7							
ECAL				S	**Sn**	**13 39 41.9**	**-2.7**
comp=N,2.4nm,0.2s							
EPON	**Pontenova**	**5.36**	**41**	P	**Pn**	**13 38 57.5**	**-0.9**
comp=N,0.7nm,0.3s,SNR=4.0							
EPON				S	**Sn**	**13 39 55.5**	**-4.6**
comp=N,0.8nm,0.1s,SNR=7.9							
EPON	**Pontenova**	**5.36**	**41**	P	**Pn**	**13 38 57.5**	**-0.9**
comp=N,0.7nm,0.3s,SNR=4.0							
EPON				S	**Sn**	**13 39 55.5**	**-4.6**
comp=N,0.8nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**5.90**	**100**	P	**Pn**	**13 39 05.5**	**-0.3**
comp=N,0.8nm,0.1s,SNR=7.9							
EADA				S	**Sn**	**13 40 10.7**	**-2.8**
comp=N,0.5nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**5.90**	**100**	P	**Pn**	**13 39 05.5**	**-0.3**
EADA				S	**Sn**	**13 40 12.3**	**-1.2**
EADA	**Adamuz**	**5.90**	**100**	P	**Pn**	**13 39 05.5**	**-0.3**
comp=N,0.8nm,0.1s,SNR=7.9							
EADA				S	**Sn**	**13 40 12.3**	**-1.2**
comp=N,0.5nm,0.1s,SNR=7.9							
EARI	**Arriondas**	**6.42**	**50**	P	**Pn**	**13 39 13.8**	**+0.8**
comp=N,0.4nm,0.1s,SNR=6.0							
EARI	**Arriondas**	**6.42**	**50**	P	**Pn**	**13 39 14.1**	**+1.1**
EHUE	**Huescar**	**7.50**	**99**	P	**Pn**	**13 39 29.3**	**+1.4**

*NEIC **21** 13:37:52.2±1.3, 622S×154.67E, h72km±12km, mb4.4/12, Error ellipse: s-maj=10.8km s-min=8.5km az=162.0*
*BJI **21** 13:37:52.2, 620S×154.70E, h71km, mB4.8, mb4.7, Ms4.5, Ms4.0*
*ISCJB **21** 13:37:53.4±1.5, 632S±007×154.74E±005, h93km±14km, mb4.4/27, Error ellipse: s-maj=12.0km s-min=7.9km az=178.7*
*IDC **21** 13:37:54.4±2.4, 628S×154.70E, h89km±20km, mb4.0/10, mb1 4.2/14, mb1mx4.1/18, mbtmp4.5/14, MS3.6/6, Ms1 3.6/6, ms1mx3.2/26, Error ellipse: s-maj=19.1km s-min=13.1km az=11.0*

ISC 21 13:37:54.8±1.3, 638S±007×15482E±006, h91km±12km, h63km±1.0km: pP-P, n51, σ1§06/54, mb4.4/27, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.91**	**121**	P	**Pn**	**13 39 20.1**	**+0.3**
37nm,0.3s,baz=262,slow=3.7,SNR=11							
HNR				S	**Sn**	**13 40 31.4**	**+5.2**
34nm,0.3s,baz=92,slow=10,SNR=7.5							
HNR	**Honiara**	**5.91**	**121**	*e*Pn	**Pn**	**13 39 19.9**	**+0.1**
126nm,0.8s							
PMG	**Port Moresby**	**8.16**	**248**	P	**Pn**	**13 39 49.5**	**-0.9**
4.2nm,0.3s,baz=58,slow=7.2,SNR=14							
PMG				S	**Sn**	**13 41 22.0**	**+1.0**
2.6nm,0.3s,baz=216,slow=23,SNR=4.8							
PMG				LR	LR	13 42 27.4	
comp=Z,171nm,19.9s,baz=43,slow=34							
PMG	**Port Moresby**	**8.16**	**248**	*e*P	**Pn**	**13 39 46.0**	**-4.4**
72nm,0.8s							
PMG				S	**Sn**	**13 41 22.0**	**+1.0**
PMG				*e*Sn	**Sn**	**13 41 22.6**	**+1.6**
PMG				LR	LR	13 42 27.4	
CTA	**Charters Tower**	**15.96**	**211**	P	**Pn**	**13 41 33.5**	**-0.5**
0.4nm,0.3s,baz=41,slow=6.1,SNR=3.8							
CTA				LR	LR	13 46 48.3	
comp=Z,249nm,18.2s,baz=319,slow=33							
CTAO	**Charters Tower**	**15.96**	**211**	*e*P	**Pn**	**13 41 35.3**	**+1.4**
19nm,1.3s							
DZM	**Mont Dzumac**	**19.22**	**145**	P	**Pn**	**13 42 12.4**	**-1.0**
1.2nm,0.3s,baz=339,slow=11,SNR=12							
DZM				LR	LR	13 48 36.5	
comp=Z,210nm,20.3s,baz=204,slow=33							
KAKA	**Kakadu**	**22.94**	**252**	*e*P	**P**	**13 42 49.5**	**-1.7**
5.9nm,0.6s,mb4.1							

WRAB	**Tennant Creek**	**24.02**	**234**	*e*P		**P**	**13 43 01.3**	**+0.3**
13nm,0.8s,mb4.3								
WB2	**Warramunga Arr**	**24.02**	**234**	*e*P		**P**	**13 43 01.6**	**+0.5**
WRA	**Warramunga Arr**	**24.03**	**234**	P		**P**	**13 43 01.5**	**+0.4**
4.8nm,0.9s,mb3.8,baz=59,slow=9.7,SNR=59								
WRA				PcP		PcP	13 46 41.4	+0.8
1.9nm,0.7s,baz=62,slow=2.3,SNR=7.9								
AS31	**Alice Springs**	**26.45**	**227**	*e*P		**P**	**13 43 22.5**	**-0.6**
ASAR	**Alice Springs**	**26.45**	**227**	P		**P**	**13 43 22.9**	**-0.2**
1.4nm,0.6s,mb3.6,baz=56,slow=9.1,SNR=56								
ASAR				PcP		PcP	13 46 46.9	+0.9
1.9nm,0.7s,baz=59,slow=2.4,SNR=12								
ASAR				LR		LR	13 53 05.9	
comp=Z,231nm,18.2s,baz=266,slow=34								
STKA	**Stephens Creek**	**28.22**	**204**	P		**P**	**13 43 37.7**	**-1.2**
1.6nm,0.6s,mb3.8,baz=325,slow=22,SNR=6.6								
STKA				LR		LR	13 54 56.3	
comp=Z,143nm,19.0s,baz=26,slow=36								
STKA	**Stephens Creek**	**28.22**	**204**	*e*P		**P**	**13 43 37.8**	**-1.1**
FITZ	**Fitzroy Crossi**	**30.75**	**245**	LR		LR	13 57 00.5	
comp=Z,88nm,20.6s,baz=82,slow=37								
FITZ	**Fitzroy Crossi**	**30.75**	**245**	*e*P		**P**	**13 44 00.5**	**-0.8**
3.0nm,0.3s,mb4.5								
MBWA	**Marble Bar**	**36.99**	**243**	*e*P		**P**	**13 44 54.8**	**-0.6**
3.5nm,0.6s,mb4.5								
URZ	**Urewera**	**37.62**	**151**	P		**P**	**13 45 02.7**	**+2.1**
5.1nm,0.4s,mb4.7,baz=179,slow=2.4,SNR=15								
RPZ	**Rata Peaks**	**39.83**	**162**	P		**P**	**13 45 19.8**	**+0.7**
12nm,0.8s,mb4.8,baz=75,slow=14,SNR=3.6								
RPZ	**Rata Peaks**	**39.83**	**162**	P		**P**	**13 45 19.8**	**+0.7**
NJ2	**Nanjing**	**51.33**	**320**	*e*P		**P**	**13 46 50.6**	**+0.9**
NJ2				AMB		AMB		
comp=Z,10.0nm,0.5s,mb5.1								
CN2	**Changchun**	**56.57**	**335**	*e*P		**P**	**13 47 29.6**	**+1.8**
KMI	**Kunming**	**59.53**	**304**	P		**P**	**13 47 49.8**	**+1.3**
KMI				AP		pP	13 48 06.6	-4.7
KMI				XP		sP	13 48 15.0	-6.4
KMI				S		**S**	**13 55 53.3**	**+2.1**
KMI				XS		sS	13 56 25.5	-4.6
KMI				SS		SS	13 59 48.3	+0.6
KMI				AMB		AMB		
comp=Z,7.0nm,0.9s,mb4.7								
KMI				AMB		AMB		
comp=Z,43nm,4.7s								
KMI				LR		LR		
comp=Z,45nm,18.6s								
CD2	**Chengdu**	**61.29**	**310**	*e*P		**P**	**13 47 58.3**	**-2.2**
HHC	**Hu-ho-hao-te**	**61.50**	**324**	*e*P		**P**	**13 48 02.4**	**+0.5**
HHC				AP		pP	13 48 18.5	-6.3
HHC				XP		sP	13 48 25.5	-9.4
HHC				PCP		PcP	13 48 43.8	+0.8
HHC				PP		PP	13 50 20.1	+1.9
HHC				SCP		ScP	13 52 38.8	+2.6
HHC				PCS		PcS	13 52 45.0	-1.0
HHC				S		**S**	**13 56 16.4**	**+0.1**
HHC				PS			13 56 41.8	
HHC				XS		sS	13 56 44.5	-11
HHC				SCS		ScS	13 57 44.6	-0.2
HHC				SS		SS	14 00 19.8	+1.2
HHC				AMB		AMB		
comp=Z,8.0nm,1.4s,mb4.6								
HHC				AMB		AMB		
comp=Z,97nm,7.7s								
HHC				LR		LR		
comp=N,115nm,19.0s								
HHC				LR		LR		
comp=E,85nm,19.0s								
HHC				LR		LR		
comp=Z,65nm,19.0s								
LZH	**Lanzhou**	**63.76**	**315**	*e*P		**P**	**13 48 17.8**	**+0.9**
LZH				AP		pP	13 48 34.1	-5.8
LZH				XP		sP	13 48 41.1	-8.9
LZH				PP		PP	13 50 40.0	+1.9
LZH				AMB		AMB		
comp=Z,21nm,1.2s,mb4.8								
SONM	**Songino Array**	**68.73**	**327**	P		**P**	**13 48 48.1**	**-0.6**
comp=Z,1.2nm,0.4s,mb4.1,baz=139,slow=5.0,SNR=5.7								
VNDA	**Vanda**	**71.19**	**178**	P		**P**	**13 49 04.0**	**+0.2**
comp=Z,0.9nm,0.7s,mb3.7,baz=321,slow=7.1,SNR=8.0								
VNDA	**Vanda**	**71.19**	**178**	*e*P		**P**	**13 49 04.0**	**+0.3**
comp=Z,0.9nm,0.7s,mb3.7								
JIRN	**Jiri**	**74.32**	**301**	*e*P		**P**	**13 49 23.3**	**+1.0**
GUN	**Gumba**	**74.66**	**301**	*e*P		**P**	**13 49 24.2**	**0.0**
**

σ0981/82, **4C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.21**	**228**	*i* P	**Pg**	**14 27 21.0**	**+0.9**
AYVA				*i* S	**Sg**	**14 27 24.6**	**+1.4**
PRK	**Paraskevi**	**0.52**	**247**	*e*PB	**Pb**	**14 27 26.4**	**-0.5**
PRK				*e*SB	**Sg**	**14 27 33.4**	**+0.6**
EZN	**Ezine**	**0.58**	**311**	*i* PG	**Pg**	**14 27 27.6**	**+0.7**
CANB	**Canakkale**	**0.58**	**13**	*i* PG	**Pg**	**14 27 27.1**	**+0.1**
CANB				*i* SG	**Sg**	**14 27 35.9**	**+1.3**
BOZC	**Bozcaada**	**0.76**	**301**	*i* P	**Pg**	**14 27 30.5**	**+0.2**
BOZC				*i* S	**Sg**	**14 27 41.1**	**+0.8**
AKS	**Akhisar**	**0.91**	**128**	*i* PG	**Pg**	**14 27 33.2**	**-0.1**
AKHS	**Akhisar**	**0.91**	**128**	*i* P	**Pg**	**14 27 33.0**	**-0.2**
AKHS				*i* S	**Sg**	**14 27 45.2**	**+0.1**
AKHS	**Akhisar**	**0.91**	**128**	*i* P	**Pg**	**14 27 33.0**	**-0.3**
AKHS				*i* S	**Sg**	**14 27 45.2**	**0.0**
LPK	**Lapseki**	**0.93**	**354**	*i* PG	**Pg**	**14 27 33.8**	**+0.2**
BTOK	**Tokmak**	**0.93**	**70**	*i* P	**Pg**	**14 27 33.5**	**-0.1**
BTOK				*i* S	**Sg**	**14 27 46.5**	**+0.7**
GADA	**Gvkgeada**	**1.07**	**314**	*i* PN	**Pn**	**14 27 36.4**	**-0.1**
GADA				*i* SN	**Sn**	**14 27 51.3**	**-0.1**
KDAG	**Bornova**	**1.08**	**164**	*i* P	**Pb**	**14 27 35.9**	**-0.5**
KDAG				*i* S	**Sb**	**14 27 51.3**	**+0.7**
IZM	**Izmir**	**1.09**	**165**	PN	**Pn**	**14 27 36.7**	**-0.1**
IZM				SN	**Sn**	**14 27 51.5**	**-0.4**
URLA	**Izmir**	**1.11**	**192**	*i* P	**Pb**	**14 27 36.4**	**-0.5**
URLA				*i* S	**Sb**	**14 27 53.3**	**+1.9**
EDC	**Edincik**	**1.17**	**39**	PN	**Pn**	**14 27 37.2**	**-0.7**
BNT	**Bandirma**	**1.20**	**41**	PN	**Pn**	**14 27 37.5**	**-0.9**
CHOS	**Chios island**	**1.25**	**212**	*e*Pg	**Pg**	**14 27 38.3**	**-1.3**
CHOS				*e*Sg	**Sg**	**14 27 55.2**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.26**	**10**	PN	**Pn**	**14 27 39.0**	**-0.1**
SART	**Tekirdag**	**1.26**	**10**	*i* P	**Pb**	**14 27 39.1**	**0.0**
SART				*i* S	**Sb**	**14 27 55.9**	**+0.3**
DST	**Dursunbey**	**1.35**	**83**	PN	**Pn**	**14 27 39.1**	**-1.3**
MFT	**Murefte**	**1.37**	**12**	PN	**Pn**	**14 27 40.3**	**-0.4**
KCT	**Karacabey**	**1.39**	**54**	PN	**Pn**	**14 27 40.6**	**-0.4**
LIA	**Limnos Island**	**1.40**	**289**	*e*PN	**Pn**	**14 27 41.2**	**+0.1**
LIA				*e*SN	**Sn**	**14 27 59.3**	**-0.2**
ENEZ	**Enez**	**1.41**	**336**	PN	**Pn**	**14 27 41.9**	**+0.7**
LOS	**Limnos**	**1.48**	**290**	*e*Pg	**Pg**	**14 27 42.7**	**-1.4**
LOS				*e*Sg	**Sg**	**14 28 01.8**	**-1.5**
ALN	**Alexandroupoli**	**1.59**	**336**	*e*Pg	**Pg**	**14 27 44.0**	**-2.1**
ALN				*e*Sg	**Sg**	**14 28 06.0**	**-0.7**
ORLT	**Orhaneli**	**1.65**	**68**	PN	**Pn**	**14 27 43.9**	**-0.7**
SMG	**Samos**	**1.74**	**181**	*e*PN	**Pn**	**14 27 44.7**	**-1.1**
RDO	**Rodhopi**	**1.99**	**329**	*e*PN	**Pn**	**14 27 49.9**	**+0.7**
RDO				*e*SN	**Sn**	**14 28 15.4**	**+1.3**
GEMT	**Gemlik**	**2.02**	**60**	PN	**Pn**	**14 27 49.4**	**-0.3**
CTT	**Catalca**	**2.06**	**34**	PN	**Pn**	**14 27 50.5**	**+0.3**
YLV	**Yalova**	**2.21**	**59**	PN	**Pn**	**14 27 51.4**	**-0.8**
DENT	**Denizli**	**2.38**	**135**	PN	**Pn**	**14 27 55.3**	**+0.7**
ADVT	**Abdulvahap**	**2.40**	**65**	*e*PN	**Pn**	**14 27 54.6**	**-0.2**
EDRB	**Edirne**	**2.40**	**357**	*e*PN	**Pn**	**14 27 55.1**	**+0.2**
BODT	**Bodrum**	**2.41**	**172**	*e*PN	**Pn**	**14 27 54.6**	**-0.4**
OUR	**Ouranopolis**	**2.41**	**292**	*e*Pn	**Pn**	**14 27 55.3**	**+0.3**
OUR				*e*Sn	**Sn**	**14 28 23.3**	**-1.2**
KLYT	**Kilyos**	**2.44**	**42**	*e*PN	**Pn**	**14 27 55.9**	**+0.5**
KDZ	**Kurdzhali**	**2.47**	**333**	*i* P	**Pn**	**14 27 56.8**	**+1.0**
HRT	**Hereke**	**2.53**	**56**	*e*PN	**Pn**	**14 27 56.9**	**+0.2**
YER	**Yerkesik**	**2.56**	**154**	*e*PN	**Pn**	**14 27 56.7**	**-0.3**
GPA	**Golpazari**	**2.76**	**71**	*e*PN	**Pn**	**14 27 59.7**	**-0.1**
DAT	**Datca**	**2.77**	**169**	*e*PN	**Pn**	**14 27 59.7**	**-0.2**
RZN	**Rozhen**	**2.79**	**324**	*i* P	**Pn**	**14 28 01.5**	**+1.3**
DIM	**Dimitrovgrad**	**2.80**	**339**	P	**Pn**	**14 28 07.0**	**+6.7**
NVR	**Nevrokopi**	**2.99**	**310**	*e*PN	**Pn**	**14 28 03.5**	**+0.4**
DALT	**Dalyan (Mudla)**	**3.01**	**152**	*e*PN	**Pn**	**14 28 04.0**	**+0.8**
ESKT	**Eskisehir**	**3.06**	**87**	*e*PN	**Pn**	**14 28 03.8**	**-0.2**
MMB	**Musomiste**	**3.22**	**313**	*i* P	**Pn**	**14 28 06.7**	**+0.5**
MDU	**Mudurnu**	**3.47**	**72**	*e*PN	**Pn**	**14 28 10.3**	**+0.7**
PGB	**Panagyurishte**	**3.72**	**327**	P	**Pn**	**14 28 12.0**	**-1.1**
PRD	**Provadia**	**3.77**	**6**	P	**Pn**	**14 28 13.0**	**-0.7**
KIZT	**Kizilcal**	**3.92**	**97**	*e*PN	**Pn**	**14 28 16.3**	**+0.6**
TIRR	**Tirgusor**	**5.13**	**12**	‖ *i*P	**Pg**	**14 28 52.3**	**-1.7**
TIRR	**Tirgusor**	**5.13**	**12**	*e*Pn	**Pn**	**14 28 32.2**	**-0.3**
TIRR	**Tirgusor**	**5.13**	**12**	*e*Pn	**Pn**	**14 28 32.2**	**-0.2**
BR131	**Keskin Array S** 3.0nm,0.6s	**5.22**	**85**	Pn	**Pn**	**14 28 34.7**	**+1.0**
BR131	**Keskin Array S** 3.0nm,0.6s	**5.22**	**85**	Pn	**Pn**	**14 28 34.7**	**+1.1**
MLR	**Muntele Rosu**	**6.08**	**354**	⇑ *i*P	**Pn**	**14 28 50.0**	**+4.6**
VOIR		**6.14**	**348**	‖ *i*P	**Pn**	**14 28 47.1**	**+0.8**
PLOR	**Plostina**	**6.40**	**358**	‖ *i*P	**Pn**	**14 28 56.8**	**+6.9**
VRI	**Vrincioaia**	**6.42**	**359**	⇑ *i*P	**Pn**	**14 28 57.0**	**+6.9**
BZS	**Buzias**	**7.29**	**329**	⇑ *i*P	**Pn**	**14 29 01.6**	**-0.5**
BURAR	**Bucovina Array**	**8.25**	**352**	⇑ *i*P	**Pn**	**14 29 17.8**	**+2.5**

*IDC **21** 14:28:32.8±0.4,290S×126.15E,h0km,mb4.8/18, mb1 4.8/20,mb1mx4.8/23,mbtmp4.8/20,ML4.2/2,MS3.9/8, Ms1 3.9/8,ms1mx3.5/22,Error ellipse: s-maj=20.8km s-min=8.1km az=64.0*

*BJI **21** 14:28:32.1,333S×12641E,h33km,mB5.1,mb4.9,Ms4.4, Msz4.1*

*ISCJB **21** 14:28:34.8±0.2,287S±003×12626E±004,h25km, mb5.1/85,MS3.9/21,Error ellipse: s-maj=5.7km s-min=3.8km az=130.3*

*MOS **21** 14:28:35.7±0.9,283S×12623E,h33km,mb5.1/34,Error ellipse: s-maj=13.5km s-min=6.1km az=117.1*

*NEIC **21** 14:28:36.2±2.0,286S×12621E,h21km±14km,mb5.0/31, Error ellipse: s-maj=7.7km s-min=3.9km az=59.0*

NEIC Felt [III] in Kepulauan Sula.

*HRVD **21** 14:28:36.2±0.3,269S×12625E,h21km±1km,MW5.0/61, Centroid moment Tensor Solution. LP body waves: s26,c29;Mantle waves: s61,c80; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.01±.19; Mθθ-0.27±.11; Mφφ-2.74±. 14; Mrθ-1.31±.23; Mφθ1.53±.08; Mφr-0.05±.20; Best double couple: Ms3.51800×10¹⁶ NP1:φs175.00000°,δ44.00000°,λ121.00000°. NP2: φs314.00000°,δ53.00000°,λ63.00000°. Principal axes: T 3.5210, Plg68.0000°, Azm165.0000°; N -0.0060, Plg21.0000°, Azm331.0000°; P -3.5160, Plg5.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 21 14:28:37.3±0.2,286S±003×12625E±004,h27km, h27km±1.7km:pP-P,n192,σ1§07/194,mb5.1/85,MS3.9/21, 14C-1D,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon** 1μm,0.8s	**2.10**	**113**	P	**Pn**	**14 29 13.9**	**+3.2**
SWI	**Sorong** 947nm,0.7s	**5.38**	**68**	P	**Pn**	**14 29 56.7**	**+0.9**
PCI	**Palu** 1μm,1.0s	**6.70**	**287**	P	**Pn**	**14 30 13.5**	**-0.4**
WSI	**Waingapu** 560nm,1.4s	**8.99**	**221**	P	**Pn**	**14 30 49.4**	**+4.1**
BAKI	**Biak** 535nm,1.0s	**9.98**	**81**	P	**Pn**	**14 30 59.2**	**+0.3**
TSM	**Tawau**	**10.98**	**310**	P	**Pn**	**14 31 10.5**	**-2.1**
KAKA	**Kakadu** 33nm,0.6s	**11.55**	**148**	*e*P	**Pn**	**14 31 23.5**	**+3.2**
KKM	**Kota Kinabalu**	**13.37**	**311**	P	**Pn**	**14 31 45.1**	**-0.1**
KKM	**Kota Kinabalu**	**13.37**	**311**	*e*Pn	**Pn**	**14 31 44.8**	**-0.3**
KRKI	**Karangkates** 581nm,1.3s	**14.71**	**248**	P	**Pn**	**14 32 08.6**	**+5.1**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=15,slow=13,SNR=10	**15.16**	**182**	Pn	**Pn**	**14 32 08.9**	**-0.6**
KSM	**Kuching**	**16.51**	**285**	*e*P	**Pn**	**14 32 26.9**	**0.0**
BJII	**Banjamegara** 289nm,1.3s	**17.06**	**254**	P	**Pn**	**14 32 36.4**	**+2.5**
BJII	**Banjamegara**	**17.06**	**254**	⇑ *e*P	**Pn**	**14 32 42.0**	**+8.1**
WRAB	**Tennant Creek**	**18.72**	**156**	*e*P	**Pn**	**14 32 53.8**	**-0.5**
WRAB	comp=Z,96nm,0.9s			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,96nm,0.9s	**18.72**	**156**	*e*P	**Pn**	**14 32 53.8**	**-0.4**
WRA	**Warramunga Arr** comp=Z,3.1nm,0.3s,baz=336,slow=12,SNR=346	**18.73**	**156**	P	**Pn**	**14 32 53.9**	**-0.4**
WRA	baz=348,slow=22,SNR=4.6			S	**Sn**	**14 36 24.6**	**+1.6**
WB2	**Warramunga Arr**	**18.73**	**156**	⇑ *i*P	**Pn**	**14 32 54.0**	**-0.4**
WB2				*e*S	**Sn**	**14 36 23.4**	**+0.3**
LEM	**Lembang** comp=Z,138nm,1.1s	**18.98**	**257**	P	**Pn**	**14 32 58.7**	**+1.3**
MBWA	**Marble Bar**	**19.27**	**199**	*e*P	**Pn**	**14 32 58.5**	**-2.3**
	comp=Z,16nm,0.8s						
CBJI	**Citeko** comp=Z,308nm,1.2s	**19.66**	**259**	P	**Pn**	**14 33 04.9**	**-0.6**
SBJI	**Serang** comp=Z,175nm,1.2s	**20.32**	**260**	P	**P**	**14 33 12.1**	**+0.9**
KLI	**Kotabumi** comp=Z,519nm,1.4s,mb5.7	**21.44**	**264**	P	**P**	**14 33 26.9**	**+3.6**
PMG	**Port Moresby** comp=Z,44nm,1.1s,mb4.8,baz=294,slow=8.1,SNR=4.6	**21.77**	**108**	P	**P**	**14 33 27.0**	**+0.2**
PMG	**Port Moresby**	**21.77**	**108**	*e*P	**P**	**14 33 27.0**	**+0.2**
PMG	comp=Z,77nm,1.0s			pmax	pmax		
PMG	**Port Moresby** comp=Z,76nm,1.0s,mb5.1	**21.77**	**108**	*e*P	**P**	**14 33 27.0**	**+0.2**
AS31	**Alice Springs**	**21.97**	**161**	⇑ *i*P	**P**	**14 33 29.1**	**+0.1**
AS31				*e*S	**S**	**14 37 31.1**	**+1.0**
ASAR	**Alice Springs** comp=Z,67nm,0.8s,mb5.1,baz=344,slow=12,SNR=716	**21.97**	**161**	P	**P**	**14 33 29.1**	**+0.1**
ASAR	comp=Z,2.7nm,0.4s,baz=354,slow=1.9,SNR=9.8			PcP	PcP	14 37 27.8	+0.8
ASAR	comp=Z,9.3nm,1.0s,baz=348,slow=21,SNR=8.1			S	**S**	**14 37 31.9**	**+1.8**
ASAR	comp=Z,311nm,18.6s,MS3.8,baz=334,slow=38			LR	LR	14 42 35.9	
ASAR	**Alice Springs**	**21.97**	**161**	P	**P**	**14 33 29.1**	**+0.1**
ASAR						14 37 27.8	
ASAR				S	**S**	**14 37 31.9**	**+1.8**
ASAR	**Alice Springs**	**21.97**	**161**	P	**P**	**14 33 29.1**	**+0.1**
ASAR				PcP	PcP	14 37 27.8	+0.8
ASAR				S	**S**	**14 37 31.9**	**+1.8**
ASAR				LR	LR	14 42 35.9	
KGM	**Kluang**	**23.43**	**282**	P	**P**	**14 33 45.1**	**+0.6**
KSI	**Kapahiang** comp=Z,256nm,1.0s,mb5.6	**23.64**	**267**	P	**P**	**14 33 47.1**	**+0.8**
PPI	**Padang Panjang** comp=Z,222nm,1.2s,mb5.6	**25.95**	**275**	P	**P**	**14 34 08.3**	**+0.9**
CTA	**Charters Tower** comp=Z,24nm,1.0s,mb4.7,baz=310,slow=12,SNR=12	**25.97**	**133**	P	**P**	**14 34 08.3**	**+0.8**
CTA	**Charters Tower**	**25.97**	**133**	*e*P	**P**	**14 34 08.1**	**+0.6**
CTA	comp=Z,18nm,1.0s			pmax	pmax		
CTA	**Charters Tower** comp=Z,18nm,1.0s,mb4.6	**25.97**	**133**	*e*P	**P**	**14 34 08.1**	**+0.6**
CTAO	**Charters Tower**	**25.97**	**133**	*e*P	**P**	**14 34 08.1**	**+0.6**
CTAO	comp=Z,39nm,1.1s,mb4.8			pmax	pmax		
CTAO	**Charters Tower** comp=Z,39nm,1.1s,mb4.8	**25.97**	**133**	*e*P	**P**	**14 34 08.1**	**+0.5**
IPM	**Ipoh**	**26.24**	**286**	P	**P**	**14 34 11.8**	**+1.7**
KULM	**Kulim**	**26.83**	**288**	*e*P	**P**	**14 34 16.2**	**+0.9**
QIZ	**Qiongzhong**	**27.09**	**324**	P	**P**	**14 34 19.6**	**+2.0**
QIZ				AP	pP	14 34 26.0	+0.5
QIZ				XP	sP	14 34 28.4	-0.4
QIZ				S	**S**	**14 38 59.3**	**+5.3**
QIZ	comp=N,198nm,19.5s			LR	LR		
QIZ	comp=Z,186nm,15.8s,MS3.8			LR	LR		
FORT	**Forrest** comp=Z,69nm,0.6s,mb5.5	**27.82**	**177**	⇑ *i*P	**P**	**14 34 23.7**	**-0.5**
PSI	**Prapat** comp=Z,38nm,0.8s,mb5.0,baz=103,slow=5.1,SNR=46	**27.89**	**281**	P	**P**	**14 34 24.9**	**+0.1**
JOW	**Kunigami** comp=Z,85nm,19.7s,MS3.4,baz=57,slow=36	**29.58**	**4**	LR	LR	14 46 20.9	
KLBR	**Kellerberrin** comp=Z,37nm,0.9s,mb5.1	**29.68**	**195**	*e*P	**P**	**14 34 39.8**	**-1.0**
KKTK	**Khon Kaen** comp=Z,309nm,0.8s,mb6.1	**30.00**	**310**	P	**P**	**14 34 43.6**	**0.0**
MUN	**Mundaring**	**30.47**	**197**	*e*P	**P**	**14 34 47.4**	**-0.3**
NWAO	**Narrogin (SRO)** comp=Z,29nm,0.8s,mb5.1,baz=24,slow=9.8,SNR=10	**31.09**	**195**	P	**P**	**14 34 52.5**	**-0.6**
STKA	**Stephens Creek** comp=Z,9.8nm,0.5s,mb4.9,baz=337,slow=8.1,SNR=34	**32.28**	**155**	P	**P**	**14 35 02.9**	**-0.7**
STKA	comp=Z,204nm,20.0s,MS3.8,baz=17,slow=34			LR	LR	14 47 05.5	
STKA	**Stephens Creek** comp=Z,21nm,1.2s,mb4.8	**32.28**	**155**	⇑ *i*P	**P**	**14 35 02.9**	**-0.7**
NANT	**Nan**	**33.10**	**312**	P	**P**	**14 35 11.0**	**+0.2**
CBIJ	**Chichi jima** comp=Z,114nm,21.1s,MS3.6,baz=9.8,slow=31	**33.51**	**26**	LR	LR	14 46 04.4	
SSE	**Sheshan**	**34.11**	**352**	*e*P	**P**	**14 35 18.8**	**-0.8**
SSE				AP	pP	14 35 27.8	+0.2
SSE				XP	sP	14 35 31.3	+0.5
SSE				PP	PP	14 36 36.3	-0.7
SSE				PCP	PcP	14 37 55.0	-1.6
SSE				S	**S**	**14 40 44.0**	**+0.1**
SSE				XS	sS	14 41 00.3	+3.3
SSE				SCS	ScS	14 45 40.3	-1.5
SSE	comp=Z,28nm,0.7s,mb5.3			AMB	AMB		
SSE	comp=Z,19nm,3.5s			AMB	AMB		
SSE	comp=N,22nm,23.0s,MS3.2			LR	LR		
SSE	comp=E,53nm,23.1s,MS3.2			LR	LR		
SSE	comp=Z,61nm,21.9s,MS3.3			LR	LR		
CHG	**Chiang Mai** comp=Z,16nm,0.9s,mb5.0	**34.44**	**310**	⇑ *i*P	**P**	**14 35 22.6**	**+0.1**
CHTO	**Chiang Mai** SNR=6.2	**34.44**	**310**	⇑ *i*P	**P**	**14 35 22.5**	**0.0**
CHTO	**Chiang Mai**	**34.44**	**310**	*e*P	**P**	**14 35 22.2**	**-0.3**
CHTO	comp=Z,16nm,1.0s,mb4.9			pmax	pmax		
CHTO	**Chiang Mai**	**34.44**	**310**	*e*PcP	PcP	14 37 59.5	+1.9
CHTO	**Chiang Mai** comp=Z,16nm,1.0s,mb4.9	**34.44**	**310**	*e*P	**P**	**14 35 22.2**	**-0.3**
GYA	**Guiyang**	**34.76**	**328**	⇑ *i*P	**P**	**14 35 25.8**	**+0.6**
GYA				AP	pP	14 35 31.6	-1.6
GYA				XP	sP	14 35 34.5	-2.0
GYA				PCP	PcP	14 37 59.9	+1.5
GYA				S	**S**	**14 40 54.5**	**+0.6**
GYA				SCP	ScP	14 41 42.3	+0.3
GYA				SCS	ScS	14 45 44.1	-1.1
GYA	comp=Z,20nm,1.0s,mb5.0			AMB	AMB		
GYA	comp=Z,120nm,4.2s			AMB	AMB		
GYA	comp=N,370nm,15.7s,MS4.4			LR	LR		
GYA	comp=E,350nm,16.0s,MS4.4			LR	LR		
GYA	comp=Z,280nm,15.2s,MS4.1			LR	LR		
WHN	**Wuhan**	**35.10**	**342**	P	**P**	**14 35 29.3**	**+1.1**
NJ2	**Nanjing**	**35.42**	**349**	*e*P	**P**	**14 35 32.4**	**+1.4**
NJ2				AP	pP	14 35 38.3	-0.6
NJ2				XP	sP	14 35 41.3	-0.9
NJ2				PP	PP	14 36 52.3	+0.7
NJ2				S	**S**	**14 41 05.0**	**+0.9**
NJ2	comp=Z,30nm,0.5s,mb5.5			AMB	AMB		
NJ2	comp=Z,30nm,4.4s			AMB	AMB		
NJ2	comp=N,390nm,15.5s,MS4.4			LR	LR		
NJ2	comp=E,300nm,14.3s,MS4.4			LR	LR		
NJ2	comp=Z,370nm,14.8s,MS4.3			LR	LR		
KMI	**Kunming**	**35.97**	**322**	P	**P**	**14 35 37.5**	**+1.8**
KMI				S	**S**	**14 41 17.1**	**+4.5**
KMI	comp=Z,8.0nm,1.4s,mb4.5			AMB	AMB		
KMI	comp=N,142nm,15.9s,MS4.0			LR	LR		
KMI	comp=E,140nm,17.0s,MS4.0			LR	LR		
KMI	comp=Z,116nm,18.3s,MS3.7			LR	LR		
ARMA	**Armidale**	**36.44**	**141**	*e*P	**P**	**14 35 40.4**	**+0.7**
TOO	**Toolangi**	**38.80**	**155**	*e*P	**P**	**14 36 01.2**	**+1.6**
TOO	comp=Z,23nm,1.1s,mb4.8			pmax	pmax		
TOO	**Toolangi** comp=Z,23nm,1.1s,mb4.8	**38.80**	**155**	*e*P	**P**	**14 36 01.2**	**+1.6**
CD2	**Chengdu**	**39.84**	**329**	P	**P**	**14 36 08.4**	**+0.1**
CD2				AP	pP	14 36 14.0	-2.4
CD2				S	**S**	**14 42 12.6**	**+1.4**
CD2				SS	SS	14 45 03.3	-4.6
CD2	comp=Z,20nm,1.1s,mb4.8			AMB	AMB		
CD2	comp=Z,60nm,5.2s			AMB	AMB		
CD2	comp=N,90nm,13.6s			LR	LR		
CD2	comp=Z,90nm,10.8s,MS3.9			LR	LR		
XAN	**Xi'an**	**40.17**	**337**	P	**P**	**14 36 10.6**	**-0.5**
XAN				AP	pP	14 36 20.9	+1.8
XAN	comp=Z,23nm,0.8s,mb5.0			AMB	AMB		
MAJO	**Matsushiro**	**40.75**	**15**	*e*P	**P**	**14 36 14.7**	**-1.2**
MAJO	comp=Z,8.0nm,0.8s,mb4.4			pmax	pmax		
MAJO	**Matsushiro** comp=Z,8.0nm,0.8s,mb4.4	**40.75**	**15**	*e*P	**P**	**14 36 14.7**	**-1.2**
MAT	**Matsushiro**	**40.75**	**15**	P	**P**	**14 36 14.7**	**-1.2**
MAT				S	**S**	**14 42 21.0**	**-3.8**
MAT	**Matsushiro**	**40.75**	**15**	*e*P	**P**	**14 36 15.0**	**-0.9**
MAT	comp=Z,13nm,1.3s,mb4.4			pmax	pmax		
MAT	**Matsushiro** comp=Z,14nm,1.3s,mb4.4	**40.75**	**15**	*e*P	**P**	**14 36 15.0**	**-0.9**
MAT				*e*S	**S**	**14 42 21.0**	**-3.8**
MJAR	**Matsushiro Arr** comp=Z,2.8nm,0.5s,mb4.1,baz=193,slow=8.3,SNR=11	**40.75**	**15**	P	**P**	**14 36 14.9**	**-0.9**
MJAR	comp=Z,3.5nm,0.9s,baz=200,slow=3.1,SNR=5.0			PcP	PcP	14 38 18.2	+1.3
MJAR	comp=Z,224nm,19.5s,MS4.0,baz=190,slow=36			LR	LR	14 52 48.4	
MJAR	**Matsushiro Arr**	**40.75**	**15**	P	**P**	**14 36 15.0**	**-0.9**
MJAR						14 38 18.2	
DZM	**Mont Dzumac** comp=Z,12nm,0.9s,mb4.6,baz=297,slow=9.4,SNR=6.4	**43.43**	**119**	P	**P**	**14 36 39.0**	**+1.3**
BJI	**Beijing**	**43.68**	**349**	*e*P	**P**	**14 36 38.8**	**-0.9**
BJI				PP	PP	14 38 23.3	+1.7
BJI				S	**S**	**14 43 09.0**	**+1.0**
BJI	comp=Z,53nm,2.5s,mb4.8			AMB	AMB		
BJI	comp=Z,84nm,29.6s,MS3.5			LR	LR		
LZH	**Lanzhou**	**44.04**	**334**	*e*P	**P**	**14 36 43.5**	**+0.9**
LZH				AP	pP	14 36 52.0	+1.3
LZH				XP	sP	14 36 56.0	+2.0
LZH				*e*S	**S**	**14 43 12.0**	**-1.2**
LZH	comp=Z,44nm,1.5s,mb5.0			AMB	AMB		
LZH	comp=Z,211nm,4.1s			AMB	AMB		
SNY	**Shenyang**	**44.54**	**357**	⇑ P	**P**	**14 36 45.4**	**-1.2**
SNY				AP	pP	14 36 54.3	-0.5
SNY				XP	sP	14 37 00.8	+2.8
SNY				S	**S**	**14 43 22.3**	**+1.8**
SNY				XS	sS	14 43 37.0	+3.1
SNY	comp=Z,11nm,1.0s,mb4.6			AMB	AMB		
SNY	comp=Z,57nm,5.6s			AMB	AMB		
SNY	comp=E,74nm,10.8s			LR	LR		
SNY	comp=Z,129nm,15.7s,MS4.0			LR	LR		
HHC	**Hu-ho-hao-te**	**45.52**	**344**	*e*P	**P**	**14 36 56.5**	**+2.1**
HHC				AP	pP	14 37 03.0	+0.4
HHC				XP	sP	14 37 05.4	-0.4
HHC				PCP	PcP	14 38 34.6	+1.7
HHC				PP	PP	14 38 43.9	+2.7
HHC				SCP	ScP	14 42 24.6	+0.8
HHC				PCS	PcS	14 42 27.5	+0.6
HHC				S	**S**	**14 43 39.3**	**+4.6**
HHC				SCS	ScS	14 46 49.0	0.0
HHC				SS	SS	14 46 53.8	-5.0
HHC	comp=Z,115nm,3.5s			AMB	AMB		
HHC	comp=N,73nm,17.1s,MS3.8			LR	LR		
HHC	comp=E,80nm,18.0s,MS3.8			LR	LR		
HHC	comp=Z,76nm,18.0s,MS3.7			LR	LR		
CN2	**Changchun**	**46.45**	**359**	*e*P	**P**	**14 37 04.6**	**+2.8**
CN2				*e*XP	sP	14 37 13.5	+0.3
CN2				*e*S	**S**	**14 43 51.8**	**+3.7**
CN2				SS	SS	14 47 10.8	-3.2
CN2	comp=Z,10.0nm,0.6s,mb4.9			AMB	AMB		
CN2	comp=Z,200nm,3.0s			AMB	AMB		
CN2	comp=N,200nm,18.0s,MS4.3			LR	LR		
CN2	comp=E,200nm,18.0s,MS4.3			LR	LR		
CN2	comp=Z,200nm,14.0s,MS4.2			LR	LR		
LSA	**Lhasa**	**46.64**	**317**	P	**P**	**14 37 05.1**	**+1.8**
LSA	**Lhasa**	**46.64**	**317**	*e*P	**P**	**14 37 05.1**	**+1.8**
LSA	comp=Z,11nm,0.6s,mb5.0			pmax	pmax		
LSA	**Lhasa** comp=Z,11nm,0.6s,mb5.0	**46.64**	**317**	*e*P	**P**	**14 37 05.1**	**+1.8**
MDJ	**Mudanjiang**	**47.36**	**3**	P	**P**	**14 37 08.4**	**-0.4**
MDJ	comp=Z,14nm,0.8s,mb4.9			AMB	AMB		
MDJ	**Mudanjiang** comp=Z,10nm,0.8s,mb4.8	**47.36**	**3**	*e*P	**P**	**14 37 08.4**	**-0.4**
GTA	**Gaotai**	**48.59**	**333**	⇑ P	**P**	**14 37 19.3**	**+1.0**
GTA				AP	pP	14 37 27.8	+1.3
GTA				XP	sP	14 37 32.1	+2.4
GTA				PCP	PcP	14 38 45.3	+1.6
GTA				PP	PP	14 39 12.5	+1.2
GTA				PPP		14 40 05.3	
GTA				S	**S**	**14 44 17.8**	**-0.6**
GTA				XS	sS	14 44 36.3	+4.4
GTA				SS	SS	14 47 42.4	-6.1
GTA	comp=Z,17nm,1.0s,mb5.0			AMB	AMB		
GTA	comp=Z,120nm,4.6s			AMB	AMB		
GTA	comp=N,64nm,13.8s,MS3.9			LR	LR		
GTA	comp=E,69nm,16.8s,MS3.9			LR	LR		
GTA	comp=Z,121nm,11.5s			LR	LR		
JIRN	**Jiri** comp=Z,111nm,0.7s,mb6.0	**49.07**	**311**	*e*P	**P**	**14 37 23.0**	**+0.9**
GUN	**Gumba** comp=Z,158nm,0.7s,mb6.2	**49.44**	**311**	*e*P	**P**	**14 37 25.6**	**+0.7**
PKI	**Pulchoki** comp=Z,56nm,0.8s,mb5.6	**49.62**	**310**	*e*P	**P**	**14 37 26.7**	**+0.5**
PKI	**Pulchoki** comp=Z,56nm,0.8s,mb5.7	**49.62**	**310**	*e*P	**P**	**14 37 26.7**	**+0.5**
PKI				pmax	pmax		
KKN	**Kakani** comp=Z,90nm,0.9s,mb5.8	**49.83**	**311**	*e*P	**P**	**14 37 28.4**	**+0.6**
KKN	**Kakani** comp=Z,90nm,0.9s,mb5.8	**49.83**	**311**	*e*P	**P**	**14 37 28.4**	**+0.6**
KKN				pmax	pmax		
DMN	**Daman** comp=Z,119nm,0.9s,mb5.9	**49.87**

BHPL Bhopal 54.17 301 eP P 14 38 00.1 -0.1
BHPL AMb AMB 14 38 02.0
comp=Z,34nm,1.1s,mb5.2
ZAK Zakamensk 56.59 343 eP P 14 38 17.2 -0.4
ZAK e 14 39 14.3
ZAK pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
TLY Talaya 57.63 344 eP P 14 38 25.1 +0.1
TLY eS S 14 46 20.9 -0.7
TLY pmax pmax
comp=Z,13nm,1.2s,mb4.8
TLY MLR MLR
comp=Z,46nm,17.0s,MS3.7
WMQ Urumqi 57.92 328 eP P 14 38 28.0 +1.0
WMQ XP sP 14 38 37.0 -1.5
WMQ S S 14 46 25.0 -0.2
WMQ SCS ScS 14 48 12.0 -2.7
WMQ SS SS 14 50 18.0 +1.7
WMQ AMB AMB
comp=Z,25nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,125nm,5.0s
WMQ LR LR
comp=N,89nm,14.0s,MS4.1
WMQ LR LR
comp=E,56nm,14.0s,MS4.1
WMQ LR LR
comp=Z,59nm,14.0s,MS3.9
IRK Irkutsk 57.97 344 eP P 14 38 31.9 +4.6
IRK pmax pmax
comp=Z,30nm,3.5s
MOY Mondy 58.41 342 eP P 14 38 31.0 +0.6
BOD Bodaibo 61.28 353 eP P 14 38 46.4 -3.8
BOD pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
MK31 Makanchi Array 62.74 328 P P 14 38 59.0 -1.0
MK31 pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
MKAR Makanchi Array 62.74 328 P P 14 39 00.1 +0.1
comp=Z,8.2nm,0.7s,mb5.0,baz=119,slow=7.5,SNR=70
MKAR PcP PcP 14 39 38.4 0.0
comp=Z,5.7nm,0.7s,baz=113,slow=4.6,SNR=5.5
KZA Kyzart 64.22 320 P P 14 39 11.4 +1.6
SNR=7.0
CASY Casey 64.26 187 eP P 14 39 08.6 -1.4
TKM2 Tokmak 2 64.44 321 P P 14 39 12.0 +0.9
SNR=10
TKM2 Tokmak 2 64.44 321 P P 14 39 09.4 -1.7
TKM2 pmax pmax
comp=Z,20nm,1.2s,mb5.0
YAK Yakutsk 64.76 2 eP P 14 39 13.1 -0.2
YAK e pP 14 39 21.2 -0.5
YAK pmax pmax
comp=Z,24nm,0.7s,mb5.3
YAK pmax pmax
comp=N,24nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.1s
AAK Ala-Archa 64.99 320 P P 14 39 15.1 +0.4
SNR=9.4
AAK Ala-Archa 64.99 320 eP P 14 39 14.1 -0.6
AAK pmax pmax
comp=Z,48nm,1.7s,mb5.2
AAK Ala-Archa 64.99 320 eP P 14 39 14.1 -0.7
comp=Z,48nm,1.7s,mb5.2
FRU Bishkek 65.01 320 eP P 14 39 15.5 +0.6
AML Almayashu 65.26 319 P P 14 39 17.9 +1.4
SNR=16
USP Ospenovka 65.30 321 P P 14 39 17.4 +0.6
SNR=9.7
EKS2 Erkin-Say 65.46 320 P P 14 39 18.8 +1.0
SNR=18
ZAL Zalesovo 66.26 335 P P 14 39 21.7 -1.2
comp=Z,3.0nm,0.9s,mb4.3,baz=336,slow=6.0,SNR=16
KURK Kurchatov 67.07 329 P P 14 39 27.9 -0.2
comp=Z,182nm,1.2s,mb6.0,SNR=16
NVS Novosibirsk 67.54 335 *i* P **P 14 39 29.3 -1.8**
NVS eS S 14 48 21.9 -4.1
NVS pmax pmax
comp=N,15nm,1.8s
NVS pmax pmax
comp=Z,22nm,1.8s,mb4.9
NVS pmax pmax
comp=E,12nm,1.4s
NVS smax
comp=N,16nm,2.1s
NVS smax
comp=E,17nm,2.1s
KKAR Karatay Array 67.79 319 *i* P **P 14 39 32.5 -0.2**
KKAR pmax pmax
comp=Z,16nm,1.2s,mb4.9
WSAR Wadi Sarin 70.71 296 P P 14 39 49.2 -1.5
comp=Z,14nm,0.7s,mb5.0,baz=80,slow=6.5,SNR=12
BIDO Bidbid 71.22 296 ⇑P **P 14 39 54.5 +0.6**
SNR=9.2
HOQ Hoqain 71.97 296 ⇓P **P 14 39 58.8 +0.5**
SNR=6.7
VOSK Vostochnaya 72.14 328 P P 14 39 57.2 -2.2
VOSK pmax pmax
comp=Z,11nm,0.9s,mb4.8
BRVK Borovoye 72.67 328 P P 14 40 02.3 -0.3
SNR=15
BRVK Borovoye 72.67 328 eP P 14 40 01.6 -0.9
BRVK pmax pmax
comp=Z,15nm,0.9s,mb4.9
BRVK Borovoye 72.67 328 eP P 14 40 01.6 -0.9
comp=Z,15nm,0.9s,mb4.9
CHKZ Chkalovo 72.81 329 eP P 14 40 02.3 -1.1
CHKZ pmax pmax
comp=Z,20nm,1.0s,mb5.0
CHKZ Chkalovo 72.81 329 eP P 14 40 02.2 -1.1
comp=Z,20nm,1.0s,mb5.0
ZRNK Zerenda 73.29 328 eP P 14 40 05.4 -0.8
ZRNK pmax pmax
comp=Z,29nm,0.9s,mb5.2
ZRNK Zerenda 73.29 328 eP P 14 40 05.4 -0.8
comp=Z,29nm,0.9s,mb5.2
ABKT Ailbek 74.70 310 P P 14 40 15.9 +1.4
comp=Z,116nm,0.9s,mb5.8,SNR=5.2
BILL Bilibino 76.00 14 eP P 14 40 22.8 +0.8
BILL pmax pmax
comp=Z,20nm,0.7s,mb5.2
AB31 Akbulak array 76.97 322 *i* P **P 14 40 26.1 -1.3**
AB31 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VNDA Vanda 77.00 173 P P 14 40 25.9 -1.6
comp=Z,4.6nm,0.8s,mb4.5,baz=316,slow=6.7,SNR=36
VNDA LR LR 15 12 58.1
comp=Z,71nm,18.0s,MS4.0,baz=323,slow=35
VNDA Vanda 77.00 173 eP P 14 40 25.4 -2.2
VNDA pmax pmax
comp=Z,4.0nm,0.8s
VNDA Vanda 77.00 173 eP P 14 40 25.4 -2.2
comp=Z,4.3nm,0.8s,mb4.4
MAW Mawson 77.45 201 P P 14 40 29.4 -0.8
comp=Z,2.4nm,0.7s,mb4.2,baz=100,slow=3.4,SNR=8.5
SBA Scott Base 77.92 172 eP P 14 40 31.6 -1.1
comp=Z,3.3nm,0.8s,mb4.3
AKTO Aktyubinsk 78.54 323 P P 14 40 34.6 -1.6
ARU Arti 80.25 329 ⇑*i*P **P 14 40 43.7 -1.8**
ARU *e* 14 43 46.5
ARU *e*PPP 14 45 40.0
ARU eS S 14 50 47.6 -1.4
ARU eSS SS 14 55 58.9 -1.2
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.9
ARU Arti 80.25 329 eP P 14 40 43.6 -1.8
comp=Z,19nm,1.3s,mb4.9
QRN Al-Qurain 81.16 300 eP P 14 40 49.8 -0.6
QRN AMb AMB 14 40 51.5
comp=Z,82nm,0.9s,mb5.7
RDF Al-Radifah 81.51 300 eP P 14 40 51.9 -0.3
RDF AMb AMB 14 40 53.7
comp=Z,40nm,0.9s,mb5.3
MIB Mutribah 81.81 300 eP P 14 40 53.3 -0.5
MIB AMb AMB 14 40 55.4
comp=Z,74nm,1.0s,mb5.5
NAY Al-Naaiem 81.82 300 eP P 14 40 53.3 -0.5
NAY AMb AMB 14 40 55.2
comp=Z,34nm,0.9s,mb5.3
RST Umm Al-Ruwaisa 82.06 300 eP P 14 40 54.6 -0.5
RST AMb AMB 14 40 55.8
comp=Z,107nm,0.6s,mb5.9
ZEI Tsey 86.31 313 eP P 14 41 16.1 -0.6
ZEI pmax pmax
comp=Z,14nm,0.5s,mb5.5

QSPA South Pole Qui 87.09 180 eP P 14 41 19.0 -1.5
comp=Z,12nm,1.0s,mb5.1
KIV Kislovodsk 87.33 314 eP P 14 41 21.1 -0.6
KIV pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
IMA2 Indian Mountai 88.56 24 eP P 14 41 27.6 0.0
KMBO Kilima Mbogo 88.95 269 P P **14 41 31.0 +1.6**
comp=Z,4.6nm,0.9s,mb4.8,baz=68,slow=7.5,SNR=8.8
KMBO LR LR 15 17 24.1
comp=Z,58nm,19.9s,MS4.0,baz=93,slow=33
MALT Malatya 90.05 308 eP P 14 41 35.0 +0.5
MALT pmax pmax
comp=Z,13nm,1.4s,mb5.1
MALT Malatya 90.05 308 eP P 14 41 35.0 +0.5
comp=Z,13nm,1.4s,mb5.1
VRSR Storozhevoye 90.36 321 eP P 14 41 34.8 -1.2
VRSR pmax pmax
comp=E,9.0nm,0.9s
VRSR pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
VRSR pmax pmax
comp=N,4.0nm,0.8s
KLMR Klimovskoe 90.88 331 eP P 14 41 34.8 -3.6
KLMR pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
ANN Anapa 91.15 315 eP P 14 41 37.7 -2.0
ANN pmax pmax
comp=Z,32nm,1.0s,mb5.6
OBN Obninsk 92.14 325 eP P 14 41 43.2 -1.0
OBN pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
BR131 Keskin Array S 93.82 309 P P 14 41 50.1 -1.9
comp=Z,0.6nm,0.3s,mb4.5
BRTR Keskin Array B 93.82 309 P P **14 41 51.1 -0.8**
comp=Z,2.0nm,0.9s,mb4.5,baz=121,slow=4.6,SNR=9.3
DAWY Dawson 94.46 26 eP P 14 41 55.2 +0.3
ARCES ARCESS Array B 96.42 340 P P **14 42 01.8 -2.1**
comp=Z,2.4nm,0.8s,mb4.7,baz=94,slow=6.4,SNR=5.6
AKASG Malin Array Be 96.66 321 P P **14 42 03.0 -1.9**
comp=Z,2.0nm,0.8s,mb4.6,baz=70,slow=4.1,SNR=8.3
BOSA Boshof 98.28 241 LR LR 15 25 28.4
comp=Z,71nm,18.0s,MS4.2,baz=91,slow=35
CLL Collm 106.62 323 *e*PP PP 14 47 16.0 +1.4
CLL Collm 106.62 323 *e*PP PP 14 47 16.0 +1.4
PDAR Pinedale Array 116.54 43 PKP PKPdf 14 47 19.9 +1.3
comp=Z,0.4nm,0.4s,baz=80,slow=1.5,SNR=5.8
PDAR PKKPbc PKKPbc 14 57 56.0 +10
comp=Z,0.3nm,0.5s,baz=72,slow=2.9,SNR=3.7
MNTX Cornudas Mount 123.66 53 *e*PKPdf PKPdf 14 47 34.1 +1.8
TOA0 Torodi Ar. Sit 124.27 284 *e*PKPdf PKPdf 14 47 34.5 +1.0
TORD Torodi Ar. Bea 124.27 284 PKP PKPdf 14 47 34.4 +0.9
comp=Z,3.3nm,0.7s,baz=61,slow=1.8,SNR=20
TORD PKKPbc 14 57 21.2
comp=Z,4.3nm,1.0s,baz=291,slow=4.4,SNR=14
TORD Torodi Ar. Bea 124.27 284 PKP PKPdf 14 47 34.4 +0.9
TORD PKKPbc 14 57 21.2
SCHQ Schefferville 127.10 9 PKP PKPdf 14 47 39.2 +0.3
comp=Z,8.9nm,1.2s,baz=273,slow=16,SNR=4.1
DBIC Dimbokro 131.15 276 PKP PKPdf 14 47 48.2 +1.6
comp=Z,2.3nm,0.7s,baz=189,slow=7.6,SNR=4.1
DBIC Dimbokro 131.15 276 PKP PKPdf 14 47 48.2 +1.6
PLCA Paso Flores 133.98 162 PKP PKPdf 14 47 54.3 +2.4
comp=Z,1.7nm,0.7s,baz=214,slow=7.9,SNR=4.2
LRAL Lakeview Retre 136.76 42 *e*PKPdf PKPdf 14 47 58.9 +1.7
LVC Limon Verde 150.67 150 *e*PKPdf PKPdf 14 48 23.3 +2.0
LVC *e*PKPbc PKPbc 14 48 29.6 +2.8
CPUP Villa Florida 150.78 173 PKP PKPdf 14 48 23.3 +1.8
comp=Z,3.9nm,0.9s,baz=179,slow=1.6,SNR=5.3
CPUP PKPbc PKPbc 14 48 29.3 +2.3
comp=Z,43nm,0.9s,baz=154,slow=1.2,SNR=46
CPUP Villa Florida 150.78 173 *e*PKPdf PKPdf 14 48 23.2 +1.8
CPUP *e*PKPbc PKPbc 14 48 28.7 +1.6
NNA Nana 152.71 123 *e*PKPbc PKPbc 14 48 33.1 +1.6
LPAZ La Paz 156.25 144 PKP PKPdf 14 48 32.9 +3.5
comp=Z,4.2nm,1.0s,baz=33,slow=2.6,SNR=12
LPAZ La Paz 156.25 144 *e*PKPdf PKPdf 14 48 32.4 +3.1

MAN 21 14:36:57.8, 943N×12240E, h20km, mb2.8, ML4.2, MS2.1, 3C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.83**	**96**⇑	*i*P	Pb	14 37 13.0	-0.5
SNPH				*i* S	Sb	14 37 25.0	+0.8
GUIM	**Jordan**	**1.20**	**9**	*e*P	Pn	14 37 18.6	-0.9
DCPH	**Dipolog City**	**1.26**	**132**⇑	*e*P	Pn	14 37 19.6	-0.7
DCPH				*i* S	Sn	14 37 37.5	+0.8
TBP	**Tagbilaran**	**1.46**	**80**	*e*P	Pn	14 37 22.8	-0.2
TBP				*e*S	Sn	14 37 42.7	+1.2
IPIL	**Ipil**	**1.64**	**174**⇓	*e*P	Pn	14 37 26.6	+1.1
IPIL				*e*S	Sn	14 37 46.1	0.0
IPIL	**Ipil**	**1.64**	**174**	*e*P	Pn	14 37 26.5	+1.0
IPIL				*e*S	Sn	14 37 45.9	-0.2
LLP	**Lapu-Lapu**	**1.77**	**60**⇑	*e*P	Pn	14 37 27.1	-0.2
LLP				*e*S	Sn	14 37 48.4	-0.9
PAGZ	**Pagadian**	**1.85**	**148**	*e*P	Pn	14 37 31.2	+2.9
CUYO	**Cuyo Island**	**1.96**	**316**	*e*P	Pn	14 37 30.7	+0.9
MSLP	**Maasin**	**2.52**	**74**	*e*P	Pn	14 37 34.2	-3.4
BUSP	**Coron**	**3.35**	**320**	*e*P	Pn	14 37 49.7	+0.7

*NEIC **21** 14:44:49.2, 1597N×9675W, h82km, MD4.0(MEX), After MEX.*

MEX 21 14:44:49.7±0.5, 1594N×9689W, h5km±8km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.77**	**102**	*i*P	Pg	14 45 03.0	-1.5
HUIG				*i* S	Sg	14 45 13.8	-0.7
HUIG	**Huatulco**	**0.77**	**102**	*i*P	Pg	14 45 02.9	-1.6
HUIG				*i* S	Sg	14 45 14.4	-0.1
VHO	**Vista Hermosa**	**1.14**	**8**	*i*P	Pg	14 45 08.4	-3.2
VHO				*i* S	Sg	14 45 23.2	-3.2
OXX	**Oaxaca**	**1.15**	**8**	*i*P	Pg	14 45 09.0	-2.7
OXX				*i* S	Sg	14 45 23.5	-3.1
UTMO	**Huajuapan**	**2.08**	**335**	*e*P	Pn	14 45 23.1	-2.0
UTMO				*i* S	Sn	14 45 47.6	-3.7
CMIG	**Matias Romero**	**2.24**	**59**	*e*P	Pn	14 45 23.7	-3.7
CMIG				*i* S	Sn	14 45 51.0	-4.4
CMIG	**Matias Romero**	**2.24**	**59**	*e*P	Pn	14 45 22.4	-5.0
CMIG				*i* S	Sn	14 45 45.6	-10
TPIG	**Tehuac#an**	**2.51**	**350**	*i*P	Pn	14 45 27.2	-3.9
TPIG				*e*S	Sn	14 45 59.0	-3.0
ACX	**Acapulco**	**3.05**	**288**	*e*P	Pn	14 45 38.5	0.0
MEIG	**Mezcala**	**3.28**	**308**	*i*P	Pn	14 45 39.4	-2.3
MEIG				*i* S	Sn	14 46 16.8	-4.3
PPM	**Popocatepetl**	**3.53**	**332**	*i*S	Sn	14 46 24.1	-3.1
PPM	**Popocatepetl**	**3.53**	**332**	*i*P	Pn	14 45 52.1	+7.0
PPM				*i* S	Sn	14 46 19.5	-7.7

*MDD **21** 15:05:08.5±1.8, 3772N×946W, h37km±29km, mb3.7/6, Error ellipse: s-maj=21.1km s-min=11.0km az=44.0, PRXIMO*

*IGIL **21** 15:05:08.0, 3790N×929W, h0km, ML1.6*

INMG 21 15:05:08.7±1.1, 3770N×946W, h27km±5km, ML1.7, Error ellipse: s-maj=7.0km s-min=2.9km az=59.0, Portugal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	**Sao Teotonio**	**0.60**	**105**	*e*Pg	Pb	15 05 28.1	-0.6
PTEO				*e*Sg	Sb	15 05 28.3	-0.5
PTEO							
	16nm,0.2s						
MORF	**Marmelete**	**0.75**	**122**	*e*P	Pb	15 05 22.2	-1.0
MORF				*e*S	Sb	15 05 32.0	-1.1
MORF				*e*S	Sb	15 05 32.1	-1.0
MORF				AML	AML	15 05 33.0	
	comp=N,19nm,0.1s						
MORF	**Marmelete**	**0.75**	**122**	*e*P	Pb	15 05 22.2	-1.0
MORF				*e*S	Sb	15 05 32.1	-1.0
PMAFR	**Mafra**	**1.26**	**6**	*e*P	Pn	15 05 29.4	-1.1
PMAFR				*e*S	Sn	15 05 43.9	-2.6
PBEJ	**Beja**	**1.30**	**75**	*e*S	Sn	15 05 45.7	-1.8
EGRO	**El Granado**	**1.57**	**96**	P	Pn	15 05 33.4	-1.4
	comp=N,1.2nm,0.1s,SNR=7.9						
EGRO				S	Sn	15 05 52.3	-2.0
	comp=N,2.2nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**1.87**	**51**	*e*P	Pn	15 05 38.3	-0.6
PESTR				*e*S	Sn	15 05 58.9	-2.7
EBAD	**Badajoz**	**2.19**	**61**	P	Pn	15 05 42.5	-0.8
	comp=N,0.6nm,0.1s,SNR=7.9						
EBAD				S	Sn	15 06 06.5	-3.0
	comp=N,3.5nm,0.1s,SNR=6.3						
EMIN	**Mina Concepcio**	**2.21**	**87**	P	Pn	15 05 42.1	-1.4
	comp=N,0.8nm,0.1s,SNR=7.9						
EMIN				S	Sn	15 06 06.3	-3.6
	comp=N,0.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.88**	**82**	P	Pn	15 06 05.3	-1.3
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	15 06 47.6	-3.6
	comp=N,0.8nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**4.29**	**14**	P	Pn	15 06 10.4	-1.9
	comp=N,0.4nm,0.0s,SNR=7.9						
ELOB				S	Sn	15 06 55.4	-6.0
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**4.72**	**25**	P	Pn	15 06 16.5	-1.6
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAL				S	Sn	15 07 05.7	-6.3
	comp=N,0.3nm,0.1s,SNR=7.9						

CASC 21 15:19:07.0±3.2, 1061N×8623W, h30km, MD3.7, ML2.9, 4C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRZC	**La Cruz**	**0.71**	**61**⇑	*e*P	Pb	15 19 19.8	-1.1
RIN3	**Volcan Rincon**	**0.85**	**78**⇑	*e*P	Pn	15 19 21.1	-1.8
LIM1	**Limonal**	**0.96**	**84**⇑	*i*P	Pn	15 19 22.4	-2.0
LIM1				*e*S	Sn	15 19 38.5	+1.5
MADN	**Villa Maderas**	**1.05**	**40**⇑	*e*P	Pn	15 19 26.5	+0.8
CONN	**Concepcion**	**1.12**	**32**	*e*P	Pn	15 19 26.8	+0.2
TICN	**Ticuantepe**	**1.42**	**360**	*e*P	Pn	15 19 31.5	+0.8
CAO	**Cobano**	**1.43**	**129**	*e*P	Pn	15 19 29.5	-1.3
CAO				*e*S	Sn	15 19 49.9	+1.3
COPN	**Copaltepe**	**1.60**	**347**	*e*P	Pn	15 19 33.8	+0.5
APYN	**Apoyeque**	**1.62**	**356**	*e*P	Pn	15 19 34.4	+0.9
APYN				*e*S	Sn	15 19 55.1	+1.7
APYN				*i*		15 20 06.5	
	comp=Z,160nm,0.4s						
EPA	**Esparza**	**1.72**	**111**⇓	*e*P	Pn	15 19 35.4	+0.5
CGA2	**Cerro Gallo 2**	**1.83**	**109**	*e*P	Pn	15 19 38.6	+2.2
LEON	**Leon**	**1.91**	**340**	*e*P	Pn	15 19 37.8	+0.3
LEON				*e*S	Sn	15 20 01.7	+1.1
LCR2	**La Lucha 2**	**2.35**	**111**	*e*P	Pn	15 19 45.0	+1.5
BUS	**Buena Vista**	**2.65**	**113**	*e*P	Pn	15 19 50.9	+3.3

PRE 21 15:29:47.8±1.0, 2206S×3313E, h5km, ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**2.89**	**264**	*e*P	Pn	15 30 35.5	+1.0
MSNA				*e*S	Sn	15 31 09.5	-0.1
MSNA				AML	AML	15 31 26.9	
	comp=Z,116nm,0.3s						
LBTB	**Lobatse**	**7.51**	**245**	*e*P	Pn	15 31 38.7	+0.7
LBTB				*e*S	Sn	15 33 01.0	-2.5
LBTB				AML	AML	15 33 59.4	
	comp=Z,19nm,0.7s						
BOSA	**Boshof**	**9.66**	**226**	*e*P	Pn	15 32 09.1	+1.7
BOSA				*e*S	Sn	15 33 51.5	-4.8
BOSA				AML	AML	15 35 21.0	
	comp=Z,8.1nm,0.8s						

IDC 21 17:02:37.8±2.6, 1042S×10865E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.6/17, mbtmp3.6/6, ML3.4/1, Error ellipse: s-maj=106.4km s-min=20.5km az=52.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.14**	**117**	P	Pn	17 06 53.2	+2.1
	0.1nm,0.3s,baz=293,slow=12,SNR=9.1						
WRA	**Warramunga Arr**	**26.50**	**114**	P	P	17 08 17.0	+0.2
	0.7nm,1.0s,baz=286,slow=11,SNR=5.9						
ASAR	**Alice Springs**	**27.44**	**122**	P	P	17 08 26.8	+1.5
	0.2nm,0.5s,baz=298,slow=9.7,SNR=9.6						
STKA	**Stephens Creek**	**37.18**	**130**	P	P	17 09 49.0	-1.5
	3.5nm,1.0s,baz=286,slow=7.4,SNR=2.5						
SONM	**Songino Array**	**58.03**	**358**	P	P	17 12 32.6	+0.2
	0.1nm,0.5s,baz=187,slow=8.6,SNR=2.4						
MKAR	**Makanchi Array**	**61.63**	**340**	P	P	17 12 57.4	+0.1
	0.4nm,0.3s,baz=134,slow=6.9,SNR=4.7						

PRE 21 17:08:55.6±0.5, 2102S×3378E, h5km, ML4.5, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**3.73**	**249**	*e*P	Pn	17 09 54.8	+1.0
MSNA				*e*S	Sn	17 10 38.2	+0.1
MSNA				AML	AML	17 10 55.2	
	comp=Z,372nm,0.4s						
POGA	**Pongola**	**6.62**	**197**	*e*P	Pn	17 10 33.9	+0.4
POGA				*e*S	Sn	17 11 45.3	-4.1
POGA				AML	AML	17 12 37.6	
	comp=Z,79nm,0.7s						
SLR	**Silverton**	**6.89**	**226**	*e*P	Pn	17 10 38.3	+1.1
SLR				*e*S	Sn	17 11 53.5	-2.5
SLR				AML	AML	17 12 36.1	
	comp=Z,136nm,0.8s						
KSR	**Koster**	**7.94**	**231**	*e*P	Pn	17 10 53.1	+1.5
KSR				*e*S	Sn	17 12 18.6	-3.1
KSR				AML	AML	17 13 09.7	
	comp=Z,52nm,0.6s						
SWZ	**Schweizer**	**9.85**	**230**	*e*S	Sn	17 13 04.2	-4.6
SWZ				AML	AML	17 14 11.3	
	comp=Z,34nm,0.5s						

MAN 21 17:34:20.0, 1363N×12063E, h122km, mb2.0, ML3.7, MS4.5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.34**	**113**	*e*P	Pn	17 34 39.0	+1.6
LUBP	**Lubang**	**0.39**	**285**	*e*P	Pn	17 34 39.2	+1.7
LUBP				*e*S	Sn	17 34 53.6	+2.8
TGY	**Tagaytay City**	**0.55**	**32**⇓	*e*P	Pn	17 34 42.4	+3.9
TGY				*e*S	Sn	17 34 58.8	+6.3
BOAC	**Boac**	**1.19**	**98**	*e*P	Pn	17 34 44.0	-0.1
POLP	**Polilio Island**	**1.67**	**49**	*e*P	Pn	17 34 51.2	+1.6
BUSP	**Coron**	**1.68**	**195**	*e*P	Pn	17 34 50.9	+1.2
OTRP	**Odiongan**	**1.85**	**133**	*e*P	Pn	17 34 51.6	-0.2
AUQP	**San Andres**	**2.01**	**99**	*e*P	Pn	17 34 55.7	+2.0
SCZP	**Santa Cruz**	**2.24**	**342**	*e*P	Pn	17 34 57.0	+0.4
BALP	**Baler**	**2.29**	**23**	*e*P	Pn	17 34 58.3	+1.2
ENPP	**El Nido**	**2.69**	**206**	*e*P	Pn	17 35 03.5	+1.2
BOLP	**Bolinao**	**2.82**	**346**	*e*P	Pn	17 35 04.7	+0.7
CAUP	**Cauayan**	**3.49**	**19**	*e*P	Pn	17 35 13.8	+1.0
APYP	**Conner**	**4.25**	**8**	*e*P	Pn	17 35 23.6	+0.8

IDC 21 17:49:00.2±59.0, 1557S×17262W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/15, mbtmp4.0/3, Error ellipse: s-maj=1146.0km s-min=185.0km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.60**	**240**	P	P	17 57 14.6	+0.5
	1.1nm,0.6s,baz=78,slow=9.3,SNR=4.9						
WRA	**Warramunga Arr**	**50.53**	**257**	P	P	17 58 00.5	+0.3
	0.3nm,0.3s,baz=95,slow=7.1,SNR=22						
ASAR	**Alice Springs**	**50.77**	**252**	P	P	17 58 02.3	+0.3
	4.6nm,0.5s,baz=89,slow=7.8,SNR=236						

*ISCJB **21** 18:01:18.8±0.5, 3499S×7109W×0.10, h99km±4km, mb3.4/2, Error ellipse: s-maj=13.8km s-min=4.3km az=32.9*

*NEIC **21** 18:01:18.8, 3497S×7109W, h100km, mb3.8/2, After GUC.*

*GUC **21** 18:01:18.8±0.8, 3497S×7109W, h100km±4km, MD3.7, ML3.8*

*IDC **21** 18:01:20.6±3.7, 3514S×7151W, h107km±35km, mb3.3/2, mb1 3.4/4, mb1mx3.3/15, mbtmp3.6/4, Error ellipse: s-maj=60.0km s-min=31.3km az=92.0*

ISC 21 18:01:19.6±0.5, 3499S×7107W×009, h95km±5km, n40, σ0s53/66, mb3.4/2, 8C-20D, Near coast of central Chile

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

NICH Los Niches 0.13 266 ⇓iP Pn 18 01 32.9 0.0
NICH iS Sn 18 01 43.5 +0.6
TALC Talca 0.61 229 ⇓iP Pn 18 01 35.7 0.0
TALC iS Sn 18 01 48.2 +0.5
TALC AML AML 18 01 48.9
comp=N,12μm,0.1s
TALC Talca 0.61 229 ⇓iP Pn 18 01 35.7 0.0
TALC iS Sn 18 01 48.2 +0.5
LNCH Linares 0.96 207 AML AML 18 01 57.5
comp=N,5μm,0.5s
LNV Longovilo 1.07 345 ⇑iP Pn 18 01 40.3 -0.1
LNV iS Sn 18 01 56.1 0.0
CHCH Chadas Angostu 1.11 18 ⇓iP Pn 18 01 40.5 -0.3
CHCH iS Sn 18 01 57.4 +0.5
TACH Talagante 1.34 5 ⇓iP Pn 18 01 43.3 -0.2
TACH iS Sn 18 02 01.9 +0.2
PCH Pirque 1.44 19 ⇓iP Pn 18 01 44.7 -0.1
PCH iS Sn 18 02 04.4 +0.5
ANTU Antumapu 1.47 14 ⇓iP Pn 18 01 45.1 0.0
ANTU iS Sn 18 02 04.3 -0.1
ANTU AML AML 18 02 06.3
comp=N,2μm,0.4s
ANTU Antumapu 1.47 14 ⇓iP Pn 18 01 45.1 0.0
ANTU iS Sn 18 02 04.3 -0.1
SJCH San Jose de Ma 1.47 24 ⇓iP Pn 18 01 44.9 -0.3
SJCH iS Sn 18 02 05.2 +0.6
SJCH AML AML 18 02 06.9
comp=E,1μm,0.4s
SJCH San Jose de Ma 1.47 24 ⇓iP Pn 18 01 44.9 -0.3
SJCH iS Sn 18 02 05.2 +0.6
RCDM Rinconada Maip 1.52 8 ⇓iP Pn 18 01 45.4 -0.3
RCDM iS Sn 18 02 05.2 -0.3
RCDM AML AML 18 02 07.0
comp=E,2μm,0.1s
RCDM Rinconada Maip 1.52 8 ⇓iP Pn 18 01 45.4 -0.3
RCDM iS Sn 18 02 05.2 -0.3
LCCH Las Cruces 1.57 345 ⇓iP Pn 18 01 46.0 -0.4
SAN Santiago 1.57 13 eP Pn 18 01 45.9 -0.5
SAN iS Sn 18 02 07.0 +0.2
SAN AML AML 18 02 10.4
comp=N,963nm,0.4s
SAN Santiago 1.57 13 eP Pn 18 01 45.9 -0.5
SAN iS Sn 18 02 07.0 +0.2
FSR Penalolen 1.57 17 ⇑iP Pn 18 01 46.8 +0.3
FSR iS Sn 18 02 07.5 +0.6
FSR AML AML 18 02 08.1
comp=E,1μm,0.2s
FSR Penalolen 1.57 17 ⇑iP Pn 18 01 46.8 +0.3
FSR iS Sn 18 02 07.5 +0.6
STL Santa Lucia 1.59 13 ⇓iP Pn 18 01 45.8 -0.9
STL eS Sn 18 02 07.0 -0.2
STL AML AML 18 02 08.8
comp=N,373nm,0.4s
DSCH Colegio Aleman 1.64 15 AML AML 18 02 11.9
comp=E,108nm,0.1s
CLCH Cerro Calan 1.65 16 ⇑iP Pn 18 01 47.3 -0.1
CLCH iS Sn 18 02 08.9 +0.3
CLCH AML AML 18 02 11.2
comp=E,1μm,0.5s
CLCH AML AML 18 02 11.8
comp=E,2μm,0.4s
FCH Farellones 1.78 21 ⇑iP Pn 18 01 49.1 0.0
FCH iS Sn 18 02 11.9 +0.4
FCH AML AML 18 02 14.3
comp=E,1μm,0.3s
CCHI Chillan 1.80 207 ⇑iP Pn 18 01 49.3 0.0
CCHI iS Sn 18 02 12.1 +0.1
CCHI AML AML 18 02 13.3
comp=E,969nm,0.7s
CCHI AML AML 18 02 13.5
comp=E,2μm,0.6s
CCHI Chillan 1.80 207 ⇑iP Pn 18 01 49.3 0.0
CCHI iS Sn 18 02 12.1 +0.1
PEL Peldehue 1.87 10 ⇓iP Pn 18 01 50.3 0.0
PEL iS Sn 18 02 13.8 +0.2
PEL AML AML 18 02 18.0
comp=N,2μm,0.3s
PEL Peldehue 1.87 10 ⇓iP Pn 18 01 50.3 0.0
PEL iS Sn 18 02 13.8 +0.2
ROCH El Roble 2.02 1 ⇑iP Pn 18 01 52.2 +0.1
ROCH eS Sn 18 02 17.1 +0.1
JACH Jahuel 2.34 10 ⇓iP Pn 18 01 55.9 -0.4
JACH eS Sn 18 02 24.2 -0.3
PTCH Petorca 2.72 2 ⇓iP Pn 18 02 01.2 -0.2
PTCH iS Sn 18 02 33.6 -0.1
PTCH AML AML 18 02 34.1
comp=N,1μm,0.2s
PTCH Petorca 2.72 2 ⇓iP Pn 18 02 01.2 -0.2
PTCH iS Sn 18 02 33.6 -0.1
MDZ Mendoza 2.80 42 eP Pn 18 02 08.2 +5.8
MDZ e 18 02 30.2
CHNG Los Chungos 3.12 353 ⇓iP Pn 18 02 06.2 -0.6
CHNG iS Sn 18 02 42.1 -1.1
CHNG AML AML 18 02 52.8
comp=E,152nm,0.4s
PLCA Paso Flores 5.75 176 P Pn 18 02 42.1 -0.2
comp=E,1.5nm,0.3s,baz=343,slow=12,SNR=45
TRQA Tornquist 7.93 115 eP Pn 18 03 10.4 -1.6
comp=E,12nm,1.0s
LPAZ La Paz 18.81 9 P Pn 18 05 34.2 +1.0
comp=E,0.1nm,0.3s,baz=175,slow=11,SNR=4.4
LPAZ La Paz 18.81 9 eP Pn 18 05 34.1 +0.9
comp=E,1.2nm,0.9s
TORD Torodi Ar. Bea 83.80 69 P P 18 13 40.4 +2.0
comp=E,0.3nm,0.5s,mb3.4,baz=239,slow=3.8,SNR=4.7
PDAR Pinedale Array 85.01 333 P P 18 13 44.6 +0.2
comp=E,0.4nm,0.8s,mb3.4,baz=101,slow=3.8,SNR=4.0
WRA Warramunga Arr 120.27 208 PKP PKPdf 18 19 58.3 -1.3
comp=E,0.2nm,0.3s,baz=154,slow=1.9,SNR=5.3

*ISCJB **21** 18:08:13.3±0.3,3868S±003×17584E±005,h174km±2km, mb3.8/6, Error ellipse: s-maj=7.6km s-min=4.2km az=63.3*
*IDC **21** 18:08:13.3±0.6,3877S×17588E,h162km±6km,mb3.6/4, mb1 3.9/5,mb1mx3.6/12,mbtmp4.2/5, Error ellipse: s-maj=19.5km s-min=13.0km az=143.0*
*NEIC **21** 18:08:14.3,3854S×17584E,h171km,MG5.2(WEL), After WEL.*
NEIC Felt in Marton.
*WEL **21** 18:08:15.7±0.2,3856S×17584E,h159km±1km,ML5.4/25, Error ellipse: s-maj=1.5km s-min=1.2km az=90.0*
WEL Felt from Gisborne to Wellington, maximum reported intensity MM 4.

ISC 21 18:08:14.0±0.3, 3868S±003×17586E±005, h171km±2km, n154,σ1°23/167, mb3.8/6, 33C-12D, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHTZ	Whakaora	0.08	83	P	Pn	18 08 37.4	+0.7
WHTZ	Whakaora	0.08	83	PN	Pn	18 08 37.4	+0.7
WATZ	Wairara	0.10	252	⇑P	Pn	18 08 37.2	+0.5
WATZ	Wairara	0.10	252	⇑PN	Pn	18 08 37.2	+0.5
RATZ	Rangitukua	0.20	200	⇑P	Pn	18 08 37.4	+0.5
RATZ	Rangitukua	0.20	200	⇑PN	Pn	18 08 37.4	+0.5
HATZ	Hinemaiaia	0.28	140	P	Pn	18 08 37.6	+0.6
HATZ	Hinemaiaia	0.28	140	PN	Pn	18 08 37.6	+0.6
HATZ				SN	Sn	18 08 53.7	-0.9
RITZ	Rihia Road	0.30	180	P	Pn	18 08 38.0	+0.9
RITZ	Rihia Road	0.30	180	PN	Pn	18 08 38.0	+0.9
KATZ	Kakaramea	0.33	203	P	Pn	18 08 38.1	+1.0
KATZ	Kakaramea	0.33	203	PN	Pn	18 08 38.0	+0.8
PATZ	Paeroa	0.43	47	⇑P	Pn	18 08 38.0	+0.5
PATZ	Paeroa	0.43	47	⇑PN	Pn	18 08 38.0	+0.5
KRVZ	Karewarewa	0.45	202	⇑PN	Pn	18 08 38.4	+0.8
WTVZ	West Tongariro	0.49	206	⇑P	Pn	18 08 38.7	+1.0
WTVZ	West Tongariro	0.49	206	⇑PN	Pn	18 08 38.7	+0.9
WTVZ				SN	Sn	18 08 55.3	-0.6
OTVZ	Oturere	0.51	197	⇑PN	Pn	18 08 38.9	+1.1
TWVZ	Taurewa	0.51	220	⇑P	Pn	18 08 38.7	+0.9
TWVZ	Taurewa	0.51	220	⇑PN	Pn	18 08 38.7	+0.8
TWVZ				SN	Sn	18 08 55.6	-0.5
NGZ	Ngauruhoe	0.54	202	⇑PN	Pn	18 08 38.8	+0.8
WPVZ	Whakapapa	0.58	205	P	Pn	18 08 39.3	+1.1
WPVZ	Whakapapa	0.58	205	PN	Pn	18 08 39.3	+1.1
TUVZ	Tukino	0.61	195	⇑PN	Pn	18 08 39.6	+1.3
TUVZ				SN	Sn	18 08 57.5	+0.6
FWVZ	Far West T-bar	0.63	202	P	Pn	18 08 39.4	+1.0
FWVZ	Far West T-bar	0.63	202	PN	Pn	18 08 39.4	+1.0
DRZ	Dome Shelter	0.64	201	P	Pn	18 08 39.8	+1.3
DRZ	Dome Shelter	0.64	201	PN	Pn	18 08 39.6	+1.2
DRZ				SN	Sn	18 08 58.0	+0.8
TRVZ	Turoa	0.67	201	PN	Pn	18 08 40.1	+1.5
TRVZ				SN	Sn	18 08 58.4	+0.9
TAZ	Tarawera	0.68	49	P	Pn	18 08 38.1	-0.6
TAZ	Tarawera	0.68	49	PN	Pn	18 08 38.1	-0.5
WNVZ	Wahianoa	0.68	197	⇑P	Pn	18 08 40.1	+1.4
WNVZ	Wahianoa	0.68	197	⇑PN	Pn	18 08 40.1	+1.4
BKZ	Black Stump Fm	0.69	135	⇓P	Pn	18 08 40.0	+1.2
BKZ	Black Stump Fm	0.69	135	⇓PN	Pn	18 08 40.0	+1.2
BKZ				SN	Sn	18 08 57.5	-0.3
KARZ	Kaharoa	0.72	25	⇓P	Pn	18 08 38.7	-0.2
KARZ	Kaharoa	0.72	25	⇓PN	Pn	18 08 38.7	-0.3
KARZ				SN	Sn	18 08 56.0	-2.0
PKVZ	Pokaka	0.73	213	⇑PN	Pn	18 08 40.1	+1.1
PKVZ				SN	Sn	18 08 58.2	+0.1
MOVZ	Moawhango	0.73	186	⇑P	Pn	18 08 40.1	+1.1
MOVZ	Moawhango	0.73	186	⇑PN	Pn	18 08 40.1	+1.1
MOVZ				SN	Sn	18 08 56.7	-1.5
MTVZ	Mangateitei	0.77	203	PN	Pn	18 08 40.5	+1.3
MTVZ				SN	Sn	18 08 59.2	+0.7
HIZ	Hauiti	0.80	281	⇓P	Pn	18 08 39.4	0.0
HIZ	Hauiti	0.80	281	⇑PN	Pn	18 08 39.4	0.0
HIZ				SN	Sn	18 08 56.8	-2.1
EDRZ	Edgecumbe	0.89	51	P	Pn	18 08 39.9	-0.2
EDRZ	Edgecumbe	0.89	51	PN	Pn	18 08 39.9	-0.2
VRZ	Vera Road	0.97	242	⇑P	Pn	18 08 41.3	+0.7
VRZ	Vera Road	0.97	242	⇑PN	Pn	18 08 41.3	+0.7
VRZ				SN	Sn	18 09 01.2	+0.2
TOZ	Tahuroa Road	0.99	343	P	Pn	18 08 40.3	-0.4
TOZ	Tahuroa Road	0.99	343	PN	Pn	18 08 40.3	-0.4
TOZ				SN	Sn	18 08 59.0	-2.2
TGRZ	Tauranga	1.00	19	⇓P	Pn	18 08 40.4	-0.4
TGRZ				S	Sn	18 09 00.2	-1.2
TGRZ	Tauranga	1.00	19	⇓PN	Pn	18 08 40.4	-0.4
TGRZ				SN	Sn	18 09 00.2	-1.2
URZ	Urewera	1.07	67	P	Pn	18 08 41.2	-0.1
576nm,0.3s,baz=253,slow=6.0,SNR=3692							
URZ				S	Sn	18 09 00.0	-2.3
URZ	Urewera	1.07	67	P	Pn	18 08 41.1	-0.3
URZ	Urewera	1.07	67	PN	Pn	18 08 41.1	-0.3
URZ				SN	Sn	18 09 00.2	-2.1
WAZ	Wanganui	1.27	212	⇑P	Pn	18 08 44.3	+1.2
WAZ	Wanganui	1.27	212	⇑PN	Pn	18 08 44.3	+1.2
WAZ				SN	Sn	18 09 06.5	+1.0
RAEZ	Rainy Point	1.30	241	P	Pn	18 08 44.3	+1.0
RAEZ	Rainy Point	1.30	241	PN	Pn	18 08 44.3	+1.0
MWZ	Matawai	1.35	76	⇓P	Pn	18 08 44.3	+0.5
MWZ	Matawai	1.35	76	⇓PN	Pn	18 08 44.3	+0.4
TSZ	Takapari Road	1.38	177	⇑P	Pn	18 08 45.8	+1.7
TSZ	Takapari Road	1.38	177	⇑PN	Pn	18 08 45.8	+1.7
KNZ	Kokohu	1.46	104	PN	Pn	18 08 46.2	+1.4
NEZ	North Egmont	1.50	246	P	Pn	18 08 46.3	+1.1
NEZ	North Egmont	1.50	246	PN	Pn	18 08 46.3	+1.1
PKE	Pukeiti	1.55	250	P	Pn	18 08 46.5	+0.8
PKE	Pukeiti	1.55	250	PN	Pn	18 08 46.5	+0.8
WIZ	White Island	1.55	43	PN	Pn	18 08 45.2	-0.5
PXZ	Pawanui	1.56	150	⇑PN	Pn	18 08 47.8	+1.9
NRZ	Ngariki Road	1.64	246	P	Pn	18 08 46.9	+0.3
NRZ	Ngariki Road	1.64	246	PN	Pn	18 08 46.9	+0.3
KUZ	Kuaotunu	1.93	357	P	Pn	18 08 48.4	-1.3
KUZ	Kuaotunu	1.93	357	PN	Pn	18 08 48.4	-1.3
PUZ	Puketiti	1.98	73	⇓P	Pn	18 08 50.4	+0.2
PUZ				S	Sn	18 09 16.0	-2.2
PUZ	Puketiti	1.98	73	⇓PN	Pn	18 08 50.4	+0.2
PUZ				SN	Sn	18 09 16.0	-2.2
MRZ	Mangatainoka R	2.00	186	⇑P	Pn	18 08 51.4	+1.0
MRZ	Mangatainoka R	2.00	186	⇑PN	Pn	18 08 51.4	+1.0
BFZ	Birch Farm	2.02	172	PN	Pn	18 08 52.1	+1.4
TIWZ	Tintock	2.10	179	PN	Pn	18 08 52.8	+1.2
MXZ	Matakaoa Point	2.23	61	P	Pn	18 08 51.4	-1.6
MXZ				S	Sn	18 09 21.7	-1.5
MXZ	Matakaoa Point	2.23	61	PN	Pn	18 08 51.4	-1.6
MXZ				SN	Sn	18 09 21.7	-1.5
KIW	Kapiti Island	2.30	198	P	Pn	18 08 54.4	+0.5
KIW	Kapiti Island	2.30	198	PN	Pn	18 08 54.4	+0.5
MTW	Mount Morrison	2.49	186	P	Pn	18 08 56.5	+0.4
MTW	Mount Morrison	2.49	186	PN	Pn	18 08 56.5	+0.3
CAW	Cannon Point	2.50	194	P	Pn	18 08 56.7	+0.5
CAW	Cannon Point	2.50	194	PN	Pn	18 08 56.7	+0.5
DUWZ	D'Urville Isla	2.60	215	PN	Pn	18 08 56.9	-0.4
MRW	Makara Radio	2.70	199	P	Pn	18 08 58.7	+0.1
MRW	Makara Radio	2.70	199	PN	Pn	18 08 58.7	+0.1
PAWZ	Paruwai Farm	2.72	187	P	Pn	18 08 59.1	+0.2
PAWZ	Paruwai Farm	2.72	187	PN	Pn	18 08 59.1	+0.2
WEL	Wellington	2.74	197	PN	Pn	18 08 59.2	+0.2
MSWZ	Moikau Station	2.77	190	⇑P	Pn	18 08 59.7	+0.2
MSWZ	Moikau Station	2.77	190	⇑PN	Pn	18 08 59.7	+0.2
SNZO	South Karori	2.77	198	eP	Pn	18 08 59.5	+0.1
SNZO				eS	Sn	18 09 33.0	-1.8
SNZO	South Karori	2.77	198	PN	Pn	18 08 59.1	-0.4
TCW	Tory Channel	2.81	205	PN	Pn	18 08 59.8	-0.1
BHW	Baring Head	2.83	195	PN	Pn	18 09 00.2	0.0
TUWZ	Tuamarina	3.12	208	PN	Pn	18 09 03.3	-0.4
NNZ	Nelson	3.17	216	⇓P	Pn	18 09 03.9	-0.5
NNZ	Nelson	3.17	216	⇓PN	Pn	18 09 03.9	-0.5
BSWZ	Blackbirch Sta	3.39	206	P	Pn	18 09 06.9	-0.2
BSWZ	Blackbirch Sta	3.39	206	PN	Pn	18 09 06.9	-0.3
THZ	Tophouse	3.82	215	eP	Pn	18 09 11.3	-1.3
THZ	Tophouse	3.82	215	ePN	Pn	18 09 11.3	-1.3
KHZ	Kahutara	4.13	205	P	Pn	18 09 16.1	-0.4
KHZ	Kahutara	4.13	205	PN	Pn	18 09 16.1	-0.5
DSZ	Denniston Nort	4.36	224	P	Pn	18 09 17.7	-1.8
DSZ	Denniston Nort	4.36	224	PN	Pn	18 09 17.7	-1.8
LTZ	Lake Taylor	4.92	212	eP	Pn	18 09 24.9	-1.9
LTZ	Lake Taylor	4.92	212	ePN	Pn	18 09 24.9	-1.8
CRLZ	Canterbury Las	5.47	206	eP	Pn	18 09 31.7	-2.2
CRLZ	Canterbury Las	5.47	206	ePN	Pn	18 09 31.7	-2.3
MQZ	McQueen's Vall	5.58	205	P	Pn	18 09 33.2	-2.1
MQZ	McQueen's Vall	5.58	205	PN	Pn	18 09 33.2	-2.1
WVZ	Waitaha Valley	5.86	220	ePN	Pn	18 09 35.9	-3.1
RPZ	Rata Peaks	6.20	214	P	Pn	18 09 41.9	-1.6
18nm,0.3s,baz=90,slow=0.9,SNR=88							
RPZ				S	Sn	18 10 48.9	-5.0
107nm,0.3s,baz=213,slow=22,SNR=45							
RPZ	Rata Peaks	6.20	214	ePN	Pn	18 09 41.6	-1.9
FOZ	Fox Glacier	6.75	222	ePN	Pn	18 09 45.7	-5.0
LBZ	Lake Benmore	7.12	215	ePN	Pn	18 09 53.2	-2.4
ODZ	Otahua Downs	7.46	210	ePN	Pn	18 09 57.8	-2.4
JCZ	Jackson Bay	7.59	222	ePN	Pn	18 09 57.8	-4.0
WKZ	Wanaka	7.99	218	ePN	Pn	18 10 02.9	-4.3
EAZ	Earnscleugh	8.17	215	ePN	Pn	18 10 05.9	-3.6
MSZ	Milford Sound	8.43	222	ePN	Pn	18 10 09.7	-3.2
TUZ	Tuapeka	8.61	210	ePN	Pn	18 10 13.1	-2.3
MLZ	Mavora Lakes	8.78	218	ePN	Pn	18 10 16.0	-1.5
SYZ	Scrubby Hill	9.28	210	ePN	Pn	18 10 22.7	-1.6
WHZ	Wether Hill Ro	9.29	217	eP	Pn	18 10 22.3	-2.0
DCZ	Deep Cove	9.38	221	ePN	Pn	18 10 22.6	-2.9
APZ	The Paps	9.99	213	ePN	Pn	18 10 31.2	-2.3
AS31	Alice Springs	38.55	280	⇑iP	P	18 15 21.6	+1.7
ASAR	Alice Springs	38.55	280	P	P	18 15 21.6	+1.7
1.2nm,0.3s,mb4.0,baz=115,slow=6.0,SNR=102							
ASAR				PcP	PcP	18 17 28.8	-0.2
1.4nm,0.9s,baz=140,slow=4.6,SNR=5.6							
ASAR				S	S	18 21 03.5	+0.7
0.6nm,0.8s,baz=128,slow=14,SNR=8.6							
WB2	Warramunga Arr	40.32	286	eP	P	18 15 35.9	+1.3
WRA	Warramunga Arr	40.33	286	P	P	18 15 36.1	+1.5
1.5nm,0.9s,mb3.6,baz=123,slow=8.5,SNR=25							
WRA				ScP	ScP	18 21 03.7	-3.9
0.6nm,1.0s,baz=115,slow=3.3,SNR=4.5							
CASY	Casey	45.46	211	eP	P	18 16 17.3	+1.4
1.7nm,0.7s,mb3.8							
FITZ	Fitzroy Crossi	48.05	281	P	P	18 16 38.1	+2.1
2.4nm,0.7s,mb3.9,baz=146,slow=11,SNR=12							
PLCA	Paso Flores	80.42	135	P	P	18 20 10.6	+4.1
1.7nm,0.8s,mb3.7,baz=207,slow=3.2,SNR=9.3							
MJAR	Matsushiro Arr	82.52	330	P	P	18 20 17.7	+0.1
0.8nm,0.7s,mb3.6,baz=158,slow=5.0,SNR=4.7							
MJAR	Matsushiro Arr	82.52	330	P	P	18 20 17.7	+0.1
MKAR	Makanchi Array	119.06	308	PKP	PKPdf	18 26 41.2	-1.2
0.6nm,0.5s,baz=218,slow=0.7,SNR=7.6							
MKAR	Makanchi Array	119.06	308	PKP	PKPdf	18 26 41.2	-1.2
ZAL	Zalesovo	120.70	317	PKP	PKPdf	18 26 43.8	-1.7
0.9nm,0.3s,baz=0.0,slow=1.0,SNR=2.9							
KEV	Kevo	144.75	342	ep	PKPdf	18 27 28.8	-1.5
6.2nm,0.9s							
ARCES	ARCESS Array B	145.27	342	PKPbc	PKPbc	18 27 30.6	-0.8
1.5nm,0.4s,baz=58,slow=3.7,SNR=20							
JOF	Joensuu	147.69	330	ep	PKPdf	18 27 36.8	+1.5
4.1nm,0.5s							
DBIC	Dimbokro	148.13	179	PKPbc	PKPbc	18 27 41.2	+1.7
6.4nm,0.8s,baz=154,slow=4.8,SNR=11							
DBIC	Dimbokro	148.13	179	PKPbc	PKPbc	18 27 41.2	+1.7
KAF	Kangasniemi	150.06	331	ep	PKPdf	18 27 42.6	+3.5
5.1nm,0.7s							
FINES	FINESS Array B	150.55	331	PKPbc	PKPbc	18 27 44.2	-1.2
5.0nm,0.9s,baz=104,slow=6.1,SNR=14							
BRTR	Keskin Array B	150.84	284	PKPbc	PKPbc	18 27 46.0	-0.2
3.0nm,0.8s,baz=152,slow=5.0,SNR=18							
BRTR				PKPab	PKPab	18 27 53.0	-1.0
1.1nm,0.7s,baz=132,slow=3.5,SNR=5.9							
AKASG	Malin Array Be	153.64	308	PKPbc	PKPbc	18 27 51.1	-1.2
0.1nm,0.2s,baz=67,slow=1.6,SNR=4.7							
AKASG				PKPab	PKPab	18 28 05.5	-0.3
0.1nm,0.3s,baz=58,slow=19,SNR=2.9							
TORD	Torodi Ar. Bea	154.05	193	PKPbc	PKPbc	18 27 54.0	+0.8
0.6nm,0.7s,baz=155,slow=2.2,SNR=6.9							
TORD				PKPab	PKPab	18 28 08.8	+1.4
1.7nm,0.7s,baz=158,slow=3.9,SNR=7.4							

IDC 21 18:18:08.2±12.0, 709S×12985E, h90km±144km, mb3.1/2, mb1 3.7/5, mb1mx3.5/14, mbtmp3.9/5, ML3.6/3, Error ellipse: s-maj=106.1km s-min=60.1km az=36.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.69	200	P	Pn	18 20 52.0	+0.3
0.7nm,0.3s,baz=38,slow=12,SNR=56							
FITZ				S	Sn	18 22 52.5	-7.6
1.8nm,0.3s,baz=164,slow=17,SNR=8.6							
WRA	Warramunga Arr	13.50	162	P	Pn	18 21 14.9	-0.9
0.1nm,0.3s,baz=343,slow=13,SNR=55							
WRA				S	Sn	18 23 37.7	-6.4
0.9nm,0.3s,baz=330,slow=21,SNR=6.5							
ASAR	Alice Springs	16.93	167	P	Pn	18 22 00.6	+1.3
0.7nm,0.3s,baz=343,slow=13,SNR=34							
ASAR				S		18 25 02.5	-9.3
0.2nm,0.3s,baz=320,slow=16,SNR=5.2							
SONM	Songino Array	58.48	342	P	P	18 27 55.0	+0.2
0.2nm,0.8s,baz=133,slow=6.1,SNR=2.7							
MKAR	Makanchi Array	68.22	327	P	P	18 28 59.0	0.0
0.3nm,0.3s,baz=133,slow=7.7,SNR=5.6							

*ISCJB **21** 18:36:51.0±0.4, 4221N±003×169E±003, h13km±5km, Error ellipse: s-maj=4.8km s-min=3.3km az=148.7*
*STR **21** 18:36:52.7±0.8, 4220N×175E, h5km±1km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **21** 18:36:52.4±0.2, 4219N×174E, h3km, Ml2.3/6, Error ellipse: s-maj=4.6km s-min=1.8km az=166.0*
*MDD **21** 18:36:53.0±0.2, 4222N×172E, h9km±4km, mbLg1.5/18, Error ellipse: s-maj=2.6km s-min=1.6km az=166.0, PRXIMO*

ISC 21 18:36:51.9±0.4, 4222N±003×173E±003, h14km±5km, n41, σ0°79/57, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VALF	Valcebollere	0.28	50	Pg	Pg	18 36 58.2	+0.3
VALF				Sg	Sg	18 37 03.0	+1.1
VALF	Valcebollere	0.28	50	Pg	Pg	18 36 58.2	+0.3
VALF				Lg		18 37 03.0	
CORG	Organya	0.30	273	Pg	Pg	18 36 58.1	-0.1
CORG				Lg		18 37 03.3	
14nm,0.4s							
CLLI	Llivia	0.32	35	Pg	Pg	18 36 58.7	+0.2
CLLI				Lg		18 37 03.8	
8.9nm,0.2s							
CBRU	Bruguera	0.34	78	Pg	Pg	18 36 59.4	+0.5
CBRU				Lg		18 37 05.3	
16nm,0.4s							
CSOR	Sort	0.47	290	Pg	Pg	18 37 01.2	+0.1
CSOR				Lg		18 37 08.5	
23nm,0.3s							
CARF	Carcanieres	0.57	29	Pg	Pg	18 37 03.4	+0.3
CARF				Sg	Sg	18 37 11.9	+1.2
CARF	Carcanieres	0.57	29	Pg	Pg	18 37 03.5	+0.3
CARF				Lg		18 37 12.0	
GRBF	Gourbit	0.64	347	Pg	Pg	18 37 04.5	+0.1
GRBF				Lg		18 37 13.5	
CFON	Fontmartina	0.70	130	Pg	Pg	18 37 06.1	+0.6
CFON				Lg		18 37 16.3	
14nm,0.2s							
FILF	Fillols	0.71	61	Pg	Pg	18 37 04.4	-1.3
FILF				Sg	Sg	18 37 13.5	-1.5
FILF	Fillols	0.71	61	Pg	Pg	18 37 04.4	-1.3
FILF				Lg		18 37 13.0	
CAVN	Les Avellanes	0.80	246	Pg	Pg	18 37 07.7	+0.3
CAVN				Lg		18 37 18.6	
8.5nm,0.3s							
EJON	La Jonquera	0.89	75	Pg	Pg	18 37 09.6	+0.4
2.4nm,0.2s,SNR=7.9							
EJON				Lg		18 37 22.2	
4.4nm,0.2s,SNR=7.9							
EPOB	Poblet	0.99	209	Pg	Pg	18 37 11.1	+0.1
2.4nm,0.1s,SNR=19							
EPOB				Lg		18 37 24.7	
6.5nm,0.2s,SNR=7.9							
MTLF	Montolieu	1.18	18	ePg	Pg	18 37 15.4	+0.8
MTLF				eSg	Sg	18 37 31.2	+1.2
4.4nm,0.2s							
MTLF	Montolieu	1.18	18	Pg	Pg	18 37 15.4	+0.8
MTLF				Lg		18 37 31.2	
2.2nm,0.2s							
EBIE	Bielsa	1.26	292	Pg	Pg	18 37 15.9	-0.2
4.8nm,0.2s,SNR=28							
EBIE				Lg		18 37 34.4	
2.5nm,0.3s,SNR=7.9							
EPF	Esparros	1.31	309	ePg	Pg	18 37 16.4	-0.6
EPF				eSg	Sg	18 37 34.1	+0.1
4.8nm,0.2s							
EPF	Esparros	1.31	309	Pg	Pg	18 37 16.4	-0.6
EPF				Lg		18 37 34.1	
2.4nm,0.

CAF					Pg	Pg	18 37 43.6	-0.4
CAF					Lg		18 38 17.8	
RJF	**Les Rejaudoux**	**3.09**	**357**	*e*Pn	**Pn**		**18 37 40.8**	**+0.6**
RJF				*e*Sg	**Sg**		**18 38 29.4**	**-1.8**
	2.0nm,0.2s							
RJF	**Les Rejaudoux**	**3.09**	**357**	Pn	**Pn**		**18 37 40.8**	**+0.6**
RJF				Lg			18 38 29.4	
	1.0nm,0.2s							
VIVF	**Saint-Julien-I**	**3.40**	**38**	*e*Pn	**Pn**		**18 37 44.5**	**0.0**
VIVF				*e*Sg	**Sg**		**18 38 40.2**	**-0.9**
	1.6nm,0.3s							
VIVF	**Saint-Julien-I**	**3.40**	**38**	Pn	**Pn**		**18 37 44.5**	**0.0**
VIVF				Lg			18 38 40.2	
	0.8nm,0.3s							

*IDC **21** 18:44:51.8±1.0,999N×10431W,h0km,mb4.1/5,mb1 4.4/5, mb1mx4.1/16,mbtmp4.1/5,MS3.9/13,Ms1 3.9/13, ms1mx3.8/22,Error ellipse: s-maj=57.8km s-min=21.1km az=60.0*

*ISCJB **21** 18:44:53.0±0.8,1024N±009×1039W±0.1,h10km,mb4.3/18, MS4.0/13,Error ellipse: s-maj=19.8km s-min=12.9km az=149.3*

*NEIC **21** 18:44:53.5±0.7,1008N×1040.7W,h10km,mb4.4/14,Error ellipse: s-maj=25.8km s-min=11.8km az=72.0*

ISC 21 18:44:55.0±0.8,1022N±009×1040W±0.1,h10km,n38, σ1§14/23,mb4.3/18,MS4.0/13,Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCT	**Junction City**	**20.52**	**10**	*e*P	**P**	**18 49 33.5**	**0.0**
	13nm,0.8s						
HKT	**Hockley**	**21.04**	**20**	*e*P	**P**	**18 49 40.5**	**+1.4**
	30nm,1.5s,mb4.4						
MNTX	**Cornudas Mount**	**21.41**	**357**	*e*P	**P**	**18 49 43.9**	**+0.9**
	16nm,1.0s,mb4.3						
TUC	**Tucson**	**22.86**	**345**	*e*P	**P**	**18 49 57.8**	**-0.8**
	14nm,1.4s,mb4.2						
LAZ	**Ladron**	**24.24**	**354**	*e*P	**P**	**18 50 13.6**	**+1.6**
WMOK	**Wichita Mounta**	**24.86**	**10**	*e*P	**P**	**18 50 15.6**	**-2.1**
	16nm,1.5s,mb4.3						
MIAR	**Mount Ida**	**26.01**	**20**	*e*P	**P**	**18 50 26.1**	**-2.0**
	6.5nm,0.8s,mb4.2						
WUAZ	**Wupatki**	**26.07**	**346**	*e*P	**P**	**18 50 30.0**	**+1.4**
	8.0nm,1.0s,mb4.2						
PLAL	**Pickwick Lake**	**28.60**	**28**	*e*P	**P**	**18 50 56.8**	**+5.4**
	5.5nm,0.8s,mb4.3						
ROSC	**El Rosal**	**29.85**	**98**	LR	LR	19 00 22.3	
	comp=Z,171nm,21.2s,MS3.6,baz=211,slow=31						
DAU	**Daniels Canyon**	**30.75**	**349**	*e*P	**P**	**18 51 11.1**	**+0.6**
NVAR	**Mina Array 3ea**	**30.89**	**338**	P	**P**	**18 51 12.7**	**+1.0**
	0.8nm,0.7s,mb3.7,baz=166,slow=8.2,SNR=5.3						
PDAR	**Pinedale Array**	**32.78**	**352**	P	**P**	**18 51 28.2**	**-0.1**
	2.7nm,0.9s,mb4.2,baz=169,slow=8.6,SNR=15						
PDAR				LR	LR	19 03 48.2	
	comp=Z,95nm,21.8s,MS3.5,baz=188,slow=34						
RRI2	**Red Ridge**	**33.62**	**350**	*e*P	**P**	**18 51 35.8**	**+0.3**
	5.7nm,1.0s,mb4.5						
HLID	**Hailey**	**34.44**	**347**	*e*P	**P**	**18 51 42.5**	**-0.2**
	5.3nm,1.2s,mb4.3						
DLMT	**Dillon**	**35.79**	**350**	*e*P	**P**	**18 51 55.8**	**+1.5**
	12nm,1.4s,mb4.7						
NEW	**Newport**	**39.50**	**346**	*e*P	**P**	**18 52 25.6**	**-0.1**
	8.2nm,1.0s,mb4.4						
WALA	**Waterton Lakes**	**39.59**	**350**	*e*P	**P**	**18 52 25.8**	**-0.8**
	2.9nm,0.8s,mb4.1						
ULM	**Lac du Bonnet**	**40.46**	**8**	LR	LR	19 09 15.2	
	comp=Z,111nm,20.3s,MS3.7,baz=196,slow=36						
LPAZ	**La Paz**	**44.17**	**126**	P	**P**	**18 53 04.9**	**+0.9**
	5.6nm,0.9s,mb4.3,baz=312,slow=7.7,SNR=26						
YKA	**Yellowknife Ar**	**52.75**	**354**	P	**P**	**18 54 09.6**	**-0.5**
	3.8nm,1.0s,mb4.3,baz=166,slow=7.0,SNR=5.2						
YKA				LR	LR	19 16 59.0	
	comp=Z,148nm,18.8s,MS4.0,baz=155,slow=36						
PPT	**Papeete**	**52.84**	**239**	*e*S	**S**	**19 01 39.5**	**+0.1**
	41nm,26.5s						
PPT				*e*LR	LR	19 08 57.8	
	206nm,25.8s						
PPT	**Papeete**	**52.84**	**239**	LR	LR	19 09 39.6	
	comp=Z,128nm,19.5s,MS4.0,baz=46,slow=28						
SCHQ	**Schefferville**	**53.28**	**26**	LR	LR	19 17 46.5	
	comp=Z,87nm,20.1s,MS3.8,baz=113,slow=37						
CPUP	**Villa Florida**	**58.08**	**130**	P	**P**	**18 54 48.3**	**-0.2**
	0.6nm,0.3s,mb4.1,baz=316,slow=8.6,SNR=3.1						
DAWY	**Dawson**	**59.26**	**343**	*e*P	**P**	**18 54 54.7**	**-2.0**
PLCA	**Paso Flores**	**59.35**	**151**	LR	LR	19 14 49.0	
	comp=Z,220nm,18.8s,MS4.3,baz=125,slow=30						
BDFB	**Brasilia**	**61.07**	**114**	LR	LR	19 20 08.5	
	comp=Z,327nm,19.5s,MS4.5,baz=111,slow=34						
INK	**Inuvik**	**61.18**	**348**	*e*P	**P**	**18 55 07.7**	**-2.1**
	7.2nm,0.9s,mb4.8						
ESDC	**Sonseca Array**	**91.14**	**49**	LR	LR	19 33 10.7	
	comp=Z,60nm,21.3s,MS4.0,baz=340,slow=32						
NOA	**NORSAR Array B**	**92.86**	**26**	LR	LR	19 37 42.0	
	comp=Z,23nm,22.0s,MS3.6,baz=300,slow=34						
ARCES	**ARCESS Array B**	**93.15**	**16**	LR	LR	19 40 38.3	
	comp=Z,59nm,21.8s,MS4.0,baz=65,slow=36						
RPZ	**Rata Peaks**	**93.38**	**226**	LR	LR	19 30 17.5	
	comp=Z,132nm,18.0s,MS4.4,baz=203,slow=29						
FINES	**FINESS Array B**	**98.61**	**22**	LR	LR	19 43 17.2	
	comp=Z,39nm,18.7s,MS3.9,baz=345,slow=35						
BRTR	**Keskin Array B**	**116.64**	**36**	PKP	PKPdf	19 03 38.5	-1.0
	0.4nm,0.7s,baz=17,slow=2.0,SNR=3.4						
MKAR	**Makanchi Array**	**122.97**	**355**	PKP	PKPdf	19 03 49.5	-2.1
	0.6nm,0.8s,baz=157,slow=3.4,SNR=5.6						
WRA	**Warramunga Arr**	**123.11**	**253**	PKP	PKPdf	19 03 50.4	-1.5
	1.3nm,0.8s,baz=91,slow=2.6,SNR=11						
ASAR	**Alice Springs**	**123.39**	**248**	PKP	PKPdf	19 03 51.1	-1.3
	0.7nm,0.8s,baz=85,slow=2.1,SNR=7.2						

ISC 21 19:02:39.2±0.8,3479N±006×708E±01,h95km±27km,n12, σ0§93/16,1C-2D,Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**1.33**	**136**	P	**Pn**	**19 03 01.6**	**-1.5**
THW	**Thamme Wali**	**2.14**	**158**	⇑P	**Pn**	**19 03 14.0**	**+0.7**
CHCP	**Chirah Chowk**	**2.34**	**118**	P	**Pn**	**19 03 17.5**	**+1.6**
SBDP	**Sheikh Budin**	**2.48**	**180**	P	**Pn**	**19 03 17.7**	**-0.1**
DRP	**Derazinda**	**3.07**	**189**	P	**Pn**	**19 03 26.4**	**+0.6**
SARP	**Sargodha**	**3.26**	**151**	P	**Pn**	**19 03 28.2**	**-0.1**
THN	**Thein Dam**	**4.73**	**118**	*e*P	**Pn**	**19 03 49.1**	**+1.0**
THN				*e*S	**Sn**	**19 04 46.6**	**+4.8**
KLP	**Kalpa**	**7.04**	**115**	*e*P	**Pn**	**19 04 19.1**	**-0.5**
KLP				*e*S	**Sn**	**19 05 38.3**	**+0.2**
KLP				AML	AML	19 06 16.8	
	comp=E,102nm,1.1s						
KLP				AML	AML	19 06 20.1	
	comp=N,56nm,0.9s						
KHET	**Khetri**	**7.94**	**146**	*e*S	**Sn**	**19 05 55.5**	**-4.5**
KUDL	**Kundal**	**8.21**	**142**	*e*P	**Pn**	**19 04 33.4**	**-2.1**
KUDL				*e*S	**Sn**	**19 06 01.9**	**-4.8**
KK31	**Karatay Array**	**8.31**	**359**	⇓P	**Pn**	**19 04 37.0**	**+0.1**
	comp=N,1.9nm,0.6s,baz=176,slow=12,SNR=13						
KK31				⇓S	**Sn**	**19 06 08.6**	**-0.4**
	comp=N,1.6nm,0.5s						
AB31	**Akbulak array**	**16.53**	**334**	P	**Pn**	**19 06 25.3**	**+0.2**
	comp=N,1.5nm,0.6s,baz=163,slow=12,SNR=21						

*IDC **21** 19:09:57.6±0.9,1980S×168.13E,h0km,mb4.2/11, mb1 4.4/12,mb1mx4.4/15,mbtmp4.2/12,ML3.6/1,MS3.4/6, Ms1 3.4/6,ms1mx3.2/20,Error ellipse: s-maj=26.9km s-min=19.2km az=138.0*

*ISCJB **21** 19:10:01.4±0.7,1981S±008×1680E±0.1,h33km,mb4.3/14, MS3.4/5,Error ellipse: s-maj=17.8km s-min=8.7km az=61.8*

*NEIC **21** 19:10:02.9±7.6,1987S×168.13E,h34km±52km,mb4.6/7, Error ellipse: s-maj=20.8km s-min=18.3km az=222.0*

ISC 21 19:10:03.2±0.7,1988S±009×1681E±01,h35km,n30, σ0§93/23,mb4.3/14,MS3.4/5,1D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.68**	**215**	*e*P	**Pn**	**19 10 43.0**	**-0.8**
DZM	**Mont Dzumac**	**2.68**	**215**	Pn	**Pn**	**19 10 42.9**	**-0.9**
	8.9nm,0.3s,baz=52,slow=18,SNR=105						
DZM				Sn	**Sn**	**19 11 15.3**	**+0.3**
	46nm,0.3s,baz=309,slow=22,SNR=5.2						
DZM				LR	LR	19 11 36.6	
	comp=Z,258nm,20.4s,baz=208,slow=36						
CTA	**Charters Tower**	**20.54**	**266**	P	**P**	**19 14 40.1**	**+1.5**
	8.5nm,0.8s,baz=88,slow=12,SNR=7.4						
CTA				LR	LR	19 21 10.5	
	comp=Z,116nm,18.3s,MS3.3,baz=66,slow=33						
CTA	**Charters Tower**	**20.54**	**266**	*e*P	**P**	**19 14 40.7**	**+2.2**
	9.5nm,1.0s						
CTAO	**Charters Tower**	**20.54**	**266**	*e*P	**P**	**19 14 40.7**	**+2.2**
PMG	**Port Moresby**	**22.75**	**294**	LR	LR	19 22 41.2	
	comp=Z,84nm,20.1s,MS3.2,baz=94,slow=34						
STKA	**Stephens Creek**	**26.60**	**238**	P	**P**	**19 15 39.4**	**+1.2**
	1.8nm,0.5s,mb3.9,baz=115,slow=8.4,SNR=9.1						
STKA				LR	LR	19 24 16.4	
	comp=Z,110nm,19.6s,MS3.4,baz=29,slow=32						
STKA	**Stephens Creek**	**26.60**	**238**	*e*P	**P**	**19 15 39.2**	**+1.0**
	2.5nm,0.8s,mb3.8						
WRAB	**Tennant Creek**	**31.71**	**264**	*e*P	**P**	**19 16 22.5**	**-1.1**
	8.3nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**31.72**	**264**	P	**P**	**19 16 22.4**	**-1.2**
	2.1nm,0.8s,mb4.0,baz=89,slow=8.4,SNR=28						
AS31	**Alice Springs**	**31.94**	**257**	*e*P	**P**	**19 16 25.4**	**-0.1**
ASAR	**Alice Springs**	**31.94**	**257**	P	**P**	**19 16 25.1**	**-0.4**
	3.3nm,0.7s,mb4.3,baz=86,slow=8.8,SNR=66						
ASAR				LR	LR	19 28 25.9	
	comp=Z,97nm,20.6s,MS3.5,baz=174,slow=35						
PPT	**Papeete**	**40.07**	**94**	*e*LQ		19 27 33.3	
	402nm,30.2s						
PPT				*e*LR	LR	19 28 55.4	
	102nm,29.5s						
PPT	**Papeete**	**40.07**	**94**	LR	LR	19 30 59.2	
	comp=Z,104nm,22.0s,MS3.6,baz=207,slow=32						
FITZ	**Fitzroy Crossi**	**40.12**	**265**	P	**P**	**19 17 35.8**	**+0.3**
	8.3nm,0.8s,mb4.5,baz=122,slow=7.8,SNR=28						
FITZ	**Fitzroy Crossi**	**40.12**	**265**	⇓*i*P	**P**	**19 17 35.7**	**+0.2**
	16nm,0.8s,mb4.8						
MBWA	**Marble Bar**	**45.19**	**260**	*e*P	**P**	**19 18 17.3**	**+0.7**
	13nm,1.0s,mb4.7						
VNDA	**Vanda**	**57.77**	**182**	P	**P**	**19 19 48.9**	**-1.9**
	0.6nm,0.8s,mb3.7,baz=300,slow=8.7,SNR=4.8						
CASY	**Casey**	**59.12**	**203**	*e*P	**P**	**19 20 00.4**	**+0.3**
	7.2nm,1.3s,mb4.5						
MJAR	**Matsushiro Arr**	**62.82**	**333**	P	**P**	**19 20 24.3**	**-1.0**
	1.3nm,0.8s,mb4.1,baz=166,slow=8.0,SNR=5.3						
MAW	**Mawson**	**77.44**	**202**	P	**P**	**19 21 56.1**	**+1.2**
	3.1nm,0.7s,mb4.4,baz=111,slow=8.0,SNR=9.6						
SONM	**Songino Array**	**87.09**	**324**	P	**P**	**19 22 44.7**	**-0.5**
	0.8nm,0.8s,mb4.0,baz=145,slow=5.7,SNR=5.8						
YBH	**Yreka Blue Hor**	**88.50**	**44**	P	**P**	**19 22 52.1**	**+0.1**
	3.2nm,0.9s,mb4.5,baz=181,slow=6.3,SNR=6.4						
NVAR	**Mina Array Bea**	**90.02**	**49**	P	**P**	**19 22 59.8**	**+0.7**
	1.7nm,1.0s,mb4.3,baz=221,slow=5.0,SNR=8.2						
WVOR	**Wild Horse Val**	**91.52**	**45**	*e*P	**P**	**19 23 06.8**	**+0.7**
	4.7nm,1.1s,mb4.7						
GERES	**GERESS Array B**	**144.53**	**331**	PKP	PKPdf	19 29 35.1	-0.7
	0.3nm,0.6s,baz=209,slow=1.8,SNR=4.0						
BAIF	**Baives**	**147.27**	**341**	*e*PKIKP	PKPdf	19 29 41.2	+0.7
CDF	**Champ du Feu**	**147.60**	**336**	*e*PKIKP	PKPdf	19 29 42.9	+1.8
	17nm,1.1s						
CABF	**La Chapelle**	**149.54**	**335**	*e*PKIKP	PKPdf	19 29 46.0	+1.8
	25nm,1.2s						
LPG	**La Plagne**	**150.16**	**333**	*e*PKIKP	PKPdf	19 29 46.1	+0.9
	10nm,1.0s						

MAN 21 19:51:60.0,782N×12109E,h16km,mb2.3,ML3.9,MS3.0, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**1.47**	**91**	⇓*e*P	Pn	19 52 24.7	-1.0
IPIL				*e*S	Sn	19 52 37.1	-7.5
IPIL	**Ipil**	**1.47**	**91**	*e*P	Pn	19 52 24.7	-1.1
IPIL				*e*S	Sn	19 52 37.2	-7.4
PAGZ	**Pagadian**	**2.27**	**89**	*e*P	Pn	19 52 37.4	+0.6
PAGZ				*e*S	Sn	19 52 59.5	-5.0
CUYO	**Cuyo Island**	**3.01**	**359**	*e*P	Pn	19 52 47.6	+0.7
GUIM	**Jordan**	**3.15**	**28**	*e*P	Pn	19 52 51.1	+2.2

*IDC **21** 20:01:04.0±1.2,104S×127.35E,h0km,mb3.8/4,mb1 3.9/6, mb1mx3.7/16,mbtmp3.8/6,ML3.5/1,Error ellipse: s-maj=95.9km s-min=19.4km az=71.0*

*NEIC **21** 20:01:05.4±0.9,1.12S×127.14E,h10km,mb3.8/2,Error ellipse: s-maj=39.5km s-min=13.3km az=74.0*

*ISCJB **21** 20:01:06.7±1.0,1.1S±0.1×127.1E±0.3,h33km,mb3.8/5, Error ellipse: s-maj=42.9km s-min=14.3km az=147.9*

ISC 21 20:01:08.9±1.0,12S±01×1272E±03,h35km,n9,σ1§36/9, mb3.8/5,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**16.91**	**185**	P	**Pn**	**20 05 04.3**	**+1.5**
	0.1nm,0.3s,baz=334,slow=7.7,SNR=6.6						
WRAB	**Tennant Creek**	**19.92**	**160**	*e*P	**Pn**	**20 05 37.9**	**-1.4**
	8.1nm,1.1s						
WRA	**Warramunga Arr**	**19.92**	**160**	P	**Pn**	**20 05 37.4**	**-2.0**
	0.2nm,0.3s,baz=341,slow=11,SNR=34						
MBWA	**Marble Bar**	**21.19**	**200**	*e*P	**P**	**20 05 50.6**	**-0.7**
	2.4nm,0.7s,mb3.6						
AS31	**Alice Springs**	**23.29**	**164**	*e*P	**P**	**20 06 14.0**	**+0.4**
ASAR	**Alice Springs**	**23.29**	**164**	P	**P**	**20 06 14.0**	**+0.4**
	2.2nm,0.6s,mb3.7,baz=344,slow=11,SNR=39						
STKA	**Stephens Creek**	**33.43**	**157**	P	**P**	**20 07 46.4**	**+2.1**
	4.1nm,0.8s,mb4.4,baz=326,slow=9.2,SNR=6.2						
SONM	**Songino Array**	**52.07**	**342**	P	**P**	**20 10 16.5**	**+1.3**
	0.3nm,0.6s,mb3.4,baz=147,slow=8.6,SNR=3.1						
MKAR	**Makanchi Array**	**61.86**	**327**	P	**P**	**20 11 22.9**	**-1.7**
	0.2nm,0.3s,mb3.6,baz=111,slow=7.9,SNR=3.2						

*ISCJB **21** 20:25:15.6±0.4,3948N±002×2285E±004,h9km±4km, Error ellipse: s-maj=4.6km s-min=3.3km az=24.4*

*NEIC **21** 20:25:16.5,3944N×2285E,h13km,MD3.2(ATH),After ATH.*

*THE **21** 20:25:16.9,3947N×2284E,h11km,ML2.8*

*ATH **21** 20:25:16.5,3944N×2285E,h13km±1km,MD3.2/3*

*CSEM **21** 20:25:17.2±0.1,3947N×2284E,h20km,ML2.8,Error ellipse: s-maj=3.3km s-min=2.4km az=104.0*

ISC 21 20:25:16.2±0.4,3947N±002×2284E±004,h15km±4km,n21, σ0§86/34,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XOR	**Xorichti**	**0.29**	**110**	*e*Pg	**Pg**	**20 25 22.3**	**0.0**
XOR				*e*Sg	**Sg**	**20 25 26.9**	**+0.5**
NEO	**Neokhori**	**0.34**	**118**	*e*PB	**Pg**	**20 25 23.0**	**-0.1**
NEO				*e*SB	**Sg**	**20 25 27.9**	**+0.1**
AGG	**Agios Georgios**	**0.60**	**222**	*e*Pg	**Pg**	**20 25 27.4**	**-0.4**
	comp=Z,12nm,0.5s						
AGG				*e*Sg	**Sg**	**20 25 37.6**	**+1.8**
LIT	**Litokhoron**	**0.69**	**337**	*e*Pg	**Pg**	**20 25 29.5**	**-0.1**
	comp=Z,10.0nm,0.3s						
LIT				*e*Sg	**Sg**	**20 25 39.7**	**+0.9**
PAIG	**Paliouri**	**0.79**	**54**	*e*Pg	**Pg**	**20 25 32.2**	**+0.6**
PAIG				*e*Sg	**Sg**	**20 25 44.4**	**+2.3**
LKR	**Lokris**	**0.82**	**171**	*e*PB	**Pb**	**20 25 32.0**	**-0.2**
LKR				*e*SB	**Sb**	**20 25 43.0**	**-0.1**
AOS	**Alonnisos**	**0.86**	**110**	*e*Pg	**Pg**	**20 25 33.4**	**+0.6**
EVR	**Evrytania**	**0.97**	**236**	*e*PG	**Pg**	**20 25 34.5**	**-0.5**
EVR				*e*SB	**Sb**	**20 25 48.0**	**+0.7**
PLG	**Polygyros**	**1.02**	**27**	*e*PB	**Pb**	**20 25 35.7**	**+0.2**
PLG				*e*SB	**Sb**	**20 25 49.7**	**+1.1**
HORT	**Hortiatis**	**1.15**	**10**	*e*Pg	**Pg**	**20 25 37.8**	**-0.5**
KZN	**Kozani**	**1.18**	**316**	*e*PB	**Pb**	**20 25 39.4**	**+1.2**
OUR	**Ouranopolis**	**1.23**	**45**	*e*Pg	**Pg**	**20 25 38.9**	**-1.0**
	comp=Z,3.5nm,0.5s						
OUR				*e*Sg	**Sg**	**20 25 56.7**	**+0.7**
SOH	**Sokhos**	**1.41**	**16**	*e*Pg	**Pg**	**20 25 42.3**	**-0.9**
SOH				*e*Sg	**Sg**	**20 26 01.1**	**-0.5**
GRG	**Griva**	**1.53**	**347**	*e*Pg	**Pg**	**20 25 44.2**	**-1.3**
PTL	**Penteli**	**1.63**	**150**	*e*PG	**Pg**	**20 25 46.5**	**-0.9**
ATH	**Athens Observa**	**1.64**	**155**	*e*PG	**Pg**	**20 25 46.5**	**-1.2**
KNT	**Kendrikon**	**1.69**	**1**	*e*Pb	**Pb**	**20 25 46.2**	**-0.7**
SRS	**Serrai**	**1.75**	**19**	*e*Pb	**Pb**	**20 25 47.0**	**-0.9**
SRS				*e*Sb	**Sb**	**20 26 08.9**	**-0.7**
NVR	**Nevrokopi**	**2.04**	**22**	*e*PB	**Pb**	**20 25 51.7**	**-1.1**
MMB	**Musomiste**	**2.23**	**17**	*e*Pn	**Pn**	**20 25 52.7**	**+0.2**
MMB				*e*Sn	**Sn**	**20 26 20.6**	**+1.0**
MMB	**Musomiste**	**2.23**	**17**	*e*Pn	**Pn**	**20 25 52.7**	**+0.2**
MMB				*e*Sn	**Sn**	**20 26 20.6**	**+0.9**

NEIC 21 20:31:43.0,1933N×15513W,h9km,MD3.7(HVO)**,After HVO.,Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HPO	**Honuapo**	**0.47**	**239**	*e*P	Pg	20 31 52.0	-0.1
POHA	**Pohakuloa**	**0.57**	**318**	*e*P	Pg	20 31 53.6	-0.4
POHA				*e*		20 32 01.9	
KKH	**Kailua Kona**	**0.90**	**291**	*e*P	Pg	20 31 57.9	-2.3

*CSEM **21** 21:14:45.9±0.1,7550N×1385E,h2km,mb4.2/11,Error ellipse: s-maj=6.0km s-min=2.2km az=87.0*

*IDC **21** 21:14:47.0±2.2,7553N×1280E,h0km,mb3.7/5,mb1 3.8/9, mb1mx3.6/25,mbtmp3.6/9,ML3.2/4,MS2.8/1,Ms1 2.8/1, ms1mx1.8/24,Error ellipse: s-maj=36.2km s-min=23.8km az=34.0*

*NEIC **21** 21:14:47.9±0.7,7556N×1314E,h10km,mb4.2/7,Error ellipse: s-maj=16.1km s-min=8.9km az=93.0*

*ISCJB **21** 21:14:48.8±0.6,7529N±005×1395E±0.1,h10km,mb3.9/14, Error ellipse: s-maj=6.5km s-min=5.5km az=15.4*

*BER **21** 21:14:48.8±4.8,7559N×1276E,h10km,MD3.3,ML2.8, ML3.3(NAO)*

*NAO **21** 21:14:50.8±2.3,7557N×1329E,h71km±113km,ML3.3*

*MOS **21** 21:14:51.2±0.5,7511N×1400E,h10km,mb4.5/9,Error ellipse: s-maj=78.9km s-min=7.5km az=92.9*

*HEL **21** 21:14:53.1±0.4,7522N×1328E,h10km,ML3.4, mb4.2(NEIC),ML2.8(BER)*

*SZGRF **21** 21:15:13.7,7303N×1793E,h33km,mb4.1,Norwegian Sea*

ISC 21 21:14:48.6±0.5,7546N±004×138E±02,h10km,n86, σ1§41/120,mb3.9/14,1D,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**1.62**	**14**	*e*P	**Pn**	**21 15 15.1**	**-2.0**
HSP				S	**Sn**	**21 15 32.2**	**-5.8**
HSP	**Hornsund**	**1.62**	**14**	P	**Pn**	**21 15 15.1**	**-2.0**
HSP				S	**Sn**	**21 15 32.2**	**-5.8**
BJO1	**Bjornoya**	**1.67**	**123**	*e*P	**Pg**	**21 15 21.0**	**+0.5**
BJO1				*e*S	**Sg**	**21 15 43.5**	**+1.4**
BJO1				AML	AML	21 15 45.3	
	comp=Z,224nm,0.3s						
BJO1	**Bjornoya**	**1.67**	**123**	*e*P	**Pg**	**21 15 21.0**	**+0.5**
BJO1				*e*S	**Sg**	**21 15 43.5**	**+1.4**
BJO	**Bjornoya**	**1.71**	**121**	*e*P	**Pg**	**21 15 21.0**	**-0.2**
BJO				*e*S	**Sg**	**21 15 43.5**	**+0.1**
BJO				AML	AML	21 15 45.3	
	comp=Z,224nm,0.3s						
BJO	**Bjornoya**	**1.71**	**121**	*e*P	**Pg**	**21 15 21.0**	**-0.3**
	SNR=50						
BJO				*e*S	**Sg**	**21 15 43.5**	**+0.1**
	comp=Z,224nm,0.3s,SNR=50						
SPA0	**Spitsbergen Ar**	**2.80**	**11**	Pn	**Pn**	**21 15 31.4**	**-2.0**
	baz=178,slow=16						
SPA0				Sn	**Sn**	**21 16 03.0**	**-4.3**
	baz=177,slow=18						
SPA0	**Spitsbergen Ar**	**2.80**	**11**	*e*	**Pn**	**21 15 31.4**	**-2.0**
SPA0				*e*		21 16 03.0	
HOPEN	**Hopen**	**2.93**	**63**	*e*P	**Pn**	**21 15 37.6**	**+2.4**
HOPEN				*e*S	**Sn**	**21 16 12.8**	**+2.4**
HOPEN				AML	AML	21 16 28.7	
	comp=N,152nm,0.6s						
KBS	**Kingsbay**	**3.51**	**354**	Pn	**Pn**	**21 15 38.9**	**-4.3**
KBS				Sn	**Sn**	**21 16 13.7**	**-11**
KBS	**Kingsbay**	**3.51**	**354**	*e*P	**Pn**	**21 15 39.1**	**-4.1**
KBS				*e*S	**Sn**	**21 16 14.1**	**-11**
TRO	**Tromso**	**6.05**	**163**	*e*P	**Pn**	**21 16 16.8**	**-1.3**
TRO				*e*S	**Sn**	**21 17 23.6**	**-3.8**
TRO				AML	AML	21 17 26.0	
	comp=Z,9.0nm,0.1s						
TRO	**Tromso**	**6.05**	**163**	*e*P	**Pn**	**21 16 16.8**	**-1.3**
TRO				*e*S	**Sn**	**21 17 23.6**	**-3.8**
KIF	**Kilpisjarvi**	**6.83**	**158**	*e*P	**Pn**	**21 16 29.1**	**+0.4**
KIF				*e*S	**Sn**	**21 17 42.2**	**-4.2**
KIF				MSN		21 17 46.6	
	comp=Z,41nm,0.3s						
ARA0	**ARCESS Array S**	**6.91**	**143**	Pn	**Pn**	**21 16 30.9**	**+1.1**
	baz=330,slow=12						
ARA0				Sn	**Sn**	**21 17 46.2**	**-2.2**
	baz=332,slow=22						
ARA0	**ARCESS Array S**	**6.91**	**143**	*e*P	**Pn**	**21 16 30.9**	**+1.1**
ARA0				*e*S	**Sn**	**21 17 46.2**	**-2.2**
ARCES	**ARCESS Array B**	**6.91**	**143**	Pn	**Pn**	**21 16 31.0**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=333,slow=12,SNR=38						
ARCES				Sn	**Sn**	**21 17 46.2**	**-2.2**
	comp=Z,11nm,0.3s,baz=335,slow=20,SNR=20						
ARCES	**ARCESS Array B**	**6.91**	**143**	P	**Pn**	**21 16 31.0**	**+1.2**
ARCES						21 17 46.2	
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES				smax			
	comp=N,11nm,0.3s

comp=Z,1.5nm,0.3s
NB2 NORSAR Subarra 14.51 185 *e*P **Pn** 21 18 12.1 -1.8
NOA NORSAR Array B 14.51 185 Pn **Pn** 21 18 12.7 -1.3
comp=Z,0.1nm,0.3s,baz=4.4,slow=12,SNR=2.6
FIA0 FINESS Array S 14.72 156 *e*P **Pn** 21 18 13.2 -3.6
FIA0 MSN 21 20 57.7
comp=Z,0.7nm,0.2s
FIA0 FINESS Array S 14.72 156 Pn **Pn** 21 18 17.8 +1.0
baz=355,slow=14
FINES FINESS Array B 14.72 156 Pn **Pn** 21 18 16.2 -0.6
comp=Z,0.1nm,0.3s,baz=0.9,slow=12,SNR=7.5
FINES Sn **Sn** 21 20 52.2 -7.8
comp=Z,0.2nm,0.3s,baz=4.5,slow=20,SNR=5.0
FINES FINESS Array B 14.72 156 Pn **Pn** 21 18 16.2 -0.6
FINES Sn **Sn** 21 20 52.2 -7.8
HFS Hagfors 15.39 180 *e* **Pn** 21 18 26.8 +1.0
HFS Hagfors 15.39 180 Pn **Pn** 21 18 25.3 -0.5
comp=Z,0.1nm,0.3s,baz=16,slow=12,SNR=5.3
HFS Hagfors 15.39 180 P **Pn** 21 18 26.8 +1.0
SNR=3.9
EKA Eskdalemuir Ar 21.22 207 P **P** 21 19 33.5 -1.0
comp=Z,0.6nm,0.3s,mb3.4,baz=239,slow=17,SNR=6.9
EKA Eskdalemuir Ar 21.22 207 P **P** 21 19 33.5 -1.0
EKA pmax pmax
comp=Z,10.0nm,0.3s
BSEG Bad Segeberg 21.65 186 *e*P **P** 21 19 41.2 +2.1
comp=Z,9.0nm,0.9s,mb4.2
BSEG Bad Segeberg 21.65 186 *e*P **P** 21 19 41.2 +2.1
BSEG pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
NRDL Niedersach Rie 23.10 186 *e*P **P** 21 19 55.1 +0.6
NEUB Neuenburg 24.36 183 *e*P **P** 21 20 07.3 +0.7
BRG Berggiesshubel 24.68 180 *e*P **P** 21 20 09.0 -0.5
MOX Moxa 24.92 183 *e*P **P** 21 20 12.0 +0.2
comp=Z,5.0nm,0.7s,mb4.2
MOX Moxa 24.92 183 *e*P **P** 21 20 11.9 +0.1
MOX pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
MOX Moxa 24.92 183 *e*P **P** 21 20 11.9 +0.1
comp=Z,5.0nm,0.7s,mb4.2
GUNZ Gunzen 25.20 182 *e*P **P** 21 20 15.1 +0.9
comp=Z,2.0nm,0.9s,mb3.6
DPC Dobruska-Polom 25.22 176 *e*P **P** 21 20 11.3 -3.2
WERN Wernitzgruen 25.27 182 *e*P **P** 21 20 15.5 +0.6
comp=Z,7.0nm,0.8s,mb4.2
ARU Arti 25.29 114 *e*P **P** 21 20 16.7 +1.6
ARU pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
ARU Arti 25.29 114 *e*P **P** 21 20 16.7 +1.6
comp=Z,4.8nm,0.6s,mb4.2
ARU Arti 25.29 114 *e*P **P** 21 20 16.7 +1.6
comp=Z,5.0nm,0.6s,mb4.2
NKC Novy Kostel 25.32 182 *e*P **P** 21 20 15.7 +0.3
PRU Pruhonice 25.57 179 *e*P **P** 21 20 18.1 +0.5
comp=Z,1.4nm,0.3s,mb4.0
AKASG Malin Array Be 25.63 157 P **P** 21 20 18.6 +0.4
comp=Z,0.9nm,0.6s,mb3.5,baz=348,slow=9.9,SNR=6.8
AKASG Malin Array Be 25.63 157 P **P** 21 20 18.6 +0.4
AKASG pmax pmax
comp=Z,10.0nm,0.6s
OKC Ostrava-Krasne 25.78 173 *e*P **P** 21 20 19.9 +0.4
ROTZ Rotzenmuhle 25.79 182 *e*P **P** 21 20 20.1 +0.4
comp=Z,4.0nm,1.0s,mb3.9
GRA1 Grafenberg Arr 25.88 184 *e*P **P** 21 20 21.5 +1.0
comp=Z,5.0nm,0.9s,mb4.0
GRF Grafenberg Arr 25.88 184 *e*P **P** 21 20 21.5 +1.0
comp=Z,5.0nm,0.9s,mb4.0
GRF Grafenberg Arr 25.88 184 *e*P **P** 21 20 21.5 +1.0
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
GRF Grafenberg Arr 25.88 184 *e*P **P** 21 20 21.5 +1.0
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
WLF Walferdange 26.08 191 *e*P **P** 21 20 24.1 +1.9
VRAC Vranov 26.27 176 P **P** 21 20 25.2 +1.2
comp=Z,2.6nm,0.8s,mb3.8,baz=3.9,slow=12,SNR=3.9
VRAC LR LR 21 31 36.9
comp=Z,22nm,19.7s,baz=189,slow=38
WET Wettzell 26.41 181 *e*P **P** 21 20 26.2 +0.9
comp=Z,4.0nm,1.4s,mb3.8
WET Wettzell 26.41 181 *e*P **P** 21 20 26.2 +0.9
WET pmax pmax
comp=Z,4.0nm,1.4s,mb3.8
KHC Kasperske Hory 26.42 180 *e*P **P** 21 20 29.2 +3.8
GEC2 GERESS Array S 26.71 180 *e*P **P** 21 20 28.9 +1.0
comp=Z,2.0nm,1.2s,mb3.5
GEC2 GERESS Array S 26.71 180 *e*P **P** 21 20 28.9 +1.0
GEC2 pmax pmax
comp=Z,2.0nm,1.2s,mb3.5
GERES GERESS Array B 26.71 180 P **P** 21 20 28.9 +1.0
comp=Z,0.5nm,0.6s,mb3.2,baz=354,slow=8.3,SNR=6.5
VYHS Vyhne 27.14 173 *e*P **P** 21 20 32.4 +0.6
TORD Torodi Ar. Bea 62.65 193 P **P** 21 25 11.8 -1.4
comp=Z,0.5nm,0.6s,mb3.8,baz=359,slow=7.3,SNR=12
MAW Mawson 146.13 149 PKPbc PKPbc 21 34 27.7 -1.2
comp=Z,1.5nm,0.7s,baz=301,slow=5.8,SNR=4.1
MAW Mawson 146.13 149 PKIKP PKPdf 21 34 27.7 -0.3
MAW pmax pmax
comp=Z,2.0nm,0.7s

MAN 21 21:21:45.4,1351N×12069E,h92km,mb2.1,ML3.8,MS3.3, 2D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.26**	**92**	*e*P	Pn	21 22 01.0	+2.1
LUBP	**Lubang**	**0.48**	**297**	*e*P	Pn	21 22 01.7	+1.5
LUBP				*e*S	Sn	21 22 14.0	+2.7
TGY	**Tagaytay City**	**0.64**	**22**	*e*P	Pn	21 22 05.6	+4.1
TGY				*e*S	Sn	21 22 18.3	+4.8
BOAC	**Boac**	**1.13**	**92**	*e*P	Pn	21 22 07.2	+0.5
BUSP	**Coron**	**1.57**	**198**	*e*P	Pn	21 22 13.3	+1.2
OTRP	**Odiongan**	**1.73**	**131**	*e*P	Pn	21 22 14.7	+0.5
BALP	**Baler**	**2.38**	**21**	*e*P	Pn	21 22 23.8	+1.1
CUYO	**Cuyo Island**	**2.66**	**173**	*e*P	Pn	21 22 27.3	+0.9

*ISCJB **21** 21:42:48.2±0.5, 4.37S±005×13908E±007, h33km, mb4.4/18, MS3.9/2, Error ellipse: s-maj=10.2km s-min=6.5km az=13.2*
*BJI **21** 21:42:48.8, 430S×139.10E, h39km, mB4.7, mb4.9*
*IDC **21** 21:42:50.2±4.2, 4.42S×13895E, h34km±33km, mb4.1/8, mb1 4.3/12, mb1mx4.3/14, mbtmp4.5/12, ML4.3/4, MS3.9/6, Ms1 3.9/6, ms1mx3.4/22, Error ellipse: s-maj=17.3km s-min=10.7km az=103.0*
*NEIC **21** 21:42:50.9±1.4, 4.35S×13907E, h39km±15km, mb4.6/8, Error ellipse: s-maj=9.7km s-min=8.4km az=141.0*

ISC 21 21:42:51.3±1.4, 445S±005×13903E±008, h42km±14km, h41km±5.2km:pP-P,n39,σ1§30/38,mb4.4/18,MS3.9/2, 1C-1D,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**9.45**	**122**	Pn	**Pn**	**21 45 04.8**	**0.0**
	1.7nm,0.3s,baz=301,slow=14,SNR=7.9						
KAKA	**Kakadu**	**10.48**	**218**	*i*P	**Pn**	**21 45 19.8**	**+0.9**
	349nm,0.5s						
WRAB	**Tennant Creek**	**16.05**	**196**	*e*P	**Pn**	**21 46 30.0**	**-3.9**
	130nm,0.6s						
WB2	**Warramunga Arr**	**16.06**	**196**	*e*P	**Pn**	**21 46 30.2**	**-3.9**
WB2				*e*		21 46 38.2	
WRA	**Warramunga Arr**	**16.06**	**196**	Pn	**Pn**	**21 46 31.0**	**-3.1**
	1.6nm,0.3s,baz=16,slow=13,SNR=68						
WRA				Sn	**Sn**	**21 49 40.0**	**+8.9**
	1.4nm,0.3s,baz=17,slow=22,SNR=7.6						
WRA				Lg		21 51 26.3	
	0.7nm,0.3s,baz=7.0,slow=24,SNR=8.1						
CTA	**Charters Tower**	**17.06**	**156**	P	**Pn**	**21 46 47.4**	**+0.7**
	0.8nm,0.3s,baz=326,slow=13,SNR=10						
CTA				Lg		21 51 57.1	
	0.3nm,0.3s,baz=255,slow=18,SNR=4.8						
CTA				LR	LR	21 53 47.7	
	comp=Z,406nm,18.6s,baz=161,slow=38						
CTA	**Charters Tower**	**17.06**	**156**	*e*P	**Pn**	**21 46 48.1**	**+1.4**
	16nm,0.9s						
CTAO	**Charters Tower**	**17.06**	**156**	*e*P	**Pn**	**21 46 47.3**	**+0.6**
	28nm,1.0s						
GUMO	**Guam**	**18.84**	**18**	LR	LR	21 53 57.5	
	comp=Z,91nm,20.3s,baz=256,slow=35						
FITZ	**Fitzroy Crossi**	**18.86**	**223**	P	**Pn**	**21 47 08.7**	**0.0**
	1.5nm,0.3s,baz=53,slow=13,SNR=33						
FITZ				S	**S**	**21 50 36.4**	**-3.4**
	1.9nm,0.3s,baz=216,slow=19,SNR=4.0						
FITZ				Lg		21 52 53.7	
	baz=142,slow=22,SNR=2.6						
FITZ				LR	LR	21 55 10.0	
	comp=Z,514nm,19.6s,baz=47,slow=39						
FITZ	**Fitzroy Crossi**	**18.86**	**223**	*e*P	**Pn**	**21 47 08.6**	**-0.1**
	29nm,0.5s						
AS31	**Alice Springs**	**19.73**	**194**	*i*P	**Pn**	**21 47 19.0**	**-0.1**
AS31				*e*S	**S**	**21 50 54.6**	**-2.9**
ASAR	**Alice Springs**	**19.73**	**194**	P	**Pn**	**21 47 18.6**	**-0.5**
	6.0nm,0.3s,baz=22,slow=8.9,SNR=345						
ASAR				S	**S**	**21 50 59.7**	**+2.2**
	0.4nm,0.3s,baz=18,slow=25,SNR=4.5						
ASAR				Lg		21 53 23.6	
	0.1nm,0.3s,baz=13,slow=29,SNR=3.1						
ASAR				LR	LR	21 55 25.7	
	comp=Z,580nm,19.6s,baz=7.8,slow=38						
ASAR	**Alice Springs**	**19.73**	**194**	P	**Pn**	**21 47 18.6**	**-0.5**
ASAR				S	**S**	**21 50 59.6**	**+2.1**
ASAR				Lg		21 53 23.6	
ASAR				LR	LR	21 55 25.7	
HNR	**Honiara**	**21.34**	**105**	P	**P**	**21 47 35.1**	**+0.4**
	60nm,0.6s,mb5.1,baz=266,slow=12,SNR=4.0						
MBWA	**Marble Bar**	**25.04**	**227**	*e*P	**P**	**21 48 13.9**	**+2.4**
	19nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**27.39**	**175**	P	**P**	**21 48 37.0**	**+4.3**
	0.9nm,0.4s,mb3.7,baz=357,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**27.39**	**175**	*e*P	**P**	**21 48 37.0**	**+4.3**
	4.4nm,0.6s,mb4.2						
CBIJ	**Chichi jima**	**31.51**	**5**	LR	LR	22 00 17.3	
	comp=Z,133nm,19.9s,MS3.6,baz=149,slow=33						
KLBR	**Kellerberrin**	**33.59**	**214**	*e*P	**P**	**21 49 28.0**	**+0.6**
	78nm,1.8s,mb5.3						
NWAO	**Narrogin (SRO)**	**34.88**	**213**	LR	LR	22 05 14.6	
	comp=Z,383nm,18.9s,MS4.2,baz=310,slow=39						
PSI	**Prapat**	**40.72**	**279**	P	**P**	**21 50 28.6**	**+0.8**
	1.6nm,0.4s,mb4.0,baz=172,slow=19,SNR=2.8						
MJAR	**Matsushiro Ar**	**40.79**	**359**	P	**P**	**21 50 27.1**	**-1.3**
	0.6nm,0.4s,mb3.6,baz=190,slow=8.3,SNR=4.2						
XAN	**Xi'an**	**47.68**	**326**	P	**P**	**21 51 23.1**	**-0.5**
XAN				AP	pP	21 51 35.0	-0.4
XAN				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.7						
BJI	**Beijing**	**49.01**	**337**	*e*P	**P**	**21 51 32.5**	**-1.3**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.7						
LZH	**Lanzhou**	**52.06**	**324**	*e*P	**P**	**21 51 57.5**	**+0.7**
LZH				AP	pP	21 52 06.0	-2.8
LZH				XP	sP	21 52 10.0	-3.7
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,32nm,4.1s						
GTA	**Gaotai**	**56.65**	**324**	*e*P	**P**	**21 52 31.0**	**+0.8**
GTA				AP	pP	21 52 43.9	+1.6
GTA				XP	sP	21 52 50.0	+2.8
GTA				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
ULN	**Ulaanbaatar**	**59.17**	**335**	*e*P	**P**	**21 52 47.9**	**0.0**
	comp=Z,2.1nm,0.6s,mb4.3						
SONM	**Songino Array**	**59.42**	**335**	P	**P**	**21 52 49.4**	**-0.2**
	comp=Z,0.9nm,0.6s,mb4.0,baz=154,slow=8.2,SNR=9.2						
WMQ	**Urumqi**	**66.57**	**322**	*e*P	**P**	**21 53 41.3**	**+4.3**
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
MKAR	**Makanchi Array**	**71.36**	**323**	P	**P**	**21 54 06.9**	**+0.1**
	comp=Z,4.6nm,0.6s,mb4.6,baz=110,slow=7.7,SNR=58						
ZAL	**Zalesovo**	**73.60**	**330**	P	**P**	**21 54 19.0**	**-1.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=12,slow=9.2,SNR=6.1						
VNDA	**Vanda**	**74.03**	**175**	P	**P**	**21 54 21.4**	**-1.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=333,slow=7.8,SNR=3.9						
BVAR	**Borovoye Array**	**80.92**	**325**	P	**P**	**21 55 00.8**	**-0.4**
	comp=Z,6.3nm,0.6s,mb4.7,baz=120,slow=7.4,SNR=46						
AKTK	**Aktyubinsk**	**87.69**	**321**	P	**P**	**21 55 38.6**	**+3.2**
AKTO	**Aktyubinsk**	**87.69**	**321**	P	**P**	**21 55 38.6**	**+3.2**
	comp=Z,0.4nm,0.5s,mb4.0,baz=118,slow=3.8,SNR=4.3						
DBIC	**Dimbokro**	**143.99**	**275**	PKP	PKPdf	22 02 20.4	-1.8
	comp=Z,3.7nm,0.6s,baz=48,slow=3.6,SNR=8.2						
CPUP	**Villa Florida**	**145.54**	**153**	PKPbc	PKPbc	22 02 24.1	-1.0
	comp=Z,1.2nm,0.6s,baz=170,slow=3.8,SNR=4.7						
LPAZ	**La Paz**	**146.14**	**128**	PKPbc	PKPbc	22 02 28.1	+1.2
	comp=Z,3.1nm,0.8s,baz=273,slow=1.1,SNR=16						

*ISCJB **21** 21:47:35.4±0.5, 6082S±007×341W±02, h10km, mb4.3/15, MS4.1/13, Error ellipse: s-maj=11.8km s-min=9.8km az=118.6*
*IDC **21** 21:47:35.7±0.7, 6076S×3405W, h0km, mb4.3/14, mb1 4.4/16, mb1mx4.3/23, mbtmp4.3/16, ML4.5/2, MS4.0/16, Ms1 4.0/16, ms1mx3.9/25, Error ellipse: s-maj=21.2km s-min=15.1km az=28.0*
*NEIC **21** 21:47:37.5±4.2, 6084S×3407W, h13km±27km, mb4.9/2, Error ellipse: s-maj=11.7km s-min=9.1km az=61.0*

ISC 21 21:47:37.0±0.5, 6087S±007×341W±02, h10km, n38, σ0§89/25, mb4.3/15, MS4.1/13, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.72**	**348**	*e*P	**Pn**	**21 49 16.2**	**+0.4**
	38nm,0.8s						
PMSA	**Palmer Station**	**14.16**	**241**	Pn	**Pn**	**21 50 57.0**	**-0.6**
	1.6nm,0.3s,baz=77,slow=12,SNR=20						
PMSA				LR	LR	21 55 36.6	
	comp=Z,694nm,19.7s,baz=49,slow=34						
VNA1	**Neumayer--Stat**	**14.29**	**144**	*e*	**Pn**	**21 50 51.5**	**-7.9**
VNA1				*e*		21 50 57.1	
VNA1				*e*		21 51 02.2	
VNA1				*e*		21 51 05.2	
VNA1				*e*		21 51 06.6	
SNAA	**Sanae**	**16.33**	**144**	Pn	**Pn**	**21 51 25.2**	**-1.2**
	0.2nm,0.3s,baz=307,slow=11,SNR=18						
SNAA				Sn	**Sn**	**21 54 17.5**	**-10**
	0.1nm,0.3s,baz=3.6,slow=21,SNR=4.9						
SNAA				LR	LR	21 56 14.7	
	comp=Z,348nm,21.9s,baz=229,slow=32						
SNAA	**Sanae**	**16.33**	**144**	*e*	**Pn**	**21 51 23.6**	**-2.8**
SNAA				*e*		21 51 29.3	
SNAA				*e*		21 51 35.5	
SNAA				*e*		21 51 40.3	
SNAA				*e*		21 51 43.8	
SNAA				*e*		21 51 47.7	
SNAA	**Sanae**	**16.33**	**144**	Pn	**Pn**	**21 51 25.2**	**-1.2**
SNAA				Sn	**Sn**	**21 54 17.5**	**-10**
SNAA				LR	LR	21 56 14.7	
USHA	**Ushuaia**	**19.08**	**273**	LR	LR	21 57 45.0	
	comp=Z,388nm,19.6s,baz=101,slow=32						
QSPA	**South Pole Qui**	**29.37**	**180**	*e*P	**P**	**21 53 40.2**	**0.0**
	21nm,1.0s,mb4.8						
PLCA	**Paso Flores**	**30.01**	**295**	LR	LR	22 04 59.6	
	comp=Z,244nm,18.3s,MS3.9,baz=150,slow=35						
CFAA	**Coronel Fontan**	**36.84**	**307**	P	**P**	**21 54 43.6**	**-1.7**
	0.2nm,0.3s,mb3.5,baz=319,slow=11,SNR=13						
CPUP	**Villa Florida**	**37.98**	**325**	P	**P**	**21 54 54.1**	**-0.8**
	3.2nm,0.6s,mb4.2,baz=131,slow=7.6,SNR=10.0						
CPUP				LR	LR	22 09 37.7	
	comp=Z,200nm,18.1s,MS4.0,baz=152,slow=35						
CPUP	**Villa Florida**	**37.98**	**325**	*e*P	**P**	**21 54 54.3**	**-0.7**
	20nm,0.8s,mb4.9						
CPUP				LR	LR	22 09 37.7	
MAW	**Mawson**	**38.48**	**142**	P	**P**	**21 55 00.7**	**+1.5**
	2.6nm,0.8s,mb4.0,baz=27,slow=1.6,SNR=4.4						
MAW				LR	LR	22 08 00.4	
	comp=Z,182nm,22.0s,MS3.9,baz=54,slow=32						
VNDA	**Vanda**	**41.51**	**185**	P	**P**	**21 55 24.6**	**+0.2**
	1.0nm,0.7s,mb3.5,baz=228,slow=5.4,SNR=4.8						
LVC	**Limon Verde**	**45.20**	**312**	P	**P**	**21 55 54.9**	**+0.8**
	1.1nm,0.6s,mb3.9,baz=170,slow=12,SNR=1.7						
SUR	**Sutherland**	**45.34**	**77**	P	**P**	**21 55 55.7**	**+0.4**
	14nm,1.0s,mb4.7,baz=15,slow=2.3,SNR=3.7						
BDFB	**Brasilia**	**46.27**	**341**	LR	LR	22 13 05.5	
	comp=Z,173nm,19.5s,MS4.0,baz=188,slow=33						
BOSA	**Boshof**	**50.59**	**78**	P	**P**	**21 56 35.8**	**-0.1**
	8.1nm,0.8s,mb4.7,baz=202,slow=8.3,SNR=9.7						
BOSA				LR	LR	22 13 06.9	
	comp=Z,138nm,19.1s,MS4.0,baz=23,slow=30						
LPAZ	**La Paz**	**50.77**	**316**	P	**P**	**21 56 38.7**	**+1.4**
	1.3nm,1.0s,mb3.8,baz=160,slow=7.5,SNR=7.3						
LPAZ				LR	LR	22 19 11.6	
	comp=Z,96nm,18.0s,MS3.9,baz=350,slow=37						
LPAZ	**La Paz**	**50.77**	**316**	P	**P**	**21 56 38.7**	**+1.4**
LPAZ				LR	LR	22 19 11.6	
LBTB	**Lobatse**	**53.78**	**76**	P	**P**	**21 56 59.5**	**-0.2**
	14nm,0.8s,mb4.9,baz=231,slow=6.6,SNR=18						
MATP	**Matopo**	**59.08**	**76**	P	**P**	**21 57 36.5**	**-0.9**
	6.0nm,0.8s,mb4.7,baz=210,slow=8.0,SNR=11						
LSZ	**Lusaka**	**63.38**	**73**	P	**P**	**21 58 06.6**	**0.0**
	8.3nm,0.8s,mb4.9,baz=204,slow=8.1,SNR=22						
DBIC	**Dimbokro**	**71.12**	**31**	P	**P**	**21 58 55.4**	**-0.3**
	7.5nm,1.1s,mb4.5,baz=196,slow=7.5,SNR=4.7						
DBIC				LR	LR	22 23 46.5	
	comp=Z,56nm,21.1s,MS3.8,baz=164,slow=31						
ROSC	**El Rosal**	**72.61**	**318**	LR	LR	22 30 52.3	
	comp=Z,73nm,20.1s,MS4.0,baz=135,slow=36						
RKT	**Rikitea**	**75.21**	**249**	*e*LR	LR	22 22 35.0	
	219nm,28.5s						
TORD	**Torodi Ar. Bea**	**79.07**	**35**	P	**P**	**21 59 41.3**	**-0.2**
	5.2nm,1.0s,mb4.4,baz=196,slow=7.2,SNR=16						
TORD				LR	LR	22 27 16.0	
	comp=Z,120nm,18.6s,MS4.3,baz=165,slow=30						
KMBO	**Kilima Mbogo**	**80.00**	**74**	LR	LR	22 31 41.9	
	comp=Z,163nm,19.3s,MS4.4,baz=111,slow=33						
TBI	**Tubuai**	**81.32**	**237**	*e*LR	LR	22 25 24.1	
	206nm,24.8s						
PPT	**Papeete**	**86.52**	**240**	*e*LR	LR	22 27 48.8	
	332nm,27.0s						
RAR	**Rarotonga**	**87.29**	**229**	LR	LR	22 37 51.4	
	comp=Z,150nm,18.0s,MS4.4,baz=50,slow=34						
ASAR	**Alice Springs**	**95.21**	**169**	P	**P**	**22 01 02.3**	**+1.5**
	1.0nm,1.1s,mb4.2,baz=180,slow=4.3,SNR=3.7						
ASAR				LR	LR	22 41 09.5	
	comp=Z,133nm,18.4s,MS4.4,baz=4.1,slow=34						
MDT	**Midelt**	**96.41**	**25**	LR	LR	22 37 10.2	
	comp=Z,80nm,21.1s,MS4.2,baz=252,slow=31						
BVAR	**Borovoye Array**	**140.25**	**66**	PKP	PKPdf	22 07 02.8	-3.3
	0.5nm,0.7s,baz=240,slow=5.0,SNR=4.5						
MKAR	**Makanchi Array**	**141.54**	**82**	PKP	PKPdf	22 07 07.4	-1.0
	0.2nm,0.3s,baz=240,slow=4.1,SNR=4.3						
INK	**Inuvik**	**147.08**	**318**	*e*P	PKPdf	22 07 16.8	-1.2
ZAL	**Zalesovo**	**147.46**	**74**	PKPbc	PKPbc	22 07 18.5	-2.7
	0.9nm,0.5s,baz=32,slow=0.8,SNR=6.4						
SONM	**Songino Array**	**154.00**	**102**	PKPbc	PKPbc	22 07 34.4	-2.4
	0.5nm,0.9s,baz=183,slow=2.6,SNR=3.3						
SONM				PKPab	PKPab	22 07 48.6	-1.5
	1.1nm,1.0s,baz=255,slow=2.5,SNR=4.8						

*THR **21** 21:56:20.4±0.4, 3323N×4613E, h18km±13km, ML3.1*
*CSEM **21** 21:56:20.4, 3323N×4613E, h18km, ML3.1, After THR*
*ISCJB **21** 21:56:21.8±2.5, 3318N±006×4635E±03, h7km±19km, Error ellipse: s-maj=36.1km s-min=7.2km az=21.3*
*KISR **21** 21:56:22.0±1.0, 3331N×4656E, h43km±999km, ML2.8*

ISC 21 21:56:21.9±3.0, 3321N±007×463E±03, h1km±27km, n8, σ0§57/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNGE	**Sanandaj**	**2.07**	**25**	*e*PG	**Pb**	**21 56 58.9**	**-1.3**
SNGE				*e*SG	**Sb**	**21 57 27.0**	**+0.5**
SNGE				AML	AML	21 57 34.8	
	comp=E,96nm,0.6s						
SNGE				AML	AML	21 57 35.8	
	comp=N,104nm,0.5s						
SNGE	**Sanandaj**	**2.07**	**25**	*e*Pg	**Pb**	**21 56 58.9**	**-1.4**
	SNR=91						
SNGE				*e*Sg	**Sb**	**21 57 27.0**	**+0.5**
	comp=N,104nm,0.5s,SNR=91						
SHGR	**Shooshtar-Gavs**	**2.39**	**117**	*e*Pn	**Pn**	**21 57 02.5**	**+0.3**
SHGR				AML	AML	21 57 46.7	
	comp=N,134nm,0.8s						
SHGR				AML	AML	21 57 52.4	
	comp=E,120nm,0.6s						
ASAO	**Ashtian**	**3.38**	**66**	*e*Pn	**Pn**	**21 57 16.1**	**+0.3**
MIB	**Mutribah**	**3.52**	**165**	*e*P	**Pn**	**21 57 18.2**	**+0.5**
MIB				*e*S	**Sn**	**21 58 00.0**	**+0.1**
MIB				AML	AML	21 58 03.3	
	comp=Z,23nm,0.5s						
RST	**Umm Al-Ruwaisa**	**3.75**	**171**	*e*P	**Pn**	**21 57 21.3**	**+0.4**
RST				*e*S	**Sn**	**21 58 06.0**	**+0.3**
RST				AML	AML	21 58 09.1	
	comp=Z,26nm,0.5s						
UMR	**Umm Al-Rimmam**	**3.85**	**161**	*e*P	**Pn**	**21 57 22.0**	**-0.2**
UMR				*e*S	**Sn**	**21 58 07.2**	**-0.9**
UMR				AML	AML	21 58 09.4	
	comp=Z,17nm,0.3s						
NAY	**Al-Naaiem**	**4.03**	**168**	*e*P	**Pn**	**21 57 25.1**	**+0.3**
NAY				*e*S	**Sn**	**21 58 12.3**	**-0.4**
NAY				AML	AML	21 58 15.6	
	comp=Z,6.0nm,0.4s						

*IDC **21** 22:00:03.1±41.0, 2385S×17976W, h509km±360km, mb3.4/4, mb1 3.6/4, mb1mx3.2/12, mbtmp4.4/4, Error ellipse: s-maj=322.6km s-min=111.6km az=116.0*
*ISCJB **21** 22:00:09.3±2.8, 235S±04×1799E±04, h600km, mb3.9/11, Error ellipse: s-maj=65.9km s-min=17.9km az=83.1*
*NEIC **21** 22:00:15.3±6.2, 2370S×17964E, h639km±65km, mb4.1/8, Error ellipse: s-maj=51.8km s-min=18.8km az=64.0*

ISC 21 22:00:09.7±2.8, 235S±04×1799W±04, h600km, n18, σ0§64/17, mb3.9/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.58**	**270**	P	**P**	**22 05 45.2**	**+0.4**
	8.6nm,0.5s,mb4.7,baz=89,slow=11,SNR=17						
CTAO	**Charters Tower**	**31.58**	**270**	*e*P	**P**	**22 05 45.2**	**+0.4**
	7.0nm,0.3s,mb4.8						
PMG	**Port Moresby**	**34.46**	**288**	*e*P	**P**	**22 06 08.9**	**-0.1**
	11nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**34.98**	**248**	P	**P**	**22 06 14.1**	**+0.8**
ASAR	**Alice Springs**	**42.21**	**260**	P	**P**	**22 07 11.4**	**0.0**
	1.2nm,0.4s,mb3.8,baz=98,slow=8.3,SNR=15						
WB2	**Warramunga Arr**	**42.53**	**266**	*e*P	**P**	**22 07 13.4**	**-0.5**
WRAB	**Tennant Creek**	**42.53**	**266**	*e*P	**P**	**22 07 13.7**	**-0.3**
	4.1nm,0.3s,mb4.4						
WRA	**Warramunga Arr**	**42.54**	**266**	P	**P**	**22 07 13.7**	**-0.3**
	2.2nm,0.4s,mb4.1,baz=103,slow=8.3,SNR=54						
KAKA	**Kakadu**	**46.38**	**275**	*e*P	**P**	**22 07 43.6**	**+0.2**
	3.5nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**50.97**	**265**

TOZ	Tahuroa Road	1.53	256	*e*P*	Pn		22 16 04.6	-2.1
KNZ	Kokohu	1.65	172	*e*P	Pn		22 16 09.7	+1.3
KNZ	Kokohu	1.65	172	PN	Pn		22 16 09.5	+1.1
BKZ	Black Stump Fm	1.91	201	*e*P	Pn		22 16 12.3	+0.4
BKZ	Black Stump FM	1.91	201	*e*P*	Pn		22 16 12.3	+0.3
KAAZ	Kauri Point	2.21	284	P	Pn		22 16 14.8	-1.2
KAAZ	Kauri Point	2.21	284	PN	Pn		22 16 14.8	-1.1
NGZ	Ngauruhoe	2.27	217	P	Pb		22 16 20.5	+0.3
NGZ	Ngauruhoe	2.27	217	P*	Pb		22 16 19.6	-0.5
TUVZ	Tukino	2.32	215	*e*P	Pn		22 16 19.4	+1.9
TUVZ	Tukino	2.32	215	*e*P*	Pn		22 16 19.4	+1.9
FWVZ	Far West T-bar	2.35	217	*e*P	Pb		22 16 21.0	-0.6
FWVZ	Far West T-bar	2.35	217	*e*P*	Pb		22 16 20.6	-1.0
MOVZ	Moawhango	2.39	212	*e*P	Pn		22 16 18.8	+0.3
MOVZ	Moawhango	2.39	212	*e*P*	Pn		22 16 18.8	+0.3
WNVZ	Wahianoa	2.39	215	P	Pb		22 16 21.8	-0.4
WNVZ	Wahianoa	2.39	215	P*	Pb		22 16 21.4	-0.8
WCZ	Waipu Caves	2.83	300	PN	Pn		22 16 21.1	-3.4
WCZ				SN	Sn		22 16 54.8	-4.2
TSZ	Takapari Road	2.89	202	*e*P	Pn		22 16 27.6	+2.2
WAZ	Wanganui	3.02	218	*e*P	Pb		22 16 30.7	-2.2
WAZ	Wanganui	3.02	218	*e*PN	Pn		22 16 29.3	+2.1
OUZ	Omahuta	3.74	304	P	Pn		22 16 34.0	-3.0
OUZ	Omahuta	3.74	304	PN	Pn		22 16 34.0	-3.0
SNZO	South Karori	4.43	207	*e*Pn	Pn		22 16 46.0	-0.6
THZ	Tophouse	5.57	217	*e*P	Pn		22 17 01.6	-0.7
THZ	Tophouse	5.57	217	*e*PN	Pn		22 17 01.4	-0.8
THZ				SN	Sn		22 18 07.3	+0.7
RPZ	Rata Peaks	7.95	215	Pn	Pn		22 17 34.6	-0.2
	0.6nm,0.3s,baz=116,slow=3.7,SNR=4.0							
RAO	Raoul Island	9.01	27	P	Pn		22 17 57.2	+7.7
DZM	Mont Dzumac	17.95	325	LR	LR		22 25 26.4	
	comp=Z,530nm,18.6s,baz=204,slow=33							
STKA	Stephens Creek	29.83	270	P	P		22 21 48.1	+1.4
	3.9nm,0.8s,mb4.2,baz=103,slow=14,SNR=3.5							
TBI	Tubuai	31.67	73	*e*LR	LR		22 30 21.7	
	167nm,26.5s							
HNR	Honiara	31.97	326	LR	LR		22 31 46.3	
	comp=Z,131nm,21.9s,MS3.6,baz=179,slow=30							
PPT	Papeete	35.09	65	*e*LR	LR		22 31 56.2	
	197nm,23.0s							
PMG	Port Moresby	38.98	308	*e*P	P		22 23 08.2	+2.4
	6.1nm,0.4s,mb4.7							
AS31	Alice Springs	39.52	278	P	P		22 23 10.4	0.0
ASAR	Alice Springs	39.52	278	P	P		22 23 10.3	-0.1
	1.4nm,0.7s,mb3.8,baz=127,slow=8.1,SNR=10							
VNDA	Vanda	40.80	185	P	P		22 23 21.4	+0.5
	0.4nm,0.7s,mb3.1,baz=21,slow=6.3,SNR=2.3							
VNDA	Vanda	40.80	185	*e*P	P		22 23 21.6	+0.6
	0.2nm,0.5s,mb3.0							
SBA	Scott Base	40.83	183	*e*P	P		22 23 22.6	+1.4
	0.7nm,0.4s,mb3.6							
WB2	Warramunga Arr	41.16	283	*e*P	P		22 23 24.1	+0.1
WRAB	Tennant Creek	41.17	283	*e*P	P		22 23 24.5	+0.5
	3.7nm,0.6s,mb4.2							
WRA	Warramunga Arr	41.17	283	P	P		22 23 23.3	-0.8
	1.9nm,0.7s,mb3.8,baz=122,slow=7.4,SNR=16							
RKT	Rikitea	43.11	85	*e*LR	LR		22 35 39.0	
	112nm,24.2s							
CASY	Casey	47.19	210	*e*P	P		22 24 11.8	-0.4
	2.2nm,0.6s,mb4.3							
QSPA	South Pole Qui	52.74	180	*e*P	P		22 24 54.8	+0.3
	4.3nm,0.7s,mb4.5							
MAW	Mawson	64.42	203	P	P		22 26 17.4	+1.5
	0.9nm,0.5s,mb4.0,baz=162,slow=3.2,SNR=3.4							
MAW				LR	LR		22 53 42.6	
	comp=Z,81nm,20.9s,MS3.9,baz=242,slow=36							
MAW	Mawson	64.42	203	*e*P	P		22 26 17.2	+1.4
PMSA	Palmer Station	67.48	156	*e*P	P		22 26 37.8	+2.2
	1.9nm,0.6s,mb4.3							
SNAA	Sanae	71.25	180	*e*P	P		22 27 01.2	+2.3
	2.4nm,0.8s,mb4.2							
USHA	Ushuaia	72.29	146	LR	LR		22 49 33.1	
	comp=Z,52nm,20.0s,MS3.8,baz=36,slow=28							
TORD	Torodi Ar. Bea	155.56	190	PKP	PKPdf		22 35 37.5	+4.0
	0.6nm,0.8s,baz=153,slow=3.2,SNR=6.2							
TORD				PKPab	PKPab		22 36 02.3	+3.0
	1.4nm,1.0s,baz=152,slow=3.7,SNR=5.1							
CLL	Collm	162.20	326	*e*PKP2	PKPab		22 36 29.0	+0.8

NIED **21** *22:20:00,3370N×13600E,h440km,Mw5.5 Best double couple: M₀1.89000×10¹⁷ NP1:φs146.00000°,δ80.00000°, λ62.00000°. NP2:φs38.00000°,δ29.00000°,λ159.00000°.*

BGS **21** *22:20:47.8±1.8,3343N×13635E,h411km,mb4.8*

BJI **21** *22:20:47.1,3369N×13583E,h403km,mB5.1,mb4.8*

IDC **21** *22:20:48.1±0.6,3369N×13590E,h396km±6km,mb4.2/33, mb1 4.3/38,mb1mx4.2/43,mbtmp5.0/38,Error ellipse: s-maj=9.5km s-min=7.4km az=77.0*

JMA **21** *22:20:48.3±0.1,3369N×13596E,h420km±2km,M5.5*

JMA Felt II J1.

MOS **21** *22:20:48.1±1.1,3365N×13585E,h408km,mb4.8/100, Error ellipse: s-maj=7.1km s-min=4.2km az=105.6*

NEIC **21** *22:20:49.5±0.1,3363N×13583E,mb4.8/136, MW5.5(NIED),Error ellipse: s-maj=3.8km s-min=2.9km az=156.0*

NEIC Felt in the Kanto region. Recorded [2 JMA] in Fukushima and [1 JMA] in Ibaraki, Iwate, Miyagi, Tochigi and Tokyo Prefectures.

HRVD **21** *22:20:49.5±0.3,3365N×13594E,h419km±1km,MW5.5/62, Centroid moment Tensor Solution. LP body waves: s62,c114; Half duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr0.43±.03; Mθθ0.57±.05; Mφφ-1.00±.05; Mrθ1.01±.06; Mθφ-0.12±.05; Mφr-1.46±.05; Best double couple: M₀1.98000×10¹⁷ NP1:φs42.00000°,δ24.00000°, λ162.00000°. NP2:φs148.00000°,δ83.00000°,λ67.00000°. Principal axes: T 1.9680, Plg47.0000°, Azm34.0000°; N 0.0250, Plg22.0000°, Azm151.0000°; P -1.9920, Plg34.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s.*

ISCJB **21** *22:20:49.0±0.1,3368N±002×13584E±002,h415km, mb4.7/202 Error ellipse: s-maj=3.1km s-min=1.8km az=141.7*

SZGRF **21** *22:20:51.3,3428N×13725E,h436km,mb5.3,Near south coast of eastern Honshu, Japan*

ISC 21 22:20:50.2±0.1,3373N±002×13583E±002,h417km, h417km±2.4km;pP-P,n837,σ0s95/902,mb4.7/202, 161C-121D,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWZ	Kozaga	0.23	206	⇑P	P	22 21 40.0	-1.5
JWZ				S	S	22 22 20.2	-2.7
JWM	Minabe	0.41	286	⇑P	P	22 21 40.5	-1.2
JWY	Kouya	0.52	338	P	P	22 21 41.0	-0.8
JWY				S	S	22 22 21.7	-1.9
JKN2	Miekihoku	0.62	36	⇓P	P	22 21 40.7	-1.3
JKN2				S	S	22 22 21.2	-2.7
JHE	Heguri	0.93	352	⇑P	P	22 21 41.7	-1.1
JIE	Ise	0.98	48	⇓P	P	22 21 41.7	-1.3
JIE				S	S	22 22 23.7	-1.9
JAJ2	Tsuna	1.04	311	⇑P	P	22 21 42.2	-1.0
TSUJ	Tsu 2	1.09	26	⇓P	P	22 21 42.1	-1.2
TSUJ				S	S	22 22 24.5	-1.8
JAI	Aioi	1.15	273	⇑P	P	22 21 42.7	-0.9
JAI				S	S	22 22 25.0	-1.7
JAA	Atsumi	1.41	50	⇓P	P	22 21 43.3	-1.3
JAA				S	S	22 22 26.7	-1.9
MRT2	Murotomisaki 2	1.45	257	⇑P	P	22 21 44.0	-0.8
TK01	Tokai 1	1.47	88	P	P	22 21 42.9	-2.0
JEG	Eigenji	1.47	18	⇓P	P	22 21 44.0	-0.9
JKS	Kasai	1.49	327	⇑P	P	22 21 43.9	-1.1
JWT	Wachi	1.59	347	⇑P	P	22 21 44.4	-1.0
JWT				S	S	22 22 27.7	-2.4
TK02	Tokai 2	1.62	82	⇓P	P	22 21 43.8	-1.8
JMN	Monobe	1.63	270	⇑P	P	22 21 45.1	-0.5
JMN				S	S	22 22 29.7	-0.8
JJS	Sakaide	1.70	293	⇑P	P	22 21 45.1	-0.9
JFM	Mihama	1.79	4	⇓P	P	22 21 45.5	-1.0
JFM				S	S	22 22 30.1	-2.0
TK04	Tokai 4	1.82	68	⇓P	P	22 21 45.6	-1.0
JAD	Aida	1.83	312	⇑P	P	22 21 45.9	-0.8
HMMJ	Hamamatsu 2	1.92	54	⇓P	P	22 21 45.7	-1.5
JAO	Obara	1.93	37	⇓P	P	22 21 46.0	-1.3
JAO				S	S	22 22 32.1	-1.4
JKY	Yasaka	1.98	343	⇑P	P	22 21 46.7	-0.9
JKSM	Kasumi	2.08	333	⇑P	P	22 21 47.3	-0.9
JGM	Miyama	2.09	20	⇓P	P	22 21 47.1	-1.1
JGM				S	S	22 22 33.5	-1.7
JSG	Sagara	2.17	64	⇓P	P	22 21 47.6	-1.1
JGF	Kuroka	2.25	34	⇓P	P	22 21 47.6	-1.6
JGF				S	S	22 22 34.7	-2.3
JET	Tanbara	2.32	272	⇑P	P	22 21 49.2	-0.5
JNY	Yasuok	2.33	45	⇓P	P	22 21 48.3	-1.5
JKR	Kurayoshi	2.33	315	⇑P	P	22 21 49.0	-0.8
JKU	Kubokawa	2.35	260	⇑P	P	22 21 49.4	-0.5
SHZ3	Shizuoka 3	2.37	55	P	P	22 21 48.6	-1.5
JJG	Jouge	2.40	293	⇑P	P	22 21 49.8	-0.4
JKG	Kaga	2.57	9	⇓P	P	22 21 50.1	-1.3
JKG				*e*S	S	22 22 38.5	-2.5
JHS	Saijyo	2.58	300	⇑P	P	22 21 51.1	-0.4
JHS				*e*S	S	22 22 41.2	+0.1
JTO	Tosashimizu	2.68	252	⇑P	P	22 21 51.8	-0.5
JTO				S	S	22 22 42.1	-0.4
JIZS	Izushimoda	2.71	68	⇓P	P	22 21 50.6	-1.8
UWA2	Uwa jima 2	2.73	260	⇑P	P	22 21 52.2	-0.4
JGN	Niukaw	2.77	26	⇓P	P	22 21 51.4	-1.5
JGN				S	S	22 22 42.0	-1.7
JHM	Kurahashi	2.77	279	⇑P	P	22 21 52.5	-0.4
JKO	Kozu shima	2.78	80	P	P	22 21 51.1	-1.9
JNA	Nagahama	2.80	267	⇑P	P	22 21 52.9	-0.2
JNA				*e*S	S	22 22 42.1	-2.0
JYN	Shimob	2.85	51	⇓P	P	22 21 51.5	-2.0
JNT	Takato	2.86	41	⇓P	P	22 21 51.9	-1.7
JNT				S	S	22 22 43.5	-1.4
JNM	Ikuma	2.90	308	⇑P	P	22 21 53.6	-0.3
JHT	Toyohira	2.98	289	⇑P	P	22 21 54.0	-0.5
JHT				S	S	22 22 46.3	-0.3
JOD2	Odawara 2	3.09	60	P	P	22 21 53.9	-1.5
JOD2				S	S	22 22 46.7	-1.6
JTT	Ttatey	3.12	23	P	P	22 21 54.5	-1.1
JIM2	Oshima 3	3.14	71	P	P	22 21 53.6	-2.2
JGT	Gotsu	3.17	295	⇑P	P	22 21 55.3	-0.7
JNG	Nsakai	3.25	34	⇓P	P	22 21 55.0	-1.7
JNG				S	S	22 22 48.9	-1.8
JJH	Hakui	3.28	13	S	S	22 22 50.5	-0.6
JKD	Kudamatsu	3.31	277	⇑P	P	22 21 57.3	+0.1
JHIK	Hikimi	3.33	285	⇑P	P	22 21 57.1	-0.3
JHJ	Hachijo jima 2	3.36	99	P	P	22 21 55.4	-2.2
	175nm,0.3s,baz=222,slow=7.1,SNR=63						
JHJ				S	S	22 22 47.0	-5.3
	149nm,0.3s,baz=237,slow=22,SNR=3.4						
JHJ2	Mitsune	3.39	99	P	P	22 21 55.8	-2.1
JRY	Ryogami san	3.40	47	⇓P	P	22 21 56.1	-1.9
JRY				S	S	22 22 50.1	-2.8
MAJO	Matsushiro	3.41	34	⇓*i*P	P	22 21 55.9	-2.2
MAJO				*e*S	S	22 22 50.1	-3.0
MAT	Matsushiro	3.41	34	P	P	22 21 56.3	-1.8
MAT				S	S	22 22 50.9	-2.2
MAT	Matsushiro	3.41	34	P	P	22 21 56.2	-1.9
MAT	Matsushiro	3.41	34	*e*P	P	22 21 56.0	-2.1
MAT				*e*S	S	22 22 51.0	-2.1
MJAR	Matsushiro Arr	3.41	34	P	P	22 21 56.3	-1.8
	74nm,0.3s,baz=207,slow=7.2,SNR=451						
MJAR				S	S	22 22 46.1	-7.0
	69nm,0.3s,baz=291,slow=32,SNR=4.6						
MJAR	Matsushiro Arr	3.41	34	P	P	22 21 56.3	-1.8
MJAR				S	S	22 22 46.1	-7.0
MJAR				pmax	pmax		
	comp=Z,74nm,0.3s						
MJAR				smax			
	comp=N,69nm,0.3s						
JUS	Usuki	3.48	260	⇑P	P	22 21 58.5	-0.1
JKI	Kunimi	3.56	270	⇑P	P	22 21 59.1	-0.2
JGK	Kuni	3.64	38	S	S	22 22 54.9	-1.8
JKIT	Kitakata	3.83	254	⇑P	P	22 22 02.0	+0.2
JJN	Nakama	3.86	29	P	P	22 22 00.9	-1.1
JJN				S	S	22 22 59.9	-0.5
JSZ	Suzu	3.91	18	⇓P	P	22 22 01.2	-1.3
JSZ				S	S	22 22 59.8	-1.4
JTSN	Tsuno	3.93	249	⇑P	P	22 22 02.4	-0.2
BSO4	Boso 4	3.93	70	P	P	22 21 59.4	-3.3
JTY	Toyota	4.00	279	⇑P	P	22 22 03.1	-0.1
JTY				S	S	22 23 02.2	-0.4
JAG	Ashikaga	4.00	47	⇓P	P	22 22 00.1	-3.2
BSO3	Boso 3	4.02	73	P	P	22 21 59.2	-4.3
JKT	Katashina	4.12	42	⇓P	P	22 22 01.6	-2.8
JHG	Hegura jima	4.20	12	P	P	22 22 04.2	-1.0
JHG				S	S	22 23 05.6	-0.5
BSO1	Boso 1	4.36	76	P	P	22 22 01.8	-4.9
JHK	Hiroka	4.37	36	P	P	22 22 04.2	-2.5
JHK				S	S	22 23 05.8	-3.1
JIU2	Izumi 2	4.37	256	⇑P	P	22 22 06.7	-0.1
JIZZ	Izumozaki	4.46	31	P	P	22 22 06.5	-1.1
JIZZ				S	S	22 23 08.2	-2.3
JFI	Itaya	4.55	268	⇑P	P	22 22 08.4	-0.2
JSB	Shiboa	4.64	45	S	S	22 23 08.8	-5.1
JZO	Okuchi	4.68	252	⇑P	P	22 22 09.7	-0.1
JSD	Sado	4.72	24	⇓P	P	22 22 08.7	-1.5
JSD				S	S	22 23 11.1	-4.2
JHO	Hitachi	4.83	52	P	P	22 22 07.2	-4.0
JFY	Yanaizu	4.84	40	⇓P	P	22 22 08.7	-2.6
JTSR	Tashiro 2	4.88	240	⇑P	P	22 22 11.9	+0.2
JHD	Hondo	4.94	257	⇑P	P	22 22 12.6	+0.2
JUR	Ureshino	4.96	264	⇑P	P	22 22 12.7	+0.1
JNS	Sasagawa	4.96	34	⇓P	P	22 22 10.3	-2.3
JNS				S	S	22 23 14.2	-5.5
JSU	Suzuyama	5.05	245	⇑P	P	22 22 13.3	-0.2
JII	Iki	5.08	272	⇑P	P	22 22 14.0	+0.2
JTN	Tanegashima 3	5.13	235	⇑P	P	22 22 14.4	+0.1
NGSJ	Nagasakinomoza	5.18	259	⇑P	P	22 22 14.8	0.0
NGSJ				S	S	22 23 23.8	+0.2
JFT	Otama	5.26	43	⇓P	P	22 22 13.0	-2.7
ONAJ	Iwakimizuishiy	5.27	49	⇓P	P	22 22 12.0	-3.7
JTU	Tsushima	5.39	280	⇑P	P	22 22 16.9	-0.1
JAW	Awa shima	5.46	29	⇓P	P	22 22 15.7	-2.0
JAW				S	S	22 23 24.3	-4.8
JSJ	Shimokoshiki	5.55	250	⇑P	P	22 22 18.4	-0.2
JYA	Atsumi	5.78	32	P	P	22 22 19.2	-1.8
JFU	Fukue jima 2	6.03	262	P	P	22 22 23.8	+0.1
JOU	Okura	6.06	39	P	P	22 22 21.3	-2.7
INCN	Inchon	8.37	299	*e*Pn	P	22 22 50.0	+0.6
	comp=N,118nm,0.8s						
CBIJ	Chichi jima	8.59	139	P	P	22 22 47.3	-4.5
	comp=N,25nm,0.3s,baz=92,slow=17,SNR=14						
CBIJ				S	S	22 24 19.9	-12
	comp=N,67nm,0.3s,baz=146,slow=23,SNR=25						
JOW	Kunigami	9.48	226	P	P	22 23 01.9	+0.3
	comp=N,11nm,0.3s,baz=0.9,slow=5.7,SNR=28						
JOW				S	S	22 24 45.2	-4.6
	baz=144,slow=18,SNR=2.0						
ASAJ	Asahikawa	11.62	25	P	P	22 23 24.0	-1.3
	comp=N,16nm,0.3s,baz=224,slow=14,SNR=41						
ASAJ				S	S	22 25 23.9	-9.3
	comp=N,12nm,0.3s,baz=212,slow=15,SNR=4.8						
ASAJ	Asahikawa	11.62	25	P	P	22 23 24.0	-1.3
ASAJ				S	S	22 25 24.0	-9.3
ASAJ				pmax	pmax		
	comp=Z,16nm,0.3s						
ASAJ				smax			
	comp=N,12nm,0.3s						
MDJ	Mudanjiang	11.89	338	P	P	22 23 29.0	+0.8
MDJ				AMB	AMB		
	comp=Z,21nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,211nm,7.9s						
MDJ	Mudanjiang	11.89	338	*e*P	P	22 23 29.2	+0.9
	comp=Z,23nm,0.9s						
DL2	Dalian	12.56	298	*i* PR	P	22 23 36.1	+0.5
DL2				S	S	22 25 53.3	+1.1
DL2				SCS	ScS	22 35 05.8	-2.0
DL2				AMB	AMB		
	comp=Z,30nm,0.7s						
DL2				AMB	AMB		
	comp=Z,390nm,7.5s						
SNY	Shenyang	12.61	313	⇑P	P	22 23 36.8	+0.7
SNY				S	S	22 25 54.0	+0.8
SNY				SCS	ScS	22 35 05.9	-2.0
SNY				AMB	AMB		
	comp=Z,50nm,2.0s						
SNY				AMB	AMB		
	comp=Z,667nm,5.0s						
SSE	Sheshan	12.65	262	*e*P	P	22 23 32.3	-4.3
SSE				XP		22 25 00.0	
SSE				S	S	22 25 49.8	-4.2
SSE				SCS	ScS	22 35 11.8	+3.8
SSE				AMB	AMB		
	comp=Z,35nm,0.7s						
SSE				AMB	AMB		
	comp=Z,272nm,6.8s						
CN2	Changchun	12.90	324	⇑P	P	22 23 40.0	+0.7
CN2				*e*XP		22 25 04.6	
CN2				*e*S	S	22 25 58.4	-0.6
CN2				AMB	AMB		
	comp=Z,20nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
YUK	Yuzh-Kuril'sk	12.90	34	⇑*i*P	P	22 23 39.6	+0.3
YUK				*i* S	S	22 25 56.0	-3.1
YUK				pmax	pmax		
	comp=N,6μm,3.0s						
YUK				pmax	pmax		
	comp=Z,4μm,3.0s						
YUK				pmax	pmax		
	comp=E,3μm,3.5s						
YUK				pmax	pmax		
	comp=N,820nm,1.0s						
YUK				pmax	pmax		
	comp=E,570nm,1.0s						
YUK				pmax	pmax		
	comp=Z,980nm,1.0s						
YUK				smax			
	comp=N,20μm,3.0s						
YUK				smax			
	comp=E,20μm,3.0s						
YUK				smax			
	comp=N,7μm,0.7s						
YUK				smax			
	comp=E,6μm,0.7s						
YSS	Yuzh-Sakhalins	14.21	20	α *i*P	P	22 23 53.3	-0.3
YSS				*e*S	S	22 26 23.1	-2.1
YSS				pmax	pmax		
	comp=N,110nm,0.9s						
YSS				pmax	pmax		
	comp=Z,180nm,0.9s						
YSS				pmax	pmax		
	comp=N,500nm,5.0s						
YSS				pmax	pmax		
	comp=Z,600nm,5.0s						
YSS				smax			
	comp=N,3μm,6.0s						
YSS				smax			
	comp=E,4μm,5.0s						
YSS				smax			
	comp=E,280nm,1.1s						
YSS				smax			
	comp=Z,470nm,1.1s						
YSS				MLR	MLR		
	comp=Z,800nm,15.0s						
YSS				MLR	MLR		
	comp=N,600nm,13.0s						
YSS	Yuzh-Sakhalins	14.21	20	*e*P	P	22 23 53.3	-0.3
	comp=N,171nm,0.9s						
NJ2	Nanjing	14.37	268	*e*P	P	22 23 56.0	+0.8
NJ2				XP		22 25 24.3	
NJ2				S	S	22 26 24.0	-4.2
NJ2				AMB	AMB		
	comp=Z,130nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,610nm,10.4s						
HABR	Khabarovsk	14.74	358	⇑*i*P	P	22 23 58.3	-0.9
HABR				*e*S	S	22 26 37.5	+1.9
HABR				pmax	pmax		
	comp=Z,125nm,1.4s						
KUR	Kuril'sk	14.75	35	κ *i*P	P	22 23 56.0	-3.4
KUR				*i* S	S	22 26 38.7	+2.8
KUR				pmax	pmax		
	comp=Z,2μm,1.6s						
KUR				pmax	pmax		
	comp=N,320nm,1.2s						
KUR				pmax	pmax		
	comp=Z,1μm,1.2s						
KUR				smax			
	comp=N,9μm,3.6s						
KUR				smax			
	comp=E,19μm,3.6s						
KUR				smax			
	comp=N,1μm,0.9s						
KUR				smax			
	comp=E,680nm,0.9s						
TATO	Taipei	15.24	239	*e*P	P	22 24 03.2	-1.5
	comp=E,19nm,0.5s						
YHNB	Yeheng	15.51	238	*e*P	P	22 24 05.9	-1.6
TIA	Tai'an	15.54	284	*e*P	P	22 24 07.6	-0.2
TIA				S	S	22 26 53.0	+1.7
TIA				AMB	AMB		
	comp=Z,28nm,1.0s						
TIA				AMB	AMB		
	comp=Z,457nm,4.0s						
NACB	Ninganchiao	15.67	236	*e*P	P	22 24 07.4	-1.9
KLR	Kul'dur	15.78	350	*e*P	P	22 24 06.0	-4.4
KLR				*e*S	S	22 26 50.5	-5.5
KLR				pmax	pmax		
	comp=E,28nm,1.6s						
KLR				pmax	pmax		
	comp=Z,57nm,1.6s						
KLR				MLR	MLR		
	comp=N,1μm,10.0s						
KLR				MLR	MLR		
	comp=E,600nm,10.0s						
KLR				MLR	MLR		
	comp=Z,2μm,10.0s						
BJT	Baijiatuan	16.92	297	*e*P	P	22 24 22.4	-0.2
BJT				pmax	pmax		
	comp=Z,579nm,1.5s						
BJT	Baijiatuan	16.92	297	*e*P	P	22 24 22.4	-0.3
	comp=Z,579nm,1.5s						
BJI	Beijing	16.93	297	P	P	22 24 22.4	-0.2
BJI				XP	sP	22 26 05.9	-6.4
BJI				S	S	22 27 19.3	+1.0
BJI				SCS	ScS	22 35 18.3	-0.9
BJI				AMB	AMB		
	comp=Z,237nm,1.3s						
BJI				AMB	AMB		
	comp=Z,2μm,3.1s						
QZH	Quanzhou	17.38	244	⇓*i*P	P	22 24 25.5	-1.9
QZH				S	S	22 27 20.0	-7.1
QZH				AMB	AMB		
	comp=Z,120nm,1.0s						
WHN	Wuhan	18.46	266	⇓P	P	22 24 38.4	-0.4
WHN				S	S	22 27 50.0	+3.0
HIA	Hailar	19.58	327	*e*P	P	22 24 48.6	-1.1
HIA				pmax	pmax		
	comp=Z,44nm,0.8s						
HIA	Hailar	19.58	327	*e*P	P	22 24 48.6	-1.1
	comp=Z,44nm,0.8s						
HHC	Hu-ho-hao-te	20.54	297	*e*P	P	22 24 59.3	+0.9
HHC				XP	sP	22 26 51.1	-1.1
HHC				S	S	22 28 22.8	+2.1
HHC				PCP	PcP	22 28 53.5	+2.5
HHC				PCS	PcS	22 32 28.3	-0.8
HHC				AMB	AMB		
	comp=Z,46nm,0.9s						
HHC				AMB	AMB		
	comp=Z,739nm,4.5s						
BTO	Baotou	21.64	296	*e*P	P	22 25 08.3	-0.1
XAN	Xi'an	22.32	278	P	P

comp=E,1µm,16.0s
ENH Enshi 22.59 268 *e*P **P** **22 25 15.4 -1.6**
TGY Tagaytay City 23.76 218 P **P** **22 25 29.0 +1.4**
comp=E,68nm,0.3s,baz=278,slow=11,SNR=3.2
TGY Tagaytay City 23.76 218 P **P** **22 25 29.0 +1.4**
TGY pmax pmax
comp=Z,68nm,0.3s
CLNS Chul'man 24.29 345 *e*P **P** **22 25 31.9 -0.4**
CLNS *e*S **S** **22 29 04.7 -16**
CLNS pmax pmax
comp=N,54nm,1.2s
CLNS pmax pmax
comp=Z,70nm,1.2s,mb5.0
CLNS pmax pmax
comp=E,21nm,1.1s
CLNS MLR MLR
comp=E,200nm,13.0s
CLNS MLR MLR
comp=Z,300nm,13.0s
CLNS MLR MLR
comp=N,400nm,14.0s
CIT Chita 24.34 325 *e*P **P** **22 25 28.8 -4.0**
CIT *e* 22 29 22.6
PET Petropavlovsk 25.25 33 *e*P **P** **22 25 40.3 -0.5**
PET pmax pmax
comp=Z,102nm,1.1s,mb5.2
PET Petropavlovsk 25.25 33 *e*P **P** **22 25 40.3 -0.5**
comp=Z,102nm,1.1s,mb5.2
ULN Ulaanbaatar 25.78 312 ⇓P **P** **22 25 46.6 +1.1**
SNR=26
ULN Ulaanbaatar 25.78 312 *e*P **P** **22 25 46.5 +1.0**
ULN pmax pmax
comp=Z,56nm,1.2s,mb4.9
ULN Ulaanbaatar 25.78 312 *e*P **P** **22 25 46.5 +1.0**
comp=Z,56nm,1.2s,mb4.9
SONM Songino Array 26.18 311 P **P** **22 25 49.9 +0.8**
comp=Z,17nm,0.8s,mb4.5,baz=114,slow=8.2,SNR=78
SONM ScP ScP 22 32 02.5 -0.1
comp=Z,3.8nm,1.0s,baz=147,slow=3.4,SNR=6.2
SONM Songino Array 26.18 311 P **P** **22 25 49.9 +0.8**
SONM pmax pmax
comp=Z,17nm,0.8s
SONM pmax pmax
comp=N,4.0nm,1.0s
GYA Guiyang 26.20 262 ⇓*i*P **P** **22 25 48.4 -0.9**
GYA XP sP 22 27 49.4 -2.6
GYA S **S** **22 29 50.0 -0.4**
GYA SCP ScP 22 32 03.6 +0.9
GYA SCS ScS 22 35 51.6 -1.8
GYA AMB AMB
comp=Z,60nm,0.8s,mb5.1
GYA AMB AMB
comp=Z,130nm,5.1s
LZH Lanzhou 26.28 284 *e*P **P** **22 25 49.0 -1.0**
LZH XP sP 22 27 43.1 -10
LZH *e*S **S** **22 29 52.1 +0.5**
LZH AMB AMB
comp=Z,14nm,1.0s,mb4.3
LZH AMB AMB
comp=Z,39nm,4.9s
CD2 Chengdu 27.19 273 P **P** **22 25 57.4 -0.7**
CD2 PCP PcP 22 29 06.4 +0.8
CD2 S **S** **22 30 06.9 +0.9**
CD2 SCS ScS 22 35 58.3 +0.5
CD2 AMB AMB
comp=Z,60nm,0.7s,mb5.1
CD2 AMB AMB
comp=Z,160nm,8.4s
QIZ Qiongzhong 27.40 244 P **P** **22 25 59.1 -0.8**
QIZ AP 22 27 10.8
QIZ S **S** **22 30 10.9 +1.6**
QIZ AMB AMB
comp=Z,133nm,5.8s
QIZ Qiongzhong 27.40 244 P **P** **22 25 59.8 -0.1**
MA2 Magadan 27.68 16 *e*P **P** **22 26 02.0 -0.3**
MA2 pmax pmax
comp=Z,142nm,1.0s,mb5.2
MA2 Magadan 27.68 16 *e*P **P** **22 26 02.0 -0.3**
comp=Z,142nm,1.0s,mb5.2
BOD Bodaibo 28.25 335 *e*P **P** **22 26 04.5 -2.8**
BOD pmax pmax
comp=Z,10.0nm,1.4s,mb4.0
YAK Yakutsk 28.59 354 *e*P **P** **22 26 10.1 -0.2**
YAK *i* *PP 22 27 22.2
YAK *i* 22 29 08.8
YAK *e*S **S** **22 30 30.3 +2.5**
YAK *i* *SS sS 22 32 45.4 -0.7
YAK *i* 22 36 01.1
YAK pmax pmax
comp=Z,52nm,1.2s,mb4.7
YAK pmax pmax
comp=N,28nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK smax
comp=N,21nm,1.3s
YAK smax
comp=E,32nm,1.3s
YAK Yakutsk 28.59 354 *e*P **P** **22 26 09.5 -0.9**
comp=E,80nm,0.9s,mb5.0
ZAK Zakamensk 29.04 315 *e*P **P** **22 26 14.8 +0.5**
ZAK *e* 22 30 39.0
ZAK *e* 22 36 07.5
ZAK pmax pmax
comp=Z,16nm,1.8s,mb4.0
GTA Gaotai 29.34 292 ⇓P **P** **22 26 16.8 -0.2**
GTA AP 22 27 34.0
GTA XP sP 22 28 18.9 -1.5
GTA PCP PcP 22 29 13.3 +2.3
GTA S **S** **22 30 39.3 -0.3**
GTA SCP ScP 22 32 12.0 -0.4
GTA XS sS 22 32 52.9 -5.3
GTA PCS PcS 22 32 54.9 +0.4
GTA SCS ScS 22 36 07.8 0.0
GTA AMB AMB
comp=Z,11nm,0.8s,mb4.2
GTA AMB AMB
comp=Z,230nm,5.0s
TLY Talaya 29.35 317 *e*P **P** **22 26 18.3 +1.3**
TLY *i* S **S** **22 30 41.8 +2.1**
TLY pmax pmax
comp=Z,13nm,0.7s,mb4.4
TLY MLR MLR
comp=Z,134nm,16.0s
TLY Talaya 29.35 317 *e*P **P** **22 26 18.1 +1.1**
comp=Z,14nm,0.8s,mb4.3
KMI Kunming 29.97 262 P **P** **22 26 22.3 -0.1**
KMI AP 22 27 35.1
KMI PP PP 22 27 42.0 +0.7
KMI PPP 22 28 04.3
KMI XP sP 22 28 20.8 -5.2
KMI PCP PcP 22 29 15.0 +2.4
KMI S **S** **22 30 49.3 0.0**
KMI SCP ScP 22 32 15.8 +1.3
KMI PCS PcS 22 32 57.4 +0.8
KMI XS sS 22 32 59.5 -8.6
KMI SS SS 22 33 09.5 -10
KMI SSS 22 33 39.8
KMI SCS ScS 22 36 12.6 +1.8
KMI AMB AMB
comp=Z,17nm,0.9s,mb4.4
KMI AMB AMB
comp=Z,300nm,6.9s
MOY Mondy 30.86 316 *e*P **P** **22 26 31.4 +1.2**
MOY pmax pmax
comp=Z,36nm,2.9s,mb4.2
WAKE Wake Island 30.97 110 *e*P **P** **22 26 30.1 -1.0**
comp=Z,40nm,0.8s,mb4.8
SMY Shemya 33.21 43 *e*P **P** **22 26 51.1 +0.7**
SMY pmax pmax
comp=Z,217nm,1.2s,mb5.4
SMY MLR MLR
comp=Z,100nm,19.0s
SMY Shemya 33.21 43 *e*P **P** **22 26 51.1 +0.7**
comp=Z,217nm,1.2s,mb5.4
SMY LR LR
comp=Z,100nm,19.0s
NANT Nan 34.65 254 ⇓P **P** **22 27 02.0 -0.6**
comp=Z,325nm,0.4s
AMKA Amchitka 35.93 47 *e*P **P** **22 27 13.3 0.0**
AMKA *e*pP pP 22 28 29.9 -0.6
CHG Chiang Mai 36.05 255 ⇓P **P** **22 27 13.9 -0.4**
comp=Z,23nm,0.8s,mb4.6
CHTO Chiang Mai 36.05 255 ⇑P **P** **22 27 14.1 -0.2**
SNR=6.3
CHTO Chiang Mai 36.05 255 *e*P **P** **22 27 14.2 -0.1**
CHTO *e**PP pP 22 28 32.2 +0.7
CHTO *e* 22 28 44.3
CHTO *e*S **S** **22 32 22.0 -0.2**
CHTO pmax pmax
comp=Z,14nm,0.9s,mb4.3
CHTO Chiang Mai 36.05 255 *e*P **P** **22 27 14.2 -0.2**
comp=Z,14nm,0.9s,mb4.3
CHTO *e*pP pP 22 28 32.2 +0.6
CHTO *e*PP PP 22 28 44.3 -3.3
CHTO *e*S **S** **22 32 22.0 -0.2**
CHTO *e*ScP ScP 22 32 36.2 +0.5
CM31 Chiang Mai Arr 36.24 255 *e*P **P** **22 27 15.7 -0.2**
comp=Z,31nm,0.8s,mb4.7
LSA Lhasa 38.00 276 *e*P **P** **22 27 30.6 +0.1**
comp=Z,4.9nm,0.6s,mb4.0
LSA *e*PP PP 22 29 11.4 +2.9
TIXI Tiksi 38.16 356 ⇓*i*P **P** **22 27 30.6 -1.2**
TIXI *e*S **S** **22 32 56.1 +2.3**
TIXI *e**SS sS 22 35 15.6 -0.6
TIXI pmax pmax
comp=Z,32nm,0.7s,mb4.8
WMQ Urumqi 38.38 300 *e*P **P** **22 27 34.0 +0.4**
WMQ AP pP 22 28 54.0 +2.2
WMQ PP PP 22 29 16.0 +3.5
WMQ S **S** **22 32 59.0 +2.0**
WMQ XS sS 22 35 19.0 -0.6
WMQ SS SS 22 36 01.0 -6.0
WMQ SCS ScS 22 36 56.0 -0.1
WMQ AMB AMB
comp=Z,31nm,1.0s,mb4.6
WMQ AMB AMB
comp=Z,202nm,4.0s
BILL Bilibino 38.52 18*c* *i*P **P** **22 27 35.2 +0.4**
BILL *e**PP pP 22 28 49.1 -3.9
BILL *e* 22 29 09.7
BILL *e* 22 29 38.9
BILL *i*S **S** **22 33 00.6 +1.5**
BILL pmax pmax
comp=Z,284nm,1.2s,mb5.5
BILL Bilibino 38.52 18 *e*P **P** **22 27 35.1 +0.3**
comp=Z,268nm,1.0s,mb5.5
KSM Kuching 40.01 222 *e*P **P** **22 27 46.8 -0.1**
KSM *e*pP pP 22 29 10.7 +4.9
ZAL Zalesovo 40.92 315 P **P** **22 27 53.6 -0.7**
comp=Z,3.2nm,0.3s,mb4.1,baz=29,slow=6.6,SNR=11
ZAL PcP PcP 22 29 46.9 +1.6
comp=Z,4.8nm,0.9s,baz=2.1,slow=3.9,SNR=9.6
ZAL ScP ScP 22 32 53.2 -1.3
comp=Z,3.4nm,1.0s,baz=359,slow=3.2,SNR=4.3
ZAL Zalesovo 40.92 315 P **P** **22 27 53.6 -0.7**
ZAL PcP PcP 22 29 46.9 +1.6
ZAL ScP ScP 22 32 53.2 -1.3
NVS Novosibirsk 41.95 317 *e*P **P** **22 28 01.8 -0.7**
NVS *e*S **S** **22 33 48.6 -0.9**
NVS *e*SS SS 22 37 10.0 -2.9
NVS pmax pmax
comp=E,58nm,2.1s
NVS pmax pmax
comp=Z,67nm,2.1s,mb4.6
NVS pmax pmax
comp=N,11nm,1.8s
NVS smax
comp=N,82nm,3.0s
NVS smax
comp=E,60nm,3.0s
MKAR Makanchi Array 42.11 305 P **P** **22 28 03.7 0.0**
comp=E,7.5nm,0.5s,mb4.3,baz=80,slow=10,SNR=102
MKAR PcP PcP 22 29 50.5 +1.2
comp=E,2.6nm,0.7s,baz=64,slow=5.5,SNR=4.8
MKAR ScP ScP 22 32 58.9 -0.3
comp=E,2.5nm,0.6s,baz=79,slow=3.1,SNR=4.1
MKAR Makanchi Array 42.11 305 P **P** **22 28 03.7 0.0**
MKAR PcP PcP 22 29 50.5 +1.2
MKAR ScP ScP 22 32 58.9 -0.3
GUN Gumba 42.95 276 *e*P **P** **22 28 09.8 -0.7**
PKI Pulchoki 43.46 276 *e*P **P** **22 28 13.9 -0.6**
KKN Kakani 43.49 276 *e*P **P** **22 28 14.7 0.0**
DMN Daman 43.70 276 *e*P **P** **22 28 15.9 -0.4**
GKN Gorkha 43.95 277 *e*P **P** **22 28 17.9 -0.4**
comp=E,37nm,0.7s,mb4.8
PMG Port Moresby 44.23 164 *e*P **P** **22 28 19.2 -1.3**
KOLN Koldanda 44.89 277 *e*P **P** **22 28 25.6 0.0**
PSI Prapat 46.18 236 P **P** **22 28 35.1 -0.5**
comp=E,9.4nm,0.7s,mb4.2,baz=43,slow=4.4,SNR=12
PSI ScP ScP 22 33 16.9 +0.9
comp=E,4.4nm,0.8s,baz=267,slow=7.6,SNR=5.8
PSI Prapat 46.18 236 P **P** **22 28 35.1 -0.5**
PSI pmax pmax
comp=Z,9.0nm,0.7s,mb4.2
PSI pmax pmax
comp=N,4.0nm,0.8s
KAKA Kakadu 46.30 185 *e*P **P** **22 28 35.7 -0.8**
comp=N,14nm,1.0s,mb4.2
TKM2 Tokmak 2 47.24 300 P **P** **22 28 44.2 +0.6**
SNR=10
KZA Kyzart 47.64 299 P **P** **22 28 48.1 +1.4**
SNR=9.2
KBK Karagaybulak 47.76 299 P **P** **22 28 47.9 +0.3**
SNR=7.7
AAK Ala-Archa 48.09 300 *e*P **P** **22 28 49.1 -1.0**
comp=N,9.3nm,0.9s,mb4.1
AAK *e*PcP PcP 22 30 10.5 +0.3
EKS2 Erkin-Say 48.60 300 P **P** **22 28 53.8 -0.1**
SNR=5.8
AML Almayashu 48.77 299 P **P** **22 28 56.2 +1.1**
SNR=17
CHKZ Chkalovo 49.30 315 *e*P **P** **22 28 58.0 -1.1**
CHKZ *e* 22 30 11.6
CHKZ pmax pmax
comp=Z,17nm,0.8s,mb4.4
CHKZ Chkalovo 49.30 315 *e*P **P** **22 28 58.0 -1.2**
comp=Z,17nm,0.8s,mb4.4
CHKZ *e*PcP PcP 22 30 11.6 -3.0
CHKZ *e*pP pP 22 30 25.0 +2.9
BVAR Borovoye Array 49.48 314 P **P** **22 29 00.1 -0.4**
comp=Z,5.4nm,0.5s,mb4.2,baz=100,slow=8.2,SNR=31
BVAR PcP PcP 22 30 16.0 +0.7
comp=Z,4.4nm,0.7s,baz=103,slow=3.2,SNR=6.9
BVAR ScP ScP 22 33 29.1 -0.9
comp=Z,1.8nm,0.6s,baz=90,slow=5.8,SNR=3.3
CHGN Chignik 49.48 42 *e*P **P** **22 28 59.5 -1.0**
BRVK Borovoye 49.54 314 *e*P **P** **22 29 00.4 -0.5**
BRVK *e* 22 30 16.9
BRVK *e*S **S** **22 35 42.7 +6.2**
BRVK pmax pmax
comp=Z,70nm,0.8s,mb5.0
BRVK Borovoye 49.54 314 *e*P **P** **22 29 00.4 -0.5**
comp=Z,6.5nm,0.8s,mb4.0
BRVK *e*PcP PcP 22 30 16.9 +1.3
BRVK *e*ScP ScP 22 33 30.2 -0.1
BRVK *e*S **S** **22 35 42.7 +6.2**
NDI New Delhi 49.82 281 *ex* x 22 29 02.0
ZRNK Zerenda 50.32 314 *e*P **P** **22 29 05.8 -0.9**
ZRNK *e* 22 30 18.7
ZRNK *e*S **S** **22 35 47.9 +0.8**
ZRNK pmax pmax
comp=Z,42nm,1.4s,mb4.6
ZRNK Zerenda 50.32 314 *e*P **P** **22 29 05.8 -0.9**
comp=Z,42nm,1.4s,mb4.6
ZRNK *e*PcP PcP 22 30 18.7 +0.3
ZRNK *e*S **S** **22 35 47.9 +0.7**
TTA Tatalina 50.70 33 *e*P **P** **22 29 10.1 +0.6**
SVW2 Sparrevohn 50.88 36 P **P** **22 29 11.1 +0.3**
IMA2 Indian Mountai 51.81 29 *e*P **P** **22 29 17.3 -0.3**
IMA2 *e*PcP PcP 22 30 23.4 -0.6
FITZ Fitzroy Crossi 52.45 192 *e*P **P** **22 29 21.4 -0.9**
comp=Z,14nm,0.9s,mb4.2
KDAK Kodiak Island 52.57 40 P **P** **22 29 22.5 -0.6**
comp=Z,99nm,0.8s,mb5.1,baz=287,slow=3.4,SNR=53
WRAB Tennant Creek 53.38 182 *e*P **P** **22 29 27.5 -1.5**
WRAB pmax pmax
comp=Z,11nm,0.4s,mb4.4
WRAB Tennant Creek 53.38 182 *e*P **P** **22 29 27.5 -1.5**
comp=Z,11nm,0.4s,mb4.5
WB2 Warramunga Arr 53.39 182 *e*P **P** **22 29 27.5 -1.6**
WRA Warramunga Arr 53.39 182 P **P** **22 29 27.4 -1.7**
comp=Z,7.5nm,0.5s,mb4.2,baz=356,slow=7.7,SNR=89
HYB Hyderabad 53.52 267 *i* *P **P** **22 29 29.5 -0.5**
HYB Hyderabad 53.52 267 *e*P **P** **22 29 29.5 -0.5**
SLKM Skilak Lake 53.53 36 *e*P **P** **22 29 29.1 -1.0**
PMR Palmer 53.96 35 *e*P **P** **22 29 32.7 -0.4**
PMR pmax pmax
comp=Z,131nm,1.0s,mb5.1
PMR MLR MLR
comp=Z,100nm,19.0s
PMR Palmer 53.96 35 *e*P **P** **22 29 32.7 -0.4**
comp=Z,130nm,1.0s,mb5.1
PMR LR LR
comp=Z,100nm,19.0s
COLA College 54.27 31 *e*P **P** **22 29 35.4 +0.1**
COLA *e* 22 31 43.3
COLA pmax pmax
comp=Z,41nm,0.8s,mb4.7
COLA College 54.27 31 *e*P **P** **22 29 35.4 +0.1**
comp=Z,41nm,0.8s,mb4.7
COLA *e*PP PP 22 31 43.2 +0.8
CTA Charters Tower 54.44 168 P **P** **22 29 35.9 -0.5**
comp=Z,7.0nm,1.0s,mb3.9,baz=18,slow=8.5,SNR=4.0
CTA Charters Tower 54.44 168 P **P** **22 29 35.9 -0.6**
CTAO Charters Tower 54.44 168 *e*P **P** **22 29 35.8 -0.7**
comp=Z,4.7nm,0.8s,mb3.8
EYAK Cordova Ski Ar 55.72 36 *e*P **P** **22 29 45.6 0.0**
EYAK *e*pP pP 22 31 10.9 -0.1
EYAK *e*PP PP 22 31 56.3 +1.0
ARU Arti 55.83 319 ⇓*i*P **P** **22 29 45.3 -1.0**
ARU *e* 22 30 36.9
ARU *e* pP 22 31 11.5 -0.3
ARU *e* 22 31 54.2
ARU *e*S **S** **22 37 00.9 +0.3**
ARU *e* 22 38 46.8
ARU *e*SS SS 22 40 50.8 -3.0
ARU pmax pmax
comp=Z,25nm,0.8s,mb4.6
ARU Arti 55.83 319 *e*P **P** **22 29 45.6 -0.7**
comp=Z,31nm,0.9s,mb4.6
ARU *e*PcP PcP 22 30 39.3 -0.2
ARU *e*S **S** **22 36 58.4 -2.2**
MENT Mentasta 56.30 33 *e*P **P** **22 29 50.0 +0.4**
MBWA Marble Bar 56.70 198 *e*P **P** **22 29 51.1 -1.3**
comp=Z,11nm,0.5s,mb4.4
AS31 Alice Springs 57.11 182 *e*P **P** **22 29 53.0 -2.1**
ASAR Alice Springs 57.11 182 P **P** **22 29 53.9 -1.3**
comp=Z,5.6nm,0.7s,mb4.0,baz=6.9,slow=6.4,SNR=44
PALK Pallekele 57.17 256 *e*P **P** **22 29 56.0 +0.5**
comp=Z,5.1nm,0.6s,mb4.0
KAD Karad 57.22 270 *e*P **P** **22 29 55.6 -0.3**
AKTK Aktyubinsk 57.49 312 P **P** **22 29 57.1 -0.7**
AKTO Aktyubinsk 57.49 312 P **P** **22 29 57.1 -0.7**
comp=Z,14nm,0.7s,mb4.4,baz=72,slow=12,SNR=32
AKTO Aktyubinsk 57.49 312 P **P** **22 29 57.1 -0.7**
AKTO pmax pmax
comp=Z,14nm,0.7s,mb4.4
DAWY Dawson 58.01 31 *e*P **P** **22 30 01.4 +0.1**
DAWY *e*PP PP 22 32 15.9 +0.3
INK Inuvik 59.36 26 P **P** **22 30 09.8 -0.7**
comp=Z,18nm,0.5s,mb4.6,baz=298,slow=7.1,SNR=54
INK Inuvik 59.36 26 *e*P **P** **22 30 09.9 -0.7**
INK pmax pmax
comp=Z,16nm,0.5s
INK Inuvik 59.36 26 *e*P **P** **22 30 09.9 -0.6**
comp=Z,16nm,0.5s,mb4.6
SKAG Skagway 61.06 36 *e*P **P** **22 30 23.0 +1.1**
comp=Z,148nm,1.2s,mb5.3
SKAG LR LR
comp=Z,100nm,18.0s
SIT Sitka 61.83 38 *e*P **P** **22 30 28.2 +1.2**
SIT pmax pmax
comp=Z,69nm,1.0s,mb5.1
SIT Sitka 61.83 38 *e*P **P** **22 30 28.2 +1.2**
comp=Z,69nm,1.0s,mb5.1
DZM Mont Dzumac 62.69 148 P **P** **22 30 32.6 0.0**
comp=Z,8.8nm,0.7s,mb4.4,baz=340,slow=7.1,SNR=8.0
KBS Kingsbay 63.10 350 *e*P **P** **22 30 35.6 +0.3**
KBS pmax pmax
comp=Z,23nm,0.8s,mb4.8
KBS Kingsbay 63.10 350 *e*P **P** **22 30 35.6 +0.3**
comp=Z,23nm,0.8s,mb4.8
TMCR Tamitsa 63.43 331 *e*P **P** **22 30 37.9 +0.5**
TMCR pmax pmax
comp=Z,40nm,1.5s,mb4.7
CRAG Craig 63.53 39 P **P** **22 30 38.7 +0.7**
KLMR Klimovskoe 64.08 327 *e*P **P** **22 30 40.6 -1.0**
KLMR pmax pmax
comp=Z,60nm,1.5s,mb4.9
FORT Forrest 64.58 187 *e*P **P** **22 30 43.6 -1.2**
comp=Z,26nm,0.6s,mb5.0
KEV Kevo 64.88 339 *e*p **P** **22 30 47.0 +0.3**
comp=Z,20nm,0.8s,mb4.8
KEV Kevo 64.88 339 *e*P **P** **22 30 47.0 +0.3**
KEV pmax pmax
comp=Z,20nm,0.8s,mb4.8
ARCES ARCESS Array B 65.44 339 P **P** **22 30 50.4 +0.1**
comp=Z,12nm,0.6s,mb4.7,baz=57,slow=5.6,SNR=52
ARCES ARCESS Array B 65.44 339 P **P** **22 30 50.4 +0.1**
ARCES pmax pmax
comp=Z,12nm,0.6s
ARE0 ARCESS Array S 65.44 339 *e*P **P** **22 30 50.9 +0.6**
ARE0 *e*PcP PcP 22 31 18.1 -0.2
STKA Stephens Creek 65.48 175 P **P** **22 30 50.3 -0.3**
comp=Z,5.7nm,1.0s,mb4.2,baz=5.3,slow=8.0,SNR=8.2
STKA Stephens Creek 65.48 175 *e*P **P** **22 30 50.4 -0.2**
JOF Joensuu 66.68 331 *e*p **P** **22 30 56.8 -1.3**
comp=Z,27nm,0.8s,mb4.9
JOF Joensuu 66.68 331 *e*P **P** **22 30 56.8 -1.3**
JOF pmax pmax
comp=Z,27nm,0.8s,mb4.9
RES Resolute Bay 66.88 13 *e*P **P** **22 30 59.1 -0.2**
RES pmax pmax
comp=Z,54nm,0.8s,mb5.2
RES Resolute Bay 66.88 13 *e*P **P** **22 30 59.0 -0.2**
comp=Z,54nm,0.8s,mb5.2
MOS Moscow 67.14 323 *e*P **P** **22 31 00.3 -0.6**
MOS *i* S S 22 39 19.1 -2.0
MOS *i* 22 40 14.2
MOS pmax pmax
comp=Z,200nm,1.8s,mb5.5
MOS pmax pmax
comp=Z,79nm,1.6s,mb5.1
OBN Obninsk 67.95 322*c* *i*P **P** **22 31 05.3 -0.6**
OBN *e* 22 31 27.1
OBN *e*S S 22 39 32.3 +1.6
OBN pmax pmax
comp=Z,55nm,1.4s,mb5.0
OBN Obninsk 67.95 322 *e*P **P** **22 31 05.2 -0.7**
comp=Z,40nm,1.0s,mb5.0
VRSR Storozhevoye 68.34 318 *e*P **P** **22 31 08.8 +0.5**
NWAO Narrogin (SRO) 68.58 197 P **P** **22 31 08.3 -1.4**
YKA Yellowknife Ar 68.90 28 P **P** **22 31 10.8 -0.9**
comp=Z,20nm,0.8s,mb4.8,baz=298,slow=6.0,SNR=29
YKA Yellowknife Ar 68.90 28 P **P** **22 31 10.8 -0.9**
YKA pmax pmax
comp=Z,20nm,0.8s
KAF Kangasniemi 69.09 332 *e*p **P** **22 31 11.5 -1.4**
comp=Z,34nm,0.7s,mb5.1
KAF Kangasniemi 69.09 332 *e*P **P** **22 31 11.5 -1.4**
KAF pmax pmax
comp=Z,35nm,0.7s,mb5.1
FIA1 FINESS Array S 69.55 331 *e*P **P** **22 31 14.8 -0.8**
FINES FINESS Array B 69.55 331 P **P** **22 31 14.5 -1.1**
comp=Z,16nm,0.6s,mb4.7,baz=68,slow=5.5,SNR=56
FINES FINESS Array B 69.55 331 P **P** **22 31 14.5 -1.1**
FINES pmax pmax
comp=Z,16nm,0.6s
FINES FINESS Array B 69.55 331 P **P** **22 31 14.5 -1.1**
KIV Kislovodsk 69.56 310 ⇑P **P** **22 31 16.0 +0.3**
SNR=16
KIV Kislovodsk 69.56 310*d* *i*P **P** **22 31 15.6 -0.1**
KIV *e* 22 31 34.8
KIV *e* pP 22 32 47.6 +1.8
KIV *e*S S 22 39 51.2 +1.9
KIV *e*SS SS 22 44 29.9 +3.1
KIV pmax pmax
comp=Z,64nm,1.9s,mb4.8
KIV Kislovodsk 69.56 310 *e*P **P** **22 31 15.8 +0.2**
comp=Z,46nm,1.3s,mb4.8
KIV *e*pP pP 22 32 46.3 +0.5
GNI Garni 69.95 305 P **P** **22 31 19.0 +0.9**
comp=Z,6.6nm,0.7s,mb4.3,baz=120,slow=8.1,SNR=5.3
C03A Quillayute Air 71.59 44 ⇑P **P** **22 31 29.5 +1.6**
baz=71,SNR=6.0
B04A Port Angeles 72.16 44 ⇓P **P** **22 31 32.2 +1.1**
baz=72,SNR=5.7
OSD Olympics--Snow 72.16 44 P **P** **22 31 32.2 +1.1**
A04A Legoe Bay, Lum 72.27 43 ⇓P **P** **22 31 32.6 +0.8**
baz=72
ANN Anapa 72.45 312 *e*P **P** **22 31 32.3 -0.5**
ANN *e*S S 22 40 22.5 +0.3
ANN pmax pmax

comp=Z,58nm,1.5s,mb4.9
A05A Maple Falls 72.48 42 ⇓P **P 22 31 33.3 +0.3**
baz=72
D03A Wishkah Elem. 72.48 45 ⇓P **P 22 31 34.6 +1.6**
baz=72,SNR=8.1
C04A Brinnon 72.64 44 ⇑P **P 22 31 34.9 +1.0**
baz=72
B05A Bryant 72.86 43 ⇓P **P 22 31 35.9 +0.8**
baz=73,SNR=15
E03A Lebam 72.90 45 ⇑P **P 22 31 36.4 +1.0**
baz=73,SNR=13
JCW Jim Creek 72.99 43 P **P 22 31 36.4 +0.4**
KBD Kabd 73.04 294 *e*P **P 22 31 35.0 -1.2**
KBD AMb AMB 22 31 38.4
comp=Z,90nm,0.6s,mb5.5
D04A Dobbs Creek Ra 73.05 44 ⇓P **P 22 31 37.8 +1.5**
baz=73
F03A Seaside 73.22 46 ⇓P **P 22 31 38.6 +1.4**
baz=73
RDF Al-Radifah 73.27 294 *e*P **P 22 31 36.6 -0.9**
RDF AMb AMB 22 31 41.0
comp=Z,58nm,0.6s,mb5.3
NAY Al-Naaiem 73.34 294 *e*P **P 22 31 37.1 -0.9**
NAY AMb AMB 22 31 40.0
comp=Z,25nm,0.8s,mb4.8
E04A Onalaska 73.37 45 ⇓P **P 22 31 39.3 +1.1**
baz=73
C05A Tolt Reservoir 73.39 43 ⇓P **P 22 31 38.9 +0.7**
baz=73,SNR=14
RST Umm Al-Ruwaisa 73.41 295 *e*P **P 22 31 37.1 -1.3**
RST AMb AMB 22 31 38.2
comp=Z,26nm,0.7s,mb4.9
D05A Enumclaw 73.48 44 ⇓P **P 22 31 40.0 +1.2**
baz=73
H02A Toledo 73.60 47 ⇓P **P 22 31 39.3 -0.2**
baz=74
PNT Penticton 73.68 41 P **P 22 31 40.2 +0.3**
G03A Yamhill 73.70 46 ⇓P **P 22 31 40.9 +0.8**
baz=74,SNR=5.5
F04A Amboy 73.89 45 P **P 22 31 41.6 +0.5**
baz=74,SNR=9.9
SUMG Summit 73.91 358 *e*P **P 22 31 41.9 +0.7**
comp=Z,76nm,0.9s,mb5.3
SUMG *e*PP PP 22 34 28.5 -4.3
E05A Randle 73.95 45 ⇑P **P 22 31 41.6 +0.1**
baz=74
AKASG Malin Array Be 74.03 321 P **P 22 31 40.9 -1.1**
comp=Z,2.1nm,0.5s,mb4.1,baz=46,slow=5.9,SNR=36
AKASG pP pP 22 33 09.3 -4.1
comp=Z,1.3nm,0.7s,baz=54,slow=6.6,SNR=5.1
AKASG Malin Array Be 74.03 321 P **P 22 31 40.9 -1.1**
AKASG pP pP 22 33 09.3 -4.1
AKBB Malin Array Si 74.03 321 *e*P **P 22 31 41.0 -0.9**
AKBB *e**PP pP 22 33 09.4 -4.0
I02A Mapleton 74.05 48 ⇑P **P 22 31 43.3 +1.2**
baz=74
COR Corvallis 74.07 47 *e*P **P 22 31 43.8 +1.6**
COR *e**PP pP 22 33 15.2 +1.5
COR pmax pmax
comp=Z,84nm,1.0s,mb5.3
COR Corvallis 74.07 47 *e*P **P 22 31 43.8 +1.7**
comp=Z,84nm,1.0s,mb5.3
COR *e*pP pP 22 33 15.2 +1.5
G04A Mulino 74.24 46 ⇓P **P 22 31 43.9 +0.8**
baz=74
KEBM Edson Butte 74.33 49 *e*P **P 22 31 44.8 +1.2**
KEBM *e*pP pP 22 33 20.0 +4.8
SIM Simferopol' 74.39 314 *e*P **P 22 31 44.7 +0.7**
SIM *e*S S 22 40 48.2 +4.4
SIM *e*SS SS 22 45 40.0 -0.3
SIM pmax pmax
comp=Z,20nm,0.9s,mb4.8
I03A Eugene 74.41 47 P **P 22 31 45.1 +1.0**
baz=74,SNR=8.2
SSOR Sweet Springs 74.44 46 P **P 22 31 45.7 +1.4**
EBG Ellensburg 74.45 44 P **P 22 31 44.7 +0.4**
F05A White Salmon 74.49 45 P **P 22 31 45.0 +0.5**
baz=74,SNR=5.2
J02A Umpqua 74.55 48 P **P 22 31 46.1 +1.3**
baz=74,SNR=9.7
H04A Detroit Lake 74.70 46 ⇑P **P 22 31 46.2 +0.5**
baz=74,SNR=12
EDM Edmonton 74.72 36 *e*P **P 22 31 45.9 +0.1**
G05A Wamic 74.92 46 P **P 22 31 47.5 +0.5**
baz=75,SNR=7.7
J03A Ideyld Park 74.92 48 ⇑P **P 22 31 48.1 +1.1**
baz=75,SNR=14
M01C Crescent City 75.00 50 ⇓P **P 22 31 48.2 +0.8**
baz=75
SUW Suwalki 75.12 326 *e*P **P 22 31 48.2 +0.1**
MALT Malatya 75.12 306 ⇓*i*P **P 22 31 49.0 +0.9**
HFS Hagfors 75.13 334 P **P 22 31 47.6 -0.6**
comp=Z,16nm,0.6s,mb4.8,baz=67,slow=3.9,SNR=47
HFS Hagfors 75.13 334 P **P 22 31 47.6 -0.6**
HFS pmax pmax
comp=Z,16nm,0.6s
L02A Cave Junction 75.17 49 ⇓P **P 22 31 49.1 +0.7**
baz=75,SNR=6.3
OD2 Odessa Site #2 75.25 43 P **P 22 31 48.8 0.0**
H05A Madras 75.29 46 ⇑P **P 22 31 49.9 +0.8**
baz=75,SNR=10.0
G06A Carlson Farm, 75.33 45 ⇑P **P 22 31 49.9 +0.7**
baz=75
HAWA Hanford 75.33 44 *e*P **P 22 31 49.8 +0.5**
comp=Z,2.5nm,1.0s,mb3.8
HAWA *e*pP pP 22 33 24.0 +2.8
NB2 NORSAR Subarra 75.38 336 P **P 22 31 49.5 -0.1**
comp=Z,32nm,0.9s,mb5.0,baz=45,slow=5.6
NOA NORSAR Array B 75.38 336 P **P 22 31 49.3 -0.2**
comp=Z,18nm,0.7s,mb4.8,baz=45,slow=5.6,SNR=65
NOA NORSAR Array B 75.38 336 P **P 22 31 49.3 -0.3**
NOA pmax pmax
comp=Z,18nm,0.7s
I05A Bend 75.53 46 ⇓P **P 22 31 51.3 +0.9**
baz=75
JCC Jacoby Creek 75.61 50 ⇑P **P 22 31 51.9 +1.0**
baz=76
NEW Newport 75.64 41 P **P 22 31 51.2 +0.2**
H06A Lindquist Farm 75.78 46 ⇑P **P 22 31 52.3 +0.5**
baz=76
YBH Yreka Blue Hor 75.96 49 *e*P **P 22 31 53.7 +0.9**
YBH *e**PP pP 22 33 25.6 +0.8
YBH pmax pmax
comp=Z,27nm,1.0s
YBH Yreka Blue Hor 75.96 49 *e*P **P 22 31 53.7 +0.9**
comp=Z,27nm,1.0s,mb4.8
YBH *e*pP pP 22 33 25.6 +0.7
YBH Yreka Blue Hor 75.96 49 P **P 22 31 53.8 +1.0**
baz=76,SNR=30
J05A Fort Rock 76.03 47 ⇓P **P 22 31 54.2 +1.0**
baz=76,SNR=41
M02C Callahan 76.05 49 P **P 22 31 54.3 +1.0**
baz=76,SNR=24
N02C Big Bar 76.07 50 ⇓P **P 22 31 54.0 +0.6**
baz=76,SNR=12
K04A Chilquin 76.09 48 ⇑P **P 22 31 54.5 +0.9**
baz=76,SNR=5.9
F08A Pendleton 76.10 44 ⇓P **P 22 31 54.4 +0.8**
baz=76
L04A Klamath Falls 76.23 48 P **P 22 31 55.2 +0.9**
baz=76,SNR=11
I06A Prineville 76.29 46 ⇑P **P 22 31 55.5 +0.8**
baz=76,SNR=11
LHEM Herd Peak 76.32 49 P **P 22 31 55.7 +0.9**
M04C Macdoel 76.48 49 ⇑P **P 22 31 56.6 +1.0**
baz=76,SNR=36
M03C McCloud 76.58 49 P **P 22 31 56.9 +0.6**
baz=76,SNR=19
I07A Izee 76.64 46 ⇑P **P 22 31 57.2 +0.6**
baz=76,SNR=26
WDC Whiskeytown Da 76.69 50 *e*P **P 22 31 56.9 0.0**
WDC *e* 22 34 56.4
WDC pmax pmax
comp=Z,29nm,1.1s,mb4.8
WDC Whiskeytown Da 76.69 50 *e*P **P 22 31 56.9 +0.1**
comp=Z,29nm,1.1s,mb4.8
WDC *e*PP PP 22 34 56.4 +0.3
WDC Whiskeytown Da 76.69 50 ⇑P **P 22 31 57.4 +0.5**
baz=76,SNR=17
J06A Christmas Vall 76.71 47 ⇓P **P 22 31 57.6 +0.7**
baz=77,SNR=26
O02C Red Bluff 76.75 51 P **P 22 31 58.0 +0.8**
baz=77,SNR=18
P01C Double 8 Ranch 76.78 51 ⇓P **P 22 31 57.8 +0.5**
baz=77,SNR=5.0
H08A Prairie City 76.88 45 P **P 22 31 58.5 +0.6**
baz=77,SNR=23
K06A Valley Falls 76.90 47 P **P 22 31 58.9 +0.9**
baz=77,SNR=18
WALA Waterton Lakes 76.91 39 *e*P **P 22 31 58.0 0.0**
comp=Z,16nm,0.7s,mb4.8
WALA *e*PP PP 22 34 55.3 -2.6
L05A Lakeview 76.96 48 ⇓P **P 22 31 59.4 +1.0**
baz=77,SNR=18
GASB Alder Springs 77.08 51 ⇓P **P 22 32 00.2 +1.2**
baz=77,SNR=18
M05C Lookout 77.14 49 ⇓P **P 22 31 59.9 +0.5**
baz=77,SNR=5.8
HOPS Hopland 77.21 52 ⇑P **P 22 32 00.1 +0.4**
baz=77
WAR Warsaw 77.24 325 *e*P **P 22 32 01.5 +1.6**
HATC Hat Creek Radi 77.25 49 ⇑P **P 22 32 00.6 +0.7**
baz=77,SNR=10
LVV L'vov 77.25 322 *e*P **P 22 32 00.7 +0.7**
I08A Drewsey 77.29 46 P **P 22 32 01.0 +0.8**
baz=77,SNR=23
H09A Durkee 77.39 45 P **P 22 32 01.6 +0.8**
baz=77,SNR=9.5
BR131 Keskin Array S 77.52 309 *e*P **P 22 32 02.3 +0.8**
comp=Z,8.1nm,0.8s,mb4.4
BR131 *e*PcP PcP 22 32 12.2 +2.4
BRTR Keskin Array B 77.52 309 P **P 22 32 01.7 +0.3**
comp=Z,10nm,0.8s,mb4.5,baz=108,slow=4.3,SNR=32
K07A Rock Creek Ran 77.57 47 P **P 22 32 02.3 +0.6**
baz=77,SNR=42
M06C Likely Place G 77.65 49 ⇓P **P 22 32 02.9 +0.8**
baz=78,SNR=12
MNRC McLaughlin Nat 77.68 51 P **P 22 32 03.2 +0.9**
baz=78,SNR=29
I09A Lost Marbles R 77.74 45 ⇓P **P 22 32 03.2 +0.6**
baz=78
O04C Chester 77.76 50 ⇑P **P 22 32 03.6 +0.9**
baz=78,SNR=7.7
MCCM Marconi Confer 77.80 52 ⇑P **P 22 32 02.8 -0.1**
baz=78
ELFS Eagle Lake Fie 77.82 49 ⇑P **P 22 32 04.1 +1.1**
baz=78
L07A Adell 77.90 47 ⇓P **P 22 32 04.5 +1.1**
baz=78,SNR=11
SUTB Sutter Butte 77.92 51 ⇓P **P 22 32 03.4 -0.2**
baz=78
ORV Oroville 77.92 50 ⇑P **P 22 32 03.2 -0.4**
baz=78,SNR=9.5
CVS Carmenet Viney 77.97 52 ⇓P **P 22 32 03.9 +0.1**
baz=78,SNR=6.0
BURAR Bucovina Array 77.97 320 ⇓*i*P **P 22 32 03.8 0.0**
BURAR Bucovina Array 77.97 320 ⇓P **P 22 32 03.9 0.0**
ANTO Ankara 77.98 310 ⇓*i*P **P 22 32 04.3 +0.4**
ANTO Ankara 77.98 310 ⇓P **P 22 32 04.3 +0.3**
K08A Mann Creek Ran 78.01 46 ⇓P **P 22 32 04.9 +0.8**
baz=78,SNR=43
KWP Kalwaria 78.05 322 *e*P **P 22 32 04.6 +0.3**
OHCM Honcut 78.05 51 *e*P **P 22 32 04.0 -0.3**
OHCM *e*PcP PcP 22 32 12.0 -0.2
O05C Quincy 78.07 50 ⇑P **P 22 32 04.6 +0.2**
baz=78
WVOR Wild Horse Val 78.09 47 *e*P **P 22 32 04.9 +0.4**
WVOR pmax pmax
comp=Z,20nm,0.9s,mb4.8
WVOR Wild Horse Val 78.09 47 *e*P **P 22 32 04.9 +0.4**
comp=Z,20nm,0.9s,mb4.7
Q03C Winters 78.10 51 ⇑P **P 22 32 05.3 +0.7**
baz=78
MSO Missoula 78.23 41 *e*P **P 22 32 05.0 -0.2**
comp=Z,11nm,1.2s,mb4.3
N06A Buffalo Meadow 78.31 49 P **P 22 32 06.0 +0.3**
baz=78,SNR=48
Q04C Lincoln 78.40 51 ⇑P **P 22 32 06.6 +0.4**
baz=78
L08A Fields 78.41 47 ⇑P **P 22 32 06.9 +0.7**
baz=78,SNR=28
BEKR Beckwourth 78.47 50 ⇑P **P 22 32 06.9 +0.3**
baz=78,SNR=17
K09A Rome 78.49 46 ⇓P **P 22 32 07.1 +0.5**
baz=78,SNR=27
BDM Black Diamond 78.57 52 ⇑P **P 22 32 07.6 +0.5**
baz=78
JRSC Jasper Ridge 78.63 53 ⇓P **P 22 32 07.4 0.0**
baz=78
P05C Yuba Gap, Truc 78.63 50 P **P 22 32 07.6 +0.2**
baz=78,SNR=8.2
O06A Flanigan 78.64 49 ⇑P **P 22 32 08.0 +0.5**
baz=78,SNR=34
KOLS Kolonicke sedl 78.70 322 *e*P **P 22 32 09.0 +1.2**
M08A Happy Creek Ra 78.81 48 P **P 22 32 09.3 +0.9**
baz=79,SNR=19
BNLO Ben Lomond (Sa 78.83 53 ⇑P **P 22 32 08.5 0.0**
baz=79
WENL Wente Brothers 78.83 52 ⇓P **P 22 32 08.8 +0.4**
baz=79
MLR Muntele Rosu 78.84 318 P **P 22 32 10.1 +1.5**
comp=Z,20nm,0.4s,mb4.1,baz=24,slow=5.2,SNR=4.8
MLR Muntele Rosu 78.84 318 ⇑*i*P **P 22 32 11.3 +2.7**
MLR Muntele Rosu 78.84 318 P **P 22 32 10.1 +1.5**
MLR pmax pmax
comp=Z,20nm,0.4s
MLR Muntele Rosu 78.84 318 ⇑P **P 22 32 11.3 +2.7**
LAVA Lava Cap Winer 78.86 51 P **P 22 32 08.6 0.0**
baz=79,SNR=11
P06A Stead Airport, 78.87 50 ⇓P **P 22 32 09.3 +0.6**
baz=79
L09A Wilkinson Ranc 78.92 47 ⇓P **P 22 32 09.9 +0.9**
baz=79,SNR=10
STHS Stebnicka Huta 78.92 323 *e*P **P 22 32 10.2 +1.2**
comp=Z,6.7nm,0.8s,mb4.3
R04C Big Horse Ranc 79.01 51 ⇑P **P 22 32 09.4 0.0**
baz=79
OJC Ojcow 79.13 324 ⇓*e*P **P 22 32 11.1 +1.0**
OJC *i* S S 22 41 33.8 -0.6
OJC *e*SS SS 22 46 49.0 -2.2
OJC MLR MLR
comp=Z,800nm,16.5s
CRVS Cervenica-Dubn 79.14 322 *e*P **P 22 32 11.0 +0.8**
S04C Ingram Canyon, 79.17 52 ⇑P **P 22 32 10.4 +0.1**
baz=79
WCN Washoe City 79.18 50 ⇓P **P 22 32 10.9 +0.6**
baz=79
PAHR Pah Rah Range 79.18 49 *e*P **P 22 32 10.9 +0.5**
comp=Z,41nm,1.0s,mb5.0
O07A Toulon 79.24 49 P **P 22 32 11.2 +0.5**
baz=79,SNR=30
R05C Kirkwood Meado 79.31 51 ⇑P **P 22 32 11.4 +0.3**
baz=79,SNR=5.9
N08A GE Springer Mi 79.35 48 ⇑P **P 22 32 12.0 +0.7**
baz=79,SNR=36
NIE Niedzica 79.39 323 *e*Pd **P 22 32 13.1 +1.6**
M09A Marrel Ranch, 79.40 47 ⇑P **P 22 32 12.4 +0.9**
baz=79,SNR=8.6
MUD Monsted U'grnd 79.43 333 *i* P **P 22 32 13.5 +1.8**
comp=Z,21nm,1.1s,mb4.7
MUD Monsted U'grnd 79.43 333 *i* P **P 22 32 13.5 +1.8**
MUD pmax pmax
comp=Z,21nm,1.1s,mb4.7
ASF Jabal al Asfar 79.45 302 P **P 22 32 12.2 +0.4**
comp=Z,2.7nm,0.8s,mb4.0,baz=308,slow=3.4,SNR=6.2
ASF Jabal al Asfar 79.45 302 P **P 22 32 12.2 +0.4**
ASF pmax pmax
comp=Z,30nm,0.8s
HRY Holter Researc 79.45 40 P **P 22 32 12.4 +0.6**
SFJD Kangerlussuaq 79.47 3 P **P 22 32 13.2 +1.3**
comp=Z,13nm,0.6s,mb4.7,baz=324,slow=3.9,SNR=4.8
PACP Pacheco Peak 79.48 53 ⇓P **P 22 32 12.0 0.0**
baz=79,SNR=9.1
CMB Columbia Colle 79.49 51 *e*P **P 22 32 12.0 0.0**
CMB *e**PP pP 22 33 45.5 +0.5
CMB pmax pmax
comp=Z,37nm,1.3s,mb4.8
CMB Columbia Colle 79.49 51 *e*P **P 22 32 12.0 0.0**
comp=Z,37nm,1.3s,mb4.9
CMB *e*pP pP 22 33 45.5 +0.5
CMB Columbia Colle 79.49 51 P **P 22 32 12.0 0.0**
baz=79,SNR=13
P07A Fallon 79.59 49 ⇑P **P 22 32 13.1 +0.5**
baz=79
O08A Rochester Mine 79.62 48 ⇑P **P 22 32 13.7 +1.0**
baz=80
HAST UC Hastings Re 79.65 53 ⇑P **P 22 32 13.1 +0.2**
baz=80,SNR=9.3
N09A Rock Creek Ran 79.68 48 ⇑P **P 22 32 14.0 +1.0**
baz=80,SNR=10
EGMT Eagleton 79.72 38 *e*P **P 22 32 13.1 -0.1**
comp=Z,34nm,1.0s,mb4.9
EGMT *e*pP pP 22 33 49.4 +3.1
R06C Coleville 79.82 50 ⇑P **P 22 32 14.3 +0.5**
baz=80,SNR=18
DRGR 79.82 320 ⇑*i*P **P 22 32 15.2 +1.4**
DRGR 79.82 320 ⇑P **P 22 32 15.2 +1.5**
DLMT Dillon 79.86 42 *e*P **P 22 32 14.2 +0.1**
comp=Z,72nm,1.1s,mb5.2
DLMT *e*pP pP 22 33 46.9 -0.2
M10A I.L. Ranch, Tu 79.89 47 P **P 22 32 15.0 +0.9**
baz=80,SNR=29
KECS Kecovo 79.91 322 *e*P **P 22 32 15.5 +1.3**
comp=Z,3.7nm,0.8s,mb4.1
S05C Merced 79.92 52 ⇓P **P 22 32 14.2 -0.2**
baz=80,SNR=5.0
S06C San Francisco 79.93 51 ⇓P **P 22 32 14.7 +0.3**
baz=80
HLID Hailey 79.93 44 P **P 22 32 14.9 +0.6**
T05C Eagle Field, D 79.95 52 ⇓P **P 22 32 14.8 +0.3**
baz=80
LRW Lerwick 80.01 340 *e*P **P 22 32 15.3 +0.5**
LRW Lerwick 80.01 340 *e*P **P 22 32 15.3 +0.5**
P08A Dixie Valley 80.01 49 ⇓P **P 22 32 16.0 +1.2**
baz=80
MMAI Mount Meron Ar 80.04 303 P **P 22 32 15.6 +0.7**
comp=Z,5.7nm,0.9s,mb4.2,baz=46,slow=8.3,SNR=5.4
WAL1 Walls 80.04 340 *e*P **P 22 32 14.5 -0.5**
WAL1 Walls 80.04 340 *e*P **P 22 32 14.5 -0.5**
MCMT McKenzie Canyo 80.05 42 *e*P **P 22 32 16.3 +1.3**
MCMT *e*PP PP 22 35 25.9 +2.0
V03C Hunter Liggett 80.07 53 ⇑P **P 22 32 15.7 +0.6**
baz=80
BMN Battle Mountai 80.12 48 *e*P **P 22 32 16.3 +1.0**
BMN pmax pmax
comp=Z,33nm,1.1s,mb4.9
BMN Battle Mountai 80.12 48 *e*P **P 22 32 16.3 +0.9**
comp=Z,32nm,1.1s,mb4.9
U04C Hernandez Rese 80.18 53 ⇓P **P 22 32 16.3 +0.6**
baz=80
OKC Ostrava-Krasne 80.18 324 *e*P **P 22 32 17.1 +1.4**
OKC *e*S S 22 41 46.1 +0.8
OKC *e*x x 22 44 25.9
OKC *e*x x 22 46 44.1
OKC *e*SKKP 22 53 43.9
OKC AMS AMS 23 12 30.0
comp=Z,100nm,19.7s
OKC Ostrava-Krasne 80.18 324 *e*P **P 22 32 17.1 +1.4**
OKC *e*S S 22 41 46.1 +0.8
OKC MLR MLR
comp=Z,100nm,19.7s
OKC Ostrava-Krasne 80.18 324 *e*P **P 22 32 17.1 +1.4**
OKC *e*S S 22 41 46.1 +0.8
OKC *e* 22 44 25.9
OKC *e*SS SS 22 46 44.1 -23
OKC *e* 22 53 43.9
BORG Borgarnes 80.22 350 P **P 22 32 17.4 +1.5**
comp=Z,7.3nm,0.7s,mb4.4,baz=23,slow=5.0,SNR=4.2
BORG Borgarnes 80.22 350 P **P 22 32 18.8 +2.9**
BOZ Bozeman (W) 80.22 41 *e*P **P 22 32 16.1 +0.2**
BOZ *e**PP pP 22 33 53.3 +4.2
BOZ pmax pmax
comp=Z,20nm,1.0s,mb4.7
BOZ Bozeman (W) 80.22 41 *e*P **P 22 32 16.1 +0.2**
comp=Z,20nm,1.0s,mb4.7
BOZ *e*pP pP 22 33 53.3 +4.2
LIKS Likavka 80.23 323 *e*P **P 22 32 17.3 +1.4**
O09A Fish Creek Ran 80.29 48 P **P 22 32 17.2 +0.9**
baz=80,SNR=26
R07C Lee Vining 80.33 51 ⇓P **P 22 32 17.6 +1.2**
baz=80
CSS Prodhromos 80.38 306 *e*P **P 22 32 16.7 0.0**
comp=Z,9.7nm,0.8s,mb4.5
N10A Dunphy 80.39 47 ⇑P **P 22 32 17.7 +0.9**
baz=80
KSP Ksiaz 80.39 326 *e*P **P 22 32 17.0 +0.2**
KSP Ksiaz 80.39 326 *e*P **P 22 32 16.6 -0.2**
KSP *e*S S 22 41 42.7 -4.7
KSP Ksiaz 80.39 326 *e*P **P 22 32 16.6 -0.2**
KSP *e* 22 32 17.8
KSP *e*S S 22 41 42.7 -4.7
KSP *e*SS SS 22 46 54.9 -15
M11A Holland Ranch, 80.40 46 ⇑P **P 22 32 18.0 +1.1**
baz=80,SNR=19
RUE Ruedersdorf 80.40 328 *e*P **P 22 32 17.5 +0.7**
comp=Z,32nm,0.8s,mb5.0
RUE Ruedersdorf 80.40 328 *e*P **P 22 32 19.4 +2.6**
MORC Moravsky Berou 80.51 325 ⇓*i*P **P 22 32 18.0 +0.6**
MORC Moravsky Berou 80.51 325 ⇓P **P 22 32 18.0 +0.6**
T06C Millerton Lake 80.52 52 ⇑P **P 22 32 17.5 0.0**
baz=80
V04C Ramage Ranch, 80.53 53 ⇓P **P 22 32 18.3 +0.7**
baz=80
PSZ Piszkesteto 80.57 322 *e*P **P 22 32 18.0 +0.3**
PSZ *e* 22 35 26.8
PSZ pmax pmax
comp=Z,43nm,1.4s,mb5.0
PSZ Piszkesteto 80.57 322 *e*P **P 22 32 18.0 +0.3**
comp=Z,43nm,1.4s,mb5.0
PSZ *e*PP PP 22 35 26.8 -1.3
PKD Parkfield 80.58 53 ⇑P **P 22 32 17.8 0.0**
baz=80,SNR=6.7
Q08A Gabbs 80.59 49 ⇑P **P 22 32 18.4 +0.5**
baz=80,SNR=6.5
KCC Kaiser Creek 80.59 51 ⇑P **P 22 32 18.1 +0.3**
baz=80,SNR=6.7
NVAR Mina Array Bea 80.61 50 P **P 22 32 18.4 +0.5**
comp=Z,13nm,0.9s,mb4.7,baz=284,slow=4.8,SNR=55
O10A Cortez Mining, 80.64 48 ⇑P **P 22 32 18.9 +0.8**
baz=80,SNR=11
P09A Austin 80.69 49 ⇑P **P 22 32 18.9 +0.6**
baz=80,SNR=6.9
DPC Dobruska-Polom 80.71 326 *e*P **P 22 32 18.9 +0.4**
DPC *e*S S 22 41 51.3 +0.6
DPC MLR MLR
comp=Z,200nm,11.9s
DPC Dobruska-Polom 80.71 326 *e*P **P 22 32 18.9 +0.4**
DPC *e*S S 22 41 51.3 +0.6
DPC *e* 22 44 34.6
DPC *e*SS SS 22 47 09.0 -5.6
DPC *e* 22 53 30.9
DPC LR LR
comp=Z,200nm,11.9s
MLAC Mammoth Lakes 80.73 51 ⇑P **P 22 32 19.3 +0.8**
baz=81
VYHS Vyhne 80.73 323 *e*P **P 22 32 19.0 +0.4**
VYHS pmax pmax
comp=Z,11nm,1.2s,mb4.5
VYHS Vyhne 80.73 323 *e*P **P 22 32 19.0 +0.4**
comp=Z,11nm,1.2s,mb4.5
VYHS *e*S S 22 41 49.9 -1.0
UPC Upice 80.75 326 *e*P **P 22 32 19.7 +1.0**
R08A Mina 80.78 50 ⇑P **P 22 32 19.6 +0.8**
baz=81,SNR=8.8
N11A Elko Archery C 80.80 47 ⇑P **P 22 32 19.7 +0.8**
baz=81
BSEG Bad Segeberg 80.82 331 *e*P **P 22 32 18.9 -0.1**
comp=Z,35nm,1.3s,mb4.9
BSEG *e*PP PP 22 35 30.2 0.0
BSEG Bad Segeberg 80.82 331 *e*P **P 22 32 18.9 -0.1**
BSEG *e* 22 35 30.2
BSEG pmax pmax
comp=Z,35nm,1.3s,mb4.9
QLMT Earthquake Lak 80.84 42 P **P 22 32 20.6 +1.4**
M12A Wells 80.93 46 ⇑P **P 22 32 20.7 +1.1**
baz=81
V05C Boulder Hill, 81.05 53 ⇑P **P 22 32 20.3 +0.1**
baz=81
P10A Eureka 81.06 48 ⇑P **P 22 32 21.2 +0.9**
baz=81
MTUM Tungsten Hills 81.07 51 P **P 22 32 20.7 +0.3**
Q09A Carvers 81.08 49 ⇓P **P 22 32 21.1 +0.7**
baz=81
ELK Elko 81.14 47 *e*P **P 22 32 22.1 +1.4**
ELK pmax pmax
comp=Z,107nm,1.1s
ELK Elko 81.14 47 *e*P **P 22 32 22.1 +1.3**
comp=Z,107nm,1.1s,mb5.5
BZS Buzias 81.15 320 ⇑*i*P **P 22 32 21.6 +0.8**
BZS Buzias 81.15 320 ⇑P **P 22 32 21.6 +0.9**
HELL Mitchell Peak, 81.16 52 ⇑P **P 22 32 20.5 -0.3**
baz=81,SNR=6.0
GCMT Greycliff 81.19 40 *e*P **P 22 32 21.4 +0.4**
N12A Clover Valley, 81.20 46 ⇓P **P 22 32 21.9 +0.9**
baz=81,SNR=17
O11A Cowboy Ranch, 81.26 47 ⇓P **P 22 32 22.1 +0.8**
baz=81
VRAC Vranov 81.29 325 P **P 22 32 22.7 +1.3**

comp=Z,16nm,0.8s,mb4.8,baz=47,slow=3.9,SNR=29
VRAC Vranov 81.29 325 ⇓*i*P **P 22 32 22.8 +1.3**
VRAC Vranov 81.29 325 ⇓P **P 22 32 22.8 +1.3**
SMMC Simmler 81.30 53 ⇑P **P 22 32 22.1 +0.6**
baz=81
YNR Norris Junctio 81.33 41 *e*P **P 22 32 23.2 +1.5**
PVCC Panska Ves 81.40 327 *e*P **P 22 32 23.2 +1.1**
PVCC *e*SKS 22 41 57.7
PVCC *ex* x 22 44 40.9
PVCC *e*SS SS 22 47 27.5 +2.6
PVCC AMS AMS 23 13 50.0
comp=Z,200nm,13.1s
PVCC Panska Ves 81.40 327 *e*P **P 22 32 23.2 +1.1**
PVCC *e*S S 22 41 57.7 -0.1
PVCC *e*SS SS 22 47 27.5 +2.6
PVCC MLR MLR
comp=Z,200nm,13.1s
YFT Old Faithful 81.41 42 *e*P **P 22 32 24.9 +2.8**
M13A Montello 81.42 46 P **P 22 32 22.9 +0.8**
baz=81,SNR=21
BRG Berggiesshubel 81.45 327 *e*P **P 22 32 22.4 +0.1**
comp=Z,18nm,0.9s,mb4.8
BRG *e*PP PP 22 35 35.1 -0.2
BRG Berggiesshubel 81.45 327 *e*P **P 22 32 22.6 +0.3**
comp=Z,11nm,0.9s,mb4.5
BRG S S 22 41 58.0 -0.2
BRG SS SS 22 46 46.0 -40
BRG
comp=N,54nm,15.4s
BRG
comp=E,66nm,14.9s
BRG
comp=Z,99nm,13.8s
BRG Berggiesshubel 81.45 327 *e*P **P 22 32 22.6 +0.3**
BRG S S 22 41 58.0 -0.2
BRG pmax pmax
comp=Z,11nm,1.0s,mb4.5
BRG MLR MLR
comp=N,54nm,15.4s
BRG MLR MLR
comp=E,66nm,14.9s
BRG MLR MLR
comp=Z,99nm,13.8s
TIN Tinemaha 81.46 51 ⇑P **P 22 32 22.8 +0.5**
baz=81
KDZ Kurdzhali 81.48 315 *i* P **P 22 32 24.0 +1.5**
R09A Tonopah 81.50 50 P **P 22 32 22.9 +0.3**
baz=81,SNR=38
TPH Tonopah 81.50 50 *e*P **P 22 32 23.4 +0.8**
TPH pmax pmax
comp=Z,39nm,1.1s,mb5.0
TPH Tonopah 81.50 50 *e*P **P 22 32 23.4 +0.8**
comp=Z,39nm,1.1s,mb5.0
P11A Circle Ranch, 81.55 48 ⇑P **P 22 32 23.5 +0.7**
baz=81
CLL Collm 81.56 328 *e*P **P 22 32 23.4 +0.5**
comp=Z,53nm,1.1s,mb5.2
CLL *e*pP pP 22 33 57.7 +1.2
CLL *e*PP PP 22 35 37.4 +1.2
CLL Collm 81.56 328 ⇓P **P 22 32 23.4 +0.5**
comp=Z,logA/T=1.7,mb5.2
CLL *e**PP pP 22 33 56.0 -0.5
CLL *e**SP sP 22 34 38.0 -1.9
CLL *e*S S 22 41 59.0 -0.4
CLL *e**SS sS 22 44 40.0 -5.9
CLL *e*SS SS 22 47 30.0 +2.7
CLL Collm 81.56 328 ⇓*i*P **P 22 32 23.4 +0.5**
comp=Z,53nm,1.1s,mb5.2
CLL *e*pP pP 22 33 56.0 -0.5
CLL *e*sP sP 22 34 38.0 -1.9
CLL *e*S S 22 41 59.0 -0.4
CLL *e*S S 22 41 59.0 -0.4
CLL *e*sS sS 22 44 40.0 -5.9
CLL *e*SS SS 22 47 30.0 +2.7
CLL Collm 81.56 328 ⇓*i*P **P 22 32 23.4 +0.5**
CLL *e**PP pP 22 33 56.0 -0.5
CLL *e*S S 22 41 59.0 -0.4
CLL pmax pmax
comp=Z,53nm,1.1s,mb5.2
CLL Collm 81.56 328 ⇓*i*P **P 22 32 23.4 +0.5**
comp=Z,53nm,1.1s,mb5.2
CLL *e*pP pP 22 33 56.0 -0.5
CLL *e*S S 22 41 59.0 -0.4
VES Vestal, Richgr 81.61 52 ⇓P **P 22 32 22.4 -0.7**
baz=82
PKM Peak Mountain 81.66 54 ⇓P **P 22 32 23.9 +0.5**
baz=82
FBE Freiberg 81.68 327 *e*P **P 22 32 23.7 +0.2**
comp=Z,75nm,1.4s,mb5.2
FBE *e*pP pP 22 33 58.6 +1.5
FBE *e*PP PP 22 35 38.6 +1.4
N13A Wendover, West 81.70 46 ⇑P **P 22 32 24.4 +0.8**
baz=82,SNR=6.6
S09A Goldfield 81.71 50 ⇑P **P 22 32 24.0 +0.3**
baz=82,SNR=14
FLWY Flagg Ranch 81.72 42 *e*P **P 22 32 24.9 +1.2**
comp=Z,52nm,1.0s,mb5.2
O12A Currie 81.73 47 P **P 22 32 24.4 +0.6**
baz=82,SNR=53
PRU Pruhonice 81.79 326 *e*P **P 22 32 25.0 +0.9**
PRU *e*SKS 22 42 02.4
PRU *ex* x 22 44 45.9
PRU *e*SS SS 22 47 13.8 -17
PRU *ex* x 22 53 57.7
PRU AMS AMS 23 12 10.0
comp=Z,100nm,16.0s
PRU Pruhonice 81.79 326 *e*P **P 22 32 25.0 +0.9**
PRU *e*S S 22 42 02.4 +0.7
PRU MLR MLR
comp=Z,100nm,16.0s
ZST Bratislava 81.79 324 *e*P **P 22 32 24.2 +0.1**
ZST *e*S S 22 42 03.3 +1.6
ZST Bratislava 81.79 324 *e*P **P 22 32 24.2 +0.1**
comp=Z,21nm,1.3s,mb4.7
ZST *e*S S 22 42 03.3 +1.6
ZST LR LR
comp=Z,100nm,16.8s
TREC Trest 81.83 325 *e*P **P 22 32 25.1 +0.8**
TREC *e*SKS 22 42 02.2
TREC AMS AMS 23 14 40.0
comp=Z,200nm,16.4s
RRI2 Red Ridge 81.84 43 *e*P **P 22 32 25.1 +0.8**
comp=Z,33nm,1.0s,mb5.0
RRI2 *e*pP pP 22 33 53.9 -4.0
RZN Rozhen 81.87 315 P **P 22 32 26.7 +2.2**
MOOW Moose Ponds 81.91 42 *e*P **P 22 32 25.3 +0.6**
comp=Z,16nm,1.0s,mb4.7
CWC Cottonwood Cre 81.91 51 ⇑P **P 22 32 24.8 +0.1**
baz=82
TPAW Teton Pass 81.95 42 *e*P **P 22 32 25.5 +0.6**
comp=Z,28nm,0.9s,mb5.0
TPAW *e*pP pP 22 34 01.6 +3.0
R10A Warm Springs 81.96 49 P **P 22 32 25.6 +0.6**
baz=82,SNR=12
NRDL Niedersach Rie 81.96 330 *e*P **P 22 32 24.7 -0.2**
comp=Z,27nm,1.3s,mb4.8
NRDL *e*PP PP 22 35 39.9 +0.5
HVU Hansel Valley 81.98 45 *e*P **P 22 32 25.2 +0.2**
HVU pmax pmax
comp=Z,32nm,0.9s,mb5.0
HVU Hansel Valley 81.98 45 *e*P **P 22 32 25.2 +0.2**
comp=Z,32nm,0.9s,mb5.0
SBC Santa Barbara 82.00 54 ⇑P **P 22 32 25.1 0.0**
baz=82
GRAC Grapevine Rang 82.05 51 ⇑P **P 22 32 25.3 0.0**
baz=82,SNR=5.0
LOHW Long Hollow 82.07 42 *e*P **P 22 32 26.0 +0.5**
comp=Z,17nm,1.0s,mb4.7
REDW Red Top Meadow 82.09 43 *e*P **P 22 32 26.1 +0.5**
comp=Z,19nm,0.9s,mb4.8
ISA Isabella 82.11 52 ⇑P **P 22 32 24.9 -0.8**
baz=82,SNR=6.4
P12A McGill 82.11 48 P **P 22 32 26.5 +0.7**
baz=82,SNR=31
VTS Vitosha 82.19 317 *i* P **P 22 32 27.5 +1.4**
VTS Vitosha 82.19 317 ⇑*i*P **P 22 32 26.5 +0.4**
ARVC Arvin 82.19 53 ⇑P **P 22 32 25.9 -0.2**
baz=82
EIL Elat 82.22 300 *e*P **P 22 32 26.0 -0.3**
comp=Z,122nm,0.8s,mb5.7
DAC Darwin (Calif) 82.33 51 *e*P **P 22 32 26.7 -0.1**
DAC *PP pP 22 34 04.4 +3.8
DAC pmax pmax
comp=Z,19nm,1.0s,mb4.8
DAC Darwin (Calif) 82.33 51 *e*P **P 22 32 26.6 -0.2**
comp=Z,19nm,1.0s,mb4.8
DAC pP pP 22 34 04.4 +3.9
PKSM Moragy 82.34 321 ⇑*i*P **P 22 32 27.5 +0.6**
PKSM Moragy 82.34 321 ⇑P **P 22 32 27.5 +0.6**
BGU Big Grassy Mou 82.36 45 *e*P **P 22 32 26.9 -0.1**
TRCR Troy Canyon 82.37 49 *e*P **P 22 32 26.6 -0.5**
LAO LASA Array 82.41 38 *e*P **P 22 32 26.7 -0.5**
comp=Z,12nm,0.3s,mb5.1
Q12A Willow Creek R 82.42 48 ⇓P **P 22 32 27.8 +0.5**
baz=82,SNR=8.3
TANN Tannenbergstha 82.44 327 *e*P **P 22 32 27.4 0.0**
comp=Z,16nm,1.2s,mb4.6
SPUT South Promonto 82.46 45 *e*P **P 22 32 27.6 +0.1**
WERD Werda 82.49 327 *e*P **P 22 32 27.6 0.0**
comp=Z,23nm,1.2s,mb4.8
MMB Musomiste 82.51 315 *i* P **P 22 32 30.2 +2.4**
MPMC Manual Prospec 82.52 52 P **P 22 32 27.8 0.0**
baz=82,SNR=27
GUNZ Gunzen 82.54 327 *e*P **P 22 32 28.1 +0.2**
comp=Z,31nm,1.0s,mb5.0
WERN Wernitzgruen 82.57 327 *e*P **P 22 32 28.2 +0.1**
comp=Z,35nm,1.1s,mb5.0
NKC Novy Kostel 82.58 327 *e*P **P 22 32 29.1 +1.0**
NKC *e*SKS 22 42 09.4
NKC AMS AMS 23 13 40.0
comp=Z,100nm,13.6s
NKC Novy Kostel 82.58 327 *e*P **P 22 32 29.1 +1.0**
NKC *e*S S 22 42 09.4 -0.2
CONA Conrad Observa 82.58 324 ⇑*i*P **P 22 32 28.5 +0.4**
comp=Z,26nm,1.7s,mb4.7
MOX Moxa 82.65 328 *e*P **P 22 32 28.4 -0.1**
comp=Z,25nm,1.2s,mb4.8
MOX *e*PP PP 22 35 46.0 +0.9
MOX Moxa 82.65 328 *e*P **P 22 32 29.1 +0.6**
comp=Z,38nm,1.5s,mb4.9
MOX
comp=Z,100nm,19.0s
MOX Moxa 82.65 328 *e*P **P 22 32 29.1 +0.6**
MOX pmax pmax
comp=Z,38nm,1.5s,mb4.9
MOX MLR MLR
comp=Z,100nm,19.0s
FURC Furnace Creek, 82.69 51 ⇑P **P 22 32 28.8 +0.2**
baz=82,SNR=22
KKB Krupnik 82.71 316 *i* P **P 22 32 30.0 +1.2**
MCD Coleburn Disti 82.73 339 *e*P **P 22 32 28.6 -0.3**
MCD AMb AMB 22 32 31.3
comp=Z,28nm,1.3s,mb4.8
MCD Coleburn Disti 82.73 339 *e*P **P 22 32 28.6 -0.3**
MCD AMb AMB 22 32 31.3
comp=Z,28nm,1.3s,mb4.8
LRMC Laurel Mountai 82.74 52 ⇑P **P 22 32 28.9 0.0**
baz=83,SNR=7.0
HWUT Hardware Ranch 82.79 44 *e*P **P 22 32 29.8 +0.6**
comp=Z,71nm,1.1s,mb5.3
KHC Kasperske Hory 82.84 326 *e*P **P 22 32 30.2 +0.8**
KHC *e*SKS 22 42 14.3
KHC *ex* x 22 44 54.2
KHC *e*SS SS 22 47 37.1 -8.9
KHC *e*PKKS 22 54 13.3
KHC AMS AMS 23 14 50.0
comp=Z,200nm,14.6s
KHC Kasperske Hory 82.84 326 *e*P **P 22 32 30.2 +0.8**
KHC *e*S S 22 42 14.3 +2.1
KHC MLR MLR
comp=Z,200nm,14.6s
EDW2 Edwards Air Fo 82.89 53 P **P 22 32 29.9 +0.2**
baz=83,SNR=14
MANZ Manzenberg 82.91 327 *e*P **P 22 32 30.0 +0.2**
comp=Z,19nm,1.0s,mb4.8
DUG Dugway 82.94 46 *e*P **P 22 32 30.8 +0.9**
DUG pmax pmax
comp=Z,47nm,1.1s,mb5.1
DUG Dugway 82.94 46 *e*P **P 22 32 30.8 +0.9**
comp=Z,37nm,1.1s,mb5.1
GEC2 GERESS Array S 82.98 326 *e*P **P 22 32 30.0 -0.1**
comp=Z,20nm,1.2s,mb4.7
GEC2 GERESS Array S 82.98 326 *e*P **P 22 32 30.0 -0.1**
GEC2 pmax pmax
comp=Z,20nm,1.2s,mb4.7
GERES GERESS Array B 82.98 326 P **P 22 32 29.8 -0.4**
comp=Z,5.0nm,0.7s,mb4.4,baz=46,slow=5.6,SNR=39
GERES GERESS Array B 82.98 326 P **P 22 32 29.8 -0.3**
GERES pmax pmax
comp=Z,50nm,0.7s
DIVS Divcibare 83.02 319 *e*P **P 22 32 29.6 -0.7**
ROTZ Rotzenmuhle 83.02 327 *e*P **P 22 32 30.8 +0.5**
comp=Z,64nm,1.5s,mb5.1
U10A Ash Meadows, A 83.06 51 ⇓P **P 22 32 31.2 +0.6**
baz=83,SNR=9.7
IBBN Ibbenburen 83.07 331 *e*P **P 22 32 30.1 -0.5**
comp=Z,48nm,0.9s,mb5.2
NOQ North Oquirrh 83.07 45 *e*P **P 22 32 31.6 +1.1**
comp=Z,21nm,0.6s,mb5.0
WET Wettzell 83.16 326 *e*P **P 22 32 31.3 +0.3**
comp=Z,18nm,1.2s,mb4.7
TCUT Toone Canyon 83.19 45 *e*P **P 22 32 32.0 +0.8**
BW06 Boulder Array 83.20 42 *e*P **P 22 32 30.8 -0.5**
comp=Z,13nm,0.8s,mb4.7
PDAR Pinedale Array 83.20 42 P **P 22 32 30.8 -0.4**
comp=Z,14nm,0.8s,mb4.7,baz=318,slow=2.0,SNR=78
ARSA Arzberg 83.22 324 ⇑*i*P **P 22 32 31.6 +0.3**
comp=Z,11nm,1.4s,mb4.4
UBBA Unterbreizbach 83.23 329 *e*P **P 22 32 31.1 -0.3**
comp=Z,22nm,1.4s,mb4.7
CTU Camp Tracy 83.26 45 *e*P **P 22 32 32.5 +0.9**
comp=Z,21nm,1.0s,mb4.8
KAC Achnashellach 83.40 340 *e*P **P 22 32 32.1 -0.2**
KAC Achnashellach 83.40 340 *e*P **P 22 32 32.1 -0.2**
SHOC Shoshone 83.41 51 ⇓P **P 22 32 32.0 -0.3**
baz=83
MOA Molln 83.41 325 ⇑*i*P **P 22 32 34.0 +1.6**
comp=Z,14nm,1.2s,mb4.6
GSC Goldstone 83.42 52 P **P 22 32 32.5 +0.2**
baz=83,SNR=20
BFSC Mount Baldy St 83.49 53 ⇓P **P 22 32 32.4 -0.3**
baz=83
GRA1 Grafenberg Arr 83.52 327 *e*P **P 22 32 33.2 +0.4**
comp=Z,54nm,1.2s,mb5.2
GRA1 *e*pP pP 22 34 08.5 +1.6
GRF Grafenberg Arr 83.52 327 *e*P **P 22 32 33.2 +0.4**
comp=Z,54nm,1.2s,mb5.2
GRF *e*pP pP 22 34 08.5 +1.6
GRF Grafenberg Arr 83.52 327 *e*P **P 22 32 33.2 +0.4**
GRF *e**PP pP 22 34 08.5 +1.6
GRF pmax pmax
comp=Z,54nm,1.2s,mb5.2
GRF Grafenberg Arr 83.52 327 *e*P **P 22 32 33.2 +0.4**
GRF *e**PP pP 22 34 08.5 +1.6
GRF pmax pmax
comp=Z,54nm,1.2s,mb5.2
NLU North Lily Min 83.53 46 *e*P **P 22 32 34.4 +1.4**
KPL Plockton 83.64 340 *e*P **P 22 32 32.9 -0.5**
KPL Plockton 83.64 340 *e*P **P 22 32 32.9 -0.5**
U11A Corn Creek 83.67 50 ⇑P **P 22 32 34.2 +0.7**
baz=84
DAU Daniels Canyon 83.73 45 *e*P **P 22 32 34.8 +0.9**
MPU Maple Canyon 83.76 46 *e*P **P 22 32 34.7 +0.6**
comp=Z,44nm,1.0s,mb5.2
GROS Grobnik 83.77 323 *e*P **P 22 32 34.5 +0.4**
TUQ Turquoise Mtn. 83.92 51 P **P 22 32 35.2 +0.4**
baz=84,SNR=16
ESY Stoneypath 83.93 338 ⇑*e*P **P 22 32 35.2 +0.3**
ESY Stoneypath 83.93 338 ⇑*e*P **P 22 32 35.2 +0.3**
HEC Hector,Ludlow 84.02 52 ⇑P **P 22 32 35.6 +0.2**
baz=84,SNR=15
KAR1 Arisaig 84.05 340 *e*P **P 22 32 35.8 +0.3**
KAR1 Arisaig 84.05 340 *e*P **P 22 32 35.8 +0.3**
ARUT Antelope Range 84.06 48 *e*P **P 22 32 36.2 +0.7**
MURC Murrieta 84.18 53 ⇓P **P 22 32 35.8 -0.3**
baz=84
EBL Broad Law 84.19 338 ⇑*e*P **P 22 32 35.8 -0.3**
EBL Broad Law 84.19 338 ⇑*e*P **P 22 32 35.8 -0.3**
U12A Valley of Fire 84.20 50 ⇑P **P 22 32 36.8 +0.6**
baz=84,SNR=6.0
LEGS Legarje 84.22 323 *e*P **P 22 32 36.8 +0.4**
EAB Aberfoyle 84.23 339 ⇑*e*P **P 22 32 36.1 -0.3**
EAB Aberfoyle 84.23 339 ⇑*e*P **P 22 32 36.1 -0.3**
CCUT Cedar City 84.25 48 *e*P **P 22 32 36.9 +0.4**
CCUT *e*pP pP 22 34 11.1 +0.4
CCUT *e*sP sP 22 34 55.0 +1.0
EAU Auchinoon 84.25 338 *e*P **P 22 32 37.0 +0.5**
EAU Auchinoon 84.25 338 *e*P **P 22 32 37.0 +0.5**
TNS Taunus Mts 84.34 329 *e*P **P 22 32 36.8 -0.1**
comp=Z,10.0nm,1.0s,mb4.5
MSU Marysvale 84.38 47 *e*P **P 22 32 38.3 +1.2**
MSU *e**PP pP 22 34 12.4 +1.0
KBA Koelnbreinsper 84.40 325 ⇑*i*P **P 22 32 38.5 +1.3**
comp=Z,5.3nm,0.8s,mb4.3
KBA Koelnbreinsper 84.40 325 ⇑*i*P **P 22 32 38.5 +1.3**
KBA pmax pmax
comp=Z,50nm,0.8s,mb5.3
V12A Nelson 84.43 50 ⇓P **P 22 32 37.9 +0.5**
baz=84,SNR=8.8
TMUT Trail Mountain 84.47 46 *e*P **P 22 32 39.0 +1.5**
GMRC Granite Mounta 84.48 52 P **P 22 32 37.9 +0.3**
baz=84,SNR=13
EKA Eskdalemuir Ar 84.59 338 P **P 22 32 37.5 -0.6**
comp=Z,6.6nm,0.7s,mb4.5,baz=34,slow=5.2,SNR=18
EKA Eskdalemuir Ar 84.59 338 P **P 22 32 37.5 -0.7**
EKA pmax pmax
comp=Z,70nm,0.7s
PGBU Glenifferbraes 84.59 339 *e*P **P 22 32 38.5 +0.3**
PGBU Glenifferbraes 84.59 339 *e*P **P 22 32 38.5 +0.3**
FUR Furstenfeldbru 84.60 326 *e*P **P 22 32 38.3 +0.1**
comp=Z,28nm,0.9s,mb5.0
FUR Furstenfeldbru 84.60 326 *e*P **P 22 32 38.3 +0.1**
FUR pmax pmax
comp=Z,28nm,0.9s,mb5.0
ESK Eskdalemuir 84.62 338 ⇑*e*P **P 22 32 38.6 +0.3**
ESK Eskdalemuir 84.62 338 ⇑*e*P **P 22 32 38.6 +0.3**
ESK Eskdalemuir 84.62 338 *e*P **P 22 32 38.3 0.0**
comp=Z,14nm,1.4s,mb4.5
109C Camp Elliot, M 84.67 54 ⇑P **P 22 32 38.5 -0.1**
baz=84
PFO Pinyon Flat Ob 84.67 53 *e*P **P 22 32 37.8 -0.8**
PFO *e**PP pP 22 34 12.2 -0.7
PFO pmax pmax
comp=Z,24nm,0.8s,mb5.0
PFO Pinyon Flat Ob 84.67 53 *e*P **P 22 32 37.8 -0.7**
comp=Z,24nm,0.8s,mb5.0
PFO *e*pP pP 22 34 12.2 -0.7
PFO Pinyon Flat Ob 84.67 53 P **P 22 32 38.5 0.0**
baz=84,SNR=18
W12A Cal Nev Ari 84.68 51 ⇓P **P 22 32 38.6 0.0**
baz=84
ECK Cauldkaine Hil 84.71 338 ⇑*e*P **P 22 32 38.6 -0.1**
ECK AMb AMB 22 32 41.2
comp=Z,35nm,1.3s,mb4.9
ECK Cauldkaine Hil 84.71 338 ⇑*e*P **P 22 32 38.6 -0.1**
ECK AMb AMB 22 32 41.2
comp=Z,35nm,1.3s,mb4.9
ULM Lac du Bonnet 84.71 30 P **P 22 32 38.0 -0.8**
comp=Z,6.7nm,0.9s,mb4.4,baz=295,slow=4.8,SNR=6.9
BELC Belle Mtn. 84.73 52 P **P 22 32 38.6 -0.2**
baz=85,SNR=9.4
BHH Howats Hill 84.81 338 *e*P **P 22 32 39.8 +0.6**
BHH Howats Hill 84.81 338 *e*P **P 22 32 39.8 +0.6**
CEY Cerknica 84.81 323 *e*P **P 22 32 39.4 +0.1**
HGN Heimansgroeve 84.98 331 *e*P **P 22 32 39.2 -0.9**
comp=Z,19nm,1.7s,mb4.5
SRU San Rafael 85.00 46 *e*P **P 22 32 40.3 +0.1**
SRU *e**PP pP 22 34 14.7 +0.1
SRU pmax pmax
comp=Z,36nm,0.9s,mb5.1
SRU San Rafael 85.00 46 *e*P **P 22 32 40.3 +0.1**
comp=Z,36nm,0.9s,mb5.1
SRU *e*pP pP 22 34 14.7 +0.1
STU Stuttgart 85.10 328 *e*P **P 22 32 40.3 -0.4**
comp=Z,25nm,1.2s,mb4.8
STU Stuttgart 85.10 328 *e*P **P 22 32 40.7 0.0**
comp=Z,10.0nm,0.8s,mb4.6
BBO1 Bothel 85.12 338 *e*P **P 22 32 41.1 +0.3**
BBO1 Bothel 85.12 338 *e*P **P 22 32 41.1 +0.3**
MONP Monument Peak 85.12 54 ⇑P **P 22 32 40.9 +0.1**
baz=85,SNR=6.8
RWWY Rawlins 85.22 42 *e*P **P 22 32 41.1 -0.2**
comp=Z,27nm,1.0s,mb4.9
MOTA Moosalm 85.27 326 ⇑*i*P **P 22 32 42.3 +0.8**
comp=Z,8.0nm,1.4s,mb4.3
RSSD Black Hills 85.29 39 *e*P **P 22 32 42.1 +0.5**
comp=Z,5.8nm,0.8s,mb4.4
W13A Hualapai Mount 85.44 50 ⇑P **P 22 32 42.9 +0.6**
baz=85,SNR=9.3
DVTC Desert V Tower 85.48 54 ⇓P **P 22 32 42.3 -0.2**
baz=85
SWSC Sam W. Stewart 85.51 53 ⇓P **P 22 32 42.6 -0.1**
baz=85
LHO Holmfirth 85.66 336 ⇑*e*P **P 22 32 43.0 -0.4**
LHO AMb AMB 22 32 45.3
comp=Z,86nm,1.0s,mb5.4
LHO Holmfirth 85.66 336 ⇑*e*P **P 22 32 43.0 -0.4**
LHO AMb AMB 22 32 45.3
comp=Z,86nm,1.0s,mb5.4
WLF Walferdange 85.73 330 *e*P **P 22 32 43.4 -0.4**
comp=Z,22nm,1.5s,mb4.7
KBI1 Birley Grange 85.78 336 *e*P **P 22 32 43.5 -0.6**
KBI1 AMb AMB 22 32 46.4
comp=Z,108nm,1.2s,mb5.5
KBI1 Birley Grange 85.78 336 *e*P **P 22 32 43.5 -0.6**
KBI1 AMb AMB 22 32 46.4
comp=Z,108nm,1.2s,mb5.5
X13A Yucca 85.79 51 ⇑P **P 22 32 44.1 +0.1**
baz=86,SNR=10
BFO Black Forest 85.81 328 *e*P **P 22 32 43.5 -0.6**
comp=Z,14nm,1.2s,mb4.6
BFO Black Forest 85.81 328 *e*P **P 22 32 43.5 -0.6**
BFO pmax pmax
comp=Z,14nm,1.2s,mb4.6
Y12C Blythe 85.86 52 ⇓P **P 22 32 44.8 +0.4**
baz=86
W14A Seligman 85.88 50 ⇑P **P 22 32 45.4 +0.9**
baz=86,SNR=12
DAVA Damuels 85.88 326 ⇑*i*P **P 22 32 44.5 0.0**
comp=Z,22nm,1.1s,mb4.8
GLA Glamis 86.09 53 ⇑P **P 22 32 45.8 +0.3**
baz=86,SNR=5.5
KWE Weaver Farm 86.09 336 *e*P **P 22 32 45.9 +0.4**
KWE AMb AMB 22 32 48.4
comp=Z,37nm,1.2s,mb5.0
KWE Weaver Farm 86.09 336 *e*P **P 22 32 45.9 +0.4**
KWE AMb AMB 22 32 48.4
comp=Z,37nm,1.2s,mb5.0
CDF Champ du Feu 86.21 329 *e*P **P 22 32 45.3 -0.8**
BAIF Baives 86.23 331 *e*P **P 22 32 44.4 -1.7**
Y13A Salome 86.27 51 ⇓P **P 22 32 47.1 +0.7**
baz=86
PV10 Paradox Valley 86.36 45 *e*P **P 22 32 47.8 +1.1**
PV10 *e*pP pP 22 34 20.7 -0.8
W15A Williams 86.42 50 ⇑P **P 22 32 48.2 +1.2**
baz=86
PHWY Pilot Hill 86.46 41 *e*P **P 22 32 47.2 0.0**
X14A Yava 86.47 50 ⇓P **P 22 32 48.3 +1.0**
baz=86,SNR=6.3
SBD1 Bryn Du 86.66 337 *e*P **P 22 32 48.4 +0.2**
SBD1 Bryn Du 86.66 337 *e*P **P 22 32 48.4 +0.2**
WUAZ Wupatki 86.77 49 *e*P **P 22 32 49.0 +0.2**
comp=Z,17nm,1.1s,mb4.7
WUAZ *e*pP pP 22 34 20.4 -3.3
WUAZ *e*PP PP 22 36 16.8 -1.4
PV01 Paradox Valley 86.79 45 *e*P **P 22 32 49.5 +0.6**
HINF Hinteralfeld 86.85 328 *e*P **P 22 32 47.9 -1.2**
comp=Z,9.3nm,0.8s,mb4.2
HINF Hinteralfeld 86.85 328 *e*P **P 22 32 47.9 -1.2**
comp=Z,4.7nm,0.8s,mb4.3
X15A Humboldt 86.88 50 ⇓P **P 22 32 50.4 +1.1**
baz=87,SNR=6.2
HAU Haudompre 86.92 329 *e*P **P 22 32 48.5 -0.9**
comp=Z,9.8nm,0.7s,mb4.4
HAU Haudompre 86.92 329 *e*P **P 22 32 48.5 -0.9**
HAU pmax pmax
comp=Z,50nm,0.7s,mb5.3
HAU Haudompre 86.92 329 *e*P **P 22 32 48.5 -0.9**
comp=Z,4.9nm,0.7s,mb4.3
SMCO Snowmass 87.03 44 *e*P **P 22 32 50.8 +0.8**
comp=Z,21nm,0.8s,mb4.9
Z14A Wintersburg 87.13 51 ⇓P **P 22 32 50.9 +0.5**
baz=87
MCH1 Michaelchurch 87.33 336 P **P 22 32 52.1 +0.7**
MCH1 Michaelchurch 87.33 336 *e*P **P 22 32 51.1 -0.3**
MCH1 *e*P 22 32 52.1
MCH1 Michaelchurch 87.33 336 *e*P **P 22 32 51.1 -0.3**
MCH1 *e*P 22 32 52.1
HTR Trewern Hill 87.35 336 *e*P **P 22 32 51.1 -0.4**
HTR AMb AMB 22 32 53.4
comp=Z,25nm,1.5s,mb4.7
HTR Trewern Hill 87.35 336 *e*P **P 22 32 51.1 -0.4**
HTR AMb AMB 22 32 53.4
comp=Z,25nm,1.5s,mb4.7
ISCO Idaho Springs 87.39 43 *e*P **P 22 32 51.9 +0.2**
ISCO pmax pmax

comp=Z,70nm,1.1s,mb5.3
ISCO Idaho Springs 87.39 43 *e*P **P 22 32 51.9 +0.3**
comp=Z,7.1nm,1.1s,mb4.3
HGH Gray Hill 87.56 336 *e*P **P 22 32 53.0 +0.5**
HGH Gray Hill 87.56 336 *e*P **P 22 32 53.0 +0.5**
115A Sonoran Desert 88.01 51 ⇓P **P 22 32 55.5 +0.9**
baz=88
CABF La Chapelle 88.10 328 *e*P **P 22 32 54.1 -0.9**
comp=Z,6.0nm,0.7s,mb4.1
CABF La Chapelle 88.10 328 *e*P **P 22 32 54.1 -0.9**
comp=Z,3.0nm,0.7s,mb4.1
116A Eloy 88.44 51 ⇑P **P 22 32 57.2 +0.6**
baz=88
LOR Lormes 88.56 330 *e*P **P 22 32 56.1 -1.0**
comp=Z,15nm,0.9s,mb4.4
LOR Lormes 88.56 330 *e*P **P 22 32 56.1 -1.0**
comp=Z,7.4nm,0.9s,mb4.4
LPL La Plagne 88.65 327 *e*P **P 22 32 57.1 -0.5**
comp=Z,22nm,0.9s,mb4.6
LPL La Plagne 88.65 327 *e*P **P 22 32 57.1 -0.5**
LPL pmax pmax
comp=Z,11nm,0.9s,mb4.6
LPL La Plagne 88.65 327 *e*P **P 22 32 57.1 -0.5**
comp=Z,11nm,0.9s,mb4.6
LPG La Plagne 88.66 327 *e*P **P 22 32 57.3 -0.3**
comp=Z,30nm,0.8s,mb4.7
LPG La Plagne 88.66 327 *e*P **P 22 32 57.3 -0.3**
LPG pmax pmax
comp=Z,15nm,0.8s,mb4.8
LPG La Plagne 88.66 327 *e*P **P 22 32 57.3 -0.3**
comp=Z,15nm,0.8s,mb4.8
SSF Saint Saulge 88.87 330 *e*P **P 22 32 57.7 -0.9**
comp=Z,9.8nm,1.0s,mb4.2
SSF Saint Saulge 88.87 330 *e*P **P 22 32 57.7 -0.9**
comp=Z,4.9nm,1.0s,mb4.2
BNI Bardonecchia 89.03 327 *e*P **P 22 33 00.3 +1.0**
BNI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
BNI Bardonecchia 89.03 327 *e*P **P 22 33 00.3 +1.0**
comp=Z,5.2nm,0.8s,mb4.3
SMF Signal de Mont 89.05 329 *e*P **P 22 32 58.5 -0.9**
comp=Z,19nm,0.9s,mb4.5
SMF Signal de Mont 89.05 329 *e*P **P 22 32 58.5 -0.9**
SMF pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
SMF Signal de Mont 89.05 329 *e*P **P 22 32 58.5 -0.9**
comp=Z,9.4nm,0.9s,mb4.5
LDF La Druitiere 89.10 333 *e*P **P 22 32 58.8 -0.9**
AVF Avril sur Loir 89.15 330 *e*P **P 22 32 59.0 -0.9**
comp=Z,18nm,0.9s,mb4.5
AVF Avril sur Loir 89.15 330 *e*P **P 22 32 59.0 -0.9**
AVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
AVF Avril sur Loir 89.15 330 *e*P **P 22 32 59.0 -0.9**
comp=Z,9.1nm,0.9s,mb4.5
TUC Tucson 89.20 51 *e*P **P 22 32 59.9 -0.2**
TUC *e**PP pP 22 34 34.7 -0.9
TUC pmax pmax
comp=Z,10.0nm,1.4s,mb4.3
TUC Tucson 89.20 51 *e*P **P 22 32 59.9 -0.2**
comp=Z,10nm,1.4s,mb4.4
TUC *e*pP pP 22 34 34.7 -0.9
MBDF Montbardon 89.24 326 *e*P **P 22 32 59.1 -1.2**
comp=Z,18nm,1.2s,mb4.4
MBDF Montbardon 89.24 326 *e*P **P 22 32 59.1 -1.2**
MBDF pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
MBDF Montbardon 89.24 326 *e*P **P 22 32 59.1 -1.2**
comp=Z,9.1nm,1.2s,mb4.4
ORIF Oris-en-Rattie 89.50 327 *e*P **P 22 33 00.6 -0.9**
BGF Bois d'Agland 89.54 330 *e*P **P 22 33 01.0 -0.7**
comp=Z,39nm,1.4s,mb4.7
BGF Bois d'Agland 89.54 330 *e*P **P 22 33 01.0 -0.7**
BGF pmax pmax
comp=Z,19nm,1.4s,mb4.7
BGF Bois d'Agland 89.54 330 *e*P **P 22 33 01.0 -0.7**
comp=Z,19nm,1.4s,mb4.7
GRR Gorron 89.55 333 *e*P **P 22 33 01.1 -0.6**
comp=Z,31nm,1.0s,mb4.8
GRR Gorron 89.55 333 *e*P **P 22 33 01.1 -0.6**
GRR pmax pmax
comp=Z,15nm,1.0s,mb4.8
GRR Gorron 89.55 333 *e*P **P 22 33 01.1 -0.6**
comp=Z,15nm,1.0s,mb4.8
SBF Sospel 89.58 325 *e*P **P 22 33 00.5 -1.4**
comp=Z,23nm,0.9s,mb4.7
SBF Sospel 89.58 325 *e*P **P 22 33 00.5 -1.4**
SBF pmax pmax
comp=Z,12nm,0.9s,mb4.7
SBF Sospel 89.58 325 *e*P **P 22 33 00.5 -1.4**
comp=Z,12nm,0.9s,mb4.7
SCHQ Schefferville 89.66 13 *e*P **P 22 33 03.3 +1.0**
comp=Z,2.1nm,0.7s,mb4.1
TCF Toulx Ste Croi 90.03 330 *e*P **P 22 33 03.4 -0.5**
comp=Z,16nm,1.0s,mb4.5
TCF Toulx Ste Croi 90.03 330 *e*P **P 22 33 03.4 -0.5**
TCF pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
TCF Toulx Ste Croi 90.03 330 *e*P **P 22 33 03.4 -0.5**
comp=Z,7.9nm,1.0s,mb4.5
VIVF Saint-Julien-l 90.09 328 *e*P **P 22 33 03.5 -0.7**
comp=Z,39nm,1.3s,mb4.8
VIVF Saint-Julien-l 90.09 328 *e*P **P 22 33 03.5 -0.7**
VIVF pmax pmax
comp=Z,19nm,1.3s,mb4.8
VIVF Saint-Julien-l 90.09 328 *e*P **P 22 33 03.5 -0.7**
comp=Z,19nm,1.3s,mb4.8
ANMO Albuquerque 90.18 47 *e*P **P 22 33 05.8 +1.2**
ANMO *e**PP pP 22 34 40.2 0.0
ANMO pmax pmax
comp=Z,9.0nm,0.9s
ANMO Albuquerque 90.18 47 *e*P **P 22 33 05.8 +1.2**
comp=Z,9.4nm,0.9s,mb4.6
ANMO *e*pP pP 22 34 40.2 0.0
SGMF Saint Gilles 90.30 334 *e*P **P 22 33 04.7 -0.5**
comp=Z,26nm,0.9s,mb4.7
SGMF Saint Gilles 90.30 334 *e*P **P 22 33 04.7 -0.5**
SGMF pmax pmax
comp=Z,13nm,0.9s,mb4.8
SGMF Saint Gilles 90.30 334 *e*P **P 22 33 04.7 -0.5**
comp=Z,13nm,0.9s,mb4.8
ROSF Rostrenen 90.50 334 *e*P **P 22 33 05.7 -0.4**
comp=Z,84nm,1.1s,mb5.2
ROSF Rostrenen 90.50 334 *e*P **P 22 33 05.7 -0.4**
ROSF pmax pmax
comp=Z,42nm,1.1s,mb5.2
ROSF Rostrenen 90.50 334 *e*P **P 22 33 05.7 -0.4**
comp=Z,42nm,1.1s,mb5.2
LPM Los Pinos Moun 90.50 47 *e*P **P 22 33 06.3 +0.2**
MFF Saint Martin d 90.74 331 *e*P **P 22 33 07.8 +0.6**
comp=Z,51nm,1.1s,mb5.0
MFF Saint Martin d 90.74 331 *e*P **P 22 33 07.8 +0.6**
MFF pmax pmax
comp=Z,25nm,1.1s,mb5.0
MFF Saint Martin d 90.74 331 *e*P **P 22 33 07.8 +0.6**
comp=Z,25nm,1.1s,mb5.0
QUIF Quistinic 90.81 334 *e*P **P 22 33 07.6 0.0**
comp=Z,22nm,1.1s,mb4.6
QUIF Quistinic 90.81 334 *e*P **P 22 33 07.6 0.0**
QUIF pmax pmax
comp=Z,11nm,1.0s,mb4.6
QUIF Quistinic 90.81 334 *e*P **P 22 33 07.6 0.0**
comp=Z,11nm,1.0s,mb4.7
RJF Les Rejaudoux 91.10 330 *e*P **P 22 33 08.6 -0.3**
comp=Z,60nm,1.3s,mb5.0
RJF Les Rejaudoux 91.10 330 *e*P **P 22 33 08.6 -0.3**
RJF pmax pmax
comp=Z,30nm,1.3s,mb5.0
RJF Les Rejaudoux 91.10 330 *e*P **P 22 33 08.6 -0.3**
comp=Z,30nm,1.3s,mb5.0
CAF Calviac 91.17 329 *e*P **P 22 33 09.1 -0.2**
comp=Z,46nm,1.3s,mb4.8
CAF Calviac 91.17 329 *e*P **P 22 33 09.1 -0.2**
CAF pmax pmax
comp=Z,23nm,1.3s,mb4.8
CAF Calviac 91.17 329 *e*P **P 22 33 09.1 -0.2**
comp=Z,23nm,1.3s,mb4.8
LFF La Frestale 91.72 330 *e*P **P 22 33 11.7 -0.1**
comp=Z,49nm,0.9s,mb5.1
LFF La Frestale 91.72 330 *e*P **P 22 33 11.7 -0.1**
LFF pmax pmax
comp=Z,25nm,0.9s,mb5.1
LFF La Frestale 91.72 330 *e*P **P 22 33 11.7 -0.1**
comp=Z,24nm,0.9s,mb5.1
MNTX Cornudas Mount 93.04 48 *e*P **P 22 33 17.9 +0.1**
comp=Z,6.2nm,0.9s,mb4.5
EPF Esparros 93.44 329 *e*P **P 22 33 19.5 -0.2**
comp=Z,10nm,1.1s,mb4.4
EPF Esparros 93.44 329 *e*P **P 22 33 19.5 -0.2**
EPF pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
EPF Esparros 93.44 329 *e*P **P 22 33 19.5 -0.2**
comp=Z,5.3nm,1.1s,mb4.4
ETSF Etsaut 93.93 329 *e*P **P 22 33 22.2 +0.3**
comp=Z,7.2nm,0.9s,mb4.4
ETSF Etsaut 93.93 329 *e*P **P 22 33 22.2 +0.3**
comp=Z,3.6nm,0.9s,mb4.4
WMOK Wichita Mounta 94.81 42 *e*P **P 22 33 25.8 -0.1**
comp=Z,3.8nm,1.0s,mb4.4
CCM Cathedral Cave 96.24 36 *e*P **P 22 33 31.2 -1.2**
CCM pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
CCM Cathedral Cave 96.24 36 *e*P **P 22 33 31.2 -1.2**
comp=Z,6.2nm,0.9s,mb4.7
TORD Torodi Ar. Bea 116.13 309 PKP PKPdf 22 38 43.8 -1.0
comp=Z,0.6nm,0.4s,baz=39,slow=1.7,SNR=16
LBTB Lobatse 119.60 258 PKP PKPdf 22 38 50.6 -0.8
comp=Z,2.3nm,0.7s,baz=102,slow=21,SNR=4.3
LBTB Lobatse 119.60 258 PKIKP PKPdf 22 38 50.6 -0.8
LBTB pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 125.22 310 PKP PKPdf 22 39 03.4 +1.2
comp=Z,2.5nm,0.7s,baz=100,slow=5.8,SNR=4.8
DBIC Dimbokro 125.22 310 PKIKP PKPdf 22 39 03.4 +1.2
DBIC pmax pmax
comp=Z,3.0nm,0.7s
ROSC El Rosal 132.18 43 PKP PKPdf 22 39 17.3 +1.8
comp=Z,5.7nm,0.9s,baz=100,slow=19,SNR=5.8
NNA Nana 143.17 62 *e*PKPdf PKPdf 22 39 31.8 -3.8
SAML Samuel 149.75 40 *e*PKPdf PKPdf 22 39 47.8 +1.2
SAML *e*PKPbc PKPbc 22 39 51.7 -0.1
SAML *e*PKPab PKPab 22 39 58.9 +0.1
ARE Arequipa 150.01 62 *e*P PKPbc 22 39 54.0 +1.6
LPAZ La Paz 152.30 57 PKP PKPdf 22 39 52.8 +2.3
comp=Z,4.5nm,1.1s,baz=336,slow=3.0,SNR=11
LPAZ PKPbc PKPbc 22 39 59.4 +1.8
comp=Z,11nm,1.1s,baz=345,slow=5.6,SNR=12
LPAZ La Paz 152.30 57 *e*PKPdf PKPdf 22 39 52.8 +2.3
LPAZ *e*PKPbc PKPbc 22 39 59.0 +1.4
LPAZ *e*PKPab PKPab 22 40 10.4 +0.9
BDFB Brasilia 161.65 12 PKP PKPdf 22 40 03.5 +1.4
comp=Z,7.9nm,1.0s,baz=57,slow=3.0,SNR=5.3
BDFB Brasilia 161.65 12 PKIKP PKPdf 22 40 03.5 +1.4
BDFB pmax pmax
comp=Z,8.0nm,1.0s
CPUP Villa Florida 166.43 61 PKP PKPdf 22 40 07.9 +1.5
comp=Z,2.5nm,0.8s,baz=360,slow=2.0,SNR=4.0
CPUP Villa Florida 166.43 61 PKIKP PKPdf 22 40 07.9 +1.5
CPUP pmax pmax
comp=Z,3.0nm,0.8s

MEX 21 22:54:33.1±0.3**, 1828N**×**10044W, h74**km±28km**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MEIG	**Mezcala**	**0.85**	**114**	*i* P	Pn	22 54 48.8	-1.2
MEIG				*i* S	Sn	22 55 01.1	-1.5
PLIG	**Platanillo**	**0.89**	**83**	*i* P	Pn	22 54 49.3	-1.2
PLIG				*i* S	Sn	22 55 02.1	-1.4
CAIG	**El Cayaco**	**1.23**	**172**	*i* P	Pn	22 54 53.4	-1.3
CAIG				*i* S	Sn	22 55 09.2	-1.7
ACX	**Acapulco**	**1.49**	**160**	*i* P	Pn	22 55 00.0	+2.0

*MAN **21** 23:44:01.3, 978N×12542E, h14km*
MAN F S UR IGAO CITY - INTENSITY I.
*ISCJB **21** 23:44:02.2±1.2, 968N×003×12525E±005, h11km±8km, mb4.2/9, Error ellipse: s-maj=8.2km s-min=5.1km az=136.2*
*IDC **21** 23:44:02.1±1.3, 939N×12441E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/19, mbtmp3.7/7, Error ellipse: s-maj=135.0km s-min=18.7km az=70.0*
*NEIC **21** 23:44:07.1±0.5, 939N×12451E, h35km, mb4.3/1, Error ellipse: s-maj=27.5km s-min=7.0km az=74.0*
NEIC Felt [I PIVS] at Surigao, Mindanao.

ISC 21 23:44:03.7±0.9**, 962N**±004×**12516E**±005**, h10**km±6km**, n32,** σ1§**37**/38**, mb4.2**/9**, 3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.59**	**330**	*e*P	**Pg**	**23 44 13.9**	**-1.3**
MSLP				*e*S	**Sg**	**23 44 24.8**	**+1.8**
BUTP	**Butuan**	**0.79**	**145**	*e*P	**Pg**	**23 44 17.9**	**-1.0**
BUTP				*e*S	**Sg**	**23 44 34.4**	**+5.3**
CGP	**Cagayan de Oro**	**1.24**	**202**⇓	*e*P	**Pn**	**23 44 26.6**	**-0.5**
CGP				*i* S	**Sb**	**23 44 47.6**	**+4.2**
TBP	**Tagbilaran**	**1.28**	**273**	*e*P	**Pn**	**23 44 27.3**	**-0.5**
TBP				*e*S	**Sb**	**23 44 45.2**	**+0.6**
LLP	**Lapu-Lapu**	**1.37**	**301**⇓	*e*P	**Pn**	**23 44 26.8**	**-2.1**
LLP				*e*S	**Sb**	**23 44 45.8**	**-1.2**
OCLP	**Ormoc**	**1.52**	**339**	*e*P	**Pn**	**23 44 28.6**	**-2.5**
PLP	**Palo**	**1.55**	**353**	*e*P	**Pn**	**23 44 25.6**	**-5.7**
PLP				*e*S	**Sn**	**23 44 46.8**	**-4.7**
BUKP	**Musuan**	**1.73**	**183**	*e*P	**Pn**	**23 44 33.8**	**-0.1**
SNPH	**Sibulan**	**1.92**	**262**	*e*P	**Pg**	**23 44 42.0**	**+1.5**
PAGZ	**Pagadian**	**2.49**	**225**	*e*P	**Pn**	**23 44 46.4**	**+2.1**
DAV	**Davao City (W)**	**2.56**	**171**	Pn	**Pn**	**23 44 43.8**	**-1.5**
PVCP	**Virac**	**4.08**	**346**⇓	*e*P	**Pn**	**23 45 05.7**	**-0.5**
PVCP	**Virac**	**4.08**	**346**	*e*P	**Pn**	**23 45 04.1**	**-2.0**
OTRP	**Odiongan**	**4.12**	**312**	*e*P	**Pn**	**23 45 06.7**	**0.0**
NACB	**Ninganchiao**	**14.87**	**347**	*e*Pn	**Pn**	**23 47 35.2**	**+1.2**
TATO	**Taipei**	**15.67**	**348**	P	**Pn**	**23 47 45.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**27.55**	**179**	P	**P**	**23 49 49.3**	**-1.4**
	1.3nm,0.7s,mb3.7,baz=6.6,slow=9.7,SNR=5.7						
INCN	**Inchon**	**27.77**	**3**	*e*P	**P**	**23 49 56.1**	**+3.3**
	23nm,0.2s,mb5.5						
PMG	**Port Moresby**	**28.92**	**130**	P	**P**	**23 50 06.8**	**+3.8**
MAJO	**Matsushiro**	**29.30**	**22**	P	**P**	**23 50 10.1**	**+3.7**
WRA	**Warramunga Arr**	**30.73**	**163**	P	**P**	**23 50 19.7**	**+0.7**
	0.3nm,0.5s,mb3.4,baz=344,slow=9.3,SNR=3.1						
WB2	**Warramunga Arr**	**30.73**	**163**	P	**P**	**23 50 19.0**	**0.0**
BJT	**Baijiatuau**	**31.32**	**347**	P	**P**	**23 50 24.9**	**+0.7**
ASAR	**Alice Springs**	**34.16**	**166**	P	**P**	**23 50 48.5**	**-0.5**
	0.3nm,0.4s,mb3.6,baz=347,slow=6.8,SNR=4.6						
CTAO	**Charters Tower**	**36.09**	**145**	*e*P	**P**	**23 51 08.0**	**+2.3**
	2.7nm,0.6s,mb4.3						
SONM	**Songino Array**	**41.26**	**341**	P	**P**	**23 51 48.3**	**-0.8**
	0.2nm,0.5s,baz=160,slow=7.7,SNR=2.4						
STKA	**Stephens Creek**	**44.15**	**160**	P	**P**	**23 52 12.4**	**-0.1**
	2.5nm,0.9s,mb4.0,baz=336,slow=13,SNR=4.1						
MKAR	**Makanchi Array**	**51.89**	**324**	P	**P**	**23 53 09.6**	**-2.8**
	0.7nm,0.6s,mb3.6,baz=134,slow=7.9,SNR=5.8						
YAK	**Yakutsk**	**52.42**	**3**	*e*P	**P**	**23 53 17.4**	**+1.1**
	20nm,0.3s,mb5.5						
ZRNK	**Zerenda**	**62.33**	**325**	P	**P**	**23 54 25.6**	**-0.6**
INK	**Inuvik**	**85.29**	**21**	P	**P**	**23 56 43.8**	**+3.0**
FINES	**FINESS Array B**	**85.94**	**332**	P	**P**	**23 56 45.0**	**+0.9**
	1.4nm,1.0s,mb4.1,baz=72,slow=6.0,SNR=4.1						

*ISCJB **21** 23:47:41.0±0.6, 4459N±003×664E±006, h2km, Error ellipse: s-maj=6.9km s-min=3.3km az=130.3*
*STR **21** 23:47:41.8±0.4, 4465N×676E, h2km±1km, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **21** 23:47:41.6±0.1, 4460N×666E, h2km, Md1.8/2, Ml1.4/2, Error ellipse: s-maj=2.7km s-min=1.2km az=66.0*

ISC 21 23:47:41.6±0.8**, 4459N**±003×**665E**±007**, h5**km±25km**, n8,** σ0§**30**/15**, France**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBDF	**Montbardon**	**0.16**	**34**	*e*Pg	**Pg**	**23 47 44.7**	**-0.1**
MBDF				*e*Sg	**Sg**	**23 47 47.1**	**+0.2**
	22nm,0.4s						
SURF	**Saint Ours**	**0.16**	**134**	Pg	**Pg**	**23 47 44.7**	**-0.2**
SURF				Sg	**Sg**	**23 47 46.9**	**-0.2**
ORIF	**Oris-en-Rattie**	**0.64**	**301**	*e*Pg	**Pg**	**23 47 53.9**	**+0.1**
ORIF				*e*Sg	**Sg**	**23 48 02.2**	**+0.1**
	4.2nm,0.5s						
TOUF	**Mont Tournerai**	**0.72**	**143**	Pg	**Pg**	**23 47 55.2**	**-0.3**
TOUF				Sg	**Sg**	**23 48 05.7**	**+0.8**
LUCF	**Luceram**	**0.86**	**144**	Pg	**Pg**	**23 47 58.0**	**-0.2**
LUCF				Sg	**Sg**	**23 48 09.6**	**+0.2**
SAOF	**Saorge**	**0.89**	**133**	Pg	**Pg**	**23 47 58.3**	**-0.4**
LPG	**La Plagne**	**0.91**	**5**	*e*Pg	**Pg**	**23 47 58.8**	**-0.2**
LPG				*e*Sg	**Sg**	**23 48 11.0**	**+0.2**
	3.0nm,0.6s						
LPL	**La Plagne**	**0.92**	**4**	*e*Pg	**Pg**	**23 47 59.0**	**-0.3**
LPL				*e*Sg	**Sg**	**23 48 11.5**	**+0.2**
	1.2nm,0.4s						

*ISCJB **22** 00:09:23.7±3.3, 6087S±005×342W±0.1, h15km±21km, mb4.3/17, MS4.4/22, Error ellipse: s-maj=12.9km s-min=6.8km az=121.8*
*IDC **22** 00:09:23.0±0.7, 6092S×3424W, h0km, mb4.3/11, mb1 4.4/14, mb1mx4.3/20, mbtmp4.4/14, ML3.5/2, MS4.3/21, Ms1 4.3/21, ms1mx4.3/24, Error ellipse: s-maj=20.3km s-min=16.1km az=25.0*
*BJI **22** 00:09:24.7, 6090S×3420W, h10km, mB4.9, Ms4.8, Msz4.6*
*NEIC **22** 00:09:24.7±0.4, 6091S×3418W, h10km, mb4.6/11, Error ellipse: s-maj=11.9km s-min=9.1km az=49.0*
*HRVD **22** 00:09:24.7±0.2, 6117S×3410W, h12km, MW5.0/77, Centroid moment Tensor Solution. LP body waves: s38,c49;Mantle waves: s77,c120; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.28±.10; Mθθ0.23±.10; Mϕϕ-0.50±.10; Mrθ0.90±.26; Mrϕ3.77±.08; Mθϕ0.09±.25; Best double couple: M₀3.89700×10¹⁶ NP1:ϕs3.00000°, δ77.00000°, λ177.00000°. NP2:ϕs93.00000°, δ87.00000°, λ13.00000°. Principal axes: T 3.8000, Plg12.0000°, Azm319.0000°; N 0.1950, Plg76.0000°, Azm106.0000°; P -3.9940, Plg7.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 22 00:09:25.7±4.2**, 6092S**±005×**342W**±01**, h18**km±26km**, n65,** σ1§**01**/41**, mb4.3**/17**, MS4.4**/22**, 1C, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.76**	**349**	*e*Pn	**Pn**	**00 11 04.5**	**+0.4**
	157nm,1.0s						
HOPE				*e*Sn	**Sn**	**00 12 19.6**	**-1.0**
PMSA	**Palmer Station**	**14.07**	**241**	Pn	**Pn**	**00 12 44.1**	**0.0**
	2.6nm,0.3s,baz=76,slow=10,SNR=29						
PMSA				LR	LR	00 17 24.8	
	comp=Z,1µm,19.4s,baz=37,slow=34						
PMSA	**Palmer Station**	**14.07**	**241**	*e*Pn	**Pn**	**00 12 44.1**	**0.0**
	22nm,0.6s						
VNA1	**Neumayer--Stat**	**14.29**	**144**	*e*	**Pn**	**00 12 41.8**	**-5.3**
VNA1				*e*		00 12 43.2	
VNA1				*e*		00 12 45.5	
VNA1				*e*		00 12 47.0	
VNA1				*e*		00 12 50.5	
VNA1				*e*		00 12 55.0	
VNA1				*e*		00 13 02.1	
VNA1				*e*		00 13 06.7	
VNA1				*e*		00 13 11.6	
VNA1				*e*		00 13 30.9	
EFI	**East Falkland**	**16.06**	**295**	*e*Pn	**Pn**	**00 13 14.8**	**+4.3**
	48nm,0.6s						
SNAA	**Sanae**	**16.33**	**144**	Pn	**Pn**	**00 13 11.9**	**-2.1**
	0.4nm,0.3s,baz=309,slow=13,SNR=28						
SNAA				LR	LR	00 18 12.6	
	comp=Z,643nm,20.0s,baz=286,slow=32						
SNAA				T		00 28 11.0	
	0.2nm,0.3s,baz=291,slow=18,SNR=3.9						
SNAA	**Sanae**	**16.33**	**144**	*e*	**Pn**	**00 13 13.4**	**-0.6**
SNAA				*e*		00 13 15.4	
SNAA				*e*		00 13 17.4	
SNAA				*e*		00 13 19.0	
SNAA				*e*		00 13 21.1	
SNAA				*e*		00 13 24.2	
SNAA				*e*		00 13 37.3	
SNAA	**Sanae**	**16.33**	**144**	*e*Pn	**Pn**	**00 13 10.9**	**-3.0**
	71nm,1.4s						
SNAA				Sn	**Sn**	**00 16 14.0**	**-0.6**
USHA	**Ushuaia**	**19.02**	**273**	P	**Pn**	**00 13 44.9**	**-2.4**
	0.1nm,0.3s,baz=234,slow=8.3,SNR=1.8						
USHA				LR	LR	00 19 15.0	
	comp=Z,940nm,19.9s,baz=100,slow=31						
MAIT	**Maitri**	**20.64**	**138**	*e*P	**P**	**00 14 04.2**	**-0.1**
TRQA	**Tornquist**	**28.73**	**310**	*e*P	**P**	**00 15 22.2**	**+0.2**
	8.3nm,0.8s,mb4.5						
PLCA	**Paso Flores**	**29.97**	**296**	P	**P**	**00 15 31.4**	**-1.6**
	1.6nm,0.7s,mb3.9,baz=139,slow=4.6,SNR=6.0						
PLCA				LR	LR	00 26 57.5	
	comp=Z,475nm,18.1s,MS4.2,baz=145,slow=35						
PLCA	**Paso Flores**	**29.97**	**296**	*e*P	**P**	**00 15 32.7**	**-0.3**
	2.3nm,0.7s,mb4.0						
SYO	**Syowa Base**	**30.34**	**137**⇑	*e*P	**P**	**00 15 36.0**	**-0.3**
CPUP	**Villa Florida**	**37.98**	**325**	P	**P**	**00 16 42.7**	**+0.2**
	17nm,0.8s,mb4.8,baz=147,slow=7.4,SNR=35						
CPUP				LR	LR	00 30 56.4	
	comp=Z,419nm,20.6s,MS4.2,baz=151,slow=34						
CPUP	**Villa Florida**	**37.98**	**325**	*e*P	**P**	**00 16 42.3**	**-0.2**
	71nm,0.8s,mb5.5						
MAW	**Mawson**	**38.48**	**142**	P	**P**	**00 16 46.2**	**-0.5**
	0.6nm,0.5s,mb3.6,baz=355,slow=9.4,SNR=3.2						
MAW				LR	LR	00 31 17.0	
	comp=Z,442nm,18.4s,MS4.3,baz=238,slow=34						
MAW	**Mawson**	**38.48**	**142**	*e*P	**P**	**00 16 47.7**	**+1.0**
SBA	**Scott Base**	**40.88**	**187**	*e*P	**P**	**00 17 08.6**	**+2.0**
	1.4nm,0.7s,mb3.7						
VNDA	**Vanda**	**41.45**	**185**	P	**P**	**00 17 12.3**	**+1.0**
	2.8nm,1.0s,mb3.9,baz=197,slow=6.5,SNR=11						
VNDA	**Vanda**	**41.45**	**185**	P	**P**	**00 17 12.3**	**+1.0**
LVC	**Limon Verde**	**45.19**	**312**	*e*P	**P**	**00 17 42.3**	**+0.8**
	4.2nm,0.7s,mb4.4						
SUR	**Sutherland**	**45.42**	**77**	P	**P**	**00 17 43.5**	**+0.2**
	5.8nm,0.9s,mb4.4,baz=197,slow=11,SNR=3.9						
BDFB	**Brasilia**	**46.30**	**341**	LR	LR	00 34 35.2	
	comp=Z,305nm,20.1s,MS4.2,baz=192,slow=33						
CASY	**Casey**	**50.47**	**162**	*e*P	**P**	**00 18 23.5**	**+1.1**
	3.3nm,0.8s,mb4.4						
BOSA	**Boshof**	**50.67**	**78**	P	**P**	**00 18 23.5**	**-0.4**
	7.0nm,0.8s,mb4.6,baz=210,slow=9.3,SNR=11						
BOSA				LR	LR	00 35 58.1	
	comp=Z,218nm,18.4s,MS4.2,baz=219,slow=32						
BOSA	**Boshof**	**50.67**	**78**	P	**P**	**00 18 23.5**	**-0.4**
BOSA				LR	LR	00 35 58.1	
LPAZ	**La Paz**	**50.76**	**316**	P	**P**	**00 18 25.7**	**+1.1**
	3.5nm,0.8s,mb4.4,baz=167,slow=6.4,SNR=23						
LPAZ				LR	LR	00 40 42.5	
	comp=Z,178nm,19.3s,MS4.1,baz=97,slow=37						
LPAZ	**La Paz**	**50.76**	**316**	P	**P**	**00 18 25.7**	**+1.1**
LPAZ				LR	LR	00 40 42.5	
LBTB	**Lobatse**	**53.86**	**76**	P	**P**	**00 18 47.4**	**-0.2**
	8.6nm,0.7s,mb4.8,baz=214,slow=6.4,SNR=13						
LBTB	**Lobatse**	**53.86**	**76**	*e*P	**P**	**00 18 46.9**	**-0.8**
	10nm,0.6s,mb4.9						
SAML	**Samuel**	**56.14**	**325**	*e*P	**P**	**00 19 03.8**	**-0.4**
	9.6nm,1.0s,mb4.8						
NNA	**Nana**	**57.87**	**309**	P	**P**	**00 19 17.2**	**+0.8**
LSZ	**Lusaka**	**63.46**	**73**	*e*P	**P**	**00 19 53.8**	**-0.7**
	9.6nm,0.9s,mb4.9						
DBIC	**Dimbokro**	**71.20**	**31**	P	**P**	**00 20 44.6**	**+1.1**
	2.3nm,0.7s,mb4.2,baz=164,slow=7.2,SNR=6.5						
DBIC				LR	LR	00 45 56.7	
	comp=Z,94nm,18.7s,MS4.1,baz=165,slow=31						
ROSC	**El Rosal**	**72.61**	**318**	LR	LR	00 49 43.0	
	comp=Z,172nm,20.4s,MS4.3,baz=195,slow=33						
PAYG	**Puerto Ayora**	**73.57**	**300**	P	**P**	**00 20 56.8**	**-0.9**
RPZ	**Rata Peaks**	**73.71**	**199**	LR	LR	00 46 53.3	
	comp=Z,188nm,20.4s,MS4.4,baz=297,slow=30						
RKT	**Rikitea**	**75.12**	**249**	*e*LR	LR	00 44 19.1	
	417nm,28.5s,baz=161						
URZ	**Urewera**	**77.90**	**205**	LR	LR	00 48 22.2	
	comp=Z,155nm,21.1s,MS4.3,baz=158,slow=30						
TOA0	**Torodi Ar. Sit**	**79.15**	**36**	*e*P	**P**	**00 21 31.4**	**+2.1**
TORD	**Torodi Ar. Bea**	**79.15**

comp=Z,137nm,18.6s,MS4.5,baz=215,slow=35
FITZ Fitzroy Crossi 99.60 161 LR LR 01 06 12.2
comp=Z,276nm,18.2s,MS4.8,baz=267,slow=34
KMI Kunming 133.80 121 PKP PKPdf 00 28 42.6 +1.1
KMI XPKP 00 28 47.1
KMI PP PP 00 31 13.5 +2.7
KMI PPP 00 34 09.3
KMI SS SS 00 48 56.4 -0.4
KMI SSS 00 54 03.6
KMI PP PP
comp=Z,62nm,5.7s
KMI LR LR
comp=N,100nm,25.3s,MS4.6
KMI LR LR
comp=E,78nm,21.6s,MS4.6
KMI LR LR
comp=Z,115nm,27.8s
CD2 Chengdu 139.28 118 *e*PKP PKPdf 00 28 50.6 -1.0
MKAR Makanchi Array 141.61 82 PKhKP 00 28 47.5
comp=Z,0.1nm,0.2s,baz=219,slow=3.7,SNR=2.1
MKAR PKP PKPdf 00 28 55.5 -0.3
comp=Z,0.3nm,0.3s,baz=250,slow=3.6,SNR=4.7
WMQ Urumqi 142.09 90 *e*PKP PKPdf 00 28 59.0 +2.3
WMQ PP PP 00 32 09.0 +6.6
WMQ SKS SKSdf 00 36 07.0 +1.2
WMQ SKKS SKKSac 00 38 58.0 +3.1
WMQ SS SS 00 50 41.0 +5.9
WMQ PP PP
comp=Z,45nm,8.0s
WMQ LR LR
comp=N,54nm,16.0s,MS4.6
WMQ LR LR
comp=E,69nm,16.0s,MS4.6
WMQ LR LR
comp=Z,65nm,16.0s,MS4.5
GTA Gaotai 144.57 106 PKP PKPdf 00 29 00.5 -0.6
GTA APKP 00 29 08.0
GTA SKS SKSdf 00 36 06.5 -3.1
GTA PP PP
comp=Z,125nm,5.7s
GTA LR LR
comp=N,79nm,16.8s,MS4.7
GTA LR LR
comp=E,74nm,16.4s,MS4.7
GTA LR LR
comp=Z,108nm,19.9s,MS4.6
NJ2 Nanjing 146.17 136 *e*PKP PKPdf 00 29 01.1 -2.7
INK Inuvik 147.07 318 PKPbc PKPbc 00 29 05.0 -2.5
comp=Z,4.4nm,1.0s,baz=300,slow=0.4,SNR=6.0
INK Inuvik 147.07 318 *e*PKP PKPdf 00 29 05.2 -0.1
DAWY Dawson 147.13 309 *e*PKP PKPdf 00 29 04.4 -1.0
ZAL Zalesovo 147.55 74 PKPbc PKPbc 00 29 07.2 -1.6
comp=Z,1.1nm,0.3s,baz=260,slow=6.1,SNR=2.9
HHC Hu-ho-hao-te 151.04 118 *e*PKP PKPdf 00 29 14.0 +2.3
HHC PKS 00 32 47.4
HHC PP PP 00 33 01.5 +6.3
HHC SKS SKSdf 00 36 20.1 +1.6
HHC SKKS SKKSac 00 39 49.5 +4.2
HHC SS SS 00 52 22.3 +5.7
HHC PP PP
comp=Z,18nm,7.3s
HHC LR LR
comp=N,96nm,31.3s,MS4.5
HHC LR LR
comp=E,83nm,33.2s,MS4.5
HHC LR LR
comp=Z,80nm,33.2s,MS4.3
SONM Songino Array 154.05 102 PKPbc PKPbc 00 29 22.7 -1.6
comp=Z,0.3nm,0.7s,baz=208,slow=2.8,SNR=2.9
MDJ Mudanjiang 161.05 142 PKP PKPdf 00 29 25.0 +0.1

*NIED **22** 00:31:00,37.70N×144.30E,h20km,Mw3.5 Best double couple: M0 2.02000×10^14 NP1:φ=234.00000°,δ=57.00000°, λ=-70.00000°. NP2:φ=21.00000°,δ=38.00000°, λ=-118.00000°.*
JMA 22 00:31:19.4±0.2,3773N×14432E,h56km,M3.9,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
JIO	**Ouri**	**2.45**	**288**	P		Pn	00 31 58.2	+1.2
JIO				S		Sn	00 32 27.2	+1.4
OFUJ	**Ofunato**	**2.48**	**304**	P		Pn	00 31 58.4	+1.1
OFUJ				*e*S		Sn	00 32 28.0	+1.6
JMK	**Ichinoseki**	**2.73**	**298**	P		Pn	00 32 02.1	+1.4
JMK				*e*S		Sn	00 32 34.3	+1.9
JMM	**Marumori**	**2.80**	**274**	P		Pn	00 32 02.8	+1.1
JMM				S		Sn	00 32 35.0	+0.8
JOM	**Ohasama**	**2.94**	**307**	P		Pn	00 32 05.3	+1.6
JOM				*e*S		Sn	00 32 39.6	+1.9
JYK	**Kaneyama**	**3.33**	**292**	P		Pn	00 32 11.2	+2.2
JYK				*e*S		Sn	00 32 49.5	+2.1
BSO1	**Boso 1**	**4.09**	**222**	P		Pn	00 32 18.6	-0.8
BSO1				*e*S		Sn	00 33 05.8	-0.1
JOT	**Ohata**	**4.44**	**326**	P		Pn	00 32 25.3	+1.2
JOT				*e*S		Sn	00 33 15.3	+0.8
JRY	**Ryogami san**	**4.67**	**250**	P		Pn	00 32 28.2	+0.9
JRY				*e*S		Sn	00 33 19.1	-1.1
JKB	**Kayabe**	**4.86**	**330**	P		Pn	00 32 31.3	+1.3
JKB				*e*S		Sn	00 33 22.7	-2.2
JOD2	**Odawara 2**	**4.88**	**241**	*e*S		Sn	00 33 23.3	-2.1
JCH	**Churui**	**4.93**	**352**	P		Pn	00 32 30.3	-0.6
JCH				*e*S		Sn	00 33 24.0	-2.7
MAT	**Matsushiro**	**5.03**	**258**	P		Pn	00 32 34.9	+2.7
MAT				S		Sn	00 33 32.8	+3.9
JOSM	**Okushiri--Mats**	**5.72**	**321**	P		Pn	00 32 43.3	+1.5
NEM2	**Nemuro 2**	**5.73**	**10**	P		Pn	00 32 39.3	-2.6
NEM2				*e*S		Sn	00 33 40.3	-6.0
JTKR	**Abashiri--Toko**	**6.24**	**357**	P		Pn	00 32 48.2	-0.7
JTKR				*e*S		Sn	00 33 55.7	-3.1
JHR	**Hokuryu**	**6.32**	**343**	P		Pn	00 32 51.9	+1.9
JHR				*e*S		Sn	00 34 02.3	+1.5

*STR **22** 00:36:52.9±0.0,4308N×081W,h5km±1km,Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **22** 00:36:53.0±0.1,4306N×081W,h10km,ML2.0, Error ellipse: s-maj=2.5km s-min=1.0km az=17.0*
*LDG **22** 00:36:53.0±0.1,4306N×081W,h8km,Md1.9/2, Error ellipse: s-maj=2.0km s-min=1.0km az=16.0*
MDD 22 00:36:53.0±0.3,4306N×081W,h10km±3km,mbLg0.5/3, Error ellipse: s-maj=4.1km s-min=1.8km az=19.0, PRXIMO SIN SOLUCIN,Pyrenees

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
ATE	**Arette**	**0.08**	**73**	Pg		Pg	00 36 55.3	-0.1
ATE				Sg		Sg	00 36 56.9	-0.3
ATE	**Arette**	**0.08**	**73**	Pg		Pg	00 36 55.3	-0.1
ATE				Lg			00 36 57.0	
LARF	**Larrau**	**0.13**	**260**	Pg		Pg	00 36 56.1	-0.1
LARF				Sg		Sg	00 36 58.5	+0.2
LARF	**Larrau**	**0.13**	**260**	Pg		Pg	00 36 56.1	-0.1
LARF				Lg			00 36 58.6	
ORDF	**Ordiarp**	**0.18**	**329**	Pg		Pg	00 36 56.6	-0.3
ORDF				Sg		Sg	00 36 59.4	-0.1
ORDF	**Ordiarp**	**0.18**	**329**	Pg		Pg	00 36 56.7	-0.2
ORDF				Lg			00 36 59.5	
ETSF	**Etsaut**	**0.24**	**132**	*e*Pg		Pg	00 36 58.0	-0.1
ETSF				*e*Sg		Sg	00 37 01.0	-0.4
4.2nm,0.2s								
ETSF	**Etsaut**	**0.24**	**132**	*e*Pg		Pg	00 36 58.0	-0.1
ETSF				*e*Sg		Sg	00 37 01.0	-0.4
2.1nm,0.2s								
SJPF	**Ste Jean**	**0.31**	**280**	*e*Pg		Pg	00 36 59.1	-0.1
SJPF				*e*Sg		Sg	00 37 03.6	+0.2
2.7nm,0.2s								
SJPF	**Ste Jean**	**0.31**	**280**	*e*Pg		Pg	00 36 59.1	-0.1
SJPF				*e*Sg		Sg	00 37 03.6	+0.2
1.4nm,0.2s								
EALK	**Alkurruntz**	**0.54**	**287**	Pg		Pg	00 37 03.2	-0.3
0.2nm,0.1s,SNR=7.9								
EALK				Lg			00 37 10.1	
1.4nm,0.2s,SNR=7.9								
ELIZ	**Elizondo**	**0.54**	**281**	Pg		Pg	00 37 02.9	-0.6
0.4nm,0.3s,SNR=7.9								
ELIZ				Lg			00 37 09.8	
0.7nm,0.2s,SNR=6.6								
EBIE	**Bielsa**	**0.79**	**118**	Pg		Pg	00 37 07.8	-0.6
0.2nm,0.1s,SNR=7.9								
EBIE				Lg			00 37 18.6	
0.3nm,0.1s,SNR=7.9								
EBIE	**Bielsa**	**0.79**	**118**	Pg		Pg	00 37 07.8	-0.6
0.2nm,0.1s,SNR=7.9								
EPF	**Esparros**	**0.84**	**92**	*e*Pg		Pg	00 37 09.1	-0.2

*NNC **22** 00:39:08.3±7.2,3968N×7267E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=60.0km s-min=40.6km az=160.0*
ISC 22 00:39:18.1±5.7,403N±04×727E±02,h16km±14km,n12, σ1=23/14,8C,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
AML	**Almayashu**	**2.01**	**22**	P		Pn	**00 39 52.0**	**+0.7**
SNR=83								
EKS2	**Erkin-Say**	**2.53**	**19**	P		Pn	**00 40 00.3**	**+1.8**
SNR=6.3								
KZA	**Kyzart**	**2.66**	**46**	P		Pn	**00 39 58.9**	**-1.3**
SNR=14								
AAK	**Ala-Archa**	**2.73**	**30**	P		Pn	**00 40 02.3**	**+1.1**
SNR=10								
CHMS	**Chumysh**	**3.14**	**29**	P		Pn	**00 40 07.5**	**+0.6**
SNR=10								
KK31	**Karatay Array**	**3.26**	**331**	Pn		Pn	**00 40 09.1**	**+0.6**
3.8nm,0.3s,baz=152,slow=12,SNR=162								
KK31				⇑Pg		Pg	**00 40 20.2**	**-0.3**
17nm,0.8s,baz=194,slow=59,SNR=6.0								
KK31				⇑Lg			00 41 08.9	
7.6nm,0.4s,baz=310,slow=38,SNR=3.6								
ULHL	**Ulahol**	**3.34**	**53**	P		Pn	**00 40 08.8**	**-0.8**
SNR=5.8								
TKM2	**Tokmak 2**	**3.44**	**39**	P		Pn	**00 40 10.3**	**-0.7**
SNR=6.8								
TKM2	**Tokmak 2**	**3.44**	**39**	⇑Pn		Pn	**00 40 10.4**	**-0.6**
0.9nm,0.7s								
TKM2				⇑Lg			00 41 12.7	
2.5nm,0.8s								
AB31	**Akbulak array**	**12.73**	**319**	⇑Pn		Pn	**00 42 13.7**	**-4.8**
1.0nm,0.5s,baz=133,slow=14,SNR=17								
AB31				⇑Sn		Sn	**00 44 39.2**	**-0.6**
1.3nm,0.7s								
ZRNK	**Zerenda**	**12.93**	**350**	⇑Pn		Pn	**00 42 18.5**	**-2.6**
1.2nm,0.9s								
AKTO	**Aktyubinsk**	**14.44**	**320**	⇑Pn		Pn	**00 42 44.3**	**+2.5**

IDC 22 00:39:36.8±66.0,2011S×17762E,h0km,mb4.3/3, mb1 4.5/3,mb1mx3.9/12,mbtmp4.3/3,Error ellipse: s-maj=1169.0km s-min=150.3km az=81.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
STKA	**Stephens Creek**	**34.28**	**243**	P		P	00 46 25.3	+0.6
1.6nm,0.7s,baz=105,slow=15,SNR=3.0								
WRA	**Warramunga Arr**	**40.58**	**263**	P		P	00 47 18.3	+0.3
1.8nm,0.5s,baz=98,slow=7.8,SNR=61								
ASAR	**Alice Springs**	**40.60**	**257**	P		P	00 47 18.4	+0.1
5.0nm,0.5s,baz=94,slow=7.6,SNR=75								

IDC 22 00:43:05.3±7.9,1701S×17662W,h0km,mb3.5/2, mb1 3.8/2,mb1mx3.6/13,mbtmp3.5/2,Error ellipse: s-maj=399.3km s-min=55.7km az=145.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
WRA	**Warramunga Arr**	**46.48**	**258**	P		P	00 51 34.6	+0.5
0.4nm,0.8s,baz=94,slow=7.1,SNR=5.3								
ASAR	**Alice Springs**	**46.68**	**253**	P		P	00 51 36.0	+0.3
0.4nm,0.6s,baz=89,slow=8.9,SNR=5.4								
GERES	**GERESS Array B**	**147.15**	**347**	PKPbc	PKPbc		01 02 49.8	-0.6
0.1nm,0.5s,baz=45,slow=4.3,SNR=3.5								

*ISCJB **22** 00:44:56.4±0.3,4763N±001×1361E±002,h6km, Error ellipse: s-maj=2.3km s-min=2.1km az=70.0*
*CSEM **22** 00:44:57.8±0.1,4755N×1363E,h12km,ML3.0/10, Error ellipse: s-maj=1.7km s-min=1.3km az=154.0*
*VIE **22** 00:44:57.2±0.1,4758N×1362E,h6km±2km,mb1.6/5, ML2.2/9, Error ellipse: s-maj=1.0km s-min=0.7km az=171.0 3 km NW of Hallstatt felt 3 EMS98 at Hallstatt / UPPER AUSTRIA*
*BGR **22** 00:44:59.2±0.3,4758N×1350E,h10km,ML2.3, Error ellipse: s-maj=4.4km s-min=3.3km az=82.0*
*PRU **22** 00:44:59.5,4762N×1359E,h0km*
ISC 22 00:44:58.0±0.3,4759N±002×1362E±002,h6km,n45, σ1=01/76,11C-14D,Austria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
MOA	**Molln**	**0.51**	**59**	*e*Pg		Pg	**00 45 08.7**	**+0.9**
MOA				*e*Sg		Sg	**00 45 18.1**	**+3.6**
MOA	**Molln**	**0.51**	**59**	⇓*i*Pg		Pg	**00 45 07.2**	**-0.6**
1.8nm,0.2s								
MOA				⇑*i*Sg		Sg	**00 45 14.3**	**-0.2**
25nm,0.5s								
MOA	**Molln**	**0.51**	**59**	Pg		Pg	**00 45 08.7**	**+0.9**
MOA				Sg		Sg	**00 45 14.3**	**-0.2**
25nm,0.5s								
KBA	**Koelnbreinsper**	**0.54**	**200**	*e*Pg		Pg	**00 45 07.9**	**-0.5**
KBA				*e*Sg		Sg	**00 45 17.8**	**+2.4**
KBA	**Koelnbreinsper**	**0.54**	**200**	⇓*e*Pg		Pg	**00 45 07.9**	**-0.5**
19nm,0.3s,SNR=19								
KBA				⇑*i*Sg		Sg	**00 45 15.1**	**-0.3**
32nm,0.5s								
OBKA	**Obir**	**1.25**	**149**	*e*Pg		Pg	**00 45 21.6**	**-0.4**
SNR=4.5								
OBKA				*e*Sg		Sg	**00 45 37.5**	**-0.7**
SNR=2.7								
OBKA	**Obir**	**1.25**	**149**	⇑*i*Pg		Pg	**00 45 21.4**	**-0.5**
3.9nm,0.4s								
OBKA				⇓*i*Sg		Sg	**00 45 39.0**	**+0.8**
22nm,0.6s								
OBKA	**Obir**	**1.25**	**149**	Pg		Pg	**00 45 21.4**	**-0.6**
3.9nm,0.4s								
OBKA				Sg		Sg	**00 45 37.5**	**-0.7**
SNR=2.7								
GEC2	**GERESS Array S**	**1.26**	**3**	*e*Pg		Pg	**00 45 22.9**	**+0.7**
GEC2				*e*Sg		Sg	**00 45 41.2**	**+2.7**
GORS	**Gorjuse**	**1.29**	**168**	*e*Pn		Pn	**00 45 22.6**	**+0.1**
ARSA	**Arzberg**	**1.34**	**104**	*e*Pg		Pg	**00 45 25.1**	**+1.5**
ARSA	**Arzberg**	**1.34**	**104**	⇑*e*Pg		Pg	**00 45 22.7**	**-0.9**
6.3nm,0.4s,SNR=6.7								
ARSA				⇑*i*Sg		Sg	**00 45 40.8**	**-0.2**
10nm,0.5s								
CADS	**Cadrg**	**1.36**	**176**	*e*Pn		Pn	**00 45 23.8**	**+0.3**
WTTA	**Wattenberg**	**1.38**	**257**	*e*Pg		Pg	**00 45 23.4**	**-1.0**
WTTA	**Wattenberg**	**1.38**	**257**	⇓*e*Pg		Pg	**00 45 23.9**	**-0.6**
6.0nm,0.2s,SNR=13								
WTTA				⇓*i*Sg		Sg	**00 45 43.2**	**+0.8**
64nm,0.6s								
WATA	**Walderalm**	**1.41**	**261**	⇓*i*Pg		Pg	**00 45 24.3**	**-0.6**
8.7nm,0.4s								
WATA				⇓*i*Sg		Sg	**00 45 43.7**	**+0.6**
28nm,0.6s								
KHC	**Kasperske Hory**	**1.55**	**359**	*e*PG		Pg	**00 45 27.3**	**-0.3**
KHC				*e*SG		Sg	**00 45 49.1**	**+1.4**
25nm,0.5s								
CONA	**Conrad Observa**	**1.55**	**76**	⇑*i*Pg		Pg	**00 45 27.3**	**-0.5**
1.6nm,0.4s								
CONA				⇓*i*Sg		Sg	**00 45 48.3**	**+0.4**
14nm,0.4s								
VOY	**Vojsko**	**1.57**	**173**	*e*Pn		Pg	**00 45 28.9**	**+0.9**
VOY				*e*Sn		Sg	**00 45 54.2**	**+5.9**
WET	**Wettzell**	**1.64**	**343**	*e*Pg		Pg	**00 45 28.2**	**-1.1**
WET				*e*Sg		Sg	**00 45 49.5**	**-1.1**
SQTA	**Sankt Quirin**	**1.68**	**258**	⇓*i*Pn		Pn	**00 45 27.3**	**-0.5**
SQTA				⇑*e*Pg		Pg	**00 45 29.4**	**-0.7**
13nm,0.4s,SNR=16								
SQTA				⇑*i*Sg		Sg	**00 45 52.3**	**+0.5**
90nm,0.6s								
FUR	**Furstenfeldbru**	**1.68**	**291**	*e*Pg		Pg	**00 45 29.9**	**-0.3**
SNR=3.9								
FUR				*e*Sg		Sg	**00 45 52.8**	**+0.9**
SNR=5.1								
MOTA	**Moosalm**	**1.72**	**263**	⇓*i*Sg		Sg	**00 45 54.3**	**+1.0**
comp=Z,58nm,0.7s								
MOTA	**Moosalm**	**1.72**	**263**	⇓*i*Pn		Pn	**00 45 27.6**	**-0.8**
MOTA				⇑*e*Pg		Pg	**00 45 30.7**	**-0.2**
SNR=20								
MOTA				⇓*i*Sg		Sg	**00 45 54.3**	**+1.0**
58nm,0.7s								
TREC	**Trest**	**2.12**	**35**	*e*PG		Pg	**00 45 37.2**	**-1.3**
ROTZ	**Rotzenmuhle**	**2.38**	**337**	*e*Pg		Pn	**00 45 40.8**	**+3.4**
ROTZ				*e*Sg		Sg	**00 46 14.5**	**+0.2**
PRU	**Pruhonice**	**2.48**	**14**	*e*PG		Pg	**00 45 44.2**	**-1.3**
PRU				*e*SG		Sg	**00 46 17.8**	**+0.1**
7.7nm,0.5s								
DAVA	**Damuels**	**2.55**	**265**	*e*Pg		Pn	**00 45 42.8**	**+3.0**
DAVA				*e*Sg		Sg	**00 46 19.7**	**-0.3**
SNR=3.6								
DAVA	**Damuels**	**2.55**	**265**	⇓*i*Pn		Pn	**00 45 39.5**	**-0.3**
DAVA				⇑*i*Pg		Pg	**00 45 45.6**	**-1.3**
DAVA				⇑*i*Sn		Sn	**00 46 11.6**	**+0.4**
DAVA				⇓*i*Sg		Sg	**00 46 21.4**	**+1.4**
12nm,0.5s								
DAVA	**Damuels**	**2.55**	**265**	Pg		Pg	**00 45 45.6**	**-1.3**
DAVA				Sn		Sn	**00 46 11.6**	**+0.4**
DAVA				Sg		Sg	**00 46 19.7**	**-0.3**
SNR=3.6								
MANZ	**Manzenberg**	**2.60**	**338**	*e*Sg		Sg	**00 46 21.9**	**+0.4**
GRF	**Grafenberg Arr**	**2.64**	**324**	*e*Sg		Sg	**00 46 20.5**	**-2.3**
NKC	**Novy Kostel**	**2.76**	**344**	*e*SG		Sg	**00 46 27.1**	**+0.5**
8.5nm,0.6s								
TANN	**Tannenbergstha**	**2.93**	**345**	*e*Sg		Sg	**00 46 32.7**	**+0.6**
WERD	**Werda**	**2.99**	**344**	*e*Sg		Sg	**00 46 33.5**	**-0.5**
DPC	**Dobruska-Polom**	**3.29**	**32**	*e*PG		Pg	**00 45 59.3**	**-1.7**
DPC				*e*SG		Sg	**00 46 44.2**	**+0.5**
10nm,0.7s								
BRG	**Berggiesshubel**	**3.30**	**4**	SG		Sg	**00 46 43.8**	**-0.1**
2.5nm,0.6s								
MOX	**Moxa**	**3.33**	**338**	*e*Sg		Sg	**00 46 44.1**	**-0.9**
MOX	**Moxa**	**3.33**	**338**	*e*SG		Sg	**00 46 46.0**	**+1.0**
FBE	**Freiberg**	**3.34**	**357**	*e*Sg		Sg	**00 46 47.2**	**+1.8**
MORC	**Moravsky Berou**	**3.40**	**48**	*e*Sg		Sg	**00 46 46.6**	**-0.6**
BFO	**Black Forest**	**3.63**	**284**	*e*Sg		Sg	**00 46 53.7**	**-0.8**
SNR=2.8								
CLL	**Collm**	**3.75**	**354**	*e*Sg		Sg	**00 46 56.1**	**-2.2**
SNR=2.8								
CLL	**Collm**	**3.75**	**354**	*e*Sg		Sg	**00 46 58.0**	**-0.3**
comp=Z,7.0nm,0.7s								
OKC	**Ostrava-Krasne**	**3.75**	**51**	*e*PN		Pn	**00 45 58.5**	**+2.2**
OKC				*e*SN		Sn	**00 46 44.5**	**+3.7**

*NEIC **22** 00:50:29.9,3821S×17620E,h156km,MG3.8(WEL), After WEL.*
WEL 22 00:50:29.9±0.4,3820S×17622E,h156km±4km,ML3.8/5, 9C-1D,Error ellipse: s-maj=1.9km s-min=1.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
TOZ	**Tahuroa Road**	**0.73**	**309**	⇑P		Pn	00 50 53.3	+0.1
TOZ	**Tahuroa Road**	**0.73**	**309**	⇑PN		Pn	00 50 53.3	+0.1
BKZ	**Black Stump Fm**	**0.99**	**168**	⇓P		Pn	00 50 55.3	+0.2
BKZ				S		Sn	00 51 14.4	+0.1
BKZ	**Black Stump Fm**	**0.99**	**168**	⇑PN		Pn	00 50 55.3	+0.2
BKZ				SN		Sn	00 51 14.4	+0.1
BKZ				SN		Sn	00 51 14.5	+0.1
MWZ	**Matawai**	**1.04**	**98**	P		Pn	00 50 55.4	-0.1
MWZ				S		Sn	00 51 14.9	-0.2
MWZ	**Matawai**	**1.04**	**98**	PN		Pn	00 50 55.4	-0.1
MWZ				SN		Sn	00 51 14.9	-0.1
TUVZ	**Tukino**	**1.16**	**202**	⇑P		Pn	00 50 56.9	+0.4
TUVZ	**Tukino**	**1.16**	**202**	⇑PN		Pn	00 50 56.9	+0.4
FWVZ	**Far West T-bar**	**1.18**	**206**	P		Pn	00 50 56.8	+0.1
FWVZ	**Far West T-bar**	**1.18**	**206**	PN		Pn	00 50 56.8	+0.1
WNVZ	**Wahianoa**	**1.23**	**203**	P		Pn	00 50 57.4	+0.2
WNVZ	**Wahianoa**	**1.23**	**203**	PN		Pn	00 50 57.4	+0.2
MOVZ	**Moawhango**	**1.26**	**197**	⇑P		Pn	00 50 57.2	-0.3
MOVZ	**Moawhango**	**1.26**	**197**	⇑PN		Pn	00 50 57.2	-0.2
KNZ	**Kokohu**	**1.40**	**126**	*e*P		Pn	00 50 59.1	+0.2
KNZ				S		Sn	00 51 20.9	-0.2
KNZ	**Kokohu**	**1.40**	**126**	⇑PN		Pn	00 50 59.1	+0.2
KNZ				SN		Sn	00 51 20.9	-0.2
PUZ	**Puketiti**	**1.61**	**86**	SN		Sn	00 51 23.2	-1.7
WAZ	**Wanganui**	**1.83**	**211**	P		Pn	00 51 03.1	-0.3
WAZ	**Wanganui**	**1.83**	**211**	PN		Pn	00 51 03.1	-0.3
WAZ				SN		Sn	00 51 29.2	+0.1
TSZ	**Takapari Road**	**1.87**	**186**	P		Pn	00 51 03.3	-0.5
TSZ	**Takapari Road**	**1.87**	**186**	PN		Pn	00 51 03.3	-0.6
TSZ				SN		Sn	00 51 28.2	-1.7
PXZ	**Pawanui**	**1.90**	**165**	PN		Pn	00 51 04.0	-0.1
PXZ				SN		Sn	00 51 30.2	-0.3
BFZ	**Birch Farm**	**2.48**	**180**	P		Pn	00 51 09.8	-1.2
BFZ	**Birch Farm**	**2.48**	**180**	PN		Pn	00 51 09.8	-1.2
MRZ	**Mangatainoka R**	**2.51**	**191**	P		Pn	00 51 09.7	-1.7
MRZ	**Mangatainoka R**	**2.51**	**191**	⇑PN		Pn	00 51 09.7	-1.6
MRZ				SN		Sn	00 51 40.7	-2.7
KIW	**Kapiti Island**	**2.84**	**200**	P		Pn	00 51 13.4	-2.1
CAW	**Cannon Point**	**3.04**	**197**	P		Pn	00 51 15.6	-2.3
MRW	**Makara Radio**	**3.24**	**201**	P		Pn	00 51 17.8	-2.7
TCW	**Tory Channel**	**3.36**	**206**	P		Pn	00 51 19.3	-2.7
THZ	**Tophouse**	**4.38**	**215**	*e*P		Pn	00 51 31.6	-3.6
KHZ	**Kahutara**	**4.68**	**205**	*e*P		Pn	00 51 35.6	-3.6

JMA 22 00:57:43.9±0.5,4602N×15108E,h165km,M3.6,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
NEM2	**Nemuro 2**	**4.64**	**237**	P		Pn	00 58 53.4	+0.6
NEM2				*e*S		Sn	00 59 47.3	+0.7
JAK	**Akkeshi**	**5.47**	**239**	P		Pn	00 59 04.2	+0.4
JAK				*e*S		Sn	01 00 07.6	+1.3
JTKR	**Abashiri--Toko**	**5.48**	**251**	P		Pn	00 59 04.9	+1.0
JAR	**Ashorobuto**	**5.88**	**245**	P		Pn	00 59 10.7	+1.6
JOB	**Onbets**	**6.05**	**242**	P		Pn	00 59 12.0	+0.7
JOB				*e*S		Sn	01 00 20.8	+0.9
JKK2	**Kamakawa 2**	**6.29**	**253**	P		Pn	00 59 15.4	+0.9
ASAJ	**Asahikawa**	**6.30**	**255**	P		Pn	00 59 15.7	+1.0
JCH	**Churui**	**6.50**	**241**	P		Pn	00 59 17.2	-0.1
JCH				*e*S		Sn	01 00 29.4	-1.2
JEM	**Erimo**	**6.97**	**238**	P		Pn	00 59 24.2	+0.6
JKB	**Kayabe**	**8.34**	**244**	P		Pn	00 59 40.1	-1.6
JKB				*e*S		Sn	01 01 09.4	-5.3
JANG	**Nango**	**8.98**	**234**	P		Pn	00 59 48.1	-2.0
JANG				*e*S		Sn	01 01 25.9	-4.1
OFUJ	**Ofunato**	**9.81**	**228**	*e*S		Sn	01 01 49.7	-0.2

*ISCJB **22** 01:07:51.2±0.4,6086S±007×340W±0.1,h10km,mb4.2/14, MS3.9/14, Error ellipse: s-maj=11.5km s-min=8.5km az=104.3*
*IDC **22** 01:07:51.2±0.7,6080S×34.11W,h0km,mb4.3/11, mb1 4.4/12,mb1mx4.3/18,mbtmp4.3/12,ML5.0/1,MS3.8/16, Ms1 3.8/16,ms1mx3.8/20,Error ellipse: s-maj=21.5km s-min=16.6km az=25.0*
*NEIC **22** 01:07:52.9±0.3,6086S×3404W,h10km,mb4.6/6, Error ellipse: s-maj=9.3km s-min=8.5km az=51.0*
*BJI **22** 01:07:52.8,6090S×3400W,h10km,mB4.8, Ms4.6, Msz4.5*
**ISC 22 01:07:52.7±0.4,6090S±007×340W±01,h10km,n56, σ0=97/34,mb4.2/14,MS3.9/14,1D,Scotia

	91nm,1.6s							
USHA	**Ushuaia**	**19.12**	**273**	LR	LR	01 17 59.7		
	comp=Z,185nm,20.2s,baz=82,slow=32							
MAIT	**Maitri**	**20.59**	**138**	*e*P	**P**	**01 12 31.6**	**-0.3**	
TRQA	**Tornquist**	**28.79**	**310**	P	**P**	**01 13 51.4**	**+0.6**	
QSPA	**South Pole Qui**	**29.34**	**180**	P	**P**	**01 13 57.1**	**+1.5**	
PLCA	**Paso Flores**	**30.05**	**295**	P	**P**	**01 14 00.2**	**-1.8**	
	1.6nm,1.0s,mb3.7,baz=5.6,slow=20,SNR=3.4							
PLCA				LR	LR	01 25 24.8		
	comp=Z,114nm,19.3s,MS3.5,baz=160,slow=35							
PLCA	**Paso Flores**	**30.05**	**295**	*e*P	**P**	**01 14 01.0**	**-1.0**	
	0.3nm,0.4s,mb3.4							
SYO	**Syowa Base**	**30.29**	**137**⇓	*e*sP	sP	01 14 08.8	+0.4	
CFAA	**Coronel Fontan**	**36.88**	**307**	P	**P**	**01 14 59.8**	**-1.6**	
	0.3nm,0.6s,mb3.3,baz=161,slow=9.5,SNR=7.0							
CPUP	**Villa Florida**	**38.02**	**325**	P	**P**	**01 15 10.4**	**-0.7**	
	3.0nm,0.7s,mb4.2,baz=142,slow=6.6,SNR=10							
CPUP				LR	LR	01 28 15.3		
	comp=Z,160nm,19.2s,MS3.8,baz=164,slow=32							
CPUP	**Villa Florida**	**38.02**	**325**	*e*P	**P**	**01 15 10.8**	**-0.3**	
	17nm,0.9s,mb4.8							
MAW	**Mawson**	**38.44**	**142**	P	**P**	**01 15 15.9**	**+1.4**	
	1.3nm,0.7s,mb3.8,baz=232,slow=19,SNR=2.3							
MAW				LR	LR	01 29 13.3		
	comp=Z,137nm,18.4s,MS3.8,baz=34,slow=33							
MAW	**Mawson**	**38.44**	**142**	*e*P	**P**	**01 15 20.1**	**+5.5**	
VNDA	**Vanda**	**41.48**	**185**	P	**P**	**01 15 40.0**	**+0.2**	
	1.4nm,0.9s,mb3.6,baz=223,slow=7.1,SNR=8.2							
VNDA				LR	LR	01 30 21.0		
	comp=Z,47nm,21.3s,MS3.3,baz=2.6,slow=32							
SUR	**Sutherland**	**45.31**	**77**	P	**P**	**01 16 11.5**	**+0.7**	
	8.9nm,0.8s,mb4.7,baz=166,slow=8.8,SNR=6.3							
BDFB	**Brasilia**	**46.31**	**341**	LR	LR	01 33 01.2		
	comp=Z,128nm,18.2s,MS3.9,baz=180,slow=33							
CASY	**Casey**	**50.46**	**162**	*e*P	**P**	**01 16 50.9**	**+0.3**	
	1.3nm,0.5s,mb4.2							
BOSA	**Boshof**	**50.56**	**78**	P	**P**	**01 16 51.2**	**-0.2**	
	9.3nm,0.8s,mb4.8,baz=211,slow=11,SNR=12							
BOSA				LR	LR	01 32 59.3		
	comp=Z,121nm,19.9s,MS3.9,baz=229,slow=30							
LPAZ	**La Paz**	**50.81**	**316**	P	**P**	**01 16 54.7**	**+1.4**	
	1.1nm,0.7s,mb3.9,baz=226,slow=3.2,SNR=5.4							
LPAZ				LR	LR	01 37 10.3		
	comp=Z,58nm,20.5s,MS3.6,baz=267,slow=35							
LPAZ	**La Paz**	**50.81**	**316**	*e*P	**P**	**01 16 55.1**	**+1.8**	
	1.5nm,0.7s,mb4.0							
LBTB	**Lobatse**	**53.76**	**76**	P	**P**	**01 17 14.9**	**-0.3**	
	15nm,0.6s,mb5.1,baz=215,slow=7.0,SNR=36							
LBTB	**Lobatse**	**53.76**	**76**	*e*P	**P**	**01 17 14.9**	**-0.2**	
	11nm,0.5s,mb5.0							
LSZ	**Lusaka**	**63.36**	**73**	*e*P	**P**	**01 18 22.1**	**0.0**	
	13nm,0.9s,mb5.1							
DBIC	**Dimbokro**	**71.13**	**31**	P	**P**	**01 19 11.1**	**-0.3**	
	4.1nm,0.6s,mb4.5,baz=156,slow=7.7,SNR=11							
DBIC	**Dimbokro**	**71.13**	**31**	P	**P**	**01 19 11.1**	**-0.3**	
ROSC	**El Rosal**	**72.66**	**318**	LR	LR	01 53 25.2		
	comp=Z,65nm,19.2s,MS3.9,baz=164,slow=38							
RKT	**Rikitea**	**75.22**	**249**	*e*LR	LR	01 42 52.5		
	226nm,33.8s							
SDV	**Santo Domingo**	**75.29**	**322**	P	**P**	**01 19 35.8**	**-0.2**	
TOA0	**Torodi Ar. Sit**	**79.08**	**35**	*e*P	**P**	**01 19 56.8**	**-0.4**	
TORD	**Torodi Ar. Bea**	**79.08**	**35**	P	**P**	**01 19 57.0**	**-0.2**	
	4.9nm,0.7s,mb4.5,baz=199,slow=6.3,SNR=34							
TORD				LR	LR	01 46 46.0		
	comp=Z,52nm,20.7s,MS3.9,baz=160,slow=30							
KMBO	**Kilima Mbogo**	**79.98**	**74**	LR	LR	01 51 56.9		
	comp=Z,121nm,18.9s,MS4.3,baz=208,slow=33							
TBI	**Tubuai**	**81.33**	**237**	*e*LR	LR	01 45 41.7		
	124nm,24.0s							
PPT	**Papeete**	**86.53**	**240**	*e*LR	LR	01 48 06.4		
	171nm,26.0s							
PPT	**Papeete**	**86.53**	**240**	LR	LR	01 49 42.9		
	comp=Z,116nm,21.8s,MS4.2,baz=120,slow=29							
STKA	**Stephens Creek**	**87.49**	**176**	LR	LR	01 57 37.3		
	comp=Z,95nm,18.8s,MS4.2,baz=206,slow=34							
ASAR	**Alice Springs**	**95.17**	**169**		**P**	**01 21 17.0**	**+0.6**	
	0.2nm,0.3s,mb4.0,baz=191,slow=4.6,SNR=3.6							
BBSR	**BB Station**	**96.26**	**334**	P	**P**	**01 21 21.4**	**+0.1**	
WRA	**Warramunga Arr**	**98.90**	**169**	LR	LR	02 06 51.3		
	comp=Z,75nm,18.1s,MS4.2,baz=75,slow=36							
MKAR	**Makanchi Array**	**141.51**	**82**	PKhKP		01 27 14.7		
	0.4nm,0.6s,baz=232,slow=6.0,SNR=4.5							
WMQ	**Urumqi**	**141.99**	**89**	*e*PKP	PKPdf	01 27 27.0	+2.1	
GTA	**Gaotai**	**144.48**	**106**	PKP	PKPdf	01 27 27.5	-1.8	
GTA				APKP		01 27 33.8		
GTA				XPKP		01 27 36.6		
NJ2	**Nanjing**	**146.12**	**136**	*e*PKP	PKPdf	01 27 29.1	-3.0	
INK	**Inuvik**	**147.12**	**318**	*e*PKPdf	PKPdf	01 27 32.2	-1.6	
DAWY	**Dawson**	**147.19**	**309**	*e*PKPdf	PKPdf	01 27 32.9	-1.0	
ZAL	**Zalesovo**	**147.44**	**74**	PKPbc	PKPbc	01 27 34.0	-2.9	
	1.6nm,0.3s,baz=63,slow=19,SNR=6.0							
COLA	**College**	**150.83**	**307**	PKPbc	PKPbc	01 27 42.8	-2.7	
HHC	**Hu-ho-hao-te**	**150.96**	**118**	*e*PKP	PKPdf	01 27 42.1	+2.1	
HHC				PKS		01 31 15.9		
HHC				PP	PP	01 31 29.8	+6.7	
HHC				SKS	SKSdf	01 34 48.3	+0.6	
HHC				SKKS	SKKSac	01 38 17.6	+3.4	
HHC				SS	SS	01 50 50.4	+5.5	
HHC				PP	PP			
	comp=Z,69nm,4.5s							
HHC				LR	LR			
	comp=N,93nm,23.7s,MS4.6							
HHC				LR	LR			
	comp=E,80nm,24.7s,MS4.6							
HHC				LR	LR			
	comp=Z,42nm,26.6s,MS4.1							
SONM	**Songino Array**	**153.96**	**102**	PKPbc	PKPbc	01 27 50.1	-2.3	
	comp=Z,0.5nm,0.7s,baz=221,slow=2.3,SNR=3.9							
MDJ	**Mudanjiang**	**161.01**	**142**	PKP	PKPdf	01 27 52.8	-0.4	

*ISCJB **22** 01:45:07.8±5.0, 476N±02×154.1E±04, h73km±43km, mb3.5/8, Error ellipse: s-maj=39.6km s-min=34.0km az=176.8*
*IDC **22** 01:45:10.6±5.2, 4766N×15399E, h84km±47km, mb3.4/8, mb1 3.6/9, mb1mx3.4/22, mbtmp3.8/9, ML3.6/1, Error ellipse: s-maj=30.7km s-min=27.8km az=84.0*

ISC 22 01:45:10.9±4.0, 477N±02×1540E±04, h86km±35km, n10, σ0§64/10, mb3.6/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ASAJ	**Asahikawa**	**8.69**	**250**	P		**Pn**	**01 47 13.8**	**+0.1**
	0.7nm,0.3s,baz=93,slow=17,SNR=4.0							
MKAR	**Makanchi Array**	**47.04**	**297**	P		**P**	**01 53 33.4**	**-0.3**
	0.8nm,0.7s,mb3.5,baz=60,slow=7.2,SNR=8.3							
FINES	**FINESS Array B**	**63.46**	**335**	P		**P**	**01 55 30.9**	**-0.7**
	0.5nm,0.4s,mb3.8,baz=51,slow=8.1,SNR=9.1							
PDAR	**Pinedale Array**	**63.74**	**55**	P		**P**	**01 55 33.7**	**+0.2**
	0.3nm,0.8s,mb3.2,baz=343,slow=2.8,SNR=3.4							
NOA	**NORSAR Array B**	**67.55**	**341**	P		**P**	**01 55 57.9**	**-0.1**
	0.3nm,0.5s,mb3.4,baz=29,slow=6.1,SNR=2.7							
HFS	**Hagfors**	**67.80**	**340**	P		**P**	**01 55 58.6**	**-0.9**
	0.9nm,0.4s,mb3.9,baz=76,slow=6.1,SNR=7.2							
ASAR	**Alice Springs**	**73.26**	**199**	P		**P**	**01 56 32.5**	**-0.3**
	0.7nm,0.8s,mb3.5,baz=10,slow=7.6,SNR=5.6							
KHC	**Kasperske Hory**	**77.66**	**335**	*e*P		**P**	**01 56 59.0**	**+1.0**
GERES	**GERESS Array B**	**77.88**	**334**	P		**P**	**01 56 59.0**	**-0.2**
	0.8nm,0.7s,mb3.6,baz=42,slow=6.2,SNR=7.9							
BRTR	**Keskin Array B**	**78.11**	**317**	P		**P**	**01 57 01.7**	**+1.2**
	0.5nm,0.4s,mb3.6,baz=42,slow=2.5,SNR=5.6							

*ISCJB **22** 02:12:04.8±1.3, 192N±01×6290W±005, h91km±21km, Error ellipse: s-maj=20.6km s-min=6.7km az=31.5*
*TRN **22** 02:12:05.3, 1894N×6282W, h10km, MD3.7*
*NEIC **22** 02:12:06.8, 1942N×6306W, h86km, MD4.0(RSPR), After RSPR.*
*RSPR **22** 02:12:06.8, 1942N×6306W, h86km±25km, MD4.0/14, MD4.0/14*

ISC 22 02:12:06.0±1.2, 192N±01×6289W±006, h72km±34km, n21, σ0§76/32, 10C-5D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STMA	**St. Maarten, A**	**1.16**	**190**	*e*P		**Pn**	**02 12 26.4**	**-0.2**
STMA				*e*S		**Sn**	**02 12 41.9**	**-0.1**
TBVI	**Tortola**	**1.81**	**245**⇑	*e*P		**Pn**	**02 12 34.9**	**-0.2**
TBVI				*e*S		**Sn**	**02 12 57.5**	**+0.4**
CULB	**Culebra**	**2.47**	**250**⇑	*e*P		**Pn**	**02 12 43.8**	**-0.3**
CULB	**Culebra**	**2.47**	**250**	*e*S		**Sn**	**02 13 13.2**	**0.0**
MTP	**Monte Pirata**	**2.75**	**247**⇓	*e*P		**Pn**	**02 12 47.8**	**-0.1**
MTP				*e*S		**Sn**	**02 13 20.4**	**+0.3**
CBYP	**Canovanas**	**2.96**	**252**⇑	*e*P		**Pn**	**02 12 50.3**	**-0.3**
HUMP	**Col San Antoni**	**2.99**	**250**⇓	*e*P		**Pn**	**02 12 50.9**	**-0.2**
HUMP				*e*S		**Sn**	**02 13 25.2**	**-0.7**
SEG	**Port Louis**	**3.07**	**154**	*e*P		**Pn**	**02 12 53.5**	**+1.3**
CPD	**Cerro la Pandu**	**3.09**	**249**⇑	*e*P		**Pn**	**02 12 53.1**	**+0.6**
CPD				*e*S		**Sn**	**02 13 29.8**	**+1.6**
LZG	**Guadaloupe-1**	**3.21**	**161**	*e*P		**Pn**	**02 12 53.8**	**-0.3**
LZG				*e*S		**Sn**	**02 13 30.7**	**-0.6**
SJG	**San Juan**	**3.27**	**251**⇑	*e*P		**Pn**	**02 12 54.6**	**-0.3**
SJG	**San Juan**	**3.27**	**251**	*e*S		**Sn**	**02 13 31.7**	**-1.0**
SJG	**San Juan**	**3.27**	**251**	*e*Pn		**Pn**	**02 12 54.4**	**-0.5**
SJG				*e*Sn		**Sn**	**02 13 33.2**	**+0.5**
CELP	**Cerrillos**	**3.67**	**253**⇓	*e*P		**Pn**	**02 13 00.5**	**+0.1**
CELP				*e*S		**Sn**	**02 13 40.3**	**-2.1**
ICM	**Isla Caja Muer**	**3.68**	**250**⇑	*e*P		**Pn**	**02 13 02.1**	**+1.6**
OBIP	**Obispado Ponce**	**3.71**	**253**⇓	*e*P		**Pn**	**02 13 00.9**	**+0.1**
OBIP				*e*S		**Sn**	**02 13 44.6**	**+1.4**
AOPR	**Arecibo Observ**	**3.75**	**258**⇑	*e*P		**Pn**	**02 13 00.2**	**-1.2**
AOPR				*e*S		**Sn**	**02 13 44.9**	**+0.5**
LRS	**Lares**	**3.85**	**257**⇑	*e*P		**Pn**	**02 13 02.5**	**-0.3**
AGPR	**Aguadilla, PR**	**4.06**	**260**⇑	*e*P		**Pn**	**02 13 05.6**	**-0.1**
MGP	**Maguayo**	**4.15**	**254**⇑	*e*P		**Pn**	**02 13 07.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**4.17**	**254**⇓	*e*P		**Pn**	**02 13 07.1**	**0.0**
CRPR				*e*S		**Sn**	**02 13 53.8**	**-0.8**

MOS 22 02:18:35.9±1.0, 4275N×4456E, h12km, mb3.5/1, Error ellipse: s-maj=21.2km s-min=11.1km az=103.9, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LACR	**Lac**	**0.21**	**291**	*i* Pg		Pg	02 18 41.7	+1.3
LACR				*i* Sg		Sg	02 18 45.9	+2.4
VLKR	**Vladikavkaz**	**0.31**	**16**	*e*Pg		Pg	02 18 44.2	+2.0
VLKR				*e*Sg		Sg	02 18 50.2	+3.8
SNJR	**Sundja**	**0.37**	**30**	*e*Pg		Pg	02 18 45.2	+2.0
SNJR				*e*Sg		Sg	02 18 52.1	+3.9
ARNR	**Ardon**	**0.48**	**335**	*e*Pg		Pg	02 18 47.5	+2.1
ARNR				*e*Sg		Sg	02 18 55.9	+4.0
KORR	**Kora**	**0.49**	**313**	*e*Pg		Pg	02 18 47.6	+2.0
KORR				*e*Sg		Sg	02 18 56.1	+4.0
KMSR	**Komsomolskaya**	**0.65**	**343**	*e*Pg		Pg	02 18 50.7	+2.2
KMSR				*e*Sg		Sg	02 19 01.5	+4.4
DIGR	**Digorskoe uzhe**	**0.74**	**282**	*i* Pg		Pg	02 18 51.1	+0.9
DIGR				*i* Sg		Sg	02 19 02.0	+2.2
PRTR	**Priterechnaya**	**1.02**	**349**	*e*Pg		Pg	02 18 57.3	+1.7
PRTR				*e*Sg		Sg	02 19 13.0	+4.1

*ISCJB **22** 02:35:28.2±0.5, 541S×008×6864E±009, h10km, mb4.1/19, MS3.8/14, Error ellipse: s-maj=13.8km s-min=10.7km az=101.0*
*IDC **22** 02:35:28.9±0.7, 541S×6856E, h0km, mb4.0/15, mb1 4.1/15, mb1mx4.0/24, mbtmp4.0/15, MS3.7/14, Ms1 3.7/14, ms1mx3.5/25, Error ellipse: s-maj=20.9km s-min=17.9km az=57.0*
*NEIC **22** 02:35:30.2±0.4, 544S×6861E, h10km, mb4.7/3, Error ellipse: s-maj=13.2km s-min=10.5km az=46.0*
MOS 22 02:35:33.2±1.4, 467S×6835E, h10km, mb5.0/4, Error ellipse: s-maj=44.1km s-min=14.6km az=90.6

ISC 22 02:35:30.5±0.5, 542S±008×6863E±009, h10km, n37, σ0§84/28, mb4.1/19, MS3.8/14, 4C, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DGAR	**Diego Garcia**	**4.29**	**118**	*e*P		**Pn**	**02 36 34.5**	**-1.3**
OPO	**Ambohidratompo**	**24.67**	**236**	P		**P**	**02 40 50.0**	**-1.4**
	3.1nm,0.9s,mb3.8,baz=163,slow=8.4,SNR=2.5							
KMBO	**Kilima Mbogo**	**31.60**	**277**	LR		LR	02 52 16.2	
	comp=Z,155nm,19.5s,MS3.7,baz=100,slow=32							
BOSA	**Boshof**	**47.08**	**236**	P		**P**	**02 44 02.9**	**+0.5**
	2.9nm,0.9s,mb4.2,baz=84,slow=7.7,SNR=3.2							
BOSA				LR		LR	03 01 14.4	
	comp=Z,141nm,19.6s,MS3.9,baz=105,slow=33							
BOSA	**Boshof**	**47.08**	**236**	P		**P**	**02 44 02.9**	**+0.5**
BOSA				LR		LR	03 01 14.4	
AAK	**Ala-Archa**	**48.12**	**6**⇑	*e*P		**P**	**02 44 11.2**	**+0.7**
MMAI	**Mount Meron Ar**	**49.54**	**323**	P		**P**	**02 44 21.8**	**+0.4**
	0.3nm,0.3s,mb3.7,baz=261,slow=3.3,SNR=3.9							
GNI	**Garni**	**50.39**	**336**	P		**P**	**02 44 28.2**	**+0.3**
	3.7nm,0.5s,mb4.7,baz=164,slow=19,SNR=3.5							
MKAR	**Makanchi Array**	**53.38**	**12**	P		**P**	**02 44 48.5**	**-1.6**
	0.9nm,0.7s,mb3.8,baz=198,slow=7.3,SNR=7.0							
MKAR				PcP		PcP	02 45 57.9	+0.4
	0.7nm,0.7s,baz=229,slow=3.1,SNR=3.9							
MKAR	**Makanchi Array**	**53.38**	**12**⇑	*e*P		**P**	**02 44 49.5**	**-0.6**
BRTR	**Keskin Array B**	**55.29**	**327**	P		**P**	**02 45 04.5**	**+0.4**
	1.7nm,0.9s,mb4.1,baz=141,slow=11,SNR=12							
BRTR				LR		LR	03 07 36.0	
	comp=Z,22nm,19.1s,MS3.2,baz=116,slow=35							
BRTR	**Keskin Array B**	**55.29**	**327**⇑	*e*P		**P**	**02 45 04.5**	**+0.4**
ZRNK	**Zerenda**	**58.15**	**0**	*e*P		**P**	**02 45 24.2**	**-0.2**
ZRNK				*e**PP		pP	02 45 30.9	+3.3
ZRNK				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.6							
ZRNK	**Zerenda**	**58.15**	**0**	*e*P		**P**	**02 45 24.1**	**-0.2**
	comp=Z,6.1nm,1.0s,mb4.6							
ZRNK				*e*pP		pP	02 45 30.9	+3.3
CHKZ	**Chkalovo**	**58.90**	**1**	*e*P		**P**	**02 45 29.2**	**-0.4**
CHKZ				*e**PP		pP	02 45 36.2	+3.4
CHKZ				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.6							
CHKZ	**Chkalovo**	**58.90**	**1**	*e*P		**P**	**02 45 29.2**	**-0.4**
	comp=Z,5.0nm,0.8s,mb4.6							
CHKZ				*e*pP		pP	02 45 36.2	+3.4
ZAL	**Zalesovo**	**60.68**	**11**	P		**P**	**02 45 41.1**	**-0.7**
	comp=Z,1.5nm,0.6s,mb4.3,baz=223,slow=1.6,SNR=4.6							
ZAL				LR		LR	03 12 46.9	
	comp=Z,70nm,20.3s,MS3.8,baz=121,slow=37							
ARU	**Arti**	**62.19**	**354**⇑	*e*P		**P**	**02 45 51.2**	**-0.9**
MAW	**Mawson**	**62.21**	**182**	P		**P**	**02 45 52.6**	**+0.4**
	comp=Z,0.7nm,0.6s,mb4.0,baz=300,slow=14,SNR=2.2							
MAW				LR		LR	03 08 01.8	
	comp=Z,65nm,18.9s,MS3.8,baz=246,slow=31							
SONM	**Songino Array**	**62.55**	**28**	P		**P**	**02 45 55.9**	**+1.4**
	comp=Z,1.0nm,0.7s,mb4.1,baz=220,slow=7.2,SNR=10							
SONM				LR		LR	03 12 41.6	
	comp=Z,129nm,19.6s,MS4.1,baz=346,slow=36							
ZAK	**Zakamensk**	**63.11**	**24**	*e*P		**P**	**02 46 02.7**	**+4.5**
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.6s,mb4.2							
ASAR	**Alice Springs**	**65.22**	**113**	P		**P**	**02 46 12.0**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=287,slow=6.3,SNR=7.4							
ASAR				LR		LR	03 11 43.3	
	comp=Z,49nm,18.3s,MS3.7,baz=181,slow=33							
WRA	**Warramunga Arr**	**65.35**	**109**	P		**P**	**02 46 14.4**	**+1.5**
	comp=Z,1.8nm,0.7s,mb4.2,baz=282,slow=6.2,SNR=13							
WRAB	**Tennant Creek**	**65.36**	**109**	*e*P		**P**	**02 46 13.4**	**+0.4**
WRAB				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.5							
WRAB	**Tennant Creek**	**65.36**	**109**	*e*P		**P**	**02 46 13.4**	**+0.4**
	comp=Z,3.9nm,0.8s,mb4.5							
AKASG	**Malin Array Be**	**65.36**	**334**	P		**P**	**02 46 11.6**	**-1.4**
	comp=Z,0.3nm,0.3s,mb3.9,baz=127,slow=5.9,SNR=7.1							
TORD	**Torodi Ar. Bea**	**68.97**	**286**	P		**P**	**02 46 36.1**	**+0.2**
	comp=Z,0.8nm,1.0s,mb3.6,baz=143,slow=5.2,SNR=3.6							
STKA	**Stephens Creek**	**72.70**	**122**	LR		LR	03 18 57.8	
	comp=Z,76nm,18.6s,MS4.0,baz=205,slow=36							
FINES	**FINESS Array B**	**74.33**	**340**	LR		LR	03 17 38.6	
	comp=Z,21nm,20.7s,MS3.4,baz=161,slow=34							
MJAR	**Matsushiro Arr**	**77.05**	**51**	LR		LR	03 22 23.5	
	comp=Z,78nm,20.5s,MS4.0,baz=90,slow=36							
HFS	**Hagfors**	**78.17**	**335**	LR		LR	03 23 32.5	
	comp=Z,27nm,19.0s,MS3.6,baz=244,slow=37							
NOA	**NORSAR Array B**	**79.69**	**335**	P		**P**	**02 47 38.5**	**+0.2**
	comp=Z,1.5nm,0.9s,mb3.9,baz=111,slow=6.2,SNR=2.5							
ESDC	**Sonseca Array**	**80.20**	**312**	P		**P**	**02 47 42.0**	**+0.9**
	comp=Z,1.4nm,0.8s,mb4.0,baz=110,slow=5.1,SNR=5.7							
ARCES	**ARCESS Array B**	**80.34**	**346**	LR		LR	03 23 39.9	
	comp=Z,42nm,18.9s,MS3.8,baz=159,slow=36							
VNDA	**Vanda**	**85.45**	**167**	LR		LR	03 19 11.4	
	comp=Z,42nm,21.2s,MS3.8,baz=270,slow=31							
JMIC	**Jan Mayen**	**90.92**	**341**	LR		LR	03 30 42.3	
	comp=Z,22nm,20.8s,MS3.6,baz=71,slow=36							
NVAR	**Mina Array Bea**	**146.54**	**10**	PKPbc		PKPbc	02 55 14.5	+2.4
	baz=346,slow=1.9							

*ISCJB **22** 02:41:20.9±0.5, 3089S±002×7215W±005, h33km, mb4.3/9, MS3.7/1, Error ellipse: s-maj=6.7km s-min=3.1km az=2.5*
*NEIC **22** 02:41:21.5, 3090S×7201W, h37km, mb4.6/2, After GUC.*
*GUC **22** 02:41:21.5±0.7, 3090S×7201W, h37km±2km, MD4.6, ML4.4*
*IDC **22** 02:41:25.6±4.5, 3085S×7205W, h58km±33km, mb4.1/8, mb1 4.1/12, mb1mx3.9/20, mbtmp4.3/12, ML4.4/3, MS3.5/4, Ms1 3.5/4, ms1mx3.0/22, Error ellipse: s-maj=33.4km s-min=21.2km az=65.0*

ISC 22 02:41:22.7±0.5, 3088S±002×7205W±006, h35km, n60, σ0§89/81, mb4.3/9, MS3.7/1, 10C-9D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OVCH	**Ovalle**	**0.78**	**70**⇑	*i*P		**Pn**	**02 41 36.3**	**-1.0**
OVCH				*i* S		**Sn**	**02 41 46.5**	**-1.3**
OVCH				AML		AML	02 41 48.2	
	comp=N,14μm,0.3s							
OVCH	**Ovalle**	**0.78**	**70**⇑	*i*P		**Pn**	**02 41 36.3**	**-1.0**
OVCH				*i* S		**Sn**	**02 41 46.5**	**-1.3**
CMCH	**Combarbala**	**0.95**	**108**	*e*P		**Pn**	**02 41 38.3**	**-1.2**
CMCH				*i* S		**Sn**	**02 41 50.9**	**-0.9**
CMCH				AML		AML	02 41 52.4	
	comp=N,74μm,0.6s							
CMCH	**Combarbala**	**0.95**	**108**	*e*P		**Pn**	**02 41 38.3**	**-1.2**
CMCH				*i* S		**Sn**	**02 41 50.9**	**-0.9**
CHNG	**Los Chungos**	**1.11**	**155**⇓	*i*P		**Pn**	**02 41 40.2**	**-1.5**
CHNG				*e*S		**Sn**	**02 41 55.5**	**-0.2**
CHNG				AML		AML	02 41 59.2	
	comp=E,3μm,0.6s							
LSCH	**La Serena**	**1.20**	**36**⇑	*i*P		**Pn**	**02 41 42.2**	**-0.7**
LSCH				*i* S		**Sn**	**02 41 57.8**	**-0.1**
TLL	**Tololo Astrono**	**1.29**	**57**⇑	*i*P		**Pn**	**02 41 44.4**	**+0.1**
TLL				*i* S		**Sn**	**02 42 01.8**	**+1.5**
TLL				AML		AML	02 42 14.7	
	comp=N,7μm,0.4s							
TLL	**Tololo Astrono**	**1.29**	**57**⇑	*i*P		**Pn**	**02 41 44.4**	**+0.1**
TLL				*i* S		**Sn**	**02 42 01.8**	**+1.5**
PTCH	**Petorca**	**1.68**	**145**⇓	*i*P		**Pn**	**02 41 49.1**	**-0.5**
PTCH				*i* S		**Sn**	**02 42 09.6**	**-0.3**
PTCH				AML		AML	02 42 14.9	
	comp=E,6μm,0.5s							
PTCH	**Petorca**	**1.68**	**145**⇓	*i*P		**Pn**	**02 41 49.1**	**-0.5**
PTCH				*i* S		**Sn**	**02 42 09.6**	**-0.3**
JACH	**Jahuel**	**2.19**	**146**⇑	*i*P		**Pn**	**02 41 57.1**	**+0.6**
JACH				*i* S		**Sn**	**02 42 23.9**	**+1.5**
ROCH	**El Roble**	**2.27**	**157**⇑	*i*P		**Pn**	**02 41 57.5**	**-0.2**
PEL	**Peldehue**	**2.54**	**153**⇓	*i*P		**Pn**	**02 42 01.3**	**-0.1**
PEL				*i* S		**Sn**	**02 42 31.3**	**+0.3**
PEL				AML		AML	02 42 41.5	
	comp=N,3μm,0.6s							
PEL	**Peldehue**	**2.54**	**153**⇓	*i*P		**Pn**	**02 42 01.3**	**-0.1**
PEL				*i* S		**Sn**	**02 42 31.3**	**+0.3**
VACH	**Vallenar**	**2.56**	**26**	*e*P		**Pn**	**02 42 02.0**	**+0.3**
VACH				*i* S		**Sn**	**02 42 32.7**	**+1.2**
RCDM	**Rinconada Maip**	**2.81**	**158**⇑	*i*P		**Pn**	**02 42 04.8**	**-0.3**
RCDM				*i* S		**Sn**	**02 42 37.7**	**0.0**
RCDM				AML		AML	02 42 51.1	
	comp=E,932nm,0.4s							
RCDM	**Rinconada Maip**	**2.81**	**158**⇑	*i*P		**Pn**	**02 42 04.8**	**-0.3**
RCDM				*i* S		**Sn**	**02 42 37.7**	**0.0**
DSCH	**Coleg

comp=E,0.6nm,0.7s,baz=350,slow=3.7,SNR=6.3
MKAR PKPab PKPab 03 01 34.8 +0.2
comp=E,0.4nm,0.6s,baz=316,slow=6.0,SNR=3.1
SONM Songino Array 163.03 4 PKPab PKPab 03 02 12.1 +1.0
comp=E,0.1nm,0.3s,baz=349,slow=6.0,SNR=4.0

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*IDC **22** 03:17:45.4±0.9, 433N×9635E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.9/21, mbtmp4.0/11, ML3.6/1, MS3.6/5, Ms1 3.6/5, ms1mx3.1/25, Error ellipse: s-maj=45.3km s-min=12.7km az=44.0*
*NEIC **22** 03:17:50.4±0.5, 448N×9661E, h30km, mb4.6/3, Error ellipse: s-maj=18.3km s-min=8.7km az=221.0*
*ISCJB **22** 03:17:51.9±2.1, 455N±009×967E±01, h59km±18km, mb4.1/14, MS3.7/4, Error ellipse: s-maj=19.2km s-min=13.2km az=104.8*
ISC 22 03:17:53.1±2.1, 455N±010×967E±01, h50km±19km, n20, σ0§94/21, mb4.1/14, MS3.7/4, 1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.83**	**128**	Pn	**Pn**	**03 18 35.8**	**0.0**
	8.5nm,0.3s,baz=312,slow=14,SNR=30						
PSI				Sn	**Sn**	**03 19 12.6**	**+4.0**
	20nm,0.3s,baz=285,slow=16,SNR=5.4						
PSI				Lg		03 19 22.7	
	20nm,0.3s,baz=170,slow=12,SNR=5.0						
PSI				LR	LR	03 20 00.6	
	comp=Z,554nm,19.7s,baz=130,slow=44						
KULM	**Kulim**	**4.02**	**79**	*e*Pn	**Pn**	**03 18 51.4**	**-0.7**
KULM				*e*Sn	**Sn**	**03 19 38.5**	**+0.6**
FITZ	**Fitzroy Crossi**	**36.36**	**129**	*e*P	**P**	**03 24 51.0**	**-1.3**
	4.0nm,0.6s,mb4.5						
MKAR	**Makanchi Array**	**43.89**	**346**	P	**P**	**03 25 54.1**	**-0.5**
	0.5nm,0.4s,mb3.6,baz=167,slow=5.9,SNR=6.3						
SONM	**Songino Array**	**43.93**	**9**	P	**P**	**03 25 56.7**	**+1.7**
	0.7nm,0.8s,mb3.4,baz=192,slow=12,SNR=4.8						
WRA	**Warramunga Arr**	**44.29**	**125**	P	**P**	**03 25 57.7**	**-0.1**
	10nm,0.5s,mb4.8,baz=300,slow=9.1,SNR=99						
WRAB	**Tennant Creek**	**44.30**	**125**	⇓*e*P	**P**	**03 25 57.9**	**0.0**
	18nm,0.4s,mb5.2						
WB2	**Warramunga Arr**	**44.30**	**125**	*e*P	**P**	**03 25 57.7**	**-0.2**
ASAR	**Alice Springs**	**45.86**	**129**	P	**P**	**03 26 10.8**	**+0.5**
	2.7nm,0.7s,mb4.3,baz=308,slow=7.6,SNR=18						
ASAR				LR	LR	03 45 51.2	
	comp=Z,82nm,21.1s,MS3.6,baz=171,slow=37						
BVAR	**Borovoye Array**	**52.94**	**340**	P	**P**	**03 27 03.5**	**-0.8**
	0.4nm,0.5s,mb3.6,baz=123,slow=5.3,SNR=3.2						
CHKZ	**Chkalovo**	**53.41**	**341**	*e*P	**P**	**03 27 07.3**	**-0.5**
	2.7nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**55.99**	**134**	P	**P**	**03 27 26.4**	**0.0**
	2.5nm,0.7s,mb4.4,baz=263,slow=8.4,SNR=5.2						
STKA	**Stephens Creek**	**55.99**	**134**	*e*P	**P**	**03 27 26.4**	**0.0**
KMBO	**Kilima Mbogo**	**59.65**	**266**	P	**P**	**03 27 54.1**	**+2.1**
	1.7nm,0.9s,mb4.1,baz=112,slow=7.8,SNR=3.8						
KMBO				LR	LR	03 48 45.5	
	comp=Z,50nm,18.2s,MS3.7,baz=94,slow=31						
BRTR	**Keskin Array B**	**66.51**	**311**	P	**P**	**03 28 36.8**	**-0.7**
	0.9nm,0.7s,mb3.9,baz=132,slow=7.4,SNR=6.1						
ARCES	**ARCESS Array B**	**79.23**	**340**	P	**P**	**03 29 54.1**	**+1.2**
	1.6nm,0.8s,mb4.0,baz=93,slow=6.2,SNR=4.2						
ARCES				LR	LR	04 07 58.0	
	comp=Z,45nm,18.7s,MS3.8,baz=163,slow=38						
GERES	**GERESS Array B**	**81.98**	**319**	P	**P**	**03 30 06.1**	**-1.5**
	0.3nm,0.5s,mb3.5,baz=117,slow=7.6,SNR=3.7						
GERES	**GERESS Array B**	**81.98**	**319**	P	**P**	**03 30 06.0**	**-1.5**
NOA	**NORSAR Array B**	**83.85**	**331**	LR	LR	04 12 29.2	
	comp=Z,33nm,16.5s,MS3.7,baz=85,slow=39						
TORD	**Torodi Ar. Bea**	**93.82**	**283**	P	**P**	**03 31 05.4**	**+0.5**
	0.3nm,0.6s,mb3.9,baz=65,slow=7.5,SNR=2.9						

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*IGIL **22** 03:25:55.3, 3562N×683W, h0km, ML1.9*
*MDD **22** 03:25:58.7±1.3, 3566N×681W, h59km±39km, mb3.1/14, Error ellipse: s-maj=13.9km s-min=6.1km az=15.0, PRXIMO*
*NEIC **22** 03:25:59.4, 3570N×678W, h64km, MG2.9(MDD), After MDD.*
*ISCJB **22** 03:25:59.2±0.9, 3591N±005×671W±004, h96km±9km, Error ellipse: s-maj=9.0km s-min=4.3km az=34.1*
*INMG **22** 03:26:00.2±0.9, 3570N×678W, h31km, ML1.9, Error ellipse: s-maj=4.4km s-min=2.3km az=18.0*
*CSEM **22** 03:26:00.6±0.3, 3596N×669W, h60km, mb2.9/8, Error ellipse: s-maj=7.7km s-min=3.4km az=11.0*
ISC 22 03:26:00.2±0.9, 3587N±005×673W±004, h76km±14km, n43, σ0§82/82, 1C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EJIF	**Jimena Fronter**	**1.17**	**60**	P	**Pn**	**03 26 21.4**	**+0.3**
	SNR=7.9						
EJIF				S	**Sn**	**03 26 36.3**	**-0.5**
	80nm,2.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.17**	**60**	P	**Pn**	**03 26 21.4**	**+0.3**
	1.7nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**03 26 36.3**	**-0.5**
	80nm,2.1s,SNR=7.9						
ESPR	**Espera**	**1.22**	**35**	P	**Pn**	**03 26 22.4**	**+0.8**
	1.1nm,0.3s,SNR=6.8						
ESPR				S	**Sn**	**03 26 38.0**	**+0.2**
	187nm,4.3s,SNR=7.3						
ESPR	**Espera**	**1.22**	**35**	P	**Pn**	**03 26 22.4**	**+0.7**
	1.1nm,0.3s,SNR=6.8						
ESPR				S	**Sn**	**03 26 38.0**	**+0.2**
	187nm,4.3s,SNR=7.3						
EMIJ	**Mijas**	**1.73**	**66**	P	**Pn**	**03 26 27.3**	**-1.0**
	1.5nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**03 26 49.6**	**0.0**
	1.1nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.73**	**66**	P	**Pn**	**03 26 27.3**	**-1.0**
EMIJ				S	**Sn**	**03 26 46.5**	**-3.1**
EGRO	**El Granado**	**1.77**	**340**	⇓P	**Pn**	**03 26 28.8**	**0.0**
	1.8nm,0.2s,SNR=18						
EGRO				S	**Sn**	**03 26 51.1**	**+0.5**
	3.0nm,0.3s,SNR=11						
EGRO	**El Granado**	**1.77**	**340**	⇓P	**Pn**	**03 26 28.9**	**+0.1**
EGRO				S	**Sn**	**03 26 51.1**	**+0.5**
	3.0nm,0.3s,SNR=11						
EMIN	**Mina Concepcio**	**1.89**	**1**	P	**Pn**	**03 26 30.8**	**+0.3**
	2.2nm,0.8s,SNR=13						
EMIN				S	**Sn**	**03 26 54.5**	**+0.9**
	2.0nm,0.6s,SNR=9.8						
EMIN	**Mina Concepcio**	**1.89**	**1**	P	**Pn**	**03 26 30.8**	**+0.3**
	2.2nm,0.8s,SNR=13						
EMIN				S	**Sn**	**03 26 54.5**	**+0.9**
	2.0nm,0.6s,SNR=9.8						
MORF	**Marmelete**	**2.11**	**313**	*e*P	**Pn**	**03 26 31.6**	**-1.8**
MORF				*e*S	**Sn**	**03 26 58.1**	**-0.6**
MORF				*e*S	**Sn**	**03 26 58.1**	**-0.6**
MORF				AML	AML	03 27 02.9	
	comp=N,6.9nm,0.2s						
MORF	**Marmelete**	**2.11**	**313**	*e*P	**Pn**	**03 26 31.6**	**-1.8**
MORF				*e*S	**Sn**	**03 26 58.1**	**-0.6**
PTEO	**Sao Teotonio**	**2.32**	**317**	*e*Pn	**Pn**	**03 26 34.9**	**-1.3**
PTEO				*e*Sn	**Sn**	**03 27 02.7**	**-1.0**
PTEO							
	comp=N,4.0nm,0.4s						
PTEO	**Sao Teotonio**	**2.32**	**317**	*e*Pn	**Pn**	**03 26 34.9**	**-1.3**
PTEO				*e*Sn	**Sn**	**03 27 02.7**	**-1.0**
PBEJ	**Beja**	**2.34**	**337**	*e*Pn	**Pn**	**03 26 36.3**	**-0.1**
PBEJ				*e*Sn	**Sn**	**03 27 04.4**	**+0.2**
ELUQ	**Luque**	**2.60**	**49**	S	**Sn**	**03 27 10.6**	**+0.1**
	comp=N,3.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**2.87**	**36**	P	**Pn**	**03 26 44.3**	**+0.7**
	comp=N,0.3nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**03 27 16.9**	**-0.1**
	comp=N,1.8nm,0.6s,SNR=11						
EADA	**Adamuz**	**2.87**	**36**	P	**Pn**	**03 26 44.3**	**+0.7**
	comp=N,0.3nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**03 27 16.9**	**-0.1**
	comp=N,1.8nm,0.6s,SNR=11						
EBAD	**Badajoz**	**2.89**	**356**	⇓P	**Pn**	**03 26 44.5**	**+0.6**
	comp=N,0.8nm,0.3s,SNR=18						
EBAD				S	**Sn**	**03 27 18.4**	**+0.8**
	comp=N,0.8nm,0.3s,SNR=5.7						
EBAD	**Badajoz**	**2.89**	**356**	P	**Pn**	**03 26 44.5**	**+0.6**
	comp=N,0.8nm,0.3s,SNR=18						
EBAD				S	**Sn**	**03 27 18.4**	**+0.8**
	comp=N,0.8nm,0.3s,SNR=5.7						
ECOG	**Cogollos-Vega**	**2.91**	**60**	P	**Pn**	**03 26 45.3**	**+1.2**
	comp=N,0.8nm,0.2s,SNR=7.9						
ECOG				S	**Sn**	**03 27 18.3**	**+0.3**
	comp=N,2.3nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.96**	**62**	P	**Pn**	**03 26 45.4**	**+0.5**
	comp=N,1.1nm,0.3s,SNR=7.9						
EQUE				S	**Sn**	**03 27 19.9**	**+0.6**
	comp=N,1.4nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.96**	**62**	P	**Pn**	**03 26 45.4**	**+0.5**
	comp=N,1.1nm,0.3s,SNR=7.9						
EQUE				S	**Sn**	**03 27 20.6**	**+1.2**
	comp=N,1.4nm,0.3s,SNR=7.9						
PESTR	**Estremoz**	**3.07**	**347**	*e*Pn	**Pn**	**03 26 46.6**	**+0.3**
PESTR				*e*Sn	**Sn**	**03 27 22.7**	**+0.7**
EBAN	**Banos Encina**	**3.28**	**45**	P	**Pn**	**03 26 49.8**	**+0.5**
	comp=N,0.1nm,0.2s,SNR=7.9						
EBAN				S	**Sn**	**03 27 26.5**	**-0.7**
	comp=N,3.2nm,0.2s,SNR=10						
EQES	**Quesada**	**3.51**	**56**	P	**Pn**	**03 26 53.2**	**+0.9**
	comp=N,3.2nm,1.0s,SNR=9.3						
EQES				S	**Sn**	**03 27 32.4**	**-0.3**
	comp=N,0.3nm,0.1s,SNR=6.1						
EQES	**Quesada**	**3.51**	**56**	P	**Pn**	**03 26 53.2**	**+0.9**
	comp=N,3.2nm,1.0s,SNR=9.3						
EQES				S	**Sn**	**03 27 32.4**	**-0.3**
	comp=N,0.3nm,0.1s,SNR=6.1						
PLOU	**Loures**	**3.58**	**328**	*e*Pn	**Pn**	**03 26 53.2**	**0.0**
PTOM	**Tomar**	**3.97**	**341**	*e*Pn	**Pn**	**03 26 59.2**	**+0.6**
PTOM				*e*Sn	**Sn**	**03 27 43.4**	**-0.6**
PCBR	**Castelo Branco**	**4.01**	**352**	*e*Pn	**Pn**	**03 27 00.0**	**+0.9**
PCBR				*e*Sn	**Sn**	**03 27 44.7**	**-0.1**
PCBR							
	comp=N,2.1nm,0.1s						
PCBR	**Castelo Branco**	**4.01**	**352**	*e*Pn	**Pn**	**03 27 00.0**	**+0.9**
PCBR				*e*Sn	**Sn**	**03 27 44.7**	**-0.1**
	comp=N,2.1nm,0.1s						
EVIA	**Vianos**	**4.36**	**49**	P	**Pn**	**03 27 03.1**	**-0.8**
	comp=N,0.9nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**03 27 51.2**	**-2.1**
	comp=N,0.8nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**4.36**	**49**	P	**Pn**	**03 27 03.1**	**-0.8**
EVIA				S	**Sn**	**03 27 51.0**	**-2.4**
PVIS	**Viseu**	**4.92**	**350**	*e*Sn	**Sn**	**03 28 07.4**	**+0.2**
ETOB	**Tobarra**	**4.97**	**55**	⇑P	**Pn**	**03 27 11.8**	**-0.4**
	comp=N,2.5nm,0.7s,SNR=18						
ETOB				S	**Sn**	**03 28 05.6**	**-2.9**
	comp=N,0.5nm,0.1s,SNR=6.2						
ETOB	**Tobarra**	**4.97**	**55**	P	**Pn**	**03 27 11.8**	**-0.5**
	comp=N,2.5nm,0.7s,SNR=18						
PVRL	**Vila Real**	**5.45**	**352**	*e*Sn	**Sn**	**03 28 20.3**	**+0.1**
PCAB	**Cabril**	**5.92**	**351**	*e*Pn	**Pn**	**03 27 25.9**	**+0.7**
PCAB				*e*Sn	**Sn**	**03 28 30.4**	**-1.2**
ECAL	**Calabor**	**6.06**	**360**	P	**Pn**	**03 27 28.0**	**+0.9**
	comp=N,0.8nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**03 28 35.5**	**+0.4**
	comp=N,0.4nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.06**	**360**	P	**Pn**	**03 27 28.0**	**+0.9**
	comp=N,0.8nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**03 28 35.5**	**+0.4**
	SNR=7.9						
ELOB	**Lobios**	**6.08**	**351**	P	**Pn**	**03 27 27.8**	**+0.4**
	comp=N,0.9nm,0.3s,SNR=7.9						
ELOB				S	**Sn**	**03 28 34.2**	**-1.3**
	comp=N,0.4nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**6.08**	**351**	P	**Pn**	**03 27 27.8**	**+0.4**
ELOB				S	**Sn**	**03 28 35.0**	**-0.5**
ELOB	**Lobios**	**6.08**	**351**	P	**Pn**	**03 27 27.8**	**+0.4**
	comp=N,0.9nm,0.3s,SNR=7.9						
ELOB				S	**Sn**	**03 28 35.0**	**-0.5**

MOS 22 03:27:21.0±0.7, 4271N×4415E, h12km, mb3.6/1, 1C, Error ellipse: s-maj=26.8km s-min=15.2km az=90.8, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LACR	**Lac**	**0.16**	**43**	*e*PG	Pg	03 27 25.8	+1.1
LACR				*i* S	Sg	03 27 29.2	+2.0
ZEI	**Tsey**	**0.20**	**288**	⇑*e*PG	Pg	03 27 26.6	+1.3
ZEI				*e*S	Sg	03 27 30.6	+2.4
KORR	**Kora**	**0.38**	**351**	*e*PG	Pg	03 27 30.4	+1.8
KORR				*e*S	Sg	03 27 37.2	+3.5
DIGR	**Digorskoe uzhe**	**0.46**	**295**	*e*PG	Pg	03 27 31.4	+1.4
DIGR				*e*S	Sg	03 27 38.9	+2.7
ARNR	**Ardon**	**0.49**	**11**	*e*PG	Pg	03 27 32.5	+1.9
ARNR				*e*S	Sg	03 27 40.8	+3.7
KMSR	**Komsomolskaya**	**0.67**	**9**	*e*PG	Pg	03 27 35.9	+1.9
KMSR				*e*S	Sg	03 27 46.7	+3.9

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*ISCJB **22** 03:27:28.3±0.4, 3973N±002×2297E±003, h4km, Error ellipse: s-maj=3.7km s-min=2.5km az=175.1*
*ATH **22** 03:27:28.9, 3971N×2297E, h3km±2km, MD3.1/3*
*NEIC **22** 03:27:28.9, 3971N×2297E, h3km, MD3.1(ATH), After ATH.*
*CSEM **22** 03:27:29.1±0.1, 3971N×2297E, h10km, ML2.4, Error ellipse: s-maj=1.9km s-min=1.2km az=90.0*
*THE **22** 03:27:29.0, 3973N×2296E, h4km, ML2.4*
ISC 22 03:27:28.9±0.4, 3972N±002×2297E±004, h14km±9km, n16, σ0§85/30, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XOR	**Xorichti**	**0.40**	**154**	*e*Pg	**Pg**	**03 27 36.2**	**-0.6**
XOR				*e*Sg	**Sg**	**03 27 42.1**	**-0.1**
NEO	**Neokhori**	**0.46**	**154**	*e*PG	**Pg**	**03 27 37.3**	**-0.7**
NEO				*e*SG	**Sg**	**03 27 43.8**	**-0.4**
LIT	**Litokhoron**	**0.53**	**316**	*e*Pg	**Pg**	**03 27 38.5**	**-0.7**
	comp=Z,6.4nm,0.4s						
LIT				*e*Sg	**Sg**	**03 27 46.9**	**+0.6**
PAIG	**Paliouri**	**0.58**	**69**	*e*Pg	**Pg**	**03 27 40.5**	**+0.1**
PAIG				*e*Sg	**Sg**	**03 27 49.1**	**+1.0**
PLG	**Polygyros**	**0.75**	**29**	*e*PG	**Pg**	**03 27 43.1**	**-0.3**
PLG				*e*SG	**Sg**	**03 27 53.2**	**0.0**
AGG	**Agios Georgios**	**0.86**	**215**	*e*Pg	**Pg**	**03 27 44.6**	**-0.9**
AGG				*e*Sg	**Sg**	**03 27 58.4**	**+1.7**
HORT	**Hortiatis**	**0.88**	**7**	*e*Pg	**Pg**	**03 27 45.5**	**-0.4**
HORT				*e*Sg	**Sg**	**03 27 58.0**	**+0.6**
AOS	**Alonnisos**	**0.90**	**128**	*e*Pg	**Pg**	**03 27 46.0**	**-0.3**
AOS				*e*Sg	**Sg**	**03 27 59.2**	**+1.3**
OUR	**Ouranopolis**	**0.99**	**52**	*e*Pg	**Pg**	**03 27 47.9**	**-0.1**
OUR				*e*Sg	**Sg**	**03 28 02.4**	**+1.5**
OUR	**Ouranopolis**	**0.99**	**52**	*e*Pg	**Pg**	**03 27 47.8**	**-0.2**
OUR				*e*Sg	**Sg**	**03 28 02.4**	**+1.5**
LKR	**Lokris**	**1.07**	**179**	*e*PG	**Pg**	**03 27 49.0**	**-0.5**
LKR				*e*SG	**Sg**	**03 28 03.8**	**+0.3**
KZN	**Kozani**	**1.09**	**303**	*e*PB	**Pb**	**03 27 49.7**	**+0.2**
KZN				*e*SB	**Sb**	**03 28 05.2**	**+1.6**
SOH	**Sokhos**	**1.14**	**15**	*e*Pg	**Pg**	**03 27 50.1**	**-0.7**
SOH				*e*Sg	**Sg**	**03 28 06.1**	**+0.5**
EVR	**Evrytania**	**1.21**	**229**	*e*PB	**Pb**	**03 27 51.7**	**+0.2**
KNT	**Kendrikon**	**1.44**	**358**	*e*Pg	**Pg**	**03 27 55.0**	**-1.5**
KNT				*e*Sg	**Sg**	**03 28 14.9**	**-0.3**
MMB	**Musomiste**	**1.95**	**17**	*e*Pb	**Pb**	**03 28 02.2**	**-2.0**

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*ISCJB **22** 03:30:32.2±1.6, 4629N±005×2.1E±0.1, h2km, Error ellipse: s-maj=10.2km s-min=6.5km az=12.1*
*LDG **22** 03:30:33.2±0.3, 4624N×2.13E, h2km, Md2.0/3, Ml1.8/3, Error ellipse: s-maj=4.7km s-min=3.4km az=86.0*
*STR **22** 03:30:34.0±0.5, 4620N×2.17E, h5km±1km, Ml1.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 22 03:30:32.3±1.9, 4627N±005×21E±01, h16km±8km, n9, σ0§29/17, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TCF	**Toulx Ste Croi**	**0.08**	**74**	*e*Pg	**Pg**	**03 30 35.3**	**-0.2**
TCF				*e*Sg	**Sg**	**03 30 37.6**	**0.0**
BGF	**Bois d'Agland**	**0.59**	**60**	*e*Pg	**Pg**	**03 30 44.6**	**+0.7**
BGF				*e*Sg	**Sg**	**03 30 52.4**	**+0.6**
	6.3nm,0.2s						
AGO	**Saint Agoulin**	**0.74**	**106**	Pg	**Pg**	**03 30 46.6**	**-0.3**
AGO				Sg	**Sg**	**03 30 56.7**	**0.0**
PYM	**Petit Puy Mans**	**0.81**	**129**	Pg	**Pg**	**03 30 48.2**	**0.0**
AVF	**Avril sur Loir**	**1.01**	**58**	*e*Pg	**Pg**	**03 30 52.1**	**+0.3**
AVF				*e*Sg	**Sg**	**03 31 04.9**	**-0.2**
	2.3nm,0.3s						
PLDF	**La Plantade**	**1.10**	**105**	Pg	**Pg**	**03 30 53.6**	**+0.1**
PLDF				Sg	**Sg**	**03 31 07.8**	**-0.1**
SSF	**Saint Saulge**	**1.25**	**50**	*e*Pg	**Pg**	**03 30 56.6**	**+0.2**
SSF				*e*Sg	**Sg**	**03 31 12.6**	**-0.1**
SMF	**Signal de Mont**	**1.26**	**72**	*e*Pg	**Pg**	**03 30 56.6**	**0.0**
SMF				*e*Sg	**Sg**	**03 31 13.0**	**0.0**
	2.2nm,0.4s						
LOR	**Lormes**	**1.57**	**50**	*e*Pg	**Pg**	**03 31 02.0**	**-0.5**
LOR				*e*Sg	**Sg**	**03 31 22.4**	**-0.5**
	1.4nm,0.2s						

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*ISCJB **22** 03:30:46.8±1.8, 3695N±007×713E±02, h128km±67km, Error ellipse: s-maj=28.9km s-min=9.3km az=151.4*
*NNC **22** 03:30:53.8±4.8, 3737N×7074E, h113km±83km, mb2.7, mpv3.1, Error ellipse: s-maj=66.8km s-min=44.1km az=77.0*
ISC 22 03:30:47.7±1.5, 3693N±007×712E±02, h120km±55km, n4, σ1§38/8, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.83**	**139**	*e*P	**Pn**	**03 32 12.2**	**+0.3**
THN				*e*S	**Sn**	**03 33 16.8**	**-0.7**
KK31	**Karatay Array**	**6.19**	**355**	⇓Pn	**Pn**	**03 32 17.6**	**+0.9**
	3.4nm,0.4s,baz=178,slow=12,SNR=82						
KK31				⇑Sn	**Sn**	**03 33 25.1**	**-1.0**
	7.9nm,0.3s						
TKM2	**Tokmak 2**	**6.88**	**28**	⇑Pn	**Pn**	**03 32 28.0**	**+2.0**
	0.3nm,0.7s						
TKM2				⇓Sn	**Sn**	**03 33 42.2**	**-0.6**
	0.2nm,0.6s						
AB31	**Akbulak array**	**14.78**	**330**	Pn	**Pn**	**03 34 10.1**	**-0.6**
	0.4nm,0.3s,baz=140,slow=13,SNR=14						
AB31				⇑Sn	**Sn**	**03 36 42.5**	**-12**
	0.8nm,0.7s,baz=147,slow=25,SNR=3.1						

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*NEIC **22** 03:55:16.0, 5792N×13839W, h21km, ML3.7(PMR), ML3.8(AEIC), MW4.1(PGC), After AEIC.*
PGC 22 03:55:17.1, 5802N×13814W, h10km, ML4.1/4, Mw4.1, 2C, 161km southeast of Yakutat, Ak Off coast of southeastern Alaska., Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YKU2	**Yakutat**	**1.70**	**333**	*e*P	Pn	03 55 44.6	-2.1
PLBC	**Pleasant Camp**	**1.71**	**32**	⇑Pn	Pn	03 55 46.6	-0.4
PLBC				Sn	Sn	03 56 08.7	-0.3
PNL	**Peninsula**	**1.78**	**339**	P	Pn	03 55 44.9	-2.9
PNL				S	Sn	03 56 06.7	-3.8
SIT	**Sitka**	**1.80**	**121**	P	Pn	03 55 49.3	+1.1
SKAG	**Skagway**	**2.06**	**44**	P	Pn	03 55 51.8	0.0
SKAG				S	Sn	03 56 20.4	+3.0
HYT	**Haines Junctio**	**2.83**	**6**	⇑Pn	Pn	03 56 01.9	-0.5
HYT				Sn	Sn	03 56 32.7	-3.9
HYT				Sg	Sg	03 56 41.8	-6.3
HYT				Trac		03 56 42.9	
	comp=Z,267nm,0.5s						
HYT	**Haines Junctio**	**2.83**	**6**	⇑*i*Pn	Pn	03 56 01.9	-0.5
HYT				*e*Sn	Sn	03 56 32.7	-3.9
HYT				*e*Sg	Sg	03 56 41.8	-6.3
WHY	**Whitehorse**	**3.13**	**31**	⇑Pn	Pn	03 56 06.5	+0.1
WHY				Sg	Sg	03 56 53.5	-4.1
WHY				Trac		03 57 02.8	
	comp=Z,808nm,0.8s						
WHY	**Whitehorse**	**3.13**	**31**	P	Pn	03 56 06.5	+0.1
CRAG	**Craig**	**3.77**	**131**	*e*P	Pn	03 56 14.5	-0.7
DLBC	**Dease Lake**	**4.31**	**81**	Pn	Pn	03 56 23.5	+0.8
DLBC				Sn	Sn	03 57 14.7	+1.6
DLBC				Sg	Sg	03 57 31.3	-4.2
DLBC				Trac		03 57 43.1	
	comp=Z,106nm,0.4s						
DLBC	**Dease Lake**	**4.31**	**81**	Pn	Pn	03 56 23.5	+0.8
DLBC				*e*Sn	Sn	03 57 14.7	+1.6
DLBC				*e*Sg	Sg	03 57 31.3	-4.2
EYAK	**Cordova Ski Ar**	**4.65**	**306**	Pn	Pn	03 56 28.1	+0.8
NDB	**Naden**	**5.01**	**142**	Pn	Pn	03 56 30.3	-2.0
NDB				Sn	Sn	03 57 26.9	-3.4
NDB				Trac		03 57 30.1	
	comp=Z,28nm,0.3s						
NDB	**Naden**	**5.01**	**142**	Pn	Pn	03 56 30.3	-2.0
NDB				*e*Sn	Sn	03 57 26.9	-3.4
MASB	**Masset**	**5.28**	**137**	*e*Pn	Pn	03 56 35.0	-1.0
MENT	**Mentasta**	**5.65**	**333**	*e*P	Pn	03 56 41.0	-0.1
VIB	**Van Inlet**	**5.73**	**144**	Pn	Pn	03 56 40.2	-2.0
VIB				Sn	Sn	03 57 42.4	-5.7
VIB				Trac		03 57 46.2	
	comp=Z,20nm,0.2s						
VIB	**Van Inlet**	**5.73**	**144**	Pn	Pn	03 56 40.2	-2.0
VIB				Sn	Sn	03 57 42.4	-5.7
RUBB	**Prince Rupert**	**5.75**	**127**	Pn	Pn	03 56 41.3	-1.2
RUBB				Sn	Sn	03 57 44.2	-4.4
RUBB				Trac		03 58 28.5	
	comp=Z,37nm,0.7s						
RUBB	**Prince Rupert**	**5.75**	**127**	Pn	Pn	03 56 41.3	-1.2
RUBB				*e*Sn	Sn	03 57 44.2	-4.4
MOBC	**Moresby Island**	**5.99**	**141**	Pn	Pn	03 56 43.9	-1.9
MOBC				Sn	Sn	03 57 50.4	-4.0
MOBC				Trac		03 57 55.4	
	comp=Z,5.0nm,0.2s						
MOBC	**Moresby Island**	**5.99**	**141**	Pn	Pn	03 56 43.9	-1.9
MOBC				Sn	Sn	03 57 50.4	-4.0
DAWY	**Dawson**	**6.10**	**355**	Pn	Pn	03 56 46.8	-0.4
DAWY				Sn	Sn

0.1nm,0.3s,baz=338,slow=19,SNR=3.4
SNAA **Sanae** **16.12 144** Pn **Pn** **04 17 45.1 -0.4**
SNAA Sn **Sn** **04 20 34.4 -10**
SNAA LR LR 04 23 03.9
QSPA **South Pole Qui** **29.16 180** *eP* **P** **04 20 02.3 +2.2**
9.0nm,1.2s,mb4.4
PLCA **Paso Flores** **30.16 296** LR LR 04 31 32.4
comp=Z,46nm,19.4s,MS3.1,baz=168,slow=35
CFAA **Coronel Fontan** **37.02 307** P **P** **04 21 08.4 -0.2**
0.1nm,0.5s,mb2.9,baz=146,slow=7.3,SNR=3.0
CPUP **Villa Florida** **38.19 325** P **P** **04 21 18.7 +0.2**
3.2nm,0.8s,mb4.1,baz=160,slow=8.7,SNR=7.2
CPUP LR LR 04 33 47.6
comp=Z,75nm,19.1s,MS3.5,baz=161,slow=31
MAW **Mawson** **38.28 142** LR LR 04 36 06.5
comp=Z,58nm,21.1s,MS3.4,baz=247,slow=35
VNDA **Vanda** **41.31 185** P **P** **04 21 44.0 -0.5**
0.6nm,0.9s,mb3.2,baz=239,slow=4.9,SNR=5.0
BOSA **Boshof** **50.57 78** LR LR 04 41 05.6
comp=Z,62nm,19.0s,MS3.6,baz=14,slow=32
LPAZ **La Paz** **50.96 316** P **P** **04 23 02.4 +1.9**
0.6nm,0.7s,mb3.6,baz=229,slow=9.3,SNR=2.5
LPAZ **La Paz** **50.96 316** P **P** **04 23 01.5 +1.0**
2.0nm,1.1s,mb4.0
TSUM **Tsumeb** **55.14 64** P **P** **04 23 30.7 -0.6**
7.8nm,1.3s,mb4.6
SAML **Samuel** **56.34 325** *eP* **P** **04 23 39.0 -1.0**
2.6nm,1.0s,mb4.2
TORD **Torodi Ar. Bea** **79.20 35** P **P** **04 26 04.3 +0.3**
0.9nm,0.7s,mb3.8,baz=190,slow=6.0,SNR=10.0
TORD LR LR 04 53 53.4
comp=Z,43nm,18.2s,MS3.8,baz=345,slow=30
KMBO **Kilima Mbogo** **80.00 74** LR LR 04 57 12.2
comp=Z,54nm,18.7s,MS3.9,baz=93,slow=32

NEIC ***22*** *04:34:01.9, 4379N×1018E, h1km, MD2.5(ROM), After ROM.*
CSEM ***22*** *04:34:01.9±0.1, 4379N×1018E, h12km, ML3.1/3, Error ellipse: s-maj=2.1km s-min=1.7km az=13.0*
GEN ***22*** *04:34:02.5, 4376N×1021E, h2km, ML2.0*
ROM 22 04:34:01.9±0.2, 4379N×1018E, h1km, Md2.5/10**, Ml1.8**/5**, 5C-1D, Error ellipse: s-maj=2.7km s-min=2.2km az=60.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PII	**Pisa**	**0.26**	**104**	⇓*i* Pg	Pg	04 34 07.9	+1.1
PII				Sg	Sg	04 34 11.4	+1.3
	200nm,0.2s						
VINC	**Vinca**	**0.36**	**356**	P	Pg	04 34 10.1	+1.4
VLC	**Villacollemand**	**0.40**	**21**	⇑*i* Pg	Pg	04 34 10.8	+1.2
	32nm,0.1s						
BDI	**Bagni Di Lucca**	**0.41**	**47**	⇑*i* Pg	Pg	04 34 10.7	+1.0
BDI				Sg	Sg	04 34 16.7	+1.7
	104nm,0.3s						
GROG	**Isola di Gorgo**	**0.42**	**211**	Pg	Pg	04 34 10.8	+0.9
	82nm,0.2s						
SARO	**Sassorosso**	**0.43**	**21**	P	Pg	04 34 10.9	+0.8
SARO				S	Sg	04 34 17.5	+1.8
BACM		**0.50**	**351**	P	Pg	04 34 12.5	+1.0
BACM				S	Sg	04 34 19.7	+1.8
VALM		**0.56**	**5**	P	Pg	04 34 14.0	+1.3
VALM				S	Sg	04 34 21.9	+1.9
PZZT	**Monte Pizzetto**	**0.60**	**55**	⇑*i* Pg	Pg	04 34 15.6	+2.2
PZZT				Sg	Sg	04 34 23.2	+2.1
GSCL	**Gusciola**	**0.64**	**27**	⇑*i* Pg	Pg	04 34 15.4	+1.3
	10.0nm,0.2s						
CODM		**0.65**	**338**	P	Pg	04 34 15.2	+0.8
CODM				S	Sg	04 34 24.0	+1.2
ERBM	**Eremo**	**0.65**	**15**	⇑*i* Pg	Pg	04 34 16.1	+1.7
	34nm,0.4s						
GRAM		**0.71**	**353**	P	Pg	04 34 16.7	+1.2
GRAM				S	Sg	04 34 25.8	+1.1
SC2M	**Scurtabr**	**0.78**	**323**	P	Pg	04 34 18.0	+1.2
SC2M				S	Sg	04 34 28.4	+1.6
FNVD	**Fontana Vidola**	**0.78**	**60**	Pg	Pg	04 34 18.0	+1.2
FNVD				Sg	Sg	04 34 28.6	+1.7
	97nm,0.7s						
CSNT	**Castellina Chi**	**0.86**	**111**	Pg	Pg	04 34 19.1	+0.7
	19nm,0.4s						
SEI	**Scarperia**	**0.89**	**72**	Pg	Pg	04 34 20.7	+1.8
SEI				Sg	Sg	04 34 33.3	+2.8
	103nm,0.3s						
SFI	**Santa Sofia**	**1.21**	**84**	Pg	Pg	04 34 25.6	+0.5
SFI				Sg	Sg	04 34 42.4	+1.6
	9.0nm,0.2s						

MAN 22 04:56:16.0, 1889N×12128E, h1km, mb2.4, ML4.0, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.84**	**228**	⇓*eP*	Pg	04 56 31.2	-0.9
PIP				*eS*	Sg	04 56 44.3	+1.3
SGCP	**Mt. Cagua**	**0.97**	**131**	*eP*	Pg	04 56 35.9	+1.3
SGCP				*eS*	Sg	04 56 50.6	+3.5
APYP	**Conner**	**1.02**	**182**	*eP*	Pg	04 56 36.2	+0.6
APYP				*eS*	Sg	04 56 53.1	+4.2
CVP	**Callao Caves**	**1.29**	**156**	*eP*	Pg	04 56 41.0	+0.3
CVP				*eS*	Sg	04 56 58.0	+0.7
ABRA	**Dolores**	**1.35**	**204**	*eP*	Pg	04 56 41.5	-0.3
ABRA				*eS*	Sg	04 56 52.1	-7.2
CAUP	**Cauayan**	**2.00**	**165**	*eP*	Pn	04 56 54.8	+3.8

NAO ***22*** *04:57:02.5±1.3, 6715N×2092E, ML2.1*
IDC ***22*** *04:57:03.2±0.9, 6718N×2098E, h0km, mb1 2.8/4, mb1mx2.7/22, mbtmp2.8/4, ML2.3/4, Error ellipse: s-maj=15.2km s-min=6.8km az=117.0*
BER ***22*** *04:57:04.4±5.2, 6718N×2077E, h0km, ML2.1, ML2.1(NAO), Suspected explosion*
HEL 22 04:57:03.6±0.2, 6718N×2066E, h0km, ML2.1, ML2.1(BER)**, ML2.1**(NAO)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIF	**Kilpisjarvi**	**1.83**	**2**	*eP*	Pn	04 57 35.9	-0.5
KIF				*eS*	Sn	04 58 01.7	+1.5
KTK1	**Kautokeino**	**2.08**	**27**	*eP*	Pn	04 57 39.7	0.0
KTK1				*eSG*	Sn	04 58 07.5	+1.3
KTK1				AML	AML	04 58 09.7	
	comp=Z,45nm,0.5s						
SGF	**Sodankyl**	**2.29**	**81**	*eP*	Pn	04 57 42.8	+0.1
SGF				*eS*	Sn	04 58 12.0	+0.4
TRO	**Tromso**	**2.54**	**346**	*eSG*	Sn	04 58 22.3	+4.5
TRO				AML	AML	04 58 23.8	
	comp=Z,9.9nm,0.5s						
MOR8	**Moi Rana**	**2.67**	**251**	*eSG*	Sn	04 58 21.6	+0.6
MOR8				AML	AML	04 58 25.2	
	comp=Z,28nm,0.5s						
LOF	**Lofoten**	**2.88**	**293**	*e*	Pn	04 58 38.1	+47
LOF				AML	AML	04 58 45.4	
	comp=Z,9.3nm,0.5s						
LOF	**Lofoten**	**2.88**	**293**	*eSg*	Sg	04 58 38.1	+1.9
LOF				AML	AML	04 58 45.4	
	comp=Z,9.3nm,0.5s						
ARA0	**ARCESS Array S**	**2.97**	**35**	Pn	Pn	04 57 50.8	-1.2
	baz=215,slow=16						
ARA0				Sn	Sn	04 58 26.9	-1.4
	baz=222,slow=22						
ARA0	**ARCESS Array S**	**2.97**	**35**	*eP*	Pn	04 57 50.8	-1.2
ARA0				*eS*	Sn	04 58 26.9	-1.4
ARCES	**ARCESS Array B**	**2.97**	**35**	Pn	Pn	04 57 51.5	-0.5
	comp=Z,0.7nm,0.3s,baz=210,slow=12,SNR=20						
ARCES				Lg		04 58 32.4	
	comp=Z,2.2nm,0.3s,baz=217,slow=26,SNR=14						
OUL	**Oulu**	**3.00**	**132**	*eSB*	Sb	04 58 33.3	-1.6
OUL				MSG		04 58 35.4	
	comp=Z,5.8nm,0.3s						
MSF	**Maaselka**	**3.59**	**107**	*eSG*	Sg	04 58 53.9	-4.9
MSF				MSG		04 58 55.8	
	comp=Z,4.3nm,0.3s						
VAF	**Ylistaro**	**4.24**	**167**	*eS*	Sn	04 58 55.4	-4.3
VAF				*eSG*	Sg	04 59 12.7	-7.3
NSS	**Namsos**	**4.45**	**237**	*eSG*	Sg	04 59 23.3	-3.2
NSS				AML	AML	04 59 24.5	
	comp=Z,18nm,0.4s						
APA0	**Apatity Array**	**4.78**	**79**	*eS*	Sn	04 59 09.9	-3.0
APA0				*eSB*	Sb	04 59 25.9	-0.5
APA0	**Apatity Array**	**4.78**	**79**	Sn	Sn	04 59 09.9	-3.0
	baz=284,slow=28						
APA0				Lg		04 59 25.9	
	baz=285,slow=22						
FIA0	**FINESS Array S**	**6.22**	**155**	Pn	Pn	04 58 35.8	-0.9
	baz=353,slow=12						
FIA0				Sn	Sn	04 59 45.5	-3.0
	baz=346,slow=28						
FIA0				Lg		05 00 15.2	
	baz=345,slow=37						
FIA0	**FINESS Array S**	**6.22**	**155**	*eP*	Pn	04 58 35.8	-0.9
FIA0				*eS*	Sn	04 59 45.5	-3.0
FIA0				*eSG*	Sg	05 00 15.2	-8.2
FINES	**FINESS Array B**	**6.22**	**155**	Pn	Pn	04 58 35.7	-1.0
	comp=Z,0.1nm,0.3s,baz=333,slow=15,SNR=3.5						
FINES				Sn	Sn	04 59 46.1	-2.3
	comp=Z,0.3nm,0.3s,baz=350,slow=24,SNR=6.5						
FINES				Lg		05 00 16.3	
	comp=Z,0.5nm,0.3s,baz=344,slow=28,SNR=7.0						
NB2	**NORSAR Subarra**	**7.41**	**218**	Lg		05 00 54.3	
	baz=29,slow=37						
NB2	**NORSAR Subarra**	**7.41**	**218**	*eSG*		05 00 54.3	
NB2	**NORSAR Subarra**	**7.41**	**218**	Lg		05 00 54.3	
	baz=29,slow=37						
NOA	**NORSAR Array B**	**7.41**	**218**	Pn	Pn	04 58 53.7	+0.7
	comp=Z,0.1nm,0.3s,baz=28,slow=12,SNR=2.7						
NOA				Sn	Sn	05 00 13.1	-4.7
	comp=Z,0.3nm,0.3s,baz=26,slow=21,SNR=3.4						
NOA				Lg		05 00 54.6	
	comp=Z,0.5nm,0.3s,baz=222,slow=11,SNR=4.7						
HFS	**Hagfors**	**7.72**	**207**	*eS*	Sn	05 00 20.8	-4.5
HFS				*eSG*		05 01 01.1	
HFS	**Hagfors**	**7.72**	**207**	Pn	Pn	04 58 56.0	-1.2
	comp=Z,0.1nm,0.3s,baz=16,slow=11,SNR=4.5						
HFS				Sn	Sn	05 00 20.6	-4.7
	comp=Z,0.4nm,0.3s,baz=34,slow=22,SNR=5.9						
HFS				Lg		05 01 00.7	
	comp=Z,0.2nm,0.3s,baz=31,slow=25,SNR=2.6						
HFS	**Hagfors**	**7.72**	**207**	Sn	Sn	05 00 20.8	-4.5
	baz=20,slow=22						
HFS				Lg		05 01 01.1	
	baz=36,slow=28						

ISCJB ***22*** *05:05:43.4±0.5, 3947N×0003×2286E×004, h8km±5km, Error ellipse: s-maj=4.5km s-min=4.3km az=2.2*
ATH ***22*** *05:05:43.8, 3946N×2284E, h8km±1km, MD3.3/7*
NEIC ***22*** *05:05:43.8, 3946N×2284E, h8km, MD3.3(ATH), ML3.0(THE), After ATH.*
CSEM ***22*** *05:05:43.8±0.1, 3946N×2283E, h8km, ML2.7, Error ellipse: s-maj=2.5km s-min=2.1km az=104.0*
THE ***22*** *05:05:43.9, 3947N×2286E, h6km, ML2.7*
ISC 22 05:05:43.8±0.5, 3946N±003×2285E±004, h10km±6km, n16, σ0$88/25, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.28**	**109**	*ePg*	**Pg**	**05 05 49.4**	**-0.2**
XOR				*eSg*	**Sg**	**05 05 53.5**	**0.0**
NEO	**Neokhori**	**0.33**	**117**	⇓*i* PG	**Pg**	**05 05 50.2**	**-0.2**
NEO				*eSB*	**Sg**	**05 05 55.2**	**+0.3**
AGG	**Agios Georgios**	**0.59**	**223**	*ePg*	**Pg**	**05 05 54.6**	**-0.8**
	comp=Z,12nm,0.5s						
AGG				*eSg*	**Sg**	**05 06 04.9**	**+1.8**
LIT	**Litokhoron**	**0.70**	**337**	*ePg*	**Pg**	**05 05 56.5**	**-0.9**
LIT				*eSg*	**Sg**	**05 06 07.2**	**+0.7**
PAIG	**Paliouri**	**0.80**	**54**	*ePg*	**Pg**	**05 05 58.9**	**-0.3**
PAIG				*eSg*	**Sg**	**05 06 10.8**	**+1.2**
LKR	**Lokris**	**0.82**	**171**	*ePB*	**Pb**	**05 05 59.2**	**-0.9**
LKR				*eSB*	**Sb**	**05 06 10.7**	**-0.5**
AOS	**Alonnisos**	**0.85**	**110**	*ePg*	**Pg**	**05 06 00.4**	**+0.1**
AOS				*eSg*	**Sg**	**05 06 11.5**	**+0.1**
EVR	**Evrytania**	**0.97**	**236**	*ePN*	**Pn**	**05 06 02.6**	**-0.9**
EVR				*eSB*	**Sb**	**05 06 15.5**	**-0.1**
PLG	**Polygyros**	**1.02**	**27**	*ePG*	**Pg**	**05 06 03.0**	**-0.5**
HORT	**Hortiatis**	**1.15**	**10**	*ePg*	**Pg**	**05 06 04.8**	**-1.3**
KZN	**Kozani**	**1.18**	**316**	*ePB*	**Pb**	**05 06 06.3**	**0.0**
OUR	**Ouranopolis**	**1.24**	**45**	*ePg*	**Pg**	**05 06 06.5**	**-1.0**
	comp=Z,4.0nm,0.5s						
OUR				*eSg*	**Sg**	**05 06 24.4**	**+0.7**
KNT	**Kendrikon**	**1.70**	**1**	*ePb*	**Pn**	**05 06 13.4**	**-0.1**
RLS	**Riolos of Patr**	**1.77**	**218**	*ePG*	**Pn**	**05 06 16.2**	**+1.8**
NVR	**Nevrokopi**	**2.04**	**22**	*ePN*	**Pn**	**05 06 20.7**	**+2.5**
MMB	**Musomiste**	**2.23**	**17**	*ePn*	**Pn**	**05 06 20.4**	**-0.5**

NIED ***22*** *05:16:00, 2420N×12660E, h5km, Mw3.8 Best double couple: M0 6.21000×10^14 NP1:φs88.00000°, δ72.00000°, λ-77.00000°. NP2:φs231.00000°, δ22.00000°, λ-125.00000°.*
IDC ***22*** *05:16:18.7±1.1, 2429N×12650E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.5/20, mbtmp3.5/6, ML3.0/1, Error ellipse: s-maj=44.3km s-min=20.2km az=74.0*
ISCJB ***22*** *05:16:19.7±2.1, 2424N±008×12655E±006, h23km±15km, mb3.5/6, Error ellipse: s-maj=13.9km s-min=9.3km az=141.9*
JMA ***22*** *05:16:19.4±0.4, 2419N×12660E, h69km, M3.5*
NEIC ***22*** *05:16:23.0±0.8, 2436N×12642E, h35km, mb3.9/1, Error ellipse: s-maj=15.2km s-min=13.9km az=185.0*
ISC 22 05:16:19.5±1.7, 2427N±007×12652E±005, h9km±10km, n21, σ0$92/25, mb3.5/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.12**	**296**	P	**Pg**	**05 16 40.8**	**-0.3**
JOGS				*eS*	**Sg**	**05 16 57.5**	**+1.9**
JMJ	**Miyako jima 2**	**1.24**	**296**	P	**Pn**	**05 16 42.9**	**-0.1**
JMJ				*eS*	**Sb**	**05 16 59.7**	**+0.6**
JTJ	**Tarama**	**1.69**	**283**	P	**Pn**	**05 16 48.4**	**-0.8**
JTJ				*eS*	**Sn**	**05 17 11.2**	**+0.2**
JKE	**Kume jima 2**	**2.06**	**7**	P	**Pn**	**05 16 52.9**	**-1.3**
JIJ	**Ishigaki jima**	**2.17**	**273**	P	**Pn**	**05 16 54.9**	**-0.9**
JKRS	**Kuro-shima**	**2.29**	**270**	P	**Pn**	**05 16 56.4**	**-1.0**
JAGN	**Aguni-jima**	**2.40**	**16**	P	**Pn**	**05 16 59.1**	**+0.2**
HATJ	**Hateruma jima**	**2.49**	**266**	P	**Pn**	**05 16 59.3**	**-0.8**
IRIF	**Iriomote-Funau**	**2.54**	**272**	P	**Pn**	**05 17 00.4**	**-0.5**
JOW	**Kunigami**	**3.00**	**32**	Pn	**Pn**	**05 17 07.2**	**0.0**
	3.7nm,0.3s,baz=210,slow=12,SNR=13						
JOW	**Kunigami**	**3.00**	**32**	P	**Pn**	**05 17 06.6**	**-0.6**
JTK	**Tokunoshima**	**4.13**	**32**	P	**Pn**	**05 17 18.2**	**-4.5**
NACB	**Ninganchiao**	**4.50**	**270**	*ePn*	**Pn**	**05 17 25.8**	**-1.9**
NACB				*eSn*	**Sn**	**05 18 10.6**	**-10**
YHNB	**Yeheng**	**4.70**	**276**	*ePn*	**Pn**	**05 17 31.2**	**+0.6**
SONM	**Songino Array**	**28.43**	**331**	P	**P**	**05 22 15.5**	**+1.1**
	0.3nm,0.5s,mb3.2,baz=154,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**41.72**	**314**	P	**P**	**05 24 08.8**	**0.0**
	0.2nm,0.4s,mb3.1,baz=104,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**41.72**	**314**	P	**P**	**05 24 08.8**	**0.0**
WRAB	**Tennant Creek**	**44.60**	**169**	P	**P**	**05 24 32.7**	**+0.7**
	1.0nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**44.60**	**169**	P	**P**	**05 24 33.4**	**+1.4**
	1.0nm,0.7s,mb3.7,baz=351,slow=8.8,SNR=11						
ASAR	**Alice Springs**	**48.19**	**171**	P	**P**	**05 25 00.7**	**+0.5**
	0.3nm,0.5s,mb3.5,baz=353,slow=13,SNR=3.5						
BRTR	**Keskin Array B**	**77.00**	**308**	P	**P**	**05 28 13.6**	**+0.9**
	0.8nm,0.8s,mb3.7,baz=76,slow=5.2,SNR=4.1						

MOS 22 05:26:20.5±0.1, 4405N×4299E, h5km, mb3.5/1, 1C, Error ellipse: s-maj=49.5km s-min=19.9km az=149.9, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYA	**Pyatigorsk**	**0.05**	**104**	*ePG*	Pg	05 26 23.5	+1.7
BEYR	**Belyy Ugol+**	**0.13**	**254**	*i* PG	Pg	05 26 24.8	+1.7
KIV0	**Kislovodsk Arr**	**0.23**	**247**	*i* PG	Pg	05 26 26.5	+1.5
KIV0				*eS*	Sg	05 26 29.7	+1.7
KIV	**Kislovodsk**	**0.23**	**247**	*i* PG	Pg	05 26 26.5	+1.4
KIV				*eS*	Sg	05 26 30.0	+1.8
SHAR	**Shatzhatmas**	**0.38**	**217**	⇑*ePG*	Pg	05 26 29.2	+1.4
SHAR				*eS*	Sg	05 26 34.5	+1.7

NEIC ***22*** *05:39:58.5, 1683N×9420W, h140km, MD3.9(MEX), After MEX.*
MEX 22 05:39:58.5±1.4, 1690N×9420W, h140km±14km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.68**	**286**	*i* P	Pn	05 40 18.3	-1.5
CMIG				*i* S	Sn	05 40 34.1	-1.8
TUIG	**Tuzandepetl**	**1.15**	**349**	*i* P	Pn	05 40 21.7	-2.0
TUIG				*i* S	Sn	05 40 40.4	-2.4
SCX	**San Cristobal**	**1.51**	**96**	*i* P	Pn	05 40 26.5	-0.9
SCX				*i* S	Sn	05 40 49.0	-0.4
HUIG	**Huatulco**	**2.15**	**239**	*i* P	Pn	05 40 31.6	-3.2
HUIG				*i* S	Sn	05 41 00.7	-2.0
OXX	**Oaxaca**	**2.42**	**275**	*i* P	Pn	05 40 38.5	+0.4
OXX				*i* S	Sn	05 41 08.5	-0.1
VHO	**Vista Hermosa**	**2.43**	**274**	*i* P	Pn	05 40 37.6	-0.7
VHO				*i* S	Sn	05 41 07.8	-1.0
TPIG	**Tehuac#an**	**3.37**	**297**	*i* P	Pn	05 40 48.9	-1.3
TPIG				*i* S	Sn	05 41 27.2	-3.1
UTMO	**Huajuapan**	**3.56**	**286**	*i* P	Pn	05 40 52.1	-0.6
UTMO				*i* S	Sn	05 41 33.0	-1.7

IDC 22 06:07:54.4±1.5, 2040S×6840W, h124km±13km, mb3.7/3, mb1 3.6/8, mb1mx3.4/20, mbtmp4.0/8, Error ellipse: s-maj=31.4km s-min=12.3km az=117.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.25**	**192**	P	Pn	06 08 32.0	+0.8
	7.0nm,0.3s,baz=13,slow=10,SNR=57						
LVC				S	Sn	06 09 00.1	+0.8
	49nm,0.3s,baz=71,slow=22,SNR=25						
LPAZ	**La Paz**	**4.10**	**4**	P	Pn	06 08 56.8	+1.5
	1.2nm,0.3s,baz=212,slow=6.3,SNR=44						
SIV	**San Ignacio**	**8.23**	**59**	P	Pn	06 09 51.2	+0.3
	1.2nm,0.3s,baz=253,slow=12,SNR=25						
SIV				S	Sn	06 11 19.9	-2.2
	baz=315,slow=19,SNR=3.8						
CFAA	**Coronel Fontan**	**11.16**	**179**	S	Sn	06 12 25.2	-7.9
	0.1nm,0.3s,baz=120,slow=20,SNR=11						
CPUP	**Villa Florida**	**11.75**	**122**	P	Pn	06 10 40.1	+2.1
	1.7nm,0.3s,baz=288,slow=12,SNR=18						
BDFB	**Brasilia**	**19.95**	**80**	P	P	06 12 18.0	+1.4
	0.4nm,0.3s,baz=268,slow=10,SNR=9.0						
PLCA	**Paso Flores**	**20.35**	**185**	P	P	06 12 21.4	+0.5
	2.0nm,0.9s,baz=353,slow=15,SNR=4.6						
DBIC	**Dimbokro**	**67.96**	**74**	P	P	06 18 40.2	+0.3
	4.6nm,0.9s,baz=241,slow=6.4,SNR=5.0						
TORD	**Torodi Ar. Bea**	**76.53**	**70**	P	P	06 19 31.4	+0.5
	2.0nm,0.5s,baz=254,slow=5.5,SNR=26						
MKAR	**Makanchi Array**	**144.47**	**35**	PKP	PKPdf	06 27 15.0	-1.0
	0.2nm,0.5s,baz=289,slow=3.7,SNR=4.4						

PRE 22 06:40:03.0±2.4, 2204S×3303E, h5km, ML3.8, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messine**	**2.80**	**263**	*eP*	Pn	06 40 49.9	+1.5
MSNA				*eS*	Sn	06 41 22.3	-0.3
MSNA				AML	AML	06 41 39.1	
	comp=Z,124nm,0.1s						
POGA	**Pongola**	**5.46**	**193**	*eP*	Pn	06 41 25.9	+0.9
POGA				*eS*	Sn	06 42 24.7	-3.5
POGA				AML	AML	06 43 26.5	
	comp=Z,19nm,0.4s						
KSR	**Koster**	**6.77**	**235**	*eP*	Pn	06 41 42.1	-0.9
LBTB	**Lobatse**	**7.43**	**245**	*eP*	Pn	06 41 52.6	+0.5
LBTB				*eS*	Sn	06 43 14.6	-2.3
LBTB				AML	AML	06 44 11.3	
	comp=Z,24nm,0.6s						
SWZ	**Schweizer**	**8.67**	**232**	*eP*	Pn	06 42 11.4	+2.3
SWZ				*eS*	Sn	06 43 43.6	-3.7
SWZ				AML	AML	06 44 58.9	
	comp=Z,8.7nm,0.6s						
BOSA	**Boshof**	**9.60**	**225**	*eP*	Pn	06 42 23.6	+1.7
BOSA				*eS*	Sn	06 44 05.7	-4.5
BOSA				AML	AML	06 45 29.2	
	comp=Z,9.9nm,0.8s						
UPI	**Upington**	**12.38**	**237**	*eP*	Pn	06 43 01.2	+1.4

IDC 22 06:40:35.1±26.0, 1955N×14536E, h250km±238km, mb3.1/4, mb1 3.3/4, mb1mx3.1/18, mbtmp3.7/4, Error ellipse: s-maj=179.9km s-min=23.3km az=75.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.70**	**196**	P	P	06 47 51.5	+0.1
	2.0nm,0.8s,baz=17,slow=8.1,SNR=11						
SONM	**Songino Array**	**42.29**	**321**	P	P	06 48 03.7	-0.6
	0.5nm,0.4s,baz=128,slow=6.4,SNR=5.0						
MKAR	**Makanchi Array**	**57.65**	**314**	P	P	06 49 59.8	+0.4
	0.6nm,0.6s,baz=80,slow=7.8,SNR=8.6						
FINES	**FINESS Array B**	**85.99**	**335**	P	P	06 52 47.1	-0.1
	0.4nm,0.3s,baz=72,slow=4.5,SNR=7.5						

ISCJB ***22*** *06:46:55.3±0.5, 293S±01×610E±01, h10km, mb4.0/13, MS3.5/6, Error ellipse: s-maj=19.1km s-min=12.5km az=100.0*
IDC ***22*** *06:46:55.3±0.7, 2928S×6105E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/25, mbtmp4.0/10, ML4.1/1, MS3.4/6, Ms1 3.4/6, ms1mx3.1/26, Error ellipse: s-maj=27.3km s-min=19.4km az=46.0*
NEIC ***22*** *06:46:57.0±0.3, 2926S×6100E, h10km, mb4.3/5, Error ellipse: s-maj=13.5km s-min=8.8km az=51.0*
ISC 22 06:46:57.1±0.5, 293S±01×610E±01, h10km, n23, σ0$69/16, mb4.0/13, MS3.5/6, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.52**	**307**	Pn	**Pn**	**06 50 48.8**	**-0.1**
	0.8nm,0.3s,baz=115,slow=12,SNR=5.1						
OPO				Sn	**Sn**	**06 53 37.5**	**-15**
	0.9nm,0.3s,baz=338,slow=8.2,SNR=6.6						
KMBO	**Kilima Mbogo**	**36.01**	**317**	LR	LR	07 05 09.3	
	comp=Z,57nm,20.1s,MS3.3,baz=267,slow=30						
MAW	**Mawson**	**38.36**	**179**	P	**P**	**06 54 18.4**	**+0.1**
	1.4nm,0.7s,mb3.8,baz=341,slow=11,SNR=3.9						
MAW				LR	LR	07 07 28.3	
	comp=Z,31nm,18.9s,MS3.1,baz=247,slow=32						
TSUM	**Tsumeb**	**40.65**	**274**	P	**P**	**06 54 38.6**	**+1.2**
	4.1nm,1.0s,mb4.0,baz=135,slow=11,SNR=3.6						
QSPA	**South Pole Qui**	**60.87**	**180**	*eP*	**P**	**06 57 08.9**	**-0.9**
	11nm,1.6s,mb4.7						
VNDA	**Vanda**	**63.94**	**166**	P	**P**	**06 57 29.0**	**-1.4**
	0.9nm,0.8s,mb3.8,baz=259,slow=3.9,SNR=6.0						
VNDA

ellipse: s-maj=5.5km s-min=2.5km az=48.0
*BEO **22** 06:57:53.2±0.1, 4291N×2188E, h13km*
*SOF **22** 06:57:53.9, 4294N×2201E, h2km, MD2.6*
*SKO **22** 06:57:54.5, 4289N×2198E, h15km*
*THE **22** 06:57:54.8, 4285N×2197E, h0km*

ISC 22 06:57:53.3±0.7, 4291N±003×2195E±005, h6km±6km, n19, s1§16/31, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.98**	**109**	*e*Pg		**Pg**		**06 58 12.7**	**+0.6**
VTS				*e*Sg		**Sg**		**06 58 26.4**	**+1.6**
VTS	**Vitosha**	**0.98**	**109**	Pg		**Pg**		**06 58 12.3**	**+0.2**
SKO	**Skopje**	**1.01**	**202**	*e*Pg		**Pg**		**06 58 11.8**	**-0.9**
SKO	**Skopje**	**1.01**	**202**	*e*Pg		**Pg**		**06 58 12.8**	**+0.1**
SKO				*e*Sg		**Sg**		**06 58 26.4**	**+0.6**
SKO	**Skopje**	**1.01**	**202**	*e*Pg		**Pg**		**06 58 12.7**	**0.0**
SKO				*e*Sg		**Sg**		**06 58 26.4**	**+0.6**
GRUS	**Gruza**	**1.33**	**318**	*i* Pg		**Pn**		**06 58 17.0**	**-1.4**
GRUS				Sg		**Sb**		**06 58 35.3**	**-0.6**
KKB	**Krupnik**	**1.34**	**141**	P		**Pn**		**06 58 20.6**	**+2.0**
VAY	**Valandovo**	**1.66**	**164**	*e*Pg		**Pg**		**06 58 23.5**	**-1.6**
VAY				*e*Sg		**Sg**		**06 58 46.5**	**0.0**
VAY	**Valandovo**	**1.66**	**164**	*e*Pn		**Pn**		**06 58 22.6**	**-0.3**
VAY				*e*Sn		**Sn**		**06 58 43.6**	**-0.9**
VAY	**Valandovo**	**1.66**	**164**	*e*Pn		**Pn**		**06 58 22.5**	**-0.4**
VAY	**Valandovo**	**1.66**	**164**	*e*Pg		**Pg**		**06 58 23.5**	**-1.5**
VAY				*e*Sn		**Sn**		**06 58 43.6**	**-0.9**
VAY				*e*Sg		**Sg**		**06 58 46.5**	**0.0**
DIVS	**Divcibare**	**1.85**	**310**	*i* Pn		**Pn**		**06 58 25.5**	**-0.1**
DIVS				Sg		**Sn**		**06 58 51.0**	**+1.6**
MMB	**Musomiste**	**1.87**	**134**	*e*Sb		**Sb**		**06 58 50.4**	**-1.0**
MMB				*e*Sb		**Sb**		**06 58 53.6**	**+2.2**
MMB	**Musomiste**	**1.87**	**134**	P		**Pn**		**06 58 29.5**	**+3.7**
BBLS	**Bajina Basta -**	**2.08**	**298**	*i* Pn		**Pn**		**06 58 29.0**	**+0.2**
BBLS				Sg		**Sn**		**06 58 56.0**	**+1.0**
RZN	**Rozhen**	**2.39**	**120**	*e*P		**Pg**		**06 58 39.1**	**0.0**
BZS	**Buzias**	**2.71**	**355**	⇑ *i* P		**Sn**		**06 59 08.8**	**-1.8**
BZS				S		**Sg**		**06 59 21.6**	**+1.1**
KDZ	**Kurdzhali**	**2.87**	**115**	P		**Pg**		**06 58 46.0**	**-2.2**
DRGR		**3.92**	**8**	S		**Sg**		**06 59 58.8**	**-0.3**

IDC 22 07:08:44.6±8.3, 2816S×17779W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/11, mbtmp3.7/3, Error ellipse: s-maj=154.8km s-min=24.0km az=70.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.09**	**186**	Pn		Pn		07 09 07.7	+0.5
	100nm,0.3s,baz=250,slow=22,SNR=4.8								
RAO				Sn		Sn		07 09 22.2	-0.7
	577nm,0.3s,baz=121,slow=22,SNR=26								
STKA	**Stephens Creek**	**35.22**	**254**	P		P		07 15 42.0	+1.5
	1.3nm,0.6s,baz=100,slow=11,SNR=3.1								
ASAR	**Alice Springs**	**43.46**	**264**	P		P		07 16 48.9	-0.4
	0.2nm,0.6s,baz=93,slow=6.5,SNR=5.0								
WRA	**Warramunga Arr**	**44.25**	**270**	P		P		07 16 55.6	-0.1
	0.6nm,0.5s,baz=108,slow=7.9,SNR=9.2								

*IDC **22** 07:37:03.6±0.5, 6105S×3438W, h0km, mb4.5/14, mb1 4.6/16, mb1mx4.5/18, mbtmp4.5/16, ML4.9/2, MS4.4/22, Ms1 4.4/22, ms1mx4.4/24, Error ellipse: s-maj=19.1km s-min=14.9km az=43.0*
*ISCJB **22** 07:37:03.1±0.3, 6100S±005×343W±0.1, h10km, mb4.7/23, MS4.5/27, Error ellipse: s-maj=9.7km s-min=5.9km az=130.1*
*MOS **22** 07:37:04.6±1.9, 6105S×3406W, h10km, mb5.1/17, Error ellipse: s-maj=33.3km s-min=11.7km az=104.7*
*NEIC **22** 07:37:05.1±0.2, 6100S×3431W, h10km, mb5.1/14, Error ellipse: s-maj=8.6km s-min=6.7km az=56.0*
*HRVD **22** 07:37:05.1±0.2, 6124S×3437W, h18km±1km, MW5.2/76, Centroid moment Tensor Solution. LP body waves: s44,c68;Mantle waves: s76,c123; Half duration: 1§0 Moment tensor: Scale 10^{16}Nm; M_r0.91±.19; $M_{\theta\theta}$-0.13±.18; $M_{\phi\phi}$-0.78±.18; $M_{r\theta}$1.78±.43; $M_{\theta\phi}$7.45±.18; $M_{\phi r}$0.34±.39; Best double couple: M_o7.69400×10^{16} NP1:ϕ_s1.00000°, δ76.00000°, λ175.00000°. NP2: ϕ_s92.00000°, δ85.00000°, λ14.00000°. Principal axes: T 7.3650, Plg13.0000°, Azm317.0000°; N 0.6570, Plg75.0000°, Azm111.0000°; P -8.0220, Plg6.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **22** 07:37:06.1, 6100S×3430W, h10km, mB5.1, Ms5.2, Msz4.7*

ISC 22 07:37:04.7±0.3, 6105S±005×343W±01, h10km, n121, s1§01/57, mb4.7/23, MS4.5/27, 4C, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.89**	**349**	*e*Pn		**Pn**		**07 38 45.4**	**-0.3**
	323nm,0.9s								
HOPE				*e*Sn		**Sn**		**07 40 03.9**	**-0.3**
PMSA	**Palmer Station**	**13.98**	**242**	Pn		**Pn**		**07 40 22.9**	**+0.1**
	3.9nm,0.3s,baz=82,slow=12,SNR=42								
PMSA				LR		LR		07 44 52.0	
	comp=Z,2μm,21.6s,baz=65,slow=34								
PMSA	**Palmer Station**	**13.98**	**242**	*e*Pn		**Pn**		**07 40 22.6**	**-0.2**
	49nm,0.7s								
VNA1	**Neumayer--Stat**	**14.20**	**143**	*e*		**Pn**		**07 40 21.4**	**-4.4**
VNA1				*e*				07 40 22.3	
VNA1				*e*				07 40 23.4	
VNA1				*e*				07 40 25.1	
VNA1				*e*				07 40 29.2	
VNA1				*e*				07 40 31.3	
VNA1				*e*				07 40 34.4	
VNA1				*e*				07 40 36.7	
VNA1				*e*				07 40 41.9	
VNA1				*e*				07 40 43.5	
VNA1				*e*				07 41 03.9	
VNA1				*e*				07 42 53.7	
VNA1				*e*				07 42 57.4	
VNA1				*e*				07 43 03.5	
VNA1				*e*				07 43 09.8	
EFI	**East Falkland**	**16.08**	**295**	P		**Pn**		**07 40 55.6**	**+4.8**
	1μm,0.8s,SNR=23								
EFI	**East Falkland**	**16.08**	**295**	*e*P		**Pn**		**07 40 54.7**	**+3.9**
EFI				pmax		pmax			
	comp=Z,335nm,1.1s								
EFI	**East Falkland**	**16.08**	**295**	*e*P		**Pn**		**07 40 54.7**	**+3.9**
	comp=Z,335nm,1.1s								
SNAA	**Sanae**	**16.24**	**144**	Pn		**Pn**		**07 40 50.7**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=316,slow=13,SNR=97								
SNAA				Sn		**Sn**		**07 43 40.6**	**-12**
	comp=Z,0.6nm,0.3s,baz=320,slow=15,SNR=5.9								
SNAA				LR		LR		07 45 51.8	
	comp=Z,1μm,19.6s,baz=298,slow=32								
SNAA				T				07 55 42.6	
	comp=Z,0.4nm,0.3s,baz=300,slow=16,SNR=4.1								
SNAA	**Sanae**	**16.24**	**144**	*e*		**Pn**		**07 40 49.9**	**-2.9**
SNAA				*e*				07 40 51.3	
SNAA				*e*				07 40 52.9	
SNAA				*e*				07 40 57.0	
SNAA				*e*				07 40 59.8	
SNAA				*e*				07 41 04.0	
SNAA				*e*				07 41 12.1	
SNAA				*e*				07 43 39.9	
SNAA				*e*				07 43 43.3	
SNAA				*e*				07 43 48.7	
SNAA				*e*				07 43 56.7	
SNAA	**Sanae**	**16.24**	**144**	*e*P		**Pn**		**07 40 52.5**	**-0.3**
SNAA				pmax		pmax			
	comp=Z,330nm,1.3s								
SNAA	**Sanae**	**16.24**	**144**	*e*Pn		**Pn**		**07 40 52.5**	**-0.3**
	comp=Z,330nm,1.3s								
SNAA				*e*S		**Sn**		**07 43 39.0**	**-14**
USHA	**Ushuaia**	**18.99**	**274**	P		**Pn**		**07 41 25.0**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=117,slow=9.0,SNR=3.3								
USHA				LR		LR		07 47 03.9	
	comp=Z,2μm,19.4s,baz=100,slow=32								
MAIT	**Maitri**	**20.57**	**137**	*e*P		**P**		**07 41 43.0**	**-0.5**
NVL	**N'lazarevskaya**	**20.60**	**137**	*c i*P		**P**		**07 41 42.0**	**-1.9**
NVL				*e*				07 42 01.7	
NVL				*e*SS				07 45 57.7	
NVL				*e*SSS				07 46 21.3	
NVL				pmax		pmax			
	comp=Z,208nm,1.5s								
NVL				MLR		MLR			
	comp=Z,3μm,21.4s,MS4.6								
TRQA	**Tornquist**	**28.79**	**310**	*e*P		**P**		**07 43 02.5**	**-0.1**
	comp=Z,34nm,1.3s,mb4.9								
QSPA	**South Pole Qui**	**29.18**	**180**	*e*P		**P**		**07 43 07.6**	**+1.4**
	comp=Z,61nm,1.1s,mb5.2								
PLCA	**Paso Flores**	**30.00**	**296**	P		**P**		**07 43 12.7**	**-0.8**
	comp=Z,2.4nm,0.8s,mb4.0,baz=155,slow=12,SNR=6.2								
PLCA				LR		LR		07 54 17.6	
	comp=Z,892nm,20.4s,MS4.4,baz=147,slow=34								
PLCA	**Paso Flores**	**30.00**	**296**	P		**P**		**07 43 12.7**	**-0.7**
PLCA				pmax		pmax			
	comp=Z,20nm,0.8s								
PLCA				MLR		MLR			
	comp=Z,892nm,20.4s								
SYO	**Syowa Base**	**30.27**	**137**	⇑ *e*P		**P**		**07 43 15.0**	**-0.8**
CPUP	**Villa Florida**	**38.08**	**325**	P		**P**		**07 44 23.5**	**0.0**
	comp=Z,15nm,0.9s,mb4.7,baz=146,slow=7.6,SNR=28								
CPUP				LR		LR		07 58 58.4	
	comp=Z,563nm,18.8s,MS4.4,baz=148,slow=35								
CPUP	**Villa Florida**	**38.08**	**325**	P		**P**		**07 44 23.5**	**+0.1**
CPUP				pmax		pmax			
	comp=Z,15nm,0.9s								
CPUP				MLR		MLR			
	comp=Z,563nm,18.8s								
MAW	**Mawson**	**38.40**	**142**	P		**P**		**07 44 26.3**	**+0.2**
	comp=Z,7.0nm,0.8s,mb4.4,baz=229,slow=9.4,SNR=14								
MAW				LR		LR		07 58 36.5	
	comp=Z,673nm,18.1s,MS4.5,baz=237,slow=34								
MAW	**Mawson**	**38.40**	**142**	*e*P		**P**		**07 44 25.6**	**-0.5**
	comp=Z,20nm,1.0s,mb4.8								
SBA	**Scott Base**	**40.74**	**187**	*e*P		**P**		**07 44 48.0**	**+2.3**
SBA				pmax		pmax			
	comp=Z,72nm,1.9s,mb5.0								
SBA	**Scott Base**	**40.74**	**187**	*e*P		**P**		**07 44 48.0**	**+2.3**
	comp=Z,72nm,1.9s,mb5.0								
VNDA	**Vanda**	**41.31**	**185**	P		**P**		**07 44 51.6**	**+1.2**
	comp=Z,5.4nm,0.9s,mb4.2,baz=186,slow=6.6,SNR=25								
VNDA				LR		LR		08 00 03.2	
	comp=Z,39nm,20.7s,MS3.3,baz=358,slow=33								
VNDA	**Vanda**	**41.31**	**185**	*e*P		**P**		**07 44 52.1**	**+1.7**
VNDA				pmax		pmax			
	comp=Z,12nm,1.1s								
VNDA	**Vanda**	**41.31**	**185**	*e*P		**P**		**07 44 52.1**	**+1.7**
	comp=Z,12nm,1.1s,mb4.4								
LVC	**Limon Verde**	**45.26**	**312**	*e*P		**P**		**07 45 22.7**	**+0.5**
	comp=Z,8.1nm,0.9s,mb4.5								
SUR	**Sutherland**	**45.48**	**77**	P		**P**		**07 45 25.6**	**+1.6**
	comp=Z,10nm,0.8s,mb4.7,baz=196,slow=17,SNR=6.0								
SUR	**Sutherland**	**45.48**	**77**	P		**P**		**07 45 25.6**	**+1.6**
BDFB	**Brasilia**	**46.42**	**342**	P		**P**		**07 45 32.0**	**+0.6**
	comp=Z,3.8nm,1.0s,mb4.3,baz=181,slow=6.7,SNR=2.9								
BDFB				LR		LR		08 02 26.3	
	comp=Z,456nm,19.4s,MS4.4,baz=179,slow=33								
MIR	**Mirnyy**	**46.95**	**154**	*e*P		**P**		**07 45 36.5**	**+0.9**
MIR				pmax		pmax			
	comp=Z,20nm,1.5s,mb4.8								
CASY	**Casey**	**50.35**	**162**	*e*P		**P**		**07 46 01.9**	**+0.2**
	comp=Z,17nm,1.1s,mb5.0								
BOSA	**Boshof**	**50.73**	**78**	P		**P**		**07 46 05.5**	**+0.9**
	comp=Z,14nm,0.9s,mb4.9,baz=209,slow=6.8,SNR=16								
BOSA				LR		LR		08 03 20.4	
	comp=Z,311nm,18.0s,MS4.4,baz=217,slow=31								
BOSA	**Boshof**	**50.73**	**78**	*e*P		**P**		**07 46 04.5**	**-0.1**
	comp=Z,40nm,1.3s,mb5.2								
LPAZ	**La Paz**	**50.83**	**316**	P		**P**		**07 46 06.7**	**+1.3**
	comp=Z,6.7nm,1.1s,mb4.5,baz=156,slow=5.8,SNR=21								
LPAZ				LR		LR		08 08 32.1	
	comp=Z,375nm,18.4s,MS4.4,baz=151,slow=37								
LPAZ	**La Paz**	**50.83**	**316**	P		**P**		**07 46 06.7**	**+1.3**
LPAZ				pmax		pmax			
	comp=Z,70nm,1.1s								
LPAZ				MLR		MLR			
	comp=Z,375nm,18.4s								
LPAZ	**La Paz**	**50.83**	**316**	*e*P		**P**		**07 46 06.4**	**+1.0**
	comp=Z,11nm,1.0s,mb4.7								
TSUM	**Tsumeb**	**55.28**	**65**	*e*P		**P**		**07 46 38.0**	**-0.3**
SAML	**Samuel**	**56.23**	**325**	*e*P		**P**		**07 46 44.1**	**-0.9**
	comp=Z,30nm,1.1s,mb5.2								
NNA	**Nana**	**57.93**	**309**	*e*P		**P**		**07 46 56.4**	**-0.7**
	comp=Z,48nm,1.4s,mb5.3								
RPN	**Rapa Nui**	**59.46**	**269**	LR		LR		08 05 29.2	
	comp=Z,62nm,20.7s,MS3.7,baz=138,slow=29								
LSZ	**Lusaka**	**63.53**	**73**	*e*P		**P**		**07 47 35.4**	**+0.2**
LSZ				pmax		pmax			
	comp=Z,13nm,0.8s,mb5.0								
LSZ	**Lusaka**	**63.53**	**73**	*e*P		**P**		**07 47 35.4**	**+0.2**
	comp=Z,13nm,0.8s,mb5.0								
DBIC	**Dimbokro**	**71.33**	**31**	P		**P**		**07 48 24.6**	**+0.1**
	comp=Z,4.2nm,0.7s,mb4.5,baz=175,slow=6.6,SNR=7.4								
DBIC				LR		LR		08 13 30.6	
	comp=Z,155nm,19.6s,MS4.3,baz=168,slow=31								
ROSC	**El Rosal**	**72.68**	**318**	P		**P**		**07 48 34.4**	**+1.7**
	comp=Z,2.2nm,0.5s,mb4.4,baz=259,slow=20,SNR=4.4								
ROSC				LR		LR		08 22 39.0	
	comp=Z,244nm,18.2s,MS4.5,baz=185,slow=38								
RPZ	**Rata Peaks**	**73.57**	**199**	LR		LR		08 15 33.1	
	comp=Z,350nm,20.8s,MS4.6,baz=320,slow=31								
RKT	**Rikitea**	**75.05**	**249**	*e*LR		LR		08 12 11.0	
	comp=Z,506nm,30.5s,baz=155								
URZ	**Urewera**	**77.77**	**205**	LR		LR		08 17 43.1	
	comp=Z,144nm,20.1s,MS4.3,baz=159,slow=31								
TOA0	**Torodi Ar. Sit**	**79.28**	**36**	*e*P		**P**		**07 49 09.8**	**-0.5**
TORD	**Torodi Ar. Bea**	**79.28**	**36**	P		**P**		**07 49 10.6**	**+0.3**
	comp=Z,6.2nm,0.8s,mb4.6,baz=200,slow=6.6,SNR=24								
TORD				LR		LR		08 16 49.9	
	comp=Z,306nm,21.6s,MS4.6,baz=165,slow=30								
KMBO	**Kilima Mbogo**	**80.15**	**74**	LR		LR		08 21 21.7	
	comp=Z,342nm,18.7s,MS4.7,baz=99,slow=33								
TBI	**Tubuai**	**81.13**	**237**	*e*LR		LR		08 15 01.2	
	comp=Z,518nm,21.5s,baz=159								
PPT	**Papeete**	**86.34**	**240**	*e*LR		LR		08 17 25.8	
	comp=Z,1μm,26.2s,baz=160								
PPT	**Papeete**	**86.34**	**240**	LR		LR		08 18 33.3	
	comp=Z,422nm,20.3s,MS4.8,baz=155,slow=29								
STKA	**Stephens Creek**	**87.35**	**176**	P		**P**		**07 49 51.8**	**-0.1**
	comp=Z,3.9nm,1.0s,mb4.6,baz=118,slow=4.8,SNR=2.9								
STKA				LR		LR		08 26 59.0	
	comp=Z,406nm,18.3s,MS4.9,baz=199,slow=34								
ASAR	**Alice Springs**	**95.04**	**169**	P		**P**		**07 50 26.2**	**-1.5**
	comp=Z,1.1nm,0.9s,mb4.3,baz=195,slow=4.4,SNR=7.5								
ASAR				PP		PP		07 54 20.6	+3.6
	comp=Z,1.3nm,1.0s,baz=194,slow=7.8,SNR=4.2								
ASAR				LR		LR		08 33 31.8	
	comp=Z,203nm,18.3s,MS4.6,baz=186,slow=36								
ASAR	**Alice Springs**	**95.04**	**169**	P		**P**		**07 50 26.3**	**-1.4**
ASAR								07 54 20.6	
ASAR				pmax		pmax			
	comp=Z,10.0nm,0.9s								
ASAR				MLR		MLR			
	comp=Z,203nm,18.3s								
ASAR	**Alice Springs**	**95.04**	**169**	P		**P**		**07 50 26.2**	**-1.5**
ASAR				PP		PP		07 54 20.6	+3.6
DZM	**Mont Dzumac**	**95.49**	**199**	LR		LR		08 26 42.4	
	comp=Z,281nm,18.9s,MS4.8,baz=200,slow=31								
AFI	**Afiamalu**	**98.02**	**222**	LR		LR		08 28 48.2	
	comp=Z,45nm,21.9s,MS3.9,baz=116,slow=32								
WRA	**Warramunga Arr**	**98.77**	**169**	P		**P**		**07 50 43.7**	**-0.8**
	comp=Z,0.7nm,1.0s,mb4.2,baz=193,slow=3.8,SNR=3.8								
WRA				LR		LR		08 34 50.7	
	comp=Z,190nm,18.9s,MS4.6,baz=185,slow=35								
WRA	**Warramunga Arr**	**98.77**	**169**	P		**P**		**07 50 43.7**	**-0.9**
WRA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
WRA				MLR		MLR			
	comp=Z,190nm,18.9s								
KHC	**Kasperske Hory**	**116.38**	**33**	AMS		AMS		08 38 00.0	
	comp=Z,300nm,25.4s								
TREC	**Trest**	**117.05**	**34**	AMS		AMS		08 36 00.0	
	comp=Z,200nm,26.1s								
NKC	**Novy Kostel**	**117.10**	**32**	AMS		AMS		08 38 10.0	
PRU	**Pruhonice**	**117.42**	**33**	AMS		AMS		08 39 10.0	
	comp=Z,200nm,23.0s								
PVCC	**Panska Ves**	**117.92**	**33**	AMS		AMS		08 37 10.0	
	comp=Z,200nm,26.7s								
CLL	**Collm**	**118.23**	**32**	*e*PP		PP		07 57 14.0	+6.5
CLL				*e*PS		PS		08 07 06.0	+13
CLL				*e*PPS				08 08 18.0	
CLL				*e*SS		SS		08 13 18.0	-4.9
CLL	**Collm**	**118.23**	**32**	*e*PP		PP		07 57 14.0	+6.5
CLL				*e*PS		PS		08 07 06.0	+13
CLL				*e*PPS				08 08 18.0	
CLL				*e*SS		SS		08 13 18.0	-4.9
CLL				*e*(SSSS)				08 21 12.0	
DPC	**Dobruska-Polom**	**118.23**	**34**	AMS		AMS		08 35 40.0	
	comp=Z,200nm,27.8s								
OKC	**Ostrava-Krasne**	**118.28**	**36**	AMS		AMS		08 36 20.0	
PDAR	**Pinedale Array**	**120.00**	**305**	PKP		PKPdf		07 55 54.0	-1.4
	comp=Z,0.4nm,0.7s,baz=116,slow=3.4,SNR=3.5								
NVAR	**Mina Array Bea**	**120.06**	**296**	PKP		PKPdf		07 55 56.0	+0.4
	comp=Z,0.1nm,0.3s,baz=193,slow=3.7,SNR=2.3								
LOHW	**Long Hollow**	**121.12**	**304**	*e*PKPdf		PKPdf		07 55 57.0	-0.7
MOOW	**Moose Ponds**	**121.30**	**304**	*e*PKPdf		PKPdf		07 55 56.9	-1.1
FLWY	**Flagg Ranch**	**121.55**	**305**	*e*PKPdf		PKPdf		07 55 58.2	-0.3
KIV	**Kislovodsk**	**121.68**	**56**	⇑ *i*PKIKP		PKPdf		07 55 59.4	+0.7
KIV				*e*				08 00 17.8	
KIV				*e*				08 03 12.7	
KIV				*e*PS		PS		08 07 20.9	-3.4
KIV				*e*SS		SS		08 14 08.9	+1.6
KIV				pmax		pmax			
	comp=Z,4.0nm,0.5s								
KIV				MLR		MLR			
	comp=Z,100nm,19.0s,MS4.5								
AKASG	**Malin Array Be**	**122.43**	**42**	PKP		PKPdf		07 55 59.9	-0.3
	comp=Z,0.7nm,0.5s,baz=243,slow=1.9,SNR=4.5								
AKASG	**Malin Array Be**	**122.43**	**42**	PKIKP		PKPdf		07 55 59.9	-0.3
AKASG				pmax		pmax			
	comp=Z,10.0nm,0.5s								
WVOR	**Wild Horse Val**	**123.50**	**298**	*e*PKIKP		PKPdf		07 56 02.7	+0.5
MSO	**Missoula**	**125.11**	**304**	*e*PKPdf		PKPdf		07 56 04.7	-0.6
NB2	**NORSAR Subarra**	**126.67**	**26**	PKPd		PKPdf		07 56 05.9	-2.4
	comp=Z,1.0nm,0.8s,baz=206,slow=2.0								
NOA	**NORSAR Array B**	**126.67**	**26**	PKP		PKPdf		07 56 05.9	-2.4
	comp=Z,0.6nm,0.7s,baz=200,slow=1.8,SNR=3.2								
NOA	**NORSAR Array B**	**126.67**	**26**	PKIKP		PKPdf		07 56 05.9	-2.4
NOA				pmax		pmax			
	comp=Z,10.0nm,0.7s								
OBN	**Obninsk**	**128.57**	**44**	⇑ *i*PKIKP		PKPdf		07 56 10.4	-1.5
OBN				pmax		pmax			
	comp=Z,5.0nm,0.5s								
EDM	**Edmonton**	**129.98**	**310**	*e*PKIKP		PKPdf		07 56 13.2	-1.4
FINES	**FINESS Array B**	**130.59**	**33**	PKP		PKPdf		07 56 13.7	-2.1
	comp=Z,2.1nm,0.8s,baz=145,slow=28,SNR=3.5								
FINES	**FINESS Array B**	**130.59**	**33**	PKIKP		PKPdf		07 56 13.7	-2.0
FINES				pmax		pmax			
	comp=Z,2.0nm,0.8s								
QIZ	**Qiongzhong**	**131.00**	**133**	PKP		PKPdf		07 56 15.5	-1.0
QIZ				PP		PP		07 58 35.8	+2.7
QIZ				LR		LR			
	comp=Z,232nm,24.9s,MS4.8								
KMI	**Kunming**	**133.75**	**121**	PKP		PKPdf		07 56 22.8	+1.1
KMI				XPKP				07 56 27.5	
KMI				PP		PP		07 58 56.4	+5.6
KMI				PPP				08 01 49.8	
KMI				SS		SS		08 16 38.3	+0.9
KMI				SSS				08 21 36.3	
KMI				PP		PP			
	comp=Z,77nm,6.4s								
KMI				LR		LR			
	comp=N,96nm,27.5s,MS4.5								
KMI				LR		LR			
	comp=E,95nm,29.8s,MS4.5								
KMI				LR		LR			
	comp=Z,134nm,27.5s,MS4.5								
YKA	**Yellowknife Ar**	**137.37**	**317**	PKP		PKPdf		07 56 28.9	+0.4
	comp=Z,1.7nm,0.8s,baz=141,slow=2.4,SNR=3.0								
YKA	**Yellowknife Ar**	**137.37**	**317**	PKIKP		PKPdf		07 56 28.9	+0.4
YKA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
CD2	**Chengdu**	**139.25**	**118**	*e*PKP		PKPdf		07 56 30.3	-1.6
ZRNK	**Zerenda**	**139.75**	**66**	*e*PKIKP		PKPdf		07 56 33.5	+0.7
CHKZ	**Chkalovo**	**140.96**	**66**	*e*PKIKP		PKPdf		07 56 34.8	-0.2
MKAR	**Makanchi Array**	**141.66**	**82**	PKhKP				07 56 31.4	
	comp=Z,0.6nm,0.8s,baz=180,slow=0.9,SNR=3.7								
MKAR				PKP		PKPdf		07 56 37.4	+1.2
	comp=Z,2.8nm,1.0s,baz=249,slow=4.8,SNR=6.5								
MKAR	**Makanchi Array**	**141.66**	**82**	PKIKP		PKPdf		07 56 37.4	+1.1
MKAR				pmax		pmax			
	comp=Z,3.0nm,1.0s								
MKAR	**Makanchi Array**	**141.66**	**82**	PKP				07 56 31.4	
MKAR				PKP		PKPdf		07 56 37.4	+1.1
WMQ	**Urumqi**	**142.12**	**90**	*e*PKP		PKPdf		07 56 39.0	+1.9
WMQ				PP		PP		07 59 49.0	+6.2
WMQ				SKS		SKSdf		08 03 47.0	-0.1
WMQ				SKKS		SKKSac		08 06 38.0	+1.7
WMQ				SS		SS		08 18 21.0	+4.5
WMQ				PP		PP			

FITZ					Sn	Sn	07 41 17.8	-11
	0.2nm,0.3s,baz=165,slow=14,SNR=4.0							
WRA	**Warramunga Arr**	**15.57**	**134**	P	Pn	Pn	07 41 11.0	0.0
	0.0nm,0.3s,baz=307,slow=14,SNR=3.2							
WRA					Sn	Sn	07 43 57.2	-7.0
	0.1nm,0.3s,baz=307,slow=24,SNR=6.5							
ASAR	**Alice Springs**	**17.95**	**144**	P	Pn	Pn	07 41 40.7	-0.4
	0.0nm,0.3s,baz=316,slow=12,SNR=3.7							
ASAR					S	Sn	07 44 55.2	-6.6
	0.0nm,0.3s,baz=329,slow=26,SNR=3.1							
MKAR	**Makanchi Array**	**66.38**	**331**	P	P	P	07 48 20.9	+0.1
	0.4nm,0.6s,baz=134,slow=6.9,SNR=6.3							

ISCJB ***22*** *07:51:44.5±0.2, 4825N±001×761E±002, h12km±3km, Error ellipse: s-maj=2.4km s-min=2.1km az=0.6*
CSEM ***22*** *07:51:45.8±0.1, 4824N×763E, h10km, ML2.9/10, Error ellipse: s-maj=1.1km s-min=1.0km az=23.0*
LDG ***22*** *07:51:45.9±0.1, 4824N×764E, h2km, Md2.5/3, Ml2.8/9, Error ellipse: s-maj=1.2km s-min=1.1km az=130.0*
LEDBW ***22*** *07:51:45.9±0.1, 48226N±0008×7627E±0006, h9km±3km, ML1.9, Error ellipse: s-maj=2.8km s-min=1.6km az=29.0*
STR ***22*** *07:51:45.3±0.1, 4824N×761E, h10km±1km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
BGR ***22*** *07:51:45.9±0.3, 4827N×763E, h10km, ML2.0/2, Error ellipse: s-maj=3.3km s-min=3.3km az=42.0*
NEIC ***22*** *07:51:45.9, 4824N×764E, h2km, ML2.8(LDG), After LDG.*
ZUR ***22*** *07:51:46.7, 4820N×770E, h10km, ML2.1/4*

ISC 22 07:51:45.1±0.3, 4824N±002×760E±002, h18km±3km, n71, σ0§60/113, 3C-10D, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIBD	**Limburg**	**0.09**	**179**	⇓*iP**	**Pg**	**07 51 48.6**	**0.0**
LIBD				*S**	**Sg**	**07 51 50.5**	**-0.4**
LIBD	**Limburg**	**0.09**	**179**	⇓*iP*	**Pg**	**07 51 48.6**	**0.0**
LIBD				S	**Sg**	**07 51 50.5**	**-0.4**
LIBD	**Limburg**	**0.09**	**179**	Pg	**Pg**	**07 51 48.4**	**-0.2**
LIBD				Sg	**Sg**	**07 51 50.4**	**-0.5**
WLS	**Welschbruch**	**0.24**	**317**	⇓*iP**	**Pg**	**07 51 51.2**	**+0.5**
WLS				S*	**Sg**	**07 51 54.8**	**+0.3**
WLS	**Welschbruch**	**0.24**	**317**	Pg	**Pg**	**07 51 51.0**	**+0.3**
WLS				Sg	**Sg**	**07 51 54.2**	**-0.3**
CDF	**Champ du Feu**	**0.28**	**309**	*e*Pg	**Pg**	**07 51 51.8**	**+0.5**
CDF				*e*Sg	**Sg**	**07 51 55.8**	**+0.3**
	46nm,0.2s						
CDF	**Champ du Feu**	**0.28**	**309**	*e*Pg	**Pg**	**07 51 51.8**	**+0.5**
CDF				*e*Sg	**Sg**	**07 51 55.8**	**+0.3**
	23nm,0.2s						
ECH	**Echery**	**0.30**	**266**	⇑*iP**	**Pg**	**07 51 52.1**	**+0.5**
ECH				*i*S*	**Sg**	**07 51 56.2**	**+0.2**
ECH	**Echery**	**0.30**	**266**	⇑*iPg*	**Pg**	**07 51 52.1**	**+0.5**
ECH				*i*Sg	**Sg**	**07 51 56.2**	**+0.2**
ECH	**Echery**	**0.30**	**266**	Pg	**Pg**	**07 51 51.9**	**+0.3**
ECH				Sg	**Sg**	**07 51 55.9**	**-0.1**
KIZ	**Kirchzarten**	**0.35**	**143**	⇓*iP**	**Pg**	**07 51 52.5**	**0.0**
KIZ				*i*S*	**Sg**	**07 51 56.9**	**-0.6**
KIZ	**Kirchzarten**	**0.35**	**143**	⇓*iP*	**Pg**	**07 51 52.5**	**0.0**
KIZ				*i*S	**Sg**	**07 51 56.9**	**-0.6**
FELD	**Feldberg im Sc**	**0.45**	**143**	⇓*iP**	**Pb**	**07 51 54.4**	**-0.1**
FELD				SmS		07 52 03.5	
FELD	**Feldberg im Sc**	**0.45**	**143**	⇓*iP*	**Pg**	**07 51 54.4**	**+0.1**
FELD	**Feldberg im Sc**	**0.45**	**143**	Pg	**Pg**	**07 51 54.3**	**0.0**
FELD				Sg	**Sg**	**07 52 00.1**	**-0.3**
BFO	**Black Forest**	**0.49**	**79**	⇑*iP**	**Pg**	**07 51 55.1**	**0.0**
BFO				PmP		07 51 56.0	
BFO				*e*Sg	**Sg**	**07 52 00.5**	**-1.3**
	SNR=4.4						
BFO	**Black Forest**	**0.49**	**79**	⇑*iPg*	**Pg**	**07 51 55.1**	**0.0**
BFO	**Black Forest**	**0.49**	**79**	Px	Px	07 51 56.0	
BFO	**Black Forest**	**0.49**	**79**	Sg	**Sg**	**07 52 00.5**	**-1.3**
	SNR=4.4						
MOF	**Molkenrain**	**0.50**	**219**	⇑P*	**Pb**	**07 51 55.7**	**+0.3**
MOF				PmP		07 51 56.6	
MOF	**Molkenrain**	**0.50**	**219**	Pg	**Pg**	**07 51 55.6**	**+0.5**
MOF				Sg	**Sg**	**07 52 02.3**	**+0.4**
MOF	**Molkenrain**	**0.50**	**219**	Px	Px	07 51 56.6	
HINF	**Hinteralfeld**	**0.66**	**230**	*e*Pg	**Pg**	**07 51 58.4**	**+0.4**
HINF				*e*Sg	**Sg**	**07 52 06.8**	**0.0**
LANF	**Langenberg**	**0.76**	**10**	Pg	**Pg**	**07 52 00.3**	**+0.3**
LANF				Sg	**Sg**	**07 52 10.3**	**+0.3**
LANF	**Langenberg**	**0.76**	**10**	Pg	**Pg**	**07 52 01.2**	**+1.2**
SLE	**Schleitheim**	**0.76**	**128**	⇓*iPg*	**Pg**	**07 52 00.4**	**+0.4**
	223nm,0.3s						
SLE				*e*Sg	**Sg**	**07 52 09.7**	**-0.4**
	223nm,0.3s						
BBS	**Basel-Blauen**	**0.77**	**185**	P*	**Pb**	**07 52 01.0**	**+0.9**
BBS				*e*Pg	**Pg**	**07 52 01.2**	**+0.9**
	SNR=2.8						
SULZ	**Sulz-Cheisache**	**0.79**	**154**	⇓*iPg*	**Pg**	**07 52 00.8**	**+0.2**
	70nm,0.5s						
SULZ				*e*Sg	**Sg**	**07 52 11.3**	**+0.3**
	70nm,0.5s						
SPAK	**Spaichingen-Ko**	**0.80**	**99**	P*	**Pb**	**07 52 01.3**	**+0.7**
SPAK	**Spaichingen-Ko**	**0.80**	**99**	Pg	**Pg**	**07 52 00.2**	**-0.7**
HAU	**Haudompre**	**0.87**	**255**	*e*Pg	**Pg**	**07 52 02.5**	**+0.4**
HAU				*e*Sg	**Sg**	**07 52 14.0**	**+0.4**
	47nm,0.3s						
HAU	**Haudompre**	**0.87**	**255**	*e*Pg	**Pg**	**07 52 02.5**	**+0.4**
HAU				*e*Sg	**Sg**	**07 52 14.0**	**+0.4**
	23nm,0.3s						
BOURR	**Bourrignon**	**0.88**	**197**	*e*Pg	**Pg**	**07 52 02.8**	**+0.5**
	152nm,0.6s						
LBG	**Lerchenberg**	**0.90**	**61**	P	**Pb**	**07 52 02.5**	**+0.2**
LBG				Sg	**Sg**	**07 52 15.0**	**+0.3**
LBG	**Lerchenberg**	**0.90**	**61**	P	**Pb**	**07 52 02.5**	**+0.2**
LBG				Sg	**Sg**	**07 52 15.0**	**+0.4**
LBG	**Lerchenberg**	**0.90**	**61**	Sg	**Sg**	**07 52 15.0**	**+0.4**
GUT	**Gutenstein**	**1.03**	**99**	Pg	**Pg**	**07 52 05.4**	**+0.3**
GUT				Sg	**Sg**	**07 52 18.4**	**-0.1**
GUT				SmS		07 52 19.2	
GUT	**Gutenstein**	**1.03**	**99**	Pg	**Pg**	**07 52 05.4**	**+0.3**
GUT				Sg	**Sg**	**07 52 18.4**	**-0.1**
LOMF	**Lomont**	**1.03**	**211**	Pg	**Pg**	**07 52 05.5**	**+0.4**
LOMF				Sg	**Sg**	**07 52 19.0**	**+0.4**
TUBL	**Tuebingen-Lenn**	**1.03**	**73**	Pg	**Pg**	**07 52 06.8**	**+1.7**
SISB	**Singen-Schiene**	**1.07**	**120**	S	**Sb**	**07 52 18.1**	**-0.6**
SISB				Sg	**Sg**	**07 52 20.8**	**+0.9**
THEF	**They Montfort**	**1.08**	**270**	⇓*iPg*	**Pg**	**07 52 06.6**	**+0.5**
THEF				Sg	**Sg**	**07 52 21.0**	**+0.7**
THEF	**They Montfort**	**1.08**	**270**	Pg	**Pg**	**07 52 06.6**	**+0.1**
THEF				Sg	**Sg**	**07 52 20.6**	**+0.4**
SWS	**Schriesheim-Wi**	**1.45**	**30**	Sg	**Sg**	**07 52 32.5**	**+0.7**
RFYF	**Reffroy**	**1.47**	**286**	*e*Pg	**Pg**	**07 52 14.1**	**+0.6**
RFYF				*e*Sg	**Sg**	**07 52 32.9**	**+0.2**
	34nm,0.2s						
RFYF	**Reffroy**	**1.47**	**286**	*e*Pg	**Pg**	**07 52 14.1**	**+0.6**
RFYF				*e*Sg	**Sg**	**07 52 32.9**	**+0.2**
	17nm,0.2s						
TOD	**Tromm**	**1.58**	**30**	Sg	**Sg**	**07 52 36.6**	**+0.3**
TOD	**Tromm**	**1.58**	**30**	Pg	**Pg**	**07 52 14.8**	**-0.8**
ABH	**Alteburg**	**1.65**	**359**	Pg	**Pg**	**07 52 16.8**	**0.0**
ABH	**Alteburg**	**1.65**	**359**	Pg	**Pg**	**07 52 16.8**	**-0.1**
ABH	**Alteburg**	**1.65**	**359**	Pg	**Pg**	**07 52 16.7**	**-0.2**
SFTF	**Sexfontaines**	**1.71**	**270**	*e*Pg	**Pg**	**07 52 18.6**	**+0.5**
SFTF				*e*Sg	**Sg**	**07 52 41.1**	**+0.7**
	9.3nm,0.2s						
SFTF	**Sexfontaines**	**1.71**	**270**	*e*Pg	**Pg**	**07 52 18.6**	**+0.5**
SFTF				*e*Sg	**Sg**	**07 52 41.1**	**+0.7**
	4.7nm,0.2s						
WLF	**Walferdange**	**1.72**	**327**	*e*Sg	**Sg**	**07 52 39.4**	**-1.2**
	SNR=3.5						
SIND	**Sindeldorf**	**1.73**	**49**	Pg	**Pg**	**07 52 17.3**	**-1.1**
SIND				Sg	**Sg**	**07 52 40.5**	**-0.5**
HDH	**Heidenheim-Cha**	**1.77**	**78**	Pg	**Pg**	**07 52 19.2**	**0.0**
HDH	**Heidenheim-Cha**	**1.77**	**78**	Px	Px	07 52 19.2	
UBR	**Ueberruh**	**1.77**	**107**	Sg	**Sg**	**07 52 41.8**	**-0.6**
CABF	**La Chapelle**	**1.92**	**213**	*e*Pn	**Pn**	**07 52 17.0**	**0.0**
CABF				*e*Sg	**Sg**	**07 52 47.1**	**0.0**
	7.9nm,0.4s						
CABF	**La Chapelle**	**1.92**	**213**	*e*Pn	**Pn**	**07 52 17.0**	**0.0**
CABF				*e*Sg	**Sg**	**07 52 47.1**	**0.0**
	4.0nm,0.4s						
TNS	**Taunus Mts**	**2.06**	**15**	Sg	**Sg**	**07 52 51.0**	**-0.6**
LOR	**Lormes**	**2.71**	**250**	*e*Pg	**Pg**	**07 52 36.6**	**-0.4**
LOR				*e*Sg	**Sg**	**07 53 11.3**	**-0.8**
	4.5nm,0.2s						
LOR	**Lormes**	**2.71**	**250**	*e*Pg	**Pg**	**07 52 36.6**	**-0.4**
LOR				*e*Sg	**Sg**	**07 53 11.3**	**-0.8**
	2.2nm,0.2s						
SMF	**Signal de Mont**	**3.01**	**239**	*e*Pg	**Pg**	**07 52 42.2**	**-0.6**
SMF				*e*Sg	**Sg**	**07 53 20.6**	**-1.2**
	4.0nm,0.2s						
SMF	**Signal de Mont**	**3.01**	**239**	*e*Pg	**Pg**	**07 52 42.2**	**-0.6**
SMF				*e*Sg	**Sg**	**07 53 20.6**	**-1.2**
	2.0nm,0.2s						
SSF	**Saint Saulge**	**3.01**	**249**	*e*Pg	**Pg**	**07 52 42.3**	**-0.5**
SSF				*e*Sg	**Sg**	**07 53 20.7**	**-1.1**
	3.0nm,0.3s						
SSF	**Saint Saulge**	**3.01**	**249**	*e*Pg	**Pg**	**07 52 42.3**	**-0.5**
SSF				*e*Sg	**Sg**	**07 53 20.7**	**-1.1**
	1.5nm,0.3s						
AVF	**Avril sur Loir**	**3.22**	**245**	*e*Pg	**Pg**	**07 52 46.3**	**-0.6**
HYF	**Humbligny**	**3.48**	**256**	*e*Pg	**Pg**	**07 52 51.6**	**-0.3**
BGF	**Bois d'Agland**	**3.64**	**244**	*e*Pg	**Pg**	**07 52 54.0**	**-0.9**
BGF				*e*Sg	**Sg**	**07 53 40.9**	**-1.2**
	6.5nm,0.4s						
BGF	**Bois d'Agland**	**3.64**	**244**	*e*Pg	**Pg**	**07 52 54.0**	**-0.9**
BGF				*e*Sg	**Sg**	**07 53 40.9**	**-1.2**
	3.2nm,0.4s						

CSEM ***22*** *07:52:01.6±1.0, 3860N×2856W, h5km±4km, ML1.7, Error ellipse: s-maj=2.4km s-min=1.6km az=170.0, After PDA*
PDA ***22*** *07:52:01.6±1.0, 3860N×2856W, h5km±4km, MD2.8, ML1.7, Error ellipse: s-maj=2.4km s-min=1.6km az=170.0*

SVSA 22 07:52:01.6±1.0, 3860N×2856W, h5km±4km, MD2.8, ML1.7, Error ellipse: s-maj=2.4km s-min=1.6km az=170.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOR	**Horta**	**0.10**	**216**	*e*P	Pg	07 52 03.2	-0.4
HOR				*e*S	Sg	07 52 05.2	+0.2
CALA	**Caldeira**	**0.11**	**259**	*i* P	Pg	07 52 04.0	0.0
CALA				*e*S	Sg	07 52 06.0	+0.4
CALA	**Caldeira**	**0.11**	**259**	*e*S	Sg	07 52 06.0	+0.4
PCED	**Cedros**	**0.11**	**282**	*i* P	Pg	07 52 03.7	-0.3
PCED				*e*S	Sg	07 52 05.9	+0.3
PCED							
	71nm,0.2s						
PCED	**Cedros**	**0.11**	**282**	*e*S	Sg	07 52 05.9	+0.3
PICO	**Pico**	**0.15**	**135**	*e*P	Pg	07 52 04.3	-0.3
PICO				*e*S	Sg	07 52 07.0	+0.5
PCND	**Candelaria**	**0.15**	**151**	*e*P	Pg	07 52 04.3	-0.4
PCND				*e*S	Sg	07 52 07.0	+0.2
PCND							
	37nm,0.1s						
PTEI	**Pico do Teixo**	**0.19**	**124**	*erx*		07 52 08.8	
PBOI	**Pico dos Bois**	**0.22**	**139**	*erx*		07 52 11.0	
ROSA	**Rosais**	**0.27**	**65**	*i* P	Pg	07 52 06.4	-0.5
ROSA				*e*S	Sg	07 52 10.2	-0.3
ROSA	**Rosais**	**0.27**	**65**	*e*S	Sg	07 52 10.2	-0.3
PAMA	**Santo Amaro**	**0.31**	**76**	*e*P	Pg	07 52 07.3	-0.2
PAMA				*e*S	Sg	07 52 11.8	+0.2
PAMA							
	23nm,0.1s						
PAMA	**Santo Amaro**	**0.31**	**76**	*e*P	Pg	07 52 07.3	-0.2
PAMA				*e*S	Sg	07 52 11.8	+0.2
PMAN	**Manadas**	**0.37**	**85**	*e*S	Sg	07 52 13.3	-0.3
PMAN							
	76nm,0.2s						
PID	**Ribeirinha**	**0.38**	**115**	*i* P	Pg	07 52 08.2	-0.8
PID				*e*S	Sg	07 52 13.8	-0.1
PID	**Ribeirinha**	**0.38**	**115**	*e*S	Sg	07 52 13.8	-0.1

ISCJB ***22*** *08:01:15.5±1.2, 199S±02×1776W±02, h529km±24km, mb3.9/7, Error ellipse: s-maj=33.7km s-min=16.4km az=83.8*
IDC ***22*** *08:01:16.7±1.6, 1996S×17750W, h537km±21km, mb3.1/6, mb1 3.3/8, mb1mx3.2/16, mbtmp4.1/8, Error ellipse: s-maj=31.5km s-min=14.7km az=143.0*
NEIC ***22*** *08:01:16.8±1.1, 2003S×17743W, h544km±15km, mb4.1/4, Error ellipse: s-maj=26.1km s-min=12.6km az=144.0*

ISC 22 08:01:16.1±1.2, 200S±02×1775W±02, h524km±23km, n17, σ0§91/16, mb3.9/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.14**	**43**	P	**P**	**08 03 15.7**	**+1.3**
	3.5nm,0.3s,baz=117,slow=6.8,SNR=4.5						
AFI				S	**S**	**08 04 50.3**	**-1.3**
	5.6nm,0.3s,baz=66,slow=22,SNR=6.1						
URZ	**Urewera**	**18.81**	**193**	P	**P**	**08 05 01.4**	**-1.1**
	1.1nm,0.3s,baz=44,slow=6.3,SNR=8.3						
CTA	**Charters Tower**	**34.02**	**263**	P	**P**	**08 07 16.9**	**+0.8**
	2.1nm,0.4s,mb4.0,baz=88,slow=12,SNR=7.0						
CTA	**Charters Tower**	**34.02**	**263**	*e*P	**P**	**08 07 16.9**	**+0.8**
	1.4nm,0.3s,mb4.0						
CTAO	**Charters Tower**	**34.02**	**263**	*e*P	**P**	**08 07 17.0**	**+0.8**
	2.3nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**38.44**	**244**	P	**P**	**08 07 53.0**	**+0.3**
	3.2nm,1.1s,mb3.8,baz=76,slow=12,SNR=3.7						
AS31	**Alice Springs**	**45.10**	**256**	*e*P	**P**	**08 08 45.7**	**+0.4**
ASAR	**Alice Springs**	**45.10**	**256**	P	**P**	**08 08 45.6**	**+0.4**
	2.6nm,0.8s,mb3.8,baz=92,slow=7.9,SNR=35						
ASAR				PcP	PcP	08 10 15.1	+0.3
	0.3nm,0.6s,baz=98,slow=4.2,SNR=4.0						
ASAR				S	**S**	**08 14 43.9**	**-2.1**
	0.4nm,0.7s,baz=93,slow=16,SNR=3.3						
WB2	**Warramunga Arr**	**45.13**	**261**	*e*P	**P**	**08 08 45.5**	**0.0**
WRAB	**Tennant Creek**	**45.14**	**261**	*e*P	**P**	**08 08 45.1**	**-0.4**
	6.4nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**45.15**	**261**	P	**P**	**08 08 45.6**	**0.0**
	2.0nm,0.5s,mb3.9,baz=97,slow=8.2,SNR=57						
FITZ	**Fitzroy Crossi**	**53.57**	**262**	*e*P	**P**	**08 09 48.3**	**+0.6**
	1.8nm,0.4s,mb3.8						
MJAR	**Matsushiro Arr**	**70.08**	**323**	P	**P**	**08 11 34.0**	**-1.3**
	3.4nm,0.9s,mb3.9,baz=111,slow=6.7,SNR=4.3						
NVAR	**Mina Array Bea**	**80.32**	**43**	P	**P**	**08 12 33.7**	**+1.3**
	0.2nm,0.6s,baz=232,slow=5.6,SNR=2.4						
MKAR	**Makanchi Array**	**111.19**	**314**	PKiKP	PKiKP	08 18 48.6	-1.5
	0.2nm,0.2s,baz=72,slow=4.7,SNR=2.2						
AKASG	**Malin Array Be**	**142.79**	**332**	PKP	PKPdf	08 19 46.2	-3.4
	0.9nm,0.5s,baz=41,slow=4.4,SNR=6.4						
GERES	**GERESS Array B**	**149.82**	**345**	PKPbc	PKPbc	08 20 06.9	+0.1
	0.6nm,0.3s,baz=7.1,slow=4.0,SNR=2.8						

IDC 22 08:18:26.1±7.2, 1813S×17791W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/13, mbtmp3.6/2, Error ellipse: s-maj=293.6km s-min=113.8km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.06**	**260**	P	P	08 26 44.9	+1.3
	0.3nm,0.3s,baz=95,slow=7.9,SNR=26						
ASAR	**Alice Springs**	**45.19**	**254**	P	P	08 26 44.0	-0.6
	0.9nm,0.8s,baz=96,slow=7.5,SNR=9.3						
AKASG	**Malin Array Be**	**140.97**	**333**	PKP	PKPdf	08 37 57.1	-1.0
	0.5nm,0.3s,baz=41,slow=3.9,SNR=9.8						

NNC 22 08:19:55.4±4.6, 3773N×7297E, h14km±27km, mb3.1, mpv3.0, 6C-1D, Error ellipse: s-maj=39.7km s-min=26.6km az=99.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**5.56**	**20**	⇑Pn	Pn	08 21 19.1	+1.5
	0.7nm,0.8s						
TKM2				⇑Lg		08 22 50.5	
	1.9nm,0.8s						
KK31	**Karatay Array**	**5.68**	**341**	Pn	Pn	08 21 21.6	+2.3
	1.6nm,0.4s,baz=162,slow=13,SNR=25						
KK31				⇑Sn	Sn	08 22 30.6	+6.2
	4.7nm,0.5s,baz=147,slow=78,SNR=3.8						
KK31				⇑Lg		08 22 58.5	
	8.0nm,0.6s						
AB31	**Akbulak array**	**14.88**	**325**	⇑Pn	Pn	08 23 24.2	-1.0
	0.4nm,0.5s,baz=142,slow=13,SNR=7.0						
AB31				⇓Sn	Sn	08 26 07.6	-2.1
	1.0nm,0.6s						
AKTO	**Aktyubinsk**	**16.59**	**325**	⇑Pn	Pn	08 23 49.5	+2.0
	0.2nm,1.6s						

BER ***22*** *08:31:18.1±2.3, 8051N×2289E, h13km, MD2.8, ML3.1, ML2.9(NAO)*
NAO ***22*** *08:31:28.3±5.1, 7989N×2042E, h32km±37km, ML2.9*

CSEM 22 08:31:22.2±0.4, 8005N×2186E, h2km, ML2.9, Error ellipse: s-maj=7.8km s-min=4.5km az=35.0, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**2.14**	**243**	Pn	Pn	08 31 57.2	-1.7
KBS				Pg	Pg	08 32 01.9	-1.3
KBS				Lg		08 32 27.0	
KBS	**Kingsbay**	**2.14**	**243**	*e*P	Pn	08 31 57.1	-1.9
KBS				*e*Pg	Pg	08 32 01.8	-1.4
KBS				*e*S	Sn	08 32 26.8	+0.8
KBS				AML	AML	08 32 31.6	
	comp=Z,163nm,0.7s						
KBS	**Kingsbay**	**2.14**	**243**	Pg	Pg	08 32 01.9	-1.3
KBS				*e*S	Sn	08 32 26.8	+0.8
	comp=Z,163nm,0.7s,SNR=55						
SPA0	**Spitsbergen Ar**	**2.15**	**212**	P	Pn	08 31 57.3	-1.8
	baz=25,slow=14						
SPA0				S	Sn	08 32 28.3	+2.0
	baz=33,slow=28						
HSP	**Hornsund**	**3.31**	**206**	Pn	Pn	08 32 15.8	+0.8
HSP				Sn	Sn	08 33 03.1	+8.2
HOPEN	**Hopen**	**3.62**	**168**	*e*P	Pn	08 32 19.2	0.0
HOPEN				*e*Sg	Sg	08 33 17.6	-0.9
HOPEN				AML	AML	08 33 26.2	
	comp=N,180nm,0.4s						
BJO	**Bjornoya**	**5.61**	**187**	*e*Sg	Sg	08 34 17.4	-5.0
BJO				AML	AML	08 34 26.4	
	comp=Z,21nm,0.7s						
ARA0	**ARCESS Array S**	**10.62**	**173**	Pn	Pn	08 33 53.9	-1.4
	baz=4.1,slow=8.6						
ARA0				Sn	Sn	08 35 44.4	-10
	baz=355,slow=22						
ARA0	**ARCESS Array S**	**10.62**	**173**	Pn	Pn	08 33 53.9	-1.4
	SNR=7.5						
ARA0				Sn	Sn	08 35 44.3	-10
	SNR=5.7						

ISCJB ***22*** *08:41:01.5±1.6, 29N±02×1225E±03, h550km±24km, mb3.9/12, Error ellipse: s-maj=55.3km s-min=10.0km az=125.5*
NEIC ***22*** *08:41:02.5±1.1, 292N×12250E, h543km±15km, mb4.3/5, Error ellipse: s-maj=36.5km s-min=6.2km az=63.0*
IDC ***22*** *08:41:03.2±2.1, 289N×12242E, h549km±28km, mb3.2/9, mb1 3.4/9, mb1mx3.2/19, mbtmp4.2/9, Error ellipse: s-maj=73.0km s-min=10.7km az=67.0*

ISC 22 08:41:03.0±1.7, 29N±02×1224E±03, h549km±23km, n19, σ0§53/19, mb3.9/12, 1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**6.95**	**297**	*e*P	**P**	**08 42 50.2**	**-0.1**
KAKA	**Kakadu**	**18.41**	**148**	*e*P	**P**	**08 44 44.5**	**-0.1**
	18nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.10**	**172**	P	**P**	**08 45 09.3**	**+0.4**
	1.3nm,0.3s,mb4.1,baz=32,slow=10.0,SNR=15						
FITZ	**Fitzroy Crossi**	**21.10**	**172**	*e*P	**P**	**08 45 09.3**	**+0.4**
	2.1nm,0.3s,mb4.2						
WRAB	**Tennant Creek**	**25.53**	**153**	*e*P	**P**	**08 45 47.6**	**-0.7**
WRA	**Warramunga Arr**	**25.53**	**153**	P	**P**	**08 45 47.8**	**-0.5**
	5.8nm,0.4s,mb4.6,baz=336,slow=9.6,SNR=94						
WB2	**Warramunga Arr**	**25.54**	**153**	*e*P	**P**	**08 45 47.8**	**-0.6**
AS31	**Alice Springs**	**28.67**	**158**	*e*P	**P**	**08 46 15.9**	**+0.1**
ASAR	**Alice Springs**	**28.67**	**158**	P	**P**	**08 46 16.2**	**+0.4**
	2.3nm,0.5s,mb4.0,baz=334,slow=7.3,SNR=45						
ASAR				ScP	ScP	08 51 58.2	+0.2
	0.5nm,0.5s,baz=339,slow=2.7,SNR=7.6						
FORT	**Forrest**	**33.91**	**171**	*e*P	**P**	**08 47 01.2**	**+0.6**
	14nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**39.08**	**154**	P	**P**	**08 47 44.1**	**+1.0**
	3.2nm,0.5s,mb4.1,baz=328,slow=7.7,SNR=19						
STKA	**Stephens Creek**	**39.08**	**154**	*e*P	**P**	**08 47 43.9**	**+0.8**
ULN	**Ulaanbaatar**	**46.72**	**346**	*e*P	**P**	**08 48 43.0**	**+0.3**
	2.0nm,0.7s,mb3.8						
SONM	**Songino Array**	**46.86**	**345**	P	**P**	**08 48 43.9**	**+0.1**
	0.9nm,0.5s,mb3.6,baz=158,slow=8.8,SNR=9.2						
MKAR	**Makanchi Array**	**55.88**	**328**	P	**P**	**08 49 49.0**	**+0.2**
	1.4nm,0.4s,mb3.6,baz=117,slow=8.2,SNR=21						
ZAL	**Zalesovo**	**59.46**	**335**	P	**P**	**08 50 14.1**	**+0.9**
	1.8nm,0.3s,mb3.7,baz=82,slow=24,SNR=3.5						
BVAR	**Borovoye Array**	**65.73**	**328**	P	**P**	**08 50 52.9**	**-0.7**
	0.6nm,0.5s,mb3.4,baz=119,slow=12,SNR=3.7						
ZRNK	**Zerenda**	**66.42**	**328**	⇓*eP*	**P**	**08 50 57.2**	**-0.7**
	1.7nm,0.4s,mb3.9						
ZRNK				*e*pP	pP	08 52 42.3	-6.9
VNDA	**Vanda**	**83.17**	**172**	P	**P**	**08 52 31.1**	**-0.5**
	0.4nm,0.5s,mb3.2,baz=313,slow=4.9,SNR=4.8						

**IDC 22 08:50:59.6±3.2, 978S×10770E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/17, mbtmp3.6

NNA	**Nana**	**2.40**	**331**	*e*Pn	Pn	09 15 19.6	0.0
NNA				*e*Sn	Sn	09 15 48.1	+0.3
LPAZ	**La Paz**	**7.58**	**108**	*e*Pn	Pn	09 16 34.5	+4.2
	5.3nm,0.8s						
LVC	**Limon Verde**	**10.61**	**144**	*e*Pn	Pn	09 17 13.2	+1.5
	5.3nm,0.5s						
LVC				*e*Sn	Sn	09 19 05.0	-3.9
SAML	**Samuel**	**13.24**	**69**	*e*Pn	Pn	09 17 48.4	+0.8
	2.9nm,0.4s						
TRQA	**Tornquist**	**26.77**	**156**	P	P	09 20 17.6	+1.4
	4.0nm,0.9s						
SJG	**San Juan**	**33.35**	**17**	*e*P	P	09 21 15.6	+1.3
	2.5nm,0.3s						

MOS **22** *09:23:16.1±1.4,3485N×27.14E, h33km, mb5.3/71, Error ellipse: s-maj=5.5km s-min=2.1km az=115.8*

BJI **22** *09:23:18.0, 3504N×2668E, h43km, mB5.1, mb5.1, Ms4.8, Msz4.4*

ISK **22** *09:23:19.7, 3512N×2697E, h79km, ML5.1*

ISCJB **22** *09:23:19.6±0.1, 3506N×001×27.12E±001, h48km, mb5.0/160, MS4.3/50, Error ellipse: s-maj=1.9km s-min=1.3km az=60.5*

CSEM **22** *09:23:20.7, 3518N×27.15E, h54km, mb4.9*

PDG **22** *09:23:21.2±0.1, 3533N×2671E, h9km±1km*

NEIC **22** *09:23:21.2, 3524N×27.12E, h31km, mb4.9/135, ML4.4(NIC), ML4.6(ATH), After ATH.*

ATH **22** *09:23:21.2, 3524N×27.12E, h31km±1km, MD4.5/27, ML4.7*

IDC **22** *09:23:21.4±2.1, 3534N×2695E, h35km±16km, mb4.5/25, mb1 4.6/29, mb1mx4.5/31, mbtmp4.7/29, ML4.8/3, MS4.3/24, Ms1 4.2/24, ms1mx4.0/38, Error ellipse: s-maj=13.7km s-min=11.2km az=161.0*

HLW **22** *09:23:21.7, 3496N×2749E, h16km, Mb4.9*

HRVD **22** *09:23:21.2±0.6, 3517N×27.11E, h12km, MW5.1/43, Centroid moment Tensor Solution. LP body waves: s21,c24;Mantle waves: s43,c54; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.06±.10; $M_{\theta\theta}$-0.42±.07; $M_{\phi\phi}$0.47±.07; $M_{r\theta}$-4.67±.21; $M_{\theta\phi}$-0.83±.06; $M_{\phi r}$-0.38±.19; Best double couple: M=4.75300×10^{16} NP1:γ_{ϕ}5.00000°, δ10.00000°, λ8.00000°. NP2: ϕ_s267.00000°, δ89.00000°, λ99.00000°. Principal axes: T 4.4580, Plg46.0000°, Azm186.0000°; N 0.5900, Plg9.0000°, Azm87.0000°; P -5.0480, Plg43.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

THE **22** *09:23:22.4, 3533N×27.17E, h0km, ML4.3*

SZGRF **22** *09:23:24.1, 3525N×2623E, h10km, mb4.2, MS4.1, Crete, Greece*

NIC **22** *09:23:27.2±0.4, 3553N×2768E, h35km, mb4.7, ML4.4, MW4.3*

ISC 22 09:23:21.6±0.1,**3508N**±001×**2709E**±001,**h50**km, **h50**km±1.8km:**pP-P, n1002,σ1528**/1083,**mb5.0**/160, **MS4.3**/50,**91C-136D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.47**	**7**	*e*PB	**Pn**	**09 23 29.2**	**-3.3**
XRY	**Khrisi**	**1.17**	**260**	*e*Pn	**Pn**	**09 23 43.5**	**+2.0**
NPS	**Neapolis**	**1.23**	**279**	*e*Pn	**Pn**	**09 23 44.2**	**+1.8**
NPS				*e*Sn	**Sn**	**09 24 00.2**	**+2.4**
ARG	**Arkhangelos**	**1.42**	**36**	*e*Pn	**Pn**	**09 23 45.6**	**+0.6**
NISR	**Nisiros**	**1.53**	**1**	*e*PB	**Pn**	**09 23 45.5**	**-1.1**
DAT	**Datca**	**1.70**	**13**	PN	**Pn**	**09 23 48.4**	**-0.4**
DAT				SN	**Sn**	**09 24 09.7**	**+0.4**
IDI	**Anoyia**	**1.82**	**277**	P	**Pn**	**09 23 51.5**	**+1.1**
SANT	**Santorini**	**1.85**	**315**	*e*Pb	**Pn**	**09 23 51.4**	**+0.5**
SANT				*e*Sb	**Sn**	**09 24 16.0**	**+2.8**
SANT	**Santorini**	**1.85**	**315**	⇓*i*Pn	**Pn**	**09 23 51.0**	**+0.1**
SANT				*e*Sn	**Sn**	**09 24 14.0**	**+0.9**
SANT	**Santorini**	**1.85**	**315**	⇓*i*Pn	**Pn**	**09 23 51.0**	**+0.1**
SANT	**Santorini**	**1.85**	**315**	*e*Pb	**Pn**	**09 23 51.4**	**+0.5**
SANT				*e*Sn	**Sn**	**09 24 14.0**	**+0.8**
SIVA	**Sivas**	**1.87**	**269**	*e*Pb	**Pn**	**09 23 55.9**	**+4.7**
BODT	**Bodrum**	**1.99**	**5**	PN	**Pn**	**09 23 52.5**	**-0.3**
BDRM	**Kayabasi**	**2.01**	**8**	*i* P	**Pn**	**09 23 52.8**	**-0.2**
BDRM				*i* S	**Sn**	**09 24 20.2**	**+3.3**
DALT	**Dalyan (Mudla)**	**2.10**	**36**	PN	**Pn**	**09 23 54.8**	**+0.4**
YER	**Yerkesik**	**2.27**	**25**	PN	**Pn**	**09 23 56.9**	**+0.3**
KSL	**Kastellorizon**	**2.30**	**61**	*e*PN	**Pn**	**09 23 57.5**	**+0.5**
AKAS	**Kas**	**2.35**	**60**	*i* P	**Pn**	**09 23 57.9**	**+0.1**
AKAS				*i* S	**Sn**	**09 24 48.0**	**+23**
APE	**Apeiranthos**	**2.36**	**328**	*e*Pn	**Pn**	**09 23 57.8**	**0.0**
APE				*e*Sn	**Sn**	**09 24 26.7**	**+1.2**
APE	**Apeiranthos**	**2.36**	**328**	*e*Pn	**Pn**	**09 23 57.8**	**0.0**
APE				*e*Sn	**Sn**	**09 24 25.9**	**+0.4**
VAM	**Vamos**	**2.39**	**279**	*e*PN	**Pn**	**09 24 01.0**	**+2.7**
GVD	**Gavdhos**	**2.48**	**265**	*e*PN	**Pn**	**09 24 02.0**	**+2.5**
KARN	**Karanos**	**2.62**	**278**	*e*Pn	**Pn**	**09 24 04.8**	**+3.4**
KARN				*e*Sn	**Sn**	**09 24 38.7**	**+6.7**
SMG	**Samos**	**2.63**	**356**	*e*PN	**Pn**	**09 24 01.3**	**-0.3**
AYDN	**Tasoluk**	**2.66**	**14**	*i* P	**Pn**	**09 24 02.1**	**+0.2**
AYDN				*i* S	**Sn**	**09 24 39.8**	**+6.9**
ELL	**Elmali**	**2.83**	**53**	PN	**Pn**	**09 24 05.5**	**+1.2**
GOLH	**Golhisar**	**2.94**	**42**	*i* P	**Pn**	**09 24 06.9**	**+1.0**
GOLH				*i* S	**Sn**	**09 24 53.7**	**+14**
DNZL	**Cakiroluk**	**3.05**	**31**	*i* P	**Pn**	**09 24 07.4**	**+0.1**
DNZL				*i* S	**Sn**	**09 24 56.8**	**+14**
DENT	**Denizli**	**3.10**	**30**	PN	**Pn**	**09 24 07.5**	**-0.5**
URLA	**Izmir**	**3.30**	**353**	*i* P	**Pn**	**09 24 10.7**	**-0.1**
BLCB	**Balcova**	**3.30**	**359**	PN	**Pn**	**09 24 10.4**	**-0.4**
IZM	**Izmir**	**3.32**	**2**	PN	**Pn**	**09 24 11.4**	**+0.4**
KDAG	**Bornova**	**3.32**	**2**	*i* P	**Pn**	**09 24 11.4**	**+0.3**
CHOS	**Chios island**	**3.41**	**346**	*e*Pn	**Pn**	**09 24 11.9**	**-0.4**
ANTB	**Antalya**	**3.41**	**57**	*e*PN	**Pn**	**09 24 13.9**	**+1.6**
KYTH	**Kithira**	**3.51**	**291**	*e*PN	**Pn**	**09 24 15.0**	**+1.3**
BCK	**Bucak**	**3.69**	**49**	PN	**Pn**	**09 24 17.0**	**+0.8**
VLI	**Veliai**	**3.75**	**297**	*e*PN	**Pn**	**09 24 18.5**	**+1.6**
VLI				*e*SN	**Sn**	**09 25 01.1**	**+1.3**
KHL	**Karahalli**	**3.78**	**30**	*e*PN	**Pn**	**09 24 17.2**	**-0.2**
KVR	**Kavouri**	**3.83**	**317**	*e*PN	**Pn**	**09 24 19.3**	**+1.2**
AKHS	**Akhisar**	**3.84**	**8**	*i* P	**Pn**	**09 24 18.1**	**-0.1**
AKHS	**Akhisar**	**3.84**	**8**	*i* P	**Pn**	**09 24 18.0**	**-0.2**
AKS	**Akhisar**	**3.84**	**8**	PN	**Pn**	**09 24 17.6**	**-0.6**
TKTP	**Tekketepe**	**3.94**	**40**	*i* P	**Pn**	**09 24 19.6**	**+0.1**
PTL	**Penteli**	**3.94**	**320**	*e*PN	**Pn**	**09 24 20.8**	**+1.2**
NAIG	**Nisos Aigina**	**3.95**	**314**	*e*PN	**Pn**	**09 24 20.5**	**+0.8**
ATH	**Athens Observa**	**3.97**	**318**	*e*PN	**Pn**	**09 24 21.5**	**+1.6**
DABA	**Dabaa**	**4.18**	**166**	⇑P	**Pn**	**09 24 22.1**	**-0.7**
PRK	**Paraskevi**	**4.21**	**351**	*e*PN	**Pn**	**09 24 23.6**	**+0.3**
AYVA	**Ayvalik**	**4.24**	**356**	*i* P	**Pn**	**09 24 23.9**	**+0.3**
AYVA				*i* S	Sn	09 25 34.8	+23
MGER	**Gerania Oros**	**4.24**	**314**	*e*PN	**Pn**	**09 24 25.0**	**+1.4**
PPCY	**Paphos**	**4.32**	**91**	P	**Pn**	**09 24 24.7**	**0.0**
	29nm,0.3s						
PPCY				S	**Sn**	**09 25 08.5**	**-5.3**
GDZ	**Gediz**	**4.44**	**25**	*i* P	**Pn**	**09 24 25.9**	**-0.5**
ALFC	**Alevga**	**4.51**	**87**	P	**Pn**	**09 24 26.7**	**-0.7**
	53nm,0.5s						
ALFC				S	**Sn**	**09 25 13.1**	**-5.5**
ITM	**Ithomi**	**4.68**	**298**	*e*PN	**Pn**	**09 24 31.9**	**+2.2**
ITM				*e*SN	**Sn**	**09 25 23.8**	**+1.2**
DST	**Dursunbey**	**4.68**	**15**	PN	**Pn**	**09 24 29.0**	**-0.7**
BTOK	**Tokmak**	**4.74**	**9**	*i* P	**Pn**	**09 24 30.2**	**-0.3**
HDMB	**Hadim**	**4.76**	**65**	PN	**Pn**	**09 24 31.9**	**+1.1**
SZAC	**Souni-Zanaja**	**4.77**	**92**	P	**Pn**	**09 24 30.4**	**-0.5**
SZAC				S	**Sn**	**09 25 21.0**	**-3.9**
EZN	**Ezine**	**4.78**	**353**	*e*PN	**Pn**	**09 24 30.6**	**-0.5**
AOS	**Alonnisos**	**4.83**	**329**	*e*Pn	**Pn**	**09 24 32.8**	**+1.1**
BOZC	**Bozcaada**	**4.83**	**350**	*i* P	**Pn**	**09 24 31.6**	**-0.2**
BOZC				*i* S	**Sn**	**09 25 33.7**	**+7.3**
BOZC	**Bozcaada**	**4.83**	**350**	*i* P	**Pn**	**09 24 31.5**	**-0.2**
LKR	**Lokris**	**4.85**	**319**	*e*PN	**Pn**	**09 24 33.5**	**+1.5**
CANB	**Canakkale**	**4.93**	**360**	PN	**Pn**	**09 24 32.2**	**-0.9**
ERMK	**Ermenek**	**4.98**	**70**	*i* P	**Pn**	**09 24 34.9**	**+1.1**
ERMK				*i* S	**Sn**	**09 25 30.2**	**+0.1**
MAMC	**Mammari**	**5.02**	**87**	P	**Pn**	**09 24 34.0**	**-0.4**
	43nm,0.7s						
MAMC				S	**Sn**	**09 25 22.3**	**-8.8**
LIA	**Limnos Island**	**5.05**	**343**	*e*PN	**Pn**	**09 24 35.2**	**+0.5**
HBRG	**Burj al 'Arab**	**5.05**	**152**	⇑P	**Pn**	**09 24 33.5**	**-1.3**
LOS	**Limnos**	**5.11**	**342**	*e*Pn	**Pn**	**09 24 36.6**	**+1.1**
	comp=Z,4.0nm,0.8s						
KONT	**Konya--Tatoy**	**5.12**	**54**	PN	**Pn**	**09 24 36.9**	**+1.2**
CSS	**Prodhromos**	**5.12**	**89**	⇓P	**Pn**	**09 24 34.6**	**-1.1**
	28nm,0.5s						
CSS				S	**Sn**	**09 25 29.0**	**-4.5**
ORLT	**Orhaneli**	**5.16**	**16**	PN	**Pn**	**09 24 35.5**	**-0.8**
GADA	**Gvkgeada**	**5.19**	**350**	PN	**Pn**	**09 24 36.4**	**-0.3**
NEO	**Neokhori**	**5.23**	**325**	*e*PN	**Pn**	**09 24 39.2**	**+2.0**
XOR	**Xorichti**	**5.29**	**325**	*e*Pn	**Pn**	**09 24 39.4**	**+1.3**
LPK	**Lapseki**	**5.29**	**357**	*e*PN	**Pn**	**09 24 37.5**	**-0.6**
KDHN	**Kadinhani**	**5.30**	**48**	*i* P	**Pn**	**09 24 37.9**	**-0.3**
KDHN	**Kadinhani**	**5.30**	**48**	*i* P	**Pn**	**09 24 37.8**	**-0.4**
ULDT	**Uludag**	**5.31**	**17**	*i* P	**Pn**	**09 24 38.3**	**-0.1**
BNT	**Bandirma**	**5.31**	**7**	PN	**Pn**	**09 24 37.4**	**-1.0**
ESKT	**Eskisehir**	**5.35**	**33**	PN	**Pn**	**09 24 39.1**	**+0.2**
ESKT	**Eskisehir**	**5.35**	**33**	*i* P	**Pn**	**09 24 38.1**	**-0.8**
SEYT	**Eskypehyr**	**5.35**	**33**	*i* P	**Pn**	**09 24 38.1**	**-0.8**
KIZT	**Kizilcal**	**5.39**	**44**	PN	**Pn**	**09 24 39.5**	**0.0**
RLS	**Riolos of Patr**	**5.42**	**305**	*e*PN	**Pn**	**09 24 41.5**	**+1.7**
AGG	**Agios Georgios**	**5.48**	**317**	*e*Pn	**Pn**	**09 24 42.6**	**+2.0**
	comp=Z,9.7nm,0.5s						
BORA	**Eskisehir**	**5.49**	**28**	*i* P	**Pn**	**09 24 40.5**	**-0.3**
IKL	**Isikli**	**5.49**	**76**	*e*PN	**Pn**	**09 24 41.4**	**+0.6**
PAIG	**Paliouri**	**5.55**	**332**	*e*Pn	**Pn**	**09 24 43.1**	**+1.5**
GEMT	**Gemlik**	**5.60**	**17**	*e*PN	**Pn**	**09 24 41.5**	**-0.8**
RKY	**Sarkoy-Tekirda**	**5.60**	**1**	*e*PN	**Pn**	**09 24 41.3**	**-1.0**
SART	**Tekirdag**	**5.60**	**1**	*i* P	**Pn**	**09 24 42.8**	**+0.5**
PHNC	**Paralimni**	**5.70**	**89**	P	**Pn**	**09 24 43.3**	**-0.3**
	54nm,0.7s						
PHNC				S	**Sn**	**09 25 39.4**	**-8.2**
ENEZ	**Enez**	**5.70**	**353**	*e*PN	**Pn**	**09 24 42.7**	**-1.0**
MFT	**Murefte**	**5.70**	**1**	*e*PN	**Pn**	**09 24 41.9**	**-1.8**
EVR	**Evrytania**	**5.71**	**314**	*e*PN	**Pn**	**09 24 45.5**	**+1.7**
ADVT	**Abdulvahap**	**5.74**	**21**	*e*PN	**Pn**	**09 24 43.8**	**-0.5**
YLV	**Yalova**	**5.77**	**18**	*e*PN	**Pn**	**09 24 43.9**	**-0.8**
GPA	**Golpazari**	**5.79**	**25**	*e*PN	**Pn**	**09 24 44.6**	**-0.4**
OUR	**Ouranopolis**	**5.80**	**336**	*e*Pn	**Pn**	**09 24 46.7**	**+1.7**
	comp=Z,3.0nm,0.5s						
ALN	**Alexandroupoli**	**5.87**	**352**	*e*Pn	**Pn**	**09 24 46.7**	**+0.6**
	comp=Z,3.5nm,0.5s						
SWA1		**5.91**	**192**	⇑P	**Pn**	**09 24 48.1**	**+1.5**
SWA1				S	**Sn**	**09 25 51.7**	**-1.3**
MEST	**Erdemli**	**5.92**	**73**	*i* P	**Pn**	**09 24 46.9**	**+0.2**
MEST				*i* S	**Sn**	**09 25 51.5**	**-1.8**
SWA2		**5.98**	**194**	⇑P	**Pn**	**09 24 49.0**	**+1.5**
AANS		**6.00**	**142**	⇓P	**Pn**	**09 24 45.8**	**-1.9**
PLG	**Polygyros**	**6.03**	**332**	*e*PN	**Pn**	**09 24 49.3**	**+1.1**
VLS	**Valsamata**	**6.08**	**303**	*e*PN	**Pn**	**09 24 50.8**	**+2.0**
HRT	**Hereke**	**6.09**	**19**	*e*PN	**Pn**	**09 24 48.2**	**-0.8**
HMYD	**Mayadein**	**6.13**	**148**	P	**Pn**	**09 24 47.9**	**-1.6**
CTT	**Catalca**	**6.15**	**9**	*e*PN	**Pn**	**09 24 48.7**	**-1.2**
ISK	**Istanbul-Kandi**	**6.18**	**14**	*e*PN	**Pn**	**09 24 49.2**	**-1.0**
RDO	**Rodhopi**	**6.18**	**349**	*e*PN	**Pn**	**09 24 51.8**	**+1.5**
RDO				*e*SN	**Sn**	**09 25 57.6**	**-2.0**
HNAT	**Natroun**	**6.19**	**150**	P	**Pn**	**09 24 49.3**	**-1.2**
LIT	**Litokhoron**	**6.20**	**325**	*e*Pn	**Pn**	**09 24 52.0**	**+1.4**
	comp=Z,2.8nm,0.5s						
LIT	**Litokhoron**	**6.20**	**325**	P	**Pn**	**09 24 53.5**	**+2.9**
SQR		**6.23**	**145**	⇑P	**Pn**	**09 24 49.3**	**-1.6**
MERS	**Mersin**	**6.29**	**71**	*e*PN	**Pn**	**09 24 52.3**	**+0.6**
MDU	**Mudurnu**	**6.29**	**30**	*e*PN	**Pn**	**09 24 51.0**	**-0.8**
HLW	**Helwan**	**6.32**	**144**	⇑P	**Pn**	**09 24 50.6**	**-1.6**
FYM	**Al Fayyum**	**6.32**	**147**	⇓P	**Pn**	**09 24 51.1**	**-1.1**
FYM				S	**Sn**	**09 25 55.8**	**-7.3**
HORT	**Hortiatis**	**6.35**	**331**	*e*Pn	**Pn**	**09 24 54.2**	**+1.6**
KLYT	**Kilyos**	**6.36**	**13**	*e*PN	**Pn**	**09 24 51.3**	**-1.4**
AYT	**Al 'Ayyat**	**6.36**	**146**	⇑P	**Pn**	**09 24 51.1**	**-1.7**
THE	**Thessaloniki**	**6.43**	**331**	*e*Pn	**Pn**	**09 24 55.4**	**+1.6**
	comp=Z,2.5nm,1.0s						
THE	**Thessaloniki**	**6.43**	**331**	P	**Pn**	**09 24 56.4**	**+2.6**
SOH	**Sokhos**	**6.45**	**334**	P	**Pn**	**09 24 57.6**	**+3.6**
HENT	**Hendek**	**6.48**	**27**	*i* P	**Pn**	**09 24 54.4**	**+0.1**
KOT	**Kottamia**	**6.51**	**141**	⇑P	**Pn**	**09 24 53.2**	**-1.6**
KOT				S	**Sn**	**09 25 58.9**	**-8.8**
ANTO	**Ankara**	**6.59**	**42**	*e*PN	**Pn**	**09 24 55.5**	**-0.4**
ANTO	**Ankara**	**6.59**	**42**	⇑*i*P	**Pn**	**09 24 56.5**	**+0.6**
ANTO	**Ankara**	**6.59**	**42**	*e*P	**Pn**	**09 24 55.7**	**-0.2**
ANTO				pmax	pmax		
	comp=Z,180nm,0.9s						
ANTO	**Ankara**	**6.59**	**42**	*e*Pn	**Pn**	**09 24 55.7**	**-0.2**
	comp=Z,180nm,0.9s						
ANTO	**Ankara**	**6.59**	**42**	*e*Pn	**Pn**	**09 24 55.7**	**-0.2**
	comp=Z,180nm,0.9s						
HSAF	**As Saff**	**6.62**	**144**	⇓P	**Pn**	**09 24 54.6**	**-1.7**
HHAG	**Hagoal**	**6.63**	**139**	⇑P	**Pn**	**09 24 54.5**	**-1.9**
KDZ	**Kurdzhali**	**6.69**	**349**	*i* P	**Pn**	**09 24 58.2**	**+0.9**
KZN	**Kozani**	**6.71**	**323**	*e*PN	**Pn**	**09 25 00.2**	**+2.7**
KZN				*e*SN	**Sn**	**09 26 12.2**	**-0.4**
GLL	**Jalalah**	**6.73**	**143**	⇓P	**Pn**	**09 24 56.2**	**-1.6**
SGKT	**Sivrigoynuk**	**6.75**	**34**	*i* P	**Pn**	**09 24 59.2**	**+1.1**
JAN	**Janina**	**6.75**	**314**	*e*PN	**Pn**	**09 25 00.7**	**+2.6**
NVR	**Nevrokopi**	**6.76**	**339**	*e*PN	**Pn**	**09 25 00.6**	**+2.4**
EDRB	**Edirne**	**6.77**	**358**	*e*PN	**Pn**	**09 24 56.7**	**-1.6**
AMAG	**Maghara**	**6.78**	**129**	⇑*e*P	**Pn**	**09 24 56.2**	**-2.4**
KARA	**Karaisali**	**6.80**	**69**	*e*PN	**Pn**	**09 24 59.2**	**+0.4**
KAMT	**Kaman**	**6.80**	**49**	*e*PN	**Pn**	**09 24 59.4**	**+0.6**
RZN	**Rozhen**	**6.86**	**345**	P	**Pn**	**09 25 01.1**	**+1.5**
KRTS	**Karatas**	**6.89**	**75**	*e*PN	**Pn**	**09 24 59.8**	**-0.2**
AWBH		**6.91**	**167**	⇓P	**Pn**	**09 24 60.0**	**-0.3**
KNT	**Kendrikon**	**6.92**	**333**	*e*Pn	**Pn**	**09 25 01.5**	**+1.1**
	comp=Z,4.0nm,0.5s						
GRG	**Griva**	**6.94**	**329**	*e*Pn	**Pn**	**09 25 02.9**	**+2.2**
BR131	**Keskin Array S**	**6.98**	**46**	*e*Pn	**Pn**	**09 25 01.1**	**-0.1**
BR131				*e*Sn	**Sn**	**09 26 16.8**	**-2.3**
BR131	**Keskin Array S**	**6.98**	**46**	*e*Pn	**Pn**	**09 25 01.1**	**-0.1**
BRTR	**Keskin Array B**	**6.98**	**46**	Pn	**Pn**	**09 25 00.6**	**-0.6**
	comp=Z,2.8nm,0.3s,baz=221,slow=13,SNR=56						
BRTR				Sn	**Sn**	**09 26 18.1**	**-1.1**
	comp=Z,4.8nm,0.3s,baz=213,slow=26,SNR=7.6						
BRTR				Lg		09 27 05.5	
	baz=216,slow=14,SNR=1.1						
BRTR	**Keskin Array B**	**6.98**	**46**	P	**Pn**	**09 25 00.6**	**-0.6**
BRTR						09 26 18.1	
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BRTR				smax			
	comp=N,5.0nm,0.3s						
BRTR	**Keskin Array B**	**6.98**	**46**	P	**Pn**	**09 25 00.6**	**-0.6**
	comp=N,3.0nm,0.3s						
BRTR				Sn	**Sn**	**09 26 18.1**	**-1.1**
MATL	**Matirih**	**7.00**	**101**	*e*Pn	**Pn**	**09 24 58.5**	**-3.1**
MMB	**Musomiste**	**7.02**	**339**	*e*Pn	**Pn**	**09 25 03.0**	**+1.3**
MMB	**Musomiste**	**7.02**	**339**	*i* P	**Pn**	**09 25 03.0**	**+1.2**
DIM	**Dimitrovgrad**	**7.07**	**351**	P	**Pn**	**09 25 03.5**	**+1.0**
KDZE	**Karadeniz Ereo**	**7.11**	**28**	*e*PN	**Pn**	**09 25 01.9**	**-1.1**
SUZ		**7.12**	**136**	⇑P	**Pn**	**09 25 01.2**	**-2.1**
BHL	**Bhannes**	**7.17**	**97**	*e*Pn	**Pn**	**09 25 03.6**	**-0.1**
VAY	**Valandovo**	**7.18**	**332**	*e*Pn	**Pn**	**09 25 05.2**	**+1.3**
VAY	**Valandovo**	**7.18**	**332**	*i* Pn	**Pn**	**09 25 05.5**	**+1.6**
MMAI	**Mount Meron Ar**	**7.20**	**104**	Pn	**Pn**	**09 25 02.8**	**-1.4**
	comp=N,16nm,0.3s,baz=308,slow=14,SNR=26						
MMAI				Sn	**Sn**	**09 26 22.2**	**-2.4**
	comp=N,72nm,0.3s,baz=305,slow=26,SNR=7.9						
AVNT	**Avonos**	**7.23**	**57**	*i* P	**Pn**	**09 25 03.3**	**+0.6**
PLD	**Plovdiv**	**7.26**	**346**	P	**Pn**	**09 25 08.1**	**+3.0**
FNA	**Florina**	**7.27**	**323**	*e*Pn	**Pn**	**09 25 07.5**	**+2.4**
	comp=N,3.2nm,0.5s						
CEYT	**Ceyhan**	**7.27**	**72**	*e*PN	**Pn**	**09 25 05.0**	**-0.3**
ARNB	**Al Arnab**	**7.29**	**81**	⇑*i*P	**Pn**	**09 25 05.3**	**-0.2**
ARNB				⇑*i*S	Sn	09 25 53.1	-34
HWQ	**Hawqa**	**7.34**	**94**	*e*Pn	**Pn**	**09 25 05.6**	**-0.6**
KSDI	**Kefar Szold**	**7.35**	**102**	P	**Pn**	**09 25 05.5**	**-0.8**
CDAG	**Cicekdag**	**7.36**	**50**	*i* P	**Pn**	**09 25 06.3**	**-0.1**
ELDT	**Eldivan**	**7.37**	**41**	*i* P	**Pn**	**09 25 06.6**	**0.0**
JMB	**Yambol**	**7.39**	**357**	*e*Pn	**Pn**	**09 25 07.6**	**+0.7**
JMB	**Yambol**	**7.39**	**357**	P	**Pn**	**09 25 08.0**	**+1.1**
ZAF		**7.40**	**140**	⇓P	**Pn**	**09 25 05.2**	**-1.7**
KZIT	**Kziot**	**7.41**	**122**	P	**Pn**	**09 25 06.3**	**-0.9**
MMLI	**Mount Malkishu**	**7.42**	**108**	P	**Pn**	**09 25 07.1**	**-0.2**
KEK	**Kerkira**	**7.42**	**311**	*e*PN	**Pn**	**09 25 09.3**	**+2.0**
HTY	**Hatay**	**7.44**	**79**	*e*PN	**Pn**	**09 25 07.6**	**0.0**
KOZT	**Kozan**	**7.45**	**69**	*e*PN	**Pn**	**09 25 07.7**	**0.0**
KKB	**Krupnik**	**7.47**	**336**	P	**Pn**	**09 25 09.2**	**+1.2**
BIA	**Bitola**	**7.47**	**324**	*i* Pn	**Pn**	**09 25 08.5**	**+0.5**
SLNF	**Slenfeh**	**7.48**	**83**	⇓*i*P	**Pn**	**09 25 07.2**	**-0.9**
ZNM		**7.50**	**138**	⇑P	**Pn**	**09 25 06.5**	**-1.9**
BRBR	**Barbar**	**7.52**	**100**	⇑*i*P	**Pn**	**09 25 09.1**	**+0.4**
BRBR				⇑*i*S	Sn	09 26 00.6	-32
SVTA	**Shivta**	**7.55**	**121**	P	**Pn**	**09 25 08.0**	**-1.1**
CANT	**Cankiri**	**7.56**	**41**	*e*PN	**Pn**	**09 25 08.4**	**-0.8**
SAFT	**Safranbolu**	**7.57**	**34**	*e*PN	**Pn**	**09 25 08.5**	**-0.8**
BIDA	**Albida**	**7.57**	**88**	⇑*i*P	**Pn**	**09 25 07.2**	**-2.1**
BIDA				⇑*i*S	Sn	09 25 58.3	-35
HMDT	**Nahal Hemdat**	**7.57**	**109**	P	**Pn**	**09 25 08.9**	**-0.5**
COBT	**Iskenderun**	**7.58**	**76**	*i* P	**Pn**	**09 25 09.0**	**-0.5**
COBT				*i* S	**Sn**	**09 26 30.0**	**-4.1**
WRDH	**Warideh**	**7.63**	**84**	⇓*i*P	**Pn**	**09 25 08.8**	**-1.4**
WRDH				⇓*i*S	Sn	09 26 01.3	-34
BTCH	**Batrach**	**7.70**	**80**	⇑*i*P	**Pn**	**09 25 11.0**	**0.0**
QASN	**Qassioun**	**7.75**	**99**	⇑*i*P	**Pn**	**09 25 13.0**	**+1.2**
HNKL	**Nakhl**	**7.76**	**130**	⇑P	**Pn**	**09 25 10.2**	**-1.7**
DRGI	**Dragot**	**7.76**	**114**	P	**Pn**	**09 25 11.1**	**-0.9**
OHR	**Ohrid**	**7.80**	**322**	*i* Pn	**Pn**	**09 25 13.4**	**+0.9**
OHR	**Ohrid**	**7.80**	**322**	*i* Pn	**Pn**	**09 25 13.3**	**+0.8**
PGB	**Panagyurishte**	**7.80**	**344**	P	**Pn**	**09 25 12.0**	**-0.5**
CORM	**Corum**	**7.85**	**47**	*e*PN	**Pn**	**09 25 12.8**	**-0.4**
TOTH	**TOTAH**	**7.92**	**100**	⇑*i*P	**Pn**	**09 25 14.8**	**+0.7**
DRWC	**Darouich**	**7.93**	**76**	⇑*i*P	**Pn**	**09 25 13.6**	**-0.6**
BNN	**Bunyan**	**7.96**	**59**	*e*PN	**Pn**	**09 25 14.3**	**-0.3**
HFRF	**Wahat Farafira**	**7.97**	**172**	⇓P	**Pn**	**09 25 14.5**	**-0.3**
YOZ	**Yozgat**	**7.98**	**53**	*e*PN	**Pn**	**09 25 14.3**	**-0.6**
TOS	**Tosya**	**8.08**	**41**	*e*PN	**Pn**	**09 25 15.3**	**-1.0**
VTS	**Vitosha**	**8.09**	**339**	P	**Pn**	**09 25 19.0**	**+2.5**
VTS	**Vitosha**	**8.09**	**339**	⇓*i*P	**Pn**	**09 25 18.0**	**+1.5**
PRD	**Provadia**	**8.12**	**2**	P	**Pn**	**09 25 16.6**	**-0.2**
BALT	**Daday**	**8.12**	**36**	*i* P	**Pn**	**09 25 16.7**	**-0.2**
SKO	**Skopje**	**8.19**	**329**	*i* Pn	**Pn**	**09 25 18.3**	**+0.5**
SKO	**Skopje**	**8.19**	**329**	*i* Pn	**Pn**	**09 25 18.2**	**+0.5**
SALA	**Sala**	**8.36**	**104**	⇓*i*P	**Pn**	**09 25 21.3**	**+1.2

	comp=Z,1µm,16.5s									
SIM					*e*S		**Sn**	**09 28 08.0**	**+4.6**	
HEDF	**Idfu**	**11.26**	**150**	⇓	*i*P		**Pn**	**09 25 59.1**	**-0.7**	
BZS	**Buzias**	**11.32**	**340**	⇓	*i*P		**Pn**	**09 26 03.8**	**+3.1**	
BZS	**Buzias**	**11.32**	**340**	⇓	P		**Pn**	**09 26 03.8**	**+3.1**	
BZS	**Buzias**	**11.32**	**340**		P		**Pn**	**09 26 01.9**	**+1.2**	
FGSL	**Fruska Gora**	**11.50**	**333**		Pn		**Pn**	**09 26 02.9**	**-0.2**	
KIS	**Kishinev**	**11.98**	**6**		*e*P		**Pn**	**09 26 06.0**	**-3.7**	
KIS					MLR		MLR			
	comp=N,2µm,15.0s									
KIS					MLR		MLR			
	comp=Z,3µm,15.0s									
KIS					MLR		MLR			
	comp=Z,3µm,15.0s									
DRGR		**12.16**	**346**	⇓	*i*P		**Pn**	**09 26 21.7**	**+10**	
DRGR		**12.16**	**346**	⇓	P		**Pn**	**09 26 21.7**	**+10**	
DRGR		**12.16**	**346**		P		**Pn**	**09 26 13.2**	**+1.1**	
AAHD	**Abu Hadid**	**12.32**	**155**	⇑	P		**Pn**	**09 26 14.8**	**+0.6**	
ANN	**Anapa**	**12.53**	**36**		*e*P		**Pn**	**09 26 12.4**	**-4.8**	
ANN					pmax		pmax			
	comp=Z,25nm,0.9s									
ANN					MLR		MLR			
	comp=Z,294nm,11.0s									
BURAR	**Bucovina Array**	**12.61**	**354**	⇓	*i*P		**Pn**	**09 26 20.7**	**+2.5**	
BURAR	**Bucovina Array**	**12.61**	**354**	⇓	P		**Pn**	**09 26 20.7**	**+2.5**	
PKSM	**Moragy**	**12.83**	**333**	⇑	*i*P		**Pn**	**09 26 23.2**	**+1.9**	
PKSM	**Moragy**	**12.83**	**333**	⇑	*e*P		**Pn**	**09 26 22.5**	**+1.2**	
AQU	**L'Aquila**	**12.92**	**308**		*e*P		**Pn**	**09 26 24.9**	**+2.5**	
BOJS	**Bojanci**	**13.77**	**323**		*e*Pn		**Pn**	**09 26 31.9**	**-2.2**	
BOJS					*e*Sn		**Sn**	**09 28 58.3**	**-7.2**	
CRES	**Cresnjev**	**13.90**	**324**		*e*Pn		**Pn**	**09 26 32.3**	**-3.6**	
PSZ	**Piszkesteto**	**13.91**	**339**		*e*Pd			09 26 34.9		
PSZ	**Piszkesteto**	**13.91**	**339**		P		**Pn**	**09 26 35.8**	**-0.1**	
UZH	**Uzhgorod**	**14.00**	**347**		*e*P		**Pn**	**09 26 38.0**	**+0.8**	
UZH					*e*S		**Sn**	**09 29 11.0**	**-0.1**	
UZH					MLR		MLR			
	comp=Z,2µm,13.0s									
UZH	**Uzhgorod**	**14.00**	**347**		*e*P		**Pn**	**09 26 38.0**	**+0.8**	
	comp=Z,2µm,13.0s									
KECS	**Kecovo**	**14.27**	**342**		*e*P		**Pn**	**09 26 44.0**	**+3.3**	
KECS					pmax		pmax			
	comp=Z,9.0nm,1.3s									
KECS	**Kecovo**	**14.27**	**342**		*e*P		**Pn**	**09 26 44.0**	**+3.3**	
	comp=Z,9.3nm,1.3s									
KOLS	**Kolonicke sedl**	**14.30**	**347**		*e*P		**Pn**	**09 26 45.6**	**+4.4**	
KOLS					*e*			09 29 35.5		
CEY	**Cerknica**	**14.35**	**322**		P		**Pn**	**09 26 42.7**	**+0.8**	
BHD	**Baghdad**	**14.43**	**92**		*ex*		x	09 26 40.0		
BHD					*ex*		x	09 29 20.0		
CRVS	**Cervenica-Dubn**	**14.43**	**345**		*e*P		**Pn**	**09 26 45.8**	**+2.9**	
CRVS					*e*S		**Sn**	**09 29 36.9**	**+15**	
KEST	**Kesra**	**14.49**	**278**		Pn		**Pn**	**09 26 46.8**	**+3.0**	
	comp=Z,0.3nm,0.3s,baz=343,slow=12,SNR=22									
LJU	**Ljubljana**	**14.51**	**323**		*i* Pn		**Pn**	**09 26 43.4**	**-0.6**	
PERS	**Pernice**	**14.66**	**326**		*e*Pn		**Pn**	**09 26 45.0**	**-0.9**	
VYHS	**Vyhne**	**14.74**	**338**		*e*P		**Pn**	**09 26 45.3**	**-1.7**	
VYHS					pmax		pmax			
	comp=Z,21nm,1.6s									
VYHS	**Vyhne**	**14.74**	**338**		*e*P		**Pn**	**09 26 45.3**	**-1.7**	
	comp=Z,21nm,1.6s									
VSL	**Villasalto**	**14.77**	**293**		*e*Pn		**Pn**	**09 26 47.0**	**-0.4**	
	comp=Z,22nm,0.8s									
VSL	**Villasalto**	**14.77**	**293**		*e*Pn		**Pn**	**09 26 47.0**	**-0.4**	
	comp=Z,22nm,0.8s									
ONI	**Oni**	**14.78**	**55**		P		**Pn**	**09 26 53.1**	**+5.7**	
VOJS	**Vojsko**	**14.83**	**322**		*e*Pn		**Pn**	**09 26 46.5**	**-1.7**	
OBKA	**Obir**	**14.83**	**324**	⇑	*i*P		**Pn**	**09 26 47.9**	**-0.3**	
	comp=Z,103nm,1.9s,SNR=9.5									
SOP	**Sopron**	**14.85**	**331**	⇑	*e*P		**Pn**	**09 26 48.9**	**+0.5**	
GNI	**Garni**	**14.87**	**65**		*e*PN		**Pn**	**09 26 47.5**	**-1.2**	
GNI	**Garni**	**14.87**	**65**		Pn		**Pn**	**09 26 52.7**	**+4.0**	
	comp=Z,1.2nm,0.3s,baz=87,slow=4.3,SNR=8.8									
GNI					LR		LR	09 33 56.3		
	comp=Z,2µm,19.5s,baz=270,slow=43									
GNI	**Garni**	**14.87**	**65**		*e*Pn		**Pn**	**09 26 50.8**	**+2.0**	
KWP	**Kalwaria**	**14.90**	**349**		*e*P		**Pn**	**09 26 49.8**	**+0.8**	
LVV	**L'vov**	**14.90**	**352**	⇑	*i*P		**Pn**	**09 26 51.9**	**+2.8**	
LVV					*e*S		**Sn**	**09 29 38.1**	**+5.1**	
LVV					MLR		MLR			
	comp=N,1µm,10.0s									
LVV					MLR		MLR			
	comp=E,200nm,10.0s									
LVV					MLR		MLR			
	comp=Z,1µm,10.0s									
KIV	**Kislovodsk**	**14.93**	**49**		P		**Pn**	**09 26 55.5**	**+6.0**	
	comp=Z,552nm,0.8s,SNR=12									
KIV	**Kislovodsk**	**14.93**	**49**	⇓	P		**Pn**	**09 26 55.5**	**+6.0**	
	SNR=40									
KIV	**Kislovodsk**	**14.93**	**49**	⇑	*e*P		**Pn**	**09 26 55.4**	**+5.9**	
KIV					*e*S		**Sn**	**09 29 40.7**	**+7.1**	
KIV					pmax		pmax			
	comp=Z,239nm,1.8s									
KIV					MLR		MLR			
	comp=Z,1µm,18.0s									
KIV	**Kislovodsk**	**14.93**	**49**	⇓	*e*P		**Pn**	**09 26 55.2**	**+5.8**	
	comp=Z,56nm,0.6s									
ARSA	**Arzberg**	**14.94**	**328**	⇑	*i*P		**Pn**	**09 26 48.9**	**-0.7**	
	comp=Z,101nm,2.0s,SNR=13									
STHS	**Stebnicka Huta**	**14.96**	**345**		*e*P		**Pn**	**09 26 54.5**	**+4.6**	
STHS					pmax		pmax			
	comp=Z,29nm,0.9s									
STHS	**Stebnicka Huta**	**14.96**	**345**		*e*P		**Pn**	**09 26 54.5**	**+4.6**	
	comp=Z,29nm,0.9s									
STHS					*e*			09 27 04.7		
ZST	**Bratislava**	**15.07**	**333**		*e*P		**Pn**	**09 26 50.6**	**-0.7**	
ZST					pmax		pmax			
	comp=Z,14nm,1.0s									
ZST					MLR		MLR			
	comp=Z,900nm,16.3s									
ZST	**Bratislava**	**15.07**	**333**		*e*P		**Pn**	**09 26 50.6**	**-0.7**	
	comp=Z,14nm,1.0s									
ZST					*e*S		**S**	**09 29 56.1**	**+3.9**	
ZEI	**Tsey**	**15.15**	**55**		*e*P		**Pn**	**09 26 56.3**	**+3.9**	
NIE	**Niedzica**	**15.18**	**343**		*e*P		**Pn**	**09 26 56.5**	**+3.8**	
CONA	**Conrad Observa**	**15.33**	**330**	⇑	*i*Pn		**Pn**	**09 26 54.3**	**-0.3**	
	comp=Z,19nm,1.4s,SNR=11									
TBLG	**Delisi**	**15.34**	**59**		P		**Pn**	**09 26 59.6**	**+4.9**	
MTA	**Mtatsminda**	**15.36**	**59**		P		**Pn**	**09 27 00.1**	**+5.0**	
JAVC	**Velka Javorina**	**15.43**	**336**		P		**Pn**	**09 26 57.9**	**+1.9**	
AKASG	**Malin Array Be**	**15.69**	**5**		Pn		**Pn**	**09 26 58.4**	**-1.0**	
	comp=Z,6.4nm,0.3s,baz=193,slow=12,SNR=36									
AKASG					Sn		**Sn**	**09 29 59.3**	**+7.1**	
	baz=191,slow=22,SNR=7.1									
AKASG					LR		LR	09 33 30.8		
	comp=Z,756nm,20.8s,baz=185,slow=40									
AKASG	**Malin Array Be**	**15.69**	**5**		P		**Pn**	**09 26 58.4**	**-0.9**	
AKASG								09 29 59.3		
AKASG					pmax		pmax			
	comp=Z,6.0nm,0.3s									
AKASG					MLR		MLR			
	comp=Z,756nm,20.8s									
AKBB	**Malin Array Si**	**15.69**	**5**		*e*P		**Pn**	**09 27 00.9**	**+1.6**	
DGRG	**David-gareji**	**15.70**	**61**		P		**Pn**	**09 27 00.6**	**+1.2**	
KBA	**Koelnbreinsper**	**15.82**	**323**	⇑	*i*P		**Pn**	**09 27 00.2**	**-0.7**	
	comp=Z,230nm,2.5s,SNR=11									
KBA	**Koelnbreinsper**	**15.82**	**323**	⇑	*i*P		**Pn**	**09 27 00.2**	**-0.8**	
KBA					pmax		pmax			
	comp=Z,230nm,2.5s									
PGF	**Pioggiola**	**15.94**	**303**		*e*P		**Pn**	**09 27 01.0**	**-1.4**	
	comp=Z,21nm,0.5s									
PGF	**Pioggiola**	**15.94**	**303**		*e*P		**Pn**	**09 27 01.0**	**-1.4**	
PGF					pmax		pmax			
	comp=Z,10.0nm,0.5s									
PGF	**Pioggiola**	**15.94**	**303**		*e*P		**Pn**	**09 27 01.0**	**-1.4**	
	comp=Z,10nm,0.5s									
MOA	**Molln**	**15.95**	**327**	⇓	*i*P		**Pn**	**09 27 00.3**	**-2.3**	
	comp=Z,118nm,2.1s,SNR=9.2									
OJC	**Ojcow**	**16.04**	**343**		*e*P		**Pn**	**09 27 05.5**	**+1.7**	
OJC					*e*S		**S**	**09 29 55.5**	**-17**	
OKC	**Ostrava-Krasne**	**16.14**	**339**		*e*P		**Pn**	**09 27 06.5**	**+1.5**	
OKC					AMS		AMS	09 34 30.0		
	comp=Z,2µm,11.5s									
OKC	**Ostrava-Krasne**	**16.14**	**339**		*e*P		**Pn**	**09 27 06.5**	**+1.5**	
	comp=Z,2µm,11.5s									
VRAC	**Vranov**	**16.19**	**335**		Pn		**Pn**	**09 27 04.7**	**-0.9**	
	comp=Z,2.0nm,0.3s,baz=159,slow=12,SNR=24									
VRAC					LR		LR	09 33 42.1		
	comp=Z,789nm,20.4s,baz=153,slow=39									
VRAC	**Vranov**	**16.19**	**335**	⇑	*i*P		**Pn**	**09 27 05.2**	**-0.4**	
VRAC	**Vranov**	**16.19**	**335**	⇑	P		**Pn**	**09 27 05.2**	**-0.4**	
MORC	**Moravsky Berou**	**16.27**	**337**	⇓	*i*P		**Pn**	**09 27 05.4**	**-1.3**	
MORC	**Moravsky Berou**	**16.27**	**337**		P		**Pn**	**09 27 08.1**	**+1.4**	
MORC	**Moravsky Berou**	**16.27**	**337**	⇓	*e*P		**Pn**	**09 27 05.3**	**-1.4**	
MORC	**Moravsky Berou**	**16.27**	**337**		*e*P		**Pn**	**09 27 05.3**	**-1.4**	
TREC	**Trest**	**16.58**	**333**		AMS		AMS	09 35 10.0		
	comp=Z,800nm,14.5s									
WTTA	**Wattenberg**	**16.80**	**321**	⇑	*i*P		**Pn**	**09 27 14.2**	**+0.9**	
	comp=Z,178nm,1.9s,SNR=14									
WTTA	**Wattenberg**	**16.80**	**321**	⇑	*i*P		**Pn**	**09 27 14.2**	**+0.8**	
WTTA					pmax		pmax			
	comp=Z,178nm,1.9s									
GEC2	**GERESS Array S**	**16.95**	**328**		*e*P		**Pn**	**09 27 14.6**	**-0.5**	
	comp=Z,120nm,1.7s									
GEC2	**GERESS Array S**	**16.95**	**328**		*e*P		**Pn**	**09 27 14.6**	**-0.5**	
GEC2					pmax		pmax			
	comp=Z,120nm,1.7s									
GERES	**GERESS Array B**	**16.95**	**328**		Pn		**Pn**	**09 27 13.9**	**-1.3**	
	comp=Z,1.8nm,0.3s,baz=135,slow=13,SNR=45									
GERES	**GERESS Array B**	**16.95**	**328**		P		**Pn**	**09 27 13.9**	**-1.2**	
GERES					pmax		pmax			
	comp=Z,2.0nm,0.3s									
SQTA	**Sankt Quirin**	**17.00**	**320**	⇓	*i*P		**Pn**	**09 27 15.6**	**-0.2**	
	comp=Z,55nm,1.6s,SNR=9.2									
SQTA	**Sankt Quirin**	**17.00**	**320**	⇓	*i*P		**Pn**	**09 27 15.6**	**-0.2**	
SQTA					pmax		pmax			
	comp=Z,55nm,1.6s									
MOTA	**Moosalm**	**17.13**	**321**	⇓	*i*P		**Pn**	**09 27 17.2**	**-0.2**	
	comp=Z,48nm,1.7s									
MOTA	**Moosalm**	**17.13**	**321**	⇓	*i*P		**Pn**	**09 27 17.2**	**-0.2**	
MOTA					pmax		pmax			
	comp=Z,49nm,1.7s									
DPC	**Dobruska-Polom**	**17.16**	**336**		*e*P		**Pn**	**09 27 17.3**	**-0.5**	
DPC					AMS		AMS	09 34 30.0		
	comp=Z,1µm,19.5s									
DPC	**Dobruska-Polom**	**17.16**	**336**		*e*P		**Pn**	**09 27 17.3**	**-0.5**	
	comp=Z,1µm,19.5s									
KHC	**Kasperske Hory**	**17.22**	**329**		*e*P		**Pn**	**09 27 17.8**	**-0.7**	
KHC					AMS		AMS	09 35 50.0		
	comp=Z,1µm,15.7s									
KHC	**Kasperske Hory**	**17.22**	**329**		*e*P		**Pn**	**09 27 17.8**	**-0.7**	
	comp=Z,1µm,15.7s									
UPC	**Upice**	**17.40**	**336**		*e*P		**Pn**	**09 27 20.1**	**-0.7**	
SAOF	**Saorge**	**17.47**	**306**		*e*P		**Pn**	**09 27 19.9**	**-1.7**	
SBF	**Sospel**	**17.50**	**306**		*e*P		**Pn**	**09 27 21.4**	**-0.6**	
	comp=Z,198nm,0.7s									
SBF	**Sospel**	**17.50**	**306**		*e*P		**Pn**	**09 27 21.4**	**-0.6**	
SBF					pmax		pmax			
	comp=Z,99nm,0.7s									
SBF	**Sospel**	**17.50**	**306**		*e*P		**Pn**	**09 27 21.4**	**-0.6**	
	comp=Z,99nm,0.7s									
PRU	**Pruhonice**	**17.50**	**332**		*e*P		**Pn**	**09 27 21.0**	**-1.0**	
PRU					AMS		AMS	09 35 10.0		
	comp=Z,800nm,11.1s									
PRU	**Pruhonice**	**17.50**	**332**		*e*P		**Pn**	**09 27 21.0**	**-1.0**	
	comp=Z,800nm,11.1s									
WET	**Wettzell**	**17.53**	**328**		*e*P		**Pn**	**09 27 21.3**	**-1.1**	
	comp=Z,141nm,2.0s									
WET	**Wettzell**	**17.53**	**328**		*e*P		**Pn**	**09 27 21.3**	**-1.1**	
WET					pmax		pmax			
	comp=Z,141nm,2.0s									
AUTN	**L'Aution**	**17.56**	**306**		*e*P		**Pn**	**09 27 20.9**	**-1.8**	
KSP	**Ksiaz**	**17.60**	**337**		*e*P		**Pn**	**09 27 22.6**	**-0.6**	
KSP	**Ksiaz**	**17.60**	**337**	⇓	*e*P		**Pn**	**09 27 22.4**	**-0.8**	
KSP					*e*S		**S**	**09 30 39.1**	**-4.7**	
KSP					MLR		MLR			
	comp=Z,2µm,24.5s									
KSP	**Ksiaz**	**17.60**	**337**	⇓	*e*P		**Pn**	**09 27 22.4**	**-0.8**	
KSP					*e*S		**S**	**09 30 39.1**	**-4.7**	
KSP	**Ksiaz**	**17.60**	**337**		*e*P		**Pn**	**09 27 22.4**	**-0.8**	
	comp=Z,2µm,24.5s									
PRA	**Prague**	**17.61**	**332**		P		**Pn**	**09 27 23.0**	**-0.3**	
MAK	**Makhachkala**	**17.68**	**57**		*d i*P		**Pn**	**09 27 26.4**	**+2.2**	
MAK					*i* S		**S**	**09 30 44.3**	**-1.2**	
MAK					pmax		pmax			
	comp=Z,616nm,1.9s									
MAK					MLR		MLR			
	comp=Z,792nm,20.0s									
TOUF	**Mont Tournerai**	**17.68**	**306**		*e*P		**Pn**	**09 27 25.3**	**+1.1**	
DAVA	**Damuels**	**17.75**	**319**	⇓	*i*P		**Pn**	**09 27 24.5**	**-0.5**	
	comp=Z,97nm,2.6s,SNR=13									
MIB	**Mutribah**	**17.87**	**101**		*e*P		**Pn**	**09 27 25.9**	**-0.7**	
MIB					AMb		AMB	09 27 27.1		
	comp=Z,18nm,0.8s									
FRF	**La Foret Royal**	**17.91**	**304**		*e*P		**Pn**	**09 27 26.2**	**-0.8**	
	comp=Z,22nm,0.6s									
FRF	**La Foret Royal**	**17.91**	**304**		*e*P		**Pn**	**09 27 26.2**	**-0.8**	
FRF					pmax		pmax			
	comp=Z,11nm,0.6s									
FRF	**La Foret Royal**	**17.91**	**304**		*e*P		**Pn**	**09 27 26.2**	**-0.8**	
	comp=Z,11nm,0.6s									
LMR	**La Mourre**	**17.93**	**304**		*e*P		**Pn**	**09 27 26.1**	**-1.1**	
	comp=Z,41nm,0.9s									
LMR	**La Mourre**	**17.93**	**304**		*e*P		**Pn**	**09 27 26.1**	**-1.1**	
LMR					pmax		pmax			
	comp=Z,21nm,0.9s									
LMR	**La Mourre**	**17.93**	**304**		*e*P		**Pn**	**09 27 26.1**	**-1.1**	
	comp=Z,21nm,0.9s									
PVCC	**Panska Ves**	**17.93**	**333**		*e*P		**Pn**	**09 27 26.5**	**-0.7**	
PVCC					AMS		AMS	09 35 40.0		
	comp=Z,700nm,9.4s									
PVCC	**Panska Ves**	**17.93**	**333**		*e*P		**Pn**	**09 27 26.5**	**-0.7**	
	comp=Z,700nm,9.4s									
LLS	**Linth-Limmern**	**17.97**	**316**	⇓	P		**Pn**	**09 27 27.2**	**-0.6**	
NAY	**Al-Naaiem**	**18.01**	**103**		*e*P		**Pn**	**09 27 28.2**	**-0.1**	
NAY					AMb		AMB	09 27 32.8		
	comp=Z,17nm,0.6s									
MMK	**Mattmark**	**18.16**	**313**		P		**Pn**	**09 27 28.3**	**-1.7**	
MUO	**Muotathal**	**18.25**	**316**	⇓	P		**Pn**	**09 27 30.4**	**-0.8**	
UMR	**Umm Al-Rimmam**	**18.27**	**102**		*e*P		**Pn**	**09 27 31.4**	**0.0**	
UMR					AMb		AMB	09 27 34.7		
	comp=Z,49nm,0.6s									
ROTZ	**Rotzenmuhle**	**18.29**	**328**		*e*P		**Pn**	**09 27 29.8**	**-1.8**	
	comp=Z,72nm,1.9s									
ROTZ					*e*S		**S**	**09 30 49.5**	**-8.2**	
MBDF	**Montbardon**	**18.29**	**308**		*e*P		**Pn**	**09 27 29.3**	**-2.3**	
	comp=Z,44nm,0.6s									
MBDF	**Montbardon**	**18.29**	**308**		*e*P		**Pn**	**09 27 29.3**	**-2.3**	
MBDF					pmax		pmax			
	comp=Z,22nm,0.6s									
MBDF	**Montbardon**	**18.29**	**308**		*e*P		**Pn**	**09 27 29.3**	**-2.3**	
	comp=Z,22nm,0.6s									
WILA	**Wila**	**18.36**	**318**	⇓	P		**Pn**	**09 27 31.1**	**-1.3**	
BRG	**Berggiesshubel**	**18.44**	**333**		*e*P		**Pn**	**09 27 31.9**	**-1.6**	
	comp=Z,32nm,1.3s									
BRG					*e*S		**S**	**09 30 52.6**	**-7.3**	
BRG	**Berggiesshubel**	**18.44**	**333**		*i* P		**Pn**	**09 27 32.4**	**-1.1**	
	comp=Z,19nm,1.3s									
BRG					*e*			09 27 50.0		
	comp=Z,8.6nm,0.9s									
BRG					S		**S**	**09 30 56.0**	**-3.9**	
BRG										
	comp=N,318nm,18.6s									
BRG										
	comp=E,359nm,17.8s									
BRG										
	comp=Z,577nm,19.8s									
BRG	**Berggiesshubel**	**18.44**	**333**		*i* P		**Pn**	**09 27 32.4**	**-1.1**	
	comp=Z,19nm,1.3s									
BRG					*e*			09 27 50.0		
BRG					S		**S**	**09 30 56.0**	**-3.9**	
BNI	**Bardonecchia**	**18.48**	**309**		*e*P		**Pn**	**09 27 34.7**	**+0.7**	
MANZ	**Manzenberg**	**18.49**	**328**		*e*P		**Pn**	**09 27 32.7**	**-1.4**	
	comp=Z,24nm,1.0s									
MANZ					*e*S		**S**	**09 30 53.1**	**-7.9**	
DIX	**Grande Dixence**	**18.50**	**312**		P		**Pn**	**09 27 33.1**	**-1.1**	
LKBD	**Leukerbad**	**18.53**	**313**	⇓	P		**Pn**	**09 27 33.5**	**-1.0**	
NKC	**Novy Kostel**	**18.53**	**329**		*e*P		**Pn**	**09 27 33.2**	**-1.4**	
NKC					AMS		AMS	09 35 40.0		
	comp=Z,1µm,14.4s									
NKC	**Novy Kostel**	**18.53**	**329**		*e*P		**Pn**	**09 27 33.2**	**-1.4**	
	comp=Z,1µm,14.4s									
LPG	**La Plagne**	**18.64**	**310**		*e*P		**Pn**	**09 27 35.1**	**-0.7**	
	comp=Z,62nm,0.4s									
LPG	**La Plagne**	**18.64**	**310**		*e*P		**Pn**	**09 27 35.1**	**-0.7**	
LPG					pmax		pmax			
	comp=Z,31nm,0.4s									
LPG	**La Plagne**	**18.64**	**310**		*e*P		**Pn**	**09 27 35.1**	**-0.7**	
	comp=Z,31nm,0.4s									
LPL	**La Plagne**	**18.66**	**310**		*e*P		**Pn**	**09 27 34.7**	**-1.4**	
	comp=Z,24nm,0.3s									
LPL	**La Plagne**	**18.66**	**310**		*e*P		**Pn**	**09 27 34.7**	**-1.4**	
LPL					pmax		pmax			
	comp=Z,12nm,0.3s									
LPL	**La Plagne**	**18.66**	**310**		*e*P		**Pn**	**09 27 34.7**	**-1.4**	
	comp=Z,12nm,0.3s									
TANN	**Tannenbergstha**	**18.66**	**330**		*e*P		**Pn**	**09 27 34.9**	**-1.3**	
	comp=Z,15nm,1.2s									
TANN					*e*S		**S**	**09 30 58.4**	**-6.6**	
GRA1	**Grafenberg Arr**	**18.67**	**326**		*e*P		**Pn**	**09 27 34.2**	**-2.0**	
	comp=Z,135nm,1.7s									
GRA1					*e*S		**S**	**09 30 55.8**	**-9.4**	
GRF	**Grafenberg Arr**	**18.67**	**326**		*e*P		**Pn**	**09 27 34.2**	**-2.0**	
	comp=Z,135nm,1.7s									
GRF					*e*S		**S**	**09 30 55.8**	**-9.4**	
GRF					*e*L			09 35 45.3		
	comp=Z,929nm,19.6s									
GRF	**Grafenberg Arr**	**18.67**	**326**		*e*P		**Pn**	**09 27 34.2**	**-2.0**	
GRF					*e*S		**S**	**09 30 55.8**	**-9.4**	
GRF					pmax		pmax			
	comp=Z,135nm,1.7s									
GRF					MLR		MLR			
	comp=Z,900nm,19.6s									
GRF	**Grafenberg Arr**	**18.67**	**326**		*e*P		**Pn**	**09 27 34.2**	**-2.0**	
	comp=Z,135nm,1.7s									
GRF					*e*S		**S**	**09 30 55.8**	**-9.4**	
GUNZ	**Gunzen**	**18.68**	**329**		*e*P		**Pn**	**09 27 34.8**	**-1.6**	
	comp=Z,15nm,0.8s									
FBE	**Freiberg**	**18.70**	**332**		*e*P		**Pn**	**09 27 35.9**	**-0.7**	
	comp=Z,150nm,1.7s									
WERD	**Werda**	**18.75**	**330**		*e*P		**Pn**	**09 27 35.7**	**-1.6**	
	comp=Z,112nm,1.8s									
VOR	**Voronezh**	**18.79**	**24**		*e*P		**Pn**	**09 27 36.5**	**-1.1**	
VOR					pmax		pmax			
	comp=Z,100nm,2.0s									
VOR	**Voronezh**	**18.79**	**24**		*e*P		**Pn**	**09 27 36.5**	**-1.1**	
	comp=Z,100nm,2.0s									
SMRF	**Simiane la Rot**	**18.79**	**305**		*e*P		**Pn**	**09 27 37.1**	**-0.5**	
SLE	**Schleitheim**	**18.79**	**318**		P		**Pn**	**09 27 34.9**	**-2.8**	
RSL	**Roselend**	**18.80**	**310**		*e*P		**Pn**	**09 27 36.2**	**-1.6**	
EMV	**Vieux Emosson**	**18.81**	**312**	⇑	P		**Pn**	**09 27 37.1**	**-0.8**	
SULZ	**Sulz-Cheisache**	**18.86**	**317**	⇑	P		**Pn**	**09 27 37.7**	**-0.8**	
ORIF	**Oris-en-Rattie**	**18.94**	**308**		*e*P		**Pn**	**09 27 37.9**	**-1.6**	
	comp=Z,28nm,0.6s									
ORIF					*e*R					
	comp=Z,1µm,20.8s									
ORIF	**Oris-en-Rattie**	**18.94**	**308**		*e*P		**Pn**	**09 27 37.9**	**-1.6**	
ORIF					pmax		pmax			
	comp=Z,14nm,0.6s									
ORIF	**Oris-en-Rattie**	**18.94**	**308**		*e*P		**Pn**	**09 27 37.9**	**-1.6**	
	comp=Z,14nm,0.6s									
STU	**Stuttgart**	**19.03**	**321**		*e*P		**Pn**	**09 27 39.1**	**-1.4**	
	comp=Z,30nm,0.8s									
STU	**Stuttgart**	**19.03**	**321**		*e*P		**Pn**	**09 27 38.9**	**-1.6**	
STU					pmax		pmax			
	comp=Z,42nm,1.1s									
STU	**Stuttgart**	**19.03**	**321**		*e*P		**Pn**	**09 27 38.9**	**-1.6**	
	comp=Z,42nm,1.1s									
FELD	**Feldberg im Sc**	**19.12**	**318**		*e*P		**Pn**	**09 27 40.2**	**-1.4**	
SUW	**Suwalki**	**19.13**	**353**		*e*P		**Pn**	**09 27 39.4**	**-2.4**	
CLL	**Collm**	**19.15**

comp=Z,770nm,17.3s,MS4.1
EJON La Jonquera 20.22 299 P **P** **09 27 50.5 -1.8**
comp=Z,40nm,1.3s
EJON La Jonquera 20.22 299 P **P** **09 27 50.5 -1.8**
comp=Z,40nm,1.3s
TNS Taunus Mts 20.34 324 *e*P **P** **09 27 52.2 -1.5**
comp=Z,28nm,0.6s
TNS Taunus Mts 20.34 324 *e*P **P** **09 27 52.2 -1.5**
TNS pmax pmax
comp=Z,28nm,0.6s
THEF They Montfort 20.44 316 *e*P **P** **09 27 53.6 -1.2**
GTTG Gyttingen 20.56 328 *e*P **P** **09 27 54.9 -1.2**
comp=Z,26nm,0.7s
ABH Alteburg 20.57 322 *e*P **P** **09 27 54.4 -1.7**
COLF Collangettes 20.60 307 *e*P **P** **09 27 55.4 -1.1**
LBL Lubilhac 20.79 306 *e*P **P** **09 27 58.7 +0.2**
PLDF La Plantade 20.82 309 *e*P **P** **09 27 57.6 -1.3**
EIBI Ibiza 20.90 288 P **P** **09 28 00.8 +1.0**
EIBI Ibiza 20.90 288 P **P** **09 28 00.8 +1.1**
MTLF Montolieu 20.91 301 ⇓*i*P **P** **09 27 58.5 -1.3**
comp=Z,8.7nm,0.5s
MTLF Montolieu 20.91 301 ⇓*i*P **P** **09 27 58.5 -1.3**
MTLF pmax pmax
comp=Z,40nm,0.5s
MTLF Montolieu 20.91 301 ⇓*i*P **P** **09 27 58.5 -1.3**
comp=Z,4.3nm,0.5s
SMF Signal de Mont 20.96 311 ⇓*i*P **P** **09 27 58.7 -1.7**
comp=Z,47nm,0.5s
SMF Signal de Mont 20.96 311 ⇓*i*P **P** **09 27 58.7 -1.7**
SMF pmax pmax
comp=Z,23nm,0.5s
SMF Signal de Mont 20.96 311 ⇓*i*P **P** **09 27 58.7 -1.7**
comp=Z,23nm,0.5s
OBN Obninsk 21.09 15 P **P** **09 27 59.6 -2.1**
comp=Z,729nm,0.5s,SNR=11
OBN Obninsk 21.09 15⇑*e*P **P** **09 27 59.7 -2.0**
OBN *e*S **S** **09 31 47.4 -6.2**
OBN pmax pmax
comp=Z,16nm,0.4s,mb4.7
OBN MLR MLR
comp=Z,1µm,20.0s,MS4.2
OBN Obninsk 21.09 15 *e*P **P** **09 27 59.9 -1.9**
comp=Z,175nm,1.1s,mb5.3
OBN Obninsk 21.09 15 *e*P **P** **09 27 59.9 -1.8**
comp=Z,175nm,1.1s,mb5.3
MEZF Maizieres J'vi 21.12 316 *e*P **P** **09 28 00.1 -1.9**
comp=Z,52nm,0.5s,mb4.8
MEZF Maizieres J'vi 21.12 316 *e*P **P** **09 28 00.1 -1.9**
comp=Z,26nm,0.5s,mb4.8
PYM Petit Puy Mans 21.13 308 *e*P **P** **09 28 01.2 -1.0**
WLF Walferdange 21.16 320 *e*P **P** **09 28 01.4 -1.1**
comp=Z,11nm,0.7s,mb4.3
WLF Walferdange 21.16 320 P **P** **09 28 01.6 -0.9**
WLF Walferdange 21.16 320 *e*P **P** **09 28 01.7 -0.8**
WLF pmax pmax
comp=Z,37nm,1.2s,mb4.6
WLF Walferdange 21.16 320 *e*P **P** **09 28 01.7 -0.8**
comp=Z,37nm,1.2s,mb4.6
AGO Saint Agoulin 21.17 308 *e*P **P** **09 28 02.1 -0.5**
NRDL Niedersach Rie 21.20 330 *e*P **P** **09 28 03.7 +0.7**
comp=Z,46nm,1.6s,mb4.6
LOR Lormes 21.22 312 *e*P **P** **09 28 01.6 -1.6**
comp=Z,22nm,0.4s,mb4.5
LOR *e*R
comp=Z,1µm,19.5s
LOR Lormes 21.22 312 *e*P **P** **09 28 01.6 -1.6**
LOR pmax pmax
comp=Z,11nm,0.4s,mb4.5
LOR MLR MLR
comp=Z,1µm,19.5s,MS4.2
LOR Lormes 21.22 312 *e*P **P** **09 28 01.6 -1.6**
comp=Z,11nm,0.4s,mb4.5
LOR LR LR
comp=Z,1µm,19.5s,MS4.2
FRNF Fournols 21.30 306 *e*P **P** **09 28 03.8 -0.2**
AVF Avril sur Loir 21.33 310 ⇓*i*P **P** **09 28 02.8 -1.5**
comp=Z,40nm,0.5s,mb4.7
AVF Avril sur Loir 21.33 310 ⇓*i*P **P** **09 28 02.8 -1.5**
AVF pmax pmax
comp=Z,20nm,0.5s,mb4.7
AVF Avril sur Loir 21.33 310 ⇓*i*P **P** **09 28 02.8 -1.5**
comp=Z,20nm,0.5s,mb4.7
EPOB Poblet 21.34 295 P **P** **09 28 03.5 -0.9**
comp=Z,34nm,0.7s,mb4.8
EPOB Poblet 21.34 295 P **P** **09 28 03.5 -0.9**
comp=Z,34nm,0.7s,mb4.8
SSF Saint Saulge 21.35 311 ⇓*i*P **P** **09 28 03.3 -1.2**
comp=Z,68nm,0.5s,mb5.0
SSF Saint Saulge 21.35 311 ⇓*i*P **P** **09 28 03.3 -1.2**
SSF pmax pmax
comp=Z,34nm,0.5s,mb4.9
SSF Saint Saulge 21.35 311 ⇓*i*P **P** **09 28 03.3 -1.2**
comp=Z,34nm,0.5s,mb5.0
CAF Calviac 21.47 305 *e*P **P** **09 28 05.3 -0.6**
comp=Z,20nm,0.7s,mb4.3
CAF Calviac 21.47 305 *e*P **P** **09 28 05.3 -0.6**
comp=Z,9.9nm,0.7s,mb4.3
BGF Bois d'Agland 21.55 310 ⇓*i*P **P** **09 28 05.7 -1.0**
comp=Z,67nm,0.7s,mb4.9
BGF Bois d'Agland 21.55 310 ⇓*i*P **P** **09 28 05.7 -1.0**
BGF pmax pmax
comp=Z,33nm,0.7s,mb4.9
BGF Bois d'Agland 21.55 310 ⇓*i*P **P** **09 28 05.7 -1.0**
comp=Z,34nm,0.7s,mb4.9
BSD Bornholm Skovb 21.74 341 *i* P **P** **09 28 06.8 -1.9**
comp=Z,6.9nm,0.3s,mb4.6
BSD *e*S **S** **09 32 13.6 +7.2**
BSD
comp=Z,500nm,19.0s
BSD Bornholm Skovb 21.74 341 *e*P **P** **09 28 06.8 -1.9**
BSD *e*S **S** **09 32 13.6 +7.2**
BSD MLR MLR
comp=Z,500nm,19.0s,MS3.9
BSD Bornholm Skovb 21.74 341 *e*P **P** **09 28 06.8 -1.9**
comp=Z,6.9nm,0.3s,mb4.6
BSD *e*S **S** **09 32 13.6 +7.2**
MEM Membach 21.79 322 P **P** **09 28 08.9 -0.4**
ERTA Horta de San J 21.84 294 P **P** **09 28 09.8 0.0**
comp=Z,50nm,0.9s,mb4.9
ERTA Horta de San J 21.84 294 P **P** **09 28 09.8 0.0**
comp=Z,50nm,0.9s,mb4.9
TCF Toulx Ste Croi 21.85 308 ⇓*i*P **P** **09 28 08.8 -1.1**
comp=Z,13nm,0.6s,mb4.3
TCF Toulx Ste Croi 21.85 308 ⇓*i*P **P** **09 28 08.8 -1.1**
TCF pmax pmax
comp=Z,70nm,0.6s,mb5.3
TCF Toulx Ste Croi 21.85 308 ⇓*i*P **P** **09 28 08.8 -1.1**
comp=Z,6.6nm,0.6s,mb4.3
MOS Moscow 21.90 16 *e*P **P** **09 28 06.5 -3.9**
MOS *e* 09 28 21.8
MOS *e*S **S** **09 32 06.9 -2.5**
MOS pmax pmax
comp=Z,191nm,1.6s,mb5.3
MOS pmax pmax
comp=Z,400nm,1.9s,mb5.5
MOS MLR MLR
comp=Z,1µm,16.1s,MS4.4
HGN Heimansgroeve 21.93 322 *e*P **P** **09 28 09.6 -1.1**
comp=Z,75nm,1.8s,mb4.8
HGN *ex* x 09 28 26.8
HGN *e*S **S** **09 32 10.5 +0.6**
RJF Les Rejaudoux 21.96 305 *e*P **P** **09 28 10.8 -0.3**
comp=Z,34nm,0.6s,mb4.6
RJF *e*R
comp=Z,606nm,17.0s
RJF Les Rejaudoux 21.96 305 *e*P **P** **09 28 10.8 -0.3**
RJF pmax pmax
comp=Z,17nm,0.6s,mb4.7
RJF MLR MLR
comp=Z,610nm,17.0s,MS4.1
RJF Les Rejaudoux 21.96 305 *e*P **P** **09 28 10.8 -0.3**
comp=Z,17nm,0.6s,mb4.7
RJF LR LR
comp=Z,610nm,17.0s,MS4.1
HYF Humbligny 21.97 311 *e*P **P** **09 28 11.1 -0.1**
BCLA Clavier 22.04 321 P **P** **09 28 11.3 -0.6**
GIVF Givet 22.11 320 *e*P **P** **09 28 10.8 -1.9**
comp=Z,13nm,0.3s,mb4.5
GIVF Givet 22.11 320 *e*P **P** **09 28 10.8 -1.9**
GIVF pmax pmax
comp=Z,7.0nm,0.3s,mb4.6
GIVF Givet 22.11 320 *e*P **P** **09 28 10.8 -1.9**
comp=Z,6.7nm,0.3s,mb4.5
EPF Esparros 22.18 299 *e*P **P** **09 28 12.2 -1.2**
comp=Z,8.0nm,0.5s,mb4.1
EPF Esparros 22.18 299 *e*P **P** **09 28 12.2 -1.2**
comp=Z,4.0nm,0.5s,mb4.1
DOU Dourbes 22.23 319 P **P** **09 28 12.7 -1.2**
EBIE Bielsa 22.25 298 P **P** **09 28 13.9 -0.3**
comp=Z,7.9nm,1.1s,mb4.1
EBIE Bielsa 22.25 298 P **P** **09 28 13.9 -0.2**
comp=Z,7.9nm,1.1s,mb4.1
LFF La Frestaie 22.37 304 ⇓*i*P **P** **09 28 14.8 -0.7**
comp=Z,21nm,0.6s,mb4.5
LFF La Frestaie 22.37 304 ⇓*i*P **P** **09 28 14.8 -0.7**
LFF pmax pmax
comp=Z,11nm,0.6s,mb4.5
LFF La Frestaie 22.37 304 ⇓*i*P **P** **09 28 14.8 -0.7**
comp=Z,11nm,0.6s,mb4.5
EMOS Mosqueruela 22.39 292 P **P** **09 28 16.3 +0.6**
comp=Z,50nm,3.2s
EMOS Mosqueruela 22.39 292 P **P** **09 28 16.3 +0.7**
comp=Z,50nm,3.2s
BAIF Baives 22.42 319 ⇓*i*P **P** **09 28 14.3 -1.6**
comp=Z,28nm,0.4s,mb4.8
BAIF Baives 22.42 319 ⇓*i*P **P** **09 28 14.3 -1.6**
BAIF pmax pmax
comp=Z,14nm,0.4s,mb4.7
BAIF Baives 22.42 319 ⇓*i*P **P** **09 28 14.3 -1.6**
comp=Z,14nm,0.4s,mb4.8
SNF Seneffe 22.63 320 P **P** **09 28 18.1 0.0**
ECHE Chera 22.72 290 P **P** **09 28 20.2 +1.1**
ECHE pmax pmax
comp=Z,17nm,1.2s,mb4.3
ECHE Chera 22.72 290 P **P** **09 28 20.2 +1.1**
comp=Z,17nm,1.2s,mb4.4
ETSF Etsaut 22.80 298 *e*P **P** **09 28 21.3 +1.4**
comp=Z,13nm,0.4s,mb4.4
ETSF Etsaut 22.80 298 *e*P **P** **09 28 21.3 +1.4**
comp=Z,6.4nm,0.4s,mb4.4
COP Copenhagen 22.95 338 *i* P **P** **09 28 20.1 -1.4**
COP *i* S **S** **09 32 27.3 -0.6**
COP *i* 09 32 44.2
COP
comp=Z,380nm,19.0s
COP Copenhagen 22.95 338 *e*P **P** **09 28 20.1 -1.4**
COP *i* S **S** **09 32 27.3 -0.6**
COP *i* 09 32 44.2
COP LR LR
comp=Z,380nm,19.0s,MS3.9
SJPF Ste Jean 23.32 299 *e*P **P** **09 28 25.1 -0.2**
comp=Z,32nm,0.7s,mb4.6
SJPF Ste Jean 23.32 299 *e*P **P** **09 28 25.1 -0.2**
SJPF pmax pmax
comp=Z,16nm,0.7s,mb4.6
SJPF Ste Jean 23.32 299 *e*P **P** **09 28 25.1 -0.2**
comp=Z,16nm,0.7s,mb4.6
VSU Vasula 23.40 360 *i* P **P** **09 28 24.2 -1.9**
MFF Saint Martin d 23.48 308 ⇓*i*P **P** **09 28 26.7 -0.2**
comp=Z,15nm,0.5s,mb4.3
MFF Saint Martin d 23.48 308 ⇓*i*P **P** **09 28 26.7 -0.2**
MFF pmax pmax
comp=Z,70nm,0.5s,mb5.3
MFF Saint Martin d 23.48 308 ⇓*i*P **P** **09 28 26.7 -0.2**
comp=Z,7.4nm,0.5s,mb4.4
EALK Alkurruntz 23.54 299 P **P** **09 28 27.6 +0.2**
comp=Z,79nm,1.6s,mb4.9
ELIZ Elizondo 23.54 299 P **P** **09 28 28.4 +1.0**
ELIZ pmax pmax
comp=Z,14nm,1.4s,mb4.2
ELIZ Elizondo 23.54 299 P **P** **09 28 28.4 +1.0**
comp=Z,14nm,1.4s,mb4.2
EVIA Vianos 23.90 287 P **P** **09 28 30.9 +0.3**
EVIA pmax pmax
comp=Z,21nm,1.3s,mb4.4
EVIA Vianos 23.90 287 P **P** **09 28 30.9 +0.3**
comp=Z,21nm,1.3s,mb4.4
PECR Pechory 24.20 23 *e*P **P** **09 28 32.4 -1.0**
PECR *e* 09 28 46.0
PECR pmax pmax
comp=Z,160nm,2.0s,mb5.1
LDF La Druitiere 24.21 312 ⇓*i*P **P** **09 28 32.1 -1.4**
EBER Berja 24.28 283 P **P** **09 28 34.0 -0.1**
comp=Z,90nm,1.6s,mb5.0
FLN La Foliniere 24.49 312 ⇓*i*P **P** **09 28 34.0 -2.1**
comp=Z,31nm,0.3s,mb4.8
FLN *e*R
comp=Z,748nm,19.0s
FLN La Foliniere 24.49 312 ⇓*i*P **P** **09 28 34.0 -2.1**
FLN pmax pmax
comp=Z,15nm,0.3s,mb4.9
FLN MLR MLR
comp=Z,750nm,19.0s,MS4.2
FLN La Foliniere 24.49 312 ⇓*i*P **P** **09 28 34.0 -2.1**
comp=Z,15nm,0.3s,mb4.9
FLN LR LR
comp=Z,750nm,19.0s,MS4.2
GRR Gorron 24.58 311 ⇓*i*P **P** **09 28 35.7 -1.1**
comp=Z,81nm,0.6s,mb5.1
GRR Gorron 24.58 311 ⇓*i*P **P** **09 28 35.7 -1.1**
GRR pmax pmax
comp=Z,40nm,0.6s,mb5.1
GRR Gorron 24.58 311 ⇓*i*P **P** **09 28 35.7 -1.1**
comp=Z,40nm,0.6s,mb5.1
MUD Monsted U'grnd 24.62 336 *i* P **P** **09 28 30.5 -6.7**
MUD *i* S **S** **09 32 59.6 +4.6**
MUD *i* 09 33 06.5
MUD
comp=Z,460nm,20.0s
MUD Monsted U'grnd 24.62 336 *i* P **P** **09 28 30.5 -6.7**
MUD *i* S **S** **09 32 59.6 +4.6**
MUD *i* 09 33 06.5
EBAN Banos Encina 24.92 286 P **P** **09 28 41.1 +1.2**
EBAN pmax pmax
comp=Z,19nm,1.3s,mb4.5
EBAN Banos Encina 24.92 286 P **P** **09 28 41.1 +1.2**
comp=Z,19nm,1.3s,mb4.5
ELAN Lanestosa 24.93 298 P **P** **09 28 40.8 +0.7**
comp=Z,65nm,1.2s,mb5.0
ESDC Sonseca Array 25.03 290 P **P** **09 28 41.5 +0.5**
comp=Z,3.0nm,0.4s,mb4.2,baz=78,slow=9.9,SNR=28
ESDC LR LR 09 40 24.9
comp=Z,122nm,18.7s,MS3.4,baz=100,slow=41
ESDC Sonseca Array 25.03 290 P **P** **09 28 41.5 +0.5**
comp=Z,23nm,1.3s,mb4.5
ESLA Sonseca Array 25.03 290 *e*P **P** **09 28 41.6 +0.7**
comp=Z,2.3nm,0.7s
GUD Guadarrama 25.21 292 P **P** **09 28 43.3 +0.7**
GUD pmax pmax
comp=Z,21nm,0.9s,mb4.7
GUD Guadarrama 25.21 292 P **P** **09 28 43.3 +0.7**
comp=Z,21nm,0.9s,mb4.7
EADA Adamuz 25.54 286 P **P** **09 28 46.8 +1.3**
comp=Z,33nm,1.6s,mb4.6
QUIF Quistinic 25.86 309 *e*P **P** **09 28 46.9 -1.6**
comp=Z,47nm,0.6s,mb4.9
QUIF Quistinic 25.86 309 *e*P **P** **09 28 46.9 -1.6**
QUIF pmax pmax
comp=Z,24nm,0.6s,mb4.9
QUIF Quistinic 25.86 309 *e*P **P** **09 28 46.9 -1.6**
comp=Z,24nm,0.6s,mb4.9
ROSF Rostrenen 26.06 310 ⇓*i*P **P** **09 28 48.5 -1.8**
comp=Z,27nm,0.6s,mb4.7
ROSF Rostrenen 26.06 310 ⇓*i*P **P** **09 28 48.5 -1.8**
ROSF pmax pmax
comp=Z,13nm,0.6s,mb4.6
ROSF Rostrenen 26.06 310 ⇓*i*P **P** **09 28 48.5 -1.8**
comp=Z,13nm,0.6s,mb4.7
MDT Midelt 26.34 274 P **P** **09 28 53.7 +0.8**
comp=Z,9.4nm,0.9s,mb4.3,baz=86,slow=12,SNR=16
FINES FINESS Array B 26.39 359 P **P** **09 28 50.5 -2.8**
comp=Z,4.2nm,0.4s,mb4.3,baz=158,slow=11,SNR=43
FINES LR LR 09 39 59.6
comp=Z,415nm,21.3s,MS4.0,baz=348,slow=38
FINES FINESS Array B 26.39 359 *i* P **P** **09 28 51.4 -1.9**
FINES pmax pmax
comp=Z,40nm,0.4s
FIA1 FINESS Array S 26.39 359 *e*P **P** **09 28 50.3 -3.0**
HFS Hagfors 26.54 345 P **P** **09 28 52.4 -2.3**
comp=Z,7.7nm,0.5s,mb4.5,baz=142,slow=12,SNR=44
HFS LR LR 09 41 09.6
comp=Z,1µm,18.4s,MS4.4,baz=154,slow=41
HFS Hagfors 26.54 345 P **P** **09 28 52.4 -2.2**
HFS pmax pmax
comp=Z,8.0nm,0.5s
HFS MLR MLR
comp=Z,1µm,18.4s
HFA0 Hagfors New Ar 26.55 345 P **P** **09 28 52.3 -2.4**
MIF Mishlifen 26.71 276 *e*P **P** **09 28 56.0 -0.2**
KLMR Klimovskoe 27.01 13 *e*P **P** **09 28 56.0 -2.8**
KLMR *e*S **S** **09 33 28.0 -4.8**
KLMR pmax pmax
comp=Z,70nm,1.7s,mb4.9
KLMR MLR MLR
comp=Z,1µm,15.0s,MS4.6
KAF Kangasniemi 27.06 359 *e*p **P** **09 28 57.0 -2.3**
comp=Z,5.1nm,0.5s,mb4.3
KAF Kangasniemi 27.06 359 *e*P **P** **09 28 57.0 -2.3**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
KONO Kongsberg 27.12 340 *i* P **P** **09 28 56.6 -3.2**
AKTK Aktyubinsk 27.16 46 P **P** **09 29 00.3 +0.1**
AKTK LR LR 09 44 03.3
AKTO Aktyubinsk 27.16 46 P **P** **09 29 00.3 +0.1**
comp=Z,8.8nm,0.4s,mb4.6,baz=243,slow=8.3,SNR=40
AKTO LR LR 09 44 03.3
comp=Z,360nm,18.2s,MS4.0,baz=253,slow=46
PBRG Braganca 27.21 294 *e*P **P** **09 29 00.9 +0.2**
comp=Z,33nm,1.4s,mb4.7
ECAL Calabor 27.22 295 P **P** **09 29 01.1 +0.3**
comp=Z,30nm,1.1s,mb4.7
EBAD Badajoz 27.42 288 P **P** **09 29 02.6 +0.1**
comp=Z,16nm,1.5s,mb4.3
ATD Arta Tunnel 27.47 145 LR LR 09 40 58.9
comp=Z,295nm,21.6s,MS3.8,baz=345,slow=38
EPON Pontenova 27.63 298 P **P** **09 29 04.6 +0.2**
comp=Z,91nm,1.4s,mb5.2
MTE Manteigas 27.79 291 *e*P **P** **09 29 07.1 +1.3**
MTE *e*S **S** **09 33 49.0 +3.9**
NAO01 NORSAR Array S 27.81 343⇑*e*P **P** **09 29 04.0 -2.0**
comp=Z,4.2nm,0.3s,mb4.5
BLS5 Blasjo 27.86 337 *e*P **P** **09 29 08.0 +1.5**
BLS5 AMb AMB 09 29 18.6
comp=Z,21nm,2.2s,mb4.4
BLS5 Blasjo 27.86 337 *e*P **P** **09 29 08.9 +2.4**
comp=Z,21nm,2.2s,mb4.4
BLS5 Blasjo 27.86 337 *e*P **P** **09 29 08.0 +1.5**
comp=Z,21nm,2.2s,mb4.4,SNR=29
PESTR Estremoz 27.86 288 *e*P **P** **09 29 08.2 +1.7**
NB2 NORSAR Subarra 27.91 343 P **P** **09 29 04.0 -2.9**
comp=Z,6.9nm,0.6s,mb4.5,baz=146,slow=9.3
NOA NORSAR Array B 27.91 343 P **P** **09 29 04.3 -2.5**
comp=Z,3.9nm,0.5s,mb4.3,baz=146,slow=9.3,SNR=26
NOA LR LR 09 42 02.4
comp=Z,858nm,18.6s,MS4.4,baz=140,slow=41
NOA NORSAR Array B 27.91 343 P **P** **09 29 04.3 -2.6**
NOA pmax pmax
comp=Z,40nm,0.5s
NOA MLR MLR
comp=Z,858nm,18.6s
NOA NORSAR Array B 27.91 343 P **P** **09 29 04.3 -2.5**
NOA LR LR 09 42 02.4
AB31 Akbulak array 27.92 49 *e*P **P** **09 29 07.6 +0.6**
AB31 pmax pmax
comp=Z,40nm,0.3s,mb5.5
PVRL Vila Real 27.93 293 *e*P **P** **09 29 07.4 +0.4**
comp=Z,24nm,1.9s,mb4.5
JOF Joensuu 27.99 4 *e*p **P** **09 29 05.4 -2.2**
comp=Z,4.6nm,0.4s,mb4.5
PVIS Viseu 28.05 292 *e*P **P** **09 29 08.5 +0.3**
comp=Z,33nm,1.8s,mb4.7
PCAB Cabril 28.17 294 *e*P **P** **09 29 09.9 +0.7**
ODD1 Odda 28.20 338 *e*P **P** **09 29 07.9 -1.6**
EKA Eskdalemuir Ar 29.03 324 P **P** **09 29 14.8 -2.0**
comp=Z,2.4nm,0.4s,mb4.3,baz=120,slow=10,SNR=19
EKA PcP PcP 09 32 25.6 +1.4
comp=Z,0.9nm,0.5s,baz=109,slow=3.3,SNR=4.8
ESK Eskdalemuir 29.05 324 *e*P **P** **09 29 16.1 -0.9**
ESK pmax pmax
comp=Z,50nm,0.5s,mb5.5
ESK Eskdalemuir 29.05 324 *e*P **P** **09 29 16.1 -0.9**
comp=Z,4.6nm,0.5s,mb4.5
WSAR Wadi Sarin 29.84 105 P **P** **09 29 27.5 +3.5**
comp=Z,4.9nm,0.9s,mb4.2,baz=110,slow=8.8,SNR=3.1
WSAR Wadi Sarin 29.84 105 P **P** **09 29 27.5 +3.5**
ARU Arti 30.20 35 ⇓*i*P **P** **09 29 24.6 -2.6**
ARU *e* 09 30 20.2
ARU *e* 09 32 24.4
ARU *e*S **S** **09 34 18.9 -4.1**
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.5
ARU MLR MLR
comp=N,200nm,20.0s,MS4.0
ARU MLR MLR
comp=Z,300nm,20.0s,MS3.9
ARU MLR MLR
comp=E,300nm,22.0s,MS4.0
ARU Arti 30.20 35 *e*P **P** **09 29 26.6 -0.6**
comp=E,35nm,1.6s,mb4.8
NSS Namsos 30.89 347 *e*P **P** **09 29 30.4 -2.9**
TOA0 Torodi Ar. Sit 31.67 233 *e*P **P** **09 29 42.0 +1.8**
TOA0 *e*pP pP 09 29 53.9 +0.8
TOA0 Torodi Ar. Sit 31.67 233 *e*P **P** **09 29 42.0 +1.8**
TOA0 *e*pP pP 09 29 53.9 +0.8
TORD Torodi Ar. Bea 31.67 233 P **P** **09 29 42.4 +2.2**
comp=E,8.4nm,0.4s,mb4.9,baz=29,slow=8.4,SNR=117
TORD ScP ScP 09 36 13.2 +3.0
comp=E,0.3nm,0.7s,baz=69,slow=3.0,SNR=3.6
TORD LR LR 09 45 50.7
comp=E,563nm,18.2s,MS4.3,baz=45,slow=42
TORD Torodi Ar. Bea 31.67 233 P **P** **09 29 42.4 +2.2**
TORD ScP ScP 09 36 13.2 +3.0
TORD LR LR 09 45 50.7
MOR8 Moi Rana 32.02 350 *e*P **P** **09 29 41.7 -1.6**
MOR8 AMb AMB 09 29 43.1
comp=Z,21nm,1.1s,mb4.9
MOR8 Moi Rana 32.02 350 *e*P **P** **09 29 41.7 -1.6**
comp=Z,21nm,1.1s,mb4.9
MOR8 Moi Rana 32.02 350 *e*P **P** **09 29 41.7 -1.5**
comp=Z,21nm,1.1s,mb4.9,SNR=28
LVZ Lovozero 33.15 5 *e*P **P** **09 29 51.5 -1.7**
LVZ pmax pmax
comp=Z,21nm,1.4s,mb4.9
LVZ pmax pmax
comp=N,15nm,1.3s
LVZ pmax pmax
comp=E,4.0nm,1.1s
LVZ MLR MLR
comp=E,294nm,14.0s,MS4.4
LVZ MLR MLR
comp=Z,678nm,14.0s,MS4.5
LVZ MLR MLR
comp=N,518nm,15.0s,MS4.4
KTK1 Kautokeino 34.06 358 *e*P **P** **09 29 59.5 -1.5**
KTK1 AMb AMB 09 30 01.6
comp=Z,33nm,1.4s,mb5.1
KTK1 Kautokeino 34.06 358 *e*P **P** **09 29 58.9 -2.1**
comp=Z,33nm,1.4s,mb5.1
KTK1 Kautokeino 34.06 358 *e*P **P** **09 29 59.5 -1.5**
comp=Z,33nm,1.4s,mb5.1,SNR=28
KK31 Karatay Array 34.33 63 *i* P **P** **09 30 05.0 +1.6**
KK31 pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
KKAR Karatay Array 34.33 63 *i* P **P** **09 30 05.0 +1.6**
KKAR pmax pmax
comp=Z,30nm,0.5s,mb5.5
ZRNK Zerenda 34.43 46 P **P** **09 30 05.1 +0.8**
ZRNK pmax pmax
comp=Z,41nm,1.0s,mb5.3
ZRNK Zerenda 34.43 46⇓*e*P **P** **09 30 04.9 +0.6**
comp=Z,88nm,1.3s,mb5.5
ZRNK Zerenda 34.43 46⇓*e*P **P** **09 30 04.9 +0.6**
comp=Z,88nm,1.3s,mb5.5
ARCES ARCESS Array B 34.52 359 P **P** **09 30 03.0 -2.1**
comp=Z,4.7nm,0.6s,mb4.6,baz=169,slow=8.6,SNR=63
ARCES PcP PcP 09 32 39.3 +0.2
comp=Z,1.7nm,0.5s,baz=183,slow=3.0,SNR=4.3
ARCES LR LR 09 44 49.9
comp=Z,457nm,18.0s,MS4.3,baz=332,slow=38
ARCES ARCESS Array B 34.52 359 P **P** **09 30 03.0 -2.1**
ARCES 09 32 39.3
ARCES pmax pmax
comp=Z,5.0nm,0.6s
ARCES MLR MLR
comp=Z,457nm,18.0s
ARCES ARCESS Array B 34.52 359 P **P** **09 30 03.0 -2.1**
ARCES PcP PcP 09 32 39.3 +0.2
ARCES LR LR 09 44 49.9
ARCES ARCESS Array B 34.52 359 PcP PcP 09 32 39.3 +0.2
ARE0 ARCESS Array S 34.52 359 *e*P **P** **09 30 03.6 -1.4**
ARE0 ARCESS Array S 34.52 359 *e*P **P** **09 30 03.6 -1.5**
TRO Tromso 34.90 355 *e*P **P** **09 30 05.2 -3.2**
TRO AMb AMB 09 30 10.0
comp=Z,27nm,1.9s,mb4.9
TRO Tromso 34.90 355 *e*P **P** **09 30 05.2 -3.2**
comp=Z,27nm,1.9s,mb4.9
TRO Tromso 34.90 355 *e*P **P** **09 30 05.2 -3.1**
comp=Z,27nm,1.9s,mb4.9,SNR=27

BRVK Borovoye 35.21 46⇓ *e*P P 09 30 11.8 +0.8
BRVK pmax pmax
comp=Z,27nm,1.4s,mb5.0
BRVK Borovoye 35.21 46⇓ *e*P P 09 30 11.8 +0.8
comp=Z,27nm,1.4s,mb5.0
BRVK Borovoye 35.21 46⇓ *e*P P 09 30 11.8 +0.8
comp=Z,27nm,1.4s,mb5.0
BVA0 Borovoye Array 35.26 46 *i* P P 09 30 11.9 +0.5
BVA0 pmax pmax
comp=Z,28nm,0.1s
CHKZ Chkalovo 35.55 45⇓ *e*P P 09 30 14.6 +0.7
CHKZ pmax pmax
comp=Z,42nm,0.9s,mb5.4
CHKZ Chkalovo 35.55 45⇓ *e*P P 09 30 14.6 +0.7
comp=Z,42nm,0.9s,mb5.4
CHKZ Chkalovo 35.55 45⇓ *e*P P 09 30 14.6 +0.7
comp=Z,42nm,0.9s,mb5.4
VOSK Vostochnaya 35.55 46 P P 09 30 14.3 +0.4
VOSK pmax pmax
comp=Z,37nm,1.2s,mb5.2
ANR Andizhan 35.85 67 *e*P P 09 30 16.0 -0.5
AML Almayashu 36.73 65 P P 09 30 26.5 +2.5
SNR=9.5
EKS2 Erkin-Say 36.75 64 P P 09 30 26.3 +2.2
SNR=36
USP Ospenovka 37.23 63 P P 09 30 29.6 +1.4
SNR=11
KMBO Kilima Mbogo 37.25 163 LR LR 09 47 37.5
comp=Z,314nm,19.3s,MS4.1,baz=279,slow=39
AAK Ala-Archa 37.28 64 P P 09 30 31.2 +2.6
SNR=16
AAK Ala-Archa 37.28 64 ⇓P P 09 30 29.9 +1.3
SNR=26
AAK Ala-Archa 37.28 64 *d i* P P 09 30 29.8 +1.2
AAK pmax pmax
comp=Z,98nm,1.8s,mb5.3
AAK MLR MLR
comp=Z,500nm,25.0s,MS4.2
AAK Ala-Archa 37.28 64⇓ *e*P P 09 30 29.8 +1.2
comp=Z,23nm,0.6s,mb5.2
AAK Ala-Archa 37.28 64⇓ *e*P P 09 30 29.8 +1.2
comp=Z,23nm,0.6s,mb5.2
CHMS Chumysh 37.44 63 P P 09 30 31.9 +2.0
SNR=19
KBK Karagaybulak 37.61 64 P P 09 30 34.0 +2.6
SNR=10
KZA Kyzart 37.88 65 P P 09 30 36.8 +3.1
SNR=30
TKM2 Tokmak 2 38.06 63 P P 09 30 37.2 +1.9
SNR=25
ULHL Ulahol 38.60 64 P P 09 30 42.5 +2.7
SNR=84
KSH Kashi 38.76 69 *e*P P 09 30 42.3 +1.2
KSH *e*AP pP 09 30 54.0 -0.3
KSH XP sP 09 30 59.5 -0.6
KSH PP PP 09 32 14.9 +4.4
KSH PPP 09 32 37.8
KSH PCP PcP 09 32 54.0 +2.2
KSH S **S 09 36 34.9 0.0**
KSH SCP ScP 09 36 37.6 +1.8
KSH PCS PcS 09 36 42.8 +1.5
KSH XS sS 09 36 55.3 -1.7
KSH SCS ScS 09 40 46.5 -0.1
KSH AMB AMB
comp=Z,27nm,0.5s,mb5.2
KSH AMB AMB
comp=Z,260nm,3.2s
KSH LR LR
comp=N,319nm,5.7s
KSH LR LR
comp=E,394nm,6.8s
KSH LR LR
comp=Z,306nm,12.6s,MS4.3
DBIC Dimbokro 40.77 234 P P 09 30 58.9 +1.1
comp=Z,3.9nm,0.4s,mb4.4,baz=23,slow=7.0,SNR=15
DBIC LR LR 09 51 14.6
comp=Z,400nm,18.6s,MS4.3,baz=27,slow=41
DBIC Dimbokro 40.77 234 *e*P P 09 30 59.2 +1.4
DBIC pmax pmax
comp=Z,70nm,0.7s
DBIC Dimbokro 40.77 234 *e*P P 09 30 59.2 +1.4
comp=Z,6.6nm,0.7s,mb4.4
DBIC Dimbokro 40.77 234 *e*P P 09 30 59.2 +1.4
comp=Z,6.6nm,0.7s,mb4.4
LIC Lamto 41.22 233 *e*P P 09 31 04.6 +3.1
LIC *e*R
comp=Z,236nm,20.5s
LIC Lamto 41.22 233 *e*P P 09 31 04.6 +3.1
LIC LR LR
comp=Z,120nm,20.5s,MS3.8
SDNR Sundarnagar 41.50 80 *e*P P 09 31 04.8 +1.0
MKAR Makanchi Array 42.50 57 P P 09 31 13.3 +1.4
comp=Z,47nm,0.5s,mb5.3,baz=274,slow=7.3,SNR=382
MKAR ScP ScP 09 36 53.0 +2.5
comp=Z,0.7nm,0.6s,baz=270,slow=3.6,SNR=4.2
MKAR Makanchi Array 42.50 57 *i* P P 09 31 13.3 +1.3
MKAR pmax pmax
comp=Z,47nm,0.5s
NDI New Delhi 42.68 84 *e*P P 09 31 14.0 +0.6
NVS Novosibirsk 43.03 45 *e*P P 09 31 17.4 +1.1
NVS *e* 09 32 54.9
NVS *e*PPP 09 33 30.8
NVS *e*S S **09 37 38.3 -0.1**
NVS *e*SSS 09 41 14.5
NVS pmax pmax
comp=N,38nm,1.4s
NVS pmax pmax
comp=E,54nm,1.4s
NVS pmax pmax
comp=Z,117nm,1.4s,mb5.4
NVS smax
comp=N,30nm,2.2s
NVS smax
comp=E,26nm,1.6s
SPB4 Spitsbergen Ar 43.45 357 *e*P P 09 31 18.5 -1.2
SPB4 *e*pP pP 09 31 33.1 +0.1
SPB4 Spitsbergen Ar 43.45 357 *e*P P 09 31 18.5 -1.2
SPB4 *e*pP pP 09 31 33.1 +0.1
ZAL Zalesovo 43.91 46 P P 09 31 23.7 +0.4
comp=E,12nm,0.5s,mb4.8,baz=197,slow=6.1,SNR=13
ZAL LR LR 09 54 08.8
comp=E,458nm,22.0s,MS4.3,baz=209,slow=42
ZAL Zalesovo 43.91 46 P P 09 31 23.7 +0.4
ZAL pmax pmax
comp=Z,12nm,0.5s
ZAL MLR MLR
comp=Z,458nm,22.0s
KBS Kingsbay 44.41 356 *e*P P 09 31 26.0 -1.3
KBS pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
KBS Kingsbay 44.41 356 *e*P P 09 31 26.0 -1.3
comp=Z,9.8nm,0.6s,mb4.7
KBS Kingsbay 44.41 356 *e*P P 09 31 26.0 -1.3
comp=Z,9.8nm,0.6s,mb4.7
WMQ Urumqi 46.68 60 P P 09 31 47.0 +1.8
WMQ AP pP 09 31 59.0 +0.3
WMQ XP sP 09 32 05.0 +0.5
WMQ PP PP 09 33 37.0 +1.5
WMQ S **S 09 38 32.0 +0.9**
WMQ SS SS 09 41 50.0 -7.7
WMQ AMB AMB
comp=Z,52nm,1.0s,mb5.4
WMQ AMB AMB
comp=Z,264nm,5.0s
WMQ LR LR
comp=N,325nm,14.0s,MS4.6
WMQ LR LR
comp=E,391nm,14.0s,MS4.6
WMQ LR LR
comp=Z,350nm,14.0s,MS4.5
KOLN Koldanda 48.23 82 *e*P P 09 31 59.2 +1.9
comp=Z,107nm,1.2s,mb5.7
KRAR Krasnoyarsk 48.53 43 *i* P P 09 32 01.7 +2.1
KRAR pmax pmax
comp=Z,100nm,1.1s,mb5.8
GKN Gorkha 48.98 81 *e*P P 09 32 04.8 +1.8
comp=Z,122nm,1.1s,mb5.9
DMN Daman 49.51 82 *e*P P 09 32 09.2 +2.0
comp=Z,78nm,0.9s,mb5.8
KKN Kakani 49.58 81 *e*P P 09 32 09.0 +1.3
comp=Z,34nm,0.7s,mb5.5
KKN Kakani 49.58 81 *e*P P 09 32 09.0 +1.3
KKN pmax pmax
comp=Z,34nm,0.7s,mb5.5
SUMG Summit 49.62 339 *e*P P 09 32 07.0 -1.0
comp=Z,7.0nm,0.6s,mb4.9
SUMG *e*pP pP 09 32 25.7 +4.2
SUMG *e*PcP PcP 09 33 29.3 +0.5
SUMG Summit 49.62 339 *e*P P 09 32 07.0 -1.0
comp=Z,7.0nm,0.6s,mb4.9
SUMG *e*pP pP 09 32 25.7 +4.2
PKI Pulchoki 49.77 82 *e*P P 09 32 10.8 +1.7
comp=Z,129nm,1.2s,mb5.8
PKI Pulchoki 49.77 82 *e*P P 09 32 10.8 +1.7
PKI pmax pmax
comp=Z,129nm,1.2s,mb5.8
GUN Gumba 50.02 81 *e*P P 09 32 12.7 +1.7
comp=Z,202nm,1.3s,mb6.0
JIRN Jiri 50.37 81 *e*P P 09 32 15.6 +1.9
LSA Lhasa 53.55 77 *e*P P 09 32 39.9 +2.6
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
LSA Lhasa 53.55 77 *e*P P 09 32 39.9 +2.6
comp=Z,9.3nm,0.6s,mb4.9
LSA Lhasa 53.55 77 *e*P P 09 32 39.8 +2.5
comp=Z,9.2nm,0.6s,mb4.9
MOY Mondy 53.90 48 *e*P P 09 32 42.2 +2.3
MOY pmax pmax
comp=Z,82nm,2.0s,mb5.3
TSUM Tsumeb 54.73 191 *e*P P 09 32 49.3 +3.4
comp=Z,11nm,1.1s,mb4.8
TSUM *e*pP pP 09 33 07.2 +7.7
TSUM Tsumeb 54.73 191 *e*P P 09 32 49.3 +3.4
comp=Z,11nm,1.1s,mb4.8
TSUM *e*pP pP 09 33 07.2 +7.6
MATP Matopo 55.21 178 LR LR 09 57 59.1
comp=Z,347nm,20.8s,MS4.4,baz=0.1,slow=37
TLY Talaya 55.50 47 ⇑P P 09 32 53.6 +2.2
SNR=12
TLY Talaya 55.50 47 *e*P P 09 32 53.6 +2.2
TLY *e*S S **09 40 27.5 -5.5**
TLY pmax pmax
comp=Z,50nm,1.2s,mb5.4
TLY MLR MLR
comp=Z,439nm,24.0s,MS4.5
TLY Talaya 55.50 47⇓ *e*P P 09 32 53.6 +2.1
comp=Z,18nm,0.7s,mb5.2
ZAK Zakamensk 55.61 49⇑ *i* P P 09 32 53.9 +1.7
ZAK pmax pmax
comp=Z,23nm,1.2s,mb5.1
GTA Gaotai 56.60 62 *e*P P 09 33 01.1 +1.8
GTA AP pP 09 33 13.8 +0.7
GTA XP sP 09 33 19.3 +0.5
GTA PCP PcP 09 33 54.4 -0.9
GTA PP PP 09 35 09.4 +3.8
GTA PPP 09 36 33.4
GTA SCP ScP 09 37 48.8 -1.7
GTA S **S 09 40 52.1 +4.5**
GTA XS sS 09 41 13.5 +2.8
GTA SCS ScS 09 42 44.1 -0.1
GTA SS SS 09 44 41.1 +5.5
GTA AMB AMB
comp=Z,16nm,1.2s,mb4.9
GTA AMB AMB
comp=Z,69nm,3.8s
GTA LR LR
comp=N,173nm,27.1s,MS4.1
GTA LR LR
comp=E,95nm,25.6s,MS4.1
GTA LR LR
comp=Z,147nm,26.7s,MS4.0
SONM Songino Array 58.31 51 P P 09 33 13.0 +1.6
comp=Z,11nm,0.5s,mb5.2,baz=286,slow=7.7,SNR=121
SONM ScP ScP 09 38 01.0 +3.0
comp=Z,0.2nm,0.3s,baz=262,slow=4.5,SNR=3.8
SONM LR LR 10 02 12.5
comp=Z,387nm,21.1s,MS4.5,baz=287,slow=40
ULN Ulaanbaatar 58.72 51 ⇓P P 09 33 15.9 +1.7
SNR=21
ULN Ulaanbaatar 58.72 51⇓ *e*P P 09 33 16.0 +1.8
ULN pmax pmax
comp=Z,14nm,0.5s,mb5.2
ULN Ulaanbaatar 58.72 51⇓ *e*P P 09 33 16.0 +1.8
comp=Z,14nm,0.5s,mb5.2
BOD Bodaibo 59.54 38⇑ *i* P P 09 33 19.6 -0.3
BOD pmax pmax
comp=Z,14nm,1.6s,mb4.7
LZH Lanzhou 60.81 65 *e*P P 09 33 30.9 +2.3
LZH AP pP 09 33 43.4 +0.9
LZH XP sP 09 33 49.0 +0.9
LZH PCP PcP 09 34 15.3 +3.4
LZH PP PP 09 35 46.4 +3.5
LZH SCP ScP 09 38 10.8 +1.7
LZH *e*S S **09 41 46.0 +3.8**
LZH XS sS 09 42 06.4 +0.9
LZH AMB AMB
comp=Z,62nm,1.4s,mb5.5
LZH AMB AMB
comp=Z,120nm,4.4s
LZH LR LR
comp=E,449nm,13.5s
LZH LR LR
comp=Z,881nm,15.0s,MS5.0
CIT Chita 61.24 45 *e*P P 09 33 32.4 +0.9
CIT *e* pP 09 33 47.8 +2.4
CIT pmax pmax
comp=Z,86nm,1.9s,mb5.6
CD2 Chengdu 62.94 70 P P 09 33 44.6 +1.8
CD2 AP pP 09 33 57.5 +0.7
CD2 XP sP 09 34 02.8 +0.3
CD2 PP PP 09 36 04.4 +2.8
CD2 S **S 09 42 07.1 -2.0**
CD2 XS sS 09 42 28.6 -3.9
CD2 AMB AMB
comp=Z,20nm,1.0s,mb5.2
CD2 AMB AMB
comp=Z,50nm,5.6s
CD2 LR LR
comp=E,90nm,19.2s
CD2 LR LR
comp=Z,100nm,23.8s,MS3.9
BOSA Boshof 63.37 182 P P 09 33 48.6 +2.9
comp=Z,2.1nm,0.5s,mb4.5,baz=350,slow=8.3,SNR=7.3
BOSA LR LR 10 03 15.1
comp=Z,192nm,18.1s,MS4.3,baz=0.8,slow=38
BOSA Boshof 63.37 182 P P 09 33 48.6 +2.9
BOSA pmax pmax
comp=Z,20nm,0.5s,mb5.5
BOSA MLR MLR
comp=Z,192nm,18.1s,MS4.3
SCHQ Schefferville 64.27 320 P P 09 33 51.3 -0.3
comp=Z,3.7nm,0.3s,mb4.9,baz=61,slow=5.4,SNR=25
SCHQ LR LR 10 02 40.3
comp=Z,74nm,19.5s,MS3.9,baz=36,slow=37
SCHQ Schefferville 64.27 320 *e*P P 09 33 51.0 -0.6
comp=Z,8.8nm,0.6s,mb5.0
SCHQ Schefferville 64.27 320 *e*P P 09 33 51.0 -0.6
comp=Z,8.8nm,0.6s,mb5.0
HHC Hu-ho-hao-te 64.36 57 *e*P P 09 33 54.4 +2.2
HHC AP pP 09 34 07.3 +1.1
HHC XP sP 09 34 12.6 +0.7
HHC PCP PcP 09 34 29.4 +3.0
HHC PP PP 09 36 15.5 +1.3
HHC SCP 09 38 26.8
HHC PCS 09 38 31.5
HHC S S **09 42 27.1 +0.3**
HHC XS sS 09 42 47.9 -2.4
HHC PS 09 42 51.8
HHC SCS ScS 09 43 40.6 -1.6
HHC SS SS 09 46 37.3 0.0
HHC AMB AMB
comp=Z,62nm,1.0s,mb5.6
HHC AMB AMB
comp=Z,136nm,3.8s
HHC LR LR
comp=N,169nm,23.9s,MS4.3
HHC LR LR
comp=E,223nm,26.7s,MS4.3
HHC LR LR
comp=Z,283nm,20.4s
KMI Kunming 64.80 76 P P 09 33 56.5 +1.4
KMI AP pP 09 34 09.8 +0.7
KMI XP sP 09 34 14.9 +0.2
KMI PP PP 09 36 20.8 +2.8
KMI PPP 09 37 53.9
KMI S S **09 42 30.3 -1.9**
KMI XS sS 09 42 52.9 -2.8
KMI AMB AMB
comp=Z,13nm,0.5s,mb5.2
KMI LR LR
comp=Z,96nm,29.6s,MS3.8
CHG Chiang Mai 64.83 84 ⇑P P 09 33 57.1 +1.8
comp=Z,12nm,0.6s,mb5.1
CHTO Chiang Mai 64.83 84 ⇑P P 09 33 56.4 +1.2
SNR=6.1
CHTO Chiang Mai 64.83 84⇓ *e*P P 09 33 56.5 +1.2
CHTO pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CHTO Chiang Mai 64.83 84⇓ *e*P P 09 33 56.5 +1.2
comp=Z,7.9nm,0.9s,mb4.7
CHTO Chiang Mai 64.83 84⇓ *e*P P 09 33 56.5 +1.2
comp=Z,7.9nm,0.9s,mb4.7
YAK Yakutsk 65.15 30 *i* P P 09 33 57.8 +0.4
XAN Xi'an 65.45 65 P P 09 34 00.9 +1.6
XAN AMB AMB
comp=Z,20nm,0.9s,mb5.2
HIA Hailar 65.96 46 *e*P P 09 34 04.2 +1.6
HIA pmax pmax
comp=Z,91nm,1.3s
HIA Hailar 65.96 46 *e*P P 09 34 04.2 +1.6
comp=Z,91nm,1.3s,mb5.7
HIA Hailar 65.96 46 *e*P P 09 34 04.2 +1.6
comp=Z,91nm,1.3s,mb5.7
NANT Nan 66.27 83 ⇑P P 09 34 04.0 -0.5
comp=Z,116nm,1.0s,mb5.9
GYA Guiyang 67.26 73⇑ *i* P P 09 34 12.3 +1.4
GYA XP sP 09 34 30.4 -0.2
GYA PP PP 09 36 41.8 +2.3
GYA S S 09 43 01.0 -1.1
GYA XS sS 09 43 28.8 +3.1
GYA SS SS 09 47 21.8 -0.5
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,120nm,4.3s
GYA LR LR
comp=N,270nm,18.4s,MS4.7
GYA LR LR
comp=E,370nm,17.6s,MS4.7
GYA LR LR
comp=Z,360nm,18.0s,MS4.6
BJI Beijing 67.87 56 *e*P P 09 34 16.6 +1.8
BJI XP sP 09 34 36.5 +2.0
BJI S S 09 43 13.9 +4.4
BJI AMB AMB
comp=Z,31nm,0.8s,mb5.4
BJI LR LR
comp=N,225nm,22.9s,MS4.5
BJI LR LR
comp=E,151nm,19.1s,MS4.5
BJI LR LR
comp=Z,163nm,23.1s,MS4.2
BJT Baijiatuau 67.88 56⇓ *e*P P 09 34 16.5 +1.7
BJT *e*PP pP 09 34 30.4 +1.5
BJT pmax pmax
comp=Z,36nm,1.3s
BJT Baijiatuau 67.88 56⇓ *e*P P 09 34 16.5 +1.7
comp=Z,36nm,1.3s,mb5.2
BJT *e*pP pP 09 34 30.4 +1.5
BJT Baijiatuau 67.88 56⇓ *e*P P 09 34 16.5 +1.7
comp=Z,36nm,1.3s,mb5.2
BJT *e*pP pP 09 34 30.4 +1.5
TIA Tai'an 70.36 59 P P 09 34 31.4 +1.2
CN2 Changchun 72.05 49 *e*P P 09 34 42.0 +1.7
CN2 *e*AP pP 09 34 55.1 +0.5
CN2 *e*S S 09 43 57.8 -0.5
CN2 AMB AMB
comp=Z,20nm,1.1s,mb5.0
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,23.0s,MS4.5
CN2 LR LR
comp=E,200nm,23.0s,MS4.5
CN2 LR LR
comp=Z,200nm,21.0s,MS4.4
LBNH Lisbon 72.22 312 *e*P P 09 34 43.3 +1.9
LBNH pmax pmax
comp=Z,39nm,1.4s,mb5.1
LBNH Lisbon 72.22 312 *e*P P 09 34 43.3 +1.9
comp=Z,39nm,1.4s,mb5.2
LBNH Lisbon 72.22 312 *e*P P 09 34 43.3 +1.9
comp=Z,39nm,1.4s,mb5.2
HNH Hanover 72.72 311 *e*P P 09 34 46.2 +1.8
HNH Hanover 72.72 311 *e*P P 09 34 46.2 +1.8
BILL Bilibino 72.75 15⇑ *e*P P 09 34 44.1 -0.4
BILL pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
BILL MLR MLR
comp=Z,300nm,23.0s,MS4.5
KLR Kul'dur 72.79 42 *e*P P 09 34 42.7 -2.1
KLR pmax pmax
comp=E,24nm,1.4s
KLR pmax pmax
comp=Z,43nm,1.4s,mb5.2
WES Weston 72.83 310 *e*P P 09 34 46.9 +1.9
WES pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
WES Weston 72.83 310 *e*P P 09 34 46.9 +1.9
comp=Z,9.5nm,0.6s,mb4.9
WES Weston 72.83 310 *e*P P 09 34 46.9 +1.9
comp=Z,9.5nm,0.6s,mb4.9
FRNY Flat Rock 72.91 313 *e*P P 09 34 46.6 +1.1
FRNY Flat Rock 72.91 313 *e*P P 09 34 46.6 +1.1
QIZ Qiongzhong 73.54 78 P P 09 34 49.1 -0.1
QIZ S S 09 44 15.6 +0.2
QIZ AMB AMB
comp=Z,42nm,2.3s,mb5.0
QIZ AMB AMB
comp=Z,153nm,3.2s
PSI Prapat 73.55 98 P P 09 34 51.6 +2.4
comp=Z,2.3nm,0.5s,mb4.4,baz=275,slow=10,SNR=6.4
PSI Prapat 73.55 98 P P 09 34 51.6 +2.3
PSI pmax pmax
comp=Z,20nm,0.5s,mb5.3
NJ2 Nanjing 73.70 62 *e*P P 09 34 52.8 +2.7
NJ2 AP pP 09 35 05.9 +1.5
NJ2 XP sP 09 35 11.3 +1.3
NJ2 PP PP 09 37 39.3 +4.4
NJ2 S S 09 44 19.0 +1.9
NJ2 AMB AMB
comp=Z,30nm,0.5s,mb5.5
NJ2 AMB AMB
comp=Z,250nm,6.4s
NJ2 LR LR
comp=N,420nm,20.0s,MS4.9
NJ2 LR LR
comp=E,470nm,20.6s,MS4.9
NJ2 LR LR
comp=Z,170nm,22.9s,MS4.3
ACCN Adirondack Com 73.75 312 *e*P P 09 34 52.6 +2.2
ACCN Adirondack Com 73.75 312 *e*P P 09 34 52.6 +2.2
MDJ Mudanjiang 74.12 46 P P 09 34 53.3 +0.7
MDJ AP pP 09 35 04.4 -2.5
MDJ XP sP 09 35 09.9 -2.6
MDJ S S 09 44 29.0 +7.1
MDJ AMB AMB
comp=Z,9.0nm,0.9s,mb4.7
MDJ AMB AMB
comp=Z,48nm,6.2s
MDJ LR LR
comp=N,134nm,24.4s,MS4.2
MDJ LR LR
comp=E,34nm,21.5s,MS4.2
MDJ LR LR
comp=Z,148nm,25.4s,MS4.2
BINY Binghamton 75.82 312 *e*P P 09 35 04.3 +1.9
comp=Z,45nm,1.5s,mb5.2
BINY Binghamton 75.82 312 *e*P P 09 35 04.3 +1.9
comp=Z,45nm,1.5s,mb5.2
SSE Sheshan 75.89 62 *e*P P 09 35 02.8 0.0
SSE PCP PcP 09 35 15.4 +0.3
SSE AP pP 09 35 17.4 +0.3
SSE XP sP 09 35 22.8 +0.1
SSE PP PP 09 37 51.8 -1.7
SSE S S 09 44 39.4 -2.2
SSE XS sS 09 45 03.9 -1.7
SSE SCS ScS 09 45 13.0 -0.1
SSE AMB AMB
comp=Z,16nm,0.7s,mb5.1
SSE AMB AMB
comp=Z,52nm,3.6s
SSE LR LR
comp=N,358nm,22.5s,MS4.7
SSE LR LR
comp=E,125nm,22.5s,MS4.7

SSE LR LR
comp=Z,140nm,24.6s,MS4.2
INK Inuvik 75.91 353 *e*P **P 09 35 02.0 -0.9**
INK pmax pmax
comp=Z,20nm,1.4s
INK Inuvik 75.91 353 *e*P **P 09 35 02.0 -0.9**
comp=Z,20nm,1.4s,mb4.8
INK Inuvik 75.91 353 *e*P **P 09 35 02.0 -0.9**
comp=Z,20nm,1.4s,mb4.8
MVL Millersville 77.30 310 *e*P **P 09 35 12.4 +1.6**
MVL Millersville 77.30 310 *e*P **P 09 35 12.4 +1.6**
SSPA Standing Stone 77.89 311 *e*P **P 09 35 15.3 +1.3**
comp=Z,5.4nm,0.7s,mb4.6
SSPA Standing Stone 77.89 311 *e*P **P 09 35 15.3 +1.2**
comp=Z,5.4nm,0.7s,mb4.6
SDMD Soldier's Deli 77.95 310 *e*P **P 09 35 19.6 +5.2**
YKA Yellowknife Ar 78.01 343 P **P 09 35 14.0 -0.7**
comp=Z,4.9nm,0.5s,mb4.7,baz=32,slow=5.4,SNR=17
YKA LR LR 10 10 44.9
comp=Z,115nm,20.5s,MS4.2,baz=25,slow=37
YKA Yellowknife Ar 78.01 343 P **P 09 35 14.0 -0.7**
YKA pmax pmax
comp=Z,5.0nm,0.5s
YKA MLR MLR
comp=Z,115nm,20.5s
YKA Yellowknife Ar 78.01 343 P **P 09 35 14.0 -0.7**
YKA LR LR 10 10 44.9
YSS Yuzh-Sakhalins 80.01 39*d i*P **P 09 35 27.0 +1.3**
YSS pmax pmax
comp=Z,71nm,1.3s,mb5.4
YSS MLR MLR
comp=Z,100nm,16.0s,MS4.3
YSS Yuzh-Sakhalins 80.01 39||*e*P **P 09 35 27.0 +1.3**
comp=Z,16nm,0.6s,mb5.1
YSS Yuzh-Sakhalins 80.01 39||*e*P **P 09 35 27.0 +1.3**
comp=Z,16nm,0.6s,mb5.1
COLA College 80.30 358 *i* P **P 09 35 27.8 +0.6**
COLA College 80.30 358 *e*P **P 09 35 27.3 +0.1**
comp=Z,33nm,1.8s,mb5.0
COLA College 80.30 358 *e*P **P 09 35 27.3 +0.1**
comp=Z,33nm,1.8s,mb5.0
DAWY Dawson 80.61 354 *e*P **P 09 35 28.8 -0.1**
DAWY Dawson 80.61 354 *e*P **P 09 35 28.8 -0.1**
ACSO Alum Creek Sta 81.23 313 *e*P **P 09 35 32.7 +0.5**
comp=Z,6.8nm,0.6s,mb4.8
ACSO *e*pP pP 09 35 47.4 +0.7
ACSO Alum Creek Sta 81.23 313 *e*P **P 09 35 32.7 +0.5**
comp=Z,6.8nm,0.6s,mb4.8
ACSO *e*pP pP 09 35 47.4 +0.8
ULM Lac du Bonnet 81.25 327 P **P 09 35 31.9 -0.4**
comp=Z,3.1nm,0.5s,mb4.5,baz=72,slow=6.5,SNR=13
ULM LR LR 10 11 00.5
comp=Z,97nm,18.3s,MS4.2,baz=42,slow=35
ULM Lac du Bonnet 81.25 327 *e*P **P 09 35 31.7 -0.6**
comp=Z,5.0nm,0.6s,mb4.6
ULM *e*pP pP 09 35 44.9 -1.9
ULM Lac du Bonnet 81.25 327 *e*P **P 09 35 31.7 -0.6**
comp=Z,5.0nm,0.6s,mb4.6
ULM *e*pP pP 09 35 44.9 -1.8
MCK McKinley 81.48 358 *e*P **P 09 35 33.4 -0.1**
MCK McKinley 81.48 358 *e*P **P 09 35 33.3 -0.2**
FWV Forest Hill 81.54 310 *e*P **P 09 35 34.4 +0.6**
FWV Forest Hill 81.54 310 *e*P **P 09 35 34.4 +0.6**
PMR Palmer 83.63 358 *e*P **P 09 35 45.1 +0.4**
PMR pmax pmax
comp=Z,38nm,1.5s,mb5.3
PMR Palmer 83.63 358 *e*P **P 09 35 45.0 +0.4**
comp=Z,38nm,1.5s,mb5.3
PMR Palmer 83.63 358 *e*P **P 09 35 45.0 +0.3**
comp=Z,38nm,1.5s,mb5.3
BLO Bloomington 84.00 314 *e*P **P 09 35 47.9 +1.3**
BLO pmax pmax
comp=Z,18nm,0.5s,mb5.5
BLO Bloomington 84.00 314 *e*P **P 09 35 47.9 +1.3**
comp=Z,18nm,0.5s,mb5.5
BLO Bloomington 84.00 314 *e*P **P 09 35 47.9 +1.3**
comp=Z,18nm,0.5s,mb5.5
MAJO Matsushiro 84.19 49||*e*P **P 09 35 48.9 +1.3**
MAJO pmax pmax
comp=Z,17nm,0.9s,mb5.2
MAJO Matsushiro 84.19 49||*e*P **P 09 35 48.9 +1.3**
comp=Z,17nm,0.9s,mb5.2
MAJO Matsushiro 84.19 49||*e*P **P 09 35 48.9 +1.3**
comp=Z,17nm,0.9s,mb5.2
MAT Matsushiro 84.19 49 P **P 09 35 48.8 +1.2**
MAT S S 09 46 09.0 +0.2
MAT Matsushiro 84.19 49 *e*P **P 09 35 49.0 +1.4**
MAT *e*S S 09 46 09.0 +0.2
MAT pmax pmax
comp=Z,37nm,1.3s,mb5.3
MAT Matsushiro 84.19 49 *e*P **P 09 35 49.0 +1.4**
comp=Z,36nm,1.3s,mb5.3
MAT *e*S S 09 46 09.0 +0.2
MJAR Matsushiro Arr 84.19 49 P **P 09 35 49.1 +1.5**
comp=Z,30nm,1.2s,mb5.3,baz=308,slow=5.4,SNR=30
MJAR LR LR 10 18 00.9
comp=Z,223nm,21.7s,MS4.5,baz=305,slow=39
WCI Wyandotte Cave 84.48 313 *e*P **P 09 35 49.8 +0.8**
WCI *e**PP pP 09 36 04.1 +0.5
WCI pmax pmax
comp=Z,41nm,1.4s,mb5.4
WCI Wyandotte Cave 84.48 313 *e*P **P 09 35 49.8 +0.7**
comp=Z,41nm,1.4s,mb5.4
WCI *e*pP pP 09 36 04.1 +0.5
WCI Wyandotte Cave 84.48 313 *e*P **P 09 35 49.8 +0.8**
comp=Z,41nm,1.4s,mb5.4
WCI *e*pP pP 09 36 04.1 +0.5
DLBC Dease Lake 84.89 348 LR LR 10 15 34.8
comp=Z,334nm,21.4s,MS4.7,baz=41,slow=37
CPCT Cooper Cave 85.20 310||*e*P **P 09 35 54.7 +2.1**
CPCT Cooper Cave 85.20 310||*e*P **P 09 35 54.7 +2.0**
EDM Edmonton 85.59 337||*e*P **P 09 35 54.9 +0.3**
SCIA State Center 85.89 320 *e*P **P 09 35 57.0 +0.9**
SCIA *e*pP pP 09 36 12.1 +1.5
SCIA State Center 85.89 320 *e*P **P 09 35 57.0 +0.9**
SCIA *e*pP pP 09 36 12.1 +1.5
SWET Sewanee 86.23 311 *e*P **P 09 35 58.6 +0.9**
SWET Sewanee 86.23 311 *e*P **P 09 35 58.6 +0.8**
SIUC Southern Illin 86.55 315 *e*P **P 09 36 00.4 +1.1**
comp=Z,26nm,0.9s,mb5.5
SIUC Southern Illin 86.55 315 *e*P **P 09 36 00.4 +1.1**
comp=Z,26nm,0.9s,mb5.5
WVT Waverly 86.79 313 *e*P **P 09 36 00.1 -0.4**
WVT pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
WVT Waverly 86.79 313 *e*P **P 09 36 00.1 -0.4**
comp=Z,6.6nm,0.7s,mb5.0
WVT Waverly 86.79 313 *e*P **P 09 36 00.1 -0.4**
comp=Z,6.6nm,0.7s,mb5.0
FVM French Village 87.07 315 *e*P **P 09 36 02.9 +1.1**
FVM pmax pmax
comp=Z,11nm,0.5s,mb5.3
FVM French Village 87.07 315 *e*P **P 09 36 02.9 +1.0**
comp=Z,11nm,0.5s,mb5.3
FVM French Village 87.07 315 *e*P **P 09 36 02.8 +1.0**
comp=Z,11nm,0.5s,mb5.3
BDFB Brasilia 87.14 249 P **P 09 36 04.6 +2.4**
comp=Z,3.0nm,0.7s,mb4.7,baz=46,slow=2.0,SNR=3.6
BDFB LR LR 10 17 22.7
comp=Z,275nm,18.3s,MS4.7,baz=21,slow=37
CCM Cathedral Cave 87.49 316 *e*P **P 09 36 04.6 +0.7**
CCM pmax pmax
comp=Z,20nm,0.5s,mb5.6
CCM Cathedral Cave 87.49 316 *e*P **P 09 36 04.6 +0.7**
comp=Z,20nm,0.5s,mb5.6
CCM Cathedral Cave 87.49 316 *e*P **P 09 36 04.6 +0.7**
comp=Z,20nm,0.5s,mb5.6
PLAL Pickwick Lake 87.70 312 *e*P **P 09 36 05.1 +0.2**
comp=Z,25nm,1.3s,mb5.3
PLAL Pickwick Lake 87.70 312 *e*P **P 09 36 05.1 +0.2**
comp=Z,25nm,1.3s,mb5.3
LRAL Lakeview Retre 88.33 310 *e*P **P 09 36 09.1 +1.2**
comp=Z,9.1nm,0.6s,mb5.2
LRAL Lakeview Retre 88.33 310 *e*P **P 09 36 09.1 +1.2**
comp=Z,9.1nm,0.6s,mb5.2
LAO LASA Array 88.42 330 *e*P **P 09 36 09.5 +1.2**
comp=Z,48nm,1.4s,mb5.5
LAO LASA Array 88.42 330 *e*P **P 09 36 09.5 +1.2**
comp=Z,48nm,1.4s,mb5.5
EGMT Eagleton 88.72 333 *e*P **P 09 36 10.8 +1.1**
comp=Z,53nm,1.4s,mb5.7
EGMT Eagleton 88.72 333 *e*P **P 09 36 10.8 +1.1**
comp=Z,53nm,1.4s,mb5.7
WALA Waterton Lakes 89.34 336 *e*P **P 09 36 13.2 +0.6**
comp=Z,8.4nm,0.8s,mb5.1
WALA *e*pP pP 09 36 26.7 -0.6
WALA Waterton Lakes 89.34 336 *e*P **P 09 36 13.2 +0.6**
comp=Z,8.4nm,0.8s,mb5.1
WALA *e*pP pP 09 36 26.7 -0.5
RSSD Black Hills 89.52 327 *e*P **P 09 36 14.5 +1.0**
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
RSSD Black Hills 89.52 327 *e*P **P 09 36 14.5 +1.1**
comp=Z,6.4nm,0.8s,mb5.0
RSSD Black Hills 89.52 327 *e*P **P 09 36 14.5 +1.0**
comp=Z,6.3nm,0.8s,mb5.0
KSU1 Kansas State U 89.70 320 *e*P **P 09 36 14.7 +0.4**
KSU1 Kansas State U 89.70 320 *e*P **P 09 36 14.7 +0.4**
HRY Holter Researc 90.59 333 *e*P **P 09 36 19.5 +1.0**
HRY Holter Researc 90.59 333 *e*P **P 09 36 19.5 +1.0**
BSMT Bassoo Peak 90.67 335 *e*P **P 09 36 19.9 +1.1**
BSMT Bassoo Peak 90.67 335 *e*P **P 09 36 19.9 +1.0**
CHMT Chamberlain Mo 90.94 334 *e*P **P 09 36 20.9 +0.8**
CHMT Chamberlain Mo 90.94 334 *e*P **P 09 36 20.9 +0.8**
NEW Newport 91.09 337 P **P 09 36 21.4 +0.6**
comp=Z,4.1nm,0.6s,mb4.9,baz=53,slow=4.7,SNR=18
NEW Newport 91.09 337 P **P 09 36 21.4 +0.6**
NEW pmax pmax
comp=Z,4.0nm,0.6s
MSO Missoula 91.26 334 *e*P **P 09 36 22.3 +0.7**
comp=Z,11nm,1.3s,mb5.0
MSO Missoula 91.26 334 *e*P **P 09 36 22.3 +0.7**
comp=Z,11nm,1.3s,mb5.0
BOZ Bozeman (W) 91.41 332 *e*P **P 09 36 24.0 +1.7**
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
BOZ Bozeman (W) 91.41 332 *e*P **P 09 36 24.0 +1.7**
comp=Z,4.5nm,0.8s,mb4.8
BOZ Bozeman (W) 91.41 332 *e*P **P 09 36 24.0 +1.7**
comp=Z,4.5nm,0.8s,mb4.8
LRM Limekiln Ridge 91.58 333 *e*P **P 09 36 24.2 +1.1**
LRM Limekiln Ridge 91.58 333 *e*P **P 09 36 24.2 +1.2**
A05A Maple Falls 91.92 340 ||P **P 09 36 23.4 -1.2**
baz=91
DLMT Dillon 92.02 333 *e*P **P**
comp=Z,13nm,1.2s,mb5.1 **09 36 26.3 +1.2**
QLMT Earthquake Lak 92.02 332 *e*P **P 09 36 26.6 +1.5**
FLWY Flagg Ranch 92.36 331 *e*P **P 09 36 30.8 +4.1**
comp=Z,17nm,1.4s,mb5.2
PHWY Pilot Hill 92.39 326 *e*P **P 09 36 27.6 +0.8**
PHWY Pilot Hill 92.39 326 *e*P **P 09 36 27.6 +0.8**
MCMT McKenzie Canyo 92.57 333 *e*P **P 09 36 29.1 +1.4**
MCMT McKenzie Canyo 92.57 333 *e*P **P 09 36 29.1 +1.5**
B05A Bryant 92.58 340 ↑P **P 09 36 26.2 -1.5**
baz=92
MOOW Moose Ponds 92.66 331 *e*P **P 09 36 29.7 +1.6**
comp=Z,5.0nm,1.3s,mb4.8
MOOW Moose Ponds 92.66 331 *e*P **P 09 36 29.7 +1.7**
comp=Z,5.0nm,1.3s,mb4.8
LOHW Long Hollow 92.72 331 *e*P **P 09 36 30.3 +1.9**
comp=Z,8.5nm,1.6s,mb4.9
LOHW Long Hollow 92.72 331 *e*P **P 09 36 30.3 +2.0**
comp=Z,8.5nm,1.6s,mb4.9
TPAW Teton Pass 92.96 331 *e*P **P 09 36 31.5 +2.1**
comp=Z,3.0nm,0.8s,mb4.8
TPAW Teton Pass 92.96 331 *e*P **P 09 36 31.5 +2.1**
comp=Z,3.0nm,0.8s,mb4.8
C05A Tolt Reservoir 92.98 339 ↑P **P 09 36 28.9 -0.7**
baz=92
BW06 Boulder Array 92.99 330 *e*P **P 09 36 29.9 +0.3**
comp=Z,7.7nm,1.4s,mb4.9
BW06 Boulder Array 92.99 330 *e*P **P 09 36 29.9 +0.3**
comp=Z,7.7nm,1.4s,mb4.9
PDAR Pinedale Array 92.99 330 P **P 09 36 29.4 -0.2**
comp=Z,0.9nm,0.6s,mb4.3,baz=64,slow=4.5,SNR=10
PDAR LR LR 10 20 34.1
comp=Z,148nm,19.5s,MS4.5,baz=46,slow=37
RRI2 Red Ridge 93.22 331 *e*P **P 09 36 32.4 +1.8**
comp=Z,7.7nm,0.5s,mb4.9
GNW Green Mountain 93.42 340 *e*P **P 09 36 32.7 +1.1**
GNW Green Mountain 93.42 340 *e*P **P 09 36 32.7 +1.1**
ISCO Idaho Springs 93.66 325 *e*P **P 09 36 31.8 -0.9**
ISCO pmax pmax
comp=Z,7.0nm,1.3s,mb4.9
ISCO Idaho Springs 93.66 325 *e*P **P 09 36 31.8 -0.8**
comp=Z,7.4nm,1.3s,mb5.0
ISCO Idaho Springs 93.66 325 *e*P **P 09 36 31.8 -0.9**
comp=Z,7.4nm,1.3s,mb5.0
F08A Pendleton 93.80 337 ↑P **P 09 36 33.5 +0.2**
baz=93
E05A Randle 94.03 339 ↑P **P 09 36 34.6 +0.2**
baz=94
BMO Blue Mountains 94.14 335 *e*P **P 09 36 34.6 -0.3**
BMO Blue Mountains 94.14 335 *e*P **P 09 36 34.6 -0.3**
F05A White Salmon 94.56 339 ||P **P 09 36 37.2 +0.5**
baz=94
E03A Lebam 94.56 340 ||P **P 09 36 37.8 +1.0**
baz=94
HWUT Hardware Ranch 94.78 330 *e*P **P 09 36 38.5 +0.7**
comp=Z,13nm,1.2s,mb5.2
HWUT *e*pP pP 09 36 55.4 +2.9
HWUT Hardware Ranch 94.78 330 *e*P **P 09 36 38.5 +0.7**
comp=Z,13nm,1.2s,mb5.2
HWUT *e*pP pP 09 36 55.3 +2.9
I07A Izee 95.56 337 ||P **P 09 36 41.9 +0.5**
baz=95
H05A Madras 95.60 338 ||P **P 09 36 41.5 0.0**
baz=95
G03A Yamhill 95.61 339 ↑P **P 09 36 41.8 +0.2**
baz=95
H04A Detroit Lake 95.86 339 ↑P **P 09 36 42.2 -0.6**
baz=95
I06A Prineville 95.91 337 ↑P **P 09 36 43.0 0.0**
baz=95,SNR=9.9
I05A Bend 96.05 338 ||P **P 09 36 43.4 -0.2**
baz=96
K09A Rome 96.18 335 ↑P **P 09 36 44.5 +0.3**
baz=96
M12A Wells 96.27 332 ||P **P 09 36 45.5 +0.9**
baz=96
PV01 Paradox Valley 96.36 326 *e*P **P 09 36 45.8 +0.8**
PV01 Paradox Valley 96.36 326 *e*P **P 09 36 45.8 +0.8**
K08A Mann Creek Ran 96.42 335 ↑P **P 09 36 45.8 +0.5**
baz=96
J06A Christmas Vall 96.51 337 ↑P **P 09 36 45.9 +0.2**
baz=96,SNR=6.9
M11A Holland Ranch, 96.59 333 ↑P **P 09 36 46.7 +0.7**
baz=96
L09A Wilkinson Ranc 96.76 334 ↑P **P 09 36 47.4 +0.6**
baz=96
M10A I.L. Ranch, Tu 96.78 333 ↑P **P 09 36 47.5 +0.6**
baz=96
N12A Clover Valley, 96.80 332 ↑P **P 09 36 47.2 +0.2**
baz=96
J05A Fort Rock 96.83 337 ↑P **P 09 36 47.5 +0.4**
baz=96,SNR=6.8
L08A Fields 96.84 335 ↑P **P 09 36 47.9 +0.7**
baz=96
K06A Valley Falls 96.95 336 ↑P **P 09 36 48.7 +1.0**
baz=96
L07A Adell 97.34 335 ||P **P 09 36 50.3 +0.9**
baz=97
M08A Happy Creek Ra 97.51 335 ↑P **P 09 36 51.1 +0.9**
baz=97
O11A Cowboy Ranch, 97.66 332 ↑P **P 09 36 52.2 +1.4**
baz=97
N09A Rock Creek Ran 97.73 334 ↑P **P 09 36 52.1 +0.9**
baz=97
L05A Lakeview 97.81 336 ↑P **P 09 36 52.3 +0.7**
baz=97,SNR=5.1
N08A GE Springer Mi 98.01 334 ||P **P 09 36 53.6 +1.2**
baz=98
L04A Klamath Falls 98.04 337 ↑P **P 09 36 53.0 +0.5**
baz=98
O09A Fish Creek Ran 98.20 333 ↑P **P 09 36 54.1 +0.8**
baz=98
M04C Macdoel 98.38 337 ↑P **P 09 36 54.6 +0.5**
baz=98
P10A Eureka 98.41 332 ||P **P 09 36 54.9 +0.7**
baz=98
M06C Likely Place G 98.45 336 ↑P **P 09 36 55.2 +0.7**
baz=98
M05C Lookout 98.53 336 ||P **P 09 36 55.7 +0.9**
baz=98
N06A Buffalo Meadow 98.64 335 ↑P **P 09 36 55.6 +0.4**
baz=98
YBH Yreka Blue Hor 98.70 338 P **P 09 36 54.8 -0.7**
comp=Z,1.1nm,0.9s,mb4.4,baz=49,slow=5.1,SNR=2.5
YBH Yreka Blue Hor 98.70 338 ||P **P 09 36 55.4 -0.1**
baz=98
O07A Toulon 98.83 334 ↑P **P 09 36 57.0 +0.9**
baz=98
M03C McCloud 98.93 337 ||P **P 09 36 57.5 +1.0**
baz=98
O04C Chester 99.45 336 ||P **P 09 36 59.7 +0.9**
baz=99
NVAR Mina Array Bea 100.14 333 P Pdif 09 37 02.4 +0.4
comp=Z,0.4nm,0.7s,baz=38,slow=5.9,SNR=4.5
R05C Kirkwood Meado 100.55 334 ↑P Pdif 09 37 04.9 +1.1
baz=100
CFAA Coronel Fontan 111.31 246 Pdiff Pdif 09 37 50.9 -0.7
comp=Z,0.1nm,0.7s,baz=146,slow=3.8,SNR=3.9
WRA Warramunga Arr 115.01 98 PKP PKiKP 09 41 58.1 +1.1
comp=Z,0.8nm,0.8s,baz=289,slow=3.0,SNR=26
WRA Warramunga Arr 115.01 98 PKIKP PKiKP 09 41 58.1 +1.1
WRA pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 116.48 101 PKP PKPdf 09 42 01.1 +1.3
comp=Z,0.8nm,0.7s,baz=318,slow=1.6,SNR=11
ASAR Alice Springs 116.48 101 PKIKP PKPdf 09 42 01.2 +1.4
ASAR pmax pmax
comp=Z,10.0nm,0.7s
CTA Charters Tower 124.82 91 PKP PKPdf 09 42 18.2 +2.4
comp=Z,1.0nm,0.4s,baz=267,slow=4.6,SNR=3.0
CTA Charters Tower 124.82 91 PKIKP PKPdf 09 42 18.3 +2.5
CTA pmax pmax
comp=Z,10.0nm,0.4s
QSPA South Pole Qui 124.93 180 *e*P PKPdf 09 42 16.5 +0.4
STKA Stephens Creek 126.16 106 PKP PKPdf 09 42 20.2 +1.8
comp=Z,2.9nm,0.8s,baz=47,slow=10,SNR=4.7
VNDA Vanda 133.16 168 SKPbc SKPbc 09 45 57.7 +2.2
comp=Z,2.0nm,1.1s,baz=267,slow=4.0,SNR=4.9

IDC 22 09:30:36.9±9.1, 1490S×16727E, h110km±82km, mb3.4/2, mb1 3.4/3, mb1mx3.2/14, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=74.5km s-min=51.9km az=151.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**1.78**	**186**	P	Pn	09 32 19.2	0.0
	0.6nm,0.3s,baz=29,slow=10,SNR=13						
DZM				S	Sn	09 33 40.0	+0.9
	1.8nm,0.3s,baz=16,slow=20,SNR=9.7						
STKA	**Stephens Creek**	**28.89**	**230**	P	P	09 36 25.4	+0.2
	4.2nm,1.2s,baz=72,slow=6.4,SNR=4.7						
ASAR	**Alice Springs**	**32.62**	**249**	P	P	09 36 58.4	+0.3
	0.4nm,0.8s,baz=81,slow=9.0,SNR=6.4						
ARCES	**ARCESS Array B**	**120.42**	**345**	PKP	PKPdf	09 49 14.6	-0.7
	1.5nm,0.8s,baz=54,slow=1.6,SNR=3.6						

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*ISCJB **22** 10:04:42.0±1.4, 1029S×008×1607E±0.1, h58km±12km, mb4.3/12, MS3.8/7, Error ellipse: s-maj=20.9km s-min=12.8km az=136.2*
*NEIC **22** 10:04:43.0±0.9, 1025S×16072E, h50km±8km, mb4.5/6, Error ellipse: s-maj=12.4km s-min=8.0km az=69.0*
*IDC **22** 10:04:43.3±2.5, 1027S×16072E, h50km±19km, mb3.8/8, mb1 4.0/10, mb1mx4.0/15, mbtmp4.2/10, ML3.9/2, MS3.7/10, Ms1 3.7/10, ms1mx3.3/31, Error ellipse: s-maj=31.0km s-min=14.6km az=78.0*

ISC 22 10:04:43.1±1.3, 1024S±008×1608E±01, h51km±11km, n25, σ0s61/21, mb4.3/12, MS3.8/7, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.14**	**315**	P	**Pn**	**10 05 01.8**	**-1.0**
	182nm,0.3s,baz=274,slow=11,SNR=115						
HNR				S	**Sn**	**10 05 17.5**	**+0.2**
	1µm,0.3s,baz=84,slow=19,SNR=29						
DZM	**Mont Dzumac**	**12.96**	**156**	P	**Pn**	**10 07 45.1**	**+0.6**
	0.2nm,0.3s,baz=319,slow=19,SNR=5.6						
DZM				S	**Sn**	**10 10 00.5**	**-6.7**
	0.2nm,0.3s,baz=127,slow=20,SNR=3.4						
DZM				LR	LR	10 11 43.6	
	comp=Z,134nm,19.0s,baz=27,slow=32						
PMG	**Port Moresby**	**13.43**	**272**	LR	LR	10 12 10.5	
	comp=Z,164nm,21.8s,baz=67,slow=33						
CTA	**Charters Tower**	**17.07**	**233**	P	**Pn**	**10 08 38.8**	**+0.7**
	0.7nm,0.3s,baz=68,slow=12,SNR=17						
CTA				LR	LR	10 14 14.5	
	comp=Z,234nm,18.8s,baz=63,slow=34						
CTA	**Charters Tower**	**17.07**	**233**	*e*P	**Pn**	**10 08 38.3**	**+0.1**
	7.6nm,0.6s						
WRAB	**Tennant Creek**	**27.23**	**246**	*e*P	**P**	**10 10 22.1**	**-0.1**
	6.5nm,0.7s,mb4.3						
WB2	**Warramunga Arr**	**27.23**	**246**	*e*P	**P**	**10 10 22.4**	**+0.2**
WRA	**Warramunga Arr**	**27.24**	**246**	P	**P**	**10 10 22.5**	**+0.2**
	3.6nm,0.5s,mb4.1,baz=76,slow=9.2,SNR=35						
KAKA	**Kakadu**		**27.86 262**	*e*P	**P**	**10 10 28.4**	**+0.6**
	8.0nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**27.90**	**217**	P	**P**	**10 10 28.8**	**+0.6**
	2.9nm,0.7s,mb4.0,baz=18,slow=14,SNR=7.3						
STKA				LR	LR	10 20 29.4	
	comp=Z,111nm,20.0s,MS3.4,baz=208,slow=34						
STKA	**Stephens Creek**	**27.90**	**217**	*e*P	**P**	**10 10 28.5**	**+0.3**
	3.4nm,1.0s,mb3.9						
STKA				*e*P		10 10 30.2	
AS31	**Alice Springs**	**28.88**	**239**	*e*P	**P**	**10 10 36.6**	**-0.3**
ASAR	**Alice Springs**	**28.88**	**239**	P	**P**	**10 10 36.5**	**-0.5**
	0.7nm,0.5s,mb3.6,baz=63,slow=10,SNR=23						
ASAR				LR	LR	10 22 09.6	
	comp=Z,221nm,19.4s,MS3.8,baz=357,slow=36						
FITZ	**Fitzroy Crossi**	**34.89**	**253**	*e*P	**P**	**10 11 29.8**	**+0.2**
	12nm,0.8s,mb4.9						
NWAO	**Narrogin (SRO)**	**45.91**	**234**	LR	LR	10 31 54.3	
	comp=Z,173nm,18.0s,MS4.0,baz=196,slow=36						
MJAR	**Matsushiro Arr**	**51.15**	**337**	P	**P**	**10 13 41.1**	**+0.2**
	3.7nm,0.7s,mb4.4,baz=168,slow=8.4,SNR=13						
ASAJ	**Asahikawa**	**56.56**	**344**	LR	LR	10 36 26.5	
	comp=Z,64nm,19.0s,MS3.7,baz=171,slow=34						
CASY	**Casey**	**65.40**	**200**	*e*P	**P**	**10 15 19.0**	**-1.4**
	19nm,0.5s,mb5.4						
VNDA	**Vanda**	**67.26**	**180**	P	**P**	**10 15 32.5**	**+0.2**
	0.9nm,0.7s,mb3.9,baz=342,slow=4.9,SNR=9.3						
SONM	**Songino Array**	**75.18**	**325**	P	**P**	**10 16 21.0**	**+0.9**
	0.5nm,0.5s,mb3.7,baz=132,slow=5.3,SNR=6.4						
MAW	**Mawson**	**83.61**	**202**	P	**P**	**10 17 04.8**	**-1.1**
	1.1nm,0.6s,mb4.1,baz=123,slow=3.1,SNR=3.6						
MAW				LR	LR	10 50 27.9	
	comp=Z,70nm,21.6s,MS4.0,baz=242,slow=33						
MKAR	**Makanchi Array**	**89.61**	**318**	P	**P**	**10 17 35.3**	**0.0**
	0.4nm,0.4s,mb4.1,baz=102,slow=6.3,SNR=5.6						
LPIG	**La Paz**	**93.15**	**66**	LR	LR	10 52 47.6	
	comp=Z,37nm,18.7s,MS3.9,baz=328,slow=31						
YKA	**Yellowknife Ar**	**96.53**	**28**	LR	LR	10 57 52.4	
	comp=Z,33nm,18.2s,MS3.9,baz=230,slow=33						
TORD	**Torodi Ar. Bea**	**159.30**	**280**	PKPab	PKPab	10 25 14.4	+1.2
	0.6nm,0.8s,baz=77,slow=4.1,SNR=4.9						

CASC 22 10:06:23.5±2.5, 859N×8305W, h0km±8km, MD3.6, 2C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTCR	**Cotoan**	**0.42**	**44**	*e*P	Pg	10 06 29.4	-2.1
CTCR				*e*S	Sg	10 06 35.6	-1.4
BRU	**Baru**	**0.53**	**66**	||*e*P	Pg	10 06 36.5	+2.8
DVD	**David**	**0.61**	**104**	||*i*P	Pg	10 06 34.8	-0.5
BUS	**Buena Vista**	**1.19**	**324**	↑↑*i*P	Pg	10 06 45.7	-0.5
BUS				*e*S	Sg	10 07 04.8	+3.2
LCR2	**La Lucha 2**	**1.48**	**321**	*e*P	Pn	10 06 50.2	-1.1
LAJ	**Bijagual**	**1.65**	**320**	*e*P	Pn	10 06 57.5	+3.8
PRS1	**Puriscal**	**1.86**	**318**	||*e*P	Pn	10 06 56.1	-0.5
AZU	**Azuero**	**2.86**	**106**	*e*P	Pn	10 07 10.4	+0.1
ACH	**Altos**	**3.09**	**88**	||*e*P	Pn	10 07 14.2	+0.7

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*ISCJB **22** 10:53:14.0±0.5, 7932N×008×19.1W±03, h10km, mb3.8/12, Error ellipse: s-maj=11.6km s-min=7.3km az=9.1*
*CSEM **22** 10:53:14.3±0.2, 7950N×1843W, h10km, ML3.7, Error ellipse: s-maj=6.9km s-min=4.2km az=14.0*
*IDC **22** 10:53:14.6±1.1, 7942N×1899W, h0km, mb3.7/11, mb1 3.9/11, mb1mx3.7/24, mbtmp3.8/11, ML4.8/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/33, Error ellipse: s-maj=43.8km s-min=15.1km az=34.0*
*NEIC **22** 10:53:16.3±0.5, 7933N×19.16W, h10km, mb4.0/1, Error ellipse: s-maj=11.0km s-min=6.8km az=197.0*
*NAO **22** 10:53:23.3, 7943N×1844W, h33km, mb3.3*

ISC 22 10:53:15.8±0.5, 7936N±008×191W±03, h10km, n37, σ0s89/49, mb3.8/12, Eastern Kalaallit Nunaat

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

KBS	**Kingsbay**	**5.82**	**79**	Pn		**Pn**	**10 54 42.0**	**-0.2**
KBS				Sn		**Sn**	**10 55 43.2**	**-5.8**
KBS	**Kingsbay**	**5.82**	**79**	*e*P		**Pn**	**10 54 41.7**	**-0.5**
KBS				*e*S		**Sn**	**10 55 43.1**	**-5.9**
KBS				AML		AML	10 55 44.9	
	comp=Z,17nm,0.2s							
KBS	**Kingsbay**	**5.82**	**79**	*e*Pn		**Pn**	**10 54 42.0**	**-0.2**
	comp=Z,14nm,0.4s							
KBS				*e*Sn		**Sn**	**10 55 42.1**	**-6.9**
KBS	**Kingsbay**	**5.82**	**79**	Pn		**Pn**	**10 54 42.0**	**-0.2**
KBS				eSn		**Sn**	**10 55 42.1**	**-6.9**
SPB4	**Spitsbergen Ar**	**6.93**	**82**	*e*Pn		**Pn**	**10 54 58.3**	**+0.9**
SPB4				*e*Sn		**Sn**	**10 56 13.0**	**-3.2**
SPA0	**Spitsbergen Ar**	**6.93**	**82**	Pn		**Pn**	**10 54 57.5**	**+0.1**
	baz=306,slow=10							
SPA0				Sn		**Sn**	**10 56 10.8**	**-5.5**
SUMG	**Summit**	**8.21**	**224**	*e*Pn		**Pn**	**10 55 14.1**	**-1.0**
	comp=Z,42nm,0.3s							
SUMG				*e*Sn		**Sn**	**10 56 38.5**	**-9.4**
SUMG	**Summit**	**8.21**	**224**	*e*Pn		**Pn**	**10 55 14.1**	**-0.9**
	comp=Z,42nm,0.3s							
JMIC	**Jan Mayen**	**8.81**	**157**	Pn		**Pn**	**10 55 23.1**	**-0.1**
	comp=Z,11nm,0.3s,baz=113,slow=5.0,SNR=6.3							
JMIC				Sn		**Sn**	**10 56 55.4**	**-7.2**
	comp=Z,7.6nm,0.3s,baz=160,slow=20,SNR=6.9							
JMIC				LR		LR	10 58 43.3	
	comp=Z,55nm,20.8s,baz=282,slow=37							
JMIC	**Jan Mayen**	**8.81**	**157**	Pn		**Pn**	**10 55 23.1**	**-0.1**
JMIC				Sn		**Sn**	**10 56 55.3**	**-7.2**
HOPEN	**Hopen**	**9.44**	**85**	*e*P		**Pn**	**10 55 32.4**	**+0.6**
HOPEN				*e*S		**Sn**	**10 57 08.8**	**-9.1**
HOPEN				AML		AML	10 57 19.9	
	comp=E,25nm,0.6s							
ARCES	**ARCESS Array B**	**14.90**	**106**	Pn		**Pn**	**10 56 51.8**	**+5.4**
	comp=E,0.4nm,0.3s,baz=327,slow=9.1,SNR=11							
SFJD	**Kangerlussuaq**	**15.04**	**232**	Pn		**Pn**	**10 56 43.4**	**-4.9**
	comp=E,2.0nm,0.3s,baz=348,slow=13,SNR=6.4							
SFJD				Sn		**Sn**	**10 59 19.6**	**-15**
	comp=E,9.5nm,0.3s,baz=280,slow=12,SNR=6.8							
SFJD				Lg			11 01 04.0	
	comp=E,1.0nm,0.3s,baz=242,slow=15,SNR=3.2							
SFJD	**Kangerlussuaq**	**15.04**	**232**	*i* P		**Pn**	**10 56 43.8**	**-4.6**
SFJD				*i* S		**Sn**	**10 59 18.4**	**-17**
NB2	**NORSAR Subarra**	**20.53**	**136**	P		**P**	**10 57 58.2**	**+3.9**
	comp=Z,1.1nm,0.6s,baz=345,slow=11							
NB2	**NORSAR Subarra**	**20.53**	**136**	P		**P**	**10 57 56.0**	**+1.7**
NOA	**NORSAR Array B**	**20.53**	**136**	P		**P**	**10 57 55.9**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=341,slow=8.5,SNR=2.9							
FRB	**Frobisher Bay**	**20.97**	**251**	P		**P**	**10 57 58.5**	**-0.6**
	comp=Z,6.2nm,0.8s,baz=54,slow=14,SNR=4.0							
FRB	**Frobisher Bay**	**20.97**	**251**	P		**P**	**10 57 58.5**	**-0.6**
HFS	**Hagfors**	**21.73**	**133**	P		**P**	**10 58 06.6**	**-0.6**
	comp=Z,2.1nm,0.5s,mb3.8,baz=3.2,slow=7.8,SNR=12							
HFS	**Hagfors**	**21.73**	**133**	P		**P**	**10 58 07.3**	**0.0**
	baz=315,slow=5.6							
KAF	**Kangasniemi**	**21.78**	**116**	*e*p		**P**	**10 58 07.4**	**-0.4**
	comp=Z,4.3nm,0.6s,mb4.1							
JOF	**Joensuu**	**21.89**	**109**	*e*p		**P**	**10 58 13.7**	**+4.8**
	comp=Z,1.8nm,0.5s,mb3.8							
FIA0	**FINESS Array S**	**22.37**	**117**	P		**P**	**10 58 14.1**	**+0.1**
	baz=331,slow=16							
FIA1	**FINESS Array S**	**22.37**	**117**	*e*P		**P**	**10 58 13.5**	**-0.5**
FIA1	**FINESS Array S**	**22.37**	**117**	*e*P		**P**	**10 58 13.5**	**-0.6**
FINES	**FINESS Array B**	**22.37**	**117**	P		**P**	**10 58 14.0**	**-0.1**
	comp=Z,2.6nm,0.5s,mb3.9,baz=344,slow=10,SNR=21							
EKA	**Eskdalemuir Ar**	**24.70**	**158**	P		**P**	**10 58 37.9**	**+0.9**
	comp=Z,0.4nm,0.4s,mb3.3,baz=343,slow=8.6,SNR=3.5							
INK	**Inuvik**	**27.93**	**314**	P		**P**	**10 59 05.5**	**-0.6**
	comp=Z,3.0nm,0.7s,mb4.0,baz=358,slow=11,SNR=5.8							
YKA	**Yellowknife Ar**	**30.47**	**294**	P		**P**	**10 59 29.8**	**+1.1**
	comp=Z,1.8nm,0.7s,mb3.9,baz=28,slow=9.6,SNR=3.1							
DAWY	**Dawson**	**32.74**	**315**	*e*P		**P**	**10 59 49.6**	**+1.0**
DAWY	**Dawson**	**32.74**	**315**	*e*P		**P**	**10 59 49.7**	**+1.0**
GERES	**GERESS Array B**	**32.76**	**139**	P		**P**	**10 59 49.9**	**+1.0**
	comp=Z,0.3nm,0.2s,mb3.8,baz=17,slow=7.6,SNR=2.2							
AKASG	**Malin Array Be**	**33.18**	**120**	P		**P**	**10 59 51.5**	**-1.0**
	comp=Z,0.5nm,0.3s,mb3.9,baz=344,slow=9.5,SNR=4.1							
BRTR	**Keskin Array B**	**44.57**	**119**	P		**P**	**11 01 36.5**	**+8.5**
	comp=Z,0.8nm,0.8s,mb3.6,baz=336,slow=6.8,SNR=3.5							
NVAR	**Mina Array Bea**	**54.22**	**287**	P		**P**	**11 02 40.6**	**-1.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=37,slow=6.6,SNR=3.6							
TORD	**Torodi Ar. Bea**	**66.96**	**158**	P		**P**	**11 04 08.9**	**+0.3**
	comp=Z,0.4nm,0.7s,mb3.6,baz=353,slow=6.6,SNR=4.1							

*ISCJB **22** 11:08:43.9±0.4,2291S±005×6371W±005,h536km±5km, mb3.5/11,Error ellipse: s-maj=7.7km s-min=6.7km az=74.7*
*IDC **22** 11:08:43.8±0.7,2285S×6373W,h525km±8km, mb3.3/9, mb1 3.4/17,mb1mx3.4/24,mbtmp4.2/17,Error ellipse: s-maj=12.3km s-min=11.3km az=69.0*
*NEIC **22** 11:08:44.1±0.4,2285S×6364W,h527km±5km, mb3.8/2, Error ellipse: s-maj=9.5km s-min=8.3km az=139.0*

ISC 22 11:08:44.3±0.4,2291S±005×6372W±005,h529km±5km, n39,σ0ᵗ98/42,mb3.5/11,5C,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**4.80**	**273**	P	**P**	**11 10 11.2**	**0.0**
	25nm,0.3s,baz=104,slow=5.5,SNR=85						
LVC				S	**S**	**11 11 19.8**	**-2.3**
	27nm,0.3s,baz=241,slow=20,SNR=11						
CEN1	**Los Morros**	**5.98**	**264**	⇑*i* P	**P**	**11 10 23.3**	**+1.6**
CEN1				*i* S	**S**	**11 11 43.2**	**+1.8**
ANCH	**Antofagasta**	**6.20**	**262**	*e*P	**P**	**11 10 23.8**	**0.0**
ANCH				*i* S	**S**	**11 11 43.0**	**-2.1**
ANCH	**Antofagasta**	**6.20**	**262**	*e*P	**P**	**11 10 23.9**	**+0.2**
ANCH				*i* S	**S**	**11 11 42.2**	**-2.9**
CPN1	**Cerro Paranal**	**6.36**	**253**	⇑*i* P	**P**	**11 10 25.9**	**+0.7**
CPN1				*i* S	**S**	**11 11 47.3**	**-0.6**
CPUP	**Villa Florida**	**6.74**	**122**	P	**P**	**11 10 30.2**	**+1.3**
	8.3nm,0.3s,baz=296,slow=9.3,SNR=74						
CPUP				S	**S**	**11 11 54.5**	**-0.1**
	0.6nm,0.3s,baz=127,slow=19,SNR=1.4						
SIV	**San Ignacio**	**7.32**	**20**	P	**P**	**11 10 35.5**	**+0.9**
	1.0nm,0.3s,baz=217,slow=9.4,SNR=16						
SIV				S	**S**	**11 12 04.6**	**-0.5**
	baz=223,slow=19,SNR=5.0						
LPAZ	**La Paz**	**7.79**	**327**	P	**P**	**11 10 40.4**	**+1.1**
	8.8nm,0.3s,baz=114,slow=5.5,SNR=212						
LPAZ				S	**S**	**11 12 13.1**	**-0.4**
	1.0nm,0.3s,baz=262,slow=21,SNR=8.2						
LPAZ	**La Paz**	**7.79**	**327**	P	**P**	**11 10 40.4**	**+1.1**
LPAZ				S	**S**	**11 12 13.1**	**-0.4**
LCO	**Las Campanas**	**8.74**	**224**	⇑*i* P	**P**	**11 10 49.1**	**+0.2**
LCO				*e*S	**S**	**11 12 31.3**	**+0.2**
CFAA	**Coronel Fontan**	**9.55**	**204**	P	**P**	**11 10 57.5**	**+0.3**
	0.2nm,0.3s,baz=26,slow=10,SNR=28						
CFAA				S	**S**	**11 12 44.0**	**-2.5**
	0.3nm,0.3s,baz=274,slow=23,SNR=20						
TLL	**Tololo Astrono**	**9.61**	**220**	⇑*i* P	**P**	**11 10 58.7**	**+0.8**
BDFB	**Brasilia**	**16.49**	**67**	P	**P**	**11 12 08.3**	**-1.0**
	2.6nm,0.3s,baz=247,slow=10,SNR=24						
BAO	**Brasilia Array**	**16.51**	**67**	P	**P**	**11 12 06.0**	**-3.5**
NNA	**Nana**	**16.56**	**309**	P	**P**	**11 12 08.6**	**-1.3**
	0.8nm,0.3s,baz=263,slow=12,SNR=4.0						
PLCA	**Paso Flores**	**18.68**	**196**	P	**P**	**11 12 29.3**	**0.0**
	0.1nm,0.3s,baz=94,slow=7.8,SNR=3.9						
DBIC	**Dimbokro**	**64.60**	**70**	P	**P**	**11 18 29.0**	**-0.5**
	1.9nm,0.4s,mb3.9,baz=225,slow=8.7,SNR=6.2						
DBIC	**Dimbokro**	**64.60**	**70**	P	**P**	**11 18 29.0**	**-0.5**
TOA0	**Torodi Ar. Sit**	**73.37**	**68**	*e*P	**P**	**11 19 22.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**73.37**	**68**	P	**P**	**11 19 22.0**	**-0.3**
	6.1nm,0.6s,mb4.2,baz=260,slow=5.9,SNR=76						
SYO	**Syowa Base**	**73.47**	**159**	⇑*e*P	**P**	**11 19 22.3**	**-0.6**
SRU	**San Rafael**	**75.65**	**324**	*e*P	**P**	**11 19 36.0**	**+0.9**
	3.4nm,0.8s,mb3.8						
VNDA	**Vanda**	**76.27**	**189**	P	**P**	**11 19 39.5**	**+0.9**
	0.6nm,0.7s,mb3.1,baz=115,slow=4.8,SNR=5.6						
PDAR	**Pinedale Array**	**77.81**	**327**	P	**P**	**11 19 47.1**	**+0.2**
	0.8nm,0.6s,mb3.2,baz=120,slow=8.2,SNR=10						
ULM	**Lac du Bonnet**	**78.21**	**340**	P	**P**	**11 19 48.2**	**-0.9**
	1.8nm,0.5s,mb3.6,baz=154,slow=5.7,SNR=8.1						
BOSA	**Boshof**	**78.53**	**116**	P	**P**	**11 19 50.8**	**0.0**
	2.9nm,0.9s,mb3.6,baz=114,slow=9.7,SNR=4.7						
NVAR	**Mina Array Bea**	**79.62**	**319**	P	**P**	**11 19 56.6**	**0.0**
	0.2nm,0.5s,mb2.7,baz=135,slow=4.5,SNR=3.7						
HLID	**Hailey**	**80.86**	**325**	*e*P	**P**	**11 20 04.0**	**+1.0**
	2.8nm,0.9s,mb3.7						
MCMT	**McKenzie Canyo**	**80.94**	**327**	*e*P	**P**	**11 20 04.6**	**+1.1**
MAW	**Mawson**	**81.55**	**162**	P	**P**	**11 20 06.8**	**+0.2**
	2.7nm,0.6s,mb3.9,baz=223,slow=6.4,SNR=12						
ESDC	**Sonseca Array**	**83.55**	**42**	P	**P**	**11 20 15.9**	**-0.8**
	0.3nm,0.3s,mb3.2,baz=253,slow=4.8,SNR=5.6						
ASAR	**Alice Springs**	**130.64**	**201**	PKP	PKPdf	11 26 55.5	+0.5
	0.7nm,0.4s,baz=138,slow=1.7,SNR=16						
ASAR				SKPbc	SKPbc	11 29 29.6	+0.1
	0.9nm,0.6s,baz=147,slow=3.6,SNR=17						
WRA	**Warramunga Arr**	**133.91**	**204**	PKP	PKPdf	11 27 02.4	+1.2
	0.9nm,0.3s,baz=158,slow=1.8,SNR=19						
BVAR	**Borovoye Array**	**134.12**	**37**	PKP	PKPdf	11 27 00.7	-0.9
	0.3nm,0.4s,baz=306,slow=1.7,SNR=3.1						
PMG	**Port Moresby**	**135.89**	**227**	PKP	PKPdf	11 27 06.1	+1.2
	11nm,0.8s,baz=169,slow=2.2,SNR=2.5						
FITZ	**Fitzroy Crossi**	**138.23**	**193**	PKP	PKPdf	11 27 10.9	+1.7
	2.8nm,0.4s,baz=177,slow=2.1,SNR=4.1						
MKAR	**Makanchi Array**	**143.76**	**41**	PKP	PKPdf	11 27 17.9	-1.2
	3.0nm,0.5s,baz=316,slow=3.3,SNR=37						
MKAR	**Makanchi Array**	**143.76**	**41**	PKP	PKPdf	11 27 17.9	-1.2
SONM	**Songino Array**	**153.90**	**15**	PKP	PKPdf	11 27 35.7	+0.5
	0.3nm,0.3s,baz=253,slow=1.5,SNR=4.0						
SONM				PKPbc	PKPbc	11 27 44.1	+0.4
	0.4nm,0.5s,baz=347,slow=2.0,SNR=4.0						
SONM				PKPab	PKPab	11 27 58.7	-0.9
	0.7nm,0.6s,baz=315,slow=3.2,SNR=5.5						

IDC 22 11:22:32.4±2.0,902S×12080E,h0km,mb3.5/1,mb1 3.7/4, mb1mx3.5/14,mbtmp3.5/4,ML3.5/3,Error ellipse: s-maj=174.2km s-min=26.5km az=56.0,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.18**	**153**	Pn	Pn	11 24 59.7	0.0
	0.1nm,0.3s,baz=330,slow=13,SNR=13						
FITZ				Sn	Sn	11 26 42.2	-12
	0.8nm,0.3s,baz=182,slow=19,SNR=12						
WRA	**Warramunga Arr**	**17.00**	**131**	P	Pn	11 26 31.8	+0.2
	0.3nm,0.3s,baz=306,slow=14,SNR=25						
WRA				S	Sn	11 29 26.0	-15
	0.2nm,0.3s,baz=294,slow=24,SNR=8.1						
ASAR	**Alice Springs**	**19.21**	**141**	P	Pn	11 26 58.4	-0.4
	0.1nm,0.3s,baz=329,slow=14,SNR=8.2						
ASAR				S	Sn	11 30 19.3	-15
	0.1nm,0.3s,baz=319,slow=25,SNR=3.0						
MKAR	**Makanchi Array**	**65.30**	**332**	P	P	11 33 16.2	+0.1
	0.2nm,0.4s,baz=150,slow=8.3,SNR=4.1						

*ISCJB **22** 11:34:06.6±0.3,523N±005×9348E±004,h31km,mb4.6/42, MS3.6/11,Error ellipse: s-maj=7.8km s-min=4.7km az=61.7*
*BJI **22** 11:34:07.6,520N×9340E,h30km,mB4.8,mb4.6,Ms3.8, Msz3.7*
*MOS **22** 11:34:07.0±0.8,526N×9342E,h33km,mb5.0/9,Error ellipse: s-maj=15.5km s-min=7.7km az=113.8*
*IDC **22** 11:34:08.5±0.4,528N×9343E,h30km±2km, mb4.2/20, mb1 4.4/21,mb1mx4.2/27,mbtmp4.4/21,ML4.2/1,MS3.5/6, Ms1 3.5/6,ms1mx3.1/35,Error ellipse: s-maj=18.0km s-min=8.9km az=54.0*
*NEIC **22** 11:34:08.5±0.3,524N×9341E,mb4.5/8,Error ellipse: s-maj=10.5km s-min=5.3km az=48.0*

ISC 22 11:34:09.1±0.3,527N±005×9346E±004,h32km, h32km±8km:pP-P,n94,σ0ᵗ87/92,mb4.6/42,MS3.6/11, 9C-1D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**5.97**	**114**	Pn	**Pn**	**11 35 36.7**	**+1.5**
	5.8nm,0.3s,baz=343,slow=10,SNR=26						
PSI				Sn	**Sn**	**11 36 41.8**	**-0.7**
	16nm,0.3s,baz=52,slow=23,SNR=7.7						
KULM	**Kulim**	**7.16**	**90**	*e*Pn	**Pn**	**11 35 52.6**	**+1.2**
KULM				*e*Sn	**Sn**	**11 37 11.8**	**+0.2**
CHG	**Chiang Mai**	**14.49**	**21**	⇑P	**Pn**	**11 37 40.3**	**+8.6**
	16nm,1.0s						
CHTO	**Chiang Mai**	**14.49**	**21**	*e*P	**Pn**	**11 37 32.3**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CHTO	**Chiang Mai**	**14.49**	**21**	*e*Pn	**Pn**	**11 37 32.3**	**+0.6**
	comp=Z,5.2nm,1.2s						
NANT	**Nan**	**15.19**	**27**	P	**Pn**	**11 37 48.0**	**+6.8**
VIS	**Vishakhapatnam**	**15.86**	**322**	*i* P	**Pn**	**11 37 52.3**	**+2.5**
VIS				*i* S	**Sn**	**11 40 29.2**	**-15**
SALM	**Salem**	**16.37**	**294**	*e*P	**Pn**	**11 38 00.0**	**+3.6**
SALM				*e*S	**Sn**	**11 40 42.0**	**-15**
KSM	**Kuching**	**17.23**	**102**	*e*P	**Pn**	**11 38 11.4**	**+4.2**
QIZ	**Qiongzhong**	**21.03**	**48**	P	**P**	**11 38 49.3**	**-0.7**
QIZ				AP		11 38 58.3	
QIZ				XP	sP	11 39 02.3	-0.5
QIZ				S	**S**	**11 42 40.3**	**-2.1**
QIZ				XS	sS	11 42 52.4	-3.8
QIZ				AMB	AMB		
	comp=Z,21nm,1.8s,mb4.2						
QIZ				AMB	AMB		
	comp=Z,187nm,4.0s						
QIZ				LR	LR		
	comp=N,346nm,19.2s						
QIZ				LR	LR		
	comp=Z,288nm,14.4s,MS3.8						
JIRN	**Jiri**	**23.32**	**344**	*e*P	**P**	**11 39 14.9**	**+0.5**
PKI	**Pulchoki**	**23.47**	**342**	*e*P	**P**	**11 39 15.5**	**-0.4**
DMN	**Daman**	**23.60**	**341**	*e*P	**P**	**11 39 16.0**	**-1.1**
GUN	**Gumba**	**23.64**	**343**	*e*P	**P**	**11 39 19.1**	**+1.6**
KKN	**Kakani**	**23.71**	**342**	*e*P	**P**	**11 39 18.4**	**+0.3**
GKN	**Gorkha**	**24.12**	**341**	*e*P	**P**	**11 39 22.4**	**+0.6**
GYA	**Guiyang**	**24.56**	**30**	⇑*i* P	**P**	**11 39 27.5**	**+1.7**
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
XAN	**Xi'an**	**32.02**	**25**	P	**P**	**11 40 32.8**	**+0.3**
XAN				AP	pP	11 40 40.4	-1.5
XAN				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.5						
GTA	**Gaotai**	**34.47**	**9**	P	**P**	**11 40 54.8**	**+1.0**
GTA				AP	pP	11 41 02.1	-1.2
GTA				XP	sP	11 41 05.0	-2.2
GTA				PP	PP	11 42 11.8	-0.4
GTA				PCP	PcP	11 43 30.3	+1.7
GTA				S	**S**	**11 46 20.4**	**+0.3**
GTA				SS	SS	11 48 31.3	-19
GTA				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.6						
GTA				AMB	AMB		
	comp=Z,85nm,4.2s						
GTA				LR	LR		
	comp=N,72nm,21.0s						
GTA				LR	LR		
	comp=E,61nm,14.9s						
GTA				LR	LR		
	comp=Z,111nm,17.2s,MS3.7						
SSE	**Sheshan**	**36.58**	**42**	*e*P	**P**	**11 41 11.5**	**-0.4**
SSE				AP	pP	11 41 20.6	-0.8
SSE				XP	sP	11 41 24.8	-0.5
SSE				PP	PP	11 42 34.4	-1.1
SSE				PCP	PcP	11 43 35.8	+1.0
SSE				S	**S**	**11 46 51.5**	**-0.9**
SSE				XS	sS	11 47 06.4	-1.7
SSE				SCS	ScS	11 51 25.3	-0.2
SSE				AMB	AMB		
	comp=Z,32nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,31nm,3.9s						
SSE				LR	LR		
	comp=N,93nm,21.2s,MS3.6						
SSE				LR	LR		
	comp=E,70nm,21.2s,MS3.6						
SSE				LR	LR		
	comp=Z,55nm,16.8s,MS3.4						
FITZ	**Fitzroy Crossi**	**39.33**	**127**	P	**P**	**11 41 34.5**	**-0.7**
	comp=Z,2.2nm,0.6s,mb4.0,baz=316,slow=7.8,SNR=13						
FITZ				pP	pP	11 41 46.0	+1.3
	comp=Z,1.4nm,0.4s,baz=330,slow=10.0,SNR=2.7						
FITZ				PcP	PcP	11 43 44.1	+0.8
	comp=Z,1.1nm,0.6s,baz=45,slow=1.4,SNR=4.7						
FITZ	**Fitzroy Crossi**	**39.33**	**127**	*e*P	**P**	**11 41 34.4**	**-0.8**
	comp=Z,3.5nm,0.6s,mb4.3						
AAK	**Ala-Archa**	**40.84**	**338**	*i* P	**P**	**11 41 48.5**	**+0.8**
AAK				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.6						
MKAR	**Makanchi Array**	**42.48**	**349**	P	**P**	**11 42 01.4**	**+0.3**
	comp=Z,5.4nm,0.6s,mb4.4,baz=160,slow=7.6,SNR=39						
MKAR				pP	pP	11 42 10.4	-0.4
	comp=Z,3.3nm,0.5s,baz=161,slow=10.0,SNR=7.6						
MKAR				PcP	PcP	11 43 53.9	+0.4
	comp=Z,1.1nm,0.6s,baz=163,slow=5.6,SNR=3.1						
MKAR	**Makanchi Array**	**42.48**	**349**	⇑*e*P	**P**	**11 42 01.5**	**+0.4**
SONM	**Songino Array**	**43.84**	**13**	P	**P**	**11 42 12.4**	**+0.3**
	comp=Z,3.2nm,0.7s,mb4.2,baz=195,slow=8.2,SNR=25						
SONM				pP	pP	11 42 20.7	-1.0
	comp=Z,4.4nm,0.8s,baz=192,slow=7.2,SNR=10						
SONM				PcP	PcP	11 43 58.9	+0.9
	comp=Z,2.9nm,0.6s,baz=200,slow=3.7,SNR=8.9						
SONM				pPcP		11 44 08.0	
	comp=Z,4.4nm,0.6s,baz=194,slow=3.2,SNR=13						
SONM				LR	LR	12 03 24.6	
	comp=Z,43nm,18.7s,MS3.4,baz=100,slow=40						
SONM	**Songino Array**	**43.84**	**13**	P	**P**	**11 42 12.4**	**+0.3**
SONM				*PP	pP	11 42 20.7	-1.0
SONM						11 43 58.9	
ULN	**Ulaanbaatar**	**44.01**	**13**	⇑*e*P	**P**	**11 42 14.0**	**+0.5**
ULN	**Ulaanbaatar**	**44.01**	**13**	*e*P	**P**	**11 42 13.5**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.1						
ZAK	**Zakamensk**	**45.71**	**9**	*e*P	**P**	**11 42 27.5**	**+0.5**
ZAK				*e*		11 44 05.2	
ZAK				pmax	pmax		
	comp=Z,20nm,1.8s,mb4.8						
WRA	**Warramunga Arr**	**47.35**	**123**	P	**P**	**11 42 40.0**	**+0.1**
	comp=Z,12nm,0.7s,mb5.0,baz=301,slow=9.1,SNR=112						
WRA				pP	pP	11 42 48.6	-1.0
	comp=Z,8.8nm,0.8s,baz=302,slow=9.7,SNR=11						
WRAB	**Tennant Creek**	**47.36**	**123**	*e*P	**P**	**11 42 40.2**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
WRAB	**Tennant Creek**	**47.36**	**123**	*e*P	**P**	**11 42 40.2**	**+0.3**
	comp=Z,18nm,0.7s,mb5.1						
WB2	**Warramunga Arr**	**47.37**	**123**	*e*P	**P**	**11 42 40.1**	**+0.1**
AS31	**Alice Springs**	**48.81**	**128**	*e*P	**P**	**11 42 51.3**	**+0.1**
ASAR	**Alice Springs**	**48.81**	**128**	P	**P**	**11 42 51.1**	**-0.1**
	comp=Z,3.1nm,0.7s,mb4.4,baz=296,slow=7.9,SNR=46						
ASAR				pP	pP	11 42 59.5	-1.5
	comp=Z,2.3nm,0.5s,baz=303,slow=7.6,SNR=7.8						
ASAR				PcP	PcP	11 44 15.8	+0.2
	comp=Z,2.5nm,0.7s,baz=305,slow=3.5,SNR=8.3						
QRN	**Al-Qurain**	**49.00**	**304**	*e*P	**P**	**11 42 52.4**	**-0.2**
QRN				AMb	AMB	11 42 54.2	
	comp=Z,28nm,0.6s,mb5.5						
RDF	**Al-Radifah**	**49.36**	**304**	*e*P	**P**	**11 42 55.5**	**+0.1**
RDF				AMb	AMB	11 42 58.1	
	comp=Z,57nm,1.1s,mb5.5						
NAY	**Al-Naaiem**	**49.73**	**304**	*e*P	**P**	**11 42 58.2**	**0.0**
NAY				AMb	AMB	11 42 59.6	
	comp=Z,22nm,0.6s,mb5.4						
MIB	**Mutribah**	**49.83**	**305**	*e*P	**P**	**11 42 59.0**	**0.0**
MIB				AMb	AMB	11 43 01.8	
	comp=Z,33nm,1.1s,mb5.3						
RST	**Umm Al-Ruwaisa**	**50.01**	**304**	*e*P	**P**	**11 43 00.2**	**-0.1**
RST				AMb	AMB	11 43 01.6	
	comp=Z,24nm,0.7s,mb5.3						
NVS	**Novosibirsk**	**50.11**	**352**	*e*P	**P**	**11 43 00.4**	**-0.7**
BVAR	**Borovoye Array**	**51.24**	**342**	P	**P**	**11 43 08.9**	**-0.6**
	comp=Z,3.5nm,0.6s,mb4.4,baz=148,slow=8.7,SNR=15						
BVAR				pP	pP	11 43 18.6	-0.7
	comp=Z,2.1nm,0.6s,baz=134,slow=8.5,SNR=3.9						
BVAR				PcP	PcP	11 44 24.2	-0.2
	comp=Z,0.8nm,0.6s,baz=129,slow=5.7,SNR=3.7						
BVAR				pPcP		11 44 35.0	
	comp=Z,1.5nm,0.7s,baz=150,slow=6.3,SNR=3.6						
BVAR	**Borovoye Array**	**51.24**	**342**	P	**P**	**11 43 08.9**	**-0.6**
BVAR				*PP	pP	11 43 18.6	-0.7
BVAR						11 44 24.2	
GUMO	**Guam**	**51.29**	**77**	LR	LR	12 04 19.9	
	comp=Z,15nm,21.3s,MS3.0,baz=245,slow=35						
ZRNK	**Zerenda**	**51.60**	**341**	*e*P	**P**	**11 43 11.6**	**-0.7**
ZRNK				*e*PP	pP	11 43 21.6	-0.5
ZRNK				*e*SP	sP	11 43 24.5	-1.4
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ZRNK	**Zerenda**	**51.60**	**341**	*e*P	**P**	**11 43 11.6**	**-0.7**
	comp=Z,2.7nm,0.6s,mb4.3

HFS				*PP	pP		11 46 26.3	-1.1
NB2	**NORSAR Subarra**	**81.66**	**331**	P	**P**		**11 46 22.4**	**-1.6**
	comp=Z,0.9nm,0.6s,mb3.9,baz=94,slow=5.6							
NOA	**NORSAR Array B**	**81.66**	**331**	P	**P**		**11 46 22.8**	**-1.2**
	comp=Z,1.9nm,0.8s,mb4.1,baz=95,slow=5.4,SNR=5.2							
NOA				pP	pP		11 46 33.2	-1.1
	comp=Z,2.9nm,0.8s,baz=94,slow=5.4,SNR=7.8							
NOA				LR	LR		12 27 57.1	
	comp=Z,24nm,18.6s,MS3.6,baz=0.0,slow=40							
NOA	**NORSAR Array B**	**81.66**	**331**	P	**P**		**11 46 22.8**	**-1.2**
NOA				*PP	pP		11 46 33.3	-1.0
SYO	**Syowa Base**	**82.73**	**197**	*eP*	**P**		**11 46 29.5**	**-0.1**
LPG	**La Plagne**	**83.97**	**315**	*eP*	**P**		**11 46 35.3**	**-0.7**
	comp=Z,7.8nm,0.7s,mb4.7							
EKA	**Eskdalemuir Ar**	**89.47**	**325**	P	**P**		**11 47 01.6**	**-1.2**
	comp=Z,0.6nm,0.6s,mb4.1,baz=97,slow=6.8,SNR=3.5							
EKA				pP	pP		11 47 12.4	-0.8
	comp=Z,1.0nm,0.6s,baz=97,slow=7.0,SNR=3.5							
VNDA	**Vanda**	**90.53**	**168**	P	**P**		**11 47 07.6**	**-0.1**
	comp=Z,0.9nm,0.7s,mb4.2,baz=302,slow=5.3,SNR=11							
VNDA				LR	LR		12 22 20.3	
	comp=Z,44nm,20.6s,MS3.9,baz=105,slow=32							
TORD	**Torodi Ar. Bea**	**90.53**	**283**	P	**P**		**11 47 08.7**	**+0.9**
	comp=Z,1.4nm,1.1s,mb4.2,baz=74,slow=6.7,SNR=4.0							
ULM	**Lac du Bonnet**	**124.12**	**7**	PKP	PKPdf		11 53 03.9	-0.3
	comp=Z,2.6nm,0.8s,baz=351,slow=6.1,SNR=5.1							
ULM				pPKP	pPKPdf		11 53 14.6	-0.3
	comp=Z,2.1nm,0.6s,baz=319,slow=0.4,SNR=3.6							
NVAR	**Mina Array Bea**	**127.48**	**31**	PKP	PKPdf		11 53 12.3	+1.7
	comp=Z,0.7nm,0.5s,baz=270,slow=4.3,SNR=8.5							
NVAR				pPKP	pPKPdf		11 53 22.0	+0.7
	comp=Z,1.7nm,0.9s,baz=342,slow=1.2,SNR=8.5							
PDAR	**Pinedale Array**	**127.82**	**21**	PKP	PKPdf		11 53 12.2	+0.9
	comp=Z,1.0nm,0.8s,baz=72,slow=0.5,SNR=9.1							
PDAR				pPKP	pPKPdf		11 53 21.8	-0.2
	comp=Z,1.2nm,0.9s,baz=29,slow=3.4,SNR=7.0							
CPUP	**Villa Florida**	**145.12**	**230**	PKPbc	PKPbc		11 53 43.1	+0.4
	comp=Z,8.6nm,0.6s,baz=85,slow=2.7,SNR=35							
CPUP				pPKPbc	pPKPbc		11 53 52.2	-1.0
	comp=Z,2.1nm,0.6s,baz=66,slow=2.7,SNR=3.5							
SIV	**San Ignacio**	**152.84**	**245**	PKPbc	PKPbc		11 54 02.4	-0.3
	comp=Z,2.2nm,0.8s,baz=144,slow=4.6,SNR=11							
LVC	**Limon Verde**	**155.76**	**223**	PKPab	PKPab		11 54 27.8	+1.6
	comp=Z,2.5nm,0.6s,baz=217,slow=0.7,SNR=6.0							
LPAZ	**La Paz**	**158.89**	**237**	PKP	PKPdf		11 54 04.4	+0.9
	comp=Z,0.8nm,0.6s,baz=269,slow=2.5,SNR=3.9							
LPAZ				PKPab	PKPab		11 54 41.6	+1.9
	comp=Z,1.2nm,0.6s,baz=144,slow=5.5,SNR=7.3							

IDC 22 11:46:40.2±4.8, 622S×15444E, h75km±39km, mb3.4/6, mb1 3.7/9, mb1mx3.6/16, mbtmp3.9/9, ML3.8/3, MS3.0/2, Ms1 3.0/2, ms1mx2.7/13, Error ellipse: s-maj=33.2km s-min=25.3km az=8.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.32**	**121**	S	Sn	11 49 26.7	+5.2
	4.1nm,0.3s,baz=270,slow=10,SNR=1.9						
HNR				LR	LR	11 50 18.9	
	comp=Z,86nm,19.6s,baz=357,slow=35						
PMG	**Port Moresby**	**7.87**	**246**	P	Pn	11 48 32.7	+0.8
	5.3nm,0.3s,baz=50,slow=6.9,SNR=18						
PMG				S	Sn	11 50 00.8	+1.3
	0.9nm,0.3s,baz=94,slow=20,SNR=4.1						
PMG				LR	LR	11 51 14.4	
	comp=Z,125nm,19.3s,baz=41,slow=35						
CTA	**Charters Tower**	**15.91**	**209**	P	Pn	11 50 20.6	+1.1
	0.3nm,0.3s,baz=23,slow=12,SNR=8.2						
DZM	**Mont Dzumac**	**19.57**	**145**	P	Pn	11 51 02.1	-1.8
	0.5nm,0.3s,baz=297,slow=20,SNR=7.4						
WRA	**Warramunga Arr**	**23.82**	**233**	P	P	11 51 46.5	+0.4
	0.9nm,0.5s,baz=59,slow=9.6,SNR=17						
WRA				PcP	PcP	11 55 28.6	+1.1
	0.7nm,0.4s,baz=29,slow=2.2,SNR=19						
ASAR	**Alice Springs**	**26.28**	**227**	P	P	11 52 08.3	-0.2
	0.5nm,0.6s,baz=57,slow=9.4,SNR=13						
ASAR				PcP	PcP	11 55 34.2	+1.2
	0.6nm,0.6s,baz=52,slow=2.7,SNR=9.6						
STKA	**Stephens Creek**	**28.20**	**204**	P	P	11 52 25.7	0.0
	1.3nm,0.9s,baz=30,slow=14,SNR=2.2						
FITZ	**Fitzroy Crossi**	**30.47**	**245**	P	P	11 52 45.7	-0.1
	2.0nm,1.1s,baz=290,slow=14,SNR=4.8						
MKAR	**Makanchi Array**	**82.46**	**319**	P	P	11 58 54.5	+0.2
	0.3nm,0.6s,baz=98,slow=5.1,SNR=3.4						
NVAR	**Mina Array Bea**	**91.68**	**52**	P	P	11 59 39.6	+0.4
	0.5nm,0.8s,baz=248,slow=9.5,SNR=4.0						
TORD	**Torodi Ar. Bea**	**152.28**	**286**	PKPbc	PKPbc	12 06 27.4	+0.1
	1.0nm,0.6s,baz=11,slow=1.8,SNR=9.0						
TORD				PKPab	PKPab	12 06 38.7	+1.3
	1.2nm,0.7s,baz=69,slow=3.5,SNR=5.4						

*ISCJB **22** 12:05:25.2±4.8, 61.5S×103×1504E±0.1, h69km±33km, mb3.8/4, Error ellipse: s-maj=51.7km s-min=24.0km az=165.5*
*NEIC **22** 12:05:26.1±3.6, 602S×150.40E, h65km±24km, mb4.1/3, Error ellipse: s-maj=38.2km s-min=16.8km az=186.0*
*IDC **22** 12:05:27.9±6.5, 6.17S×150.41E, h77km±49km, mb3.7/5, mb1 3.8/6, mb1mx3.5/14, mbtmp4.0/6, ML2.7/1, MS2.9/3, Ms1 2.9/3, ms1mx2.5/23, Error ellipse: s-maj=51.2km s-min=28.2km az=5.0*

ISC 22 12:05:26.7±4.7, 61S±03×1504E±01, h66km±32km, n13, σθ61°/11, mb3.8/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.63**	**224**	P	**Pn**	**12 06 33.5**	**-0.6**
	2.5nm,0.3s,baz=15,slow=7.9,SNR=8.7						
PMG				S	**Sn**	**12 07 27.0**	**+0.5**
	9.2nm,0.3s,baz=267,slow=23,SNR=8.3						
PMG				LR	LR	12 08 34.0	
	comp=Z,84nm,18.0s,baz=46,slow=41						
HNR	**Honiara**	**10.03**	**110**	LR	LR	12 10 27.7	
	comp=Z,60nm,21.8s,baz=358,slow=30						
CTA	**Charters Tower**	**14.52**	**196**	LR	LR	12 13 40.2	
	comp=Z,115nm,18.6s,baz=270,slow=34						
WRAB	**Tennant Creek**	**20.83**	**227**	*eP*	**P**	**12 10 02.8**	**0.0**
	9.5nm,0.7s						
WB2	**Warramunga Arr**	**20.83**	**227**	*eP*	**P**	**12 10 02.8**	**0.0**
WRA	**Warramunga Arr**	**20.84**	**227**	P	**P**	**12 10 03.1**	**+0.2**
	7.0nm,0.8s,baz=53,slow=11,SNR=40						
DZM	**Mont Dzumac**	**22.22**	**137**	P	**P**	**12 10 18.3**	**+0.7**
	3.7nm,0.8s,mb3.8,baz=263,slow=9.3,SNR=3.6						
ASAR	**Alice Springs**	**23.64**	**221**	P	**P**	**12 10 31.5**	**-0.3**
	1.1nm,0.4s,mb3.6,baz=58,slow=8.3,SNR=26						
FITZ	**Fitzroy Crossi**	**26.97**	**241**	P	**P**	**12 11 02.7**	**+0.7**
	0.9nm,0.6s,mb3.5,baz=85,slow=12,SNR=3.6						
FITZ	**Fitzroy Crossi**	**26.97**	**241**	*eP*	**P**	**12 11 02.9**	**+0.9**
	3.5nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**26.98**	**197**	P	**P**	**12 11 00.4**	**-1.7**
	3.8nm,0.8s,mb4.0,baz=20,slow=14,SNR=6.7						
STKA	**Stephens Creek**	**26.98**	**197**	*eP*	**P**	**12 11 01.3**	**-0.8**
	3.5nm,0.9s,mb3.9						
TORD	**Torodi Ar. Bea**	**148.38**	**285**	PKPbc	PKPbc	12 25 06.0	+0.5
	1.0nm,0.6s,baz=89,slow=2.4,SNR=6.6						

MAN 22 12:07:09.2, 1271N×12490E, h35km, mb2.5, ML4.1, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**1.14**	**321**	*eP*	Pn	12 07 29.0	+0.4
PVCP	**Virac**	**1.14**	**321**	*eP*	Pn	12 07 28.3	-0.3
BESP	**Borongan**	**1.22**	**154**	*eP*	Pn	12 07 30.5	+0.7
PLP	**Palo**	**1.54**	**177**	*eP*	Pn	12 07 35.0	+0.9
PLP				*eS*	Sn	12 07 52.5	-0.3
RCP	**Roxas**	**2.39**	**242**	*eP*	Pn	12 07 46.8	+0.9
MSLP	**Maasin**	**2.56**	**181**	*eP*	Pn	12 07 53.1	+5.0
OTRP	**Odiongan**	**2.83**	**263**	*eP*	Pn	12 07 53.4	+1.5

*ISCJB **22** 12:15:47.8±0.8, 3752N±003×2082E±004, h10km±5km, mb3.8/13, Error ellipse: s-maj=5.1km s-min=4.5km az=65.6*
*IDC **22** 12:15:47.8±1.0, 3766N×2105E, h0km, mb3.9/11, mb1 3.9/15, mb1mx3.8/28, mbtmp3.8/15, ML4.3/3, Error ellipse: s-maj=23.9km s-min=15.1km az=145.0*
*THE **22** 12:15:49.3, 3757N×2076E, h6km, ML3.8*
*NEIC **22** 12:15:50.9, 3768N×2092E, h18km, ML3.7(THE), ML4.0(ATH), After ATH.*
*ATH **22** 12:15:50.9, 3768N×2092E, h18km±1km, MD3.9/17, ML3.8*

*CSEM **22** 12:15:51.7±0.1, 3770N×2085E, h12km, ML4.0, Error ellipse: s-maj=3.3km s-min=1.7km az=33.0*
*HLW **22** 12:15:58.7, 3725N×2183E, h33km, Mb3.7*

ISC 22 12:15:48.7±0.8, 3753N±003×2087E±003, h5km±5km, n73, σ1♀31/83, mb3.8/13, 1D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.68**	**341**	*e*PN	**Pg**	**12 16 01.6**	**-0.2**
VLS				*e*SN	**Sg**	**12 16 10.6**	**-0.1**
RLS	**Riolos of Patr**	**0.70**	**42**	*i*PN	**Pg**	**12 16 01.8**	**-0.5**
RLS				*e*SN	**Sg**	**12 16 10.8**	**-0.6**
ITM	**Ithomi**	**0.91**	**112**	*e*PN	**Pn**	**12 16 08.7**	**+0.6**
ITM				*e*SN	**Sn**	**12 16 22.6**	**+1.0**
LKD	**Levkas**	**1.19**	**352**	*e*Pg	**Pg**	**12 16 10.5**	**-1.0**
LKD				*e*Sg	**Sg**	**12 16 27.2**	**+0.4**
LKD	**Levkas**	**1.19**	**352**	*e*Pg	**Pg**	**12 16 10.5**	**-1.0**
LKD				*e*Sg	**Sg**	**12 16 27.2**	**+0.3**
EVR	**Evrytania**	**1.57**	**28**	*e*PN	**Pn**	**12 16 17.6**	**+0.5**
VLI	**Velíai**	**1.84**	**116**	*e*PN	**Pn**	**12 16 24.6**	**+3.7**
AGG	**Agios Georgios**	**1.88**	**37**	*e*Sb	**Sb**	**12 16 47.3**	**+0.1**
MGER	**Gerania Oros**	**1.94**	**76**	*e*PN	**Pn**	**12 16 24.5**	**+2.1**
LKR	**Lokris**	**2.02**	**56**	*e*PN	**Pn**	**12 16 24.9**	**+1.6**
NAIG	**Nisos Aigina**	**2.09**	**83**	*e*PB	**Pb**	**12 16 26.0**	**-1.0**
JAN	**Janina**	**2.13**	**360**	*e*PN	**Pn**	**12 16 25.9**	**+1.1**
KYTH	**Kithira**	**2.14**	**125**	*e*PN	**Pg**	**12 16 29.5**	**-0.2**
ATH	**Athens Observa**	**2.30**	**78**	*e*PN	**Pn**	**12 16 29.5**	**+2.3**
KVR	**Kavouri**	**2.32**	**82**	*e*PB	**Pb**	**12 16 29.0**	**-1.9**
KEK	**Kerkira**	**2.33**	**339**	*e*PN	**Pn**	**12 16 29.6**	**+1.9**
PTL	**Penteli**	**2.43**	**77**	*e*PN	**Pn**	**12 16 30.0**	**+1.0**
NEO	**Neokhori**	**2.56**	**45**	*e*PB	**Pn**	**12 16 32.3**	**+1.5**
KZN	**Kozani**	**2.86**	**14**	*e*PB	**Pn**	**12 16 36.9**	**+2.0**
PAIG	**Paliouri**	**3.25**	**42**	*e*Pn	**Pn**	**12 16 40.4**	**+0.2**
FNA	**Florina**	**3.27**	**7**	*e*Pn	**Pn**	**12 16 41.3**	**+0.7**
	comp=Z,2.5nm,0.5s						
FNA				*e*Sn	**Sn**	**12 17 19.6**	**-0.3**
VAM	**Vamos**	**3.42**	**127**	*e*PN	**Pn**	**12 16 46.5**	**+3.9**
PLG	**Polygyros**	**3.48**	**34**	*e*PN	**Pn**	**12 16 43.6**	**+0.2**
BIA	**Bitola**	**3.50**	**6**	*e*Pn	**Pn**	**12 16 44.1**	**+0.4**
BIA	**Bitola**	**3.50**	**6**	*i*Pn	**Pn**	**12 16 43.9**	**+0.2**
HORT	**Hortiatis**	**3.52**	**29**	*e*Pn	**Pn**	**12 16 45.5**	**+0.5**
LCI	**Lecce**	**3.53**	**323**	Pn	**Pn**	**12 16 44.1**	**-0.1**
OHR	**Ohrid**	**3.58**	**359**	*e*Pn	**Pn**	**12 16 45.2**	**+0.4**
OHR	**Ohrid**	**3.58**	**359**	*e*Pn	**Pn**	**12 16 45.1**	**+0.3**
OUR	**Ouranopolis**	**3.70**	**40**	*e*Pn	**Pn**	**12 16 47.1**	**+0.6**
	comp=Z,3.5nm,0.5s						
APE	**Apeiranthos**	**3.74**	**96**	*e*Pn	**Pn**	**12 16 48.5**	**+1.4**
APE	**Apeiranthos**	**3.74**	**96**	*e*Pn	**Pn**	**12 16 49.6**	**+2.5**
SOH	**Sokhos**	**3.81**	**30**	*e*Pn	**Pn**	**12 16 48.4**	**+0.4**
VAY	**Valandovo**	**4.01**	**19**	*i*Pn	**Pn**	**12 16 50.8**	**+0.1**
VAY				*e*Sn	**Sn**	**12 17 34.0**	**-3.9**
VAY	**Valandovo**	**4.01**	**19**	*i*Pn	**Pn**	**12 16 50.8**	**+0.1**
VAY				*e*Sn	**Sn**	**12 17 34.0**	**-4.0**
CHOS	**Chios island**	**4.18**	**77**	*e*Pn	**Pn**	**12 16 55.1**	**+2.0**
PE1	**Pezze di Greco**	**4.23**	**322**	*e*Pn	**Pn**	**12 16 53.1**	**-0.6**
ORI	**Orsilio Calabro**	**4.28**	**308**	Pn	**Pn**	**12 16 57.6**	**+3.1**
SKO	**Skopje**	**4.46**	**5**	*e*Pn	**Pn**	**12 16 56.6**	**-0.3**
NVR	**Nevrokopi**	**4.46**	**30**	*e*PN	**Pn**	**12 16 57.9**	**+1.0**
MMB	**Musomiste**	**4.61**	**28**	*e*Pn	**Pn**	**12 16 59.3**	**+0.2**
HAVL	**Avola**	**4.62**	**265**	Pn	**Pn**	**12 16 59.2**	**+0.1**
SG1	**Sgolgore (BA)**	**4.64**	**317**	*e*Pn	**Pn**	**12 16 59.6**	**+0.2**
CUC	**Castrocucco**	**4.66**	**303**	Pn	**Pn**	**12 17 03.2**	**+3.6**
PZI	**Palazzolo**	**4.75**	**266**	Pn	**Pn**	**12 17 01.1**	**+0.2**
HVZN	**Vizzini**	**4.92**	**268**	Pn	**Pn**	**12 17 02.8**	**-0.4**
CDT	**Castel del Mon**	**5.03**	**316**	*e*Pn	**Pn**	**12 17 04.6**	**-0.1**
RDO	**Rodhopi**	**5.11**	**44**	*e*PN	**Pn**	**12 17 07.0**	**+1.2**
DIVS	**Divcibare**	**6.59**	**354**	*e*Pn	**Pn**	**12 17 22.8**	**-3.5**
MLR	**Muntele Rosu**	**8.81**	**24**	Pn	**Pn**	**12 17 57.6**	**+0.9**
	0.4nm,0.3s,baz=216,slow=14,SNR=3.7						
SWA1		**9.18**	**153**	P	**Pn**	**12 18 01.1**	**-0.6**
KEST	**Kesra**	**9.44**	**263**	Pn	**Pn**	**12 18 08.5**	**+3.2**
	0.1nm,0.3s,baz=56,slow=11,SNR=4.4						
BRTR	**Keskin Array B**	**10.23**	**74**	Pn	**Pn**	**12 18 20.9**	**+4.8**
	0.1nm,0.3s,baz=263,slow=13,SNR=3.4						
GLL	**Jalalah**	**12.02**	**128**	P	**Pn**	**12 18 37.8**	**-2.8**
HFRF	**Wahat Farafira**	**12.11**	**147**	P	**Pn**	**12 18 41.2**	**-0.6**
HFRF				S	**Sn**	**12 20 39.8**	**-17**
AMAG	**Maghara**	**12.31**	**120**	P	**Pn**	**12 18 42.0**	**-2.6**
HDK1	**Dakhla**	**13.98**	**146**	P	**Pn**	**12 19 06.9**	**-0.5**
HDK1				S	**Sn**	**12 21 24.9**	**-18**
AKASG	**Malin Array Be**	**14.45**	**22**	Pn	**Pn**	**12 19 12.5**	**-1.4**
	0.5nm,0.3s,baz=210,slow=12,SNR=3.4						
ESDC	**Sonseca Array**	**19.52**	**284**	P	**Pn**	**12 20 18.6**	**+0.7**
	0.7nm,0.3s,baz=82,slow=11,SNR=7.1						
MDT	**Midelt**	**21.33**	**265**	P	**P**	**12 20 37.9**	**+1.4**
	2.0nm,0.8s,mb3.5,baz=82,slow=12,SNR=3.7						
HFS	**Hagfors**	**23.08**	**351**	P	**P**	**12 20 52.8**	**-2.3**
	2.7nm,0.4s,mb4.0,baz=161,slow=10,SNR=20						
EKA	**Eskdalemuir Ar**	**24.12**	**325**	P	**P**	**12 21 04.8**	**-0.5**
	1.1nm,0.6s,mb3.5,baz=119,slow=8.7,SNR=4.2						
FINES	**FINESS Array B**	**24.16**	**6**	P	**P**	**12 21 04.1**	**-1.6**
	1.5nm,0.7s,mb3.5,baz=168,slow=9.8,SNR=6.2						
NB2	**NORSAR Subarra**	**24.31**	**349**	P	**P**	**12 21 04.8**	**-2.2**
	comp=Z,3.8nm,1.0s,mb3.8,baz=160,slow=10						
NOA	**NORSAR Array B**	**24.31**	**349**	P	**P**	**12 21 04.4**	**-2.6**
	comp=Z,2.0nm,0.8s,mb3.6,baz=148,slow=9.7,SNR=8.6						
KAF	**Kangasniemi**	**24.84**	**6**	*ep*	**P**	**12 21 09.4**	**-2.5**
	comp=Z,2.7nm,0.6s,mb4.0						
JOF	**Joensuu**	**26.21**	**11**	*ep*	**P**	**12 21 21.3**	**-3.0**
	comp=Z,1.7nm,0.7s,mb3.7						
AKTO	**Aktyubinsk**	**29.35**	**52**	P	**P**	**12 21 49.7**	**-2.8**
	comp=Z,1.4nm,0.4s,mb4.1,baz=253,slow=4.8,SNR=9.2						
TORD	**Torodi Ar. Bea**	**29.71**	**220**	P	**P**	**12 21 57.5**	**+2.0**
	comp=Z,2.2nm,0.8s,mb3.9,baz=31,slow=9.3,SNR=11						
ARCES	**ARCESS Array B**	**32.16**	**3**	P	**P**	**12 22 15.1**	**-2.1**
	comp=Z,0.5nm,0.5s,mb3.6,baz=186,slow=9.8,SNR=5.3						
BVAR	**Borovoye Array**	**37.32**	**49**	P	**P**	**12 23 00.4**	**-1.5**
	comp=Z,1.5nm,0.5s,mb4.1,baz=260,slow=5.9,SNR=10						
MKAR	**Makanchi Array**	**45.41**	**58**	P	**P**	**12 24 06.2**	**-2.0**
	comp=Z,1.3nm,0.4s,mb4.1,baz=267,slow=7.5,SNR=23						
MKAR				PcP	PcP	12 25 46.8	-0.7
	comp=Z,0.4nm,0.5s,baz=278,slow=4.8,SNR=3.1						
SONM	**Songino Array**	**60.65**	**50**	P	**P**	**12 25 59.1**	**-1.6**
	comp=Z,0.3nm,0.6s,mb3.6,baz=282,slow=6.8,SNR=3.0						

IDC 22 12:26:13.8±14.0, 1879N×14697E, h71km±81km, mb3.3/4, mb1 3.5/5, mb1mx3.3/18, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=271.1km s-min=26.7km az=79.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.55**	**202**	P	Pn	12 27 33.8	0.0
	5.8nm,0.3s,baz=198,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**40.44**	**198**	P	P	12 33 45.1	0.0
	0.3nm,0.5s,baz=20,slow=8.5,SNR=6.3						
ASAR	**Alice Springs**	**44.08**	**197**	P	P	12 34 15.1	+0.3
	0.3nm,0.7s,baz=12,slow=6.0,SNR=6.6						
MKAR	**Makanchi Array**	**59.27**	**314**	P	P	12 36 08.0	+0.2
	0.6nm,0.6s,baz=82,slow=10,SNR=5.6						
BVAR	**Borovoye Array**	**67.17**	**320**	P	P	12 37 00.2	0.0
	0.9nm,0.4s,baz=98,slow=9.4,SNR=3.9						

CASC 22 12:31:19.9±2.1, 1258N×8784W, h194km±22km, MD3.5, ML2.6, 5C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.70**	**1**	*eP*	x	12 31 47.1	
CNCH				*eS*	x	12 32 09.0	
CRIN	**San Cristobal**	**0.78**	**81**	*eP*	Pn	12 31 47.8	+0.1
LEON	**Leon**	**0.94**	**100**	*eP*	Pn	12 31 48.8	+0.2
LEON				*eS*	Sn	12 32 09.7	-1.2
LEON				*i*		12 32 11.7	
	comp=Z,56nm,0.3s						
BLLM	**Bellamira**	**0.94**	**336**	*i*P	x	12 31 48.8	
VSM	**San Miguel**	**0.95**	**334**	*eP*	x	12 31 49.5	
VSM				*eS*	x	12 32 13.1	
MIRN	**Miramar**	**1.11**	**97**	*eP*	Pn	12 31 50.2	+0.4
MIRN				*eS*	Sn	12 32 15.9	+2.8
CNGN	**Cerro Negro**	**1.12**	**94**	*eP*	Pn	12 31 50.0	+0.1
CNGN				*eS*	Sn	12 32 14.1	+1.0
COPN	**Copaltepe**	**1.28**	**108**	*eP*	Pn	12 31 52.1	+0.9
APYN	**Apoyeque**	**1.50**	**103**	*eP*	Pn	12 31 53.9	+0.9
LCBS	**La Ceiba**	**1.54**	**314**	*eP*	x	12 31 54.9	
LCBS				*eS*	x	12 32 21.4	
LFRS	**El Faro**	**1.58**	**311**	*eP*	x	12 31 55.0	
LFRS				*eS*	x	12 32 21.0	

*IDC **22** 12:32:09.8±0.8, 2941N×9535E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/21, mbtmp3.9/9, MS3.1/2, Ms1 3.1/2, ms1mx2.5/37, Error ellipse: s-maj=47.3km s-min=16.9km az=57.0*
*BJI **22** 12:32:10.8, 2930N×9522E, h23km, mB4.8, mb4.3, ML3.6*
*NEIC **22** 12:32:11.3±0.4, 2942N×9536E, h10km, mb4.2/1, Error ellipse: s-maj=20.9km s-min=8.4km az=60.0*
*ISCJB **22** 12:32:14.3±2.9, 296N±0.1×956E±0.2, h46km±27km, mb4.2/7, MS3.1/2, Error ellipse: s-maj=27.9km s-min=16.1km az=126.2*

ISC 22 12:32:17.0±2.5, 295N±01×955E±02, h52km±24km, n14, σθ0°24/14, mb4.2/7, MS3.1/2, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.76**	**274**	PG	**Pn**	**12 33 12.5**	**0.0**
LSA				SG	**Sn**	**12 34 02.0**	**+6.6**
LSA				Smax			
	comp=N,60nm,0.6s						
LSA				Smax			
	comp=E,100nm,0.7s						
MKAR	**Makanchi Array**	**20.05**	**333**	P	**P**	**12 36 45.4**	**-0.4**
	comp=E,0.7nm,0.4s,baz=148,slow=12,SNR=11						
SONM	**Songino Array**	**20.13**	**22**	P	**P**	**12 36 46.9**	**+0.3**
	comp=E,0.9nm,0.5s,baz=213,slow=13,SNR=7.6						
SONM				LR	LR	12 45 21.9	
	comp=E,50nm,20.2s,MS2.9,baz=188,slow=39						
FINES	**FINESS Array B**	**54.72**	**327**	P	**P**	**12 41 41.1**	**0.0**
	comp=E,1.8nm,1.0s,mb4.0,baz=100,slow=9.9,SNR=4.3						
ARCES	**ARCESS Array B**	**55.65**	**336**	P	**P**	**12 41 47.5**	**-0.2**
	comp=E,1.6nm,0.8s,mb4.1,baz=110,slow=7.9,SNR=3.6						
HFS	**Hagfors**	**60.85**	**325**	LR	LR	13 09 28.2	
	comp=E,18nm,18.2s,MS3.3,baz=228,slow=37						
WRA	**Warramunga Arr**	**61.84**	**138**	P	**P**	**12 42 30.7**	**0.0**
	comp=E,5.0nm,0.7s,mb4.8,baz=327,slow=7.5,SNR=56						
WB2	**Warramunga Arr**	**61.85**	**138**	*eP*	**P**	**12 42 30.5**	**-0.3**
NOA	**NORSAR Array B**	**61.90**	**327**	P	**P**	**12 42 31.3**	**+0.2**
	comp=E,0.5nm,0.6s,mb3.8,baz=90,slow=7.5,SNR=2.6						
AS31	**Alice Springs**	**64.53**	**141**	*eP*	**P**	**12 42 48.7**	**+0.2**
ASAR	**Alice Springs**	**64.53**	**141**	P	**P**	**12 42 48.8**	**+0.2**
	comp=E,3.8nm,0.7s,mb4.5,baz=325,slow=6.5,SNR=74						
STKA	**Stephens Creek**	**75.17**	**141**	P	**P**	**12 43 53.8**	**-0.1**
	comp=E,4.9nm,1.1s,mb4.3,baz=336,slow=9.8,SNR=4.6						
STKA	**Stephens Creek**	**75.17**	**141**	*eP*	**P**	**12 43 53.3**	**-0.6**
	comp=E,2.3nm,0.9s,mb4.1						
TORD	**Torodi Ar. Bea**	**86.84**	**283**	P	**P**	**12 44 56.2**	**+0.3**
	comp=E,0.6nm,0.6s,mb4.0,baz=78,slow=3.1,SNR=6.5						

*IDC **22** 12:55:34.0±4.0, 1208N×12475E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/18, mbtmp4.0/4, MS4.4/2, Ms1 4.4/2, ms1mx2.8/28, Error ellipse: s-maj=169.7km s-min=73.5km az=82.0*

ISC 22 12:56:04.4±1.7, 106N±02×1258E±02, h150km, n9, σ1♀19/11, mb3.7/4, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.86**	**199**	*eP*	**Pn**	**12 56 36.2**	**+8.3**
SCPH				*eS*	**Sn**	**12 57 01.4**	**+15**
PLP	**Palo**	**0.96

IDC ***22*** *13:05:37.9±2.0,670S×12963E,h154km±18km,mb4.6/18, mb1 4.6/20,mb1mx4.6/23,mbtmp5.1/20,Error ellipse: s-maj=14.9km s-min=8.7km az=69.0*

NEIC ***22*** *13:05:37.4±0.7,670S×12962E,h152km±6km,mb5.0/25, Error ellipse: s-maj=6.3km s-min=3.6km az=61.0*

HRVD ***22*** *13:05:37.4±0.4,680S×12970E,h155km±4km,MW4.8/50, Centroid moment Tensor Solution. LP body waves: s12,c13;Mantle waves: s50,c68; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 1.50±.10; Mθθ-0.32±.11; Mφφ-1.19±.15; Mrθ 0.27±.08; Mθφ-0.50±.15; Mφr 1.08±.10; Best double couple: M₀1.83400×10¹⁶ NP1:φs210.00000°,δ27.00000°,λ100.00000°. NP2: φs18.00000°,δ64.00000°,λ85.00000°. Principal axes: T 1.8840, Plg71.0000°, Azm277.0000°; N -0.1070, Plg5.0000°, Azm21.0000°; P -1.7850, Plg19.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 22 13:05:38.4±0.2,671S±004×12974E±006,h161km, h161km±1.3km:pP-P,n246,σ1905/194,mb5.0/83,16C-11D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.53**	**156**	*eP*	**Pn**	**13 07 09.5**	**-2.7**
	292nm,0.2s						
KAKA				*eS*	**Sn**	**13 08 16.5**	**-9.3**
FITZ	**Fitzroy Crossi**	**12.01**	**199**	S	**Sn**	**13 10 27.2**	**-10**
	26nm,0.3s,baz=98,slow=22,SNR=13						
WRAB	**Tennant Creek**	**13.89**	**162**	Pn	**Pn**	**13 08 43.3**	**-5.0**
	1µm,0.4s,SNR=26						
WRAB	**Tennant Creek**	**13.89**	**162**	*e*Pn	**Pn**	**13 08 43.6**	**-4.7**
WRA	**Warramunga Arr**	**13.89**	**162**	P	**Pn**	**13 08 43.2**	**-5.2**
	13nm,0.3s,baz=342,slow=13,SNR=61						
WRA				S	**Sn**	**13 11 10.9**	**-12**
	35nm,0.3s,baz=346,slow=22,SNR=14						
WB2	**Warramunga Arr**	**13.89**	**162**	*e*P	**Pn**	**13 08 44.0**	**-4.5**
WB2				*e*S	**Sn**	**13 11 08.8**	**-14**
TSM	**Tawau**	**16.12**	**312**	P	**Pn**	**13 09 10.3**	**-5.6**
AS31	**Alice Springs**	**17.33**	**167**	*e*P	**Pn**	**13 09 29.5**	**-1.0**
AS31				*e*S	**S**	**13 12 27.1**	**-14**
ASAR	**Alice Springs**	**17.33**	**167**	P	**Pn**	**13 09 29.1**	**-1.5**
	13nm,0.3s,baz=349,slow=11,SNR=177						
ASAR				S	**S**	**13 12 33.5**	**-7.9**
	8.1nm,0.3s,baz=353,slow=28,SNR=5.4						
ASAR	**Alice Springs**	**17.33**	**167**	P	**Pn**	**13 09 29.1**	**-1.4**
ASAR				S	**S**	**13 12 33.5**	**-7.9**
ASAR				pmax	pmax		
	comp=Z,13nm,0.3s						
ASAR				smax			
	comp=N,8.0nm,0.3s						
PMG	**Port Moresby**	**17.46**	**100**	P	**Pn**	**13 09 34.0**	**+1.9**
	comp=N,9.4nm,0.3s,baz=284,slow=4.7,SNR=34						
PMG				S	**S**	**13 12 39.2**	**-4.8**
	comp=N,3.5nm,0.3s,baz=176,slow=23,SNR=7.7						
PMG	**Port Moresby**	**17.46**	**100**	*e*Pn	**Pn**	**13 09 34.1**	**+2.0**
KKM	**Kota Kinabalu**	**18.51**	**313**	P	**P**	**13 09 38.9**	**-3.4**
KKM	**Kota Kinabalu**	**18.51**	**313**	*e*P	**P**	**13 09 43.0**	**+0.6**
CTA	**Charters Tower**	**20.83**	**131**	P	**P**	**13 10 08.4**	**+1.1**
	comp=N,36nm,1.0s,baz=298,slow=12,SNR=26						
CTA				S	S	13 14 10.1	+20
	comp=N,12nm,0.7s,baz=56,slow=21,SNR=3.1						
CTA	**Charters Tower**	**20.83**	**131**	P	**P**	**13 10 08.4**	**+1.1**
CTA				S	S	13 14 10.1	+20
CTA				pmax	pmax		
	comp=Z,36nm,1.0s						
CTA	**Charters Tower**	**20.83**	**131**	⇓*i*P	**P**	**13 10 08.3**	**+1.0**
	comp=Z,24nm,0.6s						
CTA				*e*S	S	13 14 09.4	+19
CTAO	**Charters Tower**	**20.83**	**131**	*e*P	**P**	**13 10 08.5**	**+1.2**
CTAO				*e*S	**S**	**13 14 07.1**	**+17**
CTAO				pmax	pmax		
	comp=Z,28nm,0.7s						
CTAO	**Charters Tower**	**20.83**	**131**	*e*P	**P**	**13 10 08.5**	**+1.2**
	comp=Z,28nm,0.7s						
CTAO				*e*S	**S**	**13 14 07.1**	**+17**
KSM	**Kuching**	**21.03**	**292**	*e*P	**P**	**13 10 08.8**	**-0.6**
TGY	**Tagaytay City**	**22.45**	**337**	P	**P**	**13 10 24.4**	**+0.4**
	comp=Z,479nm,0.6s,baz=168,slow=2.7,SNR=19						
TGY	**Tagaytay City**	**22.45**	**337**	P	**P**	**13 10 24.4**	**+0.4**
TGY				pmax	pmax		
	comp=Z,50nm,0.6s						
FORT	**Forrest**	**23.99**	**184**	*e*P	**P**	**13 10 38.6**	**+0.5**
	comp=Z,36nm,0.5s,mb5.2						
KLBR	**Kellerberrin**	**27.17**	**203**	⇑*i*P	**P**	**13 11 06.2**	**-0.5**
	comp=Z,19nm,0.5s,mb5.0						
STKA	**Stephens Creek**	**27.38**	**158**	P	**P**	**13 11 08.8**	**+0.2**
	comp=Z,15nm,0.5s,mb4.9,baz=331,slow=8.5,SNR=24						
STKA				S	S	13 16 08.6	+32
	comp=Z,5.2nm,0.9s,baz=326,slow=16,SNR=1.4						
STKA	**Stephens Creek**	**27.38**	**158**	*e*P	**P**	**13 11 08.9**	**+0.3**
	comp=Z,9.3nm,0.4s,mb4.8						
STKA				*e*S	S	13 16 24.2	+48
KGM	**Kluang**	**27.76**	**287**	P	**P**	**13 11 13.5**	**+1.5**
NWAO	**Narrogin (SRO)**	**28.56**	**202**	P	**P**	**13 11 18.6**	**-0.4**
	comp=Z,9.9nm,0.5s,mb4.8,baz=37,slow=6.6,SNR=11						
NWAO	**Narrogin (SRO)**	**28.56**	**202**	P	**P**	**13 11 18.7**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ADE	**Adelaide**	**29.31**	**165**	*e*P	**P**	**13 11 27.0**	**+1.3**
ARMA	**Armidale**	**31.28**	**142**	*e*P	**P**	**13 11 44.6**	**+1.5**
KULM	**Kulim**	**31.38**	**292**	*e*P	**P**	**13 11 43.2**	**-0.7**
PSI	**Prapat**	**32.18**	**286**	P	**P**	**13 11 49.8**	**-1.1**
	comp=Z,28nm,0.7s,mb5.1,baz=79,slow=5.2,SNR=11						
PSI	**Prapat**	**32.18**	**286**	P	**P**	**13 11 49.8**	**-1.1**
PSI				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.1						
QIZ	**Qiongzhong**	**32.23**	**323**	P	**P**	**13 11 49.5**	**-1.9**
QIZ				S	**S**	**13 16 53.6**	**+1.1**
QIZ				AMB	AMB		
	comp=Z,21nm,2.0s,mb4.5						
QIZ				AMB	AMB		
	comp=Z,131nm,3.4s						
QZH	**Quanzhou**	**33.28**	**341**	P	**P**	**13 12 00.0**	**-0.5**
JOW	**Kunigami**	**33.37**	**358**	P	**P**	**13 12 01.8**	**+0.5**
	comp=Z,16nm,0.7s,mb4.9,baz=211,slow=9.1,SNR=5.7						
CNB	**Canberra Magne**	**33.70**	**150**	*e*P	**P**	**13 12 06.2**	**+2.0**
	comp=Z,14nm,0.7s,mb4.8						
KKTK	**Khon Kaen**	**35.12**	**311**	⇑P	**P**	**13 12 16.0**	**-0.4**
	comp=Z,247nm,0.5s,mb6.1						
NANT	**Nan**	**38.24**	**312**	⇑P	**P**	**13 12 40.5**	**-2.2**
	comp=Z,506nm,1.0s,mb6.1						
SSE	**Sheshan**	**38.47**	**348**	*e*P	**P**	**13 12 45.1**	**+0.4**
SSE				AMB	AMB		
	comp=Z,43nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,45nm,5.1s						
DZM	**Mont Dzumac**	**38.56**	**117**	*e*P	**P**	**13 12 45.4**	**+0.1**
DZM	**Mont Dzumac**	**38.56**	**117**	P	**P**	**13 12 46.6**	**+1.3**
	comp=Z,8.1nm,0.6s,mb4.6,baz=280,slow=8.4,SNR=20						
CHG	**Chiang Mai**	**39.56**	**310**	⇑P	**P**	**13 12 53.8**	**+0.1**
	comp=Z,49nm,1.0s,mb5.1						
CHTO	**Chiang Mai**	**39.56**	**310**	⇑P	**P**	**13 12 53.8**	**+0.1**
	SNR=11						
CHTO	**Chiang Mai**	**39.56**	**310**	*e*P	**P**	**13 12 53.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.1						
CHTO	**Chiang Mai**	**39.56**	**310**	*e*P	**P**	**13 12 53.0**	**-0.6**
	comp=Z,43nm,0.9s,mb5.1						
CHRT	**Chiangrai**	**39.58**	**312**	⇑P	**P**	**13 12 54.5**	**+0.6**
	comp=Z,200nm,0.9s,mb5.8						
GYA	**Guiyang**	**39.85**	**327**	⇑*i*P	**P**	**13 12 55.9**	**-0.2**
GYA				AP	pP	13 13 31.0	0.0
GYA				XP	sP	13 13 49.3	+0.2
GYA				PP	PP	13 14 33.9	+2.9
GYA				PCP	PcP	13 14 59.9	+1.2
GYA				S	**S**	**13 18 46.4**	**-2.2**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,340nm,17.9s						
GYA				LR	LR		
	comp=E,360nm,17.4s						
GYA				LR	LR		
	comp=Z,290nm,17.0s						
NJ2	**Nanjing**	**39.92**	**346**	*e*P	**P**	**13 12 58.8**	**+2.1**
NJ2				AP	pP	13 13 33.9	+2.4
NJ2				XP	sP	13 13 52.1	+2.4
NJ2				PP	PP	13 14 37.3	+5.6
NJ2				S	**S**	**13 18 48.0**	**-1.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,130nm,10.6s						
NJ2				LR	LR		
	comp=N,250nm,19.5s						
NJ2				LR	LR		
	comp=E,600nm,20.3s						
NJ2				LR	LR		
	comp=Z,520nm,20.5s						
KMI	**Kunming**	**41.13**	**321**	P	**P**	**13 13 08.3**	**+1.7**
KMI				AP	pP	13 13 43.6	+2.0
KMI				S	**S**	**13 19 10.3**	**+2.8**
KMI				AMB	AMB		
	comp=Z,16nm,0.9s,mb4.7						
KMI				LR	LR		
	comp=Z,44nm,24.9s						
MAJO	**Matsushiro**	**43.75**	**10**	*e*P	**P**	**13 13 26.9**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.9						
MAJO	**Matsushiro**	**43.75**	**10**	*e*P	**P**	**13 13 26.9**	**-0.9**
	comp=Z,24nm,0.8s,mb4.9						
MAT	**Matsushiro**	**43.75**	**10**	P	**P**	**13 13 26.6**	**-1.2**
MAT	**Matsushiro**	**43.75**	**10**	*e*P	**P**	**13 13 27.0**	**-0.8**
MAT				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.7						
MAT	**Matsushiro**	**43.75**	**10**	*e*P	**P**	**13 13 27.0**	**-0.8**
	comp=Z,19nm,0.9s,mb4.7						
MJAR	**Matsushiro Arr**	**43.75**	**10**	P	**P**	**13 13 26.6**	**-1.1**
	comp=Z,20nm,0.9s,mb4.7,baz=188,slow=9.1,SNR=38						
MJAR	**Matsushiro Arr**	**43.75**	**10**	P	**P**	**13 13 26.7**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2	**Chengdu**	**44.92**	**328**	⇑*i*P	**P**	**13 13 36.0**	**-1.0**
CD2				AP	pP	13 14 11.6	-1.0
CD2				XP	sP	13 14 29.9	-0.7
CD2				PP	PP	13 15 24.0	-1.2
CD2				S	**S**	**13 20 01.5**	**-1.3**
CD2				XS	sS	13 21 04.3	-0.5
CD2				SS	SS	13 23 20.0	-7.6
CD2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
CD2				AMB	AMB		
	comp=Z,40nm,5.6s						
XAN	**Xi'an**	**45.07**	**335**	P	**P**	**13 13 37.1**	**-1.1**
XAN				AMB	AMB		
	comp=Z,35nm,0.8s,mb5.0						
BJT	**Baijiatuau**	**48.15**	**346**	*e*P	**P**	**13 14 01.6**	**-0.6**
BJT				pmax	pmax		
	comp=Z,32nm,0.7s						
BJT	**Baijiatuau**	**48.15**	**346**	*e*P	**P**	**13 14 01.6**	**-0.6**
	comp=Z,32nm,0.7s,mb5.1						
BJI	**Beijing**	**48.17**	**346**	*e*P	**P**	**13 14 02.0**	**-0.3**
BJI				XP	sP	13 14 56.4	+0.2
BJI				S	**S**	**13 20 52.6**	**+3.5**
BJI				AMB	AMB		
	comp=Z,55nm,0.7s,mb5.3						
SNY	**Shenyang**	**48.63**	**354**	⇑P	**P**	**13 14 05.3**	**-0.5**
SNY				AMB	AMB		
	comp=Z,13nm,0.5s,mb4.8						
LZH	**Lanzhou**	**49.03**	**332**	⇑P	**P**	**13 14 09.5**	**+0.6**
LZH				AP	pP	13 14 45.9	+0.9
LZH				XP	sP	13 15 03.5	+0.7
LZH				PP	PP	13 16 05.5	+1.6
LZH				*e*S	**S**	**13 21 02.5**	**+1.5**
LZH				XS	sS	13 22 02.0	-1.9
LZH				SS	SS	13 24 31.5	-2.5
LZH				AMB	AMB		
	comp=Z,52nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,133nm,4.3s						
HHC	**Hu-ho-hao-te**	**50.19**	**342**	*e*P	**P**	**13 14 18.1**	**+0.5**
HHC				AP	pP	13 14 54.3	+0.4
HHC				XP	sP	13 15 12.6	+0.9
HHC				PCP	PcP	13 15 34.3	-0.2
HHC				PP	PP	13 16 16.4	+2.0
HHC				SCP	ScP	13 19 13.4	-1.7
HHC				PCS	PcS	13 19 30.6	-1.2
HHC				S	**S**	**13 21 17.1**	**-0.1**
HHC				XS	sS	13 22 21.3	+1.1
HHC				SCS	ScS	13 23 49.3	-2.9
HHC				SS	SS	13 24 51.1	-1.4
HHC				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,80nm,7.5s						
HHC				LR	LR		
	comp=N,121nm,19.0s						
HHC				LR	LR		
	comp=E,140nm,19.9s						
HHC				LR	LR		
	comp=Z,57nm,20.9s						
CN2	**Changchun**	**50.42**	**356**	*e*P	**P**	**13 14 18.1**	**-1.3**
CN2				*e*AP	pP	13 14 54.5	-1.2
CN2				*e*S	**S**	**13 21 18.8**	**-1.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
MDJ	**Mudanjiang**	**51.09**	**360**	P	**P**	**13 14 24.8**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,29nm,4.9s						
LSA	**Lhasa**	**51.81**	**316**	P	**P**	**13 14 30.4**	**+0.7**
ASAJ	**Asahikawa**	**51.91**	**12**	P	**P**	**13 14 30.8**	**+0.3**
	comp=Z,11nm,0.6s,mb4.7,baz=218,slow=14,SNR=18						
ASAJ	**Asahikawa**	**51.91**	**12**	P	**P**	**13 14 30.8**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,11nm,0.6s						
GTA	**Gaotai**	**53.59**	**331**	⇑*i*P	**P**	**13 14 43.5**	**+0.7**
GTA				AP	pP	13 15 20.4	+0.8
GTA				XP	sP	13 15 37.8	+0.5
GTA				PCP	PcP	13 15 48.5	+1.2
GTA				PP	PP	13 16 50.3	+5.2
GTA				S	**S**	**13 22 01.9**	**-1.8**
GTA				XS	sS	13 23 06.1	-1.3
GTA				SCS	ScS	13 24 13.5	-2.4
GTA				SS	SS	13 25 46.4	+0.1
GTA				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,90nm,5.7s						
JIRN	**Jiri**	**54.20**	**311**	*e*P	**P**	**13 14 47.4**	**+0.2**
	comp=Z,29nm,0.6s,mb5.2						
GUN	**Gumba**	**54.57**	**311**	*e*P	**P**	**13 14 50.0**	**+0.1**
	comp=Z,93nm,0.7s,mb5.6						
YSS	**Yuzh-Sakhalins**	**54.67**	**11**	⇓*e*P	**P**	**13 14 50.8**	**+0.2**
YSS				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
YSS	**Yuzh-Sakhalins**	**54.67**	**11**	*e*P	**P**	**13 14 50.7**	**+0.1**
	comp=Z,11nm,0.6s,mb4.8						
PKI	**Pulchoki**	**54.74**	**311**	*e*P	**P**	**13 14 50.8**	**-0.3**
	comp=Z,35nm,0.5s,mb5.3						
PKI	**Pulchoki**	**54.74**	**311**	*e*P	**P**	**13 14 50.8**	**-0.3**
PKI				pmax	pmax		
	comp=Z,35nm,0.5s,mb5.3						
KKN	**Kakani**	**54.95**	**311**	*e*P	**P**	**13 14 52.5**	**-0.1**
	comp=Z,34nm,0.6s,mb5.2						
KKN	**Kakani**	**54.95**	**311**	*e*P	**P**	**13 14 52.5**	**-0.1**
KKN				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.2						
DMN	**Daman**	**54.99**	**310**	*e*P	**P**	**13 14 53.1**	**+0.2**
	comp=Z,17nm,0.3s,mb5.2						
HABR	**Khabarovsk**	**55.15**	**4**	⇑*i*P	**P**	**13 14 54.5**	**+0.5**
HABR				*e*S	**S**	**13 22 27.8**	**+3.4**
HABR				pmax	pmax		
	comp=Z,42nm,1.6s,mb4.9						
GKN	**Gorkha**	**55.55**	**311**	*e*P	**P**	**13 14 56.7**	**-0.2**
	comp=Z,60nm,0.4s,mb5.8						
KLR	**Kul'dur**	**55.73**	**2**	*e*P	**P**	**13 14 55.1**	**-3.1**
KOLN	**Koldanda**	**56.22**	**310**	*e*P	**P**	**13 15 01.8**	**+0.2**
	comp=Z,55nm,0.8s,mb5.5						
ULN	**Ulaanbaatar**	**57.91**	**342**	*e*P	**P**	**13 15 14.7**	**+1.1**
ULN				pmax	pmax		
	comp=Z,33nm,0.6s,mb5.3						
ULN	**Ulaanbaatar**	**57.91**	**342**	*e*P	**P**	**13 15 14.7**	**+1.1**
	comp=Z,33nm,0.6s,mb5.3						
SONM	**Songino Array**	**58.09**	**342**	P	**P**	**13 15 15.5**	**+0.7**
	comp=Z,9.7nm,0.6s,mb4.8,baz=157,slow=6.7,SNR=69						
SONM	**Songino Array**	**58.09**	**342**	P	**P**	**13 15 15.5**	**+0.7**
SONM				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CASY	**Casey**	**60.95**	**189**	*e*P	**P**	**13 15 33.9**	**-0.4**
	comp=Z,8.8nm,0.9s,mb4.6						
ZAK	**Zakamensk**	**61.31**	**341**	⇓*i*P	**P**	**13 15 36.3**	**-0.5**
TLY	**Talaya**	**62.32**	**342**	*e*P	**P**	**13 15 43.1**	**-0.4**
TLY				*e*S	S	13 24 43.6	+47
TLY				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
TLY	**Talaya**	**62.32**	**342**	*e*P	**P**	**13 15 44.5**	**+1.0**
IRK	**Irkutsk**	**62.62**	**343**	*e*P	**P**	**13 15 45.7**	**+0.1**
IRK				pmax	pmax		
	comp=Z,65nm,1.8s,mb5.2						
WMQ	**Urumqi**	**63.01**	**327**	*e*P	**P**	**13 15 50.0**	**+1.9**
WMQ				AP	pP	13 16 28.0	+2.0
WMQ				PP	PP	13 18 12.0	+3.4
WMQ				S	**S**	**13 24 06.0**	**+0.3**
WMQ				SCS	ScS	13 25 23.0	-2.3
WMQ				SS	SS	13 28 16.0	+1.9
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,42nm,14.0s						
WMQ				LR	LR		
	comp=E,39nm,14.0s						
WMQ				LR	LR		
	comp=Z,35nm,14.0s						
MOY	**Mondy**	**63.16**	**340**	*e*P	**P**	**13 15 50.6**	**+1.5**
MOY				pmax	pmax		
	comp=Z,35nm,1.8s,mb4.9						
CLNS	**Chul'man**	**63.45**	**357**	*e*P	**P**	**13 15 50.5**	**-0.5**
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
CLNS				pmax	pmax		
	comp=N,8.0nm,1.0s						
BOD	**Bodaibo**	**65.57**	**351**	*e*P	**P**	**13 16 03.6**	**-1.2**
BOD				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**67.84**	**327**	P	**P**	**13 16 19.2**	**+0.1**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.7						
MKAR	**Makanchi Array**	**67.84**	**327**	P	**P**	**13 16 19.5**	**+0.4**
	comp=Z,15nm,0.3s,mb5.2,baz=112,slow=7.7,SNR=195						
MKAR	**Makanchi Array**	**67.84**	**327**	P	**P**	**13 16 19.5**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,15nm,0.3s						
MKAR	**Makanchi Array**	**67.84**	**327**	P	**P**	**13 16 19.5**	**+0.4**
YAK	**Yakutsk**	**68.54**	**360**	*e*P	**P**	**13 16 23.4**	**-0.1**
KZA	**Kyzart**	**69.39**	**320**	P	**P**	**13 16 31.2**	**+2.5**
	SNR=6.2						
KRAR	**Krasnoyarsk**	**69.50**	**339**	*i* P	**P**	**13 16 31.7**	**+2.3**
TKM2	**Tokmak 2**	**69.59**	**321**	P	**P**	**13 16 30.8**	**+0.8**
	SNR=16						
KBK	**Karagaybulak**	**69.87**	**320**	P	**P**	**13 16 33.4**	**+1.7**
	SNR=5.3						
AAK	**Ala-Archa**	**70.15**	**320**	P	**P**	**13 16 34.7**	**+1.3**
	SNR=5.3						
AAK	**Ala-Archa**	**70.15**	**320**	⇓P	**P**	**13 16 33.2**	**-0.1**
	SNR=8.4						
AAK	**Ala-Archa**	**70.15**	**320**	*e*P	**P**	**13 16 33.6**	**+0.2**
AML	**Almayashu**	**70.42**	**319**	P	**P**	**13 16 36.5**	**+1.4**
	SNR=16						
USP	**Ospenovka**	**70.46**	**320**	P	**P**	**13 16 36.0**	**+0.7**
	SNR=13						
EKS2	**Erkin-Say**	**70.62**	**320**	P	**P**	**13 16 37.9**	**+1.7**
	SNR=5.5						
ZAL	**Zalesovo**	**71.21**	**334**	P	**P**	**13 16 39.0**	**-0.8**
	comp=Z,17nm,0.6s,mb5.0,baz=345,slow=5.3,SNR=59						
ZAL	**Zalesovo**	**71.21**	**334**	P	**P**	**13 16 39.0**	**-0.8**
ZAL				pmax	pmax		
	comp=Z,17nm,0.6s						
KURK	**Kurchatov**	**72.14**	**329**	P	**P**	**13 16 45.9**	**+0.6**
	comp=Z,350nm,0.9s,mb6.1,SNR=30						
NVS	**Novosibirsk**	**72.50**	**334**	⇑*i*P	**P**	**13 16 46.7**	**-0.8**
NVS				*e*S	S	13 25 53.9	-4.6
NVS				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.1						
NVS				pmax	pmax		
	comp=N,24nm,1.2s						
NVS				pmax	pmax		
	comp=E,31nm,1.2s						
NVS				smax			
	comp=N,21nm,2.1s						
NVS				smax			
	comp=E,22nm,1.8s						
VNDA	**Vanda**	**72.76**	**173**	P	**P**	**13 16 48.7**	**-0.3**
	comp=E,7.2nm,0.7s,mb4.5,baz=320,slow=6.6,SNR=44						
VNDA	**Vanda**	**72.76**	**173**	*e*P	**P**	**13 16 48.8**	**-0.3**
KK31	**Karatay Array**	**72.95**	**319**	*i* P	**P**	**13 16 50.4**	**+0.3**
KK31				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
KKAR	**Karatay Array**	**72.95**	**319**	*i* P	**P**	**13 16 50.4**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
SBA	**Scott Base**	**73.65**	**172**	*e*P	**P**	**13 16 55.1**	**+0.8**
MAW	**Mawson**	**75.12**	**201**	P	**P**	**13 17 02.9**	**+0.2**
	comp=Z,12nm,0.7s,mb4.7,baz=74,slow=6.9,SNR=31						
MAW	**Mawson**	**75.12**	**201**	P	**P**	**13 17 02.9**	**+0.2**
MAW				pmax	pmax		
	comp=Z,13nm,0.7s						
WSAR	**Wadi Sarin**	**75.50**	**296**	P	**P**	**13 17 05.4**	**+0.5**
	comp=Z,18nm,0.7s,mb4.8,baz=114,slow=8.9,SNR=15						
SMDO	**Samad**	**75.98**	**296**	⇓P	**P**	**13 17 08.5**	**+0.8**
	SNR=5.2						
BIDO	**Bidbid**	**76.02**	**296**	⇓P	**P**	**13 17 09.1**	**+1.3**
	SNR=11						
HOQ	**Hoqain**	**76.76**	**296**	⇓P	**P**	**13 17 12.5**	**+0.5**
	SNR=6.1						
VOSK	**Vostochnaya**	**77.22**	**328**	P	**P**	**13 17 14.0**	**-0.6**
VOSK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
BVA0	**Borovoye Array**	**77.68**	**328**	*i* P	**P**	**13 17 16.7**	**-0.4**
BVAR	**Borovoye Array**	**77.68**	**328**	P	**P**	**13 17 17.0**	**-0.1**
	comp=Z,26nm,0.8s,mb4.9,baz=123,slow=5.5,SNR=92						
BVAR	**Borovoye Array**	**77.68**	**328**	P	**P**	**13 17 17.0**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,26nm,0.9s						
BRVK	**Borovoye**	**77.75**	**328**	P	**P**	**13 17 17.2**	**-0.3**
	comp=Z,268nm,0.7s,mb6.0,SNR=11						
BRVK	**Borovoye**	**77.75**	**328**	P	**P**	**13 17 17.9**	**+0.3**
	SNR=10						
BRVK	**Borovoye**	**77.75**	**328**	*e*P	**P**	**13 17 17.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.9						
BRVK	**Borovoye**	**77.75**	**328**	*e*P	**P**	**13 17 17.5**	**0.0**
	comp=Z,24nm,0.8s,mb4.9						
CHKZ	**Chkalovo**	**77

comp=Z,73nm,0.6s,mb5.6
RDF Al-Radifah 86.42 300 *e*P **P** 13 18 01.9 -0.8
RDF AMb AMB 13 18 03.3
comp=Z,58nm,0.8s,mb5.4
NAY Al-Naaiem 86.73 300 *e*P **P** **13 18 04.0 -0.2**
NAY AMb AMB 13 18 05.5
comp=Z,67nm,0.7s,mb5.6
MIB Mutribah 86.74 300 *e*P **P** **13 18 03.7 -0.6**
MIB AMb AMB 13 18 05.0
comp=Z,58nm,0.7s,mb5.5
RST Umm Al-Ruwaisa 86.99 300 *e*P **P** **13 18 04.3 -1.1**
RST AMb AMB 13 18 06.6
comp=Z,102nm,0.7s,mb5.8
GNI Garni 90.47 310 *i* P **P** **13 18 23.2 +1.4**
KIV Kislovodsk 92.49 314⇑ *e*P **P** **13 18 37.3 +6.2**
KIV *e* 13 22 14.7
KIV *e*S S 13 28 47.5 -34
KIV *e*PS PS 13 30 37.4 -16
KIV pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
COLA College 92.81 25 *i* P **P** **13 18 32.3 -0.3**
COLA College 92.81 25 *e*P **P** **13 18 30.9 -1.7**
comp=Z,3.1nm,0.8s,mb4.5
SNAA Sanae 95.88 194 *e*P **P** **13 18 46.5 -0.2**
SNAA *e* 13 18 52.4
SNAA Sanae 95.88 194⇓ *e*P **P** **13 18 47.1 +0.4**
SNAA Sanae 95.88 194 *e*P **P** **13 18 46.5 -0.1**
comp=Z,3.8nm,0.8s,mb4.8
KLMR Klimovskoe 95.92 331 *e*P **P** **13 18 44.2 -2.6**
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.9
ANN Anapa 96.31 314 *e*P **P** **13 18 38.9 -10**
ANN pmax pmax
comp=Z,47nm,1.2s,mb5.7
DAWY Dawson 96.37 26 *e*P **P** **13 18 49.2 +0.3**
TMCR Tamitsa 96.73 334 *e*P **P** **13 18 47.6 -2.9**
TMCR pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
OBN Obninsk 97.27 325⇓ *e*P **P** **13 18 50.4 -2.5**
OBN *e**PP sP 13 19 50.4 +0.2
OBN *e* 13 22 49.5
OBN *e*S SKSac 13 29 13.8 -1.1
OBN pmax pmax
comp=Z,12nm,1.1s,mb5.1
VNA3 Neumayer Olymp 97.71 192 *e*P **P** **13 18 54.5 -0.4**
VNA3 *e* 13 18 59.7
VNA3 *e* 13 19 04.2
VNA1 Neumayer--Stat 97.85 193 *e*P **P** **13 18 55.8 +0.3**
VNA1 *e* 13 19 00.3
VNA1 *e* 13 19 04.3
VNA1 *e* 13 19 08.3
BRTR Keskin Array B 98.93 309 P **P** **13 18 59.5 -0.8**
comp=Z,1.2nm,0.8s,mb4.4,baz=136,slow=6.2,SNR=6.4
ARCES ARCESS Array B 101.22 340 P Pdif 13 19 08.9 -1.6
comp=Z,3.1nm,0.7s,baz=86,slow=6.6,SNR=11
ARCES ARCESS Array B 101.22 340 P Pdif 13 19 08.9 -1.7
ARCES pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 102.39 331 P Pdif 13 19 14.1 -1.7
comp=Z,1.5nm,0.8s,baz=74,slow=8.1,SNR=4.3
FINES FINESS Array B 102.39 331 *i* P Pdif 13 19 14.3 -1.4
FINES pmax pmax
comp=Z,2.0nm,0.8s
NVAR Mina Array Bea 111.32 51 PKiKP PKiKP 13 23 54.9 +1.7
comp=Z,0.7nm,0.8s,baz=235,slow=1.5,SNR=5.7
BRG Berggiesshubel 111.32 322 *e*(P) PKiKP 13 23 54.4 +1.3
comp=Z,1.0nm,0.2s
BRG Berggiesshubel 111.32 322 *e*PKiKP PKiKP 13 23 54.4 +1.3
BRG 14 19 57.5
BRG pmax pmax
comp=Z,1.0nm,0.2s
CLL Collm 111.77 323 *e*PKiKP PKiKP 13 23 53.0 -1.0
comp=Z,4.0nm,0.9s
CLL Collm 111.77 323 *e*PKIKP PKiKP 13 23 53.0 -1.0
CLL pmax pmax
comp=Z,4.0nm,0.9s
GERES GERESS Array B 112.03 320 PKiKP PKiKP 13 23 53.2 -1.2
comp=Z,1.7nm,0.6s,baz=128,slow=1.6,SNR=13
GERES GERESS Array B 112.03 320 *i* PKiKP PKiKP 13 23 53.2 -1.3
GERES pmax pmax
comp=Z,2.0nm,0.6s
RRI2 Red Ridge 115.47 45 *e*PKiKP PKiKP 13 24 03.1 +2.0
TPAW Teton Pass 115.69 45 *e*PKPdf PKPdf 13 24 03.2 +1.7
REDW Red Top Meadow 115.80 45 *e*PKiKP PKiKP 13 24 03.5 +1.8
LOHW Long Hollow 115.90 45 *e*PKiKP PKiKP 13 24 03.5 +1.6
BW06 Boulder Array 116.87 45 *e*PKPdf PKPdf 13 24 04.9 +1.2
PDAR Pinedale Array 116.87 45 PKP PKPdf 13 24 04.6 +0.8
comp=Z,1.9nm,0.7s,baz=286,slow=1.1,SNR=20
PDAR PKKPbc PKKPbc 13 34 30.6 +0.7
comp=Z,0.7nm,0.8s,baz=114,slow=6.6,SNR=5.7
PGF Pioggiola 116.96 315 *e*PKIKP PKPdf 13 24 03.7 -0.2
comp=Z,96nm,1.4s
SRU San Rafael 117.15 49 *e*PKiKP PKPdf 13 24 05.4 +1.1
LPL La Plagne 117.58 318 *e*PKiKP PKPdf 13 24 05.1 0.0
comp=Z,9.6nm,0.6s
CABF La Chapelle 117.61 320 *e*PKiKP PKPdf 13 24 05.1 -0.1
comp=Z,11nm,0.6s
SBF Sospel 117.65 316 *e*PKiKP PKPdf 13 24 04.7 -0.6
MBDF Montbardon 117.82 317 *e*PKiKP PKPdf 13 24 05.7 +0.1
comp=Z,8.6nm,0.7s
FRF La Foret Royal 118.29 316 *e*PKiKP PKPdf 13 24 06.1 -0.4
ORIF Oris-en-Rattie 118.35 318 *e*PKiKP PKPdf 13 24 06.3 -0.3
comp=Z,7.5nm,0.7s
KEST Kesra 118.44 307 PKP PKPdf 13 24 08.4 +1.7
comp=Z,1.7nm,0.9s,baz=287,slow=7.5,SNR=3.8
LMR La Mourre 118.46 316 *e*PKiKP PKPdf 13 24 06.9 +0.1
comp=Z,42nm,1.2s
LOR Lormes 118.78 321 *e*PKiKP PKPdf 13 24 07.1 -0.3
EKA Eskdalemuir Ar 118.79 331 PKP PKPdf 13 24 07.2 -0.3
comp=Z,1.1nm,0.6s,baz=18,slow=2.9,SNR=5.2
EKA Eskdalemuir Ar 118.79 331 PKiKP PKPdf 13 24 07.2 -0.2
EKA pmax pmax
comp=Z,1.0nm,0.6s
RWWY Rawlins 118.86 46 *e*PKPdf PKPdf 13 24 09.0 +1.4
PV01 Paradox Valley 118.88 50 *e*PKPdf PKPdf 13 24 08.6 +1.0
SMRF Simiane la Rot 118.88 317 *e*PKiKP PKPdf 13 24 07.9 +0.3
comp=Z,14nm,0.9s
SSF Saint Saulge 119.08 321 *e*PKiKP PKPdf 13 24 07.7 -0.3
comp=Z,7.5nm,0.7s
VIVF Saint-Julien-l 119.17 318 *e*PKiKP PKPdf 13 24 08.0 -0.2
comp=Z,6.6nm,0.7s
AVF Avril sur Loir 119.29 321 *e*PKiKP PKPdf 13 24 08.6 +0.2
BGF Bois d'Agland 119.70 321 *e*PKiKP PKPdf 13 24 09.2 0.0
comp=Z,21nm,0.8s
TCF Toulx Ste Croi 120.21 320 *e*PKiKP PKPdf 13 24 10.1 -0.1
comp=Z,8.6nm,0.8s
RSSD Black Hills 120.22 42 *e*PKiKP PKPdf 13 24 10.8 +0.6
FLN La Foliniere 120.76 324 *e*PKiKP PKPdf 13 24 10.8 -0.4
CAF Calviac 120.86 319 *e*PKiKP PKPdf 13 24 11.7 +0.3
SDCO Great Sand Dun 121.31 50 *e*PKPdf PKPdf 13 24 20.6 +8.3
ANMO Albuquerque 121.34 53 *e*PKiKP PKPdf 13 24 14.6 +2.2
MTLF Montolieu 121.38 317 *e*PKiKP PKPdf 13 24 12.2 -0.2
comp=Z,4.1nm,0.7s
MFF Saint Martin d 121.55 322 *e*PKiKP PKPdf 13 24 13.5 +0.7
comp=Z,12nm,0.7s
SGMF Saint Gilles 122.21 324 *e*PKiKP PKPdf 13 24 13.5 -0.5
comp=Z,13nm,0.8s
ULM Lac du Bonnet 122.35 33 PKP PKPdf 13 24 13.9 -0.3
comp=Z,3.6nm,0.5s,baz=259,slow=0.1,SNR=12
QUIF Quistinic 122.73 324 *e*PKiKP PKPdf 13 24 14.5 -0.5
EPF Esparros 122.76 318 *e*PKiKP PKPdf 13 24 15.1 0.0
MNTX Cornudas Mount 123.02 57 *e*PKPdf PKPdf 13 24 16.9 +1.4
ETSF Etsaut 123.42 318 *e*PKiKP PKPdf 13 24 17.0 +0.7
comp=Z,9.9nm,0.9s
TOA0 Torodi Ar. Sit 128.50 281 *e*PKPdf PKPdf 13 24 26.8 +0.7
TORD Torodi Ar. Bea 128.50 281 PKP PKPdf 13 24 26.9 +0.9
comp=Z,6.7nm,0.7s,baz=78,slow=1.7,SNR=35
TORD Torodi Ar. Bea 128.50 281 PKP PKPdf 13 24 26.9 +0.9
PLCA Paso Flores 129.24 160 PKP PKPdf 13 24 28.0 +0.6
comp=Z,4.4nm,0.9s,baz=118,slow=2.6,SNR=9.7
PLCA SKPbc 13 27 33.8
comp=Z,3.1nm,0.8s,baz=253,slow=3.4,SNR=8.7
PLCA Paso Flores 129.24 160 PKIKP PKPdf 13 24 28.0 +0.5
PLCA pmax pmax
comp=Z,4.0nm,0.9s
PLCA pmax pmax
comp=N,3.0nm,0.8s
PLCA Paso Flores 129.24 160 PKP PKPdf 13 24 28.0 +0.6
PLCA SKPbc 13 27 33.8
CCM Cathedral Cave 131.54 44 *e*PKPdf PKPdf 13 24 31.5 -0.4
CCM *e*SKPbc SKPbc 13 27 41.6 -0.6
FVM French Village 132.14 43 *e*PKPdf PKPdf 13 24 33.9 +1.0
FVM *e*SKPbc SKPbc 13 27 45.9 +1.5
WVT Waverly 134.87 44 *e*PKiKP PKPdf 13 24 39.8 +1.7
DBIC Dimbokro 134.91 273 PKP PKPdf 13 24 39.5 +1.3
comp=N,8.3nm,0.5s,baz=55,slow=1.5,SNR=18
DBIC Dimbokro 134.91 273 PKIKP PKPdf 13 24 39.5 +1.3
DBIC pmax pmax
comp=Z,8.0nm,0.5s
PLAL Pickwick Lake 135.28 46 *e*PKPdf PKPdf 13 24 39.2 +0.3
LRAL Lakeview Retre 137.02 47 *e*PKPdf PKPdf 13 24 42.5 +0.4
LRAL *e*SKPbc SKPbc 13 28 01.3 +1.3
SSPA Standing Stone 138.16 32 *e*PKPdf PKPdf 13 24 46.6 +2.4
LVC Limon Verde 145.61 148 *e*PKPbc PKPbc 13 25 00.8 +2.8
CPUP Villa Florida 146.45 168 PKPbc PKPbc 13 25 01.8 +1.3
comp=Z,17nm,0.6s,baz=182,slow=2.0,SNR=43
CPUP SKPbc SKPbc 13 28 25.3 +1.3
comp=Z,2.1nm,0.6s,baz=224,slow=0.7,SNR=4.1
CPUP Villa Florida 146.45 168 PKP2 PKPab 13 25 01.8 +0.1
CPUP 13 28 25.3
CPUP pmax pmax
comp=Z,17nm,0.6s
CPUP pmax pmax
comp=N,2.0nm,0.6s
CPUP Villa Florida 146.45 168 *e*PKPbc PKPbc 13 25 01.7 +1.2
NNA Nana 147.69 125 *e*PKPbc PKPbc 13 25 04.8 +0.9
LPAZ La Paz 151.11 142 PKP PKPdf 13 25 09.2 +2.8
comp=N,4.2nm,1.0s,baz=127,slow=0.6,SNR=12
LPAZ PKPbc PKPbc 13 25 15.3 +2.9
comp=N,6.7nm,0.4s,baz=40,slow=2.9,SNR=41
LPAZ La Paz 151.11 142 *e*PKPdf PKPdf 13 25 09.7 +3.3
LPAZ *e*PKPbc PKPbc 13 25 15.2 +2.8
SDV Santo Domingo 159.71 83 *e*PKPdf PKPdf 13 25 19.1 +1.2

NEIC ***22*** *13:25:42.5, 4126S×17260E, h208km, MG3.8(WEL), After WEL.*
WEL 22 13:25:42.9±0.3, 4127S×17261E, h204km±2km, ML3.5/12, 8C-3D, Error ellipse: s-maj=2.3km s-min=1.9km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	**0.45**	**352**	⇑P	Pn	13 26 10.1	-0.2
QRZ				S	Sn	13 26 30.5	-1.0
QRZ	**Quartz Range**	**0.45**	**352**	⇓PN	Pn	13 26 10.1	-0.2
QRZ				SN	Sn	13 26 30.5	-1.0
THZ	**Tophouse**	**0.54**	**156**	⇑P	Pn	13 26 11.0	+0.4
THZ				S	Sn	13 26 31.7	-0.4
THZ	**Tophouse**	**0.54**	**156**	⇑PN	Pn	13 26 11.0	+0.4
THZ				SN	Sn	13 26 31.7	-0.3
NNZ	**Nelson**	**0.58**	**85**	P	Pn	13 26 10.7	-0.1
NNZ				S	Sn	13 26 31.8	-0.6
NNZ	**Nelson**	**0.58**	**85**	PN	Pn	13 26 10.7	-0.1
NNZ				SN	Sn	13 26 31.5	-0.9
DSZ	**Denniston Nort**	**0.77**	**232**	⇓P	Pn	13 26 11.3	-0.4
DSZ				S	Sn	13 26 32.7	-1.3
DSZ	**Denniston Nort**	**0.77**	**232**	⇓PN	Pn	13 26 11.3	-0.4
DSZ				SN	Sn	13 26 32.7	-1.3
TUWZ	**Tuamarina**	**1.02**	**99**	PN	Pn	13 26 13.4	+0.2
TUWZ				SN	Sn	13 26 36.0	-0.7
DUWZ	**D'Urville Isla**	**1.10**	**65**	PN	Pn	13 26 13.6	-0.1
DUWZ				SN	Sn	13 26 37.7	0.0
TCW	**Tory Channel**	**1.26**	**88**	PN	Pn	13 26 14.9	-0.1
TCW				SN	Sn	13 26 38.8	-1.0
KHZ	**Kahutara**	**1.34**	**149**	*e*P	Pn	13 26 15.5	-0.1
KHZ	**Kahutara**	**1.34**	**149**	⇑PN	Pn	13 26 15.5	0.0
KHZ				SN	Sn	13 26 40.3	-0.7
LTZ	**Lake Taylor**	**1.53**	**189**	*e*P	Pn	13 26 17.1	-0.1
LTZ	**Lake Taylor**	**1.53**	**189**	PN	Pn	13 26 17.1	-0.1
LTZ				SN	Sn	13 26 42.3	-1.5
MRW	**Makara Radio**	**1.58**	**89**	P	Pn	13 26 17.3	-0.3
MRW	**Makara Radio**	**1.58**	**89**	PN	Pn	13 26 17.3	-0.4
SNZO	**South Karori**	**1.58**	**92**	P	Pn	13 26 17.3	-0.4
SNZO	**South Karori**	**1.58**	**92**	⇑PN	Pn	13 26 17.2	-0.4
WEL	**Wellington**	**1.63**	**91**	P	Pn	13 26 17.8	-0.3
WEL	**Wellington**	**1.63**	**91**	PN	Pn	13 26 17.8	-0.3
KIW	**Kapiti Island**	**1.79**	**77**	P	Pn	13 26 19.2	-0.4
KIW	**Kapiti Island**	**1.79**	**77**	⇑PN	Pn	13 26 19.2	-0.4
CAW	**Cannon Point**	**1.86**	**86**	P	Pn	13 26 19.9	-0.4
CAW	**Cannon Point**	**1.86**	**86**	⇑PN	Pn	13 26 19.9	-0.5
MTW	**Mount Morrison**	**2.19**	**88**	P	Pn	13 26 23.2	-0.4
MTW	**Mount Morrison**	**2.19**	**88**	⇑PN	Pn	13 26 23.2	-0.5
WVZ	**Waitaha Valley**	**2.28**	**217**	PN	Pn	13 26 23.3	-1.3
MRZ	**Mangatainoka R**	**2.33**	**76**	*e*P	Pn	13 26 24.4	-0.8
MRZ	**Mangatainoka R**	**2.33**	**76**	PN	Pn	13 26 24.4	-0.8
TIWZ	**Tintock**	**2.53**	**80**	PN	Pn	13 26 26.9	-0.5
BFZ	**Birch Farm**	**2.82**	**79**	*e*P	Pn	13 26 30.1	-0.5
TSZ	**Takapari Road**	**2.82**	**66**	*e*P	Pn	13 26 29.7	-1.0
FOZ	**Fox Glacier**	**3.15**	**222**	*e*P	Pn	13 26 31.5	-3.0
JCZ	**Jackson Bay**	**3.99**	**224**	*e*P	Pn	13 26 42.6	-2.1

IDC ***22*** *13:47:54.2±0.5, 092N×12494E, h0km, mb4.7/16, mb1 4.7/17, mb1mx4.6/20, mbtmp4.6/17, ML4.1/1, MS3.4/4, Ms1 3.4/4, ms1mx2.8/34, Error ellipse: s-maj=26.8km s-min=12.0km az=77.0*
BJI ***22*** *13:47:59.7, 029N×12567E, h103km, mB5.2, mb5.0*
MOS ***22*** *13:47:59.2±1.1, 097N×12506E, h51km, mb5.0/11, Error ellipse: s-maj=20.9km s-min=8.5km az=113.9*
ISCJB ***22*** *13:48:03.6±1.0, 096N±004×12537E±006, h96km±9km, mb4.8/35, Error ellipse: s-maj=10.8km s-min=6.3km az=127.1*
NEIC ***22*** *13:48:06.0±1.5, 091N×12536E, h103km±14km, mb4.8/14, Error ellipse: s-maj=14.6km s-min=6.1km az=65.0*
NEIC Felt [IV] at Bitung and Manado, Indonesia.
ISC 22 13:48:05.9±0.8, 091N±004×12539E±006, h103km±7km, n74, σ1°08/74, mb4.8/35, 4C-3D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**5.36**	**149**	P	**Pn**	**13 49 21.6**	**-1.8**
	514nm,0.5s						
PCI	**Palu**	**5.84**	**252**	P	**Pn**	**13 49 29.4**	**-0.6**
	267nm,1.0s						
SWI	**Sorong**	**6.13**	**107**	P	**Pn**	**13 49 34.4**	**+0.6**
	108nm,0.7s						
TSM	**Tawau**	**8.23**	**294**	P	**Pn**	**13 50 02.1**	**-0.3**
KKM	**Kota Kinabalu**	**10.48**	**299**	P	**Pn**	**13 50 35.3**	**+2.3**
KKM	**Kota Kinabalu**	**10.48**	**299**	*e*Pn	**Pn**	**13 50 34.9**	**+1.9**
KSM	**Kuching**	**15.09**	**272**	*e*Pn	**Pn**	**13 51 34.5**	**+0.9**
KAKA	**Kakadu**	**15.24**	**153**	*e*P	**Pn**	**13 51 32.9**	**-2.4**
	18nm,0.4s						
BJII	**Banjamegara**	**17.66**	**242**	P	**Pn**	**13 52 06.8**	**+1.6**
	36nm,1.6s						
FITZ	**Fitzroy Crossi**	**18.90**	**179**	P	**P**	**13 52 18.5**	**+0.2**
	0.5nm,0.3s,baz=13,slow=9.5,SNR=14						
FITZ	**Fitzroy Crossi**	**18.90**	**179**	⇑*i*P	**P**	**13 52 18.9**	**+0.6**
	13nm,1.2s						
WRAB	**Tennant Creek**	**22.50**	**157**	*e*P	**P**	**13 52 56.6**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,46nm,1.0s,mb4.8						
WRAB	**Tennant Creek**	**22.50**	**157**	*e*P	**P**	**13 52 56.5**	**-0.4**
	comp=Z,46nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**22.51**	**158**	P	**P**	**13 52 55.7**	**-1.3**
	comp=Z,16nm,0.6s,mb4.5,baz=337,slow=11,SNR=277						
WRA				S	**S**	**13 56 55.6**	**-0.6**
	comp=Z,5.0nm,1.0s,baz=338,slow=16,SNR=6.3						
WB2	**Warramunga Arr**	**22.51**	**158**	*e*P	**P**	**13 52 56.5**	**-0.5**
MBWA	**Marble Bar**	**22.62**	**194**	*e*P	**P**	**13 52 57.2**	**-1.0**
AS31	**Alice Springs**	**25.79**	**162**	*e*P	**P**	**13 53 28.2**	**+1.0**
AS31				*e*P		13 53 28.7	
ASAR	**Alice Springs**	**25.80**	**162**	P	**P**	**13 53 28.4**	**+1.2**
	comp=Z,8.7nm,0.6s,mb4.4,baz=349,slow=15,SNR=126						
ASAR				PcP	PcP	13 56 56.5	+2.3
	comp=Z,2.3nm,0.7s,baz=342,slow=2.1,SNR=7.7						
ASAR				S	**S**	**13 57 50.3**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=351,slow=18,SNR=4.9						
JOW	**Kunigami**	**25.92**	**6**	P	**P**	**13 53 30.4**	**+2.1**
	comp=Z,44nm,0.6s,mb5.1,baz=184,slow=8.0,SNR=21						
FORT	**Forrest**	**31.62**	**176**	*e*P	**P**	**13 54 20.1**	**+1.2**
	comp=Z,14nm,0.6s,mb4.9						
KLBR	**Kellerberrin**	**33.13**	**192**	*e*P	**P**	**13 54 32.3**	**+0.2**
	comp=Z,174nm,1.9s,mb5.6						
HNR	**Honiara**	**35.91**	**107**	P	**P**	**13 55 01.4**	**+5.3**
	comp=Z,82nm,0.8s,mb5.7,baz=262,slow=4.2,SNR=3.9						
STKA	**Stephens Creek**	**36.05**	**156**	P	**P**	**13 54 59.0**	**+1.8**
	comp=Z,7.6nm,0.7s,mb4.7,baz=336,slow=8.1,SNR=14						
STKA				LR	LR	14 11 46.6	
	comp=Z,63nm,18.7s,baz=205,slow=40						
STKA	**Stephens Creek**	**36.05**	**156**	*e*P	**P**	**13 54 55.8**	**-1.4**
STKA				*e*P		13 54 58.9	
STKA				LR	LR	14 11 46.6	
MJAR	**Matsushiro Arr**	**37.38**	**17**	P	**P**	**13 55 09.0**	**+0.4**
	comp=Z,3.7nm,0.8s,mb4.4,baz=195,slow=8.2,SNR=10						
MAJO	**Matsushiro**	**37.39**	**17**	*e*P	**P**	**13 55 09.2**	**+0.6**
	comp=Z,4.4nm,0.6s,mb4.6						
SNY	**Shenyang**	**40.76**	**358**	⇓P	**P**	**13 55 36.4**	**-0.3**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.3s,mb5.1						
ASAJ	**Asahikawa**	**45.66**	**17**	P	**P**	**13 56 18.4**	**+2.3**
	comp=Z,6.1nm,0.4s,mb4.6,baz=240,slow=9.3,SNR=17						
JIRN	**Jiri**	**46.01**	**309**	*e*P	**P**	**13 56 17.8**	**-1.1**
	comp=Z,9.3nm,0.4s,mb4.8						
GUN	**Gumba**	**46.37**	**309**	*e*P	**P**	**13 56 21.8**	**+0.1**
	comp=Z,16nm,0.4s,mb5.0						
PKI	**Pulchoki**	**46.58**	**308**	*e*P	**P**	**13 56 22.0**	**-1.3**
KKN	**Kakani**	**46.78**	**308**	*e*P	**P**	**13 56 24.9**	**0.0**
	comp=Z,11nm,0.7s,mb4.7						
KKN	**Kakani**	**46.78**	**308**	*e*P	**P**	**13 56 24.9**	**0.0**
KKN				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
GKN	**Gorkha**	**47.38**	**308**	*e*P	**P**	**13 56 29.2**	**-0.4**
KOLN	**Koldanda**	**48.09**	**307**	*e*P	**P**	**13 56 35.5**	**+0.4**
	comp=Z,14nm,0.5s,mb5.0						
HABR	**Khabarovsk**	**48.10**	**9**	*e*P	**P**	**13 56 36.6**	**+1.4**
HABR				*e*S	**S**	**14 03 35.6**	**+10**
HABR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**49.40**	**344**	*i* P	**P**	**13 56 47.1**	**+2.0**
SONM	**Songino Array**	**49.56**	**343**	P	**P**	**13 56 46.4**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=155,slow=7.3,SNR=8.7						
SONM				PcP	PcP	13 58 08.0	+1.4
	comp=Z,1.2nm,0.6s,baz=153,slow=5.5,SNR=5.1						
SONM				LR	LR	14 17 52.9	
	comp=Z,39nm,21.3s,baz=152,slow=36						
SONM	**Songino Array**	**49.56**	**343**	P	**P**	**13 56 46.4**	**+0.1**
SONM						13 58 08.0	
BOD	**Bodaibo**	**57.46**	**353**	*e*P	**P**	**13 57 43.5**	**-0.5**
BOD				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.7						
MKAR	**Makanchi Array**	**59.13**	**327**	P	**P**	**13 57 55.5**	**-0.1**
	comp=Z,6.7nm,0.3s,mb5.1,baz=117,slow=7.3,SNR=51						
MKAR				PcP	PcP	13 58 43.9	+0.7
	comp=Z,3.1nm,0.6s,baz=122,slow=4.6,SNR=6.2						
MKAR	**Makanchi Array**	**59.13**	**327**⇑	*e*P	**P**	**13 57 55.5**	**-0.1**
YAK	**Yakutsk**	**61.05**	**2**	*c* *i*P	**P**	**13 58 09.7**	**+1.0**
YAK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
ZAL	**Zalesovo**	**62.50**	**334**	P	**P**	**13 58 17.2**	**-1.2**
	comp=Z,2.2nm,0.3s,mb4.5,baz=347,slow=5.1,SNR=5.4						
ZAL				LR	LR	14 24 30.7	
	comp=Z,22nm,19.1s,baz=105,slow=35						
NVS	**Novosibirsk**	**63.79**	**334**	*e*P	**P**	**13 58 24.5**	**-2.5**
KK31	**Karatay Array**	**64.40**	**318**	*i* P	**P**	**13 58 30.3**	**-0.7**
KKAR	**Karatay Array**	**64.40**	**318**	*i* P	**P**	**13 58 30.2**	**-0.8**
CASY	**Casey**	**67.88**	**186**	*e*P	**P**	**13 58 54.1**	**+0.9**
VOSK	**Vostochnaya**	**68.50**	**328**	P	**P**	**13 58 56.1**	**-1.0**
BRVK	**Borovoye**	**69.03**	**328**	*e*P	**P**	**13 59 00.1**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.4						
BRVK	**Borovoye**	**69.03**	**328**	*e*P	**P**	**13 59 00.1**	**-0.3**
	comp=Z,2.5nm,0.3s,mb4.5						
CHKZ	**Chkalovo**	**69.16**	**329**	*e*P	**P**	**13 59 00.5**	**-0.6**
ZRNK	**Zerenda**	**69.67**	**327**	*e*P	**P**	**13 59 03.9**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,12nm,0.5s,mb5.0						
ZRNK	**Zerenda**	**69.67**	**327**	*e*P	**P**	**13 59 03.9**	**-0.4**
	comp=Z,12nm,0.5s,mb5.0						
AB31	**Akbulak array**	**73.49**	**322**⇑	*e*P	**P**	**13 59 26.8**	**-0.4**
AKTK	**Aktyubinsk**	**75.04**	**322**	*i* P	**P**	**13 59 36.1**	**-0.1**
AKTO	**Aktyubinsk**	**75.04**	**322**	P	**P**	**13 59 36.1**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.9						
ARU	**Arti**	**76.60**	**328**	⇓*i*P	**P**	**13 59 43.8**	**-1.3**
ARU				*e*		14 02 36.0	
ARU				*e*PPP		14 04 24.5	
ARU				*e*S	S	14 09 28.4	+5.3
ARU				*e*SS	SS	14 14 22.8	+2.5
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
ARU	**Arti**	**76.60**	**328**	*i* P	**P**	**13 59 44.2**	**-0.9**
MAW	**Mawson**	**80.67**	**200**	P	**P**	**14 00 08.9**	**+1.5**
	comp=Z,2.6nm,0.6s,mb4.3,baz=47,slow=5.6,SNR=15						
VNDA	**Vanda**	**80.82**	**172**	P	**P**	**14 00 09.3**	**+1.1**
	comp=Z,1.3nm,0.5s,mb4.0,baz=312,slow=6.3,SNR=14						
ATD	**Arta Tunnel**	**82.52**	**281**	LR	LR	14 33 33.3	
	comp=Z,24nm,19.1s,baz=306,slow=33						
KMBO	**Kilima Mbogo**	**88.16**	**269**	P	**P**	**14 00 47.6**	**+2.5**
	comp=Z,3.3nm,0.5s,mb4.6,baz=70,slow=8.2,SNR=12						
OBN	**Obninsk**	**88.58**	**325**⇓	*e*P	**P**	**14 00 47.0**	**-0.1**
OBN				*e*		14 04 18.7	
OBN				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.3						
OBN	**Obninsk**	**88.58**	**325**	*e*P	**P**	**14 00 46.7**	**-0.5**
OBN				*i* P		14 00 47.1	
JOF	**Joensuu**	**91.06**	**333**	*e*p	**P**	**14 00 57.6**	**-1.1**
	comp=Z,3.7nm,0.5s,mb4.8						
ARCES	**ARCESS Array B**	**92.61**	**340**	P	**P**	**14 01 05.4**	**-0.5**
	comp=Z,2.4nm,0.6s,mb4.7,baz=78,slow=6.1,SNR=16						
AKASG	**Malin Array Be**	**93.22**	**321**	P	**P**	**14 01 08.1**	**-0.6**
	comp=Z,1.8nm,0.5s,mb4.7,baz=69,slow=5.1,SNR=8.4						
AKASG	**Malin Array Be**	**93.22**	**321**	*i* P	**P**	**14 01 08.1**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	**Kangasniemi**	**93.45**	**332**	*e*p	**P**	**14 01 09.0**	**-0.8**
	comp=Z,2.2nm,0.4s,mb4.8						
KAF	**Kangasniemi**	**93.45**	**332**	*e*P	**P**	**14 01 09.0**	**-0.8**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.8						
FINES	**FINESS Array B**	**93.66**	**332**	P	**P**	**14 01 09.9**	**-0.8**
	comp=Z,0.9nm,0.5s,mb4.3,baz=57,slow=7.0,SNR=6.3						
TORD	**Torodi Ar. Bea**	**122.47**	**286**	PKP	PKPdf	14 06 51.1	+2.1
	comp=Z,2.5nm,0.9s,baz=89,slow=1.9,SNR=11						
JCT	**Junction

UCH	Uchtor	6.62	21	P		Sn	14 10 27.2	0.0	
	SNR=8.5								
KZA	Kyzart	6.73	26	P		Pn	14 09 15.3	+0.7	
	SNR=16								
EKS2	Erkin-Say	6.85	15	P		Pn	14 09 16.4	+0.2	
	SNR=55								
AAK	Ala-Archa	6.99	20	P		Pn	14 09 18.9	+0.7	
	SNR=24								
AAK	Ala-Archa	6.99	20	eP	PN	Pn	14 09 17.6	-0.6	
AAK					pmax	pmax			
	comp=Z,31nm,0.4s								
AAK	Ala-Archa	6.99	20	eP		Pn	14 09 17.6	-0.6	
	comp=Z,31nm,0.4s								
KK31	Karatay Array	7.05	355	⇑	Pn	Pn	14 09 17.3	-1.6	
	comp=Z,3.6nm,0.2s,baz=300,slow=14,SNR=87								
KK31				⇓	Sn	Sn	14 10 30.8	-6.6	
	comp=Z,93nm,0.6s								
KBK	Karagaybulak	7.14	22	P		Pn	14 09 21.2	+1.0	
	SNR=6.7								
ULHL	Ulahol	7.25	30	P		Pn	14 09 22.8	+1.2	
	SNR=6.0								
KLP	Kalpa	7.33	126	eP		Pn	14 09 21.3	-1.3	
KLP				eS		Sn	14 10 38.1	-6.1	
KLP					AML	AML	14 11 16.9		
	comp=E,50nm,0.7s								
KLP					AML	AML	14 11 25.8		
	comp=N,46nm,0.6s								
CHMS	Chumysh	7.40	20	P		Pn	14 09 24.0	+0.3	
	SNR=12								
USP	Ospenovka	7.59	18	P		Pn	14 09 26.6	+0.5	
	SNR=27								
TKM2	Tokmak 2	7.59	24	P		Pn	14 09 27.1	+0.8	
	SNR=13								
KHET	Khetri	8.83	153	eP		Pn	14 09 41.7	-1.4	
KHET				eS		Sn	14 11 14.6	-6.2	
KOLN	Koldanda	13.30	125	eP		Pn	14 10 40.0	-2.6	
	comp=N,14nm,0.4s								
MKAR	Makanchi Array	13.49	34	P		Pn	14 10 45.1	+0.1	
	comp=N,0.1nm,0.3s,baz=220,slow=13,SNR=8.0								
GKN	Gorkha	13.85	122	eP		Pn	14 10 48.7	-1.0	
	comp=N,19nm,0.3s								
DMN	Daman	14.42	122	eP		Pn	14 10 56.1	-0.9	
	comp=N,6.7nm,0.2s								
KKN	Kakani	14.43	121	eP		Pn	14 10 56.0	-1.1	
	comp=N,16nm,0.6s								
KKN	Kakani	14.43	121	eP		Pn	14 10 56.0	-1.1	
KKN					pmax	pmax			
	comp=Z,16nm,0.6s								
PKI	Pulchoki	14.66	121	eP		Pn	14 10 58.9	-1.1	
	comp=Z,18nm,0.5s								
PKI	Pulchoki	14.66	121	eP		Pn	14 10 58.9	-1.1	
PKI					pmax	pmax			
	comp=Z,18nm,0.5s								
GUN	Gumba	14.78	119	eP		Pn	14 11 01.2	-0.3	
	comp=Z,10nm,0.3s								
JIRN	Jiri	15.15	119	eP		Pn	14 11 05.7	-0.5	
	comp=Z,18nm,0.3s								
AB31	Akbulak array	15.58	331	⇑	Pn	Pn	14 11 08.3	-3.3	
	comp=Z,1.0nm,0.3s,baz=144,slow=14,SNR=80								
AB31				⇓	Sn	Sn	14 13 46.9	-17	
	comp=Z,1.7nm,0.5s,baz=153,slow=20,SNR=7.2								
VOSK	Vostochnaya	16.65	359	⇑	Pn	Pn	14 11 23.0	-1.7	
	comp=Z,2.6nm,1.1s								
ZRNK	Zerenda	16.95	355	eP		Pn	14 11 27.0	-1.5	
ZRNK					pmax	pmax			
	comp=Z,2.0nm,0.5s								
ZRNK	Zerenda	16.95	355	eP		Pn	14 11 27.0	-1.5	
	comp=Z,1.6nm,0.5s								
BVA0	Borovoye Array	16.96	358	⇓	Pn	Pn	14 11 28.1	-0.5	
	comp=Z,0.1nm,0.4s,baz=154,slow=11,SNR=9.7								
BVAR	Borovoye Array	16.96	358	P		Pn	14 11 27.8	-0.8	
	comp=Z,0.8nm,0.3s,baz=155,slow=10,SNR=9.5								
BVAR	Borovoye Array	16.96	358	P		Pn	14 11 27.8	-0.8	
BVAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
BRVK	Borovoye	17.00	358	eP		Pn	14 11 30.3	+1.3	
BRVK					pmax	pmax			
	comp=Z,2.0nm,0.7s								
BRVK	Borovoye	17.00	358	eP		Pn	14 11 30.3	+1.2	
	comp=Z,2.2nm,0.7s								
AKTK	Aktyubinsk	17.28	330	P		Pn	14 11 31.6	-0.8	
AKTO	Aktyubinsk	17.28	330	⇑	Pn	Pn	14 11 30.9	-1.5	
	comp=Z,0.1nm,0.6s								
AKTO				⇑	Sn	Sn	14 14 29.5	-15	
AKTO	Aktyubinsk	17.28	330	P		Pn	14 11 31.6	-0.8	
	comp=Z,0.7nm,0.3s,baz=148,slow=6.6,SNR=13								
AKTO	Aktyubinsk	17.28	330	P		Pn	14 11 31.6	-0.9	
AKTO					pmax	pmax			
	comp=Z,1.0nm,0.3s								
CHKZ	Chkalovo	17.61	359	⇑	Pn	Pn	14 11 35.7	-0.8	
	comp=Z,1.1nm,0.6s								
CHKZ	Chkalovo	17.61	359	eP		Pn	14 11 34.8	-1.6	
CHKZ					pmax	pmax			
	comp=Z,2.0nm,0.4s								
CHKZ	Chkalovo	17.61	359	eP		Pn	14 11 34.8	-1.6	
	comp=Z,1.7nm,0.4s								
ZAL	Zalesovo	20.18	24	P		P	14 12 04.7	+0.9	
	comp=Z,8nm,0.3s,baz=259,slow=7.0,SNR=15								
ZAL	Zalesovo	20.18	24	P		P	14 12 04.7	+0.9	
ZAL					pmax	pmax			
	comp=Z,6.0nm,0.4s								
ARU	Arti	22.12	341	eP		P	14 12 25.8	+1.3	
ARU					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb3.7								
ARU	Arti	22.12	341	eP		P	14 12 25.8	+1.3	
	comp=Z,3.3nm,0.8s,mb3.7								
SONM	Songino Array	28.36	55	P		P	14 13 24.7	+3.1	
	comp=Z,0.4nm,0.7s,mb3.1,baz=256,slow=9.1,SNR=3.6								
FINES	FINESS Array B	37.98	326	P		P	14 14 46.0	+0.9	
	comp=Z,0.5nm,0.3s,mb3.9,baz=353,slow=36,SNR=4.7								
FINES	FINESS Array B	37.98	326	P		P	14 14 46.0	+1.0	
FINES					pmax	pmax			
	comp=Z,1.0nm,0.3s								
ARCES	ARCESS Array B	41.64	338	P		P	14 15 16.5	+1.2	
	comp=Z,1.7nm,0.6s,mb4.0,baz=111,slow=9.2,SNR=10.0								
ARCES	ARCESS Array B	41.64	338	P		P	14 15 16.5	+1.2	
ARCES					pmax	pmax			
	comp=Z,2.0nm,0.6s								
NOA	NORSAR Array B	44.88	323	P		P	14 15 41.2	-0.1	
	comp=Z,0.7nm,0.9s,mb3.4,baz=104,slow=7.3,SNR=3.4								
CGMA	Guelma	50.66	291	P		P	14 16 16.0	-10	
ABSA	Djebel Ababsia	50.67	290	P		P	14 16 19.0	-6.9	
TORD	Torodi Ar. Bea	65.97	269	P		P	14 18 11.8	-0.6	
	comp=Z,1.5nm,0.7s,mb4.0,baz=45,slow=4.6,SNR=14								
BOSA	Boshof	77.59	220	P		P	14 19 22.1	+0.3	
	comp=Z,3.2nm,0.8s,mb4.1,baz=358,slow=8.0,SNR=3.9								
BOSA	Boshof	77.59	220	P		P	14 19 22.1	+0.3	
BOSA					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.1								
WRA	Warramunga Arr	81.54	122	P		P	14 19 45.5	+2.3	
	comp=Z,0.3nm,0.5s,mb3.4,baz=324,slow=4.9,SNR=6.9								
ASAR	Alice Springs	83.79	125	P		P	14 19 57.1	+2.2	
	comp=Z,0.2nm,0.7s,mb3.0,baz=310,slow=4.7,SNR=4.8								

*ISCJB **22** 14:14:32.9±0.4, 3922S×004×17471E×007, h222km±4km, mb3.1/3, Error ellipse: s-maj=8.6km s-min=5.3km az=41.9*
*NEIC **22** 14:14:34.4, 39.16S×17471E, h219km, MG4.4(WEL), After WEL.*
*IDC **22** 14:14:34.6±28.0, 3882S×17475E, h227km±162km, mb3.0/3, mb1 3.2/3, mb1mx3.1/12, mbtmp3.6/3, Error ellipse: s-maj=443.9km s-min=27.6km az=162.0*
*WEL **22** 14:14:35.4±0.3, 3921S×17475E, h211km±2km, ML4.3/22, Error ellipse: s-maj=2.1km s-min=1.9km az=90.0*

ISC 22 14:14:33.8±0.4, 3923S×004×17472E×006, h218km±3km, n103, d092/125, mb3.1/3, 51C-27D, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.11	16	⇑P	Pn	14 15 02.1	0.0
VRZ				S	S	14 15 23.4	-0.8
VRZ	Vera Road	0.11	16	⇑PN	Pn	14 15 02.1	0.0
VRZ				SN	S	14 15 23.4	-0.8
RAEZ	Rainy Point	0.26	257	⇑P	Pn	14 15 02.9	+0.6
RAEZ	Rainy Point	0.26	257	⇑PN	Pn	14 15 02.9	+0.6
NEZ	North Egmont	0.48	265	⇓P	Pn	14 15 03.8	+0.9
NEZ	North Egmont	0.48	265	⇓PN	Pn	14 15 03.8	+0.9
PKVZ	Pokaka	0.49	97	⇑PN	Pn	14 15 03.5	+0.6
PKVZ				SN	S	14 15 25.4	-0.2
WAZ	Wanganui	0.56	158	⇑P	Pn	14 15 04.4	+1.2
WAZ	Wanganui	0.56	158	⇑PN	Pn	14 15 04.4	+1.3
WAZ				SN	S	14 15 26.3	+0.2
PKE	Pukeiti	0.57	274	⇑PN	Pn	14 15 03.7	+0.5
TWVZ	Taurewa	0.58	74	⇑PN	Pn	14 15 03.5	+0.3
TWVZ				SN	S	14 15 25.7	-0.5
MTVZ	Mangateitei	0.60	105	⇑PN	Pn	14 15 04.1	+0.8
NRZ	Ngariki Road	0.62	260	⇓P	Pn	14 15 04.1	+0.7
NRZ	Ngariki Road	0.62	260	⇓PN	Pn	14 15 04.1	+0.8
WPVZ	Whakapapa	0.64	88	⇑P	Pn	14 15 04.2	+0.7
WPVZ	Whakapapa	0.64	88	⇑PN	Pn	14 15 04.2	+0.7
FWVZ	Far West T-bar	0.65	92	⇓P	Pn	14 15 04.3	+0.8
FWVZ	Far West T-bar	0.65	92	⇓PN	Pn	14 15 04.3	+0.8
FWVZ				SN	S	14 15 25.4	-1.3
TRVZ	Turoa	0.65	96	⇑PN	Pn	14 15 04.4	+0.9
TRVZ				SN	S	14 15 26.4	-0.3
DRZ	Dome Shelter	0.66	94	P	Pn	14 15 04.4	+0.8
DRZ	Dome Shelter	0.66	94	PN	Pn	14 15 04.4	+0.9
NWEZ	Newall Road	0.66	266	⇑P	Pn	14 15 04.3	+0.7
NWEZ	Newall Road	0.66	266	⇑PN	Pn	14 15 04.3	+0.8
WTVZ	West Tongariro	0.69	81	⇑P	Pn	14 15 04.3	+0.6
WTVZ	West Tongariro	0.69	81	⇑PN	Pn	14 15 04.3	+0.6
WTVZ				SN	S	14 15 26.1	-0.9
NGZ	Ngauruhoe	0.69	86	⇑P	Pn	14 15 04.3	+0.6
NGZ	Ngauruhoe	0.69	86	⇑PN	Pn	14 15 04.3	+0.6
NGZ				SN	S	14 15 26.9	-0.1
WNVZ	Wahianoa	0.69	98	⇑P	Pn	14 15 04.7	+1.0
WNVZ	Wahianoa	0.69	98	⇑PN	Pn	14 15 04.7	+1.0
HIZ	Hauiti	0.72	9	⇓P	Pn	14 15 03.5	-0.4
HIZ				S	S	14 15 26.2	-1.1
HIZ	Hauiti	0.72	9	⇑PN	Pn	14 15 03.5	-0.4
HIZ				SN	S	14 15 26.2	-1.2
TUVZ	Tukino	0.73	93	⇑P	Pn	14 15 04.8	+0.9
TUVZ	Tukino	0.73	93	⇑PN	Pn	14 15 04.8	+1.0
KRVZ	Karewarewa	0.73	80	⇑PN	Pn	14 15 04.5	+0.6
KRVZ				SN	S	14 15 26.7	-0.6
OTVZ	Oturere	0.74	85	⇓PN	Pn	14 15 04.6	+0.7
MOVZ	Moawhango	0.82	103	⇑P	Pn	14 15 04.8	+0.5
MOVZ	Moawhango	0.82	103	⇑PN	Pn	14 15 04.8	+0.5
MOVZ				SN	S	14 15 26.5	-1.7
TSZ	Takapari Road	1.27	131	⇓P	Pn	14 15 08.4	+1.2
TSZ	Takapari Road	1.27	131	⇓PN	Pn	14 15 08.4	+1.2
TSZ				SN	S	14 15 32.9	-0.4
BKZ	Black Stump Fm	1.38	88	⇑eP	Pn	14 15 08.2	+0.1
BKZ	Black Stump Fm	1.38	88	⇓eP	Pn	14 15 08.2	+0.1
BKZ				SN	S	14 15 32.7	-2.2
MRZ	Mangatainoka R	1.57	155	⇓P	Pn	14 15 10.6	+0.9
MRZ	Mangatainoka R	1.57	155	⇓PN	Pn	14 15 10.6	+0.9
MRZ				SN	S	14 15 36.7	-1.1
KIW	Kapiti Island	1.63	175	⇑P	Pn	14 15 11.2	+1.0
KIW	Kapiti Island	1.63	175	⇑PN	Pn	14 15 11.2	+1.0
KIW				SN	S	14 15 38.2	-0.5
DUWZ	D'Urville Isla	1.68	201	⇑PN	Pn	14 15 11.5	+0.9
DUWZ				SN	S	14 15 39.8	+0.3
TIWZ	Tintock	1.79	150	⇓PN	Pn	14 15 12.5	+0.9
PXZ	Pawanui	1.84	116	⇓PN	Pn	14 15 13.0	+0.9
PXZ				SN	S	14 15 41.6	-0.4
BFZ	Birch Farm	1.86	141	⇑P	Pn	14 15 13.1	+0.8
BFZ	Birch Farm	1.86	141	⇓PN	Pn	14 15 13.1	+0.8
BFZ				SN	S	14 15 41.7	-0.8
CAW	Cannon Point	1.89	172	⇑P	Pn	14 15 13.5	+0.9
CAW	Cannon Point	1.89	172	⇑PN	Pn	14 15 13.5	+1.0
CAW				SN	S	14 15 42.7	-0.3
MRW	Makara Radio	2.00	180	⇑P	Pn	14 15 14.4	+0.8
MRW	Makara Radio	2.00	180	⇑PN	Pn	14 15 14.4	+0.9
MRW				SN	S	14 15 43.9	-0.8
TCW	Tory Channel	2.01	190	⇑P	Pn	14 15 14.7	+1.0
TCW	Tory Channel	2.01	190	⇑PN	Pn	14 15 14.7	+1.1
MTW	Mount Morrison	2.02	163	⇑P	Pn	14 15 14.6	+0.8
MTW	Mount Morrison	2.02	163	⇑PN	Pn	14 15 14.6	+0.8
WEL	Wellington	2.05	179	P	Pn	14 15 14.9	+0.8
WEL	Wellington	2.05	179	PN	Pn	14 15 14.9	+0.8
SNZO	South Karori	2.08	180	⇑P	Pn	14 15 15.0	+0.6
SNZO	South Karori	2.08	180	⇑PN	Pn	14 15 15.0	+0.7
SNZO				SN	S	14 15 45.2	-1.0
URZ	Urewera	2.11	63	S	S	14 15 42.0	-4.7
URZ	Urewera	2.11	63	⇓P	Pn	14 15 13.2	-1.5
URZ	Urewera	2.11	63	⇓PN	Pn	14 15 13.2	-1.5
BHW	Baring Head	2.18	177	P	Pn	14 15 15.9	+0.5
PAWZ	Paruwai Farm	2.21	166	⇓P	Pn	14 15 16.5	+0.7
PAWZ	Paruwai Farm	2.21	166	⇓PN	Pn	14 15 16.5	+0.7
MSWZ	Moikau Station	2.22	170	⇓PN	Pn	14 15 16.5	+0.7
NNZ	Nelson	2.23	207	⇑P	Pn	14 15 16.4	+0.4
NNZ	Nelson	2.23	207	⇑PN	Pn	14 15 16.4	+0.5
TUWZ	Tuamarina	2.27	195	⇑PN	Pn	14 15 17.0	+0.6
TRWZ	Traveller	2.29	161	PN	Pn	14 15 17.3	+0.8
KNZ	Kokohu	2.31	86	⇓P	Pn	14 15 16.6	-0.1
KNZ	Kokohu	2.31	86	⇓PN	Pn	14 15 16.6	-0.1
QRZ	Quartz Range	2.31	226	⇓P	Pn	14 15 16.4	-0.4
QRZ	Quartz Range	2.31	226	⇑PN	Pn	14 15 16.4	-0.4
MWZ	Matawai	2.37	69	⇓P	Pn	14 15 16.3	-1.1
MWZ	Matawai	2.37	69	⇓PN	Pn	14 15 16.3	-1.1
BSWZ	Blackbirch Sta	2.56	194	P	Pn	14 15 20.5	+1.1
THZ	Tophouse	2.88	208	⇑eP	Pn	14 15 23.0	0.0
THZ	Tophouse	2.88	208	⇑ePN	Pn	14 15 23.0	0.0
MXZ	Matakaoa Point	3.27	61	eP	Pn	14 15 26.1	-1.4
KHZ	Kahutara	3.31	195	⇓P	Pn	14 15 28.0	+0.1
KHZ	Kahutara	3.31	195	⇓PN	Pn	14 15 28.0	+0.1
DSZ	Denniston Nort	3.35	221	⇑eP	Pn	14 15 27.8	-0.6
DSZ	Denniston Nort	3.35	221	⇑ePN	Pn	14 15 27.8	-0.7
LTZ	Lake Taylor	4.00	207	eP	Pn	14 15 35.6	-0.6
LTZ	Lake Taylor	4.00	207	ePN	Pn	14 15 35.6	-0.6
CRLZ	Canterbury Las	4.62	199	eP	Pn	14 15 42.4	-1.4
MQZ	McQueen's Vall	4.73	198	P	Pn	14 15 43.7	-1.5
RPZ	Rata Peaks	5.26	210	S	S	14 16 49.5	-4.2
RPZ	Rata Peaks	5.26	210	eP	Pn	14 15 50.4	-1.4
FOZ	Fox Glacier	5.75	220	eP	Pn	14 15 54.8	-3.2
LBZ	Lake Benmore	6.16	212	eP	Pn	14 16 01.2	-2.1
ODZ	Otahua Downs	6.55	206	eP	Pn	14 16 07.1	-1.2
JCZ	Jackson Bay	6.58	221	eP	Pn	14 16 05.9	-2.8
RAO	Raoul Island	11.67	34	P	Pn	14 17 10.2	-3.7
	146nm,0.3s,baz=230,slow=23,SNR=4.7						
ASAR	Alice Springs	37.78	282	P		P	14 21 28.6	-0.3	
	0.1nm,0.3s,mb2.8,baz=124,slow=7.9,SNR=5.0								
WB2	Warramunga Arr	39.62	287	eP		P	14 21 43.6	-0.5	
WRA	Warramunga Arr	39.63	287	P		P	14 21 43.6	-0.6	
	0.3nm,0.4s,mb3.1,baz=125,slow=8.4,SNR=12								
FITZ	Fitzroy Crossi	47.28	282	P		P	14 22 45.1	-0.1	
	3.1nm,1.2s,mb3.5,baz=108,slow=9.6,SNR=2.8								
ARCES	ARCESS Array B	145.52	341	PKPbc		PKPbc	14 33 43.0	-3.3	
	1.9nm,0.7s,baz=57,slow=1.7,SNR=10								

*BJI **22** 14:16:28.6, 672N×9335E, h30km, mB4.5, mb4.6, Ms3.8, Msz3.5*
*IDC **22** 14:16:32.9±0.5, 760N×9401E, h0km, mb4.2/17, mb1 4.3/17, mb1mx4.1/24, mbtmp4.1/17, MS3.1/1, Ms1 3.1/1, ms1mx2.3/23, Error ellipse: s-maj=25.4km s-min=13.3km az=58.0*
*ISCJB **22** 14:16:35.6±0.5, 740N±006×9380E±006, h33km, mb4.4/33, MS3.3/3, Error ellipse: s-maj=11.0km s-min=6.4km az=87.6*
*MOS **22** 14:16:35.9±1.2, 752N×9384E, h33km, mb5.0/7, Error ellipse: s-maj=18.8km s-min=8.5km az=111.4*
*NEIC **22** 14:16:37.4±0.4, 748N×9384E, h30km, mb4.6/9, Error ellipse: s-maj=14.8km s-min=6.7km az=52.0*

ISC 22 14:16:36.9±1.9, 734N±005×9373E±005, h30km±13km, h34km±1.1km: pP-P, n65, σ1°03/66, mb4.3/33, MS3.3/3, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	6.84	91	P	Pn	14 18 16.0	+0.9
PSI	Prapat	6.87	131	Pn	Pn	14 18 20.2	+4.7
	0.7nm,0.3s,baz=171,slow=13,SNR=5.3						
PSI				LR	LR	14 21 05.0	
	comp=Z,130nm,19.0s,baz=303,slow=39						
PSI	Prapat	6.87	131	Pn	Pn	14 18 20.2	+4.7
PSI				LR	LR	14 21 05.0	
KULM	Kulim	7.18	106	eP	Pn	14 18 18.6	-1.2
NNT	Nongplab	7.89	48	P	Pn	14 18 28.0	-1.5
CHTO	Chiang Mai	12.48	23	eP	Pn	14 19 33.5	+1.1
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHTO	Chiang Mai	12.48	23	eP	Pn	14 19 33.5	+1.1
	comp=Z,7.1nm,1.0s						
KSM	Kuching	17.53	109	P	Pn	14 20 39.8	+0.9
QIZ	Qiongzhong	19.50	52	P	Pn	14 21 01.8	-1.1
QIZ				S	Sn	14 24 40.8	-0.1
QIZ				AMB	AMB		
	comp=Z,9.0nm,1.6s						
KMI	Kunming	19.67	25	P	Pn	14 21 07.0	+2.1
KMI				AP	pP	14 21 14.9	+3.6
KMI				XP	sP	14 21 19.8	+4.6
KMI				PP		14 21 25.6	
KMI				S	Sn	14 24 45.1	+0.2
KMI				XS	sS	14 24 56.1	-0.2
KMI				AMB	AMB		
	comp=Z,3.0nm,1.0s						
KMI				AMB	AMB		
	comp=Z,21nm,3.9s						
KMI				LR	LR		
	comp=N,97nm,13.2s						
KMI				LR	LR		
	comp=E,118nm,17.6s						
KMI				LR	LR		
	comp=Z,86nm,11.7s						
JIRN	Jiri	21.43	341	eP	P	14 21 23.7	+1.3
	comp=Z,49nm,1.1s,mb4.7						
PKI	Pulchoki	21.61	340	eP	P	14 21 24.9	+0.6
	comp=Z,13nm,0.5s,mb4.6						
PKI	Pulchoki	21.61	340	eP	P	14 21 24.9	+0.6
PKI				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.6						
DMN	Daman	21.75	339	eP	P	14 21 26.8	+1.0
GUN	Gumba	21.76	341	eP	P	14 21 27.2	+1.2
KKN	Kakani	21.85	340	eP	P	14 21 27.5	+0.5
	comp=Z,28nm,0.9s,mb4.7						
KKN	Kakani	21.85	340	eP	P	14 21 27.5	+0.5
KKN				pmax	pmax		
	comp=Z,28nm,0.9s,mb4.7						
GKN	Gorkha	22.28	338	eP	P	14 21 31.0	-0.5
KOLN	Koldanda	22.47	336	eP	P	14 21 33.6	+0.1
	comp=Z,73nm,1.2s,mb5.0						
CD2	Chengdu	25.26	21	eP	P	14 21 59.0	-1.3
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
GTA	Gaotai	32.39	9	eP	P	14 23 03.5	-0.4
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.4						
NJ2	Nanjing	33.94	40	eP	P	14 23 18.8	+1.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
WMQ	Urumqi	36.72	353	eP	P	14 23 40.0	-1.2
WMQ				AP	pP	14 23 50.0	0.0
WMQ				XP	sP	14 23 54.0	+0.3
WMQ				PP	PP	14 25 06.0	+0.9
WMQ				S	S	14 29 21.0	-1.9
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,27nm,4.0s						
WMQ				LR	LR		
	comp=N,18nm,12.0s,MS3.5						
WMQ				LR	LR		
	comp=E,46nm,12.0s,MS3.5						
WMQ				LR	LR		
	comp=Z,15nm,12.0s,MS3.0						
HHC	Hu-ho-hao-te	36.96	23	eP	P	14 23 44.9	+1.6
HHC				AP	pP	14 23 54.6	+2.4
HHC				XP	sP	14 23 58.6	+2.8
HHC				PP	PP	14 25 12.4	+4.6
HHC				PCP	PcP	14 26 04.8	+0.7
HHC				S	S	14 29 29.3	+2.6
HHC				XS	sS	14 29 45.0	+3.8
HHC				SCP	ScP	14 29 48.6	-0.3
HHC				PCS	PcS	14 29 52.1	-0.2
HHC				SS	SS	14 32 00.6	-8.4
HHC				SCS	ScS	14 33 54.5	-1.6
HHC				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.6						
HHC				AMB	AMB		
	comp=Z,51nm,6.3s						
HHC				LR	LR		
	comp=N,56nm,18.0s,MS3.7						
HHC				LR	LR		
	comp=E,83nm,17.1s,MS3.7						
HHC				LR	LR		
	comp=Z,61nm,16.1s,MS3.5						
FITZ	Fitzroy Crossi	40.39	129	P	P	14 24 11.8	-0.4
	comp=Z,2.0nm,0.9s,mb3.8,baz=105,slow=16,SNR=5.7						
FITZ				PcP	PcP	14 26 16.4	+1.6
	comp=Z,1.8nm,0.9s,baz=333,slow=6.8,SNR=4.6						
MKAR	Makanchi Array	40.51	348	P	P	14 24 12.3	-0.8
	comp=Z,1.0nm,0.7s,mb3.6,baz=172,slow=7.2,SNR=8.8						
MKAR				PcP	PcP	14 26 16.3	+1.1
	comp=Z,0.5nm,0.6s,baz=211,slow=1.4,SNR=3.7						
MKAR	Makanchi Array	40.51	348	P	P	14 24 12.3	-0.8
MKAR				PcP	PcP	14 26 16.3	+1.1
SONM	Songino Array	41.77	13	P	P	14 24 22.3	-1.1
	comp=Z,2.1nm,0.8s,mb3.8,baz=195,slow=8.6,SNR=18						
SONM				PcP	PcP	14 26 20.4	+1.1
	comp=Z,0.8nm,0.6s,baz=196,slow=3.2,SNR=5.9						
ULN	Ulaanbaatar	41.94	13	eP	P	14 24 23.4	-1.5
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ULN

LPG					pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.7								
LPG	**La Plagne**	**82.70**	**315**	*eP*	**P**		**14 28 58.8**	**+1.2**	
	comp=Z,4.6nm,0.7s,mb4.6								
TORD	**Torodi Ar. Bea**	**90.32**	**283**	P	**P**		**14 29 38.2**	**+3.3**	
	comp=Z,2.0nm,1.0s,mb4.4,baz=87,slow=5.0,SNR=7.6								
ESDC	**Sonseca Array**	**91.24**	**310**	P	**P**		**14 29 40.9**	**+1.7**	
	comp=Z,0.9nm,0.5s,mb4.4,baz=50,slow=5.0,SNR=4.6								
VNDA	**Vanda**	**92.50**	**168**	P	**P**		**14 29 45.8**	**+0.7**	
	comp=Z,0.3nm,0.6s,mb3.8,baz=90,slow=3.0,SNR=3.9								
PDAR	**Pinedale Array**	**125.81**	**21**	PKP	PKPdf		14 35 36.0	+0.4	
	comp=Z,0.5nm,0.7s,baz=4.6,slow=3.7,SNR=4.7								
CPUP	**Villa Florida**	**146.61**	**232**	PKPbc	PKPbc		14 36 18.3	+2.8	
	comp=Z,1.1nm,0.5s,baz=85,slow=5.0,SNR=5.8								
CPUP	**Villa Florida**	**146.61**	**232**	PKPbc	PKPbc		14 36 18.3	+2.8	
LPAZ	**La Paz**	**160.16**	**242**	PKPab	PKPab		14 37 17.3	+3.9	
	comp=Z,0.6nm,0.8s,baz=69,slow=8.6,SNR=3.9								

*ISCJB **22** 14:25:16.4±1.1, 187S±02×1783W±02, h650km±27km, mb3.8/8, Error ellipse: s-maj=31.3km s-min=20.7km az=47.4*
*IDC **22** 14:25:16.1±2.6, 1871S×17839W, h613km±41km, mb3.1/4, mb1 3.3/6, mb1mx3.1/16, mbtmp4.2/6, Error ellipse: s-maj=52.5km s-min=22.6km az=38.0*
*NEIC **22** 14:25:16.6±1.1, 1873S×17850W, h612km±32km, mb4.2/6, Error ellipse: s-maj=31.7km s-min=14.9km az=218.0*

ISC 22 14:25:17.2±1.2, 187S±02×1783W±02, h631km±34km, n16, σ0§67/18, mb3.9/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.89**	**54**	P	**P**	**14 27 16.9**	**+0.5**
DZM	**Mont Dzumac**	**14.68**	**254**	P	**P**	**14 28 22.2**	**+1.2**
	0.6nm,0.3s,baz=45,slow=15,SNR=8.8						
URZ	**Urewera**	**19.88**	**191**	P	**P**	**14 29 07.5**	**-0.9**
	1.0nm,0.3s,baz=45,slow=2.9,SNR=7.5						
CTA	**Charters Tower**	**33.42**	**262**	*eP*	**P**	**14 31 05.8**	**-0.2**
	2.9nm,0.4s,mb4.3						
CTAO	**Charters Tower**	**33.42**	**262**	*eP*	**P**	**14 31 05.8**	**-0.2**
	4.1nm,0.6s,mb4.2						
WB2	**Warramunga Arr**	**44.57**	**260**	*eP*	**P**	**14 32 34.8**	**-0.4**
WRAB	**Tennant Creek**	**44.58**	**260**	*eP*	**P**	**14 32 34.8**	**-0.4**
	6.2nm,0.4s,mb4.5						
WRA	**Warramunga Arr**	**44.59**	**260**	P	**P**	**14 32 34.9**	**-0.4**
	3.6nm,0.4s,mb4.2,baz=97,slow=7.2,SNR=180						
WRA				S	**S**	**14 38 27.3**	**+0.4**
	0.4nm,0.9s,baz=99,slow=12,SNR=3.3						
AS31	**Alice Springs**	**44.67**	**255**	*eP*	**P**	**14 32 36.0**	**+0.1**
ASAR	**Alice Springs**	**44.67**	**255**	P	**P**	**14 32 36.0**	**+0.1**
	6.4nm,0.8s,mb4.2,baz=89,slow=8.2,SNR=169						
ASAR				S	**S**	**14 38 29.9**	**+1.9**
	1.4nm,0.7s,baz=89,slow=16,SNR=17						
KAKA	**Kakadu**	**47.67**	**270**	*eP*	**P**	**14 32 57.4**	**-1.1**
	5.3nm,0.3s,mb4.5						
FITZ	**Fitzroy Crossi**	**52.99**	**261**	P	**P**	**14 33 36.6**	**-0.4**
	1.3nm,0.9s,mb3.2,baz=89,slow=6.7,SNR=8.0						
FITZ	**Fitzroy Crossi**	**52.99**	**261**	*eP*	**P**	**14 33 36.6**	**-0.4**
	4.5nm,1.4s,mb3.6						
SBA	**Scott Base**	**59.62**	**184**	*eP*	**P**	**14 34 23.0**	**+0.7**
	1.5nm,0.6s,mb3.4						
VNDA	**Vanda**	**59.65**	**185**	P	**P**	**14 34 22.6**	**+0.1**
	0.4nm,0.6s,mb2.9,baz=5.0,slow=5.3,SNR=6.8						
VNDA	**Vanda**	**59.65**	**185**	*eP*	**P**	**14 34 22.5**	**+0.1**
	0.5nm,0.6s,mb2.9						

*NIED **22** 15:07:00, 3340N×132.10E, h59km, Mw3.6 Best double couple: M○3.06000×10^14 NP1:ϕs196.00000°, δ86.00000°, λ-67.00000°. NP2:ϕs295.00000°, δ23.00000°, λ-170.00000°.*

JMA 22 15:07:32.7, 3343N×13208E, h54km±1km, M3.6, 2C-5D Broadband fault plane solution: P waves. NP1: ϕs281.00000°, δ18.00000°, λ157.00000°. **NP2:** ϕs33.00000°, δ83.00000°, λ74.00000°. **Principal axes:** T Plg49.0000°, Azm285.0000°; N Plg16.0000°, Azm35.0000°; P Plg36.0000°, Azm137.0000°; **Shikoku**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNA	**Nagahama**	**0.36**	**69**	⇓P	Pn	15 07 42.7	0.0
JNA				S	Sn	15 07 49.9	0.0
JUS	**Usuki**	**0.46**	**217**	P	Pn	15 07 43.7	0.0
JUS				S	Sn	15 07 51.8	+0.1
JKI	**Kunimi**	**0.47**	**295**	⇓P	Pn	15 07 43.9	0.0
JKI				S	Sn	15 07 52.1	+0.1
UWA2	**Uwa jima 2**	**0.50**	**115**	⇑P	Pn	15 07 44.1	-0.2
UWA2				S	Sn	15 07 52.9	+0.3
OIT2	**Oita 2**	**0.55**	**254**	⇓P	Pn	15 07 45.1	+0.4
OIT2				S	Sn	15 07 54.4	+1.0
JHM	**Kurahashi**	**0.80**	**28**	⇓P	Pn	15 07 48.0	+0.1
JTO	**Tosashimizu**	**0.83**	**133**	⇑P	Pn	15 07 48.1	-0.2
JTO				S	Sn	15 07 58.9	-0.8
JKU	**Kubokawa**	**0.83**	**98**	⇓P	Pn	15 07 48.1	-0.2
JKU				S	Sn	15 08 00.0	+0.3
JET	**Tanbara**	**0.88**	**66**	P	Pn	15 07 48.8	-0.1
JET				S	Sn	15 08 00.7	-0.1

*NIED **22** 15:14:00, 2020N×122.10E, h8km, Mw3.8 Best double couple: M○4.97000×10^14 NP1:ϕs132.00000°, δ63.00000°, λ81.00000°. NP2:ϕs332.00000°, δ29.00000°, λ107.00000°.*
*ISCJB **22** 15:14:38.3±0.8, 2014N±007×1218E±02, h10km, Error ellipse: s-maj=29.7km s-min=4.6km az=33.9*
*JMA **22** 15:14:38.9±0.3, 2017N×122.10E, h0km, M4.2*
*MAN **22** 15:14:41.5, 1984N×12156E, h4km, mb3.5, ML4.6*

ISC 22 15:14:39.1±0.7, 2008N±007×1218E±02, h10km, n11, σ1§05/19, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**2.27**	**194**	*eP*	**Pn**	**15 15 15.6**	**-1.0**
APYP				*eS*	**Sn**	**15 15 42.3**	**-2.3**
CVP	**Callao Caves**	**2.37**	**180**	*i P*	**Pn**	**15 15 20.0**	**+2.1**
ABRA	**Dolores**	**2.63**	**203**	*eP*	**Pn**	**15 15 21.6**	**0.0**
ABRA				*eS*	**Sn**	**15 15 50.0**	**-3.6**
PALP	**Palanan**	**3.06**	**169**	*eP*	**Pn**	**15 15 28.5**	**+1.0**
PALP				*eS*	**Sn**	**15 16 10.2**	**+6.1**
CAUP	**Cauayan**	**3.12**	**180**	*eP*	**Pn**	**15 15 37.5**	**+9.2**
HATJ	**Hateruma jima**	**4.37**	**25**	P	**Pn**	**15 15 45.9**	**+0.4**
HATJ				*eS*	**Sn**	**15 16 35.0**	**-1.5**
YOJ	**Yonaguni jima**	**4.50**	**14**	P	**Pn**	**15 15 48.3**	**+1.0**
YOJ				*eS*	**Sn**	**15 16 40.7**	**+1.0**
IRIF	**Iriomote-Funau**	**4.59**	**23**	P	**Pn**	**15 15 48.9**	**+0.3**
IRIF				*eS*	**Sn**	**15 16 41.7**	**-0.3**
JKRS	**Kuro-shima**	**4.61**	**26**	P	**Pn**	**15 15 49.4**	**+0.6**
JKRS				*eS*	**Sn**	**15 16 42.2**	**-0.3**
JIJ	**Ishigaki jima**	**4.78**	**27**	P	**Pn**	**15 15 51.3**	**+0.2**
JIJ				*eS*	**Sn**	**15 16 45.3**	**-1.3**
JTJ	**Tarama**	**5.27**	**30**	*eS*	**Sn**	**15 16 58.5**	**-0.2**

*ISCJB **22** 15:30:18.1±0.8, 1765N±002×9967W±003, h13km±5km, mb4.0/1, Error ellipse: s-maj=5.2km s-min=3.8km az=52.8*
*MEX **22** 15:30:20.0±1.4, 1760N×9962W, h11km±12km, MD4.1*
*NEIC **22** 15:30:21.6, 1772N×9981W, h20km, mb4.1/2, MD4.2(MEX), After MEX.*

ISC 22 15:30:18.2±0.5, 1766N±002×9969W±003, h10km±4km, n33, σ1§36/66, mb4.0/1, 2C, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MEIG	**Mezcala**	**0.27**	**15**	*eP*	**Pg**	**15 30 22.9**	**-0.7**
MEIG				*i S*	**Sg**	**15 30 27.3**	**0.0**
PLIG	**Platanillo**	**0.75**	**14**	*eP*	**Pg**	**15 30 31.9**	**-0.7**
PLIG				*i S*	**Sg**	**15 30 42.7**	**+0.3**
PLIG	**Platanillo**	**0.75**	**14**	*eP*	**Pg**	**15 30 31.6**	**-1.0**
PLIG				*i S*	**Sg**	**15 30 42.5**	**+0.1**
ACX	**Acapulco**	**0.82**	**195**	*i P*	**Pg**	**15 30 32.5**	**-1.4**
ACX				*i S*	**Sg**	**15 30 42.5**	**-2.1**
ACX	**Acapulco**	**0.82**	**195**	*i P*	**Pg**	**15 30 34.6**	**+0.7**
ACX				*i S*	**Sg**	**15 30 45.1**	**+0.5**
CAIG	**El Cayaco**	**0.82**	**222**	⇑*iP*	**Pg**	**15 30 34.1**	**+0.1**
CAIG				*i S*	**Sg**	**15 30 44.7**	**+0.1**
CAIG	**El Cayaco**	**0.82**	**222**	⇑*iP*	**Pg**	**15 30 34.1**	**+0.1**
CAIG				*i S*	**Sg**	**15 30 45.4**	**+0.7**
YAIG	**Yautepec**	**1.33**	**26**	*i P*	**Pn**	**15 30 42.1**	**-0.7**
YAIG				*i S*	**Sb**	**15 30 59.2**	**-1.2**
YAIG	**Yautepec**	**1.33**	**26**	*eP*	**Pn**	**15 30 42.0**	**-0.9**
YAIG				*i S*	**Sb**	**15 30 59.5**	**-0.9**
IIZ	**Mezontepec**	**1.58**	**16**	*i P*	**Pn**	**15 30 47.8**	**+1.6**
IIZ				*i S*	**Sn**	**15 31 06.7**	**0.0**
CIVM	**Cilcuayo**	**1.58**	**25**	*eP*	**Pn**	**15 30 47.7**	**+1.4**
CIVM				*i S*	**Sn**	**15 31 05.0**	**-1.8**
CIVM	**Cilcuayo**	**1.58**	**25**	*i P*	**Pn**	**15 30 47.9**	**+1.6**
CIVM				*i S*	**Sn**	**15 31 09.6**	**+2.8**
ZIIG	**Zihuatanejo**	**1.69**	**268**	*i P*	**Pn**	**15 30 47.5**	**-0.2**
ZIIG				*i S*	**Sn**	**15 31 08.5**	**-0.9**
PPM	**Popocatepetl**	**1.73**	**36**	*i P*	**Pn**	**15 30 48.2**	**-0.1**
PPM				*i P*		15 30 49.0	
PPM				*i S*	**Sn**	**15 31 08.4**	**-1.9**
PPM	**Popocatepetl**	**1.73**	**36**	*i P*	**Pn**	**15 30 49.9**	**+1.6**
PPM				*i S*	**Sn**	**15 31 12.1**	**+1.7**
UNM	**Universidad Na**	**1.73**	**16**	*i P*	**Pn**	**15 30 46.9**	**-1.4**
UNM				*i P*		15 30 47.1	
UNM				*i P*		15 30 49.4	
UNM				*i S*	**Sn**	**15 31 08.0**	**-2.4**
UNM				*i S*	**Sn**	**15 31 08.4**	**-2.0**
UNM				*i S*	**Sn**	**15 31 10.4**	**0.0**
UNM	**Universidad Na**	**1.73**	**16**	*i P*	**Pn**	**15 30 50.9**	**+2.6**
UNM				*i S*	**Sn**	**15 31 13.7**	**+3.3**
UTMO	**Huajuapan**	**1.81**	**84**	*i P*	**Pn**	**15 30 48.7**	**-0.7**
UTMO				*i S*	**Sn**	**15 31 07.6**	**-4.8**
RFVM	**Rio Frio**	**1.88**	**28**	*i P*	**Pn**	**15 30 49.3**	**-1.1**
RFVM				*i S*	**Sn**	**15 31 12.5**	**-1.7**
RFVM	**Rio Frio**	**1.88**	**28**	*i P*	**Pn**	**15 30 52.0**	**+1.6**
RFVM				*i S*	**Sn**	**15 31 16.9**	**+2.8**
PTVM	**Pico Tres Padr**	**2.00**	**16**	*eP*	**Pn**	**15 30 50.9**	**-1.1**
PTVM				*i S*	**Sn**	**15 31 14.7**	**-2.3**
PTVM	**Pico Tres Padr**	**2.00**	**16**	*eP*	**Pn**	**15 30 53.0**	**+1.1**
PTVM				*i S*	**Sn**	**15 31 20.7**	**+3.6**
TPIG	**Tehuac#an**	**2.34**	**71**	*eP*	**Pn**	**15 30 57.1**	**+0.3**
TPIG				*i S*	**Sn**	**15 31 20.5**	**-5.1**
MOIG	**Morelia**	**2.46**	**325**	*eP*	**Pn**	**15 31 00.2**	**+2.0**
MOIG				*i S*	**Sn**	**15 31 27.4**	**-0.9**
MOIG	**Morelia**	**2.46**	**325**	*eP*	**Pn**	**15 31 02.4**	**+4.2**
MOIG				*i S*	**Sn**	**15 31 27.9**	**-0.4**
VHO	**Vista Hermosa**	**2.89**	**101**	*eP*	**Pn**	**15 31 04.7**	**+0.5**
VHO				*i S*	**Sn**	**15 31 38.9**	**-0.1**
VHO	**Vista Hermosa**	**2.89**	**101**	*eP*	**Pn**	**15 31 06.7**	**+2.5**
VHO				*i S*	**Sn**	**15 31 40.9**	**+1.9**
OXX	**Oaxaca**	**2.90**	**101**	*i P*	**Pn**	**15 31 06.8**	**+2.5**
OXX				*i S*	**Sn**	**15 31 36.0**	**-3.2**
HUIG	**Huatulco**	**3.92**	**118**	*eP*	**Pn**	**15 31 16.6**	**-1.8**
HUIG				*i S*	**Sn**	**15 32 01.5**	**-2.9**
HUIG	**Huatulco**	**3.92**	**118**	*i P*	**Pn**	**15 31 29.2**	**+11**
HUIG				*i S*	**Sn**	**15 32 11.0**	**+6.6**
CMIG	**Matias Romero**	**4.63**	**96**	*eP*	**Pn**	**15 31 28.9**	**+0.7**
CMIG				*i S*	**Sn**	**15 32 21.4**	**-0.5**
WUAZ	**Wupatki**	**20.59**	**332**	*eP*	**P**	**15 35 00.7**	**+3.5**
	12nm,1.0s						
HWUT	**Hardware Ranch**	**25.95**	**339**	*eP*	**P**	**15 35 55.0**	**+4.3**
	4.6nm,1.0s,mb4.0						

*IDC **22** 15:34:36.5±2.2, 6.16N×12589E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, Error ellipse: s-maj=130.7km s-min=26.1km az=68.0*
*ISCJB **22** 15:34:43.8±1.7, 64N±01×1264E±02, h89km±23km, mb3.4/4, Error ellipse: s-maj=35.2km s-min=17.9km az=161.4*
*MAN **22** 15:35:09.5, 809N×12517E, h18km, mb3.0, ML4.4, MS3.3*

ISC 22 15:34:39.7±3.9, 601N±008×1260E±03, h11km±27km, n9, σ1§03/12, mb3.4/4, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**2.08**	**333**	*eP*	**Pn**	**15 35 16.1**	**+1.5**
BUKP				*eS*	**Sn**	**15 35 40.4**	**-0.1**
BUTP	**Butuan**	**2.96**	**352**	*eP*	**Pn**	**15 35 27.5**	**+0.8**
BUTP				*eS*	**Sn**	**15 36 02.9**	**+0.7**
SCPH	**Surigao**	**3.78**	**352**	*eP*	**Pn**	**15 35 37.9**	**-0.1**
SCPH				*eS*	**Sn**	**15 36 17.3**	**-5.1**
MSLP	**Maasin**	**4.25**	**344**	*eP*	**Pn**	**15 35 43.3**	**-1.1**
BESP	**Borongan**	**5.58**	**354**	*eP*	**Pn**	**15 36 01.7**	**-1.0**
FITZ	**Fitzroy Crossi**	**23.96**	**181**	P	**P**	**15 39 54.7**	**+0.7**
	0.8nm,0.4s,mb3.5,baz=20,slow=8.6,SNR=9.6						
WRA	**Warramunga Arr**	**27.06**	**163**	P	**P**	**15 40 22.8**	**+0.7**
	0.2nm,0.3s,mb3.1,baz=340,slow=11,SNR=11						
ASAR	**Alice Springs**	**30.48**	**166**	P	**P**	**15 40 51.9**	**-0.7**
	0.2nm,0.3s,mb3.3,baz=340,slow=7.2,SNR=11						
MKAR	**Makanchi Array**	**55.29**	**325**	P	**P**	**15 44 10.3**	**-2.8**
	0.6nm,0.6s,mb3.8,baz=115,slow=9.1,SNR=4.3						

IDC 22 15:56:30.7±5.6, 4788N×15372E, h90km±51km, mb3.3/3, mb1 3.4/5, mb1mx3.2/22, mbtmp3.6/5, ML3.2/2, MS3.2/1, Ms1 3.1/1, ms1mx2.4/37, Error ellipse: s-maj=43.0km s-min=37.0km az=142.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**8.60**	**248**	P	Pn	15 58 31.9	-0.5
	0.3nm,0.3s,baz=96,slow=16,SNR=5.1						
MJAR	**Matsushiro Arr**	**16.10**	**231**	P	Pn	16 00 12.5	+1.0
	0.2nm,0.3s,baz=22,slow=9.2,SNR=4.6						
ZAL	**Zalesovo**	**42.31**	**305**	LR	LR	16 24 04.1	
	comp=Z,30nm,21.6s,baz=134,slow=39						
MKAR	**Makanchi Array**	**46.80**	**297**	P	P	16 04 50.9	-0.3
	0.4nm,0.2s,baz=65,slow=8.1,SNR=6.2						
PDAR	**Pinedale Array**	**73.76**	**55**	P	P	16 06 53.1	+0.2
	0.3nm,0.7s,baz=293,slow=3.5,SNR=3.1						
ASAR	**Alice Springs**	**73.40**	**199**	P	P	16 07 52.7	-0.3
	0.3nm,0.8s,baz=19,slow=5.1,SNR=2.5						

*ISCJB **22** 15:56:57.1±3.5, 194S±04×1774W±03, h600km±33km, mb3.7/6, Error ellipse: s-maj=68.2km s-min=27.6km az=78.0*
*IDC **22** 15:56:58.3±3.1, 1955S×17739W, h594km±56km, mb3.0/5, mb1 3.1/7, mb1mx3.0/17, mbtmp4.1/7, Error ellipse: s-maj=70.5km s-min=31.4km az=61.0*
*NEIC **22** 15:57:02.7±4.0, 1982S×17793W, h600km, mb3.9/2, Error ellipse: s-maj=89.8km s-min=19.9km az=225.0*

ISC 22 15:56:57.9±3.6, 196S±04×1776W±04, h566km±42km, n13, σ0§67/14, mb3.7/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**15.17**	**258**	P	**P**	**16 00 09.9**	**+1.2**
	baz=94,slow=19						
URZ	**Urewera**	**19.21**	**193**	P	**P**	**16 00 44.9**	**-1.0**
	1.3nm,0.3s,baz=306,slow=5.8,SNR=11						
CTA	**Charters Tower**	**34.01**	**263**	P	**P**	**16 02 55.6**	**+0.3**
	1.5nm,0.5s,mb3.8,baz=96,slow=13,SNR=5.2						
CTAO	**Charters Tower**	**34.01**	**263**	*eP*	**P**	**16 02 55.3**	**0.0**
	1.6nm,0.6s,mb3.7						
STKA	**Stephens Creek**	**38.58**	**243**	P	**P**	**16 03 34.1**	**+1.2**
	2.1nm,1.1s,mb3.6,baz=86,slow=10,SNR=5.4						
STKA	**Stephens Creek**	**38.58**	**243**	*eP*	**P**	**16 03 33.5**	**+0.6**
WB2	**Warramunga Arr**	**45.14**	**261**	*eP*	**P**	**16 04 23.9**	**-0.5**
WRAB	**Tennant Creek**	**45.14**	**261**	*eP*	**P**	**16 04 23.9**	**-0.6**
	1.8nm,0.5s,mb3.9						
AS31	**Alice Springs**	**45.15**	**256**	*eP*	**P**	**16 04 24.2**	**-0.3**
ASAR	**Alice Springs**	**45.15**	**256**	P	**P**	**16 04 24.3**	**-0.2**
	1.1nm,0.4s,mb3.7,baz=84,slow=8.1,SNR=84						
ASAR				S	**S**	**16 10 23.1**	**-0.1**
	0.5nm,0.7s,baz=90,slow=16,SNR=5.9						
WRA	**Warramunga Arr**	**45.15**	**261**	P	**P**	**16 04 24.0**	**-0.6**
	1.0nm,0.4s,mb3.7,baz=97,slow=7.7,SNR=81						
FITZ	**Fitzroy Crossi**	**53.57**	**262**	P	**P**	**16 05 26.7**	**+0.2**
	1.6nm,0.8s,mb3.4,baz=172,slow=7.1,SNR=9.3						
VNDA	**Vanda**	**58.89**	**185**	*eP*	**P**	**16 06 03.9**	**+1.0**

*ISCJB **22** 16:01:16.7±1.8, 3680N±007×712E±02, h33km, Error ellipse: s-maj=25.9km s-min=7.2km az=146.4*
*NNC **22** 16:01:23.6±1.4, 3715N×7112E, h228km±17km, mb1.9, mpv2.9, Error ellipse: s-maj=14.8km s-min=8.7km az=18.0*

ISC 22 16:01:19.2±1.8, 3677N±007×712E±02, h35km, n5, σ0§55/8, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.73**	**138**	*eP*	**Pn**	**16 02 41.2**	**-0.4**
THN				*eS*	**Sn**	**16 03 46.1**	**0.0**
KK31	**Karatay Array**	**6.35**	**356**	⇑P	**Pn**	**16 02 50.6**	**+0.4**
	0.5nm,0.2s,baz=178,slow=12,SNR=30						
KK31				⇑S	**Sn**	**16 04 00.7**	**-0.7**
	5.4nm,0.5s,baz=198,slow=66,SNR=16						
TKM2	**Tokmak 2**	**7.03**	**28**	⇑P	**Pn**	**16 03 00.5**	**+0.9**
	0.2nm,0.4s						
TKM2				⇓S	**Sn**	**16 04 18.0**	**-0.2**
	1.4nm,0.9s						
AB31	**Akbulak array**	**14.91**	**330**	⇑P	**Pn**	**16 04 38.3**	**-9.1**
	0.4nm,0.6s,baz=138,slow=12,SNR=5.9						
AKTO	**Aktyubinsk**	**16.62**	**329**	⇓P	**Pn**	**16 04 58.8**	**-11**

*IPEC **22** 16:05:14.3±0.3, 5156N×1624E, h0km, ML2.2/4, Error ellipse: s-maj=1.9km s-min=1.5km az=41.0*
*ISCJB **22** 16:05:14.6±0.6, 5142N±003×1607E±003, h0km, Error ellipse: s-maj=4.4km s-min=2.5km az=27.1*
*NEIC **22** 16:05:15.0±0.6, 5156N×1614E, h5km, ML2.7(BRA), ML2.8(SZGRF), Error ellipse: s-maj=6.3km s-min=4.1km az=181.0*
*IDC **22** 16:05:16.7±1.1, 5145N×1600E, h0km, mb1 3.2/4, mb1mx3.1/20, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=16.2km s-min=9.2km az=124.0*
*PRU **22** 16:05:17.4, 5143N×1602E, h0km*
*WAR **22** 16:05:17, 5147N×1610E, ML2.6, Mining Induced*
*VIE **22** 16:05:18.3±0.7, 5127N×1614E, h0km, mb2.3/4, ML2.7/5, Error ellipse: s-maj=4.6km s-min=3.5km az=27.0 63 km WNW of Breslau Suspected Mining induced.*
*CSEM **22** 16:05:18.1±0.2, 5141N×1609E, h2km, ML3.1/11, Error ellipse: s-maj=4.0km s-min=2.4km az=5.0*

ISC 22 16:05:15.1±0.5, 5150N±003×1609E±003, h0km, n35, σ0§97/69, 3C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**169**	*i* Pgd	**Pg**	**16 05 28.5**	**+0.6**
KSP				*e*Sg	**Sg**	**16 05 37.2**	**+0.7**
KSP	**Ksiaz**	**0.67**	**169**	⇓*i*Pg	**Pg**	**16 05 28.5**	**+0.6**
KSP				*e*Sg	**Sg**	**16 05 37.0**	**+0.5**
UPC	**Upice**	**0.99**	**183**	*e*PG	**Pg**	**16 05 34.6**	**+0.5**
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*PG	**Pg**	**16 05 37.2**	**-0.1**
DPC				*e*SG	**Sg**	**16 05 52.0**	**-0.3**
	39nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*Pg	**Pg**	**16 05 37.3**	**0.0**
DPC				*e*Sg	**Sg**	**16 05 52.1**	**-0.2**
PVCC	**Panska Ves**	**1.37**	**225**	*e*Pg	**Pg**	**16 05 41.3**	**0.0**
PVCC				*e*Sg	**Sg**	**16 06 00.6**	**+1.6**
BRG	**Berggiesshubel**	**1.49**	**246**	Pg	**Pg**	**16 05 44.1**	**+0.4**
BRG				Sg	**Sg**	**16 06 04.2**	**+1.2**
BRG	**Berggiesshubel**	**1.49**	**246**	Pg	**Pg**	**16 05 44.2**	**+0.5**
BRG				Sg	**Sg**	**16 06 04.2**	**+1.2**
PRU	**Pruhonice**	**1.80**	**214**	*e*PN	**Pn**	**16 05 47.8**	**+0.4**
PRU				*e*PG	**Pg**	**16 05 48.8**	**-0.9**
PRU				*e*SG	**Sg**	**16 06 13.7**	**+0.6**
	23nm,0.4s						
CLL	**Collm**	**1.95**	**266**	*e*Pn	**Pn**	**16 05 49.0**	**-0.4**
CLL				*e*Pg	**Pg**	**16 05 51.0**	**-1.4**
CLL				*e*x	x	16 05 55.0	
CLL				*i* x	x	16 05 56.1	
CLL				*i* Sg	**Sg**	**16 06 17.4**	**-0.3**
	comp=Z,21nm,0.4s						
MORC	**Moravsky Berou**	**1.95**	**151**	*e*Pn	**Pn**	**16 05 49.2**	**-0.3**
MORC				*e*Sn	**Sn**	**16 06 16.6**	**+1.9**
MORC	**Moravsky Berou**	**1.95**	**151**	*e*Pn	**Pn**	**16 05 49.2**	**-0.3**
MORC				*e*Sg	**Sg**	**16 06 16.2**	**-1.7**
	comp=Z,18nm,0.3s						
MORC				*e*Sn	**Sn**	**16 06 16.6**	**+1.9**
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*PG	**Pg**	**16 05 55.4**	**-0.2**
OKC				*e*SG	**Sg**	**16 06 21.7**	**-1.3**
	comp=Z,21nm,0.5s						
VRAC	**Vranov**	**2.21**	**172**	Pn	**Pn**	**16 05 54.1**	**+1.0**
	comp=Z,1.6nm,0.3s,baz=337,slow=14,SNR=11						
VRAC				Lg		16 06 25.4	
	comp=Z,4.6nm,0.3s,baz=266,slow=24,SNR=7.9						
VRAC	**Vranov**	**2.21**	**172**	*e*Pn	**Pn**	**16 05 52.7**	**-0.4**
VRAC				*e*Sg	**Sg**	**16 06 25.4**	**-0.8**
	comp=Z,12nm,0.3s						
KRUC	**Moravsky**	**2.44**	**175**	*e*Pn	**Pn**	**16 05 56.4**	**+0.1**
KRUC				*e*Sg	**Sg**	**16 06 32.8**	**-0.9**
	comp=Z,9.4nm,0.4s						
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**16 05 59.7**	**+0.8**
NKC				*e*PG	**Pg**	**16 06 05.7**	**+0.1**
NKC				*e*SG	**Sg**	**16 06 38.9**	**-0.9**
	comp=Z,70nm,0.9s						
JAVC	**Velka Javorina**	**2.83**	**158**	*e*Pn	**Pn**	**16 06 02.0**	**+0.5**
JAVC				*e*Sg	**Sg**	**16 06 45.8**	**-0.2**
	comp=Z,9.1nm,0.6s						
KHC	**Kasperske Hory**	**2.86**	**215**	*e*PN	**Pn**	**16 06 02.3**	**+0.3**
KHC				*e*PG	**Pg**	**16 06 08.5**	**-1.5**
KHC				*e*SN	**Sn**	**16 06 36.2**	**-1.0**
KHC				*e*S

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.97**	**266**	P	P	16 17 26.5	+0.5
	2.2nm,0.5s,baz=84,slow=13,SNR=8.6						
STKA	**Stephens Creek**	**41.06**	**247**	P	P	16 17 51.4	-0.3
	2.0nm,0.9s,baz=102,slow=14,SNR=3.0						
ASAR	**Alice Springs**	**48.57**	**258**	P	P	16 18 51.9	+0.3
	0.3nm,0.6s,baz=92,slow=8.3,SNR=14						
WRA	**Warramunga Arr**	**48.94**	**263**	P	P	16 18 54.9	+0.5
	0.8nm,0.5s,baz=102,slow=8.1,SNR=18						

FUNV 22 16:13:37.3, 678N×7331W, h139km, MW3.5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.47**	**42**	*e*P	Pn	16 14 05.2	-0.4
CAPV				*e*S	Sn	16 14 25.5	-1.7
VIGV	**El Vigia**	**2.81**	**43**	*e*P	Pn	16 14 21.1	-0.7
VIGV				*e*S	Sn	16 14 53.0	-3.1
SOCV	**Socops**	**2.86**	**58**	*e*P	Pn	16 14 21.8	-0.5
SOCV				*e*S	Sn	16 14 54.5	-2.6
VIRV	**Villa del Rosa**	**3.81**	**14**	*e*P	Pn	16 14 32.6	-2.1
VIRV				*e*S	Sn	16 15 15.2	-4.0
QARV	**Quebrada Arrib**	**4.38**	**39**	*e*P	Pn	16 14 41.1	-1.1
QARV				*e*S	Sn	16 15 28.0	-4.8
CURV	**Curarigua**	**4.62**	**46**	*e*P	Pn	16 14 43.8	-1.6
CURV				*e*S	Sn	16 15 32.7	-5.6
DABV	**Dabajuro**	**4.89**	**33**	*e*P	Pn	16 14 47.7	-1.4
BAUV	**El Baul**	**5.65**	**67**	*e*P	Pn	16 14 57.0	-2.2
BAUV				*e*S	Sn	16 15 56.0	-6.9
CAOV	**Caicara del Or**	**6.96**	**85**	*e*P	Pn	16 15 14.2	-2.6

NIED ***22*** *16:51:00, 4730N×15470E, h26km, Mw5.2 Best double couple: M₀6.98000×10¹⁶ NP1:φ=61.00000°, δ73.00000°, λ117.00000°. NP2:φ=181.00000°, δ31.00000°, λ34.00000°.*

MOS ***22*** *16:51:03.6±1.0, 4764N×15424E, h12km, mb5.5/89, MS4.9/29, Error ellipse: s-maj=8.3km s-min=7.1km az=79.6*

BJI ***22*** *16:51:03.0, 4783N×15446E, h15km, mB5.0, mb5.2, Ms4.9, Msz4.8*

ISCJB ***22*** *16:51:04.4±0.1, 4750N±003×15434E±002, h15km, mb5.2/260, MS4.7/69, Error ellipse: s-maj=3.9km s-min=1.8km az=147.1*

SKHL ***22*** *16:51:04.3±1.5, 4750N×15470E, h34km±2km, mb5.6/6, mbh5.8/4, mbv5.8/4, ms5.0/6, msh5.6/2*

HRVD ***22*** *16:51:06.7±0.2, 4749N×15458E, h22km, MW5.2/79, Centroid moment Tensor Solution. LP body waves: s60,c109; Mantle waves: s79,c150; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 5.44±.17; Mθθ -2.17±.12; Mφφ -3.27±.11; Mrθ 3.09±.21; Mrφ -3.16±.07; Mθφ 2.06±.18; Best double couple: M₀6.79600×10¹⁶ NP1:φ=210.00000°, δ30.00000°, λ73.00000°. NP2: φ=49.00000°, δ62.00000°, λ99.00000°. Principal axes: T 6.6280, Plg72.0000°, Azm341.0000°; N 0.3360, Plg8.0000°, Azm225.0000°; P -6.9640, Plg16.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *16:51:06.7±2.0, 4756N×15429E, h18km±12km, mb5.3/137, MS4.9/16 Error ellipse: s-maj=4.1km s-min=2.4km az=177.0*

IDC ***22*** *16:51:08.2±2.7, 4759N×15429E, h29km±17km, mb4.7/31, mb1 4.8/31, mb1mx4.8/32, mbtmp4.9/31, MS4.5/25, Ms1 4.5/25, ms1mx4.4/32, Error ellipse: s-maj=13.4km s-min=11.4km az=96.0*

CSEM ***22*** *16:51:11.6, 4831N×15398E, h33km, mb5.5*

SZGRF ***22*** *16:51:12.8, 4824N×15386E, h33km, mb5.5, MS4.8, Kuril Islands, Russia*

BGS ***22*** *16:51:13.5±1.5, 4855N×15231E, h15km±999km, mb5.3*

ISC 22 16:51:06.7±0.1, **4766N**±003×**15426E**±002, **h16**km, **h16**km±1.2km**; pP-P, n951**, σ0=**79**/967, **mb5.2**/260, **MS4.7**/69, **315C-78D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.27**	**21**	*e*P	**Pn**	**16 51 53.6**	**-3.6**
SKR				AMB	AMB	16 52 02.0	
	3μm,2.0s						
SKR				AMB	AMB	16 52 02.0	
	2μm,2.0s						
SKR				AMB	AMB	16 52 02.0	
	1μm,1.0s						
SKR				AMB	AMB	16 52 02.0	
	1μm,1.0s						
SKR				AMB	AMB	16 52 02.0	
	2μm,1.0s						
SKR				pP		16 52 04.0	
SKR				*i* S	**Sn**	**16 52 31.6**	**-4.1**
SKR				A		16 52 51.6	
	360nm,0.6s						
SKR				A		16 52 51.6	
	12μm,2.0s						
SKR				A		16 52 51.6	
	6μm,2.0s						
SKR				A		16 52 51.6	
	13μm,2.0s						
SKR				A		16 52 51.6	
	7μm,2.0s						
SKR				A		16 52 51.6	
	3μm,2.0s						
SKR				A		16 52 51.6	
	4μm,1.0s						
SKR				A		16 52 51.6	
	4μm,1.0s						
SKR				AMS	AMS	16 53 32.0	
	12μm,10.0s						
SKR				AMS	AMS	16 53 32.0	
	10μm,10.0s						
SKR				AMS	AMS	16 53 32.0	
	11μm,10.0s						
SKR				AMS	AMS	16 53 32.0	
	12μm,10.0s						
SKR				AMS	AMS	16 53 32.0	
	10μm,10.0s						
SKR				AMS	AMS	16 53 32.0	
	11μm,10.0s						
KUR	**Kuril'sk**	**5.04**	**244**	⇑*i*P	**Pn**	**16 52 20.9**	**-0.7**
KUR				⇓*i*P		16 52 20.9	
KUR				AMB	AMB	16 52 22.8	
	3μm,1.2s						
KUR				AMB	AMB	16 52 23.5	
	140nm,0.9s						
KUR				AMB	AMB	16 52 23.5	
	280nm,0.9s						
KUR				AMB	AMB	16 52 23.5	
	1μm,0.9s						
KUR				sP		16 52 35.0	
KUR				*i* S	**Sn**	**16 53 18.5**	**-0.9**
KUR				A		16 53 30.0	
	18μm,1.8s						
KUR				A		16 53 30.0	
	18μm,1.8s						
KUR				A		16 53 45.5	
	9μm,1.0s						
KUR				A		16 53 45.5	
	8μm,1.0s						
KUR				AMS	AMS	16 54 44.2	
	6μm,14.0s						
KUR				AMS	AMS	16 54 44.2	
	8μm,14.0s						
KUR				AMS	AMS	16 54 44.2	
	6μm,14.0s						
KUR	**Kuril'sk**	**5.04**	**244**	*j* PN	**Pn**	**16 52 20.9**	**-0.7**
KUR				pmax	pmax		
	comp=Z,3μm,1.2s						
KUR				pmax	pmax		
	comp=N,140nm,0.9s						
KUR				pmax	pmax		
	comp=E,280nm,0.9s						
KUR				pmax	pmax		
	comp=Z,1μm,0.9s						
PET	**Petropavlovsk**	**6.07**	**26**	⇑*e*PN	**Pn**	**16 52 35.3**	**-0.4**
PET				*e*S	**Sn**	**16 53 40.9**	**-3.8**
PET				pmax	pmax		
	comp=Z,321nm,1.3s						
PET				MLR	MLR		
	comp=Z,4μm,16.0s						
PET				MLR	MLR		
	comp=N,5μm,14.0s						
PET				MLR	MLR		
	comp=E,4μm,13.0s						
PET	**Petropavlovsk**	**6.07**	**26**	⇓*e*P	**Pn**	**16 52 35.3**	**-0.4**
	comp=E,321nm,1.3s						
PET				*e*S	**Sn**	**16 53 40.9**	**-3.8**
YUK	**Yuzh-Kuril'sk**	**6.89**	**241**	*e*P	**Pn**	**16 52 49.3**	**+2.3**
YUK				AMB	AMB	16 52 59.9	
	comp=E,170nm,0.4s						
YUK				AMB	AMB	16 52 59.9	
	comp=E,210nm,0.3s						
YUK				AMB	AMB	16 52 59.9	
	comp=E,350nm,0.3s						
YUK				AMB	AMB	16 53 05.4	
	comp=E,2μm,2.2s						
YUK				AMB	AMB	16 53 05.4	
	comp=E,2μm,3.0s						
YUK				AMB	AMB	16 53 05.4	
	comp=E,3μm,1.1s						
YUK				*i* S	**Sn**	**16 54 08.5**	**+3.4**
YUK				A		16 54 24.0	
	comp=E,6μm,1.0s						
YUK				A		16 54 24.0	
	comp=E,14μm,3.5s						
YUK				A		16 54 34.5	
	comp=E,4μm,0.8s						
YUK				A		16 54 34.5	
	comp=E,2μm,0.7s						
YUK				AMS	AMS	16 55 37.0	
	comp=E,5μm,14.0s						
YUK				AMS	AMS	16 55 37.0	
	comp=E,5μm,13.0s						
YUK				AMS	AMS	16 55 37.0	
	comp=E,4μm,16.0s						
YUK	**Yuzh-Kuril'sk**	**6.89**	**241**	*e*PN	**Pn**	**16 52 49.3**	**+2.3**
YUK				*i* S	**Sn**	**16 54 08.5**	**+3.4**
YUK				pmax	pmax		
	comp=N,210nm,0.4s						
YUK				pmax	pmax		
	comp=E,170nm,0.4s						
YUK				pmax	pmax		
	comp=Z,350nm,0.4s						
YUK				smax			
	comp=N,14μm,3.5s						
YUK				smax			
	comp=E,6μm,1.0s						
YUK				MLR	MLR		
	comp=Z,4μm,16.0s						
YUK				MLR	MLR		
	comp=N,5μm,14.0s						
YUK				MLR	MLR		
	comp=E,5μm,13.0s						
NEM2	**Nemuro 2**	**7.36**	**237**	P	**Pn**	**16 52 52.4**	**-1.1**
NEM2				*e*S	**Sn**	**16 54 09.6**	**-7.0**
JRA	**Rausu**	**7.39**	**243**	P	**Pn**	**16 52 57.4**	**+3.6**
JNK	**Nakash**	**7.83**	**242**	P	**Pn**	**16 53 00.6**	**+0.7**
YSS	**Yuzh-Sakhalins**	**7.85**	**269**	⇓*e*P	**Pn**	**16 53 04.5**	**+4.3**
YSS				AMB	AMB	16 53 05.5	
	comp=E,80nm,1.0s						
YSS				AMB	AMB	16 53 05.5	
	comp=E,40nm,0.9s						
YSS				AMB	AMB	16 53 05.5	
	comp=E,220nm,1.0s						
YSS				sP		16 53 20.0	
YSS				*e*S	**Sn**	**16 54 33.0**	**+4.2**
YSS				A		16 54 36.0	
	comp=E,80nm,0.9s						
YSS				*e*LQ		16 54 50.0	
YSS				AMS	AMS	16 55 54.0	
	comp=E,8μm,17.0s						
YSS				AMS	AMS	16 55 54.0	
	comp=E,6μm,17.0s						
YSS				AMS	AMS	16 55 54.0	
	comp=E,6μm,17.0s						
YSS	**Yuzh-Sakhalins**	**7.85**	**269**	⇓*e*PN	**Pn**	**16 53 04.6**	**+4.4**
YSS				pmax	pmax		
	comp=Z,161nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.85**	**269**	⇓*e*P	**Pn**	**16 53 04.6**	**+4.4**
	comp=Z,161nm,0.8s						
JTKR	**Abashiri--Toko**	**8.12**	**247**	P	**Pn**	**16 53 05.9**	**+2.1**
JAK	**Akkeshi**	**8.19**	**239**	P	**Pn**	**16 53 03.6**	**-1.2**
JAK				*e*S	**Sn**	**16 54 30.5**	**-6.5**
UGL	**Uglegorsk**	**8.25**	**284**	*e*P	**Pn**	**16 53 11.0**	**+5.4**
UGL				AMB	AMB	16 53 13.5	
	comp=Z,69nm,0.7s						
UGL				AMB	AMB	16 53 15.0	
	comp=Z,1μm,4.0s						
UGL				AMB	AMB	16 53 15.0	
	comp=Z,300nm,4.0s						
UGL				AMB	AMB	16 53 15.0	
	comp=Z,900nm,4.0s						
UGL				AMS	AMS	16 56 38.0	
	comp=Z,4μm,15.0s						
UGL				AMS	AMS	16 56 38.0	
	comp=Z,7μm,15.0s						
UGL				AMS	AMS	16 56 38.0	
	comp=Z,8μm,15.0s						
JMP	**Maruseppu**	**8.44**	**248**	P	**Pn**	**16 53 11.1**	**+2.8**
JSE	**Soyaes**	**8.52**	**256**	P	**Pn**	**16 53 14.7**	**+5.3**
JAR	**Ashorobuto**	**8.56**	**243**	P	**Pn**	**16 53 10.9**	**+1.0**
JOB	**Onbets**	**8.75**	**241**	P	**Pn**	**16 53 12.8**	**+0.3**
JWK2	**Keihoku**	**8.85**	**259**	P	**Pn**	**16 53 20.9**	**+7.1**
ASAJ	**Asahikawa**	**8.87**	**251**	Pn	**Pn**	**16 53 18.0**	**+3.8**
	comp=Z,3.0nm,0.3s,baz=83,slow=14,SNR=95						
ASAJ				Sn	**Sn**	**16 55 04.0**	**+10**
	comp=Z,0.3nm,0.3s,baz=0.0,slow=17,SNR=2.2						
ASAJ				LR	LR	16 56 31.9	
	comp=Z,3μm,18.6s,baz=69,slow=36						
ASAJ	**Asahikawa**	**8.87**	**251**	P	**Pn**	**16 53 18.2**	**+4.0**
ASAJ	**Asahikawa**	**8.87**	**251**	PN	**Pn**	**16 53 18.0**	**+3.8**
ASAJ						16 55 04.0	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,3μm,18.7s						
JKK2	**Kamakawa 2**	**8.89**	**249**	P	**Pn**	**16 53 17.4**	**+3.0**
JCH	**Churui**	**9.20**	**241**	P	**Pn**	**16 53 17.6**	**-1.1**
JCH				*e*S	**Sn**	**16 54 54.1**	**-7.8**
OKH	**Okha**	**9.30**	**314**	*e*P	**Pn**	**16 53 25.0**	**+4.9**
OKH				*e*L		16 55 40.2	
OKH				AMS	AMS	16 58 48.0	
	comp=Z,6μm,12.0s						
OKH				AMS	AMS	16 58 48.0	
	comp=Z,2μm,14.0s						
JFR	**Furan**	**9.35**	**246**	P	**Pn**	**16 53 22.4**	**+1.6**
JAB	**Ashibetsu**	**9.40**	**248**	P	**Pn**	**16 53 24.0**	**+2.5**
JHR	**Hokuryu**	**9.60**	**251**	P	**Pn**	**16 53 28.4**	**+4.2**
JEM	**Erimo**	**9.69**	**238**	P	**Pn**	**16 53 24.9**	**-0.5**
ERM	**Erimo**	**9.69**	**238**	Pn	**Pn**	**16 53 25.8**	**+0.4**
	comp=Z,800nm,0.7s,SNR=6.4						
ERM	**Erimo**	**9.69**	**238**	Pn	**Pn**	**16 53 25.4**	**0.0**
JBT2	**Biratori 2**	**9.71**	**244**	P	**Pn**	**16 53 26.2**	**+0.6**
JNBK	**Urakawa-nobuka**	**9.76**	**241**	P	**Pn**	**16 53 25.2**	**-1.2**
JNBK				*e*S	**Sn**	**16 55 10.6**	**-5.1**
JEW	**Eniwo**	**10.23**	**247**	P	**Pn**	**16 53 33.8**	**+1.0**
NKL	**Nikolayevsk**	**10.26**	**307**	*i* P	**Pn**	**16 53 35.8**	**+2.6**
NKL				AMB	AMB	16 53 37.0	
	comp=Z,120nm,1.0s						
NKL				AMB	AMB	16 53 37.0	
	comp=Z,210nm,1.0s						
NKL				AMB	AMB	16 53 37.0	
	comp=Z,17nm,1.1s						
NKL				AMB	AMB	16 53 38.0	
	comp=Z,600nm,2.5s						
NKL				AMB	AMB	16 53 38.0	
	comp=Z,500nm,2.5s						
NKL				A		16 55 43.0	
	comp=Z,500nm,7.0s						
NKL				*e*L		16 56 22.0	
NKL				AMS	AMS	16 58 06.0	
	comp=Z,2μm,17.0s						
NKL				AMS	AMS	16 58 06.0	
	comp=Z,4μm,17.0s						
NKL				AMS	AMS	16 58 06.0	
	comp=Z,5μm,17.0s						
JSK	**Shakotan**	**10.59**	**251**	P	**Pn**	**16 53 40.1**	**+2.4**
JNB	**Noboribetsu**	**10.69**	**246**	P	**Pn**	**16 53 39.6**	**+0.5**
JNB				*e*S	**Sn**	**16 55 34.2**	**-4.2**
JKB	**Kayabe**	**11.03**	**243**	P	**Pn**	**16 53 42.3**	**-1.4**
JSH	**Shimam**	**11.22**	**249**	P	**Pn**	**16 53 47.2**	**+0.9**
JYM2	**Yakumo 2**	**11.30**	**246**	P	**Pn**	**16 53 47.0**	**-0.4**
JSR	**Shiriuchi**	**11.61**	**243**	P	**Pn**	**16 53 49.8**	**-1.9**
JSR				*e*S	**Sn**	**16 55 53.2**	**-7.7**
JTM	**Tenmabayashi**	**11.68**	**239**	P	**Pn**	**16 53 49.7**	**-3.0**
JTM				*e*S	**Sn**	**16 55 50.4**	**-12**
JANG	**Nango**	**11.70**	**236**	P	**Pn**	**16 53 48.9**	**-4.1**
JANG				*e*S	**Sn**	**16 55 49.5**	**-14**
JTH	**Tanohata**	**11.81**	**234**	P	**Pn**	**16 53 50.0**	**-4.4**
JTH				*e*S	**Sn**	**16 55 51.9**	**-14**
JOSM	**Okushiri--Mats**	**11.87**	**247**	P	**Pn**	**16 53 55.2**	**-0.1**
MA2	**Magadan**	**12.12**	**352**	*e*PN	**Pn**	**16 54 02.1**	**+3.5**
MA2				pmax	pmax		
	comp=Z,49nm,0.9s						
MA2	**Magadan**	**12.12**	**352**	*e*P	**Pn**	**16 54 02.0**	**+3.4**
	comp=Z,49nm,0.9s						
TEY	**Ternei**	**12.48**	**264**	*e*P	**Pn**	**16 54 05.0**	**+1.4**
TEY				AMS	AMS	16 59 14.0	
	comp=Z,2μm,15.0s						
TEY				AMS	AMS	16 59 14.0	
	comp=Z,2μm,14.0s						
TEY				AMS	AMS	16 59 14.0	
	comp=Z,3μm,14.0s						
JRG	**Rokugo**	**12.87**	**235**	P	**Pn**	**16 54 05.3**	**-3.6**
JRG				*e*S	**Sn**	**16 56 18.2**	**-13**
HABR	**Khabarovsk**	**12.88**	**281**	⇑*i*PN	**Pn**	**16 54 14.9**	**+5.9**
HABR				*e*S	**Sn**	**16 56 44.3**	**+12**
HABR				pmax	pmax		
	comp=Z,41nm,1.2s						
JIO	**Ouri**	**13.16**	**230**	P	**Pn**	**16 54 08.8**	**-4.1**
JIO				*e*S	**Sn**	**16 56 25.4**	**-14**
JYA	**Atsumi**	**13.94**	**235**	P	**Pn**	**16 54 19.6**	**-3.9**
JYA				*e*S	**Sn**	**16 56 46.3**	**-12**
JFK	**Kawauchi**	**14.23**	**229**	P	**Pn**	**16 54 23.9**	**-3.6**
JFK				*e*S	**Sn**	**16 56 52.0**	**-13**
JFY	**Yanaizu**	**14.81**	**232**	P	**Pn**	**16 54 32.0**	**-3.4**
KLR	**Kul'dur**	**15.02**	**284**	*e*P	**Pn**	**16 54 39.2**	**+1.0**
KLR				pmax	pmax		
	comp=E,240nm,2.2s						
KLR				pmax	pmax		
	comp=Z,230nm,2.2s						
KLR				pmax	pmax		
	comp=E,900nm,11.0s						
KLR				pmax	pmax		
	comp=Z,1μm,11.0s						
KLR				MLR	MLR		
	comp=E,2μm,12.0s						
KLR				MLR	MLR		
	comp=E,4μm,12.0s						
MAJO	**Matsushiro**	**16.25**	**233**	*e*P	**Pn**	**16 54 51.4**	**-2.8**
MAJO				pmax	pmax		
	comp=Z,74nm,0.9s						
MAJO	**Matsushiro**	**16.25**	**233**	*e*P	**Pn**	**16 54 51.4**	**-2.9**
	comp=Z,74nm,0.9s						
MAT	**Matsushiro**	**16.25**	**233**	P	**Pn**	**16 54 50.9**	**-3.3**
MAT				S	**Sn**	**16 58 00.0**	**+5.9**
MAT	**Matsushiro**	**16.25**	**233**	*e*P	**Pn**	**16 54 51.0**	**-3.2**
MAT				pmax	pmax		
	comp=Z,43nm,1.0s						
MAT	**Matsushiro**	**16.25**	**233**	*e*P	**Pn**	**16 54 51.0**	**-3.2**
	comp=Z,43nm,1.0s						
MAT				*e*S	**Sn**	**16 58 07.0**	**+13**
MJAR	**Matsushiro Arr**	**16.25**	**233**	Pn	**Pn**	**16 54 50.7**	**-3.5**
	comp=Z,0.4nm,0.3s,baz=26,slow=12,SNR=44						
MJAR				Sn	**Sn**	**16 58 05.8**	**+12**
	comp=Z,0.2nm,0.3s,baz=28,slow=25,SNR=3.3						
MJAR				LR	LR	17 01 07.0	
	comp=Z,1μm,19.9s,baz=45,slow=37						
MJAR	**Matsushiro Arr**	**16.25**	**233**	Pn	**Pn**	**16 54 50.7**	**-3.5**
MJAR				Sn	**Sn**	**16 58 05.8**	**+12**
MJAR				LR	LR	17 01 07.0	
VLA	**Vladivostok**	**16.34**	**262**	*i* P	**Pn**	**16 54 55.2**	**-0.1**
VLA				*e*S	**Sn**	**16 58 10.0**	**+14**
VLA				pmax	pmax		
	comp=Z,65nm,1.2s						
VLA				MLR	MLR		
	comp=Z,2μm,16.9s						
AMKA	**Amchitka**	**16.65**	**68**	*e*P	**Pn**	**16 54 58.5**	**-0.9**
MDJ	**Mudanjiang**	**17.34**	**269**	P	**Pn**	**16 55 09.3**	**+1.3**
MDJ				AMB	AMB		
	comp=Z,46nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,181nm,6.8s						
MDJ				LR	LR		
	comp=N,960nm,15.7s						
MDJ				LR	LR		
	comp=E,539nm,19.9s						
MDJ				LR	LR		
	comp=Z,1μm,18.9s						
MDJ	**Mudanjiang**	**17.34**	**269**	*e*P	**Pn**	**16 55 07.4**	**-0.6**
	comp=Z,38nm,0.9s						
ZEA	**Zeya**	**18.09**	**300**	*e*P	**Pn**	**16 55 15.8**	**-1.5**
ZEA				AMB	AMB	16 55 20.4	
	comp=Z,35nm,1.0s						
ZEA				AMB	AMB	16 55 20.4	
	comp=Z,68nm,1.2s						
ZEA				AMB	AMB	16 55 20.4	
	comp=Z,61nm,1.6s						
ZEA				pP	pP	16 55 22.9	+0.7
ZEA				AMB	AMB	16 55 25.0	
	comp=Z,700nm,6.0s						
ZEA				AMB	AMB	16 55 25.0	
	comp=Z,700nm,6.0s						
ZEA				AMB	AMB	16 55 25.0	
	comp=Z,300nm,5.0s						
ZEA				*e*S	**Sn**	**16 58 44.0**	**+5.2**
ZEA				A		16 58 58.0	
	comp=Z,300nm,8.0s						
ZEA				A		16 58 58.0	
	comp=Z,600nm,9.0s						
JHJ	**Hachijo jima 2**	**18.19**	**222**	LR	LR	17 01 08.7	
	comp=Z,360nm,19.1s,baz=70,slow=33						
YAK	**Yakutsk**	**20.00**	**325**	*d* P	**P**	**16 55 39.6**	**+1.1**
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
YAK				MLR	MLR		
	comp=Z,1μm,17.0s,MS4.4						
YAK	**Yakutsk**	**20.00**	**325**	*e*P	**P**	**16 55 38.7**	**+0.1**
	comp=Z,91nm,0.9s						
CLNS	**Chul'man**	**20.05**	**308**	*e*P	**P**	**16 55 38.9**	**-0.1**
CLNS				*e**PP		16 55 44.7	
CLNS				*e*PPP		16 55 57.0	
CLNS				*e*S	**S**	**16 59 18.7**	**-5.1**
CLNS				*e*SS		16 59 52.3	
CLNS				pmax	pmax		
	comp=Z,30nm,0.8s						
CLNS				pmax	pmax		
	comp=N,22nm,1.1s						
CLNS				pmax	pmax		
	comp=E,17nm,0.9s						
CLNS				smax			
	comp=N,56nm,11.5s						
CLNS				smax			
	comp=Z,224nm,15.0s						
CLNS				smax			
	comp=E,139nm,14.0s						
CLNS				MLR	MLR		
	comp=Z,2μm,16.0s,MS4.7						
CLNS				MLR	MLR		
	comp=N,2μm,14.0s,MS4.7						
CLNS				MLR	MLR		
	comp=E,2μm,17.0s,MS4.7						
CN2	**Changchun**	**20.42**	**270**	*e*P	**P**	**16 55 42.0**	**-1.1**
CN2				*e*XP	sP	16 55 49.0	-0.8
CN2				*e*S	**S**	**16 59 25.0**	**-6.2**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,2μm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,2μm,16.0s,MS4.6						
BILL	**Bilibino**	**21.34**	**12**	⇓*e*P	**P**	**16 55 50.7**	**-2.3**
BILL				*e*S	**S**	**16 59 51.7**	**+2.4**
BILL				pmax	pmax		
	comp=Z,33nm,1.3s,mb4.5						
BILL				MLR	MLR		
	comp=Z,1μm,13.0s,MS4.5						
BILL	**Bilibino**	**21.34**	**12**	*e*P	**P**	**16 55 50.3**	**-2.7**
	comp=Z,49nm,1.1s,mb4.8						
SNY	**Shenyang**	**22.47**	**266**	⇓P	**P**	**16 56 04.1**	**-1.0**
SNY				AP		16 56 08.0	
SNY				XP	sP	16 56 11.1	-0.7
SNY				AMB	AMB		
	comp=Z,19nm,0.8s,mb4.6						
SNY				LR	LR		
	comp=E,2μm,16.2s						
SNY				LR	LR		
	comp=Z,2μm,16.2s,MS4.7						
CBIJ	**Chichi jima**	**22.60**	**209**	LR	LR	17 02 44.1	

comp=Z,442nm,21.2s,MS3.9,baz=174,slow=31
INCN Inchon 22.64 253 ⇓P **P 16 56 07.7 +0.9**
SNR=24
INCN Inchon 22.64 253 *e*P **P 16 56 07.5 +0.7**
comp=Z,167nm,1.0s,mb5.4
HIA Hailar 22.83 287 *e*P **P 16 56 05.6 -3.4**
HIA pmax pmax
comp=Z,17nm,1.0s
HIA Hailar 22.83 287 *e*P **P 16 56 05.5 -3.4**
comp=Z,17nm,0.9s,mb4.5
DL2 Dalian 25.16 262 ⇑P **P 16 56 31.3 +0.2**
DL2 S **S 17 00 57.4 +1.9**
DL2 AMB AMB
comp=Z,20nm,1.0s,mb4.6
DL2 AMB AMB
comp=Z,100nm,8.9s
DL2 LR LR
comp=N,350nm,13.5s,MS4.2
DL2 LR LR
comp=E,340nm,14.3s,MS4.2
DL2 LR LR
comp=Z,490nm,17.3s,MS4.1
BOD Bodaibo 26.03 308 *e*P **P 16 56 37.8 -1.2**
BOD pmax pmax
comp=Z,17nm,1.3s,mb4.4
CIT Chita 26.36 295 *e*P **P 16 56 41.7 -0.3**
CIT pmax pmax
comp=Z,32nm,1.2s,mb4.7
BJI Beijing 28.28 269 P **P 16 57 01.3 +2.1**
BJI AMB AMB
comp=Z,12nm,0.9s,mb4.5
BJI AMB AMB
comp=Z,216nm,5.9s
BJI LR LR
comp=N,1μm,16.5s,MS4.8
BJI LR LR
comp=E,2μm,16.0s,MS4.8
BJI LR LR
comp=Z,1μm,16.3s,MS4.6
TIA Tai'an 29.63 261 P **P 16 57 11.5 +0.3**
SSE Sheshan 30.16 249 ⇓P **P 16 57 17.3 +1.4**
SSE S **S 17 02 12.8 -1.4**
SSE AMB AMB
comp=Z,58nm,1.0s,mb5.3
SSE AMB AMB
comp=Z,59nm,4.2s
SSE LR LR
comp=N,611nm,21.7s,MS4.3
SSE LR LR
comp=E,421nm,21.8s,MS4.3
SSE LR LR
comp=Z,593nm,16.8s,MS4.3
NJ2 Nanjing 31.01 253 *e*P **P 16 57 24.3 +0.9**
NJ2 AP pP 16 57 28.8 +0.4
NJ2 XP sP 16 57 31.3 +0.9
NJ2 PP PP 16 58 25.9 -7.6
NJ2 S **S 17 02 26.0 -1.6**
NJ2 AMB AMB
comp=Z,40nm,0.8s,mb5.3
NJ2 AMB AMB
comp=Z,130nm,6.8s
NJ2 LR LR
comp=N,2μm,13.4s,MS5.2
NJ2 LR LR
comp=E,3μm,16.4s,MS5.2
NJ2 LR LR
comp=Z,2μm,16.6s,MS4.8
HHC Hu-ho-hao-te 31.02 273 *e*P **P 16 57 24.0 +0.5**
HHC AP pP 16 57 28.4 0.0
HHC XP sP 16 57 31.0 +0.5
HHC PP PP 16 58 25.5 -8.0
HHC PCP PcP 17 00 19.8 +0.6
HHC S **S 17 02 26.8 -0.9**
HHC PCS PcS 17 04 02.4 -0.8
HHC SS SS 17 04 09.8 -30
HHC SCS ScS 17 07 57.8 -0.5
HHC AMB AMB
comp=Z,35nm,1.1s,mb5.1
HHC AMB AMB
comp=Z,154nm,9.0s
HHC LR LR
comp=N,1μm,14.9s,MS4.8
HHC LR LR
comp=E,789nm,13.2s,MS4.8
HHC LR LR
comp=Z,940nm,15.9s,MS4.5
TTA Tatalina 31.22 42 *e*P **P 16 57 24.9 -0.4**
TTA pmax pmax
comp=Z,23nm,1.1s,mb4.9
TTA Tatalina 31.22 42 *e*P **P 16 57 25.2 -0.1**
ULN Ulaanbaatar 31.35 288 *e*P **P 16 57 25.8 -0.6**
comp=Z,11nm,1.1s,mb4.6
ULN LR LR
comp=Z,1μm,20.0s,MS4.6
SONM Songino Array 31.78 288 P **P 16 57 28.6 -1.6**
comp=Z,5.4nm,0.9s,mb4.4,baz=70,slow=8.5,SNR=32
SONM PcP PcP 17 00 20.5 -0.7
comp=Z,4.8nm,0.9s,baz=105,slow=2.4,SNR=9.7
SONM ScP ScP 17 04 00.1 -3.7
comp=Z,3.2nm,1.3s,baz=61,slow=1.3,SNR=5.3
SONM LR LR 17 11 23.2
comp=Z,2μm,18.8s,MS4.7,baz=78,slow=38
TLY Talaya 32.47 296 *e*P **P 16 57 36.1 -0.1**
TLY pmax pmax
comp=Z,18nm,1.2s,mb4.8
TLY MLR MLR
comp=Z,2μm,17.0s,MS4.9
TLY Talaya 32.47 296 *e*P **P 16 57 35.5 -0.8**
comp=Z,11nm,0.9s,mb4.7
TLY *e*PcP PcP 17 00 23.3 +0.2
KDAK Kodiak Island 32.93 52 P **P 16 57 39.3 -0.9**
comp=Z,11nm,0.9s,mb4.8,baz=299,slow=10,SNR=3.7
ZAK Zakamensk 33.01 294 ⇑*i*P **P 16 57 40.5 -0.5**
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
MOY Mondy 34.07 297 *e*P **P 16 57 50.2 0.0**
MCK McKinley 34.45 41 P **P 16 57 53.6 +0.1**
MCK pmax pmax
comp=Z,16nm,1.1s,mb4.9
MCK McKinley 34.45 41 *e*P **P 16 57 53.1 -0.5**
comp=Z,16nm,1.1s,mb4.9
MCK *e* 16 58 04.6
WHN Wuhan 34.92 255 ⇓P **P 16 57 58.0 +0.5**
WHN S **S 17 03 24.0 -4.3**
WHN AMB AMB
comp=Z,42nm,1.1s,mb5.3
WHN LR LR
comp=Z,1μm,14.6s,MS4.7
COLA College 34.94 39*c i*P **P 16 57 57.7 -0.1**
COLA College 34.94 39 *e*P **P 16 57 57.4 -0.4**
comp=Z,35nm,0.8s,mb5.3
COLA LR LR
comp=Z,421nm,20.0s,MS4.2
QZH Quanzhou 36.14 244 P **P 16 58 10.6 +2.6**
QZH S **S 17 03 48.3 +1.3**
QZH LR LR
comp=N,2μm,19.7s
QZH LR LR
comp=E,460nm,9.3s
QZH LR LR
comp=Z,1μm,11.9s
XAN Xi'an 36.37 265 P **P 16 58 10.0 -0.1**
XAN AP pP 16 58 21.8 +6.7
XAN PP PP 16 59 37.3 +4.5
XAN AMB AMB
comp=Z,48nm,1.2s,mb5.3
XAN LR LR
comp=N,792nm,14.1s,MS4.8
XAN LR LR
comp=E,914nm,14.9s,MS4.8
XAN LR LR
comp=Z,1μm,15.1s,MS4.9
MENT Mentasta 36.84 42 *e*P **P 16 58 14.2 +0.2**
KRAR Krasnoyarsk 37.67 306 *i* P **P 16 58 20.9 -0.2**
KRAR pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
KRAR MLR MLR
comp=Z,800nm,17.0s,MS4.6
EGAK Eagle 37.80 39 *e*P **P 16 58 21.3 -0.9**
EGAK *e* 16 58 34.4
DAWY Dawson 38.64 40 *e*P **P 16 58 28.0 -1.3**
LZH Lanzhou 38.64 271 ⇑P **P 16 58 30.3 +1.0**
LZH AP pP 16 58 33.3 -1.0
LZH PP PP 17 00 02.0 +4.2
LZH *e*S **S 17 04 23.0 -2.1**
LZH SS SS 17 07 04.1 -11
LZH AMB AMB
comp=Z,90nm,1.1s,mb5.4
LZH AMB AMB
comp=Z,190nm,4.0s
LZH LR LR
comp=N,1μm,15.7s
LZH LR LR
comp=Z,1μm,16.9s,MS4.8
GTA Gaotai 39.60 279 P **P 16 58 37.5 +0.2**
GTA AP pP 16 58 40.8 -1.6
GTA XP sP 16 58 44.0 -0.4
GTA PP PP 17 00 15.3 +7.0
GTA PCP PcP 17 00 44.8 +0.5
GTA SCP ScP 17 04 30.5 -1.9
GTA PCS PcS 17 04 34.8 +0.5
GTA S **S 17 04 45.6 +6.0**
GTA XS sS 17 04 51.8 +3.9
GTA SCS ScS 17 08 42.5 -2.2
GTA AMB AMB
comp=Z,22nm,1.1s,mb4.8
GTA AMB AMB
comp=Z,139nm,4.6s
GTA LR LR
comp=N,818nm,15.7s,MS4.8
GTA LR LR
comp=E,815nm,16.4s,MS4.8
GTA LR LR
comp=Z,1μm,16.8s,MS4.8
INK Inuvik 40.47 33 P **P 16 58 45.0 +0.5**
comp=Z,23nm,0.8s,mb4.9,baz=283,slow=7.4,SNR=27
INK Inuvik 40.47 33 *e*P **P 16 58 44.5 0.0**
INK pmax pmax
comp=Z,22nm,0.9s
INK Inuvik 40.47 33 *e*P **P 16 58 44.5 0.0**
comp=Z,22nm,0.9s,mb4.9
CD2 Chengdu 41.74 265 ⇑*i*P **P 16 58 55.5 +0.6**
CD2 AP pP 16 59 00.1 +0.1
CD2 XP sP 16 59 03.5 +1.5
CD2 PP PP 17 00 35.1 +3.7
CD2 PCP PcP 17 00 53.1 +1.9
CD2 SCP ScP 17 04 41.5 +0.8
CD2 PCS PcS 17 04 45.3 +2.7
CD2 S **S 17 05 11.1 -0.2**
CD2 XS sS 17 05 18.5 -1.2
CD2 SS SS 17 08 10.8 -6.3
CD2 SCS ScS 17 08 56.0 -1.5
CD2 AMB AMB
comp=Z,100nm,0.9s,mb5.5
CD2 AMB AMB
comp=Z,130nm,4.5s
CD2 LR LR
comp=N,400nm,15.6s
CD2 LR LR
comp=Z,680nm,16.2s,MS4.6
GYA Guiyang 42.67 258 ⇑*i*P **P 16 59 02.4 -0.2**
GYA AP pP 16 59 06.8 -0.8
GYA XP sP 16 59 09.5 -0.1
GYA PP PP 17 00 42.5 +0.9
GYA SCP ScP 17 04 47.6 +3.1
GYA S **S 17 05 18.8 -6.4**
GYA SCS ScS 17 09 03.0 -0.3
GYA AMB AMB
comp=Z,120nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,140nm,5.2s
GYA LR LR
comp=N,410nm,16.4s,MS4.6
GYA LR LR
comp=E,550nm,15.5s,MS4.6
GYA LR LR
comp=Z,430nm,17.0s,MS4.4
ZAL Zalesovo 42.74 305 P **P 16 59 02.3 -0.8**
comp=Z,4.9nm,1.1s,mb4.2,baz=39,slow=6.7,SNR=17
ZAL PcP PcP 17 00 53.5 -1.0
comp=Z,5.4nm,0.9s,baz=18,slow=4.4,SNR=8.4
ZAL ScP ScP 17 04 43.1 -1.6
comp=Z,0.8nm,0.2s,baz=194,slow=24,SNR=7.8
ZAL LR LR 17 18 51.8
comp=Z,2μm,19.2s,MS4.9,baz=42,slow=39
ZAL Zalesovo 42.74 305 P **P 16 59 02.3 -0.8**
ZAL 17 00 53.5
ZAL pmax pmax
comp=Z,50nm,1.1s
NVS Novosibirsk 43.26 307 *e*P **P 16 59 04.9 -2.4**
NVS *i* 17 00 55.3
NVS *e*S **S 17 05 29.8 -4.0**
NVS *e* 17 09 04.0
NVS pmax pmax
comp=Z,38nm,2.0s,mb4.8
NVS pmax pmax
comp=N,7.0nm,1.8s
NVS pmax pmax
comp=E,31nm,2.1s
NVS smax
comp=N,20nm,1.7s
NVS smax
comp=E,24nm,2.1s
WMQ Urumqi 45.33 291 *e*P **P 16 59 24.0 +0.1**
WMQ AP pP 16 59 31.0 +2.0
WMQ PP PP 17 01 10.0 0.0
WMQ S **S 17 06 04.0 +0.1**
WMQ SS SS 17 09 18.0 -9.4
WMQ AMB AMB
comp=Z,19nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,124nm,5.0s
WMQ LR LR
comp=N,902nm,14.0s,MS5.0
WMQ LR LR
comp=E,689nm,14.0s,MS5.0
WMQ LR LR
comp=Z,1μm,15.0s,MS4.9
QIZ Qiongzhong 45.92 247 P **P 16 59 26.6 -2.0**
QIZ AP pP 16 59 31.9 -1.8
QIZ S **S 17 06 12.6 +0.2**
QIZ AMB AMB
comp=Z,26nm,1.7s,mb4.9
QIZ LR LR
comp=N,463nm,18.0s
QIZ LR LR
comp=Z,516nm,14.8s,MS4.6
KMI Kunming 46.18 260 P **P 16 59 31.1 +0.5**
KMI AP pP 16 59 35.1 -0.6
KMI PCP PcP 17 01 08.8 +2.5
KMI PP PP 17 01 18.9 0.0
KMI PPP 17 02 02.0
KMI SCP ScP 17 05 00.1 +1.3
KMI PCS PcS 17 05 01.6 +0.8
KMI S **S 17 06 14.3 -1.8**
KMI SCS ScS 17 09 24.3 -1.2
KMI SS SS 17 09 30.5 -11
KMI SSS 17 10 33.8
KMI AMB AMB
comp=Z,68nm,1.3s,mb5.4
KMI AMB AMB
comp=Z,287nm,4.8s
KMI LR LR
comp=N,857nm,18.6s,MS4.8
KMI LR LR
comp=E,478nm,18.2s,MS4.8
KMI LR LR
comp=Z,280nm,17.0s,MS4.3
MK31 Makanchi Array 47.22 297 P **P 16 59 37.7 -1.1**
MK31 pmax pmax
comp=Z,59nm,1.1s,mb5.4
MKAR Makanchi Array 47.22 297 P **P 16 59 38.0 -0.8**
comp=Z,32nm,0.9s,mb5.2,baz=57,slow=8.8,SNR=158
MKAR ScP ScP 17 05 00.5 -2.8
comp=Z,0.4nm,0.2s,baz=46,slow=5.2,SNR=4.3
MKAR Makanchi Array 47.22 297 P **P 16 59 38.0 -0.8**
MKAR ScP ScP 17 05 00.5 -2.8
KURK Kurchatov 47.52 303 P **P 16 59 40.3 -0.8**
comp=Z,309nm,0.9s,mb6.3,SNR=22
ALE Alert 48.76 6 P **P 16 59 50.9 +0.2**
comp=Z,209nm,0.9s,mb6.2,SNR=11
YKA Yellowknife Ar 49.73 37 P **P 16 59 57.4 -0.7**
comp=Z,10nm,0.9s,mb4.8,baz=298,slow=7.5,SNR=8.5
YKA Yellowknife Ar 49.73 37 P **P 16 59 57.4 -0.7**
YKA pmax pmax
comp=Z,10.0nm,0.9s
CHKZ Chkalovo 50.45 310 P **P 17 00 02.3 -1.2**
CHKZ pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
CHKZ Chkalovo 50.45 310 *e*P **P 17 00 01.9 -1.7**
comp=Z,9.4nm,0.7s,mb4.9
VOSK Vostochnaya 50.73 309 P **P 17 00 04.9 -0.8**
VOSK pmax pmax
comp=Z,11nm,1.2s,mb4.7
BVA0 Borovoye Array 50.89 309 *i* P **P 17 00 06.5 -0.4**
BRVK Borovoye 50.93 309 P **P 17 00 06.2 -1.0**
comp=Z,40nm,0.8s,mb5.4,SNR=5.1
BRVK Borovoye 50.93 309 ⇑P **P 17 00 05.4 -1.7**
SNR=7.3
BRVK Borovoye 50.93 309 P **P 17 00 07.1 -0.1**
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BRVK Borovoye 50.93 309 *e*P **P 17 00 06.8 -0.3**
comp=Z,3.6nm,0.7s,mb4.4
LSA Lhasa 51.01 273 P **P 17 00 10.3 +2.6**
ZRNK Zerenda 51.65 310 *e*P **P 17 00 11.6 -1.0**
ZRNK pmax pmax
comp=Z,13nm,1.1s,mb4.8
ZRNK Zerenda 51.65 310 *e*P **P 17 00 11.6 -0.9**
comp=Z,13nm,1.1s,mb4.8
KBS Kingsbay 51.72 351 *e*P **P 17 00 13.1 0.0**
KBS *e*PP PP 17 02 11.2 +0.4
KBS AMS AMS 17 24 48.1
comp=Z,254nm,18.1s,MS4.3
KBS Kingsbay 51.72 351 *e*P **P 17 00 13.1 0.0**
KBS *e*PP PP 17 02 11.2 +0.4
CHRT Chiangrai 51.78 257 ⇑P **P 17 00 15.0 +1.5**
comp=Z,140nm,1.1s,mb5.8
NANT Nan 51.94 255 ⇑P **P 17 00 11.0 -3.8**
comp=Z,165nm,1.0s,mb5.9
C04A Brinnon 53.06 57 ⇑P **P 17 00 23.0 -0.1**
baz=53
CHG Chiang Mai 53.09 257 ⇑P **P 17 00 24.4 +1.2**
comp=Z,55nm,1.2s,mb5.4
CHTO Chiang Mai 53.09 257 ⇑P **P 17 00 24.5 +1.2**
SNR=17
CHTO Chiang Mai 53.09 257 P **P 17 00 24.0 +0.8**
CHTO pmax pmax
comp=Z,48nm,1.0s,mb5.4
CHTO Chiang Mai 53.09 257 *e*P **P 17 00 24.0 +0.8**
comp=Z,48nm,1.0s,mb5.4
B05A Bryant 53.26 56 ⇑P **P 17 00 24.2 -0.3**
baz=53
ULHL Ulahol 53.29 295 P **P 17 00 21.7 -3.0**
SNR=5.8
TKM2 Tokmak 2 53.30 296 P **P 17 00 25.1 +0.2**
SNR=14
E03A Lebam 53.37 58 ⇓P **P 17 00 24.9 -0.4**
baz=53
CHMS Chumysh 53.77 297 P **P 17 00 27.8 -0.5**
SNR=12
USP Ospenovka 53.77 297 P **P 17 00 28.0 -0.2**
SNR=52
C05A Tolt Reservoir 53.80 56 ⇓P **P 17 00 27.9 -0.6**
baz=54
KBK Karagaybulak 53.85 296 P **P 17 00 29.0 +0.2**
SNR=12
D05A Enumclaw 53.91 57 ⇑P **P 17 00 28.3 -0.9**
baz=54
FRU Bishkek 53.95 296 *e*P **P 17 00 28.5 -1.0**
FRU pmax pmax
comp=Z,43nm,1.5s,mb5.2
KZA Kyzart 53.99 295 P **P 17 00 31.0 +1.1**
SNR=18
AAK Ala-Archa 54.13 296 P **P 17 00 30.6 -0.3**
SNR=9.7
AAK Ala-Archa 54.13 296 P **P 17 00 29.5 -1.4**
comp=Z,135nm,0.9s,mb5.9,SNR=7.3
AAK Ala-Archa 54.13 296 ⇑P **P 17 00 29.4 -1.5**
SNR=14
AAK Ala-Archa 54.13 296*c i*P **P 17 00 29.5 -1.4**
AAK pmax pmax
comp=Z,23nm,1.0s,mb5.1
AAK MLR MLR
comp=Z,600nm,13.0s,MS4.8
AAK Ala-Archa 54.13 296 *e*P **P 17 00 29.9 -1.0**
comp=Z,21nm,0.9s,mb5.1
F04A Amboy 54.37 59 ⇓P **P 17 00 31.3 -1.3**
baz=54
E05A Randle 54.39 58 ⇓P **P 17 00 32.2 -0.6**
baz=54
EKS2 Erkin-Say 54.55 297 P **P 17 00 33.4 -0.5**
SNR=25
NST Nakhon Sawan 54.59 253 P **P 17 00 34.3 +0.1**
ETW Entiat 54.61 56 P **P 17 00 34.5 +0.1**
G04A Mulino 54.74 59 ⇑P **P 17 00 34.9 -0.4**
baz=55
EBG Ellensburg 54.87 57 P **P 17 00 36.6 +0.3**
ARU Arti 54.87 317 P **P 17 00 35.4 -0.9**
comp=Z,98nm,0.7s,mb6.0,SNR=6.6
ARU Arti 54.87 317 ⇓*i*P **P 17 00 35.4 -0.9**
ARU *i* 17 01 35.7
ARU *e* 17 02 43.2
ARU *e*PPP 17 03 52.8
ARU *e*S **S 17 08 18.2 +1.3**
ARU pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ARU MLR MLR
comp=N,400nm,20.0s,MS4.7
ARU MLR MLR
comp=E,500nm,20.0s,MS4.7
ARU MLR MLR
comp=Z,700nm,20.0s,MS4.7
ARU Arti 54.87 317 *e*P **P 17 00 34.6 -1.7**
comp=Z,15nm,0.9s,mb5.0
ARU LR LR
comp=Z,780nm,21.0s,MS4.8
AML Almayashu 54.91 296 P **P 17 00 36.9 +0.3**
SNR=12
F05A White Salmon 54.95 58 ⇑P **P 17 00 36.4 -0.4**
baz=55
I03A Eugene 54.98 61 ⇓P **P 17 00 37.6 +0.5**
baz=55
KSH Kashi 55.03 292 *e*P **P 17 00 35.0 -2.4**
KSH PCP PcP 17 01 38.5 -0.4
KSH PP PP 17 02 38.6 -2.0
KSH PPP 17 03 50.8
KSH SCP ScP 17 05 34.8 -2.0
KSH PCS PcS 17 05 35.6 -3.2
KSH S **S 17 08 12.3 -6.7**
KSH SCS ScS 17 10 20.5 -5.5
KSH AMB AMB
comp=Z,57nm,1.2s,mb5.5
KSH AMB AMB
comp=Z,272nm,4.1s
KSH LR LR
comp=N,2μm,15.5s,MS5.5
KSH LR LR
comp=E,2μm,12.6s,MS5.5
KSH LR LR
comp=Z,2μm,17.4s,MS5.3
EDM Edmonton 55.12 47 P **P 17 00 38.3 +0.2**
EDM Edmonton 55.12 47 *e*P **P 17 00 37.6 -0.5**
J02A Umpqua 55.16 62 ⇓P **P 17 00 39.1 +0.8**
baz=55,SNR=6.1
EPH Ephrata 55.16 56 P **P 17 00 38.0 -0.4**
H04A Detroit Lake 55.21 60 ⇑P **P 17 00 38.5 -0.3**
baz=55
BROR Big Rock Looko 55.30 60 P **P 17 00 40.0 +0.7**
G05A Wamic 55.40 59 ⇓P **P 17 00 39.9 -0.2**
baz=55
J03A Ideyld Park 55.51 61 ⇑P **P 17 00 41.4 +0.5**
baz=55,SNR=6.1
OD2 Odessa Site #2 55.64 55 P **P 17 00 41.5 -0.3**
GUN Gumba 55.70 275 *e*P **P 17 00 43.0 +0.8**
comp=Z,93nm,0.9s,mb5.8
M01C Crescent City 55.71 63 ⇓P **P 17 00 42.0 -0.3**
baz=56
HAWA Hanford 55.75 57 *e*P **P 17 00 42.9 +0.3**
comp=Z,0.9nm,1.0s
DAG Danmarks Havn 55.77 358 ⇑*i*P **P 17 00 42.2 -0.5**
comp=Z,9.7nm,0.8s,mb4.9
DAG Danmarks Havn 55.77 358 ⇑*i*P **P 17 00 42.2 -0.5**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
H05A Madras 55.79 59 ⇑P **P 17 00 42.7 -0.2**
baz=56
L02A Cave Junction 55.84 63 ⇑P **P 17 00 43.3 0.0**
baz=56
BBOR Butler Butte 55.97 62 P **P 17 00 45.2 +1.1**
NEW Newport 56.01 54 P **P 17 00 43.3 -1.1**
NEW pmax pmax
comp=Z,6.0nm,0.9s
NEW MLR MLR
comp=Z,278nm,20.0s
NEW Newport 56.01 54 P **P 17 00 43.3 -1.1**
comp=Z,5.6nm,0.9s,mb4.6

NEW LR LR
comp=Z,278nm,20.0s,MS4.3
I05A Bend 56.05 60 ⇑P P 17 00 44.8 0.0
baz=56
KKN Kakani 56.18 275 eP P 17 00 46.5 +0.8
comp=Z,206nm,1.0s,mb6.1
KKN Kakani 56.18 275 eP P 17 00 46.5 +0.8
KKN pmax pmax
comp=Z,21nm,1.0s,mb5.1
VIPM Ingram Point 56.23 59 P P 17 00 46.8 +0.8
PKI Pulchoki 56.24 275 eP P 17 00 46.9 +0.8
comp=Z,180nm,1.1s,mb6.0
PKI Pulchoki 56.24 275 eP P 17 00 46.9 +0.8
PKI pmax pmax
comp=Z,18nm,1.1s,mb5.0
KK31 Karatay Array 56.25 299 i P P 17 00 45.2 -1.0
KK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
KKAR Karatay Array 56.25 299 P P 17 00 45.2 -1.0
JCC Jacoby Creek 56.38 64 ⇓P P 17 00 47.1 0.0
baz=56
DMN Daman 56.42 275 eP P 17 00 48.6 +1.2
comp=Z,388nm,1.0s
GKN Gorkha 56.48 276 eP P 17 00 48.5 +0.7
F08A Pendleton 56.53 57 ⇑P P 17 00 48.3 +0.2
baz=56
J05A Fort Rock 56.59 61 ⇑P P 17 00 49.3 +0.7
baz=56,SNR=5.3
YBH Yreka Blue Hor 56.63 63 eP P 17 00 49.7 +0.8
YBH pmax pmax
comp=Z,9.0nm,0.9s
YBH Yreka Blue Hor 56.63 63 eP P 17 00 49.7 +0.8
comp=Z,9.4nm,0.9s,mb4.8
YBH Yreka Blue Hor 56.63 63 ⇑P P 17 00 49.6 +0.7
baz=56,SNR=7.9
M02C Callahan 56.75 63 ⇑P P 17 00 50.3 +0.6
baz=57
I06A Prineville 56.80 59 ⇑P P 17 00 50.4 +0.3
baz=57,SNR=8.6
N02C Big Bar 56.81 64 ⇓P P 17 00 50.6 +0.5
baz=57
L04A Klamath Falls 56.86 62 ⇑P P 17 00 50.8 +0.4
baz=57
LHEM Herd Peak 56.99 63 P P 17 00 52.3 +0.8
HNR Honiara 57.06 173 LR LR 17 24 27.0
comp=Z,427nm,19.1s,MS4.6,baz=0,0,slow=35
M04C Macdoel 57.12 62 ⇑P P 17 00 52.6 +0.2
baz=57,SNR=5.7
I07A Izee 57.12 59 ⇑P P 17 00 52.6 +0.2
baz=57,SNR=11
NNT Nongplab 57.14 251 P P 17 00 53.0 +0.5
J06A Christmas Vall 57.24 60 ⇓P P 17 00 53.6 +0.4
baz=57,SNR=11
ARCES ARCESS Array B 57.25 341 P P 17 00 52.2 -1.1
comp=Z,4.7nm,0.8s,mb4.5,baz=39,slow=7.4,SNR=12
ARCES LR LR 17 29 13.6
comp=Z,1μm,20.8s,MS5.0,baz=30,slow=40
ARCES ARCESS Array B 57.25 341 P P 17 00 52.2 -1.1
ARCES pmax pmax
comp=Z,5.0nm,0.8s
ARCES MLR MLR
comp=Z,1μm,20.8s
M03C McCloud 57.26 63 ⇑S P 17 00 53.8 +0.4
baz=57
WALA Waterton Lakes 57.26 51 eP P 17 00 53.2 -0.2
comp=Z,16nm,0.9s,mb5.1
KOLN Koldanda 57.32 277 eP P 17 00 54.8 +1.0
comp=Z,210nm,1.0s,mb6.1
H08A Prairie City 57.34 58 ⇑P P 17 00 53.9 0.0
baz=57,SNR=6.1
WDC Whiskeytown Da 57.42 64 eP P 17 00 54.5 0.0
WDC pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
WDC Whiskeytown Da 57.42 64 eP P 17 00 54.5 0.0
comp=Z,10nm,1.1s,mb4.8
WDC Whiskeytown Da 57.42 64 ⇓P P 17 00 54.4 0.0
baz=57
K06A Valley Falls 57.46 61 ⇑P P 17 00 55.1 +0.3
baz=57,SNR=19
O02C Red Bluff 57.52 64 ⇑P P 17 00 55.9 +0.7
baz=57
L05A Lakeview 57.56 62 ⇑P P 17 00 56.1 +0.6
baz=57,SNR=11
P01C Double 8 Ranch 57.61 65 ⇑P P 17 00 55.9 +0.1
baz=57
I08A Drewsey 57.77 59 ⇓P P 17 00 57.2 +0.3
baz=58,SNR=14
H09A Durkee 57.83 57 ⇑P P 17 00 57.5 +0.2
baz=58,SNR=7.5
GASB Alder Springs 57.88 65 ⇑P P 17 00 58.3 +0.6
baz=58
TMCR Tamitsa 57.90 332 eP P 17 00 56.9 -0.9
TMCR pmax pmax
comp=Z,20nm,1.3s,mb5.0
HATC Hat Creek Radi 57.93 63 ⇑P P 17 00 58.4 +0.3
baz=58
I09A Lost Marbles R 58.21 58 ⇑P P 17 01 00.1 +0.1
baz=58
M06C Likely Place G 58.29 62 ⇑P P 17 01 00.7 +0.1
baz=58
AB31 Akbulak array 58.45 310 P P 17 01 01.1 -0.6
AB31 pmax pmax
comp=Z,20nm,0.3s,mb5.6
O04C Chester 58.46 63 ⇑P P 17 01 01.9 +0.1
baz=58
L07A Adell 58.47 61 ⇓P P 17 01 02.2 +0.4
baz=58,SNR=6.1
ELFS Eagle Lake Fie 58.49 63 ⇓P P 17 01 02.4 +0.4
baz=58
MNRC McLaughlin Nat 58.52 65 ⇓P P 17 01 02.5 +0.3
baz=58
K08A Mann Creek Ran 58.53 60 ⇓P P 17 01 02.3 0.0
baz=58,SNR=18
MSO Missoula 58.59 54 eP P 17 01 02.4 -0.3
comp=Z,16nm,1.1s,mb5.0
ORV Oroville 58.68 64 ⇓P P 17 01 02.4 -0.9
baz=58
AKTK Aktyubinsk 58.70 312 P P 17 01 03.3 -0.2
AKTK LR LR 17 28 41.5
AKTO Aktyubinsk 58.70 312 P P 17 01 03.3 -0.2
comp=Z,3.8nm,1.0s,mb4.4,baz=58,slow=8.0
AKTO LR LR 17 28 41.4
comp=Z,553nm,18.9s,MS4.7,baz=237,slow=38
OHCM Honcut 58.83 64 eP P 17 01 03.9 -0.4
CHMT Chamberlain Mo 58.91 53 eP P 17 01 04.7 -0.3
L08A Fields 58.95 60 ⇑P P 17 01 05.3 +0.2
baz=59,SNR=7.6
N06A Buffalo Meadow 58.95 62 ⇑P P 17 01 05.5 +0.3
baz=59,SNR=9.9
K09A Rome 58.99 59 ⇓P P 17 01 05.6 +0.1
baz=59
BEKR Beckwourth 59.18 63 ⇑P P 17 01 06.5 -0.3
baz=59,SNR=6.7
O06A Flanigan 59.31 63 ⇑P P 17 01 07.9 +0.2
baz=59
SDNR Sundarnagar 59.33 284 eP P 17 01 08.2 +0.4
P05C Yuba Gap, Truc 59.38 64 ⇑P P 17 01 08.0 -0.2
baz=59
M08A Happy Creek Ra 59.38 61 ⇑P P 17 01 08.9 +0.7
baz=59,SNR=5.5
L09A Wilkinson Ranc 59.45 60 ⇑P P 17 01 09.0 +0.4
baz=59,SNR=8.7
FFC Flin Flon 59.54 41 P P 17 01 09.1 -0.2
comp=Z,121nm,1.0s,mb5.9,SNR=5.0
FFC Flin Flon 59.54 41 P P 17 01 09.9 +0.6
LAVA Lava Cap Winer 59.64 65 ⇓P P 17 01 09.6 -0.3
baz=60
KSM Kuching 59.64 234 eP P 17 01 10.7 +0.8
KLMR Klimovskoe 59.74 329 eP P 17 01 08.4 -2.2
KLMR eS S 17 09 20.4 -0.5
KLMR eSS SS 17 13 17.6 +0.9
KLMR pmax pmax
comp=Z,40nm,1.6s,mb5.2
KLMR MLR MLR
comp=Z,1μm,22.0s,MS5.0
SUMG Summit 59.74 4 eP P 17 01 11.1 +0.4
comp=Z,150nm,1.0s,mb6.0
HRY Holter Researc 59.80 53 eP P 17 01 11.6 +0.5
PAHR Pah Rah Range 59.87 63 eP P 17 01 11.5 0.0
comp=Z,7.0nm,0.8s,mb4.7
O07A Toulon 59.89 62 ⇑P P 17 01 12.0 +0.3
baz=60
WCN Washoe City 59.90 63 ⇑P P 17 01 11.9 +0.1
baz=60
N08A GE Springer Mi 59.94 61 ⇑P P 17 01 12.3 +0.3
baz=60,SNR=9.8
M09A Marrel Ranch, 59.95 60 ⇑P P 17 01 12.3 +0.3
baz=60
FCC Fort Churchill 60.08 34 P P 17 01 13.0 +0.1
FCC pmax pmax
comp=Z,28nm,1.2s,mb5.2
FCC Fort Churchill 60.08 34 eP P 17 01 12.9 -0.1
comp=Z,28nm,1.2s,mb5.2
R05C Kirkwood Meado 60.08 64 ⇑P P 17 01 13.0 +0.1
baz=63
DLMT Dillon 60.24 54 eP P 17 01 13.5 -0.6
comp=Z,18nm,0.8s,mb5.1
N09A Rock Creek Ran 60.26 61 ⇑P P 17 01 14.2 0.0
baz=60,SNR=6.7
CMB Columbia Colle 60.31 65 eP P 17 01 14.6 +0.1
CMB pmax pmax
comp=Z,12nm,1.0s,mb4.9
CMB Columbia Colle 60.31 65 eP P 17 01 14.6 +0.1
FCC comp=Z,12nm,1.0s,mb4.9
CMB Columbia Colle 60.31 65 ⇑P P 17 01 14.4 -0.2
baz=60
LCCM Lewis and Clar 60.33 53 P P 17 01 15.3 +0.6
HLID Hailey 60.35 57 eP P 17 01 14.2 -0.7
comp=Z,13nm,1.0s,mb4.9
PACP Pacheco Peak 60.40 66 ⇑P P 17 01 15.0 -0.2
baz=60
M10A I.L. Ranch, Tu 60.42 60 ⇑P P 17 01 15.9 +0.6
baz=60,SNR=14
MCMT McKenzie Canyo 60.43 55 eP P 17 01 15.8 +0.3
R06C Colerlie 60.57 64 ⇓P P 17 01 16.3 0.0
baz=60,SNR=6.9
BOZ Bozeman (W) 60.58 53 eP P 17 01 16.7 +0.3
BOZ pmax pmax
comp=Z,38nm,1.1s,mb5.4
BOZ Bozeman (W) 60.58 53 eP P 17 01 16.7 +0.3
comp=Z,38nm,1.1s,mb5.4
P08A Dixie Valley 60.66 62 ⇓P P 17 01 17.6 +0.6
baz=60
BMN Battle Mountai 60.70 61 eP P 17 01 17.7 +0.5
BMN pmax pmax
comp=Z,20nm,0.9s,mb5.2
BMN Battle Mountai 60.70 61 eP P 17 01 17.7 +0.4
comp=Z,20nm,0.9s,mb5.2
S06C San Francisco 60.73 65 ⇓P P 17 01 17.1 -0.3
baz=61
JOF Joensuu 60.87 334 ep P 17 01 16.9 -1.5
comp=Z,19nm,1.0s,mb5.2
O09A Fish Creek Ran 60.89 61 ⇓P P 17 01 18.7 +0.2
baz=61,SNR=11
M11A Holland Ranch, 60.91 59 ⇑P P 17 01 19.1 +0.5
baz=61
NDI New Delhi 60.99 282 ex P 17 01 12.0 -7.2
JMIC Jan Mayen 61.02 354 LR LR 17 25 32.9
comp=Z,289nm,21.9s,MS4.4,baz=61,slow=34
JMIC Jan Mayen 61.02 354 i P 17 01 19.1 -0.3
JMIC eS S 17 09 42.6 +5.3
JMIC AMS AMS 17 25 58.8
comp=Z,242nm,19.1s,MS4.4
R07C Lee Vining 61.09 64 ⇓P P 17 01 20.1 +0.3
baz=61
U04C Hernandez Rese 61.12 67 ⇓P P 17 01 20.5 +0.5
baz=61
QLMT Earthquake Lak 61.21 54 eP P 17 01 21.5 +0.8
O10A Cortez Mining, 61.22 61 ⇑P P 17 01 21.4 +0.6
baz=61
Q08A Gabbs 61.27 63 ⇓P P 17 01 21.3 +0.2
baz=61,SNR=6.5
P09A Austin 61.31 62 ⇓P P 17 01 21.6 +0.2
baz=61
NVAR Mina Array Bea 61.33 63 P P 17 01 21.6 +0.1
comp=Z,4.3nm,0.7s,mb4.7,baz=299,slow=6.1,SNR=41
N11A Elko Archery C 61.33 60 ⇑P P 17 01 22.0 +0.5
baz=61
T06C Millerton Lake 61.38 65 ⇑P P 17 01 22.1 +0.3
baz=61
KCC Kaiser Creek 61.41 65 ⇑P P 17 01 21.9 -0.2
baz=61
M12A Wells 61.43 59 ⇑P P 17 01 22.7 +0.5
baz=61,SNR=9.4
R08A Mina 61.50 63 ⇓P P 17 01 22.8 +0.2
baz=61
GCMT Greycliff 61.55 52 eP P 17 01 23.5 +0.5
YMR Madison River 61.57 54 eP P 17 01 23.5 +0.4
comp=Z,5.5nm,0.3s,mb5.2
P10A Eureka 61.67 61 ⇑P P 17 01 24.1 +0.3
baz=62
N12A Clover Valley, 61.72 59 ⇑P P 17 01 24.2 +0.1
baz=62
Q09A Carvers 61.74 62 ⇓P P 17 01 24.1 -0.2
baz=62
O11A Cowboy Ranch, 61.82 60 ⇑P P 17 01 25.0 +0.2
baz=62
MTUM Tungsten Hills 61.85 65 eP P 17 01 24.7 -0.3
M13A Montello 61.90 59 ⇑P P 17 01 25.7 +0.4
baz=62,SNR=15
LKWY Lake 61.95 54 eP P 17 01 28.1 +2.5
LKWY pmax pmax
comp=Z,42nm,1.2s,mb5.4
LKWY Lake 61.95 54 eP P 17 01 28.1 +2.4
comp=Z,42nm,1.2s,mb5.4
V05C Boulder Hill, 61.99 67 ⇓P P 17 01 25.9 0.0
baz=62
FLWY Flagg Ranch 62.09 54 eP P 17 01 27.6 +1.0
comp=Z,26nm,1.0s,mb5.3
P11A Circle Ranch, 62.13 61 ⇓P P 17 01 27.0 +0.1
baz=62
KULM Kulim 62.17 245 eP P 17 01 27.9 +0.7
R09A Tonopah 62.19 63 P P 17 01 27.2 -0.1
baz=62,SNR=16
N13A Wendover, West 62.20 59 ⇓P P 17 01 27.6 +0.2
baz=62,SNR=5.4
RRI2 Red Ridge 62.23 55 eP P 17 01 28.5 +1.0
comp=Z,33nm,0.8s,mb5.5
O12A Currie 62.26 60 ⇓P P 17 01 28.0 +0.2
baz=62,SNR=15
MOOW Moose Ponds 62.28 55 eP P 17 01 28.7 +0.8
comp=Z,16nm,1.1s,mb5.1
TPAW Teton Pass 62.34 55 eP P 17 01 29.2 +0.9
comp=Z,39nm,1.0s,mb5.5
HVU Hansel Valley 62.42 57 eP P 17 01 28.8 0.0
HVU pmax pmax
comp=Z,12nm,0.9s,mb5.0
HVU Hansel Valley 62.42 57 eP P 17 01 28.8 0.0
comp=Z,12nm,0.9s,mb5.0
S09A Goldfield 62.43 63 ⇓P P 17 01 28.8 -0.1
baz=62
LOHW Long Hollow 62.45 55 eP P 17 01 29.8 +0.7
comp=Z,22nm,1.0s,mb5.2
REDW Red Top Meadow 62.48 55 eP P 17 01 30.5 +1.3
comp=Z,59nm,1.2s,mb5.6
VES Vestal, Richgr 62.51 66 ⇑P P 17 01 28.7 -0.7
baz=62
P12A McGill 62.68 61 ⇑P P 17 01 30.5 -0.1
baz=62
GRAC Grapevine Rang 62.81 64 ⇑P P 17 01 31.5 +0.1
baz=63
BGU Big Grassy Mou 62.83 58 P P 17 01 31.7 +0.1
SPUT South Promonto 62.91 58 eP P 17 01 32.2 0.0
KAF Kangasniemi 62.95 335 ep P 17 01 31.2 -1.1
comp=Z,22nm,1.0s,mb5.2,baz=35,slow=6.3
KAF Kangasniemi 62.95 335 eP P 17 01 31.2 -1.1
KAF pmax pmax
comp=Z,22nm,1.0s,mb5.2
ISA Isabella 63.00 66 ⇑P P 17 01 31.8 -0.9
baz=63
Q12A Willow Creek R 63.01 61 ⇑P P 17 01 32.8 +0.1
baz=63
TRCR Troy Canyon 63.01 62 eP P 17 01 32.8 0.0
HWUT Hardware Ranch 63.22 57 eP P 17 01 34.3 +0.1
comp=Z,11nm,0.8s,mb5.0
MPMC Manual Prospec 63.35 65 ⇑P P 17 01 34.9 -0.1
baz=63,SNR=6.8
DUG Dugway 63.43 59 eP P 17 01 35.8 +0.2
DUG pmax pmax
comp=Z,22nm,0.9s,mb5.3
DUG Dugway 63.43 59 eP P 17 01 35.8 +0.3
comp=Z,22nm,0.9s,mb5.3
FURC Furnace Creek, 63.47 64 ⇓P P 17 01 35.2 -0.5
baz=63
OSI Osito Adit 63.53 67 ⇓P P 17 01 35.8 -0.4
baz=63
FINES FINESS Array B 63.55 335 P P 17 01 35.4 -0.9
comp=Z,118nm,1.3s,mb5.8,baz=37,slow=5.8,SNR=63
FINES LR LR 17 33 24.6
comp=Z,608nm,19.1s,MS4.8,baz=20,slow=40
FINES FINESS Array B 63.55 335 P P 17 01 35.4 -1.0
FINES pmax pmax
comp=Z,118nm,1.3s
FINES MLR MLR
comp=Z,608nm,19.1s
FINES FINESS Array B 63.55 335 P P 17 01 35.4 -0.9
FINES LR LR 17 33 24.6
PDAR Pinedale Array 63.58 55 P P 17 01 36.8 +0.2
comp=Z,11nm,0.9s,mb4.9,baz=300,slow=2.9,SNR=69
PDAR LR LR 17 31 00.9
comp=Z,170nm,19.8s,MS4.2,baz=335,slow=38
LRMC Laurel Mountai 63.61 66 ⇑P P 17 01 36.3 -0.4
baz=63
CTU Camp Tracy 63.72 58 eP P 17 01 37.6 +0.2
comp=Z,11nm,0.9s,mb4.9
EDW2 Edwards Air Fo 63.81 66 ⇑P P 17 01 37.6 -0.5
baz=64,SNR=6.0
U10A Ash Meadows, A 63.82 64 ⇓P P 17 01 38.0 -0.1
baz=64
NLU North Lily Min 64.02 59 eP P 17 01 40.1 +0.7
MOS Moscow 64.14 326 eP P 17 01 43.6 +3.4
AJM Ajmer 64.15 282 i P P 17 01 40.0 -0.3
DAU Daniels Canyon 64.19 58 eP P 17 01 41.6 +1.1
SHOC Shoshone 64.19 64 ⇑P P 17 01 40.2 -0.4
baz=64
GSC Goldstone 64.27 65 ⇓P P 17 01 40.7 -0.3
baz=64
BFSC Mount Baldy St 64.44 67 ⇑P P 17 01 41.7 -0.5
baz=64
BHPL Bhopal 64.49 277 i x x 17 01 28.4
CIS Catalina Islan 64.53 68 ⇓P P 17 01 42.0 -0.8
baz=64
ARUT Antelope Range 64.65 61 eP P 17 01 36.4 -7.2
TUQ Turquoise Mtn. 64.72 65 ⇓P P 17 01 43.9 -0.1
baz=64
CCUT Cedar City 64.86 61 eP P 17 01 44.8 -0.1
HEC Hector,Ludlow 64.87 65 ⇑P P 17 01 44.7 -0.3
baz=65,SNR=7.0
U12A Valley of Fire 64.90 63 ⇑P P 17 01 45.0 -0.2
baz=65
MSU Marysvale 64.92 60 eP P 17 01 45.9 +0.6
TMUT Trail Mountain 64.95 59 eP P 17 01 46.2 +0.6
OBN Obninsk 65.00 326 ⇓eP P 17 01 44.9 -1.0
OBN e 17 04 15.3
OBN eS S 17 10 28.2 +1.0
OBN pmax pmax
comp=Z,31nm,1.3s,mb5.2
OBN MLR MLR
comp=Z,800nm,22.0s,MS4.9
V12A Nelson 65.18 64 ⇑P P 17 01 46.7 -0.3
baz=65
ULM Lac du Bonnet 65.33 42 P P 17 01 45.8 -2.1
comp=Z,5.0nm,0.9s,mb4.6,baz=305,slow=7.6,SNR=7.1
ULM LR LR 17 31 01.3
comp=Z,300nm,21.6s,MS4.5,baz=176,slow=37
SRU San Rafael 65.47 58 eP P 17 01 48.7 -0.2
SRU pmax pmax
comp=Z,28nm,0.8s,mb5.3
SRU San Rafael 65.47 58 eP P 17 01 48.7 -0.2
comp=Z,28nm,0.8s,mb5.3
RWWY Rawlins 65.60 54 eP P 17 01 49.5 -0.2
comp=Z,20nm,1.1s,mb5.1
BELC Belle Mtn. 65.63 66 ⇑P P 17 01 49.2 -0.7
baz=65
RSSD Black Hills 65.64 51 eP P 17 01 49.3 -0.7
RSSD pmax pmax
comp=Z,46nm,1.2s,mb5.4
RSSD Black Hills 65.64 51 eP P 17 01 49.3 -0.7
comp=Z,46nm,1.2s,mb5.4
W13A Hualapai Mount 66.18 64 ⇓P P 17 01 53.4 -0.1
baz=66
X13A Yucca 66.56 64 ⇓P P 17 01 55.5 -0.4
baz=66,SNR=6.6
W14A Seligman 66.59 63 ⇓P P 17 01 56.1 0.0
baz=66,SNR=9.1
Y12C Blythe 66.70 65 ⇑P P 17 01 56.5 -0.3
baz=66
PV10 Paradox Valley 66.82 58 eP P 17 01 57.2 -0.4
GLA Glamis 66.99 66 ⇑P P 17 01 58.4 -0.2
baz=67
Y13A Salome 67.08 65 ⇑P P 17 01 59.2 -0.1
baz=67
W15A Williams 67.10 63 ⇓P P 17 01 59.9 +0.5
baz=67
X14A Yava 67.21 64 ⇓P P 17 02 00.3 +0.3
baz=67,SNR=5.0
PV01 Paradox Valley 67.26 58 eP P 17 02 00.7 +0.3
WUAZ Wupatki 67.41 62 eP P 17 02 01.5 +0.2
comp=Z,14nm,1.0s,mb5.0
SMCO Snowmass 67.45 56 eP P 17 02 02.3 +0.7
comp=Z,19nm,0.9s,mb5.1
Y14A Wickenburg 67.50 64 ⇓P P 17 02 01.7 -0.1
baz=67
X15A Humboldt 67.59 63 ⇑P P 17 02 02.8 +0.3
baz=67,SNR=5.8
NB2 NORSAR Subarra 67.62 342 P P 17 02 02.1 -0.5
comp=Z,91nm,1.7s,mb5.5,baz=25,slow=6.5
NOA NORSAR Array B 67.62 342 P P 17 02 02.0 -0.6
comp=Z,11nm,1.1s,mb4.8,baz=26,slow=6.3,SNR=14
NOA LR LR 17 37 58.5
comp=Z,552nm,18.4s,MS4.8,baz=5.0,slow=42
NOA NORSAR Array B 67.62 342 P P 17 02 02.0 -0.6
NOA pmax pmax
comp=Z,11nm,1.1s
NOA MLR MLR
comp=Z,552nm,18.4s
HYB Hyderabad 67.76 272 i P P 17 02 04.0 +0.5
HYB Hyderabad 67.76 272 eP P 17 02 04.0 +0.5
ISCO Idaho Springs 67.78 55 eP P 17 02 04.6 +1.0
ISCO pmax pmax
comp=Z,22nm,1.1s,mb5.1
ISCO Idaho Springs 67.78 55 eP P 17 02 04.6 +0.9
comp=Z,22nm,1.1s,mb5.1
CTA Charters Tower 67.81 188 P P 17 02 02.6 -1.2
comp=Z,6.4nm,0.7s,mb4.7,baz=12,slow=8.0,SNR=11
CTA LR LR 17 28 35.8
comp=Z,153nm,18.4s,MS4.3,baz=16,slow=33
CTA Charters Tower 67.81 188 P P 17 02 02.7 -1.1
CTA pmax pmax
comp=Z,6.0nm,0.7s
CTA MLR MLR
comp=Z,153nm,18.5s
CTAO Charters Tower 67.81 188 eP P 17 02 02.2 -1.6
CTAO pmax pmax
comp=Z,16nm,1.2s,mb4.9
CTAO Charters Tower 67.81 188 eP P 17 02 02.2 -1.7
comp=Z,16nm,1.2s,mb4.9
NAO01 NORSAR Array S 67.87 342 eP P 17 02 03.9 -0.3
comp=Z,10nm,1.0s,mb4.8
HFS Hagfors 67.88 340 P P 17 02 03.9 -0.4
comp=Z,7.8nm,0.4s,mb5.1,baz=51,slow=4.7,SNR=90
HFS Hagfors 67.88 340 P P 17 02 03.9 -0.4
HFS pmax pmax
comp=Z,8.0nm,0.4s
BORG Borgarnes 67.89 358 P P 17 02 05.9 +1.6
comp=Z,59nm,1.0s,mb5.6,baz=4.6,slow=1.7,SNR=5.6
Z14A Wintersburg 67.93 64 ⇑P P 17 02 04.1 -0.5
baz=68
MNK Minsk 68.63 330 eP P 17 02 08.0 -1.0
115A Sonoran Desert 68.82 64 ⇑P P 17 02 10.4 +0.2
baz=69
MAK Makhachkala 69.07 311 i P P 17 02 16.3 +4.6
MAK MLR MLR
comp=Z,2μm,17.0s,MS5.3
KONO Kongsberg 69.23 342 eP P 17 02 13.3 +0.6
KONO eS S 17 11 17.9 -0.2
KONO i 17 16 29.1
KONO Kongsberg 69.23 342 P P 17 02 13.6 +0.9
KONO pmax pmax
comp=Z,30nm,1.2s,mb5.1
KONO Kongsberg 69.23 342 eP P 17 02 12.8 +0.1
comp=Z,30nm,1.2s,mb5.1
116A Eloy 69.24 64 ⇓P P 17 02 12.5 -0.3
baz=69
BER Bergen 69.40 344 eP P 17 02 14.6 +0.9
BER eP P 17 04 47.0 -0.1
BER eS S 17 11 18.7 -1.4
BER AMS AMS 17 38 20.6
comp=Z,313nm,10.3s,MS4.8
WRAB Tennant Creek 69.61 200 P P 17 02 14.9 -0.2
comp=Z,152nm,1.1s,mb5.8,SNR=9.1
WRAB Tennant Creek 69.61 200 ⇓eP P 17 02 14.2 -0.9
WRAB Tennant Creek 69.61 200 eP P 17 02 12.7 -2.4
comp=Z,55nm,1.2s,mb5.4
WB2 Warramunga Arr 69.62 200 eP P 17 02 13.9 -1.2
WRA Warramunga Arr 69.63 200 P P 17 02 14.0 -1.2
comp=Z,21nm,1.1s,mb5.0,baz=19,slow=6.5,SNR=49
WRA Warramunga Arr 69.63 200 P P 17 02 14.0 -1.2
WRA pmax pmax
comp=Z,21nm,1.1s

TUC Tucson 69.97 64 *e*P P 17 02 17.3 0.0
TUC pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TUC Tucson 69.97 64 *e*P P 17 02 17.3 0.0
comp=Z,10nm,1.1s,mb4.7
POO Poona 70.15 276⇓ *i*P P 17 02 15.0 -3.4
comp=Z,106nm,1.2s,mb5.7
DZM Mont Dzumac 70.26 168 LR LR 17 29 47.7
comp=Z,542nm,18.3s,MS4.8,baz=52,slow=33
FITZ Fitzroy Crossi 70.31 209 P P 17 02 19.4 0.0
comp=Z,12nm,0.9s,mb4.8,baz=2.9,slow=8.5,SNR=15
FITZ Fitzroy Crossi 70.31 209 *e*P P 17 02 19.3 -0.1
comp=Z,20nm,1.0s,mb5.0
SUW Suwalki 70.57 332 *e*P P 17 02 20.5 -0.5
SUW L 17 35 30.3
comp=Z,0.5nm,21.4s
SUW Suwalki 70.57 332 P P 17 02 20.9 -0.1
SUW pmax pmax
comp=Z,32nm,0.6s,mb5.4
LAZ Ladron 70.68 60 *e*P P 17 02 22.6 +1.0
KIV Kislovodsk 70.72 315 P P 17 02 23.5 +1.6
comp=Z,162nm,1.1s,mb5.9,SNR=6.7
KIV Kislovodsk 70.72 315⇑ *e*P P 17 02 22.6 +0.7
KIV *e*S S 17 11 35.4 -0.3
KIV pmax pmax
comp=Z,33nm,1.1s,mb5.2
KIV Kislovodsk 70.72 315 *e*P P 17 02 22.6 +0.7
comp=Z,28nm,1.0s,mb5.1
KAD Karad 70.78 275 *e*P P 17 02 22.0 -0.2
ZEI Tsey 71.02 313 *e*P P 17 02 21.8 -1.9
ZEI *e* 17 04 59.3
ZEI pmax pmax
comp=Z,13nm,0.6s,mb5.0
AKASG Malin Array Be 71.23 327 P P 17 02 24.3 -0.7
comp=Z,1.8nm,0.3s,mb4.5,baz=33,slow=5.9,SNR=45
AKASG LR LR 17 36 07.2
comp=Z,450nm,21.4s,MS4.7,baz=35,slow=38
AKASG Malin Array Be 71.23 327 P P 17 02 24.3 -0.6
AKASG pmax pmax
comp=Z,20nm,0.3s
AKASG MLR MLR
comp=Z,450nm,21.4s
AKASG Malin Array Be 71.23 327 P P 17 02 24.3 -0.7
AKASG LR LR 17 36 07.2
AKBB Malin Array Si 71.23 327 P P 17 02 24.4 -0.5
AKBB Malin Array Si 71.23 327 *e*P P 17 02 24.0 -0.9
DGRG David-gareji 71.25 311 P P 17 02 34.3 +9.2
MTA Mtatsminda 71.37 312 P P 17 02 27.2 +1.4
TBLG Delisi 71.37 312 P P 17 02 27.6 +1.9
ONI Oni 71.38 313 P P 17 02 27.3 +1.4
SCHQ Schefferville 72.17 24 P P 17 02 30.4 -0.2
comp=Z,8.8nm,0.9s,mb4.7,baz=338,slow=4.8,SNR=6.9
SCHQ LR LR 17 38 18.0
comp=Z,284nm,19.7s,MS4.5,baz=67,slow=39
OBR Brabster 72.47 348 *e*P P 17 02 31.6 -0.8
OBR Brabster 72.47 348 *e*P P 17 02 31.6 -0.8
ANN Anapa 72.53 318 *e*P P 17 02 32.8 0.0
GNI Garni 72.54 311 P P 17 02 34.6 +1.8
comp=Z,1.9nm,0.3s,mb4.5,baz=19,slow=15,SNR=7.0
GNI Garni 72.54 311 P P 17 02 34.6 +1.8
GNI pmax pmax
comp=Z,20nm,0.3s
ORE Reay 72.62 348 *e*P P 17 02 32.8 -0.5
ORE Reay 72.62 348 *e*P P 17 02 32.8 -0.5
WAR Warsaw 72.77 332 *e*P P 17 02 35.2 +1.0
MLA1 Latheron 72.80 348⇑ *e*P P 17 02 33.9 -0.4
MLA1 Latheron 72.80 348⇑ *e*P P 17 02 33.9 -0.4
GKP Gorka Klasztor 73.02 335 *e*P P 17 02 35.3 -0.4
GKP L 17 39 42.8
comp=Z,1.3nm,19.3s
AS31 Alice Springs 73.32 199 *e*P P 17 02 37.4 0.0
ASAR Alice Springs 73.32 199 P P 17 02 37.5 +0.1
comp=Z,19nm,1.0s,mb5.0,baz=9.7,slow=5.2,SNR=90
ASAR LR LR 17 31 28.1
comp=Z,221nm,20.4s,MS4.4,baz=360,slow=33
ASAR Alice Springs 73.32 199 P P 17 02 37.6 +0.2
ASAR pmax pmax
comp=Z,19nm,1.0s
ASAR MLR MLR
comp=Z,221nm,20.5s
MCD Coleburn Disti 73.48 348⇑ *e*P P 17 02 37.7 -0.7
MCD Coleburn Disti 73.48 348⇑ *e*P P 17 02 37.7 -0.7
MNTX Cornudas Mount 73.64 61 *e*P P 17 02 38.4 -0.9
comp=Z,11nm,1.1s,mb4.7
LVV L'vov 73.83 329⇓ *i*P P 17 02 40.5 +0.1
LVV *e*S S 17 11 58.7 -13
LVV *e* 17 12 56.1
LVV MLR MLR
comp=Z,300nm,20.0s,MS4.6
LVV MLR MLR
comp=N,300nm,18.0s
KAC Achnashellach 73.85 349⇑ *e*P P 17 02 39.8 -0.7
KAC Achnashellach 73.85 349⇑ *e*P P 17 02 39.8 -0.7
SIM Simferopol' 73.88 320 *c i*P P 17 02 41.0 +0.3
SIM pmax pmax
comp=Z,35nm,0.9s,mb5.3
SIM MLR MLR
comp=Z,640nm,16.2s,MS5.0
KPL Plockton 74.05 349⇑ *e*P P 17 02 41.1 -0.6
KPL Plockton 74.05 349⇑ *e*P P 17 02 41.1 -0.6
KSB Sheil Bridge 74.14 349⇑ *e*P P 17 02 42.0 -0.3
KSB Sheil Bridge 74.14 349⇑ *e*P P 17 02 42.0 -0.3
BSEG Bad Segeberg 74.27 339 *e*P P 17 02 43.1 +0.1
comp=Z,50nm,1.3s,mb5.3
BSEG Bad Segeberg 74.27 339 *e*P P 17 02 43.1 +0.1
BSEG pmax pmax
comp=Z,50nm,1.3s,mb5.3
KIS Kishinev 74.41 325 *e*P P 17 02 42.0 -1.8
ERZM Erzurum 74.42 313 *i*P P 17 02 45.6 +1.7
KWP Kalwaria 74.44 330 *e*P P 17 02 44.3 +0.3
KWP L 17 37 04.5
comp=Z,0.5nm,22.8s
KWP Kalwaria 74.44 330 P P 17 02 44.4 +0.4
KWP *e* 17 02 44.7
KWP pmax pmax
comp=Z,19nm,1.2s,mb4.9
KAR1 Arisaig 74.48 349⇑ *e*P P 17 02 43.8 -0.5
KAR1 Arisaig 74.48 349⇑ *e*P P 17 02 43.8 -0.5
RUE Ruedersdorf 74.69 336 *e*P P 17 02 45.3 -0.2
comp=Z,76nm,1.1s,mb5.5
RUE Ruedersdorf 74.69 336 *e*P P 17 02 45.2 -0.3
OJC Ojcow 74.90 332⇑ *i*P P 17 02 46.5 -0.2
OJC *e*S S 17 12 20.2 -3.1
OJC MLR MLR
comp=Z,3μm,17.7s,MS5.6
EAB Aberfoyle 74.99 348 *e*P P 17 02 46.6 -0.6
EAB Aberfoyle 74.99 348 *e*P P 17 02 46.6 -0.6
ESY Stoneypath 74.99 347 *e*P P 17 02 46.4 -0.8
ESY Stoneypath 74.99 347 *e*P P 17 02 46.4 -0.8
EDI Edinburgh 75.07 347 *e*P P 17 02 46.8 -0.8
EDI Edinburgh 75.07 347 *e*P P 17 02 46.8 -0.8
STHS Stebnicka Huta 75.12 330 *e*P P 17 02 48.6 +0.7
STHS pmax pmax
comp=Z,35nm,1.1s,mb5.2
STHS Stebnicka Huta 75.12 330 *e*P P 17 02 48.6 +0.7
comp=Z,35nm,1.1s,mb5.2
KOLS Kolonicke sedl 75.19 330 *e*P P 17 02 48.6 +0.3
EAU Auchinoon 75.19 347 *e*P P 17 02 48.2 -0.1
EAU Auchinoon 75.19 347 *e*P P 17 02 48.2 -0.1
EBL Broad Law 75.20 347 *e*P P 17 02 47.9 -0.5
EBL Broad Law 75.20 347 *e*P P 17 02 47.9 -0.5
BURAR Bucovina Array 75.26 327⇓ *i*P P 17 02 49.0 +0.3
KELT Kelkit 75.28 314 *i*P P 17 02 49.7 +0.9
NIE Niedzica 75.43 331 *e*P P 17 02 50.6 +0.9
KSP Ksiaz 75.44 334 *e*P P 17 02 49.7 -0.1
KSP L 17 41 19.5
comp=Z,1.7nm,19.5s
KSP Ksiaz 75.44 334⇑ *e*P P 17 02 49.6 -0.2
KSP *e* 17 03 00.5
KSP *e*S S 17 12 33.4 +4.2
KSP MLR MLR
comp=Z,2μm,19.5s,MS5.4
KSP Ksiaz 75.44 334⇑ *e*P P 17 02 49.6 -0.2
KSP *e*PcP PcP 17 03 00.5 -2.4
KSP *e*S S 17 12 33.4 +4.2
KSP *e*SS SS 17 18 06.6 +47
KSP LR LR
comp=Z,2μm,19.5s,MS5.4
CRVS Cervenica-Dubn 75.49 330 *e*P P 17 02 50.0 -0.1
EKA Eskdalemuir Ar 75.64 347 P P 17 02 50.8 -0.1
comp=Z,6.5nm,0.8s,mb4.6,baz=17,slow=5.8,SNR=16
EKA Eskdalemuir Ar 75.64 347 P P 17 02 50.8 -0.1
EKA pmax pmax
comp=Z,70nm,0.8s

NRDL Niedersach Rie 75.64 338 *e*P P 17 02 50.8 -0.1
comp=Z,37nm,1.2s,mb5.2
ESK Eskdalemuir 75.66 347 *e*P P 17 02 50.5 -0.5
ESK AMb AMB 17 02 52.8
comp=Z,27nm,1.5s,mb4.9
ESK Eskdalemuir 75.66 347 *e*P P 17 02 50.5 -0.5
ESK AMb AMB 17 02 52.8
comp=Z,27nm,1.5s,mb4.9
OKC Ostrava-Krasne 75.76 332 *e*P P 17 02 52.1 +0.5
OKC *e*S S 17 12 33.2 +0.4
OKC *ex* x 17 17 58.9
OKC AMS AMS 17 41 40.0
comp=Z,900nm,16.0s
OKC Ostrava-Krasne 75.76 332 *e*P P 17 02 52.1 +0.5
OKC *e*S S 17 12 33.2 +0.4
OKC MLR MLR
comp=Z,900nm,16.0s,MS5.2
OKC Ostrava-Krasne 75.76 332 *e*P P 17 02 52.1 +0.5
OKC *e*S S 17 12 33.2 +0.4
OKC *e*SS SS 17 17 58.9 +34
ECK Cauldkaine Hil 75.78 347⇑ *e*P P 17 02 51.3 -0.5
ECK AMb AMB 17 02 53.5
comp=Z,30nm,1.5s,mb5.0
ECK Cauldkaine Hil 75.78 347⇑ *e*P P 17 02 51.3 -0.5
ECK AMb AMB 17 02 53.5
comp=Z,30nm,1.5s,mb5.0
UPC Upice 75.82 334 *e*P P 17 02 52.3 +0.4
DPC Dobruska-Polom 75.86 334 *e*P P 17 02 52.6 +0.4
DPC *e*S S 17 12 47.9 +14
DPC *ex* x 17 18 06.0
DPC AMS AMS 17 41 00.0
comp=Z,1μm,17.8s
BHH Howats Hill 75.88 347 *e*P P 17 02 51.8 -0.5
BHH Howats Hill 75.88 347 *e*P P 17 02 51.8 -0.5
CLL Collm 75.96 336 *e*P P 17 02 52.1 -0.7
comp=Z,78nm,1.0s,mb5.6
CLL Collm 75.96 336⇑ *i*P P 17 02 52.2 -0.6
comp=Z,logA/T=1.9,mb5.6
CLL *e* 17 03 18.0
CLL *e*PP PP 17 05 54.0 +11
CLL *e*PS 17 13 15.0
CLL *e*SS SS 17 18 06.0 +38
CLL Lm 17 41 00.0
comp=Z,600nm,20.2s
CLL Collm 75.96 336⇑ *i*P P 17 02 52.2 -0.6
CLL pmax pmax
comp=Z,78nm,1.0s,mb5.6
CLL MLR MLR
comp=Z,600nm,20.2s,MS4.9
CLL Collm 75.96 336⇑ *i*P P 17 02 52.2 -0.6
comp=Z,78nm,1.0s,mb5.6
CLL *e* 17 03 18.0
CLL LR LR
comp=Z,600nm,20.2s,MS4.9
MORC Moravsky Berou 76.00 333⇑ *i*P P 17 02 53.2 +0.2
MORC Moravsky Berou 76.00 333 P P 17 02 53.3 +0.3
MORC Moravsky Berou 76.00 333 *e*P P 17 02 52.8 -0.1
comp=Z,63nm,1.1s,mb5.5
BRG Berggiesshubel 76.09 335 *e*P P 17 02 53.0 -0.5
comp=Z,39nm,1.2s,mb5.2
BRG Berggiesshubel 76.09 335 *i*P P 17 02 53.3 -0.2
comp=Z,23nm,1.2s,mb5.0
BRG *e* 17 03 08.4
comp=Z,4.7nm,0.9s
BRG S S 17 12 30.0 -6.4
BRG
comp=N,245nm,15.1s
BRG
comp=E,178nm,14.8s
BRG
comp=Z,462nm,16.2s
BRG Berggiesshubel 76.09 335 *i*P P 17 02 53.3 -0.2
BRG *e* 17 03 08.4
BRG pmax pmax
BRG S S 17 12 30.0 -6.4
BRG LR LR
comp=Z,23nm,1.2s,mb5.0
BRG MLR MLR
comp=N,245nm,15.1s,MS4.7
BRG MLR MLR
comp=E,178nm,14.8s,MS4.7
BRG MLR MLR
comp=Z,462nm,16.2s,MS4.9
BRG Berggiesshubel 76.09 335 *i*P P 17 02 53.3 -0.2
comp=Z,23nm,1.2s,mb5.0
BRG *e* 17 03 08.4
BRG S S 17 12 30.0 -6.4
BRG LR LR
comp=Z,460nm,16.2s,MS4.9
LIKS Likavka 76.14 331 *e*P P 17 02 53.4 -0.4
KECS Kecovo 76.18 330 *e*P P 17 02 53.9 -0.1
KECS pmax pmax
comp=Z,16nm,1.1s,mb4.9
KECS Kecovo 76.18 330 *e*P P 17 02 53.9 -0.1
comp=Z,16nm,1.1s,mb4.9
FBE Freiberg 76.21 336 *e*P P 17 02 53.9 -0.3
comp=Z,61nm,1.1s,mb5.4
PVCC Panska Ves 76.22 335 *e*P P 17 02 54.4 +0.2
PVCC AMS AMS 17 41 50.0
comp=Z,600nm,16.3s
BBO1 Bothel 76.23 347 *e*P P 17 02 54.3 0.0
BBO1 Bothel 76.23 347 *e*P P 17 02 54.3 0.0
CKE Keswick 76.35 347⇑ *e*P P 17 02 54.8 -0.2
CKE Keswick 76.35 347⇑ *e*P P 17 02 54.8 -0.2
IBBN Ibbenburen 76.38 340 *e*P P 17 02 55.2 0.0
comp=Z,79nm,1.4s,mb5.5
XDE Dent Fell 76.49 347 *e*P P 17 02 55.0 -0.7
XDE AMb AMB 17 02 57.6
comp=Z,58nm,1.6s,mb5.2
XDE Dent Fell 76.49 347 *e*P P 17 02 55.0 -0.7
XDE AMb AMB 17 02 57.6
comp=Z,58nm,1.6s,mb5.2
GTTG Gvttingen 76.55 338 *e*P P 17 02 56.1 0.0
comp=Z,50nm,1.3s,mb5.3
CCM Cathedral Cave 76.64 48 P P 17 02 55.1 -1.5
CCM pmax pmax
comp=Z,31nm,1.5s,mb5.0
CCM Cathedral Cave 76.64 48 *e*P P 17 02 54.5 -2.1
comp=Z,31nm,1.5s,mb5.0
TIRR Tirgusor 76.66 323⇑ *i*P P 17 02 56.7 0.0
TIRR Tirgusor 76.66 323 P P 17 02 57.2 +0.5
TIRR Tirgusor 76.66 323 *e*P P 17 02 56.5 -0.2
MARD Mardin 76.70 311 *i*P P 17 02 58.6 +1.6
VRAC Vranov 76.70 333 P P 17 02 57.1 +0.1
comp=Z,31nm,0.9s,mb5.2,baz=26,slow=6.0,SNR=44
VRAC Vranov 76.70 333⇑ *i*P P 17 02 57.4 +0.4
VRAC Vranov 76.70 333 P P 17 02 57.7 +0.7
VRAC Vranov 76.70 333⇑ P P 17 02 57.4 +0.4
PRU Pruhonice 76.71 335 *e*P P 17 02 57.3 +0.3
PRU *ex* x 17 12 16.2
PRU *ex* x 17 18 19.6
PRU AMS AMS 17 42 00.0
comp=Z,700nm,15.9s
VYHS Vyhne 76.71 331 *i*P P 17 02 57.2 +0.2
VYHS pmax pmax
comp=Z,24nm,1.1s,mb5.0
VYHS Vyhne 76.71 331 *i*P P 17 02 57.2 +0.2
comp=Z,24nm,1.1s,mb5.0
MLR Muntele Rosu 76.77 325 P P 17 02 57.3 -0.1
comp=Z,41nm,0.9s,mb5.3,baz=343,slow=0.5,SNR=40
MLR Muntele Rosu 76.77 325⇑ *i*P P 17 02 57.5 +0.2
DRGR 76.86 328⇓ *i*P P 17 02 57.9 0.0
DRGR 76.86 328⇓ P P 17 02 57.9 0.0
PSZ Piszkesteto 76.87 330⇑ *e*P P 17 02 58.4 +0.5
PSZ Piszkesteto 76.87 330⇓ *i*P P 17 02 58.4 +0.5
PSZ Piszkesteto 76.87 330 P P 17 02 58.7 +0.8
PSZ pmax pmax
comp=Z,44nm,1.1s,mb5.3
TANN Tannenbergstha 76.91 336 *e*P P 17 02 58.1 -0.1
comp=Z,25nm,1.2s,mb5.0
WTSB Winterswijk 76.92 340⇑ *e*P P 17 02 57.8 -0.4
comp=Z,59nm,1.3s,mb5.3
WERD Werda 76.93 336 *e*P P 17 02 58.2 0.0
comp=Z,45nm,1.2s,mb5.3
MOX Moxa 76.94 337 *e*P P 17 02 58.1 -0.2
comp=Z,45nm,1.2s,mb5.3
MOX Moxa 76.94 337 *e*P P 17 02 52.5 -5.8
MOX *e* pP 17 02 58.3 -5.3
MOX *e* 17 03 09.0
MOX
comp=Z,500nm,22.0s
MOX Moxa 76.94 337 *e*P P 17 02 58.3 0.0
MOX *e* 17 03 09.0
MOX LR LR
comp=Z,500nm,22.0s,MS4.8
GUNZ Gunzen 77.00 336 *e*P P 17 02 58.7 +0.1
comp=Z,36nm,1.1s,mb5.2
CTKT Corum 77.02 317 *i*P P 17 03 00.3 +1.6
WIM Isle of Man 77.02 347⇑ *e*P P 17 02 58.4 -0.3
WIM AMb AMB 17 02 59.8
comp=Z,60nm,1.2s,mb5.4
WIM Isle of Man 77.02 347⇑ *e*P P 17 02 58.4 -0.3
WIM AMb AMB 17 02 59.8
comp=Z,60nm,1.2s,mb5.4
TREC Trest 77.05 334 *e*P P 17 02 59.2 +0.3
TREC AMS AMS 17 42 30.0
comp=Z,1μm,17.2s
NKC Novy Kostel 77.08 336 *e*P P 17 02 59.3 +0.2
NKC *ex* x 17 12 34.9
NKC AMS AMS 17 41 40.0
NKC Novy Kostel 77.08 336 *e*P P 17 02 59.3 +0.2
NKC *e*S S 17 12 34.9 -12
FVM French Village 77.11 47 P P 17 02 58.8 -0.4
FVM pmax pmax
comp=Z,31nm,1.5s,mb5.0
FVM French Village 77.11 47 *e*P P 17 02 58.8 -0.5
comp=Z,31nm,1.5s,mb5.0
MALT Malatya 77.11 313⇑ *i*P P 17 03 00.7 +1.5
MALT Malatya 77.11 313 P P 17 03 00.9 +1.7
MALT Malatya 77.11 313 *e*P P 17 03 00.5 +1.3
comp=Z,67nm,1.1s,mb5.5
SMOL Smolenice 77.15 332 *i*P P 17 02 59.7 +0.2
LHO Holmfirth 77.15 346⇑ *e*P P 17 02 58.5 -1.0
LHO Holmfirth 77.15 346⇑ *e*P P 17 02 58.5 -1.0
VOIR 77.16 326⇑ *i*P P 17 03 00.0 +0.5
VOIR 77.16 326⇑ P P 17 02 60.0 +0.5
UBBA Unterbreizbach 77.20 338 *e*P P 17 02 59.5 -0.3
comp=Z,63nm,1.6s,mb5.3
HATD Hatta, Dubai 77.24 293⇑ P P 17 03 00.4 +0.4
SNR=8.8
BUG Bochum--Univer 77.30 340 *e*P P 17 03 00.0 -0.3
comp=Z,53nm,1.1s,mb5.4
KBI1 Birley Grange 77.38 345⇑ *e*P P 17 03 00.4 -0.4
KBI1 Birley Grange 77.38 345⇑ *e*P P 17 03 00.4 -0.4
PSN Preselentsi 77.39 323 *e*P P 17 03 01.0 +0.1
ASHO Ashiyiah 77.39 293⇓ P P 17 03 01.2 +0.4
SNR=14
MANZ Manzenberg 77.40 336 *e*P P 17 03 00.9 0.0
comp=Z,34nm,1.1s,mb5.2
HOQ Hoqain 77.40 291⇓ P P 17 03 01.7 +0.7
SNR=15
ZST Bratislava 77.53 332 *i*P P 17 03 02.1 +0.5
comp=Z,36nm,1.2s,mb5.2
ZST LR LR
comp=Z,1μm,18.9s,MS5.2
BUD Budapest 77.53 331⇓ *e*P P 17 03 02.8 +1.2
ROTZ Rotzenmuhle 77.57 336 *e*P P 17 03 02.1 +0.2
comp=Z,55nm,1.1s,mb5.4
KWE Weaver Farm 77.66 345⇑ *e*P P 17 03 02.3 0.0
KWE Weaver Farm 77.66 345⇑ *e*P P 17 03 02.3 0.0
ELDT Eldivan 77.74 318 *i*P P 17 03 04.2 +1.3
KHC Kasperske Hory 77.76 335 *e*P P 17 03 03.4 +0.5
KHC *e*pP pP 17 03 08.0 -0.3
KHC *e*S S 17 13 00.9 +6.3
KHC *e*SS SS 17 18 06.4 +12
KHC AMS AMS 17 41 00.0
comp=Z,800nm,18.2s
KHC Kasperske Hory 77.76 335 *e*P P 17 03 03.4 +0.5
KHC *e* pP 17 03 08.0 -0.3
KHC *e*S S 17 13 00.9 +6.3
KHC MLR MLR
comp=Z,800nm,18.2s,MS5.1
JCT Junction City 77.78 58 P P 17 03 03.0 0.0
JCT pmax pmax
comp=Z,15nm,0.9s,mb4.9
JCT Junction City 77.78 58 P P 17 03 02.1 -0.9
comp=Z,15nm,0.9s,mb4.9
GRA1 Grafenberg Arr 77.91 336 *e*P P 17 03 04.1 +0.4
comp=Z,91nm,1.1s,mb5.6
GRA1 LR LR
comp=Z,600nm,21.4s,MS4.9
GRF Grafenberg Arr 77.91 336 *e*P P 17 03 04.1 +0.4
comp=Z,91nm,1.1s,mb5.6
GRF *e*L 17 40 35.0
comp=Z,562nm,21.4s
GRF Grafenberg Arr 77.91 336 *e*P P 17 03 04.1 +0.4
GRF pmax pmax
comp=Z,91nm,1.1s,mb5.6
GRF MLR MLR
comp=Z,600nm,21.4s,MS4.9
GRF Grafenberg Arr 77.91 336 *e*P P 17 03 04.1 +0.4
GRF pmax pmax
comp=Z,91nm,1.1s,mb5.6
GRF MLR MLR
comp=Z,600nm,21.4s,MS4.9
WET Wettzell 77.95 335 *e*P P 17 03 04.3 +0.4
comp=Z,67nm,1.1s,mb5.5
WET Wettzell 77.95 335 *e*P P 17 03 04.3 +0.4
WET pmax pmax
comp=Z,67nm,1.1s,mb5.5
GEC2 GERESS Array S 77.98 335 *e*P P 17 03 03.9 -0.2
comp=Z,30nm,1.1s,mb5.1
GEC2 GERESS Array S 77.98 335 *e*P P 17 03 03.9 -0.2
GEC2 pmax pmax
comp=Z,30nm,1.1s,mb5.1
GERES GERESS Array B 77.98 335 P P 17 03 03.9 -0.3
comp=Z,14nm,0.9s,mb4.9,baz=35,slow=4.9,SNR=60
GERES LR LR 17 41 42.5
comp=Z,929nm,18.7s,MS5.1,baz=23,slow=39
GERES GERESS Array B 77.98 335 P P 17 03 03.9 -0.2
GERES pmax pmax
comp=Z,14nm,0.9s
GERES MLR MLR
comp=Z,929nm,18.7s
SBD1 Bryn Du 78.00 346 *e*P P 17 03 04.0 -0.3
SBD1 Bryn Du 78.00 346 *e*P P 17 03 04.0 -0.3
CDAG Cicekdag 78.00 317 *i*P P 17 03 04.9 +0.6
ARQ Araqi 78.08 291⇑ P P 17 03 05.9 +1.2
SNR=10
DLF Lyons Farm 78.11 348⇑ *i*P P 17 03 04.5 -0.3
TNS Taunus Mts 78.14 338 *e*P P 17 03 05.0 0.0
comp=Z,43nm,1.1s,mb5.3
TNS Taunus Mts 78.14 338 *e*P P 17 03 05.0 0.0
TNS pmax pmax
comp=Z,43nm,1.1s,mb5.3
MIAR Mount Ida 78.15 51 *e*P P 17 03 04.7 -0.4
MIAR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MIAR Mount Ida 78.15 51 *e*P P 17 03 04.7 -0.3
comp=Z,10nm,0.9s,mb4.8
CONA Conrad Observa 78.15 333 *i*P P 17 03 05.7 +0.6
comp=Z,36nm,1.2s,mb5.2,SNR=17
SOP Sopron 78.15 332⇓ *e*P P 17 03 06.4 +1.3
DCN Croghan 78.16 349⇑ *i*P P 17 03 05.0 -0.1
HGN Heimansgroeve 78.24 340⇑ *e*P P 17 03 05.4 -0.2
comp=Z,66nm,1.3s,mb5.4
HGN Heimansgroeve 78.24 340 *e*S S 17 13 16.9 +17
HGN *e*SS SS 17 18 50.9 +49
BR131 Keskin Array S 78.26 317 *e*P P 17 03 05.9 +0.2
comp=Z,30nm,0.9s,mb5.2
BRTR Keskin Array B 78.26 317 P P 17 03 06.2 +0.6
comp=Z,33nm,1.0s,mb5.2,baz=66,slow=3.0,SNR=92
BRTR LR LR 17 44 22.2
comp=Z,272nm,18.1s,MS4.6,baz=191,slow=41
BRTR Keskin Array B 78.26 317 P P 17 03 06.3 +0.6
BRTR pmax pmax
comp=Z,33nm,1.0s
BRTR MLR MLR
comp=Z,272nm,18.1s
BZS Buzias 78.26 328⇑ *i*P P 17 03 05.2 -0.5
BZS Buzias 78.26 328 P P 17 03 05.5 -0.2
BZS Buzias 78.26 328⇑ P P 17 03 05.2 -0.5
BEBN Eben Emael 78.27 340 P P 17 03 05.8 +0.1
GZT Gaziantep 78.28 313 *i*P P 17 03 07.0 +1.2
SGKT Sivrigoynuk 78.29 319 *i*P P 17 03 07.0 +1.2
HLM1 Long Mynd 78.31 346 *e*P P 17 03 05.7 -0.3
HLM1 Long Mynd 78.31 346 *e*P P 17 03 05.7 -0.3
MEM Membach 78.37 340 P P 17 03 06.3 0.0
AVNT Avonos 78.45 316 *i*P P 17 03 09.2 +2.4
ANTO Ankara 78.53 318⇑ *i*P P 17 03 08.0 +0.8
ANTO Ankara 78.53 318 P P 17 03 08.4 +1.2
SNR=13
ANTO Ankara 78.53 318 P P 17 03 08.5 +1.3
ANTO pmax pmax
comp=Z,80nm,1.2s,mb5.5

ANTO Ankara 78.53 318 *eP* **P 17 03 07.7 +0.5**
comp=Z,80nm,1.2s,mb5.5

ZIMR 78.53 325 ⇓*iP* **P 17 03 07.2 0.0**
ZIMR 78.53 325 ⇓P **P 17 03 07.2 0.0**
UCC Uccle 78.56 341 P **P 17 03 07.5 +0.1**
HENT Hendek 78.60 320 *iP* **P 17 03 07.7 +0.2**
TOD Tromm 78.62 338⇑*eP* **P 17 03 07.4 -0.3**
ABH Alteburg 78.68 339⇑*eP* **P 17 03 07.2 -0.8**
MOA Molln 78.71 334⇑*iP* **P 17 03 08.3 +0.2**
comp=Z,21nm,1.1s,mb5.0,SNR=10.0

BCLA Clavier 78.71 340 P **P 17 03 08.0 -0.2**
BCLA XP sP 17 03 14.4 -1.0
BCLA E 17 03 22.4

PKSM Moragy 78.77 330⇑*iP* **P 17 03 07.8 -0.7**
PKSM Moragy 78.77 330 *eP* **P 17 03 08.3 -0.2**
HTR Trewern Hill 78.80 346⇑*eP* **P 17 03 08.4 -0.2**
HTR AMb AMB 17 03 10.7
comp=Z,35nm,1.4s,mb5.1

HTR Trewern Hill 78.80 346⇑*eP* **P 17 03 08.4 -0.2**
HTR AMb AMB 17 03 10.7
comp=Z,35nm,1.4s,mb5.1

UMR Umm Al-Rimmam 78.82 302 *eP* **P 17 03 08.7 -0.1**
UMR AMb AMB 17 03 10.8
comp=Z,184nm,1.0s,mb6.0

MCH1 Michaelchurch 78.83 346 *eP* **P 17 03 08.6 -0.2**
MCH1 Michaelchurch 78.83 346 *eP* **P 17 03 08.6 -0.2**
MIB Mutribah 78.85 302 *eP* **P 17 03 09.1 +0.1**
MIB AMb AMB 17 03 11.0
comp=Z,260nm,0.9s,mb6.2

ARSA Arzberg 78.86 333⇑*iP* **P 17 03 09.3 +0.3**
comp=Z,64nm,1.5s,mb5.3,SNR=15

JMB Yambol 79.05 323 *eP* **P 17 03 10.0 0.0**
GIVF Givet 79.11 341⇑*iP* **P 17 03 10.2 -0.2**
comp=Z,96nm,1.2s,mb5.3

GIVF Givet 79.11 341⇑*iP* **P 17 03 10.2 -0.2**
GIVF pmax pmax
comp=Z,48nm,1.2s,mb5.3

GIVF Givet 79.11 341⇑*iP* **P 17 03 10.2 -0.2**
comp=Z,48nm,1.2s,mb5.3

HGH Gray Hill 79.15 346⇑*eP* **P 17 03 09.4 -1.2**
HGH AMb AMB 17 03 12.6
comp=Z,118nm,1.2s,mb5.7

HGH Gray Hill 79.15 346⇑*eP* **P 17 03 09.4 -1.2**
HGH AMb AMB 17 03 12.6
comp=Z,118nm,1.2s,mb5.7

DOU Dourbes 79.17 341 P **P 17 03 10.5 -0.2**
WLF Walferdange 79.22 340 *eP* **P 17 03 10.8 -0.1**
comp=Z,32nm,1.4s,mb5.1

WLF Walferdange 79.22 340 P **P 17 03 11.3 +0.4**
WLF Walferdange 79.22 340 *eP* **P 17 03 11.1 +0.2**
WLF pmax pmax
comp=Z,64nm,1.6s,mb5.3

WLF Walferdange 79.22 340 *eP* **P 17 03 11.1 +0.2**
comp=Z,64nm,1.6s,mb5.3

MENF Mencas 79.26 342 *eP* **P 17 03 10.8 -0.4**
RST Umm Al-Ruwaisa 79.28 302 *eP* **P 17 03 11.1 -0.2**
RST AMb AMB 17 03 13.1
comp=Z,288nm,1.0s,mb6.2

FUR Furstenfeldbru 79.28 336 *eP* **P 17 03 11.5 +0.2**
comp=Z,91nm,1.1s,mb5.6

FUR Furstenfeldbru 79.28 336 *eP* **P 17 03 11.5 +0.2**
FUR pmax pmax
comp=Z,91nm,1.1s,mb5.6

STU Stuttgart 79.29 337 *eP* **P 17 03 11.3 0.0**
comp=Z,49nm,1.0s,mb5.4

STU Stuttgart 79.29 337 P **P 17 03 11.3 0.0**
STU pmax pmax
comp=Z,34nm,0.9s,mb5.3

STU Stuttgart 79.29 337 P **P 17 03 11.3 -0.1**
comp=Z,34nm,0.9s,mb5.3

BAIF Baives 79.29 341⇑*iP* **P 17 03 11.3 -0.1**
comp=Z,77nm,1.2s,mb5.2

BAIF Baives 79.29 341⇑*iP* **P 17 03 11.3 -0.1**
BAIF pmax pmax
comp=Z,38nm,1.2s,mb5.2

BAIF Baives 79.29 341⇑*iP* **P 17 03 11.3 -0.1**
comp=Z,38nm,1.2s,mb5.2

QRN Al-Qurain 79.31 301 *eP* **P 17 03 11.6 +0.1**
QRN AMb AMB 17 03 13.7
comp=Z,171nm,1.0s,mb5.9

NAY Al-Naaiem 79.32 302 *eP* **P 17 03 11.6 0.0**
NAY AMb AMB 17 03 13.6
comp=Z,131nm,1.0s,mb5.8

RDF Al-Radifah 79.39 301 *eP* **P 17 03 12.1 +0.2**
RDF AMb AMB 17 03 14.3
comp=Z,350nm,1.1s,mb6.2

LANF Langenberg 79.45 338⇑*eP* **P 17 03 12.4 +0.2**
PERS Pernice 79.54 333 *iP* **P 17 03 12.7 0.0**
KBA Koelnbreinsper 79.67 334⇑*iP* **P 17 03 14.2 +0.7**
comp=Z,88nm,1.1s,mb5.6,SNR=9.9

KBA Koelnbreinsper 79.67 334⇑*iP* **P 17 03 14.2 +0.8**
KBA pmax pmax
comp=Z,88nm,1.1s,mb5.6

ESKT Eskisehir 79.69 319 *iP* **P 17 03 15.1 +1.6**
NATX Nacogdoches 79.70 54 *eP* **P 17 03 14.2 +0.6**
comp=Z,34nm,1.0s,mb5.2

DIM Dimitrovgrad 79.82 324 P **P 17 03 14.6 +0.3**
OBKA Obir 79.82 333 ⇓*iP* **P 17 03 14.3 +0.1**
comp=Z,100nm,2.5s,mb5.3

WVT Waverly 79.84 47 P **P 17 03 14.3 -0.1**
WVT pmax pmax
comp=Z,21nm,0.9s,mb5.1

BFO Black Forest 79.92 338 *eP* **P 17 03 14.7 -0.1**
comp=Z,53nm,1.1s,mb5.4

BFO Black Forest 79.92 338 *eP* **P 17 03 14.7 -0.1**
BFO pmax pmax
comp=Z,53nm,1.1s,mb5.4

ULDT Uludag 79.92 320 *iP* **P 17 03 15.2 +0.4**
KDHN Kadinhani 79.93 318 *iP* **P 17 03 14.8 -0.1**
WATA Walderalm 79.95 335⇑*iP* **P 17 03 15.4 +0.5**
comp=Z,59nm,1.1s,mb5.4,SNR=14

WATA Walderalm 79.95 335⇑*iP* **P 17 03 15.4 +0.4**
WATA pmax pmax
comp=Z,59nm,1.1s,mb5.4

STKA Stephens Creek 79.98 191 P **P 17 03 13.1 -2.0**
comp=Z,5.8nm,1.1s,mb4.4,baz=80,slow=5.5,SNR=3.8
STKA LR LR 17 39 11.1
comp=Z,292nm,18.2s,MS4.7,baz=24,slow=36

STKA Stephens Creek 79.98 191 *eP* **P 17 03 13.5 -1.6**
comp=Z,64nm,0.9s,mb4.5

WTTA Wattenberg 80.00 335 *iP* **P 17 03 16.0 +0.8**
comp=Z,137nm,1.2s,mb5.7,SNR=28

WTTA Wattenberg 80.00 335 *iP* **P 17 03 16.0 +0.8**
WTTA pmax pmax
comp=Z,137nm,1.2s,mb5.8

MOTA Moosalm 80.08 336⇑*iP* **P 17 03 16.1 +0.4**
comp=Z,73nm,1.1s,mb5.5,SNR=27

MOTA Moosalm 80.08 336⇑*iP* **P 17 03 16.1 +0.5**
MOTA pmax pmax
comp=Z,73nm,1.1s,mb5.5

WLS Welschbruch 80.09 338 *eP* **P 17 03 15.0 -0.7**
CDF Champ du Feu 80.11 338⇑*iP* **P 17 03 15.8 0.0**
comp=Z,140nm,1.1s,mb5.5

CDF Champ du Feu 80.11 338⇑*iP* **P 17 03 15.8 0.0**
CDF pmax pmax
comp=Z,70nm,1.1s,mb5.5

CDF Champ du Feu 80.11 338⇑*iP* **P 17 03 15.8 0.0**
comp=Z,70nm,1.1s,mb5.5

SQTA Sankt Quirin 80.16 335 ⇓*iP* **P 17 03 17.0 +0.9**
comp=Z,67nm,1.1s,mb5.5,SNR=13

SQTA Sankt Quirin 80.16 335 ⇓*iP* **P 17 03 17.0 +0.9**
SQTA pmax pmax
comp=Z,67nm,1.1s,mb5.5

KDZ Kurdzhali 80.21 324 P **P 17 03 17.0 +0.7**
LJU Ljubljana 80.25 333 *eP* **P 17 03 15.9 -0.7**
VTS Vitosha 80.27 326 P **P 17 03 16.2 -0.5**
VTS Vitosha 80.27 326⇑*iP* **P 17 03 16.7 0.0**
VTS Vitosha 80.27 326 P **P 17 03 17.0 +0.3**
ECH Echery 80.32 338⇑*eP* **P 17 03 16.1 -0.8**
OXF Oxford 80.33 49 *eP* **P 17 03 15.9 -1.1**
OXF pmax pmax
comp=Z,29nm,1.0s,mb5.2

OXF Oxford 80.33 49 *eP* **P 17 03 15.9 -1.1**
comp=Z,29nm,1.0s,mb5.2

ROBS Robic 80.38 334 *eP* **P 17 03 15.9 -1.3**
SLE Schleitheim 80.40 337⇑*iP* **P 17 03 16.0 -1.3**
comp=Z,87nm,1.3s,mb5.5

FELD Feldberg im Sc 80.42 338⇑*eP* **P 17 03 17.5 0.0**
DAVA Damuels 80.47 336⇑*iP* **P 17 03 18.1 +0.4**
comp=Z,69nm,1.3s,mb5.4,SNR=14

DYA Yadsworthy 80.50 346⇑*eP* **P 17 03 17.8 -0.1**
DYA Yadsworthy 80.50 346⇑*eP* **P 17 03 17.8 -0.1**
BOJS Bojanci 80.50 332 *eP* **P 17 03 17.3 -0.6**
MEST Erdemli 80.55 315 *iP* **P 17 03 18.1 0.0**
BBLS Bajina Basta - 80.56 329 *iP* **P 17 03 18.9 +0.7**

MEZF Maizieres J'vi 80.56 340⇑*iP* **P 17 03 18.4 +0.2**
comp=Z,163nm,1.1s,mb5.5

MEZF Maizieres J'vi 80.56 340⇑*iP* **P 17 03 18.4 +0.2**
comp=Z,163nm,1.1s,mb5.9

LIENZ Alp Oberkamor 80.57 337⇑*iP* **P 17 03 17.1 -1.1**
comp=Z,67nm,1.4s,mb5.4

THEF They Montfort 80.60 339⇑*eP* **P 17 03 18.2 -0.2**
WILA Wila 80.61 337⇑*iP* **P 17 03 19.0 +0.5**
comp=Z,129nm,1.2s,mb5.7

PLAL Pickwick Lake 80.63 47 *eP* **P 17 03 16.5 -2.1**
comp=Z,21nm,1.3s,mb4.9

GDZ Gediz 80.64 320 *iP* **P 17 03 19.0 +0.3**
SSPA Standing Stone 80.66 38 *eP* **P 17 03 17.8 -1.0**
comp=Z,13nm,1.1s,mb4.8

MOF Molkenrain 80.67 338⇑*eP* **P 17 03 18.0 -0.8**
SULZ Sulz-Cheisache 80.72 338⇑*iP* **P 17 03 18.6 -0.5**
comp=Z,187nm,1.2s,mb5.9

HAU Haudompre 80.72 339⇑*iP* **P 17 03 18.9 -0.2**
comp=Z,103nm,1.2s,mb5.3

HAU *eR*
comp=Z,316nm,19.5s

HAU Haudompre 80.72 339⇑*iP* **P 17 03 18.9 -0.2**
HAU pmax pmax
comp=Z,51nm,1.2s,mb5.3

HAU MLR MLR
comp=Z,320nm,19.5s,MS4.7

HAU Haudompre 80.72 339⇑*iP* **P 17 03 18.9 -0.2**
comp=Z,51nm,1.2s,mb5.3

HAU LR LR
comp=Z,320nm,19.5s,MS4.7

ZUR Zurich 80.74 337⇑*iP* **P 17 03 18.7 -0.5**
comp=Z,161nm,1.1s,mb5.9

HINF Hinteralfeld 80.77 338⇑*iP* **P 17 03 19.0 -0.3**
comp=Z,64nm,1.2s,mb5.1

HINF Hinteralfeld 80.77 338⇑*iP* **P 17 03 19.0 -0.3**
HINF pmax pmax
comp=Z,32nm,1.2s,mb5.1

HINF Hinteralfeld 80.77 338⇑*iP* **P 17 03 19.0 -0.3**
comp=Z,32nm,1.2s,mb5.1

PLONS Plons 80.82 337⇑*iP* **P 17 03 19.2 -0.4**
comp=Z,105nm,1.2s,mb5.6

MMB Musomiste 80.93 325 P **P 17 03 20.3 +0.1**
BBS Basel-Blauen 80.93 338⇑*eP* **P 17 03 19.5 -0.7**
DAVOX Davos 80.93 336⇑*iP* **P 17 03 19.4 -0.8**
comp=Z,106nm,1.8s,mb5.5

KKB Krupnik 80.94 325 P **P 17 03 20.3 0.0**
CRQ2 Rosemanowes 2 80.95 347⇑*eP* **P 17 03 20.3 0.0**
CRQ2 AMb AMB 17 03 21.8
comp=Z,77nm,1.3s,mb5.5

CRQ2 Rosemanowes 2 80.95 347⇑*eP* **P 17 03 20.3 0.0**
CRQ2 AMb AMB 17 03 21.8
comp=Z,77nm,1.3s,mb5.5

BALST Balsthal 81.00 338⇑*iP* **P 17 03 19.9 -0.7**
comp=Z,237nm,1.2s,mb6.0

BOURR Bourrignon 81.07 338⇑*iP* **P 17 03 20.9 0.0**
comp=Z,106nm,1.2s,mb5.7

CGH1 Goonhilly 81.07 347⇑*eP* **P 17 03 21.2 +0.2**
CGH1 Goonhilly 81.07 347⇑*eP* **P 17 03 21.2 +0.2**
ERMK Ermenek 81.08 316 *iP* **P 17 03 21.6 +0.6**
MUO Muotathal 81.10 337⇑*iP* **P 17 03 20.9 -0.2**
comp=Z,137nm,1.4s,mb5.7

LLS Linth-Limmern 81.11 337⇑*iP* **P 17 03 21.1 0.0**
comp=Z,135nm,2.7s,mb5.4

TKTP Tekketepe 81.14 318 *iP* **P 17 03 21.3 0.0**
LOMF Lomont 81.21 338⇑*eP* **P 17 03 21.5 -0.2**
BERNI Berninapass 81.23 336⇑*iP* **P 17 03 21.6 -0.2**
comp=Z,85nm,1.5s,mb5.5

BNALP Bannalp 81.24 337⇑*iP* **P 17 03 21.5 -0.4**
comp=Z,81nm,1.4s,mb5.5

VDL Val di Lei 81.32 336⇑*iP* **P 17 03 22.2 -0.1**
comp=Z,71nm,1.0s,mb5.5

JRS Jersey 81.38 345 *eP* **P 17 03 22.4 -0.3**
JRS Jersey 81.38 345 *eP* **P 17 03 22.4 -0.3**
HASLI Hasliberg 81.42 337⇑*iP* **P 17 03 22.6 -0.2**
comp=Z,116nm,1.6s,mb5.6

SKO Skopje 81.47 326 *eP* **P 17 03 22.8 -0.3**
FLN La Foliniere 81.50 343⇑*iP* **P 17 03 23.0 -0.2**
comp=Z,92nm,1.2s,mb5.3

FLN *eR*
comp=Z,524nm,19.5s

FLN La Foliniere 81.50 343⇑*iP* **P 17 03 23.0 -0.2**
FLN pmax pmax
comp=Z,46nm,1.2s,mb5.3

FLN MLR MLR
comp=Z,520nm,19.5s,MS4.9

FLN La Foliniere 81.50 343⇑*iP* **P 17 03 23.0 -0.2**
comp=Z,46nm,1.2s,mb5.3

FLN LR LR
comp=Z,520nm,19.5s,MS4.9

SWET Sewanee 81.50 46 *eP* **P 17 03 22.2 -1.0**
TZTN Tazewell 81.56 44 *eP* **P 17 03 22.6 -0.9**
FUSIO Fusio 81.56 337⇑*iP* **P 17 03 23.0 -0.6**
comp=Z,136nm,1.4s,mb5.7

LDF La Druitiere 81.59 343⇑*iP* **P 17 03 23.3 -0.4**
comp=Z,58nm,1.2s,mb5.1

LDF La Druitiere 81.59 343⇑*iP* **P 17 03 23.3 -0.4**
LDF pmax pmax
comp=Z,29nm,1.2s,mb5.1

LDF La Druitiere 81.59 343⇑*iP* **P 17 03 23.3 -0.4**
comp=Z,29nm,1.2s,mb5.1

VAY Valandovo 81.61 325 *iP* **P 17 03 23.1 -0.7**
BRANT Les Verrieres 81.68 338⇑*iP* **P 17 03 23.4 -0.8**
comp=Z,77nm,1.2s,mb5.5

GRR Gorron 81.93 344⇑*iP* **P 17 03 25.5 0.0**
comp=Z,131nm,1.2s,mb5.5

GRR Gorron 81.93 344⇑*iP* **P 17 03 25.5 0.0**
GRR pmax pmax
comp=Z,66nm,1.2s,mb5.4

GRR Gorron 81.93 344⇑*iP* **P 17 03 25.5 0.0**
comp=Z,66nm,1.2s,mb5.4

MUGIO Muggio 81.95 336⇑*iP* **P 17 03 24.2 -1.4**
comp=Z,106nm,1.1s,mb5.7

FWV Forest Hill 81.95 41 *eP* **P 17 03 25.3 -0.3**
BHL Bhannes 81.96 312 *eP* **P 17 03 25.9 +0.3**
DNZL Cakiroluk 81.99 319 *iP* **P 17 03 26.9 +1.1**
LOR Lormes 82.00 340⇑*iP* **P 17 03 25.7 -0.2**
comp=Z,87nm,1.1s,mb5.3

LOR *eR*
comp=Z,701nm,21.2s

LOR Lormes 82.00 340⇑*iP* **P 17 03 25.7 -0.2**
LOR pmax pmax
comp=Z,44nm,1.1s,mb5.3

LOR MLR MLR
comp=Z,700nm,21.3s,MS5.0

LOR Lormes 82.00 340⇑*iP* **P 17 03 25.7 -0.2**
comp=Z,44nm,1.1s,mb5.3

LOR LR LR
comp=Z,700nm,21.3s,MS5.0

SENIN Lac Senin 82.01 338⇑*iP* **P 17 03 24.6 -1.3**
comp=Z,115nm,2.5s,mb5.3

PPT Papeete 82.06 127 LR LR 17 34 11.7
comp=Z,403nm,18.9s,MS4.8,baz=316,slow=32

CABF La Chapelle 82.08 338⇑*iP* **P 17 03 26.6 +0.3**
comp=Z,80nm,1.3s,mb5.2

CABF La Chapelle 82.08 338⇑*iP* **P 17 03 26.6 +0.3**
CABF pmax pmax
comp=Z,40nm,1.3s,mb5.2

CABF La Chapelle 82.08 338⇑*iP* **P 17 03 26.6 +0.3**
comp=Z,40nm,1.3s,mb5.2

MMK Mattmark 82.12 337⇑*iP* **P 17 03 25.3 -1.2**
comp=Z,123nm,2.0s,mb5.5

GRYON Gryon 82.16 338⇑*iP* **P 17 03 26.4 -0.3**
comp=Z,122nm,2.2s,mb5.4

OG01 Vacheresse 82.19 338⇑*eP* **P 17 03 27.2 +0.3**
DIX Grande Dixence 82.24 337⇑*iP* **P 17 03 28.0 +0.9**
comp=Z,94nm,1.1s,mb5.6

CSS Prodhromos 82.25 315 *eP* **P 17 03 27.0 -0.1**
comp=Z,21nm,0.8s,mb5.1

HYF Humbligny 82.27 341 *eP* **P 17 03 27.6 +0.3**
ELN Prospectdale 82.27 41 *eP* **P 17 03 26.7 -0.6**
SSF Saint Saulge 82.27 340⇑*iP* **P 17 03 27.2 -0.1**
comp=Z,34nm,1.0s,mb5.0

SSF Saint Saulge 82.27 340⇑*iP* **P 17 03 27.2 -0.1**
SSF pmax pmax
comp=Z,17nm,1.0s,mb4.9

SSF Saint Saulge 82.27 340⇑*iP* **P 17 03 27.2 -0.1**
comp=Z,17nm,1.0s,mb4.9

SALAN Lac Salanfe 82.29 338⇑*iP* **P 17 03 27.3 -0.1**
comp=Z,119nm,2.2s,mb5.4

SGMF Saint Gilles 82.37 345⇑*iP* **P 17 03 27.9 +0.1**
comp=Z,103nm,1.1s,mb5.4

SGMF Saint Gilles 82.37 345⇑*iP* **P 17 03 27.9 +0.1**
SGMF pmax pmax
comp=Z,52nm,1.1s,mb5.4

SGMF Saint Gilles 82.37 345⇑*iP* **P 17 03 27.9 +0.1**
comp=Z,52nm,1.1s,mb5.4

ROSF Rostrenen 82.42 345⇑*iP* **P 17 03 28.2 +0.1**
comp=Z,155nm,1.1s,mb5.5

ROSF Rostrenen 82.42 345⇑*iP* **P 17 03 28.2 +0.1**
ROSF pmax pmax
comp=Z,77nm,1.1s,mb5.5

ROSF Rostrenen 82.42 345⇑*iP* **P 17 03 28.2 +0.1**
comp=Z,77nm,1.1s,mb5.5

URLA Izmir 82.49 321 *iP* **P 17 03 26.9 -1.6**
AYDN Tasoluk 82.53 320 *iP* **P 17 03 29.8 +1.1**
AVF Avril sur Loir 82.56 340⇑*iP* **P 17 03 28.9 +0.1**
comp=Z,147nm,1.2s,mb5.6

AVF Avril sur Loir 82.56 340⇑*iP* **P 17 03 28.9 +0.1**
AVF pmax pmax
comp=Z,73nm,1.2s,mb5.6

AVF Avril sur Loir 82.56 340⇑*iP* **P 17 03 28.9 +0.1**
comp=Z,73nm,1.2s,mb5.6

SMF Signal de Mont 82.59 340⇑*iP* **P 17 03 29.1 +0.2**
comp=Z,210nm,1.1s,mb5.8

SMF Signal de Mont 82.59 340⇑*iP* **P 17 03 29.1 +0.2**
SMF pmax pmax
comp=Z,105nm,1.1s,mb5.8

SMF Signal de Mont 82.59 340⇑*iP* **P 17 03 29.1 +0.2**
comp=Z,105nm,1.1s,mb5.8

ASF Jabal al Asfar 82.71 311 P **P 17 03 30.3 +0.7**
comp=Z,28nm,1.0s,mb5.2,baz=263,slow=0.3,SNR=38

ASF Jabal al Asfar 82.71 311 P **P 17 03 30.3 +0.7**
ASF pmax pmax
comp=Z,28nm,1.0s

MMAI Mount Meron Ar 82.80 312 P **P 17 03 30.9 +0.9**
comp=Z,64nm,1.0s,mb5.6,baz=45,slow=7.2,SNR=45

QUIF Quistinic 82.80 345⇑*iP* **P 17 03 29.9 -0.2**
comp=Z,70nm,1.2s,mb5.3

QUIF Quistinic 82.80 345⇑*iP* **P 17 03 29.9 -0.2**
QUIF pmax pmax
comp=Z,35nm,1.2s,mb5.3

QUIF Quistinic 82.80 345⇑*iP* **P 17 03 29.9 -0.2**
comp=Z,35nm,1.2s,mb5.3

RSL Roselend 82.81 338⇑*eP* **P 17 03 30.5 +0.4**
BGF Bois d'Agland 82.90 341⇑*iP* **P 17 03 30.6 0.0**
comp=Z,77nm,1.2s,mb5.3

BGF Bois d'Agland 82.90 341⇑*iP* **P 17 03 30.6 0.0**
BGF pmax pmax
comp=Z,39nm,1.2s,mb5.3

BGF Bois d'Agland 82.90 341⇑*iP* **P 17 03 30.6 0.0**
comp=Z,39nm,1.2s,mb5.3

LPL La Plagne 82.94 338⇑*iP* **P 17 03 31.7 +0.9**
comp=Z,108nm,1.1s,mb5.5

LPL La Plagne 82.94 338⇑*iP* **P 17 03 31.7 +0.9**
LPL pmax pmax
comp=Z,54nm,1.1s,mb5.5

LPL La Plagne 82.94 338⇑*iP* **P 17 03 31.7 +0.9**
comp=Z,54nm,1.1s,mb5.5

LPG La Plagne 82.95 338⇑*iP* **P 17 03 32.0 +1.2**
comp=Z,155nm,1.2s,mb5.6

LPG La Plagne 82.95 338⇑*iP* **P 17 03 32.0 +1.2**
LPG pmax pmax
comp=Z,78nm,1.2s,mb5.6

LPG La Plagne 82.95 338⇑*iP* **P 17 03 32.0 +1.2**
comp=Z,78nm,1.2s,mb5.6

PLDF La Plantade 83.28 340⇑*eP* **P 17 03 33.2 +0.7**
TCF Toulx Ste Croi 83.30 341⇑*iP* **P 17 03 32.8 +0.2**
comp=Z,87nm,1.1s,mb5.4

TCF Toulx Ste Croi 83.30 341⇑*iP* **P 17 03 32.8 +0.2**
TCF pmax pmax
comp=Z,43nm,1.1s,mb5.4

TCF Toulx Ste Croi 83.30 341⇑*iP* **P 17 03 32.8 +0.2**
comp=Z,43nm,1.1s,mb5.4

AGO Saint Agoulin 83.31 340⇑*eP* **P 17 03 33.4 +0.7**
BNI Bardonecchia 83.39 338 P **P 17 03 34.0 +0.9**
BNI pmax pmax
comp=Z,30nm,1.1s,mb5.2

BNI Bardonecchia 83.39 338 *eP* **P 17 03 33.9 +0.8**
comp=Z,30nm,1.1s,mb5.2

GDM Grand'Maison 83.39 338⇑*eP* **P 17 03 34.2 +1.1**
MFF Saint Martin d 83.50 343⇑*iP* **P 17 03 34.8 +1.2**
comp=Z,74nm,1.2s,mb5.3

MFF Saint Martin d 83.50 343⇑*iP* **P 17 03 34.8 +1.2**
MFF pmax pmax
comp=Z,37nm,1.2s,mb5.3

MFF Saint Martin d 83.50 343⇑*iP* **P 17 03 34.8 +1.2**
comp=Z,37nm,1.2s,mb5.3

LCHF La Chataignera 83.55 343⇑*eP* **P 17 03 34.9 +1.0**
PYM Petit Puy Mans 83.62 340⇑*eP* **P 17 03 35.2 +0.9**
MBDF Montbardon 83.66 337⇑*iP* **P 17 03 34.8 +0.3**
comp=Z,53nm,1.1s,mb5.3

MBDF Montbardon 83.66 337⇑*iP* **P 17 03 34.8 +0.3**
MBDF pmax pmax
comp=Z,27nm,1.1s,mb5.3

MBDF Montbardon 83.66 337⇑*iP* **P 17 03 34.8 +0.3**
comp=Z,26nm,1.1s,mb5.3

COLF Collangettes 83.69 340⇑*eP* **P 17 03 35.1 +0.5**
ORIF Oris-en-Rattie 83.71 338⇑*iP* **P 17 03 35.6 +0.8**
comp=Z,112nm,1.0s,mb5.6

ORIF *eR*
comp=Z,472nm,21.2s

ORIF Oris-en-Rattie 83.71 338⇑*iP* **P 17 03 35.6 +0.8**
ORIF pmax pmax
comp=Z,56nm,1.0s,mb5.7

ORIF Oris-en-Rattie 83.71 338⇑*iP* **P 17 03 35.6 +0.8**
comp=Z,56nm,1.0s,mb5.7

SURF Saint Ours 83.88 337⇑*eP* **P 17 03 36.6 +1.0**
AQU L'Aquila 83.92 332 ⇓*iP* **P 17 03 35.0 -0.8**
AQU L'Aquila 83.92 332 P **P 17 03 37.1 +1.3**
AQU pmax pmax
comp=Z,51nm,1.1s,mb5.6

AQU L'Aquila 83.92 332 *eP* **P 17 03 34.5 -1.3**
comp=Z,51nm,1.1s,mb5.6

LBL Lubilhac 84.06 340⇑*eP* **P 17 03 37.7 +1.2**
VIVF Saint-Julien-l 84.07 339⇑*iP* **P 17 03 37.1 +0.5**
comp=Z,56nm,0.9s,mb5.4

VIVF Saint-Julien-l 84.07 339⇑*iP* **P 17 03 37.1 +0.5**
VIVF pmax pmax
comp=Z,28nm,0.9s,mb5.4

VIVF Saint-Julien-l 84.07 339⇑*iP* **P 17 03 37.1 +0.5**
comp=Z,28nm,0.9s,mb5.4

SAOF Saorge 84.14 337⇑*eP* **P 17 03 36.3 -0.7**
AUTN L'Aution 84.17 337⇑*eP* **P 17 03 37.1 0.0**
OCF Saint Nazaire 84.18 338⇑*eP* **P 17 03 38.1 +1.0**
OG26 St.-Nazaire-De 84.18 338⇑*eP* **P 17 03 38.1 +1.0**
TOUF Mont Tournerai 84.20 337 *eP* **P 17 03 37.9 +0.7**
LUCF Luceram 84.29 337⇑*eP* **P 17 03 37.5 -0.2**
SBF Sospel 84.29 337⇑*iP* **P 17 03 37.5 -0.2**
comp=Z,155nm,1.1s,mb5.7

SBF Sospel 84.29 337⇑*iP* **P 17 03 37.5 -0.2**
SBF pmax pmax
comp=Z,77nm,1.1s,mb5.8

SBF Sospel 84.29 337⇑*iP* **P 17 03 37.5 -0.2**
comp=Z,77nm,1.1s,mb5.8

MVIF Mont Vial 84.34 337⇑*eP* **P 17 03 37.9 0.0**
RJF Les Rejaudoux 84.38 341⇑*iP* **P 17 03 38.2 0.0**
comp=Z,54nm,1.3s,mb5.2

RJF *eR*
comp=Z,544nm,18.5s

RJF Les Rejaudoux 84.38 341⇑*iP* **P 17 03 38.2 0.0**
RJF pmax pmax
comp=Z,27nm,1.3s,mb5.2

RJF MLR MLR
comp=Z,540nm,18.5s,MS5.0

RJF Les Rejaudoux 84.38 341⇑*iP* **P 17 03 38.2 0.0**
comp=Z,27nm,1.3s,mb5.2

RJF LR LR
comp=Z,540nm,18.5s,MS5.0

REVF Revere 84.42 337 *eP* **P 17 03 38.7 +0.3**
JSC Jenkinsville 84.48 43 P **P 17 03 39.0 +0.3**
CAF Calviac 84.62 341⇑*iP* **P 17 03 39.9 +0.5**
comp=Z,24nm,1.1s,mb5.0

CAF Calviac 84.62 341⇑*iP* **P 17 03 39.9 +0.5**
CAF pmax pmax
comp=Z,12nm,1.1s,mb4.9

CAF Calviac 84.62 341⇑*iP* **P 17 03 39.9 +0.5**
comp=Z,12nm,1.1s,mb4.9

SMRF Simiane la Rot 84.67 338⇑*iP* **P 17 03 40.4 +0.8**
comp=Z,133nm,1.4s,mb5.6

SMRF Simiane la Rot 84.67 338⇑*iP* **P 17 03 40.4 +0.8**
comp=Z,133nm,1.4s,mb5.9

FRF La Foret Royal 84.78 337⇑*iP* **P 17 03 40.1 -0.1**
comp=Z,82nm,1.2s,mb5.5

FRF La Foret Royal 84.78 337⇑*iP* **P 17 03 40.1 -0.1**
FRF pmax pmax
comp=Z,41nm,1.2s,mb5.4

FRF La Foret Royal 84.78 337⇑*iP* **P 17 03 40.1 -0.1**
comp=Z,41nm,1.2s,mb5.4

TAVF Tavernes 84.88 337 *eP* **P 17 03 41.7 +1.0**
LFF La Frestale 84.90 341 *eP* **P 17 03 40.6 -0.2**
PRAF Pradon 84.94 338⇑*eP* **P 17 03 41.9 +0.9**
LMR La Mourre 85.03 337⇑*iP* **P 17 03 41.5 +0.1**

comp=Z,191nm,1.2s,mb5.8
LMR La Mourre 85.03 337 ⇑*i*P **P** **17 03 41.5 +0.1**
LMR pmax pmax
comp=Z,96nm,1.2s,mb5.8
LMR La Mourre 85.03 337 ⇑*i*P **P** **17 03 41.5 +0.1**
comp=Z,96nm,1.2s,mb5.8
TREF Trevaresse 85.05 338 ⇑*e*P **P** **17 03 42.3 +0.8**
PUYF Puyloubier 85.06 338 ⇑*e*P **P** **17 03 38.1 -3.5**
EIL Eiat 85.71 310 *e*P **P** **17 03 45.5 +0.7**
comp=Z,1µm,1.4s
MTLF Montolieu 86.09 340 ⇑*i*P **P** **17 03 46.3 -0.4**
comp=Z,19nm,1.0s,mb5.0
MTLF Montolieu 86.09 340 ⇑*i*P **P** **17 03 46.3 -0.4**
MTLF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
MTLF Montolieu 86.09 340 ⇑*i*P **P** **17 03 46.3 -0.4**
comp=Z,9.6nm,1.0s,mb5.0
EPF Esparros 86.81 341 *e*P **P** **17 03 49.0 -1.2**
SJPF Ste Jean 87.06 342 *e*P **P** **17 03 51.1 -0.4**
comp=Z,16nm,1.0s,mb4.9
SJPF Ste Jean 87.06 342 *e*P **P** **17 03 51.1 -0.4**
SJPF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
SJPF Ste Jean 87.06 342 *e*P **P** **17 03 51.1 -0.4**
comp=Z,8.2nm,1.0s,mb4.9
ETSF Etsaut 87.12 342 ⇑*i*P **P** **17 03 51.2 -0.6**
comp=Z,22nm,1.1s,mb5.0
ETSF Etsaut 87.12 342 ⇑*i*P **P** **17 03 51.2 -0.6**
ETSF pmax pmax
comp=Z,11nm,1.1s,mb5.0
ETSF Etsaut 87.12 342 ⇑*i*P **P** **17 03 51.2 -0.6**
comp=Z,11nm,1.1s,mb5.0
PBRG Braganca 89.35 346 *e*P **P** **17 04 01.8 -0.5**
comp=Z,27nm,2.2s,mb5.2
PVRL Vila Real 90.02 347 *e*P **P** **17 04 05.2 -0.3**
comp=Z,37nm,1.2s,mb5.6
PVIS Viseu 90.59 347 *e*P **P** **17 04 08.3 +0.1**
comp=Z,21nm,1.2s,mb5.3
MTE Manteigas 90.85 346 *e*P **P** **17 04 09.1 -0.2**
comp=Z,21nm,1.3s,mb5.3
MTE Manteigas 90.85 346 *e*LR LR 17 35 15.5
comp=Z,203nm,18.0s
ESDC Sonseca Array 90.92 343 P **P** **17 04 08.6 -1.1**
comp=Z,6.0nm,0.9s,mb4.9,baz=3.4,slow=4.3,SNR=20
ESDC LR LR 17 51 49.4
comp=Z,348nm,18.9s,MS4.8,baz=350,slow=40
KEST Kesra 91.24 332 P **P** **17 04 10.9 -0.2**
comp=Z,6.7nm,1.0s,mb4.9,baz=221,slow=1.3,SNR=12
KEST LR LR 17 49 42.1
comp=Z,255nm,20.4s,MS4.7,baz=326,slow=38
PCBR Castelo Branco 91.38 346 *e*P **P** **17 04 11.1 -0.7**
comp=Z,20nm,1.4s,mb5.3
PBEJ Beja 93.22 346 *e*P **P** **17 04 20.1 -0.2**
comp=Z,16nm,1.3s,mb5.3
TORD Torodi Ar. Bea 114.71 330 PKP PKiKP 17 09 45.5 -0.7
comp=Z,0.8nm,0.5s,baz=19,slow=2.5,SNR=11
DBIC Dimbokro 122.85 335 PKIKP PKPdf 17 10 00.8 -1.1
comp=Z,4.5nm,0.8s,baz=308,slow=4.4,SNR=3.4
DBIC Dimbokro 122.85 335 PKIKP PKPdf 17 10 00.8 -1.1
DBIC pmax pmax
comp=Z,5.0nm,0.8s
VNDA Vanda 124.99 178 PKP PKPdf 17 10 03.1 -2.9
comp=Z,1.3nm,1.0s,baz=312,slow=4.8,SNR=6.6
LPAZ La Paz 133.23 63 PKP PKPdf 17 10 22.6 +0.9
comp=Z,0.6nm,0.5s,baz=338,slow=6.9,SNR=5.7
LPAZ La Paz 133.23 63 *e*PKPdf PKPdf 17 10 22.6 +0.9
MAW Mawson 133.38 212 PKP PKPdf 17 10 18.7 -3.3
comp=Z,1.3nm,0.5s,baz=333,slow=7.5,SNR=4.4
QSPA South Pole Qui 137.39 180 *e*P 17 10 23.6
BDFB Brasilia 143.15 38 PKhKP 17 10 36.2
comp=Z,10nm,0.9s,baz=326,slow=3.5,SNR=10
BDFB Brasilia 143.15 38 *i* PKIKP 17 10 36.2
BDFB pmax pmax
comp=Z,10.0nm,0.9s
CPUP Villa Florida 147.34 61 PKPbc PKPbc 17 10 47.2 -2.2
comp=Z,7.7nm,0.9s,baz=305,slow=2.5,SNR=12
CPUP Villa Florida 147.34 61 PKP2 PKPbc 17 10 48.3 -1.2
CPUP Villa Florida 147.34 61 *e*PKPdf PKPdf 17 10 47.0 -0.1
PLCA Paso Flores 147.50 95 PKPbc PKPbc 17 10 48.9 -1.0
comp=Z,5.3nm,1.1s,baz=347,slow=2.8,SNR=6.4
PLCA Paso Flores 147.50 95 PKP2 PKPbc 17 10 49.1 -0.8
PLCA Paso Flores 147.50 95 *e*PKPbc PKPbc 17 10 49.0 -1.0
NVL N'lazarevskaya 150.78 204 *e*PKIKP PKPbc 17 10 55.9 -2.3
NVL pmax pmax
comp=Z,36nm,1.3s
MAIT Maitri 150.81 204 *e*PKPdf PKPbc 17 10 55.5 -2.7
SNAA Sanae 153.64 196 PKPbc PKPbc 17 11 01.5 -3.1
comp=Z,1.5nm,1.0s,baz=166,slow=2.5,SNR=12
SNAA PKPab PKPab 17 11 14.9 -2.3
comp=Z,5.7nm,1.0s,baz=99,slow=2.7,SNR=18
SNAA Sanae 153.64 196 *e*PKPdf PKPbc 17 11 01.3 -3.3
SNAA *e* 17 11 07.8
SNAA *e* 17 11 14.8
SNAA *e* 17 11 17.7
SNAA *e* 17 11 28.6
SNAA *e* 17 11 33.1
SNAA *e* 17 11 39.6
SNAA Sanae 153.64 196 PKP2 PKPab 17 11 14.9 -2.4
SNAA pmax pmax
comp=Z,6.0nm,1.0s
SNAA Sanae 153.64 196 *e*PKPbc PKPbc 17 11 01.4 -3.2
SNAA *e*PKPab PKPab 17 11 15.0 -2.2
VNA3 Neumayer Olymp 155.15 192 *e*PKPdf PKPdf 17 11 04.7 +5.7
VNA3 *e* 17 11 10.8
VNA3 *e* 17 11 18.7
VNA3 *e* 17 11 23.4
VNA3 *e* 17 11 27.6
VNA3 *e* 17 11 30.8
VNA3 *e* 17 11 34.9
VNA3 *e* 17 11 40.3
VNA3 *e* 17 11 45.6
VNA3 *e* 17 11 55.5
VNA1 Neumayer--Stat 155.46 194 *e*PKPdf PKPdf 17 11 06.4 +7.0
VNA1 *e* 17 11 15.4
VNA1 *e* 17 11 20.1
VNA1 *e* 17 11 23.6
VNA1 *e* 17 11 29.4
VNA1 *e* 17 11 35.4
VNA1 *e* 17 11 44.2

*NEIC **22** 16:56:15.2, 3695S×17680E, h298km, MG4.0(WEL), After WEL.*
WEL 22 16:56:15.2±0.5, 3697S×17684E, h300km±3km, ML4.0/13, **1C, Error ellipse: s-maj=6.0km s-min=5.7km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.31**	**170**	*e*P	Pn	16 56 57.0	-0.1
URZ	**Urewera**	**1.31**	**170**	PN	Pn	16 56 57.0	-0.1
URZ				SN	S	16 57 30.0	-0.5
MXZ	**Matakaoa Point**	**1.31**	**117**	P	Pn	16 56 57.3	+0.2
MXZ	**Matakaoa Point**	**1.31**	**117**	PN	Pn	16 56 57.3	+0.1
MXZ				SN	S	16 57 30.1	-0.4
MWZ	**Matawai**	**1.47**	**158**	P	Pn	16 56 58.5	+0.4
MWZ	**Matawai**	**1.47**	**158**	PN	Pn	16 56 58.4	+0.3
KNZ	**Kokohu**	**2.15**	**162**	*e*P	Pn	16 57 03.5	+0.4
KNZ	**Kokohu**	**2.15**	**162**	PN	Pn	16 57 03.4	+0.3
BKZ	**Black Stump Fm**	**2.21**	**187**	⇑PN	Pn	16 57 03.7	+0.1
OTVZ	**Oturere**	**2.38**	**202**	PN	Pn	16 57 05.9	+0.8
NGZ	**Ngauruhoe**	**2.41**	**203**	P	Pn	16 57 06.4	+1.1
NGZ	**Ngauruhoe**	**2.41**	**203**	PN	Pn	16 57 06.1	+0.8
TUVZ	**Tukino**	**2.48**	**202**	P	Pn	16 57 06.5	+0.6
TUVZ	**Tukino**	**2.48**	**202**	PN	Pn	16 57 06.5	+0.6
FWVZ	**Far West T-bar**	**2.50**	**204**	P	Pn	16 57 06.8	+0.7
FWVZ	**Far West T-bar**	**2.50**	**204**	PN	Pn	16 57 06.8	+0.7
WNVZ	**Wahianoa**	**2.55**	**202**	P	Pn	16 57 07.0	+0.4
WNVZ	**Wahianoa**	**2.55**	**202**	PN	Pn	16 57 07.0	+0.4
MOVZ	**Moawhango**	**2.58**	**199**	P	Pn	16 57 06.7	-0.2
MOVZ	**Moawhango**	**2.58**	**199**	PN	Pn	16 57 06.6	-0.3
PKVZ	**Pokaka**	**2.60**	**206**	PN	Pn	16 57 07.3	+0.3
MTVZ	**Mangateitei**	**2.64**	**204**	PN	Pn	16 57 07.7	+0.3
VRZ	**Vera Road**	**2.71**	**217**	P	Pn	16 57 08.8	+0.8
VRZ	**Vera Road**	**2.71**	**217**	PN	Pn	16 57 08.8	+0.8
WAZ	**Wanganui**	**3.14**	**207**	*e*P	Pn	16 57 12.3	+0.1
WAZ	**Wanganui**	**3.14**	**207**	PN	Pn	16 57 12.0	-0.3
TSZ	**Takapari Road**	**3.16**	**192**	P	Pn	16 57 12.0	-0.5
TSZ	**Takapari Road**	**3.16**	**192**	PN	Pn	16 57 11.9	-0.5
MRZ	**Mangatainoka R**	**3.81**	**195**	P	Pn	16 57 18.0	-1.3
MRZ	**Mangatainoka R**	**3.81**	**195**	PN	Pn	16 57 18.0	-1.4
MRZ				SN	S	16 58 09.1	-1.5
TIWZ	**Tintock**	**3.87**	**191**	PN	Pn	16 57 19.1	-0.8
KIW	**Kapiti Island**	**4.17**	**201**	P	Pn	16 57 21.8	-1.4
KIW	**Kapiti Island**	**4.17**	**201**	PN	Pn	16 57 21.7	-1.4
MTW	**Mount Morrison**	**4.31**	**194**	P	Pn	16 57 23.1	-1.7
MTW	**Mount Morrison**	**4.31**	**194**	PN	Pn	16 57 23.1	-1.7
CAW	**Cannon Point**	**4.36**	**198**	P	Pn	16 57 23.7	-1.6
CAW	**Cannon Point**	**4.36**	**198**	PN	Pn	16 57 23.7	-1.6
DUWZ	**D'Urville Isla**	**4.45**	**210**	PN	Pn	16 57 24.7	-1.7
PAWZ	**Paruwai Farm**	**4.54**	**194**	P	Pn	16 57 25.8	-1.6
MRW	**Makara Radio**	**4.57**	**201**	P	Pn	16 57 26.0	-1.7
WEL	**Wellington**	**4.60**	**200**	P	Pn	16 57 26.4	-1.6
TCW	**Tory Channel**	**4.68**	**204**	P	Pn	16 57 27.5	-1.5
TUWZ	**Tuamarina**	**4.99**	**206**	*e*PN	Pn	16 57 30.7	-1.8
NNZ	**Nelson**	**5.02**	**211**	P	Pn	16 57 30.6	-2.3
QRZ	**Quartz Range**	**5.11**	**220**	*e*P	Pn	16 57 31.2	-2.7
BSWZ	**Blackbirch Sta**	**5.26**	**205**	P	Pn	16 57 34.1	-1.6
THZ	**Tophouse**	**5.67**	**211**	*e*P	Pn	16 57 37.9	-2.6
KHZ	**Kahutara**	**6.00**	**204**	*e*P	Pn	16 57 42.6	-1.9
LTZ	**Lake Taylor**	**6.78**	**210**	*e*P	Pn	16 57 51.1	-2.8

KRSC 22 16:57:08, 5000N×15666E, h5km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**1.12**	**321**	*e*P	Pg	16 57 30.2	+0.7
ALID				*i* S	Sg	16 57 45.8	+1.7
MIPR	**Malaya Ipel'ka**	**2.28**	**2**	*e*P	Pn	16 57 47.5	+1.2
RUS	**Russkaya**	**2.70**	**25**	*e*P	Pn	16 57 54.7	+2.6
RUS				*i* S	Sn	16 58 29.3	+4.2
GRL	**Gorelyy**	**2.71**	**19**	P	Pn	16 57 55.2	+3.1
GRL				*i* S	Sn	16 58 28.9	+3.7
PET	**Petropavlovsk**	**3.27**	**22**	*e*P	Pn	16 58 02.3	+2.4
PET				*e*S	Sn	16 58 42.7	+3.4
SDLR	**Sedlovina**	**3.56**	**22**	*e*P	Pn	16 58 06.6	+2.7
SDLR				*i* S	Sn	16 58 49.4	+3.0
NLC	**Nalytchevo**	**3.59**	**27**	P	Pn	16 58 05.7	+1.4
NLC				*i* S	Sn	16 58 47.9	+0.8
SPN	**Mys Shipunski**	**3.75**	**33**	*e*P	Pn	16 58 09.0	+2.6
SPN				*i* S	Sn	16 58 54.0	+3.1
GNL	**Ganaly**	**3.79**	**12**	P	Pn	16 58 08.5	+1.5
MKZ	**Mys Kozlova**	**5.52**	**32**	*e*P	Pn	16 58 31.5	+0.6
MKZ				*i* S	Sn	16 59 32.8	-1.9
KBTR	**Krutoberegovo**	**7.24**	**28**	*e*P	Pn	16 58 54.7	+0.3

*ISCJB **22** 16:59:47.1±0.3, 4322N×1002×1280E×003, h77km±4km, Error ellipse: s-maj=3.4km s-min=2.9km az=82.0*
*CSEM **22** 16:59:47.3±0.1, 4319N×1282E, h60km, ML3.5/18, Error ellipse: s-maj=1.6km s-min=1.2km az=56.0*
*NEIC **22** 16:59:48.6, 4314N×1275E, h60km, MD2.9(ROM), After ROM.*
*ROM **22** 16:59:48.6±0.1, 4314N×1275E, h60km±3km, Md2.9/34, Ml2.8/20, Error ellipse: s-maj=2.8km s-min=1.7km az=56.0*
*LDG **22** 16:59:49.0, 4318N×1285E, h49km*
ISC 22 16:59:48.3±0.3, 4321N±002×1281E±003, h68km±4km, n91, σ1°01/145, 9C-8D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASS	**Assisi**	**0.18**	**218**	Pg	**Pn**	**16 59 57.8**	**-0.8**
ASS				Sg	**Sn**	**17 00 04.9**	**-1.2**
	20nm,0.2s						
CING	**Cingoli**	**0.33**	**59**	Pg	**Pn**	**16 59 59.9**	**+0.5**
CING				Sg	**Sn**	**17 00 08.5**	**+0.9**
	942nm,0.5s						
CDCA	**Citt' di Caste**	**0.49**	**301**	Pg	**Pn**	**17 00 00.7**	**-0.1**
CDCA				Sg	**Sn**	**17 00 09.6**	**-0.3**
	360nm,0.1s						
BADI	**Badiali**	**0.51**	**307**	⇓*i*Pg	**Pn**	**17 00 01.2**	**+0.2**
	74µm,17.0s						
AOI	**Ancona**	**0.67**	**59**	⇓*i*Pg	**Pn**	**17 00 02.9**	**+0.2**
AOI				Sg	**Sn**	**17 00 13.8**	**+0.4**
	460nm,0.4s						
PESA	**Pesaro**	**0.73**	**2**	Pg	**Pn**	**17 00 05.3**	**+1.9**
	262nm,0.3s						
CRE	**Caprese Michel**	**0.75**	**304**	⇓*i*Pg	**Pn**	**17 00 03.5**	**0.0**
CRE				Sg	**Sn**	**17 00 14.8**	**0.0**
	211nm,0.4s						
RSM	**Repubblica di**	**0.77**	**340**	Pg	**Pn**	**17 00 05.6**	**+1.8**
	116nm,0.6s						
MNS	**Montasola**	**0.83**	**186**	Pg	**Pn**	**17 00 03.7**	**-0.8**
MNS				Sg	**Sn**	**17 00 15.1**	**-1.4**
	447nm,0.5s						
TERO	**Teramo**	**0.83**	**135**	Pg	**Pn**	**17 00 04.8**	**+0.3**
TERO				Sg	**Sn**	**17 00 17.2**	**+0.6**
	424nm,0.7s						
LATE	**Laterza**	**0.95**	**231**	⇓*i*Pg	**Pn**	**17 00 05.1**	**-0.9**
	46nm,0.4s						
AQU	**L'Aquila**	**0.96**	**153**	Pg	**Pn**	**17 00 06.7**	**+0.6**
	327nm,1.0s						
AQU	**L'Aquila**	**0.96**	**153**	*e*Pn	**Pn**	**17 00 05.6**	**-0.6**
AQU				Pg	**Pn**	**17 00 06.7**	**+0.6**
AQU	**L'Aquila**	**0.96**	**153**	*e*Pn	**Pn**	**17 00 05.6**	**-0.5**
AQU	**L'Aquila**	**0.96**	**153**	Pg	**Pn**	**17 00 06.7**	**+0.6**
	327nm,1.0s						
SFI	**Santa Sofia**	**0.98**	**315**	Pg	**Pn**	**17 00 07.2**	**+0.8**
	39nm,0.3s						
FAGN	**Fagnano**	**1.10**	**148**	Pg	**Pn**	**17 00 09.8**	**+1.9**
	247nm,0.5s						
CSNT	**Castellina Chi**	**1.14**	**284**	Pg	**Pn**	**17 00 08.4**	**0.0**
CSNT				Sg	**Sn**	**17 00 23.7**	**+0.3**
	185nm,0.7s						
MTCE	**Montecelio**	**1.19**	**182**	Pg	**Pn**	**17 00 08.0**	**-1.0**
	75nm,0.6s						
CERT	**Cerreto**	**1.27**	**174**	Pg	**Pn**	**17 00 09.4**	**-0.6**
CERT				Sg	**Sn**	**17 00 25.2**	**-1.2**
	96nm,0.4s						
TOLF	**Tolfa**	**1.29**	**208**	Pg	**Pn**	**17 00 09.3**	**-1.1**
	108nm,0.5s						
GRFL	**Gerfalco**	**1.34**	**268**	Pg	**Pn**	**17 00 10.8**	**-0.2**
GRFL				Sg	**Sn**	**17 00 28.0**	**-0.1**
	24nm,0.3s						
SEI	**Scarperia**	**1.35**	**309**	Pg	**Pn**	**17 00 13.0**	**+1.9**
	179nm,0.3s						
INTR	**Introdacqua**	**1.45**	**145**	Pg	**Pn**	**17 00 12.3**	**-0.1**
	120nm,0.8s						
GUAR	**Guarcino**	**1.46**	**165**	Pg	**Pn**	**17 00 12.5**	**-0.1**
	62nm,0.4s						
VVLD	**Villa Vallelon**	**1.47**	**155**	Pg	**Pn**	**17 00 13.1**	**+0.4**
	77nm,0.6s						
FNVD	**Fontana Vidola**	**1.55**	**309**	Pg	**Pn**	**17 00 15.7**	**+1.9**
	89nm,0.6s						
SDI	**San Donato**	**1.67**	**153**	Pg	**Pn**	**17 00 16.5**	**+1.1**
	14nm,0.3s						
GIUL	**Giuliano Di Ro**	**1.68**	**168**	Pg	**Pn**	**17 00 15.2**	**-0.4**
	22nm,0.5s						
PZZT	**Monte Pizzetto**	**1.69**	**304**	Pg	**Pn**	**17 00 15.9**	**+0.3**
PII	**Pisa**	**1.74**	**288**	Pg	**Pn**	**17 00 16.9**	**+0.6**
	21nm,0.2s						
NVLJ	**Novalja**	**2.02**	**47**	*i* Pn	**Pn**	**17 00 20.0**	**0.0**
NVLJ				*i* Sn	**Sn**	**17 00 43.4**	**-0.9**
RGNG	**Rignano Grg**	**2.57**	**126**	Pg	**Pn**	**17 00 27.3**	**-0.2**
KNDS	**Knezji Dol**	**2.58**	**25**	*i* Pn	**Pn**	**17 00 27.8**	**+0.2**
KNDS				*i* Sn	**Sn**	**17 00 57.2**	**-0.7**
KNDS							
	comp=Z,30nm,0.2s						
KNDS	**Knezji Dol**	**2.58**	**25**	*i* Pn	**Pn**	**17 00 27.8**	**+0.1**
KNDS				*i* Sn	**Sn**	**17 00 57.2**	**-0.8**
	comp=Z,30nm,0.2s						
SGRT	**San Giovanni R**	**2.62**	**123**	Pg	**Pn**	**17 00 28.0**	**-0.2**
	comp=Z,101nm,0.2s						
JAVS	**Javornik**	**2.83**	**18**	*i* Pn	**Pn**	**17 00 30.8**	**-0.3**
PGF	**Pioggiola**	**2.87**	**258**	*e*Pn	**Pn**	**17 00 32.4**	**+0.7**
PGF				*e*Sn	**Sn**	**17 01 05.5**	**+0.4**
	comp=Z,28nm,0.5s						
PGF	**Pioggiola**	**2.87**	**258**	*e*Pn	**Pn**	**17 00 32.4**	**+0.7**
PGF				*e*Sn	**Sn**	**17 01 05.5**	**+0.4**
	comp=Z,14nm,0.5s						
BOB	**Bobbio (Coli)**	**2.88**	**304**	Pg	**Pn**	**17 00 34.1**	**+2.3**
	comp=Z,10.0nm,0.5s						
BOJS	**Bojanci**	**2.89**	**37**	*i* Pn	**Pn**	**17 00 32.7**	**+0.8**
VOJS	**Vojsko**	**2.93**	**15**	*i* Pn	**Pn**	**17 00 32.2**	**-0.2**
VOJS				*i* Sn	**Sn**	**17 01 05.7**	**-0.7**
CTI	**Castel Tesino**	**2.96**	**344**	Pg	**Pn**	**17 00 33.1**	**+0.3**
VISS	**Visnje**	**2.98**	**29**	*i* Pn	**Pn**	**17 00 33.7**	**+0.6**
VISS				*i* Sn	**Sn**	**17 01 07.3**	**-0.3**
VISS							
	comp=Z,13nm,0.1s						
VISS	**Visnje**	**2.98**	**29**	*i* Pn	**Pn**	**17 00 33.7**	**+0.6**
VISS				*i* Sn	**Sn**	**17 01 07.3**	**-0.3**
	comp=Z,13nm,0.1s						
MAGA	**Magasa**	**3.00**	**330**	Pg	**Pn**	**17 00 33.6**	**+0.2**
ROBS	**Robic**	**3.08**	**9**	*i* Pn	**Pn**	**17 00 34.3**	**-0.2**
ROBS				*i* Sn	**Sn**	**17 01 08.4**	**-1.6**
ROBS							
	comp=Z,24nm,0.1s						
ROBS	**Robic**	**3.08**	**9**	*i* Pn	**Pn**	**17 00 34.3**	**-0.2**
ROBS				*i* Sn	**Sn**	**17 01 08.4**	**-1.6**
ROBS	**Robic**	**3.08**	**9**	*i* Pn	**Pn**	**17 00 34.3**	**-0.2**
ROBS				*i* Sn	**Sn**	**17 01 08.4**	**-1.7**
	comp=Z,24nm,0.1s						
CADS	**Cadrg**	**3.09**	**12**	*i* Pn	**Pn**	**17 00 34.4**	**-0.3**
CADS				*i* Sn	**Sn**	**17 01 09.2**	**-1.2**
CADS							
	comp=Z,40nm,0.2s						
CADS	**Cadrg**	**3.09**	**12**	*i* Pn	**Pn**	**17 00 34.4**	**-0.3**
CADS				*i* Sn	**Sn**	**17 01 09.2**	**-1.2**
	comp=Z,40nm,0.2s						
GORS	**Gorjuse**	**3.22**	**15**	*i* Pn	**Pn**	**17 00 36.6**	**+0.2**
GORS				*i* Sn	**Sn**	**17 01 12.9**	**-0.7**
GORS							
	comp=Z,36nm,0.1s						
GORS	**Gorjuse**	**3.22**	**15**	*i* Pn	**Pn**	**17 00 36.6**	**+0.2**
GORS				*i* Sn	**Sn**	**17 01 12.9**	**-0.7**
	comp=Z,36nm,0.1s						
PDKS	**Podkum**	**3.25**	**28**	*i* Pn	**Pn**	**17 00 37.5**	**+0.6**
PDKS				*e*Sn	**Sn**	**17 01 13.8**	**-0.6**
PDKS							
	comp=Z,15nm,0.1s						
PDKS	**Podkum**	**3.25**	**28**	*i* Pn	**Pn**	**17 00 37.5**	**+0.6**
PDKS				*e*Sn	**Sn**	**17 01 13.8**	**-0.6**
MABI	**Malga Bissina**	**3.28**	**331**	Pg	**Pn**	**17 00 37.7**	**+0.4**
FVI	**Forni Avoltri**	**3.39**	**360**	Pg	**Pn**	**17 00 39.3**	**+0.6**
MDI	**Monti di Nese**	**3.39**	**320**	Pg	**Pn**	**17 00 38.7**	**0.0**
	comp=Z,21nm,0.2s						
OBKA	**Obir**	**3.53**	**20**	⇑*i*Pn	**Pn**	**17 00 40.2**	**-0.4**
OBKA				⇑*i*Sn	**Sn**	**17 01 20.7**	**-0.3**
SG1	**Sgolgore (BA)**	**3.73**	**128**	*e*Pn	**Pn**	**17 00 43.2**	**-0.2**
PERS	**Pernice**	**3.80**	**25**	*i* Pn	**Pn**	**17 00 45.5**	**+1.2**
PERS				*e*Sn	**Sn**	**17 01 27.9**	**+0.1**
PERS							
	comp=Z,13nm,0.2s						
PERS	**Pernice**	**3.80**	**25**	*i* Pn	**Pn**	**17 00 45.5**	**+1.2**
PERS				*e*Sn	**Sn**	**17 01 27.9**	**+0.1**
PERS	**Pernice**	**3.80**	**25**	*i* Pn	**Pn**	**17 00 45.5**	**+1.2**
PERS				*e*Sn	**Sn**	**17 01 27.9**	**+0.1**
	comp=Z,13nm,0.2s						
SBF	**Sospel**	**3.96**	**281**	*e*Pn	**Pn**	**17 00 47.6**	**+1.1**
SBF				*e*Sg	**Sn**	**17 01 30.0**	**-1.7**
	comp=Z,9.7nm,0.3s						
SBF	**Sospel**	**3.96**	**281**	*e*Pn	**Pn**	**17 00 47.6**	**+1.1**
SBF				*e*Sg	**Sn**	**17 01 30.0**	**-1.7**
	comp=Z,4.8nm,0.3s						
WTTA	**Wattenberg**	**4.14**	**349**	⇓*i*Pn	**Pn**	**17 00 50.8**	**+1.9**
WTTA				⇑*i*Sn	**Sn**	**17 01 37.8**	**+1.7**
ARSA	**Arzberg**	**4.47**	**24**	⇑*i*Pn	**Pn**	**17 00 52.7**	**-0.8**
ARSA				⇓*i*Sn	**Sn**	**17 01 41.2**	**-3.1**
FRF	**La Foret Royal**	**4.50**	**277**	*e*Pn	**Pn**	**17 00 54.9**	**+1.0**
FRF				*e*Sg	**Sn**	**17 01 42.1**	**-2.9**
	comp=Z,4.7nm,0.3s						
FRF	**La Foret Royal**	**4.50**	**277**	*e*Pn	**Pn**	**17 00 54.9**	**+1.0**
FRF				*e*Sg	**Sn**	**17 01 42.1**	**-2.9**
	comp=Z,2.3nm,0.3s						
DAVA	**Damuels**	**4.57**	**334**	⇑*i*Pn	**Pn**	**17 00 58.6**	**+3.7**
DAVA				⇓*i*Sn	**Sn**	**17 01 50.1**	**+3.5**
LMR	**La Mourre**	**4.60**	**274**	*e*Pn	**Pn**	**17 00 55.7**	**+0.5**
LMR				*e*Sg	**Sn**	**17 01 45.3**	**-2.0**
MBDF	**Montbardon**	**4.61**	**291**	*e*Pn	**Pn**	**17 00 57.7**	**+2.3**
MBDF				*e*Sg	**Sn**	**17 01 47.1**	**-0.6**
	comp=Z,7.8nm,0.6s						
MBDF	**Montbardon**	**4.61**	**291**	*e*Pn	**Pn**	**17 00 57.7**	**+2.3**
MBDF				*e*Sg	**Sn**	**17 01 47.1**	**-0.6**
	comp=Z,3.9nm,0.6s						
MOA	**Molln**	**4.75**	**12**	⇑*i*Sn	**Sn**	**17 01 50.5**	**-0.6**
MOA	**Molln**	**4.75**	**12**	⇓*i*Pn	**Pn**	**17 00 58.1**	**+0.8**
MOA				⇑*i*Sn	**Sn**	**17 01 50.5**	**-0.6**
LPG	**La Plagne**	**4.91**	**300**	*e*Pn	**Pn**	**17 00 58.1**	**-1.4**
LPG				*e*Sg	**Sn**	**17 01 53.1**	**-1.8**
	comp=Z,2.7nm,0.2s						
LPG	**La Plagne**	**4.91**	**300**	*e*Pn	**Pn**	**17 00 58.1**	**-1.4**
LPG				*e*Sg	**Sn**	**17 01 53.1**	**-1.8**
	comp=Z,1.4nm,0.2s						
LPL	**La Plagne**	**4.93**	**300**	*e*Pn	**Pn**	**17 00 59.7**	**0.0**
CONA	**Conrad Observa**	**5.18**	**23**	⇓*i*Pn	**Pn**	**17 01 03.7**	**+0.4**
CONA				⇑*i*Sn	**Sn**	**17 01 59.6**	**-2.1**
ORIF	**Oris-en-Rattie**	**5.28**	**291**	*e*Pg	**Pn**	**17 01 05.7**	**+1.2**
SMRF	**Simiane la Rot**	**5.31**	**281**	*e*Pn	**Pn**	**17 01 07.1**	**+2.2**
ZST	**Bratislava**	**5.83**	**30**	*e*SG	**Sn**	**17 02 13.5**	**-3.9**
CABF	**La Chapelle**	**5.86**	**308**	*e*Pg	**Pn**	**17 01 12.6**	**+0.1**
CABF				*e*Sg	**Sn**	**17 02 14.7**	**-3.5**
	comp=Z,2.6nm,0.4s						
CABF	**La Chapelle**	**5.86**	**308**	*e*Pg	**Pn**	**17 01 12.6**	**+0.1**
CABF				*e*Sg	**Sn**	**17 02 14.7**	**-3.5**
	comp=Z,1.3nm,0.4s						
HINF	**Hinteralfeld**	**6.22**	**320**	*e*Pn	**Pn**	**17 01 16.6**	**-0.8**
HINF				*e*Sn	**Sn**	**17 02 22.0**	**-5.1**
	comp=Z,6.0nm,0.3s						
HINF	**Hinteralfeld**	**6.22**	**320**	*e*Pn	**Pn**	**17 01 16.6**	**-0.8**
HINF				*e*Sn	**Sn**	**17 02 22.0**	**-5.1**
	comp=Z,3.0nm,0.3s						
CDF	**Champ du Feu**	**6.48**	**325**	*e*Pn	**Pn**	**17 01 20.3**	**-0.7**
HAU	**Haudompre**	**6.60**	**319**	*e*Pn	**Pn**	**17 01 22.0**	**-

*ISCJB **22** 17:30:51.2±0.5, 1633S×006×6957W±005, h195km±6km, mb3.9/9, Error ellipse: s-maj=10.6km s-min=7.3km az=28.5*

*BJI **22** 17:30:51.7, 1630S×6960W, h188km, mB4.7*

*NEIC **22** 17:30:52.1±0.6, 1635S×6960W, h189km±6km, mb4.2/6, Error ellipse: s-maj=10.5km s-min=9.6km az=210.0*

*IDC **22** 17:30:54.8±0.9, 1650S×6937W, h205km±5km, mb3.6/8, mb1 3.7/11, mb1mx3.6/21, mbtmp4.2/11, Error ellipse: s-maj=18.6km s-min=14.2km az=127.0*

ISC 22 17:30:52.1±0.5, 1635S±007×6953W±005, h186km±6km, n43, σ0§97/35, mb3.9/9, 1C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.35**	**87**	P	**Pn**	**17 31 27.6**	**+4.4**
	222nm,0.3s,baz=279,slow=6.9,SNR=5569						
LPAZ				S	**Sn**	**17 31 52.8**	**+5.6**
	85nm,0.3s,baz=93,slow=14,SNR=11						
LPAZ	**La Paz**	**1.35**	**87**	⇑*i*P	**Pn**	**17 31 27.6**	**+4.4**
ARE	**Arequipa**	**1.88**	**266**	⇑*i*P	**Pn**	**17 31 29.1**	**+0.8**
ARE				*i* S	**Sn**	**17 31 57.2**	**+0.8**
LVC	**Limon Verde**	**6.25**	**175**	P	**Pn**	**17 32 22.3**	**-0.2**
	8.1nm,0.3s,baz=23,slow=8.8,SNR=108						
SIV	**San Ignacio**	**8.14**	**89**	P	**Pn**	**17 32 47.0**	**-0.1**
	2.3nm,0.3s,baz=275,slow=11,SNR=28						
SIV				S	**Sn**	**17 34 17.7**	**-0.8**
	0.5nm,0.3s,baz=352,slow=15,SNR=4.8						
NNA	**Nana**	**8.31**	**301**	P	**Pn**	**17 32 47.4**	**-2.0**
	5.6nm,0.3s,baz=138,slow=11,SNR=11						
NNA				S	**Sn**	**17 34 18.3**	**-4.2**
	1.6nm,0.3s,baz=217,slow=20,SNR=2.6						
NNA	**Nana**	**8.31**	**301**	*e*Pn	**Pn**	**17 32 46.2**	**-3.1**
	54nm,0.8s						
SAML	**Samuel**	**9.62**	**41**	*e*Pn	**Pn**	**17 33 06.2**	**-0.3**
	3.5nm,0.6s						
ATAH	**Atahualpa**	**12.71**	**316**	P	**Pn**	**17 33 45.4**	**-0.9**
	0.5nm,0.3s,baz=86,slow=11,SNR=7.3						
CPUP	**Villa Florida**	**15.08**	**133**	P	**Pn**	**17 34 16.6**	**+0.7**
	0.7nm,0.3s,baz=309,slow=9.2,SNR=5.9						
CPUP	**Villa Florida**	**15.08**	**133**	*e*P	**Pn**	**17 34 15.0**	**-0.8**
BDFB	**Brasilia**	**20.70**	**91**	P	**P**	**17 35 17.2**	**-0.6**
	7.7nm,0.7s,baz=255,slow=12,SNR=11						
BDFB	**Brasilia**	**20.70**	**91**	*e*P	**P**	**17 35 17.8**	**0.0**
ROSC	**El Rosal**	**21.60**	**347**	*e*P	**P**	**17 35 27.2**	**-0.1**
PLCA	**Paso Flores**	**24.31**	**182**	P	**P**	**17 35 52.3**	**-0.1**
	5.6nm,0.8s,mb4.2,baz=357,slow=12,SNR=14						
PLCA	**Paso Flores**	**24.31**	**182**	*e*P	**P**	**17 35 52.3**	**-0.1**
	4.6nm,0.8s,mb4.1						
RCBR	**Riachuelo**	**34.56**	**76**	P	**P**	**17 37 24.2**	**+1.3**
VNA3	**Neumayer Olymp**	**65.12**	**162**	*e*	**P**	**17 41 11.7**	**-1.2**
VNA3				*e*		17 41 14.0	
VNA3				*e*		17 41 19.1	
VNA1	**Neumayer--Stat**	**65.31**	**161**	*e*	**P**	**17 41 14.4**	**+0.3**
VNA1				*e*		17 41 17.1	
SNAA	**Sanae**	**67.32**	**162**	*e*	**P**	**17 41 25.8**	**-1.1**
SNAA				*e*		17 41 32.2	
SNAA	**Sanae**	**67.32**	**162**	*e*P	**P**	**17 41 26.6**	**-0.3**
	2.7nm,0.8s,mb4.1						
DBIC	**Dimbokro**	**67.94**	**76**	P	**P**	**17 41 31.5**	**+0.8**
	2.5nm,0.4s,mb4.3,baz=320,slow=3.6,SNR=7.3						
DBIC	**Dimbokro**	**67.94**	**76**	*e*P	**P**	**17 41 31.3**	**+0.6**
	2.8nm,0.5s,mb4.2						
PDAR	**Pinedale Array**	**69.39**	**330**	P	**P**	**17 41 41.0**	**+1.3**
	0.3nm,0.5s,mb3.3,baz=114,slow=8.2,SNR=3.6						
QSPA	**South Pole Qui**	**73.81**	**180**	*e*P	**P**	**17 42 05.7**	**-0.4**
	5.4nm,0.7s,mb4.4						
TORD	**Torodi Ar. Bea**	**76.25**	**72**	P	**P**	**17 42 19.6**	**-0.4**
	3.3nm,0.5s,mb4.3,baz=264,slow=5.2,SNR=24						
TORD				pP	pP	17 43 08.5	+3.6
	1.3nm,0.9s,baz=243,slow=4.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**76.25**	**72**	P	**P**	**17 42 19.6**	**-0.4**
TORD				pP	pP	17 43 08.5	+3.6
VNDA	**Vanda**	**81.79**	**190**	P	**P**	**17 42 50.4**	**+0.3**
	0.6nm,0.8s,mb3.3,baz=144,slow=4.7,SNR=5.3						
VNDA	**Vanda**	**81.79**	**190**	P	**P**	**17 42 50.4**	**+0.3**
ESDC	**Sonseca Array**	**82.62**	**45**	P	**P**	**17 42 56.2**	**+1.8**
	0.3nm,0.3s,mb3.5,baz=246,slow=4.7,SNR=6.0						
MAW	**Mawson**	**89.41**	**164**	P	**P**	**17 43 27.7**	**0.0**
	0.6nm,0.4s,mb3.9,baz=208,slow=6.0,SNR=5.6						
ASAR	**Alice Springs**	**134.10**	**211**	PKP	PKPdf	17 49 47.4	+0.1
	0.5nm,0.6s,baz=132,slow=2.1,SNR=10						
WRA	**Warramunga Arr**	**136.97**	**214**	PKP	PKPdf	17 49 53.1	+0.5
	0.8nm,0.6s,baz=158,slow=1.7,SNR=13						
ZAL	**Zalesovo**	**137.50**	**22**	PKP	PKPdf	17 49 53.1	-0.5
	1.5nm,0.6s,baz=283,slow=4.6,SNR=7.6						
ZAL				SKPbc	SKPbc	17 53 09.3	-0.3
	0.8nm,0.3s,baz=279,slow=6.4,SNR=3.7						
ZAL	**Zalesovo**	**137.50**	**22**	PKP	PKPdf	17 49 53.1	-0.5
ZAL				SKPbc	SKPbc	17 53 09.3	-0.3
MKAR	**Makanchi Array**	**141.70**	**32**	PKP	PKPdf	17 50 01.7	+0.5
	0.3nm,0.2s,baz=38,slow=2.2,SNR=4.4						
MKAR				SKPbc	SKPbc	17 53 20.9	0.0
	0.2nm,0.2s,baz=8.7,slow=1.6,SNR=4.5						
FITZ	**Fitzroy Crossi**	**142.64**	**204**	PKhKP		17 49 59.2	
	1.9nm,0.7s,baz=186,slow=13,SNR=8.3						
MDJ	**Mudanjiang**	**147.53**	**334**	PKP	PKPdf	17 50 09.8	-1.5
MJAR	**Matsushiro Arr**	**148.23**	**315**	PKPbc	PKPbc	17 50 16.3	+0.3
	1.9nm,0.7s,baz=66,slow=1.0,SNR=8.1						
SONM	**Songino Array**	**148.43**	**5**	PKPbc	PKPbc	17 50 17.0	+0.5
	3.5nm,0.6s,baz=331,slow=1.7,SNR=35						
SONM				pPKPbc	pPKPbc	17 51 11.0	+6.4
	0.8nm,0.8s,baz=320,slow=2.7,SNR=3.2						
ULN	**Ulaanbaatar**	**148.45**	**4**	*e*PKPbc	PKPbc	17 50 17.3	+0.7
HHC	**Hu-ho-hao-te**	**155.57**	**358**	*e*PKP	PKPdf	17 50 24.8	+1.4
HHC				PKS		17 53 57.3	
HHC				PP	PP	17 54 33.0	+5.3
HHC				SKS	SKSdf	17 57 07.5	-4.6
HHC				SKKS	SKKSac	18 00 56.5	-2.5
HHC				SS	SS	18 13 56.3	-2.0
HHC				PP	PP		
	comp=Z,76nm,9.9s						
HHC				LR	LR		
	comp=N,98nm,24.7s						
HHC				LR	LR		
	comp=E,90nm,26.6s						
HHC				LR	LR		
	comp=Z,68nm,26.6s						
NJ2	**Nanjing**	**162.61**	**336**	*e*PKP	PKPdf	17 50 34.1	+2.5

*NEIC **22** 17:32:39.8, 32.18S×7179W, h9km, ML2.5(GUC), After GUC.*

GUC 22 17:32:39.8±0.6, 3218S×7179W, h9km±2km, MD3.6, ML2.5, 6C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.39**	**39**	⇑*i*P	Pg	17 32 47.9	+0.5
CHNG				*i* S	Sg	17 32 53.8	+1.4
CHNG				AML	AML	17 32 54.4	
	comp=E,568nm,0.4s						
ROCH	**El Roble**	**1.02**	**140**	⇓*i*P	Pg	17 32 59.1	-0.4
ROCH				*i* S	Sg	17 33 13.7	+0.9
JACH	**Jahuel**	**1.13**	**117**	⇑*i*P	Pb	17 33 00.4	-1.0
JACH				*i* S	Sg	17 33 16.0	-0.1
LCCH	**Las Cruces**	**1.30**	**172**	⇑*i*P	Pn	17 33 02.9	-1.2
LCCH				*i* S	Sb	17 33 21.6	+0.4
PEL	**Peldehue**	**1.34**	**136**	⇑*i*P	Pn	17 33 03.8	-0.8
PEL				*i* S	Sb	17 33 22.0	-0.2
PEL				AML	AML	17 33 23.8	
	comp=E,237nm,0.3s						
PEL	**Peldehue**	**1.34**	**136**	⇑*i*P	Pn	17 33 03.8	-0.8
PEL				*i* S	Sb	17 33 22.0	-0.2
RCDM	**Rinconada Maip**	**1.54**	**148**	⇓*i*P	Pn	17 33 06.9	-0.5
RCDM				*i* S	Sn	17 33 27.0	-0.6
RCDM				AML	AML	17 33 29.5	
	comp=E,144nm,0.1s						
RCDM	**Rinconada Maip**	**1.54**	**148**	⇓*i*P	Pn	17 33 06.9	-0.5
RCDM				*i* S	Sn	17 33 27.0	-0.6
FCH	**Farellones**	**1.70**	**133**	⇑*i*P	Pn	17 33 09.5	-0.1
FCH				*i* S	Sn	17 33 32.4	+0.9
FCH				AML	AML	17 33 33.2	
	comp=E,76nm,0.2s						
PCH	**Pirque**	**1.79**	**144**	*e*P	Pn	17 33 10.4	-0.4
TLL	**Tololo Astrono**	**2.18**	**23**	*e*P	Pn	17 33 17.7	+1.6
TLL				*i* S	Sn	17 33 45.9	+2.6

*ISCJB **22** 17:54:37.4±0.6, 691N±006×7304W±007, h166km±7km, mb3.8/3, Error ellipse: s-maj=14.0km s-min=6.7km az=72.7*

*FUNV **22** 17:54:37.6, 677N×7320W, h163km, MW3.8*

*IDC **22** 17:54:37.2±0.8, 680N×7303W, h157km±8km, mb3.7/2, mb1 3.7/4, mb1mx3.3/22, mbtmp4.1/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/35, Error ellipse: s-maj=36.9km s-min=7.6km az=130.0*

*NEIC **22** 17:54:38.2±0.8, 668N×7296W, h171km±8km, mb3.6/3, Error ellipse: s-maj=16.5km s-min=11.2km az=103.0*

ISC 22 17:54:38.1±0.6, 686N±006×7302W±007, h162km±6km, n21, σ1§11/30, mb3.8/3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.22**	**35**	*e*P	**Pn**	**17 55 07.0**	**+1.2**
CAPV				*e*S	**Sn**	**17 55 28.4**	**+1.3**
ROSC	**El Rosal**	**2.38**	**213**	P	**Pn**	**17 55 18.7**	**+0.3**
	70nm,0.3s,baz=100,slow=11,SNR=67						
ROSC				LR	LR	17 55 38.5	
	comp=Z,837nm,20.0s,baz=297,slow=26						
ROSC				S	**Sn**	**17 55 47.7**	**-1.8**
	62nm,0.3s,baz=71,slow=21,SNR=11						
ROSC	**El Rosal**	**2.38**	**213**	*e*Pn	**Pn**	**17 55 18.3**	**-0.1**
ROSC				LR	LR	17 55 38.5	
ROSC				*e*S	**Sn**	**17 55 47.6**	**-1.9**
VIGV	**El Vigia**	**2.56**	**40**	*e*P	**Pn**	**17 55 21.4**	**+0.9**
VIGV				*e*S	**Sn**	**17 55 52.8**	**-0.4**
SOCV	**Socops**	**2.57**	**56**	*e*P	**Pn**	**17 55 21.9**	**+1.3**
SOCV				*e*S	**Sn**	**17 55 54.0**	**+0.6**
SDV	**Santo Domingo**	**3.10**	**49**	P	**Pn**	**17 55 28.7**	**+1.5**
	25nm,0.3s,baz=270,slow=5.3,SNR=10						
SDV				S	**Sn**	**17 56 05.3**	**+0.1**
	54nm,0.3s,baz=50,slow=15,SNR=26						
ELOV	**Elorza**	**3.51**	**88**	*e*P	**Pn**	**17 55 33.0**	**+0.7**
VIRV	**Villa del Rosa**	**3.67**	**9**	*e*P	**Pn**	**17 55 33.7**	**-0.6**
VIRV				*e*S	**Sn**	**17 56 15.8**	**-2.3**
QARV	**Quebrada Arrib**	**4.14**	**36**	*e*P	**Pn**	**17 55 41.3**	**+0.9**
QARV				*e*S	**Sn**	**17 56 28.1**	**-0.8**
SANV	**Sanarito**	**4.33**	**53**	*e*P	**Pn**	**17 55 43.3**	**+0.4**
SANV				*e*S	**Sn**	**17 56 32.3**	**-1.2**
CURV	**Curarigua**	**4.35**	**44**	*e*P	**Pn**	**17 55 43.5**	**+0.4**
CURV				*e*S	**Sn**	**17 56 33.5**	**-0.4**
DABV	**Dabajuro**	**4.67**	**30**	*e*P	**Pn**	**17 55 47.9**	**+0.5**
DABV				*e*S	**Sn**	**17 56 39.5**	**-1.9**
TEPV	**Terepaima**	**4.88**	**51**	*e*P	**Pn**	**17 55 50.6**	**+0.5**
TEPV				*e*S	**Sn**	**17 56 44.7**	**-1.7**
SAML	**Samuel**	**18.51**	**148**	P	**P**	**17 58 40.1**	**-1.9**
	1.3nm,0.5s						
LPAZ	**La Paz**	**23.50**	**168**	P	**P**	**17 59 34.1**	**+0.9**
	0.8nm,0.3s,mb3.7,baz=309,slow=10,SNR=6.3						
LPAZ				pP		18 00 05.4	
	1.2nm,0.7s,baz=343,slow=9.3,SNR=3.3						
LPAZ	**La Paz**	**23.50**	**168**	*e*P	**P**	**17 59 31.3**	**-1.9**
	0.9nm,0.4s,mb3.6						
LPAZ				pP		18 00 05.4	
MNTX	**Cornudas Mount**	**39.02**	**314**	*e*P	**P**	**18 01 49.5**	**+0.7**
	1.4nm,0.7s,mb3.7						
SCHQ	**Schefferville**	**48.09**	**5**	P	**P**	**18 03 02.4**	**+1.1**
	2.9nm,0.5s,mb4.2,baz=178,slow=7.2,SNR=5.0						
ASAR	**Alice Springs**	**149.22**	**234**	PKPbc	PKPbc	18 14 06.5	-0.9
	0.2nm,0.5s,baz=116,slow=3.5,SNR=9.8						
WRAB	**Tennant Creek**	**150.44**	**241**	*e*PKPbc	PKPbc	18 14 11.2	+0.8
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc	PKPbc	18 14 10.3	-0.1
	0.4nm,0.4s,baz=107,slow=2.7,SNR=17						
WRA				pPKPbc	pPKPbc	18 14 52.7	-0.1
	0.3nm,0.4s,baz=108,slow=2.5,SNR=2.3						

GUC 22 18:10:44.0±0.7, 3315S×7028W, h3km±2km, MD3.5, ML2.2, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**0.18**	**183**	⇑*i*P	Pg	18 10 48.1	+0.7
FCH				*i* S	Sg	18 10 51.2	+1.5
FCH				AML	AML	18 10 51.9	
	comp=E,531nm,0.3s						
CLCH	**Cerro Calan**	**0.33**	**221**	*e*P	Pg	18 10 50.8	+0.5
CLCH				*i* S	Sg	18 10 56.2	+1.7
CLCH				AML	AML	18 10 58.5	
	comp=E,734nm,0.8s						
PEL	**Peldehue**	**0.34**	**271**	*i* P	Pg	18 10 51.1	+0.6
PEL				*i* S	Sg	18 10 56.1	+1.2
CACH	**El Canelo**	**1.00**	**195**	⇓*i*P	Pg	18 11 03.6	+0.4
CACH				*i* S	Sg	18 11 18.3	+2.2
CICH	**Cipreses**	**1.17**	**186**	*i* P	Pg	18 11 06.2	-0.2
CICH				*i* S	Sg	18 11 23.1	+1.4

*CSEM **22** 18:11:02.2, 1690S×17753W, h33km, mb6.1*

*MOS **22** 18:11:58.0±0.8, 1756S×17876W, h538km, mb5.1/26, Error ellipse: s-maj=9.4km s-min=8.6km az=151.2*

*ISCJB **22** 18:11:59.7±0.1, 1781S±003×17877W±003, h564km, mb4.8/93, Error ellipse: s-maj=5.0km s-min=3.0km az=97.8*

*BJI **22** 18:11:59.9, 1720S×17858W, h552km, mB4.8, mb5.0*

*NEIC **22** 18:12:00.6±0.1, 1773S×17874W, mb4.8/48, Error ellipse: s-maj=5.1km s-min=3.3km az=124.0*

*HRVD **22** 18:12:00.6±0.4, 1759S×17854W, h589km±2km, MW5.2/55, Centroid moment Tensor Solution. LP body waves: s55,c80; Half duration: 1§0 Moment tensor: Scale 10^17 Nm; Mrr-0.79±.03; Mθθ 0.45±.05; Mϕϕ 0.34±.05; Mrθ 0.18±.05; Mθϕ -0.18±.05; Mϕr-0.35±.05; Best double couple: M0 0.78800×10^17 NP1:ϕs 122.00000°, δ32.00000°, λ-104.00000°. NP2:ϕs 318.00000°, δ59.00000°, λ-82.00000°. Principal axes: T 0.6740, Plg14.0000°, Azm42.0000°; N 0.2260, Plg7.0000°, Azm134.0000°; P -0.9010, Plg74.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s.*

*IDC **22** 18:12:01.2±0.6, 1775S×17875W, h568km±6km, mb4.3/25, mb1 4.4/27, mb1mx4.4/29, mbtmp5.3/27 Error ellipse: s-maj=9.9km s-min=6.8km az=161.0*

*BGS **22** 18:12:01.6±4.3, 1773S×17874W, h565km, mb4.8(NEIC)*

*SZGRF **22** 18:12:02.1, 1777S×17801W, h584km, Fiji Islands region*

ISC 22 18:12:01.1±0.1, 1779S±003×17875W±003, h565km, h565km±1.5km:pP-P, n727, σ0§86/345, mb4.8/93, 65C-151D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.74**	**61**	P	**P**	**18 13 53.0**	**-3.6**
	105nm,0.3s,baz=72,slow=1.0,SNR=47						
AFI				S	**S**	**18 15 23.6**	**-7.7**
	12nm,0.3s,baz=35,slow=18,SNR=3.6						
AFI	**Afiamalu**	**7.74**	**61**	*e*P	**P**	**18 13 51.4**	**-5.2**
AFI				*e*S	**S**	**18 15 23.0**	**-8.3**
FUNA	**Funafuti**	**9.42**	**347**	*e*P	**P**	**18 14 12.0**	**-1.3**
BKM	**Butte a Klehm**	**12.40**	**269**	*i* P	**P**	**18 14 43.9**	**+0.2**
DZM	**Mont Dzumac**	**14.56**	**251**	*e*P	**P**	**18 15 05.8**	**-0.1**
DZM	**Mont Dzumac**	**14.56**	**251**	P	**P**	**18 15 05.7**	**-0.2**
	23nm,0.3s,baz=73,slow=17,SNR=359						
DZM				S	**S**	**18 17 38.0**	**+0.2**
	baz=216,slow=19,SNR=2.6						
RAR	**Rarotonga**	**18.21**	**104**	P	**P**	**18 15 39.1**	**-0.9**
	1.0nm,0.3s,baz=316,slow=17,SNR=4.0						
KUZ	**Kuaotunu**	**19.51**	**193**	*e*P	**P**	**18 15 53.6**	**+1.7**
KUZ	**Kuaotunu**	**19.51**	**193**	PN	**P**	**18 15 53.6**	**+1.7**
URZ	**Urewera**	**20.72**	**189**	P	**P**	**18 16 01.2**	**-1.6**
	33nm,0.5s,baz=10.0,slow=1.8,SNR=39						
URZ				S	**S**	**18 19 15.0**	**-3.1**
	21nm,0.8s,baz=145,slow=16,SNR=5.8						
MWZ	**Matawai**	**20.73**	**188**	*e*P	**P**	**18 16 01.3**	**-1.6**
MWZ	**Matawai**	**20.73**	**188**	PN	**P**	**18 16 01.3**	**-1.6**
BKZ	**Black Stump Fm**	**21.70**	**190**	*e*P	**P**	**18 16 09.9**	**-1.7**
BKZ	**Black Stump Fm**	**21.70**	**190**	PN	**P**	**18 16 09.0**	**-2.7**
BKZ				SN	**S**	**18 19 30.3**	**-2.4**
OTVZ	**Oturere**	**21.85**	**192**	PN	**P**	**18 16 13.1**	**+0.2**
HNR	**Honiara**	**22.30**	**289**	P	**P**	**18 16 16.9**	**0.0**
	114nm,0.7s,mb5.6,baz=100,slow=2.6,SNR=7.6						
MRZ	**Mangatainoka R**	**23.32**	**191**	*e*P	**P**	**18 16 24.4**	**-1.6**
MRZ	**Mangatainoka R**	**23.32**	**191**	PN	**P**	**18 16 24.3**	**-1.7**
QRZ	**Quartz Range**	**24.16**	**196**	*e*P	**P**	**18 16 32.8**	**-0.7**
QRZ	**Quartz Range**	**24.16**	**196**	PN	**P**	**18 16 34.1**	**+0.6**
NNZ	**Nelson**	**24.31**	**195**	*e*P	**P**	**18 16 34.5**	**-0.3**
NNZ	**Nelson**	**24.31**	**195**	PN	**P**	**18 16 34.3**	**-0.5**
THZ	**Tophouse**	**24.94**	**195**	*e*P	**P**	**18 16 39.7**	**-0.7**
THZ	**Tophouse**	**24.94**	**195**	PN	**P**	**18 16 39.7**	**-0.8**
THZ				SN	**S**	**18 20 21.9**	**-2.8**
DSZ	**Denniston Nort**	**25.21**	**197**	P	**P**	**18 16 42.9**	**+0.1**
DSZ	**Denniston Nort**	**25.21**	**197**	PN	**P**	**18 16 42.9**	**+0.1**
KHZ	**Kahutara**	**25.41**	**193**	*e*P	**P**	**18 16 43.6**	**-1.0**
KHZ	**Kahutara**	**25.41**	**193**	PN	**P**	**18 16 43.2**	**-1.4**
LTZ	**Lake Taylor**	**26.06**	**195**	*e*P	**P**	**18 16 49.4**	**-0.9**
LTZ	**Lake Taylor**	**26.06**	**195**	PN	**P**	**18 16 49.4**	**-0.9**
RPZ	**Rata Peaks**	**27.25**	**196**	P	**P**	**18 17 00.2**	**-0.5**
	25nm,0.7s,mb5.0,baz=225,slow=4.9,SNR=11						
FOZ	**Fox Glacier**	**27.50**	**198**	P	**P**	**18 17 01.6**	**-1.3**
FOZ	**Fox Glacier**	**27.50**	**198**	PN	**P**	**18 17 01.6**	**-1.3**
PAE	**Paea**	**27.77**	**94**	*e*P	**P**	**18 17 04.7**	**-0.5**
	67nm,0.8s,mb5.3						
PPT	**Papeete**	**27.78**	**94**	*e*P	**P**	**18 17 04.8**	**-0.5**
	157nm,1.3s,mb5.5						
PPT	**Papeete**	**27.78**	**94**	P	**P**	**18 17 05.4**	**0.0**
	58nm,0.6s,mb5.4,baz=145,slow=3.6,SNR=4.2						
TVO	**Taravao**	**28.07**	**95**	*e*P	**P**	**18 17 07.6**	**-0.3**
	109nm,0.8s,mb5.5						
LBZ	**Lake Benmore**	**28.11**	**197**	*e*P	**P**	**18 17 06.8**	**-1.4**
LBZ	**Lake Benmore**	**28.11**	**197**	PN	**P**	**18 17 06.6**	**-1.6**
JCZ	**Jackson Bay**	**28.24**	**199**	*e*P	**P**	**18 17 09.2**	**-0.2**
JCZ	**Jackson Bay**	**28.24**	**199**	PN	**P**	**18 17 09.2**	**-0.1**
MLZ	**Mavora Lakes**	**29.57**	**199**	*e*P	**P**	**18 17 21.8**	**+0.9**
MLZ	**Mavora Lakes**	**29.57**	**199**	PN	**P**	**18 17 21.8**	**+0.9**
TUZ	**Tuapeka**	**29.70**	**196**	*e*P	**P**	**18 17 21.9**	**-0.1**
TUZ	**Tuapeka**	**29.70**	**196**	PN	**P**	**18 17 21.9**	**-0.1**
PMOR	**Pomariorio Ree**	**29.71**	**89**	*e*P	**P**	**18 17 21.6**	**-0.5**
	126nm,1.0s,mb5.4						
ARMA	**Armidale**	**29.72**	**239**	*e*P	**P**	**18 17 23.9**	**+1.7**
WHZ	**Wether Hill Ro**	**30.13**	**199**	*e*P	**P**	**18 17 26.2**	**+0.5**
WHZ	**Wether Hill Ro**	**30.13**	**199**	PN	**P**	**18 17 26.2**	**+0.5**
CTA	**Charters Tower**	**33.15**	**260**	P	**P**	**18 17 52.0**	**+0.6**
	29nm,0.7s,mb4.9,baz=92,slow=12,SNR=10						
CTA				PcP	PcP	18 20 18.1	+0.8
	14nm,0.6s,baz=101,slow=2.3,SNR=5.3						
CTA				S	**S**	**18 22 29.9**	**-1.4**
	3.4nm,0.8s,baz=307,slow=20,SNR=3.6						
CTA	**Charters Tower**	**33.15**	**260**	*e*P	**P**	**18 17 51.7**	**+0.3**
CTA				*e*		18 20 18.0	
CTA				*e*S	**S**	**18 22 30.3**	**-1.1**
CTA				pmax	pmax		
	comp=Z,20nm,0.6s						
CTA	**Charters Tower**	**33.15**	**260**	*e*P	**P**	**18 17 51.7**	**+0.3**
	comp=Z,20nm,0.6s,mb4.8						
CTA				*e*PcP	PcP	18 20 18.0	+0.7
CTA				*e*S	**S**	**18 22 30.3**	**-1.1**
CTAO	**Charters Tower**	**33.15**	**260**	*e*P	**P**	**18 17 51.7**	**+0.3**
CTAO				*e**PP		18 19 24.5	
CTAO				*i*		18 20 17.9	
CTAO				pmax	pmax		
	comp=Z,28nm,0.7s,mb4.9						
CTAO	**Charters Tower**	**33.15**	**260**	*e*P	**P**	**18 17 51.7**	**+0.3**
	comp=Z,28nm,0.7s,mb4.9						
CTAO				*e*pP		18 19 24.5	
CTAO				⇓*i*PcP	PcP	18 20 17.9	+0.6
CNB	**Canberra Magne**	**33.25**	**232**	*e*P	**P**	**18 17 53.6**	**+1.4**
	comp=Z,52nm,0.6s,mb5.2						
PMG	**Port Moresby**	**34.12**	**280**	P	**P**	**18 18 01.0**	**+1.5**
	comp=Z,152nm,0.8s,mb5.5,baz=77,slow=5.5,SNR=14						
TOO	**Toolangi**	**37.00**	**231**	*e*P	**P**	**18 18 24.5**	**+1.2**
TOO				*i* S	**S**	**18 23 30.7**	**+1.7**
TOO				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.1						
TOO	**Toolangi**	**37.00**	**231**	*e*P	**P**	**18 18 24.5**	**+1.2**
	comp=Z,59nm,0.9s,mb5.1						
TOO				*i* S	**S**	**18 23 30.7**	**+1.7**
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**18 18 36.3**	**+1.5**
	comp=Z,46nm,0.7s,mb5.2,baz=85,slow=8.7,SNR=66						
STKA				PcP	PcP	18 20 33.2	-0.1
	comp=Z,15nm,0.8s,baz=76,slow=4.8,SNR=5.0						
STKA				S	**S**	**18 23 49.6**	**-0.2**
	comp=Z,3.8nm,0.9s,baz=299,slow=19,SNR=4.3						
STKA				PKiKP	PKiKP	18 27 44.0	-1.7
	comp=Z,0.9nm,0.7s,baz=31,slow=20,SNR=2.9						
STKA	**Stephens Creek**	**38.41**	**241**	⇓*i*P	**P**	**18 18 35.9**	**+1.1**
	comp=Z,52nm,1.0s,mb5.0						
STKA				*e*PcP	PcP	18 20 33.4	+0.1
STKA				*e*S	**S**	**18 23 50.3**	**+0.5**
TAOE	**Nuku Hiva Isla**	**38.52**	**82**	*e*LR	LR	18 47 27.7	
	comp=Z,3μm,25.2s,baz=66						
WB2	**Warramunga Arr**	**44.33**	**259**	*e*P	**P**	**18 19 20.8**	**-0.7**
WB2				*e*PcP	PcP	18 20 53.6	+0.5
WB2				*e*S	**S**	**18 25 12.3**	**-2.6**
WRAB	**Tennant Creek**	**44.33**	**259**	*d*P	**P**	**18 19 21.5**	**0.0**
**

SMY Shemya 70.49 355 *e*P P 18 22 17.4 -1.9
SMY pmax pmax
comp=Z,61nm,0.7s,mb5.2
SMY Shemya 70.49 355 *e*P P 18 22 17.4 -1.9
comp=Z,61nm,0.7s,mb5.2
NIKO Nikolski 70.98 6 *e*P P 18 22 19.5 -2.7
SKR Severo-Kuril's 71.67 343 *e*P P 18 22 21.4 -4.8
SKR pmax pmax
comp=Z,50nm,0.7s,mb5.0
SKR pmax pmax
comp=N,30nm,0.5s
QSPA South Pole Qui 72.27 180⇓*i*P P 18 22 30.4 +0.8
comp=N,128nm,1.0s,mb5.3
MIR Mirnyy 73.14 205*d i*P P 18 22 36.4 +1.7
MIR pmax pmax
comp=Z,42nm,1.0s,mb4.8
YSS Yuzh-Sakhalins 73.17 334*d i*P P 18 22 34.5 -0.3
YSS pmax pmax
comp=Z,54nm,1.5s,mb4.8
YSS Yuzh-Sakhalins 73.17 334⇓*i*P P 18 22 34.5 -0.3
comp=Z,24nm,0.8s,mb4.7
PET Petropavlovsk 73.18 346 *i* P P 18 22 33.3 -1.6
PET pmax pmax
comp=Z,18nm,0.7s,mb4.6
QZH Quanzhou 74.34 303⇓*i*P P 18 22 41.6 +0.1
QZH S S 18 31 31.8 +1.2
QZH AMB AMB
comp=Z,150nm,0.9s,mb5.4
SSE Sheshan 75.42 310 *e*P P 18 22 46.5 -1.0
SSE AMB AMB
comp=Z,21nm,0.9s,mb4.6
SSE AMB AMB
comp=Z,30nm,3.9s
VLA Vladivostok 75.67 325 *i* P P 18 22 49.1 +0.2
VLA pmax pmax
comp=Z,60nm,1.5s,mb4.8
CHGN Chignik 75.76 12 *e*P P 18 22 46.3 -3.1
HAST UC Hastings Re 76.28 44⇑P P 18 22 52.4 +0.1
baz=76
PACP Pacheco Peak 76.80 44⇑P P 18 22 55.0 -0.1
baz=77
NJ2 Nanjing 77.62 310 *e*P P 18 23 01.0 +1.5
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.4
VES Vestal, Richgr 77.64 46⇓P P 18 22 59.5 -0.2
baz=78
N02C Big Bar 77.73 40⇓P P 18 23 00.6 +0.5
baz=78
HABR Khabarovsk 77.75 331⇓*i*P P 18 23 00.7 +0.5
HABR *e*S S 18 32 14.3 +7.4
HABR pmax pmax
comp=Z,58nm,1.0s,mb4.9
EDW2 Edwards Air Fo 77.89 47⇓P P 18 23 01.3 +0.3
baz=78
MDJ Mudanjiang 77.90 325 P P 18 23 01.1 0.0
MDJ AP pP 18 24 59.1 -0.9
MDJ XP sP 18 25 56.8 -1.0
MDJ PP PP 18 26 06.8 -0.5
MDJ S S 18 32 08.8 +0.3
MDJ SCS ScS 18 32 28.4 -0.2
MDJ XS sS 18 35 39.3 -1.2
MDJ AMB AMB
comp=Z,67nm,0.8s,mb5.0
MDJ AMB AMB
comp=Z,80nm,3.8s
ISA Isabella 77.97 46 *e*P P 18 23 00.4 -1.0
ISA *e**PP pP 18 25 01.1 +0.8
ISA Isabella 77.97 46 P P 18 23 01.9 +0.5
baz=78,SNR=5.9
CMB Columbia Colle 77.97 43 *e*P P 18 23 01.4 0.0
CMB pmax pmax
comp=Z,40nm,0.7s,mb4.9
CMB Columbia Colle 77.97 43 *e*P P 18 23 01.4 0.0
comp=Z,4.0nm,0.7s,mb3.9
CMB Columbia Colle 77.97 43⇓P P 18 23 01.5 +0.1
baz=78
MONP Monument Peak 77.98 50⇑P P 18 23 02.0 +0.5
baz=78
WDC Whiskeytown Da 78.06 40⇑P P 18 23 01.2 -0.6
baz=78
DVTC Desert V Tower 78.10 50⇓P P 18 23 02.3 +0.2
baz=78
ORV Oroville 78.11 42⇓P P 18 23 01.9 -0.3
baz=78
LAVA Lava Cap Winer 78.15 43⇑P P 18 23 01.9 -0.5
baz=78
S06C San Francisco 78.24 44⇓P P 18 23 02.5 -0.3
baz=78
KCC Kaiser Creek 78.29 45⇓P P 18 23 02.4 -0.7
baz=78
PFO Pinyon Flat Ob 78.32 49⇓P P 18 23 03.7 +0.4
baz=78
M02C Callahan 78.35 40⇓P P 18 23 03.1 -0.3
baz=78
L02A Cave Junction 78.35 39⇑P P 18 23 02.6 -0.9
baz=78
LRMC Laurel Mountai 78.41 47⇑P P 18 23 03.7 -0.1
baz=78
P05C Yuba Gap, Truc 78.54 42⇑P P 18 23 03.9 -0.5
baz=79
R05C Kirkwood Meado 78.55 43⇓P P 18 23 04.0 -0.5
baz=79
YBH Yreka Blue Hor 78.63 39 P P 18 23 05.4 +0.4
comp=Z,3.8nm,0.6s,mb3.9,baz=198,slow=1.2,SNR=13
YBH pP pP 18 25 05.6 +1.4
comp=Z,7.1nm,0.9s,baz=230,slow=4.7,SNR=6.0
YBH Yreka Blue Hor 78.63 39 *e*P P 18 23 05.0 0.0
YBH *e**PP pP 18 25 05.1 +0.9
YBH pmax pmax
comp=Z,40nm,0.8s
YBH Yreka Blue Hor 78.63 39 *e*P P 18 23 05.0 0.0
comp=Z,4.3nm,0.8s,mb3.8
YBH *ep*P pP 18 25 05.1 +0.9
YBH Yreka Blue Hor 78.63 39⇑P P 18 23 04.8 -0.1
baz=79,SNR=5.8
M03C McCloud 78.72 40⇓P P 18 23 04.9 -0.5
baz=79
MTUM Tungsten Hills 78.81 45 *e*P P 18 23 06.1 +0.2
MTUM *ep*P pP 18 25 06.1 +1.0
O04C Chester 78.81 41⇓P P 18 23 06.2 +0.2
baz=79
BELC Belle Mtn. 78.84 49⇑P P 18 23 06.6 +0.5
baz=79
MPMC Manual Prospec 78.85 46 P P 18 23 06.7 +0.6
baz=79,SNR=6.0
R06C Coleville 78.86 43⇓P P 18 23 06.7 +0.5
baz=79
HATC Hat Creek Radi 78.86 41⇑P P 18 23 06.5 +0.3
baz=79
GSC Goldstone 78.94 47⇓P P 18 23 07.4 +0.8
baz=79
BEKR Beckwourth 79.02 42 P P 18 23 07.3 +0.3
baz=79,SNR=5.2
LTIM Timbered Crate 79.05 40 P P 18 23 07.5 +0.3
WCN Washoe City 79.09 43⇓P P 18 23 07.8 +0.4
baz=79
J02A Umpqua 79.10 38⇓P P 18 23 07.4 0.0
baz=79
KGM Kluang 79.14 276 P P 18 23 08.8 +1.1
M04C Macdoel 79.19 40⇓P P 18 23 08.0 +0.1
baz=79
GLA Glamis 79.22 50⇓P P 18 23 09.0 +1.0
baz=79
DL2 Dalian 79.28 317 P P 18 23 08.5 +0.1
DL2 AMB AMB
comp=Z,20nm,0.8s,mb4.5
I02A Mapleton 79.34 37⇑P P 18 23 08.5 -0.2
baz=80
L04A Klamath Falls 79.39 39⇓P P 18 23 09.3 +0.4
baz=80
GRAC Grapevine Rang 79.43 46⇑P P 18 23 09.6 +0.4
baz=80
J03A Ideyld Park 79.46 38⇓P P 18 23 09.1 -0.2
baz=80
FURC Furnace Creek, 79.50 46⇓P P 18 23 09.8 +0.2
baz=80
O06A Flanigan 79.52 42 P P 18 23 10.0 +0.3
baz=80,SNR=15
NVAR Mina Array Bea 79.56 44 P P 18 23 09.9 +0.1
comp=Z,4.2nm,0.7s,mb3.9,baz=214,slow=6.9,SNR=20
NVAR pP pP 18 25 10.2 +0.7
comp=Z,4.0nm,1.0s,baz=221,slow=6.9,SNR=9.1
TUQ Turquoise Mtn. 79.62 48⇑P P 18 23 10.8 +0.6
baz=80
R08A Mina 79.65 44⇓P P 18 23 10.5 +0.2
baz=80
SNY Shenyang 79.69 320⇓P P 18 23 10.4 -0.1
SNY S S 18 32 27.6 +0.6
SNY AMB AMB
comp=Z,20nm,1.3s,mb4.3
SNY AMB AMB
comp=Z,75nm,4.3s
M06C Likely Place G 79.70 41 P P 18 23 11.1 +0.5
baz=80,SNR=5.9
CN2 Changchun 79.73 323⇑P P 18 23 11.0 +0.3
CN2 AMB AMB
comp=Z,50nm,1.0s,mb4.8
Y12C Blythe 79.78 50⇑P P 18 23 11.9 +0.9
baz=80
U10A Ash Meadows, A 79.84 47⇓P P 18 23 12.2 +0.9
baz=80
N06A Buffalo Meadow 79.84 41 P P 18 23 11.5 +0.2
baz=80,SNR=8.3
KLR Kul'dur 79.85 330 *e*P P 18 23 07.2 -4.1
KLR pmax pmax
comp=E,24nm,1.4s
KLR pmax pmax
comp=Z,28nm,1.4s,mb4.4
S09A Goldfield 79.91 45⇑P P 18 23 11.6 -0.1
baz=80
L05A Lakeview 79.96 40 P P 18 23 12.3 +0.4
baz=80,SNR=6.2
Q08A Gabbs 80.04 44⇓P P 18 23 12.4 0.0
baz=80
TPH Tonopah 80.09 45 P P 18 23 12.8 +0.1
comp=Z,13nm,1.4s,mb4.1
TPH *ep*P pP 18 25 13.6 +1.2
O07A Toulon 80.13 42⇑P P 18 23 12.9 +0.1
baz=80,SNR=9.3
WHN Wuhan 80.28 306⇓P P 18 23 14.3 +0.7
WHN AMB AMB
comp=Z,34nm,1.2s,mb4.5
R09A Tonopah 80.28 45⇓P P 18 23 13.8 +0.2
baz=80
Y13A Salome 80.32 50⇓P P 18 23 14.5 +0.7
baz=80
J05A Fort Rock 80.43 39⇑P P 18 23 14.6 +0.2
baz=81,SNR=21
Q09A Carvers 80.52 44⇓P P 18 23 14.5 -0.4
baz=81
V12A Nelson 80.53 48⇓P P 18 23 14.7 -0.1
baz=81
H04A Detroit Lake 80.69 37⇓P P 18 23 15.2 -0.6
baz=81
X13A Yucca 80.70 49⇓P P 18 23 16.6 +0.8
baz=81
K06A Valley Falls 80.74 39 P P 18 23 16.3 +0.3
baz=81,SNR=9.2
Z14A Wintersburg 80.75 51⇑P P 18 23 17.3 +1.2
baz=81
R10A Warm Springs 80.82 45⇓P P 18 23 17.2 +0.8
baz=81
G04A Mulino 80.83 37⇓P P 18 23 16.9 +0.4
baz=81
L07A Adell 80.86 41⇑P P 18 23 17.0 +0.4
baz=81
W13A Hualapai Mount 80.90 49⇑P P 18 23 17.9 +1.0
baz=81
I05A Bend 80.92 38⇑P P 18 23 17.0 +0.1
baz=81
P09A Austin 80.92 44⇓P P 18 23 17.3 +0.3
baz=81
N08A GE Springer Mi 80.94 42 P P 18 23 17.4 +0.3
baz=81,SNR=9.2
115A Sonoran Desert 80.98 52⇑P P 18 23 18.5 +1.3
baz=81
Y14A Wickenburg 80.98 50⇓P P 18 23 18.2 +1.0
baz=81
MA2 Magadan 81.00 345 *i* P P 18 23 15.1 -2.2
MA2 pmax pmax
comp=Z,70nm,2.0s,mb4.7
J06A Christmas Vall 81.06 39 P P 18 23 17.4 -0.2
baz=81,SNR=7.5
U12A Valley of Fire 81.09 47⇑P P 18 23 18.4 +0.6
baz=81
M08A Happy Creek Ra 81.14 41 P P 18 23 18.7 +0.6
baz=81,SNR=6.8
O09A Fish Creek Ran 81.22 43 P P 18 23 18.7 +0.3
baz=81,SNR=6.7
H05A Madras 81.22 38⇓P P 18 23 18.2 -0.3
baz=81
D03A Wishkah Elem. 81.28 34⇓P P 18 23 18.4 -0.3
baz=81
F04A Amboy 81.30 36⇓P P 18 23 18.5 -0.4
baz=82
116A Eloy 81.30 52⇑P P 18 23 19.8 +0.9
baz=81
X14A Yava 81.32 50 P P 18 23 20.0 +1.0
baz=81,SNR=8.3
BMN Battle Mountai 81.34 43 *e*P P 18 23 19.2 +0.1
BMN pmax pmax
comp=Z,19nm,1.3s,mb4.4
BMN Battle Mountai 81.34 43 *e*P P 18 23 19.2 +0.1
comp=Z,19nm,1.3s,mb4.4
N09A Rock Creek Ran 81.37 42⇓P P 18 23 19.3 +0.1
baz=82
P10A Eureka 81.41 44⇑P P 18 23 20.3 +0.9
baz=82
I06A Prineville 81.42 39 P P 18 23 19.9 +0.5
baz=82,SNR=11
VIPM Ingram Point 81.50 38 P P 18 23 19.8 -0.1
G05A Wamic 81.52 37⇑P P 18 23 19.9 0.0
baz=82
WVOR Wild Horse Val 81.52 40⇓*i*P P 18 23 19.9 -0.1
WVOR *e**PP pP 18 25 21.6 +1.2
WVOR pmax pmax
comp=Z,13nm,0.9s,mb4.4
WVOR Wild Horse Val 81.52 40⇓*i*P P 18 23 19.9 -0.1
comp=Z,13nm,0.9s,mb4.4
WVOR *ep*P pP 18 25 21.6 +1.2
W14A Seligman 81.53 49⇓P P 18 23 21.3 +1.2
baz=82
L08A Fields 81.57 41 P P 18 23 20.7 +0.5
baz=82,SNR=18
M09A Marrel Ranch, 81.72 42 P P 18 23 21.7 +0.7
baz=82,SNR=5.3
O10A Cortez Mining, 81.73 43⇑P P 18 23 21.4 +0.4
baz=82
K08A Mann Creek Ran 81.78 40 P P 18 23 21.8 +0.4
baz=82,SNR=35
X15A Humboldt 81.80 50 P P 18 23 22.6 +1.1
baz=82,SNR=6.0
F05A White Salmon 81.81 36⇑P P 18 23 21.3 -0.2
baz=82
P11A Circle Ranch, 81.84 44⇓P P 18 23 22.2 +0.6
baz=82
TUC Tucson 81.88 52 *e*P P 18 23 22.5 +0.7
comp=Z,15nm,1.3s,mb4.2
TUC *ep*P pP 18 25 24.7 +2.4
L09A Wilkinson Ranc 81.90 41 P P 18 23 22.2 +0.3
baz=82,SNR=9.2
I07A Izee 81.91 39 P P 18 23 22.3 +0.3
baz=82,SNR=17
E05A Randle 82.04 36⇓P P 18 23 22.3 -0.3
baz=82
C04A Brinnon 82.07 34⇓P P 18 23 22.6 -0.2
baz=82
IPM Ipoh 82.09 277 P P 18 23 24.1 +1.3
W15A Williams 82.11 49⇑P P 18 23 23.5 +0.5
baz=82
Q12A Willow Creek R 82.20 45⇑P P 18 23 24.0 +0.6
baz=82
K09A Rome 82.23 41 P P 18 23 23.9 +0.3
baz=82,SNR=23
D05A Enumclaw 82.29 35⇑P P 18 23 24.3 +0.4
baz=82
M10A I.L. Ranch, Tu 82.35 42⇑P P 18 23 24.6 +0.4
baz=82,SNR=7.2
P12A McGill 82.36 45⇑P P 18 23 24.7 +0.4
baz=82
I08A Drewsey 82.38 39 P P 18 23 24.5 +0.2
baz=82,SNR=12
TTA Tatalina 82.41 10 *e*P P 18 23 23.4 -1.1
ARUT Antelope Range 82.52 47 *e*P P 18 23 25.7 +0.6
PMR Palmer 82.56 14 *e*P P 18 23 23.0 -2.3
PMR pmax pmax
comp=Z,18nm,0.9s,mb4.6
PMR Palmer 82.56 14 *e*P P 18 23 23.0 -2.3
comp=Z,18nm,0.9s,mb4.6
H08A Prairie City 82.65 39⇑P P 18 23 25.5 -0.3
baz=83
C05A Tolt Reservoir 82.75 35⇑P P 18 23 26.1 -0.2
baz=83
M11A Holland Ranch, 82.78 42⇓P P 18 23 26.7 +0.3
baz=83
B05A Bryant 82.87 34⇓P P 18 23 26.4 -0.4
baz=83
O12A Currie 82.87 44 P P 18 23 27.1 +0.3
baz=83,SNR=6.5
WUAZ Wupatki 82.91 49 *e*P P 18 23 27.8 +0.8
comp=Z,13nm,1.1s,mb4.4
WUAZ *ep*P pP 18 25 31.2 +3.3
I09A Lost Marbles R 82.91 40⇓P P 18 23 26.8 -0.3
baz=83,SNR=6.0
N12A Clover Valley, 82.97 43 P P 18 23 27.9 +0.5
baz=83,SNR=8.0
RSW Rattlesnake Hi 83.17 37 P P 18 23 28.5 +0.2
HAWA Hanford 83.20 37 *e*P P 18 23 27.9 -0.6
comp=Z,0.6nm,0.9s
HAWA *ep*P pP 18 25 30.0 +0.5
F08A Pendleton 83.30 38⇑P P 18 23 28.8 -0.2
baz=83
A05A Maple Falls 83.32 34⇑P P 18 23 28.2 -0.9
baz=84
SNG Songkhla 83.33 280 P P 18 23 31.0 +1.9
comp=Z,240nm,1.0s,mb5.7
H09A Durkee 83.33 39 P P 18 23 29.2 +0.1
baz=84,SNR=5.2
M12A Wells 83.34 43 P P 18 23 29.6 +0.4
baz=84,SNR=9.3
ETW Entiat 83.44 35 P P 18 23 29.4 -0.3
BJI Beijing 83.47 316 *e*P P 18 23 30.1 +0.3
BJI AMB AMB
comp=Z,40nm,0.9s,mb5.0
N13A Wendover, West 83.52 44⇓P P 18 23 30.4 +0.4
baz=84
PSI Prapat 83.56 275 P P 18 23 30.2 0.0
comp=Z,47nm,0.7s,mb5.1,baz=89,slow=1.6,SNR=54
EPH Ephrata 83.71 36 P P 18 23 30.6 -0.3
MSU Marysvale 83.75 46 *e*P P 18 23 31.7 +0.5
MSU *e**PP pP 18 25 34.0 +1.6
MSU *e* 18 26 52.8
M13A Montello 83.80 43⇓P P 18 23 31.7 +0.3
baz=84,SNR=6.3
MAW Mawson 83.86 200 P P 18 23 32.0 +0.2
comp=Z,35nm,0.7s,mb5.0,baz=125,slow=6.5,SNR=103
MAW Mawson 83.86 200⇓*i*P P 18 23 31.9 +0.1
MAW pmax pmax
comp=Z,34nm,0.8s
MAW Mawson 83.86 200⇓*i*P P 18 23 31.9 +0.1
comp=Z,34nm,0.8s,mb4.9
PMSA Palmer Station 84.04 157 P P 18 23 32.9 +0.2
comp=Z,24nm,1.1s,mb4.6,baz=260,slow=3.3,SNR=8.5
KKTK Khon Kaen 84.34 289⇓P P 18 23 35.0 +0.9
comp=Z,309nm,0.6s
MCK McKinley 84.50 13 *e*P P 18 23 32.8 -2.1
MCK pmax pmax
comp=Z,18nm,1.0s,mb4.6
MCK McKinley 84.50 13 *e*P P 18 23 32.8 -2.1
comp=Z,18nm,1.0s,mb4.6
HLID Hailey 84.75 41 *e*P P 18 23 36.2 +0.1
comp=Z,7.6nm,0.9s,mb4.2
HLID *ep*P pP 18 25 39.0 +1.3
MENT Mentasta 85.02 15 *e*P P 18 23 36.1 -1.3
SRU San Rafael 85.17 46 *e*P P 18 23 37.9 -0.2
comp=Z,5.8nm,0.8s,mb4.2
SRU *ep*P pP 18 25 39.1 -0.7
NEW Newport 85.60 36 *e*P P 18 23 39.1 -1.1
HWUT Hardware Ranch 85.63 44 *e*P P 18 23 39.3 -1.0
comp=Z,2.9nm,0.8s,mb4.0
COLA College 85.73 13*d i*P P 18 23 38.3 -2.5
COLA College 85.73 13 *e*P P 18 23 37.9 -2.9
comp=Z,11nm,0.8s,mb4.5
MNTX Cornudas Mount 85.77 55 *e*P P 18 23 41.1 +0.1
comp=Z,6.6nm,0.9s,mb4.3
MNTX *ep*P pP 18 25 43.1 +0.1
XAN Xi'an 85.93 308 P P 18 23 42.6 +0.8
XAN AMB AMB
comp=Z,83nm,1.1s,mb5.3
PV01 Paradox Valley 86.09 48 *e*P P 18 23 42.5 0.0
ANMO Albuquerque 86.27 52 *e*P P 18 23 43.3 -0.1
comp=Z,6.7nm,1.0s,mb4.2
ANMO *ep*P pP 18 25 46.4 +0.8
BILL Bilibino 86.28 354 *e*P P 18 23 42.0 -1.4
BILL pmax pmax
comp=Z,17nm,0.8s,mb4.7
BILL Bilibino 86.28 354 *e*P P 18 23 42.0 -1.5
comp=Z,18nm,0.8s,mb4.7
NST Nakhon Sawan 86.55 288 P P 18 23 45.0 +0.3
RRI2 Red Ridge 86.61 42 *e*P P 18 23 44.9 0.0
comp=Z,24nm,0.8s,mb4.9
RRI2 *ep*P pP 18 25 46.6 -0.7
USHA Ushuaia 86.77 147 P P 18 23 45.5 -0.2
comp=Z,14nm,0.9s,mb4.6,baz=188,slow=6.3,SNR=4.2
REDW Red Top Meadow 86.92 43⇓*e*P P 18 23 46.3 -0.1
comp=Z,25nm,1.1s,mb4.8
REDW *ep*P pP 18 25 49.9 +1.1
HHC Hu-ho-hao-te 86.96 315 *e*P P 18 23 46.8 +0.2
HHC AP pP 18 25 45.6 -3.5
HHC XP sP 18 26 39.3 -6.7
HHC PP PP 18 27 21.8 +1.6
HHC SKS 18 33 20.8
HHC S S 18 33 39.8 +1.6
HHC XS sS 18 37 09.4 -7.0
HHC SS SS 18 39 39.3 +1.3
HHC AMB AMB
comp=Z,32nm,1.2s,mb4.8
DAWY Dawson 87.06 16 *e*P P 18 23 45.5 -1.6
NANT Nan 87.09 291⇓P P 18 23 44.7 -2.5
comp=Z,81nm,1.0s,mb5.3
CHMT Chamberlain Mo 87.14 39 *e*P P 18 23 46.5 -1.0
CHMT *ep*P pP 18 25 51.6 +1.6
MOOW Moose Ponds 87.17 42 *e*P P 18 23 45.3 -2.3
comp=Z,5.3nm,0.9s,mb4.2
EGAK Eagle 87.18 15 *e*P P 18 23 46.0 -1.7
EGAK *ep*P pP 18 25 50.4 +0.2
LOHW Long Hollow 87.19 42 *e*P P 18 23 47.4 -0.4
comp=Z,3.6nm,0.6s,mb4.2
LOHW *ep*P pP 18 25 51.0 +0.8
QLMT Earthquake Lak 87.24 41 *e*P P 18 23 48.5 +0.6
QLMT *ep*P pP 18 25 51.8 +1.3
PDAR Pinedale Array 87.48 44 P P 18 23 48.7 -0.4
comp=Z,7.3nm,0.7s,mb4.4,baz=215,slow=3.0,SNR=59
PDAR pP pP 18 25 51.8 +0.1
comp=Z,2.9nm,0.9s,baz=222,slow=1.2,SNR=3.4
PDAR PP PP 18 27 20.0 -4.4
comp=Z,1.8nm,1.0s,baz=255,slow=5.8,SNR=5.7
PDAR PKKPbc PKKPbc 18 41 33.2 -1.0
comp=Z,1.0nm,0.8s,baz=57,slow=5.5,SNR=7.5
KMI Kunming 87.49 297 P P 18 23 50.9 +1.8
KMI AP pP 18 25 53.3 +1.5
KMI AMB AMB
comp=Z,31nm,0.9s,mb4.9
SMCO Snowmass 87.67 48 *e*P P 18 23 46.7 -3.3
comp=Z,31nm,0.5s,mb5.3
WALA Waterton Lakes 87.83 37 *e*P P 18 23 49.8 -0.9
comp=Z,4.2nm,0.8s,mb4.2
WALA *ep*P pP 18 25 53.6 +0.2
CHRT Chiangrai 88.26 291 P P 18 23 54.5 +1.8
CHG Chiang Mai 88.66 290⇓P P 18 23 55.7 +1.1
comp=Z,27nm,0.8s,mb5.1
CD2 Chengdu 88.73 303 P P 18 23 55.5 +0.6
CD2 AP pP 18 25 57.9 0.0
CD2 XP sP 18 26 48.4 -6.3
CD2 SKS 18 33 34.0
CD2 S S 18 33 58.5 +3.9
CD2 XS sS 18 37 32.0 -2.0
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
CD2 AMB AMB
comp=Z,90nm,5.4s
GCMT Greycliff 88.79 41 *e*P P 18 23 55.0 -0.1
GCMT *ep*P pP 18 26 00.7 +2.5
SYO Syowa Base 89.20 193⇑*e*P P 18 23 55.8 -1.3
SYO Syowa Base 89.20 193⇑*e*PcP PcP 18 23 57.0 -1.0
YAK Yakutsk 89.35 338*d i*P P 18 23 55.5 -2.3
YAK Yakutsk 89.35 338 *e*P P 18 23 55.5 -2.3
comp=Z,12nm,0.8s,mb4.8
CMIG Matias Romero 89.50 72 P P 18 23 59.5 +1.0
comp=Z,4.8nm,0.8s,mb4.3,baz=307,slow=5.4,SNR=6.9
PHWY Pilot Hill 89.61 46 *e*P P 18 23 58.5 -0.4
JCT Junction City 89.74 58 *e*P P 18 23 59.7 +0.1
JCT pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
JCT Junction City 89.74 58 *e*P P 18 23 59.7 +0.1
comp=Z,5.3nm,0.4s,mb4.7
EDM Edmonton 90.23 33 *e*P P 18 24 00.4 -1.5
LZH Lanzhou 90.56 308 *e*P P 18 24 04.3 +0.9
LZH AP pP 18 26 09.1 +2.3
LZH XP sP 18 27 03.5 +0.2

LZH PP PP 18 27 51.1 +2.6
LZH SKS 18 33 43.0
LZH eS S 18 34 12.0 +0.9
LZH XS sS 18 37 41.4 -10
LZH SS SS 18 40 31.0 +1.4
LZH AMB AMB
comp=Z,60nm,1.4s,mb5.3
LZH AMB AMB
comp=Z,210nm,5.3s
SNAA Sanae 90.72 179 *e*P **P 18 24 03.1 -1.0**
SNAA *e* 18 24 06.4
SNAA Sanae 90.72 179 *d*P **P 18 24 03.2 -0.9**
CIT Chita 90.88 325 *e*P **P 18 24 04.0 -0.8**
CIT pmax pmax
comp=Z,55nm,1.3s,mb5.3
LAO LASA Array 91.33 41 *e*P **P 18 24 07.1 +0.2**
comp=Z,58nm,1.5s,mb5.3
PLCA Paso Flores 91.64 134 P **P 18 24 09.2 +0.8**
comp=Z,5.5nm,1.0s,mb4.5,baz=234,slow=2.7,SNR=8.4
PLCA Paso Flores 91.64 134 *e*P **P 18 24 09.6 +1.2**
PLCA pmax pmax
comp=Z,10.0nm,1.1s
PLCA Paso Flores 91.64 134 *e*P **P 18 24 09.6 +1.2**
comp=Z,10nm,1.1s,mb4.8
INK Inuvik 91.86 15 *e*P **P 18 24 06.9 -2.4**
INK pmax pmax
comp=Z,17nm,1.0s
INK Inuvik 91.86 15 *e*P **P 18 24 06.8 -2.5**
comp=Z,17nm,1.0s,mb5.0
ULN Ulaanbaatar 92.86 320 ⇓P **P 18 24 13.3 -0.6**
SNR=9.3
ULN Ulaanbaatar 92.86 320 *i*P **P 18 24 13.4 -0.5**
ULN Ulaanbaatar 92.86 320 *e*P **P 18 24 12.9 -1.1**
comp=Z,27nm,1.3s,mb5.1
SONM Songino Array 93.25 319 P **P 18 24 15.1 -0.6**
comp=Z,4.9nm,1.0s,mb4.5,baz=124,slow=3.8,SNR=32
SONM pP pP 18 26 18.4 -0.9
comp=Z,0.2nm,0.8s,baz=167,slow=7.2,SNR=3.0
SONM PP PP 18 28 07.2 -2.1
comp=Z,0.4nm,0.8s,baz=136,slow=6.1,SNR=2.8
SONM PKiKP PKiKP 18 28 58.1 -0.3
comp=Z,0.3nm,0.3s,baz=80,slow=1.5,SNR=6.3
SONM PKKPbc PKKPbc 18 41 20.0 0.0
comp=Z,0.6nm,0.8s,baz=255,slow=2.6,SNR=5.3
SONM Songino Array 93.25 319 P **P 18 24 15.1 -0.6**
SONM pP pP 18 26 18.4 -0.9
SONM PP PP 18 28 07.2 -2.1
BOD Bodaibo 93.40 330 *e*P **P 18 24 13.3 -3.1**
BOD pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
GTA Gaotai 94.71 310 P **P 18 24 22.6 +0.2**
GTA AP pP 18 26 22.8 -3.3
GTA XP sP 18 27 15.1 -7.5
GTA PP PP 18 28 23.0 +2.5
GTA AMB AMB
comp=Z,12nm,0.9s,mb5.0
ZAK Zakamensk 96.09 321 *e*P **P 18 24 26.9 -1.7**
ZAK *e* 18 27 22.6
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
CFAA Coronel Fontan 97.27 126 P **P 18 24 34.4 +0.5**
comp=Z,0.1nm,0.5s,baz=281,slow=6.5,SNR=3.7
LPAZ La Paz 103.74 112 PKKPbc PKKPbc 18 40 51.4 +0.1
comp=Z,0.8nm,0.6s,baz=315,slow=2.9,SNR=4.2
ZAL Zalesovo 107.95 322 PKiKP PKiKP 18 29 23.0 -1.8
comp=Z,2.5nm,0.6s,baz=356,slow=3.9,SNR=12
MKAR Makanchi Array 108.82 314 Pdiff Pdif 18 25 25.2 0.0
comp=Z,0.2nm,0.2s,baz=83,slow=5.0,SNR=5.2
MKAR PKiKP PKiKP 18 29 24.9 -1.6
comp=Z,5.0nm,0.5s,baz=337,slow=0.3,SNR=52
MKAR PKKPbc PKKPbc 18 40 36.2 +0.4
comp=Z,0.5nm,0.3s,baz=298,slow=2.6,SNR=11
MKAR Makanchi Array 108.82 314 Pdif Pdif 18 25 25.2 0.0
MKAR PKPdif PKiKP 18 29 24.9 -1.6
MKAR PKKPbc PKKPbc 18 40 36.2 +0.4
AAK Ala-Archa 114.06 309 ⇑*i*PKIKP PKiKP 18 29 34.9 -1.5
VOSK Vostochnaya 116.22 321 PKIKP PKPdf 18 29 38.8 -1.8
VOSK pmax pmax
comp=Z,11nm,0.8s
CHKZ Chkalovo 116.35 322 PKIKP PKPdf 18 29 38.9 -1.9
CHKZ pmax pmax
comp=Z,3.0nm,0.5s
BVA0 Borovoye Array 116.55 321 *i*PKIKP PKPdf 18 29 39.6 -1.6
BVA0 pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 116.55 321 PKP PKPdf 18 29 39.8 -1.5
comp=Z,9.2nm,0.4s,baz=120,slow=2.6,SNR=77
BRVK Borovoye 116.61 321 *e*PKIKP PKPdf 18 29 39.6 -1.7
SCHQ Schefferville 116.96 37 PKP PKPdf 18 29 40.9 -1.1
comp=Z,1.6nm,0.6s,baz=203,slow=16,SNR=4.3
SCHQ Schefferville 116.96 37 PKP PKPdf 18 29 40.9 -1.1
KKAR Karatay Array 117.00 310 *i*PKIKP PKPdf 18 29 40.7 -1.4
KKAR pmax pmax
comp=Z,4.0nm,0.7s
ZRNK Zerenda 117.39 321 PKIKP PKPdf 18 29 41.0 -1.8
ZRNK pmax pmax
comp=Z,16nm,0.9s
BDFB Brasilia 121.17 121 PKP PKPdf 18 29 50.0 0.0
comp=Z,1.4nm,0.5s,baz=68,slow=4.0,SNR=5.9
OPO Ambohidratompo 122.17 234 PKP PKPdf 18 29 53.0 +0.9
comp=Z,11nm,0.8s,baz=163,slow=1.4,SNR=16
ARU Arti 122.57 326 *i*PKIKP PKPdf 18 29 51.3 -1.5
ARU Arti 122.57 326 *e*PKPdf PKPdf 18 29 51.2 -1.6
AB31 Akbulak array 123.63 318 *i*PKIKP PKPdf 18 29 53.3 -1.5
AB31 pmax pmax
comp=Z,3.0nm,0.6s
AKTO Aktyubinsk 124.57 319 PKIKP PKPdf 18 29 55.2 -1.4
AKTO pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 126.14 350 PKP PKPdf 18 29 57.6 -2.1
comp=Z,15nm,0.8s,baz=198,slow=0.4,SNR=21
ARCES PKKPbc 18 39 34.1
comp=Z,2.1nm,0.7s,baz=213,slow=1.5,SNR=12
ARCES PKKP 18 40 15.5
comp=Z,1.4nm,0.8s,baz=212,slow=2.7,SNR=6.8
BSY Bisya 127.54 285 ⇓P PKPdf 18 30 02.4 +0.1
SNR=6.6
BOSA Boshof 128.36 207 PKP PKPdf 18 30 04.6 +0.8
comp=Z,12nm,0.8s,baz=296,slow=2.3,SNR=10
HATD Hatta, Dubai 128.67 288 ⇑P PKPdf 18 29 59.7 -4.7
SNR=11
KLMR Klimovskoe 129.12 337 *i*PKIKP PKPdf 18 30 03.5 -1.8
KLMR pmax pmax
comp=Z,40nm,1.5s
JOF Joensuu 130.35 342 *ep* PKPdf 18 30 04.7 -2.9
comp=Z,15nm,0.6s
LBTB Lobatse 131.29 210 PKP PKPdf 18 30 10.1 +0.7
comp=Z,4.1nm,0.8s,baz=152,slow=3.1,SNR=9.0
LBTB Lobatse 131.29 210 PKP PKPdf 18 30 10.1 +0.7
KAF Kangasniemi 132.36 344 *ep* PKPdf 18 30 03.8 -7.6
comp=Z,7.5nm,0.6s
FINES FINESS Array B 132.99 344 PKhKP 18 29 58.0
comp=Z,1.8nm,0.9s,baz=45,slow=5.7,SNR=6.5
FINES PKP PKPdf 18 30 09.5 -3.1
comp=Z,5.7nm,0.7s,baz=74,slow=3.0,SNR=15
FINES SKPbc SKPbc 18 32 48.4 +0.6
comp=Z,3.5nm,0.7s,baz=72,slow=6.2,SNR=8.0
FINES FINESS Array B 132.99 344 PKP 18 29 58.0
FINES PKP PKPdf 18 30 09.5 -3.1
FINES SKPbc SKPbc 18 32 48.4 +0.6
MATP Matopo 133.56 216 PKP PKPdf 18 30 13.8 +0.2
comp=Z,12nm,0.7s,baz=157,slow=2.4,SNR=22
VRHR Novokhopersk 133.90 325 *e*PKIKP PKPdf 18 30 13.0 -1.3
VRHR pmax pmax
comp=E,5.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR pmax pmax
comp=N,10.0nm,1.1s
OBN Obninsk 134.04 332 ⇑*i*PKIKP PKPdf 18 30 12.8 -1.8
OBN *e* 18 32 51.5
OBN *e* 18 36 27.2
OBN pmax pmax
comp=Z,17nm,0.7s
OBN MLR MLR
comp=Z,300nm,22.0s
OBN Obninsk 134.04 332 *e*PKPdf PKPdf 18 30 14.3 -0.3
QRN Al-Qurain 136.01 293 *e*P PKPdf 18 30 18.9 +0.6
QRN AMb AMB 18 30 20.5
comp=Z,50nm,0.4s
UMR Umm Al-Rimmam 136.13 294 *e*P PKPdf 18 30 18.3 -0.2
UMR AMb AMB 18 30 20.9
comp=Z,42nm,0.7s
NB2 NORSAR Subarra 136.22 353 PKPd PKPdf 18 30 17.2 -1.4
comp=Z,2.1nm,0.6s,baz=14,slow=1.8
NOA NORSAR Array B 136.22 353 PKhKP 18 30 06.9
comp=Z,2.5nm,0.9s,baz=32,slow=2.1,SNR=7.8
NOA PKP PKPdf 18 30 17.4 -1.2
comp=Z,3.4nm,0.6s,baz=14,slow=4.1,SNR=12
NOA SKPab 18 33 05.0
comp=Z,1.7nm,0.8s,baz=11,slow=3.1,SNR=4.2
RDF Al-Radifah 136.32 293 *e*P PKPdf 18 30 19.0 +0.2
RDF AMb AMB 18 30 21.8
comp=Z,53nm,1.1s
KIV Kislovodsk 136.55 316 ⇓P PKPdf 18 30 18.6 -0.6
SNR=5.0
KIV Kislovodsk 136.55 316 ⇑*i*PKIKP PKPdf 18 30 18.7 -0.5
KIV *e* 18 33 05.4
KIV *e* 18 36 36.6
KIV pmax pmax
comp=Z,11nm,1.0s
RST Umm Al-Ruwaisa 136.75 294 *e*P PKPdf 18 30 19.2 -0.4
RST AMb AMB 18 30 22.1
comp=Z,35nm,0.7s
ANN Anapa 139.53 320 *i*PKHKP 18 30 15.7
ANN pmax pmax
comp=Z,32nm,0.9s
KMBO Kilima Mbogo 139.89 246 PKhKP 18 30 20.8
comp=Z,1.4nm,0.6s,baz=51,slow=5.4,SNR=7.1
KMBO PKP PKPdf 18 30 26.9 +1.5
comp=Z,10.0nm,1.1s,baz=47,slow=4.9,SNR=10
KMBO Kilima Mbogo 139.89 246 PKP 18 30 20.8
KMBO PKP PKPdf 18 30 26.9 +1.5
TSUM Tsumeb 139.89 204 *e*PKPdf PKPdf 18 30 28.4 +3.1
AKASG Malin Array Be 140.31 332 PKhKP 18 30 18.2
comp=Z,3.3nm,0.4s,baz=42,slow=4.0,SNR=31
AKASG PKP PKPdf 18 30 24.8 -1.3
comp=Z,5.0nm,0.4s,baz=38,slow=3.1,SNR=19
AKASG Malin Array Be 140.31 332 PKP 18 30 18.2
AKASG PKP PKPdf 18 30 24.8 -1.3
AKBB Malin Array Si 140.31 332 *e*PKHKP 18 30 17.8
AKBB *e* 18 30 23.7
MALT Malatya 141.69 310 ⇑*i*P PKPdf 18 30 25.2 -3.4
BBO1 Bothel 142.96 4 *e*P PKPdf 18 30 27.7 -3.1
BBO1 Bothel 142.96 4 *e*P PKPdf 18 30 27.7 -3.1
CKE Keswick 143.12 4 *e*P PKPdf 18 30 25.8 -5.3
CKE Keswick 143.12 4 *e*P PKPdf 18 30 25.8 -5.3
LVV L'vov 143.17 335 ⇓*i*PKIKP PKPdf 18 30 28.3 -2.9
LVV MLR MLR
comp=Z,400nm,22.0s
XDE Dent Fell 143.17 5 *e*P PKPdf 18 30 27.7 -3.5
XDE Dent Fell 143.17 5 *e*P PKPdf 18 30 27.7 -3.5
GlM North Isle of 143.30 6 *e*P PKPdf 18 30 26.7 -4.7
GlM North Isle of 143.30 6 *e*P PKPdf 18 30 26.7 -4.7
WIM Isle of Man 143.42 6 *e*P PKPdf 18 30 28.4 -3.2
WIM Isle of Man 143.42 6 *e*P PKPdf 18 30 28.4 -3.2
KWP Kalwaria 143.83 336 *e*PKP PKPdf 18 30 31.2 -1.1
DCN Croghan 143.90 9 *e*P PKPdf 18 30 26.8 -5.6
DCN Croghan 143.90 9 ⇓*i*P PKPdf 18 30 30.4 -2.0
DLF Lyons Farm 144.05 8 *e*P PKPdf 18 30 27.3 -5.4
DLF Lyons Farm 144.05 8 ⇓*i*P PKPdf 18 30 30.9 -1.8
WCB1 Church Bay 144.20 6 *e*P PKPdf 18 30 30.9 -2.0
WCB1 Church Bay 144.20 6 *e*P PKPdf 18 30 30.9 -2.0
LHO Holmfirth 144.23 3 *e*P PKPdf 18 30 30.9 -2.1
LHO Holmfirth 144.23 3 *e*P PKPdf 18 30 30.9 -2.1
WLF1 Llynfaes 144.30 6 *e*P PKPdf 18 30 31.4 -1.7
WLF1 Llynfaes 144.30 6 *e*P PKPdf 18 30 31.4 -1.7
YRC Rhoscolyn 144.32 6 *e*P PKPdf 18 30 31.1 -2.0
YRC Rhoscolyn 144.32 6 *e*P PKPdf 18 30 31.1 -2.0
BURAR Bucovina Array 144.36 332 ⇑*i*P PKPdf 18 30 33.5 +0.3
WPM1 Penmaenmawr 144.38 5 *e*P PKPdf 18 30 31.8 -1.4
WPM1 Penmaenmawr 144.38 5 *e*P PKPdf 18 30 31.8 -1.4
OJC Ojcow 144.39 339 *i*PKPd PKPdf 18 30 32.7 -0.6
YLL Llanberis 144.47 6 *e*P PKPdf 18 30 32.0 -1.4
YLL Llanberis 144.47 6 *e*P PKPdf 18 30 32.0 -1.4
BR131 Keskin Array S 144.47 315 *e*PKPdf PKPdf 18 30 32.6 -0.9
BRTR Keskin Array B 144.47 315 PKP PKPdf 18 30 32.9 -0.5
comp=Z,43nm,0.8s,baz=144,slow=4.6,SNR=186
KBI1 Birley Grange 144.54 3 *e*P PKPdf 18 30 32.1 -1.5
KBI1 Birley Grange 144.54 3 *e*P PKPdf 18 30 32.1 -1.5
STHS Stebnicka Huta 144.56 337 *e*PKP PKPdf 18 30 33.7 +0.1
KOLS Kolonicke sedl 144.57 336 *e*PKP PKPdf 18 30 33.4 -0.2
YRE Yr Eifl 144.60 6 *e*P PKPdf 18 30 32.3 -1.4
YRE Yr Eifl 144.60 6 *e*P PKPdf 18 30 32.3 -1.4
FKH Fakeheh 144.64 305 *e*P PKPdf 18 30 34.8 +1.1
KWE Weaver Farm 144.76 3 *e*P PKPdf 18 30 32.9 -1.0
KWE Weaver Farm 144.76 3 *e*P PKPdf 18 30 32.9 -1.0
SBD1 Bryn Du 144.78 5 *e*P PKPdf 18 30 33.0 -0.9
SBD1 Bryn Du 144.78 5 *e*P PKPdf 18 30 33.0 -0.9
NIE Niedzica 144.89 338 *i*PKPdf PKPdf 18 30 34.9 +0.7
CRVS Cervenica-Dubn 144.90 337 *e*PKP PKPdf 18 30 34.0 -0.2
KSP Ksiaz 144.91 343 *e*PKP PKPdf 18 30 34.8 +0.6
KSP Ksiaz 144.91 343 *e*PKP PKPdf 18 30 34.3 +0.1
KSP *e*PKPdf PKPdf 18 30 36.1 +1.9
ANTO Ankara 144.97 315 ⇑*i*P PKPdf 18 30 33.7 -0.6
ANTO Ankara 144.97 315 *e*PKPdf PKPdf 18 30 34.1 -0.2
ABA1 Baconsthorpe 144.97 0 *e*P PKPdf 18 30 33.4 -0.9
ABA1 Baconsthorpe 144.97 0 *e*P PKPdf 18 30 33.4 -0.9
TIRR Tirgusor 144.99 325 ⇓*i*P PKPdf 18 30 34.1 -0.2
IBBN Ibbenburen 145.18 353 *e*PKPbc PKPbc 18 30 34.8 -0.9
HLM1 Long Mynd 145.19 4 *e*P PKPdf 18 30 34.4 -0.9
HLM1 Long Mynd 145.19 4 *e*P PKPdf 18 30 34.4 -0.3
AEU East Anglia Un 145.24 0 *e*P PKPdf 18 30 35.0 +0.2
AEU East Anglia Un 145.24 0 *e*P PKPdf 18 30 35.0 +0.2
OKC Ostrava-Krasne 145.26 341 *e*PKP PKPdf 18 30 35.5 +0.7
CLL Collm 145.28 347 *e*PKPbc PKPbc 18 30 35.4 -0.6
CLL *ep*PKPbc 18 32 49.8
CLL Collm 145.28 347 *e*PKPdf PKPdf 18 30 34.0 -0.8
CLL ⇓*i*PKPbc PKPbc 18 30 35.3 -0.7
comp=Z,116nm,0.7s
CLL *i*PKiKP PKiKP 18 30 38.3 -0.7
CLL *ep*PKiKP 18 32 50.0
CLL Collm 145.28 347 ⇓*e*PKIKP PKPdf 18 30 34.0 -0.8
CLL *i* 18 30 35.3
CLL pmax pmax
comp=Z,116nm,0.7s
CLL Collm 145.28 347 *e*PKP PKPdf 18 30 34.0 -0.8
CLL ⇓*i*PKP PKPdf 18 30 35.3 +0.5
CLL *ep*PKP pPKPdf 18 32 50.0 +3.3
UPC Upice 145.29 343 *e*PKPbc PKPbc 18 30 34.8 -1.2
UPC *e*PKPab PKPab 18 30 35.9 -1.3
BHL Bhannes 145.33 304 *e*P PKPdf 18 30 36.5 +1.6
DPC Dobruska-Polom 145.34 343 *e*PKPDF PKPdf 18 30 34.9 0.0
DPC ⇑*e*PKPB PKPbc 18 30 36.3 +0.2
DPC *e*PKPAB PKPab 18 30 37.8 +0.3
DPC Dobruska-Polom 145.34 343 *e*PKIKP PKPdf 18 30 34.9 0.0
DPC *e* 18 30 36.3
DPC Dobruska-Polom 145.34 343 *e*PKP PKPdf 18 30 34.9 0.0
DPC *e* 18 30 36.3
DPC *e* 18 30 37.8
DPC LR LR
comp=Z,200nm,21.7s
BRG Berggiesshubel 145.47 346 *e*PKPdf PKPdf 18 30 34.8 -0.3
BRG *e*PKPbc PKPbc 18 30 36.1 -0.4
BRG *ep*PKPbc 18 32 50.7
BRG Berggiesshubel 145.47 346 *i*PKP PKPdf 18 30 35.0 -0.2
BRG Berggiesshubel 145.47 346 *i*PKP PKPdf 18 30 36.0 +0.9
comp=Z,37nm,0.8s
BRG *i* 18 30 42.9
comp=Z,9.0nm,0.7s
BRG
comp=N,88nm,24.6s
BRG
comp=E,105nm,23.1s
BRG
comp=Z,183nm,24.9s
BRG Berggiesshubel 145.47 346 *i*PKIKP PKPdf 18 30 35.0 -0.1
BRG *i* 18 30 36.0
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG MLR MLR
comp=N,88nm,24.6s
BRG MLR MLR
comp=E,105nm,23.2s
BRG MLR MLR
comp=Z,183nm,24.9s
MORC Moravsky Berou 145.50 341 ⇓*i*P PKPdf 18 30 35.4 +0.2
FBE Freiberg 145.56 346 *e*PKPdf PKPdf 18 30 35.1 -0.2
FBE *e*PKPbc PKPbc 18 30 36.6 -0.2
MLR Muntele Rosu 145.56 329 ⇓*i*P PKPdf 18 30 34.9 -0.4
HTR Trewern Hill 145.60 5 *e*P PKPdf 18 30 35.5 +0.2
HTR Trewern Hill 145.60 5 *e*P PKPdf 18 30 35.5 +0.2
KECS Kecovo 145.61 337 *i*PKP PKPdf 18 30 36.7 +1.3
WTSB Winterswijk 145.62 354 *e*PKP PKPdf 18 30 33.4 -2.0
comp=Z,31nm,1.0s
GTTG Gvttingen 145.62 350 *e*PKPdf PKPdf 18 30 34.7 -0.7
GTTG *e*PKPbc PKPbc 18 30 36.4 -0.5
PVCC Panska Ves 145.64 345 *e*PKPDF PKPdf 18 30 35.5 +0.1
PVCC ⇑*e*PKPB PKPbc 18 30 36.9 -0.1
PVCC *e*PKPAB PKPab 18 30 40.2 +1.6
PVCC Panska Ves 145.64 345 *e*PKIKP PKPdf 18 30 35.5 +0.1
PVCC *e* 18 30 36.9
MCH1 Michaelchurch 145.70 5 *e*P PKPdf 18 30 35.6 +0.1
MCH1 *e*P 18 30 35.6
MCH1 Michaelchurch 145.70 5 *e*P PKPdf 18 30 35.6 +0.1
MCH1 *e*P 18 30 35.6
MBAR Mbarara 145.71 241 *i*PKIKP PKPdf 18 30 37.8 +2.3
HSA Swansea 145.85 6 *e*P PKPdf 18 30 34.5 -1.3
HSA Swansea 145.85 6 *e*P PKPdf 18 30 34.5 -1.3
VOIR 146.04 329 ⇑*i*P PKPdf 18 30 37.0 +0.9
HGH Gray Hill 146.07 5 *e*P PKPdf 18 30 36.8 +0.6
HGH Gray Hill 146.07 5 *e*P PKPdf 18 30 36.8 +0.6
BUG Bochum--Univer 146.09 353 *e*PKPdf PKPdf 18 30 35.9 -0.3
BUG *e*PKPbc PKPbc 18 30 37.3 -1.0
BUG *ep*PKPbc 18 32 53.8
DRGR 146.09 333 ⇓*i*P PKPdf 18 30 37.2 +1.0
SKP1 Kophill 146.10 2 *e*P PKPdf 18 30 36.8 +0.6
SKP1 Kophill 146.10 2 *e*P PKPdf 18 30 36.8 +0.6
PRU Pruhonice 146.15 345 *e*PKPDF PKPdf 18 30 35.9 -0.4
PRU ⇑*e*PKPB PKPbc 18 30 38.0 -0.4
PRU *e*PKPAB PKPab 18 30 40.4 -0.3
PRU Pruhonice 146.15 345 *e*PKP PKPdf 18 30 35.9 -0.4
PRU *e* 18 30 38.0
PRU *e* 18 30 40.4
PRU LR LR
comp=Z,200nm,18.7s
MOX Moxa 146.19 348 *e*PKPdf PKPdf 18 30 35.7 -0.7
MOX *e*PKPbc PKPbc 18 30 37.9 -0.6
MOX Moxa 146.19 348 *e*PKP PKPdf 18 30 35.8 -0.6
comp=Z,85nm,1.6s
MOX
comp=Z,100nm,23.0s
MOX Moxa 146.19 348 *e*PKIKP PKPdf 18 30 35.8 -0.6
MOX pmax pmax
comp=Z,85nm,1.6s
MOX MLR MLR
comp=Z,100nm,23.0s
VYHS Vyhne 146.19 339 *i*PKP PKPdf 18 30 38.2 +1.8
VRAC Vranov 146.20 342 ⇑*i*P PKPdf 18 30 36.0 -0.4
VRAC Vranov 146.20 342 ⇑PKIKP PKPdf 18 30 36.1 -0.3
TANN Tannenbergstha 146.23 347 *e*PKPdf PKPdf 18 30 35.9 -0.5
TANN *e*PKPbc PKPbc 18 30 38.3 -0.4
WERD Werda 146.24 347 *e*PKPdf PKPdf 18 30 35.9 -0.5
WERD *e*PKPbc PKPbc 18 30 38.3 -0.4
SWN1 Swindon 146.26 3 *e*P PKPdf 18 30 37.4 +0.9
SWN1 Swindon 146.26 3 *e*P PKPdf 18 30 37.4 +0.9
PSZ Piszkesteto 146.30 337 ⇓*e*PKP/F PKPbc 18 30 38.6 -0.3
PSZ Piszkesteto 146.30 337 ⇓*i*P PKPbc 18 30 38.7 -0.2
PSZ Piszkesteto 146.30 337 PKIKP PKPdf 18 30 36.4 -0.1
GUNZ Gunzen 146.31 347 *e*PKPdf PKPdf 18 30 36.4 -0.2
GUNZ *ep*PKPbc 18 32 52.7
PRD Provadia 146.36 324 *e*P PKPbc 18 30 39.4 +0.4
NKC Novy Kostel 146.41 347 *e*PKPDF PKPdf 18 30 36.6 -0.1
NKC ⇑*e*PKPB PKPbc 18 30 38.9 -0.2
NKC *e*PKPAB PKPab 18 30 41.5 -0.2
TREC Trest 146.53 343 *e*PKPbc PKPbc 18 30 36.6 -2.9
TREC *e*PKPab PKPab 18 30 39.1 -3.1
HEX Exmoor 146.56 6 *e*P PKPdf 18 30 38.2 +1.2
HEX Exmoor 146.56 6 *e*P PKPdf 18 30 38.2 +1.2
SWK Warminster 146.60 4 *e*P PKPdf 18 30 38.1 +1.1
SWK Warminster 146.60 4 *e*P PKPdf 18 30 38.1 +1.1
TSA1 Sevenoaks 146.61 1 *e*P PKPdf 18 30 38.9 +1.8
TSA1 Sevenoaks 146.61 1 *e*P PKPdf 18 30 38.9 +1.8
SMOL Smolenice 146.64 340 *i*PKP PKPbc 18 30 40.1 +0.3
MANZ Manzenberg 146.71 347 *e*PKPdf PKPdf 18 30 37.0 -0.2
MANZ *e*PKPbc PKPbc 18 30 39.8 -0.2
TFO1 Folkestone 146.75 0 *e*P PKPdf 18 30 39.0 +1.7
TFO1 Folkestone 146.75 0 *e*P PKPdf 18 30 39.0 +1.7
CSS Prodhromos 146.75 307 ⇓P PKPbc 18 30 39.8 -0.3
comp=Z,0.8nm,1.0s
CSS Prodhromos 146.75 307 *e*P PKPbc 18 30 39.7 -0.4
MAMC Mammari 146.76 308 P PKPbc 18 30 39.8 -0.3
BEBN Eben Emael 146.88 355 PKPbc PKPbc 18 30 39.6 -0.8
HGN Heimansgroeve 146.89 355 *e*PKP PKPdf 18 30 38.5 +1.0
comp=Z,2.6nm,1.0s
ROTZ Rotzenmuhle 146.90 347 *e*PKPdf PKPdf 18 30 37.0 -0.5
ROTZ *e*PKPbc PKPbc 18 30 40.4 -0.1
UCC Uccle 146.97 356 PKPbc PKPbc 18 30 40.0 -0.7
BUD Budapest 146.99 338 ⇓*e*PKP/p PKPbc 18 30 40.5 -0.2
ZST Bratislava 147.03 340 *i*PKP PKPbc 18 30 41.0 +0.2
ZST LR LR
comp=Z,100nm,19.1s
MEM Membach 147.04 354 PKP PKPdf 18 30 37.2 -0.5
MEM PKPbc PKPbc 18 30 40.3 -0.5
MEM PKPab PKPab 18 30 42.2 -1.7
MEM APKP 18 30 49.2
TNS Taunus Mts 147.13 351 *e*PKPdf PKPdf 18 30 37.6 -0.3
TNS *e*PKPbc PKPbc 18 30 40.6 -0.5
TNS *e*PKPab PKPab 18 30 43.8 -0.8
TNS Taunus Mts 147.13 351 *e*PKP2 PKPab 18 30 43.8 -0.8
CSA1 St Austell 147.14 7 *e*P PKPdf 18 30 39.6 +1.7
CSA1 St Austell 147.14 7 *e*P PKPdf 18 30 39.6 +1.7
ZIMR 147.15 327 ⇑*i*P PKPbc 18 30 42.0 +0.9
DYA Yadsworthy 147.17 6 *e*P PKPdf 18 30 39.4 +1.4
DYA Yadsworthy 147.17 6 *e*P PKPdf 18 30 39.4 +1.4
GRA1 Grafenberg Arr 147.18 348 *e*PKPdf PKPdf 18 30 37.7 -0.3
GRA1 *e*PKPbc PKPbc 18 30 41.1 -0.1
GRF Grafenberg Arr 147.18 348 *e*PKPdf PKPdf 18 30 37.7 -0.3
GRF *e*PKPbc PKPbc 18 30 41.1 -0.1
KHC Kasperske Hory 147.18 345 *e*PKPDF PKPdf 18 30 37.8 -0.2
KHC ⇑*e*PKPB PKPbc 18 30 41.1 -0.1
KHC *e*PKPAB PKPab 18 30 44.5 -0.3
KHC Kasperske Hory 147.18 345 *e*PKP PKPdf 18 30 37.8 -0.2
KHC *e* 18 30 41.1
KHC *e* 18 30 44.5
KHC LR LR
comp=Z,300nm,21.9s
ALFC Alevga 147.23 308 P PKPbc 18 30 40.6 -0.7
comp=Z,5.3nm,0.8s
SNF Seneffe 147.27 356 PKPbc PKPbc 18 30 39.9 -1.5
SNF PKPab PKPab 18 30 42.6 -2.6
BCLA Clavier 147.29 355 PKPbc PKPbc 18 30 41.0 -0.5
CRQ2 Rosemanowes 2 147.29 8 *e*P PKPdf 18 30 40.0 +1.8
CRQ2 Rosemanowes 2 147.29 8 *e*P PKPdf 18 30 40.0 +1.8
JMB Yambol 147.30 324 *e*P PKPbc 18 30 41.6 0.0
JMB Yambol 147.30 324 *e*P PKPbc 18 30 40.8 -0.7
WET Wettzell 147.34 346 *e*PKPdf PKPdf 18 30 37.6 -0.7
WET *e*PKPbc PKPbc 18 30 41.2 -0.4
WET *e*PKPab PKPab 18 30 45.0 -0.4
WET Wettzell 147.34 346 *e*PKP2 PKPab 18 30 45.0 -0.4
CGW Gweek 147.35 8 *e*P PKPdf 18 30 40.2 +2.0
CGW Gweek 147.35 8 *e*P PKPdf 18 30 40.2 +2.0
CGH1 Goonhilly 147.40 8 *e*P PKPdf 18 30 38.9 +0.5
CGH1 Goonhilly 147.40 8 *e*P PKPdf 18 30 38.9 +0.5
GEC2 GERESS Array S 147.41 345 *e*PKPdf PKPdf 18 30 37.8 -0.6
GEC2 *e*PKPbc PKPbc 18 30 41.5 -0.3
GEC2 *e*PKPab PKPab 18 30 45.0 -0.8
GERES GERESS Array B 147.41 345 PKP PKPdf 18 30 37.7 -0.7
comp=Z,43nm,0.7s,baz=7.4,slow=2.3,SNR=110
GERES PKPbc PKPbc 18 30 41.3 -0.5
comp=Z,43nm,0.7s,baz=66,slow=1.6,SNR=28
BZS Buzias 147.48 333 ⇓*i*P PKPdf 18 30 38.4 -0.1
BZS Buzias 147.48 333 PKIKP PKPdf 18 30 38.0 -0.5
ISP Isparta 147.52 314 PKIKP PKPbc 18 30 41.5 -0.6
PPCY Paphos 147.53 308 ⇑P PKPbc 18 30 41.2 -0.9
comp=Z,2.0nm,0.8s
CONA Conrad Observa 147.65 342 ⇓*i*PKPdf PKPdf 18 30 38.1 -0.7
comp=Z,4.7nm,1.0s,SNR=30
CONA ⇓*i*PKiKP PKiKP 18 30 42.4 -1.5
comp=Z,62nm,0.9s
SOP Sopron 147.65 341 ⇓*e*PKP/p PKPbc 18 30 42.4 0.0
DOU Dourbes 147.66 356 PKPbc PKPbc 18 30 41.9 -0.5
DOU E 18 30 48.1
WLF Walferdange 147.96 354 *e*PKPdf PKPdf 18 30 38.9 -0.4
WLF *e*PKPbc PKPbc 18 30 43.0 -0.2
WLF *e*PKPab PKPab 18 30 47.3 -0.7
WLF *ep*PKPbc pPKPbc 18 32 55.3 +2.1
WLF Walferdange 147.96 354 PKP PKPdf 18 30 39.0 -0.3
WLF PKPbc PKPbc 18 30 43.3 +0.1
WLF PKPab PKPab 18 30 46.4 -1.6
DIM Dimitrovgrad 148.16 325 *e*P PKPbc 18 30 43.5 -0.2
MOA Molln 148.18 343 ⇑*i* PKPbc 18 30 43.2 -0.6
comp=Z,80nm,1.5s
MOA Molln 148.18 343 ⇑*i*PKPdf PKPdf 18 30 38.6 -1.0
comp=Z,12nm,1.9s,SNR=13
MOA ⇓*i*PKPbc PKPbc 18 30 43.2 -0.6
comp=Z,80nm,1.5s
PKSM Moragy 148.20 337 ⇑*i*P PKPdf 18 30 38.8 -0.9

ARSA	**Arzberg**	**148.36**	**341**	⇓*i*	PKPbc	18 30 43.4	-0.8
	comp=Z,90nm,1.8s							
ARSA	**Arzberg**	**148.36**	**341**	⇓*i* PKPdf	PKPdf	18 30 38.7	-1.3
	comp=Z,17nm,2.5s,SNR=8.5							
ARSA				⇓*i* PKPbc	PKPbc	18 30 43.4	-0.8
	comp=Z,90nm,1.8s							
STU	**Stuttgart**	**148.43**	**350**	*e*PKPdf	PKPdf	18 30 39.9	-0.1
STU				*e*PKPbc	PKPbc	18 30 44.1	-0.3
LANF	**Langenberg**	**148.44**	**352**	PKP	PKPbc	18 30 44.1	-0.3
KDZ	**Kurdzhali**	**148.49**	**324**	P	PKPbc	18 30 43.8	-0.7
JVM	**Valle D.L. Mar**	**148.53**	**4**	*e*P	PKPbc	18 30 43.5	-1.1
JVM	**Valle D.L. Mar**	**148.53**	**4**	*e*P	PKPbc	18 30 43.5	-1.1
PGB	**Panagyurishte**	**148.55**	**327**	P	PKPbc	18 30 44.5	-0.2
JRS	**Jersey**	**148.56**	**4**	*e*P	PKPdf	18 30 43.3	+3.0
JRS	**Jersey**	**148.56**	**4**	*e*P	PKPdf	18 30 43.3	+3.0
FUR	**Furstenfeldbru**	**148.62**	**347**	*e*PKPdf	PKPdf	18 30 40.2	-0.1
FUR				*e*PKPbc	PKPbc	18 30 44.5	-0.3
FUR				*e*PKPab	PKPab	18 30 50.1	-0.6
FUR	**Furstenfeldbru**	**148.62**	**347**	*e*PKP2	PKPab	18 30 50.1	-0.6
ALN	**Alexandroupoli**	**148.62**	**322**	*e*P	PKPbc	18 30 44.7	-0.1
RDO	**Rodhopi**	**148.75**	**323**	*e*P	PKPbc	18 30 44.5	-0.7
KOGS	**Kog**	**148.84**	**340**	*i* PKPbc	PKPbc	18 30 44.5	-0.9
BFO	**Black Forest**	**149.00**	**351**	*e*PKPdf	PKPdf	18 30 40.4	-0.5
BFO				*e*PKPbc	PKPbc	18 30 45.3	-0.5
BFO				*e*PKPab	PKPab	18 30 51.2	-1.1
BFO				*e*pPKPbc	pPKPbc	18 32 57.6	+1.5
BFO	**Black Forest**	**149.00**	**351**	*e*PKP2	PKPab	18 30 51.2	-1.1
VTS	**Vitosha**	**149.02**	**328**	*e*P	PKPbc	18 30 45.6	-0.2
VTS	**Vitosha**	**149.02**	**328**	P	PKPbc	18 30 45.5	-0.3
VTS	**Vitosha**	**149.02**	**328**	⇓*i* P	PKPbc	18 30 45.6	-0.2
PERS	**Pernice**	**149.03**	**341**	*i* PKPbc	PKPbc	18 30 44.9	-1.0
WLS	**Welschbruch**	**149.05**	**352**	PKP	PKPbc	18 30 45.5	-0.4
CDF	**Champ du Feu**	**149.06**	**352**	*e*PKIKP	PKPdf	18 30 39.5	-1.6
FLN	**La Foliniere**	**149.07**	**2**	*e*PKIKP	PKPdf	18 30 39.6	-1.5
	comp=Z,50nm,1.1s							
KBA	**Koelnbreinsper**	**149.14**	**344**	⇓*i*	PKPbc	18 30 45.1	-1.0
	comp=Z,56nm,1.2s							
KBA	**Koelnbreinsper**	**149.14**	**344**	⇓*i* PKPdf	PKPdf	18 30 39.8	-1.4
	comp=Z,42nm,2.7s,SNR=23							
KBA				⇓*i* PKPbc	PKPbc	18 30 45.1	-1.0
	comp=Z,56nm,1.2s							
KBA	**Koelnbreinsper**	**149.14**	**344**	⇓*i* P	PKPdf	18 30 39.8	-1.4
KBA				*i*		18 30 45.1		
SPAK	**Spaichingen-Ko**	**149.15**	**350**	*e*P	PKPbc	18 30 45.8	-0.3
MEZF	**Maizieres J'vi**	**149.21**	**355**	*e*PKIKP	PKPdf	18 30 40.3	-1.0
GRUS	**Gruza**	**149.24**	**332**	*i* PKP	PKPbc	18 30 45.4	-1.0
LDF	**La Druitiere**	**149.25**	**2**	*e*PKIKP	PKPdf	18 30 39.8	-1.6
	comp=Z,19nm,0.9s							
ECH	**Echery**	**149.27**	**352**	PKP	PKPbc	18 30 45.5	-0.9
ROSF	**Rostrenen**	**149.31**	**6**	*e*PKIKP	PKPdf	18 30 39.8	-1.6
WATA	**Walderalm**	**149.34**	**346**	⇓*i*	PKPbc	18 30 46.0	-0.6
	comp=Z,44nm,1.1s							
WATA	**Walderalm**	**149.34**	**346**	⇑*i* PKPdf	PKPdf	18 30 41.1	-0.4
	comp=Z,7.6nm,1.1s,SNR=15							
WATA				⇓*i* PKPbc	PKPbc	18 30 46.0	-0.6
	comp=Z,44nm,1.1s							
WTTA	**Wattenberg**	**149.39**	**346**	⇓*i*	PKPbc	18 30 46.4	-0.3
	comp=Z,120nm,1.2s							
WTTA	**Wattenberg**	**149.39**	**346**	⇓*i* PKPdf	PKPdf	18 30 40.9	-0.6
	comp=Z,35nm,1.6s,SNR=33							
WTTA				⇓*i* PKiKP	PKiKP	18 30 46.4	-1.1
	comp=Z,120nm,1.2s							
DIVS	**Divcibare**	**149.39**	**333**	*e*PKP	PKPdf	18 30 40.9	-0.7
DIVS	**Divcibare**	**149.39**	**333**	*e*P	PKPbc	18 30 46.3	-0.4
THEF	**They Montfort**	**149.40**	**354**	PKP	PKPbc	18 30 46.1	-0.6
MOTA	**Moosalm**	**149.43**	**347**	⇓*i*	PKPbc	18 30 46.2	-0.6
	comp=Z,52nm,1.0s							
MOTA	**Moosalm**	**149.43**	**347**	⇑*i* PKPdf	PKPdf	18 30 41.0	-0.6
	comp=Z,16nm,1.2s,SNR=27							
MOTA				⇓*i* PKPbc	PKPbc	18 30 46.2	-0.6
	comp=Z,52nm,1.0s							
GRR	**Gorron**	**149.43**	**3**	*e*PKIKP	PKPdf	18 30 40.3	-1.3
SGMF	**Saint Gilles**	**149.46**	**5**	*e*PKIKP	PKPdf	18 30 39.9	-1.8
MMB	**Musomiste**	**149.46**	**326**	*e*P	PKPdf	18 30 45.8	+4.1
MMB	**Musomiste**	**149.46**	**326**	P	PKPbc	18 30 46.2	-0.7
FELD	**Feldberg im Sc**	**149.49**	**351**	*e*P	PKPdf	18 30 41.0	-0.7
FELD				⇓*e*P		18 30 46.4		
PRK	**Paraskevi**	**149.52**	**320**	*e*P	PKPbc	18 30 46.0	-1.0
SLE	**Schleitheim**	**149.52**	**350**	⇓*i* PKPdf	PKPdf	18 30 40.7	-1.1
	comp=Z,59nm,1.0s							
SQTA	**Sankt Quirin**	**149.53**	**347**	⇓*i*	PKPbc	18 30 46.6	-0.5
	comp=Z,52nm,1.0s							
SQTA	**Sankt Quirin**	**149.53**	**347**	⇑*i* PKPdf	PKPdf	18 30 41.4	-0.4
	comp=Z,11nm,1.2s,SNR=21							
SQTA				⇓*i* PKiKP	PKiKP	18 30 46.6	-1.2
	comp=Z,52nm,1.0s							
NVR	**Nevrokopi**	**149.55**	**325**	*e*P	PKPdf	18 30 45.5	+3.7
HAU	**Haudompre**	**149.58**	**353**	*e*PKIKP	PKPdf	18 30 40.5	-1.4
KKB	**Krupnik**	**149.60**	**327**	P	PKPbc	18 30 46.5	-0.7
MOF	**Molkenrain**	**149.63**	**352**	PKP	PKPbc	18 30 46.2	-1.1
MOF	**Molkenrain**	**149.63**	**352**	*e*P	PKPbc	18 30 46.2	-1.1
HINF	**Hinteralfeld**	**149.70**	**353**	*e*PKIKP	PKPdf	18 30 40.6	-1.5
	comp=Z,21nm,1.1s							
QUIF	**Quistinic**	**149.74**	**6**	*e*PKIKP	PKPdf	18 30 40.5	-1.6
DAVA	**Damuels**	**149.74**	**348**	⇓*i*	PKPbc	18 30 47.1	-0.4
	comp=Z,100nm,1.2s							
DAVA	**Damuels**	**149.74**	**348**	⇓*i* PKPdf	PKPdf	18 30 41.5	-0.7
	comp=Z,50nm,2.4s,SNR=14							
DAVA				⇓*i* PKiKP	PKiKP	18 30 47.1	-1.1
	comp=Z,100nm,1.2s							
LJU	**Ljubljana**	**149.75**	**341**	*e*PKPdf	PKPdf	18 30 40.5	-1.6
LJU				*e*PKPbc	PKPbc	18 30 46.1	-1.4
LJU				*e*PP	SKPdf	18 33 16.0	-6.5
LIA	**Limnos Island**	**149.77**	**322**	*e*P	PKPdf	18 30 46.0	+3.8
WILA	**Wila**	**149.79**	**350**	⇓*i* PKPdf	PKPdf	18 30 40.8	-1.4
	comp=Z,129nm,1.1s							
CADS	**Cadrg**	**149.81**	**343**	*i* PKPbc	PKPbc	18 30 46.2	-1.5
SULZ	**Sulz-Cheisache**	**149.81**	**351**	⇓*i* PKPdf	PKPdf	18 30 41.3	-0.9
	comp=Z,158nm,0.9s							
BBLS	**Bajina Basta -**	**149.83**	**333**	*i* PKP	PKPbc	18 30 47.7	0.0
VISS	**Visnje**	**149.87**	**341**	*i* PKPbc	PKPbc	18 30 47.3	-0.6
VOY	**Vojsko**	**149.94**	**342**	*e*PKPab	PKPab	18 30 53.8	-2.4
VOJS	**Vojsko**	**149.95**	**342**	*i* PKPbc	PKPbc	18 30 47.0	-1.0
ARG	**Arkhangelos**	**149.99**	**313**	*e*P	PKPdf	18 30 46.5	+4.0
BOJS	**Bojanci**	**150.00**	**340**	*i* PKPdf	PKPdf	18 30 41.7	-0.8
BOJS				*i* PKPbc	PKPbc	18 30 47.9	-0.2
BOJS				*i* PP	pPKPab	18 33 00.4	-1.7
SMG	**Samos**	**150.06**	**317**	*e*P	PKPbc	18 30 47.0	-1.3
BALST	**Balsthal**	**150.06**	**351**	⇓*i* PKPdf	PKPdf	18 30 41.8	-0.8
	comp=Z,181nm,1.2s							
PLONS	**Plons**	**150.06**	**349**	⇓*i* PKPdf	PKPdf	18 30 41.4	-1.2
	comp=Z,126nm,1.5s							
LOMF	**Lomont**	**150.16**	**352**	PKP	PKPbc	18 30 48.2	-0.3
LOMF	**Lomont**	**150.16**	**352**	*e*P	PKPbc	18 30 48.2	-0.3
CHOS	**Chios island**	**150.17**	**318**	*e*P	PKPbc	18 30 47.3	-1.2
OUR	**Ouranopolis**	**150.18**	**324**	*e*P	PKPbc	18 30 47.4	-1.2
KNT	**Kendrikon**	**150.20**	**326**	*e*P	PKPbc	18 30 47.1	-1.5
DAVOX	**Davos**	**150.22**	**348**	⇓*i* PKPdf	PKPdf	18 30 41.9	-1.0
	comp=Z,128nm,0.7s							
VAY	**Valandovo**	**150.26**	**326**	*e*PKP	PKPdf	18 30 47.2	+4.2
PLE	**Pljevlja**	**150.26**	**333**	⇓*i* PKP	PKPbc	18 30 48.5	-0.3
MUO	**Muotathal**	**150.27**	**350**	⇓*i* PKPdf	PKPdf	18 30 42.3	-0.6
	comp=Z,201nm,1.3s							
LLS	**Linth-Limmern**	**150.32**	**349**	⇓*i* PKPdf	PKPdf	18 30 42.4	-0.6
	comp=Z,69nm,1.4s							
SKO	**Skopje**	**150.36**	**329**	*e*PKP	PKPbc	18 30 48.6	-0.4
BNALP	**Bannalp**	**150.40**	**350**	⇓*i* PKPdf	PKPdf	18 30 42.5	-0.6
	comp=Z,91nm,0.8s							
IVA	**Berane**	**150.41**	**332**	⇓*i* PKP	PKPbc	18 30 48.6	-0.5
PLG	**Polygyros**	**150.45**	**324**	*e*P	PKPdf	18 30 46.5	+3.3
LOR	**Lormes**	**150.52**	**356**	*e*PKIKP	PKPdf	18 30 42.2	-1.1
	comp=Z,13nm,0.9s							
BERNI	**Berninapass**	**150.55**	**348**	⇓*i* PKPdf	PKPdf	18 30 42.6	-0.8
	comp=Z,154nm,1.0s							
UPM	**Unac-Piva**	**150.58**	**333**	⇓*i* PKP	PKPbc	18 30 48.6	-0.9
VDL	**Val di Lei**	**150.59**	**348**	⇓*i* PKPdf	PKPdf	18 30 42.9	-0.5
	comp=Z,104nm,1.2s							
PVY	**Plav**	**150.59**	**331**	⇓*i* PKP	PKPbc	18 30 48.9	-0.6
GRG	**Griva**	**150.61**	**326**	*e*P	PKPbc	18 30 48.2	-1.4
PAIG	**Paliouri**	**150.62**	**323**	*e*P	PKPbc	18 30 48.1	-1.5
WIMIS	**Wimmis**	**150.73**	**351**	⇓*i* PKPdf	PKPdf	18 30 43.0	-0.6
	comp=Z,77nm,1.1s							
SSF	**Saint Saulge**	**150.75**	**357**	*e*PKIKP	PKPdf	18 30 42.6	-1.1
	comp=Z,30nm,1.1s							
FUSIO	**Fusio**	**150.76**	**349**	⇓*i* PKPdf	PKPdf	18 30 42.9	-0.8
	comp=Z,90nm,0.8s							
NKY	**Niksic**	**150.85**	**333**	⇓*i* PKP	PKPbc	18 30 49.5	-0.6
BRY	**Bratogost**	**150.98**	**333**	⇓*i* PKP	PKPbc	18 30 49.6	-0.8
CABF	**La Chapelle**	**150.98**	**353**	*e*PKIKP	PKPdf	18 30 43.5	-0.5
	comp=Z,41nm,1.3s							
KAP	**Karpathos**	**150.99**	**313**	*e*P	PKPbc	18 30 49.5	-0.9
LKBD	**Leukerbad**	**151.00**	**351**	⇓*i* PKPdf	PKPdf	18 30 43.4	-0.6
	comp=Z,56nm,1.0s							
AVF	**Avril sur Loir**	**151.03**	**357**	*e*PKIKP	PKPdf	18 30 42.7	-1.4
GIMEL	**Gimel**	**151.04**	**353**	⇓*i* PKPdf	PKPdf	18 30 43.6	-0.5
	comp=Z,86nm,1.3s							
TTG	**Podgorica**	**151.04**	**332**	⇓*i* PKP	PKPbc	18 30 49.7	-0.8
BIA	**Bitola**	**151.13**	**327**	*e*PKP	PKPbc	18 30 49.5	-1.3
SMF	**Signal de Mont**	**151.15**	**356**	*e*PKIKP	PKPdf	18 30 43.0	-1.3
LCHF	**La Chataignera**	**151.15**	**3**	PKP	PKPbc	18 30 50.5	-0.3
LIT	**Litokhoron**	**151.17**	**325**	*e*P	PKPbc	18 30 49.5	-1.3
OG01	**Vacheresse**	**151.19**	**352**	PKP	PKPbc	18 30 50.6	-0.3
OG01	**Vacheresse**	**151.19**	**352**	*e*P	PKPbc	18 30 50.6	-0.3
MUGIO	**Muggio**	**151.21**	**349**	⇓*i* PKPdf	PKPdf	18 30 43.3	-1.1
	comp=Z,71nm,0.9s							
MFF	**Saint Martin d**	**151.24**	**2**	*e*PKIKP	PKPdf	18 30 44.1	-0.3
	comp=Z,33nm,1.0s							
FNA	**Florina**	**151.27**	**327**	*e*P	PKPbc	18 30 50.3	-0.8
XOR	**Xorichti**	**151.28**	**323**	*e*P	PKPdf	18 30 49.0	+4.6
APE	**Apeiranthos**	**151.28**	**317**	⇓*i* P	PKPbc	18 30 49.5	-1.6
BGF	**Bois d'Agland**	**151.28**	**358**	*e*PKIKP	PKPdf	18 30 43.3	-1.2
NEO	**Neokhori**	**151.30**	**323**	*e*P	PKPdf	18 30 45.0	+0.5
BUM	**Brajici-Budva**	**151.31**	**332**	⇓*i* PKP	PKPbc	18 30 50.2	-1.0
OHR	**Ohrid**	**151.32**	**328**	*e*PKP	PKPbc	18 30 49.9	-1.3
HCY	**Herceg Novi**	**151.37**	**333**	⇓*i* PKP	PKPbc	18 30 50.1	-1.1
KZN	**Kozani**	**151.41**	**326**	*e*P	PKPdf	18 30 48.5	+3.8
ULC	**Ulcinj**	**151.42**	**331**	⇓*i* PKP	PKPbc	18 30 50.4	-1.0
TCF	**Toulx Ste Croi**	**151.57**	**359**	*e*PKIKP	PKPdf	18 30 43.6	-1.3
	comp=Z,37nm,1.4s							
OG05	**Jujurieux**	**151.61**	**354**	PKP	PKPbc	18 30 51.6	-0.2
OG05	**Jujurieux**	**151.61**	**354**	*e*P	PKPbc	18 30 51.6	-0.2
AGO	**Saint Agoulin**	**151.77**	**357**	PKP	PKPbc	18 30 51.8	-0.4
AGO	**Saint Agoulin**	**151.77**	**357**	*e*P	PKPbc	18 30 51.8	-0.4
RSL	**Roselend**	**151.82**	**352**	PKP	PKPbc	18 30 52.2	-0.1
RSL	**Roselend**	**151.82**	**352**	*e*P	PKPbc	18 30 52.2	-0.1
PLDF	**La Plantade**	**151.83**	**357**	PKP	PKPbc	18 30 52.0	-0.3
PLDF	**La Plantade**	**151.83**	**357**	*e*P	PKPbc	18 30 52.0	-0.3
LKR	**Lokris**	**151.86**	**322**	*e*P	PKPbc	18 30 50.5	-1.9
ZKR	**Zakros**	**151.89**	**313**	*e*P	PKPbc	18 30 51.9	-0.6
LPL	**La Plagne**	**151.98**	**352**	*e*PKIKP	PKPdf	18 30 45.1	-0.4
LPG	**La Plagne**	**151.99**	**352**	*e*PKIKP	PKPdf	18 30 45.2	-0.3
	comp=Z,12nm,0.9s							
AGG	**Agios Georgios**	**152.00**	**323**	*e*P	PKPbc	18 30 51.4	-1.3
MEV	**Metsovon**	**152.07**	**326**	*e*P	PKPbc	18 30 53.3	+0.4
PYM	**Petit Puy Mans**	**152.08**	**357**	PKP	PKPbc	18 30 52.4	-0.5
PYM	**Petit Puy Mans**	**152.08**	**357**	*e*P	PKPbc	18 30 52.4	-0.5
EVR	**Evrytania**	**152.37**	**324**	*e*P	PKPdf	18 30 50.5	+4.4
RJF	**Les Rejaudoux**	**152.56**	**360**	*e*PKIKP	PKPdf	18 30 45.2	-1.2
	comp=Z,46nm,1.3s							
LBL	**Lubilhac**	**152.59**	**357**	PKP	PKPbc	18 30 54.1	+0.1
LBL	**Lubilhac**	**152.59**	**357**	*e*P	PKPbc	18 30 54.1	+0.1
ORIF	**Oris-en-Rattie**	**152.68**	**353**	*e*PKIKP	PKPdf	18 30 45.8	-0.7
IGT	**Igoumenitsa**	**152.73**	**327**	*e*P	PKPbc	18 30 53.4	-0.9
MBDF	**Montbardon**	**152.75**	**351**	*e*PKIKP	PKPdf	18 30 45.9	-0.7
VIVF	**Saint-Julien-l**	**152.86**	**355**	*e*PKIKP	PKPdf	18 30 46.2	-0.6
	comp=Z,25nm,1.2s							
SIVA	**Sivas**	**152.91**	**314**	*e*P	PKPbc	18 30 54.5	-0.2
LFF	**La Frestale**	**152.93**	**1**	*e*PKIKP	PKPdf	18 30 45.9	-1.0
	comp=Z,12nm,0.7s							
CAF	**Calviac**	**152.94**	**359**	*e*PKIKP	PKPdf	18 30 46.0	-0.9
	comp=Z,12nm,1.0s							
VAM	**Vamos**	**153.11**	**315**	*e*P	PKPbc	18 30 55.0	-0.1
AUTN	**L'Aution**	**153.36**	**350**	PKP	PKPbc	18 30 55.2	-0.4
TOUF	**Mont Tournerai**	**153.37**	**350**	PKP	PKPbc	18 30 55.5	-0.2
AQU	**L'Aquila**	**153.41**	**340**	⇑*i* P	PKPbc	18 30 54.5	-1.2
SMRF	**Simiane la Rot**	**153.64**	**353**	*e*PKIKP	PKPdf	18 30 47.8	-0.1
	comp=Z,13nm,0.9s							
FRF	**La Foret Royal**	**153.91**	**351**	*e*PKIKP	PKPdf	18 30 47.4	-0.9
LMR	**La Mourre**	**154.15**	**351**	*e*PKIKP	PKPdf	18 30 48.5	-0.1
PGF	**Pioggiola**	**154.45**	**347**	*e*PKIKP	PKPdf	18 30 48.9	-0.1
MTLF	**Montolieu**	**154.52**	**358**	*e*PKIKP	PKPdf	18 30 48.0	-1.1
	comp=Z,34nm,1.5s							
SJPF	**Ste Jean**	**154.67**	**4**	*e*PKIKP	PKPdf	18 30 48.5	-0.8
	comp=Z,22nm,1.1s							
EPF	**Esparros**	**154.83**	**2**	*e*PKIKP	PKPdf	18 30 48.8	-0.7
	comp=Z,16nm,1.2s							
ETSF	**Etsaut**	**154.92**	**3**	*e*PKIKP	PKPdf	18 30 49.1	-0.6
	comp=Z,17nm,0.9s							
PVRL	**Vila Real**	**155.36**	**16**	*e*PKPab	PKPab	18 31 18.7	-0.6
PVIS	**Viseu**	**155.83**	**17**	*e*PKPdf	PKPdf	18 30 50.5	-0.4
PVIS	**Viseu**	**155.83**	**17**	*e*PKPab	PKPab	18 31 20.6	-0.7
MTE	**Manteigas**	**156.22**	**17**	*e*PKPdf	PKPdf	18 30 51.5	+0.1
MTE	**Manteigas**	**156.22**	**17**	*e*PKPab	PKPab	18 31 22.4	-0.6
MTE	**Manteigas**	**156.22**	**17**	*e*LR	LR	19 11 29.6	
	comp=Z,206nm,22.0s							
PTOM	**Tomar**	**156.69**	**19**	*e*PKPdf	PKPdf	18 30 52.1	+0.1
PTOM	**Tomar**	**156.69**	**19**	*e*PKPab	PKPab	18 31 24.1	-0.9
PCBR	**Castelo Branco**	**156.76**	**17**	*e*PKPdf	PKPdf	18 30 52.5	+0.4
PESTR	**Estremoz**	**157.63**	**18**	*e*PKPdf	PKPdf	18 30 53.3	+0.2
PESTR				*i* -		18 31 28.1	
ESDC	**Sonseca Array**	**157.73**	**11**	PKP	PKPdf	18 30 53.3	+0.1
	comp=Z,1.1nm,0.6s,baz=345,slow=2.5,SNR=8.7							
ESDC				PKPab	PKPab	18 31 28.2	-1.3
	comp=Z,4.0nm,0.8s,baz=351,slow=4.6,SNR=10							
KEST	**Kesra**	**160.74**	**340**	PKP	PKPdf	18 30 55.4	-1.3
	comp=Z,2.0nm,0.9s,baz=225,slow=0.8,SNR=3.8							
KEST				PKPab	PKPab	18 31 42.2	-0.4
	comp=Z,2.9nm,0.7s,baz=315,slow=4.3,SNR=7.1							
LIC	**Lamto**	**166.97**	**151**	*e*PKIKP	PKPdf	18 31 01.6	-0.7
	comp=Z,47nm,1.0s							
DBIC	**Dimbokro**	**167.44**	**151**	PKP	PKPdf	18 31 01.9	-0.7
	comp=Z,9.7nm,0.9s,baz=161,slow=2.1,SNR=6.7							
TOA0	**Torodi Ar. Sit**	**175.37**	**185**	*e*PKPdf	PKPdf	18 31 05.8	-0.6
TOA0				*e*PKPab	PKPab	18 32 46.7	-0.8
TOA0				*e*PP	PP	18 36 39.2	-1.4
TORD	**Torodi Ar. Bea**	**175.37**	**185**	PKP	PKPdf	18 31 06.0	-0.4
	comp=Z,10nm,0.8s,baz=326,slow=1.2,SNR=51							
TORD				PKPab	PKPab	18 32 47.1	-0.3
	comp=Z,5.9nm,0.7s,baz=177,slow=4.3,SNR=15							
TORD				PP	PP	18 36 39.3	-1.2
	comp=Z,3.1nm,0.8s,baz=171,slow=3.5,SNR=8.7							

*ISCJB **22** 18:16:03.3±0.5, 3693N±003×2793E±004, h13km±4km, Error ellipse: s-maj=5.7km s-min=4.6km az=136.7*
*ATH **22** 18:16:03.8, 3693N×2785E, h26km±4km, MD3.1/4*
*CSEM **22** 18:16:03.0±0.1, 3700N×2793E, h5km, MD2.7, Error ellipse: s-maj=2.5km s-min=1.7km az=169.0*
*ISK **22** 18:16:03.2, 3698N×2793E, h5km, MD2.7*
*NEIC **22** 18:16:03.8, 3693N×2785E, h26km, MD3.1(ATH), After ATH.*

ISC 22 18:16:03.5±0.5, 3694N±003×2794E±004, h15km±4km, n12, σ0$ 79/20, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.34**	**54**	PG	**Pg**	**18 16 10.3**	**-0.2**
YER				SG	**Sg**	**18 16 14.9**	**-0.3**
DAT	**Datca**	**0.35**	**235**	PG	**Pg**	**18 16 10.7**	**0.0**
DAT				SG	**Sg**	**18 16 16.9**	**+1.3**
BDRM	**Kayabasi**	**0.42**	**288**	*i* P	**Pg**	**18 16 11.2**	**-0.7**
BDRM				*i* S	**Sg**	**18 16 17.8**	**+0.3**
BODT	**Bodrum**	**0.52**	**284**	PG	**Pg**	**18 16 13.6**	**-0.1**
BODT				SG	**Sg**	**18 16 20.9**	**+0.2**
DALT	**Dalyan (Mudla)**	**0.58**	**106**	*e*PG	**Pg**	**18 16 15.2**	**+0.2**
AYDN	**Tasoluk**	**0.73**	**356**	*i* P	**Pg**	**18 16 17.1**	**-0.6**
AYDN				*i* S	**Sg**	**18 16 26.8**	**-0.4**
NISR	**Nisiros**	**0.73**	**244**	*e*PN	**Pn**	**18 16 17.0**	**-2.2**
ARG	**Arkhangelos**	**0.73**	**168**	*e*PN	**Pn**	**18 16 18.1**	**-1.2**
ARG				*e*SN	**Sn**	**18 16 30.3**	**+0.1**
DNZL	**Cakiroluk**	**1.16**	**49**	*i* P	**Pn**	**18 16 25.2**	**0.0**
DNZL				*i* S	**Sb**	**18 16 42.0**	**+1.9**
SMG	**Samos**	**1.17**	**312**	*e*PN	**Pn**	**18 16 25.1**	**-0.2**
SMG				*e*SN	**Sn**	**18 16 41.3**	**+0.3**
KARP	**Karpathos**	**1.52**	**205**	*e*PN	**Pn**	**18 16 30.8**	**+0.7**
APE	**Apeiranthos**	**1.93**	**275**	*e*PN	**Pn**	**18 16 36.5**	**+0.7**

*CSEM **22** 18:27:33.5, 3636N×609E, h0km, ML3.5, After ALG*

CRAAG 22 18:27:33.5, 3636N×609E, MI3.5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DFRA	**Djebel Bou Aff**	**0.25**	**318**	P	Pg	18 27 39.6	+1.2
CASM	**Ain Smara**	**0.34**	**106**	P	Pg	18 27 41.0	+1.0
CTEI	**Djebel Teioual**	**0.39**	**138**	P	Pg	18 27 42.0	+1.0
CKFL	**Kef-Lekhel**	**0.51**	**85**	P	Pg	18 27 45.0	+1.7
CKHR	**Kef el Ahmar**	**0.57**	**234**	P	Pg	18 27 51.3	+6.8
SET	**Setif**	**0.58**	**255**	P	Pg	18 27 51.0	+6.5
CAEH	**'Ain El Ouahch**	**0.75**	**55**	P	Pg	18 27 46.0	-1.8
CMER	**Merouana**	**0.75**	**192**	P	Pg	18 27 54.0	+6.1
CMAH	**Djebel Manchou**	**1.11**	**76**	P	Pg	18 27 52.0	-2.7
ABSA	**Djebel Ababsia**	**1.13**	**94**	P	Pg	18 27 53.0	-2.1

*ISCJB **22** 18:29:13.2±0.5, 835N±007×10386W±008, h10km,*
mb4.3/26, MS4.5/15, Error ellipse: s-maj=11.7km s-min=9.4km az=169.9
*IDC **22** 18:29:13.3±1.5, 833N×10397W, h0km, mb4.2/8, mb1 4.4/9, mb1mx4.2/20, mbtmp4.2/9, MS4.5/17, Ms1 4.4/17, ms1mx4.3/24, Error ellipse: s-maj=57.2km s-min=17.3km az=59.0*
*NEIC **22** 18:29:14.8±0.8, 835N×10385W, h10km, mb4.6/17, Error ellipse: s-maj=19.6km s-min=10.7km az=52.0*
*HRVD **22** 18:29:14.8±0.2, 844N×10397W, h12km, MW5.2/81, Centroid moment Tensor Solution. LP body waves: s63,c95; Mantle waves: s81,c143; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.47±.13; $M_{\theta\theta}$2.42±.13; $M_{\phi\phi}$-0.94±.17; $M_{r\theta}$-1.54±.30; $M_{\theta\phi}$-6.18±.10; $M_{\phi r}$0.71±.35; Best double couple: $M_0$6.57600×10^{16} NP1:ϕ_s353.00000°, δ79.00000°, λ4.00000°. NP2: ϕ_s262.00000°, δ86.00000°, λ169.00000°. Principal axes: T 7.4510, Plg11.0000°, Azm217.0000°; N -1.7450, Plg78.0000°, Azm64.0000°; P -5.7000, Plg5.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 22 18:29:15.3±0.5, 836N±006×10393W±008, h10km, n59, σ1$ 09/43, mb4.3/26, MS4.5/15, Northern East Pacific Rise

| Code | Station Name | Δ° | AZ° | Ph

WRA	Warramunga Arr	22.61	157	P	P	19 39 28.1	-0.3
	3.4nm,0.4s,mb4.1,baz=335,slow=11,SNR=78						
WB2	Warramunga Arr	22.61	157	eP	P	19 39 27.8	-0.6
MBWA	Marble Bar	22.68	194	eP	P	19 39 28.7	-0.4
	21nm,1.5s,mb4.3						
AS31	Alice Springs	25.89	162	eP	P	19 39 59.8	+0.4
ASAR	Alice Springs	25.89	162	P	P	19 39 59.9	+0.5
	4.4nm,0.8s,mb4.0,baz=339,slow=8.2,SNR=99						
ASAR				PcP	PcP	19 43 28.2	+0.6
	0.3nm,0.5s,baz=357,slow=2.7,SNR=4.2						
STKA	Stephens Creek	36.15	156	P	P	19 41 30.4	+0.7
	1.9nm,0.3s,mb4.5,baz=321,slow=8.3,SNR=16						
STKA	Stephens Creek	36.15	156	eP	P	19 41 30.2	+0.5
MKAR	Makanchi Array	59.02	327	P	P	19 44 27.1	+0.1
	0.3nm,0.4s,mb3.7,baz=121,slow=7.5,SNR=11						
VNDA	Vanda	80.91	172	P	P	19 46 40.8	-0.6
	0.7nm,0.8s,mb3.6						

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*JMA **22** 19:43:58.8±0.5, 2499N×12340E, h29^{km}, M2.6*
*ISCJB **22** 19:44:00.2±0.9, 2488N±007×12340E±007, h33^{km}, mb3.3/4, Error ellipse: s-maj=10.8km s-min=7.9km az=61.5*
*IDC **22** 19:44:01.0±2.3, 2515N×12298E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, Error ellipse: s-maj=173.8km s-min=23.3km az=64.0*
ISC 22 19:44:01.3±0.9**, 2480N**±008×**12340E**±006**, h35**^{km}**, n9, σ0^{s}71**/12**, mb3.3**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.49	226	P	Pn	19 44 10.9	-0.9
YOJ				eS	Sn	19 44 19.2	+0.1
IRIF	Iriomote-Funau	0.56	147	P	Pn	19 44 12.4	-0.4
IRIF				eS	Sn	19 44 21.9	+1.1
JKRS	Kuro-shima	0.79	135	P	Pn	19 44 16.1	+0.1
JIJ	Ishigaki jima	0.81	123	P	Pn	19 44 14.8	-1.4
JIJ				eS	Sn	19 44 26.8	-0.2
HATJ	Hateruma jima	0.83	153	P	Pn	19 44 17.1	+0.6
SONM	Songino Array	26.64	334	P	P	19 49 37.3	+0.7
	0.3nm,0.7s,mb2.9,baz=150,slow=9.8,SNR=3.0						
MKAR	Makanchi Array	39.32	315	P	P	19 51 27.2	+0.3
	0.3nm,0.6s,mb3.2,baz=98,slow=8.7,SNR=5.2						
WRA	Warramunga Arr	45.73	166	P	P	19 52 26.7	+7.6
	0.8nm,0.7s,mb3.8,baz=348,slow=8.8,SNR=6.5						
ASAR	Alice Springs	49.25	167	P	P	19 52 55.4	+9.1
	0.2nm,0.7s,mb3.3,baz=348,slow=6.9,SNR=4.5						

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*IDC **22** 19:55:43.2±0.8, 536S×13087E, h0^{km}, mb4.2/6, mb1 4.5/9, mb1mx4.3/14, mbtmp4.4/9, ML4.3/3, MS3.3/1, Ms1 3.3/1, ms1mx2.4/20, Error ellipse: s-maj=51.3km s-min=16.3km az=69.0*
*NEIC **22** 19:55:44.5±6.8, 537S×13101E, h11^{km}±43^{km}, mb4.5/12, Error ellipse: s-maj=23.1km s-min=11.4km az=55.0*
*ISCJB **22** 19:55:45.5±0.5, 544S±006×1311E±01, h33^{km}, mb4.5/13, Error ellipse: s-maj=21.7km s-min=5.6km az=144.9*
ISC 22 19:55:47.4±0.6**, 536S**±006×**1313E**±01**, h35**^{km}**, n36, σ0^{s}94**/41**, mb4.5**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	7.39	171	eP	Pn	19 57 37.2	+4.4
	179nm,0.6s						
KAKA				eS	Sn	19 58 56.2	+0.8
FITZ	Fitzroy Crossi	13.80	203	Pn	Pn	19 58 59.7	-0.9
	0.4nm,0.3s,baz=34,slow=13,SNR=61						
FITZ				Sn	Sn	20 01 22.0	-11
	8.9nm,0.3s,baz=120,slow=21,SNR=14						
FITZ	Fitzroy Crossi	13.80	203	eP	Pn	19 58 59.8	-0.8
	6.0nm,0.2s						
FITZ				eS	Sn	20 01 21.0	-12
WRAB	Tennant Creek	14.79	169	ePn	Pn	19 59 12.8	-1.2
	21nm,0.6s						
WRAB				eSn	Sn	20 01 46.6	-10
WRA	Warramunga Arr	14.79	169	Pn	Pn	19 59 13.4	-0.7
	1.9nm,0.3s,baz=355,slow=13,SNR=109						
WRA				Sn	Sn	20 01 49.5	-7.2
	4.4nm,0.3s,baz=349,slow=24,SNR=8.1						
WB2	Warramunga Arr	14.80	169	ePn	Pn	19 59 12.9	-1.2
WB2				eSn	Sn	20 01 39.8	-17
PMG	Port Moresby	16.26	105	eP	Pn	19 59 40.6	+7.6
	25nm,0.9s						
AS31	Alice Springs	18.37	172	eP	Pn	19 59 59.4	+0.1
AS31				eS	S	20 03 15.2	-12
ASAR	Alice Springs	18.37	172	P	Pn	20 00 00.3	+1.0
	3.1nm,0.3s,baz=346,slow=11,SNR=152						
ASAR				S	S	20 03 15.2	-12
	1.0nm,0.3s,baz=358,slow=28,SNR=7.1						
MBWA	Marble Bar	19.28	214	eP	Pn	20 00 10.2	-0.1
	7.5nm,0.6s						
CTA	Charters Tower	20.65	136	P	P	20 00 28.6	+4.6
	8.4nm,0.8s,baz=313,slow=12,SNR=12						
CTA	Charters Tower	20.65	136	eP	P	20 00 28.6	+4.6
	5.8nm,0.7s						
CTAO	Charters Tower	20.65	136	eP	P	20 00 28.1	+4.1
	59nm,0.6s						
STKA	Stephens Creek	28.09	161	P	P	20 01 38.0	+2.2
	1.7nm,0.4s,mb4.0,baz=35,slow=18,SNR=12						
STKA				LR	LR	20 13 18.1	
	comp=Z,60nm,18.1s,baz=26,slow=37						
STKA	Stephens Creek	28.09	161	eP	P	20 01 37.4	+1.6
CM31	Chiang Mai Arr	39.70	307	eP	P	20 03 16.9	+0.6
PKI	Pulchoki	55.06	309	eP	P	20 05 15.8	+0.1
KKN	Kakani	55.26	309	eP	P	20 05 17.2	0.0
DMN	Daman	55.31	309	eP	P	20 05 17.4	-0.1
	26nm,1.0s,mb5.2						
GKN	Gorkha	55.87	309	eP	P	20 05 21.6	+0.1
	10nm,0.3s,mb5.4						
KOLN	Koldanda	56.56	308	eP	P	20 05 26.9	+0.5
	11nm,0.5s,mb5.2						
ULN	Ulaanbaatar	57.13	341	P	P	20 05 31.6	+1.2
	1.9nm,0.8s,mb4.2						
SONM	Songino Array	57.32	340	P	P	20 05 32.8	+1.0
	0.8nm,0.7s,mb3.9,baz=161,slow=7.0,SNR=10						
MA2	Magadan	66.56	11	eP	P	20 06 32.2	-1.7
	26nm,1.0s,mb5.2						
MKAR	Makanchi Array	67.57	326	P	P	20 06 41.0	+0.6
	6.0nm,0.4s,mb5.0,baz=114,slow=8.2,SNR=104						
MKAR	Makanchi Array	67.57	326	P	P	20 06 41.0	+0.6
AAK	Ala-Archa	70.13	319	P	P	20 06 56.3	+0.1
	5.5nm,1.3s,mb4.3						
ZAL	Zalesovo	70.70	333	P	P	20 06 58.7	-1.0
	1.1nm,0.5s,mb4.0,baz=349,slow=8.5,SNR=7.2						
ZAL	Zalesovo	70.70	333	P	P	20 06 58.7	-1.0
MAW	Mawson	76.92	201	P	P	20 07 36.6	+0.5
	1.0nm,0.6s,mb3.9,baz=94,slow=4.6,SNR=4.4						
MAW	Mawson	76.92	201	P	P	20 07 36.4	+0.2
MAW				P		20 07 36.6	
BRVK	Borovoye	77.44	327	eP	P	20 07 38.0	-1.0
	1.5nm,0.8s,mb4.0						
ARU	Arti	85.00	328	eP	P	20 08 17.9	-1.3
	2.7nm,0.8s,mb4.4						
TORD	Torodi Ar. Bea	129.71	283	PKP	PKPdf	20 14 53.5	+0.7
	0.7nm,0.5s,baz=88,slow=1.9,SNR=19						
CPUP	Villa Florida	147.41	166	PKPbc	PKPbc	20 15 28.5	+1.0
	0.4nm,0.3s,baz=194,slow=1.4,SNR=3.7						
LPAZ	La Paz	151.17	139	PKPbc	PKPbc	20 15 40.5	+3.6
	0.6nm,0.4s,baz=60,slow=6.1,SNR=4.6						

CASC 22 19:56:00.0±2.1**, 1178N**×**8618W, h142**^{km}±8^{km}**, MD3.7, ML3.0, 10C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TICN	Ticuantepe	0.26	349	⇑eP	Pn	19 56 19.9	+0.4
MGAN	Managua	0.37	350	⇑eP	Pn	19 56 20.0	+0.2
TISN	Laguna Tiscapa	0.37	347	eP	Pn	19 56 20.1	+0.3
XAVN	Gruta Xavier	0.40	339	⇑eP	Pn	19 56 20.1	+0.2
APYN	Apoyeque	0.48	340	⇓eP	Pn	19 56 20.5	+0.2
COPN	Copaltepe	0.57	315	⇓eP	Pn	19 56 20.6	-0.2
CONN	Concepcion	0.58	111	⇑eP	Pn	19 56 21.3	+0.4
CONN				eS	Sn	19 56 38.1	+1.4
MOMJ	Momotombo	0.72	331	⇑eP	Pn	19 56 21.7	-0.1
MADN	Villa Maderas	0.73	120	⇑eP	Pn	19 56 22.1	+0.2
MADN				eS	Sn	19 56 39.5	+1.0
BOA	Boaco	0.83	33	eP	Pn	19 56 22.6	0.0
BOA				eS	Sn	19 56 39.8	0.0
BOA				i		19 56 41.0	
	comp=E,46nm,0.6s						
MIRN	Miramar	0.84	322	eP	Pn	19 56 22.7	+0.1
CNGN	Cerro Negro	0.88	325	⇑iP	Pn	19 56 22.9	-0.1
CNGN				eS	Sn	19 56 42.4	+2.0
CNGN				i		19 56 47.0	
	comp=E,606nm,0.1s						
LEON	Leon	0.94	312	⇑eP	Pn	19 56 23.2	-0.3
LEON				eS	Sn	19 56 42.3	+0.9
TELN	Telica	1.04	322	eP	Pn	19 56 24.6	+0.2
CRIN	San Cristobal	1.25	317	⇑eP	Pn	19 56 26.4	+0.1
CRIN				eS	Sn	19 56 48.6	+2.2
CRIN				i		19 56 52.0	
	comp=Z,297nm,0.4s						
RIN3	Volcan Rincon	1.26	141	eP	Pn	19 56 27.0	+0.6
RIN3				eS	Sn	19 56 47.6	+1.0
JCR	Jicaral	2.19	151	eP	Pn	19 56 37.7	+0.9
JCR				eS	Sn	19 57 05.1	0.0
CAO	Cobano	2.32	153	⇑eP	Pn	19 56 39.2	+0.7
EPA	Esparza	2.36	139	eS	Sn	19 57 10.3	+1.3
CGA2	Cerro Gallo 2	2.43	136	eP	Pn	19 56 41.6	+1.8
CGA2				eS	Sn	19 57 11.2	+0.7
LCR2	La Lucha 2	2.94	133	eS	Sn	19 57 26.3	+4.2

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*NIED **22** 20:06:00, 3390N×13420E, h5^{km}, Mw3.2 Best double couple: $M_0$6.61000×10^{13} NP1:ϕ_s306.00000°, δ77.00000°, λ15.00000°. NP2:ϕ_s212.00000°, δ75.00000°, λ166.00000°.*
*ISCJB **22** 20:06:38.5±0.7, 3394N±004×13424E±004, h7^{km}, Error ellipse: s-maj=5.7km s-min=5.0km az=115.5*
*JMA **22** 20:06:38.6, 3393N×13423E, h7^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s214.00000°, δ77.00000°, λ-176.00000°. NP2: ϕ_s123.00000°, δ86.00000°, λ-13.00000°. Principal axes: T Plg6.0000°, Azm169.0000°; N Plg77.0000°, Azm285.0000°; P Plg12.0000°, Azm78.0000°;*
JMA Felt III J1.
ISC 22 20:06:39.1±0.7**, 3393N**±004×**13423E**±004**, h7**^{km}**, n5, σ0^{s}48**/10**, 2C-2D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAI	Aioi	0.23	126	⇑P	Pg	20 06 43.3	-0.4
JAI				S	Sg	20 06 46.5	-0.2
JMN	Monobe	0.35	236	⇓P	Pg	20 06 45.8	-0.2
JMN				eS	Sg	20 06 51.1	+0.5
JJS	Sakaide	0.51	331	⇑P	Pg	20 06 48.6	-0.3
JJS				eS	Sg	20 06 55.3	-0.3
JAJ2	Tsuna	0.73	48	⇓P	Pg	20 06 52.6	-0.6
JAJ2				S	Sg	20 07 02.5	-0.2
MAT	Matsushiro	4.17	50	P	Pn	20 07 43.8	+0.7
MAT				S	Sn	20 08 33.1	+1.0

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*ISCJB **22** 20:22:19.1±1.7, 546S±008×1296E±02, h275^{km}±15^{km}, mb3.5/2, Error ellipse: s-maj=25.3km s-min=11.5km az=142.0*
*IDC **22** 20:22:20.3±11.0, 549S×12927E, h262^{km}±120^{km}, mb3.3/2, mb1 3.5/5, mb1mx3.2/15, mbtmp4.1/5, Error ellipse: s-maj=109.1km s-min=30.1km az=52.0*
*NEIC **22** 20:22:23.5±2.5, 565S×12896E, h305^{km}±26^{km}, mb4.3/2, Error ellipse: s-maj=40.8km s-min=19.3km az=59.0*
ISC 22 20:22:26.2±1.5**, 575S**±008×**1292E**±02**, h333**^{km}±15^{km}**, n11, σ1^{s}14**/17**, mb3.4**/2**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	7.63	155	⇑iP	Pn	20 24 14.3	-1.3
	4.8nm,0.2s						
KAKA				eS	S	20 25 36.2	-8.3
FITZ	Fitzroy Crossi	12.75	195	P	Pn	20 25 15.9	-1.2
	0.2nm,0.3s,baz=30,slow=14,SNR=12						
FITZ				S	S	20 27 38.7	+0.6
	0.1nm,0.3s,baz=72,slow=23,SNR=4.3						
WRAB	Tennant Creek	14.97	161	eP	P	20 25 41.7	+0.6
	11nm,0.4s						
WRA	Warramunga Arr	14.97	161	P	P	20 25 41.9	+0.6
	1.9nm,0.3s,baz=341,slow=11,SNR=172						
WRA				S	S	20 28 21.8	-1.2
	0.2nm,0.3s,baz=344,slow=21,SNR=7.1						
WB2	Warramunga Arr	14.97	161	eP	P	20 25 41.9	+0.6
WB2				eS	S	20 28 20.7	-2.4
AS31	Alice Springs	18.38	166	eP	P	20 26 18.8	+0.8
AS31				eS	S	20 29 30.4	+0.1
ASAR	Alice Springs	18.38	166	P	P	20 26 19.1	+1.0
	2.1nm,0.3s,baz=346,slow=12,SNR=161						
ASAR				S	S	20 29 31.1	+0.8
	0.1nm,0.3s,baz=347,slow=21,SNR=12						
STKA	Stephens Creek	28.47	157	P	P	20 27 53.2	+1.8
	1.3nm,0.7s,mb3.3,baz=353,slow=12,SNR=4.8						
STKA	Stephens Creek	28.47	157	P	P	20 27 53.2	+1.8
MKAR	Makanchi Array	66.74	327	P	P	20 32 42.6	+0.3
	0.4nm,0.4s,mb3.5,baz=118,slow=7.7,SNR=7.0						
GNI	Garni	89.43	310	P	P	20 34 43.7	-2.0

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*ISK **22** 20:30:23.7, 3866N×2679E, h3^{km}, MD3.0*
*CSEM **22** 20:30:24.3±0.2, 3857N×2677E, h8^{km}, MD3.0, Error ellipse: s-maj=5.8km s-min=4.2km az=65.0*
*ISCJB **22** 20:30:25.4±0.5, 3857N±002×2675E±004, h9^{km}±4^{km}, Error ellipse: s-maj=5.0km s-min=3.4km az=145.4*
*ATH **22** 20:30:25.2, 3854N×2679E, h41^{km}±7^{km}, MD3.2/3*
ISC 22 20:30:25.8±0.4**, 3856N**±002×**2676E**±004**, h12**^{km}±3^{km}**, n22, σ1^{s}11**/34**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.24	212	i P	Pg	20 30 30.4	-0.4
URLA				i S	Sg	20 30 34.7	+0.5
URLA	Izmir	0.24	212	i P	Sg	20 30 34.7	+0.5
BLCB	Balcova	0.28	128	PG	Pg	20 30 31.1	-0.5
IZM	Izmir	0.43	112	PG	Pg	20 30 33.4	-0.9
IZM				SG	Sg	20 30 40.7	+0.7
KDAG	Bornova	0.43	111	i P	Pg	20 30 33.8	-0.5
KDAG				i S	Sg	20 30 40.5	+0.4
AYVA	Ayvalik	0.75	356	i P	Pg	20 30 40.7	+0.4
AYVA				i S	Sg	20 30 50.8	+0.7
PRK	Paraskevi	0.78	331	eP	Pg	20 30 41.5	+0.6
PRK				eS	Sg	20 30 52.9	+1.7
SMG	Samos	0.85	176	eP	Pg	20 30 41.2	-1.1
SMG				eS	Sg	20 30 53.9	+0.4
AKS	Akhisar	0.88	69	PG	Pg	20 30 40.6	-2.3
AKHS	Akhisar	0.89	69	i P	Pg	20 30 42.4	-0.5
AKHS				i S	Sg	20 30 55.0	+0.6
AYDN	Tasoluk	1.26	135	i P	Pn	20 30 49.2	-0.1
AYDN				i S	Sb	20 31 04.8	-0.9
BOZC	Bozcaada	1.39	337	i P	Pn	20 30 51.2	+0.1
BOZC				i S	Sn	20 31 08.1	-1.3
CANB	Canakkale	1.47	9	ePN	Pn	20 30 50.4	-1.8
BTOK	Tokmak	1.56	39	i P	Pn	20 30 54.1	+0.7
BTOK				i S	Sn	20 31 14.9	+1.5
BODT	Bodrum	1.56	164	ePN	Pn	20 30 54.7	+1.3
BDRM	Kayabasi	1.59	160	i P	Pn	20 30 52.4	-1.4
BDRM				i S	Sn	20 31 16.1	+1.8
GADA	Gvkgeada	1.76	338	ePN	Pn	20 30 55.1	-1.0
APE	Apeiranthos	1.78	213	eP	Pn	20 30 55.2	-1.2
DST	Dursunbey	1.79	54	ePN	Pn	20 30 55.1	-1.5
YER	Yerkesik	1.87	139	ePN	Pn	20 30 58.3	+0.7
DAT	Datca	1.94	160	ePN	Pn	20 31 00.0	+1.3
DNZL	Cakiroluk	2.00	115	i P	Pn	20 31 02.5	+3.0
DNZL				i S	Sn	20 31 30.9	+6.4

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*CSEM **22** 20:59:04.1, 1840S×17725W, h33^{km}, mb5.6*
*MOS **22** 20:59:47.5±1.0, 1762S×17884W, h520^{km}, mb4.5/13, Error ellipse: s-maj=18.7km s-min=13.4km az=157.3*
*ISCJB **22** 20:59:47.7±1.2, 1762S±008×17884W±008, h523^{km}±15^{km}, mb4.0/29, Error ellipse: s-maj=14.6km s-min=9.2km az=106.1*
*BJI **22** 20:59:47.6, 1760S×17880W, h522^{km}, mB4.3, mb4.2*
*NEIC **22** 20:59:48.6±0.9, 1758S×17881W, h523^{km}±11^{km}, mb4.3/20, Error ellipse: s-maj=12.6km s-min=7.2km az=144.0*
*IDC **22** 20:59:55.1±3.0, 1772S×17895W, h595^{km}±35^{km}, mb3.5/13, mb1 3.7/13, mb1mx3.6/16, mbtmp4.3/13, Error ellipse: s-maj=18.1km s-min=13.1km az=141.0*
ISC 22 20:59:48.6±1.1**, 1769S**±008×**17874W**±008**, h523**^{km}±13^{km}**, n72, σ1^{s}01**/62**, mb4.0**/29**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.69	62	P	P	21 01 42.1	-0.2
	13nm,0.3s,baz=77,slow=2.3,SNR=15						
DZM	Mont Dzumac	14.60	250	eP	P	21 02 54.9	+0.8
DZM	Mont Dzumac	14.60	250	P	P	21 02 54.0	-0.2
	0.6nm,0.3s,baz=79,slow=19,SNR=7.9						
URZ	Urewera	20.81	189	P	P	21 03 50.3	-3.0
	6.7nm,0.8s,baz=13,slow=8.1,SNR=3.6						
RPZ	Rata Peaks	27.34	196	P	P	21 04 48.0	-3.3
	6.0nm,0.9s,mb4.2,baz=97,slow=16,SNR=4.8						
ARMA	Armidale	29.78	239	eP	P	21 05 13.8	+1.2
CTA	Charters Tower	33.17	260	eP	P	21 05 42.1	+0.5
CTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CTA	Charters Tower	33.17	260	eP	P	21 05 42.1	+0.5
	comp=Z,5.7nm,0.8s,mb4.2						
CTAO	Charters Tower	33.17	260	eP	P	21 05 42.2	+0.6
CTAO				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.5						
CTAO	Charters Tower	33.17	260	eP	P	21 05 42.2	+0.6
	comp=Z,11nm,0.7s,mb4.5						
CNB	Canberra Magne	33.31	232	eP	P	21 05 44.1	+1.3
	comp=Z,28nm,0.6s						
PMG	Port Moresby	34.11	279	eP	P	21 05 47.4	-2.1
PMG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PMG	Port Moresby	34.11	279	eP	P	21 05 47.4	-2.1
	comp=Z,7.7nm,0.7s,mb4.3						
TOO	Toolangi	37.06	230	eP	P	21 06 15.0	+1.0
TOO				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
TOO	Toolangi	37.06	230	eP	P	21 06 15.0	+1.0
	comp=Z,20nm,0.8s,mb4.7						
STKA	Stephens Creek	38.46	241	P	P	21 06 26.5	+1.1
	comp=Z,15nm,0.8s,mb4.6,baz=88,slow=8.6,SNR=36						
STKA	Stephens Creek	38.46	241	eP	P	21 06 26.5	+1.1
	comp=Z,8.2nm,0.6s,mb4.4						
WB2	Warramunga Arr	44.35	259	eP	P	21 07 11.4	-0.7
WRAB	Tennant Creek	44.35	259	eP	P	21 07 11.4	-0.7
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
WRAB	Tennant Creek	44.35	259	eP	P	21 07 11.4	-0.7
	comp=Z,9.5nm,0.7s,mb4.4						
WRA	Warramunga Arr	44.36	259	P	P	21 07 11.6	-0.5
	comp=Z,2.7nm,0.6s,mb4.0,baz=96,slow=7.5,SNR=69						
AS31	Alice Springs	44.54	254	eP	P	21 07 14.0	+0.4
ASAR	Alice Springs	44.55	254	P	P	21 07 14.0	+0.4
	comp=Z,30nm,0.5s,baz=89,slow=8.1,SNR=609						
ASAR				S	S	21 13 06.3	-4.6
	comp=Z,1.5nm,0.8s,baz=85,slow=16,SNR=6.0						
FORT	Forrest	49.81	244	eP	P	21 07 53.0	-0.3
	comp=Z,28nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	52.75	260	eP	P	21 08 14.8	+0.2
	comp=Z,2.7nm,0.7s,mb3.7						
MBWA	Marble Bar	57.82	256	eP	P	21 08 49.7	-0.1
	comp=Z,8.3nm,0.8s,mb4.0						
KLBR	Kellerberrin	58.64	243	eP	P	21 08 55.2	-0.2
	comp=Z,93nm,1.8s,mb4.7						
SBA	Scott Base	60.62	183	eP	P	21 09 10.1	+1.5
SBA				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.1						
SBA	Scott Base	60.62	183	eP	P	21 09 10.1	+1.5
	comp=Z,11nm,1.1s,mb4.1						
VNDA	Vanda	60.63	185	P	P	21 09 08.9	+0.2
	comp=Z,1.2nm,0.7s,mb3.4,baz=352,slow=7.5,SNR=10						
CASY	Casey	66.20	205	eP	P	21 09 44.1	-0.3
	comp=Z,4.7nm,0.6s,mb4.2						
MJAR	Matsushiro Arr	67.54	323	P	P	21 09 52.7	0.0
	comp=Z,3.5nm,0.6s,mb4.0,baz=155,slow=6.0,SNR=11						
MAT	Matsushiro	67.55	323	P	P	21 09 52.8	+0.1
MAT	Matsushiro	67.55	323	eP	P	21 09 53.0	+0.3
MAT				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
MAT	Matsushiro	67.55	323	eP	P	21 09 53.0	+0.3
	comp=Z,7.5nm,0.7s,mb4.3						
NIKO	Nikolski	70.89	6	eP	P	21 10 10.1	-2.7
QSPA	South Pole Qui	72.36	180	eP	P	21 10 21.9	+0.6
	comp=Z,15nm,0.9s,mb4.4						
MDJ	Mudanjiang	77.83	325	P	P	21 10 53.1	+1.2
MDJ				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,30nm,4.7s						
ISA	Isabella	77.89	46	eP	P	21 10 51.7	-0.5
KDAK	Kodiak Island	78.27	14	P	P	21 10 53.9	-0.3
	comp=Z,4.2nm,0.6s,mb4.0,baz=218,slow=9.3,SNR=4.2						
YBH	Yreka Blue Hor	78.56	39	P	P	21 10 56.9	+1.1
	comp=Z,1.3nm,0.4s,mb3.6,baz=217,slow=6.6,SNR=4.7						
NVAR	Mina Array Bea	79.49	44	P	P	21 11 02.0	+1.3
	comp=Z,1.7nm,0.8s,mb3.4,baz=231,slow=13,SNR=8.2						
WVOR	Wild Horse Val	81.45	40	eP	P	21 11 11.8	+0.9
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
WVOR	Wild Horse Val	81.45	40	eP	P	21 11 11.8	+0.8
	comp=Z,7.1nm,1.0s,mb4.0						
MAW	Mawson	83.96	200	P	P	21 11 23.3	-0.3
	comp=Z,2.3nm,0.6s,mb3.9,baz=130,slow=9.1,SNR=6.5						
MAW	Mawson	83.96	200	eP	P	21 11 23.4	-0.2
	comp=Z,1.9nm,0.6s,mb3.8						
MCK	McKinley	84.40	13	P	P	21 11 24.5	-1.2
MCK				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.0						
MCK	McKinley	84.40	13	P	P	21 11 24.5	-1.3
	comp=Z,9.0nm,1.7s,mb4.0						
BILL	Bilibino	86.19	354	e	PP	21 15 06.0	+1.6
MCMT	McKenzie Canyo	86.28	41	eP	P	21 11 35.9	+1.0
CHMT	Chamberlain Mo	87.06	39	eP	P	21 11 38.6	+0.1
PDAR	Pinedale Array	87.41	44	P	P	21 11 41.2	+1.0
	comp=Z,0.6nm,0.6s,mb3.4,baz=205,slow=4.0,SNR=3.5						
CM31	Chiang Mai Arr	88.51	290	eP	P	21 11 50.0	+4.7
	comp=Z,2.6nm,0.8s,mb4.1						
SNAA	Sanae	90.82	179	P	P	21 11 55.0	-1.0
	comp=Z,0.5nm,0.6s,mb3.6,baz=197,slow=6.0,SNR=12						
SNAA	Sanae	90.82	179	eP	P	21 11 54.3	-1.7
SNAA	Sanae	90.82	179	eP	P	21 11 54.3	-1.7
SNAA				e		21 11 56.9	
VNA3	Neumayer Olymp	90.97	176	eP	P	21 11 56.1	-0.6
VNA3	Neumayer Olymp	90.97	176	eP	P	21 11 56.1	-0.6
VNA3				e		21 11 58.8	
VNA1	Neumayer--Stat	91.64	177	eP	P	21 11 59.6	-0.2
VNA1	Neumayer--Stat	91.64	177	eP	P	21 11 59.6	-0.2
VNA1				e		21 12 02.3	
PLCA	Paso Flores	91.71	134	P	P	21 11 59.4	-0.7
	comp=Z,0.8nm,0.8s,mb3.8,baz=158,slow=19,SNR=2.3						
SONM	Songino Array	93.18	319	P	P	21 12 05.1	-1.7
	comp=Z,0.1nm,0.5s,mb3.1,baz=112,slow=1.6,SNR=2.4						
BOSA	Boshof	128.45	207	PKP	PKPdf	21 17 54.2	-1.6
	comp=Z,1.8nm,0.7s,baz=117,slow=4.5,SNR=2.1						
FINES	FINESS Array B	132.89	344	PKP	PKPdf	21 18 03.2	-1.0
	comp=Z,1.0nm,0.8s,baz=134,slow=5.5,SNR=4.0						
LVV	L'vov	143.08	335	ePKHKP		21 18 10.9	
BR131	Keskin Array S	144.41	315	ePKPdf	PKPdf	21 18 24.7	-0.4
BRTR	Keskin Array B	144.41	315	PKP	PKPdf	21 18 24.9	-0.3
	comp=Z,1.2nm,0.8s,baz=121,slow=3.9,SNR=7.7						
CLL	Collm	145.18	347	ePKP1	PKPbc	21 18 27.0	-0.4
BRG	Berggiesshubel	145.38	346	e(P)	PKPbc	21 18 28.1	+0.1
	comp=Z,2.5nm,1.1s						
BRG	Berggiesshubel	145.38	346	ePKP2	PKPbc	21 18 28.0	0.0
BRG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KHC	Kasperske Hory	147.09	345	ePKP	PKPdf	21 18 31.5	+1.8
GERES	GERESS Array B	147.32	345	PKPbc	PKPbc	21 18 33.1	-0.2
	comp=Z,1.2nm,0.6s,baz=24,slow=3.2,SNR=16						

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*MOS **22** 21:00:02.5±1.5, 1766S×17888W, h518^{km}, mb4.8/8, Error ellipse: s-maj=12.1km s-min=9.9km az=155.3*
*NEIC **22** 21:00:02.8±0.7, 1769S×17878W, h524^{km}±8^{km}, mb4.8/23, Error ellipse: s-maj=8.0km s-min=5.4km az=143.0*
*ISCJB **22** 21:00:02.0±1.0, 1770S±006×17884W±006, h526^{km}±12^{km}, mb4.7/44, Error ellipse: s-maj=9.8km s-min=7.1km az=91.8*
*BJI **22** 21:00:02.7, 1770S×17880W, h524^{km}, mb4.5*
*SZGRF **22** 21:00:03.9, 1859S×17840W, h557^{km}, Fiji Islands region*
*IDC **22** 21:00:04.7±1.2, 1778S×17888W, h544^{km}±13^{km}, mb4.0/21, mb1 4.0/23, mb1mx4.0/26, mbtmp4.8/23, Error ellipse: s-maj=10.6km s-min=8.3km az=130.0*
ISC 22 21:00:03.3±1.0**, 1773S**±006×**17876W**±006**, h529**^{km}±11^{km}**, n241, σ0^{s}87**/93**, mb4.7**/44**, 19C-29D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.72	62	P	P	21 01 56.5	-1.0
	14nm,0.3s,baz=31,slow=3.9,SNR=22						
AFI	Afiamalu	7.72	62	ePn	P	21 01 56.1	-1.4
AFI				P		21 01 56.5	
DZM	Mont Dzumac	14.57	250	P	P	21 03 08.8	+0.3
	2.6nm,0.3s,baz=71,slow=19,SNR=20						
RAR	Rarotonga	18.23	104	P	P	21 03 44.8	+0.7
	1.7nm,0.3s,baz=89,slow=7.2,SNR=3.6						

URZ	**Urewera**	**20.77**	**189**	P		**P**	**21 04 06.1**	**-1.2**
	23nm,0.6s,baz=4.5,slow=1.9,SNR=12								
URZ				S		**S**	**21 07 23.2**	**-1.7**
	14nm,0.8s,baz=170,slow=18,SNR=5.7								
SNZO	**South Karori**	**24.17**	**192**	*e*P		**P**	**21 04 36.5**	**-1.1**
	60nm,0.9s,mb5.2								
RPZ	**Rata Peaks**	**27.30**	**196**	P		**P**	**21 05 04.1**	**-1.2**
	21nm,0.7s,mb4.9,baz=315,slow=2.2,SNR=16								
ARMA	**Armidale**	**29.75**	**239**	ǁ *i*P		**P**	**21 05 28.0**	**+1.4**
CTA	**Charters Tower**	**33.15**	**260**	PcP		PcP	21 08 23.3	+0.3
	4.9nm,0.5s,baz=80,slow=4.7,SNR=4.6								
CTA	**Charters Tower**	**33.15**	**260**	ǁ *i*P		**P**	**21 05 55.9**	**+0.2**
CTA				*e*			21 08 23.2		
CTA				pmax	pmax				
	comp=Z,46nm,0.8s								
CTA	**Charters Tower**	**33.15**	**260**	ǁ *i*P		**P**	**21 05 55.9**	**+0.2**
	comp=Z,46nm,0.8s,mb5.1								
CTA				*e*PcP	PcP		21 08 23.2	+0.2	
CTAO	**Charters Tower**	**33.15**	**260**	*e*P		**P**	**21 05 55.6**	**-0.1**
CTAO				*e*			21 08 23.2		
CTAO				pmax	pmax				
	comp=Z,69nm,0.8s,mb5.2								
CTAO	**Charters Tower**	**33.15**	**260**	*e*P		**P**	**21 05 55.6**	**0.0**
	comp=Z,69nm,0.8s,mb5.2								
CTAO				*e*PcP	PcP		21 08 23.2	+0.2	
CNB	**Canberra Magne**	**33.27**	**232**	*e*P		**P**	**21 05 58.0**	**+1.3**
	comp=Z,128nm,0.5s,mb5.7								
PMG	**Port Moresby**	**34.10**	**280**	P		**P**	**21 06 04.9**	**+1.3**
	comp=Z,38nm,1.0s,mb4.9,baz=97,slow=9.5,SNR=5.2								
TOO	**Toolangi**	**37.03**	**230**	ǁ *i*P		**P**	**21 06 29.1**	**+1.1**
TOO				pmax	pmax				
	comp=Z,128nm,0.8s,mb5.5								
TOO	**Toolangi**	**37.03**	**230**	ǁ *i*P		**P**	**21 06 29.1**	**+1.1**
	comp=Z,128nm,0.8s,mb5.5								
STKA	**Stephens Creek**	**38.43**	**241**	P		**P**	**21 06 40.5**	**+1.1**
	comp=Z,105nm,0.8s,mb5.4,baz=90,slow=9.2,SNR=91								
STKA	**Stephens Creek**	**38.43**	**241**	*e*P		**P**	**21 06 40.0**	**+0.6**
WAKE	**Wake Island**	**39.47**	**338**	*e*P		**P**	**21 06 47.5**	**-0.3**
	comp=Z,171nm,1.0s,mb5.5								
ADE	**Adelaide**	**41.46**	**237**	*e*P		**P**	**21 07 04.6**	**+0.9**
WB2	**Warramunga Arr**	**44.33**	**259**	*e*P		**P**	**21 07 25.3**	**-0.8**
WB2				*e*PcP	PcP		21 08 59.2	+0.5	
WRAB	**Tennant Creek**	**44.33**	**259**	*d i*P		**P**	**21 07 25.5**	**-0.6**
WRAB	**Tennant Creek**	**44.33**	**259**	*e*P		**P**	**21 07 25.0**	**-1.1**
	comp=Z,59nm,0.8s,mb5.2								
WRA	**Warramunga Arr**	**44.34**	**259**	P		**P**	**21 07 25.9**	**-0.3**
	comp=Z,31nm,0.8s,mb4.9,baz=96,slow=7.5,SNR=38								
WRA				PcP	PcP		21 08 59.2	+0.5	
	comp=Z,8.7nm,0.7s,baz=92,slow=3.5,SNR=8.0								
WRA				S		**S**	**21 13 16.3**	**-5.4**
	comp=Z,0.9nm,0.7s,baz=94,slow=13,SNR=5.9								
AS31	**Alice Springs**	**44.52**	**254**	*e*P		**P**	**21 07 27.9**	**+0.3**
AS31				*e*PcP	PcP		21 08 59.6	+0.2	
ASAR	**Alice Springs**	**44.52**	**254**	P		**P**	**21 07 27.9**	**+0.3**
	comp=Z,319nm,0.7s,mb6.0,baz=88,slow=8.1,SNR=276								
ASAR				PcP	PcP		21 08 59.6	+0.2	
	comp=Z,9.4nm,0.5s,baz=103,slow=3.8,SNR=5.5								
ASAR				S		**S**	**21 13 22.0**	**-2.3**
	comp=Z,7.3nm,0.9s,baz=88,slow=16,SNR=21								
GUMO	**Guam**	**47.50**	**309**	P		**P**	**21 07 51.1**	**+0.8**
	comp=Z,56nm,0.6s,mb5.3,baz=185,slow=11,SNR=6.1								
FORT	**Forrest**	**49.78**	**244**	*e*P		**P**	**21 08 06.9**	**-0.3**
	comp=Z,199nm,0.5s,mb5.8								
FORT				*e*PcP	PcP		21 09 18.5	+0.1	
FITZ	**Fitzroy Crossi**	**52.73**	**260**	ǁ *i*P		**P**	**21 08 29.0**	**+0.5**
	comp=Z,18nm,0.4s,mb4.7								
MBWA	**Marble Bar**	**57.80**	**256**	*e*P		**P**	**21 09 03.5**	**-0.3**
	comp=Z,34nm,0.6s,mb4.8								
KLBR	**Kellerberrin**	**58.61**	**243**	ǁ *i*P		**P**	**21 09 08.9**	**-0.5**
	comp=Z,92nm,0.7s,mb5.1								
NWAO	**Narrogin (SRO)**	**59.00**	**242**	*e*P		**P**	**21 09 11.4**	**-0.6**
NWAO				pmax	pmax				
	comp=Z,27nm,0.9s								
NWAO	**Narrogin (SRO)**	**59.00**	**242**	*e*P		**P**	**21 09 11.4**	**-0.6**
	comp=Z,27nm,0.9s,mb4.5								
MUN	**Mundaring**	**59.91**	**243**	*e*P		**P**	**21 09 18.4**	**+0.4**
SBA	**Scott Base**	**60.58**	**183**	*e*P		**P**	**21 09 23.9**	**+1.4**
SBA				pmax	pmax				
	comp=Z,28nm,0.9s,mb4.6								
SBA	**Scott Base**	**60.58**	**183**	*e*P		**P**	**21 09 23.9**	**+1.4**
	comp=Z,28nm,0.9s,mb4.6								
VNDA	**Vanda**	**60.60**	**185**	P		**P**	**21 09 23.0**	**+0.4**
	comp=Z,7.8nm,0.8s,mb4.1,baz=356,slow=7.0,SNR=33								
CASY	**Casey**	**66.16**	**205**	*e*P		**P**	**21 09 57.8**	**-0.4**
	comp=Z,50nm,1.0s,mb5.0								
MJAR	**Matsushiro Arr**	**67.56**	**324**	P		**P**	**21 10 06.4**	**-0.5**
	comp=Z,7.1nm,0.6s,mb4.4,baz=157,slow=5.7,SNR=18								
MAJO	**Matsushiro**	**67.56**	**324**	*e*P		**P**	**21 10 06.2**	**-0.7**
MAJO				pmax	pmax				
	comp=Z,11nm,0.6s,mb4.6								
MAJO	**Matsushiro**	**67.56**	**324**	*e*P		**P**	**21 10 06.2**	**-0.7**
	comp=Z,11nm,0.6s,mb4.6								
NIKO	**Nikolski**	**70.92**	**6**	*e*P		**P**	**21 10 24.8**	**-2.2**
TATO	**Taipei**	**72.02**	**304**	*e*P		**P**	**21 10 33.2**	**-0.2**
	comp=Z,63nm,1.2s,mb4.9								
YSS	**Yuzh-Sakhalins**	**73.11**	**334**	*i* P		**P**	**21 10 40.1**	**+0.4**
YSS				pmax	pmax				
	comp=Z,4.0nm,0.3s,mb4.3								
YSS	**Yuzh-Sakhalins**	**73.11**	**334**	*i* P		**P**	**21 10 40.1**	**+0.4**
YSS				pmax	pmax				
	comp=Z,4.0nm,0.3s,mb4.3								
PET	**Petropavlovsk**	**73.12**	**346**	ǁ *e*P		**P**	**21 10 38.7**	**-1.1**
PET				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.2								
PET	**Petropavlovsk**	**73.12**	**346**	ǁ *e*P		**P**	**21 10 38.7**	**-1.1**
PET				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.2								
MIR	**Mirnyy**	**73.19**	**205**	*d i*P		**P**	**21 10 42.0**	**+1.8**
MIR				pmax	pmax				
	comp=Z,32nm,1.0s,mb4.7								
MIR	**Mirnyy**	**73.19**	**205**	*d i*P		**P**	**21 10 42.0**	**+1.8**
MIR				pmax	pmax				
	comp=Z,32nm,1.0s,mb4.7								
SSE	**Sheshan**	**75.37**	**310**	*e*P		**P**	**21 10 51.6**	**-0.9**
SSE				AMB	AMB				
	comp=Z,14nm,0.6s,mb4.6								
HABR	**Khabarovsk**	**77.69**	**331**	*e*P		**P**	**21 11 04.5**	**-0.7**
HABR				*e*S		S	21 20 14.9	+0.9	
ISA	**Isabella**	**77.93**	**46**	*e*P		**P**	**21 11 06.5**	**0.0**
CMB	**Columbia Colle**	**77.94**	**43**	*e*P		**P**	**21 11 07.2**	**+0.7**
	comp=Z,2.7nm,0.7s								
KDAK	**Kodiak Island**	**78.31**	**14**	P		**P**	**21 11 08.2**	**-0.4**
	comp=Z,4.5nm,0.5s,mb4.1,baz=294,slow=9.1,SNR=6.3								
YBH	**Yreka Blue Hor**	**78.59**	**39**	P		**P**	**21 11 11.4**	**+1.3**
	comp=Z,3.1nm,0.6s,mb3.8,baz=169,slow=1.0,SNR=7.7								
NVAR	**Mina Array Bea**	**79.52**	**44**	P		**P**	**21 11 16.1**	**+1.2**
	comp=Z,3.7nm,0.7s,mb3.9,baz=218,slow=7.8,SNR=18								
WVOR	**Wild Horse Val**	**81.48**	**40**	*e*P		**P**	**21 11 25.5**	**+0.3**
WVOR				pmax	pmax				
	comp=Z,7.0nm,0.8s,mb4.1								
WVOR	**Wild Horse Val**	**81.48**	**40**	*e*P		**P**	**21 11 25.5**	**+0.4**
	comp=Z,7.2nm,0.8s,mb4.2								
WVOR				*e*pP		pP	21 13 27.1	+7.9	
BBB	**Bella Bella**	**82.32**	**29**	P		**P**	**21 11 29.2**	**-0.2**
	comp=Z,2.2nm,0.6s,mb3.8,baz=140,slow=2.5,SNR=4.7								
MAW	**Mawson**	**83.92**	**200**	P		**P**	**21 11 37.4**	**0.0**
	comp=Z,18nm,0.7s,mb4.7,baz=126,slow=6.6,SNR=39								
MAW	**Mawson**	**83.92**	**200**	ǁ *i*P		**P**	**21 11 37.3**	**-0.1**
MAW				pmax	pmax				
	comp=Z,11nm,0.6s								
MAW	**Mawson**	**83.92**	**200**	ǁ *i*P		**P**	**21 11 37.3**	**-0.1**
	comp=Z,11nm,0.6s,mb4.6								
PMSA	**Palmer Station**	**84.11**	**157**	P		**P**	**21 11 38.5**	**+0.2**
	comp=Z,4.1nm,0.7s,mb4.1,baz=286,slow=7.4,SNR=3.2								
NEW	**Newport**	**85.56**	**36**	P		**P**	**21 11 45.2**	**-0.3**
	comp=Z,2.2nm,0.5s,mb4.1,baz=93,slow=19,SNR=2.2								
NEW	**Newport**	**85.56**	**36**	P		**P**	**21 11 45.2**	**-0.3**
DLBC	**Dease Lake**	**85.80**	**23**	P		**P**	**21 11 46.2**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=223,slow=3.1,SNR=4.4								
DLBC	**Dease Lake**	**85.80**	**23**	P		**P**	**21 11 46.2**	**-0.3**
PV01	**Paradox Valley**	**86.06**	**48**	P		**P**	**21 11 48.7**	**+0.9**
BILL	**Bilibino**	**86.22**	**354**	ǁ *e*P		**P**	**21 11 42.7**	**-5.9**
BILL				pmax	pmax				
	comp=Z,4.0nm,0.5s,mb4.3								
ANMO	**Albuquerque**	**86.24**	**52**	P		**P**	**21 11 49.5**	**+0.8**
	comp=Z,3.3nm,1.0s,mb3.9,baz=257,slow=2.1,SNR=3.9								
ANMO	**Albuquerque**	**86.24**	**52**	*i* P		**P**	**21 11 49.2**	**+0.5**
ANMO	**Albuquerque**	**86.24**	**52**	*e*P		**P**	**21 11 49.2**	**+0.6**
	comp=Z,8.5nm,1.3s,mb4.2								
MCMT	**McKenzie Canyo**	**86.32**	**41**	*e*P		**P**	**21 11 49.8**	**+0.7**
MCMT				*e*pP		pP	21 13 48.3	+3.5	
CHMT	**Chamberlain Mo**	**87.10**	**39**	*e*P		**P**	**21 11 52.3**	**-0.4**
PDAR	**Pinedale Array**	**87.45**	**44**	P		**P**	**21 11 55.0**	**+0.6**
	comp=Z,3.6nm,0.5s,mb4.3,baz=216,slow=2.9,SNR=21								
WALA	**Waterton Lakes**	**87.79**	**37**	*e*P		**P**	**21 11 55.8**	**-0.1**
	comp=Z,4.6nm,0.8s,mb4.3								
CM31	**Chiang Mai Arr**	**88.51**	**290**	*e*P		**P**	**21 12 01.0**	**+1.7**
	comp=Z,8.6nm,1.0s,mb4.5								
SYO	**Syowa Base**	**89.26**	**193**	ǁ *e*P		**P**	**21 12 01.0**	**-1.8**
SNAA	**Sanae**	**90.79**	**179**	P		**P**	**21 12 08.9**	**-1.0**
	comp=Z,3.8nm,0.6s,mb4.5,baz=209,slow=5.7,SNR=64								
SNAA	**Sanae**	**90.79**	**179**	*e*P		**P**	**21 12 08.5**	**-1.4**
SNAA	**Sanae**	**90.79**	**179**	*e*P		**P**	**21 12 08.5**	**-1.4**
VNA3	**Neumayer Olymp**	**90.94**	**176**	*e*P		**P**	**21 12 09.8**	**-0.8**
VNA3	**Neumayer Olymp**	**90.94**	**176**	*e*P		**P**	**21 12 09.8**	**-0.8**
VNA3				*e*			21 12 10.4		
VNA3				*e*			21 14 19.3		
VNA3				*e*			21 14 23.6		
VNA3				*e*			21 14 27.4		
VNA1	**Neumayer--Stat**	**91.61**	**177**	*e*P		**P**	**21 12 13.7**	**+0.1**
VNA1	**Neumayer--Stat**	**91.61**	**177**	*e*P		**P**	**21 12 13.7**	**+0.1**
VNA1				*e*			21 12 14.1		
VNA1				*e*			21 14 22.2		
VNA1				*e*			21 14 29.3		
RSSD	**Black Hills**	**91.67**	**44**	*e*P		**P**	**21 12 13.3**	**-0.6**
RSSD				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.5								
RSSD	**Black Hills**	**91.67**	**44**	*e*P		**P**	**21 12 13.3**	**-0.6**
	comp=Z,4.0nm,0.9s,mb4.5								
PLCA	**Paso Flores**	**91.70**	**134**	P		**P**	**21 12 15.2**	**+1.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=301,slow=6.8,SNR=3.4								
ULN	**Ulaanbaatar**	**92.80**	**320**	*e*P		**P**	**21 12 19.0**	**-0.1**
	comp=Z,0.8nm,0.6s,mb3.9								
SONM	**Songino Array**	**93.20**	**319**	P		**P**	**21 12 20.3**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=129,slow=4.2,SNR=6.5								
ZAL	**Zalesovo**	**107.90**	**322**	PKiKP		PKiKP	21 17 28.8	-1.8	
	comp=Z,0.9nm,0.6s,baz=121,slow=1.2,SNR=5.0								
MKAR	**Makanchi Array**	**108.77**	**314**	PKiKP		PKiKP	21 17 30.8	-1.3	
	comp=Z,1.7nm,0.5s,baz=292,slow=0.3,SNR=20								
AAK	**Ala-Archa**	**114.01**	**309**	*i* PKiKP		PKiKP	21 17 42.3	+0.2	
AAK	**Ala-Archa**	**114.01**	**309**	*i* PKiKP		PKiKP	21 17 42.3	+0.2	
ARU	**Arti**	**122.52**	**326**	*i* PKiKP		PKPdf	21 17 57.1	-1.3	
ARU				*e*			21 19 39.4		
ARU	**Arti**	**122.52**	**326**	*i* PKiKP		PKPdf	21 17 57.1	-1.3	
ARCES	**ARCESS Array B**	**126.08**	**350**	PKP		PKPdf	21 18 04.0	-1.3	
	comp=Z,2.6nm,0.8s,baz=76,slow=1.1,SNR=11								
SUR	**Sutherland**	**126.77**	**201**	PKP		PKPdf	21 18 07.3	+0.7	
	comp=Z,9.1nm,0.9s,baz=226,slow=2.5,SNR=6.2								
BOSA	**Boshof**	**128.41**	**207**	PKP		PKPdf	21 18 10.1	+0.4	
	comp=Z,6.1nm,0.9s,baz=151,slow=9.3,SNR=5.9								
BOSA	**Boshof**	**128.41**	**207**	PKP		PKPdf	21 18 10.1	+0.4	
JOF	**Joensuu**	**130.28**	**343**	*ep*		PKPdf	21 18 11.6	-1.7	
	comp=Z,4.9nm,0.5s								
LBTB	**Lobatse**	**131.34**	**210**	PKP		PKPdf	21 18 16.8	+1.5	
	comp=Z,1.9nm,0.7s,baz=138,slow=6.0,SNR=3.8								
KAF	**Kangasniemi**	**132.30**	**344**	*ep*		PKPdf	21 18 11.2	-5.9	
	comp=Z,2.4nm,0.6s								
FINES	**FINESS Array B**	**132.92**	**344**	PKP		PKPdf	21 18 16.8	-1.5	
	comp=Z,1.1nm,0.6s,baz=56,slow=3.4,SNR=6.0								
FINES				SKPbc		SKPbc	21 20 56.1	-0.2	
	comp=Z,5.4nm,0.8s,baz=28,slow=5.2,SNR=16								
OBN	**Obninsk**	**133.99**	**333**	ǁ *i*PKIKP		PKPdf	21 18 19.3	-0.9	
OBN				*e*			21 24 20.6		
OBN				pmax	pmax				
	comp=Z,4.0nm,0.6s								
OBN	**Obninsk**	**133.99**	**333**	ǁ *i*PKIKP		PKPdf	21 18 19.3	-0.9	
OBN				*i*			21 20 59.5		
OBN				pmax	pmax				
	comp=Z,4.0nm,0.6s								
NB2	**NORSAR Subarra**	**136.16**	**353**	SKPa		SKPbc	21 21 06.0	-0.6	
	comp=Z,10nm,1.2s,baz=14,slow=4.4								
NB2	**NORSAR Subarra**	**136.16**	**353**	SKPa		SKPbc	21 21 06.0	-0.6	
	baz=14,slow=4.4								
NOA	**NORSAR Array B**	**136.16**	**353**	PKP		PKPdf	21 18 23.0	-1.3	
	comp=Z,0.8nm,0.6s,baz=16,slow=3.9,SNR=4.3								
NOA	**NORSAR Array B**	**136.16**	**353**	PKP		PKPdf	21 18 23.0	-1.3	
KIV	**Kislovodsk**	**136.49**	**316**	ǁ *i*PKIKP		PKPdf	21 18 26.2	+1.3	
KIV				*e*SS		SS	21 38 26.8	-7.3	
KIV				pmax	pmax				
	comp=Z,5.0nm,1.4s								
KIV	**Kislovodsk**	**136.49**	**316**	ǁ *i*PKIKP		PKPdf	21 18 26.2	+1.3	
KIV				*e*			21 21 14.0		
KIV				pmax	pmax				
	comp=Z,5.0nm,1.4s								
AKASG	**Malin Array Be**	**140.25**	**332**	PKiKP			21 18 24.1		
	comp=Z,1.0nm,0.4s,baz=44,slow=4.0,SNR=9.9								
AKASG				PKP		PKPdf	21 18 32.4	+0.7	
	comp=Z,1.6nm,0.4s,baz=44,slow=3.1,SNR=9.7								
AKASG				SKPbc		SKPbc	21 21 16.7	-1.3	
	comp=Z,0.2nm,0.3s,baz=35,slow=2.9,SNR=8.8								
AKASG				SKPab			21 21 29.5		
	comp=Z,0.7nm,0.6s,baz=36,slow=3.9,SNR=5.3								
AKASG	**Malin Array Be**	**140.25**	**332**	PKiKP		PKPdf	21 18 32.4	+0.6	
AKASG							21 21 29.5		
AKASG	**Malin Array Be**	**140.25**	**332**	PKP		PKPdf	21 18 32.4	+0.7	
AKASG				SKPbc		SKPbc	21 21 16.7	-1.3	
AKASG				SKPab			21 21 29.5		
	comp=Z,0.7nm,0.6s,baz=35,slow=3.9,SNR=4.1								
MALT	**Malatya**	**141.64**	**310**	ǁ *i*P		PKPdf	21 18 33.4	-0.9	
MALT	**Malatya**	**141.64**	**310**	ǁ P		PKPdf	21 18 33.4	-0.8	
BOYT	**Boyabat**	**142.76**	**316**	*i* P		PKPdf	21 18 34.6	-1.6	
BALT	**Daday**	**143.69**	**318**	*i* P		PKPdf	21 18 37.1	-0.7	
KWP	**Kalwaria**	**143.77**	**336**	*e*PKP		PKPdf	21 18 36.7	-1.3	
COBT	**Iskenderun**	**143.91**	**308**	*i* P		PKPdf	21 18 38.3	+0.1	
CDAG	**Cicekdag**	**143.97**	**314**	*i* P		PKPdf	21 18 37.8	-0.6	
AVNT	**Avonos**	**144.01**	**313**	*i* P		PKPdf	21 18 38.2	-0.3	
ELDT	**Eldivan**	**144.19**	**316**	*i* P		PKPdf	21 18 39.0	+0.2	
BURAR	**Bucovina Array**	**144.30**	**332**	ǁ *i*P		PKPdf	21 18 39.5	+0.6	
OJC	**Ojcow**	**144.33**	**339**	*e*PKP		PKPdf	21 18 38.0	-1.0	
BR131	**Keskin Array S**	**144.42**	**315**	*e*PKPdf		PKPdf	21 18 38.9	-0.3	
BRTR	**Keskin Array B**	**144.42**	**315**	PKP		PKPdf	21 18 39.1	0.0	
	comp=Z,7.6nm,0.7s,baz=122,slow=3.9,SNR=41								
STHS	**Stebnicka Huta**	**144.50**	**337**	*e*PKP		PKPdf	21 18 39.5	+0.2	
KOLS	**Kolonicke sedl**	**144.50**	**336**	*e*PKP		PKPdf	21 18 39.7	+0.4	
NRDL	**Niedersach Rie**	**144.61**	**351**	*e*PKPbc		PKPdf	21 18 39.0	-0.5	
NIE	**Niedzica**	**144.83**	**338**	*e*PKPdf		PKPdf	21 18 40.8	+1.0	
CRVS	**Cervenica-Dubn**	**144.84**	**337**	*e*PKP		PKPdf	21 18 40.0	+0.1	
KSP	**Ksiaz**	**144.84**	**343**	*e*PKP		PKPdf	21 18 40.4	+0.5	
KSP	**Ksiaz**	**144.84**	**343**	*e*PKP		PKPdf	21 18 40.5	+0.6	
VRI	**Vrincioaia**	**144.85**	**329**	ǁ *i*P		PKPdf	21 18 40.6	+0.7	
PLOR	**Plostina**	**144.90**	**329**	ǁ *i*P		PKPdf	21 18 40.9	+0.9	
ANTO	**Ankara**	**144.92**	**316**	ǁ *i*P		PKPdf	21 18 41.5	+1.5	
ANTO	**Ankara**	**144.92**	**316**	ǁ PKiKP		PKPdf	21 18 41.6	+1.6	
ANTO	**Ankara**	**144.92**	**316**	*e*P		PKPdf	21 18 39.9	0.0	
TIRR	**Tirgusor**	**144.93**	**325**	ǁ P		PKPdf	21 18 37.0	-3.0	
TIRR	**Tirgusor**	**144.93**	**325**	ǁ P		PKPdf	21 18 37.0	-3.0	
SGKT	**Sivrigoynuk**	**145.04**	**317**	*i* P		PKPdf	21 18 40.4	+0.1	
IBBN	**Ibbenburen**	**145.12**	**353**	*e*PKPbc		PKPbc	21 18 40.8	-0.4	
OKC	**Ostrava-Krasne**	**145.19**	**341**	*e*PKP		PKPdf	21 18 41.3	+0.8	
CLL	**Collm**	**145.21**	**347**	*e*PKPbc		PKPbc	21 18 41.1	-0.4	
CLL	**Collm**	**145.21**	**347**	ǁ *i*PKPbc		PKPbc	21 18 41.2	-0.3	
	comp=Z,22nm,0.6s								
CLL	**Collm**	**145.21**	**347**	ǁ *i*PKIKP		PKPdf	21 18 41.2	+0.7	
CLL				pmax	pmax				
	comp=Z,22nm,0.6s								
UPC	**Upice**	**145.22**	**343**	*e*PKP		PKPdf	21 18 41.6	+1.1	
DPC	**Dobruska-Polom**	**145.28**	**343**	*e*PKP		PKPdf	21 18 42.0	+1.4	
BHL	**Bhannes**	**145.29**	**304**	*e*P		PKPdf	21 18 42.2	+1.6	
BRG	**Berggiesshubel**	**145.41**	**346**	*e*PKPbc		PKPbc	21 18 41.7	-0.3	
BRG	**Berggiesshubel**	**145.41**	**346**	*i* PKP		PKPdf	21 18 41.7	+0.9	
	comp=Z,8.4nm,1.2s								
BRG				*e*			21 18 49.3		
	comp=Z,1.9nm,1.1s								
BRG	**Berggiesshubel**	**145.41**	**346**	*i* PKIKP		PKPdf	21 18 41.7	+0.9	
BRG				pmax	pmax				
	comp=Z,8.0nm,1.2s								
BRG				pmax	pmax				
	comp=Z,2.0nm,1.1s								
MORC	**Moravsky Berou**	**145.44**	**341**	ǁ *i*P		PKPdf	21 18 42.2	+1.3	
FBE	**Freiberg**	**145.50**	**346**	*e*PKPbc		PKPbc	21 18 42.3	0.0	
MLR	**Muntele Rosu**	**145.51**	**329**	ǁ P		PKPbc	21 18 43.0	+0.7	
KECS	**Kecove**	**145.55**	**337**	*e*PKP		PKPbc	21 18 42.4	0.0	
GTTG	**Gyttingen**	**145.56**	**350**	*e*PKPbc		PKPbc	21 18 42.2	-0.3	
PVCC	**Panska Ves**	**145.58**	**345**	*e*PKP		PKPbc	21 18 42.6	+0.1	
VOIR		**145.98**	**329**	ǁ *i*P		PKPbc	21 18 44.3	+0.6	
DRGR		**146.03**	**333**	ǁ *i*P		PKPbc	21 18 44.0	+0.2	
PRU	**Pruhonice**	**146.08**	**345**	*e*PKP		PKPbc	21 18 43.8	-0.2	
MOX	**Moxa**	**146.13**	**348**	*e*P		PKPbc	21 18 44.0	-0.1	
VYHS	**Vyhne**	**146.13**	**339**	*e*PKP		PKPbc	21 18 44.0	-0.1	
TANN	**Tannenbergstha**	**146.17**	**347**	*e*PKPbc		PKPbc	21 18 43.9	-0.3	
TANN				*ep*PKPbc			21 20 51.4		
WERD	**Werda**	**146.17**	**347**	*e*PKPbc		PKPbc	21 18 43.9	-0.3	
PSZ	**Piszkesteto**	**146.24**	**337**	ǁ *i*P		PKPbc	21 18 44.1	-0.3	
GUNZ	**Gunzen**	**146.25**	**347**	*e*PKPbc		PKPbc	21 18 44.3	-0.1	
GUNZ				*ep*PKPbc			21 20 51.4		
ERMK	**Ermenek**	**146.33**	**310**	*i* P		PKPbc	21 18 44.8	+0.1	
NKC	**Novy Kostel**	**146.35**	**347**	*e*PKP		PKPbc	21 18 44.6	-0.1	
TREC	**Trest**	**146.47**	**343**	*e*PKP		PKPbc	21 18 44.9	-0.1	
MANZ	**Manzenberg**	**146.65**	**347**	*e*PKPbc		PKPbc	21 18 45.1	-0.4	
MANZ				*ep*PKPbc		pPKPbc	21 20 55.2	+7.3	
ROTZ	**Rotzenmuhle**	**146.84**	**347**	*e*PKPbc		PKPbc	21 18 46.0	0.0	
ZST	**Bratislava**	**146.97**	**340**	*e*PKP		PKPbc	21 18 46.7	+0.3	
MEM	**Membach**	**146.97**	**354**	PKPbc		PKPbc	21 18 46.1	-0.3	
TNS	**Taunus Mts**	**147.07**	**351**	*e*PKPbc		PKPbc	21 18 46.5	-0.1	
GRA1	**Grafenberg Arr**	**147.11**	**348**	*e*PKPbc		PKPbc	21 18 46.8	+0.1	
GRF	**Grafenberg Arr**	**147.11**	**348**	*e*PKPbc		PKPbc	21 18 46.8	+0.1	
KHC	**Kasperske Hory**	**147.12**	**345**	*e*PKP		PKPbc	21 18 46.9	+0.1	
BCLA	**Clavier**	**147.22**	**355**	PKPbc		PKPbc	21 18 49.6	+2.6	
WET	**Wettzell**	**147.27**	**346**	*e*PKPbc		PKPbc	21 18 46.9	-0.3	
GEC2	**GERESS Array S**	**147.35**	**345**	*e*PKPbc		PKPbc	21 18 47.1	-0.3	
GERES	**GERESS Array B**	**147.35**	**345**	PKPbc		PKPbc	21 18 47.3	-0.1	
	comp=Z,8.2nm,0.5s,baz=26,slow=3.0,SNR=61								
BZS	**Buzias**	**147.42**	**333**	ǁ *i*P		PKPbc	21 18 47.6	0.0	
GIVF	**Givet**	**147.57**	**356**	*e*PKP1		PKPbc	21 18 47.7	-0.2	
	comp=Z,25nm,0.7s								
CONA	**Conrad Observa**	**147.59**	**342**	ǁ *i*PKiKP		PKiKP	21 18 48.3	-1.3	
	comp=Z,8.4nm,0.6s								
DOU	**Dourbes**	**147.60**	**356**	PKPbc		PKPbc	21 18 47.9	-0.1	
BAIF	**Baives**	**147.66**	**356**	*e*PKP1		PKP

LSZ				*e*Sn		**Sn**	**21 28 12.7**	**-5.1**
MATP	**Matopo**	**14.57**	**183**	Pn		**Pn**	**21 27 39.0**	**-1.8**
	0.5nm,0.3s,baz=2.0,slow=14,SNR=14							
MATP				Lg			21 31 54.5	
	0.9nm,0.3s,baz=250,slow=22,SNR=3.9							
MATP				LR	LR		21 33 20.3	
	comp=Z,170nm,18.3s,baz=99,slow=37							
TSUM	**Tsumeb**	**17.57**	**220**	P		**Pn**	**21 28 19.0**	**-0.5**
	0.9nm,0.3s,baz=30,slow=14,SNR=8.7							
TSUM				S		**Sn**	**21 31 24.7**	**-10**
	0.7nm,0.3s,baz=295,slow=12,SNR=4.8							
TSUM				Lg			21 33 25.5	
	baz=252,slow=12,SNR=3.3							
TSUM				LR	LR		21 35 04.3	
	comp=Z,85nm,20.9s,baz=175,slow=37							
LBTB	**Lobatse**	**19.44**	**190**	P		**Pn**	**21 28 44.8**	**+2.4**
	0.3nm,0.3s,baz=22,slow=15,SNR=4.5							
LBTB				Lg			21 34 27.2	
	0.3nm,0.3s,baz=293,slow=19,SNR=3.8							
LBTB				LR	LR		21 36 35.0	
	comp=Z,74nm,18.1s,baz=291,slow=38							
LBTB	**Lobatse**	**19.44**	**190**	*e*P		**Pn**	**21 28 44.1**	**+1.7**
ATD	**Arta Tunnel**	**21.84**	**38**	LR	LR		21 36 40.2	
	comp=Z,399nm,18.2s,MS2.9,baz=191,slow=34							
BOSA	**Boshof**	**23.02**	**189**	P		**P**	**21 29 21.9**	**+2.2**
	9.0nm,0.9s,mb4.2,baz=5.1,slow=12,SNR=6.8							
BOSA				LR	LR		21 38 47.4	
	comp=Z,143nm,18.2s,MS3.5,baz=256,slow=38							
BOSA	**Boshof**	**23.02**	**189**	*e*P		**P**	**21 29 21.6**	**+1.8**
	13nm,0.9s,mb4.4							
TOA0	**Torodi Ar. Sit**	**33.28**	**305**	*e*P		**P**	**21 30 50.5**	**-1.7**
TORD	**Torodi Ar. Bea**	**33.28**	**305**	P		**P**	**21 30 51.5**	**-0.6**
	6.7nm,0.9s,mb4.6,baz=109,slow=7.3,SNR=50							
TORD				LR	LR		21 43 54.8	
	comp=Z,88nm,18.1s,MS3.5,baz=125,slow=36							
DBIC	**Dimbokro**	**36.30**	**289**	P		**P**	**21 31 18.4**	**+0.3**
	8.0nm,1.0s,mb4.6,baz=136,slow=13,SNR=3.9							
DBIC				LR	LR		21 45 38.1	
	comp=Z,131nm,20.3s,MS3.7,baz=120,slow=36							
DBIC	**Dimbokro**	**36.30**	**289**	P		**P**	**21 31 18.4**	**+0.2**
	25nm,1.4s,mb5.0							
BRTR	**Keskin Array B**	**45.47**	**5**	P		**P**	**21 32 34.5**	**+0.8**
	4.2nm,0.8s,mb4.3,baz=180,slow=9.0,SNR=29							
BR131	**Keskin Array S**	**45.47**	**5**	*e*P		**P**	**21 32 34.0**	**+0.3**
	4.4nm,0.8s,mb4.3							
BZS	**Buzias**	**51.64**	**353**	↓*i*P		**P**	**21 33 22.2**	**+0.9**
DRGR		**52.68**	**354**	↓*i*P		**P**	**21 33 30.4**	**+1.4**
BURAR	**Bucovina Array**	**53.30**	**357**	↓*i*P		**P**	**21 33 35.4**	**+1.8**
PSZ	**Piszkesteto**	**54.12**	**352**	↓*i*P		**P**	**21 33 41.4**	**+1.8**
ESDC	**Sonseca Array**	**54.68**	**329**	P		**P**	**21 33 44.4**	**+0.7**
	1.2nm,0.9s,mb3.9,baz=144,slow=7.9,SNR=5.0							
GERES	**GERESS Array B**	**56.10**	**348**	P		**P**	**21 33 53.1**	**-0.9**
	0.5nm,0.7s,mb3.7,baz=149,slow=2.8,SNR=5.8							
OKC	**Ostrava-Krasne**	**56.25**	**351**	*e*P		**P**	**21 33 54.1**	**-0.9**
AKASG	**Malin Array Be**	**56.27**	**360**	P		**P**	**21 33 53.8**	**-1.3**
	1.6nm,0.6s,mb4.2,baz=186,slow=6.7,SNR=13							
KHC	**Kasperske Hory**	**56.40**	**348**	*e*P		**P**	**21 33 56.1**	**+0.1**
FINES	**FINESS Array B**	**67.08**	**358**	P		**P**	**21 35 06.9**	**-1.1**
	2.2nm,1.0s,mb4.2,baz=132,slow=8.2,SNR=5.3							
NB2	**NORSAR Subarra**	**68.12**	**351**	P		**P**	**21 35 14.2**	**-0.4**
	comp=Z,2.7nm,1.0s,mb4.2,baz=160,slow=6.5							
NOA	**NORSAR Array B**	**68.12**	**351**	P		**P**	**21 35 14.8**	**+0.2**
	comp=Z,3.8nm,0.9s,mb4.4,baz=164,slow=5.8,SNR=11							
NOA	**NORSAR Array B**	**68.12**	**351**	P		**P**	**21 35 14.8**	**+0.2**
MKAR	**Makanchi Array**	**70.19**	**36**	P		**P**	**21 35 27.9**	**+0.5**
	comp=Z,2.1nm,0.9s,mb4.1,baz=242,slow=5.2,SNR=15							
MKAR	**Makanchi Array**	**70.19**	**36**	P		**P**	**21 35 27.9**	**+0.5**
ARCES	**ARCESS Array B**	**75.21**	**359**	P		**P**	**21 35 56.0**	**-1.2**
	comp=Z,1.7nm,0.8s,mb4.0,baz=188,slow=7.4,SNR=5.7							
PLCA	**Paso Flores**	**93.70**	**229**	LR	LR		22 15 51.6	
	comp=Z,157nm,18.7s,MS4.5,baz=294,slow=33							
LPAZ	**La Paz**	**95.52**	**253**	LR	LR		22 15 03.9	
	comp=Z,54nm,19.5s,MS4.0,baz=275,slow=32							
SCHQ	**Schefferville**	**98.26**	**324**	LR	LR		22 25 23.5	
	comp=Z,28nm,19.1s,MS3.8,baz=323,slow=37							

*BJI **22** 21:29:45.0,2430S×17480W,h10km,mB4.9,mb4.8*
*IDC **22** 21:29:46.5±1.2,2445S×17489W,h0km,mb3.9/4, mb1 4.2/6,mb1mx4.1/14,mbtmp4.1/6,ML4.2/2,MS3.6/5, Ms1 3.6/5,ms1mx3.2/27,Error ellipse: s-maj=45.2km s-min=27.8km az=165.0*
*NEIC **22** 21:29:47.0±0.7,2429S×17481W,h10km,mb4.8/4,Error ellipse: s-maj=29.3km s-min=12.9km az=172.0*
*ISCJB **22** 21:29:48.3±2.9,243S±02×174.7W±0.1,h35km±29km, mb4.5/10,MS3.6/5,Error ellipse: s-maj=31.8km s-min=16.4km az=164.4*

ISC 22 21:29:50.8±2.1,243S±02×174.7W±0.1,h42km±23km,n25, σ0§82/12,mb4.5/10,MS3.6/5,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**14.14**	**80**	Pn	**Pn**	**21 33 08.4**	**-0.1**
	4.3nm,0.3s,baz=115,slow=23,SNR=6.8						
DZM	**Mont Dzumac**	**17.44**	**273**	P	**Pn**	**21 33 51.3**	**+0.4**
	0.3nm,0.3s,baz=74,slow=20,SNR=3.3						
TBI	**Tubuai**	**23.14**	**93**	*e*LR	LR	21 39 49.2	
	204nm,23.5s						
PPT	**Papeete**	**24.41**	**79**	*e*LR	LR	21 40 22.1	
	149nm,21.5s						
PPT	**Papeete**	**24.41**	**79**	LR	LR	21 42 12.1	
	comp=Z,99nm,19.1s,MS3.3,baz=263,slow=30						
HNR	**Honiara**	**28.30**	**297**	LR	LR	21 44 36.4	
	comp=Z,50nm,20.9s,MS3.1,baz=179,slow=32						
CTAO	**Charters Tower**	**36.28**	**269**	*e*P	**P**	**21 36 49.4**	**-0.8**
	5.9nm,0.6s,mb4.7						
RKT	**Rikitea**	**36.34**	**96**	*e*LR	LR	21 45 56.6	
	79nm,22.0s						
STKA	**Stephens Creek**	**39.06**	**249**	P	**P**	**21 37 15.3**	**+1.7**
	2.2nm,0.8s,mb3.9,baz=69,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**46.71**	**260**	P	**P**	**21 38 15.6**	**0.0**
	3.2nm,0.9s,mb4.2,baz=94,slow=8.3,SNR=18						
ASAR				LR	LR	21 57 52.5	
	comp=Z,138nm,18.3s,MS4.0,baz=1.2,slow=36						
WRAB	**Tennant Creek**	**47.16**	**265**	*e*P	**P**	**21 38 18.1**	**-1.1**
	19nm,1.3s,mb4.9						
WRA	**Warramunga Arr**	**47.17**	**265**	P	**P**	**21 38 18.3**	**-0.9**
	2.5nm,0.6s,mb4.3,baz=102,slow=8.7,SNR=36						
VNDA	**Vanda**	**54.45**	**186**	P	**P**	**21 39 13.8**	**-0.2**
	0.3nm,0.8s,mb3.3,baz=8.8,slow=7.1,SNR=2.7						
FITZ	**Fitzroy Crossi**	**55.59**	**264**	LR	LR	22 03 09.4	
	comp=Z,57nm,18.1s,MS3.7,baz=349,slow=36						
CASY	**Casey**	**61.88**	**206**	P	**P**	**21 40 10.5**	**+4.6**
	3.1nm,1.0s,mb4.4						
CBIJ	**Chichi jima**	**65.86**	**318**	LR	LR	22 04 38.1	
	comp=Z,57nm,20.2s,MS3.8,baz=91,slow=32						
YSS	**Yuzh-Sakhalins**	**80.62**	**332**	*e*P	**P**	**21 41 58.5**	**-0.6**
	23nm,0.9s,mb5.1						
MDJ	**Mudanjiang**	**85.34**	**324**	P	**P**	**21 42 24.0**	**+0.5**
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,42nm,6.0s						
XAN	**Xi'an**	**92.80**	**306**	P	**P**	**21 43 00.0**	**+1.1**
XAN				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.9						
AKASG	**Malin Array Be**	**147.77**	**331**	PKPbc	PKPbc	21 49 32.3	+1.2
	comp=Z,1.8nm,0.5s,baz=40,slow=4.2,SNR=11						
BR131	**Keskin Array S**	**151.59**	**310**	*e*PKPbc	PKPbc	21 49 42.6	+2.2
BRTR	**Keskin Array B**	**151.59**	**310**	PKPbc	PKPbc	21 49 43.0	+2.5
	comp=Z,1.9nm,1.0s,baz=150,slow=2.7,SNR=7.6						
CLL	**Collm**	**152.37**	**349**	*e*PKP1	PKPbc	21 49 44.0	+1.8
CLL				*e*PKP2	PKPab	21 49 56.0	+3.6
BRG	**Berggiesshubel**	**152.62**	**348**	*e*(P)	PKPbc	21 49 45.2	+2.4
	comp=Z,1.6nm,0.8s						
GERES	**GERESS Array B**	**154.60**	**347**	PKPbc	PKPbc	21 49 51.2	+4.1
	comp=Z,0.1nm,0.3s,baz=126,slow=5.0,SNR=3.2						

*NEIC **22** 21:42:24.9±1.3,4886N×15336E,h142km±13km,mb4.6/2, Error ellipse: s-maj=19.8km s-min=10.1km az=137.0*
*MOS **22** 21:42:25.9±1.4,4888N×15340E,h176km,mb4.0/1,Error ellipse: s-maj=34.5km s-min=13.5km az=58.0*
*ISCJB **22** 21:42:26.3±0.8,487N±01×1532E±02,h171km±9km, mb3.5/7,Error ellipse: s-maj=23.7km s-min=8.2km az=98.7*
*IDC **22** 21:42:31.0±3.9,4885N×153.17E,h196km±37km,mb3.2/7, mb1 3.5/9,mb1mx3.2/22,mbtmp3.8/9,Error ellipse: s-maj=22.8km s-min=20.1km az=115.0*

ISC 22 21:42:26.9±0.8,487N±01×1532E±02,h160km±9km,n46, σ1§42/55,mb3.5/7,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.74**	**43**	↑*i*PN	**Pn**	**21 43 11.2**	**-0.2**
SKR				*e*S	**Sn**	**21 43 38.5**	**-7.4**
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,220nm,0.5s						
SKR				pmax	pmax		
	comp=N,80nm,0.2s						
SKR				smax			
	comp=N,120nm,0.3s						
SKR				smax			
	comp=E,260nm,0.3s						
SKR				smax			
	comp=Z,40nm,0.5s						
KUR	**Kuril'sk**	**5.04**	**228**	*e*PN	**Pn**	**21 43 42.0**	**+1.1**
KUR				S	**Sn**	**21 44 44.5**	**+5.7**
KUR				pmax	pmax		
	comp=Z,120nm,0.5s						
KUR				smax			
	comp=N,80nm,0.6s						
KUR				smax			
	comp=E,60nm,0.6s						
PET	**Petropavlovsk**	**5.54**	**36**	*e*PN	**Pn**	**21 43 42.2**	**-5.3**
PET				pmax	pmax		
	comp=Z,26nm,0.3s						
PET	**Petropavlovsk**	**5.54**	**36**	*e*Pn	**Pn**	**21 43 42.2**	**-5.3**
	comp=Z,26nm,0.3s						
NEM2	**Nemuro 2**	**7.44**	**227**	P	**Pn**	**21 44 12.8**	**0.0**
NEM2				*e*S	**Sn**	**21 45 32.8**	**-3.3**
JNK	**Nakash**	**7.80**	**232**	P	**Pn**	**21 44 20.4**	**+2.8**
JTKR	**Abashiri--Toko**	**7.98**	**237**	P	**Pn**	**21 44 23.2**	**+3.2**
JSE	**Soyaes**	**8.19**	**247**	P	**Pn**	**21 44 29.5**	**+6.8**
JAK	**Akkeshi**	**8.23**	**229**	P	**Pn**	**21 44 23.2**	**-0.1**
JAK				*e*S	**Sn**	**21 45 51.4**	**-3.6**
JMP	**Maruseppu**	**8.27**	**239**	P	**Pn**	**21 44 28.3**	**+4.5**
JAR	**Ashorobuto**	**8.50**	**234**	P	**Pn**	**21 44 29.5**	**+2.6**
JAR				*e*S	**Sn**	**21 46 03.4**	**+1.9**
ASAJ	**Asahikawa**	**8.64**	**242**	P	**Pn**	**21 44 33.5**	**+4.7**
	comp=Z,9.0nm,0.3s,baz=71,slow=14,SNR=59						
ASAJ	**Asahikawa**	**8.64**	**242**	P	**Pn**	**21 44 33.6**	**+4.9**
ASAJ	**Asahikawa**	**8.64**	**242**	PN	**Pn**	**21 44 33.5**	**+4.8**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
JKK2	**Kamakawa 2**	**8.70**	**240**	P	**Pn**	**21 44 34.0**	**+4.5**
JOB	**Onbets**	**8.74**	**232**	P	**Pn**	**21 44 30.7**	**+0.7**
JOB				*e*S	**Sn**	**21 46 04.6**	**-2.7**
JCH	**Churui**	**9.19**	**232**	P	**Pn**	**21 44 36.3**	**+0.3**
JCH				*e*S	**Sn**	**21 46 12.5**	**-5.6**
JBT2	**Biratori 2**	**9.61**	**236**	P	**Pn**	**21 44 43.1**	**+1.5**
JEM	**Erimo**	**9.72**	**230**	P	**Pn**	**21 44 43.1**	**0.0**
JNBK	**Urakawa-nobuka**	**9.74**	**233**	P	**Pn**	**21 44 42.4**	**-0.9**
JNBK				*e*S	**Sn**	**21 46 25.2**	**-6.2**
JNB	**Noboribetsu**	**10.55**	**238**	P	**Pn**	**21 44 54.8**	**+0.8**
JNB				*e*S	**Sn**	**21 46 47.6**	**-3.3**
JKB	**Kayabe**	**10.94**	**236**	P	**Pn**	**21 44 58.0**	**-1.1**
JKB				*e*S	**Sn**	**21 46 52.3**	**-7.9**
JSH	**Shimam**	**11.01**	**242**	P	**Pn**	**21 45 02.0**	**+2.0**
JYM2	**Yakumo 2**	**11.16**	**239**	P	**Pn**	**21 45 02.1**	**+0.2**
JSR	**Shiriuchi**	**11.52**	**236**	P	**Pn**	**21 45 06.3**	**-0.4**
JOSM	**Okushiri--Mats**	**11.69**	**241**	P	**Pn**	**21 45 09.6**	**+0.7**
JTM	**Tenmabayashi**	**11.70**	**232**	P	**Pn**	**21 45 06.6**	**-2.3**
JTM				*e*S	**Sn**	**21 47 07.1**	**-11**
JANG	**Nango**	**11.77**	**229**	P	**Pn**	**21 45 06.9**	**-3.0**
JANG				*e*S	**Sn**	**21 47 08.0**	**-12**
OFUJ	**Ofunato**	**12.70**	**225**	P	**Pn**	**21 45 20.2**	**-1.7**
JRG	**Rokugo**	**12.96**	**229**	P	**Pn**	**21 45 24.0**	**-1.1**
JIO	**Ouri**	**13.35**	**224**	P	**Pn**	**21 45 27.7**	**-2.5**
MAJO	**Matsushiro**	**16.38**	**228**	P	**Pn**	**21 46 08.5**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,13nm,0.7s						
MAJO	**Matsushiro**	**16.38**	**228**	P	**Pn**	**21 46 08.5**	**+0.8**
	comp=Z,13nm,0.7s						
MJAR	**Matsushiro Arr**	**16.38**	**228**	P	**Pn**	**21 46 09.3**	**+1.6**
	comp=Z,1.5nm,0.3s,baz=22,slow=13,SNR=14						
MJAR	**Matsushiro Arr**	**16.38**	**228**	P	**Pn**	**21 46 09.3**	**+1.6**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SONM	**Songino Array**	**30.79**	**286**	P	**P**	**21 48 28.2**	**+0.7**
	comp=Z,0.3nm,0.4s,mb3.4,baz=120,slow=10,SNR=5.3						
MKAR	**Makanchi Array**	**46.12**	**296**	P	**P**	**21 50 35.0**	**-0.1**
	comp=Z,0.3nm,0.2s,mb3.5,baz=66,slow=9.4,SNR=3.6						
NVAR	**Mina Array Bea**	**61.49**	**63**	P	**P**	**21 52 26.9**	**+0.2**
	comp=Z,0.3nm,0.3s,mb3.6,baz=278,slow=6.3,SNR=4.2						
FINES	**FINESS Array B**	**62.31**	**334**	P	**P**	**21 52 30.1**	**-2.0**
	comp=Z,0.8nm,0.8s,mb3.6,baz=28,slow=8.6,SNR=7.8						
FINES	**FINESS Array B**	**62.31**	**334**	P	**P**	**21 52 30.2**	**-1.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**63.56**	**55**	P	**P**	**21 52 40.2**	**-0.2**
	comp=Z,0.5nm,0.5s,mb3.6,baz=325,slow=2.3,SNR=4.7						
WRA	**Warramunga Arr**	**70.38**	**199**	P	**P**	**21 53 23.9**	**+0.5**
	comp=Z,0.4nm,0.6s,mb3.4,baz=24,slow=7.6,SNR=5.8						
ASAR	**Alice Springs**	**74.08**	**198**	P	**P**	**21 53 46.5**	**+1.1**
	comp=Z,0.2nm,0.4s,mb3.2,baz=11,slow=6.1,SNR=4.6						
CFAA	**Coronel Fontan**	**144.53**	**77**	PKP	PKPdf	22 01 42.1	-2.1
	comp=Z,0.5nm,0.4s,baz=284,slow=2.0,SNR=6.3						
PLCA	**Paso Flores**	**148.27**	**92**	PKPbc	PKPbc	22 01 53.6	-0.6
	comp=Z,2.0nm,0.7s,baz=275,slow=6.5,SNR=6.3						
PLCA	**Paso Flores**	**148.27**	**92**	PKP2	PKPbc	22 01 53.6	-0.5
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						

KRSC 22 21:42:49,5628N×16404E,h5km,ML3.8,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.69**	**264**	*e*P	Pg	21 43 04.1	+1.9
KBTR				*i*S	Sg	21 43 14.6	+3.5
BDR	**Baidarnaya**	**1.60**	**282**	*i*P	Pn	21 43 18.7	+0.8
BDR				*i*S	Sn	21 43 39.8	+0.9
SRKR	**Sorokina**	**1.64**	**284**	*e*P	Pn	21 43 18.9	+0.5
SRKR				*i*S	Sn	21 43 40.5	+0.6
ZLN	**Zelenaya**	**1.83**	**263**	*i*P	Pn	21 43 23.2	+2.1
ZLN				*i*S	Sn	21 43 47.7	+3.1
KLY	**Klyuchi**	**1.89**	**272**	*e*P	Pn	21 43 21.4	-0.5
KLY				*i*S	Sn	21 43 44.8	-1.3
KRSR	**Krestovskiy**	**1.94**	**270**	*i*P	Pn	21 43 24.1	+1.5
KRSR				*e*S	Sn	21 43 49.2	+1.8
KPT	**Kopyto**	**2.16**	**263**	*e*P	Pn	21 43 28.2	+2.6
KPT				*i*S	Sn	21 43 56.6	+3.8
MKZ	**Mys Kozlova**	**2.17**	**218**	*e*P	Pn	21 43 25.9	+0.1
MKZ				*i*S	Sn	21 43 52.5	-0.6
KMNR	**Kamenistaya**	**2.20**	**258**	*e*P	Pn	21 43 28.7	+2.5
KMNR				*i*S	Sn	21 43 57.9	+4.2
KOZ	**Kozyrevsk**	**2.34**	**266**	*e*P	Pn	21 43 30.7	+2.6
KOZ				*i*S	Sn	21 44 01.2	+4.0
SRDR	**Sredinnyy**	**2.41**	**273**	*e*P	Pn	21 43 31.2	+2.1
SRDR				*i*S	Sn	21 44 01.4	+2.5
TUMR	**Tumrok**	**2.42**	**247**	*e*P	Pn	21 43 31.7	+2.6
TUMR				*i*S	Sn	21 44 02.0	+2.9

BJI 22 21:57:16.3,3969N×9542E,h24km,ML3.6,Ms3.1,Msz3.1, Gansu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**3.41**	**93**	PG	Pn	21 58 15.3	+7.4
GTA				SG	Sn	21 59 01.5	+14
GTA				Smax			
	comp=N,102nm,0.7s						
GTA				Smax			
	comp=E,74nm,0.5s						
GTA				LR	LR		
	comp=N,162nm,7.3s						
GTA				LR	LR		
	comp=E,143nm,5.4s						
GTA				LR	LR		
	comp=Z,93nm,8.8s						
WMQ	**Urumqi**	**7.10**	**308**	*e*P	Pn	21 59 02.0	+3.4
WMQ				Smax			
	comp=N,59nm,0.9s						
WMQ				Smax			
	comp=E,62nm,0.8s						

*NEIC **22** 22:05:19.4,3738N×2155E,h18km,MD3.5(ATH),After ATH.*
*CSEM **22** 22:05:19.4,3738N×2155E,h18km,MD3.5/8,After ATH*

ATH 22 22:05:19.4,3738N×2155E,h18km±1km,MD3.5/8, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**0.36**	**124**	*e*PB	Pg	22 05 26.8	-0.2
ITM				*e*SB	Sg	22 05 32.2	+0.1
RLS	**Riolos of Patr**	**0.68**	**354**	*e*PB	Pb	22 05 32.4	-0.3
RLS				*e*SN	Sb	22 05 42.7	+0.9
VLS	**Valsamata**	**1.10**	**317**	*e*PN	Pn	22 05 40.8	+0.9
VLI	**Veliai**	**1.29**	**120**	*e*PN	Pn	22 05 43.9	+1.4
VLI				*e*SN	Sn	22 06 02.3	+3.0
MGER	**Gerania Oros**	**1.49**	**65**	*e*PN	Pn	22 05 46.5	+1.3
EVR	**Evrytania**	**1.55**	**7**	*e*PN	Pn	22 05 48.2	+2.2
EVR				*e*SN	Sn	22 06 09.4	+3.7
NAIG	**Nisos Aigina**	**1.59**	**76**	*e*PN	Pn	22 05 48.0	+1.4
KYTH	**Kithira**	**1.62**	**132**	*e*PN	Pn	22 05 50.0	+3.0
LKR	**Lokris**	**1.71**	**42**	*e*PN	Pn	22 05 50.4	+2.1
LKR				*e*SN	Sn	22 06 13.5	+3.9
ATH	**Athens Observa**	**1.82**	**70**	*e*PB	Pb	22 05 51.0	-1.1
KVR	**Kavouri**	**1.82**	**75**	*e*PN	Pn	22 05 52.0	+2.2
PTL	**Penteli**	**1.95**	**69**	*e*PN	Pn	22 05 54.0	+2.4

*ISCJB **22** 23:02:00.5±0.3,1285N±003×8826W±002,h85km±3km, mb4.7/82,Error ellipse: s-maj=6.1km s-min=2.8km az=59.0*
*IDC **22** 23:02:00.9±1.3,1298N×8815W,h73km±11km,mb4.4/30, mb1 4.4/32,mb1mx4.4/34,mbtmp4.7/32,MS4.3/25, Ms1 4.3/25,ms1mx4.2/29,Error ellipse: s-maj=15.4km s-min=7.8km az=58.0*
*BJI **22** 23:02:00.4,1280N×8830W,h89km,mB4.8,Ms5.1,Msz4.9*
*CASC **22** 23:02:00.8±2.4,1278N×8832W,h34km±9km,MD4.6, ML5.4,mb5.0(NEIC)*
*HRVD **22** 23:02:02.5±0.1,1279N×8842W,h77km±2km,MW5.3/96, Centroid moment Tensor Solution. LP body waves: s87,c154;Mantle waves: s96,c172; Half duration: 1§1 Moment tensor: Scale 10^17^Nm; Mrr~0.28±.02; Mθθ~0.10±.02; Mφφ0.38±.03; Mrθ0.83±.01; Mθφ0.02±.02; Mφr~0.81±.02; Best double couple: M0:1.20300×10^17^ NP1:φs204.00000°,δ13.00000°,λ-24.00000°. NP2: φs318.00000°,δ85.00000°,λ-102.00000°. Principal axes: T 1.1290, Plg39.0000°, Azm58.0000°; N 0.1500, Plg12.0000°, Azm319.0000°; P -1.2780, Plg49.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **22** 23:02:02.5±0.3,1285N×8827W,h90km±3km,mb4.9/55 Error ellipse: s-maj=5.2km s-min=2.8km az=222.0*
NEIC Felt [IV] at San Salvador. Felt at Santa Cruz, Honduras and in eastern El Salvador.
*MOS **22** 23:02:02.8±1.1,1285N×8827W,h109km,mb5.1/22,Error ellipse: s-maj=9.7km s-min=5.1km az=105.8*
*SZGRF **22** 23:02:08.8,1326N×8830W,h33km,mb5.1,MS4.7,El Salvador*

ISC 22 23:02:01.8±0.3,1286N±003×8824W±002,h80km±3km, h92km±8.8km:pP-P,n526,σ0§95/463,mb4.7/82,90C-72D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**0.57**	**356**	↓*i*P	x	23 02 20.5	
VSM				*e*S	x	23 02 30.3	
CNCH	**Conchagua**	**0.57**	**43**	↓*i*P	x	23 02 20.6	
CNCH				*e*S	x	23 02 31.4	
BLLM	**Bellamira**	**0.58**	**360**	↓*i*P	x	23 02 20.4	
BLLM				*e*S	x	23 02 31.4	
SNVI	**San Vicente**	**0.95**	**322**	↓*e*P	x	23 02 24.1	
SNVI				*e*S	x	23 02 38.3	
LCBS	**La Ceiba**	**1.07**	**318**	↓*i*P	x	23 02 25.6	
LCBS				*e*S	x	23 02 40.3	
LFRS	**El Faro**	**1.11**	**313**	↓*i*P	x	23 02 25.8	
LFRS				*e*S	x	23 02 41.0	
CRIN	**San Cristobal**	**1.17**	**98**	↓*i*P	**Pn**	**23 02 22.9**	**+0.1**
CRIN				*e*S	**Sn**	**23 02 37.0**	**-1.6**
LBRS	**Las Brisas**	**1.18**	**318**	↓*i*P	x	23 02 27.2	
LBRS				*e*S	x	23 02 43.2	
LFU	**La Fuente**	**1.23**	**316**	↓*e*P	x	23 02 28.0	
LFU				*e*S	x	23 02 44.9	
SNET	**Serv Nac Est T**	**1.27**	**310**	↓*e*P	x	23 02 21.3	
SNET				*e*S	x	23 02 38.1	
SNET				*i*		23 02 39.5	
	comp=Z,154μm,0.3s						
BQQS	**Boqueron**	**1.34**	**311**	↑*i*P	x	23 02 29.3	
BQQS				*e*S	x	23 02 48.3	
LEON	**Leon**	**1.38**	**108**	↓*i*P	**Pn**	**23 02 24.2**	**-1.4**
TEL3	**Telica 3**	**1.39**	**102**	↓*e*P	**Pn**	**23 02 25.3**	**-0.3**
TELN	**Telica**	**1.39**	**100**	↓*i*P	**Pn**	**23 02 25.2**	**-0.5**
CNGN	**Cerro Negro**	**1.54**	**103**	↓*e*P	**Pn**	**23 02 27.1**	**-0.5**
CNGN				*e*P		23 02 25.9	
MIRN	**Miramar**	**1.54**	**105**	↑*e*P	**Pn**	**23 02 26.7**	**-0.9**
SBLS	**San Blas**	**1.67**	**306**	↓*e*P	x	23 02 33.7	
SBLS				*e*S	x	23 02 55.2	
SNJE	**San Jose**	**1.67**	**307**	↓*e*P	x	23 02 33

CAIG **El Cayaco** 12.35 291 *i* P Pn 23 04 53.8 -0.7
LMGC **Las Mercedes** 12.93 55 *e*P Pn 23 05 05.6 +3.3
PAYG **Puerto Ayora** 13.60 189 *e*Pn Pn 23 05 17.8 +6.7
comp=E,160nm,1.1s
RCC **Rio Carpintero** 13.96 58 *e*P Pn 23 05 17.0 +1.1
RCC *e*S Sn 23 08 00.0 +11
comp=N,719nm,17.6s
RCC *e*
comp=E,1µm,20.5s
MOIG **Morelia** 14.16 300 *i* P Pn 23 05 11.0 -7.5
MOAC **Moa** 14.88 57 *e*P Pn 23 05 30.9 +3.1
MOAC *e*S Sn 23 08 07.6 -4.1
comp=N,591nm,16.4s
MOAC *e*
comp=E,1µm,17.7s
ROSC **El Rosal** 15.86 119 P Pn 23 05 41.9 +1.6
comp=E,0.6nm,0.3s,baz=265,slow=12,SNR=10
ROSC LR LR 23 12 40.8
comp=E,352nm,18.8s,baz=344,slow=40
ROSC **El Rosal** 15.86 119 *e*Pn Pn 23 05 44.0 +3.7
DWPF **Disney** 16.45 22 *e*Pn Pn 23 05 49.6 +2.0
SDV **Santo Domingo** 17.73 101 P Pn 23 06 04.4 +1.2
comp=E,3.8nm,0.3s,baz=316,slow=9.0,SNR=20
SDV S S 23 09 22.3 +1.0
comp=E,1.3nm,0.3s,baz=328,slow=20,SNR=2.0
SDV LR LR 23 13 26.5
comp=E,963nm,21.0s,baz=309,slow=39
SDV **Santo Domingo** 17.73 101 *e*P Pn 23 06 04.1 +0.8
comp=E,30nm,0.5s
SDV *e* 23 06 21.4
HKT **Hockley** 18.41 339 *e*P Pn 23 06 12.8 +1.3
HKT *e*S S 23 09 37.5 +0.9
NATX **Nacogdoches** 19.72 344 *e*Pn Pn 23 06 26.4 -0.6
comp=E,92nm,0.7s
NATX *e* 23 06 39.1
LRAL **Lakeview Retre** 20.12 3 *e*Pn P 23 06 31.0 +1.9
comp=E,35nm,0.6s
LRAL *e* 23 06 46.4
LRAL *e*ScP ScP 23 14 12.1 +1.8
JCT **Junction City** 20.54 330 *e*P P 23 06 33.5 -0.2
JCT pmax pmax
comp=E,78nm,0.6s
JCT **Junction City** 20.54 330 *e*P P 23 06 33.5 -0.2
comp=E,78nm,0.6s
JCT *e*ScP ScP 23 14 13.2 +1.9
OXF **Oxford** 21.58 357 *e*P P 23 06 45.7 +0.8
OXF *e* 23 10 40.6
OXF pmax pmax
comp=Z,103nm,0.9s,mb5.2
OXF **Oxford** 21.58 357 *e*P P 23 06 45.7 +0.8
comp=Z,104nm,0.9s,mb5.2
OXF *e*PcP PcP 23 10 40.5 -3.4
SJG **San Juan** 21.91 73 P P 23 06 49.1 +0.8
comp=Z,22nm,0.6s,mb4.6,baz=302,slow=6.0,SNR=5.7
ATAH **Atahualpa** 22.02 153 P P 23 06 53.4 +3.9
comp=Z,20nm,0.8s,mb4.5,baz=325,slow=8.1,SNR=19
PLAL **Pickwick Lake** 22.03 0 *e*P P 23 06 49.7 +0.1
PLAL *e* 23 07 12.7
CPD **Cerro la Pandu** 22.11 74 *e*P P 23 06 54.9 +4.4
MIAR **Mount Ida** 22.13 348 *e*P P 23 06 51.2 +0.5
MIAR pmax pmax
comp=Z,53nm,0.7s,mb5.0
MIAR **Mount Ida** 22.13 348 *e*P P 23 06 51.2 +0.5
comp=Z,54nm,0.7s,mb5.0
MIAR *e*S S 23 10 54.1 +4.3
HUMP **Col San Antoni** 22.19 73 *e*P P 23 06 53.2 +1.8
JSC **Jenkinsville** 22.25 15 *e*P P 23 06 53.9 +1.9
JSC *e* 23 07 17.0
SWET **Sewanee** 22.36 5 *e*P P 23 06 53.4 +0.3
SWET *e* 23 07 10.8
MYNC **Murphy** 22.43 9 *e*P P 23 06 54.8 +0.9
MYNC pmax pmax
comp=Z,57nm,0.6s,mb5.1
MYNC **Murphy** 22.43 9 *e*P P 23 06 54.8 +0.9
comp=Z,57nm,0.6s,mb5.1
MTP **Monte Pirata** 22.46 74 *e*P P 23 06 54.1 -0.1
HBAR **Harrisburg** 22.70 355 *e*P P 23 06 56.8 0.0
CPCT **Cooper Cave** 22.74 8 *e*P P 23 06 55.5 -1.7
CPCT *e* 23 07 14.9
WVT **Waverly** 23.18 1 *e*P P 23 06 59.8 -1.6
WVT *e*S S 23 11 00.5 -6.3
WVT **Waverly** 23.18 1 *e*P P 23 06 59.8 -1.7
comp=Z,15nm,0.6s,mb4.5
WVT *e*S S 23 11 00.5 -6.4
WVT *e*ScP ScP 23 14 16.2 -1.7
PCRV **Puerto La Cruz** 23.27 94 P P 23 07 03.5 +1.1
comp=Z,24nm,0.6s,mb4.8,baz=182,slow=5.9,SNR=12
PCRV LR LR 23 16 36.8
comp=Z,569nm,21.9s,baz=107,slow=38
LPIG **La Paz** 23.70 301 P P 23 07 07.0 +0.8
comp=Z,17nm,0.3s,mb4.9,baz=146,slow=4.8,SNR=7.6
LPIG LR LR 23 16 39.7
comp=Z,400nm,21.4s,baz=110,slow=37
LPIG **La Paz** 23.70 301 P P 23 07 07.0 +0.8
LPIG *i* P 23 07 08.6
LPIG LR LR 23 16 39.7
WMOK **Wichita Mounta** 23.79 338 *e*P P 23 07 06.1 -0.9
WMOK pmax pmax
comp=Z,24nm,0.6s,mb4.7
WMOK **Wichita Mounta** 23.79 338 *e*P P 23 07 06.1 -1.0
comp=Z,24nm,0.6s,mb4.7
WMOK *e* 23 07 35.2
TZTN **Tazewell** 23.96 9 *e*P P 23 07 08.8 +0.2
GDL2 **Guadalupe Moun** 24.28 325 *e*P P 23 07 11.4 -0.1
MNTX **Cornudas Mount** 24.50 323 *e*P P 23 07 12.6 -0.9
SIUC **Southern Illin** 24.77 358 *e*P P 23 07 15.6 -0.4
comp=Z,62nm,0.9s,mb5.0
FVM **French Village** 25.10 356 *e*P P 23 07 20.4 +1.5
ELN **Prospectdale** 25.18 14 *e*P P 23 07 20.6 +0.9
CCM **Cathedral Cave** 25.24 354 *e*P P 23 07 18.7 -1.5
CCM *e* pP 23 07 39.6 +1.1
CCM pmax pmax
comp=Z,35nm,0.8s,mb4.8
CCM **Cathedral Cave** 25.24 354 *e*P P 23 07 18.7 -1.5
comp=Z,35nm,0.8s,mb4.8
CCM *e* pP 23 07 39.6 +1.1
CCM *e*ScP ScP 23 14 24.4 +0.7
BLA **Blacksburg** 25.24 15 *e*P P 23 07 19.4 -0.8
BLA pmax pmax
comp=Z,20nm,0.6s,mb4.7
BLA **Blacksburg** 25.24 15 *e*P P 23 07 19.4 -0.9
comp=Z,1.8nm,0.6s,mb3.7
BLA *e*ScP ScP 23 14 22.0 -1.7
WCI **Wyandotte Cave** 25.33 4 *e*P P 23 07 20.0 -1.0
WCI pmax pmax
comp=Z,24nm,0.5s,mb4.9
WCI **Wyandotte Cave** 25.33 4 *e*P P 23 07 20.0 -1.1
comp=Z,24nm,0.5s,mb4.9
WCI *e* 23 07 49.0
WCI *e*ScP ScP 23 14 23.0 -0.9
BLO **Bloomington** 26.25 3 *e*P P 23 07 28.4 -1.0
BLO pmax pmax
comp=Z,28nm,0.8s,mb4.7
BLO **Bloomington** 26.25 3 *e*P P 23 07 28.4 -1.0
comp=Z,28nm,0.8s,mb4.8
CBN **Corbin** 27.03 19 *e*P P 23 07 37.4 +1.0
LPM **Los Pinos Moun** 27.12 325 *e*P P 23 07 38.2 +1.1
NNA **Nana** 27.15 155 LR LR 23 16 35.9
comp=Z,419nm,21.0s,baz=325,slow=32
KSU1 **Kansas State U** 27.17 346 *e*P P 23 07 36.6 -1.0
LENM **Lemitar** 27.20 324 *e*P P 23 07 39.8 +1.9
ANMO **Albuquerque** 27.50 326 P P 23 07 41.5 +1.0
comp=Z,8.2nm,0.6s,mb4.4,baz=134,slow=10,SNR=22
ANMO LR LR 23 21 19.7
comp=Z,224nm,21.4s,baz=34,slow=42
ANMO **Albuquerque** 27.50 326⇓ *e*P P 23 07 42.0 +1.4
ANMO **Albuquerque** 27.50 326 *e*P P 23 07 41.1 +0.5
ACSO **Alum Creek Sta** 27.66 9 *e*P P 23 07 41.6 -0.4
comp=Z,18nm,0.6s,mb4.8
MCWV **Mont Chateau** 27.70 14 *e*P P 23 07 42.7 +0.3
comp=Z,30nm,0.5s,mb5.1
SDMD **Soldier's Deli** 28.30 19 *e*P P 23 07 54.6 +6.9
MVL **Millersville** 28.99 19 *e*P P 23 07 54.9 +1.1
MVL *e*ScP ScP 23 14 34.1 -0.9
116A **Eloy** 29.09 316 ⇑P P 23 07 55.0 +0.3
baz=29
SSPA **Standing Stone** 29.12 16 *e*P P 23 07 55.2 +0.1
SDCO **Great Sand Dun** 29.18 331 *e*P P 23 07 54.4 -1.2
115A **Sonoran Desert** 29.53 316 ⇑P P 23 07 58.8 +0.3
baz=30
JFWS **Jewell Farm** 30.00 357 *e*P P 23 08 01.8 -1.0
JFWS *e* 23 10 58.1
ERPA **Erie** 30.02 12 *e*P P 23 08 05.2 +2.3
comp=Z,40nm,0.6s,mb5.2

BRNJ **Basking Ridge** 30.20 21 *e*P P 23 08 05.4 +0.8
Z14A **Wintersburg** 30.41 316 ⇑P P 23 08 06.7 +0.3
baz=30
X15A **Humboldt** 30.62 319 ⇑P P 23 08 08.7 +0.4
baz=31
PAL **Palisades** 30.72 22 *e*P P 23 08 08.8 -0.3
PAL pmax pmax
comp=Z,26nm,0.6s,mb5.1
PAL **Palisades** 30.72 22 *e*P P 23 08 08.8 -0.4
comp=Z,26nm,0.6s,mb5.2
WUAZ **Wupatki** 30.74 321 *e*P P 23 08 10.4 +1.0
WUAZ *e*ScP ScP 23 14 43.6 +3.0
Y14A **Wickenburg** 30.79 317 ⇑P P 23 08 09.9 +0.2
baz=31
ISCO **Idaho Springs** 30.91 333 *e*P P 23 08 11.6 +0.8
PV01 **Paradox Valley** 31.01 328 *e*P P 23 08 11.8 +0.2
SMCO **Snowmass** 31.02 331 *e*P P 23 08 12.7 +0.9
comp=Z,27nm,0.6s,mb5.2
X14A **Yava** 31.03 318 ⇑P P 23 08 12.3 +0.4
baz=31,SNR=12
W15A **Williams** 31.08 320 ⇑P P 23 08 12.5 +0.2
baz=31
BINY **Binghamton** 31.11 18 *e*P P 23 08 12.5 -0.1
comp=Z,70nm,0.8s,mb5.4
Y13A **Salome** 31.27 316 ⇓P P 23 08 14.1 +0.2
baz=31,SNR=8.3
GLA **Glamis** 31.52 314 *e*P P 23 08 17.0 +0.8
GLA *e*ScP ScP 23 14 45.9 +2.7
GLA **Glamis** 31.52 314 ⇑P P 23 08 16.6 +0.4
baz=32,SNR=11
W14A **Seligman** 31.62 319 ⇑P P 23 08 17.6 +0.6
baz=32,SNR=12
Y12C **Blythe** 31.70 315 ⇓P P 23 08 18.0 +0.3
baz=32
X13A **Yucca** 31.73 317 ⇑P P 23 08 18.2 +0.2
baz=32,SNR=9.3
W13A **Hualapai Mount** 32.07 318 ⇓P P 23 08 21.6 +0.7
baz=32,SNR=7.9
PHWY **Pilot Hill** 32.09 335 *e*P P 23 08 22.3 +1.2
SWSC **Sam W. Stewart** 32.15 313 ⇑P P 23 08 22.1 +0.5
baz=32
DVTC **Desert V Tower** 32.22 312 ⇓P P 23 08 22.8 +0.5
baz=32
IRM **Iron Mountain** 32.36 315 ⇓P P 23 08 24.0 +0.4
baz=32
MONP **Monument Peak** 32.57 312 ⇑P P 23 08 26.0 +0.6
baz=33,SNR=6.1
SADO **Sadowa** 32.74 12 P P 23 08 26.2 -0.6
comp=Z,30nm,0.5s,mb5.4,baz=208,slow=9.2,SNR=36
SADO ScP ScP 23 14 45.5 -1.8
comp=Z,4.6nm,0.7s,baz=283,slow=5.2,SNR=3.7
SRU **San Rafael** 32.76 327 *e*P P 23 08 27.7 +0.7
BELC **Belle Mtn.** 32.86 314 ⇑P P 23 08 28.4 +0.6
baz=33,SNR=6.0
WES **Weston** 32.88 23 *e*P P 23 08 30.5 +2.4
WES pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
WES **Weston** 32.88 23 *e*P P 23 08 30.5 +2.5
comp=Z,10nm,0.5s,mb4.9
PFO **Pinyon Flat Ob** 32.97 314 ⇓P P 23 08 29.4 +0.5
baz=33
SAML **Samuel** 32.99 130 *e*P P 23 08 28.2 -0.9
SAML *e*ScP ScP 23 14 52.1 +3.8
SAML **Samuel** 32.99 130 Pn P 23 08 27.9 -1.2
GMRC **Granite Mounta** 33.06 316 ⇑P P 23 08 30.5 +0.8
baz=33,SNR=6.8
109C **Camp Elliot, M** 33.06 312 ⇑P P 23 08 30.1 +0.5
baz=33
V12A **Nelson** 33.07 318 ⇑P P 23 08 30.2 +0.5
baz=33,SNR=25
RWWY **Rawlins** 33.15 334 *e*P P 23 08 31.5 +1.1
MSU **Marysvale** 33.24 324 *e*P P 23 08 32.3 +1.1
TMUT **Trail Mountain** 33.26 326 *e*P P 23 08 32.9 +1.6
NCB **Newcomb** 33.26 19 *e*P P 23 08 32.4 +1.1
U12A **Valley of Fire** 33.30 319 ⇓P P 23 08 32.2 +0.5
baz=33
MURC **Murrieta** 33.49 313 ⇑P P 23 08 34.0 +0.5
baz=34
HEC **Hector,Ludlow** 33.54 315 ⇓P P 23 08 34.5 +0.7
baz=34,SNR=7.3
TUQ **Turquoise Mtn.** 33.61 317 ⇑P P 23 08 34.9 +0.4
baz=34
LONY **Lake Ozonia** 33.74 18 *e*P P 23 08 35.9 +0.4
SHPR **Sheep Range** 33.74 319 *e*P P 23 08 36.5 +0.9
SHPR *e*ScP ScP 23 14 53.1 +2.2
U11A **Corn Creek** 33.84 319 ⇑P P 23 08 37.0 +0.6
baz=34
RSSD **Black Hills** 33.98 339 *e*P P 23 08 38.1 +0.5
RSSD pmax pmax
comp=Z,17nm,0.6s,mb5.0
RSSD **Black Hills** 33.98 339 *e*P P 23 08 38.1 +0.5
comp=Z,17nm,0.6s,mb5.0
MPU **Maple Canyon** 34.00 327 *e*P P 23 08 38.6 +0.8
DAU **Daniels Canyon** 34.09 328 *e*P P 23 08 39.5 +0.8
DAU *e*ScP ScP 23 14 53.8 +1.7
GSC **Goldstone** 34.13 316 *e*P P 23 08 39.8 +0.9
GSC *e**PP pP 23 09 09.1 +11
GSC *e* 23 11 15.8
BFSC **Mount Baldy St** 34.15 314 ⇓P P 23 08 39.5 +0.3
baz=34
FRNY **Flat Rock** 34.24 19 *e*P P 23 08 40.2 +0.3
U10A **Ash Meadows, A** 34.45 318 ⇓P P 23 08 42.4 +0.8
baz=34,SNR=6.5
CTU **Camp Tracy** 34.55 328 *e*P P 23 08 43.4 +0.8
TCUT **Toone Canyon** 34.69 329 *e*P P 23 08 44.7 +0.9
EDW2 **Edwards Air Fo** 34.72 314 ⇓P P 23 08 44.2 +0.2
baz=35
NOQ **North Oquirrh** 34.72 327 *e*P P 23 08 44.8 +0.7
DUG **Dugway** 34.77 326 *e*P P 23 08 45.0 +0.6
FURC **Furnace Creek,** 34.83 317 ⇓P P 23 08 45.8 +0.8
baz=35
LRMC **Laurel Mountai** 34.83 315 ⇑P P 23 08 45.6 +0.7
baz=35
MPMC **Manual Prospec** 35.01 316 P P 23 08 47.0 +0.4
baz=35,SNR=12
BW06 **Boulder Array** 35.05 332 *e*P P 23 08 46.6 -0.3
comp=Z,13nm,0.6s,mb5.0
PDAR **Pinedale Array** 35.05 332 P P 23 08 46.5 -0.4
comp=Z,13nm,0.6s,mb4.9,baz=129,slow=9.3,SNR=92
PDAR PcP PcP 23 11 15.7 -1.4
comp=Z,1.3nm,0.4s,baz=130,slow=5.4,SNR=6.6
PDAR ScP ScP 23 14 57.0 +1.4
comp=Z,0.6nm,0.5s,baz=132,slow=6.6,SNR=4.8
PDAR LR LR 23 26 33.4
comp=Z,332nm,19.4s,baz=152,slow=42
EYMN **Ely** 35.09 356 *e*P P 23 08 45.1 -2.0
comp=Z,10nm,0.5s,mb4.9
LPAZ **La Paz** 35.12 145 P P 23 08 48.2 +0.7
comp=Z,2.5nm,0.6s,mb4.2,baz=335,slow=5.9,SNR=2.5
LPAZ ScP ScP 23 14 59.8 +4.0
comp=Z,1.0nm,0.7s,baz=359,slow=3.5,SNR=3.7
LPAZ **La Paz** 35.12 145 *e*P P 23 08 48.7 +1.2
LPAZ pmax pmax
comp=Z,30nm,0.6s
LPAZ **La Paz** 35.12 145 *e*P P 23 08 48.7 +1.2
comp=Z,3.0nm,0.6s,mb4.3
LPAZ ScP ScP 23 14 59.8 +4.0
LPAZ *e*ScP ScP 23 15 02.4 +6.6
HWUT **Hardware Ranch** 35.13 329 *e*P P 23 08 47.8 +0.2
Q12A **Willow Creek R** 35.13 323 ⇓P P 23 08 47.7 +0.2
baz=35
DAC **Darwin (Calif)** 35.20 317 *e*P P 23 08 47.5 -0.7
DAC *e* 23 11 19.0
DAC pmax pmax
comp=Z,30nm,0.9s,mb5.1
DAC **Darwin (Calif)** 35.20 317 *e*P P 23 08 47.5 -0.7
comp=Z,2.7nm,0.9s,mb4.1
DAC *e*PcP PcP 23 11 19.0 +1.4
SPUT **South Promonto** 35.37 328 *e*P P 23 08 49.0 -0.5
P12A **McGill** 35.46 323 ⇑P P 23 08 50.8 +0.4
baz=36,SNR=16
GRAC **Grapevine Rang** 35.47 318 ⇓P P 23 08 51.3 +0.9
baz=36
ISA **Isabella** 35.47 315 *e*P P 23 08 50.8 +0.3
ISA **Isabella** 35.47 315 ⇓P P 23 08 50.9 +0.5
baz=36
R10A **Warm Springs** 35.55 320 ⇑P P 23 08 51.9 +0.8
baz=36
CWC **Cottonwood Cre** 35.62 316 ⇓P P 23 08 52.4 +0.6
baz=36
AHID **Auburn Hatcher** 35.77 331 *e*P P 23 08 53.4 +0.4
comp=Z,124nm,0.7s,mb6.0
S09A **Goldfield** 35.79 319 ⇑P P 23 08 53.6 +0.4
baz=36,SNR=5.8
HVU **Hansel Valley** 35.87 328 *e*P P 23 08 53.9 0.0
O12A **Currie** 35.89 324 P P 23 08 54.8 +0.7
baz=36,SNR=26
VES **Vestal, Richgr** 35.98 315 ⇓P P 23 08 55.6 +0.8
baz=36
N13A **Wendover, West** 35.99 326 P P 23 08 55.8 +0.9
baz=36,SNR=8.9
TPH **Tonopah** 36.00 319 *e*P P 23 08 55.3 +0.3
R09A **Tonopah** 36.00 320 ⇑P P 23 08 55.6 +0.6
baz=36,SNR=9.1
PKM **Peak Mountain** 36.02 313 ⇓P P 23 08 55.7 +0.5
baz=36
REDW **Red Top Meadow** 36.11 332 *e*P P 23 08 56.5 +0.5
SNOW **Snow King Moun** 36.15 332 *e*P P 23 08 56.9 +0.6
LOHW **Long Hollow** 36.19 332 *e*P P 23 08 56.9 +0.2
TPAW **Teton Pass** 36.26 332 *e*P P 23 08 57.5 +0.3
M13A **Montello** 36.31 326 ⇑P P 23 08 58.1 +0.4
baz=36,SNR=24
RRI2 **Red Ridge** 36.32 331 *e*P P 23 08 50.4 -7.3
MOOW **Moose Ponds** 36.36 332 *e*P P 23 08 58.3 +0.2
HELL **Mitchell Peak,** 36.39 316 ⇑P P 23 08 58.6 +0.3
baz=36,SNR=10
Q09A **Carvers** 36.43 320 ⇓P P 23 08 59.0 +0.4
baz=36
DCID1 **Drake Creek** 36.45 332 *e*P P 23 08 59.0 +0.2
N12A **Clover Valley,** 36.45 325 ⇑P P 23 08 59.2 +0.3
baz=36,SNR=17
P10A **Eureka** 36.48 322 ⇑P P 23 08 59.5 +0.5
baz=36
IMW **Indian Meadow** 36.57 332 *e*P P 23 09 00.3 +0.5
comp=Z,31nm,0.6s,mb5.4
FLWY **Flagg Ranch** 36.60 332 *e*P P 23 09 01.0 +0.9
M12A **Wells** 36.76 326 ⇑P P 23 09 01.6 +0.1
baz=37,SNR=14
N11A **Elko Archery C** 36.82 324 ⇓P P 23 09 02.8 +0.8
baz=37
P09A **Austin** 36.84 321 ⇑P P 23 09 02.5 +0.4
baz=37
NVAR **Mina Array Bea** 36.89 319 P P 23 09 04.0 +1.4
comp=Z,11nm,0.7s,mb4.9,baz=123,slow=8.7,SNR=66
NVAR PcP PcP 23 11 23.8 +1.2
comp=Z,3.6nm,0.6s,baz=119,slow=4.7,SNR=4.0
NVAR ScP ScP 23 15 04.0 +1.7
comp=Z,3.6nm,0.7s,baz=129,slow=4.4,SNR=13
NVAR **Mina Array Bea** 36.89 319 P P 23 09 04.0 +1.4
NVAR PcP PcP 23 11 23.8 +1.2
NVAR ScP ScP 23 15 04.0 +1.7
Q08A **Gabbs** 36.91 320 ⇓P P 23 09 02.8 +0.1
baz=37,SNR=7.6
O10A **Cortez Mining,** 36.92 323 ⇑P P 23 09 03.3 +0.5
baz=37,SNR=7.2
KCC **Kaiser Creek** 36.94 317 ⇑P P 23 09 03.6 +0.6
baz=37
YFT **Old Faithful** 36.95 333 *e*P P 23 09 05.1 +2.0
LAO **LASA Array** 36.97 339 *e*P P 23 09 03.5 +0.2
comp=Z,28nm,0.7s,mb5.3
T06C **Millerton Lake** 37.03 316 ⇓P P 23 09 03.5 -0.2
baz=37
PKD **Parkfield** 37.05 314 ⇓P P 23 09 04.1 +0.1
baz=37
YMR **Madison River** 37.18 333 *e*P P 23 09 06.3 +1.3
comp=Z,85nm,0.7s,mb5.8
O09A **Fish Creek Ran** 37.25 322 ⇑P P 23 09 05.8 +0.2
baz=37,SNR=30
M11A **Holland Ranch,** 37.26 325 P P 23 09 06.2 +0.5
baz=37,SNR=5.6
U04C **Hernandez Rese** 37.43 314 ⇓P P 23 09 06.8 -0.4
baz=38
BMN **Battle Mountai** 37.44 323 *e*P P 23 09 08.1 +0.9
BMN pmax pmax
comp=Z,24nm,0.7s,mb5.2
BMN **Battle Mountai** 37.44 323 *e*P P 23 09 08.1 +0.9
comp=Z,24nm,0.7s,mb5.2
QLMT **Earthquake Lak** 37.51 333 *e*P P 23 09 09.4 +1.6
S06C **San Francisco** 37.59 317 ⇓P P 23 09 09.2 +0.7
baz=38,SNR=11
S05C **Merced** 37.63 316 ⇑P P 23 09 08.7 -0.1
baz=38
WAKR **Walker** 37.67 318 *e*P P 23 09 10.5 +1.4
R06C **Coleville** 37.69 318 ⇓P P 23 09 10.2 +0.9
baz=38,SNR=7.6
M10A **I.L. Ranch, Tu** 37.74 324 ⇑P P 23 09 09.9 +0.2
baz=38
ULM **Lac du Bonnet** 37.81 352 P P 23 09 08.3 -2.1
comp=Z,16nm,0.5s,mb5.1,baz=170,slow=8.2,SNR=38
ULM ScP ScP 23 15 04.3 -1.4
comp=Z,5.2nm,0.5s,baz=174,slow=3.9,SNR=9.2
ULM LR LR 23 26 43.9
comp=Z,521nm,21.7s,baz=170,slow=39
ULM **Lac du Bonnet** 37.81 352 P P 23 09 08.3 -2.1
ULM ScP ScP 23 15 04.3 -1.4
ULM LR LR 23 26 43.9
N09A **Rock Creek Ran** 37.88 323 ⇑P P 23 09 11.3 +0.3
baz=38,SNR=22
HAST **UC Hastings Re** 37.98 314 ⇓P P 23 09 12.2 +0.4
baz=38
HLID **Hailey** 37.99 329 *e*P P 23 09 11.9 0.0
comp=Z,21nm,0.7s,mb5.1
HLID *e*ScP ScP 23 15 08.0 +1.5
CMB **Columbia Colle** 38.03 317 *e*P P 23 09 11.7 -0.5
CMB **Columbia Colle** 38.03 317 ⇓P P 23 09 11.9 -0.3
baz=38
PACP **Pacheco Peak** 38.11 315 ⇓P P 23 09 12.6 -0.3
baz=38
R05C **Kirkwood Meado** 38.19 318 ⇑P P 23 09 14.4 +0.9
baz=38,SNR=6.0
M09A **Marrel Ranch,** 38.20 324 ⇑P P 23 09 13.6 0.0
baz=38
N08A **GE Springer Mi** 38.20 322 ⇑P P 23 09 13.5 -0.2
baz=38,SNR=14
BOZ **Bozeman (W)** 38.24 333 *e*P P 23 09 14.1 +0.2
O07A **Toulon** 38.27 321 ⇑P P 23 09 13.9 -0.4
baz=38,SNR=12
DLMT **Dillon** 38.45 332 *e*P P 23 09 16.3 +0.6
LAVA **Lava Cap Winer** 38.66 318 P P 23 09 18.0 +0.5
baz=39,SNR=5.1
N07B **Gerlach** 38.70 322 ⇑P P 23 09 18.2 +0.4
baz=39
L09A **Wilkinson Ranc** 38.70 324 ⇓P P 23 09 18.5 +0.6
baz=39
LRM **Limekiln Ridge** 38.74 333 *e*P P 23 09 18.4 +0.3
WENL **Wente Brothers** 38.74 316 ⇑P P 23 09 18.6 +0.5
baz=39
M08A **Happy Creek Ra** 38.76 323 P P 23 09 18.2 -0.1
baz=39,SNR=9.4
O06A **Flanigan** 38.86 320 ⇑P P 23 09 19.7 +0.5
baz=39
P05C **Yuba Gap, Truc** 38.87 319 ⇑P P 23 09 19.9 +0.7
baz=39
BEKR **Beckwourth** 39.03 319 ⇑P P 23 09 20.3 -0.2
baz=39
HRY **Holter Researc** 39.16 334 *e*P P 23 09 22.0 +0.3
K09A **Rome** 39.18 325 ⇑P P 23 09 21.5 -0.3
baz=39,SNR=19
L08A **Fields** 39.20 324 P P 23 09 21.8 -0.3
baz=39,SNR=8.6
N06A **Buffalo Meadow** 39.21 321 P P 23 09 21.6 -0.5
baz=39,SNR=12
SIV **San Ignacio** 39.28 136 P P 23 09 22.7 0.0
comp=Z,14nm,0.8s,mb4.8,baz=314,slow=9.3,SNR=32
SIV PcP PcP 23 11 30.6 +0.6
comp=Z,6.2nm,0.5s,baz=291,slow=4.2,SNR=6.5
SIV ScP ScP 23 15 15.1 +3.7
comp=Z,2.7nm,0.7s,baz=325,slow=3.5,SNR=6.1
EGMT **Eagleton** 39.38 337 *e*P P 23 09 23.5 0.0
comp=Z,22nm,0.6s,mb5.2
OHCM **Honcut** 39.46 318 *e*pP pP 23 09 44.3 +1.1
OHCM *e*sP sP 23 09 54.5 +2.1
WVOR **Wild Horse Val** 39.52 324 *e*P P 23 09 24.4 -0.3
WVOR pmax pmax
comp=Z,17nm,0.8s,mb4.9
WVOR **Wild Horse Val** 39.52 324 *e*P P 23 09 24.4 -0.3
comp=Z,17nm,0.8s,mb4.9
WVOR *e*pP pP 23 09 55.0 +11
WVOR *e*sP sP 23 10 11.2 +18
ORV **Oroville** 39.59 318 ⇓P P 23 09 25.6 +0.3
baz=40
SUTB **Sutter Butte** 39.60 318 ⇑P P 23 09 25.3 0.0
baz=40
K08A **Mann Creek Ran** 39.63 324 P P 23 09 25.6 +0.1
baz=40,SNR=194
L07A **Adell** 39.67 323 ⇓P P 23 09 25.7 -0.2
baz=40,SNR=23
M06C **Likely Place G** 39.87 321 ⇑P P 23 09 27.2 -0.3
baz=40
CHMT **Chamberlain Mo** 39.93 333 *e*P P 23 09 27.6 -0.4
LVC **Limon Verde** 40.02 152 P P 23 09 31.0 +2.3
comp=Z,13nm,0.8s,mb4.8,baz=318,slow=8.0,SNR=4.1
I09A **Lost Marbles R** 40.02 326 P P 23 09 28.7 -0.1

baz=40,SNR=9.1
K07A Rock Creek Ran 40.04 324 P **P** **23 09 28.8 -0.2**
baz=40,SNR=46
MSO Missoula 40.17 333 *e*P **P** **23 09 29.8 -0.3**
comp=Z,24nm,1.0s,mb5.0
HATC Hat Creek Radi 40.26 320 ⇓P **P** **23 09 30.4 -0.3**
baz=40
M05C Lookout 40.37 321 ⇑P **P** **23 09 31.5 -0.2**
baz=40,SNR=8.0
I08A Drewsey 40.43 326 ⇑P **P** **23 09 32.2 0.0**
baz=40
GASB Alder Springs 40.43 318 ⇑P **P** **23 09 32.8 +0.6**
baz=40
H09A Durkee 40.45 327 ⇑P **P** **23 09 32.2 -0.1**
baz=40
L05A Lakeview 40.58 322 ⇓P **P** **23 09 33.3 -0.2**
baz=41
K06A Valley Falls 40.69 323 ⇑P **P** **23 09 33.9 -0.4**
baz=41
P01C Double 8 Ranch 40.75 317 ⇓P **P** **23 09 35.4 +0.6**
baz=41
O02C Red Bluff 40.76 318 ⇓P **P** **23 09 33.7 -1.1**
baz=41
LASM Arnica Sink 40.77 321 P **P** **23 09 35.1 +0.1**
WDC Whiskeytown Da 40.81 319 ⇓P **P** **23 09 33.6 -1.7**
baz=41
H08A Prairie City 40.88 326 ⇑P **P** **23 09 34.7 -1.2**
baz=41,SNR=13
J06A Christmas Vall 40.91 324 ⇑P **P** **23 09 34.6 -1.5**
baz=41,SNR=8.4
M03C McCloud 40.93 320 ⇑P **P** **23 09 35.1 -1.1**
baz=41
M04C Macdoel 41.04 321 ⇑P **P** **23 09 36.3 -0.9**
baz=41,SNR=8.5
I07A Izee 41.06 325 P **P** **23 09 36.7 -0.7**
baz=41,SNR=13
L04A Klamath Falls 41.29 321 ⇑P **P** **23 09 38.5 -0.8**
baz=41
BSMT Bassoo Peak 41.32 333 P **P** **23 09 39.5 0.0**
I06A Prineville 41.37 325 ⇓P **P** **23 09 39.2 -0.7**
baz=41,SNR=6.2
N02C Big Bar 41.43 319 ⇑P **P** **23 09 39.5 -1.0**
baz=42
K04A Chilquin 41.45 322 ⇓P **P** **23 09 39.6 -1.0**
baz=42
M02C Callahan 41.45 320 ⇓P **P** **23 09 38.8 -1.7**
baz=42
YBH Yreka Blue Hor 41.55 320 P **P** **23 09 39.6 -1.8**
comp=Z,4.4nm,0.7s,mb4.3,baz=68,slow=6.2,SNR=13
YBH PcP PcP 23 11 36.8 -0.6
comp=Z,2.6nm,0.8s,baz=133,slow=3.3,SNR=3.7
YBH Yreka Blue Hor 41.55 320 *e*P **P** **23 09 39.7 -1.7**
YBH Yreka Blue Hor 41.55 320 ⇑P **P** **23 09 40.0 -1.4**
baz=42
KHMM Horse Mountain 41.73 319 *e*P **P** **23 09 43.6 +0.7**
WALA Waterton Lakes 41.87 335 *e*P **P** **23 09 43.8 -0.1**
comp=Z,15nm,0.6s,mb4.9
HAWA Hanford 42.58 328 *e*P **P** **23 09 48.8 -0.9**
J03A Ideyld Park 42.63 322 ⇑P **P** **23 09 49.1 -1.0**
baz=43
NEW Newport 42.69 332 *e*P **P** **23 09 49.8 -0.8**
NEW pmax pmax
comp=Z,16nm,0.7s
NEW Newport 42.69 332 *e*P **P** **23 09 49.8 -0.8**
comp=Z,16nm,0.7s,mb4.8
KBO Bosley Butte 42.76 320 *e*P **P** **23 09 51.8 +0.6**
G05A Wamic 42.79 325 ⇑P **P** **23 09 51.6 +0.1**
baz=43,SNR=7.3
OD2 Odessa Site #2 42.83 330 P **P** **23 09 51.4 -0.4**
BROR Big Rock Looko 42.85 324 P **P** **23 09 50.9 -1.0**
H04A Detroit Lake 42.94 324 ⇓P **P** **23 09 51.6 -1.1**
baz=43,SNR=10
J02A Umpqua 42.99 322 ⇓P **P** **23 09 52.2 -0.9**
baz=43
FFC Flin Flon 43.14 348 P **P** **23 09 53.2 -1.1**
comp=Z,192nm,0.5s,mb6.1,SNR=8.6
FFC Flin Flon 43.14 348 *e*P **P** **23 09 53.6 -0.7**
FFC pmax pmax
comp=Z,18nm,0.6s,mb5.0
FFC Flin Flon 43.14 348 *e*P **P** **23 09 53.6 -0.7**
comp=Z,18nm,0.6s,mb5.0
I03A Eugene 43.16 323 ⇓P **P** **23 09 53.3 -1.1**
baz=43
KEBM Edson Butte 43.18 321 *e*P **P** **23 09 55.3 +0.6**
F05A White Salmon 43.27 326 ⇑P **P** **23 09 55.0 -0.3**
baz=43
RNO Roman Nose 43.40 322 P **P** **23 09 56.1 -0.3**
G04A Mulino 43.42 325 ⇓P **P** **23 09 56.2 -0.3**
baz=44
I02A Mapleton 43.50 322 ⇑P **P** **23 09 56.8 -0.5**
baz=44,SNR=5.4
F04A Amboy 43.83 326 ⇑P **P** **23 09 59.6 -0.3**
baz=44
E05A Randle 43.86 327 ⇓P **P** **23 09 59.2 -0.9**
baz=44
G03A Yamhill 43.94 324 ⇑P **P** **23 09 59.6 -1.1**
baz=44,SNR=6.9
FMW Mount Fremont 44.05 327 P **P** **23 10 01.5 -0.1**
D05A Enumclaw 44.38 327 ⇓P **P** **23 10 03.5 -0.7**
baz=44
E04A Onalaska 44.40 326 ⇑P **P** **23 10 04.1 -0.3**
baz=44
F03A Seaside 44.46 325 ⇓P **P** **23 10 04.5 -0.4**
baz=44
C05A Tolt Reservoir 44.54 328 ⇑P **P** **23 10 04.1 -1.4**
baz=45,SNR=17
RPN Rapa Nui 44.71 207 P **P** **23 10 09.3 +2.4**
comp=Z,40nm,0.9s,mb5.2,baz=35,slow=4.2,SNR=3.7
RPN Rapa Nui 44.71 207 P **P** **23 10 08.7 +1.8**
comp=Z,32nm,0.7s,mb5.2
E03A Lebam 44.83 326 ⇑P **P** **23 10 06.2 -1.6**
baz=45
RPW Rockport 44.94 329 P **P** **23 10 07.7 -1.0**
GNW Green Mountain 45.06 327 *e*P **P** **23 10 08.3 -1.3**
SCHQ Schefferville 45.12 17 P **P** **23 10 08.8 -1.3**
comp=Z,17nm,0.5s,mb5.0,baz=219,slow=7.1,SNR=40
SCHQ LR LR 23 29 54.2
comp=Z,764nm,18.8s,baz=27,slow=37
SCHQ Schefferville 45.12 17 P **P** **23 10 08.8 -1.3**
SCHQ LR LR 23 29 54.2
B05A Bryant 45.12 328 ⇑P **P** **23 10 08.0 -2.1**
baz=45,SNR=9.2
C04A Brinnon 45.23 327 P **P** **23 10 09.9 -1.0**
baz=45,SNR=8.5
HDW Hoodsport 45.23 327 P **P** **23 10 09.9 -1.1**
A05A Maple Falls 45.59 329 ⇑P **P** **23 10 12.6 -1.3**
baz=46
B04A Port Angeles 45.72 327 ⇑P **P** **23 10 14.1 -0.8**
baz=46,SNR=6.7
A04A Legoe Bay, Lum 45.72 328 ⇑P **P** **23 10 13.7 -1.2**
baz=46
STW Striped Peak 45.87 327 P **P** **23 10 15.9 -0.1**
FCC Fort Churchill 46.03 356 *e*P **P** **23 10 15.9 -1.4**
FCC pmax pmax
comp=Z,26nm,0.5s,mb5.2
FCC Fort Churchill 46.03 356 *e*P **P** **23 10 15.9 -1.4**
comp=Z,26nm,0.5s,mb5.2
CFAA Coronel Fontan 48.19 157 P **P** **23 10 34.4 +0.3**
comp=Z,1.1nm,0.7s,mb3.8,baz=334,slow=6.2,SNR=17
BDFB Brasilia 48.84 124 P **P** **23 10 37.8 -1.2**
comp=Z,3.3nm,0.5s,mb4.5,baz=292,slow=13,SNR=6.1
BDFB LR LR 23 34 25.4
comp=Z,410nm,20.4s,baz=1.6,slow=40
BDFB Brasilia 48.84 124 P **P** **23 10 37.8 -1.2**
BDFB LR LR 23 34 25.4
CPUP Villa Florida 49.20 142 P **P** **23 10 41.1 -0.7**
comp=Z,2.7nm,0.5s,mb4.5,baz=324,slow=7.8,SNR=12
CPUP PcP PcP 23 12 07.2 +3.3
comp=Z,2.5nm,0.5s,baz=298,slow=4.7,SNR=6.2
CPUP LR LR 23 33 24.8
comp=Z,236nm,21.2s,baz=308,slow=38
CPUP Villa Florida 49.20 142 P **P** **23 10 41.1 -0.7**
CPUP 23 12 07.2
CPUP Villa Florida 49.20 142 P **P** **23 10 41.1 -0.7**
CPUP PcP PcP 23 12 07.2 +3.3
CPUP LR LR 23 33 24.8
YKA Yellowknife Ar 53.02 345 P **P** **23 11 08.6 -1.8**
comp=Z,10nm,0.6s,mb5.1,baz=152,slow=6.8,SNR=33
YKA LR LR 23 37 49.9
comp=Z,230nm,19.4s,baz=125,slow=41
YKA Yellowknife Ar 53.02 345 P **P** **23 11 08.7 -1.8**
YKA LR LR 23 37 49.9
YKW3 Yellowknife Ar 53.08 345 *e*P **P** **23 11 09.7 -1.2**
CRAG Craig 54.88 331 *e*P **P** **23 11 23.8 -0.2**
DLBC Dease Lake 55.21 335 LR LR 23 40 22.1
comp=Z,488nm,19.5s,baz=115,slow=42
PLCA Paso Flores 55.78 164 P **P** **23 11 30.9 +0.5**
comp=Z,19nm,0.9s,mb5.1,baz=340,slow=8.2,SNR=32
PLCA LR LR 23 32 14.7
comp=Z,257nm,19.0s,baz=350,slow=32
TAOE Nuku Hiva Isla 55.90 250 *e*LR LR 23 27 34.5
comp=Z,5μm,28.3s
TRQA Tornquist 56.31 155 *e*P **P** **23 11 33.3 -0.9**
comp=Z,15nm,1.1s,mb4.9
TRQA *e*pP pP 23 11 54.0 -0.4
RKT Rikitea 58.06 232 *e*S **S** **23 19 41.9 +0.6**
comp=Z,197nm,31.0s
RKT *e*LR LR 23 29 12.3
comp=Z,1μm,29.5s
RES Resolute Bay 61.93 358 P **P** **23 12 12.8 -0.3**
RES *e*pP pP 23 12 29.2 -4.3
DAWY Dawson 62.12 337 *e*P **P** **23 12 12.8 -1.5**
INK Inuvik 62.59 343 P **P** **23 12 15.9 -1.5**
comp=Z,9.1nm,0.6s,mb4.9,baz=126,slow=9.8,SNR=14
INK Inuvik 62.59 343 *e*P **P** **23 12 16.3 -1.1**
INK pmax pmax
comp=Z,10.0nm,0.6s
INK Inuvik 62.59 343 *e*P **P** **23 12 16.3 -1.1**
comp=Z,10nm,0.6s,mb4.9
DIV Divide 63.42 333 *e*P **P** **23 12 24.6 +1.7**
PMR Palmer 65.10 333 *e*P **P** **23 12 32.0 -1.9**
SLKM Skilak Lake 65.24 331 *e*P **P** **23 12 33.1 -1.7**
KDAK Kodiak Island 65.61 328 P **P** **23 12 35.5 -1.7**
comp=Z,8.2nm,0.7s,mb4.7,baz=36,slow=5.6,SNR=6.9
COLA College 65.76 336 *e*P **P** **23 12 36.5 -1.7**
MCK McKinley 65.77 335 *e*P **P** **23 12 34.5 -3.8**
comp=Z,6.0nm,0.7s,mb4.5
SUMG Summit 66.39 15 *e*P **P** **23 12 43.2 +1.0**
PPT Papeete 67.68 245 *e*S S 23 21 41.4 -0.1
comp=Z,196nm,23.8s
PPT *e*LR LR 23 33 08.7
comp=Z,2μm,28.2s,baz=61
PPT Papeete 67.68 245 LR LR 23 35 03.7
comp=Z,253nm,19.2s,baz=119,slow=29
CHGN Chignik 68.41 326 *e*P **P** **23 12 53.1 -1.9**
BORG Borgarnes 68.67 25 P **P** **23 12 54.4 -2.2**
USHA Ushuaia 69.48 168 P **P** **23 13 01.7 +0.1**
comp=Z,13nm,1.0s,mb4.7,baz=357,slow=8.4,SNR=4.2
USHA LR LR 23 36 24.6
comp=Z,732nm,19.5s,baz=292,slow=30
TBI Tubuai 69.86 239 *e*S S 23 22 07.4 +0.1
comp=Z,162nm,27.5s
TBI *e*LR LR 23 34 23.3
comp=Z,1μm,28.8s,baz=65
DAG Danmarks Havn 72.93 13 *i* P **P** **23 13 22.0 -0.4**
comp=Z,9.1nm,0.3s,mb5.1
DAG Danmarks Havn 72.93 13 *e*P **P** **23 13 22.0 -0.4**
DAG pmax pmax
comp=Z,9.0nm,0.3s,mb5.1
DAG Danmarks Havn 72.93 13 *e*P **P** **23 13 22.0 -0.4**
comp=Z,9.1nm,0.3s,mb5.1
JMIC Jan Mayen 74.58 20 *e*P **P** **23 13 36.5 +4.5**
JMIC *e*S S 23 23 00.9 -0.3
JMIC AMS AMS 23 41 57.9
comp=Z,237nm,25.2s
JMIC Jan Mayen 74.58 20 *e*P pP 23 13 51.0 -2.1
JMIC LR LR
comp=Z,240nm,25.2s
ESK Eskdalemuir 76.72 36 *e*P **P** **23 13 44.1 -0.1**
comp=Z,3.9nm,0.5s,mb4.4
QUIF Quistinic 77.29 43 *e*P **P** **23 13 46.6 -0.9**
comp=Z,24nm,0.9s,mb4.6
QUIF Quistinic 77.29 43 *e*P **P** **23 13 46.6 -0.9**
QUIF pmax pmax
comp=Z,12nm,0.9s,mb4.6
QUIF Quistinic 77.29 43 *e*P **P** **23 13 46.6 -0.9**
comp=Z,12nm,0.9s,mb4.6
ESDC Sonseca Array 77.54 52 P **P** **23 13 50.3 +1.4**
comp=Z,1.8nm,0.5s,mb4.0,baz=283,slow=5.1,SNR=24
ESDC LR LR 23 42 13.6
comp=Z,186nm,21.2s,baz=300,slow=31
ESLA Sonseca Array 77.54 52 *e*P **P** **23 13 50.8 +1.9**
comp=Z,0.3nm,0.5s
SGMF Saint Gilles 77.67 43 *e*P **P** **23 13 48.6 -1.0**
comp=Z,5.4nm,0.8s,mb4.0
SGMF Saint Gilles 77.67 43 *e*P **P** **23 13 48.6 -1.0**
comp=Z,7.7nm,0.8s,mb4.0
GRR Gorron 78.78 43 *e*P **P** **23 13 54.1 -1.6**
comp=Z,11nm,0.7s,mb4.5
GRR Gorron 78.78 43 *e*P **P** **23 13 54.1 -1.6**
GRR pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
GRR Gorron 78.78 43 *e*P **P** **23 13 54.1 -1.6**
comp=Z,5.6nm,0.7s,mb4.5
FLN La Foliniere 78.98 42 *e*P **P** **23 13 55.3 -1.5**
comp=Z,8.2nm,0.6s,mb4.5
FLN *e*R
comp=Z,497nm,21.8s
FLN La Foliniere 78.98 42 *e*P **P** **23 13 55.3 -1.5**
FLN pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
FLN MLR MLR
comp=Z,500nm,21.8s
FLN La Foliniere 78.98 42 *e*P **P** **23 13 55.3 -1.5**
comp=Z,4.1nm,0.6s,mb4.4
FLN LR LR
comp=Z,500nm,21.8s
SJPF Ste Jean 79.17 48 *e*P **P** **23 13 59.7 +1.8**
comp=Z,14nm,0.9s,mb4.5
SJPF Ste Jean 79.17 48 *e*P **P** **23 13 59.7 +1.8**
SJPF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
SJPF Ste Jean 79.17 48 *e*P **P** **23 13 59.7 +1.8**
comp=Z,6.8nm,0.9s,mb4.5
LDF La Druitiere 79.24 42 *e*P **P** **23 13 56.8 -1.4**
comp=Z,15nm,0.9s,mb4.5
LDF La Druitiere 79.24 42 *e*P **P** **23 13 56.8 -1.4**
LDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
LDF La Druitiere 79.24 42 *e*P **P** **23 13 56.8 -1.4**
comp=Z,7.4nm,0.9s,mb4.5
KBS Kingsbay 79.42 11 *e*P **P** **23 14 05.4 +6.2**
KBS *e*S S 23 23 54.1 +0.3
KBS AMS AMS 23 48 45.6
comp=Z,177nm,21.5s
MFF Saint Martin d 79.48 44 *e*P **P** **23 13 59.1 -0.4**
comp=Z,5.8nm,0.6s,mb4.3
MFF Saint Martin d 79.48 44 *e*P **P** **23 13 59.1 -0.4**
MFF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
MFF Saint Martin d 79.48 44 *e*P **P** **23 13 59.1 -0.4**
comp=Z,2.9nm,0.6s,mb4.3
ETSF Etsaut 79.69 48 *e*P **P** **23 13 59.9 -0.8**
EPF Esparros 80.32 48 *e*P **P** **23 14 03.0 -1.1**
comp=Z,3.8nm,0.7s,mb4.0
EPF Esparros 80.32 48 *e*P **P** **23 14 03.0 -1.1**
comp=Z,1.9nm,0.7s,mb4.0
LFF La Frestale 80.33 46 *e*P **P** **23 14 03.8 -0.3**
BER Bergen 80.69 30 *e* pP 23 14 25.9 -1.5
BER AMS AMS 23 44 29.6
comp=Z,234nm,20.4s
RJF Les Rejaudoux 80.81 46 *e*P **P** **23 14 06.4 -0.3**
RJF *e*R
comp=Z,333nm,21.0s
RJF Les Rejaudoux 80.81 46 *e*P **P** **23 14 06.4 -0.3**
RJF LR LR
comp=Z,330nm,21.0s
TCF Toulx Ste Croi 81.14 45 *e*P **P** **23 14 06.5 -1.9**
comp=Z,3.5nm,0.6s,mb4.0
TCF Toulx Ste Croi 81.14 45 *e*P **P** **23 14 06.5 -1.9**
comp=Z,1.8nm,0.6s,mb4.1
AMKA Amchitka 81.60 321 *e*P **P** **23 14 10.0 -0.9**
BAIF Baives 81.82 41 *e*P **P** **23 14 11.0 -1.0**
LOR Lormes 82.09 43 *e*P **P** **23 14 12.4 -1.0**
comp=Z,3.7nm,0.7s,mb4.0
LOR *e*R
comp=Z,378nm,22.0s
LOR Lormes 82.09 43 *e*P **P** **23 14 12.4 -1.0**
LOR pmax pmax
comp=Z,20nm,0.7s,mb5.1
LOR MLR MLR
comp=Z,380nm,22.0s
LOR Lormes 82.09 43 *e*P **P** **23 14 12.4 -1.0**
comp=Z,1.9nm,0.7s,mb4.0
LOR LR LR
comp=Z,380nm,22.0s
DBIC Dimbokro 82.11 85 P **P** **23 14 12.8 -0.8**
comp=Z,1.6nm,0.7s,mb4.0,baz=353,slow=8.1,SNR=4.4
DBIC LR LR 23 47 47.6
comp=Z,261nm,19.9s,baz=274,slow=34
DBIC Dimbokro 82.11 85 P **P** **23 14 12.8 -0.8**
DBIC LR LR 23 47 47.6
KONO Kongsberg 82.94 30 *e* pP 23 14 35.5 -3.7
KONO Kongsberg 82.94 30 *e*P pP 23 14 38.2 -1.0
NB2 NORSAR Subarra 83.38 29 P **P** **23 14 20.0 -0.1**
comp=Z,0.9nm,0.6s,mb3.8,baz=286,slow=5.1
NOA NORSAR Array B 83.38 29 P **P** **23 14 20.1 -0.1**
comp=Z,1.3nm,0.7s,mb3.9,baz=286,slow=5.0,SNR=7.9
NOA LR LR 23 48 46.0
comp=Z,75nm,21.9s,baz=280,slow=34
BILL Bilibino 83.86 339 ⇓ *i*P **P** **23 14 21.5 -1.1**
BILL *e**PP pP 23 14 50.3 +6.3
BILL pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
BILL MLR MLR
comp=Z,300nm,22.0s
TRO Tromso 83.89 20 *e*S S 23 24 34.4 -5.5
TRO AMS AMS 23 48 11.9
comp=Z,152nm,21.5s
CDF Champ du Feu 84.12 42 *e*P **P** **23 14 23.2 -0.7**
comp=Z,3.2nm,0.7s,mb4.0
CDF Champ du Feu 84.12 42 *e*P **P** **23 14 23.2 -0.7**
CDF pmax pmax
comp=Z,20nm,0.7s,mb5.1
CDF Champ du Feu 84.12 42 *e*P **P** **23 14 23.2 -0.7**
comp=Z,1.6nm,0.7s,mb4.0
ARCES ARCESS Array B 86.05 19 P **P** **23 14 31.9 -1.7**
comp=Z,1.1nm,0.5s,mb4.1,baz=287,slow=4.6,SNR=12
ARCES LR LR 23 55 03.8
comp=Z,169nm,20.4s,baz=266,slow=37
MOX Moxa 86.31 39 *e*P pP 23 14 51.2 -5.2
MOX
comp=Z,200nm,23.0s
GRA1 Grafenberg Arr 86.33 40 *e*P pP 23 14 52.1 -4.3
GRA1 LR LR
comp=Z,300nm,19.6s
GRF Grafenberg Arr 86.33 40 *e*P pP 23 14 52.1 -4.3
comp=Z,8.0nm,0.5s
GRF *e*L 23 52 22.4
comp=Z,328nm,19.6s
AFI Afiamalu 86.92 255 LR LR 23 43 15.2
comp=Z,222nm,21.3s,baz=57,slow=28
NKC Novy Kostel 86.94 39 *e*pP pP 23 14 56.5 -2.9
NKC *e*SKS 23 24 56.1
NKC AMS AMS 23 45 40.0
comp=Z,600nm,31.5s
CLL Collm 86.97 38 P **P** **23 14 41.0 +2.9**
comp=Z,logA/T=0.5,mb4.2
CLL *i* *PP pP 23 14 57.2 -2.4
CLL *e*SP 23 26 06.0
CLL *e*PS 23 26 24.0
CLL Collm 86.97 38 *e*(P) **P** **23 14 41.0 +2.9**
comp=Z,3.0nm,0.9s,mb4.2
CLL *i* pP pP 23 14 57.2 -2.4
comp=Z,5.0nm,0.9s
CLL *e*SP 23 26 06.0
CLL *e*PS 23 26 24.0
CLL LmV 23 50 00.0
comp=Z,200nm,18.0s
CLL Collm 86.97 38 *e*P **P** **23 14 41.0 +2.9**
comp=Z,3.0nm,0.9s,mb4.2
CLL *i* pP pP 23 14 57.2 -2.4
CLL *e*SKS 23 24 42.0
TORD Torodi Ar. Bea 87.07 77 P **P** **23 14 37.4 -1.1**
comp=Z,0.8nm,0.5s,mb3.9,baz=293,slow=5.5,SNR=25
TORD PKKPbc PKKPbc 23 32 35.0 +4.9
comp=Z,0.2nm,0.5s,baz=61,slow=0.3,SNR=5.5
TORD LR LR 23 50 15.6
comp=Z,309nm,21.3s,baz=285,slow=33
TORD Torodi Ar. Bea 87.07 77 P **P** **23 14 37.4 -1.1**
TORD PKKPbc PKKPbc 23 32 35.0 +4.9
TORD LR LR 23 50 15.6
BRG Berggiesshubel 87.67 38 *e*(P) pP 23 15 00.2 -2.7
comp=Z,1.4nm,1.0s
BRG *e* 23 25 00.0
BRG
comp=N,138nm,26.1s
BRG
comp=E,181nm,28.4s
BRG
comp=Z,284nm,31.2s
KHC Kasperske Hory 87.96 40 *e*pP pP 23 15 00.0 -4.4
KHC *e*SKS 23 24 58.0
KHC AMS AMS 23 45 20.0
comp=Z,500nm,27.7s
GERES GERESS Array B 88.12 40 P **P** **23 14 42.5 -1.1**
comp=Z,0.6nm,0.6s,mb3.8,baz=258,slow=2.6,SNR=6.5
GERES LR LR 23 51 16.1
comp=Z,231nm,19.8s,baz=278,slow=34
PVCC Panska Ves 88.15 39 AMS AMS 23 46 30.0
PRU Pruhonice 88.30 39 *e*P **P** **23 14 55.6 +11**
PRU *e*SKS 23 25 04.1
PRU AMS AMS 23 46 00.0
comp=Z,500nm,28.8s
KEST Kesra 88.63 54 P **P** **23 14 47.1 +1.1**
comp=Z,0.6nm,0.6s,mb3.8,baz=247,slow=2.0,SNR=7.8
KEST LR LR 23 51 06.1
comp=Z,36nm,19.5s,baz=86,slow=33
UPC Upice 89.03 38 *e*pP pP 23 15 08.1 -1.3
TREC Trest 89.10 40 AMS AMS 23 46 40.0
comp=Z,400nm,22.9s
DPC Dobruska-Polom 89.27 38 *e*pP pP 23 15 02.9 -7.7
DPC AMS AMS 23 47 10.0
comp=Z,400nm,25.9s
FINES FINESS Array B 89.94 26 P **P** **23 14 52.2 +0.1**
comp=Z,1.2nm,0.8s,mb4.1,baz=318,slow=2.6,SNR=7.0
AKASG Malin Array Be 96.62 35 LR LR 23 58 20.3
comp=Z,114nm,21.0s,baz=300,slow=35
OBN Obninsk 97.98 28 *e**PP pP 23 15 51.2 +0.5
OBN *e*PS PS 23 28 11.5 -11
VNA3 Neumayer Olymp 98.43 161 *e*P **P** **23 15 30.0 -1.0**
VNA3 *e* 23 15 33.4
SNAA Sanae 100.66 161 P Pdif 23 15 39.8 -1.1
comp=Z,0.9nm,0.9s,baz=278,slow=3.4,SNR=5.3
SNAA Sanae 100.66 161 *e*P Pdif 23 15 40.4 -0.5
SNAA *e* 23 15 43.2
SNAA Sanae 100.66 161 *e*P Pdif 23 15 38.5 -2.5
BRTR Keskin Array B 104.86 43 PKKPbc PKKPbc 23 31 44.0 +1.9
comp=Z,0.4nm,0.7s,baz=123,slow=4.6,SNR=3.9
CN2 Changchun 115.79 334 *e*PKP PKPdf 23 20 31.8 -3.2
BOSA Boshof 116.56 116 PKP PKPdf 23 20 37.1 +0.6
comp=Z,2.2nm,0.5s,baz=10,slow=12,SNR=11
LBTB Lobatse 116.78 112 PKP PKPdf 23 20 37.8 +1.0
comp=Z,4.5nm,0.9s,baz=261,slow=9.4,SNR=5.6
LBTB Lobatse 116.78 112 PKPdf PKPdf 23 20 36.3 -0.5
SONM Songino Array 118.19 349 PKP PKPdf 23 20 38.9 -0.6
comp=Z,0.5nm,0.6s,baz=254,slow=1.6,SNR=5.7
SONM PKKPbc PKKPbc 23 30 57.9 -0.3
comp=Z,0.5nm,0.4s,baz=181,slow=3.1,SNR=6.2
LSZ Lusaka 118.47 101 PKP PKPdf 23 20 41.3 +1.1
comp=Z,0.8nm,0.4s,baz=250,slow=13,SNR=7.7
MATP Matopo 119.22 106 PKP PKPdf 23 20 41.7 +0.1
comp=Z,2.3nm,0.4s,baz=273,slow=1.6,SNR=24
MATP Matopo 119.22 106 PKP PKPdf 23 20 41.7 +0.1
MKAR Makanchi Array 120.02 8 PKP PKPdf 23 20 40.8 -2.3
comp=Z,0.3nm,0.3s,baz=266,slow=3.0,SNR=4.4
MAW Mawson 122.10 167 PKP PKPdf 23 20 46.4 -0.7
comp=Z,2.2nm,0.5s,baz=205,slow=2.1,SNR=4.8
MAW Mawson 122.10 167 PKP PKPdf 23 20 46.4 -0.7
MAW *e*PKPdf PKPdf 23 20 48.8 +1.7
WMQ Urumqi 123.47 4 *e*PKP PKPdf 23 20 47.0 -2.7
WMQ PP PP 23 22 34.0 +2.1
WMQ PP PP
comp=Z,107nm,8.0s
WMQ LR LR
comp=N,598nm,16.0s
WMQ LR LR
comp=E,465nm,16.0s
WMQ LR LR
comp=Z,678nm,16.0s
HHC Hu-ho-hao-te 123.51 342 *e*PKP PKPdf 23 20 46.4 -3.4
HHC PP PP 23 22 33.3 +1.2
HHC PKS 23 24 21.9
HHC PP PP
comp=Z,47nm,10.4s
HHC LR LR
comp=N,184nm,27.1s
HHC LR LR
comp=E,154nm,29.4s
HHC LR LR
comp=Z,354nm,33.8s
CASY Casey 125.15 189 *e*PKPdf PKPdf 23 20 50.7 -2.2
SSE Sheshan 127.96 328 PKP PKPdf 23 20 54.0 -4.3
SSE PP PP 23 23 06.3 +4.6
SSE LR LR
comp=N,132nm,27.2s
SSE LR LR
comp=E,46nm,27.2s
SSE LR LR

	comp=Z,197nm,24.8s								
NJ2	**Nanjing**	**128.35**	**330**	*e*PKP	PKPdf	23 20 57.1	-2.0		
NJ2				PP	PP	23 23 10.0	+5.7		
NJ2				PKS		23 24 32.0			
NJ2				PP	PP				
	comp=Z,70nm,8.7s								
NJ2				LR	LR				
	comp=N,140nm,29.0s								
NJ2				LR	LR				
	comp=E,240nm,22.0s								
NJ2				LR	LR				
	comp=Z,200nm,13.7s								
LZH	**Lanzhou**	**130.00**	**347**	*e*PKP	PKPdf	23 21 00.0	-2.2		
LZH				PP	PP	23 23 16.5	+1.4		
LZH				PP	PP				
	comp=Z,70nm,6.9s								
STKA	**Stephens Creek**	**130.65**	**239**	PKP	PKPdf	23 21 04.6	+1.2		
	comp=Z,2.3nm,0.5s,baz=110,slow=4.8,SNR=6.7								
STKA				SKPbc	SKPbc	23 24 25.7	+5.6		
	comp=Z,4.0nm,0.8s,baz=121,slow=3.9,SNR=6.4								
STKA	**Stephens Creek**	**130.65**	**239**	*e*PKP	PKPdf	23 21 04.2	+0.8		
WSAR	**Wadi Sarin**	**131.64**	**42**	SKPbc	SKPbc	23 24 23.0	-0.8		
	baz=299,slow=5.2								
OPO	**Ambohidratompo**	**136.80**	**103**	SKPbc	SKPbc	23 24 44.4	+3.8		
	comp=Z,8.1nm,0.8s,baz=263,slow=3.7,SNR=9.5								
WB2	**Warramunga Arr**	**138.63**	**254**	*e*PKP	PKPdf	23 21 19.8	+1.5		
WRAB	**Tennant Creek**	**138.63**	**254**	*i* PKIKP	PKPdf	23 21 20.0	+1.7		
WRAB	**Tennant Creek**	**138.63**	**254**	*e*PKPdf	PKPdf	23 21 20.0	+1.6		
WRA	**Warramunga Arr**	**138.64**	**254**	PKhKP		23 21 09.9			
	comp=Z,1.6nm,0.8s,baz=94,slow=3.0,SNR=62								
WRA				PKP	PKPdf	23 21 19.5	+1.2		
	comp=Z,5.8nm,0.5s,baz=88,slow=1.8,SNR=22								
WRA				SKPbc	SKPbc	23 24 50.6	+4.7		
	comp=Z,2.1nm,0.8s,baz=87,slow=2.8,SNR=6.4								
ASAR	**Alice Springs**	**138.71**	**249**	PKhKP		23 21 09.5			
	comp=Z,1.7nm,0.7s,baz=107,slow=2.4,SNR=13								
ASAR				PKP	PKPdf	23 21 20.2	+1.8		
	comp=Z,2.8nm,0.6s,baz=98,slow=2.4,SNR=9.5								
ASAR				SKPbc	SKPbc	23 24 51.7	+5.6		
	comp=Z,3.0nm,0.9s,baz=105,slow=2.7,SNR=9.0								
GKN	**Gorkha**	**138.80**	**10**	*e*P	SKPdf	23 24 45.8	-0.5		
GUN	**Gumba**	**139.07**	**8**	*e*P	SKPdf	23 24 46.7	-0.1		
	comp=Z,32nm,0.7s								
KKN	**Kakani**	**139.11**	**9**	*e*P	SKPdf	23 24 47.2	+0.3		
	comp=Z,25nm,1.0s								
DMN	**Daman**	**139.26**	**9**	*e*P	SKPdf	23 24 47.5	+0.3		
	comp=Z,21nm,1.0s								
PKI	**Pulchoki**	**139.34**	**9**	*e*P	SKPdf	23 24 47.5	+0.2		
JIRN	**Jiri**	**139.36**	**8**	*e*P	SKPdf	23 24 46.7	-0.6		
KMI	**Kunming**	**140.76**	**344**	PKP	PKPdf	23 21 19.0	-3.2		
KMI				PP	PP	23 24 24.8	+1.9		
KMI				PKS		23 24 53.5			
KMI				PPP		23 27 32.9			
KMI				SKKS	SKKSac	23 30 59.4	-10		
KMI				SS	SS	23 42 37.0	-5.7		
KMI				SSS		23 47 55.3			
KMI				LR	LR				
	comp=N,195nm,27.9s								
KMI				LR	LR				
	comp=E,171nm,30.4s								
KMI				LR	LR				
	comp=Z,385nm,27.9s								
FORT	**Forrest**	**142.10**	**236**	*e*PKP	PKPdf	23 21 24.8	+0.2		
QIZ	**Qiongzhong**	**143.65**	**330**	PKP	PKPdf	23 21 26.5	-0.9		
QIZ				PP	PP	23 24 38.8	-1.5		
QIZ				LR	LR				
	comp=Z,228nm,38.6s								
FITZ	**Fitzroy Crossi**	**146.97**	**257**	*e*PKP	PKPdf	23 21 34.4	+1.3		
KLBR	**Kellerberrin**	**149.69**	**228**	*e*PKP	PKPdf	23 21 42.3	+4.8		
MUN	**Mundaring**	**150.58**	**226**	*e*PKIKP	PKPdf	23 21 44.3	+5.4		
MBWA	**Marble Bar**	**152.05**	**249**	*e*PKPbc	PKPbc	23 21 48.5	+0.7		
TSI	**Tuntungan**	**162.40**	**337**	*e*P	PKPdf	23 21 56.0	+1.9		
	comp=Z,9.0nm,1.1s								

*ISCJB **22** 23:05:45.0±1.0, 2014S±007×687W±02, h116km±11km, mb3.7/1, Error ellipse: s-maj=29.3km s-min=10.6km az=20.6*
*IDC **22** 23:05:45.4±1.9, 2015S×6866W, h110km±17km, mb3.5/2, mb1 3.3/6, mb1mx3.2/20, mbtmp3.6/6, Error ellipse: s-maj=56.0km s-min=14.1km az=104.0*
*NEIC **22** 23:05:46.1±1.0, 2013S×6864W, h107km±12km, mb3.7/1, Error ellipse: s-maj=24.3km s-min=9.6km az=99.0*
ISC 22 23:05:46.4±1.0, 2014S±007×687W±02, h107km±11km, n10, σ0 66/11, mb3.7/1, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.47**	**186**	P	**Pn**	**23 06 24.2**	**-1.0**
	4.6nm,0.3s,baz=346,slow=12,SNR=62						
LVC				S	**Sn**	**23 06 55.0**	**-0.2**
	84nm,0.3s,baz=125,slow=20,SNR=60						
LPAZ	**La Paz**	**3.86**	**7**	P	**Pn**	**23 06 44.0**	**+0.2**
	1.2nm,0.3s,baz=182,slow=8.0,SNR=20						
SIV	**San Ignacio**	**8.31**	**61**	P	**Pn**	**23 07 44.3**	**+0.4**
	1.8nm,0.3s,baz=257,slow=12,SNR=51						
CFAA	**Coronel Fontan**	**11.42**	**178**	P	**Pn**	**23 08 27.2**	**+1.1**
	0.0nm,0.3s,baz=10,slow=5.0,SNR=2.8						
CFAA	**Coronel Fontan**	**11.42**	**178**	P	**Pn**	**23 08 27.2**	**+1.1**
TRQA	**Tornquist**	**18.77**	**163**	*e*P	**P**	**23 09 57.1**	**0.0**
	3.3nm,0.9s						
PLCA	**Paso Flores**	**20.59**	**184**	P	**P**	**23 10 17.4**	**+0.6**
	2.3nm,0.7s,baz=349,slow=10,SNR=7.2						
WCI	**Wyandotte Cave**	**60.38**	**344**	P	**P**	**23 15 44.0**	**-0.3**
ACSO	**Alum Creek Sta**	**61.53**	**348**	P	**P**	**23 15 52.5**	**+0.5**
TORD	**Torodi Ar. Bea**	**76.68**	**71**	P	**P**	**23 17 24.4**	**-1.2**
	0.6nm,0.4s,mb3.7,baz=254,slow=5.1,SNR=12						

*ISCJB **22** 23:35:52.5±1.4, 4253N±004×431E±0.1, h4km±6km, Error ellipse: s-maj=13.3km s-min=6.0km az=16.6*
*TIF **22** 23:35:53.8, 4249N×4323E, h17km, 2km*
*MOS **22** 23:35:53.8±0.3, 4255N×4318E, h15km, mb3.6/1, Error ellipse: s-maj=55.6km s-min=11.4km az=137.6*
ISC 22 23:35:53.6±1.5, 4252N±004×432E±01, h11km±5km, n14, σ0 85/27, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONI	**Oni**	**0.23**	**76**	P	**Pg**	**23 35 58.2**	**-0.2**
ONI				S	**Sg**	**23 36 02.1**	**+0.5**
ONI	**Oni**	**0.23**	**76**	P	**Pg**	**23 35 58.2**	**-0.2**
ONI				S	**Sg**	**23 36 02.1**	**+0.5**
DIGR	**Digorskoe uzhe**	**0.49**	**40**	*i* PG	**Pg**	**23 36 03.8**	**+0.6**
DIGR				*e*S	**Sg**	**23 36 11.4**	**+1.7**
ZEI	**Tsey**	**0.61**	**66**	*e*PG	**Pg**	**23 36 06.1**	**+0.7**
ZEI				*i*		23 36 16.9	
KORR	**Kora**	**0.88**	**50**	*e*PG	**Pg**	**23 36 10.4**	**-0.2**
KORR				*e*S	**Sg**	**23 36 22.8**	**+0.8**
GOR	**Gori**	**0.89**	**127**	P	**Pg**	**23 36 11.1**	**+0.3**
GOR				S	**Sg**	**23 36 21.9**	**-0.6**
LACR	**Lac**	**0.90**	**70**	*e*PG	**Pg**	**23 36 10.6**	**-0.3**
LACR				*e*S	**Sg**	**23 36 23.1**	**+0.5**
ARNR	**Ardon**	**1.06**	**51**	*e*PG	**Pg**	**23 36 13.4**	**-0.7**
ARNR				*e*S	**Sg**	**23 36 27.9**	**0.0**
KMSR	**Komsomolskaya**	**1.19**	**44**	*e*PG	**Pg**	**23 36 15.5**	**-1.0**
KMSR				*e*S	**Sb**	**23 36 31.5**	**-0.1**
VLKR	**Vladikavkaz**	**1.24**	**65**	*e*PG	**Pg**	**23 36 16.1**	**-1.3**
VLKR				*e*S	**Sb**	**23 36 32.6**	**-0.4**
SNJR	**Sundja**	**1.34**	**65**	*e*PG	**Pg**	**23 36 17.6**	**-1.7**
SNJR				*e*S	**Sb**	**23 36 35.3**	**-0.6**
TBLG	**Delisi**	**1.42**	**123**	P	**Pn**	**23 36 19.6**	**+0.2**
TBLG				S	**Sn**	**23 36 38.0**	**-0.1**
MTA	**Mtatsminda**	**1.48**	**124**	P	**Pn**	**23 36 20.4**	**+0.3**
MTA				S	**Sn**	**23 36 39.5**	**0.0**
DGRG	**David-gareji**	**1.98**	**122**	P	**Pn**	**23 36 29.9**	**+3.0**
DGRG				S	**Sn**	**23 36 55.4**	**+3.7**

*ATH **23** 00:17:08.5, 3880N×2103E, h26km±4km, MD3.1/3*
*THE **23** 00:17:09.9, 3880N×2104E, h11km*
CSEM 23 00:17:10.0±0.2, 3879N×2104E, h15km, MD3.1, Error ellipse: s-maj=4.2km s-min=3.4km az=163.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD	**Levkas**	**0.32**	**255**	*e*Pg	Pg	00 17 15.3	-1.2
LKD				*e*Sg	Sg	00 17 21.6	+0.7
EVR	**Evrytania**	**0.61**	**78**	*e*PN	Pn	00 17 21.1	-3.1
EVR				*e*SN	Sg	00 17 30.1	-0.1
VLS	**Valsamata**	**0.71**	**210**	*e*PN	Pn	00 17 22.8	-2.6
VLS				*e*SN	Sg	00 17 33.6	+0.5
RLS	**Riolos of Patr**	**0.81**	**155**	*e*PN	Pn	00 17 24.6	-2.2
IGT	**Igoumenitsa**	**0.92**	**324**	*e*Pg	Pg	00 17 26.9	-0.9
IGT				*e*Sg	Sg	00 17 40.5	+0.6
AGG	**Agios Georgios**	**1.03**	**77**	*e*Pg	Pg	00 17 29.9	-0.1
AGG				*e*Sg	Sg	00 17 43.7	+0.2

*ATH **23** 00:21:15.3, 3879N×2099E, h23km±7km, MD3.1/3*
*THE **23** 00:21:16.0, 3864N×2104E, h13km*
CSEM 23 00:21:16.7±0.1, 3875N×2102E, h10km, MD3.1, Error ellipse: s-maj=4.3km s-min=2.8km az=161.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD	**Levkas**	**0.29**	**261**	*e*Pg	Pg	00 21 22.0	-0.6
LKD				*e*Sg	Sg	00 21 27.6	+1.1
EVR	**Evrytania**	**0.64**	**75**	*e*PN	Pg	00 21 28.4	-0.6
EVR				*e*SN	Sg	00 21 37.5	+0.1
VLS	**Valsamata**	**0.67**	**211**	*e*PN	Pn	00 21 29.0	-3.2
VLS				*e*SN	Sg	00 21 39.4	+1.0
RLS	**Riolos of Patr**	**0.78**	**153**	*e*PN	Pn	00 21 31.2	-2.5
IGT	**Igoumenitsa**	**0.94**	**326**	*e*Pg	Pg	00 21 34.5	-0.3
IGT				*e*Sg	Sg	00 21 50.9	+3.7
IGT	**Igoumenitsa**	**0.94**	**326**	*e*Pg	Pg	00 21 34.5	-0.4
AGG	**Agios Georgios**	**1.06**	**75**	*e*Pg	Pg	00 21 36.6	-0.5
AGG				*e*Sg	Sg	00 21 51.0	+0.2

*ISCJB **23** 00:21:41.6±1.5, 490S±02×1615E±0.1, h33km, mb3.5/2, Error ellipse: s-maj=30.1km s-min=8.4km az=151.4*
*IDC **23** 00:21:44.7±3.6, 4787S×161.19E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/11, mbtmp3.7/3, ML3.9/1, Error ellipse: s-maj=99.3km s-min=30.3km az=175.0*
ISC 23 00:21:43.8±1.5, 490S±02×1615E±01, h35km, n15, σ1 9 29/19, mb3.5/2, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APZ	**The Paps**	**4.89**	**66**	*e*PN	**Pn**	**00 22 53.6**	**-1.2**
APZ				SN	**Sn**	**00 23 49.1**	**-1.0**
DCZ	**Deep Cove**	**5.24**	**50**	PN	**Pn**	**00 22 59.8**	**+0.2**
DCZ				SN	**Sn**	**00 23 58.7**	**+0.1**
WHZ	**Wether Hill Ro**	**5.38**	**57**	PN	**Pn**	**00 23 02.3**	**+0.7**
WHZ				SN	**Sn**	**00 24 02.2**	**0.0**
SYZ	**Scrubby Hill**	**5.72**	**67**	*e*PN	**Pn**	**00 23 06.5**	**+0.2**
SYZ				SN	**Sn**	**00 24 09.1**	**-1.6**
MLZ	**Mavora Lakes**	**5.85**	**54**	*e*PN	**Pn**	**00 23 09.1**	**+1.1**
MSZ	**Milford Sound**	**6.19**	**48**	PN	**Pn**	**00 23 14.8**	**+2.1**
TUZ	**Tuapeka**	**6.31**	**64**	PN	**Pn**	**00 23 14.5**	**+0.1**
EAZ	**Earnscleugh**	**6.54**	**58**	PN	**Pn**	**00 23 17.6**	**0.0**
WKZ	**Wanaka**	**6.64**	**54**	*e*PN	**Pn**	**00 23 21.0**	**+2.1**
JCZ	**Jackson Bay**	**7.04**	**48**	*e*PN	**Pn**	**00 23 26.6**	**+2.3**
RPZ	**Rata Peaks**	**8.47**	**55**	Pn	**Pn**	**00 23 42.4**	**-1.6**
	1.8nm,0.3s,baz=232,slow=2.7,SNR=10						
RPZ				Sn	**Sn**	**00 25 16.9**	**-1.5**
	0.5nm,0.3s,baz=112,slow=16,SNR=2.3						
LTZ	**Lake Taylor**	**9.76**	**54**	PN	**Pn**	**00 24 02.8**	**+1.1**
ASAR	**Alice Springs**	**33.33**	**309**	P	**P**	**00 28 16.5**	**-1.9**
	0.3nm,0.5s,mb3.5,baz=145,slow=8.8,SNR=5.0						
WRA	**Warramunga Arr**	**36.26**	**313**	P	**P**	**00 28 41.9**	**-1.7**
	0.6nm,0.8s,mb3.6,baz=148,slow=9.0,SNR=4.1						
FINES	**FINESS Array B**	**152.30**	**313**	PKPbc	PKPbc	00 41 38.9	+3.0
	1.3nm,1.0s,baz=72,slow=4.5,SNR=3.5						

*ISCJB **23** 00:34:16.4±2.7, 321N±03×138.1E±02, h392km±9km, mb3.1/3, Error ellipse: s-maj=58.3km s-min=16.2km az=139.3*
*JMA **23** 00:34:17.2±0.4, 3190N×138.11E, h370km, M2.9*
*IDC **23** 00:34:18.9±19.0, 3220N×13799E, h393km±71km, mb2.9/3, mb1 2.8/4, mb1mx2.6/21, mbtmp3.5/4, Error ellipse: s-maj=317.6km s-min=64.5km az=172.0*
ISC 23 00:34:17.6±2.6, 322N±03×1382E±02, h387km±9km, n11, σ0 71/13, mb3.1/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWZ	**Kozaga**	**2.46**	**304**	P	**Pn**	**00 35 15.0**	**-0.5**
JIE	**Ise**	**2.53**	**332**	P	**Pn**	**00 35 16.6**	**+0.6**
BSO3	**Boso 3**	**3.29**	**36**	*e*S	**S**	**00 36 13.6**	**-0.8**
BSO4	**Boso 4**	**3.36**	**32**	P	**Pn**	**00 35 24.3**	**+1.5**
BSO4				*e*S	**S**	**00 36 15.8**	**+0.2**
BSO1	**Boso 1**	**3.43**	**43**	P	**Pn**	**00 35 23.6**	**+0.2**
BSO1				*e*S	**S**	**00 36 15.7**	**-1.0**
JAI	**Aioi**	**3.51**	**299**	P	**Pn**	**00 35 23.5**	**-0.7**
JWT	**Wachi**	**3.87**	**324**	P	**Pn**	**00 35 27.6**	**+0.1**
MJAR	**Matsushiro Arr**	**4.37**	**1**	P	**Pn**	**00 35 33.5**	**+1.1**
	0.7nm,0.3s,baz=184,slow=9.3,SNR=5.1						
SONM	**Songino Array**	**28.68**	**312**	P	**P**	**00 39 40.5**	**-0.1**
	0.2nm,0.4s,mb2.8,baz=128,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**44.61**	**306**	P	**P**	**00 41 52.8**	**-0.4**
	0.3nm,0.3s,mb3.1,baz=91,slow=9.7,SNR=6.1						
FINES	**FINESS Array B**	**71.86**	**332**	P	**P**	**00 44 59.4**	**-0.2**
	0.5nm,0.4s,mb3.4,baz=72,slow=6.2,SNR=11						

MOS 23 00:37:50.8±0.2, 4301N×4523E, h5km, mb3.5/1, 1D, Error ellipse: s-maj=59.3km s-min=15.7km az=3.3, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNJR	**Sundja**	**0.32**	**281**	*e*PG	Pg	00 37 58.2	+1.3
SNJR				*e*S	Sg	00 38 09.6	+8.6
VLKR	**Vladikavkaz**	**0.41**	**276**	*e*PG	Pg	00 38 00.0	+1.3
VLKR				*e*S	Sg	00 38 12.7	+8.6
LACR	**Lac**	**0.71**	**255**	*i* PG	Pg	00 38 05.4	+0.9
LACR				*i* S	Sg	00 38 22.1	+8.4
ARNR	**Ardon**	**0.72**	**285**	*e*PG	Pg	00 38 05.7	+1.0
ARNR				*i* S	Sg	00 38 22.5	+8.4
KORR	**Kora**	**0.86**	**276**	*e*PG	Pg	00 38 08.1	+0.8
KORR				*i* S	Sg	00 38 26.7	+8.3
ZEI	**Tsey**	**1.01**	**257**	*e*PG	Pg	00 38 10.5	+0.3
ZEI				*e*S	Sg	00 38 30.8	+7.5

*SZGRF **23** 00:53:30.4, 2120S×3455E, h21km, mb5.2, Mozambique*
*ISCJB **23** 00:53:31.8±0.2, 2129S±003×3330E±003, h19km, mb5.0/181, MS4.3/54, Error ellipse: s-maj=4.7km s-min=3.9km az=71.1*
*BJI **23** 00:53:31.0, 2130S×3340E, h20km, mB5.3, mb5.1, Ms4.8, Msz4.6*
*MOS **23** 00:53:31.4±0.9, 2106S×3351E, h10km, mb5.2/86, Error ellipse: s-maj=11.4km s-min=4.1km az=98.2*
*HRVD **23** 00:53:34.1±0.3, 2109S×3333E, h23km, MW5.0/67, Centroid moment Tensor Solution. LP body waves: s32,c39;Mantle waves: s67,c97; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.43±.20; Mθθ-0.24±.13; Mϕϕ3.67±.13; Mrθ-0.11±.24; Mϕθ-0.60±.10; Mϕr0.58±.17; Best double couple: M0 3.64400×10^16 NP1:ϕ352.00000°, δ40.00000°, λ-89.00000°. NP2: ϕ171.00000°, δ50.00000°, λ-91.00000°. Principal axes: T 3.8090, Plg5.0000°, Azm261.0000°; N -0.3300, Plg0.0000°, Azm171.0000°; P -3.4790, Plg85.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **23** 00:53:34.1±0.2, 2127S×3340E, mb5.1/109, MS4.3/23 Error ellipse: s-maj=6.0km s-min=4.7km az=87.0*
NEIC Felt at Beira and Chipinge, Zimbabwe.
*IDC **23** 00:53:34.4±0.4, 2114S×3337E, h20km±2km, mb4.6/27, mb1 4.7/28, mb1mx4.7/29, mbtmp4.7/28, ML5.3/2, MS4.3/22, Ms1 4.3/22, ms1mx4.2/28, Error ellipse: s-maj=14.3km s-min=9.9km az=94.0*
*BGS **23** 00:53:34.5±1.6, 2127S×3346E, h20km, mb5.3*
*PRE **23** 00:53:36.3±1.1, 2182S×3301E, h5km, ML6.2*
ISC 23 00:53:33.9±0.2, 2131S±003×3332E±003, h20km, h20km±.4km: pP-P, n780, σ0 96/524, mb5.0/181, MS4.3/54, 97C-106D, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATP	**Matopo**	**4.59**	**280**	Pn	**Pn**	**00 54 41.0**	**-1.2**
	349nm,0.3s,baz=90,slow=14,SNR=3552						
MATP				Sn	**Sn**	**00 55 31.6**	**-3.3**
	549nm,0.3s,baz=197,slow=20,SNR=7.8						
MATP				Lg		00 55 48.3	
	2μm,0.3s,baz=16,slow=22,SNR=17						
MATP				LR	LR	00 56 40.0	
	comp=Z,7μm,18.9s,baz=96,slow=40						
MATP	**Matopo**	**4.59**	**280**	Pn	**Pn**	**00 54 41.0**	**-1.1**
MATP				Sn	**Sn**	**00 55 31.6**	**-3.3**
MATP				Lg		00 55 48.3	
MATP				LR	LR	00 56 40.0	
SLR	**Silverton**	**6.39**	**225**	*e*P	**Pn**	**00 55 04.6**	**-2.2**
SLR				*e*S	**Sn**	**00 56 08.0**	**-11**
SLR				AML	AML	00 57 02.6	
	comp=Z,6μm,0.6s						
ERPM	**east rand prop**	**6.76**	**222**	*e*P	**Pn**	**00 55 09.7**	**-2.4**
ERPM				*e*S	**Sn**	**00 56 17.4**	**-11**
ERPM				AML	AML	00 57 24.3	
	comp=Z,2μm,0.6s						
KSR	**Koster**	**7.43**	**231**	*e*P	**Pn**	**00 55 19.9**	**-1.3**
KSR				*e*S	**Sn**	**00 56 34.5**	**-10**
KSR				AML	AML	00 57 32.7	
	comp=Z,2μm,0.6s						
LSZ	**Lusaka**	**7.73**	**320**	Pn	**Pn**	**00 55 21.3**	**-3.9**
	comp=Z,130nm,0.3s,baz=146,slow=15,SNR=384						
LSZ				Sn	**Sn**	**00 56 40.6**	**-12**
	comp=Z,134nm,0.3s,baz=169,slow=14,SNR=10						
LSZ				Lg		00 57 25.5	
	comp=Z,357nm,0.3s,baz=49,slow=19,SNR=13						
LSZ				LR	LR	00 58 33.8	
	comp=Z,4μm,18.7s,baz=141,slow=39						
LSZ	**Lusaka**	**7.73**	**320**	*e*Pn	**Pn**	**00 55 21.2**	**-4.0**
LSZ				*e*Sn	**Sn**	**00 56 43.6**	**-8.5**
LBTB	**Lobatse**	**8.01**	**241**	*e*P	**Pn**	**00 55 27.9**	**-1.2**
LBTB				*e*S	**Sn**	**00 56 49.1**	**-10**
LBTB				AML	AML	00 57 47.3	
	comp=Z,1μm,0.6s						
LBTB	**Lobatse**	**8.01**	**241**	Pn	**Pn**	**00 55 28.6**	**-0.4**
	comp=Z,91nm,0.3s,baz=66,slow=13,SNR=219						
LBTB				Sn	**Sn**	**00 56 53.1**	**-5.9**
	comp=Z,46nm,0.3s,baz=112,slow=17,SNR=3.4						
LBTB				Lg		00 57 36.8	
	comp=Z,99nm,0.3s,baz=333,slow=22,SNR=4.3						
LBTB				LR	LR	00 59 04.8	
	comp=Z,1μm,20.9s,baz=75,slow=41						
LBTB	**Lobatse**	**8.01**	**241**	*e*Pn	**Pn**	**00 55 28.5**	**-0.6**
LBTB				*e*Sn	**Sn**	**00 56 59.3**	**+0.2**
SEK	**Senekal**	**8.69**	**215**	*e*P	**Pn**	**00 55 35.9**	**-2.5**
SEK				*e*S	**Sn**	**00 57 03.0**	**-13**
SEK				AML	AML	00 58 21.5	
	comp=Z,2μm,0.7s						
SWZ	**Schweizer**	**9.34**	**230**	*e*P	**Pn**	**00 55 44.9**	**-2.5**
SWZ				*e*S	**Sn**	**00 57 20.0**	**-12**
SWZ				AML	AML	00 58 40.3	
	comp=Z,835nm,0.6s						
KSD	**Kokstad**	**9.84**	**200**	*e*P	**Pn**	**00 55 51.9**	**-2.3**
KSD				*e*S	**Sn**	**00 57 31.0**	**-13**
KSD				AML	AML	00 58 47.2	
	comp=Z,823nm,0.7s						
BOSA	**Boshof**	**10.31**	**224**	*e*P	**Pn**	**00 55 58.6**	**-2.1**
BOSA				*e*S	**Sn**	**00 57 42.0**	**-14**
BOSA				AML	AML	00 59 06.5	
	comp=Z,517nm,0.7s						
BOSA	**Boshof**	**10.31**	**224**	Pn	**Pn**	**00 55 59.5**	**-1.2**
	comp=Z,69nm,0.3s,baz=53,slow=14,SNR=256						
BOSA				Sn	**Sn**	**00 57 47.9**	**-7.8**
	comp=Z,56nm,0.3s,baz=324,slow=13,SNR=7.5						
BOSA				Lg		00 58 51.8	
	comp=Z,56nm,0.3s,baz=318,slow=17,SNR=3.9						
BOSA				LR	LR	01 00 12.2	
	comp=Z,4μm,19.1s,baz=52,slow=38						
BOSA	**Boshof**	**10.31**	**224**	*e*Pn	**Pn**	**00 55 59.3**	**-1.4**
BOSA				*e*Sn	**Sn**	**00 57 50.0**	**-5.7**
UPI	**Upington**	**13.01**	**235**	*e*P	**Pn**	**00 56 36.0**	**-1.6**
UPI				*e*S	**Sn**	**00 58 48.2**	**-13**
UPI				AML	AML	01 00 45.1	
	comp=Z,459nm,0.6s						
OPO	**Ambohidratompo**	**13.32**	**81**	Pn	**Pn**	**00 56 39.7**	**-2.2**
	comp=Z,6.0nm,0.3s,baz=252,slow=12,SNR=40						
OPO				Sn	**Sn**	**00 58 58.1**	**-11**
	comp=Z,33nm,0.3s,baz=154,slow=16,SNR=9.5						
TSUM	**Tsumeb**	**14.91**	**275**	Pn	**Pn**	**00 56 58.5**	**-5.1**
	comp=Z,23nm,0.3s,baz=99,slow=12,SNR=315						
TSUM				Sn	**Sn**	**00 59 34.0**	**-14**
	comp=Z,4.9nm,0.3s,baz=126,slow=23,SNR=3.1						
TSUM				Lg		01 01 11.7	
	comp=Z,11nm,0.3s,baz=254,slow=23,SNR=2.1						
TSUM	**Tsumeb**	**14.91**	**275**	*e*Pn	**Pn**	**00 56 58.0**	**-5.5**
TSUM				*e*Sn	**Sn**	**00 59 48.0**	**-0.2**
SUR	**Sutherland**	**15.68**	**223**	Pn	**Pn**	**00 57 11.5**	**-2.1**
	comp=Z,2μm,0.5s,SNR=83						
SUR	**Sutherland**	**15.68**	**223**	*e*P	**Pn**	**00 57 12.6**	**-1.0**
SUR				*e*S	**Sn**	**00 59 51.0**	**-16**
SUR	**Sutherland**	**15.68**	**223**	Pn	**Pn**	**00 57 12.0**	**-1.6**
	comp=Z,34nm,0.3s,baz=51,slow=13,SNR=82						
SUR				Sn	**Sn**	**00 59 56.6**	**-10**
	comp=Z,18nm,0.3s,baz=19,slow=20,SNR=8.9						
SUR				Lg		01 01 40.6	
	comp=Z,12nm,0.3s,baz=126,slow=24,SNR=6.8						
SUR				LR	LR	01 03 35.5	
	comp=Z,2μm,18.7s,baz=210,slow=38						
SUR	**Sutherland**	**15.68**	**223**	*e*Pn	**Pn**	**00 57 11.3**	**-2.3**
SUR				*e*Sn	**Sn**	**01 00 00.3**	**-6.4**
CVNA	**Calvinia**	**15.80**	**227**	*e*P	**Pn**	**00 57 14.2**	**-1.0**
CVNA				*e*S	**Sn**	**00 59 54.1**	**-16**
CVNA				AML	AML	01 01 53.8	
	comp=Z,973nm,0.7s		

comp=Z,376nm,0.8s
MIB Mutribah 52.58 15 *e*P **P 01 02 46.4 +0.3**
MIB AMb AMB 01 02 47.6
comp=Z,170nm,0.9s
ASF Jabal al Asfar 53.28 4 P **P 01 02 51.8 +0.5**
comp=Z,1.5nm,0.4s,mb4.3,baz=36,slow=3.4,SNR=7.0
ASF Jabal al Asfar 53.28 4 P **P 01 02 51.8 +0.5**
ASF pmax pmax
comp=Z,20nm,0.4s
SNAA Sanae 54.49 193 P **P 01 03 01.0 +0.9**
comp=Z,6.6nm,0.8s,mb4.6,baz=72,slow=6.0,SNR=79
SNAA Sanae 54.49 193 P **P 01 03 01.0 +0.9**
SNAA pmax pmax
comp=Z,7.0nm,0.8s
SNAA Sanae 54.49 193 *e*P **P 01 03 00.8 +0.7**
comp=Z,41nm,1.2s,mb5.2
CSS Prodhromos 55.96 0 *e*P **P 01 03 11.7 +1.0**
SANT Santorini 57.84 353 *e*P **P 01 03 24.1 +0.1**
APE Apeiranthos 58.52 353 *e*P **P 01 03 29.2 +0.4**
APE Apeiranthos 58.52 353⇑*i*P **P 01 03 29.7 +0.9**
HYB Hyderabad 58.70 52 *i* P **P 01 03 29.0 -1.1**
HYB Hyderabad 58.70 52 *e*P **P 01 03 29.0 -1.1**
MIR Mirnyy 58.71 156*c i*P **P 01 03 33.0 +2.9**
MIR pmax pmax
comp=Z,26nm,1.0s,mb5.2
ISP Isparta 58.89 357 P **P 01 03 31.4 0.0**
ISP pmax pmax
comp=Z,12nm,0.6s,mb5.1
ISP Isparta 58.89 357 P **P 01 03 31.4 0.0**
comp=Z,12nm,0.6s,mb5.1
MALT Malatya 59.49 5⇓*i*P **P 01 03 36.2 +0.6**
MALT Malatya 59.49 5 *e*P **P 01 03 36.1 +0.6**
AKL Akola 59.72 48 *e*P **P 01 03 36.4 -0.7**
AKL AMb AMB 01 03 37.4
comp=Z,53nm,1.0s,mb5.5
CHOS Chios island 59.77 353 *e*P **P 01 03 38.0 +0.6**
BRTR Keskin Array B 60.71 0 P **P 01 03 43.8 -0.1**
comp=Z,4.5nm,0.9s,mb4.6,baz=178,slow=9.2,SNR=30
BRTR pP pP 01 03 50.0 -0.3
comp=Z,9.9nm,0.9s,baz=178,slow=8.6,SNR=24
BRTR LR LR 01 32 43.4
comp=Z,67nm,18.8s,MS3.8,baz=32,slow=39
BRTR Keskin Array B 60.71 0 P **P 01 03 43.8 -0.1**
BRTR *PP pP 01 03 50.0 -0.3
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR MLR MLR
comp=Z,67nm,18.8s
BR131 Keskin Array S 60.71 0 *e*P **P 01 03 44.0 +0.1**
AOS Alonnisos 60.80 352 *e*P **P 01 03 43.2 -1.3**
ANTO Ankara 60.86 360⇑*i*P pP 01 03 50.0 -1.3
ANTO Ankara 60.86 360⇑P pP 01 03 50.0 -1.3
AGG Agios Georgios 60.89 350 *e*P **P 01 03 45.6 +0.6**
KEST Kesra 61.10 338 P **P 01 03 47.5 +0.9**
comp=Z,2.4nm,0.9s,mb4.3,baz=332,slow=3.8,SNR=7.5
KEST pP pP 01 03 53.9 +0.9
comp=Z,5.5nm,0.8s,baz=120,slow=1.5,SNR=13
KEST LR LR 01 32 40.9
comp=Z,131nm,19.2s,MS4.1,baz=199,slow=38
NGP Nagpur 61.44 50 *e*P **P 01 03 43.6 -5.2**
NGP AMb AMB 01 03 44.7
comp=Z,17nm,0.6s,mb5.3
BHPL Bhopal 61.70 47 *e*P **P 01 03 50.1 -0.4**
BHPL AMb AMB 01 03 51.8
comp=Z,63nm,1.1s,mb5.7
MEV Metsovon 61.81 349 *e*P **P 01 03 53.8 +2.4**
GNI Garni 62.06 10 *e*P **P 01 03 53.9 +0.9**
GNI pmax pmax
comp=Z,14nm,0.9s
GNI MLR MLR
comp=Z,78nm,19.0s
GNI Garni 62.06 10 *e*P **P 01 03 53.9 +0.9**
comp=Z,14nm,0.9s,mb5.1
GNI LR LR
comp=Z,78nm,19.0s,MS3.9
TIP Timpagrande 62.13 345 P **P 01 03 52.1 -1.4**
SOH Sokhos 62.50 351 *e*P **P 01 03 56.2 +0.3**
FNA Florina 62.76 350 *e*P **P 01 03 58.2 +0.5**
KNT Kendrikon 62.90 351 *e*P **P 01 03 59.4 +0.8**
VAY Valandovo 63.10 351 *e*P **P 01 03 60.0 0.0**
VAY Valandovo 63.10 351 *i* P **P 01 03 59.6 -0.3**
OHR Ohrid 63.18 349 *i* P **P 01 04 00.6 +0.1**
DGRG David-gareji 63.43 10 P **P 01 04 02.5 +0.3**
TIR Tirane 63.57 349 *e*P **P 01 04 04.1 +1.0**
MTA Mtatsminda 63.57 10 P **P 01 04 02.5 -0.6**
TBLG Delisi 63.60 10 P **P 01 04 02.6 -0.6**
SKO Skopje 63.91 350 *e*P **P 01 04 04.4 -0.9**
ONI Oni 64.25 8 P **P 01 04 07.2 -0.4**
VTS Vitosha 64.26 352⇑*i*P **P 01 04 07.3 -0.3**
VTS Vitosha 64.26 352⇑P **P 01 04 07.2 -0.3**
VSL Villasalto 64.49 340 *e*P pP 01 04 16.1 +0.5
ZEI Tsey 64.50 9 *e*P **P 01 04 07.7 -1.5**
ZEI *e**PP pP 01 04 10.6 -5.0
ZEI *e* 01 04 43.7
ZIMR 65.05 354⇑*i*P **P 01 04 11.1 -1.7**
ZIMR 65.05 354⇑P **P 01 04 11.1 -1.6**
MIDA Miranda 65.07 344 P **P 01 04 14.5 +1.6**
VVLD Villa Vallelon 65.45 344 P pP 01 04 22.2 +0.4
KIV Kislovodsk 65.50 7 P **P 01 04 15.1 -0.6**
comp=Z,105nm,1.7s,mb5.6,SNR=6.3
KIV Kislovodsk 65.50 7*d i*P **P 01 04 15.2 -0.5**
KIV *i* pP 01 04 21.8 -0.4
KIV *e* 01 04 46.8
KIV pmax pmax
comp=Z,24nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,100nm,21.0s,MS4.0
KIV Kislovodsk 65.50 7 *e*P **P 01 04 15.6 -0.1**
KIV LR LR
comp=Z,27nm,19.0s,MS3.5
INTR Introdacqua 65.51 344 P pP 01 04 20.8 -1.4
CASY Casey 65.56 154 *e*P **P 01 04 16.9 +0.9**
comp=Z,12nm,0.9s,mb4.9
TIRR Tirgusor 65.59 356 P **P 01 04 18.7 +2.4**
SIM Simferopol' 65.94 1 *e*P pP 01 04 24.0 -1.0
SIM pmax pmax
comp=Z,16nm,0.8s,mb5.1
SIM MLR MLR
comp=Z,60nm,20.9s,MS3.8
AQU L'Aquila 65.96 344⇓*i*P **P 01 04 19.7 +1.0**
AQU L'Aquila 65.96 344 *e*P **P 01 04 19.4 +0.8**
comp=Z,20nm,0.9s,mb5.2
DIVS Divcibare 66.22 350⇑*i*P **P 01 04 20.2 -0.1**
DIVS Divcibare 66.22 350 *e*P **P 01 04 19.7 -0.6**
MLR Muntele Rosu 66.81 354 P **P 01 04 23.8 -0.4**
comp=Z,9.7nm,1.0s,mb4.8,baz=151,slow=2.8,SNR=10
MLR pP pP 01 04 30.7 +0.1
comp=Z,19nm,0.8s,baz=214,slow=3.6,SNR=16
MLR Muntele Rosu 66.81 354⇑*i*P **P 01 04 25.0 +0.9**
MLR Muntele Rosu 66.81 354⇑P **P 01 04 25.0 +0.9**
VOIR 66.84 354⇑*i*P **P 01 04 24.4 +0.1**
VOIR 66.84 354⇑P **P 01 04 24.4 +0.1**
CART Cartagena 66.90 331 *e*P **P 01 04 24.5 -0.1**
SMLA Simla 66.99 40 *e*P **P 01 04 24.3 -1.0**
SMLA AMb AMB 01 04 25.7
comp=Z,78nm,1.0s,mb5.7
PLOR Plostina 67.11 355⇓*i*P **P 01 04 26.4 +0.4**
VRI Vrincioaia 67.12 355⇓*i*P **P 01 04 26.7 +0.6**
VRI Vrincioaia 67.12 355⇓P **P 01 04 26.7 +0.6**
EMUR La Murta 67.21 331 P **P 01 04 30.6 +4.0**
comp=Z,9.7nm,0.7s,mb4.9
EBER Berja 67.22 329 P **P 01 04 28.9 +2.2**
comp=Z,12nm,0.7s,mb5.0
PGF Pioggiola 67.38 341 *e*P **P 01 04 28.0 +0.3**
comp=Z,77nm,1.0s,mb5.4
PGF Pioggiola 67.38 341 *e*P **P 01 04 28.0 +0.3**
PGF pmax pmax
comp=Z,38nm,1.0s,mb5.4
PGF Pioggiola 67.38 341 *e*P **P 01 04 28.0 +0.3**
comp=Z,38nm,1.0s,mb5.4
BZS Buzias 67.45 351⇓*i*P **P 01 04 28.3 +0.2**
BZS Buzias 67.45 351 P **P 01 04 28.6 +0.5**
ERON Agron 67.76 329 P **P 01 04 31.3 +1.2**
comp=Z,1.7nm,0.3s,mb4.5
EHUE Huescar 67.81 330 P **P 01 04 35.7 +5.2**
comp=Z,3.8nm,0.7s,mb4.5
ECOG Cogollos-Vega 67.85 329 P **P 01 04 32.0 +1.3**
comp=Z,3.7nm,0.5s,mb4.7
EMIJ Mijas 67.88 328 P **P 01 04 33.8 +2.9**
comp=Z,13nm,3.0s
KLP Kalpa 67.93 41 *e*P **P 01 04 30.2 -1.0**
KLP *e*P 01 04 31.5
KLP AMb AMB 01 04 32.6
comp=Z,39nm,1.1s,mb5.3
ETOB Tobarra 68.01 331 P **P 01 04 33.5 +1.8**
comp=Z,59nm,2.6s,mb5.2
ELOJ Sierra Loja 68.03 328 P **P 01 04 32.5 +0.7**
ELOJ pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
ELOJ Sierra Loja 68.03 328 P **P 01 04 32.5 +0.7**
comp=Z,6.5nm,0.6s,mb4.8
EQES Quesada 68.03 330 P **P 01 04 32.0 +0.2**
comp=Z,6.5nm,0.9s,mb4.7
JOSI Joshimath 68.06 42 *ex* x 01 04 13.3
EJIF Jimena Fronter 68.14 327 P pP 01 04 37.2 -1.8
EJIF pmax pmax
comp=Z,11nm,2.1s,mb4.5
EJIF Jimena Fronter 68.14 327 P pP 01 04 37.2 -1.8
comp=Z,11nm,2.1s
IAS Iasi 68.37 356 P pP 01 04 40.0 -0.5
ELUQ Luque 68.41 329 P **P 01 04 34.6 +0.4**
ELUQ pmax pmax
comp=Z,21nm,1.4s,mb5.0
ELUQ Luque 68.41 329 P **P 01 04 34.6 +0.4**
comp=Z,21nm,1.4s,mb5.0
DRGR 68.45 352⇑*i*P **P 01 04 35.2 +0.7**
DRGR 68.45 352⇑P **P 01 04 35.2 +0.7**
ZCCA Zocca 68.46 343 P **P 01 04 37.0 +2.5**
comp=Z,11nm,0.8s,mb4.9
PKSM Moragy 68.50 349⇑*i*P **P 01 04 35.0 +0.2**
PKSM Moragy 68.50 349⇓*e*P **P 01 04 34.7 -0.1**
ECHE Chera 68.53 332 P **P 01 04 35.8 +0.9**
ECHE pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ECHE Chera 68.53 332 P **P 01 04 35.8 +0.8**
comp=Z,5.0nm,0.6s,mb4.6
RCBR Riachuelo 68.56 272 P **P 01 04 36.3 +1.2**
RCBR *e*pP pP 01 04 42.7 +1.0
RCBR LR LR
comp=Z,377nm,21.0s,MS4.6
EBAN Banos Encina 68.66 329 P pP 01 04 40.3 -1.9
EBAN pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
EBAN Banos Encina 68.66 329 P pP 01 04 40.3 -2.0
comp=Z,5.0nm,0.6s
ESPR Espera 68.66 327 P pP 01 04 39.9 -2.4
comp=Z,11nm,0.8s
CRES Cresnjev 68.75 347⇓*i*P **P 01 04 36.8 +0.5**
CRES *i* pP pP 01 04 42.5 -0.3
QSPA South Pole Qui 68.85 180 *e*P **P 01 04 37.8 +0.8**
comp=Z,17nm,1.0s,mb4.9
KOLN Koldanda 68.86 47 *e*P **P 01 04 35.9 -1.1**
comp=Z,81nm,0.9s,mb5.6
CEY Cerknica 68.90 346⇓*i*P **P 01 04 37.7 +0.4**
CEY *i* pP pP 01 04 43.8 +0.1
EMOS Mosqueruela 68.95 333 P **P 01 04 37.6 0.0**
comp=Z,12nm,0.7s,mb4.9
BURAR Bucovina Array 68.98 354⇓*i*P **P 01 04 39.3 +1.5**
BURAR Bucovina Array 68.98 354⇓P **P 01 04 39.3 +1.6**
EADA Adamuz 69.04 329 P **P 01 04 41.0 +2.9**
comp=Z,5.9nm,0.6s,mb4.7
SBF Sospel 69.06 340 *e*P **P 01 04 38.7 +0.4**
comp=Z,115nm,1.0s,mb5.5
SBF Sospel 69.06 340 *e*P **P 01 04 38.7 +0.4**
SBF pmax pmax
comp=Z,58nm,1.0s,mb5.5
SBF Sospel 69.06 340 *e*P **P 01 04 38.7 +0.4**
comp=Z,58nm,1.0s,mb5.5
ERTA Horta de San J 69.11 334 P **P 01 04 41.0 +2.4**
comp=Z,5.8nm,0.8s,mb4.6
LUCF Luceram 69.11 340 *e*P pP 01 04 45.6 +0.5
SAOF Saorge 69.13 340 *e*P pP 01 04 45.2 0.0
EPOB Poblet 69.14 335 P **P 01 04 37.1 -1.7**
comp=Z,6.2nm,0.7s,mb4.7
MVIF Mont Vial 69.18 340 *e*P pP 01 04 46.1 +0.6
AUTN L'Aution 69.18 340 *e*P pP 01 04 46.3 +0.8
TOUF Mont Tournerai 69.25 340 *e*P pP 01 04 46.7 +0.8
VOY Vojsko 69.30 346 *e*P **P 01 04 40.1 +0.4**
VOY *e*pP pP 01 04 46.2 0.0
TREF Trevaresse 69.52 339⇑*e*P **P 01 04 44.9 +3.8**
CADS Cadrg 69.52 346⇓*i*P **P 01 04 41.4 +0.3**
CADS *e*pP pP 01 04 47.4 -0.2
PERS Pernice 69.60 347⇓*i*P **P 01 04 41.9 +0.4**
PERS *i* pP pP 01 04 48.0 0.0
OBKA Obir 69.60 346 *i* P **P 01 04 42.3 +0.7**
comp=Z,21nm,0.9s,mb5.1,SNR=11
BUD Budapest 69.67 350⇓*e*PcP **P 01 04 41.7 -0.3**
STOF St-Etienne Org 69.67 339⇓*e*P pP 01 04 49.9 +1.4
GMNA Gemona 69.68 345 P **P 01 04 43.1 +1.0**
comp=Z,176nm,1.0s,mb6.0
CAM4 Nova Friburgo 69.69 253⇑*i*P **P 01 04 43.7 +1.6**
CAM4 *i* 01 04 46.6
CAM4 *i* pP 01 04 48.9 +0.3
CAM4 *i* 01 04 53.5
CAM4 *i* 01 05 01.2
GKN Gorkha 69.72 47 *e*P **P 01 04 41.2 -1.1**
comp=Z,121nm,0.8s,mb5.9
PRAF Pradon 69.75 339 *e*P pP 01 04 50.3 +1.3
SMRF Simiane la Rot 69.77 339 *e*P **P 01 04 44.0 +1.4**
comp=Z,59nm,1.2s,mb5.1
SMRF Simiane la Rot 69.77 339 *e*P **P 01 04 44.0 +1.4**
comp=Z,59nm,1.2s,mb5.4
EMIN Mina Concepcio 69.77 327 P **P 01 04 42.2 -0.4**
comp=Z,5.7nm,0.6s,mb4.7
PTCC Patoccо-Chiusa 69.78 345 P **P 01 04 43.4 +0.7**
comp=Z,24nm,0.6s,mb5.3
DMN Daman 69.80 48 *e*P **P 01 04 42.0 -0.8**
comp=Z,54nm,0.8s,mb5.5
ESLA Sonseca Array 69.94 330 *e*P **P 01 04 44.3 +0.6**
ESLA LR LR
comp=Z,2μm,19.0s,MS5.4
ESDC Sonseca Array 69.94 330 P **P 01 04 44.0 +0.3**
comp=Z,4.8nm,0.8s,mb4.5,baz=145,slow=5.9,SNR=25
ESDC pP pP 01 04 50.2 0.0
comp=Z,8.9nm,0.7s,baz=144,slow=5.6,SNR=19
ESDC LR LR 01 39 23.7
comp=Z,193nm,18.7s,MS4.4,baz=165,slow=39
ESDC Sonseca Array 69.94 330 P **P 01 04 44.0 +0.2**
comp=Z,3.3nm,0.6s,mb4.4
PSZ Piszkesteto 69.95 350⇑*e*PcP **P 01 04 43.7 -0.1**
PSZ Piszkesteto 69.95 350⇓*i*P **P 01 04 44.0 +0.2**
PKI Pulchoki 69.98 48 *e*P **P 01 04 43.0 -1.0**
comp=Z,78nm,0.8s,mb5.7
PKI Pulchoki 69.98 48 *e*P **P 01 04 43.0 -1.0**
PKI pmax pmax
comp=Z,79nm,0.8s,mb5.7
KKN Kakani 70.03 48 *e*P **P 01 04 43.3 -0.9**
comp=Z,75nm,0.9s,mb5.6
KKN Kakani 70.03 48 *e*P **P 01 04 43.3 -0.9**
KKN pmax pmax
comp=Z,75nm,0.9s,mb5.6
FVI Forni Avoltri 70.09 345 P **P 01 04 45.6 +1.0**
FVI pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
FVI Forni Avoltri 70.09 345 P **P 01 04 45.6 +1.0**
comp=Z,9.9nm,0.7s,mb4.8
ARSA Arzberg 70.10 347⇑*i*P **P 01 04 44.7 +0.1**
comp=Z,18nm,1.1s,mb4.9
SOP Sopron 70.30 348⇓*e*PcP **P 01 04 45.9 0.0**
BNI Bardonecchia 70.37 340 *e*P **P 01 04 47.8 +1.5**
BNI pmax pmax
comp=Z,24nm,1.2s,mb5.0
BNI Bardonecchia 70.37 340 *e*P **P 01 04 47.8 +1.5**
comp=Z,24nm,1.2s,mb5.0
MTLF Montolieu 70.40 336 *e*P **P 01 04 46.4 -0.1**
comp=Z,31nm,1.3s,mb4.8
MTLF Montolieu 70.40 336 *e*P **P 01 04 46.4 -0.1**
MTLF pmax pmax
comp=Z,15nm,1.3s,mb4.8
MTLF Montolieu 70.40 336 *e*P **P 01 04 46.4 -0.1**
comp=Z,15nm,1.3s,mb4.8
KBA Koelnbreinsper 70.41 346⇑*i*P **P 01 04 46.7 +0.1**
comp=Z,49nm,1.8s,mb5.1
KBA Koelnbreinsper 70.41 346⇑*i*P **P 01 04 46.7 +0.1**
KBA pmax pmax
comp=Z,49nm,1.8s,mb5.1
KECS Kecovo 70.41 351 *e*P **P 01 04 45.9 -0.7**
KECS *e* pP 01 04 52.4 -0.7
KECS pmax pmax
comp=Z,11nm,1.4s,mb4.6
KECS Kecovo 70.41 351 *e*P **P 01 04 45.9 -0.7**
comp=Z,10nm,1.4s,mb4.6
KECS *e* pP 01 04 52.4 -0.7
ORIF Oris-en-Rattie 70.50 340 *e*P **P 01 04 48.1 +1.0**
comp=Z,36nm,1.0s,mb5.0
ORIF *e*R
comp=Z,322nm,18.8s
ORIF Oris-en-Rattie 70.50 340 *e*P **P 01 04 48.1 +1.0**
ORIF pmax pmax
comp=Z,18nm,1.0s,mb5.0
ORIF Oris-en-Rattie 70.50 340 *e*P **P 01 04 48.1 +1.0**
comp=Z,18nm,1.0s,mb5.0
GUN Gumba 70.52 48 *e*P **P 01 04 46.7 -0.5**
MELF Melles 70.56 335 *e*P **P 01 04 48.4 +0.9**
JIRN Jiri 70.58 49 *e*P **P 01 04 46.8 -0.8**
comp=Z,129nm,0.8s,mb5.9
KOLS Kolonicke sedl 70.61 352 *e*P **P 01 04 47.7 -0.1**
EBIE Bielsa 70.64 335 P **P 01 04 48.9 +0.9**
comp=Z,4.6nm,0.7s,mb4.5
CONA Conrad Observa 70.67 348⇓*i*P **P 01 04 48.2 +0.1**
comp=Z,26nm,1.0s,mb5.1
VYHS Vyhne 70.68 350 *e*P **P 01 04 47.5 -0.7**
VYHS *e* pP 01 04 53.8 -0.9
VYHS pmax pmax
comp=Z,11nm,1.4s,mb4.6
VYHS Vyhne 70.68 350 *e*P **P 01 04 47.5 -0.7**
comp=Z,11nm,1.4s,mb4.6
VYHS *e* pP 01 04 53.8 -0.9
CRVS Cervenica-Dubn 70.69 352 *e*P **P 01 04 47.8 -0.5**
CRVS *e*pP pP 01 04 54.0 -0.8
ZST Bratislava 70.69 349 *e*P **P 01 04 48.3 0.0**
ZST *e*pP pP 01 04 53.9 -0.9
ZST Bratislava 70.69 349 *e*P **P 01 04 48.3 0.0**
comp=Z,18nm,1.4s,mb4.8
ZST *e* pP 01 04 53.9 -0.9
ZST LR LR
comp=Z,100nm,15.5s,MS4.2
EBAD Badajoz 70.70 328 P **P 01 04 47.5 -0.9**
comp=Z,7.3nm,0.7s,mb4.7
MCGN Macugnaga 70.78 342 P pP 01 04 55.3 0.0
comp=Z,5.2nm,0.7s
VIVF Saint-Julien-l 70.84 339 *e*P **P 01 04 49.8 +0.6**
comp=Z,20nm,0.8s,mb4.8
VIVF Saint-Julien-l 70.84 339 *e*P **P 01 04 49.8 +0.6**
VIVF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VIVF Saint-Julien-l 70.84 339 *e*P **P 01 04 49.8 +0.6**
comp=Z,9.9nm,0.8s,mb4.8
EPF Esparros 70.85 335 *e*P **P 01 04 49.7 +0.4**
comp=Z,29nm,0.8s,mb4.9
EPF Esparros 70.85 335 *e*P **P 01 04 49.7 +0.4**
EPF pmax pmax
comp=Z,14nm,0.8s,mb4.9
EPF Esparros 70.85 335 *e*P **P 01 04 49.7 +0.4**
comp=Z,14nm,0.8s,mb5.0
MOA Molln 70.93 347⇓*i*P **P 01 04 49.9 +0.1**
comp=Z,40nm,1.1s,mb5.3,SNR=12
LABF Labassere 70.97 335 *e*P pP 01 04 56.7 +0.2
WTTA Wattenberg 70.99 345⇓*i*P **P 01 04 50.7 +0.6**
comp=Z,20nm,0.7s,mb5.2
WTTA Wattenberg 70.99 345⇓*i*P **P 01 04 50.7 +0.6**
WTTA pmax pmax
comp=Z,20nm,0.7s,mb5.2
KULM Kulim 71.05 76 *e*P **P 01 04 50.4 0.0**
KULM *e*pP pP 01 04 57.6 +0.6
SQTA Sankt Quirin 71.06 344⇓*i*P **P 01 04 50.8 +0.3**
comp=Z,14nm,0.9s,mb4.9
SQTA Sankt Quirin 71.06 344⇓*i*P **P 01 04 50.8 +0.3**
SQTA pmax pmax
comp=Z,14nm,0.9s,mb4.9
ETSF Etsaut 71.10 334 *e*P **P 01 04 51.1 +0.3**
comp=Z,31nm,0.7s,mb5.1
ETSF Etsaut 71.10 334 *e*P **P 01 04 51.1 +0.3**
ETSF pmax pmax
comp=Z,16nm,0.7s,mb5.1
ETSF Etsaut 71.10 334 *e*P **P 01 04 51.1 +0.3**
comp=Z,16nm,0.7s,mb5.0
MOTA Moosalm 71.20 344⇓*i*P **P 01 04 51.5 +0.1**
comp=Z,16nm,1.0s,mb4.9,SNR=9.3
MOTA Moosalm 71.20 344⇓*i*P **P 01 04 51.5 +0.1**
MOTA pmax pmax
comp=Z,16nm,1.0s,mb4.9
STHS Stebnicka Huta 71.22 352 *e*P **P 01 04 51.3 -0.2**
STHS *e* pP 01 04 57.6 -0.4
STHS *e* 01 05 11.1
STHS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
STHS Stebnicka Huta 71.22 352 *e*P **P 01 04 51.3 -0.2**
comp=Z,9.1nm,1.2s,mb4.6
STHS *e* pP 01 04 57.6 -0.4
STHS *e* 01 05 11.1
KWP Kalwaria 71.25 353 *e*P **P 01 04 51.4 -0.2**
KWP *e* pP 01 04 57.2 -1.0
ATE Arette 71.31 334⇑*e*P pP 01 04 58.5 -0.1
NIE Niedzica 71.35 351 *e*P **P 01 04 52.2 -0.1**
DAVA Damuels 71.47 343⇓*i*P **P 01 04 52.9 0.0**
comp=Z,38nm,1.6s,mb5.1,SNR=11
SJPF Ste Jean 71.55 334 *e*P **P 01 04 53.8 +0.3**
comp=Z,30nm,0.7s,mb5.1
SJPF Ste Jean 71.55 334 *e*P **P 01 04 53.8 +0.3**
SJPF pmax pmax
comp=Z,15nm,0.7s,mb5.0
SJPF Ste Jean 71.55 334 *e*P **P 01 04 53.8 +0.3**
comp=Z,15nm,0.7s,mb5.0
LBL Lubilhac 71.66 338⇑*e*P pP 01 05 01.3 +0.6
ELIZ Elizondo 71.72 334 P **P 01 04 52.7 -1.8**
ELIZ pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ELIZ Elizondo 71.72 334 P **P 01 04 52.7 -1.8**
comp=Z,6.1nm,0.7s,mb4.6
EALK Alkurruntz 71.75 334 P **P 01 04 52.9 -1.8**
comp=Z,4.9nm,0.6s,mb4.6
AKASG Malin Array Be 71.78 357 P **P 01 04 53.4 -1.4**
comp=Z,4.0nm,0.9s,mb4.4,baz=180,slow=5.7,SNR=13
AKASG pP pP 01 04 59.4 -2.0
comp=Z,10nm,0.8s,baz=180,slow=5.6,SNR=11
AKASG Malin Array Be 71.78 357 P **P 01 04 53.4 -1.5**
AKASG *PP pP 01 04 59.4 -2.0
AKASG pmax pmax
comp=N,10.0nm,0.8s
AKASG Malin Array Be 71.78 357 P **P 01 04 53.4 -1.4**
AKASG pP pP 01 04 59.4 -2.0
AKBB Malin Array Si 71.78 357 *e*P **P 01 04 53.2 -1.7**
AKBB *e**PP pP 01 04 59.5 -1.9
CAF Calviac 71.82 337 *e*P **P 01 04 55.6 +0.5**
comp=N,46nm,1.1s,mb5.0
CAF Calviac 71.82 337 *e*P **P 01 04 55.6 +0.5**
CAF pmax pmax
comp=Z,23nm,1.1s,mb5.0
CAF Calviac 71.82 337 *e*P **P 01 04 55.6 +0.5**
comp=Z,23nm,1.1s,mb5.0
FUR Furstenfeldbru 71.92 345 *e*P **P 01 04 55.6 -0.1**
comp=Z,73nm,1.1s,mb5.5
FUR Furstenfeldbru 71.92 345 *e*P **P 01 04 55.6 -0.1**
FUR pmax pmax
comp=Z,73nm,1.1s,mb5.5
GEC2 GERESS Array S 72.00 347 *e*P **P 01 04 55.6 -0.6**
comp=Z,38nm,1.4s,mb5.1
GEC2 GERESS Array S 72.00 347 *e*P **P 01 04 55.6 -0.6**
GEC2 pmax pmax
comp=Z,38nm,1.4s,mb5.1
GERES GERESS Array B 72.00 347 P **P 01 04 55.9 -0.3**
comp=Z,3.7nm,0.7s,mb4.4,baz=163,slow=5.2,SNR=38
GERES pP pP 01 05 02.1 -0.6
comp=Z,7.7nm,0.6s,baz=157,slow=5.3,SNR=31
GERES LR LR 01 40 39.7
comp=Z,127nm,18.3s,MS4.2,baz=269,slow=39
GERES GERESS Array B 72.00 347 P **P 01 04 55.9 -0.3**
GERES *PP pP 01 05 02.1 -0.6
GERES pmax pmax
comp=Z,4.0nm,0.7s
GERES MLR MLR
comp=Z,127nm,18.3s
TREC Trest 72.06 348 *e*P **P 01 04 55.8 -0.7**
TREC *e*pP pP 01 05 01.2 -1.8
TREC AMS AMS 01 42 40.0
comp=Z,100nm,15.9s
OKC Ostrava-Krasne 72.09 350 *e*P **P 01 04 56.2 -0.6**
OKC *e*pP pP 01 05 02.0 -1.3
MORC Moravsky Berou 72.14 349⇓*i*P **P 01 04 56.6 -0.4**
MORC Moravsky Berou 72.14 349 *e*P **P 01 04 56.3 -0.7**
PLDF La Plantade 72.18 339 *e*P pP 01 05 03.6 -0.2
PYM Petit Puy Mans 72.20 338 *e*P pP 01 05 04.4 +0.5
OJC Ojcow 72.21 351 *e*P **P 01 04 56.5 -0.9**
OJC *e**PP pP 01 04 59.5 -4.4
OJC *e*S S 01 14 22.0 +3.0
OJC MLR MLR
comp=Z,600nm,18.6s,MS4.9
KHC Kasperske Hory 72.29 347 *e*P **P 01 04 57.3 -0.7**
KHC *e*pP pP 01 05 03.6 -0.9
KHC AMS AMS 01 41 30.0
comp=Z,200nm,17.3s
KHC Kasperske Hory 72.29 347*d i*P **P 01 04 57.3 -0.7**
LFF La Frestale 72.32 336 *e*P **P 01 04 58.5 +0.4**

comp=Z,65nm,1.0s,mb5.2
LFF La Frestale 72.32 336 *e*P **P** **01 04 58.5 +0.4**
LFF pmax pmax
comp=Z,32nm,1.0s,mb5.2
LFF La Frestale 72.32 336 *e*P **P** **01 04 58.5 +0.4**
comp=Z,32nm,1.0s,mb5.2
RJF Les Rejaudoux 72.34 337 *e*P **P** **01 04 58.6 +0.4**
RJF *e*R
comp=Z,355nm,19.0s
RJF Les Rejaudoux 72.34 337 *e*P **P** **01 04 58.6 +0.4**
RJF LR LR
comp=Z,350nm,19.0s,MS4.7
LOMF Lomont 72.39 341 *e*P pP 01 05 05.1 +0.1
VRSR Storozhevoye 72.39 4 *e*P **P** **01 04 57.4 -1.1**
VRSR pmax pmax
comp=N,20nm,1.0s
VRSR pmax pmax
comp=E,9.0nm,1.0s
VRSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
AGO Saint Agoulin 72.42 338 *e*P pP 01 05 05.7 +0.5
WET Wettzell 72.46 346 *e*P **P** **01 04 58.1 -0.9**
comp=Z,21nm,1.3s,mb4.9
WET Wettzell 72.46 346 *e*P **P** **01 04 58.1 -0.9**
WET pmax pmax
comp=Z,21nm,1.3s,mb4.9
ELAN Lanestosa 72.57 333 P **P** **01 04 58.8 -0.8**
comp=Z,8.3nm,0.7s,mb4.8
KK31 Karatay Array 72.66 28 *i* P **P** **01 04 59.2 -0.9**
KK31 pmax pmax
comp=Z,35nm,0.9s,mb5.3
KKAR Karatay Array 72.66 28 *i* P **P** **01 04 59.2 -0.9**
KKAR pmax pmax
comp=Z,31nm,0.9s,mb5.2
SMF Signal de Mont 72.69 339 *e*P **P** **01 05 00.3 0.0**
comp=Z,23nm,0.7s,mb4.9
SMF Signal de Mont 72.69 339 *e*P **P** **01 05 00.3 0.0**
SMF pmax pmax
comp=Z,11nm,0.7s,mb4.9
SMF Signal de Mont 72.69 339 *e*P **P** **01 05 00.3 0.0**
comp=Z,11nm,0.7s,mb4.9
MOF Molkenrain 72.75 342 *e*P pP 01 05 07.5 +0.3
HINF Hinteralfeld 72.80 342 *e*P **P** **01 05 00.8 -0.1**
comp=Z,21nm,0.9s,mb4.8
HINF Hinteralfeld 72.80 342 *e*P **P** **01 05 00.8 -0.1**
HINF pmax pmax
comp=Z,11nm,0.9s,mb4.8
HINF Hinteralfeld 72.80 342 *e*P **P** **01 05 00.8 -0.1**
comp=Z,11nm,0.9s,mb4.8
BFO Black Forest 72.84 343 *e*P **P** **01 05 00.9 -0.3**
comp=Z,8.0nm,1.1s,mb4.6
PRU Pruhonice 72.90 347 *e*P **P** **01 05 01.0 -0.6**
PRU *e*pP pP 01 05 06.9 -1.2
PRU AMS AMS 01 40 00.0
comp=Z,100nm,16.4s
DPC Dobruska-Polom 72.91 349 *e*P **P** **01 05 01.0 -0.6**
DPC *e*pP pP 01 05 07.2 -0.9
TCF Toulx Ste Croi 72.94 338 *e*P **P** **01 05 02.5 +0.7**
comp=Z,50nm,1.0s,mb5.1
TCF Toulx Ste Croi 72.94 338 *e*P **P** **01 05 02.5 +0.7**
TCF pmax pmax
comp=Z,25nm,1.0s,mb5.1
TCF Toulx Ste Croi 72.94 338 *e*P **P** **01 05 02.5 +0.7**
comp=Z,25nm,1.0s,mb5.1
BGF Bois d'Agland 72.95 339 *e*P **P** **01 05 02.2 +0.3**
comp=Z,26nm,0.9s,mb4.8
BGF Bois d'Agland 72.95 339 *e*P **P** **01 05 02.2 +0.3**
BGF pmax pmax
comp=Z,13nm,0.9s,mb4.9
BGF Bois d'Agland 72.95 339 *e*P **P** **01 05 02.2 +0.3**
comp=Z,13nm,0.9s,mb4.9
AVF Avril sur Loir 72.98 339 *e*P **P** **01 05 02.2 +0.1**
comp=Z,49nm,0.9s,mb5.1
AVF Avril sur Loir 72.98 339 *e*P **P** **01 05 02.2 +0.1**
AVF pmax pmax
comp=Z,24nm,0.9s,mb5.1
AVF Avril sur Loir 72.98 339 *e*P **P** **01 05 02.2 +0.1**
comp=Z,24nm,0.9s,mb5.1
STU Stuttgart 73.01 344 *e*P **P** **01 05 02.1 -0.1**
comp=Z,29nm,0.9s,mb5.2
STU Stuttgart 73.01 344 P **P** **01 05 01.8 -0.4**
ECH Echery 73.07 342 *e*P pP 01 05 08.4 -0.7
UPC Upice 73.11 349 *e*P **P** **01 05 02.6 -0.2**
HAU Haudompre 73.12 341 *e*P **P** **01 05 02.8 0.0**
comp=Z,44nm,0.8s,mb5.2
HAU *e*R
comp=Z,220nm,17.0s
HAU Haudompre 73.12 341 *e*P **P** **01 05 02.8 0.0**
HAU pmax pmax
comp=Z,22nm,0.8s,mb5.1
HAU MLR MLR
comp=Z,220nm,17.0s,MS4.5
HAU Haudompre 73.12 341 *e*P **P** **01 05 02.8 0.0**
comp=Z,22nm,0.8s,mb5.1
HAU LR LR
comp=Z,220nm,17.0s,MS4.5
SSF Saint Saulge 73.17 339 *e*P **P** **01 05 02.9 -0.3**
comp=Z,13nm,0.8s,mb4.6
SSF Saint Saulge 73.17 339 *e*P **P** **01 05 02.9 -0.3**
comp=Z,6.7nm,0.8s,mb4.6
WLS Welschbruch 73.19 342 *e*P **P** **01 05 08.9 +5.6**
ROTZ Rotzenmuhle 73.20 346 *e*P **P** **01 05 03.0 -0.3**
comp=Z,43nm,1.0s,mb5.3
CDF Champ du Feu 73.21 342 *e*P **P** **01 05 03.1 -0.3**
comp=Z,33nm,1.0s,mb4.9
CDF Champ du Feu 73.21 342 *e*P **P** **01 05 03.1 -0.3**
CDF pmax pmax
comp=Z,16nm,1.0s,mb4.9
CDF Champ du Feu 73.21 342 *e*P **P** **01 05 03.1 -0.3**
comp=Z,16nm,1.0s,mb4.9
LOR Lormes 73.24 340 *e*P **P** **01 05 03.4 -0.2**
comp=Z,18nm,0.6s,mb4.9
LOR *e*R
comp=Z,185nm,19.8s
LOR Lormes 73.24 340 *e*P **P** **01 05 03.4 -0.2**
LOR pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
LOR MLR MLR
comp=Z,190nm,19.8s,MS4.4
LOR Lormes 73.24 340 *e*P **P** **01 05 03.4 -0.2**
comp=Z,9.3nm,0.6s,mb4.9
LOR LR LR
comp=Z,190nm,19.8s,MS4.4
AML Almayashu 73.32 30 P **P** **01 05 04.1 0.0**
SNR=22
GRA1 Grafenberg Arr 73.36 345 *e*P **P** **01 05 04.0 -0.3**
comp=Z,48nm,1.0s,mb5.4
GRA1 *e*pP pP 01 05 10.0 -0.8
GRF Grafenberg Arr 73.36 345 *e*P **P** **01 05 04.0 -0.3**
comp=Z,48nm,1.0s,mb5.4
GRF *e*pP pP 01 05 10.0 -0.8
GRF Grafenberg Arr 73.36 345 *e*P **P** **01 05 04.0 -0.3**
GRF *e**PP pP 01 05 10.0 -0.8
GRF pmax pmax
comp=Z,48nm,1.0s,mb5.4
GRF Grafenberg Arr 73.36 345 *e*P **P** **01 05 04.0 -0.3**
GRF *e**PP pP 01 05 10.0 -0.8
GRF pmax pmax
comp=Z,48nm,1.0s,mb5.4
KSP Ksiaz 73.39 349 *e*P pP 01 05 10.3 -0.7
PVCC Panska Ves 73.41 348 *e*P **P** **01 05 04.1 -0.5**
PVCC *e*pP pP 01 05 10.2 -0.9
THEF They Montfort 73.42 341⇑ *e*P pP 01 05 10.7 -0.5
MANZ Manzenburg 73.42 346 *e*P **P** **01 05 04.4 -0.3**
comp=Z,35nm,1.2s,mb5.2
LANF Langenberg 73.58 343 *e*P pP 01 05 12.3 +0.2
NKC Novy Kostel 73.58 346 *e*P **P** **01 05 05.9 +0.3**
NKC *e*pP pP 01 05 11.9 -0.2
HYF Humbligny 73.64 339 *e*P **P** **01 05 06.1 +0.2**
GUNZ Gunzen 73.73 346 *e*P **P** **01 05 06.4 -0.1**
comp=Z,13nm,0.9s,mb4.9
TANN Tannenbergstha 73.75 346 *e*P **P** **01 05 06.4 -0.2**
comp=Z,30nm,0.9s,mb5.2
EKS2 Erkin-Say 73.77 30 P **P** **01 05 06.3 -0.4**
SNR=17
WERD Werda 73.81 346 *e*P **P** **01 05 06.8 -0.1**
comp=Z,36nm,1.2s,mb5.2
NWAO Narrogin (SRO) 73.83 119 *e*P **P** **01 05 08.5 +1.5**
BRG Berggiesshubel 73.87 347 *e*P **P** **01 05 06.3 -1.0**
comp=Z,9.0nm,0.8s,mb4.8
BRG Berggiesshubel 73.87 347 *e*P **P** **01 05 07.0 -0.2**
comp=Z,2.9nm,0.9s,mb4.2
BRG *i* pP 01 05 12.7 -1.1
comp=Z,5.5nm,0.8s
BRG
comp=N,104nm,16.1s
BRG
comp=E,178nm,14.8s
BRG
comp=Z,219nm,16.5s
BRG Berggiesshubel 73.87 347 *e*P **P** **01 05 07.0 -0.3**
BRG *i* pP 01 05 12.7 -1.1
BRG pmax pmax
comp=Z,30nm,0.9s,mb5.2
BRG MLR MLR
comp=N,104nm,16.1s,MS4.5
BRG MLR MLR
comp=E,178nm,14.8s,MS4.5
BRG MLR MLR
comp=Z,219nm,16.5s,MS4.5
BRG Berggiesshubel 73.87 347 *e*P **P** **01 05 07.0 -0.2**
comp=Z,2.9nm,0.9s,mb4.2
BRG *i* pP 01 05 12.7 -1.1
BRG LR LR
comp=Z,220nm,16.5s,MS4.5
TOD Tromm 73.88 344 *e*P pP 01 05 14.0 +0.1
MEZF Maizieres J'vi 73.95 341 *e*P **P** **01 05 08.3 +0.6**
comp=Z,35nm,0.7s,mb5.1
FBE Freiberg 74.03 347 *e*P **P** **01 05 07.4 -0.8**
comp=Z,7.0nm,0.7s,mb4.7
MFF Saint Martin d 74.05 337 *e*P **P** **01 05 09.6 +1.2**
comp=Z,58nm,1.0s,mb5.2
MFF Saint Martin d 74.05 337 *e*P **P** **01 05 09.6 +1.2**
MFF pmax pmax
comp=Z,29nm,1.0s,mb5.2
MFF Saint Martin d 74.05 337 *e*P **P** **01 05 09.6 +1.2**
comp=Z,29nm,1.0s,mb5.2
AAK Ala-Archa 74.08 30 ⇑P **P** **01 05 07.4 -1.1**
SNR=8.5
AAK Ala-Archa 74.08 30*d* *i*P **P** **01 05 07.5 -1.0**
AAK pmax pmax
comp=Z,20nm,1.6s,mb4.8
AAK MLR MLR
comp=Z,100nm,14.0s,MS4.3
AAK Ala-Archa 74.08 30 *e*P **P** **01 05 07.4 -1.1**
AAK LR LR
comp=Z,46nm,21.0s,MS3.7
AB31 Akbulak array 74.14 18 *i* P **P** **01 05 07.2 -1.7**
AB31 pmax pmax
comp=Z,15nm,0.8s,mb5.0
MOX Moxa 74.15 346 *e*P **P** **01 05 08.5 -0.4**
comp=Z,21nm,0.9s,mb5.1
MOX Moxa 74.15 346 *e*P **P** **01 05 09.1 +0.2**
MOX *e* pP 01 05 15.3 -0.2
comp=Z,29nm,1.1s
MOX Moxa 74.15 346 *e*P **P** **01 05 09.1 +0.2**
MOX *e* pP 01 05 15.3 -0.2
MOX pmax pmax
comp=Z,29nm,1.1s,mb5.1
MOX Moxa 74.15 346 *e*P **P** **01 05 09.1 +0.2**
comp=Z,29nm,1.1s,mb5.1
MOX *e* pP 01 05 15.3 -0.2
FRU Bishkek 74.30 30 *e*P **P** **01 05 08.5 -1.3**
KBK Karagaybulak 74.32 31 P **P** **01 05 10.1 +0.2**
SNR=16
CLL Collm 74.47 347 *e*P **P** **01 05 10.1 -0.7**
comp=Z,32nm,1.3s,mb5.1
CLL Collm 74.47 347 P **P** **01 05 10.7 -0.1**
comp=Z,logA/T=1.0,mb4.7
CLL *i* *PP pP 01 05 17.0 -0.3
CLL *i* *SP sP 01 05 19.9 +0.2
CLL *e*PP PP 01 07 57.0 -0.2
CLL Collm 74.47 347 *i* P **P** **01 05 10.7 -0.1**
comp=Z,11nm,1.1s,mb4.7
CLL ⇓*i*pP pP 01 05 17.0 -0.3
comp=Z,31nm,1.3s
CLL *i* sP sP 01 05 19.9 +0.2
CLL *e*PP PP 01 07 57.0 -0.2
CLL Collm 74.47 347 ⇓*i*P **P** **01 05 10.7 -0.1**
CLL *i* *PP pP 01 05 17.0 -0.3
CLL pmax pmax
comp=Z,11nm,1.1s,mb4.7
CLL MLR MLR
comp=Z,200nm,15.9s,MS4.5
CLL Collm 74.47 347 *i* P **P** **01 05 10.7 -0.1**
comp=Z,11nm,1.1s,mb4.7
CLL ⇓*i*pP pP 01 05 17.0 -0.3
CLL LR LR
comp=Z,200nm,15.9s,MS4.5
CHMS Chumysh 74.49 30 P **P** **01 05 10.7 -0.2**
SNR=6.9
TNS Taunus Mts 74.54 344 *e*P **P** **01 05 10.9 -0.3**
comp=Z,20nm,1.0s,mb5.0
TNS Taunus Mts 74.54 344 *e*P **P** **01 05 10.9 -0.3**
TNS pmax pmax
comp=Z,20nm,1.0s,mb5.0
USP Ospenovka 74.58 30 P **P** **01 05 10.7 -0.7**
SNR=14
ULHL Ulahol 74.63 32 P **P** **01 05 12.2 +0.5**
SNR=6.0
WLF Walferdange 74.66 342 *e*P **P** **01 05 11.6 -0.3**
comp=Z,16nm,0.9s,mb5.0
WLF Walferdange 74.66 342 P **P** **01 05 13.8 +2.0**
WLF AP pP 01 05 18.5 +0.1
WLF Walferdange 74.66 342 *e*P **P** **01 05 12.5 +0.6**
UBBA Unterbreizbach 74.70 345 *e*P **P** **01 05 11.7 -0.4**
TKM2 Tokmak 2 74.83 31 P **P** **01 05 12.6 -0.3**
SNR=28
LSA Lhasa 75.29 50 P **P** **01 05 15.4 -0.1**
GTTG Gvttingen 75.38 345 *e*P **P** **01 05 15.8 -0.2**
comp=Z,26nm,0.9s,mb5.2
GIVF Givet 75.44 341 *e*P **P** **01 05 16.4 0.0**
comp=Z,26nm,0.8s,mb4.9
GIVF Givet 75.44 341 *e*P **P** **01 05 16.4 0.0**
GIVF pmax pmax
comp=Z,13nm,0.8s,mb4.9
GIVF Givet 75.44 341 *e*P **P** **01 05 16.4 0.0**
comp=Z,13nm,0.8s,mb4.9
DOU Dourbes 75.50 341 P **P** **01 05 17.2 +0.4**
DOU AP pP 01 05 23.0 -0.3
SUW Suwalki 75.51 354 *e*P **P** **01 05 16.0 -0.8**
SUW *e* pP 01 05 21.7 -1.6
GKP Gorka Klasztor 75.56 350 *e*P **P** **01 05 17.1 0.0**
GKP *e* pP 01 05 23.5 -0.1
BCLA Clavier 75.58 342 P **P** **01 05 17.6 +0.4**
BCLA XP sP 01 05 24.0 -2.1
BAIF Baives 75.59 341 *e*P **P** **01 05 17.4 +0.2**
comp=Z,64nm,1.2s,mb5.1
BAIF Baives 75.59 341 *e*P **P** **01 05 17.4 +0.2**
BAIF pmax pmax
comp=Z,32nm,1.2s,mb5.1
BAIF Baives 75.59 341 *e*P **P** **01 05 17.4 +0.2**
comp=Z,32nm,1.2s,mb5.1
CHG Chiang Mai 75.60 63 ⇓P **P** **01 05 17.0 -0.3**
comp=Z,20nm,1.0s,mb5.0
CHTO Chiang Mai 75.60 63 ⇓P **P** **01 05 16.8 -0.4**
SNR=5.4
CHTO Chiang Mai 75.60 63 *e*P **P** **01 05 16.7 -0.6**
CHTO *e**PP pP 01 05 25.4 +1.6
CHTO pmax pmax
comp=Z,21nm,1.1s,mb5.0
CHTO Chiang Mai 75.60 63 *e*P **P** **01 05 16.7 -0.5**
comp=Z,20nm,1.1s,mb5.0
CHTO *e*pP pP 01 05 25.4 +1.6
HGN Heimansgroeve 75.71 342 *e*P **P** **01 05 24.5 +6.6**
comp=Z,14nm,0.9s,mb4.9
HGN *e*S S 01 15 08.4 +10
LDF La Druitiere 75.73 338 *e*P **P** **01 05 17.8 -0.3**
comp=Z,42nm,1.0s,mb5.0
LDF La Druitiere 75.73 338 *e*P **P** **01 05 17.8 -0.3**
LDF pmax pmax
comp=Z,21nm,1.0s,mb5.0
LDF La Druitiere 75.73 338 *e*P **P** **01 05 17.8 -0.3**
comp=Z,21nm,1.0s,mb5.0
GRR Gorron 75.82 337 *e*P **P** **01 05 18.3 -0.3**
comp=Z,20nm,0.9s,mb4.8
GRR Gorron 75.82 337 *e*P **P** **01 05 18.3 -0.3**
GRR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GRR Gorron 75.82 337 *e*P **P** **01 05 18.3 -0.3**
comp=Z,9.9nm,0.9s,mb4.7
BUG Bochum--Univer 75.96 344 *e*P **P** **01 05 19.4 +0.1**
comp=Z,28nm,0.9s,mb5.2
FLN La Foliniere 76.00 338 *e*P **P** **01 05 19.2 -0.4**
FLN *e*R
comp=Z,266nm,18.5s
OBN Obninsk 76.16 2⇑ *e*P **P** **01 05 19.9 -0.6**
OBN *i* pP 01 05 25.9 -1.1
OBN pmax pmax
comp=Z,39nm,1.8s,mb5.0
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.2
OBN Obninsk 76.16 2 PFAKE 01 05 30.0 +10
OBN LR LR
comp=Z,19nm,20.0s,MS3.4
NRDL Niedersach Rie 76.22 346 *e*P **P** **01 05 20.9 0.0**
comp=Z,39nm,1.7s,mb5.1
QUIF Quistinic 76.29 336 *e*P **P** **01 05 21.2 0.0**
comp=Z,23nm,1.0s,mb4.8
QUIF Quistinic 76.29 336 *e*P **P** **01 05 21.2 0.0**
QUIF pmax pmax
comp=Z,12nm,1.0s,mb4.8
QUIF Quistinic 76.29 336 *e*P **P** **01 05 21.2 0.0**
comp=Z,12nm,1.0s,mb4.8
SGMF Saint Gilles 76.33 336 *e*P **P** **01 05 21.0 -0.5**
WTSB Winterswijk 76.56 343 *e*P pP 01 05 29.0 -0.3
comp=Z,20nm,1.1s
BDFB Brasilia 76.58 258 P **P** **01 05 24.9 +2.1**
comp=Z,15nm,0.7s,mb5.0,baz=110,slow=4.9,SNR=24
BDFB pP pP 01 05 30.7 +1.3
comp=Z,33nm,0.7s,baz=121,slow=4.5,SNR=22
BDFB LR LR 01 36 00.1
comp=Z,565nm,18.2s,MS4.9,baz=107,slow=33
BDFB Brasilia 76.58 258 P **P** **01 05 24.9 +2.0**
BDFB *PP pP 01 05 30.7 +1.3
BDFB pmax pmax
comp=Z,15nm,0.7s
BDFB pmax pmax
comp=N,33nm,0.7s
IBBN Ibbenburen 76.62 344 *e*P **P** **01 05 23.2 +0.1**
comp=Z,17nm,0.8s,mb5.0
ROSF Rostrenen 76.67 336 *e*P **P** **01 05 23.0 -0.4**
comp=Z,15nm,0.9s,mb4.6
MOS Moscow 76.82 2 *e*P **P** **01 05 22.0 -2.2**
MOS *e* pP 01 05 28.6 -2.2
MOS *e* 01 08 10.2
MOS pmax pmax
comp=Z,58nm,1.6s,mb5.3
VNDA Vanda 76.93 170 P **P** **01 05 26.3 +1.5**
comp=Z,8.0nm,0.7s,mb4.8,baz=261,slow=5.8,SNR=69
VNDA LR LR 01 38 29.8
comp=Z,173nm,18.5s,MS4.4,baz=205,slow=35
VNDA Vanda 76.93 170 *e*P **P** **01 05 26.2 +1.4**
SBA Scott Base 77.45 171 *e*P **P** **01 05 30.1 +2.3**
SBA pmax pmax
comp=Z,33nm,1.2s,mb5.1
SBA Scott Base 77.45 171 *e*P **P** **01 05 30.1 +2.3**
comp=Z,33nm,1.2s,mb5.1
BSEG Bad Segeberg 77.51 346 *e*P **P** **01 05 27.6 -0.5**
comp=Z,13nm,1.0s,mb4.8
BSEG Bad Segeberg 77.51 346 *e*P **P** **01 05 27.6 -0.5**
BSEG pmax pmax
comp=Z,13nm,1.0s,mb4.8
KKTK Khon Kaen 77.73 67 P **P** **01 05 29.0 -0.3**
SWK Warminster 78.63 338 *e*P **P** **01 05 35.1 +0.8**
SWK Warminster 78.63 338 *e*P **P** **01 05 35.1 +0.8**
CGH1 Goonhilly 78.79 336 *e*P **P** **01 05 36.1 +0.9**
CGH1 Goonhilly 78.79 336 *e*P **P** **01 05 36.1 +0.9**
CRQ2 Rosemanowes 2 78.89 336 *e*P **P** **01 05 36.4 +0.7**
CRQ2 Rosemanowes 2 78.89 336 *e*P **P** **01 05 36.4 +0.7**
CSA1 St Austell 78.93 336 *e*P **P** **01 05 36.8 +0.8**
CSA1 St Austell 78.93 336 *e*P **P** **01 05 36.8 +0.8**
USHA Ushuaia 79.36 215 P **P** **01 05 39.9 +1.6**
comp=Z,16nm,0.8s,mb5.0,baz=46,slow=2.6,SNR=6.6
USHA pP pP 01 05 46.3 +1.4
comp=Z,35nm,1.0s,baz=66,slow=3.2,SNR=7.0
MBWA Marble Bar 79.39 109 *e*P **P** **01 05 39.6 +1.1**
comp=Z,20nm,0.9s,mb5.0
MCH1 Michaelchurch 79.59 338 *e*P **P** **01 05 40.2 +0.6**
MCH1 Michaelchurch 79.59 338 *e*P **P** **01 05 40.2 +0.6**
HTR Trewern Hill 79.76 338 *e*P **P** **01 05 41.2 +0.7**
HTR AMb AMB 01 05 48.5
comp=Z,34nm,1.0s,mb5.2
HTR Trewern Hill 79.76 338 *e*P **P** **01 05 41.2 +0.7**
HTR AMb AMB 01 05 48.5
comp=Z,34nm,1.0s,mb5.2
HLM1 Long Mynd 79.99 338 *e*P **P** **01 05 41.6 -0.1**
HLM1 AMb AMB 01 05 50.1
comp=Z,41nm,1.3s,mb5.2
HLM1 Long Mynd 79.99 338 *e*P **P** **01 05 41.6 -0.1**
HLM1 AMb AMB 01 05 50.1
comp=Z,41nm,1.3s,mb5.2
MUD Monsted U'grnd 80.10 347 *i* P **P** **01 05 42.4 +0.1**
comp=Z,19nm,0.9s,mb5.0
MUD *i* pP 01 05 48.7 -0.2
MUD Monsted U'grnd 80.10 347 *i* P **P** **01 05 42.4 +0.1**
MUD *i* pP 01 05 48.7 -0.2
MUD pmax pmax
comp=Z,19nm,0.9s,mb5.0
ZRNK Zerenda 80.17 21 P **P** **01 05 41.3 -1.4**
ZRNK pmax pmax
comp=Z,16nm,1.0s,mb4.9
ZRNK Zerenda 80.17 21 *e*P **P** **01 05 41.2 -1.5**
comp=Z,14nm,0.7s,mb5.0
ZRNK *e*pP pP 01 05 47.4 -1.9
ARU Arti 80.32 14 P **P** **01 05 42.6 -0.9**
comp=Z,139nm,1.1s,mb5.8,SNR=8.5
ARU Arti 80.32 14 ⇓*i*P **P** **01 05 42.5 -1.0**
ARU *e* 01 08 45.1
ARU *e*PPP 01 10 35.8
ARU *e*S S 01 15 49.0 +0.9
ARU *e*SS SS 01 20 57.2 -2.2
ARU pmax pmax
comp=Z,31nm,1.1s,mb5.2
ARU Arti 80.32 14 *e*P **P** **01 05 41.8 -1.7**
comp=Z,48nm,1.3s,mb5.3
ARU LR LR
comp=Z,26nm,20.0s,MS3.6
SBD1 Bryn Du 80.44 339 *e*P **P** **01 05 44.6 +0.5**
SBD1 Bryn Du 80.44 339 *e*P **P** **01 05 44.6 +0.5**
LHO Holmfirth 80.50 340 *e*P **P** **01 05 45.7 +1.2**
LHO Holmfirth 80.50 340 *e*P **P** **01 05 45.7 +1.2**
VOSK Vostochnaya 80.66 22 P **P** **01 05 43.8 -1.6**
VOSK pmax pmax
comp=Z,17nm,1.1s,mb4.9
BRVK Borovoye 80.69 22 P **P** **01 05 44.5 -1.0**
comp=Z,133nm,0.9s,mb5.9,SNR=11
BRVK Borovoye 80.69 22 ⇓P **P** **01 05 44.4 -1.1**
SNR=10
BRVK Borovoye 80.69 22 *e*P **P** **01 05 44.3 -1.2**
BRVK LR LR
comp=Z,18nm,19.0s,MS3.4
BVA0 Borovoye Array 80.70 22 *i* P **P** **01 05 44.3 -1.3**
BVA0 pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MKAR Makanchi Array 80.90 32 P **P** **01 05 45.5 -1.2**
comp=Z,11nm,0.8s,mb4.8,baz=224,slow=5.1,SNR=80
MKAR Makanchi Array 80.90 32 P **P** **01 05 45.5 -1.1**
MKAR pmax pmax
comp=Z,11nm,0.8s
WPM1 Penmaenmawr 80.95 338 *e*P **P** **01 05 47.3 +0.4**
WPM1 Penmaenmawr 80.95 338 *e*P **P** **01 05 47.3 +0.4**
TRQA Tornquist 81.16 233 *e*P **P** **01 05 49.1 +1.1**
comp=Z,28nm,1.1s,mb5.1
CHKZ Chkalovo 81.32 21 *e*P **P** **01 05 47.6 -1.2**
CHKZ *e* pP 01 05 54.0 -1.4
CHKZ pmax pmax
comp=Z,20nm,0.8s,mb5.1
CHKZ Chkalovo 81.32 21 *e*P **P** **01 05 47.6 -1.2**
comp=Z,20nm,0.8s,mb5.1
CHKZ *e* pP 01 05 54.0 -1.5
CPUP Villa Florida 81.38 245 P **P** **01 05 50.5 +1.3**
comp=Z,0.6nm,0.4s,baz=101,slow=7.7,SNR=5.5
CPUP LR LR 01 37 21.2
comp=Z,247nm,18.5s,baz=129,slow=32
CPUP Villa Florida 81.38 245 *e*P **P** **01 05 50.6 +1.4**
CPUP pmax pmax
comp=Z,37nm,1.1s
CPUP Villa Florida 81.38 245 *e*P **P** **01 05 50.6 +1.4**
comp=Z,38nm,1.1s,mb5.2
KMI Kunming 81.69 59 P **P** **01 05 49.6 -1.2**
KMI PP PP 01 08 58.8 +1.2
KMI PPP 01 10 51.3
KMI S S 01 16 01.9 -0.4
KMI SKS 01 16 05.4
KMI PS 01 16 52.0
KMI SS SS 01 21 22.8 +3.0
KMI SSS 01 24 46.3
KMI AMB AMB
comp=Z,12nm,0.6s,mb5.0
KMI LR LR
comp=Z,59nm,18.9s,MS4.0
XAL Allendale 81.72 340 *e*P **P** **01 05 51.5 +0.5**
XAL AMb AMB 01 05 57.7
comp=Z,34nm,1.0s,mb5.2
XAL Allendale 81.72 340 *e*P **P** **01 05 51.5 +0.5**
XAL AMb AMB 01 05 57.7

comp=Z,34nm,1.0s,mb5.2
WMQ Urumqi 81.73 36 eP P **01 05 50.0 -1.0**
WMQ XP sP 01 05 57.0 -3.0
WMQ PP PP 01 08 59.0 +1.1
WMQ SS SS 01 21 22.0 +1.6
WMQ AMB AMB
comp=Z,16nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,110nm,6.0s
WMQ LR LR
comp=N,84nm,15.0s,MS4.4
WMQ LR LR
comp=E,98nm,15.0s,MS4.4
WMQ LR LR
comp=Z,61nm,15.0s,MS4.1
DLF Lyons Farm 81.91 337 eP pP 01 05 57.8 -0.8
KLMR Klimovskoe 82.02 3 eP P **01 05 51.3 -1.3**
KLMR pmax pmax
comp=Z,30nm,1.3s,mb5.1
KURK Kurchatov 82.06 27 P P **01 05 52.4 -0.4**
comp=Z,246nm,1.0s,mb6.1,SNR=33
DCN Croghan 82.22 337⇓ iP pP 01 06 00.5 +0.3
BHH Howats Hill 82.24 340 eP P **01 05 53.9 +0.2**
BHH Howats Hill 82.24 340 eP P **01 05 53.9 +0.2**
ECK Cauldkaine Hil 82.28 340 eP P **01 05 54.6 +0.7**
ECK AMb AMB 01 06 01.7
comp=Z,52nm,1.1s,mb5.4
ECK Cauldkaine Hil 82.28 340 eP P **01 05 54.6 +0.7**
ECK AMb AMB 01 06 01.7
comp=Z,52nm,1.1s,mb5.4
ESK Eskdalemuir 82.42 340 eP P **01 05 57.9 +3.3**
ESK pmax pmax
comp=Z,40nm,1.4s,mb5.2
ESK MLR MLR
comp=Z,48nm,19.0s,MS3.9
ESK Eskdalemuir 82.42 340 eP P **01 05 57.9 +3.3**
comp=Z,40nm,1.4s,mb5.2
ESK LR LR
comp=Z,48nm,19.0s,MS3.9
ESY Stoneypath 82.73 341 eP P **01 05 56.9 +0.7**
ESY Stoneypath 82.73 341 eP P **01 05 56.9 +0.7**
EBL Broad Law 82.75 340 eP P **01 05 57.1 +0.8**
EBL Broad Law 82.75 340 eP P **01 05 57.1 +0.8**
EDI Edinburgh 82.92 340 eP P **01 05 58.5 +1.2**
EDI Edinburgh 82.92 340 eP P **01 05 58.5 +1.2**
KONO Kongsberg 82.97 348 PFAKE 01 06 10.0 +12
KONO LR LR
comp=Z,90nm,19.0s,MS4.2
FORT Forrest 83.25 120 eP P **01 05 59.3 +0.4**
comp=Z,24nm,0.7s,mb5.3
EAB Aberfoyle 83.50 340 eP P **01 06 00.9 +0.7**
EAB Aberfoyle 83.50 340 eP P **01 06 00.9 +0.7**
NAO01 NORSAR Array S 83.85 349 eP P **01 06 01.6 -0.5**
comp=Z,17nm,0.9s,mb5.2
NAO01 epP pP 01 06 08.2 -0.5
NB2 NORSAR Subarra 83.98 349 P P **01 06 02.1 -0.6**
comp=Z,0.8nm,0.8s,mb3.9,baz=156,slow=5.1
NOA NORSAR Array B 83.98 349 P P **01 06 02.2 -0.5**
comp=Z,12nm,0.9s,mb5.1,baz=152,slow=4.8,SNR=16
NOA pP pP 01 06 08.6 -0.7
comp=Z,12nm,0.9s,baz=151,slow=4.7,SNR=17
NOA LR LR 01 46 54.5
comp=Z,36nm,19.9s,MS3.8,baz=185,slow=38
NOA NORSAR Array B 83.98 349 P P **01 06 02.2 -0.5**
NOA *PP pP 01 06 08.6 -0.7
NOA pmax pmax
comp=Z,13nm,0.9s
NOA MLR MLR
comp=Z,36nm,19.9s
MCD Coleburn Disti 84.32 341 eP P **01 06 04.6 +0.2**
MCD Coleburn Disti 84.32 341 eP P **01 06 04.6 +0.2**
KAR1 Arisaig 84.58 340 eP P **01 06 06.0 +0.3**
KAR1 Arisaig 84.58 340 eP P **01 06 06.0 +0.3**
KPL Plockton 84.86 340 eP P **01 06 07.8 +0.7**
KPL Plockton 84.86 340 eP P **01 06 07.8 +0.7**
QIZ Qiongzhong 84.92 67 P P **01 06 08.3 +0.8**
QIZ AP pP 01 06 12.6 -1.5
QIZ XP sP 01 06 15.4 -1.1
QIZ S S 01 16 35.6 +0.5
QIZ XS sS 01 16 43.0 -3.0
QIZ AMB AMB
comp=Z,32nm,1.9s,mb5.1
QIZ LR LR
comp=Z,196nm,19.6s,MS4.5
CD2 Chengdu 85.20 54 eP P **01 06 08.9 0.0**
CD2 AP pP 01 06 13.8 -1.7
CD2 XP sP 01 06 15.9 -2.0
CD2 PP PP 01 09 28.8 +2.4
CD2 SKS 01 16 30.3
CD2 S S 01 16 38.0 +0.1
CD2 XS sS 01 16 46.0 -2.8
CD2 SS SS 01 22 16.1 +4.2
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,30nm,6.2s
CD2 LR LR
comp=E,70nm,15.6s
CD2 LR LR
comp=Z,70nm,16.8s,MS4.1
GYA Guiyang 85.44 59⇓ iP P **01 06 09.8 -0.3**
GYA AP pP 01 06 14.3 -2.4
GYA XP sP 01 06 17.4 -1.7
GYA SKS 01 16 31.8
GYA S S 01 16 37.9 -2.3
GYA PS 01 17 36.5
GYA SS SS 01 22 15.0 -0.4
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.2
GYA AMB AMB
comp=Z,130nm,4.6s
GYA LR LR
comp=Z,270nm,17.9s,MS4.7
FITZ Fitzroy Crossi 85.66 108 eP P **01 06 12.4 +1.2**
comp=Z,19nm,0.8s,mb5.4
PLCA Paso Flores 86.28 228 P P **01 06 15.8 +1.6**
comp=Z,4.2nm,0.8s,mb4.7,baz=132,slow=6.4,SNR=9.6
PLCA pP pP 01 06 22.1 +1.2
comp=Z,5.3nm,0.8s,baz=141,slow=3.4,SNR=7.8
PLCA LR LR 01 38 25.4
comp=Z,168nm,21.5s,MS4.4,baz=163,slow=31
PLCA Paso Flores 86.28 228 P P **01 06 15.8 +1.6**
PLCA *PP pP 01 06 22.1 +1.2
PLCA Paso Flores 86.28 228 eP P **01 06 15.8 +1.6**
comp=Z,3.6nm,0.7s,mb4.7
PLCA epP pP 01 06 22.1 +1.3
GTA Gaotai 86.58 45⇓ P P **01 06 15.6 -0.1**
GTA AP pP 01 06 20.4 -1.9
GTA XP sP 01 06 23.5 -1.2
GTA PS 01 19 40.1
GTA AMB AMB
comp=Z,18nm,1.1s,mb5.2
GTA AMB AMB
comp=Z,110nm,5.0s
GTA LR LR
comp=N,114nm,20.3s,MS4.5
GTA LR LR
comp=E,194nm,21.8s,MS4.5
GTA LR LR
comp=Z,216nm,20.3s,MS4.5
NVS Novosibirsk 86.98 26⇓ iP P **01 06 16.4 -1.3**
NVS pmax pmax
comp=N,9.0nm,0.8s
NVS pmax pmax
comp=Z,21nm,0.8s,mb5.4
NVS pmax pmax
comp=E,5.0nm,0.7s
LZH Lanzhou 87.71 50 eP P **01 06 21.8 +0.6**
LZH AP pP 01 06 25.5 -2.3
LZH XP sP 01 06 28.5 -1.7
LZH PP PP 01 09 50.1 +3.4
LZH eSKS 01 16 47.0
LZH eS S 01 17 03.0 +0.7
LZH SS SS 01 22 53.1 +4.5
LZH AMB AMB
comp=Z,41nm,1.0s,mb5.6
LZH AMB AMB
comp=Z,194nm,4.0s
LZH LR LR
comp=E,344nm,17.5s
LZH LR LR
comp=Z,552nm,18.6s,MS5.0
CFAA Coronel Fontan 88.34 237 P P **01 06 26.0 +1.8**
comp=Z,1.1nm,0.9s,mb4.1,baz=91,slow=2.5,SNR=19
ADE Adelaide 89.84 128 eP P **01 06 33.8 +2.6**
XAN Xi'an 90.50 54 P P **01 06 33.1 -1.2**
XAN AMB AMB
comp=Z,8.0nm,1.3s,mb4.9
ASAR Alice Springs 90.74 116 P P **01 06 35.6 +0.2**
comp=Z,20nm,0.8s,mb5.5,baz=243,slow=4.0,SNR=93
ASAR PKKPbc PKKPbc 01 24 01.6 +0.6
comp=Z,0.6nm,0.7s,baz=68,slow=2.5,SNR=4.8
ASAR LR LR 01 42 13.2
comp=Z,127nm,20.0s,MS4.3,baz=357,slow=32
AS31 Alice Springs 90.74 116 eP P **01 06 36.0 +0.6**
ARCES ARCESS Array B 90.76 357 P P **01 06 34.0 -1.6**
comp=Z,2.3nm,1.0s,mb4.5,baz=172,slow=2.5,SNR=6.1
ARCES pP pP 01 06 40.4 -1.8
comp=Z,4.2nm,0.9s,baz=160,slow=3.9,SNR=5.6
ARCES LR LR 01 50 23.3
comp=Z,71nm,18.5s,MS4.1,baz=6.4,slow=38
KEV Kevo 90.92 358 P P **01 06 33.9 -2.3**
KEV e*PP pP 01 06 41.2 -1.7
KRAR Krasnoyarsk 91.92 29 i P P **01 06 40.6 -0.3**
LVC Limon Verde 92.55 245 P P **01 06 46.9 +3.1**
comp=Z,13nm,0.7s,mb5.4,baz=88,slow=2.8,SNR=22
LVC pP pP 01 06 53.4 +3.0
comp=Z,16nm,0.7s,baz=67,slow=2.2,SNR=13
LVC Limon Verde 92.55 245 eP P **01 06 47.1 +3.3**
WRA Warramunga Arr 92.59 112 P P **01 06 44.6 +0.6**
comp=Z,7.1nm,1.0s,mb5.1,baz=244,slow=2.8,SNR=29
WRA PKKPbc PKKPbc 01 23 57.4 +1.1
comp=Z,1.0nm,0.8s,baz=67,slow=3.4,SNR=6.2
WRA LR LR 01 43 34.0
comp=Z,198nm,18.7s,MS4.6,baz=275,slow=32
WB2 Warramunga Arr 92.60 112 eP P **01 06 43.8 -0.2**
WRAB Tennant Creek 92.60 112 i P P **01 06 45.0 +0.9**
WRAB Tennant Creek 92.60 112 eP P **01 06 44.5 +0.4**
comp=Z,9.0nm,0.8s,mb5.2
WRAB LR LR
comp=Z,81nm,21.0s,MS4.2
SAML Samuel 92.78 259 eP P **01 06 46.6 +1.8**
comp=Z,12nm,1.1s,mb5.2
SAML LR LR
comp=Z,509nm,20.0s,MS5.0
STKA Stephens Creek 93.38 126 P P **01 06 48.9 +1.2**
comp=Z,8.3nm,0.7s,mb5.3,baz=250,slow=4.4,SNR=16
STKA PKKPbc PKKPbc 01 23 54.5 +0.2
comp=Z,0.6nm,0.3s,baz=335,slow=20,SNR=2.8
STKA LR LR 01 45 36.2
comp=Z,224nm,18.3s,MS4.7,baz=23,slow=33
STKA Stephens Creek 93.38 126 eP P **01 06 49.3 +1.7**
comp=Z,7.0nm,0.8s,mb5.1
ZAK Zakamensk 94.18 37 eP P **01 06 50.8 -0.5**
ZAK pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
LPAZ La Paz 94.42 251 P P **01 06 55.0 +2.5**
comp=Z,4.5nm,0.9s,mb4.9,baz=102,slow=5.6,SNR=19
LPAZ pP pP 01 07 01.1 +2.0
comp=Z,11nm,1.0s,baz=67,slow=12,SNR=17
LPAZ PKKPbc PKKPbc 01 23 52.5 +1.0
comp=Z,0.6nm,0.7s,baz=15,slow=6.9,SNR=4.1
LPAZ La Paz 94.42 251 eP P **01 06 54.8 +2.3**
comp=Z,17nm,1.1s,mb5.4
LPAZ LR LR
comp=Z,299nm,19.0s,MS4.8
SONM Songino Array 94.82 40 P P **01 06 53.0 -1.2**
comp=Z,3.8nm,0.8s,mb4.8,baz=236,slow=4.8,SNR=27
SONM LR LR 01 49 13.1
comp=Z,124nm,20.0s,MS4.4,baz=164,slow=35
SONM Songino Array 94.82 40 P P **01 06 53.0 -1.2**
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM MLR MLR
comp=Z,125nm,20.0s
SONM Songino Array 94.82 40 P P **01 06 53.0 -1.2**
SONM LR LR 01 49 13.1
ULN Ulaanbaatar 95.23 40⇑ eP P **01 06 55.2 -0.9**
ULN Ulaanbaatar 95.23 40 PFAKE 01 07 10.0 +14
ULN LR LR
comp=Z,123nm,19.0s,MS4.4
HHC Hu-ho-hao-te 95.23 48 eP P **01 06 56.5 +0.4**
HHC AP pP 01 07 01.3 -1.5
HHC XP sP 01 07 03.5 -1.7
HHC PP PP 01 10 47.6 +1.5
HHC SKS 01 17 30.6
HHC S S 01 18 09.3 -1.3
HHC XS sS 01 18 17.1 -4.5
HHC PS PS 01 19 34.1 +4.1
HHC SS SS 01 24 40.3 +3.2
HHC AMB AMB
comp=Z,27nm,0.8s,mb5.7
HHC AMB AMB
comp=Z,64nm,6.5s
HHC LR LR
comp=N,146nm,18.1s,MS4.7
HHC LR LR
comp=E,151nm,17.6s,MS4.7
HHC LR LR
comp=Z,143nm,17.4s,MS4.5
NJ2 Nanjing 97.42 59 eP P **01 07 07.3 +1.2**
NJ2 AP pP 01 07 12.0 -0.7
NJ2 XP sP 01 07 14.3 -0.8
NJ2 PP PP 01 11 07.3 +4.3
NJ2 AMB AMB
comp=Z,150nm,5.9s
NJ2 LR LR
comp=Z,400nm,21.1s,MS4.9
SSE Sheshan 98.97 60 P P **01 07 13.8 +0.8**
SSE AMB AMB
comp=Z,42nm,4.2s
NNA Nana 103.88 251 PFAKE 01 07 50.0 +15
NNA LR LR
comp=Z,91nm,20.0s,MS4.3
SJG San Juan 104.92 284 PFAKE 01 07 50.0 +11
SJG LR LR
comp=Z,174nm,19.0s,MS4.6
SDV Santo Domingo 106.12 273 PFAKE 01 12 10.0 +13
SDV LR LR
comp=Z,92nm,20.0s,MS4.3
YAK Yakutsk 111.55 30 PFAKE 01 12 20.0 +13
YAK LR LR
comp=Z,89nm,22.0s,MS4.3
YSS Yuzh-Sakhalins 118.41 47 PFAKE 01 12 30.0 +10
YSS LR LR
comp=Z,104nm,19.0s,MS4.5
MYNC Murphy 124.00 299 ePKIKP PKPdf 01 12 31.4 +0.7
MYNC e 01 12 37.7
BILL Bilibino 125.01 20⇑ iPKIKP PKPdf 01 12 32.5 -0.1
BILL pmax pmax
comp=Z,7.0nm,0.8s
BILL Bilibino 125.01 20 PFAKE 01 12 40.0 +7.4
BILL LR LR
comp=Z,177nm,22.0s,MS4.7
WCI Wyandotte Cave 125.84 302 ePKIKP PKPdf 01 12 34.2 0.0
LRAL Lakeview Retre 126.25 296 ePKPdf PKPdf 01 12 34.9 -0.1
LRAL epPKPdf pPKPdf 01 12 42.0 +0.1
WVT Waverly 127.05 300 ePKIKP PKPdf 01 12 36.4 -0.1
WVT e 01 12 42.7
PLAL Pickwick Lake 127.23 298 ePKPdf PKPdf 01 12 36.5 -0.4
PLAL epPKPdf pPKPdf 01 12 43.6 -0.1
OXF Oxford 128.32 298 ePKIKP PKPdf 01 12 39.1 +0.1
OXF e 01 12 45.7
JFWS Jewell Farm 128.60 308 ePKIKP PKPdf 01 12 39.6 +0.1
JFWS e 01 12 46.0
EYMN Ely 128.71 315 ePKPdf PKPdf 01 12 39.8 +0.1
EYMN epPKPdf pPKPdf 01 12 46.1 -0.4
CCM Cathedral Cave 129.74 302 ePKIKP PKPdf 01 12 42.0 +0.3
CCM e 01 12 49.2
ULM Lac du Bonnet 130.94 319 PKP PKPdf 01 12 43.7 -0.2
comp=Z,8.6nm,0.9s,baz=94,slow=3.8,SNR=11
ULM pPKP pPKPdf 01 12 50.1 -0.6
comp=Z,5.9nm,0.7s,baz=101,slow=3.1,SNR=7.5
ULM Lac du Bonnet 130.94 319 PKP PKPdf 01 12 43.7 -0.2
ULM pPKP pPKPdf 01 12 50.1 -0.6
YKA Yellowknife Ar 133.38 340 PKP PKPdf 01 12 48.0 -0.5
comp=Z,3.8nm,0.6s,baz=43,slow=1.9,SNR=14
YKA Yellowknife Ar 133.38 340 PKIKP PKPdf 01 12 48.0 -0.5
YKA pmax pmax
comp=Z,4.0nm,0.6s
YKA Yellowknife Ar 133.38 340 PKP PKPdf 01 12 48.0 -0.5
HKT Hockley 133.66 292 ePKIKP PKPdf 01 12 50.3 +1.2
HKT e 01 12 56.9
KSU1 Kansas State U 133.84 304 ePKPdf PKPdf 01 12 50.0 +0.6
KSU1 epPKPdf pPKPdf 01 12 56.5 +0.3
TBI Tubuai 135.53 176 eLR LR 01 56 29.4
comp=Z,133nm,23.5s
WMOK Wichita Mounta 136.03 298 ePKPdf PKPdf 01 12 51.5 -2.0
WMOK epPKPdf pPKPdf 01 13 01.1 +0.7
WMOK ePP PP 01 15 34.5 +1.6
EGAK Eagle 136.39 357 ePKPdf PKPdf 01 12 52.8 -1.4
DAWY Dawson 136.98 355 ePKPdf PKPdf 01 12 55.2 -0.1
DAWY epPKPdf pPKPdf 01 13 03.2 +1.1
JCT Junction City 137.10 292 ePKIKP PKPdf 01 12 57.5 +2.0
RSSD Black Hills 138.12 313 ePKIKP PKPdf 01 12 57.6 +0.2
RSSD e 01 13 04.6
EGMT Eagleton 140.19 321 ePKPdf PKPdf 01 13 02.2 +1.0
EGMT epPKPdf pPKPdf 01 13 09.6 +1.6
DIV Divide 140.21 359 ePKPdf PKPdf 01 13 00.2 -1.0
ISCO Idaho Springs 140.53 307 ePKIKP PKPdf 01 12 57.4 -4.4
PPT Papeete 141.26 176 eLR LR 01 59 08.8
comp=Z,83nm,25.0s
SMCO Snowmass 141.71 307 ePKPdf PKPdf 01 13 00.8 -3.0
MNTX Cornudas Mount 141.82 294 ePKPdf PKPdf 01 12 59.8 -4.3
WALA Waterton Lakes 141.99 325 ePKPdf PKPdf 01 12 59.6 -4.7
ANMO Albuquerque 142.27 300 ePKHKP 01 13 00.7
PDAR Pinedale Array 142.36 313 PKhKP 01 13 00.5
comp=Z,4.1nm,0.9s,baz=83,slow=4.2,SNR=21
PDAR PKP PKPdf 01 13 04.5 -0.5
comp=Z,4.0nm,0.8s,baz=78,slow=3.3,SNR=21
BOZ Bozeman (W) 142.46 319 ePKIKP PKPdf 01 13 02.9 -2.3
YFT Old Faithful 142.51 316 ePKPdf PKPdf 01 13 04.4 -0.9
YFT epPKPdf pPKPdf 01 13 11.1 -1.1
LPM Los Pinos Moun 142.52 299 ePKPdf PKPdf 01 13 02.7 -2.6
LPM epPKPdf pPKPdf 01 13 11.1 -1.0
LOHW Long Hollow 142.72 315 ePKPdf PKPdf 01 13 02.5 -3.2
CHMT Chamberlain Mo 142.80 321 ePKPdf PKPdf 01 13 06.1 +0.3
IMW Indian Meadow 142.82 316 ePKPdf PKPdf 01 13 03.6 -2.2
LENM Lemitar 142.82 299 ePKPdf PKPdf 01 13 02.8 -3.1
LAZ Ladron 142.91 299 ePKPdf PKPdf 01 13 04.3 -1.7
REDW Red Top Meadow 142.99 315 ePKPdf PKPdf 01 13 04.4 -1.8
TPAW Teton Pass 143.00 315 ePKPdf PKPdf 01 13 03.6 -2.5
DLMT Dillon 143.19 319 ePKPdf PKPdf 01 13 05.0 -1.5
DLMT epPKPdf pPKPdf 01 13 13.2 -0.2
PV01 Paradox Valley 143.20 306 ePKPdf PKPdf 01 13 05.3 -1.2
MSO Missoula 143.24 322 ePKPdf PKPdf 01 13 03.9 -2.7
RRI2 Red Ridge 143.31 315 ePKPdf PKPdf 01 13 05.3 -1.5
PV10 Paradox Valley 143.48 306 ePKPdf PKPdf 01 13 06.2 -0.8
HWUT Hardware Ranch 144.19 312 ePKPdf PKPdf 01 13 06.7 -1.6
HWUT epPKPdf pPKPdf 01 13 14.7 -0.4
TCUT Toone Canyon 144.28 312 ePKPdf PKPdf 01 13 07.5 -1.0
SRU San Rafael 144.36 308 ePKIKP PKPdf 01 13 08.1 -0.5
SRU e 01 13 15.1
DAU Daniels Canyon 144.43 310 ePKIKP PKPdf 01 13 08.2 -0.5
CTU Camp Tracy 144.68 311 ePKPdf PKPdf 01 13 09.0 -0.1
TMUT Trail Mountain 144.80 309 ePKPdf PKPdf 01 13 09.7 +0.4
TMUT epPKPdf pPKPdf 01 13 16.4 +0.2
MPU Maple Canyon 144.85 310 ePKPdf PKPdf 01 13 10.2 +0.7
MPU epPKPdf pPKPdf 01 13 15.6 -0.7
SPUT South Promonto 144.92 312 ePKPdf PKPdf 01 13 08.9 -0.6
HVU Hansel Valley 144.95 313 ePKIKP PKPdf 01 13 09.7 +0.1
HVU e 01 13 16.6
NOQ North Oquirrh 144.95 311 ePKP PKPdf 01 13 09.5 -0.1
NOQ epPKP pPKPdf 01 13 16.5 +0.1
NLU North Lily Min 145.19 310 ePKPbc PKPbc 01 13 10.7 +1.1
NLU epPKP pPKPdf 01 13 17.6 +0.8
HLID Hailey 145.21 317 ePKP PKPdf 01 13 10.8 +0.8
HLID epPKP pPKPdf 01 13 17.6 +0.8
BGU Big Grassy Mou 145.48 312 ePKP PKPdf 01 13 11.4 +0.9
BGU epPKP pPKPdf 01 13 17.5 +0.2
DUG Dugway 145.62 311 ePKIKP PKPdf 01 13 11.8 +1.1
DUG e 01 13 17.9
MSU Marysvale 145.78 308 ePKP PKPbc 01 13 13.1 +1.6
MSU epPKPdf pPKPdf 01 13 19.9 +2.1
NLW Nelson Butte 145.93 328 P PKPdf 01 13 12.8 +1.5
EPH Ephrata 146.03 326 P PKPdf 01 13 12.8 +1.3
M13A Montello 146.07 314⇓P PKPbc 01 13 13.9 +1.5
baz=146
WUAZ Wupatki 146.07 302 ePKP PKPbc 01 13 14.0 +1.6
WUAZ epPKP pPKPdf 01 13 19.9 +1.6
A05A Maple Falls 146.12 331⇑P PKPdf 01 13 11.9 +0.3
baz=146,SNR=7.4
TUC Tucson 146.28 297 ePKP PKPbc 01 13 14.4 +1.3
TUC e 01 13 21.5
BMO Blue Mountains 146.29 321 ePKHKP PKPbc 01 13 13.5 +0.4
BMO e 01 13 19.8
N13A Wendover, West 146.31 313⇓P PKPbc 01 13 14.5 +1.4
baz=146
LPIG La Paz 146.39 282 PKPbc PKPbc 01 13 14.6 +1.3
M12A Wells 146.55 314⇓P PKPbc 01 13 15.4 +1.6
baz=147
H09A Durkee 146.61 321⇓P PKPdf 01 13 14.1 +1.7
baz=147
HAWA Hanford 146.62 325 ePKP PKPdf 01 13 14.2 +1.8
HAWA epPKP pPKPdf 01 13 21.1 +1.8
REDWA Red Mountain 146.63 325 P PKPbc 01 13 15.4 +1.4
B05A Bryant 146.65 330⇑P PKPdf 01 13 13.5 +1.1
baz=147,SNR=12
EBG Ellensburg 146.83 327 P PKPdf 01 13 14.3 +1.5
TWW Teanaway 146.83 327 P PKPbc 01 13 15.7 +1.1
C05A Tolt Reservoir 146.86 329⇑P PKPdf 01 13 14.6 +1.7
baz=147,SNR=11
W15A Williams 146.86 302⇑P PKPbc 01 13 16.4 +1.7
baz=147
N12A Clover Valley, 146.88 313⇑P PKPbc 01 13 16.1 +1.3
baz=147
O12A Currie 146.94 312⇑P PKPbc 01 13 16.2 +1.3
baz=147
ARUT Antelope Range 146.96 307 ePKIKP PKPdf 01 13 13.0 0.0
ARUT e 01 13 16.1
CCUT Cedar City 146.99 307 ePKP PKPdf 01 13 15.0 +1.9
116A Eloy 147.00 297 P PKPbc 01 13 16.9 +1.8
baz=147,SNR=33
X15A Humboldt 147.01 301 P PKPbc 01 13 17.1 +2.0
baz=147,SNR=29
I09A Lost Marbles R 147.05 320⇑P PKPbc 01 13 16.2 +1.0
baz=147
M11A Holland Ranch, 147.12 315⇓P PKPbc 01 13 17.2 +1.8
baz=147
H08A Prairie City 147.28 322⇓P PKPbc 01 13 16.5 +0.6
baz=147
P12A McGill 147.38 311⇓P PKPbc 01 13 17.6 +1.4
baz=147
115A Sonoran Desert 147.41 298⇓P PKPbc 01 13 17.7 +1.5
baz=148,SNR=7.1
C04A Brinnon 147.45 330⇑P PKPbc 01 13 17.4 +1.1
baz=147,SNR=7.5
B04A Port Angeles 147.46 331⇑P PKPbc 01 13 17.3 +0.9
baz=147
W14A Seligman 147.50 303⇑P PKPbc 01 13 18.5 +2.0
baz=148,SNR=40
Q12A Willow Creek R 147.51 310⇑P PKPbc 01 13 17.9 +1.4
baz=148
X14A Yava 147.54 301⇑P PKPbc 01 13 18.3 +1.7
baz=148,SNR=16
I08A Drewsey 147.57 321⇑P PKPbc 01 13 17.3 +0.6
baz=148
M10A I.L. Ranch, Tu 147.57 315⇓P PKPbc 01 13 18.0 +1.3
baz=148
O11A Cowboy Ranch, 147.63 312⇓P PKPbc 01 13 18.1 +1.2
baz=148
E05A Randle 147.67 327⇓P PKPbc 01 13 17.5 +0.5
baz=148,SNR=14
K09A Rome 147.73 318⇑P PKPbc 01 13 18.7 +1.6
baz=148
Y14A Wickenburg 147.77 300⇓P PKPbc 01 13 18.8 +1.5
baz=148,SNR=21
Z14A Wintersburg 147.85 299⇑P PKPbc 01 13 18.6 +1.1
baz=148
N10A Dunphy 147.94 314⇑P PKPbc 01 13 18.8 +1.1
baz=148
P11A Circle Ranch, 147.94 312⇓P PKPbc 01 13 19.4 +1.7
baz=148
F05A White Salmon 147.97 326⇑P PKPbc 01 13 18.6 +0.9
baz=148,SNR=8.2
C03A Quillayute Air 148.02 331⇑P PKPbc 01 13 19.3 +1.4
baz=148
I07A Izee 148.02 322⇓P PKPbc 01 13 19.2 +1.3
baz=148,SNR=19
L09A Wilkinson Ranc 148.05 317⇑P PKPbc 01 13 19.5 +1.5
baz=148
O10A Cortez Mining, 148.13 313⇑P PKPbc 01 13 19.4 +1.2
baz=148
W13A Hualapai Mount 148.16 303⇓P PKPbc 01 13 20.1 +1.8
baz=148,SNR=13
K08A Mann Creek Ran 148.19 319⇑P PKPbc 01 13 19.6 +1.2
baz=148,SNR=27
M09A Marrel Ranch, 148.22 316⇑P PKPbc 01 13 19.8 +1.4
baz=148
U12A Valley of Fire 148.25 305⇓P PKPbc 01 13 20.1 +1.6
baz=148,SNR=7.5
X13A Yucca 148.26 302 P PKPbc 01 13 20.1 +1.6
baz=148,SNR=23
D03A Wishkah Elem. 148.26 330⇑P PKPbc 01 13 19.9 +1.3

baz=148
G05A Wamic 148.31 325 ⇑P PKPbc 01 13 19.9 +1.2
baz=148
TRCR Troy Canyon 148.32 309 *e*PKPdf PKPbc 01 13 17.9 -0.8
L08A Fields 148.39 318 ⇑P PKPbc 01 13 20.5 +1.6
baz=148,SNR=23
P10A Eureka 148.41 312 ⇑P PKPbc 01 13 20.5 +1.6
baz=148
F04A Amboy 148.43 327 ⇑P PKPbc 01 13 19.2 +0.2
baz=148
WVOR Wild Horse Val 148.44 318 *e*PKIKP PKPdf 01 13 17.3 +1.8
Y13A Salome 148.46 300 ⇓P PKPbc 01 13 20.4 +1.3
baz=148,SNR=8.6
I06A Prineville 148.51 322 ⇓P PKPbc 01 13 21.0 +1.8
baz=148,SNR=21
TDH Tom, Dick, Har 148.53 325 P PKPbc 01 13 20.4 +1.2
N09A Rock Creek Ran 148.55 315 ⇑P PKPbc 01 13 20.6 +1.3
baz=149
BMN Battle Mountai 148.55 314 *e*PKIKP PKPdf 01 13 17.3 +1.7
E03A Lebam 148.57 329 ⇑P PKPbc 01 13 20.4 +1.0
baz=149
H05A Madras 148.65 324 ⇓P PKPbc 01 13 20.9 +1.3
baz=149,SNR=7.0
O09A Fish Creek Ran 148.66 314 ⇓P PKPbc 01 13 20.5 +0.9
baz=149,SNR=8.8
K07A Rock Creek Ran 148.68 319 ⇑P PKPbc 01 13 20.8 +1.2
baz=149,SNR=25
V12A Nelson 148.72 304 ⇑P PKPbc 01 13 21.5 +1.7
baz=149,SNR=9.1
M08A Happy Creek Ra 148.81 317 ⇑P PKPbc 01 13 21.6 +1.6
baz=149,SNR=19
R10A Warm Springs 148.86 310 ⇓P PKPbc 01 13 21.6 +1.5
baz=149
W12A Cal Nev Ari 148.87 303 ⇓P PKPbc 01 13 21.8 +1.7
baz=149
J06A Christmas Vall 148.89 321 ⇑P PKPbc 01 13 21.5 +1.3
baz=149,SNR=59
G04A Mulino 148.95 326 ⇑P PKPbc 01 13 21.0 +0.7
baz=149
I05A Bend 148.98 323 ⇑P PKPbc 01 13 22.1 +1.8
baz=149
N08A GE Springer Mi 148.99 315 P PKPbc 01 13 21.9 +1.5
baz=149,SNR=6.4
F03A Seaside 149.01 328 ⇑P PKPbc 01 13 21.7 +1.2
baz=149
Y12C Blythe 149.04 300 ⇑P PKPbc 01 13 22.0 +1.5
baz=149,SNR=13
L07A Adell 149.11 318 ⇑P PKPbc 01 13 22.6 +1.9
baz=149,SNR=26
H04A Detroit Lake 149.15 325 P PKPbc 01 13 21.2 +0.5
baz=149,SNR=5.6
K06A Valley Falls 149.22 320 ⇓P PKPbc 01 13 22.4 +1.4
baz=149,SNR=37
G03A Yamhill 149.30 327 ⇑P PKPbc 01 13 22.6 +1.4
baz=149
IRM Iron Mountain 149.43 302 ⇓P PKPbc 01 13 23.3 +1.8
baz=150,SNR=19
R09A Tonopah 149.44 310 ⇑P PKPbc 01 13 23.1 +1.6
baz=150,SNR=19
GLA Glamis 149.46 299 ⇓P PKPbc 01 13 23.0 +1.4
baz=150,SNR=13
P08A Dixie Valley 149.48 313 ⇑P PKPbc 01 13 23.1 +1.4
baz=150
J05A Fort Rock 149.51 322 ⇓P PKPbc 01 13 23.2 +1.5
baz=150,SNR=50
N07B Gerlach 149.53 316 ⇓P PKPbc 01 13 23.2 +1.4
baz=150,SNR=11
BROR Big Rock Looko 149.56 324 P PKPdf 01 13 18.6 +1.3
U10A Ash Meadows, A 149.61 306 ⇓P PKPbc 01 13 24.4 +2.5
baz=150,SNR=11
TPH Tonopah 149.61 310 *e*PKP2 PKPbc 01 13 23.7 +1.7
TUQ Turquoise Mtn. 149.64 304 ⇓P PKPbc 01 13 23.7 +1.6
baz=150,SNR=7.4
GMRC Granite Mounta 149.64 303 ⇓P PKPbc 01 13 23.7 +1.6
baz=150,SNR=11
SHOC Shoshone 149.75 305 ⇑P PKPbc 01 13 23.9 +1.6
baz=150,SNR=5.3
S09A Goldfield 149.76 309 ⇓P PKPbc 01 13 24.3 +2.0
baz=150,SNR=32
O07A Toulon 149.79 315 ⇑P PKPbc 01 13 23.7 +1.3
baz=150,SNR=16
COR Corvallis 149.81 326 *e*PKP2 PKPbc 01 13 23.4 +1.0
FURC Furnace Creek, 149.99 307 P PKPbc 01 13 25.3 +2.4
baz=150,SNR=14
MPOR Mary's Peak 149.99 326 P PKPbc 01 13 24.5 +1.6
L05A Lakeview 150.01 319 ⇓P PKPbc 01 13 24.5 +1.6
baz=150,SNR=18
N06A Buffalo Meadow 150.11 316 ⇑P PKPbc 01 13 24.4 +1.3
baz=150,SNR=19
BELC Belle Mtn. 150.15 302 ⇓P PKPbc 01 13 25.1 +1.9
baz=150,SNR=13
HEC Hector,Ludlow 150.15 303 ⇓P PKPbc 01 13 25.2 +2.0
baz=150,SNR=15
GRAC Grapevine Rang 150.16 308 ⇓P PKPbc 01 13 25.5 +2.2
baz=150,SNR=7.3
I03A Eugene 150.20 325 ⇓P PKPbc 01 13 24.2 +0.8
baz=150,SNR=7.2
K04A Chilquin 150.20 321 ⇓P PKPbc 01 13 24.4 +1.0
baz=150
NVAR Mina Array Bea 150.22 311 PKP PKPdf 01 13 20.6 +2.3
comp=Z,11nm,0.7s,baz=144,slow=2.0,SNR=31
NVAR PKPbc PKPbc 01 13 25.5 +2.1
comp=Z,8.0nm,0.6s,baz=65,slow=36,SNR=31
NVAR pPKPbc pPKPbc 01 13 31.9 +1.7
comp=Z,12nm,0.6s,baz=54,slow=3.6,SNR=10
NVAR Mina Array Bea 150.22 311 PKP PKPdf 01 13 20.6 +2.3
NVAR PKPbc PKPbc 01 13 25.5 +2.1
NVAR pPKPbc pPKPbc 01 13 31.9 +1.7
M06C Likely Place G 150.27 318 ⇓P PKPbc 01 13 24.7 +1.1
baz=150
SWSC Sam W. Stewart 150.28 299 ⇑P PKPbc 01 13 24.8 +1.2
baz=150
PAHR Pah Rah Range 150.35 314 *e*PKPdf PKPdf 01 13 20.7 +2.2
PAHR *e*PKPbc PKPbc 01 13 25.0 +1.2
GSC Goldstone 150.36 305 ⇓P PKPbc 01 13 25.4 +1.6
baz=150,SNR=10
O06A Flanigan 150.41 315 ⇑P PKPbc 01 13 25.1 +1.2
baz=150,SNR=16
J03A Ideyld Park 150.43 324 ⇓P PKPbc 01 13 24.5 +0.6
baz=150
I02A Mapleton 150.48 325 ⇑P PKPbc 01 13 24.9 +0.9
baz=150
L04A Klamath Falls 150.56 321 ⇓P PKPbc 01 13 25.1 +0.9
baz=151,SNR=8.7
BBOR Butler Butte 150.58 323 P PKPdf 01 13 20.2 +1.3
M05C Lookout 150.59 319 ⇓P PKPbc 01 13 25.3 +1.0
baz=151
DAC Darwin (Calif) 150.61 307 *e*PKIKP PKPdf 01 13 20.8 +1.9
DAC *e* 01 13 26.3
DAC Darwin (Calif) 150.61 307 *e*PKPdf PKPdf 01 13 20.8 +1.9
DAC *e*PKPbc PKPbc 01 13 26.3 +1.9
DAC *e*PKPab PKPab 01 13 32.9 +1.8
MPMC Manual Prospec 150.61 306 ⇑P PKPbc 01 13 26.4 +2.0
baz=151,SNR=20
PFO Pinyon Flat Ob 150.62 301 *e*PKIKP PKPdf 01 13 21.1 +2.2
PFO *e* 01 13 26.2
PFO Pinyon Flat Ob 150.62 301 *e*PKPdf PKPdf 01 13 21.1 +2.2
PFO *e*PKPbc PKPbc 01 13 26.2 +1.8
PFO *e*pPKPab pPKPab 01 13 32.5 -5.4
PFO *e* 01 13 39.6
PFO Pinyon Flat Ob 150.62 301 ⇓P PKPbc 01 13 26.1 +1.7
baz=151,SNR=14
P06A Stead Airport, 150.71 315 ⇑P PKPbc 01 13 26.0 +1.4
baz=151
M04C Macdoel 150.77 320 ⇓P PKPbc 01 13 25.8 +1.0
baz=151,SNR=26
MONP Monument Peak 150.80 300 P PKPbc 01 13 26.9 +2.1
baz=151,SNR=9.7
MTUM Tungsten Hills 150.88 309 *e*PKPdf PKPdf 01 13 21.9 +2.5
MTUM *e*PKPbc PKPbc 01 13 27.5 +2.5
MTUM *e*PKPab PKPab 01 13 33.7 +1.4
R07C Lee Vining 150.90 311 ⇑P PKPbc 01 13 27.2 +2.2
baz=151
CWC Cottonwood Cre 150.91 307 ⇑P PKPbc 01 13 27.1 +2.1
baz=151
BEKR Beckwourth 150.92 315 ⇓P PKPbc 01 13 26.3 +1.2
baz=151,SNR=13
MLAC Mammoth Lakes 150.96 310 ⇑P PKPbc 01 13 27.9 +2.7
baz=151
LRMC Laurel Mountai 150.98 305 ⇓P PKPbc 01 13 27.3 +2.1
baz=151
R06C Coleville 150.98 312 ⇓P PKPbc 01 13 27.5 +2.3
baz=151,SNR=15
HATC Hat Creek Radi 151.10 318 ⇓P PKPbc 01 13 26.6 +1.1
baz=151,SNR=16
O04C Chester 151.14 317 ⇑P PKPbc 01 13 26.3 +0.7
baz=151
MURC Murrieta 151.22 301 ⇓P PKPbc 01 13 26.9 +1.1
baz=151,SNR=7.5
O05C Quincy 151.23 316 ⇓P PKPbc 01 13 26.8 +1.0
baz=151
M03C McCloud 151.24 319 ⇓P PKPbc 01 13 26.4 +0.6
baz=151,SNR=7.6
R05C Kirkwood Meado 151.32 313 ⇑P 01 13 27.9 +1.9
baz=151,SNR=28
YBH Yreka Blue Hor 151.32 321 PKP PKPdf 01 13 21.0 +1.0
comp=Z,8.5nm,0.9s,baz=122,slow=2.7,SNR=6.3
YBH PKPbc PKPbc 01 13 26.3 +0.3
comp=Z,8.9nm,0.9s,baz=8.0,slow=5.5,SNR=12
YBH Yreka Blue Hor 151.32 321 ⇑P PKPbc 01 13 26.3 +0.3
baz=151
109C Camp Elliot, M 151.35 300 ⇓P PKPbc 01 13 26.8 +0.7
baz=151
P05C Yuba Gap, Truc 151.37 315 ⇑P PKPbc 01 13 27.2 +1.0
baz=151,SNR=7.4
BFSC Mount Baldy St 151.38 303 ⇑P PKPbc 01 13 27.2 +1.1
baz=151,SNR=11
EDW2 Edwards Air Fo 151.42 304 ⇓P PKPbc 01 13 28.0 +1.7
baz=152,SNR=17
KCC Kaiser Creek 151.44 310 ⇑P PKPbc 01 13 28.0 +1.7
baz=152,SNR=8.5
ISA Isabella 151.50 306 P PKPbc 01 13 28.7 +2.2
baz=152,SNR=16
S06C San Francisco 151.56 311 ⇓P PKPbc 01 13 28.3 +1.7
baz=152,SNR=6.3
L02A Cave Junction 151.57 322 ⇓P PKPbc 01 13 27.6 +1.0
baz=152
M02C Callahan 151.61 320 ⇑P PKPbc 01 13 27.3 +0.6
baz=152,SNR=11
ORV Oroville 151.83 316 ⇓P PKPbc 01 13 27.7 +0.5
baz=152,SNR=7.5
T06C Millerton Lake 151.85 310 ⇓P PKPbc 01 13 28.6 +1.4
baz=152,SNR=7.5
CMB Columbia Colle 151.86 312 *e*PKIKP PKPdf 01 13 22.4 +1.6
CMB *e* 01 13 28.3
WDC Whiskeytown Da 151.91 319 *e*PKIKP PKPdf 01 13 21.3 +0.4
WDC *e* 01 13 27.3
WDC Whiskeytown Da 151.91 319 ⇓P PKPbc 01 13 27.1 -0.3
baz=152
OHCM Honcut 151.93 315 *e*PKPdf PKPdf 01 13 22.8 +1.9
OHCM *e*PKPbc PKPbc 01 13 27.9 +0.5
OHCM *e*PKPab PKPab 01 13 35.2 -1.4
ARVC Arvin 151.97 305 ⇑P PKPbc 01 13 29.4 +1.9
baz=152
Q04C Lincoln 152.13 314 ⇑P PKPbc 01 13 29.9 +2.0
baz=152
S05C Merced 152.14 311 ⇓P PKPbc 01 13 29.7 +1.7
baz=152
SUTB Sutter Butte 152.19 316 ⇓P PKPbc 01 13 28.2 +0.2
baz=152
N02C Big Bar 152.23 320 ⇓P PKPbc 01 13 29.1 +1.0
baz=152,SNR=9.4
O02C Red Bluff 152.30 318 ⇓P PKPbc 01 13 29.1 +0.8
baz=152,SNR=5.4
KHMM Horse Mountain 152.45 320 *e*PKPdf PKPdf 01 13 21.3 -0.4
KHMM *e* 01 13 29.9
S04C Ingram Canyon, 152.77 312 ⇑P PKPbc 01 13 30.3 +1.0
baz=153
MNRC McLaughlin Nat 152.81 315 ⇑P PKPbc 01 13 30.7 +1.3
baz=153
CVS Carmenet Viney 153.11 315 ⇑P PKPbc 01 13 31.1 +1.0
baz=153
NSHM Saint Helena R 153.11 315 *e*PKPdf PKPdf 01 13 22.4 -0.2
NSHM *e* 01 13 31.3
HOPS Hopland 153.15 316 ⇓P PKPbc 01 13 31.6 +1.4
baz=153
JRSC Jasper Ridge 153.45 313 ⇑P PKPbc 01 13 32.7 +1.9
baz=154
HAST UC Hastings Re 153.46 310 ⇓P PKPbc 01 13 31.9 +1.0
baz=154

MAN 23 00:57:05.7, 940N×12610E, h19km, mb3.4, ML4.7, MS2.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.64**	**228**	*e*P	Pb	00 57 18.6	+0.4
BUTP				*e*S	Sb	00 57 29.6	+2.8
SCPH	**Surigao**	**0.71**	**302**	*e*P	Pb	00 57 19.8	+0.3
SCPH				*e*S	Sb	00 57 30.6	+1.8
MSLP	**Maasin**	**1.42**	**301**	*e*P	Pn	00 57 29.2	-1.2
MSLP				*e*S	Sn	00 57 53.0	+4.3
BUKP	**Musuan**	**1.83**	**214**	*e*P	Pn	00 57 35.7	-0.4
BUKP				*e*S	Sn	00 58 00.3	+1.6
PLP	**Palo**	**2.07**	**328**	*e*P	Pn	00 57 39.6	+0.2
PLP				*e*S	Sn	00 58 07.4	+2.8
TBP	**Tagbilaran**	**2.23**	**278**	*e*P	Pn	00 57 42.5	+1.0
TBP				*e*S	Sn	00 58 10.8	+2.3

*ISCJB **23** 01:00:40.8±4.2, 580S±0.1×250W±02, h56km±38km, mb4.3/8, MS3.9/1, Error ellipse: s-maj=22.3km s-min=14.8km az=102.8*
*IDC **23** 01:00:43.4±7.2, 5801S×24 83W, h65km±67km, mb4.1/4, mb1 4.2/6, mb1mx3.8/18, mbtmp4.4/6, ML4.6/2, MS3.4/2, Ms1 3.4/2, ms1mx3.2/18, Error ellipse: s-maj=48.2km s-min=25.3km az=102.0*
*NEIC **23** 01:00:44.8±2.7, 5802S×24 90W, h79km±25km, mb4.3/7, Error ellipse: s-maj=15.2km s-min=9.8km az=49.0*

ISC 23 01:00:42.1±3.4, 580S±01×251W±02, h55km±32km, n23, σ0≋89/20, mb4.3/8, MS3.9/1, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**16.44**	**155**	P	**Pn**	**01 04 29.3**	**+0.2**
	5.6nm,0.4s						
SNAA				S	S	01 07 18.0	-22
SNAA				LR	LR	01 09 51.8	
PMSA	**Palmer Station**	**19.56**	**234**	P	**Pn**	**01 05 06.6**	**-0.4**
	0.5nm,0.3s,baz=83,slow=7.4,SNR=7.2						
PMSA	**Palmer Station**	**19.56**	**234**	*e*P	**Pn**	**01 05 06.4**	**-0.7**
	16nm,0.8s						
EFI	**East Falkland**	**19.89**	**274**	P	**Pn**	**01 05 10.8**	**-0.2**
PLCA	**Paso Flores**	**33.51**	**281**	*e*P	**P**	**01 07 12.7**	**-3.6**
	3.0nm,0.8s,mb4.3						
SBA	**Scott Base**	**44.17**	**184**	*e*P	**P**	**01 08 46.4**	**+1.1**
	1.7nm,0.5s,mb4.0						
VNDA	**Vanda**	**44.63**	**182**	P	**P**	**01 08 49.2**	**+0.1**
	4.0nm,0.7s,mb4.3,baz=179,slow=8.0,SNR=7.4						
VNDA	**Vanda**	**44.63**	**182**	*e*P	**P**	**01 08 49.2**	**+0.2**
	2.9nm,0.6s,mb4.3						
BOSA	**Boshof**	**45.41**	**72**	LR	LR	01 23 53.9	
	comp=Z,126nm,18.7s,MS3.9,baz=187,slow=31						
LVC	**Limon Verde**	**47.30**	**299**	P	**P**	**01 09 10.7**	**+0.6**
LPAZ	**La Paz**	**52.47**	**304**	P	**P**	**01 09 50.5**	**+1.2**
RCBR	**Riachuelo**	**52.76**	**346**	P	**P**	**01 09 52.6**	**+1.1**
SAML	**Samuel**	**57.03**	**313**	*e*P	**P**	**01 10 19.5**	**-2.8**
	2.6nm,0.7s,mb4.4						
NNA	**Nana**	**60.22**	**298**	*e*P	**P**	**01 10 44.7**	**+0.2**
	5.6nm,0.5s,mb4.8						
DBIC	**Dimbokro**	**66.54**	**22**	P	**P**	**01 11 25.6**	**-0.6**
	2.7nm,0.6s,mb4.4,baz=189,slow=4.6,SNR=5.7						
DBIC	**Dimbokro**	**66.54**	**22**	P	**P**	**01 11 26.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**74.26**	**27**	P	**P**	**01 12 13.0**	**-0.3**
	3.5nm,0.6s,mb4.5,baz=199,slow=6.3,SNR=40						
DGAR	**Diego Garcia**	**87.73**	**100**	P	**P**	**01 13 24.6**	**-0.3**
STKA	**Stephens Creek**	**89.73**	**169**	P	**P**	**01 13 34.5**	**+0.2**
ASAR	**Alice Springs**	**96.73**	**161**	P	**P**	**01 14 05.5**	**-1.0**
	0.2nm,0.5s,mb3.8,baz=174,slow=4.3,SNR=5.4						
DAWY	**Dawson**	**148.97**	**309**	*e*PKPbc	PKPbc	01 20 20.7	-3.1
SONM	**Songino Array**	**149.65**	**88**	PKPbc	PKPbc	01 20 24.1	-1.4
	2.7nm,0.7s,baz=229,slow=2.7,SNR=23						

*ISCJB **23** 01:03:36.3±0.4, 4253N±003×172E±002, h1km±5km, Error ellipse: s-maj=4.2km s-min=3.0km az=4.5*
*LDG **23** 01:03:37.2±0.0, 4249N×176E, h7km, Md1.8/3, Ml1.9/5, Error ellipse: s-maj=1.1km s-min=0.5km az=8.0*
*MDD **23** 01:03:37.7±0.2, 4250N×176E, h5km±7km, mbLg1.3/16, Error ellipse: s-maj=2.0km s-min=1.5km az=2.0, PRXIMO*
*STR **23** 01:03:37.0±0.2, 4250N×176E, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 23 01:03:37.1±0.3, 4251N±002×174E±002, h0km±5km, n40, σ0≋95/52, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLLI	**Llivia**	**0.18**	**101**	Pg	**Pg**	**01 03 40.7**	**+0.2**
CLLI				Lg		01 03 43.1	
	15nm,0.0s						
VALF	**Valcebollere**	**0.23**	**118**	Pg	**Pg**	**01 03 41.6**	**0.0**
VALF				Sg	**Sg**	**01 03 44.7**	**+0.1**
VALF	**Valcebollere**	**0.23**	**118**	Pg	**Pg**	**01 03 41.6**	**0.0**
VALF				Lg		01 03 44.9	
CARF	**Carcanieres**	**0.34**	**53**	Pg	**Pg**	**01 03 44.2**	**+0.6**
CARF				Lg		01 03 48.8	
GRBF	**Gourbit**	**0.36**	**336**	Lg		01 03 49.4	
CBRU	**Bruguera**	**0.40**	**125**	Pg	**Pg**	**01 03 44.5**	**-0.2**
CBRU				Lg		01 03 50.4	
	2.7nm,0.2s						
CORG	**Organya**	**0.42**	**228**	Pg	**Pg**	**01 03 45.3**	**+0.1**
CORG				Lg		01 03 52.0	
	0.9nm,0.0s						
CSOR	**Sort**	**0.47**	**253**	Pg	**Pg**	**01 03 46.3**	**+0.2**
CSOR				Lg		01 03 52.9	
	3.1nm,0.2s						
SALF	**Salau**	**0.47**	**302**	Pg	**Pg**	**01 03 46.8**	**+0.6**
SALF				Sg	**Sg**	**01 03 53.2**	**+0.8**
SALF	**Salau**	**0.47**	**302**	Pg	**Pg**	**01 03 46.8**	**+0.6**
SALF				Lg		01 03 53.3	
FILF	**Fillols**	**0.61**	**85**	Pg	**Pg**	**01 03 46.8**	**-2.0**
FILF				Sg	**Sg**	**01 03 53.2**	**-3.5**
FILF	**Fillols**	**0.61**	**85**	Pg	**Pg**	**01 03 46.9**	**-1.9**
FILF				Lg		01 03 53.5	
LRDF	**Laroque-de-Fa**	**0.73**	**54**	Pg	**Pg**	**01 03 51.5**	**+0.5**
LRDF				Lg		01 04 01.6	
MELF	**Melles**	**0.81**	**297**	Pg	**Pg**	**01 03 53.2**	**+0.6**
MELF				Sg	**Sg**	**01 04 03.7**	**+0.7**
MELF	**Melles**	**0.81**	**297**	Pg	**Pg**	**01 03 53.2**	**+0.6**
MELF				Lg		01 04 03.8	
EJON	**La Jonquera**	**0.85**	**94**	Pg	**Pg**	**01 03 53.1**	**-0.3**
	0.7nm,0.1s,SNR=5.7						
EJON				Lg		01 04 05.0	
	1.5nm,0.1s,SNR=5.5						
MTLF	**Montolieu**	**0.90**	**23**	*e*Pg	**Pg**	**01 03 54.5**	**+0.2**
MTLF				*e*Sg	**Sg**	**01 04 06.6**	**+0.6**
	1.6nm,0.2s						
MTLF	**Montolieu**	**0.90**	**23**	Pg	**Pg**	**01 03 54.5**	**+0.2**
MTLF				Lg		01 04 06.6	
	0.8nm,0.2s						
CFON	**Fontmartina**	**0.91**	**145**	Pg	**Pg**	**01 03 54.4**	**-0.2**
CFON				Lg		01 04 06.1	
	4.9nm,0.1s						
CAVN	**Les Avellanes**	**0.97**	**230**	Pg	**Pg**	**01 03 55.7**	**+0.1**
CAVN				S	**Sg**	**01 04 09.7**	**+1.5**
	2.2nm,0.1s						
EPF	**Esparros**	**1.15**	**297**	*e*Pn	**Pn**	**01 03 58.5**	**-1.9**
EPF	**Esparros**	**1.15**	**297**	*e*Pg	**Pg**	**01 03 59.4**	**+0.2**
EPF				*e*Sg	**Sg**	**01 04 14.5**	**+0.4**
	1.0nm,0.2s						
EPF	**Esparros**	**1.15**	**297**	Pn	**Pn**	**01 03 58.5**	**-1.9**
EPF				Pg	**Pg**	**01 03 59.4**	**+0.2**
EPF				Lg		01 04 14.5	
	0.5nm,0.2s						
EBIE	**Bielsa**	**1.19**	**279**	Pg	**Pg**	**01 04 00.4**	**+0.5**
	SNR=7.8						
EBIE				Lg		01 04 16.4	
	1.5nm,0.1s,SNR=5.0						
EPOB	**Poblet**	**1.26**	**203**	Pg	**Pg**	**01 04 00.6**	**-0.6**
	0.3nm,0.1s,SNR=12						
EPOB				Lg		01 04 17.1	
	1.9nm,0.1s,SNR=5.0						
ETSF	**Etsaut**	**1.74**	**284**	*e*Pg	**Pg**	**01 04 09.9**	**-0.5**
ETSF				*e*Sg	**Sg**	**01 04 32.7**	**-0.2**
	1.5nm,0.3s						
ETSF	**Etsaut**	**1.74**	**284**	Pg	**Pg**	**01 04 09.9**	**-0.5**
ETSF				Lg		01 04 32.7	
	0.8nm,0.3s						
ESAC	**San Caprasio**	**1.82**	**245**	Pg	**Pg**	**01 04 11.9**	**-0.1**
	3.2nm,0.3s,SNR=7.9						
ESAC				Sn	**Sn**	**01 04 32.6**	**-0.9**
	5.5nm,0.3s,SNR=7.9						
ESAC				Lg		01 04 36.8	
	2.6nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**1.88**	**215**	Pg	**Pg**	**01 04 12.5**	**-0.5**
	0.3nm,0.1s,SNR=7.9						
ERTA				Lg		01 04 36.8	
	15nm,1.0s,SNR=7.9						
SJPF	**Ste Jean**	**2.26**	**286**	*e*Pg	**Pg**	**01 04 19.6**	**-0.9**
SJPF				*e*Sg	**Sg**	**01 04 49.0**	**-0.8**
	0.4nm,0.2s						
SJPF	**Ste Jean**	**2.26**	**286**	Pg	**Pg**	**01 04 19.6**	**-0.9**
SJPF				Lg		01 04 49.0	
	0.2nm,0.2s						
CAF	**Calviac**	**2.42**	**5**	*e*Pn	**Pn**	**01 04 15.7**	**-2.2**
CAF	**Calviac**	**2.42**	**5**	*e*Pg	**Pg**	**01 04 22.6**	**-1.0**
CAF				*e*Sg	**Sg**	**01 04 53.9**	**-1.1**
	5.0nm,0.5s						
CAF	**Calviac**	**2.42**	**5**	Pn	**Pn**	**01 04 15.7**	**-2.2**
CAF				Pg	**Pg**	**01 04 22.6**	**-1.0**
CAF				Lg		01 04 53.9	
	2.5nm,0.5s						
LMR	**La Mourre**	**3.60**	**75**	*e*P	**Pn**	**01 04 37.3**	**+3.2**
	44nm,0.9s						
FRF	**La Foret Royal**	**3.75**	**72**	*e*P	**Pn**	**01 04 38.3**	**+2.2**
	36nm,0.9s						
MBDF	**Montbardon**	**4.27**	**57**	*e*P	**Pn**	**01 04 45.5**	**+2.2**
	29nm,0.8s						
LPG	**La Plagne**	**4.69**	**49**	*e*P	**Pn**	**01 04 49.0**	**-0.1**
	34nm,0.9s						
LPL	**La Plagne**	**4.69**	**48**	*e*P	**Pn**	**01 04 49.0**	**-0.1**
	40nm,0.9s						
CABF	**La Chapelle**	**5.14**	**36**	*e*P	**Pn**	**01 04 56.3**	**+1.0**
	41nm,0.8s						

*NIED **23** 01:33:00, 3620N×142 00E, h23km, Mw3.6 Best double couple: M0 3.11000×10^14 NP1:φ≋56.00000°, δ80.00000°, λ123.00000°. NP2:φ≋161.00000°, δ34.00000°, λ18.00000°.*
*IDC **23** 01:33:28.0±1.8, 3616N×142 27E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=48.8km s-min=26.6km az=55.0*
*ISCJB **23** 01:33:31.4±1.9, 3617N±004×142 11E±008, h31km±17km, mb3.7/4, Error ellipse: s-maj=10.2km s-min=6.8km az=11.5*
*NEIC **23** 01:33:32.5, 3619N×141 97E, h62km, MG3.5(JMA), After JMA.*
*JMA **23** 01:33:32.4±0.2, 3619N×141 97E, h62km, M3.5*

ISC 23 01:33:30.5±1.9, 3616N±004×142 07E±008, h11km±13km, n21, σ0≋60/30, mb3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.08**	**245**	P	**Pb**	**01 33 51.2**	**0.0**
CHOJ				S	**Sb**	**01 34 04.8**	**-0.6**
JHO	**Hitachi**	**1.29**	**291**	P	**Pn**	**01 33 53.0**	**-1.4**
ONAJ	**Iwakimizuishiy**	**1.39**	**313**	P	**Pn**	**01 33 54.9**	**-0.8**
JFK	**Kawauchi**	**1.54**	**322**	P	**Pn**	**01 33 57.3**	**-0.5**
BSO1	**Boso 1**	**1.75**	**211**	P	**Pn**	**01 34 00.7**	**0.0**
BSO1				S	**Sn**	**01 34 22.9**	**-0.1**
BSO3	**Boso 3**	**1.86**	**224**	P	**Pn**	**01 34 02.4**	**+0.2**
BSO3				S	**Sn**	**01 34 25.8**	**+0.1**
JFT	**Otama**	**1.94**	**315**	P	**Pn**	**01 34 03.6**	**+0.3**
JFT				S	**Sn**	**01 34 27.2**	**-0.5**
JMM	**Marumori**	**1.98**	**329**	P	**Pn**	**01 34 04.3**	**+0.4**
JAG	**Ashikaga**	**2.13**	**278**	P	**Pn**	**01 34 05.6**	**-0.3**
JFY	**Yanaizu**	**2.27**	**304**	P	**Pn**	**01 34 08.2**	**+0.4**
JKT	**Katashina**	**2.35**	**286**	P	**Pn**	**01 34 09.2**	**+0.2**
JKT				S	**Sn**	**01 34 37.3**	**-0.5**
JIO	**Ouri**	**2.36**	**346**	P	**Pn**	**01 34 08.8**	**-0.3**
JOU	**Okura**	**2.47**	**333**	P	**Pn**	**01 34 11.1**	**+0.5**
MJAR	**Matsushiro Arr**	**3.14**	**278**	Pn	**Pn**	**01 34 20.5**	**+0.7**
	8.2nm,0.3s,baz=99,slow=9.0,SNR=64						
MJAR				Sn	**Sn**	**01 35 01.8**	**+4.5**
	3.5nm,0.3s,baz=246,slow=42,SNR=5.0						
MJAR	**Matsushiro Arr**	**3.14**	**278**	Pn	**Pn**	**01 34 20.5**	**+0.7**
MJAR				Sn	**Sn**	**01 35 01.8**	**+4.5**
MAJO	**Matsushiro**	**3.14**	**278**	*e*Pn	**Pn**	**01 34 20.5**	**+0.7**
MAJO				*e*Sn	**Sn**	**01 34 56.6**	**-0.6**
MAT	**Matsushiro**	**3.14**	**278**	P	**Pn**	**01 34 20.2**	**+0.4**
MAT				S	**Sn**	**01 34 59.1**	**+1.8**
SONM	**Songino Array**	**28.71**	**305**	P	**P**	**01 39 28.0**	**+0.4**
	0.6nm,0.5s,mb3.6,baz=103,slow=10,SNR=6.7						
MKAR	**Makanchi Array**	**45.03**	**303**	P	**P**	**01 41 46.4**	**+0.4**
	1.0nm,0.7s,mb3.8,baz=74,slow=11,SNR=7.4						

WRA Warramunga Arr 56.27 189 P **P** **01 43 10.4 -0.5**
0.4nm,0.7s,mb3.6,baz=5.4,slow=7.0,SNR=12

AKASG Malin Array Be 75.31 323 P **P** **01 45 13.4 -0.2**
0.6nm,0.5s,mb3.8,baz=45,slow=7.1,SNR=4.6

WEL 23 01:43:50.9±0.6, 3767S×17611E, h226km±9km, ML3.5/5, Error ellipse: s-maj=19.4km s-min=8.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.99**	**127**	*e*PN		Pn	01 44 23.1	-0.1
URZ				SN		S	01 44 48.1	-0.3
URZ				SN		S	01 44 48.6	+0.1
BKZ	**Black Stump Fm**	**1.52**	**169**	PN		Pn	01 44 27.3	+0.3
BKZ				SN		S	01 44 54.5	-0.8
MOVZ	**Moawhango**	**1.75**	**189**	PN		Pn	01 44 29.2	+0.1
TSZ	**Takapari Road**	**2.39**	**183**	PN		Pn	01 44 34.8	-0.4
TSZ				SN		S	01 45 10.1	+0.1
MRZ	**Mangatainoka R**	**3.01**	**188**	PN		Pn	01 44 40.6	-1.4
MRZ				SN		S	01 45 18.9	-3.4
TIWZ	**Tintock**	**3.11**	**183**	PN		Pn	01 44 41.7	-1.4
TIWZ				SN		S	01 45 20.9	-3.2
KIW	**Kapiti Island**	**3.32**	**196**	PN		Pn	01 44 43.6	-1.9
KIW				SN		S	01 45 25.1	-3.5
TCW	**Tory Channel**	**3.81**	**201**	PN		Pn	01 44 49.4	-1.9
TCW				SN		S	01 45 34.6	-4.4
THZ	**Tophouse**	**4.77**	**210**	*e*PN		Pn	01 45 01.0	-2.0
THZ				SN		S	01 45 56.4	-3.9
KHZ	**Kahutara**	**5.13**	**202**	PN		Pn	01 45 05.2	-2.4
MQZ	**McQueen's Vall**	**6.58**	**202**	SN		S	01 46 32.2	-9.3

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*PRE **23** 01:59:37.7±0.7, 2199S×3373E, h5km, ML5.5*
*ISCJB **23** 01:59:38.6±0.3, 2172S±005×3334E±005, h20km, mb4.4/52, MS3.9/7, Error ellipse: s-maj=9.2km s-min=3.5km az=85.1*
*MOS **23** 01:59:40.1±0.7, 2114S×3352E, h10km, mb5.0/34, Error ellipse: s-maj=16.6km s-min=7.1km az=101.1*
*NEIC **23** 01:59:43.0±0.2, 2129S×3340E, mb4.6/36, Error ellipse: s-maj=7.5km s-min=6.2km az=127.0*
*IDC **23** 01:59:43.4±0.5, 2114S×3336E, h21km±2km, mb3.9/19, mb1 4.0/20, mb1mx4.0/26, mbtmp4.0/20, ML4.6/3, MS3.8/10, Ms1 3.8/10, ms1mx3.4/33, Error ellipse: s-maj=17.2km s-min=14.0km az=93.0*
*SZGRF **23** 01:59:50.4, 2143S×3184E, h20km, mb4.8, Zimbabwe*

ISC 23 01:59:41.2±0.3, 2167S±005×3333E±005, h21km, h21km±.5km: pP-P, n197, σ0.97/186, mb4.4/52, MS3.9/7, 15C-8D, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.15**	**257**	*e*P		**Pn**	**02 00 32.9**	**+3.4**
MSNA				*e*S		**Sn**	**02 01 13.7**	**+7.3**
MSNA				AML		AML	02 01 32.4	
	comp=Z,1μm,0.2s							
MATP	**Matopo**	**4.68**	**284**	Pn		**Pn**	**02 00 50.1**	**-0.4**
	comp=Z,54nm,0.3s,baz=100,slow=14,SNR=883							
MATP				Sn		**Sn**	**02 01 39.7**	**-4.6**
	comp=Z,114nm,0.3s,baz=338,slow=5.0,SNR=6.8							
MATP				Lg			02 01 58.7	
	comp=Z,278nm,0.3s,baz=8.9,slow=23,SNR=7.8							
MATP				LR		LR	02 02 49.0	
	comp=Z,1μm,19.1s,baz=95,slow=40							
MATP	**Matopo**	**4.68**	**284**	Pn		**Pn**	**02 00 50.1**	**-0.4**
MATP				Sn		**Sn**	**02 01 39.7**	**-4.6**
MATP				Lg			02 01 58.7	
MATP				LR		LR	02 02 49.0	
SLR	**Silverton**	**6.15**	**228**	*e*P		**Pn**	**02 01 11.3**	**+0.5**
SLR				*e*S		**Sn**	**02 02 19.4**	**-1.0**
SLR				AML		AML	02 03 11.5	
	comp=Z,917nm,0.6s							
ERPM	**east rand prop**	**6.51**	**225**	*e*P		**Pn**	**02 01 16.0**	**+0.2**
ERPM				*e*S		**Sn**	**02 02 27.9**	**-1.5**
ERPM				AML		AML	02 03 21.1	
	comp=Z,481nm,0.6s							
KSR	**Koster**	**7.22**	**234**	*e*P		**Pn**	**02 01 26.7**	**+1.3**
KSR				*e*S		**Sn**	**02 02 46.0**	**-0.8**
KSR				AML		AML	02 03 41.8	
	comp=Z,359nm,0.5s							
LBTB	**Lobatse**	**7.85**	**243**	*e*P		**Pn**	**02 01 35.9**	**+1.8**
LBTB				*e*S		**Sn**	**02 03 03.0**	**+0.7**
LBTB				AML		AML	02 04 03.6	
	comp=Z,355nm,0.6s							
LBTB	**Lobatse**	**7.85**	**243**	Pn		**Pn**	**02 01 38.0**	**+3.9**
	comp=Z,15nm,0.3s,baz=67,slow=13,SNR=35							
LBTB				Sn		**Sn**	**02 03 05.2**	**+2.9**
	comp=Z,23nm,0.3s,baz=357,slow=21,SNR=4.5							
LBTB				Lg			02 03 46.6	
	comp=Z,60nm,0.3s,baz=346,slow=23,SNR=11							
LBTB				LR		LR	02 04 56.6	
	comp=Z,521nm,19.4s,baz=75,slow=39							
LBTB	**Lobatse**	**7.85**	**243**	*e*Pn		**Pn**	**02 01 37.5**	**+3.3**
	comp=Z,45nm,0.6s							
LBTB				*e*Sn		**Sn**	**02 03 07.1**	**+4.8**
LSZ	**Lusaka**	**8.01**	**322**	Pn		**Pn**	**02 01 30.8**	**-5.5**
	comp=Z,24nm,0.3s,baz=146,slow=15,SNR=146							
LSZ				Sn		**Sn**	**02 02 49.3**	**-17**
	comp=Z,49nm,0.3s,baz=247,slow=24,SNR=12							
LSZ				Lg			02 03 35.4	
	comp=Z,36nm,0.3s,baz=35,slow=22,SNR=3.5							
LSZ				LR		LR	02 04 43.3	
	comp=Z,523nm,19.1s,baz=11,slow=39							
LSZ	**Lusaka**	**8.01**	**322**	*e*Pn		**Pn**	**02 01 30.5**	**-5.8**
	comp=Z,107nm,0.6s							
LSZ				*e*Sn		**Sn**	**02 02 51.2**	**-15**
SEK	**Senekal**	**8.41**	**217**	*e*P		**Pn**	**02 01 41.0**	**-0.8**
SEK				*e*S		**Sn**	**02 03 11.0**	**-5.1**
SEK				AML		AML	02 04 31.6	
	comp=Z,291nm,0.6s							
SWZ	**Schweizer**	**9.13**	**231**	*e*P		**Pn**	**02 01 52.5**	**+0.9**
SWZ				*e*S		**Sn**	**02 03 31.3**	**-2.3**
SWZ				AML		AML	02 04 49.3	
	comp=Z,169nm,0.6s							
KSD	**Kokstad**	**9.51**	**201**	*e*P		**Pn**	**02 01 54.2**	**-2.7**
KSD				*e*S		**Sn**	**02 03 34.3**	**-8.8**
KSD				AML		AML	02 05 03.5	
	comp=Z,131nm,0.7s							
BOSA	**Boshof**	**10.07**	**225**	*e*P		**Pn**	**02 02 05.1**	**+0.6**
BOSA				*e*S		**Sn**	**02 03 52.4**	**-4.3**
BOSA				AML		AML	02 05 29.1	
	comp=Z,95nm,0.7s							
BOSA	**Boshof**	**10.07**	**225**	Pn		**Pn**	**02 02 08.7**	**+4.2**
	comp=Z,8.7nm,0.3s,baz=53,slow=13,SNR=25							
BOSA				Sn		**Sn**	**02 03 57.6**	**+0.9**
	comp=Z,8.2nm,0.3s,baz=74,slow=16,SNR=6.4							
BOSA				Lg			02 05 02.0	
	comp=Z,11nm,0.3s,baz=312,slow=18,SNR=6.2							
BOSA				LR		LR	02 06 20.8	
	comp=Z,672nm,18.5s,baz=53,slow=38							
BOSA	**Boshof**	**10.07**	**225**	*e*Pn		**Pn**	**02 02 08.7**	**+4.3**
	comp=Z,39nm,1.4s							
BOSA				*e*Sn		**Sn**	**02 03 58.8**	**+2.1**
UPI	**Upington**	**12.82**	**236**	*e*P		**Pn**	**02 02 44.2**	**+2.1**
UPI				*e*S		**Sn**	**02 05 00.5**	**-3.6**
UPI				AML		AML	02 06 22.6	
	comp=Z,63nm,0.6s							
OPO	**Ambohidratompo**	**13.37**	**79**	Pn		**Pn**	**02 02 49.0**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=253,slow=16,SNR=9.3							
OPO				Sn		**Sn**	**02 05 09.0**	**-8.7**
	comp=Z,8.0nm,0.3s,baz=158,slow=20,SNR=7.9							
TSUM	**Tsumeb**	**14.97**	**277**	Pn		**Pn**	**02 03 07.9**	**-3.5**
	comp=Z,6.1nm,0.3s,baz=97,slow=11,SNR=93							
TSUM				Sn		**Sn**	**02 05 48.5**	**-8.0**
	baz=300,slow=22,SNR=3.1							
TSUM				Lg			02 07 21.8	
	comp=Z,4.6nm,0.3s,baz=275,slow=19,SNR=3.6							
TSUM				LR		LR	02 09 09.4	
	comp=Z,279nm,18.8s,baz=220,slow=38							
TSUM	**Tsumeb**	**14.97**	**277**	*e*Pn		**Pn**	**02 03 08.0**	**-3.4**
	comp=Z,38nm,0.6s							
TSUM				*e*Sn		**Sn**	**02 05 50.2**	**-6.3**
SUR	**Sutherland**	**15.42**	**224**	*e*P		**Pn**	**02 03 19.0**	**+1.6**
SUR				*e*S		**Sn**	**02 05 60.0**	**-7.7**
SUR	**Sutherland**	**15.42**	**224**	Pn		**Pn**	**02 03 20.6**	**+3.1**
	comp=Z,4.6nm,0.3s,baz=55,slow=14,SNR=23							
SUR				Sn		**Sn**	**02 06 07.2**	**-0.5**
	comp=Z,2.1nm,0.3s,baz=116,slow=17,SNR=4.2							
SUR				Lg			02 07 49.6	
	comp=Z,3.0nm,0.3s,baz=329,slow=22,SNR=6.0							
SUR				LR		LR	02 09 44.6	
	comp=Z,266nm,20.3s,baz=356,slow=38							

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**15.42**	**224**	*e*Pn		**Pn**	**02 03 21.8**	**+4.4**
	comp=Z,60nm,0.8s							
SUR				*e*Sn		**Sn**	**02 06 06.1**	**-1.5**
CVNA	**Calvinia**	**15.57**	**228**	*e*P		**Pn**	**02 03 21.8**	**+2.4**
CVNA				*e*S		**Sn**	**02 06 04.8**	**-6.5**
CVNA				AML		AML	02 07 58.1	
	comp=Z,105nm,0.7s							
KMBO	**Kilima Mbogo**	**20.77**	**11**	P		**P**	**02 04 17.3**	**-3.4**
	comp=Z,0.8nm,0.5s,baz=197,slow=15,SNR=4.3							
KMBO				Lg			02 10 08.1	
	comp=Z,4.1nm,1.0s,baz=252,slow=23,SNR=2.5							
DGAR	**Diego Garcia**	**40.29**	**75**	P		**P**	**02 07 17.8**	**+1.0**
TRIS	**Tristan da Cun**	**42.23**	**238**	*e*P		pP	02 07 39.1	-0.1
TOA0	**Torodi Ar. Sit**	**46.49**	**315**	*e*P		**P**	**02 08 07.3**	**+0.6**
TOA0				*e*pP		pP	02 08 13.0	-0.4
TORD	**Torodi Ar. Bea**	**46.49**	**315**	P		**P**	**02 08 05.1**	**-1.7**
	comp=Z,1.8nm,1.0s,mb4.0,baz=128,slow=6.0,SNR=18							
TORD				LR		LR	02 28 21.7	
	comp=Z,58nm,21.8s,MS3.5,baz=145,slow=37							
DBIC	**Dimbokro**	**46.85**	**303**	P		**P**	**02 08 10.0**	**+0.4**
	comp=Z,2.6nm,0.7s,mb4.3,baz=177,slow=7.8,SNR=5.4							
DBIC				LR		LR	02 25 47.0	
	comp=Z,83nm,20.0s,MS3.7,baz=129,slow=34							
DBIC	**Dimbokro**	**46.85**	**303**	P		**P**	**02 08 10.0**	**+0.4**
DBIC				*e*P			02 08 10.4	
DBIC				LR		LR	02 25 47.0	
SYO	**Syowa Base**	**47.50**	**177**	⇑*e*P		pP	02 08 19.8	-1.5
SYO	**Syowa Base**	**47.50**	**177**	⇑*e*sP		sP	02 08 27.6	+3.8
MAW	**Mawson**	**49.52**	**166**	P		pP	02 08 35.8	-1.1
	comp=Z,7.0nm,0.6s,baz=319,slow=9.9,SNR=17							
MAW	**Mawson**	**49.52**	**166**	*e*P		pP	02 08 36.0	-0.8
MAW				pmax		pmax		
	comp=Z,8.0nm,0.6s							
MAW	**Mawson**	**49.52**	**166**	*e*P		pP	02 08 36.0	-0.9
	comp=Z,7.9nm,0.6s							
EIL	**Elat**	**51.06**	**2**	*e*P		**P**	**02 08 41.8**	**-0.1**
EIL				*e*pP		pP	02 08 47.9	-0.7
RDF	**Al-Radifah**	**52.13**	**16**	*e*P		**P**	**02 08 49.3**	**-0.6**
RDF				AMb		AMB	02 08 50.8	
	comp=Z,14nm,0.7s,mb5.0							
NAY	**Al-Naaiem**	**52.36**	**15**	*e*P		**P**	**02 08 51.2**	**-0.4**
NAY				AMb		AMB	02 08 58.0	
	comp=Z,8.3nm,0.7s,mb4.8							
RST	**Umm Al-Ruwaisa**	**52.55**	**15**	*e*P		**P**	**02 08 52.9**	**0.0**
RST				AMb		AMB	02 09 00.3	
	comp=Z,24nm,0.9s,mb5.1							
UMR	**Umm Al-Rimmam**	**52.77**	**16**	*e*P		**P**	**02 08 54.3**	**-0.3**
UMR				AMb		AMB	02 09 02.2	
	comp=Z,74nm,0.8s,mb5.6							
SNAA	**Sanae**	**54.14**	**193**	*e*P		pP	02 09 10.1	-1.3
SNAA				pmax		pmax		
	comp=Z,20nm,0.6s							
SNAA	**Sanae**	**54.14**	**193**	*e*P		pP	02 09 10.1	-1.3
	comp=Z,1.7nm,0.6s							
MALT	**Malatya**	**59.85**	**5**	*e*P		**P**	**02 09 44.8**	**-0.3**
MALT				*e**P		pP	02 09 51.8	-0.1
BR131	**Keskin Array S**	**61.07**	**0**	*e*P		**P**	**02 09 53.0**	**-0.5**
BR131				*e*pP		pP	02 09 59.1	-1.2
BRTR	**Keskin Array B**	**61.07**	**0**	P		**P**	**02 09 52.8**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.8,baz=166,slow=11,SNR=5.2							
BRTR				pP		pP	02 09 59.4	-0.9
	comp=Z,2.1nm,0.9s,baz=176,slow=8.8,SNR=10							
BRTR	**Keskin Array B**	**61.07**	**0**	P		**P**	**02 09 52.8**	**-0.7**
BRTR				*PP		pP	02 09 59.4	-0.8
BRTR				pmax		pmax		
	comp=N,2.0nm,0.9s							
KEST	**Kesra**	**61.44**	**338**	P		**P**	**02 09 54.9**	**-1.1**
	comp=N,1.1nm,1.0s,mb3.9,baz=71,slow=6.8,SNR=2.7							
MLR	**Muntele Rosu**	**67.17**	**354**	P		**P**	**02 10 33.2**	**-0.4**
	comp=N,0.8nm,0.4s,mb4.1,baz=96,slow=4.8,SNR=2.5							
MLR				pP		pP	02 10 40.0	-0.4
	comp=N,2.5nm,0.7s,baz=158,slow=14,SNR=3.7							
MLR	**Muntele Rosu**	**67.17**	**354**	⇓*i*P		**P**	**02 10 33.6**	**+0.1**
MLR	**Muntele Rosu**	**67.17**	**354**	⇓P		**P**	**02 10 33.6**	**+0.1**
VOIR		**67.20**	**354**	⇓*i*P		**P**	**02 10 33.9**	**+0.2**
VOIR		**67.20**	**354**	⇓P		**P**	**02 10 33.9**	**+0.1**
PLOR	**Plostina**	**67.47**	**355**	⇑*i*P		**P**	**02 10 34.5**	**-0.9**
VRI	**Vrincioaia**	**67.48**	**355**	⇑*i*P		**P**	**02 10 35.8**	**+0.4**
VRI	**Vrincioaia**	**67.48**	**355**	⇑P		**P**	**02 10 35.8**	**+0.3**
DRGR		**68.81**	**352**	⇑*i*P		**P**	**02 10 44.7**	**+0.9**
DRGR		**68.81**	**352**	⇑P		**P**	**02 10 44.7**	**+0.9**
PKSM	**Moragy**	**68.86**	**349**	⇓*i*P		**P**	**02 10 43.8**	**-0.3**
PKSM	**Moragy**	**68.86**	**349**	⇓P		**P**	**02 10 43.9**	**-0.3**
KOLN	**Koldanda**	**69.10**	**47**	*e*P		**P**	**02 10 45.0**	**-0.6**
	comp=N,14nm,0.8s,mb4.9							
LMR	**La Mourre**	**69.22**	**339**	*e*P		**P**	**02 10 46.5**	**+0.1**
	comp=N,9.1nm,0.8s,mb4.5							
LMR	**La Mourre**	**69.22**	**339**	*e*P		**P**	**02 10 46.5**	**+0.1**
LMR				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
LMR	**La Mourre**	**69.22**	**339**	*e*P		**P**	**02 10 46.5**	**+0.1**
	comp=Z,4.6nm,0.8s,mb4.5							
FRF	**La Foret Royal**	**69.38**	**340**	*e*P		**P**	**02 10 46.8**	**-0.6**
	comp=Z,5.5nm,0.7s,mb4.3							
FRF	**La Foret Royal**	**69.38**	**340**	*e*P		**P**	**02 10 46.8**	**-0.6**
FRF				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
FRF	**La Foret Royal**	**69.38**	**340**	*e*P		**P**	**02 10 46.8**	**-0.6**
	comp=Z,2.8nm,0.7s,mb4.3							
SBF	**Sospel**	**69.40**	**340**	*e*P		**P**	**02 10 47.4**	**-0.1**
GKN	**Gorkha**	**69.95**	**47**	*e*P		**P**	**02 10 50.3**	**-0.6**
OBKA	**Obir**	**69.95**	**346**	⇑*i*P		pP	02 10 57.5	-0.2
	comp=Z,4.6nm,0.8s							
OBKA	**Obir**	**69.95**	**346**	⇑*i*P		**P**	**02 10 51.7**	**+0.8**
	comp=Z,4.6nm,0.8s,mb4.4							
OBKA				⇓*i*P		pP	02 10 57.5	-0.3
DMN	**Daman**	**70.03**	**48**	*e*P		**P**	**02 10 51.4**	**+0.1**
	comp=Z,9.4nm,0.4s,mb5.0							
SMRF	**Simiane la Rot**	**70.11**	**339**	*e*P		**P**	**02 10 51.9**	**+0.1**
	comp=Z,24nm,1.3s,mb4.7							
SMRF	**Simiane la Rot**	**70.11**	**339**	*e*P		**P**	**02 10 51.9**	**+0.1**
	comp=Z,24nm,1.3s,mb5.0							
PKI	**Pulchoki**	**70.21**	**48**	*e*P		**P**	**02 10 52.0**	**-0.5**
	comp=Z,12nm,0.6s,mb5.0							
PKI	**Pulchoki**	**70.21**	**48**	*e*P		**P**	**02 10 52.0**	**-0.5**
PKI				pmax		pmax		
	comp=Z,12nm,0.6s,mb5.0							
KKN	**Kakani**	**70.26**	**48**	*e*P		**P**	**02 10 52.5**	**-0.3**
ESDC	**Sonseca Array**	**70.26**	**330**	P		**P**	**02 10 52.9**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=144,slow=4.6,SNR=5.4							
ESDC				pP		pP	02 10 59.2	-0.4
	comp=Z,2.4nm,0.7s,baz=140,slow=6.1,SNR=5.4							
ESLA	**Sonseca Array**	**70.26**	**330**	*e*P		**P**	**02 10 53.2**	**+0.5**
MBDF	**Montbardon**	**70.39**	**340**	*e*P		**P**	**02 10 54.5**	**+0.9**
	comp=Z,9.5nm,0.8s,mb4.5							
MBDF	**Montbardon**	**70.39**	**340**	*e*P		**P**	**02 10 54.5**	**+0.9**
MBDF				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
MBDF	**Montbardon**	**70.39**	**340**	*e*P		**P**	**02 10 54.5**	**+0.9**
	comp=Z,4.8nm,0.8s,mb4.5							
MTLF	**Montolieu**	**70.73**	**336**	*e*P		**P**	**02 10 56.0**	**+0.3**
	comp=Z,7.0nm,1.1s,mb4.2							
MTLF	**Montolieu**	**70.73**	**336**	*e*P		**P**	**02 10 56.0**	**+0.3**
MTLF				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.3							
MTLF	**Montolieu**	**70.73**	**336**	*e*P		**P**	**02 10 56.0**	**+0.3**
	comp=Z,3.5nm,1.0s,mb4.2							
GUN	**Gumba**	**70.75**	**48**	*e*P		**P**	**02 10 55.8**	**0.0**
	comp=Z,24nm,0.7s,mb5.2							
JIRN	**Jiri**	**70.81**	**48**	*e*P		**P**	**02 10 56.0**	**-0.1**
	comp=Z,24nm,0.7s,mb5.2							
ORIF	**Oris-en-Rattie**	**70.84**	**340**	*e*P		**P**	**02 10 57.1**	**+0.8**
	comp=Z,5.4nm,0.8s,mb4.2							
ORIF				*e*R				
	comp=Z,69nm,20.0s							
ORIF	**Oris-en-Rattie**	**70.84**	**340**	*e*P		**P**	**02 10 57.1**	**+0.8**
ORIF				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
ORIF	**Oris-en-Rattie**	**70.84**	**340**	*e*P		**P**	**02 10 57.1**	**+0.8**
	comp=Z,2.7nm,0.8s,mb4.2							
LPL	**La Plagne**	**71.11**	**341**	*e*P		**P**	**02 10 58.0**	**+0.1**
	comp=Z,5.5nm,0.8s,mb4.2							
LPL	**La Plagne**	**71.11**	**341**	*e*P		**P**	**02 10 58.0**	**+0.1**
LPL				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
LPL	**La Plagne**	**71.11**	**341**	*e*P		**P**	**02 10 58.0**	**+0.1**
	comp=Z,2.8nm,0.8s,mb4.2							
EPF	**Esparros**	**71.19**	**335**	*e*P		**P**	**02 10 58.7**	**+0.3**
	comp=Z,4.3nm,0.7s,mb4.2							
EPF	**Esparros**	**71.19**	**335**	*e*P		**P**	**02 10 58.7**	**+0.3**
EPF				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.2							
EPF	**Esparros**	**71.19**	**335**	*e*P		**P**	**02 10 58.7**	**+0.3**
	comp=Z,2.2nm,0.7s,mb4.2							
VIVF	**Saint-Julien-l**	**71.19**	**339**	*e*P		**P**	**02 10 59.9**	**+1.5**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MOA	**Molln**	**71.28**	**347**	⇑*i*P		**P**	**02 10 59.5**	**+0.5**
	comp=Z,8.8nm,1.1s,mb4.6							
MOA				⇑*i*P		pP	02 11 05.3	-0.6
MOA	**Molln**	**71.28**	**347**	⇑*i*P		pP	02 11 05.2	-0.7
	comp=Z,8.8nm,1.1s							
ETSF	**Etsaut**	**71.43**	**334**	*e*P		**P**	**02 11 00.1**	**+0.2**
	comp=Z,7.1nm,0.7s,mb4.4							
ETSF	**Etsaut**	**71.43**	**334**	*e*P		**P**	**02 11 00.1**	**+0.2**
ETSF				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.5							
ETSF	**Etsaut**	**71.43**	**334**	*e*P		**P**	**02 11 00.1**	**+0.2**
	comp=Z,3.5nm,0.7s,mb4.4							
MOTA	**Moosalm**	**71.55**	**344**	⇑*i*P		pP	02 11 06.9	-0.6
	comp=Z,3.2nm,1.0s							
MOTA	**Moosalm**	**71.55**	**344**	⇓*i*P		**P**	**02 11 01.9**	**+1.3**
	comp=Z,3.2nm,1.0s,mb4.2							
MOTA				⇑*i*P		pP	02 11 07.1	-0.3
MOTA	**Moosalm**	**71.55**	**344**	⇑*i*P		pP	02 11 06.9	-0.6
MOTA				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.2							
SJPF	**Ste Jean**	**71.88**	**334**	*e*P		**P**	**02 11 02.9**	**+0.3**
	comp=Z,5.3nm,0.5s,mb4.4							
SJPF	**Ste Jean**	**71.88**	**334**	*e*P		**P**	**02 11 02.9**	**+0.3**
SJPF				pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.5							
SJPF	**Ste Jean**	**71.88**	**334**	*e*P		**P**	**02 11 02.9**	**+0.3**
	comp=Z,2.7nm,0.5s,mb4.4							
AKASG	**Malin Array Be**	**72.14**	**357**	P		**P**	**02 11 02.4**	**-1.8**
	comp=Z,0.3nm,0.4s,mb3.6,baz=175,slow=5.2,SNR=3.4							
AKASG				pP		pP	02 11 09.0	-2.0
	comp=Z,0.9nm,0.6s,baz=178,slow=5.3,SNR=4.2							
CAF	**Calviac**	**72.15**	**337**	*e*P		**P**	**02 11 04.7**	**+0.5**
	comp=Z,8.1nm,1.0s,mb4.3							
CAF	**Calviac**	**72.15**	**337**	*e*P		**P**	**02 11 04.7**	**+0.5**
CAF				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.3							
CAF	**Calviac**	**72.15**	**337**	*e*P		**P**	**02 11 04.7**	**+0.5**
	comp=Z,4.1nm,1.0s,mb4.3							
CABF	**La Chapelle**	**72.29**	**341**	*e*P		**P**	**02 11 05.3**	**+0.3**
	comp=Z,7.7nm,0.7s,mb4.5							
CABF	**La Chapelle**	**72.29**	**341**	*e*P		**P**	**02 11 05.3**	**+0.3**
CABF				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.5							
CABF	**La Chapelle**	**72.29**	**341**	*e*P		**P**	**02 11 05.3**	**+0.3**
	comp=Z,3.8nm,0.7s,mb4.4							
GEC2	**GERESS Array S**	**72.35**	**347**	*e*P		**P**	**02 11 04.2**	**-1.2**
GEC2				*e**PP		pP	02 11 11.4	-0.9
GERES	**GERESS Array B**	**72.35**	**347**	P		**P**	**02 11 05.2**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=164,slow=5.3,SNR=7.1							
GERES				pP		pP	02 11 11.2	-1.1
	comp=Z,1.4nm,0.6s,baz=156,slow=5.0,SNR=11							
GERES	**GERESS Array B**	**72.35**	**347**	P		**P**	**02 11 05.2**	**-0.2**
GERES				*PP		pP	02 11 11.2	-1.1
GERES				pmax		pmax		
	comp=Z,10.0nm,0.6s							
LFF	**La Frestale**	**72.65**	**336**	*e*P		**P**	**02 11 07.5**	**+0.3**
RJF	**Les Rejaudoux**	**72.68**	**337**	*e*P		**P**	**02 11 07.5**	**+0.2**
	comp=Z,6.5nm,0.8s,mb4.3							
RJF				*e*R				
	comp=Z,79nm,18.8s							
RJF	**Les Rejaudoux**	**72.68**	**337**	*e*P		**P**	**02 11 07.5**	**+0.2**
RJF				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
RJF				MLR		MLR		
	comp=Z,80nm,18.8s,MS4.0							
RJF	**Les Rejaudoux**	**72.68**	**337**	*e*P		**P**	**02 11 07.5**	**+0.2**
	comp=Z,3.3nm,0.8s,mb4.3							
RJF				LR		LR		
	comp=Z,80nm,18.8s,MS4.0							
SMF	**Signal de Mont**	**73.04**	**339**	*e*P		**P**	**02 11

ZRNK	**Zerenda**	**80.50**	**21**	*e*P	**P**	**02 11 50.5**	**-1.1**
ZRNK				*e**PP	pP	02 11 57.0	-1.6
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
ZRNK	**Zerenda**	**80.50**	**21**	*e*P	**P**	**02 11 50.5**	**-1.1**
	comp=Z,2.8nm,0.9s,mb4.2						
ZRNK				*e*pP	pP	02 11 57.0	-1.5
MKAR	**Makanchi Array**	**81.20**	**32**	P	**P**	**02 11 54.6**	**-0.8**
	comp=Z,1.7nm,0.7s,mb4.1,baz=216,slow=3.9,SNR=12						
CPUP	**Villa Florida**	**81.24**	**245**	LR	LR	02 46 44.8	
	comp=Z,69nm,18.2s,MS4.0,baz=183,slow=35						
CHKZ	**Chkalovo**	**81.64**	**21**	*e*P	**P**	**02 11 56.6**	**-1.1**
CHKZ				*e*	pP	02 12 03.2	-1.4
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**81.64**	**21**	*e*P	**P**	**02 11 56.6**	**-1.1**
	comp=Z,4.2nm,0.8s,mb4.4						
CHKZ				*e*PcP	PcP	02 12 03.2	-0.3
FINES	**FINESS Array B**	**83.02**	**356**	pP	pP	02 12 10.5	-1.3
	comp=Z,1.3nm,0.7s,baz=165,slow=7.9,SNR=2.2						
NB2	**NORSAR Subarra**	**84.33**	**349**	P	pP	02 12 17.5	-1.1
	comp=Z,0.8nm,0.8s,baz=161,slow=4.8						
NOA	**NORSAR Array B**	**84.33**	**349**	P	**P**	**02 12 11.5**	**-0.1**
	comp=Z,0.7nm,0.9s,mb3.8,baz=173,slow=9.5,SNR=2.5						
NOA				pP	pP	02 12 17.3	-1.3
	comp=Z,2.2nm,0.8s,baz=153,slow=4.9,SNR=5.8						
NOA	**NORSAR Array B**	**84.33**	**349**	P	**P**	**02 12 11.5**	**-0.1**
NOA				*PP	pP	02 12 17.3	-1.3
NOA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NOA				pmax	pmax		
	comp=N,2.0nm,0.9s						
NOA	**NORSAR Array B**	**84.33**	**349**	P	**P**	**02 12 11.5**	**-0.1**
NOA				pP	pP	02 12 17.3	-1.3
PLCA	**Paso Flores**	**86.05**	**228**	pP	pP	02 12 31.6	+4.4
	comp=N,1.5nm,1.0s,baz=117,slow=2.3,SNR=1.9						
NVS	**Novosibirsk**	**87.30**	**26**	*e*P	**P**	**02 12 23.0**	**-3.3**
ZAL	**Zalesovo**	**87.33**	**28**	LR	LR	02 58 52.9	
	comp=N,133nm,19.3s,MS4.4,baz=283,slow=41						
SIV	**San Ignacio**	**88.18**	**254**	pP	pP	02 12 40.5	+2.9
	comp=N,0.5nm,0.5s,baz=100,slow=1,SNR=3.0						
ASAR	**Alice Springs**	**90.57**	**116**	P	**P**	**02 12 45.4**	**+3.7**
	comp=N,2.7nm,0.8s,mb4.7,baz=244,slow=3.9,SNR=20						
ASAR	**Alice Springs**	**90.57**	**116**	P	**P**	**02 12 45.4**	**+3.7**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA	**Warramunga Arr**	**92.44**	**112**	P	**P**	**02 12 52.4**	**+2.0**
	comp=Z,0.6nm,0.7s,mb4.1,baz=245,slow=2.9,SNR=6.6						
WRA	**Warramunga Arr**	**92.44**	**112**	P	**P**	**02 12 52.4**	**+2.0**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WRAB	**Tennant Creek**	**92.45**	**112**	P	**P**	**02 12 52.1**	**+1.6**
LPAZ	**La Paz**	**94.32**	**251**	P	**P**	**02 13 03.0**	**+4.0**
	comp=Z,0.7nm,0.8s,mb4.2,baz=63,slow=2.3,SNR=3.6						
LPAZ				pP	pP	02 13 10.6	+4.6
	comp=Z,1.9nm,0.9s,baz=57,slow=9.2,SNR=6.1						
LPAZ	**La Paz**	**94.32**	**251**	P	**P**	**02 13 03.1**	**+4.1**
LPAZ				*PP	pP	02 13 10.6	+4.5
LPAZ				pmax	pmax		
	comp=N,2.0nm,0.9s						
SONM	**Songino Array**	**95.09**	**40**	P	**P**	**02 13 02.3**	**-0.2**
	comp=N,0.5nm,0.7s,mb4.0,baz=242,slow=5.4,SNR=4.4						
CCM	**Cathedral Cave**	**129.95**	**302**	*e*PKIKP	PKPdf	02 18 51.3	+2.1
CCM				*e*		02 18 58.3	
PDAR	**Pinedale Array**	**142.62**	**313**	PKhKP		02 19 09.3	
	comp=N,0.2nm,0.6s,baz=41,slow=4.8,SNR=2.8						
PDAR				PKP	PKPdf	02 19 15.0	+2.4
	comp=N,0.7nm,0.9s,baz=70,slow=3.8,SNR=5.7						
PV01	**Paradox Valley**	**143.42**	**305**	*e*PKPdf	PKPdf	02 19 14.5	+0.5
PV10	**Paradox Valley**	**143.71**	**306**	*e*PKPdf	PKPdf	02 19 15.8	+1.3
PV10				*ep*PKPdf	pPKPdf	02 19 22.3	+0.6
SRU	**San Rafael**	**144.59**	**308**	*e*PKIKP	PKPdf	02 19 17.3	+1.2
SRU				*e*		02 19 24.1	
TMUT	**Trail Mountain**	**145.03**	**308**	*e*PKPdf	PKPdf	02 19 19.6	+2.7
HLID	**Hailey**	**145.48**	**317**	*e*PKP	PKPdf	02 19 19.3	+1.7
DUG	**Dugway**	**145.86**	**311**	*e*PKIKP	PKPdf	02 19 21.5	+3.2
DUG				*e*		02 19 27.9	
MSU	**Marysvale**	**146.01**	**307**	*e*PKP	PKPdf	02 19 22.8	+4.3
MSU				*ep*PKP	pPKPdf	02 19 28.9	+3.2
WUAZ	**Wupatki**	**146.27**	**302**	*e*PKPdf	PKPdf	02 19 21.9	+3.0
WUAZ				*ep*PKPdf	pPKPdf	02 19 29.1	+3.0
TUC	**Tucson**	**146.46**	**296**	*e*PKPdf	PKPdf	02 19 24.0	+4.7
TUC				*ep*PKPdf	pPKPdf	02 19 30.1	+3.7
HAWA	**Hanford**	**146.92**	**325**	*e*PKPdf	PKPdf	02 19 21.6	+1.5
HAWA				*e*		02 19 30.9	
WVOR	**Wild Horse Val**	**148.72**	**318**	*e*PKP2	PKPab	02 19 26.7	-3.8
NVAR	**Mina Array Bea**	**150.47**	**311**	PKP	PKPdf	02 19 28.0	+2.2
	comp=N,1.9nm,0.7s,baz=130,slow=3.7,SNR=6.8						
NVAR				PKPbc	PKPbc	02 19 34.0	+2.8
	comp=N,1.8nm,0.7s,baz=64,slow=2.1,SNR=13						
NVAR				pPKPbc	pPKPbc	02 19 41.2	+2.9
	comp=N,2.5nm,0.8s,baz=56,slow=4.6,SNR=7.5						
NVAR	**Mina Array Bea**	**150.47**	**311**	PKP	PKPdf	02 19 28.0	+2.2
NVAR				PKPbc	PKPbc	02 19 34.0	+2.8
NVAR				pPKPbc	pPKPbc	02 19 41.2	+2.9
DAC	**Darwin (Calif)**	**150.83**	**306**	*e*PKIKP	PKPbc	02 19 34.3	+2.3

*ISCJB **23** 02:13:13.9±0.6, 6.15N±004×12627E±006, h57km±6km, mb4.4/27, MS3.5/4, Error ellipse: s-maj=10.4km s-min=6.0km az=137.9*

*IDC **23** 02:13:15.3±3.5, 640N×12620E, h78km±30km, mb4.0/11, mb1 4.1/11, mb1mx3.9/22, mbtmp4.3/11, MS3.4/1, Ms1 3.4/1, ms1mx2.5/22, Error ellipse: s-maj=35.1km s-min=13.4km az=66.0*

*MOS **23** 02:13:15.6±1.9, 629N×12607E, h90km, mb5.0/6, Error ellipse: s-maj=27.4km s-min=11.5km az=110.7*

*MAN **23** 02:13:16.2, 650N×12626E, h66km, mb4.1, ML5.0*

*NEIC **23** 02:13:16.0±1.2, 650N×12636E, h86km±11km, mb4.6/11, Error ellipse: s-maj=16.9km s-min=8.0km az=62.0*

*BJI **23** 02:13:20.0, 650N×12640E, h86km, mB4.8, mb4.5, Ms4.4, Msz4.2*

ISC 23 02:13:15.2±0.6, 618N±004×12626E±006, h51km±6km, h98km±3.0km:pP-P, n61, σ1s24/65, mb4.4/27, MS3.5/4, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.77**	**359**	*e*P	**Pn**	**02 13 29.7**	**0.0**
MATI				*e*S	**Sn**	**02 13 40.6**	**+0.2**
DAV	**Davao City (W)**	**1.12**	**323**	*i*P	**Pn**	**02 13 35.0**	**+0.5**
DAV	**Davao City (W)**	**1.12**	**323**	*e*Pn	**Pn**	**02 13 34.5**	**0.0**
DMPH	**Davao City--Mi**	**1.17**	**320**	*e*P	**Pn**	**02 13 35.2**	**0.0**
KCP	**Kidapawan**	**1.43**	**305**	*e*P	**Pn**	**02 13 38.4**	**-0.4**
KCP				*e*S	**Sn**	**02 13 55.6**	**-0.6**
BUKP	**Musuan**	**2.07**	**325**	*e*P	**Pn**	**02 13 46.4**	**-1.0**
BUKP				*e*S	**Sn**	**02 14 12.2**	**+0.2**
CTBH	**Cotabato--PC H**	**2.26**	**297**	*e*P	**Pn**	**02 13 49.6**	**-0.4**
CTBH				*i* S	**Sn**	**02 14 18.5**	**+1.8**
CGP	**Cagayan de Oro**	**2.75**	**326**	*e*P	**Pn**	**02 13 56.0**	**-0.8**
CGP				*i* S	**Sn**	**02 14 25.9**	**-2.8**
BUTP	**Butuan**	**2.85**	**347**	*e*P	**Pn**	**02 13 58.6**	**+0.5**
BUTP				*e*S	**Sn**	**02 14 34.4**	**+3.3**
PAGZ	**Pagadian**	**3.31**	**300**	*e*P	**Pn**	**02 14 04.3**	**-0.1**
SCPH	**Surigao**	**3.66**	**348**	*e*P	**Pn**	**02 14 07.3**	**-1.9**
SCPH				*e*S	**Sn**	**02 14 54.1**	**+2.8**
IPIL	**Ipil**	**4.00**	**294**	*e*P	**Pn**	**02 14 15.7**	**+1.8**
TBP	**Tagbilaran**	**4.23**	**326**	*e*P	**Pn**	**02 14 16.1**	**-0.9**
SNPH	**Sibulan**	**4.35**	**317**	*e*P	**Pn**	**02 14 18.5**	**-0.2**
KSM	**Kuching**	**16.59**	**254**	*e*P	**Pn**	**02 17 07.6**	**+3.4**
KAKA	**Kakadu**	**19.74**	**162**	*e*P	**Pn**	**02 17 42.0**	**-0.5**
	37nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.13**	**181**	P	**P**	**02 18 26.2**	**0.0**
	8.2nm,0.6s,mb4.3,baz=1.9,slow=8.4,SNR=32						
FITZ	**Fitzroy Crossi**	**24.13**	**181**	*e*P	**P**	**02 18 26.5**	**+0.3**
	16nm,0.5s,mb4.7						
KULM	**Kulim**	**25.50**	**269**	*e*P	**P**	**02 18 39.5**	**+0.8**
PMG	**Port Moresby**	**25.95**	**126**	LR	LR	02 27 52.2	
	comp=Z,92nm,20.3s,MS3.3,baz=87,slow=34						
NJ2	**Nanjing**	**26.66**	**346**	*e*P	**P**	**02 18 50.5**	**+1.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
WRAB	**Tennant Creek**	**27.14**	**163**	*e*P	**P**	**02 18 53.6**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**27.14**	**163**	*e*P	**P**	**02 18 53.6**	**+0.2**
	comp=Z,13nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**27.14**	**163**	P	**P**	**02 18 53.0**	**-0.5**
	comp=Z,9.0nm,0.7s,mb4.4,baz=342,slow=10,SNR=46						
WRA	**Warramunga Arr**	**27.15**	**163**	*e*P	**P**	**02 18 54.2**	**+0.7**
WB2	**Prapat**	**27.46**	**264**	P	**P**	**02 18 54.3**	**-2.0**
PSI							
	comp=Z,1.4nm,0.3s,mb4.0,baz=84,slow=10,SNR=4.7						

MBWA	**Marble Bar**	**27.91**	**193**	*e*P	**P**	**02 19 01.7**	**+1.4**
	comp=Z,4.3nm,0.5s,mb4.3						
KMI	**Kunming**	**29.36**	**312**	P	**P**	**02 19 16.3**	**+3.0**
KMI				AP	pP	02 19 39.3	+13
KMI				PP	PP	02 20 14.4	-5.8
KMI				PPP		02 20 28.6	
KMI				S	**S**	**02 24 08.1**	**+4.8**
KMI				XS	sS	02 24 32.0	+6.6
KMI				SS	SS	02 25 41.8	-28
KMI				SSS		02 26 03.8	
KMI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
KMI				AMB	AMB		
	comp=Z,88nm,4.2s						
KMI				LR	LR		
	comp=N,84nm,17.8s,MS3.5						
KMI				LR	LR		
	comp=E,73nm,19.2s,MS3.5						
KMI				LR	LR		
	comp=Z,85nm,17.7s,MS3.4						
AS31	**Alice Springs**	**30.58**	**166**	*e*P	**P**	**02 19 25.2**	**+1.2**
ASAR	**Alice Springs**	**30.58**	**166**	P	**P**	**02 19 23.4**	**-0.6**
	comp=Z,1.3nm,0.3s,mb4.2,baz=345,slow=6.6,SNR=23						
ASAR				ScP	ScP	02 25 55.2	-4.6
	comp=Z,0.7nm,0.8s,baz=341,slow=2.3,SNR=4.2						
CD2	**Chengdu**	**32.42**	**322**	*e*P	**P**	**02 19 45.9**	**+5.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CTA	**Charters Tower**	**32.68**	**143**	P	**P**	**02 19 42.9**	**+0.4**
	comp=Z,8.0nm,0.8s,mb4.7,baz=330,slow=9.6,SNR=12						
CTAO	**Charters Tower**	**32.68**	**143**	*e*P	**P**	**02 19 43.8**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
CTAO	**Charters Tower**	**32.68**	**143**	*e*P	**P**	**02 19 43.8**	**+1.4**
	comp=Z,6.6nm,0.6s,mb4.7						
LZH	**Lanzhou**	**36.18**	**328**	*e*P	**P**	**02 20 15.3**	**+2.6**
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.9						
FORT	**Forrest**	**36.78**	**177**	*e*P	**P**	**02 20 17.6**	**-0.3**
	comp=Z,15nm,0.7s,mb4.9						
HHC	**Hu-ho-hao-te**	**36.95**	**341**	*e*P	**P**	**02 20 20.5**	**+1.3**
HHC				AP	pP	02 20 35.9	+3.4
HHC				PP	PP	02 21 48.4	+4.3
HHC				PCP	PcP	02 22 40.9	+1.3
HHC				S	**S**	**02 26 01.1**	**+0.4**
HHC				SCP	ScP	02 26 21.3	-0.9
HHC				PCS	PcS	02 26 27.8	0.0
HHC				SS	SS	02 28 33.0	-11
HHC				SCS	ScS	02 30 27.3	-2.3
HHC				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.4						
HHC				AMB	AMB		
	comp=Z,34nm,9.4s						
HHC				LR	LR		
	comp=N,59nm,18.0s,MS3.5						
HHC				LR	LR		
	comp=E,46nm,18.0s,MS3.5						
HHC				LR	LR		
	comp=Z,51nm,19.0s,MS3.3						
MDJ	**Mudanjiang**	**38.40**	**4**	P	**P**	**02 20 31.5**	**0.0**
MDJ				AP	pP	02 20 53.9	+9.0
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,34nm,5.0s						
KLBR	**Kellerberrin**	**38.42**	**192**	*e*P	**P**	**02 20 30.8**	**-0.9**
	comp=Z,8.0nm,0.5s,mb4.7						
MUN	**Mundaring**	**39.13**	**194**	*e*P	**P**	**02 20 37.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**39.82**	**192**	P	**P**	**02 20 42.8**	**-0.6**
	comp=Z,9.1nm,0.5s,mb4.8,baz=12,slow=8.6,SNR=16						
STKA	**Stephens Creek**	**40.57**	**160**	P	**P**	**02 20 49.0**	**-0.5**
	comp=Z,5.6nm,0.6s,mb4.4,baz=336,slow=7.7,SNR=12						
STKA	**Stephens Creek**	**40.57**	**160**	*e*P	**P**	**02 20 49.2**	**-0.4**
	comp=Z,6.7nm,0.8s,mb4.3						
GTA	**Gaotai**	**40.78**	**328**	*e*P	**P**	**02 20 54.1**	**+2.8**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb3.9						
ULN	**Ulaanbaatar**	**44.66**	**342**	*e*P	**P**	**02 21 23.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
ULN	**Ulaanbaatar**	**44.66**	**342**	*e*P	**P**	**02 21 23.5**	**+0.7**
	comp=Z,5.0nm,1.0s,mb4.3						
SONM	**Songino Array**	**44.85**	**341**	P	**P**	**02 21 20.3**	**-3.9**
	comp=Z,0.3nm,0.3s,mb3.6,baz=140,slow=34,SNR=3.5						
WMQ	**Urumqi**	**50.47**	**324**	*e*P	**P**	**02 22 08.0**	**+0.1**
WMQ				AP	pP	02 22 31.0	+9.4
WMQ				PP	PP	02 24 05.0	+1.2
WMQ				S	**S**	**02 29 15.0**	**-2.9**
WMQ				SCS	ScS	02 31 50.0	-4.3
WMQ				SS	SS	02 32 46.0	-6.3
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,102nm,5.0s						
WMQ				LR	LR		
	comp=N,36nm,14.0s,MS3.9						
WMQ				LR	LR		
	comp=E,71nm,14.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,32nm,13.0s,MS3.5						
BOD	**Bodaibo**	**52.39**	**352**	*e*P	**P**	**02 22 18.7**	**-3.5**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
MKAR	**Makanchi Array**	**55.30**	**325**	P	**P**	**02 22 38.8**	**-4.7**
	comp=Z,0.7nm,0.5s,mb3.9,baz=112,slow=7.9,SNR=7.0						
BRVK	**Borovoye**	**65.11**	**327**	*e*P	**P**	**02 23 49.1**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
BRVK	**Borovoye**	**65.11**	**327**	*e*P	**P**	**02 23 49.1**	**-1.4**
	comp=Z,2.1nm,0.9s,mb4.2						
ZRNK	**Zerenda**	**65.77**	**326**	*e*P	**P**	**02 23 49.0**	**-5.8**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ZRNK	**Zerenda**	**65.77**	**326**	*e*P	**P**	**02 23 49.0**	**-5.8**
	comp=Z,1.7nm,0.5s,mb4.3						
ARCES	**ARCESS Array B**	**88.01**	**340**	P	**P**	**02 25 54.8**	**-4.9**
	comp=Z,1.5nm,0.9s,mb4.2,baz=79,slow=6.5,SNR=11						
BRTR	**Keskin Array B**	**88.11**	**310**	P	**P**	**02 25 57.7**	**-2.6**
	comp=Z,0.6nm,0.9s,mb3.8,baz=76,slow=6.1,SNR=3.5						
ABMS	**Boumerdes**	**111.64**	**313**	P	PKiKP	02 31 45.8	+1.8
TORD	**Torodi Ar. Bea**	**121.70**	**289**	PKP	PKPdf	02 32 00.3	-2.9
	comp=Z,1.7nm,0.8s,baz=57,slow=1.7,SNR=11						
TORD	**Torodi Ar. Bea**	**121.70**	**289**	PKP	PKPdf	02 32 00.3	-2.9
TRQA	**Tornquist**	**147.39**	**168**	*e*PKPbc	PKPbc	02 32 51.4	-1.9
LPAZ	**La Paz**	**162.69**	**127**	*e*PKIKP	PKPdf	02 33 11.3	-0.1

IDC 23 03:22:11.9±12.0, 2169S×17982E, h652km±119km, mb2.8/4, mb1 3.0/5, mb1mx2.8/14, mbtmp4.0/5, Error ellipse: s-maj=129.3km s-min=79.2km az=126.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.43**	**266**	P	P	03 24 55.2	+0.8
	0.2nm,0.3s,baz=72,slow=18,SNR=4.8						
CTA	**Charters Tower**	**31.37**	**267**	P	P	03 27 42.7	+0.2
	1.7nm,0.6s,baz=106,slow=7.4,SNR=3.4						
STKA	**Stephens Creek**	**35.44**	**245**	P	P	03 28 16.2	-0.2
	0.9nm,0.4s,baz=94,slow=15,SNR=3.6						
ASAR	**Alice Springs**	**42.27**	**258**	P	P	03 29 11.8	+0.8
	1.8nm,0.6s,baz=91,slow=8.1,SNR=15						
WRA	**Warramunga Arr**	**42.43**	**264**	P	P	03 29 12.7	+0.4
	0.6nm,0.3s,baz=98,slow=8.0,SNR=41						
HFS	**Hagfors**	**140.36**	**349**	PKhKP		03 40 22.8	
	0.8nm,0.4s,baz=42,slow=2.8,SNR=12						
AKASG	**Malin Array Be**	**143.02**	**329**	PKP	PKPdf	03 40 32.0	-1.2
	1.2nm,0.4s,baz=40,slow=4.2,SNR=8.4						
CLL	**Collm**	**148.70**	**344**	P	PKPdf	03 40 48.4	+5.6
	logA/T=0.8						
CLL				*e*		03 41 01.0	
CLL	**Collm**	**148.70**	**344**	*i* P	PKPdf	03 40 48.4	+5.6
	comp=Z,6.0nm,0.9s						
CLL				*ex*	x	03 41 01.0	
BRG	**Berggiesshubel**	**148.84**	**343**	*i* P	PKPdf	03 40 49.1	+6.0
	comp=Z,2.5nm,0.6s						
GERES	**GERESS Array B**	**150.73**	**341**	PKPbc	PKPbc	03 40 52.7	+0.4
	comp=Z,0.4nm,0.5s,baz=28,slow=2.3,SNR=3.7						

MOS 23 03:29:38.0±0.4, 4296N×4563E, h19km, mb3.7/1, 2D, Error ellipse: s-maj=30.6km s-min=13.4km az=19.4, Eastern Caucasus

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

SNJR	**Sundja**	**0.61**	**281**	*e*PG	Pg	03 29 50.3	+0.2
SNJR				*e*S	Sb	03 30 02.1	+3.9
VLKR	**Vladikavkaz**	**0.70**	**277**	*e*PG	Pg	03 29 51.9	0.0
VLKR				*e*S	Sb	03 30 04.8	+3.8
LACR	**Lac**	**0.99**	**263**	*i*PG	Pg	03 29 56.6	-0.7
LACR				*i* S	Sb	03 30 12.9	+3.7
TRKR	**Terskaya**	**1.01**	**320**	*e*PG	Pg	03 29 56.7	-0.9
TRKR				*e*S	Sb	03 30 13.1	+3.5
ARNR	**Ardon**	**1.02**	**283**	*i*PG	Pg	03 29 57.2	-0.5
ARNR				*i* S	Sb	03 30 14.0	+4.1
KORR	**Kora**	**1.15**	**277**	*e*PG	Pg	03 29 59.4	-0.9
KORR				*i* S	Sb	03 30 17.8	+3.9
PRTR	**Priterechnaya**	**1.26**	**309**	*e*PG	Pg	03 30 00.8	-1.6
PRTR				*e*S	Sb	03 30 20.2	+3.2
ZEI	**Tsey**	**1.29**	**262**	*e*PG	Pg	03 30 01.0	-1.9
ZEI				*e*S	Sn	03 30 20.7	+3.1

CASC 23 03:53:19.7±3.0, 1299N×8906W, h20km±48km, MD3.8, ML2.5, 3C-11D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LFRS	**El Faro**	**0.63**	**360**	*i*P	x	03 53 38.0	
LFRS				*e*S	x	03 53 46.5	
SNVI	**San Vicente**	**0.66**	**19**	*e*P	x	03 53 39.1	
SNVI				*e*S	x	03 53 48.3	
LCBS	**La Ceiba**	**0.67**	**7**	*i*P	x	03 53 38.5	
LCBS				*e*S	x	03 53 47.7	
LBRS	**Las Brisas**	**0.75**	**1**	*e*P	x	03 53 39.7	
LBRS				*e*S	x	03 53 50.3	
LFU	**La Fuente**	**0.76**	**356**	*e*P	x	03 53 39.7	
LFU				*e*S	x	03 53 49.1	
BOQS	**Boqueron**	**0.78**	**344**	*e*P	x	03 53 39.5	
BOQS				*e*S	x	03 53 48.9	
VSM	**San Miguel**	**0.88**	**60**	*i*P	x	03 53 44.4	
VSM				*e*S	x	03 53 58.0	
BLLM	**Bellamira**	**0.92**	**60**	*e*P	x	03 53 44.7	
BLLM				*e*S	x	03 53 58.6	
SBLS	**San Blas**	**1.01**	**327**	*e*P	x	03 53 42.1	
SBLS				*e*S	x	03 53 57.2	
SNJE	**San Jose**	**1.03**	**329**	*e*P	x	03 53 42.2	
SNJE				*e*S	x	03 53 56.8	
RTR	**El Retiro**	**1.07**	**328**	*e*P	x	03 53 43.1	
RTR				*e*S	x	03 53 58.4	
CNCH	**Conchagua**	**1.23**	**76**	*e*P	x	03 53 49.1	
CNCH				*e*S	x	03 54 07.0	
RBDL	**Robledal**	**1.28**	**331**	*e*P	x	03 53 45.6	
RBDL				*e*S	x	03 54 03.0	
LEON	**Leon**	**2.19**	**105**	*e*P	Pn	03 53 54.8	-0.1
LEON				*i*		03 54 24.0	
	comp=Z,36nm,0.2s						
CNGN	**Cerro Negro**	**2.35**	**102**	*e*P	Pn	03 53 57.4	+0.2
MIRN	**Miramar**	**2.35**	**103**	*e*P	Pn	03 53 57.8	+0.6
COPN	**Copaltepe**	**2.54**	**108**	*e*P	Pn	03 54 00.1	+0.3
COPN				*e*S	Sn	03 54 31.5	+1.4
MGAN	**Managua**	**2.87**	**107**	*e*S	Sn	03 54 37.4	-0.8

*BJI **23** 04:15:29.0, 4961N×2864W, h13km, mB5.0, mb4.9, Ms4.7, Msz4.3*

*MOS **23** 04:15:30.2±0.8, 4973N×2858W, h10km, mb5.0/46, Error ellipse: s-maj=11.5km s-min=5.7km az=163.1*

*CSEM **23** 04:15:30.0±0.1, 4963N×2864W, h14km, mb4.5/67, Ms3.6, Error ellipse: s-maj=3.9km s-min=1.3km az=9.0*

*IDC **23** 04:15:30.5±0.5, 4971N×2856W, h0km, mb4.2/22, mb1 4.3/23, mb1mx4.2/29, mbtmp4.2/23, ML4.2/1, MS3.8/27, Ms1 3.8/27, ms1mx3.7/30, Error ellipse: s-maj=16.9km s-min=11.3km az=9.0*

*HRVD **23** 04:15:31.9±0.3, 4968N×2854W, h19km±1km, MW4.8/65, Centroid moment Tensor Solution. LP body waves: s15,c19;Mantle waves: s65,c98; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.14±.17; Mθθ 0.83±.11; Mφφ 1.31±.10; Mrθ 0.20±.27; Mrφ -0.48±.05; Mθφ 0.33±.25; Best double couple: M0 1.90200×10^16 NP1:φs322.00000°, δ43.00000°, λ-101.00000°. NP2: φs156.00000°, δ48.00000°, λ-80.00000°. Principal axes: T 1.6130, Plg3.0000°, Azm239.0000°; N 0.5810, Plg7.0000°, Azm330.0000°; P -2.1910, Plg82.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **23** 04:15:31.9±0.2, 4965N×2859W, h10km, mb4.4/93 Error ellipse: s-maj=6.5km s-min=2.4km az=188.0*

*ISCJB **23** 04:15:31.8±1.6, 4957N±005×2862W±003, h23km±11km, mb4.4/101, MS3.9/42, Error ellipse: s-maj=8.0km s-min=3.5km az=7.8*

*BGS **23** 04:15:33.8±3.2, 4965N×2859W, h10km, mb4.8*

*SZGRF **23** 04:15:37.7, 4879N×2783W, h33km, mb4.6, MS3.9, Northern Mid-Atlantic Ridge*

**ISC

HGH Gray Hill 16.44 73 *eP* **Pn 04 19 25.7 +2.7**
HGH Gray Hill 16.44 73 *eP* **Pn 04 19 25.7 +2.7**
EKA Eskdalemuir Ar 16.45 60 Pn **Pn 04 19 23.6 +0.5**
comp=Z,0.5nm,0.3s,baz=256,slow=9.2,SNR=13
EBL Broad Law 16.59 58 *eP* **Pn 04 19 26.0 +1.0**
EBL Broad Law 16.59 58 *eP* **Pn 04 19 26.0 +1.0**
ROSF Rostrenen 16.63 85 *eP* **Pn 04 19 24.1 -1.4**
QUIF Quistinic 16.81 86 *eP* **Pn 04 19 26.4 -1.3**
comp=Z,37nm,1.1s
QUIF Quistinic 16.81 86 *eP* **Pn 04 19 26.4 -1.3**
comp=Z,18nm,1.1s
MCD Coleburn Disti 16.93 52 *eP* **Pn 04 19 29.8 +0.6**
MCD Coleburn Disti 16.93 52 *eP* **Pn 04 19 29.8 +0.6**
ORE Reay 16.99 49 *eP* **Pn 04 19 29.7 -0.3**
ORE Reay 16.99 49 *eP* **Pn 04 19 29.7 -0.3**
ECAL Calabor 17.01 109 P **Pn 04 19 29.9 -0.3**
comp=Z,2.2nm,0.4s
ECAL Calabor 17.01 109 P **Pn 04 19 30.0 -0.3**
comp=Z,2.2nm,0.4s
SGMF Saint Gilles 17.12 85 *eP* **Pn 04 19 30.2 -1.4**
comp=Z,66nm,1.4s
SGMF Saint Gilles 17.12 85 *eP* **Pn 04 19 30.2 -1.4**
comp=Z,33nm,1.4s
EARI Arriondas 17.25 103 P **Pn 04 19 32.7 -0.6**
comp=Z,3.6nm,0.3s
EARI Arriondas 17.25 103 P **Pn 04 19 32.7 -0.5**
comp=Z,3.6nm,0.3s
GRR Gorron 18.18 83 *eP* **Pn 04 19 44.0 -0.8**
comp=Z,37nm,1.1s
GRR Gorron 18.18 83 *eP* **Pn 04 19 44.0 -0.8**
comp=Z,18nm,1.1s
FLN La Foliniere 18.34 82 *eP* **Pn 04 19 45.3 -1.3**
comp=Z,28nm,1.0s
FLN *eR*
comp=Z,808nm,20.5s
FLN La Foliniere 18.34 82 *eP* **Pn 04 19 45.3 -1.3**
comp=Z,14nm,1.0s
ELAN Lanestosa 18.41 101 P **Pn 04 19 47.1 -0.5**
comp=Z,7.5nm,0.8s
ELAN Lanestosa 18.41 101 P **Pn 04 19 47.1 -0.5**
comp=Z,7.5nm,0.8s
LDF La Druitiere 18.61 82 *eP* **Pn 04 19 48.8 -1.1**
comp=Z,20nm,1.0s
LDF La Druitiere 18.61 82 *eP* **Pn 04 19 48.8 -1.1**
comp=Z,10nm,1.0s
MFF Saint Martin d 19.17 88 *eP* **Pn 04 19 56.1 -0.6**
comp=Z,31nm,1.0s
MFF Saint Martin d 19.17 88 *eP* **Pn 04 19 56.1 -0.6**
comp=Z,15nm,1.0s
EMIN Mina Concepcio 19.69 119 P **Pn 04 20 04.4 +1.4**
comp=Z,8.4nm,0.8s
EMIN Mina Concepcio 19.69 119 P **Pn 04 20 04.4 +1.5**
comp=Z,8.4nm,0.8s
SJPF Ste Jean 19.89 99 *eP* **Pn 04 20 04.6 -0.7**
ESDC Sonseca Array 20.05 110 P **P 04 20 05.4 +0.1**
comp=Z,3.0nm,0.8s,baz=304,slow=9.8,SNR=17
ESDC LR LR 04 26 16.6
comp=Z,243nm,18.7s,MS3.6,baz=300,slow=32
ESDC Sonseca Array 20.05 110 P **P 04 20 05.8 +0.5**
comp=Z,3.5nm,0.9s
ESDC Sonseca Array 20.05 110 P **P 04 20 05.8 +0.5**
comp=Z,3.5nm,0.9s
ESLA Sonseca Array 20.05 110 *eP* **P 04 20 05.4 +0.1**
comp=Z,1.7nm,1.0s
ESLA Sonseca Array 20.05 110 *eP* **P 04 20 05.4 +0.1**
comp=Z,1.7nm,1.0s
LFF La Frestale 20.36 92 *eP* **P 04 20 09.1 +0.5**
comp=Z,24nm,1.0s
LFF La Frestale 20.36 92 *eP* **P 04 20 09.1 +0.5**
comp=Z,12nm,1.0s
ETSF Etsaut 20.42 99 *eP* **P 04 20 10.1 +0.8**
comp=Z,23nm,1.0s
ETSF Etsaut 20.42 99 *eP* **P 04 20 10.1 +0.8**
comp=Z,11nm,1.0s
SFJD Kangerlussuaq 20.71 335 LR LR 04 26 28.0
comp=Z,179nm,19.4s,MS3.5,baz=53,slow=32
RJF Les Rejaudoux 20.72 90 *eP* **P 04 20 13.1 +0.5**
comp=Z,44nm,1.0s
RJF *eR*
comp=Z,321nm,17.5s
RJF Les Rejaudoux 20.72 90 *eP* **P 04 20 13.1 +0.5**
RJF pmax pmax
comp=Z,22nm,1.0s
RJF MLR MLR
comp=Z,320nm,17.5s,MS3.8
RJF Les Rejaudoux 20.72 90 *eP* **P 04 20 13.1 +0.5**
comp=Z,22nm,1.0s
RJF LR LR
comp=Z,320nm,17.5s,MS3.8
HYF Humbligny 20.76 85 *eP* **P 04 20 12.7 -0.3**
TCF Toulx Ste Croi 20.80 87 *eP* **P 04 20 12.9 -0.6**
comp=Z,68nm,1.0s
TCF Toulx Ste Croi 20.80 87 *eP* **P 04 20 12.9 -0.6**
TCF pmax pmax
comp=Z,34nm,1.0s
TCF Toulx Ste Croi 20.80 87 *eP* **P 04 20 12.9 -0.6**
comp=Z,34nm,1.0s
EPF Esparros 20.94 97 *eP* **P 04 20 15.5 +0.6**
comp=Z,12nm,0.9s
EPF Esparros 20.94 97 *eP* **P 04 20 15.5 +0.6**
EPF pmax pmax
comp=Z,60nm,0.9s
EPF Esparros 20.94 97 *eP* **P 04 20 15.5 +0.6**
comp=Z,6.1nm,0.9s
EBIE Bielsa 20.98 98 P **P 04 20 21.7 +6.3**
comp=Z,16nm,1.0s
UCC Uccle 21.01 74 P **P 04 20 15.2 -0.5**
SNF Seneffe 21.02 75 P **P 04 20 17.2 +1.5**
SNF Seneffe 21.02 75 P **P 04 20 17.2 +1.4**
BAIF Baives 21.05 76 *eP* **P 04 20 15.3 -0.9**
comp=Z,95nm,1.4s,mb4.6
BAIF Baives 21.05 76 *eP* **P 04 20 15.3 -0.9**
BAIF pmax pmax
comp=Z,47nm,1.4s,mb4.6
BAIF Baives 21.05 76 *eP* **P 04 20 15.3 -0.9**
comp=Z,47nm,1.4s,mb4.6
ESAC San Caprasio 21.07 101 P **P 04 20 20.1 +3.7**
comp=Z,40nm,1.1s,mb4.7
BGF Bois d'Agland 21.12 86 *eP* **P 04 20 16.4 -0.6**
comp=Z,92nm,1.1s,mb4.7
BGF Bois d'Agland 21.12 86 *eP* **P 04 20 16.4 -0.6**
BGF pmax pmax
comp=Z,46nm,1.1s,mb4.7
BGF Bois d'Agland 21.12 86 *eP* **P 04 20 16.4 -0.6**
comp=Z,46nm,1.1s,mb4.7
CAF Calviac 21.22 91 *eP* **P 04 20 17.4 -0.6**
comp=Z,76nm,1.3s,mb4.5
CAF Calviac 21.22 91 *eP* **P 04 20 17.4 -0.6**
CAF pmax pmax
comp=Z,38nm,1.3s,mb4.6
CAF Calviac 21.22 91 *eP* **P 04 20 17.4 -0.6**
comp=Z,38nm,1.3s,mb4.5
DOU Dourbes 21.29 76 P **P 04 20 17.7 -1.0**
FRNF Fournols 21.36 89 *eP* **P 04 20 19.8 +0.3**
AVF Avril sur Loir 21.38 85 *eP* **P 04 20 18.9 -0.8**
comp=Z,57nm,1.0s,mb4.6
AVF Avril sur Loir 21.38 85 *eP* **P 04 20 18.9 -0.8**
AVF pmax pmax
comp=Z,29nm,1.0s,mb4.6
AVF Avril sur Loir 21.38 85 *eP* **P 04 20 18.9 -0.8**
comp=Z,28nm,1.0s,mb4.6
SSF Saint Saulge 21.39 85 *eP* **P 04 20 19.0 -0.8**
comp=Z,51nm,0.9s,mb4.5
SSF Saint Saulge 21.39 85 *eP* **P 04 20 19.0 -0.8**
SSF pmax pmax
comp=Z,25nm,0.9s,mb4.5
SSF Saint Saulge 21.39 85 *eP* **P 04 20 19.0 -0.8**
comp=Z,25nm,0.9s,mb4.5
GIVF Givet 21.43 76 *eP* **P 04 20 19.2 -1.1**
comp=Z,53nm,0.9s,mb4.5
GIVF Givet 21.43 76 *eP* **P 04 20 19.2 -1.1**
GIVF pmax pmax
comp=Z,27nm,0.9s,mb4.6
GIVF Givet 21.43 76 *eP* **P 04 20 19.2 -1.1**
comp=Z,27nm,0.9s,mb4.5
AGO Saint Agoulin 21.49 87 *eP* **P 04 20 22.2 +1.3**
PYM Petit Puy Mans 21.52 88 *eP* **P 04 20 22.9 +1.7**
LOR Lormes 21.55 84 *eP* **P 04 20 20.6 -0.9**
comp=Z,75nm,1.3s,mb4.7
LOR *eR*
comp=Z,713nm,19.8s
LOR Lormes 21.55 84 *eP* **P 04 20 20.6 -0.9**
LOR pmax pmax
comp=Z,38nm,1.3s,mb4.7
LOR MLR MLR
comp=Z,710nm,19.8s,MS4.1
LOR Lormes 21.55 84 *eP* **P 04 20 20.6 -0.9**
comp=Z,38nm,1.3s,mb4.7
LOR LR LR
comp=Z,710nm,19.8s,MS4.1
BCLA Clavier 21.67 75 P **P 04 20 23.9 +1.0**
BCLA Clavier 21.67 75 P **P 04 20 23.8 +0.9**
SMF Signal de Mont 21.74 85 *eP* **P 04 20 23.0 -0.6**
comp=Z,48nm,1.0s,mb4.6
SMF Signal de Mont 21.74 85 *eP* **P 04 20 23.0 -0.6**
SMF pmax pmax
comp=Z,24nm,1.0s,mb4.6
SMF Signal de Mont 21.74 85 *eP* **P 04 20 23.0 -0.6**
comp=Z,24nm,1.0s,mb4.6
PLDF La Plantade 21.84 87 *eP* **P 04 20 25.1 +0.5**
LBL Lubilhac 21.87 89 *eP* **P 04 20 25.9 +0.9**
MEZF Maizieres J'vi 21.96 80 *eP* **P 04 20 27.0 +1.1**
comp=Z,52nm,0.8s,mb4.7
MEZF Maizieres J'vi 21.96 80 *eP* **P 04 20 27.0 +1.1**
comp=Z,26nm,0.8s,mb4.7
ERTA Horta de San J 21.99 102 P **P 04 20 30.2 +4.0**
comp=Z,17nm,0.9s,mb4.5
MTLF Montolieu 22.00 95 *eP* **P 04 20 26.3 -0.1**
comp=Z,66nm,1.5s,mb4.5
MTLF Montolieu 22.00 95 *eP* **P 04 20 26.3 -0.1**
MTLF pmax pmax
comp=Z,33nm,1.5s,mb4.5
MTLF Montolieu 22.00 95 *eP* **P 04 20 26.3 -0.1**
comp=Z,33nm,1.5s,mb4.5
EHUE Huescar 22.05 113 P **P 04 20 30.6 +3.7**
comp=Z,7.5nm,1.0s,mb4.1
MEM Membach 22.08 74 P **P 04 20 29.3 +2.1**
MEM Membach 22.08 74 P **P 04 20 29.2 +2.0**
WLF Walferdange 22.37 77 AP pP 04 20 31.6 -5.6
WLF Walferdange 22.37 77 *eP* **P 04 20 29.9 -0.4**
WLF pmax pmax
comp=Z,36nm,1.4s,mb4.6
WLF Walferdange 22.37 77 *eP* **P 04 20 29.9 -0.4**
comp=Z,36nm,1.4s,mb4.6
HAU Haudompre 22.93 81 *eP* **P 04 20 36.0 -0.2**
comp=Z,47nm,1.0s,mb4.5
HAU *eR*
comp=Z,474nm,21.2s
HAU Haudompre 22.93 81 *eP* **P 04 20 36.0 -0.2**
HAU pmax pmax
comp=Z,24nm,1.0s,mb4.6
HAU MLR MLR
comp=Z,470nm,21.3s,MS3.9
HAU Haudompre 22.93 81 *eP* **P 04 20 36.0 -0.2**
comp=Z,24nm,1.0s,mb4.6
HAU LR LR
comp=Z,470nm,21.3s,MS3.9
VIVF Saint-Julien-l 22.95 89 *eP* **P 04 20 36.0 -0.4**
comp=Z,40nm,1.4s,mb4.4
VIVF Saint-Julien-l 22.95 89 *eP* **P 04 20 36.0 -0.4**
comp=Z,20nm,1.4s,mb4.4
ABH Alteburg 23.20 75 *eP* **P 04 20 41.6 +2.5**
CABF La Chapelle 23.21 84 *eP* **P 04 20 38.1 -1.1**
comp=Z,28nm,1.0s,mb4.3
CABF La Chapelle 23.21 84 *eP* **P 04 20 38.1 -1.1**
comp=Z,14nm,1.0s,mb4.3
HINF Hinterlafeld 23.31 81 *eP* **P 04 20 39.8 -0.4**
comp=Z,40nm,1.2s,mb4.4
HINF Hinterlafeld 23.31 81 *eP* **P 04 20 39.8 -0.4**
HINF pmax pmax
comp=Z,20nm,1.2s,mb4.4
HINF Hinterlafeld 23.31 81 *eP* **P 04 20 39.8 -0.4**
comp=Z,20nm,1.2s,mb4.4
JMIC Jan Mayen 23.38 16 LR LR 04 27 31.5
comp=Z,309nm,18.0s,MS3.8,baz=253,slow=31
ECH Echery 23.39 80 *eP* **P 04 20 42.3 +1.3**
CDF Champ du Feu 23.41 79 *eP* **P 04 20 40.2 -1.0**
comp=Z,24nm,1.1s,mb4.2
CDF Champ du Feu 23.41 79 *eP* **P 04 20 40.2 -1.0**
comp=Z,12nm,1.1s,mb4.2
LOMF Lomont 23.44 82 *eP* **P 04 20 43.3 +1.7**
WLS Welschbruch 23.45 79 *eP* **P 04 20 49.0 +7.3**
SUMG Summit 23.46 353 *eP* **P 04 20 41.5 -0.3**
comp=Z,14nm,1.1s,mb4.3
SUMG Summit 23.46 353 *eP* **P 04 20 41.5 -0.3**
comp=Z,14nm,1.1s,mb4.3
MOF Molkenrain 23.48 81 *eP* **P 04 20 43.7 +1.7**
LANF Langenberg 23.59 78 *eP* **P 04 20 45.4 +2.5**
ORIF Oris-en-Rattie 23.71 88 *eP* **P 04 20 43.2 -0.9**
comp=Z,32nm,1.2s,mb4.3
ORIF *eR*
comp=Z,321nm,22.5s
ORIF Oris-en-Rattie 23.71 88 *eP* **P 04 20 43.2 -0.9**
comp=Z,16nm,1.2s,mb4.3
SCHQ Schefferville 23.80 297 P **P 04 20 44.0 -0.9**
comp=Z,3.8nm,0.9s,mb3.8,baz=92,slow=11,SNR=3.7
SCHQ LR LR 04 28 31.7
comp=Z,85nm,19.7s,MS3.2,baz=126,slow=33
SCHQ Schefferville 23.80 297 P **P 04 20 44.0 -0.9**
SCHQ LR LR 04 28 31.7
SMRF Simiane la Rot 23.90 91 *eP* **P 04 20 45.2 -0.7**
LPL La Plagne 24.02 86 *eP* **P 04 20 46.7 -0.3**
comp=Z,16nm,0.9s,mb4.1
LPL La Plagne 24.02 86 *eP* **P 04 20 46.7 -0.3**
comp=Z,8.1nm,0.9s,mb4.1
FELD Feldberg im Sc 24.03 80 *eP* **P 04 20 47.8 +0.8**
LPG La Plagne 24.05 86 *eP* **P 04 20 47.0 -0.1**
comp=Z,36nm,1.3s,mb4.3
LPG La Plagne 24.05 86 *eP* **P 04 20 47.0 -0.1**
LPG pmax pmax
comp=Z,18nm,1.3s,mb4.3
LPG La Plagne 24.05 86 *eP* **P 04 20 47.0 -0.1**
comp=Z,18nm,1.3s,mb4.3
BNI Bardonecchia 24.17 87 *eP* **P 04 20 48.6 +0.3**
comp=Z,9.9nm,1.2s,mb4.1
BNI Bardonecchia 24.17 87 *eP* **P 04 20 48.6 +0.3**
comp=Z,9.9nm,1.2s,mb4.1
MBDF Montbardon 24.36 88 *eP* **P 04 20 50.0 -0.1**
comp=Z,18nm,1.1s,mb4.1
MBDF Montbardon 24.36 88 *eP* **P 04 20 50.0 -0.1**
comp=Z,8.9nm,1.1s,mb4.1
MDT Midelt 24.46 124 P **P 04 20 51.9 +0.9**
comp=Z,3.3nm,0.9s,mb3.8,baz=325,slow=11,SNR=6.6
MDT LR LR 04 28 27.4
comp=Z,60nm,22.0s,MS3.0,baz=341,slow=32
NAO01 NORSAR Array S 24.74 48 *eP* **P 04 20 53.9 +0.4**
comp=Z,5.8nm,0.9s,mb4.1
NAO01 NORSAR Array S 24.74 48 *eP* **P 04 20 53.8 +0.3**
comp=Z,5.8nm,0.9s,mb4.1
FRF La Foret Royal 24.78 91 *eP* **P 04 20 53.5 -0.4**
comp=Z,33nm,1.2s,mb4.5
FRF La Foret Royal 24.78 91 *eP* **P 04 20 53.5 -0.4**
FRF pmax pmax
comp=Z,17nm,1.2s,mb4.5
FRF La Foret Royal 24.78 91 *eP* **P 04 20 53.5 -0.4**
comp=Z,17nm,1.2s,mb4.5
LMR La Mourre 24.80 91 *eP* **P 04 20 53.6 -0.4**
comp=Z,30nm,1.2s,mb4.4
LMR La Mourre 24.80 91 *eP* **P 04 20 53.6 -0.4**
LMR pmax pmax
comp=Z,15nm,1.2s,mb4.4
LMR La Mourre 24.80 91 *eP* **P 04 20 53.6 -0.4**
comp=Z,15nm,1.2s,mb4.4
NB2 NORSAR Subarra 24.93 48 P **P 04 20 54.6 -0.6**
comp=Z,16nm,1.1s,mb4.5,baz=262,slow=10
NOA NORSAR Array B 24.93 48 P **P 04 20 54.6 -0.6**
comp=Z,5.3nm,1.0s,mb4.0,baz=262,slow=9.9,SNR=5.5
NOA LR LR 04 30 02.2
comp=Z,293nm,18.6s,MS3.8,baz=265,slow=35
SBF Sospel 25.16 89 *eP* **P 04 20 57.4 +0.1**
comp=Z,39nm,1.0s,mb4.6
SBF Sospel 25.16 89 *eP* **P 04 20 57.4 +0.1**
SBF pmax pmax
comp=Z,19nm,1.0s,mb4.6
SBF Sospel 25.16 89 *eP* **P 04 20 57.4 +0.1**
comp=Z,19nm,1.0s,mb4.6
DAVA Damuels 25.42 80⇑ *iP* **P 04 21 00.4 +0.7**
comp=Z,15nm,1.2s,mb4.4
GRA1 Grafenberg Arr 25.55 74 *eP* **P 04 21 00.9 0.0**
comp=Z,14nm,1.2s,mb4.4
GRA1 *epP* pP 04 21 04.7 -3.5
GRA1 LR LR
comp=Z,400nm,21.1s,MS3.9
GRA1 Grafenberg Arr 25.55 74 *eP* **P 04 21 00.9 0.0**
comp=Z,14nm,1.2s,mb4.4
GRA1 *epP* pP 04 21 04.7 -3.5
GRF Grafenberg Arr 25.55 74 *eP* **P 04 21 00.9 0.0**
comp=Z,14nm,1.2s,mb4.4
GRF *epP* pP 04 21 04.7 -3.5
comp=Z,14nm,1.2s
GRF *eL* 04 29 54.1
comp=Z,391nm,21.1s
GRF Grafenberg Arr 25.55 74 *eP* **P 04 21 00.9 0.0**
GRF *e*PP* pP 04 21 04.7 -3.5
GRF pmax pmax
comp=Z,14nm,1.2s,mb4.4
GRF MLR MLR
comp=Z,400nm,21.1s,MS3.9
GRF Grafenberg Arr 25.55 74 *eP* **P 04 21 00.9 0.0**
GRF *e*PP* pP 04 21 04.7 -3.5
GRF pmax pmax
comp=Z,14nm,1.2s,mb4.4
GRF MLR MLR
comp=Z,400nm,21.1s,MS3.9
GRF Grafenberg Arr 25.55 74 *eP* **P 04 21 00.9 0.0**
comp=Z,14nm,1.2s,mb4.4
MOX Moxa 25.56 72 *eP* **P 04 21 02.5 +1.5**
MOX
comp=Z,300nm,20.0s
MOX Moxa 25.56 72 *eP* **P 04 21 02.5 +1.5**
comp=Z,300nm,20.0s
HFS Hagfors 26.04 50 P **P 04 21 08.6 +3.3**
comp=Z,3.4nm,0.9s,mb3.9,baz=46,slow=6.4,SNR=4.5
HFS LR LR 04 30 54.5
comp=Z,344nm,18.1s,MS3.9,baz=276,slow=36
NKC Novy Kostel 26.18 73 *eP* **P 04 21 10.4 +3.9**
MOTA Moosalm 26.19 80⇑ *iP* **P 04 21 06.5 -0.1**
comp=Z,17nm,1.3s,mb4.4
CLL Collm 26.27 70 P **P 04 21 07.1 -0.2**
comp=Z,logA/T=0.8,mb4.1
CLL *i* *SP sP 04 21 10.8 -7.0
CLL *ePP* 04 21 46.0
CLL Collm 26.27 70 *i* P **P 04 21 07.1 -0.2**
comp=Z,8.0nm,1.3s,mb4.1
CLL *i* 04 21 10.8
CLL LR LR
comp=Z,400nm,16.6s,MS4.0
WTTA Wattenberg 26.55 80⇑ *iP* **P 04 21 10.9 +1.0**
comp=Z,21nm,1.5s,mb4.5
WTTA Wattenberg 26.55 80⇑ *iP* **P 04 21 10.9 +1.0**
WTTA pmax pmax
comp=Z,21nm,1.5s,mb4.5
PGF Pioggiola 26.78 91 *eP* **P 04 21 12.2 +0.2**
BRG Berggiesshubel 26.94 71 *eP* **P 04 21 13.3 -0.1**
comp=Z,1.9nm,1.1s,mb3.5
BRG Berggiesshubel 26.94 71 *eP* **P 04 21 13.3 -0.1**
BRG pmax pmax
comp=Z,20nm,1.1s,mb4.6
KHC Kasperske Hory 27.19 75 *eP* **P 04 21 15.3 -0.3**
KHC *epP* pP 04 21 22.2 -0.8
KHC AMS AMS 04 31 20.0
comp=Z,300nm,16.1s
GEC2 GERESS Array S 27.35 75 *eP* **P 04 21 16.5 -0.6**
GERES GERESS Array B 27.35 75 P **P 04 21 17.0 -0.1**
comp=Z,1.1nm,0.8s,mb3.4,baz=298,slow=8.5,SNR=7.5
GERES LR LR 04 31 59.4
comp=Z,308nm,18.8s,MS3.9,baz=278,slow=36
PRU Pruhonice 27.54 73 *eP* **P 04 21 18.5 -0.3**
PRU AMS AMS 04 31 20.0
comp=Z,400nm,16.4s
MOA Molln 28.03 77⇑ *iP* **P 04 21 24.9 +1.7**
comp=Z,5.2nm,1.3s,mb4.0
UPC Upice 28.31 71 *eP* **P 04 21 25.7 0.0**
TREC Trest 28.33 74 *eP* **P 04 21 25.9 0.0**
TREC AMS AMS 04 31 10.0
comp=Z,300nm,17.0s
DPC Dobruska-Polom 28.54 71 *eP* **P 04 21 27.3 -0.4**
VRAC Vranov 29.02 73 LR LR 04 32 11.0
comp=Z,382nm,20.5s,MS4.0,baz=292,slow=34
MORC Moravsky Berou 29.46 72 *eP* **P 04 21 35.1 -0.8**
MORC pmax pmax
comp=Z,20nm,0.8s,mb4.9
MORC Moravsky Berou 29.46 72 *eP* **P 04 21 35.1 -0.8**
comp=Z,1.8nm,0.8s,mb3.9
MORC Moravsky Berou 29.46 72 *eP* **P 04 21 35.1 -0.8**
comp=Z,1.8nm,0.8s,mb3.9
OKC Ostrava-Krasne 29.82 71 AMS AMS 04 32 50.0
comp=Z,400nm,20.4s
VYHS Vyhne 30.68 74 *eP* **P 04 21 46.6 -0.1**
OJC Ojcow 30.71 70 *eP* **P 04 21 45.0 -2.0**
OJC *eS* **S 04 26 50.1 +1.8**
OJC MLR MLR
comp=Z,1μm,15.8s,MS4.7
OJC Ojcow 30.71 70 *eP* **P 04 21 45.0 -2.0**
OJC *eS* **S 04 26 50.1 +1.8**
KEST Kesra 30.78 102 P **P 04 21 47.8 +0.3**
comp=Z,5.1nm,0.9s,mb4.3,baz=291,slow=1.5,SNR=14
KEST LR LR 04 33 04.8
comp=Z,52nm,20.1s,MS3.2,baz=214,slow=34
PSZ Piszkesteto 31.55 74 *eP* **P 04 21 53.9 -0.4**
PSZ pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
PSZ Piszkesteto 31.55 74 *eP* **P 04 21 53.9 -0.5**
comp=Z,9.8nm,1.1s,mb4.5
PSZ Piszkesteto 31.55 74 *eP* **P 04 21 53.8 -0.5**
comp=Z,9.8nm,1.1s,mb4.5
KECS Kecovo 31.71 73 *eP* **P 04 21 54.7 -1.1**
STHS Stebnicka Huta 31.86 71 *eP* **P 04 21 57.6 +0.5**
STHS pmax pmax
comp=Z,30nm,0.8s,mb5.2
STHS Stebnicka Huta 31.86 71 *eP* **P 04 21 57.6 +0.5**
comp=Z,7.7nm,0.8s,mb4.1
CRVS Cervenica-Dubn 32.17 72 *eP* **P 04 22 00.0 +0.2**
ARE0 ARCESS Array S 32.30 32 *eP* **P 04 21 59.7 -1.2**
ARE0 ARCESS Array S 32.30 32 *eP* **P 04 21 59.7 -1.2**
ARCES ARCESS Array B 32.30 32 P **P 04 21 59.6 -1.3**
comp=Z,3.8nm,0.7s,mb4.3,baz=247,slow=8.6,SNR=33
ARCES LR LR 04 31 57.2
comp=Z,128nm,21.3s,MS3.6,baz=267,slow=31
KOLS Kolonicke sedl 32.66 71 *eP* **P 04 22 04.2 +0.1**
VSU Vasula 32.77 53 *iP* **P 04 22 04.3 -0.8**
SADO Sadowa 34.17 282 P **P 04 22 17.3 0.0**
comp=Z,2.5nm,0.5s,mb4.4,baz=223,slow=2.7,SNR=3.0
SADO Sadowa 34.17 282 P **P 04 22 17.3 0.0**
APA Apatity 35.04 36⇓ *eP* **P 04 22 22.0 -2.8**
APA pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
AKASG Malin Array Be 36.23 66 P **P 04 22 33.6 -1.3**
comp=Z,1.9nm,0.7s,mb4.1,baz=286,slow=8.8,SNR=13
AKASG LR LR 04 37 43.4
comp=Z,228nm,19.6s,MS4.0,baz=290,slow=37
AKBB Malin Array Si 36.23 66 *eP* **P 04 22 33.8 -1.2**
KLMR Klimovskoe 38.63 47 *eP* **P 04 22 54.4 -0.9**
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.3
KLMR MLR MLR
comp=Z,500nm,24.0s,MS4.2
OBN Obninsk 38.85 56⇑ *eP* **P 04 22 56.5 -0.6**
OBN *i* pP 04 23 03.7 -0.9
OBN pmax pmax
comp=Z,7.0nm,1.2s,mb4.3
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.0
ULM Lac du Bonnet 41.97 298 P **P 04 23 22.1 -0.9**
comp=Z,1.8nm,0.5s,mb4.0,baz=34,slow=7.3,SNR=3.1
ULM LR LR 04 38 37.9
comp=Z,54nm,21.5s,MS3.4,baz=20,slow=33
CPCT Cooper Cave 42.62 272 *eP* **P 04 23 29.1 +0.8**
CPCT Cooper Cave 42.62 272 *eP* **P 04 23 29.1 +0.8**
TOA0 Torodi Ar. Sit 44.03 135 *eP* **P 04 23 39.1 -0.6**
TOA0 Torodi Ar. Sit 44.03 135 *eP* **P 04 23 39.1 -0.6**
TORD Torodi Ar. Bea 44.03 135 P **P 04 23 39.5 -0.2**
comp=Z,7.1nm,1.0s,mb4.3,baz=334,slow=7.9,SNR=39
TORD LR LR 04 40 57.5
comp=Z,70nm,19.4s,MS3.6,baz=260,slow=35
BR131 Keskin Array S 44.16 78 *eP* **P 04 23 41.3 +0.6**
comp=Z,1.7nm,0.8s,mb3.8
BR131 Keskin Array S 44.16 78 *eP* **P 04 23 41.3 +0.6**
comp=Z,1.7nm,0.8s,mb3.8
BRTR Keskin Array B 44.16 78 P **P 04 23 41.6 +0.9**
comp=Z,1.3nm,0.8s,mb3.7,baz=297,slow=5.4,SNR=6.5
BRTR PcP PcP 04 25 25.2 -0.1
comp=Z,1.1nm,0.8s,baz=248,slow=2.0,SNR=4.6
BRTR LR LR 04 42 57.7
comp=Z,76nm,19.4s,MS3.6,baz=98,slow=37
BRTR Keskin Array B 44.16 78 P **P 04 23 41.6 +0.9**
BRTR 04 25 25.2
BRTR Keskin Array B 44.16 78 PcP PcP 04 25 25.2 -0.1
PLAL Pickwick Lake 45.21 274 *eP* **P 04 23 49.8 +0.7**
comp=Z,3.6nm,0.8s,mb4.2
PLAL Pickwick Lake 45.21 274 *eP* **P 04 23 49.8 +0.7**
comp=Z,3.6nm,0.8s,mb4.2
CCM Cathedral Cave 45.42 280 *eP* **P 04 23 50.2 -0.5**
CCM pmax pmax

comp=Z,4.0nm,0.9s,mb4.2
CCM Cathedral Cave 45.42 280 *e*P P 04 23 50.2 -0.5
comp=Z,4.5nm,0.9s,mb4.3
YKA Yellowknife Ar 46.08 320 P P 04 23 55.5 -0.4
comp=Z,1.8nm,0.7s,mb4.1,baz=63,slow=8.7,SNR=3.4
YKA LR LR 04 42 24.9
comp=Z,27nm,19.3s,MS3.2,baz=90,slow=35
YKA Yellowknife Ar 46.08 320 P P 04 23 55.5 -0.5
DBIC Dimbokro 47.22 147 P P 04 24 04.8 0.0
comp=Z,4.8nm,0.9s,mb4.5,baz=278,slow=2.2,SNR=3.6
DBIC LR LR 04 42 21.1
comp=Z,86nm,18.8s,MS3.7,baz=273,slow=34
DBIC Dimbokro 47.22 147 P P 04 24 04.8 -0.1
DBIC LR LR 04 42 21.1
ARU Arti 49.48 47 *e*P P 04 24 21.2 -1.1
ARU *e*S S 04 31 28.4 +0.1
ARU *e*SS SS 04 34 56.7 -3.5
ARU MLR MLR
comp=Z,300nm,18.5s,MS4.3
ARU MLR MLR
comp=N,60nm,17.0s,MS4.2
ARU MLR MLR
comp=E,200nm,19.0s,MS4.2
ARU Arti 49.48 47 *e*P P 04 24 21.3 -1.0
comp=E,4.9nm,0.3s,mb5.0
ARU Arti 49.48 47 *e*P P 04 24 21.3 -1.0
comp=E,4.9nm,0.3s,mb5.0
LAO LASA Array 49.71 298 *e*P P 04 24 24.3 +0.3
comp=E,9.8nm,1.2s,mb4.7
LAO LASA Array 49.71 298 *e*P P 04 24 24.3 +0.2
comp=E,9.8nm,1.2s,mb4.7
EGMT Eagleton 50.96 301 *e*P P 04 24 33.1 -0.4
comp=E,7.1nm,1.1s,mb4.5
EGMT Eagleton 50.96 301 *e*P P 04 24 33.1 -0.4
comp=E,7.1nm,1.1s,mb4.5
WMOK Wichita Mounta 52.25 281 *e*P P 04 24 42.4 -0.8
comp=E,2.6nm,1.0s,mb4.1
WMOK Wichita Mounta 52.25 281 *e*P P 04 24 42.4 -0.8
comp=E,2.6nm,1.0s,mb4.1
WALA Waterton Lakes 52.64 304 *e*P P 04 24 45.5 -0.6
comp=E,9.4nm,0.9s,mb4.7
WALA Waterton Lakes 52.64 304 *e*P P 04 24 45.5 -0.5
comp=E,9.4nm,0.9s,mb4.7
HRY Holter Researc 52.87 301 *e*P P 04 24 47.2 -0.6
HRY Holter Researc 52.87 301 *e*P P 04 24 47.2 -0.5
RWWY Rawlins 53.19 293 *e*P P 04 24 50.0 -0.1
comp=E,12nm,1.0s,mb4.8
RWWY Rawlins 53.19 293 *e*P P 04 24 50.0 -0.1
comp=E,12nm,1.0s,mb4.8
CHMT Chamberlain Mo 53.54 302 *e*P P 04 24 51.7 -0.9
CHMT Chamberlain Mo 53.54 302 *e*P P 04 24 51.7 -1.0
FLWY Flagg Ranch 53.79 298 *e*P P 04 24 53.4 -1.1
comp=E,3.2nm,0.8s,mb4.3
FLWY Flagg Ranch 53.79 298 *e*P P 04 24 53.4 -1.1
comp=E,3.2nm,0.8s,mb4.3
BW06 Boulder Array 53.92 296 *e*P P 04 24 54.2 -1.3
comp=E,3.8nm,0.9s,mb4.3
BW06 Boulder Array 53.92 296 *e*P P 04 24 54.2 -1.3
comp=E,3.8nm,0.9s,mb4.3
PDAR Pinedale Array 53.92 296 P P 04 24 54.6 -0.9
comp=E,3.4nm,0.8s,mb4.3,baz=54,slow=7.6,SNR=25
PDAR LR LR 04 45 26.4
comp=E,66nm,18.3s,MS3.7,baz=68,slow=33
MOOW Moose Ponds 54.02 297 *e*P P 04 24 54.2 -2.0
comp=E,2.4nm,0.9s,mb4.1
IMW Indian Meadow 54.04 298 *e*P P 04 24 55.9 -0.4
comp=E,2.3nm,0.9s,mb4.1
IMW Indian Meadow 54.04 298 *e*P P 04 24 55.9 -0.4
comp=E,2.3nm,0.9s,mb4.1
TPAW Teton Pass 54.29 297 *e*P P 04 24 57.7 -0.5
comp=E,3.7nm,0.8s,mb4.4
TPAW Teton Pass 54.29 297 *e*P P 04 24 57.7 -0.5
comp=E,3.7nm,0.8s,mb4.4
REDW Red Top Meadow 54.31 297 *e*P P 04 24 58.1 -0.2
comp=E,5.1nm,1.0s,mb4.4
REDW Red Top Meadow 54.31 297 *e*P P 04 24 58.1 -0.2
comp=E,5.1nm,1.0s,mb4.4
DAWY Dawson 54.51 330 *e*P P 04 24 59.4 -0.3
DAWY Dawson 54.51 330 *e*P P 04 24 59.4 -0.4
SMCO Snowmass 54.59 291 *e*P P 04 25 00.5 +0.1
comp=E,3.0nm,0.9s,mb4.3
SMCO Snowmass 54.59 291 *e*P P 04 25 00.4 +0.1
comp=E,3.0nm,0.9s,mb4.3
NEW Newport 54.83 305 P P 04 25 01.5 -0.5
comp=E,1.5nm,0.7s,mb4.1,baz=23,slow=7.8,SNR=4.1
NEW Newport 54.83 305 *e*P P 04 25 01.4 -0.6
NEW pmax pmax
comp=Z,3.0nm,0.9s
NEW Newport 54.83 305 *e*P P 04 25 01.4 -0.7
comp=Z,2.9nm,0.9s,mb4.3
NEW Newport 54.83 305 *e*P P 04 25 01.4 -0.6
comp=Z,2.9nm,0.9s,mb4.3
HWUT Hardware Ranch 55.81 296 *e*P P 04 25 08.2 -0.9
comp=Z,7.9nm,0.8s,mb4.8
HWUT Hardware Ranch 55.81 296 *e*P P 04 25 08.2 -0.9
comp=Z,7.9nm,0.8s,mb4.8
HLID Hailey 56.23 299 *e*P P 04 25 12.2 +0.1
comp=Z,3.5nm,1.2s,mb4.3
HLID Hailey 56.23 299 *e*P P 04 25 12.2 +0.1
comp=Z,3.5nm,1.2s,mb4.3
PV10 Paradox Valley 56.34 291 *e*P P 04 25 13.9 +0.9
PV10 Paradox Valley 56.34 291 *e*P P 04 25 13.9 +1.0
ZRNK Zerenda 56.43 46 *e*P P 04 25 13.1 -0.5
ZRNK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ZRNK Zerenda 56.43 46 *e*P P 04 25 13.1 -0.5
comp=Z,3.8nm,0.9s,mb4.4
ZRNK Zerenda 56.43 46 *e*P P 04 25 13.1 -0.5
comp=Z,3.8nm,0.9s,mb4.4
MENT Mentasta 56.70 330 *e*P P 04 25 15.2 -0.3
MENT Mentasta 56.70 330 *e*P P 04 25 15.2 -0.3
CHKZ Chkalovo 56.72 45 *e*P P 04 25 15.1 -0.5
CHKZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
CHKZ Chkalovo 56.72 45 *e*P P 04 25 15.1 -0.5
comp=Z,7.0nm,1.0s,mb4.7
CHKZ Chkalovo 56.72 45 *e*P P 04 25 15.1 -0.5
comp=Z,6.9nm,1.0s,mb4.6
BRVK Borovoye 56.96 45 *e*P P 04 25 17.4 +0.1
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BRVK Borovoye 56.96 45 *e*P P 04 25 17.4 +0.1
comp=Z,4.5nm,0.8s,mb4.5
BRVK Borovoye 56.96 45 *e*P P 04 25 17.4 +0.1
comp=Z,4.5nm,0.8s,mb4.5
ANMO Albuquerque 56.96 287 P P 04 25 18.5 +1.1
comp=Z,2.1nm,0.9s,mb4.2,baz=30,slow=5.4,SNR=5.3
ANMO Albuquerque 56.96 287⇓ *e*P P 04 25 18.9 +1.6
ANMO Albuquerque 56.96 287 *e*P P 04 25 18.1 +0.7
comp=Z,2.5nm,1.0s,mb4.2
ANMO Albuquerque 56.96 287 *e*P P 04 25 18.0 +0.7
comp=Z,2.5nm,1.0s,mb4.2
TMUT Trail Mountain 57.06 294 *e*P P 04 25 17.8 -0.2
TMUT Trail Mountain 57.06 294 *e*P P 04 25 17.8 -0.2
F08A Pendleton 57.24 304 ⇓P P 04 25 18.7 -0.6
baz=57
DUG Dugway 57.44 295 *e*P P 04 25 21.1 +0.4
DUG pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
DUG Dugway 57.44 295 *e*P P 04 25 21.1 +0.4
comp=Z,5.0nm,0.8s,mb4.6
DUG Dugway 57.44 295 *e*P P 04 25 21.1 +0.4
comp=Z,5.0nm,0.8s,mb4.6
M13A Montello 57.48 297 ⇓P P 04 25 21.0 0.0
baz=57
I09A Lost Marbles R 57.84 301 ⇓P P 04 25 23.1 -0.4
baz=58
M12A Wells 57.88 298 ⇑P P 04 25 23.9 +0.1
baz=58
MSU Marysvale 58.14 293 *e*P P 04 25 26.1 +0.4
N12A Clover Valley, 58.31 297 ⇑P P 04 25 27.2 +0.3
baz=58
M11A Holland Ranch, 58.37 298 ⇑P P 04 25 27.8 +0.6
baz=58,SNR=7.1
O12A Currie 58.52 296 ⇑P P 04 25 28.8 +0.5
baz=58
K09A Rome 58.65 300 ⇑P P 04 25 29.7 +0.5
baz=58,SNR=7.3
M10A I.L. Ranch, Tu 58.74 299 ⇑P P 04 25 30.0 +0.2
baz=58
ROSC El Rosal 58.94 236 P P 04 25 33.7 +2.5
comp=Z,3.5nm,0.7s,mb4.5,baz=276,slow=20,SNR=4.2
ROSC LR LR 04 47 57.8
comp=Z,86nm,19.4s,MS3.9,baz=21,slow=33
K08A Mann Creek Ran 59.06 301 ⇓P P 04 25 32.3 +0.3
baz=59,SNR=6.0
L09A Wilkinson Ranc 59.06 300 ⇓P P 04 25 32.3 +0.3
baz=59,SNR=5.2
P12A McGill 59.13 296 ⇑P P 04 25 32.6 +0.1
baz=59
O11A Cowboy Ranch, 59.14 297 ⇑P P 04 25 32.9 +0.3
baz=59
I06A Prineville 59.22 303 ⇓P P 04 25 32.9 -0.3
baz=59
M09A Marrel Ranch, 59.33 299 ⇓P P 04 25 34.2 +0.3
baz=59
L08A Fields 59.33 300 P P 04 25 34.7 +0.8
baz=59,SNR=11
WVOR Wild Horse Val 59.33 301 *e*P P 04 25 34.2 +0.3
WVOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
WVOR Wild Horse Val 59.33 301 *e*P P 04 25 34.2 +0.2
comp=Z,6.9nm,0.9s,mb4.7
WVOR Wild Horse Val 59.33 301 *e*P P 04 25 34.2 +0.3
comp=Z,6.9nm,0.9s,mb4.7
Q12A Willow Creek R 59.37 295 ⇑P P 04 25 34.4 +0.3
baz=59
CCUT Cedar City 59.48 293 *e*P P 04 25 35.7 +0.7
CCUT Cedar City 59.48 293 *e*P P 04 25 35.7 +0.8
K07A Rock Creek Ran 59.51 301 ⇑P P 04 25 35.2 +0.1
baz=59
WUAZ Wupatki 59.62 290 *e*P P 04 25 36.6 +0.7
comp=Z,12nm,1.1s,mb4.8
WUAZ Wupatki 59.62 290 *e*P P 04 25 36.6 +0.7
comp=Z,12nm,1.1s,mb4.8
J06A Christmas Vall 59.64 302 ⇑P P 04 25 35.8 -0.3
baz=59
N09A Rock Creek Ran 59.74 299 ⇑P P 04 25 37.1 +0.4
baz=60,SNR=5.4
M08A Happy Creek Ra 59.84 300 ⇓P P 04 25 37.7 +0.3
baz=60
K06A Valley Falls 59.99 302 ⇓P P 04 25 38.7 +0.3
baz=60
L07A Ada 60.00 301 ⇑P P 04 25 38.6 +0.1
baz=60
O09A Fish Creek Ran 60.00 298 ⇑P P 04 25 38.7 +0.2
baz=60
N08A GE Springer Mi 60.14 299 ⇑P P 04 25 39.4 0.0
baz=60
J05A Fort Rock 60.21 303 ⇓P P 04 25 40.4 +0.4
baz=60,SNR=5.2
W15A Williams 60.39 291 ⇓P P 04 25 41.6 +0.4
baz=60
N07B Gerlach 60.61 299 ⇓P P 04 25 42.9 +0.2
baz=60
R10A Warm Springs 60.73 296 ⇑P P 04 25 43.9 +0.4
baz=60
L05A Lakeview 60.81 302 ⇑P P 04 25 44.2 +0.1
baz=61
X15A Humboldt 60.84 290 ⇓P P 04 25 45.0 +0.8
baz=61,SNR=6.2
W14A Seligman 60.86 291 ⇑P P 04 25 45.0 +0.6
baz=61,SNR=6.4
O07A Toulon 60.97 299 ⇓P P 04 25 45.1 -0.1
baz=61
N06A Buffalo Meadow 61.12 300 ⇓P P 04 25 46.0 -0.2
baz=61,SNR=8.0
M06C Likely Place G 61.18 301 ⇓P P 04 25 46.5 0.0
baz=61
R09A Tonopah 61.21 296 ⇓P P 04 25 46.9 +0.1
baz=61,SNR=12
X14A Yava 61.25 290 ⇓P P 04 25 47.3 +0.3
baz=61
Q08A Gabbs 61.30 297 ⇓P P 04 25 47.1 -0.3
baz=61,SNR=5.5
NVS Novosibirsk 61.32 38 *e*P P 04 25 47.0 -0.5
TUC Tucson 61.41 287 *e*P P 04 25 48.4 +0.3
comp=Z,2.7nm,1.1s,mb4.3
TUC Tucson 61.41 287 *e*P P 04 25 48.4 +0.3
comp=Z,2.7nm,1.1s,mb4.3
W13A Hualapai Mount 61.43 291 ⇓P P 04 25 48.7 +0.4
baz=61
M05C Lookout 61.45 301 ⇓P P 04 25 48.2 -0.2
baz=61
O06A Flanigan 61.51 299 ⇓P P 04 25 48.8 0.0
baz=61
M04C Macdoel 61.55 302 ⇓P P 04 25 48.7 -0.4
baz=61
V12A Nelson 61.59 293 ⇑P P 04 25 49.2 -0.2
baz=61
S09A Goldfield 61.65 296 ⇑P P 04 25 49.6 -0.1
baz=61,SNR=5.9
Y14A Wickenburg 61.67 290 ⇓P P 04 25 49.8 -0.1
baz=62
X13A Yucca 61.73 291 ⇓P P 04 25 50.8 +0.5
baz=62
NVAR Mina Array Bea 61.80 297 P P 04 25 50.4 -0.4
comp=Z,0.6nm,0.6s,mb3.9,baz=47,slow=4.1,SNR=5.7
116A Eloy 61.81 288 ⇑P P 04 25 51.2 +0.4
baz=62
U10A Ash Meadows, A 62.00 294 ⇑P P 04 25 52.6 +0.5
baz=62
115A Sonoran Desert 62.03 288 ⇑P P 04 25 52.7 +0.4
baz=62,SNR=5.6
M03C McCloud 62.05 302 ⇑P P 04 25 52.2 -0.2
baz=62
YBH Yreka Blue Hor 62.06 302 ⇓P P 04 25 52.4 -0.1
baz=62
O04C Chester 62.12 300 ⇓P P 04 25 52.7 -0.2
baz=62
GRAC Grapevine Rang 62.22 295 ⇑P P 04 25 53.4 -0.2
baz=62
Y13A Salome 62.26 290 ⇑P P 04 25 53.8 -0.1
baz=62
O05C Quincy 62.26 300 ⇑P P 04 25 53.7 -0.2
baz=62
FURC Furnace Creek, 62.28 294 ⇓P P 04 25 53.8 -0.2
baz=62
P05C Yuba Gap, Truc 62.53 299 ⇓P P 04 25 54.9 -0.8
baz=62
GMRC Granite Mounta 62.71 292 ⇑P P 04 25 57.0 +0.1
baz=62,SNR=6.5
Y12C Blythe 62.73 291 ⇑P P 04 25 57.0 0.0
baz=62
IRM Iron Mountain 62.83 291 ⇑P P 04 25 57.8 +0.1
baz=63
DAC Darwin (Calif) 62.85 295 *e*P P 04 25 57.9 +0.1
DAC pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
DAC Darwin (Calif) 62.85 295 *e*P P 04 25 57.9 +0.1
comp=Z,2.7nm,0.9s,mb4.4
DAC Darwin (Calif) 62.85 295 *e*P P 04 25 57.9 +0.1
comp=Z,2.7nm,0.9s,mb4.4
O03C Acorn Hollow, 62.87 300 ⇑P P 04 25 57.9 0.0
baz=63
ORV Oroville 62.87 300 ⇑P P 04 25 57.5 -0.4
baz=63
MPMC Manual Prospec 62.93 295 ⇑P P 04 25 58.9 +0.5
baz=63,SNR=6.8
N02C Big Bar 63.01 302 ⇑P P 04 25 58.4 -0.5
baz=63
GSC Goldstone 63.04 293 ⇓P P 04 25 59.6 +0.5
baz=63,SNR=10
S06C San Francisco 63.07 297 ⇓P P 04 25 59.8 +0.6
baz=63,SNR=6.5
HEC Hector,Ludlow 63.08 293 ⇑P P 04 25 59.9 +0.6
baz=63,SNR=5.8
GLA Glamis 63.39 290 ⇑P P 04 26 01.5 +0.1
baz=63
HELL Mitchell Peak, 63.41 296 P P 04 26 01.8 +0.3
baz=63,SNR=8.0
BELC Belle Mtn. 63.45 292 ⇑P P 04 26 01.9 +0.2
baz=63
LRMC Laurel Mountai 63.45 294 ⇑P P 04 26 01.8 0.0
baz=63
ISA Isabella 63.79 295 ⇓P P 04 26 04.0 +0.1
baz=64
BBRC Big Bear Sol-O 63.83 293 ⇓P P 04 26 04.7 +0.5
baz=64
PFO Pinyon Flat Ob 63.99 292 *e*P P 04 26 05.5 +0.1
PFO pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
PFO Pinyon Flat Ob 63.99 292 *e*P P 04 26 05.5 +0.2
comp=Z,9.7nm,1.1s,mb4.8
PFO Pinyon Flat Ob 63.99 292 *e*P P 04 26 05.5 +0.1
comp=Z,9.7nm,1.1s,mb4.8
PFO Pinyon Flat Ob 63.99 292 ⇑P P 04 26 05.2 -0.2
baz=64
VES Vestal, Richgr 64.02 295 ⇓P P 04 26 05.9 +0.4
baz=64
SAML Samuel 65.70 218 *e*P P 04 26 15.8 -0.7
comp=Z,5.0nm,1.3s,mb4.4
SAML Samuel 65.70 218 *e*P P 04 26 15.8 -0.7
comp=Z,5.0nm,1.3s,mb4.4
AAK Ala-Archa 66.16 52⇑ *e*P P 04 26 20.2 +0.8
AAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
MKAR Makanchi Array 66.87 44 P P 04 26 23.6 -0.3
comp=Z,8.2nm,0.8s,mb4.8,baz=325,slow=6.1,SNR=53
BDFB Brasilia 67.21 200 P P 04 26 27.3 +1.2
comp=Z,4.6nm,1.0s,mb4.5,baz=33,slow=7.9,SNR=4.7
BDFB LR LR 04 49 53.2
comp=Z,179nm,21.7s,MS4.2,baz=30,slow=31
BOD Bodaibo 68.58 20 *e*P P 04 26 32.5 -2.2
BOD pmax pmax
comp=Z,5.0nm,2.0s,mb4.1
WMQ Urumqi 71.59 43 *e*P P 04 26 54.0 +0.8
WMQ AP pP 04 27 01.0 -0.2
WMQ PP PP 04 29 35.0 +2.8
WMQ S S 04 36 12.0 +1.1
WMQ SCS ScS 04 36 55.0 -1.8
WMQ SS SS 04 40 49.0 +2.7
WMQ AMB AMB
comp=Z,16nm,1.1s,mb4.9
WMQ AMB AMB
comp=Z,102nm,5.0s
WMQ LR LR
comp=N,132nm,15.0s,MS4.5
WMQ LR LR
comp=E,145nm,15.0s,MS4.5
WMQ LR LR
comp=Z,175nm,15.0s,MS4.5
LPAZ La Paz 74.35 219 LR LR 04 56 08.4
comp=Z,104nm,19.2s,MS4.1,baz=212,slow=33
SONM Songino Array 75.42 30 P P 04 27 16.4 +0.7
comp=Z,3.2nm,0.8s,mb4.3,baz=324,slow=6.5,SNR=16
SONM LR LR 05 01 54.6
comp=Z,62nm,20.6s,MS3.9,baz=123,slow=37
KMBO Kilima Mbogo 75.43 110 LR LR 04 59 08.4
comp=Z,38nm,20.4s,MS3.7,baz=99,slow=35
ULN Ulaanbaatar 75.61 29⇑ *e*P P 04 27 17.9 +1.1
ULN Ulaanbaatar 75.61 29 *e*P P 04 27 17.5 +0.7
comp=Z,11nm,1.2s,mb4.7
CPUP Villa Florida 79.83 206 LR LR 04 57 04.0
comp=Z,118nm,21.6s,MS4.2,baz=9.8,slow=31
KLR Kul'dur 80.09 13 *e*P P 04 27 43.8 +2.1
GTA Gaotai 80.36 38 *e*P P 04 27 43.3 +0.1
GTA AP pP 04 27 47.8 -3.5
GTA XP sP 04 27 50.5 -3.7
GTA PP PP 04 30 51.0 +4.8
GTA S S 04 37 53.3 +5.8
GTA SKS 04 37 58.9
GTA XS sS 04 38 01.3 +0.5
GTA PS 04 38 41.8
GTA AMB AMB
comp=Z,6.0nm,1.3s,mb4.4
GTA AMB AMB
comp=Z,49nm,5.0s
GTA LR LR
comp=N,99nm,19.1s,MS4.3
GTA LR LR
comp=E,90nm,18.0s,MS4.3
GTA LR LR
comp=Z,167nm,22.2s,MS4.3
HHC Hu-ho-hao-te 83.33 29 *e*P P 04 27 57.5 -1.3
HHC AP pP 04 28 02.3 -4.6
HHC XP sP 04 28 04.6 -5.2
HHC PP PP 04 31 10.3 -0.3
HHC S S 04 38 14.5 -3.6
HHC SS SS 04 43 40.6 -2.7
HHC AMB AMB
comp=Z,17nm,1.3s,mb4.9
HHC AMB AMB
comp=Z,71nm,6.5s
HHC LR LR
comp=N,68nm,24.7s,MS4.3
HHC LR LR
comp=E,171nm,27.5s,MS4.3
HHC LR LR
comp=Z,84nm,25.6s,MS4.0
CN2 Changchun 84.23 19 *e*P P 04 28 02.1 -1.3
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.0
MDJ Mudanjiang 84.23 15 P P 04 28 01.8 -1.6
MDJ AP pP 04 28 05.1 -6.4
MDJ AMB AMB
comp=Z,4.0nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,61nm,5.4s
MDJ LR LR
comp=N,29nm,25.6s,MS3.6
MDJ LR LR
comp=E,19nm,22.8s,MS3.6
MDJ LR LR
comp=Z,32nm,23.7s,MS3.6
LZH Lanzhou 84.83 37 *e*P P 04 28 07.4 +0.9
LZH AP pP 04 28 10.5 -4.1
LZH XP sP 04 28 14.5 -3.0
LZH AMB AMB
comp=Z,13nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,66nm,4.4s
BJI Beijing 85.47 26 *e*P P 04 28 06.4 -3.3
BJI S S 04 38 38.8 -0.7
BJI SS SS 04 44 12.3 -2.6
BJI LR LR
comp=N,104nm,15.4s,MS4.4
BJI LR LR
comp=E,93nm,17.0s,MS4.4
BJI LR LR
comp=Z,76nm,20.0s,MS4.1
BOSA Boshof 91.39 135 LR LR 05 08 49.5
comp=Z,67nm,19.0s,MS4.1,baz=35,slow=35
NJ2 Nanjing 93.68 27 *e*P P 04 28 49.8 +1.3
NJ2 AP pP 04 28 54.6 -2.0
NJ2 XP sP 04 28 56.8 -2.7
NJ2 PP PP 04 32 36.1 +2.5
NJ2 S S 04 39 56.0 0.0
NJ2 XS sS 04 40 04.0 -5.5
NJ2 AMB AMB
comp=Z,200nm,11.3s
NJ2 LR LR
comp=N,430nm,17.8s,MS5.0
NJ2 LR LR
comp=E,130nm,14.3s,MS5.0
NJ2 LR LR
comp=Z,160nm,22.2s
KMI Kunming 93.92 43 P P 04 28 46.9 -2.7
KMI LR LR
comp=Z,80nm,20.3s,MS4.2
SSE Sheshan 95.26 26 P P 04 28 54.9 -0.8
SSE AMB AMB
comp=Z,20nm,4.3s
PLCA Paso Flores 97.26 211 LR LR 05 08 31.5
comp=Z,143nm,20.4s,MS4.5,baz=305,slow=33
WRAB Tennant Creek 147.39 31 *e*PKPbc PKPbc 04 35 15.1 -0.5
WRA Warramunga Arr 147.39 31 PKPbc PKPbc 04 35 15.2 -0.4
comp=Z,4.6nm,0.9s,baz=333,slow=2.6,SNR=26
WB2 Warramunga Arr 147.40 31 *e*P PKPdf 04 35 14.9 +1.7
AS31 Alice Springs 150.67 34 *e*PKPbc PKPbc 04 35 23.1 -0.8
AS31 *e*PKPab PKPab 04 35 30.8 -0.1
ASAR Alice Springs 150.67 34 PKPbc PKPbc 04 35 23.2 -0.7
comp=Z,5.4nm,0.6s,baz=349,slow=2.1,SNR=50
ASAR PKPab PKPab 04 35 30.0 -0.9
comp=Z,3.2nm,0.7s,baz=335,slow=2.4,SNR=11
VNDA Vanda 151.71 185 PKPbc PKPbc 04 35 25.5 -0.8
comp=Z,2.2nm,0.9s,baz=259,slow=2.6,SNR=12
VNDA Vanda 151.71 185 *e*PKPbc PKPbc 04 35 25.3 -1.1

IDC 23 04:18:26.8±8.4,361N×12818E,h0km,mb3.6/4,mb1 3.8/4, mb1mx3.5/16,mbtmp3.6/4,Error ellipse: s-maj=138.3km s-min=97.0km az=144.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**			**21.72 187**	P	P	04 23 20.8	+1.3
	0.5nm,0.5s,baz=5.2,slow=11,SNR=4.5							
WRA	**Warramunga Arr**			**24.18 166**	P	P	04 23 45.0	+0.2
	0.8nm,0.5s,baz=344,slow=10,SNR=9.7							
ASAR	**Alice Springs**			**27.68 169**	P	P	04 24 16.8	+0.3
	0.4nm,0.4s,baz=355,slow=8.1,SNR=6.2							
STKA	**Stephens Creek**			**37.53 161**	P	P	04 25 42.1	-0.4
	0.7nm,0.3s,baz=328,slow=11,SNR=4.2							

NEIC 23 04:57:20.5,6488N×15078W,h14km,ML3.4(AEIC), **ML3.7**(PMR)**, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COLA	**College**	**1.25**	**89**	P	Pn	04 57 42.7	-0.9
COLA				S	Sb	04 58 01.0	+1.2
KTH	**Kantishna Hill**	**1.34**	**183**	P	Pn	04 57 44.2	-0.6
KTH				S	Sn	04 58 02.7	+0.3
MCK	**McKinley**	**1.41**	**144**	P	Pn	04 57 45.3	-0.4
TRF	**Thorofare Moun**	**1.45**	**171**	P	Pn	04 57 45.9	-0.4
COLD	**Coldfoot**	**2.37**	**5**	P	Pn	04 57 59.0	+0.1
GCSA	**Galena City Sc**	**2.62**	**270**	P	Pn	04 58 03.0	+0.7
TTA	**Tatalina**	**3.03**	**232**	P	Pn	04 58 06.4	-1.7
PMR	**Palmer**	**3.39**	**167**	P	Pn	04 58 13.3	+0.4
MENT	**Mentasta**	**3.68**	**119**	*e*P	Pn	04 58 16.9	-0.1
EGAK	**Eagle**	**4.11**	**87**	*e*Pn	Pn	04 58 21.9	-1.0
EGAK				*e*Pg	Pg	04 58 38.2	-1.0
EGAK				*e*Sg	Sg	04 59 26.6	-5.9
SVW2	**Sparrevohn**	**4.39**	**212**	*e*Pn	Pn	04 58 25.0	-1.7
SVW2				*e*Pg	Pg	04 58 40.1	-4.4
SVW2				*e*Sg	Sg	04 59 35.6	-5.7
DAWY	**Dawson**	**4.99**	**94**	P	Pn	04 58 34.8	-0.2

MEX 23 05:18:14.2±0.3, 1699N×10002W, h29km±5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.16**	**140**	*i* P	Pb	05 18 18.7	-1.2
ACX				*i* S	Sb	05 18 22.2	-1.6
CAIG	**El Cayaco**	**0.24**	**284**	*i* P	Pb	05 18 19.6	-1.3
CAIG				*i* S	Sb	05 18 23.8	-1.5
MEIG	**Mezcala**	**1.01**	**22**	*i* P	Pn	05 18 30.2	-2.1
MEIG				*i* S	Sn	05 18 42.5	-3.0

IDC ***23*** *05:35:17.7±0.9, 5773S×2528W, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/16, mbtmp4.0/6, Error ellipse: s-maj=31.9km s-min=22.6km az=74.0*

ISCJB ***23*** *05:35:25.7±6.4, 577S±02×254W±03, h78km±63km, mb3.9/7, Error ellipse: s-maj=32.2km s-min=23.6km az=98.0*

NEIC ***23*** *05:35:28.5±3.4, 5779S×2540W, h90km±32km, mb4.0/1, Error ellipse: s-maj=20.6km s-min=14.0km az=54.0*

ISC 23 05:35:27.4±5.9, 578S±02×254W±03, h81km±60km, n13, σ0s50/9, mb3.9/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**16.73**	**155**	*e*P	**Pn**	**05 39 16.6**	**-0.1**
	2.8nm,0.9s						
MAW	**Mawson**	**38.16**	**142**	P	**P**	**05 42 38.9**	**+0.1**
	1.3nm,0.5s,mb4.0,baz=247,slow=13,SNR=4.1						
CPUP	**Villa Florida**	**38.70**	**311**	P	**P**	**05 42 44.1**	**+0.8**
	0.2nm,0.4s,mb3.3,baz=162,slow=6.4,SNR=3.1						
VNDA	**Vanda**	**44.85**	**182**	P	**P**	**05 43 33.6**	**+0.1**
	1.2nm,0.9s,mb3.6,baz=158,slow=6.1,SNR=6.1						
BOSA	**Boshof**	**45.53**	**72**	P	**P**	**05 43 38.8**	**-0.1**
	1.8nm,0.7s,mb3.9,baz=198,slow=9.6,SNR=3.3						
SAML	**Samuel**	**56.72**	**314**	*e*P	**P**	**05 45 01.6**	**-1.1**
	0.7nm,0.5s,mb4.0						
DBIC	**Dimbokro**	**66.41**	**22**	P	**P**	**05 46 07.7**	**-0.1**
	5.8nm,0.9s,mb4.4,baz=173,slow=7.5,SNR=3.6						
DBIC	**Dimbokro**	**66.41**	**22**	P	**P**	**05 46 07.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**74.15**	**28**	P	**P**	**05 46 55.5**	**+0.4**
	2.7nm,0.7s,mb4.1,baz=200,slow=6.2,SNR=38						
FINES	**FINESS Array B**	**125.50**	**28**	PKP	PKPdf	05 54 16.8	-2.4
	0.9nm,0.6s,baz=150,slow=6.4,SNR=5.5						
FINES	**FINESS Array B**	**125.50**	**28**	PKP	PKPdf	05 54 16.8	-2.4
ARCES	**ARCESS Array B**	**132.23**	**22**	PKP	PKPdf	05 54 29.5	-2.4
	1.4nm,1.0s,baz=208,slow=2.3,SNR=4.9						
SONM	**Songino Array**	**149.85**	**88**	PKPbc	PKPbc	05 55 07.0	-1.1
	1.0nm,0.4s,baz=222,slow=3.8,SNR=7.7						

NEIC ***23*** *05:54:33.1±3.0, 703S×129.14E, h108km±30km, mb4.1/5, Error ellipse: s-maj=31.7km s-min=14.4km az=47.0*

IDC ***23*** *05:54:34.8±4.6, 707S×12903E, h124km±43km, mb3.6/4, mb1 3.8/7, mb1mx3.6/14, mbtmp4.1/7, Error ellipse: s-maj=51.3km s-min=19.0km az=58.0*

ISCJB ***23*** *05:54:35.5±2.2, 726S±008×1290E±01, h148km±22km, mb4.3/14, Error ellipse: s-maj=20.5km s-min=9.9km az=128.7*

ISC 23 05:54:39.8±1.9, 746S±009×1290E±01, h176km±20km, n24, σ1s15/27, mb4.4/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.06**	**197**	P	**Pn**	**05 57 15.1**	**+2.0**
	0.5nm,0.3s,baz=33,slow=14,SNR=31						
FITZ				S	**Sn**	**05 59 14.9**	**-1.0**
	0.9nm,0.3s,baz=290,slow=23,SNR=5.0						
WRAB	**Tennant Creek**	**13.46**	**158**	*e*Pn	**Pn**	**05 57 42.3**	**-1.5**
	25nm,0.8s						
WRAB				*e*Sn	**Sn**	**06 00 04.7**	**-8.6**
WRA	**Warramunga Arr**	**13.46**	**158**	P	**Pn**	**05 57 43.3**	**-0.5**
	1.0nm,0.3s,baz=340,slow=13,SNR=47						
WRA				S	**Sn**	**06 00 08.0**	**-5.4**
	2.3nm,0.3s,baz=330,slow=23,SNR=18						
WB2	**Warramunga Arr**	**13.46**	**158**	*e*Pn	**Pn**	**05 57 42.5**	**-1.4**
AS31	**Alice Springs**	**16.80**	**164**	*e*P	**Pn**	**05 58 27.5**	**+2.7**
AS31				*e*Sn	**Sn**	**06 01 26.9**	**-6.2**
ASAR	**Alice Springs**	**16.80**	**164**	P	**Pn**	**05 58 27.6**	**+2.8**
	1.0nm,0.3s,baz=345,slow=8.9,SNR=59						
ASAR				S	**S**	**06 01 29.8**	**-0.4**
	0.3nm,0.3s,baz=211,slow=26,SNR=4.5						
CTA	**Charters Tower**	**20.94**	**129**	P	**P**	**05 59 10.3**	**+1.5**
	5.0nm,0.8s,baz=310,slow=12,SNR=9.1						
CTAO	**Charters Tower**	**20.94**	**129**	*e*P	**P**	**05 59 10.1**	**+1.3**
	6.9nm,0.9s						
STKA	**Stephens Creek**	**27.00**	**156**	P	**P**	**06 00 07.7**	**+2.5**
	2.1nm,0.6s,mb3.9,baz=351,slow=12,SNR=5.3						
STKA	**Stephens Creek**	**27.00**	**156**	*e*P	**P**	**06 00 08.5**	**+3.3**
CHTO	**Chiang Mai**	**39.47**	**312**	*e*P	**P**	**06 01 53.1**	**+0.2**
	5.6nm,0.9s,mb4.2						
JIRN	**Jiri**	**54.12**	**312**	*e*P	**P**	**06 03 47.0**	**+0.6**
	11nm,0.6s,mb4.7						
GUN	**Gumba**	**54.48**	**312**	*e*P	**P**	**06 03 49.9**	**+0.8**
	22nm,0.6s,mb5.0						
PKI	**Pulchoki**	**54.65**	**311**	*e*P	**P**	**06 03 50.3**	**0.0**
	11nm,0.6s,mb4.8						
KKN	**Kakani**	**54.86**	**312**	*e*P	**P**	**06 03 52.3**	**+0.5**
	12nm,0.6s,mb4.8						
DMN	**Daman**	**54.89**	**311**	*e*P	**P**	**06 03 52.5**	**+0.5**
	14nm,0.7s,mb4.8						
GKN	**Gorkha**	**55.45**	**311**	*e*P	**P**	**06 03 56.1**	**+0.1**
	17nm,0.6s,mb5.0						
KOLN	**Koldanda**	**56.11**	**311**	*e*P	**P**	**06 04 00.8**	**+0.1**
	17nm,0.8s,mb4.9						
SONM	**Songino Array**	**58.56**	**342**	P	**P**	**06 04 16.1**	**-1.7**
	0.5nm,0.6s,mb3.5,baz=133,slow=6.3,SNR=5.0						
MKAR	**Makanchi Array**	**68.05**	**327**	P	**P**	**06 05 19.1**	**-1.1**
	0.8nm,0.4s,mb3.8,baz=111,slow=7.8,SNR=17						
CHKZ	**Chkalovo**	**78.11**	**329**	*e*P	**P**	**06 06 18.6**	**-0.6**
	1.5nm,0.7s,mb3.7						
ZRNK	**Zerenda**	**78.60**	**328**	*e*P	**P**	**06 06 21.1**	**-0.8**
	1.9nm,0.8s,mb3.8						
CPUP	**Villa Florida**	**145.86**	**170**	PKPbc	PKPbc	06 14 01.1	+2.8
	0.6nm,0.5s,baz=157,slow=3.9,SNR=3.7						
LPAZ	**La Paz**	**150.97**	**144**	PKPbc	PKPbc	06 14 13.8	+2.3
	0.3nm,0.4s,baz=231,slow=6.5,SNR=3.5						
LPAZ				PKPab	PKPab	06 14 24.1	+4.4
	1.1nm,0.7s,baz=214,slow=6.3,SNR=5.8						

PRE 23 06:57:22.4±0.7, 2195S×3330E, h5km, ML4.7, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.06**	**262**	*e*P	Pn	06 58 12.0	+0.6
MSNA				*e*S	Sn	06 58 49.0	+0.6
MSNA				AML	AML	06 59 06.4	
	comp=Z,654nm,0.6s						
SLR	**Silverton**	**5.94**	**230**	*e*P	Pn	06 58 51.8	+0.9
SLR				*e*S	Sn	06 59 57.0	-2.3
SLR				AML	AML	07 00 47.8	
	comp=Z,166nm,0.5s						
ERPM	**east rand prop**	**6.29**	**226**	*e*S	Sn	07 00 05.9	-2.2
ERPM				AML	AML	07 00 54.8	
	comp=Z,146nm,0.6s						
KSR	**Koster**	**7.03**	**235**	*e*P	Pn	06 59 07.2	+1.3
KSR				*e*S	Sn	07 00 23.6	-2.5
KSR				AML	AML	07 00 37.8	
	comp=Z,54nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**7.70**	**245**	*e*P	Pn	06 59 16.3	+1.2
LBTB				*e*S	Sn	07 00 39.7	-3.0
LBTB				AML	AML	07 01 35.0	
	comp=Z,94nm,0.6s						
SEK	**Senekal**	**8.16**	**218**	*e*P	Pn	06 59 22.7	+1.2
SEK				*e*S	Sn	07 00 50.7	-3.4
SEK				AML	AML	07 01 54.0	
	comp=Z,83nm,0.7s						
SWZ	**Schweizer**	**8.93**	**233**	*e*P	Pn	06 59 33.3	+1.4
SWZ				*e*S	Sn	07 01 08.4	-4.5
SWZ				AML	AML	07 02 16.0	
	comp=Z,47nm,0.6s						
KSD	**Kokstad**	**9.24**	**201**	*e*P	Pn	06 59 37.9	+1.6
KSD				*e*S	Sn	07 01 15.9	-4.6
KSD				AML	AML	07 02 32.0	
	comp=Z,35nm,0.7s						
BOSA	**Boshof**	**9.84**	**226**	*e*P	Pn	06 59 45.6	+1.0
BOSA				*e*S	Sn	07 01 30.8	-4.6
BOSA				AML	AML	07 02 50.6	
	comp=Z,42nm,0.7s						
UPI	**Upington**	**12.63**	**237**	*e*P	Pn	07 00 24.3	+1.6
UPI				*e*S	Sn	07 02 37.7	-6.1
UPI				AML	AML	07 02 39.8	
	comp=Z,18nm,0.5s						
SUR	**Sutherland**	**15.20**	**224**	*e*P	Pn	07 01 00.4	+2.7
SUR				*e*S	Sn	07 03 38.9	-7.4

NEIC 23 07:08:33.3, 5791N×15741W, h0km, ML2.5(AEIC), After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.58**	**91**	P	Pn	07 09 15.2	-1.1
SDPT	**Sand Point**	**3.08**	**215**	P	Pn	07 09 22.3	-0.8
SVW2	**Sparrevohn**	**3.33**	**15**	*e*Pn	Pn	07 09 24.0	-2.5
SVW2				*e*Sn	Sn	07 10 09.1	+2.4
NED	**Newark**	**53.31**	**72**	P	P	07 18 20.5	+26

ISCJB ***23*** *07:48:19.6±3.7, 187S±01×1685E±06, h135km±9km, mb3.9/4, Error ellipse: s-maj=88.7km s-min=12.1km az=19.8*

IDC ***23*** *07:48:20.4±8.7, 1840S×16802E, h88km±85km, mb3.7/4, mb1 3.9/5, mb1mx3.6/13, mbtmp4.0/5, ML3.7/1, Error ellipse: s-maj=181.0km s-min=58.1km az=105.0*

ISC 23 07:48:19.9±3.7, 187S±01×1687E±05, h128km±8km, n7, σ0s35/10, mb3.9/4, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKM	**Butte a Klehm**	**1.12**	**338**	⇑*i*P	**Pn**	**07 48 43.5**	**-0.3**
BKM				S	**Sn**	**07 49 02.0**	**+0.2**
DZM	**Mont Dzumac**	**3.94**	**212**	*e*P	**Pn**	**07 49 19.1**	**+0.3**
DZM				*e*S	**Sn**	**07 50 04.4**	**-0.1**
DZM	**Mont Dzumac**	**3.94**	**212**	P	**Pn**	**07 49 19.1**	**+0.3**
	5.1nm,0.3s,baz=50,slow=17,SNR=187						
DZM				S	**Sn**	**07 50 04.2**	**-0.2**
	14nm,0.3s,baz=162,slow=22,SNR=10						
STKA	**Stephens Creek**	**27.68**	**236**	P	**P**	**07 53 55.6**	**-0.2**
	0.6nm,0.4s,mb3.4,baz=78,slow=9.3,SNR=3.0						
WRA	**Warramunga Arr**	**32.39**	**262**	P	**P**	**07 54 36.8**	**-0.5**
	0.4nm,0.4s,mb3.5,baz=89,slow=8.5,SNR=10.0						
ASAR	**Alice Springs**	**32.74**	**255**	P	**P**	**07 54 40.5**	**0.0**
	5.2nm,0.6s,mb4.5,baz=84,slow=8.7,SNR=78						
FITZ	**Fitzroy Crossi**	**40.76**	**264**	P	**P**	**07 55 49.0**	**+0.7**
	2.2nm,0.8s,mb4.0,baz=137,slow=4.4,SNR=8.1						

ISCJB ***23*** *08:25:34.8±1.2, 2015S±008×17777W±007, h462km±14km, mb4.2/22, Error ellipse: s-maj=15.5km s-min=6.6km az=108.8*

IDC ***23*** *08:25:36.8±1.8, 2013S×17772W, h476km±20km, mb3.8/7, mb1 4.0/10, mb1mx3.8/16, mbtmp4.7/10, Error ellipse: s-maj=19.6km s-min=12.2km az=146.0*

NEIC ***23*** *08:25:36.3±0.9, 2012S×17767W, h473km±11km, mb4.4/15, Error ellipse: s-maj=14.3km s-min=6.7km az=143.0*

ISC 23 08:25:36.5±1.2, 2020S±008×17769W±007, h468km±13km, n131, σ0s60/126, mb4.2/22, 43C-45D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.44**	**43**	P	**P**	**08 27 35.4**	**-1.4**
	15nm,0.3s,baz=54,slow=2.4,SNR=24						
AFI				S	**S**	**08 29 07.7**	**-7.8**
	11nm,0.3s,baz=46,slow=21,SNR=11						
DZM	**Mont Dzumac**	**14.92**	**260**	*e*P	**P**	**08 28 48.4**	**+2.1**
DZM	**Mont Dzumac**	**14.92**	**260**	P	**P**	**08 28 48.1**	**+1.8**
	1.4nm,0.3s,baz=86,slow=18,SNR=27						
MWZ	**Matawai**	**18.54**	**192**	PN	**P**	**08 29 22.4**	**-0.9**
URZ	**Urewera**	**18.55**	**193**	P	**P**	**08 29 22.2**	**-1.3**
	2.6nm,0.3s,baz=266,slow=15,SNR=10						
URZ				S	**S**	**08 32 22.3**	**-6.5**
	0.2nm,0.3s,baz=327,slow=12,SNR=3.5						
URZ	**Urewera**	**18.55**	**193**	PN	**P**	**08 29 22.3**	**-1.2**
QRZ	**Quartz Range**	**22.18**	**200**	*e*PN	**P**	**08 29 56.8**	**+0.3**
LTZ	**Lake Taylor**	**24.05**	**198**	PN	**P**	**08 30 11.8**	**-1.4**
RPZ	**Rata Peaks**	**25.26**	**199**	P	**P**	**08 30 23.8**	**-0.3**
	7.3nm,1.0s,mb4.0,baz=177,slow=18,SNR=4.6						
ARMA	**Armidale**	**29.45**	**244**	*e*P	**P**	**08 31 02.3**	**+1.4**
CNB	**Canberra Magne**	**32.63**	**236**	*e*P	**P**	**08 31 29.4**	**+1.1**
	14nm,1.0s,mb4.3						
CTA	**Charters Tower**	**33.81**	**264**	⇓*i*P	**P**	**08 31 38.9**	**+0.7**
	15nm,0.3s,mb4.9						
CTAO	**Charters Tower**	**33.81**	**264**	*e*P	**P**	**08 31 38.9**	**+0.7**
	25nm,0.6s,mb4.8						
PMG	**Port Moresby**	**35.56**	**282**	P	**P**	**08 31 53.7**	**+0.8**
	30nm,0.9s,mb4.7,baz=104,slow=5.5,SNR=4.8						
TOO	**Toolangi**	**36.30**	**234**	⇑*i*P	**P**	**08 32 00.0**	**+0.8**
	9.4nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**38.18**	**244**	P	**P**	**08 32 15.2**	**+0.6**
	4.3nm,0.5s,mb4.2,baz=86,slow=11,SNR=19						
STKA	**Stephens Creek**	**38.18**	**244**	*e*P	**P**	**08 32 15.1**	**+0.5**
AS31	**Alice Springs**	**44.87**	**256**	*e*P	**P**	**08 33 07.8**	**0.0**
ASAR	**Alice Springs**	**44.87**	**256**	P	**P**	**08 33 08.0**	**+0.1**
	23nm,0.8s,mb4.7,baz=92,slow=8.2,SNR=174						
ASAR				S	**S**	**08 39 08.8**	**-1.6**
	0.8nm,0.9s,baz=94,slow=16,SNR=4.4						
ASAR	**Alice Springs**	**44.87**	**256**	P	**P**	**08 33 08.0**	**+0.1**
ASAR				S	**S**	**08 39 08.8**	**-1.6**
WB2	**Warramunga Arr**	**44.92**	**262**	⇓*i*P	**P**	**08 33 06.8**	**-1.4**
WRAB	**Tennant Creek**	**44.92**	**262**	*e*P	**P**	**08 33 07.8**	**-0.4**
	8.7nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**44.93**	**262**	P	**P**	**08 33 07.7**	**-0.6**
	5.2nm,0.3s,mb4.4,baz=96,slow=7.7,SNR=607						
KAKA	**Kakadu**	**48.26**	**271**	*e*P	**P**	**08 33 33.0**	**-0.6**
	5.6nm,0.3s,mb4.4						
FORT	**Forrest**	**49.68**	**246**	⇑*i*P	**P**	**08 33 43.8**	**-0.4**
	25nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.35**	**262**	⇓*i*P	**P**	**08 34 10.8**	**-0.1**
	7.6nm,0.6s,mb4.2						
VNDA	**Vanda**	**58.23**	**185**	P	**P**	**08 34 45.6**	**+0.7**
	0.4nm,0.6s,mb2.9,baz=17,slow=7.5,SNR=2.3						
KLBR	**Kellerberrin**	**58.44**	**245**	*e*P	**P**	**08 34 46.2**	**-0.1**
	23nm,0.9s,mb4.5						
MUN	**Mundaring**	**59.71**	**244**	*e*P	**P**	**08 34 54.9**	**0.0**
ARVC	**Arvin**	**78.38**	**46**	⇓P	**P**	**08 36 47.2**	**-0.4**
	baz=78						
MONP	**Monument Peak**	**78.80**	**49**	⇓P	**P**	**08 36 50.3**	**+0.5**
	baz=79						
EDW2	**Edwards Air Fo**	**78.81**	**46**	⇑P	**P**	**08 36 49.8**	**-0.1**
DVTC	**Desert V Tower**	**78.90**	**49**	⇓P	**P**	**08 36 50.4**	**+0.1**
	baz=79						
ISA	**Isabella**	**78.92**	**45**	⇑P	**P**	**08 36 50.3**	**-0.2**
	baz=79						
CMB	**Columbia Colle**	**79.05**	**43**	⇑P	**P**	**08 36 50.7**	**-0.5**
	baz=79						
ORV	**Oroville**	**79.27**	**41**	⇓P	**P**	**08 36 52.6**	**+0.3**
	baz=79						
L02A	**Cave Junction**	**79.63**	**38**	⇑P	**P**	**08 36 54.6**	**+0.4**
	baz=80						
R05C	**Kirkwood Meado**	**79.64**	**42**	⇓P	**P**	**08 36 54.9**	**+0.6**
	baz=80						
P05C	**Yuba Gap, Truc**	**79.67**	**41**	⇑P	**P**	**08 36 54.7**	**+0.3**
	baz=80						
BELC	**Belle Mtn.**	**79.69**	**48**	⇓P	**P**	**08 36 54.8**	**+0.2**
	baz=80						
MPMC	**Manual Prospec**	**79.81**	**46**	⇑P	**P**	**08 36 55.4**	**+0.2**
	baz=80						
GSC	**Goldstone**	**79.85**	**47**	⇓P	**P**	**08 36 55.6**	**+0.2**
	baz=80						
TIN	**Tinemaha**	**79.88**	**44**	⇑P	**P**	**08 36 56.3**	**+0.8**
	baz=80						
YBH	**Yreka Blue Hor**	**79.88**	**39**	⇑P	**P**	**08 36 56.0**	**+0.5**
	baz=80						
HEC	**Hector,Ludlow**	**79.92**	**47**	⇓P	**P**	**08 36 56.3**	**+0.5**
	baz=80						
R06C	**Coleville**	**79.93**	**43**	⇑P	**P**	**08 36 56.3**	**+0.4**
	baz=80						
M03C	**McCloud**	**79.94**	**39**	⇑P	**P**	**08 36 56.0**	**+0.1**
	baz=80						
O04C	**Chester**	**79.98**	**40**	⇓P	**P**	**08 36 56.2**	**+0.1**
	baz=80						
GLA	**Glamis**	**80.02**	**49**	⇓P	**P**	**08 36 56.9**	**+0.6**
	baz=80						
HATC	**Hat Creek Radi**	**80.06**	**40**	⇑P	**P**	**08 36 56.6**	**+0.1**
	baz=80						
BEKR	**Beckwourth**	**80.16**	**41**	⇑P	**P**	**08 36 57.0**	**0.0**
	baz=80						
WCN	**Washoe City**	**80.20**	**42**	⇓P	**P**	**08 36 57.5**	**+0.3**
	baz=80						
P06A	**Stead Airport,**	**80.33**	**41**	⇑P	**P**	**08 36 57.9**	**0.0**
	baz=80						
GMRC	**Granite Mounta**	**80.35**	**48**	⇓P	**P**	**08 36 58.0**	**0.0**
	baz=80						
IRM	**Iron Mountain**	**80.37**	**48**	⇑P	**P**	**08 36 58.3**	**+0.1**
	baz=80						
TUQ	**Turquoise Mtn.**	**80.52**	**47**	⇓P	**P**	**08 36 59.5**	**+0.6**
	baz=81						
M05C	**Lookout**	**80.58**	**40**	⇓P	**P**	**08 36 59.2**	**-0.1**
	baz=81						
Y12C	**Blythe**	**80.60**	**49**	⇑P	**P**	**08 36 59.9**	**+0.6**
	baz=81						
NVAR	**Mina Array Bea**	**80.61**	**43**	P	**P**	**08 36 59.8**	**+0.4**
	1.4nm,0.8s,mb3.6,baz=234,slow=13,SNR=11						
L04A	**Klamath Falls**	**80.63**	**39**	⇑P	**P**	**08 36 59.7**	**+0.2**
	baz=81						
R08A	**Mina**	**80.69**	**43**	⇓P	**P**	**08 36 59.8**	**0.0**
	baz=81						
N06A	**Buffalo Meadow**	**81.00**	**41**	⇓P	**P**	**08 37 01.3**	**-0.2**
	baz=81						
Q08A	**Gabbs**	**81.10**	**43**	⇓P	**P**	**08 37 02.3**	**+0.4**
	baz=81						
Y13A	**Salome**	**81.12**	**49**	⇑P	**P**	**08 37 02.7**	**+0.6**
	baz=81						
L05A	**Lakeview**	**81.18**	**39**	⇓P	**P**	**08 37 02.7**	**+0.3**
	baz=81						
O07A	**Toulon**	**81.25**	**42**	⇑P	**P**	**08 37 02.7**	**0.0**
	baz=81,SNR=5.5						
P08A	**Dixie Valley**	**81.48**	**42**	⇑P	**P**	**08 37 04.2**	**+0.3**
	baz=82						
Z14A	**Wintersburg**	**81.52**	**50**	⇑P	**P**	**08 37 04.4**	**+0.3**
	baz=82						
X13A	**Yucca**	**81.53**	**48**	⇓P	**P**	**08 37 04.5**	**+0.3**
	baz=82						
N07B	**Gerlach**	**81.55**	**41**	⇑P	**P**	**08 37 04.2**	**-0.1**
	baz=82						
J05A	**Fort Rock**	**81.69**	**38**	⇓P	**P**	**08 37 05.4**	**+0.4**
	baz=82,SNR=6.6						
115A	**Sonoran Desert**	**81.71**	**51**	⇑P	**P**	**08 37 05.4**	**+0.4**
	baz=82						
W13A	**Hualapai Mount**	**81.75**	**48**	⇓P	**P**	**08 37 05.4**	**+0.1**
	baz=82						
Y14A	**Wickenburg**	**81.78**	**49**	⇑P	**P**	**08 37 05.5**	**+0.1**
	baz=82						
R10A	**Warm Springs**	**81.83**	**44**	⇓P	**P**	**08 37 05.9**	**+0.2**
	baz=82,SNR=6.0						
K06A	**Valley Falls**	**81.97**	**39**	⇑P	**P**	**08 37 06.5**	**+0.1**
	baz=82						
P09A	**Austin**	**82.00**	**43**	⇓P	**P**	**08 37 06.2**	**-0.3**
	baz=82						
116A	**Eloy**	**82.02**	**51**	⇑P	**P**	**08 37 07.0**	**+0.4**
	baz=82						
L07A	**Adell**	**82.05**	**40**	⇑P	**P**	**08 37 07.2**	**+0.4**
	baz=82						
N08A	**GE Springer Mi**	**82.07**	**41**	⇑P	**P**	**08 37 07.4**	**+0.5**
	baz=82						
X14A	**Yava**	**82.13**	**49**	⇑P	**P**	**08 37 07.7**	**+0.5**
	baz=82						
I05A	**Bend**	**82.21**	**37**	⇓P	**P**	**08 37 07.6**	**0.0**
	baz=82						
M08A	**Happy Creek Ra**	**82.30**	**41**	⇓P	**P**	**08 37 08.4**	**+0.3**
	baz=82						
J06A	**Christmas Vall**	**82.30**	**38**	⇓P	**P**	**08 37 07.7**	**-0.4**
	baz=82						
O09A	**Fish Creek Ran**	**82.31**	**42**	⇓P	**P**	**08 37 08.2**	**0.0**
	baz=82						
W14A	**Seligman**	**82.37**	**48**	⇓P	**P**	**08 37 09.1**	**+0.6**
	baz=82,SNR=5.6						
E03A	**Lebam**	**82.45**	**34**	⇓P	**P**	**08 37 08.6**	**-0.2**
	baz=83						
P10A	**Eureka**	**82.47**	**43**	⇑P	**P**	**08 37 08.7**	**-0.2**
	baz=83						
N09A	**Rock Creek Ran**	**82.49**	**42**	⇓P	**P**	**08 37 08.9**	**-0.2**
	baz=83						
H05A	**Madras**	**82.53**	**37**	⇓P	**P**	**08 37 09.1**	**-0.2**
	baz=83						
X15A	**Humboldt**	**82.60**	**49**	⇑P	**P**	**08 37 10.0**	**+0.4**
	baz=83,SNR=5.0						
I06A	**Prineville**	**82.69**	**38**	⇓P	**P**	**08 37 10.1**	**+0.1**
	baz=83,SNR=7.1						
L08A	**Fields**	**82.75**	**40**	⇓P	**P**	**08 37 10.2**	**-0.2**
	baz=83						
M09A	**Marrel Ranch,**	**82.86**	**41**	⇓P	**P**	**08 37 11.1**	**+0.2**
	baz=83						
K08A	**Mann Creek Ran**	**82.98**	**40**	⇓P	**P**	**08 37 11.

BRG	**Berggiesshubel**	**148.04**	**346**	*e*P		PKPdf	08 44 26.7	+2.0
	comp=Z,2.2nm,0.5s								
GERES	**GERESS Array B**	**149.99**	**345**	PKPbc		PKPbc	08 44 32.2	-1.1
	comp=Z,2.2nm,0.7s,baz=11,slow=2.7,SNR=12								

TEH ***23*** *08:35:47.4, 2782N×5549E, h17km, ML4.2*
MOS ***23*** *08:36:07.7±1.1, 2731N×5579E, h10km, mb4.9/6, Error ellipse: s-maj=14.1km s-min=8.9km az=110.3*
ISCJB ***23*** *08:36:08.8±0.3, 2737N±003×5570E±003, h10km, mb4.3/31, MS3.4/5, Error ellipse: s-maj=5.3km s-min=3.6km az=60.2*
BJI ***23*** *08:36:09.1, 2725N×5571E, h26km, mB4.7, mb4.5, Ms4.2, Msz4.0*
CSEM ***23*** *08:36:10.2±0.1, 2732N×5572E, h20km, mb4.6/14, Error ellipse: s-maj=2.7km s-min=1.8km az=37.0*
THR ***23*** *08:36:12.3±0.3, 2745N×5585E, h17km±6km, ML4.4*
NEIC ***23*** *08:36:12.2, 2750N×5584E, h13km, mb4.4/15, ML4.5(THR), MN4.2(TEH), After THR.*
IDC ***23*** *08:36:15.6±2.6, 2737N×5585E, h63km±29km, mb3.7/13, mb1 3.9/15, mb1mx3.7/26, mbtmp4.0/15, ML4.0/1, MS3.0/5, Ms1 3.0/5, ms1mx2.7/36, Error ellipse: s-maj=18.2km s-min=14.9km az=71.0*

ISC 23 08:36:11.2±0.3, 2742N±003×5576E±003, h10km, n113, σ1§23/128, mb4.3/31, MS3.4/5, 7C-3D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.36**	**93**	*e*PG	**Pg**	**08 36 18.7**	**+0.3**
BNDS				*e*SG	**Sg**	**08 36 23.6**	**+0.2**
BNDS				AML	AML	08 36 26.1	
	comp=N,47μm,0.5s						
BNDS	**Bandar-Abbas**	**0.36**	**93**	*e*Pg	**Pg**	**08 36 18.0**	**-0.4**
BNDS				*e*Sg	**Sg**	**08 36 23.0**	**-0.3**
BNDS	**Bandar-Abbas**	**0.36**	**93**	*e*Pg	**Pg**	**08 36 18.7**	**+0.3**
	SNR=111						
BNDS				*e*Sg	**Sg**	**08 36 23.5**	**+0.2**
	SNR=111						
BANOM	**Banah**	**1.56**	**162**	⇑P	**Pn**	**08 36 40.4**	**+1.4**
	SNR=340						
HATD	**Hatta, Dubai**	**2.60**	**173**	⇑P	**Pn**	**08 36 56.1**	**+2.8**
	SNR=21						
GHIR	**Ghir-Karzin**	**2.60**	**290**	*e*PN	**Pn**	**08 36 56.7**	**+3.3**
GHIR				AML	AML	08 37 52.4	
	comp=E,985nm,0.5s						
GHIR				AML	AML	08 37 54.9	
	comp=N,1μm,0.6s						
GHIR	**Ghir-Karzin**	**2.60**	**290**	*e*Pn	**Pn**	**08 36 56.0**	**+2.6**
KRBR	**Kerman**	**2.70**	**19**	*e*PN	**Pn**	**08 36 56.5**	**+1.8**
KRBR				AML	AML	08 37 35.8	
	comp=E,2μm,0.4s						
KRBR				AML	AML	08 37 36.7	
	comp=N,2μm,0.5s						
KRBR	**Kerman**	**2.70**	**19**	*e*Pn	**Pn**	**08 36 56.0**	**+1.3**
KRBR				*e*Sn	**Sn**	**08 37 28.0**	**+0.5**
KRBR	**Kerman**	**2.70**	**19**	*e*Pn	**Pn**	**08 36 56.5**	**+1.8**
	SNR=52						
KRBR				*e*Sn	**Sn**	**08 37 28.0**	**+0.5**
ASHO	**Ashiyiah**	**2.73**	**174**	⇓P	**Pn**	**08 36 58.0**	**+2.9**
	SNR=353						
ISRV	**Sarvestan**	**3.05**	**311**	*e*Pn	**Pn**	**08 37 01.5**	**+2.1**
ISRV	**Sarvestan**	**3.05**	**311**	Pn	**Pn**	**08 37 01.4**	**+2.0**
IMEH	**Mehriz**	**4.08**	**346**	*e*Pn	**Pn**	**08 37 13.0**	**-0.7**
IMEH				*e*Pn	**Pn**	**08 37 15.6**	**+1.9**
IMEH				*e*Sn	**Sn**	**08 37 56.5**	**-5.1**
IMEH	**Mehriz**	**4.08**	**346**	Pn	**Pn**	**08 37 12.9**	**-0.8**
IMEH				Sn	**Sn**	**08 37 56.4**	**-5.2**
IMEH	**Mehriz**	**4.08**	**346**	*e*Pn	**Pn**	**08 37 15.6**	**+1.9**
IMEH				Sn	**Sn**	**08 37 56.4**	**-5.2**
IBAF	**Bafgh**	**4.16**	**358**	*e*Pn	**Pn**	**08 37 16.2**	**+1.4**
IBAF	**Bafgh**	**4.16**	**358**	Pn	**Pn**	**08 37 16.1**	**+1.3**
BIDO	**Bidbid**	**4.43**	**151**	⇑P	**Pn**	**08 37 19.1**	**+0.6**
	SNR=7.8						
ISAD	**Sadrabad**	**4.83**	**339**	*e*Pn	**Pn**	**08 37 25.0**	**+1.0**
ISAD				*e*Sn	**Sn**	**08 38 13.6**	**-6.4**
ISAD	**Sadrabad**	**4.83**	**339**	*e*Pn	**Pn**	**08 37 25.0**	**+1.0**
ISAD				Sn	**Sn**	**08 38 13.5**	**-6.5**
WSAR	**Wadi Sarin**	**4.90**	**147**	P	**Pn**	**08 37 25.8**	**+0.9**
	comp=N,5.8nm,0.3s,baz=317,slow=9.0,SNR=81						
WSAR				S	**Sn**	**08 38 20.7**	**-1.0**
	comp=N,7.2nm,0.3s,baz=162,slow=17,SNR=6.0						
ZHSF	**Zahedan**	**4.92**	**62**	*e*PN	**Pn**	**08 37 26.7**	**+1.4**
ZHSF	**Zahedan**	**4.92**	**62**	*e*Pn	**Pn**	**08 37 26.0**	**+0.7**
ICHK	**Chekchek**	**4.95**	**347**	*e*Pn	**Pn**	**08 37 27.3**	**+1.6**
WBK	**Wadi Bani Khal**	**5.60**	**148**	⇓P	**Pn**	**08 37 35.3**	**+0.8**
	SNR=10						
IGAR	**Garneh**	**5.72**	**328**	*e*Pn	**Pn**	**08 37 40.5**	**+4.3**
IKOO		**5.73**	**29**	*e*Pn	**Pn**	**08 37 36.7**	**+0.4**
IZEF	**Zefreh**	**6.22**	**332**	*e*Pn	**Pn**	**08 37 43.7**	**+0.7**
IZEF				*e*Sn	**Sn**	**08 38 46.5**	**-7.6**
IZEF	**Zefreh**	**6.22**	**332**	Pn	**Pn**	**08 37 43.6**	**+0.6**
IZEF				Sn	**Sn**	**08 38 46.5**	**-7.6**
IZEF	**Zefreh**	**6.22**	**332**	*e*Pn	**Pn**	**08 37 43.7**	**+0.7**
IPIR	**Pirpir**	**6.74**	**322**	*e*Pn	**Pn**	**08 37 51.2**	**+1.1**
IPIR				*e*Pn	**Pn**	**08 37 52.3**	**+2.2**
IPIR				*e*Sn	**Sn**	**08 38 58.9**	**-8.0**
IPIR	**Pirpir**	**6.74**	**322**	Pn	**Pn**	**08 37 51.1**	**+1.0**
IPIR				Sn	**Sn**	**08 38 58.9**	**-8.0**
IKLH	**Kalahroud**	**6.90**	**329**	*e*Pn	**Pn**	**08 37 53.1**	**+0.6**
QRN	**Al-Qurain**	**7.05**	**283**	*e*P	**Pn**	**08 37 54.8**	**+0.2**
QRN				AML	AML	08 39 14.5	
	comp=Z,290nm,0.6s						
UMR	**Umm Al-Rimmam**	**7.39**	**289**	*e*P	**Pn**	**08 37 59.0**	**-0.2**
UMR				AML	AML	08 39 20.1	
	comp=Z,47nm,0.5s						
RDF	**Al-Radifah**	**7.40**	**284**	*e*P	**Pn**	**08 37 59.1**	**-0.2**
RDF				AML	AML	08 39 19.7	
	comp=Z,49nm,0.5s						
ISFB	**Sefidab**	**7.55**	**337**	*e*Pn	**Pn**	**08 38 02.3**	**+1.0**
NAY	**Al-Naaiem**	**7.73**	**286**	*e*P	**Pn**	**08 38 03.5**	**-0.2**
NAY				AML	AML	08 39 28.5	
	comp=Z,21nm,0.6s						
RST	**Umm Al-Ruwaisa**	**7.99**	**287**	*e*P	**Pn**	**08 38 07.1**	**-0.3**
RST				AML	AML	08 39 34.6	
	comp=Z,54nm,0.6s						
IANJ	**Anjiloo**	**8.18**	**349**	*e*Pn	**Pn**	**08 38 11.2**	**+1.2**
IANJ	**Anjiloo**	**8.18**	**349**	Pn	**Pn**	**08 38 11.1**	**+1.1**
IVRN	**Varamin**	**8.31**	**336**	*e*Pn	**Pn**	**08 38 12.4**	**+0.7**
IFIR	**Firoozkooh**	**8.59**	**343**	*e*Pn	**Pn**	**08 38 16.4**	**+0.8**
ISHM	**Shahmirzad**	**8.62**	**346**	*e*Pn	**Pn**	**08 38 17.0**	**+0.9**
ISHM	**Shahmirzad**	**8.62**	**346**	Pn	**Pn**	**08 38 16.9**	**+0.8**
IGLO	**Galoogah**	**9.07**	**348**	*e*Pn	**Pn**	**08 38 26.2**	**+4.0**
IPRN	**Paran-Amol**	**9.29**	**342**	*e*Pn	**Pn**	**08 38 27.1**	**+1.9**
GNI	**Garni**	**15.64**	**327**	P	**Pn**	**08 39 52.1**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=141,slow=17,SNR=2.4						
GNI				LR	LR	08 46 14.5	
	comp=Z,38nm,19.1s,baz=128,slow=38						
GNI	**Garni**	**15.64**	**327**	*e*P	**Pn**	**08 39 52.4**	**+0.7**
GNI				pmax	pmax		
	comp=Z,11nm,0.5s						
GNI	**Garni**	**15.64**	**327**	*e*P	**Pn**	**08 39 52.4**	**+0.7**
	comp=Z,11nm,0.5s						
GNI	**Garni**	**15.64**	**327**	*e*P	**Pn**	**08 39 52.4**	**+0.7**
	comp=Z,11nm,0.5s						
ASF	**Jabal al Asfar**	**17.04**	**291**	P	**Pn**	**08 40 14.4**	**+4.8**
	comp=Z,0.2nm,0.3s,baz=21,slow=4.5,SNR=2.9						
ZEI	**Tsey**	**18.11**	**331**	*e*P	**Pn**	**08 40 32.1**	**+9.3**
MMAI	**Mount Meron Ar**	**18.45**	**293**	LR	LR	08 47 42.5	
	comp=Z,16nm,20.4s,baz=165,slow=37						
KIV	**Kislovodsk**	**19.58**	**331**	*e*P	**Pn**	**08 40 38.1**	**-2.6**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	**Kislovodsk**	**19.58**	**331**	*e*P	**Pn**	**08 40 38.1**	**-2.6**
	comp=Z,2.0nm,0.9s						
AAK	**Ala-Archa**	**21.51**	**40**	*e*P	**P**	**08 40 59.1**	**-1.2**
	comp=Z,2.1nm,0.5s,mb3.8						
AAK	**Ala-Archa**	**21.51**	**40**	*e*P	**P**	**08 40 59.1**	**-1.2**
BR131	**Keskin Array S**	**22.08**	**309**	*e*P	**P**	**08 41 06.7**	**+0.3**
	comp=Z,3.6nm,0.6s,mb4.0						
BR131	**Keskin Array S**	**22.08**	**309**	*e*P	**P**	**08 41 06.7**	**+0.3**
	comp=Z,3.6nm,0.6s,mb4.0						
BRTR	**Keskin Array B**	**22.08**	**309**	P	**P**	**08 41 07.0**	**+0.6**
	comp=Z,1.5nm,0.6s,mb3.6,baz=129,slow=12,SNR=9.8						
ANTO	**Ankara**	**22.73**	**309**	*e*P	**P**	**08 41 13.8**	**+0.6**
ANTO				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.3						
ANTO	**Ankara**	**22.73**	**309**	*e*P	**P**	**08 41 13.8**	**+0.5**
	comp=Z,5.5nm,0.4s,mb4.3						
ANTO	**Ankara**	**22.73**	**309**	*e*P	**P**	**08 41 13.8**	**+0.6**
	comp=Z,5.0nm,0.4s,mb4.3						
AKTK	**Aktyubinsk**	**23.05**	**4**	P	**P**	**08 41 15.7**	**-1.0**
AKTO	**Aktyubinsk**	**23.05**	**4**	P	**P**	**08 41 15.7**	**-1.0**
	comp=Z,1.4nm,0.4s,mb3.7,baz=158,slow=12,SNR=8.1						
KOLN	**Koldanda**	**24.66**	**83**	*e*P	**P**	**08 41 29.0**	**-3.0**
	comp=Z,6.0nm,0.5s,mb4.3						
GKN	**Gorkha**	**25.55**	**82**	*e*P	**P**	**08 41 40.3**	**+0.2**
	comp=Z,12nm,0.6s,mb4.6						
DMN	**Daman**	**26.00**	**83**	*e*P	**P**	**08 41 43.1**	**-1.1**
	comp=Z,7.8nm,0.6s,mb4.4						
KKN	**Kakani**	**26.14**	**82**	*e*P	**P**	**08 41 45.5**	**+0.1**
	comp=Z,16nm,0.5s,mb4.8						
KKN	**Kakani**	**26.14**	**82**	*e*P	**P**	**08 41 45.5**	**+0.1**
KKN				pmax	pmax		
	comp=Z,16nm,0.5s,mb4.8						
PKI	**Pulchoki**	**26.27**	**83**	*e*P	**P**	**08 41 46.1**	**-0.6**
	comp=Z,12nm,0.6s,mb4.7						
PKI	**Pulchoki**	**26.27**	**83**	*e*P	**P**	**08 41 46.1**	**-0.6**
PKI				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.6						
GUN	**Gumba**	**26.65**	**82**	*e*P	**P**	**08 41 51.0**	**+0.9**
JIRN	**Jiri**	**26.95**	**82**	*e*P	**P**	**08 41 53.4**	**+0.6**
	comp=Z,18nm,0.6s,mb4.8						
BRVK	**Borovoye**	**27.80**	**19**	*e*P	**P**	**08 41 59.8**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb4.9						
BRVK	**Borovoye**	**27.80**	**19**	*e*P	**P**	**08 41 59.8**	**-0.6**
	comp=Z,0.9nm,0.3s,mb3.9						
BRVK	**Borovoye**	**27.80**	**19**	*e*P	**P**	**08 41 59.8**	**-0.6**
	comp=Z,10.0nm,0.3s,mb4.9						
BVAR	**Borovoye Array**	**27.80**	**19**	P	**P**	**08 41 59.2**	**-1.3**
	comp=Z,1.1nm,0.3s,mb3.9,baz=190,slow=6.3,SNR=6.4						
BVAR				LR	LR	08 54 47.5	
	comp=Z,65nm,18.2s,MS3.2,baz=141,slow=40						
CHKZ	**Chkalovo**	**28.44**	**19**	*e*P	**P**	**08 42 05.0**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb4.9						
CHKZ	**Chkalovo**	**28.44**	**19**	*e*P	**P**	**08 42 05.0**	**-1.1**
	comp=Z,0.6nm,0.3s,mb3.7						
CHKZ	**Chkalovo**	**28.44**	**19**	*e*P	**P**	**08 42 05.0**	**-1.1**
	comp=Z,10.0nm,0.3s,mb4.9						
MKAR	**Makanchi Array**	**28.45**	**40**	P	**P**	**08 42 05.0**	**-1.2**
	comp=Z,0.3nm,0.3s,mb3.3,baz=220,slow=7.5,SNR=5.1						
MKAR	**Makanchi Array**	**28.45**	**40**	P	**P**	**08 42 05.0**	**-1.2**
ARU	**Arti**	**29.06**	**3**	*e*P	**P**	**08 42 07.4**	**-4.3**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
MLR	**Muntele Rosu**	**29.77**	**315**	LR	LR	08 56 16.8	
	comp=Z,35nm,19.9s,MS3.0,baz=313,slow=40						
AKASG	**Malin Array Be**	**30.77**	**326**	P	**P**	**08 42 25.1**	**-1.7**
	comp=Z,0.6nm,0.4s,mb3.8,baz=127,slow=8.6,SNR=4.4						
AKBB	**Malin Array Si**	**30.77**	**326**	*e*P	**P**	**08 42 26.3**	**-0.5**
ZAL	**Zalesovo**	**34.01**	**31**	P	**P**	**08 42 53.3**	**-1.9**
	comp=Z,3.5nm,0.3s,mb4.7,baz=216,slow=11,SNR=4.2						
GERES	**GERESS Array B**	**38.75**	**315**	P	**P**	**08 43 33.4**	**-2.3**
	comp=Z,0.6nm,0.4s,mb3.7,baz=119,slow=8.0,SNR=4.5						
KHC	**Kasperske Hory**	**38.92**	**315**	*e*P	**P**	**08 43 36.0**	**-1.1**
KHC				*ex*	x	08 43 46.5	
KHC				*ex*	x	08 44 32.0	
FINES	**FINESS Array B**	**39.40**	**338**	P	**P**	**08 43 39.2**	**-1.8**
	comp=Z,1.2nm,0.4s,mb4.0,baz=139,slow=10,SNR=21						
FINES	**FINESS Array B**	**39.40**	**338**	*i*P	**P**	**08 43 39.7**	**-1.4**
SQTA	**Sankt Quirin**	**39.92**	**312**	⇑*i*P	**P**	**08 43 44.4**	**-1.0**
	comp=Z,0.7nm,0.5s,mb3.7						
MOTA	**Moosalm**	**40.02**	**312**	⇑*i*P	**P**	**08 43 44.9**	**-1.4**
	comp=Z,3.8nm,0.4s,mb4.4						
MOTA	**Moosalm**	**40.02**	**312**	⇑*i*P	**P**	**08 43 44.9**	**-1.4**
MOTA				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
DAVA	**Damuels**	**40.82**	**312**	⇑*i*P	**P**	**08 43 51.0**	**-1.9**
	comp=Z,11nm,0.4s,mb4.8						
SONM	**Songino Array**	**44.08**	**48**	LR	LR	09 04 49.9	
	comp=Z,26nm,19.0s,MS3.2,baz=85,slow=39						
NB2	**NORSAR Subarra**	**44.89**	**331**	P	**P**	**08 44 23.7**	**-2.2**
	comp=Z,0.8nm,0.4s,mb3.9,baz=118,slow=8.6						
NOA	**NORSAR Array B**	**44.89**	**331**	P	**P**	**08 44 23.9**	**-2.0**
	comp=Z,0.5nm,0.5s,mb3.6,baz=120,slow=7.4,SNR=8.0						
ARCES	**ARCESS Array B**	**45.67**	**346**	P	**P**	**08 44 30.8**	**-1.3**
	comp=Z,0.8nm,0.5s,mb3.9,baz=139,slow=10.0,SNR=9.1						
HHC	**Hu-ho-hao-te**	**47.36**	**59**	*e*P	**P**	**08 44 46.8**	**+1.5**
HHC				AP	pP	08 44 51.3	+2.8
HHC				XP	sP	08 44 53.8	+4.1
HHC				PCP	PcP	08 46 19.5	+3.5
HHC				PP	PP	08 46 37.3	+0.8
HHC				SCP	ScP	08 50 10.4	+0.3
HHC				PCS	PcS	08 50 12.3	+1.0
HHC				S	**S**	**08 51 38.1**	**-1.0**
HHC				SCS	ScS	08 54 37.8	-1.7
HHC				SS	SS	08 54 58.6	-8.0
HHC				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.7						
HHC				AMB	AMB		
	comp=Z,44nm,6.1s						
HHC				LR	LR		
	comp=N,91nm,21.8s,MS4.1						
HHC				LR	LR		
	comp=E,210nm,22.6s,MS4.1						
TOA0	**Torodi Ar. Sit**	**52.29**	**266**	*e*P	**P**	**08 45 22.4**	**-0.4**
TOA0	**Torodi Ar. Sit**	**52.29**	**266**	*e*P	**P**	**08 45 22.4**	**-0.4**
TORD	**Torodi Ar. Bea**	**52.29**	**266**	P	**P**	**08 45 22.1**	**-0.7**
	comp=E,2.7nm,0.5s,mb4.5,baz=64,slow=7.2,SNR=58						
NJ2	**Nanjing**	**54.30**	**69**	*e*P	**P**	**08 45 39.3**	**+1.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
SNY	**Shenyang**	**56.28**	**56**	⇓P	**P**	**08 45 47.0**	**-4.9**
SNY				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb5.0						
MDJ	**Mudanjiang**	**60.17**	**52**	P	**P**	**08 46 18.3**	**-0.9**
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.7s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,68nm,5.2s						
MDJ				LR	LR		
	comp=N,34nm,22.4s,MS3.6						
MDJ				LR	LR		
	comp=E,33nm,18.5s,MS3.6						
MDJ				LR	LR		
	comp=Z,38nm,17.1s,MS3.6						
DBIC	**Dimbokro**	**60.92**	**262**	P	**P**	**08 46 22.9**	**-1.3**
	comp=Z,1.1nm,0.3s,mb4.4,baz=46,slow=8.8,SNR=12						
DBIC	**Dimbokro**	**60.92**	**262**	*e*P	**P**	**08 46 23.7**	**-0.5**
DBIC	**Dimbokro**	**60.92**	**262**	*e*P	**P**	**08 46 23.7**	**-0.5**
WRA	**Warramunga Arr**	**89.41**	**113**	P	**P**	**08 49 04.5**	**-3.7**
	comp=Z,0.3nm,0.8s,mb3.7,baz=316,slow=3.9,SNR=3.2						

WEL 23 08:38:27.7±0.4, 3714S×17748E, h12km, ML3.5/6, Error ellipse: s-maj=3.2km s-min=2.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.45**	**211**	P*	Pg	08 38 36.2	-0.4
WIZ				S*	Sg	08 38 42.8	+0.2
MXZ	**Matakaoa Point**	**0.78**	**123**	P*	Pb	08 38 41.8	-1.5
MXZ				S*	Sb	08 38 51.5	-2.2
MYRZ	**Mayor Island**	**1.00**	**262**	*e*P*	Pb	08 38 46.2	-0.7
PUZ	**Puketiti**	**1.12**	**147**	*e*P*	Pb	08 38 47.4	-1.6
URZ	**Urewera**	**1.15**	**195**	P*	Pb	08 38 47.5	-2.1
MWZ	**Matawai**	**1.19**	**178**	*e*P*	Pb	08 38 48.2	-2.1
KUZ	**Kuaotunu**	**1.46**	**285**	PN	Pn	08 38 52.3	-1.6
KUZ				SN	Sn	08 39 11.6	-1.4
OUZ	**Omahuta**	**3.68**	**300**	PN	Pn	08 39 24.9	+0.5

ISCJB ***23*** *09:06:54.1±1.4, 2743N±004×5562E±005, h3km±12km, Error ellipse: s-maj=7.4km s-min=6.9km az=135.8*
THR ***23*** *09:06:56.5±0.3, 2744N×5581E, h15km±7km, ML3.9*
CSEM ***23*** *09:06:56.2±0.1, 2750N×5575E, h10km, ML3.8, Error ellipse: s-maj=6.0km s-min=3.7km az=75.0*
KISR ***23*** *09:06:56.7±1.0, 2824N×5554E, h18km±999km, ML3.9*
TEH ***23*** *09:07:09.3, 2817N×5538E, h18km, Mn3.8*

ISC 23 09:06:56.0±1.5, 2743N±004×5569E±005, h2km±12km, n22, σ1§17/29, 3C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.43**	**94**	*e*PG	**Pg**	**09 07 03.4**	**-0.9**
BNDS				*e*SG	**Sg**	**09 07 08.5**	**-1.3**
BNDS				AML	AML	09 07 10.7	
	comp=N,14μm,0.5s						
BNDS				AML	AML	09 07 10.7	
	comp=E,8μm,0.4s						
BANOM	**Banah**	**1.59**	**160**	⇑P	**Pn**	**09 07 25.3**	**+0.1**
	SNR=192						
GHIR	**Ghir-Karzin**	**2.54**	**290**	*e*PN	**Pn**	**09 07 40.6**	**+2.4**
HATD	**Hatta, Dubai**	**2.62**	**171**	⇓P	**Pn**	**09 07 40.5**	**+1.2**
	SNR=9.1						
KRBR	**Kerman**	**2.71**	**20**	*e*PN	**Pn**	**09 07 41.2**	**+0.6**
KRBR				Sn	**Sn**	**09 08 13.9**	**-0.1**
KRBR				AML	AML	09 08 20.3	
	comp=N,558nm,0.3s						
KRBR				AML	AML	09 08 20.4	
	comp=E,647nm,0.5s						
KRBR	**Kerman**	**2.71**	**20**	*e*Pn	**Pn**	**09 07 41.2**	**+0.6**
	SNR=52						
KRBR				Sn	**Sn**	**09 08 13.9**	**-0.1**
	SNR=52						
ASHO	**Ashiyiah**	**2.75**	**173**	⇑P	**Pn**	**09 07 42.7**	**+1.5**
	SNR=121						
ISRV	**Sarvestan**	**2.99**	**311**	*e*Pn	**Pn**	**09 07 46.1**	**+1.7**
IMEH	**Mehriz**	**4.06**	**347**	*e*Pn	**Pn**	**09 08 00.4**	**+1.3**
HOQ	**Hoqain**	**4.10**	**159**	⇑P	**Pn**	**09 07 58.6**	**-1.1**
IBAF	**Bafgh**	**4.15**	**359**	*e*Pn	**Pn**	**09 08 00.7**	**+0.4**
ZHSF	**Zahedan**	**4.98**	**63**	*e*PN	**Pn**	**09 08 11.5**	**-0.2**
WBK	**Wadi Bani Khal**	**5.64**	**147**	⇓P	**Pn**	**09 08 19.7**	**-1.2**
	SNR=6.2						
IZEF	**Zefreh**	**6.18**	**333**	*e*Pn	**Pn**	**09 08 27.9**	**-0.3**
IPIR	**Pirpir**	**6.69**	**323**	*e*Pn	**Pn**	**09 08 35.6**	**+0.4**
IKLH	**Kalahroud**	**6.86**	**330**	*e*Pn	**Pn**	**09 08 37.6**	**0.0**
QRN	**Al-Qurain**	**6.99**	**283**	*e*P	**Pn**	**09 08 39.2**	**-0.1**
QRN				*e*S	**Sn**	**09 09 56.5**	**-3.0**
QRN				AML	AML	09 09 59.4	
	comp=Z,90nm,0.4s						
KBD	**Kabd**	**7.26**	**286**	*e*P	**Pn**	**09 08 43.2**	**+0.1**
RDF	**Al-Radifah**	**7.34**	**284**	*e*P	**Pn**	**09 08 44.2**	**+0.1**
RDF				*e*S	**Sn**	**09 10 04.8**	**-3.2**
RDF				AMb	AMB	09 10 06.8	
	comp=Z,22nm,0.5s						
NAY	**Al-Naaiem**	**7.66**	**286**	*e*P	**Pn**	**09 08 48.2**	**-0.4**
NAY				AML	AML	09 10 08.7	
	comp=Z,4.2nm,0.5s						
NAY				*e*S	**Sn**	**09 10 12.7**	**-3.2**
RST	**Umm Al-Ruwaisa**	**7.92**	**287**	*e*P	**Pn**	**09 08 51.7**	**-0.5**
RST				*e*S	**Sn**	**09 10 17.7**	**-4.7**
RST				AML	AML	09 10 19.8	
	comp=Z,13nm,0.5s						
SHAO	**Shalim**	**9.36**	**180**	P	**Pn**	**09 09 13.2**	**+1.3**
	SNR=8.3						

ISCJB ***23*** *09:09:38.9±0.5, 6024N±003×2515E±006, h0km, Error ellipse: s-maj=5.1km s-min=3.5km az=117.0*
BER ***23*** *09:09:39.9±1.6, 6020N×2564E, h0km, ML2.0(NAO), Suspected explosion*
NAO ***23*** *09:09:39.7±1.7, 6020N×2562E, ML2.0*
IDC ***23*** *09:09:40.7±1.8, 6025N×2547E, h0km, mb1 2.9/2, mb1mx2.8/20, mbtmp2.8/2, ML2.9/2, Error ellipse: s-maj=16.8km s-min=8.6km az=143.0*
HEL ***23*** *09:09:40.4±0.1, 6023N×2520E, h0km, ML2.1, ML2.0(NAO), Explosion*

ISC 23 09:09:39.9±0.5, 6025N±003×2520E±006, h0km, n18, σ1§09/36, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.40**	**266**	*e*P	**Pg**	**09 09 47.2**	**-0.4**
MEF				*e*S	**Sg**	**09 09 52.3**	**-0.5**
PVF	**Pernaja**	**0.44**	**48**	*e*P	**Pg**	**09 09 48.4**	**0.0**
PVF				*e*S	**Sg**	**09 09 54.5**	**+0.3**
FIA0	**FINESS Array S**	**1.27**	**19**	*e*PB	**Pg**	**09 10 03.8**	**-0.5**
FIA0				*e*S	**Sg**	**09 10 19.7**	**-1.1**
FIA0				*e*RG		09 10 25.5	
FIA0	**FINESS Array S**	**1.27**	**19**	Pg	**Pg**	**09 10 03.8**	**-0.5**
	baz=190,slow=18						
FIA0				Lg		09 10 19.7	
	baz=185,slow=37						
FIA0				Rg		09 10 25.5	
	baz=191,slow=37						
FINES	**FINESS Array B**	**1.27**	**19**	Pg	**Pg**	**09 10 03.8**	**-0.6**
	3.4nm,0.3s,baz=196,slow=16,SNR=63						
FINES				Pn	**Pn**	**09 10 06.4**	**+1.4**
	3.4nm,0.3s,baz=198,slow=12,SNR=74						
FINES				Lg		09 10 19.9	
	1.8nm,0.3s,baz=197,slow=27,SNR=13						
FINES				Sn	**Sn**	**09 10 25.6**	**+2.9**
	7.0nm,0.3s,baz=194,slow=23,SNR=26						
FINES				Rg		09 10 28.6

JHO	**Hitachi**	**5.42**	**349**	P	**Pn**	**09 20 39.3**	**-2.1**
JHO				*e*S	**Sn**	**09 21 37.1**	**-6.1**
MJAR	**Matsushiro Arr**	**6.06**	**331**	Pn	**Pn**	**09 20 50.5**	**+0.3**
	2.4nm,0.3s,baz=158,slow=11,SNR=14						
MJAR				Sn	**Sn**	**09 21 56.7**	**-2.2**
	0.3nm,0.3s,baz=201,slow=14,SNR=3.4						
MJAR	**Matsushiro Arr**	**6.06**	**331**	P	**Pn**	**09 20 50.5**	**+0.3**
MJAR						09 21 56.7	
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	**Matsushiro**	**6.06**	**331**	*e*P	**Pn**	**09 20 51.3**	**+1.1**
MAJO				*e*		09 21 58.7	
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MAJO	**Matsushiro**	**6.06**	**331**	*e*Pn	**Pn**	**09 20 51.3**	**+1.1**
	comp=Z,10nm,0.4s						
MAJO				*e*Sn	**Sn**	**09 21 58.7**	**-0.3**
MAT	**Matsushiro**	**6.06**	**331**	P	**Pn**	**09 20 51.0**	**+0.8**
MAT				S	**Sn**	**09 22 00.4**	**+1.4**
ASAJ	**Asahikawa**	**12.82**	**2**	Pn	**Pn**	**09 22 20.3**	**-2.6**
	comp=Z,0.6nm,0.3s,baz=188,slow=7.1,SNR=4.6						
ASAJ				Sn	**Sn**	**09 24 32.8**	**-12**
	comp=Z,0.1nm,0.3s,baz=58,slow=19,SNR=2.4						
BJI	**Beijing**	**22.57**	**300**	*e*P	**P**	**09 24 24.8**	**+4.1**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.1						
ULN	**Ulaanbaatar**	**31.20**	**312**	*e*P	**P**	**09 25 40.2**	**+0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**31.20**	**312**	*e*P	**P**	**09 25 40.2**	**+0.6**
	comp=Z,1.5nm,0.8s,mb3.9						
SONM	**Songino Array**	**31.61**	**312**	P	**P**	**09 25 43.1**	**-0.1**
	comp=Z,1.9nm,0.9s,mb3.9,baz=114,slow=9.2,SNR=11						
SONM	**Songino Array**	**31.61**	**312**	P	**P**	**09 25 43.1**	**-0.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAL	**Zalesovo**	**46.21**	**317**	P	**P**	**09 27 45.2**	**-0.1**
	comp=Z,1.3nm,0.4s,mb4.3,baz=166,slow=7.3,SNR=3.1						
ZAL	**Zalesovo**	**46.21**	**317**	P	**P**	**09 27 45.3**	**-0.1**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**47.67**	**307**	P	**P**	**09 27 56.9**	**+0.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=82,slow=9.1,SNR=8.4						
MKAR	**Makanchi Array**	**47.67**	**307**	P	**P**	**09 27 56.9**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**51.44**	**189**	P	**P**	**09 28 25.2**	**-0.4**
	comp=Z,1.3nm,0.3s,mb4.3,baz=6.6,slow=7.6,SNR=6.1						
WRA	**Warramunga Arr**	**51.44**	**189**	P	**P**	**09 28 25.2**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**55.17**	**189**	P	**P**	**09 28 52.6**	**-0.3**
	comp=Z,0.8nm,0.5s,mb4.0,baz=9.9,slow=5.9,SNR=5.0						
ASAR	**Alice Springs**	**55.17**	**189**	P	**P**	**09 28 52.6**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	**81.45**	**45**	P	**P**	**09 31 37.9**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=317,slow=3.7,SNR=3.3						
SRU	**San Rafael**	**82.93**	**48**	*e*P	**P**	**09 31 45.7**	**+0.5**
SRU				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
SRU	**San Rafael**	**82.93**	**48**	*e*P	**P**	**09 31 45.7**	**+0.5**
	comp=Z,1.2nm,0.6s,mb4.1						
PV10	**Paradox Valley**	**84.30**	**48**	*e*P	**P**	**09 31 54.0**	**+1.8**
PV01	**Paradox Valley**	**84.74**	**48**	*e*P	**P**	**09 31 55.3**	**+0.8**
GEC2	**GERESS Array S**	**87.79**	**329**	P	**P**	**09 32 09.4**	**-0.1**
LPAZ	**La Paz**	**148.88**	**68**	PKPbc	PKPbc	09 39 10.2	+2.1
	comp=Z,0.3nm,0.5s,baz=307,slow=5.1,SNR=3.8						

*NAO **23** 09:19:41.0±2.9, 7801N×865E, ML2.4*
BER 23 09:19:42.1±2.2, 7800N×867E, h11km±18km, MD2.7, ML1.9, ML2.4(NAO), Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.15**	**34**	Pg	Pg	09 20 02.5	-1.6
KBS				Lg		09 20 18.4	
KBS	**Kingsbay**	**1.15**	**34**	*e*P	Pb	09 20 01.9	-2.0
KBS				*e*S	Sb	09 20 16.2	-2.6
KBS				AML	AML	09 20 20.3	
	comp=Z,34nm,0.4s						
SPA0	**Spitsbergen Ar**	**1.61**	**80**	Pn	Pn	09 20 09.5	-1.0
	baz=258,slow=16						
SPA0				Lg		09 20 31.5	
	baz=268,slow=22						
HSP	**Hornsund**	**1.80**	**120**	Pn	Pn	09 20 09.0	-4.1
HSP				Sn	Sn	09 20 30.2	-5.6
HOPEN	**Hopen**	**3.91**	**104**	*e*P	Pn	09 20 39.7	-2.3
HOPEN				*e*S	Sn	09 21 23.6	-4.3

*ISCJB **23** 09:21:22.4±1.5, 76S±0.1×1246E±0.1, h352km±15km, mb3.8/6, Error ellipse: s-maj=21.1km s-min=15.0km az=95.2*
*NEIC **23** 09:21:26.2±1.6, 767S×12476E, h370km±16km, mb4.5/5, Error ellipse: s-maj=15.9km s-min=13.1km az=133.0*
*IDC **23** 09:21:28.1±2.7, 774S×12478E, h388km±31km, mb3.5/5, mb1 3.6/8, mb1mx3.4/17, mbtmp4.3/8, Error ellipse: s-maj=28.5km s-min=14.0km az=62.0*
ISC 23 09:21:26.0±1.5, 77S±0.1×1247E±0.1, h367km±17km, n18, σ0§64/21, mb3.8/6, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**9.10**	**124**	*e*P	**Pn**	**09 23 32.3**	**-0.9**
	21nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.42**	**175**	P	**Pn**	**09 23 49.3**	**+0.6**
	11nm,0.3s,baz=9.0,slow=9.7,SNR=340						
FITZ	**Fitzroy Crossi**	**10.42**	**175**	⇓*i*P	**Pn**	**09 23 49.2**	**+0.4**
	35nm,0.2s						
WRAB	**Tennant Creek**	**15.36**	**144**	*e*P	**P**	**09 24 43.5**	**0.0**
	19nm,0.6s						
WRA	**Warramunga Arr**	**15.36**	**144**	P	**P**	**09 24 43.5**	**-0.1**
	2.2nm,0.3s,baz=316,slow=13,SNR=58						
WRA				S	**S**	**09 27 28.6**	**+1.2**
	0.9nm,0.3s,baz=316,slow=21,SNR=33						
WB2	**Warramunga Arr**	**15.36**	**144**	*e*P	**P**	**09 24 43.3**	**-0.4**
AS31	**Alice Springs**	**18.19**	**152**	*e*P	**P**	**09 25 15.1**	**+1.2**
ASAR	**Alice Springs**	**18.19**	**152**	P	**P**	**09 25 14.4**	**+0.5**
	1.4nm,0.3s,baz=319,slow=7.9,SNR=69						
ASAR				S	**S**	**09 28 21.8**	**-1.0**
	0.0nm,0.3s,baz=331,slow=19,SNR=9.5						
ASAR	**Alice Springs**	**18.19**	**152**	P	**P**	**09 25 14.4**	**+0.5**
ASAR				S	**S**	**09 28 21.8**	**-1.0**
PMG	**Port Moresby**	**22.25**	**96**	P	**P**	**09 25 52.7**	**-0.4**
	22nm,0.9s,mb4.4,baz=324,slow=8.1,SNR=3.1						
FORT	**Forrest**	**23.21**	**173**	*e*P	**P**	**09 26 01.4**	**-0.4**
	8.7nm,0.5s,mb4.2						
KLBR	**Kellerberrin**	**24.68**	**194**	*e*P	**P**	**09 26 14.7**	**-0.3**
MUN	**Mundaring**	**25.46**	**197**	*e*P	**P**	**09 26 21.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**26.09**	**194**	P	**P**	**09 26 27.4**	**-0.1**
	6.6nm,0.7s,mb4.0,baz=42,slow=9.3,SNR=5.9						
STKA	**Stephens Creek**	**28.77**	**149**	P	**P**	**09 26 51.8**	**+0.6**
	2.9nm,0.5s,mb3.7,baz=318,slow=11,SNR=12						
STKA	**Stephens Creek**	**28.77**	**149**	*e*P	**P**	**09 26 51.7**	**+0.5**
	2.6nm,0.7s,mb3.6						
MKAR	**Makanchi Array**	**66.02**	**330**	P	**P**	**09 31 34.9**	**+0.6**
	0.4nm,0.6s,mb3.4,baz=145,slow=5.3,SNR=3.7						
VNDA	**Vanda**	**72.47**	**172**	P	**P**	**09 32 12.8**	**-0.6**
	0.4nm,0.6s,mb3.4,baz=320,slow=8.1,SNR=8.6						

*IDC **23** 10:22:57.1±1.1, 1125S×16224E, h0km, mb3.9/7, mb1 4.1/8, mb1mx4.0/14, mbtmp4.0/8, ML4.5/1, MS3.6/8, Ms1 3.6/8, ms1mx3.3/17, Error ellipse: s-maj=25.8km s-min=24.3km az=76.0*
*ISCJB **23** 10:23:02.5±1.8, 114S±0.1×162.1E±0.1, h48km±17km, mb3.9/8, MS3.6/6, Error ellipse: s-maj=23.4km s-min=12.7km az=108.7*
*NEIC **23** 10:23:03.5±1.8, 1106S×16227E, h55km±16km, mb4.2/6, Error ellipse: s-maj=21.3km s-min=15.9km az=221.0*
ISC 23 10:23:04.5±1.5, 112S±0.1×1622E±0.1, h52km±14km, n20, σ1§18/19, mb3.9/8, MS3.6/6, 1D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.86**	**309**	Pn	**Pn**	**10 23 45.6**	**-1.9**
	62nm,0.3s,baz=109,slow=2.7,SNR=19						
HNR				Sn	**Sn**	**10 24 21.9**	**+1.2**
	556nm,0.3s,baz=268,slow=23,SNR=9.8						
DZM	**Mont Dzumac**	**11.51**	**160**	Pn	**Pn**	**10 25 46.4**	**+0.3**
	0.3nm,0.3s,baz=298,slow=20,SNR=4.3						
DZM				LR	LR	10 29 42.4	
	comp=Z,154nm,18.3s,baz=199,slow=35						
CTA	**Charters Tower**	**17.68**	**238**	P	**Pn**	**10 27 10.1**	**+3.1**
	1.0nm,0.3s,baz=68,slow=13,SNR=29						
CTA				LR	LR	10 32 00.5	
	comp=Z,72nm,19.4s,baz=42,slow=31						
CTA	**Charters Tower**	**17.68**	**238**	⇓*i*P	**Pn**	**10 27 10.0**	**+3.0**
	17nm,1.0s						
CTAO	**Charters Tower**	**17.68**	**238**	*e*P	**Pn**	**10 27 09.5**	**+2.5**
	25nm,0.9s						
AFI	**Afiamalu**	**25.53**	**99**	LR	LR	10 36 39.0	
	comp=Z,147nm,18.8s,MS3.5,baz=24,slow=32						
STKA	**Stephens Creek**	**27.99**	**220**	P	**P**	**10 28 50.5**	**+0.2**
	2.7nm,0.7s,mb4.0,baz=309,slow=18,SNR=2.9						
STKA				LR	LR	10 40 01.7	
	comp=Z,170nm,18.7s,MS3.7,baz=26,slow=37						
STKA	**Stephens Creek**	**27.99**	**220**	*e*P	**P**	**10 28 49.4**	**-0.9**
	2.5nm,0.8s,mb3.9						
WRAB	**Tennant Creek**	**28.15**	**249**	*e*P	**P**	**10 28 51.2**	**-0.5**
	10nm,1.1s,mb4.4						
WB2	**Warramunga Arr**	**28.15**	**249**	*e*P	**P**	**10 28 51.1**	**-0.6**
WRA	**Warramunga Arr**	**28.16**	**249**	P	**P**	**10 28 50.9**	**-0.9**
	1.0nm,0.8s,mb3.5,baz=77,slow=9.3,SNR=12						
WRA				PcP	PcP	10 32 04.5	-0.1
	0.4nm,0.6s,baz=82,slow=3.3,SNR=5.1						
ASAR	**Alice Springs**	**29.62**	**242**	P	**P**	**10 29 04.1**	**-0.6**
	2.0nm,0.9s,mb3.9,baz=64,slow=10.0,SNR=15						
ASAR				PcP	PcP	10 32 07.8	-0.5
	0.4nm,0.7s,baz=94,slow=2.7,SNR=3.6						
ASAR				LR	LR	10 39 57.1	
	comp=Z,116nm,21.9s,MS3.5,baz=162,slow=34						
ASAR	**Alice Springs**	**29.62**	**242**	P	**P**	**10 29 04.1**	**-0.6**
ASAR				PcP	PcP	10 32 07.8	-0.5
FITZ	**Fitzroy Crossi**	**35.97**	**255**	P	**P**	**10 29 59.5**	**-0.7**
	1.9nm,1.0s,mb4.0,baz=75,slow=13,SNR=3.8						
FITZ				LR	LR	10 44 45.5	
	comp=Z,116nm,19.1s,MS3.7,baz=100,slow=36						
FITZ	**Fitzroy Crossi**	**35.97**	**255**	*e*P	**P**	**10 30 00.3**	**+0.1**
	5.7nm,1.1s,mb4.4						
PPT	**Papeete**	**47.03**	**104**	LR	LR	10 48 41.1	
	comp=Z,96nm,19.6s,MS3.8,baz=340,slow=33						
VNDA	**Vanda**	**66.27**	**180**	P	**P**	**10 33 48.3**	**+1.1**
	0.3nm,0.6s,mb3.5,baz=356,slow=8.3,SNR=3.7						
VNDA	**Vanda**	**66.27**	**180**	*e*P	**P**	**10 33 48.3**	**+1.1**
	0.7nm,0.7s,mb3.8						
SONM	**Songino Array**	**76.80**	**325**	P	**P**	**10 34 52.7**	**+2.2**
	1.1nm,0.7s,mb3.9,baz=141,slow=4.4,SNR=5.4						
SONM				LR	LR	11 04 13.7	
	comp=Z,32nm,21.8s,MS3.6,baz=251,slow=32						
NVAR	**Mina Array Bea**	**88.82**	**51**	P	**P**	**10 35 52.0**	**-0.8**
	0.6nm,0.7s,mb4.1,baz=232,slow=6.7,SNR=6.9						

*ISCJB **23** 10:46:24.0±0.5, 607S±005×294E±0.1, h10km, mb4.2/16, MS3.4/4, Error ellipse: s-maj=14.5km s-min=6.8km az=11.9*
*IDC **23** 10:46:27.4±0.8, 569S×2920E, h0km, mb4.2/14, mb1 4.3/16, mb1mx4.2/25, mbtmp4.2/16, ML2.5/1, MS3.4/8, Ms1 3.4/8, ms1mx3.1/27, Error ellipse: s-maj=26.4km s-min=16.9km az=107.0*
*NEIC **23** 10:46:28.3±0.4, 577S×2932E, h10km, mb4.4/6, Error ellipse: s-maj=13.1km s-min=7.2km az=99.0*
ISC 23 10:46:27.1±0.5, 596S±005×2941E±009, h10km, n44, σ0§97/50, mb4.2/16, MS3.4/4, 1C, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**9.18**	**59**	Pn	**Pn**	**10 48 38.3**	**-1.3**
	4.3nm,0.3s,baz=223,slow=16,SNR=28						
KMBO				Sn	**Sn**	**10 50 16.2**	**-6.8**
	10nm,0.3s,baz=230,slow=19,SNR=19						
KMBO				Lg		10 51 06.9	
	7.1nm,0.3s,baz=155,slow=21,SNR=3.2						
KMBO				LR	LR	10 52 23.9	
	comp=Z,342nm,18.3s,baz=96,slow=39						
KMBO	**Kilima Mbogo**	**9.18**	**59**	Pn	**Pn**	**10 48 38.3**	**-1.3**
KMBO				Sn	**Sn**	**10 50 16.2**	**-6.8**
KMBO				Lg		10 51 06.9	
LSZ	**Lusaka**	**9.33**	**187**	*e*Pn	**Pn**	**10 48 45.6**	**+4.0**
	20nm,0.6s						
LSZ				*e*Sn	**Sn**	**10 50 20.2**	**-6.5**
MATP	**Matopo**	**14.40**	**183**	Pn	**Pn**	**10 49 52.8**	**+1.8**
	0.7nm,0.3s,baz=4.1,slow=14,SNR=13						
MATP				Sn	**Sn**	**10 52 28.8**	**-2.0**
	0.7nm,0.3s,baz=269,slow=10,SNR=2.9						
MATP				Lg		10 54 01.1	
	1.7nm,0.3s,baz=99,slow=22,SNR=2.1						
MATP				LR	LR	10 55 34.5	
	comp=Z,154nm,18.6s,baz=354,slow=37						
MATP	**Matopo**	**14.40**	**183**	Pn	**Pn**	**10 49 52.8**	**+1.8**
MATP				Sn	**Sn**	**10 52 28.8**	**-2.0**
MATP				Lg		10 54 01.1	
TSUM	**Tsumeb**	**17.49**	**220**	P	**Pn**	**10 50 32.9**	**+1.8**
	1.0nm,0.3s,baz=29,slow=12,SNR=12						
TSUM				S	**Sn**	**10 53 34.8**	**-11**
	0.7nm,0.3s,baz=306,slow=16,SNR=3.0						
TSUM				Lg		10 55 35.4	
	0.7nm,0.3s,baz=97,slow=22,SNR=3.1						
TSUM				LR	LR	10 57 59.2	
	comp=Z,30nm,18.2s,baz=145,slow=39						
TSUM	**Tsumeb**	**17.49**	**220**	*e*P	**Pn**	**10 50 32.9**	**+1.9**
	9.7nm,0.6s						
TSUM				*e*S	**Sn**	**10 53 35.9**	**-10**
LBTB	**Lobatse**	**19.29**	**191**	P	**Pn**	**10 50 57.0**	**+3.9**
	0.7nm,0.3s,baz=16,slow=14,SNR=9.5						
LBTB				S	**Sn**	**10 54 20.0**	**-9.4**
	baz=53,slow=13,SNR=2.2						
LBTB				Lg		10 56 37.2	
	0.5nm,0.3s,baz=146,slow=16,SNR=2.2						
LBTB				LR	LR	10 57 50.9	
	comp=Z,62nm,18.9s,baz=125,slow=35						
LBTB	**Lobatse**	**19.29**	**191**	*e*P	**Pn**	**10 50 57.7**	**+4.6**
	7.0nm,0.8s						
BOSA	**Boshof**	**22.87**	**189**	P	**P**	**10 51 35.4**	**+4.7**
	12nm,0.9s,mb4.3,baz=14,slow=10,SNR=12						
BOSA				Lg		10 58 31.0	
	8.8nm,1.1s,baz=271,slow=21,SNR=1.6						
BOSA	**Boshof**	**22.87**	**189**	*e*P	**P**	**10 51 35.4**	**+4.7**
	4.7nm,0.7s,mb4.0						
TOA0	**Torodi Ar. Sit**	**33.44**	**305**	*e*P	**P**	**10 53 05.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**33.44**	**305**	P	**P**	**10 53 05.3**	**-0.8**
	6.2nm,0.7s,mb4.7,baz=116,slow=8.1,SNR=30						
TORD				LR	LR	11 06 08.4	
	comp=Z,78nm,19.5s,MS3.4,baz=140,slow=36						
DBIC	**Dimbokro**	**36.43**	**290**	P	**P**	**10 53 31.5**	**-0.3**
	5.1nm,0.8s,mb4.5,baz=141,slow=9.5,SNR=4.1						
DBIC				LR	LR	11 08 02.1	
	comp=Z,122nm,19.7s,MS3.7,baz=103,slow=36						
DBIC	**Dimbokro**	**36.43**	**290**	P	**P**	**10 53 31.5**	**-0.3**
KEST	**Kesra**	**45.56**	**337**	LR	LR	11 13 31.8	
	comp=Z,28nm,20.5s,MS3.2,baz=348,slow=36						
BRTR	**Keskin Array B**	**45.62**	**5**	P	**P**	**10 54 48.3**	**+0.7**
	6.1nm,0.8s,mb4.6,baz=181,slow=9.7,SNR=25						
BR131	**Keskin Array S**	**45.63**	**5**	*e*P	**P**	**10 54 48.4**	**+0.8**
	4.0nm,0.6s,mb4.5						
ESDC	**Sonseca Array**	**54.87**	**329**	P	**P**	**10 55 57.9**	**+0.2**
	0.8nm,0.5s,mb4.0,baz=144,slow=8.3,SNR=4.8						
EPF	**Esparros**	**55.44**	**334**	*e*P	**P**	**10 56 02.6**	**+0.9**
GERES	**GERESS Array B**	**56.28**	**348**	P	**P**	**10 56 07.5**	**-0.4**
	0.7nm,0.6s,mb3.9,baz=165,slow=5.5,SNR=7.3						
GERES				LR	LR	11 20 24.6	
	comp=Z,34nm,19.8s,MS3.4,baz=263,slow=36						
CABF	**La Chapelle**	**56.29**	**341**	*e*P	**P**	**10 56 06.2**	**-1.7**
AKASG	**Malin Array Be**	**56.43**	**360**	P	**P**	**10 56 08.3**	**-0.5**
	0.5nm,0.3s,mb4.1,baz=186,slow=6.7,SNR=13						
RJF	**Les Rejaudoux**	**56.82**	**337**	*e*P	**P**	**10 56 11.5**	**-0.1**
LFF	**La Frestale**	**56.83**	**336**	*e*P	**P**	**10 56 12.0**	**+0.3**
	10nm,0.7s,mb4.7						
LFF	**La Frestale**	**56.83**	**336**	*e*P	**P**	**10 56 12.0**	**+0.3**
	5.2nm,0.7s,mb4.7						
TCF	**Toulx Ste Croi**	**57.37**	**338**	*e*P	**P**	**10 56 15.7**	**+0.1**
AVF	**Avril sur Loir**	**57.38**	**339**	*e*P	**P**	**10 56 15.2**	**-0.4**
CDF	**Champ du Feu**	**57.52**	**343**	*e*P	**P**	**10 56 16.5**	**-0.1**
AKTK	**Aktyubinsk**	**61.37**	**20**	P	**P**	**10 56 43.0**	**-0.2**
AKTO	**Aktyubinsk**	**61.37**	**20**	P	**P**	**10 56 43.0**	**-0.2**
	1.7nm,1.0s,mb4.1,baz=229,slow=8.2,SNR=4.9						
SYO	**Syowa Base**	**63.32**	**176**	*e*P	**P**	**10 56 48.8**	**-7.4**
FINES	**FINESS Array B**	**67.25**	**358**	P	**P**	**10 57 21.3**	**-0.5**
	3.0nm,0.8s,mb4.4,baz=219,slow=2.4,SNR=7.2						
FINES	**FINESS Array B**	**67.25**	**358**	P	**P**	**10 57 21.3**	**-0.5**
NAO01	**NORSAR Array S**	**68.17**	**350**	*e*P	**P**	**10 57 27.8**	**+0.3**
	5.2nm,0.7s,mb4.7						
BVAR	**Borovoye Array**	**68.20**	**25**	P	**P**	**10 57 28.0**	**+0.3**
	0.3nm,0.4s,mb3.7,baz=241,slow=4.8,SNR=3.6						
BVAR	**Borovoye Array**	**68.20**	**25**	P	**P**	**10 57 28.0**	**+0.3**
NB2	**NORSAR Subarra**	**68.30**	**351**	P	**P**	**10 57 28.4**	**+0.1**
	comp=Z,5.7nm,0.9s,mb4.6,baz=161,slow=6.5						
NOA	**NORSAR Array B**	**68.30**	**351**	P	**P**	**10 57 28.9**	**+0.5**
	comp=Z,5.5nm,0.8s,mb4.6,baz=163,slow=5.8,SNR=16						
MKAR	**Makanchi Array**	**70.28**	**36**	P	**P**	**10 57 42.0**	**+1.4**
	comp=Z,3.0nm,0.9s,mb4.2,baz=245,slow=5.2,SNR=14						
ARCES	**ARCESS Array B**	**75.38**	**359**	P	**P**	**10 58 11.2**	**+0.3**
	comp=Z,1.5nm,0.7s,mb4.0,baz=177,slow=4.9,SNR=8.3						
SONM	**Songino Array**	**85.72**	**41**	P	**P**	**10 59 09.2**	**+2.9**
	comp=Z,0.4nm,0.6s,mb3.8,baz=255,slow=5.5,SNR=3.1						
SONM	**Songino Array**	**85.72**	**41**	P	**P**	**10 59 09.2**	**+2.9**
PDAR	**Pinedale Array**	**128.49**	**322**	PKP	PKPdf	11 05 36.6	+2.4
	comp=Z,0.1nm,0.5s,baz=76,slow=3.8,SNR=3.6						

*ISCJB **23** 10:53:18.8±0.9, 2743N±007×5585E±006, h10km, Error ellipse: s-maj=10.8km s-min=8.2km az=8.1*
*CSEM **23** 10:53:18.5, 2753N×5590E, h14km, ML3.1, After THR*
*THR **23** 10:53:18.5±0.7, 2753N×5590E, h14km±10km, ML3.1*
ISC 23 10:53:19.9±1.7, 2743N±008×559E±02, h15km±16km, n8, σ0§45/12, 1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.23**	**97**	*e*PG	**Pg**	**10 53 24.4**	**-0.7**
BNDS				*e*SG	**Sg**	**10 53 29.2**	**+0.6**
BNDS				AML	AML	10 53 30.6	
	comp=N,3μm,0.2s						
BNDS				AML	AML	10 53 30.9	
	comp=E,3μm,0.4s						
BNDS	**Bandar-Abbas**	**0.23**	**97**	*e*Pg	**Pg**	**10 53 24.4**	**-0.7**
	SNR=102						
BNDS				*e*Sg	**Sg**	**10 53 29.2**	**+0.6**
	comp=E,3μm,0.4s,SNR=102						
BANOM	**Banah**	**1.54**	**167**	P	**Pn**	**10 53 46.2**	**-0.6**
	SNR=74						
HATD	**Hatta, Dubai**	**2.60**	**176**	⇓P	**Pn**	**10 54 01.7**	**+0.3**
	SNR=5.8						
KRBR	**Kerman**	**2.65**	**16**	*e*Pn	**Pn**	**10 54 02.1**	**0.0**
KRBR				*e*SG	**Sg**	**10 54 38.8**	**-6.3**
KRBR				AML	AML	10 54 40.7	
	comp=N,145nm,0.5s						
KRBR	**Kerman**	**2.65**	**16**	*e*Pn	**Pn**	**10 54 02.1**	**0.0**
	SNR=52						
KRBR				*e*Sg	**Sg**	**10 54 38.8**	**-6.3**
	comp=N,145nm,0.5s,SNR=90						
GHIR	**Ghir-Karzin**	**2.72**	**289**	*e*PN	**Pn**	**10 54 03.3**	**+0.2**
GHIR				AML	AML	10 55 00.5	
	comp=N,46nm,0.5s						
ASHO	**Ashiyiah**	**2.74**	**177**	P	**Pn**	**10 54 03.6**	**+0.3**
	SNR=54						

CSEM 23 11:02:52.7±0.5, 4024N×335W, h0km, mb3.5/2, Error ellipse: s-maj=4.3km s-min=1.7km az=38.0, After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUD	**Guadarrama**	**0.73**	**303**	Pg	Pg	11 03 05.4	-1.3
	3.6nm,0.3s,SNR=4.6						
GUD				Lg		11 03 16.1	
	13nm,0.4s						
ESDC	**Sonseca Array**	**0.74**	**220**	Pg	Pg	11 03 06.6	-0.2
	2.7nm,0.3s,baz=40,SNR=14						
ESDC				Lg		11 03 16.9	
	3.6nm,0.3s,baz=39,SNR=9.5						
EVIA	**Vianos**	**1.73**	**157**	Pg	Pg	11 03 22.0	-3.9
	SNR=7.9						
EVIA				Lg		11 03 47.6	
	27nm,0.4s,SNR=19						
ECHE	**Chera**	**1.94**	**109**	Pg	Pg	11 03 28.6	-1.4
	SNR=7.9						
ECHE				Lg		11 03 52.9	
	5.9nm,0.4s,SNR=5.0						
EBAN	**Banos Encina**	**2.10**	**189**	Pn	Pn	11 03 27.6	-1.5
	SNR=7.9						
EBAN				Lg		11 03 57.8	
	SNR=7.9						
ETOB	**Tobarra**	**2.12**	**138**	Pn	Pn	11 03 28.3	-1.1
	3.8nm,0.5s,SNR=5.9						
ETOB	**Tobarra**	**2.12**	**138**	Pg	Pg	11 03 32.2	-1.1
	SNR=7.9						
ETOB				Lg		11 03 59.9	
	16nm,0.4s						
EMOS	**Mosqueruela**	**2.21**	**86**	Pn	Pn	11 03 30.8	+0.3
	6.1nm,0.4s,SNR=8.7						
EMOS	**Mosqueruela**	**2.21**	**86**	Pg	Pg	11 03 33.9	-1.1
	SNR=7.9						
EMOS				Sn	Sn	11 03 56.9	-1.6
	SNR=7.9						
EMOS				Lg		11 04 02.4	
	5.3nm,0.5s						
EADA	**

comp=Z,82nm,0.7s
SHAR smax
comp=Z,253nm,1.1s
SHAR Shatzhatmas 1.31 340 *i* Pg **Pg 11 23 16.7 -1.2**
comp=Z,82nm,0.7s
SHAR *e*Sg **Sg 11 23 35.7 +0.8**
comp=Z,253nm,1.1s
TBLG Delisi 1.32 126 P **Pn 11 23 16.6 -0.6**
TBLG S **Sb 11 23 35.4 +0.7**
TBLG Delisi 1.32 126 *e*Pg **Pg 11 23 16.6 -1.5**
TBLG *e*Sg **Sg 11 23 35.4 +0.1**
MTA Mtatsminda 1.38 126 P **Pn 11 23 17.3 -0.6**
MTA S **Sb 11 23 36.7 +0.5**
MTA Mtatsminda 1.38 126 *e*Pg **Pg 11 23 17.3 -1.8**
MTA *e*Sg **Sg 11 23 36.7 -0.3**
KZR Kazreti 1.40 143 P **Pn 11 23 17.6 -0.7**
KZR S **Sn 11 23 36.8 -0.1**
PRTR Priterechnaya 1.43 30 *e*Pg **Pg 11 23 17.1 -3.0**
PRTR *i* Sg **Sg 11 23 36.5 -2.2**
KIV Kislovodsk 1.51 343 *d i*PG **Pg 11 23 20.3 -1.3**
KIV *e*S **Sg 11 23 41.9 +0.7**
KIV pmax pmax
comp=Z,394nm,1.1s
KIV smax
comp=E,551nm,1.0s
KIV Kislovodsk 1.51 343 *i* Pg **Pg 11 23 20.3 -1.3**
comp=E,394nm,1.1s
KIV *e*Sg **Sg 11 23 41.9 +0.7**
DGRG David-gareji 1.87 124 P **Pn 11 23 26.1 +1.4**
DGRG S **Sn 11 23 52.1 +3.6**
DGRG David-gareji 1.87 124 *e*Pn **Pn 11 23 26.1 +1.3**
DGRG *e*Sg **Sg 11 23 52.1 -0.8**
GNI Garni 2.60 155 *e*PN **Pn 11 23 36.7 +2.0**
GNI *e*S **Sn 11 24 08.8 +2.4**
GNI pmax pmax
comp=Z,82nm,1.0s
GNI Garni 2.60 155 *e*Pn **Pn 11 23 36.7 +2.0**
comp=Z,82nm,1.0s
GNI *e*Sn **Sn 11 24 08.8 +2.4**
BRTR Keskin Array B 7.81 252 *e*P **Pn 11 24 48.0 +1.7**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BRTR Keskin Array B 7.81 252 *e*P **Pn 11 24 48.0 +1.7**
comp=Z,1.0nm,0.5s

NEIC ***23*** *11:38:06.2, 1928N×6329W, h38km, MD4.0(RSPR), MD4.0(TRN), After TRN.*
TRN ***23*** *11:38:06.2, 1929N×6330W, h35km, MD4.0*
ISCJB ***23*** *11:38:07.2±1.1, 1922N±0.10×6331W±0.04, h84km±16km, Error ellipse: s-maj=16.3km s-min=4.5km az=27.4*
RSPR ***23*** *11:38:08.9, 1944N×6338W, h24km±39km, MD4.0/14, MD4.0/14*

ISC 23 11:38:08.3±1.1, 193N±01×6330W±004, h58km±36km, n23, σ0§61/41, 10C-6D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**1.10**	**242**⇑	*e*P	**Pn**	**11 38 27.2**	**-0.4**
STMA	**St. Maarten, A**	**1.22**	**171**⇓	*e*P	**Pn**	**11 38 29.5**	**+0.3**
STMA				*e*S	**Sn**	**11 38 45.1**	**+0.5**
TBVI	**Tortola**	**1.50**	**236**⇓	*e*P	**Pn**	**11 38 32.1**	**-0.7**
TBVI				*e*S	**Sn**	**11 38 51.2**	**-0.1**
STVI	**Saint Thomas**	**1.81**	**241**⇑	*e*P	**Pn**	**11 38 36.6**	**-0.5**
STVI				*e*S	**Sn**	**11 38 59.4**	**+0.5**
CULB	**Culebra**	**2.14**	**244**⇑	*e*P	**Pn**	**11 38 40.9**	**-0.6**
CULB				*e*S	**Sn**	**11 39 06.3**	**-0.7**
MTP	**Monte Pirata**	**2.43**	**242**⇑	*e*P	**Pn**	**11 38 45.5**	**-0.1**
MTP				*e*S	**Sn**	**11 39 15.1**	**+1.0**
BPA	**Boggy Peak**	**2.59**	**148**	*e*P	**Pn**	**11 38 48.5**	**+0.8**
BPA				*e*S	**Sn**	**11 39 16.8**	**-1.2**
CBYP	**Canovanas**	**2.61**	**248**⇓	*e*P	**Pn**	**11 38 48.1**	**+0.1**
CBYP				*e*S	**Sn**	**11 39 19.3**	**+0.8**
HUMP	**Col San Antoni**	**2.66**	**246**	*e*P	**Pn**	**11 38 48.4**	**-0.2**
HUMP				*e*S	**Sn**	**11 39 19.3**	**-0.3**
CPD	**Cerro la Pandu**	**2.76**	**244**⇑	*e*P	**Pn**	**11 38 50.8**	**+0.8**
CPD				*e*S	**Sn**	**11 39 22.7**	**+0.6**
SJG	**San Juan**	**2.93**	**248**	*e*Pn	**Pn**	**11 38 52.4**	**0.0**
SEG	**Port Louis**	**3.31**	**149**	*e*P	**Pn**	**11 38 57.1**	**-0.6**
CELP	**Cerrillos**	**3.32**	**250**⇓	*e*P	**Pn**	**11 38 58.0**	**+0.3**
CELP				*e*S	**Sn**	**11 39 35.7**	**-0.2**
ICM	**Isla Caja Muer**	**3.34**	**247**⇑	*e*P	**Pn**	**11 38 59.1**	**+1.1**
ICM				*e*S	**Sn**	**11 39 36.2**	**-0.2**
OBIP	**Obispado Ponce**	**3.35**	**250**⇓	*e*P	**Pn**	**11 38 58.6**	**+0.4**
OBIP				*e*S	**Sn**	**11 39 36.2**	**-0.6**
AOPR	**Arecibo Observ**	**3.39**	**255**⇑	*e*P	**Pn**	**11 38 57.9**	**-0.7**
AOPR				*e*S	**Sn**	**11 39 38.0**	**+0.3**
AOPR	**Arecibo Observ**	**3.39**	**255**⇑	*e*P	**Pn**	**11 38 57.9**	**-0.7**
AOPR				*e*S	**Sn**	**11 39 38.0**	**+0.3**
LZG	**Guadaloupe-1**	**3.42**	**155**	*e*P	**Pn**	**11 39 00.4**	**+1.2**
LZG				*e*S	**Sn**	**11 39 37.9**	**-0.5**
LRS	**Lares**	**3.49**	**255**⇑	*e*P	**Pn**	**11 38 59.5**	**-0.5**
LRS				*e*S	**Sn**	**11 39 39.2**	**-0.9**
DEG	**La Desirade**	**3.62**	**143**	*e*P	**Pn**	**11 39 01.2**	**-0.7**
MGP	**Maguayo**	**3.80**	**252**⇑	*e*P	**Pn**	**11 39 04.7**	**+0.4**
MGP				*e*S	**Sn**	**11 39 48.0**	**+0.3**
CRPR	**Cabo Rojo, PR**	**3.82**	**252**⇓	*e*P	**Pn**	**11 39 04.8**	**+0.2**
CRPR				*e*S	**Sn**	**11 39 47.6**	**-0.5**
BBL	**Barber's Block**	**4.10**	**154**	*e*P	**Pn**	**11 39 09.2**	**+0.8**

IDC 23 11:45:33.6±3.6, 645S×14870E, h76km±24km, mb3.5/2, mb1 3.7/4, mb1mx3.3/14, mbtmp3.8/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/21, Error ellipse: s-maj=91.3km s-min=23.1km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.31**	**207**	P	Pn	11 46 22.9	-0.1
	9.6nm,0.3s,baz=34,slow=6.0,SNR=41						
PMG				S	Sn	11 47 02.1	+0.8
	27nm,0.3s,baz=129,slow=22,SNR=12						
HNR	**Honiara**	**11.53**	**106**	LR	LR	11 51 43.9	
	comp=Z,26nm,20.0s,baz=358,slow=32						
WRA	**Warramunga Arr**	**19.35**	**225**	P	Pn	11 49 53.1	-1.7
	0.3nm,0.3s,baz=50,slow=11,SNR=26						
ASAR	**Alice Springs**	**22.26**	**218**	P	P	11 50 24.2	0.0
	0.7nm,0.4s,baz=56,slow=9.6,SNR=24						
ASAR				S	S	11 54 25.6	+1.3
	0.6nm,0.8s,baz=29,slow=26,SNR=4.4						
DZM	**Mont Dzumac**	**23.13**	**134**	LR	LR	11 58 09.9	
	comp=Z,64nm,20.1s,baz=168,slow=33						
FITZ	**Fitzroy Crossi**	**25.30**	**241**	P	P	11 50 53.7	+0.8
	1.2nm,0.4s,baz=74,slow=12,SNR=16						
TORD	**Torodi Ar. Bea**	**146.84**	**284**	PKPbc	PKPbc	12 05 07.4	+0.3
	0.7nm,0.5s,baz=92,slow=2.9,SNR=6.0						

IDC ***23*** *12:00:36.9±0.7, 537N×9453E, h0km, mb4.4/17, mb1 4.5/17, mb1mx4.4/24, mbtmp4.4/17, MS3.3/2, Ms1 3.3/2, ms1mx2.7/26, Error ellipse: s-maj=29.2km s-min=13.0km az=47.0*
BJI ***23*** *12:00:37.8, 480N×9439E, h47km, mB4.8, mb4.8, Ms4.2, Msz3.9*
ISCJB ***23*** *12:00:40.1±0.4, 530N×005×9455E±004, h33km, mb4.6/60, MS3.4/8, Error ellipse: s-maj=8.5km s-min=4.9km az=57.3*
NEIC ***23*** *12:00:41.0±0.4, 5.14N×9432E, h30km, mb4.8/14, Error ellipse: s-maj=12.4km s-min=6.1km az=47.0*
NEIC Felt [II] at Banda Aceh.
MOS ***23*** *12:00:40.2±1.0, 543N×9465E, h33km, mb5.0/19, Error ellipse: s-maj=16.3km s-min=7.2km az=108.7*

ISC 23 12:00:42.8±0.4, 538N±006×9455E±004, h35km, h35km±.6km: pP-P, n116, σ1§07/118, mb4.6/60, MS3.4/8, 13C-6D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.08**	**91**	*e*Pn	**Pn**	**12 02 11.4**	**+1.3**
KULM				*e*Sn	**Sn**	**12 03 17.5**	**-0.9**
SNG	**Songkhla**	**6.29**	**73**	P	**Pn**	**12 02 14.0**	**+0.9**
	700nm,0.9s						
KKTK	**Khon Kaen**	**13.58**	**36**	P	**Pn**	**12 04 03.5**	**+11**
CM31	**Chiang Mai Arr**	**13.69**	**18**	*e*Pn	**Pn**	**12 03 59.6**	**+5.2**
CHG	**Chiang Mai**	**14.03**	**17**	P	**Pn**	**12 04 04.6**	**+5.7**
CHTO	**Chiang Mai**	**14.03**	**17**	*e*P	**Pn**	**12 04 04.3**	**+5.4**
CHTO				pmax	pmax		
	comp=Z,555nm,1.2s						
CHTO	**Chiang Mai**	**14.03**	**17**	*e*Pn	**Pn**	**12 04 04.3**	**+5.4**
	comp=Z,555nm,1.2s						
NANT	**Nan**	**14.63**	**24**	P	**Pn**	**12 04 12.0**	**+4.8**
KSM	**Kuching**	**16.20**	**103**	*e*P	**Pn**	**12 04 29.1**	**+1.5**
VIS	**Vishakhapatnam**	**16.46**	**319**	*e*P	**Pn**	**12 04 30.1**	**-0.8**
TRD	**Trivandrum**	**17.73**	**281**	*e*P	**Pn**	**12 04 44.7**	**-2.1**
TRD				AMb	AMB	12 04 52.8	
	comp=Z,29nm,1.0s						
BOK	**Bokaro**	**20.12**	**336**	*e*P	**P**	**12 05 14.6**	**+0.9**
BOK				AMb	AMB	12 05 18.4	
	comp=Z,33nm,0.7s						
QIZ	**Qiongzhong**	**20.16**	**46**	P	**P**	**12 05 17.9**	**+3.8**
QIZ				LR	LR		
	comp=N,227nm,22.2s						
QIZ				LR	LR		
	comp=Z,187nm,19.7s,MS3.4						
KMI	**Kunming**	**21.15**	**21**	P	**P**	**12 05 28.9**	**+4.2**
KMI				AP		12 05 38.3	
KMI				XP	sP	12 05 43.5	+5.2
KMI				PP		12 05 57.3	
KMI				PPP		12 06 06.8	
KMI				S	**S**	**12 09 26.3**	**+8.3**
KMI				XS	sS	12 09 38.3	+5.7
KMI				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.3						
KMI				AMB	AMB		
	comp=Z,46nm,3.1s						
KMI				LR	LR		
	comp=N,91nm,19.3s,MS3.4						
KMI				LR	LR		
	comp=E,90nm,15.4s,MS3.4						
JIRN	**Jiri**	**23.54**	**341**	*e*P	**P**	**12 05 50.3**	**+0.3**
	comp=E,20nm,0.3s,mb5.0						
PKI	**Pulchoki**	**23.72**	**339**	*e*P	**P**	**12 05 51.7**	**+0.1**
	comp=E,10nm,0.4s,mb4.6						
PKI	**Pulchoki**	**23.72**	**339**	*e*P	**P**	**12 05 51.7**	**+0.1**
PKI				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.6						
DMN	**Daman**	**23.86**	**339**	*e*P	**P**	**12 05 53.8**	**+0.9**
	comp=Z,19nm,0.6s,mb4.7						
GUN	**Gumba**	**23.88**	**341**	*e*P	**P**	**12 05 53.1**	**+0.1**
	comp=Z,28nm,0.5s,mb5.0						
GYA	**Guiyang**	**23.95**	**28**⇓	*i*P	**P**	**12 05 53.8**	**+0.1**
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.9						
KKN	**Kakani**	**23.97**	**339**	*e*P	**P**	**12 05 53.7**	**-0.2**
	comp=Z,19nm,0.7s,mb4.6						
KKN	**Kakani**	**23.97**	**339**	*e*P	**P**	**12 05 53.7**	**-0.2**
KKN				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.6						
BHPL	**Bhopal**	**24.25**	**319**	*e*P	**P**	**12 05 54.5**	**-2.0**
BHPL				AMb	AMB	12 05 55.2	
	comp=Z,7.3nm,0.5s,mb4.3						
GKN	**Gorkha**	**24.39**	**338**	*e*P	**P**	**12 05 57.9**	**+0.2**
	comp=Z,16nm,0.3s,mb5.0						
LSA	**Lhasa**	**24.40**	**353**	P	**P**	**12 05 59.1**	**+1.3**
KOLN	**Koldanda**	**24.58**	**336**	*e*P	**P**	**12 06 00.0**	**+0.5**
	comp=Z,29nm,0.6s,mb5.0						
CD2	**Chengdu**	**26.83**	**18**	*e*P	**P**	**12 06 18.4**	**-1.5**
CD2				PP		12 07 06.3	
CD2				S	**S**	**12 10 54.6**	**+0.7**
CD2				SS		12 12 12.6	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
CD2				AMB	AMB		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=E,70nm,10.8s						
CD2				LR	LR		
	comp=Z,70nm,9.6s						
XAN	**Xi'an**	**31.48**	**23**	P	**P**	**12 06 59.5**	**-1.7**
XAN				AMB	AMB		
	comp=Z,25nm,0.6s,mb5.2						
LZH	**Lanzhou**	**31.73**	**14**	*e*P	**P**	**12 07 03.3**	**-0.1**
LZH				AP	pP	12 07 12.8	-0.5
LZH				XP	sP	12 07 17.9	+0.4
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
GTA	**Gaotai**	**34.21**	**7**	⇑P	**P**	**12 07 24.3**	**-0.7**
GTA				AP	pP	12 07 34.5	-0.5
GTA				XP	sP	12 07 38.8	-0.4
GTA				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.9						
NJ2	**Nanjing**	**34.94**	**38**	*e*P	**P**	**12 07 32.3**	**+1.0**
NJ2				AP	pP	12 07 41.9	+0.6
NJ2				XP	sP	12 07 45.8	+0.3
NJ2				PP	PP	12 08 52.3	+1.4
NJ2				S	**S**	**12 13 05.0**	**+4.4**
NJ2				XS	sS	12 13 20.0	+2.9
NJ2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,90nm,11.2s						
NJ2				LR	LR		
	comp=N,210nm,11.9s						
NJ2				LR	LR		
	comp=E,180nm,19.9s						
NJ2				LR	LR		
	comp=Z,320nm,28.2s						
SSE	**Sheshan**	**35.78**	**41**	P	**P**	**12 07 38.1**	**-0.4**
SSE				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.9						
SSE				AMB	AMB		
	comp=Z,46nm,5.6s						
HHC	**Hu-ho-hao-te**	**38.47**	**21**	*e*P	**P**	**12 08 04.9**	**+3.5**
HHC				AP	pP	12 08 14.8	+3.3
HHC				XP	sP	12 08 18.8	+3.2
HHC				PP	PP	12 09 39.0	+9.3
HHC				PCP	PcP	12 10 15.4	+1.4
HHC				S	**S**	**12 14 01.4**	**+7.0**
HHC				PCS	PcS	12 14 03.8	+0.6
HHC				XS	sS	12 14 17.6	+6.6
HHC				SS	SS	12 16 46.0	+1.6
HHC				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,67nm,6.4s						
HHC				LR	LR		
	comp=N,82nm,19.9s,MS3.7						
HHC				LR	LR		
	comp=E,72nm,19.9s,MS3.7						
HHC				LR	LR		
	comp=Z,85nm,20.9s,MS3.5						
FITZ	**Fitzroy Crossi**	**38.54**	**128**	P	**P**	**12 08 01.2**	**-0.8**
	comp=Z,4.3nm,0.6s,mb4.4,baz=310,slow=7.7,SNR=30						
FITZ	**Fitzroy Crossi**	**38.54**	**128**⇑	*i*P	**P**	**12 08 01.0**	**-0.9**
	comp=Z,7.4nm,0.6s,mb4.6						
WMQ	**Urumqi**	**38.76**	**352**	*e*P	**P**	**12 08 05.0**	**+1.2**
WMQ				AP	pP	12 08 15.0	+1.1
WMQ				XP	sP	12 08 19.0	+1.0
WMQ				PP	PP	12 09 39.0	+6.1
WMQ				S	**S**	**12 14 02.0**	**+3.3**
WMQ				XS	sS	12 14 18.0	+2.6
WMQ				SS	SS	12 16 46.0	-4.2
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,112nm,5.0s						
WMQ				LR	LR		
	comp=N,38nm,12.0s,MS3.6						
WMQ				LR	LR		
	comp=E,45nm,12.0s,MS3.6						
WMQ				LR	LR		
	comp=Z,32nm,12.0s,MS3.4						
WSAR	**Wadi Sarin**	**38.90**	**301**	P	**P**	**12 08 08.3**	**+3.3**
	comp=Z,6.3nm,0.9s,mb4.3,baz=143,slow=8.5,SNR=4.1						
BJI	**Beijing**	**39.62**	**26**	*e*P	**P**	**12 08 11.4**	**+0.4**
BJI				AMB	AMB		
	comp=Z,18nm,0.9s,mb4.8						
BJI				LR	LR		
	comp=N,58nm,8.8s						
BJI				LR	LR		
	comp=E,114nm,7.2s						
BJI				LR	LR		
	comp=Z,66nm,23.0s,MS3.4						
ULHL	**Ulahol**	**40.16**	**339**	P	**P**	**12 08 16.5**	**+1.1**
	SNR=8.3						
KZA	**Kyzart**	**40.38**	**338**	P	**P**	**12 08 18.4**	**+1.1**
	SNR=7.7						
TKM2	**Tokmak 2**	**40.98**	**339**	P	**P**	**12 08 23.1**	**+0.9**
	SNR=10						
TKM2	**Tokmak 2**	**40.98**	**339**	P	**P**	**12 08 23.0**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
KBK	**Karagaybulak**	**40.99**	**338**	P	**P**	**12 08 24.0**	**+1.6**
	SNR=14						
AML	**Almayashu**	**41.03**	**336**	P	**P**	**12 08 24.1**	**+1.5**
	SNR=14						
AAK	**Ala-Archa**	**41.14**	**337**	P	**P**	**12 08 25.4**	**+1.9**
	SNR=6.0						
AAK	**Ala-Archa**	**41.14**	**337**⇑	*e*P	**P**	**12 08 24.3**	**+0.7**
AAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
AAK	**Ala-Archa**	**41.14**	**337**	*e*P	**P**	**12 08 24.0**	**+0.4**
	comp=Z,9.3nm,0.7s,mb4.5						
EKS2	**Erkin-Say**	**41.45**	**337**	P	**P**	**12 08 27.3**	**+1.2**
	SNR=12						
USP	**Ospenovka**	**41.69**	**338**	P	**P**	**12 08 28.7**	**+0.7**
	SNR=31						
MK31	**Makanchi Array**	**42.59**	**348**	P	**P**	**12 08 34.8**	**-0.6**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
MKAR	**Makanchi Array**	**42.59**	**348**	P	**P**	**12 08 35.1**	**-0.3**
	comp=Z,5.5nm,0.5s,mb4.5,baz=162,slow=7.8,SNR=64						
MKAR	**Makanchi Array**	**42.59**	**348**⇑	*e*P	**P**	**12 08 35.2**	**-0.2**
KK31	**Karatay Array**	**43.16**	**334**	*i*P	**P**	**12 08 40.4**	**+0.4**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
KKAR	**Karatay Array**	**43.16**	**334**	P	**P**	**12 08 40.4**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
SONM	**Songino Array**	**43.50**	**12**	P	**P**	**12 08 42.0**	**-0.8**
	comp=Z,5.8nm,0.7s,mb4.4,baz=192,slow=8.0,SNR=40						
SONM				PcP	PcP	12 10 30.2	-0.1
	comp=Z,1.8nm,0.5s,baz=190,slow=4.1,SNR=6.8						
SONM				LR	LR	12 30 04.9	
	comp=Z,30nm,20.1s,MS3.2,baz=340,slow=41						
SONM	**Songino Array**	**43.50**	**12**	P	**P**	**12 08 42.0**	**-0.8**
SONM						12 10 30.2	
ULN	**Ulaanbaatar**	**43.67**	**12**⇑	*e*P	**P**	**12 08 42.8**	**-1.3**
	comp=Z,4.7nm,0.6s,mb4.4						
SNY	**Shenyang**	**44.56**	**31**	⇑P	**P**	**12 08 50.6**	**-0.7**
SNY				AMB	AMB		
	comp=Z,17nm,0.5s,mb5.1						
ZAK	**Zakamensk**	**45.45**	**8**	*e*P	**P**	**12 08 56.9**	**-1.4**
WRA	**Warramunga Arr**	**46.52**	**124**	P	**P**	**12 09 06.7**	**0.0**
	comp=Z,7.5nm,0.5s,mb4.9,baz=306,slow=8.5,SNR=238						
WRAB	**Tennant Creek**	**46.52**	**124**⇑	*e*P	**P**	**12 09 06.7**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.1						
WRAB	**Tennant Creek**	**46.52**	**124**⇑	*e*P	**P**	**12 09 06.7**	**0.0**
	comp=Z,10nm,0.4s,mb5.1						
WB2	**Warramunga Arr**	**46.52**	**124**⇑	*i*P	**P**	**12 09 06.7**	**-0.1**
ASAR	**Alice Springs**	**48.03**	**129**	P	**P**	**12 09 18.6**	**+0.1**
	comp=Z,4.1nm,0.5s,mb4.7,baz=300,slow=7.6,SNR=84						
ASAR				S	**S**	**12 16 09.9**	**-4.4**
	comp=Z,0.5nm,0.8s,baz=286,slow=14,SNR=4.6						
AS31	**Alice Springs**	**48.03**	**129**	*e*P	**P**	**12 09 18.5**	**0.0**
ZAL	**Zalesovo**	**49.06**	**352**	P	**P**	**12 09 25.9**	**-0.5**
	comp=Z,7.6nm,0.5s,mb5.0,baz=299,slow=6.0,SNR=21						
ZAL	**Zalesovo**	**49.06**	**352**	P	**P**	**12 09 25.9**	**-0.5**
MDJ	**Mudanjiang**	**49.66**	**33**	P	**P**	**12 09 34.1**	**+3.1**
MDJ				AP	pP	12 09 43.3	+2.0
MDJ				XP	sP	12 09 47.0	+1.6
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,57nm,5.3s						
MDJ				LR	LR		
	comp=N,10.0nm,19.5s,MS3.4						
MDJ				LR	LR		
	comp=E,34nm,21.9s,MS3.4						
MDJ				LR	LR		
	comp=Z,34nm,21.9s,MS3.3						
NVS	**Novosibirsk**	**50.16**	**352**	*i*P	**P**	**12 09 33.5**	**-1.3**
NVS				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
NVS				pmax	pmax		
	comp=N,9.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.9s						
MJAR	**Matsushiro Arr**	**50.56**	**46**	P	**P**	**12 09 38.3**	**+0.5**
	comp=E,1.0nm,0.5s,mb4.0,baz=228,slow=8.0,SNR=4.6						
VOSK	**Vostochnaya**	**51.02**	**342**	P	**P**	**12 09 40.9**	**-0.4**
VOSK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
BVA0	**Borovoye Array**	**51.47**	**342**	P	**P**	**12 09 44.2**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
BRVK	**Borovoye**	**51.53**	**342**⇑	*e*P	**P**	**12 09 44.6**	**-0.5**
ZRNK	**Zerenda**	**51.85**	**341**	P	**P**	**12 09 47.1**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ZRNK	**Zerenda**	**51.85**	**341**⇑	*e*P	**P**	**12 09 47.1**	**-0.4**
CHKZ	**Chkalovo**	**51.96**	**342**	P	**P**	**12 09 48.3**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
CHKZ	**Chkalovo**	**51.96**	**342**⇑	*e*P	**P**	**12 09 48.1**	**-0.2**
	comp=Z,24nm,0.6s,mb5.3						
PMG	**Port Moresby**	**54.45**	**106**	P	**P**	**12 10 06.3**	**-0.3**
	comp=Z,13nm,1.0s,mb4.8,baz=224,slow=5.6,SNR=5.3						
BOD	**Bodaibo**	**54.47**	**13**	*e*P	**P**	**12 10 04.8**	**-2.0**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
HABR	**Khabarovsk**	**55.02**	**32**	*e*P	**P**	**12 10 07.7**	**-3.1**
HABR				*e*S	**S**	**12 17 48.0**	**-2.6**
HABR				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
GNI	**Garni**	**56.47**	**315**	*e*P	**P**	**12 10 21.6**	**+0.4**
GNI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ASAJ	**Asahikawa**	**57.04**	**40**	P	**P**	**12 10 25.1**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.4,baz=270,slow=10,SNR=3.6						
KMBO	**Kilima Mbogo**	**57.59**	**265**	LR	LR	12 31 15.0	
	comp=Z,39nm,20.1s,MS3.5,baz=94,slow=32						
STKA	**Stephens Creek**	**58.11**	**133**	P	**P**	**12 10 32.2**	**-0.5**
	comp=Z,1.6nm,0.4s,mb4.4,baz=316,slow=8.1,SNR=6.5						
STKA	**Stephens Creek**	**58.11**	**133**	*e*P	**P**	**12 10 32.6**	**-0.2**
	comp=Z,2.9nm,0.6s,mb4.5						
ARU	**Arti**	**58.33**	**337**⇓	*i*P	**P**	**12 10 32.8**	**-1.5**
ARU				*e*S	**S**	**12 18 32.7**	**-1.7**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
YSS	**Yuzh-Sakhalins**	**58.51**	**37**	*e*P	**P**	**12 10 35.2**	**-0.3**
YSS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**59.44**	**319**	*e*P	**P**	**12 10 41.0**	**-1.0**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BRTR	**Keskin Array B**	**64.37**	**312**	P	**P**	**12 11 14.7**	**-0.4**
	comp=Z,2.3nm,0.8s,mb4.3,baz=117,slow=7.3,SNR=10						
OBN	**Obninsk**	**67.70**	**328**	*e*P	**P**	**12 11 34.5**	**-2.0**
OBN				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.1						
TIXI	**Tiksi**	**69.59**	**11**	*e*P	**P**	**12 11 45.8**	**-2.5**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
AKASG	**Malin Array Be**	**70.36**

PDAR Pinedale Array 127.32 22 PKP PKPdf 12 19 43.6 0.0
comp=Z,1.0nm,0.5s,baz=96,slow=2.7,SNR=13

*ISCJB **23** 12:02:41.8±0.6, 3583N×003×249W±004, h22km±6km, Error ellipse: s-maj=5.3km s-min=4.0km az=62.8*
*CSEM **23** 12:02:42.2±0.2, 3576N×242W, h12km, ML3.1/8, Error ellipse: s-maj=5.3km s-min=3.3km az=124.0*
*MDD **23** 12:02:43.5±0.7, 3589N×252W, h7km±5km, mb3.6/26, Error ellipse: s-maj=5.5km s-min=4.4km az=129.0, PRIMO*
*INMG **23** 12:02:44.6±1.2, 3599N×259W, h14km±3km, ML2.4, Error ellipse: s-maj=3.7km s-min=2.4km az=135.0*
*CNRM **23** 12:02:50.0, 3557N×292W, h17km, MD3.2*

ISC 23 12:02:42.5±0.7, 3590N±003×252W±003, h13km±4km, n57, σ1§23/96, 1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EALB	**Alboran**	**0.42**	**276**	⇓P	**Pg**	**12 02 51.2**	**+0.4**
	67nm,0.1s,SNR=18						
EALB				S	**Sg**	**12 02 57.2**	**+0.7**
	2μm,0.2s						
EALB	**Alboran**	**0.42**	**276**	Pg	**Pg**	**12 02 51.2**	**+0.3**
	67nm,0.1s,SNR=18						
EALB				Lg		12 02 57.2	
	2μm,0.2s						
ZAI	**Zaio**	**0.94**	**192**	*i* P	**Pb**	**12 03 01.0**	**+0.3**
ZAI				*i* S	**Sb**	**12 03 08.5**	**-4.6**
EBER	**Berja**	**1.04**	**343**	P	**Pb**	**12 03 02.0**	**-0.4**
	5.6nm,0.1s,SNR=60						
EBER				S	**Sb**	**12 03 15.6**	**-0.5**
	72nm,0.3s,SNR=30						
EBER	**Berja**	**1.04**	**343**	Pg	**Pg**	**12 03 02.0**	**-0.6**
	5.6nm,0.1s,SNR=60						
EBER				Lg		12 03 14.1	
	72nm,0.3s,SNR=30						
ENIJ	**Nijar**	**1.10**	**13**	P	**Pb**	**12 03 03.4**	**-0.1**
	4.6nm,0.1s,SNR=10						
ENIJ				S	**Sb**	**12 03 17.2**	**-0.6**
	40nm,0.3s,SNR=10						
EGUA	**Guajares**	**1.26**	**318**	P	**Pn**	**12 03 04.0**	**-1.9**
	2.6nm,0.2s,SNR=7.9						
EGUA				S	**Sb**	**12 03 20.1**	**-2.2**
	4.8nm,0.2s,SNR=7.9						
MPAL	**Palemas**	**1.34**	**240**	*i* P	**Pn**	**12 03 06.5**	**-0.4**
TOU	**Touzarine**	**1.37**	**228**	P	**Pn**	**12 03 07.0**	**-0.4**
TOU				S	**Sn**	**12 03 19.0**	**-6.5**
TOU	**Touzarine**	**1.37**	**228**	*i* P	**Pn**	**12 03 07.0**	**-0.4**
EQUE	**Quentar**	**1.50**	**331**	P	**Pn**	**12 03 09.1**	**-0.1**
	2.9nm,0.2s,SNR=41						
EQUE				S	**Sn**	**12 03 29.2**	**+0.6**
	7.8nm,0.1s,SNR=6.2						
ERON	**Agron**	**1.53**	**318**	P	**Pn**	**12 03 09.5**	**-0.1**
	3.9nm,0.2s,SNR=5.9						
ERON				S	**Sn**	**12 03 30.1**	**+0.8**
	5.6nm,0.2s,SNR=4.0						
ECOG	**Cogollos-Vega**	**1.62**	**329**	P	**Pn**	**12 03 12.2**	**+1.4**
	9.9nm,0.2s,SNR=8.9						
ECOG				S	**Sn**	**12 03 31.5**	**0.0**
	22nm,0.3s,SNR=5.6						
ELOJ	**Sierra Loja**	**1.82**	**314**	P	**Pn**	**12 03 13.9**	**+0.4**
	1.3nm,0.2s,SNR=6.2						
ELOJ				S	**Sn**	**12 03 37.7**	**+1.3**
	3.6nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**1.92**	**358**	P	**Pn**	**12 03 16.9**	**+2.0**
	0.6nm,0.1s,SNR=12						
EHUE				S	**Sn**	**12 03 39.4**	**+0.5**
	4.8nm,0.2s,SNR=6.8						
EHUE	**Huescar**	**1.92**	**358**	Pg	**Pg**	**12 03 17.1**	**-2.2**
	0.6nm,0.1s,SNR=12						
EHUE				Lg		12 03 41.6	
	4.8nm,0.2s,SNR=6.8						
EMIJ	**Mijas**	**1.94**	**291**	P	**Pn**	**12 03 12.3**	**-2.9**
	3.7nm,0.3s,SNR=7.6						
EMIJ				S	**Sn**	**12 03 33.1**	**-6.4**
	16nm,0.2s,SNR=11						
EQES	**Quesada**	**1.96**	**347**	P	**Pn**	**12 03 17.0**	**+1.6**
	6.0nm,0.1s,SNR=39						
EQES				S	**Sn**	**12 03 41.7**	**+1.9**
	25nm,0.2s,SNR=12						
EQES	**Quesada**	**1.96**	**347**	Pg	**Pg**	**12 03 17.0**	**-3.0**
	6.0nm,0.1s,SNR=39						
EQES				Lg		12 03 42.6	
	25nm,0.2s,SNR=12						
ELUQ	**Luque**	**2.18**	**320**	P	**Pn**	**12 03 20.1**	**+1.7**
	5.9nm,0.3s,SNR=7.9						
ELUQ				S	**Sn**	**12 03 46.3**	**+1.0**
	4.6nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**2.18**	**320**	Pn	**Pn**	**12 03 20.1**	**+1.7**
	5.9nm,0.3s,SNR=7.9						
ELUQ				Lg		12 03 49.5	
	4.6nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.20**	**27**	P	**Pn**	**12 03 18.9**	**+0.2**
	1.5nm,0.1s,SNR=8.1						
EMUR				S	**Sn**	**12 03 44.7**	**-1.1**
	31nm,0.4s,SNR=9.6						
EMUR	**La Murta**	**2.20**	**27**	Pn	**Pn**	**12 03 18.9**	**+0.2**
	1.5nm,0.1s,SNR=8.1						
EMUR				Sn	**Sn**	**12 03 44.4**	**-1.4**
	31nm,0.4s,SNR=9.6						
TZK	**Tazeka**	**2.26**	**218**	*i* P	**Pn**	**12 03 19.5**	**-0.1**
TZK				*i* S	**Sn**	**12 03 41.5**	**-5.9**
EJIF	**Jimena Fronter**	**2.45**	**284**	P	**Pn**	**12 03 22.2**	**0.0**
	2.1nm,0.4s,SNR=7.9						
EJIF				S	**Sn**	**12 03 51.4**	**-0.6**
	5.2nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.45**	**284**	Pn	**Pn**	**12 03 24.0**	**+1.8**
	2.1nm,0.4s,SNR=7.9						
EJIF				Sn	**Sn**	**12 03 53.9**	**+1.8**
	5.2nm,0.4s,SNR=7.9						
EBAN	**Banos Encina**	**2.48**	**336**	P	**Pn**	**12 03 23.8**	**+1.2**
	1.8nm,0.3s,SNR=7.9						
EBAN				S	**Sn**	**12 03 53.4**	**+0.6**
	10nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	**2.48**	**336**	Pn	**Pn**	**12 03 23.8**	**+1.2**
	1.8nm,0.3s,SNR=7.9						
EBAN				Sn	**Sn**	**12 03 54.7**	**+1.9**
	10nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**2.74**	**0**	P	**Pn**	**12 03 27.7**	**+1.6**
	0.5nm,0.2s,SNR=4.6						
EVIA				S	**Sn**	**12 03 59.4**	**+0.3**
	3.4nm,0.2s,SNR=4.0						
EVIA	**Vianos**	**2.74**	**0**	Pn	**Pn**	**12 03 28.6**	**+2.4**
	0.5nm,0.2s,SNR=4.6						
EVIA				Sn	**Sn**	**12 03 59.4**	**+0.3**
	3.4nm,0.2s,SNR=4.0						
EADA	**Adamuz**	**2.80**	**325**	P	**Pn**	**12 03 27.3**	**+0.2**
	0.9nm,0.1s,SNR=8.7						
EADA				S	**Sn**	**12 04 01.0**	**+0.2**
	3.2nm,0.2s,SNR=5.8						
EADA	**Adamuz**	**2.80**	**325**	Pn	**Pn**	**12 03 27.3**	**+0.2**
	0.9nm,0.1s,SNR=8.7						
EADA				Sn	**Sn**	**12 04 01.0**	**+0.3**
	3.2nm,0.2s,SNR=5.8						
ETOB	**Tobarra**	**2.85**	**15**	P	**Pn**	**12 03 29.3**	**+1.5**
	4.2nm,0.4s,SNR=10						
ETOB				S	**Sn**	**12 04 02.4**	**+0.5**
	3.0nm,0.1s,SNR=9.6						
ETOB	**Tobarra**	**2.85**	**15**	Pn	**Pn**	**12 03 29.3**	**+1.6**
	4.2nm,0.4s,SNR=10						
ETOB				Sn	**Sn**	**12 04 02.4**	**+0.5**
	3.0nm,0.1s,SNR=9.6						
ESPR	**Espera**	**2.86**	**291**	S	**Sn**	**12 04 02.2**	**-0.1**
	4.1nm,0.2s,SNR=7.9						
ESPR	**Espera**	**2.86**	**291**	Sn	**Sn**	**12 04 03.2**	**+0.9**
	4.1nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.35**	**32**	P	**Pn**	**12 03 34.7**	**+0.2**
	0.1nm,0.2s,SNR=4.0						
EBEN				S	**Sn**	**12 04 12.6**	**-1.6**
	2.4nm,0.2s,SNR=6.9						
EBEN	**Beniarda**	**3.35**	**32**	Pn	**Pn**	**12 03 34.7**	**+0.2**
	0.1nm,0.2s,SNR=4.0						
EBEN				Sn	**Sn**	**12 04 12.6**	**-1.5**
	2.4nm,0.2s,SNR=6.9						
CZD	**Col de Zad**	**3.54**	**217**	P	**Pn**	**12 03 38.0**	**+0.9**
CZD				S	**Sn**	**12 04 10.5**	**-8.3**
CZD	**Col de Zad**	**3.54**	**217**	*e*P	**Pn**	**12 03 38.0**	**+0.9**
EMIN	**Mina Concepcio**	**3.82**	**300**	P	**Pn**	**12 03 39.3**	**-1.8**
	1.0nm,0.1s,SNR=16						
EMIN				S	**Sn**	**12 04 21.9**	**-3.9**
	0.2nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**3.94**	**344**	P	**Pn**	**12 03 44.3**	**+1.5**
	2.4nm,0.2s,baz=165,slow=12,SNR=27						
ESDC	**Sonseca Array**	**3.94**	**344**	Pn	**Pn**	**12 03 44.3**	**+1.6**
	2.4nm,0.2s,SNR=27						
EGRO	**El Granado**	**4.31**	**294**	P	**Pn**	**12 03 46.5**	**-1.3**
	6.7nm,0.3s,SNR=11						
EGRO				S	**Sn**	**12 04 33.5**	**-4.5**
	5.0nm,0.3s						
EIBI	**Ibiza**	**4.38**	**43**	P	**Pn**	**12 03 49.1**	**+0.4**
	2.2nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**12 04 37.8**	**-1.8**
	8.4nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.58**	**310**	P	**Pn**	**12 03 50.5**	**-1.0**
	1.9nm,0.2s,SNR=11						
EBAD				S	**Sn**	**12 04 40.9**	**-3.7**
	3.4nm,0.2s,SNR=4.5						
PBEJ	**Beja**	**4.78**	**298**	*e*Pn	**Pn**	**12 03 54.3**	**0.0**
PBEJ				*e*Sn	**Sn**	**12 04 46.6**	**-3.0**
PESTR	**Estremoz**	**5.01**	**308**	*e*Pn	**Pn**	**12 03 56.9**	**-0.5**
PESTR				*e*Sn	**Sn**	**12 04 52.5**	**-2.7**
PTEO	**Sao Teotonio**	**5.25**	**290**	*e*Pn	**Pn**	**12 04 00.3**	**-0.4**
PTEO				*e*Sn	**Sn**	**12 04 57.6**	**-3.5**
PTEO							
	6.5nm,0.6s						
PTEO	**Sao Teotonio**	**5.25**	**290**	*e*Pn	**Pn**	**12 04 00.3**	**-0.4**
PTEO				*e*Sn	**Sn**	**12 04 57.6**	**-3.5**
	6.5nm,0.6s						
PCBR	**Castelo Branco**	**5.56**	**317**	*e*Pn	**Pn**	**12 04 04.7**	**-0.2**
ETOS	**Mallorca**	**5.72**	**46**	P	**Pn**	**12 04 07.9**	**+0.8**
	0.7nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**12 05 10.1**	**-2.6**
	0.6nm,0.3s,SNR=7.9						
PTOM	**Tomar**	**5.97**	**310**	*e*Pn	**Pn**	**12 04 10.0**	**-0.5**
MTE	**Manteigas**	**5.99**	**320**	*e*Pn	**Pn**	**12 04 11.2**	**+0.3**
PVIS	**Viseu**	**6.41**	**320**	*e*Pn	**Pn**	**12 04 16.9**	**+0.3**
PBRG	**Braganca**	**6.76**	**332**	*e*Pn	**Pn**	**12 04 21.8**	**+0.4**
ECAL	**Calabor**	**6.87**	**333**	P	**Pn**	**12 04 24.0**	**+1.0**
	2.1nm,0.3s,SNR=7.9						

CASC 23 12:03:21.0±4.0, 1299N×8918W, h28km±31km, MD3.7, 5C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LFRS	**El Faro**	**0.64**	**10**	⇑*i*P	x	12 03 47.0	
LFRS				*e*S	x	12 03 59.0	
LCBS	**La Ceiba**	**0.69**	**17**	⇑*e*P	x	12 03 47.5	
LCBS				*e*S	x	12 03 58.1	
SNVI	**San Vicente**	**0.70**	**28**	*e*P	x	12 03 47.9	
SNVI				*e*S	x	12 03 59.2	
BOQS	**Boqueron**	**0.74**	**353**	⇑*e*P	x	12 03 48.4	
BOQS				*e*S	x	12 03 58.6	
LBRS	**Las Brisas**	**0.75**	**10**	*e*P	x	12 03 48.3	
LBRS				*e*S	x	12 03 59.2	
SBLS	**San Blas**	**0.94**	**333**	⇓*e*P	x	12 03 50.9	
SBLS				*e*S	x	12 04 03.6	
SNJE	**San Jose**	**0.96**	**335**	⇑*e*P	x	12 03 51.2	
SNJE				*e*S	x	12 04 03.1	
VSM	**San Miguel**	**0.98**	**64**	⇑*e*P	x	12 03 53.2	
VSM				*e*S	x	12 04 07.1	
RTR	**El Retiro**	**1.01**	**333**	⇓*e*P	x	12 03 52.0	
RTR				*e*S	x	12 04 07.9	
BLLM	**Bellamira**	**1.02**	**64**	⇓*e*P	x	12 03 53.5	
BLLM				*e*S	x	12 04 06.7	
RBDL	**Robledal**	**1.22**	**336**	⇓*e*P	x	12 03 54.9	
RBDL				*e*S	x	12 04 11.6	
CNCH	**Conchagua**	**1.34**	**78**	⇓*e*P	x	12 03 57.9	
CNCH				*e*S	x	12 04 16.1	
TP2	**Tecpan 2**	**2.52**	**315**	*e*S	Sn	12 04 33.0	+3.2

*CSEM **23** 12:04:42.9, 3491N×25.17E, h10km, MD3.6/7, After ATH*

ATH 23 12:04:42.9, 3491N×2517E, h10km±7km, MD3.6/7, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	**0.43**	**95**	*e*PG	Pg	12 04 51.0	-0.4
NPS	**Neapolis**	**0.51**	**46**	*e*PG	Pg	12 04 52.4	-0.3
GVD	**Gavdhos**	**0.89**	**266**	*e*PB	Pb	12 05 00.0	-0.5
VAM	**Vamos**	**0.94**	**302**	*e*PB	Pb	12 05 00.9	-0.3
KARP	**Karpathos**	**1.75**	**68**	*e*PG	Pg	12 05 16.7	+0.2
KYTH	**Kithira**	**2.21**	**309**	*e*PB	Pb	12 05 21.0	-2.0
VLI	**Veliai**	**2.56**	**315**	*e*PB	Pb	12 05 25.2	-3.7

*ISCJB **23** 12:27:53.7±0.3, 464S±004×1534E±005, h82km, mb4.7/43, Error ellipse: s-maj=7.0km s-min=5.5km az=166.6*
*BJI **23** 12:27:54.0, 450S×1534E, h83km, mB4.9, mb4.8, Ms4.5, Msz4.1*
*NEIC **23** 12:27:55.0±0.3, 454S×1534E, mb4.7/18, Error ellipse: s-maj=8.8km s-min=7.5km az=100.0*
*MOS **23** 12:27:55.6±0.8, 454S×1534E, h97km, mb5.1/14, Error ellipse: s-maj=12.8km s-min=9.4km az=82.4*
*IDC **23** 12:27:57.7±0.7, 471S×1534E, h103km±5km, mb4.4/12, mb1 4.4/15, mb1mx4.3/19, mbtmp4.7/15, MS3.4/3, Ms1 3.3/3, ms1mx3.0/17, Error ellipse: s-maj=15.0km s-min=11.5km az=67.0*

ISC 23 12:27:55.7±0.3, 464S±004×1534E±005, h84km, h84km±2.9km: pP-P, n88, σ1§09/84, mb4.7/43, 7C-2D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.87**	**233**	P	**Pn**	**12 29 49.0**	**+1.6**
	44nm,0.3s,baz=37,slow=5.9,SNR=130						
PMG				S	**Sn**	**12 31 14.7**	**-0.1**
	42nm,0.3s,baz=163,slow=20,SNR=7.1						
PMG	**Port Moresby**	**7.87**	**233**	*e*P	**Pn**	**12 29 48.7**	**+1.4**
PMG				*e*		12 31 14.3	
PMG				pmax	pmax		
	comp=Z,95nm,0.4s						
PMG	**Port Moresby**	**7.87**	**233**	*e*Pn	**Pn**	**12 29 48.7**	**+1.3**
	comp=Z,95nm,0.4s						
PMG				*e*Sn	**Sn**	**12 31 14.3**	**-0.5**
HNR	**Honiara**	**7.98**	**127**	P	**Pn**	**12 29 52.3**	**+3.5**
	comp=Z,5.3nm,0.3s,baz=262,slow=3.1,SNR=2.8						
HNR				S	**Sn**	**12 31 18.3**	**+0.9**
	comp=Z,26nm,0.3s,baz=88,slow=13,SNR=2.9						
CTA	**Charters Tower**	**16.90**	**204**	P	**Pn**	**12 31 47.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=34,slow=16,SNR=7.4						
CTA	**Charters Tower**	**16.90**	**204**	*e*P	**Pn**	**12 31 48.3**	**+1.5**
CTA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CTA	**Charters Tower**	**16.90**	**204**	*e*P	**Pn**	**12 31 48.3**	**+1.5**
	comp=Z,2.2nm,0.4s						
CTAO	**Charters Tower**	**16.90**	**204**	*e*P	**Pn**	**12 31 48.0**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CTAO	**Charters Tower**	**16.90**	**204**	*e*Pn	**Pn**	**12 31 48.0**	**+1.2**
	comp=Z,5.8nm,0.9s						
DZM	**Mont Dzumac**	**21.39**	**145**	*e*P	**P**	**12 32 35.2**	**-1.3**
DZM	**Mont Dzumac**	**21.39**	**145**	P	**P**	**12 32 36.5**	**+0.1**
	comp=Z,14nm,0.4s,mb4.7,baz=304,slow=19,SNR=76						
KAKA	**Kakadu**	**22.29**	**248**	*e*P	**P**	**12 32 45.0**	**-0.9**
	comp=Z,37nm,0.9s,mb4.7						
WRAB	**Tennant Creek**	**24.05**	**229**	*d*iP	**P**	**12 33 03.1**	**+0.1**
WRAB	**Tennant Creek**	**24.05**	**229**	*e*P	**P**	**12 33 02.6**	**-0.3**
	comp=Z,50nm,0.4s,mb5.2						
WRAB				*e*PcP	PcP	12 36 43.1	+0.6
WB2	**Warramunga Arr**	**24.06**	**229**	*e*P	**P**	**12 33 02.8**	**-0.2**
WB2				*e*		12 36 42.9	
WRA	**Warramunga Arr**	**24.07**	**229**	P	**P**	**12 33 03.1**	**0.0**
	comp=Z,33nm,0.6s,mb4.9,baz=54,slow=10.0,SNR=386						
WRA				PcP	PcP	12 36 43.0	+0.5
	comp=Z,5.7nm,0.6s,baz=48,slow=2.4,SNR=12						
WRA				ScP	ScP	12 40 14.0	+0.6
	comp=Z,0.7nm,0.6s,baz=59,slow=2.8,SNR=6.2						
WRA	**Warramunga Arr**	**24.07**	**229**	P	**P**	**12 33 03.1**	**0.0**
WRA						12 36 43.0	
ARMA	**Armidale**	**25.70**	**184**	*e*P	**P**	**12 33 19.0**	**+1.1**
AS31	**Alice Springs**	**26.73**	**223**	*e*P	**P**	**12 33 27.0**	**-0.2**
ASAR	**Alice Springs**	**26.73**	**223**	P	**P**	**12 33 26.9**	**-0.3**
	comp=Z,1.8nm,0.4s,mb4.0,baz=54,slow=8.8,SNR=32						
ASAR				PcP	PcP	12 36 49.0	+0.5
	comp=Z,5.7nm,0.7s,baz=61,slow=2.7,SNR=16						
ASAR				ScP	ScP	12 40 20.6	-0.5
	comp=Z,0.5nm,0.7s,baz=46,slow=2.7,SNR=4.1						
ASAR				LR	LR	12 42 55.8	
	comp=Z,64nm,21.2s,baz=359,slow=34						
ASAR	**Alice Springs**	**26.73**	**223**	P	**P**	**12 33 27.0**	**-0.2**
ASAR						12 36 49.1	
STKA	**Stephens Creek**	**29.30**	**201**	P	**P**	**12 33 49.9**	**-0.2**
	comp=Z,4.4nm,0.6s,mb4.3,baz=38,slow=15,SNR=14						
STKA				LR	LR	12 44 17.5	
	comp=Z,63nm,19.4s,baz=25,slow=34						
STKA	**Stephens Creek**	**29.30**	**201**	*e*P	**P**	**12 33 49.7**	**-0.4**
	comp=Z,3.6nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**30.34**	**242**	⇓*i*P	**P**	**12 33 58.7**	**-0.6**
	comp=Z,23nm,0.6s,mb5.0						
FORT	**Forrest**	**35.35**	**220**	*e*P	**P**	**12 34 42.0**	**-0.9**
	comp=Z,20nm,0.7s,mb5.0						
MBWA	**Marble Bar**	**36.65**	**240**	*e*P	**P**	**12 34 53.0**	**-1.0**
	comp=Z,14nm,0.9s,mb4.9						
URZ	**Urewera**	**39.78**	**150**	P	**P**	**12 35 20.4**	**+0.1**
	comp=Z,5.1nm,0.3s,mb4.8,baz=333,slow=3.0,SNR=10						
RPZ	**Rata Peaks**	**41.89**	**161**	P	**P**	**12 35 37.5**	**-0.2**
	comp=Z,67nm,0.6s,mb5.6,baz=311,slow=1.4,SNR=74						
SSE	**Sheshan**	**47.05**	**321**	P	**P**	**12 36 19.3**	**+0.6**
SSE				AMB	AMB		
	comp=Z,22nm,1.0s,mb4.8						
SSE				AMB	AMB		
	comp=Z,15nm,3.3s						
NJ2	**Nanjing**	**49.16**	**320**	*e*P	**P**	**12 36 36.3**	**+1.3**
NJ2				AP	pP	12 36 55.0	-0.5
NJ2				XP	sP	12 37 03.9	-1.0
NJ2				PP	PP	12 38 31.0	+1.6
NJ2				S	**S**	**12 43 34.0**	**-0.1**
NJ2				XS	sS	12 44 04.0	-5.1
NJ2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,30nm,5.2s						
NJ2				LR	LR		
	comp=N,250nm,21.1s						
NJ2				LR	LR		
	comp=E,120nm,29.2s						
NJ2				LR	LR		
	comp=Z,120nm,21.2s						
MDJ	**Mudanjiang**	**53.52**	**339**	P	**P**	**12 37 07.9**	**+0.4**
MDJ				AP	pP	12 37 27.8	-0.5
MDJ				XP	sP	12 37 37.1	-0.6
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,60nm,6.4s						
SNY	**Shenyang**	**53.68**	**332**	⇑P	**P**	**12 37 10.5**	**+1.8**
SNY				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.9						
KMI	**Kunming**	**57.47**	**304**	P	**P**	**12 37 37.3**	**+1.4**
KMI				PP	PP	12 39 49.6	+5.4
KMI				PPP		12 41 06.3	
KMI				S	**S**	**12 45 29.8**	**+3.1**
KMI				XS	sS	12 45 57.8	-4.8
KMI				SS	SS	12 49 19.3	+1.7
KMI				SSS		12 51 38.3	
KMI				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.2						
KMI				AMB	AMB		
	comp=Z,68nm,4.3s						
KMI				LR	LR		
	comp=N,79nm,18.8s						
KMI				LR	LR		
	comp=E,64nm,16.2s						
KMI				LR	LR		
	comp=Z,49nm,17.5s						
CD2	**Chengdu**	**59.16**	**310**	*e*P	**P**	**12 37 46.5**	**-1.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,6.4s						
HHC	**Hu-ho-hao-te**	**59.32**	**324**	*e*P	**P**	**12 37 49.5**	**+0.7**
HHC				PCS	PcS	12 42 37.3	-0.8
HHC				S	**S**	**12 45 49.5**	**-1.3**
HHC				PS		12 46 17.3	
HHC				XS	sS	12 46 24.3	-2.5
HHC				SCS	ScS	12 47 29.4	-1.7
HHC				SS	SS	12 49 48.3	+1.6
HHC				AMB	AMB		
	comp=Z,23nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,78nm,4.8s						
HHC				LR	LR		
	comp=N,74nm,19.9s						
HHC				LR	LR		
	comp=E,113nm,21.8s						
HHC				LR	LR		
	comp=Z,64nm,22.8s						
HIA	**Hailar**	**61.17**	**335**	*e*P	**P**	**12 38 00.4**	**-1.0**
LZH	**Lanzhou**	**61.60**	**315**	*e*P	**P**	**12 38 06.3**	**+2.0**
LZH				AP	pP	12 38 28.3	+2.8
LZH				XP	sP	12 38 38.3	+3.5
LZH				PCP	PcP	12 38 46.5	+1.3
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,80nm,4.3s						
MA2	**Magadan**	**64.05**	**358**	*e*P	**P**	**12 38 20.2**	**-0.3**
MA2				pmax	pmax		
	comp=Z,80nm,1.4s,mb5.4						
GTA	**Gaotai**	**66.01**	**317**	*e*P	**P**	**12 38 35.3**	**+2.1**
GTA				AP	pP	12 38 56.8	+2.1
GTA				XP	sP	12 39 08.6	+4.7
GTA				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**66.23**	**328**	*e*P	**P**	**12 38 35.7**	**+1.1**
	comp=Z,2.7nm,0.9s,mb4.1						
ULN				*e*PcP	PcP	12 39 04.0	-0.1
SONM	**Songino Array**	**66.56**	**327**	P	**P**	**12 38 37.3**	**+0.6**
	comp=Z,1.7nm,0.6s,mb4.1,baz=144,slow=6.0,SNR=17						
SONM				pP	pP	12 39 03.6	+5.3
	comp=Z,1.3nm,0.6s,baz=155,slow=5.0,SNR=4.0						
YAK	**Yakutsk**	**68.96**	**348**	*e*P	**P**	**12 38 51.3**	**-0.5**
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
ZAK	**Zakamensk**	**69.72**	**328**	*e*P	**P**	**12 38 56.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.9						
VNDA	**Vanda**	**72.97**	**178**	P	**P**	**12 39 15.6**	**-0.5**
	comp=Z,18nm,0.7s,mb5.0,baz=330,slow=6.5,SNR=105						
VNDA	**Vanda**	**72.97**	**178**	⇑*e*P	**P**	**12 39 15.6**	**-0.5**
VNDA				pmax	pmax		
	comp=Z,16nm,0.7s						
VNDA	**Vanda**	**72.97**	**178**	⇑*e*P	**P**	**12 39 15.6**	**-0.5**
	comp=Z,16nm,0.7s,mb5.0						
**

AAK	**Ala-Archa**	**85.06**	**313**	*e*P	**P**	**12 40 21.7**	**-0.4**
AAK				*e**PP	pP	12 40 44.1	-0.3
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
AAK	**Ala-Archa**	**85.06**	**313**	*e*P	**P**	**12 40 21.6**	**-0.4**
	comp=Z,4.7nm,0.6s,mb4.6						
AAK				*e*pP	pP	12 40 44.1	-0.3
USP	**Ospenovka**	**85.17**	**314**	P	**P**	**12 40 23.3**	**+0.6**
	SNR=7.8						
QSPA	**South Pole Qui**	**85.32**	**180**	*e*P	**P**	**12 40 22.9**	**-0.5**
	comp=Z,37nm,0.5s,mb5.6						
AML	**Almayashu**	**85.55**	**313**	P	**P**	**12 40 26.6**	**+2.1**
	SNR=5.3						
MAW	**Mawson**	**85.98**	**203**	P	**P**	**12 40 24.7**	**-2.0**
	comp=Z,3.7nm,0.8s,mb4.4,baz=95,slow=8.6,SNR=7.4						
MAW	**Mawson**	**85.98**	**203**	*e*P	**P**	**12 40 25.6**	**-1.0**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAW	**Mawson**	**85.98**	**203**	*e*P	**P**	**12 40 25.6**	**-1.1**
	comp=Z,3.8nm,0.7s,mb4.4						
CHKZ	**Chkalovo**	**89.49**	**324**⇑	*e*P	**P**	**12 40 41.8**	**-1.6**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
CHKZ	**Chkalovo**	**89.49**	**324**⇑	*e*P	**P**	**12 40 41.8**	**-1.6**
	comp=Z,3.7nm,0.8s,mb4.5						
BVA0	**Borovoye Array**	**89.53**	**323**	*i* P	**P**	**12 40 42.3**	**-1.3**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb4.0						
BRVK	**Borovoye**	**89.60**	**323**	*e*P	**P**	**12 40 42.1**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
BRVK	**Borovoye**	**89.60**	**323**	*e*P	**P**	**12 40 42.1**	**-1.8**
	comp=Z,4.1nm,1.0s,mb4.5						
ZRNK	**Zerenda**	**90.35**	**323**⇑	*e*P	**P**	**12 40 45.8**	**-1.6**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
ZRNK	**Zerenda**	**90.35**	**323**⇑	*e*P	**P**	**12 40 45.8**	**-1.6**
	comp=Z,6.0nm,0.8s,mb4.8						
ZRNK				*e*pP	pP	12 41 06.8	-3.1
NVAR	**Mina Array Bea**	**91.44**	**52**	P	**P**	**12 40 52.8**	**+0.3**
	comp=Z,0.5nm,0.6s,mb3.8,baz=253,slow=9.4,SNR=6.0						
ARU	**Arti**	**96.57**	**326**	*e*P	**P**	**12 41 13.0**	**-3.0**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**98.23**	**48**	LR	LR	13 19 31.2	
	comp=Z,22nm,21.3s,baz=80,slow=32						
PLCA	**Paso Flores**	**119.49**	**143**	PKP	PKPdf	12 46 34.5	-1.0
	comp=Z,0.6nm,0.6s,baz=228,slow=1.1,SNR=3.7						
PLCA	**Paso Flores**	**119.49**	**143**	PKP	PKPdf	12 46 34.5	-1.0
LSZ	**Lusaka**	**122.34**	**249**	*e*PKIKP	PKPdf	12 46 41.8	+0.8
GERES	**GERESS Array B**	**124.28**	**329**	PKP	PKPdf	12 46 43.9	-0.8
	comp=Z,1.0nm,0.6s,baz=64,slow=3.1,SNR=7.6						
GERES				pPKP	pPKPdf	12 47 12.4	+4.2
	comp=Z,0.7nm,0.6s,baz=90,slow=2.7,SNR=2.1						
LPAZ	**La Paz**	**133.88**	**118**	PKP	PKPdf	12 47 04.0	+1.1
	comp=Z,0.8nm,0.5s,baz=216,slow=1.4,SNR=5.4						
CPUP	**Villa Florida**	**137.12**	**137**	PKP	PKPdf	12 47 09.4	+0.5
	comp=Z,1.0nm,0.6s,baz=162,slow=4.8,SNR=3.8						
BDFB	**Brasilia**	**150.68**	**134**	PKPbc	PKPbc	12 47 37.1	-0.9
	comp=Z,5.9nm,0.3s,baz=286,slow=2.2,SNR=8.5						
TOA0	**Torodi Ar. Sit**	**150.91**	**289**	*e*PKPbc	PKPbc	12 47 38.5	-0.1
TOA0				*es*PKPdf		12 48 07.2	
TORD	**Torodi Ar. Bea**	**150.91**	**289**	PKPbc	PKPbc	12 47 38.8	+0.2
	comp=Z,21nm,0.7s,baz=62,slow=2.3,SNR=84						
TORD				pPKPbc	pPKPbc	12 48 07.5	+5.6
	comp=Z,11nm,0.7s,baz=71,slow=2.0,SNR=9.1						

PGC 23 12:36:10.0, 6668N×13605W, h20km, ML2.6/2, 110km southwest of Ft. McPherson, Nt Richardson Mountains, Yukon Territory, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INK	**Inuvik**	**1.91**	**30**	P	Pn	12 36 42.0	+0.7
INK				Sn	Sn	12 37 04.5	-0.3
INK				Sg	Sn	12 37 09.1	+4.4
INK				Trac		12 37 10.9	
	comp=Z,36nm,0.1s						
DAWY	**Dawson**	**2.97**	**210**	Pg	Pn	12 37 05.0	+8.9
DAWY				Sn	Sn	12 37 31.0	-0.1
DAWY				Sg	Sn	12 37 41.5	+10
DAWY				Trac		12 37 45.0	
	comp=Z,9.0nm,0.1s						
HYT	**Haines Junctio**	**5.91**	**187**	Pn	Pn	12 37 39.2	+2.8
HYT				Sg	Sn	12 39 15.1	+32
HYT				Trac		12 39 17.2	
	comp=Z,2.0nm,0.5s						
YKW3	**Yellowknife Ar**	**10.06**	**104**	P	Pn	12 38 31.2	-2.1
YKW3				Sn	Sn	12 40 15.4	-10
YKW3				Trac		12 40 22.0	
	comp=Z,1.0nm,0.4s						

*ISCJB **23** 12:50:46.3±2.5, 156S±0.1×1674E±0.4, h100km, mb3.5/3, Error ellipse: s-maj=53.0km s-min=15.8km az=164.1*
*IDC **23** 12:50:48.7±9.4, 1566S×16761E, h122km±116km, mb3.2/3, mb1 3.5/4, mb1mx3.3/14, mbtmp3.8/4, ML4.4/1, Error ellipse: s-maj=112.9km s-min=50.2km az=135.0*
ISC 23 12:50:47.2±2.5, 155S±01×1675E±04, h100km, n5, σ0§21/7, mb3.5/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.58**	**189**	*e*P	**Pn**	**12 52 21.6**	**+0.3**
DZM				*e*S	**Sn**	**12 53 29.2**	**-5.7**
DZM	**Mont Dzumac**	**6.58**	**189**	P	**Pn**	**12 52 21.6**	**+0.2**
	8.1nm,0.3s,baz=40,slow=17,SNR=110						
DZM				S	**Sn**	**12 53 34.5**	**-0.4**
	0.4nm,0.3s,baz=308,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**31.88**	**257**	P	**P**	**12 57 02.8**	**-0.1**
	0.5nm,0.8s,mb3.3,baz=83,slow=7.5,SNR=8.8						
ASAR	**Alice Springs**	**32.63**	**250**	P	**P**	**12 57 09.6**	**+0.2**
	0.8nm,0.6s,mb3.7,baz=79,slow=8.8,SNR=19						
SONM	**Songino Array**	**83.29**	**324**	P	**P**	**13 03 02.7**	**-0.2**
	0.6nm,0.9s,mb3.4,baz=116,slow=3.4,SNR=3.5						

*ISCJB **23** 13:01:36.2±1.6, 364N±02×137.1E±04, h285km, mb3.0/2, Error ellipse: s-maj=52.9km s-min=11.4km az=39.4*
*IDC **23** 13:01:38.0±1.5, 3636N×13757E, h285km±9km, mb2.9/2, mb1 3.2/3, mb1mx2.8/22, mbtmp3.7/3, Error ellipse: s-maj=91.2km s-min=19.8km az=103.0*
ISC 23 13:01:38.1±1.9, 364N±02×1375E±08, h285km, n5, σ0§64/8, mb3.0/2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.57**	**77**	P	**Pn**	**13 02 15.0**	**-0.1**
MAT				S	**S**	**13 02 44.3**	**-0.2**
MJAR	**Matsushiro Arr**	**0.57**	**77**	P	**Pn**	**13 02 15.6**	**+0.5**
	3.0nm,0.3s,baz=253,slow=7.1,SNR=15						
MJAR				S	**S**	**13 02 45.0**	**+0.5**
	baz=321,slow=29,SNR=3.5						
ASAJ	**Asahikawa**	**8.61**	**25**	P	**Pn**	**13 03 40.2**	**+1.2**
	1.7nm,0.3s,baz=237,slow=12,SNR=20						
ASAJ				S	**S**	**13 05 16.2**	**-1.0**
	0.2nm,0.3s,baz=283,slow=33,SNR=3.6						
WRA	**Warramunga Arr**	**56.14**	**184**	P	**P**	**13 10 47.9**	**-0.5**
	0.5nm,0.4s,mb3.3,baz=0.2,slow=7.5,SNR=20						
ASAR	**Alice Springs**	**59.86**	**184**	P	**P**	**13 11 13.7**	**-0.4**
	0.1nm,0.3s,mb2.8,baz=359,slow=5.9,SNR=6.0						

*ISCJB **23** 13:01:40.7±3.5, 3621N±004×138.1E±04, h15km±29km, Error ellipse: s-maj=60.7km s-min=7.0km az=4.8*
*JMA **23** 13:01:41.0, 3621N×13803E, h5km±1km, M1.2*
ISC 23 13:01:40.7±3.6, 3621N±005×1380E±05, h15km±28km, n4, σ0§11/8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**0.20**	**16**	P	**Pg**	**13 01 45.3**	**-0.1**
JNG				S	**Sg**	**13 01 48.6**	**+0.1**
JNT	**Takato**	**0.35**	**165**	P	**Pg**	**13 01 48.0**	**+0.1**
JNT				S	**Sg**	**13 01 52.7**	**-0.1**
MAT	**Matsushiro**	**0.36**	**23**	P	**Pg**	**13 01 48.0**	**-0.1**
MAT				S	**Sg**	**13 01 52.9**	**-0.1**
MAT	**Matsushiro**	**0.36**	**23**	P	**Pg**	**13 01 48.1**	**0.0**
MAT				S	**Sg**	**13 01 53.1**	**+0.1**

IDC 23 13:15:52.4±10.0, 168S×6926E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, MS3.4/4, Ms1 3.4/4,
ms1mx2.8/43, Error ellipse: s-maj=318.4km s-min=39.2km az=76.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**32.00**	**271**	LR	LR	13 33 54.9	
	comp=Z,44nm,18.0s,baz=88,slow=34						
BOSA	**Boshof**	**49.76**	**233**	LR	LR	13 45 41.6	
	comp=Z,71nm,18.9s,baz=306,slow=36						
BRTR	**Keskin Array B**	**52.54**	**326**	LR	LR	13 47 29.0	
	comp=Z,39nm,18.6s,baz=115,slow=36						
SONM	**Songino Array**	**58.98**	**28**	P	P	13 25 53.9	+0.2
	0.4nm,0.6s,baz=210,slow=8.1,SNR=2.8						
WRA	**Warramunga Arr**	**66.04**	**111**	P	P	13 26 41.9	+1.0
	0.4nm,0.8s,baz=286,slow=6.0,SNR=2.0						
ASAR	**Alice Springs**	**66.17**	**115**	P	P	13 26 42.0	+0.3
	0.6nm,0.7s,baz=284,slow=6.0,SNR=6.1						
GERES	**GERESS Array B**	**69.41**	**324**	LR	LR	13 58 04.2	
	comp=Z,24nm,19.1s,baz=307,slow=36						
STKA	**Stephens Creek**	**74.14**	**123**	P	P	13 27 31.3	+0.7
	1.8nm,0.9s,baz=236,slow=3.6,SNR=2.2						

*IDC **23** 13:35:58.8±1.0, 9.19S×10796E, h0km, mb4.0/7, mb1 4.0/9, mb1mx3.9/19, mbtmp4.0/9, ML3.5/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/28, Error ellipse: s-maj=51.7km s-min=17.2km az=52.0*
*NEIC **23** 13:36:00.0±0.4, 9.29S×10790E, h10km, mb4.6/11, Error ellipse: s-maj=22.4km s-min=4.9km az=48.0*
*ISCJB **23** 13:36:01.6±0.5, 9.21S±006×10801E±006, h33km, mb4.3/17, MS3.4/2, Error ellipse: s-maj=10.8km s-min=7.0km az=89.0*
*MOS **23** 13:36:02.1±0.7, 9.09S×10806E, h33km, mb4.9/5, Error ellipse: s-maj=34.2km s-min=12.3km az=125.1*
ISC 23 13:36:04.1±0.5, 9.18S±007×10805E±007, h35km, n42, σ0§92/40, mb4.3/17, MS3.4/2, 2C-1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**2.38**	**349**	P	**Pn**	**13 36 42.4**	**+1.9**
	0.0nm,0.0s						
BJII	**Banjamegara**	**2.46**	**42**	P	**Pn**	**13 36 41.5**	**-0.2**
	0.0nm,0.0s						
YOGI	**Yogyakarta**	**2.60**	**59**⇑	*e*P	**Pn**	**13 36 43.0**	**-0.6**
YOGI				*e*S	**Sn**	**13 37 13.8**	**-0.1**
YOGI	**Yogyakarta**	**2.60**	**59**⇓	*i* P	**Pn**	**13 36 44.1**	**+0.5**
YOGI				*i* S	**Sn**	**13 37 04.3**	**-10**
YOGI	**Yogyakarta**	**2.60**	**59**⇑	*i* P	**Pn**	**13 36 42.4**	**-1.2**
YOGI				*i* S		13 37 37.3	+23
JCJI	**Jatiwangi**	**2.68**	**5**	P	**Pn**	**13 36 43.6**	**-1.1**
	0.0nm,0.0s						
CBJI	**Citeko**	**2.99**	**336**	P	**Pn**	**13 36 45.6**	**-3.3**
	0.0nm,0.0s						
KRKI	**Karangkates**	**4.46**	**77**	P	**Pn**	**13 37 16.6**	**+7.3**
	0.0nm,0.0s						
PSI	**Prapat**	**14.98**	**322**	Pn	**Pn**	**13 39 30.8**	**-2.4**
	0.9nm,0.3s,baz=160,slow=15,SNR=4.7						
MBWA	**Marble Bar**	**16.39**	**138**	*e*P	**Pn**	**13 39 48.8**	**-2.5**
	6.2nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.24**	**119**	P	**Pn**	**13 40 26.3**	**-0.2**
	0.0nm,0.3s,baz=270,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**27.56**	**116**	P	**P**	**13 41 47.9**	**+0.2**
	1.4nm,0.8s,mb3.6,baz=289,slow=11,SNR=7.7						
WRAB	**Tennant Creek**	**27.56**	**116**	*e*P	**P**	**13 41 49.1**	**+1.4**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
WRAB	**Tennant Creek**	**27.56**	**116**	*e*P	**P**	**13 41 49.1**	**+1.5**
	comp=Z,4.2nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**28.60**	**123**	P	**P**	**13 41 58.1**	**+1.1**
	comp=Z,0.6nm,0.9s,mb3.3,baz=294,slow=9.0,SNR=5.3						
ASAR				PcP	PcP	13 45 09.8	+2.4
	comp=Z,0.6nm,0.7s,baz=319,slow=1.5,SNR=6.0						
ASAR				LR	LR	13 54 35.6	
	comp=Z,69nm,18.2s,MS3.3,baz=173,slow=39						
ASAR	**Alice Springs**	**28.60**	**123**	P	**P**	**13 41 58.1**	**+1.1**
ASAR						13 45 09.9	
STKA	**Stephens Creek**	**38.42**	**131**	P	**P**	**13 43 22.0**	**-0.3**
	comp=Z,1.4nm,0.6s,mb3.9,baz=299,slow=8.4,SNR=4.3						
JIRN	**Jiri**	**42.30**	**331**	*e*P	**P**	**13 43 54.8**	**+0.5**
PKI	**Pulchoki**	**42.61**	**330**	*e*P	**P**	**13 43 56.7**	**-0.1**
GUN	**Gumba**	**42.66**	**330**	*e*P	**P**	**13 43 57.9**	**+0.7**
	comp=Z,23nm,0.7s,mb5.0						
DMN	**Daman**	**42.79**	**329**	*e*P	**P**	**13 43 58.6**	**+0.3**
	comp=Z,21nm,0.8s,mb4.9						
KKN	**Kakani**	**42.85**	**330**	*e*P	**P**	**13 43 59.1**	**+0.3**
	comp=Z,20nm,0.8s,mb4.9						
KKN	**Kakani**	**42.85**	**330**	*e*P	**P**	**13 43 59.1**	**+0.3**
KKN				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
GKN	**Gorkha**	**43.35**	**329**	*e*P	**P**	**13 44 02.9**	**+0.1**
	comp=Z,16nm,0.7s,mb4.9						
KOLN	**Koldanda**	**43.70**	**328**	*e*P	**P**	**13 44 06.2**	**+0.6**
	comp=Z,24nm,0.7s,mb5.0						
MJAR	**Matsushiro Arr**	**53.58**	**30**	LR	LR	14 10 08.0	
	comp=Z,46nm,19.0s,MS3.5,baz=35,slow=38						
SONM	**Songino Array**	**56.78**	**359**	P	**P**	**13 45 44.8**	**+0.1**
	comp=Z,1.8nm,0.6s,mb4.2,baz=173,slow=8.1,SNR=22						
ULN	**Ulaanbaatar**	**56.80**	**359**	*e*P	**P**	**13 45 44.8**	**0.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**56.80**	**359**	*e*P	**P**	**13 45 44.8**	**+0.1**
	comp=Z,1.9nm,0.6s,mb4.3						
MKAR	**Makanchi Array**	**60.27**	**340**	P	**P**	**13 46 08.6**	**-0.4**
	comp=Z,5.5nm,0.6s,mb4.8,baz=134,slow=6.9,SNR=34						
MKAR	**Makanchi Array**	**60.27**	**340**	P	**P**	**13 46 08.6**	**-0.4**
BRVK	**Borovoye**	**69.83**	**337**	*e*P	**P**	**13 47 10.9**	**-0.2**
BRVK				*e**PP	pP	13 47 26.7	+4.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
BRVK	**Borovoye**	**69.83**	**337**	*e*P	**P**	**13 47 10.9**	**-0.2**
	comp=Z,0.8nm,0.5s,mb3.9						
BRVK				*e*pP	pP	13 47 26.7	+4.8
CHKZ	**Chkalovo**	**70.18**	**337**	*e*P	**P**	**13 47 13.1**	**-0.1**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
CHKZ	**Chkalovo**	**70.18**	**337**	*e*P	**P**	**13 47 13.1**	**-0.1**
	comp=Z,3.1nm,0.6s,mb4.4						
ZRNK	**Zerenda**	**70.25**	**336**	*e*P	**P**	**13 47 13.8**	**+0.2**
ZRNK				*e**PP	pP	13 47 28.2	+3.7
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ZRNK	**Zerenda**	**70.25**	**336**	*e*P	**P**	**13 47 13.8**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.2						
ZRNK				*e*pP	pP	13 47 28.1	+3.7
VNDA	**Vanda**	**73.65**	**169**	P	**P**	**13 47 33.4**	**-0.6**
	comp=Z,0.6nm,0.8s,mb3.6,baz=300,slow=8.0,SNR=3.9						
BRTR	**Keskin Array B**	**84.05**	**312**	P	**P**	**13 48 31.6**	**+0.6**
	comp=Z,0.4nm,0.4s,mb4.0,baz=104,slow=5.2,SNR=3.5						
WMOK	**Wichita Mounta**	**144.63**	**40**	*e*PKIKP	PKPdf	13 55 37.3	+0.4
JCT	**Junction City**	**146.47**	**47**	*e*PKP2	PKPab	13 55 44.1	+1.7
WVT	**Waverly**	**149.52**	**26**	*e*PKPbc	PKPbc	13 55 50.9	+1.3
WVT				*e*PKPab	PKPab	13 55 56.7	+2.1

*NIED **23** 13:46:00, 2690N×13000E, h5km, Mw4.1 Best double couple: M0 1.36000×10^15 NP1:φs 184.00000°, δ61.00000°, λ -92.00000°. NP2:φs 8.00000°, δ29.00000°, λ -87.00000°.*
*IDC **23** 13:46:38.2±1.2, 2700N×12989E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/22, mbtmp3.9/6, MS3.0/3, Ms1 3.0/3, ms1mx2.5/24, Error ellipse: s-maj=28.9km s-min=18.8km az=49.0*
*ISCJB **23** 13:46:41.6±0.5, 2691N±003×12993E±004, h45km, mb3.9/6, MS3.2/2, Error ellipse: s-maj=4.8km s-min=4.4km az=83.6*
*JMA **23** 13:46:41.0, 2688N×12998E, h45km, M3.9*
ISC 23 13:46:41.5±2.1, 2691N±003×12991E±004, h26km±17km, n24, σ0§91/34, mb3.9/6, MS3.2/2, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.22**	**316**	P	**Pn**	**13 47 03.1**	**+0.2**
JTK				S	**Sn**	**13 47 18.5**	**-0.1**
JZK	**Kikaishima**	**1.40**	**2**	P	**Pn**	**13 47 05.4**	**0.0**
JZK				S	**Sn**	**13 47 23.1**	**+0.1**
JOW	**Kunigami**	**1.46**	**267**	Pn	**Pn**	**13 47 06.7**	**+0.4**
	102nm,0.3s,baz=116,slow=16,SNR=784						
JOW				Sn	**Sn**	**13 47 24.1**	**-0.4**
	123nm,0.3s,baz=116,slow=20,SNR=9.4						
JOW	**Kunigami**	**1.46**	**267**	P	**Pn**	**13 47 06.6**	**+0.4**
JOW				S	**Sn**	**13 47 24.9**	**+0.3**
JAM	**Amami Oshima**	**1.52**	**350**	P	**Pn**	**13 47 07.0**	**0.0**
JAM				S	**Sn**	**13 47 25.2**	**-0.7**
JMZ	**Minamidaito 2**	**1.60**	**132**	P	**Pn**	**13 47 06.5**	**-1.6**
JMZ				S	**Sn**	**13 47 25.1**	**-2.9**
JIH	**Iheya**	**1.74**	**275**	P	**Pn**	**13 47 10.6**	**+0.6**
JIH				S	**Sn**	**13 47 32.0**	**+0.6**
JJT2	**Tamagusuku 2**	**2.08**	**249**	P	**Pn**	**13 47 15.2**	**+0.4**
JJT2				S	**Sn**	**13 47 40.0**	**+0.1**
NAH1	**Naha**	**2.11**	**251**	P	**Pn**	**13 47 15.5**	**+0.4**
NAH1				S	**Sn**	**13 47 40.1**	**-0.4**
JAGN	**Aguni-jima**	**2.41**	**263**	P	**Pn**	**13 47 19.5**	**+0.3**
JAGN				S	**Sn**	**13 47 48.1**	**+0.3**
JKE	**Kume jima 2**	**2.86**	**259**	P	**Pn**	**13 47 25.1**	**-0.3**
JKE				S	**Sn**	**13 47 59.3**	**+0.4**
JNN	**Nakanoshima**	**2.92**	**359**	P	**Pn**	**13 47 26.4**	**+0.1**
JNN				S	**Sn**	**13 47 59.8**	**-0.7**
JOGS	**Gusukube**	**4.59**	**243**	S	**Sn**	**13 48 39.8**	**-1.9**
JTJ	**Tarama**	**5.21**	**245**	*e*S	**Sn**	**13 48 52.2**	**-4.8**
JIJ	**Ishigaki jima**	**5.79**	**245**	*e*S	**Sn**	**13 49 05.1**	**-6.2**
JKRS	**Kuro-shima**	**5.96**	**245**	*e*S	**Sn**	**13 49 13.0**	**-2.4**
GUMO	**Guam**	**19.28**	**131**	LR	LR	13 58 24.1	
	comp=Z,17nm,18.6s,baz=278,slow=36						
SONM	**Songino Array**	**27.83**	**325**	P	**P**	**13 52 28.0**	**-0.7**
	0.3nm,0.4s,mb3.2,baz=133,slow=8.1,SNR=3.3						
SONM				LR	LR	14 04 59.9	
	comp=Z,40nm,20.9s,MS3.0,baz=268,slow=40						
FITZ	**Fitzroy Crossi**	**44.94**	**186**	P	**P**	**13 54 55.4**	**+1.2**
	1.9nm,1.0s,mb3.9,baz=35,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**46.77**	**174**	P	**P**	**13 55 09.5**	**+0.9**
	2.1nm,0.6s,mb4.2,baz=354,slow=8.5,SNR=27						
CTA	**Charters Tower**	**49.33**	**160**	P	**P**	**13 55 29.9**	**+1.4**
	4.2nm,0.8s,mb4.5,baz=336,slow=6.4,SNR=6.7						
ASAR	**Alice Springs**	**50.43**	**175**	P	**P**	**13 55 38.5**	**+1.7**
	1.1nm,0.6s,mb4.1,baz=6.1,slow=14,SNR=23						
FINES	**FINESS Array B**	**73.01**	**331**	LR	LR	14 31 42.6	
	comp=Z,22nm,18.6s,MS3.5,baz=161,slow=37						
NOA	**NORSAR Array B**	**79.36**	**334**	P	**P**	**13 58 45.5**	**+0.4**
	0.6nm,0.7s,mb3.6,baz=51,slow=5.6,SNR=2.6						

*IDC **23** 15:00:43.9±1.1, 5.21S×14641E, h0km, mb3.8/7, mb1 3.9/10, mb1mx3.9/17, mbtmp3.8/10, ML3.8/3, MS3.1/4, Ms1 3.1/4, ms1mx2.8/22, Error ellipse: s-maj=32.3km s-min=15.3km az=79.0*
*ISCJB **23** 15:00:48.3±3.1, 5.23S±0.1×1464E±0.1, h44km±27km, mb4.0/7, Error ellipse: s-maj=20.9km s-min=17.7km az=60.0*
*NEIC **23** 15:00:50.2±2.4, 5.21S×14635E, h45km±22km, mb4.5/4, Error ellipse: s-maj=17.1km s-min=15.0km az=185.0*
ISC 23 15:00:50.2±2.8, 52S±01×1464E±01, h43km±26km, n21, σ0§73/22, mb4.0/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.21**	**169**	Pn	**Pn**	**15 01 51.5**	**-0.4**
	8.9nm,0.3s,baz=354,slow=6.6,SNR=43						
PMG				Sn	**Sn**	**15 02 39.7**	**-0.1**
	4.8nm,0.3s,baz=29,slow=19,SNR=3.4						
PMG				Lg		15 02 57.0	
	16nm,0.3s,baz=6.1,slow=19,SNR=3.6						
PMG				LR	LR	15 03 47.1	
	comp=Z,209nm,20.1s,baz=5.8,slow=43						
PMG	**Port Moresby**	**4.21**	**169**	*e*Pn	**Pn**	**15 01 51.3**	**-0.5**
PMG				Sn	**Sn**	**15 02 39.7**	**-0.1**
PMG				Lg		15 02 57.0	
PMG				LR	LR	15 03 47.1	
CTA	**Charters Tower**	**14.76**	**180**	Pn	**Pn**	**15 04 16.6**	**+0.6**
	0.7nm,0.3s,baz=5.3,slow=14,SNR=10						
CTA				LR	LR	15 09 34.9	
	comp=Z,83nm,21.7s,baz=161,slow=36						
CTA	**Charters Tower**	**14.76**	**180**	*e*P	**Pn**	**15 04 17.7**	**+1.7**
	2.6nm,0.6s						
CTAO	**Charters Tower**	**14.76**	**180**	*e*P	**Pn**	**15 04 17.8**	**+1.8**
KAKA	**Kakadu**	**15.62**	**241**	*e*P	**Pn**	**15 04 27.2**	**-0.1**
	11nm,0.5s						
WRAB	**Tennant Creek**	**18.71**	**218**	*e*P	**Pn**	**15 05 05.8**	**+0.1**
	5.0nm,0.7s						
WB2	**Warramunga Arr**	**18.71**	**218**	*e*P	**Pn**	**15 05 06.0**	**+0.3**
WRA	**Warramunga Arr**	**18.72**	**218**	P	**Pn**	**15 05 04.3**	**-1.5**
	0.4nm,0.3s,baz=38,slow=12,SNR=30						
GUMO	**Guam**	**18.77**	**355**	LR	LR	15 10 04.2	
	comp=Z,48nm,19.5s,baz=242,slow=30						
AS31	**Alice Springs**	**21.90**	**212**	*e*P	**P**	**15 05 40.7**	**+1.1**
ASAR	**Alice Springs**	**21.90**	**212**	P	**P**	**15 05 39.5**	**-0.1**
	0.3nm,0.5s,baz=55,slow=8.6,SNR=18						
ASAR				LR	LR	15 15 03.1	
	comp=Z,84nm,19.6s,baz=172,slow=39						
FITZ	**Fitzroy Crossi**	**23.95**	**236**	P	**P**	**15 06 00.1**	**-0.2**
	6.4nm,0.5s,mb4.3,baz=57,slow=8.3,SNR=68						
FITZ	**Fitzroy Crossi**	**23.95**	**236**	*e*P	**P**	**15 06 00.0**	**-0.3**
	12nm,0.5s,mb4.6						
DZM	**Mont Dzumac**	**25.64**	**133**	P	**P**	**15 06 14.9**	**-0.8**
	5.0nm,1.2s,mb

ARA0	**ARCESS Array S**	**3.56 306**	Pn	**Pn**	**15 19 30.1**	**+0.5**
	baz=123,slow=14					
ARA0			Pg	**Pg**	**15 19 37.9**	**-3.5**
	baz=124,slow=18					
ARA0			Sn	**Sn**	**15 20 11.6**	**-0.8**
	baz=123,slow=28					
ARA0			Lg		15 20 24.0	
	baz=105,slow=37					
OUL	**Oulu**	**4.08 234**	*e*P	**Pn**	**15 19 37.1**	**+0.3**
OUL			*e*SG	**Sg**	**15 20 41.2**	**-3.1**
OUL			MSG		15 20 44.9	
	comp=Z,7.1nm,0.3s					
KTK1	**Kautokeino**	**4.13 294**	*e*S	**Sn**	**15 20 26.2**	**-0.2**
KTK1			AML	AML	15 20 54.3	
	comp=Z,7.7nm,0.4s					
KIF	**Kilpisjarvi**	**4.99 292**	*e*S	**Sn**	**15 20 45.8**	**-1.7**
KIF			*e*SB	**Sb**	**15 21 04.0**	**+2.3**
KIF			MSG		15 21 07.8	
	comp=Z,8.0nm,0.3s					
FIA0	**FINESS Array S**	**7.06 211**	Lg		15 22 06.3	
	baz=16,slow=28					
FIA0	**FINESS Array S**	**7.06 211**	*e*		15 22 06.3	
FIA0	**FINESS Array S**	**7.06 211**	Lg		15 22 06.3	
	baz=16,slow=28					

MEX 23 15:35:53.1±0.6, 1624N×9784W, h28km±30km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.34**	**52**	*i* P	Pn	15 36 13.9	-2.1
VHO				*i* S	Sn	15 36 29.7	-3.2
OXX	**Oaxaca**	**1.36**	**52**	*i* P	Pn	15 36 14.7	-1.4
OXX				*i* S	Sn	15 36 31.2	-2.0
UTMO	**Huajuapan**	**1.58**	**1**	*i* P	Pn	15 36 17.2	-2.0
UTMO				*i* S	Sn	15 36 36.4	-2.4
MEIG	**Mezcala**	**2.39**	**315**	*i* P	Pn	15 36 28.0	-2.4
MEIG				*i* S	Sn	15 36 57.3	-1.5
CMIG	**Matias Romero**	**2.95**	**73**	*e*P	Pn	15 36 36.5	-1.6
CMIG				*i* S	Sn	15 37 09.9	-2.6

IDC 23 15:36:57.7±16.0, 5610S×2759W, h176km±155km, mb3.5/3, mb1 3.7/3, mb1mx3.3/16, mbtmp4.0/3, Error ellipse: s-maj=52.9km s-min=24.1km az=75.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**46.52**	**183**	P	P	15 45 06.4	-0.9
	0.8nm,0.6s,baz=176,slow=6.5,SNR=12						
LPAZ	**La Paz**	**50.22**	**306**	P	P	15 45 36.2	+0.6
	1.4nm,0.5s,baz=153,slow=5.9,SNR=6.8						
TORD	**Torodi Ar. Bea**	**73.21**	**30**	P	P	15 48 09.1	-0.1
	1.1nm,0.5s,baz=201,slow=5.8,SNR=7.3						
SONM	**Songino Array**	**150.95**	**87**	PKPbc	PKPbc	15 56 28.3	-1.1
	0.9nm,0.4s,baz=217,slow=3.5,SNR=11						

*ISCJB **23** 15:48:55.7±0.9, 2899S×1773W±0.2, h263km±6km, mb3.5/7, Error ellipse: s-maj=25.1km s-min=7.2km az=20.0*
*NEIC **23** 15:49:01.0±0.8, 2822S×17828W, h229km±8km, mb4.3/3, Error ellipse: s-maj=15.0km s-min=12.4km az=119.0*
*IDC **23** 15:49:00.0±0.9, 2820S×17824W, h221km±7km, mb3.3/5, mb1 3.6/6, mb1mx3.5/13, mbtmp4.1/6, Error ellipse: s-maj=22.4km s-min=20.4km az=7.0*

ISC 23 15:49:00.7±1.2, 2912S±005×1779W±02, h253km±7km, n48, σ1$07/53, mb3.6/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.14**	**190**	P	**Pn**	**15 49 34.4**	**+1.3**
	542nm,0.3s,baz=75,slow=7.2,SNR=30						
RAO				S	**S**	**15 49 58.0**	**-0.7**
	457nm,0.3s,baz=87,slow=23,SNR=6.6						
MXZ	**Matakaoa Point**	**9.00**	**200**	PN	**Pn**	**15 51 05.6**	**-1.0**
MXZ				SN	**S**	**15 52 49.3**	**+0.9**
PUZ	**Puketiti**	**9.49**	**199**	PN	**Pn**	**15 51 11.8**	**-0.9**
PUZ				SN	**S**	**15 52 59.0**	**-0.8**
MWZ	**Matawai**	**9.95**	**201**	*e*P	**Pn**	**15 51 17.6**	**-0.9**
MWZ				S	**S**	**15 53 10.6**	**+0.1**
MWZ	**Matawai**	**9.95**	**201**	*e*PN	**Pn**	**15 51 17.6**	**-0.9**
MWZ				SN	**S**	**15 53 10.1**	**-0.4**
URZ	**Urewera**	**10.02**	**203**	P	**Pn**	**15 51 19.8**	**+0.3**
	0.7nm,0.3s,baz=354,slow=19,SNR=19						
URZ				S	**S**	**15 53 13.6**	**+1.5**
	4.7nm,0.3s,baz=303,slow=22,SNR=14						
URZ	**Urewera**	**10.02**	**203**	*e*P	**Pn**	**15 51 19.7**	**+0.3**
URZ	**Urewera**	**10.02**	**203**	*e*PN	**Pn**	**15 51 19.7**	**+0.3**
URZ				SN	**S**	**15 53 13.6**	**+1.5**
KNZ	**Kokohu**	**10.54**	**199**	SN	**S**	**15 53 19.8**	**-4.3**
BKZ	**Black Stump Fm**	**11.05**	**203**	*e*P	**Pn**	**15 51 31.4**	**-0.9**
BKZ	**Black Stump Fm**	**11.05**	**203**	PN	**Pn**	**15 51 30.8**	**-1.4**
BKZ				SN	**S**	**15 53 36.5**	**+0.6**
FWVZ	**Far West T-bar**	**11.47**	**206**	*e*P	**Pn**	**15 51 39.3**	**+1.7**
WNVZ	**Wahianoa**	**11.52**	**206**	P	**Pn**	**15 51 40.3**	**+2.2**
TSZ	**Takapari Road**	**12.03**	**203**	*e*P	**Pn**	**15 51 45.7**	**+1.2**
TSZ	**Takapari Road**	**12.03**	**203**	PN	**Pn**	**15 51 45.8**	**+1.3**
BFZ	**Birch Farm**	**12.50**	**201**	*e*P	**Pn**	**15 51 51.2**	**+1.0**
MRZ	**Mangatainoka R**	**12.70**	**203**	P	**Pn**	**15 51 51.4**	**-1.3**
MRZ	**Mangatainoka R**	**12.70**	**203**	*e*PN	**Pn**	**15 51 48.8**	**-3.9**
TIWZ	**Tintock**	**12.70**	**202**	PN	**Pn**	**15 51 52.5**	**-0.2**
MTW	**Mount Morrison**	**13.17**	**202**	P	**Pn**	**15 51 51.4**	**-7.1**
TCW	**Tory Channel**	**13.65**	**206**	P	**Pn**	**15 52 04.4**	**0.0**
NNZ	**Nelson**	**14.02**	**208**	*e*P	**Pn**	**15 52 09.0**	**+0.2**
NNZ	**Nelson**	**14.02**	**208**	*e*PN	**Pn**	**15 52 07.2**	**-1.6**
NNZ				SN	**S**	**15 54 39.9**	**-4.0**
QRZ	**Quartz Range**	**14.06**	**211**	*e*P	**Pn**	**15 52 07.9**	**-1.5**
THZ	**Tophouse**	**14.67**	**208**	*e*P	**Pn**	**15 52 15.2**	**-1.5**
KHZ	**Kahutara**	**14.97**	**205**	*e*P	**Pn**	**15 52 20.4**	**+0.1**
DZM	**Mont Dzumac**	**15.77**	**293**	P	**Pn**	**15 52 28.6**	**-1.3**
	0.2nm,0.3s,baz=170,slow=18,SNR=4.5						
LTZ	**Lake Taylor**	**15.78**	**208**	*e*P	**Pn**	**15 52 29.2**	**-0.7**
AFI	**Afiamalu**	**16.16**	**22**	P	**P**	**15 52 25.5**	**-7.5**
	2.1nm,0.3s,baz=223,slow=18,SNR=7.5						
AFI				S	**S**	**15 55 08.1**	**-21**
	1.1nm,0.3s,baz=288,slow=20,SNR=4.4						
AFI	**Afiamalu**	**16.16**	**22**	*e*P	**P**	**15 52 26.9**	**-6.1**
	22nm,0.8s						
AFI				S	**S**	**15 55 08.1**	**-21**
RPZ	**Rata Peaks**	**17.05**	**208**	P	**P**	**15 52 43.8**	**+1.1**
	0.1nm,0.3s,baz=7.5,slow=11,SNR=2.7						
RPZ				S	**S**	**15 55 45.8**	**-1.4**
	1.0nm,0.3s,baz=186,slow=14,SNR=11						
STKA	**Stephens Creek**	**34.88**	**255**	P	**P**	**15 55 30.6**	**+2.4**
	0.8nm,0.3s,mb3.8,baz=118,slow=14,SNR=8.1						
ASAR	**Alice Springs**	**43.29**	**266**	P	**P**	**15 56 38.1**	**+0.5**
	0.7nm,0.7s,mb3.2,baz=96,slow=7.2,SNR=15						
WB2	**Warramunga Arr**	**44.15**	**271**	*e*P	**P**	**15 56 44.5**	**+0.1**
WRAB	**Tennant Creek**	**44.15**	**271**	*e*P	**P**	**15 56 44.5**	**0.0**
WRA	**Warramunga Arr**	**44.16**	**271**	P	**P**	**15 56 44.4**	**-0.1**
	1.4nm,0.6s,mb3.5,baz=108,slow=6.4,SNR=25						
SBA	**Scott Base**	**49.32**	**184**	*e*P	**P**	**15 57 33.5**	**+9.2**
	6.2nm,1.0s,mb3.9						
VNDA	**Vanda**	**49.38**	**186**	P	**P**	**15 57 33.1**	**+8.3**
	1.4nm,0.9s,mb3.3,baz=1.9,slow=6.8,SNR=8.2						
VNDA	**Vanda**	**49.38**	**186**	*e*P	**P**	**15 57 32.7**	**+7.9**
FITZ	**Fitzroy Crossi**	**52.47**	**269**	P	**P**	**15 57 47.9**	**+0.2**
	1.6nm,0.9s,mb3.5,baz=122,slow=13,SNR=3.2						
QSPA	**South Pole Qui**	**60.99**	**180**	*e*P	**P**	**15 58 55.1**	**+7.7**
	6.8nm,0.9s,mb4.3						
ARCES	**ARCESS Array B**	**137.36**	**348**	PKP	PKPdf	16 07 56.1	+2.1
	0.4nm,0.5s,baz=57,slow=3.3,SNR=3.9						
FINES	**FINESS Array B**	**143.97**	**341**	PKP	PKPdf	16 08 03.9	-2.0
	1.2nm,0.8s,baz=23,slow=4.7,SNR=3.3						
NOA	**NORSAR Array B**	**147.50**	**352**	PKPbc	PKPbc	16 08 14.6	-0.3
	0.5nm,0.5s,baz=16,slow=4.3,SNR=3.3						
AKASG	**Malin Array Be**	**150.33**	**324**	PKPbc	PKPbc	16 08 22.4	+0.5
	0.4nm,0.4s,baz=46,slow=3.0,SNR=5.1						
AKASG	**Malin Array Be**	**150.33**	**324**	PKPbc	PKPbc	16 08 22.4	+0.5
CLL	**Collm**	**156.38**	**343**	*e*PKP2	PKPab	16 08 51.0	-3.8
TORD	**Torodi Ar. Bea**	**164.10**	**179**	PKPab	PKPab	16 09 35.3	+6.8
	0.5nm,0.6s,baz=174,slow=2.9,SNR=5.0						

*ISCJB **23** 16:04:48.5±2.1, 179N±0.1×9520W±0.07, h121km±18km, Error ellipse: s-maj=17.0km s-min=10.2km az=165.1*
*MEX **23** 16:04:49.0±0.9, 1783N×9516W, h134km±14km, MD3.8*
*NEIC **23** 16:04:49.4, 1783N×9518W, h130km, MD3.8(MEX), After MEX.*

ISC 23 16:04:48.7±2.4, 179N±01×9518W±007, h122km±20km, n6, σ0$69/11, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.74**	**77**	*i* P	**Pn**	**16 05 08.3**	**-0.3**
TUIG				*i* S	**Sn**	**16 05 24.6**	**+1.0**
CMIG	**Matias Romero**	**0.82**	**159**	*i* P	**Pn**	**16 05 08.9**	**-0.3**
CMIG				*i* S	**Sn**	**16 05 23.7**	**-1.0**
OXX	**Oaxaca**	**1.66**	**242**	*i* P	**Pn**	**16 05 18.7**	**+0.6**
OXX				*i* S	**Sn**	**16 05 41.0**	**+0.4**
VHO	**Vista Hermosa**	**1.67**	**242**	*i* P	**Pn**	**16 05 18.1**	**-0.2**
VHO				*i* S	**Sn**	**16 05 41.6**	**+0.8**
TPIG	**Tehuac#an**	**2.14**	**285**	*i* P	**Pn**	**16 05 24.3**	**+0.3**
TPIG				*i* S	**Sn**	**16 05 49.9**	**-1.2**
MDZ	**Mendoza**	**56.39**	**153**	*e*P	**P**	**16 14 07.5**	**-10**

*NEIC **23** 16:13:28.6, 3266S×70.11W, h112km, MG3.5(GUC), After GUC.*

GUC 23 16:13:28.6±0.5, 3266S×7011W, h112km±2km, MD3.3, ML3.5, 14C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.41**	**267**	*i* P	Pn	16 13 45.2	+0.2
JACH				*i* S	Sn	16 13 58.3	+0.9
FCH	**Farellones**	**0.68**	**193**	*i* P	Pn	16 13 47.8	+0.8
FCH				*i* S	Sn	16 14 02.4	+1.6
FCH				AML	AML	16 14 02.6	
	comp=E,1μm,0.2s						
PEL	**Peldehue**	**0.69**	**225**	*i* P	Pn	16 13 47.3	+0.3
PEL				*i* S	Sn	16 14 01.6	+0.8
PEL				AML	AML	16 14 03.1	
	comp=E,1μm,0.3s						
PEL	**Peldehue**	**0.69**	**225**	*i* P	Pn	16 13 47.3	+0.3
PEL				*i* S	Sn	16 14 01.6	+0.8
PTCH	**Petorca**	**0.80**	**299**	*i* P	Pn	16 13 48.6	+0.6
PTCH				*i* S	Sn	16 14 03.6	+1.0
PTCH				AML	AML	16 14 05.5	
	comp=E,3μm,0.4s						
PTCH	**Petorca**	**0.80**	**299**	*i* P	Pn	16 13 48.6	+0.6
PTCH				*i* S	Sn	16 14 03.6	+1.0
CLCH	**Cerro Calan**	**0.82**	**206**	*i* P	Pn	16 13 48.5	+0.4
CLCH				*i* S	Sn	16 14 03.5	+0.7
CLCH				AML	AML	16 14 05.6	
	comp=E,1μm,0.4s						
ROCH	**El Roble**	**0.82**	**248**	*i* P	Pn	16 13 48.7	+0.5
ROCH				*i* S	Sn	16 14 04.3	+1.4
STL	**Santa Lucia**	**0.90**	**210**	*i* P	Pn	16 13 48.5	-0.3
STL				*i* S	Sn	16 14 04.2	0.0
SAN	**Santiago**	**0.92**	**210**	*i* P	Pn	16 13 49.3	+0.2
SAN				*i* S	Sn	16 14 05.1	+0.6
SAN				AML	AML	16 14 05.9	
	comp=N,1μm,0.2s						
SAN	**Santiago**	**0.92**	**210**	*i* P	Pn	16 13 49.3	+0.2
SAN				*i* S	Sn	16 14 05.1	+0.6
ANTU	**Antumapu**	**1.01**	**206**	*i* P	Pn	16 13 50.6	+0.6
ANTU				*i* S	Sn	16 14 07.1	+0.9
ANTU				AML	AML	16 14 08.2	
	comp=E,854nm,0.8s						
ANTU	**Antumapu**	**1.01**	**206**	*i* P	Pn	16 13 50.6	+0.6
ANTU				*i* S	Sn	16 14 07.1	+0.9
RCDM	**Rinconada Maip**	**1.01**	**215**	*i* P	Pn	16 13 50.5	+0.5
RCDM				*i* S	Sn	16 14 07.0	+0.8
RCDM				AML	AML	16 14 07.4	
	comp=E,2μm,0.2s						
RCDM	**Rinconada Maip**	**1.01**	**215**	*i* P	Pn	16 13 50.5	+0.5
RCDM				*i* S	Sn	16 14 07.0	+0.8
PCH	**Pirque**	**1.02**	**200**	*i* P	Pn	16 13 50.5	+0.5
PCH				*i* S	Sn	16 14 07.0	+0.7
PACH	**Papudo**	**1.13**	**276**	*i* P	Pn	16 13 51.6	+0.3
PACH				*i* S	Sn	16 14 09.3	+0.9
TACH	**Talagante**	**1.21**	**215**	*i* P	Pn	16 13 52.4	+0.2
TACH				*i* S	Sn	16 14 10.3	+0.3
CHCH	**Chadas Angostu**	**1.35**	**200**	*i* P	Pn	16 13 54.4	+0.7
CHCH				*i* S	Sn	16 14 13.7	+0.9
CHNG	**Los Chungos**	**1.41**	**303**	*i* P	Pn	16 13 54.9	+0.5
CHNG				*i* S	Sn	16 14 14.3	+0.3
LCCH	**Las Cruces**	**1.47**	**236**	*i* P	Pn	16 13 55.5	+0.3
LCCH				*i* S	Sn	16 14 15.8	+0.5
CACH	**El Canelo**	**1.51**	**196**	*i* P	Pn	16 13 56.7	+1.1
CACH				*i* S	Sn	16 14 17.7	+1.6
CMCH	**Combarbala**	**1.67**	**333**	*i* P	Pn	16 13 57.8	+0.3
CMCH				*i* S	Sn	16 14 20.2	+0.7
CMCH				AML	AML	16 14 21.4	
	comp=N,1μm,0.7s						
CMCH	**Combarbala**	**1.67**	**333**	*i* P	Pn	16 13 57.8	+0.3
CMCH				*i* S	Sn	16 14 20.2	+0.7
CICH	**Cipreses**	**1.68**	**189**	*e*P	Pn	16 13 58.5	+0.9
CICH				*i* S	Sn	16 14 20.9	+1.2
SFDO	**San Fernando**	**2.09**	**201**	*i* P	Pn	16 14 03.0	+0.3
SFDO				*i* S	Sn	16 14 29.7	+0.8

*NIED **23** 16:16:00, 2690N×13000E, h8km, Mw4.0 Best double couple: M₀9.64000×10¹⁴ NP1:φ=240.00000°, δ=59.00000°, λ=-76.00000°. NP2:φ=33.00000°, δ=34.00000°, λ=-113.00000°.*
*IDC **23** 16:16:08.6±1.6, 2674N×12976E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/21, mbtmp4.0/4, MS2.9/1, Ms1 2.9/1, ms1mx2.0/24, Error ellipse: s-maj=40.7km s-min=19.5km az=35.0*
*ISCJB **23** 16:16:09.8±0.5, 2690N±003×12994E±003, h33km, mb4.0/4, Error ellipse: s-maj=4.6km s-min=4.3km az=120.9*
*JMA **23** 16:16:09.5, 2688N×12998E, h46km, M3.6*
*NEIC **23** 16:16:10.1±1.0, 2673N×12979E, h10km, mb4.6/1, MW3.9(NIED), Error ellipse: s-maj=27.5km s-min=11.8km az=42.0*

ISC 23 16:16:11.7±0.5, 2695N±003×12988E±004, h35km, n20, σ0$85/32, mb4.0/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.18**	**315**	P	**Pn**	**16 16 31.5**	**-0.1**
JTK				S	**Sn**	**16 16 47.2**	**+0.8**
JZK	**Kikaishima**	**1.36**	**3**	P	**Pn**	**16 16 33.8**	**-0.4**
JZK				S	**Sn**	**16 16 51.0**	**0.0**
JOW	**Kunigami**	**1.44**	**266**	Pn	**Pn**	**16 16 35.2**	**0.0**
	53nm,0.3s,baz=108,slow=11,SNR=171						
JOW				Sn	**Sn**	**16 16 51.6**	**-1.2**
	89nm,0.3s,baz=107,slow=18,SNR=20						
JOW	**Kunigami**	**1.44**	**266**	P	**Pn**	**16 16 35.2**	**0.0**
JOW				S	**Sn**	**16 16 53.0**	**+0.1**
JAM	**Amami Oshima**	**1.48**	**351**	P	**Pn**	**16 16 35.3**	**-0.5**
JAM				S	**Sn**	**16 16 53.7**	**-0.2**
JMZ	**Minamidaito 2**	**1.65**	**133**	P	**Pn**	**16 16 35.0**	**-3.0**
JMZ				S	**Sn**	**16 16 53.6**	**-4.3**
JIH	**Iheya**	**1.71**	**273**	P	**Pn**	**16 16 39.0**	**+0.1**
JIH				S	**Sn**	**16 17 00.0**	**+0.4**
JJT2	**Tamagusuku 2**	**2.07**	**248**	P	**Pn**	**16 16 43.8**	**-0.1**
JJT2				S	**Sn**	**16 17 08.6**	**+0.1**
NAH1	**Naha**	**2.10**	**250**	P	**Pn**	**16 16 44.2**	**-0.1**
NAH1				S	**Sn**	**16 17 08.9**	**-0.2**
JAGN	**Aguni-jima**	**2.39**	**262**	P	**Pn**	**16 16 48.1**	**-0.1**
JAGN				S	**Sn**	**16 17 16.7**	**+0.5**
JKE	**Kume jima 2**	**2.84**	**258**	P	**Pn**	**16 16 54.0**	**-0.5**
JKE				S	**Sn**	**16 17 27.8**	**+0.4**
JNN	**Nakanoshima**	**2.88**	**360**	P	**Pn**	**16 16 54.5**	**-0.6**
JNN				S	**Sn**	**16 17 28.1**	**-0.4**
JOGS	**Gusukube**	**4.58**	**243**	S	**Sn**	**16 18 08.5**	**-1.9**
WRA	**Warramunga Arr**	**46.81**	**174**	P	**P**	**16 24 38.1**	**+0.3**
	1.8nm,0.7s,mb4.1,baz=354,slow=8.4,SNR=18						
WB2	**Warramunga Ar**	**46.81**	**174**	*e*P	**P**	**16 24 38.2**	**+0.3**
CTA	**Charters Tower**	**49.38**	**160**	P	**P**	**16 24 59.0**	**+1.3**
	3.3nm,0.7s,mb4.5,baz=325,slow=9.0,SNR=5.7						
CTAO	**Charters Tower**	**49.38**	**160**	*e*P	**P**	**16 24 58.7**	**+1.0**
	7.1nm,1.0s,mb4.7						
AS31	**Alice Springs**	**50.47**	**175**	*e*P	**P**	**16 25 06.6**	**+0.6**
ASAR	**Alice Springs**	**50.47**	**175**	P	**P**	**16 25 07.1**	**+1.2**
	0.8nm,0.6s,mb3.9,baz=6.8,slow=14,SNR=18						
FINES	**FINESS Array B**	**72.97**	**331**	P	**P**	**16 27 40.3**	**+2.8**
	0.3nm,0.5s,mb3.5,baz=57,slow=7.0,SNR=3.8						

*ISCJB **23** 16:27:13.1±0.7, 2128S±009×1738W±0.1, h33km, mb4.1/12, Error ellipse: s-maj=16.6km s-min=11.8km az=62.9*
*NEIC **23** 16:27:14.8±0.4, 2130S×17384W, mb4.7/2, Error ellipse: s-maj=14.6km s-min=8.9km az=125.0*
*IDC **23** 16:27:15.2±0.6, 2141S×17385W, h30km±4km, mb3.9/10, mb1 4.2/12, mb1mx4.1/18, mbtmp4.2/12, ML4.1/2, Error ellipse: s-maj=24.8km s-min=14.7km az=128.0*
*MOS **23** 16:27:18.6±2.6, 2188S×17463W, h33km, mb5.1/3, Error ellipse: s-maj=30.3km s-min=21.3km az=169.3*

ISC 23 16:27:15.0±0.7, 2130S±009×1738W±01, h35km, (h33km±6km:pP-P), n54, σ0$84/24, mb4.1/12, 2C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.60**	**15**	Pn	**Pn**	**16 29 01.9**	**-1.3**
	21nm,0.3s,baz=133,slow=2.3,SNR=35						
AFI				Sn	**Sn**	**16 30 22.1**	**-5.9**
	5.1nm,0.3s,baz=26,slow=20,SNR=3.4						
AFI	**Afiamalu**	**7.60**	**15**	*e*Pn	**Pn**	**16 29 01.7**	**-1.5**
AFI				Sn	**Sn**	**16 30 22.1**	**-5.9**
RAO	**Raoul Island**	**8.76**	**205**	Sn	**Sn**	**16 30 46.0**	**-11**
	55nm,0.3s,baz=276,slow=21,SNR=2.5						
RAR	**Rarotonga**	**13.06**	**92**	Pn	**Pn**	**16 30 12.3**	**-5.7**
	6.3nm,0.3s,baz=276,slow=9.6,SNR=18						
DZM	**Mont Dzumac**	**18.40**	**264**	P	**Pn**	**16 31 27.9**	**+0.7**
	0.6nm,0.3s,baz=86,slow=16,SNR=11						
URZ	**Urewera**	**18.64**	**203**	P	**Pn**	**16 31 30.6**	**+0.4**
	0.7nm,0.3s,baz=330,slow=6.3,SNR=5.9						
URZ				S	S	16 34 38.5	-22
	0.9nm,0.3s,baz=102,slow=22,SNR=5.6						
TBI	**Tubuai**	**22.58**	**100**	*e*LR	LR	16 37 20.1	
	201nm,26.2s						
PPT	**Papeete**	**23.11**	**85**	*e*LR	LR	16 37 37.5	
	204nm,24.5s						
RPZ	**Rata Peaks**	**25.67**	**206**	P	**P**	**16 32 41.5**	**-0.1**
	7.5nm,0.7s,mb4.3,baz=82,slow=7.1,SNR=3.6						
RKT	**Rikitea**	**35.90**	**100**	*e*LR	LR	16 43 23.2	
	127nm,28.5s						
CTA	**Charters Tower**	**37.34**	**264**	P	**P**	**16 34 24.1**	**+0.1**
	2.7nm,0.6s,mb4.2,baz=88,slow=12,SNR=5.9						
STKA	**Stephens Creek**	**41.03**	**246**	P	**P**	**16 34 55.1**	**+0.3**
	1.7nm,0.5s,mb3.9,baz=81,slow=10,SNR=6.1						
AS31	**Alice Springs**	**48.18**	**257**	*e*P	**P**	**16 35 51.8**	**-0.1**
ASAR	**Alice Springs**	**48.18**	**257**	P	**P**	**16 35 51.9**	**0.0**
	4.8nm,0.8s,mb4.6,baz=99,slow=7.7,SNR=66						
ASAR				PcP	PcP	16 37 19.9	+1.0
	1.2nm,0.7s,baz=101,slow=3.1,SNR=6.4						
WB2	**Warramunga Arr**	**48.39**	**262**	*e*P	**P**	**16 35 53.0**	**-0.5**
WRAB	**Tennant Creek**	**48.39**	**262**	*e*P	**P**	**16 35 52.6**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
WRAB	**Tennant Creek**	**48.39**	**262**	*e*P	**P**	**16 35 52.6**	**-0.9**
	comp=Z,10nm,1.1s,mb4.8						
WRA	**Warramunga Arr**	**48.40**	**262**	P	**P**	**16 35 53.0**	**-0.6**
	comp=Z,1.8nm,0.8s,mb4.2,baz=94,slow=8.2,SNR=65						
WRA				PcP	PcP	16 37 21.1	+1.5
	comp=Z,1.4nm,0.6s,baz=101,slow=3.0,SNR=5.6						
VNDA	**Vanda**	**57.50**	**186**	P	**P**	**16 37 00.5**	**-0.2**
	comp=Z,0.4nm,0.8s,mb3.5,baz=19,slow=4.1,SNR=4.1						
VNDA				pP	pP	16 37 09.8	-1.5
	comp=Z,0.9nm,0.9s,baz=1.9,slow=8.6,SNR=4.7						
VNDA	**Vanda**	**57.50**	**186**	P	**P**	**16 37 00.5**	**-0.2**
VNDA				pP	pP	16 37 09.8	-1.5
QSPA	**South Pole Qui**	**68.77**	**180**	*e*P	**P**	**16 38 15.0**	**-0.4**
	comp=Z,6.8nm,1.0s,mb4.5						
MJAR	**Matsushiro Arr**	**73.25**	**321**	P	**P**	**16 38 44.5**	**+1.9**
	comp=Z,1.5nm,1.0s,mb3.9,baz=158,slow=5.2,SNR=4.7						
NVAR	**Mina Array Bea**	**78.96**	**41**	P	**P**	**16 39 17.5**	**+2.5**
	comp=Z,2.7nm,1.1s,mb4.1,baz=229,slow=11,SNR=3.2						
NVAR				pP	pP	16 39 27.1	+1.1
	comp=Z,0.8nm,0.5s,baz=220,slow=6.9,SNR=3.0						
MAW	**Mawson**	**82.12**	**199**	P	**P**	**16 39 31.5**	**-0.5**
	comp=Z,0.5nm,0.4s,mb3.8,baz=92,slow=6.4,SNR=4.3						
MAW				pP	pP	16 39 41.5	-1.5
	comp=Z,1.8nm,0.6s,baz=140,slow=9.6,SNR=3.3						
PDAR	**Pinedale Array**	**86.89**	**42**	P	**P**	**16 39 56.6**	**+0.5**
	comp=Z,0.4nm,0.9s,mb3.7,baz=259,slow=2.3,SNR=2.9						
PDAR				pP	pP	16 40 06.8	-0.4
	comp=Z,0.3nm,0.5s,baz=204,slow=9.8,SNR=2.6						
MKAR	**Makanchi Array**	**114.63**	**313**	PKP	PKiKP	16 45 51.6	+0.1
	comp=Z,0.3nm,0.2s,baz=38,slow=5.4,SNR=5.5						
MKAR				pPKP		16 46 01.5	
	comp=Z,0.2nm,0.2s,baz=72,slow=1.5,SNR=1.5						
ZRNK	**Zerenda**	**123.07**	**320**	*e*PKIKP	PKPdf	16 46 07.9	+0.2
ZRNK				*e*		16 46 18.0	
ARCES	**ARCESS Array B**	**130.37**	**351**	PKP	PKPdf	16 46 21.6	-0.1
	comp=Z,1.1nm,0.7s,baz=252,slow=0.6,SNR=7.1						
ARCES				pPKP	pPKPdf	16 46 31.9	-1.2
	comp=Z,1.0nm,0.9s,baz=318,slow=1.6,SNR=1.7						
EKA	**Eskdalemuir Ar**	**145.30**	**9**	PKPbc	PKPbc	16 46 49.1	+0.3
	comp=Z,1

AKS	**Akhisar**	**1.42**	**112**	*e*PN	**Pn**	**17 09 17.4**	**-0.3**
AKHS	**Akhisar**	**1.42**	**112**	*i* P	**Pn**	**17 09 16.9**	**-0.8**
AKHS				*i* S	**Sb**	**17 09 37.6**	**+1.1**
RKY	**Sarkoy-Tekirda**	**1.50**	**32**	*e*PN	**Pn**	**17 09 18.4**	**-0.4**
MFT	**Murefte**	**1.63**	**33**	*e*PN	**Pn**	**17 09 20.7**	**+0.2**
MRMT	**Marmara Adasi**	**1.63**	**43**	*e*PN	**Pn**	**17 09 20.5**	**-0.1**
RDO	**Rodhopi**	**1.78**	**345**	*e*PG	**Pg**	**17 09 21.5**	**-4.2**
SMG	**Samos**	**1.80**	**162**	*e*PB	**Pb**	**17 09 25.5**	**+0.8**
ULDT	**Uludag**	**2.43**	**72**	*i* P	**Pn**	**17 09 36.7**	**+5.1**
ULDT				*i* S	**Sn**	**17 10 09.3**	**+7.8**
EDRB	**Edirne**	**2.47**	**11**	*e*PN	**Pn**	**17 09 32.9**	**+0.7**
NVR	**Nevrokopi**	**2.59**	**319**	*e*PN	**Pn**	**17 09 33.7**	**-0.1**
YLV	**Yalova**	**2.74**	**64**	*e*PN	**Pn**	**17 09 36.2**	**+0.3**

CSEM ***23*** *17:18:04.9, 2756N×5594E, h14km, ML3.3, After THR*
THR ***23*** *17:18:04.9±0.7, 2756N×5594E, h14km±9km, ML3.3*
ISCJB ***23*** *17:18:05.9±1.3, 2744N±008×560E±02, h21km±15km, Error ellipse: s-maj=25.0km s-min=12.8km az=160.0*

ISC 23 17:18:06.5±1.4, 2744N±008×560E±02, h18km±13km, n7, σ0§46/10, 1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.18**	**101**	*e*PG	**Pg**	**17 18 10.4**	**-0.8**
BNDS				*e*SG	**Sg**	**17 18 15.0**	**+0.6**
BANOM	**Banah**	**1.54**	**169**	P	**Pn**	**17 18 32.4**	**-0.5**
	SNR=39						
HATD	**Hatta, Dubai**	**2.60**	**177**	⇓P	**Pn**	**17 18 47.9**	**+0.3**
KRBR	**Kerman**	**2.63**	**15**	*e*PN	**Pn**	**17 18 48.0**	**0.0**
KRBR				*e*SG	**Sg**	**17 19 24.1**	**-7.0**
KRBR				AML	AML	17 19 27.2	
	comp=N,140nm,0.6s						
KRBR				AML	AML	17 19 27.5	
	comp=E,163nm,0.5s						
KRBR	**Kerman**	**2.63**	**15**	*e*Pn	**Pn**	**17 18 48.0**	**0.0**
	SNR=52						
KRBR				*e*Sg	**Sg**	**17 19 24.1**	**-7.0**
	comp=E,163nm,0.5s,SNR=90						
ASHO	**Ashiyiah**	**2.74**	**178**	P	**Pn**	**17 18 49.7**	**+0.2**
	SNR=65						
GHIR	**Ghir-Karzin**	**2.77**	**288**	*e*PN	**Pn**	**17 18 50.2**	**+0.2**
GHIR				AML	AML	17 19 46.4	
	comp=N,82nm,0.6s						

IDC 23 17:27:17.6±1.2, 029N×12122E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/18, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=123.9km s-min=19.3km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.78**	**167**	P	Pn	17 31 40.4	+1.7
	0.1nm,0.3s,baz=0.6,slow=8.7,SNR=4.1						
WRA	**Warramunga Arr**	**23.86**	**148**	P	P	17 32 31.4	-1.2
	0.5nm,0.6s,baz=330,slow=9.1,SNR=14						
ASAR	**Alice Springs**	**26.81**	**153**	P	P	17 32 59.0	-0.3
	0.3nm,0.8s,baz=338,slow=10,SNR=4.7						
SONM	**Songino Array**	**49.08**	**347**	P	P	17 36 07.5	+1.0
	0.3nm,0.6s,baz=171,slow=8.6,SNR=3.3						
MKAR	**Makanchi Array**	**57.45**	**329**	P	P	17 37 08.4	+0.3
	0.5nm,0.3s,baz=123,slow=8.9,SNR=7.2						

MAN 23 17:30:40.6, 838N×12660E, h27km, mb2.8, ML4.3, MS4.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.13**	**301**	*e*P	Pn	17 30 59.9	-0.8
BUTP				*e*S	Sn	17 31 15.2	-0.1
MATI	**Mati**	**1.46**	**193**	*e*P	Pn	17 31 04.7	-0.4
MATI				*e*S	Sn	17 31 23.9	+0.5
BUKP	**Musuan**	**1.60**	**252**	*e*P	Pn	17 31 08.4	+1.3
SCPH	**Surigao**	**1.78**	**322**	*e*P	Pn	17 31 08.1	-1.4
SCPH				*e*S	Sn	17 31 29.1	-2.1
MSLP	**Maasin**	**2.45**	**316**	*e*P	Pn	17 31 20.4	+1.6
MSLP				*e*S	Sn	17 31 48.0	+0.1
OCLP	**Ormoc**	**3.30**	**324**	*e*P	Pn	17 31 32.2	+1.6

MOS ***23*** *17:34:53.0±1.0, 673S×10620E, h60km, mb5.1/14, Error ellipse: s-maj=13.8km s-min=8.2km az=118.9*
ISCJB ***23*** *17:34:54.2±1.6, 686S±006×10612E±007, h72km±14km, mb4.6/49, Error ellipse: s-maj=13.2km s-min=7.4km az=106.1*
IDC ***23*** *17:34:54.1±3.7, 684S×10608E, h56km±32km, mb4.1/16, mb1 4.2/16, mb1mx4.1/20, mbtmp4.4/16, MS3.7/5, Ms1 3.7/5, ms1mx3.1/23, Error ellipse: s-maj=22.7km s-min=13.1km az=54.0*
BJI ***23*** *17:34:58.0, 690S×10610E, h111km, mB4.8, mb4.7*
NEIC ***23*** *17:35:00.1±1.7, 689S×10614E, h112km±15km, mb4.5/19, Error ellipse: s-maj=14.3km s-min=5.9km az=51.0*
NEIC Felt [III] at Malingping and [II] at Cikeusik.

ISC 23 17:34:58.8±1.3, 688S±006×10609E±007, h98km±12km, h111km±.6km; pP-P, n110, σ1§15/96, mb4.6/49, 8C-2D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOGI	**Yogyakarta**	**4.28**	**103**	⇓*e*P	**Pn**	**17 36 00.4**	**-1.2**
YOGI				*e*S	**Sn**	**17 36 52.1**	**+1.7**
YOGI	**Yogyakarta**	**4.28**	**103**	⇑*i*P	**Pn**	**17 35 51.8**	**-10**
YOGI				*i* S	**Sn**	**17 36 38.9**	**-11**
PSI	**Prapat**	**11.98**	**323**	LR	LR	17 43 18.1	
	comp=Z,206nm,18.1s,baz=277,slow=42						
KULM	**Kulim**	**13.25**	**336**	P	**Pn**	**17 38 06.2**	**+3.2**
PCI	**Palu**	**14.94**	**67**	P	**Pn**	**17 38 31.8**	**+7.1**
	35nm,1.4s						
KKM	**Kota Kinabalu**	**16.34**	**38**	*e*P	**Pn**	**17 38 44.2**	**+2.0**
MBWA	**Marble Bar**	**19.38**	**138**	*e*P	**Pn**	**17 39 14.8**	**-4.1**
	12nm,0.8s						
FITZ	**Fitzroy Crossi**	**22.08**	**122**	P	**P**	**17 39 44.9**	**-0.8**
	2.7nm,0.6s,mb3.7,baz=234,slow=7.8,SNR=6.2						
FITZ	**Fitzroy Crossi**	**22.08**	**122**	*e*P	**P**	**17 39 45.0**	**-0.7**
	9.6nm,0.9s,mb4.1						
SWI	**Sorong**	**25.80**	**78**	P	**P**	**17 40 16.1**	**-4.5**
	79nm,1.0s,mb5.1						
KAKA	**Kakadu**	**26.59**	**105**	*e*P	**P**	**17 40 29.8**	**+2.1**
	8.7nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**30.32**	**118**	P	**P**	**17 41 00.5**	**-0.4**
	2.1nm,0.6s,mb4.0,baz=303,slow=8.9,SNR=62						
WRA				PcP	PcP	17 43 59.8	+1.0
	0.7nm,0.5s,baz=306,slow=2.0,SNR=7.7						
WRA	**Warramunga Arr**	**30.32**	**118**	*i* P	**P**	**17 41 00.5**	**-0.4**
WRA				pmax	pmax		
	comp=Z,20nm,0.6s						
WRAB	**Tennant Creek**	**30.33**	**118**	*e*P	**P**	**17 41 00.5**	**-0.5**
WRAB	**Tennant Creek**	**30.33**	**118**	*e*P	**P**	**17 41 00.4**	**-0.6**
	comp=Z,7.7nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**30.34**	**118**	*e*P	**P**	**17 41 00.3**	**-0.7**
AS31	**Alice Springs**	**31.50**	**125**	*e*P	**P**	**17 41 10.3**	**-0.9**
ASAR	**Alice Springs**	**31.50**	**125**	P	**P**	**17 41 10.7**	**-0.5**
	comp=Z,1.1nm,0.7s,mb3.7,baz=300,slow=8.0,SNR=27						
KMI	**Kunming**	**31.98**	**354**	P	**P**	**17 41 20.3**	**+4.9**
KMI				AP	pP	17 41 45.0	+7.4
KMI				XP	sP	17 41 59.9	+11
KMI				PPP		17 42 49.4	
KMI				S	**S**	**17 46 23.3**	**+3.6**
KMI				XS	sS	17 47 07.8	+10
KMI				SS	SS	17 48 24.0	-17
KMI				SSS		17 48 51.3	
KMI				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb3.9						
KMI				AMB	AMB		
	comp=Z,35nm,4.7s						
KMI				LR	LR		
	comp=N,76nm,20.1s						
KMI				LR	LR		
	comp=E,96nm,16.5s						
KMI				LR	LR		
	comp=Z,131nm,15.5s						
JAY	**Jayapura**	**34.76**	**85**	P	**P**	**17 41 39.8**	**+0.2**
	comp=Z,17nm,0.8s,mb4.9						
HYB	**Hyderabad**	**36.38**	**312**	*i* P	**P**	**17 41 55.0**	**+1.6**
HYB	**Hyderabad**	**36.38**	**312**	*e*P	**P**	**17 41 55.0**	**+1.6**
CD2	**Chengdu**	**37.64**	**357**	*e*P	**P**	**17 42 04.5**	**+0.4**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
LSA	**Lhasa**	**39.10**	**339**	P	**P**	**17 42 15.3**	**-1.1**
PKI	**Pulchoki**	**39.66**	**331**	*e*P	**P**	**17 42 21.6**	**+0.6**
GUN	**Gumba**	**39.72**	**331**	*e*P	**P**	**17 42 21.6**	**+0.1**
	comp=Z,12nm,0.4s,mb5.0						
DMN	**Daman**	**39.84**	**330**	*e*P	**P**	**17 42 23.9**	**+1.4**
	comp=Z,5.8nm,0.5s,mb4.7						
KKN	**Kakani**	**39.91**	**331**	*e*P	**P**	**17 42 21.7**	**-1.4**
GKN	**Gorkha**	**40.40**	**330**	*e*P	**P**	**17 42 26.1**	**-1.0**
	comp=Z,7.2nm,0.3s,mb4.9						
SSE	**Sheshan**	**40.43**	**20**	P	**P**	**17 42 26.3**	**-1.1**
SSE				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.8						
SSE				AMB	AMB		
	comp=Z,22nm,4.0s						
NJ2	**Nanjing**	**40.59**	**17**	*e*P	**P**	**17 42 29.8**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
PMG	**Port Moresby**	**40.72**	**96**	P	**P**	**17 42 30.2**	**+0.5**
	comp=Z,50nm,1.0s,mb5.3,baz=260,slow=5.2,SNR=8.8						
PMG	**Port Moresby**	**40.72**	**96**	⇑*e*P	**P**	**17 42 30.2**	**+0.5**
PMG	**Port Moresby**	**40.72**	**96**	*e*P	**P**	**17 42 30.4**	**+0.7**
PMG				pmax	pmax		
	comp=Z,41nm,0.9s						
PMG	**Port Moresby**	**40.72**	**96**	*e*P	**P**	**17 42 30.4**	**+0.7**
	comp=Z,41nm,0.9s,mb5.3						
KOLN	**Koldanda**	**40.73**	**329**	*e*P	**P**	**17 42 29.3**	**-0.6**
	comp=Z,18nm,0.7s,mb5.0						
CTA	**Charters Tower**	**41.08**	**113**	P	**P**	**17 42 33.0**	**+0.3**
	comp=Z,1.3nm,0.3s,mb4.3,baz=309,slow=9.4,SNR=3.9						
CTAO	**Charters Tower**	**41.08**	**113**	P	**P**	**17 42 32.8**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
CTAO	**Charters Tower**	**41.08**	**113**	P	**P**	**17 42 32.8**	**+0.1**
	comp=Z,5.1nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**41.39**	**132**	P	**P**	**17 42 35.4**	**+0.1**
	comp=Z,4.7nm,0.8s,mb4.4,baz=305,slow=8.2,SNR=10						
STKA				PcP	PcP	17 44 32.8	+1.2
	comp=Z,2.7nm,0.6s,baz=276,slow=3.5,SNR=3.2						
STKA	**Stephens Creek**	**41.39**	**132**	*e*P	**P**	**17 42 35.1**	**-0.2**
	comp=Z,3.5nm,0.5s,mb4.5						
NDI	**New Delhi**	**45.00**	**323**	*e*P	**P**	**17 43 03.5**	**-0.8**
GTA	**Gaotai**	**46.42**	**353**	P	**P**	**17 43 16.3**	**+0.8**
GTA				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.6						
HHC	**Hu-ho-hao-te**	**47.76**	**6**	*e*P	**P**	**17 43 28.1**	**+2.2**
HHC				AP	pP	17 43 54.0	+4.7
HHC				XP	sP	17 44 06.8	+6.4
HHC				PCP	PcP	17 44 54.8	+1.3
HHC				PP	PP	17 45 22.1	+3.7
HHC				SCP	ScP	17 48 37.5	-1.2
HHC				PCS	PcS	17 48 49.1	0.0
HHC				S	**S**	**17 50 16.6**	**+1.7**
HHC				XS	sS	17 51 01.8	+6.7
HHC				SCS	ScS	17 53 07.4	-2.1
HHC				SS	SS	17 53 41.9	-2.5
HHC				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.7						
HHC				AMB	AMB		
	comp=Z,81nm,6.9s						
HHC				LR	LR		
	comp=N,105nm,19.9s						
HHC				LR	LR		
	comp=E,74nm,19.9s						
HHC				LR	LR		
	comp=Z,77nm,21.8s						
MJAR	**Matsushiro Arr**	**52.65**	**33**	PcP	PcP	17 45 12.8	+1.3
	comp=Z,2.2nm,0.8s,baz=203,slow=3.9,SNR=7.4						
WMQ	**Urumqi**	**53.14**	**343**	*e*P	**P**	**17 44 09.0**	**+2.6**
WMQ				AP	pP	17 44 35.0	+4.8
WMQ				XP	sP	17 44 48.0	+6.8
WMQ				PP	PP	17 46 12.0	+4.8
WMQ				S	**S**	**17 51 30.0**	**+0.6**
WMQ				SS	SS	17 55 10.0	0.0
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,105nm,5.0s						
WMQ				LR	LR		
	comp=N,48nm,14.0s						
WMQ				LR	LR		
	comp=E,37nm,14.0s						
WMQ				LR	LR		
	comp=Z,28nm,13.0s						
CN2	**Changchun**	**53.40**	**17**	*e*P	**P**	**17 44 07.5**	**-0.8**
SONM	**Songino Array**	**54.48**	**0**	P	**P**	**17 44 16.0**	**-0.2**
	comp=Z,2.5nm,0.7s,mb4.3,baz=175,slow=8.7,SNR=26						
SONM				PcP	PcP	17 45 19.2	+0.7
	comp=Z,7.2nm,0.7s,baz=177,slow=3.7,SNR=25						
SONM				ScP	ScP	17 49 11.1	+3.4
	comp=Z,0.5nm,0.7s,baz=176,slow=4.8,SNR=3.7						
SONM				LR	LR	18 09 30.1	
	comp=Z,63nm,20.4s,baz=236,slow=38						
SONM	**Songino Array**	**54.48**	**0**	P	**P**	**17 44 16.0**	**-0.1**
SONM						17 45 19.2	
SONM	**Songino Array**	**54.48**	**0**	P	**P**	**17 44 16.0**	**-0.2**
SONM				PcP	PcP	17 45 19.2	+0.7
SONM				ScP	ScP	17 49 11.1	+3.4
SONM				LR	LR	18 09 30.1	
ULN	**Ulaanbaatar**	**54.52**	**1**	⇑*e*P	**P**	**17 44 16.7**	**+0.3**
ULN	**Ulaanbaatar**	**54.52**	**1**	*e*P	**P**	**17 44 16.2**	**-0.2**
	comp=Z,2.4nm,0.7s,mb4.3						
MDJ	**Mudanjiang**	**55.46**	**20**	P	**P**	**17 44 25.6**	**+2.4**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,63nm,6.8s						
MDJ				LR	LR		
	comp=N,10.0nm,18.5s						
MDJ				LR	LR		
	comp=E,26nm,18.5s						
MDJ				LR	LR		
	comp=Z,29nm,20.3s						
AAK	**Ala-Archa**	**57.06**	**333**	*e*P	**P**	**17 44 33.2**	**-1.4**
AAK				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
MKAR	**Makanchi Array**	**57.47**	**341**	P	**P**	**17 44 36.5**	**-1.0**
	comp=Z,4.7nm,0.5s,mb4.8,baz=145,slow=7.6,SNR=72						
MKAR	**Makanchi Array**	**57.47**	**341**	⇑*e*P	**P**	**17 44 36.5**	**-1.0**
HABR	**Khabarovsk**	**60.71**	**22**	*e*P	**P**	**17 44 57.1**	**-2.7**
HABR				*e*S	**S**	**17 53 09.3**	**+0.4**
YSS	**Yuzh-Sakhalins**	**62.69**	**27**	⇑*e*P	**P**	**17 45 12.3**	**-0.8**
YSS				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
ZAL	**Zalesovo**	**63.19**	**346**	P	**P**	**17 45 15.1**	**-1.3**
	comp=Z,1.9nm,0.5s,mb4.3,baz=33,slow=1.8,SNR=6.1						
ZAL				LR	LR	18 15 41.1	
	comp=Z,32nm,19.0s,baz=126,slow=39						
BOD	**Bodaibo**	**64.80**	**5**	*e*P	**P**	**17 45 27.1**	**+0.1**
BOD				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1						
BRVK	**Borovoye**	**66.97**	**337**	*e*P	**P**	**17 45 40.3**	**-0.6**
MAW	**Mawson**	**67.22**	**197**	P	**P**	**17 45 43.0**	**+0.5**
	comp=Z,2.2nm,0.6s,mb4.2,baz=43,slow=4.3,SNR=6.1						
RPZ	**Rata Peaks**	**67.26**	**135**	LR	LR	18 13 18.9	
	comp=Z,63nm,18.4s,baz=359,slow=34						
CHKZ	**Chkalovo**	**67.33**	**338**	*e*P	**P**	**17 45 42.4**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
CHKZ	**Chkalovo**	**67.33**	**338**	*e*P	**P**	**17 45 42.4**	**-0.8**
	comp=Z,8.0nm,0.7s,mb4.7						
ZRNK	**Zerenda**	**67.39**	**337**	*e*P	**P**	**17 45 42.5**	**-1.0**
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
ZRNK	**Zerenda**	**67.39**	**337**	*e*P	**P**	**17 45 42.5**	**-1.1**
	comp=Z,6.8nm,0.8s,mb4.5						
URZ	**Urewera**	**70.88**	**128**	LR	LR	18 16 06.8	
	comp=Z,99nm,19.8s,baz=349,slow=35						
YAK	**Yakutsk**	**71.09**	**12**	*e*P	**P**	**17 46 04.9**	**-1.5**
YAK				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9						
YAK	**Yakutsk**	**71.09**	**12**	*e*P	**P**	**17 46 04.9**	**-1.5**
	comp=Z,12nm,0.6s,mb4.9						
GNI	**Garni**	**73.23**	**315**	*e*P	**P**	**17 46 18.8**	**-0.3**
ARU	**Arti**	**74.13**	**335**	⇓*i*P	**P**	**17 46 24.4**	**0.0**
ARU				*e*		17 46 36.9	
ARU				*e*		17 49 11.0	
ARU				*e*S	S	17 55 55.9	+6.4
ARU				*e*SS	SS	18 00 32.6	-3.9
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
ARU	**Arti**	**74.13**	**335**	*e*P	**P**	**17 46 24.5**	**+0.1**
	comp=Z,5.1nm,0.6s,mb4.4						
KIV	**Kislovodsk**	**76.19**	**318**	*e*P	**P**	**17 46 38.3**	**+2.1**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
KIV	**Kislovodsk**	**76.19**	**318**	*e*P	**P**	**17 46 38.3**	**+2.1**
	comp=Z,4.7nm,0.6s,mb4.4						
VNDA	**Vanda**	**76.25**	**169**	P	**P**	**17 46 36.2**	**-0.3**
	comp=Z,1.5nm,0.9s,mb3.7,baz=308,slow=5.2,SNR=9.4						
SBA	**Scott Base**	**77.33**	**169**	*e*P	**P**	**17 46 43.7**	**+1.1**
	comp=Z,1.1nm,0.7s,mb3.7						
SEY	**Seymchan**	**77.99**	**20**	*e*P	**P**	**17 46 45.1**	**-1.2**
BOSA	**Boshof**	**78.71**	**242**	P	**P**	**17 46 51.0**	**+0.8**
	comp=Z,1.2nm,0.3s,mb4.2,baz=108,slow=6.4,SNR=10.0						
TIXI	**Tiksi**	**79.80**	**7**	⇑*e*P	**P**	**17 46 53.8**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.0						
ANN	**Anapa**	**80.00**	**318**	*e*P	**P**	**17 46 54.3**	**-2.9**
ANN				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.0						
BRTR	**Keskin Array B**	**81.08**	**312**	P	**P**	**17 47 04.0**	**+1.0**
	comp=Z,4.2nm,0.7s,mb4.4,baz=133,slow=7.4,SNR=27						
BRTR	**Keskin Array B**	**81.08**	**312**	⇑*e*P	**P**	**17 47 04.0**	**+1.0**
VRSR	**Storozhevoye**	**81.23**	**324**	*e*P	**P**	**17 47 04.2**	**+0.4**
VRSR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
VRSR				pmax	pmax		
	comp=N,8.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.7s						
QSPA	**South Pole Qui**	**83.11**	**180**	*e*P	**P**	**17 47 14.1**	**+0.5**
	comp=E,2.9nm,1.2s,mb4.0						
OBN	**Obninsk**	**84.14**	**327**	⇑*e*P	**P**	**17 47 17.7**	**-1.2**
OBN				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.4						
KLMR	**Klimovskoe**	**84.87**	**333**	*e*P	**P**	**17 47 22.6**	**+0.1**
KLMR				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
TMCR	**Tamitsa**	**86.81**	**336**	*e*P	**P**	**17 47 32.7**	**+0.5**
TMCR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
AKASG	**Malin Array Be**	**87.04**	**322**	P	**P**	**17 47 33.2**	**0.0**
	comp=Z,3.7nm,0.9s,mb4.3,baz=88,slow=4.5,SNR=11						
AKASG				pP	pP	17 47 50.2	-8.9
	comp=Z,1.5nm,0.7s,baz=85,slow=5.0,SNR=4.8						
AKASG	**Malin Array Be**	**87.04**	**322**	*i* P	**P**	**17 47 33.2**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	**Malin Array Be**	**87.04**	**322**	P	**P**	**17 47 33.2**	**0.0**
AKASG				pP	pP	17 47 50.2	-8.9
SNAA	**Sanae**	**89.37**	**197**	*e*P	**P**	**17 47 46.4**	**+2.1**
FINES	**FINESS Array B**	**91.24**	**332**	P	**P**	**17 47 53.8**	**+0.8**
	comp=Z,2.2nm,0.8s,mb4.3,baz=110,slow=11,SNR=5.7						
ARCES	**ARCESS Array B**	**93.11**	**340**	P	**P**	**17 48 01.4**	**-0.2**
	comp=Z,4.5nm,0.9s,mb4.8,baz=104,slow=5.1,SNR=13						
PDAR	**Pinedale Array**	**132.43**	**36**	PKP	PKPdf	17 54 03.8	+2.2
	comp=Z,0.5nm,0.6s,baz=80,slow=1.7,SNR=5.5						
NCB	**Newcomb**	**143.06**	**0**	*e*PKPpre	PKPdf	17 54 18.1	-3.0
CPUP	**Villa Florida**	**143.27**	**205**	PKhKP	PKPdf	17 54 20.1	-1.4
	comp=Z,0.3nm,0.3s,baz=56,slow=2.4,SNR=3.3						
WMOK	**Wichita Mounta**	**144.04**	**36**	*e*PKIKP	PKPdf	17 54 21.4	-1.4
CCM	**Cathedral Cave**	**145.21**	**24**	*e*PKIKP	PKPdf	17 54 24.2	-0.6
FVM	**French Village**	**145.60**	**23**	*e*PKIKP	PKPdf	17 54 26.3	+0.8
SSPA	**Standing Stone**	**146.20**	**5**	*e*PKPbc	PKPbc	17 54 28.4	+0.7
JCT	**Junction City**	**146.22**	**43**	*e*PKP2	PKPab	17 54 28.7	+0.1
MCWV	**Mont Chateau**	**146.93**	**8**	*e*PKPbc	PKPbc	17 54 30.2	+0.4
MVL	**Millersville**	**146.95**	**3**	*e*PKPbc	PKPbc	17 54 30.8	+1.0
MIAR	**Mount Ida**	**147.03**	**31**	*e*PKP2	PKPab	17 54 30.2	-1.6
WVT	**Waverly**	**148.22**	**22**	*e*PKP2	PKPab	17 54 33.9	-2.6
PLAL	**Pickwick Lake**	**149.14**	**23**	*e*PKPbc	PKPbc	17 54 36.0	+0.3
PLAL				*e*PKPab	PKPab	17 54 40.1	-0.2
TZTN	**Tazewell**	**149.19**	**15**	*e*PKPbc	PKPbc	17 54 36.6	+0.8
CPCT	**Cooper Cave**	**149.94**	**17**	*e*PKPbc	PKPbc	17 54 38.5	+0.9
CPCT				*e*PKPab	PKPab	17 54 43.8	+0.2
LRAL	**Lakeview Retre**	**151.28**	**23**	*e*PKPbc	PKPbc	17 54 41.3	+0.5

IDC 23 18:01:05.3±2.6, 573S×13392E, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.8/11, mbtmp3.9/4, ML3.6/2, MS3.3/1, Ms1 3.2/1, ms1mx2.5/10, Error ellipse: s-maj=166.4km s-min=27.3km az=73.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.13**	**178**	Pn	Pn	18 04 26.0	-0.6
	0.3nm,0.3s,baz=357,slow=13,SNR=24						
WRA				Sn	Sn	18 06 55.5	-8.7
	0.5nm,0.3s,baz=360,slow=23,SNR=4.2						
ASAR	**Alice Springs**	**17.83**	**180**	P	Pn	18 05 14.8	+0.1
	0.2nm,0.3s,baz=10.0,slow=7.8,SNR=30						
ASAR				S	Sn	18 08 27.3	-6.9
	0.2nm,0.3s,baz=359,slow=30,SNR=4.3						
STKA	**Stephens Creek**	**26.98**	**166**	P	P	18 06 49.2	+0.6
	3.3nm,0.9s,baz=326,slow=12,SNR=4.1						
STKA				LR	LR	18 18 59.5	
	comp=Z,55nm,18.9s,baz=26,slow=40						
MKAR	**Makanchi Array**	**69.37**	**325**	P	P	18 12 14.9	+0.1
	0.4nm,0.6s,baz=114,slow=6.9,SNR=5.3						

IDC 23 18:01:12.6±2.2, 4450S×7882W, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.8/19, mbtmp3.8/6, ML4.1/2, MS3.3/5, Ms1 3.3/5, ms1mx3.2/20, Error ellipse: s-maj=62.3km s-min=27.0km az=100.0, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

ISHM	**Shahmirzad**	**2.01**	**109**	*e*Pn	**Pn**	**18 26 02.3**	**+0.1**
ISHM				*e*Sn	**Sn**	**18 26 28.0**	**+0.1**
ASAO	**Ashtian**	**2.09**	**202**	*e*PG	**Pg**	**18 26 04.4**	**-3.0**
ASAO				*e*SG	**Sg**	**18 26 32.1**	**-2.3**
ASAO				AML	AML	18 26 35.2	
	comp=N,196nm,0.3s						
ASAO	**Ashtian**	**2.09**	**202**	*e*Pg	**Pg**	**18 26 04.4**	**-3.0**
	SNR=92						
ASAO				*e*Sg	**Sg**	**18 26 32.2**	**-2.2**
	SNR=92						
IKIA	**Kiasar**	**2.22**	**97**	*e*Pn	**Pn**	**18 26 04.9**	**-0.2**
ISFB	**Sefidab**	**2.38**	**154**	*e*Pn	**Pn**	**18 26 07.0**	**-0.3**
IANJ	**Anjiloo**	**2.61**	**112**	*e*Pn	**Pn**	**18 26 10.6**	**+0.2**
IANJ				*e*Sn	**Sn**	**18 26 43.4**	**+0.8**
IKLH	**Kalahroud**	**3.21**	**171**	*e*Pn	**Pn**	**18 26 19.6**	**+0.9**
IKLH				*e*Sn	**Sn**	**18 26 57.0**	**-0.5**
GRMI	**Germi**	**3.35**	**314**	*e*PN	**Pn**	**18 26 19.3**	**-1.4**
GRMI				AML	AML	18 27 02.4	
	comp=N,64nm,0.3s						
GRMI				AML	AML	18 27 04.0	
	comp=E,58nm,0.2s						
IBST	**Bostanabad**	**3.47**	**291**	*e*Pn	**Pn**	**18 26 22.7**	**+0.4**
IZEF	**Zefreh**	**3.77**	**162**	*e*Pn	**Pn**	**18 26 27.6**	**+1.2**
IZEF				*e*Sn	**Sn**	**18 27 10.3**	**-0.9**
IPIR	**Pirpir**	**3.80**	**181**	*e*Pn	**Pn**	**18 26 29.1**	**+2.2**
IPIR				*e*Sn	**Sn**	**18 27 11.1**	**-1.1**
NASN	**Na'in**	**3.99**	**157**	*e*PN	**Pn**	**18 26 29.5**	**0.0**
IAZR	**Azarshahr**	**4.15**	**288**	*e*Pn	**Pn**	**18 26 41.3**	**+10**
IAZR				*e*Sn	**Sn**	**18 27 19.8**	**-1.0**
MRVT	**Maraveh tapeh**	**4.26**	**73**	*e*PN	**Pn**	**18 26 31.9**	**-1.3**
IGAR	**Garneh**	**4.36**	**166**	*e*Pn	**Pn**	**18 26 34.4**	**-0.2**
IGAR				*e*Sn	**Sn**	**18 27 20.2**	**-5.8**
IMRD	**Marand**	**4.72**	**300**	*e*Pn	**Pn**	**18 26 41.7**	**+2.2**
IMRD				*e*Sn	**Sn**	**18 27 32.5**	**-2.4**
ISFR	**Esferayen**	**5.68**	**82**	*e*Pn	**Pn**	**18 26 52.3**	**-0.3**

MEX 23 18:28:08.0±1.7, 1829N×10097W, h64km±71km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLIG	**Platanillo**	**1.40**	**86**	*i* P	Pn	18 28 30.6	-0.8
PLIG				*i* S	Sn	18 28 46.6	-2.3
CAIG	**El Cayaco**	**1.41**	**151**	*i* P	Pn	18 28 29.1	-2.4
CAIG				*i* S	Sn	18 28 48.2	-1.0
ACX	**Acapulco**	**1.74**	**144**	*i* P	Pn	18 28 34.0	-2.0
ACX				*i* S	Sn	18 28 57.0	-0.2
IIZ	**Mezontepec**	**1.86**	**61**	*e*P	Pn	18 28 37.8	+0.1
IIZ				*i* S	Sn	18 28 59.2	-1.0
PPM	**Popocatepetl**	**2.35**	**71**	*e*P	Pn	18 28 42.0	-2.3
UTMO	**Huajuapan**	**3.05**	**98**	*i* P	Pn	18 28 53.9	+0.1
UTMO				*i* S	Sn	18 29 26.1	-2.9

BJI ***23*** *18:31:49.9, 459N×94.99E, h38km, mB4.9, mb5.1, Ms4.6, Msz4.4*

MOS ***23*** *18:31:50.2±2.2, 487N×9527E, h33km, mb5.3/81, Error ellipse: s-maj=20.2km s-min=10.5km az=111.8*

ISCJB ***23*** *18:31:51.5±0.2, 469N±003×95.13E±002, h45km, mb5.0/164, MS4.3/56, Error ellipse: s-maj=4.9km s-min=3.4km az=30.4*

NEIC ***23*** *18:31:51.3±0.1, 472N×95.10E, h30km, mb5.0/86, Error ellipse: s-maj=5.2km s-min=3.1km az=210.0*

NEIC Felt [IV] at Banda Aceh and Calang.

HRVD ***23*** *18:31:51.3±0.3, 429N×9524E, h57km±1km, MW5.1/71, Centroid moment Tensor Solution. LP body waves: s52,c85;Mantle waves: s71,c110; Half duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.10±.17; Mθθ -2.48±.14; Mϕϕ -0.61±.17; Mrθ 1.64±.10; Mθϕ 4.11±.12; Mϕr -2.50±.14; Best double couple: Mo 5.49900×10^16 NP1:ϕs 278.00000°, δ 36.00000°, λ 43.00000°. NP2: ϕs 151.00000°, δ 66.00000°, λ 118.00000°. Principal axes: T 4.3960, Plg 59.0000°, Azm 101.0000°; N 2.2120, Plg 26.0000°, Azm 319.0000°; P -6.6020, Plg 16.0000°, Azm 220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

SZGRF ***23*** *18:31:53.0, 443N×9497E, h46km, mb5.0, Off west coast of northern Sumatera, Indonesia*

IDC ***23*** *18:31:53.9±0.5, 475N×95.16E, h52km±4km, mb4.5/24, mb1 4.6/25, mb1mx4.5/28, mbtmp4.8/25, MS4.2/25, Ms1 4.2/25, ms1mx4.0/33, Error ellipse: s-maj=14.9km s-min=9.7km az=42.0*

ISC 23 18:31:53.7±0.2, 472N±003×9511E±002, h47km, h47km±2.1km:pP-P, n464, σ0s94/439, mb5.0/164, MS4.3/56, 76C-34D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**4.26**	**116**	P	**Pn**	**18 32 56.9**	**+0.8**
	11nm,0.3s,baz=313,slow=9.0,SNR=39						
PSI				LR	LR	18 35 00.4	
	comp=Z,5μm,20.3s,baz=276,slow=44						
KULM	**Kulim**	**5.55**	**84**	⇓*e*Pn	**Pn**	**18 33 14.3**	**+0.6**
KULM				*e*Sn	**Sn**	**18 34 16.8**	**+0.6**
IPM	**Ipoh**	**5.91**	**92**	P	**Pn**	**18 33 19.7**	**+1.1**
SNG	**Songkhla**	**6.00**	**66**	P	**Pn**	**18 33 21.5**	**+1.6**
	504nm,0.8s						
PBA	**Port Blair**	**7.28**	**341**	*ex*	x	18 33 20.4	
KGM	**Kluang**	**8.63**	**108**	P	**Pn**	**18 33 58.6**	**+2.6**
NNT	**Nongplab**	**9.06**	**30**	P	**Pn**	**18 34 05.0**	**+3.1**
NST	**Nakhon Sawan**	**11.96**	**24**	P	**Pn**	**18 34 46.0**	**+4.5**
CHG	**Chiang Mai**	**14.50**	**15**	⇓P	**Pn**	**18 35 24.0**	**+7.9**
	72nm,0.8s						
CHTO	**Chiang Mai**	**14.50**	**15**	⇓P	**Pn**	**18 35 22.3**	**+6.3**
	SNR=9.7						
CHTO	**Chiang Mai**	**14.50**	**15**	*e*P	**Pn**	**18 35 17.0**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,49nm,0.8s						
CHTO	**Chiang Mai**	**14.50**	**15**	*e*Pn	**Pn**	**18 35 17.0**	**+0.9**
	comp=Z,49nm,0.8s						
CHTO				*e*P		18 35 22.0	
PALK	**Pallekele**	**14.55**	**281**	*e*Pn	**Pn**	**18 35 15.9**	**-0.7**
	comp=Z,27nm,1.0s						
KSM	**Kuching**	**15.52**	**102**	P	**Pn**	**18 35 28.6**	**-0.7**
MDRS	**Chennai**	**16.85**	**300**	*ex*	x	18 35 08.2	
MDRS				*ex*	x	18 35 40.9	
MDRS				*ex*	x	18 38 17.9	
MDRS				*ex*	x	18 39 10.9	
MDRS				*ex*	x	18 39 47.9	
MDRS				*ex*	x	18 44 28.9	
MDRS				*ex*	x	18 52 30.9	
VIS	**Vishakhapatnam**	**17.32**	**319**	*e*P	**Pn**	**18 35 52.2**	**+0.2**
VIS				AMb	AMB	18 36 02.0	
	comp=Z,46nm,1.8s						
TRD	**Trivandrum**	**18.41**	**283**	*e*P	**Pn**	**18 36 08.1**	**+2.7**
QIZ	**Qiongzhong**	**20.23**	**44**	P	**P**	**18 36 24.4**	**-0.4**
QIZ				AP		18 36 33.8	
QIZ				XP	sP	18 36 37.6	-4.3
QIZ				S	**S**	**18 40 13.8**	**+4.7**
QIZ				XS	sS	18 40 19.4	-7.6
QIZ				AMB	AMB		
	comp=Z,218nm,2.4s						
QIZ				LR	LR		
	comp=N,793nm,18.9s,MS4.3						
QIZ				LR	LR		
	comp=E,833nm,18.2s,MS4.3						
QIZ				LR	LR		
	comp=Z,1μm,20.2s,MS4.2						
HYB	**Hyderabad**	**20.55**	**309**	*i* P	**P**	**18 36 30.5**	**+2.3**
HYB				*e*S	**S**	**18 40 14.0**	**-1.4**
HYB	**Hyderabad**	**20.55**	**309**	*e*P	**P**	**18 36 24.0**	**-4.2**
HYB				*e*S	**S**	**18 40 09.5**	**-5.9**
BOK	**Bokaro**	**20.95**	**336**	*i* P	**P**	**18 36 30.3**	**-2.3**
BOK				*e*P		18 36 32.0	
BOK				AMb	AMB	18 36 37.5	
	comp=Z,50nm,0.6s						
BOK				*i* S	**S**	**18 40 21.3**	**-2.1**
KKM	**Kota Kinabalu**	**21.06**	**85**	P	**P**	**18 36 37.5**	**+3.8**
KKM	**Kota Kinabalu**	**21.06**	**85**	*e*P	**P**	**18 36 35.1**	**+1.4**
BLSP	**Bilaspur**	**21.39**	**325**	*e*P	**P**	**18 36 39.0**	**+1.7**
KMI	**Kunming**	**21.57**	**19**	P	**P**	**18 36 41.4**	**+2.1**
KMI				AP		18 36 49.8	
KMI				XP	sP	18 36 53.4	-3.0
KMI				PP		18 37 06.5	
KMI				PPP		18 37 16.0	
KMI				S	**S**	**18 40 33.4**	**-2.2**
KMI				XS	sS	18 40 47.3	-6.5
KMI				SS		18 41 09.6	
KMI				SSS		18 41 24.1	
KMI				AMB	AMB		
	comp=Z,42nm,1.0s,mb4.8						
KMI				LR	LR		
	comp=N,1μm,14.4s,MS4.5						
KMI				LR	LR		
	comp=E,596nm,13.7s,MS4.5						
KMI				LR	LR		
	comp=Z,1μm,14.6s,MS4.5						
NGP	**Nagpur**	**22.58**	**318**	*ex*	**P**	**18 36 49.2**	**-0.8**
	comp=Z,25nm,0.8s,mb4.7						
NGP				*e*P		18 36 49.7	
NGP				*e*S	**S**	**18 40 57.4**	**+2.9**
LATR	**Latur**	**22.67**	**308**	*ex*	**P**	**18 36 44.4**	**-6.5**
LATR				*ex*	x	18 40 44.9	
TSM	**Tawau**	**22.70**	**90**	P	**P**	**18 36 52.6**	**+1.3**
JBP	**Jabalpur**	**23.45**	**323**	⇑*i*P	**P**	**18 36 59.6**	**+0.7**
JBP				*i* S	**S**	**18 41 12.3**	**+3.7**
AKL	**Akola**	**23.70**	**314**	*e*P	**P**	**18 37 03.9**	**+2.7**
AKL				AMb	AMB	18 37 07.6	
	comp=Z,47nm,1.0s,mb4.9						
GYA	**Guiyang**	**24.28**	**26**	⇓*i*P	**P**	**18 37 07.0**	**+0.5**
GYA				AP		18 37 16.4	
GYA				XP	sP	18 37 20.3	-4.1
GYA				PP		18 37 44.8	
GYA				XS	sS	18 41 42.9	+0.1
GYA				SCP	ScP	18 44 16.3	-3.8
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
GYA				AMB	AMB		
	comp=Z,100nm,6.0s						
GYA				LR	LR		
	comp=N,720nm,16.0s,MS4.3						
GYA				LR	LR		
	comp=E,560nm,17.4s,MS4.3						
GYA				LR	LR		
	comp=Z,950nm,16.1s,MS4.4						
PKI	**Pulchoki**	**24.54**	**339**	*e*P	**P**	**18 37 08.8**	**0.0**
	comp=Z,29nm,0.6s,mb5.0						
PKI	**Pulchoki**	**24.54**	**339**	*e*P	**P**	**18 37 08.8**	**0.0**
PKI				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.0						
DMN	**Daman**	**24.68**	**338**	*e*P	**P**	**18 37 09.9**	**-0.2**
GUN	**Gumba**	**24.68**	**340**	*e*P	**P**	**18 37 10.8**	**+0.7**
	comp=Z,82nm,0.6s,mb5.5						
KKN	**Kakani**	**24.78**	**339**	*e*P	**P**	**18 37 11.4**	**+0.4**
	comp=Z,50nm,0.8s,mb5.1						
KKN	**Kakani**	**24.78**	**339**	*e*P	**P**	**18 37 11.4**	**+0.4**
KKN				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.1						
POO	**Poona**	**24.89**	**305**	⇑*i*P	**P**	**18 37 14.0**	**+1.9**
	comp=Z,20nm,1.0s,mb4.6						
BHPL	**Bhopal**	**25.11**	**319**	*e*P	**P**	**18 37 15.1**	**+1.1**
BHPL				AMb	AMB	18 37 19.3	
	comp=Z,33nm,0.6s,mb5.0						
GKN	**Gorkha**	**25.21**	**338**	*e*P	**P**	**18 37 14.9**	**0.0**
	comp=Z,32nm,0.3s,mb5.4						
GZH	**Guangzhou**	**25.37**	**42**	P	**P**	**18 37 22.1**	**+5.7**
GZH				LR	LR		
	comp=N,698nm,17.7s,MS4.4						
GZH				LR	LR		
	comp=E,784nm,16.8s,MS4.4						
GZH				LR	LR		
	comp=Z,1μm,20.5s,MS4.3						
KOLN	**Koldanda**	**25.41**	**336**	*e*P	**P**	**18 37 17.1**	**+0.4**
	comp=Z,130nm,0.6s,mb5.6						
TGY	**Tagaytay City**	**27.11**	**68**	P	**P**	**18 37 33.1**	**+1.1**
	comp=Z,52nm,0.5s,baz=166,slow=4.2,SNR=4.4						
TGY	**Tagaytay City**	**27.11**	**68**	P	**P**	**18 37 33.1**	**+1.0**
TGY				pmax	pmax		
	comp=Z,52nm,0.5s						
CD2	**Chengdu**	**27.30**	**16**	⇑*i*P	**P**	**18 37 32.8**	**-1.0**
CD2				AP	pP	18 37 41.3	-4.8
CD2				PP		18 38 21.3	
CD2				S	**S**	**18 42 07.6**	**-2.4**
CD2				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.3						
CD2				AMB	AMB		
	comp=Z,70nm,7.8s						
CD2				LR	LR		
	comp=N,590nm,15.6s						
CD2				LR	LR		
	comp=Z,380nm,21.0s						
BALP	**Baler**	**28.22**	**65**	*e*P	**P**	**18 37 42.6**	**+0.6**
LGTI	**Lohaghat**	**28.34**	**332**	*e*P	**P**	**18 37 45.0**	**+1.9**
CAUP	**Cauayan**	**28.87**	**63**	*e*P	**P**	**18 37 48.5**	**+0.7**
NDI	**New Delhi**	**29.27**	**326**	*ex*	x	18 37 42.0	
WHN	**Wuhan**	**31.45**	**33**	⇓P	**P**	**18 38 11.5**	**+0.9**
WHN				*e*S	**S**	**18 43 19.0**	**+3.9**
WHN				LR	LR		
	comp=Z,2μm,15.2s,MS4.9						
XAN	**Xi'an**	**31.88**	**22**	P	**P**	**18 38 13.1**	**-1.2**
XAN				AMB	AMB		
	comp=Z,135nm,0.7s,mb5.9						
XAN				LR	LR		
	comp=N,403nm,14.3s,MS4.4						
XAN				LR	LR		
	comp=E,472nm,14.9s,MS4.4						
XAN				LR	LR		
	comp=Z,1μm,16.3s,MS4.7						
LZH	**Lanzhou**	**32.24**	**13**	*e*P	**P**	**18 38 17.0**	**-0.5**
LZH				AP	pP	18 38 25.3	-4.7
LZH				XP	sP	18 38 29.1	-6.5
LZH				PP	PP	18 39 25.0	-5.9
LZH				PCP	PcP	18 41 06.0	+0.9
LZH				*e*S	**S**	**18 43 27.0**	**-0.4**
LZH				SS	SS	18 45 23.1	-24
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,125nm,4.5s						
LZH				LR	LR		
	comp=N,585nm,14.0s						
LZH				LR	LR		
	comp=Z,962nm,15.2s,MS4.6						
GTA	**Gaotai**	**34.80**	**6**	P	**P**	**18 38 38.9**	**-0.9**
GTA				AP	pP	18 38 47.9	-4.4
GTA				XP	sP	18 38 51.9	-6.0
GTA				PP	PP	18 39 57.9	-1.4
GTA				PCP	PcP	18 41 13.5	+1.2
GTA				S	**S**	**18 44 08.8**	**+1.7**
GTA				XS	sS	18 44 24.4	-3.7
GTA				SCP	ScP	18 44 54.5	+0.8
GTA				PCS	PcS	18 44 58.3	-0.7
GTA				SS	SS	18 46 24.3	-15
GTA				SCS	ScS	18 48 54.9	-2.2
GTA				AMB	AMB		
	comp=Z,33nm,0.7s,mb5.4						
GTA				AMB	AMB		
	comp=Z,101nm,5.3s						
GTA				LR	LR		
	comp=N,281nm,20.9s,MS4.1						
GTA				LR	LR		
	comp=E,264nm,25.5s,MS4.1						
GTA				LR	LR		
	comp=Z,380nm,25.1s,MS4.0						
NJ2	**Nanjing**	**35.13**	**36**	*e*P	**P**	**18 38 43.5**	**+0.8**
NJ2				AP	pP	18 38 53.3	-1.9
NJ2				XP	sP	18 38 57.1	-3.7
NJ2				PP	PP	18 40 02.9	-0.1
NJ2				S	**S**	**18 44 16.0**	**+3.8**
NJ2				XS	sS	18 44 31.0	-2.3
NJ2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,210nm,5.4s						
NJ2				LR	LR		
	comp=N,1μm,17.1s,MS4.9						
NJ2				LR	LR		
	comp=E,2μm,18.0s,MS4.9						
NJ2				LR	LR		
	comp=Z,2μm,13.9s,MS5.0						
SSE	**Sheshan**	**35.91**	**40**	P	**P**	**18 38 49.4**	**0.0**
SSE				AP	pP	18 38 58.1	-3.8
SSE				XP	sP	18 39 01.8	-5.8
SSE				PP	PP	18 40 11.4	-0.2
SSE				S	**S**	**18 44 25.4**	**+1.2**
SSE				XS	sS	18 44 40.8	-4.5
SSE				SCS	ScS	18 49 05.3	+2.1
SSE				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,37nm,4.8s						
SSE				LR	LR		
	comp=N,483nm,16.4s,MS4.4						
SSE				LR	LR		
	comp=E,189nm,16.4s,MS4.4						
SSE				LR	LR		
	comp=Z,558nm,16.9s,MS4.4						
TIA	**Tai'an**	**37.32**	**30**	⇓P	**P**	**18 39 01.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**37.70**	**128**	P	**P**	**18 39 03.2**	**-1.3**
	comp=Z,12nm,1.0s,mb4.6,baz=315,slow=9.1,SNR=35						
FITZ				LR	LR	18 56 15.7	
	comp=Z,228nm,18.3s,MS4.0,baz=302,slow=39						
FITZ	**Fitzroy Crossi**	**37.70**	**128**	*e*P	**P**	**18 39 03.6**	**-0.9**
	comp=Z,15nm,1.0s,mb4.7						
FITZ				*e*pP	pP	18 39 13.1	-4.0
FITZ				*e*PcP	PcP	18 41 22.2	+1.2
JOW	**Kunigami**	**38.54**	**52**	P	**P**	**18 39 12.2**	**+0.6**
	comp=Z,43nm,0.6s,mb5.3,baz=236,slow=7.0,SNR=33						
JOW				LR	LR	18 54 56.6	
	comp=Z,466nm,21.7s,MS4.3,baz=247,slow=36						
KSH	**Kashi**	**38.73**	**336**	P	**P**	**18 39 14.4**	**+1.2**
KSH				AP	pP	18 39 24.0	-1.9
KSH				XP	sP	18 39 27.8	-3.7
KSH				PP	PP	18 40 47.3	+4.8
KSH				PPP		18 41 10.0	
KSH				PCP	PcP	18 41 25.8	+1.6
KSH				S	**S**	**18 45 09.3**	**+2.4**
KSH				PCS	PcS	18 45 14.0	+0.4
KSH				XS	sS	18 45 25.4	-2.8
KSH				SS	SS	18 47 52.8	-6.1
KSH				SCS	ScS	18 49 19.5	+0.4
KSH				AMB	AMB		
	comp=Z,72nm,0.5s,mb5.7						
KSH				LR	LR		
	comp=N,252nm,5.0s						
KSH				LR	LR		
	comp=E,282nm,11.0s						
KSH				LR	LR		
	comp=Z,328nm,9.7s						
HHC	**Hu-ho-hao-te**	**38.89**	**20**	*e*P	**P**	**18 39 14.5**	**-0.1**
HHC				AP	pP	18 39 24.3	-3.0
HHC				XP	sP	18 39 28.4	-4.4
HHC				PP	PP	18 40 48.9	+4.6
HHC				PCP	PcP	18 41 23.3	-1.4
HHC				S	**S**	**18 45 08.8**	**-0.6**
HHC				PCS	PcS	18 45 13.3	-0.9
HHC				XS	sS	18 45 27.6	-3.1
HHC				SS	SS	18 47 58.1	-4.1
HHC				SCS	ScS	18 49 16.9	-3.1
HHC				AMB	AMB		
	comp=Z,38nm,1.5s,mb4.9						
HHC				AMB	AMB		
	comp=Z,117nm,6.7s						
HHC				LR	LR		
	comp=N,952nm,14.9s,MS4.8						
HHC				LR	LR		
	comp=E,645nm,16.9s,MS4.8						
HHC				LR	LR		
	comp=Z,954nm,22.2s						
WMQ	**Urumqi**	**39.49**	**352**	P	**P**	**18 39 20.0**	**+0.4**
WMQ				AP	pP	18 39 30.0	-2.3
WMQ				XP	sP	18 39 34.0	-3.8
WMQ				PP	PP	18 40 55.0	+4.2
WMQ				S	**S**	**18 45 20.0**	**+1.6**
WMQ				SS	SS	18 48 07.0	-7.1
WMQ				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,120nm,4.0s						
WMQ				LR	LR		
	comp=N,185nm,12.0s,MS4.6						
WMQ				LR	LR		
	comp=E,458nm,12.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,206nm,12.0s,MS4.2						
BJI	**Beijing**	**39.97**	**25**	*e*P	**P**	**18 39 24.9**	**+1.3**
BJI				AP	pP	18 39 33.8	-2.5
BJI				PP	PP	18 40 58.5	+2.4
BJI				S	**S**	**18 45 21.5**	**-4.1**
BJI				SS	SS	18 48 19.3	-4.5
BJI				AMB	AMB		
	comp=Z,105nm,0.8s,mb5.6						
BJI				LR	LR		
	comp=N,541nm,20.1s						
BJI				LR	LR		
	comp=E,295nm,14.7s						
BJI				LR	LR		
	comp=Z,606nm,27.7s						
KAKA	**Kakadu**	**40.94**	**115**	*e*P	**P**	**18 39 30.3**	**-1.2**
	comp=Z,11nm,0.7s,mb4.6						
ULHL	**Ulahol**	**40.98**	**339**	P	**P**	**18 39 32.0**	**+0.2**
	SNR=108						
KZA	**Kyzart**	**41.20**	**337**	P	**P**	**18 39 34.5**	**+0.7**
	SNR=49						
UCH	**Uchtor**	**41.61**	**337**	P	**P**	**18 39 39.1**	**+2.0**
	SNR=11						
MUN	**Mundaring**	**41.66**	**153**	*e*P	**P**	**18 39 38.0**	**+0.6**
DL2	**Dalian**	**41.68**	**32**	P	**P**	**18 39 38.6**	**+1.0**
DL2				S	**S**	**18 45 53.3**	**+2.3**
DL2				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.2						
DL2				LR	LR		
	comp=N,260nm,16.5s,MS4.3						
DL2				LR	LR		
	comp=E,160nm,14.9s,MS4.3						
DL2				LR	LR		
	comp=Z,230nm,19.4s,MS4.1						
TKM2	**Tokmak 2**	**41.80**	**338**	P	**P**	**18 39 39.5**	**+0.8**
	SNR=52						
TKM2	**Tokmak 2**	**41.80**	**338**	P	**P**	**18 39 39.3**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.0						
KBK	**Karagaybulak**	**41.81**	**338**	P	**P**	**18 39 39.8**	**+1.0**
	SNR=89						
AML	**Almayashu**	**41.86**	**336**	P	**P**	**18 39 41.5**	**+2.4**
	SNR=7.3						
AAK	**Ala-Archa**	**41.97**	**337**	P	**P**	**18 39 41.9**	**+1.9**
	SNR=23						
AAK	**Ala-Archa**	**41.97**	**337**	P	**P**	**18 39 40.5**	**+0.5**
	comp=Z,392nm,0.7s,SNR=15						
AAK	**Ala-Archa**	**41.97**	**337**	⇑P	**P**	**18 39 41.0**	**+1.0**
	SNR=44						
AAK	**Ala-Archa**	**41.97**	**337**	⇑*e*P	**P**	**18 39 40.6**	**+0.6**
AAK				pmax	pmax		
	comp=Z,81nm,1.2s,mb5.2						
AAK	**Ala-Archa**	**41.97**	**337**	*e*P	**P**	**18 39 40.2**	**+0.2**
	comp=Z,94nm,1.1s,mb5.3						
AAK				LR	LR		
	comp=Z,50nm,20.0s,MS3.4						
CHMS	**Chumysh**	**42.18**	**338**	P	**P**	**18 39 43.0**	**+1.3**
	SNR=22						
EKS2	**Erkin-Say**	**42.27**	**336**	P	**P**	**18 39 44.4**	**+1.9**
	SNR=56						
USP	**Ospenovka**	**42.50**	**338**	P	**P**	**18 39 45.4**	**+1.0**
	SNR=17						
NWAO	**Narrogin (SRO)**	**42.92**	**152**	P	**P**	**18 39 47.3**	**-0.4**
	comp=Z,11nm,1.0s,mb4.5,baz=334,slow=11,SNR=3.9						
NWAO	**Narrogin (SRO)**	**42.92**	**152**	P	**P**	**18 39 47.3**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,11nm,1.0s						
MK31	**Makanchi Array**	**43.36**	**347**	P	**P**	**18 39 50.2**	**-1.1**
MK31				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
MKAR	**Makanchi Array**	**43.36**	**347**	P	**P**	**18 39 50.5**	**-0.8**
	comp=Z,15nm,0.6s,mb4.9,baz=170,slow=7.1,SNR=161						
MKAR	**Makanchi Array**	**43.36**	**347**	P	**P**	**18 39 50.5**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,15nm,0.6s						
MKAR	**Makanchi Array**	**43.36**	**347**	P	**P**	**18 39 50.5**	**-0.8**
INCN	**Inchon**	**43.51**	**37**	*e*P	**P**	**18 39 51.5**	**-0.9**
	comp=Z,10nm,0.5s,mb4.8						
KKAR	**Karatay Array**	**44.00**	**334**	P	**P**	**18 39 56.7**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
SONM	**Songino Array**	**44.04**	**11**	P	**P**	**18 39 55.6**	**-1.2**
	comp=Z,2.9nm,0.5s,mb4.2,baz=190,slow=9.1,SNR=35						
SONM				PcP	PcP	18 41 41.8	+

comp=Z,377nm,18.3s
ULN Ulaanbaatar 44.20 12 *e*P P **18 39 56.8 -1.2**
comp=Z,7.2nm,1.1s,mb4.3
ULN *e*PP PP 18 41 42.1 +0.5
SNY Shenyang 44.84 30⇑P **P 18 40 03.1 0.0**
SNY AP pP 18 40 13.0 -3.0
SNY XP sP 18 40 17.3 -4.3
SNY PP PP 18 41 52.3 +3.8
SNY S **S 18 46 37.9 +0.6**
SNY SS SS 18 49 52.3 -7.2
SNY AMB AMB
comp=Z,63nm,0.7s,mb5.5
SNY AMB AMB
comp=Z,87nm,5.5s
SNY LR LR
comp=N,343nm,22.0s
SNY LR LR
comp=Z,409nm,25.7s,MS4.2
WRA Warramunga Arr 45.69 124 P **P 18 40 09.3 -0.5**
comp=Z,50nm,0.7s,mb5.6,baz=302,slow=9.2,SNR=304
WRA LR LR 18 59 53.6
comp=Z,280nm,21.2s,MS4.2,baz=300,slow=37
WRA Warramunga Arr 45.69 124 P **P 18 40 09.3 -0.5**
WRA pmax pmax
comp=Z,50nm,0.7s
WRA MLR MLR
comp=Z,280nm,21.2s
WRAB Tennant Creek 45.69 124 P **P 18 40 10.0 +0.1**
comp=Z,526nm,0.7s,SNR=30
WRAB Tennant Creek 45.69 124*c iP* **P 18 40 09.9 0.0**
WRAB Tennant Creek 45.69 124 *e*P **P 18 40 09.4 -0.5**
comp=Z,168nm,1.0s,mb5.9
WRAB *e* pP 18 40 20.7 -2.1
WB2 Warramunga Ar 45.70 124⇑*iP* **P 18 40 09.3 -0.6**
ZAK Zakamensk 46.02 7 *e*P **P 18 40 10.5 -2.0**
ZAK *e* 18 41 48.2
ZAK pmax pmax
comp=Z,30nm,1.3s,mb5.1
ASAR Alice Springs 47.19 128 P **P 18 40 21.4 -0.3**
comp=Z,9.9nm,0.7s,mb4.9,baz=298,slow=7.8,SNR=193
ASAR PcP PcP 18 41 53.2 +0.7
comp=Z,4.6nm,0.7s,baz=302,slow=3.8,SNR=4.1
ASAR LR LR 18 59 22.3
comp=Z,318nm,21.8s,MS4.2,baz=309,slow=35
ASAR Alice Springs 47.19 128 P **P 18 40 21.4 -0.2**
ASAR 18 41 53.2
ASAR pmax pmax
comp=Z,10.0nm,0.7s
ASAR MLR MLR
comp=Z,318nm,21.8s
AS31 Alice Springs 47.19 128 *e*P **P 18 40 20.8 -0.8**
ABKT Ailbek 47.19 320 P **P 18 40 22.3 +0.6**
comp=Z,191nm,0.7s,mb6.1,SNR=12
CN2 Changchun 47.22 30 *e*P **P 18 40 21.8 -0.1**
CN2 *e*AP pP 18 40 31.6 -3.2
CN2 *e*S **S 18 47 12.6 +1.1**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,17.0s,MS4.5
CN2 LR LR
comp=E,400nm,17.0s,MS4.5
CN2 LR LR
comp=Z,500nm,17.0s,MS4.5
KURK Kurchatov 47.89 346 P **P 18 40 27.0 0.0**
comp=Z,209nm,0.7s,SNR=6.9
HIA Hailar 49.07 21 *e*P **P 18 40 35.9 -0.2**
HIA pmax pmax
comp=Z,16nm,0.6s
HIA Hailar 49.07 21 *e*P **P 18 40 35.9 -0.2**
comp=Z,16nm,0.6s,mb5.2
CIT Chita 49.57 15 *e*P **P 18 40 38.8 -1.2**
CIT *e* 18 42 01.0
ZAL Zalesovo 49.78 352 P **P 18 40 40.8 -0.8**
comp=Z,11nm,0.5s,mb5.1,baz=308,slow=6.3,SNR=50
ZAL LR LR 19 06 22.8
comp=Z,289nm,21.8s,MS4.2,baz=293,slow=42
ZAL Zalesovo 49.78 352 P **P 18 40 40.8 -0.8**
ZAL pmax pmax
comp=Z,11nm,0.5s
ZAL MLR MLR
comp=Z,289nm,21.8s
MDJ Mudanjiang 49.92 32 P **P 18 40 42.9 +0.3**
MDJ AP pP 18 40 51.8 -3.8
MDJ XP sP 18 40 55.8 -5.3
MDJ PP PP 18 42 38.1 +0.4
MDJ SCP ScP 18 45 55.5 +1.5
MDJ PCS PcS 18 45 59.3 0.0
MDJ S **S 18 47 52.4 +3.0**
MDJ XS sS 18 48 08.3 -2.9
MDJ SCS ScS 18 50 31.4 +1.5
MDJ AMB AMB
comp=Z,29nm,1.0s,mb5.3
MDJ AMB AMB
comp=Z,74nm,4.3s
MDJ LR LR
comp=N,231nm,21.7s,MS4.3
MDJ LR LR
comp=E,251nm,25.6s,MS4.3
MDJ LR LR
comp=Z,426nm,21.7s,MS4.4
MDJ Mudanjiang 49.92 32 *e*P **P 18 40 42.7 +0.1**
comp=Z,20nm,0.8s,mb5.2
MDJ LR LR
comp=Z,538nm,22.0s,MS4.5
VLA Vladivostok 50.20 35*d iP* **P 18 40 44.4 -0.4**
VLA pmax pmax
comp=Z,39nm,1.3s,mb5.3
VLA Vladivostok 50.20 35 *i* Pr 18 40 44.4
MAJO Matsushiro 50.62 45 *e*P **P 18 40 47.1 -0.8**
MAJO pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
MAJO MLR MLR
comp=Z,456nm,21.0s,MS4.5
MAJO Matsushiro 50.62 45 *e*P **P 18 40 47.1 -0.8**
comp=Z,3.9nm,0.6s,mb4.5
MAJO LR LR
comp=Z,456nm,21.0s,MS4.5
MAT Matsushiro 50.62 45 P **P 18 40 47.0 -0.9**
MJAR Matsushiro Arr 50.62 45 P **P 18 40 48.0 +0.1**
comp=Z,6.4nm,0.9s,mb4.6,baz=244,slow=8.7,SNR=19
MJAR PcP PcP 18 42 05.3 +0.4
comp=Z,5.4nm,0.9s,baz=240,slow=3.8,SNR=7.4
MJAR pPcP 18 42 21.0
comp=Z,4.0nm,0.9s,baz=254,slow=3.9,SNR=6.5
MJAR LR LR 19 03 14.8
comp=Z,341nm,20.4s,MS4.3,baz=245,slow=37
NVS Novosibirsk 50.89 351⇑*iP* **P 18 40 48.8 -1.1**
NVS *e**PP pP 18 41 01.8 -1.2
NVS *e* 18 42 00.7
NVS *i* S **18 48 00.8 -2.1**
NVS *e* 18 50 28.6
NVS pmax pmax
comp=N,18nm,1.2s
NVS pmax pmax
comp=E,11nm,1.2s
NVS pmax pmax
comp=Z,19nm,1.2s,mb4.9
NVS smax
comp=N,22nm,1.6s
NVS smax
comp=E,9.0nm,1.3s
BVA0 Borovoye Array 52.27 341 *i* P **P 18 40 59.4 -0.8**
BVA0 pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BRVK Borovoye 52.33 341 P **P 18 41 00.4 -0.3**
comp=Z,487nm,0.6s,SNR=48
BRVK Borovoye 52.33 341 P **P 18 41 00.0 -0.7**
SNR=28
BRVK Borovoye 52.33 341 *e*P **P 18 40 59.8 -0.9**
BRVK pmax pmax
comp=Z,28nm,0.6s,mb5.4
BRVK Borovoye 52.33 341 *e*P **P 18 40 59.8 -0.9**
comp=Z,28nm,0.6s,mb5.4
ZRNK Zerenda 52.66 340 P **P 18 41 02.3 -0.8**
ZRNK pmax pmax
comp=Z,28nm,0.9s,mb5.2
ZRNK Zerenda 52.66 340⇑*eP* **P 18 41 02.2 -0.9**
comp=Z,36nm,0.8s,mb5.3
CHKZ Chkalovo 52.75 342 P **P 18 41 03.4 -0.4**
CHKZ pmax pmax
comp=Z,63nm,0.7s,mb5.7
CHKZ Chkalovo 52.75 342⇑*eP* **P 18 41 03.3 -0.6**
comp=Z,98nm,0.6s,mb5.9

AB31 Akbulak array 53.45 332 *i* P **P 18 41 08.7 -0.2**
AB31 pmax pmax
comp=Z,69nm,1.2s,mb5.5
PMG Port Moresby 53.74 105 P **P 18 41 09.2 -1.9**
comp=Z,15nm,0.7s,mb5.0,baz=256,slow=4.8,SNR=5.8
PMG Port Moresby 53.74 105 P **P 18 41 09.2 -1.9**
PMG pmax pmax
comp=Z,15nm,0.7s
KLR Kul'dur 54.13 29 *e*P **P 18 41 10.5 -3.4**
KLR pmax pmax
comp=E,42nm,1.6s
KLR pmax pmax
comp=Z,80nm,1.6s,mb5.4
KLR MLR MLR
comp=Z,600nm,13.0s,MS4.8
BOD Bodaibo 55.00 12 *e*P **P 18 41 19.3 -0.9**
BOD pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
AKTO Aktyubinsk 55.16 332 P **P 18 41 20.8 -0.6**
AKTO pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
HABR Khabarovsk 55.29 31⇑*iP* **P 18 41 21.5 -0.8**
HABR *eS* **S 18 49 04.2 +1.5**
HABR pmax pmax
comp=Z,28nm,0.6s,mb5.5
CTA Charters Tower 55.96 118 P **P 18 41 27.4 +0.3**
comp=Z,13nm,1.0s,mb4.9,baz=295,slow=9.5,SNR=12
CTA LR LR 19 06 05.2
comp=Z,522nm,21.9s,MS4.6,baz=287,slow=37
CTA Charters Tower 55.96 118 P **P 18 41 27.4 +0.3**
CTA pmax pmax
comp=Z,13nm,1.0s
CTA MLR MLR
comp=Z,522nm,21.9s
CTA Charters Tower 55.96 118 *eP* **P 18 41 27.3 +0.2**
comp=Z,13nm,1.3s,mb4.8
CTAO Charters Tower 55.96 118 *eP* **P 18 41 26.1 -1.0**
CTAO pmax pmax
comp=Z,27nm,1.3s,mb5.1
CTAO Charters Tower 55.96 118 *eP* **P 18 41 26.1 -1.1**
comp=Z,4.6nm,0.8s,mb4.5,baz=275,slow=7.8,SNR=6.8
STKA Stephens Creek 57.26 133 P **P 18 41 34.9 -1.5**
comp=Z,213nm,20.0s,MS4.2,baz=234,slow=39
STKA LR LR 19 08 52.1
STKA Stephens Creek 57.26 133 *eP* **P 18 41 35.6 -0.7**
comp=Z,5.9nm,0.8s,mb4.7
GNI Garni 57.33 315 P **P 18 41 38.1 +1.2**
SNR=6.2
GNI Garni 57.33 315⇑*eP* **P 18 41 37.1 +0.2**
GNI pmax pmax
comp=Z,15nm,1.1s
GNI Garni 57.33 315 *eP* **P 18 41 36.2 -0.7**
comp=Z,89nm,0.6s,mb6.0
GNI LR LR
comp=Z,105nm,21.0s,MS3.9
KMBO Kilima Mbogo 58.09 266 P **P 18 41 43.5 +1.3**
comp=Z,1.5nm,0.7s,mb4.1,baz=51,slow=11,SNR=4.3
KMBO pP pP 18 41 56.9 +1.4
comp=Z,2.1nm,0.6s,baz=56,slow=15,SNR=4.9
KMBO LR LR 19 02 12.4
comp=Z,388nm,21.9s,MS4.5,baz=94,slow=31
KMBO Kilima Mbogo 58.09 266 P **P 18 41 43.5 +1.3**
KMBO *PP pP 18 41 56.9 +1.4
KMBO pmax pmax
comp=Z,20nm,0.7s
KMBO MLR MLR
comp=Z,388nm,21.9s
KMBO Kilima Mbogo 58.09 266 *i* P **P 18 41 47.2 +5.0**
KMBO pmax pmax
comp=Z,20nm,0.7s
YSS Yuzh-Sakhalins 58.70 36⇓*iP* **P 18 41 46.0 -0.5**
YSS *e* pP 18 41 59.8 0.0
YSS *e* 18 42 28.5
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.6
YSS MLR MLR
comp=Z,200nm,18.0s,MS4.3
YSS Yuzh-Sakhalins 58.70 36 *eP* **P 18 41 45.9 -0.6**
comp=Z,16nm,0.6s,mb5.2
YSS LR LR
comp=Z,236nm,21.0s,MS4.3
ZEI Tsey 59.00 318 *eP* **P 18 41 48.2 -0.3**
ZEI *e**PP pP 18 41 56.8 -5.0
ZEI pmax pmax
comp=Z,18nm,0.6s,mb5.3
ARU Arti 59.15 337 P **P 18 41 49.4 -0.2**
comp=Z,146nm,1.1s,mb5.9,SNR=12
ARU Arti 59.15 337⇑*iP* **P 18 41 48.2 -1.4**
ARU *e* 18 42 36.5
ARU *e* 18 43 58.1
ARU *e*PPP 18 45 21.8
ARU *eS* **S 18 49 54.8 +1.2**
ARU *e* 18 51 28.8
ARU *e*SS SS 18 53 52.8 +4.5
ARU pmax pmax
comp=Z,29nm,1.2s,mb5.2
ARU MLR MLR
comp=Z,100nm,18.0s,MS4.0
ARU MLR MLR
comp=N,80nm,19.0s,MS4.0
ARU MLR MLR
comp=E,60nm,19.0s,MS4.0
ARU Arti 59.15 337 *eP* **P 18 41 47.8 -1.8**
comp=E,43nm,1.3s,mb5.3
ARU *e* pP 18 42 02.1 -0.8
KIV Kislovodsk 60.30 319 P **P 18 41 57.5 0.0**
comp=E,150nm,0.8s,mb6.1,SNR=6.3
KIV Kislovodsk 60.30 319 P **P 18 41 58.0 +0.6**
SNR=8.4
KIV Kislovodsk 60.30 319 *eP* **P 18 41 57.0 -0.5**
KIV *e* pP 18 42 11.1 +0.3
KIV pmax pmax
comp=Z,16nm,0.8s,mb5.1
KIV Kislovodsk 60.30 319 *eP* **P 18 41 57.0 -0.5**
comp=Z,16nm,0.8s,mb5.1
KIV *e* pP 18 42 11.1 +0.3
MALT Malatya 61.24 311⇑*iP* **P 18 42 04.4 +0.5**
MALT Malatya 61.24 311 *eP* **P 18 42 03.6 -0.2**
comp=Z,16nm,1.3s,mb5.0
EIL Elat 61.84 301 *eP* **P 18 42 08.7 +0.8**
comp=Z,159nm,0.8s
SOKR Solikamsk 62.07 339*c iP* **P 18 42 09.1 -0.4**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.5
YAK Yakutsk 62.68 18 *eP* **P 18 42 11.8 -1.7**
YAK pmax pmax
comp=N,6.0nm,1.2s
YAK pmax pmax
comp=Z,20nm,1.2s,mb5.1
YAK MLR MLR
comp=Z,459nm,17.0s,MS4.7
YAK MLR MLR
comp=N,390nm,24.0s
YAK Yakutsk 62.68 18 *eP* **P 18 42 11.4 -2.2**
comp=N,14nm,0.6s,mb5.3
YAK LR LR
comp=Z,868nm,19.0s,MS4.9
ANN Anapa 64.10 318 *eP* **P 18 42 19.7 -3.2**
ANN *eS* **S 18 50 54.3 -1.9**
ANN pmax pmax
comp=Z,24nm,0.9s,mb5.2
ARMA Armidale 64.29 127 *eP* **P 18 42 26.0 +1.8**
BR131 Keskin Array S 65.22 312 *eP* **P 18 42 29.2 -1.0**
comp=Z,7.4nm,0.6s,mb4.9
BRTR Keskin Array B 65.22 312 P **P 18 42 29.4 -0.8**
comp=Z,9.3nm,0.6s,mb5.0,baz=132,slow=7.3,SNR=60
BRTR LR LR 19 15 30.3
comp=Z,55nm,18.2s,MS3.8,baz=103,slow=40
VRSR Storozhevoye 65.49 325 *eP* **P 18 42 30.4 -1.6**
VRSR pmax pmax
comp=E,20nm,0.8s
VRSR pmax pmax
comp=Z,20nm,0.8s,mb5.2
VRSR pmax pmax
comp=N,5.0nm,1.0s
VOR Voronezh 65.71 326 *eP* **P 18 42 31.0 -2.4**
VOR pmax pmax
comp=Z,70nm,1.4s,mb5.5
ANTO Ankara 65.89 312 *eP* **P 18 42 33.9 -0.6**
ANTO pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
ANTO Ankara 65.89 312 *eP* **P 18 42 33.9 -0.6**
comp=Z,8.7nm,0.6s,mb5.0
SIM Simferopol' 66.38 317*c iP* **P 18 42 37.0 -0.6**
SIM *eS* S 18 51 22.0 -2.1
SIM pmax pmax
comp=Z,23nm,0.7s,mb5.3
ISP Isparta 67.15 309⇑*iP* **P 18 42 41.9 -0.7**
MOS Moscow 68.26 329 *eP* **P 18 42 46.9 -2.7**
MOS *e* pP 18 42 59.7 -3.4
MOS *e* 18 43 14.9
MOS *eS* S 18 51 41.8 -4.9
MOS pmax pmax
comp=Z,200nm,1.8s,mb5.8
MOS pmax pmax
comp=Z,97nm,1.3s,mb5.7
OBN Obninsk 68.55 328*c iP* **P 18 42 50.3 -1.1**
OBN *i* pP 18 43 04.5 -0.4
OBN *i* 18 43 15.9
OBN *eS* S 18 51 50.1 0.0
OBN pmax pmax
comp=Z,56nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.0
OBN Obninsk 68.55 328 *eP* **P 18 42 49.9 -1.5**
comp=Z,11nm,0.5s,mb5.0
LSZ Lusaka 69.16 252 *eP* **P 18 42 56.6 +1.4**
comp=Z,3.7nm,1.0s,mb4.3
KLMR Klimovskoe 69.70 334 *eP* **P 18 42 57.2 -1.3**
KLMR pmax pmax
comp=Z,40nm,1.3s,mb5.2
TIXI Tiksi 70.13 11⇑*eP* **P 18 42 59.0 -2.1**
TIXI pmax pmax
comp=Z,28nm,0.7s,mb5.3
TIRR Tirgusor 70.16 316*i P* **P 18 43 01.1 -0.2**
AKASG Malin Array Be 71.22 322 P **P 18 43 06.5 -1.2**
comp=Z,14nm,0.5s,mb5.1,baz=92,slow=5.3,SNR=74
AKASG pP pP 18 43 20.3 -1.1
comp=Z,5.5nm,0.7s,baz=94,slow=4.6,SNR=5.4
AKASG LR LR 19 20 36.2
comp=Z,39nm,19.6s,MS3.7,baz=85,slow=41
AKASG Malin Array Be 71.22 322 P **P 18 43 06.6 -1.1**
AKASG *PP pP 18 43 20.3 -1.1
AKASG pmax pmax
comp=Z,14nm,0.5s
AKASG MLR MLR
comp=Z,39nm,19.6s
SEY Seymchan 71.39 24⇑*eP* **P 18 43 07.4 -1.4**
VRI Vrincioaia 71.64 317⇑*iP* **P 18 43 10.5 +0.2**
VRI Vrincioaia 71.64 317 P **P 18 43 11.0 +0.7**
VRI Vrincioaia 71.64 317⇑P **P 18 43 10.5 +0.2**
PLOR Plostina 71.69 317⇓*iP* **P 18 43 11.5 +0.9**
TMCR Tamitsa 71.89 337 *eP* **P 18 43 10.7 -1.1**
TMCR pmax pmax
comp=Z,50nm,0.7s,mb5.5
MLR Muntele Rosu 72.09 316⇑*iP* **P 18 43 13.2 +0.2**
MLR Muntele Rosu 72.09 316 P **P 18 43 13.9 +0.9**
MLR Muntele Rosu 72.09 316⇑P **P 18 43 13.2 +0.2**
VOIR 72.70 316⇑*iP* **P 18 43 16.1 -0.5**
VOIR 72.70 316⇑P **P 18 43 16.1 -0.5**
BURAR Bucovina Array 73.02 318⇑*iP* **P 18 43 18.9 +0.3**
BURAR Bucovina Array 73.02 318⇑P **P 18 43 18.9 +0.3**
VTS Vitosha 73.52 313⇑*iP* **P 18 43 20.8 -0.7**
VTS Vitosha 73.52 313 P **P 18 43 21.8 +0.3**
VTS Vitosha 73.52 313⇑P **P 18 43 20.8 -0.7**
LBTB Lobatse 73.61 242 *eP* **P 18 43 23.2 +1.2**
LBTB pmax pmax
comp=Z,21nm,1.0s,mb5.0
LBTB Lobatse 73.61 242 *eP* **P 18 43 23.2 +1.2**
comp=Z,22nm,1.0s,mb5.0
JOF Joensuu 74.09 335 *ep* **P 18 43 24.1 -0.7**
LVV L'vov 74.24 320⇑*iP* **P 18 43 25.5 -0.2**
LVV *e* 18 47 52.9
DRGR 74.55 317⇑*iP* **P 18 43 27.3 -0.2**
DRGR 74.55 317 P **P 18 43 28.3 +0.8**
DRGR 74.55 317⇑P **P 18 43 27.9 +0.5**
BOSA Boshof 74.75 239 P **P 18 43 29.6 +0.9**
comp=Z,2.5nm,0.6s,mb4.3,baz=342,slow=1.1,SNR=7.9
BOSA LR LR 19 10 12.5
comp=Z,277nm,21.7s,MS4.5,baz=66,slow=31
BOSA Boshof 74.75 239 P **P 18 43 29.6 +0.9**
BOSA pmax pmax
comp=Z,30nm,0.6s,mb5.4
BOSA MLR MLR
comp=Z,277nm,21.7s,MS4.5
VSU Vasula 74.78 330 *i* P **P 18 43 27.9 -0.9**
LVZ Lovozero 74.83 340 P **P 18 43 28.3 -0.8**
comp=Z,390nm,0.5s,SNR=13
LVZ Lovozero 74.83 340*c iP* **P 18 43 27.8 -1.3**
LVZ pmax pmax
comp=Z,18nm,0.7s,mb5.1
KWP Kalwaria 75.05 320 *eP* **P 18 43 31.0 +0.6**
BZS Buzias 75.11 316⇑*iP* **P 18 43 30.1 -0.6**
BZS Buzias 75.11 316 P **P 18 43 30.9 +0.2**
BZS Buzias 75.11 316⇓P **P 18 43 30.4 -0.3**
APA Apatity 75.12 340⇓*iP* **P 18 43 30.4 -0.4**
APA *i* pP 18 43 44.0 -0.5
APA *eS* S 18 53 25.0 +19
APA pmax pmax
comp=Z,30nm,0.7s,mb5.3
APA MLR MLR
comp=Z,300nm,17.0s,MS4.7
KOLS Kolonicke sedl 75.20 319 *eP* **P 18 43 32.0 +0.7**
SUW Suwalki 75.61 325 *eP* **P 18 43 33.1 -0.5**
MAW Mawson 75.66 192 LR LR 19 10 14.5
comp=Z,188nm,20.2s,MS4.4,baz=176,slow=30
CRVS Cervenica-Dubn 75.73 319 *eP* **P 18 43 34.8 +0.5**
FIA1 FINESS Array S 75.93 332 *eP* **P 18 43 34.4 -1.0**
FINES FINESS Array B 75.94 332 P **P 18 43 34.4 -1.1**
comp=Z,9.6nm,0.4s,mb5.1,baz=106,slow=5.8,SNR=133
FINES LR LR 19 22 01.6
comp=Z,89nm,20.4s,MS4.1,baz=130,slow=40
FINES FINESS Array B 75.94 332 P **P 18 43 34.4 -1.1**
FINES pmax pmax
comp=Z,10.0nm,0.4s
FINES MLR MLR
comp=Z,89nm,20.4s
STHS Stebnicka Huta 75.95 320 *eP* **P 18 43 36.1 +0.6**
STHS pmax pmax
comp=Z,16nm,0.7s,mb5.1
STHS Stebnicka Huta 75.95 320 *eP* **P 18 43 36.1 +0.6**
comp=Z,16nm,0.7s,mb5.1
KAF Kangasniemi 76.02 333 *ep* **P 18 43 35.3 -0.7**
comp=Z,16nm,0.6s,mb5.1,baz=103,slow=5.3
KAF Kangasniemi 76.02 333 *eP* **P 18 43 35.3 -0.7**
KAF pmax pmax
comp=Z,17nm,0.6s,mb5.2
KECS Kecovo 76.30 319 *eP* **P 18 43 37.8 +0.3**
KECS *e* pP 18 43 53.0 +1.7
KECS pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
KECS Kecovo 76.30 319 *eP* **P 18 43 37.8 +0.3**
comp=Z,9.5nm,0.7s,mb4.8
KECS *e* pP 18 43 53.0 +1.7
NIE Niedzica 76.55 320 *eP* **P 18 43 39.6 +0.6**
NIE *e*PcP PcP 18 43 54.6 +4.2
PSZ Piszkesteto 76.61 318 *e*Pd 18 43 39.9
PSZ Piszkesteto 76.61 318⇑*iP* **P 18 43 39.0 -0.3**
PSZ Piszkesteto 76.61 318 P **P 18 43 40.0 +0.7**
OJC Ojcow 77.00 320 *eP* **P 18 43 41.3 -0.2**
OJC *e* pP 18 43 56.9 +1.7
PKSM Moragy 77.25 316⇑*iP* **P 18 43 42.2 -0.7**
PKSM Moragy 77.25 316⇓*eP* **P 18 43 43.1 +0.2**
VYHS Vyhne 77.39 319 *eP* **P 18 43 43.5 -0.2**
VYHS *e* pP 18 43 58.8 +1.4
VYHS pmax pmax
comp=Z,14nm,1.5s,mb4.7
VYHS Vyhne 77.39 319 *eP* **P 18 43 43.5 -0.2**
comp=Z,14nm,1.5s,mb4.7
VYHS *e* pP 18 43 58.8 +1.4
OKC Ostrava-Krasne 78.00 320 *eP* **P 18 43 47.7 +0.6**
OKC *es*P sP 18 44 02.4 -3.8
OKC AMS AMS 19 18 20.0
OKC Ostrava-Krasne 78.00 320 *eP* **P 18 43 47.7 +0.6**
OKC *ep*P pP 18 44 02.4 +1.5
KEV Kevo 78.11 341 *ep* **P 18 43 46.6 -1.1**
comp=Z,17nm,0.6s,mb5.1
KEV Kevo 78.11 341 *eP* **P 18 43 46.6 -1.1**
KEV pmax pmax
comp=Z,17nm,0.6s,mb5.2
MORC Moravsky Berou 78.39 320⇑*iP* **P 18 43 49.7 +0.5**
MORC Moravsky Berou 78.39 320 *eP* **P 18 43 49.1 0.0**
comp=Z,54nm,1.7s,mb5.2
ZST Bratislava 78.50 318 *eP* **P 18 43 50.6 +0.8**
ZST *e* pP 18 44 05.7 +2.0
ZST pmax pmax
comp=Z,29nm,1.2s,mb5.1
ZST Bratislava 78.50 318 *eP* **P 18 43 50.6 +0.8**
comp=Z,29nm,1.2s,mb5.1

ZST *e* pP 18 44 05.7 +2.0
ARCES ARCESS Array B 78.54 340 P **P** **18 43 49.3 -0.8**
comp=Z,10nm,0.5s,mb5.0,baz=94,slow=5.2,SNR=200
ARCES LR LR 19 24 51.6
comp=Z,117nm,21.5s,MS4.2,baz=279,slow=40
ARCES ARCESS Array B 78.54 340 P **P** **18 43 49.3 -0.8**
ARCES pmax pmax
comp=Z,10.0nm,0.5s
ARCES MLR MLR
comp=Z,117nm,21.5s
ARE0 ARCESS Array S 78.54 340 *e*P **P** **18 43 48.9 -1.2**
BILL Bilibino 78.66 21 *e*P **P** **18 43 49.8 -0.9**
BILL *e* pP 18 43 58.7 -5.8
BILL *e* 18 46 47.2
BILL pmax pmax
comp=Z,14nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,600nm,18.0s,MS5.0
SOP Sopron 78.82 318⇓ *e*P **P** **18 43 52.1 +0.5**
KOGS Kog 78.92 316⇑ *i*P **P** **18 43 52.0 -0.1**
VRAC Vranov 78.95 319⇑ *i*P **P** **18 43 51.8 -0.5**
VRAC Vranov 78.95 319⇑ *i*P **P** **18 43 51.8 -0.5**
DPC Dobruska-Polom 79.23 320 *e*P **P** **18 43 54.9 +1.1**
DPC *es*P sP 18 44 09.4 -3.6
DPC AMS AMS 19 13 40.0
DPC Dobruska-Polom 79.23 320 *e*P **P** **18 43 54.9 +1.1**
DPC *ep*P pP 18 44 09.4 +1.8
KSP Ksiaz 79.30 321 *e*P **P** **18 43 54.4 +0.2**
KSP Ksiaz 79.30 321 *e*P **P** **18 43 54.9 +0.7**
KSP *es*P sP 18 44 07.9 -5.4
KSP *e*S S 18 53 47.5 -3.5
CONA Conrad Observa 79.31 318⇑ *i*P **P** **18 43 53.9 -0.4**
comp=Z,4.8nm,0.8s,mb4.5
CRES Cresnjev 79.42 316⇑ *e*P **P** **18 43 54.8 0.0**
comp=Z,59nm,1.8s,mb5.2
UPC Upice 79.44 320 *e*P **P** **18 43 55.8 +0.8**
UPC *es*P sP 18 44 10.8 -3.3
ARSA Arzberg 79.48 317⇑ *i*P **P** **18 43 55.2 0.0**
comp=Z,76nm,1.9s,mb5.3
BOJS Bojanci 79.54 315⇑ *e*P **P** **18 43 55.3 -0.3**
comp=Z,27nm,0.7s,mb5.3
BOJS *e* pP 18 44 09.6 +0.3
BOJS *e* 18 44 14.4
TREC Trest 79.67 319 *e*P **P** **18 43 56.6 +0.4**
TREC *es*P sP 18 44 11.3 -4.1
TREC AMS AMS 19 13 50.0
comp=Z,100nm,15.2s
PERS Pernice 79.71 316⇑ *e*P **P** **18 43 56.4 -0.1**
PERS *e* pP 18 44 10.6 +0.3
LJU Ljubljana 80.08 316⇑ *e*P **P** **18 43 58.6 +0.1**
LJU *e* pP 18 44 13.0 +0.7
OBKA Obir 80.10 316⇑ *i*P **P** **18 43 59.1 +0.5**
comp=Z,89nm,2.2s,mb5.3
PRU Pruhonice 80.34 320 *e*P **P** **18 44 00.3 +0.5**
PRU *es*P sP 18 44 14.9 -4.1
PRU AMS AMS 19 14 20.0
comp=Z,100nm,26.7s
PVCC Panska Ves 80.36 320 *e*P **P** **18 44 00.7 +0.7**
PVCC *es*P sP 18 44 15.4 -3.7
MOA Molln 80.37 318⇑ *i*P **P** **18 43 60.0 -0.1**
comp=Z,31nm,1.9s,mb4.9
VOY Vojsko 80.52 316 *e*P **P** **18 44 01.1 +0.3**
VOY *e* 18 44 20.2
BRG Berggiesshubel 80.78 321 *e*P **P** **18 44 02.4 +0.2**
comp=Z,8.0nm,0.8s,mb4.7
BRG Berggiesshubel 80.78 321 *e*P **P** **18 44 02.6 +0.4**
comp=Z,4.6nm,0.8s,mb4.5
BRG *e* pP 18 44 17.2 +1.2
comp=Z,8.4nm,1.2s
BRG
comp=N,57nm,22.6s
BRG
comp=E,41nm,21.3s
BRG
comp=Z,51nm,18.8s
BRG Berggiesshubel 80.78 321 *e*P **P** **18 44 02.6 +0.4**
BRG *e* pP 18 44 17.2 +1.1
BRG pmax pmax
comp=Z,50nm,0.8s,mb5.5
BRG MLR MLR
comp=N,57nm,22.6s,MS4.0
BRG MLR MLR
comp=E,41nm,21.3s,MS4.0
BRG MLR MLR
comp=Z,51nm,18.8s,MS3.9
BRG Berggiesshubel 80.78 321 *e*P **P** **18 44 02.6 +0.4**
comp=Z,4.6nm,0.8s,mb4.5
BRG *e* pP 18 44 17.2 +1.2
BRG LR LR
comp=Z,50nm,18.8s,MS3.9
GEC2 GERESS Array S 80.81 319 *e*P **P** **18 44 02.7 +0.3**
comp=Z,19nm,0.9s,mb5.0
GEC2 GERESS Array S 80.81 319 *e*P **P** **18 44 02.7 +0.3**
GEC2 pmax pmax
comp=Z,19nm,0.9s,mb5.0
GERES GERESS Array B 80.81 319 P **P** **18 44 02.7 +0.4**
comp=Z,9.4nm,0.7s,mb4.8,baz=95,slow=6.0,SNR=75
GERES pP pP 18 44 17.7 +1.5
comp=Z,10nm,0.7s,baz=103,slow=5.8,SNR=7.1
GERES GERESS Array B 80.81 319 P **P** **18 44 02.7 +0.3**
GERES *PP pP 18 44 17.7 +1.5
GERES pmax pmax
comp=Z,9.0nm,0.7s
KHC Kasperske Hory 80.91 319 *e*P **P** **18 44 02.3 -0.6**
KHC *es*P sP 18 44 18.0 -4.0
KHC *ex* x 18 44 34.5
KHC AMS AMS 19 14 40.0
comp=Z,100nm,24.2s
KHC Kasperske Hory 80.91 319⇑ *e*P **P** **18 44 02.7 -0.2**
PTCC Patocco-Chiusa 80.92 316 P **P** **18 44 03.4 +0.5**
comp=Z,13nm,0.6s,mb5.0
KBA Koelnbreinsper 80.95 317⇑ *i*P **P** **18 44 02.8 -0.3**
comp=Z,10.0nm,1.4s,mb4.6
KBA Koelnbreinsper 80.95 317⇑ *i*P **P** **18 44 02.8 -0.3**
KBA pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
RUE Ruedersdorf 80.99 322 *e*P **P** **18 44 03.3 0.0**
comp=Z,20nm,0.6s,mb5.2
CERT Cerreto 81.01 312 P **P** **18 44 02.9 -0.5**
comp=Z,12nm,0.6s,mb5.0
FBE Freiberg 81.16 321 *e*P **P** **18 44 04.4 +0.2**
comp=Z,13nm,0.9s,mb4.9
FVI Forni Avoltri 81.32 316 P **P** **18 44 05.3 +0.2**
FVI pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
FVI Forni Avoltri 81.32 316 P **P** **18 44 05.3 +0.2**
comp=Z,8.8nm,0.6s,mb4.9
WET Wettzell 81.37 319 *e*P **P** **18 44 05.5 +0.2**
comp=Z,10.0nm,0.9s,mb4.8
WET Wettzell 81.37 319 *e*P **P** **18 44 05.5 +0.2**
WET pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CLL Collm 81.40 321 *e*P **P** **18 44 05.1 -0.4**
comp=Z,7.0nm,0.9s,mb4.6
CLL Collm 81.40 321 ⇓P **P** **18 44 05.5 0.0**
comp=Z,logA/T=1.0,mb4.7
CLL *e**PP pP 18 44 14.0 -5.4
CLL *i* pP 18 44 20.1 +0.7
CLL *i* pP 18 44 23.2 +3.8
CLL *i* 18 44 30.9
CLL *i* 18 44 44.5
CLL *e*S S 18 54 10.0 -3.1
CLL *e*SCS ScS 18 54 30.0 -0.5
CLL Collm 81.40 321 ⇓ *i*P **P** **18 44 05.5 0.0**
comp=Z,11nm,1.2s,mb4.7
CLL *ep*P pP 18 44 14.0 -5.4
CLL *i* pPcP pP 18 44 20.1 +0.7
CLL *i* sPcP pP 18 44 23.2 +3.8
CLL *i* x x 18 44 30.9
CLL *i* x x 18 44 44.5
CLL *e*S S 18 54 10.0 -3.1
CLL *e*ScS ScS 18 54 30.0 -0.5
CLL Collm 81.40 321 ⇓ *i*P **P** **18 44 05.5 0.0**
CLL *i* pP 18 44 20.1 +0.7
CLL *e*S S 18 54 10.0 -3.1
CLL pmax pmax
comp=Z,11nm,1.2s,mb4.7
CLL MLR MLR
comp=Z,100nm,14.4s,MS4.3
CLL Collm 81.40 321 ⇓ *i*P **P** **18 44 05.5 0.0**
comp=Z,11nm,1.2s,mb4.7
CLL *i* pP 18 44 20.1 +0.7
CLL *e*S S 18 54 10.0 -3.1
CLL LR LR
comp=Z,100nm,14.4s,MS4.3

TANN Tannenbergstha 81.70 320 *e*P **P** **18 44 07.1 0.0**
comp=Z,11nm,1.4s,mb4.6
NKC Novy Kostel 81.70 320 *e*P **P** **18 44 07.7 +0.6**
NKC *es*P sP 18 44 22.7 -3.5
GUNZ Gunzen 81.78 320 *e*P **P** **18 44 07.7 +0.2**
comp=Z,7.0nm,0.9s,mb4.6
WERD Werda 81.80 320 *e*P **P** **18 44 07.5 -0.1**
comp=Z,5.0nm,0.9s,mb4.4
CRE Caprese Michel 81.81 313 P **P** **18 44 08.2 +0.5**
CRE pmax pmax
comp=Z,12nm,0.6s,mb5.0
CRE Caprese Michel 81.81 313 P **P** **18 44 08.2 +0.5**
comp=Z,12nm,0.6s,mb5.0
ROTZ Rotzenmuhle 81.83 319 *e*P **P** **18 44 08.3 +0.5**
comp=Z,9.0nm,0.9s,mb4.7
SFI Santa Sofia 81.89 314 P **P** **18 44 09.5 +1.4**
SFI pmax pmax
comp=Z,36nm,0.8s,mb5.3
SFI Santa Sofia 81.89 314 P **P** **18 44 09.5 +1.4**
comp=Z,36nm,0.8s,mb5.3
MANZ Manzenberg 81.91 320 *e*P **P** **18 44 08.8 +0.6**
comp=Z,16nm,1.1s,mb4.9
CTI Castel Tesino 82.08 316 P **P** **18 44 09.9 +0.8**
CTI pmax pmax
comp=Z,27nm,0.8s,mb5.2
CTI Castel Tesino 82.08 316 P **P** **18 44 09.9 +0.8**
comp=Z,27nm,0.8s,mb5.2
WTTA Wattenberg 82.13 317⇑ *i*P **P** **18 44 08.8 -0.5**
comp=Z,40nm,1.6s,mb5.1
WTTA Wattenberg 82.13 317⇑ *i*P **P** **18 44 08.8 -0.5**
WTTA pmax pmax
comp=Z,40nm,1.6s,mb5.1
WATA Walderalm 82.17 317⇑ *i*P **P** **18 44 08.6 -0.9**
comp=Z,14nm,1.3s,mb4.7
WATA Walderalm 82.17 317⇑ *i*P **P** **18 44 08.6 -0.9**
WATA pmax pmax
comp=Z,14nm,1.3s,mb4.7
MOX Moxa 82.25 320 *e*P **P** **18 44 10.0 +0.1**
comp=Z,6.0nm,0.9s,mb4.5
MOX Moxa 82.25 320 *e*P **P** **18 44 10.2 +0.3**
SQTA Sankt Quirin 82.42 317⇑ *i*P **P** **18 44 10.1 -0.7**
comp=Z,3.7nm,0.6s,mb4.5,SNR=16
SQTA Sankt Quirin 82.42 317⇑ *i*P **P** **18 44 10.1 -0.7**
SQTA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
GRA1 Grafenberg Arr 82.47 319 *e*P **P** **18 44 11.6 +0.5**
comp=Z,10.0nm,0.9s,mb4.8
GRA1 *ep*P pP 18 44 25.0 0.0
GRF Grafenberg Arr 82.47 319 *e*P **P** **18 44 11.6 +0.5**
comp=Z,10.0nm,0.9s,mb4.8
GRF *ep*P pP 18 44 25.0 0.0
GRF Grafenberg Arr 82.47 319 *e*P **P** **18 44 11.6 +0.5**
GRF *e**PP pP 18 44 25.0 0.0
GRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GRF Grafenberg Arr 82.47 319 *e*P **P** **18 44 11.6 +0.5**
GRF *e**PP pP 18 44 25.0 0.0
GRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MOTA Moosalm 82.49 317⇓ *i*P **P** **18 44 11.0 -0.3**
comp=Z,24nm,1.5s,mb4.9,SNR=7.4
MOTA Moosalm 82.49 317⇓ *i*P **P** **18 44 11.0 -0.2**
MOTA pmax pmax
comp=Z,24nm,1.5s,mb4.9
ZCCA Zocca 82.53 314 P **P** **18 44 13.5 +2.1**
SYO Syowa Base 82.69 197⇑ *ep*P pP 18 44 23.2 -3.0
AMKA Amchitka 82.71 39 *e*P **P** **18 44 10.3 -2.1**
GSCL Gusciola 82.81 314 P **P** **18 44 14.3 +1.4**
comp=Z,11nm,0.8s,mb4.9
MABI Malga Bissina 82.88 316 P **P** **18 44 14.2 +1.0**
comp=Z,9.9nm,0.8s,mb4.4
NB2 NORSAR Subarra 82.94 331 P **P** **18 44 12.6 -0.9**
comp=Z,24nm,1.4s,mb5.0,baz=97,slow=5.1
NOA NORSAR Array B 82.94 331 P **P** **18 44 12.7 -0.9**
comp=Z,7.0nm,1.1s,mb4.6,baz=94,slow=5.5,SNR=11
NOA pP pP 18 44 28.1 +0.7
comp=Z,5.5nm,0.9s,baz=98,slow=5.4,SNR=7.5
NOA PP PP 18 47 24.6 +0.1
comp=Z,1.7nm,0.8s,baz=87,slow=7.6,SNR=3.6
NOA LR LR 19 26 57.3
comp=Z,64nm,18.9s,MS4.0,baz=90,slow=40
NOA NORSAR Array B 82.94 331 P **P** **18 44 12.7 -0.8**
NOA *PP pP 18 44 28.1 +0.7
NOA 18 47 24.6
NOA pmax pmax
comp=Z,7.0nm,1.1s
NOA MLR MLR
comp=Z,65nm,18.9s
BSEG Bad Segeberg 83.14 324 *e*P **P** **18 44 14.7 +0.1**
comp=Z,16nm,1.0s,mb5.0
BSEG Bad Segeberg 83.14 324 *e*P **P** **18 44 14.7 +0.1**
BSEG pmax pmax
comp=Z,16nm,1.0s,mb5.0
NRDL Niedersach Rie 83.24 322 *e*P **P** **18 44 16.5 +1.4**
comp=Z,23nm,1.4s,mb5.0
GTTG Gvttingen 83.31 321 *e*P **P** **18 44 15.3 -0.2**
comp=Z,5.0nm,0.7s,mb4.7
DAVA Damuels 83.32 317⇑ *i*P **P** **18 44 15.4 -0.1**
comp=Z,34nm,1.5s,mb5.1,SNR=5.2
KONO Kongsberg 83.69 329⇑ *e*P **P** **18 44 17.2 -0.2**
STU Stuttgart 83.78 318 *e*P **P** **18 44 17.8 -0.1**
comp=Z,86nm,2.9s,mb5.4
KEST Kesra 83.83 305 P **P** **18 44 19.4 +1.3**
comp=Z,2.8nm,0.6s,mb4.5,baz=148,slow=1.9,SNR=11
KEST pP pP 18 44 34.5 +2.4
comp=Z,3.3nm,0.7s,baz=320,slow=3.2,SNR=4.6
KEST LR LR 19 22 34.4
comp=Z,45nm,19.6s,MS3.9,baz=323,slow=36
PGF Pioggiola 83.97 312 *e*P **P** **18 44 18.5 -0.4**
comp=Z,9.2nm,0.8s,mb4.7
PGF Pioggiola 83.97 312 *e*P **P** **18 44 18.5 -0.4**
comp=Z,4.6nm,0.8s,mb4.7
TNS Taunus Mts 84.27 320 *e*P **P** **18 44 20.5 +0.1**
comp=Z,9.0nm,0.9s,mb4.9
TNS Taunus Mts 84.27 320 *e*P **P** **18 44 20.5 +0.1**
TNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
BFO Black Forest 84.36 318 *e*P **P** **18 44 20.4 -0.4**
comp=Z,7.0nm,0.8s,mb4.8
BFO Black Forest 84.36 318 *e*P **P** **18 44 20.4 -0.4**
BFO pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
FIN Finale Ligure 84.52 314 P **P** **18 44 21.8 +0.2**
FIN pmax pmax
comp=Z,32nm,0.7s,mb5.6
FIN Finale Ligure 84.52 314 P **P** **18 44 21.8 +0.2**
comp=Z,32nm,0.7s,mb5.6
IBBN Ibbenburen 84.68 322 *e*P **P** **18 44 22.6 +0.2**
comp=Z,13nm,0.5s,mb5.3
BUG Bochum--Univer 85.00 321 *e*P **P** **18 44 24.0 0.0**
comp=Z,11nm,0.6s,mb5.2
CDF Champ du Feu 85.06 318 *e*P **P** **18 44 23.3 -1.1**
comp=Z,5.3nm,0.7s,mb4.5
CDF *ep*P pP 18 44 42.6 +4.3
CDF Champ du Feu 85.06 318 *e*P **P** **18 44 23.3 -1.1**
comp=Z,2.7nm,0.7s,mb4.5
CDF *ep*P pP 18 44 42.6 +4.3
SBF Sospel 85.08 313 *e*P **P** **18 44 24.1 -0.4**
comp=Z,26nm,0.8s,mb5.1
SBF Sospel 85.08 313 *e*P **P** **18 44 24.1 -0.4**
SBF pmax pmax
comp=Z,13nm,0.8s,mb5.1
SBF Sospel 85.08 313 *e*P **P** **18 44 24.1 -0.4**
comp=Z,13nm,0.8s,mb5.1
HINF Hinteralfeld 85.36 317 *e*P **P** **18 44 24.6 -1.3**
comp=Z,3.7nm,0.7s,mb4.3
HINF Hinteralfeld 85.36 317 *e*P **P** **18 44 24.6 -1.3**
comp=Z,1.9nm,0.7s,mb4.3
LPG La Plagne 85.52 315 *e*P **P** **18 44 26.5 -0.1**
LPG *ep*P pP 18 44 45.8 +5.2
LPL La Plagne 85.53 315 *e*P **P** **18 44 26.5 -0.2**
comp=Z,24nm,0.8s,mb5.2
LPL La Plagne 85.53 315 *e*P **P** **18 44 26.5 -0.2**
LPL pmax pmax
comp=Z,12nm,0.8s,mb5.2
LPL La Plagne 85.53 315 *e*P **P** **18 44 26.5 -0.2**
comp=Z,12nm,0.8s,mb5.2
MBDF Montbardon 85.53 314 *e*P **P** **18 44 25.7 -1.0**
comp=Z,5.0nm,0.6s,mb4.6
MBDF Montbardon 85.53 314 *e*P **P** **18 44 25.7 -1.0**
MBDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
MBDF Montbardon 85.53 314 *e*P **P** **18 44 25.7 -1.0**
comp=Z,2.5nm,0.6s,mb4.6
BNI Bardonecchia 85.58 315 *e*P **P** **18 44 27.1 +0.1**
BNI pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
BNI Bardonecchia 85.58 315 *e*P **P** **18 44 27.1 +0.1**
comp=Z,5.2nm,0.8s,mb4.8
FRF La Foret Royal 85.67 313 *e*P **P** **18 44 27.0 -0.4**
comp=Z,16nm,0.8s,mb5.0
FRF *ep*P pP 18 44 46.4 +5.1
FRF La Foret Royal 85.67 313 *e*P **P** **18 44 27.0 -0.4**
FRF pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
FRF La Foret Royal 85.67 313 *e*P **P** **18 44 27.0 -0.4**
comp=Z,7.8nm,0.8s,mb5.0
FRF *ep*P pP 18 44 46.4 +5.1
HAU Haudompre 85.70 318 *e*P **P** **18 44 26.6 -0.9**
comp=Z,22nm,0.8s,mb5.2
HAU *e*R
comp=Z,42nm,18.8s
HAU Haudompre 85.70 318 *e*P **P** **18 44 26.6 -0.9**
comp=Z,11nm,0.8s,mb5.2
HAU LR LR
comp=Z,40nm,18.8s,MS3.8
WLF Walferdange 85.76 319 *e*P **P** **18 44 28.2 +0.4**
comp=Z,9.0nm,1.0s,mb5.0
LMR La Mourre 85.78 313 *e*P **P** **18 44 27.6 -0.3**
CABF La Chapelle 85.93 316 *e*P **P** **18 44 28.4 -0.3**
comp=Z,10nm,0.6s,mb4.9
CABF La Chapelle 85.93 316 *e*P **P** **18 44 28.4 -0.3**
CABF pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
CABF La Chapelle 85.93 316 *e*P **P** **18 44 28.4 -0.3**
comp=Z,5.2nm,0.6s,mb4.9
ORIF Oris-en-Rattie 86.16 315 *e*P **P** **18 44 29.7 -0.1**
comp=Z,13nm,0.8s,mb4.9
ORIF *e*R
comp=Z,104nm,21.5s
ORIF Oris-en-Rattie 86.16 315 *e*P **P** **18 44 29.7 -0.1**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
ORIF Oris-en-Rattie 86.16 315 *e*P **P** **18 44 29.7 -0.1**
comp=Z,6.4nm,0.8s,mb4.9
SMRF Simiane la Rot 86.42 314 *e*P **P** **18 44 31.3 +0.2**
BAIF Baives 87.00 320 *e*P **P** **18 44 33.5 -0.4**
comp=Z,7.5nm,0.5s,mb4.8
BAIF *ep*P pP 18 44 52.8 +4.9
BAIF Baives 87.00 320 *e*P **P** **18 44 33.5 -0.4**
BAIF pmax pmax
comp=Z,4.0nm,0.5s,mb4.9
BAIF Baives 87.00 320 *e*P **P** **18 44 33.5 -0.4**
comp=Z,3.8nm,0.5s,mb4.9
BAIF *ep*P pP 18 44 52.8 +4.9
VIVF Saint-Julien-I 87.02 315 *e*P **P** **18 44 33.6 -0.4**
comp=Z,7.9nm,0.7s,mb4.7
VIVF Saint-Julien-I 87.02 315 *e*P **P** **18 44 33.6 -0.4**
VIVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
VIVF Saint-Julien-I 87.02 315 *e*P **P** **18 44 33.6 -0.4**
comp=Z,4.0nm,0.7s,mb4.8
LOR Lormes 87.42 317 *e*P **P** **18 44 35.3 -0.7**
comp=Z,13nm,0.7s,mb5.0
LOR *ep*P pP 18 44 54.5 +4.5
LOR *e*R
comp=Z,68nm,21.8s
LOR Lormes 87.42 317 *e*P **P** **18 44 35.3 -0.7**
LOR pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
LOR MLR MLR
comp=Z,70nm,21.8s,MS4.0
LOR Lormes 87.42 317 *e*P **P** **18 44 35.3 -0.7**
comp=Z,6.5nm,0.7s,mb5.0
LOR *ep*P pP 18 44 54.5 +4.5
LOR LR LR
comp=Z,70nm,21.8s,MS4.0
SMF Signal de Mont 87.48 316 *e*P **P** **18 44 35.5 -0.7**
comp=Z,13nm,0.7s,mb5.0
SMF Signal de Mont 87.48 316 *e*P **P** **18 44 35.5 -0.7**
SMF pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
SMF Signal de Mont 87.48 316 *e*P **P** **18 44 35.5 -0.7**
comp=Z,6.6nm,0.7s,mb5.0
LASF Ste Croix 87.65 314 *e*P **P** **18 44 37.0 -0.1**
comp=Z,11nm,1.0s,mb4.7
LASF *ep*P pP 18 44 56.3 +5.2
SSF Saint Saulge 87.67 317 *e*P **P** **18 44 37.0 -0.2**
comp=Z,10.0nm,0.8s,mb4.8
SSF Saint Saulge 87.67 317 *e*P **P** **18 44 37.0 -0.2**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
SSF Saint Saulge 87.67 317 *e*P **P** **18 44 37.0 -0.2**
comp=Z,5.0nm,0.8s,mb4.8
AVF Avril sur Loir 87.80 317 *e*P **P** **18 44 37.1 -0.7**
comp=Z,15nm,1.1s,mb4.8
AVF *ep*P pP 18 44 56.3 +4.5
AVF Avril sur Loir 87.80 317 *e*P **P** **18 44 37.1 -0.7**
AVF pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
AVF Avril sur Loir 87.80 317 *e*P **P** **18 44 37.1 -0.7**
comp=Z,7.5nm,1.1s,mb4.8
AVF *ep*P pP 18 44 56.3 +4.5
BGF Bois d'Agland 88.17 316 *e*P **P** **18 44 39.3 -0.2**
TCF Toulx Ste Croi 88.63 316 *e*P **P** **18 44 41.5 -0.2**
CAF Calviac 88.86 315 *e*P **P** **18 44 42.8 0.0**
comp=Z,23nm,1.4s,mb5.0
CAF Calviac 88.86 315 *e*P **P** **18 44 42.8 0.0**
CAF pmax pmax
comp=Z,12nm,1.4s,mb5.0
CAF Calviac 88.86 315 *e*P **P** **18 44 42.8 0.0**
comp=Z,12nm,1.4s,mb5.0
MTLF Montolieu 88.90 313 *e*P **P** **18 44 42.9 -0.1**
RJF Les Rejaudoux 89.21 315 *e*P **P** **18 44 44.6 +0.2**
comp=Z,11nm,0.9s,mb4.9
RJF *ep*P pP 18 45 03.2 +4.8
RJF *e*R
comp=Z,72nm,22.5s
RJF Les Rejaudoux 89.21 315 *e*P **P** **18 44 44.6 +0.2**
RJF *e**PP pP 18 45 03.2 +4.8
RJF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
RJF MLR MLR
comp=Z,70nm,22.5s,MS4.0
RJF Les Rejaudoux 89.21 315 *e*P **P** **18 44 44.6 +0.2**
comp=Z,5.6nm,0.9s,mb4.9
RJF *ep*P pP 18 45 03.2 +4.8
RJF LR LR
comp=Z,70nm,22.5s,MS4.0
RAO Raoul Island 89.64 119 LR LR 19 26 11.0
comp=Z,181nm,21.0s,MS4.5,baz=204,slow=36
VNDA Vanda 89.66 168 P **P** **18 44 46.5 -0.1**
comp=Z,0.5nm,0.9s,baz=250,slow=4.8,SNR=3.1
VNDA LR LR 19 23 53.6
comp=Z,183nm,18.7s,baz=298,slow=35
LFF La Frestale 89.79 315 *e*P **P** **18 44 47.4 +0.2**
LDF La Druitiere 89.95 319 *e*P **P** **18 44 47.7 -0.2**
comp=Z,16nm,0.9s,mb5.0
LDF La Druitiere 89.95 319 *e*P **P** **18 44 47.7 -0.2**
LDF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
LDF La Druitiere 89.95 319 *e*P **P** **18 44 47.7 -0.2**
comp=Z,7.9nm,0.9s,mb5.0
FLN La Foliniere 90.17 319 *e*P **P** **18 44 48.5 -0.4**
comp=Z,21nm,0.8s,mb5.2
FLN *ep*P pP 18 45 07.8 +4.8
FLN *e*R
comp=Z,67nm,20.0s
FLN La Foliniere 90.17 319 *e*P **P** **18 44 48.5 -0.4**
FLN pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
FLN MLR MLR
comp=Z,70nm,20.0s,MS4.1
FLN La Foliniere 90.17 319 *e*P **P** **18 44 48.5 -0.4**
comp=Z,10nm,0.8s,mb5.2
FLN *ep*P pP 18 45 07.8 +4.8
FLN LR LR
comp=Z,70nm,20.0s,MS4.1
ETSF Etsaut 90.97 313 *e*P **P** **18 44 53.2 +0.6**
ETSF *ep*P pP 18 45 12.5 +5.8
SJPF Ste Jean 91.42 313 *e*P **P** **18 44 55.3 +0.6**
TORD Torodi Ar. Bea 92.25 283 P **P** **18 44 59.6 +1.0**
comp=Z,1.0nm,0.7s,mb4.2,baz=90,slow=4.5,SNR=5.7
TORD PKKPbc PKKPbc 19 02 14.8 +1.7
comp=Z,0.5nm,1.0s,baz=241,slow=1.6,SNR=4.2
TORD LR LR 19 25 47.9
comp=Z,132nm,18.7s,MS4.4,baz=100,slow=35
TORD Torodi Ar. Bea 92.25 283 P **P** **18 44 59.6 +1.0**
TORD PKKPbc PKKPbc 19 02 14.8 +1.7
TORD LR LR 19 25 47.9
ESDC Sonseca Array 93.97 310 LR LR 19 31 31.9
comp=Z,48nm,19.0s,MS4.0,baz=130,slow=38

AFI	**Afiamalu**	**94.14**	**104**	LR		LR		19 27 16.9	
	comp=Z,72nm,20.4s,MS4.1,baz=139,slow=35								
SVW2	**Sparrevohn**	**95.09**	**27**	*e*P		**P**		**18 45 11.8**	**+0.1**
DBIC	**Dimbokro**	**99.31**	**278**	LR		LR		19 26 37.7	
	comp=Z,132nm,20.7s,MS4.4,baz=75,slow=33								
H06A	**Lindquist Farm**	**121.43**	**29**	⇓P		PKPdf		18 50 42.6	+0.8
	baz=121								
M01C	**Crescent City**	**121.50**	**34**	⇑P		PKPdf		18 50 42.6	+0.7
	baz=121								
J05A	**Fort Rock**	**122.04**	**31**	⇑P		PKPdf		18 50 44.2	+1.3
	baz=122								
I06A	**Prineville**	**122.07**	**30**	⇓P		PKPdf		18 50 44.4	+1.4
	baz=122								
I07A	**Izee**	**122.31**	**29**	⇑P		PKPdf		18 50 44.6	+1.1
	baz=122								
YBH	**Yreka Blue Hor**	**122.35**	**33**	⇓P		PKPdf		18 50 44.0	+0.5
	baz=122								
J06A	**Christmas Vall**	**122.61**	**30**	⇑P		PKPdf		18 50 44.6	+0.6
	baz=122								
K06A	**Valley Falls**	**122.89**	**30**	⇓P		PKPdf		18 50 44.1	-0.5
	baz=123								
I08A	**Drewsey**	**122.89**	**29**	⇓P		PKPdf		18 50 45.9	+1.3
	baz=123								
K09A	**Rome**	**124.21**	**29**	⇓P		PKPdf		18 50 47.6	+0.5
	baz=124								
L08A	**Fields**	**124.29**	**30**	⇑P		PKPdf		18 50 48.0	+0.8
	baz=124								
ULM	**Lac du Bonnet**	**124.44**	**9**	PKP		PKPdf		18 50 46.6	-1.0
	comp=Z,3.9nm,0.7s,baz=301,slow=3.9,SNR=5.5								
N06A	**Buffalo Meadow**	**124.58**	**32**	⇑P		PKPdf		18 50 47.7	-0.1
	baz=124								
MCCM	**Marconi Confer**	**124.69**	**36**	⇓P		PKPdf		18 50 49.3	+1.3
	baz=124								
M08A	**Happy Creek Ra**	**124.82**	**30**	⇑P		PKPdf		18 50 49.9	+1.7
	baz=125								
BNLO	**Ben Lomond (Sa**	**125.78**	**37**	⇓P		PKPdf		18 50 51.0	+0.9
	baz=126								
O09A	**Fish Creek Ran**	**126.38**	**31**	⇑P		PKPdf		18 50 52.6	+1.3
	baz=126								
M12A	**Wells**	**126.53**	**28**	⇑P		PKPdf		18 50 52.6	+1.1
	baz=126								
N12A	**Clover Valley,**	**126.91**	**28**	⇓P		PKPdf		18 50 54.1	+1.9
	baz=127								
NVAR	**Mina Array Bea**	**127.08**	**33**	PKP		PKPdf		18 50 54.2	+1.6
	comp=Z,1.4nm,0.8s,baz=285,slow=2.1,SNR=9.4								
NVAR				pPKP		pPKPdf		18 51 09.8	+2.7
	comp=Z,1.5nm,0.7s,baz=272,slow=1.9,SNR=5.5								
NVAR	**Mina Array Bea**	**127.08**	**33**	PKP		PKPdf		18 50 54.2	+1.6
NVAR				pPKP		pPKPdf		18 51 09.8	+2.7
O12A	**Currie**	**127.51**	**29**	⇓P		PKPdf		18 50 55.4	+2.0
	baz=127								
PDAR	**Pinedale Array**	**127.71**	**23**	PKP		PKPdf		18 50 54.1	+0.3
	comp=Z,2.0nm,0.8s,baz=339,slow=3.8,SNR=5.3								
PDAR				pPKP		pPKPdf		18 51 10.2	+1.8
	comp=Z,1.7nm,0.6s,baz=96,slow=1.5,SNR=3.9								
HELL	**Mitchell Peak,**	**127.93**	**35**	⇑P		PKPdf		18 50 55.3	+1.1
	baz=128								
S09A	**Goldfield**	**128.17**	**33**	⇓P		PKPdf		18 50 56.5	+1.9
	baz=128								
MPMC	**Manual Prospec**	**129.24**	**34**	⇓P		PKPdf		18 50 58.6	+1.9
	baz=129								
FURC	**Furnace Creek,**	**129.29**	**33**	⇑P		PKPdf		18 50 58.4	+1.6
	baz=129								
GSC	**Goldstone**	**130.17**	**34**	⇓P		PKPdf		18 51 00.5	+2.1
	baz=130								
MONP	**Monument Peak**	**132.12**	**36**	⇑P		PKPdf		18 51 03.9	+1.7
	baz=132								
W14A	**Seligman**	**132.25**	**32**	⇓P		PKPdf		18 51 05.1	+2.7
	baz=132								
X13A	**Yucca**	**132.33**	**33**	⇑P		PKPdf		18 51 04.8	+2.3
	baz=132								
GLA	**Glamis**	**132.93**	**35**	⇓P		PKPdf		18 51 06.3	+2.6
	baz=133								
PLCA	**Paso Flores**	**141.90**	**198**	PKhKP				18 51 16.5	
	comp=Z,1.5nm,0.9s,baz=270,slow=2.0,SNR=2.7								
PLCA	**Paso Flores**	**141.90**	**198**	*i* PKIKP				18 51 16.5	
PLCA				pmax		pmax			
	comp=Z,20nm,0.9s								
JCT	**Junction City**	**142.21**	**21**	*e*PKIKP				18 51 16.4	
JCT				MLR		MLR			
	comp=Z,187nm,19.0s,MS4.9								
CPUP	**Villa Florida**	**145.99**	**228**	PKPbc		PKPbc		18 51 28.8	+0.6
	comp=Z,4.2nm,0.8s,baz=96,slow=3.6,SNR=12								
CPUP	**Villa Florida**	**145.99**	**228**	PKP2		PKPab		18 51 28.8	0.0
CPUP				pmax		pmax			
	comp=Z,40nm,0.8s								
CPUP	**Villa Florida**	**145.99**	**228**	*e*PKPdf		PKPdf		18 51 28.6	+1.3
LPAZ	**La Paz**	**159.93**	**234**	PKP		PKPdf		18 51 50.0	+2.5
	comp=Z,1.9nm,0.9s,baz=49,slow=4.6,SNR=5.6								
LPAZ				pPKP		pPKPdf		18 52 05.4	+3.4
	comp=Z,3.6nm,1.0s,baz=86,slow=2.7,SNR=5.0								
LPAZ				PKPab		PKPab		18 52 30.9	+3.8
	comp=Z,1.2nm,0.9s,baz=180,slow=9.1,SNR=2.0								
LPAZ	**La Paz**	**159.93**	**234**	*e*PKPdf		PKPdf		18 51 49.2	+1.7

MAN 23 18:37:05.3, 1610N×11955E, h184km, mb2.2, ML3.8, Luzon

GUC 23 18:43:05.4±0.5, 2785S×7105W, h19km±8km, MD3.6, ML3.7, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
VACH	**Vallenar**	**0.77**	**160**	*e*P		Pb	18	43	19.5	-0.6
VACH				*i* S		Sb	18	43	30.0	-0.1
VACH				AML		AML	18	43	30.4	
	comp=N,7μm,0.1s									
CPCH	**Copiapo**	**0.79**	**52**	⇓*i* P		Pb	18	43	20.0	-0.5
CPCH				*i* S		Sb	18	43	30.7	-0.1
CDCH	**Caldera**	**0.80**	**14**	*e*P		Pb	18	43	19.6	-1.0
CDCH				*i* S		Sb	18	43	31.0	-0.1
TLL	**Tololo Astrono**	**2.32**	**175**	*e*P		Pn	18	43	41.9	-0.5
TLL				*i* S		Sn	18	44	11.5	+1.1
TLL				AML		AML	18	44	21.5	
	comp=N,443nm,0.6s									

IDC 23 18:49:30.6±1.6, 182N×12659E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.5/16, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=108.6km s-min=25.8km az=74.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
FITZ	**Fitzroy Crossi**	**19.82**	**183**	P		Pn	18	54	03.1	-1.1
	0.1nm,0.3s,baz=22,slow=16,SNR=2.7									
WRA	**Warramunga Arr**	**22.92**	**161**	P		P	18	54	35.5	-0.6
	0.9nm,0.5s,baz=340,slow=11,SNR=14									
ASAR	**Alice Springs**	**26.31**	**165**	P		P	18	55	08.8	+0.8
	0.4nm,0.7s,baz=343,slow=8.3,SNR=13									
STKA	**Stephens Creek**	**36.41**	**158**	P		P	18	56	37.3	+0.5
	0.7nm,0.5s,baz=343,slow=16,SNR=3.0									
SONM	**Songino Array**	**49.06**	**342**	P		P	18	58	19.4	0.0
	0.2nm,0.6s,baz=159,slow=6.3,SNR=2.6									

IDC 23 18:56:33.6±1.7, 235N×12604E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.6/17, mbtmp3.7/5, Error ellipse: s-maj=112.2km s-min=22.4km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
FITZ	**Fitzroy Crossi**	**20.32**	**181**	P		P	19	01	12.3	+1.1
	0.9nm,0.8s,baz=18,slow=9.6,SNR=5.5									
WRA	**Warramunga Arr**	**23.60**	**160**	P		P	19	01	46.2	-0.1
	1.3nm,0.3s,baz=338,slow=11,SNR=43									
ASAR	**Alice Springs**	**26.97**	**164**	P		P	19	02	17.1	+0.3
	0.7nm,0.5s,baz=341,slow=7.6,SNR=51									
STKA	**Stephens Creek**	**37.11**	**158**	P		P	19	03	45.8	+0.1
	1.7nm,0.9s,baz=0.0,slow=11,SNR=3.5									
MKAR	**Makanchi Array**	**58.30**	**326**	P		P	19	06	30.1	0.0
	0.1nm,0.4s,baz=132,slow=8.4,SNR=3.9									

*ISCJB **23** 19:00:30.0±0.4, 3818N±002×2672E±004, h14km±4km, Error ellipse: s-maj=5.3km s-min=3.4km az=154.3*
*NEIC **23** 19:00:30.0, 3816N×2661E, h28km, MD3.2(ISK), MD3.5(ATH), After ATH.*
*ATH **23** 19:00:30.0, 3816N×2661E, h28km±2km, MD3.5/4*
*CSEM **23** 19:00:33.1±0.1, 3811N×2704E, h2km, MD3.2, Error ellipse: s-maj=2.4km s-min=1.2km az=87.0*
*ISK **23** 19:00:33.2, 3811N×2704E, h2km, MD3.2*

ISC 23 19:00:30.5±0.4, 3818N±002×2670E±004, h17km±4km, n30, σ1§02/40, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
URLA	**Izmir**	**0.20**	**335**	*i* P		**Pg**	**19**	**00**	**34.8**	**-0.5**
URLA				*i* S		**Sg**	**19**	**00**	**38.1**	**-0.5**
SMG	**Samos**	**0.48**	**167**	*e*PB		**Pg**	**19**	**00**	**40.3**	**0.0**
SMG				*e*SB		**Sg**	**19**	**00**	**47.7**	**+0.9**
IZM	**Izmir**	**0.49**	**64**	*i* PG		**Pg**	**19**	**00**	**40.4**	**0.0**
KDAG	**Bornova**	**0.50**	**63**	*i* P		**Pg**	**19**	**00**	**40.6**	**+0.1**
KDAG				*i* S		**Sg**	**19**	**00**	**47.5**	**+0.2**
AYDN	**Tasoluk**	**1.07**	**119**	*i* P		**Pg**	**19**	**00**	**51.8**	**+0.5**
AYDN				*i* S		**Sg**	**19**	**01**	**04.9**	**-0.3**
PRK	**Paraskevi**	**1.11**	**343**	*e*PN		**Pn**	**19**	**00**	**51.4**	**+0.1**
PRK				*e*SN		**Sn**	**19**	**01**	**06.8**	**+0.5**
AKHS	**Akhisar**	**1.12**	**51**	*i* P		**Pg**	**19**	**00**	**52.1**	**-0.1**
AKHS				*i* S		**Sg**	**19**	**01**	**08.2**	**+1.4**
AKS	**Akhisar**	**1.12**	**51**	PG		**Pg**	**19**	**00**	**53.1**	**+0.9**
AKS				SG		**Sg**	**19**	**01**	**07.4**	**+0.6**
AYVA	**Ayvalik**	**1.12**	**360**	*i* P		**Pn**	**19**	**00**	**52.5**	**+1.0**
BODT	**Bodrum**	**1.22**	**156**	PG		**Pg**	**19**	**00**	**54.6**	**+0.5**
BODT				SG		**Sg**	**19**	**01**	**10.1**	**+0.1**
BDRM	**Kayabasi**	**1.26**	**152**	*i* P		**Pn**	**19**	**00**	**53.5**	**+0.1**
APE	**Apeiranthos**	**1.45**	**220**	*e*PN		**Pn**	**19**	**00**	**55.5**	**-0.4**
DAT	**Datca**	**1.61**	**154**	*e*PN		**Pg**	**19**	**01**	**01.4**	**-0.1**
YER	**Yerkesik**	**1.63**	**129**	*e*PN		**Pg**	**19**	**01**	**00.0**	**-2.0**
EZN	**Ezine**	**1.67**	**350**	*e*PN		**Pg**	**19**	**01**	**06.3**	**+3.7**
BOZC	**Bozcaada**	**1.73**	**343**	*i* P		**Pn**	**19**	**01**	**00.1**	**+0.2**
BOZC				*i* S		**Sg**	**19**	**01**	**27.2**	**+0.8**
CANB	**Canakkale**	**1.85**	**9**	*e*PN		**Pg**	**19**	**01**	**07.8**	**+1.6**
BTOK	**Tokmak**	**1.89**	**33**	*i* P		**Pg**	**19**	**01**	**08.1**	**+1.2**
BTOK				*i* S		**Sg**	**19**	**01**	**30.6**	**-0.7**
DST	**Dursunbey**	**2.07**	**46**	*e*PN		**Pb**	**19**	**01**	**07.9**	**+0.3**
LIA	**Limnos Island**	**2.08**	**326**	*e*PN		**Pn**	**19**	**01**	**05.0**	**+0.3**
GADA	**Gvkgeada**	**2.10**	**343**	*e*PN		**Pg**	**19**	**01**	**12.9**	**+2.0**
LPK	**Lapseki**	**2.19**	**1**	*e*PN		**Pg**	**19**	**01**	**13.0**	**+0.4**
GDZ	**Gediz**	**2.36**	**67**	*i* P		**Pg**	**19**	**01**	**15.5**	**-0.3**
MRMT	**Marmara Adasi**	**2.52**	**16**	*e*PN		**Pg**	**19**	**01**	**16.7**	**-2.1**
ORLT	**Orhaneli**	**2.53**	**42**	*e*PN		**Pg**	**19**	**01**	**15.3**	**-3.7**
RKY	**Sarkoy-Tekirda**	**2.53**	**8**	*e*PN		**Pg**	**19**	**01**	**17.2**	**-1.9**
ENEZ	**Enez**	**2.59**	**351**	*e*PN		**Pg**	**19**	**01**	**19.4**	**-0.7**
MFT	**Murefte**	**2.64**	**10**	*e*PN		**Pg**	**19**	**01**	**18.8**	**-2.4**
YLV	**Yalova**	**3.16**	**40**	*e*PN		**Pb**	**19**	**01**	**24.1**	**-2.1**
EDRB	**Edirne**	**3.66**	**1**	*e*PN		**Pb**	**19**	**01**	**33.7**	**-1.1**

*NEIC **23** 19:09:37.3, 1558N×9562W, h15km, MD3.6(MEX), After MEX.*

MEX 23 19:09:37.4±0.7, 1556N×9563W, h22km±38km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
HUIG	**Huatulco**	**0.51**	**294**	*i* P		Pb	19	09	46.2	-1.4
HUIG				*i* S		Sb	19	09	52.4	-2.2
CMIG	**Matias Romero**	**1.68**	**25**	*e*P		Pn	19	10	02.2	-3.3
CMIG				*i* S		Sn	19	10	23.1	-3.2
VHO	**Vista Hermosa**	**1.84**	**325**	*i* P		Pn	19	10	06.1	-1.6
VHO				*i* S		Sn	19	10	27.1	-3.1
OXX	**Oaxaca**	**1.84**	**325**	*i* P		Pn	19	10	06.3	-1.4
OXX				*i* S		Sn	19	10	27.2	-3.1
UTMO	**Huajuapan**	**3.07**	**318**	*i* P		Pn	19	10	23.5	-1.1
UTMO				*i* S		Sn	19	10	56.8	-3.9

*IDC **23** 19:16:12.3±6.1, 442S×144.15E, h60km±44km, mb3.7/5, mb1 3.9/7, mb1mx3.6/15, mbtmp4.0/7, ML3.7/2, MS3.2/2, Ms1 3.2/2, ms1mx2.3/16, Error ellipse: s-maj=50.2km s-min=27.9km az=13.0*
*ISCJB **23** 19:16:14.5±4.6, 475S±03×144.1E±0.1, h79km±27km, mb4.2/8, Error ellipse: s-maj=51.4km s-min=16.5km az=36.9*
*NEIC **23** 19:16:14.9±3.5, 460S×14404E, h69km±16km, mb4.4/5, Error ellipse: s-maj=42.9km s-min=13.1km az=187.0*

ISC 23 19:16:15.2±4.3, 46S±03×1441E±01, h72km±24km, n15, σ0§44/16, mb4.2/8, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
PMG	**Port Moresby**	**5.68**	**147**	P		**Pn**	**19**	**17**	**36.8**	**-0.1**
	3.2nm,0.3s,baz=32,slow=5.6,SNR=10									
PMG				S		**Sn**	**19**	**18**	**40.9**	**+0.1**
	6.3nm,0.3s,baz=115,slow=19,SNR=4.1									
KAKA	**Kakadu**	**14.03**	**234**	*e*P		**Pn**	**19**	**19**	**31.0**	**+0.5**
	16nm,0.4s									
WRAB	**Tennant Creek**	**17.94**	**211**	*e*P		**Pn**	**19**	**20**	**19.9**	**+0.2**
	8.5nm,0.8s									
WB2	**Warramunga Arr**	**17.95**	**211**	*e*P		**Pn**	**19**	**20**	**19.6**	**-0.2**
WRA	**Warramunga Arr**	**17.95**	**211**	P		**Pn**	**19**	**20**	**19.4**	**-0.4**
	0.6nm,0.3s,baz=34,slow=11,SNR=47									
WRA				LR		LR	19	28	18.3	
	comp=Z,101nm,19.3s,baz=155,slow=40									
AS31	**Alice Springs**	**21.34**	**206**	*e*P		**P**	**19**	**20**	**56.3**	**0.0**
ASAR	**Alice Springs**	**21.34**	**206**	P		**P**	**19**	**20**	**55.4**	**-0.9**
	1.1nm,0.5s,mb3.4,baz=35,slow=7.9,SNR=25									
FITZ	**Fitzroy Crossi**	**22.47**	**232**	P		**P**	**19**	**21**	**08.2**	**-0.1**
	5.5nm,0.5s,mb4.1,baz=55,slow=12,SNR=46									
FITZ				LR		LR	19	30	42.6	
	comp=Z,34nm,18.9s,baz=155,slow=38									
FITZ	**Fitzroy Crossi**	**22.47**	**232**	*e*P		**P**	**19**	**21**	**08.0**	**-0.3**
	5.3nm,0.4s,mb4.2									
STKA	**Stephens Creek**	**27.23**	**185**	P		**P**	**19**	**21**	**53.0**	**+0.6**
	0.6nm,0.5s,mb3.4,baz=350,slow=15,SNR=3.8									
MBWA	**Marble Bar**	**28.79**	**233**	*e*P		**P**	**19**	**22**	**06.2**	**-0.1**
	2.6nm,0.5s,mb4.1									
FORT	**Forrest**	**30.09**	**208**	*e*P		**P**	**19**	**22**	**18.7**	**+0.9**
	12nm,0.6s,mb4.7									
KLBR	**Kellerberrin**	**36.48**	**220**	*e*P		**P**	**19**	**23**	**13.3**	**0.0**
	72nm,1.7s,mb5.3									
NWAO	**Narrogin (SRO)**	**37.70**	**218**	P		**P**	**19**	**23**	**23.8**	**+0.1**
	5.0nm,0.6s,mb4.5,baz=54,slow=10,SNR=5.8									
VNDA	**Vanda**	**73.49**	**176**	P		**P**	**19**	**27**	**39.6**	**-0.4**
	1.0nm,0.8s,mb3.7,baz=331,slow=5.8,SNR=7.4									

MAN 23 19:30:29.3, 1051N×12243E, h23km, mb2.3, ML3.9, MS3.0, 1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
GUIM	**Jordan**	**0.20**	**53**	*e*P		Pb	19	30	35.4	+0.7
GUIM				*e*S		Sb	19	30	39.4	+1.0
RCP	**Roxas**	**1.09**	**17**	⇓*e*P		Pn	19	30	48.3	-0.9
RCP				*e*S		Sb	19	31	00.0	-3.2
CUYO	**Cuyo Island**	**1.43**	**284**	*e*P		Pn	19	30	53.9	+0.1
CUYO				*e*S		Sn	19	31	11.7	-0.1
OTRP	**Odiongan**	**1.89**	**348**	*e*P		Pn	19	31	01.2	+1.1
OTRP				*e*S		Sn	19	31	24.2	+1.1
MSLP	**Maasin**	**2.42**	**99**	*e*P		Pn	19	31	08.4	+0.9
MSLP				*e*S		Sn	19	31	41.1	+4.8
BUSP	**Coron**	**2.64**	**304**	*e*P		Pn	19	31	10.8	+0.3
BUSP				*e*S		Sn	19	31	40.2	-1.6
ENPP	**El Nido**	**3.03**	**284**	*e*P		Pn	19	31	17.6	+1.7

*MOS **23** 19:41:45.9±1.7, 5730N×12070E, h17km, mb4.3/1, Error ellipse: s-maj=43.0km s-min=31.8km az=140.7*

BYKL 23 19:41:43.1±0.6, 5736N×12084E, 1C-1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
KHNR	**Khani**	**0.64**	**227**	*e*Pg		Pg	19	41	55.6	+0.2
KHNR				*e*Sg		Sg	19	42	03.6	-0.2
CRS	**Chara**	**1.48**	**253**	⇑*i* Pg		Pg	19	42	10.4	-1.0
CRS				*e*Sg		Sg	19	42	28.9	-1.6
CRS				Pmax						
	69nm,1.0s									
CRS				Smax						
	149nm,1.3s									
CLNS	**Chul'man**	**2.27**	**102**	*e*		Pn	19	42	22.4	+0.5
CLNS				*e*			19	42	51.2	
CLNS				*e*Sg		Sg	19	42	53.8	-2.3
CLNS	**Chul'man**	**2.27**	**102**	*e*P		Pn	19	42	21.7	-0.2
CLNS				*e*S		Sn	19	42	50.2	-0.4
CLNS				pmax		pmax				
	comp=N,4.0nm,0.3s									
CLNS				pmax		pmax				
	comp=E,3.0nm,0.3s									
CLNS				pmax		pmax				
	comp=Z,6.0nm,0.3s									
CLNS				smax						
	comp=E,14nm,0.2s									
CLNS				smax						
	comp=Z,11nm,0.3s									
CLNS				smax						
	comp=N,22nm,0.2s									
NLYR	**Nelyaty**	**2.95**	**255**	*e*Pn		Pn	19	42	30.5	-0.7
NLYR				*e*Pg		Pg	19	42	35.7	-3.9
NLYR				*e*Sg		Sg	19	43	12.5	-5.3
TUP	**Tupik**	**2.98**	**190**	*e*Pn		Pn	19	42	31.6	-0.1
TUP				*e*Pg		Pg	19	42	37.5	-2.8
TUP				*e*Sg		Sg	19	43	15.5	-3.5
TUP				Pmax						
	comp=N,35nm,0.6s									
TUP				Smax						
	comp=N,205nm,1.0s									
TUP	**Tupik**	**2.98**	**190**	*e*P		Pn	19	42	31.8	+0.1
TUP				*e*S		Sn	19	43	07.1	-1.0
TUP				pmax		pmax				
	comp=Z,35nm,0.4s									
TUP				smax						
	comp=E,204nm,1.0s									
TNDR	**Tynda**	**3.10**	**134**	*e*		Pn	19	43	10.2	+37
TNDR				*e*Sg		Sg	19	43	18.5	-4.2
BOD	**Bodaibo**	**3.71**	**280**	*e*Pn		Pn	19	42	39.7	-1.9
BOD				*e*Pg		Pg	19	42	49.4	-4.8
BOD				*e*Sg		Sg	19	43	36.5	-5.8
BOD				Pmax						
	comp=E,11nm,0.6s									
BOD				Smax						
	comp=E,89nm,0.9s									
UKT	**Uakit**	**4.42**	**248**	*e*		Pn	19	43	06.5	+15
UKT				*e*Sg		Sg	19	43	58.9	-6.3
UKT				max						
	comp=E,5.0nm,0.6s									
UKT				Smax						
	comp=E,27nm,0.8s									
KROS	**Kirovskiy**	**4.53**	**128**	*e*Pn		Pn	19	42	49.6	-3.3
KROS				⇓*i* Pg		Pg	19	43	02.1	-7.8
KROS				*e*Sg		Sg	19	44	00.5	-8.1
YOA	**Uoyan**	**5.17**	**260**	*e*		Pn	19	43	50.4	+49
YOA				*e*Sg		Sg	19	44	22.7	-6.4
YOA				Smax						
	comp=E,186nm,0.9s									
YOA	**Uoyan**	**5.17**	**260**	*e*P		Pn	19	43	18.6	+17
YOA				pmax		pmax				
	comp=Z,24nm,0.3s									
KMO	**Kumora**	**5.52**	**259**	*e*		Pn	19	43	24.1	+18
KMO				*e*Sg		Sg	19	44	32.9	-7.6
KMO				max						
	comp=Z,3.0nm,0.6s									
KMO				Smax						
	comp=Z,46nm,1.5s									
KMO	**Kumora**	**5.52**	**259**	*e*P		Pn	19	43	07.2	+0.6
KMO				*e*S		Sn	19	44	07.4	-3.4
KMO				pmax		pmax				
	comp=Z,2.0nm,0.3s									
KMO				smax						
	comp=E,41nm,1.3s									
YLYR	**Ulyunkhan**	**5.96**	**249**	*e*Pg		Pg	19	43	31.4	-5.9
YLYR				*e*Sg		Sg	19	44	48.7	-5.8
YLYR				Pmax						
	comp=E,1.0nm,0.8s									
YLYR				Smax						
	comp=E,33nm,1.8s									
YLYR	**Ulyunkhan**	**5.96**	**249**	*e*P		Pn	19	43	12.7	+0.2
YLYR				*e*S		Sn	19	44	19.7	-1.8
YLYR				pmax		pmax				
	comp=Z,2.0nm,0.6s									
YLYR				smax						
	comp=N,33nm,1.4s									
CIT	**Chita**	**6.81**	**221**	*e*		Pb	19	44	42.5	+60
CIT				*e*Sg		Sg	19	45	13.6	-8.3
CIT				Smax						
	comp=N,51nm,1.8s									
SYVR	**Suvo**	**7.18**	**244**	*e*		Pn	19	43	57.1	+28
SYVR				*e*Sg		Sg	19	45	24.4	-9.5
SYVR				Smax						
	comp=N,29nm,1.9s									
KPC	**Khapcheranga**	**9.17**	**217**	*e*			19	45	53.8	
KPC				*e*Sg		Sn	19	46	27.5	+47
KPC				Smax						
	comp=N,20nm,1.2s									

MAN 23 20:01:51.5, 1678N×11947E, h9km, mb2.6, ML4.1, MS1.3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
BOLP	**Bolinao**	**0.58**	**133**	*e*P		Pg	20	02	03.3	+0.4
SCZP	**Santa Cruz**	**1.09**	**157**	*e*P		Pg	20

	comp=Z,0.1nm,0.5s								
USP	**Ospenovka**	**6.28**	**17**	P		**Pn**	**20 41 57.9**	**+0.4**
	SNR=6.0								
SDNR	**Sundarnagar**	**7.10**	**143**	*e*P		**Sn**	**20 43 11.0**	**-17**
MKAR	**Makanchi Array**	**12.20**	**36**	P		**Pn**	**20 43 17.5**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=218,slow=14,SNR=7.2								
KOLN	**Koldanda**	**13.64**	**131**	*e*P		**Pn**	**20 43 34.2**	**-1.0**
	comp=Z,3.2nm,0.3s								
KOLN				*e*S		**Sn**	**20 45 59.2**	**-6.6**
GKN	**Gorkha**	**14.12**	**127**	*e*P		**Pn**	**20 43 41.0**	**-0.3**
	comp=Z,4.8nm,0.3s								
GKN				*e*S		**Sn**	**20 46 08.7**	**-8.6**
KKN	**Kakani**	**14.67**	**126**	*e*P		**Pn**	**20 43 47.9**	**-0.4**
	comp=Z,2.5nm,0.2s								
KKN	**Kakani**	**14.67**	**126**	*e*P		**Pn**	**20 43 47.9**	**-0.4**
KKN				pmax	pmax				
	comp=Z,3.0nm,0.2s								
DMN	**Daman**	**14.69**	**127**	*e*P		**Pn**	**20 43 48.5**	**0.0**
AB31	**Akbulak array**	**14.80**	**328**	⇓P		**Pn**	**20 43 48.4**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=145,slow=13,SNR=3.2								
AB31				⇓S		**Sn**	**20 46 17.8**	**-16**
	comp=Z,1.0nm,0.5s,baz=152,slow=22,SNR=6.1								
PKI	**Pulchoki**	**14.91**	**127**	*e*S		**Sn**	**20 46 27.8**	**-8.5**
BVAR	**Borovoye Array**	**15.78**	**356**	P		**Pn**	**20 44 00.1**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=179,slow=11,SNR=3.7								
ZRNK	**Zerenda**	**15.80**	**353**	*e*P		**Pn**	**20 44 02.0**	**-0.4**
ZRNK				pmax	pmax				
	comp=Z,3.0nm,0.9s								
ZRNK	**Zerenda**	**15.80**	**353**	*e*P		**Pn**	**20 44 02.0**	**-0.4**
	comp=Z,2.6nm,0.9s								
BRVK	**Borovoye**	**15.81**	**356**	*e*P		**Pn**	**20 43 59.9**	**-2.6**
BRVK				pmax	pmax				
	comp=Z,2.0nm,0.8s								
BRVK	**Borovoye**	**15.81**	**356**	*e*P		**Pn**	**20 43 59.9**	**-2.7**
	comp=Z,1.6nm,0.8s								
AKTK	**Aktyubinsk**	**16.51**	**327**	P		**Pn**	**20 44 12.0**	**+0.9**
AKTK				S		**S**	**20 47 03.0**	**-12**
AKTO	**Aktyubinsk**	**16.51**	**327**	⇑P		**Pn**	**20 44 12.4**	**+1.3**
AKTO				⇑S		**S**	**20 47 03.1**	**-12**
AKTO	**Aktyubinsk**	**16.51**	**327**	P		**Pn**	**20 44 12.0**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=129,slow=9.8,SNR=13								
AKTO				S		**S**	**20 47 03.0**	**-12**
	comp=Z,0.1nm,0.3s,baz=24,slow=20,SNR=4.2								
AKTO	**Aktyubinsk**	**16.51**	**327**	P		**Pn**	**20 44 12.0**	**+0.9**
AKTO				S		**S**	**20 47 03.0**	**-12**
AKTO				pmax	pmax				
	comp=Z,1.0nm,0.3s								
ZAL	**Zalesovo**	**18.86**	**24**	P		**P**	**20 44 37.7**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=240,slow=4.5,SNR=4.5								
ZAL	**Zalesovo**	**18.86**	**24**	P		**P**	**20 44 37.7**	**+0.6**
ZAL				pmax	pmax				
	comp=Z,1.0nm,0.3s								
ZAL	**Zalesovo**	**18.86**	**24**	P		**P**	**20 44 37.7**	**+0.5**
FINES	**FINESS Array B**	**37.27**	**325**	P		**P**	**20 47 27.9**	**+1.6**
	comp=Z,1.1nm,0.9s,mb3.5,baz=120,slow=8.2,SNR=5.4								
FINES	**FINESS Array B**	**37.27**	**325**	P		**P**	**20 47 27.9**	**+1.6**
FINES				pmax	pmax				
	comp=Z,1.0nm,0.9s								
ARCES	**ARCESS Array B**	**40.72**	**337**	P		**P**	**20 47 55.0**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.4,baz=105,slow=7.6,SNR=8.0								
ARCES	**ARCESS Array B**	**40.72**	**337**	P		**P**	**20 47 55.0**	**+0.1**
ARCES				pmax	pmax				
	comp=Z,1.0nm,0.5s								

IDC ***23*** *20:43:39.7±1.6, 1419N×14697E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, ML4.0/1, Error ellipse: s-maj=39.4km s-min=23.3km az=110.0*
NEIC ***23*** *20:43:41.2±1.2, 1420N×14695E, h10km, mb4.1/1, Error ellipse: s-maj=29.7km s-min=15.9km az=112.0*
ISCJB ***23*** *20:43:42.8±1.2, 142N±0.1×1470E±0.1, h33km, mb3.9/8, Error ellipse: s-maj=24.6km s-min=11.5km az=109.4*
ISC 23 20:43:44.9±1.2, 142N±01×1470E±01, h35km, n10, σ0§97/11, mb3.9/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.13**	**254**	Pn	**Pn**	**20 44 16.1**	**-1.8**
	43nm,0.3s,baz=36,slow=12,SNR=20						
GUMO				Sn	**Sn**	**20 44 43.7**	**+0.5**
	14nm,0.3s,baz=350,slow=17,SNR=3.8						
MJAR	**Matsushiro Arr**	**23.60**	**342**	P	**P**	**20 48 51.0**	**-1.6**
	1.2nm,0.8s,mb3.4,baz=153,slow=8.2,SNR=4.9						
MJAR	**Matsushiro Arr**	**23.60**	**342**	P	**P**	**20 48 51.0**	**-1.6**
WRA	**Warramunga Arr**	**36.12**	**200**	P	**P**	**20 50 43.8**	**+0.3**
	0.6nm,0.7s,mb3.6,baz=22,slow=9.3,SNR=7.1						
SONM	**Songino Array**	**47.45**	**323**	P	**P**	**20 52 17.1**	**+1.1**
	0.7nm,0.8s,mb3.6,baz=138,slow=7.5,SNR=6.0						
MKAR	**Makanchi Array**	**62.49**	**316**	P	**P**	**20 54 06.0**	**+1.3**
	0.3nm,0.3s,mb3.9,baz=91,slow=8.5,SNR=6.3						
BVAR	**Borovoye Array**	**70.73**	**322**	P	**P**	**20 54 57.8**	**+0.5**
	1.7nm,0.8s,mb4.0,baz=92,slow=7.4,SNR=11						
ZRNK	**Zerenda**	**71.57**	**321**	*e*P	**P**	**20 55 02.6**	**+0.3**
	1.3nm,0.9s,mb3.9						
ARCES	**ARCESS Array B**	**87.14**	**343**	P	**P**	**20 56 26.8**	**-0.3**
	1.2nm,0.7s,mb4.2,baz=47,slow=6.3,SNR=4.5						
FINES	**FINESS Array B**	**91.47**	**336**	P	**P**	**20 56 47.1**	**-0.4**
	1.5nm,0.9s,mb4.3,baz=55,slow=7.2,SNR=4.3						

MAN 23 21:06:06.0, 922N×12436E, h11km, mb2.7, ML4.2, MS1.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.68**	**314**	*e*P	Pg	21 06 19.7	+0.5
TBP				*e*S	Sg	21 06 29.6	+1.6
CGP	**Cagayan de Oro**	**0.83**	**156**	⇑*e*P	Pg	21 06 21.3	-0.7
CGP				*i* S	Sg	21 06 32.9	+0.1
MSLP	**Maasin**	**1.03**	**28**	*e*P	Pb	21 06 24.8	-1.2
MSLP				*e*S	Sg	21 06 40.0	+0.6
LLP	**Lapu-Lapu**	**1.16**	**340**	⇓*i*P	Pb	21 06 26.7	-1.3
LLP				*e*S	Sb	21 06 41.2	-1.8
DCPH	**Dipolog City**	**1.18**	**238**	*e*P	Pb	21 06 27.6	-0.8
DCPH				*i* S	Sb	21 06 44.2	+0.5
BUKP	**Musuan**	**1.50**	**152**	*e*P	Pn	21 06 32.7	-0.2
PAGZ	**Pagadian**	**1.67**	**215**	*e*P	Pn	21 06 35.1	-0.1
PAGZ				*e*S	Sn	21 06 56.9	+0.3
OCLP	**Ormoc**	**1.84**	**8**	*e*P	Pn	21 06 37.4	-0.1
OCLP				*e*S	Sn	21 07 01.5	+0.8
GUIM	**Jordan**	**2.24**	**309**	*e*P	Pn	21 06 42.8	-0.1
GUIM				*e*S	Sn	21 07 10.9	+0.4

MAN 23 21:25:47.4, 715N×12552E, h20km, mb3.1, ML4.4, MS2.2, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.10**	**145**	⇑*e*P	Pb	21 25 46.0	-5.3
KCP	**Kidapawan**	**0.45**	**252**	⇓*e*P	Pb	21 26 00.5	+3.8
KCP				*i* S	Sb	21 26 08.6	+5.7
MATI	**Mati**	**0.76**	**106**	*e*P	Pb	21 26 01.6	-0.3
MATI				*e*S	Sb	21 26 11.2	-0.6
BUKP	**Musuan**	**0.85**	**328**	*e*P	Pb	21 26 03.7	+0.2
BUKP				*e*S	Sb	21 26 16.1	+1.6
CTBH	**Cotabato--PC H**	**1.27**	**273**	⇓*i*P	Pn	21 26 09.7	-0.2
CTBH				*i* S	Sn	21 26 26.5	+0.2
CGP	**Cagayan de Oro**	**1.53**	**328**	*e*P	Pn	21 26 13.4	-0.1
CGP				*i* S	Sn	21 26 33.6	+0.7
BUTP	**Butuan**	**1.81**	**3**	*e*P	Pn	21 26 17.8	+0.4
BUTP				*e*S	Sn	21 26 41.9	+2.2
PAGZ	**Pagadian**	**2.23**	**288**	*e*P	Pn	21 26 23.5	+0.3

ISCJB ***23*** *21:58:47.7±0.8, 4675N±003×982E±006, h12km±7km, Error ellipse: s-maj=6.9km s-min=4.8km az=33.6*
CSEM ***23*** *21:58:47.2±0.1, 4669N×978E, h12km, ML2.5/5, Error ellipse: s-maj=2.8km s-min=1.9km az=130.0*
VIE ***23*** *21:58:48.0±0.5, 4673N×983E, h4km±3km, mb0.8/1, ML2.0/4, Error ellipse: s-maj=3.6km s-min=1.3km az=14.0 8 km S of Davos*
ROM ***23*** *21:58:48.4±0.7, 4681N×983E, h10km, Md2.3/5, Ml1.6/3, Error ellipse: s-maj=9.8km s-min=3.8km az=173.0*
ZUR ***23*** *21:58:48.6, 4675N×983E, h5km, 1km, ML1.5/3*
ISC 23 21:58:48.6±0.8, 4675N±003×980E±006, h7km±9km, n14, σ0§71/22, 5C-6D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAVOX	**Davos**	**0.06**	**63**	⇓*i*Pg	**Pg**	**21 58 50.3**	**0.0**
DAVOX				*i* Sg	**Sg**	**21 58 51.3**	**-0.2**
VDL	**Val di Lei**	**0.35**	**221**	⇑*i*Pg	**Sg**	**21 59 06.8**	**+6.7**
	89nm,0.1s						
BERNI	**Berninapass**	**0.37**	**156**	*i* Sg	**Sg**	**21 58 59.5**	**-1.3**
	80nm,0.2s						
BERNI	**Berninapass**	**0.37**	**156**	⇓*i*Pg	**Sg**	**21 59 02.8**	**+2.0**
	80nm,0.2s						
BRMO	**Bormio**	**0.48**	**125**	Pg	**Pg**	**21 58 57.6**	**-0.3**
	17nm,0.4s						
DAVA	**Damuels**	**0.54**	**6**	⇑*i*Pg	**Pg**	**21 58 59.0**	**+0.1**
DAVA				⇓*i*Sg	**Sg**	**21 59 06.7**	**+0.7**
	comp=Z,8.0nm,0.1s						
DAVA	**Damuels**	**0.54**	**6**	Pg	**Pg**	**21 58 59.0**	**0.0**
DAVA				Sg	**Sg**	**21 59 06.7**	**+0.7**
	8.0nm,0.1s						
MUGIO	**Muggio**	**0.98**	**213**	Pg	**Pg**	**21 59 07.5**	**0.0**
APPI	**Appiano**	**1.02**	**105**	Pg	**Pg**	**21 59 07.7**	**-0.5**
APPI				Sg	**Sg**	**21 59 21.2**	**-0.3**
	9.0nm,0.4s						
MOTA	**Moosalm**	**1.07**	**56**	⇑*i*Pg	**Pg**	**21 59 08.0**	**-1.2**
MOTA				⇓*i*Sg	**Sg**	**21 59 24.2**	**+1.2**
	6.0nm,0.2s						
SQTA	**Sankt Quirin**	**1.07**	**64**	⇓*i*Pg	**Pg**	**21 59 08.2**	**-1.0**
SQTA				⇑*i*Sg	**Sg**	**21 59 22.9**	**-0.2**
	5.4nm,0.2s						
MAGA	**Magasa**	**1.13**	**149**	Pg	**Pg**	**21 59 10.4**	**0.0**
MAGA				Sg	**Sg**	**21 59 26.0**	**+0.9**
	22nm,0.6s						
VAI	**Varese**	**1.14**	**219**	Pg	**Pg**	**21 59 10.6**	**+0.1**
	3.0nm,0.2s						
WTTA	**Wattenberg**	**1.35**	**67**	⇑*i*Pg	**Pg**	**21 59 14.2**	**-0.4**
WTTA				⇓*i*Sg	**Sg**	**21 59 33.1**	**+0.9**
	2.6nm,0.3s						

ISCJB ***23*** *22:12:45.6±0.7, 3996N±003×2370E±006, h13km±4km, Error ellipse: s-maj=7.8km s-min=4.6km az=22.2*
CSEM ***23*** *22:12:46.5±0.3, 3998N×2374E, h8km, ML1.9, Error ellipse: s-maj=7.6km s-min=3.4km az=96.0*
ATH ***23*** *22:12:46.6, 4003N×2324E, h29km±2km, MD3.1/3*
THE ***23*** *22:12:47.0, 3998N×2368E, h2km, ML1.9*
ISC 23 22:12:46.3±0.8, 3997N±003×2372E±006, h9km±6km, n11, σ0§97/19, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.05**	**219**	*e*Pg	**Pg**	**22 12 47.6**	**-0.5**
PAIG				*e*Sg	**Sg**	**22 12 48.3**	**-1.1**
OUR	**Ouranopolis**	**0.42**	**28**	*e*Pg	**Pg**	**22 12 55.7**	**+1.2**
OUR				*e*Sg	**Sg**	**22 13 01.3**	**+1.3**
PLG	**Polygyros**	**0.46**	**333**	*e*PB	**Pg**	**22 12 54.8**	**-0.4**
PLG				*e*SB	**Sg**	**22 13 01.0**	**-0.3**
XOR	**Xorichti**	**0.72**	**214**	*e*Pg	**Pg**	**22 13 00.9**	**+0.7**
XOR				*e*Sg	**Sg**	**22 13 11.5**	**+1.8**
NEO	**Neokhori**	**0.76**	**210**	*e*PN	**Pn**	**22 13 01.2**	**-2.1**
NEO				*e*SN	**Sg**	**22 13 11.3**	**+0.4**
HORT	**Hortiatis**	**0.79**	**323**	*e*Pg	**Pg**	**22 13 01.4**	**-0.2**
HORT				*e*Sg	**Sg**	**22 13 12.1**	**+0.3**
LIT	**Litokhoron**	**0.95**	**279**	*e*Pg	**Pg**	**22 13 04.6**	**-0.1**
LIT				*e*Sg	**Sg**	**22 13 17.8**	**+0.7**
KNT	**Kendrikon**	**1.35**	**333**	*e*Pg	**Pg**	**22 13 11.7**	**-0.5**
KNT				*e*Sg	**Sg**	**22 13 30.5**	**+0.8**
NVR	**Nevrokopi**	**1.39**	**4**	*e*PN	**Pn**	**22 13 12.1**	**+0.3**
GRG	**Griva**	**1.41**	**315**	*e*Pg	**Pg**	**22 13 12.7**	**-0.7**
MMB	**Musomiste**	**1.62**	**0**	*e*Pg	**Pg**	**22 13 15.4**	**-2.0**

ISCJB ***23*** *22:51:51.1±0.5, 1966S±004×6733W±005, h210km±5km, mb4.0/18, Error ellipse: s-maj=8.0km s-min=6.6km az=162.8*
IDC ***23*** *22:51:51.6±0.7, 1970S×6726W, h202km±7km, mb3.7/11, mb1 3.9/17, mb1mx3.8/23, mbtmp4.3/17, Error ellipse: s-maj=11.5km s-min=7.6km az=97.0*
NEIC ***23*** *22:51:52.4±0.5, 1968S×6734W, h208km±5km, mb4.2/10, Error ellipse: s-maj=8.7km s-min=6.1km az=72.0*
BJI ***23*** *22:51:52.3, 1970S×6730W, h208km, mB4.9*
ISC 23 22:51:52.1±0.5, 1968S±004×6733W±005, h203km±5km, n44, σ1§08/48, mb4.0/18, 3C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**3.27**	**206**	P	**Pn**	**22 52 46.1**	**+1.0**
	9.6nm,0.3s,baz=15,slow=8.7,SNR=136						
LVC				S	**Sn**	**22 53 26.1**	**-0.5**
	50nm,0.3s,baz=252,slow=24,SNR=24						
LVC	**Limon Verde**	**3.27**	**206**	⇑*i*Pn	**Pn**	**22 52 46.0**	**+0.9**
LVC				*e*Sn	**Sn**	**22 53 26.9**	**+0.3**
LPAZ	**La Paz**	**3.46**	**347**	P	**Pn**	**22 52 49.7**	**+2.4**
	15nm,0.3s,baz=151,slow=7.5,SNR=350						
LPAZ				S	**Sn**	**22 53 32.3**	**+1.7**
	8.9nm,0.3s,baz=256,slow=24,SNR=12						
LPAZ	**La Paz**	**3.46**	**347**	⇑*e*Pn	**Pn**	**22 52 50.4**	**+3.1**
LPAZ				*e*Sn	**Sn**	**22 53 33.9**	**+3.3**
ARE	**Arequipa**	**5.09**	**308**	⇑*i*P	**Pn**	**22 53 07.8**	**+0.2**
ARE				*i* S	**Sn**	**22 54 04.7**	**-2.6**
SIV	**San Ignacio**	**7.00**	**59**	P	**Pn**	**22 53 31.8**	**-0.5**
	15nm,0.3s,baz=257,slow=9.7,SNR=185						
SIV				S	**Sn**	**22 54 49.4**	**-2.5**
	baz=152,slow=22,SNR=5.6						
CPUP	**Villa Florida**	**11.34**	**128**	P	**Pn**	**22 54 27.5**	**-1.0**
	1.8nm,0.3s,baz=298,slow=12,SNR=8.8						
CPUP	**Villa Florida**	**11.34**	**128**	*e*Pn	**Pn**	**22 54 27.9**	**-0.6**
	16nm,0.4s						
SAML	**Samuel**	**11.39**	**21**	*e*Pn	**Pn**	**22 54 31.2**	**+2.0**
CFAA	**Coronel Fontan**	**11.91**	**184**	P	**Pn**	**22 54 35.1**	**-0.5**
	0.1nm,0.3s,baz=19,slow=10.0,SNR=13						
CFAA				S	**S**	**22 56 38.5**	**-10**
	0.1nm,0.3s,baz=269,slow=22,SNR=5.9						
NNA	**Nana**	**11.92**	**308**	P	**Pn**	**22 54 35.0**	**-0.8**
	2.5nm,0.3s,baz=118,slow=9.4,SNR=6.5						
NNA				S	**S**	**22 56 40.6**	**-8.2**
	2.2nm,0.3s,baz=62,slow=19,SNR=5.2						
BDFB	**Brasilia**	**18.84**	**81**	P	**P**	**22 55 58.0**	**+1.3**
	3.7nm,0.3s,baz=265,slow=11,SNR=28						
TRQA	**Tornquist**	**18.90**	**167**	*e*P	**P**	**22 55 56.5**	**-0.9**
	6.0nm,0.9s						
PLCA	**Paso Flores**	**21.17**	**187**	P	**P**	**22 56 22.0**	**+0.5**
	2.0nm,0.5s,mb3.9,baz=358,slow=11,SNR=12						
PLCA	**Paso Flores**	**21.17**	**187**	*e*P	**P**	**22 56 22.1**	**+0.6**
	2.1nm,0.5s,mb3.9						
EFI	**East Falkland**	**32.75**	**169**	*e*P	**P**	**22 58 05.5**	**-0.3**
SJG	**San Juan**	**37.57**	**2**	*e*P	**P**	**22 58 45.3**	**-1.5**
TEIG	**Tepich**	**44.65**	**331**	*e*P	**P**	**22 59 43.8**	**-0.6**
CMIG	**Matias Romero**	**45.47**	**322**	P	**P**	**22 59 51.2**	**+0.3**
	4.6nm,1.1s,mb3.7,baz=134,slow=6.2,SNR=4.2						
CMIG	**Matias Romero**	**45.47**	**322**	P	**P**	**22 59 51.2**	**+0.3**
FVM	**French Village**	**61.33**	**339**	*e*P	**P**	**23 01 45.6**	**-0.6**
	7.8nm,0.3s,mb4.8						
SNAA	**Sanae**	**63.52**	**161**	*e*P	**P**	**23 02 01.9**	**+1.2**
	0.4nm,0.4s,mb3.4						
DBIC	**Dimbokro**	**66.80**	**73**	P	**P**	**23 02 20.7**	**-1.1**
	4.5nm,0.6s,mb4.2,baz=231,slow=8.5,SNR=18						
CCUT	**Cedar City**	**71.53**	**323**	*e*P	**P**	**23 02 51.9**	**+1.1**
DAC	**Darwin (Calif)**	**73.17**	**320**	*e*P	**P**	**23 03 01.7**	**+1.2**
	3.5nm,0.7s,mb4.1						
PDAR	**Pinedale Array**	**73.30**	**329**	P	**P**	**23 03 01.8**	**+0.5**
	0.6nm,0.5s,mb3.5,baz=130,slow=9.1,SNR=7.4						
ULM	**Lac du Bonnet**	**74.05**	**341**	P	**P**	**23 03 04.8**	**-0.8**
	3.9nm,0.5s,mb4.3,baz=158,slow=6.6,SNR=9.0						
NVAR	**Mina Array Bea**	**75.00**	**321**	P	**P**	**23 03 11.7**	**+0.6**
	0.7nm,0.7s,mb3.4,baz=166,slow=7.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**75.35**	**70**	P	**P**	**23 03 12.0**	**-1.1**
	9.5nm,0.4s,mb4.8,baz=253,slow=5.4,SNR=475						
HLID	**Hailey**	**76.31**	**327**	*e*P	**P**	**23 03 17.0**	**-1.5**
	1.8nm,0.9s,mb3.7						
SBA	**Scott Base**	**77.88**	**190**	P	**P**	**23 03 26.2**	**-1.0**
SUR	**Sutherland**	**78.22**	**120**	*e*P	**P**	**23 03 30.3**	**+1.2**
	3.6nm,0.6s,mb4.2						
VNDA	**Vanda**	**78.89**	**190**	P	**P**	**23 03 32.1**	**-0.7**
	1.0nm,1.0s,mb3.4,baz=120,slow=3.6,SNR=4.1						
VNDA	**Vanda**	**78.89**	**190**	*e*P	**P**	**23 03 32.8**	**+0.1**
TSUM	**Tsumeb**	**79.14**	**107**	*e*P	**P**	**23 03 35.0**	**+0.9**
	3.5nm,0.7s,mb4.1						
BOSA	**Boshof**	**82.99**	**118**	P	**P**	**23 03 54.9**	**+0.4**
	1.5nm,0.5s,mb4.0,baz=226,slow=16,SNR=6.2						
ESDC	**Sonseca Array**	**83.50**	**44**	P	**P**	**23 03 57.9**	**+0.9**
	1.3nm,0.9s,mb3.7,baz=231,slow=6.0,SNR=6.0						
ESLA	**Sonseca Array**	**83.50**	**44**	P	**P**	**23 03 57.1**	**+0.1**
LBTB	**Lobatse**	**84.43**	**114**	*e*P	**P**	**23 04 02.5**	**+0.7**
	3.5nm,0.5s,mb4.3						
YKA	**Yellowknife Ar**	**89.97**	**340**	P	**P**	**23 04 27.9**	**-0.5**
	1.8nm,0.7s,mb4.0,baz=126,slow=4.1,SNR=7.3						
WRA	**Warramunga Arr**	**135.27**	**210**	PKP	PKPdf	23 10 47.5	+0.1
	0.6nm,0.6s,baz=151,slow=1.7,SNR=6.8						
MDJ	**Mudanjiang**	**151.42**	**334**	PKP	PKPdf	23 11 14.8	-0.6
MDJ				APKP		23 12 09.3	
MDJ				XPKP		23 12 30.8	
MDJ				PKS		23 14 49.5	
MDJ				PP	PP	23 15 02.8	+0.4
MDJ				SKS	SKSdf	23 18 02.1	-1.4
MDJ				PP	PP		
	comp=Z,62nm,4.8s						
MDJ				LR	LR		
	comp=N,1μm,39.5s						
MDJ				LR	LR		
	comp=E,2μm,37.7s						
MDJ				LR	LR		
	comp=Z,681nm,23.9s						
SONM	**Songino Array**	**151.45**	**9**	PKPbc	PKPbc	23 11 22.5	+0.7
	comp=Z,1.0nm,0.4s,baz=286,slow=1.1,SNR=11						
HHC	**Hu-ho-hao-te**	**158.88**	**2**	*e*PKP	PKPdf	23 11 23.3	-2.2
HHC				APKP		23 12 19.9	
HHC				XPKP		23 12 44.8	
HHC				PKS		23 14 53.6	
HHC				PP	PP	23 15 42.1	-1.8
HHC				SKS	SKSdf	23 18 04.8	-6.9
HHC				SKKS	SKKSac	23 22 08.3	-4.4
HHC				PP	PP		
	comp=Z,68nm,5.7s						
HHC				LR	LR		
	comp=N,156nm,34.2s						
HHC				LR	LR		
	comp=E,112nm,38.9s						
HHC				LR	LR		
	comp=Z,128nm,38.9s						

CASC 23 23:05:30.7±5.3, 1382N×9147W, h27km±777km, MD3.6, 2C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TP2	**Tecpan 2**	**1.05**	**24**	*e*P	Pn	23 05 51.4	+1.7
TP2				*e*S	Sn	23 06 05.0	+1.6
RTR	**El Retiro**	**1.77**	**87**	⇑*e*P	x	23 06 18.6	
RTR				*e*S	x	23 06 45.6	
SBLS	**San Blas**	**1.80**	**89**	⇑*e*P	x	23 06 18.5	
SBLS				*e*S	x	23 06 41.0	
SNJE	**San Jose**	**1.81**	**88**	⇓*e*P	x	23 06 19.1	
SNJE				*e*S	x	23 06 41.3	
LFRS	**El Faro**	**2.35**	**95**	⇓*e*P	x	23 06 26.8	
LFRS				*e*S	x	23 06 54.9	

IDC ***23*** *23:06:38.5±1.8, 1265S×16739E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/13, mbtmp4.1/4, MS3.7/1, Ms1 3.7/1, ms1mx2.8/29, Error ellipse: s-maj=101.5km s-min=29.3km az=142.0*
ISCJB ***23*** *23:06:42.2±5.2, 129S±07×1674E±04, h33km, mb4.1/6, MS3.8/1, Error ellipse: s-maj=111.6km s-min=33.4km az=59.6*
NEIC ***23*** *23:06:43.7±0.7, 1274S×16739E, h35km, mb4.4/2, Error ellipse: s-maj=26.4km s-min=15.7km az=151.0*
ISC 23 23:06:43.7±5.3, 128S±07×1675E±05, h35km, n14, σ0§49/10, mb4.2/6, MS3.8/1, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.41**	**227**	P	**P**	**23 12 53.2**	**+0.6**
	3.1nm,0.4s,mb4.4,baz=47,slow=8.2,SNR=14						
STKA	**Stephens Creek**	**30.41**	**227**	P	**P**	**23 12 53.2**	**+0.6**
WRAB	**Tennant Creek**	**32.51**	**253**	*e*P	**P**	**23 13 10.8**	**-0.3**
	4.9nm,1.1s,mb4.3						
WB2	**Warramunga Arr**	**32.51**	**253**	*e*P	**P**	**23 13 11.2**	**+0.1**
WRA	**Warramunga Arr**	**32.52**	**253**	P	**P**	**23 13 11.0**	**-0.2**
	0.5nm,0.4s,mb3.8,baz=84,slow=9.2,SNR=9.2						
ASAR	**Alice Springs**	**33.58**	**246**	P	**P**	**23 13 20.1**	**-0.3**
	1.6nm,0.5s,mb4.2,baz=75,slow=9.0,SNR=26						
FITZ	**Fitzroy Crossi**	**40.59**	**257**	P	**P**	**23 14 20.3**	**+0.4**
	0.9nm,0.7s,mb3.5,baz=27,slow=14,SNR=3.5						
MBWA	**Marble Bar**	**46.26**	**253**	*e*P	**P**	**23 15 06.2**	**+0.6**
	4.4nm,0.6s,mb4.6						
NWAO	**Narrogin (SRO)**	**49.92**	**238**	*e*P	**P**	**23 15 32.9**	**-1.0**
SBA	**Scott Base**	**65.06**	**180**	P	**P**	**23 17 20.5**	**0.0**
SNAA	**Sanae**	**95.48**	**183**	LR	LR	00 02 40.4	
	comp=Z,39nm,21.9s,MS3.8,baz=291,slow=35						
ARCES	**ARCESS Array B**	**118.43**	**346**	PKP	PKPdf	23 25 27.0	-0.5
	0.8nm,0.3s,baz=78,slow=2.0,SNR=21						
FINES	**FINESS Array B**	**124.00**	**339**	PKP	PKPdf	23 25 37.1	-1

comp=Z,49nm,0.8s
CTA eS S 23 22 29.7 -3.3
CTA eScP ScP 23 27 34.4 +1.4
CTAO Charters Tower 16.96 202⇓*e*P **Pn 23 19 18.5 +1.8**
CTAO eSn **Sn 23 22 31.9 +7.7**
GUMO Guam 19.46 336 P **Pn 23 19 48.5 +1.3**
comp=Z,9.9nm,0.3s,baz=170,slow=7.9,SNR=38
GUMO LR LR 23 26 19.3
GUMO comp=Z,991nm,19.3s,baz=147,slow=34 ScP ScP 23 27 40.4 +2.0
baz=207,slow=22,SNR=3.2
KAKA Kakadu 21.84 246⇓*i*P **P 23 20 10.6 -0.9**
comp=Z,3μm,1.4s,mb6.6
KAKA eS S **23 24 07.4 -3.2**
DZM Mont Dzumac 22.03 145 *e*P **P 23 20 13.7 +0.2**
DZM Mont Dzumac 22.03 145 P **P 23 20 13.8 +0.3**
comp=Z,97nm,0.5s,mb5.5,baz=334,slow=10,SNR=191
DZM PcP PcP 23 24 12.1 +1.6
comp=Z,22nm,1.0s,baz=127,slow=5.1,SNR=3.4
DZM ScP ScP 23 27 47.2 +2.6
comp=Z,37nm,0.9s,baz=44,slow=8.4,SNR=17
WRAB Tennant Creek 23.81 228⇓*i*P **P 23 20 31.4 -0.2**
comp=Z,1μm,0.7s,mb6.5
WRAB *e* 23 20 49.1
WRAB *e*PcP PcP 23 24 14.7 +0.5
WRAB eS **S 23 24 41.7 -2.8**
WB2 Warramunga Arr 23.82 228⇓*i*P **P 23 20 31.6 -0.1**
WB2 *e*PcP PcP 23 24 14.8 +0.6
WB2 *i* S **S 23 24 42.2 -2.4**
WB2 eScP ScP 23 27 49.2 0.0
WB2 eScS ScS 23 31 36.0 -0.1
WRA Warramunga Arr 23.82 228 P **P 23 20 31.0 -0.8**
comp=Z,1μm,0.9s,mb6.3,baz=53,slow=9.9,SNR=578
WRA PcP PcP 23 24 14.8 +0.6
comp=Z,88nm,0.9s,baz=51,slow=2.1,SNR=11
WRA S **S 23 24 43.5 -1.2**
comp=Z,161nm,1.0s,baz=55,slow=18,SNR=9.1
WRA ScP ScP 23 27 49.6 +0.3
comp=Z,24nm,0.8s,baz=50,slow=2.7,SNR=10
WRA LR LR 23 30 13.4
comp=Z,6μm,20.1s,MS5.1,baz=45,slow=38
WRA PKiKP PKiKP 23 31 56.1 -1.2
comp=Z,1.8nm,0.6s,baz=339,slow=0.9,SNR=8.5
WRA P3KP 23 54 49.3
comp=Z,1.4nm,1.1s,baz=278,slow=2.5,SNR=5.0
WRA Warramunga Arr 23.82 228 P **P 23 20 31.0 -0.8**
WRA PcP PcP 23 24 14.8 +0.6
WRA S **S 23 24 43.5 -1.2**
WRA ScP ScP 23 27 49.6 +0.3
WRA LR LR 23 30 13.4
ARMA Armidale 26.00 182 *e*P **P 23 20 52.3 +0.7**
ARMA eScP ScP 23 27 58.6 +3.2
AS31 Alice Springs 26.56 222⇓*i*P **P 23 20 56.1 -0.5**
AS31 *e* 23 21 14.5
ASAR Alice Springs 26.56 222 P **P 23 20 56.3 -0.3**
comp=Z,126nm,0.9s,mb5.5,baz=57,slow=8.5,SNR=293
ASAR PcP PcP 23 24 21.1 +0.8
comp=Z,47nm,0.8s,baz=64,slow=2.3,SNR=8.9
ASAR S **S 23 25 21.3 -7.1**
comp=Z,4.4nm,0.8s,baz=40,slow=15,SNR=2.4
ASAR ScP ScP 23 27 57.5 +0.4
comp=Z,22nm,0.8s,baz=47,slow=3.1,SNR=15
ASAR LR LR 23 31 27.4
comp=Z,5μm,21.5s,MS5.0,baz=353,slow=36
ASAR P3KP 23 54 45.6
comp=Z,1.0nm,1.0s,baz=198,slow=3.4,SNR=4.7
ASAR Alice Springs 26.56 222 P **P 23 20 56.3 -0.3**
ASAR 23 24 21.2
ASAR pmax pmax
comp=Z,126nm,0.9s
ASAR MLR MLR
comp=Z,5μm,21.5s
ASAR Alice Springs 26.56 222 P **P 23 20 56.3 -0.3**
ASAR PcP PcP 23 24 21.1 +0.8
ASAR S **S 23 25 21.3 -7.1**
ASAR ScP ScP 23 27 57.5 +0.4
ASAR LR LR 23 31 27.4
STKA Stephens Creek 29.40 200 P **P 23 21 20.6 -1.4**
comp=Z,41nm,0.7s,mb5.3,baz=2.9,slow=8.8,SNR=90
STKA PcP PcP 23 24 27.2 0.0
comp=Z,40nm,1.0s,baz=36,slow=4.0,SNR=3.9
STKA ScP ScP 23 28 07.5 +1.7
comp=Z,43nm,1.1s,baz=44,slow=4.7,SNR=8.1
STKA PKiKP PKiKP 23 31 59.1 -1.4
comp=Z,2.4nm,0.7s,baz=347,slow=4.1,SNR=3.3
STKA LR LR 23 33 09.4
comp=Z,6μm,20.8s,MS5.2,baz=15,slow=36
STKA Stephens Creek 29.40 200⇓*i*P **P 23 21 21.2 -0.8**
comp=Z,33nm,0.6s,mb5.2
STKA eScP ScP 23 28 08.0 +2.2
RIV Riverview 29.42 183 *e*P **P 23 21 22.8 +0.6**
FITZ Fitzroy Crossi 29.96 241 P **P 23 21 25.7 -1.3**
comp=Z,501nm,0.9s,mb6.2,baz=84,slow=9.5,SNR=641
FITZ ScP ScP 23 28 09.1 +1.6
comp=Z,13nm,0.8s,baz=111,slow=5.2,SNR=3.9
FITZ LR LR 23 33 57.1
comp=Z,1μm,21.0s,MS4.6,baz=33,slow=37
FITZ Fitzroy Crossi 29.96 241⇓*i*P **P 23 21 25.9 -1.0**
comp=Z,926nm,1.0s,mb6.5
CNB Canberra Magne 31.03 186⇓*i*P **P 23 21 37.0 +0.6**
comp=Z,155nm,1.0s,mb5.8
CBIJ Chichi jima 32.87 342 P **P 23 21 50.8 -1.8**
comp=Z,147nm,0.8s,mb6.0,baz=310,slow=3.8,SNR=7.9
ADE Adelaide 33.22 202⇓*i*P **P 23 21 55.5 0.0**
TOO Toolangi 33.80 191⇓*i*P **P 23 22 01.2 +0.6**
TOO pmax pmax
comp=Z,67nm,1.0s,mb5.5
TOO Toolangi 33.80 191⇓*i*P **P 23 22 01.2 +0.6**
comp=Z,67nm,1.0s,mb5.5
FORT Forrest 35.22 219⇓*i*P **P 23 22 12.2 -0.7**
comp=Z,628nm,1.2s,mb6.4
TSM Tawau 35.99 283 P **P 23 22 20.6 +1.1**
AFI Afiamalu 36.14 108 P **P 23 22 20.7 -0.1**
comp=Z,15nm,0.4s,mb5.2,baz=142,slow=4.9,SNR=5.1
AFI LR LR 23 35 19.1
comp=Z,1μm,19.8s,MS4.7,baz=273,slow=33
AFI Afiamalu 36.14 108 P **P 23 22 20.8 0.0**
AFI eS **S 23 28 01.8 +4.0**
AFI Afiamalu 36.14 108 P **P 23 22 20.8 -0.1**
AFI eS **S 23 28 01.8 +4.0**
AFI LR LR 23 35 19.1
MBWA Marble Bar 36.28 240 P **P 23 22 21.4 -0.6**
SNR=48
MBWA Marble Bar 36.28 240⇓*i*P **P 23 22 20.9 -1.0**
comp=Z,315nm,0.6s,mb6.4
MBWA *e*PP PP 23 23 43.5 -1.5
TGY Tagaytay City 36.57 301 P **P 23 22 24.6 +0.1**
comp=Z,99nm,0.4s,baz=214,slow=20,SNR=4.2
TGY PcP PcP 23 24 48.3 +1.1
comp=Z,318nm,0.7s,baz=208,slow=5.2,SNR=8.7
TGY Tagaytay City 36.57 301 P **P 23 22 24.6 +0.1**
TGY 23 24 48.3
TGY pmax pmax
comp=Z,99nm,0.4s
BALP Baler 36.82 303 *e*P **P 23 22 26.8 +0.2**
RAO Raoul Island 37.17 135 LR LR 23 33 44.1
comp=Z,601nm,21.6s,MS4.3,baz=214,slow=30
CAUP Cauayan 37.23 305 *e*P **P 23 22 30.8 +0.7**
BCPH Baguio City Da 37.97 304⇑*i*P **P 23 22 37.4 +1.1**
KKM Kota Kinabalu 38.01 285 P **P 23 22 37.5 +0.8**
KKM Kota Kinabalu 38.01 285⇓*i*P **P 23 22 36.6 -0.1**
KKM *e*PP PP 23 24 05.4 +1.4
KKM *e*PcP PcP 23 24 51.6 0.0
KKM eS **S 23 28 24.0 -2.2**
JOW Kunigami 39.03 324 P **P 23 22 46.0 +0.8**
comp=Z,90nm,0.9s,mb5.5,baz=145,slow=9.3,SNR=16
PKVZ Pokaka 40.36 153 PN **P 23 22 57.8 +1.5**
URZ Urewera 40.38 150 P **P 23 22 56.2 -0.3**
comp=Z,39nm,0.8s,mb5.2,baz=348,slow=7.2,SNR=15
URZ PcP PcP 23 24 57.5 -1.6
comp=Z,84nm,0.7s,baz=318,slow=2.8,SNR=11
URZ ScP ScP 23 28 45.4 +0.2
comp=Z,14nm,0.8s,baz=196,slow=16,SNR=6.8
URZ LR LR 23 37 26.2
comp=Z,1μm,21.6s,MS4.7,baz=182,slow=33
URZ Urewera 40.38 150 P **P 23 22 56.2 -0.3**
URZ PcP PcP 23 24 57.5 -1.6
URZ ScP ScP 23 28 45.4 +0.2
URZ LR LR 23 37 26.2
QRZ Quartz Range 40.44 157 *e*P **P 23 22 58.2 +1.3**
QRZ Quartz Range 40.44 157 PN **P 23 22 58.2 +1.3**
QRZ PcP PcP 23 24 57.9 -1.4
MXZ Matakaoa Point 40.46 148 P **P 23 22 57.1 -0.1**
MXZ Matakaoa Point 40.46 148 PN **P 23 22 57.1 0.0**
NACB Ninganchiao 41.57 314⇓*i*P **P 23 23 06.7 +0.4**
NACB *e*pP pP 23 23 19.7 +2.2
NACB *e*PP PP 23 24 49.2 +6.5
NACB *e*PcP PcP 23 25 04.4 +1.4
SNZO South Karori 41.73 155 *e*P **P 23 23 07.5 0.0**
comp=Z,110nm,0.8s,mb5.5
SNZO *e*pP pP 23 23 18.1 -0.8
WVZ Waitaha Valley 41.74 160 *e*PN **P 23 23 07.4 -0.3**
FOZ Fox Glacier 41.84 162 *e*P **P 23 23 08.8 +0.3**
FOZ Fox Glacier 41.84 162 PN **P 23 23 09.1 +0.7**
LTZ Lake Taylor 42.02 159 *e*P **P 23 23 10.2 +0.2**
LTZ Lake Taylor 42.02 159 PN **P 23 23 10.8 +0.8**
YHNB Yeheng 42.03 315⇓*i*P **P 23 23 10.9 +0.9**
YHNB *e*pP pP 23 23 29.7 +8.3
YHNB *e*PcP PcP 23 25 04.6 +0.1
TATO Taipei 42.15 315⇓*e*P **P 23 23 11.6 +0.7**
comp=Z,277nm,1.4s,mb5.7
TATO *e*pP pP 23 23 23.6 +1.4
TATO *e*PP PP 23 24 48.6 -0.4
TATO *e*PcP PcP 23 25 05.3 +0.5
RPZ Rata Peaks 42.42 160 P **P 23 23 12.7 -0.4**
comp=Z,415nm,0.9s,mb6.0,baz=15,slow=0.9,SNR=62
RPZ Rata Peaks 42.42 160 P **P 23 23 12.7 -0.4**
KLBR Kellerberrin 42.70 226⇓*i*P **P 23 23 13.8 -1.6**
comp=Z,296nm,1.5s,mb5.8
MJAR Matsushiro Arr 42.88 343 P **P 23 23 15.1 -1.8**
comp=Z,29nm,1.0s,mb5.0,baz=167,slow=8.4,SNR=52
MJAR PcP PcP 23 25 07.0 -0.3
comp=Z,21nm,0.9s,baz=161,slow=3.6,SNR=8.8
MJAR ScP ScP 23 28 55.0 0.0
comp=Z,6.0nm,1.1s,baz=170,slow=3.4,SNR=6.1
MJAR LR LR 23 38 58.0
comp=Z,1μm,20.8s,MS4.8,baz=165,slow=33
MJAR Matsushiro Arr 42.88 343 P **P 23 23 15.1 -1.8**
MJAR PcP PcP 23 25 07.0 -0.2
MJAR ScP ScP 23 28 55.0 0.0
MJAR LR LR 23 38 58.0
MAJO Matsushiro 42.88 343 *e*P **P 23 23 15.4 -1.5**
MAJO pmax pmax
comp=Z,77nm,1.2s,mb5.3
MAJO Matsushiro 42.88 343⇓*i*P **P 23 23 14.3 -2.6**
comp=Z,77nm,1.2s,mb5.3
MAJO *e*pP pP 23 23 26.6 -1.6
MAJO *e*sP sP 23 23 33.0 +0.1
MAJO *e*ScP ScP 23 28 54.6 -0.5
KSM Kuching 42.91 277⇓*i*P **P 23 23 16.9 -0.2**
KSM *e* 23 23 33.0
KSM *e*PP PP 23 24 59.5 +2.3
KSM *e*PcP PcP 23 25 07.0 -0.4
WHZ Wether Hill Ro 43.47 165 *e*P **P 23 23 21.4 -0.3**
WHZ Wether Hill Ro 43.47 165 PN **P 23 23 21.5 -0.1**
ODZ Otahua Downs 43.47 162 *e*P **P 23 23 21.5 -0.2**
ODZ Otahua Downs 43.47 162 PN **P 23 23 21.8 +0.1**
NWAO Narrogin (SRO) 43.78 225 P **P 23 23 22.9 -1.3**
comp=Z,66nm,1.0s,mb5.3,baz=58,slow=7.8,SNR=18
NWAO LR LR 23 42 37.0
comp=Z,5μm,19.8s,MS5.4,baz=38,slow=38
NWAO Narrogin (SRO) 43.78 225 P **P 23 23 22.9 -1.3**
NWAO pmax pmax
comp=Z,66nm,1.0s
NWAO MLR MLR
comp=Z,5μm,19.8s
NWAO Narrogin (SRO) 43.78 225⇓*e*P **P 23 23 22.9 -1.3**
comp=Z,89nm,1.1s,mb5.4
NWAO *e*PP PP 23 25 04.1 -2.5
MUN Mundaring 44.02 227⇓*i*P **P 23 25 25.1 -1.0**
MUN *e*PP PP 23 25 02.9 -6.2
QZH Quanzhou 44.20 313⇓*i*P **P 23 23 28.6 +1.0**
QZH S **S 23 29 59.0 +0.9**
QZH SS SS 23 33 17.3 +0.4
QZH AMB AMB
comp=Z,280nm,1.2s,mb5.9
QZH AMB AMB
comp=Z,1μm,3.5s
QZH LR LR
comp=N,3μm,24.0s
QZH LR LR
comp=E,780nm,13.0s
QZH LR LR
comp=Z,2μm,17.5s
SSE Sheshan 46.39 322 P **P 23 23 45.8 +0.9**
SSE AP pP 23 23 57.1 +0.8
SSE XP sP 23 24 02.1 +1.1
SSE PCP PcP 23 25 20.3 +1.0
SSE PP PP 23 25 35.0 +0.8
SSE S **S 23 30 30.8 +1.1**
SSE XS sS 23 30 51.1 +2.5
SSE AMB AMB
comp=Z,106nm,1.6s,mb5.5
SSE AMB AMB
comp=Z,360nm,6.2s
SSE LR LR
comp=N,555nm,21.4s,MS4.8
SSE LR LR
comp=E,980nm,21.4s,MS4.8
SSE LR LR
comp=Z,959nm,20.3s,MS4.7
GZH Guangzhou 47.21 307 P **P 23 23 51.4 +0.1**
GZH S **S 23 30 45.1 +3.7**
GZH LR LR
comp=N,743nm,19.6s,MS4.9
GZH LR LR
comp=E,1μm,21.5s,MS4.9
GZH LR LR
comp=Z,2μm,23.6s,MS5.0
INCN Inchon 48.20 332 P **P 23 24 00.3 +1.3**
SNR=62
INCN Inchon 48.20 332⇓*i*P **P 23 24 00.0 +1.0**
comp=Z,210nm,0.9s,mb6.2
INCN *e*pP pP 23 24 11.3 +0.8
INCN *e*sP sP 23 24 18.0 +2.8
INCN *e*PcP PcP 23 25 25.9 +0.1
QIZ Qiongzhong 48.27 300 P **P 23 24 00.8 +1.2**
QIZ AP pP 23 24 10.9 -0.1
QIZ S **S 23 30 59.0 +2.5**
QIZ AMB AMB
comp=Z,21nm,1.6s,mb4.9
QIZ LR LR
comp=E,1μm,23.8s
QIZ LR LR
comp=Z,3μm,24.4s,MS5.1
NJ2 Nanjing 48.50 321 *e*P **P 23 24 02.8 +1.5**
NJ2 AP pP 23 24 12.8 0.0
NJ2 XP sP 23 24 16.6 -0.9
NJ2 PP PP 23 25 55.9 +1.6
NJ2 S **S 23 31 06.0 +6.3**
NJ2 XS sS 23 31 23.0 +4.3
NJ2 AMB AMB
comp=Z,150nm,0.6s,mb6.2
NJ2 AMB AMB
comp=Z,720nm,4.2s
NJ2 LR LR
comp=N,1μm,22.5s
NJ2 LR LR
comp=E,3μm,28.0s
NJ2 LR LR
comp=Z,440nm,18.0s,MS4.5
YUK Yuzh-Kuril'sk 48.52 353 *e*P pP 23 24 13.0 0.0
YUK eS **S 23 30 56.0 -4.0**
YUK pmax pmax
comp=Z,2μm,1.0s
YUK smax
comp=N,500nm,2.0s
RAR Rarotonga 48.92 114 P **P 23 24 04.2 -0.3**
comp=N,17nm,0.7s,mb5.2,baz=269,slow=13,SNR=4.2
RAR Rarotonga 48.92 114 P **P 23 24 04.2 -0.4**
RAR pmax pmax
comp=Z,17nm,0.7s
KGM Kluang 49.91 276 P **P 23 24 12.7 +0.7**
WHN Wuhan 50.54 316⇓P **P 23 24 18.1 +1.2**
WHN S **S 23 31 29.0 +0.7**
WHN LR LR
comp=Z,2μm,20.2s,MS5.1
VLA Vladivostok 50.87 340⇑*i*P **P 23 24 19.4 +0.1**
DL2 Dalian 51.78 329 *i* PR 23 24 26.3
DL2 AP pP 23 24 38.1 +0.4
DL2 XP sP 23 24 43.8 +1.4
DL2 PCP PcP 23 25 39.3 +0.4
DL2 S **S 23 31 43.8 -1.5**
DL2 SS SS 23 35 18.3 -3.9
DL2 AMB AMB
comp=Z,70nm,1.1s,mb5.5
DL2 AMB AMB
comp=Z,190nm,5.8s
DL2 LR LR
comp=N,320nm,19.8s,MS4.5
DL2 LR LR
comp=E,260nm,18.7s,MS4.5
DL2 LR LR
comp=Z,480nm,18.4s,MS4.6
YSS Yuzh-Sakhalins 51.81 351⇓*e*P **P 23 24 26.0 -0.4**
YSS *e**PP pP 23 24 36.5 -1.4
YSS *e* 23 24 40.2
YSS *i* 23 25 39.4
YSS *i*PPP 23 27 16.0
YSS eS **S 23 31 42.0 -3.8**
YSS pmax pmax
comp=N,70nm,1.0s
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.7
YSS pmax pmax
comp=Z,300nm,4.0s
YSS MLR MLR
comp=N,600nm,19.0s
YSS MLR MLR
comp=Z,500nm,19.0s,MS4.6
YSS Yuzh-Sakhalins 51.81 351⇓*i*P **P 23 24 26.2 -0.2**
comp=Z,26nm,0.6s,mb5.3
YSS *e* pP 23 24 38.3 +0.3
YSS *e*PcP PcP 23 25 39.0 0.0
TIA Tai'an 52.35 323 ⇓P **P 23 24 30.3 -0.1**
TIA AMB AMB
comp=Z,104nm,1.0s,mb5.7
IPM Ipoh 52.52 279 P **P 23 24 31.0 -0.6**
MDJ Mudanjiang 52.98 339 P **P 23 24 35.0 0.0**
MDJ AP pP 23 24 44.1 -2.5
MDJ PP PP 23 26 34.8 -0.1
MDJ SCP ScP 23 29 38.6 +0.9
MDJ PCS PcS 23 29 42.4 +0.2
MDJ S **S 23 32 06.1 +4.4**
MDJ AMB AMB
comp=Z,77nm,1.1s,mb5.5
MDJ AMB AMB
comp=Z,276nm,5.4s
MDJ LR LR
comp=N,1μm,32.4s,MS5.0
MDJ LR LR
comp=E,2μm,32.4s,MS5.0
MDJ LR LR
comp=Z,811nm,28.4s,MS4.6
MDJ Mudanjiang 52.98 339⇓*i*P **P 23 24 34.9 -0.1**
comp=Z,280nm,1.7s,mb5.9
MDJ *e*pP pP 23 24 46.7 +0.1
MDJ *e*sP sP 23 24 54.1 +2.9
MDJ *e*PcP PcP 23 25 39.0 -4.4
KULM Kulim 53.02 280⇓*i*P **P 23 24 34.3 -1.0**
KULM *e*PcP PcP 23 25 43.4 -0.1
KULM *e*PP PP 23 26 35.0 -0.2
KULM *e*ScP ScP 23 29 34.8 -3.0
SNY Shenyang 53.09 333 ⇓P **P 23 24 35.9 0.0**
SNY AP pP 23 24 46.9 -0.5
SNY XP sP 23 24 51.3 -0.8
SNY S **S 23 31 57.9 -5.4**
SNY AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
SNY AMB AMB
comp=Z,507nm,5.9s
SNY LR LR
comp=N,936nm,22.8s,MS5.0
SNY LR LR
comp=E,1μm,21.6s,MS5.0
SNY LR LR
comp=Z,1μm,28.4s
SNG Songkhla 53.38 282 P **P 23 24 39.0 +1.0**
KKTK Khon Kaen 53.55 294 P **P 23 24 40.0 +0.7**
CN2 Changchun 53.87 336 ⇑P **P 23 24 41.3 -0.3**
CN2 *e*XP sP 23 24 55.3 -2.6
CN2 *e*S **S 23 32 13.3 -0.6**
CN2 SS SS 23 35 54.1 -1.1
CN2 AMB AMB
comp=Z,90nm,1.1s,mb5.6
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,21.0s,MS4.6
CN2 LR LR
comp=E,400nm,21.0s,MS4.6
CN2 LR LR
comp=Z,500nm,17.0s,MS4.6
GYA Guiyang 54.15 307⇓*i*P **P 23 24 45.0 +1.4**
GYA AP pP 23 24 54.8 -0.4
GYA XP sP 23 24 58.6 -1.3
GYA PCP PcP 23 25 49.8 +2.0
GYA PP PP 23 26 47.9 +2.5
GYA PPP 23 27 58.0
GYA S **S 23 32 20.4 +2.8**
GYA PS 23 32 32.3
GYA SS SS 23 35 58.4 -1.1
GYA AMB AMB
comp=Z,40nm,1.5s,mb5.1
GYA AMB AMB
comp=Z,320nm,8.1s
GYA LR LR
comp=N,620nm,22.1s,MS4.9
GYA LR LR
comp=E,950nm,21.5s,MS4.9
GYA LR LR
comp=Z,1μm,21.5s,MS4.9
PSI Prapat 54.36 277 P **P 23 24 43.5 -1.6**
comp=Z,18nm,0.9s,mb5.0,baz=170,slow=5.3,SNR=22
PSI PcP PcP 23 25 47.4 -1.2
comp=Z,22nm,0.9s,baz=148,slow=3.9,SNR=5.7
PSI Prapat 54.36 277 P **P 23 24 43.5 -1.7**
PSI 23 25 47.4
PSI pmax pmax
comp=Z,19nm,0.9s,mb5.0
PSI Prapat 54.36 277 P **P 23 24 43.5 -1.6**
PSI PcP PcP 23 25 47.4 -1.2
HABR Khabarovsk 54.81 346⇓*i*P **P 23 24 48.9 +0.5**
HABR *i* pP 23 24 59.9 -0.2
HABR eS **S 23 32 28.7 +2.1**
HABR pmax pmax
comp=Z,211nm,1.0s,mb6.1
HABR pmax pmax
comp=Z,685nm,2.5s,mb6.2
SKR Severo-Kuril's 54.84 3 *e*P **P 23 24 44.0 -4.6**
SKR *e* 23 26 54.0
SKR eS **S 23 32 21.0 -5.8**
SKR pmax pmax
comp=Z,200nm,1.0s,mb6.1
SKR pmax pmax
comp=E,1μm,5.0s
SKR pmax pmax
comp=Z,1μm,5.0s
SKR smax
comp=N,1μm,10.0s
SKR smax
comp=E,1μm,10.0s
SKR MLR MLR
comp=N,1μm,18.0s,MS5.3
SKR MLR MLR
comp=E,2μm,18.0s,MS5.3
SKR MLR MLR
comp=Z,1μm,18.0s,MS5.1
BJI Beijing 55.52 326 *e*P **P 23 24 53.5 0.0**
BJI PCP PcP 23 25 51.3 -1.8
BJI S **S 23 32 34.3 -1.6**
BJI XS sS 23 32 54.4 -0.8
BJI AMB AMB
comp=Z,52nm,1.6s,mb5.3
BJI LR LR
comp=N,562nm,23.7s,MS4.8
BJI LR LR
comp=E,701nm,22.1s,MS4.8
BJI LR LR
comp=Z,1μm,30.8s
NST Nakhon Sawan 55.83 292 P **P 23 24 57.2 +1.5**
COCO West Island 55.92 258 PFAKE 23 25 10.0 +14
COCO LR LR
comp=Z,481nm,20.0s,MS4.6
NANT Nan 56.25 296 ⇑P **P 23 24 58.0 -0.7**
comp=Z,244nm,0.9s,mb6.2
XAN Xi'an 56.31 316 P **P 23 24 59.3 +0.1**
XAN AP pP 23 25 11.3 +0.5
XAN S **S 23 32 41.5 -5.0**
XAN AMB AMB
comp=Z,58nm,1.4s,mb5.4
XAN AMB AMB
comp=Z,361nm,8.2s
XAN LR LR

comp=N,324nm,23.5s,MS4.6
XAN LR LR
comp=E,478nm,21.1s,MS4.6
XAN LR LR
comp=Z,964nm,20.1s,MS4.9
KLR Kul'dur 56.39 344α *i*P **P 23 24 56.8 -2.9**
KLR *e* pP 23 25 08.0 -3.4
KLR *e*S **S 23 32 42.0 -5.5**
KLR pmax pmax
comp=E,140nm,1.6s
KLR pmax pmax
comp=Z,360nm,1.6s,mb6.2
KMI Kunming 56.76 304 P **P 23 25 03.8 +1.4**
KMI AP pP 23 25 14.3 +0.2
KMI XP sP 23 25 18.4 -0.3
KMI PP PP 23 27 12.4 +3.6
KMI PPP 23 28 30.9
KMI S **S 23 32 53.4 +0.9**
KMI PS 23 33 10.1
KMI SS SS 23 36 42.9 +2.1
KMI SSS 23 38 56.3
KMI AMB AMB
comp=Z,50nm,1.4s,mb5.3
KMI AMB AMB
comp=Z,320nm,4.8s
KMI LR LR
comp=N,490nm,18.9s,MS4.9
KMI LR LR
comp=E,991nm,23.9s,MS4.9
KMI LR LR
comp=Z,2µm,26.2s,MS5.0
PET Petropavlovsk 57.32 4κ *i*P **P 23 25 06.4 +0.1**
PET *e* 23 25 59.4
PET *e*S **S 23 32 56.3 -3.5**
PET *e*SP 23 33 03.9
PET *e*PPS 23 33 15.0
PET *e*SS SS 23 36 44.6 -4.9
PET pmax pmax
comp=Z,200nm,1.1s,mb6.1
PET pmax pmax
comp=Z,159nm,0.9s,mb6.0
PET smax
comp=N,400nm,15.2s
PET smax
comp=E,200nm,6.4s
PET smax
comp=N,100nm,4.1s
PET Petropavlovsk 57.32 4⇓ *i*P **P 23 25 06.1 -0.3**
PET *e*pP pP 23 25 17.6 -0.4
PET *e*PcP PcP 23 25 58.8 -1.4
CHRT Chiangrai 57.41 297 ⇓P **P 23 25 08.0 +1.0**
comp=N,155nm,1.0s,mb6.0
PPT Papeete 57.81 108 *e*S **S 23 33 06.0 -0.3**
comp=N,929nm,24.8s
PPT *e*LQ 23 39 34.8
comp=N,531nm,25.8s
PPT *e*LR LR 23 42 05.3
comp=N,2µm,34.5s
PPT Papeete 57.81 108 LR LR 23 47 10.9
comp=N,331nm,18.2s,MS4.5,baz=274,slow=33
CHG Chiang Mai 57.83 295 ⇓P **P 23 25 10.8 +0.8**
comp=N,38nm,1.0s,mb5.4
CHTO Chiang Mai 57.83 295 P **P 23 25 11.7 +1.7**
SNR=17
CHTO Chiang Mai 57.83 295⇓ *i*P **P 23 25 10.2 +0.2**
CHTO *e* 23 25 26.0
CHTO *e* 23 26 01.8
CHTO pmax pmax
comp=Z,56nm,1.3s,mb5.4
CHTO Chiang Mai 57.83 295⇓ *i*P **P 23 25 10.2 +0.2**
comp=Z,56nm,1.3s,mb5.4
CHTO *e* 23 25 25.9
CHTO *e* 23 25 41.0
CHTO *e*PcP PcP 23 26 01.8 -0.4
CD2 Chengdu 58.46 310 P **P 23 25 15.0 +0.6**
CD2 AP pP 23 25 25.9 -0.2
CD2 XP sP 23 25 29.0 -1.7
CD2 PCP PcP 23 26 06.0 +1.4
CD2 SCP ScP 23 30 02.3 +0.5
CD2 PCS PcS 23 30 06.5 +0.2
CD2 S **S 23 33 13.0 -1.8**
CD2 SCS ScS 23 34 58.3 -2.6
CD2 SS SS 23 37 09.8 +2.3
CD2 AMB AMB
comp=Z,50nm,1.2s,mb5.4
CD2 AMB AMB
comp=Z,300nm,5.5s
CD2 LR LR
comp=N,180nm,17.4s
CD2 LR LR
comp=Z,150nm,22.8s
HHC Hu-ho-hao-te 58.68 324 *e*P **P 23 25 16.3 +0.4**
HHC AP pP 23 25 26.4 -1.2
HHC XP sP 23 25 30.3 -1.9
HHC PCP PcP 23 26 05.4 -0.1
HHC PP PP 23 27 28.9 +3.0
HHC SCP ScP 23 29 57.0 -5.7
HHC PCS PcS 23 30 05.4 -1.8
HHC S **S 23 33 18.0 +0.4**
HHC PS 23 33 36.0
HHC SCS ScS 23 34 59.5 -3.0
HHC SS SS 23 37 12.3 +1.4
HHC AMB AMB
comp=Z,64nm,1.0s,mb5.6
HHC AMB AMB
comp=Z,306nm,9.4s
HHC LR LR
comp=N,656nm,19.6s,MS4.8
HHC LR LR
comp=E,578nm,24.5s,MS4.8
HHC LR LR
comp=Z,1µm,26.5s,MS4.8
TBI Tubuai 58.70 115 *e*S **S 23 33 17.9 0.0**
comp=Z,739nm,25.8s
TBI *e*LQ 23 39 55.1
comp=Z,1µm,31.5s
TBI *e*LR LR 23 42 31.2
comp=Z,3µm,27.8s
BTO Baotou 59.44 323 *e*P **P 23 25 21.4 +0.3**
BTO AMB AMB
comp=Z,10.0nm,1.1s,mb4.8
SMY Shemya 59.59 15⇓ *e*P **P 23 25 22.5 +0.3**
SMY *e**PP pP 23 25 33.9 0.0
SMY *e* 23 26 07.9
SMY pmax pmax
comp=Z,108nm,0.6s,mb6.1
SMY Shemya 59.59 15⇓ *e*P **P 23 25 22.5 +0.3**
comp=Z,108nm,0.6s,mb6.1
SMY *e*pP pP 23 25 33.9 0.0
SMY *e*PcP PcP 23 26 07.9 -1.2
AMKA Amchitka 59.89 19⇓ *e*P **P 23 25 24.1 -0.1**
AMKA *e*pP pP 23 25 35.3 -0.7
AMKA *e*PcP PcP 23 26 09.6 -0.7
AMKA *e*ScP ScP 23 30 08.0 -0.1
HIA Hailar 60.61 336*d i*P **P 23 25 28.9 -0.2**
HIA Hailar 60.61 336 *i* Pr **P 23 25 28.0 -1.1**
LZH Lanzhou 60.92 316 *e*P **P 23 25 32.6 +1.3**
LZH AP pP 23 25 41.6 -1.4
LZH XP sP 23 25 45.5 -2.2
LZH PCP PcP 23 26 16.0 +1.5
LZH PP PP 23 27 49.0 +3.3
LZH SCP ScP 23 30 13.5 +0.8
LZH PCS PcS 23 30 18.0 +0.8
LZH S **S 23 33 46.5 +0.1**
LZH AMB AMB
comp=Z,318nm,1.7s,mb6.2
LZH AMB AMB
comp=Z,774nm,4.0s
LZH LR LR
comp=E,2µm,16.0s
LZH LR LR
comp=Z,2µm,17.0s,MS5.4
DRV Dumont d'Urvil 62.90 186 P **P 23 25 40.0 -4.5**
DRV S **S 23 34 08.0 -3.4**
DRV L 23 41 00.0
MA2 Magadan 63.70 359*d i*P **P 23 25 49.2 -0.7**
MA2 *e*S **S 23 34 16.1 -5.3**
MA2 *e*PS 23 34 43.1
MA2 pmax pmax
comp=Z,200nm,0.7s,mb6.3
MA2 pmax pmax
comp=N,90nm,0.8s
MA2 MLR MLR
comp=Z,500nm,21.2s,MS4.7
MA2 Magadan 63.70 359⇓ *i*P **P 23 25 49.3 -0.5**
comp=Z,126nm,0.9s,mb6.0
MA2 *e*pP pP 23 25 56.6 -5.1
CLNS Chul'man 65.05 343*d i*P **P 23 25 58.0 -0.7**
CLNS *e**PP pP 23 26 08.9 -1.6
CLNS *e* 23 26 28.1
CLNS *e*PS 23 34 48.9
CLNS *e**SS sS 23 35 13.0 +15
CLNS *e* 23 35 41.1
CLNS pmax pmax
comp=Z,137nm,1.0s,mb5.9
CLNS pmax pmax
comp=N,70nm,1.1s
CLNS pmax pmax
comp=E,23nm,0.9s
CLNS Chul'man 65.05 343 *i* P **P 23 25 58.1 -0.6**
GTA Gaotai 65.34 317⇓ *i*P **P 23 26 01.8 +1.3**
GTA AP pP 23 26 14.0 +1.6
GTA XP sP 23 26 19.8 +2.8
GTA PCP PcP 23 26 32.8 +0.3
GTA PP PP 23 28 27.1 +2.6
GTA PPP 23 30 02.9
GTA SCP 23 30 32.3
GTA PCS 23 30 35.8
GTA S S 23 34 42.0 +0.4
GTA SS SS 23 38 57.1 +2.1
GTA AMB AMB
comp=Z,87nm,1.2s,mb5.7
GTA AMB AMB
comp=Z,755nm,4.2s
GTA LR LR
comp=N,322nm,20.2s,MS4.8
GTA LR LR
comp=E,472nm,20.5s,MS4.8
GTA LR LR
comp=Z,505nm,19.4s,MS4.7
ULN Ulaanbaatar 65.61 328 P **P 23 26 03.2 +0.9**
SNR=39
ULN Ulaanbaatar 65.61 328⇓ *e*P **P 23 26 03.0 +0.7**
comp=Z,27nm,0.8s,mb5.3
ULN *e*pP pP 23 26 14.4 +0.2
ULN *e*PcP PcP 23 26 33.4 -0.2
SONM Songino Array 65.94 328 P **P 23 26 04.9 +0.5**
comp=Z,34nm,1.2s,mb5.3,baz=136,slow=4.9,SNR=112
SONM PKPPKP 23 54 37.1
comp=Z,1.2nm,0.9s,baz=302,slow=2.3,SNR=5.4
SONM PKP2bc 23 54 43.5
comp=Z,6.3nm,0.8s,baz=289,slow=2.0,SNR=15
SONM Songino Array 65.94 328 P **P 23 26 04.9 +0.5**
SONM P'P' 23 54 37.1
SONM ⇑*e* 23 54 43.5
TAOE Nuku Hiva Isla 66.63 98 *e*LR LR 23 46 05.2
comp=Z,5µm,28.0s
SEY Seymchan 67.05 360⇑ *e*P **P 23 26 11.0 -0.5**
LSA Lhasa 68.01 304 P **P 23 26 19.0 +1.4**
LSA AP pP 23 26 28.6 -0.9
LSA XP sP 23 35 36.4 +2.7
LSA SS SS 23 39 41.8 +5.3
LSA LR LR
comp=N,230nm,25.2s,MS4.9
LSA LR LR
comp=E,760nm,23.5s,MS4.9
LSA LR LR
comp=Z,1µm,22.2s,MS5.1
SPIA Saint Paul Isl 68.17 21 *e*P **P 23 26 18.6 +0.1**
YAK Yakutsk 68.50 348 *e*P **P 23 26 20.4 -0.3**
YAK *e*pP pP 23 26 32.1 -0.5
YAK *e*PP PP 23 28 47.2 -4.9
CASY Casey 68.51 197⇓ *e*P **P 23 26 19.8 -1.0**
comp=Z,124nm,1.1s,mb5.8
CASY *e* 23 26 42.9
TLY Talaya 69.68 330 P **P 23 26 28.4 +0.4**
SNR=14
TLY Talaya 69.68 330⇓ *i*P **P 23 26 27.7 -0.3**
comp=Z,21nm,0.9s,mb5.1
TLY *e*pP pP 23 26 40.0 +0.1
TLY *e*PP PP 23 28 51.5 -11
SDPT Sand Point 70.74 26⇓ *e*P **P 23 26 33.2 -1.3**
SDPT *e*PP PP 23 29 14.0 +2.5
BOK Bokaro 70.89 297 *e*P **P 23 26 36.1 +0.7**
BOK AMb AMB 23 26 38.9
comp=Z,71nm,1.1s,mb5.5
GUN Gumba 71.92 301 *e*P **P 23 26 42.3 +0.7**
comp=Z,392nm,1.2s,mb6.2
RKT Rikitea 71.92 113 *e*S S 23 35 59.7 -0.1
comp=Z,381nm,30.0s
RKT *e*LR LR 23 48 37.0
comp=Z,2µm,30.8s
VIS Vishakhapatnam 71.95 290 *e*P **P 23 26 42.5 +0.7**
VIS AMb AMB 23 26 45.1
comp=Z,153nm,1.1s,mb5.9
PKI Pulchoki 72.24 301 *e*P **P 23 26 43.5 0.0**
comp=Z,247nm,1.3s,mb6.0
CHGN Chignik 72.25 26 *e*P **P 23 26 42.4 -1.2**
KKN Kakani 72.40 301 *e*P **P 23 26 44.6 +0.1**
comp=Z,204nm,1.1s,mb6.0
DMN Daman 72.51 301 *e*P **P 23 26 45.4 +0.3**
comp=Z,420nm,1.1s,mb6.3
BILL Bilibino 72.79 5 *i* Pr **P 23 26 46.5 -0.3**
PALK Pallekele 72.92 279 *e*P **P 23 26 47.3 -0.3**
comp=Z,67nm,1.1s,mb5.5
PALK *e*PcP PcP 23 27 04.1 -0.3
GKN Gorkha 73.01 301 *e*P **P 23 26 47.8 -0.3**
comp=Z,367nm,1.2s,mb6.2
VNDA Vanda 73.32 178 P **P 23 26 49.6 -0.3**
comp=Z,67nm,0.8s,mb5.7,baz=333,slow=6.6,SNR=149
VNDA LR LR 23 57 04.7
comp=Z,541nm,20.1s,MS4.8,baz=351,slow=34
VNDA Vanda 73.32 178 *e*P **P 23 26 49.7 -0.3**
comp=Z,64nm,0.8s,mb5.6
KOLN Koldanda 73.84 300 *e*P **P 23 26 52.8 -0.2**
comp=Z,102nm,0.7s,mb5.9
SBA Scott Base 73.87 177 *e*P **P 23 26 54.0 +0.9**
comp=Z,125nm,1.1s,mb5.8
WMQ Urumqi 75.42 317⇓ *i*P **P 23 27 02.6 +0.5**
WMQ AP pP 23 27 12.6 -1.6
WMQ XP sP 23 27 17.6 -1.2
WMQ PP PP 23 29 53.6 +2.2
WMQ S S 23 36 39.0 -0.2
WMQ SCS ScS 23 37 10.0 -2.2
WMQ SS SS 23 41 32.0 +2.0
WMQ AMB AMB
comp=Z,95nm,1.3s,mb5.6
WMQ AMB AMB
comp=Z,564nm,5.0s
WMQ LR LR
comp=N,845nm,14.0s,MS5.3
WMQ LR LR
comp=E,524nm,13.0s,MS5.3
WMQ LR LR
comp=Z,563nm,13.0s,MS5.0
KDAK Kodiak Island 75.70 27 P **P 23 27 03.0 -0.7**
comp=Z,38nm,1.0s,mb5.3,baz=190,slow=2.1,SNR=17
KDAK LR LR 23 55 01.3
comp=Z,735nm,21.2s,MS5.0,baz=244,slow=31
KDAK Kodiak Island 75.70 27 *e*P **P 23 27 03.5 -0.2**
SVW2 Sparrevohn 76.34 23 *e*P **P 23 27 07.7 +0.3**
HYB Hyderabad 76.39 289 *i* P **P 23 27 07.5 -0.2**
comp=Z,121nm,1.2s,mb5.7
HYB Hyderabad 76.39 289 *e*P **P 23 27 07.5 -0.2**
HYB pmax pmax
comp=Z,121nm,1.2s,mb5.7
HYB Hyderabad 76.39 289 *e*P **P 23 27 07.5 -0.2**
comp=Z,121nm,1.2s,mb5.7
NGP Nagpur 76.54 293⇓ *ex* **P 23 27 03.8 -4.7**
TRD Trivandrum 76.75 280 *e*P **P 23 27 10.0 +0.3**
TRD AMb AMB 23 27 14.4
comp=Z,127nm,1.3s,mb5.7
LGTI Lohaghat 77.09 301 *i* P **P 23 27 14.0 +2.4**
TTA Tatalina 77.28 21 *e*P **P 23 27 12.5 -0.2**
TTA pP 23 27 26.8 +2.0
TTA Tatalina 77.28 21 *e*P **P 23 27 12.8 +0.1**
TIXI Tiksi 77.41 352⇑ *e*P **P 23 27 11.8 -1.6**
SLKM Skilak Lake 78.19 25 P **P 23 27 16.9 -0.8**
SLKM Skilak Lake 78.19 25 *e*P **P 23 27 16.7 -1.0**
SLKM *e*pP pP 23 27 29.4 -0.5
SLKM *e*PP PP 23 30 18.2 +3.6
AKL Akola 78.34 292 *i* P **P 23 27 19.1 +0.5**
AKL AMb AMB 23 27 21.5
comp=Z,137nm,1.1s,mb5.8
BHPL Bhopal 78.38 295 *e*P **P 23 27 19.4 +0.6**
BHPL AMb AMB 23 27 20.9
comp=Z,69nm,1.0s,mb5.5
PMR Palmer 79.20 24 *e*P **P 23 27 22.2 -1.1**
PMR pmax pmax
comp=Z,55nm,0.9s,mb5.5
PMR Palmer 79.20 24 *e*P **P 23 27 22.2 -1.1**
comp=Z,55nm,0.9s,mb5.5
PMR *e*PcP PcP 23 27 31.4 -0.1
NDI New Delhi 79.54 300 *e*P **P 23 27 23.5 -1.6**
SML Sawmill 79.64 24 *e*P **P 23 27 23.1 -2.6**
SML *e*PcP PcP 23 27 32.8 -0.7
MKAR Makanchi Array 79.99 319 P **P 23 27 27.3 -0.3**
comp=Z,19nm,0.8s,mb5.1,baz=100,slow=5.3,SNR=102
MKAR PKKPbc PKKPbc 23 46 12.6 +0.6
comp=Z,4.5nm,0.7s,baz=304,slow=2.6,SNR=22
MKAR PKPPKP 23 54 12.5
comp=Z,0.3nm,0.2s,baz=245,slow=2.6,SNR=3.6
MKAR PKP2bc 23 54 19.0
comp=Z,2.9nm,0.8s,baz=241,slow=3.0,SNR=13
MKAR Makanchi Array 79.99 319 P **P 23 27 27.3 -0.3**
MKAR PKKPbc PKKPbc 23 46 12.6 +0.6
MKAR P'P' 23 54 12.5
MKAR ⇑*e* 23 54 19.0
SMLA Simla 80.04 302 *e*P **P 23 27 27.5 -0.3**
SMLA AMb AMB 23 27 33.2
comp=Z,68nm,0.7s,mb5.7
EYAK Cordova Ski Ar 80.14 26 *e*P **P 23 27 27.9 -0.5**
EYAK *e*pP pP 23 27 39.2 -1.3
SDNR Sundarnagar 80.28 303 *e*P **P 23 27 29.0 -0.1**
MCK McKinley 80.38 23 *e*P **P 23 27 28.3 -1.4**
MCK pmax pmax
comp=Z,84nm,0.8s,mb5.7
MCK McKinley 80.38 23 *e*P **P 23 27 28.2 -1.4**
comp=Z,84nm,0.8s,mb5.7
MCK *e*pP pP 23 27 39.8 -2.0
KAD Karad 80.51 288 *i* P **P 23 27 30.2 -0.2**
ZAL Zalesovo 80.78 326 P **P 23 27 30.7 -1.2**
comp=Z,11nm,1.0s,mb4.7,baz=1.8,slow=6.1,SNR=31
ZAL LR LR 00 02 12.2
comp=Z,547nm,21.2s,MS4.9,baz=357,slow=35
ZAL Zalesovo 80.78 326 P **P 23 27 30.7 -1.1**
ZAL pmax pmax
comp=Z,110nm,1.0s
ZAL MLR MLR
comp=Z,547nm,21.2s
ZAL Zalesovo 80.78 326 P **P 23 27 30.7 -1.2**
COLA College 81.36 22 *i* P **P 23 27 33.2 -1.7**
COLA College 81.36 22 *i* Pr **P 23 27 33.2 -1.7**
AJM Ajmer 81.41 297 *i* P **P 23 27 34.0 -1.2**
THN Thein Dam 81.50 304 *e*P **P 23 27 33.7 -1.9**
NVS Novosibirsk 81.95 327⇓ *i*P **P 23 27 36.8 -1.2**
NVS *i* S S 23 37 47.9 -1.1
NVS *i* 23 38 40.3
NVS pmax pmax
comp=N,48nm,1.8s
NVS pmax pmax
comp=E,80nm,1.8s
NVS pmax pmax
comp=Z,152nm,1.8s,mb5.6
NVS smax
comp=N,40nm,3.0s
NVS smax
comp=E,73nm,2.4s
MENT Mentasta 82.07 24 *e*P **P 23 27 38.5 -0.2**
KSH Kashi 82.66 311 P **P 23 27 43.8 +2.1**
KSH AP pP 23 27 54.3 +0.4
KSH XP sP 23 27 58.4 -0.1
KSH PP PP 23 30 56.8 +5.1
KSH PPP 23 32 49.6
KSH SKS 23 37 59.1
KSH SS SS 23 43 26.5 +7.8
KSH AMB AMB
comp=Z,286nm,1.1s,mb6.2
KSH LR LR
comp=N,392nm,10.0s,MS5.5
KSH LR LR
comp=E,886nm,10.9s,MS5.5
KSH LR LR
comp=Z,468nm,15.8s,MS5.0
ULHL Ulahol 83.03 313 P **P 23 27 44.3 +0.7**
SNR=32
KURK Kurchatov 83.42 322 P **P 23 27 44.1 -1.5**
comp=Z,535nm,1.2s,mb6.5,SNR=50
TKM2 Tokmak 2 83.63 314 P **P 23 27 47.2 +0.4**
SNR=69
KZA Kyzart 83.71 313 P **P 23 27 49.4 +2.2**
SNR=61
SIT Sitka 83.81 31 *e*P **P 23 27 47.8 +0.1**
SIT *e* 23 28 06.2
SIT pmax pmax
comp=Z,27nm,0.8s,mb5.4
SIT Sitka 83.81 31 *e*P **P 23 27 47.8 +0.1**
comp=Z,27nm,0.8s,mb5.4
SIT *e*PcP PcP 23 27 51.5 -0.2
SIT *e* 23 28 06.2
EGAK Eagle 83.88 23 *e*P **P 23 27 47.6 -0.4**
EGAK *e*pP pP 23 27 59.4 -0.8
KBK Karagaybulak 84.05 314 P **P 23 27 49.3 +0.4**
SNR=38
CHMS Chumysh 84.26 314 P **P 23 27 50.1 +0.2**
SNR=62
UCH Uchtor 84.28 313 P **P 23 27 52.2 +2.1**
SNR=20
DAWY Dawson 84.31 24 *e*P **P 23 27 50.1 -0.1**
DAWY *e*pP pP 23 28 02.6 +0.2
DAWY *e*PP PP 23 31 04.5 -0.7
FRU Bishkek 84.32 314 *i* P **P 23 27 50.0 -0.3**
FRU *i* pP 23 28 03.5 +1.0
FRU pmax pmax
comp=Z,380nm,1.9s,mb6.2
FRU MLR MLR
comp=Z,400nm,20.0s,MS4.8
AAK Ala-Archa 84.37 313 P **P 23 27 51.2 +0.7**
SNR=32
AAK Ala-Archa 84.37 313 P **P 23 27 50.3 -0.2**
SNR=52
AAK Ala-Archa 84.37 313⇑ *e*P **P 23 27 49.9 -0.6**
AAK pmax pmax
comp=Z,133nm,1.5s,mb5.8
AAK MLR MLR
comp=Z,400nm,19.0s,MS4.8
AAK Ala-Archa 84.37 313 *e*P **P 23 27 49.8 -0.7**
comp=Z,49nm,0.8s,mb5.7
USP Ospenovka 84.49 314 P **P 23 27 51.2 +0.1**
SNR=115
AML Almayashu 84.86 313 P **P 23 27 54.2 +1.2**
SNR=71
EKS2 Erkin-Say 84.90 313 P **P 23 27 53.8 +0.6**
SNR=80
MAW Mawson 86.05 203 P **P 23 27 57.7 -1.2**
comp=Z,69nm,0.7s,mb6.0,baz=97,slow=7.7,SNR=173
MAW PKKPbc PKKPbc 23 45 58.4 +0.3
comp=Z,4.5nm,0.8s,baz=269,slow=4.1,SNR=13
MAW LR LR 00 03 06.6
comp=Z,1µm,21.1s,MS5.2,baz=84,slow=33
MAW Mawson 86.05 203⇓ *i*P **P 23 27 57.9 -1.0**
MAW pmax pmax
comp=Z,55nm,0.6s
MAW Mawson 86.05 203⇓ *i*P **P 23 27 57.9 -1.0**
comp=Z,55nm,0.6s,mb6.0
DLBC Dease Lake 86.92 31 PKKPbc PKKPbc 23 45 57.2 +1.2
comp=Z,5.2nm,0.9s,baz=329,slow=4.1,SNR=6.4
DLBC LR LR 00 00 50.4
comp=Z,2µm,20.8s,MS5.5,baz=284,slow=31
INK Inuvik 87.97 21 PKKPbc PKKPbc 23 45 53.1 -0.4
comp=Z,7.0nm,0.9s,baz=97,slow=5.5,SNR=5.7
INK LR LR 00 11 13.1
comp=Z,357nm,18.3s,MS4.8,baz=180,slow=38
INK Inuvik 87.97 21 *e*P **P 23 28 06.3 -1.9**
INK pmax pmax
comp=Z,71nm,1.0s
INK Inuvik 87.97 21 *e*P **P 23 28 06.3 -2.0**
comp=Z,71nm,1.0s,mb5.8
INK *e*pP pP 23 28 15.7 -4.8
INK *e*PP PP 23 31 34.6 -0.2
N02C Big Bar 88.12 49 ⇓P **P 23 28 10.0 +1.0**
baz=88
I02A Mapleton 88.15 46 ⇓P **P 23 28 08.9 -0.2**
baz=88
C03A Quillayute Air 88.19 42 ⇓P **P 23 28 09.2 0.0**
baz=88
J02A Umpqua 88.25 46 ⇓P **P 23 28 10.6 +1.0**
baz=88
GASB Alder Springs 88.42 50 ⇓P **P 23 28 11.2 +0.9**
baz=88
O02C Red Bluff 88.43 50 ⇓P **P 23 28 12.5 +2.1**
baz=88
M02C Callahan 88.53 48 ⇑P **P 23 28 11.7 +0.9**
baz=89
MNRC McLaughlin Nat 88.54 51 ⇓P **P 23 28 13.5 +2.6**

baz=89
BNLO Ben Lomond (Sa 88.55 53 ⇑P P 23 28 13.6 +2.6
baz=89
WDC Whiskeytown Da 88.66 49 ⇓P P 23 28 10.7 -0.8
baz=89
E03A Lebam 88.67 43 ⇑P P 23 28 11.0 -0.5
baz=89
YBH Yreka Blue Hor 88.67 48 PKKPbc PKKPbc 23 45 52.6 +0.8
comp=Z,3.1nm,0.8s,baz=169,slow=2.5,SNR=4.8
YBH Yreka Blue Hor 88.67 48 *e*P P 23 28 12.4 +0.9
YBH Yreka Blue Hor 88.67 48 *e*P P 23 28 12.0 +0.4
comp=Z,15nm,1.3s,mb5.2
YBH *e*PP PP 23 31 42.8 +2.4
YBH Yreka Blue Hor 88.67 48 ⇓P P 23 28 11.0 -0.5
baz=89
J03A Ideyld Park 88.69 47 ⇑P P 23 28 11.1 -0.5
baz=89
CHKZ Chkalovo 88.85 324 ⇓*i*P P 23 28 10.1 -2.3
CHKZ *e*PP PP 23 31 40.1 -1.7
BVAR Borovoye Array 88.88 323 P P 23 28 10.9 -1.7
comp=Z,53nm,0.8s,mb5.9,baz=112,slow=5.0,SNR=193
BVAR PKKPbc PKKPbc 23 45 51.8 +0.5
comp=Z,1.9nm,0.7s,baz=297,slow=6.5,SNR=8.8
BVAR PKPPKP 23 53 59.1
comp=Z,1.8nm,1.0s,baz=216,slow=4.6,SNR=7.6
BVAR LR LR 00 09 52.6
comp=Z,611nm,20.1s,MS5.0,baz=326,slow=37
BRVK Borovoye 88.95 323 P P 23 28 11.6 -1.3
SNR=48
BRVK Borovoye 88.95 323 ⇓*i*P P 23 28 11.2 -1.7
BRVK *e*pP pP 23 28 24.5 -0.6
BRVK *e*PP PP 23 31 43.5 +0.9
M03C McCloud 89.06 49 ⇑P P 23 28 13.1 -0.2
baz=89
C04A Brinnon 89.22 42 ⇑P P 23 28 13.4 -0.7
baz=89
GNW Green Mountain 89.30 42 *e*P P 23 28 14.4 -0.1
M04C Macdoel 89.33 48 ⇑P P 23 28 14.5 -0.1
baz=89
L04A Klamath Falls 89.33 48 ⇓P P 23 28 14.3 -0.4
baz=89
ORV Oroville 89.34 50 ⇑P P 23 28 14.0 -0.7
baz=89
F04A Amboy 89.38 44 ⇓P P 23 28 14.5 -0.4
baz=89
H04A Detroit Lake 89.40 45 ⇓P P 23 28 14.4 -0.5
baz=89
ZRNK Zerenda 89.70 323 ⇓*i*P P 23 28 14.4 -2.0
ZRNK *e**PP pP 23 28 26.8 -1.9
ZRNK *i* 23 31 49.7
ZRNK pmax pmax
comp=Z,83nm,1.0s,mb6.0
ZRNK Zerenda 89.70 323 ⇓*i*P P 23 28 14.4 -2.0
comp=Z,83nm,1.0s,mb6.0
ZRNK *e*pP pP 23 28 26.8 -1.9
ZRNK *i* PP PP 23 31 49.7 +1.0
M05C Lookout 89.80 49 ⇑P P 23 28 16.9 +0.1
baz=90
LAVA Lava Cap Winer 89.85 51 ⇓P P 23 28 17.0 -0.1
baz=90
B05A Bryant 89.87 42 ⇑P P 23 28 16.2 -1.0
baz=90
J05A Fort Rock 89.93 47 P P 23 28 17.4 0.0
baz=90,SNR=16
P05C Yuba Gap, Truc 90.01 51 ⇑P P 23 28 18.6 +0.8
baz=90
F05A White Salmon 90.04 44 ⇓P P 23 28 17.9 -0.1
baz=90
CMB Columbia Colle 90.06 52 *e*P P 23 28 18.9 +0.9
CMB Columbia Colle 90.06 52 ⇓P P 23 28 17.8 -0.2
baz=90
G05A Wamic 90.08 45 ⇑P P 23 28 18.2 +0.1
baz=90
H05A Madras 90.08 45 ⇑P P 23 28 18.3 +0.2
baz=90
C05A Tolt Reservoir 90.08 42 ⇓P P 23 28 17.9 -0.2
baz=90
L05A Lakeview 90.10 48 ⇑P P 23 28 18.9 +0.7
baz=90
BEKR Beckwourth 90.25 50 ⇑P P 23 28 19.3 +0.4
baz=90
M06C Likely Place G 90.29 49 ⇓P P 23 28 19.5 +0.4
baz=90
S06C San Francisco 90.47 52 ⇓P P 23 28 20.2 +0.2
baz=90
T06C Millerton Lake 90.50 53 ⇑P P 23 28 20.2 +0.1
baz=90
G06A Carlson Farm, 90.55 45 ⇑P P 23 28 20.4 +0.1
baz=91
K06A Valley Falls 90.60 47 P P 23 28 20.6 0.0
baz=91,SNR=9.1
O06A Flanigan 90.68 50 ⇓P P 23 28 21.0 +0.1
baz=91
J06A Christmas Vall 90.72 47 P P 23 28 20.7 -0.4
baz=91,SNR=11
H06A Lindquist Farm 90.72 45 ⇑P P 23 28 20.2 -0.9
baz=91,SNR=8.5
N06A Buffalo Meadow 90.73 49 ⇓P P 23 28 20.4 -0.7
baz=91,SNR=6.2
I06A Prineville 90.74 46 ⇑P P 23 28 20.9 -0.3
baz=91
R06C Coleville 90.83 52 ⇑P P 23 28 21.7 +0.1
baz=91
KCC Kaiser Creek 90.84 53 ⇓P P 23 28 21.9 +0.2
baz=91
WAKR Walker 90.84 52 *e*P P 23 28 22.4 +0.7
VES Vestal, Richgr 90.91 54 ⇓P P 23 28 21.7 -0.3
baz=91
HELL Mitchell Peak, 91.02 53 ⇓P P 23 28 22.6 +0.1
baz=91
L07A Adell 91.21 48 ⇓P P 23 28 23.4 0.0
baz=91
I07A Izee 91.25 46 P P 23 28 23.3 -0.3
baz=91,SNR=14
ISA Isabella 91.39 55 ⇑P P 23 28 24.3 0.0
baz=91
DECC Green Verdugo 91.40 56 P P 23 28 23.7 -0.6
baz=91
O07A Toulon 91.41 50 ⇑P P 23 28 23.6 -0.7
baz=91
HAWA Hanford 91.42 44 *e*P P 23 28 23.6 -0.8
MTUM Tungsten Hills 91.44 53 *e*P P 23 28 24.3 -0.1
MWC Mount Wilson 91.63 56 *e*P P 23 28 26.2 +0.9
NVAR Mina Array Bea 91.72 52 P P 23 28 26.0 +0.2
comp=Z,6.5nm,0.8s,mb5.0,baz=253,slow=5.3,SNR=28
NVAR PKPPKP 23 53 51.6
comp=Z,0.8nm,0.8s,baz=64,slow=3.4,SNR=5.1
WVOR Wild Horse Val 91.76 48 P P 23 28 26.1 +0.2
WVOR pmax pmax
comp=Z,19nm,1.2s,mb5.3
WVOR Wild Horse Val 91.76 48 *e*P P 23 28 26.1 +0.1
comp=Z,19nm,1.2s,mb5.3
R08A Mina 91.87 52 ⇓P P 23 28 26.3 -0.1
baz=92,SNR=6.1
M08A Happy Creek Ra 91.88 49 ⇑P P 23 28 26.4 -0.1
baz=92
H08A Prairie City 91.89 46 ⇑P P 23 28 25.9 -0.6
baz=92
K08A Mann Creek Ran 91.89 47 ⇑P P 23 28 26.1 -0.4
baz=92
F08A Pendleton 91.90 44 ⇓P P 23 28 25.9 -0.7
baz=92
I08A Drewsey 91.92 46 ⇓P P 23 28 26.1 -0.6
baz=92
BFSC Mount Baldy St 91.96 56 ⇑P P 23 28 26.6 -0.3
baz=92
L08A Fields 91.96 48 ⇑P P 23 28 26.6 -0.3
baz=92,SNR=6.5
LRMC Laurel Mountai 92.01 55 ⇑P P 23 28 27.0 -0.1
baz=92,SNR=8.2
N08A GE Springer Mi 92.02 49 ⇑P P 23 28 26.4 -0.7
baz=92,SNR=5.8
Q08A Gabbs 92.05 51 ⇑P P 23 28 26.8 -0.4
baz=92,SNR=8.7
DAC Darwin (Calif) 92.14 54 *e*P P 23 28 28.0 +0.3
DAC pmax pmax
comp=Z,26nm,1.4s,mb5.4
DAC Darwin (Calif) 92.14 54 *e*P P 23 28 28.0 +0.3
comp=Z,26nm,1.4s,mb5.4
MPMC Manual Prospec 92.21 54 ⇑P P 23 28 28.2 +0.2
baz=92,SNR=5.8
K09A Rome 92.45 48 ⇑P P 23 28 28.8 -0.3
baz=92
N09A Rock Creek Ran 92.49 49 ⇓P P 23 28 29.3 0.0
baz=92
I09A Lost Marbles R 92.52 46 ⇑P P 23 28 29.3 -0.1
baz=92
S09A Goldfield 92.53 53 ⇑P P 23 28 29.2 -0.3
baz=93,SNR=11
TPH Tonopah 92.55 52 P P 23 28 30.3 +0.7
M09A Marrel Ranch, 92.58 49 ⇓P P 23 28 30.0 +0.3
baz=93
Q09A Carvers 92.63 51 ⇑P P 23 28 29.7 -0.3
baz=93
R09A Tonopah 92.68 52 ⇑P P 23 28 30.2 0.0
baz=93
BMN Battle Mountai 92.69 50 *e*P P 23 28 31.3 +1.1
BMN pmax pmax
comp=Z,30nm,0.7s,mb5.8
BMN Battle Mountai 92.69 50 *e*P P 23 28 31.3 +1.0
comp=Z,3.2nm,0.7s,mb4.9
O09A Fish Creek Ran 92.70 50 ⇑P P 23 28 30.4 +0.2
baz=93
GSC Goldstone 92.72 55 *e*P P 23 28 31.1 +0.7
GSC *e* 23 32 21.5
GSC Goldstone 92.72 55 *e*P P 23 28 31.1 +0.7
GSC Goldstone 92.72 55 ⇓P P 23 28 30.4 0.0
baz=93
FURC Furnace Creek, 92.75 54 ⇓P P 23 28 30.3 -0.2
baz=93
BMO Blue Mountains 92.88 45 *e*P P 23 28 31.0 -0.1
BMO pmax pmax
comp=Z,30nm,1.4s,mb5.5
BMO Blue Mountains 92.88 45 *e*P P 23 28 31.0 -0.1
comp=Z,30nm,1.4s,mb5.5
MONP Monument Peak 92.91 57 ⇑P P 23 28 30.9 -0.3
baz=93
PFO Pinyon Flat Ob 92.92 57 *e*P P 23 28 32.8 +1.5
PFO Pinyon Flat Ob 92.92 57 *e*P P 23 28 31.8 +0.5
PFO Pinyon Flat Ob 92.92 57 ⇓P P 23 28 30.8 -0.5
baz=93
HEC Hector,Ludlow 93.09 55 ⇓P P 23 28 31.7 -0.3
baz=93
U10A Ash Meadows, A 93.17 54 ⇓P P 23 28 32.1 -0.3
baz=93
NEW Newport 93.18 42 *e*P P 23 28 31.9 -0.6
NEW *e* 23 28 38.3
NEW Newport 93.18 42 *e*P P 23 28 30.2 -2.3
SHOC Shoshone 93.18 54 ⇓P P 23 28 31.8 -0.8
baz=93
O10A Cortez Mining, 93.23 50 ⇓P P 23 28 32.3 -0.5
baz=93
BELC Belle Mtn. 93.32 56 ⇑P P 23 28 33.8 +0.6
baz=93
SWSC Sam W. Stewart 93.43 57 ⇓P P 23 28 34.3 +0.6
baz=94
TUQ Turquoise Mtn. 93.45 55 ⇓P P 23 28 34.0 +0.3
baz=94
GMRC Granite Mounta 93.64 56 ⇓P P 23 28 34.9 +0.3
baz=94,SNR=6.5
O11A Cowboy Ranch, 93.87 50 ⇑P P 23 28 36.0 +0.3
baz=94
SHPR Sheep Range 94.12 54 *e*P P 23 28 37.3 +0.5
SYO Syowa Base 94.16 199 ⇑*i*P P 23 28 35.0 -2.0
SYO Syowa Base 94.16 199 ⇓*e*P P 23 28 40.4 +3.4
ELK Elko 94.21 50 P pP 23 28 50.1 +0.5
GLA Glamis 94.25 57 *e*P P 23 28 40.7 +3.3
GLA *e**PP pP 23 28 54.2 +4.5
GLA Glamis 94.25 57 *e*P P 23 28 36.8 -0.6
GLA *e* 23 28 54.0
GLA *e*PP PP 23 32 36.5 +12
GLA Glamis 94.25 57 ⇑P P 23 28 37.7 +0.3
baz=94
W12A Cal Nev Ari 94.31 55 ⇓P P 23 28 37.6 0.0
baz=94
V12A Nelson 94.34 55 ⇓P P 23 28 38.2 +0.4
baz=94
N12A Clover Valley, 94.37 49 ⇑P P 23 28 37.9 0.0
baz=94
Q12A Willow Creek R 94.47 51 ⇓P P 23 28 38.5 +0.1
baz=94
M12A Wells 94.48 49 ⇑P P 23 28 39.0 +0.6
baz=94
Y12C Blythe 94.53 57 ⇓P P 23 28 39.0 +0.3
baz=95
O12A Currie 94.57 50 ⇓P P 23 28 39.8 +0.9
baz=95
U12A Valley of Fire 94.61 54 ⇓P P 23 28 39.5 +0.4
baz=95
BSMT Bassoo Peak 94.73 42 *e*P P 23 28 39.1 -0.6
BSMT *e*pP pP 23 28 59.3 +7.3
PDMCI Parker Dam,Lak 94.87 56 ⇑P P 23 28 40.7 +0.4
baz=95
HLID Hailey 94.91 47 *e*P P 23 28 39.5 -0.9
comp=Z,22nm,1.6s,mb5.3
YKW3 Yellowknife Ar 94.95 28 *e*P P 23 28 39.6 -1.0
YKA Yellowknife Ar 94.96 28 P P 23 28 39.7 -1.0
comp=Z,13nm,0.7s,mb5.4,baz=272,slow=4.5,SNR=41
YKA PKKP PKiKP 23 33 21.5 -0.8
comp=Z,2.0nm,0.6s,baz=274,slow=1.2,SNR=12
YKA PKKP PKKPbc 23 45 34.7 -1.0
comp=Z,3.8nm,0.8s,baz=82,slow=2.7,SNR=9.8
YKA LR LR 00 05 39.6
comp=Z,1μm,21.5s,MS5.3,baz=240,slow=32
YKA Yellowknife Ar 94.96 28 P P 23 28 39.7 -1.0
W13A Hualapai Mount 95.10 55 ⇑P P 23 28 42.8 +1.5
baz=95
Y13A Salome 95.11 57 ⇓P P 23 28 43.0 +1.6
baz=95
X13A Yucca 95.14 56 ⇑P P 23 28 42.3 +0.9
baz=95
WALA Waterton Lakes 95.33 41 *e*P P 23 28 42.0 -0.4
comp=Z,12nm,0.9s,mb5.3
ARUT Antelope Range 95.53 53 P P 23 28 45.2 +1.9
ARUT Antelope Range 95.53 53 *e*P P 23 28 44.8 +1.5
WSAR Wadi Sarin 95.56 293 P P 23 28 42.5 -0.9
comp=Z,13nm,0.7s,mb5.5,baz=97,slow=4.5,SNR=8.3
WSAR PKKP PKKPbc 23 45 34.1 -0.1
comp=Z,7.0nm,0.7s,baz=132,slow=9.0,SNR=7.9
CCUT Cedar City 95.58 53 *e*P P 23 28 43.8 +0.3
EDM Edmonton 95.69 37 *e*P P 23 28 42.7 -1.3
EDM *e* 23 29 07.8
W14A Seligman 95.76 55 ⇑P P 23 28 46.0 +1.6
baz=96
CHMT Chamberlain Mo 95.77 43 *e*P P 23 28 43.1 -1.2
Y14A Wickenburg 95.80 56 ⇓P P 23 28 46.0 +1.5
baz=96
Z14A Wintersburg 95.84 57 ⇑P P 23 28 46.0 +1.3
baz=96
X14A Yava 95.91 56 ⇑P P 23 28 46.3 +1.3
baz=96
ARU Arti 95.94 326 ⇓*i*P P 23 28 42.5 -2.6
ARU *e* 23 32 34.1
ARU *e*PPP 23 34 35.4
ARU *e*S S 23 39 15.8 -45
ARU *e*SP SP 23 41 17.5 -1.6
ARU *e*PS PS 23 41 27.8 +3.6
ARU *e*SS SS 23 46 26.7 -4.7
ARU *e*SSS 23 50 14.6
ARU pmax pmax
comp=Z,26nm,1.0s,mb5.6
ARU MLR MLR
comp=E,400nm,20.0s,MS4.9
ARU MLR MLR
comp=Z,600nm,20.0s,MS5.1
ARU MLR MLR
comp=N,60nm,17.0s,MS4.9
ARU Arti 95.94 326 *e*P P 23 28 42.4 -2.8
comp=N,34nm,1.0s,mb5.7
ARU *e*pP pP 23 28 54.5 -3.0
HVU Hansel Valley 96.09 49 *e*P P 23 28 47.7 +1.9
AKTK Aktyubinsk 96.38 320 P P 23 28 45.0 -2.2
AKTO Aktyubinsk 96.38 320 P P 23 28 45.0 -2.2
comp=N,13nm,0.9s,mb5.3,baz=86,slow=5.5,SNR=40
AKTO PKiKP PKiKP 23 33 24.8 0.0
comp=N,2.8nm,0.8s,baz=83,slow=3.4,SNR=5.7
AKTO PKKP PKKPbc 23 45 32.5 +0.6
comp=N,4.7nm,0.8s,baz=281,slow=2.4,SNR=18
AKTO LR LR 00 11 29.6
comp=N,216nm,21.5s,MS4.6,baz=265,slow=35
115A Sonoran Desert 96.43 58 ⇓P P 23 28 48.8 +1.4
baz=96
X15A Humboldt 96.45 56 ⇑P P 23 28 49.2 +1.7
baz=96
BOZ Bozeman (W) 96.90 45 *e*P P 23 28 49.0 -0.5
comp=N,4.5nm,0.9s,mb4.9
RRI2 Red Ridge 97.16 47 *e*P P 23 28 51.1 +0.4
WUAZ Wupatki 97.17 55 *e*P P 23 28 51.0 +0.3
comp=N,5.4nm,0.9s,mb5.0
WUAZ *e* 23 29 12.6
TUC Tucson 97.64 58 *e*P P 23 28 52.7 -0.2
SRU San Rafael 97.82 51 *e*P P 23 28 53.8 +0.1
LPIG La Paz 97.96 66 LR LR 00 10 29.2
comp=N,1μm,18.1s,MS5.5,baz=332,slow=34
EGMT Eagleton 98.12 42 *e*P P 23 28 54.0 -1.0
BW06 Boulder Array 98.47 48 *e*P P 23 28 54.9 -1.7
comp=N,3.2nm,0.9s,mb4.8
PDAR Pinedale Array 98.47 48 P P 23 28 55.6 -0.9
comp=N,2.3nm,0.9s,mb4.7,baz=259,slow=1.6,SNR=15
PDAR PP PP 23 33 03.3 +6.2
comp=N,2.0nm,0.9s,baz=269,slow=4.2,SNR=4.7
PDAR PKiKP PKiKP 23 33 29.6 +1.2
comp=N,1.1nm,0.7s,baz=140,slow=5.8,SNR=3.2
PDAR PKKP PKKPbc 23 45 26.6 +0.4
comp=N,2.3nm,0.9s,baz=91,slow=5.1,SNR=10
PDAR LR LR 00 11 49.7
comp=N,966nm,18.6s,MS5.3,baz=270,slow=34
PDAR Pinedale Array 98.47 48 P P 23 28 55.6 -0.9
PDAR PP PP 23 33 03.3 +6.2
RES Resolute Bay 99.91 14 *e*P Pdif 23 29 02.5 -0.5
SMCO Snowmass 100.58 51 *e*Pdif Pdif 23 29 06.4 +0.5
ANMO Albuquerque 101.20 55 PFAKE 23 29 20.0 +11
ANMO LR LR
comp=Z,988nm,22.0s,MS5.3
MNTX Cornudas Mount 102.24 59 *e*PP PP 23 33 36.7 +11
RSSD Black Hills 102.38 46 *e*P Pdif 23 29 12.9 -1.1
KBS Kingsbay 102.87 353 *e* PS 23 42 35.5 -3.2
KBS *e*SS SS 23 48 05.9 -2.4
KBS AMS AMS 00 13 40.6
comp=Z,180nm,19.9s,MS4.6
FCC Fort Churchill 105.49 30 *e*PKiKP PKiKP 23 33 40.1 -1.1
ARCES ARCESS Array B 106.41 343 Pdiff Pdif 23 29 30.1 -1.8
comp=Z,1.6nm,0.9s,baz=341,slow=4.8,SNR=5.4
ARCES PKiKP PKiKP 23 33 41.8 -1.1
comp=Z,7.1nm,0.7s,baz=69,slow=1.2,SNR=26
ARCES PKKPbc PKKPbc 23 45 01.9 -1.0
comp=Z,1.9nm,0.6s,baz=242,slow=2.4,SNR=22
ARE0 ARCESS Array S 106.41 343 *e*PKiKP PKiKP 23 33 42.0 -0.9
GNI Garni 106.60 311 PKiKP PKiKP 23 33 43.9 +0.7
comp=Z,8.4nm,0.8s,baz=302,slow=5.8,SNR=7.6
GNI Garni 106.60 311 *e*PKiKP PKiKP 23 33 44.0 +0.8
ULM Lac du Bonnet 106.81 39 PKiKP PKiKP 23 33 42.8 -0.9
comp=Z,6.3nm,0.8s,baz=196,slow=0.8,SNR=8.7
JCT Junction City 107.10 60 *e*PKiKP PKiKP 23 33 48.4 +4.3
DAG Danmarks Havn 107.44 358 ⇑*i*P Pdif 23 29 34.1 -2.3
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 107.44 358 ⇑*i*P PKiKP 23 33 42.8 -2.0
comp=Z,5.2nm,0.8s
DAG Danmarks Havn 107.44 358 ⇑*e*P Pdif 23 29 34.1 -2.3
DAG pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 107.44 358 ⇑*e*P Pdif 23 29 34.1 -2.3
comp=Z,5.0nm,0.9s
DAG ⇑*i*P 23 33 42.8
KIV Kislovodsk 107.45 315 *e*PKiKP PKiKP 23 33 44.3 -0.5
KIV *e*PP PP 23 34 02.7 -1.6
WMOK Wichita Mounta 107.51 55 *e*PKiKP PKiKP 23 33 45.3 +0.4
MOS Moscow 107.57 328 *e*P Pdif 23 29 32.7 -4.4
TRO Tromso 108.18 345 *e*PP PP 23 34 08.9 -0.8
TRO AMS AMS 00 22 26.6
comp=Z,431nm,20.5s,MS5.0
OBN Obninsk 108.35 327 *e*PKiKP PKiKP 23 33 45.9 -0.5
KSU1 Kansas State U 108.59 50 *e*PKiKP PKiKP 23 33 47.2 +0.2
ATD Arta Tunnel 110.45 281 PKiKP PKiKP 23 33 50.8 +0.4
comp=Z,8.7nm,0.8s,baz=18,slow=4.5,SNR=3.7
FINES FINESS Array B 110.63 336 Pdiff Pdif 23 29 48.2 -2.4
comp=Z,1.1nm,0.7s,baz=140,slow=12,SNR=6.5
FINES PKiKP PKiKP 23 33 49.8 -1.0
comp=Z,9.0nm,0.8s,baz=108,slow=6.2,SNR=27
FINES PKKPbc PKKPbc 23 44 49.0 -0.7
comp=Z,3.3nm,0.8s,baz=180,slow=2.6,SNR=22
FINES FINESS Array B 110.63 336 *i* PKiKP PKiKP 23 33 49.8 -0.9
FINES 23 44 49.0
FINES pmax pmax
comp=Z,9.0nm,0.8s
ANN Anapa 110.93 316 *i* PKiKP PKiKP 23 33 47.5 -3.8
ANN *e* 23 34 27.4
ANN *e* 23 40 25.1
ANN *e*SP SP 23 43 56.3 +0.5
ANN pmax pmax
comp=Z,62nm,5.8s
SUMG Summit 111.44 4 *e*PKiKP PKiKP 23 33 52.0 -0.3
MALT Malatya 111.75 310 ⇓*i*P PKiKP 23 33 53.2 +0.3
MALT Malatya 111.75 310 PKiKP PKiKP 23 33 53.3 +0.4
MALT Malatya 111.75 310 *e*PKiKP PKiKP 23 33 52.7 -0.2
MALT *e*pPKP 23 34 08.1
MALT *e*PP PP 23 34 37.7 +2.3
MIAR Mount Ida 111.78 55 *e*PKiKP PKiKP 23 33 54.8 +1.9
MIAR Mount Ida 111.78 55 *e*PKPdf PKiKP 23 33 53.2 +0.3
USHA Ushuaia 111.88 156 PKKPbc PKKPbc 23 44 44.6 -0.9
comp=Z,13nm,0.9s,baz=352,slow=2.7,SNR=4.1
JMIC Jan Mayen 112.34 354 *e* PS 23 44 24.2 +11
JMIC AMS AMS 00 17 35.9
comp=Z,124nm,22.1s,MS4.5
JFWS Jewell Farm 112.45 45 *e*PKiKP PKiKP 23 33 53.5 -0.7
CCM Cathedral Cave 112.92 50 *e*PKiKP PKiKP 23 33 54.8 -0.3
SIM Simferopol' 113.14 317 *i* PKiKP PKiKP 23 33 55.0 -0.5
SIM *i* 23 34 45.0
SIM *e*PS PS 23 44 14.0 -7.0
SIM pmax pmax
comp=Z,13nm,0.7s
MNK Minsk 113.23 329 *e*PKiKP PKiKP 23 33 52.0 -3.7
FVM French Village 113.57 50 *e*PKiKP PKiKP 23 33 55.7 -0.6
NSS Namsos 113.69 343 AMS AMS 00 21 22.9
comp=Z,703nm,24.8s,MS5.2
AKASG Malin Array Be 114.13 325 PKP PKiKP 23 33 56.4 -1.1
comp=Z,29nm,0.8s,baz=62,slow=2.2,SNR=88
AKASG SKP 23 37 30.5
comp=Z,4.9nm,0.7s,baz=62,slow=2.2,SNR=8.7
AKASG PKKPbc PKKPbc 23 44 37.9 -0.1
comp=Z,5.8nm,0.7s,baz=261,slow=3.9,SNR=29
AKASG Malin Array Be 114.13 325 PKiKP PKiKP 23 33 56.4 -1.0
AKASG pmax pmax
comp=Z,29nm,0.8s
AKASG pmax pmax
comp=N,5.0nm,0.7s
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 114.13 325 PKP PKiKP 23 33 56.4 -1.1
AKASG SKP 23 37 30.5
AKASG PKKPbc PKKPbc 23 44 37.9 -0.1
BHL Bhannes 114.87 305 *e*P PKiKP 23 33 58.9 +0.1
BR131 Keskin Array S 115.02 312 *e*PKiKP PKiKP 23 33 58.3 -0.8
BRTR Keskin Array B 115.02 312 PKP PKiKP 23 33 58.4 -0.7
comp=Z,12nm,1.0s,baz=120,slow=2.0,SNR=40
BRTR PKKPbc PKKPbc 23 44 36.9 +2.0
comp=Z,2.2nm,0.7s,baz=220,slow=2.9,SNR=13
BRTR Keskin Array B 115.02 312 PKIKP PKiKP 23 33 58.4 -0.7
BRTR 23 44 36.9
BRTR pmax pmax
comp=Z,12nm,1.0s
KMBO Kilima Mbogo 115.44 267 PKP PKPdf 23 34 00.8 +0.9
comp=Z,9.8nm,0.9s,baz=43,slow=3.4,SNR=20
KMBO Kilima Mbogo 115.44 267 PKIKP PKPdf 23 34 00.9 +1.0
KMBO pmax pmax
comp=Z,10.0nm,0.9s
ANTO Ankara 115.60 312 ⇓*i*P PKPdf 23 34 00.2 0.0
ANTO Ankara 115.60 312 PKIKP PKPdf 23 34 00.3 +0.1
ANTO Ankara 115.60 312 ⇓P PKPdf 23 34 00.2 -0.1
SUW Suwalki 115.85 330 *e*PKP PKPdf 23 33 59.8 -0.9
WVT Waverly 116.03 52 PKIKP PKPdf 23 34 00.4 -0.7
WVT Waverly 116.03 52 *e*PKPdf PKPdf 23 34 00.2 -0.9
BLO Bloomington 116.20 48 *e*PKIKP PKPdf 23 34 01.3 -0.1
HFS Hagfors 116.24 339 PKP PKPdf 23 33 60.0 -1.5
comp=Z,10.0nm,0.8s,baz=116,slow=3.4,SNR=25
HFS PKKPbc PKKPbc 23 44 30.0 -0.7
comp=Z,4.3nm,1.0s,baz=134,slow=4.3,SNR=6.8
EIL Elat 116.30 301 *e*PKiKP PKiKP 23 34 01.4 -0.2
NB2 NORSAR Subarra 116.47 340 PKPd PKPdf 23 34 00.5 -1.4
comp=Z,12nm,0.7s,baz=44,slow=2.0
NB2 NORSAR Subarra 116.47 340 PKPd PKPdf 23 34 00.5 -1.4
baz=44,slow=2.0
NOA NORSAR Array B 116.47 340 PKP PKPdf 23 34 00.6 -1.3
comp=Z,10nm,0.7s,baz=45,slow=1.9,SNR=94
NOA PP PP 23 35 04.8 -4.0
comp=Z,3.3nm,0.9s,baz=38,slow=6.6,SNR=3.0
NOA SKP 23 37 35.2
comp=Z,2.6nm,0.8s,baz=45,slow=1.8,SNR=7.6
NOA PKKPab PKKPab 23 44 35.0 +0.5
comp=Z,2.7nm,0.8s,baz=222,slow=4.4,SNR=9.3
NOA NORSAR Array B 116.47 340 PKP PKPdf 23 34 00.6 -1.3
NOA PP PP 23 35 04.8 -4.0
NOA SKP 23 37 35.2
NOA PKKPab PKKPab 23 44 35.0 +0.5
CSS Prodhromos 116.50 307 *e*P PKPdf 23 34 01.1 -0.9
WCI Wyandotte Cave 116.65 49 *e*PKIKP PKPdf 23 34 01.8 -0.5
NAO01 NORSAR Array S 116.72 340 *e*PKPdf PKPdf 23 34 02.0 -0.4

LRAL	Lakeview Retre	117.45	55	ePKPdf	PKPdf	23 34 03.5	-0.3		
LVV	L'vov	117.50	325	⇓iPKIKP	PKPdf	23 34 03.1	-0.8		
LVV				i		23 34 16.1			
LVV				e		23 37 40.9			
LVV				e		23 40 47.7			
LVV				MLR	MLR				
	comp=Z,500nm,23.0s,MS5.1								
LVV				MLR	MLR				
	comp=N,300nm,21.0s,MS5.1								
LVV				MLR	MLR				
	comp=E,400nm,22.0s,MS5.1								
VRI	Vrincioaia	117.66	320	⇓iP	PKPdf	23 34 03.5	-0.7		
VRI	Vrincioaia	117.66	320	PKIKP	PKPdf	23 34 03.8	-0.4		
VRI	Vrincioaia	117.66	320	⇓P	PKPdf	23 34 03.5	-0.7		
PLOR	Plostina	117.72	320	⇓iP	PKPdf	23 34 03.6	-0.7		
SWET	Sewanee	117.76	52	ePKPdf	PKPdf	23 34 03.7	-0.7		
BURAR	Bucovina Array	117.84	323	⇓iP	PKPdf	23 34 04.8	+0.3		
BURAR	Bucovina Array	117.84	323	⇓P	PKPdf	23 34 04.8	+0.2		
WAR	Warsaw	117.89	329	ePKP	PKPdf	23 34 05.5	+0.9		
ISP	Isparta	117.91	311	ePKIKP	PKPdf	23 34 03.4	-1.3		
PRD	Provadia	118.29	317	iP	PKPdf	23 34 05.2	-0.2		
MLR	Muntele Rosu	118.31	320	PKP	PKPdf	23 34 04.8	-0.6		
	comp=E,22nm,0.9s,baz=29,slow=0.1,SNR=26								
MLR				PKKPbc	PKKPbc	23 44 24.2	+0.9		
	comp=E,12nm,0.6s,baz=287,slow=3.2,SNR=21								
MLR	Muntele Rosu	118.31	320	⇓iP	PKPdf	23 34 04.9	-0.6		
MLR	Muntele Rosu	118.31	320	PKIKP	PKPdf	23 34 05.3	-0.2		
MLR	Muntele Rosu	118.31	320	⇓P	PKPdf	23 34 04.9	-0.6		
KWP	Kalwaria	118.34	326	ePKP	PKPdf	23 34 05.3	-0.2		
ACSO	Alum Creek Sta	118.46	46	ePKPdf	PKPdf	23 34 05.7	0.0		
ACSO				LR	LR				
	comp=Z,365nm,20.0s,MS5.0								
TEIG	Tepich	118.53	69	PKPdf	PKPdf	23 34 06.0	+0.1		
CPCT	Cooper Cave	118.80	52	ePKPdf	PKPdf	23 34 06.4	0.0		
VOIR		118.91	321	⇓iP	PKPdf	23 34 06.3	-0.3		
VOIR		118.91	321	⇓P	PKPdf	23 34 06.3	-0.3		
KOLS	Kolonicke sedl	118.94	325	ePKP	PKPdf	23 34 06.5	-0.2		
JMB	Yambol	119.13	317	iP	PKPdf	23 34 06.3	-0.7		
GKP	Gorka Klasztor	119.19	331	ePKP	PKPdf	23 34 06.7	-0.4		
TZTN	Tazewell	119.23	50	ePKPdf	PKPdf	23 34 07.5	+0.3		
STHS	Stebnicka Huta	119.27	326	ePKP	PKPdf	23 34 06.9	-0.4		
CRVS	Cervenica-Dubn	119.42	325	ePKP	PKPdf	23 34 06.9	-0.7		
ZIMR		119.46	319	PKIKP	PKPdf	23 34 07.8	+0.1		
BORG	Borgarnes	119.53	357	PKP	PKPdf	23 34 07.4	-0.4		
	comp=Z,24nm,0.9s,baz=338,slow=3.8,SNR=6.0								
BORG	Borgarnes	119.53	357	ePKPdf	PKPdf	23 34 08.8	+1.0		
OJC	Ojcow	119.64	327	ePKP	PKPdf	23 34 07.3	-0.7		
DRGR		119.73	323	⇓iP	PKPdf	23 34 07.6	-0.6		
DRGR		119.73	323	PKIKP	PKPdf	23 34 08.0	-0.2		
DRGR		119.73	323	⇓P	PKPdf	23 34 07.6	-0.6		
NIE	Niedzica	119.79	326	ePKP	PKPdf	23 34 08.5	+0.2		
ERPA	Erie	119.85	43	ePKPdf	PKPdf	23 34 08.5	+0.1		
ALLY	Alegheny Colle	119.93	44	ePKPdf	PKPdf	23 34 07.8	-0.8		
BOSA	Boshof	119.97	234	PKP	PKPdf	23 34 08.8	+0.2		
	comp=Z,28nm,0.7s,baz=120,slow=2.0,SNR=64								
BOSA	Boshof	119.97	234	ePKPdf	PKPdf	23 34 09.3	+0.7		
DIM	Dimitrovgrad	120.01	317	iP	PKPdf	23 34 08.0	-0.7		
ALN	Alexandroupoli	120.11	315	eP	PKPdf	23 34 07.9	-1.0		
PLCA	Paso Flores	120.14	143	PKP	PKPdf	23 34 09.8	+0.8		
	comp=Z,22nm,0.9s,baz=228,slow=2.8,SNR=41								
PLCA				SKP		23 37 41.4			
	comp=Z,3.5nm,0.8s,baz=133,slow=9.6,SNR=3.5								
PLCA				PKKPbc	PKKPbc	23 44 17.5	+0.8		
	comp=Z,4.3nm,0.8s,baz=55,slow=5.0,SNR=11								
PLCA	Paso Flores	120.14	143	PKIKP	PKPdf	23 34 09.8	+0.8		
PLCA				pmax	pmax				
	comp=Z,22nm,0.9s								
PLCA				pmax	pmax				
	comp=N,4.0nm,0.8s								
PLCA				pmax	pmax				
	comp=Z,4.0nm,0.8s								
PLCA	Paso Flores	120.14	143	ePKPdf	PKPdf	23 34 09.7	+0.8		
MATP	Matopo	120.14	244	PKP	PKPdf	23 34 09.2	+0.3		
	comp=Z,30nm,0.7s,baz=98,slow=1.9								
KECS	Kecovo	120.19	325	ePKP	PKPdf	23 34 07.6	-1.5		
CRAR	CRAIOVA	120.19	320	PKIKP	PKPdf	23 34 09.6	+0.5		
ARG	Arkhangelos	120.22	310	eP	PKPdf	23 34 08.5	-0.6		
KDZ	Kurdzhali	120.25	316	iP	PKPdf	23 34 07.9	-1.3		
SCHQ	Schefferville	120.31	25	PKP	PKPdf	23 34 08.9	-0.4		
	comp=Z,15nm,0.7s,baz=316,slow=2.5,SNR=20								
SCHQ				PKKPbc	PKKPbc	23 44 16.4	+0.4		
	comp=Z,6.8nm,0.8s,baz=286,slow=2.1,SNR=4.5								
SCHQ	Schefferville	120.31	25	PKP	PKPdf	23 34 08.9	-0.4		
SCHQ				PKKPbc	PKKPbc	23 44 16.4	+0.4		
RDO	Rodhopi	120.36	316	eP	PKPdf	23 34 08.5	-0.9		
PLD	Plovdiv	120.55	317	eP	PKPdf	23 34 08.9	-0.8		
PRK	Paraskevi	120.57	314	eP	PKPdf	23 34 09.5	-0.3		
RAC	Raciborz	120.57	328	ePKIKP	PKPdf	23 34 10.1	+0.3		
RZN	Rozhen	120.71	317	iP	PKPdf	23 34 09.3	-0.8		
PGB	Panagyurishte	120.72	318	iP	PKPdf	23 34 09.3	-0.8		
OKC	Ostrava-Krasne	120.74	328	ePKPDF	PKPdf	23 34 09.9	-0.2		
OKC				ePP	PP	23 35 39.0	+0.6		
OKC				ePS	PS	23 45 36.9	+7.1		
OKC				AMS	AMS	00 30 00.0			
	comp=Z,400nm,18.7s								
OKC	Ostrava-Krasne	120.74	328	ePKIKP	PKPdf	23 34 09.9	-0.2		
OKC				e		23 35 39.0			
OKC	Ostrava-Krasne	120.74	328	ePKP	PKPdf	23 34 09.9	-0.2		
OKC				ePP	PP	23 35 39.0	+0.6		
OKC				ePS	PS	23 45 36.9	+7.1		
PSZ	Piszkesteto	120.82	325	⇓iPKP/D		23 34 09.8			
PSZ	Piszkesteto	120.82	325	⇓iP	PKPdf	23 34 09.9	-0.4		
PSZ	Piszkesteto	120.82	325	PKIKP	PKPdf	23 34 10.3	0.0		
PSZ	Piszkesteto	120.82	325	ePKPdf	PKPdf	23 34 09.9	-0.4		
LRW	Lerwick	120.88	345	⇑eP	PKPdf	23 34 09.6	-0.8		
LRW	Lerwick	120.88	345	⇑eP	PKPdf	23 34 09.6	-0.8		
MCWV	Mont Chateau	120.91	46	ePKPdf	PKPdf	23 34 10.5	0.0		
FWV	Forest Hill	120.96	48	ePKPdf	PKPdf	23 34 10.2	-0.4		
FWV				epPKPdf	pPKPdf	23 34 34.9	+12		
BZS	Buzias	120.97	322	⇓iP	PKPdf	23 34 10.0	-0.6		
BZS	Buzias	120.97	322	PKIKP	PKPdf	23 34 10.3	-0.3		
BZS	Buzias	120.97	322	⇓P	PKPdf	23 34 10.0	-0.6		
MORC	Moravsky Berou	121.09	328	⇓iP	PKPdf	23 34 10.8	0.0		
MORC	Moravsky Berou	121.09	328	PKIKP	PKPdf	23 34 11.0	+0.2		
MORC	Moravsky Berou	121.09	328	ePKPdf	PKPdf	23 34 10.7	-0.1		
LBTB	Lobatse	121.10	237	ePKIKP	PKPdf	23 34 11.2	+0.4		
VYHS	Vyhne	121.11	326	ePKP	PKPdf	23 34 09.9	-0.9		
KSP	Ksiaz	121.11	329	ePKIKP	PKPdf	23 34 10.7	-0.1		
KSP				e		23 34 23.9			
KSP				e		23 35 43.3			
KSP				eSS	SS	23 52 24.8	+14		
KSP				MLR	MLR				
	comp=Z,1μm,27.1s,MS5.4								
KSP	Ksiaz	121.11	329	ePKPdf	PKPdf	23 34 10.7	-0.1		
KSP				epPKPdf	pPKPdf	23 34 23.9	+0.4		
KSP				ePP	PP	23 35 43.3	+2.3		
KSP				eSP	SP	23 45 38.5	+10		
KSP				eSS	SS	23 52 24.8	+14		
KSP				LR	LR				
	comp=Z,1μm,27.1s,MS5.4								
ELN	Prospectdale	121.13	49	ePKPdf	PKPdf	23 34 10.8	-0.1		
LOS	Limnos	121.16	315	eP	PKPdf	23 34 09.1	-1.8		
RUE	Ruedersdorf	121.32	332	ePKPdf	PKPdf	23 34 10.9	-0.4		
VTS	Vitosha	121.34	318	eP	PKPdf	23 34 10.9	-0.4		
VTS	Vitosha	121.34	318	iP	PKPdf	23 34 10.6	-0.7		
VTS	Vitosha	121.34	318	⇓iP	PKPdf	23 34 11.0	-0.3		
VTS	Vitosha	121.34	318	PKIKP	PKPdf	23 34 11.1	-0.2		
PKSN	Nyarlorinc	121.37	324	⇑eP	PKPdf	23 34 11.7	+0.4		
BLA	Blacksburg	121.39	49	PKIKP	PKPdf	23 34 11.6	+0.2		
BLA	Blacksburg	121.39	49	ePKPdf	PKPdf	23 34 11.3	0.0		
BLA				epPKPdf	pPKPdf	23 34 29.6	+5.5		
BLA				eSKPdf	SKPdf	23 37 45.3	+1.7		
DPC	Dobruska-Polom	121.39	329	ePKPDF	PKPdf	23 34 11.4	0.0		
DPC				ePP	PP	23 35 47.9	+5.0		
DPC				ePS	PS	23 45 40.6	+4.9		
DPC				AMS	AMS	00 25 20.0			
	comp=Z,500nm,24.5s								
DPC	Dobruska-Polom	121.39	329	ePKIKP	PKPdf	23 34 11.4	0.0		
DPC				e		23 35 47.9			
DPC	Dobruska-Polom	121.39	329	ePKP	PKPdf	23 34 11.4	0.0		
DPC				ePP	PP	23 35 47.9	+5.0		
DPC				ePS	PS	23 45 40.6	+4.9		
MMB	Musomiste	121.43	317	eP	PKPdf	23 34 10.5	-1.0		
MMB	Musomiste	121.43	317	iP	PKPdf	23 34 10.4	-1.0		
UPC	Upice	121.46	329	ePKPDF	PKPdf	23 34 11.7	+0.2		
BUD	Budapest	121.55	325	⇓ePKP/D		23 34 11.4			
SUR	Sutherland	121.70	228	ePKPdf	PKPdf	23 34 13.3	+1.4		
PKS6	Bocsa	121.70	324	⇑eP	PKPdf	23 34 12.3	+0.3		
PKS7	Kunszentmiklos	121.70	324	⇑eP	PKPdf	23 34 11.9	-0.1		
JSC	Jenkinsville	121.71	52	PKIKP	PKPdf	23 34 12.6	+0.6		
KKB	Krupnik	121.75	318	iP	PKPdf	23 34 10.8	-1.3		
OUR	Ouranopolis	121.77	316	eP	PKPdf	23 34 11.1	-1.0		
SVIS	Svilajnac	121.85	321	⇓iPKP	PKPdf	23 34 11.6	-0.6		
VRAC	Vranov	121.87	328	PKP	PKPdf	23 34 11.5	-0.8		
	comp=Z,24nm,0.9s,baz=76,slow=1.6,SNR=36								
VRAC	Vranov	121.87	328	P	PKPdf	23 34 12.4	+0.1		
SMOL	Smolenice	121.88	327	ePKP	PKPdf	23 34 12.4	+0.1		
LSZ	Lusaka	121.88	249	PKP	PKPdf	23 34 13.1	+0.8		
	comp=Z,34nm,0.9s,baz=143,slow=2.1,SNR=29								
LSZ				PKKPbc	PKKPbc	23 44 13.0	+2.9		
	comp=Z,1.5nm,0.6s,baz=126,slow=3.1,SNR=5.6								
LSZ	Lusaka	121.88	249	ePKPdf	PKPdf	23 34 12.8	+0.5		
BSEG	Bad Segeberg	121.88	335	ePKPdf	PKPdf	23 34 12.3	0.0		
BSEG				epPKPdf	pPKPdf	23 34 25.5	+0.5		
BSEG				ePP	PP	23 35 45.5	-0.7		
MSNY	Massena	121.90	38	ePKPdf	PKPdf	23 34 11.2	-1.2		
SSPA	Standing Stone	121.90	44	ePKPdf	PKPdf	23 34 12.2	-0.1		
SSPA				ePP	PP	23 35 50.0	+3.7		
SSPA				eSKPdf	SKPdf	23 37 45.9	+1.3		
SOH	Sokhos	122.01	316	eP	PKPdf	23 34 11.1	-1.5		
PLG	Polygyros	122.13	316	eP	PKPdf	23 34 11.0	-1.8		
PAIG	Paliouri	122.15	315	eP	PKPdf	23 34 11.5	-1.3		
KNT	Kendrikon	122.17	317	eP	PKPdf	23 34 11.6	-1.3		
PVCC	Panska Ves	122.18	330	ePKPDF	PKPdf	23 34 13.1	+0.2		
PVCC				ePP	PP	23 35 50.9	+2.7		
PVCC				ex	x	23 45 55.5			
PVCC	Panska Ves	122.18	330	ePKIKP	PKPdf	23 34 13.1	+0.2		
PVCC				e		23 35 50.9			
SANT	Santorini	122.20	311	PKPdf	PKPdf	23 34 11.4	-1.5		
ZST	Bratislava	122.23	327	ePKIKP	PKPdf	23 34 12.8	-0.2		
ZST				MLR	MLR				
	comp=Z,300nm,20.9s,MS4.9								
LONY	Lake Ozonia	122.26	38	ePKPdf	PKPdf	23 34 12.8	-0.2		
BRG	Berggiesshubel	122.27	331	ePKPdf	PKPdf	23 34 12.8	-0.3		
BRG				ePP	PP	23 35 49.1	+0.3		
BRG	Berggiesshubel	122.27	331	⇓iPKP	PKPdf	23 34 13.1	0.0		
	comp=Z,40nm,0.9s								
BRG				i		23 34 25.9			
	comp=Z,23nm,1.4s								
BRG				PP	PP	23 35 39.0	-10		
BRG				eSKP		23 37 48.0			
	comp=Z,6.0nm,1.1s								
BRG				e		23 44 09.5			
	comp=Z,2.7nm,0.8s								
BRG				e		23 45 39.0			
BRG				e		23 47 25.9			
	comp=Z,1.0nm,0.7s								
BRG				e		23 48 08.5			
	comp=Z,4.5nm,1.4s								
BRG				SS	SS	23 52 15.0	-11		
BRG									
	comp=N,129nm,20.7s								
BRG									
	comp=E,139nm,23.2s								
BRG									
	comp=Z,278nm,19.0s								
BRG	Berggiesshubel	122.27	331	⇓iPKIKP	PKPdf	23 34 13.1	0.0		
BRG				i		23 34 25.9			
BRG				e		23 45 39.0			
BRG				SS	SS	23 52 15.0	-11		
BRG				pmax	pmax				
	comp=Z,40nm,0.9s								
BRG				MLR	MLR				
	comp=N,129nm,20.7s,MS4.7								
BRG				MLR	MLR				
	comp=E,139nm,23.2s,MS4.7								
BRG				MLR	MLR				
	comp=Z,278nm,19.0s,MS4.9								
BRG	Berggiesshubel	122.27	331	⇓iPKP	PKPdf	23 34 13.1	0.0		
BRG				i		23 34 25.9			
BRG				PP	PP	23 35 39.0	-10		
BRG				eSKP		23 37 48.0			
BRG				e		23 44 09.5			
BRG				e		23 45 39.0			
BRG				e		23 47 25.9			
BRG				e		23 48 08.5			
BRG				SS	SS	23 52 15.0	-11		
BRG				LR	LR				
	comp=Z,280nm,19.0s,MS4.9								
HORT	Hortiatis	122.28	316	eP	PKPdf	23 34 11.7	-1.4		
AOS	Alonnisos	122.31	314	eP	PKPdf	23 34 11.8	-1.3		
VAY	Valandovo	122.33	317	eP	PKPdf	23 34 11.2	-2.0		
VAY	Valandovo	122.33	317	iPKP	PKPdf	23 34 11.1	-2.1		
THE	Thessaloniki	122.35	316	eP	PKPdf	23 34 11.7	-1.5		
CLL	Collm	122.45	331	⇓iPKPdf	PKPdf	23 34 13.1	-0.3		
	comp=Z,76nm,0.7s								
CLL				eL		00 31 54.9			
	comp=Z,573nm,20.0s								
CLL				epPKPdf	pPKPdf	23 34 26.3	+0.2		
CLL				ePP	PP	23 35 50.7	+0.7		
CLL				epPP		23 35 57.8			
CLL				esPP		23 36 03.7			
CLL				eSKPdf	SKPdf	23 37 48.1	+2.5		
CLL				ePKKPab	PKKPab	23 44 08.8	+0.4		
CLL				ePS	PS	23 45 37.7	-7.3		
CLL				ePPS		23 47 13.0			
CLL				eSS	SS	23 52 50.2	+22		
CLL				eSSS		23 57 03.7			
CLL	Collm	122.45	331	⇓iPKIKP	PKPdf	23 34 12.9	-0.5		
	comp=Z,logA/T=2.0								
CLL				e		23 34 28.0			
CLL				e		23 34 37.0			
CLL				ePP	PP	23 35 51.0	+1.0		
CLL				e*PPP		23 35 58.0			
CLL				e*SPP		23 36 06.0			
CLL				i		23 37 48.2			
CLL				iPKKP	PKKPbc	23 44 08.7	+0.8		
CLL				e		23 45 38.0			
CLL				ePS	PS	23 45 51.0	+6.0		
CLL				ePPS		23 47 12.0			
CLL				e		23 48 06.0			
CLL				e		23 48 20.0			
CLL				e		23 51 35.0			
CLL				eSS	SS	23 52 54.0	+26		
CLL				eSSS		23 57 12.0			
CLL	Collm	122.45	331	⇓iPKPdf	PKPdf	23 34 12.9	-0.5		
	comp=Z,75nm,0.8s								
CLL				esPKPdf		23 34 28.0			
CLL				ex	x	23 34 37.0			
CLL				ePP	PP	23 35 51.0	+1.0		
CLL				epPP		23 35 58.0			
CLL				esPP		23 36 06.0			
CLL				iSKPdf	SKPdf	23 37 48.2	+2.6		
	comp=Z,10.0nm,0.8s								
CLL				iPKKPab	PKKPab	23 44 08.7	+0.3		
	comp=Z,46nm,1.8s								
CLL				ePSKS		23 45 38.0			
CLL				ePS	PS	23 45 51.0	+6.0		
CLL				ePPS		23 47 12.0			
CLL				epSKKPbc		23 48 06.0			
CLL				ePKKSdf		23 48 20.0			
CLL				ePPPrev		23 51 35.0			
CLL				eSS	SS	23 52 54.0	+26		
CLL				eSSS		23 57 12.0			
CLL	Collm	122.45	331	⇓iPKIKP	PKPdf	23 34 12.9	-0.5		
CLL				e		23 35 51.0			
CLL				pmax	pmax				
	comp=Z,75nm,0.8s								
CLL	Collm	122.45	331	⇓iPKP	PKPdf	23 34 12.9	-0.5		
CLL				ePP	PP	23 35 51.0	+1.0		
CLL				iSKP		23 37 48.2			
CLL				iPKKP	PKKPbc	23 44 08.7	+0.8		
PKSM	Moragy	122.45	324	⇓iP	PKPdf	23 34 12.9	-0.5		
PKSM	Moragy	122.45	324	⇓iP	PKPdf	23 34 13.0	-0.4		
TREC	Trest	122.46	328	ePKPDF	PKPdf	23 34 13.3	-0.1		
TREC				ePP	PP	23 35 49.0	-1.1		
TREC				ePS	PS	23 45 53.0	+7.9		
TREC				AMS	AMS	00 26 00.0			
	comp=Z,600nm,24.4s								
TREC	Trest	122.46	328	ePKIKP	PKPdf	23 34 13.3	-0.1		
TREC				e		23 35 49.0			
NPS	Neapolis	122.47	309	eP	PKPdf	23 34 14.0	+0.6		
BINY	Binghamton	122.51	42	ePKPdf	PKPdf	23 34 13.4	-0.1		
PRU	Pruhonice	122.53	329	ePKPDF	PKPdf	23 34 13.2	-0.4		
PRU				ePP	PP	23 35 54.0	+3.5		
PRU				ePS	PS	23 45 53.3	+7.6		
PRU				AMS	AMS	00 27 00.0			
	comp=Z,400nm,22.9s								
PRU	Pruhonice	122.53	329	ePKIKP	PKPdf	23 34 13.2	-0.4		
PRU				e		23 35 54.0			
PRU	Pruhonice	122.53	329	ePKP	PKPdf	23 34 13.2	-0.4		
PRU				ePP	PP	23 35 54.0	+3.5		
PRU				ePS	PS	23 45 53.3	+7.6		
FBE	Freiberg	122.53	331	ePKPdf	PKPdf	23 34 13.4	-0.2		
XRY	Khrisi	122.53	309	eP	PKPdf	23 34 13.0	-0.6		
GRG	Griva	122.60	317	eP	PKPdf	23 34 12.0	-1.7		
DIVS	Divcibare	122.72	321	eP	PKPdf	23 34 13.7	-0.2		
XOR	Xorichti	122.72	315	eP	PKPdf	23 34 12.9	-1.0		
NEO	Neokhori	122.72	315	eP	PKPdf	23 34 13.0	-0.9		
FRNY	Flat Rock	122.76	38	ePKPdf	PKPdf	23 34 13.4	-0.6		
PTL	Penteli	122.77	313	eP	PKPdf	23 34 12.7	-1.3		
SKO	Skopje	122.80	318	eP	PKPdf	23 34 14.5	+0.4		
SKO	Skopje	122.80	318	iPKP	PKPdf	23 34 13.2	-0.9		
NCB	Newcomb	122.80	39	ePKPdf	PKPdf	23 34 14.0	-0.1		
SOP	Sopron	122.83	326	⇓ePKP/D	PKPdf	23 34 13.9	-0.2		
SOP	Sopron	122.83	326	⇓eP	PKPdf	23 34 13.6	-0.5		
LIT	Litokhoron	122.91	316	eP	PKPdf	23 34 12.9	-1.4		
KVR	Kavouri	122.92	313	eP	PKPdf	23 34 13.0	-1.3		
CONA	Conrad Observa	123.07	327	iPKiKP	PKiKP	23 34 14.3	-0.5		
	comp=Z,28nm,0.8s,SNR=28								
SIVA	Sivas	123.17	309	eP	PKPdf	23 34 15.2	+0.4		
MVL	Millersville	123.23	44	ePKPdf	PKPdf	23 34 14.7	-0.2		
CBN	Corbin	123.25	46	ePKPdf	PKPdf	23 34 15.2	+0.2		
TANN	Tannenbergstha	123.29	331	ePKPdf	PKPdf	23 34 14.6	-0.4		
TANN				ePP	PP	23 35 56.1	+0.4		
WERD	Werda	123.34	331	ePKPdf	PKPdf	23 34 14.7	-0.4		
WERD				epPKPdf	pPKPdf	23 34 28.2	+0.4		
FNA	Florina	123.38	317	eP	PKPdf	23 34 14.3	-0.9		
IVA	Berane	123.38	320	⇑iPKP	PKPdf	23 34 14.9	-0.3		
GUNZ	Gunzen	123.39	331	ePKPdf	PKPdf	23 34 15.1	-0.1		
NKC	Novy Kostel	123.41	331	ePKPDF	PKPdf	23 34 15.2	-0.1		
NKC				ePP	PP	23 35 52.6	-3.9		
ACCN	Adirondack Com	123.44	39	ePKPdf	PKPdf	23 34 14.8	-0.5		
PVY	Plav	123.46	320	⇑iPKP	PKPdf	23 34 14.6	-0.8		
AGG	Agios Georgios	123.47	315	eP	PKPdf	23 34 14.5	-0.9		
PLE	Pljevlja	123.47	321	⇑iPKP	PKPdf	23 34 15.1	-0.3		
VAM	Vamos	123.50	310	eP	PKPdf	23 34 16.0	+0.6		
MOX	Moxa	123.55	331	ePKPdf	PKPdf	23 34 14.8	-0.7		
MOX				ePP	PP	23 35 58.0	+0.6		
MOX	Moxa	123.55	331	ePKP	PKPdf	23 34 15.0	-0.5		
	comp=Z,42nm,1.3s								
MOX				ePP	PP	23 35 58.0	+0.6		
MOX									
	comp=Z,300nm,20.0s								
MOX	Moxa	123.55	331	ePKIKP	PKPdf	23 34 15.0	-0.5		
MOX				e		23 35 58.0			
MOX				pmax	pmax				
	comp=Z,42nm,1.3s								
MOX				MLR	MLR				
	comp=Z,300nm,20.0s,MS5.0								
KHC	Kasperske Hory	123.55	329	ePKPDF	PKPdf	23 34 15.4	-0.1		
KHC				ePP	PP	23 35 59.9	+2.4		
KHC				ePS	PS	23 46 01.2	+6.4		
KHC				AMS	AMS	00 28 20.0			
	comp=Z,500nm,20.7s								
KHC	Kasperske Hory	123.55	329	ePKIKP	PKPdf	23 34 15.4	-0.1		
KHC				e		23 35 59.9			
KHC	Kasperske Hory	123.55	329	ePKP	PKPdf	23 34 15.4	-0.1		
KHC				ePP	PP	23 35 59.9	+2.4		
KHC				ePS	PS	23 46 01.2	+6.4		
OHR	Ohrid	123.62	318	eP	PKPdf	23 34 14.8	-0.9		
OHR	Ohrid	123.62	318	iPKP	PKPdf	23 34 14.4	-1.3		
ARSA	Arzberg	123.65	326	iP	PKPdf	23 34 15.0	-0.7		
	comp=Z,32nm,1.3s,SNR=14								
GEC2	GERESS Array S	123.67	329	ePKPdf	PKPdf	23 34 15.6	-0.1		
GEC2				epPKPdf	pPKPdf	23 34 36.8	+8.4		
GEC2				eSKPdf	SKPdf	23 37 48.7	+0.8		
GERES	GERESS Array B	123.67	329	PKhKP		23 34 07.4			
	comp=Z,

LJU e 23 47 53.0
LJU Ljubljana 124.92 326 *e*PKIKP PKPdf 23 34 17.8 -0.3
LJU e 23 34 30.8
LJU e 23 41 20.0
KBA Koelnbreinsper 124.94 327 ⇓*i*P PKPdf 23 34 17.1 -1.1
comp=Z,60nm,1.3s,SNR=20
BUG Bochum--Univer 124.96 334 *e*PKPdf PKPdf 23 34 17.9 -0.3
BUG *ep*PKPdf pPKPdf 23 34 31.4 +0.5
BUG *e*PP PP 23 36 07.2 +0.3
EDI Edinburgh 125.07 344⇑ *e*P PKPdf 23 34 18.7 +0.2
EDI Edinburgh 125.07 344⇑ *e*P PKPdf 23 34 18.7 +0.2
PKME Peaks-Kenny Pk 125.09 35 *e*PKPdf PKPdf 23 34 18.6 +0.1
EAB Aberfoyle 125.15 345⇑ *e*P PKPdf 23 34 18.1 -0.5
EAB Aberfoyle 125.15 345⇑ *e*P PKPdf 23 34 18.1 -0.5
CEY Cerknica 125.15 325 *e*PKPdf PKPdf 23 34 18.1 -0.5
EBL Broad Law 125.16 344⇑ *i*P PKPdf 23 34 18.1 -0.5
EBL Broad Law 125.16 344⇑ *i*P PKPdf 23 34 18.1 -0.5
EAU Auchinoon 125.21 344⇑ *e*P PKPdf 23 34 18.3 -0.4
EAU Auchinoon 125.21 344⇑ *e*P PKPdf 23 34 18.3 -0.4
HRV Harvard--Oak R 125.22 39 *e*PKIKP PKPdf 23 34 18.7 0.0
CADS Cadrg 125.25 326 *e*PKPdf PKPdf 23 34 17.8 -0.9
CADS *i* PKKP 23 43 58.2
WVL Waterville 125.27 36 *e*PKPdf PKPdf 23 34 18.8 -0.1
VOY Vojsko 125.28 326 *e*PKPdf PKPdf 23 34 18.2 -0.6
VOY *ep*PKPdf pPKPdf 23 34 30.2 -1.3
KNDS Knezji Dol 125.30 325 *i* PKPdf PKPdf 23 34 18.4 -0.4
KNDS *ep*PKPdf pPKPdf 23 34 31.5 0.0
TNS Taunus Mts 125.31 333 *e*PKPdf PKPdf 23 34 18.6 -0.3
TNS *e*PP PP 23 36 10.1 +0.8
FUR Furstenfeldbru 125.34 329 *e*PKPdf PKPdf 23 34 18.5 -0.5
FUR *ep*PKPdf pPKPdf 23 34 32.3 +0.7
FUR *e*PP PP 23 36 10.4 +0.9
WES Weston 125.44 39 *e*PKIKP PKPdf 23 34 19.6 +0.5
GMNA Gemona 125.50 327 PKP PKPdf 23 34 18.6 -0.6
TRI Trieste 125.54 326 PKIKP PKPdf 23 34 18.8 -0.5
EKA Eskdalemuir Ar 125.58 343 PKP PKPdf 23 34 18.6 -0.8
comp=Z,7.3nm,0.6s,baz=11,slow=2.4,SNR=43
EKA PKKPbc 23 43 55.4
comp=Z,1.1nm,0.7s,baz=208,slow=3.9,SNR=5.3
TOD Tromm 125.58 332 PKIKP PKPdf 23 34 18.9 -0.5
ESK Eskdalemuir 125.60 343⇑ *e*P PKPdf 23 34 18.7 -0.7
ESK Eskdalemuir 125.60 343⇑ *e*P PKPdf 23 34 18.7 -0.7
ESK Eskdalemuir 125.60 343 *e*PKPdf PKPdf 23 34 18.9 -0.5
ESK LR LR
comp=Z,173nm,20.0s,MS4.7
WATA Walderalm 125.72 328⇑ *i*P PKPdf 23 34 19.1 -0.6
comp=Z,53nm,1.1s,SNR=16
WTTA Wattenberg 125.74 328 *i* P PKPdf 23 34 19.4 -0.3
comp=Z,158nm,1.2s,SNR=57
MOTA Moosalm 125.96 329⇓ *i*P PKPdf 23 34 19.6 -0.5
comp=Z,61nm,0.9s,SNR=64
ABH Alteburg 125.96 333 PKP PKPdf 23 34 20.3 +0.2
STU Stuttgart 125.97 331 *e*PKPdf PKPdf 23 34 19.9 -0.3
STU *e*PP PP 23 36 14.2 +0.6
STU Stuttgart 125.97 331 *e*PKPdf PKPdf 23 34 19.4 -0.7
TLL Tololo Astrono 125.98 132 ⇓*i*P PKPdf 23 34 21.2 +1.0
SQTA Sankt Quirin 125.99 328 ⇓*i*P PKPdf 23 34 19.9 -0.3
comp=Z,58nm,1.0s,SNR=35
HGN Heimansgroeve 126.03 335 *e*PKP PKPdf 23 34 19.7 -0.6
comp=Z,59nm,1.2s
KTD Kalmit 126.12 332 PKIKP PKPdf 23 34 20.3 -0.1
MEM Membach 126.12 334 PKP PKPdf 23 34 20.3 -0.1
BEBN Eben Emael 126.12 335 PKP PKPdf 23 34 20.8 +0.3
APPI Appiano 126.45 328 PKP PKPdf 23 34 19.1 -2.0
EMMW East Machias 126.47 35 *e*PKPdf PKPdf 23 34 20.7 -0.4
LANF Langenberg 126.48 332 PKP PKPdf 23 34 21.1 0.0
FGMS Monte Sant'Ang 126.48 320 PKP PKPdf 23 34 20.7 -0.4
CTT Castel Tesino 126.50 327 PKIKP PKPdf 23 34 20.6 -0.6
BCLA Clavier 126.56 335 PKP PKPdf 23 34 21.3 +0.1
SPAK Spaichingen-Ko 126.63 331 PKP PKPdf 23 34 21.2 -0.2
DAVA Damuels 126.63 329 ⇓*i*P PKPdf 23 34 21.1 -0.3
comp=Z,82nm,1.1s,SNR=30
LCO Las Campanas 126.65 131 ⇓*i*P PKPdf 23 34 22.8 +1.3
UCC Uccle 126.67 336 PKP PKPdf 23 34 21.1 -0.4
BFO Black Forest 126.69 331 *e*PKPdf PKPdf 23 34 20.9 -0.6
BFO *e*PP PP 23 36 19.2 +0.8
WLF Walferdange 126.75 334 *e*PKPdf PKPdf 23 34 22.0 +0.4
WLF *ep*PKPdf pPKPdf 23 34 35.4 +1.1
WLF *e*PP PP 23 36 18.2 -0.6
WLF Walferdange 126.75 334 PKP PKPdf 23 34 22.2 +0.6
WLF Walferdange 126.75 334 *e*PKPdf PKPdf 23 34 22.2 +0.6
STR Strasbourg 126.78 332 PKP PKPdf 23 34 21.7 0.0
LIENZ Alp Oberkamor 126.82 330 ⇓*i*PKPdf PKPdf 23 34 19.4 -2.4
comp=Z,186nm,1.6s
STEIN Stein am Rhein 126.88 330 ⇓*i*PKPdf PKPdf 23 34 21.1 -0.8
TRQA Tornquist 126.89 146 *e*PKPdf PKPdf 23 34 21.6 -0.3
BRMO Bormio 126.91 328 PKP PKPdf 23 34 21.7 -0.2
SNF Seneffe 126.92 335 PKP PKPdf 23 34 21.7 -0.2
DAVOX Davos 126.97 329 ⇓*i*PKPdf PKPdf 23 34 21.3 -0.8
comp=Z,291nm,1.6s
SLE Schleitheim 127.00 331 ⇓*i*PKPdf PKPdf 23 34 21.4 -0.7
comp=Z,95nm,1.0s
GIVF Givet 127.00 335 *e*PKIKP PKPdf 23 34 21.0 -1.1
comp=Z,187nm,1.0s
WILA Wila 127.03 330 ⇓*i*PKPdf PKPdf 23 34 21.6 -0.6
comp=Z,157nm,1.0s
CFAA Coronel Fontan 127.04 135 PKP PKPdf 23 34 22.2 0.0
comp=Z,12nm,0.7s,baz=244,slow=2.2,SNR=8.7
CFAA Coronel Fontan 127.04 135 PKP PKPdf 23 34 22.2 0.0
PLONS Plons 127.04 329 ⇓*i*PKPdf PKPdf 23 34 21.3 -0.9
comp=Z,240nm,1.6s
WLS Welschbruch 127.10 332 PKP PKPdf 23 34 21.9 -0.4
DOU Dourbes 127.10 335 PKP PKPdf 23 34 22.1 -0.2
MABI Malga Bissina 127.11 328 PKP PKPdf 23 34 21.5 -0.8
BERNI Berninapass 127.13 328 ⇓*i*PKPdf PKPdf 23 34 21.8 -0.6
comp=Z,211nm,1.6s
CDF Champ du Feu 127.14 332 *e*PKIKP PKPdf 23 34 20.7 -1.7
comp=Z,82nm,1.1s
FELD Feldberg im Sc 127.16 331 *e*P PKPdf 23 34 22.0 -0.4
LIBD Limburg 127.16 331 PKIKP PKPdf 23 34 22.3 -0.1
ZUR Zurich 127.23 330 ⇓*i*PKPdf PKPdf 23 34 21.9 -0.7
comp=Z,296nm,1.8s
CING Cingoli 127.25 324 PKP PKPdf 23 34 22.8 +0.2
TIP Timpagrande 127.26 317 *e*PKPdf PKPdf 23 34 17.3 -5.3
BAIF Baives 127.29 335 *e*PKIKP PKPdf 23 34 21.5 -1.2
comp=Z,98nm,0.9s
ECH Echery 127.33 332 PKP PKPdf 23 34 22.6 -0.2
SULZ Sulz-Cheisache 127.35 331 ⇓*i*PKPdf PKPdf 23 34 22.2 -0.6
comp=Z,95nm,1.1s
LLS Linth-Limmern 127.37 329 ⇓*i*PKPdf PKPdf 23 34 22.1 -0.7
comp=Z,87nm,0.8s
VDL Val di Lei 127.37 329 ⇓*i*PKPdf PKPdf 23 34 21.9 -0.9
comp=Z,87nm,0.9s
MUO Muotathal 127.47 330 ⇓*i*PKPdf PKPdf 23 34 22.6 -0.4
comp=Z,334nm,1.6s
CUC Castrocucco 127.48 319 PKP PKPdf 23 34 21.9 -1.1
MIDA Miranda 127.59 321 PKP PKPdf 23 34 22.9 -0.4
MOF Molkenrain 127.60 331 PKP PKPdf 23 34 22.8 -0.5
ATAH Atahualpa 127.62 102 PKP PKPdf 23 34 25.6 +2.3
comp=Z,56nm,0.9s,baz=216,slow=0.7,SNR=29
ATAH SKPbc 23 37 46.0
comp=Z,9.7nm,0.8s,baz=190,slow=6.0,SNR=5.1
BNALP Bannalp 127.65 330 ⇓*i*PKPdf PKPdf 23 34 22.6 -0.8
comp=Z,121nm,1.0s
BALST Balsthal 127.69 331 ⇓*i*PKPdf PKPdf 23 34 22.8 -0.6
comp=Z,133nm,1.6s
BBS Basel-Blauen 127.69 331 PKIKP PKPdf 23 34 22.8 -0.6
AQU L'Aquila 127.72 322 ⇓*i*P PKPdf 23 34 23.4 -0.1
AQU L'Aquila 127.72 322 PKIKP PKPdf 23 34 24.0 +0.5
AQU L'Aquila 127.72 322 *e*PKPdf PKPdf 23 34 23.6 +0.1
BADI Badiali 127.73 324 PKP PKPdf 23 34 23.3 -0.2
MENF Mencas 127.74 337 PKP PKPdf 23 34 23.4 -0.1
ASS Assisi 127.75 324 PKIKP PKPdf 23 34 22.7 -0.9
HINF Hinteralfeld 127.76 332 *e*PKIKP PKPdf 23 34 22.0 -1.6
comp=Z,214nm,1.1s
FUSIO Fusio 127.81 329 ⇓*i*PKPdf PKPdf 23 34 22.8 -0.9
comp=Z,303nm,1.7s
HAU Haudompre 127.86 332 *e*PKIKP PKPdf 23 34 22.4 -1.4
comp=Z,183nm,1.0s
HAU *e*R
comp=Z,672nm,22.8s
HAU Haudompre 127.86 332 *e*PKPdf PKPdf 23 34 22.4 -1.4
HAU LR LR
comp=Z,670nm,22.8s,MS5.3
HASLI Hasliberg 127.86 330 ⇓*i*PKPdf PKPdf 23 34 22.8 -1.0
comp=Z,137nm,1.0s
THEF They Montfort 127.87 332 PKP PKPdf 23 34 23.5 -0.3
BOURR Bourrignon 127.87 331 ⇓*i*PKPdf PKPdf 23 34 23.3 -0.5
comp=Z,199nm,1.0s
SKP1 Kophill 127.90 340⇑ *e*P PKPdf 23 34 22.9 -0.9
SKP1 Kophill 127.90 340⇑ *e*P PKPdf 23 34 22.9 -0.9
HLM1 Long Mynd 127.92 341⇑ *i*P PKPdf 23 34 23.8 -0.1
HLM1 AMb AMB 23 34 25.7
comp=Z,85nm,1.5s
HLM1 Long Mynd 127.92 341⇑ *i*P PKPdf 23 34 23.8 -0.1
HLM1 AMb AMB 23 34 25.7
comp=Z,85nm,1.5s
FNVD Fontana Vidola 127.97 326 PKP PKPdf 23 34 24.4 +0.4
MUGIO Muggio 127.97 328 ⇓*i*PKPdf PKPdf 23 34 23.5 -0.5
comp=Z,115nm,1.0s
NNA Nana 128.00 109 PKP PKPdf 23 34 24.7 +0.6
comp=Z,39nm,0.8s,baz=282,slow=5.1,SNR=16
NNA SKP 23 37 59.3
comp=Z,4.4nm,0.3s,baz=98,slow=6.5,SNR=4.3
NNA Nana 128.00 109 *e*PKPdf PKPdf 23 34 24.3 +0.2
MEZF Maizieres J'vi 128.09 333 *e*PKIKP PKPdf 23 34 23.3 -0.9
comp=Z,175nm,1.0s
LOMF Lomont 128.10 331 PKP PKPdf 23 34 24.3 +0.1
WIMIS Wimmis 128.19 330 ⇓*i*PKPdf PKPdf 23 34 23.5 -0.9
comp=Z,83nm,1.0s
CERT Cerreto 128.21 322 PKP PKPdf 23 34 23.3 -1.1
CSNT Castellina Chi 128.30 325 PKP PKPdf 23 34 22.8 -1.8
DLF Lyons Farm 128.31 344 *e*P PKPdf 23 34 18.0 -6.6
MTCE Montecelio 128.31 322 PKP PKPdf 23 34 23.8 -0.8
LKBD Leukerbad 128.38 330 ⇓*i*PKPdf PKPdf 23 34 23.6 -1.2
comp=Z,77nm,1.1s
VLC Villacollemand 128.39 326 *e*PKPdf PKPdf 23 34 24.0 -0.8
MCH1 Michaelchurch 128.40 341 P PKPdf 23 34 24.7 -0.1
MCH1 Michaelchurch 128.40 341⇑ *e*P PKPdf 23 34 24.4 -0.4
MCH1 ⇑ *i*P 23 34 24.7
MCH1 Michaelchurch 128.40 341⇑ *e*P PKPdf 23 34 24.4 -0.4
MCH1 ⇑ *i*P 23 34 24.7
SWN1 Swindon 128.42 340⇑ *i*P PKPdf 23 34 24.7 -0.2
SWN1 Swindon 128.42 340⇑ *i*P PKPdf 23 34 24.7 -0.2
HTR Trewern Hill 128.42 341⇑ *i*P PKPdf 23 34 24.8 0.0
HTR AMb AMB 23 34 26.3
comp=Z,61nm,1.5s
HTR Trewern Hill 128.42 341⇑ *i*P PKPdf 23 34 24.8 0.0
HTR AMb AMB 23 34 26.3
comp=Z,61nm,1.5s
SCLL Scilla 128.43 317 PKP PKPdf 23 34 24.0 -0.8
MMK Mattmark 128.44 329 ⇓*i*PKPdf PKPdf 23 34 23.9 -1.0
comp=Z,195nm,1.8s
TORNY Torny 128.44 331 ⇓*i*PKPdf PKPdf 23 34 24.4 -0.5
comp=Z,198nm,1.2s
DCN Croghan 128.46 345 *e*P PKPdf 23 34 19.0 -5.9
BOB Bobbio (Coli) 128.51 327 PKIKP PKPdf 23 34 24.9 -0.1
SENIN Lac Senin 128.56 330 ⇓*i*PKPdf PKPdf 23 34 24.8 -0.3
comp=Z,117nm,1.6s
BRANT Les Verrieres 128.56 331 ⇓*i*PKPdf PKPdf 23 34 25.1 0.0
comp=Z,127nm,1.6s
HGH Gray Hill 128.65 341⇑ *e*P PKPdf 23 34 25.0 -0.3
HGH AMb AMB 23 34 27.5
comp=Z,156nm,1.4s
HGH Gray Hill 128.65 341⇑ *e*P PKPdf 23 34 25.0 -0.3
HGH AMb AMB 23 34 27.5
comp=Z,156nm,1.4s
DIX Grande Dixence 128.70 330 ⇓*i*PKPdf PKPdf 23 34 25.1 -0.3
comp=Z,116nm,1.1s
GRYON Gryon 128.73 330 ⇓*i*PKPdf PKPdf 23 34 25.2 -0.2
comp=Z,121nm,1.2s
AIGLE Aigle 128.75 330 ⇓*i*PKPdf PKPdf 23 34 25.3 -0.2
comp=Z,213nm,1.3s
SLNA Salina 128.87 318 PKP PKPdf 23 34 24.8 -0.9
SALAN Lac Salanfe 128.87 330 ⇓*i*PKPdf PKPdf 23 34 25.3 -0.4
comp=Z,112nm,1.2s
SWK Warminster 128.88 340⇑ *i*P PKPdf 23 34 25.6 -0.1
SWK Warminster 128.88 340⇑ *i*P PKPdf 23 34 25.6 -0.1
GIMEL Gimel 128.95 331 ⇓*i*PKPdf PKPdf 23 34 25.7 -0.1
comp=Z,257nm,1.8s
EMV Vieux Emosson 128.97 330 ⇓*i*PKPdf PKPdf 23 34 25.7 -0.2
comp=Z,186nm,1.8s
CABF La Chapelle 128.98 331 *e*PKIKP PKPdf 23 34 25.2 -0.7
comp=Z,309nm,1.2s
LPL La Plagne 129.43 330 *e*PKIKP PKPdf 23 34 26.0 -0.8
comp=Z,90nm,1.2s
LPG La Plagne 129.44 329 *e*PKIKP PKPdf 23 34 26.2 -0.6
comp=Z,92nm,1.1s
LOR Lormes 129.55 333 *e*PKIKP PKPdf 23 34 26.0 -1.0
comp=Z,172nm,1.2s
LOR *e*R
comp=Z,533nm,21.5s
LOR Lormes 129.55 333 *e*PKPdf PKPdf 23 34 26.0 -1.0
LOR LR LR
comp=Z,530nm,21.5s,MS5.2
FIN Finale Ligure 129.55 327 PKIKP PKPdf 23 34 26.3 -0.7
HVZN Vizzini 129.65 316 PKP PKPdf 23 34 27.9 +0.7
VAE Valguarnera 129.71 317 SKPbc 23 37 47.4
comp=Z,31nm,1.0s,baz=30,slow=7.1,SNR=4.5
BNI Bardonecchia 129.78 329 *e*PKIKP PKPdf 23 34 26.7 -0.7
DOI San Damiano 129.86 328 PKIKP PKPdf 23 34 26.1 -1.5
SSF Saint Saulge 129.86 333 *e*PKIKP PKPdf 23 34 26.6 -1.0
comp=Z,238nm,1.3s
MBDF Montbardon 129.96 329 *e*PKIKP PKPdf 23 34 26.7 -1.1
comp=Z,79nm,1.2s
GDM Grand'Maison 129.96 330 PKP PKPdf 23 34 27.9 +0.1
SMF Signal de Mont 130.02 332 *e*PKIKP PKPdf 23 34 26.7 -1.2
comp=Z,138nm,1.1s
SAOF Saorge 130.05 328 PKP PKPdf 23 34 27.7 -0.2
HYF Humbligny 130.09 334 *e*PKIKP PKPdf 23 34 27.5 -0.5
SURF Saint Ours 130.10 328 PKP PKPdf 23 34 28.5 +0.5
AUTN L'Aution 130.11 328 PKP PKPdf 23 34 27.9 -0.1
GRN Grenoble 130.12 330 PKP PKPdf 23 34 28.6 +0.5
AVF Avril sur Loir 130.13 333 *e*PKIKP PKPdf 23 34 26.8 -1.3
comp=Z,134nm,1.5s
TSUM Tsumeb 130.19 241 SKPbc SKPbc 23 37 48.5 +0.6
comp=Z,37nm,1.1s,baz=100,slow=4.1,SNR=16
TSUM Tsumeb 130.19 241 *e*PKPdf PKPdf 23 34 29.1 +0.9
TSUM *e*SKPbc SKPbc 23 37 48.8 +1.0
PGF Pioggiola 130.19 325 *e*PKIKP PKPdf 23 34 27.2 -1.0
comp=Z,218nm,1.0s
TOUF Mont Tournerai 130.19 328 PKP PKPdf 23 34 28.6 +0.4
SBF Sospel 130.19 328 *e*PKIKP PKPdf 23 34 26.9 -1.3
comp=Z,168nm,1.0s
LDF La Druitiere 130.21 337 *e*PKIKP PKPdf 23 34 26.9 -1.3
comp=Z,214nm,1.5s
FLN La Foliniere 130.21 337 *e*PKIKP PKPdf 23 34 27.0 -1.2
comp=Z,119nm,0.9s
FLN *e*R
comp=Z,376nm,21.5s
FLN La Foliniere 130.21 337 *e*PKPdf PKPdf 23 34 27.0 -1.2
FLN LR LR
comp=Z,380nm,21.5s,MS5.1
LUCF Luceram 130.22 328 PKP PKPdf 23 34 28.5 +0.2
ORIF Oris-en-Rattie 130.28 330 *e*PKIKP PKPdf 23 34 27.5 -0.9
comp=Z,58nm,0.7s
ORIF *e*R
comp=Z,728nm,21.8s
REVF Revere 130.31 327 PKP PKPdf 23 34 28.0 -0.4
MVIF Mont Vial 130.32 328 PKP PKPdf 23 34 28.8 +0.3
BGF Bois d'Agland 130.54 333 *e*PKIKP PKPdf 23 34 28.0 -0.9
comp=Z,114nm,0.9s
PLDF La Plantade 130.62 332 PKP PKPdf 23 34 29.6 +0.6
ERC Erice 130.64 318 PKP PKPdf 23 34 28.7 -0.4
GRR Gorron 130.66 337 *e*PKIKP PKPdf 23 34 28.1 -1.0
comp=Z,80nm,0.8s
AGO Saint Agoulin 130.79 332 PKP PKPdf 23 34 29.9 +0.6
FRF La Foret Royal 130.82 328 *e*PKIKP PKPdf 23 34 28.2 -1.2
comp=Z,114nm,1.0s
STOF St-Etienne Org 130.91 329 PKP PKPdf 23 34 29.8 +0.2
VIVF Saint-Julien-l 130.93 330 *e*PKIKP PKPdf 23 34 28.8 -0.8
comp=Z,63nm,1.0s
TCF Toulx Ste Croi 131.03 333 *e*PKIKP PKPdf 23 34 29.0 -0.8
comp=Z,167nm,1.0s
LMR La Mourre 131.05 328 *e*PKIKP PKPdf 23 34 28.7 -1.1
comp=Z,171nm,1.1s
PYM Petit Puy Mans 131.07 332 PKP PKPdf 23 34 30.1 +0.2
TAVF Tavernes 131.09 328 PKP PKPdf 23 34 30.1 +0.2
SMRF Simiane la Rot 131.10 329 *e*PKIKP PKPdf 23 34 29.5 -0.4
comp=Z,176nm,1.0s
VILF Villemus 131.11 329 PKP PKPdf 23 34 30.3 +0.4
LVC Limon Verde 131.20 125 PKP PKPdf 23 34 32.4 +2.3
comp=Z,42nm,0.9s,baz=255,slow=3.8,SNR=27
LVC SKPbc SKPbc 23 37 54.9 +3.3
comp=Z,31nm,0.9s,baz=256,slow=3.0,SNR=22
LVC Limon Verde 131.20 125 *e*PKPdf PKPdf 23 34 32.5 +2.4
LVC *e*SKPbc SKPbc 23 37 55.2 +3.6
PUYF Puyloubier 131.34 328 PKP PKPdf 23 34 30.7 +0.3
LBL Lubilhac 131.34 332 PKP PKPdf 23 34 31.1 +0.7
SGMF Saint Gilles 131.41 338 *e*PKIKP PKPdf 23 34 29.3 -1.2
comp=Z,77nm,0.8s
PRAF Pradon 131.43 329 PKP PKPdf 23 34 30.6 +0.1
TREF Trevaresse 131.44 329 PKP PKPdf 23 34 31.7 +1.1
BERF Bertagne 131.50 328 PKP PKPdf 23 34 30.9 +0.2
ARE Arequipa 131.54 116 *e*PKIKP PKPdf 23 34 33.0 +2.2
GELF Grande-Etoile 131.59 328 PKP PKPdf 23 34 31.7 +0.9
ROSF Rostrenen 131.61 339 *e*PKIKP PKPdf 23 34 29.6 -1.3
comp=Z,34nm,0.8s
PTS Pantelleria 131.70 317 PKIKP PKPdf 23 34 32.4 +1.3
VSL Villasalto 131.86 322 *e*PKPdf PKPdf 23 34 30.1 -1.3
VSL *e*SKPbc SKPbc 23 37 53.7 -0.3
LASF Ste Croix 131.90 330 *e*PKIKP PKPdf 23 34 30.9 -0.5
comp=Z,123nm,0.9s
QUIF Quistinic 131.92 338 *e*PKIKP PKPdf 23 34 30.2 -1.3
comp=Z,45nm,0.9s
RJF Les Rejaudoux 132.09 333 *e*PKIKP PKPdf 23 34 31.1 -0.7
comp=Z,49nm,1.0s
RJF *e*R
comp=Z,221nm,22.5s
RJF Les Rejaudoux 132.09 333 *e*PKPdf PKPdf 23 34 31.1 -0.7
RJF LR LR
comp=Z,220nm,22.5s,MS4.8
CAF Calviac 132.13 332 *e*PKIKP PKPdf 23 34 31.4 -0.5
comp=Z,49nm,1.1s
LFF La Frestale 132.73 333 *e*PKIKP PKPdf 23 34 32.5 -0.5
comp=Z,80nm,0.9s
ROSC El Rosal 132.96 87 PKP PKPdf 23 34 35.8 +2.3
comp=Z,33nm,0.5s,baz=80,slow=3.5,SNR=19
ROSC SKPab 23 38 01.9
comp=Z,27nm,0.6s,baz=140,slow=3.7,SNR=14
ROSC El Rosal 132.96 87 *e*PKPdf PKPdf 23 34 32.2 -1.2
ROSC PKP PKPdf 23 34 35.8 +2.3
ROSC SKPab 23 38 01.9
MTLF Montolieu 133.24 331 *e*PKIKP PKPdf 23 34 33.3 -0.7
comp=Z,69nm,0.9s
LRDF Laroque-de-Fa 133.38 330 PKP PKPdf 23 34 34.1 -0.1
FILF Fillols 133.65 330 PKP PKPdf 23 34 34.5 -0.2
VALF Valcebollere 134.04 330 PKP PKPdf 23 34 36.2 +0.7
KEST Kesra 134.08 318 PKhKP 23 34 31.4
comp=Z,4.0nm,0.8s,baz=316,slow=4.7,SNR=8.3
KEST PKP PKPdf 23 34 37.8 +2.2
comp=Z,13nm,0.9s,baz=200,slow=1.8,SNR=25
KEST SKPab 23 38 03.2
comp=Z,16nm,1.0s,baz=287,slow=3.4,SNR=13
SALF Salau 134.18 331 PKP PKPdf 23 34 36.0 +0.3
MELF Melles 134.30 331 PKP PKPdf 23 34 36.9 +0.9
EPF Esparros 134.38 332 *e*PKIKP PKPdf 23 34 35.8 -0.3
comp=Z,53nm,1.0s
LABF Labassere 134.49 332 PKP PKPdf 23 34 37.8 +1.5
RESF Ens 134.55 332 PKP PKPdf 23 34 37.5 +1.1
LPAZ La Paz 134.59 118 PKhKP 23 34 25.5
comp=Z,5.4nm,0.8s,baz=249,slow=5.0,SNR=9.5
LPAZ PKP PKPdf 23 34 39.4 +2.9
comp=Z,46nm,0.7s,baz=265,slow=2.7,SNR=74
LPAZ SKPbc SKPbc 23 38 07.5 +4.2
comp=Z,39nm,1.1s,baz=270,slow=1.9,SNR=28
LPAZ La Paz 134.59 118 PKIKP PKPdf 23 34 39.4 +2.9
LPAZ pmax pmax
comp=Z,46nm,0.7s
LPAZ La Paz 134.59 118 PKP PKPdf 23 34 39.4 +2.9
LPAZ SKPbc SKPbc 23 38 07.5 +4.2
VIEF Viey 134.64 332 PKP PKPdf 23 34 37.6 +1.0
REYF Montagne du Re 134.69 332 PKP PKPdf 23 34 37.6 +0.9
EBIE Bielsa 134.74 332 PKP PKPdf 23 34 28.1 -8.7
ATE Arette 134.82 333 PKP PKPdf 23 34 37.5 +0.6
CMAH Djebel Manchou 134.83 320 P PKPdf 23 34 37.0 +0.1
ETSF Etsaut 134.90 332 *e*PKIKP PKPdf 23 34 37.6 +0.5
comp=Z,89nm,0.7s
LARF Larrau 134.99 333 PKP PKPdf 23 34 38.7 +1.5
SJPF Ste Jean 135.04 333 *e*PKIKP PKPdf 23 34 37.6 +0.3
comp=Z,35nm,0.7s
EALK Alkurruntz 135.08 333 PKP PKPdf 23 34 28.9 -8.5
CAEH 'Ain El Ouahch 135.09 321 P PKPdf 23 34 41.0 +3.6
ELIZ Elizondo 135.13 333 PKHKP 23 34 29.1
EPOB Poblet 135.28 330 PKP PKPdf 23 34 28.6 -9.2
CKFL Kef-Lekhel 135.41 320 P PKPdf 23 34 40.0 +2.0
ETOS Mallorca 135.51 327 PKP PKPdf 23 34 32.0 -6.2
ESAC San Caprasio 135.77 331 PKP PKPdf 23 34 29.1 -10
DFRA Djebel Bou Aff 135.85 321 P PKPdf 23 34 42.0 +3.1
ELAN Lanestosa 135.91 335 PKP PKPdf 23 34 28.9 -10
ERTA Horta de San J 135.95 330 PKP PKPdf 23 34 31.2 -7.9
SET Setif 136.37 321 P PKPdf 23 34 40.0 +0.2
CKHR Kef el Ahmar 136.41 321 P PKPdf 23 34 44.0 +4.1
SDV Santo Domingo 136.57 82 PKP PKPdf 23 34 42.1 +1.9
comp=Z,86nm,0.8s,baz=180,slow=5.1,SNR=14
SDV SKP 23 38 13.6
comp=Z,56nm,0.9s,baz=301,slow=2.8,SNR=24
SDV Santo Domingo 136.57 82 *e*PKPdf PKPdf 23 34 41.8 +1.6
SDV eSKPbc SKPbc 23 38 12.2 +2.7
EARI Arriondas 136.57 337 PKP PKPdf 23 34 29.6 -11
EMOS Mosqueruela 136.80 330 PKP PKPdf 23 34 31.0 -10
EIBI Ibiza 136.84 327 PKP PKPdf 23 34 33.5 -7.2
ABA Alger-Bouzarea 137.43 323 P PKPdf 23 34 42.0 +0.2
ECHE Chera 137.64 330 PKHKP 23 34 34.7
CPUP Villa Florida 137.79 138 PKhKP 23 34 30.5
comp=Z,1.9nm,0.6s,baz=234,slow=4.4,SNR=10
CPUP PKP PKPdf 23 34 43.4 +1.0
comp=Z,44nm,0.9s,baz=254,slow=2.0,SNR=33
CPUP SKP 23 38 16.0
comp=Z,7.6nm,0.8s,baz=214,slow=4.1,SNR=4.9
CPUP Villa Florida 137.79 138 PKIKP PKPdf 23 34 43.4 +1.0
CPUP pmax pmax
comp=Z,44nm,0.9s
CPUP pmax pmax
comp=N,8.0nm,0.8s
CPUP Villa Florida 137.79 138 PKP PKPdf 23 34 43.4 +1.0
CPUP SKP 23 38 16.0
EMHD Djebel Mahouad 137.88 323 P PKPdf 23 34 42.0 -0.6
EBEN Beniarda 137.92 328 PKP PKPdf 23 34 34.4 -8.3
GUD Guadarrama 138.33 333 PKHKP 23 34 33.4
PBRG Braganca 138.44 337 *e*PKP PKPdf 23 34 36.9 -6.7
PBRG *e*- 23 38 16.6
ETOB Tobarra 138.65 329 PKP PKPdf 23 34 36.4 -7.6
ESDC Sonseca Array 139.02 332 PKhKP 23 34 37.3
comp=N,1.5nm,0.6s,baz=51,slow=1.7,SNR=7.9
ESDC PKP PKPdf 23 34 45.3 +0.6
comp=N,8.3nm,0.7s,baz=14,slow=3.7,SNR=20
ESDC SKP 23 38 19.1
comp=N,14nm,1.1s,baz=22,slow=3.4,SNR=11
ESDC Sonseca Array 139.02 332 PKP PKPdf 23 34 37.4 -7.3
ESDC PKP PKPdf 23 34 45.3 +0.6
ESDC SKP 23 38 19.1
ESLA Sonseca Array 139.02 332 *e*PKPdf PKPdf 23 34 44.7 0.0
ESLA *ep*PKPdf pPKPdf 23 34 56.0 -1.4
ESLA *e*SKP 23 38 18.7
EMUR La Murta 139.09 328 PKP PKPdf 23 34 36.9 -7.9
EVIA Vianos 139.13 330 PKHKP 23 34 37.6
EANR 'Ain N'Sour 139.15 324 P PKPdf 23 34 37.0 -7.9
CART Cartagena 139.15 328 *e*PKPdf PKPdf 23 34 43.8 -1.1
PVRL Vila Real 139.27 337 *e*PKP PKPdf 23 34 39.3 -5.9
PVRL *e*- 23 38 18.1
ETRT Tiaret 139.41 323 P PKPdf 23 34 38.0 -7.4
SJG San Juan 139.46 67 *e*PKPdf PKPdf 23 34 44.2 -1.3
SJG *e*SKPbc SKPbc 23 38 20.9 +3.2
CPD Cerro la Pandu 139.69 67 *e*PKPdf PKPdf 23 34 46.8 +0.8
CPD *e*SKPbc SKPbc 23 38 21.6 +3.3
HUMP Col San Antoni 139.72 67 *e*PKPdf PKPdf 23 34 43.0 -3.0
HUMP *e*SKPbc SKPbc 23 38 20.6 +2.1
EHUE Huescar 139.81 329 PKHKP 23 34 38.8
PVIS Viseu 139.82 337 *e*PKP PKPdf 23 34 41.3 -4.9
PVIS *e*- 23 38 19.4
MTE Manteigas 139.96 337 *e*PKP PKPdf 23 34 41.7 -4.7
MTE Manteigas 139.96 337 *e*PP PP 23 37 46.5 +3.4
MTE Manteigas 139.96 337 *e*SS SS 23 56 01.7 -0.2
MTE Manteigas 139.96 337 *e*LR LR 00 25 39.3
MTE Manteigas 139.96 337 *e*PKPdf PKPdf 23 34 46.0 -0.4
MTP Monte Pirata 140.01 67 *e*PKPdf PKPdf 23 34 46.6 +0.1
EQES Quesada 140.06 330 PKP PKPdf 23 34 39.4 -7.2
EBAN Banos Encina 140.13 331 PKHKP 23 34 38.4
ENIJ Nijar 140.25 328 PKHKP 23 34 39.1
PCBR Castelo Branco 140.41 336 *e*PKP PKPdf 23 34 40.6 -6.6
PCBR *e*- 23 38 21.0
EADA Adamuz 140.51 332 PKP PKPdf 23 34 39.1 -8.3
EBER Berja 140.66 329 PKP PKPdf 23 34 39.0 -8.7
ECOG Cogollos-Vega 140.72 330 PKHKP 23 34 38.6
SIV San Ignacio 140.84 122 PKhKP 23 34 41.5
comp=N,12nm,0.6s,baz=245,slow=4.2,SNR=33
SIV PKP PKPdf 23 34 48.3 +0.3
comp=N,16nm,0.5s,baz=245,slow=3.1,SNR=23
SIV SKP 23 38 24.3
comp=N,17nm,1.0s,baz=250,slow=6.2,SNR=16
ELUQ Luque 140.84 331 PKHKP 23 34

EMIJ	**Mijas**	**141.88**	**330**	PKP	PKPdf	23 34 41.5	-8.4		
PBEJ	**Beja**	**142.10**	**335**	*e*PKP	PKPdf	23 34 45.1	-5.2		
PBEJ				*e-*		23 38 26.7			
ESPR	**Espera**	**142.16**	**332**	PKP	PKPdf	23 34 43.2	-7.2		
EJIF	**Jimena Fronter**	**142.31**	**331**	PKHKP		23 34 41.0			
PCRV	**Puerto La Cruz**	**142.37**	**79**	PKhKP		23 34 45.8			
	comp=N,14nm,0.5s,baz=253,slow=2.2,SNR=5.2								
PCRV				SKPbc	SKPbc	23 38 27.0	+1.7		
	comp=N,16nm,1.0s,baz=12,slow=15,SNR=4.1								
SFS	**San Fernando**	**142.65**	**332**	*e*PKIKP	PKPdf	23 34 53.3	+2.1		
PTEO	**Sao Teotonio**	**142.87**	**335**	*e*PKP	PKPdf	23 34 48.1	-3.5		
STGR	**Santa Cruz**	**145.37**	**1**	*e*PKP	PKPab	23 34 57.8	+1.7		
PVIA	**Vitoria**	**145.38**	**1**	*e*PKP	PKPab	23 34 57.8	+1.7		
PLUZ	**Luz**	**145.40**	**3**	*e*PKP	PKPab	23 34 58.1	+1.9		
SRBC	**Serra Branca**	**145.41**	**1**	*e*PKP	PKPab	23 34 57.7	+1.4		
PBIS	**Biscoitos**	**145.70**	**0**	*e*PKP	PKPab	23 34 58.8	+1.5		
PVNV	**Vila Nova**	**145.70**	**0**	*e*PKP	PKPab	23 34 58.7	+1.4		
ROSA	**Rosais**	**145.72**	**2**	*e*PKP	PKPab	23 34 58.4	+1.0		
ASBA	**Santa Barbara**	**145.74**	**0**	*e*PKP	PKPab	23 34 59.4	+1.9		
PFAV	**Pico das Favas**	**145.75**	**360**	*e*PKP	PKPab	23 34 58.7	+1.2		
PPAD	**Pico dos Padre**	**145.76**	**0**	*e*PKP	PKPab	23 34 58.8	+1.3		
PAMA	**Santo Amaro**	**145.77**	**1**	*e*PKP	PKPab	23 34 58.0	+0.4		
RIB2	**Ribeirinha**	**145.79**	**0**	*e*PKP	PKPab	23 34 58.9	+1.2		
PMAN	**Manadas**	**145.82**	**1**	*e*PKP	PKPab	23 34 58.4	+0.6		
CALA	**Caldeira**	**145.85**	**2**	*e*PKP	PKPab	23 34 58.6	+0.7		
HOR	**Horta**	**145.91**	**2**	*e*PKP	PKPab	23 34 59.1	+1.0		
PICO	**Pico**	**145.94**	**2**	*e*PKP	PKPab	23 34 58.7	+0.5		
PTEI	**Pico do Teixo**	**145.95**	**2**	*e*PKP	PKPab	23 34 58.9	+0.6		
PCND	**Candelaria**	**145.97**	**2**	*e*PKP	PKPab	23 34 59.0	+0.7		
PBOI	**Pico dos Bois**	**146.00**	**2**	*e*PKP	PKPab	23 34 59.0	+0.5		
PID	**Ribeirinha**	**146.00**	**1**	*e*PKP	PKPab	23 34 58.4	-0.1		
SET4	**Mosteiros**	**146.56**	**358**	*e*PKP	PKPab	23 35 01.0	+0.4		
PFAD	**Fenais da Ajud**	**146.58**	**357**	*e*PKP	PKPab	23 35 01.0	+0.3		
SET2	**Ginetes**	**146.59**	**358**	*e*PKP	PKPab	23 35 02.5	+1.8		
PMAT	**Coroa da Mata**	**146.61**	**358**	*e*PKP	PKPab	23 35 01.4	+0.6		
PVER	**Pico Vermelho**	**146.63**	**358**	*e*PKP	PKPab	23 35 01.6	+0.7		
MESC	**Monte Escuro**	**146.63**	**358**	*e*PKP	PKPab	23 35 01.2	+0.3		
MIRA	**Miradouro**	**146.63**	**357**	*e*PKP	PKPab	23 35 01.3	+0.4		
LFA	**Lagoa do Fogo**	**146.65**	**358**	*e*PKP	PKPab	23 35 01.4	+0.4		
PCNG	**Congro**	**146.65**	**357**	*e*PKP	PKPab	23 35 01.3	+0.3		
CML	**Cha da Macela**	**146.66**	**358**	*e*PKP	PKPab	23 35 00.8	-0.2		
FAC	**Faja de Cima**	**146.66**	**358**	*e*PKP	PKPab	23 35 01.9	+0.9		
FRA1	**Furnas**	**146.68**	**357**	*e*PKP	PKPab	23 35 00.9	-0.2		
VIF	**Vila Franca**	**146.68**	**358**	*e*PKP	PKPab	23 35 01.2	+0.1		
PRCH	**Ribeira Ch**	**146.69**	**358**	*e*PKP	PKPab	23 35 01.6	+0.5		
PSMN	**Pico do Norte,**	**147.40**	**357**	*e*PKP	PKPab	23 35 01.7	-2.2		
CAM4	**Nova Friburgo**	**149.51**	**151**	⇑P	PKPab	23 35 04.9	-7.5		
CAM4				*i*		23 35 08.3			
CAM4				*i*		23 35 13.7			
CAM4				*i*		23 35 19.3			
PMPS	**Porto Santo**	**149.66**	**342**	*e-*	PKPdf	23 35 08.6	+5.5		
PMAR	**Madeira**	**150.15**	**343**	*e-*	PKPdf	23 35 10.4	+6.5		
TORD	**Torodi Ar. Bea**	**150.21**	**289**	PKP	PKPdf	23 35 03.3	-0.6		
	comp=N,18nm,0.9s,baz=23,slow=0.9,SNR=65								
TORD				PKPbc	PKPbc	23 35 09.4	+0.3		
	comp=N,382nm,0.8s,baz=44,slow=1.0,SNR=144								
BDFB	**Brasilia**	**151.37**	**134**	PKP	PKPdf	23 35 06.7	+1.0		
	comp=N,67nm,1.0s,baz=254,slow=0.9,SNR=49								
BDFB				PKPbc	PKPbc	23 35 12.5	+0.7		
	comp=N,334nm,0.7s,baz=252,slow=2.1,SNR=165								
BDFB	**Brasilia**	**151.37**	**134**	PKP	PKPdf	23 35 06.7	+1.0		
BDFB				PKPbc	PKPbc	23 35 12.5	+0.7		
BDFB				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
BAO	**Brasilia Array**	**151.39**	**134**	PKPdf	PKPbc	23 35 13.0	+1.1		
EFAM	**Famara**	**152.14**	**334**	PKP	PKPbc	23 35 12.4	-1.2		
CFTV	**Fuerteventura**	**153.00**	**334**	PKP	PKPbc	23 35 16.3	+0.8		
DBIC	**Dimbokro**	**157.70**	**277**	PKPdf	PKPdf	23 35 14.6	+0.1		
DBIC				pPKPdf	pPKPdf	23 35 25.7	-1.5		
DBIC				PKPab	PKPab	23 35 47.7	+0.6		
DBIC	**Dimbokro**	**157.70**	**277**	PKP	PKPdf	23 35 15.1	+0.5		
	comp=Z,16nm,1.0s,baz=360,slow=4.2,SNR=11								
DBIC				PKPab	PKPab	23 35 47.6	+0.6		
	comp=Z,123nm,0.9s,baz=74,slow=5.8,SNR=26								
DBIC	**Dimbokro**	**157.70**	**277**	PKP2	PKPab	23 35 47.7	+0.7		
DBIC				pmax	pmax				
	comp=Z,123nm,1.0s								
DBIC	**Dimbokro**	**157.70**	**277**	*e*PKPdf	PKPdf	23 35 15.2	+0.6		
LIC	**Lamto**	**157.91**	**276**	*e*PKIKP	PKPdf	23 35 14.1	-0.7		
	comp=Z,206nm,1.5s								
LIC				*e*R					
	comp=Z,356nm,22.5s								
LIC	**Lamto**	**157.91**	**276**	*e*PKPdf	PKPdf	23 35 14.1	-0.7		
LIC				LR	LR				
	comp=Z,180nm,22.5s,MS4.8								

MOS ***23*** *23:36:34.6±1.0,605N×12579E,h84km,mb4.6/2,Error ellipse: s-maj=45.3km s-min=15.8km az=101.9*
IDC ***23*** *23:36:42.0±8.6,606N×12588E,h136km±75km,mb3.7/7, mb1 3.9/7,mb1mx3.6/20,mbtmp4.1/7,Error ellipse: s-maj=70.1km s-min=23.1km az=65.0*
ISCJB ***23*** *23:36:43.1±0.5,606N±006×1260E±01,h166km±5km, mb4.2/12,Error ellipse: s-maj=21.1km s-min=8.2km az=149.2*
MAN ***23*** *23:36:43.7,576N×12556E,h1km,mb3.6,ML4.8,MS5.1*
NEIC ***23*** *23:36:43.5±0.8,605N×12596E,h150km±8km,mb4.5/7, Error ellipse: s-maj=24.4km s-min=5.9km az=79.0*

ISC 23 23:36:44.3±0.5,605N±006×1260E±01,h157km±5km,n35, σ0=89/32,mb4.2/12,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.94**	**18**	*e*P		**Pn**	**23 37 09.5**	**+0.3**
MATI				*e*S		**Sn**	**23 37 28.7**	**+0.5**
DAV	**Davao City (W)**	**1.09**	**339**	*e*Pn		**Pn**	**23 37 09.3**	**-1.1**
DAV				*e*Sn		**Sn**	**23 37 27.3**	**-3.1**
BUKP	**Musuan**	**2.03**	**334**	*e*P		**Pn**	**23 37 21.1**	**+1.0**
BUKP				*e*S		**Sn**	**23 37 49.5**	**+1.7**
PAGZ	**Pagadian**	**3.13**	**305**	*e*P		**Pn**	**23 37 33.1**	**-0.4**
NACB	**Ninganchiao**	**18.51**	**347**	P		**P**	**23 40 48.3**	**-0.2**
YHNB	**Yeheng**	**19.04**	**347**	*e*P		**P**	**23 40 53.2**	**-1.0**
TATO	**Taipei**	**19.31**	**348**	P		**P**	**23 40 56.2**	**-0.9**
KAKA	**Kakadu**	**19.71**	**161**	*e*P		**P**	**23 41 01.4**	**-0.1**
	9.7nm,0.6s							
FITZ	**Fitzroy Crossi**	**24.00**	**181**	P		**P**	**23 41 44.3**	**0.0**
	2.9nm,0.3s,mb4.2,baz=17,slow=10.0,SNR=34							
FITZ	**Fitzroy Crossi**	**24.00**	**181**	*e*P		**P**	**23 41 44.3**	**0.0**
	5.4nm,0.3s,mb4.6							
WRAB	**Tennant Creek**	**27.10**	**162**	*e*P		**P**	**23 42 12.0**	**-0.3**
WRAB				pmax	pmax			
	comp=Z,4.0nm,0.4s,mb4.4							
WRAB	**Tennant Creek**	**27.10**	**162**	*e*P		**P**	**23 42 11.9**	**-0.4**
	comp=Z,4.4nm,0.4s,mb4.4							
WRA	**Warramunga Arr**	**27.11**	**163**	P		**P**	**23 42 12.0**	**-0.3**
	comp=Z,0.6nm,0.3s,mb3.7,baz=334,slow=11,SNR=20							
WB2	**Warramunga Arr**	**27.11**	**162**	*e*P		**P**	**23 42 11.7**	**-0.7**
MBWA	**Marble Bar**	**27.72**	**193**	*e*P		**P**	**23 42 19.1**	**+1.3**
	comp=Z,15nm,1.2s,mb4.6							
CHTO	**Chiang Mai**	**29.23**	**298**	PFAKE			23 42 40.0	+8.8
CHTO				LR	LR			
	comp=Z,624nm,20.0s							
ASAR	**Alice Springs**	**30.53**	**166**	P		**P**	**23 42 42.8**	**+0.1**
	comp=Z,1.6nm,0.5s,mb4.0,baz=344,slow=7.3,SNR=31							
ASAR				PcP	PcP		23 45 38.5	+0.8
	comp=Z,0.7nm,0.5s,baz=334,slow=2.3,SNR=6.6							
INCN	**Inchon**	**31.30**	**1**	*e*P		**P**	**23 42 48.5**	**-0.9**
	comp=Z,19nm,0.3s,mb5.3							
MDJ	**Mudanjiang**	**38.55**	**4**	P		**P**	**23 43 52.1**	**+0.5**
NWAO	**Narrogin (SRO)**	**39.64**	**192**	P		**P**	**23 44 00.5**	**0.0**
	comp=Z,2.8nm,0.5s,mb4.2,baz=356,slow=8.4,SNR=7.8							
NWAO	**Narrogin (SRO)**	**39.64**	**192**	P		**P**	**23 44 00.5**	**0.0**
STKA	**Stephens Creek**	**40.55**	**159**	P		**P**	**23 44 08.9**	**+0.8**
	comp=Z,3.7nm,0.5s,mb4.3,baz=327,slow=8.2,SNR=12							
STKA	**Stephens Creek**	**40.55**	**159**	⇑*i*P		**P**	**23 44 08.8**	**+0.7**
	comp=Z,2.9nm,0.5s,mb4.2							
HIA	**Hailar**	**43.39**	**354**	PFAKE			23 44 40.0	+8.9
HIA				LR	LR			
	comp=Z,695nm,19.0s							
MKAR	**Makanchi Array**	**55.23**	**325**	P		**P**	**23 46 00.7**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.5,baz=109,slow=7.3,SNR=5.0							
MA2	**Magadan**	**56.66**	**15**	P		**P**	**23 46 12.4**	**+1.3**
NVS	**Novosibirsk**	**59.48**	**333**	*i* P		**P**	**23 46 26.2**	**-4.4**
NVS				pmax	pmax			
	comp=E,10.0nm,1.3s							
NVS				pmax	pmax			
	comp=Z,27nm,1.3s,mb4.9							
NVS				pmax	pmax			
	comp=N,27nm,2.0s							
CHKZ	**Chkalovo**	**65.14**	**327**	P		**P**	**23 47 09.9**	**+1.6**
ZRNK	**Zerenda**	**65.71**	**326**	*e*P		**P**	**23 47 11.2**	**-0.7**
	comp=N,0.4nm,0.4s,mb3.6							
CASY	**Casey**	**73.01**	**186**	PFAKE			23 48 10.0	+13
CASY				LR	LR			
	comp=Z,720nm,20.0s							
VNDA	**Vanda**	**85.80**	**173**	P		**P**	**23 49 05.7**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.2,baz=325,slow=5.3,SNR=3.2							
INK	**Inuvik**	**88.30**	**21**	P		**P**	**23 49 17.8**	**-0.1**
WVOR	**Wild Horse Val**	**104.21**	**44**	P		Pdif	23 50 31.4	+1.3
WVOR				pmax	pmax			
	comp=Z,3.0nm,0.5s							
WVOR	**Wild Horse Val**	**104.21**	**44**	Pdif		Pdif	23 50 31.4	+1.2
	comp=Z,3.3nm,0.5s							
TORD	**Torodi Ar. Bea**	**121.46**	**289**	PKP		PKPdf	23 55 19.6	+0.7
	comp=Z,0.3nm,0.3s,baz=74,slow=1.5,SNR=21							

ISCJB ***23*** *23:49:46.6±0.3,1312N±003×14587E±006,h35km, mb4.8/66,MS4.3/16, Error ellipse: s-maj=8.6km s-min=4.9km az=163.7*
BJI ***23*** *23:49:46.3,1312N×1460 4E,h45km,mB5.2,mb4.9,Ms4.4, Msz4.0*
NEIC ***23*** *23:49:49.0±0.2,1312N×14587E,mb4.9/23,Error ellipse: s-maj=6.4km s-min=4.0km az=80.0*
IDC ***23*** *23:49:50.7±1.6,1312N×14587E,h56km±14km,mb4.3/28, mb1 4.4/29,mb1mx4.3/34,mbtmp4.6/29,MS4.0/9, Ms1 4.0/9,ms1mx3.6/36,Error ellipse: s-maj=18.2km s-min=9.0km az=77.0*
MOS ***23*** *23:49:50.0±0.9,1314N×14579E,h67km,mb5.1/21,Error ellipse: s-maj=13.4km s-min=6.5km az=106.6*

ISC 23 23:49:48.6±0.3,1314N±003×14598E±005,h37km, h37km±2.1km:pP-P,n142,σ0=88/135,mb4.8/66,MS4.3/16, 8C-2D,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.17**	**293**	P		**Pn**	**23 50 09.6**	**+1.2**
	308nm,0.3s,baz=151,slow=8.4,SNR=124							
GUMO				S		**Sn**	**23 50 24.0**	**+0.9**
	4μm,0.3s,baz=278,slow=23,SNR=104							
CBIJ	**Chichi jima**	**14.33**	**346**	P		**Pn**	**23 53 09.7**	**+0.8**
	4.0nm,0.3s,baz=287,slow=19,SNR=3.6							
CBIJ				S		**Sn**	**23 55 48.0**	**+1.6**
	2.8nm,0.3s,baz=246,slow=23,SNR=2.5							
CBIJ				LR	LR		23 58 07.9	
	comp=Z,611nm,21.1s,baz=179,slow=35							
JOW	**Kunigami**	**21.46**	**312**	P		**P**	**23 54 34.0**	**+0.3**
	28nm,0.6s,mb4.8,baz=149,slow=10,SNR=10							
JOW				LR	LR		00 02 09.3	
	comp=Z,256nm,19.1s,MS3.6,baz=192,slow=34							
PMG	**Port Moresby**	**22.43**	**177**	P		**P**	**23 54 44.5**	**+0.4**
	17nm,0.7s,mb4.6,baz=16,slow=7.3,SNR=5.7							
MJAR	**Matsushiro Arr**	**24.32**	**345**	P		**P**	**23 55 01.2**	**-1.5**
	5.9nm,0.9s,mb4.0,baz=154,slow=10.0,SNR=11							
MJAR				LR	LR		00 04 55.6	
	comp=Z,136nm,18.4s,MS3.5,baz=170,slow=37							
MAJO	**Matsushiro**	**24.32**	**345**	*e*P		**P**	**23 55 02.1**	**-0.6**
MAJO				pmax	pmax			
	comp=Z,19nm,0.9s,mb4.5							
MAJO	**Matsushiro**	**24.32**	**345**	*e*P		**P**	**23 55 02.1**	**-0.6**
	comp=Z,19nm,0.9s,mb4.5							
MAT	**Matsushiro**	**24.32**	**345**	P		**P**	**23 55 01.3**	**-1.4**
NACB	**Ninganchiao**	**25.53**	**299**	P		**P**	**23 55 13.9**	**+0.2**
YHNB	**Yeheng**	**25.90**	**300**	P		**P**	**23 55 17.4**	**+0.4**
HNR	**Honiara**	**26.37**	**148**	LR	LR		00 04 35.1	
	comp=Z,273nm,19.1s,MS3.8,baz=0.7,slow=34							
INCN	**Inchon**	**29.77**	**328**	*e*P		**P**	**23 55 50.5**	**-1.0**
	comp=Z,14nm,0.3s,mb5.2							
ASAJ	**Asahikawa**	**31.00**	**355**	P		**P**	**23 56 02.4**	**-0.2**
	comp=Z,6.3nm,0.6s,mb4.6,baz=208,slow=28,SNR=4.0							
NJ2	**Nanjing**	**31.18**	**312**	*e*P		**P**	**23 56 02.4**	**-1.7**
NJ2				AP	pP		23 56 11.9	-2.6
NJ2				XP	sP		23 56 15.9	-3.0
NJ2				PP	PP		23 57 05.3	-10
NJ2				AMB	AMB			
	comp=Z,30nm,0.5s,mb5.4							
NJ2				AMB	AMB			
	comp=Z,220nm,4.5s							
NJ2				LR	LR			
	comp=N,110nm,21.5s,MS3.8							
NJ2				LR	LR			
	comp=E,228nm,22.1s,MS3.8							
NJ2				LR	LR			
	comp=Z,140nm,18.2s,MS3.7							
CTA	**Charters Tower**	**33.02**	**180**	P		**P**	**23 56 19.9**	**-0.3**
	comp=Z,2.6nm,0.6s,mb4.3,baz=16,slow=9.1,SNR=5.3							
CTAO	**Charters Tower**	**33.02**	**180**	*e*P		**P**	**23 56 20.1**	**-0.1**
	comp=Z,2.0nm,0.5s,mb4.3							
CTAO				*e*pP	pP		23 56 31.4	+0.7
CTAO				*e*sP	sP		23 56 36.5	+1.5
YSS	**Yuzh-Sakhalins**	**33.81**	**356**	P		**P**	**23 56 26.5**	**-0.7**
WHN	**Wuhan**	**33.92**	**306**	⇓P		**P**	**23 56 28.0**	**-0.1**
MDJ	**Mudanjiang**	**34.35**	**339**	P		**P**	**23 56 32.6**	**+0.8**
MDJ				AP	pP		23 56 41.4	-0.9
MDJ				XP	sP		23 56 45.3	-1.4
MDJ				PP	PP		23 57 50.9	+0.9
MDJ				AMB	AMB			
	comp=Z,5.0nm,1.3s,mb4.3							
MDJ				AMB	AMB			
	comp=Z,59nm,5.6s							
MDJ				LR	LR			
	comp=N,136nm,26.3s,MS3.6							
MDJ				LR	LR			
	comp=E,98nm,26.3s,MS3.6							
MDJ				LR	LR			
	comp=Z,164nm,21.7s,MS3.7							
WRAB	**Tennant Creek**	**34.80**	**199**	*e*P		**P**	**23 56 35.7**	**0.0**
WRAB				pmax	pmax			
	comp=Z,20nm,1.0s,mb5.0							
WRAB	**Tennant Creek**	**34.80**	**199**	*e*P		**P**	**23 56 35.6**	**0.0**
	comp=Z,20nm,1.0s,mb5.0							
WB2	**Warramunga Arr**	**34.81**	**199**	*e*P		**P**	**23 56 35.2**	**-0.6**
WRA	**Warramunga Arr**	**34.81**	**199**	P		**P**	**23 56 35.4**	**-0.4**
	comp=Z,8.6nm,0.9s,mb4.7,baz=20,slow=9.5,SNR=30							
WRA				LR	LR		00 09 43.6	
	comp=Z,213nm,20.5s,MS3.9,baz=245,slow=34							
WRA	**Warramunga Arr**	**34.81**	**199**	*i* P		**P**	**23 56 35.4**	**-0.4**
WRA				pmax	pmax			
	comp=Z,9.0nm,0.9s							
WRA	**Warramunga Arr**	**34.81**	**199**	P		**P**	**23 56 35.4**	**-0.4**
WRA				LR	LR		00 09 43.6	
QIZ	**Qiongzhong**	**35.16**	**284**	P		**P**	**23 56 39.7**	**+0.9**
HABR	**Khabarovsk**	**36.38**	**348**	*e*P		**P**	**23 56 42.2**	**-7.0**
HABR				S		**S**	**00 02 18.7**	**-9.3**
FITZ	**Fitzroy Crossi**	**36.96**	**213**	P		**P**	**23 56 54.3**	**+0.1**
	comp=Z,6.5nm,0.7s,mb4.6,baz=43,slow=10,SNR=24							
FITZ	**Fitzroy Crossi**	**36.96**	**213**	*e*P		**P**	**23 56 54.1**	**-0.1**
	comp=Z,11nm,0.7s,mb4.8							
BJI	**Beijing**	**37.47**	**321**	*e*P		**P**	**23 56 57.8**	**-0.7**
BJI				AMB	AMB			
	comp=Z,17nm,0.7s,mb5.0							
ASAR	**Alice Springs**	**38.44**	**198**	P		**P**	**23 57 06.8**	**+0.1**
	comp=Z,1.9nm,0.6s,mb4.0,baz=18,slow=12,SNR=22							
XAN	**Xi'an**	**39.52**	**308**	P		**P**	**23 57 15.3**	**-0.4**
XAN				AMB	AMB			
	comp=Z,16nm,0.9s,mb4.8							
DZM	**Mont Dzumac**	**40.34**	**150**	P		**P**	**23 57 23.6**	**+1.1**
	comp=Z,6.7nm,0.8s,mb4.4,baz=335,slow=10,SNR=6.3							
DZM				LR	LR		00 11 04.1	
	comp=Z,158nm,21.3s,MS3.8,baz=235,slow=32							
HHC	**Hu-ho-hao-te**	**40.81**	**319**	*e*P		**P**	**23 57 28.3**	**+1.9**
HHC				AP	pP		23 57 38.0	+0.9
HHC				XP	sP		23 57 42.0	+0.6
HHC				PP	PP		23 59 05.1	+4.2
HHC				PCP	PcP		23 59 29.3	+2.3
HHC				AMB	AMB			
	comp=Z,16nm,1.0s,mb4.6							
HHC				AMB	AMB			
	comp=Z,128nm,8.1s							
HHC				LR	LR			
	comp=N,109nm,21.8s,MS4.0							
HHC				LR	LR			
	comp=E,177nm,17.4s,MS4.0							
PET	**Petropavlovsk**	**41.05**	**12**	*e*P		**P**	**23 57 28.4**	**0.0**
HIA	**Hailar**	**42.01**	**334**	*e*P		**P**	**23 57 36.8**	**+0.6**
HIA				pmax	pmax			
	comp=Z,5.0nm,0.4s							
HIA	**Hailar**	**42.01**	**334**	*e*P		**P**	**23 57 36.8**	**+0.5**
	comp=Z,5.3nm,0.4s,mb4.5							
CD2	**Chengdu**	**42.65**	**302**	P		**P**	**23 57 41.4**	**-0.1**
MBWA	**Marble Bar**	**42.74**	**217**	*e*P		**P**	**23 57 42.2**	**0.0**
	comp=Z,5.5nm,0.4s,mb4.6							
ARMA	**Armidale**	**43.65**	**173**	⇑*i*P		**P**	**23 57 50.3**	**+0.8**
LZH	**Lanzhou**	**44.14**	**309**	*e*P		**P**	**23 57 54.3**	**+0.8**
LZH				AMB	AMB			
	comp=Z,66nm,1.3s,mb5.2							
STKA	**Stephens Creek**	**44.96**	**185**	P		**P**	**23 57 59.6**	**-0.3**
	comp=Z,3.9nm,0.5s,mb4.5,baz=351,slow=7.3,SNR=9.8							
STKA	**Stephens Creek**	**44.96**	**185**	*e*P		**P**	**23 57 59.6**	**-0.4**
	comp=Z,5.8nm,1.1s,mb4.3							
STKA				*e*pP	pP		23 58 11.2	+0.5
MA2	**Magadan**	**46.49**	**3**	*e*P		**P**	**23 58 11.9**	**-0.2**
MA2				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.9							
MA2	**Magadan**	**46.49**	**3**	*e*P		**P**	**23 58 11.9**	**-0.2**
	comp=Z,9.7nm,0.6s,mb4.9							
MA2				*e*pP	pP		23 58 23.3	+0.4
AMKA	**Amchitka**	**46.67**	**28**	*e*P		**P**	**23 58 15.1**	**+1.6**
ULN	**Ulaanbaatar**	**47.37**	**325**	*e*P		**P**	**23 58 18.9**	**0.0**
	comp=Z,3.7nm,0.8s,mb4.4							
PSI	**Prapat**	**47.63**	**262**	P		**P**	**23 58 21.4**	**+0.3**
	comp=Z,4.1nm,0.5s,mb4.8,baz=144,slow=5.2,SNR=8.6							
SONM	**Songino Array**	**47.72**	**325**	P		**P**	**23 58 21.8**	**+0.1**
	comp=Z,5.5nm,0.9s,mb4.6,baz=139,slow=7.5,SNR=17							
GTA	**Gaotai**	**48.28**	**312**	⇑P		**P**	**23 58 26.6**	**+0.6**
GTA				AMB	AMB			
	comp=Z,24nm,1.1s,mb5.1							
AFI	**Afiamalu**	**49.74**	**121**	LR	LR		00 16 00.8	
	comp=Z,144nm,18.4s,MS4.0,baz=298,slow=32							
SEY	**Seymchan**	**49.93**	**4**	⇑*e*P		**P**	**23 58 38.4**	**-0.2**
YAK	**Yakutsk**	**50.21**	**350**	⇑*e*P		**P**	**23 58 40.0**	**-0.7**
YAK				pmax	pmax			
	comp=Z,36nm,0.7s,mb5.5							
TOO	**Toolangi**	**50.44**	**181**	*e*P		**P**	**23 58 43.6**	**+1.1**
TOO				pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.9							
TOO	**Toolangi**	**50.44**	**181**	*e*P		**P**	**23 58 43.6**	**+1.1**
	comp=Z,9.3nm,0.7s,mb4.9							
BOD	**Bodaibo**	**50.72**	**339**	*e*P		**P**	**23 58 43.6**	**-1.1**
BOD				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.2							
ZAK	**Zakamensk**	**50.81**	**326**	*e*P		**P**	**23 58 44.2**	**-1.1**
TLY	**Talaya**	**51.31**	**328**	*e*P		**P**	**23 58 48.4**	**-0.6**
TLY				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6							
KLBR	**Kellerberrin**	**52.07**	**211**	*e*P		**P**	**23 58 54.0**	**-0.7**
	comp=Z,8.4nm,0.6s,mb4.8							
LSA	**Lhasa**	**53.16**	**297**	P		**P**	**23 59 04.1**	**+1.3**
BILL	**Bilibino**	**56.43**	**9**	*d* iP		**P**	**23 59 26.5**	**+0.1**
BILL				pmax	pmax			
	comp=Z,18nm,0.8s,mb5.2							
JIRN	**Jiri**	**57.38**	**294**	*e*P		**P**	**23 59 32.5**	**-0.7**
GUN	**Gumba**	**57.66**	**295**	*e*P		**P**	**23 59 35.2**	**0.0**
	comp=Z,36nm,0.9s,mb5.4							
PKI	**Pulchoki**	**58.07**	**294**	*e*P		**P**	**23 59 37.8**	**-0.2**
	comp=Z,19nm,0.9s,mb5.1							
PKI	**Pulchoki**	**58.07**	**294**	*e*P		**P**	**23 59 37.8**	**-0.2**
PKI				pmax	pmax			
	comp=Z,19nm,0.9s,mb5.1							
KKN	**Kakani**	**58.19**	**295**	*e*P		**P**	**23 59 38.7**	**-0.2**
	comp=Z,36nm,1.1s,mb5.3							
KKN	**Kakani**	**58.19**	**295**	*e*P		**P**	**23 59 38.7**	**-0.2**
KKN				pmax	pmax			
	comp=Z,36nm,1.1s,mb5.3							
WMQ	**Urumqi**	**58.23**	**314**	*e*P		**P**	**23 59 39.5**	**+0.4**
WMQ				AMB	AM

TMCR				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.2						
NVAR	**Mina Array Bea**	**86.35**	**52**	P	**P**	**00 02 28.7**	**+1.8**
	comp=Z,1.5nm,0.6s,mb4.4,baz=265,slow=7.1,SNR=12						
NVAR	**Mina Array Bea**	**86.35**	**52**	P	**P**	**00 02 28.7**	**+1.8**
KLMR	**Klimovskoe**	**86.45**	**332**	*e*P	**P**	**00 02 26.3**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.8						
WALA	**Waterton Lakes**	**86.69**	**40**	P	**P**	**00 02 28.1**	**-0.4**
ARCES	**ARCESS Array B**	**87.84**	**342**	P	**P**	**00 02 33.1**	**-0.9**
	comp=Z,6.7nm,0.9s,mb4.9,baz=46,slow=7.0,SNR=20						
JOF	**Joensuu**	**89.15**	**335**	*e*p	**P**	**00 02 36.6**	**-3.7**
	comp=Z,11nm,0.7s,mb5.3						
JOF	**Joensuu**	**89.15**	**335**	*e*P	**P**	**00 02 36.6**	**-3.7**
JOF				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.3						
OBN	**Obninsk**	**90.06**	**327**	⇑*e*P	**P**	**00 02 42.5**	**-2.0**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9						
OBN	**Obninsk**	**90.06**	**327**	*e*P	**P**	**00 02 43.2**	**-1.3**
KIV	**Kislovodsk**	**90.32**	**315**	P	**P**	**00 02 45.6**	**-0.1**
KIV	**Kislovodsk**	**90.32**	**315**	P	**P**	**00 02 45.5**	**-0.1**
VNDA	**Vanda**	**90.95**	**177**	P	**P**	**00 02 48.3**	**-0.4**
	comp=Z,1.4nm,1.1s,mb4.2,baz=317,slow=6.7,SNR=5.6						
KAF	**Kangasniemi**	**91.57**	**336**	*e*p	**P**	**00 02 47.6**	**-3.9**
	comp=Z,12nm,0.9s,mb5.2						
KAF	**Kangasniemi**	**91.57**	**336**	*e*P	**P**	**00 02 47.6**	**-3.9**
KAF				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2						
FINES	**FINESS Array B**	**92.02**	**335**	P	**P**	**00 02 52.4**	**-1.2**
	comp=Z,5.9nm,0.6s,mb5.1,baz=72,slow=5.2,SNR=53						
FINES	**FINESS Array B**	**92.02**	**335**	*i* P	**P**	**00 02 52.4**	**-1.2**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LAO	**LASA Array**	**92.36**	**41**	PFAKE		00 03 10.0	+15
LAO				LR	LR		
	comp=Z,864nm,19.0s,MS5.2						
ISCO	**Idaho Springs**	**95.33**	**47**	PFAKE		00 03 20.0	+11
ISCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
NB2	**NORSAR Subarra**	**97.85**	**340**	P	**P**	**00 03 18.9**	**-1.3**
	comp=Z,2.5nm,0.8s,mb4.8,baz=48,slow=4.6						
NOA	**NORSAR Array B**	**97.85**	**340**	P	**P**	**00 03 18.8**	**-1.4**
	comp=Z,1.4nm,0.8s,mb4.6,baz=46,slow=5.5,SNR=12						
BRTR	**Keskin Array B**	**98.15**	**314**	P	**P**	**00 03 21.3**	**-0.3**
	comp=Z,0.7nm,0.9s,mb4.2,baz=98,slow=5.1,SNR=4.3						
MIAR	**Mount Ida**	**106.26**	**48**	PFAKE		00 08 20.0	+11
MIAR				LR	LR		
	comp=Z,825nm,20.0s,MS5.3						
HKT	**Hockley**	**106.69**	**53**	PFAKE		00 08 20.0	+10
HKT				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
NATX	**Nacogdoches**	**106.77**	**51**	PFAKE		00 08 20.0	+10
NATX				LR	LR		
	comp=Z,971nm,22.0s,MS5.3						
TORD	**Torodi Ar. Bea**	**136.01**	**305**	PKP	PKPdf	00 09 07.3	+1.7
	comp=Z,0.4nm,0.6s,baz=71,slow=1.6,SNR=5.5						
DBIC	**Dimbokro**	**144.97**	**302**	PKP	PKPdf	00 09 22.4	+0.7
	comp=Z,4.4nm,0.6s,baz=38,slow=3.9,SNR=22						

ISCJB ***24*** *00:02:53.9±0.2, 1055N±003×8694W±002, h24km, mb4.5/48, MS4.5/4, Error ellipse: s-maj=4.0km s-min=2.7km az=56.1*

IDC ***24*** *00:02:54.7±0.8, 1063N×8696W, h24km±4km, mb4.1/18, mb1 4.2/20, mb1mx4.1/25, mbtmp4.3/20, ML3.9/2, MS4.1/2, Ms1 4.1/2, ms1mx3.5/22, Error ellipse: s-maj=21.8km s-min=11.5km az=63.0*

NEIC ***24*** *00:02:55.0±0.3, 1066N×8677W, mb4.7/27, Error ellipse: s-maj=8.9km s-min=5.6km az=222.0*

MOS ***24*** *00:02:54.8±1.1, 1061N×8689W, h33km, mb5.0/9, Error ellipse: s-maj=17.7km s-min=7.7km az=113.6*

CASC ***24*** *00:02:55.2±2.4, 1053N×8700W, h41km±12km, MD4.2, ML3.7, mb4.7(NEIC)*

ISC 24 00:02:56.2±0.2, **1062N**±003×**8685W**±002, **h25**km, **h25**km±.7km**:pP-P, n235, σ1^{s}01**/225, **mb4.4**/47, **MS4.5**/4, **54C-50D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRZC	**La Cruz**	**1.28**	**75**	⇑*e*P	**Pn**	**00 03 18.4**	**0.0**
VCR	**Vista de Mar**	**1.30**	**112**	*e*P	**Pn**	**00 03 17.2**	**-1.5**
MADN	**Villa Maderas**	**1.51**	**59**	⇓*e*P	**Pn**	**00 03 22.6**	**+0.9**
CONN	**Concepcion**	**1.52**	**52**	⇑*e*P	**Pn**	**00 03 22.2**	**+0.4**
TICN	**Ticuantepe**	**1.53**	**23**	*e*P	**Pn**	**00 03 22.7**	**+0.8**
TICN				*e*S	**Sn**	**00 03 44.5**	**+3.5**
COPN	**Copaltepe**	**1.57**	**9**	⇓*i*P	**Pn**	**00 03 22.1**	**-0.4**
COPN				*e*S	**Sn**	**00 03 43.8**	**+1.8**
LIM1	**Limonal**	**1.57**	**87**	*i* P	**Pn**	**00 03 22.4**	**0.0**
LIM1				*i* S	**Sn**	**00 03 44.3**	**+2.3**
XAVN	**Gruta Xavier**	**1.60**	**19**	⇑*e*P	**Pn**	**00 03 22.9**	**0.0**
TISN	**Laguna Tiscapa**	**1.62**	**21**	⇓*e*P	**Pn**	**00 03 23.0**	**-0.1**
MGAN	**Managua**	**1.63**	**21**	⇑*e*P	**Pn**	**00 03 23.1**	**-0.1**
MGAN				*e*S	**Sn**	**00 03 45.5**	**+2.1**
	comp=E,2µm,0.4s						
APYN	**Apoyeque**	**1.68**	**17**	⇑*e*P	**Pn**	**00 03 23.9**	**0.0**
LEON	**Leon**	**1.79**	**359**	⇑*i*P	**Pn**	**00 03 24.7**	**-0.7**
LEON				*e*S	**Sn**	**00 03 48.4**	**+1.1**
MIRN	**Miramar**	**1.81**	**4**	⇓*e*P	**Pn**	**00 03 25.2**	**-0.6**
MIRN				*e*S	**Sn**	**00 03 49.4**	**+1.4**
CNGN	**Cerro Negro**	**1.87**	**5**	⇑*e*P	**Pn**	**00 03 26.0**	**-0.7**
JCR	**Jicaral**	**1.88**	**114**	⇑*e*P	**Pn**	**00 03 25.6**	**-1.0**
JCR				*e*S	**Sn**	**00 03 49.2**	**-0.2**
TELN	**Telica**	**1.97**	**1**	⇑*e*P	**Pn**	**00 03 27.3**	**-0.7**
CRIN	**San Cristobal**	**2.08**	**355**	⇑*e*P	**Pn**	**00 03 28.7**	**-0.7**
CRIN				*e*S	**Sn**	**00 03 54.8**	**+0.4**
BOA	**Boaco**	**2.16**	**31**	⇑*e*P	**Pn**	**00 03 30.2**	**-0.3**
BOA				⇑*e*P		00 03 30.3	
BOA				*i*		00 04 12.0	
	comp=E,163nm,0.8s						
CGA2	**Cerro Gallo 2**	**2.42**	**104**	⇑*e*P	**Pn**	**00 03 34.9**	**+0.8**
PRS1	**Puriscal**	**2.58**	**104**	*e*P	**Pn**	**00 03 36.8**	**+0.5**
LAJ	**Bijagual**	**2.79**	**105**	⇓*i*P	**Pn**	**00 03 34.9**	**-4.3**
LAJ				*e*S	**Sn**	**00 04 04.7**	**-7.4**
CNCH	**Conchagua**	**2.81**	**340**	*e*P	x	00 03 55.1	
CNCH				*e*S	x	00 04 27.1	
SJS	**Escuela Geolog**	**2.83**	**104**	⇑*e*P	**Pn**	**00 03 42.1**	**+2.3**
LCR2	**La Lucha 2**	**2.94**	**107**	*e*P	**Pn**	**00 03 42.4**	**+1.2**
BLLM	**Bellamira**	**3.12**	**334**	*e*P	x	00 03 59.0	
BLLM				*e*S	x	00 04 33.8	
VSM	**San Miguel**	**3.12**	**334**	*e*P	x	00 03 59.3	
VSM				*e*S	x	00 04 35.9	
BUS	**Buena Vista**	**3.22**	**109**	⇑*e*P	**Pn**	**00 03 46.4**	**+1.3**
BUS				*e*S	**Sn**	**00 04 24.7**	**+2.0**
SNVI	**San Vicente**	**3.55**	**327**	*e*P	x	00 04 05.1	
SNVI				*e*S	x	00 04 45.2	
LCBS	**La Ceiba**	**3.66**	**326**	*e*P	x	00 04 06.1	
LCBS				*e*S	x	00 04 46.7	
LFRS	**El Faro**	**3.69**	**324**	*e*P	x	00 04 06.3	
LBRS	**Las Brisas**	**3.77**	**326**	*e*P	x	00 04 08.3	
LBRS				*e*S	x	00 04 50.8	
LFU	**La Fuente**	**3.82**	**325**	*e*P	x	00 04 08.7	
BOQS	**Boqueron**	**3.90**	**323**	*e*P	x	00 03 52.6	
BOQS				*e*P	x	00 04 10.1	
SBLS	**San Blas**	**4.19**	**320**	*i* P	x	00 03 57.1	
SBLS				*e*P	x	00 04 13.8	
SNJE	**San Jose**	**4.20**	**320**	*e*P	x	00 04 13.9	
SNJE				*e*S	x	00 05 00.5	
RTR	**El Retiro**	**4.25**	**320**	*e*P	x	00 04 14.9	
RTR				*e*S	x	00 05 02.3	
RBDL	**Robledal**	**4.44**	**322**	*e*P	x	00 04 17.8	
RBDL				*e*S	x	00 05 06.9	
MTO2	**Montecristo 2**	**4.49**	**327**	*e*P	x	00 04 18.3	
MTO2				*e*S	x	00 05 09.1	
FUG	**Fuego 3**	**5.45**	**315**	*e*P	**Pn**	**00 04 15.4**	**-0.3**
TP2	**Tecpan 2**	**5.80**	**316**	*e*P	**Pn**	**00 04 20.9**	**+0.3**
TP2				*e*S	**Sn**	**00 05 27.6**	**+1.3**
JAT	**Jato**	**5.95**	**309**	*e*P	**Pn**	**00 04 22.7**	**+0.1**
CMIG	**Matias Romero**	**10.11**	**310**	Pn	**Pn**	**00 05 18.7**	**-1.0**
	comp=E,2.2nm,0.3s,baz=105,slow=10,SNR=32						
CMIG				Sn	**Sn**	**00 07 06.9**	**-5.3**
	comp=E,0.6nm,0.3s,baz=229,slow=20,SNR=1.9						
CMIG	**Matias Romero**	**10.11**	**310**	Pn	**Pn**	**00 05 18.7**	**-1.0**
CMIG				Sn	**Sn**	**00 07 06.9**	**-5.3**
VHO	**Vista Hermosa**	**11.54**	**305**	*i* P	**Pn**	**00 05 38.9**	**-0.4**
ACX	**Acapulco**	**14.13**	**298**	*i* P	**Pn**	**00 06 15.7**	**+1.1**
PPM	**Popocatepetl**	**14.14**	**308**	*i* P	**Pn**	**00 06 16.4**	**+1.6**
YAIG	**Yautepec**	**14.37**	**306**	*i* P	**Pn**	**00 06 18.3**	**+0.4**
PLIG	**Platanillo**	**14.47**	**304**	*i* P	**Pn**	**00 06 20.8**	**+1.4**
CAIG	**El Cayaco**	**14.51**	**298**	*i* P	**Pn**	**00 06 21.5**	**+1.7**
SDV	**Santo Domingo**	**16.08**	**95**	Pn	**Pn**	**00 06 43.4**	**+3.0**
	comp=E,0.5nm,0.3s,baz=347,slow=18,SNR=4.3						
ATAH	**Atahualpa**	**19.42**	**154**	P	**Pn**	**00 07 22.3**	**+0.5**
	comp=E,0.2nm,0.3s,baz=308,slow=18,SNR=2.5						
HKT	**Hockley**	**20.98**	**338**	*e*P	**P**	**00 07 36.0**	**-1.4**
HKT				S	**S**	**00 11 29.2**	**-0.6**
HKT				pmax	pmax		
	comp=Z,61nm,1.5s						
HKT	**Hockley**	**20.98**	**338**	*e*P	**P**	**00 07 36.0**	**-1.4**
	comp=Z,61nm,1.5s						
HKT				S	**S**	**00 11 29.1**	**-0.7**
SJG	**San Juan**	**21.38**	**67**	P	**P**	**00 07 42.2**	**+0.4**
	comp=Z,8.6nm,0.5s,mb4.3,baz=277,slow=7.6,SNR=4.3						
PCRV	**Puerto La Cruz**	**21.86**	**89**	P	**P**	**00 07 48.8**	**+2.0**
	comp=Z,11nm,0.7s,mb4.4,baz=274,slow=8.7,SNR=4.6						
LRAL	**Lakeview Retre**	**22.31**	**360**	*e*P	**P**	**00 07 50.8**	**-0.9**
	comp=Z,18nm,0.9s,mb4.5						
JCT	**Junction City**	**23.14**	**331**	*e*P	**P**	**00 07 59.7**	**-0.8**
JCT				*e*		00 08 07.0	
JCT				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.5						
JCT	**Junction City**	**23.14**	**331**	*e*P	**P**	**00 07 59.7**	**-0.9**
	comp=Z,24nm,1.1s,mb4.5						
JCT				*e*		00 08 07.0	
JSC	**Jenkinsville**	**24.10**	**11**	*e*P	**P**	**00 08 10.0**	**+0.3**
JSC				*e*		00 08 16.5	
JSC				*e*		00 08 18.7	
SWET	**Sewanee**	**24.50**	**2**	*e*P	**P**	**00 08 11.7**	**-1.7**
SWET				*e*		00 08 19.7	
NNA	**Nana**	**24.56**	**156**	P	**P**	**00 08 12.8**	**-1.1**
	comp=Z,9.2nm,0.6s,mb4.5,baz=333,slow=12,SNR=4.7						
MIAR	**Mount Ida**	**24.59**	**347**	*e*P	**P**	**00 08 12.2**	**-2.0**
MIAR				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.6						
MIAR	**Mount Ida**	**24.59**	**347**	*e*P	**P**	**00 08 12.2**	**-2.0**
	comp=Z,14nm,0.7s,mb4.6						
CPCT	**Cooper Cave**	**24.81**	**5**	*e*P	**P**	**00 08 15.3**	**-0.8**
WVT	**Waverly**	**25.41**	**358**	*e*P	**P**	**00 08 20.8**	**-0.9**
	comp=Z,3.7nm,0.6s,mb4.1						
UTMT	**University of**	**25.67**	**356**	P	**P**	**00 08 20.0**	**-4.0**
TZTN	**Tazewell**	**25.98**	**6**	*e*P	**P**	**00 08 26.3**	**-0.5**
WMOK	**Wichita Mounta**	**26.36**	**337**	*e*P	**P**	**00 08 29.0**	**-1.2**
WMOK				pmax	pmax		
	comp=Z,33nm,1.1s,mb4.8						
WMOK	**Wichita Mounta**	**26.36**	**337**	*e*P	**P**	**00 08 29.0**	**-1.2**
	comp=Z,33nm,1.1s,mb4.8						
ELN	**Prospectdale**	**27.06**	**11**	*e*P	**P**	**00 08 35.8**	**-0.7**
MNTX	**Cornudas Mount**	**27.09**	**323**	*e*P	**P**	**00 08 35.1**	**-1.7**
	comp=Z,20nm,1.4s,mb4.5						
BLA	**Blacksburg**	**27.10**	**11**	*e*PKIKP	**P**	**00 08 36.7**	**-0.2**
BLA				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.2						
BLA	**Blacksburg**	**27.10**	**11**	*e*P	**P**	**00 08 36.7**	**-0.2**
BLA				*e*	pP	00 08 44.4	0.0
BLA				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
BLA	**Blacksburg**	**27.10**	**11**	*e*P	**P**	**00 08 36.7**	**-0.2**
	comp=Z,1.5nm,1.2s,mb3.4						
BLA				*e*	pP	00 08 44.4	-0.1
USIN	**University of**	**27.24**	**359**	*e*P	**P**	**00 08 36.4**	**-1.7**
CCM	**Cathedral Cave**	**27.60**	**352**	*e*P	**P**	**00 08 38.0**	**-3.4**
CCM				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
CCM				MLR	MLR		
	comp=Z,2µm,22.0s,MS4.6						
CCM	**Cathedral Cave**	**27.60**	**352**	*e*P	**P**	**00 08 38.0**	**-3.4**
	comp=Z,9.2nm,0.8s,mb4.5						
CCM				LR	LR		
	comp=Z,2µm,22.0s,MS4.6						
KSU1	**Kansas State U**	**29.67**	**345**	*e*P	**P**	**00 08 57.7**	**-2.1**
ACSO	**Alum Creek Sta**	**29.69**	**6**	P	**P**	**00 08 59.4**	**-0.5**
	comp=Z,27nm,1.2s,mb4.9						
ACSO				*e*	pP	00 09 08.1	+0.6
ANMO	**Albuquerque**	**30.10**	**327**	P	**P**	**00 09 04.2**	**+0.6**
	comp=Z,1.5nm,0.6s,mb3.9,baz=173,slow=7.5,SNR=3.1						
ANMO	**Albuquerque**	**30.10**	**327**	P	**P**	**00 09 04.2**	**+0.6**
SAML	**Samuel**	**30.54**	**129**	*e*P	**P**	**00 09 07.0**	**-0.5**
	comp=Z,16nm,1.3s,mb4.7						
SAML				*e*pP	pP	00 09 15.0	0.0
MVL	**Millersville**	**30.71**	**16**	*e*P	**P**	**00 09 08.5**	**-0.4**
MVL				*e*	pP	00 09 17.1	+0.5
SSPA	**Standing Stone**	**30.93**	**13**	*e*P	**P**	**00 09 09.5**	**-1.4**
	comp=Z,17nm,1.0s,mb4.8						
SSPA				*e*pP	pP	00 09 16.2	-2.2
116A	**Eloy**	**31.64**	**317**	⇓P	**P**	**00 09 17.6**	**+0.4**
	baz=32						
ERPA	**Erie**	**31.95**	**10**	P	**P**	**00 09 18.7**	**-1.2**
	comp=Z,74nm,1.4s,mb5.3						
115A	**Sonoran Desert**	**32.07**	**317**	⇓P	**P**	**00 09 21.6**	**+0.6**
	baz=32						
JFWS	**Jewell Farm**	**32.31**	**355**	*e*P	**P**	**00 09 23.9**	**+0.9**
JFWS				*e*		00 09 28.1	
LPAZ	**La Paz**	**32.52**	**145**	P	**P**	**00 09 25.8**	**+0.8**
	comp=Z,1.5nm,0.6s,mb4.1,baz=343,slow=11,SNR=6.8						
LPAZ				LR	LR	00 22 49.5	
	comp=Z,282nm,21.8s,MS3.9,baz=49,slow=37						
LPAZ	**La Paz**	**32.52**	**145**	P	**P**	**00 09 25.8**	**+0.8**
LPAZ				LR	LR	00 22 49.5	
BINY	**Binghamton**	**32.87**	**15**	*e*P	**P**	**00 09 27.3**	**-0.7**
	comp=Z,20nm,0.8s,mb5.1						
BINY				*e*pP	pP	00 09 33.9	-1.6
Z14A	**Wintersburg**	**32.95**	**317**	⇑P	**P**	**00 09 28.9**	**+0.2**
	baz=33						
X15A	**Humboldt**	**33.19**	**320**	⇓P	**P**	**00 09 31.4**	**+0.7**
	baz=33						
WUAZ	**Wupatki**	**33.33**	**322**	P	**P**	**00 09 29.0**	**-2.9**
	comp=Z,9.9nm,1.1s,mb4.7						
Y14A	**Wickenburg**	**33.34**	**318**	⇑P	**P**	**00 09 32.4**	**+0.3**
	baz=33						
X14A	**Yava**	**33.60**	**319**	⇑P	**P**	**00 09 34.6**	**+0.3**
	baz=34						
PV01	**Paradox Valley**	**33.61**	**328**	P	**P**	**00 09 32.1**	**-2.4**
W15A	**Williams**	**33.65**	**321**	⇑P	**P**	**00 09 34.7**	**-0.1**
	baz=34						
Y13A	**Salome**	**33.81**	**317**	⇓P	**P**	**00 09 36.6**	**+0.4**
	baz=34						
PV10	**Paradox Valley**	**34.04**	**328**	*e*P	**P**	**00 09 37.3**	**-0.8**
GLA	**Glamis**	**34.05**	**315**	⇑P	**P**	**00 09 39.0**	**+0.8**
	baz=34						
W14A	**Seligman**	**34.19**	**320**	⇑P	**P**	**00 09 40.2**	**+0.8**
	baz=34,SNR=5.2						
Y12C	**Blythe**	**34.24**	**317**	⇓P	**P**	**00 09 40.7**	**+0.8**
	baz=34						
X13A	**Yucca**	**34.28**	**318**	⇓P	**P**	**00 09 40.8**	**+0.5**
	baz=34						
PDMCI	**Parker Dam,Lak**	**34.31**	**318**	⇑P	**P**	**00 09 41.2**	**+0.7**
	baz=34,SNR=7.2						
W13A	**Hualapai Mount**	**34.63**	**319**	⇑P	**P**	**00 09 44.2**	**+0.9**
	baz=35,SNR=11						
SADO	**Sadowa**	**34.67**	**10**	P	**P**	**00 09 41.6**	**-2.0**
	comp=Z,7.6nm,0.8s,mb4.7,baz=204,slow=7.3,SNR=7.7						
SRU	**San Rafael**	**35.36**	**327**	*e*P	**P**	**00 09 49.3**	**-0.3**
SRU				*e**PP	pP	00 09 54.8	-2.4
SRU				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
SRU	**San Rafael**	**35.36**	**327**	*e*P	**P**	**00 09 49.3**	**-0.3**
	comp=Z,13nm,1.0s,mb4.8						
SRU				*e*pP	pP	00 09 54.8	-2.4
BELC	**Belle Mtn.**	**35.39**	**316**	⇓P	**P**	**00 09 50.4**	**+0.5**
	baz=36						
LONY	**Lake Ozonia**	**35.49**	**15**	*e*P	**P**	**00 09 49.7**	**-1.0**
LONY				*e*	pP	00 09 58.6	+0.3
PFO	**Pinyon Flat Ob**	**35.49**	**315**	⇓P	**P**	**00 09 51.5**	**+0.9**
	baz=36						
GMRC	**Granite Mounta**	**35.61**	**317**	⇓P	**P**	**00 09 52.6**	**+0.9**
	baz=36						
V12A	**Nelson**	**35.64**	**319**	⇑P	**P**	**00 09 52.5**	**+0.6**
	baz=36						
RWWY	**Rawlins**	**35.74**	**334**	*e*P	**P**	**00 09 52.4**	**-0.4**
	comp=Z,13nm,1.0s,mb4.8						
RWWY				*e*pP	pP	00 10 00.2	-0.2
MSU	**Marysvale**	**35.84**	**325**	*e*P	**P**	**00 09 51.8**	**-1.9**
MSU				*e**PP	pP	00 09 57.7	-3.6
HEC	**Hector,Ludlow**	**36.09**	**317**	⇑P	**P**	**00 09 56.6**	**+0.8**
	baz=36						
TUQ	**Turquoise Mtn.**	**36.16**	**318**	⇓P	**P**	**00 09 57.2**	**+0.7**
	baz=36						
BFSC	**Mount Baldy St**	**36.67**	**315**	⇑P	**P**	**00 10 02.4**	**+1.6**
	baz=37						
GSC	**Goldstone**	**36.67**	**317**	⇓P	**P**	**00 10 01.7**	**+0.9**
	baz=37						
DAU	**Daniels Canyon**	**36.70**	**328**	P	**P**	**00 10 01.5**	**+0.5**
DAU				*e*pP	pP	00 10 06.4	-2.2
U10A	**Ash Meadows, A**	**37.01**	**319**	⇑P	**P**	**00 10 04.8**	**+1.1**
	baz=37						
DECC	**Green Verdugo**	**37.15**	**314**	⇓P	**P**	**00 10 06.5**	**+1.6**
	baz=37						
LRMC	**Laurel Mountai**	**37.37**	**316**	⇓P	**P**	**00 10 07.2**	**+0.5**
	baz=37						
FURC	**Furnace Creek,**	**37.38**	**318**	⇑P	**P**	**00 10 07.8**	**+0.9**
	baz=38						
MPMC	**Manual Prospec**	**37.56**	**317**	⇓P	**P**	**00 10 08.9**	**+0.5**
	baz=38						
PDAR	**Pinedale Array**	**37.65**	**332**	P	**P**	**00 10 08.1**	**-1.0**
	comp=Z,1.3nm,0.6s,mb3.9,baz=120,slow=8.5,SNR=14						
PDAR				pP	pP	00 10 15.8	-1.0
	comp=Z,4.7nm,0.8s,baz=124,slow=8.9,SNR=23						
PDAR				PcP	PcP	00 12 25.4	-0.8
	comp=Z,0.8nm,0.8s,baz=120,slow=5.3,SNR=4.3						
Q12A	**Willow Creek R**	**37.72**	**323**	⇓P	**P**	**00 10 09.1**	**-0.7**
	baz=38						
HWUT	**Hardware Ranch**	**37.73**	**329**	*e*P	**P**	**00 10 09.3**	**-0.5**
	comp=Z,11nm,0.7s,mb4.7						
HWUT				*e*pP	pP	00 10 17.1	-0.3
BGU	**Big Grassy Mou**	**38.00**	**327**	*e*P	**P**	**00 10 13.1**	**+1.0**
GRAC	**Grapevine Rang**	**38.03**	**319**	⇑P	**P**	**00 10 13.4**	**+1.1**
	baz=38						
R10A	**Warm Springs**	**38.13**	**321**	⇓P	**P**	**00 10 13.8**	**+0.6**
	baz=38						
S09A	**Goldfield**	**38.36**	**320**	⇑P	**P**	**00 10 15.8**	**+0.7**
	baz=38						
O12A	**Currie**	**38.49**	**325**	⇓P	**P**	**00 10 15.9**	**-0.3**
	baz=39						
VES	**Vestal, Richgr**	**38.52**	**316**	⇓P	**P**	**00 10 17.8**	**+1.4**
	baz=39						
PKM	**Peak Mountain**	**38.53**	**314**	⇑P	**P**	**00 10 17.7**	**+1.1**
	baz=39						
R09A	**Tonopah**	**38.58**	**321**	⇓P	**P**	**00 10 17.3**	**+0.4**
	baz=39,SNR=6.5						
REDW	**Red Top Meadow**	**38.71**	**332**	*e*P	**P**	**00 10 18.0**	**-0.1**
	comp=Z,44nm,1.0s,mb5.1						
REDW				*e*pP	pP	00 10 25.1	-0.6
SNOW	**Snow King Moun**	**38.75**	**332**	*e*P	**P**	**00 10 17.9**	**-0.4**
	comp=Z,29nm,0.9s,mb5.0						
SNOW				*e*pP	pP	00 10 25.5	-0.5
LOHW	**Long Hollow**	**38.79**	**332**	*e*P	**P**	**00 10 18.1**	**-0.6**
	comp=Z,5.6nm,0.8s,mb4.3						
LOHW				*e*pP	pP	00 10 25.7	-0.7
TPAW	**Teton Pass**	**38.86**	**332**	*e*P	**P**	**00 10 19.0**	**-0.3**
	comp=Z,13nm,0.8s,mb4.7						
TPAW				*e*pP	pP	00 10 24.3	-2.6
TPAW				*e*sP	sP	00 10 27.1	-2.9
SMMC	**Simmler**	**38.87**	**315**	⇑P	**P**	**00 10 21.7**	**+2.3**
	baz=39						
O11A	**Cowboy Ranch,**	**38.92**	**324**	⇑P	**P**	**00 10 18.9**	**-0.9**
	baz=39						
RRI2	**Red Ridge**	**38.92**	**331**	*e*P	**P**	**00 10 19.2**	**-0.6**
	comp=Z,12nm,0.8s,mb4.7						
RRI2				*e*pP	pP	00 10 26.4	-1.1
HELL	**Mitchell Peak,**	**38.93**	**317**	⇓P	**P**	**00 10 20.6**	**+0.7**
	baz=39						
MOOW	**Moose Ponds**	**38.96**	**332**	*e*P	**P**	**00 10 19.4**	**-0.8**
	comp=Z,5.7nm,0.7s,mb4.4						
MOOW				*e*pP	pP	00 10 26.9	-0.9
IMW	**Indian Meadow**	**39.17**	**332**	*e*P	**P**	**00 10 19.8**	**-2.0**
	comp=Z,4.6nm,0.8s,mb4.3						
IMW				*e*pP	pP	00 10 27.6	-1.9
R08A	**Mina**	**39.29**	**320**	⇑P	**P**	**00 10 23.4**	**+0.5**
	baz=39						
NVAR	**Mina Array Bea**	**39.47**	**320**	P	**P**	**00 10 26.0**	**+1.6**
	comp=Z,4.6nm,0.9s,mb4.2,baz=139,slow=7.0						
NVAR				pP	pP	00 10 33.4	+1.4
	baz=140,slow=7.1						
NVAR				PcP	PcP	00 12 32.2	+0.3
	comp=Z,1.3nm,0.7s,baz=128,slow=4.8,SNR=4.7						
NVAR	**Mina Array Bea**	**39.47**	**320**	P	**P**	**00 10 26.0**	**+1.6**
NVAR				pP	pP	00 10 33.4	+1.4
NVAR				PcP	PcP	00 12 32.2	+0.3
KCC	**Kaiser Creek**	**39.49**	**318**	⇑P	**P**	**00 10 25.7**	**+1.2**
	baz=40						
Q08A	**Gabbs**	**39.49**	**321**	⇓P	**P**	**00 10 25.2**	**+0.7**
	baz=40						
O09A	**Fish Creek Ran**	**39.84**	**323**	⇑P	**P**	**00 10 28.2**	**+0.7**
	baz=40						
M11A	**Holland Ranch,**	**39.86**	**325**	⇑P	**P**	**00 10 27.8**	**+0.1**
	baz=40						
BMN	**Battle Mountai**	**40.03**	**323**	*e*P	**P**	**00 10 29.2**	**+0.2**
BMN				*e**PP	pP	00 10 36.1	-0.6
BMN				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.4						
BMN	**Battle Mountai**	**40.03**	**323**	*e*P	**P**	**00 10 29.2**	**+0.2**
	comp=Z,12nm,1.4s,mb4.4						
BMN				*e*pP	pP	00 10 36.1	-0.6
S06C	**San Francisco**	**40.15**	**318**	⇓P	**P**	**00 10 32.4**	**+2.3**
	baz=40						
ULM	**Lac du Bonnet**	**40.21**	**351**	P	**P**	**00 10 26.9**	**-3.6**
	comp=Z,3.9nm,0.7s,mb4.3,baz=156,slow=7.6,SNR=6.3						
ULM				PcP	PcP	00 12 33.8	-0.5
	comp=Z,2.5nm,0.8s,baz=191,slow=5.2,SNR=3.1						
ULM				pPcP		00 12 41.6	
	comp=Z,3.1nm,0.8s,baz=162,slow=6.4,SNR=3.6						
ULM				LR	LR	00 29 59.1	
	comp=Z,323nm,18.1s,MS4.2,baz=249,slow=40						
ULM	**Lac du Bonnet**	**40.21**	**351**	*e*P	**P**	**00 10 28.0**	**-2.5**
ULM				*e*pP	pP	00 10 36.1	-2.1
ULM				PcP	PcP	00 12 33.8	-0.5
ULM				pPcP		00 12 41.6	
ULM				LR	LR	00 29 59.1	
R06C	**Coleville**	**40.25**	**319**	⇓P	**P**	**00 10 32.2**	**+1.3**
	baz=40						
N09A	**Rock Creek Ran**	**40.47**	**323**	⇑P	**P**	**00 10 33.1**	**+0.4**
	baz=41						
CMB	**Columbia Colle**	**40.59**	**318**	⇓P	**P**	**00 10 34.4**	**+0.7**
	baz=41						
R05C	**Kirkwood Meado**	**40.76**	**319**	⇓P	**P**	**00 10 36.1**	**+1.0**
	baz=41						
N08A	**GE Springer Mi**	**40.79**	**323**	⇑P	**P**	**00 10 34.9**	**-0.4**
	baz=41						
M09A	**Marrel Ranch,**	**40.79**	**324**	⇓P	**P**	**00 10 34.8**	**-0.5**
	baz=41						
BOZ	**Bozeman (W)**	**40.83**	**333**	*e*P	**P**	**00 10 34.4**	**-1.3**
BOZ				*e**PP	pP	00 10 41.6	-1.8
BOZ				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.2						
BOZ	**Bozeman (W)**	**40.83**	**333**	*e*P	**P**	**00 10 34.4**	**-1.2**
	comp=Z,4.6nm,0.8s,mb4.2						
BOZ				*e*pP	pP	00 10 41.6	-1.8
WCN	**Washoe City**	**40.89**	**320**	⇓P	**P**	**00 10 37.3**	**+1.1**
	baz=41						
DLMT	**Dillon**	**41.05**	**332**	*e*P	**P**	**00 10 36.7**	**-0.7**
	comp=Z,9.9nm,1.1s,mb4.3						
LAVA	**Lava Cap Winer**	**41.22**	**319**	⇓P	**P**	**00 10 39.2**	**+0.4**
	baz=41						
M08A	**Happy Creek Ra**	**41.35**	**323**	⇑P	**P**	**00 10 39.8**	**-0.1**
	baz=41						
O06A	**Flanigan**	**41.44**	**321**	⇑P	**P**	**00 10 41.0**	**+0.3**
	baz=42,SNR=6.0						
BEKR	**Beckwourth**	**41.60**	**320**	⇑P	**P**	**00 10 42.6**	**+0.6**
	baz=42						
K09A	**Rome**	**41.78**	**325**	⇑P	**P**	**00 10 43.5**	**+0.1**
	baz=42						
N06A	**Buffalo Meadow**	**41.79**	**322**	⇓P	**P**	**00 10 43.1**	**-0.5**
	baz=42						
L08A	**Fields**	**41.80**	**324**	⇓P	**P**	**00 10 43.2**	**-0.4**
	baz=42						
O05C	**Quincy**	**42.01**	**320**	⇑P	**P**	**00 10 46.2**	**+0.9**
	baz=42						
ORV	**Oroville**	**42.15**	**319**	⇑P	**P**	**00 10 47.2**	**+0.7**
	baz=42						
SUTB	**Sutter Butte**	**42.16**	**318**	⇓P	**P**	**00 10 46.8**	**+0.2**
	baz=42						
K08A	**Mann Creek Ran**	**42.22**	**325**	⇑P	**P**	**00 10 47.0**	**-0.1**
	baz=42,SNR=10						
M06C	**Likely Place G**	**42.45**	**322**	⇑P	**P**	**00 10 49.6**	**+0.6**
	baz=42						
CHMT	**Chamberlain Mo**	**42.53**	**333**	P	**P**	**00 10 46.8**	**-2.8**
I09A	**Lost Marbles R**	**42.62**	**327**	⇓P	**P**	**00 10 49.3**	**-1.1**
	baz=43						
M05C	**Lookout**	**42.95**	**322**	⇑P	**P**	**00 10 53.0**	**0.0**
	baz=43						
K06A	**Valley Falls**	**43.28**	**324**	⇓P	**P**	**00 10 55.9**	**+0.2**
	baz=43						
J06A	**Christmas Vall**	**43.50**	**324**	⇓P	**P**	**00 10 56.8**	**-0.6**
	baz=44						
M04C	**Macdoel**	**43.62**	**322**	⇓P	**P**	**00 10 58.5**	**+0.1**
	baz=44						
I07A	**Izee**	**43.66**	**326**	⇓P	**P**	**00 10 57.9**	**-0.8**
	baz=44						
N02C	**Big Bar**	**44.00**	**320**	⇓P	**P**	**00 11 02.7**	**+1.2**
	baz=44						
J05A	**Fort Rock**	**44.15**	**324**	⇑P	**P**	**00 11 03.3**	**+0.6**
	baz=44						
G06A	**Carlson Farm,**	**45.02**	**326**	⇓P	**P**	**00 11 09.9**	**+0.3**
	baz=45						

H04A	**Detroit Lake**	**45.54 325**	⇑P		**P**	**00 11 13.1**	**-0.6**
	baz=46							
J02A	**Umpqua**	**45.58 322**	⇓P		**P**	**00 11 14.4**	**+0.4**
	baz=46							
I03A	**Eugene**	**45.75 323**	⇑P		**P**	**00 11 14.9**	**-0.5**
	baz=46							
F05A	**White Salmon**	**45.87 326**	⇓P		**P**	**00 11 16.1**	**-0.3**
	baz=46							
G04A	**Mulino**	**46.02 325**	⇓P		**P**	**00 11 17.6**	**+0.1**
	baz=46							
I02A	**Mapleton**	**46.09 323**	⇓P		**P**	**00 11 17.9**	**-0.2**
	baz=46							
F04A	**Amboy**	**46.43 326**	⇓P		**P**	**00 11 20.0**	**-0.8**
	baz=46							
BDFB	**Brasilia**	**46.47 124**	P		**P**	**00 11 20.6**	**-0.4**
	comp=Z,2.3nm,0.6s,mb4.3,baz=244,slow=5.1,SNR=3.3							
G03A	**Yamhill**	**46.54 325**	⇑P		**P**	**00 11 21.3**	**-0.3**
	baz=47							
CPUP	**Villa Florida**	**46.61 143**	P		**P**	**00 11 20.9**	**-1.3**
	comp=Z,2.7nm,0.8s,mb4.2,baz=334,slow=13,SNR=6.8							
SCHQ	**Schefferville**	**46.86 16**	P		**P**	**00 11 21.1**	**-3.0**
	comp=Z,2.2nm,0.5s,mb4.3,baz=221,slow=8.9,SNR=5.5							
SCHQ			PcP	PcP		00 12 56.4	-0.4	
	comp=Z,3.3nm,0.8s,baz=180,slow=2.0,SNR=2.9							
E04A	**Onalaska**	**47.00 326**	⇓P		**P**	**00 11 25.2**	**0.0**
	baz=47							
C05A	**Tolt Reservoir**	**47.15 328**	⇑P		**P**	**00 11 25.5**	**-0.9**
	baz=47							
E03A	**Lebam**	**47.43 326**	⇑P		**P**	**00 11 27.9**	**-0.7**
	baz=48							
EDM	**Edmonton**	**47.52 339**	P		**P**	**00 11 27.4**	**-1.9**
C04A	**Brinnon**	**47.83 328**	⇓P		**P**	**00 11 30.7**	**-1.0**
	baz=48							
PLCA	**Paso Flores**	**53.27 165**	P		**P**	**00 12 11.7**	**-1.1**
	comp=Z,8.0nm,0.9s,mb4.7,baz=336,slow=9.1,SNR=18							
PLCA			PcP	PcP		00 13 19.5	-0.8	
	comp=Z,1.7nm,0.9s,baz=308,slow=4.4,SNR=2.9							
YKA	**Yellowknife Ar**	**55.52 345**	P		**P**	**00 12 26.6**	**-2.5**
	comp=Z,0.8nm,0.7s,mb3.8,baz=142,slow=6.3,SNR=3.4							
YKA			pP	pP		00 12 34.1	-2.9	
	comp=Z,2.9nm,0.7s,baz=140,slow=7.3,SNR=11							
YKA			PcP	PcP		00 13 28.1	-0.7	
	comp=Z,0.9nm,0.7s,baz=146,slow=4.1,SNR=3.6							
YKA			pPcP			00 13 36.4		
	comp=Z,2.5nm,0.7s,baz=142,slow=4.0,SNR=8.7							
YKA	**Yellowknife Ar**	**55.52 345**	P		**P**	**00 12 26.6**	**-2.5**
YKA			*PP	pP		00 12 34.1	-2.9	
YKA						00 13 28.2		
YKA	**Yellowknife Ar**	**55.52 345**	P		**P**	**00 12 26.6**	**-2.5**
YKA			pP	pP		00 12 34.1	-2.9	
YKA			PcP	PcP		00 13 28.1	-0.7	
YKA			pPcP			00 13 36.4		
INK	**Inuvik**	**65.12 343**	P		**P**	**00 13 32.8**	**-2.0**
	comp=Z,1.2nm,0.3s,mb4.5,baz=168,slow=9.6,SNR=3.3							
EGAK	**Eagle**	**65.72 338**	*eP*		**P**	**00 13 37.2**	**-1.4**
EGAK			*e*pP	pP		00 13 42.9	-3.8	
SLKM	**Skilak Lake**	**67.84 331**	*eP*		**P**	**00 13 51.0**	**-1.2**
SLKM			*e*'PP	pP		00 13 58.8	-1.4	
ESDC	**Sonseca Array**	**77.86 52**	P		**P**	**00 14 50.8**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.6,baz=276,slow=4.7,SNR=4.2							
DBIC	**Dimbokro**	**80.96 85**	P		**P**	**00 15 08.5**	**+0.1**
	comp=Z,4.8nm,0.8s,mb4.5,baz=219,slow=8.9,SNR=3.7							
DBIC	**Dimbokro**	**80.96 85**	P		**P**	**00 15 08.5**	**+0.1**
AMKA	**Amchitka**	**84.18 321**	*eP*		**P**	**00 15 24.7**	**-0.5**
NB2	**NORSAR Subarra**	**84.67 29**	P		**P**	**00 15 28.0**	**+0.3**
	comp=Z,0.8nm,0.8s,mb3.9,baz=280,slow=5.1							
NOA	**NORSAR Array B**	**84.67 29**	P		**P**	**00 15 27.8**	**+0.1**
	comp=Z,0.8nm,0.9s,mb3.8,baz=251,slow=7.3,SNR=4.1							
TORD	**Torodi Ar. Bea**	**86.23 77**	P		**P**	**00 15 34.8**	**-0.8**
	comp=Z,0.9nm,0.7s,mb4.1,baz=288,slow=5.8,SNR=13							
TORD			pP	pP		00 15 42.8	-1.0	
	comp=Z,0.6nm,0.6s,baz=284,slow=5.6,SNR=3.2							
ARCES	**ARCESS Array B**	**87.71 19**	P		**P**	**00 15 42.4**	**-0.3**
	comp=Z,0.7nm,0.8s,mb3.9,baz=297,slow=3.7,SNR=4.6							
ARCES			pP	pP		00 15 49.5	-1.5	
	comp=Z,0.5nm,0.5s,baz=280,slow=3.6,SNR=2.0							
CLL	**Collm**	**87.88 38**	*e*'PP		pP	00 15 50.0	-1.8	
CLL	**Collm**	**87.88 38**	*e*pP		pP	00 15 50.0	-1.8	
VNA3	**Neumayer Olymp**	**95.89 162**	*e*		**P**	**00 16 14.6**	**-6.0**
VNA3			*e*			00 16 18.6		
VNA3			*e*	pP		00 16 20.7	-8.2	
VNA3			*e*	pP		00 16 22.3	-6.6	
VNA3			*e*			00 16 34.2		
VNA1	**Neumayer--Stat**	**96.19 161**	*e*		**P**	**00 16 14.2**	**-7.8**
VNA1			*e*			00 16 17.2		
VNA1			*e*			00 16 19.3		
VNA1			*e*	pP		00 16 21.2	-9.1	
TSUM	**Tsumeb**	**106.94 107**	PFAKE			00 21 30.0	+10	
TSUM			LR	LR				
	comp=Z,860nm,20.0s,MS5.3							
SONM	**Songino Array**	**120.63 350**	PKP		PKPdf	00 21 44.7	-1.0	
	comp=Z,0.7nm,0.8s,baz=344,slow=0.6,SNR=4.4							
ASAR	**Alice Springs**	**139.10 246**	PKP		PKPdf	00 22 20.4	-0.3	
	comp=Z,1.3nm,0.8s,baz=94,slow=2.4,SNR=9.3							
WB2	**Warramunga Arr**	**139.28 252**	*eP*		PKPdf	00 22 20.5	-0.5	
WRA	**Warramunga Arr**	**139.29 252**	PKhKP			00 22 11.5		
	comp=Z,0.3nm,0.6s,baz=91,slow=3.5,SNR=5.5							
WRA			PKP		PKPdf	00 22 20.9	-0.1	
	comp=Z,3.2nm,0.9s,baz=88,slow=1.7,SNR=18							
FITZ	**Fitzroy Crossi**	**147.70 253**	*eP*		PKPdf	00 22 35.5	-0.2	
	comp=Z,11nm,0.8s							
FITZ	**Fitzroy Crossi**	**147.70 253**	PKPbc		PKPbc	00 22 35.5	-3.0	
	comp=Z,5.6nm,0.8s,baz=163,slow=2.5,SNR=15							
HYB	**Hyderabad**	**148.63 28**	*i* PKP		PKPbc	00 22 41.0	0.0	
CHTO	**Chiang Mai**	**150.20 349**	*e*PKIKP		PKPdf	00 22 38.6	-1.1	

*IDC **24** 00:03:40.5±3.9, 1851S×17306W, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.9/17, mbtmp3.9/5, Error ellipse: s-maj=276.6km s-min=29.6km az=154.0*
*ISCJB **24** 00:03:43.5±0.8, 185S±02×173.1W±0.1, h33km, mb4.1/7, Error ellipse: s-maj=25.3km s-min=18.6km az=138.6*
*NEIC **24** 00:03:45.2±0.7, 1845S×17304W, h35km, mb4.4/2, Error ellipse: s-maj=21.4km s-min=15.3km az=164.0*
ISC 24 00:03:45.5±0.8, 185S±02×1730W±01, h35km, n13, σ0§83/13, mb4.1/7, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNZO	**South Karori**	**25.04**	**202**	P		P	**P**	**00 09 06.4**	**+0.1**
CTA	**Charters Tower**	**38.42**	**261**	P		P	**P**	**00 11 04.3**	**+0.7**
	1.8nm,0.4s,mb4.2,baz=84,slow=13,SNR=5.2								
CTA	**Charters Tower**	**38.42**	**261**	P			**P**	**00 11 04.3**	**+0.7**
CTAO	**Charters Tower**	**38.42**	**261**	*eP*			**P**	**00 11 04.0**	**+0.4**
	1.6nm,0.4s,mb4.1								
WB2	**Warramunga Arr**	**49.56**	**259**	*eP*			**P**	**00 12 32.7**	**-0.2**
WRAB	**Tennant Creek**	**49.57**	**259**	*eP*			**P**	**00 12 32.4**	**-0.5**
	3.7nm,0.7s,mb4.5								
WRA	**Warramunga Arr**	**49.58**	**259**	P			**P**	**00 12 32.6**	**-0.4**
	0.4nm,0.3s,mb4.0,baz=97,slow=7.4,SNR=21								
ASAR	**Alice Springs**	**49.58**	**254**	P			**P**	**00 12 33.1**	**+0.1**
	0.8nm,0.4s,mb4.1,baz=90,slow=7.6,SNR=14								
FITZ	**Fitzroy Crossi**	**57.99**	**260**	P			**P**	**00 13 35.2**	**+0.7**
	1.2nm,0.9s,mb3.9,baz=96,slow=9.2,SNR=6.0								
SBA	**Scott Base**	**60.19**	**185**	P			**P**	**00 13 48.6**	**-1.2**
PMSA	**Palmer Station**	**81.19**	**156**	*eP*			**P**	**00 15 58.7**	**+1.1**
	27nm,1.1s,mb5.1								
RRI2	**Red Ridge**	**83.54**	**40**	*eP*			**P**	**00 16 08.3**	**-1.5**
PDAR	**Pinedale Array**	**84.33**	**41**	P			**P**	**00 16 15.0**	**+1.2**
	0.1nm,0.6s,mb3.1,baz=228,slow=6.7,SNR=2.7								

*ISCJB **24** 00:10:44.4±4.4, 50S±02×1509E±04, h113km±31km, mb3.8/5, Error ellipse: s-maj=76.8km s-min=26.3km az=42.9*
*IDC **24** 00:10:44.3±7.1, 529S×15123E, h114km±48km, mb3.6/4, mb1 3.7/5, mb1mx3.5/14, mbtmp3.9/5, Error ellipse: s-maj=84.2km s-min=33.3km az=106.0*
*NEIC **24** 00:10:45.4±4.2, 521S×15106E, h117km±26km, mb4.0/1, Error ellipse: s-maj=72.3km s-min=24.1km az=107.0*
ISC 24 00:10:44.3±4.3, 52S±02×1511E±04, h109km±29km, n11, σ0§98/11, mb3.8/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.78**	**223**	P		P	**Pn**	**00 12 07.4**	**-0.2**
	1.7nm,0.3s,baz=41,slow=12,SNR=3.6								
PMG				S			**Sn**	**00 13 12.8**	**+0.2**
	6.0nm,0.3s,baz=201,slow=16,SNR=7.1								
WRAB	**Tennant Creek**	**21.97**	**227**	*eP*			**P**	**00 15 29.8**	**+0.6**
	4.1nm,0.5s,mb4.0								
WB2	**Warramunga Arr**	**21.98**	**227**	*eP*			**P**	**00 15 29.6**	**+0.4**
WRA	**Warramunga Arr**	**21.98**	**227**	P			**P**	**00 15 27.7**	**-1.7**
	2.5nm,0.6s,mb3.8,baz=52,slow=9.8,SNR=26								

ASAR	**Alice Springs**	**24.79 220**	P		**P**	**00 15 56.9**	**+1.0**
	2.7nm,0.5s,mb3.9,baz=58,slow=8.7,SNR=29							
FITZ	**Fitzroy Crossi**	**28.04 241**	P		**P**	**00 16 24.8**	**-0.4**
	0.9nm,0.3s,mb3.8,baz=57,slow=13,SNR=11							
KULM	**Kulim**	**51.47 281**	*eP*		**P**	**00 19 38.3**	**-0.1**
SONM	**Songino Array**	**65.75 329**	P		**P**	**00 21 18.7**	**+1.3**
	0.5nm,0.6s,mb3.5,baz=149,slow=4.9,SNR=4.0							
CHKZ	**Chkalovo**	**88.52 324**	P		**P**	**00 23 22.2**	**-2.3**
BRVK	**Borovoye**	**88.60 323**	*eP*		**P**	**00 23 25.6**	**+0.7**
TORD	**Torodi Ar. Bea**	**148.83 287**	PKPbc	PKPbc		00 30 18.9	-0.1	
	1.0nm,0.8s,baz=104,slow=2.2,SNR=9.3							

*ISCJB **24** 00:37:03.3±0.5, 4.71N±0.08×126.2E±0.2, h33km, mb4.2/18, Error ellipse: s-maj=30.4km s-min=7.9km az=147.4*
*NEIC **24** 00:37:05.7±0.5, 4.65N×125.90E, h35km, mb4.3/7, Error ellipse: s-maj=21.5km s-min=8.2km az=70.0*
*IDC **24** 00:37:08.8±7.5, 4.57N×126.21E, h67km±67km, mb3.9/12, mb1 4.0/12, mb1mx3.9/19, mbtmp4.2/12, Error ellipse: s-maj=69.6km s-min=17.8km az=73.0*
ISC 24 00:37:05.7±0.5, 468N±007×1259E±01, h35km, n34, σ1§12/32, mb4.2/18, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**9.78**	**278**	Pn		Pn	**Pn**	**00 39 22.3**	**-1.5**
YHNB	**Yeheng**	**20.36**	**348**	P		P	**P**	**00 41 37.7**	**-1.3**
FITZ	**Fitzroy Crossi**	**22.63**	**181**	*eP*		P	**P**	**00 42 01.6**	**-1.9**
	10nm,0.9s,mb4.3								
FITZ	**Fitzroy Crossi**	**22.63**	**181**	P		P	**P**	**00 42 02.7**	**-0.7**
	5.5nm,0.7s,mb4.1,baz=13,slow=7.0,SNR=19								
WRAB	**Tennant Creek**	**25.81**	**162**	*eP*			**P**	**00 42 33.5**	**0.0**
	4.8nm,0.5s,mb4.3								
WRAB				*e*		pP		00 42 43.3	-0.2
WRA	**Warramunga Arr**	**25.82**	**162**	P		P	**P**	**00 42 32.0**	**-1.5**
	2.4nm,0.6s,mb3.9,baz=339,slow=10,SNR=24								
WB2	**Warramunga Arr**	**25.82**	**162**	*eP*			**P**	**00 42 33.1**	**-0.5**
MBWA	**Marble Bar**	**26.39**	**193**	*eP*			**P**	**00 42 39.1**	**+0.4**
	3.4nm,0.5s,mb4.1								
ASAR	**Alice Springs**	**29.22**	**165**	P			**P**	**00 43 02.9**	**-1.1**
	1.1nm,0.6s,mb3.8,baz=342,slow=7.0,SNR=14								
CTAO	**Charters Tower**	**31.69**	**142**	P			**P**	**00 43 25.2**	**-0.6**
FORT	**Forrest**	**35.31**	**177**	*eP*			**P**	**00 43 59.1**	**+1.8**
	14nm,0.8s,mb5.0								
KLBR	**Kellerberrin**	**36.90**	**192**	*eP*			**P**	**00 44 10.7**	**-0.2**
	6.2nm,0.5s,mb4.7								
MUN	**Mundaring**	**37.61**	**194**	*eP*			**P**	**00 44 17.4**	**+0.5**
NWAO	**Narrogin (SRO)**	**38.30**	**192**	P			**P**	**00 44 23.4**	**+0.6**
	6.6nm,0.5s,mb4.6,baz=27,slow=9.9,SNR=9.9								
STKA	**Stephens Creek**	**39.29**	**159**	P			**P**	**00 44 32.8**	**+1.7**
	2.5nm,0.7s,mb4.1,baz=344,slow=8.0,SNR=3.7								
STKA	**Stephens Creek**	**39.29**	**159**	P			**P**	**00 44 33.6**	**+2.6**
SONM	**Songino Array**	**46.16**	**342**	P			**P**	**00 45 29.5**	**+2.7**
	0.3nm,0.5s,mb3.5,baz=158,slow=10,SNR=4.0								
SONM				PcP		PcP		00 47 02.8	+0.5
	1.0nm,0.8s,baz=132,slow=3.1,SNR=6.0								
MKAR	**Makanchi Array**	**56.34**	**325**	P			**P**	**00 46 44.8**	**+1.7**
	0.7nm,0.6s,mb3.9,baz=129,slow=9.5,SNR=5.4								
MKAR				PcP		PcP		00 47 40.3	+0.2
	2.9nm,0.7s,baz=116,slow=4.2,SNR=12								
SNZO	**South Karori**	**63.79**	**141**	*eP*			**P**	**00 47 25.4**	**-8.8**
	78nm,0.8s								
BVAR	**Borovoye Array**	**66.10**	**327**	P			**P**	**00 47 50.2**	**+1.0**
	1.0nm,0.7s,mb4.0,baz=133,slow=8.7,SNR=6.7								
BRVK	**Borovoye**	**66.18**	**327**	P			**P**	**00 47 49.2**	**-0.5**
CHKZ	**Chkalovo**	**66.27**	**328**	P			**P**	**00 47 49.3**	**-1.0**
ZRNK	**Zerenda**	**66.83**	**327**	*eP*			**P**	**00 47 53.8**	**-0.1**
	2.2nm,0.8s,mb4.2								
CASY	**Casey**	**71.66**	**187**	P			**P**	**00 48 25.3**	**+1.6**
VNDA	**Vanda**	**84.46**	**173**	P			**P**	**00 49 33.5**	**-1.2**
	0.6nm,0.7s,mb3.9,baz=326,slow=4.0,SNR=6.6								
VNDA	**Vanda**	**84.46**	**173**	*eP*			**P**	**00 49 33.8**	**-0.9**
	0.6nm,0.5s,mb4.0								
EIL	**Elat**	**88.57**	**299**	*eP*			**P**	**00 49 56.4**	**+1.5**
BRTR	**Keskin Array B**	**88.82**	**310**	P			**P**	**00 49 55.8**	**-0.2**
	0.9nm,0.9s,mb4.1,baz=122,slow=4.7,SNR=4.8								
ARCES	**ARCESS Array B**	**89.30**	**340**	P			**P**	**00 49 58.0**	**-0.3**
	3.7nm,0.8s,mb4.8,baz=79,slow=6.3,SNR=15								
FINES	**FINESS Array B**	**90.63**	**332**	P			**P**	**00 50 04.3**	**-0.2**
	0.6nm,0.7s,mb4.0,baz=70,slow=4.9,SNR=5.0								
NB2	**NORSAR Subarra**	**97.60**	**334**	P			**P**	**00 50 35.4**	**-1.0**
	comp=Z,1.5nm,0.8s,mb4.6,baz=68,slow=4.6								
NOA	**NORSAR Array B**	**97.60**	**334**	P			**P**	**00 50 35.5**	**-0.9**
	comp=Z,1.4nm,0.8s,mb4.6,baz=66,slow=4.5,SNR=7.4								
TORD	**Torodi Ar. Bea**	**121.88**	**289**	PKP		PKPdf		00 55 57.2	+1.1
	comp=Z,0.5nm,0.6s,baz=41,slow=1.6,SNR=7.4								
TORD	**Torodi Ar. Bea**	**121.88**	**289**	PKP		PKPdf		00 55 57.2	+1.1

*INMG **24** 00:52:59.6±0.9, 4365N×957W, h7km±3km, ML1.8, Error ellipse: s-maj=5.7km s-min=2.5km az=101.0*
MDD 24 00:53:00.1±1.5, 4368N×945W, h10km±1km, mbLg2.1/8, 2C, Error ellipse: s-maj=14.6km s-min=8.7km az=108.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EMAZ	**Mazaricos**	**0.81**	**154**	⇑Pg		Pg		00 53 14.7	-0.9
	10nm,0.1s,SNR=18								
EMAZ				Lg				00 53 26.1	
	5.5nm,0.1s,SNR=10								
STS	**Santiago**	**1.03**	**140**	⇑Pg		Pg		00 53 19.1	-0.8
	15nm,0.1s,SNR=18								
STS				Lg				00 53 33.5	
	19nm,0.2s,SNR=17								
EZAM	**Zamans**	**1.63**	**160**	Pn		Pn		00 53 28.4	-0.4
	2.7nm,0.3s,SNR=7.9								
EZAM				Lg				00 53 51.5	
	4.3nm,0.2s,SNR=7.9								
EPON	**Pontenova**	**1.71**	**101**	Pg		Pg		00 53 31.8	-1.1
	0.9nm,0.2s,SNR=6.2								
EPON				Lg				00 53 54.7	
	4.7nm,0.1s,SNR=13								
ELOB	**Lobios**	**2.08**	**150**	Pn		Pn		00 53 33.5	-1.5
	22nm,1.4s,SNR=7.9								
ELOB				Pg		Pg		00 53 38.2	-1.8
	47nm,2.1s,SNR=7.9								
ELOB				Lg				00 54 06.3	
	0.7nm,0.1s,SNR=7.9								
PCAB	**Cabril**	**2.23**	**151**	*e*Pn		Pn		00 53 35.5	-1.6
PCAB				*e*Sg		Sg		00 54 11.0	-0.8
PCAB									
	5.6nm,0.1s								
ECAL	**Calabor**	**2.65**	**130**	Pn		Pn		00 53 41.2	-1.6
	5.1nm,0.5s,SNR=7.9								
ECAL				Pg		Pg		00 53 48.9	-1.9
	8.9nm,0.8s,SNR=7.9								
ECAL				Sn		Sn		00 54 13.1	-1.8
	0.7nm,0.1s,SNR=7.9								
ECAL				Lg				00 54 25.0	
	2.2nm,0.1s,SNR=7.9								
PVRL	**Vila Real**	**2.72**	**151**	*e*Sg		Sg		00 54 26.9	-0.7
PVRL									
	3.0nm,0.1s								
PVRL	**Vila Real**	**2.72**	**151**	Lg				00 54 26.9	
	1.5nm,0.1s								
PBRG	**Braganca**	**2.74**	**132**	*e*Pn		Pn		00 53 43.0	-1.1
PBRG				*e*Sg		Sg		00 54 27.4	-0.7
PBRG									
	3.0nm,0.3s								
EARI	**Arriondas**	**3.11**	**96**	Pn		Pn		00 53 47.4	-1.8
	35nm,1.2s,SNR=7.9								
EARI				Sn		Sn		00 54 23.9	-2.5
	0.4nm,0.2s,SNR=7.9								
EARI				Lg				00 54 38.9	
	0.5nm,0.1s,SNR=7.9								
PVIS	**Viseu**	**3.18**	**158**	*e*Sg		Sg		00 54 41.2	-1.0
ELAN	**Lanestosa**	**4.41**	**94**	Sn		Sn		00 54 53.8	-4.5
	SNR=7.9								

*ISCJB **24** 01:06:13.3±1.4, 16N±0.1×121.2E±0.2, h483km±19km, mb3.7/7, Error ellipse: s-maj=38.1km s-min=11.2km az=120.9*
*IDC **24** 01:06:14.5±15.0, 157N×121.07E, h483km±239km, mb3.1/5, mb1 3.3/5, mb1mx2.9/18, mbtmp4.0/5, Error ellipse: s-maj=117.4km s-min=30.0km az=64.0*
*NEIC **24** 01:06:14.5±0.9, 159N×121.08E, h481km±12km, mb3.6/3, Error ellipse: s-maj=23.9km s-min=7.0km az=61.0*
ISC 24 01:06:14.9±1.4, 16N±01×1211E±02, h487km±19km, n15, σ0§59/15, mb3.7/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**6.55**	**313**	*eP*			**P**	**01 07 55.5**	**-0.6**

FITZ	**Fitzroy Crossi**	**20.08 167**	P		**P**	**01 10 14.4**	**-0.4**
	1.2nm,0.4s,baz=338,slow=10,SNR=14						
QIZ	**Qiongzhong**	**20.52 328**	P		**P**	**01 10 19.4**	**+0.5**
KULM	**Kulim**	**20.70 281**	*eP*		**P**	**01 10 21.3**	**+0.8**
WRAB	**Tennant Creek**	**25.05 149**	*eP*		**P**	**01 11 00.1**	**+0.6**
	4.3nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**25.05 149**	P		**P**	**01 10 59.8**	**+0.3**
	3.6nm,0.5s,mb4.0,baz=334,slow=9.6,SNR=64						
WB2	**Warramunga Arr**	**25.06 149**	*eP*		**P**	**01 11 00.3**	**+0.7**
ASAR	**Alice Springs**	**28.04 154**	P		**P**	**01 11 25.7**	**-0.1**
	0.6nm,0.4s,mb3.4,baz=326,slow=7.8,SNR=9.3						
NWAO	**Narrogin (SRO)**	**34.52 186**	P		**P**	**01 12 21.6**	**+0.1**
STKA	**Stephens Creek**	**38.56 151**	P		**P**	**01 12 54.6**	**-0.3**
	2.5nm,0.4s,mb4.0,baz=325,slow=11,SNR=8.1						
SONM	**Songino Array**	**47.79 347**	P		**P**	**01 14 07.2**	**+0.1**
	0.7nm,0.5s,mb3.2,baz=166,slow=8.7,SNR=6.5						
BRVK	**Borovoye**	**66.20 329**	*eP*		**P**	**01 16 12.7**	**-1.0**
	0.5nm,0.4s,mb3.5						
CHKZ	**Chkalovo**	**66.37 330**	*eP*		**P**	**01 16 15.4**	**+0.7**
	0.3nm,0.4s,mb3.3						
VNDA	**Vanda**	**82.08 172**	P		**P**	**01 17 42.8**	**-0.9**
SBA	**Scott Base**	**83.05 171**	P		**P**	**01 17 48.1**	**-0.5**

*IDC **24** 01:23:30.9±2.6, 3183S×6933W, h94km±23km, mb3.3/4, mb1 3.5/9, mb1mx3.4/21, mbtmp3.7/9, Error ellipse: s-maj=32.1km s-min=19.2km az=86.0*
*ISCJB **24** 01:23:31.6±0.3, 3181S±002×6942W±004, h117km±4km, mb3.6/5, Error ellipse: s-maj=6.1km s-min=3.5km az=175.6*
*GUC **24** 01:23:31.8±0.9, 3184S×6968W, h143km±8km, MD4.1, ML4.1*
*NEIC **24** 01:23:31.8, 3184S×6968W, h143km, mb4.5/2, After GUC.*
ISC 24 01:23:32.5±0.3, 3181S±002×6942W±004, h111km±4km, n52, σ0§95/84, mb3.6/5, 9C-21D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**1.03**	**79**	P		P	**Pn**	**01 23 53.5**	**-0.5**
	53nm,0.3s,baz=255,slow=8.7,SNR=1918								
CFAA				S			**Sn**	**01 24 09.8**	**-0.5**
	101nm,0.3s,baz=219,slow=12,SNR=142								
CFAA	**Coronel Fontan**	**1.03**	**79**	P			**Pn**	**01 23 53.5**	**-0.5**
CFAA				S			**Sn**	**01 24 09.8**	**-0.5**
MDZ	**Mendoza**	**1.17**	**156**	*eP*			**Pn**	**01 23 55.5**	**-0.1**
MDZ				*i*				01 24 13.3	
MDZ				*i*	S		**Sn**	**01 24 14.4**	**+1.3**
JACH	**Jahuel**	**1.32**	**229**	⇓*i*	P		**Pn**	**01 23 57.7**	**+0.4**
JACH				*i*	S		**Sn**	**01 24 17.9**	**+1.8**
PTCH	**Petorca**	**1.36**	**250**	⇑*i*	P		**Pn**	**01 23 57.7**	**-0.1**
PTCH				*i*	S		**Sn**	**01 24 17.2**	**+0.3**
PTCH				AML		AML		01 24 17.8	
	comp=N,16μm,0.4s								
PTCH	**Petorca**	**1.36**	**250**	⇑*i*	P		**Pn**	**01 23 57.7**	**-0.1**
PTCH				*i*	S		**Sn**	**01 24 17.2**	**+0.3**
CMCH	**Combarbala**	**1.49**	**295**	⇓*i*	P		**Pn**	**01 23 58.8**	**-0.5**
CMCH				*i*	S		**Sn**	**01 24 19.9**	**+0.2**
CMCH				AML		AML		01 24 23.7	
	comp=E,10μm,0.4s								
CMCH	**Combarbala**	**1.49**	**295**	⇓*i*	P		**Pn**	**01 23 58.8**	**-0.5**
CMCH				*i*	S		**Sn**	**01 24 19.9**	**+0.2**
FCH	**Farellones**	**1.68**	**206**	⇑*i*	P		**Pn**	**01 24 02.5**	**+0.9**
FCH				*i*	S		**Sn**	**01 24 26.1**	**+2.4**
FCH				AML		AML		01 24 27.2	
	comp=E,926nm,0.3s								
PEL	**Peldehue**	**1.71**	**219**	⇓*i*	P		**Pn**	**01 24 01.7

IDC ***24*** *01:27:33.8±0.8, 1187N×8625W, h0km, mb4.0/7, mb1 4.2/8, mb1mx3.8/22, mbtmp4.0/8, ML3.7/1, MS3.4/2, Ms1 3.4/2, ms1mx2.8/30, Error ellipse: s-maj=59.7km s-min=15.7km az=54.0*

CASC ***24*** *01:27:34.8±2.6, 1115N×8707W, h20km±16km, MD4.4, ML4.3, mb4.2(NEIC)*

ISCJB ***24*** *01:27:37.1±0.9, 1122N±006×8690W±009, h54km±8km, mb4.2/24, MS3.4/1, Error ellipse: s-maj=17.3km s-min=5.9km az=112.8*

NEIC ***24*** *01:27:38.2±0.4, 1181N×8621W, h35km, mb4.2/20, Error ellipse: s-maj=12.7km s-min=6.9km az=58.0*

ISC 24 01:27:38.5±0.8, 1127N±006×8684W±008, h46km±8km, n68, σ0 96/60, mb4.2/24, MS3.3/2, 7C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**0.94**	**15**	⇓*iP*	**Pn**	**01 27 55.6**	**+0.4**
XAVN	**Gruta Xavier**	**1.01**	**30**	⇓*eP*	**Pn**	**01 27 57.0**	**+0.8**
TISN	**Laguna Tiscapa**	**1.03**	**33**	⇓*eP*	**Pn**	**01 27 56.8**	**+0.3**
MGAN	**Managua**	**1.05**	**34**	⇓*eP*	**Pn**	**01 27 57.2**	**+0.4**
MGAN				*eS*	**Sn**	**01 28 16.4**	**+6.1**
	comp=N,6μm,0.4s						
LEON	**Leon**	**1.14**	**358**	⇑*eP*	**Pn**	**01 27 58.0**	**0.0**
MIRN	**Miramar**	**1.17**	**6**	⇓*eP*	**Pn**	**01 27 58.5**	**+0.1**
CONN	**Concepcion**	**1.23**	**76**	⇑*eP*	**Pn**	**01 27 58.8**	**-0.4**
CNGN	**Cerro Negro**	**1.23**	**7**	⇑*eP*	**Pn**	**01 27 59.3**	**+0.1**
MADN	**Villa Maderas**	**1.29**	**84**	⇑*eP*	**Pn**	**01 27 59.5**	**-0.6**
TELN	**Telica**	**1.32**	**0**	⇓*eP*	**Pn**	**01 28 00.7**	**+0.1**
CRIN	**San Cristobal**	**1.43**	**352**	⇑*eP*	**Pn**	**01 28 01.9**	**-0.1**
BOA	**Boaco**	**1.63**	**42**	⇑*eP*	**Pn**	**01 28 05.0**	**+0.2**
VCR	**Vista de Mar**	**1.65**	**134**	*eP*	**Pn**	**01 28 03.9**	**-1.1**
LIM1	**Limonal**	**1.66**	**110**	*eP*	**Pn**	**01 28 04.5**	**-0.6**
JCR	**Jicaral**	**2.21**	**130**	*eP*	**Pn**	**01 28 11.7**	**-1.0**
CNCH	**Conchagua**	**2.22**	**334**	*eP*	x	01 28 30.0	
CNCH				*eS*	x	01 28 57.5	
BLLM	**Bellamira**	**2.55**	**328**	*eP*	x	01 28 34.9	
BLLM				*eS*	x	01 29 05.0	
CGA2	**Cerro Gallo 2**	**2.65**	**118**	*eP*	**Pn**	**01 28 19.0**	**+0.3**
PRS1	**Puriscal**	**2.80**	**117**	*eP*	**Pn**	**01 28 22.5**	**+1.7**
LAJ	**Bijagual**	**3.02**	**117**	*eP*	**Pn**	**01 28 20.2**	**-3.6**
LCBS	**La Ceiba**	**3.16**	**319**	*eP*	x	01 28 42.0	
LCBS				*eS*	x	01 29 18.4	
LCR2	**La Lucha 2**	**3.18**	**118**	*eP*	**Pn**	**01 28 26.7**	**+0.7**
LFRS	**El Faro**	**3.19**	**317**	*eP*	x	01 28 42.5	
LFRS				*eS*	x	01 29 19.1	
BOQS	**Boqueron**	**3.42**	**316**	*eP*	x	01 28 47.4	
BOQS				*eS*	x	01 29 27.4	
BUS	**Buena Vista**	**3.48**	**119**	*eP*	**Pn**	**01 28 29.6**	**-0.5**
SBLS	**San Blas**	**3.73**	**314**	*eP*	x	01 28 50.8	
SBLS				*eS*	x	01 29 34.0	
CMIG	**Matias Romero**	**9.71**	**307**	Pn	**Pn**	**01 29 55.4**	**-0.1**
	comp=N,0.7nm,0.3s,baz=137,slow=8.1,SNR=5.3						
PAYG	**Puerto Ayora**	**12.35**	**196**	Pn	**Pn**	**01 30 39.4**	**+7.7**
SDV	**Santo Domingo**	**16.13**	**97**	*ePn*	**Pn**	**01 31 13.8**	**-8.3**
	comp=N,5.2nm,0.3s						
ATAH	**Atahualpa**	**20.00**	**155**	LR	LR	01 37 54.5	
	comp=N,108nm,20.4s,MS3.2,baz=114,slow=30						
HKT	**Hockley**	**20.38**	**337**	*eP*	**P**	**01 32 09.0**	**-2.4**
	comp=N,4.8nm,0.8s						
SJG	**San Juan**	**21.13**	**69**	*eP*	**P**	**01 32 12.5**	**-6.8**
	comp=N,7.1nm,0.7s,mb4.1						
NATX	**Nacogdoches**	**21.63**	**342**	*eP*	**P**	**01 32 25.7**	**+1.0**
LRAL	**Lakeview Retre**	**21.66**	**360**	*eP*	**P**	**01 32 26.4**	**+1.3**
	comp=N,9.6nm,0.9s,mb4.2						
JCT	**Junction City**	**22.59**	**330**	P	**P**	**01 32 31.3**	**-3.6**
OXF	**Oxford**	**23.25**	**355**	P	**P**	**01 32 41.0**	**-1.0**
	comp=N,11nm,0.9s,mb4.3						
PLAL	**Pickwick Lake**	**23.63**	**357**	*eP*	**P**	**01 32 40.3**	**-5.1**
	comp=N,3.9nm,0.9s,mb3.8						
MIAR	**Mount Ida**	**23.97**	**346**	*eP*	**P**	**01 32 47.3**	**-1.2**
	comp=N,6.5nm,0.7s,mb4.2						
CPCT	**Cooper Cave**	**24.16**	**5**	*eP*	**P**	**01 32 51.0**	**+0.7**
NNA	**Nana**	**25.15**	**156**	P	**P**	**01 33 04.0**	**+4.7**
WMOK	**Wichita Mounta**	**25.77**	**337**	*eP*	**P**	**01 33 05.0**	**+0.1**
	comp=N,7.0nm,0.8s,mb4.2						
MNTX	**Cornudas Mount**	**26.58**	**323**	*eP*	**P**	**01 33 11.3**	**-0.9**
	comp=N,1.2nm,0.6s,mb3.6						
ACSO	**Alum Creek Sta**	**29.05**	**6**	*eP*	**P**	**01 33 29.3**	**-4.9**
ANMO	**Albuquerque**	**29.57**	**326**	P	**P**	**01 33 38.5**	**-0.3**
	comp=N,0.6nm,0.6s,mb3.5,baz=145,slow=16,SNR=2.4						
ANMO	**Albuquerque**	**29.57**	**326**	*eP*	**P**	**01 33 38.8**	**-0.1**
	comp=N,0.8nm,0.6s,mb3.6						
SAML	**Samuel**	**30.94**	**130**	*eP*	**P**	**01 33 50.6**	**-0.4**
	comp=N,6.1nm,0.8s,mb4.1						
BRNJ	**Basking Ridge**	**31.23**	**18**	*eP*	**P**	**01 33 47.6**	**-6.0**
BINY	**Binghamton**	**32.24**	**15**	*eP*	**P**	**01 34 02.1**	**-0.3**
	comp=N,7.6nm,0.8s,mb4.6						
PV01	**Paradox Valley**	**33.07**	**328**	*eP*	**P**	**01 34 09.5**	**-0.2**
GLA	**Glamis**	**33.60**	**315**	*eP*	**P**	**01 34 15.3**	**+1.0**
SRU	**San Rafael**	**34.82**	**327**	*eP*	**P**	**01 34 25.9**	**+1.0**
	comp=N,2.5nm,0.4s,mb4.5						
LONY	**Lake Ozonia**	**34.86**	**15**	*eP*	**P**	**01 34 24.4**	**-0.9**
LONY				*ePcP*	PcP	01 36 58.2	+0.8
RSSD	**Black Hills**	**35.94**	**339**	*eP*	**P**	**01 34 32.4**	**-2.1**
	comp=N,0.8nm,0.4s,mb4.0						
DUG	**Dugway**	**36.84**	**326**	P	**P**	**01 34 35.6**	**-6.6**
	comp=N,1.8nm,0.6s,mb4.1						
PDAR	**Pinedale Array**	**37.09**	**332**	P	**P**	**01 34 44.2**	**0.0**
	comp=N,0.9nm,0.6s,mb3.8,baz=123,slow=9.7,SNR=12						
PDAR				PcP	PcP	01 37 05.2	+1.2
	comp=N,0.4nm,0.6s,baz=108,slow=4.8,SNR=4.0						
HWUT	**Hardware Ranch**	**37.19**	**329**	*eP*	**P**	**01 34 45.6**	**+0.5**
	comp=N,3.6nm,0.7s,mb4.3						
SIV	**San Ignacio**	**37.20**	**136**	P	**P**	**01 34 47.2**	**+1.9**
	comp=N,5.8nm,0.7s,mb4.5,baz=314,slow=8.8,SNR=32						
SIV				PcP	PcP	01 37 06.8	+2.4
	comp=N,1.0nm,0.7s,baz=304,slow=5.4,SNR=4.1						
REDW	**Red Top Meadow**	**38.15**	**331**	*eP*	**P**	**01 34 53.8**	**+0.6**
	comp=N,4.8nm,0.7s,mb4.3						
REDW				*ePP*	PP	01 36 20.2	-0.9
TPAW	**Teton Pass**	**38.29**	**331**	*eP*	**P**	**01 34 55.9**	**+1.4**
	comp=N,3.7nm,0.8s,mb4.2						
NVAR	**Mina Array Bea**	**38.98**	**319**	P	**P**	**01 35 02.1**	**+1.9**
	comp=N,0.7nm,0.8s,mb3.4,baz=138,slow=9.1,SNR=4.6						
NVAR				PcP	PcP	01 37 12.4	+2.5
	comp=N,1.4nm,0.7s,baz=125,slow=4.9,SNR=8.3						
YMR	**Madison River**	**39.20**	**333**	P	**P**	**01 34 53.9**	**-8.2**
	comp=N,28nm,0.7s,mb5.1						
ULM	**Lac du Bonnet**	**39.57**	**351**	P	**P**	**01 35 02.9**	**-2.3**
	comp=N,3.9nm,0.7s,mb4.2,baz=166,slow=9.0,SNR=6.4						
HLID	**Hailey**	**40.05**	**328**	*eP*	**P**	**01 35 08.9**	**-0.3**
	comp=N,0.8nm,0.5s,mb3.7						
WALA	**Waterton Lakes**	**43.88**	**334**	P	**P**	**01 35 40.0**	**-0.4**
SCHQ	**Schefferville**	**46.24**	**16**	LR	LR	01 56 55.1	
	comp=N,46nm,19.4s,MS3.4,baz=80,slow=39						
BDFB	**Brasilia**	**46.83**	**124**	P	**P**	**01 36 04.2**	**+0.5**
	comp=N,2.5nm,0.7s,mb4.3,baz=260,slow=9.8,SNR=4.1						
PLCA	**Paso Flores**	**53.89**	**165**	P	**P**	**01 37 02.9**	**+5.8**
	comp=N,1.2nm,0.7s,mb4.0,baz=9.2,slow=9.6,SNR=4.0						
WRA	**Warramunga Arr**	**139.50**	**253**	PKP	PKPdf	01 47 02.9	+2.1
	comp=N,0.6nm,0.8s,baz=92,slow=2.3,SNR=6.3						

NIED ***24*** *01:33:00, 4300N×14660E, h29km, Mw3.6 Best double couple: M0 3.08000×10^14 NP1:φ=225.00000°, δ=55.00000°, λ=-93.00000°. NP2:φ=50.00000°, δ=35.00000°, λ=-86.00000°.*

JMA 24 01:33:21.7±0.1, 4299N×14658E, h44km±2km, M3.5, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.72**	**302**	P	Pn	01 33 35.5	0.0
NEM2				*eS*	Sn	01 33 45.5	+0.1
JAK	**Akkeshi**	**1.38**	**271**	P	Pn	01 33 44.9	+0.4
JAK				*eS*	Sn	01 34 02.0	+0.4
JRA	**Rausu**	**1.42**	**312**	P	Pn	01 33 45.6	+0.5
JRA				*eS*	Sn	01 34 03.0	+0.4
JNK	**Nakash**	**1.48**	**294**	P	Pn	01 33 46.2	+0.3
JNK				*eS*	Sn	01 34 03.9	-0.2
JOB	**Onbets**	**2.02**	**268**	P	Pn	01 33 54.2	+1.0
JOB				*eS*	Sn	01 34 18.0	+0.8
JAR	**Ashorobuto**	**2.08**	**279**	P	Pn	01 33 55.0	+0.9
JAR				*eS*	Sn	01 34 19.8	+1.1
JTKR	**Abashiri--Toko**	**2.18**	**298**	P	Pn	01 33 56.8	+1.4
JTKR				*eS*	Sn	01 34 22.7	+1.5
JCH	**Churui**	**2.40**	**262**	P	Pn	01 33 59.9	+1.5
JCH				*eS*	Sn	01 34 27.3	+0.7
JMP	**Maruseppu**	**2.55**	**295**	P	Pn	01 34 02.3	+1.7
JMP				*eS*	Sn	01 34 32.6	+2.2

ISCJB ***24*** *01:48:42.6±0.7, 504N±02×1534E±0.2, h267km±10km, mb3.3/8, Error ellipse: s-maj=31.1km s-min=10.9km az=96.5*

MOS ***24*** *01:48:42.0±1.2, 5039N×15331E, h263km, mb3.4/5, Error ellipse: s-maj=26.5km s-min=12.2km az=60.0*

KRSC ***24*** *01:48:43, 5033N×15354E, h277km, ML4.3*

IDC ***24*** *01:48:44.7±5.3, 5040N×15321E, h270km±66km, mb3.1/8, mb1 3.3/10, mb1mx3.1/23, mbtmp3.8/10, Error ellipse: s-maj=42.8km s-min=21.4km az=179.0*

ISC 24 01:48:43.6±0.6, 505N±01×1533E±02, h261km±10km, n31, σ0 96/40, mb3.3/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.80**	**81**	*e*PN	**Pn**	**01 49 22.0**	**-3.2**
SKR				*eS*	**S**	**01 49 58.8**	**+0.7**
SKR				pmax	pmax		
	comp=N,140nm,0.3s						
SKR				pmax	pmax		
	comp=Z,220nm,0.3s						
SKR				pmax	pmax		
	comp=E,30nm,0.4s						
SKR				smax			
	comp=N,40nm,0.5s						
SKR				smax			
	comp=Z,20nm,0.5s						
SKR				smax			
	comp=E,70nm,0.2s						
MIPR	**Malaya Ipel'ka**	**2.83**	**48**	*e*P	**Pn**	**01 49 36.4**	**+1.5**
GRL	**Gorelyy**	**3.64**	**53**	P	**Pn**	**01 49 43.3**	**-0.4**
RUS	**Russkaya**	**3.81**	**57**	P	**Pn**	**01 49 46.4**	**+0.8**
RUS				S	**S**	**01 50 32.5**	**-2.5**
RUS	**Russkaya**	**3.81**	**57**	*e*P	**Pn**	**01 49 46.4**	**+0.8**
RUS				*i* S	**S**	**01 50 32.5**	**-2.5**
GNL	**Ganaly**	**4.32**	**39**	*e*P	**Pn**	**01 49 53.2**	**+1.6**
NLC	**Nalytchevo**	**4.63**	**52**	P	**Pn**	**01 49 55.0**	**-0.2**
NLC				S	**S**	**01 50 47.2**	**-5.1**
NLC	**Nalytchevo**	**4.63**	**52**	P	**Pn**	**01 49 55.0**	**-0.2**
NLC				*i* S	**S**	**01 50 47.2**	**-5.1**
SPN	**Mys Shipunski**	**4.94**	**55**	P	**Pn**	**01 49 58.7**	**-0.2**
SPN				S	**S**	**01 50 53.8**	**-5.2**
SPN	**Mys Shipunski**	**4.94**	**55**	*e*P	**Pn**	**01 49 58.7**	**-0.2**
SPN				*i* S	**S**	**01 50 53.8**	**-5.2**
MKZ	**Mys Kozlova**	**6.58**	**48**	P	**Pn**	**01 50 18.4**	**-0.7**
MKZ				S	**S**	**01 51 28.3**	**-7.4**
MKZ	**Mys Kozlova**	**6.58**	**48**	*e*P	**Pn**	**01 50 18.4**	**-0.7**
MKZ				*i* S	**S**	**01 51 28.3**	**-7.4**
KBTR	**Krutoberegovo**	**8.10**	**41**	P	**Pn**	**01 50 38.8**	**+0.7**
KBTR	**Krutoberegovo**	**8.10**	**41**	*e*P	**Pn**	**01 50 38.8**	**+0.7**
ASAJ	**Asahikawa**	**9.65**	**233**	P	**Pn**	**01 50 57.8**	**+0.2**
	comp=E,1.6nm,0.3s,baz=321,slow=33,SNR=3.5						
ASAJ	**Asahikawa**	**9.65**	**233**	PN	**Pn**	**01 50 57.8**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**17.65**	**224**	P	**P**	**01 52 31.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=18,slow=12,SNR=7.4						
MJAR	**Matsushiro Arr**	**17.65**	**224**	P	**P**	**01 52 31.2**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**30.41**	**284**	P	**P**	**01 54 31.9**	**+0.1**
	comp=Z,0.2nm,0.5s,mb2.9,baz=75,slow=7.8,SNR=2.5						
YKA	**Yellowknife Ar**	**47.91**	**39**	P	**P**	**01 56 56.2**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.1,baz=301,slow=6.9,SNR=4.9						
YKA	**Yellowknife Ar**	**47.91**	**39**	P	**P**	**01 56 56.2**	**+0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**48.67**	**307**	P	**P**	**01 57 01.0**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.3,baz=72,slow=9.7,SNR=5.8						
BVAR	**Borovoye Array**	**48.67**	**307**	P	**P**	**01 57 01.0**	**-0.6**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**54.41**	**340**	P	**P**	**01 57 43.4**	**-0.5**
	comp=Z,1.4nm,0.9s,mb3.3,baz=30,slow=7.6,SNR=4.2						
ARCES	**ARCESS Array B**	**54.41**	**340**	P	**P**	**01 57 43.4**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**60.76**	**334**	P	**P**	**01 58 27.7**	**-0.3**
	comp=Z,2.5nm,1.1s,mb3.6,baz=38,slow=6.5,SNR=8.9						
FINES	**FINESS Array B**	**60.76**	**334**	P	**P**	**01 58 27.7**	**-0.3**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PDAR	**Pinedale Array**	**62.49**	**55**	P	**P**	**01 58 40.3**	**+0.8**
	comp=Z,0.6nm,0.5s,mb3.5,baz=325,slow=1.3,SNR=8.0						
NOA	**NORSAR Array B**	**64.78**	**341**	P	**P**	**01 58 53.7**	**-0.7**
	comp=Z,0.6nm,1.0s,mb3.2,baz=8.4,slow=10,SNR=3.3						
NOA	**NORSAR Array B**	**64.78**	**341**	P	**P**	**01 58 53.7**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GERES	**GERESS Array B**	**75.19**	**334**	P	**P**	**01 59 58.1**	**+0.6**
	comp=Z,0.4nm,0.4s,mb3.4,baz=27,slow=6.4,SNR=5.2						

NNC 24 01:53:44.3±2.1, 4486N×8191E, h30km±14km, mb3.5, mpv3.0, 2C-3D, Error ellipse: s-maj=12.0km s-min=9.1km az=154.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK02	**Makanchi Array**	**1.93**	**8**	⇓Pn	Pn	01 54 15.1	0.0
	10nm,0.3s,baz=186,slow=14						
MK02				⇓Sn	Sn	01 54 38.7	+0.4
	21nm,0.5s,baz=189,slow=28						
MK02				⇑Lg		01 54 46.1	
	34nm,0.5s,baz=188,slow=28						
TKM2	**Tokmak 2**	**4.96**	**249**	⇑Pn	Pn	01 54 56.6	-0.1
	0.7nm,0.7s						
TKM2				⇓Lg		01 55 56.2	
	0.3nm,0.4s						
KK31	**Karatay Array**	**8.41**	**262**	Lg		01 57 48.6	
	1.4nm,0.5s,baz=115,slow=69,SNR=5.9						

ISCJB ***24*** *02:06:36.6±2.0, 3691N±004×6840E±006, h10km±14km, mb3.9/16, Error ellipse: s-maj=7.7km s-min=6.9km az=136.1*

IDC ***24*** *02:06:36.6±1.1, 3674N×6846E, h0km, mb3.7/12, mb1 3.9/15, mb1mx3.9/24, mbtmp3.8/15, ML3.8/3, MS2.8/2, Ms1 2.8/2, ms1mx2.3/31, Error ellipse: s-maj=23.3km s-min=16.9km az=167.0*

MOS ***24*** *02:06:40.4±1.7, 3702N×6847E, h33km, mb4.5/11, Error ellipse: s-maj=11.2km s-min=6.0km az=88.1*

NEIC ***24*** *02:06:41.8±0.4, 3683N×6850E, h35km, mb3.8/10, Error ellipse: s-maj=9.9km s-min=5.9km az=214.0*

NNC ***24*** *02:06:44.5±16.0, 3748N×6807E, h15km±90km, mb3.7, mpv3.4, Error ellipse: s-maj=135.9km s-min=51.7km az=170.0*

ISC 24 02:06:38.7±2.5, 3684N±004×6838E±006, h12km±17km, n77, σ1 20/82, mb3.9/16, 8C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.47**	**14**	⇑Pn	**Pn**	**02 08 13.2**	**-0.5**
	1.5nm,0.3s,baz=318,slow=72,SNR=85						
KK31				⇑Sn	**Sn**	**02 09 27.6**	**0.0**
	4.6nm,0.4s,baz=28,slow=115,SNR=4.6						
KK31				⇑Lg		02 09 50.8	
	11nm,0.7s						
KKAR	**Karatay Array**	**6.47**	**14**	PN	**Pn**	**02 08 13.2**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AML	**Almayashu**	**6.70**	**36**	P	**Pn**	**02 08 17.6**	**+0.8**
	SNR=28						
EKS2	**Erkin-Say**	**7.15**	**34**	P	**Pn**	**02 08 24.2**	**+1.1**
	SNR=13						
KZA	**Kyzart**	**7.46**	**43**	P	**Pn**	**02 08 28.9**	**+1.6**
	SNR=13						
AAK	**Ala-Archa**	**7.46**	**37**	P	**Pn**	**02 08 28.4**	**+1.0**
	SNR=12						
AAK	**Ala-Archa**	**7.46**	**37**	*e*P	**Pn**	**02 08 27.1**	**-0.3**
AAK				pmax	pmax		
	comp=Z,13nm,0.5s						
AAK	**Ala-Archa**	**7.46**	**37**	*e*Pn	**Pn**	**02 08 27.1**	**-0.2**
	comp=Z,13nm,0.5s						
FRU	**Bishkek**	**7.67**	**37**	*e*P	**Pn**	**02 08 31.4**	**+1.1**
KBK	**Karagaybulak**	**7.71**	**39**	P	**Pn**	**02 08 32.0**	**+1.3**
	SNR=24						
CHMS	**Chumysh**	**7.86**	**37**	P	**Pn**	**02 08 33.2**	**+0.4**
	SNR=6.9						
USP	**Ospenovka**	**7.95**	**34**	P	**Pn**	**02 08 35.1**	**+1.0**
	SNR=7.5						
ULHL	**Ulahol**	**8.13**	**46**	P	**Pn**	**02 08 36.8**	**+0.3**
	SNR=15						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**8.23**	**40**	⇓Pn	**Pn**	**02 08 38.3**	**+0.5**
	comp=Z,0.6nm,0.5s						
TKM2				⇓Sn	**Sn**	**02 10 10.2**	**-0.5**
	comp=Z,0.9nm,0.6s						
TKM2				⇑Lg		02 11 00.8	
	comp=Z,1.1nm,0.8s						
TKM2	**Tokmak 2**	**8.23**	**40**	P	**Pn**	**02 08 38.3**	**+0.4**
TKM2				S	**Sn**	**02 10 10.2**	**-0.5**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TKM2				smax			
	comp=Z,5.0nm,0.6s						
AB31	**Akbulak array**	**13.85**	**336**	P	**Pn**	**02 09 51.2**	**-3.5**
	comp=Z,2.0nm,0.3s,baz=154,slow=12,SNR=105						
AB31				⇓S	**Sn**	**02 12 14.5**	**-14**
	comp=Z,2.2nm,0.7s						
AB31	**Akbulak array**	**13.85**	**336**	*eP*	**Pn**	**02 09 51.2**	**-3.6**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**14.35**	**42**	Pn	**Pn**	**02 09 60.0**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=227,slow=14,SNR=10.0						
AKTK	**Aktyubinsk**	**15.50**	**335**	Pn	**Pn**	**02 10 14.4**	**-2.6**
AKTO	**Aktyubinsk**	**15.50**	**335**	Pn	**Pn**	**02 10 14.4**	**-2.6**
	comp=Z,0.9nm,0.3s,baz=149,slow=15,SNR=18						
AKTO	**Aktyubinsk**	**15.50**	**335**	P	**Pn**	**02 10 14.5**	**-2.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KOLN	**Koldanda**	**15.71**	**121**	*e*P	**Pn**	**02 10 19.3**	**-0.5**
	comp=Z,4.4nm,0.3s						
VOSK	**Vostochnaya**	**15.99**	**6**	⇑P	**Pn**	**02 10 20.2**	**-3.3**
	comp=Z,1.4nm,0.6s						
VOSK	**Vostochnaya**	**15.99**	**6**	P	**Pn**	**02 10 20.1**	**-3.3**
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZRNK	**Zerenda**	**16.12**	**1**	⇑P	**Pn**	**02 10 21.1**	**-4.0**
	comp=Z,1.7nm,0.6s						
ZRNK	**Zerenda**	**16.12**	**1**	P	**Pn**	**02 10 21.1**	**-4.0**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZRNK	**Zerenda**	**16.12**	**1**	*e*Pn	**Pn**	**02 10 20.7**	**-4.4**
	comp=Z,2.2nm,0.5s						
ZRNK				*e*Sn	**Sn**	**02 13 12.5**	**-11**
BVA0	**Borovoye Array**	**16.25**	**4**	⇑P	**Pn**	**02 10 23.1**	**-3.7**
	comp=Z,0.3nm,0.6s,baz=177,slow=12,SNR=10						
BVA0	**Borovoye Array**	**16.25**	**4**	*i* P	**Pn**	**02 10 23.0**	**-3.8**
BVAR	**Borovoye Array**	**16.25**	**4**	Pn	**Pn**	**02 10 22.9**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=179,slow=13,SNR=8.6						
BVAR				LR	LR	02 17 31.8	
	comp=Z,35nm,19.0s,baz=323,slow=40						
BRVK	**Borovoye**	**16.28**	**4**	*e*P	**Pn**	**02 10 28.8**	**+1.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRVK	**Borovoye**	**16.28**	**4**	*e*P	**Pn**	**02 10 28.8**	**+1.6**
	comp=Z,2.2nm,0.4s						
GKN	**Gorkha**	**16.29**	**118**	*e*P	**Pn**	**02 10 26.5**	**-0.8**
	comp=Z,12nm,0.3s						
KKN	**Kakani**	**16.88**	**117**	*e*P	**Pn**	**02 10 34.0**	**-0.7**
	comp=Z,14nm,0.5s						
KKN	**Kakani**	**16.88**	**117**	*e*P	**Pn**	**02 10 34.0**	**-0.7**
KKN				pmax	pmax		
	comp=Z,14nm,0.5s						
CHKZ	**Chkalovo**	**16.91**	**5**	*e*P	**Pn**	**02 10 35.3**	**+0.1**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHKZ	**Chkalovo**	**16.91**	**5**	*e*P	**Pn**	**02 10 35.3**	**+0.1**
	comp=Z,1.8nm,0.6s						
PKI	**Pulchoki**	**17.10**	**118**	*e*P	**Pn**	**02 10 37.7**	**+0.2**
GUN	**Gumba**	**17.23**	**116**	*e*P	**Pn**	**02 10 39.1**	**-0.1**
JIRN	**Jiri**	**17.60**	**116**	*e*P	**Pn**	**02 10 43.5**	**-0.3**
GNI	**Garni**	**18.78**	**287**	*e*P	**Pn**	**02 11 07.7**	**+9.4**
ZAL	**Zalesovo**	**20.54**	**28**	P	**P**	**02 11 15.2**	**-1.8**
	comp=Z,3.3nm,0.4s,baz=249,slow=9.4,SNR=17						
ZAL	**Zalesovo**	**20.54**	**28**	*i* P	**P**	**02 11 15.6**	**-1.4**
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ARU	**Arti**	**20.69**	**344**	⇓*i*P	**P**	**02 11 18.2**	**-0.4**
ARU				*e*		02 11 33.4	
ARU				*eS*	**S**	**02 14 59.5**	**-10**
ARU				*eSS*		02 15 16.3	
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARU	**Arti**	**20.69**	**344**	*eP*	**P**	**02 11 18.1**	**-0.5**
	comp=Z,2.7nm,0.4s						
NVS	**Novosibirsk**	**20.69**	**25**	*eP*	**P

WRA				Sn	Sn	02 25 20.3	-15
	0.3nm,0.3s,baz=331,slow=23,SNR=8.6						
ASAR	**Alice Springs**	**17.86**	**163**	P	Pn	02 23 35.4	-0.3
	0.1nm,0.3s,baz=339,slow=9.9,SNR=8.3						
MKAR	**Makanchi Array**	**66.93**	**328**	P	P	02 30 20.2	+0.2
	0.5nm,0.4s,baz=127,slow=7.2,SNR=8.6						

*IDC **24** 02:23:21.1±1.9, 263N×9562E, h0km, mb4.0/7, mb1 4.0/8, mb1mx3.7/23, mbtmp3.9/8, ML2.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/28, Error ellipse: s-maj=61.7km s-min=23.6km az=43.0*

*NEIC **24** 02:23:25.8±0.9, 266N×9572E, h30km, mb4.6/6, Error ellipse: s-maj=21.6km s-min=8.4km az=207.0*

*ISCJB **24** 02:23:28.1±4.1, 28N±02×959E±03, h65km±33km, mb4.2/13, Error ellipse: s-maj=54.3km s-min=19.6km az=95.5*

ISC 24 02:23:30.4±4.1, 28N±02×960E±03, h66km±32km, n19, σ0°65/19, mb4.2/13, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.96**	**90**	Pn	**Pn**	**02 24 14.9**	**-0.1**
	1.1nm,0.3s,baz=301,slow=9.2,SNR=8.1						
PSI				LR	LR	02 25 49.6	
	comp=Z,408nm,18.8s,baz=268,slow=45						
KULM	**Kulim**	**5.29**	**62**	*e*Pn	**Pn**	**02 24 46.6**	**-0.3**
JIRN	**Jiri**	**26.42**	**340**	*e*P	**P**	**02 29 01.6**	**+0.8**
	27nm,0.7s,mb4.8						
PKI	**Pulchoki**	**26.62**	**339**	*e*P	**P**	**02 29 03.0**	**+0.5**
GUN	**Gumba**	**26.76**	**340**	*e*P	**P**	**02 29 04.6**	**+0.8**
	23nm,0.7s,mb4.8						
DMN	**Daman**	**26.76**	**338**	*e*P	**P**	**02 29 04.9**	**+1.1**
KKN	**Kakani**	**26.86**	**339**	*e*P	**P**	**02 29 04.0**	**-0.7**
	16nm,0.9s,mb4.5						
GKN	**Gorkha**	**27.29**	**338**	*e*P	**P**	**02 29 08.6**	**0.0**
KOLN	**Koldanda**	**27.49**	**336**	*e*P	**P**	**02 29 10.9**	**+0.5**
	20nm,1.1s,mb4.6						
WRA	**Warramunga Arr**	**43.93**	**123**	P	**P**	**02 31 31.3**	**+0.7**
	1.4nm,1.0s,mb3.6,baz=299,slow=9.5,SNR=4.8						
MKAR	**Makanchi Array**	**45.40**	**347**	P	**P**	**02 31 42.6**	**+0.3**
	2.9nm,0.7s,mb4.2,baz=158,slow=7.6,SNR=26						
SONM	**Songino Array**	**45.76**	**10**	P	**P**	**02 31 45.6**	**+0.5**
	2.6nm,1.1s,mb3.9,baz=196,slow=8.3,SNR=9.9						
SONM				PcP	PcP	02 33 23.7	+1.8
	0.6nm,0.6s,baz=200,slow=2.0,SNR=3.7						
ULN	**Ulaanbaatar**	**45.90**	**10**	*e*P	**P**	**02 31 45.9**	**-0.4**
	0.8nm,0.6s,mb3.6						
ZAL	**Zalesovo**	**51.79**	**352**	P	**P**	**02 32 31.1**	**-0.3**
	2.0nm,0.3s,mb4.6,baz=306,slow=7.1,SNR=5.6						
BVAR	**Borovoye Array**	**54.34**	**341**	P	**P**	**02 32 50.0**	**-0.1**
	1.4nm,0.6s,mb4.2,baz=145,slow=8.9,SNR=8.7						
BRVK	**Borovoye**	**54.40**	**341**	*e*P	**P**	**02 32 49.7**	**-0.9**
	1.4nm,0.7s,mb4.1						
AKTK	**Aktyubinsk**	**57.24**	**332**	P	**P**	**02 33 09.7**	**-1.2**
AKTO	**Aktyubinsk**	**57.24**	**332**	P	**P**	**02 33 09.7**	**-1.2**
	0.9nm,0.7s,mb3.9,baz=141,slow=7.4,SNR=4.4						
ARCES	**ARCESS Array B**	**80.62**	**340**	P	**P**	**02 35 35.7**	**-0.1**
	0.5nm,0.6s,mb3.5,baz=107,slow=6.6,SNR=5.3						

*NEIC **24** 02:29:05.9±0.8, 5028N×1867E, h5km, MG2.5(WAR), Error ellipse: s-maj=13.9km s-min=6.1km az=178.0*

*PRU **24** 02:29:06.7, 5026N×1862E, h0km*

*VIE **24** 02:29:07.6±0.7, 4978N×1879E, h0km, mb1.6/2, ML2.2/3, Error ellipse: s-maj=4.8km s-min=4.2km az=179.0 39 km E of Ostrava Suspected Mining induced.*

WAR 24 02:29:06.2, 5022N×1872E, ML2.5, 2C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.36**	**248**	*e*Pg	Pg	02 29 13.9	+0.7
RAC				*e*Sg	Sg	02 29 19.3	+1.4
OKC	**Ostrava-Krasne**	**0.53**	**224**	*e*PG	Pg	02 29 16.6	+0.2
OKC				*e*SG	Sg	02 29 24.1	+0.9
	31nm,0.4s						
OJC	**Ojcow**	**0.69**	**89**	*e*Pg	Pg	02 29 19.3	-0.2
OJC				*e*Sg	Sg	02 29 29.2	+0.7
MORC	**Moravsky Berou**	**0.88**	**240**	*e*Pg	Pg	02 29 22.0	-1.0
MORC				*e*Sg	Sg	02 29 33.4	-1.0
NIE	**Niedzica**	**1.31**	**127**	*e*Pg	Pg	02 29 30.7	-0.5
NIE				*e*Sg	Sg	02 29 49.4	+1.2
DPC	**Dobruska-Polom**	**1.54**	**276**	*e*PG	Pg	02 29 33.7	-2.1
DPC				*e*SG	Sg	02 29 54.2	-1.6
	16nm,0.3s						
KSP	**Ksiaz**	**1.67**	**293**	*e*Pg	Pg	02 29 37.0	-1.2
KSP				Sn	Sn	02 29 57.1	-1.7
KSP				*e*Sg	Sg	02 29 58.8	-1.1
VYHS	**Vyhne**	**1.73**	**177**	*e*PN	Pn	02 29 37.4	-0.1
VYHS				*e*SN	Sn	02 30 00.0	-0.2
UPC	**Upice**	**1.76**	**281**	*e*PG	Pg	02 29 36.1	-3.8
UPC				*e*SG	Sg	02 30 01.4	-1.3
STHS	**Stebnicka Huta**	**1.82**	**115**	*e*PN	Pn	02 29 40.4	+1.6
KECS	**Kecovo**	**2.09**	**146**	*e*PG	Sn	02 30 06.7	-2.4
CRVS	**Cervenica-Dubn**	**2.22**	**125**	*e*PN	Pn	02 29 48.2	+4.0
CRVS				*e*SN	Sn	02 30 16.7	+4.3
PVCC	**Panska Ves**	**2.67**	**278**	*e*SG	Sg	02 30 30.8	-1.4
PRU	**Pruhonice**	**2.70**	**267**	*e*SG	Sg	02 30 28.9	-4.0
	2.8nm,0.3s						
BRG	**Berggiesshubel**	**3.12**	**284**	SG	Sg	02 30 46.8	+0.4
	1.8nm,0.6s						
KHC	**Kasperske Hory**	**3.51**	**254**	*e*PN	Pn	02 30 01.5	-0.5
KHC				*e*Pg	Pg	02 30 12.0	-1.5
KHC				*e*SG	Sg	02 30 57.0	-2.0
	3.8nm,0.5s						
MOA	**Molln**	**3.77**	**233**	*i*Pn	Pn	02 30 04.0	-1.6
MOA				*i*Sg	Sg	02 31 05.2	-2.1
	comp=Z,1.5nm,0.4s						
CLL	**Collm**	**3.79**	**289**	*e*SG	Sg	02 31 12.0	+4.0

*ISCJB **24** 02:43:07.8±2.8, 194S±06×1779W±04, h509km±29km, mb3.9/8, Error ellipse: s-maj=110.3km s-min=19.5km az=121.9*

*IDC **24** 02:43:07.7±13.0, 1971S×17767W, h501km±153km, mb3.4/4, mb1 3.6/4, mb1mx3.2/13, mbtmp4.2/4, Error ellipse: s-maj=162.3km s-min=52.9km az=162.0*

*NEIC **24** 02:43:11.9±5.7, 1985S×17775W, h553km±63km, mb4.0/6, Error ellipse: s-maj=79.3km s-min=31.3km az=155.0*

ISC 24 02:43:08.2±2.8, 194S±06×1778W±04, h502km±29km, n17, σ0°67/15, mb3.9/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.94**	**47**	S	**S**	**02 46 38.6**	**-0.4**
	4.9nm,0.3s,baz=197,slow=23,SNR=5.7						
CTA	**Charters Tower**	**33.80**	**263**	*e*P	**P**	**02 49 09.1**	**+1.3**
	2.3nm,0.6s,mb3.8						
CTAO	**Charters Tower**	**33.80**	**263**	*e*P	**P**	**02 49 09.0**	**+1.1**
	3.1nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**38.45**	**243**	*e*P	**P**	**02 49 45.8**	**-0.5**
	1.1nm,0.6s,mb3.5						
STKA	**Stephens Creek**	**38.45**	**243**	P	**P**	**02 49 45.6**	**-0.7**
	1.7nm,0.7s,mb3.6,baz=76,slow=8.3,SNR=4.0						
WB2	**Warramunga Arr**	**44.94**	**261**	*e*P	**P**	**02 50 36.8**	**-0.9**
WRAB	**Tennant Creek**	**44.94**	**261**	*e*P	**P**	**02 50 37.8**	**0.0**
	2.0nm,0.3s,mb4.0						
WRA	**Warramunga Arr**	**44.95**	**261**	P	**P**	**02 50 38.2**	**+0.4**
	3.6nm,0.4s,mb4.1,baz=97,slow=7.9,SNR=145						
AS31	**Alice Springs**	**44.97**	**256**	*e*P	**P**	**02 50 38.1**	**+0.2**
ASAR	**Alice Springs**	**44.97**	**256**	P	**P**	**02 50 38.1**	**+0.2**
	5.4nm,0.6s,mb4.2,baz=94,slow=7.5,SNR=73						
ASAR				S	**S**	**02 56 37.4**	**-1.7**
	0.8nm,0.9s,baz=193,slow=28,SNR=4.1						
ASPA	**Alice Springs**	**44.97**	**256**	*e*P	**P**	**02 50 38.1**	**+0.2**
FITZ	**Fitzroy Crossi**	**53.37**	**262**	*e*P	**P**	**02 51 40.9**	**+0.7**
	3.5nm,0.4s,mb4.0						
MBWA	**Marble Bar**	**58.29**	**257**	*e*P	**P**	**02 52 13.6**	**-0.7**
	3.8nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**88.03**	**43**	P	**P**	**02 55 05.0**	**+0.5**
	0.3nm,0.6s,mb3.2,baz=222,slow=2.2,SNR=3.8						
BRTR	**Keskin Array B**	**146.24**	**314**	PKPbc	PKPbc	03 01 52.0	-0.1
	0.7nm,0.5s,baz=136,slow=5.0,SNR=5.4						
CLL	**Collm**	**147.04**	**348**	*i* PKPbc	PKPbc	03 01 54.9	+0.6
	comp=Z,5.0nm,0.9s						
GERES	**GERESS Array B**	**149.20**	**345**	PKPbc	PKPbc	03 01 60.0	+0.3
	comp=Z,0.9nm,0.7s,baz=28,slow=2.3,SNR=11						

CASC 24 03:44:31.6±4.1, 1264N×8798W, h49km±76km, MD4.0,

ML3.8, 10C-6D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.65**	**12**	*e*P	x	03 45 03.5	
CNCH				*e*S	x	03 45 14.0	
VSM	**San Miguel**	**0.83**	**340**	*e*P	x	03 45 06.1	
VSM				*e*S	x	03 45 18.9	
BLLM	**Bellamira**	**0.83**	**342**	*e*P	x	03 45 05.4	
BLLM				*e*S	x	03 45 17.1	
CRIN	**San Cristobal**	**0.91**	**86**	*e*P	Pn	03 44 48.8	+0.7
CRIN				*e*S	Sn	03 45 01.9	+1.9
LEON	**Leon**	**1.08**	**102**	*e*P	Pn	03 44 49.7	-0.7
LEON				*e*S	Sn	03 45 03.8	-0.5
TELN	**Telica**	**1.12**	**92**	*e*P	Pn	03 44 50.8	-0.1
TELN				*e*S	Sn	03 45 07.3	+2.1
MIRN	**Miramar**	**1.25**	**99**	*e*P	Pn	03 44 52.4	-0.3
MIRN				*e*S	Sn	03 45 09.3	+0.9
CNGN	**Cerro Negro**	**1.26**	**96**	*e*P	Pn	03 44 52.4	-0.3
CNGN				*e*P		03 44 52.5	
CNGN				*e*S	Sn	03 45 10.8	+2.3
SNVI	**San Vicente**	**1.28**	**319**	*e*P	x	03 45 11.6	
SNVI				*e*S	x	03 45 27.7	
LCBS	**La Ceiba**	**1.40**	**316**	*e*P	x	03 45 12.6	
LCBS				*e*S	x	03 45 34.4	
COPN	**Copaltepe**	**1.43**	**109**	*e*P	Pn	03 44 54.7	-0.4
COPN				*e*S	Sn	03 45 12.6	-0.1
LFRS	**El Faro**	**1.44**	**313**	*e*P	x	03 45 13.2	
LFRS				*e*S	x	03 45 33.7	
LBRS	**Las Brisas**	**1.50**	**316**	*e*P	x	03 45 14.7	
LBRS				*e*S	x	03 45 33.7	
LFU	**La Fuente**	**1.56**	**315**	*e*P	x	03 45 15.2	
LFU				*e*S	x	03 45 35.6	
APYN	**Apoyeque**	**1.64**	**104**	*e*P	Pn	03 44 58.0	0.0
BOQS	**Boqueron**	**1.67**	**311**	*e*P	x	03 45 16.9	
BOQS				*e*S	x	03 45 38.7	
XAVN	**Gruta Xavier**	**1.69**	**107**	*e*P	Pn	03 44 58.6	0.0
XAVN				*e*S	Sn	03 45 19.4	+0.3
TISN	**Laguna Tiscapa**	**1.74**	**106**	*e*P	Pn	03 44 59.1	-0.3
TISN				*e*S	Sn	03 45 20.7	+0.3
MGAN	**Managua**	**1.76**	**106**	*e*P	Pn	03 44 59.2	-0.4
MGAN				*e*S	Sn	03 45 20.7	-0.2
	comp=E,1μm,0.4s						
TICN	**Ticuantepe**	**1.81**	**109**	*e*P	Pn	03 45 00.9	+0.6
TICN				*e*S	Sn	03 45 22.1	+0.1
SBLS	**San Blas**	**2.00**	**307**	*e*P	x	03 45 21.4	
SBLS				*e*S	x	03 45 47.2	
SNJE	**San Jose**	**2.00**	**308**	*e*P	x	03 45 21.7	
SNJE				*e*S	x	03 45 38.7	
BOA	**Boaco**	**2.21**	**94**	*e*P	Pn	03 45 06.0	+0.1
CONN	**Concepcion**	**2.54**	**115**	*e*P	Pn	03 45 09.8	-0.5
CONN				*e*S	Sn	03 45 40.6	+0.6
MADN	**Villa Maderas**	**2.69**	**117**	*e*P	Pn	03 45 12.3	0.0
MADN				*e*S	Sn	03 45 45.3	+1.7
VCR	**Vista de Mar**	**3.40**	**137**	*e*P	Pn	03 45 22.2	+0.2
TP2	**Tecpan 2**	**3.65**	**306**	*e*S	Sn	03 46 09.6	+2.4
TP2				*e*S	Sn	03 46 11.9	+4.7
JCR	**Jicaral**	**3.95**	**134**	*e*P	Pn	03 45 29.5	-0.2
CGA2	**Cerro Gallo 2**	**4.32**	**127**	*e*P	Pn	03 45 37.0	+2.3
PRS1	**Puriscal**	**4.46**	**126**	*e*P	Pn	03 45 39.4	+2.8
LAJ	**Bijagual**	**4.68**	**126**	*e*P	Pn	03 45 38.3	-1.4
LCR2	**La Lucha 2**	**4.85**	**126**	*e*P	Pn	03 45 44.5	+2.5
BUS	**Buena Vista**	**5.15**	**126**	*e*P	Pn	03 45 49.0	+2.9
BUS				*e*S	Sn	03 46 46.0	+1.7

GUC 24 03:45:59.4±0.7, 3212S×7180W, h35km±3km, MD3.5, ML2.4, 1C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.34**	**47**	*i*P	Pb	03 46 07.7	-0.2
CHNG				*i*S	Sb	03 46 13.8	+0.1
CHNG				AML	AML	03 46 14.8	
	comp=E,141nm,0.5s						
PTCH	**Petorca**	**0.75**	**101**	*i*P	Pn	03 46 13.7	+0.2
PTCH				*i*S	Sn	03 46 23.9	+0.3
PTCH				AML	AML	03 46 25.1	
	comp=E,684nm,0.1s						
CMCH	**Combarbala**	**1.16**	**36**	*i*P	Pn	03 46 19.9	+0.7
CMCH				*i*S	Sn	03 46 35.8	+2.0
CMCH				AML	AML	03 46 41.9	
	comp=E,291nm,0.6s						
JACH	**Jahuel**	**1.16**	**119**	*i*P	Pn	03 46 20.1	+0.9
JACH				*i*S	Sn	03 46 35.6	+1.8
LCCH	**Las Cruces**	**1.37**	**172**	*e*P	Pn	03 46 22.8	+0.8
PEL	**Peldehue**	**1.39**	**138**	*i*P	Pn	03 46 24.0	+1.7
PEL				*i*S	Sn	03 46 42.2	+2.9
PEL				AML	AML	03 46 44.8	
	comp=N,185nm,0.4s						
RCDM	**Rinconada Maip**	**1.60**	**149**	*i*P	Pn	03 46 26.8	+1.6
RCDM				*i*S	Sn	03 46 47.4	+2.7
RCDM				AML	AML	03 46 48.9	
	comp=E,66nm,0.1s						
CLCH	**Cerro Calan**	**1.66**	**141**	*e*P	Pn	03 46 27.2	+1.2
CLCH				*i*S	Sn	03 46 49.6	+3.6
CLCH				AML	AML	03 46 53.8	
	comp=N,62nm,0.6s						
TACH	**Talagante**	**1.69**	**155**	*i*S	Sn	03 46 49.2	+2.3
FCH	**Farellones**	**1.75**	**134**	*i*P	Pn	03 46 29.2	+2.0
FCH				*i*S	Sn	03 46 52.5	+4.1
FCH				AML	AML	03 46 55.3	
	comp=E,42nm,0.3s						

*LDG **24** 03:55:10.6±0.1, 4278N×1337E, h7km, Ml2.5/9, Error ellipse: s-maj=2.0km s-min=1.3km az=28.0*

*ISCJB **24** 03:56:00.3±0.3, 4283N±002×1343E±003, h10km, Error ellipse: s-maj=3.7km s-min=2.4km az=156.8*

*CSEM **24** 03:56:00.9±0.1, 4278N×1334E, h20km, MD3.0/10, Error ellipse: s-maj=1.7km s-min=1.0km az=67.0*

*NEIC **24** 03:56:01.2, 4278N×1335E, h4km, ML2.8(ROM), After ROM.*

*ROM **24** 03:56:01.2±0.3, 4278N×1335E, h4km±3km, Md3.0/10, Ml2.8/24, Error ellipse: s-maj=2.8km s-min=1.9km az=60.0*

ISC 24 03:56:01.2±0.3, 4282N±002×1342E±003, h10km, n53, σ1°12/61, 6C-6D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TERO	**Teramo**	**0.24**	**145**	*i*Pg	**Pg**	**03 56 07.0**	**+0.9**
TERO				Sg	**Sg**	**03 56 11.5**	**+2.1**
	5μm,0.3s						
AQU	**L'Aquila**	**0.46**	**181**	Pg	**Pg**	**03 56 10.2**	**-0.1**
AQU				Sg	**Sg**	**03 56 17.7**	**+1.3**
	1μm,0.4s						
VCEL	**Villa Celiera**	**0.53**	**143**	Pg	**Pg**	**03 56 11.7**	**+0.3**
VCEL				Sg	**Sg**	**03 56 20.8**	**+2.4**
	1μm,0.4s						
FAGN	**Fagnano**	**0.56**	**167**	Pg	**Pg**	**03 56 11.8**	**-0.4**
FAGN				Sg	**Sg**	**03 56 21.9**	**+2.3**
CING	**Cingoli**	**0.58**	**344**	Pg	**Pg**	**03 56 12.8**	**+0.3**
CING				Sg	**Sg**	**03 56 23.0**	**+2.8**
	690nm,0.5s						
FIAM	**Fiamignano**	**0.59**	**202**	Pg	**Pg**	**03 56 12.3**	**-0.4**
FIAM				Sg	**Sg**	**03 56 21.1**	**+0.6**
	1μm,0.4s						
ASS	**Assisi**	**0.61**	**294**	Pg	**Pg**	**03 56 12.9**	**-0.2**
ASS				Sg	**Sg**	**03 56 22.6**	**+1.4**
	11nm,0.2s						
MNS	**Montasola**	**0.69**	**232**	*i*Pg	**Pg**	**03 56 14.1**	**-0.6**
MNS				Sg	**Sg**	**03 56 24.9**	**+1.2**
	501nm,0.4s						
AOI	**Ancona**	**0.74**	**10**	Pg	**Pg**	**03 56 16.6**	**+1.0**
AOI				Sg	**Sg**	**03 56 29.3**	**+4.0**
	403nm,0.5s						
CERT	**Cerreto**	**0.93**	**201**	Pg	**Pg**	**03 56 17.8**	**-1.2**
	549nm,0.8s						
MTCE	**Montecelio**	**0.94**	**212**	Pg	**Pg**	**03 56 17.9**	**-1.4**
	302nm,0.5s						
VVLD	**Villa Vallelon**	**0.96**	**171**	Pg	**Pg**	**03 56 18.3**	**-1.4**
	292nm,0.5s						
BADI	**Badiali**	**1.10**	**309**	Pg	**Pg**	**03 56 21.9**	**-0.5**
	5μm,7.0s						
RDP	**Rocca di Papa**	**1.18**	**206**	Pg	**Pg**	**03 56 23.6**	**-0.3**
	535nm,0.5s						
PESA	**Pesaro**	**1.20**	**340**	Pg	**Pg**	**03 56 24.9**	**+0.6**
	261nm,0.6s						
LATE	**Laterza**	**1.21**	**261**	Pg	**Pg**	**03 56 24.6**	**+0.2**
	22nm,0.8s						
RNI2	**Rionero Sannit**	**1.24**	**154**	Pg	**Pg**	**03 56 25.1**	**+0.1**
	194nm,0.6s						
FRES	**Fresagrandinar**	**1.25**	**132**	Pg	**Pg**	**03 56 25.5**	**+0.2**
	212nm,0.7s						
GIUL	**Giuliano Di Ro**	**1.26**	**186**	Pg	**Pg**	**03 56 25.1**	**-0.4**
	141nm,0.6s						
TOLF	**Tolfa**	**1.29**	**235**	Pg	**Pg**	**03 56 24.5**	**-1.5**
	103nm,0.6s						
CERA	**Filignano**	**1.30**	**160**	Pg	**Pg**	**03 56 25.0**	**-1.1**
	150nm,0.7s						
RSM	**Repubblica di**	**1.32**	**328**	Pg	**Pg**	**03 56 26.8**	**+0.3**
	52nm,0.6s						
MIDA	**Miranda**	**1.33**	**152**	Pg	**Pg**	**03 56 25.5**	**-1.2**
	140nm,0.8s						
CRE	**Caprese Michel**	**1.34**	**307**	Pg	**Pg**	**03 56 28.1**	**+1.2**
	20nm,0.3s						
TRIV	**Trivento**	**1.34**	**141**	Pg	**Pg**	**03 56 27.6**	**+0.6**
	189nm,1.0s						
VAGA	**Valle Agricola**	**1.53**	**156**	Pg	**Pg**	**03 56 29.6**	**-0.9**
	60nm,0.5s						
BSSO	**Busso**	**1.54**	**145**	Pg	**Pg**	**03 56 30.8**	**0.0**
	69nm,0.7s						
SFI	**Santa Sofia**	**1.58**	**314**	Pg	**Pg**	**03 56 31.7**	**+0.2**
	23nm,0.5s						
CIGN	**Sant'Elia a Pi**	**1.60**	**136**	Pg	**Pg**	**03 56 31.3**	**-0.7**
CSNT	**Castellina Chi**	**1.69**	**294**	Pg	**Pg**	**03 56 30.6**	**-3.0**
	22nm,0.5s						
RGNG	**Rignano Grg**	**1.97**	**125**	Pg	**Pg**	**03 56 37.0**	**-2.1**
SGRT	**San Giovanni R**	**2.03**	**121**	Pg	**Pn**	**03 56 36.1**	**+0.7**
	68nm,0.6s						
NVLJ	**Novalja**	**2.04**	**31**	*i* Pn	**Pn**	**03 56 35.7**	**+0.1**
NVLJ				*i* Sn	**Sn**	**03 56 59.6**	**-1.5**
BOJS	**Bojanci**	**2.99**	**26**	*i* Pn	**Pn**	**03 56 50.0**	**+1.3**
VOY	**Vojsko**	**3.23**	**6**	*e*Pn	**Pn**	**03 56 56.5**	**+4.5**
VOY				*e*(Sn)	**Sn**	**03 57 31.1**	**+0.6**
VOY				*e*		03 57 50.8	
VOY	**Vojsko**	**3.23**	**6**	*e*Sn	**Sn**	**03 57 31.1**	**+0.6**
PGF	**Pioggiola**	**3.27**	**267**	*e*Pn	Px	03 55 59.9	
PGF				*e*Sn	Sx	03 56 35.9	
	2.7nm,0.3s						
OBKA	**Obir**	**3.78**	**12**	*i*Sn	**Sn**	**03 57 42.7**	**-1.4**
OBKA	**Obir**	**3.78**	**12**	*i*Pn	**Pn**	**03 56 60.0**	**+0.5**
OBKA				*i*Sn	**Sn**	**03 57 44.8**	**+0.7**
OBKA	**Obir**	**3.78**	**12**	*i*Pn	**Pn**	**03 56 57.9**	**-1.6**
OBKA				*i* Sn	**Sn**	**03 57 42.7**	**-1.4**
OBKA	**Obir**	**3.78**	**12**	*i*Pn	**Pn**	**03 56 57.9**	**-1.6**
OBKA				Sn	**Sn**	**03 57 44.8**	**+0.8**
KBA	**Koelnbreinsper**	**4.26**	**359**	*i*Sn	**Sn**	**03 57 54.0**	**-2.0**
KBA	**Koelnbreinsper**	**4.26**	**359**	*i*Pn	**Pn**	**03 57 05.3**	**-0.8**
KBA				*i*Sn	**Sn**	**03 57 56.1**	**+0.2**
KBA	**Koelnbreinsper**	**4.26**	**359**	*i*Pn	**Pn**	**03 57 05.3**	**-0.8**
KBA				*i* Sn	**Sn**	**03 57 54.0**	**-2.0**
KBA	**Koelnbreinsper**	**4.26**	**359**	*i*Pn	**Pn**	**03 57 05.3**	**-0.9**
KBA				*i* Sn	**Sn**	**03 57 54.0**	**-1.9**
SBF	**Sospel**	**4.49**	**286**	*e*Pn	Px	03 56 16.6	
SBF				*e*Sn	Sx	03 57 05.7	
	1.6nm,0.2s						
FRF	**La Foret Royal**	**5.01**	**281**	*e*Pn	Px	03 56 23.7	
FRF				*e*Sn	Sx	03 57 18.2	
	1.4nm,0.4s						
LMR	**La Mourre**	**5.09**	**278**	*e*Pn	Px	03 56 24.7	
LMR				*e*Sn	Sx	03 57 20.1	
	1.4nm,0.3s						
MBDF	**Montbardon**	**5.18**	**294**	*e*Pn	Px	03 56 26.3	
MBDF				*e*Sn	Sx	03 57 22.6	
	0.7nm,0.3s						
LPG	**La Plagne**	**5.49**	**301**	*e*Pn	Px	03 56 30.9	
LPG				*e*Sn	Sx	03 57 30.5	
	1.4nm,0.5s						
LPL	**La Plagne**	**5.51**	**302**	*e*Pn	Px	03 56 31.1	
LPL				*e*Sn	Sx	03 57 30.9	
	0.7nm,0.3s						
SMRF	**Simiane la Rot**	**5.83**	**284**	*e*Pn	Px	03 56 34.9	
SMRF				*e*Sn	Sx	03 57 37.7	
	0.7nm,0.3s						
ORIF	**Oris-en-Rattie**	**5.84**	**294**	*e*Pn	Px	03 56 35.2	
ORIF				*e*Sn	Sx	03 57 38.3	
	1.1nm,0.4s						

*NEIC **24** 03:57:10.0±3.2, 1717N×14559E, h450km, mb3.9/2, Error ellipse: s-maj=99.8km s-min=20.4km az=185.0*

*IDC **24** 03:57:11.4±28.0, 1713N×14557E, h468km±259km, mb3.3/6, mb1 3.4/6, mb1mx3.0/20, mbtmp4.1/6, Error ellipse: s-maj=217.1km s-min=28.0km az=177.0*

*ISCJB **24** 03:57:15.5±4.4, 177N±09×1455E±02, h500km, mb3.7/8, Error ellipse: s-maj=125.4km s-min=26.0km az=10.8*

ISC 24 03:57:16.5±4.5, 176N±10×1456E±02, h500km, n9, σ0°29/9, mb3.7/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**43.90**	**322**	P	**P**	**04 04 37.9**	**-0.1**
	0.8nm,0.5s,mb3.4,baz=138,slow=7.5,SNR=7.2						
MKAR	**Makanchi Array**	**59.11**	**314**	P	**P**	**04 06 28.2**	**-0.1**
	1.2nm,0.3s,mb3.6,baz=85,slow=8.5,SNR=14						
KDAK	**Kodiak Island**	**60.30**	**33**	P	**P**	**04 06 36.6**	**+0.4**
	2.6nm,0.5s,mb4.0,baz=22,slow=1.0,SNR=8.0						
BVAR	**Borovoye Array**	**67.22**	**321**	P	**P**	**04 07 20.6**	**+0.2**
	6.5nm,0.5s,mb4.5,baz=99,slow=8.4,SNR=24						
BRVK	**Borovoye**	**67.28**	**321**	*e*P	**P**	**04 07 21.1**	**+0.3**
	3.0nm,0.6s,mb4.1						
ZRNK	**Zerenda**

0.9nm,0.5s,baz=42,slow=4.0,SNR=6.3

IDC ***24*** *04:12:02.3±7.1,3625N×7115E,h187km±65km,mb3.2/7, mb1 3.3/9,mb1mx3.1/23,mbtmp3.7/9,Error ellipse: s-maj=34.7km s-min=22.1km az=24.0*

NEIC ***24*** *04:12:05.8±2.5,3666N×7077E,h188km±28km,mb3.6/2, Error ellipse: s-maj=28.2km s-min=8.0km az=65.0*

ISCJB ***24*** *04:12:07.7±1.9,368N±0.1×71.1E±0.2,h217km± 19km, mb3.2/6, Error ellipse: s-maj=33.7km s-min=7.3km az=120.7*

ISC 24 04:12:07.3±1.8,3675N±010×709E±02,h202km±18km,n23, σ1§07/25,mb3.2/6,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.35**	**357**	P	**Pn**	04 13 41.1	**+2.0**
	1.4nm,0.2s,baz=180,slow=13,SNR=47						
KK31				S	**Sn**	04 14 50.2	**-1.7**
	12nm,0.5s,baz=182,slow=21,SNR=21						
AAK	**Ala-Archa**	**6.50**	**24**	*e*Pn	**Pn**	04 13 40.0	**-1.0**
MKAR	**Makanchi Array**	**13.14**	**37**	P	**Pn**	04 15 05.9	**-0.5**
	0.2nm,0.3s,baz=215,slow=8.2,SNR=8.2						
KOLN	**Koldanda**	**13.98**	**126**	*e*P	**Pn**	04 15 15.8	**-1.1**
KOLN				*e*S	**S**	04 17 39.6	**-13**
GKN	**Gorkha**	**14.51**	**123**	*e*P	**Pn**	04 15 23.2	**-0.2**
DMN	**Daman**	**15.08**	**123**	*e*P	**Pn**	04 15 30.3	**-0.1**
KKN	**Kakani**	**15.08**	**122**	*e*P	**Pn**	04 15 30.4	**0.0**
PKI	**Pulchoki**	**15.31**	**123**	*e*P	**Pn**	04 15 33.4	**+0.2**
GUN	**Gumba**	**15.42**	**121**	*e*P	**Pn**	04 15 35.6	**+1.1**
JIRN	**Jiri**	**15.79**	**121**	*e*P	**Pn**	04 15 39.5	**+0.6**
ZRNK	**Zerenda**	**16.25**	**356**	*e*P	**P**	04 15 44.6	**+0.7**
	1.2nm,0.4s						
BVAR	**Borovoye Array**	**16.28**	**359**	P	**P**	04 15 45.4	**+1.3**
	0.3nm,0.3s,baz=163,slow=11,SNR=4.6						
BRVK	**Borovoye**	**16.31**	**359**	*e*P	**P**	04 15 46.7	**+2.2**
	1.2nm,0.5s						
ZAL	**Zalesovo**	**19.71**	**25**	P	**P**	04 16 20.5	**-0.9**
	3.2nm,0.3s,baz=245,slow=8.4,SNR=4.6						
FINES	**FINESS Array B**	**37.23**	**326**	P	**P**	04 18 59.8	**+0.5**
	0.4nm,0.3s,mb3.4,baz=115,slow=12,SNR=5.9						
ARCES	**ARCESS Array B**	**40.88**	**338**	P	**P**	04 19 29.8	**+0.2**
	0.5nm,0.4s,mb3.3,baz=114,slow=8.5,SNR=14						
NOA	**NORSAR Array B**	**44.13**	**323**	P	**P**	04 19 55.7	**0.0**
	0.4nm,0.4s,mb3.1,baz=96,slow=7.7,SNR=3.7						
NOA	**NORSAR Array B**	**44.13**	**323**	P	**P**	04 19 55.7	**0.0**
TORD	**Torodi Ar. Bea**	**65.64**	**268**	P	**P**	04 22 27.8	**-2.0**
	0.4nm,0.7s,mb3.2,baz=47,slow=6.1,SNR=10						
TORD	**Torodi Ar. Bea**	**65.64**	**268**	P	**P**	04 22 27.8	**-2.0**
YKA	**Yellowknife Ar**	**81.00**	**3**	P	**P**	04 23 58.3	**-1.2**
	0.6nm,0.7s,mb3.3,baz=353,slow=5.5,SNR=5.2						
YKA	**Yellowknife Ar**	**81.00**	**3**	P	**P**	04 23 58.3	**-1.2**
WRA	**Warramunga Arr**	**82.20**	**122**	P	**P**	04 24 00.3	**-5.4**
	0.4nm,0.9s,mb3.1,baz=327,slow=4.9,SNR=3.3						

NEIC ***24*** *04:22:53.2,3973S×17685E,h45km,ML3.7(WEL),After WEL.*

NEIC Felt at Hastings.

WEL 24 04:22:52.9±0.1,3973S×17681E,h41km±1km,ML3.7/6, 3C-2D,Error ellipse: s-maj=1.2km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.30**	**172**	⇑P	Pn	04 23 01.6	+0.3
PXZ				*e*SN	Sn	04 23 08.2	+1.1
BKZ	**Black Stump Fm**	**0.62**	**336**	P	Pn	04 23 04.9	-0.3
BKZ				S	Sn	04 23 13.9	-0.1
BKZ	**Black Stump Fm**	**0.62**	**336**	PN	Pn	04 23 04.9	-0.4
BKZ				SN	Sn	04 23 13.9	-0.2
TSZ	**Takapari Road**	**0.73**	**243**	P	Pn	04 23 06.5	-0.3
TSZ				S	Sn	04 23 16.7	0.0
TSZ	**Takapari Road**	**0.73**	**243**	PN	Pn	04 23 06.5	-0.2
TSZ				SN	Sn	04 23 16.7	0.0
MOVZ	**Moawhango**	**0.88**	**291**	P	Pn	04 23 08.9	+0.1
MOVZ	**Moawhango**	**0.88**	**291**	PN	Pn	04 23 08.9	+0.1
MOVZ				SN	Sn	04 23 20.3	-0.1
KNZ	**Kokohu**	**0.98**	**44**	*e*P	Pn	04 23 10.1	-0.1
KNZ	**Kokohu**	**0.98**	**44**	*e*PN	Pn	04 23 10.1	0.0
HATZ	**Hinemaiaia**	**1.01**	**326**	P	Pn	04 23 11.0	+0.4
HATZ	**Hinemaiaia**	**1.01**	**326**	PN	Pn	04 23 11.0	+0.4
HATZ				SN	Sn	04 23 24.5	+1.0
TUVZ	**Tukino**	**1.01**	**297**	P	Pn	04 23 11.5	+0.9
TUVZ	**Tukino**	**1.01**	**297**	PN	Pn	04 23 11.5	+0.9
TUVZ				SN	Sn	04 23 25.7	+2.2
WNVZ	**Wahianoa**	**1.02**	**293**	P	Pn	04 23 11.6	+0.8
WNVZ	**Wahianoa**	**1.02**	**293**	PN	Pn	04 23 11.6	+0.8
WNVZ				SN	Sn	04 23 26.2	+2.3
BFZ	**Birch Farm**	**1.04**	**204**	P	Pn	04 23 10.9	-0.1
BFZ	**Birch Farm**	**1.04**	**204**	PN	Pn	04 23 10.9	-0.2
BFZ				SN	Sn	04 23 24.9	+0.6
OTVZ	**Oturere**	**1.05**	**302**	PN	Pn	04 23 12.0	+0.8
OTVZ				SN	Sn	04 23 26.0	+1.4
RITZ	**Rihia Road**	**1.05**	**315**	P	Pn	04 23 12.1	+0.9
RITZ	**Rihia Road**	**1.05**	**315**	PN	Pn	04 23 12.1	+0.9
DRZ	**Dome Shelter**	**1.06**	**295**	P	Pn	04 23 12.5	+1.1
DRZ	**Dome Shelter**	**1.06**	**295**	PN	Pn	04 23 12.5	+1.1
DRZ				SN	Sn	04 23 26.9	+1.9
TRVZ	**Turoa**	**1.07**	**294**	PN	Pn	04 23 12.5	+1.1
TRVZ				*e*SN	Sn	04 23 26.6	+1.6
FWVZ	**Far West T-bar**	**1.08**	**296**	*e*P	Pn	04 23 12.1	+0.5
FWVZ	**Far West T-bar**	**1.08**	**296**	*e*PN	Pn	04 23 12.1	+0.5
FWVZ				SN	Sn	04 23 27.4	+2.0
NGZ	**Ngauruhoe**	**1.09**	**300**	P	Pn	04 23 12.2	+0.5
NGZ	**Ngauruhoe**	**1.09**	**300**	PN	Pn	04 23 12.2	+0.5
NGZ				SN	Sn	04 23 27.8	+2.3
MTVZ	**Mangateitei**	**1.09**	**288**	PN	Pn	04 23 13.1	+1.3
MTVZ				SN	Sn	04 23 28.3	+2.7
KRVZ	**Karewarewa**	**1.11**	**305**	PN	Pn	04 23 13.0	+1.1
KRVZ				SN	Sn	04 23 27.9	+2.0
WPVZ	**Whakapapa**	**1.11**	**298**	⇑P	Pn	04 23 13.3	+1.3
WPVZ	**Whakapapa**	**1.11**	**298**	⇑PN	Pn	04 23 13.3	+1.3
WPVZ				SN	Sn	04 23 28.2	+2.1
WTVZ	**West Tongariro**	**1.13**	**303**	P	Pn	04 23 13.2	+1.0
WTVZ	**West Tongariro**	**1.13**	**303**	PN	Pn	04 23 13.2	+1.0
KATZ	**Kakaramea**	**1.15**	**311**	PN	Pn	04 23 13.3	+0.8
KATZ				SN	Sn	04 23 29.1	+2.1
RATZ	**Rangitukua**	**1.18**	**317**	*e*PN	Pn	04 23 13.7	+0.8
PKVZ	**Pokaka**	**1.21**	**291**	*e*PN	Pn	04 23 14.5	+1.1
TWVZ	**Taurewa**	**1.25**	**301**	*e*PN	Pn	04 23 14.5	+0.6
TIWZ	**Tintock**	**1.26**	**214**	PN	Pn	04 23 13.7	-0.4
WATZ	**Wairara**	**1.32**	**320**	*e*PN	Pn	04 23 14.8	-0.1
MRZ	**Mangatainoka R**	**1.32**	**225**	P	Pn	04 23 14.5	-0.4
MRZ	**Mangatainoka R**	**1.32**	**225**	PN	Pn	04 23 14.5	-0.4
WAZ	**Wanganui**	**1.41**	**268**	*e*PN	Pn	04 23 17.2	+1.2
URZ	**Urewera**	**1.49**	**9**	PN	Pn	04 23 16.7	-0.5
MWZ	**Matawai**	**1.50**	**22**	⇓P	Pn	04 23 17.3	-0.1
MWZ	**Matawai**	**1.50**	**22**	⇓PN	Pn	04 23 17.3	-0.1
TAZ	**Tarawera**	**1.52**	**351**	P	Pn	04 23 18.1	+0.5
TAZ	**Tarawera**	**1.52**	**351**	PN	Pn	04 23 18.1	+0.5
MTW	**Mount Morrison**	**1.74**	**215**	P	Pn	04 23 19.4	-1.2
MTW	**Mount Morrison**	**1.74**	**215**	PN	Pn	04 23 19.4	-1.2
MTW				SN	Sn	04 23 40.8	-0.8
KIW	**Kapiti Island**	**1.84**	**232**	P	Pn	04 23 21.8	-0.2
KIW	**Kapiti Island**	**1.84**	**232**	PN	Pn	04 23 21.4	-0.6
TRWZ	**Traveller**	**1.87**	**207**	PN	Pn	04 23 21.3	-1.2
CAW	**Cannon Point**	**1.91**	**223**	*e*PN	Pn	04 23 21.5	-1.5
HIZ	**Hauiti**	**1.95**	**308**	*e*PN	Pn	04 23 23.8	+0.4
PAWZ	**Paruwai Farm**	**1.96**	**212**	P	Pn	04 23 22.2	-1.4
PAWZ	**Paruwai Farm**	**1.96**	**212**	PN	Pn	04 23 22.2	-1.4
MSWZ	**Moikau Station**	**2.06**	**215**	P	Pn	04 23 23.4	-1.6
MSWZ	**Moikau Station**	**2.06**	**215**	PN	Pn	04 23 23.0	-2.0
PKE	**Pukeiti**	**2.25**	**283**	*e*PN	Pn	04 23 30.1	+2.5
TCW	**Tory Channel**	**2.43**	**232**	P	Pn	04 23 28.9	-1.2
TCW	**Tory Channel**	**2.43**	**232**	PN	Pn	04 23 28.9	-1.3
MXZ	**Matakaoa Point**	**2.46**	**29**	*e*PN	Pn	04 23 30.4	-0.2
MQZ	**McQueen's Vall**	**5.04**	**217**	SN	Sn	04 24 56.5	-6.5

ATH ***24*** *04:30:56.7,3649N×2891E,h16km±2km,MD3.9/4*

NEIC ***24*** *04:30:56.7,3649N×2891E,h16km,MD3.2(ISK), MD3.9(ATH),After ATH.*

BJI ***24*** *04:30:56.7,3650N×2890E,h16km,mB4.7,mb4.9,Ms4.1, Msz3.7*

IDC ***24*** *04:30:56.0±1.3,3635N×2882E,h0km,mb3.8/3,mb1 3.8/7, mb1mx3.6/23,mbtmp3.6/7,ML3.6/4,Error ellipse: s-maj=24.9km s-min=21.6km az=130.0*

ISCJB ***24*** *04:30:56.2±0.3,3630N±003×2879E±004,h10km,mb4.2/6, MS3.8/1,Error ellipse: s-maj=4.6km s-min=3.5km az=125.5*

CSEM ***24*** *04:30:57.8±0.1,3654N×2884E,h5km,MD3.2,Error ellipse: s-maj=2.4km s-min=1.3km az=7.0*

ISK ***24*** *04:30:57.2,3647N×2881E,h6km,MD3.2*

HLW ***24*** *04:31:00.2,3634N×2869E,h33km,Mb3.5*

ISC 24 04:30:58.0±0.3,3639N±003×2881E±004,h10km,n52, σ1§15/62,mb4.2/6,MS3.8/1,3C-6D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALT	**Dalyan (Mudla)**	**0.40**	**340**	*i* PG	**Pg**	04 31 03.9	**-2.0**
DALT				SG	**Sg**	04 31 09.6	**-1.6**
ARG	**Arkhangelos**	**0.58**	**253**	*e*PN	**Pg**	04 31 09.9	**+0.7**
YER	**Yerkesik**	**0.85**	**331**	PG	**Pg**	04 31 12.7	**-1.7**
ELL	**Elmali**	**0.96**	**68**	PG	**Pg**	04 31 15.2	**-1.2**
DAT	**Datca**	**1.04**	**289**	PG	**Pg**	04 31 17.3	**-0.8**
NISR	**Nisiros**	**1.37**	**280**	*e*PN	**Pn**	04 31 24.0	**+0.9**
DENT	**Denizli**	**1.37**	**8**	PN	**Pn**	04 31 22.1	**-1.1**
BODT	**Bodrum**	**1.38**	**300**	PN	**Pn**	04 31 23.0	**-0.2**
ANTB	**Antalya**	**1.57**	**71**	*e*PN	**Pn**	04 31 26.1	**+0.2**
KARP	**Karpathos**	**1.58**	**238**	*e*PN	**Pn**	04 31 28.3	**+2.3**
KARP				*e*SN	**Sn**	04 31 50.5	**+4.0**
BCK	**Bucak**	**1.78**	**53**	*e*PN	**Pn**	04 31 28.7	**-0.1**
ISP	**Isparta**	**1.99**	**43**	*e*PN	**Pn**	04 31 30.8	**-0.9**
ISP	**Isparta**	**1.99**	**43**	*e*Pn	**Pn**	04 31 32.1	**+0.5**
SMG	**Samos**	**2.05**	**310**	*e*PN	**Pn**	04 31 32.5	**0.0**
SMG				*e*SN	**Sn**	04 31 59.3	**+1.1**
IZM	**Izmir**	**2.35**	**329**	*e*PN	**Pn**	04 31 36.6	**0.0**
BLCB	**Balcova**	**2.44**	**325**	*e*PN	**Pn**	04 31 37.8	**-0.1**
AKS	**Akhisar**	**2.61**	**343**	*e*PN	**Pn**	04 31 39.5	**-0.7**
SANT	**Santorini**	**2.70**	**271**	*e*Pn	**Pn**	04 31 45.9	**+4.5**
HDMB	**Hadim**	**3.01**	**78**	*e*PN	**Pn**	04 31 47.0	**+1.2**
KONT	**Konya--Tatoy**	**3.23**	**60**	*e*PN	**Pn**	04 31 49.9	**+1.1**
KIZT	**Kizilcal**	**3.48**	**44**	*e*PN	**Pn**	04 31 52.7	**+0.5**
IKL	**Isikli**	**3.94**	**91**	*e*PN	**Pn**	04 32 00.6	**+2.0**
GVD	**Gavdhos**	**4.14**	**249**	*e*Pn	**Pn**	04 32 04.5	**+3.2**
MERS	**Mersin**	**4.62**	**82**	*e*PN	**Pn**	04 32 10.0	**+2.1**
BR131	**Keskin Array S**	**5.06**	**47**	*e*Pn	**Pn**	04 32 15.4	**+1.5**
BR131	**Keskin Array S**	**5.06**	**47**	*e*Pn	**Pn**	04 32 15.4	**+1.5**
BRTR	**Keskin Array B**	**5.06**	**47**	Pn	**Pn**	04 32 14.3	**+0.4**
	0.2nm,0.3s,baz=219,slow=15,SNR=9.5						
BRTR				Sn	**Sn**	04 33 15.7	**+3.2**
	0.1nm,0.3s,baz=213,slow=24,SNR=3.7						
MMAI	**Mount Meron Ar**	**6.39**	**120**	Pn	**Pn**	04 32 31.6	**-0.5**
	3.0nm,0.3s,baz=305,slow=12,SNR=8.2						
MMAI				Sn	**Sn**	04 33 42.4	**-2.8**
	3.7nm,0.3s,baz=305,slow=23,SNR=4.2						
AMAG	**Maghara**	**6.81**	**146**	⇓P	**Pn**	04 32 37.8	**-0.2**
HNAT	**Natroun**	**6.91**	**167**	⇓P	**Pn**	04 32 38.9	**-0.4**
KOT	**Kottamia**	**6.93**	**158**	⇑P	**Pn**	04 32 39.1	**-0.4**
KOT				S	**Sn**	04 33 52.0	**-6.4**
HHAG	**Hagoal**	**6.99**	**156**	P	**Pn**	04 32 40.1	**-0.3**
HSAF	**As Saff**	**7.14**	**160**	⇓P	**Pn**	04 32 42.8	**+0.4**
GLL	**Jalalah**	**7.22**	**159**	P	**Pn**	04 32 43.3	**-0.2**
SUZ		**7.35**	**152**	⇓P	**Pn**	04 32 45.4	**0.0**
SUZ				S	**Sn**	04 34 02.3	**-6.5**
SWA2		**7.66**	**203**	⇑P	**Pn**	04 32 49.0	**-0.7**
AWBH		**8.05**	**179**	⇑P	**Pn**	04 32 53.9	**-1.0**
EIL	**Elat**	**8.46**	**141**	*e*Pn	**Pn**	04 32 57.4	**-3.1**
EIL				*e*Sn	**Sn**	04 34 30.8	**-5.2**
HFRF	**Wahat Farafira**	**9.22**	**183**	P	**Pn**	04 33 10.2	**-0.8**
HFRF				S	**Sn**	04 34 45.9	**-9.0**
ASUT		**9.27**	**165**	⇓P	**Pn**	04 33 11.5	**-0.1**
MLR	**Muntele Rosu**	**9.34**	**348**	Pn	**Pn**	04 33 12.5	**-0.2**
	0.1nm,0.3s,baz=146,slow=23,SNR=2.6						
TR1		**9.43**	**151**	⇓P	**Pn**	04 33 13.5	**-0.3**
HHRG	**Al Ghardaqah**	**10.00**	**155**	P	**Pn**	04 33 22.3	**+0.6**
GERES	**GERESS Array B**	**16.65**	**323**	Pn	**Pn**	04 34 54.2	**+2.8**
	0.1nm,0.3s,baz=134,slow=11,SNR=11						
FINES	**FINESS Array B**	**25.13**	**357**	P	**P**	04 36 23.1	**0.0**
	1.6nm,0.7s,mb3.6,baz=148,slow=11,SNR=4.0						
NAO01	**NORSAR Array S**	**27.00**	**341**	*e*P	**P**	04 36 44.4	**+4.4**
	3.3nm,0.8s,mb3.9						
TORD	**Torodi Ar. Bea**	**33.58**	**233**	P	**P**	04 37 37.6	**-0.5**
	0.5nm,0.5s,mb3.7,baz=36,slow=9.0,SNR=16						
MKAR	**Makanchi Array**	**40.62**	**58**	P	**P**	04 38 36.9	**-1.0**
	0.7nm,0.5s,mb3.5,baz=286,slow=8.7,SNR=4.1						
MKAR	**Makanchi Array**	**40.62**	**58**	P	**P**	04 38 36.9	**-1.0**
HHC	**Hu-ho-hao-te**	**62.48**	**58**	*e*P	**P**	04 41 22.3	**+0.8**
HHC				AP	pP	04 41 32.4	+7.6
HHC				XP	sP	04 41 36.3	+10
HHC				PCP	PcP	04 42 02.3	+1.5
HHC				PP	PP	04 43 40.3	+1.4
HHC				SCP	ScP	04 46 00.5	-2.4
HHC				PCS	PcS	04 46 04.0	-0.1
HHC				S	**S**	**04 49 44.0**	**-4.8**
HHC				XS	sS	04 49 59.6	+5.5
HHC				PS		04 50 03.8	
HHC				SCS	ScS	04 51 07.8	-6.2
HHC				SS	SS	04 53 48.8	-3.8
HHC				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.1						
HHC				AMB	AMB		
	comp=Z,44nm,4.8s						
HHC				LR	LR		
	comp=N,73nm,24.7s,MS4.0						
HHC				LR	LR		
	comp=E,114nm,23.7s,MS4.0						
HHC				LR	LR		
	comp=Z,49nm,24.7s,MS3.6						
NJ2	**Nanjing**	**71.86**	**63**	*e*P	**P**	**04 42 23.1**	**+2.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
MDJ	**Mudanjiang**	**72.20**	**47**	P	**P**	**04 42 22.5**	**-0.6**
MDJ				AP	pP	04 42 31.9	+5.5
MDJ				XP	sP	04 42 35.5	+7.9

CASC 24 04:34:17.0±2.9,1320N×9109W,h4km±37km,MD3.8,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**1.56**	**66**	*e*P	x	04 35 04.1	
SBLS				*e*S	x	04 35 28.0	
RTR	**El Retiro**	**1.57**	**64**	*e*P	x	04 35 04.8	
RTR				*e*S	x	04 35 26.5	
TP2	**Tecpan 2**	**1.57**	**2**	*e*P	Pn	04 34 46.6	+0.9
TP2				*e*S	Sn	04 35 07.8	+1.4
SNJE	**San Jose**	**1.59**	**65**	*e*P	x	04 35 05.2	
SNJE				*e*S	x	04 35 26.7	
RBDL	**Robledal**	**1.64**	**56**	*e*P	x	04 35 05.5	
RBDL				*e*S	x	04 35 28.9	
BOQS	**Boqueron**	**1.84**	**73**	*e*P	x	04 35 08.4	
BOQS				*e*S	x	04 35 32.2	
LFRS	**El Faro**	**2.02**	**78**	*e*P	x	04 35 11.5	
LFRS				*e*S	x	04 35 38.7	
LBRS	**Las Brisas**	**2.06**	**75**	*e*P	x	04 35 11.9	
LBRS				*e*S	x	04 35 40.4	
LCBS	**La Ceiba**	**2.10**	**77**	*e*P	x	04 35 12.4	
LCBS				*e*S	x	04 35 40.2	
SNVI	**San Vicente**	**2.23**	**79**	*e*P	x	04 35 18.9	
SNVI				*e*S	x	04 35 48.2	

CSEM ***24*** *04:42:27.9±0.8,3864N×2981W,h0km,ML1.7,Error ellipse: s-maj=19.6km s-min=8.0km az=7.0,After PDA*

PDA ***24*** *04:42:27.9±0.8,3864N×2981W,h0km,MD3.4,ML1.7, Error ellipse: s-maj=19.6km s-min=8.0km az=7.0*

SVSA 24 04:42:27.9±0.8,3864N×2981W,h0km,MD3.4,ML1.7, Error ellipse: s-maj=19.6km s-min=8.0km az=7.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.87**	**94**	*e*P	Pg	04 42 42.4	-2.1
CALA				*e*S	Sg	04 42 53.8	-2.0
HOR	**Horta**	**0.93**	**97**	*e*S	Sg	04 42 54.8	-3.0
PICO	**Pico**	**1.09**	**97**	*e*P	Pg	04 42 45.4	-3.4
PICO				*e*S	Sg	04 42 59.1	-3.9
PTEI	**Pico do Teixo**	**1.15**	**97**	*e*S	Sg	04 43 00.1	-4.6
PTEI							
	8.7nm,0.1s						
ROSA	**Rosais**	**1.23**	**86**	*e*P	Pg	04 42 47.8	-3.6
ROSA				*e*S	Sg	04 43 01.8	-5.6
PMAN	**Manadas**	**1.34**	**90**	*e*S	Sg	04 43 04.8	-6.3
PMAN							
	9.4nm,0.4s						

BJI 24 04:48:01.0,3276N×11617E,h15km,ML3.5, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	**Nanjing**	**2.38**	**107**	*e*P	Pn	04 48 39.1	-0.3
NJ2				PG	Pg	04 48 46.1	-0.5
NJ2				SG	Sg	04 49 18.1	+0.7
NJ2				Smax			
	comp=N,780nm,0.2s						
NJ2				Smax			
	comp=E,170nm,0.1s						
WHN	**Wuhan**	**2.70**	**216**	PG	Pg	04 48 50.0	-2.8
WHN				SG	Sg	04 49 25.0	-2.8
WHN				Smax			
	comp=N,350nm,0.7s						
WHN				Smax			
	comp=E,980nm,0.5s						
TIA	**Tai'an**	**3.53**	**13**	PG	Pg	04 49 03.6	-5.1
TIA				SG	Sg	04 49 46.6	-7.8
XAN	**Xi'an**	**6.20**	**284**	PG	Pg	04 49 51.3	-8.3
XAN				SG	Sg	04 51 10.0	-10
XAN				Smax			
	comp=N,35nm,0.9s						
XAN				Smax			
	comp=E,25nm,0.9s						

CASC 24 05:13:28.1±2.5,839N×8281W,h10km±9km,MD4.0,4C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.35**	**82**	⇓*i*P	Pg	05 13 35.3	+0.2
BRU2	**Volcan**	**0.42**	**16**	⇑*i*P	Pg	05 13 37.4	+1.1
BRU2				*e*S	Sg	05 13 45.0	+3.1
BRU	**Baru**	**0.48**	**30**	*e*P	Pg	05 13 38.5	+1.0
CNI	**Changuinola**	**1.06**	**16**	⇓*i*P	Pg	05 13 47.0	-1.6
CNI				*e*S	Sg	05 14 01.4	-1.0
BUS	**Buena Vista**	**1.50**	**321**	⇑*e*P	Pn	05 13 53.4	-1.6
BUS				*e*S	Sn	05 14 13.8	-0.7
LCR2	**La Lucha 2**	**1.79**	**319**	⇑*e*P	Pn	05 13 57.5	-1.6
LCR2				*e*S	Sn	05 14 23.6	+1.7
LAJ	**Bijagual**	**1.96**	**319**	*e*P	Pn	05 14 03.3	+1.9
PRS1	**Puriscal**	**2.17**	**317**	⇑*e*P	Pn	05 14 03.2	-1.1
PRS1				*e*S	Sn	05 14 32.4	+1.0
CGA2	**Cerro Gallo 2**	**2.30**	**315**	*e*P	Pn	05 14 05.7	-0.4
CGA2				*e*S	Sn	05 14 36.1	+1.6
AZU	**Azuero**	**2.58**	**103**	*e*P	Pn	05 14 08.9	-0.9
JCR	**Jicaral**	**2.70**	**303**	*e*P	Pn	05 14 11.2	-0.4
FORC	**Fortuna**	**2.77**	**319**	*i* P	Pn	05 14 13.8	+1.3
FORC				*i* S	Sn	05 14 48.8	+2.8
ACH	**Altos**	**2.86**	**84**	*e*P	Pn	05 14 13.2	-0.5
VCR	**Vista de Mar**	**3.28**	**302**	*e*P	Pn	05 14 19.1	-0.5
LIM1	**Limonal**	**3.33**	**314**	*e*P	Pn	05 14 20.8	+0.6

NEIC ***24*** *05:20:03.8,3847S×17586E,h149km,MG3.8(WEL),After WEL.*

WEL 24 05:20:05.0±0.3,3847S×17591E,h136km±2km,ML3.7/5, 4C-2D,Error ellipse: s-maj=2.2km s-min=2.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KATZ	**Kakaramea**	**0.53**	**198**	P	Pn	05 20 25.1	+0.2
KATZ				S	Sn	05 20 40.4	+0.4
KATZ	**Kakaramea**	**0.53**	**198**	PN	Pn	05 20 25.1	+0.2
KATZ				SN	Sn	05 20 40.4	+0.5
KRVZ	**Karewarewa**	**0.66**	**198**	PN	Pn	05 20 25.7	0.0
KRVZ				SN	Sn	05 20 42.2	+0.8
WTVZ	**West Tongariro**	**0.69**	**201**	P	Pn	05 20 26.0	+0.1
WTVZ	**West Tongariro**	**0.69**	**201**	PN	Pn	05 20 25.9	0.0
WTVZ				SN	Sn	05 20 41.3	-0.5
TWVZ	**Taurewa**	**0.70**	**211**	P	Pn	05 20 26.0	0.0
TWVZ	**Taurewa**	**0.70**	**211**	PN	Pn	05 20 26.0	+0.1
OTVZ	**Oturere**	**0.72**	**195**	PN	Pn	05 20 26.4	+0.3
OTVZ				SN	Sn	05 20 43.7	+1.6
NGZ	**Ngauruhoe**	**0.74**	**199**	P	Pn	05 20 26.6	+0.3
NGZ				S	Sn	05 20 44.2	+1.7
NGZ	**Ngauruhoe**	**0.74**	**199**	PN	Pn	05 20 26.5	+0.2
NGZ				SN	Sn	05 20 44.2	+1.8
WPVZ	**Whakapapa**	**0.78**	**201**	P	Pn	05 20 26.7	+0.1
WPVZ	**Whakapapa**	**0.78**	**201**	PN	Pn	05 20 26.7	+0.1
TUVZ	**Tukino**	**0.82**	**194**	P	Pn	05 20 27.1	+0.2
TUVZ				S	Sn	05 20 45.0	+1.5
TUVZ	**Tukino**	**0.82**	**194**	PN	Pn	05 20 27.1	+

CMIG	**Matias Romero**	**2.47**	**64**	*i* P	Pn	05 50 36.5	-2.3
CMIG				*i* S	Sn	05 51 07.4	-1.3
MEIG	**Mezcala**	**3.01**	**310**	*i* P	Pn	05 50 45.2	-0.9
MEIG				*i* S	Sn	05 51 17.8	-4.0
CAIG	**El Cayaco**	**3.12**	**290**	*i* P	Pn	05 50 45.6	-2.1
CAIG				*i* S	Sn	05 51 18.9	-5.7
CAIG	**El Cayaco**	**3.12**	**290**	*i* P	Pn	05 50 43.9	-3.8
CAIG				*i* S	Sn	05 51 18.5	-6.2
PLIG	**Platanillo**	**3.24**	**318**	*i* P	Pn	05 50 47.9	-1.4
PLIG				*i* S	Sn	05 51 25.1	-2.6
PLIG	**Platanillo**	**3.24**	**318**	*i* P	Pn	05 50 43.9	-5.4
PLIG				*i* S	Sn	05 51 25.1	-2.6
PPM	**Popocatepetl**	**3.34**	**336**	*i* P	Pn	05 50 48.1	-2.6
PPM				*i* S	Sn	05 51 27.6	-2.5
IIZ	**Mezontepec**	**3.72**	**329**	*e*P	Pn	05 50 50.5	-5.5
IIZ				*i* S	Sn	05 51 36.0	-3.4
LVIG	**Laguna Verde**	**3.78**	**11**	*i* P	Pn	05 50 59.2	+2.5
LVIG				*i* S	Sn	05 51 40.0	-0.9

IDC 24 05:55:53.3±6.0, 2256S×17639W, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.9/14, mbtmp4.1/3, Error ellipse: s-maj=241.7km s-min=57.3km az=150.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.83**	**267**	P	P	06 02 47.6	+1.7
	1.9nm,0.4s,baz=86,slow=11,SNR=10						
ASAR	**Alice Springs**	**45.54**	**258**	P	P	06 04 14.7	-0.1
	1.0nm,0.9s,baz=88,slow=9.1,SNR=7.5						
WRA	**Warramunga Arr**	**45.83**	**264**	P	P	06 04 16.4	-0.6
	2.5nm,0.8s,baz=101,slow=8.3,SNR=14						
AKASG	**Malin Array Be**	**145.53**	**331**	PKPbc	PKPbc	06 15 32.7	-0.8
	0.3nm,0.4s,baz=42,slow=3.2,SNR=4.4						

IDC 24 05:59:58.7±3.7, 3049S×13825E, h0km, mb1 3.1/3, mb1mx3.1/12, mbtmp2.9/3, ML2.9/3, Error ellipse: s-maj=83.6km s-min=16.6km az=41.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.19**	**117**	Pn	Pn	06 00 49.4	-0.7
	0.5nm,0.3s,baz=301,slow=14,SNR=8.2						
STKA				Pg	Pg	06 00 57.0	-2.7
	2.6nm,0.3s,baz=300,slow=14,SNR=19						
STKA				Sn	Sn	06 01 27.1	-1.6
	1.5nm,0.3s,baz=22,slow=23,SNR=3.2						
STKA				Lg		06 01 40.4	
	5.6nm,0.3s,baz=204,slow=21,SNR=8.5						
ASAR	**Alice Springs**	**7.81**	**329**	Pn	Pn	06 01 54.8	+1.2
	0.2nm,0.3s,baz=154,slow=11,SNR=7.4						
ASAR				Sn	Sn	06 03 23.5	+0.8
	0.2nm,0.3s,baz=150,slow=23,SNR=4.1						
WRA	**Warramunga Arr**	**11.07**	**341**	Pn	Pn	06 02 37.8	-0.5
	0.2nm,0.3s,baz=161,slow=13,SNR=18						

IDC 24 06:00:38.0±2.8, 443S×15274E, h60km±23km, mb4.0/9, mb1 4.1/9, mb1mx4.0/16, mbtmp4.3/9, MS3.5/2, Ms1 3.4/2, ms1mx2.9/21, Error ellipse: s-maj=23.2km s-min=17.6km az=127.0
ISCJB 24 06:00:41.3±3.8, 455S×1528E±0.1, h104km±30km, mb4.3/13, Error ellipse: s-maj=26.5km s-min=22.2km az=30.8
NEIC 24 06:00:42.5±2.2, 450S×15277E, h101km±17km, mb4.9/3, Error ellipse: s-maj=16.3km s-min=14.3km az=198.0
ISC 24 06:00:40.5±2.3, 44S±01×1529E±01, h88km±17km, n24, σ0s61/20, mb4.3/13, 1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.53**	**228**	P	**Pn**	**06 02 28.4**	**+0.9**
	1.8nm,0.3s,baz=90,slow=17,SNR=4.0						
PMG				S	**Sn**	**06 03 51.2**	**-0.1**
	7.1nm,0.3s,baz=122,slow=21,SNR=10						
KAKA	**Kakadu**	**21.79**	**246**	*e*P	**P**	**06 05 24.2**	**-1.0**
	12nm,0.2s,mb4.9						
DZM	**Mont Dzumac**	**21.95**	**144**	P	**P**	**06 05 27.0**	**+0.1**
	4.1nm,0.6s,mb4.0,baz=334,slow=7.6,SNR=11						
WRAB	**Tennant Creek**	**23.73**	**228**	*e*P	**P**	**06 05 44.3**	**-0.2**
	53nm,0.8s,mb4.9						
WB2	**Warramunga Arr**	**23.74**	**228**	⇓*i*P	**P**	**06 05 44.5**	**0.0**
WRA	**Warramunga Arr**	**23.75**	**228**	P	**P**	**06 05 44.6**	**0.0**
	20nm,0.7s,mb4.6,baz=54,slow=9.8,SNR=92						
WRA				PcP	PcP	06 09 27.4	+1.3
	1.7nm,0.7s,baz=54,slow=2.7,SNR=6.4						
WRA				S	**S**	**06 09 54.8**	**+1.4**
	0.8nm,0.7s,baz=54,slow=16,SNR=5.0						
WRA				LR	LR	06 14 27.7	
	comp=Z,73nm,19.0s,baz=245,slow=35						
AS31	**Alice Springs**	**26.48**	**222**	*e*P	**P**	**06 06 09.7**	**+0.3**
ASAR	**Alice Springs**	**26.48**	**222**	P	**P**	**06 06 09.8**	**+0.4**
	3.6nm,0.4s,mb4.1,baz=53,slow=9.1,SNR=27						
ASAR				ScP	ScP	06 13 08.7	+4.5
	0.6nm,0.7s,baz=42,slow=3.8,SNR=5.2						
ASPA	**Alice Springs**	**26.48**	**222**	*e*P	**P**	**06 06 09.7**	**+0.3**
STKA	**Stephens Creek**	**29.30**	**200**	P	**P**	**06 06 33.2**	**-1.3**
	1.9nm,0.6s,mb3.9,baz=20,slow=15,SNR=3.5						
STKA				LR	LR	06 17 58.2	
	comp=Z,106nm,18.9s,baz=26,slow=36						
FITZ	**Fitzroy Crossi**	**29.90**	**241**	*e*P	**P**	**06 06 38.8**	**-1.0**
	14nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**29.90**	**241**	P	**P**	**06 06 39.0**	**-0.9**
	4.0nm,0.3s,mb4.5,baz=50,slow=8.3,SNR=54						
FORT	**Forrest**	**35.13**	**219**	*e*P	**P**	**06 07 25.8**	**+0.3**
	15nm,0.6s,mb5.0						
KLBR	**Kellerberrin**	**42.62**	**226**	*e*P	**P**	**06 08 27.2**	**-0.8**
	27nm,1.5s,mb4.8						
VNDA	**Vanda**	**73.22**	**178**	P	**P**	**06 12 02.2**	**+0.3**
	0.5nm,0.6s,mb3.6,baz=332,slow=5.4,SNR=5.8						
MKAR	**Makanchi Array**	**80.07**	**319**	P	**P**	**06 12 41.1**	**+0.7**
	0.3nm,0.4s,mb3.4,baz=90,slow=4.5,SNR=3.1						
MAW	**Mawson**	**85.95**	**203**	P	**P**	**06 13 11.0**	**+0.2**
	1.9nm,0.6s,mb4.2,baz=130,slow=4.2,SNR=5.2						
BVAR	**Borovoye Array**	**88.96**	**323**	P	**P**	**06 13 25.3**	**0.0**
	0.7nm,0.4s,mb4.0,baz=72,slow=9.5,SNR=5.9						
BRG	**Berggiesshubel**	**122.36**	**330**	*e*P	Pdif	06 15 56.0	+0.9
	1.3nm,0.6s						
GERES	**GERESS Array B**	**123.75**	**329**	PKP	PKPdf	06 19 28.7	+0.7
	0.7nm,0.4s,baz=40,slow=2.3,SNR=4.9						
CFAA	**Coronel Fontan**	**126.97**	**135**	PKP	PKPdf	06 19 35.5	+1.4
	0.3nm,0.7s,baz=243,slow=3.3,SNR=8.6						
LPAZ	**La Paz**	**134.55**	**118**	PKP	PKPdf	06 19 52.1	+3.6
	1.1nm,0.7s,baz=88,slow=2.1,SNR=7.7						
TORD	**Torodi Ar. Bea**	**150.23**	**289**	PKPbc	PKPbc	06 20 22.3	+1.1
	4.0nm,0.4s,baz=72,slow=2.3,SNR=98						
BDFB	**Brasilia**	**151.30**	**134**	PKPbc	PKPbc	06 20 26.0	+2.2
	5.3nm,0.6s,baz=296,slow=1.8,SNR=12						

IDC 24 06:08:16.9±0.8, 2108S×6706W, h186km±9km, mb3.4/4, mb1 3.5/8, mb1mx3.4/19, mbtmp3.9/8, Error ellipse: s-maj=17.9km s-min=10.7km az=121.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.30**	**228**	P	Pn	06 08 59.0	+1.3
	7.7nm,0.3s,baz=33,slow=8.2,SNR=106						
LVC				S	Sn	06 09 30.1	+0.7
	5.4nm,0.3s,baz=223,slow=20,SNR=19						
LPAZ	**La Paz**	**4.87**	**348**	P	Pn	06 09 31.4	+2.2
	0.9nm,0.3s,baz=160,slow=4.7,SNR=34						
LPAZ				S	Sn	06 10 27.8	+1.7
	0.3nm,0.3s,baz=18,slow=24,SNR=6.2						
SIV	**San Ignacio**	**7.60**	**49**	P	Pn	06 10 05.0	+0.1
	3.6nm,0.3s,baz=248,slow=11,SNR=101						
SIV				S	Sn	06 11 27.9	-2.5
	0.4nm,0.3s,baz=137,slow=22,SNR=4.6						
BDFB	**Brasilia**	**18.86**	**77**	P	P	06 12 24.9	+2.0
	0.5nm,0.3s,baz=274,slow=11,SNR=6.9						
PDAR	**Pinedale Array**	**74.62**	**329**	P	P	06 19 35.7	+0.2
	0.3nm,0.4s,baz=116,slow=6.1,SNR=4.1						
ULM	**Lac du Bonnet**	**75.45**	**341**	P	P	06 19 39.3	-1.0
	1.2nm,0.6s,baz=157,slow=3.0,SNR=3.3						
TORD	**Torodi Ar. Bea**	**75.59**	**70**	P	P	06 19 41.5	+0.5
	0.7nm,0.4s,baz=251,slow=5.8,SNR=15						
YKA	**Yellowknife Ar**	**91.37**	**340**	P	P	06 21 01.3	-0.1
	0.3nm,0.5s,baz=129,slow=4.9,SNR=6.5						

NEIC 24 06:27:45.1, 3967N×2109E, h30km, MD3.0(ATH), After ATH.

ATH 24 06:27:45.1, 3967N×2109E, h30km±1km, MD3.0/4
ISCJB 24 06:27:47.9±0.7, 3951N±003×2090E±006, h111km±7km, Error ellipse: s-maj=7.6km s-min=5.1km az=33.3
CSEM 24 06:27:48.0±0.1, 3943N×2085E, h2km, MD3.0, Error ellipse: s-maj=3.1km s-min=1.8km az=109.0
THE 24 06:27:49.4, 3950N×2088E, h0km
ISC 24 06:27:48.3±0.6, 3950N±004×2088E±006, h18km±7km, n10, σ1s22/15, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**352**	*e*PB	**Pg**	**06 27 51.5**	**-1.2**
JAN				*e*SB	**Sg**	**06 27 55.5**	**-0.2**
IGT	**Igoumenitsa**	**0.42**	**275**	*e*Pg	**Pg**	**06 27 56.8**	**-0.3**
IGT				*e*Sg	**Sg**	**06 28 03.9**	**+1.0**
LKD	**Levkas**	**0.81**	**193**	*e*Pg	**Pg**	**06 28 02.0**	**-2.1**
LKD				*e*Sg	**Sg**	**06 28 16.3**	**+1.5**
KEK	**Kerkira**	**0.86**	**285**	*e*PN	**Pn**	**06 28 04.0**	**-1.5**
EVR	**Evrytania**	**0.93**	**129**	*e*PN	**Pn**	**06 28 03.2**	**-3.2**
VLS	**Valsamata**	**1.34**	**190**	*e*PN	**Pn**	**06 28 12.7**	**+0.7**
VLS				*e*SN	**Sn**	**06 28 33.3**	**+4.0**
FNA	**Florina**	**1.34**	**16**	*e*Pg	**Pg**	**06 28 14.1**	**-0.1**
FNA				*e*Sg	**Sg**	**06 28 33.8**	**+2.1**
LIT	**Litokhoron**	**1.38**	**64**	*e*Pg	**Pg**	**06 28 14.7**	**-0.2**
XOR	**Xorichti**	**1.79**	**93**	*e*Pb	**Pb**	**06 28 20.9**	**+0.3**
GRG	**Griva**	**1.87**	**38**	*e*Pb	**Pb**	**06 28 22.0**	**+0.2**

IDC 24 07:41:04.8±4.2, 3038S×13848E, h0km, mb1 3.1/3, mb1mx3.1/12, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=110.3km s-min=16.6km az=42.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.06**	**120**	Pn	Pn	07 41 54.8	+0.3
	0.2nm,0.3s,baz=303,slow=13,SNR=5.5						
STKA				Sn	Sn	07 42 31.6	-0.1
	1.6nm,0.3s,baz=298,slow=14,SNR=4.6						
STKA				Lg		07 42 42.3	
	2.2nm,0.3s,baz=0.4,slow=18,SNR=8.3						
ASAR	**Alice Springs**	**7.83**	**328**	Pn	Pn	07 43 00.2	+0.3
	0.1nm,0.3s,baz=151,slow=12,SNR=9.4						
ASAR				Sn	Sn	07 44 31.0	+1.8
	0.2nm,0.3s,baz=150,slow=22,SNR=5.1						
WRA	**Warramunga Arr**	**11.04**	**339**	Pn	Pn	07 43 43.7	-0.3
	0.0nm,0.3s,baz=158,slow=11,SNR=3.5						

IGQ 24 08:06:07.2, 276S×7727W, h27km±17km, Mb4.2, Ms4.0, 5C-7D, Error ellipse: s-maj=15.9km s-min=13.0km az=85.5, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARRY	**Arrayan**	**1.72**	**316**	⇓P	Pn	08 06 38.2	+2.9
ULBA	**Ulba**	**1.73**	**319**	⇓P	Pn	08 06 39.0	+3.6
RETU	**Refugio**	**1.75**	**318**	P	Pn	08 06 39.2	+3.4
RUN5	**Runtun**	**1.77**	**319**	⇓P	Pn	08 06 39.1	+3.2
JUIV	**Juive**	**1.79**	**318**	P	Pn	08 06 38.8	+2.6
IGUA	**Igualata**	**1.86**	**313**	⇓P	Pn	08 06 38.9	+1.7
TAMB	**Tambo**	**2.33**	**332**	⇑P	Pn	08 06 47.0	+3.4
VC1	**Cotopaxi 1**	**2.39**	**332**	P	Pn	08 06 47.7	+3.2
CAMI	**Rancho Maria**	**2.41**	**329**	P	Pn	08 06 47.1	+2.4
NAS1	**Nasa**	**2.43**	**330**	⇑P	Pn	08 06 47.9	+2.8
ANTI	**Antisana**	**2.46**	**339**	⇑P	Pn	08 06 49.9	+4.4
ANTI				S	Sn	08 07 18.1	+3.4
CONE	**Cono NE Rev Vo**	**2.70**	**352**	⇑P	Pn	08 06 56.1	+7.4
CONE				S	Sn	08 07 12.5	-8.0
CAYR	**Refugio Cayamb**	**2.85**	**345**	P	Pn	08 06 56.1	+5.2
JUA2	**San Juan 2**	**2.86**	**332**	⇓P	Pn	08 06 52.3	+1.4
GGP	**Refugio Guagua**	**2.89**	**333**	⇓P	Pn	08 06 52.8	+1.4
TERV	**Terraza Guagua**	**2.89**	**333**	P	Pn	08 06 52.9	+1.5
TERV				S	Sn	08 07 27.2	+1.9
PINO	**Pino**	**2.91**	**333**	⇓P	Pn	08 06 53.1	+1.4
YANA	**Yana**	**2.93**	**334**	⇑P	Pn	08 06 53.0	+1.1
YANA				S	Sn	08 07 28.0	+1.8

IDC 24 08:28:50.0±2.4, 1667S×17759W, h345km±43km, mb3.3/4, mb1 3.4/6, mb1mx3.2/16, mbtmp4.0/6, Error ellipse: s-maj=262.0km s-min=17.8km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.25**	**65**	P	Pn	08 30 23.3	-0.1
	2.5nm,0.3s,baz=247,slow=21,SNR=5.3						
AFI				S	S	08 31 36.4	-2.8
	1.3nm,0.3s,baz=143,slow=20,SNR=2.6						
DZM	**Mont Dzumac**	**15.99**	**248**	P	P	08 32 17.5	+2.1
	0.2nm,0.3s,baz=108,slow=20,SNR=5.0						
WRA	**Warramunga Arr**	**45.63**	**258**	P	P	08 36 36.5	-0.5
	0.6nm,0.6s,baz=94,slow=7.7,SNR=37						
ASAR	**Alice Springs**	**45.88**	**253**	P	P	08 36 38.9	-0.1
	4.7nm,0.5s,baz=89,slow=8.1,SNR=151						
ASPA	**Alice Springs**	**45.89**	**253**	*e*P	P	08 36 39.0	0.0
FITZ	**Fitzroy Crossi**	**54.01**	**260**	P	P	08 37 40.8	+1.3
	0.9nm,0.7s,baz=87,slow=14,SNR=4.9						
NVAR	**Mina Array Bea**	**78.00**	**44**	P	P	08 40 11.4	+0.6
	0.5nm,0.6s,baz=233,slow=11,SNR=6.1						

NEIC 24 08:41:49.2, 3137S×7166W, h28km, ML3.5(GUC), After GUC.
GUC 24 08:41:49.2±0.8, 3137S×7166W, h28km±2km, MD4.0, ML3.5, 7C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.53**	**165**	⇓*i*P	Pb	08 41 59.9	-0.1
CHNG				*i* S	Sb	08 42 07.4	+0.1
CHNG				AML	AML	08 42 08.0	
	comp=E,4μm,0.3s						
CMCH	**Combarbala**	**0.60**	**71**	⇑*i*P	Pb	08 42 00.6	-0.5
CMCH				*i* S	Sb	08 42 09.7	+0.3
CMCH				AML	AML	08 42 10.4	
	comp=N,10μm,0.6s						
CMCH	**Combarbala**	**0.60**	**71**	⇑*i*P	Pb	08 42 00.6	-0.5
CMCH				*i* S	Sb	08 42 09.7	+0.3
OVCH	**Ovalle**	**0.86**	**28**	*e*P	Pn	08 42 05.1	-0.3
OVCH				*i* S	Sb	08 42 16.9	+0.3
OVCH				AML	AML	08 42 19.9	
	comp=N,1μm,0.4s						
OVCH	**Ovalle**	**0.86**	**28**	*e*P	Pn	08 42 05.1	-0.3
OVCH				*i* S	Sb	08 42 16.9	+0.3
PTCH	**Petorca**	**1.09**	**145**	⇓*i*P	Pn	08 42 08.5	0.0
PTCH				*i* S	Sn	08 42 22.8	+0.2
PTCH				AML	AML	08 42 23.9	
	comp=E,3μm,0.5s						
PTCH	**Petorca**	**1.09**	**145**	⇓*i*P	Pn	08 42 08.5	0.0
PTCH				*i* S	Sn	08 42 22.8	+0.2
PACH	**Papudo**	**1.18**	**171**	*e*P	Pn	08 42 09.7	-0.1
PACH				*i* S	Sn	08 42 24.8	-0.1
TLL	**Tololo Astrono**	**1.41**	**32**	⇑*i*P	Pn	08 42 14.5	+1.5
TLL				*i* S	Sn	08 42 32.8	+2.2
TLL				AML	AML	08 42 36.3	
	comp=N,844nm,0.8s						
TLL	**Tololo Astrono**	**1.41**	**32**	⇑*i*P	Pn	08 42 14.5	+1.5
TLL				*i* S	Sn	08 42 32.8	+2.2
LSCH	**La Serena**	**1.50**	**14**	*e*P	Pn	08 42 14.9	+0.7
LSCH				*i* S	Sn	08 42 34.0	+1.1
JACH	**Jahuel**	**1.59**	**145**	*e*P	Pn	08 42 16.9	+1.4
JACH				*i* S	Sn	08 42 37.3	+2.2
ROCH	**El Roble**	**1.69**	**161**	⇓*i*P	Pn	08 42 17.8	+0.9
ROCH				*i* S	Sn	08 42 39.6	+2.1
PEL	**Peldehue**	**1.95**	**155**	*e*P	Pn	08 42 21.6	+1.2
PEL				*e*S	Sn	08 42 46.9	+3.0
PEL				AML	AML	08 42 50.6	
	comp=E,786nm,0.3s						
PEL	**Peldehue**	**1.95**	**155**	*e*P	Pn	08 42 21.6	+1.2
PEL				*e*S	Sn	08 42 46.9	+3.0
DSCH	**Colegio Aleman**	**2.22**	**156**	*i* S	Sn	08 42 53.3	+2.6
CLCH	**Cerro Calan**	**2.23**	**155**	*e*P	Pn	08 42 25.9	+1.6
CLCH				*i* S	Sn	08 42 53.8	+2.9
CLCH				AML	AML	08 43 02.4	
	comp=E,545nm,0.5s						
CLCH				AML	AML	08 43 03.0	
	comp=E,621nm,0.4s						
RCDM	**Rinconada Maip**	**2.23**	**161**	*e*P	Pn	08 42 25.4	+1.1
RCDM				AML	AML	08 43 03.3	
	comp=E,323nm,0.1s						
STL	**Santa Lucia**	**2.23**	**158**	*e*P	Pn	08 42 24.9	+0.6
STL				*i* S	Sn	08 42 53.1	+2.2
FCH	**Farellones**	**2.27**	**150**	*e*P	Pn	08 42 26.6	+1.8
FCH				*i* S	Sn	08 42 55.5	+3.7
FCH				AML	AML	08 43 05.1	
	comp=N,217nm,0.3s						
TACH	**Talagante**	**2.36**	**165**	⇑*i*P	Pn	08 42 27.2	+1.3
ANTU	**Antumapu**	**2.36**	**159**	*i* P	Pn	08 42 27.8	+1.8
ANTU				*i* S	Sn	08 42 56.3	+2.3
ANTU				AML	AML	08 43 04.6	
	comp=E,278nm,0.4s						
ANTU	**Antumapu**	**2.36**	**159**	*i* P	Pn	08 42 27.8	+1.8
ANTU				*i* S	Sn	08 42 56.3	+2.3
PCH	**Pirque**	**2.44**	**157**	⇑*i*P	Pn	08 42 28.8	+1.6
LCO	**Las Campanas**	**2.50**	**20**	*e*P	Pn	08 42 28.6	+0.7
LCO				*i* S	Sn	08 43 00.2	+2.8
LNV	**Longovilo**	**2.59**	**175**	*e*P	Pn	08 42 30.1	+1.0
CHCH	**Chadas Angostu**	**2.69**	**162**	*e*P	Pn	08 42 32.3	+1.6
CACH	**El Canelo**	**2.88**	**162**	⇑*i*P	Pn	08 42 35.1	+1.9
CICH	**Cipreses**	**3.12**	**161**	*i* P	Pn	08 42 38.0	+1.6

ISCJB 24 08:56:60.0±0.4, 2568N±009×126.17E±009, h47km±8km, mb4.0/7, Error ellipse: s-maj=20.0km s-min=4.1km az=102.9
JMA 24 08:56:59.1±0.1, 2570N×126.16E, h73km±3km, M3.1
NEIC 24 08:57:04.2±1.2, 2619N×126.15E, h46km±13km, mb4.6/3, Error ellipse: s-maj=19.1km s-min=12.3km az=165.0
IDC 24 08:57:04.5±5.3, 2617N×12607E, h46km±58km, mb3.5/5, mb1 3.6/6, mb1mx3.4/22, mbtmp3.7/6, MS3.1/1, Ms1 3.1/1, ms1mx2.0/21, Error ellipse: s-maj=44.8km s-min=23.7km az=64.0
ISC 24 08:57:00.3±1.2, 2571N±007×12614E±007, h33km±10km, n23, σ0s86/29, mb4.1/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.85**	**43**	P	**Pn**	**08 57 15.9**	**0.0**
JKE				*e*S	**Sb**	**08 57 28.6**	**+1.0**
JOGS	**Gusukube**	**1.15**	**215**	P	**Pn**	**08 57 19.5**	**-0.7**
JOGS				*e*S	**Sn**	**08 57 35.2**	**+0.4**
JMJ	**Miyako jima 2**	**1.17**	**221**	P	**Pn**	**08 57 20.4**	**0.0**
JMJ				*e*S	**Sn**	**08 57 36.2**	**+0.9**
JAGN	**Aguni-jima**	**1.32**	**48**	P	**Pn**	**08 57 22.3**	**-0.2**
JJT2	**Tamagusuku 2**	**1.51**	**73**	P	**Pn**	**08 57 24.7**	**-0.4**
JJT2				*e*S	**Sn**	**08 57 43.6**	**0.0**
JTJ	**Tarama**	**1.68**	**231**	P	**Pn**	**08 57 26.9**	**-0.5**
JTJ				*e*S	**Sn**	**08 57 48.3**	**+0.5**
JIH	**Iheya**	**2.10**	**51**	P	**Pn**	**08 57 32.4**	**-0.8**
JOW	**Kunigami**	**2.22**	**59**	P	**Pn**	**08 57 35.6**	**+0.8**
	9.8nm,0.3s,baz=233,slow=16,SNR=20						
JOW				S	**Sn**	**08 58 03.0**	**+1.8**
	12nm,0.3s,baz=131,slow=26,SNR=3.8						
JOW	**Kunigami**	**2.22**	**59**	P	**Pn**	**08 57 33.6**	**-1.2**
JIJ	**Ishigaki jima**	**2.25**	**234**	P	**Pn**	**08 57 35.1**	**-0.2**
JIJ				*e*S	**Sn**	**08 58 02.0**	**+0.1**
JKRS	**Kuro-shima**	**2.43**	**233**	P	**Pn**	**08 57 37.5**	**-0.2**
IRIF	**Iriomote-Funau**	**2.58**	**239**	P	**Pn**	**08 57 39.9**	**+0.1**
JTK	**Tokunoshima**	**3.25**	**50**	P	**Pn**	**08 57 47.8**	**-1.3**
YHNB	**Yeheng**	**4.44**	**258**	*e*Pn	**Pn**	**08 58 10.5**	**+5.1**
SONM	**Songino Array**	**27.02**	**330**	P	**P**	**09 02 39.8**	**+0.5**
	0.7nm,0.6s,mb3.4,baz=138,slow=10,SNR=6.9						
SONM				LR	LR	09 14 46.9	
	comp=Z,40nm,18.3s,baz=122,slow=40						
MKAR	**Makanchi Array**	**40.50**	**313**	P	**P**	**09 04 36.4**	**+0.3**
	0.7nm,0.4s,mb3.6,baz=88,slow=8.9,SNR=7.5						
WRA	**Warramunga Arr**	**46.07**	**169**	P	pP	09 05 28.0	-2.7
	0.4nm,0.8s,baz=349,slow=8.9,SNR=4.3						
ARU	**Arti**	**56.64**	**322**	*e*P	**P**	**09 06 42.9**	**+2.7**
	4.0nm,0.6s,mb4.6						
COLA	**College**	**65.36**	**28**	*e*P	**P**	**09 07 38.2**	**-1.2**
	3.1nm,0.7s,mb4.5						
FINES	**FINESS Array B**	**72.39**	**330**	P	**P**	**09 08 22.0**	**-1.1**
	0.9nm,0.7s,mb3.8,baz=64,slow=6.3,SNR=4.5						
NOA	**NORSAR Array B**	**78.94**	**333**	P	**P**	**09 08 59.4**	**-1.2**
	0.6nm,0.6s,mb3.7,baz=53,slow=5.6,SNR=3.6						
NOA	**NORSAR Array B**	**78.94**	**333**	P	**P**	**09 08 59.4**	**-1.2**
YMR	**Madison River**	**92.72**	**37**	*e*P	**P**	**09 10 09.8**	**+0.7**
	2.5nm,0.7s,mb4.8						

ISCJB 24 09:15:54.3±0.5, 2411S±003×6675W±005, h185km±4km, mb4.3/47, Error ellipse: s-maj=6.9km s-min=5.0km az=158.3
MOS 24 09:15:54.9±1.2, 2399S×6672W, h188km, mb5.0/15, Error ellipse: s-maj=17.4km s-min=8.4km az=114.1
NEIC 24 09:15:55.2±0.4, 2404S×6670W, h178km±3km, mb4.4/39, Error ellipse: s-maj=5.9km s-min=4.3km az=73.0
IDC 24 09:15:56.0±0.8, 2400S×6666W, h189km±7km, mb4.0/14, mb1 4.2/22, mb1mx4.2/26, mbtmp4.6/22, Error ellipse: s-maj=11.4km s-min=9.2km az=62.0
BJI 24 09:15:57.2, 2400S×6670W, h178km, mB4.9
GUC 24 09:15:57.0±0.8, 2437S×6707W, h200km, ML5.4
ISC 24 09:15:55.3±0.5, 2409S±003×6675W±004, h179km±4km, n153, σ0s90/134, mb4.3/47, 10C-4D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.47**	**306**	P	**Pn**	**09 16 40.8**	**+3.2**
	209nm,0.3s,baz=

USHA	**Ushuaia**	**30.73**	**182**	P	**P**	**09 21 53.3**	**-0.1**
	comp=Z,8.7nm,0.6s,mb4.6,baz=12,slow=4.9,SNR=5.7						
VNA1	**Neumayer--Stat**	**57.18**	**160**	⇓*iP*	**P**	**09 25 24.1**	**+0.6**
VNA1				*e*		09 25 24.8	
VNA1				*e*		09 25 33.2	
VNA1				*e*		09 25 41.5	
VNA1				*e*	pP	09 26 05.2	+0.7
VNA1				*e*		09 26 16.2	
SNAA	**Sanae**	**59.19**	**161**	P	**P**	**09 25 37.3**	**-0.1**
	comp=Z,2.6nm,0.8s,mb4.1,baz=288,slow=6.5,SNR=60						
SNAA	**Sanae**	**59.19**	**161**	⇓*iP*	**P**	**09 25 37.3**	**-0.1**
SNAA				*e*		09 25 38.1	
SNAA				*e*		09 25 44.2	
SNAA				*e*		09 25 53.0	
SNAA				*e*		09 26 23.8	
SNAA	**Sanae**	**59.19**	**161**	*eP*	**P**	**09 25 37.3**	**-0.1**
SNAA				*e*PcP	PcP	09 26 23.5	-0.3
CPCT	**Cooper Cave**	**61.56**	**344**	*eP*	**P**	**09 25 52.5**	**-1.0**
SWET	**Sewanee**	**61.72**	**342**	*eP*	**P**	**09 25 53.4**	**-1.1**
OXF	**Oxford**	**62.13**	**339**	*eP*	**P**	**09 25 55.4**	**-1.8**
OXF				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9						
OXF	**Oxford**	**62.13**	**339**	*eP*	**P**	**09 25 55.4**	**-1.9**
	comp=Z,16nm,0.8s,mb4.9						
JCT	**Junction City**	**62.84**	**328**	*eP*	**P**	**09 26 01.8**	**-0.2**
JCT				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
JCT	**Junction City**	**62.84**	**328**	*eP*	**P**	**09 26 01.8**	**-0.2**
	comp=Z,11nm,0.7s,mb4.8						
WVT	**Waverly**	**63.12**	**341**	*eP*	**P**	**09 26 01.9**	**-1.9**
WVT				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.0						
WVT	**Waverly**	**63.12**	**341**	*eP*	**P**	**09 26 01.9**	**-1.9**
	comp=Z,31nm,1.1s,mb5.0						
UTMT	**University of**	**63.63**	**340**	*eP*	**P**	**09 26 05.9**	**-1.3**
MIAR	**Mount Ida**	**63.63**	**335**	*eP*	**P**	**09 26 06.4**	**-0.8**
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
MIAR	**Mount Ida**	**63.63**	**335**	*eP*	**P**	**09 26 06.4**	**-0.7**
	comp=Z,6.3nm,0.9s,mb4.5						
MAIT	**Maitri**	**63.68**	**159**	*eP*	**P**	**09 26 07.4**	**-0.1**
MAIT				*e*pP		09 26 10.5	
MAIT				*e*S	**S**	**09 34 23.4**	**-3.9**
FVM	**French Village**	**65.63**	**340**	*eP*	**P**	**09 26 18.9**	**-1.2**
FVM				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
FVM	**French Village**	**65.63**	**340**	*eP*	**P**	**09 26 18.9**	**-1.3**
	comp=Z,10nm,0.8s,mb4.7						
CCM	**Cathedral Cave**	**65.96**	**339**	*eP*	**P**	**09 26 21.0**	**-1.2**
QSPA	**South Pole Qui**	**66.11**	**180**	*eP*	**P**	**09 26 23.7**	**+0.5**
	comp=Z,34nm,0.6s,mb5.3						
GDL2	**Guadalupe Moun**	**66.52**	**326**	*eP*	**P**	**09 26 25.8**	**0.0**
MNTX	**Cornudas Mount**	**66.65**	**325**	*eP*	**P**	**09 26 25.9**	**-0.8**
	comp=Z,5.8nm,0.9s,mb4.4						
DBIC	**Dimbokro**	**67.61**	**71**	P	**P**	**09 26 31.5**	**-1.2**
	comp=Z,8.5nm,0.8s,mb4.5,baz=213,slow=7.2,SNR=8.2						
LPM	**Los Pinos Moun**	**69.35**	**325**	*eP*	**P**	**09 26 43.5**	**+0.1**
ANMO	**Albuquerque**	**69.75**	**326**	⇑*iP*	**P**	**09 26 46.3**	**+0.4**
ANMO				*i* *PP	pP	09 27 30.4	+1.9
ANMO	**Albuquerque**	**69.75**	**326**	*eP*	**P**	**09 26 46.4**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ANMO	**Albuquerque**	**69.75**	**326**	*eP*	**P**	**09 26 46.4**	**+0.5**
	comp=Z,4.8nm,0.8s,mb4.3						
TUC	**Tucson**	**70.10**	**321**	*eP*	**P**	**09 26 48.2**	**+0.2**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.2						
TUC	**Tucson**	**70.10**	**321**	*eP*	**P**	**09 26 48.2**	**+0.2**
	comp=Z,6.7nm,1.3s,mb4.2						
WUAZ	**Wupatki**	**72.79**	**323**	*eP*	**P**	**09 27 04.5**	**+0.4**
	comp=Z,8.8nm,0.9s,mb4.5						
GLA	**Glamis**	**72.99**	**319**	*eP*	**P**	**09 27 06.4**	**+1.1**
ISCO	**Idaho Springs**	**73.18**	**330**	*eP*	**P**	**09 27 06.9**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
ISCO	**Idaho Springs**	**73.18**	**330**	*eP*	**P**	**09 27 06.9**	**+0.6**
	comp=Z,5.9nm,1.1s,mb4.2						
PV01	**Paradox Valley**	**73.29**	**327**	*eP*	**P**	**09 27 07.4**	**+0.4**
SMCO	**Snowmass**	**73.32**	**328**	*eP*	**P**	**09 27 07.9**	**+0.7**
	comp=Z,6.2nm,0.8s,mb4.4						
SYO	**Syowa Base**	**73.38**	**159**	⇑*eP*	**P**	**09 27 07.0**	**-0.6**
SYO	**Syowa Base**	**73.38**	**159**	⇑*e*PcP	PcP	09 27 20.3	-2.6
SBA	**Scott Base**	**73.65**	**190**	*eP*	**P**	**09 27 10.3**	**+1.2**
SBA				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
SBA	**Scott Base**	**73.65**	**190**	*eP*	**P**	**09 27 10.3**	**+1.2**
	comp=Z,14nm,1.3s,mb4.5						
PFO	**Pinyon Flat Ob**	**74.36**	**319**	*eP*	**P**	**09 27 13.7**	**+0.5**
PFO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
PFO	**Pinyon Flat Ob**	**74.36**	**319**	*eP*	**P**	**09 27 13.7**	**+0.5**
	comp=Z,6.2nm,0.9s,mb4.3						
VNDA	**Vanda**	**74.65**	**190**	P	**P**	**09 27 15.8**	**+0.9**
	comp=Z,4.8nm,0.9s,mb4.1,baz=149,slow=4.4,SNR=22						
VNDA	**Vanda**	**74.65**	**190**	*eP*	**P**	**09 27 15.4**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VNDA	**Vanda**	**74.65**	**190**	*eP*	**P**	**09 27 15.4**	**+0.5**
	comp=Z,5.7nm,0.9s,mb4.2						
SRU	**San Rafael**	**75.03**	**326**	*eP*	**P**	**09 27 17.4**	**+0.3**
SRU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
SRU	**San Rafael**	**75.03**	**326**	*eP*	**P**	**09 27 17.4**	**+0.4**
	comp=Z,6.3nm,0.8s,mb4.3						
CCUT	**Cedar City**	**75.37**	**323**	*eP*	**P**	**09 27 19.9**	**+0.9**
MSU	**Marysvale**	**75.44**	**325**	*eP*	**P**	**09 27 20.0**	**+0.6**
ARUT	**Antelope Range**	**75.58**	**323**	*eP*	**P**	**09 27 20.9**	**+0.7**
SHPR	**Sheep Range**	**75.62**	**322**	*eP*	**P**	**09 27 21.7**	**+1.3**
GSC	**Goldstone**	**75.73**	**320**	*eP*	**P**	**09 27 22.3**	**+1.2**
RSSD	**Black Hills**	**75.99**	**333**	*eP*	**P**	**09 27 22.4**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
RSSD	**Black Hills**	**75.99**	**333**	*eP*	**P**	**09 27 22.4**	**-0.2**
	comp=Z,5.5nm,0.8s,mb4.2						
TORD	**Torodi Ar. Bea**	**76.39**	**69**	P	**P**	**09 27 23.8**	**-1.0**
	comp=Z,4.8nm,0.5s,mb4.4,baz=256,slow=5.5,SNR=113						
DAC	**Darwin (Calif)**	**76.87**	**320**	*eP*	**P**	**09 27 28.0**	**+0.5**
DAC				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.2						
DAC	**Darwin (Calif)**	**76.87**	**320**	*eP*	**P**	**09 27 28.0**	**+0.5**
	comp=Z,7.0nm,1.1s,mb4.2						
ISA	**Isabella**	**76.97**	**319**	*eP*	**P**	**09 27 29.3**	**+1.2**
ISA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
ISA	**Isabella**	**76.97**	**319**	*eP*	**P**	**09 27 29.3**	**+1.2**
	comp=Z,6.1nm,0.9s,mb4.2						
PDAR	**Pinedale Array**	**77.34**	**329**	P	**P**	**09 27 29.9**	**-0.2**
	comp=Z,1.4nm,0.7s,mb3.7,baz=123,slow=7.6,SNR=13						
BW06	**Boulder Array**	**77.34**	**329**	*eP*	**P**	**09 27 30.2**	**+0.1**
TSUM	**Tsumeb**	**77.41**	**106**	P	**P**	**09 27 29.8**	**-0.7**
	comp=Z,3.6nm,0.7s,mb4.1,baz=226,slow=13,SNR=13						
HWUT	**Hardware Ranch**	**77.43**	**327**	*eP*	**P**	**09 27 30.8**	**+0.2**
	comp=Z,2.7nm,0.6s,mb4.0						
ULM	**Lac du Bonnet**	**78.39**	**341**	P	**P**	**09 27 34.3**	**-1.6**
	comp=Z,5.2nm,0.6s,mb4.3,baz=168,slow=5.9,SNR=14						
ULM	**Lac du Bonnet**	**78.39**	**341**	*eP*	**P**	**09 27 34.2**	**-1.7**
	comp=Z,3.1nm,0.5s,mb4.2						
REDW	**Red Top Meadow**	**78.41**	**329**	*eP*	**P**	**09 27 36.2**	**+0.2**
	comp=Z,4.3nm,0.8s,mb4.1						
SNOW	**Snow King Moun**	**78.44**	**329**	*eP*	**P**	**09 27 36.6**	**+0.4**
	comp=Z,5.4nm,0.8s,mb4.2						
LOHW	**Long Hollow**	**78.48**	**329**	*eP*	**P**	**09 27 36.8**	**+0.3**
	comp=Z,5.3nm,0.8s,mb4.2						
TPAW	**Teton Pass**	**78.55**	**329**	*eP*	**P**	**09 27 37.3**	**+0.5**
	comp=Z,14nm,1.3s,mb4.4						
RRI2	**Red Ridge**	**78.62**	**329**	*eP*	**P**	**09 27 38.0**	**+0.9**
NVAR	**Mina Array Bea**	**78.75**	**321**	P	**P**	**09 27 37.8**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.6,baz=152,slow=6.6,SNR=12						
IMW	**Indian Meadow**	**78.86**	**329**	*eP*	**P**	**09 27 39.1**	**+0.6**
	comp=Z,9.3nm,0.9s,mb4.4						
FLWY	**Flagg Ranch**	**78.89**	**329**	*eP*	**P**	**09 27 39.0**	**+0.3**
	comp=Z,14nm,1.0s,mb4.6						
YMR	**Madison River**	**79.46**	**330**	*eP*	**P**	**09 27 42.4**	**+0.7**
	comp=Z,14nm,1.2s,mb4.5						
PAHR	**Pah Rah Range**	**80.24**	**322**	*eP*	**P**	**09 27 46.3**	**+0.4**
	comp=Z,14nm,1.0s,mb4.5						
HLID	**Hailey**	**80.29**	**327**	*eP*	**P**	**09 27 46.8**	**+0.7**
	comp=Z,11nm,0.9s,mb4.5						
MCMT	**McKenzie Canyo**	**80.46**	**329**	*eP*	**P**	**09 27 47.4**	**+0.3**
BOSA	**Boshof**	**80.49**	**117**	P	**P**	**09 27 46.2**	**-1.1**
	comp=Z,3.0nm,0.8s,mb4.0,baz=218,slow=1.2,SNR=3.7						
BOZ	**Bozeman (W)**	**80.50**	**330**	*eP*	**P**	**09 27 47.1**	**-0.2**
	comp=Z,2.4nm,1.0s,mb3.8						
DLMT	**Dillon**	**80.74**	**329**	*eP*	**P**	**09 27 48.8**	**+0.2**
	comp=Z,9.5nm,1.0s,mb4.4						
LRM	**Limekiln Ridge**	**81.02**	**330**	*eP*	**P**	**09 27 50.6**	**+0.6**
MAW	**Mawson**	**81.28**	**163**	P	**P**	**09 27 51.7**	**+0.2**
	comp=Z,17nm,0.8s,mb4.7,baz=225,slow=6.1,SNR=37						
MAW	**Mawson**	**81.28**	**163**	*eP*	**P**	**09 27 51.4**	**0.0**
MAW				pmax	pmax		
	comp=Z,19nm,0.9s						
MAW	**Mawson**	**81.28**	**163**	*eP*	**P**	**09 27 51.4**	**0.0**
	comp=Z,19nm,0.9s,mb4.7						
HRY	**Holter Researc**	**81.40**	**330**	*eP*	**P**	**09 27 52.2**	**+0.2**
MDT	**Midelt**	**81.91**	**49**	P	**P**	**09 27 55.1**	**+0.3**
	comp=Z,2.0nm,0.7s,mb3.9,baz=264,slow=6.0,SNR=5.0						
MSO	**Missoula**	**82.45**	**329**	*eP*	**P**	**09 27 57.4**	**-0.2**
	comp=Z,2.1nm,0.9s,mb3.8						
BMO	**Blue Mountains**	**82.67**	**326**	*eP*	**P**	**09 27 58.6**	**-0.1**
BSMT	**Bassoo Peak**	**83.60**	**330**	*eP*	**P**	**09 28 03.6**	**+0.2**
WALA	**Waterton Lakes**	**84.09**	**331**	*eP*	**P**	**09 28 05.2**	**-0.7**
	comp=Z,5.3nm,0.9s,mb4.3						
HAWA	**Hanford**	**84.86**	**326**	*eP*	**P**	**09 28 09.8**	**+0.1**
ESDC	**Sonseca Array**	**86.30**	**43**	P	**P**	**09 28 17.7**	**+0.8**
	comp=Z,0.9nm,0.6s,mb3.6,baz=242,slow=5.0,SNR=4.5						
EDM	**Edmonton**	**86.95**	**334**	*eP*	**P**	**09 28 18.4**	**-1.6**
CASY	**Casey**	**89.89**	**179**	*eP*	**P**	**09 28 34.1**	**+0.2**
	comp=Z,25nm,1.1s,mb5.1						
YKA	**Yellowknife Ar**	**94.29**	**340**	P	**P**	**09 28 52.7**	**-1.5**
	comp=Z,2.7nm,0.6s,mb4.5,baz=134,slow=4.5,SNR=32						
CTA	**Charters Tower**	**125.58**	**219**	PKP	PKPdf	09 34 35.3	+0.1
	comp=Z,0.7nm,0.3s,baz=277,slow=3.4,SNR=5.2						
ASAR	**Alice Springs**	**128.47**	**204**	PKP	PKPdf	09 34 40.6	0.0
	comp=Z,4.7nm,0.7s,baz=138,slow=2.0,SNR=63						
ASPA	**Alice Springs**	**128.47**	**204**	*eP*	PKPdf	09 34 40.6	-0.1
WB2	**Warramunga Arr**	**131.64**	**207**	*eP*	PKPdf	09 34 46.9	+0.2
WRA	**Warramunga Arr**	**131.65**	**207**	PKP	PKPdf	09 34 46.9	+0.1
	comp=Z,3.2nm,0.7s,baz=165,slow=1.6,SNR=8.3						
WRA				SKPbc	SKPbc	09 37 53.4	-2.1
	comp=Z,2.0nm,0.8s,baz=158,slow=3.7,SNR=16						
WRAB	**Tennant Creek**	**131.65**	**207**	⇑*i*PKIKP	PKPdf	09 34 47.1	+0.4
ZRNK	**Zerenda**	**136.00**	**37**	PKIKP	PKPdf	09 34 54.8	-0.1
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZRNK	**Zerenda**	**136.00**	**37**	*e*PKPdf	PKPdf	09 34 54.7	-0.2
FITZ	**Fitzroy Crossi**	**136.36**	**197**	*eP*	PKPdf	09 34 56.1	+0.6
	comp=Z,4.8nm,0.9s						
CHKZ	**Chkalovo**	**136.57**	**36**	PKIKP	PKPdf	09 34 55.6	-0.3
CHKZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
CHKZ	**Chkalovo**	**136.57**	**36**	*e*PKPdf	PKPdf	09 34 55.9	0.0
BVA0	**Borovoye Array**	**136.73**	**37**	PKIKP	PKPdf	09 34 55.8	-0.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.6s						
VOSK	**Vostochnaya**	**137.18**	**37**	PKIKP	PKPdf	09 34 56.6	-0.5
VOSK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAL	**Zalesovo**	**143.37**	**28**	PKP	PKPdf	09 35 05.0	-3.3
	comp=Z,3.5nm,0.6s,baz=184,slow=4.2,SNR=15						
BOD	**Bodaibo**	**146.30**	**359**	⇑*i*PKP2	PKPbc	09 35 12.9	-1.9
BOD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MK31	**Makanchi Array**	**146.45**	**40**	PKP2	PKPbc	09 35 13.5	-1.7
MK31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR	**Makanchi Array**	**146.45**	**40**	PKPbc	PKPbc	09 35 13.3	-1.9
	comp=Z,12nm,0.8s,baz=323,slow=3.0,SNR=46						
YSS	**Yuzh-Sakhalins**	**147.20**	**321**	*c i*PKP2	PKPbc	09 35 16.8	-0.5
GUMO	**Guam**	**148.38**	**256**	PKPbc	PKPbc	09 35 20.6	+0.2
	comp=Z,32nm,0.9s,baz=188,slow=22,SNR=4.2						
HABR	**Khabarovsk**	**150.19**	**330**	*i* PKIKP	PKPbc	09 35 24.3	-0.6
KLR	**Kul'dur**	**151.01**	**335**	*e*PKIKP	PKPdf	09 35 22.2	+1.3
WMQ	**Urumqi**	**151.27**	**41**	*e*PKP	PKPdf	09 35 24.0	+2.7
ZAK	**Zakamensk**	**152.63**	**14**	*e*PKIKP	PKPdf	09 35 19.0	-4.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s						
MJAR	**Matsushiro Arr**	**155.22**	**306**	PKPbc	PKPdf	09 35 35.4	+8.4
	comp=Z,1.3nm,0.7s,baz=95,slow=1.8,SNR=4.2						
MJAR				PKPab	PKPab	09 35 52.5	-0.3
	comp=Z,2.5nm,0.8s,baz=74,slow=1.9,SNR=7.5						
MDJ	**Mudanjiang**	**155.57**	**331**	PKP	PKPdf	09 35 27.3	-0.2
SONM	**Songino Array**	**155.69**	**11**	PKP	PKPdf	09 35 27.8	+0.1
	comp=Z,1.1nm,0.8s,baz=192,slow=0.7,SNR=7.8						
SONM				PKPab	PKPab	09 35 54.7	-0.1
	comp=Z,1.5nm,0.8s,baz=322,slow=5.1,SNR=7.7						
GTA	**Gaotai**	**160.96**	**33**	PKP	PKPdf	09 35 34.1	+0.1
GTA				APKP		09 36 17.8	
HHC	**Hu-ho-hao-te**	**163.23**	**4**	*e*PKP	PKPdf	09 35 37.8	+1.6
HHC				APKP		09 36 24.5	
HHC				PKS		09 39 10.6	
HHC				PP	PP	09 40 15.8	+2.8
HHC				SKS	SKSdf	09 42 25.0	+1.1
HHC				SKKS	SKKSac	09 46 46.4	+2.8
HHC				SS	SS	10 00 24.0	+0.5
HHC				PP	PP		
	comp=Z,51nm,4.8s						
HHC				LR	LR		
	comp=N,86nm,36.1s						
HHC				LR	LR		
	comp=E,104nm,35.1s						
HHC				LR	LR		
	comp=Z,79nm,35.1s						
LZH	**Lanzhou**	**165.55**	**32**	*e*PKP	PKPdf	09 35 41.0	+2.7
LZH				APKP		09 36 28.4	
LZH				XPKP		09 36 44.0	
LZH				LR	LR		
	comp=E,123nm,19.6s						
LZH				LR	LR		
	comp=Z,254nm,20.5s						
SSE	**Sheshan**	**170.09**	**316**	PKP	PKPdf	09 35 44.1	+2.7
KMI	**Kunming**	**170.38**	**82**	PKP	PKPdf	09 35 40.5	-1.1
NJ2	**Nanjing**	**170.66**	**329**	*e*PKP	PKPdf	09 35 43.3	+1.5
YHNB	**Yeheng**	**172.57**	**276**	*e*PKPdf	PKPdf	09 35 44.5	+1.9

CSEM ***24*** *09:42:43.2±0.8, 3682N×2438W, h5km, ML2.3, Error ellipse: s-maj=7.0km s-min=5.5km az=84.0, After PDA*
PDA ***24*** *09:42:43.2±0.8, 3682N×2438W, h5km, MD2.6, ML2.3, Error ellipse: s-maj=7.0km s-min=5.5km az=84.0*
SVSA 24 09:42:43.2±0.8, 3682N×2438W, h5km, MD2.6, ML2.3, Error ellipse: s-maj=7.0km s-min=5.5km az=84.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSMN	**Pico do Norte,**	**0.58**	**289**	*eP*	Pg	09 42 52.9	-1.4
PSMN				*eS*	Sg	09 43 00.5	-1.3
MIRA	**Miradouro**	**1.20**	**324**	*eP*	Pg	09 43 01.8	-4.4
MIRA				*eS*	Sg	09 43 15.4	-6.4
VIF	**Vila Franca**	**1.25**	**318**	*eS*	Sg	09 43 17.0	-6.4
PRCH	**Ribeira Ch**	**1.26**	**316**	*eS*	Sg	09 43 17.3	-6.4
PRCH							
	56nm,0.2s						
PFAD	**Fenais da Ajud**	**1.26**	**324**	*eP*	Pg	09 43 02.4	-5.0
PFAD				*eS*	Sg	09 43 17.3	-6.5
MESC	**Monte Escuro**	**1.29**	**319**	*eS*	Sg	09 43 18.1	-6.6
LFA	**Lagoa do Fogo**	**1.29**	**318**	*eP*	Pn	09 43 03.6	-4.3
CML	**Cha da Macela**	**1.33**	**316**	*erx*		09 43 20.5	
FAC	**Faja de Cima**	**1.39**	**314**	*erx*		09 43 22.3	

IDC ***24*** *09:46:13.7±7.7, 3193S×17939W, h167km±61km, mb3.7/4, mb1 3.7/5, mb1mx3.5/14, mbtmp4.0/5, Error ellipse: s-maj=61.6km s-min=31.3km az=40.0*
ISC 24 09:46:22.8±1.3, 333S±01×1785W±03, h347km±12km, n27, σ1§17/36, mb3.5/4, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.03**	**210**	PN	**Pn**	**09 47 46.1**	**+3.6**
MXZ				SN	**S**	**09 48 46.7**	**-0.3**
PUZ	**Puketiti**	**5.49**	**208**	PN	**Pn**	**09 47 47.3**	**-0.3**
PUZ				SN	**S**	**09 48 51.9**	**-4.4**
MWZ	**Matawai**	**6.01**	**211**	PN	**Pn**	**09 47 52.7**	**-0.9**
MWZ				SN	**S**	**09 49 08.8**	**+1.6**
URZ	**Urewera**	**6.14**	**214**	P	**Pn**	**09 47 54.1**	**-1.0**
	0.3nm,0.3s,baz=18,slow=21,SNR=3.2						
URZ				S	**S**	**09 49 09.7**	**-0.2**
	6.4nm,0.3s,baz=100,slow=20,SNR=15						
URZ	**Urewera**	**6.14**	**214**	PN	**Pn**	**09 47 55.9**	**+0.8**
PXZ	**Pawanui**	**7.72**	**208**	PN	**Pn**	**09 48 14.6**	**+1.1**
PXZ				SN	**S**	**09 49 43.2**	**-0.6**
TSZ	**Takapari Road**	**8.12**	**212**	PN	**Pn**	**09 48 17.3**	**-0.9**
BFZ	**Birch Farm**	**8.52**	**208**	PN	**Pn**	**09 48 24.8**	**+1.7**
BFZ				SN	**S**	**09 50 02.7**	**+1.5**
TIWZ	**Tintock**	**8.75**	**209**	SN	**S**	**09 50 08.8**	**+2.7**
MRZ	**Mangatainoka R**	**8.78**	**211**	PN	**Pn**	**09 48 25.4**	**-0.8**
MRZ				SN	**S**	**09 50 08.4**	**+1.5**
MTW	**Mount Morrison**	**9.23**	**210**	PN	**Pn**	**09 48 32.1**	**+0.7**
CAW	**Cannon Point**	**9.37**	**211**	PN	**Pn**	**09 48 31.7**	**-1.4**
TCW	**Tory Channel**	**9.81**	**214**	PN	**Pn**	**09 48 36.7**	**-1.7**
TCW				SN	**S**	**09 50 29.3**	**-0.2**
TUWZ	**Tuamarina**	**10.14**	**214**	PN	**Pn**	**09 48 41.7**	**-0.6**
TUWZ				SN	**S**	**09 50 34.5**	**-2.3**
NNZ	**Nelson**	**10.25**	**217**	PN	**Pn**	**09 48 44.6**	**+1.0**
NNZ				SN	**S**	**09 50 37.6**	**-1.6**
THZ	**Tophouse**	**10.89**	**216**	PN	**Pn**	**09 48 50.4**	**-1.0**
THZ				SN	**S**	**09 50 54.0**	**+0.5**
KHZ	**Kahutara**	**11.10**	**212**	PN	**Pn**	**09 48 53.6**	**-0.2**
DSZ	**Denniston Nort**	**11.45**	**219**	SN	**S**	**09 51 01.6**	**-4.1**
MQZ	**McQueen's Vall**	**12.52**	**211**	SN	**S**	**09 51 28.5**	**-0.4**
STKA	**Stephens Creek**	**33.53**	**261**	P	**P**	**09 52 34.1**	**+3.1**
	1.0nm,0.4s,mb3.4,baz=110,slow=12,SNR=4.3						
CTA	**Charters Tower**	**33.96**	**284**	P	**P**	**09 52 33.5**	**-1.1**
	0.9nm,0.4s,mb3.4,baz=119,slow=10,SNR=3.1						
ASAR	**Alice Springs**	**42.63**	**270**	*eP*	**P**	**09 53 46.9**	**+0.8**
	1.8nm,0.7s,mb3.3,baz=103,slow=7.4,SNR=29						
ASPA	**Alice Springs**	**42.63**	**270**	*eP*	**P**	**09 53 47.0**	**+0.9**
WB2	**Warramunga Arr**	**43.86**	**275**	⇑*iP*	**P**	**09 53 55.9**	**0.0**
WRA	**Warramunga Arr**	**43.87**	**275**	P	**P**	**09 53 56.0**	**0.0**
	2.5nm,0.3s,mb3.8,baz=112,slow=8.0,SNR=87						
FINES	**FINESS Array B**	**147.66**	**338**	PKPbc	PKPbc	10 05 32.5	+5.8
	1.4nm,0.8s,baz=104,slow=5.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**159.98**	**181**	PKPab	PKPab	10 06 38.6	+16
	0.2nm,0.5s,baz=184,slow=3.5,SNR=4.3						

ISCJB ***24*** *09:52:17.2±1.7, 2234S±01×17143E±009, h109km±14km, mb4.3/13, Error ellipse: s-maj=24.9km s-min=12.0km az=33.5*
IDC ***24*** *09:52:17.8±2.7, 2234S×17146E, h100km±22km, mb4.0/10, mb1 4.2/11, mb1mx4.1/15, mbtmp4.4/11, MS3.2/1, Ms1 3.2/1, ms1mx2.1/27, Error ellipse: s-maj=22.7km s-min=17.3km az=19.0*
NEIC ***24*** *09:52:18.6±1.2, 2234S×17153E, h113km±10km, mb4.5/5, Error ellipse: s-maj=15.0km s-min=8.7km az=193.0*
ISC 24 09:52:18.2±1.6, 224S±01×17148E±009, h101km±13km, n27, σ0§77/24, mb4.3/13, 3C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.67**	**273**	*eP*	**Pn**	**09 53 27.8**	**+1.4**
DZM				*eS*	**Sn**	**09 54 18.1**	**-1.3**
DZM	**Mont Dzumac**	**4.67**	**273**	P	**Pn**	**09 53 27.7**	**+1.3**
	14nm,0.3s,baz=93,slow=21,SNR=510						
DZM				S	**Sn**	**09 54 18.1**	**-1.4**
	69nm,0.3s,baz=229,slow=22,SNR=16						
RAO	**Raoul Island**	**11.75**	**128**	P	**Pn**	**09 55 02.3**	**-0.2**
	167nm,0.3s,baz=99,slow=23,SNR=4.3						
URZ	**Urewera**	**16.56**	**164**	LR	LR	10 00 56.3	
	comp=Z,94nm,20.2s,baz=134,slow=31						
CTA	**Charters Tower**	**23.61**	**271**	⇑*iP*	**P**	**09 57 20.8**	**+1.0**
	2.7nm,0.5s,mb3.8						
CTA	**Charters Tower**	**23.61**	**271**	P	**P**	**09 57 21.0**	**+1.2**
	4.7nm,0.6s,mb4.0,baz=97,slow=12,SNR=12						
PMG	**Port Moresby**	**26.65**	**295**	P	**P**	**09 57 47.4**	**+0.1**
	13nm,0.7s,mb4.6,baz=127,slow=6.6,SN

*IDC **24** 10:16:56.0±4.4, 3213N×13672E, h218km±74km, mb3.0/3, mb1 3.0/6, mb1mx2.9/24, mbtmp3.6/6, Error ellipse: s-maj=96.2km s-min=17.1km az=64.0*
*ISCJB **24** 10:16:58.9±0.7, 3279N±007×1384E±0.1, h338km±7km, mb3.0/2, Error ellipse: s-maj=15.9km s-min=10.1km az=120.9*
*JMA **24** 10:16:58.5±0.2, 3286N×13831E, h349km, M3.2*
ISC 24 10:17:00.1±0.7,3284N±008×1384E±01,h331km±7km,n20, σ1º02/26,mb3.0/2,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**1.22**	**336**	P	**Pn**	**10 17 44.9**	**+0.1**
JHJ	**Hachijo jima 2**	**1.23**	**76**	P	**Pn**	**10 17 43.9**	**-0.9**
	14nm,0.3s,baz=88,slow=20,SNR=9.6						
JHJ				S	**S**	**10 18 22.5**	**+1.9**
	15nm,0.3s,baz=266,slow=22,SNR=7.6						
JHJ2	**Mitsune**	**1.26**	**77**	P	**Pn**	**10 17 45.9**	**+0.9**
JHJ2				*e*S	**S**	**10 18 22.1**	**+1.2**
TK04	**Tokai 4**	**1.59**	**346**	P	**Pn**	**10 17 47.5**	**+0.6**
JIE	**Ise**	**2.07**	**319**	P	**Pn**	**10 17 49.8**	**-0.4**
JOD2	**Odawara 2**	**2.49**	**14**	P	**Pn**	**10 17 53.9**	**+0.4**
JYN	**Shimob**	**2.66**	**3**	P	**Pn**	**10 17 56.0**	**+1.1**
JWY	**Kouya**	**2.69**	**302**	P	**Pn**	**10 17 54.7**	**-0.5**
BSO1	**Boso 1**	**2.84**	**50**	P	**Pn**	**10 17 54.9**	**-1.6**
BSO1				*e*S	**S**	**10 18 40.2**	**-1.6**
JRY	**Ryogami san**	**3.20**	**8**	P	**Pn**	**10 18 00.7**	**+0.8**
JRY				*e*S	**S**	**10 18 47.6**	**-0.4**
JAI	**Aioi**	**3.41**	**287**	P	**Pn**	**10 18 00.6**	**-1.3**
JWT	**Wachi**	**3.46**	**316**	P	**Pn**	**10 18 01.9**	**-0.5**
MJAR	**Matsushiro Arr**	**3.70**	**358**	P	**Pn**	**10 18 05.3**	**+0.5**
	0.8nm,0.3s,baz=174,slow=12,SNR=6.5						
MAT	**Matsushiro**	**3.70**	**358**	P	**Pn**	**10 18 05.4**	**+0.6**
MAT				S	**S**	**10 18 56.1**	**-0.8**
MAT	**Matsushiro**	**3.70**	**358**	P	**Pn**	**10 18 05.3**	**+0.5**
CBIJ	**Chichi jima**	**6.62**	**149**	P	**Pn**	**10 18 35.1**	**-2.3**
	5.1nm,0.3s,baz=276,slow=21,SNR=5.6						
CBIJ	**Chichi jima**	**6.62**	**149**	P	**Pn**	**10 18 35.4**	**-2.0**
CBIJ				*e*S	**S**	**10 19 49.6**	**-6.8**
SONM	**Songino Array**	**28.36**	**311**	P	**P**	**10 22 25.7**	**+1.2**
	0.6nm,0.5s,mb3.1,baz=113,slow=8.4,SNR=6.2						
MKAR	**Makanchi Array**	**44.35**	**305**	P	**P**	**10 24 38.2**	**-0.3**
	0.5nm,0.4s,mb3.3,baz=82,slow=9.3,SNR=6.4						
WRA	**Warramunga Arr**	**52.62**	**185**	P	**P**	**10 25 41.9**	**+0.9**
	0.2nm,0.5s,baz=360,slow=7.5,SNR=7.7						

MEX 24 10:30:11.1±0.6,1718N×10025W,h33km±9km,MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.13**	**186**	*i* P	Pb	10 30 15.8	-1.3
CAIG				*i* S	Sb	10 30 19.6	-1.6
ACX	**Acapulco**	**0.45**	**134**	*i* P	Pb	10 30 19.2	-1.7
ACX				*i* S	Sb	10 30 25.6	-2.0
MEIG	**Mezcala**	**0.96**	**39**	*i* P	Pn	10 30 25.8	-2.4
MEIG				*i* S	Sn	10 30 37.8	-2.9
PLIG	**Platanillo**	**1.40**	**31**	*i* P	Pn	10 30 33.1	-1.2
PLIG				*i* S	Sn	10 30 49.6	-2.0
IIZ	**Mezontepec**	**2.21**	**26**	*e*P	Pn	10 30 43.6	-1.9
IIZ				*i* S	Sn	10 31 06.5	-5.2
UTMO	**Huajuapan**	**2.42**	**74**	*i* P	Pn	10 30 47.1	-1.3
UTMO				*i* S	Sn	10 31 16.0	-0.9

*IDC **24** 10:32:12.4±0.9, 5698S×25.16W, h0km, mb4.1/5, mb1 4.1/6, mb1mx3.9/17, mbtmp4.0/6, ML3.7/1, Error ellipse: s-maj=38.8km s-min=20.8km az=57.0*
*ISCJB **24** 10:32:15.5±0.8, 570S±0.1×252W±04, h33km, mb4.0/5, Error ellipse: s-maj=36.2km s-min=12.1km az=124.5*
ISC 24 10:32:17.4±4.2,571S±02×252W±04,h36km±42km,n11, σ0º68/9,mb4.0/5,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.45**	**159**	*e*	**Pn**	**10 35 52.9**	**+0.4**
VNA1				*e*		10 35 55.6	
VNA1				*e*		10 35 58.2	
VNA3	**Neumayer Olymp**	**15.67**	**161**	*e*	**Pn**	**10 35 54.7**	**-0.8**
VNA3				*e*		10 35 57.1	
VNA3				*e*		10 36 00.0	
SNAA	**Sanae**	**17.37**	**156**	P	**Pn**	**10 36 17.5**	**+0.5**
	0.2nm,0.3s,baz=331,slow=13,SNR=33						
SNAA	**Sanae**	**17.37**	**156**	*e*	**Pn**	**10 36 17.5**	**+0.6**
SNAA				*e*		10 36 20.3	
SNAA				*e*		10 36 23.0	
CPUP	**Villa Florida**	**38.30**	**310**	P	**P**	**10 39 33.5**	**-1.0**
	0.4nm,0.4s,mb3.5,baz=155,slow=6.3,SNR=3.8						
MAW	**Mawson**	**38.68**	**142**	P	**P**	**10 39 37.7**	**+0.1**
	1.0nm,0.6s,mb3.8,baz=238,slow=4.6,SNR=8.4						
VNDA	**Vanda**	**45.60**	**182**	P	**P**	**10 40 33.6**	**-0.4**
	0.6nm,0.7s,mb3.6,baz=187,slow=6.7,SNR=3.0						
LPAZ	**La Paz**	**51.85**	**304**	P	**P**	**10 41 23.3**	**+1.3**
	6.9nm,0.5s,mb4.9,baz=124,slow=6.1,SNR=67						
TORD	**Torodi Ar. Bea**	**73.43**	**27**	P	**P**	**10 43 45.8**	**-0.2**
	1.6nm,0.7s,mb4.1,baz=204,slow=6.3,SNR=10						
YKA	**Yellowknife Ar**	**137.66**	**316**	PKP	PKPdf	10 51 36.0	-1.6
	0.5nm,0.5s,baz=130,slow=2.2,SNR=7.8						
SONM	**Songino Array**	**149.70**	**87**	PKPbc	PKPbc	10 52 02.3	-1.0
	1.6nm,0.8s,baz=224,slow=3.4,SNR=9.8						

*ISCJB **24** 10:32:46.2±1.1, 78S±02×1199E±02, h200km, mb3.5/1, Error ellipse: s-maj=39.9km s-min=12.0km az=94.4*
*NEIC **24** 10:32:49.1±3.5, 793S×11984E, h213km±37km, mb4.0/3, Error ellipse: s-maj=37.7km s-min=21.5km az=57.0*
*IDC **24** 10:32:50.9±2.5, 802S×11992E, h234km±28km, mb3.0/2, mb1 3.1/4, mb1mx2.9/17, mbtmp3.6/4, Error ellipse: s-maj=91.7km s-min=12.0km az=52.0*
ISC 24 10:32:50.8±1.6,79S±02×1200E±02,h227km±17km,n11, σ0º96/19,mb3.5/1,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.55**	**152**	*e*P	**Pn**	**10 35 28.3**	**-1.0**
	3.2nm,0.9s						
FITZ				*e*S	**S**	**10 37 27.2**	**-11**
FITZ	**Fitzroy Crossi**	**11.55**	**152**	P	**Pn**	**10 35 28.0**	**-1.3**
	0.2nm,0.3s,baz=326,slow=14,SNR=10						
FITZ				S	**S**	**10 37 31.3**	**-7.1**
	0.8nm,0.3s,baz=184,slow=18,SNR=10						
KAKA	**Kakadu**	**13.17**	**112**	*e*P	**Pn**	**10 35 49.4**	**-0.1**
	5.7nm,0.6s						
KAKA				*e*S	**S**	**10 38 05.9**	**-10**
WRA	**Warramunga Arr**	**18.37**	**132**	P	**P**	**10 36 48.6**	**-0.2**
	0.3nm,0.3s,baz=307,slow=12,SNR=27						
WRA				S	**S**	**10 40 04.8**	**-1.7**
	0.1nm,0.3s,baz=289,slow=24,SNR=3.4						
WRAB	**Tennant Creek**	**18.37**	**132**	*e*P	**P**	**10 36 48.8**	**0.0**
	6.2nm,1.0s						
WRAB				*e*S	**S**	**10 40 08.4**	**+1.8**
WB2	**Warramunga Arr**	**18.38**	**132**	*e*P	**P**	**10 36 48.8**	**-0.1**
WB2				*e*S	**S**	**10 40 05.9**	**-0.8**
WB2	**Warramunga Arr**	**18.38**	**132**	*e*P	**P**	**10 36 48.7**	**-0.2**
WB2				*e*S	**S**	**10 40 06.6**	**-0.1**
ASPA	**Alice Springs**	**20.60**	**141**	*e*P	**P**	**10 37 14.4**	**+1.7**
ASPA				*e*S	S	10 41 12.6	+23
AS31	**Alice Springs**	**20.61**	**141**	*e*P	**P**	**10 37 13.7**	**+1.0**
AS31				*e*S	S	10 41 12.6	+23
ASAR	**Alice Springs**	**20.61**	**141**	P	**P**	**10 37 12.6**	**-0.1**
	0.8nm,0.4s,baz=314,slow=8.8,SNR=29						
ASAR				S	**S**	**10 40 49.5**	**-0.5**
	0.4nm,0.6s,baz=328,slow=25,SNR=3.3						
MKAR	**Makanchi Array**	**63.92**	**332**	P	**P**	**10 42 59.2**	**-0.4**
	0.8nm,0.6s,mb3.5,baz=134,slow=6.9,SNR=8.3						

*NEIC **24** 10:44:19.4, 3644N×2128E, h19km, MD3.6(ATH), After ATH.*
*CSEM **24** 10:44:19.4, 3644N×2128E, h19km, MD3.6/5, After ATH*
ATH 24 10:44:19.4,3644N×2128E,h19km±9km,MD3.6/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.90**	**35**	*e*PN	Pn	10 44 36.3	-0.8
ITM				*e*SN	Sn	10 44 49.7	+0.1
VLI	**Veliai**	**1.36**	**78**	*e*PN	Pn	10 44 45.2	+1.8
KYTH	**Kithira**	**1.43**	**96**	*e*PN	Pn	10 44 46.5	+2.2
RLS	**Riolos of Patr**	**1.62**	**5**	*e*PN	Pn	10 44 48.7	+1.8
VLS	**Valsamata**	**1.82**	**343**	*e*PN	Pn	10 44 52.2	+2.5
EVR	**Evrytania**	**2.51**	**9**	*e*PB	Pb	10 45 02.7	-1.1

*IDC **24** 11:17:19.2±0.8, 3652N×7119E, h0km, mb4.1/9, mb1 4.3/13, mb1mx4.1/24, mbtmp4.2/13, ML4.3/4, Error ellipse: s-maj=20.3km s-min=17.8km az=68.0*
*BJI **24** 11:17:23.6, 3664N×7078E, h62km, mB4.2, mb4.1, ML4.2, Ms3.5, Msz3.3*
*MOS **24** 11:17:26.5±1.5, 3683N×7107E, h67km, mb4.5/8, Error ellipse: s-maj=15.3km s-min=7.1km az=92.6*
*NEIC **24** 11:17:27.9±1.5, 3682N×7114E, h63km±15km, mb4.1/8, Error ellipse: s-maj=17.5km s-min=6.4km az=59.0*
*ISCJB **24** 11:17:30.5±0.5, 3696N±003×7130E±006, h109km±7km, mb3.8/13, Error ellipse: s-maj=8.7km s-min=3.8km az=151.3*
*NNC **24** 11:17:38.2±2.4, 3756N×7090E, h142km±24km, mb3.2, mpv3.9, Error ellipse: s-maj=25.8km s-min=17.8km az=23.0*
ISC 24 11:17:32.0±0.5,3695N±003×7131E±006,h107km±6km, n79,σ1º43/99,mb3.8/13,5C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.16**	**171**	P	**Pn**	**11 18 21.7**	**+1.7**
CHCP	**Chirah Chowk**	**3.66**	**153**	P	**Pn**	**11 18 29.4**	**+2.8**
THW	**Thamme Wali**	**4.16**	**175**	P	**Pn**	**11 18 34.5**	**+1.0**
KSH	**Kashi**	**4.48**	**54**	*e*P	**Pn**	**11 18 42.3**	**+4.6**
KSH				S	**Sn**	**11 19 34.3**	**+5.6**
KSH				Smax			
	comp=N,204nm,0.3s						
KSH				Smax			
	comp=E,227nm,0.2s						
SBDP	**Sheikh Budin**	**4.66**	**185**	P	**Pn**	**11 18 40.3**	**+0.1**
SARP	**Sargodha**	**5.14**	**167**	P	**Pn**	**11 18 47.3**	**+0.6**
SARP				S	**Sn**	**11 19 43.0**	**-1.8**
DRP	**Derazinda**	**5.28**	**190**	P	**Pn**	**11 18 49.2**	**+0.7**
AML	**Almayashu**	**5.49**	**19**	P	**Pn**	**11 18 51.3**	**-0.1**
	SNR=90						
THN	**Thein Dam**	**5.79**	**140**	*e*P	**Pn**	**11 18 56.5**	**+1.1**
THN				*e*S	**Sn**	**11 20 01.7**	**+1.2**
DLH	**Dalhousie**	**5.84**	**138**	*e*P	**Pn**	**11 18 56.0**	**-0.1**
DLH				*e*S	**Sn**	**11 20 00.0**	**-1.7**
EKS2	**Erkin-Say**	**6.01**	**18**	P	**Pn**	**11 18 59.2**	**+0.8**
	SNR=21						
KK31	**Karatay Array**	**6.17**	**355**	⇓Pn	**Pn**	**11 18 59.7**	**-0.9**
	comp=E,38nm,0.5s,baz=173,slow=12,SNR=574						
KK31				⇑Sn	**Sn**	**11 20 04.8**	**-5.1**
	comp=E,28nm,0.3s						
KKAR	**Karatay Array**	**6.17**	**355**	PN	**Pn**	**11 18 59.7**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,13nm,0.3s						
AAK	**Ala-Archa**	**6.18**	**22**	P	**Pn**	**11 19 02.2**	**+1.5**
	SNR=15						
AAK	**Ala-Archa**	**6.18**	**22**	*e*PN	**Pn**	**11 19 01.0**	**+0.3**
AAK				pmax	pmax		
	comp=Z,19nm,0.4s						
AAK	**Ala-Archa**	**6.18**	**22**	*e*Pn	**Pn**	**11 19 01.0**	**+0.3**
	comp=Z,19nm,0.4s						
PONG	**Pong**	**6.29**	**141**	*e*P	**Pn**	**11 19 02.0**	**-0.2**
PONG				*e*S	**Sn**	**11 20 12.0**	**-0.7**
KBK	**Karagaybulak**	**6.35**	**25**	P	**Pn**	**11 19 05.0**	**+2.0**
	SNR=6.9						
ULHL	**Ulahol**	**6.52**	**34**	P	**Pn**	**11 19 07.5**	**+2.2**
	SNR=13						
CHMS	**Chumysh**	**6.59**	**23**	P	**Pn**	**11 19 07.2**	**+0.8**
	SNR=14						
USP	**Ospenovka**	**6.76**	**20**	P	**Pn**	**11 19 08.8**	**+0.2**
	SNR=12						
TKM2	**Tokmak 2**	**6.81**	**28**	P	**Pn**	**11 19 10.9**	**+1.6**
	SNR=17						
TKM2	**Tokmak 2**	**6.81**	**28**	⇑Pn	**Pn**	**11 19 10.8**	**+1.5**
	comp=Z,0.7nm,0.5s						
TKM2				⇑Sn	**Sn**	**11 20 25.1**	**-0.2**
	comp=Z,1.4nm,0.6s						
TKM2	**Tokmak 2**	**6.81**	**28**	PN	**Pn**	**11 19 10.7**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BHK	**Bhakra**	**6.96**	**141**	*e*P	**Pn**	**11 19 02.4**	**-8.9**
BHK				*e*S	**Sn**	**11 20 30.6**	**+1.7**
SDNR	**Sundarnagar**	**7.18**	**138**	*e*P	**Pn**	**11 19 14.8**	**+0.5**
SDNR				*e*S	**Sn**	**11 20 30.6**	**-3.7**
NDI	**New Delhi**	**9.63**	**147**	*e*P	**Pn**	**11 19 42.0**	**-5.5**
NDI				*e*S	**Sn**	**11 21 21.0**	**-13**
LGTI	**Lohaghat**	**10.58**	**132**	*e*P	**Pn**	**11 20 00.5**	**0.0**
LGTI				*e*S	**Sn**	**11 21 52.5**	**-4.4**
MKAR	**Makanchi Array**	**12.78**	**36**	Pn	**Pn**	**11 20 29.6**	**-0.1**
	comp=E,2.4nm,0.3s,baz=226,slow=15,SNR=14						
KOLN	**Koldanda**	**13.84**	**128**	*e*P	**Pn**	**11 20 42.1**	**-1.4**
	comp=Z,9.3nm,0.3s						
GKN	**Gorkha**	**14.35**	**125**	*e*P	**Pn**	**11 20 48.7**	**-1.3**
	comp=Z,16nm,0.2s						
GKN				*e*S	**Sn**	**11 23 17.5**	**-11**
AB31	**Akbulak array**	**14.81**	**330**	⇓Pn	**Pn**	**11 20 52.0**	**-3.9**
	comp=Z,4.1nm,0.3s,baz=155,slow=11						
AB31				⇑Sn	**Sn**	**11 23 27.2**	**-12**
	comp=Z,3.4nm,0.5s,baz=147,slow=24						
KKN	**Kakani**	**14.91**	**124**	*e*P	**Pn**	**11 20 55.6**	**-1.7**
	comp=Z,5.7nm,0.2s						
KKN	**Kakani**	**14.91**	**124**	*e*P	**Pn**	**11 20 55.6**	**-1.7**
KKN				pmax	pmax		
	comp=Z,6.0nm,0.2s						
DMN	**Daman**	**14.92**	**125**	*e*P	**Pn**	**11 20 55.9**	**-1.4**
DMN				*e*S	**Sn**	**11 23 31.0**	**-11**
PKI	**Pulchoki**	**15.14**	**124**	*e*P	**Pn**	**11 20 58.7**	**-1.5**
	comp=Z,6.5nm,0.2s						
PKI	**Pulchoki**	**15.14**	**124**	*e*P	**Pn**	**11 20 58.7**	**-1.5**
PKI				pmax	pmax		
	comp=Z,7.0nm,0.2s						
GUN	**Gumba**	**15.24**	**122**	*e*P	**Pn**	**11 21 00.4**	**-0.9**
	comp=Z,25nm,0.4s						
JIRN	**Jiri**	**15.61**	**122**	*e*P	**Pn**	**11 21 04.6**	**-1.4**
	comp=Z,31nm,0.4s						
JIRN				*e*S	**S**	**11 23 48.0**	**-19**
VOSK	**Vostochnaya**	**15.77**	**359**	⇑P	**Pn**	**11 21 04.0**	**-4.0**
	comp=Z,5.0nm,1.2s						
ZRNK	**Zerenda**	**16.08**	**355**	⇓P	**Pn**	**11 21 09.3**	**-2.5**
	comp=Z,1.8nm,0.5s						
ZRNK	**Zerenda**	**16.08**	**355**	*e*P	**Pn**	**11 21 09.5**	**-2.3**
ZRNK				*e*		11 24 15.1	
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZRNK	**Zerenda**	**16.08**	**355**	*e*P	**Pn**	**11 21 09.5**	**-2.3**
	comp=Z,3.6nm,0.4s						
ZRNK				*e*Sn	**Sn**	**11 24 15.1**	**+5.2**
BVAR	**Borovoye Array**	**16.09**	**358**	Pn	**Pn**	**11 21 09.6**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=169,slow=12,SNR=6.5						
BVAR				Sn	**Sn**	**11 23 57.9**	**-12**
	comp=Z,0.2nm,0.3s,baz=193,slow=40,SNR=2.4						
BRVK	**Borovoye**	**16.12**	**358**	*e*P	**Pn**	**11 21 08.6**	**-3.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**16.12**	**358**	*e*P	**Pn**	**11 21 08.6**	**-3.7**
	comp=Z,1.8nm,0.5s						
AKTK	**Aktyubinsk**	**16.52**	**329**	Pn	**Pn**	**11 21 14.9**	**-2.2**
AKTK				Sn	**Sn**	**11 24 04.5**	**-16**
AKTO	**Aktyubinsk**	**16.52**	**329**	⇓Pn	**Pn**	**11 21 15.0**	**-2.2**
	comp=Z,0.1nm,0.3s						
AKTO				⇓Sn	**Sn**	**11 24 07.8**	**-13**
	comp=Z,0.2nm,1.0s						
AKTO	**Aktyubinsk**	**16.52**	**329**	Pn	**Pn**	**11 21 14.9**	**-2.2**
	comp=Z,4.9nm,0.3s,baz=130,slow=8.2,SNR=36						
AKTO				Sn	**Sn**	**11 24 04.5**	**-16**
	comp=Z,0.2nm,0.3s,baz=56,slow=2.1,SNR=3.4						
CHKZ	**Chkalovo**	**16.73**	**359**	*e*P	**Pn**	**11 21 17.7**	**-2.1**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHKZ	**Chkalovo**	**16.73**	**359**	*e*P	**Pn**	**11 21 17.7**	**-2.1**
	comp=Z,2.7nm,0.7s						
ZAL	**Zalesovo**	**19.39**	**25**	P	**P**	**11 21 49.2**	**-0.2**
	comp=Z,2.8nm,0.3s,baz=259,slow=6.4,SNR=10.0						
ZAL	**Zalesovo**	**19.39**	**25**	P	**P**	**11 21 49.2**	**-0.2**
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZAL	**Zalesovo**	**19.39**	**25**	P	**P**	**11 21 49.2**	**-0.2**
NVS	**Novosibirsk**	**19.67**	**21**	*e*P	**P**	**11 21 50.4**	**-2.1**
ARU	**Arti**	**21.29**	**340**	*e*P	**P**	**11 22 11.9**	**+2.0**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.0						
ARU	**Arti**	**21.29**	**340**	*e*P	**P**	**11 22 11.9**	**+2.0**
	comp=Z,3.2nm,0.4s,mb4.0						
GTA	**Gaotai**	**22.51**	**75**	*e*P	**P**	**11 22 25.4**	**+2.6**
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.1						
GTA				AMB	AMB		
	comp=Z,55nm,5.3s						
GTA				LR	LR		
	comp=N,52nm,16.0s						
GTA				LR	LR		
	comp=E,68nm,14.1s						
GTA				LR	LR		
	comp=Z,61nm,12.6s						
ZAK	**Zakamensk**	**26.51**	**49**	*e*P	**P**	**11 23 01.3**	**+1.9**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.1						
SONM	**Songino Array**	**27.88**	**56**	P	**P**	**11 23 14.4**	**+2.8**
	comp=Z,1.5nm,0.5s,mb3.8,baz=266,slow=8.8,SNR=13						
SONM	**Songino Array**	**27.88**	**56**	P	**P**	**11 23 14.4**	**+2.8**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ENH	**Enshi**	**32.33**	**91**	*e*P	**P**	**11 23 52.5**	**+1.6**
	comp=Z,1.9nm,0.7s,mb3.9						
FINES	**FINESS Array B**	**37.25**	**326**	P	**P**	**11 24 35.1**	**+1.9**
	comp=Z,0.5nm,0.3s,mb3.9,baz=125,slow=10.0,SNR=3.9						
FINES	**FINESS Array B**	**37.25**	**326**	P	**P**	**11 24 35.1**	**+1.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**40.82**	**337**	P	**P**	**11 25 04.8**	**+1.9**
	comp=Z,0.6nm,0.5s,mb3.7,baz=112,slow=8.8,SNR=12						
ARCES	**ARCESS Array B**	**40.82**	**337**	P	**P**	**11 25 04.9**	**+1.9**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**44.17**	**323**	P	**P**	**11 25 30.8**	**+0.7**
	comp=Z,0.7nm,0.5s,mb3.6,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.17**	**323**	P	**P**	**11 25 30.8**	**+0.8**
	comp=Z,0.7nm,0.5s,mb3.6,baz=96,slow=7.7,SNR=5.4						
NOA	**NORSAR Array B**	**44.17**	**323**	P	**P**	**11 25 30.8**	**+0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.97**	**269**	P	**P**	**11 28 06.7**	**-0.2**
	comp=Z,0.9nm,0.4s,mb3.9,baz=50,slow=5.8,SNR=13						
BOSA	**Boshof**	**78.25**	**220**	P	**P**	**11 29 20.2**	**+0.3**
	comp=Z,1.5nm,0.5s,mb4.0,baz=8.2,slow=2.1,SNR=3.6						
BOSA	**Boshof**	**78.25**	**220**	P	**P**	**11 29 20.2**	**+0.2**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
YKA	**Yellowknife Ar**	**80.78**	**3**	P	**P**	**11 29 35.2**	**+1.6**
	comp=Z,1.4nm,0.3s,mb4.2,baz=350,slow=5.6,SNR=52						
YKA	**Yellowknife Ar**	**80.78**	**3**	P	**P**	**11 29 35.2**	**+1.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YKA	**Yellowknife Ar**	**80.78**	**3**	P	**P**	**11 29 35.2**	**+1.6**
WRA	**Warramunga Arr**	**82.02**	**122**	P	**P**	**11 29 40.5**	**+0.3**
	comp=Z,0.8nm,0.6s,mb3.7,baz=324,slow=5.1,SNR=17						
WRA	**Warramunga Arr**	**82.02**	**122**	P	**P**	**11 29 40.5**	**+0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**84.31**	**125**	P	**P**	**11 29 52.4**	**+0.4**
	comp=Z,0.7nm,0.6s,mb3.7,baz=311,slow=5.0,SNR=17						
ASAR	**Alice Springs**	**84.31**	**125**	P	**P**	**11 29 52.4**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*BJI **24** 11:32:56.4, 41.15N×142.73E, h69km, mB4.9, mb4.6, Ms3.7, Msz3.5*
*NIED **24** 11:33:00, 4100N×14200E, h50km, Mw4.2 Best double couple: M0 1.97000×10^15 NP1:φs21.00000°, δ76.00000°, λ105.00000°. NP2:φs153.00000°, δ21.00000°, λ45.00000°.*
*ISCJB **24** 11:33:01.3±0.3, 4103N±003×14198E±004, h72km, mb4.4/51, Error ellipse: s-maj=5.2km s-min=3.1km az=61.2*
*JMA **24** 11:33:01.5±0.1, 4104N×14205E, h55km±2km, M4.3 Broadband fault plane solution: P waves. NP1: φs178.00000°, δ9.00000°, λ62.00000°. NP2:φs27.00000°, δ82.00000°, λ94.00000°. Principal axes: T Plg53.0000°, Azm302.0000°; N Plg4.0000°, Azm206.0000°; P Plg37.0000°, Azm113.0000°;*
JMA Felt II J1.
*MOS **24** 11:33:01.1±1.2, 4102N×14183E, h66km, mb4.6/30 Error ellipse: s-maj=10.8km s-min=6.3km az=108.6*
*IDC **24** 11:33:02.9±0.6, 4102N×14193E, h71km±4km, mb3.9/16, mb1 4.1/19, mb1mx4.0/25, mbtmp4.2/19, MS3.3/4, Ms1 3.3/4, ms1mx3.0/28, Error ellipse: s-maj=14.9km s-min=9.3km az=103.0*
*NEIC **24** 11:33:02.7±0.3, 4104N×14205E, mb4.6/21, MW4.1(NIED), Error ellipse: s-maj=7.7km s-min=5.6km az=132.0*
NEIC Recorded [2 JMA] in Aomori and Iwate Prefectures, Honshu. Recorded [1 JMA] in southwestern Hokkaido.
ISC 24 11:33:02.9±0.3,4106N±003×14194E±005,h74km, h74km±1.9km:pP-P,n138,σ1º14/152,mb4.4/51,12C-15D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTM	**Tenmabayashi**	**0.71**	**248**	⇓P	**Pn**	**11 33 16.7**	**-1.5**
JTM				S	**Sn**	**11 33 27.5**	**-2.1**
JOT	**Ohata**	**0.74**	**296**	⇓P	**Pn**	**11 33 16.9**	**-1.7**
JOT				S	**Sn**	**11 33 28.2**	**-1.9**
JANG	**Nango**	**0.76**	**205**	⇓P	**Pn**	**11 33 16.4**	**-2.3**
JANG				S	**Sn**	**11 33 26.9**	**-3.5**
JKB	**Kayabe**	**1.07**	**321**	⇓P	**Pn**	**11 33 21.1**	**-1.4**
JKB				S	**Sn**	**11 33 35.5**	**-1.6**
JSR	**Shiriuchi**	**1.24**	**293**	⇓P	**Pn**	**11 33 23.9**	**-0.7**
JAH	**Hinai**	**1.32**	**229**	⇓P	**Pn**	**11 33 24.6**	**-1.0**
JAH				S	**Sn**	**11 33 42.5**	**-0.2**
ERM	**Erimo**	**1.32**	**43**

comp=Z,41nm,5.4s
MDJ Mudanjiang 9.74 295 *e*Pn **Pn** **11 35 23.7 +3.5**
comp=Z,20nm,0.9s
MA2 Magadan 19.34 14⇑ *e*P **Pn** **11 37 22.3 -1.8**
SSE Sheshan 19.46 246 P **Pn** **11 37 24.5 -1.0**
SSE AMB AMB
comp=Z,14nm,0.7s
SSE AMB AMB
comp=Z,36nm,4.5s
NJ2 Nanjing 20.56 251 *e*P **P** **11 37 40.0 +4.4**
NJ2 AP 11 37 55.9
NJ2 PP 11 38 04.6
NJ2 XP sP 11 38 05.8 +5.9
NJ2 S **S** **11 41 20.0 -1.4**
NJ2 XS sS 11 41 44.0 -2.3
NJ2 AMB AMB
comp=Z,30nm,0.6s
NJ2 AMB AMB
comp=Z,310nm,11.7s
NJ2 LR LR
comp=N,950nm,24.7s
NJ2 LR LR
comp=E,900nm,23.6s
NJ2 LR LR
comp=Z,210nm,18.0s
YAK Yakutsk 22.27 345⇓ *e*P **P** **11 37 53.1 -0.7**
YAK pmax pmax
comp=Z,16nm,0.9s,mb4.3
YAK Yakutsk 22.27 345 *e*P **P** **11 37 50.7 -3.1**
comp=Z,13nm,0.5s,mb4.5
HHC Hu-ho-hao-te 22.89 280 *e*P **P** **11 38 00.4 0.0**
HHC AP 11 38 17.4
HHC XP sP 11 38 25.0 +0.1
HHC PP 11 38 33.5
HHC PCP PcP 11 41 49.3 +0.8
HHC S **S** **11 42 00.5 -3.9**
HHC XS sS 11 42 29.9 -2.4
HHC SCP ScP 11 45 20.9 +1.1
HHC PCS PcS 11 45 27.4 -0.2
HHC AMB AMB
comp=Z,16nm,0.8s,mb4.4
HHC AMB AMB
comp=Z,62nm,7.8s
HHC LR LR
comp=N,97nm,18.0s
HHC LR LR
comp=E,116nm,15.2s
HHC LR LR
comp=Z,59nm,16.1s
BOD Bodaibo 24.45 323 *e*P **P** **11 38 13.0 -1.8**
BOD pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
ULN Ulaanbaatar 25.65 297 *e*P **P** **11 38 26.7 +1.0**
comp=Z,3.2nm,0.9s,mb3.8
SONM Songino Array 26.09 297 P **P** **11 38 30.0 +0.3**
comp=Z,2.2nm,0.5s,mb3.8,baz=77,slow=8.1,SNR=16
SONM LR LR 11 49 26.8
comp=Z,41nm,18.9s,baz=269,slow=38
SONM Songino Array 26.09 297 P **P** **11 38 30.0 +0.3**
SONM pmax pmax
comp=Z,2.0nm,0.5s
SONM MLR MLR
comp=Z,41nm,18.9s
TLY Talaya 28.17 305⇓ *e*P **P** **11 38 47.6 -0.7**
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
ZAK Zakamensk 28.27 302 *e*P **P** **11 38 49.4 +0.2**
LZH Lanzhou 30.03 273 *e*P **P** **11 39 07.5 +2.7**
LZH AP pP 11 39 26.3 +4.1
LZH AMB AMB
comp=Z,13nm,1.0s,mb4.5
LZH AMB AMB
comp=Z,80nm,4.5s
BILL Bilibino 30.07 18 *i* P **P** **11 39 07.3 +2.2**
GTA Gaotai 31.98 281 P **P** **11 39 22.5 +0.6**
GTA AMB AMB
comp=Z,3.0nm,0.8s,mb4.1
CD2 Chengdu 32.29 264 *e*P **P** **11 39 24.5 -0.2**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
KRAR Krasnoyarsk 34.95 312⇓ *e*P **P** **11 39 45.3 -2.5**
KRAR pmax pmax
comp=Z,36nm,0.5s,mb5.5
KMI Kunming 36.15 256 P **P** **11 40 03.3 +5.3**
KMI AP pP 11 40 20.8 +5.1
KMI XP sP 11 40 28.4 +4.2
KMI PP PP 11 41 25.8 +4.4
KMI S **S** **11 45 33.8 +1.4**
KMI XS sS 11 46 05.0 +2.4
KMI SSS 11 48 33.1
KMI AMB AMB
comp=Z,5.0nm,1.0s,mb4.4
KMI AMB AMB
comp=Z,51nm,6.1s
KMI LR LR
comp=N,117nm,15.5s
KMI LR LR
comp=E,119nm,17.6s
KMI LR LR
comp=Z,90nm,19.1s
WMQ Urumqi 39.53 293 *e*P **P** **11 40 29.0 +2.5**
WMQ AP pP 11 40 47.0 +2.7
WMQ XP sP 11 40 57.0 +4.2
WMQ PP PP 11 42 06.0 +7.5
WMQ S **S** **11 46 26.0 +2.5**
WMQ SS SS 11 49 18.0 -2.7
WMQ AMB AMB
comp=Z,18nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,102nm,4.0s
WMQ LR LR
comp=N,24nm,12.0s
WMQ LR LR
comp=E,46nm,12.0s
WMQ LR LR
comp=Z,27nm,12.0s
ZAL Zalesovo 39.62 309 LR LR 11 58 22.0
comp=Z,50nm,18.4s,baz=70,slow=38
MK31 Makanchi Array 42.44 299 P **P** **11 40 50.8 +0.4**
MK31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
MKAR Makanchi Array 42.44 299 P **P** **11 40 50.9 +0.5**
comp=Z,3.1nm,0.5s,mb4.3,baz=77,slow=10,SNR=38
MKAR pP pP 11 41 07.9 -0.5
comp=Z,2.5nm,0.7s,baz=84,slow=11,SNR=3.6
MKAR Makanchi Array 42.44 299 P **P** **11 40 50.9 +0.5**
MKAR *PP pP 11 41 07.9 -0.5
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 42.44 299 P **P** **11 40 50.9 +0.5**
MKAR pP pP 11 41 07.9 -0.5
CHTO Chiang Mai 42.81 252 *e*P **P** **11 40 54.4 +1.0**
CHTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
CHTO Chiang Mai 42.81 252 *e*P **P** **11 40 54.4 +1.0**
comp=Z,4.3nm,0.6s,mb4.4
COLA College 45.49 34⇓ *e*P **P** **11 41 18.3 +3.5**
JIRN Jiri 47.18 272 *e*P **P** **11 41 29.6 +1.5**
GUN Gumba 47.29 272 *e*P **P** **11 41 30.5 +1.6**
comp=Z,54nm,0.4s,mb5.6
KKN Kakani 47.80 272 *e*P **P** **11 41 34.2 +1.3**
comp=Z,39nm,0.8s,mb5.3
KKN Kakani 47.80 272 *e*P **P** **11 41 34.2 +1.3**
KKN pmax pmax
comp=Z,39nm,0.8s,mb5.3
PKI Pulchoki 47.82 272 *e*P **P** **11 41 34.1 +1.1**
comp=Z,11nm,0.5s,mb5.0
PKI Pulchoki 47.82 272 *e*P **P** **11 41 34.1 +1.1**
PKI pmax pmax
comp=Z,11nm,0.5s,mb4.9
CHKZ Chkalovo 47.93 311⇑ *e*P **P** **11 41 34.1 +0.2**
CHKZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
CHKZ Chkalovo 47.93 311⇑ *e*P **P** **11 41 34.1 +0.2**
comp=Z,3.6nm,0.6s,mb4.4
VOSK Vostochnaya 47.98 309 P **P** **11 41 34.0 -0.2**
DMN Daman 48.03 272 *e*P **P** **11 41 36.1 +1.5**
GKN Gorkha 48.18 273 *e*P **P** **11 41 36.9 +1.1**
comp=Z,18nm,0.5s,mb5.2
BVA0 Borovoye Array 48.24 310 P **P** **11 41 36.8 +0.5**
BVAR Borovoye Array 48.24 310 P **P** **11 41 36.8 +0.6**
comp=Z,4.3nm,0.4s,mb4.7,baz=74,slow=8.8,SNR=18
BVAR Borovoye Array 48.24 310 P **P** **11 41 36.8 +0.5**
BVAR pmax pmax
comp=Z,4.0nm,0.4s

EGAK Eagle 48.34 34 *e*P **P** **11 41 37.0 -0.1**
AAK Ala-Archa 49.03 296 *c i*P **P** **11 41 42.1 -0.3**
AAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ZRNK Zerenda 49.06 310 P **P** **11 41 43.3 +0.7**
ZRNK pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ZRNK Zerenda 49.06 310⇑ *e*P **P** **11 41 43.3 +0.7**
comp=Z,7.2nm,0.8s,mb4.7
KOLN Koldanda 49.08 274 *e*P **P** **11 41 43.9 +1.2**
comp=Z,29nm,1.0s,mb5.2
INK Inuvik 50.64 29 P **P** **11 41 54.7 +0.1**
comp=Z,2.8nm,0.6s,mb4.5,baz=287,slow=12,SNR=8.0
INK pP pP 11 42 12.3 -0.7
comp=Z,1.6nm,0.4s,baz=300,slow=6.0,SNR=3.1
INK Inuvik 50.64 29 *e*P **P** **11 41 55.1 +0.6**
INK *e*PP pP 11 42 12.7 -0.3
INK pmax pmax
comp=Z,3.0nm,0.7s
INK Inuvik 50.64 29 *e*P **P** **11 41 55.1 +0.5**
comp=Z,2.8nm,0.7s,mb4.4
INK *e*pP pP 11 42 12.7 -0.3
KK31 Karatay Array 51.54 298 *i* P **P** **11 42 01.5 +0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KKAR Karatay Array 51.54 298 *i* P **P** **11 42 01.5 +0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
ARU Arti 53.66 317⇑ *i*P **P** **11 42 17.0 0.0**
ARU *e* 11 43 19.8
ARU *e* 11 44 17.7
AB31 Akbulak array 55.72 308 *e*P **P** **11 42 32.2 +0.4**
ARU *e*S **S** **11 49 44.1 -1.1**
AB31 pmax pmax
ARU *e*SS SS 11 53 26.3 -0.3
comp=Z,1.0nm,0.3s,mb4.3
ARU pmax pmax
AKTK Aktyubinsk 56.34 310 P **P** **11 42 36.7 +0.4**
AKTO Aktyubinsk 56.34 310 P **P** **11 42 36.7 +0.4**
comp=Z,4.0nm,0.7s,mb4.6,baz=66,slow=12,SNR=14
AKTO Aktyubinsk 56.34 310 P **P** **11 42 36.7 +0.4**
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
YKA Yellowknife Ar 60.14 31 P **P** **11 43 03.1 +0.4**
comp=Z,0.2nm,0.4s,mb3.5,baz=60,slow=8.2,SNR=4.9
YKA pP pP 11 43 21.3 -0.4
comp=Z,0.5nm,0.7s,baz=307,slow=6.7,SNR=3.7
YKA Yellowknife Ar 60.14 31 P **P** **11 43 03.1 +0.4**
YKA pP pP 11 43 21.3 -0.4
ARCES ARCESS Array B 60.39 339 P **P** **11 43 04.3 -0.1**
comp=Z,0.3nm,0.5s,mb3.6,baz=60,slow=7.3,SNR=4.7
ARCES pP pP 11 43 21.3 -2.1
comp=Z,0.6nm,0.5s,baz=46,slow=7.7,SNR=1.9
WRAB Tennant Creek 61.09 188⇓ *e*P **P** **11 43 09.7 +0.5**
WRA Warramunga Arr 61.10 188 P **P** **11 43 08.6 -0.6**
comp=Z,1.6nm,0.5s,mb4.3,baz=7.8,slow=7.7,SNR=56
WRA Warramunga Arr 61.10 188 P **P** **11 43 08.6 -0.7**
WRA pmax pmax
comp=Z,2.0nm,0.5s
ASAR Alice Springs 64.83 188 P **P** **11 43 33.1 -0.8**
comp=Z,0.4nm,0.9s,baz=140,slow=9.9,SNR=4.3
ASAR pP pP 11 43 52.9 -0.3
comp=Z,0.6nm,0.6s,baz=359,slow=6.4,SNR=3.1
OBN Obninsk 65.14 322 *c e*P **P** **11 43 35.5 -0.5**
OBN pmax pmax
comp=Z,7.0nm,0.4s,mb4.8
FINES FINESS Array B 65.46 332 P **P** **11 43 38.0 0.0**
comp=Z,3.9nm,0.4s,mb4.6,baz=44,slow=8.0,SNR=32
FINES FINESS Array B 65.46 332 P **P** **11 43 38.1 0.0**
FINES pmax pmax
comp=Z,4.0nm,0.4s
KIV Kislovodsk 68.61 310 *d i*P **P** **11 43 59.8 +1.8**
KIV *e* pP 11 44 23.4 +6.0
KIV pmax pmax
comp=Z,16nm,0.8s,mb4.9
KIV Kislovodsk 68.61 310 *e*P **P** **11 43 59.4 +1.3**
comp=Z,12nm,0.8s,mb4.8
NB2 NORSAR Subarra 70.64 337 P **P** **11 44 10.1 -0.5**
comp=Z,5.1nm,0.8s,mb4.4,baz=37,slow=6.2
NOA NORSAR Array B 70.64 337 P **P** **11 44 10.1 -0.4**
comp=Z,3.6nm,0.7s,mb4.3,baz=38,slow=6.1,SNR=19
NOA LR LR 12 21 39.9
comp=Z,20nm,19.2s,baz=245,slow=41
DLMT Dillon 71.22 46 *e*P **P** **11 44 14.7 +0.6**
comp=Z,2.2nm,0.7s,mb4.1
AKASG Malin Array Be 71.38 322 P **P** **11 44 15.3 +0.3**
comp=Z,3.9nm,0.5s,mb4.5,baz=44,slow=5.8,SNR=34
AKASG pP pP 11 44 34.4 -0.1
comp=Z,1.5nm,0.5s,baz=43,slow=5.7,SNR=4.4
AKASG Malin Array Be 71.38 322 P **P** **11 44 15.3 +0.3**
AKASG *PP pP 11 44 34.4 -0.1
AKASG pmax pmax
comp=Z,4.0nm,0.5s
NVAR Mina Array Bea 72.28 54 P **P** **11 44 21.7 +1.3**
comp=Z,0.8nm,0.8s,mb3.6,baz=295,slow=4.8,SNR=6.0
NVAR pP pP 11 44 40.7 +0.8
comp=Z,0.5nm,0.6s,baz=304,slow=6.4,SNR=4.0
NVAR Mina Array Bea 72.28 54 P **P** **11 44 21.7 +1.3**
NVAR pP pP 11 44 40.7 +0.8
BW06 Boulder Array 74.58 46 *e*P **P** **11 44 34.5 +0.6**
comp=Z,0.7nm,0.6s,mb3.6
PDAR Pinedale Array 74.58 46 P **P** **11 44 34.7 +0.8**
comp=Z,0.7nm,0.6s,mb3.5,baz=280,slow=2.7,SNR=9.2
PDAR pP pP 11 44 53.1 -0.4
comp=Z,0.6nm,0.6s,baz=229,slow=2.6,SNR=4.9
BRTR Keskin Array B 76.50 311 P **P** **11 44 45.3 +0.4**
comp=Z,0.6nm,0.5s,mb3.6,baz=105,slow=2.8,SNR=4.1
CLL Collm 77.82 330 *e*P **P** **11 44 53.0 +0.7**
PV10 Paradox Valley 77.83 49 *e*P **P** **11 44 53.8 +1.5**
KHC Kasperske Hory 79.33 328⇓ *i*P **P** **11 45 02.0 +1.4**
GERES GERESS Array B 79.51 328 P **P** **11 45 02.3 +0.7**
comp=Z,0.9nm,0.4s,mb3.9,baz=54,slow=6.8,SNR=7.5
GERES LR LR 12 26 56.8
comp=Z,18nm,18.6s,baz=272,slow=41
LOR Lormes 84.50 333 *e*P **P** **11 45 26.9 -0.8**
comp=Z,7.6nm,0.8s,mb4.3
LOR Lormes 84.50 333 *e*P **P** **11 45 26.9 -0.8**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
LOR Lormes 84.50 333 *e*P **P** **11 45 26.9 -0.8**
comp=Z,3.8nm,0.8s,mb4.4
SSF Saint Saulge 84.80 333 *e*P **P** **11 45 29.1 -0.1**
comp=Z,8.4nm,0.8s,mb4.4
SSF Saint Saulge 84.80 333 *e*P **P** **11 45 29.1 -0.1**
SSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SSF Saint Saulge 84.80 333 *e*P **P** **11 45 29.1 -0.1**
comp=Z,4.2nm,0.8s,mb4.4
AVF Avril sur Loir 85.08 333 *e*P **P** **11 45 30.8 +0.2**
comp=Z,9.5nm,0.7s,mb4.5
AVF Avril sur Loir 85.08 333 *e*P **P** **11 45 30.8 +0.2**
AVF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
AVF Avril sur Loir 85.08 333 *e*P **P** **11 45 30.8 +0.2**
comp=Z,4.8nm,0.7s,mb4.5
MBDF Montbardon 85.61 330 *e*P **P** **11 45 33.2 0.0**
comp=Z,7.6nm,0.7s,mb4.5
MBDF Montbardon 85.61 330 *e*P **P** **11 45 33.2 0.0**
MBDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
MBDF Montbardon 85.61 330 *e*P **P** **11 45 33.2 0.0**
comp=Z,3.8nm,0.7s,mb4.4
ORIF Oris-en-Rattie 85.78 330 *e*P **P** **11 45 34.5 +0.4**
comp=Z,6.3nm,0.6s,mb4.4
ORIF Oris-en-Rattie 85.78 330 *e*P **P** **11 45 34.5 +0.4**
ORIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
ORIF Oris-en-Rattie 85.78 330 *e*P **P** **11 45 34.5 +0.4**
comp=Z,3.2nm,0.6s,mb4.4
TCF Toulx Ste Croi 85.91 333 *e*P **P** **11 45 34.1 -0.6**
VIVF Saint-Julien-l 86.28 331 *e*P **P** **11 45 36.9 +0.3**
comp=Z,9.6nm,0.8s,mb4.5
VIVF Saint-Julien-l 86.28 331 *e*P **P** **11 45 36.9 +0.3**
VIVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 86.28 331 *e*P **P** **11 45 36.9 +0.3**
comp=Z,4.8nm,0.8s,mb4.5
CAF Calviac 87.15 333 *e*P **P** **11 45 41.9 +1.1**
comp=Z,7.7nm,0.7s,mb4.5
CAF Calviac 87.15 333 *e*P **P** **11 45 41.9 +1.1**
CAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CAF Calviac 87.15 333 *e*P **P** **11 45 41.9 +1.1**

comp=Z,3.8nm,0.7s,mb4.4
SNAA Sanae 144.70 198 *e*PKPdf PKPdf 11 52 28.5 -2.6
SNAA *e* 11 52 32.3
SNAA *e* 11 52 55.7
SNAA Sanae 144.70 198 *e*PKPdf PKPdf 11 52 28.9 -2.2
VNA3 Neumayer Olymp 146.55 196 *e*PKPdf PKPdf 11 52 34.3 0.0
VNA3 *e* 11 52 35.8
VNA3 *e* 11 52 44.5
VNA3 *e* 11 52 58.5
VNA3 *e* 11 53 00.2
VNA3 *e* 11 53 09.4
VNA3 *e* 11 53 13.8
VNA1 Neumayer--Stat 146.68 198 *e*PKPdf PKPdf 11 52 35.4 +0.9
VNA1 *e* 11 52 36.8
VNA1 *e* 11 52 44.4
VNA1 *e* 11 52 58.3
VNA1 *e* 11 53 00.4

*IDC **24** 11:54:52.5±0.9, 965N×12224E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/18, mbtmp4.1/8, MS3.1/1, Ms1 3.1/1, ms1mx2.2/30, Error ellipse: s-maj=119.5km s-min=16.2km az=68.0*
*NEIC **24** 11:54:56.1±8.3, 960N×122.14E, h23km±58km, mb4.8/1, Error ellipse: s-maj=33.0km s-min=8.2km az=60.0*
*MAN **24** 11:54:56.4, 958N×12189E, h22km, mb3.2, ML4.5, MS2.5*
*ISCJB **24** 11:54:57.6±0.5, 955N±003×12198E±003, h53km±6km, mb4.1/9, Error ellipse: s-maj=5.3km s-min=4.9km az=154.5*

ISC 24 11:54:59.0±0.5, 957N±003×12200E±003, h46km±6km, n31, σ0°72/39, mb4.1/9, 2C-6D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**1.24**	**100**	⇓*i*P	**Pn**	**11 55 19.5**	**-0.3**
SNPH				*i* S	**Sn**	**11 55 36.5**	**+1.1**
DCPH	**Dipolog City**	**1.65**	**126**	⇓*i*P	**Pn**	**11 55 24.8**	**-0.7**
DCPH				*i* S	**Sn**	**11 55 45.6**	**+0.1**
TBP	**Tagbilaran**	**1.84**	**86**	*e*P	**Pn**	**11 55 28.3**	**+0.2**
TBP				*e*S	**Sn**	**11 55 51.2**	**+1.1**
IPIL	**Ipil**	**1.85**	**162**⇑	*e*P	**Pn**	**11 55 27.7**	**-0.6**
IPIL				*e*S	**Sn**	**11 55 49.2**	**-1.3**
IPIL	**Ipil**	**1.85**	**162**	*e*P	**Pn**	**11 55 27.8**	**-0.5**
IPIL				*e*S	**Sn**	**11 55 48.4**	**-2.0**
LLP	**Lapu-Lapu**	**2.07**	**69**⇓	*i*P	**Pn**	**11 55 31.0**	**-0.3**
LLP				*i* S	**Sn**	**11 55 54.7**	**-1.2**
RCP	**Roxas**	**2.11**	**20**⇓	*e*P	**Pn**	**11 55 31.4**	**-0.4**
RCP				*e*S	**Sn**	**11 55 57.7**	**+0.9**
KALP	**Kalibo**	**2.12**	**9**⇑	*e*P	**Sn**	**11 55 57.0**	**-0.1**
OTRP	**Odiongan**	**2.78**	**0**	*e*P	**Pn**	**11 55 39.8**	**-1.2**
CGP	**Cagayan de Oro**	**2.88**	**112**⇓	*e*P	**Pn**	**11 55 42.8**	**+0.4**
CGP				*i* S	**Sn**	**11 56 16.8**	**+1.0**
PPR	**Puerto Princes**	**3.23**	**274**⇓	*i*P	**Pn**	**11 55 46.0**	**-1.3**
PPR				*i* S	**Sn**	**11 56 25.2**	**+0.8**
PLP	**Palo**	**3.33**	**61**	*i* P	**Pn**	**11 55 48.8**	**+0.2**
PLP				*i* S	**Sn**	**11 56 26.6**	**-0.3**
TSM	**Tawau**	**6.65**	**218**	P	**Pn**	**11 56 35.4**	**+1.2**
KKM	**Kota Kinabalu**	**6.72**	**239**	P	**Pn**	**11 56 36.2**	**+1.2**
KKM	**Kota Kinabalu**	**6.72**	**239**	*e*Pn	**Pn**	**11 56 35.2**	**+0.1**
KKM				*e*Sn	**Sn**	**11 57 50.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**27.72**	**173**	P	**P**	**12 00 43.2**	**+0.2**
	1.2nm,0.8s,mb3.6,baz=1.0,slow=10,SNR=6.6						
JHJ	**Hachijo jima 2**	**28.61**	**32**	LR	LR	12 12 42.7	
	comp=Z,34nm,18.0s,baz=5.1,slow=38						
WRAB	**Tennant Creek**	**31.73**	**158**	*e*P	**P**	**12 01 18.4**	**-0.2**
	6.1nm,0.5s,mb4.7						
WRAB				*e*pP	pP	12 01 29.6	-1.0
WRA	**Warramunga Arr**	**31.74**	**158**	P	**P**	**12 01 18.1**	**-0.5**
	3.8nm,0.6s,mb4.4,baz=337,slow=9.5,SNR=62						
WB2	**Warramunga Arr**	**31.74**	**158**	*e*P	**P**	**12 01 18.0**	**-0.6**
AS31	**Alice Springs**	**35.02**	**161**	*e*P	**P**	**12 01 47.6**	**+0.5**
ASAR	**Alice Springs**	**35.02**	**161**	P	**P**	**12 01 47.5**	**+0.4**
	4.6nm,0.6s,mb4.6,baz=342,slow=7.3,SNR=100						
ASAR				PcP	PcP	12 04 18.6	+0.1
	0.5nm,0.6s,baz=350,slow=2.9,SNR=6.5						
ASPA	**Alice Springs**	**35.02**	**161**	*e*P	**P**	**12 01 47.6**	**+0.5**
SONM	**Songino Array**	**40.36**	**344**	P	**P**	**12 02 32.2**	**0.0**
	0.8nm,0.9s,mb3.5,baz=155,slow=8.8,SNR=4.6						
STKA	**Stephens Creek**	**45.27**	**156**	P	**P**	**12 03 11.3**	**-0.7**
	2.6nm,1.0s,mb4.0,baz=322,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**50.12**	**325**	P	**P**	**12 03 50.5**	**+1.0**
	1.5nm,0.6s,mb4.2,baz=121,slow=8.7,SNR=13						
ARCES	**ARCESS Array B**	**83.38**	**339**	P	**P**	**12 07 20.9**	**-0.4**
	0.9nm,0.8s,mb3.9,baz=101,slow=5.1,SNR=3.9						
ARCES	**ARCESS Array B**	**83.38**	**339**	P	**P**	**12 07 20.9**	**-0.4**
AKASG	**Malin Array Be**	**84.43**	**320**	P	**P**	**12 07 26.6**	**-0.1**
	0.2nm,0.3s,mb3.8,baz=69,slow=3.8,SNR=4.6						
PLCA	**Paso Flores**	**147.02**	**162**	PKPbc	PKPbc	12 14 37.7	+1.0
	1.3nm,0.6s,baz=229,slow=1.9,SNR=7.2						
PLCA	**Paso Flores**	**147.02**	**162**	PKPbc	PKPbc	12 14 37.7	+1.0

*HLW **24** 12:52:30.6, 2979N×3678E, h20km, Mb3.4*
*ISCJB **24** 12:52:33.2±1.2, 2987N±005×3623E±008, h10km, Error ellipse: s-maj=9.7km s-min=7.5km az=31.2*
*GII **24** 12:52:33.3±0.5, 2991N×3618E, h0km±11km, ML1.7/2*

ISC 24 12:52:33.3±1.2, 2987N±006×3627E±008, h10km, n15, σ0°91/19, 3C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.07**	**263**	Pg	**Pg**	**12 52 53.1**	**-0.8**
EIL	**Elat**	**1.16**	**260**	Pg	**Pg**	**12 52 55.0**	**-0.6**
EIL	**Elat**	**1.16**	**260**	Pg	**Pg**	**12 52 55.0**	**-0.7**
ZFRI	**Zfri**	**1.16**	**306**	Pg	**Pg**	**12 52 54.0**	**-1.6**
MBH	**Mount Berech**	**1.18**	**266**	Pg	**Pg**	**12 52 54.6**	**-1.3**
MBH				Sg	**Sg**	**12 53 12.1**	**+0.8**
PRNI	**Paran**	**1.20**	**294**	Pg	**Pg**	**12 52 54.5**	**-1.8**
PRNI				Sg	**Sg**	**12 53 11.9**	**+0.1**
HBST	**Basata**	**1.49**	**244**	⇑P	**Pn**	**12 53 00.4**	**+0.3**
MZDA	**Masada**	**1.63**	**332**	Pn	**Pn**	**12 53 02.2**	**+0.1**
MASH	**Mash'abbe Sade**	**1.70**	**311**	Pn	**Pn**	**12 53 03.6**	**+0.6**
SVTA	**Shivta**	**1.77**	**307**	Pn	**Pn**	**12 53 03.9**	**-0.1**
HDHB	**Dhahab**	**1.84**	**232**	⇑P	**Pn**	**12 53 04.4**	**-0.6**
DRGI	**Dragot**	**1.87**	**336**	Pn	**Pn**	**12 53 05.9**	**+0.5**
KZIT	**Kziot**	**1.92**	**303**	Pn	**Pn**	**12 53 07.2**	**+1.2**
KZIT				Sn	**Sn**	**12 53 31.1**	**+1.0**
HNKL	**Nakhl**	**1.99**	**272**⇑	*i*P	**Pn**	**12 53 08.1**	**+1.2**
HKAT	**Jabal Katrina**	**2.40**	**237**	P	**Pn**	**12 53 12.4**	**-0.2**
HKAT				S	**Sn**	**12 53 43.3**	**+1.2**

*NEIC **24** 12:54:36.1, 3167S×6749W, h150km, MG4.3(GUC), After GUC.*

GUC 24 12:54:36.1±0.5, 3167S×6749W, h150km, MD3.9, ML4.3, 3C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDZ	**Mendoza**	**1.68**	**223**	*e*P	Pn	12 55 03.4	-4.1
MDZ				*e*		12 55 26.1	
JACH	**Jahuel**	**2.82**	**248**	*e*P	Pn	12 55 22.1	+0.9
JACH				*i* S	Sn	12 55 57.1	+1.1
FCH	**Farellones**	**2.89**	**234**	*e*P	Pn	12 55 23.5	+1.4
FCH				*i* S	Sn	12 55 59.5	+1.9
FCH				AML	AML	12 56 01.0	
	comp=N,462nm,0.5s						
CMCH	**Combarbala**	**3.05**	**278**	*e*P	Pn	12 55 24.9	+0.9
CMCH				*i* S	Sn	12 56 02.1	+1.0
PEL	**Peldehue**	**3.08**	**241**	*e*P	Pn	12 55 25.2	+0.8
PEL				*i* S	Sn	12 56 02.4	+0.6
PEL				AML	AML	12 56 09.3	
	comp=E,460nm,0.6s						
PEL	**Peldehue**	**3.08**	**241**	*e*P	Pn	12 55 25.2	+0.8
PEL				*i* S	Sn	12 56 02.4	+0.6
CLCH	**Cerro Calan**	**3.10**	**235**⇑	*i*P	Pn	12 55 28.2	+3.6
CLCH				*i* S	Sn	12 56 05.8	+3.5
CLCH				AML	AML	12 56 08.6	
	comp=N,716nm,0.5s						
PCH	**Pirque**	**3.21**	**232**⇑	*i*P	Pn	12 55 27.0	+0.9
PCH				*i* S	Sn	12 56 05.8	+0.9
RCDM	**Rinconada Maip**	**3.34**	**236**	AML	AML	12 56 14.3	
	comp=N,388nm,0.5s						
OVCH	**Ovalle**	**3.36**	**287**	AML	AML	12 56 23.4	
	comp=E,641nm,0.3s						
CHNG	**Los Chungos**	**3.43**	**265**	*e*P	Pn	12 55 33.2	+4.4
CHNG				*i* S	Sn	12 56 13.4	+3.7
CHNG				AML	AML	12 56 18.9	
	comp=N,192nm,0.6s						
PACH	**Papudo**	**3.46**	**254**	*i* P	Pn	12 55 30.1	+0.7
PACH				*i* S	Sn	12 56 11.0	+0.4

PACH				*e*S		Sn	12 56 11.1 +0.5
CHCH	**Chadas Angostu**	**3.50**	**229**	*e*P		Pn	12 55 30.6 +0.8
CHCH				*e*S		Sn	12 56 12.2 +0.8
TACH	**Talagante**	**3.52**	**235**	⇑*i*P		Pn	12 55 30.4 +0.3
CACH	**El Canelo**	**3.58**	**226**	*e*P		Pn	12 55 32.3 +1.4
CACH				*e*S		Sn	12 56 14.7 +1.4
LCCH	**Las Cruces**	**3.89**	**241**	*e*P		Pn	12 55 35.5 +0.6
LCCH				*e*S		Sn	12 56 21.0 +0.5
LNV	**Longovilo**	**4.02**	**234**	*i* P		Pn	12 55 37.2 +0.7
LNV				*e*S		Sn	12 56 24.0 +0.5
SFDO	**San Fernando**	**4.17**	**224**	*e*P		Pn	12 55 39.5 +1.0
SFDO				*e*S		Sn	12 56 27.4 +0.3

*ISCJB **24** 12:58:59.1±0.6, 5982N±004×24.13E±007, h0km, Error ellipse: s-maj=5.9km s-min=4.6km az=94.4*
*CSEM **24** 12:59:01.8±0.2, 5962N×2395E, h1km, ML2.5, Error ellipse: s-maj=7.0km s-min=4.9km az=42.0, Mining explosion.*
*NAO **24** 12:59:01.9±1.0, 5980N×2436E, ML2.2*
*HEL **24** 12:59:01.9±0.2, 5982N×2423E, h0km, ML2.5, ML2.2(NAO), Explosion*
*BER **24** 12:59:03.0±2.5, 5981N×2429E, h0km, ML2.2(NAO), Suspected explosion*

ISC 24 12:59:00.6±0.6, 5983N±004×2420E±007, h0km, n20, σ0§82/32, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.40**	**14**	*e*P	**Pg**	**12 59 08.9**	**+0.6**
MEF				*e*S	**Sg**	**12 59 14.0**	**+0.4**
PVF	**Pernaja**	**1.10**	**48**	*e*P	**Pg**	**12 59 21.3**	**-0.4**
PVF				*e*S	**Sg**	**12 59 35.3**	**-0.6**
RAF	**Rauma**	**1.70**	**316**	*e*P	**Pn**	**12 59 32.1**	**+0.5**
RAF				*e*S	**Sn**	**12 59 55.0**	**+0.9**
RAF	**Rauma**	**1.70**	**316**	P	**Pn**	**12 59 32.1**	**+0.5**
RAF				S	**Sn**	**12 59 54.9**	**+0.9**
FIA0	**FINESS Array S**	**1.87**	**29**	*e*PG	**Pg**	**12 59 36.0**	**-0.4**
FIA0				*e*SG	**Sg**	**13 00 00.1**	**-0.5**
VSU	**Vasula**	**1.89**	**135**	*e*P	**Pn**	**12 59 35.0**	**+0.8**
VSU				*e*S	**Sn**	**12 59 59.1**	**+0.5**
VSU	**Vasula**	**1.89**	**135**	Pn	**Pn**	**12 59 34.9**	**+0.8**
VSU				Lg		12 59 59.3	
VSU	**Vasula**	**1.89**	**135**	P	**Pn**	**12 59 34.9**	**+0.8**
VSU				S	**Sn**	**12 59 59.1**	**+0.4**
KEF	**Keuruu**	**2.37**	**8**	MSG		13 00 16.8	
	comp=Z,25nm,0.1s						
KAF	**Kangasniemi**	**2.51**	**23**	*e*PB	**Pb**	**12 59 45.4**	**-1.2**
KAF				*e*SB	**Sb**	**13 00 18.2**	**+0.2**
KAF				MSG		13 00 19.7	
	comp=Z,17nm,0.2s						
HFS	**Hagfors**	**5.29**	**278**	Pn	**Pn**	**13 00 21.9**	**+1.1**
	baz=90,slow=12						
HFS				Sn	**Sn**	**13 01 21.7**	**-0.8**
	baz=86,slow=28						
HFS	**Hagfors**	**5.29**	**278**	*e*P	**Pn**	**13 00 21.9**	**+1.1**
HFS				*e*S	**Sn**	**13 01 21.7**	**-0.8**
NB2	**NORSAR Subarra**	**6.54**	**286**	Pn	**Pn**	**13 00 37.6**	**-0.4**
	baz=92,slow=14						
NB2	**NORSAR Subarra**	**6.54**	**286**	*e*P	**Pn**	**13 00 37.6**	**-0.4**
BSD	**Bornholm Skovb**	**6.88**	**231**	*i* P	**Pn**	**13 00 41.1**	**-1.6**
BSD				*i* S	**Sn**	**13 01 57.1**	**-4.6**
BSD				*e*		13 03 47.8	
APA0	**Apatity Array**	**8.72**	**23**	Pn	**Pn**	**13 01 09.4**	**+1.5**
	baz=202,slow=16						
APA0	**Apatity Array**	**8.72**	**23**	*e*P	**Pn**	**13 01 09.4**	**+1.5**
APA0	**Apatity Array**	**8.72**	**23**	Pn	**Pn**	**13 01 09.4**	**+1.5**
	SNR=50						
ARA0	**ARCESS Array S**	**9.77**	**3**	Pn	**Pn**	**13 01 21.6**	**-0.7**
	baz=178,slow=14						
ARA0				Sn	**Sn**	**13 03 07.4**	**-5.2**
	baz=182,slow=28						
ARA0	**ARCESS Array S**	**9.77**	**3**	*e*P	**Pn**	**13 01 21.6**	**-0.7**
ARA0				*e*S	**Sn**	**13 03 07.4**	**-5.2**

*NEIC **24** 13:18:05.8, 3226S×71.10W, h81km, MG3.4(GUC), After GUC.*

GUC 24 13:18:05.3±1.0, 3223S×7109W, h82km±3km, MD3.4, ML3.5, 17C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTCH	**Petorca**	**0.14**	**103**	⇑*i*P	Pn	13 18 17.8	+0.8
PTCH				*i* S	Sn	13 18 26.6	+0.9
PTCH				AML	AML	13 18 27.9	
	comp=N,19μm,0.3s						
PACH	**Papudo**	**0.42**	**224**	⇓*i*P	Pn	13 18 19.2	+0.7
PACH				*i* S	Sn	13 18 29.3	+1.0
CHNG	**Los Chungos**	**0.49**	**315**	⇓*i*P	Pn	13 18 20.1	+1.0
CHNG				*i* S	Sn	13 18 30.0	+0.7
CHNG				AML	AML	13 18 31.4	
	comp=E,1μm,0.2s						
JACH	**Jahuel**	**0.62**	**137**	⇓*i*P	Pn	13 18 20.9	+0.6
JACH				*i* S	Sn	13 18 32.1	+0.7
ROCH	**El Roble**	**0.74**	**175**	⇑*i*P	Pn	13 18 22.3	+0.8
ROCH				*i* S	Sn	13 18 34.8	+1.3
ROCH	**El Roble**	**0.74**	**175**	⇑*i*P	Pn	13 18 22.3	+0.8
ROCH				*i* S	Sn	13 18 34.7	+1.2
CMCH	**Combarbala**	**1.06**	**4**	⇑*i*P	Pn	13 18 25.2	+0.1
CMCH				*i* S	Sn	13 18 40.5	+0.5
CMCH				AML	AML	13 18 41.0	
	comp=N,5μm,0.4s						
DSCH	**Colegio Aleman**	**1.24**	**159**	⇑*i*P	Pn	13 18 27.6	+0.2
DSCH				*i* S	Sn	13 18 44.7	+0.7
DSCH	**Colegio Aleman**	**1.24**	**159**	⇑*i*P	Pn	13 18 27.6	+0.2
DSCH				*i* S	Sn	13 18 44.6	+0.6
CLCH	**Cerro Calan**	**1.25**	**158**	⇓*i*P	Pn	13 18 28.2	+0.8
CLCH				*i* S	Sn	13 18 45.4	+1.3
CLCH				AML	AML	13 18 46.6	
	comp=N,978nm,0.4s						
CLCH				AML	AML	13 18 50.9	
	comp=E,1μm,0.9s						
STL	**Santa Lucia**	**1.26**	**163**	⇑*i*P	Pn	13 18 27.7	+0.1
STL				*i* S	Sn	13 18 44.7	+0.4
STL				AML	AML	13 18 45.8	
	comp=E,1μm,0.3s						
SAN	**Santiago**	**1.27**	**163**	*i* S	Sn	13 18 45.3	+0.7
SAN				AML	AML	13 18 46.6	
	comp=E,930nm,0.4s						
RCDM	**Rinconada Maip**	**1.28**	**169**	*e*P	Pn	13 18 28.2	+0.4
RCDM				*i* S	Sn	13 18 45.4	+0.6
RCDM				AML	AML	13 18 47.6	
	comp=E,2μm,0.1s						
RCDM	**Rinconada Maip**	**1.28**	**169**	*e*P	Pn	13 18 28.2	+0.4
RCDM				*i* S	Sn	13 18 45.4	+0.6
FCH	**Farellones**	**1.28**	**148**	⇑*i*P	Pn	13 18 29.4	+1.5
FCH				*i* S	Sn	13 18 47.2	+2.3
FCH				AML	AML	13 18 49.2	
	comp=E,1μm,0.2s						
LCCH	**Las Cruces**	**1.30**	**198**	⇑*i*P	Pn	13 18 28.6	+0.4
FSR	**Penalolen**	**1.33**	**159**	*e*S	Sn	13 18 47.2	+1.3
FSR				AML	AML	13 18 48.4	
	comp=N,1μm,0.5s						
ANTU	**Antumapu**	**1.39**	**164**	⇓*i*P	Pn	13 18 30.1	+0.8
ANTU				*i* S	Sn	13 18 48.2	+0.9
ANTU				AML	AML	13 18 49.2	
	comp=E,1μm,0.1s						
ANTU	**Antumapu**	**1.39**	**164**	⇓*i*P	Pn	13 18 30.1	+0.8
ANTU				*i* S	Sn	13 18 48.2	+0.9
TACH	**Talagante**	**1.42**	**175**	⇑*i*P	Pn	13 18 30.3	+0.7
TACH				*i* S	Sn	13 18 48.8	+0.7
PCH	**Pirque**	**1.47**	**161**	⇑*i*P	Pn	13 18 30.9	+0.6
PCH				*i* S	Sn	13 18 49.5	+0.5
SJCH	**San Jose de Ma**	**1.54**	**156**	⇑*i*P	Pn	13 18 31.6	+0.4
SJCH				*i* S	Sn	13 18 51.7	+1.1
SJCH				AML	AML	13 18 54.7	
	comp=N,554nm,0.5s						
SJCH	**San Jose de Ma**	**1.54**	**156**	⇑*i*P	Pn	13 18 31.6	+0.4
SJCH				*i* S	Sn	13 18 51.7	+1.1
OVCH	**Ovalle**	**1.62**	**357**	⇑*i*P	Pn	13 18 33.1	+0.9
OVCH				*i* S	Sn	13 18 53.0	+0.4
OVCH				AML	AML	13 18 56.6	
	comp=E,998nm,0.3s						
CHCH	**Chadas Angostu**	**1.74**	**168**	⇑*i*P	Pn	13 18 34.4	+0.7
CHCH				*i* S	Sn	13 18 56.5	+1.2
LNV	**Longovilo**	**1.74**	**189**	*e*P	Pn	13 18 33.5	-0.3
CACH	**El Canelo**	**1.93**	**168**	⇓*i*P	Pn	13 18 37.4	+1.1
CACH				*i* S	Sn	13 19 01.6	+1.8
CICH	**Cipreses**	**2.16**	**165**	⇑*i*P	Pn	13 18 40.4	+1.1
CICH				*i* S	Sn	13 19 06.5	+1.2
SFDO	**San Fernando**	**2.38**	**178**	⇑*i*P	Pn	13 18 42.7	+0.5

*ISCJB **24** 14:14:52.7±0.7, 5985N±004×2405E±007, h0km, Error ellipse: s-maj=6.0km s-min=5.1km az=132.3*
*IDC **24** 14:14:54.8±2.5, 5979N×2422E, h0km, mb1 3.0/2, mb1mx2.8/20, mbtmp2.9/2, ML3.0/2, Error ellipse: s-maj=26.8km s-min=7.8km az=149.0*
*NAO **24** 14:14:54.9±1.0, 5981N×2428E, ML2.1*
*HEL **24** 14:14:55.4±0.1, 5983N×2420E, h0km, ML2.0, ML2.1(NAO), Explosion*
*BER **24** 14:14:56.3±4.5, 5983N×2421E, h0km, ML2.1(NAO), Suspected explosion*

ISC 24 14:14:54.0±0.6, 5986N±004×2412E±007, h0km, n18, σ0§96/26, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.38**	**21**	*e*P	**Pg**	**14 15 01.8**	**+0.4**
MEF				*e*S	**Sg**	**14 15 07.6**	**+1.3**
PVF	**Pernaja**	**1.11**	**51**	*e*P	**Pg**	**14 15 14.8**	**-0.4**
PVF				*e*S	**Sg**	**14 15 29.4**	**-0.2**
RAF	**Rauma**	**1.65**	**316**	*e*P	**Pn**	**14 15 25.4**	**+1.2**
RAF				*e*S	**Sn**	**14 15 47.2**	**+1.1**
FIA0	**FINESS Array S**	**1.86**	**30**	*e*P	**Pn**	**14 15 28.0**	**+1.0**
FIA0				*e*S	**Sn**	**14 15 52.4**	**+1.1**
FIA0				MSG		14 15 57.7	
	comp=Z,8.7nm,0.1s						
FIA0	**FINESS Array S**	**1.86**	**30**	Pn	**Pn**	**14 15 27.9**	**+0.9**
	baz=201,slow=18						
FIA0				Lg		14 15 54.2	
	baz=212,slow=28						
FINES	**FINESS Array B**	**1.86**	**30**	Pg	**Pg**	**14 15 28.0**	**-1.6**
	comp=Z,1.7nm,0.3s,baz=205,slow=16,SNR=62						
FINES				Lg		14 15 54.5	
	comp=Z,1.9nm,0.3s,baz=212,slow=25,SNR=17						
VSU	**Vasula**	**1.95**	**135**	*e*P	**Pn**	**14 15 28.6**	**+0.3**
VSU				*e*S	**Sn**	**14 15 53.5**	**+0.1**
VSU	**Vasula**	**1.95**	**135**	Pn	**Pn**	**14 15 27.9**	**-0.3**
VSU				Lg		14 15 55.2	
KEF	**Keuruu**	**2.34**	**9**	*e*PB	**Pb**	**14 15 36.2**	**-0.9**
KEF				*e*SG	**Sg**	**14 16 08.0**	**-1.3**
KEF				MSG		14 16 11.0	
	comp=Z,7.6nm,0.1s						
KAF	**Kangasniemi**	**2.50**	**24**	MSG		14 16 14.3	
	comp=Z,6.4nm,0.1s						
HFS	**Hagfors**	**5.24**	**277**	Pn	**Pn**	**14 16 14.2**	**+0.6**
	baz=115,slow=14						
HFS				Sn	**Sn**	**14 17 15.0**	**+0.3**
	baz=104,slow=28						
HFS	**Hagfors**	**5.24**	**277**	*e*P	**Pn**	**14 16 14.2**	**+0.6**
HFS				*e*S	**Sn**	**14 17 15.0**	**+0.3**
NB2	**NORSAR Subarra**	**6.49**	**286**	Pn	**Pn**	**14 16 30.2**	**-0.5**
	baz=91,slow=14						
NB2	**NORSAR Subarra**	**6.49**	**286**	*e*P	**Pn**	**14 16 30.2**	**-0.5**
NOA	**NORSAR Array B**	**6.49**	**286**	Pn	**Pn**	**14 16 30.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=92,slow=13,SNR=2.5						
NOA				Sn	**Sn**	**14 17 42.8**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=83,slow=19,SNR=2.8						
NOA				Lg		14 18 18.6	
	comp=Z,0.3nm,0.3s,baz=124,slow=22,SNR=3.1						
ARA0	**ARCESS Array S**	**9.73**	**3**	Pn	**Pn**	**14 17 14.7**	**-0.5**
	baz=186,slow=14						
ARA0	**ARCESS Array S**	**9.73**	**3**	*e*P	**Pn**	**14 17 14.7**	**-0.5**
ARCES	**ARCESS Array B**	**9.73**	**3**	Pn	**Pn**	**14 17 14.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=188,slow=14,SNR=12						

*ISCJB **24** 14:17:19.5±0.6, 5982N±004×2408E±007, h0km, Error ellipse: s-maj=5.5km s-min=4.9km az=103.4*
*NAO **24** 14:17:21.9±1.0, 5980N×2433E, ML2.3*
*HEL **24** 14:17:22.2±0.1, 5982N×2419E, h0km, ML2.3, ML2.3(NAO), Explosion*
*IDC **24** 14:17:24.0±0.8, 5993N×2408E, h0km, mb1 3.6/5, mb1mx3.3/23, mbtmp3.4/5, ML3.6/5, Error ellipse: s-maj=9.6km s-min=5.6km az=138.0*
*BER **24** 14:17:23.0±3.9, 5981N×2428E, h0km, ML2.3(NAO), Suspected explosion*

ISC 24 14:17:21.0±0.5, 5984N±003×2415E±007, h0km, n24, σ0§97/32, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.40**	**18**	*e*P	**Pg**	**14 17 29.3**	**+0.7**
MEF				*e*S	**Sg**	**14 17 34.9**	**+1.2**
PVF	**Pernaja**	**1.11**	**50**	*e*P	**Pg**	**14 17 41.9**	**-0.3**
PVF				*e*S	**Sg**	**14 17 56.4**	**-0.2**
RAF	**Rauma**	**1.68**	**316**	*e*P	**Pn**	**14 17 52.3**	**+0.8**
RAF				*e*S	**Sn**	**14 18 14.2**	**+0.5**
FIA0	**FINESS Array S**	**1.87**	**30**	*e*P	**Pn**	**14 17 55.5**	**+1.3**
FIA0				*e*S	**Sn**	**14 18 19.8**	**+1.4**
FIA0	**FINESS Array S**	**1.87**	**30**	Pn	**Pn**	**14 17 55.5**	**+1.3**
	baz=200,slow=16						
FIA0				Lg		14 18 20.7	
	baz=202,slow=28						
FINES	**FINESS Array B**	**1.87**	**30**	Pg	**Pg**	**14 17 55.5**	**-1.2**
	4.3nm,0.3s,baz=212,slow=13,SNR=57						
FINES				Lg		14 18 21.1	
	5.2nm,0.3s,baz=209,slow=23,SNR=19						
VSU	**Vasula**	**1.92**	**135**	*e*P	**Pn**	**14 17 55.4**	**+0.5**
VSU				*e*S	**Sn**	**14 18 19.8**	**+0.1**
VSU	**Vasula**	**1.92**	**135**	Pn	**Pn**	**14 17 55.5**	**+0.6**
VSU				Lg		14 18 20.0	
KEF	**Keuruu**	**2.36**	**8**	*e*PB	**Pb**	**14 18 03.8**	**-0.6**
KEF				*e*SG	**Sg**	**14 18 34.8**	**-2.0**
KEF				MSG		14 18 36.0	
	comp=Z,14nm,0.2s						
KAF	**Kangasniemi**	**2.51**	**24**	MSG		14 18 40.1	
	comp=Z,13nm,0.2s						
SUF	**Sumiainen**	**3.04**	**18**	MSG		14 18 55.6	
	comp=Z,6.7nm,0.2s						
HFS	**Hagfors**	**5.26**	**278**	*e*P	**Pn**	**14 18 41.9**	**+1.0**
HFS				*e*S	**Sn**	**14 19 41.8**	**-0.4**
HFS	**Hagfors**	**5.26**	**278**	Pn	**Pn**	**14 18 41.9**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=102,slow=13,SNR=6.8						
HFS				Sn	**Sn**	**14 19 40.8**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=94,slow=23,SNR=6.4						
HFS				Lg		14 20 06.0	
	comp=Z,1.1nm,0.3s,baz=92,slow=33,SNR=6.8						
HFS	**Hagfors**	**5.26**	**278**	Pn	**Pn**	**14 18 41.9**	**+1.0**
	baz=109,slow=12						
HFS				Sn	**Sn**	**14 19 41.8**	**-0.4**
	baz=103,slow=22						
NB2	**NORSAR Subarra**	**6.52**	**286**	Pn	**Pn**	**14 18 57.3**	**-0.8**
	baz=90,slow=14						
NB2	**NORSAR Subarra**	**6.52**	**286**	*e*P	**Pn**	**14 18 57.3**	**-0.8**
NOA	**NORSAR Array B**	**6.52**	**286**	Pn	**Pn**	**14 18 57.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=94,slow=13,SNR=3.6						
NOA				Sn	**Sn**	**14 20 08.9**	**-4.2**
	comp=Z,0.5nm,0.3s,baz=135,slow=26,SNR=3.4						
NOA				Lg		14 20 46.0	
	comp=Z,0.5nm,0.3s,baz=67,slow=21,SNR=3.8						
APA0	**Apatity Array**	**8.71**	**23**	Pn	**Pn**	**14 19 27.9**	**-0.3**
	baz=205,slow=14						
APA0	**Apatity Array**	**8.71**	**23**	*e*P	**Pn**	**14 19 27.9**	**-0.3**
AKASG	**Malin Array Be**	**9.60**	**160**	Pn	**Pn**	**14 19 38.4**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=341,slow=13,SNR=3.5						
ARA0	**ARCESS Array S**	**9.75**	**3**	Pn	**Pn**	**14 19 42.1**	**-0.4**
	baz=186,slow=14						
ARA0	**ARCESS Array S**	**9.75**	**3**	*e*P	**Pn**	**14 19 42.1**	**-0.4**
ARCES	**ARCESS Array B**	**9.75**	**3**	Pn	**Pn**	**14 19 42.1**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=184,slow=13,SNR=12						
VRAC	**Vranov**	**11.42**	**206**	Pn	**Pn**	**14 20 06.3**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=256,slow=8.3,SNR=3.4						

*ISCJB **24** 14:27:37.4±0.7, 5982N±004×24.11E±007, h0km, Error ellipse: s-maj=6.1km s-min=5.3km az=136.0*
*HEL **24** 14:27:39.7±0.1, 5982N×2420E, h0km, ML1.9, Explosion*
*IDC **24** 14:27:40.9±2.3, 5987N×24.14E, h0km, mb1 2.9/3, mb1mx8.2/21, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=26.3km s-min=6.3km az=149.0*

ISC 24 14:27:38.7±0.7, 5984N±004×2418E±007, h0km, n12, σ0§88/18, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.39**	**16**	*e*P	**Pg**	**14 27 46.9**	**+0.7**
MEF				*e*S	**Sg**	**14 27 52.4**	**+1.2**
PVF	**Pernaja**	**1.10**	**49**	*e*P	**Pg**	**14 27 59.3**	**-0.4**
PVF				*e*S	**Sg**	**14 28 13.7**	**-0.2**
RAF	**Rauma**	**1.69**	**316**	*e*P	**Pn**	**14 28 09.9**	**+0.5**
RAF				*e*SN	**Sn**	**14 28 33.0**	**+1.4**
FIA0	**FINESS Array S**	**1.86**	**29**	*e*P	**Pn**	**14 28 13.1**	**+1.3**
FIA0				*e*S	**Sn**	**14 28 36.2**	**+0.3**
FINES	**FINESS Array B**	**1.86**	**29**	Pg	**Pg**	**14 28 13.3**	**-1.0**
	1.7nm,0.3s,baz=206,slow=16,SNR=76						
FINES				Lg		14 28 39.2	
	1.8nm,0.3s,baz=217,slow=24,SNR=17						
VSU	**Vasula**	**1.91**	**135**	*e*P	**Pn**	**14 28 13.1**	**+0.6**
VSU				*e*S	**Sn**	**14 28 37.0**	**-0.3**
KEF	**Keuruu**	**2.36**	**8**	*e*PB	**Pb**	**14 28 21.2**	**-0.8**
KEF				*e*SG	**Sg**	**14 28 52.8**	**-1.6**
KEF				MSG		14 28 54.3	
	comp=Z,5.4nm,0.1s						
KAF	**Kangasniemi**	**2.50**	**24**	MSG		14 28 58.9	
	comp=Z,3.4nm,0.1s						
SUF	**Sumiainen**	**3.04**	**17**	MSG		14 29 19.5	
	comp=Z,2.4nm,0.1s						
HFS	**Hagfors**	**5.28**	**278**	Pn	**Pn**	**14 28 59.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=93,slow=16,SNR=6.6						
HFS				Sn	**Sn**	**14 29 59.6**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=83,slow=24,SNR=6.9						
HFS				Lg		14 30 24.8	
	comp=Z,0.5nm,0.3s,baz=90,slow=32,SNR=6.5						
NOA	**NORSAR Array B**	**6.53**	**286**	Pn	**Pn**	**14 29 15.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=94,slow=13,SNR=3.4						
NOA				Sn	**Sn**	**14 30 27.3**	**-3.9**
	comp=Z,0.2nm,0.3s,baz=124,slow=22,SNR=2.3						
ARCES	**ARCESS Array B**	**9.75**	**3**	Pn	**Pn**	**14 29 59.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=179,slow=14,SNR=7.7						

NEIC 24 14:49:19.5, 6015N×15303W, h142km, MG2.6(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLKM	**Skilak Lake**	**1.45**	**74**	*e*Pn	Pn	14 49 47.3	-0.6
SLKM				P		14 49 47.3	
SLKM				*e*Sn	Sn	14 50 08.0	-1.6
SVW2	**Sparrevohn**	**1.58**	**308**	*e*Pn	Pn	14 49 47.1	-2.2
FIB	**Fire Island**	**1.74**	**53**	P	Pn	14 49 51.1	0.0
SEW	**Seward**	**1.79**	**90**	P	Pn	14 49 51.2	-0.6
RC01	**Rabbit Creek A**	**1.88**	**58**	P	Pn	14 49 51.7	-1.0
RC01				S	Sn	14 50 17.1	-1.2
KDAK	**Kodiak Island**	**2.38**	**174**	P	Pn	14 49 57.0	-1.8
KDAK				S	Sn	14 50 26.6	-2.5
PMR	**Palmer**	**2.40**	**51**	*e*Pn	Pn	14 49 51.3	-7.6
PMR				*e*Sn	Sn	14 50 26.2	-3.1
TTA	**Tatalina**	**3.13**	**334**	*e*Pn	Pn	14 50 06.1	-2.2
KTH	**Kantishna Hill**	**3.56**	**15**	P	Pn	14 50 12.0	-1.8
TRF	**Thorofare Moun**	**3.56**	**20**	P	Pn	14 50 12.7	-1.1
TRF				S	Sn	14 50 52.8	-3.1
DIV	**Divide**	**3.71**	**71**	P	Pn	14 50 14.5	-1.2
DIV				S	Sn	14 50 56.9	-2.5
MCK	**McKinley**	**4.08**	**27**	P	Pn	14 50 19.9	-0.7
BMRM	**Bremner River**	**4.24**	**75**	P	Pn	14 50 21.6	-1.2

*ISCJB **24** 15:02:54.7±0.7, 5155N±004×16.10E±004, h0km, Error ellipse: s-maj=5.7km s-min=3.4km az=29.1*
*IPEC **24** 15:02:57.1±0.4, 5154N×1646E, h0km, ML1.8/1, Error ellipse: s-maj=3.4km s-min=2.4km az=95.0*
*PRU **24** 15:02:58.6, 5145N×16.10E, h0km*
*CSEM **24** 15:02:58.1±0.4, 5148N×16.16E, h2km, ML3.1/7, Error ellipse: s-maj=6.5km s-min=3.7km az=2.0*
*VIE **24** 15:03:00.4±0.8, 5124N×16.19E, h0km, mb2.3/2, ML2.6/3, Error ellipse: s-maj=5.5km s-min=4.4km az=172.0 59 km WNW of Breslau Suspected Mining induced.*

ISC 24 15:02:56.1±0.7, 5154N±004×1611E±004, h0km, n18, σ0§84/36, 4C, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.71**	**170**	*e*Pg	**Pg**	**15 03 10.6**	**+0.9**
KSP				*e*Sg	**Sg**	**15 03 20.2**	**+1.3**
KSP	**Ksiaz**	**0.71**	**170**	*e*Pg	**Pg**	**15 03 10.5**	**+0.8**
KSP				*e*Sg	**Sg**	**15 03 19.1**	**+0.2**
UPC	**Upice**	**1.04**	**183**	*e*PG	**Pg**	**15 03 16.6**	**+0.6**
DPC	**Dobruska-Polom**	**1.20**	**173**	*e*PG	**Pg**	**15 03 19.3**	**+0.2**
DPC				*e*SG	**Sg**	**15 03 35.0**	**+0.3**
	30nm,0.4s						
DPC	**Dobruska-Polom**	**1.20**	**173**	*e*Pg	**Pg**	**15 03 19.3**	**+0.2**
DPC				*e*Sg	**Sg**	**15 03 34.5**	**-0.2**
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	**Pg**	**15 03 23.6**	**+0.6**
PRU	**Pruhonice**	**1.85**	**213**	*e*PG	**Pg**	**15 03 31.7**	**+0.2**
PRU				*e*SG	**Sg**	**15 03 55.2**	**-0.3**
	20nm,0.4s						
CLL	**Collm**	**1.96**	**264**	*e*Pn	**Pn**	**15 03 30.0**	**-0.5**
CLL				*e*Pg	**Pg**	**15 03 33.0**	**-0.6**
CLL				*ex*	x	15 03 38.0	
CLL				*i* Sg	**Sg**	**15 03 59.5**	**+0.5**
	comp=Z,14nm,0.5s						
MORC	**Moravsky Berou**	**1.99**	**152**	*e*Pn	**Pn**	**15 03 30.9**	**-0.1**
MORC				*e*Sg	**Sg**	**15 03 56.2**	**-3.8**
	comp=Z,7.0nm,0.2s						
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*PG	**Pg**	**15 03 36.3**	**-0.9**
OKC				*e*SG	**Sg**	**15 04 05.0**	**0.0**
	comp=Z,14nm,0.5s						
VRAC	**Vranov**	**2.26**	**172**	*e*Pn	**Pn**	**15 03 35.5**	**+0.8**
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**15 03 40.6**	**+0.4**
NKC				*e*PG	**Pg**	**15 03 47.1**	**0.0**
NKC				*e*SG	**Sg**	**15

KZN	Kozani	0.90	112	*e*PG	Pg	15 07 19.1	-0.6
KZN				*e*SB	Sb	15 07 32.8	0.0
TIR	Tirane	0.94	319	*e*Pg	Pg	15 07 21.5	+1.0
TIR	Tirane	0.94	319	*i* Pg	Pg	15 07 21.5	+1.0
JAN	Janina	0.99	172	*e*PB	Pb	15 07 22.7	+0.5
KEK	Kerkira	1.15	216	*e*PG	Pg	15 07 23.7	-0.9
KEK				*e*SB	Sg	15 07 41.7	+2.2
GRG	Griva	1.34	76	*e*Pg	Pg	15 07 27.8	-0.5
GRG				*e*Sg	Sg	15 07 46.6	+1.0
SKO	Skopje	1.44	23	*e*Pg	Pg	15 07 30.2	0.0
SKO				*e*Sg	Sg	15 07 51.0	+2.1
SKO	Skopje	1.44	23	*e*Pg	Pg	15 07 28.9	-1.3
SKO				*e*Sg	Sg	15 07 47.8	-1.1
SKO				*e*Lg		15 07 50.5	
	comp=E,71nm,0.6s						
SKO				*e*Lg		15 07 51.1	
	comp=N,156nm,0.4s						
SKO	Skopje	1.44	23	*e*Pg	Pg	15 07 28.9	-1.3
SKO				*e*Sg	Sg	15 07 51.0	+2.1
LIT	Litokhoron	1.48	111	*e*Pg	Pg	15 07 30.0	-0.9
	comp=N,9.5nm,0.5s						
VAY	Valandovo	1.58	64	*e*Pg	Pg	15 07 30.9	-1.9
VAY				*e*Sg	Sg	15 07 54.4	+1.0
VAY				*e*Lg		15 07 55.3	
	comp=N,123nm,0.7s						
VAY				*e*Lg		15 07 56.3	
	comp=E,96nm,1.0s						
VAY	Valandovo	1.58	64	*e*Pg	Pg	15 07 31.1	-1.7
KNT	Kendrikon	1.76	72	*e*Pb	Pb	15 07 33.6	-1.6
HORT	Hortiatis	1.84	91	*e*Pb	Pb	15 07 35.0	-1.6
EVR	Evrytania	1.93	153	*e*PG	Pg	15 07 38.7	-0.8
EVR				*e*SN	Sn	15 08 06.1	+5.5
LKD	Levkas	1.94	181	*e*Pb	Pb	15 07 37.6	-0.6
SOH	Sokhos	2.04	84	*e*Pn	Pn	15 07 37.8	+0.3
SOH				*e*Sn	Sn	15 08 03.8	+0.5
PLG	Polygyros	2.12	96	*e*PN	Pn	15 07 38.5	-0.1
PAIG	Paliouri	2.40	106	*e*Pn	Pn	15 07 43.6	+1.1
MMB	Musomiste	2.49	67	*e*Pn	Pn	15 07 44.0	+0.3
VTS	Vitosha	2.71	43	*e*Pn	Pn	15 07 48.0	+1.3
BBLS	Bajina Basta -	3.36	344	*e*Pn	Pg	15 08 06.4	-0.5
DIVS	Divcibare	3.49	352	*e*Pn	Pn	15 07 56.3	-1.1

BJI ***24*** *15:12:29.9, 2061N×14552E, h65km, mB4.9, mb4.9, Ms4.2, Msz3.9*
MOS ***24*** *15:12:29.7±0.9, 2054N×14544E, h63km, mb5.2/43, Error ellipse: s-maj=9.0km s-min=5.6km az=101.9*
ISCJB ***24*** *15:12:31.9±0.1, 2059N±003×14538E±003, h78km, mb4.8/108, Error ellipse: s-maj=3.9km s-min=3.1km az=85.7*
IDC ***24*** *15:12:32.5±0.4, 2057N×14546E, h75km±3km, mb4.4/26, mb1 4.5/28, mb1mx4.5/32, mbtmp4.8/28, MS3.6/11, Ms1 3.6/11, ms1mx3.2/38, Error ellipse: s-maj=13.6km s-min=7.4km az=85.0*
NEIC ***24*** *15:12:33.2±0.1, 2054N×14546E, mb4.9/66, Error ellipse: s-maj=4.7km s-min=4.2km az=150.0*
ISC 24 15:12:33.9±0.1, 2061N±003×14541E±003, h80km, h80km±1.6km; pP-P, n419, σ078/425, mb4.8/108, 82C-75D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	6.69	334	P			Pn	15 14 08.0	-1.4
JHHJ						*e*S	Sn	15 15 24.1	0.0
GUMO	Guam	7.00	184	P			Pn	15 14 15.6	+1.9
	50nm,0.3s,baz=340,slow=3.0,SNR=33								
GUMO				S			Sn	15 15 34.6	+2.9
	8.5nm,0.3s,baz=0.6,slow=22,SNR=3.1								
CBIJ	Chichi jima	7.10	336	P			Pn	15 14 14.9	-0.1
	44nm,0.3s,baz=105,slow=17,SNR=42								
CBIJ				S			Sn	15 15 32.1	-2.0
	148nm,0.3s,baz=132,slow=23,SNR=18								
CBIJ	Chichi jima	7.10	336	P			Pn	15 14 14.5	-0.5
CBIJ						*e*S	Sn	15 15 32.7	-1.5
BSO1	Boso 1	14.53	345	P			Pn	15 15 54.4	-0.9
BSO4	Boso 4	15.01	344	P			Pn	15 16 02.3	+0.8
JOD2	Odawara 2	15.62	340	P			Pn	15 16 08.7	-0.6
JHU	Hanno	16.11	342	P			Pn	15 16 15.1	-0.3
JNY	Yasuok	16.13	337	P			Pn	15 16 19.5	+3.9
JYT	Yasato	16.22	345	P			Pn	15 16 16.8	0.0
JYT						*e*S	S	15 19 12.0	-12
JRY	Ryogami san	16.38	341	P			Pn	15 16 20.5	+1.7
JRY						*e*S	S	15 19 17.0	-10
JHO	Hitachi	16.50	346	P			Pn	15 16 20.1	-0.1
JAG	Ashikaga	16.60	343	P			Pn	15 16 21.9	+0.4
JOW	Kunigami	16.86	295	P			Pn	15 16 27.8	+3.0
	1.5nm,0.3s,baz=90,slow=18,SNR=6.0								
JOW				LR		LR	LR	15 22 09.5	
	comp=Z,81nm,18.4s,baz=315,slow=34								
MJAR	Matsushiro Arr	17.08	340	P			Pn	15 16 27.9	+0.5
	1.4nm,0.3s,baz=163,slow=11,SNR=18								
MJAR				S			S	15 19 32.0	-10
	0.4nm,0.3s,baz=281,slow=25,SNR=4.8								
MJAR	Matsushiro Arr	17.08	340	P			Pn	15 16 27.9	+0.5
MJAR				S			S	15 19 32.0	-10
MAJO	Matsushiro	17.08	340	*e*P			Pn	15 16 27.5	+0.1
MAJO				pmax		pmax			
	comp=Z,15nm,0.7s								
MAJO	Matsushiro	17.08	340	*e*P			Pn	15 16 27.5	0.0
	comp=Z,16nm,0.7s								
MAT	Matsushiro	17.08	340	P			Pn	15 16 28.6	+1.2
MAT				S			S	15 19 41.1	-0.6
JSJ	Shimokoshiki	17.87	311	P			Pn	15 16 38.8	+1.8
JHS	Saijyo	17.97	325	P			Pn	15 16 39.8	+1.5
JMK	Ichinoseki	18.64	350	P			Pn	15 16 49.7	+3.4
JMK						*e*S	S	15 20 05.2	-8.0
TATO	Taipei	22.47	286	P			P	15 17 28.3	+2.0
YHNB	Yeheng	22.54	285	*e*P			P	15 17 26.4	-0.7
INCN	Inchon	23.42	320	*e*P			P	15 17 35.4	-0.4
	comp=Z,41nm,0.9s,mb4.8								
INCN						*e*pP		15 17 54.1	
INCN						*e*sP	sP	15 18 05.6	+2.7
ASAJ	Asahikawa	23.56	355	P			P	15 17 38.0	+1.0
	comp=Z,13nm,1.0s,mb4.2,baz=244,slow=21,SNR=5.4								
SSE	Sheshan	24.12	301	P			P	15 17 40.1	-2.0
SSE				AMB		AMB			
	comp=Z,29nm,0.7s,mb4.7								
SSE				AMB		AMB			
	comp=Z,60nm,4.2s								
TGY	Tagaytay City	24.22	258	P			P	15 17 44.3	+1.2
	comp=Z,391nm,0.4s,baz=166,slow=4.2,SNR=3.9								
VLA	Vladivostok	25.14	336	*d* iP			P	15 17 52.9	+1.5
VLA				pmax		pmax			
	comp=Z,53nm,1.2s,mb4.8								
NJ2	Nanjing	26.32	301	*e*P			P	15 18 04.1	+2.1
NJ2				AP		pP		15 18 21.4	+1.0
NJ2				XP		sP		15 18 30.8	+1.0
NJ2				PP				15 18 50.1	
NJ2				S		S		15 22 30.0	+1.0
NJ2				XS		sS		15 23 02.0	+1.0
NJ2				AMB		AMB			
	comp=Z,30nm,0.6s,mb4.9								
NJ2				AMB		AMB			
	comp=Z,1μm,6.1s								
NJ2				LR		LR			
	comp=N,280nm,15.1s								
NJ2				LR		LR			
	comp=E,190nm,16.5s								
NJ2				LR		LR			
	comp=Z,240nm,24.5s								
YSS	Yuzh-Sakhalins	26.37	356	*e*P			P	15 18 02.3	-0.2
YSS				pmax		pmax			
	comp=Z,17nm,1.3s,mb4.3								
YSS	Yuzh-Sakhalins	26.37	356	*e*P			P	15 18 01.7	-0.8
	comp=Z,11nm,0.9s,mb4.3								
MDJ	Mudanjiang	27.30	335	*e*P			P	15 18 12.0	+1.2
	comp=Z,5.2nm,0.7s,mb4.2								
PMG	Port Moresby	29.87	177	P			P	15 18 32.2	-1.6
	comp=Z,7.0nm,0.7s,mb4.4,baz=346,slow=4.2,SNR=3.9								
PMG	Port Moresby	29.87	177	P			P	15 18 31.5	-2.2
PMG				pmax		pmax			
	comp=Z,13nm,0.8s								
PMG	Port Moresby	29.87	177	P			P	15 18 31.5	-2.2
	comp=Z,13nm,0.8s,mb4.6								
KLR	Kul'dur	30.57	342	*e*P			P	15 18 37.0	-2.9
KKM	Kota Kinabalu	31.80	247	pP			P	15 18 49.4	-1.3
KKM						*e*pP	pP	15 19 09.0	-0.3
KKM						*e*sP	sP	15 19 20.6	+1.9
HNR	Honiara	33.10	153	P			P	15 18 57.7	-4.4
	comp=Z,22nm,0.3s,mb5.5,baz=321,slow=15,SNR=5.9								
HNR				LR		LR	LR	15 30 48.9	
	comp=Z,110nm,21.0s,baz=359,slow=33								
HNR	Honiara	33.10	153	P			P	15 18 57.7	-4.4
HNR				LR		LR		15 30 48.9	
PET	Petropavlovsk	33.94	14	*e*P			P	15 19 08.6	-0.7
PET				pmax		pmax			
	comp=Z,17nm,0.9s,mb4.9								
PET	Petropavlovsk	33.94	14	P			P	15 19 05.2	-4.2
	comp=Z,18nm,0.9s,mb4.9								
HHC	Hu-ho-hao-te	35.09	313	*e*P			P	15 19 20.0	+0.7
HHC				AP		pP		15 19 38.1	-0.1
HHC				XP		sP		15 19 47.3	-0.1
HHC				PP		PP		15 20 41.3	+1.0
HHC				PCP		PcP		15 21 51.5	+2.2
HHC				S		S		15 24 47.0	+0.9
HHC				XS		sS		15 25 17.4	-1.1
HHC				SCP		ScP		15 25 28.8	+1.1
HHC				PCS		PcS		15 25 36.4	+0.2
HHC				SS		SS		15 27 06.5	-15
HHC				SCS		ScS		15 29 30.8	-1.0
HHC				AMB		AMB			
	comp=Z,24nm,1.1s,mb4.9								
HHC				AMB		AMB			
	comp=Z,68nm,5.7s								
HHC				LR		LR			
	comp=N,70nm,17.1s								
HHC				LR		LR			
	comp=E,131nm,16.1s								
HHC				LR		LR			
	comp=Z,71nm,16.1s								
HIA	Hailar	35.17	330	P			P	15 19 19.1	-0.8
HIA				pmax		pmax			
	comp=Z,5.0nm,0.6s								
HIA	Hailar	35.17	330	P			P	15 19 19.1	-0.9
	comp=Z,5.4nm,0.6s,mb4.5								
CD2	Chengdu	38.70	294	*e*P			P	15 19 48.0	-1.9
CD2				AP		pP		15 20 08.5	-0.4
CD2				XP		sP		15 20 19.0	+0.8
CD2				PP		PP		15 21 22.5	+2.7
CD2				S		S		15 25 38.5	-2.3
CD2				XS		sS		15 26 14.5	+1.0
CD2				SS		SS		15 28 25.6	-8.6
CD2				AMB		AMB			
	comp=Z,10.0nm,0.9s,mb4.7								
CD2				AMB		AMB			
	comp=Z,30nm,5.8s								
CD2				LR		LR			
	comp=N,70nm,16.8s								
CD2				LR		LR			
	comp=Z,100nm,7.2s								
KSM	Kuching	39.18	245	P			P	15 19 53.1	-0.8
CLNS	Chul'man	39.24	342	*e*P			P	15 19 51.0	-3.4
CLNS				pmax		pmax			
	comp=Z,22nm,1.0s,mb4.9								
CLNS				pmax		pmax			
	comp=N,12nm,0.9s								
CLNS				pmax		pmax			
	comp=E,7.0nm,0.8s								
LZH	Lanzhou	39.38	302	*e*P			P	15 19 56.0	+0.4
LZH				AP		pP		15 20 14.9	+0.2
LZH				PP		PP		15 21 32.0	+4.7
LZH				PCP		PcP		15 22 01.0	-1.4
LZH				*e*S		S		15 25 50.0	-1.1
LZH				XS		sS		15 26 25.0	+1.1
LZH				SS		SS		15 28 44.4	-3.5
LZH				AMB		AMB			
	comp=Z,13nm,1.0s,mb4.7								
LZH				AMB		AMB			
	comp=Z,80nm,4.3s								
LZH				LR		LR			
	comp=E,335nm,14.0s								
LZH				LR		LR			
	comp=Z,578nm,15.0s								
KMI	Kunming	39.45	285	P			P	15 19 57.9	+1.7
KMI				AP		pP		15 20 13.8	-1.5
KMI				XP		sP		15 20 25.0	+0.5
KMI				AMB		AMB			
	comp=Z,4.0nm,1.3s,mb4.1								
KMI				LR		LR			
	comp=Z,48nm,17.0s								
CTA	Charters Tower	40.45	179	P			P	15 20 03.1	-1.4
	comp=Z,3.5nm,0.7s,mb4.3,baz=335,slow=6.6,SNR=6.1								
CTAO	Charters Tower	40.45	179	*e*P			P	15 20 01.7	-2.8
ULN	Ulaanbaatar	41.12	321	⇑*e*P			P	15 20 10.5	+0.6
ULN	Ulaanbaatar	41.12	321	*e*P			P	15 20 09.9	-0.1
	comp=Z,2.7nm,0.6s,mb4.2								
SONM	Songino Array	41.50	320	P			P	15 20 13.6	+0.5
	comp=Z,4.7nm,0.5s,mb4.6,baz=126,slow=7.7,SNR=36								
SONM						pP	pP	15 20 30.5	-1.8
	comp=Z,2.2nm,0.6s,baz=133,slow=6.9,SNR=4.8								
SONM						PcP	PcP	15 22 09.4	+0.1
	comp=Z,2.2nm,0.7s,baz=139,slow=3.7,SNR=4.6								
SONM				LR		LR	LR	15 35 45.8	
	comp=Z,43nm,21.1s,baz=274,slow=34								
SONM	Songino Array	41.50	320	P			P	15 20 13.6	+0.6
SONM				*PP		pP		15 20 30.5	-1.8
SONM								15 22 09.4	
WRAB	Tennant Creek	41.72	196	*e*P			P	15 20 14.0	-0.8
WRAB				pmax		pmax			
	comp=Z,20nm,0.6s,mb5.0								
WRAB	Tennant Creek	41.72	196	*e*P			P	15 20 14.0	-0.8
	comp=Z,20nm,0.6s,mb5.0								
WB2	Warramunga Arr	41.73	196	⇓*i* P			P	15 20 14.4	-0.5
WB2	Warramunga Arr	41.73	196	*e*P			P	15 20 14.0	-0.9
WB2						*e*pP	pP	15 20 34.0	-0.2
WRA	Warramunga Arr	41.73	196	P			P	15 20 14.3	-0.7
	comp=Z,10nm,0.6s,mb4.7,baz=17,slow=8.9,SNR=102								
WRA						pP	pP	15 20 33.4	-0.8
	comp=Z,7.5nm,0.6s,baz=8.1,slow=8.7,SNR=6.9								
WRA				S		S		15 26 24.2	-1.9
	comp=Z,0.9nm,1.0s,baz=25,slow=16,SNR=3.4								
SEY	Seymchan	42.56	5	⇓*i* P			P	15 20 22.1	+0.4
YAK	Yakutsk	42.80	349	*e*P			P	15 20 23.1	-0.6
YAK				*e*PP		pP		15 20 41.1	-1.9
YAK				pmax		pmax			
	comp=Z,37nm,0.6s,mb5.3								
YAK	Yakutsk	42.80	349	*e*P			P	15 20 23.1	-0.6
	comp=Z,37nm,0.6s,mb5.3								
YAK						*e*pP	pP	15 20 41.1	-1.9
YAK						*e*sP	sP	15 20 56.3	+4.1
FITZ	Fitzroy Crossi	43.08	208	*e*P			P	15 20 25.7	-0.2
	comp=Z,20nm,0.8s,mb4.9								
FITZ	Fitzroy Crossi	43.08	208	P			P	15 20 25.7	-0.1
	comp=Z,8.2nm,0.6s,mb4.6,baz=24,slow=10.0,SNR=31								
FITZ						pP	pP	15 20 43.8	-1.4
	comp=Z,8.7nm,0.6s,baz=26,slow=15,SNR=4.6								
GTA	Gaotai	43.19	306	*e*P			P	15 20 27.5	+0.7
GTA				PCP		PcP		15 22 15.3	+0.4
GTA				AMB		AMB			
	comp=Z,7.0nm,1.0s,mb4.3								
BOD	Bodaibo	43.66	336	*e*P			P	15 20 29.5	-1.0
ZAK	Zakamensk	44.47	322	*e*P			P	15 20 36.8	-0.2
ZAK				*e*		pP		15 20 56.4	-0.1
ZAK				*e*PP		pP		15 21 01.0	+4.5
TLY	Talaya	44.86	324	⇓*i* P			P	15 20 40.4	+0.3
TLY				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.2								
TLY	Talaya	44.86	324	*e*P			P	15 20 39.5	-0.6
	comp=Z,2.4nm,0.5s,mb4.2								
TLY						*e*pP	pP	15 21 00.9	+1.4
TLY						*e*sP	sP	15 21 11.2	+2.5
AS31	Alice Springs	45.41	195	*e*P			P	15 20 43.4	-1.1
ASAR	Alice Springs	45.41	195	P			P	15 20 43.5	-0.9
	comp=Z,4.0nm,0.6s,mb4.3,baz=16,slow=7.0,SNR=62								
ASAR						pP	pP	15 21 04.0	0.0
	comp=Z,1.7nm,0.4s,baz=15,slow=6.9,SNR=4.8								
ASAR				LR		LR		15 40 06.9	
	comp=Z,62nm,19.2s,baz=169,slow=36								
ASAR	Alice Springs	45.41	195	P			P	15 20 43.6	-0.9
ASAR				*PP		pP		15 21 04.0	0.0
ASPA	Alice Springs	45.41	195	⇓*i* P			P	15 20 43.6	-0.9
KULM	Kulim	46.02	257	*e*P			P	15 20 50.4	+1.2
KULM						*e*pP	pP	15 21 12.5	+3.7
DZM	Mont Dzumac	47.13	153	P			P	15 20 57.1	-0.9
	comp=Z,5.8nm,0.5s,mb4.5,baz=27,slow=8.0,SNR=15								
DZM						pP	pP	15 21 17.4	-0.2
	comp=Z,5.0nm,0.7s,baz=342,slow=9.9,SNR=2.8								
MBWA	Marble Bar	48.51	213	*e*P			P	15 21 09.1	+0.5
	comp=Z,5.3nm,0.7s,mb4.6								
PSI	Prapat	48.60	255	P			P	15 21 11.3	+1.9
	comp=Z,2.1nm,0.4s,mb4.4,baz=144,slow=4.6,SNR=3.6								
PSI	Prapat	48.60	255	P			P	15 21 11.3	+1.9
SPIA	Saint Paul Isl	48.83	30	P			P	15 21 10.4	-0.7
BILL	Bilibino	49.20	10	*c* iP			P	15 21 14.3	+0.4
BILL				pmax		pmax			
	comp=Z,21nm,1.0s,mb5.0								
BILL	Bilibino	49.20	10	*e*P			P	15 21 13.3	-0.5
	comp=Z,10nm,0.8s,mb4.8								
LSA	Lhasa	49.56	292	P			P	15 21 19.3	+2.6
LSA	Lhasa	49.56	292	*e*P			P	15 21 18.4	+1.7
LSA				pmax		pmax			
	comp=Z,11nm,0.8s,mb4.8								
LSA	Lhasa	49.56	292	*e*P			P	15 21 18.4	+1.7
	comp=Z,10nm,0.8s,mb4.8								
TIXI	Tiksi	51.95	353	*c* iP			P	15 21 34.3	-0.3
TIXI				pmax		pmax			
	comp=Z,10.0nm,0.9s,mb4.8								
STKA	Stephens Creek	52.31	184	*e*P			P	15 21 35.5	-1.8
	comp=Z,3.3nm,1.2s,mb4.2								
STKA	Stephens Creek	52.31	184	P			P	15 21 35.6	-1.7
	comp=Z,1.8nm,0.5s,mb4.3,baz=351,slow=8.2,SNR=8.3								
STKA	Stephens Creek	52.31	184	*e*P			P	15 21 34.2	-3.0
KRAR	Krasnoyarsk	52.44	326	⇓*e*P			P	15 21 38.0	-0.3
KRAR				pmax		pmax			
	comp=Z,10.0nm,0.5s,mb5.1								
WMQ	Urumqi	52.87	310	P			P	15 21 43.0	+1.6
WMQ				AP		pP		15 22 04.0	+2.6
WMQ				PP		PP		15 23 45.0	+3.5
WMQ				S		S		15 29 04.0	-0.2
WMQ				SCS		ScS		15 31 21.0	-2.4
WMQ				SS		SS		15 32 44.0	+0.1
WMQ				AMB		AMB			
	comp=Z,19nm,1.0s,mb5.1								
WMQ				AMB		AMB			
	comp=Z,113nm,5.0s								
WMQ				LR		LR			
	comp=N,26nm,14.0s								
WMQ				LR		LR			
	comp=E,38nm,14.0s								
WMQ				LR		LR			
	comp=Z,34nm,14.0s								
FORT	Forrest	53.74	199	*e*P			P	15 21 47.3	-0.5
	comp=Z,12nm,0.6s,mb5.1								
GUN	Gumba	54.31	290	*e*P			P	15 21 53.4	+1.4
PKI	Pulchoki	54.77	290	*e*P			P	15 21 55.0	-0.2
	comp=Z,13nm,0.6s,mb5.2								
PKI	Pulchoki	54.77	290	*e*P			P	15 21 55.0	-0.2
PKI				pmax		pmax			
	comp=Z,13nm,0.6s,mb5.1								
KKN	Kakani	54.85	290	*e*P			P	15 21 57.1	+1.2
DMN	Daman	55.03	290	*e*P			P	15 21 58.5	+1.4
	comp=Z,10.0nm,0.4s,mb5.2								
GKN	Gorkha	55.40	290	*e*P			P	15 22 01.0	+1.2
	comp=Z,19nm,0.5s,mb5.4								
KOLN	Koldanda	56.34	290	*e*P			P	15 22 07.5	+1.0
	comp=Z,17nm,0.8s,mb5.1								
ZAL	Zalesovo	56.36	322	P			P	15 22 06.2	-0.5
	comp=Z,5.2nm,0.4s,mb4.9,baz=359,slow=7.1,SNR=14								
MK31	Makanchi Array	56.96	313	P			P	15 22 11.0	+0.1
MK31				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.7								
MKAR	Makanchi Array	56.96	313	P			P	15 22 11.3	+0.5
	comp=Z,6.1nm,0.6s,mb4.8,baz=84,slow=9.3,SNR=70								
MKAR						pP	pP	15 22 27.9	-3.1
	comp=Z,5.8nm,0.8s,baz=94,slow=8.7,SNR=5.5								
MKAR						PcP	PcP	15 23 04.8	-0.5
	comp=Z,3.6nm,0.7s,baz=76,slow=5.1,SNR=4.2								
MKAR	Makanchi Array	56.96	313	P			P	15 22 11.3	+0.5
MKAR						pP	pP	15 22 27.9	-3.1
MKAR						PcP	PcP	15 23 04.8	-0.5
NVS	Novosibirsk	57.43	323	*e*P			P	15 22 12.7	-1.5
NVS				*e*		pP		15 22 33.7	-0.7
KDAK	Kodiak Island	57.93	34	P			P	15 22 16.8	-0.9
	comp=Z,12nm,0.7s,mb5.0,baz=285,slow=9.1,SNR=4.7								
KDAK	Kodiak Island	57.93	34	P			P	15 22 16.8	-0.9
SLKM	Skilak Lake	59.70	31	*e*P			P	15 22 27.9	-2.1
SLKM				*e*				15 23 15.3	
PMR	Palmer	60.44	30	*e*P			P	15 22 33.6	-1.4
PMR				*e**PP		pP		15 22 55.5	+0.1
PMR				pmax		pmax			
	comp=Z,7.0nm,0.6s,mb4.9								
PMR	Palmer	60.44	30	*e*P			P	15 22 33.6	-1.5
	comp=Z,7.3nm,0.6s,mb4.9								
PMR				*e*pP		pP		15 22 55.5	+0.1
SML	Sawmill	60.85	30	*e*P			P	15 22 36.1	-1.8
SML				*e**PP		pP		15 22 58.4	+0.1
SML	Sawmill	60.85	30	*e*P			P	15 22 36.1	-1.8
SML				*e*pP		pP		15 22 58.4	+0.2
SML				*e*sP		sP		15 23 07.4	+0.3
MCK	McKinley	60.98	28	*e*P			P	15 22 36.9	-1.8
MCK				pmax		pmax			
	comp=Z,12nm,1.2s,mb4.8								
MCK	McKinley	60.98	28	*e*P			P	15 22 36.9	-1.8
	comp=Z,12nm,1.2s,mb4.8								
COLA	College	61.68	26	*c* iP			P	15 22 43.8	+0.3
COLA	College	61.68	26	*e*P			P	15 22 42.5	-1.0
	comp=Z,6.8nm,0.8s,mb4.7								
HYB	Hyderabad	62.89	280	*i* P			P	15 22 53.0	+1.5
HYB	Hyderabad	62.89	280	*e*P			P	15 22 53.0	+1.5
VOSK	Vostochnaya	64.49	320	P			P	15 23 01.6	-0.4
EGAK	Eagle	64.50	27	*e*P			P	15 23 01.0	-1.1
CHKZ	Chkalovo	64.69	321	*e*P			P	15 23 02.4	-1.0
CHKZ				*e**PP		pP		15 23 21.7	-2.3
CHKZ				*e*SP		sP		15 23 32.6	-0.2
CHKZ				pmax		pmax			
	comp=Z,10.0nm,0.7s,mb4.8								
CHKZ	Chkalovo	64.69	321	*e*P			P	15 23 02.4	-1.0
	comp=Z,9.8nm,0.

baz=76
D03A **Wishkah Elem.** 75.73 45 ⇓P P 15 24 11.5 +0.7
baz=76
A04A **Legoe Bay, Lum** 76.01 43 ⇓P P 15 24 12.8 +0.5
baz=76
E03A **Lebam** 76.02 45 ⇑P P 15 24 12.8 +0.5
baz=76
HDW **Hoodsport** 76.07 44 P P 15 24 13.6 +1.0
C04A **Brinnon** 76.10 44 ⇓P P 15 24 13.4 +0.6
baz=76
F03A **Seaside** 76.19 46 ⇑P P 15 24 13.5 +0.2
baz=76
A05A **Maple Falls** 76.33 43 ⇑P P 15 24 14.3 +0.2
baz=76
YKA **Yellowknife Ar** 76.44 28 P P 15 24 13.9 -0.8
comp=Z,14nm,0.6s,mb4.9,baz=290,slow=5.5,SNR=98
YKA pP pP 15 24 33.9 -2.0
comp=Z,3.4nm,0.7s,baz=291,slow=5.4,SNR=4.6
YKA LR LR 15 57 49.1
comp=Z,20nm,19.7s,baz=205,slow=36
YKA **Yellowknife Ar** 76.44 28 P P 15 24 13.9 -0.9
YKA *PP pP 15 24 33.9 -2.0
YKA **Yellowknife Ar** 76.44 28 P P 15 24 13.9 -0.8
YKA pP pP 15 24 33.9 -2.0
YKA LR LR 15 57 49.1
KEBM **Edson Butte** 76.46 49 *e*P P 15 24 14.6 -0.3
MBW **Mount Baker** 76.51 43 P P 15 24 15.6 +0.4
I02A **Mapleton** 76.51 48 ⇑P P 15 24 14.9 -0.3
baz=76
B05A **Bryant** 76.52 43 ⇑P P 15 24 14.8 -0.4
baz=76
JCW **Jim Creek** 76.65 43 P P 15 24 16.5 +0.6
RPW **Rockport** 76.85 43 P P 15 24 17.0 0.0
J02A **Umpqua** 76.86 48 ⇑P P 15 24 17.5 +0.4
baz=77
D05A **Enumclaw** 76.89 44 ⇓P P 15 24 17.9 +0.6
baz=77
I03A **Eugene** 76.91 48 ⇓P P 15 24 17.9 +0.5
baz=77
C05A **Tolt Reservoir** 76.94 44 ⇓P P 15 24 17.5 -0.1
baz=77
F04A **Amboy** 76.95 46 ⇓P P 15 24 17.6 -0.1
baz=77
G04A **Mulino** 77.11 46 ⇑P P 15 24 18.7 +0.2
baz=77
L02A **Cave Junction** 77.18 50 ⇓P P 15 24 19.1 +0.2
baz=77
E05A **Randle** 77.21 45 ⇑P P 15 24 19.0 -0.1
baz=77,SNR=5.0
JCC **Jacoby Creek** 77.24 51 ⇓P P 15 24 18.4 -0.8
baz=77
J03A **Ideyld Park** 77.29 48 ⇓P P 15 24 19.7 +0.1
baz=77
KBS **Kingsbay** 77.37 352 *c i*P P 15 24 20.3 +0.3
BROR **Big Rock Looko** 77.39 47 P P 15 24 20.4 +0.3
H04A **Detroit Lake** 77.46 47 ⇑P P 15 24 20.4 -0.1
baz=77,SNR=8.2
IRO **Indian Ridge** 77.61 48 P P 15 24 21.4 +0.2
F05A **White Salmon** 77.61 46 ⇑P P 15 24 21.3 0.0
baz=78
N02C **Big Bar** 77.77 51 ⇑P P 15 24 22.0 -0.2
baz=78
TBM **Table Mountain** 77.80 44 P P 15 24 22.7 +0.3
G05A **Wamic** 77.89 46 ⇓P P 15 24 23.1 +0.3
baz=78
EBG **Ellensburg** 77.90 44 P P 15 24 23.5 +0.6
M02C **Callahan** 77.93 50 ⇑P P 15 24 23.7 +0.6
baz=78,SNR=5.1
YBH **Yreka Blue Hor** 77.94 50 *e*P P 15 24 23.5 +0.4
YBH pmax pmax
comp=Z,13nm,1.0s
YBH **Yreka Blue Hor** 77.94 50 *e*P P 15 24 23.4 +0.3
comp=Z,13nm,1.0s,mb4.6
YBH **Yreka Blue Hor** 77.94 50 ⇓P P 15 24 23.7 +0.6
baz=78,SNR=8.7
H05A **Madras** 78.12 47 ⇓P P 15 24 24.2 0.0
baz=78
P01C **Double 8 Ranch** 78.13 52 ⇓P P 15 24 23.9 -0.4
baz=78
I05A **Bend** 78.24 47 ⇑P P 15 24 25.1 +0.3
baz=78
LHEM **Herd Peak** 78.32 50 P P 15 24 25.9 +0.6
O02C **Red Bluff** 78.33 51 ⇓P P 15 24 25.5 +0.2
baz=78
G06A **Carlson Farm,** 78.35 46 ⇓P P 15 24 25.3 -0.1
baz=78
K04A **Chilquin** 78.38 49 ⇑P P 15 24 25.9 +0.3
baz=78
L04A **Klamath Falls** 78.39 49 ⇑P P 15 24 25.9 +0.3
baz=78
WDC **Whiskeytown Da** 78.39 51 ⇑P P 15 24 25.8 +0.1
baz=78
HOPS **Hopland** 78.47 53 ⇓P P 15 24 26.0 -0.1
baz=78
M03C **McCloud** 78.49 50 ⇑P P 15 24 26.3 0.0
baz=78
MDW **Midway** 78.52 45 P P 15 24 26.7 +0.4
J05A **Fort Rock** 78.52 48 ⇑P P 15 24 27.0 +0.6
baz=78,SNR=15
GASB **Alder Springs** 78.54 52 ⇓P P 15 24 27.1 +0.6
baz=78
M04C **Macdoel** 78.55 50 ⇑P P 15 24 26.9 +0.4
baz=78,SNR=9.7
LVZ **Lovozero** 78.57 339 ⇓*i*P P 15 24 26.2 -0.4
LVZ pmax pmax
comp=Z,14nm,1.0s,mb4.8
VIPM **Ingram Point** 78.58 47 P P 15 24 27.1 +0.4
H06A **Lindquist Farm** 78.71 46 ⇑P P 15 24 27.3 -0.1
baz=79,SNR=10
TMCR **Tamitsa** 78.93 335 *e*P P 15 24 28.1 -0.5
TMCR pmax pmax
comp=Z,20nm,0.5s,mb5.2
MNRC **McLaughlin Nat** 78.97 53 ⇓P P 15 24 29.3 +0.5
baz=79
I06A **Prineville** 79.03 47 ⇓P P 15 24 29.5 +0.4
baz=79,SNR=8.3
HATC **Hat Creek Radi** 79.11 51 ⇑P P 15 24 29.7 +0.1
baz=79
CVS **Carmenet Viney** 79.12 53 ⇑P P 15 24 29.3 -0.4
baz=79
M05C **Lookout** 79.17 50 ⇑P P 15 24 29.9 0.0
baz=79
L05A **Lakeview** 79.18 49 ⇑P P 15 24 30.4 +0.4
baz=79,SNR=7.2
J06A **Christmas Vall** 79.29 48 ⇓P P 15 24 30.5 -0.1
baz=79,SNR=9.4
SUTB **Sutter Butte** 79.35 52 ⇑P P 15 24 30.6 -0.3
baz=79
K06A **Valley Falls** 79.36 48 ⇑P P 15 24 31.3 +0.3
baz=79,SNR=5.9
F08A **Pendleton** 79.42 45 ⇑P P 15 24 31.6 +0.3
baz=79,SNR=10
G08A **Pilot Rock** 79.46 46 ⇓P P 15 24 31.6 +0.1
baz=79
ORV **Oroville** 79.46 52 P P 15 24 31.2 -0.3
baz=79,SNR=7.7
I07A **Izee** 79.47 47 ⇓P P 15 24 31.6 0.0
baz=79,SNR=5.8
O04C **Chester** 79.53 51 ⇓P P 15 24 32.1 +0.2
baz=79
OHCM **Honcut** 79.54 52 *e*P P 15 24 31.2 -0.7
NEW **Newport** 79.69 42 *e*P P 15 24 32.0 -0.8
NEW pmax pmax
comp=Z,20nm,0.9s
NEW **Newport** 79.69 42 *e*P P 15 24 31.9 -0.8
comp=Z,20nm,0.9s,mb4.9
M06C **Likely Place G** 79.70 50 ⇑P P 15 24 32.8 0.0
baz=80
ELFS **Eagle Lake Fie** 79.70 51 ⇑P P 15 24 32.6 -0.2
baz=80
O05C **Quincy** 79.77 51 ⇑P P 15 24 33.0 -0.2
baz=80
WENL **Wente Brothers** 79.87 54 ⇑P P 15 24 32.6 -1.1
baz=80
H08A **Prairie City** 79.90 46 ⇓P P 15 24 34.1 +0.2
baz=80
KEV **Kevo** 80.04 342 *ep* P 15 24 32.7 -2.0
comp=Z,9.4nm,0.7s,mb4.7
KEV **Kevo** 80.04 342 *e*P P 15 24 32.7 -2.0
KEV pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
I08A **Drewsey** 80.17 47 ⇑P P 15 24 35.4 +0.1
baz=80,SNR=5.9
P05C **Yuba Gap, Truc** 80.20 52 ⇑P P 15 24 35.5 0.0
baz=80,SNR=6.4
BEKR **Beckwourth** 80.20 51 ⇓P P 15 24 35.2 -0.3
baz=80,SNR=15
EDM **Edmonton** 80.23 37 *e*P P 15 24 35.0 -0.6
S04C **Ingram Canyon,** 80.23 54 ⇓P P 15 24 35.5 -0.1
baz=80
L07A **Adell** 80.25 49 ⇑P P 15 24 36.3 +0.5
baz=80,SNR=31
LAVA **Lava Cap Winer** 80.28 52 P P 15 24 36.0 +0.1
baz=80,SNR=6.9
N06A **Buffalo Meadow** 80.30 50 ⇓P P 15 24 36.1 +0.1
baz=80,SNR=15
HAST **UC Hastings Re** 80.41 55 ⇑P P 15 24 36.6 0.0
baz=80
PACP **Pacheco Peak** 80.42 54 ⇑P P 15 24 36.7 0.0
baz=80
O06A **Flanigan** 80.49 51 ⇓P P 15 24 37.1 +0.1
baz=80,SNR=15
H09A **Durkee** 80.53 46 ⇓P P 15 24 37.4 +0.1
baz=80
P06A **Stead Airport,** 80.60 51 ⇑P P 15 24 37.6 -0.1
baz=80
ARCES **ARCESS Array B** 80.60 342 P P 15 24 37.3 -0.4
comp=Z,12nm,0.7s,mb4.8,baz=71,slow=8.3,SNR=75
ARCES pP pP 15 24 56.1 -2.9
comp=Z,2.4nm,0.5s,baz=66,slow=7.2,SNR=3.3
ARCES LR LR 16 02 31.5
comp=Z,34nm,21.0s,baz=77,slow=37
ARCES **ARCESS Array B** 80.60 342 P P 15 24 37.3 -0.4
ARCES *PP pP 15 24 56.1 -2.9
ARE0 **ARCESS Array S** 80.60 342 *e*P P 15 24 36.9 -0.8
WVOR **Wild Horse Val** 80.60 48 *e*P P 15 24 37.1 -0.6
WVOR pmax pmax
comp=Z,12nm,0.9s,mb4.7
WVOR **Wild Horse Val** 80.60 48 *e*P P 15 24 37.1 -0.6
comp=Z,12nm,0.9s,mb4.7
K08A **Mann Creek Ran** 80.61 48 ⇑P P 15 24 37.8 +0.1
baz=80,SNR=33
I09A **Lost Marbles R** 80.71 47 ⇓P P 15 24 38.0 -0.2
baz=81,SNR=6.3
CMB **Columbia Colle** 80.77 53 *e*P P 15 24 38.3 -0.2
CMB pmax pmax
comp=Z,31nm,1.1s,mb5.0
CMB **Columbia Colle** 80.77 53 *e*P P 15 24 38.3 -0.2
comp=Z,31nm,1.1s,mb5.0
CMB **Columbia Colle** 80.77 53 ⇑P P 15 24 38.5 -0.1
baz=81,SNR=10
V03C **Hunter Liggett** 80.77 55 ⇑P P 15 24 38.9 +0.4
baz=81
R05C **Kirkwood Meado** 80.78 52 ⇑P P 15 24 38.4 -0.2
baz=81
WCN **Washoe City** 80.83 52 ⇑P P 15 24 39.0 +0.1
baz=81
L08A **Fields** 80.89 48 ⇓P P 15 24 39.5 +0.4
baz=81,SNR=22
N07B **Gerlach** 80.91 50 ⇓P P 15 24 39.5 +0.2
baz=81
J09A **Fry Pan Ranch,** 80.91 47 ⇓P P 15 24 39.3 0.0
baz=81
PAHR **Pah Rah Range** 80.97 51 *e*P P 15 24 39.6 0.0
comp=Z,23nm,1.1s,mb4.9
U04C **Hernandez Rese** 81.01 55 ⇑P P 15 24 40.2 +0.4
baz=81
S05C **Merced** 81.03 54 ⇑P P 15 24 39.5 -0.5
baz=81
M08A **Happy Creek Ra** 81.11 49 ⇓P P 15 24 40.7 +0.4
baz=81,SNR=7.3
K09A **Rome** 81.15 48 P P 15 24 40.5 0.0
baz=81,SNR=11
O07A **Toulon** 81.18 51 ⇑P P 15 24 40.4 -0.3
baz=81
S06C **San Francisco** 81.22 53 P P 15 24 40.9 0.0
baz=81,SNR=7.7
R06C **Coleville** 81.31 52 ⇓P P 15 24 41.8 +0.4
baz=81,SNR=15
PKD **Parkfield** 81.33 55 ⇓P P 15 24 41.5 0.0
baz=81
P07A **Fallon** 81.38 51 ⇑P P 15 24 42.3 +0.5
baz=81
WALA **Waterton Lakes** 81.41 41 *e*P P 15 24 42.0 0.0
comp=Z,25nm,1.1s,mb5.0
L09A **Wilkinson Ranc** 81.42 48 ⇑P P 15 24 42.3 +0.3
baz=81,SNR=11
N08A **GE Springer Mi** 81.51 50 P P 15 24 42.9 +0.5
baz=81,SNR=19
T06C **Millerton Lake** 81.61 54 ⇓P P 15 24 42.6 -0.4
baz=82,SNR=9.8
R07C **Lee Vining** 81.75 53 P P 15 24 44.5 +0.8
baz=82,SNR=16
M09A **Marrel Ranch,** 81.78 49 ⇑P P 15 24 44.1 +0.2
baz=82
KCC **Kaiser Creek** 81.80 53 ⇑P P 15 24 43.7 -0.3
baz=82,SNR=7.8
P08A **Dixie Valley** 81.92 51 ⇑P P 15 24 44.8 +0.2
baz=82
N09A **Rock Creek Ran** 81.92 49 ⇑P P 15 24 45.1 +0.5
baz=82,SNR=14
JOF **Joensuu** 82.18 335 *ep* P 15 24 42.6 -3.4
comp=Z,13nm,0.5s,mb5.0
JOF **Joensuu** 82.18 335 *e*P P 15 24 42.6 -3.4
JOF pmax pmax
comp=Z,13nm,0.5s,mb5.0
NVAR **Mina Array Bea** 82.19 52 P P 15 24 46.5 +0.5
comp=Z,19nm,0.8s,mb5.0,baz=271,slow=4.2,SNR=134
NVAR **Mina Array Bea** 82.19 52 P P 15 24 46.5 +0.5
PKM **Peak Mountain** 82.23 56 ⇓P P 15 24 46.9 +0.6
baz=82,SNR=6.4
HELL **Mitchell Peak,** 82.24 54 ⇑P P 15 24 45.9 -0.4
baz=82,SNR=9.8
Q08A **Gabbs** 82.31 51 P P 15 24 46.9 +0.3
baz=82,SNR=8.0
MTUM **Tungsten Hills** 82.36 53 *e*P P 15 24 47.0 +0.1
R08A **Mina** 82.36 52 ⇓P P 15 24 47.4 +0.5
baz=82
M10A **I.L. Ranch, Tu** 82.39 49 ⇑P P 15 24 47.5 +0.4
baz=82
O09A **Fish Creek Ran** 82.40 50 ⇓P P 15 24 47.6 +0.5
baz=82,SNR=17
VES **Vestal, Richgr** 82.48 55 ⇓P P 15 24 46.7 -0.9
baz=82
CHMT **Chamberlain Mo** 82.62 43 *e*P P 15 24 47.6 -0.6
TIN **Tinemaha** 82.71 53 ⇓P P 15 24 48.7 -0.1
baz=83
O10A **Cortez Mining,** 82.85 50 ⇑P P 15 24 49.8 +0.3
baz=83
Q09A **Carvers** 82.87 51 ⇓P P 15 24 49.6 0.0
baz=83
M11A **Holland Ranch,** 82.94 48 ⇑P P 15 24 50.1 +0.1
baz=83
ISA **Isabella** 83.01 55 ⇑P P 15 24 49.5 -0.7
baz=83
SNCC **San Nicolas Is** 83.02 57 ⇑P P 15 24 49.9 -0.4
baz=83
CWC **Cottonwood Cre** 83.04 54 ⇑P P 15 24 50.4 -0.1
baz=83,SNR=6.6
HLID **Hailey** 83.11 46 *e*P P 15 24 50.6 -0.2
comp=Z,7.8nm,1.2s,mb4.4
P10A **Eureka** 83.11 50 ⇑P P 15 24 51.0 +0.2
baz=83
R09A **Tonopah** 83.16 52 ⇓P P 15 24 51.3 +0.3
baz=83,SNR=24
OSI **Osito Adit** 83.17 56 ⇓P P 15 24 51.5 +0.3
baz=83
S09A **Goldfield** 83.23 52 ⇓P P 15 24 51.5 +0.1
baz=83,SNR=25
GRAC **Grapevine Rang** 83.38 53 ⇓P P 15 24 52.5 +0.4
baz=83
DAC **Darwin (Calif)** 83.46 54 *e*P P 15 24 52.4 -0.2
DAC pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
DAC **Darwin (Calif)** 83.46 54 *e*P P 15 24 52.4 -0.2
comp=Z,9.1nm,1.0s,mb4.6
O11A **Cowboy Ranch,** 83.51 50 ⇓P P 15 24 53.2 +0.3
baz=83
OBN **Obninsk** 83.54 327 ⇓*i*P P 15 24 52.4 -0.6
OBN *e* pP 15 25 14.3 -0.1
OBN pmax pmax
comp=Z,33nm,1.5s,mb4.9
OBN **Obninsk** 83.54 327 *e*P P 15 24 52.1 -0.9
comp=Z,19nm,0.6s,mb5.1
M12A **Wells** 83.56 48 ⇑P P 15 24 53.5 +0.4
baz=83
ELK **Elko** 83.58 49 *e*P P 15 24 53.7 +0.5
ELK pmax pmax
comp=Z,13nm,0.9s
ELK **Elko** 83.58 49 *e*P P 15 24 53.7 +0.4
comp=Z,13nm,0.9s,mb4.8
HRY **Holter Researc** 83.60 42 *e*P P 15 24 53.4 +0.1
MPMC **Manual Prospec** 83.62 54 P P 15 24 53.7 +0.3
baz=84,SNR=21
DLMT **Dillon** 83.64 44 *e*P P 15 24 53.2 -0.3
comp=Z,6.6nm,0.9s,mb4.5
P11A **Circle Ranch,** 83.65 50 ⇓P P 15 24 53.8 +0.2
baz=84
LRMC **Laurel Mountai** 83.67 55 ⇓P P 15 24 53.6 0.0
baz=84
MCMT **McKenzie Canyo** 83.68 45 *e*P P 15 24 53.6 -0.1
N12A **Clover Valley,** 83.68 49 P P 15 24 54.2 +0.5
baz=84,SNR=5.5
R10A **Warm Springs** 83.71 52 ⇑P P 15 24 54.1 +0.2
baz=84,SNR=6.1
CIS **Catalina Islan** 83.84 57 ⇓P P 15 24 54.1 -0.4
baz=84
FURC **Furnace Creek,** 83.95 53 ⇓P P 15 24 54.8 -0.3
baz=84,SNR=8.0
M13A **Montello** 84.11 48 P P 15 24 56.2 +0.3
baz=84,SNR=12
O12A **Currie** 84.11 49 P P 15 24 56.2 +0.3
baz=84,SNR=20
BOZ **Bozeman (W)** 84.15 43 *e*P P 15 24 56.1 0.0
BOZ pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
BOZ **Bozeman (W)** 84.15 43 *e*P P 15 24 56.1 0.0
comp=Z,6.3nm,0.7s,mb4.5
N13A **Wendover, West** 84.27 49 ⇓P P 15 24 56.9 +0.2
baz=84
P12A **McGill** 84.29 50 P P 15 24 57.2 +0.4
baz=84,SNR=6.1
U10A **Ash Meadows, A** 84.36 53 ⇓P P 15 24 57.7 +0.5
baz=84,SNR=12
GSC **Goldstone** 84.41 55 ⇑P P 15 24 57.5 +0.1
baz=84,SNR=5.3
Q12A **Willow Creek R** 84.50 50 ⇑P P 15 24 58.2 +0.2
baz=84,SNR=5.1
KAF **Kangasniemi** 84.57 336 *ep* P 15 24 55.9 -2.4
comp=Z,12nm,0.6s,mb5.0,baz=54,slow=4.6
KAF **Kangasniemi** 84.57 336 *e*P P 15 24 55.9 -2.4
KAF pmax pmax
comp=Z,12nm,0.6s,mb5.0
SHOC **Shoshone** 84.59 54 ⇑P P 15 24 58.1 -0.3
baz=84
QLMT **Earthquake Lak** 84.60 44 *e*P P 15 24 58.9 +0.5
HVU **Hansel Valley** 84.91 47 *e*P P 15 25 00.1 +0.1
HVU pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
HVU **Hansel Valley** 84.91 47 *e*P P 15 25 00.1 +0.1
comp=Z,6.7nm,0.8s,mb4.6
HEC **Hector,Ludlow** 84.94 55 ⇓P P 15 25 00.2 0.0
baz=85,SNR=5.8
YMR **Madison River** 84.97 44 *e*P P 15 25 01.2 +0.9
comp=Z,26nm,0.9s,mb5.2
TUQ **Turquoise Mtn.** 85.03 54 ⇑P P 15 25 00.4 -0.2
baz=85
109C **Camp Elliot, M** 85.05 57 ⇓P P 15 25 00.4 -0.3
baz=85
FIA1 **FINESS Array S** 85.05 335 *e*P P 15 24 58.8 -1.8
FINES **FINESS Array B** 85.05 335 P P 15 24 59.2 -1.4
comp=Z,14nm,0.5s,mb5.1,baz=69,slow=5.6,SNR=122
FINES pP pP 15 25 20.9 -1.3
comp=Z,3.5nm,0.6s,baz=64,slow=4.2,SNR=3.7
BGU **Big Grassy Mou** 85.06 48 *e*P P 15 25 00.7 0.0
YNR **Norris Junctio** 85.14 44 *e*P P 15 25 02.7 +1.6
YFT **Old Faithful** 85.14 44 *e*P P 15 25 03.0 +1.8
RRI2 **Red Ridge** 85.27 45 *e*P P 15 25 02.0 +0.2
comp=Z,17nm,0.9s,mb5.0
PFO **Pinyon Flat Ob** 85.29 56 ⇑P P 15 25 01.7 -0.2
baz=85,SNR=5.3
IMW **Indian Meadow** 85.30 45 *e*P P 15 25 02.7 +0.8
comp=Z,16nm,0.8s,mb5.0
IMW *ep*P pP 15 25 24.6 +1.2
GCMT **Greycliff** 85.34 43 *e*P P 15 25 02.2 +0.1
GCMT *ep*P pP 15 25 24.6 +0.9
GCMT *es*P sP 15 25 37.7 +5.4
FLWY **Flagg Ranch** 85.39 45 *e*P P 15 25 03.3 +0.9
comp=Z,42nm,1.0s,mb5.3
TPAW **Teton Pass** 85.46 45 *e*P P 15 25 03.0 +0.3
comp=Z,16nm,1.1s,mb4.9
MOOW **Moose Ponds** 85.49 45 *e*P P 15 25 03.0 +0.2
comp=Z,14nm,1.3s,mb4.7
BELC **Belle Mtn.** 85.50 55 P P 15 25 02.7 -0.2
baz=85,SNR=6.3
DUG **Dugway** 85.50 49 *e*P P 15 25 02.2 -0.7
DUG pmax pmax
comp=Z,23nm,1.0s,mb5.1
DUG **Dugway** 85.50 49 *e*P P 15 25 02.2 -0.7
comp=Z,23nm,1.0s,mb5.1
MONP **Monument Peak** 85.58 57 ⇓P P 15 25 03.0 -0.3
baz=85
LOHW **Long Hollow** 85.64 45 *e*P P 15 25 03.8 +0.2
comp=Z,11nm,1.1s,mb4.7
U12A **Valley of Fire** 85.70 53 ⇓P P 15 25 04.1 +0.2
baz=86
V12A **Nelson** 85.73 54 ⇑P P 15 25 04.3 +0.2
baz=86,SNR=5.2
HWUT **Hardware Ranch** 85.81 47 *e*P P 15 25 04.2 -0.2
comp=Z,22nm,0.8s,mb5.2
ARUT **Antelope Range** 85.99 51 *e*P P 15 25 05.4 +0.1
CTU **Camp Tracy** 86.05 48 *e*P P 15 25 05.3 -0.3
comp=Z,17nm,1.1s,mb4.9
SWSC **Sam W. Stewart** 86.05 56 ⇑P P 15 25 05.2 -0.4
baz=86
TCUT **Toone Canyon** 86.11 48 *e*P P 15 25 05.8 -0.2
NLU **North Lily Min** 86.12 49 *e*P P 15 25 06.1 +0.1
CCUT **Cedar City** 86.14 51 *e*P P 15 25 06.5 +0.4
DAU **Daniels Canyon** 86.51 48 *e*P P 15 25 07.8 -0.1
PDAR **Pinedale Array** 86.69 45 P P 15 25 08.3 -0.4
comp=Z,3.0nm,0.7s,mb4.3,baz=277,slow=2.8,SNR=28
PDAR pP pP 15 25 28.5 -1.8
comp=Z,1.7nm,0.8s,baz=306,slow=3.0,SNR=3.2
PDAR LR LR 16 00 59.1
comp=Z,32nm,21.4s,baz=259,slow=34
W13A **Hualapai Mount** 86.70 54 ⇑P P 15 25 09.0 +0.2
baz=87,SNR=6.2
Y12C **Blythe** 86.73 55 ⇑P P 15 25 08.9 -0.1
baz=87
GLA **Glamis** 86.76 56 ⇑P P 15 25 09.4 +0.3
baz=87
PDMCI **Parker Dam,Lak** 86.81 55 ⇓P P 15 25 09.5 +0.1
baz=87
X13A **Yucca** 86.94 54 P P 15 25 10.2 +0.2
baz=87,SNR=8.8
SUMG **Summit** 87.02 1 *e*P P 15 25 10.5 +0.1
comp=Z,17nm,1.1s,mb4.9
FCC **Fort Churchill** 87.09 27 *e*P P 15 25 09.1 -1.6
FCC pmax pmax
comp=Z,15nm,0.7s,mb5.0
FCC **Fort Churchill** 87.09 27 *e*P P 15 25 09.1 -1.6
comp=Z,15nm,0.7s,mb5.0
LAO **LASA Array** 87.10 41 P P 15 25 10.3 -0.5
comp=Z,18nm,0.6s,mb5.2
Y13A **Salome** 87.24 55 ⇓P P 15 25 11.8 +0.4
baz=87
W14A **Seligman** 87.26 53 ⇑P P 15 25 12.3 +0.7
baz=87,SNR=14
SRU **San Rafael** 87.56 49 *e*P P 15 25 12.7 -0.2
SRU pmax pmax
comp=Z,25nm,0.7s,mb5.3
SRU **San Rafael** 87.56 49 *e*P P 15 25 12.7 -0.2
comp=Z,25nm,0.7s,mb5.3
X14A **Yava** 87.70 54 ⇓P P 15 25 14.4 +0.8
baz=88,SNR=9.2
Y14A **Wickenburg** 87.82 55 ⇑P P 15 25 14.3 +0.1
baz=88,SNR=18
W15A **Williams** 87.89 53 ⇑P P 15 25 15.4 +0.9
baz=88,SNR=6.9
Z14A **Wintersburg** 88.09 55 ⇑P P 15 25 15.8 +0.3
baz=88
X15A **Humboldt** 88.19 54 ⇓P P 15 25 16.8 +0.8
baz=88,SNR=11
WUAZ **Wupatki** 88.42 53 *e*P P 15 25 17.2 +0.1
comp=Z,20nm,1.0s,mb5.1
115A **Sonoran Desert** 88.91 55 ⇑P P 15 25 20.1 +0.7
baz=89,SNR=5.8
PV10 **Paradox Valley** 88.92 49 *e*P P 15 25 19.6 +0.2
PV01 **Paradox Valley** 89.36 49 *e*P P 15 25 21.1 -0.3
116A **Eloy** 89.37 55 P P 15 25 22.3 +0.8
baz=89,SNR=5.6
AKASG **Malin Array Be** 89.59 325 P P 15 25 20.5 -2.0
comp=Z,0.4nm,0.3s,mb4.0,baz=44,slow=4.4,SNR=8.9
AKASG pP pP 15 25 42.6 -1.6
comp=Z,0.4nm,0.5s,baz=44,slow=4.9,SNR=1.5
AKASG **Malin Array Be** 89.59 325 P P 15 25 20.5 -2.0
AKASG pP pP 15 25 42.6 -1.6
RSSD **Black Hills** 89.67 42 *e*P P 15 25 22.4 -0.5
RSSD pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
RSSD **Black Hills** 89.67 42 *e*P P 15 25 22.4 -0.5
comp=Z,4.2nm,0.7s,mb4.7

MALT	**Malatya**	**89.95**	**311**	*e*P		**P**		**15 25 24.5**	**+0.3**
MALT				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.5								
MALT	**Malatya**	**89.95**	**311**	*e*P		**P**		**15 25 24.5**	**+0.2**
	comp=Z,3.5nm,0.9s,mb4.5								
SMCO	**Snowmass**	**90.02**	**48**	*e*P		**P**		**15 25 24.9**	**+0.4**
	comp=Z,13nm,1.1s,mb5.0								
TUC	**Tucson**	**90.19**	**55**	*e*P		**P**		**15 25 26.1**	**+0.8**
TUC				pmax		pmax			
	comp=Z,8.0nm,1.2s,mb4.7								
TUC	**Tucson**	**90.19**	**55**	*e*P		**P**		**15 25 26.1**	**+0.8**
	comp=Z,8.0nm,1.2s,mb4.7								
ISCO	**Idaho Springs**	**90.67**	**47**	*e*P		**P**		**15 25 27.8**	**+0.2**
ISCO				pmax		pmax			
	comp=Z,7.0nm,0.8s,mb4.8								
ISCO	**Idaho Springs**	**90.67**	**47**	*e*P		**P**		**15 25 27.8**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.9								
NB2	**NORSAR Subarra**	**90.70**	**340**	P		**P**		**15 25 25.6**	**-2.1**
	comp=Z,6.3nm,1.0s,mb4.7,baz=44,slow=4.8								
NOA	**NORSAR Array B**	**90.70**	**340**	P		**P**		**15 25 26.2**	**-1.4**
	comp=Z,3.0nm,0.8s,mb4.5,baz=47,slow=4.5,SNR=12								
NOA				LR		LR		16 07 33.0	
	comp=Z,24nm,20.7s,baz=45,slow=36								
SUW	**Suwalki**	**90.71**	**330**	*e*P		**P**		**15 25 26.7**	**-1.1**
SUW				pmax		pmax			
	comp=Z,6.0nm,1.1s,mb4.6								
SUW	**Suwalki**	**90.71**	**330**	*e*P		**P**		**15 25 26.7**	**-1.0**
	comp=Z,59nm,1.1s,mb5.6								
ULM	**Lac du Bonnet**	**91.19**	**34**	P		**P**		**15 25 29.5**	**-0.4**
	comp=Z,9.3nm,0.8s,mb4.9,baz=301,slow=4.8,SNR=11								
ULM	**Lac du Bonnet**	**91.19**	**34**	*e*P		**P**		**15 25 29.1**	**-0.8**
	comp=Z,13nm,0.9s,mb5.0								
ANMO	**Albuquerque**	**92.29**	**51**	⇓ *i*P		**P**		**15 25 35.4**	**+0.3**
ANMO	**Albuquerque**	**92.29**	**51**	*e*P		**P**		**15 25 35.4**	**+0.4**
	comp=Z,4.3nm,0.8s,mb4.7								
BR131	**Keskin Array S**	**92.59**	**314**	*e*P		**P**		**15 25 34.6**	**-1.9**
	comp=Z,1.7nm,0.8s,mb4.4								
BRTR	**Keskin Array B**	**92.59**	**314**	P		**P**		**15 25 35.2**	**-1.2**
	comp=Z,2.0nm,0.9s,mb4.5,baz=106,slow=4.0,SNR=10								
LPIG	**La Paz**	**93.97**	**63**	LR		LR		15 59 19.2	
	comp=Z,121nm,21.2s,slow=30								
MNTX	**Cornudas Mount**	**94.58**	**54**	*e*P		**P**		**15 25 45.2**	**-0.4**
	comp=Z,5.1nm,1.0s,mb4.9								
GERES	**GERESS Array B**	**98.57**	**330**	LR		LR		16 13 54.9	
	comp=Z,27nm,19.8s,baz=89,slow=37								
LSZ	**Lusaka**	**120.34**	**264**	*e*PKIKP		PKPdf		15 31 16.7	+0.9
TORD	**Torodi Ar. Bea**	**131.03**	**310**	PKP		PKPdf		15 31 36.5	+0.2
	comp=Z,1.9nm,0.5s,baz=36,slow=1.3,SNR=16								
TORD	**Torodi Ar. Bea**	**131.03**	**310**	PKP		PKPdf		15 31 36.5	+0.2
DBIC	**Dimbokro**	**140.14**	**310**	PKP		PKPdf		15 31 53.6	+0.4
	comp=Z,2.9nm,0.6s,baz=315,slow=3.6,SNR=4.9								
PLCA	**Paso Flores**	**143.48**	**131**	PKP		PKPdf		15 31 56.0	-3.2
	comp=Z,1.6nm,0.9s,baz=230,slow=4.7,SNR=3.4								
PLCA				*e*PKP		pPKPdf		15 32 18.9	-2.8
	comp=Z,2.7nm,0.9s,baz=287,slow=2.4,SNR=3.7								
LPAZ	**La Paz**	**147.93**	**88**	PKPbc		PKPbc		15 32 11.3	+1.5
	comp=Z,8.4nm,0.8s,baz=296,slow=2.8,SNR=38								
LPAZ	**La Paz**	**147.93**	**88**	*e*PKPdf		PKPdf		15 32 06.7	-0.1
LPAZ				*e*PKPbc		PKPbc		15 32 11.1	+1.2
LPAZ				PKPbc		PKPbc		15 32 11.3	+1.5
SAML	**Samuel**	**150.08**	**71**	*e*PKPdf		PKPdf		15 32 10.5	+0.3
SAML				*e*PKPbc		PKPbc		15 32 15.1	-0.2
SAML				*e*PKPab		PKPab		15 32 20.1	-1.3

*NEIC **24** 15:31:22.1, 3506N×2520E, h51km, MD3.0(ATH), After ATH.*
*THE **24** 15:31:22.3, 3483N×2508E, h3km*
*ATH **24** 15:31:22.1, 3506N×2520E, h51km±4km, MD3.0/4*
*ISCJB **24** 15:31:23.5±0.7, 3502N±0.008×2511E±0.003, h9km±9km, Error ellipse: s-maj=13.5km s-min=4.3km az=4.9*
*CSEM **24** 15:31:23.0±0.3, 3503N×2511E, h12km, MD3.0, Error ellipse: s-maj=20.7km s-min=5.7km az=3.0*

ISC 24 15:31:23.6±0.8, 3500N±0.008×2510E±0.003, h19km±10km, n7, σ0=87/13, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.24**	**274**	*e*Pg	**Pg**	**15 31 28.3**	**-0.9**
SIVA				*e*Sg	**Sg**	**15 31 32.8**	**-0.2**
NPS	**Neapolis**	**0.49**	**58**	*e*P	**Pg**	**15 31 32.6**	**-1.0**
NPS				*e*S	**Sg**	**15 31 40.0**	**-0.3**
XRY	**Khrisi**	**0.51**	**104**	*e*P	**Pg**	**15 31 33.5**	**-0.3**
XRY				*e*S	**Sg**	**15 31 41.5**	**+0.9**
VAM	**Vamos**	**0.84**	**299**	*e*P	**Pb**	**15 31 39.1**	**-0.4**
VAM				*e*S	**Sg**	**15 31 52.0**	**+0.9**
GVD	**Gavdhos**	**0.85**	**259**	*e*P	**Pb**	**15 31 40.0**	**+0.3**
ZKR	**Zakros**	**0.92**	**83**	*e*Pg	**Pg**	**15 31 40.8**	**-0.7**
ZKR				*e*Sg	**Sg**	**15 31 55.0**	**+1.2**
KARN	**Karanos**	**1.05**	**293**	*e*Pg	**Pg**	**15 31 42.7**	**-1.2**
KARN				*e*Sg	**Sg**	**15 31 59.1**	**+1.4**

IDC 24 15:36:26.9±19.0, 970S×10742E, h135km±181km, mb3.3/6, mb1 3.3/7, mb1mx3.2/18, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=109.6km s-min=29.9km az=58.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.55**	**117**	P	P	15 40 44.3	+0.3
	0.1nm,0.3s,baz=15,slow=12,SNR=4.2						
FITZ	**Fitzroy Crossi**	**19.55**	**117**	P	P	15 40 44.3	+0.3
WRA	**Warramunga Arr**	**27.91**	**114**	P	P	15 42 04.8	+0.6
	0.3nm,0.4s,baz=286,slow=11,SNR=4.3						
ASAR	**Alice Springs**	**28.85**	**122**	P	P	15 42 12.4	-0.1
	0.4nm,0.9s,baz=300,slow=8.5,SNR=3.3						
STKA	**Stephens Creek**	**38.57**	**130**	P	P	15 43 36.8	+0.3
	2.0nm,0.9s,baz=300,slow=14,SNR=3.4						
SONM	**Songino Array**	**57.28**	**359**	P	P	15 46 01.1	+0.8
	0.7nm,0.6s,baz=172,slow=8.4,SNR=5.8						
MKAR	**Makanchi Array**	**60.55**	**340**	P	P	15 46 22.8	-0.1
	0.8nm,0.6s,baz=134,slow=7.0,SNR=9.7						
BVAR	**Borovoye Array**	**70.00**	**337**	P	P	15 47 23.3	-0.5
	0.8nm,0.6s,baz=157,slow=7.8,SNR=6.9						
AB31	**Akbulak array**	**71.93**	**329**	*i* P	P	15 47 35.1	-0.3
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						

*BJI **24** 15:36:20.9, 1008S×10754E, h30km, mB5.0, mb4.6*
*IDC **24** 15:36:22.1±1.2, 964S×107.19E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.1/19, mbtmp4.1/10, ML3.7/1, Error ellipse: s-maj=51.5km s-min=15.8km az=48.0*
*NEIC **24** 15:36:23.7±0.5, 962S×10723E, h10km, mb4.5/9, Error ellipse: s-maj=16.9km s-min=7.6km az=46.0*
*MOS **24** 15:36:25.7±0.7, 955S×10731E, h33km, mb4.8/15, Error ellipse: s-maj=36.3km s-min=13.7km az=101.9*
*ISCJB **24** 15:36:30.5±2.3, 954S±0.010×1074E±0.1, h78km±19km, mb4.4/27, Error ellipse: s-maj=23.6km s-min=9.8km az=104.0*

ISC 24 15:36:31.5±2.2, 955S±010×1074E±01, h69km±18km, n58, σ0=81/56, mb4.4/27, 3C-1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**3.18**	**46**	P	**Pn**	**15 37 19.5**	**+0.4**
	0.0nm,0.0s						
KRKI	**Karangkates**	**5.19**	**75**	P	**Pn**	**15 37 47.0**	**+0.5**
	0.0nm,0.0s						
KSI	**Kapahiang**	**7.55**	**321**	⇑ *e*P	**Pn**	**15 38 11.0**	**-7.8**
KSM	**Kuching**	**11.33**	**15**	P	**Pn**	**15 39 15.3**	**+4.9**
MBWA	**Marble Bar**	**16.56**	**136**	Pn	**Pn**	**15 40 12.2**	**-7.0**
KKM	**Kota Kinabalu**	**17.81**	**30**	*e*Pn	**Pn**	**15 40 34.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.64**	**118**	P	**Pn**	**15 40 54.6**	**-1.8**
	0.2nm,0.3s,baz=256,slow=5.6,SNR=6.0						
FITZ	**Fitzroy Crossi**	**19.64**	**118**	P	**Pn**	**15 40 54.6**	**-1.8**
WRA	**Warramunga Arr**	**27.99**	**115**	P	**P**	**15 42 16.0**	**+0.3**
	1.6nm,0.8s,mb3.6,baz=287,slow=11,SNR=9.2						
WRAB	**Tennant Creek**	**28.00**	**115**	*e*P	**P**	**15 42 14.8**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
WRAB	**Tennant Creek**	**28.00**	**115**	*e*P	**P**	**15 42 14.8**	**-1.0**
	comp=Z,3.9nm,0.8s,mb4.0						
WB2	**Warramunga Arr**	**28.00**	**115**	*e*P	**P**	**15 42 15.9**	**+0.1**
ASAR	**Alice Springs**	**28.95**	**122**	P	**P**	**15 42 24.6**	**+0.3**
	comp=Z,1.0nm,1.0s,mb3.4,baz=298,slow=8.1,SNR=5.9						
ASAR				PcP	PcP	15 45 32.1	+0.6
	comp=Z,0.2nm,0.8s,baz=338,slow=3.0,SNR=4.8						
STKA	**Stephens Creek**	**38.68**	**130**	P	**P**	**15 43 48.7**	**+0.3**
	comp=Z,3.1nm,0.7s,mb4.2,baz=294,slow=8.8,SNR=4.8						
STKA	**Stephens Creek**	**38.68**	**130**	*e*P	**P**	**15 43 48.3**	**-0.1**
STKA				*e*		15 43 59.1	

CTA	**Charters Tower**	**38.91**	**110**	P		**P**		**15 43 51.5**	**+1.2**
	comp=Z,4.3nm,1.1s,mb4.2,baz=265,slow=13,SNR=4.9								
CTAO	**Charters Tower**	**38.91**	**110**	*e*P		**P**		**15 43 52.2**	**+1.8**
CTAO				pmax		pmax			
	comp=Z,24nm,1.8s,mb4.7								
CTAO	**Charters Tower**	**38.91**	**110**	*e*P		**P**		**15 43 52.2**	**+1.9**
	comp=Z,24nm,1.8s,mb4.7								
LSA	**Lhasa**	**42.04**	**339**	P		**P**		**15 44 17.3**	**+1.1**
LSA	**Lhasa**	**42.04**	**339**	*e*P		**P**		**15 44 17.2**	**+1.0**
LSA				pmax		pmax			
	comp=Z,9.0nm,0.8s,mb4.5								
LSA	**Lhasa**	**42.04**	**339**	*e*P		**P**		**15 44 17.2**	**+1.0**
	comp=Z,9.3nm,0.8s,mb4.6								
SSE	**Sheshan**	**42.53**	**18**	P		**P**		**15 44 20.3**	**+0.2**
SSE				AMB		AMB			
	comp=Z,26nm,0.7s,mb5.1								
SSE				AMB		AMB			
	comp=Z,71nm,3.8s								
PKI	**Pulchoki**	**42.61**	**331**	*e*P		**P**		**15 44 21.1**	**+0.3**
DMN	**Daman**	**42.78**	**330**	*e*P		**P**		**15 44 20.8**	**-1.4**
	comp=Z,20nm,0.9s,mb4.8								
NJ2	**Nanjing**	**42.80**	**14**	*e*P		**P**		**15 44 21.3**	**-1.0**
NJ2				AMB		AMB			
	comp=Z,10.0nm,0.5s,mb4.8								
KKN	**Kakani**	**42.85**	**331**	*e*P		**P**		**15 44 22.0**	**-0.8**
GKN	**Gorkha**	**43.34**	**330**	*e*P		**P**		**15 44 26.1**	**-0.6**
	comp=Z,4.6nm,0.3s,mb4.8								
KOLN	**Koldanda**	**43.67**	**329**	*e*P		**P**		**15 44 29.4**	**0.0**
	comp=Z,12nm,0.8s,mb4.7								
MJAR	**Matsushiro Arr**	**54.24**	**31**	P		**P**		**15 45 49.6**	**-0.6**
	comp=Z,3.5nm,1.0s,mb4.3,baz=210,slow=7.7,SNR=7.2								
WMQ	**Urumqi**	**56.05**	**343**	P		**P**		**15 46 04.0**	**+0.7**
WMQ				AMB		AMB			
	comp=Z,16nm,1.0s,mb5.0								
SONM	**Songino Array**	**57.14**	**359**	P		**P**		**15 46 12.4**	**+1.5**
	comp=Z,2.6nm,0.7s,mb4.4,baz=173,slow=7.4,SNR=19								
ULN	**Ulaanbaatar**	**57.16**	**360**	*e*P		**P**		**15 46 12.0**	**+0.9**
ULN				pmax		pmax			
	comp=Z,2.0nm,0.6s,mb4.3								
ULN	**Ulaanbaatar**	**57.16**	**360**	*e*P		**P**		**15 46 12.0**	**+0.9**
	comp=Z,2.2nm,0.6s,mb4.4								
ZAK	**Zakamensk**	**59.79**	**357**	*e*P		**P**		**15 46 29.9**	**+0.5**
MKAR	**Makanchi Array**	**60.40**	**340**	P		**P**		**15 46 33.7**	**+0.1**
	comp=Z,2.9nm,0.6s,mb4.5,baz=134,slow=6.9,SNR=16								
MKAR	**Makanchi Array**	**60.40**	**340**	P		**P**		**15 46 33.7**	**+0.1**
TLY	**Talaya**	**61.07**	**357**	⇓ *e*P		**P**		**15 46 39.1**	**+1.0**
TLY				pmax		pmax			
	comp=Z,2.0nm,0.8s,mb4.2								
KLR	**Kul'dur**	**62.32**	**18**	*e*P		**P**		**15 46 43.1**	**-3.4**
HABR	**Khabarovsk**	**62.72**	**20**	*e*P		**P**		**15 46 48.9**	**-0.3**
YSS	**Yuzh-Sakhalins**	**64.47**	**26**	P		**P**		**15 47 01.6**	**+0.8**
BVAR	**Borovoye Array**	**69.85**	**337**	P		**P**		**15 47 34.5**	**-0.3**
	comp=Z,2.0nm,0.7s,mb4.1,baz=143,slow=8.6,SNR=13								
BRVK	**Borovoye**	**69.92**	**337**	*e*P		**P**		**15 47 34.4**	**-0.8**
BRVK				pmax		pmax			
	comp=Z,2.0nm,0.8s,mb4.0								
BRVK	**Borovoye**	**69.92**	**337**	*e*P		**P**		**15 47 34.4**	**-0.8**
	comp=Z,2.0nm,0.8s,mb4.0								
KMBO	**Kilima Mbogo**	**70.23**	**272**	⇑ *e*P		**P**		**15 47 49.7**	**+13**
CHKZ	**Chkalovo**	**70.27**	**338**	*e*P		**P**		**15 47 37.4**	**0.0**
CHKZ				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.4								
CHKZ	**Chkalovo**	**70.27**	**338**	*e*P		**P**		**15 47 37.4**	**0.0**
	comp=Z,4.2nm,0.6s,mb4.5								
ZRNK	**Zerenda**	**70.33**	**336**	*e*P		**P**		**15 47 37.3**	**-0.4**
ZRNK				*e*				15 47 42.8	
ZRNK				pmax		pmax			
	comp=Z,2.0nm,0.5s,mb4.2								
ZRNK	**Zerenda**	**70.33**	**336**	*e*P		**P**		**15 47 37.3**	**-0.4**
	comp=Z,2.4nm,0.5s,mb4.3								
ZRNK				*e*				15 47 42.8	
YAK	**Yakutsk**	**73.45**	**11**	*i* P		**P**		**15 47 55.8**	**-0.6**
YAK				pmax		pmax			
	comp=Z,6.0nm,0.5s,mb4.7								
ARU	**Arti**	**77.08**	**335**	⇑ *i*P		**P**		**15 48 16.7**	**-0.5**
ARU				*e*				15 48 26.4	
ARU				*e*				15 51 12.6	
ARU				*e*PPP				15 53 02.7	
ARU				pmax		pmax			
	comp=Z,8.0nm,1.1s,mb4.4								
ARU	**Arti**	**77.08**	**335**	*e*P		**P**		**15 48 16.6**	**-0.7**
	comp=Z,14nm,1.4s,mb4.5								
LSZ	**Lusaka**	**77.20**	**256**	P		**P**		**15 48 18.9**	**+1.0**
LSZ				pmax		pmax			
	comp=Z,5.0nm,1.2s,mb4.1								
LSZ	**Lusaka**	**77.20**	**256**	P		**P**		**15 48 18.9**	**+0.9**
	comp=Z,5.4nm,1.2s,mb4.2								
KIV	**Kislovodsk**	**79.03**	**318**	*e*P		**P**		**15 48 28.7**	**+0.7**
KIV				pmax		pmax			
	comp=Z,7.0nm,0.8s,mb4.5								
TIXI	**Tiksi**	**82.28**	**7**	*e*P		**P**		**15 48 45.4**	**0.0**
TIXI				pmax		pmax			
	comp=Z,10.0nm,1.3s,mb4.5								
BRTR	**Keskin Array B**	**83.81**	**312**	P		**P**		**15 48 52.5**	**-0.7**
	comp=Z,0.4nm,0.7s,mb3.4,baz=136,slow=8.0,SNR=5.5								
MNTX	**Cornudas Mount**	**142.48**	**49**	*e*PKPdf		PKPdf		15 55 54.1	-2.3
PLAL	**Pickwick Lake**	**151.00**	**27**	*e*PKPbc		PKPbc		15 56 15.8	-0.6

*ISCJB **24** 15:45:33.6±1.4, 5971N±0.008×2425E±0.1, h0km, Error ellipse: s-maj=13.2km s-min=5.2km az=129.1*
*HEL **24** 15:45:35.0±0.6, 5967N×2420E, h0km, Explosion*
*IDC **24** 15:45:35.9±2.3, 5966N×2455E, h0km, mb1 3.2/3, mb1mx3.0/20, mbtmp3.1/3, ML2.9/3, Error ellipse: s-maj=23.8km s-min=6.8km az=144.0*

ISC 24 15:45:35.1±1.4, 5972N±0.008×243E±01, h0km, n8, σ0=93/15, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.50**	**7**	*e*P	**Pg**	**15 45 44.3**	**-0.3**
MEF				*e*S	**Sg**	**15 45 52.6**	**+1.5**
PVF	**Pernaja**	**1.14**	**43**	*e*P	**Pg**	**15 45 56.9**	**-0.1**
PVF				*e*SN	**Sn**	**15 46 18.8**	**+1.1**
RAF	**Rauma**	**1.81**	**317**	*e*P	**Pn**	**15 46 07.0**	**-0.5**
RAF				*e*S	**Sn**	**15 46 30.7**	**-0.4**
FIA0	**FINESS Array S**	**1.94**	**26**	*e*P	**Pn**	**15 46 10.6**	**+1.2**
FIA0				*e*SG	**Sg**	**15 46 36.8**	**-0.7**
FINES	**FINESS Array B**	**1.94**	**26**	Pg	**Pg**	**15 46 10.6**	**-1.7**
	0.9nm,0.3s,baz=208,slow=16,SNR=42						
FINES				Lg		15 46 37.0	
	2.0nm,0.3s,baz=232,slow=27,SNR=20						
HFS	**Hagfors**	**5.34**	**279**	Pn	**Pn**	**15 46 57.0**	**+0.9**
	0.2nm,0.3s,baz=95,slow=15,SNR=10						
HFS				Sn	**Sn**	**15 47 59.3**	**+1.0**
	0.3nm,0.3s,baz=96,slow=27,SNR=6.0						
HFS				Lg		15 48 27.8	
	0.8nm,0.3s,baz=87,slow=29,SNR=6.4						
NOA	**NORSAR Array B**	**6.61**	**287**	Pn	**Pn**	**15 47 12.8**	**-0.7**
	0.3nm,0.3s,baz=96,slow=14,SNR=2.4						
NOA				Sn	**Sn**	**15 48 29.2**	**-0.4**
	0.2nm,0.3s,baz=88,slow=16,SNR=2.9						
ARCES	**ARCESS Array B**	**9.87**	**3**	Pn	**Pn**	**15 47 57.3**	**-0.9**
	0.1nm,0.3s,baz=178,slow=14,SNR=14						
ARCES				Sn	**Sn**	**15 49 44.2**	**-5.4**
	0.1nm,0.3s,baz=180,slow=24,SNR=2.7						

*NEIC **24** 15:46:51.1, 3663S×17844E, h97km, ML4.1(WEL), After WEL.*
*WEL **24** 15:46:53.0±0.8, 3669S×17840E, h73km±4km, ML4.0/4, Error ellipse: s-maj=6.6km s-min=5.8km az=90.0*
*ISCJB **24** 15:46:53.7±1.3, 3691S±0.008×1783E±0.1, h94km±7km, mb3.6/3, Error ellipse: s-maj=17.3km s-min=10.6km az=103.2*
*IDC **24** 15:46:53.4±5.9, 3757S×17898E, h119km±60km, mb3.3/3, mb1 3.5/3, mb1mx3.3/11, mbtmp3.6/3, Error ellipse: s-maj=242.4km s-min=60.0km az=162.0*

ISC 24 15:46:54.3±1.3, 3685S±0.008×1783E±01, h82km±9km, n39, σ1=28/48, mb3.6/3, 1C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.71**	**180**	*e*P	**Pn**	**15 47 09.1**	**-1.1**
MXZ	**Matakaoa Point**	**0.71**	**180**	*e*P*	**Pn**	**15 47 09.1**	**-1.1**
MXZ				S*	**Sn**	**15 47 22.1**	**0.0**
WIZ	**White Island**	**1.12**	**232**	P	**Pn**	**15 47 15.6**	**+0.8**
WIZ	**White Island**	**1.12**	**232**	P*	**Pn**	**15 47 15.6**	**+0.8**
PUZ	**Puketiti**	**1.22**	**182**	P	**Pn**	**15 47 16.8**	**+0.7**
PUZ				S	**Sn**	**15 47 38.3**	**+5.8**
PUZ	**Puketiti**	**1.22**	**182**	PN	**Pn**	**15 47 16.8**	**+0.7**
PUZ				*e*SN	**Sn**	**15 47 33.8**	**+1.3**
MWZ	**Matawai**	**1.60**	**202**	P*	**Pn**	**15 47 22.2**	**+1.2**
MWZ				S*	**Sn**	**15 47 44.2**	**+3.0**
URZ	**Urewera**	**1.69**	**214**	P	**Pn**	**15 47 22.7**	**+0.5**
	16nm,0.3s,baz=2.3,slow=1.7,SNR=263						
URZ				S	**Sn**	**15 47 44.2**	**+0.9**
	68nm,0.3s,baz=346,slow=23,SNR=38						
URZ	**Urewera**	**1.69**	**214**	P	**Pn**	**15 47 22.7**	**+0.5**
URZ	**Urewera**	**1.69**	**214**	⇑PN	**Pn**	**15 47 22.7**	**+0.5**
URZ				SN	**Sn**	**15 47 43.3**	**0.0**
KARZ	**Kaharoa**	**2.01**	**234**	P	**Pn**	**15 47 27.2**	**+0.9**
KARZ	**Kaharoa**	**2.01**	**234**	PN	**Pn**	**15 47 27.1**	**+0.8**
KUZ	**Kuaotunu**	**2.07**	**272**	P	**Pn**	**15 47 26.6**	**-0.6**
KUZ				S	**Sn**	**15 47 51.2**	**-1.1**
KUZ	**Kuaotunu**	**2.07**	**272**	PN	**Pn**	**15 47 26.5**	**-0.7**
KUZ				SN	**Sn**	**15 47 51.2**	**-1.1**
KNZ	**Kokohu**	**2.22**	**193**	*e*P	**Pn**	**15 47 29.1**	**-0.1**
KNZ	**Kokohu**	**2.22**	**193**	PN	**Pn**	**15 47 29.1**	**-0.1**
BKZ	**Black Stump Fm**	**2.72**	**211**	P	**Pn**	**15 47 36.3**	**+0.5**
BKZ	**Black Stump Fm**	**2.72**	**211**	PN	**Pn**	**15 47 36.3**	**+0.5**
FWVZ	**Far West T-bar**	**3.24**	**221**	*e*P	**Pn**	**15 47 46.1**	**+3.3**
FWVZ	**Far West T-bar**	**3.24**	**221**	PN	**Pn**	**15 47 44.8**	**+2.0**
MOVZ	**Moawhango**	**3.25**	**217**	P	**Pn**	**15 47 43.9**	**+0.9**
MOVZ	**Moawhango**	**3.25**	**217**	PN	**Pn**	**15 47 43.9**	**+0.9**
PXZ	**Pawanui**	**3.37**	**199**	PN	**Pn**	**15 47 42.4**	**-2.3**
PXZ				SN	**Sn**	**15 48 22.5**	**-1.1**
WAZ	**Wanganui**	**3.90**	**221**	*e*P	**Pn**	**15 47 55.1**	**+3.3**
WAZ	**Wanganui**	**3.90**	**221**	PN	**Pn**	**15 47 55.1**	**+3.2**
BFZ	**Birch Farm**	**4.15**	**202**	*e*P	**Pn**	**15 47 52.7**	**-2.5**
BFZ	**Birch Farm**	**4.15**	**202**	PN	**Pn**	**15 47 52.7**	**-2.5**
MRZ	**Mangatainoka R**	**4.36**	**208**	*e*P	**Pn**	**15 47 55.9**	**-2.2**
MRZ	**Mangatainoka R**	**4.36**	**208**	PN	**Pn**	**15 47 55.7**	**-2.4**
MTW	**Mount Morrison**	**4.82**	**206**	P	**Pn**	**15 48 02.1**	**-2.3**
MTW	**Mount Morrison**	**4.82**	**206**	PN	**Pn**	**15 48 02.1**	**-2.2**
TCW	**Tory Channel**	**5.37**	**214**	PN	**Pn**	**15 48 11.9**	**+0.1**
TUWZ	**Tuamarina**	**5.69**	**215**	PN	**Pn**	**15 48 14.7**	**-1.5**
NNZ	**Nelson**	**5.80**	**220**	*e*P	**Pn**	**15 48 18.7**	**+0.9**
THZ	**Tophouse**	**6.45**	**219**	P	**Pn**	**15 48 25.5**	**-1.0**
THZ	**Tophouse**	**6.45**	**219**	PN	**Pn**	**15 48 25.5**	**-1.1**
STKA	**Stephens Creek**	**30.58**	**268**	P	**P**	**15 53 00.1**	**-0.1**
	1.5nm,0.8s,mb3.8,baz=168,slow=22,SNR=3.2						
ASAR	**Alice Springs**	**40.20**	**276**	P	**P**	**15 54 23.6**	**+1.1**
	0.6nm,0.6s,mb3.6,baz=121,slow=7.9,SNR=17						
WRA	**Warramunga Arr**	**41.79**	**281**	P	**P**	**15 54 36.2**	**+0.6**
	0.4nm,0.5s,mb3.4,baz=123,slow=7.0,SNR=12						

*BER **24** 15:48:35.9±2.6, 5984N×24.18E, h0km, ML2.1(NAO), Suspected explosion*
*NAO **24** 15:48:35.0±1.1, 5984N×24.33E, ML2.1*

HEL 24 15:48:35.0±0.2, 5983N×2414E, h0km, ML2.1(NAO), Explosion, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.41**	**18**	*e*P		15 48 42.2	
PVF	**Pernaja**	**1.12**	**49**	*e*P		15 48 54.8	
RAF	**Rauma**	**1.68**	**317**	*e*P		15 49 04.9	
FIA0	**FINESS Array S**	**1.89**	**30**	*e*P		15 49 08.5	
FIA0				*e*S		15 49 31.4	
FIA0	**FINESS Array S**	**1.89**	**30**	Pn		15 49 08.5	
	baz=209,slow=14						
FIA0				Lg		15 49 32.6	
	baz=215,slow=28						
VSU	**Vasula**	**1.91**	**134**	*e*P		15 49 08.5	
VSU				*e*S		15 49 33.5	
VSU	**Vasula**	**1.91**	**134**	Pn		15 49 08.5	
VSU	

PET *e*Sn **Sn** **15 56 59.6 +0.1**
PET Petropavlovsk 4.38 29 P **Pn** **15 56 09.0 -0.7**
PET *i* S **Sn** **15 56 57.1 -2.4**
GNL Ganaly 4.79 20 *e*P **Pn** **15 56 17.1 +1.8**
SPN Mys Shipunski 4.93 36 P **Pn** **15 56 16.3 -0.8**
SPN S **Sn** **15 57 09.2 -3.6**
SPN Mys Shipunski 4.93 36 *e*P **Pn** **15 56 16.3 -0.8**
SPN *i* S **Sn** **15 57 09.2 -3.6**
MKZ Mys Kozlova 6.70 35 P **Pn** **15 56 38.9 -2.3**
MKZ S **Sn** **15 57 49.7 -6.3**
MKZ Mys Kozlova 6.70 35 *e*P **Pn** **15 56 38.9 -2.3**
MKZ *i* S **Sn** **15 57 49.7 -6.3**
TUMR Tumrok 6.79 25 P **Pn** **15 56 43.3 +0.9**
ZLN Zelenaya 7.61 25 P **Pn** **15 56 54.6 +0.9**
SRDR Sredinnyy 7.61 19 P **Pn** **15 56 55.7 +2.0**
SRKR Sorokina 8.27 24 P **Pn** **15 57 04.0 +1.4**
KBTR Krutoberegovo 8.38 31 P **Pn** **15 57 03.9 -0.3**
KBTR Krutoberegovo 8.38 31 *e*P **Pn** **15 57 03.9 -0.3**
YSS Yuzh-Sakhalins 8.63 259‖ *e*PN **Pn** **15 57 07.9 +0.4**
YSS Yuzh-Sakhalins 8.63 259 *e*Pn **Pn** **15 57 08.2 +0.7**
ASAJ Asahikawa 10.04 244 P **Pn** **15 57 27.7 +0.8**
comp=Z,0.8nm,0.3s,baz=78,slow=15,SNR=11
ASAJ LR LR 16 00 47.5
comp=Z,39nm,20.7s,baz=350,slow=34
MAJO Matsushiro 17.71 231 *e*P **Pn** **15 59 03.5 -3.1**
MAJO pmax pmax
comp=Z,9.0nm,1.0s
MAJO Matsushiro 17.71 231 *e*P **Pn** **15 59 03.5 -3.1**
comp=Z,9.0nm,1.0s
MJAR Matsushiro Arr 17.71 231 P **Pn** **15 59 05.1 -1.5**
comp=Z,0.1nm,0.3s,baz=25,slow=10,SNR=6.2
MJAR LR LR 16 07 09.4
comp=Z,34nm,18.9s,baz=195,slow=41
YAK Yakutsk 19.11 322 *e*P **Pn** **15 59 23.0 -0.4**
YAK pmax pmax
comp=Z,10.0nm,0.7s
YAK Yakutsk 19.11 322 *e*P **Pn** **15 59 23.0 -0.3**
comp=Z,9.6nm,0.7s
BILL Bilibino 19.67 12⇑ *e*P **Pn** **15 59 29.6 -0.4**
BILL pmax pmax
comp=Z,6.0nm,1.3s
TIXI Tiksi 25.53 341 *i* P **P** **16 00 29.6 +3.3**
COLA College 33.34 41 P **P** **16 01 34.4 -1.1**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
COLA College 33.34 41 P **P** **16 01 34.4 -1.1**
comp=Z,7.4nm,0.8s,mb4.6
EGAK Eagle 36.20 41 *e*P **P** **16 01 59.6 -0.6**
INK Inuvik 38.82 34 P **P** **16 02 23.1 +0.9**
comp=Z,2.2nm,0.5s,mb4.2,baz=333,slow=9.3,SNR=3.2
INK Inuvik 38.82 34 P **P** **16 02 23.2 +1.0**
INK pmax pmax
comp=Z,2.0nm,0.5s
ZAL Zalesovo 42.34 304 LR LR 16 20 54.0
comp=Z,27nm,20.4s,baz=47,slow=37
MKAR Makanchi Array 47.07 296 P **P** **16 03 27.0 -1.8**
comp=Z,0.3nm,0.2s,mb3.6,baz=53,slow=8.2,SNR=4.4
YKA Yellowknife Ar 48.11 39 P **P** **16 03 37.7 +0.8**
comp=Z,1.2nm,0.7s,mb3.8,baz=300,slow=7.6,SNR=8.1
YKA Yellowknife Ar 48.11 39 P **P** **16 03 37.7 +0.8**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 48.11 39 P **P** **16 03 37.7 +0.8**
NVAR Mina Array Bea 60.09 65 P **P** **16 05 05.7 +1.8**
comp=Z,1.0nm,0.7s,mb4.0,baz=283,slow=10,SNR=7.4
NVAR Mina Array Bea 60.09 65 P **P** **16 05 05.7 +1.8**
PDAR Pinedale Array 62.19 56 P **P** **16 05 19.4 +1.3**
comp=Z,0.5nm,0.4s,mb3.9,baz=320,slow=4.4,SNR=11
SRU San Rafael 64.14 60 *e*P **P** **16 05 31.6 +0.5**
SRU *e* 16 05 42.5
SRU pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
SRU San Rafael 64.14 60 *e*P **P** **16 05 31.6 +0.5**
comp=Z,2.2nm,0.7s,mb4.1
SRU *e* 16 05 42.5
SCHQ Schefferville 70.48 24 P **P** **16 06 09.9 -1.2**
comp=Z,1.7nm,0.5s,mb4.1,baz=315,slow=7.1,SNR=4.4
WRA Warramunga Arr 71.31 201 P **P** **16 06 15.3 -0.9**
comp=Z,0.8nm,0.6s,mb3.7,baz=15,slow=6.1,SNR=10
WRA Warramunga Arr 71.31 201 P **P** **16 06 15.3 -0.9**
WRA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 75.01 200 P **P** **16 06 38.3 +0.4**
comp=Z,0.8nm,0.6s,mb3.6,baz=10,slow=5.3,SNR=19
ASAR Alice Springs 75.01 200 P **P** **16 06 38.3 +0.4**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
CPUP Villa Florida 146.02 60 PKPbc PKPbc 16 14 35.2 -0.5
comp=Z,0.4nm,0.4s,baz=27,slow=2.3,SNR=3.5

IDC 24 16:03:03.5±3.9**, 1920S**×**17556W, h0**km**, mb4.0**/2**, mb1 4.2**/2**, mb1mx3.7**/13**, mbtmp4.0**/2**, MS4.3**/1**, Ms1 4.2**/1**, ms1mx2.6**/24**, Error ellipse: s-maj=258.0km s-min=79.0km az=162.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.42**	**243**	LR	LR	16 24 00.7	
	comp=Z,370nm,19.4s,baz=349,slow=31						
WB2	**Warramunga Arr**	**47.06**	**260**	*e*P	P	16 11 37.4	+0.6
ASAR	**Alice Springs**	**47.06**	**255**	*e*P	P	16 11 37.5	+0.6
	1.1nm,0.5s,baz=89,slow=7.8,SNR=60						
ASAR				PcP	PcP	16 13 08.2	-0.7
	0.2nm,0.6s,baz=100,slow=4.2,SNR=5.0						
ASPA	**Alice Springs**	**47.07**	**255**	*e*P	P	16 11 37.5	+0.6
WRA	**Warramunga Arr**	**47.07**	**260**	P	P	16 11 37.4	+0.4
	0.6nm,0.3s,baz=97,slow=7.7,SNR=29						
AKASG	**Malin Array Be**	**142.93**	**334**	PKP	PKPdf	16 22 40.6	+1.5
	0.2nm,0.3s,baz=39,slow=3.3,SNR=5.6						

*ISCJB **24** 16:11:17.1±0.3, 5748S×1004×1485E±02, h10km, mb5.0/32, MS4.7/27, Error ellipse: s-maj=13.2km s-min=6.1km az=177.7*

*IDC **24** 16:11:17.9±0.6, 5741S×14859E, h0km, mb4.7/10, mb1 4.8/11, mb1mx4.7/13, mbtmp4.6/11, ML3.4/1, MS4.7/17, Ms1 4.7/17, ms1mx4.6/25, Error ellipse: s-maj=23.6km s-min=15.5km az=95.0*

*HRVD **24** 16:11:18.9±0.1, 5754S×14805E, h12km, MW5.2/89, Centroid moment Tensor Solution. LP body waves: s66,c103;Mantle waves: s89,c161; Half duration: 1§0 Moment tensor: Scale 10^16^Nm; M_{rr}-0.55±.14; $M_{\theta\theta}$4.18±.13; $M_{\phi\phi}$-3.64±.15; $M_{r\theta}$-1.32±.35; $M_{r\phi}$-8.12±.12; $M_{\theta\phi}$0.31±.35; Best double couple: $M_0$9.10700×10^16^ NP1:ϑ=347.00000°, δ83.00000°, λ3.00000°. NP2: ϕ=257.00000°, δ87.00000°, λ173.00000°. Principal axes: T 9.4470, Plg7.0000°, Azm212.0000°; N -0.6850, Plg82.0000°, Azm55.0000°; P -8.7660, Plg3.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **24** 16:11:18.9, 5750S×14850E, h10km, mB5.6, mb5.4, Ms4.9, Msz4.6*

*NEIC **24** 16:11:18.9±0.3, 5749S×14852E, h10km, mb5.0/25, MS4.6/5, Error ellipse: s-maj=13.1km s-min=7.3km az=90.0*

*MOS **24** 16:11:28.0±2.8, 5851S×14824E, h33km, mb5.2/8, MS4.6/12, Error ellipse: s-maj=41.2km s-min=14.0km az=87.9*

ISC 24 16:11:18.8±0.3**, 5752S**±004×**1484E**±02**, h10**km**, n171**, σ**1§12/69, mb5.0**/32**, MS4.7**/27**, 30C-3D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CASY	**Casey**	**19.55**	**228**	*e*P	**Pn**	**16 15 46.1**	**-1.7**
CASY	**Casey**	**19.55**	**228**	*e*P	**Pn**	**16 15 46.0**	**-1.8**
	123nm,1.5s						
RPZ	**Rata Peaks**	**19.81**	**56**	P	**Pn**	**16 15 46.8**	**-4.2**
	0.1nm,0.3s,baz=246,slow=12,SNR=2.5						
RPZ				LR	LR	16 21 53.9	
	comp=Z,2μm,18.3s,baz=211,slow=32						
TOO	**Toolangi**	**20.05**	**353**	*e*P	**P**	**16 15 53.7**	**+1.7**
	66nm,1.2s						
VNDA	**Vanda**	**20.62**	**172**	P	**P**	**16 15 57.9**	**-0.3**
	75nm,1.1s,baz=342,slow=13,SNR=51						
VNDA	**Vanda**	**20.62**	**172**	*e*P	**P**	**16 15 57.0**	**-1.2**
VNDA				pmax	pmax		
	comp=Z,178nm,1.4s						
VNDA	**Vanda**	**20.62**	**172**	*e*P	**P**	**16 15 57.0**	**-1.2**
	comp=Z,178nm,1.4s						

SBA Scott Base 21.36 169 *e*P **P** **16 16 06.7 +0.5**
SBA pmax pmax
comp=Z,125nm,1.3s,mb5.1
SBA Scott Base 21.36 169 *e*P **P** **16 16 06.7 +0.5**
comp=Z,125nm,1.3s,mb5.1
CNB Canberra Magne 22.22 2 *e*P **P** **16 16 14.9 -0.5**
comp=Z,43nm,1.1s,mb4.8
STKA Stephens Creek 26.06 347 *e*P **P** **16 16 53.5 +1.2**
comp=Z,12nm,0.9s,mb4.4
STKA Stephens Creek 26.06 347 P **P** **16 16 52.6 +0.3**
comp=Z,16nm,1.1s,mb4.5,baz=174,slow=8.9,SNR=9.6
STKA Stephens Creek 26.06 347 *e*P **P** **16 16 53.0 +0.7**
URZ Urewera 26.91 57 P **P** **16 16 59.6 -0.4**
comp=Z,25nm,0.9s,mb4.8,baz=209,slow=9.4,SNR=5.0
URZ LR LR 16 27 20.1
comp=Z,3μm,18.0s,MS4.9,baz=216,slow=36
FORT Forrest 30.21 324⇑ *i*P **P** **16 17 29.4 0.0**
comp=Z,26nm,0.7s,mb5.1
QSPA South Pole Qui 32.58 180 *e*P **P** **16 17 51.1 +0.9**
comp=Z,53nm,1.2s,mb5.3
ASAR Alice Springs 35.41 337 P **P** **16 18 14.6 -0.2**
comp=Z,4.5nm,0.9s,mb4.4,baz=164,slow=9.2,SNR=52
ASAR PcP PcP 16 20 45.3 +0.7
comp=Z,3.0nm,1.0s,baz=152,slow=2.4,SNR=3.8
ASAR LR LR 16 29 52.4
comp=Z,835nm,20.1s,MS4.5,baz=172,slow=32
ASPA Alice Springs 35.41 337 *e*P **P** **16 18 15.0 +0.2**
AS31 Alice Springs 35.41 337 *e*P **P** **16 18 12.2 -2.6**
RAO Raoul Island 36.72 54 LR LR 16 31 32.8
comp=Z,1μm,19.0s,MS4.7,baz=188,slow=33
CTA Charters Tower 37.41 357⇑ *i*P **P** **16 18 32.9 +1.0**
comp=Z,17nm,1.2s,mb4.7
CTA Charters Tower 37.41 357 LR LR 16 32 32.7
comp=Z,3μm,18.6s,MS5.1,baz=181,slow=34
CTAO Charters Tower 37.41 357 *e*P **P** **16 18 32.4 +0.5**
comp=Z,36nm,1.2s,mb5.1
MAW Mawson 37.45 219 *e*P **P** **16 18 32.6 +0.3**
comp=Z,8.0nm,1.0s,mb4.5
MAW Mawson 37.45 219 P **P** **16 18 32.8 +0.5**
comp=Z,10nm,1.0s,mb4.6,baz=117,slow=9.4,SNR=9.8
MAW LR LR 16 32 46.0
comp=Z,2μm,21.4s,MS5.0,baz=97,slow=34
MAW Mawson 37.45 219 *e*P **P** **16 18 32.3 0.0**
MAW pmax pmax
comp=Z,18nm,1.1s
MAW Mawson 37.45 219 *e*P **P** **16 18 32.3 +0.1**
comp=Z,18nm,1.1s,mb4.8
DZM Mont Dzumac 37.78 28 P **P** **16 18 33.7 -1.3**
comp=Z,9.5nm,1.0s,mb4.5,baz=266,slow=7.6,SNR=5.0
DZM LR LR 16 31 18.5
comp=Z,2μm,19.4s,MS5.0,baz=183,slow=32
WB2 Warramunga Arr 38.93 339 *e*P **P** **16 18 44.2 -0.5**
WB2 Warramunga Arr 38.93 339 *e*P **P** **16 18 43.2 -1.5**
WRA Warramunga Arr 38.93 339 P **P** **16 18 44.4 -0.3**
comp=Z,9.4nm,0.9s,mb4.5,baz=165,slow=7.1,SNR=34
WRA LR LR 16 32 52.4
comp=Z,756nm,20.3s,MS4.5,baz=160,slow=33
WRAB Tennant Creek 38.94 339 P **P** **16 18 44.1 -0.7**
comp=Z,149nm,1.3s,mb5.6,SNR=6.5
WRAB Tennant Creek 38.94 339 *e*P **P** **16 18 44.0 -0.8**
comp=Z,54nm,1.1s,mb5.2
MBWA Marble Bar 41.92 318 *e*P **P** **16 19 09.1 -0.3**
comp=Z,27nm,1.0s,mb4.8
FITZ Fitzroy Crossi 42.84 327 *e*P **P** **16 19 17.6 +0.7**
comp=Z,26nm,1.1s,mb4.9
FITZ Fitzroy Crossi 42.84 327 LR LR 16 34 06.4
comp=Z,539nm,20.6s,MS4.4,baz=166,slow=32
SYO Syowa Base 43.72 210‖ *e*P **P** **16 19 23.2 -0.8**
KAKA Kakadu 46.34 338 *e*P **P** **16 19 45.0 +0.1**
comp=Z,17nm,0.8s,mb5.0
PMG Port Moresby 48.01 358 LR LR 16 37 05.7
comp=Z,1μm,21.6s,MS4.9,baz=185,slow=32
NVL N'lazarevskaya 48.35 198*c* *i*P **P** **16 20 00.3 -0.3**
NVL *i* S **S** **16 27 07.6 +6.8**
NVL pmax pmax
comp=Z,47nm,1.6s,mb5.3
NVL MLR MLR
comp=Z,6μm,24.1s,MS5.5
MAIT Maitri 48.36 198 *e*P **P** **16 20 01.0 +0.4**
HNR Honiara 48.80 15 LR LR 16 36 13.1
comp=Z,596nm,21.3s,MS4.5,baz=177,slow=31
SNAA Sanae 49.53 192 *e*P **P** **16 20 09.4 -0.2**
SNAA *e* 16 20 19.6
SNAA *e* 16 20 24.8
SNAA Sanae 49.53 192*c* *i*P **P** **16 20 09.4 -0.2**
SNAA Sanae 49.53 192 *e*P **P** **16 20 09.3 -0.3**
comp=Z,53nm,1.2s,mb5.4
VNA3 Neumayer Olymp 50.60 189 *e*P **P** **16 20 17.4 -0.3**
VNA3 *e* 16 20 27.1
VNA3 *e* 16 20 30.9
VNA3 *e* 16 21 34.0
VNA3 *e* 16 21 40.8
VNA3 *e* 16 21 43.4
VNA1 Neumayer--Stat 51.05 190 *e*P **P** **16 20 21.4 +0.3**
VNA1 *e* 16 20 31.2
VNA1 *e* 16 20 34.3
VNA1 *e* 16 21 38.7
PPT Papeete 60.40 76 LR LR 16 40 48.2
comp=Z,228nm,19.6s,MS4.3,baz=312,slow=29
KSM Kuching 66.23 318 *e*P **P** **16 22 07.4 +0.5**
KKM Kota Kinabalu 68.52 325 *e*P **P** **16 22 22.3 +0.9**
KKM *e* 16 22 30.1
PSI Prapat 71.97 307 LR LR 16 52 28.4
comp=Z,458nm,18.7s,MS4.8,baz=24,slow=34
KULM Kulim 73.48 310 *e*P **P** **16 22 51.5 0.0**
PLCA Paso Flores 76.80 151 P **P** **16 23 11.9 +1.3**
comp=Z,5.8nm,0.9s,mb4.5,baz=205,slow=5.8,SNR=8.2
PLCA Paso Flores 76.80 151 *e*P **P** **16 23 11.1 +0.5**
PLCA pmax pmax
comp=Z,13nm,1.1s
PLCA Paso Flores 76.80 151 *e*P **P** **16 23 11.1 +0.5**
comp=Z,13nm,1.1s,mb4.8
SUR Sutherland 80.19 223 *e*P **P** **16 23 27.6 -1.7**
comp=Z,36nm,1.1s,mb5.2
TRQA Tornquist 81.41 156 *e*P **P** **16 23 34.6 -1.2**
comp=Z,9.0nm,1.2s,mb4.6
BOSA Boshof 81.84 228 P **P** **16 23 39.1 +1.0**
comp=Z,5.0nm,0.9s,mb4.4,baz=114,slow=9.3,SNR=5.7
BOSA LR LR 16 54 20.4
comp=Z,275nm,18.2s,MS4.7,baz=157,slow=32
BOSA Boshof 81.84 228 *e*P **P** **16 23 36.9 -1.2**
BOSA pmax pmax
comp=Z,16nm,1.1s,mb4.9
BOSA Boshof 81.84 228 *e*P **P** **16 23 36.9 -1.2**
comp=Z,16nm,1.1s,mb4.9
QIZ Qiongzhong 82.74 324 P **P** **16 23 42.5 -0.3**
QIZ S S 16 33 57.0 -3.7
QIZ SS SS 16 39 27.5 +4.6
QIZ AMB AMB
comp=Z,25nm,2.2s,mb4.9
QIZ LR LR
comp=E,343nm,22.6s
LBTB Lobatse 84.90 230 *e*P **P** **16 23 54.5 +0.6**
LBTB pmax pmax
comp=Z,14nm,1.1s,mb5.0
LBTB Lobatse 84.90 230 *e*P **P** **16 23 54.5 +0.7**
comp=Z,14nm,1.1s,mb5.0
CM31 Chiang Mai Arr 86.10 314 *e*P **P** **16 24 06.2 +6.3**
comp=Z,4.0nm,0.9s,mb4.7
KMI Kunming 90.78 320 P **P** **16 24 24.3 +2.2**
KMI AMB AMB
comp=Z,7.0nm,1.2s,mb4.9
SSE Sheshan 91.20 337 P **P** **16 24 26.8 +2.7**
SSE XP sP 16 24 40.1 +11
SSE PP PP 16 28 04.6 +3.7
SSE S S 16 35 24.4 +1.9
SSE SS SS 16 41 32.3 +5.5
SSE AMB AMB
comp=Z,28nm,0.7s,mb5.7
SSE AMB AMB
comp=Z,35nm,3.2s
SSE LR LR
comp=N,126nm,18.5s,MS4.4
SSE LR LR
comp=E,23nm,18.8s,MS4.4
SSE LR LR
comp=Z,159nm,19.1s,MS4.5
LSZ Lusaka 92.38 237 LR LR 16 59 48.1
comp=Z,722nm,19.9s,MS5.1,baz=164,slow=32
LSZ Lusaka 92.38 237 *e*P **P** **16 24 31.6 +2.1**
LSZ pmax pmax
comp=Z,23nm,1.6s,mb5.3
LSZ Lusaka 92.38 237 *e*P **P** **16 24 31.6 +2.0**
comp=Z,23nm,1.6s,mb5.3
NJ2 Nanjing 92.64 335 *e*P **P** **16 24 30.8 +0.1**
NJ2 AP pP 16 24 35.6 +1.5
NJ2 XP sP 16 24 37.8 +2.6
NJ2 PP PP 16 28 14.4 +2.2
NJ2 S S 16 35 29.0 -6.4
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.7
NJ2 AMB AMB
comp=Z,250nm,10.5s
NJ2 LR LR
comp=E,180nm,15.0s
NJ2 LR LR
comp=Z,210nm,26.4s
TSUM Tsumeb 93.32 226 P **P** **16 24 34.9 +1.0**
comp=Z,5.5nm,1.2s,mb4.9
CPUP Villa Florida 93.72 157 P **P** **16 24 38.1 +2.4**
comp=Z,4.9nm,0.9s,mb5.0,baz=194,slow=5.2,SNR=10
CPUP LR LR 17 02 48.3
comp=Z,198nm,18.9s,MS4.6,baz=179,slow=33
CPUP Villa Florida 93.72 157 *e*P **P** **16 24 37.7 +2.0**
CPUP pmax pmax
comp=Z,22nm,0.9s
CPUP Villa Florida 93.72 157 *e*P **P** **16 24 37.7 +2.0**
comp=Z,22nm,0.9s,mb5.6
MJAR Matsushiro Arr 94.09 352 LR LR 17 06 57.9
comp=Z,94nm,19.8s,MS4.2,baz=190,slow=36
MAJO Matsushiro 94.10 352 P **P** **16 24 34.2 -3.2**
comp=Z,5.6nm,0.9s,mb5.0
CD2 Chengdu 95.76 323 *e*P **P** **16 24 42.9 -2.1**
CD2 PP PP 16 28 37.9 +1.3
CD2 S S 16 35 57.3 -5.4
CD2 SS SS 16 42 32.4 +0.5
CD2 AMB AMB
comp=Z,20nm,0.9s,mb5.5
CD2 AMB AMB
comp=Z,60nm,9.2s
CD2 LR LR
comp=E,240nm,20.4s
CD2 LR LR
comp=Z,140nm,16.8s,MS4.5
LZH Lanzhou 100.50 325 *e*P Pdif 16 25 05.3 -1.0
LZH PP PP 16 29 15.1 +2.1
LZH *e*SKS 16 35 41.0
LZH *e*S Sdif 16 36 38.0 -5.0
LZH SS SS 16 43 38.3 -0.3
LZH AMB AMB
comp=Z,13nm,1.0s
LZH AMB AMB
comp=Z,71nm,5.0s
LZH LR LR
comp=E,229nm,18.7s
LZH LR LR
comp=Z,339nm,19.9s,MS4.8
HHC Hu-ho-hao-te 102.76 332 *e*P Pdif 16 25 17.9 +1.5
HHC AP 16 25 22.8
HHC PP PP 16 29 35.3 +5.3
HHC SKS 16 35 55.9
HHC S Sdif 16 37 00.4 -1.4
HHC XS 16 37 08.1
HHC PS PS 16 38 41.3 +3.9
HHC SS SS 16 44 14.0 +4.0
HHC AMB AMB
comp=Z,18nm,1.2s
HHC AMB AMB
comp=Z,59nm,5.3s
HHC LR LR
comp=N,183nm,19.9s,MS4.8
HHC LR LR
comp=E,169nm,18.1s,MS4.8
HHC LR LR
comp=Z,206nm,17.8s,MS4.7
MDJ Mudanjiang 102.97 346 P Pdif 16 25 18.8 +1.5
MDJ PP PP 16 29 33.8 +2.2
MDJ S Sdif 16 37 05.9 +2.3
MDJ SP SP 16 38 42.5 +4.1
MDJ PS PS 16 38 43.9 +4.2
MDJ AMB AMB
comp=Z,3.0nm,0.5s
MDJ AMB AMB
comp=Z,27nm,4.3s
MDJ LR LR
comp=N,25nm,23.0s
MDJ LR LR
comp=E,171nm,38.4s
MDJ LR LR
comp=Z,153nm,25.6s,MS4.4
WMQ Urumqi 112.94 317 *e*PDIF Pdif 16 26 04.0 +2.4
WMQ PP PP 16 30 51.0 +6.6
WMQ SKS SKSdf 16 37 09.0 +0.8
WMQ PS PS 16 40 20.0 +0.7
WMQ PP PP
comp=Z,215nm,8.0s
WMQ LR LR
comp=N,168nm,18.0s,MS4.8
WMQ LR LR
comp=E,173nm,18.0s,MS4.8
WMQ LR LR
comp=Z,187nm,18.0s,MS4.7
MKAR Makanchi Array 117.48 315 PKiKP PKiKP 16 30 04.9 +0.2
comp=Z,0.2nm,0.2s,baz=94,slow=4.8,SNR=2.3
YAK Yakutsk 120.10 350‖ *i*PKIKP PKPdf 16 30 11.3 +1.5
TORD Torodi Ar. Bea 129.02 224 PKP PKPdf 16 30 27.4 +0.6
comp=Z,2.0nm,0.9s,baz=215,slow=3.1,SNR=7.0
TIXI Tiksi 129.60 352⇑ *i*PKIKP PKPdf 16 30 26.9 -1.1
WMOK Wichita Mounta 130.54 87 *e*PKIKP PKPdf 16 30 30.7 +1.0
PDAR Pinedale Array 130.74 72 PKP PKPdf 16 30 28.4 -1.7
comp=Z,0.1nm,0.3s,baz=185,slow=4.1,SNR=2.4
ARU Arti 134.36 309 *i*PKIKP PKPdf 16 30 36.2 -0.7
ARU MLR MLR
comp=N,100nm,20.0s,MS4.7
ARU MLR MLR
comp=Z,100nm,20.0s,MS4.5
ARU MLR MLR
comp=E,90nm,19.0s,MS4.7
BRTR Keskin Array B 135.25 276 PKP PKPdf 16 30 39.0 +0.5
comp=E,0.7nm,0.7s,baz=243,slow=2.5,SNR=4.1
YKA Yellowknife Ar 140.92 47 PKP PKPdf 16 30 46.2 -2.8
comp=E,0.4nm,0.6s,baz=244,slow=3.5,SNR=4.0
YKA Yellowknife Ar 140.92 47 PKP PKPdf 16 30 46.2 -2.8
MLR Muntele Rosu 143.32 276⇑ *i*P PKPdf 16 30 56.1 +2.8
MLR Muntele Rosu 143.32 276⇑ P PKPdf 16 30 56.1 +2.8
OBN Obninsk 143.54 296 *i*PKHKP 16 30 55.3
OBN pmax pmax
comp=Z,11nm,1.2s
OBN Obninsk 143.54 296 *e*PKPdf PKPdf 16 30 54.5 +0.8
AKASG Malin Array Be 144.78 286 PKP PKPdf 16 30 53.6 -2.2
comp=Z,3.5nm,0.6s,baz=102,slow=2.6,SNR=27
AKASG PKKP 16 40 00.1
comp=Z,0.5nm,0.5s,baz=184,slow=2.4,SNR=4.8
BURAR Bucovina Array 145.05 279⇑ *i*P PKPbc 16 30 57.2 +1.5
BURAR Bucovina Array 145.05 279⇑ P PKPbc 16 30 57.2 +1.5
KEST Kesra 145.19 249 PKPbc PKPbc 16 30 58.4 +2.2
comp=Z,15nm,1.0s,baz=231,slow=2.0,SNR=25
DIVS Divcibare 145.62 270⇑ *i*PKP PKPdf 16 30 57.2 0.0
BZS Buzias 145.73 273⇑ *i*P PKPdf 16 30 59.3 +1.8
BZS Buzias 145.73 273⇑ P PKPdf 16 30 59.3 +1.8
BBLS Bajina Basta - 145.78 269 *e*PKP PKPdf 16 30 58.3 +0.8
DRGR 145.89 276⇑ *i*P PKPbc 16 31 06.6 +8.2
MVL Millersville 146.46 102 *e*PKP PKPbc 16 31 04.3 +4.3
LVV L'vov 147.00 281 *e*PKHKP PKPbc 16 31 01.7 +0.1
LVV *i* 16 31 08.7
TMCR Tamitsa 147.04 311 *e*PKHKP PKPbc 16 30 58.0 -3.7
TMCR pmax pmax
comp=Z,20nm,0.4s
KOLS Kolonicke sedl 147.42 278 *e*PKP PKPbc 16 31 02.8 0.0
MNK Minsk 147.55 291 *e*PKIKP PKPbc 16 31 05.0 +1.8
PKSM Moragy 147.71 272⇑ *i*P PKPbc 16 31 03.3 -0.3
PKSM Moragy 147.71 272⇑ P PKPbc 16 31 03.3 -0.3
CRVS Cervenica-Dubn 147.83 278 *e*PKP PKPbc 16 31 04.0 +0.1
AQU L'Aquila 147.98 261 *e*PKIKP PKPbc 16 31 06.6 +2.3
FCC Fort Churchill 148.05 61 *e*PKHKP PKPbc 16 31 01.4 -3.1
PSZ Piszkesteto 148.09 275 *e*PKP/p PKPbc 16 31 04.8 +0.2
PSZ Piszkesteto 148.09 275 *e*PKPbc PKPbc 16 31 04.4 -0.2
KECS Kecovo 148.11 276 *e*PKP PKPbc 16 31 04.2 -0.5
BINY Binghamton 148.22 99 *e*PKPbc PKPbc 16 31 05.5 +0.5
BINY *e*PKPab PKPab 16 31 09.8 +1.9
STHS Stebnicka Huta 148.25 278 *e*PKP PKPab 16 31 12.1 +4.0
BUD Budapest 148.29 274 *e*pPKP/F PKPab 16 31 10.1 +1.9
VYHS Vyhne 149.00 275 *e*PKP PKPbc 16 31 06.1 -0.9
VYHS *e* 16 31 11.7
JOF Joensuu 149.43 307 *e*p PKPbc 16 31 11.1 +3.1
comp=Z,15nm,0.9s
JOF Joensuu 149.43 307 *e*PKHKP PKPbc 16 31 11.1 +3.1
JOF pmax pmax
comp=Z,15nm,0.9s
OJC Ojcow 149.48 279 *e*PKP2 PKPab 16 31 12.9 -0.1

OJC	**Ojcow**	**149.48**	**279**	*e*PKPdf	PKPdf	16 31 02.6	-1.1
OJC				*e*PKPbc	PKPbc	16 31 07.0	-1.2
OJC				*e*PKPab	PKPab	16 31 12.9	-0.1
LVZ	**Lovozero**	**149.49**	**317**	⇑*i*PKIKP	PKPab	16 31 11.2	-1.9
SUW	**Suwalki**	**149.68**	**287**	*e*PKIKP	PKPbc	16 31 08.0	-0.7
APA	**Apatity**	**149.87**	**316**	⇑*i*PKIKP	PKPab	16 31 13.0	-1.6
APA				pmax	pmax		
	comp=Z,13nm,1.0s						
APA				MLR	MLR		
	comp=Z,300nm,18.0s,MS5.1						
ARSA	**Arzberg**	**150.04**	**271**	⇓*i*P	PKPbc	16 31 09.5	0.0
	comp=Z,28nm,1.3s						
OKC	**Ostrava-Krasne**	**150.15**	**277**	⇑*e*PKPB	PKPbc	16 31 09.3	-0.5
OKC				*e*PKPAB	PKPab	16 31 14.6	-1.2
OKC				*ep*PKP	pPKPdf	16 31 17.5	+9.3
OKC				AMS	AMS	17 48 30.0	
	comp=Z,100nm,22.8s						
OKC	**Ostrava-Krasne**	**150.15**	**277**	*e*PKP	PKPbc	16 31 09.3	-0.5
OKC				*e*		16 31 14.6	
OKC				*e*		16 31 17.5	
CONA	**Conrad Observa**	**150.27**	**272**	⇑*i*PKPbc	PKPbc	16 31 09.3	-0.8
	comp=Z,9.3nm,1.3s						
NCB	**Newcomb**	**150.37**	**99**	*e*PKPdf	PKPdf	16 31 06.8	+1.7
NCB				*e*PKPbc	PKPbc	16 31 10.8	+0.5
NCB				*e*PKPab	PKPab	16 31 18.3	+1.6
MORC	**Moravsky Berou**	**150.44**	**276**	⇑*i*P	PKPbc	16 31 10.8	+0.3
MORC	**Moravsky Berou**	**150.44**	**276**	*e*PKPbc	PKPbc	16 31 10.3	-0.2
LONY	**Lake Ozonia**	**150.61**	**97**	*e*PKPbc	PKPbc	16 31 10.8	-0.2
KBA	**Koelnbreinsper**	**151.11**	**268**	⇑*i*P	PKPbc	16 31 11.9	-0.2
	comp=Z,43nm,2.5s						
TREC	**Trest**	**151.27**	**274**	⇑*e*PKPB	PKPbc	16 31 12.2	-0.2
TREC				*e*PKPAB	PKPab	16 31 17.2	-3.2
TREC				*ep*PKP	pPKPdf	16 31 21.0	+11
TREC				AMS	AMS	17 49 40.0	
	comp=Z,100nm,22.8s						
FIA1	**FINESS Array S**	**151.27**	**302**	*e*PKPbc	PKPbc	16 31 11.7	-0.8
FINES	**FINESS Array B**	**151.28**	**302**	PKPbc	PKPbc	16 31 11.8	-0.6
	comp=Z,8.8nm,0.7s,baz=100,slow=2.7,SNR=14						
FINES	**FINESS Array B**	**151.28**	**302**	PKPbc	PKPbc	16 31 11.8	-0.6
KAF	**Kangasniemi**	**151.38**	**304**	*ep*	PKPbc	16 31 10.0	-2.7
	comp=Z,16nm,1.0s						
KAF	**Kangasniemi**	**151.38**	**304**	*e*PKIKP	PKPbc	16 31 10.0	-2.7
KAF				pmax	pmax		
	comp=Z,16nm,1.0s						
DPC	**Dobruska-Polom**	**151.41**	**276**	⇑*e*PKPB	PKPbc	16 31 12.8	0.0
DPC				*e*PKPAB	PKPab	16 31 17.7	-3.3
DPC				*ep*PKP	pPKPdf	16 31 22.8	+13
DPC				AMS	AMS	17 48 10.0	
	comp=Z,200nm,22.4s						
UPC	**Upice**	**151.66**	**276**	*e*PKPDF	PKPdf	16 31 09.4	+2.3
UPC				*e*PKPAB	PKPab	16 31 18.6	-3.4
UPC				*ep*PKP	pPKPdf	16 31 26.0	+15
GEC2	**GERESS Array S**	**151.97**	**272**	*e*PKIKP	PKPdf	16 31 06.9	-0.6
GEC2				*e*		16 31 12.3	
GERES	**GERESS Array B**	**151.97**	**272**	PKPbc	PKPbc	16 31 13.3	-0.7
	comp=Z,2.4nm,0.7s,baz=149,slow=2.8,SNR=14						
WTTA	**Wattenberg**	**152.15**	**267**	⇑*i*P	PKPbc	16 31 14.6	+0.2
	comp=Z,30nm,1.7s						
PRU	**Pruhonice**	**152.16**	**274**	⇑*e*PKPB	PKPbc	16 31 16.4	+1.9
PRU				*e*PKPAB	PKPab	16 31 21.7	-2.5
PRU				*ep*PKP	pPKPdf	16 31 28.5	+17
PRU				AMS	AMS	17 48 10.0	
	comp=Z,200nm,23.8s						
KHC	**Kasperske Hory**	**152.20**	**272**	⇑*e*PKPB	PKPbc	16 31 13.8	-0.8
KHC				*e*PKPAB	PKPab	16 31 22.5	-1.8
KHC				*ep*PKP	pPKPdf	16 31 28.7	+17
KHC				AMS	AMS	17 44 40.0	
	comp=Z,100nm,19.8s						
SQTA	**Sankt Quirin**	**152.35**	**267**	⇑*i*P	PKPbc	16 31 14.7	-0.2
	comp=Z,8.0nm,0.9s						
PVCC	**Panska Ves**	**152.45**	**275**	⇑*e*PKPB	PKPbc	16 31 15.8	+0.7
PVCC				*e*PKPAB	PKPab	16 31 20.6	-4.7
PVCC				*ep*PKP	pPKPdf	16 31 23.3	+12
PVCC				AMS	AMS	17 48 10.0	
PVCC	**Panska Ves**	**152.45**	**275**	*e*PKP	PKPbc	16 31 15.8	+0.7
PVCC				*e*		16 31 20.6	
PVCC				*e*		16 31 23.3	
MOTA	**Moosalm**	**152.48**	**267**	⇑*i*P	PKPbc	16 31 14.9	-0.3
	comp=Z,11nm,1.1s						
BRG	**Berggiesshubel**	**152.97**	**276**	*e*P	PKPbc	16 31 16.8	+0.5
	comp=Z,4.5nm,1.4s						
BRG				*e*		16 31 36.4	
	comp=Z,5.5nm,1.3s						
BRG	**Berggiesshubel**	**152.97**	**276**	*e*PKIKP	PKPbc	16 31 16.8	+0.5
BRG				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ARCES	**ARCESS Array B**	**153.02**	**319**	PKPbc	PKPbc	16 31 16.4	0.0
	comp=Z,2.6nm,0.8s,baz=180,slow=0.7,SNR=5.2						
ARCES	**ARCESS Array B**	**153.02**	**319**	PKPbc	PKPbc	16 31 16.4	0.0
MBDF	**Montbardon**	**153.12**	**258**	*e*PKIKP	PKPbc	16 31 14.0	-2.6
	comp=Z,27nm,1.1s						
NKC	**Novy Kostel**	**153.43**	**273**	⇑*e*PKPB	PKPbc	16 31 20.2	+2.9
NKC				*e*PKPAB	PKPab	16 31 30.2	+0.7
NKC				*ep*PKP	pPKPdf	16 31 35.6	+22
NKC				AMS	AMS	17 42 50.0	
	comp=Z,200nm,27.3s						
NKC	**Novy Kostel**	**153.43**	**273**	*e*PKP	PKPbc	16 31 20.2	+2.9
NKC				*e*		16 31 30.2	
NKC				*e*		16 31 35.6	
CLL	**Collm**	**153.70**	**276**	*i* *PPKP	PKPbc	16 31 22.0	+4.1
CLL				*e*PKP2	PKPab	16 31 30.0	-0.6
CLL				*i*		16 31 38.8	
CLL	**Collm**	**153.70**	**276**	*i* pPKPbc	PKPbc	16 31 22.0	+4.1
	comp=Z,8.0nm,1.1s						
CLL				*e*PKPab	PKPab	16 31 30.0	-0.6
	comp=Z,11nm,1.2s						
CLL				*i* (sPKPab)		16 31 38.8	
CLL				LmV		17 53 00.0	
	comp=Z,200nm,21.0s						
CLL				LmH		17 54 00.0	
	comp=N,100nm,19.2s						
CLL				LmH		17 54 00.0	
	comp=E,100nm,18.5s						
CLL	**Collm**	**153.70**	**276**	*i* PKIKP	PKPbc	16 31 22.0	+4.1
CLL				*e*		16 31 30.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLL				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.9						
CLL	**Collm**	**153.70**	**276**	*i* PKP	PKPbc	16 31 22.0	+4.1
CLL				*e*		16 31 30.0	
CLL				LR	LR		
	comp=Z,200nm,21.0s,MS4.9						
GRA1	**Grafenberg Arr**	**153.79**	**271**	*e*PKP	PKPbc	16 31 16.2	-1.9
GRA1				LR	LR		
	comp=Z,100nm,21.0s,MS4.6						
GRF	**Grafenberg Arr**	**153.79**	**271**	*e*PKP	PKPbc	16 31 16.2	-1.9
GRF				*e*L		17 54 36.0	
	comp=Z,145nm,21.0s						
MOX	**Moxa**	**154.10**	**273**	*e*(PKP)	PKPbc	16 31 19.3	+0.6
MOX							
	comp=Z,100nm,22.0s						
ESDC	**Sonseca Array**	**154.72**	**237**	PKPbc	PKPbc	16 31 20.7	+0.6
	comp=Z,0.3nm,0.3s,baz=114,slow=0.6,SNR=5.1						
NB2	**NORSAR Subarra**	**158.14**	**297**	PKPa	PKPab	16 31 48.6	-1.0
	comp=Z,4.4nm,1.1s,baz=100,slow=4.4						
NOA	**NORSAR Array B**	**158.14**	**297**	PKPab	PKPab	16 31 48.8	-0.8
	comp=Z,1.2nm,0.9s,baz=102,slow=4.5,SNR=2.7						

*ISCJB **24** 16:25:52.6±4.5, 65S±0.1×154.0E±0.2, h79km±36km, mb3.9/10, Error ellipse: s-maj=38.5km s-min=20.2km az=53.3*
*IDC **24** 16:25:53.5±6.5, 6.71S×154.13E, h74km±52km, mb3.6/7, mb1 3.8/8, mb1mx3.7/15, mbtmp3.9/8, ML2.5/1, Error ellipse: s-maj=48.8km s-min=29.0km az=112.0*
*NEIC **24** 16:25:54.2±3.6, 6.63S×154.08E, h83km±26km, mb4.2/3, Error ellipse: s-maj=40.6km s-min=15.3km az=112.0*
ISC 24 16:25:54.8±3.8, 66S±0.1×154.1E±0.2, h86km±29km, n16, σ0 89/16, mb3.9/10, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.37**	**247**	P	**Pn**	**16 27 39.7**	**+0.1**
	0.4nm,0.3s,baz=211,slow=18,SNR=3.3						
PMG				S	**Sn**	**16 29 01.7**	**+0.1**
	0.3nm,0.3s,baz=210,slow=12,SNR=2.3						
WRAB	**Tennant Creek**	**23.27**	**233**	Pn	**P**	**16 30 53.2**	**-1.6**
	7.6nm,0.9s,mb4.0						
WB2	**Warramunga Arr**	**23.27**	**233**	*e*P	**P**	**16 30 55.1**	**+0.3**
WRA	**Warramunga Arr**	**23.28**	**233**	P	**P**	**16 30 54.9**	**0.0**
	3.2nm,1.0s,mb3.6,baz=59,slow=10,SNR=20						
AS31	**Alice Springs**	**25.74**	**227**	P	**P**	**16 31 17.1**	**-0.1**
ASAR	**Alice Springs**	**25.74**	**227**	P	**P**	**16 31 17.8**	**+0.5**
	0.5nm,0.8s,mb3.0,baz=58,slow=9.2,SNR=11						
FITZ	**Fitzroy Crossi**	**29.96**	**245**	P	**P**	**16 31 55.0**	**+0.1**
	1.3nm,0.9s,mb3.6,baz=77,slow=18,SNR=5.4						
YSS	**Yuzh-Sakhalins**	**54.25**	**350**	*e*P	**P**	**16 35 11.0**	**-0.8**
	17nm,1.1s,mb5.0						
ULN	**Ulaanbaatar**	**68.17**	**328**	*e*Pn	**P**	**16 36 44.2**	**-1.6**
	2.2nm,1.0s,mb3.9						
SONM	**Songino Array**	**68.50**	**328**	P	**P**	**16 36 49.4**	**+1.5**
	1.1nm,0.7s,mb3.8,baz=127,slow=5.3,SNR=8.7						
MKAR	**Makanchi Array**	**82.49**	**319**	P	**P**	**16 38 09.8**	**+1.9**
	1.0nm,0.5s,mb3.9,baz=104,slow=5.1,SNR=11						
MKAR	**Makanchi Array**	**82.49**	**319**	P	**P**	**16 38 09.8**	**+1.9**
ZAL	**Zalesovo**	**83.33**	**326**	P	**P**	**16 38 11.6**	**-0.6**
	1.2nm,0.5s,mb4.0,baz=344,slow=5.2,SNR=6.4						
BRVK	**Borovoye**	**91.48**	**323**	*e*P	**P**	**16 38 51.5**	**-0.1**
NVAR	**Mina Array Bea**	**92.22**	**52**	P	**P**	**16 38 55.4**	**+0.4**
	0.9nm,0.9s,mb4.0,baz=251,slow=6.6,SNR=4.5						
TORD	**Torodi Ar. Bea**	**152.01**	**286**	PKPbc	PKPbc	16 45 41.9	+1.9
	2.6nm,1.0s,baz=25,slow=2.6,SNR=7.3						

*ISCJB **24** 16:30:17.6±0.5, 5753S±0.005×1479E±0.2, h10km, mb4.6/18, MS4.2/15, Error ellipse: s-maj=17.5km s-min=7.7km az=177.3*
*IDC **24** 16:30:18.3±0.8, 5747S×148.10E, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.3/13, mbtmp4.2/9, MS3.9/8, Ms1 3.9/8, ms1mx3.6/23, Error ellipse: s-maj=33.5km s-min=17.3km az=87.0*
*BJI **24** 16:30:19.6, 5750S×14790E, h10km, mB5.4, mb5.1, Ms5.0, Msz4.5*
*NEIC **24** 16:30:19.3±0.4, 5753S×14786E, h10km, mb4.7/13, Error ellipse: s-maj=17.1km s-min=7.7km az=89.0*
*MOS **24** 16:30:20.8±2.2, 5745S×14862E, h33km, mb5.0/8, Error ellipse: s-maj=63.5km s-min=12.2km az=92.9*
ISC 24 16:30:19.1±0.5, 5756S±0.005×1478E±0.2, h10km, n69, σ1 9/02/44, mb4.6/18, MS4.2/15, 1D, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CASY	**Casey**	**19.30**	**228**	*e*P	**Pn**	**16 34 44.3**	**-0.9**
	15nm,1.1s						
TOO	**Toolangi**	**20.06**	**355**	*e*P	**P**	**16 34 52.9**	**+0.5**
	29nm,1.2s						
TOO	**Toolangi**	**20.06**	**355**	*e*P	**P**	**16 34 52.9**	**+0.5**
TOO				pmax	pmax		
	comp=Z,29nm,1.2s						
RPZ	**Rata Peaks**	**20.08**	**56**	LR	LR	16 40 04.2	
	comp=Z,162nm,20.3s,MS3.4,baz=0.7,slow=29						
VNDA	**Vanda**	**20.63**	**171**	P	**P**	**16 34 57.7**	**-0.9**
	comp=Z,11nm,1.1s,baz=342,slow=13,SNR=12						
VNDA				LR	LR	16 41 35.1	
	comp=Z,87nm,18.4s,MS3.2,baz=346,slow=33						
VNDA	**Vanda**	**20.63**	**171**	*e*P	**P**	**16 34 57.5**	**-1.1**
VNDA				pmax	pmax		
	comp=Z,22nm,1.4s						
VNDA	**Vanda**	**20.63**	**171**	*e*P	**P**	**16 34 57.5**	**-1.1**
	comp=Z,22nm,1.4s						
SBA	**Scott Base**	**21.38**	**169**	*e*P	**P**	**16 35 07.0**	**+0.3**
SBA				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.2						
SBA	**Scott Base**	**21.38**	**169**	*e*P	**P**	**16 35 07.0**	**+0.2**
	comp=Z,13nm,1.3s,mb4.2						
CNB	**Canberra Magne**	**22.27**	**3**	*e*P	**P**	**16 35 18.0**	**+1.7**
STKA	**Stephens Creek**	**26.03**	**348**	*e*P	**P**	**16 35 53.8**	**+1.4**
	comp=Z,8.5nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**26.03**	**348**	P	**P**	**16 35 53.4**	**+1.0**
	comp=Z,12nm,1.1s,mb4.4,baz=165,slow=12,SNR=4.7						
STKA	**Stephens Creek**	**26.03**	**348**	*e*P	**P**	**16 35 53.2**	**+0.8**
URZ	**Urewera**	**27.19**	**57**	P	**P**	**16 36 02.2**	**-0.6**
	comp=Z,17nm,1.0s,mb4.5,baz=197,slow=5.3,SNR=3.9						
URZ				LR	LR	16 44 50.1	
	comp=Z,390nm,21.4s,MS3.9,baz=280,slow=32						
FORT	**Forrest**	**30.06**	**324**	*e*P	**P**	**16 36 27.8**	**-0.6**
	comp=Z,16nm,0.7s,mb4.9						
NWAO	**Narrogin (SRO)**	**32.23**	**307**	LR	LR	16 46 58.8	
	comp=Z,167nm,19.0s,MS3.8,baz=109,slow=31						
ASAR	**Alice Springs**	**35.32**	**338**	P	**P**	**16 37 14.1**	**-0.3**
	comp=Z,2.0nm,1.0s,mb4.0,baz=162,slow=9.0,SNR=21						
ASAR				PcP	PcP	16 39 44.2	-0.4
	comp=Z,0.4nm,0.8s,baz=153,slow=4.1,SNR=4.0						
MAW	**Mawson**	**37.24**	**219**	P	**P**	**16 37 31.7**	**+1.0**
	comp=Z,1.8nm,0.8s,mb3.9,baz=132,slow=5.8,SNR=4.2						
MAW				LR	LR	16 52 06.6	
	comp=Z,344nm,20.1s,MS4.1,baz=81,slow=35						
MAW	**Mawson**	**37.24**	**219**	*e*P	**P**	**16 37 32.0**	**+1.3**
MAW				pmax	pmax		
	comp=Z,11nm,1.4s						
MAW	**Mawson**	**37.24**	**219**	*e*P	**P**	**16 37 32.0**	**+1.3**
	comp=Z,11nm,1.4s,mb4.5						
CTA	**Charters Tower**	**37.44**	**358**	P	**P**	**16 37 31.8**	**-0.6**
	comp=Z,16nm,0.8s,mb4.4,baz=182,slow=9.4,SNR=6.4						
CTAO	**Charters Tower**	**37.44**	**358**	*e*P	**P**	**16 37 31.7**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.6						
CTAO	**Charters Tower**	**37.44**	**358**	*e*P	**P**	**16 37 31.7**	**-0.7**
	comp=Z,12nm,1.1s,mb4.6						
DZM	**Mont Dzumac**	**37.95**	**29**	LR	LR	16 48 52.6	
	comp=Z,414nm,19.6s,MS4.2,baz=78,slow=30						
WB2	**Warramunga Arr**	**38.85**	**340**	*e*P	**P**	**16 37 45.1**	**+0.7**
WB2	**Warramunga Arr**	**38.85**	**340**	*e*P	**P**	**16 37 43.7**	**-0.7**
WRA	**Warramunga Arr**	**38.86**	**340**	P	**P**	**16 37 43.5**	**-0.9**
	comp=Z,12nm,1.0s,mb4.6,baz=167,slow=6.9,SNR=20						
WRA				PcP	PcP	16 39 56.2	+0.9
	comp=Z,1.7nm,1.0s,baz=180,slow=2.4,SNR=4.7						
WRAB	**Tennant Creek**	**38.86**	**340**	*e*P	**P**	**16 37 42.8**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.9						
WRAB	**Tennant Creek**	**38.86**	**340**	*e*P	**P**	**16 37 42.8**	**-1.7**
	comp=Z,30nm,1.1s,mb4.9						
MBWA	**Marble Bar**	**41.74**	**319**	*e*P	**P**	**16 38 07.9**	**-0.4**
	comp=Z,13nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**42.70**	**328**	P	**P**	**16 38 16.6**	**+0.4**
	comp=Z,1.5nm,0.7s,mb3.8,baz=212,slow=18,SNR=4.6						
SNAA	**Sanae**	**49.43**	**192**	*e*	**P**	**16 39 09.2**	**0.0**
SNAA				*e*		16 39 16.4	
SNAA	**Sanae**	**49.43**	**192**	*e*P	**P**	**16 39 09.1**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,13nm,1.4s						
SNAA	**Sanae**	**49.43**	**192**	*e*P	**P**	**16 39 09.1**	**-0.1**
	comp=Z,13nm,1.4s,mb4.8						
VNA3	**Neumayer Olymp**	**50.52**	**189**	*e*	**P**	**16 39 18.0**	**+0.6**
VNA3				*e*		16 39 23.5	
VNA3				*e*		16 39 32.4	
VNA1	**Neumayer--Stat**	**50.96**	**190**	*e*	**P**	**16 39 21.5**	**+0.7**
VNA1				*e*		16 39 27.8	
VNA1				*e*		16 39 36.8	
PPT	**Papeete**	**60.70**	**76**	LR	LR	16 59 03.6	
	comp=Z,108nm,21.0s,MS4.0,baz=201,slow=28						
KSM	**Kuching**	**66.05**	**318**	*e*P	**P**	**16 41 11.2**	**+5.2**
SUR	**Sutherland**	**79.96**	**223**	*e*P	**P**	**16 42 31.4**	**+3.0**
	comp=Z,15nm,1.1s,mb4.8						
BOSA	**Boshof**	**81.60**	**229**	LR	LR	17 15 52.6	
	comp=Z,112nm,18.7s,MS4.2,baz=340,slow=33						
LBTB	**Lobatse**	**84.64**	**230**	*e*P	**P**	**16 42 52.3**	**-0.6**
LBTB				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.9						
LBTB	**Lobatse**	**84.64**	**230**	*e*P	**P**	**16 42 52.3**	**-0.6**
	comp=Z,13nm,1.2s,mb4.9						
KMI	**Kunming**	**90.61**	**320**	P	**P**	**16 43 23.1**	**+1.5**
KMI				AP	pP	16 43 27.9	+2.9
KMI				XP	sP	16 43 29.4	+3.2
KMI				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.6						
KMI				LR	LR		
	comp=Z,134nm,20.0s,MS4.4						
SSE	**Sheshan**	**91.12**	**337**	P	**P**	**16 43 25.3**	**+1.3**
SSE				AMB	AMB		
	comp=Z,19nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,36nm,6.4s						
LSZ	**Lusaka**	**92.10**	**237**	P	**P**	**16 43 34.0**	**+5.4**
LSZ				pmax	pmax		
	comp=Z,11nm,1.4s,mb5.0						
LSZ	**Lusaka**	**92.10**	**237**	P	**P**	**16 43 34.0**	**+5.4**
	comp=Z,11nm,1.4s,mb5.0						
NJ2	**Nanjing**	**92.54**	**336**	*e*P	**P**	**16 43 30.4**	**-0.2**
NJ2				AP	pP	16 43 35.1	+1.2
NJ2				XP	sP	16 43 37.4	+2.3
NJ2				PP	PP	16 47 14.0	+2.2
NJ2				AMB	AMB		
	comp=Z,210nm,10.1s						
NJ2				LR	LR		
	comp=N,710nm,24.1s						
NJ2				LR	LR		
	comp=E,120nm,15.4s						
NJ2				LR	LR		
	comp=Z,110nm,21.4s,MS4.3						
CPUP	**Villa Florida**	**93.80**	**158**	P	**P**	**16 43 35.6**	**-0.8**
	comp=Z,1.5nm,0.9s,mb4.4,baz=243,slow=9.0,SNR=3.9						
CD2	**Chengdu**	**95.60**	**323**	*e*P	**P**	**16 43 42.6**	**-2.1**
CD2				AMB	AMB		
	comp=Z,30nm,8.4s						
LZH	**Lanzhou**	**100.35**	**325**	*e*P	Pdif	16 44 08.6	+2.6
LZH				AP		16 44 11.8	
LZH				XP		16 44 13.5	
LZH				AMB	AMB		
	comp=Z,77nm,4.7s						
LZH				LR	LR		
	comp=E,312nm,17.0s						
LZH				LR	LR		
	comp=Z,410nm,18.1s,MS5.0						
HHC	**Hu-ho-hao-te**	**102.65**	**333**	*e*P	Pdif	16 44 18.3	+2.1
HHC				AP		16 44 23.3	
HHC				PP	PP	16 48 35.5	+6.0
HHC				SKS		16 54 57.0	
HHC				S	Sdif	16 56 00.5	-0.8
HHC				XS		16 56 08.5	
HHC				PS	PS	16 57 41.3	+4.7
HHC				SS	SS	17 03 15.3	+6.5
HHC				AMB	AMB		
	comp=Z,43nm,7.7s						
HHC				LR	LR		
	comp=N,151nm,16.2s,MS4.7						
HHC				LR	LR		
	comp=E,162nm,20.9s,MS4.7						
HHC				LR	LR		
	comp=Z,110nm,17.1s,MS4.5						
MDJ	**Mudanjiang**	**102.94**	**347**	P	Pdif	16 44 18.5	+1.0
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.5s						
MDJ				AMB	AMB		
	comp=Z,62nm,6.4s						
MDJ				LR	LR		
	comp=N,70nm,19.9s,MS4.3						
MDJ				LR	LR		
	comp=E,47nm,19.9s,MS4.3						
MDJ				LR	LR		
	comp=Z,93nm,19.9s,MS4.3						
WMQ	**Urumqi**	**112.76**	**317**	*e*PDIF	Pdif	16 45 04.0	+2.8
WMQ				PP	PP	16 49 51.0	+7.5
WMQ				SKS	SKSdf	16 56 09.0	+0.8
WMQ				PS	PS	16 59 20.0	+2.0
WMQ				SS	SS	17 05 31.0	+5.4
WMQ				PP	PP		
	comp=Z,135nm,8.0s						
WMQ				LR	LR		
	comp=N,134nm,18.0s,MS4.7						
WMQ				LR	LR		
	comp=E,114nm,18.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,125nm,18.0s,MS4.5						
TORD	**Torodi Ar. Bea**	**128.78**	**224**	PKP	PKPdf	16 49 29.7	+3.0
	comp=Z,1.4nm,0.9s,baz=118,slow=1.7,SNR=4.4						
AKASG	**Malin Array Be**	**144.50**	**286**	PKP	PKPdf	16 49 56.3	+0.6
	comp=Z,3.5nm,0.8s,baz=110,slow=2.3,SNR=14						
KEST	**Kesra**	**144.89**	**250**	PKPbc	PKPdf	16 49 57.4	+1.1
	comp=Z,12nm,1.0s,baz=201,slow=0.9,SNR=15						
DIVS	**Divcibare**	**145.32**	**270**	⇓*i*PKP	PKPdf	16 49 58.6	+1.5
BBLS	**Bajina Basta -**	**145.48**	**269**	*e*PKP	PKPdf	16 49 57.5	+0.1
MORC	**Moravsky Berou**	**150.14**	**277**	*e*PKIKP	PKPdf	16 50 06.4	+1.3
FINES	**FINESS Array B**	**151.04**	**302**	PKPbc	PKPbc	16 50 11.2	-1.0
	comp=Z,2.4nm,0.8s,baz=135,slow=27,SNR=3.9						
GERES	**GERESS Array B**	**151.67**	**272**	PKPbc	PKPbc	16 50 12.3	-1.4
	comp=Z,1.5nm,0.8s,baz=141,slow=4.5,SNR=9.4						
BRG	**Berggiesshubel**	**152.67**	**276**	*e*P	PKPbc	16 50 21.1	+5.2
	comp=Z,3.3nm,1.4s						
BRG				*e*		16 50 32.3	
	comp=Z,2.5nm,0.9s						
BRG							
	comp=N,85nm,20.9s						
BRG							
	comp=E,67nm,21.8s						
BRG							
	comp=Z,78nm,15.0s						
BRG	**Berggiesshubel**	**152.67**	**276**	*e*PKIKP	PKPbc	16 50 21.1	+5.1
BRG				*e*		16 50 32.3	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BRG				MLR	MLR		
	comp=N,85nm,20.9s,MS4.6						
BRG				MLR	MLR		
	comp=E,67nm,21.8s,MS4.6						
BRG				MLR	MLR		
	comp=Z,78nm,15.0s						
BRG	**Berggiesshubel**	**152.67**	**276**	*e*P	PKPbc	16 50 21.1	+5.2
BRG				*e*		16 50 32.3	
BRG				LR	LR		
	comp=Z,80nm,15.0s,MS4.7						
ARCES	**ARCESS Array B**	**152.85**	**319**	PKPbc	PKPbc	16 50 17.9	+1.5
	comp=Z,2.6nm,1.1s,baz=66,slow=12,SNR=4.3						
CLL	**Collm**	**153.40**	**276**	*e*PKP2	PKPab	16 50 35.0	+5.3
CLL	**Collm**	**153.40**	**276**	*e*(PKPab)	PKPab	16 50 35.0	+5.3
GRA1	**Grafenberg Arr**	**153.49**	**272**	*e*PKP	PKPbc	16 50 21.7	+3.9
**

SGMF				*e*Sg		Sg	17 15 43.0	-2.3
	82nm,0.3s							
SGMF	**Saint Gilles**	**1.56**	**327**	*e*Pg		Pg	17 15 23.4	-1.7
SGMF				*e*Sg		Sg	17 15 43.0	-2.3
	41nm,0.3s							
QUIF	**Quistinic**	**1.60**	**307**	*e*Pg		Pg	17 15 24.0	-1.9
QUIF				*e*Sg		Sg	17 15 44.4	-2.3
	27nm,0.2s							
QUIF	**Quistinic**	**1.60**	**307**	*e*P		Pn	17 15 22.3	-1.9
QUIF				*e*Pg		Pg	17 15 24.0	-1.9
QUIF				*e*Sg		Sg	17 15 44.4	-2.3
QUIF	**Quistinic**	**1.60**	**307**	*e*Pg		Pg	17 15 24.0	-1.9
QUIF				*e*Sg		Sg	17 15 44.4	-2.3
	13nm,0.2s							
LDF	**La Druitiere**	**1.81**	**25**	*e*Pg		Pg	17 15 28.2	-1.8
LDF				*e*Sg		Sg	17 15 50.9	-2.6
	15nm,0.2s							
LDF	**La Druitiere**	**1.81**	**25**	*e*P		Pn	17 15 26.0	-1.1
LDF				*e*Pg		Pg	17 15 28.2	-1.8
LDF				*e*Sg		Sg	17 15 50.9	-2.6
LDF	**La Druitiere**	**1.81**	**25**	*e*Pg		Pg	17 15 28.2	-1.8
LDF				*e*Sg		Sg	17 15 50.9	-2.6
	7.4nm,0.2s							
FLN	**La Foliniere**	**1.88**	**16**	*e*Pg		Pg	17 15 29.4	-2.0
FLN				*e*Sg		Sg	17 15 53.2	-2.6
	20nm,0.2s							
FLN	**La Foliniere**	**1.88**	**16**	*e*P		Pn	17 15 27.0	-1.1
FLN				*e*Pg		Pg	17 15 29.4	-2.0
FLN				*e*Sg		Sg	17 15 53.2	-2.6
FLN	**La Foliniere**	**1.88**	**16**	*e*Pg		Pg	17 15 29.4	-2.0
FLN				*e*Sg		Sg	17 15 53.2	-2.6
	10nm,0.2s							
ROSF	**Rostrenen**	**1.93**	**316**	*e*Pg		Pg	17 15 30.1	-2.1
ROSF				*e*Sg		Sg	17 15 54.5	-2.7
	23nm,0.3s							
ROSF	**Rostrenen**	**1.93**	**316**	*e*Pg		Pg	17 15 30.1	-2.1
ROSF				*e*Sg		Sg	17 15 54.5	-2.7
	12nm,0.3s							
LFF	**La Frestale**	**2.46**	**144**	*e*Pg		Pg	17 15 40.2	-2.3
LFF				*e*Sg		Sg	17 16 12.1	-2.4
	29nm,0.3s							
LFF	**La Frestale**	**2.46**	**144**	*e*Pg		Pg	17 15 40.2	-2.3
LFF				*e*Sg		Sg	17 16 12.1	-2.4
	14nm,0.3s							
TCF	**Toulx Ste Croi**	**2.50**	**104**	*e*Pg		Pg	17 15 40.8	-2.4
TCF				*e*Sg		Sg	17 16 12.6	-2.9
	15nm,0.3s							
TCF	**Toulx Ste Croi**	**2.50**	**104**	*e*Pn		Pn	17 15 33.1	-3.5
TCF				*e*Pg		Pg	17 15 40.8	-2.4
TCF				*e*Sg		Sg	17 16 12.6	-2.9
TCF	**Toulx Ste Croi**	**2.50**	**104**	*e*Pg		Pg	17 15 40.8	-2.4
TCF				*e*Sg		Sg	17 16 12.6	-2.9
	7.5nm,0.3s							
RJF	**Les Rejaudoux**	**2.55**	**129**	*e*Pg		Pg	17 15 41.8	-2.4
RJF				*e*Sg		Sg	17 16 14.7	-2.6
	16nm,0.2s							
RJF	**Les Rejaudoux**	**2.55**	**129**	*e*Pg		Pg	17 15 41.8	-2.4
RJF				*e*Sg		Sg	17 16 14.7	-2.6
	8.1nm,0.2s							
HYF	**Humbligny**	**2.69**	**82**	*e*Pg		Pg	17 15 44.0	-2.9
HYF				*e*Sg		Sg	17 16 19.0	-2.9
BGF	**Bois d'Agland**	**2.87**	**97**	*e*Pg		Pg	17 15 47.3	-2.9
BGF				*e*Sg		Sg	17 16 24.1	-3.2
	43nm,0.4s							
BGF	**Bois d'Agland**	**2.87**	**97**	*e*Pg		Pg	17 15 47.3	-2.9
BGF				*e*Sg		Sg	17 16 24.1	-3.2
	22nm,0.4s							
CAF	**Calviac**	**3.10**	**130**	*e*P		Pn	17 15 44.2	-0.6
CAF				*e*Sn		Sn	17 16 16.2	-6.0
CAF				*e*Sg		Sg	17 16 31.9	-2.8
	6.8nm,0.2s							
CAF	**Calviac**	**3.10**	**130**	*e*P		Pn	17 15 44.2	-0.6
CAF				*e*Sn		Sn	17 16 16.2	-6.0
CAF				*e*Sg		Sg	17 16 31.9	-2.8
	3.4nm,0.2s							
AGO	**Saint Agoulin**	**3.18**	**105**	Pn		Pn	17 15 45.8	-0.1
AVF	**Avril sur Loir**	**3.18**	**91**	*e*Pg		Pg	17 15 53.0	-3.3
AVF				*e*Sg		Sg	17 16 33.6	-3.9
	5.3nm,0.2s							
PYM	**Petit Puy Mans**	**3.21**	**111**	Pn		Pn	17 15 47.1	+0.8
SSF	**Saint Saulge**	**3.28**	**86**	*e*Pg		Pg	17 15 55.0	-3.1
SSF				*e*Sg		Sg	17 16 36.9	-3.6
	7.3nm,0.3s							
LOR	**Lormes**	**3.52**	**83**	*e*Pg		Pg	17 15 59.7	-3.1
LOR				*e*Sg		Sg	17 16 44.5	-4.0
	7.1nm,0.2s							
LOR	**Lormes**	**3.52**	**83**	*e*Pg		Pg	17 15 59.7	-3.1
LOR				*e*Sg		Sg	17 16 44.5	-4.0
	3.5nm,0.2s							
PLDF	**La Plantade**	**3.53**	**105**	Pn		Pn	17 15 48.8	-2.0
SMF	**Signal de Mont**	**3.53**	**93**	*e*Pg		Pg	17 16 00.0	-3.0
SMF				*e*Sg		Sg	17 16 44.7	-4.0
	4.8nm,0.2s							
SMF	**Signal de Mont**	**3.53**	**93**	*e*Pg		Pg	17 16 00.0	-3.0
SMF				*e*Sg		Sg	17 16 44.7	-4.0
	2.4nm,0.2s							
LBL	**Lubilhac**	**3.59**	**117**	Pn		Pn	17 15 51.6	0.0
LBL				Sg		Sg	17 16 51.9	+1.2
SJPF	**Ste Jean**	**3.85**	**179**	*e*Pg		Pg	17 16 05.2	-3.8
SJPF				*e*Sn		Sn	17 16 34.3	-6.4
SJPF				*e*Sg		Sg	17 16 55.1	-3.8
	3.0nm,0.3s							
SJPF	**Ste Jean**	**3.85**	**179**	*e*Pg		Pg	17 16 05.2	-3.8
SJPF				*e*Sn		Sn	17 16 34.3	-6.4
SJPF				*e*Sg		Sg	17 16 55.1	-3.8
	1.5nm,0.3s							
ETSF	**Etsaut**	**4.09**	**173**	*e*Pg		Pg	17 16 09.4	-4.3
ETSF				*e*Sn		Sn	17 16 40.7	-6.1
ETSF				*e*Sg		Sg	17 17 02.2	-4.6
	2.2nm,0.3s							
ETSF	**Etsaut**	**4.09**	**173**	*e*Pg		Pg	17 16 09.4	-4.3
ETSF				*e*Sn		Sn	17 16 40.7	-6.1
EPF	**Esparros**	**4.09**	**163**	*e*Pg		Pg	17 16 10.5	-3.2
EPF				*e*Sn		Sn	17 16 40.4	-6.4
EPF				*e*Sg		Sg	17 17 02.9	-3.9
	4.7nm,0.3s							
EPF	**Esparros**	**4.09**	**163**	*e*Pn		Pn	17 15 55.5	-3.0
EPF				*e*Pg		Pg	17 16 10.5	-3.2
EPF				*e*Sn		Sn	17 16 40.4	-6.4
EPF				*e*Sg		Sg	17 17 02.9	-3.9
EPF	**Esparros**	**4.09**	**163**	*e*Pg		Pg	17 16 10.5	-3.2
EPF				*e*Sn		Sn	17 16 40.4	-6.4
EPF				*e*Sg		Sg	17 17 02.9	-3.9
	2.3nm,0.3s							
MTLF	**Montolieu**	**4.38**	**144**	*e*Pg		Pg	17 16 15.8	-3.5
MTLF				*e*Sg		Sg	17 17 11.7	-4.4
	1.8nm,0.3s							
MTLF	**Montolieu**	**4.38**	**144**	*e*Pn		Pn	17 15 59.2	-3.3
MTLF				*e*Pg		Pg	17 16 15.8	-3.5
MTLF				*e*Sg		Sg	17 17 11.7	-4.4
MTLF	**Montolieu**	**4.38**	**144**	*e*Pg		Pg	17 16 15.8	-3.5
MTLF				*e*Sg		Sg	17 17 11.7	-4.4
	0.9nm,0.3s							
VIVF	**Saint-Julien-l**	**4.66**	**115**	*e*Pg		Pg	17 16 20.4	-4.1
VIVF				*e*Sg		Sg	17 17 20.0	-4.9
	1.8nm,0.3s							
VIVF	**Saint-Julien-l**	**4.66**	**115**	*e*Pg		Pg	17 16 20.4	-4.1
VIVF				*e*Sg		Sg	17 17 20.0	-4.9
	0.9nm,0.3s							

IDC 24 17:15:07.4±1.4, 1618S×17694W, h0km, mb4.2/4, mb1 4.2/5, mb1mx3.8/15, mbtmp4.1/5, ML1.7/1, MS3.6/8, Ms1 3.6/8, ms1mx3.4/25, Error ellipse: s-maj=53.5km s-min=27.0km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.47**	**66**	Pn	Pn	17 16 30.7	+0.5
	1.5nm,0.3s,baz=60,slow=20,SNR=2.9						
AFI				LR	LR	17 17 49.8	
	comp=Z,142nm,18.4s,baz=86,slow=30						
RAO	**Raoul Island**	**13.04**	**184**	LR	LR	17 21 47.5	
	comp=Z,72nm,20.5s,baz=325,slow=31						
DZM	**Mont Dzumac**	**16.75**	**247**	LR	LR	17 24 31.1	
	comp=Z,154nm,18.2s,baz=326,slow=34						
RAR	**Rarotonga**	**17.01**	**110**	LR	LR	17 24 15.6	
	comp=Z,369nm,18.6s,baz=172,slow=32						
HNR	**Honiara**	**23.50**	**284**	LR	LR	17 27 45.5	
	comp=Z,503nm,19.9s,baz=181,slow=32						
PPT	**Papeete**	**26.22**	**97**	LR	LR	17 28 43.9	
	comp=Z,105nm,19.3s,baz=274,slow=31						
RPZ	**Rata Peaks**	**29.29**	**198**	P	P	17 21 10.9	-0.4
	17nm,1.1s,baz=324,slow=22,SNR=3.5						

PMG	**Port Moresby**	**35.61**	**276**	LR		LR	17 32 12.2	
	comp=Z,228nm,20.5s,baz=19,slow=29							
STKA	**Stephens Creek**	**40.70**	**240**	P		P	17 22 50.8	+1.2
	6.8nm,1.0s,baz=86,slow=7.5,SNR=4.9							
WRA	**Warramunga Arr**	**46.35**	**258**	P		P	17 23 36.8	+1.6
	0.9nm,1.1s,baz=92,slow=6.9,SNR=4.6							
ASAR	**Alice Springs**	**46.63**	**253**	P		P	17 23 36.3	-1.0
	1.7nm,0.7s,baz=85,slow=8.2,SNR=2.4							
ASAR				LR		LR	17 41 51.5	
	comp=Z,84nm,18.8s,baz=356,slow=34							
BRTR	**Keskin Array B**	**144.52**	**317**	PKP		PKPdf	17 34 47.6	+1.9
	1.2nm,0.9s,baz=63,slow=0.9,SNR=6.3							
GERES	**GERESS Array B**	**146.28**	**347**	PKPbc		PKPbc	17 34 48.3	-1.6
	0.6nm,0.7s,baz=20,slow=4.3,SNR=5.0							

IDC 24 17:33:02.8±1.2, 1912N×7808W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/20, mbtmp3.6/3, MS4.3/1, Ms1 4.3/1, ms1mx3.0/26, Error ellipse: s-maj=55.5km s-min=33.0km az=70.0

ISCJB 24 17:33:04.8±1.7, 1909N±0.10×779W±0.1, h31km±11km, mb3.5/3, MS4.4/1, Error ellipse: s-maj=20.3km s-min=11.2km az=92.2

JSN 24 17:33:06.8±0.8, 1907N×7774W, h16km±4km, MD4.0

ISC 24 17:33:05.4±1.6, 1908N±009×7781W±010, h25km±11km, n12, σ0§75/13, mb3.5/3, MS4.4/1, 6D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBJ	**Montego Bay**	**0.68**	**185**	*i*P	**Pb**	**17 33 18.8**	**+0.2**
MBJ				*i* S	**Sb**	**17 33 27.5**	**0.0**
BBJ	**Bamboo Saint A**	**0.86**	**143**	*i*P	**Pb**	**17 33 22.0**	**+0.3**
BBJ				*i* S	**Sb**	**17 33 32.2**	**-0.6**
STH	**Stony Hill**	**1.38**	**136**	*i*P	**Pn**	**17 33 28.8**	**-0.2**
STH				*e*S	**Sn**	**17 33 45.5**	**-0.9**
GWJ	**Greenwich**	**1.43**	**134**	*e*P	**Pn**	**17 33 29.5**	**-0.3**
PCJ	**Portland Cotta**	**1.47**	**155**	*i*P	**Pn**	**17 33 31.0**	**+0.7**
PCJ				*i* S	**Sn**	**17 33 49.1**	**+0.4**
CMJ	**Castle Mountai**	**1.65**	**124**	*e*P	**Pn**	**17 33 33.3**	**+0.5**
NVAR	**Mina Array Bea**	**40.01**	**307**	P	**P**	**17 40 36.1**	**-2.0**
	0.1nm,0.5s,mb2.8,baz=113,slow=6.9,SNR=2.9						
PLCA	**Paso Flores**	**59.88**	**174**	P	**P**	**17 43 09.3**	**+0.3**
	0.9nm,0.7s,mb3.9,baz=337,slow=7.7,SNR=4.5						
INK	**Inuvik**	**60.02**	**339**	LR	LR	18 08 23.9	
	comp=Z,289nm,21.0s,MS4.4,baz=271,slow=35						
ARCES	**ARCESS Array B**	**76.85**	**21**	P	**P**	**17 44 56.4**	**+1.2**
	0.9nm,0.8s,mb3.8,baz=282,slow=4.5,SNR=3.7						
WRA	**Warramunga Arr**	**149.71**	**263**	PKPbc	PKPbc	17 52 55.8	+2.8
	0.6nm,0.6s,baz=85,slow=2.9,SNR=16						
ASAR	**Alice Springs**	**150.16**	**256**	PKPbc	PKPbc	17 52 56.7	+2.7
	0.7nm,0.6s,baz=79,slow=2.4,SNR=19						

ISCJB 24 17:35:42.8±3.1, 1085S±02×1648E±02, h101km±19km, mb3.9/5, Error ellipse: s-maj=41.8km s-min=11.6km az=96.6

NEIC 24 17:35:42.9±3.0, 1062S×16485E, h86km±18km, mb4.2/3, Error ellipse: s-maj=43.6km s-min=15.7km az=225.0

IDC 24 17:35:44.7±5.1, 1082S×16477E, h90km±27km, mb3.5/4, mb1 3.9/7, mb1mx3.6/17, mbtmp4.3/7, MS3.0/3, Ms1 3.0/3, ms1mx2.9/15, Error ellipse: s-maj=67.3km s-min=18.2km az=42.0

ISC 24 17:35:43.4±2.8, 1078S±02×1649E±02, h88km±16km, n16, σ1§06/19, mb3.9/5, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.01**	**284**	P	**Pn**	**17 36 55.6**	**-0.5**
	55nm,0.3s,baz=118,slow=1.4,SNR=38						
HNR				S	**Sn**	**17 37 54.2**	**+1.4**
	76nm,0.3s,baz=89,slow=13,SNR=10.0						
HNR	**Honiara**	**5.01**	**284**	P	**Pn**	**17 36 55.6**	**-0.5**
HNR				*e*Sn	**Sn**	**17 37 52.3**	**-0.4**
DZM	**Mont Dzumac**	**11.38**	**173**	*e*P	**Pn**	**17 38 22.7**	**-0.2**
DZM				*e*S	**Sn**	**17 40 22.9**	**-5.3**
DZM	**Mont Dzumac**	**11.38**	**173**	P	**Pn**	**17 38 22.9**	**0.0**
	5.9nm,0.3s,baz=305,slow=21,SNR=155						
DZM				S	**Sn**	**17 40 26.8**	**-1.3**
	1.0nm,0.3s,baz=310,slow=23,SNR=6.9						
DZM				LR	LR	17 42 04.6	
	comp=Z,67nm,18.2s,baz=10,slow=34						
PMG	**Port Moresby**	**17.49**	**273**	P	**Pn**	**17 39 43.1**	**+1.6**
	0.4nm,0.3s,baz=106,slow=15,SNR=3.2						
PMG				LR	LR	17 44 30.4	
	comp=Z,48nm,19.1s,baz=156,slow=30						
CTA	**Charters Tower**	**20.20**	**240**	P	**P**	**17 40 11.7**	**+0.7**
	3.6nm,0.7s,baz=70,slow=12,SNR=6.3						
CTAO	**Charters Tower**	**20.20**	**240**	P	**P**	**17 40 12.1**	**+1.2**
	4.9nm,0.8s						
WRAB	**Tennant Creek**	**30.78**	**249**	*e*P	**P**	**17 41 49.8**	**-0.6**
	6.0nm,1.0s,mb4.3						
WB2	**Warramunga Arr**	**30.78**	**249**	*e*P	**P**	**17 41 49.8**	**-0.6**
WRA	**Warramunga Arr**	**30.79**	**249**	P	**P**	**17 41 50.5**	**0.0**
	0.6nm,0.5s,mb3.6,baz=76,slow=9.4,SNR=13						
GUMO	**Guam**	**31.26**	**320**	LR	LR	17 52 22.7	
	comp=Z,36nm,21.7s,baz=54,slow=32						
ASAR	**Alice Springs**	**32.17**	**242**	P	**P**	**17 42 01.9**	**-0.8**
	0.7nm,0.7s,mb3.5,baz=66,slow=9.9,SNR=13						
KKM	**Kota Kinabalu**	**51.22**	**287**	P	**P**	**17 44 37.0**	**-0.8**
KSM	**Kuching**	**55.60**	**279**	P	**P**	**17 45 08.2**	**-1.6**
VNDA	**Vanda**	**66.80**	**181**	P	**P**	**17 46 26.6**	**+1.1**
	1.4nm,1.1s,mb3.7,baz=358,slow=4.3,SNR=6.1						
SBA	**Scott Base**	**67.13**	**180**	*e*P	**P**	**17 46 29.6**	**+2.0**
	4.7nm,1.0s,mb4.3						

KRSC 24 18:05:40, 5209N×15959E, h19km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.75**	**298**	*i* P	Pb	18 05 54.2	-0.2
RUS				*i* S	Sb	18 06 05.0	+0.8
GRL	**Gorelyy**	**1.04**	**297**	*e*P	Pb	18 05 59.7	+0.3
GRL				*i* S	Sb	18 06 14.1	+1.5
SPN	**Mys Shipunski**	**1.04**	**14**	P	Pb	18 06 01.1	+1.7
SPN				*i* S	Sb	18 06 17.0	+4.3
NLC	**Nalytchevo**	**1.09**	**352**	P	Pn	18 06 00.5	+0.2
NLC				*i* S	Sb	18 06 15.8	+1.6
PET	**Petropavlovsk**	**1.10**	**329**	*e*P	Pn	18 06 00.6	+0.3
PET				*i* S	Sb	18 06 16.1	+1.9
AVH	**Avacha**	**1.29**	**337**	P	Pn	18 06 05.6	+2.7
AVH				*i* S	Sn	18 06 23.7	+4.1
MIPR	**Malaya Ipel'ka**	**1.75**	**277**	*e*P	Pn	18 06 09.6	+0.2
GNL	**Ganaly**	**1.89**	**329**	*i* P	Pn	18 06 12.8	+1.5
GNL				*i* S	Sn	18 06 36.9	+2.3
MKZ	**Mys Kozlova**	**2.78**	**27**	*e*P	Pn	18 06 23.8	+0.3
MKZ				*e*S	Sn	18 06 55.2	-1.4
KBTR	**Krutoberegovo**	**4.54**	**23**	*i* P	Pn	18 06 49.4	+1.7

BJI 24 18:05:49.8, 1022S×10878E, h17km, mB5.0, mb4.5

IDC 24 18:05:49.6±0.6, 1003S×10809E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/18, mbtmp4.1/11, ML3.8/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/28, Error ellipse: s-maj=26.3km s-min=15.1km az=61.0

ISCJB 24 18:05:50.0±5.0, 1008S±009×108.1E±0.1, h14km±31km, mb4.2/15, MS3.5/3, Error ellipse: s-maj=20.5km s-min=10.3km az=104.1

NEIC 24 18:05:51.3±0.4, 1007S×108.17E, h10km, mb4.4/7, Error ellipse: s-maj=17.2km s-min=8.2km az=52.0

ISC 24 18:05:53.9±4.1, 1010S±009×1081E±01, h26km±29km, n33, σ0§89/27, mb4.2/15, MS3.5/3, 1C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJII	**Banjamegara**	**3.18**	**30**	P	**Pn**	**18 06 42.2**	**0.0**
	0.0nm,0.0s						
JCJI	**Jatiwangi**	**3.59**	**3**	P	**Pn**	**18 06 43.8**	**-4.0**
	0.0nm,0.0s						
CBJI	**Citeko**	**3.86**	**341**	P	**Pn**	**18 06 46.0**	**-5.5**
	0.0nm,0.0s						
KRKI	**Karangkates**	**4.72**	**66**	P	**Pn**	**18 07 03.4**	**+0.1**
	0.0nm,0.0s						
NBBI	**Negara**	**6.67**	**76**	P	**Pn**	**18 07 35.1**	**+5.0**
	0.0nm,0.0s						
KSI	**Kapahiang**	**8.41**	**319**	*e*P	**Pn**	**18 07 54.0**	**-0.1**
PSI	**Prapat**	**15.73**	**324**	LR	LR	18 16 29.9	
	comp=Z,83nm,20.0s,baz=53,slow=41						
FITZ	**Fitzroy Crossi**	**18.77**	**117**	*e*P	**Pn**	**18 10 08.3**	**-3.3**
	8.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.77**	**117**	P	**Pn**	**18 10 12.0**	**+0.4**
	0.2nm,0.3s,baz=306,slow=11,SNR=13						
NWAO	**Narrogin (SRO)**	**24.23**	**161**	P	**P**	**18 11 07.7**	**-0.8**
	5.7nm,0.9s,mb4.0,baz=326,slow=11,SNR=4.3						
NWAO				LR	LR	18 19 45.0	
	comp=Z,78nm,19.4s,MS3.2,baz=132,slow=34						
WRA	**Warramunga Arr**	**27.13**	**114**	P	**P**	**18 11 35.1**	**+0.3**
	3.9nm,1.0s,mb3.9,baz=285,slow=11,SNR=14						
WRA				PcP	PcP	18 14 54.1	-0.8
	0.5nm,0.7s,baz=299,slow=2.2,SNR=3.8						
WB2	**Warramunga Arr**	**27.14**	**114**	*e*P	**P**	**18 11 34.8**	**-0.1**
ASAR	**Alice Springs**	**28.07**	**122**	P	**P**	**18 11 43.2**	**0.0**
	1.9nm,1.0s,mb3.7,baz=311,slow=8.9,SNR=13						
ASAR				PcP	PcP	18 14 58.6	+1.3
	0.6nm,0.7s,baz=300,slow=2.1,SNR=5.6						
STKA	**Stephens Creek**	**37.80**	**130**	*e*P	**P**	**18 13 09.0**	**+1.0**
	5.7nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**37.80**	**130**	P	**P**	**18 13 08.9**	**+1.0**
	8.0nm,0.8s,mb4.5,baz=287,slow=8.6,SNR=11						
STKA				LR	LR	18 28 55.7	
	comp=Z,74nm,20.9s,MS3.5,baz=205,slow=37						
LSA	**Lhasa**	**42.80**	**338**	P	**P**	**18 13 51.8**	**+2.4**
LSA	**Lhasa**	**42.80**	**338**	*e*P	**P**	**18 13 51.4**	**+2.0**
	7.0nm,0.7s,mb4.5						
GTA	**Gaotai**	**49.85**	**352**	*e*P	**P**	**18 14 47.8**	**+3.0**
GTA				AP	pP	18 14 54.3	+1.5
GTA				XP	sP	18 14 57.3	+1.3
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.2						
MJAR	**Matsushiro Arr**	**54.36**	**30**	P	**P**	**18 15 17.3**	**-1.0**
	comp=Z,0.5nm,0.4s,mb3.8,baz=193,slow=7.5,SNR=4.1						
SONM	**Songino Array**	**57.69**	**359**	P	**P**	**18 15 42.4**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.4,baz=180,slow=7.9,SNR=25						
MKAR	**Makanchi Array**	**61.15**	**340**	P	**P**	**18 16 05.8**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.3,baz=143,slow=7.0,SNR=16						
MAW	**Mawson**	**64.74**	**198**	P	**P**	**18 16 30.2**	**+0.3**
	comp=Z,0.8nm,0.3s,mb4.3,baz=31,slow=5.9,SNR=4.9						
ZAL	**Zalesovo**	**66.78**	**345**	P	**P**	**18 16 41.6**	**-1.4**
	comp=Z,1.0nm,0.3s,mb4.4,baz=258,slow=2.3,SNR=3.2						
CHKZ	**Chkalovo**	**71.04**	**337**	*e*P	**P**	**18 17 09.5**	**0.0**
	comp=Z,4.2nm,0.8s,mb4.4						
ZRNK	**Zerenda**	**71.11**	**336**	*e*P	**P**	**18 17 09.5**	**-0.4**
	comp=Z,3.4nm,0.8s,mb4.3						
ARU	**Arti**	**77.86**	**334**	*e*P	**P**	**18 17 49.0**	**-0.1**
	comp=Z,6.2nm,1.0s,mb4.5						
BR131	**Keskin Array S**	**84.68**	**312**	*e*P	**P**	**18 18 25.4**	**+0.1**
	comp=Z,0.8nm,0.6s,mb4.0						
BRTR	**Keskin Array B**	**84.68**	**312**	P	**P**	**18 18 24.9**	**-0.5**
	comp=Z,1.3nm,0.8s,mb4.1,baz=138,slow=5.9,SNR=8.6						
ARCES	**ARCESS Array B**	**96.80**	**339**	LR	LR	19 06 03.2	
	comp=Z,29nm,20.0s,MS3.8,baz=266,slow=37						
BDFB	**Brasilia**	**145.16**	**223**	PKPbc	PKPbc	18 25 30.2	+1.7
	comp=Z,1.8nm,0.5s,baz=270,slow=3.0,SNR=3.4						
WMOK	**Wichita Mounta**	**145.31**	**41**	*e*PKPdf	PKPdf	18 25 30.6	+1.4
JCT	**Junction City**	**147.06**	**48**	*e*PKPbc	PKPbc	18 25 35.9	+1.6
SIV	**San Ignacio**	**151.95**	**203**	PKPbc	PKPbc	18 25 48.0	+1.5
	comp=Z,2.1nm,0.7s,baz=92,slow=3.7,SNR=6.1						
SIV				PKPab	PKPab	18 25 56.7	+0.9
	comp=Z,1.3nm,0.9s,baz=180,slow=3.0,SNR=3.7						

SZGRF 24 18:17:09.2, 1957S×17631W, h33km, Fiji Islands region

BJI 24 18:18:11.2, 1803S×17860W, h521km, mB4.7, mb4.5

ISCJB 24 18:18:11.6±0.9, 1827S±009×17785W±009, h559km±12km, mb4.2/30, Error ellipse: s-maj=16.8km s-min=9.0km az=99.9

NEIC 24 18:18:12.0±0.9, 1830S×17776W, h553km±11km, mb4.4/7, Error ellipse: s-maj=19.2km s-min=9.6km az=142.0

MOS 24 18:18:12.0±1.6, 1752S×17839W, h518km, mb4.5/7, Error ellipse: s-maj=18.5km s-min=13.6km az=179.5

IDC 24 18:18:16.8±1.9, 1831S×17796W, h606km±22km, mb3.5/15, mb1 3.7/16, mb1mx3.6/20, mbtmp4.5/16, Error ellipse: s-maj=18.4km s-min=10.1km az=152.0

ISC 24 18:18:12.4±0.9, 1826S±009×17780W±009, h557km±11km, h535km±3.3km:pP-P, n150, σ1§05/57, mb4.2/30, 30C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.23**	**54**	P	**P**	**18 20 02.9**	**+0.2**
	29nm,0.3s,baz=281,slow=4.0,SNR=19						
AFI				S	**S**	**18 21 30.7**	**-2.4**
	5.6nm,0.3s,baz=31,slow=23,SNR=4.3						
AFI	**Afiamalu**	**7.23**	**54**	*e*P	**P**	**18 20 02.2**	**-0.5**
AFI				*e*S	**S**	**18 21 27.8**	**-5.4**
AFI				pmax	pmax	

NJ2	**Nanjing**	**78.61**	**309**	*e*P	**P**	**18 29 16.6**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.4						
MDJ	**Mudanjiang**	**78.80**	**325**	P	**P**	**18 29 18.4**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,31nm,4.8s						
MDJ	**Mudanjiang**	**78.80**	**325**	*e*P	**P**	**18 29 18.9**	**+1.0**
	comp=Z,11nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**79.28**	**44**	P	**P**	**18 29 21.6**	**+1.1**
	comp=Z,2.7nm,0.8s,mb3.6,baz=229,slow=10,SNR=20						
CN2	**Changchun**	**80.65**	**322**	*e*P	**P**	**18 29 28.5**	**+0.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
BBB	**Bella Bella**	**82.35**	**28**	P	**P**	**18 29 35.5**	**-0.8**
	comp=Z,2.4nm,0.6s,mb3.8,baz=266,slow=4.0,SNR=4.3						
SEY	**Seymchan**	**84.25**	**347**	*i*P	**P**	**18 29 44.6**	**-1.2**
SEY				*i* *PP	pP	18 31 33.9	-12
XAN	**Xi'an**	**86.93**	**307**	P	**P**	**18 29 59.3**	**+0.7**
XAN				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.1						
PDAR	**Pinedale Array**	**87.21**	**43**	P	**P**	**18 30 00.5**	**+0.5**
	comp=Z,1.8nm,0.7s,mb3.8,baz=225,slow=2.3,SNR=17						
HHC	**Hu-ho-hao-te**	**87.93**	**314**	*e*P	**P**	**18 30 02.8**	**-0.5**
HHC				AP	pP	18 32 01.9	-2.6
HHC				XP	sP	18 32 54.8	-5.7
HHC				PP	PP	18 33 39.4	-0.4
HHC				SKS		18 39 38.1	
HHC				S	S	18 39 56.1	-3.9
HHC				XS	sS	18 43 27.0	-9.0
HHC				SS	SS	18 46 01.6	-2.7
HHC				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.7						
HHC				AMB	AMB		
	comp=Z,92nm,5.2s						
KMI	**Kunming**	**88.50**	**297**	P	**P**	**18 30 06.1**	**+0.1**
KMI				AMB	AMB		
	comp=Z,4.0nm,0.5s,mb4.5						
CD2	**Chengdu**	**89.74**	**303**	*e*P	**P**	**18 30 09.5**	**-2.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
YAK	**Yakutsk**	**90.11**	**338**	*e*P	**P**	**18 30 11.0**	**-2.4**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
SNAA	**Sanae**	**90.23**	**178**	P	**P**	**18 30 13.3**	**-0.7**
	comp=Z,0.6nm,1.1s,mb3.3,baz=88,slow=2.9,SNR=6.4						
PLCA	**Paso Flores**	**90.67**	**133**	P	**P**	**18 30 16.9**	**+0.8**
	comp=Z,0.5nm,0.6s,mb3.7,baz=353,slow=14,SNR=3.7						
LZH	**Lanzhou**	**91.56**	**307**	*e*P	**P**	**18 30 22.0**	**+1.9**
LZH				AP	pP	18 32 20.3	-1.7
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,68nm,4.5s						
ULN	**Ulaanbaatar**	**93.80**	**319**	*e*P	**P**	**18 30 30.7**	**+0.4**
ULN				*i* *PP	pP	18 32 29.1	-3.3
SONM	**Songino Array**	**94.19**	**319**	P	**P**	**18 30 32.2**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.7,baz=104,slow=6.1,SNR=3.1						
YKA	**Yellowknife Ar**	**94.41**	**25**	P	**P**	**18 30 32.0**	**-1.1**
	comp=Z,1.0nm,0.6s,mb4.1,baz=241,slow=4.8,SNR=5.9						
MKAR	**Makanchi Array**	**109.79**	**314**	PKiKP	PKiKP		
	comp=Z,0.6nm,0.4s,baz=351,slow=0.8,SNR=6.1					18 35 39.3	-1.2
CHKZ	**Chkalovo**	**117.28**	**322**	*e*PKiKP	PKPdf	18 35 53.1	-1.7
ZRNK	**Zerenda**	**118.32**	**321**	*e*PKiKP	PKPdf	18 35 55.4	-1.4
ARU	**Arti**	**123.46**	**326**	*i* PKiKP	PKPdf	18 36 05.2	-1.5
ARU				*e*		18 38 02.0	
LVZ	**Lovozero**	**126.28**	**345**	↑PKiKP	PKPdf	18 36 08.8	-3.3
ARCES	**ARCESS Array B**	**126.76**	**350**	PKP	PKPdf	18 36 11.8	-1.2
	comp=Z,1.3nm,0.4s,baz=59,slow=0.9,SNR=24						
JOF	**Joensuu**	**131.06**	**343**	*e*p	PKPdf	18 36 18.7	-2.5
	comp=Z,4.6nm,0.6s						
JOF	**Joensuu**	**131.06**	**343**	*e*PKiKP	PKPdf	18 36 18.7	-2.5
JOF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KAF	**Kangasniemi**	**133.06**	**345**	*e*p	PKPdf	18 36 23.1	-1.8
	comp=Z,2.7nm,0.5s						
KAF	**Kangasniemi**	**133.06**	**345**	*e*PKiKP	PKPdf	18 36 23.1	-1.8
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	**FINESS Array B**	**133.68**	**344**	PKhKP		18 36 18.7	
	comp=Z,1.7nm,1.0s,baz=16,slow=1.7,SNR=6.1						
FINES				PKP	PKPdf	18 36 24.3	-1.8
	comp=Z,1.6nm,0.6s,baz=119,slow=3.7,SNR=8.7						
FINES	**FINESS Array B**	**133.68**	**344**	*i* PKHKP		18 36 20.2	
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NB2	**NORSAR Subarra1**	**136.79**	**354**	PKPd	PKPdf	18 36 32.3	+0.4
	comp=Z,0.5nm,0.5s,baz=13,slow=1.9						
NOA	**NORSAR Array B**	**136.79**	**354**	PKP	PKPdf	18 36 30.6	-1.3
	comp=Z,0.6nm,0.5s,baz=14,slow=4.0,SNR=5.2						
AKASG	**Malin Array Be**	**141.14**	**333**	PKhKP		18 36 33.2	
	comp=Z,0.7nm,0.3s,baz=40,slow=4.2,SNR=14						
AKASG				PKP	PKPdf	18 36 39.4	-0.4
	comp=Z,1.7nm,0.5s,baz=36,slow=2.8,SNR=7.4						
AKASG	**Malin Array Be**	**141.14**	**333**	*i* PKHKP		18 36 33.2	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BSEG	**Bad Segeberg**	**143.84**	**352**	*e*PKPbc	PKPdf	18 36 43.1	-1.5
KWP	**Kalwaria**	**144.62**	**337**	*e*PKP	PKPdf	18 36 46.0	+0.1
BURAR	**Bucovina Array**	**145.19**	**332**	↑*i*P	PKPdf	18 36 48.8	+1.9
STHS	**Stebnicka Huta**	**145.33**	**338**	*e*PKP	PKPdf	18 36 48.6	+1.5
KOLS	**Kolonicke sedl**	**145.36**	**337**	*e*PKP	PKPdf	18 36 48.7	+1.5
BR131	**Keskin Array S**	**145.44**	**315**	*e*PKPdf	PKPdf	18 36 48.6	+1.3
BRTR	**Keskin Array B**	**145.44**	**315**	PKPbc	PKPbc	18 36 48.5	-0.1
	comp=Z,4.4nm,0.7s,baz=136,slow=3.4,SNR=29						
BRTR	**Keskin Array B**	**145.44**	**315**	*i* PKIKP	PKPdf	18 36 48.5	+1.2
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSP	**Ksiaz**	**145.61**	**344**	*e*PKP	PKPdf	18 36 49.3	+1.7
KSP	**Ksiaz**	**145.61**	**344**	*e*PKIKP	PKPdf	18 36 48.5	+0.9
NIE	**Niedzica**	**145.66**	**339**	*e*PKP	PKPdf	18 36 49.8	+2.1
VRI	**Vrincioaia**	**145.78**	**329**	↑*i*P	PKPdf	18 36 49.5	+1.6
TIRR	**Tirgusor**	**145.88**	**326**	↑*i*P	PKPdf	18 36 50.0	+1.9
CLL	**Collm**	**145.93**	**348**	*e*PKPbc	PKPbc	18 36 49.5	-0.5
CLL	**Collm**	**145.93**	**348**	↓*i*PKPbc	PKPbc	18 36 49.6	-0.4
	comp=Z,26nm,0.8s						
CLL				*es*PKiKP		18 39 55.0	
CLL	**Collm**	**145.93**	**348**	↓*i*PKIKP	PKPdf	18 36 49.6	+1.5
CLL				pmax	pmax		
	comp=Z,26nm,0.8s						
UPC	**Upice**	**145.99**	**344**	↑*e*PKPB	PKPbc	18 36 50.2	0.0
UPC				*e*PKPAB	PKPab	18 36 52.4	+0.2
OKC	**Ostrava-Krasne**	**145.99**	**341**	↑*e*PKPB	PKPbc	18 36 50.2	0.0
OKC				*e*PKPAB	PKPab	18 36 52.6	+0.4
DPC	**Dobruska-Polom**	**146.05**	**344**	↑*e*PKPB	PKPbc	18 36 50.7	+0.3
DPC				*e*PKPAB	PKPab	18 36 53.2	+0.8
BRG	**Berggiesshubel**	**146.14**	**347**	*e*PKPbc	PKPbc	18 36 50.2	-0.4
BRG	**Berggiesshubel**	**146.14**	**347**	*e*PKP	PKPdf	18 36 48.4	-0.1
	comp=Z,1.2nm,0.6s						
BRG				*i*		18 36 50.5	
	comp=Z,6.6nm,0.8s						
BRG	**Berggiesshubel**	**146.14**	**347**	*e*PKHKP	PKPbc	18 36 48.3	-2.3
BRG				*i*		18 36 50.5	
BRG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FBE	**Freiberg**	**146.22**	**347**	*e*PKPbc	PKPbc	18 36 50.7	-0.1
GTTG	**Gvttingen**	**146.22**	**351**	*e*PKPbc	PKPbc	18 36 50.4	-0.4
MORC	**Moravsky Berou**	**146.22**	**342**	↑*i*P	PKPdf	18 36 50.7	+2.1
MORC	**Moravsky Berou**	**146.22**	**342**	*e*PKPbc	PKPbc	18 36 51.0	+0.1
PVCC	**Panska Ves**	**146.32**	**346**	↑*e*PKPB	PKPbc	18 36 51.4	+0.3
PVCC				*e*PKPAB	PKPab	18 36 53.8	+0.3
KECS	**Kecovo**	**146.39**	**338**	*e*PKP	PKPbc	18 36 51.3	0.0
MLR	**Muntele Rosu**	**146.43**	**329**	↑*i*P	PKPdf	18 36 50.7	+1.7
BUG	**Bochum--Univer**	**146.65**	**354**	*e*PKPbc	PKPbc	18 36 50.9	-1.1
MOX	**Moxa**	**146.83**	**349**	*e*PKPbc	PKPbc	18 36 51.9	-0.6
MOX	**Moxa**	**146.83**	**349**	*e*PKP	PKPdf	18 36 52.2	+2.6
	comp=Z,14nm,1.3s						
PRU	**Pruhonice**	**146.83**	**345**	↑*e*PKPB	PKPbc	18 36 52.3	-0.2
PRU				*e*PKPAB	PKPab	18 36 55.7	+0.1
WERD	**Werda**	**146.88**	**348**	*e*PKPbc	PKPbc	18 36 52.2	-0.4
TANN	**Tannenbergstha**	**146.89**	**348**	*e*PKPbc	PKPbc	18 36 52.4	-0.2
DRGR		**146.91**	**334**	↑*i*P	PKPbc	18 36 53.0	+0.3
UBBA	**Unterbreizbach**	**146.93**	**351**	*e*PKPbc	PKPbc	18 36 52.0	-0.7
VYHS	**Vyhne**	**146.95**	**340**	*e*PKP	PKPbc	18 36 52.5	-0.3
VYHS	**Vyhne**	**146.95**	**340**	*e*PKIKP	PKPbc	18 36 52.6	-0.2
GUNZ	**Gunzen**	**146.96**	**348**	*e*PKPbc	PKPbc	18 36 52.8	0.0
NKC	**Novy Kostel**	**147.06**	**348**	↑*e*PKPB	PKPbc	18 36 53.2	+0.1
NKC				*e*PKPAB	PKPab	18 36 56.4	-0.1
PSZ	**Piszkesteto**	**147.08**	**338**	↑*i*P	PKPbc	18 36 53.3	+0.2
TREC	**Trest**	**147.23**	**344**	↑*e*PKPB	PKPbc	18 36 53.4	-0.1
TREC				*e*PKPAB	PKPab	18 36 57.0	-0.2
ROTZ	**Rotzenmuhle**	**147.55**	**348**	*e*PKPbc	PKPbc	18 36 54.2	-0.2
TNS	**Taunus Mts**	**147.72**	**352**	*e*PKPbc	PKPbc	18 36 54.3	-0.5
GRF	**Grafenberg Arr**	**147.81**	**349**	*e*PKPbc	PKPbc	18 36 54.8	-0.2
KHC	**Kasperske Hory**	**147.86**	**346**	↑*e*PKPB	PKPbc	18 36 55.2	0.0
KHC				*e*PKPAB	PKPab	18 37 00.2	+0.5
KHC	**Kasperske Hory**	**147.86**	**346**	*d i*PKIKP	PKPbc	18 36 55.1	-0.1
WET	**Wettzell**	**148.00**	**347**	*e*PKPbc	PKPbc	18 36 55.5	0.0
GEC2	**GERESS Array S**	**148.10**	**346**	*e*PKPbc	PKPbc	18 36 55.5	-0.3
GERES	**GERESS Array B**	**148.10**	**346**	PKPbc	PKPbc	18 36 55.7	-0.1
	comp=Z,4.9nm,0.6s,baz=29,slow=3.0,SNR=32						
GIVF	**Givet**	**148.16**	**357**	*e*PKP1	PKPbc	18 36 55.6	-0.3
	comp=Z,22nm,0.7s						
BAIF	**Baives**	**148.24**	**358**	*e*PKP1	PKPbc	18 36 55.9	-0.2
	comp=Z,8.7nm,0.6s						
BZS	**Buzias**	**148.30**	**334**	↑*i*P	PKPbc	18 36 56.2	-0.1
CONA	**Conrad Observa**	**148.37**	**342**	↑*i*PKiKP	PKiKP	18 36 56.1	-1.5
	comp=Z,6.5nm,0.8s						
WLF	**Walferdange**	**148.51**	**355**	*e*PKPbc	PKPbc	18 36 56.7	-0.1
MOA	**Molln**	**148.88**	**344**	↓*i*P	PKPbc	18 36 57.3	-0.4
	comp=Z,4.8nm,1.1s						
PKSM	**Moragy**	**148.98**	**338**	↑*i*P	PKPbc	18 36 57.6	-0.3
FUR	**Furstenfeldbru**	**149.27**	**348**	*e*PKPbc	PKPbc	18 36 58.2	-0.4
FLN	**La Foliniere**	**149.50**	**3**	*e*PKP1	PKPbc	18 36 58.5	-0.7
BFO	**Black Forest**	**149.59**	**352**	*e*PKPbc	PKPbc	18 36 58.8	-0.6
CDF	**Champ du Feu**	**149.64**	**353**	*e*PKP1	PKPbc	18 36 59.3	-0.2
	comp=Z,14nm,0.7s						
LDF	**La Druitiere**	**149.68**	**3**	*e*PKP1	PKPbc	18 36 58.8	-0.8
	comp=Z,13nm,0.6s						
MEZF	**Maizieres J'vi**	**149.75**	**356**	*e*PKP1	PKPbc	18 36 59.8	0.0
KBA	**Koelnbreinsper**	**149.83**	**345**	↓*i*P	PKPbc	18 36 59.0	-1.0
	comp=Z,8.1nm,0.6s						
SGMF	**Saint Gilles**	**149.83**	**6**	*e*PKP1	PKPbc	18 36 59.1	-0.9
	comp=Z,64nm,1.1s						
GRR	**Gorron**	**149.85**	**4**	*e*PKP1	PKPbc	18 36 59.4	-0.6
	comp=Z,18nm,0.6s						
VTS	**Vitosha**	**149.89**	**328**	↑*i*P	PKPbc	18 37 00.5	+0.4
WATA	**Walderalm**	**150.00**	**347**	↑*i*P	PKPbc	18 37 00.1	-0.2
	comp=Z,7.4nm,1.2s						
WTTA	**Wattenberg**	**150.05**	**347**	↓*i*P	PKPbc	18 37 00.3	-0.2
	comp=Z,16nm,0.5s						
MOTA	**Moosalm**	**150.09**	**348**	↓*i*P	PKPbc	18 37 00.1	-0.5
	comp=Z,4.4nm,0.9s						
HAU	**Haudompre**	**150.14**	**354**	*e*PKP1	PKPbc	18 37 00.3	-0.4
	comp=Z,16nm,0.6s						
SQTA	**Sankt Quirin**	**150.18**	**348**	↑*i*P	PKPbc	18 37 00.8	0.0
	comp=Z,5.0nm,0.8s						
HINF	**Hinteralfeld**	**150.28**	**354**	*e*PKP1	PKPbc	18 37 00.4	-0.6
	comp=Z,8.0nm,0.6s						
DAVA	**Damuels**	**150.37**	**349**	↑*i*P	PKPbc	18 37 01.6	+0.3
	comp=Z,8.5nm,0.9s						
LOR	**Lormes**	**151.04**	**358**	*e*PKP1	PKPbc	18 37 02.5	-0.2
	comp=Z,15nm,0.7s						
SSF	**Saint Saulge**	**151.26**	**358**	*e*PKP1	PKPbc	18 37 03.0	-0.2
	comp=Z,9.6nm,0.7s						
AVF	**Avril sur Loir**	**151.53**	**358**	*e*PKP1	PKPbc	18 37 03.7	-0.2
CABF	**La Chapelle**	**151.54**	**354**	*e*PKP1	PKPbc	18 37 04.1	+0.2
	comp=Z,24nm,1.0s						
TCF	**Toulx Ste Croi**	**152.05**	**360**	*e*PKP1	PKPbc	18 37 04.5	-0.5
	comp=Z,3.5nm,0.6s						
ORIF	**Oris-en-Rattie**	**153.24**	**354**	*e*PKP1	PKPbc	18 37 08.1	+0.5
MBDF	**Montbardon**	**153.34**	**353**	*e*PKP1	PKPbc	18 37 07.8	0.0
	comp=Z,7.5nm,0.7s						
VIVF	**Saint-Julien-l**	**153.40**	**356**	*e*PKP1	PKPbc	18 37 07.9	0.0
TORD	**Torodi Ar. Bea**	**174.89**	**174**	PKP	PKPdf	18 37 17.7	-0.8
	comp=Z,1.3nm,1.1s,baz=330,slow=0.9,SNR=4.0						

IDC 24 18:20:11.1±0.9, 2134S×6653W, h235km±15km, mb3.5/1, mb1 3.1/6, mb1mx3.0/20, mbtmp3.6/6, Error ellipse: s-maj=22.1km s-min=11.7km az=110.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.55**	**240**	P	Pn	18 20 59.3	+1.5
	5.2nm,0.3s,baz=54,slow=9.4,SNR=61						
LVC				S	S	18 21 35.2	+0.6
	10nm,0.3s,baz=281,slow=20,SNR=16						
LPAZ	**La Paz**	**5.25**	**343**	P	Pn	18 21 32.0	+2.5
	0.8nm,0.3s,baz=173,slow=9.8,SNR=18						
LPAZ				S	S	18 22 33.1	+1.3
	0.3nm,0.3s,baz=352,slow=16,SNR=15						
SIV	**San Ignacio**	**7.41**	**45**	P	Pn	18 21 56.6	-0.2
	2.5nm,0.3s,baz=237,slow=11,SNR=78						
SIV				S	S	18 23 21.0	-0.6
	0.3nm,0.3s,baz=210,slow=20,SNR=2.4						
CPUP	**Villa Florida**	**9.77**	**122**	P	Pn	18 22 28.1	+1.2
	0.8nm,0.3s,baz=296,slow=12,SNR=5.3						
CFAA	**Coronel Fontan**	**10.34**	**188**	P	Pn	18 22 33.6	-0.5
	0.1nm,0.3s,baz=6.5,slow=13,SNR=8.9						
CFAA				S	S	18 24 22.2	-7.9
	0.2nm,0.3s,baz=220,slow=19,SNR=8.2						
BDFB	**Brasilia**	**18.44**	**75**	P	P	18 24 13.6	+4.2
	0.6nm,0.3s,baz=243,slow=11,SNR=3.3						
PLCA	**Paso Flores**	**19.64**	**189**	P	P	18 24 25.9	+3.8
	0.1nm,0.3s,baz=349,slow=5.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**75.21**	**69**	P	P	18 31 28.4	+0.5
	1.1nm,0.7s,baz=258,slow=5.7,SNR=9.2						

*NEIC **24** 18:52:27.6, 38.18N×26.69E, h26km, MD3.0(ATH), After ATH.*
*ISK **24** 18:52:27.9, 38.36N×26.76E, h30km, MD2.7*
*ATH **24** 18:52:27.6, 38.18N×26.69E, h26km±3km, MD3.0/3*
*ISCJB **24** 18:52:28.7±0.7, 38.19N±0.004×26.76E±0.009, h19km±12km, Error ellipse: s-maj=12.5km s-min=6.6km az=160.8*
*CSEM **24** 18:52:28.3±0.1, 38.22N×26.77E, h18km±1km, MD3.0, Error ellipse: s-maj=3.5km s-min=2.0km az=85.0*

ISC 24 18:52:28.4±0.7, 3820N±0.004×2671E±0.009, h14km±8km, n8, σ0838/11, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.32**	**54**	PG	**Pg**	**18 52 34.7**	**-0.3**
BLCB				SG	**Sg**	**18 52 39.8**	**+0.4**
IZM	**Izmir**	**0.48**	**65**	PG	**Pg**	**18 52 37.6**	**-0.2**
SMG	**Samos**	**0.50**	**169**	*e*PB	**Pg**	**18 52 38.1**	**-0.2**
SMG				*e*SB	**Sg**	**18 52 45.1**	**+0.1**
PRK	**Paraskevi**	**1.10**	**342**	*e*PN	**Pg**	**18 52 48.9**	**-0.7**
PRK				*e*SN	**Sg**	**18 53 04.6**	**+0.6**
BODT	**Bodrum**	**1.23**	**157**	*e*PN	**Pn**	**18 52 51.6**	**+0.5**
APE	**Apeiranthos**	**1.47**	**220**	*e*PN	**Pn**	**18 52 54.5**	**+0.1**
YER	**Yerkesik**	**1.64**	**130**	*e*PN	**Pn**	**18 52 56.5**	**-0.2**
LIA	**Limnos Island**	**2.07**	**325**	*e*PN	**Pn**	**18 53 02.5**	**-0.2**

WEL 24 19:01:17.9±0.3, 3769S×17717E, h122km±2km, ML3.5/13, 1C, Error ellipse: s-maj=3.2km s-min=2.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.57**	**185**	PN	Pn	19 01 36.6	+0.1
URZ				SN	Sn	19 01 50.8	+0.1
MWZ	**Matawai**	**0.70**	**156**	PN	Pn	19 01 37.7	+0.2
MWZ				SN	Sn	19 01 52.9	+0.5
MXZ	**Matakaoa Point**	**0.91**	**82**	PN	Pn	19 01 39.3	0.0
MXZ				SN	Sn	19 01 55.0	-0.5
KNZ	**Kokohu**	**1.39**	**163**	↑PN	Pn	19 01 44.2	0.0
KNZ				SN	Sn	19 02 03.0	-1.2
BKZ	**Black Stump Fm**	**1.57**	**200**	*e*PN	Pn	19 01 46.2	-0.1
BKZ				SN	Sn	19 02 07.8	0.0
FWVZ	**Far West T-bar**	**2.01**	**219**	PN	Pn	19 01 52.4	+0.7
MOVZ	**Moawhango**	**2.04**	**212**	PN	Pn	19 01 51.6	-0.4
PXZ	**Pawanui**	**2.35**	**186**	PN	Pn	19 01 55.3	-0.6
PXZ				SN	Sn	19 02 23.3	-1.6
TSZ	**Takapari Road**	**2.55**	**201**	PN	Pn	19 01 57.1	-1.2
WAZ	**Wanganui**	**2.68**	**219**	PN	Pn	19 02 00.0	0.0

*NEIC **24** 19:15:55.8, 4222N×1909E, h19km, ML2.6(PDG), After PDG.*
*PDG **24** 19:15:55.8±0.1, 4222N×1909E, h19km*
*ISCJB **24** 19:15:56.6±0.5, 4224N±0.003×1908E±0.004, h7km±5km, Error ellipse: s-maj=5.0km s-min=4.2km az=122.6*
*SKO **24** 19:15:56.5, 4224N×1900E, h2km*

ISC 24 19:15:57.1±0.6, 4223N±0.003×1908E±0.004, h3km±5km, n15, σ1824/30, 4C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUM	**Brajici-Budva**	**0.15**	**298**	↓*i*Pg	**Pg**	**19 16 00.4**	**+0.3**
BUM				*e*Sg	**Sg**	**19 16 03.6**	**+1.5**
TTG	**Podgorica**	**0.24**	**33**	↓*i*Pg	**Pg**	**19 16 01.0**	**-0.7**
TTG				*e*Sg	**Sg**	**19 16 06.1**	**+1.3**
ULC	**Ulcinj**	**0.29**	**155**	↑*i*Pg	**Pg**	**19 16 01.9**	**-0.8**
ULC				*e*Sg	**Sg**	**19 16 06.8**	**+0.4**
HCY	**Herceg Novi**	**0.49**	**297**	↓*i*Pg	**Pg**	**19 16 05.7**	**-0.7**
HCY				*e*Sg	**Sg**	**19 16 13.5**	**+0.8**
NKY	**Niksic**	**0.59**	**354**	↓*i*Pg	**Pg**	**19 16 07.0**	**-1.3**
NKY				*e*Sg	**Sg**	**19 16 17.1**	**+1.1**
PVY	**Plav**	**0.75**	**61**	↓*i*Pg	**Pg**	**19 16 10.1**	**-1.4**
PVY				*e*Sg	**Sg**	**19 16 22.3**	**+1.0**
BRY	**Bratogost**	**0.78**	**330**	↑*i*Pg	**Pg**	**19 16 10.7**	**-1.4**
BRY				*e*Sg	**Sg**	**19 16 23.4**	**+1.2**
IVA	**Berane**	**0.88**	**43**	↓*i*Pg	**Pg**	**19 16 12.4**	**-1.6**
IVA				*e*Sg	**Sg**	**19 16 26.8**	**+1.5**
UPM	**Unac-Piva**	**0.98**	**353**	↓*i*Pg	**Pg**	**19 16 14.2**	**-1.7**
UPM				*e*Sg	**Sg**	**19 16 30.1**	**+1.5**
PLE	**Pljevlja**	**1.12**	**12**	↑*i*Pg	**Pg**	**19 16 16.9**	**-1.7**
PLE				*e*Sg	**Sg**	**19 16 35.1**	**+2.0**
BBLS	**Bajina Basta -**	**1.66**	**8**	*i* Pg	**Pg**	**19 16 27.9**	**-0.9**
BBLS				Sg	**Sg**	**19 16 48.8**	**-1.5**
SKO	**Skopje**	**1.77**	**98**	*e*Pn	**Pn**	**19 16 28.2**	**-0.5**
SKO				*e*Sn	**Sn**	**19 16 52.9**	**+1.2**
DIVS	**Divcibare**	**1.98**	**19**	*i* Pn	**Pn**	**19 16 31.3**	**-0.3**
DIVS				Sg	**Sg**	**19 16 55.4**	**-5.4**
BIA	**Bitola**	**2.07**	**125**	*e*Pn	**Pn**	**19 16 33.8**	**+1.1**
BIA				*e*Sn	**Sn**	**19 17 01.4**	**+2.3**
BZS	**Buzias**	**3.85**	**28**	↑*i*P	**Pn**	**19 16 56.9**	**-0.3**
BZS				S	**Sn**	**19 17 41.3**	**-1.7**

CASC 24 19:31:28.2±2.5, 1333N×9048W, h24km±7km, MD4.1, 14C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.97**	**59**	↑*e*P	x	19 31 46.6	
SBLS				*e*S	x	19 31 59.9	
TER	**Terranova**	**0.98**	**348**	↑*e*P	Pn	19 31 45.5	-1.0
RTR	**El Retiro**	**0.98**	**55**	↑*e*P	x	19 31 47.1	
RTR				*e*S	x	19 32 00.5	
SNJE	**San Jose**	**1.00**	**58**	↑*e*P	x	19 31 47.1	
PCG	**Pacaya**	**1.06**	**353**	↑*e*P	Pn	19 31 46.8	-0.8
RBDL	**Robledal**	**1.09**	**45**	↑*i*P	x	19 31 49.2	
FUG	**Fuego 3**	**1.16**	**342**	↑*e*P	Pn	19 31 48.1	-0.8
BOQS	**Boqueron**	**1.23**	**71**	↑*e*P	x	19 31 50.1	
GCG	**Guatemala City**	**1.25**	**358**	*e*P	Pn	19 31 52.3	+2.2
GCG				*e*S	Sn	19 32 08.6	+2.4
LFRS	**El Faro**	**1.41**	**78**	↓*e*P	x	19 31 52.1	
LBRS	**Las Brisas**	**1.45**	**74**	↓*e*P	x	19 31 53.5	
JAT	**Jato**	**1.49**	**311**	↑*e*P	Pn	19 31 52.8	-0.7
LCBS	**La Ceiba**	**1.49**	**77**	↑*e*P	x	19 31 53.5	
MTO2	**Montecristo 2**	**1.52**	**46**	↑*e*P	x	19 31 55.4	
MTO2				*e*S	x	19 32 14.8	
TP2	**Tecpan 2**	**1.53**	**340**	↑*e*P	Pn	19 31 53.6	-0.5
TP2				*e*S	Sn	19 32 14.6	+1.3
SNVI	**San Vicente**	**1.62**	**80**

NEIC Minor damage occurred in Charente. Felt at Angouleme and Cognac. Felt in Charente-Maritime and Deux-Sevres. Felt as far as Limoges, Merignac and Perigueux.
*PRU **24** 20:01:00.5, 4561N×008E, h0km*
ISC 24 20:00:58.4±0.1, 45821N±0009×018W±001, h10km, n256, σ1§27/490, mb3.4/3, 8C-11D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATF	**Mathat**	**0.08**	**277**	Pg	**Pg**	**20 01 03.2**	**+2.5**
MATF				Sg	**Sg**	**20 01 05.5**	**+3.2**
MATF	**Mathat**	**0.08**	**277**	Pg	**Pg**	**20 01 03.1**	**+2.4**
MATF				Sg	**Sg**	**20 01 06.4**	**+4.1**
MATF	**Mathat**	**0.08**	**277**	Pg	**Pg**	**20 01 03.1**	**+2.4**
MATF				Sg	**Sg**	**20 01 05.5**	**+3.2**
OLEF	**Ile d'Oleron**	**0.83**	**279**	Pg	**Pg**	**20 01 15.5**	**+1.2**
OLEF				Sg	**Sg**	**20 01 26.6**	**+1.5**
OLEF	**Ile d'Oleron**	**0.83**	**279**	Pg	**Pg**	**20 01 15.6**	**+1.3**
OLEF				Sg	**Sg**	**20 01 26.6**	**+1.5**
LFF	**La Frestale**	**1.09**	**143**	*e*Pg	**Pg**	**20 01 20.2**	**+0.8**
LFF				*e*Sg	**Sg**	**20 01 35.2**	**+1.6**
	1μm,0.2s						
LFF	**La Frestale**	**1.09**	**143**	*e*Pg	**Pg**	**20 01 20.2**	**+0.8**
LFF				*e*Sg	**Sg**	**20 01 35.2**	**+1.6**
	727nm,0.2s						
LRYF	**La Roche-sur-Y**	**1.22**	**309**	Pg	**Pg**	**20 01 22.7**	**+1.0**
LRYF				Sg	**Sg**	**20 01 39.2**	**+1.7**
RJF	**Les Rejaudoux**	**1.30**	**113**	*e*Pg	**Pg**	**20 01 24.4**	**+1.1**
RJF				*e*Sg	**Sg**	**20 01 41.0**	**+0.9**
	2μm,0.2s						
RJF	**Les Rejaudoux**	**1.30**	**113**	*e*Pn	**Pn**	**20 01 23.5**	**+1.0**
RJF				*e*Pg	**Pg**	**20 01 24.4**	**+1.1**
RJF				*e*Sg	**Sg**	**20 01 41.0**	**+0.9**
RJF	**Les Rejaudoux**	**1.30**	**113**	*e*Pg	**Pg**	**20 01 24.4**	**+1.1**
RJF				*e*Sg	**Sg**	**20 01 41.0**	**+0.9**
	981nm,0.2s						
TCF	**Toulx Ste Croi**	**1.73**	**73**	*e*Pg	**Pg**	**20 01 32.2**	**+0.7**
TCF				*e*Sg	**Sg**	**20 01 54.0**	**+0.1**
	353nm,0.2s						
TCF	**Toulx Ste Croi**	**1.73**	**73**	*e*Pn	**Pn**	**20 01 29.4**	**+0.9**
TCF				*e*Pg	**Pg**	**20 01 32.2**	**+0.7**
TCF				*e*Sg	**Sg**	**20 01 54.0**	**+0.1**
TCF	**Toulx Ste Croi**	**1.73**	**73**	*e*Pg	**Pg**	**20 01 32.2**	**+0.7**
TCF				*e*Sg	**Sg**	**20 01 54.0**	**+0.1**
	177nm,0.2s						
CAF	**Calviac**	**1.82**	**119**	*e*Pg	**Pg**	**20 01 33.9**	**+0.7**
CAF				*e*Sg	**Sg**	**20 01 57.5**	**+0.7**
	837nm,0.3s						
CAF	**Calviac**	**1.82**	**119**	*e*Pn	**Pn**	**20 01 30.8**	**+1.1**
CAF				*e*Pg	**Pg**	**20 01 33.9**	**+0.7**
CAF				*e*Sg	**Sg**	**20 01 57.5**	**+0.7**
CAF	**Calviac**	**1.82**	**119**	*e*Pg	**Pg**	**20 01 33.9**	**+0.7**
CAF				*e*Sg	**Sg**	**20 01 57.5**	**+0.7**
	418nm,0.3s						
FRNF	**Fournols**	**1.97**	**102**	Pn	**Pn**	**20 01 33.3**	**+1.5**
FRNF	**Fournols**	**1.97**	**102**	Pn	**Pn**	**20 01 33.5**	**+1.7**
BGF	**Bois d'Agland**	**2.23**	**70**	*e*Pg	**Pg**	**20 01 41.4**	**+0.3**
BGF				*e*Sg	**Sg**	**20 02 10.0**	**+0.1**
BGF	**Bois d'Agland**	**2.23**	**70**	*e*Pn	**Pn**	**20 01 36.2**	**+0.9**
BGF				*e*Pg	**Pg**	**20 01 41.4**	**+0.3**
BGF				*e*Sg	**Sg**	**20 02 10.0**	**+0.1**
BGF	**Bois d'Agland**	**2.23**	**70**	*e*Pg	**Pg**	**20 01 41.4**	**+0.3**
BGF				*e*Sg	**Sg**	**20 02 10.0**	**+0.1**
PYM	**Petit Puy Mans**	**2.23**	**91**	Pg	**Pg**	**20 01 41.8**	**+0.7**
PYM	**Petit Puy Mans**	**2.23**	**91**	Pn	**Pn**	**20 01 36.5**	**+1.1**
PYM				Pg	**Pg**	**20 01 41.8**	**+0.7**
PYM	**Petit Puy Mans**	**2.23**	**91**	Pg	**Pg**	**20 01 41.8**	**+0.7**
AGO	**Saint Agoulin**	**2.32**	**83**	Pg	**Pg**	**20 01 44.9**	**+2.0**
AGO				Sg	**Sg**	**20 02 13.7**	**+0.8**
AGO	**Saint Agoulin**	**2.32**	**83**	Pn	**Pn**	**20 01 37.7**	**+1.1**
AGO				Pg	**Pg**	**20 01 44.9**	**+2.0**
AGO				Sg	**Sg**	**20 02 13.7**	**+0.8**
AGO	**Saint Agoulin**	**2.32**	**83**	Pg	**Pg**	**20 01 44.9**	**+2.0**
AGO				Sg	**Sg**	**20 02 13.7**	**+0.8**
HYF	**Humbligny**	**2.42**	**52**	*e*Pg	**Pg**	**20 01 45.0**	**+0.2**
HYF				*e*Sg	**Sg**	**20 02 16.6**	**+0.3**
HYF	**Humbligny**	**2.42**	**52**	*e*Pn	**Pn**	**20 01 39.2**	**+1.2**
HYF				*e*Pg	**Pg**	**20 01 45.0**	**+0.2**
HYF				*e*Sg	**Sg**	**20 02 16.6**	**+0.3**
HYF	**Humbligny**	**2.42**	**52**	*e*Pg	**Pg**	**20 01 45.0**	**+0.2**
HYF				*e*Sg	**Sg**	**20 02 16.6**	**+0.3**
LBL	**Lubilhac**	**2.48**	**103**	Pn	**Pn**	**20 01 40.3**	**+1.5**
LBL				Sg	**Sg**	**20 02 18.2**	**+0.2**
RENF	**Rennes**	**2.51**	**337**	Pn	**Pn**	**20 01 40.8**	**+1.6**
RENF	**Rennes**	**2.51**	**337**	Pg	**Pg**	**20 01 46.7**	**+0.3**
GRR	**Gorron**	**2.61**	**350**	*e*Pg	**Pg**	**20 01 47.8**	**-0.6**
GRR				*e*Sg	**Sg**	**20 02 20.6**	**-1.6**
	293nm,0.2s						
GRR	**Gorron**	**2.61**	**350**	*e*Pn	**Pn**	**20 01 40.7**	**+0.1**
GRR				*e*Pg	**Pg**	**20 01 47.8**	**-0.6**
GRR				*e*Sg	**Sg**	**20 02 20.6**	**-1.6**
GRR	**Gorron**	**2.61**	**350**	*e*Pg	**Pg**	**20 01 47.8**	**-0.6**
GRR				*e*Sg	**Sg**	**20 02 20.6**	**-1.6**
	147nm,0.2s						
AVF	**Avril sur Loir**	**2.63**	**67**	*e*Pg	**Pg**	**20 01 48.7**	**-0.1**
AVF				*e*Sn	**Sn**	**20 02 12.0**	**-0.9**
AVF				*e*Sg	**Sg**	**20 02 22.4**	**-0.5**
	321nm,0.5s						
AVF	**Avril sur Loir**	**2.63**	**67**	*e*Pn	**Pn**	**20 01 41.6**	**+0.7**
AVF				*e*Pg	**Pg**	**20 01 48.7**	**-0.1**
AVF				*e*Sn	**Sn**	**20 02 12.0**	**-0.9**
AVF				*e*Sg	**Sg**	**20 02 22.4**	**-0.5**
AVF	**Avril sur Loir**	**2.63**	**67**	*e*Pg	**Pg**	**20 01 48.7**	**-0.1**
AVF				*e*Sn	**Sn**	**20 02 12.0**	**-0.9**
AVF				*e*Sg	**Sg**	**20 02 22.4**	**-0.5**
	160nm,0.5s						
PLDF	**La Plantade**	**2.66**	**85**	Pn	**Pn**	**20 01 42.1**	**+0.9**
PLDF				Sg	**Sg**	**20 02 25.4**	**+1.7**
COLF	**Collangettes**	**2.73**	**95**	Pn	**Pn**	**20 01 43.4**	**+1.1**
REYF	**Montagne du Re**	**2.76**	**183**	Pg	**Pg**	**20 01 51.5**	**+0.3**
REYF				Sg	**Sg**	**20 02 26.1**	**-0.8**
ATE	**Arette**	**2.76**	**188**	Pg	**Pg**	**20 01 51.2**	**-0.1**
ATE				Sg	**Sg**	**20 02 26.2**	**-0.9**
EALK	**Alkurruntz** SNR=26	**2.77**	**201**	Pn	**Pn**	**20 01 43.4**	**+0.6**
EALK				Pg	**Pg**	**20 01 51.0**	**-0.5**
	53nm,0.4s,SNR=30						
EALK				Sn	**Sn**	**20 02 16.1**	**-0.2**
	30nm,0.3s,SNR=6.7						
EALK				Lg		20 02 26.5	
	606nm,0.5s,SNR=14						
EALK	**Alkurruntz** 4.0nm,0.1s,SNR=26	**2.77**	**201**	Pn	**Pn**	**20 01 43.4**	**+0.6**
EALK	**Alkurruntz** 53nm,0.4s,SNR=30	**2.77**	**201**	Pg	**Pg**	**20 01 51.0**	**-0.5**
EALK				Sn	**Sn**	**20 02 16.1**	**-0.2**
	30nm,0.3s,SNR=6.7						
LDF	**La Druitiere**	**2.77**	**1**	*e*Pg	**Pg**	**20 01 50.5**	**-1.0**
LDF				*e*Sg	**Sg**	**20 02 26.3**	**-1.2**
	288nm,0.3s						
LDF	**La Druitiere**	**2.77**	**1**	*e*Pn	**Pn**	**20 01 42.7**	**-0.1**
LDF				*e*Pg	**Pg**	**20 01 50.5**	**-1.0**
LDF				*e*Sg	**Sg**	**20 02 26.3**	**-1.2**
LDF	**La Druitiere**	**2.77**	**1**	*e*Pg	**Pg**	**20 01 50.5**	**-1.0**
LDF				*e*Sg	**Sg**	**20 02 26.3**	**-1.2**
	144nm,0.3s						
LABF	**Labassere**	**2.78**	**176**	Pg	**Pg**	**20 01 52.2**	**+0.6**
SJPF	**Ste Jean**	**2.81**	**196**	*e*Pg	**Pg**	**20 01 52.0**	**-0.2**
SJPF				*e*Sg	**Sg**	**20 02 27.5**	**-1.1**
	217nm,0.3s						
SJPF	**Ste Jean**	**2.81**	**196**	*e*Pn	**Pn**	**20 01 43.4**	**+0.1**
SJPF				*e*Pg	**Pg**	**20 01 52.0**	**-0.2**
SJPF				*e*Sg	**Sg**	**20 02 27.5**	**-1.1**
SJPF	**Ste Jean**	**2.81**	**196**	*e*Pg	**Pg**	**20 01 52.0**	**-0.2**
SJPF				*e*Sg	**Sg**	**20 02 27.5**	**-1.1**
	109nm,0.3s						
EPF	**Esparros**	**2.81**	**172**	*e*Pg	**Pg**	**20 01 52.5**	**+0.2**
EPF				*e*Sn	**Sn**	**20 02 16.6**	**-0.8**
EPF				*e*Sg	**Sg**	**20 02 28.9**	**+0.1**
	212nm,0.2s						
EPF	**Esparros**	**2.81**	**172**	*e*Pn	**Pn**	**20 01 43.7**	**+0.3**
EPF				*e*Pg	**Pg**	**20 01 52.5**	**+0.2**
EPF				*e*Sn	**Sn**	**20 02 16.6**	**-0.8**
EPF				*e*Sg	**Sg**	**20 02 28.9**	**+0.1**
EPF	**Esparros**	**2.81**	**172**	*e*Pg	**Pg**	**20 01 52.5**	**+0.2**
EPF				*e*Sn	**Sn**	**20 02 16.6**	**-0.8**
EPF				*e*Sg	**Sg**	**20 02 28.9**	**+0.1**
	106nm,0.2s						
ELIZ	**Elizondo** 4.2nm,0.2s,SNR=49	**2.83**	**200**	Pn	**Pn**	**20 01 44.2**	**+0.6**
ELIZ				Pg	**Pg**	**20 01 52.0**	**-0.5**
	40nm,0.3s,SNR=20						
ELIZ				Sn	**Sn**	**20 02 16.2**	**-1.5**
	33nm,0.2s,SNR=6.4						
ELIZ				Lg		20 02 28.8	
	165nm,0.2s,SNR=16						
ELIZ	**Elizondo** 40nm,0.3s,SNR=20	**2.83**	**200**	Pg	**Pg**	**20 01 52.0**	**-0.6**
ELIZ				Sn	**Sn**	**20 02 16.2**	**-1.5**
	33nm,0.2s,SNR=6.4						
SSF	**Saint Saulge**	**2.83**	**63**	*e*Pg	**Pg**	**20 01 52.5**	**-0.2**
SSF				*e*Sg	**Sg**	**20 02 29.0**	**-0.4**
	228nm,0.3s						
SSF	**Saint Saulge**	**2.83**	**63**	*e*Pn	**Pn**	**20 01 44.1**	**+0.4**
SSF				*e*Pg	**Pg**	**20 01 52.5**	**-0.2**
SSF				*e*Sg	**Sg**	**20 02 29.0**	**-0.4**
SSF	**Saint Saulge**	**2.83**	**63**	*e*Pg	**Pg**	**20 01 52.5**	**-0.2**
SSF				*e*Sg	**Sg**	**20 02 29.0**	**-0.4**
	114nm,0.3s						
LARF	**Larrau**	**2.84**	**192**	Pg	**Pg**	**20 01 53.9**	**+1.0**
SMF	**Signal de Mont**	**2.91**	**72**	*e*Pg	**Pg**	**20 01 53.8**	**-0.3**
SMF				*e*Sg	**Sg**	**20 02 31.6**	**-0.2**
	465nm,0.4s						
SMF	**Signal de Mont**	**2.91**	**72**	*e*Pn	**Pn**	**20 01 45.3**	**+0.6**
SMF				*e*Pg	**Pg**	**20 01 53.8**	**-0.3**
SMF				*e*Sg	**Sg**	**20 02 31.6**	**-0.2**
SMF	**Signal de Mont**	**2.91**	**72**	*e*Pg	**Pg**	**20 01 53.8**	**-0.3**
SMF				*e*Sg	**Sg**	**20 02 31.6**	**-0.2**
	233nm,0.4s						
SGMF	**Saint Gilles**	**2.93**	**327**	*e*Pg	**Pg**	**20 01 53.9**	**-0.6**
SGMF				*e*Sg	**Sg**	**20 02 31.1**	**-1.3**
	165nm,0.3s						
SGMF	**Saint Gilles**	**2.93**	**327**	*e*Pn	**Pn**	**20 01 45.5**	**+0.5**
SGMF				*e*Pg	**Pg**	**20 01 53.9**	**-0.6**
SGMF				*e*Sg	**Sg**	**20 02 31.1**	**-1.3**
SGMF	**Saint Gilles**	**2.93**	**327**	*e*Pg	**Pg**	**20 01 53.9**	**-0.6**
SGMF				*e*Sg	**Sg**	**20 02 31.1**	**-1.3**
	82nm,0.3s						
QUIF	**Quistinic**	**2.93**	**317**	*e*Pg	**Pg**	**20 01 53.8**	**-0.8**
QUIF				*e*Sg	**Sg**	**20 02 31.1**	**-1.4**
	242nm,0.2s						
QUIF	**Quistinic**	**2.93**	**317**	*e*Pn	**Pn**	**20 01 46.1**	**+1.1**
QUIF				*e*Pg	**Pg**	**20 01 53.8**	**-0.8**
QUIF				*e*Sg	**Sg**	**20 02 31.1**	**-1.4**
QUIF	**Quistinic**	**2.93**	**317**	*e*Pg	**Pg**	**20 01 53.8**	**-0.8**
QUIF				*e*Sg	**Sg**	**20 02 31.1**	**-1.4**
	121nm,0.2s						
ETSF	**Etsaut**	**2.94**	**185**	*e*Pg	**Pg**	**20 01 54.2**	**-0.4**
ETSF				*e*Sg	**Sg**	**20 02 31.9**	**-0.8**
	194nm,0.3s						
ETSF	**Etsaut**	**2.94**	**185**	*e*Pn	**Pn**	**20 01 44.8**	**-0.3**
ETSF				*e*Pg	**Pg**	**20 01 54.2**	**-0.4**
ETSF				*e*Sg	**Sg**	**20 02 31.9**	**-0.8**
ETSF	**Etsaut**	**2.94**	**185**	*e*Pg	**Pg**	**20 01 54.2**	**-0.4**
ETSF				*e*Sg	**Sg**	**20 02 31.9**	**-0.8**
	97nm,0.3s						
VIEF	**Viey**	**2.94**	**177**	Pn	**Pn**	**20 01 45.8**	**+0.7**
VIEF	**Viey**	**2.94**	**177**	Pn	**Pn**	**20 01 47.6**	**+2.5**
FLN	**La Foliniere**	**2.95**	**356**	*e*Pg	**Pg**	**20 01 54.8**	**-0.1**
FLN				*e*Sg	**Sg**	**20 02 31.3**	**-1.8**
	226nm,0.2s						
FLN	**La Foliniere**	**2.95**	**356**	*e*Pn	**Pn**	**20 01 45.1**	**-0.2**
FLN				*e*Pg	**Pg**	**20 01 54.8**	**-0.1**
FLN				*e*Sg	**Sg**	**20 02 31.3**	**-1.8**
FLN	**La Foliniere**	**2.95**	**356**	*e*Pg	**Pg**	**20 01 54.8**	**-0.1**
FLN				*e*Sg	**Sg**	**20 02 31.3**	**-1.8**
	113nm,0.2s						
MLS	**Moulis**	**3.00**	**162**	Pg	**Pg**	**20 01 55.6**	**-0.4**
MLS	**Moulis**	**3.00**	**162**	Pn	**Pn**	**20 01 46.6**	**+0.6**
MLS				Pg	**Pg**	**20 01 55.6**	**-0.4**
MLS	**Moulis**	**3.00**	**162**	Pg	**Pg**	**20 01 55.6**	**-0.4**
MTLF	**Montolieu**	**3.01**	**145**	*e*Pg	**Pg**	**20 01 55.9**	**-0.2**
MTLF				*e*Sg	**Sg**	**20 02 35.1**	**-0.1**
	160nm,0.3s						
MTLF	**Montolieu**	**3.01**	**145**	*e*Pn	**Pn**	**20 01 47.0**	**+0.9**
MTLF				*e*Pg	**Pg**	**20 01 55.9**	**-0.2**
MTLF				*e*Sg	**Sg**	**20 02 35.1**	**-0.1**
MTLF	**Montolieu**	**3.01**	**145**	*e*Pg	**Pg**	**20 01 55.9**	**-0.2**
MTLF				*e*Sg	**Sg**	**20 02 35.1**	**-0.1**
	80nm,0.3s						
MELF	**Melles**	**3.02**	**167**	Pn	**Pn**	**20 01 46.3**	**0.0**
MELF				Pg	**Pg**	**20 01 56.1**	**-0.2**
RESF	**Ens**	**3.04**	**173**	Pg	**Pg**	**20 01 56.7**	**+0.1**
RESF				Sg	**Sg**	**20 02 35.1**	**-0.8**
IUSE	**Utxeti** 2.6nm,0.1s,SNR=7.9	**3.04**	**199**	Pn	**Pn**	**20 01 46.9**	**+0.5**
IUSE				Pg	**Pg**	**20 01 56.8**	**+0.2**
	11nm,0.2s,SNR=15						
IUSE				Sn	**Sn**	**20 02 21.9**	**-1.0**
	18nm,0.3s,SNR=4.0						
IUSE				Lg		20 02 35.1	
	135nm,0.2s,SNR=5.6						
IUSE	**Utxeti** 2.6nm,0.1s,SNR=7.9	**3.04**	**199**	Pn	**Pn**	**20 01 46.9**	**+0.4**
IUSE	**Utxeti** 11nm,0.2s,SNR=15	**3.04**	**199**	Pg	**Pg**	**20 01 56.8**	**+0.2**
IUSE				Sn	**Sn**	**20 02 21.9**	**-1.0**
	18nm,0.3s,SNR=4.0						
LOR	**Lormes**	**3.14**	**61**	*e*Pg	**Pg**	**20 01 57.8**	**-0.7**
LOR				*e*Sg	**Sg**	**20 02 38.0**	**-1.2**
	168nm,0.3s						
LOR	**Lormes**	**3.14**	**61**	*e*Pn	**Pn**	**20 01 48.2**	**+0.3**
LOR				*e*Pg	**Pg**	**20 01 57.8**	**-0.7**
LOR				*e*Sg	**Sg**	**20 02 38.0**	**-1.2**
LOR	**Lormes**	**3.14**	**61**	*e*Pg	**Pg**	**20 01 57.8**	**-0.7**
LOR				*e*Sg	**Sg**	**20 02 38.0**	**-1.2**
	84nm,0.3s						
EBIE	**Bielsa** 18nm,0.3s,SNR=176	**3.14**	**176**	Pn	**Pn**	**20 01 48.5**	**+0.5**
EBIE				Pb	**Pb**	**20 01 51.9**	**-2.4**
	SNR=7.9						
EBIE				Pg	**Pg**	**20 01 57.9**	**-0.7**
	35nm,0.2s,SNR=24						
EBIE				Sn	**Sn**	**20 02 24.5**	**-0.9**
	42nm,0.4s,SNR=5.7						
EBIE				Lg		20 02 37.0	
	80nm,0.2s,SNR=12						
EBIE	**Bielsa** 18nm,0.3s,SNR=176	**3.14**	**176**	Pn	**Pn**	**20 01 48.5**	**+0.6**
EBIE	**Bielsa** 35nm,0.2s,SNR=24	**3.14**	**176**	Pg	**Pg**	**20 01 57.9**	**-0.7**
EBIE				Sn	**Sn**	**20 02 24.5**	**-1.0**
	42nm,0.4s,SNR=5.7						
EARA	**Aranguren** 6.8nm,0.2s,SNR=6.4	**3.21**	**199**	Pn	**Pn**	**20 01 50.6**	**+1.8**
EARA				Pg	**Pg**	**20 01 59.3**	**-0.6**
	11nm,0.2s,SNR=5.7						
EARA				Sn	**Sn**	**20 02 29.4**	**+2.3**
	26nm,0.4s,SNR=7.5						
EARA				Lg		20 02 42.9	
	73nm,0.5s,SNR=12						
SALF	**Salau**	**3.21**	**162**	Pn	**Pn**	**20 01 49.3**	**+0.4**
SALF	**Salau**	**3.21**	**162**	Pg	**Pg**	**20 01 59.3**	**-0.7**
ROSF	**Rostrenen**	**3.29**	**321**	*e*Pg	**Pg**	**20 02 00.5**	**-0.9**
ROSF				*e*Sn	**Sn**	**20 02 26.7**	**-2.3**
LRDF				Pg	**Pg**	**20 02 42.1**	**-1.9**
	281nm,0.5s						
ROSF	**Rostrenen**	**3.29**	**321**	*e*Pn	**Pn**	**20 01 50.8**	**+0.9**
ROSF				*e*Pg	**Pg**	**20 02 00.5**	**-0.9**
ROSF				*e*Sn	**Sn**	**20 02 26.7**	**-2.3**
ROSF				*e*Sg	**Sg**	**20 02 42.1**	**-1.9**
ROSF	**Rostrenen**	**3.29**	**321**	*e*Pg	**Pg**	**20 02 00.5**	**-0.9**
ROSF				*e*Sn	**Sn**	**20 02 26.7**	**-2.3**
ROSF				*e*Sg	**Sg**	**20 02 42.1**	**-1.9**
	141nm,0.5s						
LRDF	**Laroque-de-Fa**	**3.48**	**145**	Pn	**Pn**	**20 01 52.9**	**+0.4**
LRDF	**Laroque-de-Fa**	**3.48**	**145**	Pg	**Pg**	**20 02 05.3**	**+0.3**
LRDF	**Laroque-de-Fa**	**3.48**	**145**	Pn	**Pn**	**20 01 54.1**	**+1.6**
LRDF				Pg	**Pg**	**20 02 05.3**	**+0.3**
ELAN	**Lanestosa** 6.0nm,0.2s,SNR=52	**3.48**	**223**	Pn	**Pn**	**20 01 53.2**	**+0.6**
ELAN				Pg	**Pg**	**20 02 03.9**	**-1.2**
	13nm,0.2s,SNR=11						
ELAN				Sn	**Sn**	**20 02 32.4**	**-1.5**
	23nm,0.4s,SNR=7.1						
ELAN				Lg		20 02 49.4	
	51nm,0.3s,SNR=5.0						
ELAN	**Lanestosa** 6.0nm,0.2s,SNR=52	**3.48**	**223**	Pn	**Pn**	**20 01 53.2**	**+0.6**
ELAN	**Lanestosa** 13nm,0.2s,SNR=11	**3.48**	**223**	Pg	**Pg**	**20 02 03.9**	**-1.2**
ELAN				Sn	**Sn**	**20 02 32.4**	**-1.5**
	23nm,0.4s,SNR=7.1						
CARF	**Carcanieres**	**3.51**	**151**	Pn	**Pn**	**20 01 54.1**	**+1.1**
CARF	**Carcanieres**	**3.51**	**151**	Pn	**Pn**	**20 01 54.0**	**+1.0**
CARF				Pn	**Pn**	**20 01 54.8**	**+1.8**
VIVF	**Saint-Julien-l**	**3.55**	**104**	*e*Pg	**Pg**	**20 02 06.6**	**+0.1**
VIVF				*e*Sg	**Sg**	**20 02 50.6**	**-1.9**
	215nm,0.3s						
VIVF	**Saint-Julien-l**	**3.55**	**104**	*e*Pn	**Pn**	**20 01 55.1**	**+1.5**
VIVF				*e*Pg	**Pg**	**20 02 06.6**	**+0.1**
VIVF				*e*Sg	**Sg**	**20 02 50.6**	**-1.9**
VIVF	**Saint-Julien-l**	**3.55**	**104**	*e*Pg	**Pg**	**20 02 06.6**	**+0.1**
VIVF				*e*Sg	**Sg**	**20 02 50.6**	**-1.9**
	107nm,0.3s						
VALF	**Valcebollere**	**3.77**	**154**	Pn	**Pn**	**20 01 59.1**	**+2.6**
FILF	**Fillols**	**3.81**	**148**	Pn	**Pn**	**20 01 58.0**	**+0.9**
FILF				Pg	**Pg**	**20 02 10.1**	**-1.2**
SJAF	**Saint Jean de**	**4.00**	**145**	Pn	**Pn**	**20 02 00.3**	**+0.6**
SJAF				Pg	**Pg**	**20 02 14.4**	**-0.6**
EJON	**La Jonquera** 12nm,0.2s,SNR=33	**4.03**	**146**	Pn	**Pn**	**20 02 01.0**	**+0.9**
EJON				Pg	**Pg**	**20 02 14.6**	**-1.0**
	47nm,0.4s,SNR=22						
EJON				Sn	**Sn**	**20 02 44.8**	**-2.5**
	13nm,0.3s,SNR=7.9						
EJON				Lg		20 03 07.2	
	128nm,0.8s,SNR=5.0						
EJON	**La Jonquera** 12nm,0.2s,SNR=33	**4.03**	**146**	Pn	**Pn**	**20 02 01.0**	**+0.9**
EJON	**La Jonquera** 47nm,0.4s,SNR=22	**4.03**	**146**	Pg	**Pg**	**20 02 14.6**	**-1.0**
EJON				Sn	**Sn**	**20 02 44.8**	**-2.6**
	13nm,0.3s,SNR=7.9						
ESAC	**San Caprasio** 7.3nm,0.2s,SNR=6.3	**4.10**	**183**	Pn	**Pn**	**20 02 03.2**	**+2.1**
ESAC				Pg	**Pg**	**20 02 14.3**	**-2.7**
	52nm,0.2s,SNR=17						
ESAC				Sn	**Sn**	**20 02 47.7**	**-1.5**
	70nm,0.4s,SNR=4.7						
ESAC	**San Caprasio** 7.3nm,0.2s,SNR=6.3	**4.10**	**183**	Pn	**Pn**	**20 02 03.2**	**+2.1**
ESAC	**San Caprasio** 52nm,0.2s,SNR=17	**4.10**	**183**	Pg	**Pg**	**20 02 14.3**	**-2.7**
ESAC				Sn	**Sn**	**20 02 47.7**	**-1.5**
	70nm,0.4s,SNR=4.7						
PRAF	**Pradon**	**4.31**	**116**	Pn	**Pn**	**20 02 05.4**	**+1.5**
ORIF	**Oris-en-Rattie**	**4.36**	**100**	*e*Pn	**Pn**	**20 02 06.8**	**+2.1**
ORIF				*e*Sg	**Sg**	**20 03 16.9**	**-1.6**
	120nm,0.7s						
ORIF	**Oris-en-Rattie**	**4.36**	**100**	*e*Pn	**Pn**	**20 02 06.8**	**+2.1**
ORIF				*e*Sg	**Sg**	**20 03 16.9**	**-1.6**
	60nm,0.7s						
EARI	**Arriondas** 4.9nm,0.2s,SNR=18	**4.39**	**237**	⇑Pn	**Pn**	**20 02 04.8**	**-0.3**
EARI				Sn	**Sn**	**20 02 52.9**	**-3.3**
	5.4nm,0.1s,SNR=5.0						
EARI	**Arriondas** 4.9nm,0.2s,SNR=18	**4.39**	**237**	Pn	**Pn**	**20 02 04.8**	**-0.3**
EARI				Sn	**Sn**	**20 02 52.9**	**-3.4**
	5.4nm,0.1s,SNR=5.0						
CABF	**La Chapelle**	**4.42**	**77**	*e*Pg	**Pg**	**20 02 21.5**	**-1.6**
CABF				*e*Sg	**Sg**	**20 03 19.2**	**-1.1**
	231nm,0.6s						
CABF	**La Chapelle**	**4.42**	**77**	*e*Pn	**Pn**	**20 02 06.2**	**+0.7**
CABF				*e*Pg	**Pg**	**20 02 21.5**	**-1.6**
CABF				*e*Sg	**Sg**	**20 03 19.2**	**-1.1**
CABF	**La Chapelle**	**4.42**	**77**	*e*Pg	**Pg**	**20 02 21.5**	**-1.6**
CABF				*e*Sg	**Sg**	**20 03 19.2**	**-1.1**
	116nm,0.6s						
MEZF	**Maizieres J'vi**	**4.46**	**51**	*e*Pg	**Pg**	**20 02 22.3**	**-1.6**
MEZF				*e*Sg	**Sg**	**20 03 20.1**	**-1.6**
	171nm,0.5s						
MEZF	**Maizieres J'vi**	**4.46**	**51**	*e*Pn	**Pn**	**20 02 06.2**	**+0.1**
MEZF				*e*Pg	**Pg**	**20 02 22.3**	**-1.6**
MEZF				*e*Sg	**Sg**	**20 03 20.1**	**-1.6**
MEZF	**Maizieres J'vi**	**4.46**	**51**	*e*Pg	**Pg**	**20 02 22.3**	**-1.6**
MEZF				*e*Sg	**Sg**	**20 03 20.1**	**-1.6**
	85nm,0.5s						
SMRF	**Simiane la Rot**	**4.48**	**112**	*e*Pn	**Pn**	**20 02 08.0**	**+1.6**
SMRF				*e*Sn	**Sn**	**20 02 57.4**	**-1.2**
SMRF				*e*Sg	**Sg**	**20 03 21.0**	**-1.4**
	135nm,0.6s						
SMRF	**Simiane la

FRF	**La Foret Royal**	**5.37**	**112**	*e*Pn		**Pn**	**20 02 19.9**	**+1.4**
FRF				*e*Sn		**Sn**	**20 03 17.9**	**-2.4**
FRF				*e*Sg		**Sg**	**20 03 48.4**	**-2.2**
	19nm,0.4s							
LMR	**La Mourre**	**5.38**	**115**	*e*Pg		**Pg**	**20 02 39.0**	**-2.5**
LMR				*e*Sn		**Sn**	**20 03 18.0**	**-2.8**
LMR				*e*Sg		**Sg**	**20 03 48.3**	**-3.0**
	17nm,0.4s							
LMR	**La Mourre**	**5.38**	**115**	*e*Pn		**Pn**	**20 02 19.6**	**+0.9**
LMR				*e*Pg		**Pg**	**20 02 39.0**	**-2.5**
LMR				*e*Sn		**Sn**	**20 03 18.0**	**-2.8**
LMR				*e*Sg		**Sg**	**20 03 48.3**	**-3.0**
LMR	**La Mourre**	**5.38**	**115**	*e*Pg		**Pg**	**20 02 39.0**	**-2.5**
LMR				*e*Sn		**Sn**	**20 03 18.0**	**-2.8**
MOF	**Molkenrain**	**5.41**	**65**	Pn		**Pn**	**20 02 18.0**	**-1.1**
GIVF	**Givet**	**5.44**	**36**	*e*Pn		**Pn**	**20 02 19.9**	**+0.4**
GIVF				*e*Sg		**Sg**	**20 03 50.4**	**-2.7**
	56nm,0.5s							
GIVF	**Givet**	**5.44**	**36**	*e*Pn		**Pn**	**20 02 19.9**	**+0.4**
GIVF				*e*Sg		**Sg**	**20 03 50.4**	**-2.7**
	28nm,0.5s							
EMOS	**Mosqueruela**	**5.46**	**182**	Pn		**Pn**	**20 02 21.3**	**+1.6**
	2.8nm,0.2s,SNR=24							
EMOS				Pg		**Pg**	**20 02 39.5**	**-3.4**
	14nm,0.4s,SNR=6.2							
EMOS				Sn		**Sn**	**20 03 20.0**	**-2.6**
	12nm,0.3s,SNR=12							
EMOS				Lg			20 03 53.1	
	35nm,0.6s,SNR=5.0							
EMOS	**Mosqueruela**	**5.46**	**182**	Pn		**Pn**	**20 02 21.3**	**+1.5**
	2.8nm,0.2s,SNR=24							
EMOS	**Mosqueruela**	**5.46**	**182**	Pg		**Pg**	**20 02 39.5**	**-3.4**
	14nm,0.4s,SNR=6.2							
EMOS				Sn		**Sn**	**20 03 20.0**	**-2.6**
	12nm,0.3s,SNR=12							
STV	**Sta Anna Valdi**	**5.55**	**104**	P		**Pn**	**20 02 23.7**	**+2.7**
SNF	**Seneffe**	**5.56**	**31**	PN		**Pn**	**20 02 21.5**	**+0.4**
SNF				SN		**Sn**	**20 03 20.8**	**-4.2**
EPON	**Pontenova**	**5.57**	**246**	Pn		**Pn**	**20 02 21.1**	**-0.2**
	9.1nm,0.1s,SNR=72							
EPON				Sn		**Sn**	**20 03 20.6**	**-4.7**
	18nm,0.3s,SNR=5.0							
EPON	**Pontenova**	**5.57**	**246**	Pn		**Pn**	**20 02 21.1**	**-0.2**
	9.1nm,0.1s,SNR=72							
EPON				Sn		**Sn**	**20 03 20.6**	**-4.7**
	18nm,0.3s,SNR=5.0							
CDF	**Champ du Feu**	**5.71**	**60**	*e*Pg		**Pg**	**20 02 44.9**	**-2.8**
CDF				*e*Sg		**Sg**	**20 03 59.6**	**-2.1**
	67nm,0.5s							
CDF	**Champ du Feu**	**5.71**	**60**	*e*Pn		**Pn**	**20 02 21.5**	**-1.7**
CDF				*e*Pg		**Pg**	**20 02 44.9**	**-2.8**
CDF				*e*Sg		**Sg**	**20 03 59.6**	**-2.1**
CDF	**Champ du Feu**	**5.71**	**60**	*e*Pg		**Pg**	**20 02 44.9**	**-2.8**
CDF				*e*Sg		**Sg**	**20 03 59.6**	**-2.1**
	34nm,0.5s							
ORX	**Oropa**	**5.72**	**89**	P		**Pn**	**20 02 26.8**	**+3.5**
WLF	**Walferdange**	**5.75**	**46**	PN		**Pn**	**20 02 23.9**	**+0.2**
WLF				APN			20 02 27.1	
WLF				E			20 02 46.3	
WLF				SB		**Sb**	**20 03 50.3**	**+2.7**
WLF	**Walferdange**	**5.75**	**46**	*e*P		**Pn**	**20 02 23.5**	**-0.1**
	27nm,0.6s							
SBF	**Sospel**	**5.76**	**107**	*e*Pn		**Pn**	**20 02 24.2**	**+0.4**
SBF				*e*Sg		**Sg**	**20 04 00.2**	**-3.0**
	82nm,0.7s							
WLS	**Welschbruch**	**5.76**	**61**	Pn		**Pn**	**20 02 22.0**	**-1.8**
BCLA	**Clavier**	**5.88**	**37**	P		**Pn**	**20 02 25.9**	**+0.4**
MONE	**Monesi**	**5.89**	**104**	P		**Pn**	**20 02 29.1**	**+3.4**
ROB	**Roburent**	**5.90**	**102**	P		**Pn**	**20 02 31.3**	**+5.5**
GUD	**Guadarrama**	**5.93**	**211**	Pn		**Pn**	**20 02 27.0**	**+0.7**
	0.8nm,0.2s,SNR=8.3							
GUD				Sn		**Sn**	**20 03 31.1**	**-3.2**
	3.9nm,0.3s,SNR=4.8							
NEGI	**Negi**	**5.94**	**107**	P		**Pn**	**20 02 29.1**	**+2.7**
ECAL	**Calabor**	**6.12**	**233**	Pn		**Pn**	**20 02 28.6**	**-0.3**
	3.2nm,0.1s,SNR=18							
ECAL				Sn		**Sn**	**20 03 34.6**	**-4.4**
	7.3nm,0.2s,SNR=5.0							
ECAL	**Calabor**	**6.12**	**233**	Pn		**Pn**	**20 02 28.6**	**-0.3**
	3.2nm,0.1s,SNR=18							
ECAL				Sn		**Sn**	**20 03 34.6**	**-4.4**
	7.3nm,0.2s,SNR=5.0							
FIN	**Finale Ligure**	**6.16**	**102**	P		**Pn**	**20 02 33.6**	**+4.2**
ECHE	**Chera**	**6.25**	**186**	Pn		**Pn**	**20 02 30.7**	**0.0**
	0.4nm,0.2s,SNR=4.0							
ECHE				Sn		**Sn**	**20 03 37.5**	**-4.7**
	3.3nm,0.4s,SNR=4.0							
MEM	**Membach**	**6.33**	**39**	PN		**Pn**	**20 02 31.8**	**+0.1**
BEBN	**Eben Emael**	**6.33**	**36**	PN		**Pn**	**20 02 31.9**	**+0.2**
BEBN	**Eben Emael**	**6.33**	**36**	Pn		**Pn**	**20 02 31.8**	**+0.1**
ETOS	**Mallorca**	**6.44**	**159**	Pn		**Pn**	**20 02 33.7**	**+0.5**
	2.9nm,0.3s,SNR=9.0							
ETOS				Sn		**Sn**	**20 03 42.9**	**-3.8**
	2.1nm,0.4s,SNR=5.0							
ETOS	**Mallorca**	**6.44**	**159**	Pn		**Pn**	**20 02 33.7**	**+0.5**
	2.9nm,0.3s,SNR=9.0							
ETOS				Sn		**Sn**	**20 03 43.0**	**-3.7**
ESDC	**Sonseca Array**	**6.75**	**206**	Pn		**Pn**	**20 02 37.4**	**0.0**
	1.1nm,0.3s,baz=24,slow=13,SNR=10							
ESDC				Sn		**Sn**	**20 03 50.0**	**-4.3**
	4.1nm,0.3s,baz=22,slow=24,SNR=14							
ESDC	**Sonseca Array**	**6.75**	**206**	Pn		**Pn**	**20 02 37.3**	**-0.1**
	17nm,0.2s,baz=25,slow=13,SNR=31							
ESDC				Sn		**Sn**	**20 03 49.1**	**-5.2**
	5.8nm,0.1s,baz=29,slow=24,SNR=11							
ESDC	**Sonseca Array**	**6.75**	**206**	Pn		**Pn**	**20 02 37.3**	**-0.1**
	17nm,0.2s,SNR=31							
ESDC				Sn		**Sn**	**20 03 49.1**	**-5.2**
	5.8nm,0.1s,SNR=11							
EIBI	**Ibiza**	**6.88**	**170**	Pn		**Pn**	**20 02 39.4**	**+0.1**
	14nm,0.4s,SNR=11							
EIBI				Sn		**Sn**	**20 03 50.7**	**-6.9**
	2.4nm,0.3s,SNR=5.0							
EIBI	**Ibiza**	**6.88**	**170**	Pn		**Pn**	**20 02 39.4**	**+0.1**
	14nm,0.4s,SNR=11							
EMAZ	**Mazaricos**	**6.93**	**249**	Pn		**Pn**	**20 02 39.6**	**-0.3**
	11nm,0.1s,SNR=32							
EMAZ				Sn		**Sn**	**20 03 52.3**	**-6.5**
	12nm,0.2s,SNR=5.5							
EMAZ	**Mazaricos**	**6.93**	**249**	Pn		**Pn**	**20 02 39.6**	**-0.3**
	11nm,0.1s,SNR=32							
ELOB	**Lobios**	**6.94**	**238**	Pn		**Pn**	**20 02 39.4**	**-0.6**
	1.7nm,0.1s,SNR=16							
ELOB				Sn		**Sn**	**20 03 54.1**	**-4.8**
	4.3nm,0.3s,SNR=5.9							
ELOB	**Lobios**	**6.94**	**238**	Pn		**Pn**	**20 02 39.5**	**-0.5**
ELOB				Sn		**Sn**	**20 03 54.1**	**-4.9**
	4.3nm,0.3s,SNR=5.9							
DAVA	**Damuels**	**7.09**	**74**	⇑*i*Sn		**Sn**	**20 04 14.9**	**+12**
DAVA	**Damuels**	**7.09**	**74**	⇓*i*Pn		**Pn**	**20 02 43.5**	**+1.4**
DAVA				⇓*i*Sg		**Sg**	**20 04 50.5**	**+4.6**
DAVA	**Damuels**	**7.09**	**74**	⇓*i*Pn		**Pn**	**20 02 43.5**	**+1.4**
DAVA				*i* Sn		**Sn**	**20 04 14.9**	**+12**
EBEN	**Beniarda**	**7.11**	**180**	Pn		**Pn**	**20 02 41.7**	**-0.7**
	0.5nm,0.2s,SNR=7.9							
EBEN				Sn		**Sn**	**20 03 59.7**	**-3.6**
	2.4nm,0.3s,SNR=7.9							
EBEN	**Beniarda**	**7.11**	**180**	Pn		**Pn**	**20 02 41.8**	**-0.7**
EBEN				Sn		**Sn**	**20 03 59.7**	**-3.6**
	2.4nm,0.3s,SNR=7.9							
ETOB	**Tobarra**	**7.24**	**189**	Pn		**Pn**	**20 02 45.3**	**+1.1**
	0.6nm,0.2s,SNR=7.9							
ETOB				Sn		**Sn**	**20 03 52.8**	**-14**
	3.4nm,0.5s,SNR=7.9							
ETOB	**Tobarra**	**7.24**	**189**	Pn		**Pn**	**20 02 45.3**	**+1.0**
	0.6nm,0.2s,SNR=7.9							
EVIA	**Vianos**	**7.38**	**194**	Pn		**Pn**	**20 02 41.3**	**-4.9**
	2.4nm,0.4s,SNR=7.9							
EVIA				Sn		**Sn**	**20 04 06.0**	**-3.9**
	2.2nm,0.3s,SNR=7.9							
MOTA	**Moosalm**	**7.92**	**75**	⇑*i*Sn		**Sn**	**20 04 35.6**	**+12**
MOTA	**Moosalm**	**7.92**	**75**	⇓*i*Pn		**Pn**	**20 02 55.2**	**+1.6**
MOTA				⇑*i*Sg		Sn	20 05 15.3	+52
MOTA	**Moosalm**	**7.92**	**75**	⇓*i*Pn		**Pn**	**20 02 55.2**	**+1.6**
MOTA				*i* Sn		**Sn**	**20 04 35.6**	**+12**
MOTA	**Moosalm**	**7.92**	**75**	*i* Sn		**Sn**	**20 04 35.6**	**+12**
MOTA				Sg		Sn	20 05 15.3	+52
SQTA	**Sankt Quirin**	**7.98**	**76**	⇓*i*Sn		**Sn**	**20 04 36.8**	**+12**
SQTA	**Sankt Quirin**	**7.98**	**76**	⇓*i*Pn		**Pn**	**20 02 56.2**	**+1.8**
SQTA				⇓*i*Sg		Sn	20 05 16.4	+52
SQTA	**Sankt Quirin**	**7.98**	**76**	⇓*i*Pn		**Pn**	**20 02 56.2**	**+1.9**
SQTA				*i* Sn		**Sn**	**20 04 36.8**	**+12**
SQTA	**Sankt Quirin**	**7.98**	**76**	*i* Sn		**Sn**	**20 04 36.8**	**+12**
SQTA				Sg		Sn	20 05 16.4	+52
WATA	**Walderalm**	**8.24**	**75**	⇓*i*Pn		**Pn**	**20 02 59.5**	**+1.5**
WATA				⇓*i*Sn		**Sn**	**20 04 42.1**	**+11**
WTTA	**Wattenberg**	**8.27**	**76**	⇑*i*Sn		**Sn**	**20 04 45.0**	**+13**
WTTA	**Wattenberg**	**8.27**	**76**	⇑*i*Pn		**Pn**	**20 03 00.4**	**+2.0**
WTTA				⇑*i*Sg		Sn	20 05 27.8	+56
WTTA	**Wattenberg**	**8.27**	**76**	⇑*i*Pn		**Pn**	**20 03 00.4**	**+2.0**
WTTA				*i* Sn		**Sn**	**20 04 45.0**	**+13**
WTTA	**Wattenberg**	**8.27**	**76**	*i* Sn		**Sn**	**20 04 45.0**	**+13**
WTTA				Sg		Sn	20 05 27.8	+56
EQES	**Quesada**	**8.30**	**196**	Pn		**Pn**	**20 02 58.8**	**0.0**
	1.2nm,0.3s,SNR=7.9							
EQES				Sn		**Sn**	**20 04 27.9**	**-4.6**
	1.2nm,0.4s,SNR=7.9							
EQES	**Quesada**	**8.30**	**196**	Pn		**Pn**	**20 02 58.8**	**+0.1**
	1.2nm,0.3s,SNR=7.9							
EQES				Sn		**Sn**	**20 04 27.9**	**-4.6**
	1.2nm,0.4s,SNR=7.9							
EADA	**Adamuz**	**8.32**	**205**	Pn		**Pn**	**20 02 59.5**	**+0.5**
	1.0nm,0.2s,SNR=7.6							
EADA				Sn		**Sn**	**20 04 25.6**	**-7.4**
	2.6nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**8.32**	**205**	Pn		**Pn**	**20 02 59.5**	**+0.5**
	1.0nm,0.2s,SNR=7.6							
DLF	**Lyons Farm**	**8.54**	**333**	*e*P		**Pn**	**20 02 57.3**	**-4.8**
EBAD	**Badajoz**	**8.69**	**218**	Pn		**Pn**	**20 03 04.2**	**+0.1**
	0.5nm,0.1s,SNR=6.0							
EBAD				Sn		**Sn**	**20 04 34.8**	**-7.3**
	5.8nm,0.2s,SNR=4.6							
EBAD	**Badajoz**	**8.69**	**218**	Pn		**Pn**	**20 03 04.2**	**+0.1**
EQUE	**Quentar**	**8.95**	**197**	Pn		**Pn**	**20 03 09.4**	**+1.7**
	1.2nm,0.3s,SNR=5.2							
EQUE				Sn		**Sn**	**20 04 44.6**	**-3.9**
	0.8nm,0.4s,SNR=7.9							
EBER	**Berja**	**9.14**	**194**	Pn		**Pn**	**20 03 12.8**	**+2.5**
	0.8nm,0.2s,SNR=5.1							
EBER				Sn		**Sn**	**20 04 49.2**	**-4.1**
	2.4nm,0.6s,SNR=7.9							
EBER	**Berja**	**9.14**	**194**	Pn		**Pn**	**20 03 12.8**	**+2.5**
EBER				Sn		**Sn**	**20 04 49.2**	**-4.1**
EMIN	**Mina Concepcio**	**9.39**	**213**	Pn		**Pn**	**20 03 13.5**	**-0.3**
	0.4nm,0.1s,SNR=7.9							
EMIN				Sn		**Sn**	**20 04 51.1**	**-8.3**
	0.5nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**9.39**	**213**	Pn		**Pn**	**20 03 13.5**	**-0.2**
EKA	**Eskdalemuir Ar**	**9.71**	**350**	Pn		**Pn**	**20 03 16.9**	**-1.2**
	0.5nm,0.3s,baz=161,slow=15,SNR=14							
EKA				Sn		**Sn**	**20 04 60.0**	**-7.2**
	0.6nm,0.3s,baz=165,slow=25,SNR=5.3							
EKA	**Eskdalemuir Ar**	**9.71**	**350**	Sn		**Sn**	**20 05 00.0**	**-7.2**
EMIJ	**Mijas**	**9.87**	**202**	Pn		**Pn**	**20 03 20.2**	**-0.2**
	1.0nm,0.3s,SNR=4.0							
EMIJ				Sn		**Sn**	**20 05 04.0**	**-7.2**
	1.8nm,0.5s,SNR=4.0							
KHC	**Kasperske Hory**	**9.88**	**65**	*e*P		**Pn**	**20 03 20.7**	**+0.2**
KHC	**Kasperske Hory**	**9.88**	**65**	*e*Pn		**Pn**	**20 03 20.7**	**+0.2**
	4.2nm,0.6s							
GERES	**GERESS Array B**	**9.90**	**67**	Pn		**Pn**	**20 03 21.2**	**+0.5**
	0.4nm,0.3s,baz=255,slow=14,SNR=12							
GERES				Lg			20 06 16.7	
	0.4nm,0.3s,baz=262,slow=27,SNR=4.7							
ESPR	**Espera**	**9.91**	**207**	Sn		**Sn**	**20 05 07.1**	**-4.9**
	3.3nm,0.5s,SNR=4.0							
HFS	**Hagfors**	**16.54**	**25**	Pn		**Pn**	**20 04 51.9**	**+1.5**
	0.1nm,0.3s,baz=209,slow=13,SNR=3.6							
FINES	**FINESS Array B**	**21.84**	**35**	P		**P**	**20 05 54.4**	**+3.4**
	1.2nm,0.8s,mb3.4,baz=235,slow=6.7,SNR=4.0							
BRTR	**Keskin Array B**	**25.43**	**92**	P		**P**	**20 06 32.9**	**+6.7**
	1.1nm,0.8s,mb3.5,baz=290,slow=8.3,SNR=6.7							
ARCES	**ARCESS Array B**	**27.03**	**20**	P		**P**	**20 06 47.6**	**+7.0**
	0.7nm,0.7s,mb3.3,baz=221,slow=10,SNR=4.3							

BJI 24 20:02:23.7,3636N×11324E,h15km,ML3.6, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIA	**Tai'an**	**3.14**	**92**	PG	Pg	20 03 20.3	-3.6
TIA				SG	Sg	20 03 58.0	-6.6
TIA				Smax			
	comp=E,78nm,0.9s						
XAN	**Xi'an**	**4.23**	**238**	P	Pn	20 03 31.3	+3.8
XAN				PG	Pg	20 03 40.8	-3.9
XAN				S	Sn	20 04 25.8	+9.2
XAN				SG	Sg	20 04 38.3	-1.1
XAN				Smax			
	comp=N,35nm,0.8s						
XAN				Smax			
	comp=E,25nm,0.9s						
BJI	**Beijing**	**4.34**	**31**	PG	Pg	20 03 40.3	-6.5
BJI				SG	Sg	20 04 32.5	-11
BJI				Smax			
	comp=N,63nm,0.6s						
BJI				Smax			
	comp=E,103nm,1.1s						
HHC	**Hu-ho-hao-te**	**4.67**	**344**	*e*PG	Pg	20 03 47.6	-5.6
HHC				SG	Sg	20 04 48.8	-4.8
HHC				Smax			
	comp=N,96nm,0.7s						
HHC				Smax			
	comp=E,75nm,0.9s						
WHN	**Wuhan**	**5.88**	**171**	*e*P	Pn	20 03 53.3	+3.1
WHN				*e*S	Sn	20 05 05.0	+7.8
WHN				Smax			
	comp=N,118nm,1.0s						
WHN				Smax			
	comp=E,130nm,1.0s						
NJ2	**Nanjing**	**6.33**	**131**	*e*P	Pn	20 03 55.3	-1.2

*STR **24** 20:20:32.6±0.3, 4583N×0.12W, h5km±1km, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **24** 20:20:32.6, 4583N×0.12W, h5km, ML2.6(LDG), ML2.8(STR), After STR.*
NEIC Felt in the Cognac area.
*LDG **24** 20:20:32.4±0.1, 4583N×0.19W, h2km, Md2.6/3, Ml2.6/21, Error ellipse: s-maj=1.1km s-min=0.8km az=68.0*
*MDD **24** 20:20:49.2±3.5, 4485N×0.27E, h0km, mb2.5/3, Error ellipse: s-maj=31.7km s-min=26.6km az=3.0, PRXIMO SIN SOLUCIN*

CSEM 24 20:20:32.6±0.1, 4583N×018W, h5km, ML2.7/18, Error ellipse: s-maj=1.1km s-min=0.9km az=64.0, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATF	**Mathat**	**0.07**	**273**	Pg	Pg	20 20 35.7	+1.4
MATF				Sg	Sg	20 20 37.7	+2.3
OLEF	**Ile d'Oleron**	**0.82**	**279**	Pg	Pg	20 20 48.3	-0.1
OLEF				Sg	Sg	20 21 00.4	+1.3
LFF	**La Frestale**	**1.10**	**143**	*e*Pg	Pg	20 20 52.9	-0.8
LFF				*e*Sg	Sg	20 21 07.5	-0.5
	23nm,0.2s						
LFF	**La Frestale**	**1.10**	**143**	*e*Pg	Pg	20 20 52.9	-0.8
LFF				*e*Sg	Sg	20 21 07.5	-0.5
	11nm,0.2s						
RJF	**Les Rejaudoux**	**1.30**	**113**	*e*Pg	Pg	20 20 56.9	-0.7
RJF				*e*Sg	Sg	20 21 13.4	-1.1
	32nm,0.2s						
RJF	**Les Rejaudoux**	**1.30**	**113**	*e*Pn	Pn	20 20 56.0	-1.4
RJF				*e*Pg	Pg	20 20 56.9	-0.7
RJF				*e*Sg	Sg	20 21 13.4	-1.1
RJF	**Les Rejaudoux**	**1.30**	**113**	*e*Pg	Pg	20 20 56.9	-0.7
RJF				*e*Sg	Sg	20 21 13.4	-1.1
	16nm,0.2s						
TCF	**Toulx Ste Croi**	**1.73**	**74**	*e*Pg	Pg	20 21 04.2	-1.5
TCF				*e*Sg	Sg	20 21 26.5	-1.7
	8.5nm,0.2s						
TCF	**Toulx Ste Croi**	**1.73**	**74**	*e*Pn	Pn	20 21 02.3	-1.0
TCF				*e*Pg	Pg	20 21 04.2	-1.5
TCF				*e*Sg	Sg	20 21 26.5	-1.7
TCF	**Toulx Ste Croi**	**1.73**	**74**	*e*Pg	Pg	20 21 04.2	-1.5
TCF				*e*Sg	Sg	20 21 26.5	-1.7
	4.2nm,0.2s						
CAF	**Calviac**	**1.82**	**119**	*e*Pg	Pg	20 21 06.3	-1.2
CAF				*e*Sg	Sg	20 21 30.4	-0.8
	8.4nm,0.2s						
CAF	**Calviac**	**1.82**	**119**	*e*Pn	Pn	20 21 03.3	-1.3
CAF				*e*Pg	Pg	20 21 06.3	-1.2
CAF				*e*Sg	Sg	20 21 30.4	-0.8
CAF	**Calviac**	**1.82**	**119**	*e*Pg	Pg	20 21 06.3	-1.2
CAF				*e*Sg	Sg	20 21 30.4	-0.8
	4.2nm,0.2s						
BGF	**Bois d'Agland**	**2.23**	**70**	*e*Pg	Pg	20 21 14.3	-1.0
BGF				*e*Sg	Sg	20 21 42.4	-1.8
	34nm,0.3s						
BGF	**Bois d'Agland**	**2.23**	**70**	*e*Pn	Pn	20 21 08.7	-1.5
BGF				*e*Pg	Pg	20 21 14.3	-1.0
BGF				*e*Sg	Sg	20 21 42.4	-1.8
BGF	**Bois d'Agland**	**2.23**	**70**	*e*Pg	Pg	20 21 14.3	-1.0
BGF				*e*Sg	Sg	20 21 42.4	-1.8
	17nm,0.3s						
PYM	**Petit Puy Mans**	**2.23**	**91**	Pg	Pg	20 21 14.5	-0.9
PYM	**Petit Puy Mans**	**2.23**	**91**	Pn	Pn	20 21 09.8	-0.4
PYM				Pg	Pg	20 21 14.5	-0.9
PYM	**Petit Puy Mans**	**2.23**	**91**	Pg	Pg	20 21 14.5	-0.9
AGO	**Saint Agoulin**	**2.32**	**83**	Pn	Pn	20 21 10.5	-1.0
HYF	**Humbligny**	**2.42**	**52**	*e*Pg	Pg	20 21 18.0	-1.0
HYF				*e*Sg	Sg	20 21 48.9	-1.6
HYF	**Humbligny**	**2.42**	**52**	*e*Pn	Pn	20 21 11.7	-1.1
HYF				*e*Pg	Pg	20 21 18.0	-1.0
HYF				*e*Sg	Sg	20 21 48.9	-1.6
HYF	**Humbligny**	**2.42**	**52**	*e*Pg	Pg	20 21 18.0	-1.0
HYF				*e*Sg	Sg	20 21 48.9	-1.6
LBL	**Lubilhac**	**2.48**	**103**	Pn	Pn	20 21 12.7	-1.0
LBL				Sg	Sg	20 21 51.3	-1.1
GRR	**Gorron**	**2.60**	**350**	*e*Pg	Pg	20 21 20.7	-1.8
GRR				*e*Sg	Sg	20 21 53.9	-2.3
	5.3nm,0.2s						
GRR	**Gorron**	**2.60**	**350**	*e*Pn	Pn	20 21 13.7	-1.6
GRR				*e*Pg	Pg	20 21 20.7	-1.8
GRR				*e*Sg	Sg	20 21 53.9	-2.3
GRR	**Gorron**	**2.60**	**350**	*e*Pg	Pg	20 21 20.7	-1.8
GRR				*e*Sg	Sg	20 21 53.9	-2.3
	2.7nm,0.2s						
AVF	**Avril sur Loir**	**2.63**	**67**	*e*Pn	Pn	20 21 14.1	-1.6
AVF				*e*Sn	Sn	20 21 44.0	-4.1
AVF				*e*Sg	Sg	20 21 54.8	-2.4
	1.8nm,0.2s						
AVF	**Avril sur Loir**	**2.63**	**67**	*e*Pn	Pn	20 21 14.1	-1.6
AVF				*e*Sn	Sn	20 21 44.0	-4.1
AVF				*e*Sg	Sg	20 21 54.8	-2.4
	0.9nm,0.2s						
PLDF	**La Plantade**	**2.66**	**86**	Pn	Pn	20 21 14.1	-2.0
PLDF				Sg	Sg	20 21 57.6	-0.5
LDF	**La Druitiere**	**2.77**	**1**	*e*Pg	Pg	20 21 23.4	-2.2
LDF				*e*Sg	Sg	20 21 59.7	-1.8
	3.9nm,0.2s						
LDF	**La Druitiere**	**2.77**	**1**	*e*Pn	Pn	20 21 15.7	-1.9
LDF				*e*Pg	Pg	20 21 23.4	-2.2
LDF				*e*Sg	Sg	20 21 59.7	-1.8
LDF	**La Druitiere**	**2.77**	**1**	*e*Pg	Pg	20 21 23.4	-2.2
LDF				*e*Sg	Sg	20 21 59.7	-1.8
	2.0nm,0.2s						
EALK	**Alkurruntz**	**2.77**	**200**	Pn	Pn	20 21 24.7	+7.0
	0.7nm,0.2s,SNR=7.9						
EALK				Sn	Sn	20 21 49.0	-2.5
	0.4nm,0.1s,SNR=7.9						
EALK	**Alkurruntz**	**2.77**	**200**	Pn	Pn	20 21 25.3	+7.7
EALK				Lg		20 21 59.9	
SJPF	**Ste Jean**	**2.81**	**196**	*e*Pg	Pg	20 21 24.7	-1.8
SJPF				*e*Sg	Sg	20 21 59.9	-3.1
	2.1nm,0.2s						
SJPF	**Ste Jean**	**2.81**	**196**	*e*Pg	Pg	20 21 24.7	-1.8
SJPF				*e*Sg	Sg	20 21 59.9	-3.1
	1.0nm,0.2s						
EPF	**Esparros**	**2.82**	**172**	*e*Pg	Pg	20 21 25.1	-1.6
EPF				*e*Sn	Sn	20 21 49.6	-3.1
EPF				*e*Sg	Sg	20 22 02.3	-0.9
	4.2nm,0.2s						
EPF	**Esparros**	**2.82**	**172**	*e*Pn	Pn	20 21 16.6	-1.7
EPF				*e*Pg	Pg	20 21 25.1	-1.6
EPF				*e*Sn	Sn	20 21 49.6	-3.1
EPF				*e*Sg	Sg	20 22 02.3	-0.9
EPF	**Esparros**	**2.82**	**172**	*e*Pg	Pg	20 21 25.1	-1.6
EPF				*e*Sn	Sn	20 21 49.6	-3.1
EPF				*e*Sg	Sg	20 22 02.3	-0.9
	2.1nm,0.2s						
ELIZ	**Elizondo**	**2.83**	**200**	Pn	Pn	20 21 24.3	+5.8
	0.1nm,0.2s,SNR=7.9						
ELIZ				Sn	Sn	20 21 51.6	-1.3
	0.2nm,0.2s,SNR=7.9						
ELIZ	**El

ROSF				*e*Pg		Pg	20 21 33.3	-2.2
ROSF				*e*Sg		Sg	20 22 13.7	-4.3
ROSF	**Rostrenen**	**3.28**	**321**	*e*Pg		Pg	20 21 33.3	-2.2
ROSF				*e*Sg		Sg	20 22 13.7	-4.3
	2.3nm,0.3s							
VIVF	**Saint-Julien-l**	**3.56**	**104**	*e*Pg		Pg	20 21 38.3	-2.5
VIVF				*e*Sg		Sg	20 22 23.6	-3.3
	2.5nm,0.3s							
VIVF	**Saint-Julien-l**	**3.56**	**104**	*e*Pg		Pg	20 21 38.3	-2.5
VIVF				*e*Sg		Sg	20 22 23.6	-3.3
	1.2nm,0.3s							
MEZF	**Maizieres J'vi**	**4.46**	**51**	*e*Pg		Pg	20 21 54.7	-3.4

NIED ***24*** *20:22:00,34.00N*$_{K}$ *13680E,h38*^{km}*,Mw3.6 Best double couple: M*$_{0}$*2.73000*$\times$*10*^{14} *NP1:*ϕ_{s}*11.00000°,*δ*81.00000°,* λ*22.00000°. NP2:*ϕ_{s}*277.00000°,*δ*68.00000°,*λ*171.00000°.*

JMA 24 20:22:50.1,3396N$\times$**13681E,h39**$^{km}\pm1^{km}$**,M3.7,2C-6D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.44**	**349**	⇓P	Pn	20 23 00.0	0.0
JIE				S	Sn	20 23 06.6	-0.3
JKN2	**Miekihoku**	**0.53**	**302**	⇓P	Pn	20 23 01.1	0.0
JKN2				S	Sn	20 23 08.4	-0.5
TK01	**Tokai 1**	**0.68**	**106**	*e*S	Sn	20 23 12.3	-0.3
JAA	**Atsumi**	**0.72**	**22**	⇓P	Pn	20 23 04.0	+0.2
JAA				S	Sn	20 23 13.8	+0.1
TK02	**Tokai 2**	**0.79**	**91**	⇑P	Pn	20 23 04.2	-0.5
TK02				S	Sn	20 23 15.2	-0.1
TSUJ	**Tsu 2**	**0.81**	**337**	⇓P	Pn	20 23 05.3	+0.2
TSUJ				S	Sn	20 23 16.0	+0.1
TK04	**Tokai 4**	**0.98**	**64**	P	Pn	20 23 07.4	+0.1
TK04				S	Sn	20 23 20.8	+0.8
JWY	**Kouya**	**1.04**	**285**	⇓P	Pn	20 23 08.7	+0.5
JWY				S	Sn	20 23 21.4	-0.1
JHE	**Heguri**	**1.16**	**307**	⇓P	Pn	20 23 10.2	+0.4
JHE				S	Sn	20 23 24.7	+0.3
JWM	**Minabe**	**1.22**	**265**	⇑P	Pn	20 23 11.1	+0.5
JWM				S	Sn	20 23 26.0	+0.2
MAT	**Matsushiro**	**2.82**	**24**	P	Pn	20 23 34.3	+1.7
MAT				S	Sn	20 24 07.7	+2.4

ATH ***24*** *20:35:30.6,3841N*$_{K}$*2178E,h25*$^{km}\pm2^{km}$*,MD3.2/4*
NEIC ***24*** *20:35:30.6,3841N*$_{K}$*2178E,h25*^{km}*,MD3.2(ATH),After ATH.*
THE ***24*** *20:35:30.9,3835N*$_{K}$*2187E,h3*^{km}*,ML2.6*
CSEM ***24*** *20:35:30.7*$\pm$*0.1,3837N*$_{K}$*2182E,h2*^{km}*,MD3.2,Error ellipse: s-maj=2.9km s-min=2.5km az=126.0*
ISCJB ***24*** *20:35:31.8*$\pm$*0.6,3842N*$\pm$*004*$_{K}$*2174E*$\pm$*007,h27*$^{km}\pm7^{km}$*, Error ellipse: s-maj=9.9km s-min=5.3km az=60.0*

ISC 24 20:35:31.3$\pm$**0.6,3839N**$\pm$003$_{K}$**2186E**$\pm$005**,h13**$^{km}\pm6^{km}$**,n13,** σ**0§94/20,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.46**	**223**	*e*PB	**Pg**	**20 35 40.2**	**-0.1**
RLS				*e*SB	**Sg**	**20 35 47.2**	**+0.8**
EVR	**Evrytania**	**0.53**	**355**	*e*PN	**Pg**	**20 35 40.8**	**-0.9**
EVR				*e*SN	**Sg**	**20 35 49.0**	**+0.3**
AGG	**Agios Georgios**	**0.73**	**30**	*e*Pg	**Pg**	**20 35 44.6**	**-0.9**
AGG				*e*Sg	**Sg**	**20 35 56.7**	**+1.6**
LKR	**Lokris**	**0.93**	**73**	*e*PN	**Pn**	**20 35 49.3**	**-0.7**
LKR				*e*SN	**Sn**	**20 36 03.1**	**-0.1**
LKD	**Levkas**	**1.00**	**289**	*e*Pg	**Pg**	**20 35 49.3**	**-1.3**
LKD				*e*Sg	**Sg**	**20 36 05.3**	**+1.5**
VLS	**Valsamata**	**1.02**	**258**	*e*PN	**Pn**	**20 35 49.3**	**-2.0**
ITM	**Ithomi**	**1.21**	**178**	*e*PN	**Pn**	**20 35 54.1**	**+0.2**
NEO	**Neokhori**	**1.40**	**49**	*e*PN	**Pn**	**20 35 57.3**	**+0.8**
XOR	**Xorichti**	**1.42**	**46**	*e*Pg	**Pg**	**20 35 57.5**	**-1.1**
XOR				*e*Sg	**Sg**	**20 36 17.1**	**0.0**
MEV	**Metsovon**	**1.48**	**341**	*e*Sg	**Sg**	**20 36 18.8**	**-0.1**
LIT	**Litokhoron**	**1.78**	**16**	*e*Pb	**Pb**	**20 36 02.9**	**-0.8**
LIT				*e*Sb	**Sb**	**20 36 26.7**	**+0.9**
VLI	**Veliai**	**1.87**	**153**	*e*PN	**Pn**	**20 36 04.2**	**+1.2**
HORT	**Hortiatis**	**2.40**	**23**	*e*Pn	**Pn**	**20 36 10.9**	**+0.6**

IDC 24 20:53:42.7$\pm$**7.0,684S**$\times$**14600E,h112**$^{km}\pm46^{km}$**,mb3.1/3, mb1 3.1/5,mb1mx3.0/13,mbtmp3.3/5,Error ellipse: s-maj=87.8km s-min=44.8km az=41.0,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.80**	**156**	P	Pn	20 54 26.1	+0.1
	4.0nm,0.3s,baz=358,slow=5.7,SNR=9.4						
PMG				S	Sn	20 55 00.1	+0.6
	24nm,0.3s,baz=102,slow=22,SNR=36						
WRA	**Warramunga Arr**	**17.25**	**220**	P	Pn	20 57 37.2	+0.6
	0.1nm,0.3s,baz=46,slow=12,SNR=5.8						
ASAR	**Alice Springs**	**20.37**	**213**	P	P	20 58 11.3	+0.9
	0.3nm,0.5s,baz=55,slow=8.6,SNR=7.5						
FITZ	**Fitzroy Crossi**	**22.78**	**239**	P	P	20 58 35.4	-0.5
	1.7nm,0.6s,baz=77,slow=10,SNR=13						
STKA	**Stephens Creek**	**25.24**	**189**	P	P	20 58 58.5	+0.2
	0.7nm,0.4s,baz=21,slow=12,SNR=4.8						

CSEM ***24*** *21:00:01.4*$\pm$*0.9,4325N*$_{K}$*2926E,h20*^{km}*,MD3.5/2,Error ellipse: s-maj=23.7km s-min=5.8km az=117.0*
SOF ***24*** *21:00:02.2,4378N*$_{K}$*2857E,h8*^{km}*,MD2.8*
ISCJB ***24*** *21:00:05.3*$\pm$*0.4,4337N*$\pm$*003*$_{K}$*2878E*$\pm$*005,h10*^{km}*,Error ellipse: s-maj=5.7km s-min=3.5km az=135.3*
BUC ***24*** *21:00:06.0*$\pm$*3.9,4360N*$_{K}$*2899E,h5*^{km}*,MD3.5/3,Error ellipse: s-maj=33.2km s-min=27.1km az=113.0*
NEIC ***24*** *21:00:07.0,4339N*$_{K}$*2877E,h33*^{km}*,MD2.8(SOF), MD3.8(ISK),After ISK.*

ISC 24 21:00:06.2$\pm$**0.4,4337N**$\pm$003$_{K}$**2872E**$\pm$005**,h10**^{km}**,n30,** σ**1§09/39,4C-7D,Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRD	**Provadia**	**0.98**	**261**	P	**Pg**	**21 00 24.0**	**-1.1**
TIRR	**Tirgusor**	**1.12**	**348**	⇑*i*P	**Pb**	**21 00 25.6**	**-2.0**
TIRR				*i* S	**Sg**	**21 00 42.6**	**+0.5**
TIRR	**Tirgusor**	**1.12**	**348**	*e*P	**Pb**	**21 00 25.4**	**-2.2**
TIRR				*e*S	**Sg**	**21 00 38.4**	**-3.8**
AMRR		**1.60**	**322**	⇓*i*P	**Pn**	**21 00 34.1**	**-0.4**
AMRR				*i* S	**Sn**	**21 00 54.6**	**-0.6**
JMB	**Yambol**	**1.81**	**241**	P	**Pn**	**21 00 37.6**	**+0.2**
CFR	**Carcaliu**	**1.86**	**347**	⇓*i*P	**Pn**	**21 00 36.4**	**-1.7**
CFR				*i* S	**Sn**	**21 01 00.7**	**-1.0**
SZH	**Strazhica**	**2.04**	**268**	P	**Pn**	**21 00 39.2**	**-1.4**
SZH				Pg	**Pg**	**21 00 40.9**	**-4.4**
EDRB	**Edirne**	**2.11**	**225**	PN	**Pn**	**21 00 41.9**	**+0.4**
EDRB				SN	**Sn**	**21 01 06.7**	**-1.0**
KLYT	**Kilyos**	**2.12**	**174**	PN	**Pn**	**21 00 41.8**	**+0.1**
KLYT				SN	**Sn**	**21 01 06.9**	**-1.3**
SULR		**2.21**	**307**	⇑*i*P	**Pn**	**21 00 44.4**	**+1.5**
SULR				*i* S	**Sn**	**21 01 13.3**	**+3.0**
ISK	**Istanbul-Kandi**	**2.31**	**174**	PN	**Pn**	**21 00 44.1**	**-0.2**
PVL	**Pavlikeni**	**2.48**	**268**	P	**Pn**	**21 00 48.8**	**+2.2**
PVL				Pg	**Pg**	**21 00 52.4**	**-1.3**
HRT	**Hereke**	**2.64**	**164**	PN	**Pn**	**21 00 49.0**	**+0.2**
DIM	**Dimitrovgrad**	**2.69**	**242**	P	**Pn**	**21 00 49.0**	**-0.6**
YLV	**Yalova**	**2.84**	**170**	PN	**Pn**	**21 00 51.7**	**+0.2**
KDZE	**Karadeniz Ereo**	**2.88**	**135**	PN	**Pn**	**21 00 52.2**	**+0.1**
VRI	**Vrincioaia**	**2.88**	**331**	⇑*i*P	**Pn**	**21 00 52.1**	**0.0**
PLOR	**Plostina**	**2.89**	**330**	⇓*i*P	**Pn**	**21 00 51.7**	**-0.6**
MLR	**Muntele Rosu**	**2.91**	**318**	⇓*i*P	**Pn**	**21 00 53.8**	**+1.2**
KDZ	**Kurdzhali**	**2.99**	**236**	P	**Pn**	**21 00 54.3**	**+0.7**
ADVT	**Abdulvahap**	**3.03**	**165**	*e*PN	**Pn**	**21 00 54.4**	**+0.3**
VOIR		**3.35**	**309**	⇓*i*P	**Pn**	**21 01 01.0**	**+2.4**
RZN	**Rozhen**	**3.40**	**242**	P	**Pn**	**21 00 59.0**	**-0.3**
SAFT	**Safranbolu**	**3.63**	**125**	*e*PN	**Pn**	**21 01 02.5**	**+0.1**
VTS	**Vitosha**	**4.12**	**261**	⇑*i*P	**Pb**	**21 01 20.0**	**+1.2**
VTS	**Vitosha**	**4.12**	**261**	P	**Pn**	**21 01 13.9**	**+4.7**
BZK	**Bozkurt**	**4.14**	**108**	*e*P	**Pn**	**21 01 09.6**	**+0.2**
BURAR	**Bucovina Array**	**4.91**	**331**	⇓*i*P	**Pn**	**21 01 20.2**	**+0.1**
DIKM	**Dikmen**	**5.12**	**107**	*e*P	**Pn**	**21 01 23.9**	**+0.9**
BZS	**Buzias**	**5.56**	**296**	⇓*i*P	**Pn**	**21 01 32.1**	**+3.1**

IDC ***24*** *21:15:41.6*$\pm$*1.6,3616N*$_{K}$*2932E,h0*^{km}*,mb3.8/2,mb1 3.7/5, mb1mx3.5/22,mbtmp3.6/5,ML3.3/3,Error ellipse: s-maj=52.0km s-min=21.6km az=145.0*
ATH ***24*** *21:15:45.4,3650N*$_{K}$*2908E,h36*$^{km}\pm2^{km}$*,MD3.5/9*
CSEM ***24*** *21:15:45.9*$\pm$*0.1,3669N*$_{K}$*2904E,h20*^{km}*,MD3.6,Error ellipse: s-maj=1.4km s-min=0.8km az=3.0*
NEIC ***24*** *21:15:45.4,3650N*$_{K}$*2908E,h36*^{km}*,MD3.4(ISK), MD3.5(ATH),After ATH.*
ISK ***24*** *21:15:46.4,3668N*$_{K}$*2906E,h24*^{km}*,MD3.6,ML3.5*
ISCJB ***24*** *21:15:46.5*$\pm$*0.4,3655N*$\pm$*004*$_{K}$*2905E*$\pm$*003,h33*^{km}*,mb3.7/2, Error ellipse: s-maj=5.4km s-min=3.1km az=155.8*

ISC 24 21:15:46.0$\pm$**0.7,3653N**$\pm$004$_{K}$**2903E**$\pm$003**,h15**$^{km}\pm4^{km}$**,n53,** σ**0§87/59,mb3.7/2,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALT	**Dalyan (Mudla)**	**0.40**	**307**	*i* P	**Pg**	**21 15 54.6**	**+0.6**
KSL	**Kastellorizon**	**0.58**	**130**	*e*PN	**Pg**	**21 15 57.0**	**-0.5**
ELL	**Elmali**	**0.74**	**72**	PG	**Pg**	**21 16 00.1**	**-0.3**
ELL				SG	**Sg**	**21 16 10.5**	**+0.3**
ARG	**Arkhangelos**	**0.79**	**247**	*e*PN	**Pg**	**21 16 01.4**	**-1.2**
ARG				*e*SN	**Sn**	**21 16 14.0**	**-0.1**
YER	**Yerkesik**	**0.85**	**315**	PG	**Pg**	**21 16 02.4**	**-0.1**
YER				SG	**Sg**	**21 16 13.7**	**0.0**
DAT	**Datca**	**1.19**	**280**	PN	**Pn**	**21 16 08.1**	**+0.1**
ANTB	**Antalya**	**1.36**	**74**	PN	**Pn**	**21 16 09.8**	**-0.5**
BODT	**Bodrum**	**1.48**	**292**	PN	**Pn**	**21 16 11.5**	**-0.5**
NISR	**Nisiros**	**1.53**	**274**	*e*PN	**Pn**	**21 16 12.5**	**-0.3**
BCK	**Bucak**	**1.56**	**53**	PN	**Pn**	**21 16 12.5**	**-0.6**
ISP	**Isparta**	**1.77**	**42**	PN	**Pn**	**21 16 14.6**	**-1.3**
ISP	**Isparta**	**1.77**	**42**	*e*P	**Pn**	**21 16 16.2**	**+0.3**
ISP	**Isparta**	**1.77**	**42**	*e*P	**Pn**	**21 16 16.2**	**+0.3**
KARP	**Karpathos**	**1.80**	**238**	*e*PN	**Pn**	**21 16 16.3**	**-0.2**
SMG	**Samos**	**2.11**	**305**	*e*PN	**Pn**	**21 16 20.9**	**+0.2**
SMG				*e*SN	**Sn**	**21 16 47.1**	**+0.4**
IZM	**Izmir**	**2.34**	**324**	PN	**Pn**	**21 16 23.2**	**-0.6**
BLCB	**Balcova**	**2.44**	**320**	PN	**Pn**	**21 16 24.3**	**-0.9**
AKS	**Akhisar**	**2.54**	**338**	PN	**Pn**	**21 16 25.4**	**-1.2**
HDMB	**Hadim**	**2.81**	**80**	PN	**Pn**	**21 16 31.1**	**+0.8**
APE	**Apeiranthos**	**2.86**	**282**	*e*PN	**Pn**	**21 16 32.0**	**+1.0**
KONT	**Konya--Tatoy**	**3.01**	**61**	PN	**Pn**	**21 16 33.3**	**+0.2**
NPS	**Neapolis**	**3.05**	**247**	*e*PN	**Pn**	**21 16 33.0**	**-0.6**
XRY	**Khrisi**	**3.18**	**240**	*e*PN	**Pn**	**21 16 35.5**	**+0.1**
KIZT	**Kizilcal**	**3.26**	**43**	PN	**Pn**	**21 16 36.1**	**-0.4**
ESKT	**Eskisehir**	**3.31**	**25**	PN	**Pn**	**21 16 36.3**	**-0.9**
PRK	**Paraskevi**	**3.48**	**322**	*e*PN	**Pn**	**21 16 40.3**	**+0.8**
ORLT	**Orhaneli**	**3.51**	**358**	PN	**Pn**	**21 16 39.0**	**-1.0**
IKL	**Isikli**	**3.77**	**93**	*e*PN	**Pn**	**21 16 44.8**	**+1.3**
KCT	**Karacabey**	**3.77**	**352**	*e*PN	**Pn**	**21 16 42.4**	**-1.1**
CSS	**Prodhromos**	**3.83**	**113**	P	**Pn**	**21 16 40.0**	**-4.4**
CSS	**Prodhromos**	**3.83**	**113**	P	**Pn**	**21 16 40.0**	**-4.3**
YLV	**Yalova**	**4.04**	**4**	*e*PN	**Pn**	**21 16 46.3**	**-0.9**
VAM	**Vamos**	**4.08**	**255**	*e*PN	**Pn**	**21 16 49.1**	**+1.4**
GVD	**Gavdhos**	**4.36**	**249**	*e*PN	**Pn**	**21 16 52.5**	**+0.9**
GADA	**Gvkgeada**	**4.41**	**327**	*e*PN	**Pn**	**21 16 52.1**	**-0.2**
MERS	**Mersin**	**4.43**	**84**	*e*PN	**Pn**	**21 16 53.9**	**+1.4**
LIA	**Limnos Island**	**4.53**	**319**	*e*PN	**Pn**	**21 16 55.2**	**+1.3**
KAMT	**Kaman**	**4.66**	**51**	*e*PN	**Pn**	**21 16 56.0**	**+0.2**
ENEZ	**Enez**	**4.77**	**333**	*e*PN	**Pn**	**21 16 56.9**	**-0.3**
BRTR	**Keskin Array B**	**4.83**	**47**	Pn	**Pn**	**21 16 58.5**	**+0.4**
	0.8nm,0.3s,baz=222,slow=14,SNR=15						
BRTR				Sn	**Sn**	**21 17 55.4**	**+1.6**
	0.7nm,0.3s,baz=213,slow=26,SNR=6.8						
BRTR	**Keskin Array B**	**4.83**	**47**	Pn	**Pn**	**21 16 58.5**	**+0.4**
BRTR				Sn	**Sn**	**21 17 55.4**	**+1.6**
BR131	**Keskin Array S**	**4.84**	**47**	*e*P	**Pn**	**21 16 57.6**	**-0.6**
BR131	**Keskin Array S**	**4.84**	**47**	*e*P	**Pn**	**21 16 57.6**	**-0.5**
VLI	**Veliai**	**4.91**	**274**	*e*PN	**Pn**	**21 17 00.1**	**+1.0**
KDZE	**Karadeniz Ereo**	**5.13**	**21**	*e*PN	**Pn**	**21 17 02.1**	**-0.2**
RDO	**Rodhopi**	**5.36**	**330**	*e*PN	**Pn**	**21 17 06.4**	**+1.1**
SAFT	**Safranbolu**	**5.50**	**30**	*e*PN	**Pn**	**21 17 07.5**	**+0.2**
EDRB	**Edirne**	**5.60**	**342**	*e*PN	**Pn**	**21 17 08.8**	**+0.1**
KEST	**Kesra**	**15.93**	**273**	Pn	**Pn**	**21 19 29.7**	**+0.3**
	0.0nm,0.3s,baz=163,slow=19,SNR=4.4						
GERES	**GERESS Array B**	**16.65**	**322**	P	**Pn**	**21 19 41.9**	**+3.2**
	0.1nm,0.3s,baz=135,slow=13,SNR=4.4						
TORD	**Torodi Ar. Bea**	**33.80**	**234**	P	**P**	**21 22 25.4**	**-1.9**
	0.9nm,0.5s,mb4.0,baz=33,slow=9.0,SNR=34						
TORD	**Torodi Ar. Bea**	**33.80**	**234**	P	**P**	**21 22 25.4**	**-1.9**
MKAR	**Makanchi Array**	**40.39**	**58**	P	**P**	**21 23 20.6**	**-2.6**
	0.3nm,0.3s,mb3.5,baz=274,slow=6.7,SNR=3.9						

BJI ***24*** *21:50:34.8,5122N*$_{K}$*15754E,h45*^{km}*,mB6.4,mb5.9,Ms6.4, Msz6.3*
MOS ***24*** *21:50:35.4*$\pm$*0.9,5115N*$_{K}$*15745E,h50*^{km}*,mb6.0/124, MS6.3/128,Error ellipse: s-maj=7.2km s-min=4.7km az=76.3 Broadband fault plane solution: P waves. M*$_{0}$*1.80000*$\times$*10*^{19} *NP1:*ϕ_{s}*42.00000°,*δ*71.00000°,* λ*100.00000°. NP2:*ϕ_{s}*194.00000°,*δ*21.00000°,*λ*63.00000°. Principal axes: T Plg63.0000°, Azm327.0000°; N Plg9.0000°, Azm219.0000°; P Plg25.0000°, Azm124.0000°;*
MOS Felt (V-VI) at Severo-Kuril'sk; (III-IV) at Petropavlovsk-Kamchatskii. Fault plane solution: P-wave C197, D24 . .
NEIC ***24*** *21:50:36.6*$\pm$*0.1,5115N*$_{K}$*15752E,h43*^{km}*,mb5.9/187, ME6.1,MS6.2/149,MW6.5,MW6.8(MOS) Error ellipse: s-maj=2.9km s-min=1.8km az=176.0,Moment Tensor Solution. s87 Moment tensor: Scale 10*^{18}*Nm; M*$_{rr}$*5.39; M*$_{\theta\theta}$*-1.83; M*$_{\phi\phi}$*-3.56; M*$_{r\theta}$*0.98; M*$_{\theta\phi}$*-3.16; M*$_{\phi r}$*1.91; Best double couple: M*$_{0}$*6.10000*$\times$*10*^{18} *NP1:*ϕ_{s}*33.00000°,* δ*55.00000°,*λ*85.00000°. NP2:*ϕ_{s}*222.00000°,*δ*35.00000°, *λ*97.00000°. Principal axes: T 5.7900, Plg79.0000°, Azm286.0000°; N 0.5600, Plg4.0000°, Azm36.0000°; P -6.3500, Plg10.0000°, Azm127.0000°; Broadband fault plane solution: P waves. NP1:*ϕ_{s}*210.00000°,*δ*35.00000°, *λ*90.00000°. NP2:*ϕ_{s}*30.00000°,*δ*55.00000°,*λ*90.00000°. Principal axes: T Plg80.0000°, Azm300.0000°; N Plg0.0000°, Azm0.0000°; P Plg10.0000°, Azm120.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [VI] at Severo-Kuril'sk and [IV] at Petropavlovsk-Kamchatskiy.
ISCJB ***24*** *21:50:36.1*$\pm$*0.1,5107N*$\pm$*002*$_{K}$*15754E*$\pm$*002,h54*^{km}*, mb5.9/354,MS6.2/237 Error ellipse: s-maj=2.5km s-min=1.4km az=159.0*
HRVD ***24*** *21:50:36.7*$\pm$*0.1,5092N*$_{K}$*158.17E,h50*^{km}*,MW6.5/108, Centroid moment Tensor Solution. LP body waves: s106,c268;Mantle waves: s108,c452; Half duration: 4*$\pm$*1 Moment tensor: Scale 10*^{18}*Nm; M*$_{rr}$*5.61*$\pm$*.03; M*$_{\theta\theta}$*-1.21*$\pm$*.03; M*$_{\phi\phi}$*-4.40*$\pm$*.03; M*$_{r\theta}$*0.62*$\pm$*.03; M*$_{\theta\phi}$*-2.50*$\pm$*.02; M*$_{\phi r}$*2.01*$\pm$*.03; Best double couple: M*$_{0}$*6.06800*$\times$*10*^{18} *NP1:*ϕ_{s}*213.00000°,*δ*35.00000°,*λ*97.00000°. NP2: *ϕ_{s}*25.00000°,*δ*55.00000°,*λ*85.00000°. Principal axes: T 6.0010, Plg79.0000°, Azm277.0000°; N 0.1320, Plg4.0000°, Azm27.0000°; P -6.1340, Plg10.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
CRAAG ***24*** *21:50:36.4,5114N*$_{K}$*15759E,Mb6.5*
IDC ***24*** *21:50:37.5*$\pm$*0.9,5121N*$_{K}$*15744E,h50*$^{km}\pm6^{km}$*,mb5.5/48, mb1 5.5/49,mb1mx5.5/49,mbtmp5.7/49,MS6.1/36, Ms1 6.1/36,ms1mx6.1/37,Error ellipse: s-maj=8.2km s-min=5.4km az=139.0*
KRSC ***24*** *21:50:37,51.19N*$_{K}$*1580 6E,h5*^{km}*, ML6.2*
IGIL ***24*** *21:50:39.5,51.19N*$_{K}$*15752E,h70*^{km}*, MS6.2*
BGS ***24*** *21:50:39.0*$\pm$*1.1,5164N*$_{K}$*15851E,h43*^{km}*, mb5.7,MS6.0*
SZGRF ***24*** *21:50:41.2,5126N*$_{K}$*156.13E,h33*^{km}*, mb5.8,MS6.4, Kamchatka Peninsula, Russia*

ISC 24 21:50:38.0$\pm$**0.1,5118N**$\pm$002$_{K}$**15740E**$\pm$001**,h54**^{km}**, h54**$^{km}\pm2.2^{km}$**:pP-P,n1877,**σ**0§97**/2001**,mb5.9**/354**, MS6.2**/237**,655C-206D,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.95**	**239**	*i*PN	**Pn**	**21 50 53.0**	**-2.1**
SKR				*i* S	**Sn**	**21 51 07.0**	**-0.7**
SKR				pmax	pmax		
	comp=Z,349nm,2.0s						
MIPR	**Malaya Ipel'ka**	**1.17**	**340**	*i* P	**Pn**	**21 51 01.9**	**+3.8**
ALID	**Alaid**	**1.21**	**256**	*e*P	**Pn**	**21 51 02.1**	**+3.5**
RUS	**Russkaya**	**1.44**	**28**	P	**Pn**	**21 51 01.1**	**-0.6**
RUS	**Russkaya**	**1.44**	**28**	*i* P	**Pn**	**21 51 01.1**	**-0.6**
GRL	**Gorelyy**	**1.44**	**17**	*i* P	**Pn**	**21 51 03.3**	**+1.6**
PET	**Petropavlovsk**	**2.01**	**22**	P	**Pn**	**21 51 10.2**	**+0.8**
PET	**Petropavlovsk**	**2.01**	**22**	*e*PN	**Pn**	**21 51 10.1**	**+0.7**
PET				*e*S	**Sn**	**21 51 35.5**	**+2.1**
PET				pmax	pmax		
	comp=Z,70μm,5.2s						
PET				pmax	pmax		
	comp=N,65μm,4.1s						
PET				smax			
	comp=E,222μm,0.8s						
PET				smax			
	comp=N,234μm,0.7s						
PET				MLR	MLR		
	comp=Z,744μm,19.0s						
PET				MLR	MLR		
	comp=N,627μm,18.0s						
PET				MLR	MLR		
	comp=E,304μm,15.0s						
PET	**Petropavlovsk**	**2.01**	**22**	*e*Pn	**Pn**	**21 51 09.7**	**+0.2**
PET	**Petropavlovsk**	**2.01**	**22**	*i* P	**Pn**	**21 51 10.2**	**+0.8**
AVH	**Avacha**	**2.25**	**21**	*i* P	**Pn**	**21 51 14.7**	**+2.0**
KOK	**Koryaka**	**2.25**	**19**	*i* P	**Pn**	**21 51 15.2**	**+2.4**
SDLR	**Sedlovina**	**2.30**	**23**	*i* P	**Pn**	**21 51 14.1**	**+0.7**
SPN	**Mys Shipunski**	**2.52**	**39**	P	**Pn**	**21 51 15.6**	**-0.8**
SPN	**Mys Shipunski**	**2.52**	**39**	*i* P	**Pn**	**21 51 15.6**	**-0.8**
GNL	**Ganaly**	**2.55**	**7**	*i* P	**Pn**	**21 51 19.7**	**+2.9**
KII	**Karymskiy**	**3.13**	**23**	P	**Pn**	**21 51 26.9**	**+2.1**
KII	**Karymskiy**	**3.13**	**23**	*e*P	**Pn**	**21 51 26.9**	**+2.1**
MKZ	**Mys Kozlova**	**4.28**	**36**	P	**Pn**	**21 51 40.3**	**-0.3**
MKZ	**Mys Kozlova**	**4.28**	**36**	*i* P	**Pn**	**21 51 40.3**	**-0.3**
TUMR	**Tumrok**	**4.43**	**21**	*i* P	**Pn**	**21 51 45.6**	**+2.9**
KMNR	**Kamenistaya**	**4.89**	**19**	*i* P	**Pn**	**21 51 53.0**	**+4.0**
KPT	**Kopyto**	**5.09**	**18**	*i* P	**Pn**	**21 51 55.2**	**+3.6**
KOZ	**Kozyrevsk**	**5.11**	**16**	P	**Pn**	**21 51 55.2**	**+3.3**
KOZ	**Kozyrevsk**	**5.11**	**16**	*i* P	**Pn**	**21 51 55.2**	**+3.3**
KOZR	**Kozyr**	**5.12**	**16**	PN	**Pn**	**21 51 55.2**	**+3.1**
ZLN	**Zelenaya**	**5.26**	**21**	*i* P	**Pn**	**21 51 57.8**	**+3.8**
SRDR	**Sredinnyy**	**5.33**	**14**	*i* P	**Pn**	**21 51 57.9**	**+2.9**
KRSR	**Krestovskiy**	**5.39**	**19**	*i* P	**Pn**	**21 52 00.3**	**+4.5**
KLY	**Klyuchi**	**5.50**	**19**	P	**Pn**	**21 52 01.2**	**+4.0**
KLY	**Klyuchi**	**5.50**	**19**	*i* P	**Pn**	**21 52 01.2**	**+4.0**
BDR	**Baidarnaya**	**5.85**	**21**	*i* P	**Pn**	**21 52 05.6**	**+3.5**
SRKR	**Sorokina**	**5.92**	**21**	*i* P	**Pn**	**21 52 05.9**	**+2.8**
SMKR	**Semkarok**	**5.93**	**22**	*i* P	**Pn**	**21 52 05.3**	**+2.2**
KBTR	**Krutoberegovo**	**5.98**	**30**	P	**Pn**	**21 52 04.4**	**+0.5**
KBTR	**Krutoberegovo**	**5.98**	**30**	*e*P	**Pn**	**21 52 04.4**	**+0.5**
KUR	**Kuril'sk**	**8.71**	**231**	*i* PN	**Pn**	**21 52 40.0**	**-1.2**
KUR				pmax	pmax		
	comp=N,2μm,0.7s						
KUR				pmax	pmax		
	comp=E,2μm,0.7s						
KUR				pmax	pmax		
	comp=Z,5μm,0.7s						
KUR				MLR	MLR		
	comp=N,77μm,16.0s						
KUR				MLR	MLR		
	comp=E,126μm,16.0s						
KUR				MLR	MLR		
	comp=Z,115μm,16.0s						
OKH	**Okha**	**9.17**	**291**	*i* PN	**Pn**	**21 52 51.6**	**+4.1**
OKH				*i* S	**Sn**	**21 54 42.0**	**+13**
OKH				pmax	pmax		
	comp=Z,25μm,6.0s						
OKH			

VLA Vladivostok 19.05 255⇑ eP Pn 21 54 56.6 -0.3
VLA pmax pmax
comp=Z,294nm,1.7s
MDJ Mudanjiang 19.69 261 P Pn 21 55 02.9 -1.6
MDJ AP pP 21 55 12.9 -1.8
MDJ XP sP 21 55 18.0 -3.6
MDJ S **S 21 58 42.3 +0.6**
MDJ XS sS 21 59 00.1 -1.2
MDJ SCP ScP 22 02 52.8 +1.6
MDJ PCS PcS 22 02 57.5 +0.4
MDJ AMB AMB
comp=Z,601nm,0.8s
MDJ AMB AMB
comp=Z,5μm,5.0s
MDJ LR LR
comp=N,121μm,24.1s
MDJ LR LR
comp=E,18μm,20.8s
MDJ LR LR
comp=Z,81μm,18.8s
SPIA Saint Paul Isl 19.73 60 ePn Pn 21 55 03.6 -1.4
CLNS Chul'man 19.80 299⇑ eP Pn 21 55 07.2 +1.5
CLNS e*PP pP 21 55 29.9 +14
CLNS S **S 21 58 50.0 +6.1**
CLNS pmax pmax
comp=Z,420nm,0.7s
CLNS pmax pmax
comp=N,209nm,0.9s
CLNS pmax pmax
comp=E,260nm,0.8s
CLNS MLR MLR
comp=E,37μm,17.0s
CLNS MLR MLR
comp=Z,48μm,17.0s
CLNS MLR MLR
comp=N,98μm,14.0s
MAJO Matsushiro 20.05 231 eP P 21 55 07.8 +1.3
MAJO pmax pmax
comp=Z,450nm,0.6s
MAJO Matsushiro 20.05 231 ePn P 21 55 07.8 +1.2
comp=Z,450nm,0.6s
MAT Matsushiro 20.05 231 P P 21 55 07.1 +0.6
MAT S **S 21 58 54.0 +5.2**
MJAR Matsushiro Arr 20.05 231 P P 21 55 06.7 +0.2
comp=Z,237nm,0.8s,baz=23,slow=10,SNR=263
MJAR S **S 21 58 57.8 +9.0**
comp=Z,14nm,0.8s,baz=55,slow=25,SNR=2.3
MJAR LR LR 22 03 20.6
comp=Z,54μm,21.7s,MS5.8,baz=50,slow=38
NIKO Nikolski 20.71 72 eP P 21 55 12.5 -1.3
UNV Unalaska Valle 21.98 69 PFAKE 21 55 40.0 +13
UNV LR LR
comp=Z,187μm,22.0s,MS6.5
JHJ Hachijo jima 2 22.17 222 P P 21 55 28.9 -0.4
comp=Z,468nm,0.9s,mb5.9,baz=242,slow=1.6,SNR=8.4
JHJ S **S 21 59 39.6 +9.1**
comp=Z,70nm,0.4s,baz=124,slow=20,SNR=4.9
JHJ LR LR 22 03 39.1
comp=Z,19μm,20.6s,MS5.5,baz=260,slow=35
AKUT Akutan 22.37 68 eP P 21 55 30.8 -0.7
CN2 Changchun 22.68 264 ⇑P P 21 55 32.9 -1.8
CN2 eS **S 21 59 30.8 -8.5**
CN2 LR LR
comp=N,87μm,18.0s,MS6.4
CN2 LR LR
comp=E,81μm,18.0s,MS6.4
CN2 LR LR
comp=Z,97μm,18.0s,MS6.3
TNA Tin City 22.79 38 eP P 21 55 35.2 -0.7
comp=Z,540nm,1.0s,mb5.9
TNA LR LR
comp=Z,40μm,21.0s,MS5.8
HIA Hailar 24.00 280⇑ iP P 21 55 47.6 +0.1
HIA LR LR
comp=Z,80μm,21.0s,MS6.2
TIXI Tiksi 24.19 338 eP P 21 55 47.2 -2.1
TIXI e*PP 21 56 05.6
TIXI eS **S 22 00 02.0 -1.8**
TIXI pmax pmax
comp=Z,244nm,0.8s,mb5.7
TIXI MLR MLR
comp=N,43μm,16.0s,MS6.1
TIXI MLR MLR
comp=E,27μm,16.0s,MS6.1
TIXI MLR MLR
comp=Z,71μm,16.0s,MS6.2
TIXI Tiksi 24.19 338⇑ iP P 21 55 48.8 -0.5
TIXI LR LR
comp=Z,60μm,20.0s,MS6.1
SNY Shenyang 24.89 261 ⇑P P 21 55 56.1 +0.4
SNY XP sP 21 56 14.1 -1.5
SNY S **S 22 00 14.3 -0.7**
SNY XS sS 22 00 38.1 +0.1
SNY SS 22 01 11.3
SNY AMB AMB
comp=Z,199nm,2.2s,mb5.3
SNY AMB AMB
comp=Z,5μm,5.3s
SNY LR LR
comp=N,99μm,19.4s,MS6.4
SNY LR LR
comp=E,27μm,16.8s,MS6.4
SNY LR LR
comp=Z,60μm,22.1s
SDPT Sand Point 25.25 64 eP P 21 55 57.5 -1.4
BOD Bodaibo 25.69 302 eP P 21 56 02.7 -0.2
BOD pmax pmax
comp=Z,129nm,0.8s,mb5.5
INCN Inchon 25.70 250 eP P 21 56 05.0 +2.1
INCN LR LR
comp=Z,34μm,20.0s,MS5.9
CHGN Chignik 26.27 61 eP P 21 56 09.4 +1.2
CBIJ Chichi jima 26.68 211 P P 21 56 10.7 -1.2
comp=Z,166nm,1.0s,mb5.5,baz=88,slow=2.9,SNR=11
CBIJ S **S 22 00 44.9 +1.6**
comp=Z,28nm,0.7s,baz=127,slow=21,SNR=2.0
CBIJ LR LR 22 05 40.8
comp=Z,11μm,20.1s,MS5.4,baz=6.2,slow=34
CIT Chita 26.95 289 eP pP 21 56 26.2 -1.6
CIT e sP 21 56 38.2 +4.0
TTA Tatalina 27.27 46 eP P 21 56 15.9 -1.3
SVW2 Sparrevohn 27.42 51 eP P 21 56 17.2 -1.3
DL2 Dalian 27.81 258⇑ iP P 21 56 22.3 +0.4
DL2 XP sP 21 56 41.4 -0.6
DL2 PP PP 21 57 17.0 -8.5
DL2 PPP 21 57 35.3
DL2 S **S 22 01 01.6 +0.5**
DL2 XS sS 22 01 23.8 -0.4
DL2 SS 22 02 28.0
DL2 SSS 22 02 59.3
DL2 PCS PcS 22 03 14.5 -4.5
DL2 AMB AMB
comp=Z,60nm,0.7s,mb5.3
DL2 AMB AMB
comp=Z,2μm,7.0s
DL2 LR LR
comp=N,23μm,21.1s,MS5.9
DL2 LR LR
comp=E,24μm,21.1s,MS5.9
DL2 LR LR
comp=Z,37μm,22.2s,MS5.9
KDAK Kodiak Island 29.22 57 P P 21 56 32.0 -2.4
comp=Z,102nm,0.8s,mb5.6,baz=320,slow=6.0,SNR=23
KDAK Kodiak Island 29.22 57 eP P 21 56 31.7 -2.8
KDAK LR LR
comp=Z,21μm,21.0s,MS5.7
SLKM Skilak Lake 30.08 51 P P 21 56 40.6 -1.5
SLKM Skilak Lake 30.08 51 eP P 21 56 40.2 -1.8
MCK McKinley 30.48 45 eP P 21 56 44.3 -1.4
MCK MLR MLR
comp=Z,32μm,20.0s,MS6.0
PMR Palmer 30.51 49 eP P 21 56 44.8 -1.1
PMR Palmer 30.51 49 eP P 21 56 44.4 -1.5
comp=Z,108nm,1.4s,mb5.5
PMR LR LR
comp=Z,40μm,21.0s,MS6.0
BJI Beijing 30.53 265 P P 21 56 45.6 -0.5
BJI S **S 22 01 52.3 +8.5**
BJI AMB AMB
comp=Z,55nm,1.7s,mb5.1
BJI LR LR
comp=N,101μm,23.9s,MS6.5
BJI LR LR
comp=E,69μm,23.3s,MS6.5
BJI LR LR
comp=Z,72μm,26.5s,MS6.2
BJT Baijiatuan 30.54 265 PFAKE 21 57 00.0 +14
BJT LR LR
comp=Z,79μm,20.0s,MS6.4
COLA College 30.94 43⇑ iP P 21 56 48.8 -0.9
COLA College 30.94 43⇑ iP P 21 56 48.5 -1.2
comp=Z,398nm,0.9s,mb6.2
COLA LR LR
comp=Z,33μm,19.0s,MS6.0
MID Middleton Isla 32.16 53 eP P 21 56 59.2 -1.3
DIV Divide 32.17 50 eP P 21 56 59.1 -1.4
DIV LR LR
comp=Z,109μm,21.0s,MS6.5
EYAK Cordova Ski Ar 32.27 51⇑ iP P 21 56 59.8 -1.5
TIA Tai'an 32.28 258 P P 21 57 01.8 +0.3
TIA S **S 22 02 10.6 -0.6**
TIA LR LR
comp=N,6μm,17.0s,MS5.8
TIA LR LR
comp=E,16μm,18.3s,MS5.8
TIA LR LR
comp=Z,44μm,17.0s,MS6.2
IRK Irkutsk 32.33 293⇑ iP P 21 57 02.8 +0.9
IRK pmax pmax
comp=Z,363nm,2.8s,mb5.7
ULN Ulaanbaatar 32.33 284 P P 21 57 03.4 +1.5
SNR=70
ULN Ulaanbaatar 32.33 284 eP P 21 57 02.6 +0.7
ULN LR LR
comp=Z,86μm,22.0s,MS6.4
WAKE Wake Island 32.66 164 PFAKE 21 57 20.0 +15
WAKE LR LR
comp=Z,56μm,21.0s,MS6.2
SONM Songino Array 32.75 285 P P 21 57 06.0 +0.5
comp=Z,32nm,0.5s,mb5.5,baz=82,slow=9.2,SNR=63
SONM PcP PcP 21 59 50.2 +0.3
comp=Z,78nm,0.8s,baz=71,slow=1.5,SNR=12
SONM LR LR 22 11 18.6
comp=Z,113μm,21.4s,MS6.5,baz=65,slow=38
SONM P3KPbc 22 28 26.6
comp=Z,1.0nm,0.9s,baz=259,slow=3.8,SNR=8.4
SONM Songino Array 32.75 285 P P 21 57 06.0 +0.5
SONM PcP PcP 21 59 50.2 +0.3
SONM LR LR 22 11 18.6
SONM e 22 28 26.6
JOW Kunigami 32.84 233 P P 21 57 07.0 +0.7
comp=Z,642nm,1.0s,mb6.5,baz=39,slow=7.8
JOW S **S 22 02 20.9 +1.1**
comp=Z,16nm,0.9s,baz=252,slow=25,SNR=11
JOW LR LR 22 10 08.0
comp=Z,17μm,22.0s,MS5.7,baz=42,slow=36
MENT Mentasta 32.89 46 eP P 21 57 05.6 -1.2
TLY Talaya 32.89 292 P P 21 57 08.5 +1.7
comp=Z,429nm,0.9s,mb6.4,SNR=34
TLY Talaya 32.89 292 P P 21 57 08.6 +1.8
SNR=30
TLY Talaya 32.89 292 c iP P 21 57 06.9 +0.1
TLY e 21 57 25.5
TLY e 21 58 24.7
TLY eS **S 22 02 19.3 -1.3**
TLY pmax pmax
comp=Z,188nm,2.5s,mb5.6
TLY MLR MLR
comp=Z,83μm,21.0s,MS6.4
TLY Talaya 32.89 292 eP P 21 57 08.7 +2.0
TLY LR LR
comp=Z,21μm,20.0s,MS5.8
HHC Hu-ho-hao-te 32.97 270 eP P 21 57 07.5 0.0
HHC AP pP 21 57 19.5 -1.8
HHC XP sP 21 57 24.8 -2.8
HHC PP PP 21 58 18.8 -4.0
HHC PCP PcP 21 59 46.0 -4.5
HHC S **S 22 02 19.8 -2.0**
HHC XS sS 22 02 41.6 -3.5
HHC SCP ScP 22 03 28.8 -1.2
HHC PCS PcS 22 03 33.3 -2.6
HHC SS Ss 22 04 23.9 -22
HHC SCS ScS 22 07 28.8 -1.5
HHC AMB AMB
comp=Z,3μm,5.9s
HHC LR LR
comp=N,37μm,16.9s,MS6.3
HHC LR LR
comp=E,34μm,17.6s,MS6.3
HHC LR LR
comp=Z,39μm,21.4s,MS6.1
SSE Sheshan 33.38 247 P P 21 57 12.6 +1.5
SSE AP pP 21 57 27.5 +2.6
SSE PP PP 21 58 29.6 +2.2
SSE S **S 22 02 31.6 +3.3**
SSE XS sS 22 02 53.8 +2.2
SSE AMB AMB
comp=Z,207nm,0.9s,mb6.1
SSE AMB AMB
comp=Z,5μm,10.0s
SSE LR LR
comp=N,18μm,21.4s,MS5.8
SSE LR LR
comp=E,7μm,21.4s,MS5.8
SSE LR LR
comp=Z,19μm,20.2s,MS5.8
ZAK Zakamensk 33.58 290⇑ eP P 21 57 14.7 +1.9
ZAK e 21 59 52.8
EGAK Eagle 33.80 43⇑ iP P 21 57 12.6 -2.2
NJ2 Nanjing 34.06 251 eP P 21 57 18.4 +1.4
NJ2 PP PP 21 58 34.4 -0.5
NJ2 S **S 22 02 37.0 -1.8**
NJ2 AMB AMB
comp=Z,210nm,0.6s,mb6.2
NJ2 AMB AMB
comp=Z,1μm,10.1s
NJ2 LR LR
comp=N,53μm,19.6s,MS6.5
NJ2 LR LR
comp=E,86μm,22.2s,MS6.5
NJ2 LR LR
comp=Z,86μm,22.4s,MS6.4
BTO Baotou 34.08 271 eP P 21 57 16.5 -0.6
BTO LR LR
comp=N,3μm,15.2s,MS5.3
BTO LR LR
comp=E,3μm,17.2s,MS5.3
MOY Mondy 34.43 293 eP P 21 57 21.4 +1.2
MOY pmax pmax
comp=Z,325nm,3.4s
DAWY Dawson 34.65 44 eP P 21 57 20.9 -1.3
INK Inuvik 36.40 36 P P 21 57 36.4 -0.7
comp=Z,265nm,0.9s,mb6.2,baz=283,slow=6.1,SNR=115
INK S **S 22 03 13.8 -1.0**
comp=Z,16nm,1.1s,baz=122,slow=10,SNR=3.8
INK LR LR 22 13 42.2
comp=Z,30μm,21.6s,MS6.0,baz=270,slow=38
INK Inuvik 36.40 36 P P 21 57 36.4 -0.7
INK S **S 22 03 13.8 -0.9**
INK pmax pmax
comp=Z,265nm,1.0s
INK smax
comp=N,16nm,1.1s
INK MLR MLR
comp=Z,30μm,21.6s
INK Inuvik 36.40 36 eP P 21 57 36.8 -0.4
KRAR Krasnoyarsk 37.35 303⇑ eP P 21 57 45.8 +0.6
KRAR pmax pmax
comp=Z,152nm,0.8s,mb5.9
KRAR MLR MLR
comp=Z,38μm,19.0s,MS6.2
SKAG Skagway 37.60 51 eP P 21 57 47.5 +0.2
comp=Z,587nm,1.5s,mb6.1
SKAG LR LR
comp=Z,40μm,21.0s,MS6.2
WHN Wuhan 37.84 254⇑ iP P 21 57 49.0 -0.3
WHN LR LR
comp=Z,49μm,15.2s,MS6.4
TATO Taipei 37.91 240 eP P 21 57 52.3 +2.4
comp=Z,179nm,0.6s,mb6.0
TATO LR LR
comp=Z,21μm,19.0s,MS6.0
YHNB Yeheng 38.21 240 eP P 21 57 51.6 -0.9
SIT Sitka 38.41 54 eP P 21 57 54.4 +0.3
SIT Sitka 38.41 54 eP P 21 57 53.6 -0.5
comp=Z,439nm,1.4s,mb6.0
SIT LR LR
comp=Z,17μm,23.0s,MS5.8
NACB Ninganchiao 38.49 239 eP P 21 57 52.8 -2.0
XAN Xi'an 38.79 263 P P 21 57 57.3 0.0
XAN AP pP 21 58 14.9 +3.6
XAN S **S 22 03 55.3 +4.4**
XAN AMB AMB
comp=Z,62nm,1.3s,mb5.2
XAN AMB AMB
comp=Z,4μm,14.8s
XAN LR LR
comp=N,24μm,17.9s,MS6.2
XAN LR LR
comp=E,27μm,17.9s,MS6.2
XAN LR LR
comp=Z,54μm,18.5s,MS6.4
GUMO Guam 38.84 200 LR LR 22 15 09.7
comp=Z,7μm,18.3s,MS5.5,baz=19,slow=38
QZH Quanzhou 39.54 243⇑ iP P 21 58 05.8 +2.2
QZH S **S 22 04 04.0 +1.8**
QZH AMB AMB
comp=Z,520nm,1.0s,mb6.2
QZH AMB AMB
comp=Z,620nm,4.2s
QZH LR LR
comp=N,12μm,28.4s,MS5.9
QZH LR LR
comp=E,22μm,30.8s,MS5.9
QZH LR LR
comp=Z,28μm,19.8s
CRAG Craig 40.15 56 eP P 21 58 09.0 +0.4
comp=Z,684nm,2.5s,mb5.9
CRAG LR LR
comp=Z,28μm,21.0s,MS6.1
LZH Lanzhou 40.66 270 eP P 21 58 14.6 +1.7
LZH AP pP 21 58 30.6 +3.7
LZH PP PP 21 59 52.3 +5.0
LZH PCP PcP 22 00 16.3 +2.6
LZH S **S 22 04 19.3 +0.3**
LZH XS sS 22 04 45.0 +2.3
LZH SS SS 22 07 17.3 -3.6
LZH AMB AMB
comp=Z,431nm,1.7s,mb5.8
LZH AMB AMB
comp=Z,2μm,4.9s
LZH LR LR
comp=E,77μm,18.8s
LZH LR LR
comp=Z,79μm,19.8s,MS6.6
GTA Gaotai 41.17 277⇑ iP P 21 58 18.4 +1.4
GTA PP PP 21 59 56.4 +3.6
GTA PCP PcP 22 00 17.6 +2.2
GTA SCP ScP 22 04 03.6 +3.0
GTA PCS PcS 22 04 08.9 +2.4
GTA S **S 22 04 27.5 +1.0**
GTA XS sS 22 04 48.1 -2.2
GTA SS Ss 22 07 25.8 -5.2
GTA SCS ScS 22 08 15.6 -0.7
GTA AMB AMB
comp=Z,65nm,1.6s,mb5.0
GTA AMB AMB
comp=Z,4μm,8.4s
GTA LR LR
comp=N,43μm,19.8s,MS6.5
GTA LR LR
comp=E,37μm,19.0s,MS6.5
GTA LR LR
comp=Z,45μm,21.3s,MS6.3
ZAL Zalesovo 42.45 303 P P 21 58 27.0 -0.5
comp=Z,25nm,0.7s,mb5.0,baz=51,slow=7.5,SNR=47
ZAL PcP PcP 22 00 20.4 +0.8
comp=Z,26nm,0.8s,baz=46,slow=3.0,SNR=6.0
ZAL LR LR 22 18 34.3
comp=Z,42μm,18.0s,MS6.4,baz=37,slow=40
ZAL Zalesovo 42.45 303 P P 21 58 27.0 -0.4
ZAL 22 00 20.4
ZAL pmax pmax
comp=Z,25nm,0.7s
ZAL MLR MLR
comp=Z,42μm,18.0s
ZAL Zalesovo 42.45 303 P P 21 58 27.0 -0.5
ZAL PcP PcP 22 00 20.4 +0.8
ZAL LR LR 22 18 34.3
NVS Novosibirsk 42.85 305⇑ iP P 21 58 30.4 -0.3
NVS e pP 21 58 47.8 +3.0
NVS e 22 00 14.5
NVS pmax pmax
comp=Z,967nm,2.5s,mb6.1
NVS pmax pmax
comp=N,390nm,2.4s
NVS pmax pmax
comp=E,1μm,2.8s
CVP Callao Caves 43.71 233 eP P 21 58 38.0 +0.4
GZH Guangzhou 43.98 247 P P 21 58 36.3 -3.5
GZH S **S 22 05 01.8 -6.0**
GZH AMB AMB
comp=Z,380nm,1.3s,mb6.0
GZH LR LR
comp=N,15μm,18.7s,MS6.1
GZH LR LR
comp=E,16μm,20.5s,MS6.1
GZH LR LR
comp=Z,25μm,18.6s,MS6.2
HKC Hong Kong 44.11 246⇑ iP P 21 58 42.0 +1.1
HKC *i* S **S 22 05 12.0 +2.3**
CD2 Chengdu 44.12 264⇑ iP P 21 58 41.8 +0.9
CD2 PP PP 22 00 26.3 +1.8
CD2 SCP ScP 22 04 09.8 -2.7
CD2 PCS PcS 22 04 18.4 0.0
CD2 S **S 22 05 09.4 -0.4**
CD2 SS Ss 22 08 20.4 -8.4
CD2 SCS ScS 22 08 30.3 -4.2
CD2 AMB AMB
comp=Z,40nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,3μm,5.4s
CD2 LR LR
comp=N,19μm,26.4s
CD2 LR LR
comp=Z,22μm,19.8s
ABRA Dolores 44.32 235 eP P 21 58 44.9 +2.4
CAUP Cauayan 44.35 233 eP P 21 58 44.6 +1.8
ALE Alert 45.03 7 P P 21 58 48.0 -0.2
comp=Z,939nm,0.9s,mb6.6,SNR=81
BCPH Baguio City Da 45.45 234⇑ iP P 21 58 52.5 +1.0
GYA Guiyang 45.45 257⇑ iP P 21 58 52.8 +1.2
GYA PP PP 22 00 40.5 +1.8
GYA SCP ScP 22 04 16.6 -1.4
GYA S **S 22 05 24.6 -4.5**
GYA SS Ss 22 08 41.4 -12
GYA AMB AMB
comp=Z,350nm,0.9s,mb6.2
GYA AMB AMB
comp=Z,4μm,12.9s
GYA LR LR
comp=N,14μm,19.7s,MS6.2
GYA LR LR
comp=E,22μm,20.0s,MS6.2
GYA LR LR
comp=Z,15μm,19.0s,MS6.0
BALP Baler 45.49 232 eP P 21 58 52.5 +0.7
KIP Kipapa 45.58 114 deP P 21 58 51.9 -0.7
KIP Kipapa 45.58 114 eP P 21 58 51.3 -1.3
comp=Z,380nm,1.3s,mb6.2
KIP LR LR
comp=Z,28μm,19.0s,MS6.2
YKW3 Yellowknife Ar 45.67 40 eP P 21 58 52.6 -0.6
YKA Yellowknife Ar 45.70 40 P P 21 58 52.8 -0.7
comp=Z,278nm,0.9s,mb6.2,baz=298,slow=8.0,SNR=127
YKA S **S 22 05 33.1 +0.4**
comp=Z,1.5nm,0.8s,baz=99,slow=23,SNR=2.4
YKA LR LR 22 20 20.9
comp=Z,15μm,19.2s,MS6.0,baz=285,slow=39
YKA Yellowknife Ar 45.70 40 P P 21 58 52.8 -0.7
YKA S **S 22 05 33.1 +0.4**
YKA pmax pmax
comp=Z,278nm,0.9s
YKA smax
comp=N,2.0nm,0.8s
YKA MLR MLR
comp=Z,15μm,19.2s
YKA Yellowknife Ar 45.70 40 P P 21 58 52.8 -0.7
YKA S **S 22 05 33.1 +0.4**
YKA LR LR 22 20 20.9
RES Resolute Bay 45.72 21 eP P 21 58 53.5 -0.1
RES pmax pmax
comp=Z,208nm,0.8s,mb6.1
RES Resolute Bay 45.72 21 eP P 21 58 53.5 -0.2
comp=Z,208nm,0.8s,mb6.1

BOLP Bolinao 45.79 235 *e*P **P** **21 58 54.3 +0.1**
WMQ Urumqi 46.04 289⇑ *i*P **P** **21 58 57.6 +1.4**
WMQ AP pP 21 59 13.0 +2.6
WMQ PP PP 22 00 47.0 +2.1
WMQ S **S** **22 05 38.0 +0.4**
WMQ XS sS 22 06 04.0 +2.4
WMQ SS SS 22 08 55.0 -8.0
WMQ AMB AMB
comp=Z,215nm,1.0s,mb6.0
WMQ AMB AMB
comp=Z,3μm,5.0s
WMQ LR LR
comp=N,60μm,14.0s,MS6.8
WMQ LR LR
comp=E,36μm,14.0s,MS6.8
WMQ LR LR
comp=Z,59μm,14.0s,MS6.7
SCZP Santa Cruz 46.30 234 *e*P **P** **21 58 59.6 +1.3**
AUQP San Andres 47.03 229 *e*P **P** **21 59 07.2 +3.3**
TGY Tagaytay City 47.21 232 *e*P **P** **21 59 09.8 +4.5**
TGY Tagaytay City 47.21 232 P **P** **21 59 07.1 +1.8**
comp=Z,415nm,0.9s,baz=147,slow=4.9,SNR=9.4
TGY Tagaytay City 47.21 232 P **P** **21 59 07.1 +1.8**
TGY pmax pmax
comp=Z,415nm,0.9s
BOAC Boac 47.32 230 *e*P **P** **21 59 06.3 +0.1**
KURK Kurchatov 47.34 302 P **P** **21 59 06.2 -0.1**
comp=Z,2μm,0.4s,SNR=42
MK31 Makanchi Array 47.49 296 P **P** **21 59 07.5 0.0**
MK31 pmax pmax
comp=Z,73nm,0.8s,mb5.7
MKAR Makanchi Array 47.49 296 P **P** **21 59 07.6 +0.1**
comp=Z,104nm,0.9s,mb5.8,baz=56,slow=7.6,SNR=128
MKAR Makanchi Array 47.49 296 *i* P **P** **21 59 07.5 0.0**
MKAR pmax pmax
comp=Z,104nm,0.9s
PLP Palo 47.86 225 *e*P **P** **21 59 11.2 +0.8**
LUBP Lubang 47.87 232 *e*P **P** **21 59 09.1 -1.3**
POHA Pohakuloa 48.32 113 PFAKE 21 59 30.0 +16
POHA LR LR
comp=Z,27μm,20.0s,MS6.2
C03A Quillayute Air 48.48 61 ⇓P **P** **21 59 15.2 0.0**
baz=48,SNR=8.1
C03A ⇑S **S** **22 06 14.6 +2.4**
baz=48
RCP Roxas 48.53 228⇓ *e*P **P** **21 59 16.9 +1.4**
KBS Kingsbay 48.54 352⇑ *i*P **P** **21 59 15.1 -0.5**
KBS *e*PP PP 22 01 07.7 -1.1
KBS *e*S **S** **22 06 14.0 +0.9**
KBS AMS AMS 22 20 21.8
comp=Z,14μm,22.8s,MS5.9
KBS Kingsbay 48.54 352 *e*P **P** **21 59 15.9 +0.3**
KBS LR LR
comp=Z,24μm,20.0s,MS6.2
SPB4 Spitsbergen Ar 48.75 350 *e*P **P** **21 59 16.7 -0.5**
KMI Kunming 48.84 259 P **P** **21 59 19.6 +1.7**
KMI AP pP 21 59 30.0 -2.3
KMI XP sP 21 59 33.6 -4.9
KMI PP PP 22 01 13.6 +2.1
KMI PPP 22 01 57.8
KMI S **S** **22 06 14.8 -2.6**
KMI SS SS 22 09 41.6 -6.8
KMI SSS 22 10 54.8
KMI AMB AMB
comp=Z,247nm,1.7s,mb6.0
KMI AMB AMB
comp=Z,5μm,4.8s
KMI LR LR
comp=N,26μm,18.6s,MS6.3
KMI LR LR
comp=E,12μm,20.8s,MS6.3
KMI LR LR
comp=Z,33μm,17.5s,MS6.4
SCPH Surigao 48.86 224 *e*P **P** **21 59 18.3 +0.2**
VGZ Gonzales 48.89 60 P **P** **21 59 17.3 -1.0**
B04A Port Angeles 49.00 61 ⇓P **P** **21 59 18.4 -0.7**
baz=49,SNR=13
B04A ⇑S **S** **22 06 21.0 +1.4**
baz=49
A04A Legoe Bay, Lum 49.05 60 P **P** **21 59 19.0 -0.6**
baz=49,SNR=23
A04A ⇓S **S** **22 06 21.1 +0.8**
baz=49
QIZ Qiongzhong 49.18 247 P **P** **21 59 23.3 +2.8**
QIZ AP pP 21 59 36.4 +1.5
QIZ XP sP 21 59 42.5 +1.4
QIZ S **S** **22 06 24.1 +2.0**
QIZ AMB AMB
comp=Z,347nm,1.3s,mb6.2
QIZ AMB AMB
comp=Z,6μm,10.6s
QIZ LR LR
comp=E,22μm,20.9s
QIZ LR LR
comp=Z,13μm,23.7s,MS5.8
QIZ Qiongzhong 49.18 247 PFAKE 21 59 30.0 +10
QIZ LR LR
comp=Z,13μm,22.0s,MS5.9
A05A Maple Falls 49.23 59 ⇑P **P** **21 59 19.9 -1.0**
baz=49,SNR=12
A05A ⇑S **S** **22 06 22.2 -0.7**
baz=49
SQM Sequim 49.24 61 P **P** **21 59 20.6 -0.3**
BUSP Coron 49.37 231 *e*P **P** **21 59 23.0 +1.0**
D03A Wishkah Elem. 49.40 62 P **P** **21 59 22.2 +0.1**
baz=49,SNR=14
D03A ⇑S **S** **22 06 27.7 +2.5**
baz=49
WISH Wishkah 49.40 62 P **P** **21 59 22.2 0.0**
GUIM Jordan 49.42 228 *e*P **P** **21 59 23.3 +0.9**
MBW Mount Baker 49.46 59 P **P** **21 59 21.9 -0.8**
HDW Hoodsport 49.48 61 P **P** **21 59 22.4 -0.5**
C04A Brinnon 49.49 61 ⇑P **P** **21 59 22.3 -0.6**
baz=49
C04A ⇓S **S** **22 06 27.7 +1.3**
baz=49
CMW Cultus Mountai 49.55 60 P **P** **21 59 22.9 -0.4**
B05A Bryant 49.65 60 ⇓P **P** **21 59 23.3 -0.8**
baz=49
B05A ⇑S **S** **22 06 29.3 +0.6**
baz=49
GNW Green Mountain 49.66 61 *e*P **P** **21 59 23.5 -0.6**
CHKZ Chkalovo 49.79 309 P **P** **21 59 24.2 -1.0**
CHKZ pmax pmax
comp=Z,45nm,0.5s,mb5.8
CHKZ Chkalovo 49.79 309 *e*P **P** **21 59 24.1 -1.1**
E03A Lebam 49.84 62 ⇑P **P** **21 59 25.1 -0.5**
baz=50,SNR=16
E03A ⇓S **S** **22 06 32.6 +1.2**
baz=50
D04A Dobbs Creek Ra 49.94 61 ⇑P **P** **21 59 25.9 -0.4**
baz=50
D04A ⇓S **S** **22 06 34.4 +1.8**
baz=50
CUYO Cuyo Island 49.97 230 *e*P **P** **21 59 27.5 +1.0**
VOSK Vostochnaya 50.16 308 P **P** **21 59 27.1 -0.9**
VOSK pmax pmax
comp=Z,68nm,1.0s,mb5.6
C05A Tolt Reservoir 50.20 60 P **P** **21 59 27.6 -0.7**
baz=50,SNR=29
C05A ⇓S **S** **22 06 37.1 +0.6**
baz=50
F03A Seaside 50.21 63 ⇓P **P** **21 59 28.0 -0.4**
baz=50,SNR=10
F03A ⇑S **S** **22 06 38.1 +1.5**
baz=50
BVA0 Borovoye Array 50.28 308 *i* P **P** **21 59 28.3 -0.6**
BVA0 pmax pmax
comp=Z,80nm,0.6s,mb5.9
BVAR Borovoye Array 50.28 308 P **P** **21 59 28.2 -0.7**
comp=Z,71nm,0.5s,mb6.0,baz=54,slow=7.6,SNR=243
BVAR PcP PcP 22 00 47.2 +0.1
comp=Z,70nm,0.9s,baz=71,slow=3.2,SNR=5.2
BVAR LR LR 22 22 22.9
comp=Z,77μm,21.6s,MS6.7,baz=319,slow=38
BVAR Borovoye Array 50.28 308 P **P** **21 59 28.2 -0.7**
BVAR 22 00 47.2
BVAR pmax pmax
comp=Z,71nm,0.5s
BVAR MLR MLR
comp=Z,77μm,21.6s
E04A Onalaska 50.29 62 ⇓P **P** **21 59 28.6 -0.3**
baz=50
E04A ⇓S **S** **22 06 39.8 +2.2**
baz=50

BRVK Borovoye 50.31 308 P **P** **21 59 28.6 -0.5**
comp=Z,1μm,0.6s
BRVK Borovoye 50.31 308 P **P** **21 59 28.9 -0.2**
SNR=80
BRVK Borovoye 50.31 308 *e*P **P** **21 59 28.2 -0.9**
BRVK pmax pmax
comp=Z,87nm,0.6s,mb6.0
BRVK MLR MLR
comp=Z,14μm,22.0s,MS5.9
BRVK Borovoye 50.31 308 *e*P **P** **21 59 28.2 -0.9**
comp=Z,87nm,0.6s,mb6.0
BRVK LR LR
comp=Z,14μm,22.0s,MS5.9
D05A Enumclaw 50.34 61 ⇓P **P** **21 59 28.9 -0.4**
baz=50,SNR=19
D05A ⇓S **S** **22 06 40.2 +1.9**
baz=50
PNT Penticton 50.37 57 P **P** **21 59 28.6 -1.0**
ENPP El Nido 50.44 232 *e*P **P** **21 59 31.2 +1.1**
LON Longmire 50.70 61 P **P** **21 59 31.0 -1.0**
NLW Nelson Butte 50.71 59 P **P** **21 59 31.5 -0.7**
H02A Toledo 50.71 65 ⇓P **P** **21 59 31.7 -0.5**
baz=50
H02A ⇓S **S** **22 06 45.5 +2.0**
baz=50
G03A Yamhill 50.74 64 ⇓P **P** **21 59 31.5 -0.8**
baz=50,SNR=9.6
G03A ⇑S **S** **22 06 45.6 +1.8**
baz=50
E05A Randle 50.84 61 ⇑P **P** **21 59 31.8 -1.3**
baz=51
E05A ⇑S **S** **22 06 44.9 -0.3**
baz=51
F04A Amboy 50.85 62 P **P** **21 59 32.3 -0.9**
baz=51,SNR=23
F04A ⇓S **S** **22 06 45.5 +0.2**
baz=51
ZRNK Zerenda 51.00 309 P **P** **21 59 33.6 -0.7**
ZRNK pmax pmax
comp=Z,110nm,0.8s,mb5.8
ZRNK Zerenda 51.00 309⇑ *i*P **P** **21 59 33.5 -0.8**
comp=Z,105nm,0.8s,mb5.8
LTY Liberty 51.02 60 P **P** **21 59 33.3 -1.1**
MPOR Mary's Peak 51.07 65 P **P** **21 59 34.7 -0.2**
TBM Table Mountain 51.11 60 P **P** **21 59 34.4 -0.8**
COR Corvallis 51.16 64 PFAKE 21 59 50.0 +14
COR LR LR
comp=Z,18μm,22.0s,MS6.0
I02A Mapleton 51.22 65 ⇓P **P** **21 59 35.5 -0.4**
baz=51
I02A ⇓S **S** **22 06 52.6 +2.1**
baz=51
DAV Davao City (W) 51.25 222⇑ *e*P **P** **21 59 33.0 -3.2**
DAV Davao City (W) 51.25 222 PFAKE 21 59 50.0 +14
DAV LR LR
comp=Z,12μm,21.0s,MS5.9
G04A Mulino 51.25 63 ⇑P **P** **21 59 35.3 -0.9**
baz=51
G04A ⇓S **S** **22 06 52.5 +1.5**
baz=51
EDM Edmonton 51.26 50 *e*P **P** **21 59 35.5 -0.8**
EBG Ellensburg 51.28 60 P **P** **21 59 35.8 -0.7**
F05A White Salmon 51.41 62 P **P** **21 59 36.8 -0.6**
baz=51,SNR=15
F05A ⇑S **S** **22 06 53.4 +0.2**
baz=51
BJO Bjornoya 51.52 347⇑ *i*P **P** **21 59 36.7 -1.5**
BJO *e*PP PP 22 01 36.7 +0.8
BJO *e*S **S** **22 06 56.3 +1.6**
BJO AMS AMS 22 22 30.8
comp=Z,17μm,23.2s,MS6.0
EPH Ephrata 51.55 60 P **P** **21 59 37.1 -1.3**
BJO1 Bjornoya 51.55 347⇑ *i*P **P** **21 59 36.7 -1.7**
BJO1 LR LR
comp=Z,17μm,23.2s,MS6.0
I03A Eugene 51.55 65 P **P** **21 59 38.5 0.0**
baz=51,SNR=18
I03A ⇑S **S** **22 06 57.2 +2.1**
baz=51
KEBM Edson Butte 51.62 67 *e*P **P** **21 59 39.5 +0.5**
H04A Detroit Lake 51.74 64 P **P** **21 59 39.2 -0.6**
baz=52,SNR=31
H04A ⇓S **S** **22 06 57.0 -0.6**
baz=52
VFP Flag Point 51.75 63 P **P** **21 59 39.5 -0.4**
J02A Umpqua 51.76 66 P **P** **21 59 40.2 +0.2**
baz=52,SNR=27
J02A ⇓S **S** **22 06 58.7 +0.8**
baz=52
G05A Wamic 51.88 63 P **P** **21 59 40.6 -0.3**
baz=52,SNR=21
G05A ⇓S **S** **22 07 00.2 +0.6**
baz=52
KBO Bosley Butte 52.10 67 *e*P **P** **21 59 44.3 +1.8**
DBO Dodson Butte 52.10 66 P **P** **21 59 42.7 +0.2**
J03A Ideyld Park 52.10 65 ⇓P **P** **21 59 42.5 0.0**
baz=52,SNR=33
J03A ⇑S **S** **22 07 03.4 +0.7**
baz=52
IRO Indian Ridge 52.12 64 P **P** **21 59 42.2 -0.4**
HAWA Hanford 52.17 60 *e*P **P** **21 59 41.4 -1.6**
HAWA LR LR
comp=Z,1μm,22.0s
HBO Huckleberry Mo 52.18 65 P **P** **21 59 42.7 -0.4**
G06A Carlson Farm, 52.27 62 P **P** **21 59 42.9 -0.9**
baz=52,SNR=29
G06A ⇓S **S** **22 07 05.1 +0.3**
baz=52
H05A Madras 52.30 63 ⇑P **P** **21 59 43.3 -0.7**
baz=52,SNR=19
H05A ⇑S **S** **22 07 05.4 +0.1**
baz=52
DAG Danmarks Havn 52.30 359⇓ *i*P **P** **21 59 42.8 -1.2**
comp=Z,21nm,0.6s,mb5.2
DAG
comp=Z,20μm,22.0s
DAG Danmarks Havn 52.30 359⇓ *i*P **P** **21 59 42.8 -1.2**
DAG pmax pmax
comp=Z,21nm,0.6s,mb5.2
DAG MLR MLR
comp=Z,20μm,22.0s,MS6.1
DAG MLR MLR
comp=N,12μm,23.0s
NEW Newport 52.32 57 P **P** **21 59 43.0 -1.2**
comp=N,72nm,0.9s,mb5.6,baz=311,slow=7.9,SNR=14
NEW S **S** **22 07 05.2 -0.4**
comp=N,2.4nm,0.6s,baz=44,slow=21,SNR=2.3
NEW Newport 52.32 57 P **P** **21 59 43.0 -1.2**
NEW S **S** **22 07 05.2 -0.4**
NEW pmax pmax
comp=Z,72nm,0.9s
NEW smax
comp=N,2.0nm,0.6s
NEW Newport 52.32 57 *e*P **P** **21 59 42.6 -1.5**
comp=N,448nm,1.6s,mb6.2
NEW LR LR
comp=Z,19μm,22.0s,MS6.1
WIFE Three Sisters- 52.33 64 P **P** **21 59 44.1 -0.2**
M01C Crescent City 52.38 68 ⇓P **P** **21 59 44.4 -0.2**
baz=52
M01C ⇓S **S** **22 07 09.1 +2.6**
baz=52
SOKR Solikamsk 52.42 321*c* *i*P **P** **21 59 43.4 -1.5**
SOKR S **S** **22 07 14.0 +7.0**
SOKR pmax pmax
comp=Z,40nm,1.0s,mb5.3
SOKR MLR MLR
comp=Z,46μm,16.0s,MS6.6
L02A Cave Junction 52.49 67 P **P** **21 59 45.5 +0.1**
baz=52,SNR=16
L02A ⇓S **S** **22 07 11.1 +3.1**
baz=52
BBOR Butler Butte 52.57 66 P **P** **21 59 46.0 +0.1**
I05A Bend 52.58 64 ⇓P **P** **21 59 45.6 -0.4**
baz=52
I05A ⇓S **S** **22 07 09.8 +0.7**
baz=52
AAA Alma-Ata 52.63 295 *i* P **P** **21 59 47.9 +1.5**
KRMB Red Mountain 52.71 68 *e*P **P** **21 59 46.8 -0.2**
H06A Lindquist Farm 52.74 63 P **P** **21 59 46.6 -0.7**
baz=52,SNR=51
H06A ⇓S **S** **22 07 11.4 0.0**
baz=52
KTRM Thompson Ridge 52.78 67 P **P** **21 59 47.7 +0.2**
LSA Lhasa 52.87 273 P **P** **21 59 51.1 +2.9**
LSA XP sP 22 00 09.9 +0.9
LSA PP PP 22 01 53.5 +5.4
LSA S **S** **22 07 11.8 -1.3**
LSA XS sS 22 07 35.1 -2.4
LSA AMB AMB
comp=Z,5μm,14.6s
LSA LR LR
comp=N,9μm,18.0s,MS6.3
LSA LR LR
comp=E,21μm,18.7s,MS6.3
LSA LR LR
comp=Z,32μm,20.2s,MS6.4
LSA Lhasa 52.87 273 PFAKE 22 00 00.0 +12
LSA LR LR
comp=Z,33μm,19.0s,MS6.4
F08A Pendleton 52.95 61 P **P** **21 59 48.0 -0.8**
baz=53,SNR=22
F08A ⇓S **S** **22 07 15.2 +1.1**
baz=53
JCC Jacoby Creek 53.09 68 ⇑P **P** **21 59 49.9 +0.1**
baz=53
JCC ⇓S **S** **22 07 20.0 +3.9**
baz=53
J05A Fort Rock 53.14 64 P **P** **21 59 50.5 +0.3**
baz=53,SNR=100
J05A ⇓S **S** **22 07 19.1 +2.3**
baz=53
KHMM Horse Mountain 53.23 68 *e*P **P** **21 59 50.2 -0.6**
YBH Yreka Blue Hor 53.28 67 P **P** **21 59 51.0 -0.2**
comp=Z,38nm,0.6s,mb5.5,baz=324,slow=3.4,SNR=5.7
YBH S **S** **22 07 21.8 +3.1**
comp=Z,0.7nm,0.4s,baz=255,slow=22,SNR=4.5
YBH Yreka Blue Hor 53.28 67 P **P** **21 59 51.0 -0.2**
YBH S **S** **22 07 21.8 +3.2**
YBH pmax pmax
comp=Z,38nm,0.6s
YBH smax
comp=N,1.0nm,0.4s
YBH Yreka Blue Hor 53.28 67 *e*P **P** **21 59 50.6 -0.6**
comp=N,274nm,1.3s,mb6.0
YBH LR LR
comp=Z,13μm,22.0s,MS6.0
YBH Yreka Blue Hor 53.28 67 P **P** **21 59 51.6 +0.4**
baz=53,SNR=49
YBH ⇑S **S** **22 07 21.6 +3.0**
baz=53
K04A Chilquin 53.28 65 ⇑P **P** **21 59 51.4 +0.2**
baz=53
K04A ⇓S **S** **22 07 20.8 +2.1**
baz=53
I06A Prineville 53.31 63 P **P** **21 59 51.2 -0.2**
baz=53,SNR=13
I06A ⇓S **S** **22 07 20.9 +1.9**
baz=53
BATP Bataraza 53.31 232 *e*P **P** **21 59 53.3 +1.8**
M02C Callahan 53.41 67 P **P** **21 59 52.6 +0.4**
baz=53,SNR=33
M02C ⇓S **S** **22 07 23.8 +3.4**
baz=53
L04A Klamath Falls 53.47 66 P **P** **21 59 52.6 0.0**
baz=53,SNR=26
L04A ⇓S **S** **22 07 23.6 +2.4**
baz=53
N02C Big Bar 53.51 68 ⇑P **P** **21 59 52.8 -0.1**
baz=53,SNR=24
N02C ⇓S **S** **22 07 24.6 +2.8**
baz=53
WALA Waterton Lakes 53.51 55 *e*P **P** **21 59 51.8 -1.1**
comp=Z,100nm,0.6s,mb5.9
I07A Izee 53.62 63 P **P** **21 59 53.2 -0.5**
baz=53,SNR=31
I07A ⇑S **S** **22 07 24.4 +1.1**
baz=53
TKM2 Tokmak 2 53.62 295 P **P** **21 59 54.5 +0.8**
SNR=36
TKM2 Tokmak 2 53.62 295 *i* P **P** **21 59 54.3 +0.6**
ARU Arti 53.68 317 P **P** **21 59 53.0 -1.1**
comp=Z,1μm,0.4s
ARU Arti 53.68 317 *e*P **P** **21 59 52.8 -1.3**
ARU *e* pP 22 00 06.4 -2.3
ARU *e*SP 22 00 12.1
ARU *e* 22 00 58.8
ARU *e* 22 02 04.8
ARU *e*PPP 22 03 04.6
ARU *e*S **S** **22 07 24.0 0.0**
ARU *e*SS PKiKP 22 07 41.3 +5.4
ARU *e* 22 09 32.2
ARU *e*SS SS 22 11 02.9 -2.3
ARU MLR MLR
comp=N,31μm,18.0s,MS6.6
ARU MLR MLR
comp=E,43μm,18.0s,MS6.6
ARU MLR MLR
comp=Z,66μm,18.0s,MS6.7
ARU Arti 53.68 317 *e*P **P** **21 59 52.5 -1.7**
comp=Z,134nm,0.6s,mb6.0
ARU LR LR
comp=Z,14μm,21.0s,MS6.0
ULHL Ulahol 53.68 294 P **P** **21 59 58.2 +4.1**
SNR=7.8
M04C Macdoel 53.75 66 P **P** **21 59 54.9 +0.2**
baz=54,SNR=40
M04C ⇑S **S** **22 07 27.2 +2.2**
baz=54
J06A Christmas Vall 53.78 64 P **P** **21 59 54.9 0.0**
baz=54,SNR=98
J06A ⇓S **S** **22 07 27.7 +2.2**
baz=54
H08A Prairie City 53.81 62 P **P** **21 59 54.6 -0.5**
baz=54,SNR=48
H08A ⇓S **S** **22 07 26.3 +0.5**
baz=54
BSMT Bassoo Peak 53.81 57 P **P** **21 59 54.8 -0.3**
LVZ Lovozero 53.82 337 P **P** **21 59 54.3 -0.9**
comp=Z,235nm,0.7s,mb6.2,SNR=10
LVZ Lovozero 53.82 337*c* *i*P **P** **21 59 53.6 -1.6**
LVZ *e*PPP 22 03 07.8
LVZ *e*S **S** **22 07 21.0 -5.0**
LVZ pmax pmax
comp=Z,63nm,1.0s,mb5.5
LVZ pmax pmax
comp=N,15nm,0.9s
LVZ pmax pmax
comp=E,21nm,0.9s
LVZ smax
comp=N,3μm,14.1s
LVZ smax
comp=Z,2μm,14.4s
LVZ smax
comp=E,3μm,16.8s
LVZ MLR MLR
comp=N,25μm,22.0s,MS6.5
LVZ MLR MLR
comp=E,37μm,22.0s,MS6.5
LVZ MLR MLR
comp=Z,43μm,22.0s,MS6.5
LVZ Lovozero 53.82 337⇑ *e*P **P** **21 59 53.6 -1.6**
M03C McCloud 53.91 67 P **P** **21 59 55.7 -0.1**
baz=54,SNR=14
M03C ⇑S **S** **22 07 29.3 +2.1**
baz=54
K06A Valley Falls 54.01 64 ⇑P **P** **21 59 56.7 +0.1**
baz=54,SNR=120
K06A ⇑S **S** **22 07 30.0 +1.4**
baz=54
USP Ospenovka 54.02 296 P **P** **21 59 57.3 +0.6**
SNR=64
CHMS Chumysh 54.05 296 P **P** **21 59 57.4 +0.6**
SNR=35
KIPM Iron Peak 54.06 69 *e*P **P** **21 59 56.9 0.0**
KEV Kevo 54.10 341 P **P** **21 59 57.3 +0.1**
KEV pmax pmax
comp=Z,22nm,0.8s,mb5.1
KEV Kevo 54.10 341 *e*P **P** **21 59 56.0 -1.2**
comp=Z,7.4nm,0.5s,mb4.9
KEV LR LR
comp=Z,24μm,20.0s,MS6.2
WDC Whiskeytown Da 54.11 68 *e*P **P** **21 59 57.2 -0.1**
WDC pmax pmax
comp=Z,163nm,1.2s,mb5.8
WDC MLR MLR
comp=Z,11μm,22.0s,MS5.9
WDC Whiskeytown Da 54.11 68 *e*P **P** **21 59 57.1 -0.2**
comp=Z,163nm,1.2s,mb5.8
WDC LR LR
comp=Z,11μm,22.0s,MS5.9
WDC Whiskeytown Da 54.11 68 ⇑P **P** **21 59 57.0 -0.3**
baz=54,SNR=36

WDC ⇑S S 22 07 32.6 +2.7
baz=54
KBK Karagaybulak 54.16 296 P P 21 59 58.4 +0.7
SNR=38
L05A Lakeview 54.16 65 P P 21 59 58.1 +0.5
baz=54,SNR=78
L05A ⇓S S 22 07 33.1 +2.6
baz=54
O02C Red Bluff 54.23 68 P P 21 59 58.5 +0.3
baz=54,SNR=29
O02C ⇓S S 22 07 34.9 +3.5
baz=54
FRU Bishkek 54.23 296 ⇑*i*P P 21 59 58.0 -0.2
FRU *e* 22 01 01.0
FRU *e* 22 02 06.0
FRU *e*PPP 22 03 21.0
FRU *e*S S 22 07 33.0 +1.5
FRU pmax pmax
comp=Z,690nm,2.8s,mb6.1
FRU pmax pmax
comp=Z,3μm,14.0s
FRU smax
comp=E,4μm,8.5s
FRU MLR MLR
comp=N,40μm,19.0s,MS6.7
FRU MLR MLR
comp=E,40μm,19.0s,MS6.7
FRU MLR MLR
comp=Z,62μm,19.0s,MS6.7
I08A Drewsey 54.25 62 ⇑P P 21 59 58.0 -0.3
baz=54,SNR=64
I08A ⇓S S 22 07 32.9 +1.1
baz=54
H09A Durkee 54.27 61 P P 21 59 58.2 -0.2
baz=54,SNR=31
H09A ⇓S S 22 07 33.3 +1.2
baz=54
BMO Blue Mountains 54.35 61 *e*P P 21 59 58.5 -0.6
comp=Z,282nm,1.5s,mb6.0
BMO LR LR
comp=Z,12μm,22.0s,MS5.9
KZA Kyzart 54.35 295 P P 22 00 00.6 +1.5
SNR=17
P01C Double 8 Ranch 54.36 69 ⇓P P 21 59 58.8 -0.3
baz=54,SNR=12
P01C ⇑S S 22 07 36.8 +3.5
baz=54
APA Apatity 54.38 337 *b*/P P 21 59 57.0 -2.3
APA *e**PP pP 22 00 15.0 +1.2
APA *e* 22 02 00.0
APA */*PPP 22 03 20.0
APA */*S S 22 07 28.0 -5.5
APA */*PS 22 07 51.0
APA *e*SS SS 22 11 14.0 -2.2
APA pmax pmax
comp=Z,20nm,0.8s,mb5.1
APA pmax pmax
comp=Z,4μm,13.0s
APA MLR MLR
comp=Z,34μm,18.0s,MS6.5
M05C Lookout 54.42 66 P P 21 59 59.6 +0.1
baz=54,SNR=55
M05C ⇑S S 22 07 35.7 +1.6
baz=54
AAK Ala-Archa 54.43 296 P P 22 00 00.3 +0.7
SNR=37
AAK Ala-Archa 54.43 296 P P 21 59 59.2 -0.4
comp=Z,595nm,0.8s,mb6.6,SNR=24
AAK Ala-Archa 54.43 296 P P 21 59 59.6 0.0
SNR=34
AAK Ala-Archa 54.43 296 *e*P P 21 59 59.3 -0.3
AAK LR LR
comp=Z,14μm,22.0s,MS6.0
CHRT Chiangrai 54.56 257 ⇑P P 22 00 03.0 +2.4
comp=Z,2μm,1.2s
ARCES ARCESS Array B 54.58 341 P P 21 59 58.8 -1.9
comp=Z,10nm,0.6s,mb5.0,baz=47,slow=7.2,SNR=60
ARCES LR LR 22 27 28.4
comp=Z,34μm,21.3s,MS6.4,baz=32,slow=40
ARCES PKPPKP 22 30 02.7
comp=Z,1.3nm,0.8s,baz=193,slow=3.7,SNR=4.5
ARCES ARCESS Array B 54.58 341 P P 21 59 58.8 -1.9
ARCES LR LR 22 27 28.4
ARCES P'P' 22 30 02.7
ARE0 ARCESS Array S 54.58 341 *e*P P 22 00 00.1 -0.6
HATC Hat Creek Radi 54.59 67 P P 22 00 00.9 +0.1
baz=54,SNR=15
HATC ⇓S S 22 07 39.6 +3.3
baz=54
GASB Alder Springs 54.61 69 P P 22 00 01.5 +0.6
baz=54,SNR=49
GASB ⇑S S 22 07 40.1 +3.5
baz=54
I09A Lost Marbles R 54.67 62 P P 22 00 01.1 -0.2
baz=54,SNR=30
I09A ⇓S S 22 07 39.5 +2.1
baz=54
O03C Acorn Hollow, 54.78 68 ⇑P P 22 00 01.6 -0.6
baz=54
O03C ⇑S S 22 07 42.0 +3.0
baz=54
EKS2 Erkin-Say 54.81 296 P P 22 00 03.7 +1.2
SNR=15
HOPS Hopland 54.83 70 *e*P P 22 00 02.0 -0.5
comp=Z,334nm,1.4s,mb6.2
HOPS LR LR
comp=Z,23μm,22.0s,MS6.2
HOPS Hopland 54.83 70 P P 22 00 02.1 -0.4
baz=55,SNR=5.8
HOPS ⇓S S 22 07 42.6 +3.1
baz=55
M06C Likely Place G 54.90 66 ⇑P P 22 00 03.2 +0.1
baz=55,SNR=20
M06C ⇓S S 22 07 43.4 +2.8
baz=55
MSO Missoula 54.90 57 *e*P P 22 00 02.3 -0.7
comp=Z,208nm,1.4s,mb6.0
MSO LR LR
comp=Z,8μm,22.0s,MS5.8
L07A Adell 55.03 65 ⇑P P 22 00 04.2 +0.3
baz=55,SNR=53
L07A ⇑S S 22 07 42.4 +0.2
baz=55
K08A Mann Creek Ran 55.05 63 P P 22 00 04.2 +0.1
baz=55,SNR=156
K08A ⇓S S 22 07 44.1 +1.6
baz=55
O04C Chester 55.12 67 ⇓P P 22 00 04.7 0.0
baz=55,SNR=17
O04C ⇑S S 22 07 45.9 +2.4
baz=55
ELFS Eagle Lake Fie 55.14 67 ⇓P P 22 00 05.0 +0.3
baz=55
ELFS ⇑S S 22 07 45.7 +2.0
baz=55
WVOR Wild Horse Val 55.16 64 P P 22 00 04.9 0.0
WVOR pmax pmax
comp=Z,500nm,1.3s,mb6.4
WVOR Wild Horse Val 55.16 64 ⇑*i*P P 22 00 04.7 -0.2
comp=Z,503nm,1.3s,mb6.4
WVOR LR LR
comp=Z,23μm,22.0s,MS6.2
AML Almayashu 55.20 296 P P 22 00 08.2 +3.0
SNR=32
CHMT Chamberlain Mo 55.21 57 *e*P P 22 00 04.3 -1.0
MNRC McLaughlin Nat 55.27 69 ⇓P P 22 00 06.0 +0.3
baz=55,SNR=29
MNRC ⇓S S 22 07 50.0 +4.5
baz=55
ORV Oroville 55.38 68 P P 22 00 05.6 -0.9
baz=55,SNR=52
ORV ⇓S S 22 07 47.8 +0.8
baz=55
NSHM Saint Helena R 55.41 70 *e*P P 22 00 06.3 -0.4
KKTK Khon Kaen 55.42 252 ⇑P P 22 00 08.9 +2.1
comp=Z,5μm,0.6s
SUTB Sutter Butte 55.43 69 ⇑P P 22 00 05.9 -1.0
baz=55,SNR=5.8
SUTB ⇑S S 22 07 49.6 +2.0
baz=55
O05C Quincy 55.46 67 ⇑P P 22 00 06.8 -0.2
baz=55,SNR=23
O05C ⇓S S 22 07 48.9 +0.9
baz=55
KTK1 Kautokeino 55.47 342 ⇑/P P 22 00 07.0 -0.1
L08A Fields 55.48 64 P P 22 00 07.3 +0.1
baz=55,SNR=182
L08A ⇑S S 22 07 48.4 +0.1
baz=55
MCCM Marconi Confer 55.50 70 *e*P P 22 00 06.2 -1.1
MCCM Marconi Confer 55.50 70 ⇓P P 22 00 06.5 -0.8
baz=55
MCCM ⇓S S 22 07 49.2 +0.8
baz=55
K09A Rome 55.50 63 ⇓P P 22 00 07.1 -0.2
baz=55,SNR=104
K09A ⇑S S 22 07 49.7 +1.2
baz=55
OHCM Honcut 55.53 68 *e*P P 22 00 06.7 -0.9
FFC Flin Flon 55.56 44 P P 22 00 07.3 -0.5
comp=Z,1μm,1.2s,mb6.7,SNR=52
FFC Flin Flon 55.56 44 P P 22 00 07.3 -0.5
FFC LR LR
comp=Z,9μm,22.0s,MS5.8
N06A Buffalo Meadow 55.57 66 P P 22 00 07.9 +0.1
baz=55,SNR=87
N06A ⇑S S 22 07 50.0 +0.5
baz=55
KSH Kashi 55.60 292 P P 22 00 09.8 +1.8
KSH PCP PcP 22 01 08.8 +1.6
KSH PP PP 22 02 16.6 +4.0
KSH PPP 22 03 32.3
KSH SCP ScP 22 04 59.6 -1.9
KSH PCS PcS 22 05 07.8 +0.4
KSH S S 22 07 48.0 -1.8
KSH SCS ScS 22 09 48.0 -4.4
KSH SS SS 22 11 33.6 -1.8
KSH AMB AMB
comp=Z,163nm,1.0s,mb6.0
KSH AMB AMB
comp=Z,5μm,4.3s
KSH LR LR
comp=N,50μm,16.8s,MS7.0
KSH LR LR
comp=E,83μm,16.5s,MS7.0
KSH LR LR
comp=Z,65μm,18.4s,MS6.8
CVS Carmenet Viney 55.61 70 ⇑P P 22 00 07.5 -0.7
baz=55,SNR=5.6
CVS ⇓S S 22 07 52.2 +2.1
baz=55
Q03C Winters 55.69 69 ⇓P P 22 00 09.2 +0.5
baz=55
Q03C ⇓S S 22 07 54.5 +3.5
baz=55
FARB Farallon Islan 55.72 71 ⇓P P 22 00 08.1 -0.8
baz=56
FARB ⇑S S 22 07 53.0 +1.5
baz=56
TMCR Tamitsa 55.72 332 *e*P P 22 00 07.3 -1.7
TMCR pmax pmax
comp=Z,60nm,0.8s,mb5.7
TRO Tromso 55.75 344 ⇑*i*P P 22 00 06.2 -2.9
TRO *e*S S 22 07 53.5 +1.6
TRO AMS AMS 22 31 52.1
comp=Z,15μm,12.4s,MS6.3
BEKR Beckwourth 55.84 67 ⇓P P 22 00 09.4 -0.4
baz=56,SNR=9.9
BEKR ⇓S S 22 07 54.4 +1.2
baz=56
CHTO Chiang Mai 55.87 257 P P 22 00 12.4 +2.4
SNR=679
CHTO Chiang Mai 55.87 257 P P 22 00 12.3 +2.3
CHTO pmax pmax
comp=Z,690nm,1.0s,mb6.6
CHTO Chiang Mai 55.87 257 ⇑*i*P P 22 00 12.1 +2.0
comp=Z,692nm,0.9s,mb6.7
CHTO LR LR
comp=Z,14μm,19.0s,MS6.1
Q04C Lincoln 55.92 69 ⇑P P 22 00 10.0 -0.4
baz=56
Q04C ⇓S S 22 07 57.1 +2.9
baz=56
M08A Happy Creek Ra 55.94 65 ⇓P P 22 00 10.9 +0.4
baz=56,SNR=88
M08A ⇑S S 22 07 56.5 +2.1
baz=56
O06A Flanigan 55.95 67 ⇑P P 22 00 10.5 -0.1
baz=56,SNR=20
O06A ⇑S S 22 07 56.3 +1.7
baz=56
L09A Wilkinson Ranc 55.97 64 P P 22 00 11.1 +0.4
baz=56,SNR=30
L09A ⇑S S 22 07 57.6 +2.8
baz=56
FCC Fort Churchill 56.02 37 *e*P P 22 00 10.3 -0.8
N07B Gerlach 56.04 65 ⇓P P 22 00 11.3 0.0
baz=56
N07B ⇑S S 22 07 57.2 +1.4
baz=56
SUMG Summit 56.05 6 *e*P P 22 00 11.5 +0.2
P05C Yuba Gap, Truc 56.07 68 ⇓P P 22 00 10.9 -0.5
baz=56,SNR=12
P05C ⇑S S 22 07 57.8 +1.7
baz=56
HRY Holter Researc 56.09 56 *e*P P 22 00 11.2 -0.4
SAC San Andreas 56.14 71 *e*P P 22 00 11.7 -0.2
SAC *e**PP pP 22 00 24.7 -1.9
CM31 Chiang Mai Arr 56.14 257 PFAKE 22 00 20.0 +8.0
CM31 LR LR
comp=Z,15μm,22.0s,MS6.0
BDM Black Diamond 56.22 70 ⇓P P 22 00 12.1 -0.4
baz=56
BDM ⇑S S 22 08 01.0 +2.9
baz=56
P06A Stead Airport, 56.23 67 ⇑P P 22 00 12.6 0.0
baz=56
P06A ⇓S S 22 08 01.3 +3.0
baz=56
EGMT Eagleton 56.30 54 *e*P P 22 00 12.2 -0.9
comp=Z,354nm,1.4s,mb6.2
EGMT LR LR
comp=Z,29μm,22.0s,MS6.3
LRM Limekiln Ridge 56.34 57 *e*P P 22 00 12.8 -0.6
LAVA Lava Cap Winer 56.35 68 P P 22 00 13.0 -0.5
baz=56,SNR=26
LAVA ⇑S S 22 08 03.1 +3.2
baz=56
KK31 Karatay Array 56.35 299 *i*P P 22 00 12.7 -0.8
KKAR Karatay Array 56.35 299 *i*P P 22 00 12.7 -0.8
KKAR pmax pmax
comp=Z,34nm,0.8s,mb5.4
JRSC Jasper Ridge 56.37 71 ⇑P P 22 00 12.7 -0.8
baz=56
JRSC ⇓S S 22 08 01.5 +1.4
baz=56
KKM Kota Kinabalu 56.47 232 P P 22 00 16.2 +2.0
KKM Kota Kinabalu 56.47 232 ⇑*e*P P 22 00 15.2 +1.0
M09A Marrel Ranch, 56.49 64 P P 22 00 14.8 +0.4
baz=56,SNR=52
M09A ⇑S S 22 08 03.7 +2.0
baz=56
O07A Toulon 56.50 66 P P 22 00 14.7 +0.1
baz=56,SNR=98
O07A ⇑S S 22 08 02.7 +0.8
baz=56
WENL Wente Brothers 56.51 70 ⇓P P 22 00 14.2 -0.3
baz=56,SNR=5.8
WENL ⇑S S 22 08 04.6 +2.6
baz=56
PAHR Pah Rah Range 56.51 67 *e*P P 22 00 19.1 +4.5
comp=Z,358nm,1.3s,mb6.2
N08A GE Springer Mi 56.52 65 P P 22 00 14.7 +0.1
baz=56,SNR=79
N08A ⇑S S 22 08 04.0 +1.8
baz=56
DLMT Dillon 56.56 58 *e*P P 22 00 14.2 -0.7
WCN Washoe City 56.56 67 ⇑P P 22 00 14.8 -0.2
baz=56,SNR=13
WCN ⇑S S 22 08 05.2 +2.5
baz=56
R04C Big Horse Ranc 56.57 69 ⇓P P 22 00 14.2 -0.8
baz=56
R04C ⇑S S 22 08 04.7 +1.9
baz=56
BNLO Ben Lomond (Sa 56.59 71 ⇓P P 22 00 14.1 -1.0
baz=56,SNR=6.4
BNLO ⇓S S 22 08 04.9 +1.9
baz=56
SLGI Shiliguri 56.69 272 *ex* x 21 55 17.5
HLID Hailey 56.77 60 *e*P P 22 00 15.2 -1.2
comp=Z,430nm,1.6s,mb6.2
HLID LR LR
comp=Z,17μm,21.0s,MS6.1
R05C Kirkwood Meado 56.78 68 ⇓P P 22 00 16.3 -0.1
baz=56,SNR=23
R05C ⇓S S 22 08 07.0 +1.6
baz=56
MCMT McKenzie Canyo 56.78 58 *e*P P 22 00 15.6 -0.9
N09A Rock Creek Ran 56.82 65 P P 22 00 17.1 +0.3
baz=57,SNR=108
N09A ⇓S S 22 08 08.2 +2.1
baz=57
O08A Rochester Mine 56.83 65 ⇓P P 22 00 17.1 +0.3
baz=57
O08A ⇓S S 22 08 08.6 +2.3
baz=57
S04C Ingram Canyon, 56.84 70 P P 22 00 16.3 -0.6
baz=57,SNR=12
S04C ⇑S S 22 08 09.0 +2.7
baz=57
BOZ Bozeman (W) 56.89 57 *e*P P 22 00 16.9 -0.4
BOZ MLR MLR
comp=Z,16μm,22.0s,MS6.1
P07A Fallon 56.91 67 ⇓P P 22 00 17.5 +0.2
baz=57
P07A ⇓S S 22 08 10.3 +3.1
baz=57
M10A I.L. Ranch, Tu 56.94 63 P P 22 00 18.1 +0.5
baz=57,SNR=76
M10A ⇓S S 22 08 09.3 +1.7
baz=57
CMB Columbia Colle 57.04 69 *e*P P 22 00 17.0 -1.3
CMB pmax pmax
comp=Z,235nm,1.4s,mb6.0
CMB MLR MLR
comp=Z,22μm,22.0s,MS6.2
CMB Columbia Colle 57.04 69 *e*P P 22 00 17.0 -1.4
comp=Z,235nm,1.4s,mb6.0
CMB LR LR
comp=Z,22μm,22.0s,MS6.2
CMB Columbia Colle 57.04 69 P P 22 00 18.0 -0.3
baz=57,SNR=36
CMB ⇓S S 22 08 11.9 +3.0
baz=57
TSM Tawau 57.18 229 P P 22 00 20.5 +1.2
PACP Pacheco Peak 57.20 70 ⇓P P 22 00 19.0 -0.4
baz=57,SNR=16
PACP ⇓S S 22 08 13.3 +2.3
baz=57
R06C Coleville 57.26 68 ⇑P P 22 00 20.0 +0.1
baz=57,SNR=60
R06C ⇓S S 22 08 13.5 +1.6
baz=57
SAO San Andreas Ge 57.26 71 *e*P P 22 00 19.2 -0.7
SAO MLR MLR
comp=Z,14μm,20.0s,MS6.1
P08A Dixie Valley 57.27 66 ⇓P P 22 00 20.5 +0.5
baz=57,SNR=14
P08A ⇓S S 22 08 15.3 +3.3
baz=57
BMN Battle Mountai 57.27 65 *e*P P 22 00 20.1 +0.1
BMN MLR MLR
comp=Z,19μm,22.0s,MS6.1
WAKR Walker 57.28 68 *e*P P 22 00 20.2 +0.1
Q07A Schurz 57.36 67 ⇑P P 22 00 20.4 -0.1
baz=57
Q07A ⇑S S 22 08 15.0 +1.9
baz=57
M11A Holland Ranch, 57.42 63 P P 22 00 21.7 +0.7
baz=57,SNR=34
M11A ⇑S S 22 08 16.8 +2.9
baz=57
GUN Gumba 57.43 275 *e*P P 22 00 22.5 +1.5
comp=Z,324nm,0.3s,mb6.8
HAST UC Hastings Re 57.45 71 ⇑P P 22 00 20.4 -0.8
baz=57,SNR=24
HAST ⇓S S 22 08 15.8 +1.4
baz=57
S06C San Francisco 57.46 69 P P 22 00 20.9 -0.4
baz=57,SNR=70
S06C ⇓S S 22 08 17.6 +3.1
baz=57
O09A Fish Creek Ran 57.47 65 P P 22 00 21.6 +0.3
baz=57,SNR=96
O09A ⇓S S 22 08 17.2 +2.7
baz=57
N10A Dunphy 57.49 64 ⇑P P 22 00 21.9 +0.4
baz=57,SNR=5.0
N10A ⇓S S 22 08 18.0 +3.1
baz=57
S05C Merced 57.53 69 ⇑P P 22 00 20.8 -1.0
baz=57
S05C ⇑S S 22 08 16.9 +1.5
baz=57
QLMT Earthquake Lak 57.54 57 *e*P P 22 00 21.8 0.0
NST Nakhon Sawan 57.55 254 ⇓P P 22 00 24.8 +2.9
comp=Z,232nm,0.8s,mb6.3
T05C Eagle Field, D 57.63 70 ⇑P P 22 00 22.7 +0.2
baz=57
T05C ⇑S S 22 08 20.6 +3.9
baz=57
JMIC Jan Mayen 57.73 355 P P 22 00 22.9 -0.2
comp=Z,242nm,0.8s,mb6.3,baz=35,slow=5.4,SNR=14
JMIC Jan Mayen 57.73 355 ⇑*i*P P 22 00 23.6 +0.5
JMIC *e*S S 22 08 18.4 +0.4
JMIC AMS AMS 22 24 17.8
comp=Z,12μm,17.6s,MS6.1
AB31 Akbulak array 57.76 310 *i*P P 22 00 22.4 -1.0
O10A Cortez Mining, 57.78 64 ⇑P P 22 00 23.9 +0.3
baz=58,SNR=42
O10A ⇓S S 22 08 20.9 +2.3
baz=58
R07C Lee Vining 57.79 68 ⇑P P 22 00 23.9 +0.4
baz=58
R07C ⇑S S 22 08 21.1 +2.3
baz=58
GCMT Greycliff 57.82 56 *e*P P 22 00 24.0 +0.2
N11A Elko Archery C 57.86 64 ⇑P P 22 00 24.3 +0.3
baz=58
N11A ⇑S S 22 08 21.8 +2.1
baz=58
AKTK Aktyubinsk 57.88 312 P P 22 00 23.2 -1.1
AKTK S S 22 08 22.8 +2.8
AKTO Aktyubinsk 57.88 312 P P 22 00 23.2 -1.0
comp=Z,28nm,0.6s,mb5.5,baz=61,slow=8.3,SNR=43
AKTO S S 22 08 22.8 +2.8
comp=Z,1.8nm,0.8s,baz=3.1,slow=22,SNR=1.7
AKTO Aktyubinsk 57.88 312 P P 22 00 23.2 -1.0
AKTO S S 22 08 22.8 +2.8
AKTO pmax pmax
comp=Z,28nm,0.6s,mb5.5
AKTO smax
comp=N,2.0nm,0.8s
KKN Kakani 57.89 275 *e*P P 22 00 25.8 +1.5
comp=N,772nm,0.6s,mb6.9
KKN Kakani 57.89 275 *e*P P 22 00 25.8 +1.5
KKN pmax pmax
comp=Z,772nm,0.6s,mb6.9
V03C Hunter Liggett 57.89 71 P P 22 00 24.2 -0.1
baz=58,SNR=6.2
V03C ⇑S S 22 08 22.8 +2.6
baz=58
YMR Madison River 57.89 57 ⇑*e*P P 22 00 24.5 +0.1
YMR LR LR
comp=Z,15μm,22.0s,MS6.1
P09A Austin 57.91 65 ⇑P P 22 00 24.6 +0.2
baz=58,SNR=28
P09A ⇓S S 22 08 23.4 +3.0
baz=58
Q08A Gabbs 57.92 67 ⇓P P 22 00 24.5 0.0
baz=58,SNR=79
Q08A ⇑S S 22 08 22.8 +2.4
baz=58
M12A Wells 57.92 62 P P 22 00 24.9 +0.5
baz=58,SNR=56
M12A ⇑S S 22 08 23.7 +3.2
baz=58
U04C Hernandez Rese 57.93 71 ⇓P P 22 00 24.3 -0.3
baz=58,SNR=16
U04C ⇑S S 22 08 23.3 +2.7
baz=58
PKI Pulchoki 57.96 275 *e*P P 22 00 26.1 +1.3
comp=Z,452nm,0.6s,mb6.7
PKI Pulchoki 57.96 275 *e*P P 22 00 26.1 +1.3
PKI pmax pmax
comp=Z,452nm,0.6s,mb6.7
NVAR Mina Array Bea 57.99 67 P P 22 00 25.1 0.0
comp=Z,25nm,0.5s,mb5.5,baz=305,slow=6.1,SNR=175
NVAR S S 22 08 25.6 +4.1
comp=Z,0.8nm,0.7s,baz=41,slow=0.5,SNR=3.5

NVAR PKPPKP 22 30 06.7
comp=Z,1.5nm,0.8s,baz=90,slow=5.4,SNR=3.5
LOF Lofoten 58.00 345 *eP* **P 22 00 25.2 +0.1**
YNR Norris Junctio 58.01 57⇑*iP* **P 22 00 25.9 +0.8**
YFT Old Faithful 58.10 57 *eP* **P 22 00 27.3 +1.5**
DMN Daman 58.12 275 *eP* **P 22 00 27.6 +1.7**
comp=Z,969nm,0.7s,mb6.9
T06C Millerton Lake 58.13 69⇑P **P 22 00 25.0 -0.9**
baz=58,SNR=14
T06C ⇑S **S 22 08 24.4 +1.2**
baz=58
GKN Gorkha 58.14 276 *eP* **P 22 00 27.3 +1.3**
KCC Kaiser Creek 58.14 69 P **P 22 00 25.8 -0.3**
baz=58,SNR=23
KCC ⇑S **S 22 08 26.0 +2.6**
baz=58
R08A Mina 58.16 67⇓P **P 22 00 26.2 0.0**
baz=58,SNR=24
R08A ⇑S **S 22 08 26.6 +3.0**
baz=58
ELK Elko 58.19 63 *eP* **P 22 00 26.7 +0.3**
ELK MLR MLR
comp=Z,21μm,22.0s
SHBG Sahibganj 58.21 272 *ex* x 22 00 38.0
MLAC Mammoth Lakes 58.22 68⇓P **P 22 00 27.0 +0.4**
baz=58
MLAC ⇑S **S 22 08 28.0 +3.6**
baz=58
N12A Clover Valley, 58.23 63 P **P 22 00 27.0 +0.3**
baz=58,SNR=49
N12A ⇓S **S 22 08 26.7 +2.2**
baz=58
P10A Eureka 58.25 65 P **P 22 00 27.2 +0.4**
baz=58,SNR=14
P10A ⇑S **S 22 08 27.8 +3.0**
baz=58
LKWY Lake 58.26 57 *eP* **P 22 00 28.5 +1.6**
LKWY pmax pmax
LKWY comp=Z,104nm,0.8s,mb5.9 MLR MLR
comp=Z,23μm,21.0s,MS6.3
LKWY Lake 58.26 57 *eP* **P 22 00 28.5 +1.7**
comp=Z,104nm,0.8s,mb5.9
LKWY LR LR
comp=Z,23μm,21.0s,MS6.3
U05C Westside ANR, 58.34 70⇓P **P 22 00 27.0 -0.5**
baz=58
U05C ⇓S **S 22 08 30.4 +4.4**
baz=58
PKD Parkfield 58.36 71⇑P **P 22 00 26.9 -0.7**
baz=58,SNR=7.6
PKD ⇓S **S 22 08 28.4 +2.2**
baz=58
O11A Cowboy Ranch, 58.36 64⇓P **P 22 00 27.8 +0.2**
baz=58
O11A ⇓S **S 22 08 28.3 +2.0**
baz=58
Q09A Carvers 58.37 66⇓P **P 22 00 27.7 +0.1**
baz=58,SNR=18
Q09A ⇓S **S 22 08 29.3 +3.0**
baz=58
V04C Ramage Ranch, 58.37 71⇑P **P 22 00 27.4 -0.2**
baz=58
V04C ⇓S **S 22 08 29.1 +2.8**
baz=58
M13A Montello 58.37 62 P **P 22 00 27.8 +0.1**
baz=58,SNR=83
M13A ⇓S **S 22 08 28.9 +2.5**
baz=58
IMW Indian Meadow 58.42 58 *eP* **P 22 00 28.7 +0.7**
FLWY Flagg Ranch 58.43 58 *eP* **P 22 00 27.7 -0.4**
DCID1 Drake Creek 58.50 58 *eP* **P 22 00 29.8 +1.2**
RRI2 Red Ridge 58.59 59⇑*iP* **P 22 00 29.6 +0.4**
comp=Z,65nm,0.4s,mb6.0
JOF Joensuu 58.59 334 *ep* **P 22 00 27.4 -1.8**
comp=Z,20nm,0.4s,mb5.5
MOOW Moose Ponds 58.63 58 *eP* **P 22 00 30.0 +0.5**
comp=Z,170nm,1.2s,mb6.0
N13A Wendover, West 58.69 63⇓P **P 22 00 30.1 +0.2**
baz=58,SNR=24
N13A ⇓S **S 22 08 33.3 +2.7**
baz=58
TPAW Teton Pass 58.69 58 *eP* **P 22 00 29.5 -0.4**
P11A Circle Ranch, 58.70 65⇓P **P 22 00 30.0 +0.1**
baz=58,SNR=16
P11A ⇑S **S 22 08 31.9 +1.2**
baz=58
HELL Mitchell Peak, 58.75 69 P **P 22 00 29.5 -0.8**
baz=58,SNR=52
HELL ⇑S **S 22 08 33.2 +1.9**
baz=58
O12A Currie 58.78 63 P **P 22 00 30.7 +0.2**
baz=58,SNR=108
O12A ⇓S **S 22 08 34.2 +2.5**
baz=58
V05C Boulder Hill, 58.79 70⇓P **P 22 00 30.4 -0.2**
baz=58
V05C ⇓S **S 22 08 34.4 +2.6**
baz=58
LOHW Long Hollow 58.79 58 *eP* **P 22 00 30.2 -0.4**
SNOW Snow King Moun 58.81 58 *eP* **P 22 00 31.8 +1.0**
REDW Red Top Meadow 58.83 58 *eP* **P 22 00 30.2 -0.6**
R09A Tonopah 58.83 67 P **P 22 00 30.6 -0.3**
baz=59,SNR=127
R09A ⇓S **S 22 08 35.5 +3.2**
baz=59
TPH Tonopah 58.86 67 *eP* **P 22 00 30.9 -0.1**
HVU Hansel Valley 58.86 61 *eP* **P 22 00 31.2 +0.1**
RCTC Rector, Farmer 58.88 70⇑P **P 22 00 30.0 -1.1**
baz=59
RCTC ⇑S **S 22 08 34.1 +1.2**
baz=59
KOLN Koldanda 58.95 277 *eP* **P 22 00 33.0 +1.3**
comp=Z,623nm,0.9s,mb6.7
TIN Tinemaha 58.97 68⇑P **P 22 00 31.5 -0.3**
baz=59
TIN ⇑S **S 22 08 38.0 +3.9**
baz=59
LAO LASA Array 58.97 53 *eP* **P 22 00 32.1 +0.2**
LAO LR LR
comp=Z,37μm,22.0s,MS6.5
S09A Goldfield 59.09 67⇑P **P 22 00 32.3 -0.4**
baz=59,SNR=84
S09A ⇑S **S 22 08 39.8 +4.0**
baz=59
AHID Auburn Hatcher 59.10 59 *eP* **P 22 00 33.1 +0.4**
AHID LR LR
comp=Z,10μm,20.0s,MS6.0
SMMC Simmler 59.11 71⇓P **P 22 00 32.1 -0.7**
baz=59
SMMC ⇓S **S 22 08 38.8 +2.8**
baz=59
P12A McGill 59.23 64 P **P 22 00 33.7 0.0**
baz=59,SNR=54
P12A ⇑S **S 22 08 40.6 +3.1**
baz=59
R10A Warm Springs 59.24 66 P **P 22 00 33.5 -0.2**
baz=59,SNR=35
R10A ⇑S **S 22 08 39.9 +2.2**
baz=59
VES Vestal, Richgr 59.29 70⇓P **P 22 00 32.7 -1.4**
baz=59,SNR=12
VES ⇓S **S 22 08 39.1 +0.7**
baz=59
BGU Big Grassy Mou 59.30 62⇑*iP* **P 22 00 33.9 -0.2**
SPUT South Promonto 59.36 61 *eP* **P 22 00 34.1 -0.4**
CWC Cottonwood Cre 59.47 69⇑P **P 22 00 34.8 -0.5**
baz=59,SNR=26
CWC ⇓S **S 22 08 43.0 +2.4**
baz=59
PKM Peak Mountain 59.50 71⇓P **P 22 00 35.3 -0.2**
baz=59,SNR=23
PKM ⇓S **S 22 08 44.2 +3.2**
baz=59
GRAC Grapevine Rang 59.50 68 P **P 22 00 35.5 0.0**
baz=59,SNR=27
GRAC ⇑S **S 22 08 44.7 +3.7**
baz=59
JOSI Joshimath 59.51 282 *ex* x 22 00 18.6
Q12A Willow Creek R 59.57 64 P **P 22 00 36.1 +0.1**
baz=59,SNR=37
Q12A ⇑S **S 22 08 43.0 +1.1**
baz=59
PECR Pechory 59.58 324 *i* P **P 22 00 34.4 -1.6**
PECR *e* 22 00 58.0
PECR *eS* S 22 09 04.0 +22
PECR *e* 22 10 15.0
PECR pmax pmax
comp=Z,220nm,2.0s,mb5.8
PECR pmax pmax
comp=Z,3μm,13.0s
PECR MLR MLR
comp=N,33μm,20.0s,MS6.6
PECR MLR MLR
comp=Z,11μm,20.0s,MS6.0
PECR MLR MLR
comp=E,28μm,19.0s,MS6.6
TRCR Troy Canyon 59.61 66⇑*iP* **P 22 00 35.7 -0.6**
MOR8 Moi Rana 59.61 344 *eP* **P 22 00 33.7 -2.6**
KLP Kalpa 59.63 284 *eP* **P 22 00 36.7 +0.3**
HWUT Hardware Ranch 59.64 60 *eP* **P 22 00 36.6 +0.1**
HWUT LR LR
comp=Z,16μm,22.0s,MS6.1
STOK Stokkvaagen 59.72 344 *eP* **P 22 00 35.9 -1.1**
CAL Calcutta 59.73 269 *eP* **P 22 00 38.5 +1.4**
CAL *ex* x 22 04 29.0
CAL *ex* x 22 08 39.7
CAL AMP 22 30 31.6
comp=Z,12μm,15.6s
ISA Isabella 59.77 70 *eP* **P 22 00 35.9 -1.5**
ISA MLR MLR
comp=Z,4μm,22.0s,MS5.5
ISA Isabella 59.77 70 P **P 22 00 36.0 -1.3**
baz=60,SNR=14
ISA ⇓S **S 22 08 45.1 +0.6**
baz=60
LGTI Lohaghat 59.86 280 *ex* x 22 00 44.0
DAC Darwin (Calif) 59.87 69 *eP* **P 22 00 37.5 -0.5**
SBC Santa Barbara 59.88 71⇑P **P 22 00 37.5 -0.6**
baz=60
SBC ⇑S **S 22 08 48.6 +2.7**
baz=60
DUG Dugway 59.92 62 *eP* **P 22 00 38.4 +0.1**
DUG pmax pmax
comp=Z,221nm,1.2s,mb6.1
DUG MLR MLR
comp=Z,9μm,22.0s,MS5.9
DUG Dugway 59.92 62 *eP* **P 22 00 38.4 +0.1**
comp=Z,222nm,1.2s,mb6.1
DUG LR LR
comp=Z,9μm,22.0s,MS5.9
FRB Frobisher Bay 59.92 22 P **P 22 00 36.8 -1.6**
comp=Z,155nm,0.7s,mb6.1,baz=335,slow=7.7,SNR=51
FRB S **S 22 08 41.0 -5.4**
comp=Z,9.2nm,0.9s,baz=158,slow=16,SNR=2.2
FRB LR LR 22 27 43.2
comp=Z,22μm,21.8s,MS6.3,baz=335,slow=37
FRB Frobisher Bay 59.92 22 P **P 22 00 36.8 -1.6**
FRB S **S 22 08 41.0 -5.4**
FRB pmax pmax
comp=Z,155nm,0.7s
FRB smax
comp=N,9.0nm,0.9s
FRB MLR MLR
comp=Z,22μm,21.8s
FRB Frobisher Bay 59.92 22 P **P 22 00 36.8 -1.6**
FRB S **S 22 08 41.0 -5.4**
FRB LR LR 22 27 43.2
BW06 **Boulder Array 59.93 58** *eP* **P 22 00 38.3 -0.2**
BW06 LR LR
comp=Z,14μm,21.0s,MS6.1
PDAR Pinedale Array 59.93 58 P **P 22 00 38.3 -0.1**
comp=Z,106nm,0.9s,mb5.8,baz=312,slow=2.6,SNR=333
PDAR S **S 22 08 48.0 +1.5**
comp=Z,0.5nm,0.6s,baz=162,slow=11,SNR=2.1
PDAR PKPPKP 22 30 04.5
comp=Z,3.2nm,0.9s,baz=108,slow=2.0,SNR=7.8
ARVC Arvin 59.93 70⇑P **P 22 00 37.2 -1.3**
baz=60
ARVC ⇓S **S 22 08 47.4 +0.9**
baz=60
NOQ North Oquirrh 59.99 61 *eP* **P 22 00 39.1 +0.2**
TCUT Toone Canyon 60.06 61 *eP* **P 22 00 39.7 +0.3**
MPMC Manual Prospec 60.08 69 P **P 22 00 39.1 -0.4**
baz=60,SNR=72
MPMC ⇓S **S 22 08 49.9 +1.5**
baz=60
CTU Camp Tracy 60.16 61 *eP* **P 22 00 40.1 0.0**
FURC Furnace Creek, 60.16 68 P **P 22 00 39.9 -0.2**
baz=60,SNR=107
FURC ⇓S **S 22 08 52.0 +2.4**
baz=60
NNT Nongplab 60.20 252 P **P 22 00 43.2 +2.9**
BSC Santa Cruz Isl 60.24 72⇓P **P 22 00 39.4 -1.1**
baz=60
BSC ⇑S **S 22 08 52.8 +2.4**
baz=60
SFJD Kangerlussuaq 60.26 12 P **P 22 00 39.6 -1.1**
comp=Z,190nm,0.9s,mb6.1,baz=322,slow=6.6,SNR=34
SFJD S **S 22 08 45.7 -5.1**
comp=Z,3.4nm,0.5s,baz=30,slow=17,SNR=1.9
SFJD Kangerlussuaq 60.26 12 *i* P **P 22 00 39.5 -1.2**
SFJD *i* S **S 22 08 42.4 -8.4**
SFJD
comp=Z,23μm,19.0s
SFJD Kangerlussuaq 60.26 12 P **P 22 00 39.8 -0.9**
DLH Dalhousie 60.32 286 *eP* **P 22 00 42.0 +0.9**
OSI Osito Adit 60.35 71⇑P **P 22 00 40.8 -0.5**
baz=60
OSI ⇓S **S 22 08 54.5 +2.6**
baz=60
LRMC Laurel Mountai 60.36 69 P **P 22 00 40.8 -0.6**
baz=60,SNR=32
LRMC ⇑S **S 22 08 52.8 +0.7**
baz=60
HNR Honiara 60.40 177 LR LR 22 22 32.2
comp=Z,24μm,21.3s,MS6.3,baz=360,slow=32
HNR Honiara 60.40 177 *eP* **P 22 00 39.9 -1.7**
HNR pmax pmax
comp=Z,249nm,1.1s,mb6.2
HNR MLR MLR
comp=Z,29μm,22.0s,MS6.4
HNR Honiara 60.40 177 *eP* **P 22 00 39.9 -1.8**
comp=Z,249nm,1.1s,mb6.2
HNR LR LR
comp=Z,29μm,22.0s,MS6.4
SDNR Sundarnagar 60.44 284 *eP* **P 22 00 42.8 +0.9**
SDNR *ex* x 22 01 28.0
NLU North Lily Min 60.49 62 *eP* **P 22 00 42.6 +0.3**
BLG Laguna Peak 60.50 71⇑P **P 22 00 41.3 -1.0**
baz=60
BLG ⇑S **S 22 08 55.2 +1.4**
baz=60
U10A Ash Meadows, A 60.51 68 P **P 22 00 42.4 0.0**
baz=60,SNR=30
U10A ⇓S **S 22 08 56.7 +2.7**
baz=60
THN Thein Dam 60.55 286 *eP* **P 22 00 42.7 +0.1**
KAF Kangasniemi 60.58 336 *ep* **P 22 00 41.5 -1.4**
comp=Z,45nm,0.7s,mb5.7,baz=33,slow=6.4
KAF Kangasniemi 60.58 336 *eP* **P 22 00 41.5 -1.4**
KAF pmax pmax
comp=Z,45nm,0.7s,mb5.7
DAU Daniels Canyon 60.63 61 *eP* **P 22 00 43.6 +0.4**
MPU Maple Canyon 60.70 62 *eP* **P 22 00 44.0 +0.3**
MPU LR LR
comp=Z,13μm,20.0s,MS6.1
PONG Pong 60.74 286 *eP* **P 22 00 46.0 +2.0**
SNCC San Nicolas Is 60.82 72 *eP* **P 22 00 42.9 -1.6**
comp=Z,0.3nm,1.2s
SNCC *ep*P pP 22 00 58.6 -0.7
SNCC LR LR
comp=Z,15μm,20.0s
SNCC San Nicolas Is 60.82 72⇑P **P 22 00 43.8 -0.7**
baz=61
SNCC ⇑S **S 22 08 59.8 +1.9**
baz=61
BHK Bhakra 60.83 285 *ex* x 22 00 51.0
DECC Green Verdugo 60.84 71⇑P **P 22 00 43.8 -0.9**
baz=61
DECC S **S 22 08 59.6 +1.5**
baz=61
SHOC Shoshone 60.90 68 P **P 22 00 44.7 -0.3**
baz=61,SNR=10.0
SHOC ⇓S **S 22 09 00.6 +1.7**
baz=61
PMG Port Moresby 60.98 192 *iP* **P 22 00 44.8 -0.8**
PMG Port Moresby 60.98 192 *eP* **P 22 00 45.3 -0.3**
PMG LR LR
comp=Z,13μm,20.0s,MS6.1
GSC Goldstone 61.01 69 *eP* **P 22 00 45.2 -0.6**
GSC Goldstone 61.01 69 P **P 22 00 45.3 -0.5**
baz=61,SNR=27
GSC ⇑S **S 22 09 02.2 +1.9**
baz=61
MWC Mount Wilson 61.02 71 *eP* **P 22 00 45.0 -0.8**
U11A Corn Creek 61.06 67⇓P **P 22 00 46.0 -0.1**
baz=61,SNR=11
U11A ⇓S **S 22 09 04.6 +3.7**
baz=61
SHPR Sheep Range 61.13 67 *eP* **P 22 00 46.3 -0.3**
NIL Nilore 61.18 289 P **P 22 00 49.2 +2.3**
comp=Z,269nm,0.9s,mb6.4,SNR=6.1
RRX Edison Barstow 61.18 69⇑P **P 22 00 46.3 -0.7**
baz=61
RRX ⇑S **S 22 09 04.1 +1.5**
baz=61
FIA1 FINESS Array S 61.20 336 *eP* **P 22 00 45.1 -2.0**
FINES FINESS Array B 61.20 336 P **P 22 00 46.0 -1.1**
comp=Z,21nm,0.5s,mb5.5,baz=35,slow=4.2,SNR=132
FINES PcP PcP 22 01 26.6 -2.8
comp=Z,16nm,0.6s,baz=25,slow=9.5,SNR=4.7
FINES PKPPKP 22 29 46.8
comp=Z,2.5nm,0.9s,baz=132,slow=3.9,SNR=7.2
FINES LR LR 22 30 46.8
comp=Z,33μm,21.6s,MS6.5,baz=26,slow=39
FINES FINESS Array B 61.20 336 P **P 22 00 46.1 -1.0**
FINES 22 01 26.6
FINES pmax pmax
comp=Z,21nm,0.5s
ARUT Antelope Range 61.22 65 *eP* **P 22 00 47.1 -0.2**
FMP Fort Macarthur 61.23 71⇓P **P 22 00 46.4 -1.0**
baz=61
FMP ⇑S **S 22 09 04.4 +1.2**
baz=61
BFSC Mount Baldy St 61.24 70⇓P **P 22 00 46.7 -0.7**
baz=61,SNR=15
BFSC ⇓S **S 22 09 05.1 +1.8**
baz=61
ULM Lac du Bonnet 61.35 44 P **P 22 00 47.1 -1.1**
comp=Z,34nm,0.7s,mb5.6,baz=313,slow=6.9,SNR=32
ULM S **S 22 09 04.5 -0.2**
comp=Z,4.9nm,0.9s,baz=213,slow=17,SNR=2.7
ULM LR LR 22 28 39.6
comp=Z,22μm,21.9s,MS6.3,baz=328,slow=37
ULM PKPPKP 22 30 04.1
comp=Z,5.6nm,0.9s,baz=111,slow=3.3,SNR=4.3
ULM Lac du Bonnet 61.35 44⇑*iP* **P 22 00 46.8 -1.3**
comp=Z,192nm,1.4s,mb6.0
ULM LR LR
comp=Z,35μm,22.0s,MS6.5
CIS Catalina Islan 61.38 71⇓P **P 22 00 47.2 -1.1**
baz=61
CIS ⇓S **S 22 09 06.3 +1.3**
baz=61
TUQ Turquoise Mtn. 61.43 68⇓P **P 22 00 48.2 -0.4**
baz=61,SNR=7.9
TUQ ⇑S **S 22 09 08.4 +2.7**
baz=61
TMUT Trail Mountain 61.43 62 *eP* **P 22 00 47.2 -1.5**
CCUT Cedar City 61.43 65⇑*iP* **P 22 00 48.2 -0.4**
MSU Marysvale 61.44 63 *eP* **P 22 00 48.9 +0.2**
PUL Pulkovo 61.44 333 *eP* **P 22 00 47.9 -0.8**
PUL *e* 22 03 02.4
PUL *e*PPP 22 04 33.3
PUL *eS* **S 22 08 58.0 -7.8**
PUL *eSS* SS 22 13 08.9 +1.7
PUL pmax pmax
comp=Z,133nm,0.8s,mb6.1
PUL pmax pmax
comp=N,154nm,0.9s
PUL pmax pmax
comp=E,150nm,0.9s
PUL smax
comp=N,5μm,21.8s
PUL smax
comp=Z,2μm,17.0s
PUL smax
comp=E,3μm,16.3s
PUL MLR MLR
comp=E,15μm,21.0s,MS6.5
PUL MLR MLR
comp=Z,39μm,21.0s,MS6.5
PUL MLR MLR
comp=N,30μm,20.0s,MS6.5
PUL Pulkovo 61.44 333⇑*eP* **P 22 00 48.8 +0.1**
U12A Valley of Fire 61.54 66⇑P **P 22 00 49.3 -0.1**
baz=61,SNR=19
U12A ⇓S **S 22 09 10.3 +3.2**
baz=61
NSS Namsos 61.55 344⇑*iP* **P 22 00 46.8 -2.6**
NSS *eS* S 22 09 08.4 +1.2
NSS AMS AMS 22 34 36.3
comp=Z,18μm,24.7s,MS6.1
SCI San Clemente I 61.59 72⇑P **P 22 00 48.9 -0.8**
baz=61
SCI ⇑S **S 22 09 09.9 +2.1**
baz=61
KKR Kurukshetra 61.61 283 *eP* **P 22 00 50.3 +0.4**
HEC Hector,Ludlow 61.61 69⇓P **P 22 00 49.4 -0.5**
baz=61,SNR=22
HEC ⇑S **S 22 09 10.8 +2.8**
baz=61
BBRC Big Bear Sol-O 61.66 70⇑P **P 22 00 49.3 -0.9**
baz=61
BBRC ⇑S **S 22 09 10.0 +1.4**
baz=61
V12A Nelson 61.85 67⇑P **P 22 00 51.2 -0.3**
baz=62,SNR=38
V12A ⇑S **S 22 09 14.2 +3.2**
baz=62
RSSD Black Hills 61.87 54 PFAKE 22 01 00.0 +8.4
RSSD LR LR
comp=Z,21μm,22.0s,MS6.2
RWWY Rawlins 61.93 58 *eP* **P 22 00 51.5 -0.5**
comp=Z,155nm,1.1s,mb6.0
SRU San Rafael 61.94 62 *eP* **P 22 00 51.5 -0.6**
MURC Murrieta 61.96 70⇓P **P 22 00 51.2 -1.0**
baz=62,SNR=8.8
MURC ⇑S **S 22 09 13.5 +1.1**
baz=62
GMRC Granite Mounta 62.04 69⇓P **P 22 00 52.3 -0.5**
baz=62,SNR=63
GMRC ⇑S **S 22 09 15.2 +1.8**
baz=62
W12A Cal Nev Ari 62.14 68⇑P **P 22 00 53.0 -0.4**
baz=62,SNR=6.9
W12A ⇑S **S 22 09 17.9 +3.3**
baz=62
NDI New Delhi 62.27 282 *eP* **P 22 00 54.0 -0.3**
NDI *ex* x 22 09 12.0
MOS Moscow 62.35 326*α iP* **P 22 00 53.4 -1.5**
MOS *e* pP 22 01 11.6 +1.9
MOS *i* 22 01 33.1
MOS *e* 22 03 10.4
MOS *e*PPP 22 04 44.6
MOS *eS* **S 22 09 12.9 -4.5**
MOS *e* 22 09 56.8
MOS *i* 22 10 36.5
MOS *eSS* SS 22 13 30.0 +8.5
MOS pmax pmax
comp=Z,60nm,0.7s,mb5.8
MOS pmax pmax
comp=N,73nm,0.5s
MOS pmax pmax
comp=E,29nm,0.5s
MOS MLR MLR
comp=N,30μm,21.0s,MS6.5
MOS MLR MLR
comp=Z,39μm,21.0s,MS6.5
MOS MLR MLR
comp=E,11μm,20.0s,MS6.5
FUNA Funafuti 62.38 156 PFAKE 22 01 10.0 +15
FUNA LR LR
comp=Z,29μm,20.0s,MS6.4
BELC Belle Mtn. 62.39 69 P **P 22 00 54.0 -1.0**
baz=62,SNR=32
BELC ⇑S **S 22 09 17.9 +0.1**
baz=62
PFO Pinyon Flat Ob 62.40 70 P **P 22 00 53.6 -1.5**
comp=Z,286nm,2.0s,mb6.1,SNR=23
PFO Pinyon Flat Ob 62.40 70 P **P 22 00 53.9 -1.2**
PFO Pinyon Flat Ob 62.40 70 *eP* **P 22 00 53.7 -1.4**
comp=Z,270nm,1.8s,mb6.1
PFO LR LR
comp=Z,3μm,21.0s,MS5.5
PFO Pinyon Flat Ob 62.40 70 P **P 22 00 54.2 -0.9**
baz=62,SNR=15
PFO ⇓S **S 22 09 18.5 +0.6**
baz=62

BHGR Bahadurgarh 62.44 282 *e*P **P 22 00 55.9 +0.5**
AYAN Aya Nagar 62.47 282 *e*x x 22 00 48.5
109C Camp Elliot, M 62.52 71 ⇑P **P 22 00 55.0 -0.9**
baz=62
109C ⇑S **S 22 09 20.3 +0.9**
baz=62
SONA Sohna 62.66 282 *e*P **P 22 00 56.7 -0.2**
W13A Hualapai Mount 62.85 67 P **P 22 00 58.0 -0.2**
baz=63,SNR=45
W13A ⇓S **S 22 09 26.0 +2.4**
baz=63
AGRA Agra 62.86 280 *e*P **P 22 00 57.8 -0.4**
BAR Barrett 62.92 71 *e*P **P 22 00 57.7 -0.9**
MONP Monument Peak 62.92 71 ⇓P **P 22 00 57.8 -0.8**
baz=63,SNR=12
MONP ⇓S **S 22 09 27.1 +2.6**
baz=63
KUDL Kundal 63.10 282 *e*P **P 22 00 58.2 -1.6**
PHWY Pilot Hill 63.13 57 *e*P **P 22 00 59.4 -0.6**
OBN Obninsk 63.22 326 P **P 22 01 00.0 -0.6**
comp=Z,352nm,0.7s,mb6.6,SNR=9.4
OBN Obninsk 63.22 326*c i*P **P 22 00 58.9 -1.7**
OBN *e* 22 01 32.9
OBN *e* 22 03 20.1
OBN *i* S **S 22 09 30.2 +2.0**
OBN *i* SS SS 22 13 34.4 -0.6
OBN pmax pmax
comp=Z,16nm,0.5s,mb5.4
OBN MLR MLR
comp=Z,41µm,19.0s,MS6.6
OBN Obninsk 63.22 326 *e*P **P 22 00 59.0 -1.6**
OBN LR LR
comp=Z,11µm,20.0s,MS6.0
W14A Seligman 63.23 67 ⇓P **P 22 01 00.9 +0.2**
baz=63
W14A ⇓S **S 22 09 32.4 +4.0**
baz=63
X13A Yucca 63.24 67 P **P 22 01 00.1 -0.6**
baz=63,SNR=41
X13A ⇑S **S 22 09 30.7 +2.2**
baz=63
SWSC Sam W. Stewart 63.26 70 P **P 22 00 59.8 -1.1**
baz=63,SNR=12
SWSC ⇓S **S 22 09 30.9 +2.2**
baz=63
PDMCI Parker Dam,Lak 63.27 68 P **P 22 01 00.2 -0.7**
baz=63,SNR=33
PDMCI ⇓S **S 22 09 30.9 +2.1**
baz=63
DVTC Desert V Tower 63.28 71 P **P 22 01 00.3 -0.6**
baz=63,SNR=11
DVTC ⇑S **S 22 09 30.7 +1.8**
baz=63
PV10 Paradox Valley 63.28 61 *e*P **P 22 01 01.0 0.0**
KSM Kuching 63.37 235 ⇑*i*P **P 22 01 03.6 +2.0**
Y12C Blythe 63.43 69 P **P 22 01 01.7 -0.3**
baz=63,SNR=28
Y12C ⇑S **S 22 09 32.9 +2.0**
baz=63
VSU Vasula 63.55 334*c i*P **P 22 01 01.9 -0.9**
VSU Vasula 63.55 334 ⇑*i*P **P 22 01 01.0 -1.8**
KHET Khetri 63.57 283 *e*P **P 22 01 01.9 -1.1**
PV01 Paradox Valley 63.71 61 *e*P **P 22 01 03.4 -0.5**
W15A Williams 63.73 66 ⇑P **P 22 01 04.3 +0.3**
baz=64,SNR=14
W15A ⇓S **S 22 09 39.0 +4.4**
baz=64
GLA Glamis 63.75 69 *e*P **P 22 01 03.6 -0.5**
GLA Glamis 63.75 69 P **P 22 01 03.8 -0.3**
baz=64,SNR=38
GLA ⇓S **S 22 09 36.2 +1.4**
baz=64
Y13A Salome 63.79 68 P **P 22 01 04.1 -0.3**
baz=64,SNR=10
Y13A ⇓S **S 22 09 37.7 +2.3**
baz=64
SMCO Snowmass 63.84 60 ⇑*i*P **P 22 01 04.6 -0.1**
comp=Z,78nm,0.8s,mb5.8
X14A Yava 63.87 67 P **P 22 01 05.2 +0.3**
baz=64,SNR=29
X14A ⇓S **S 22 09 40.3 +3.9**
baz=64
BLSP Bilaspur 63.93 273 *e*P **P 22 01 05.0 -0.3**
SNG Songkhla 63.98 247 P **P 22 01 08.0 +2.4**
comp=Z,1µm,1.0s,mb6.9
WUAZ Wupatki 64.00 65 *e*P **P 22 01 05.9 +0.1**
WUAZ LR LR
comp=Z,34µm,22.0s,MS6.5
ISCO Idaho Springs 64.13 58 P **P 22 01 07.1 +0.5**
ISCO pmax pmax
comp=Z,180nm,1.1s,mb6.0
ISCO Idaho Springs 64.13 58 ⇑*i*P **P 22 01 06.8 +0.3**
comp=Z,183nm,1.1s,mb6.0
ISCO LR LR
comp=Z,25µm,22.0s,MS6.4
Y14A Wickenburg 64.19 67 P **P 22 01 06.7 -0.3**
baz=64,SNR=37
Y14A ⇑S **S 22 09 42.6 +2.4**
baz=64
X15A Humboldt 64.24 67 P **P 22 01 07.6 +0.3**
baz=64,SNR=98
X15A ⇓S **S 22 09 45.0 +4.2**
baz=64
DOMB Dombas 64.36 344 ⇑*i*P **P 22 01 07.5 -0.6**
DOMB AMb AMB 22 01 10.1
comp=Z,71nm,0.9s,mb5.7
DOMB Dombas 64.36 344 ⇑*i*P **P 22 01 07.5 -0.6**
comp=Z,71nm,0.9s,mb5.7
BORG Borgarnes 64.41 359 P **P 22 01 09.7 +1.3**
comp=Z,1µm,1.0s,mb6.8,SNR=7.6
BORG Borgarnes 64.41 359 P **P 22 01 08.4 0.0**
comp=Z,131nm,0.9s,mb6.0,baz=4.1,slow=4.5,SNR=23
BORG Borgarnes 64.41 359 *e*P **P 22 01 09.7 +1.3**
comp=Z,177nm,0.9s,mb6.1
BORG LR LR
comp=Z,3µm,22.0s,MS5.4
VRHR Novokhopersk 64.50 321 *e*P **P 22 01 08.5 -0.6**
VRHR *e**PP pP 22 01 19.5 -4.5
VRHR *e*S **S 22 09 39.4 -4.7**
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.6s
VRHR smax
comp=N,380nm,3.3s
VRHR smax
comp=Z,120nm,3.1s
VRHR smax
comp=E,280nm,3.0s
JBP Jabalpur 64.52 276 ⇑*i*P **P 22 01 10.3 +1.2**
JBP *ex* x 22 01 13.6
comp=Z,227nm,1.8s
JBP *i* x x 22 05 48.5
Z14A Wintersburg 64.63 68 ⇓P **P 22 01 09.4 -0.5**
baz=64,SNR=11
Z14A ⇓S **S 22 09 47.3 +1.7**
baz=64
NB2 NORSAR Subarra 64.90 343 P **P 22 01 11.1 -0.5**
comp=Z,116nm,0.9s,mb5.9,baz=22,slow=6.5
NB2 NORSAR Subarra 64.90 343 P **P 22 01 11.0 -0.6**
NOA NORSAR Array B 64.90 343 P **P 22 01 11.2 -0.5**
comp=Z,83nm,0.8s,mb5.8,baz=22,slow=6.6,SNR=279
NOA PKPPKP 22 29 43.9
comp=Z,1.3nm,0.9s,baz=178,slow=4.1,SNR=4.3
NOA LR LR 22 35 58.8
comp=Z,16µm,18.0s,MS6.2,baz=25,slow=42
VOR Voronezh 64.95 323 *e*P **P 22 01 10.5 -1.4**
VOR pmax pmax
comp=N,70nm,3.0s
VOR pmax pmax
comp=E,90nm,3.0s
VOR pmax pmax
comp=Z,190nm,3.0s
EYMN Ely 64.99 44 *e*P **P 22 01 11.2 -1.1**
comp=Z,116nm,0.8s,mb6.0
EYMN LR LR
comp=Z,27µm,22.0s,MS6.4
NAO01 NORSAR Array S 65.14 343 *e*P **P 22 01 12.5 -0.7**
NAO01 LR LR
comp=Z,20µm,19.0s,MS6.3
PBA Port Blair 65.17 257 *ex* **P 22 01 18.2 +4.8**
comp=Z,1µm,1.0s,mb6.8
PBA *ex* x 22 09 05.2
HFS Hagfors 65.25 341 P **P 22 01 13.4 -0.5**
comp=Z,26nm,0.4s,mb5.6,baz=39,slow=4.1,SNR=123
HFS Hagfors 65.25 341 P **P 22 01 13.4 -0.5**
HFS pmax pmax
comp=Z,26nm,0.4s
VRSR Storozhevoye 65.36 322 *i*P **P 22 01 12.2 -2.4**
VRSR *e* 22 01 44.7
VRSR *e*S S 22 09 48.5 -6.1
VRSR *e* 22 10 58.2
VRSR pmax pmax
comp=Z,1µm,3.9s
VRSR pmax pmax
comp=N,390nm,3.6s
VRSR pmax pmax
comp=E,300nm,3.8s
VRSR smax
comp=N,450nm,5.5s
VRSR smax
comp=Z,120nm,3.7s
VRSR smax
comp=E,290nm,4.8s
VRSR MLR MLR
comp=N,43µm,20.0s,MS6.8
VRSR MLR MLR
comp=Z,76µm,20.0s,MS6.9
VRSR MLR MLR
comp=E,37µm,18.0s,MS6.8
AJM Ajmer 65.44 282 *i*P **P 22 01 15.0 -0.1**
KULM Kulim 65.49 246 ⇑*i*P **P 22 01 17.6 +2.1**
115A Sonoran Desert 65.53 68 P **P 22 01 15.8 +0.1**
baz=65,SNR=39
115A ⇑S S 22 09 59.8 +3.1
baz=65
HYA Hoyanger 65.66 345 ⇑*i*P **P 22 01 17.2 +0.6**
HYA AMb AMB 22 01 20.0
comp=Z,82nm,0.8s,mb5.8
HYA Hoyanger 65.66 345 ⇑*i*P **P 22 01 17.2 +0.6**
comp=Z,82nm,0.8s,mb5.8
SDCO Great Sand Dun 65.67 60 PFAKE 22 01 30.0 +13
SDCO LR LR
comp=Z,17µm,21.0s,MS6.2
116A Eloy 65.93 68 ⇓P **P 22 01 17.8 -0.4**
baz=66,SNR=17
116A ⇓S S 22 10 05.1 +3.5
baz=66
IPM Ipoh 65.93 245 P **P 22 01 20.2 +1.9**
SUE Sulen 65.99 346 ⇑*i*P **P 22 01 18.3 -0.4**
SUE AMb AMB 22 01 26.4
comp=Z,89nm,1.9s,mb5.5
SUE Sulen 65.99 346 ⇑*i*P **P 22 01 18.3 -0.4**
comp=Z,89nm,1.9s,mb5.5
IZAR Zarasai 66.00 332 *e*P **P 22 01 18.8 0.0**
IZAR AMb AMB 22 01 21.2
comp=Z,2µm,0.7s
OSL Oslo 66.02 342 *e*P **P 22 01 18.7 -0.1**
BHPL Bhopal 66.07 278 *e*P **P 22 01 18.6 -0.5**
BHPL AMb AMB 22 01 22.6
comp=Z,275nm,1.1s,mb6.2
FSV Svinoy 66.18 352 *e*P **P 22 01 18.7 -1.2**
FSV Svinoy 66.18 352 *e*P **P 22 01 18.7 -1.2**
IDID Didziasalis 66.23 332 *e*P **P 22 01 19.9 -0.3**
IDID AMb AMB 22 01 22.7
comp=Z,2µm,0.8s
IIGN Ignalina 66.35 332 *e*P **P 22 01 20.9 -0.1**
IIGN AMb AMB 22 01 22.9
comp=Z,5µm,0.7s
VIS Vishakhapatnam 66.44 269 *e*P **P 22 01 21.9 +0.4**
VIS AMb AMB 22 01 27.5
comp=Z,334nm,1.4s,mb6.2
FVA Vagar 66.45 352 *e*P **P 22 01 20.8 -0.8**
FVA Vagar 66.45 352 *e*P **P 22 01 20.8 -0.8**
FTO Torshavn 66.46 352 *e*P **P 22 01 20.7 -0.9**
FTO Torshavn 66.46 352 *e*P **P 22 01 20.7 -0.9**
ASK Askoy 66.47 345 *e*P **P 22 01 21.9 +0.2**
KONO Kongsberg 66.50 343 ⇑*i*P **P 22 01 21.5 -0.4**
KONO Kongsberg 66.50 343 *e*P **P 22 01 22.1 +0.2**
KONO LR LR
comp=Z,23nm,20.0s,MS6.4
RUND Rundenannen 66.51 345 ⇑*i*P **P 22 01 21.7 -0.3**
RUND AMb AMB 22 01 24.7
comp=Z,294nm,1.0s,mb6.3
RUND Rundenannen 66.51 345 ⇑*i*P **P 22 01 21.7 -0.3**
comp=Z,294nm,1.0s,mb6.3
BER Bergen 66.54 345 ⇑*i*P **P 22 01 21.8 -0.4**
BER *e*P 22 01 22.3
BER AMb AMB 22 01 24.4
comp=Z,160nm,0.9s,mb6.0
BER *e*S S 22 10 08.8 -0.2
BER AMS AMS 22 36 30.3
comp=Z,16µm,22.4s,MS6.2
BER Bergen 66.54 345 ⇑*i*P **P 22 01 21.8 -0.4**
BER *e*P 22 01 22.3
BER LR LR
comp=Z,16µm,22.4s,MS6.2
NGP Nagpur 66.58 275⇑*ex* **P 22 01 18.6 -3.9**
NGP *ex* x 22 01 22.3
comp=Z,288nm,1.7s
NGP *ex* x 22 10 04.5
NGP AMP 22 33 01.1
comp=Z,23µm,19.3s
MNK Minsk 66.59 331 *e*P **P 22 01 21.0 -1.5**
MNK *e**PP pP 22 01 40.0 +2.5
MNK *e*S S 22 10 04.0 -5.6
MNK *e**SS sS 22 10 28.0 -6.9
MNK MLR MLR
comp=Z,140µm,20.0s,MS7.2
MNK MLR MLR
comp=N,91µm,20.0s,MS7.1
MNK MLR MLR
comp=E,91µm,20.0s,MS7.1
TUC Tucson 66.65 67 *e*P **P 22 01 22.2 -0.7**
TUC *e**PP pP 22 01 34.4 -3.5
TUC pmax pmax
comp=Z,92nm,1.3s,mb5.7
TUC MLR MLR
comp=Z,8µm,22.0s,MS5.9
TUC Tucson 66.65 67 *e*P **P 22 01 22.2 -0.7**
comp=Z,92nm,1.3s,mb5.7
TUC *e*pP pP 22 01 34.4 -3.5
TUC LR LR
comp=Z,8µm,22.0s,MS5.9
KGM Kluang 66.66 242 P **P 22 01 25.5 +2.5**
EGD Espegrend 66.66 345 *e*P **P 22 01 23.0 +0.1**
ABKT Ailbek 66.71 302 P **P 22 01 23.6 +0.3**
comp=Z,723nm,0.6s,mb6.9,SNR=45
ODD1 Odda 66.77 344 ⇑*i*P **P 22 01 22.5 -1.2**
ODD1 AMb AMB 22 01 25.4
comp=Z,104nm,0.9s,mb5.8
ODD1 Odda 66.77 344 ⇑*i*P **P 22 01 22.5 -1.2**
comp=Z,104nm,0.9s,mb5.9
ANMO Albuquerque 67.18 62 P **P 22 01 26.2 0.0**
comp=Z,35nm,0.9s,mb5.4,baz=314,slow=7.6,SNR=67
ANMO S S 22 10 18.0 +1.3
comp=Z,0.7nm,0.4s,baz=2.1,slow=17,SNR=1.8
ANMO Albuquerque 67.18 62 P **P 22 01 26.3 0.0**
ANMO S S 22 10 18.0 +1.2
ANMO pmax pmax
comp=Z,35nm,0.9s
ANMO smax
comp=N,1.0nm,0.4s
ANMO Albuquerque 67.18 62 *e*P **P 22 01 26.3 0.0**
comp=N,216nm,1.6s,mb5.9
ANMO LR LR
comp=Z,11µm,22.0s,MS6.0
LAZ Ladron 67.20 63 *e*P **P 22 01 26.6 +0.1**
KAKA Kakadu 67.23 207 *e*P **P 22 01 26.2 -0.4**
comp=Z,231nm,0.6s,mb6.4
BLS5 Blasjo 67.27 344 ⇑*i*P **P 22 01 28.0 +1.2**
BLS5 AMb AMB 22 01 30.9
comp=Z,60nm,0.9s,mb5.6
BLS5 Blasjo 67.27 344 ⇑*i*P **P 22 01 28.0 +1.2**
comp=Z,60nm,0.9s,mb5.6
JASL Jaisalmer 67.40 285 *e*P **P 22 01 25.1 -2.5**
JASL AMb AMB 22 01 27.7
comp=Z,148nm,1.3s,mb5.9
LENM Lemitar 67.47 63 *e*P **P 22 01 28.3 +0.2**
LPM Los Pinos Moun 67.56 63 *e*P **P 22 01 28.3 -0.3**
Y22C IRIS PASSCAL I 67.57 63 ⇓P **P 22 01 29.4 +0.7**
baz=67
Y22C ⇑S S 22 10 26.8 +5.4
baz=67
WAL1 Walls 67.64 349⇑*e*P **P 22 01 28.4 -0.8**
WAL1 Walls 67.64 349⇑*e*P **P 22 01 28.4 -0.8**
KMY Karmoy 67.67 345 ⇑*i*P **P 22 01 29.2 -0.1**
KMY AMb AMB 22 01 32.0
comp=Z,97nm,0.9s,mb5.8
KMY Karmoy 67.67 345 ⇑*i*P **P 22 01 29.2 -0.1**
comp=Z,97nm,0.9s,mb5.8
LRW Lerwick 67.70 349⇑*e*P **P 22 01 29.0 -0.6**
LRW AMS AMS 22 38 04.2
comp=Z,4µm,19.6s,MS5.7
LRW Lerwick 67.70 349⇑*e*P **P 22 01 29.0 -0.6**
LRW AMS AMS 22 38 04.2
comp=Z,4µm,19.6s,MS5.7
STAV Stavanger 67.86 345 *e*P **P 22 01 30.6 +0.1**
STAV AMb AMB 22 01 33.3
comp=Z,97nm,0.9s,mb5.8
STAV Stavanger 67.86 345 *e*P **P 22 01 30.8 +0.3**
comp=Z,97nm,0.9s,mb5.8
SCHQ Schefferville 68.11 26 P **P 22 01 31.4 -0.7**
comp=Z,152nm,0.8s,mb6.1,baz=346,slow=6.7,SNR=82
SCHQ S S 22 10 25.1 -2.7
comp=Z,4.0nm,0.8s,baz=285,slow=11,SNR=3.0
SCHQ PKP2bc 22 29 50.4
comp=Z,16nm,1.0s,baz=112,slow=5.0,SNR=5.3
SCHQ LR LR 22 36 46.6
comp=Z,13µm,19.1s,MS6.2,baz=330,slow=41
SCHQ Schefferville 68.11 26 *e*P **P 22 01 30.9 -1.2**
comp=Z,177nm,0.8s,mb6.1
SCHQ LR LR
comp=Z,20µm,19.0s,MS6.4
SNART Snartemo 68.16 344 *e*P **P 22 01 32.4 0.0**
SNART AMb AMB 22 01 34.3
comp=Z,88nm,1.0s,mb5.8
AKL Akola 68.19 276 *i*P **P 22 01 34.5 +1.9**
AKL *i* x x 22 10 25.5
MAK Makhachkala 68.26 312*c i*P **P 22 01 32.0 -1.1**
MAK *i* 22 01 53.2
MAK *i* 22 04 07.4
MAK *i* PPP 22 05 43.1
MAK *i* S S 22 10 25.7 -3.9
MAK *i* 22 11 24.5
MAK pmax pmax
comp=Z,154nm,1.5s,mb5.8
MAK pmax pmax
comp=N,127nm,0.9s
MAK pmax pmax
comp=E,78nm,0.7s
MAK smax
comp=N,3µm,11.5s
MAK smax
comp=E,3µm,11.9s
MAK MLR MLR
comp=E,60µm,18.0s,MS6.9
MAK MLR MLR
comp=Z,63µm,18.0s,MS6.9
MAK MLR MLR
comp=N,27µm,16.0s,MS6.9
SUW Suwalki 68.40 333 *e*Pc **P 22 01 32.6 -1.3**
comp=Z,1.5nm,3.1s
SUW *e*PcP PcP 22 01 58.4 -0.6
SUW *e*S S 22 10 28.5 -2.8
SUW *e*SKS 22 11 25.5
SUW *e*SS SS 22 14 59.0 +3.5
SUW L 22 33 28.7
comp=Z,51nm,23.2s
SUW Suwalki 68.40 333⇑*e*P **P 22 01 32.6 -1.3**
SUW *e*PcP PcP 22 01 58.4 -0.6
SUW *e*S S 22 10 28.5 -2.8
SUW *e*SKS 22 11 25.5
SUW *e*SS SS 22 14 59.0 +3.5
PSI Prapat 68.50 246 P **P 22 01 35.7 +1.2**
comp=Z,58nm,0.7s,mb5.6,baz=0.6,slow=4.0,SNR=38
PSI S S 22 10 36.4 +3.9
comp=Z,1.9nm,0.5s,baz=264,slow=23,SNR=9.9
PSI Prapat 68.50 246 P **P 22 01 35.7 +1.1**
PSI S S 22 10 36.4 +3.9
PSI pmax pmax
comp=Z,58nm,0.7s,mb5.6
PSI smax
comp=N,2.0nm,0.5s
PSI Prapat 68.50 246 P **P 22 01 35.7 +1.2**
PSI S S 22 10 36.4 +3.9
GOF Gofitskoye 68.65 316 *e*P **P 22 01 45.4 +10**
GOF pmax pmax
comp=Z,144nm,0.7s,mb6.0
KSU1 Kansas State U 69.32 53 *e*P **P 22 01 37.3 -2.3**
AKASG Malin Array Be 69.38 328 P **P 22 01 38.2 -1.8**
comp=Z,31nm,0.4s,mb5.5,baz=32,slow=6.2,SNR=142
AKASG PKPPKP 22 29 38.3
comp=Z,0.8nm,0.7s,baz=194,slow=1.1,SNR=6.4
AKASG LR LR 22 35 36.0
comp=Z,41µm,19.5s,MS6.7,baz=20,slow=39
AKBB Malin Array Si 69.38 328 P **P 22 01 38.2 -1.8**
AKBB Malin Array Si 69.38 328 ⇑*i*P **P 22 01 38.1 -1.9**
OBR Brabster 69.43 349⇑*e*P **P 22 01 39.6 -0.7**
OBR Brabster 69.43 349⇑*e*P **P 22 01 39.6 -0.7**
JFWS Jewell Farm 69.44 47 *e*P **P 22 01 38.8 -1.6**
JFWS Jewell Farm 69.44 47 ⇑*i*P **P 22 01 38.0 -2.4**
JFWS LR LR
comp=Z,26µm,22.0s,MS6.4
ORE Reay 69.56 350⇑*e*P **P 22 01 40.1 -1.0**
ORE Reay 69.56 350⇑*e*P **P 22 01 40.1 -1.0**
MUD Monsted U'grnd 69.56 342 ⇑*i*P **P 22 01 41.3 +0.1**
comp=Z,42nm,0.8s,mb5.4
MUD *i* S S 22 10 45.7 +0.6
MUD *i* 22 11 39.8
comp=Z,20µm,22.0s
MUD Monsted U'grnd 69.56 342 ⇑*i*P **P 22 01 41.3 +0.1**
MUD *i* S S 22 10 45.7 +0.6
MUD *i* 22 11 39.8
MUD pmax pmax
comp=Z,42nm,0.8s,mb5.4
MUD MLR MLR
comp=Z,20µm,22.0s,MS6.3
MUD Monsted U'grnd 69.56 342 ⇑*i*P **P 22 01 41.3 +0.1**
comp=Z,42nm,0.8s,mb5.4
MUD *i* S S 22 10 45.7 +0.6
MUD *i* 22 11 39.8
BSD Bornholm Skovb 69.57 338 ⇑*i*P **P 22 01 40.0 -1.2**
comp=Z,44nm,1.1s,mb5.3
BSD *i* S S 22 10 42.9 -2.2
BSD *i* 22 11 38.0
BSD
comp=Z,31µm,21.0s
BSD Bornholm Skovb 69.57 338 ⇑*i*P **P 22 01 40.0 -1.2**
BSD *i* S S 22 10 42.9 -2.2
BSD *i* 22 11 38.0
BSD pmax pmax
comp=Z,44nm,1.1s,mb5.3
BSD MLR MLR
comp=Z,31µm,21.0s,MS6.5
BSD Bornholm Skovb 69.57 338 ⇑*i*P **P 22 01 40.0 -1.2**
comp=Z,44nm,1.1s,mb5.3
BSD *i* S S 22 10 42.9 -2.2
BSD *i* 22 11 38.0
COP Copenhagen 69.61 340 ⇑*i*P **P 22 01 41.3 -0.1**
comp=Z,35nm,0.9s,mb5.3
COP *i* S S 22 10 45.5 0.0
COP *i* 22 11 40.4
COP
comp=Z,9µm,18.0s
COP Copenhagen 69.61 340 ⇑*i*P **P 22 01 41.3 -0.1**
COP *i* S S 22 10 45.5 0.0
COP *i* 22 11 40.4
COP pmax pmax
comp=Z,35nm,0.9s,mb5.3
COP MLR MLR
comp=Z,9µm,18.0s,MS6.1
HYB Hyderabad 69.67 273 ⇑*i*P **P 22 01 42.5 +0.7**
comp=Z,380nm,1.0s,mb6.3
HYB *e*sP sP 22 02 02.0 -1.0
HYB *e*PcP PcP 22 02 05.5 +1.1
HYB *e*PP PP 22 04 18.0 +1.7
HYB *e*ScP 22 06 05.0
HYB *e*S S 22 10 40.0 -6.3
HYB *e* 22 11 08.0
HYB *e*ScS ScS 22 11 40.0 +1.1
HYB *e* 22 12 02.0
HYB LR LR 22 35 28.0
comp=Z,39nm,20.0s
HYB Hyderabad 69.67 273 ⇑*i*P **P 22 01 42.0 +0.2**
HYB *e* 22 02 02.0
HYB *e*S S 22 10 40.0 -6.3
HYB pmax pmax
comp=Z,380nm,1.0s,mb6.3
HYB Hyderabad 69.67 273 ⇑*i*P **P 22 01 42.0 +0.2**
comp=Z,380nm,1.0s,mb6.3
HYB *e* 22 02 02.0
HYB *e* 22 02 25.0
HYB *e*S S 22 10 40.0 -6.3

HYB eLR LR 22 35 28.0
KIV Kislovodsk 69.67 316 P **P** **22 01 42.2 +0.4**
comp=Z,294nm,0.6s,mb6.4,SNR=34
KIV Kislovodsk 69.67 316 P **P** **22 01 42.1 +0.3**
SNR=21
KIV Kislovodsk 69.67 316⇑ *i*P **P** **22 01 41.6 -0.2**
KIV *e* 22 04 17.0
KIV *i* S S 22 10 44.2 -2.1
KIV pmax pmax
comp=Z,135nm,2.5s,mb5.4
KIV MLR MLR
comp=Z,19µm,18.0s,MS6.4
KIV Kislovodsk 69.67 316⇑ *i*P **P** **22 01 41.6 -0.2**
ZEI Tsey 70.07 314 *e*P **P** **22 01 44.2 -0.1**
ZEI *e* 22 04 19.3
ZEI pmax pmax
comp=Z,33nm,0.7s,mb5.4
AFI Afiamalu 70.16 148 LR LR 22 28 02.2
comp=Z,9µm,19.6s,MS6.0,baz=346,slow=32
AFI Afiamalu 70.16 148 PFAKE 22 02 00.0 +15
AFI LR LR
comp=Z,9µm,20.0s,MS6.0
LATR Latur 70.18 275 *e*P **P** **22 01 45.6 +0.7**
LATR *e*P 22 01 45.6
MNTX Cornudas Mount 70.19 64⇑ *i*P **P** **22 01 44.3 -0.7**
comp=Z,288nm,1.4s,mb6.0
MNTX LR LR
comp=Z,12µm,22.0s,MS6.1
MVH1 Achvaich 70.22 350⇑ *e*P **P** **22 01 44.7 -0.5**
MVH1 Achvaich 70.22 350⇑ *e*P **P** **22 01 44.7 -0.5**
GDL2 Guadalupe Moun 70.39 63 *e*P **P** **22 01 45.9 -0.3**
DGRG David-gareji 70.43 312 P **P** **22 01 46.6 +0.1**
DGRG S 22 11 14.7
MCD Coleburn Disti 70.45 349⇑ *e*P **P** **22 01 46.1 -0.5**
MCD Coleburn Disti 70.45 349⇑ *e*P **P** **22 01 46.1 -0.5**
TBLG Delisi 70.50 313 P **P** **22 01 47.1 +0.2**
MTA Mtatsminda 70.51 313 P **P** **22 01 47.0 +0.1**
MTA S S 22 10 52.4 -3.7
WAR Warsaw 70.58 333 *e*Pc **P** **22 01 47.8 +0.4**
comp=Z,4.4nm,4.2s
WAR *e*S S 22 10 56.6 -0.3
WAR *e*SKS 22 11 47.1
WAR L 22 34 56.6
comp=Z,48nm,23.3s
WAR Warsaw 70.58 333⇑ *e*P **P** **22 01 47.8 +0.4**
WAR *e*S S 22 10 56.6 -0.3
WAR *e* 22 11 47.1
WAR pmax pmax
comp=Z,40nm,4.2s
WAR MLR MLR
comp=Z,48µm,23.3s,MS6.7
GKP Gorka Klasztor 70.68 336 *e*Pc **P** **22 01 47.8 -0.2**
comp=Z,3.2nm,4.9s
GKP *e*S S 22 10 55.6 -2.5
GKP *e*SKS 22 11 45.8
GKP L 22 32 09.0
comp=Z,24nm,26.5s
KAC Achnashellach 70.76 350⇑ *i*P **P** **22 01 48.0 -0.5**
KAC Achnashellach 70.76 350⇑ *i*P **P** **22 01 48.0 -0.5**
KSK Scoval 70.94 351⇑ *e*P **P** **22 01 49.2 -0.3**
KSK Scoval 70.94 351⇑ *e*P **P** **22 01 49.2 -0.3**
KPL Plockton 70.95 350⇑ *e*P **P** **22 01 49.0 -0.7**
KPL AMS AMS 22 31 19.2
comp=Z,8µm,20.2s,MS6.0
KPL Plockton 70.95 350⇑ *e*P **P** **22 01 49.0 -0.7**
KPL AMS AMS 22 31 19.2
comp=Z,8µm,20.2s,MS6.0
KSB Sheil Bridge 71.06 350⇑ *i*P **P** **22 01 50.1 -0.2**
KSB Sheil Bridge 71.06 350⇑ *i*P **P** **22 01 50.1 -0.2**
ANN Anapa 71.23 319 *e*P **P** **22 01 50.0 -1.3**
KAR1 Arisaig 71.39 350⇑ *i*P **P** **22 01 52.1 -0.1**
KAR1 Arisaig 71.39 350⇑ *i*P **P** **22 01 52.1 -0.1**
WMOK Wichita Mounta 71.53 57 *e*P **P** **22 01 51.7 -1.4**
WMOK MLR MLR
comp=Z,11µm,22.0s,MS6.1
CTA Charters Tower 71.62 191⇑ *i*P **P** **22 01 52.8 -0.9**
comp=Z,62nm,0.8s,mb5.6
CTA *e*pP pP 22 02 06.8 -2.0
CTA *e*S S 22 11 04.9 -4.1
CTA *e*SS SS 22 15 12.0 -33
CTA Charters Tower 71.62 191⇑ *i*P **P** **22 01 52.8 -0.9**
CTA *e**PP pP 22 02 06.8 -2.0
CTA *e*S S 22 11 04.9 -4.1
CTA pmax pmax
comp=Z,62nm,0.8s
CTAO Charters Tower 71.62 191 *e*P **P** **22 01 52.7 -1.0**
CTAO *e**PP pP 22 02 05.9 -2.9
CTAO pmax pmax
comp=Z,202nm,1.1s,mb6.0
CTAO MLR MLR
comp=Z,8µm,21.0s,MS6.0
CTAO Charters Tower 71.62 191 *e*P **P** **22 01 52.7 -1.0**
comp=Z,202nm,1.1s,mb6.0
CTAO *e*pP pP 22 02 05.9 -2.9
CTAO LR LR
comp=Z,8µm,21.0s,MS6.0
BSEG Bad Segeberg 71.69 340 *e*P **P** **22 01 53.9 -0.2**
BSEG *e* 22 04 28.6
BSEG *e*S S 22 11 05.8 -4.0
GNI Garni 71.75 312 P **P** **22 01 52.6 -1.8**
GNI Garni 71.75 312 P **P** **22 01 54.3 -0.2**
comp=Z,11nm,0.5s,mb5.1,baz=187,slow=0.7,SNR=12
GNI Garni 71.75 312 *e*P **P** **22 01 56.8 +2.3**
GNI pmax pmax
comp=Z,200nm,1.1s
GNI Garni 71.75 312⇑ *e*P **P** **22 01 55.6 +1.1**
comp=Z,201nm,1.1s,mb6.0
GNI LR LR
comp=Z,36µm,20.0s,MS6.6
KSI Kapahiang 71.76 239⇑ *e*P **P** **22 01 57.5 +3.0**
POO Poona 71.79 277⇑ *i*P **P** **22 01 51.0 -3.7**
comp=Z,390nm,1.0s,mb6.3
POO *i* x x 22 02 09.0
POO *i* PP PP 22 04 32.0 -2.5
POO *i* S S 22 11 12.0 +1.1
POO *i* SS SS 22 15 50.0 +2.3
POO *i* SSS 22 18 59.0
POO *i* x x 22 20 35.0
POO *i* x x 22 24 01.0
LVV L'vov 71.82 330 *e*P **P** **22 01 53.3 -1.6**
LVV *e* 22 04 34.3
LVV *e*S S 22 11 11.9 +0.6
LVV *i* 22 11 46.7
LVV *e* 22 18 54.9
LVV MLR MLR
comp=N,36µm,19.0s,MS6.8
LVV MLR MLR
comp=E,31µm,19.0s,MS6.8
LVV MLR MLR
comp=Z,53µm,19.0s,MS6.8
LVV L'vov 71.82 330 *i* P **P** **22 01 53.7 -1.2**
MDRS Chennai 71.88 268⇑ *e*P **P** **22 01 54.0 -1.2**
MDRS *ex* x 22 04 38.0
MDRS *ex* x 22 06 49.0
MDRS *ex* x 22 11 13.0
MDRS *ex* x 22 11 57.0
MDRS *ex* x 22 16 38.0
MDRS *ex* x 22 19 09.0
MDRS *ex* x 22 29 12.0
EAB Aberfoyle 71.94 349⇑ *i*P **P** **22 01 55.2 -0.4**
EAB Aberfoyle 71.94 349⇑ *i*P **P** **22 01 55.2 -0.4**
ESY Stoneypath 71.99 348⇑ *i*P **P** **22 01 55.5 -0.4**
ESY Stoneypath 71.99 348⇑ *i*P **P** **22 01 55.5 -0.4**
EDI Edinburgh 72.06 349 P **P** **22 01 56.9 +0.5**
EDI AMb AMB 22 01 59.1
comp=Z,116nm,0.9s,mb5.8
EDI Edinburgh 72.06 349⇑ *e*P **P** **22 01 56.9 +0.5**
EDI AMb AMB 22 01 59.1
comp=Z,116nm,0.9s,mb5.8
EDI AMS AMS 22 32 29.6
comp=Z,8µm,20.1s,MS6.0
EDI Edinburgh 72.06 349⇑ *e*P **P** **22 01 56.9 +0.5**
EDI AMb AMB 22 01 59.1
comp=Z,116nm,0.9s,mb5.8
EDI AMS AMS 22 32 29.6
comp=Z,8µm,20.1s,MS6.0
PCOU Corrie 72.11 349⇑ *e*P **P** **22 01 56.5 -0.1**
PCOU Corrie 72.11 349⇑ *e*P **P** **22 01 56.5 -0.1**
BCA Borcka 72.15 315 P **P** **22 01 56.5 -0.3**
BOM Bombay 72.16 278 *ex* **P** **22 01 58.5 +1.6**
comp=Z,484nm,1.2s,mb6.3
BOM *i* x x 22 12 08.8
EAU Auchinoon 72.17 349⇑ *i*P **P** **22 01 56.7 -0.2**
EAU Auchinoon 72.17 349⇑ *i*P **P** **22 01 56.7 -0.2**
EBL Broad Law 72.19 349⇑ *i*P **P** **22 01 56.8 -0.3**
EBL Broad Law 72.19 349⇑ *i*P **P** **22 01 56.8 -0.3**
POB1 Observatory 72.29 349⇑ *e*P **P** **22 01 57.4 -0.3**
POB1 Observatory 72.29 349⇑ *e*P **P** **22 01 57.4 -0.3**
PMSU Muirshiel 72.32 350⇑ *e*P **P** **22 01 57.3 -0.5**
PMSU Muirshiel 72.32 350⇑ *e*P **P** **22 01 57.3 -0.5**
XSO Sourhope Farm 72.36 348⇑ *e*P **P** **22 01 57.8 -0.3**
XSO AMb AMB 22 02 00.2
comp=Z,215nm,2.2s,mb5.7
XSO Sourhope Farm 72.36 348⇑ *e*P **P** **22 01 57.8 -0.3**
XSO AMb AMB 22 02 00.2
comp=Z,215nm,2.2s,mb5.7
KWP Kalwaria 72.40 331 *e*Pc **P** **22 01 58.4 +0.1**
comp=Z,2.4nm,2.5s
KWP *e*pP pP 22 02 09.9 -3.6
KWP *e*S S 22 11 19.9 +2.0
KWP *e*SKS 22 11 59.9
KWP L 22 36 59.7
comp=Z,97nm,21.0s
KWP Kalwaria 72.40 331⇑ *e*P **P** **22 01 58.4 +0.1**
KWP *e*pP pP 22 02 09.9 -3.6
KWP *e*S S 22 11 19.9 +2.0
KWP *e*SKS 22 11 59.9
SIM Simferopol' 72.44 321 *c* *i*P **P** **22 01 57.7 -0.9**
SIM *e* 22 04 43.0
SIM *e*S S 22 11 14.0 -4.3
SIM *e*PS 22 12 02.0
SIM pmax pmax
comp=Z,80nm,0.8s,mb5.7
SIM MLR MLR
comp=Z,42µm,17.1s,MS6.8
KAD Karad 72.50 276 *e*P **P** **22 01 60.0 +1.1**
KAD AMb AMB 22 02 05.2
comp=Z,468nm,0.8s,mb6.5
EKA Eskdalemuir Ar 72.63 349 P **P** **22 01 59.6 -0.1**
comp=Z,78nm,0.5s,mb5.9,baz=16,slow=4.9,SNR=20
EKA Eskdalemuir Ar 72.63 349 P **P** **22 01 59.6 -0.1**
EKA pmax pmax
comp=Z,78nm,0.5s
ESK Eskdalemuir 72.66 349 P **P** **22 01 59.7 -0.2**
comp=Z,1µm,1.3s,mb6.6,SNR=73
ESK Eskdalemuir 72.66 349 P **P** **22 01 59.7 -0.2**
ESK AMb AMB 22 02 02.0
comp=Z,156nm,2.0s,mb5.6
ESK Eskdalemuir 72.66 349⇑ *e*P **P** **22 01 59.7 -0.2**
ESK AMb AMB 22 02 02.0
comp=Z,156nm,2.0s,mb5.6
ESK AMS AMS 22 40 46.8
comp=Z,13µm,20.2s,MS6.2
ESK Eskdalemuir 72.66 349⇑ *e*P **P** **22 01 59.7 -0.2**
ESK AMb AMB 22 02 02.0
comp=Z,156nm,2.0s,mb5.6
ESK AMS AMS 22 40 46.8
comp=Z,13µm,20.2s,MS6.2
ESK Eskdalemuir 72.66 349 *e*P **P** **22 01 59.7 -0.1**
comp=Z,179nm,0.9s,mb6.0
SADO Sadowa 72.66 39 P **P** **22 01 57.7 -2.2**
comp=Z,21nm,0.8s,mb5.1,baz=340,slow=7.7,SNR=15
SADO LR LR 22 36 19.4
comp=Z,14µm,21.4s,MS6.2,baz=225,slow=38
KIS Kishinev 72.68 326⇑ *e*P **P** **22 01 56.0 -4.0**
KIS *e* 22 04 42.0
KIS *e*S S 22 11 16.0 -5.1
KIS *e*PS 22 11 44.0
KIS pmax pmax
comp=Z,4µm,8.0s
KIS MLR MLR
comp=N,29µm,18.0s,MS6.7
KIS MLR MLR
comp=E,18µm,18.0s,MS6.7
KIS MLR MLR
comp=Z,48µm,18.0s,MS6.8
OJC Ojcow 72.73 333⇑ *i*P **P** **22 01 59.8 -0.5**
OJC *e*S S 22 11 15.6 -6.1
OJC Ojcow 72.73 333⇑ *i*P **P** **22 01 59.8 -0.5**
OJC *e*S S 22 11 15.6 -6.1
OJC LR LR
comp=Z,223µm,23.0s
ECK Cauldkaine Hil 72.78 348⇑ *i*P **P** **22 02 00.1 -0.5**
ECK AMb AMB 22 02 03.7
comp=Z,190nm,0.8s,mb6.1
ECK Cauldkaine Hil 72.78 348⇑ *i*P **P** **22 02 00.1 -0.5**
ECK AMb AMB 22 02 03.7
comp=Z,190nm,0.8s,mb6.1
SLM Saint Louis 72.81 49 *e*P **P** **22 01 59.7 -1.1**
SLM pmax pmax
comp=Z,230nm,1.1s,mb6.0
SLM Saint Louis 72.81 49 *e*P **P** **22 01 59.3 -1.5**
comp=Z,235nm,1.1s,mb6.0
AAM Ann Arbor 72.84 43 PFAKE 22 02 10.0 +9.0
AAM LR LR
comp=Z,16µm,22.0s,MS6.2
BWH Wardlaw 72.85 349⇑ *e*P **P** **22 02 00.5 -0.5**
BWH Wardlaw 72.85 349⇑ *e*P **P** **22 02 00.5 -0.5**
BHH Howats Hill 72.88 348⇑ *e*P **P** **22 02 01.0 -0.1**
BHH Howats Hill 72.88 348⇑ *e*P **P** **22 02 01.0 -0.1**
GMK Mull of Kintyr 72.91 350⇑ *e*P **P** **22 02 00.4 -0.9**
GMK Mull of Kintyr 72.91 350⇑ *e*P **P** **22 02 00.4 -0.9**
CLDR Caldiran 72.94 312 P **P** **22 02 02.2 +0.6**
IAS Iasi 72.95 327⇓ *i*P **P** **22 02 01.7 +0.1**
XAL Allendale 72.97 348⇑ *e*P **P** **22 02 01.3 -0.4**
XAL AMb AMB 22 02 03.8
comp=Z,190nm,1.4s,mb5.8
XAL Allendale 72.97 348⇑ *e*P **P** **22 02 01.3 -0.4**
XAL AMb AMB 22 02 03.8
comp=Z,190nm,1.4s,mb5.8
LPIG La Paz 72.99 73 LR LR 22 27 43.7
comp=Z,10µm,21.6s,MS6.1,baz=324,slow=30
STHS Stebnicka Huta 73.03 332 *e*P **P** **22 02 03.2 +1.1**
STHS pmax pmax
comp=Z,62nm,0.8s,mb5.6
STHS Stebnicka Huta 73.03 332 *e*P **P** **22 02 03.2 +1.1**
comp=Z,62nm,0.8s,mb5.6
BDL Dobcross Hall 73.12 348⇑ *e*P **P** **22 02 02.7 +0.1**
BDL Dobcross Hall 73.12 348⇑ *e*P **P** **22 02 02.7 +0.1**
KSP Ksiaz 73.13 335 *e*Pc **P** **22 02 02.3 -0.4**
comp=Z,3.1nm,4.0s
KSP *e*pP pP 22 02 11.6 -6.2
KSP *e*S S 22 11 26.4 +0.2
KSP *e*SKS 22 12 22.4
KSP L 22 33 34.5
comp=Z,38nm,27.3s
KSP Ksiaz 73.13 335⇑ *e*P **P** **22 02 01.9 -0.8**
KSP *e*S S 22 11 15.3 -11
KSP MLR MLR
comp=Z,44µm,23.3s,MS6.7
KSP Ksiaz 73.13 335⇑ *e*P **P** **22 02 01.9 -0.8**
KSP *e*sP sP 22 02 28.0 +4.1
KSP *e*PP PP 22 04 35.9 -10
KSP *e*S S 22 11 15.3 -11
KSP *e*SS SS 22 15 53.6 -15
KSP LR LR
comp=Z,44µm,27.3s,MS6.6
KOLS Kolonicke sedl 73.15 331 *i* P **P** **22 02 02.2 -0.6**
KOLS *e*S S 22 11 22.2 -4.2
KOLS Kolonicke sedl 73.15 331 *i* P **P** **22 02 02.2 -0.6**
KOLS *e*S S 22 11 22.2 -4.2
BBO1 Bothel 73.23 348⇑ *e*P **P** **22 02 02.7 -0.5**
BBO1 Bothel 73.23 348⇑ *e*P **P** **22 02 02.7 -0.5**
GCL Cushendall 73.23 350⇑ *e*P **P** **22 02 03.1 -0.1**
GCL Cushendall 73.23 350⇑ *e*P **P** **22 02 03.1 -0.1**
FVM French Village 73.24 50 *e*P **P** **22 02 02.0 -1.3**
GAL1 Galloway 73.28 349⇑ *e*P **P** **22 02 03.2 -0.3**
GAL1 Galloway 73.28 349⇑ *e*P **P** **22 02 03.2 -0.3**
NIE Niedzica 73.30 332 *e*P **P** **22 02 03.5 -0.2**
RAC Raciborz 73.31 334⇑ *e*P **P** **22 02 04.1 +0.4**
RAC *e*S S 22 11 26.7 -1.5
RAC MLR MLR
comp=Z,54µm,20.0s,MS6.8
KTUT Trabzon 73.34 316 P **P** **22 02 04.0 +0.1**
CKE Keswick 73.36 348⇑ *e*P **P** **22 02 03.8 -0.2**
CKE Keswick 73.36 348⇑ *e*P **P** **22 02 03.8 -0.2**
DZM Mont Dzumac 73.36 171 *e*P **P** **22 02 02.6 -1.4**
DZM Mont Dzumac 73.36 171 S S 22 11 25.4 -3.4
comp=Z,3.3nm,1.0s,baz=100,slow=23,SNR=1.7
DZM LR LR 22 30 17.2
comp=Z,6µm,20.1s,MS5.9,baz=16,slow=32
BURAR Bucovina Array 73.37 328⇓ *i*P **P** **22 02 03.7 -0.4**
BURAR Bucovina Array 73.37 328 P **P** **22 02 03.8 -0.3**
BURAR Bucovina Array 73.37 328⇓ P **P** **22 02 03.7 -0.4**
UZH Uzhgorod 73.41 331 *e*P **P** **22 02 04.0 -0.3**
CRVS Cervenica-Dubn 73.42 331 *i* P **P** **22 02 03.7 -0.7**
CRVS *e*S S 22 11 29.6 +0.1
CRVS *e* 22 17 21.5
CRVS Cervenica-Dubn 73.42 331 *i* P **P** **22 02 03.7 -0.7**
CRVS *e*S S 22 11 29.6 +0.1
XDE Dent Fell 73.48 349⇑ *e*P **P** **22 02 04.1 -0.7**
XDE AMb AMB 22 02 06.9
comp=Z,194nm,2.0s,mb5.7
XDE Dent Fell 73.48 349⇑ *e*P **P** **22 02 04.1 -0.7**
XDE AMb AMB 22 02 06.9
comp=Z,194nm,2.0s,mb5.7
EZM Erzurum 73.50 314 P **P** **22 02 06.2 +1.3**
UPC Upice 73.51 335 *e*P **P** **22 02 05.4 +0.5**
UPC *e*pP pP 22 02 27.6 +7.5
CLL Collm 73.53 338⇑ *i*P **P** **22 02 04.5 -0.5**
comp=Z,77nm,0.8s,mb5.7
CLL *e*sP sP 22 02 21.6 -4.6
CLL *e*PP PP 22 04 50.9 +1.5
CLL *e*PPP 22 06 36.7
CLL *e*PPPP 22 07 44.7
CLL *e*S S 22 11 27.6 -3.1
CLL *e*sS sS 22 11 50.4 -5.9
CLL *e*PPS 22 12 23.8
CLL *e*SS SS 22 16 32.9 +19
CLL *e*SSSS 22 21 18.0
CLL *e*LR LR 22 25 23.8
CLL *e*PKPPKPdf 22 29 41.0
CLL *e*L 22 38 24.8
comp=Z,28µm,20.0s
CLL Collm 73.53 338 ⇑P **P** **22 02 04.3 -0.7**
comp=Z,logA/T=2.0,mb5.7
CLL *i* 22 02 12.0
CLL *i* 22 02 31.6
CLL *e* 22 02 49.0
CLL *e*PP PP 22 04 39.0 -10
CLL *e*PPP 22 06 40.0
CLL *e* 22 07 45.0
CLL *e*S S 22 11 27.0 -3.7
CLL *e**SS sS 22 11 51.0 -5.3
CLL *e*PPS 22 12 25.0
CLL *e*SS SS 22 16 31.0 +17
CLL *e* 22 17 15.0
CLL *e* 22 18 18.0
CLL *e* 22 29 39.0
CLL Collm 73.53 338⇑ *i*P **P** **22 02 04.3 -0.7**
comp=Z,76nm,0.8s,mb5.7
CLL *i* x x 22 02 12.0
CLL *i* x x 22 02 31.6
CLL *ex* x 22 02 49.0
comp=Z,128nm,1.0s
CLL *e*PP PP 22 04 39.0 -10
CLL *e*PPP 22 06 40.0
CLL *e*PPPP 22 07 45.0
CLL *e*S S 22 11 27.0 -3.7
CLL *e*sS sS 22 11 51.0 -5.3
CLL *e*PPS 22 12 25.0
CLL *e*SS SS 22 16 31.0 +17
CLL *ex* x 22 17 15.0
CLL *e*SSSS 22 21 18.0
CLL *e*PKPPKPdf 22 29 39.0
CLL Collm 73.53 338⇑ *i*P **P** **22 02 04.3 -0.7**
CLL *e*S S 22 11 27.0 -3.7
CLL pmax pmax
comp=Z,76nm,0.8s,mb5.7
CLL MLR MLR
comp=Z,26µm,16.6s,MS6.6
CLL Collm 73.53 338⇑ *i*P **P** **22 02 04.3 -0.7**
comp=Z,76nm,0.8s,mb5.7
CLL *i* 22 02 12.0
CLL *i* sP sP 22 02 31.6 +5.4
CLL *e*S S 22 11 27.0 -3.7
CLL *e*P'P' 22 29 39.0
CLL LR LR
comp=Z,26µm,16.6s,MS6.6
OKC Ostrava-Krasne 73.54 334 *e*P **P** **22 02 05.6 +0.5**
OKC *e*sP sP 22 02 25.6 -0.7
OKC *e*PP PP 22 04 56.4 +6.9
OKC *ex* x 22 06 47.0
OKC *e*S S 22 11 32.7 +1.8
OKC *ex* x 22 16 56.9
OKC AMS AMS 22 37 20.0
comp=Z,31µm,20.1s
OKC Ostrava-Krasne 73.54 334 *e*P **P** **22 02 05.6 +0.5**
OKC *e**PP pP 22 02 25.6 +5.3
OKC *e* 22 04 56.4
OKC *e*S S 22 11 32.7 +1.8
OKC MLR MLR
comp=Z,31µm,20.1s,MS6.6
OKC Ostrava-Krasne 73.54 334 *e*P **P** **22 02 05.6 +0.5**
OKC *e*pP pP 22 02 25.6 +5.3
OKC *e*PP PP 22 04 56.4 +6.9
OKC *e* 22 06 47.0
OKC *e*S S 22 11 32.7 +1.8
OKC *e*SS SS 22 16 56.9 +42
DPC Dobruska-Polom 73.57 335 *e*P **P** **22 02 05.2 -0.1**
DPC *e*sP sP 22 02 26.4 -0.1
DPC *ex* x 22 04 39.8
DPC *ex* x 22 06 44.0
DPC *e*S S 22 11 31.4 +0.2
DPC *e*SS SS 22 16 36.7 +22
DPC AMS AMS 22 39 10.0
comp=Z,42µm,16.9s
DPC Dobruska-Polom 73.57 335 *e*P **P** **22 02 05.2 -0.1**
DPC *e**PP pP 22 02 26.4 +5.9
DPC *e*S S 22 11 31.4 +0.2
DPC MLR MLR
comp=Z,42µm,16.9s,MS6.8
CDU1 Dunnerdale 73.61 348⇑ *e*P **P** **22 02 05.2 -0.4**
CDU1 Dunnerdale 73.61 348⇑ *e*P **P** **22 02 05.2 -0.4**
VANB Van 73.62 312 P **P** **22 02 06.7 +1.1**
WRAB Tennant Creek 73.64 203 P **P** **22 02 05.0 -0.7**
comp=Z,814nm,0.7s,mb6.8,SNR=66
WRAB Tennant Creek 73.64 203⇑ *i*P **P** **22 02 05.1 -0.6**
WRAB Tennant Creek 73.64 203⇑ *i*P **P** **22 02 05.0 -0.7**
WRAB LR LR
comp=Z,2µm,22.0s,MS5.4
WB2 Warramunga Arr 73.65 203⇑ *i*P **P** **22 02 05.1 -0.6**
WRA Warramunga Arr 73.65 203 P **P** **22 02 05.0 -0.8**
comp=Z,93nm,0.6s,mb5.9,baz=17,slow=6.2,SNR=157
WRA S S 22 11 30.1 -2.1
comp=Z,0.6nm,0.9s,baz=325,slow=8.1,SNR=4.0
WRA PKKPbc PKKPbc 22 21 43.7 +4.2
comp=Z,0.6nm,1.0s,baz=186,slow=2.5,SNR=4.8
WRA PKPPKP 22 29 35.9
comp=Z,0.8nm,0.8s,baz=192,slow=1.9,SNR=5.3
WRA LR LR 22 31 24.5
comp=Z,5µm,21.1s,MS5.8,baz=35,slow=33
WRA Warramunga Arr 73.65 203 P **P** **22 02 05.0 -0.7**
WRA S S 22 11 30.1 -2.0
WRA pmax pmax
comp=Z,93nm,0.6s
WRA smax
comp=N,1.0nm,0.9s
BRG Berggiesshubel 73.70 337 *e*P **P** **22 02 05.6 -0.4**
comp=N,65nm,1.6s,mb5.3
BRG PP PP 22 04 43.0 -7.8
BRG S 22 09 35.0
BRG *e* S 22 11 23.0 -10
BRG *e*PKPPKP 22 29 33.0
comp=N,70nm,2.8s
BRG
comp=N,8µm,16.6s
BRG
comp=E,8µm,16.5s
BRG
comp=Z,20µm,16.0s
BRG Berggiesshubel 73.70 337 *e*P **P** **22 02 05.6 -0.4**
comp=Z,65nm,1.6s,mb5.3
BRG PP PP 22 04 43.0 -7.8
BRG S 22 09 35.0
BRG *e* S 22 11 23.0 -10
BRG *e*P'P' 22 29 33.0
BRG LR LR
comp=Z,20µm,16.0s,MS6.5
MORC Moravsky Berou 73.76 334⇑ *i*P **P** **22 02 06.2 -0.2**
MORC Moravsky Berou 73.76 334 P **P** **22 02 07.4 +1.0**
MORC Moravsky Berou 73.76 334⇑ *i*P **P** **22 02 06.1 -0.3**
comp=Z,92nm,1.7s,mb5.4
MORC *e* 22 02 15.1
GIM North Isle of 73.81 349⇑ *e*P **P** **22 02 06.3 -0.3**
GIM North Isle of 73.81 349⇑ *e*P **P** **22 02 06.3 -0.3**
PVCC Panska Ves 73.86 336 *e*P **P** **22 02 07.4 +0.4**
PVCC *e*pP pP 22 02 26.8 +4.6
PVCC *ex* x 22 04 40.3
PVCC *ex* x 22 06 44.6

PVCC eS S 22 11 34.2 -0.3
PVCC ex x 22 16 55.8
PVCC AMS AMS 22 40 10.0
comp=Z,23µm,16.6s
PVCC Panska Ves 73.86 336 eP **P 22 02 07.4 +0.4**
PVCC e*PP pP 22 02 26.8 +4.6
PVCC e 22 06 44.6
PVCC eS S 22 11 34.2 -0.3
PVCC MLR MLR
comp=Z,23µm,16.6s,MS6.5
WIM Isle of Man 73.98 349⇑ iP **P 22 02 07.5 -0.1**
WIM AMb AMB 22 02 09.9
comp=Z,314nm,0.6s,mb6.4
WIM Isle of Man 73.98 349⇑ iP **P 22 02 07.5 -0.1**
WIM AMb AMB 22 02 09.9
comp=Z,314nm,0.6s,mb6.4
SIUC Southern Illin 74.03 49 eP **P 22 02 06.9 -1.0**
comp=Z,140nm,0.8s,mb5.9
GMM Mts of Mourne 74.04 350⇑ iP **P 22 02 07.3 -0.7**
GMM Mts of Mourne 74.04 350⇑ iP **P 22 02 07.3 -0.7**
KECS Kecovo 74.09 332 eP **P 22 02 08.2 -0.1**
comp=Z,33nm,1.1s,mb5.2
KECS e 22 02 16.1
MSNY Massena 74.09 36 eP **P 22 02 06.4 -1.9**
BLO Bloomington 74.12 47 eP **P 22 02 07.1 -1.4**
BLO Bloomington 74.12 47 eP **P 22 02 06.9 -1.6**
LHO Holmfirth 74.21 347⇑ iP **P 22 02 08.4 -0.6**
LHO Holmfirth 74.21 347⇑ iP **P 22 02 08.4 -0.6**
JCT Junction City 74.23 61 eP **P 22 02 08.3 -0.8**
JCT pmax pmax
comp=Z,110nm,0.8s,mb5.8
JCT Junction City 74.23 61⇑ iP **P 22 02 08.1 -1.1**
comp=Z,111nm,0.8s,mb5.8
JCT LR LR
comp=Z,14µm,22.0s,MS6.2
HKR Hakkari 74.27 311 P **P 22 02 10.4 +1.1**
PRA Prague 74.31 336 P **P 22 02 10.0 +0.4**
PRA ex x 22 02 36.0
EZC Erzincan 74.33 315 P **P 22 02 12.3 +2.6**
PRU Pruhonice 74.36 336 eP **P 22 02 10.2 +0.3**
PRU esP sP 22 02 30.5 -0.7
PRU ePP PP 22 04 56.5 0.0
PRU ex x 22 07 09.9
PRU eS S 22 11 39.9 -0.2
PRU ex x 22 16 46.0
PRU AMS AMS 22 39 10.0
comp=Z,27µm,18.6s
PRU Pruhonice 74.36 336 eP **P 22 02 10.2 +0.3**
PRU e*PP pP 22 02 30.5 +5.4
PRU e 22 04 56.5
PRU eS S 22 11 39.9 -0.2
PRU MLR MLR
comp=Z,27µm,18.6s,MS6.6
MIAR Mount Ida 74.39 54 P **P 22 02 08.9 -1.1**
MIAR pmax pmax
comp=Z,150nm,1.0s,mb5.9
MIAR Mount Ida 74.39 54⇑ iP **P 22 02 08.6 -1.4**
comp=Z,148nm,1.0s,mb5.9
MIAR LR LR
comp=Z,22µm,20.0s,MS6.5
VRI Vrincioaia 74.39 327⇓ iP **P 22 02 10.0 0.0**
VRI Vrincioaia 74.39 327 P **P 22 02 10.4 +0.4**
FITZ Fitzroy Crossi 74.39 211⇑ iP **P 22 02 10.3 +0.3**
comp=Z,199nm,0.9s,mb6.0
FITZ epP pP 22 02 25.0 -0.3
FITZ eS S 22 11 43.0 +2.6
FITZ Fitzroy Crossi 74.39 211 LR LR 22 34 49.6
comp=Z,2µm,20.8s,MS5.4,baz=22,slow=36
ABA1 Baconsthorpe 74.40 345⇑ eP **P 22 02 11.2 +1.1**
ABA1 Baconsthorpe 74.40 345⇑ eP **P 22 02 11.2 +1.1**
PLOR Plostina 74.42 327⇓ iP **P 22 02 11.5 +1.3**
KBI1 Birley Grange 74.45 347⇑ iP **P 22 02 10.2 -0.2**
KBI1 Birley Grange 74.45 347⇑ iP **P 22 02 10.2 -0.2**
VRAC Vranov 74.45 335⇑ iP **P 22 02 10.9 +0.5**
VRAC Vranov 74.45 335⇑ iP **P 22 02 10.9 +0.6**
MOX Moxa 74.47 338 eP **P 22 02 10.2 -0.3**
comp=Z,113nm,1.6s,mb5.5
MOX
comp=Z,18µm,23.0s
MOX Moxa 74.47 338 eP **P 22 02 10.2 -0.3**
MOX pmax pmax
comp=Z,113nm,1.6s,mb5.5
MOX MLR MLR
comp=Z,18µm,23.0s,MS6.3
LONY Lake Ozonia 74.52 36⇑ iP **P 22 02 08.8 -1.9**
ERPA Erie 74.53 41⇑ iP **P 22 02 09.5 -1.3**
comp=Z,145nm,0.6s,mb6.1
ERPA LR LR
comp=Z,11µm,20.0s,MS6.1
JAVC Velka Javorina 74.56 334 P **P 22 02 13.3 +2.3**
VYHS Vyhne 74.56 333 i P **P 22 02 10.9 -0.1**
VYHS e 22 02 20.0
VYHS eS S 22 11 43.2 +0.9
VYHS eSS SS 22 17 22.0 +52
VYHS Vyhne 74.56 333 i P **P 22 02 10.9 -0.1**
VYHS e 22 02 20.0
VYHS eS S 22 11 43.2 +0.9
VYHS MLR MLR
comp=Z,20µm,22.3s,MS6.4
VYHS Vyhne 74.56 333 i P **P 22 02 10.9 -0.1**
VYHS e 22 02 20.0
VYHS eS S 22 11 43.2 +0.9
VYHS eSS SS 22 17 22.0 +52
VYHS LR LR
comp=Z,20µm,22.3s,MS6.4
USIN University of 74.56 48 eP **P 22 02 09.8 -1.2**
comp=Z,210nm,1.0s,mb6.0
CUKT Cukurca 74.60 311 P **P 22 02 11.2 0.0**
PARMO Parma 74.61 50 eP **P 22 02 10.3 -1.0**
AEU East Anglia Un 74.64 345⇑ eP **P 22 02 11.6 0.0**
AEU East Anglia Un 74.64 345⇑ eP **P 22 02 11.6 0.0**
NKC Novy Kostel 74.66 338 eP **P 22 02 11.8 +0.2**
NKC esP sP 22 02 32.3 -0.6
NKC ex x 22 04 45.9
NKC ex x 22 06 55.2
NKC eS S 22 11 44.4 +1.0
NKC ex x 22 16 53.8
NKC AMS AMS 22 39 40.0
comp=Z,22µm,19.7s
NKC Novy Kostel 74.66 338 eP **P 22 02 11.8 +0.2**
NKC e*PP pP 22 02 32.3 +5.5
NKC eS S 22 11 44.4 +1.0
NKC MLR MLR
comp=Z,22µm,19.7s,MS6.5
NKC Novy Kostel 74.66 338 eP **P 22 02 11.8 +0.2**
NKC epP pP 22 02 32.3 +5.5
NKC ePP PP 22 04 45.9 -13
NKC e 22 06 55.2
NKC eS S 22 11 44.4 +1.0
NKC eSS SS 22 16 53.8 +22
FRNY Flat Rock 74.69 35⇑ iP **P 22 02 09.8 -2.0**
WCB1 Church Bay 74.72 349⇑ eP **P 22 02 11.4 -0.6**
WCB1 AMb AMB 22 02 13.7
comp=Z,182nm,0.9s,mb6.0
WCB1 Church Bay 74.72 349⇑ eP **P 22 02 11.4 -0.6**
WCB1 AMb AMB 22 02 13.7
comp=Z,182nm,0.9s,mb6.0
KWE Weaver Farm 74.72 347⇑ eP **P 22 02 11.9 -0.1**
KWE Weaver Farm 74.72 347⇑ eP **P 22 02 11.9 -0.1**
KRUC Moravsky 74.72 335 P **P 22 02 12.4 +0.4**
DIKM Dikmen 74.73 319 P **P 22 02 11.7 -0.3**
BINT Bingol 74.73 314 P **P 22 02 13.7 +1.7**
TREC Trest 74.75 335 eP **P 22 02 12.1 -0.1**
TREC epP pP 22 02 32.6 +5.2
TREC ePP PP 22 04 49.9 -10
TREC eS S 22 11 42.1 -2.4
TREC ex x 22 17 00.2
TREC AMS AMS 22 40 00.0
comp=Z,39µm,16.9s
TREC Trest 74.75 335 eP **P 22 02 12.1 -0.1**
TREC e*PP pP 22 02 32.6 +5.2
TREC eS S 22 11 42.1 -2.4
TREC MLR MLR
comp=Z,39µm,16.9s,MS6.8
WPM1 Penmaenmawr 74.76 348 eP **P 22 02 11.2 -1.0**
WPM1 Penmaenmawr 74.76 348 eP **P 22 02 11.2 -1.0**
PSZ Piszkesteto 74.77 332⇑ iP **P 22 02 12.8 +0.6**
PSZ Piszkesteto 74.77 332⇑ iP **P 22 02 12.5 +0.3**
PSZ Piszkesteto 74.77 332 P **P 22 02 13.5 +1.3**
PSZ e*PP pP 22 02 20.5 -7.0
PSZ pmax pmax
comp=Z,99nm,1.7s,mb5.5
WLF1 Llynfaes 74.79 349 eP **P 22 02 12.2 -0.1**
WLF1 Llynfaes 74.79 349 eP **P 22 02 12.2 -0.1**
ACSO Alum Creek Sta 74.83 44 eP **P 22 02 11.4 -1.2**
ACSO LR LR
comp=Z,13µm,22.0s,MS6.2
BTMT Batman 74.83 313 P **P 22 02 14.3 +1.8**
YRC Rhoscolyn 74.85 349⇓ eP **P 22 02 12.0 -0.7**
YRC AMb AMB 22 02 15.3
comp=Z,105nm,1.0s,mb5.7
YRC Rhoscolyn 74.85 349⇓ eP **P 22 02 12.0 -0.7**
YRC AMb AMB 22 02 15.3
comp=Z,105nm,1.0s,mb5.7
ALLY Alegheny Colle 74.86 41 eP **P 22 02 11.8 -0.9**
KVT Kavak 74.87 318 P **P 22 02 13.0 +0.2**
DRGR 74.91 330⇑ iP **P 22 02 12.8 -0.2**
DRGR 74.91 330 P **P 22 02 13.5 +0.5**
DRGR 74.91 330⇑ P **P 22 02 12.8 -0.3**
BZK Bozkurt 74.98 320 P **P 22 02 13.0 -0.4**
MLR Muntele Rosu 74.98 327 P **P 22 02 13.3 -0.1**
comp=Z,68nm,0.6s,mb5.8,baz=14,slow=2.1,SNR=101
MLR S S 22 11 47.6 +0.5
comp=Z,0.9nm,0.4s,baz=107,slow=19,SNR=1.9
MLR Muntele Rosu 74.98 327⇑ iP **P 22 02 13.4 -0.1**
MLR Muntele Rosu 74.98 327 P **P 22 02 13.8 +0.3**
MLR Muntele Rosu 74.98 327⇑ P **P 22 02 13.4 -0.1**
WCI Wyandotte Cave 74.98 47 PFAKE 22 02 20.0 +6.5
WCI LR LR
comp=Z,29µm,21.0s,MS6.5
TIRR Tirgusor 75.01 325⇓ iP **P 22 02 13.2 -0.4**
TIRR Tirgusor 75.01 325 P **P 22 02 13.9 +0.3**
TIRR Tirgusor 75.01 325⇓ P **P 22 02 13.2 -0.4**
SBD1 Bryn Du 75.02 348⇑ iP **P 22 02 13.7 0.0**
SBD1 AMb AMB 22 02 16.1
comp=Z,245nm,0.9s,mb6.1
SBD1 Bryn Du 75.02 348⇑ iP **P 22 02 13.7 0.0**
SBD1 AMb AMB 22 02 16.1
comp=Z,245nm,0.9s,mb6.1
DLF Lyons Farm 75.03 350⇑ iP **P 22 02 13.7 0.0**
HBAR Harrisburg 75.05 52 eP **P 22 02 13.1 -0.8**
DCN Croghan 75.06 351⇑ iP **P 22 02 13.9 0.0**
DSB Dublin 75.06 350 eP **P 22 02 13.5 -0.4**
comp=Z,201nm,0.9s,mb6.0
BYBT Boyabat 75.08 319 P **P 22 02 15.6 +1.6**
YRE Yr Eifl 75.09 349⇑ eP **P 22 02 13.5 -0.6**
YRE AMb AMB 22 02 17.1
comp=Z,170nm,1.3s,mb5.8
YRE Yr Eifl 75.09 349⇑ eP **P 22 02 13.5 -0.6**
YRE AMb AMB 22 02 17.1
comp=Z,170nm,1.3s,mb5.8
GLAT Glass 75.15 50 eP **P 22 02 13.8 -0.6**
NCB Newcomb 75.20 36⇑ iP **P 22 02 12.9 -1.8**
NCB LR LR
comp=Z,15µm,20.0s,MS6.3
PTK Pertek 75.22 315 P **P 22 02 15.4 +0.5**
TOKT Tokat 75.29 317 eP **P 22 02 16.9 +1.7**
UTMT University of 75.30 50 eP **P 22 02 14.5 -0.8**
comp=Z,234nm,0.9s,mb6.1
ZST Bratislava 75.32 334 eP **P 22 02 15.5 +0.1**
ZST eS S 22 11 54.4 +3.6
ZST Bratislava 75.32 334 eP **P 22 02 15.5 +0.1**
ZST eS S 22 11 54.4 +3.6
ZST LR LR
comp=Z,27µm,20.5s,MS6.5
VOIR 75.33 327⇑ iP **P 22 02 15.8 +0.3**
VOIR 75.33 327⇑ P **P 22 02 15.8 +0.3**
HLM1 Long Mynd 75.35 348⇑ eP **P 22 02 15.6 0.0**
HLM1 AMb AMB 22 02 18.0
comp=Z,144nm,1.7s,mb5.6
HLM1 Long Mynd 75.35 348⇑ eP **P 22 02 15.6 0.0**
HLM1 AMb AMB 22 02 18.0
comp=Z,144nm,1.7s,mb5.6
MNGI Mangalore 75.39 272 i P **P 22 02 16.6 +0.8**
MNGI i S S 22 11 50.7 -0.9
MNGI ex x 22 40 09.2
comp=Z,14µm,18.7s
KHC Kasperske Hory 75.40 336 eP **P 22 02 16.2 +0.3**
KHC esP sP 22 02 36.0 -1.1
KHC ex x 22 04 53.0
KHC ex x 22 06 59.8
KHC eS S 22 11 51.6 0.0
KHC ex x 22 17 03.0
KHC AMS AMS 22 39 30.0
comp=Z,31µm,18.9s
KHC Kasperske Hory 75.40 336 eP **P 22 02 16.2 +0.3**
KHC e*PP pP 22 02 36.0 +4.9
KHC e 22 06 59.8
KHC eS S 22 11 51.6 0.0
KHC MLR MLR
comp=Z,31µm,18.9s,MS6.6
HALT Halls 75.41 50 eP **P 22 02 15.1 -0.8**
BUD Budapest 75.42 332⇑ iP **P 22 02 16.7 +0.7**
SVSK Karacayir 75.43 317 P **P 22 02 15.9 -0.1**
GRA1 Grafenberg Arr 75.45 338 eP **P 22 02 16.2 0.0**
comp=Z,115nm,0.9s,mb5.8
GRA1 eS S 22 11 50.0 -2.2
GRA1 LR LR
comp=Z,22µm,21.1s,MS6.4
GRF Grafenberg Arr 75.45 338 eP **P 22 02 16.2 0.0**
comp=Z,115nm,0.9s,mb5.8
GRF eS S 22 11 50.0 -2.2
GRF ePKPPKPdf 22 29 34.2
GRF eL 22 39 21.4
comp=Z,22µm,21.1s
GRF Grafenberg Arr 75.45 338 eP **P 22 02 16.2 0.0**
GRF eS S 22 11 50.0 -2.2
GRF pmax pmax
comp=Z,115nm,0.9s,mb5.8
GRF MLR MLR
comp=Z,22µm,21.1s,MS6.4
GRF Grafenberg Arr 75.45 338 eP **P 22 02 16.2 0.0**
GRF eS S 22 11 50.0 -2.2
GRF pmax pmax
comp=Z,115nm,0.9s,mb5.8
GRF MLR MLR
comp=Z,22µm,21.1s,MS6.4
GRF Grafenberg Arr 75.45 338 eP **P 22 02 16.2 0.0**
comp=Z,115nm,0.9s,mb5.8
GRF eS S 22 11 50.0 -2.2
GRF LR LR
comp=Z,22µm,21.1s,MS6.4
TCR Colchester 75.45 345⇑ eP **P 22 02 16.2 0.0**
TCR Colchester 75.45 345⇑ eP **P 22 02 16.2 0.0**
WET Wettzell 75.56 337 eP **P 22 02 16.8 0.0**
WET eS S 22 11 49.4 -4.0
WET pmax pmax
comp=Z,72nm,0.8s,mb5.7
WET Wettzell 75.56 337 eP **P 22 02 16.8 0.0**
comp=Z,72nm,0.8s,mb5.7
WET eS S 22 11 49.4 -4.0
TNS Taunus Mts 75.58 340 eP **P 22 02 16.6 -0.3**
comp=Z,67nm,0.9s,mb5.6
TNS ePP PP 22 04 56.9 -10
TNS eS S 22 11 52.5 -1.1
TNS Taunus Mts 75.58 340 eP **P 22 02 16.6 -0.3**
TNS eS S 22 11 52.5 -1.1
TNS pmax pmax
comp=Z,67nm,0.9s,mb5.6
BEBN Eben Emael 75.60 342 P **P 22 02 17.1 0.0**
MSL Mosul 75.61 311 ex x 22 02 20.0
MSL ex x 22 02 31.0
MSL ex x 22 04 58.0
MSL ex x 22 06 30.0
MSL ex x 22 11 53.0
MSL ex x 22 12 15.0
GEC2 GERESS Array S 75.63 336 eP **P 22 02 16.9 -0.3**
GEC2 eS S 22 11 50.1 -4.1
GEC2 pmax pmax
comp=Z,39nm,0.7s,mb5.5
GEC2 GERESS Array S 75.63 336 eP **P 22 02 16.9 -0.3**
comp=Z,39nm,0.7s,mb5.5
GEC2 ePP PP 22 04 55.5 -12
GEC2 eS S 22 11 50.1 -4.1
GERES GERESS Array B 75.63 336 P **P 22 02 17.4 +0.2**
comp=Z,20nm,0.5s,mb5.3,baz=33,slow=5.5,SNR=157
GERES S S 22 11 52.2 -2.0
comp=Z,1.0nm,1.1s,baz=54,slow=5.0,SNR=2.2
GERES LR LR 22 40 34.6
comp=Z,40µm,18.8s,MS6.7,baz=18,slow=40
GERES GERESS Array B 75.63 336 P **P 22 02 17.4 +0.2**
GERES S S 22 11 52.2 -2.0
GERES pmax pmax
comp=Z,20nm,0.5s
GERES smax
comp=N,1.0nm,1.1s
GERES MLR MLR
comp=Z,40µm,18.8s
DIY Diyarbakir 75.65 313 eP **P 22 02 19.9 +2.6**
PKSG 75.69 333⇑ eP **P 22 02 17.6 +0.1**
MEM Membach 75.72 342 P **P 22 02 17.8 +0.1**
TOS Tosya 75.75 319 eP **P 22 02 19.7 +1.8**
PSN Preselentsi 75.76 325 i P **P 22 02 17.6 -0.3**
PKS7 Kunszentmiklos 75.77 332⇑ eP **P 22 02 17.8 -0.2**
LBNH Lisbon 75.80 34 PFAKE 22 02 30.0 +12
LBNH LR LR
comp=Z,15µm,22.0s,MS6.3
PKME Peaks-Kenny Pk 75.81 32⇑ iP **P 22 02 17.3 -1.0**
HTR Trewern Hill 75.83 348⇑ iP **P 22 02 18.3 0.0**
HTR AMb AMB 22 02 25.8
comp=Z,121nm,0.9s,mb5.8
HTR Trewern Hill 75.83 348⇑ iP **P 22 02 18.3 0.0**
HTR AMb AMB 22 02 25.8
comp=Z,121nm,0.9s,mb5.8
SKP1 Kophill 75.83 346⇑ iP **P 22 02 17.9 -0.5**
SKP1 Kophill 75.83 346⇑ iP **P 22 02 17.9 -0.5**
UCC Uccle 75.85 343 P **P 22 02 18.7 +0.2**
MCH1 Michaelchurch 75.88 348 P **P 22 02 18.2 -0.3**
MCH1 AMb AMB 22 02 21.9
comp=Z,114nm,1.5s,mb5.6
MCH1 Michaelchurch 75.88 348 AMS AMS 22 43 46.8
comp=Z,5µm,18.2s
MCH1 Michaelchurch 75.88 348⇑ eP **P 22 02 18.2 -0.3**
MCH1 ⇑ eP 22 02 18.2
MCH1 AMb AMB 22 02 21.9
comp=Z,114nm,1.5s,mb5.6
MCH1 AMS AMS 22 43 46.8
comp=Z,5µm,18.2s,MS5.9
MCH1 Michaelchurch 75.88 348⇑ eP **P 22 02 18.2 -0.3**
MCH1 ⇑ eP 22 02 18.2
MCH1 AMb AMB 22 02 21.9
comp=Z,114nm,1.5s,mb5.6
MCH1 AMS AMS 22 43 46.8
comp=Z,5µm,18.2s,MS5.9
CONA Conrad Observa 75.91 334⇑ iP **P 22 02 19.2 +0.5**
comp=Z,59nm,0.9s,mb5.5,SNR=39
ACCN Adirondack Com 75.91 36 eP **P 22 02 17.5 -1.3**
SOP Sopron 75.94 334⇑ iP **P 22 02 20.0 +1.0**
BUC1 Bucharest 75.95 326⇓ iP **P 22 02 20.9 +1.9**
WVT Waverly 75.96 49 PFAKE 22 02 30.0 +11
WVT LR LR
comp=Z,29µm,22.0s,MS6.5
NATX Nacogdoches 76.01 57 eP **P 22 02 19.1 -0.2**
NATX LR LR
comp=Z,15µm,22.0s,MS6.3
PALK Pallekele 76.03 264 P **P 22 02 20.1 +0.6**
comp=Z,1µm,0.9s,mb6.8,SNR=37
PALK Pallekele 76.03 264 P **P 22 02 21.1 +1.6**
SNR=31
PALK Pallekele 76.03 264 eP **P 22 02 20.4 +0.9**
comp=Z,182nm,0.9s,mb6.0
PALK LR LR
comp=Z,2µm,20.0s,MS5.5
BCLA Clavier 76.03 342 P **P 22 02 19.6 +0.1**
BINY Binghamton 76.06 38 eP **P 22 02 18.1 -1.5**
comp=Z,207nm,1.4s,mb5.9
BINY LR LR
comp=Z,14µm,20.0s,MS6.3
TOD Tromm 76.08 340⇑ eP **P 22 02 19.7 -0.1**
ABH Alteburg 76.09 340⇑ eP **P 22 02 19.6 -0.2**
MYA Malataya 76.11 315 eP **P 22 02 21.8 +1.8**
TFO1 Folkestone 76.11 345⇑ eP **P 22 02 20.2 +0.2**
TFO1 Folkestone 76.11 345⇑ eP **P 22 02 20.2 +0.2**
SAFT Safranbolu 76.12 320 eP **P 22 02 21.0 +1.0**
MALT Malatya 76.12 315⇑ iP **P 22 02 21.2 +1.2**
MALT Malatya 76.12 315⇑ P **P 22 02 21.2 +1.2**
MALT epP pP 22 02 34.3 -1.0
HNH Hanover 76.14 35 eP **P 22 02 19.3 -0.8**
SNF Seneffe 76.14 343 P **P 22 02 20.2 +0.1**
SIND Sindeldorf 76.14 339 P **P 22 02 20.6 +0.5**
TSA1 Sevenoaks 76.15 345⇑ eP **P 22 02 20.6 +0.4**
TSA1 Sevenoaks 76.15 345⇑ eP **P 22 02 20.6 +0.4**
SWN1 Swindon 76.18 347⇑ eP **P 22 02 20.0 -0.3**
SWN1 Swindon 76.18 347⇑ eP **P 22 02 20.0 -0.3**
HGH Gray Hill 76.20 347⇑ eP **P 22 02 20.2 -0.2**
HGH AMb AMB 22 02 23.6
comp=Z,296nm,1.2s,mb6.1
HGH Gray Hill 76.20 347⇑ eP **P 22 02 20.2 -0.2**
HGH AMb AMB 22 02 23.6
comp=Z,296nm,1.2s,mb6.1
CORM Corum 76.22 318 eP **P 22 02 21.1 +0.5**
SWS Schriesheim-Wi 76.22 340 P **P 22 02 21.0 +0.5**
CANT Cankiri 76.28 319 eP **P 22 02 22.0 +1.1**
BZS Buzias 76.30 330⇑ iP **P 22 02 20.7 -0.3**
BZS Buzias 76.30 330 P **P 22 02 21.5 +0.5**
BZS Buzias 76.30 330⇑ P **P 22 02 20.7 -0.3**
WVL Waterville 76.30 33 eP **P 22 02 20.4 -0.6**
comp=Z,141nm,1.1s,mb5.8
MOA Molln 76.40 335⇓ iP **P 22 02 21.8 +0.2**
comp=Z,3µm,4.6s,SNR=63
GIVF Givet 76.43 342⇑ iP **P 22 02 21.8 +0.1**
comp=Z,289nm,1.1s,mb5.8
GIVF Givet 76.43 342⇑ iP **P 22 02 21.8 +0.1**
GIVF pmax pmax
comp=Z,145nm,1.1s,mb5.8
GIVF Givet 76.43 342⇑ iP **P 22 02 21.8 +0.1**
comp=Z,144nm,1.1s,mb5.8
PRD Provadia 76.46 325 i P **P 22 02 21.4 -0.5**
DOU Dourbes 76.48 342 P **P 22 02 22.0 0.0**
MENF Mencas 76.48 344⇑ eP **P 22 02 22.2 +0.2**
OXF Oxford 76.50 51 eP **P 22 02 21.1 -1.0**
OXF pmax pmax
comp=Z,161nm,0.8s,mb6.0
OXF MLR MLR
comp=Z,12µm,21.0s,MS6.2
OXF Oxford 76.50 51 eP **P 22 02 21.1 -1.1**
comp=Z,161nm,0.8s,mb6.0
OXF LR LR
comp=Z,12µm,21.0s,MS6.2
KTD Kalmit 76.51 340 eP **P 22 02 22.2 0.0**
KDZE Karadeniz Ereo 76.55 321 eP **P 22 02 21.8 -0.6**
WLF Walferdange 76.59 341 P **P 22 02 22.6 -0.1**
WLF Walferdange 76.59 341 eP **P 22 02 23.4 +0.8**
BAIF Baives 76.59 343⇑ iP **P 22 02 22.9 +0.3**
comp=Z,343nm,1.1s,mb5.9
BAIF Baives 76.59 343⇑ iP **P 22 02 22.9 +0.3**
BAIF pmax pmax
comp=Z,171nm,1.1s,mb5.9
BAIF Baives 76.59 343⇑ iP **P 22 02 22.9 +0.3**
comp=Z,171nm,1.1s,mb5.9
SWK Warminster 76.60 347⇑ iP **P 22 02 22.4 -0.3**
SWK Warminster 76.60 347⇑ iP **P 22 02 22.4 -0.3**
ARSA Arzberg 76.62 334 i P **P 22 02 23.2 +0.4**
comp=Z,2µm,3.4s,SNR=41
SSPA Standing Stone 76.63 40 PFAKE 22 02 30.0 +7.1
SSPA LR LR
comp=Z,8µm,20.0s,MS6.0
MCWV Mont Chateau 76.65 42⇑ iP **P 22 02 22.1 -0.9**
comp=Z,334nm,1.4s,mb6.1
MCWV LR LR
comp=Z,19µm,22.0s,MS6.4
URFA Urfa 76.66 314 eP **P 22 02 23.9 +0.8**
PKSM Moragy 76.68 332⇑ iP **P 22 02 22.5 -0.6**
PKSM Moragy 76.68 332 P **P 22 02 23.2 +0.1**
PKSM Moragy 76.68 332⇑ iP **P 22 02 22.6 -0.5**
VAL Valentia 76.73 352 eP **P 22 02 22.6 -0.8**
CRAR CRAIOVA 76.73 328⇓ iP **P 22 02 24.7 +1.2**
PLAL Pickwick Lake 76.77 50 PFAKE 22 02 30.0 +6.3
PLAL LR LR
comp=Z,27µm,22.0s,MS6.5
BANOM Banah 76.78 295 P **P 22 02 24.5 +0.8**
SNR=8.4
STU Stuttgart 76.78 339 eP **P 22 02 23.3 -0.4**
comp=Z,141nm,1.3s,mb5.7
STU eS S 22 12 05.0 -1.8
STU Stuttgart 76.78 339 eP **P 22 02 24.0 +0.3**
ZIMR 76.79 326⇓ iP **P 22 02 24.0 +0.2**
HKT Hockley 76.80 59 PFAKE 22 02 40.0 +16
HKT LR LR
comp=Z,15µm,22.0s,MS6.3
BNN Bunyan 76.81 317 eP **P 22 02 24.3 +0.4**
FUR Furstenfeldbru 76.86 337 eP **P 22 02 24.1 -0.1**
comp=Z,137nm,1.0s,mb5.8
FUR eS S 22 12 06.5 -1.2
FUR Furstenfeldbru 76.86 337 eP **P 22 02 24.1 -0.1**
FUR eS S 22 12 06.5 -1.2
FUR pmax pmax
comp=Z,137nm,1.0s,mb5.8
DJES Djerdap 76.89 329 eP **P 22 02 25.6 +1.3**
LANF Langenberg 76.89 340⇑ eP **P 22 02 24.2 -0.1**
HEX Exmoor 76.89 348⇑ iP **P 22 02 25.1 +0.7**

HEX Exmoor 76.89 348⇑ *i*P P 22 02 25.1 +0.7
EMMW East Machias 76.91 31 *e*P P 22 02 23.6 -0.8
comp=Z,142nm,0.9s,mb5.9
SZH Strazhica 76.93 326 *i* P P 22 02 25.2 +0.6
LBG Lerchenberg 76.97 339 P P 22 02 25.2 +0.4
BR131 Keskin Array S 77.01 319 *e*P P 22 02 24.9 -0.1
BR131 LR LR
comp=Z,13µm,19.0s,MS6.3
BRTR Keskin Array B 77.01 319 P P 22 02 24.9 -0.1
comp=Z,26nm,0.6s,mb5.3,baz=39,slow=3.1,SNR=99
BRTR LR LR 22 42 15.5
comp=Z,16µm,19.2s,MS6.3,baz=211,slow=40
BRTR Keskin Array B 77.01 319 P P 22 02 24.9 -0.1
BRTR pmax pmax
comp=Z,26nm,0.6s
BRTR MLR MLR
comp=Z,16µm,19.2s
HTL Hartland 77.05 348⇑ *e*P P 22 02 25.1 -0.2
HTL AMS AMS 22 42 52.1
comp=Z,7µm,20.2s,MS6.0
HTL Hartland 77.05 348⇑ *e*P P 22 02 25.1 -0.2
HTL AMS AMS 22 42 52.1
comp=Z,7µm,20.2s,MS6.0
KOGS Kog 77.15 334 P P 22 02 27.0 +1.2
PVL Pavlikeni 77.18 326 *i* P P 22 02 26.1 +0.1
ANTO Ankara 77.23 319 *e*P P 22 02 25.4 -0.9
ANTO Ankara 77.23 319⇑ *i*P P 22 02 26.6 +0.3
ANTO Ankara 77.23 319 P P 22 02 27.0 +0.7
SNR=28
ANTO Ankara 77.23 319 P P 22 02 27.3 +1.0
ANTO pmax pmax
comp=Z,74nm,1.0s,mb5.6
ANTO Ankara 77.23 319 *e*P P 22 02 26.2 0.0
comp=Z,74nm,1.0s,mb5.6
ANTO LR LR
comp=Z,14µm,20.0s,MS6.3
STR Strasbourg 77.27 340⇑ *e*P P 22 02 27.1 +0.6
KAMT Kaman 77.28 319 *e*P P 22 02 26.2 -0.3
PERS Pernice 77.29 334 *e*P P 22 02 26.9 +0.3
PERS *e*PP PP 22 05 22.4 +1.2
AS31 Alice Springs 77.34 202 *e*P P 22 02 27.0 +0.2
AS31 *e*S S 22 12 15.1 +2.2
ASAR Alice Springs 77.34 202 P P 22 02 27.1 +0.2
comp=Z,61nm,0.7s,mb5.6,baz=14,slow=5.5,SNR=227
ASAR ScS ScS 22 12 40.3 +0.1
comp=Z,5.0nm,1.3s,baz=19,slow=7.8,SNR=5.8
ASAR PKKPbc PKKPbc 22 21 31.4 -0.3
comp=Z,1.2nm,0.8s,baz=199,slow=2.0,SNR=6.8
ASAR PKP2ab 22 29 25.4
comp=Z,0.6nm,0.8s,baz=156,slow=2.8,SNR=4.2
ASAR LR LR 22 33 40.5
comp=Z,7µm,21.4s,MS6.0,baz=19,slow=33
ASAR Alice Springs 77.34 202 P P 22 02 27.1 +0.3
ASAR 22 12 40.3
ASAR pmax pmax
comp=Z,61nm,0.7s
ASPA Alice Springs 77.34 202 *e*P P 22 02 27.0 +0.1
ASPA *e*S S 22 12 15.1 +2.2
KBA Koelnbreinsper 77.36 336 *i* P P 22 02 28.1 +1.1
comp=Z,3µm,3.5s,SNR=84
KBA Koelnbreinsper 77.36 336 *i* P P 22 02 28.1 +1.2
KBA pmax pmax
comp=Z,340nm,3.5s
MDU Mudurnu 77.36 321 *e*P P 22 02 27.9 +0.9
BEO Belgrade 77.38 330 *e*P P 22 02 27.2 +0.2
BFO Black Forest 77.39 339 P P 22 02 27.3 +0.2
comp=Z,360nm,0.7s,mb6.4,SNR=30
BFO Black Forest 77.39 339 *e*P P 22 02 26.7 -0.4
BFO *e*S S 22 12 12.7 -0.7
BFO pmax pmax
comp=Z,89nm,1.0s,mb5.7
BFO Black Forest 77.39 339 *e*P P 22 02 26.7 -0.4
comp=Z,89nm,1.0s,mb5.7
BFO *e*S S 22 12 12.7 -0.7
JMB Yambol 77.40 325 *e*P P 22 02 26.4 -0.7
JMB Yambol 77.40 325 *i* P P 22 02 25.2 -2.0
BHD Baghdad 77.41 308 *i* x x 22 02 25.0
BHD *i* x x 22 02 43.0
BHD *i* x x 22 02 49.0
BHD *i* x x 22 05 23.0
BHD *e*x x 22 12 12.0
BHD *e*x x 22 12 31.0
BHD *e*x x 22 12 50.0
TRD Trivandrum 77.43 268 *e*P P 22 02 27.3 -0.1
TRD AMb AMB 22 02 31.8
comp=Z,217nm,1.5s,mb5.9
TRD *i* x x 22 12 28.1
HRV Harvard--Oak R 77.44 35 *e*P P 22 02 26.7 -0.7
HRV pmax pmax
comp=Z,100nm,0.9s,mb5.8
HRV Harvard--Oak R 77.44 35⇑ *i*P P 22 02 26.6 -0.8
comp=Z,101nm,0.9s,mb5.8
HRV LR LR
comp=Z,19µm,22.0s,MS6.4
GUT Gutenstein 77.46 339 P P 22 02 28.1 +0.6
WSAR Wadi Sarin 77.49 291 P P 22 02 28.7 +1.0
comp=Z,80nm,0.9s,mb5.7,baz=46,slow=5.2,SNR=47
SPAK Spaichingen-Ko 77.50 339⇑ *e*P P 22 02 28.0 +0.2
WLS Welschbruch 77.52 340⇑ *e*P P 22 02 28.1 +0.2
DYA Yadsworthy 77.53 348⇑ *e*P P 22 02 27.6 -0.3
DYA Yadsworthy 77.53 348⇑ *e*P P 22 02 27.6 -0.3
KLYT Kilyos 77.53 323 *e*P P 22 02 27.7 -0.2
CDF Champ du Feu 77.54 340⇑ *i*P P 22 02 28.2 +0.2
comp=Z,265nm,1.0s,mb5.8
CDF Champ du Feu 77.54 340⇑ *i*P P 22 02 28.2 +0.2
CDF pmax pmax
comp=Z,132nm,1.0s,mb5.8
CDF Champ du Feu 77.54 340⇑ *i*P P 22 02 28.2 +0.2
comp=Z,132nm,1.0s,mb5.8
KVTX Kingsville 77.56 62 *e*P P 22 02 28.8 +0.7
OBKA Obir 77.56 335 *i* P P 22 02 28.5 +0.4
comp=Z,3µm,3.2s,SNR=60
WATA Walderalm 77.56 337⇓ *i*P P 22 02 28.8 +0.7
comp=Z,310nm,1.6s,mb6.0,SNR=66
WATA Walderalm 77.56 337⇓ *i*P P 22 02 28.8 +0.7
WATA pmax pmax
comp=Z,310nm,1.6s,mb6.0
WATA Walderalm 77.56 337⇓ *i*P P 22 02 28.8 +0.7
comp=Z,310nm,1.6s,mb6.0
BIDO Bidbid 77.57 292 P P 22 02 29.5 +1.3
SNR=18
UBR Ueberruh 77.59 338 P P 22 02 28.9 +0.6
SWET Sewanee 77.60 49⇑ *i*P P 22 02 26.6 -1.7
GAZ Gaziantep 77.61 315 *e*P P 22 02 30.1 +1.7
SVIS Svilajnac 77.61 329⇓ *i*P P 22 02 28.5 +0.2
WTTA Wattenberg 77.62 337 *i* P P 22 02 29.2 +0.8
comp=Z,3µm,3.0s,SNR=97
WTTA Wattenberg 77.62 337 *i* P P 22 02 29.2 +0.8
WTTA pmax pmax
comp=Z,306nm,3.0s
TZTN Tazewell 77.62 46⇑ *i*P P 22 02 27.4 -1.0
WES Weston 77.64 35 *e*P P 22 02 27.8 -0.7
WES pmax pmax
comp=Z,155nm,0.9s,mb5.9
WES MLR MLR
comp=Z,14µm,22.0s,MS6.2
WES Weston 77.64 35 *e*P P 22 02 27.8 -0.7
comp=Z,155nm,0.9s,mb5.9
WES LR LR
comp=Z,14µm,22.0s,MS6.2
HRT Hereke 77.67 322 *e*P P 22 02 28.6 -0.1
MOTA Moosalm 77.67 337⇑ *i*P P 22 02 29.2 +0.5
comp=Z,121nm,1.0s,mb5.8,SNR=42
MOTA Moosalm 77.67 337⇑ *i*P P 22 02 29.3 +0.6
MOTA pmax pmax
comp=Z,121nm,1.0s,mb5.8
ISK Istanbul-Kandi 77.69 323 *e*P P 22 02 28.1 -0.7
LIBD Limburg 77.72 340⇑ *e*P P 22 02 29.4 +0.4
HATD Hatta, Dubai 77.72 294 P P 22 02 29.5 +0.5
SNR=31
CSA1 St Austell 77.73 348⇑ *i*P P 22 02 28.9 -0.1
CSA1 St Austell 77.73 348⇑ *i*P P 22 02 28.9 -0.1
ECH Echery 77.75 340⇑ *e*P P 22 02 29.1 -0.1
SQTA Sankt Quirin 77.76 337⇑ *i*P P 22 02 29.8 +0.6
comp=Z,900nm,2.1s,mb6.3,SNR=29
SQTA Sankt Quirin 77.76 337⇑ *i*P P 22 02 29.8 +0.6
SQTA pmax pmax
comp=Z,900nm,2.1s,mb6.3
WBK Wadi Bani Khal 77.78 291 P P 22 02 31.1 +1.8
SNR=15
MVL Millersville 77.79 39 *e*P P 22 02 28.1 -1.3
KIZ Kirchzarten 77.83 340 P P 22 02 29.8 +0.2
SISB Singen-Schiene 77.85 339 P P 22 02 30.4 +0.7
CTT Catalca 77.86 323 *e*P P 22 02 28.9 -0.8

ASHO Ashiyiah 77.87 294 P P 22 02 30.2 +0.4
SNR=36
GPA Golpazari 77.87 321 *e*P P 22 02 30.5 +0.7
PAL Palisades 77.88 37 *e*P P 22 02 28.6 -1.3
PAL pmax pmax
comp=Z,89nm,0.7s,mb5.8
PAL Palisades 77.88 37 *e*P P 22 02 28.6 -1.2
comp=Z,89nm,0.7s,mb5.8
EDRB Edirne 77.88 325 *e*P P 22 02 29.6 -0.3
SLE Schleitheim 77.89 339⇑ *i*P P 22 02 29.2 -0.7
comp=Z,326nm,1.7s,mb6.0
SLE Schleitheim 77.89 339⇑ P P 22 02 29.7 -0.2
FELD Feldberg im Sc 77.89 339⇑ *e*P P 22 02 30.0 +0.1
BRNJ Basking Ridge 77.90 38 *e*P P 22 02 29.1 -0.9
MEZF Maizieres J'vi 77.92 342⇑ *i*P P 22 02 30.6 +0.5
comp=Z,692nm,1.1s,mb6.2
MEZF Maizieres J'vi 77.92 342⇑ *i*P P 22 02 30.6 +0.5
comp=Z,692nm,1.1s,mb6.5
CRES Cresnjev 77.94 334 P P 22 02 30.6 +0.4
CRQ2 Rosemanowes 2 77.95 349⇑ *i*P P 22 02 30.0 -0.2
CRQ2 AMb AMB 22 02 32.6
comp=Z,82nm,0.9s,mb5.7
CRQ2 Rosemanowes 2 77.95 349⇑ *i*P P 22 02 30.0 -0.2
CRQ2 AMb AMB 22 02 32.6
comp=Z,82nm,0.9s,mb5.7
SEST Monte Rota 77.95 336 P P 22 02 30.9 +0.6
TRULL Truellikon 77.95 339⇑ *i*P P 22 02 29.7 -0.6
comp=Z,520nm,2.4s,mb6.0
KOZT Kozan 77.96 316 *e*P P 22 02 30.6 +0.3
FWV Forest Hill 77.97 44 *e*P P 22 02 29.2 -1.2
SMDO Samad 77.97 292 P P 22 02 31.4 +1.1
SNR=23
ADVT Abdulvahap 77.97 322 *e*P P 22 02 30.1 -0.3
PTCC Patocco-Chiusa 77.98 335 P P 22 02 30.0 -0.4
THEF They Montfort 77.99 341⇑ *e*P P 22 02 30.8 +0.3
WEIN Weingarten 78.00 339⇑ *i*P P 22 02 30.2 -0.3
comp=Z,543nm,1.6s,mb6.2
HOQ Hoqain 78.00 293 P P 22 02 30.9 +0.4
SNR=63
LJU Ljubljana 78.00 335 *e*P P 22 02 30.2 -0.4
LJU *e*PP PP 22 05 26.6 -0.6
LJU *e*PKiKP PKiKP 22 08 16.0 +7.7
LJU *e*S S 22 12 19.5 -0.6
LJU *e*SS SS 22 17 39.5 +18
LJU Ljubljana 78.00 335 *e*P P 22 02 30.2 -0.4
LJU *e*PP PP 22 05 26.6 -0.6
YLV Yalova 78.00 322 *e*P P 22 02 30.4 -0.1
CPZ Penzance 78.01 349⇑ *e*P P 22 02 30.4 -0.2
CPZ AMb AMB 22 02 32.9
comp=Z,191nm,1.8s,mb5.7
CPZ Penzance 78.01 349⇑ *e*P P 22 02 30.4 -0.2
CPZ AMb AMB 22 02 32.9
comp=Z,191nm,1.8s,mb5.7
DAVA Damuels 78.02 338 *i* P P 22 02 31.1 +0.5
comp=Z,3µm,4.0s,SNR=55
CGW Gweek 78.02 349⇑ *i*P P 22 02 30.6 -0.1
CGW Gweek 78.02 349⇑ *i*P P 22 02 30.6 -0.1
CMA1 Manaccan 78.03 349⇑ *i*P P 22 02 30.5 -0.1
CMA1 Manaccan 78.03 349⇑ *i*P P 22 02 30.5 -0.1
CPNY Central Park 78.04 37 *e*P P 22 02 29.7 -1.0
CGH1 Goonhilly 78.06 349⇑ *i*P P 22 02 30.7 -0.2
CGH1 Goonhilly 78.06 349⇑ *i*P P 22 02 30.7 -0.2
CPCT Cooper Cave 78.07 47⇑ *i*P P 22 02 29.6 -1.3
LIENZ Alp Oberkamor 78.10 338⇑ *i*P P 22 02 31.0 -0.1
comp=Z,612nm,3.0s
MOF Molkenrain 78.10 340⇑ *e*P P 22 02 31.1 0.0
HAU Haudompre 78.12 341⇑ *i*P P 22 02 31.4 +0.2
comp=Z,250nm,1.1s,mb5.8
HAU *e*R
comp=Z,17µm,20.8s
HAU Haudompre 78.12 341⇑ *i*P P 22 02 31.4 +0.2
HAU pmax pmax
comp=Z,125nm,1.1s,mb5.8
HAU MLR MLR
comp=Z,17µm,20.8s,MS6.3
HAU Haudompre 78.12 341⇑ *i*P P 22 02 31.4 +0.2
comp=Z,125nm,1.1s,mb5.8
HAU LR LR
comp=Z,17µm,20.8s,MS6.3
WILA Wila 78.12 339⇑ *i*P P 22 02 31.9 +0.7
comp=Z,600nm,1.8s,mb6.2
WILA Wila 78.12 339⇑ P P 22 02 31.5 +0.3
GMNA Gemona 78.13 335 P P 22 02 30.9 -0.3
GRUS Gruza 78.13 330 *i* P P 22 02 30.1 -1.2
DIM Dimitrovgrad 78.14 325 *i* P P 22 02 32.7 +1.4
DIVS Divcibare 78.17 330⇓ *i*P P 22 02 30.7 -0.8
DIVS Divcibare 78.17 330 *e*P P 22 02 30.9 -0.6
PGB Panagyurishte 78.18 327 *i* P P 22 02 30.8 -0.7
VOY Vojsko 78.18 335 *e*P P 22 02 30.7 -0.8
VOY *e* 22 03 18.5
GEMT Gemlik 78.18 322 *e*P P 22 02 31.3 -0.2
SULZ Sulz-Cheisache 78.19 339⇑ *i*P P 22 02 31.4 -0.2
comp=Z,681nm,1.9s,mb6.3
SULZ Sulz-Cheisache 78.19 339⇑ P P 22 02 31.7 +0.1
HINF Hinteralfeld 78.20 340⇑ *i*P P 22 02 31.5 -0.1
comp=Z,50nm,0.6s,mb5.3
HINF Hinteralfeld 78.20 340⇑ *i*P P 22 02 31.5 -0.1
HINF pmax pmax
comp=Z,25nm,0.6s,mb5.3
HINF Hinteralfeld 78.20 340⇑ *i*P P 22 02 31.5 -0.1
comp=Z,25nm,0.6s,mb5.3
ZUR Zurich 78.24 339⇑ *i*P P 22 02 31.4 -0.5
comp=Z,849nm,2.4s,mb6.2
ZUR Zurich 78.24 339⇑ P P 22 02 32.2 +0.3
ELN Prospectdale 78.29 44 *e*P P 22 02 30.7 -1.4
BOJS Bojanci 78.30 334 *e*P P 22 02 32.0 -0.2
BOJS *e*PcP PcP 22 02 39.8 -1.6
BOJS *e*sP sP 22 02 50.8 -2.7
BOJS *e*PP PP 22 05 31.6 +2.0
BOJS *e*PKiKP PKiKP 22 08 22.3 +14
BOJS *e*S S 22 12 19.8 -3.5
BOJS *e*SS SS 22 17 43.7 +17
CEY Cerknica 78.31 334 P P 22 02 32.6 +0.4
ESKT Eskisehir 78.32 321 *e*P P 22 02 32.5 +0.2
SOF Sofiya 78.34 327 *i* P P 22 02 31.8 -0.6
PLONS Plons 78.36 338⇑ *i*P P 22 02 31.6 -0.9
comp=Z,552nm,2.2s,mb6.1
PLD Plovdiv 78.38 326 *e*P P 22 02 32.3 -0.3
PLD Plovdiv 78.38 326 *i* P P 22 02 31.8 -0.9
CEYT Ceyhan 78.39 316 *e*P P 22 02 33.4 +0.8
BBS Basel-Blauen 78.39 340⇑ *e*P P 22 02 32.8 +0.1
KIZT Kizilcal 78.45 320 *e*P P 22 02 32.8 -0.3
APPI Appiano 78.45 337 P P 22 02 33.0 0.0
BLA Blacksburg 78.45 44⇑ *i*P P 22 02 31.9 -1.1
BLA *e* pP 22 02 44.9 -3.5
BLA pmax pmax
comp=Z,60nm,0.8s,mb5.6
BLA MLR MLR
comp=Z,10µm,22.0s,MS6.1
BLA Blacksburg 78.45 44⇑ *i*P P 22 02 31.9 -1.1
comp=Z,6.5nm,0.8s
BLA *e* pP 22 02 44.9 -3.5
BLA LR LR
comp=Z,972nm,22.0s
JMDO Jabal Madar 78.47 291 P P 22 02 34.2 +1.1
SNR=56
BALST Balsthal 78.47 340⇑ *i*P P 22 02 32.1 -1.0
comp=Z,707nm,1.7s,mb6.3
VTS Vitosha 78.47 327 *e*P P 22 02 32.9 -0.2
VTS Vitosha 78.47 327 *i* P P 22 02 31.8 -1.3
VTS Vitosha 78.47 327⇑ *i*P P 22 02 32.8 -0.3
VTS Vitosha 78.47 327 P P 22 02 33.0 -0.1
JVM Valle D.L. Mar 78.48 347⇑ *e*P P 22 02 33.2 0.0
JVM Valle D.L. Mar 78.48 347⇑ *e*P P 22 02 33.2 0.0
KARA Karaisali 78.48 317 *e*P P 22 02 33.6 +0.4
JRS Jersey 78.49 346⇑ *i*P P 22 02 33.2 0.0
JRS Jersey 78.49 346⇑ *i*P P 22 02 33.2 0.0
DAVOX Davos 78.49 338⇑ *i*P P 22 02 32.9 -0.4
comp=Z,448nm,1.5s,mb6.2
JSA Saint Aubin 78.50 346⇑ *e*P P 22 02 33.3 0.0
JSA Saint Aubin 78.50 346⇑ *e*P P 22 02 33.3 0.0
BOURR Bourrignon 78.52 340⇑ *i*P P 22 02 33.4 0.0
comp=Z,522nm,1.8s,mb6.2
KDZ Kurdzhali 78.53 325 *i* P P 22 02 33.7 +0.2
MYNC Murphy 78.56 47 *e*P P 22 02 32.7 -0.9
MYNC pmax pmax
comp=Z,180nm,1.2s,mb5.9
MYNC Murphy 78.56 47⇑ *i*P P 22 02 32.5 -1.1
comp=Z,178nm,1.3s,mb5.8
MYNC LR LR
comp=Z,40µm,21.0s,MS6.7
BBLS Bajina Basta - 78.56 330 *i* P P 22 02 34.8 +1.2
ZAIG Zacatecas 78.59 68 *i* P P 22 02 34.0 +0.2
MFT Murefte 78.60 324 *e*P P 22 02 33.0 -0.9

MUO Muotathal 78.61 339⇑ *i*P P 22 02 33.6 -0.3
comp=Z,565nm,1.6s,mb6.2
MUO Muotathal 78.61 339⇑ P P 22 02 34.4 +0.5
LLS Linth-Limmern 78.63 338⇑ *i*P P 22 02 34.2 +0.2
comp=Z,442nm,2.5s,mb6.0
LLS Linth-Limmern 78.63 338⇑ P P 22 02 34.6 +0.6
ORLT Orhaneli 78.63 322 *e*P P 22 02 34.7 +0.7
LOMF Lomont 78.64 340⇑ *e*P P 22 02 34.5 +0.4
MRMT Marmara Adasi 78.64 323 *e*P P 22 02 32.5 -1.6
ARQ Araqi 78.65 293 P P 22 02 34.8 +0.7
SNR=114
FLN La Foliniere 78.66 345⇑ *i*P P 22 02 34.2 0.0
comp=Z,486nm,0.9s,mb6.1
FLN *e*R
comp=Z,21µm,22.8s
FLN La Foliniere 78.66 345⇑ *i*P P 22 02 34.2 0.0
FLN pmax pmax
comp=Z,243nm,0.9s,mb6.1
FLN MLR MLR
comp=Z,21µm,22.8s,MS6.4
FLN La Foliniere 78.66 345⇑ *i*P P 22 02 34.2 0.0
comp=Z,243nm,0.9s,mb6.1
FLN LR LR
comp=Z,21µm,22.8s,MS6.4
BRMO Bormio 78.66 337 P P 22 02 35.2 +1.0
MIB Mutribah 78.66 304 *e*P P 22 02 33.7 -0.5
MIB AMb AMB 22 02 37.0
comp=Z,472nm,0.6s,mb6.6
UMR Umm Al-Rimmam 78.67 303 *e*P P 22 02 33.4 -0.8
UMR AMb AMB 22 02 36.1
comp=Z,170nm,0.5s,mb6.2
BSY Bisya 78.71 292 P P 22 02 35.4 +1.0
SNR=118
RKY Sarkoy-Tekirda 78.73 324 *e*P P 22 02 34.2 -0.4
BARS Barje 78.73 328 *e*P P 22 02 34.8 +0.2
BNT Bandirma 78.74 323 *e*P P 22 02 36.1 +1.5
RZN Rozhen 78.75 326 *i* P P 22 02 32.7 -1.9
BNALP Bannalp 78.75 339⇑ *i*P P 22 02 34.3 -0.4
comp=Z,413nm,2.3s,mb6.0
LDF La Druitiere 78.76 345⇑ *i*P P 22 02 34.7 0.0
comp=Z,322nm,1.0s,mb5.9
LDF La Druitiere 78.76 345⇑ *i*P P 22 02 34.7 0.0
LDF pmax pmax
comp=Z,161nm,1.0s,mb5.9
LDF La Druitiere 78.76 345⇑ *i*P P 22 02 34.7 0.0
comp=Z,161nm,1.0s,mb5.9
EDC Edincik 78.77 323 *e*P P 22 02 35.3 +0.5
BERNI Berninapass 78.80 338⇑ *i*P P 22 02 34.5 -0.5
comp=Z,231nm,0.8s,mb6.1
VDL Val di Lei 78.87 338⇑ *i*P P 22 02 35.1 -0.2
comp=Z,764nm,2.5s,mb6.2
VDL Val di Lei 78.87 338⇑ P P 22 02 36.3 +1.0
LRAL Lakeview Retre 78.87 51⇑ *i*P P 22 02 33.5 -1.8
comp=Z,58nm,0.7s,mb5.6
LRAL LR LR
comp=Z,14µm,22.0s,MS6.3
CBN Corbin 78.90 41 *e*P P 22 02 34.7 -0.8
comp=Z,86nm,0.8s,mb5.7
CBN LR LR
comp=Z,13µm,19.0s,MS6.3
HASLI Hasliberg 78.92 339⇑ *i*P P 22 02 35.9 +0.3
comp=Z,592nm,1.8s,mb6.2
KRTS Karatas 78.92 316 *e*P P 22 02 36.5 +0.9
RDO Rodhopi 78.93 325 *e*P P 22 02 35.7 0.0
HTY Hatay 78.96 315 *e*P P 22 02 36.3 +0.5
ALN Alexandroupoli 78.96 325 *e*P P 22 02 36.3 +0.4
KBD Kabd 78.98 303 *e*P P 22 02 35.6 -0.3
KBD AMb AMB 22 02 38.0
comp=Z,544nm,0.7s,mb6.6
MABI Malga Bissina 79.02 337 P P 22 02 36.3 +0.1
MERS Mersin 79.04 317 *e*P P 22 02 36.3 0.0
KONT Konya--Tatoy 79.05 319 *e*P P 22 02 36.1 -0.2
PLE Pljevlja 79.06 330⇓ *i*P P 22 02 37.2 +0.9
ENEZ Enez 79.06 324 *e*P P 22 02 36.1 -0.3
GRR Gorron 79.08 345⇑ *i*P P 22 02 36.8 +0.3
comp=Z,746nm,0.9s,mb6.3
GRR Gorron 79.08 345⇑ *i*P P 22 02 36.8 +0.3
GRR pmax pmax
comp=Z,373nm,0.9s,mb6.3
GRR Gorron 79.08 345⇑ *i*P P 22 02 36.8 +0.3
comp=Z,373nm,0.9s,mb6.3
FUSIO Fusio 79.08 339⇑ *i*P P 22 02 35.9 -0.6
comp=Z,348nm,1.0s,mb6.2
RST Umm Al-Ruwaisa 79.08 304 *e*P P 22 02 35.5 -1.0
RST AMb AMB 22 02 38.1
comp=Z,302nm,0.6s,mb6.4
BRANT Les Verrieres 79.11 340⇑ *i*P P 22 02 36.2 -0.5
comp=Z,626nm,2.1s,mb6.2
DST Dursunbey 79.12 322 *e*P P 22 02 37.1 +0.5
WIMIS Wimmis 79.12 339⇑ *i*P P 22 02 36.9 +0.2
comp=Z,320nm,2.2s,mb5.9
KKB Krupnik 79.16 327 *i* P P 22 02 36.5 -0.4
NAY Al-Naaiem 79.16 303 *e*P P 22 02 36.6 -0.2
NAY AMb AMB 22 02 38.8
comp=Z,169nm,0.8s,mb6.0
LPK Lapseki 79.16 324 *e*P P 22 02 38.0 +1.1
TORNY Torny 79.16 340⇑ *i*P P 22 02 37.2 +0.3
comp=Z,649nm,2.2s,mb6.2
MMB Musomiste 79.18 326 *e*P P 22 02 36.9 -0.2
MMB Musomiste 79.18 326 *i* P P 22 02 36.5 -0.5
QRN Al-Qurain 79.20 303 *e*P P 22 02 36.7 -0.5
QRN AMb AMB 22 02 40.7
comp=Z,488nm,0.8s,mb6.5
RDF Al-Radifah 79.25 303 *e*P P 22 02 36.7 -0.8
RDF AMb AMB 22 02 41.1
comp=Z,734nm,1.1s,mb6.5
MAGA Magasa 79.25 337 P P 22 02 37.5 +0.1
MBWA Marble Bar 79.26 215⇑ *i*P P 22 02 37.2 -0.3
MBWA LR LR
comp=Z,3µm,19.0s,MS5.7
NVLJ Novalja 79.27 334⇑ *i*P P 22 02 36.5 -1.0
IVA Berane 79.31 330⇓ *i*P P 22 02 37.8 0.0
UPM Unac-Piva 79.32 330⇓ *i*P P 22 02 37.2 -0.6
LOR Lormes 79.33 342⇑ *i*P P 22 02 38.1 +0.3
comp=Z,484nm,0.9s,mb6.1
LOR *e*R
comp=Z,32µm,21.0s
LOR Lormes 79.33 342⇑ *i*P P 22 02 38.1 +0.3
LOR pmax pmax
comp=Z,242nm,0.9s,mb6.1
LOR MLR MLR
comp=Z,32µm,21.0s,MS6.6
LOR Lormes 79.33 342⇑ *i*P P 22 02 38.1 +0.3
comp=Z,242nm,0.9s,mb6.1
LOR LR LR
comp=Z,32µm,21.0s,MS6.6
NVR Nevrokopi 79.34 326 *e*P P 22 02 37.9 0.0
CANB Canakkale 79.36 323 *e*P P 22 02 37.4 -0.6
LKBD Leukerbad 79.38 339⇑ *i*P P 22 02 37.2 -0.9
comp=Z,335nm,1.9s,mb5.9
LKBD Leukerbad 79.38 339⇑ P P 22 02 38.7 +0.6
SGMF Saint Gilles 79.47 347⇑ *i*P P 22 02 39.0 +0.4
comp=Z,568nm,0.9s,mb6.2
SGMF Saint Gilles 79.47 347⇑ *i*P P 22 02 39.0 +0.4
SGMF pmax pmax
comp=Z,284nm,0.9s,mb6.2
SGMF Saint Gilles 79.47 347⇑ *i*P P 22 02 39.0 +0.4
comp=Z,284nm,0.9s,mb6.2
SENIN Lac Senin 79.48 339⇑ *i*P P 22 02 37.3 -1.4
comp=Z,445nm,2.4s,mb6.0
ROSF Rostrenen 79.49 347⇑ *i*P P 22 02 39.2 +0.5
comp=Z,660nm,0.9s,mb6.2
ROSF Rostrenen 79.49 347⇑ *i*P P 22 02 39.2 +0.5
ROSF pmax pmax
comp=Z,330nm,0.9s,mb6.3
ROSF Rostrenen 79.49 347⇑ *i*P P 22 02 39.2 +0.5
comp=Z,330nm,0.9s,mb6.3
MUGIO Muggio 79.50 338⇑ *i*P P 22 02 38.5 -0.3
comp=Z,684nm,2.2s,mb6.2
CABF La Chapelle 79.50 340⇑ *i*P P 22 02 39.3 +0.5
comp=Z,229nm,0.9s,mb5.8
CABF La Chapelle 79.50 340⇑ *i*P P 22 02 39.3 +0.5
CABF pmax pmax
comp=Z,115nm,0.9s,mb5.8
CABF La Chapelle 79.50 340⇑ *i*P P 22 02 39.3 +0.5
comp=Z,115nm,0.9s,mb5.8
PVY Plav 79.53 329⇓ *i*P P 22 02 38.9 -0.1
GIMEL Gimel 79.54 340⇑ *i*P P 22 02 38.5 -0.5
comp=Z,602nm,4.1s
HYF Humbligny 79.56 343⇑ *i*P P 22 02 39.8 +0.7
AIGLE Aigle 79.58 340⇑ *i*P P 22 02 38.6 -0.6
comp=Z,425nm,2.3s,mb6.0
SSF Saint Saulge 79.60 342⇑ *i*P P 22 02 39.6 +0.3
comp=Z,290nm,0.8s,mb6.0
SSF Saint Saulge 79.60 342⇑ *i*P P 22 02 39.6 +0.3

SSF pmax pmax
comp=Z,145nm,0.8s,mb6.0
SSF Saint Saulge 79.60 342⇑*iP* P 22 02 39.6 +0.3
comp=Z,145nm,0.8s,mb6.0
SKO Skopje 79.62 328 *eP* P 22 02 39.9 +0.5
SKO Skopje 79.62 328⇑*iP* P 22 02 38.9 -0.5
MMK Mattmark 79.62 339⇑*iP* P 22 02 39.3 -0.1
comp=Z,392nm,0.9s,mb6.3
MMK Mattmark 79.62 339 ⇑P P 22 02 40.4 +1.0
GRYON Gryon 79.63 340⇑*iP* P 22 02 39.2 -0.3
comp=Z,438nm,2.9s,mb5.9
GADA Gvkgeada 79.64 324 *eP* P 22 02 38.4 -1.1
NKY Niksic 79.65 330⇓*iP* P 22 02 38.7 -0.9
BRY Bratogost 79.71 331⇓*iP* P 22 02 38.8 -1.1
MCGN Macugnaga 79.71 339 P P 22 02 40.8 +0.9
DIX Grande Dixence 79.72 339⇑*iP* P 22 02 39.4 -0.6
comp=Z,427nm,0.9s,mb6.3
DIX Grande Dixence 79.72 339 ⇑P P 22 02 40.7 +0.7
SALAN Lac Salanfe 79.76 340⇑*iP* P 22 02 39.8 -0.4
comp=Z,338nm,1.7s,mb6.0
EZN Ezine 79.80 324 *eP* P 22 02 41.6 +1.2
VAY Valandovo 79.82 327 *eP* P 22 02 40.0 -0.5
VAY Valandovo 79.82 327⇑*iP* P 22 02 39.2 -1.3
HDMB Hadim 79.83 318 *eP* P 22 02 39.5 -1.0
KNT Kendrikon 79.84 327 *eP* P 22 02 40.4 -0.3
EMV Vieux Emosson 79.85 340⇑*iP* P 22 02 40.4 -0.3
comp=Z,546nm,1.8s,mb6.2
EMV Vieux Emosson 79.85 340 ⇑P P 22 02 41.5 +0.8
AVF Avril sur Loir 79.89 342⇑*iP* P 22 02 41.2 +0.3
comp=Z,466nm,0.8s,mb6.2
AVF Avril sur Loir 79.89 342⇑*iP* P 22 02 41.2 +0.3
AVF pmax pmax
comp=Z,233nm,0.8s,mb6.2
AVF Avril sur Loir 79.89 342⇑*iP* P 22 02 41.2 +0.3
comp=Z,233nm,0.8s,mb6.2
QUIF Quistinic 79.89 347⇑*iP* P 22 02 41.1 +0.2
comp=Z,299nm,1.0s,mb5.9
QUIF Quistinic 79.89 347⇑*iP* P 22 02 41.1 +0.2
QUIF pmax pmax
comp=Z,150nm,1.0s,mb5.9
QUIF Quistinic 79.89 347⇑*iP* P 22 02 41.1 +0.2
comp=Z,150nm,1.0s,mb5.9
ISP Isparta 79.89 320 *eP* P 22 02 39.7 -1.2
ISP Isparta 79.89 320 *eP* P 22 02 40.3 -0.6
ISP Isparta 79.89 320⇓*iP* P 22 02 41.1 +0.2
ISP Isparta 79.89 320 *eP* P 22 02 41.3 +0.4
ISP pmax pmax
comp=Z,120nm,0.9s,mb5.8
TTG Podgorica 79.91 330⇓*iP* P 22 02 40.2 -0.8
IKL Isikli 79.93 317 *eP* P 22 02 40.0 -1.1
SMF Signal de Mont 79.93 342⇑*iP* P 22 02 41.4 +0.3
comp=Z,490nm,0.9s,mb6.1
SMF Signal de Mont 79.93 342⇑*iP* P 22 02 41.4 +0.3
SMF pmax pmax
comp=Z,245nm,0.9s,mb6.1
SMF Signal de Mont 79.93 342⇑*iP* P 22 02 41.4 +0.3
comp=Z,245nm,0.9s,mb6.1
SOH Sokhos 79.99 326 *eP* P 22 02 40.9 -0.5
STON Ston 79.99 331 P P 22 02 41.6 +0.2
ORO Oropa 80.02 339 P P 22 02 41.5 -0.1
AKS Akhisar 80.06 322 *eP* P 22 02 42.3 +0.5
HCY Herceg Novi 80.13 330⇓*iP* P 22 02 41.7 -0.5
BUM Brajici-Budva 80.14 330⇓*iP* P 22 02 41.7 -0.5
LIA Limnos Island 80.15 325 *eP* P 22 02 41.7 -0.6
LOS Limnos 80.16 325 *eP* P 22 02 42.4 +0.1
BCK Bucak 80.19 320 *eP* P 22 02 42.8 +0.3
GRG Griva 80.20 327 *eP* P 22 02 43.2 +0.7
OUR Ouranopolis 80.20 326 *eP* P 22 02 42.4 -0.1
BGF Bois d'Agland 80.21 342⇑*iP* P 22 02 43.1 +0.5
comp=Z,190nm,0.5s,mb6.0
BGF Bois d'Agland 80.21 342⇑*iP* P 22 02 43.1 +0.5
BGF pmax pmax
comp=Z,95nm,0.5s,mb6.0
BGF Bois d'Agland 80.21 342⇑*iP* P 22 02 43.1 +0.5
comp=Z,95nm,0.5s,mb6.0
HORT Hortiatis 80.28 326 *eP* P 22 02 42.1 -0.9
TAOE Nuku Hiva Isla 80.28 117 *eS* S 22 12 38.9 -5.3
comp=Z,40µm,29.6s
TAOE *eLQ* 22 24 12.3
comp=Z,23µm,26.8s
TAOE *eLR* LR 22 27 01.0
comp=Z,101µm,30.7s,baz=330
THE Thessaloniki 80.29 327 *eP* P 22 02 42.0 -1.0
PRK Paraskevi 80.33 324 *eP* P 22 02 42.7 -0.5
ULC Ulcinj 80.33 330⇓*iP* P 22 02 42.8 -0.5
PLG Polygyros 80.36 326 *eP* P 22 02 42.8 -0.6
PESA Pesaro 80.40 335 P P 22 02 44.7 +1.1
BOB Bobbio (Coli) 80.49 337 P P 22 02 45.1 +1.0
ZCCA Zocca 80.50 336 P P 22 02 45.4 +1.2
BIA Bitola 80.51 328 *eP* P 22 02 44.2 0.0
BIA Bitola 80.51 328 *iP* P 22 02 42.1 -2.1
RSM Repubblica di 80.51 335 P P 22 02 45.4 +1.2
JSC Jenkinsville 80.53 46 P P 22 02 43.5 -0.8
JSC Jenkinsville 80.53 46 *eP* P 22 02 43.2 -1.1
AOI Ancona 80.56 334 P P 22 02 45.2 +0.7
DENT Denizli 80.56 321 *eP* P 22 02 44.9 +0.4
ERBM Eremo 80.58 337 P P 22 02 45.9 +1.3
TCF Toulx Ste Croi 80.59 343⇑*iP* P 22 02 45.2 +0.6
comp=Z,543nm,0.9s,mb6.2
TCF Toulx Ste Croi 80.59 343⇑*iP* P 22 02 45.2 +0.6
TCF pmax pmax
comp=Z,272nm,0.9s,mb6.2
TCF Toulx Ste Croi 80.59 343⇑*iP* P 22 02 45.2 +0.6
comp=Z,272nm,0.9s,mb6.2
GSCL Gusciola 80.60 337 P P 22 02 46.0 +1.3
OHR Ohrid 80.60 328 *eP* P 22 02 43.8 -0.9
OHR Ohrid 80.60 328⇑*iP* P 22 02 43.6 -1.1
PLDF La Plantade 80.62 342 *eP* P 22 02 45.8 +1.0
FNVD Fontana Vidola 80.64 336 P P 22 02 46.8 +1.9
RSP Reno Superiore 80.64 339 P P 22 02 44.9 0.0
AGO Saint Agoulin 80.64 342 *eP* P 22 02 46.1 +1.2
ANTB Antalya 80.64 319 *eP* P 22 02 43.3 -1.6
PAIG Paliouri 80.67 326 *eP* P 22 02 43.8 -1.3
SEI Scarperia 80.68 336 P P 22 02 46.6 +1.5
IZM Izmir 80.69 323 *eP* P 22 02 44.8 -0.4
TIR Tirane 80.69 329 *eP* P 22 02 44.7 -0.5
SFI Santa Sofia 80.69 336 P P 22 02 46.5 +1.3
FNA Florina 80.70 328 *eP* P 22 02 44.5 -0.7
BLCB Balcova 80.79 323 *eP* P 22 02 44.7 -1.0
CING Cingoli 80.83 334 P P 22 02 46.2 +0.3
VLC Villacollemand 80.83 337 *eP* P 22 02 45.9 0.0
comp=Z,211nm,0.9s,mb6.1
BNI Bardonecchia 80.86 339 P P 22 02 46.8 +0.7
BDI Bagni Di Lucca 80.87 336 P P 22 02 46.1 0.0
LIT Litokhoron 80.93 327 *eP* P 22 02 45.1 -1.3
CRE Caprese Michel 80.93 335 P P 22 02 47.5 +1.0
PYM Petit Puy Mans 80.95 342 *eP* P 22 02 47.6 +1.0
BADI Badiali 80.96 335 P P 22 02 47.7 +1.1
KZN Kozani 80.99 327 *eP* P 22 02 46.0 -0.8
CDCA Citt' di Caste 81.01 335 P P 22 02 48.0 +1.1
BHL Bhannes 81.03 314 *eP* P 22 02 48.1 +1.1
MAMC Mammari 81.04 317 ⇑P P 22 02 47.2 +0.2
COLF Collangettes 81.04 342⇑*eP* P 22 02 48.0 +0.9
ELL Elmali 81.08 320 *eP* P 22 02 47.0 -0.2
MBDF Montbardon 81.15 339⇑*iP* P 22 02 48.3 +0.7
comp=Z,225nm,0.8s,mb5.9
MBDF Montbardon 81.15 339⇑*iP* P 22 02 48.3 +0.7
MBDF pmax pmax
comp=Z,112nm,0.8s,mb5.8
MBDF Montbardon 81.15 339⇑*iP* P 22 02 48.3 +0.7
comp=Z,112nm,0.8s,mb5.8
CHOS Chios island 81.16 323 *eP* P 22 02 46.9 -0.8
ORIF Oris-en-Rattie 81.16 340⇑*iP* P 22 02 48.9 +1.2
comp=Z,488nm,0.9s,mb6.2
ORIF *eR*
comp=Z,20µm,21.2s
ORIF Oris-en-Rattie 81.16 340⇑*iP* P 22 02 48.9 +1.2
ORIF pmax pmax
comp=Z,244nm,0.9s,mb6.1
ORIF Oris-en-Rattie 81.16 340⇑*iP* P 22 02 48.9 +1.2
comp=Z,244nm,0.9s,mb6.1
CSS Prodhromos 81.16 316 P P 22 02 48.4 +0.7
comp=Z,3.2nm,0.9s
PII Pisa 81.20 336 P P 22 02 47.5 -0.4
CNNC Cliffs of the 81.21 43 *eP* P 22 02 47.1 -0.8
CSNT Castellina Chi 81.24 336 P P 22 02 47.9 -0.2
AOS Alonnisos 81.27 325 *eP* P 22 02 48.2 -0.1
PMOR Pomariorio Ree 81.28 127 *eP* P 22 02 47.1 -1.2
comp=Z,86nm,1.0s,mb5.6
RAR Rarotonga 81.30 140 LR LR 22 34 07.2
comp=Z,8µm,19.7s,MS6.1,baz=337,slow=32
FIN Finale Ligure 81.31 338 P P 22 02 48.2 -0.3
ALFC Alevga 81.31 317 P P 22 02 48.4 -0.1
XOR Xorichti 81.34 326 *eP* P 22 02 48.2 -0.5
NEO Neokhori 81.38 326 *eP* P 22 02 47.7 -1.2
FRNF Fournols 81.39 342⇑*eP* P 22 02 50.1 +1.2
YER Yerkesik 81.39 321 *eP* P 22 02 49.6 +0.7
ARMA Armidale 81.40 185⇑*iP* P 22 02 49.2 +0.3
ARMA *epP* pP 22 03 03.5 -0.8
ARMA *eS* S 22 12 59.0 +3.1
ARMA *eSS* SS 22 18 28.0 +15
LBL Lubilhac 81.40 342 *eP* P 22 02 50.1 +1.1
TERO Teramo 81.41 334 P P 22 02 49.7 +0.7
SMG Samos 81.45 322 *eP* P 22 02 48.1 -1.2
MATF Mathat 81.47 344 *eP* P 22 02 50.4 +1.1
VIVF Saint-Julien-l 81.48 341⇑*iP* P 22 02 50.3 +0.9
comp=Z,381nm,0.8s,mb6.1
VIVF Saint-Julien-l 81.48 341⇑*iP* P 22 02 50.3 +0.9
VIVF pmax pmax
comp=Z,190nm,0.8s,mb6.1
VIVF Saint-Julien-l 81.48 341⇑*iP* P 22 02 50.3 +0.9
comp=Z,190nm,0.8s,mb6.1
OLEF Ile d'Oleron 81.54 345⇑*eP* P 22 02 50.6 +0.9
DALT Dalyan (Mudla) 81.57 321 *eP* P 22 02 49.1 -0.7
FGMS Monte Sant'Ang 81.58 332 P P 22 02 49.9 0.0
MSAG Monte S. Angel 81.59 332 P P 22 02 49.7 -0.3
SGRT San Giovanni R 81.60 332 P P 22 02 50.7 +0.7
OCF Saint Nazaire 81.61 340⇑*eP* P 22 02 51.3 +1.2
OG26 St.-Nazaire-De 81.61 340⇑*eP* P 22 02 51.3 +1.2
VAH Vaihoa 81.61 127 *eP* P 22 02 49.0 -1.1
comp=Z,109nm,1.0s,mb5.7
GRFL Gerfalco 81.63 336 P P 22 02 50.2 0.0
PPCY Paphos 81.66 317 P P 22 02 50.4 +0.1
comp=Z,14nm,0.8s,mb5.0
RJF Les Rejaudoux 81.66 343⇑*iP* P 22 02 51.0 +0.7
comp=Z,490nm,1.0s,mb6.1
RJF *eR*
comp=Z,47µm,22.0s
RJF Les Rejaudoux 81.66 343⇑*iP* P 22 02 51.0 +0.7
RJF pmax pmax
comp=Z,245nm,1.0s,mb6.1
RJF MLR MLR
comp=Z,47µm,22.0s,MS6.8
RJF Les Rejaudoux 81.66 343⇑*iP* P 22 02 51.0 +0.7
comp=Z,245nm,1.0s,mb6.1
RJF LR LR
comp=Z,47µm,22.0s,MS6.8
IMI Imperia 81.67 338 P P 22 02 50.5 +0.1
SAOF Saorge 81.67 338⇑*eP* P 22 02 50.4 0.0
AUTM L'Aution 81.69 339⇑*eP* P 22 02 50.6 +0.1
TOUF Mont Tournerai 81.72 339⇑*eP* P 22 02 51.1 +0.5
AQU L'Aquila 81.72 334⇑*iP* P 22 02 51.7 +1.1
AQU L'Aquila 81.72 334 P P 22 02 51.5 +0.9
comp=Z,189nm,0.7s,mb6.1
AQU ⇑P 22 02 51.7
RGNG Rignano Grg 81.72 332 P P 22 02 50.4 -0.3
FG2 Serracapriola 81.72 332 P P 22 02 52.0 +1.3
MOIG Morelia 81.80 69 *iP* P 22 02 51.2 +0.2
LUCF Luceram 81.81 339⇑*eP* P 22 02 51.4 +0.3
SBF Sospel 81.82 339⇑*iP* P 22 02 51.3 +0.1
comp=Z,628nm,0.8s,mb6.3
SBF Sospel 81.82 339⇑*iP* P 22 02 51.3 +0.1
SBF pmax pmax
comp=Z,314nm,0.8s,mb6.3
SBF Sospel 81.82 339⇑*iP* P 22 02 51.3 +0.1
comp=Z,314nm,0.8s,mb6.3
BODT Bodrum 81.84 322 *eP* P 22 02 50.3 -1.0
MVIF Mont Vial 81.85 339⇑*eP* P 22 02 51.8 +0.5
FIAM Fiamignano 81.88 334 P P 22 02 52.0 +0.5
MNS Montasola 81.89 334 P P 22 02 51.4 -0.1
MMAI Mount Meron Ar 81.89 314 P P 22 02 51.8 +0.3
comp=Z,220nm,0.7s,mb6.2,baz=33,slow=6.4,SNR=362
JAN Janina 81.89 328 *eP* P 22 02 51.7 +0.2
INTR Introdacqua 81.89 333 P P 22 02 51.0 -0.6
ASF Jabal al Asfar 81.91 312 P P 22 02 52.5 +0.9
comp=Z,182nm,0.9s,mb6.0,baz=271,slow=2.5,SNR=176
ASF Jabal al Asfar 81.91 312 P P 22 02 52.5 +0.9
ASF pmax pmax
comp=Z,182nm,0.9s
LATE Laterza 81.91 335 P P 22 02 51.7 +0.1
CAF Calviac 81.93 343⇑*iP* P 22 02 52.9 +1.2
comp=Z,556nm,1.0s,mb6.2
CAF Calviac 81.93 343⇑*iP* P 22 02 52.9 +1.2
CAF pmax pmax
comp=Z,278nm,1.0s,mb6.1
CAF Calviac 81.93 343⇑*iP* P 22 02 52.9 +1.2
comp=Z,278nm,1.0s,mb6.1
CIGN Sant'Elia a Pi 81.94 333 P P 22 02 51.9 +0.1
AGG Agios Georgios 81.95 326 *eP* P 22 02 50.0 -1.8
REVF Revere 81.95 339 *eP* P 22 02 52.2 +0.3
COCO West Island 81.98 239 PFAKE 22 03 00.0 +8.0
COCO LR LR
comp=Z,1µm,21.0s,MS5.2
DAT Datca 82.02 321 *eP* P 22 02 50.6 -1.6
STOF St-Etienne Org 82.03 340⇑*eP* P 22 02 53.3 +1.0
LKR Lokris 82.04 326 *eP* P 22 02 50.9 -1.4
VVLD Villa Vallelon 82.10 334 P P 22 02 52.6 -0.1
RNI2 Rionero Sannit 82.11 333 P P 22 02 53.5 +0.8
SMRF Simiane la Rot 82.13 340⇑*iP* P 22 02 53.8 +1.0
comp=Z,240nm,1.2s,mb5.7
SMRF Simiane la Rot 82.13 340⇑*iP* P 22 02 53.8 +1.0
comp=Z,240nm,1.2s,mb6.0
MIDA Miranda 82.14 333 P P 22 02 53.3 +0.5
LFF La Frestale 82.16 343⇑*iP* P 22 02 54.0 +1.1
comp=Z,666nm,1.0s,mb6.2
LFF La Frestale 82.16 343⇑*iP* P 22 02 54.0 +1.1
LFF pmax pmax
comp=Z,333nm,1.0s,mb6.2
LFF La Frestale 82.16 343⇑*iP* P 22 02 54.0 +1.1
comp=Z,333nm,1.0s,mb6.2
LCI Lecce 82.17 330 P P 22 02 53.0 0.0
FG5 Orsara di Pugl 82.17 332 P P 22 02 53.5 +0.5
IGT Igoumenitsa 82.17 328 *eP* P 22 02 52.3 -0.7
KEK Kerkira 82.19 328 *eP* P 22 02 52.3 -0.8
MTCE Montecelio 82.21 334 P P 22 02 53.1 -0.1
CERT Cerreto 82.21 334 P P 22 02 53.0 -0.2
VILF Villemus 82.21 340⇑*eP* P 22 02 53.7 +0.5
EVR Evrytania 82.22 327 *eP* P 22 02 52.5 -0.8
FG4 Candela 82.24 332 P P 22 02 53.7 +0.3
ARG Arkhangelos 82.25 321 *eP* P 22 02 53.0 -0.4
MAON Monte Argentar 82.26 335 P P 22 02 53.4 -0.1
PTL Penteli 82.27 325 *eP* P 22 02 53.0 -0.5
FRF La Foret Royal 82.28 339⇑*iP* P 22 02 53.7 +0.1
comp=Z,178nm,1.0s,mb5.7
FRF La Foret Royal 82.28 339⇑*iP* P 22 02 53.7 +0.1
FRF pmax pmax
comp=Z,89nm,1.0s,mb5.7
FRF La Foret Royal 82.28 339⇑*iP* P 22 02 53.7 +0.1
comp=Z,89nm,1.0s,mb5.7
PSB1 Pescosannita 82.36 332 P P 22 02 54.0 0.0
TAVF Tavernes 82.36 339⇑*eP* P 22 02 54.3 +0.3
TOLF Tolfa 82.37 335 P P 22 02 54.7 +0.6
PRAF Pradon 82.38 340⇑*eP* P 22 02 55.2 +1.1
ATH Athens Observa 82.39 325 *eP* P 22 02 52.8 -1.4
ROM9 Roma 82.45 334 P P 22 02 54.9 +0.4
RDP Rocca di Papa 82.46 334 P P 22 02 55.0 +0.5
KVR Kavouri 82.50 325 *eP* P 22 02 54.0 -0.7
TREF Trevaresse 82.50 340⇑*eP* P 22 02 56.2 +1.5
APE Apiranthos 82.51 323 *eP* P 22 02 53.2 -1.6
APE Apeiranthos 82.51 323⇑*iP* P 22 02 53.2 -1.6
PUYF Puyloubier 82.52 340⇑*eP* P 22 02 55.9 +1.1
LMR La Mourre 82.53 339⇑*iP* P 22 02 55.3 +0.4
comp=Z,329nm,1.0s,mb6.0
LMR La Mourre 82.53 339⇑*iP* P 22 02 55.3 +0.4
LMR pmax pmax
comp=Z,164nm,1.0s,mb6.0
LMR La Mourre 82.53 339⇑*iP* P 22 02 55.3 +0.4
comp=Z,164nm,1.0s,mb6.0
MRLC Muro Lucano 82.59 332 P P 22 02 56.0 +0.8
PPT Papeete 82.64 130 *eP* P 22 02 54.5 -1.0
comp=Z,176nm,1.3s,mb5.9
PPT Papeete 82.64 130 *eS* S 22 13 04.0 -4.7
comp=Z,3µm,21.0s
PPT *eLQ* 22 25 20.8
comp=Z,9µm,29.2s
PPT *eLR* LR 22 28 15.4
comp=Z,18µm,24.0s,baz=320
PPT Papeete 82.64 130 P P 22 02 55.5 +0.1
comp=Z,104nm,0.9s,mb5.8,baz=15,slow=5.7,SNR=6.6
PPT LR LR 22 37 23.2
comp=Z,9µm,18.4s,MS6.2,baz=293,slow=34
PPT Papeete 82.64 130 P P 22 02 55.5 0.0
PPT pmax pmax
comp=Z,104nm,0.9s
PPT MLR MLR
comp=Z,9µm,18.4s
PGF Pioggiola 82.69 337⇑*iP* P 22 02 55.9 +0.2
comp=Z,243nm,0.7s,mb6.0
PGF Pioggiola 82.69 337⇑*iP* P 22 02 55.9 +0.2
PGF pmax pmax
comp=Z,121nm,0.7s,mb6.0
PGF Pioggiola 82.69 337⇑*iP* P 22 02 55.9 +0.2
comp=Z,121nm,0.7s,mb6.0
PAE Paea 82.72 130 *eP* P 22 02 54.7 -1.2
comp=Z,461nm,1.4s,mb6.3
GELF Grande-Etoile 82.72 340⇑*eP* P 22 02 57.1 +1.2
BERF Bertagne 82.73 340⇑*eP* P 22 02 56.9 +1.0
SLCN Sala Consilina 82.89 332 P P 22 02 56.0 -0.7
ORI Oriolo Calabro 82.94 331 P P 22 02 57.9 +0.9
TVO Taravao 82.98 130 *eP* P 22 02 56.3 -0.9
comp=Z,132nm,0.9s,mb6.0
RAO Raoul Island 82.99 158 LR LR 22 33 01.1
comp=Z,8µm,21.6s,MS6.0,baz=7.8,slow=31
RAO Raoul Island 82.99 158 PFAKE 22 03 10.0 +13
RAO LR LR
comp=Z,7µm,19.0s,MS6.1
RLS Riolos of Patr 83.11 326 *eP* P 22 02 57.5 -0.4
CUC Castrocucco 83.20 331 P P 22 02 58.2 -0.1
VLS Valsamata 83.31 327 *eP* P 22 02 58.2 -0.7
MTLF Montolieu 83.42 342⇑*iP* P 22 03 00.5 +1.0
comp=Z,264nm,1.0s,mb5.9
MTLF Montolieu 83.42 342⇑*iP* P 22 03 00.5 +1.0
MTLF pmax pmax
comp=Z,132nm,1.0s,mb5.9
MTLF Montolieu 83.42 342⇑*iP* P 22 03 00.5 +1.0
comp=Z,132nm,1.0s,mb5.9
OSPF L'Ospedale 83.47 337⇑*eP* P 22 03 07.1 +7.3
ITM Ithomi 83.74 326 *eP* P 22 02 59.9 -1.2
LRDF Laroque-de-Fa 83.75 342⇑*eP* P 22 03 02.1 +0.9
VLI Veliai 83.79 325 *eP* P 22 02 58.9 -2.5
STKA Stephens Creek 83.86 193⇑*iP* P 22 03 01.2 -0.5
comp=Z,53nm,1.0s,mb5.6
STKA *epP* pP 22 03 16.5 -0.7
STKA *eS* S 22 13 14.0 -7.0
STKA *eSS* SS 22 18 44.7 -4.7
STKA Stephens Creek 83.86 193 P P 22 03 01.4 -0.4
comp=Z,68nm,1.0s,mb5.7,baz=351,slow=7.8,SNR=28
STKA S S 22 13 16.7 -4.3
comp=Z,1.5nm,0.8s,baz=216,slow=19,SNR=2.2
STKA PKKPbc PKKPbc 22 21 19.4 +2.4
comp=Z,1.4nm,0.8s,baz=135,slow=1.4,SNR=1.8
STKA LR LR 22 38 53.9
comp=Z,9µm,21.3s,MS6.1,baz=5.4,slow=34
ZKR Zakros 83.97 322 *eP* P 22 03 01.7 -0.6
MLS Moulis 84.01 343⇑*eP* P 22 03 02.9 +0.4
CARF Carcanieres 84.05 342⇑*eP* P 22 03 02.9 +0.2
NPS Neapolis 84.07 322 *eP* P 22 03 01.1 -1.7
EPF Esparros 84.08 343 *eP* P 22 03 03.4 +0.6
comp=Z,149nm,0.9s,mb5.8
EPF Esparros 84.08 343 *eP* P 22 03 03.4 +0.6
EPF pmax pmax
comp=Z,75nm,0.9s,mb5.8
EPF Esparros 84.08 343 *eP* P 22 03 03.4 +0.6
comp=Z,75nm,0.9s,mb5.8
GRI Girifalco 84.08 330 P P 22 03 03.1 +0.2
LABF Labassere 84.11 343⇑*eP* P 22 03 02.3 -0.7
FILF Fillols 84.11 342⇑*eP* P 22 03 03.6 +0.6
SJAF Saint Jean de 84.12 341⇑*eP* P 22 03 03.5 +0.4
SJAF Saint Jean de 84.12 341⇑*eP* P 22 03 03.4 +0.3
ORDF Ordiarp 84.12 344 *eP* P 22 03 03.0 -0.1
OSSF Osses 84.14 344⇑*eP* P 22 03 02.5 -0.7
EJON La Jonquera 84.15 341 P P 22 03 03.2 0.0
comp=Z,72nm,0.9s,mb5.8
MELF Melles 84.15 343⇑*eP* P 22 03 02.9 -0.3
REYF Montagne du Re 84.17 344 *eP* P 22 03 02.8 -0.5
SALF Salau 84.18 343 *eP* P 22 03 03.7 +0.3
ATE Arette 84.21 344⇑*eP* P 22 03 03.2 -0.3
EALK Alkurruntz 84.21 345 P P 22 03 02.6 -1.0
comp=Z,194nm,1.4s,mb6.0
SJPF Ste Jean 84.27 344 *eP* P 22 03 05.0 +1.2
comp=Z,56nm,0.8s,mb5.4
SJPF Ste Jean 84.27 344 *eP* P 22 03 05.0 +1.2
SJPF pmax pmax
comp=Z,28nm,0.8s,mb5.4
SJPF Ste Jean 84.27 344 *eP* P 22 03 05.0 +1.2
comp=Z,28nm,0.8s,mb5.4
ELIZ Elizondo 84.27 345 P P 22 03 05.7 +1.9
ELIZ pmax pmax
comp=Z,75nm,1.1s,mb5.7
ELIZ Elizondo 84.27 345 P P 22 03 05.7 +1.8
comp=Z,75nm,1.1s,mb5.7
VIEF Viey 84.28 343⇑*eP* P 22 03 04.8 +0.9
RESF Ens 84.29 343⇑*eP* P 22 03 04.9 +1.0
LARF Larrau 84.30 344⇑*eP* P 22 03 03.9 -0.1
ETSF Etsaut 84.36 344 *eP* P 22 03 05.4 +1.1
comp=Z,143nm,0.8s,mb5.8
ETSF Etsaut 84.36 344 *eP* P 22 03 05.4 +1.1
ETSF pmax pmax
comp=Z,71nm,0.8s,mb5.8
ETSF Etsaut 84.36 344 *eP* P 22 03 05.4 +1.1
comp=Z,71nm,0.8s,mb5.8
VALF Valcebollere 84.37 342⇑*eP* P 22 03 05.1 +0.8
XRY Khrisi 84.38 322 *eP* P 22 03 03.5 -0.9
EBIE Bielsa 84.45 343 P P 22 03 05.3 +0.6
comp=Z,80nm,1.0s,mb5.8
WHFO Wadi Hawf 84.47 292 P P 22 03 04.8 0.0
SNR=34
VAM Vamos 84.48 323 *eP* P 22 03 03.2 -1.7
ELAN Lanestosa 84.51 346 P P 22 03 04.3 -0.7
comp=Z,156nm,1.3s,mb6.0
KARN Karanos 84.59 323 *eP* P 22 03 04.4 -1.0
SIVA Sivas 84.60 323 *eP* P 22 03 04.7 -0.8
DGI Dorgali Grotta 84.63 336 P P 22 03 06.0 +0.3
EARI Arriondas 84.70 347 P P 22 03 05.6 -0.4
comp=Z,294nm,1.3s,mb6.2
SLNA Salina 84.81 331 P P 22 03 06.1 -0.4
RIV Riverview 84.82 185 *eP* P 22 03 06.0 -0.6
RIV *epP* pP 22 03 21.2 -0.9
SCLL Scilla 84.82 331 P P 22 03 05.4 -1.2
SOI Samo 84.89 330 P P 22 03 06.5 -0.4
EIL Etat 84.91 312 *eP* P 22 03 06.5 -0.2
MSI Messina ING 84.92 331 P P 22 03 06.6 -0.5
EPON Pontenova 84.92 349 P P 22 03 07.2 +0.1
comp=Z,305nm,1.2s,mb6.3
GVD Gavdhos 85.03 323 *eP* P 22 03 07.0 -0.7
GVD Gavdhos 85.03 323 *eP* P 22 03 07.5 -0.1
MTTG Motta San Giov 85.06 331 P P 22 03 07.8 0.0
USI Ustica 85.16 333 P P 22 03 08.4 +0.1
ABTO Aybut 85.19 292 P P 22 03 09.1 +0.7
SNR=16
MNO Monte Soro 85.43 331 P P 22 03 09.2 -0.5
VSL Villasalto 85.47 336 P P 22 03 10.0 +0.2
ESAC San Caprasio 85.49 344 P P 22 03 10.7 +0.7
comp=Z,185nm,0.8s,mb6.3
EMAZ Mazaricos 85.51 350 P P 22 03 09.3 -0.7
comp=Z,41nm,0.6s,mb5.8
EPOB Poblet 85.56 342 P P 22 03 11.6 +1.2
comp=Z,32nm,1.0s,mb5.5
GIB Gibilmanna 85.58 332 P P 22 03 08.7 -1.7
FORT Forrest 85.60 205 *eP* P 22 03 10.1 -0.4
comp=Z,186nm,0.7s,mb6.4
FORT *epP* pP 22 03 25.4 -0.6
FORT Forrest 85.60 205 *eS* SKSac 22 13 26.0 -5.3
FORT *eSS* SS 22 19 20.1 +5.0
FORT Forrest 85.60 205 *eP* P 22 03 10.1 -0.4
comp=Z,186nm,0.7s,mb6.4
FORT *epP* pP 22 03 25.4 -0.6
FORT *eS* S 22 13 26.0 -12
FORT *eSS* SS 22 19 20.1 +5.0
CGL Cagliari Serpe 85.61 336 P P 22 03 11.1 +0.5
DWPF Disney 85.62 49 PFAKE 22 03 20.0 +9.4
DWPF LR LR
comp=Z,18µm,21.0s,MS6.5
AGST Augusta-Monte 85.89 331 P P 22 03 11.4 -0.5
ERC Erice 85.96 333 P P 22 03 12.5 +0.2
SSY Sortino 86.03 331 P P 22 03 12.5 -0.1
ERTA Horta de San J 86.09 343 P P 22 03 11.2 -1.7
comp=Z,42nm,1.2s,mb5.5
HVZN Vizzini 86.12 331 P P 22 03 12.6 -0.5
RAFF Raffo Rosso 86.19 331 P P 22 03 12.6 -0.8
HAVL Avola 86.20 331 P P 22 03 13.9 +0.5
ECAL Calabor 86.24 348 P P 22 03 12.5 -1.2
comp=Z,57nm,1.1s,mb5.7
HMDC Modica 86.30 331 P P 22 03 14.4 +0.4
FAVR Favara 86.36 332 P P 22 03 16.0 +1.8
PBRG Braganca 86.37 348 *eP* P 22 03 13.8 -0.5
comp=Z,25nm,1.0s,mb5.4
CNB Canberra Magne 86.41 187 *eP* P 22 03 14.2 -0.3
comp=Z,46nm,1.1s,mb5.6
CNB *epP* pP 22 03 28.7 -1.3
ELOB Lobios 86.47 349 P P 22 03 14.5 -0.3

comp=Z,42nm,0.9s,mb5.7
PCAB Cabrid 86.62 349 *e*P **P 22 03 15.3 -0.3**
ETOS Mallorca 86.74 341 P **P 22 03 15.4 -0.7**
comp=Z,155nm,1.2s,mb6.1
EMOS Mosqueruela 86.81 343 P **P 22 03 15.0 -1.4**
comp=Z,17nm,1.0s,mb5.2
PVRL Vila Real 87.02 349 *e*P **P 22 03 17.1 -0.4**
comp=Z,54nm,0.8s,mb5.8
GUD Guadarrama 87.15 346 P **P 22 03 17.4 -0.7**
comp=Z,13nm,0.8s,mb5.2
PTO Porto 87.26 349 *e*P **P 22 03 18.4 -0.2**
PTS Pantelleria 87.27 333 P **P 22 03 19.2 +0.5**
ADE Adelaide 87.34 195⇑ *i*P **P 22 03 18.9 -0.1**
CMIG Matias Romero 87.49 66 P **P 22 03 18.9 -0.8**
comp=Z,17nm,0.7s,mb5.4,baz=324,slow=4.3,SNR=20
CMIG S S 22 13 42.5 -14
comp=Z,0.7nm,0.4s,baz=203,slow=22,SNR=2.6
CMIG Matias Romero 87.49 66 P **P 22 03 18.9 -0.8**
CMIG S S 22 13 42.5 -14
PVIS Viseu 87.59 349 *e*P **P 22 03 19.8 -0.4**
comp=Z,22nm,0.9s,mb5.4
ECHE Chera 87.65 343 P **P 22 03 21.0 +0.5**
comp=Z,18nm,0.8s,mb5.3
TBI Tubuai 87.66 133 *e*P **P 22 03 19.0 -1.6**
comp=Z,474nm,1.0s,mb6.7
TBI Tubuai 87.66 133 *e*PP PP 22 06 44.9 -1.5
comp=Z,1µm,28.0s
TBI Tubuai 87.66 133 *e*SKSac SKSac 22 13 42.2 -1.8
comp=Z,7µm,27.0s
TBI *e*SS SS 22 19 46.2 +1.0
comp=Z,6µm,27.5s
TBI *e*LR LR 22 30 51.8
comp=Z,26µm,32.5s,baz=333
EIBI Ibiza 87.76 342 P **P 22 03 21.1 +0.1**
comp=Z,66nm,1.2s,mb5.7
MTE Manteigas 87.86 349 *i* P **P 22 03 21.0 -0.5**
comp=Z,43nm,1.1s,mb5.6
MTE Manteigas 87.86 349 *e*PP PP 22 06 48.9 +0.9
MTE *e*S S 22 13 44.8 -15
MTE Manteigas 87.86 349 *e*LQ 22 27 13.1
MTE *e*LR LR 22 32 42.8
comp=Z,9µm,23.7s
ESDC Sonseca Array 88.07 346 P **P 22 03 22.0 -0.5**
comp=Z,34nm,0.8s,mb5.6,baz=5.3,slow=4.4,SNR=101
ESDC S S 22 13 48.5 -14
comp=Z,0.5nm,0.9s,baz=67,slow=3.3,SNR=2.2
ESDC LR LR 22 49 26.3
comp=Z,14µm,20.5s,MS6.3,baz=20,slow=40
ESDC Sonseca Array 88.07 346 P **P 22 03 21.0 -1.5**
comp=Z,76nm,1.1s,mb5.8
ESLA Sonseca Array 88.07 346⇑ *i*P **P 22 03 21.8 -0.7**
ESLA LR LR
comp=Z,95µm,20.0s,MS7.2
EBEN Beniarda 88.37 343 P **P 22 03 22.6 -1.3**
comp=Z,142nm,1.5s,mb6.0
PCBR Castelo Branco 88.40 348 *e*P **P 22 03 23.3 -0.8**
comp=Z,21nm,1.1s,mb5.3
ETOB Tobarra 88.67 344 P **P 22 03 24.8 -0.6**
comp=Z,47nm,1.0s,mb5.8
CAEH 'Ain El Ouahch 88.68 337 P **P 22 03 28.0 +2.6**
CMAH Djebel Manchou 88.68 336 P **P 22 03 25.0 -0.4**
PTOM Tomar 88.73 349 *e*P **P 22 03 24.7 -0.9**
comp=Z,31nm,1.1s,mb5.6
EVIA Vianos 88.84 344 P **P 22 03 26.3 +0.1**
EVIA pmax pmax
comp=Z,19nm,0.6s,mb5.6
EVIA Vianos 88.84 344 P **P 22 03 26.3 +0.1**
comp=Z,19nm,0.6s,mb5.6
BBSR BB Station 88.93 35 *e*P **P 22 03 26.0 -0.6**
comp=Z,94nm,1.0s,mb6.1
BBSR LR LR
comp=Z,8µm,22.0s,MS6.1
TOO Toolangi 88.99 189 *e*P **P 22 03 26.8 0.0**
comp=Z,54nm,1.0s,mb5.8
TOO *e*pP pP 22 03 41.6 -0.8
TOO Toolangi 88.99 189 *e*S SKSac 22 13 49.8 -2.1
TOO *e*SS SS 22 19 31.0 -34
TOO Toolangi 88.99 189 *e*P **P 22 03 26.8 0.0**
TOO *e**PP pP 22 03 41.6 -0.8
TOO *e*S S 22 13 49.8 -21
TOO pmax pmax
comp=Z,54nm,1.0s,mb5.8
TOO Toolangi 88.99 189 *e*P **P 22 03 26.8 0.0**
comp=Z,54nm,1.0s,mb5.8
TOO *e*pP pP 22 03 41.6 -0.8
TOO *e*S S 22 13 49.8 -21
TOO *e*SS SS 22 19 31.0 -34
ABSA Djebel Ababsia 89.00 336 P **P 22 03 27.5 +0.6**
KEST Kesra 89.02 334 P **P 22 03 27.1 +0.1**
comp=Z,111nm,0.8s,mb6.2,baz=280,slow=0.2,SNR=157
KEST S S 22 13 52.3 -19
comp=Z,0.8nm,0.8s,baz=202,slow=23,SNR=1.9
KEST ScS ScS 22 14 15.4 -0.7
comp=Z,0.9nm,0.8s,baz=304,slow=22,SNR=5.5
KEST LR LR 22 47 45.1
comp=Z,9µm,21.6s,MS6.2,baz=324,slow=38
CKFL Kef-Lekhel 89.07 337 P **P 22 03 28.0 +0.8**
DFRA Djebel Bou Aff 89.14 337 P **P 22 03 29.0 +1.5**
CASM Ain Smara 89.26 337 P **P 22 03 28.5 +0.4**
PESTR Estremoz 89.37 348 *i* P **P 22 03 27.4 -1.2**
PESTR Estremoz 89.37 348 *e*PP PP 22 06 57.8 -2.3
PESTR *e*S S 22 13 55.6 -19
PESTR Estremoz 89.37 348 *e*LQ 22 27 41.0
PESTR *e*LR LR 22 33 11.0
EMUR La Murta 89.40 343 P **P 22 03 28.4 -0.4**
comp=Z,30nm,1.0s,mb5.6
EBAD Badajoz 89.41 348 P **P 22 03 28.3 -0.5**
comp=Z,67nm,2.3s,mb5.6
CTEI Djebel Teioual 89.47 337 P **P 22 03 29.5 +0.4**
PMAFR Mafra 89.49 350 *e*P **P 22 03 28.0 -1.2**
PMAFR Mafra 89.49 350 *e*PP PP 22 06 56.9 -4.1
PMAFR *e*S S 22 14 14.1 -1.4
PMAFR Mafra 89.49 350 *e*LQ 22 27 25.7
PMAFR *e*LR LR 22 34 16.4
KLBR Kellerberrin 89.51 213 *e*P **P 22 03 28.2 -1.1**
comp=Z,61nm,0.8s,mb6.0
KLBR *e*pP pP 22 03 42.3 -2.6
EBAN Banos Encina 89.52 345 P **P 22 03 29.0 -0.3**
EBAN pmax pmax
comp=Z,34nm,1.1s,mb5.6
EBAN Banos Encina 89.52 345 P **P 22 03 29.0 -0.3**
comp=Z,34nm,1.1s,mb5.6
PLOU Loures 89.55 350 *e*P **P 22 03 29.2 -0.2**
comp=Z,65nm,0.9s,mb6.0
SET Setif 89.58 338 P **P 22 03 30.0 +0.4**
CART Cartagena 89.60 343 *e*P **P 22 03 28.2 -1.5**
comp=Z,32nm,0.9s,mb5.7
EADA Adamuz 89.64 346 P **P 22 03 28.6 -1.3**
comp=Z,90nm,1.8s,mb5.8
EHUE Huescar 89.66 344 P **P 22 03 29.9 -0.1**
EHUE pmax pmax
comp=Z,34nm,1.2s,mb5.5
EHUE Huescar 89.66 344 P **P 22 03 29.9 -0.1**
comp=Z,34nm,1.2s,mb5.5
LIS Lisbon 89.71 350 *e*P **P 22 03 31.1 +0.9**
LIS *e*S S 22 13 52.4 -25
LIS *e*S S 22 13 52.4 -25
LIS AMS AMS 22 50 26.0
comp=Z,12µm,19.9s,MS6.3
CKHR Kef el Ahmar 89.73 338 P **P 22 03 31.0 +0.7**
EQES Quesada 89.75 345 P **P 22 03 29.6 -0.8**
comp=Z,11nm,0.6s,mb5.3
CMER Merouana 90.01 337 P **P 22 03 31.0 -0.6**
PBEJ Beja 90.24 348 *e*P **P 22 03 31.2 -1.5**
comp=Z,22nm,1.2s,mb5.4
EMIN Mina Concepcio 90.34 347 P **P 22 03 32.1 -1.0**
comp=Z,31nm,0.9s,mb5.6
ECOG Cogollos-Vega 90.35 345 P **P 22 03 32.9 -0.3**
ECOG pmax pmax
comp=Z,16nm,0.6s,mb5.5
ECOG Cogollos-Vega 90.35 345 P **P 22 03 32.9 -0.3**
comp=Z,16nm,0.6s,mb5.5
MUN Mundaring 90.40 214 *e*P **P 22 03 32.0 -1.4**
MUN *e*pP pP 22 03 46.3 -2.7
MUN Mundaring 90.40 214 *e*S SKSac 22 13 59.9 -0.2
MUN *e*SS SS 22 20 23.8 -1.1
MUN Mundaring 90.40 214 *e*P **P 22 03 32.0 -1.4**
MUN *e*pP pP 22 03 46.3 -2.7
MUN *e*S S 22 13 59.9 -24
MUN *e*SS SS 22 20 23.8 -1.1
ENIJ Nijar 90.42 344 P **P 22 03 32.5 -1.0**
ENIJ pmax pmax
comp=Z,15nm,0.5s,mb5.6
ENIJ Nijar 90.42 344 P **P 22 03 32.5 -1.0**
comp=Z,15nm,0.5s,mb5.6
ELOJ Sierra Loja 90.57 345 P **P 22 03 34.5 +0.3**
ELOJ pmax pmax
comp=Z,23nm,0.8s,mb5.6
ELOJ Sierra Loja 90.57 345 P **P 22 03 34.5 +0.3**
comp=Z,23nm,0.8s,mb5.5
EBER Berja 90.61 344 P **P 22 03 34.0 -0.4**
comp=Z,20nm,0.9s,mb5.5
ERON Agron 90.64 345 P **P 22 03 33.8 -0.7**
comp=Z,14nm,0.6s,mb5.5
EGRO El Granado 90.67 348 P **P 22 03 33.7 -1.0**
comp=Z,8.8nm,0.8s,mb5.1
URZ Urewera 90.72 165 LR LR 22 38 37.4
comp=Z,13µm,20.5s,MS6.3,baz=163,slow=32
PTEO Sao Teotonio 90.82 349 *e*P **P 22 03 33.3 -2.1**
comp=Z,70nm,1.6s,mb5.7
NWAO Narrogin (SRO) 90.90 213 *e*P **P 22 03 34.2 -1.6**
NWAO pmax pmax
comp=Z,84nm,1.1s
NWAO Narrogin (SRO) 90.90 213 *e*P **P 22 03 33.7 -2.1**
comp=Z,84nm,1.1s,mb6.0
NWAO LR LR
comp=Z,6µm,20.0s,MS6.0
MORF Marmelete 91.05 349 *e*P **P 22 03 35.9 -0.5**
MORF *e*S S 22 14 00.4 -29
MORF *e*S S 22 14 00.4 -29
MORF AMS AMS 22 50 40.2
comp=N,8µm,19.5s
ESPR Espera 91.10 347 P **P 22 03 35.9 -0.8**
comp=N,53nm,1.4s,mb5.7
EMIJ Mijas 91.24 346 P **P 22 03 34.9 -2.5**
comp=N,22nm,0.8s,mb5.5
MGV Manicaragua 91.37 51 *e*P **P 22 03 38.8 +0.8**
PDA Ponta Delgada 91.41 2 *i* P **P 22 03 40.0 +1.9**
PDA Ponta Delgada 91.41 2 *e*PP PP 22 07 18.0 +1.7
PDA *i* 22 15 44.0
PDA Ponta Delgada 91.41 2 *i* LR LR 22 33 00.0
EJIF Jimena Fronter 91.46 346 P **P 22 03 37.8 -0.5**
EJIF pmax pmax
comp=Z,21nm,0.6s,mb5.6
EJIF Jimena Fronter 91.46 346 P **P 22 03 37.8 -0.5**
comp=Z,21nm,0.6s,mb5.7
DGAR Diego Garcia 92.55 261 PFAKE 22 03 50.0 +6.6
DGAR LR LR
comp=Z,2µm,22.0s,MS5.5
SNZO South Karori 93.34 167 PFAKE 22 04 00.0 +13
SNZO LR LR
comp=Z,27µm,21.0s,MS6.7
LMGC Las Mercedes 94.56 50 *e*P **P 22 03 52.9 +0.3**
LMGC *e*S S 22 14 22.6 -38
comp=N,122µm,22.6s
LMGC *e*
comp=E,118µm,24.1s
RKT Rikitea 94.75 121 *e*PP PP 22 07 42.3 -0.1
comp=E,1µm,30.8s
RKT Rikitea 94.75 121 *e*SKSac SKSac 22 14 23.0 -1.4
comp=E,5µm,25.5s
RKT *e*SP SP 22 16 20.0 +1.3
comp=E,7µm,33.5s
RKT *e*SS SS 22 21 28.2 +0.9
comp=E,8µm,29.2s
RKT *e*LR LR 22 34 04.5
comp=E,40µm,21.5s,baz=324
MDT Midelt 94.88 345 P **P 22 03 52.5 -1.7**
comp=E,10nm,0.9s,mb5.2,baz=12,slow=4.7,SNR=17
MOAC Moa 95.02 48 *e*P **P 22 03 51.7 -3.1**
RCC Rio Carpintero 95.25 49 *e*P **P 22 03 53.3 -2.5**
RCC *e*S S 22 14 29.9 -37
comp=N,1µm,18.2s
RCC *e*
comp=E,2µm,21.5s
RPZ Rata Peaks 95.25 170 LR LR 22 40 29.6
comp=E,31µm,21.8s,MS6.7,baz=20,slow=31
ATD Arta Tunnel 95.86 296 P **P 22 03 59.5 +0.9**
comp=E,16nm,0.8s,mb5.5,baz=323,slow=5.3,SNR=12
PMPS Porto Santo 95.95 355 *e*P **P 22 04 01.9 +2.9**
PMAR Madeira 96.31 355 *e*P **P 22 04 00.5 -0.1**
comp=E,90nm,1.1s,mb6.1
PTCN Pitcairn Islan 98.97 119 PFAKE 22 04 20.0 +7.4
PTCN LR LR
comp=Z,24µm,22.0s,MS6.7
SJG San Juan 101.18 42 PP PP 22 08 28.9 -2.8
comp=Z,57nm,0.3s,baz=314,slow=18,SNR=4.8
SJG San Juan 101.18 42 PFAKE 22 04 30.0 +7.6
SJG LR LR
comp=Z,7µm,21.0s,MS6.2
PAYG Puerto Ayora 104.36 73 PFAKE 22 04 50.0 +13
PAYG LR LR
comp=Z,6µm,20.0s,MS6.1
SDV Santo Domingo 107.26 50 PP PP 22 09 14.7 -2.2
comp=Z,3.4nm,0.3s,baz=235,slow=2.6,SNR=3.8
SDV Santo Domingo 107.26 50 PFAKE 22 09 10.0 +12
SDV LR LR
comp=Z,4µm,21.0s,MS6.0
ROSC El Rosal 108.86 56 PP PP 22 09 29.0 +0.4
comp=Z,9.2nm,0.3s,baz=102,slow=22,SNR=3.7
PCRV Puerto La Cruz 108.90 44 PP PP 22 09 26.1 -2.7
comp=Z,2.1nm,0.4s,baz=220,slow=11,SNR=1.8
KMBO Kilima Mbogo 109.34 294 Pdiff Pdif 22 05 05.2 +6.4
comp=Z,1.1nm,0.9s,baz=38,slow=12,SNR=3.6
KMBO PKiKP PKiKP 22 09 02.7 +0.6
comp=Z,3.6nm,0.9s,baz=38,slow=7.9,SNR=4.6
KMBO Kilima Mbogo 109.34 294 PKPdf PKiKP 22 09 02.7 +0.6
TOA0 Torodi Ar. Sit 112.54 334 *e*PKiKP PKiKP 22 09 08.1 0.0
TORD Torodi Ar. Bea 112.54 334 Pdiff Pdif 22 05 13.9 +1.0
comp=Z,1.5nm,0.7s,baz=17,slow=3.1,SNR=17
TORD PKiKP PKiKP 22 09 07.1 -1.0
comp=Z,5.0nm,0.6s,baz=17,slow=2.1,SNR=47
TORD PKKPbc PKKPbc 22 19 56.5 -0.6
comp=Z,3.1nm,0.8s,baz=216,slow=3.2,SNR=8.8
TORD Torodi Ar. Bea 112.54 334 Pdif Pdif 22 05 13.9 +1.0
TORD PKPdf PKiKP 22 09 07.1 -1.0
TORD PKKPbc PKKPbc 22 19 56.5 -0.6
RPN Rapa Nui 112.61 105 PFAKE 22 09 20.0 +12
RPN LR LR
comp=Z,3µm,20.0s,MS6.0
DRV Dumont d'Urvil 118.25 188 Pdif Pdif 22 05 39.0 +0.7
DRV Dumont d'Urvil 118.25 188 PP PP 22 10 32.0 -3.2
DRV SKS SKSdf 22 16 25.0 -1.5
DRV SP SP 22 20 16.0 +0.7
DRV SS SS 22 26 53.0 +6.2
DBIC Dimbokro 120.39 339 PKP PKPdf 22 09 23.4 +0.2
comp=Z,28nm,0.6s,baz=3.7,slow=2.0,SNR=47
DBIC PKKPbc PKKPbc 22 19 27.3 -2.2
comp=Z,6.9nm,0.9s,baz=225,slow=4.8,SNR=6.5
DBIC Dimbokro 120.39 339 PKP PKPdf 22 09 23.4 +0.2
DBIC PKKPbc PKKPbc 22 19 27.3 -2.2
DBIC LR LR
comp=Z,12µm,21.0s,MS6.5
LIC Lamto 120.86 340⇑ *i*PKIKP PKPdf 22 09 24.3 +0.2
comp=Z,41nm,0.6s
LIC *e*R
comp=Z,15µm,20.8s
LIC Lamto 120.86 340⇑ *i*PKPdf PKPdf 22 09 24.3 +0.2
LIC LR LR
comp=Z,8µm,20.8s,MS6.3
NNA Nana 121.35 68 PKP PKPdf 22 09 24.6 -0.5
comp=Z,5.5nm,0.4s,baz=45,slow=2.3,SNR=4.8
NNA Nana 121.35 68 PKP PKPdf 22 09 24.6 -0.5
NNA LR LR
comp=Z,2µm,20.0s,MS5.7
CASY Casey 122.44 200 *e*PDIF PKPdf 22 09 24.4 -2.7
CASY *e*pPDIF 22 09 40.5
CASY Casey 122.44 200 *e*Pdif PKPdf 22 09 24.4 -2.7
CASY LR
comp=Z,7µm,21.0s
LSZ Lusaka 125.98 292 PKP PKPdf 22 09 34.2 +0.3
comp=Z,24nm,0.8s,baz=38,slow=2.6,SNR=5.6
LSZ Lusaka 125.98 292 PKIKP PKPdf 22 09 35.0 +1.1
LSZ Lusaka 125.98 292 *e*PKPdf PKPdf 22 09 34.7 +0.8
LSZ LR LR
comp=Z,6µm,20.0s,MS6.2
SAML Samuel 126.33 53 *e*PKPdf PKPdf 22 09 33.3 -1.3
SAML LR LR
comp=Z,13µm,22.0s,MS6.6
ARE Arequipa 128.02 67 *e*PKIKP PKPdf 22 09 38.0 +0.2
VNDA Vanda 128.45 179 PKP PKPdf 22 09 36.1 -2.5
comp=Z,6.3nm,0.8s,baz=317,slow=4.0,SNR=14
VNDA Vanda 128.45 179 PKP PKPdf 22 09 36.1 -2.5
VNDA LR LR
comp=Z,9µm,22.0s,MS6.4
SBA Scott Base 128.89 177 PFAKE 22 09 50.0 +11
SBA LR LR
comp=Z,10µm,22.0s,MS6.5
LPAZ La Paz 129.80 63 PKP PKPdf 22 09 41.5 +0.3
comp=Z,17nm,0.8s,baz=12,slow=4.8,SNR=35
LPAZ La Paz 129.80 63 PKP PKPdf 22 09 41.5 +0.3
LPAZ LR LR
comp=Z,5µm,21.0s,MS6.2
MATP Matopo 129.81 288 PKP PKPdf 22 09 41.2 0.0
comp=Z,24nm,0.8s,baz=73,slow=1.2,SNR=24
SIV San Ignacio 133.37 55 PKP PKPdf 22 09 46.2 -1.8
comp=Z,11nm,0.8s,baz=328,slow=0.4,SNR=16
SIV SKKPbc 22 22 24.4
comp=Z,2.7nm,1.0s,baz=138,slow=9.0,SNR=3.9
RCBR Riachuelo 133.46 18 PFAKE 22 10 00.0 +12
RCBR LR LR
comp=Z,7µm,21.0s,MS6.3
LVC Limon Verde 134.34 69 PKP PKPdf 22 09 49.2 -0.5
comp=Z,7.9nm,0.7s,baz=291,slow=4.7,SNR=17
LVC Limon Verde 134.34 69 PKP PKPdf 22 09 49.2 -0.5
LVC LR LR
comp=Z,5µm,22.0s,MS6.2
LBTB Lobatse 135.03 287 PKhKP 22 09 40.3
comp=Z,4.0nm,0.7s,baz=71,slow=3.3,SNR=9.3
LBTB PKP PKPdf 22 09 51.4 +0.4
comp=Z,25nm,0.8s,baz=111,slow=0.8,SNR=15
LBTB Lobatse 135.03 287 PKP PKPdf 22 09 51.4 +0.4
LBTB LR LR
comp=Z,7µm,21.0s,MS6.3
TSUM Tsumeb 135.11 300 PKhKP 22 09 41.7
comp=Z,3.4nm,0.8s,baz=73,slow=6.2,SNR=1.1
TSUM PKP PKPdf 22 09 52.0 +0.8
comp=Z,37nm,0.9s,baz=37,slow=3.9,SNR=6.9
TSUM Tsumeb 135.11 300 PKP PKPdf 22 09 52.0 +0.8
TSUM LR LR
comp=Z,12µm,22.0s,MS6.6
MAW Mawson 137.45 214 *e*PDIF 22 09 44.4
comp=Z,8.3nm,0.8s
MAW Mawson 137.45 214 PKhKP 22 09 42.6
comp=Z,1.5nm,0.4s,baz=25,slow=2.3,SNR=8.0
MAW PKP PKPdf 22 09 54.8 -0.8
comp=Z,12nm,0.9s,baz=18,slow=2.4,SNR=7.0
MAW Mawson 137.45 214 PKIKP PKPdf 22 09 54.8 -0.7
MAW pmax pmax
comp=Z,12nm,0.9s
BOSA Boshof 137.86 284 PKP PKPdf 22 09 56.4 +0.1
comp=Z,34nm,0.9s,baz=52,slow=3.8,SNR=17
BOSA Boshof 137.86 284 PKP PKPdf 22 09 56.4 +0.1
BOSA LR LR
comp=Z,6µm,20.0s,MS6.3
BDFB Brasilia 139.11 39 PKhKP 22 09 51.0
comp=Z,4.4nm,0.6s,baz=241,slow=6.0,SNR=10.0
BDFB Brasilia 139.11 39 PKHKP 22 09 51.0
BDFB pmax pmax
comp=Z,4.0nm,0.6s
BDFB Brasilia 139.11 39 PFAKE 22 10 10.0 +11
BDFB LR LR
comp=Z,21µm,22.0s,MS6.8
QSPA South Pole Qui 140.91 180 *e*P PKPdf 22 09 56.4 -5.5
CFAA Coronel Fontan 141.33 77 PKhKP 22 09 55.3
comp=Z,3.5nm,0.8s,baz=281,slow=2.8,SNR=35
SUR Sutherland 143.23 284 PKhKP 22 10 02.7
comp=Z,40nm,0.8s,baz=54,slow=4.1,SNR=17
SUR Sutherland 143.23 284 PKP PKPdf 22 10 02.7 -3.3
SUR LR LR
comp=Z,2µm,22.0s,MS5.9
CPUP Villa Florida 143.81 60 PKP PKPdf 22 10 03.7 -3.3
comp=Z,9.3nm,0.6s,baz=303,slow=2.9,SNR=38
CPUP Villa Florida 143.81 60 PKP PKPdf 22 10 03.7 -3.3
CPUP LR LR
comp=Z,1µm,20.0s,MS5.7
PLCA Paso Flores 145.64 91 PKPbc PKPbc 22 10 09.0 -1.5
comp=Z,222nm,0.8s,baz=299,slow=3.5,SNR=128
PLCA Paso Flores 145.64 91 PKP2 PKPab 22 10 09.0 -1.9
PLCA pmax pmax
comp=Z,222nm,0.8s
PLCA Paso Flores 145.64 91 PFAKE 22 10 20.0 +10
PLCA LR LR
comp=Z,13µm,22.0s,MS6.7
SYO Syowa Base 146.16 215‖ *e*PKPdf PKPdf 22 10 08.0 -3.1
SYO Syowa Base 146.16 215‖ *i*PKPbc PKPbc 22 10 09.8 -2.3
CAM3 Guarapari 146.52 31⇑ *i*P PKPdf 22 10 11.5 -0.1
CAM3 *i* 22 10 19.9
CAM3 *i* 22 10 26.3
CAM4 Nova Friburgo 147.31 36⇑ *i*P PKPdf 22 10 13.3 +0.3
CAM4 *i* 22 10 14.5
CAM4 *i* 22 10 25.0
CAM4 *i* 22 10 34.0
TRQA Tornquist 149.44 80 PFAKE 22 10 30.0 +14
TRQA LR LR
comp=Z,7µm,22.0s,MS6.4
LPA La Plata 149.85 71 *ce*PKP PKPdf 22 10 15.0 -2.1
LPA La Plata 149.85 71 *ce*PKP PKPdf 22 10 20.0 +2.9
LPA La Plata 149.85 71 *ce*PKP PKPab 22 10 26.0 -1.6
LPA *e*PKS 22 13 52.0
LPA *e*PP PP 22 13 58.0 +2.1
LPA *e*SS SS 22 33 06.0 -1.6
LPA
comp=Z,9µm,22.0s
USHA Ushuaia 152.56 116 PKPbc PKPbc 22 10 26.8 -1.4
comp=Z,47nm,0.8s,baz=278,slow=1.5,SNR=15
PMSA Palmer Station 154.72 138 PKPbc PKPbc 22 10 34.0 +1.0
comp=Z,23nm,0.8s,baz=202,slow=5.1,SNR=6.5
PMSA Palmer Station 154.72 138 PFAKE 22 10 30.0 +5.7
PMSA LR LR
comp=Z,7µm,21.0s,MS6.5
NVL N'lazarevskaya 154.84 206 *c i*PKIKP PKPdf 22 10 20.8 -3.7
NVL *i* 22 14 20.9
NVL *e* 22 17 25.1
NVL *e*SS SS 22 33 54.3 -8.2
NVL *e*SSS 22 39 59.5
NVL pmax pmax
comp=Z,1µm,5.7s
MAIT Maitri 154.87 206 *e*PKPdf PKPbc 22 10 32.2 -1.0
SNAA Sanae 157.60 196 PKP PKPdf 22 10 24.9 -3.3
comp=Z,2.0nm,1.0s,baz=152,slow=2.3,SNR=15
SNAA PP PP 22 14 38.6 -1.0
comp=Z,11nm,1.2s,baz=187,slow=8.1,SNR=5.4
SNAA Sanae 157.60 196 *e*PKPdf PKPdf 22 10 24.8 -3.3
SNAA *e* 22 10 57.9
SNAA *e* 22 11 11.2
SNAA *e* 22 11 17.8
SNAA *e* 22 11 25.8
SNAA *e* 22 11 45.1
SNAA *e* 22 14 39.1
SNAA *e* 22 14 52.5
SNAA Sanae 157.60 196 PKIKP PKPdf 22 10 24.9 -3.2
SNAA 22 14 38.6
SNAA pmax pmax
comp=Z,2.0nm,1.0s
EFI East Falkland 158.01 105 PFAKE 22 10 40.0 +11
EFI LR LR
comp=Z,3µm,19.0s,MS6.1
VNA1 Neumayer--Stat 159.37 194 *e*PKPdf PKPdf 22 10 29.6 -0.6
VNA1 *e* 22 11 06.0
VNA1 *e* 22 11 18.6
VNA1 *e* 22 11 25.9
VNA1 *e* 22 11 35.0
VNA1 *e* 22 14 45.6
VNA1 *e* 22 14 58.0
VNA1 *e* 22 15 03.5
TRIS Tristan da Cun 164.10 329 PFAKE 22 10 50.0 +15
TRIS LR LR
comp=Z,9µm,20.0s

KRSC 24 22:00:16, 5124N×15806E, h5km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
RUS	**Russkaya**	**1.23**	**13**	*e*P	Pg	22 00 39.8	+0.3
RUS				*e*S	Sg	22 00 56.9	+1.4
GRL	**Gorelyy**	**1.31**	**0**	*e*P	Pn	22 00 41.7	+0.7
GRL				*e*S	Sg	22 01 00.0	+1.8
MIPR	**Malaya Ipel'ka**	**1.32**	**323**	P	Pn	22 00 41.7	+0.7
PET	**Petropavlovsk**	**1.82**	**11**	P	Pn	22 00 48.7	+0.7
PET				S	Sn	22 01 12.5	+1.0
SDLR	**Sedlovina**	**2.10**	**14**	P	Pn	22 00 53.6	+1.8
SDLR				S	Sn	22 01 20.7	+2.3
SPN	**Mys Shipunski**	**2.22**	**32**	P	Pn	22 00 55.4	+2.0
SPN				S	Sn	22 01 24.1	+2.9
GNL	**Ganaly**	**2.46**	**358**	P	Pn	22 00 58.7	+1.9
GNL				S	Sn	22 01 29.9	+2.7

KRSC 24 22:10:39, 5123N×15826E, h5km, ML3.9, Near east coast of Kamchatka Peninsula

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

RUS	**Russkaya**	**1.22**	**7**	*e*P	Pg	22 11 03.3	+1.0
RUS				*i* S	Sg	22 11 20.5	+2.4
GRL	**Gorelyy**	**1.33**	**355**	*e*P	Pn	22 11 05.8	+1.6
GRL				*i* S	Sg	22 11 24.9	+3.2
MIPR	**Malaya Ipel'ka**	**1.40**	**319**	*e*P	Pn	22 11 04.8	-0.4
MIPR				*i* S	Sb	22 11 23.2	-0.7
PET	**Petropavlovsk**	**1.81**	**8**	P	Pn	22 11 12.8	+1.9
PET				*i* S	Sn	22 11 36.9	+2.7
NLC	**Nalytchevo**	**2.06**	**19**	P	Pn	22 11 14.8	+0.6
NLC				*i* S	Sn	22 11 40.4	+0.2
AVH	**Avacha**	**2.06**	**8**	P	Pn	22 11 17.4	+3.2
AVH				*i* S	Sn	22 11 44.6	+4.3
SDLR	**Sedlovina**	**2.09**	**10**	*e*P	Pn	22 11 16.4	+1.8
SDLR				*i* S	Sn	22 11 43.3	+2.3
SPN	**Mys Shipunski**	**2.16**	**29**	P	Pn	22 11 17.8	+2.1
SPN				*i* S	Sn	22 11 45.9	+3.0
GNL	**Ganaly**	**2.48**	**356**	*e*P	Pn	22 11 22.5	+2.5
GNL				*e*S	Sn	22 11 54.1	+3.5
MKZ	**Mys Kozlova**	**3.94**	**31**	P	Pn	22 11 42.0	+1.9
MKZ				*i* S	Sn	22 12 27.1	+0.4
KBTR	**Krutoberegovo**	**5.67**	**27**	*e*P	Pn	22 12 06.9	+3.0

KRSC 24 22:16:26, 5132N×15815E, h5km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**1.14**	**11**	*e*P	Pg	22 16 49.1	+1.3
RUS				*i* S	Sg	22 17 06.3	+3.7
GRL	**Gorelyy**	**1.23**	**358**	*e*P	Pg	22 16 51.2	+1.5
GRL				*i* S	Sg	22 17 09.7	+4.0
MIPR	**Malaya Ipel'ka**	**1.29**	**318**	*e*P	Pn	22 16 50.0	-0.7
MIPR				*i* S	Sg	22 17 07.6	+0.1
PET	**Petropavlovsk**	**1.73**	**10**	*e*P	Pn	22 16 58.8	+2.0
PET				*i* S	Sn	22 17 22.0	+2.7
NLC	**Nalytchevo**	**1.99**	**21**	P	Pn	22 17 00.4	+0.1
NLC				*i* S	Sn	22 17 25.3	-0.4
SDLR	**Sedlovina**	**2.01**	**13**	*e*P	Pn	22 17 02.8	+2.2
SDLR				*i* S	Sn	22 17 29.5	+3.4
SPN	**Mys Shipunski**	**2.12**	**32**	P	Pn	22 17 04.1	+2.0
SPN				*i* S	Sn	22 17 32.3	+3.5
GNL	**Ganaly**	**2.38**	**357**	*e*P	Pn	22 17 07.6	+1.9
GNL				*i* S	Sn	22 17 37.6	+2.3
MKZ	**Mys Kozlova**	**3.90**	**32**	*e*P	Pn	22 17 27.8	+1.3
MKZ				*i* S	Sn	22 18 13.0	+0.3
KBTR	**Krutoberegovo**	**5.62**	**28**	P	Pn	22 17 52.2	+1.9

*ISCJB **24** 22:27:18.7±2.4, 214S±05×1775W±04, h100km, mb4.1/6, Error ellipse: s-maj=88.0km s-min=8.7km az=95.9*
*NEIC **24** 22:27:21.3±4.0, 2137S×17730W, h119km±32km, mb4.6/2, Error ellipse: s-maj=94.1km s-min=21.5km az=148.0*
*IDC **24** 22:27:22.7±5.6, 2091S×17783W, h108km±47km, mb3.7/4, mb1 3.9/5, mb1mx3.6/14, mbtmp4.1/5, Error ellipse: s-maj=142.2km s-min=27.1km az=143.0*

ISC 24 22:27:20.4±2.5, 215S±05×1774W±05, h100km, n11, σ0§90/10, mb4.1/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.21**	**36**	P	**Pn**	**22 29 29.8**	**-0.5**
	2.5nm,0.3s,baz=236,slow=7.3,SNR=3.0						
AFI				S	**Sn**	**22 31 12.4**	**+0.3**
	0.7nm,0.3s,baz=90,slow=20,SNR=2.0						
CTAO	**Charters Tower**	**33.98**	**266**	*e*P	**P**	**22 33 57.0**	**+2.7**
	6.1nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**37.90**	**245**	P	**P**	**22 34 27.8**	**0.0**
	1.9nm,0.8s,mb4.0,baz=94,slow=12,SNR=4.5						
ASAR	**Alice Springs**	**44.87**	**258**	P	**P**	**22 35 23.9**	**-0.7**
	1.5nm,0.7s,mb3.8,baz=92,slow=8.8,SNR=13						
WB2	**Warramunga Arr**	**45.03**	**263**	*e*P	**P**	**22 35 25.7**	**-0.3**
WRAB	**Tennant Creek**	**45.03**	**263**	*e*P	**P**	**22 35 25.2**	**-0.8**
	2.7nm,0.3s,mb4.5						
WRA	**Warramunga Arr**	**45.04**	**263**	P	**P**	**22 35 25.1**	**-1.0**
	1.0nm,0.5s,mb3.8,baz=95,slow=8.3,SNR=46						
FITZ	**Fitzroy Crossi**	**53.47**	**263**	P	**P**	**22 36 30.8**	**+0.6**
	1.2nm,0.8s,mb4.0,baz=106,slow=7.4,SNR=5.0						
NWAO	**Narrogin (SRO)**	**58.46**	**244**	P	**P**	**22 37 06.7**	**+0.9**
AKASG	**Malin Array Be**	**144.12**	**331**	PKP	PKPdf	22 46 43.0	-1.4
	1.7nm,0.6s,baz=41,slow=3.8,SNR=17						
BRTR	**Keskin Array B**	**147.90**	**312**	PKPbc	PKPbc	22 46 52.9	-1.0
	0.7nm,0.7s,baz=152,slow=3.1,SNR=5.3						

KRSC 24 22:32:18, 5122N×15807E, h5km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**1.25**	**13**	*e*P	Pg	22 32 43.4	+1.5
RUS				*i* S	Sg	22 33 00.5	+2.5
GRL	**Gorelyy**	**1.33**	**0**	P	Pn	22 32 43.5	+0.2
MIPR	**Malaya Ipel'ka**	**1.34**	**323**	*e*P	Pn	22 32 44.2	+0.9
MIPR				*i* S	Sb	22 33 03.0	+2.1
PET	**Petropavlovsk**	**1.84**	**11**	P	Pn	22 32 51.2	+0.9
PET				*i* S	Sn	22 33 15.8	+1.9
SDLR	**Sedlovina**	**2.12**	**13**	*e*P	Pn	22 32 56.0	+1.9
SDLR				*i* S	Sn	22 33 24.0	+3.2
SPN	**Mys Shipunski**	**2.23**	**32**	P	Pn	22 32 57.4	+1.8
SPN				*i* S	Sn	22 33 26.7	+3.1
GNL	**Ganaly**	**2.48**	**358**	*e*P	Pn	22 33 01.8	+2.8
GNL				*e*S	Sn	22 33 32.9	+3.2
MKZ	**Mys Kozlova**	**4.01**	**32**	P	Pn	22 33 22.4	+2.3
MKZ				*i* S	Sn	22 34 08.2	+0.8
KBTR	**Krutoberegovo**	**5.74**	**28**	P	Pn	22 33 46.4	+2.6

*IDC **24** 22:37:35.0±0.4, 878S×10862E, h0km, mb4.7/18, mb1 4.7/20, mb1mx4.7/22, mbtmp4.6/20, ML4.4/2, Error ellipse: s-maj=19.0km s-min=11.9km az=58.0*
*BJI **24** 22:37:35.0, 900S×10840E, h10km, mB5.7, mb4.8, Ms5.5, Msz5.1*
*NEIC **24** 22:37:36.5±0.2, 897S×10845E, h10km, mb4.9/22, Error ellipse: s-maj=8.4km s-min=5.1km az=54.0*
*MOS **24** 22:37:38.4±1.3, 874S×10869E, h33km, mb5.1/23, Error ellipse: s-maj=13.3km s-min=7.1km az=114.0*
*ISCJB **24** 22:37:39.5±1.6, 897S±004×10854E±005, h33km±11km, mb4.8/64, MS5.2/6, Error ellipse: s-maj=8.4km s-min=5.2km az=126.2*

ISC 24 22:37:37.5±1.6, 904S±003×10844E±004, h15km±10km, h17km±1.9km:pP-P, n146, σ1§27/140, mb4.8/64, MS5.2/6, 6C-3D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJII	**Banjamegara**	**2.11**	**37**	P	**Pn**	**22 38 12.5**	**+0.4**
	1μm,0.8s						
LEM	**Lembang**	**2.34**	**340**	P	**Pn**	**22 38 17.5**	**+2.2**
	7μm,0.9s						
JCJI	**Jatiwangi**	**2.53**	**356**	P	**Pn**	**22 38 17.1**	**-0.9**
	5μm,0.6s						
CBJI	**Citeko**	**3.04**	**329**	P	**Pn**	**22 38 24.2**	**-0.7**
	14μm,0.6s						
TNG	**Tangerang**	**3.35**	**328**	P	**Pn**	**22 38 35.9**	**+6.6**
	1μm,0.8s						
SBJI	**Serang**	**3.69**	**322**	P	**Pn**	**22 38 37.6**	**+3.7**
	1μm,0.5s						
KRKI	**Karangkates**	**4.06**	**78**	P	**Pn**	**22 38 40.4**	**+1.4**
	906nm,0.7s						
KSI	**Kapahiang**	**7.89**	**312**	P	**Pn**	**22 39 34.3**	**+2.6**
	723nm,0.7s						
KSI	**Kapahiang**	**7.89**	**312**	‖*e*P	**Pn**	**22 39 38.0**	**+6.3**
KSM	**Kuching**	**10.60**	**10**	*e*Pn	**Pn**	**22 40 10.6**	**+1.8**
KSM				*e*Sn	**Sn**	**22 42 08.5**	**+1.3**
COCO	**West Island**	**11.83**	**254**	Pn	**Pn**	**22 40 23.6**	**-1.9**
COCO				Sn	**Sn**	**22 42 29.2**	**-8.1**
PCI	**Palu**	**13.93**	**55**	P	**Pn**	**22 40 56.5**	**+2.3**
	77nm,1.3s						
PSI	**Prapat**	**15.11**	**321**	Pn	**Pn**	**22 41 05.9**	**-4.3**
	2.4nm,0.3s,baz=150,slow=14,SNR=6.5						
KULM	**Kulim**	**16.21**	**331**	*e*Pn	**Pn**	**22 41 23.8**	**-0.8**
MBWA	**Marble Bar**	**16.24**	**139**	*e*Pn	**Pn**	**22 41 20.1**	**-4.8**
	22nm,0.9s						
KKM	**Kota Kinabalu**	**16.87**	**28**	*e*Pn	**Pn**	**22 41 33.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**18.98**	**120**	*e*P	**Pn**	**22 41 58.4**	**-0.6**
	25nm,0.8s						
FITZ				*e*S	Sn	22 45 10.9	-20
FITZ	**Fitzroy Crossi**	**18.98**	**120**	P	**Pn**	**22 41 58.5**	**-0.4**
	0.6nm,0.3s,baz=284,slow=7.0,SNR=42						
FITZ				S	**Sn**	**22 45 14.3**	**-17**
	0.6nm,0.3s,baz=124,slow=16,SNR=5.0						
BSI	**Banda Aceh**	**19.49**	**317**	P	**Pn**	**22 42 07.1**	**+2.0**
	76nm,0.9s						
AAI	**Ambon**	**20.33**	**76**	P	**P**	**22 42 12.3**	**-0.7**
	134nm,1.1s						
KAKA	**Kakadu**	**23.85**	**101**	*e*P	**P**	**22 42 48.8**	**-1.3**
	29nm,0.9s,mb4.7						
MUN	**Mundaring**	**23.94**	**164**	*e*P	**P**	**22 42 51.5**	**+0.6**
MUN				*e*S	**S**	**22 47 13.1**	**+6.2**
KLBR	**Kellerberrin**	**24.06**	**160**	*e*P	**P**	**22 42 51.8**	**-0.2**
	38nm,1.2s,mb4.7						
KLBR				*e*S	**S**	**22 47 14.3**	**+5.6**
NWAO	**Narrogin (SRO)**	**25.13**	**162**	P	**P**	**22 43 01.8**	**0.0**
	21nm,0.8s,mb4.7,baz=338,slow=9.7,SNR=14						
NWAO	**Narrogin (SRO)**	**25.13**	**162**	*e*P	**P**	**22 43 02.0**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,26nm,0.9s						
NWAO	**Narrogin (SRO)**	**25.13**	**162**	*e*P	**P**	**22 43 01.9**	**+0.2**
	comp=Z,26nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**27.28**	**116**	P	**P**	**22 43 20.9**	**-0.3**
	comp=Z,17nm,0.5s,mb4.8,baz=290,slow=11,SNR=193						
WRA				PcP	PcP	22 46 41.2	+0.6
	comp=Z,3.8nm,0.7s,baz=298,slow=2.1,SNR=9.3						
WRAB	**Tennant Creek**	**27.28**	**116**	P	**P**	**22 43 21.0**	**-0.2**
	comp=Z,242nm,0.5s,mb6.0,SNR=35						
WRAB	**Tennant Creek**	**27.28**	**116**	*e*P	**P**	**22 43 21.1**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**27.28**	**116**	*e*P	**P**	**22 43 21.1**	**-0.1**
	comp=Z,34nm,0.6s,mb5.0						
WB2	**Warramunga Arr**	**27.29**	**116**	*e*P	**P**	**22 43 20.4**	**-0.9**
WB2				*e*PCP	PcP	22 46 41.7	+1.0
WB2				*e*S	S	22 48 28.3	+28
ASPA	**Alice Springs**	**28.36**	**124**	*e*P	**P**	**22 43 31.1**	**+0.2**
ASPA				*e*PCP	PcP	22 46 44.8	+1.5
ASPA				*e*S	S	22 48 59.5	+42
AS31	**Alice Springs**	**28.36**	**124**	*e*P	**P**	**22 43 30.0**	**-0.9**
AS31				*e*PcP	PcP	22 46 44.4	+1.0
ASAR	**Alice Springs**	**28.36**	**124**	P	**P**	**22 43 30.8**	**-0.1**
	comp=Z,9.5nm,0.6s,mb4.6,baz=297,slow=8.8,SNR=32						
ASAR				PcP	PcP	22 46 44.7	+1.4
	comp=Z,3.9nm,0.5s,baz=302,slow=2.0,SNR=19						
KMI	**Kunming**	**34.40**	**351**	P	**P**	**22 44 28.4**	**+4.4**
KMI				AP	pP	22 44 34.3	+5.6
KMI				XP	sP	22 44 36.8	+6.2
KMI				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.3						
KMI				LR	LR		
	comp=Z,2μm,19.0s,MS4.9						
CTA	**Charters Tower**	**38.12**	**111**	*e*P	**P**	**22 44 56.9**	**+1.1**
	comp=Z,9.2nm,0.7s,mb4.6						
CTA				*e*PCP	PcP	22 47 11.9	+1.3
CTA	**Charters Tower**	**38.12**	**111**	*e*P	**P**	**22 44 56.9**	**+1.1**
CTA				*e*		22 47 11.9	
CTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CTAO	**Charters Tower**	**38.12**	**111**	*e*P	**P**	**22 44 56.6**	**+0.8**
CTAO				*e*		22 47 11.8	
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
CTAO	**Charters Tower**	**38.12**	**111**	*e*P	**P**	**22 44 56.6**	**+0.8**
	comp=Z,6.1nm,0.8s,mb4.4						
CTAO				*e*PcP	PcP	22 47 11.8	+1.2
STKA	**Stephens Creek**	**38.23**	**131**	*e*P	**P**	**22 44 56.7**	**0.0**
	comp=Z,54nm,0.8s,mb5.3						
STKA				*e*PCP	PcP	22 47 12.1	+1.2
STKA	**Stephens Creek**	**38.23**	**131**	P	**P**	**22 44 57.2**	**+0.5**
	comp=Z,62nm,0.7s,mb5.4,baz=304,slow=8.1,SNR=119						
STKA				PcP	PcP	22 47 12.1	+1.2
	comp=Z,9.8nm,0.7s,baz=300,slow=4.5,SNR=3.6						
STKA	**Stephens Creek**	**38.23**	**131**	*e*P	**P**	**22 44 56.8**	**+0.1**
STKA				*e*PcP	PcP	22 47 11.6	+0.7
HYB	**Hyderabad**	**39.54**	**312**	*i* P	**P**	**22 45 10.0**	**+2.4**
HYB				*e*	pP	22 45 16.0	+3.6
HYB				*e*		22 45 23.0	
CD2	**Chengdu**	**39.97**	**354**	*e*P	**P**	**22 45 12.1**	**+0.9**
CD2				AP	pP	22 45 16.6	+0.6
CD2				XP	sP	22 45 19.3	+1.4
CD2				PP	PP	22 46 48.8	+5.7
CD2				S	**S**	**22 51 18.4**	**+2.4**
CD2				XS	sS	22 51 25.8	+2.0
CD2				SS	SS	22 54 10.3	-2.6
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
CD2				LR	LR		
	comp=E,1μm,15.6s						
CD2				LR	LR		
	comp=Z,2μm,14.4s,MS5.0						
SSE	**Sheshan**	**41.73**	**17**	P	**P**	**22 45 27.3**	**+1.5**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,2μm,12.0s						
LSA	**Lhasa**	**41.95**	**337**	P	**P**	**22 45 27.1**	**-0.5**
LSA	**Lhasa**	**41.95**	**337**	*e*P	**P**	**22 45 28.7**	**+1.1**
LSA				*e*		22 47 28.5	
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
LSA	**Lhasa**	**41.95**	**337**	*e*P	**P**	**22 45 28.7**	**+1.1**
	comp=Z,9.0nm,0.6s,mb4.6						
LSA				*e*PcP	PcP	22 47 28.5	+5.7
NJ2	**Nanjing**	**42.05**	**13**	*e*P	**P**	**22 45 30.1**	**+1.7**
NJ2				AP	pP	22 45 34.6	+1.5
NJ2				XP	sP	22 45 37.1	+2.1
NJ2				S	**S**	**22 51 49.0**	**+2.0**
NJ2				XS	sS	22 51 56.0	+1.2
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,2μm,8.4s						
NJ2				LR	LR		
	comp=N,3μm,17.8s,MS5.5						
NJ2				LR	LR		
	comp=E,4μm,15.2s,MS5.5						
NJ2				LR	LR		
	comp=Z,4μm,14.8s,MS5.4						
PKI	**Pulchoki**	**42.68**	**329**	*e*P	**P**	**22 45 34.3**	**+0.8**
	comp=Z,10nm,0.6s,mb4.7						
PKI	**Pulchoki**	**42.68**	**329**	*e*P	**P**	**22 45 34.3**	**+0.8**
PKI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
XAN	**Xi'an**	**42.84**	**1**	P	**P**	**22 45 35.3**	**+0.5**
XAN				AP	pP	22 45 45.3	+5.7
XAN				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
DMN	**Daman**	**42.87**	**329**	*e*P	**P**	**22 45 35.1**	**+0.1**
	comp=Z,34nm,0.8s,mb5.1						
KKN	**Kakani**	**42.93**	**329**	*e*P	**P**	**22 45 35.5**	**0.0**
	comp=Z,22nm,0.7s,mb5.0						
KKN	**Kakani**	**42.93**	**329**	*e*P	**P**	**22 45 35.5**	**0.0**
KKN				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.0						
GKN	**Gorkha**	**43.43**	**329**	*e*P	**P**	**22 45 38.9**	**-0.7**
	comp=Z,13nm,0.3s,mb5.1						
KOLN	**Koldanda**	**43.78**	**327**	*e*P	**P**	**22 45 42.4**	**0.0**
	comp=Z,38nm,0.7s,mb5.2						
LZH	**Lanzhou**	**45.09**	**355**	*e*P	**P**	**22 45 57.8**	**+4.9**
LZH				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.6						
GTA	**Gaotai**	**48.86**	**351**	*e*P	**P**	**22 46 25.6**	**+3.3**
GTA				AP	pP	22 46 29.1	+2.0
GTA				XP	sP	22 46 32.3	+3.3
GTA				AMB	AMB		
	comp=Z,4.0nm,0.5s,mb4.7						
BJI	**Beijing**	**49.35**	**8**	P	**P**	**22 46 24.8**	**-1.3**
BJI				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb5.0						
HHC	**Hu-ho-hao-te**	**49.72**	**3**	*e*P	**P**	**22 46 29.0**	**+0.1**
HHC				AP	pP	22 46 33.6	-0.1
HHC				PCP	PcP	22 47 47.5	-2.4
HHC				PP	PP	22 48 25.5	+2.1
HHC				SCP	ScP	22 51 45.5	+0.7
HHC				PCS	PcS	22 51 50.4	+3.8
HHC				S	**S**	**22 53 38.5**	**+1.2**
HHC				SCS	ScS	22 56 16.9	-3.1
HHC				SS	SS	22 57 07.6	-2.0
HHC				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.9						
HHC				AMB	AMB		
	comp=Z,2μm,9.9s						
HHC				LR	LR		
	comp=N,2μm,15.2s,MS5.4						
HHC				LR	LR		
	comp=E,2μm,13.3s,MS5.4						
HHC				LR	LR		
	comp=Z,2μm,18.4s						
HNR	**Honiara**	**50.80**	**95**	*e*P	**P**	**22 46 37.5**	**+0.4**
MAT	**Matsushiro**	**53.27**	**30**	P	**P**	**22 46 51.9**	**-3.6**
MJAR	**Matsushiro Arr**	**53.27**	**30**	P	**P**	**22 46 51.8**	**-3.7**
	comp=Z,4.6nm,0.7s,mb4.5,baz=213,slow=7.7,SNR=17						
CN2	**Changchun**	**54.81**	**15**	*e*P	**P**	**22 47 08.6**	**+1.9**
WMQ	**Urumqi**	**55.88**	**342**	P	**P**	**22 47 15.5**	**+1.1**
WMQ				AP	pP	22 47 22.5	+3.2
WMQ				PP	PP	22 49 21.5	+2.5
WMQ				S	**S**	**22 55 00.5**	**-0.8**
WMQ				SCS	ScS	22 57 00.5	-2.6
WMQ				SS	SS	22 58 46.5	-0.6
WMQ				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,146nm,5.0s						
WMQ				LR	LR		
	comp=N,2μm,15.0s,MS5.4						
WMQ				LR	LR		
	comp=E,1μm,14.0s,MS5.4						
WMQ				LR	LR		
	comp=Z,2μm,15.0s,MS5.2						
SONM	**Songino Array**	**56.65**	**358**	P	**P**	**22 47 18.6**	**-1.3**
	comp=Z,3.9nm,0.5s,mb4.7,baz=176,slow=9.0,SNR=35						
ULN	**Ulaanbaatar**	**56.66**	**359**	‖*e*P	**P**	**22 47 19.8**	**-0.2**
MDJ	**Mudanjiang**	**56.72**	**18**	P	**P**	**22 47 22.0**	**+1.6**
MDJ				AP	pP	22 47 25.3	0.0
MDJ				PP	PP	22 49 28.5	+1.9
MDJ				SCP	ScP	22 52 16.9	+1.6
MDJ				PCS	PcS	22 52 18.3	+1.2
MDJ				S	**S**	**22 55 17.8**	**+5.2**
MDJ				XS	sS	22 55 22.0	+1.4
MDJ				SCS	ScS	22 57 11.4	+2.2
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.6						
MDJ				LR	LR		
	comp=N,424nm,15.3s						
MDJ				LR	LR		
	comp=E,1μm,23.0s						
MDJ				LR	LR		
	comp=Z,2μm,20.1s,MS5.1						
CASY	**Casey**	**57.18**	**179**	*e*P	**P**	**22 47 24.0**	**+0.3**
CASY	**Casey**	**57.18**	**179**	*e*P	**P**	**22 47 24.1**	**+0.4**
	comp=Z,4.6nm,0.8s,mb4.6						
ZAK	**Zakamensk**	**59.34**	**356**	*e*P	**P**	**22 47 37.2**	**-1.6**
OPO	**Ambohidratompo**	**60.00**	**254**	P	**P**	**22 47 45.8**	**+2.5**
	comp=Z,2.2nm,0.7s,mb4.3,baz=51,slow=7.1,SNR=3.3						
AAK	**Ala-Archa**	**60.04**	**332**	‖*e*P	**P**	**22 47 41.3**	**-2.3**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
MK31	**Makanchi Array**	**60.27**	**340**	P	**P**	**22 47 44.3**	**-0.9**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
MKAR	**Makanchi Array**	**60.27**	**340**	P	**P**	**22 47 44.6**	**-0.6**
	comp=Z,7.0nm,0.4s,mb5.0,baz=151,slow=7.7,SNR=95						
MKAR	**Makanchi Array**	**60.27**	**340**	*i* P	**P**	**22 47 44.5**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
HABR	**Khabarovsk**	**61.88**	**20**	*e*P	**P**	**22 47 53.9**	**-2.3**
HABR				*e*S	**S**	**22 56 13.8**	**-5.6**
KK31	**Karatay Array**	**62.33**	**329**	*i* P	**P**	**22 47 58.5**	**-0.6**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
KKAR	**Karatay Array**	**62.33**	**329**	*i* P	**P**	**22 47 58.5**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
YSS	**Yuzh-Sakhalins**	**63.56**	**26**	*e*P	**P**	**22 48 05.5**	**-1.8**
YSS				*e*		22 48 19.9	
RPZ	**Rata Peaks**	**64.10**	**134**	P	**P**	**22 48 11.4**	**+0.5**
	comp=Z,11nm,0.9s,mb4.9,baz=243,slow=11,SNR=2.7						
ZAL	**Zalesovo**	**65.84**	**345**	P	**P**	**22 48 20.7**	**-1.6**
	comp=Z,8.3nm,0.3s,mb5.2,baz=340,slow=3.5,SNR=26						
ZAL	**Zalesovo**	**65.84**	**345**	P	**P**	**22 48 20.7**	**-1.6**
MAW	**Mawson**	**65.85**	**197**	*e*P	**P**	**22 48 23.3**	**+1.0**
	comp=Z,2.3nm,0.6s,mb4.4						
MAW	**Mawson**	**65.85**	**197**	P	**P**	**22 48 23.4**	**+1.1**
	comp=Z,3.1nm,0.6s,mb4.5,baz=47,slow=7.7,SNR=13						
MAW	**Mawson**	**65.85**	**197**	*e*P	**P**	**22 48 23.3**	**+1.0**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BOD	**Bodaibo**	**66.78**	**3**	*e*P	**P**	**22 48 26.2**	**-2.0**
BOD				*e*		22 48 40.5	
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
NVS	**Novosibirsk**	**67.06**	**344**	*e*P	**P**	**22 48 27.1**	**-2.9**
NVS				*e*S	S	22 57 14.7	-8.6
NVS				pmax	pmax		
	comp=Z,22nm,1.9s,mb4.9						
NVS				pmax	pmax		
	comp=N,16nm,1.7s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.4s						
NVS				smax			
	comp=N,10.0nm,2.0s						
VOSK	**Vostochnaya**	**69.32**	**337**	P	**P**	**22 48 42.8**	**-1.4**
VOSK				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
BVA0	**Borovoye Array**	**69.79**	**337**	P	**P**	**22 48 46.0**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
BRVK	**Borovoye**	**69.85**	**337**	P	**P**	**22 48 46.4**	**-1.1**
	comp=Z,114nm,0.5s,mb6.1,SNR=6.3						
BRVK	**Borovoye**	**69.85**	**337**	*e*P	**P**	**22 48 46.3**	**-1.2**
BRVK				*e*		22 49 09.3	
BRVK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
BRVK	**Borovoye**	**69.85**	**337**	*e*P	**P**	**22 48 46.3**	**-1.1**
	comp=Z,16nm,1.0s,mb4.9						
BRVK				*e*PcP	PcP	22 49 09.3	-0.6
CHKZ	**Chkalovo**	**70.20**	**337**	*e*P	**P**	**22 48 48.9**	**-0.7**
CHKZ				*e*	

comp=Z,1.5nm,0.5s,mb4.2,baz=128,slow=12,SNR=5.6
TIXI Tiksi 81.65 6 *e*P **P 22 49 50.9 -4.0**
TIXI pmax pmax
comp=Z,31nm,0.9s,mb5.2
BR131 Keskin Array S 84.24 312 *e*P **P 22 50 08.6 +0.3**
comp=Z,5.3nm,0.9s,mb4.7
BRTR Keskin Array B 84.24 312 P **P 22 50 08.7 +0.4**
comp=Z,5.5nm,1.0s,mb4.6,baz=125,slow=6.5,SNR=23
VRSR Storozhevoye 84.33 324 *e*P **P 22 50 08.7 -0.1**
VRSR pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
VRSR pmax pmax
comp=N,7.0nm,0.9s
VRSR pmax pmax
comp=E,10.0nm,0.9s
BILL Bilibino 86.95 19 *e*P **P 22 50 20.5 -1.3**
BILL pmax pmax
comp=Z,8.0nm,1.6s,mb4.7
OBN Obninsk 87.20 327 *e*P **P 22 50 22.2 -0.8**
OBN *i* 22 50 38.7
OBN pmax pmax
comp=Z,34nm,1.6s,mb5.3
SNAA Sanae 88.02 197 *e*P **P 22 50 27.9 +0.9**
SNAA *e* 22 50 29.1
SNAA *e* pP 22 50 32.1 0.0
SNAA *e* pP 22 50 33.3 +1.2
SNAA *e* 22 50 44.3
SNAA Sanae 88.02 197 *e*P **P 22 50 28.1 +1.1**
SNAA pmax pmax
comp=Z,17nm,1.3s
SNAA Sanae 88.02 197 *e*P **P 22 50 28.1 +1.1**
comp=Z,17nm,1.3s,mb5.1
TMCR Tamitsa 89.72 336 *e*P **P 22 50 43.7 +8.7**
TMCR pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
VNA1 Neumayer--Stat 90.05 197 *e*P **P 22 50 38.5 +2.0**
VNA1 *e* 22 50 39.5
VNA1 *e* pP 22 50 41.2 -0.4
VNA1 *e* pP 22 50 42.3 +0.7
VNA1 *e* 22 50 54.8
AKASG Malin Array Be 90.16 321 P **P 22 50 35.9 -1.2**
comp=Z,0.8nm,0.6s,mb4.2,baz=86,slow=4.7,SNR=5.5
AKASG PP PP 22 54 09.8 -0.8
comp=Z,0.6nm,0.5s,baz=97,slow=6.0,SNR=11
FINES FINESS Array B 94.23 331 P **P 22 50 55.1 -0.7**
comp=Z,0.7nm,0.7s,mb4.2,baz=160,slow=3.5,SNR=3.3
ARCES ARCESS Array B 95.93 339 P **P 22 51 01.2 -2.5**
comp=Z,1.3nm,0.8s,mb4.4,baz=80,slow=8.8,SNR=5.2
TORD Torodi Ar. Bea 108.21 281 PKiKP PKiKP 22 56 05.9 +1.0
comp=Z,1.0nm,0.8s,baz=64,slow=1.4,SNR=14
TORD PKKPbc PKKPbc 23 07 17.3 +1.3
comp=Z,0.4nm,0.8s,baz=298,slow=3.1,SNR=6.9
NVAR Mina Array Bea 128.92 47 PKP PKPdf 22 56 46.2 +1.8
comp=Z,0.5nm,0.7s,baz=322,slow=1.2,SNR=3.6
NVAR Mina Array Bea 128.92 47 PKP PKPdf 22 56 46.2 +1.8
PLCA Paso Flores 130.47 181 PKP PKPdf 22 56 49.5 +2.1
comp=Z,0.9nm,0.8s,baz=222,slow=2.7,SNR=3.4
CPUP Villa Florida 142.22 201 PKhKP 22 57 06.2
comp=Z,0.8nm,0.5s,baz=98,slow=3.2,SNR=4.5
CPUP PKP PKPdf 22 57 11.0 +1.8
comp=Z,0.7nm,0.5s,baz=207,slow=1.8,SNR=5.3
CPUP Villa Florida 142.22 201 PKP PKPdf 22 57 06.2 -3.0
CPUP *e*PKPdf PKPdf 22 57 06.3 -2.9
CPUP PKP PKPdf 22 57 11.0 +1.8
NCB Newcomb 145.12 3 *e*PKPbc PKPbc 22 57 13.3 -0.4
ACCN Adirondack Com 145.74 3 *e*PKPdf PKPdf 22 57 15.8 +0.5
JCT Junction City 146.09 47 *e*PKP2 PKPab 22 57 17.5 +0.1
BDFB Brasilia 146.16 224 PKPbc PKPbc 22 57 19.0 +2.0
comp=Z,9.5nm,0.5s,baz=137,slow=1.6,SNR=16
MIAR Mount Ida 147.56 35 *e*PKP2 PKPab 22 57 20.4 -2.7
LVC Limon Verde 148.44 185 *e*PKPbc PKPbc 22 57 26.4 +3.0
WVT Waverly 149.23 26 *e*PKP2 PKPab 22 57 25.5 -4.3
OXF Oxford 149.81 30 *e*PKP2 PKPab 22 57 27.3 -4.9
LPAZ La Paz 154.61 188 PKP PKPdf 22 57 31.6 +2.4
comp=Z,0.7nm,0.8s,baz=236,slow=0.4,SNR=3.2
LPAZ PKPbc PKPbc 22 57 41.7 +4.1
comp=Z,1.0nm,0.6s,baz=146,slow=3.6,SNR=4.1
LPAZ PKPab PKPab 22 57 54.9 +2.6
comp=Z,3.3nm,0.8s,baz=184,slow=5.8,SNR=11
LPAZ La Paz 154.61 188 PKP PKPdf 22 57 31.6 +2.4
LPAZ PKPbc PKPbc 22 57 41.7 +4.1
LPAZ PKPab PKPab 22 57 54.9 +2.6

KRSC 24 22:41:31,5115N×15817E,h5km,ML3.6,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.30**	**9**	*e*P	Pn	22 41 56.7	+0.9
RUS				*i* S	Sg	22 42 15.3	+2.4
GRL	**Gorelyy**	**1.41**	**358**	*e*P	Pn	22 41 58.7	+1.5
GRL				*i* S	Sb	22 42 18.8	+2.9
MIPR	**Malaya Ipel'ka**	**1.43**	**323**	*e*P	Pn	22 41 58.8	+1.2
MIPR				*i* S	Sb	22 42 18.1	+1.5
PET	**Petropavlovsk**	**1.90**	**9**	P	Pn	22 42 05.6	+1.5
PET				*i* S	Sn	22 42 30.4	+2.0
AVH	**Avacha**	**2.15**	**9**	*e*P	Pn	22 42 10.2	+2.8
AVH				*e*S	Sn	22 42 38.2	+3.7
NLC	**Nalytchevo**	**2.15**	**19**	P	Pn	22 42 08.5	+1.0
NLC				*i* S	Sn	22 42 35.7	+1.2
SPN	**Mys Shipunski**	**2.26**	**30**	P	Pn	22 42 11.7	+2.7
SPN				*i* S	Sn	22 42 41.4	+4.1
GNL	**Ganaly**	**2.55**	**357**	*e*P	Pn	22 42 15.4	+2.4
MKZ	**Mys Kozlova**	**4.04**	**31**	*e*P	Pn	22 42 35.2	+1.8
MKZ				*e*S	Sn	22 43 22.0	+0.9
KBTR	**Krutoberegovo**	**5.77**	**27**	*e*P	Pn	22 42 59.6	+2.3

*STR **24** 22:48:05.7±0.0,4317N×057W,h2km±1km,Ml2.1,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **24** 22:48:06.3±0.1,4305N×059W,h2km,Md2.2/3,Ml2.2/1, Error ellipse: s-maj=1.9km s-min=1.2km az=6.0*
MDD 24 22:48:06.3±0.3,4306N×058W,h3km±7km,mbLg0.9/2, Error ellipse: s-maj=2.9km s-min=1.6km az=17.0, PRXIMO,Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.09**	**285**	Pg	Pg	22 48 07.8	-0.3
ATE				Sg	Sg	22 48 09.3	0.0
ATE	**Arette**	**0.09**	**285**	Pg	Pg	22 48 07.8	-0.3
ATE				Lg		22 48 09.3	
REYF	**Montagne du Re**	**0.14**	**87**	Pg	Pg	22 48 08.8	-0.3
REYF				Lg		22 48 11.1	
ETSF	**Etsaut**	**0.17**	**174**	*e*Pg	Pg	22 48 09.5	0.0
ETSF				*e*Sg	Sg	22 48 11.4	-0.3
11nm,0.3s							
ETSF	**Etsaut**	**0.17**	**174**	Pg	Pg	22 48 09.5	0.0
ETSF				Lg		22 48 11.4	
5.4nm,0.3s							
FDAF	**Les Forges d'A**	**0.24**	**177**	Pg	Pg	22 48 10.9	-0.1
FDAF				Lg		22 48 14.6	
LARF	**Larrau**	**0.30**	**265**	Pg	Pg	22 48 11.9	-0.1
LARF				Sg	Sg	22 48 16.4	+0.5
LARF	**Larrau**	**0.30**	**265**	Pg	Pg	22 48 11.7	-0.3
LARF				Lg		22 48 15.8	
SJPF	**Ste Jean**	**0.47**	**276**	*e*Pg	Pg	22 48 15.6	+0.2
SJPF				*e*Sg	Sg	22 48 21.6	+0.1
2.3nm,0.2s							
SJPF	**Ste Jean**	**0.47**	**276**	Pg	Pg	22 48 15.6	+0.2
SJPF				Lg		22 48 21.6	
1.1nm,0.2s							
EBIE	**Bielsa**	**0.65**	**125**	Pg	Pg	22 48 18.2	-0.7
0.4nm,0.1s,SNR=7.9							
EBIE				Lg		22 48 26.6	
0.6nm,0.0s,SNR=7.9							
EPF	**Esparros**	**0.68**	**92**	*e*Pg	Pg	22 48 19.2	-0.1
EPF				*e*Sg	Sg	22 48 28.5	+0.4
1.1nm,0.2s							
EPF	**Esparros**	**0.68**	**92**	Pg	Pg	22 48 19.2	-0.1
EPF				Lg		22 48 28.5	
0.6nm,0.2s							
EALK	**Alkurruntz**	**0.69**	**283**	Pg	Pg	22 48 18.8	-0.9
0.0nm,0.0s,SNR=7.9							
EALK				Lg		22 48 28.6	
0.7nm,0.1s,SNR=7.9							
ELIZ	**Elizondo**	**0.70**	**279**	Pg	Pg	22 48 19.1	-0.7
0.4nm,0.2s,SNR=7.9							
ELIZ				Lg		22 48 28.9	
0.4nm,0.1s,SNR=7.9							
LFF	**La Frestale**	**2.10**	**27**	*e*Pn	Pn	22 48 40.8	-1.6
LFF				*e*Sn	Sn	22 49 06.4	-2.7
3.5nm,0.2s							
LFF	**La Frestale**	**2.10**	**27**	Pn	Pn	22 48 40.8	-1.6
LFF				Sn	Sn	22 49 06.4	-2.7
1.8nm,0.2s							

KRSC 24 22:54:58,5207N×15965E,h23km,ML3.5,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.79**	**298**	*i* P	Pb	22 55 12.7	-0.3
RUS				*i* S	Sb	22 55 23.1	-0.2
SPN	**Mys Shipunski**	**1.05**	**12**	*e*P	Pn	22 55 19.2	+1.8
SPN				*i* S	Sb	22 55 34.5	+3.6
GRL	**Gorelyy**	**1.08**	**297**	*i* P	Pn	22 55 18.1	+0.4
GRL				*i* S	Sb	22 55 32.4	+0.7
NLC	**Nalytchevo**	**1.12**	**351**	*e*P	Pn	22 55 18.5	+0.3
NLC				*i* S	Sb	22 55 33.3	+0.5
PET	**Petropavlovsk**	**1.13**	**328**	*e*P	Pn	22 55 18.8	+0.4
PET				*i* S	Sb	22 55 33.9	+0.7
AVH	**Avacha**	**1.32**	**335**	*e*P	Pn	22 55 22.6	+1.6
AVH				*e*S	Sn	22 55 40.4	+2.5
MIPR	**Malaya Ipel'ka**	**1.79**	**278**	*e*P	Pn	22 55 28.1	+0.6
GNL	**Ganaly**	**1.93**	**328**	*i* P	Pn	22 55 31.4	+2.0
GNL				*i* S	Sn	22 55 55.8	+2.9
MKZ	**Mys Kozlova**	**2.79**	**26**	*e*P	Pn	22 55 42.1	+0.9
MKZ				*i* S	Sn	22 56 13.8	-0.2
KBTR	**Krutoberegovo**	**4.54**	**23**	*e*P	Pn	22 56 07.1	+1.7

*ISCJB **24** 22:57:29.3±0.6,2327S±008×1758W±0.1,h10km,mb4.4/9, Error ellipse: s-maj=16.7km s-min=8.1km az=60.8*
*IDC **24** 22:57:31.3±1.2,2338S×17599W,h0km,mb4.1/4, mb1 4.3/6,mb1mx4.0/15,mbtmp4.3/6,ML3.7/2,Error ellipse: s-maj=38.0km s-min=25.8km az=141.0*
*NEIC **24** 22:57:32.2±0.4,2339S×17594W,h10km,mb4.6/5,Error ellipse: s-maj=11.8km s-min=8.8km az=143.0*
ISC 24 22:57:31.7±0.6,2333S±007×17585W±010,h10km,n28, σ1§00/20,mb4.4/9,2D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.18**	**197**	*e*Pn	**Pn**	**22 59 08.2**	**-0.2**
AFI	**Afiamalu**	**10.14**	**23**	Pn	**Pn**	**22 59 57.6**	**+0.3**
3.4nm,0.3s,baz=107,slow=11,SNR=3.8							
AFI				Sn	**Sn**	**23 01 49.8**	**-1.3**
0.6nm,0.3s,baz=345,slow=20,SNR=1.8							
RAR	**Rarotonga**	**15.04**	**85**	Pn	**Pn**	**23 01 06.7**	**+2.5**
3.3nm,0.3s,baz=260,slow=6.1,SNR=5.0							
HNR	**Honiara**	**26.96**	**297**	P	**P**	**23 03 08.5**	**-4.9**
CTAO	**Charters Tower**	**35.29**	**268**	*e*P	**P**	**23 04 28.3**	**+1.6**
6.8nm,0.4s,mb4.9							
PMG	**Port Moresby**	**37.96**	**285**	*e*P	**P**	**23 04 49.3**	**-0.2**
7.1nm,0.6s,mb4.6							
STKA	**Stephens Creek**	**38.46**	**248**	P	**P**	**23 04 54.5**	**+0.8**
0.9nm,0.6s,mb3.7,baz=90,slow=10,SNR=2.5							
STKA	**Stephens Creek**	**38.46**	**248**	*e*P	**P**	**23 04 53.5**	**-0.3**
ASAR	**Alice Springs**	**45.88**	**259**	P	**P**	**23 05 54.0**	**-0.2**
1.8nm,0.7s,mb4.1,baz=89,slow=8.8,SNR=19							
WB2	**Warramunga Arr**	**46.23**	**264**	*i* P	**P**	**23 05 56.7**	**-0.3**
WB2	**Warramunga Arr**	**46.23**	**264**	*e*P	**P**	**23 05 57.0**	**0.0**
WRAB	**Tennant Creek**	**46.24**	**264**	*e*P	**P**	**23 05 56.7**	**-0.4**
6.1nm,0.8s,mb4.6							
WRA	**Warramunga Arr**	**46.24**	**264**	P	**P**	**23 05 56.9**	**-0.2**
1.5nm,0.5s,mb4.2,baz=103,slow=8.3,SNR=71							
GUMO	**Guam**	**53.14**	**310**	P	**P**	**23 06 50.5**	**+0.9**
33nm,0.3s,baz=350,slow=22,SNR=4.1							
FITZ	**Fitzroy Crossi**	**54.67**	**264**	*i* P	**P**	**23 07 01.9**	**+1.1**
7.8nm,2.0s,mb4.4							
CASY	**Casey**	**62.28**	**206**	*e*P	**P**	**23 07 52.6**	**-1.4**
1.9nm,0.4s,mb4.6							
MAW	**Mawson**	**79.58**	**199**	P	**P**	**23 09 38.8**	**-0.2**
2.4nm,0.7s,mb4.2,baz=128,slow=5.4,SNR=5.2							
MAW	**Mawson**	**79.58**	**199**	*e*P	**P**	**23 09 38.7**	**-0.3**
SNAA	**Sanae**	**85.13**	**178**	P	**P**	**23 10 06.3**	**-1.7**
CHKZ	**Chkalovo**	**122.34**	**320**	*e*PKPdf	PKPdf	23 16 27.2	+0.1
BRVK	**Borovoye**	**122.58**	**319**	PKPdf	PKPdf	23 16 28.0	+0.5
ZRNK	**Zerenda**	**123.36**	**319**	PKPdf	PKPdf	23 16 29.7	+0.7
AKASG	**Malin Array Be**	**146.45**	**331**	PKPbc	PKPbc	23 17 14.1	+1.1
2.0nm,0.5s,baz=42,slow=3.8,SNR=18							
AKASG	**Malin Array Be**	**146.45**	**331**	PKPbc	PKPbc	23 17 14.1	+1.1
BR131	**Keskin Array S**	**150.20**	**310**	*e*PKPbc	PKPbc	23 17 24.8	+1.9
BRTR	**Keskin Array B**	**150.20**	**310**	PKPbc	PKPbc	23 17 24.7	+1.8
1.1nm,0.7s,baz=150,slow=4.4,SNR=11							
CLL	**Cellm**	**151.24**	**348**	*e*PKP1	PKPbc	23 17 27.0	+1.6
BRG	**Berggiesshubel**	**151.47**	**347**	*e*P	PKPbc	23 17 27.7	+1.8
2.1nm,0.8s							
BRG				*e*	PKPab	23 17 39.3	+5.1
2.2nm,1.0s							

*NEIC **24** 23:19:58.8,1737N×10121W,h15km,MD3.6(MEX),After MEX.*
MEX 24 23:19:58.8±1.1,1734N×10122W,h16km±16km,MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.36**	**319**	*e*P	Pg	23 20 04.8	-1.4
ZIIG				*i* S	Sg	23 20 10.5	-0.6
CAIG	**El Cayaco**	**0.95**	**107**	*i* P	Pb	23 20 14.5	-2.5
CAIG				*i* S	Sb	23 20 23.8	-5.6
ACX	**Acapulco**	**1.33**	**110**	*i* P	Pn	23 20 19.0	-3.7
ACX				*i* S	Sn	23 20 38.0	-2.1
ACX	**Acapulco**	**1.33**	**110**	*i* P	Pn	23 20 21.3	-1.4
MEIG	**Mezcala**	**1.64**	**69**	*i* P	Pn	23 20 23.4	-3.5
MEIG				*i* S	Sn	23 20 42.9	-4.7
PLIG	**Platanillo**	**1.94**	**57**	*i* P	Pn	23 20 27.8	-3.4
PLIG				*i* S	Sn	23 20 51.6	-3.7
PLIG	**Platanillo**	**1.94**	**57**	*i* P	Pn	23 20 27.8	-3.4
PLIG				*i* S	Sn	23 20 50.6	-4.6
MOIG	**Morelia**	**2.33**	**1**	*i* P	Pn	23 20 34.1	-2.3
MOIG				*i* S	Sn	23 21 00.3	-4.5
MOIG	**Morelia**	**2.33**	**1**	*i* P	Pn	23 20 34.4	-2.1
MOIG				*i* S	Sn	23 21 00.2	-4.6

*NEIC **24** 23:22:09.7,1692N×09449W,h133km,MD4.0(MEX),After MEX.*
MEX 24 23:22:10.0±1.4,1700N×09458W,h136km±14km,MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.30**	**288**	*i* P	Pn	23 22 27.6	-1.2
CMIG				*i* S	Sn	23 22 40.8	-2.2
HUIG	**Huatulco**	**1.91**	**230**	*i* P	Pn	23 22 40.9	-2.2
HUIG				*i* S	Sn	23 23 07.4	-1.1
OXX	**Oaxaca**	**2.05**	**273**	*i* P	Pn	23 22 45.5	+0.6
VHO	**Vista Hermosa**	**2.06**	**272**	*i* P	Pn	23 22 44.9	-0.1
VHO				*i* S	Sn	23 23 11.3	-0.5
UTMO	**Huajuapan**	**3.19**	**286**	*i* P	Pn	23 22 58.2	-1.0
UTMO				*i* S	Sn	23 23 34.2	-3.0
PPM	**Popocatepetl**	**4.37**	**299**	*i* P	Pn	23 23 15.7	+1.0
PPM				*i* S	Sn	23 24 04.8	-0.1
PPM	**Popocatepetl**	**4.37**	**299**	*i* P	Pn	23 23 15.9	+1.3
PPM				*i* S	Sn	23 24 06.4	+1.5

*CSEM **24** 23:41:26.4±0.1,3843N×2731E,h2km,MD3.1,Error ellipse: s-maj=2.5km s-min=1.7km az=118.0*
*ISK **24** 23:41:26.5,3843N×2731E,h3km,MD3.1*
*ISCJB **24** 23:41:27.0±0.8,3843N±004×2730E±005,h4km±6km, Error ellipse: s-maj=7.2km s-min=6.9km az=152.1*
*ATH **24** 23:41:27.7,3839N×2720E,h21km±1km,MD3.1/3*
ISC 24 23:41:27.3±0.8,3842N±004×2730E±005,h2km±7km,n16, σ0§81/20,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.04**	**227**	*i* PG	**Pg**	**23 41 27.8**	**-0.3**
BLCB	**Balcova**	**0.20**	**259**	PG	**Pg**	**23 41 31.3**	**+0.1**
BLCB				SG	**Sg**	**23 41 35.1**	**+1.2**
AKS	**Akhisar**	**0.61**	**41**	Pg	**Pg**	**23 41 38.0**	**-1.0**
SMG	**Samos**	**0.80**	**207**	*e*PN	**Pn**	**23 41 41.9**	**-3.6**
SMG				*e*SN	**Sg**	**23 41 52.6**	**-0.4**
PRK	**Paraskevi**	**1.15**	**316**	*e*PN	**Pn**	**23 41 49.1**	**-1.2**
PRK				*e*SN	**Sn**	**23 42 04.5**	**-2.0**
BODT	**Bodrum**	**1.36**	**180**	*e*PN	**Pn**	**23 41 53.6**	**+0.4**
YER	**Yerkesik**	**1.50**	**148**	*e*PN	**Pn**	**23 41 55.1**	**-0.1**
DST	**Dursunbey**	**1.57**	**41**	PN	**Pn**	**23 41 55.7**	**-0.4**
EZN	**Ezine**	**1.59**	**332**	*e*PN	**Pn**	**23 41 56.8**	**+0.4**
EZN				*e*SN	**Sn**	**23 42 18.4**	**+0.9**
DAT	**Datca**	**1.71**	**172**	*e*PN	**Pn**	**23 41 58.5**	**+0.5**
APE	**Apeiranthos**	**1.95**	**227**	*e*PN	**Pn**	**23 42 00.8**	**-0.5**
EDC	**Edincik**	**1.97**	**13**	*e*PN	**Pn**	**23 42 02.1**	**+0.5**
ORLT	**Orhaneli**	**2.04**	**37**	*e*PN	**Pn**	**23 42 03.0**	**+0.4**
ENEZ	**Enez**	**2.47**	**339**	*e*PN	**Pn**	**23 42 09.4**	**+0.9**
YLV	**Yalova**	**2.68**	**36**	*e*PN	**Pn**	**23 42 11.8**	**+0.5**
ESKT	**Eskisehir**	**2.98**	**67**	*e*PN	**Pn**	**23 42 15.9**	**+0.4**

*IDC **24** 23:45:15.2±1.1,3029N×13841E,h433km±12km,mb3.1/8, mb1 3.2/12,mb1mx3.2/23,mbtmp4.0/12,Error ellipse: s-maj=33.3km s-min=13.1km az=66.0*
*ISCJB **24** 23:45:16.3±0.6,3052N±007×1387E±0.1,h455km±6km, mb3.4/10,Error ellipse: s-maj=16.9km s-min=10.2km az=152.0*
*JMA **24** 23:45:17.2±0.4,3069N×13877E,h470km,M4.2*
*NEIC **24** 23:45:19.6±1.3,3082N×13844E,h460km±11km,mb3.4/4, Error ellipse: s-maj=20.3km s-min=16.2km az=118.0*
ISC 24 23:45:17.3±0.7,3056N±007×1387E±01,h454km±6km,n33, σ1§33/40,mb3.4/10,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.71**	**19**	P	**P**	**23 46 22.7**	**+0.2**
63nm,0.3s,baz=223,slow=13,SNR=16							
JHJ				S	**S**	**23 47 15.4**	**0.0**
25nm,0.3s,baz=56,slow=19,SNR=3.0							
JHJ2	**Mitsune**	**2.71**	**20**	P	**P**	**23 46 23.5**	**+1.0**
JIE	**Ise**	**4.17**	**337**	P	**P**	**23 46 35.9**	**+1.7**
JIM2	**Oshima 3**	**4.19**	**8**	P	**P**	**23 46 34.6**	**+0.3**
JIM2				*e*S	**S**	**23 47 38.6**	**+1.7**
BSO1	**Boso 1**	**4.51**	**25**	P	**P**	**23 46 37.5**	**+0.4**
BSO1				*e*S	**S**	**23 47 40.5**	**-1.7**
CBIJ	**Chichi jima**	**4.61**	**138**	P	**P**	**23 46 33.1**	**-5.0**
21nm,0.3s,baz=49,slow=19,SNR=18							
CBIJ				S	**S**	**23 47 40.2**	**-3.8**
136nm,0.3s,baz=304,slow=23,SNR=20							
JOD2	**Odawara 2**	**4.70**	**4**	P	**P**	**23 46 39.2**	**+0.3**
JOD2				*e*S	**S**	**23 47 44.3**	**-1.2**
JYN	**Shimob**	**4.92**	**358**	P	**P**	**23 46 42.2**	**+1.2**
JRY	**Ryogami san**	**5.44**	**2**	P	**P**	**23 46 46.8**	**+0.7**
JRY				*e*S	**S**	**23 47 55.4**	**-3.1**
JTO	**Tosashimizu**	**5.53**	**296**	P	**P**	**23 46 47.0**	**+0.1**
MJAR	**Matsushiro Arr**	**5.98**	**356**	P	**P**	**23 46 50.4**	**-1.1**
1.7nm,0.3s,baz=169,slow=11,SNR=8.6							
MJAR				S	**S**	**23 48 08.4**	**0.0**
0.5nm,0.3s,baz=180,slow=23,SNR=4.1							
MAJO	**Matsushiro**	**5.98**	**356**	*e*P	**P**	**23 46 51.8**	**+0.3**
MAT	**Matsushiro**	**5.98**	**356**	P	**P**	**23 46 52.1**	**+0.6**
MAT				S	**S**	**23 48 07.3**	**-1.1**
ASAJ	**Asahikawa**	**13.88**	**12**	P	**P**	**23 48 18.4**	**+2.1**
0.8nm,0.3s,baz=227,slow=10,SNR=3.0							
MDJ	**Mudanjiang**	**15.76**	**335**	*e*P	**P**	**23 48 34.4**	**-2.0**
2.5nm,0.4s							
NACB	**Ninganchiao**	**16.47**	**251**	P	**P**	**23 48 46.0**	**+2.1**
ULN	**Ulaanbaatar**	**29.72**	**315**	*e*P	**P**	**23 50 44.6**	**-0.3**
SONM	**Songino Array**	**30.11**	**314**	P	**P**	**23 50 47.6**	**-0.8**
0.6nm,0.4s,mb3.3,baz=127,slow=8.4,SNR=8.5							
YAK	**Yakutsk**	**32.02**	**352**	P	**P**	**23 51 02.2**	**-2.6**
SWI	**Sorong**	**32.05**	**194**	P	**P**	**23 51 08.4**	**+3.3**
0.0nm,0.0s							
MKAR	**Makanchi Array**	**45.94**	**307**	P	**P**	**23 52 57.5**	**-0.4**
1.2nm,0.6s,mb3.5,baz=87,slow=10,SNR=9.6							
BRVK	**Borovoye**	**53.50**	**316**	*e*P	**P**	**23 53 51.3**	**-2.7**
1.3nm,0.7s,mb3.4							
ZRNK	**Zerenda**	**54.28**	**316**	*e*P	**P**	**23 53 58.0**	**-1.4**
1.0nm,0.4s,mb3.5							
INK	**Inuvik**	**61.17**	**25**	P	**P**	**23 54 48.8**	**+2.1**
ARCES	**ARCESS Array B**	**69.26**	**340**	P	**P**	**23 55 38.4**	**+0.7**
1.5nm,1.0s,mb3.5,baz=61,slow=9.9,SNR=5.4							
FINES	**FINESS Array B**	**73.49**	**332**	P	**P**	**23 56 02.5**	**0.0**
0.9nm,0.5s,mb3.5,baz=64,slow=6.5,SNR=13							
AKASG	**Malin Array Be**	**78.02**	**322**	P	**P**	**23 56 27.5**	**-0.3**
0.7nm,0.4s,mb3.5,baz=52,slow=5.3,SNR=5.2							
AKASG	**Malin Array Be**	**78.02**	**322**	P	**P**	**23 56 27.5**	**-0.3**
NOA	**NORSAR Array B**	**79.25**	**337**	P	**P**	**23 56 33.9**	**-0.5**
0.4nm,0.6s,mb3.1,baz=48,slow=5.1,SNR=3.2							
BR131	**Keskin Array S**	**81.42**	**311**	*e*P	**P**	**23 56 46.2**	**+0.4**
0.5nm,0.6s,mb3.2							
BRTR	**Keskin Array B**	**81.42**	**311**	P	**P**	**23 56 46.1**	**+0.3**
1.5nm,0.8s,mb3.6,baz=86,slow=3.1,SNR=10							
PDAR	**Pinedale Array**	**83.85**	**43**	P	**P**	**23 57 01.0**	**+2.9**
0.4nm,0.5s,mb3.2,baz=254,slow=1.3,SNR=3.5							
TORD	**Torodi Ar. Bea**	**120.02**	**310**	PKP	PKPdf	00 03 16.0	+0.6
0.4nm,1.1s,baz=59,slow=0.8,SNR=7.7							

*IDC **24** 23:49:10.2±0.5,760S×12828E,h0km,mb4.8/14, mb1 5.0/18,mb1mx4.8/22,mbtmp4.9/18,ML5.0/4,MS3.6/1, Ms1 3.6/1,ms1mx2.8/23,Error ellipse: s-maj=21.4km s-min=11.5km az=75.0*
*BJI **24** 23:49:12.2,791S×12880E,h46km,mB5.3,mb4.8,Ms4.6, Msz4.4*
*ISCJB **24** 23:49:13.3±0.2,766S±004×12836E±006,h36km, mb4.8/46,MS4.2/2,Error ellipse: s-maj=8.6km s-min=4.4km az=140.1*
*MOS **24** 23:49:13.8±0.8,749S×12821E,h33km,mb5.0/23,Error ellipse: s-maj=12.8km s-min=8.2km az=113.0*
*NEIC **24** 23:49:15.6±0.2,766S×12827E,mb4.8/24,Error ellipse: s-maj=9.1km s-min=5.2km az=65.0*
ISC 24 23:49:15.7±0.2,766S±003×12839E±006,h38km, h38km±2.8km;pP-P,n130,σ1§16/122,mb4.8/46,MS4.2/2, 8C-7D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.95**	**357**	P	**Pn**	**23 50 20.3**	**+6.6**
0.0nm,0.0s							
KAKA	**Kakadu**	**6.41**	**142**	*e*P	**Pn**	**23 50 51.4**	**+3.8**
597nm,0.6s							
KAKA				*e*S	**Sn**	**23 51 58.2**	**-1.3**
BAKI	**Biak**	**10.02**	**51**	P	**Pn**	**23 51 42.1**	**+5

CTA S S 23 58 15.4 +23
5.6nm,0.7s,baz=259,slow=16,SNR=3.2
CTAO Charters Tower 21.27 127 *e*P **P** **23 54 01.9 +3.3**
CTAO *e*S **S** **23 57 55.3 +2.5**
CTAO pmax pmax
comp=Z,21nm,0.9s,mb4.5
CTAO Charters Tower 21.27 127 *e*P **P** **23 54 01.9 +3.2**
comp=Z,21nm,0.9s,mb4.5
CTAO *e*S **S** **23 57 55.3 +2.5**
FORT Forrest 23.00 181 ⇓*i*P **P** **23 54 17.6 +0.5**
comp=Z,68nm,0.5s,mb5.3
FORT *e*S **S** **23 58 26.4 +1.5**
KLBR Kellerberrin 25.79 201 ⇑*i*P **P** **23 54 43.6 +0.6**
comp=Z,122nm,0.9s,mb5.4
KLBR *e*S **S** **23 59 27.4 +18**
MUN Mundaring 26.72 203 *e*P **P** **23 54 52.0 +0.6**
MUN *e*S S 23 59 48.6 +24
STKA Stephens Creek 27.06 155 *e*P **P** **23 54 55.4 +1.0**
comp=Z,15nm,0.6s,mb4.7
STKA *e*S S 00 00 01.4 +32
STKA Stephens Creek 27.06 155 P **P** **23 54 55.4 +1.0**
comp=Z,19nm,0.6s,mb4.8,baz=324,slow=8.7,SNR=51
STKA S S 23 59 59.6 +30
comp=Z,5.7nm,0.7s,baz=358,slow=14,SNR=2.8
NWAO Narrogin (SRO) 27.19 201 P **P** **23 54 56.2 +0.6**
comp=Z,40nm,0.7s,mb5.0,baz=34,slow=8.5,SNR=33
NWAO S S 00 00 00.6 +29
comp=Z,28nm,0.8s,baz=263,slow=16,SNR=4.4
KULM Kulim 30.51 294 *e*P **P** **23 55 25.3 +0.1**
KULM *e*pP pP 23 55 35.7 -0.2
KULM *e*PcP PcP 23 58 27.5 +3.9
PSI Prapat 31.18 288 P **P** **23 55 30.4 -0.6**
comp=Z,35nm,0.8s,mb5.2,baz=110,slow=5.0,SNR=32
PSI Prapat 31.18 288 P **P** **23 55 30.4 -0.6**
PSI pmax pmax
comp=Z,35nm,0.8s,mb5.2
HNR Honiara 31.25 96 P **P** **23 55 34.4 +2.7**
TOO Toolangi 33.58 155 ⇓*i*P **P** **23 55 54.9 +2.8**
comp=Z,6.7nm,0.6s,mb4.8
TOO Toolangi 33.58 155 ⇓*i*P **P** **23 55 54.9 +2.8**
TOO pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
JOW Kunigami 34.28 360 P **P** **23 55 59.2 +1.0**
comp=Z,23nm,0.7s,mb5.2,baz=190,slow=11,SNR=6.4
SSE Sheshan 39.15 350 P **P** **23 56 38.5 -1.1**
SSE AMB AMB
comp=Z,14nm,0.7s,mb4.8
SSE AMB AMB
comp=Z,363nm,12.0s
NJ2 Nanjing 40.52 348 *e*P **P** **23 56 46.8 -4.2**
NJ2 PP PP 23 58 23.8 -0.9
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
NJ2 AMB AMB
comp=Z,250nm,5.4s
NJ2 LR LR
comp=N,240nm,17.2s,MS4.3
NJ2 LR LR
comp=E,230nm,13.2s,MS4.3
NJ2 LR LR
comp=Z,320nm,24.1s
KMI Kunming 41.05 323 P **P** **23 56 57.9 +2.5**
KMI AMB AMB
comp=Z,5.0nm,0.5s,mb4.4
ENH Enshi 41.85 335 P **P** **23 57 03.1 +1.2**
comp=Z,1.6nm,0.8s,mb3.7
MAJO Matsushiro 44.92 11 *e*P **P** **23 57 25.5 -1.2**
MAJO pmax pmax
comp=Z,11nm,0.6s,mb4.9
MAJO Matsushiro 44.92 11 *e*P **P** **23 57 25.5 -1.2**
comp=Z,11nm,0.6s,mb4.8
MAT Matsushiro 44.92 11 P **P** **23 57 24.9 -1.8**
MJAR Matsushiro Arr 44.92 11 P **P** **23 57 25.4 -1.3**
comp=Z,5.4nm,0.6s,mb4.6,baz=191,slow=9.0,SNR=17
MJAR Matsushiro Arr 44.92 11 P **P** **23 57 25.4 -1.3**
MJAR pmax pmax
comp=Z,5.0nm,0.6s
XAN Xi'an 45.39 337 P **P** **23 57 30.0 -0.4**
XAN AMB AMB
comp=Z,11nm,0.7s,mb4.8
LZH Lanzhou 49.25 334 *e*P **P** **23 58 01.3 +0.9**
LZH AMB AMB
comp=Z,21nm,1.2s,mb5.0
HHC Hu-ho-hao-te 50.69 344 *e*P **P** **23 58 15.0 +3.6**
HHC AP pP 23 58 24.9 +2.4
HHC XP sP 23 58 28.8 +1.9
HHC PCP PcP 23 59 31.5 +3.2
HHC AMB AMB
comp=Z,15nm,1.2s,mb4.8
HHC AMB AMB
comp=Z,351nm,8.0s
HHC LR LR
comp=N,201nm,20.9s
HHC LR LR
comp=E,263nm,15.2s
HHC LR LR
comp=Z,214nm,21.8s,MS4.1
LSA Lhasa 51.59 318 *e*P **P** **23 58 19.4 +1.3**
LSA *e**PP pP 23 58 29.2 0.0
LSA pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
LSA Lhasa 51.59 318 *e*P **P** **23 58 19.4 +1.3**
comp=Z,4.2nm,0.4s,mb4.7
LSA *e*pP pP 23 58 29.2 0.0
RPZ Rata Peaks 51.71 141 P **P** **23 58 20.8 +1.9**
comp=Z,25nm,0.8s,mb5.2,baz=318,slow=8.5,SNR=8.4
MDJ Mudanjiang 52.04 1 P **P** **23 58 24.8 +3.3**
MDJ AP pP 23 58 33.9 +1.3
MDJ XP sP 23 58 37.8 +0.7
MDJ AMB AMB
comp=Z,5.0nm,0.6s,mb4.6
MDJ AMB AMB
comp=Z,287nm,9.8s
ASAJ Asahikawa 53.11 13 P **P** **23 58 29.7 +0.3**
comp=Z,8.5nm,0.7s,mb4.8,baz=228,slow=13,SNR=6.2
ASAJ Asahikawa 53.11 13 P **P** **23 58 29.7 +0.3**
ASAJ pmax pmax
comp=Z,9.0nm,0.7s
GTA Gaotai 53.80 333 *e*P **P** **23 58 35.3 +0.9**
GTA AP pP 23 58 50.9 +5.3
GTA XP sP 23 58 58.1 +8.1
GTA AMB AMB
comp=Z,6.0nm,0.8s,mb4.6
GUN Gumba 54.20 312 *e*P **P** **23 58 37.3 0.0**
comp=Z,37nm,0.7s,mb5.4
PKI Pulchoki 54.35 312 *e*P **P** **23 58 38.9 +0.4**
comp=Z,8.8nm,0.5s,mb5.0
PKI Pulchoki 54.35 312 *e*P **P** **23 58 38.9 +0.4**
PKI pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
KKN Kakani 54.57 312 *e*P **P** **23 58 40.2 +0.2**
comp=Z,10nm,0.7s,mb5.0
KKN Kakani 54.57 312 *e*P **P** **23 58 40.2 +0.2**
KKN pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
DMN Daman 54.60 312 *e*P **P** **23 58 40.6 +0.4**
comp=Z,26nm,1.0s,mb5.2
GKN Gorkha 55.16 312 *e*P **P** **23 58 44.4 +0.1**
comp=Z,20nm,0.7s,mb5.3
KOLN Koldanda 55.80 311 *e*P **P** **23 58 48.7 -0.2**
comp=Z,27nm,0.8s,mb5.4
YSS Yuzh-Sakhalins 55.85 12⇑*e*P **P** **23 58 48.5 -0.8**
YSS pmax pmax
comp=Z,17nm,0.7s,mb5.2
ULN Ulaanbaatar 58.41 343⇓*e*P **P** **23 59 08.6 +1.2**
SONM Songino Array 58.57 343 P **P** **23 59 09.4 +0.9**
comp=Z,3.5nm,0.7s,mb4.5,baz=165,slow=7.6,SNR=25
SONM ScP ScP 00 03 49.6 -6.2
comp=Z,0.8nm,0.8s,baz=153,slow=4.6,SNR=3.8
AFI Afiamalu 58.99 102 P **P** **23 59 11.6 +0.2**
AFI pmax pmax
comp=Z,64nm,0.4s
AFI Afiamalu 58.99 102 P **P** **23 59 11.6 +0.3**
comp=Z,64nm,0.4s
CASY Casey 59.82 188 *e*P **P** **23 59 17.6 +0.5**
PET Petropavlovsk 65.69 20⇑*e*P **P** **23 59 55.9 -0.3**
PET pmax pmax
comp=Z,16nm,1.3s,mb4.9
BOD Bodaibo 66.30 352 *e*P **P** **23 59 59.8 -0.3**
BOD pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
MKAR Makanchi Array 67.91 328 P **P** **00 00 10.4 +0.1**
comp=Z,2.4nm,0.5s,mb4.5,baz=120,slow=7.4,SNR=23
MKAR Makanchi Array 67.91 328 P **P** **00 00 10.4 +0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.5s

YAK Yakutsk 69.49 1 *e*P **P** **00 00 18.1 -2.1**
YAK pmax pmax
comp=Z,21nm,0.8s,mb5.1
AAK Ala-Archa 70.02 321⇑*e*P **P** **00 00 22.5 -0.9**
ZAL Zalesovo 71.47 335 P **P** **00 00 31.5 -0.8**
comp=Z,3.1nm,0.5s,mb4.5,baz=342,slow=5.4,SNR=13
ZAL Zalesovo 71.47 335 P **P** **00 00 31.5 -0.8**
ZAL pmax pmax
comp=Z,3.0nm,0.5s
ZAL Zalesovo 71.47 335 P **P** **00 00 31.5 -0.8**
VNDA Vanda 72.00 173 P **P** **00 00 35.5 +0.1**
comp=Z,3.2nm,0.5s,mb4.5,baz=320,slow=6.4,SNR=34
VNDA Vanda 72.00 173 *e*P **P** **00 00 35.9 +0.5**
VNDA pmax pmax
comp=Z,3.0nm,0.4s
VNDA Vanda 72.00 173 *e*P **P** **00 00 35.9 +0.4**
comp=Z,2.7nm,0.4s,mb4.5
SEY Seymchan 72.75 11⇓*e*P **P** **00 00 39.8 -0.1**
NVS Novosibirsk 72.76 335 *e*P **P** **00 00 38.3 -1.7**
NVS *e* 00 01 00.1
NVS *e*S S 00 09 52.6 -10
NVS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
NVS pmax pmax
comp=E,3.0nm,0.6s
NVS smax
comp=E,13nm,1.6s
SBA Scott Base 72.90 172 *e*P **P** **00 00 42.2 +1.4**
SBA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SBA Scott Base 72.90 172 *e*P **P** **00 00 42.2 +1.4**
comp=Z,5.9nm,0.9s,mb4.5
MAW Mawson 73.76 201 *e*P **P** **00 00 46.4 +0.5**
MAW Mawson 73.76 201 P **P** **00 00 46.6 +0.8**
comp=Z,5.9nm,0.5s,mb4.8,baz=85,slow=6.5,SNR=34
MAW Mawson 73.76 201 P **P** **00 00 46.6 +0.7**
MAW pmax pmax
comp=Z,6.0nm,0.5s
MAW Mawson 73.76 201 *e*P **P** **00 00 46.5 +0.6**
comp=Z,6.0nm,0.5s,mb4.8
BRVK Borovoye 77.84 328 *e*P **P** **00 01 08.4 -0.8**
BRVK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BRVK Borovoye 77.84 328 *e*P **P** **00 01 08.4 -0.8**
comp=Z,1.6nm,0.8s,mb4.0
CHKZ Chkalovo 77.99 329 *e*P **P** **00 01 08.6 -1.4**
CHKZ *e* pP 00 01 19.4 -2.3
CHKZ pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CHKZ Chkalovo 77.99 329 *e*P **P** **00 01 08.6 -1.5**
comp=Z,5.1nm,1.0s,mb4.4
CHKZ *e* pP 00 01 19.4 -2.3
ZRNK Zerenda 78.46 328 *e*P **P** **00 01 11.5 -1.1**
ZRNK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ZRNK Zerenda 78.46 328 *e*P **P** **00 01 11.5 -1.1**
comp=Z,6.0nm,0.8s,mb4.6
TIXI Tiksi 79.14 0⇓*i*P **P** **00 01 14.2 -2.2**
TIXI pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SYO Syowa Base 82.47 201⇑*e*P **P** **00 01 33.8 -0.3**
SYO Syowa Base 82.47 201⇑*e*pP pP 00 01 43.0 -2.9
ARU Arti 85.42 328 *e*P **P** **00 01 48.0 -1.2**
ARU *e* 00 05 06.6
ARU *e*PPP 00 07 02.8
ARU *e*S S 00 12 09.8 -7.7
ARU *e*SS SS 00 17 55.1 +2.1
ARU Arti 85.42 328 *e*P **P** **00 01 47.0 -2.2**
comp=Z,3.8nm,0.8s,mb4.6
ARU *e*pP pP 00 01 59.4 -1.6
GNI Garni 90.05 310 P **P** **00 02 11.4 0.0**
SNAA Sanae 94.65 194 P **P** **00 02 32.8 +0.2**
comp=Z,2.2nm,0.8s,mb4.6,baz=140,slow=3.6,SNR=20
SNAA Sanae 94.65 194 *e* **P** **00 02 32.9 +0.3**
SNAA *e* 00 02 36.8
SNAA Sanae 94.65 194 *e*P **P** **00 02 33.4 +0.8**
SNAA pmax pmax
comp=Z,3.0nm,0.6s
SNAA Sanae 94.65 194 *e*P **P** **00 02 33.4 +0.7**
comp=Z,3.4nm,0.6s,mb5.0
LBTB Lobatse 98.24 243 *e*P **P** **00 02 49.4 +0.5**
comp=Z,0.4nm,0.3s,mb4.4
ARCES ARCESS Array B 101.63 340 P Pdif 00 03 01.9 -2.1
comp=Z,1.3nm,0.8s,baz=80,slow=6.7,SNR=9.5
ARCES ARCESS Array B 101.63 340 P Pdif 00 03 01.9 -2.1
ARCES pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 101.63 340 P Pdif 00 03 01.9 -2.1
NB2 NORSAR Subarra109.63 333 SKiK 00 10 58.0
comp=Z,0.3nm,0.5s,baz=70,slow=2.0
IMW Indian Meadow 117.20 44 PKPdf PKPdf 00 07 55.6 -1.1
PDAR Pinedale Array 118.49 45 PKP PKPdf 00 07 59.0 -0.2
comp=Z,0.8nm,0.7s,baz=270,slow=0.8,SNR=8.3
PDAR PKKPbc PKKPbc 00 18 19.4 +3.3
comp=Z,0.6nm,0.7s,baz=108,slow=6.4,SNR=7.5
TORD Torodi Ar. Bea 127.36 281 PKP PKPdf 00 08 15.8 -0.5
comp=Z,1.0nm,0.6s,baz=86,slow=2.0,SNR=20
PLCA Paso Flores 128.79 162 PKP PKPdf 00 08 20.1 +1.2
comp=Z,1.4nm,0.7s,baz=266,slow=5.5,SNR=3.7
PLCA Paso Flores 128.79 162 PKIKP PKPdf 00 08 20.1 +1.2
PLCA pmax pmax
comp=Z,1.0nm,0.7s
JCT Junction City 129.59 57 *e*PKIKP PKPdf 00 08 21.3 +0.8
SCHQ Schefferville 131.40 12 PKP PKPdf 00 08 23.9 0.0
comp=Z,3.5nm,0.8s,baz=304,slow=5.1,SNR=2.8
SCHQ Schefferville 131.40 12 PKP PKPdf 00 08 23.9 0.0
DBIC Dimbokro 133.61 272 PKP PKPdf 00 08 28.7 +0.6
comp=Z,1.4nm,0.6s,baz=90,slow=1.0,SNR=3.6
DBIC Dimbokro 133.61 272 PKIKP PKPdf 00 08 28.7 +0.6
DBIC pmax pmax
comp=Z,1.0nm,0.6s
DBIC Dimbokro 133.61 272 PKP PKPdf 00 08 28.7 +0.6
CFAA Coronel Fontan 137.85 159 PKP PKPdf 00 08 37.2 +1.2
comp=Z,0.3nm,0.4s,baz=234,slow=1.6,SNR=6.8
CFAA Coronel Fontan 137.85 159 PKP PKPdf 00 08 37.2 +1.2
LVC Limon Verde 145.47 151 *e*PKPdf PKPdf 00 08 52.1 +2.6
LVC *e*pPKPdf pPKPdf 00 09 02.6 +0.8
CPUP Villa Florida 145.76 171 PKPbc PKPbc 00 08 51.6 +1.0
comp=Z,1.6nm,0.4s,baz=179,slow=1.7,SNR=16
CPUP Villa Florida 145.76 171 PKP2 PKPab 00 08 51.6 +0.6
CPUP pmax pmax
comp=Z,2.0nm,0.4s
LPAZ La Paz 151.13 146 PKPbc PKPbc 00 09 07.2 +2.5
comp=Z,2.7nm,0.4s,baz=47,slow=3.4,SNR=26
LPAZ PKPab PKPab 00 09 14.6 +2.1
comp=Z,3.6nm,0.4s,baz=198,slow=3.2,SNR=9.1

MDD ***25*** *00:20:11.9± 1.5, 3656N× 981W, h25km± 43km, mb3.8/18, Error ellipse: s-maj=45.8km s-min=9.2km az=45.0, PRXIMO*
IGIL ***25*** *00:20:11.9, 3660N× 970W, h10km, ML2.4*
NEIC ***25*** *00:20:11.2, 3650N× 992W, h39km, MG2.7(MDD), After MDD.*
CSEM ***25*** *00:20:13.7± 0.6, 3657N× 938W, h20km, ML2.2, Error ellipse: s-maj=12.1km s-min=6.1km az=30.0*
INMG 25 00:20:12.6± 0.9, 3667N× 968W, h2km± 2km, ML2.2, Error ellipse: s-maj=3.6km s-min=2.0km az=60.0, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MORF	**Marmelete**	**1.04**	**52**	*e*P	Pg	00 20 31.2	-1.2
MORF				*e*S	Sg	00 20 45.3	-0.7
MORF				*e*S	Sg	00 20 45.3	-0.7
MORF				AML	AML	00 20 47.8	
	comp=N,59nm,0.0s						
MORF	**Marmelete**	**1.04**	**52**	*e*P	Pg	00 20 31.3	-1.2
MORF				*e*S	Sg	00 20 45.3	-0.7
PTEO	**Sao Teotonio**	**1.16**	**41**	*e*P	Pg	00 20 34.3	-0.5
PTEO				*e*S	Sg	00 20 50.1	+0.3
PTEO							
	comp=N,18nm,0.2s						
EGRO	**El Granado**	**1.95**	**63**	P	Pn	00 20 44.8	-1.9
	comp=N,1.5nm,0.1s,SNR=7.2						
EGRO				S	Sn	00 21 08.5	-3.3
	comp=N,13nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.95**	**63**	P	Pn	00 20 44.8	-2.0
	comp=N,1.5nm,0.1s,SNR=7.2						
EGRO				S	Sn	00 21 08.5	-3.4
	comp=N,13nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**1.98**	**46**	*e*Pn	Pn	00 20 45.3	-1.8
PBEJ				*e*Sn	Sn	00 21 09.3	-3.2
	comp=N,7.9nm,0.1s						
PMAFR	**Mafra**	**2.30**	**8**	*e*Pn	Pn	00 20 49.5	-2.0
PMAFR				*e*Sn	Sn	00 21 17.5	-2.9
EMIN	**Mina Concepcio**	**2.64**	**65**	P	Pn	00 20 53.9	-2.3
	comp=N,0.4nm,0.1s,SNR=9.0						
EMIN				S	Sn	00 21 24.3	-4.4
	comp=N,3.8nm,0.1s,SNR=12						
EMIN	**Mina Concepcio**	**2.64**	**65**	P	Pn	00 20 54.5	-1.6
EMIN				S	Sn	00 21 25.4	-3.3
EMIN	**Mina Concepcio**	**2.64**	**65**	P	Pn	00 20 54.5	-1.6
	comp=N,0.4nm,0.1s,SNR=9.0						
EMIN				S	Sn	00 21 25.4	-3.3
	comp=N,3.8nm,0.1s,SNR=12						
PESTR	**Estremoz**	**2.75**	**36**	*e*Pn	Pn	00 20 55.5	-2.2
PESTR				*e*Sn	Sn	00 21 28.3	-3.1
EBAD	**Badajoz**	**2.96**	**45**	P	Pn	00 20 58.6	-2.1
	comp=N,1.7nm,0.1s,SNR=18						
EBAD				S	Sn	00 21 33.1	-3.7
	comp=N,8.9nm,0.1s,SNR=11						
EBAD	**Badajoz**	**2.96**	**45**	P	Pn	00 20 58.6	-2.1
	comp=N,1.7nm,0.1s,SNR=18						
EBAD				S	Sn	00 21 33.1	-3.7
	comp=N,8.9nm,0.1s,SNR=11						
ESPR	**Espera**	**3.07**	**85**	P	Pn	00 20 59.7	-2.5
	comp=N,3.2nm,0.1s,SNR=7.9						
ESPR				S	Sn	00 21 34.7	-4.8
	comp=N,23nm,0.3s,SNR=7.9						
ESPR	**Espera**	**3.07**	**85**	P	Pn	00 20 59.7	-2.5
	comp=N,3.2nm,0.1s,SNR=7.9						
ESPR				S	Sn	00 21 34.7	-4.8
	comp=N,23nm,0.3s,SNR=7.9						
PTOM	**Tomar**	**3.11**	**18**	*e*Pn	Pn	00 21 00.5	-2.1
PTOM				*e*Sn	Sn	00 21 36.2	-4.1
PTOM							
	comp=N,5.9nm,0.1s						
PTOM	**Tomar**	**3.11**	**18**	*e*Pn	Pn	00 21 00.5	-2.1
PTOM				*e*Sn	Sn	00 21 36.2	-4.1
PCBR	**Castelo Branco**	**3.61**	**28**	*e*Pn	Pn	00 21 07.8	-1.7
PCBR				*e*Sn	Sn	00 21 48.8	-3.9
EMIJ	**Mijas**	**3.95**	**90**	S	Sn	00 21 55.8	-5.2
	comp=N,0.7nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**3.95**	**90**	S	Sn	00 21 56.7	-4.3
	comp=N,0.7nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**4.08**	**24**	*e*Pn	Pn	00 21 13.9	-2.1
MTE				*e*Sn	Sn	00 22 00.0	-4.4
MTE							
	comp=N,3.5nm,0.3s						
PVIS	**Viseu**	**4.27**	**19**	*e*Pn	Pn	00 21 16.3	-2.3
PVIS				*e*Sn	Sn	00 22 04.8	-4.3
PVIS							
	comp=N,5.1nm,0.1s						
EADA	**Adamuz**	**4.33**	**68**	P	Pn	00 21 17.4	-2.0
	comp=N,0.6nm,0.1s,SNR=8.5						
EADA				S	Sn	00 22 04.2	-6.2
	comp=N,2.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.33**	**68**	P	Pn	00 21 17.4	-2.0
EADA				S	Sn	00 22 05.4	-5.0
EADA	**Adamuz**	**4.33**	**68**	P	Pn	00 21 17.4	-2.0
	comp=N,0.6nm,0.1s,SNR=8.5						
EADA				S	Sn	00 22 05.4	-5.0
	comp=N,2.3nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**4.41**	**77**	P	Pn	00 21 18.4	-2.2
	comp=N,0.5nm,0.2s,SNR=7.9						
ELUQ				S	Sn	00 22 07.6	-5.0
	comp=N,1.5nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**4.41**	**77**	P	Pn	00 21 18.4	-2.2
ELUQ				S	Sn	00 22 08.3	-4.2
ELUQ	**Luque**	**4.41**	**77**	P	Pn	00 21 18.4	-2.2
	comp=N,0.5nm,0.2s,SNR=7.9						
ELUQ				S	Sn	00 22 08.4	-4.2
	comp=N,1.5nm,0.1s,SNR=7.9						
PVRL	**Vila Real**	**4.84**	**18**	*e*Pn	Pn	00 21 24.1	-2.4
PVRL				*e*Sn	Sn	00 22 18.0	-5.2
PVRL							
	comp=N,6.7nm,0.1s						
EBAN	**Banos Encina**	**4.92**	**71**	P	Pn	00 21 25.4	-2.1
	comp=N,1.0nm,0.1s,SNR=7.9						
EBAN				S	Sn	00 22 19.6	-5.5
	comp=N,1.9nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**4.92**	**71**	P	Pn	00 21 25.4	-2.1
EBAN				S	Sn	00 22 20.2	-4.8
EBAN	**Banos Encina**	**4.92**	**71**	P	Pn	00 21 25.4	-2.2
	comp=N,1.0nm,0.1s,SNR=7.9						
EBAN				S	Sn	00 22 20.2	-4.9
	comp=N,1.9nm,0.2s,SNR=7.9						
PCAB	**Cabril**	**5.19**	**14**	*e*Pn	Pn	00 21 28.8	-2.5
PCAB				*e*Sn	Sn	00 22 26.5	-5.3
PCAB							
	comp=N,4.8nm,0.1s						
ELOB	**Lobios**	**5.34**	**13**	P	Pn	00 21 30.9	-2.4
	comp=N,0.7nm,0.1s,SNR=9.7						
ELOB				S	Sn	00 22 28.3	-7.1
	comp=N,1.9nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.34**	**13**	P	Pn	00 21 30.9	-2.4
ELOB				S	Sn	00 22 28.8	-6.6
ELOB	**Lobios**	**5.34**	**13**	P	Pn	00 21 30.9	-2.4
	comp=N,0.7nm,0.1s,SNR=9.7						
ELOB				S	Sn	00 22 28.8	-6.6
	comp=N,1.9nm,0.1s,SNR=7.9						
EQES	**Quesada**	**5.39**	**76**	P	Pn	00 21 31.4	-2.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	00 22 30.4	-6.3
	comp=N,1.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.39**	**76**	P	Pn	00 21 31.4	-2.6
EQES				S	Sn	00 22 31.4	-5.2
EQES	**Quesada**	**5.39**	**76**	P	Pn	00 21 31.4	-2.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	00 22 31.4	-5.2
	comp=N,1.8nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**5.41**	**55**	P	Pn	00 21 32.3	-2.0
	comp=N,0.7nm,0.1s,baz=241,slow=13,SNR=7.9						
ESDC				S	Sn	00 22 31.6	-5.5
	comp=N,1.1nm,0.2s,baz=242,slow=24,SNR=7.9						
ESDC	**Sonseca Array**	**5.41**	**55**	P	Pn	00 21 32.3	-1.9
ESDC				S	Sn	00 22 32.9	-4.2
ESDC	**Sonseca Array**	**5.41**	**55**	P	Pn	00 21 32.3	-2.0
	comp=N,0.7nm,0.1s,SNR=7.9						
ESDC				S	Sn	00 22 32.9	-4.2
	comp=N,2.3nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**5.52**	**8**	P	Pn	00 21 33.0	-2.8
	comp=N,0.5nm,0.2s,SNR=7.9						
EZAM				S	Sn	00 22 33.1	-6.8
	comp=N,0.2nm,0.1s,SNR=7.9						
EZAM	**Zamans**	**5.52**	**8**	P	Pn	00 21 32.9	-2.9
EZAM				S	Sn	00 22 33.8	-6.1
EZAM	**Zamans**	**5.52**	**8**	P	Pn	00 21 32.9	-2.9
	SNR=7.9						
EZAM				S	Sn	00 22 33.8	-6.1
	comp=N,0.2nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**5.61**	**23**	*e*Pn	Pn	00 21 34.7	-2.3
PBRG				*e*Sn	Sn	00 22 36.1	-5.9
ECAL	**Calabor**	**5.74**	**23**	P	Pn	00 21 36.5	-2.3
	comp=N,1.2nm,0.2s,SNR=4.7						
ECAL				S	Sn	00 22 38.8	-6.3
	comp=N,1.8nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**5.74**	**23**	P	Pn	00 21 36.6	-2.1
ECAL				S	Sn	00 22 40.1	-5.0
ECAL	**Calabor**	**5.74**	**23**	P	Pn	00 21 36.7	-2.0
	comp=N,1.2nm,0.2s,SNR=4.7						
ECAL				S	Sn	00 22 40.1	-5.0
	comp=N,1.8nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**5.87**	**46**	P	Pn	00 21 38.6	-1.9
	comp=N,0.5nm,0.2s,SNR=7.9						
GUD				S	Sn	00 22 42.2	-6.2
	comp=N,1.1nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**6.02**	**69**	P	Pn	00 21 40.2	-2.5
	comp=N,0.6nm,0.1s,SNR=7.9						
EVIA				S	Sn	00 22 45.9	-6.3
	comp=N,0.7nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.29**	**5**	P	Pn	00 21 43.0	-3.4
	comp=N,1.1nm,0.1s,SNR=7.9						
EMAZ				S	Sn	00 22 50.9	-8.0
	comp=N,0.8nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.29**	**5**	P	Pn	00 21 42.9	-3.6
EMAZ				S	Sn	00 22 50.2	-8.6
EMAZ	**Mazaricos**	**6.29**	**5**	P	Pn	00 21 42.9	-3.5
	comp=N,1.1nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**6.74**	**71**	P	Pn	00 21 49.8	-2.8
	comp=N,0.3nm,0.2s,SNR=7.9						
ETOB				S	Sn	00 23 03.3	-6.7
	comp=N,0.3nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**6.74**	**71**	P	Pn	00 21 50.3	-2.3
ETOB				S	Sn	00 23 03.3	-6.7

ETOB	**Tobarra**	**6.74**	**71**	P	Pn	00 21 50.3	-2.3
	comp=N,0.3nm,0.2s,SNR=7.9							
ETOB				S	Sn	00 23 03.3	-6.7
	comp=N,0.3nm,0.1s,SNR=7.9							
EPON	**Pontenova**	**6.92**	**15**	P	Pn	00 21 52.4	-2.7
	comp=N,0.3nm,0.1s,SNR=4.0							
EPON	**Pontenova**	**6.92**	**15**	P	Pn	00 21 52.4	-2.7
	comp=N,0.3nm,0.1s,SNR=4.0							
EARI	**Arriondas**	**7.46**	**26**	P	Pn	00 22 00.0	-2.3
	comp=N,0.2nm,0.2s,SNR=7.9							
EARI	**Arriondas**	**7.46**	**26**	P	Pn	00 22 01.8	-0.6
EARI	**Arriondas**	**7.46**	**26**	P	Pn	00 22 01.7	-0.7
	comp=N,0.2nm,0.2s,SNR=7.9							

IDC ***25*** *00:40:43.9±3.6, 3337N×13639E, h284km±49km, mb3.0/2, mb1 3.0/4, mb1mx2.7/23, mbtmp3.5/4, Error ellipse: s-maj=88.8km s-min=14.9km az=72.0*

JMA ***25*** *00:40:45.1±0.3, 3341N×13772E, h351km, M2.9*

ISCJB ***25*** *00:40:46.1±0.8, 335N±0.1×13768E±0.10, h343km±9km, mb3.2/2, Error ellipse: s-maj=18.1km s-min=12.1km az=135.1*

ISC 25 00:40:47.4±0.8, 3369N±009×1375E±01, h345km±8km, n12, σ1ᵗ03/16, mb3.2/2, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWZ	**Kozaga**	**1.52**	**264**	P	**Pn**	**00 41 34.4**	**-0.7**
JHJ	**Hachijo jima 2**	**1.97**	**106**	P	**Pn**	**00 41 37.7**	**-0.3**
	8.1nm,0.3s,baz=229,slow=19,SNR=3.4						
JHJ				S	**S**	**00 42 20.6**	**+2.0**
	5.5nm,0.3s,baz=60,slow=20,SNR=1.9						
JOD2	**Odawara 2**	**2.03**	**39**	P	**Pn**	**00 41 38.6**	**+0.2**
JWT	**Wachi**	**2.37**	**313**	P	**Pn**	**00 41 41.6**	**+0.6**
JAI	**Aioi**	**2.57**	**273**	P	**Pn**	**00 41 42.5**	**-0.1**
JRY	**Ryogami san**	**2.58**	**26**	P	**Pn**	**00 41 43.2**	**+0.5**
JRY				*e*S	**S**	**00 42 27.6**	**+0.6**
MJAR	**Matsushiro Arr**	**2.90**	**11**	P	**Pn**	**00 41 45.5**	**+0.1**
	0.7nm,0.3s,baz=196,slow=10.0,SNR=7.3						
MJAR				S	**S**	**00 42 30.6**	**-1.4**
	0.3nm,0.3s,baz=181,slow=16,SNR=3.1						
BSO1	**Boso 1**	**3.01**	**70**	P	**Pn**	**00 41 44.0**	**-2.4**
BSO1				*e*S	**S**	**00 42 29.6**	**-4.3**
JMN	**Monobe**	**3.05**	**272**	P	**Pn**	**00 41 47.0**	**+0.3**
JTO	**Tosashimizu**	**4.05**	**259**	P	**Pn**	**00 41 56.4**	**-0.1**
WRA	**Warramunga Arr**	**53.42**	**184**	P	**P**	**00 49 31.8**	**-1.0**
	0.2nm,0.3s,mb2.9,baz=0.2,slow=7.6,SNR=7.4						
FINES	**FINESS Array B**	**70.27**	**332**	P	**P**	**00 51 25.6**	**+1.6**
	1.1nm,0.9s,mb3.6,baz=75,slow=8.9,SNR=6.6						

ISCJB ***25*** *00:43:52.3±1.2, 1892N±008×1449E±0.2, h476km±13km, mb3.7/18, Error ellipse: s-maj=27.4km s-min=12.1km az=164.7*

NEIC ***25*** *00:43:56.7±2.5, 1893N×14482E, h517km±29km, mb4.0/5, Error ellipse: s-maj=20.2km s-min=7.4km az=82.0*

IDC ***25*** *00:43:57.6±5.7, 1892N×14485E, h526km±67km, mb3.2/14, mb1 3.4/14, mb1mx3.3/21, mbtmp4.1/14, Error ellipse: s-maj=36.3km s-min=13.4km az=76.0*

ISC 25 00:43:51.9±1.3, 1899N±008×1450E±02, h460km±15km, n26, σ0ˢ86/25, mb3.7/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.37**	**182**	S	**S**	**00 46 31.6**	**-0.8**
	28nm,0.3s,baz=339,slow=22,SNR=5.8						
MAJO	**Matsushiro**	**18.49**	**342**	P	**P**	**00 47 40.2**	**+1.4**
NACB	**Ninganchiao**	**22.38**	**287**	*e*P	**P**	**00 48 14.9**	**+0.8**
WRAB	**Tennant Creek**	**40.07**	**196**	*e*P	**P**	**00 50 46.4**	**+0.5**
	3.1nm,0.5s,mb4.0						
WB2	**Warramunga Arr**	**40.08**	**196**	*e*P	**P**	**00 50 46.5**	**+0.5**
WRA	**Warramunga Arr**	**40.08**	**196**	P	**P**	**00 50 46.7**	**+0.7**
	1.9nm,0.7s,mb3.7,baz=19,slow=8.6,SNR=27						
FITZ	**Fitzroy Crossi**	**41.48**	**208**	P	**P**	**00 50 57.5**	**+0.2**
	0.4nm,0.4s,mb3.2,baz=3.4,slow=15,SNR=5.2						
ULN	**Ulaanbaatar**	**42.15**	**322**	*e*P	**P**	**00 51 02.2**	**-0.3**
	2.0nm,0.5s,mb3.8						
SONM	**Songino Array**	**42.52**	**322**	P	**P**	**00 51 06.2**	**+0.7**
	2.3nm,0.7s,mb3.8,baz=138,slow=7.8,SNR=20						
SONM				PcP	PcP	00 52 48.1	+0.2
	1.2nm,0.9s,baz=138,slow=4.3,SNR=5.1						
ASAR	**Alice Springs**	**43.76**	**195**	P	**P**	**00 51 15.6**	**+0.3**
	0.7nm,0.6s,mb3.3,baz=16,slow=7.7,SNR=9.9						
STKA	**Stephens Creek**	**50.68**	**184**	P	**P**	**00 52 07.2**	**-0.4**
	0.9nm,0.8s,mb3.1,baz=331,slow=10,SNR=2.8						
ZAL	**Zalesovo**	**57.41**	**322**	P	**P**	**00 52 54.9**	**-0.5**
	1.5nm,0.8s,mb3.4,baz=15,slow=7.1,SNR=10.0						
MKAR	**Makanchi Array**	**57.80**	**314**	P	**P**	**00 52 58.6**	**+0.6**
	2.1nm,0.6s,mb3.7,baz=82,slow=8.9,SNR=15						
MKAR	**Makanchi Array**	**57.80**	**314**	P	**P**	**00 52 58.6**	**+0.6**
BRVK	**Borovoye**	**65.91**	**320**	*e*P	**P**	**00 53 51.3**	**+0.2**
	1.4nm,0.4s,mb3.9						
INK	**Inuvik**	**69.36**	**23**	P	**P**	**00 54 12.3**	**0.0**
	2.6nm,0.8s,mb3.8,baz=163,slow=6.4,SNR=3.0						
INK	**Inuvik**	**69.36**	**23**	*e*P	**P**	**00 54 12.7**	**+0.3**
	1.7nm,0.6s,mb3.8						
ARCES	**ARCESS Array B**	**82.03**	**342**	P	**P**	**00 55 22.2**	**-0.6**
	3.5nm,0.8s,mb4.0,baz=64,slow=6.2,SNR=20						
NVAR	**Mina Array Bea**	**83.47**	**52**	P	**P**	**00 55 32.2**	**+2.1**
	0.5nm,0.5s,mb3.3,baz=269,slow=7.6,SNR=4.1						
NVAR	**Mina Array Bea**	**83.47**	**52**	P	**P**	**00 55 32.2**	**+2.1**
FINES	**FINESS Array B**	**86.36**	**335**	P	**P**	**00 55 43.0**	**-1.3**
	1.4nm,0.4s,mb3.9,baz=67,slow=5.0,SNR=16						
REDW	**Red Top Meadow**	**86.97**	**45**	P	**P**	**00 55 41.8**	**-5.4**
	2.3nm,0.5s,mb4.2						
HFS	**Hagfors**	**91.88**	**338**	P	**P**	**00 56 08.6**	**-1.4**
	1.1nm,0.8s,mb3.8,baz=66,slow=7.1,SNR=4.3						
NOA	**NORSAR Array B**	**92.08**	**339**	P	**P**	**00 56 09.9**	**-1.1**
	0.4nm,0.7s,mb3.5,baz=46,slow=4.5,SNR=2.5						
BRTR	**Keskin Array B**	**93.45**	**314**	P	**P**	**00 56 16.1**	**-1.1**
	0.8nm,0.9s,mb3.8,baz=98,slow=0.2,SNR=5.8						
AGO	**Saint Agoulin**	**106.65**	**333**	*e*P	PKiKP	01 01 32.1	+8.2

CRAAG ***25*** *00:44:39.6, 2429S×67.10W, Mw6.6*

BGS ***25*** *00:44:41.7±1.4, 2489S×6789W, h184km, mb5.8, MS5.7*

GUC ***25*** *00:44:42.1±0.6, 2456S×6728W, h175km, mb6.0(NEIC), MW6.6(NEIC)*

IGIL ***25*** *00:44:43.2, 2433S×6689W, h157km, MS5.9*

ISCJB ***25*** *00:44:44.9±0.1, 2433S×003×6708W±002, h183km, mb5.8/235, Error ellipse: s-maj=3.7km s-min=2.8km az=37.8*

BJI ***25*** *00:44:44.7, 2361S×67.44W, h173km, mB6.2*

IDC ***25*** *00:44:45.2±0.4, 2436S×6697W, h174km±3km, mb5.6/30, mb1 5.7/38, mb1mx5.7/38, mbtmp6.1/38, MS5.8/11, Ms1 5.9/11, ms1mx5.4/36, Error ellipse: s-maj=9.0km s-min=6.9km az=75.0*

MOS ***25*** *00:44:45.2±0.9, 2425S×67.13W, h184km, mb6.0/95, MS5.7/13, Error ellipse: s-maj=8.3km s-min=5.2km az=79.0*

HRVD ***25*** *00:44:46.2±0.1, 2444S×67.18W, h186km, MW6.6/105, Centroid moment Tensor Solution. LP body waves: s105,c267;Mantle waves: s103,c456; Half duration: 4s7 Moment tensor: Scale 10¹⁹Nm; Mrr-0.62±.00; Mθθ-0.16±.01; Mφφ0.77±.01; Mrθ0.39±.00; Mθφ-0.19±.00; Mφr-0.34±.00; Best double couple: M₀0.89800×10¹⁹ NP1:ϕs194.00000°, δ36.00000°, λ-48.00000°. NP2: ϕs326.00000°, δ64.00000°, λ-115.00000°. Principal axes: T 0.9270, Plg16.0000°, Azm74.0000°; N -0.0590, Plg23.0000°, Azm338.0000°; P -0.8680, Plg62.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***25*** *00:44:46.2±0.1, 2440S×6703W, h184km, mb5.9/166, ME6.3, MW6.6 Error ellipse: s-maj=4.1km s-min=3.3km az=45.0, Moment Tensor Solution. s71 Moment tensor: Scale 10¹⁸Nm; Mrr-5.87; Mθθ-2.16; Mφφ8.03; Mrθ3.57; Mθφ0.14; Mφr-3.87; Best double couple: M₀8.90000×10¹⁸ NP1:ϕs335.00000°, δ65.00000°, λ-119.00000°. NP2: ϕs208.00000°, δ37.00000°, λ-44.00000°. Principal axes: T 0.9090, Plg15.0000°, Azm86.0000°; N -0.3500, Plg26.0000°, Azm348.0000°; P -8.7400, Plg59.0000°, Azm203.0000°; Broadband fault plane solution: P waves. NP1:ϕs334.00000°, δ64.00000°, λ-114.00000°. NP2: ϕs200.00000°, δ35.00000°, λ-50.00000°. Principal axes: T Plg16.0000°, Azm82.0000°; N Plg0.0000°, Azm0.0000°; P Plg63.0000°, Azm205.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [III] at Salta. Felt [IV] at Antofagasta, Baquedano, Calama, Chanaral, Maria Elena, Mejillones and Sierra Gorda; [III] at Caldera, Copiapo, Huara, Iquique, Pozo Almonte, San Pedro de Atacama, Tierra Amarilla and Tocopilla; [II] at Diego de Almagro, El Salvador, Freirina, Huasco and Vallenar, Chile.

LDG ***25*** *00:44:47.1±0.3, 2394S×6693W, h190km, Mb5.8/39, Ms5.8/9 Error ellipse: s-maj=30.0km s-min=13.0km az=103.0*

ISC 25 00:44:46.5±0.1, 2435S±002×6701W±002, h185km, h185km±1.3km: pP-P, n1455, σ0ˢ97/1020, mb5.8/233, 248C-276D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.45**	**314**	P	**Pn**	**00 45 27.1**	**-1.8**
	5μm,0.3s,baz=143,slow=6.4,SNR=1361						
LVC				S	**Sn**	**00 45 53.1**	**-8.8**
	5μm,0.3s,baz=135,slow=15,SNR=7.2						
LVC				LR	LR	00 46 21.5	
	comp=Z,353μm,21.9s,baz=225,slow=39						
LVC	**Limon Verde**	**2.45**	**314**	*e*P	**Pn**	**00 45 25.7**	**-3.3**
LVC				*e*S	**Sn**	**00 45 53.3**	**-8.6**
CEN1	**Los Morros**	**3.07**	**287**	*i*P	**Pn**	**00 45 31.8**	**-4.4**
CEN1				*i* S	**Sn**	**00 46 08.7**	**-6.3**
CPN1	**Cerro Paranal**	**3.11**	**264**	*e*P	**Pn**	**00 45 30.8**	**-5.9**
CPN1				*i* S	**Sn**	**00 46 07.4**	**-8.3**
ANCH	**Antofagasta**	**3.18**	**281**	*e*P	**Pn**	**00 45 32.1**	**-5.5**
ANCH				*i* S	**Sn**	**00 46 09.9**	**-7.5**
ANCH	**Antofagasta**	**3.18**	**281**	*e*P	**Pn**	**00 45 32.3**	**-5.2**
ANCH				*i* S	**Sn**	**00 46 10.2**	**-7.1**
CPCH	**Copiapo**	**4.25**	**224**	*i*P	**Pn**	**00 45 43.8**	**-7.1**
CPCH				*i* S	**Sn**	**00 46 32.3**	**-9.2**
CPCH	**Copiapo**	**4.25**	**224**	*i*P	**Pn**	**00 45 43.8**	**-7.1**
CDCH	**Caldera**	**4.39**	**231**	*e*P	**Pn**	**00 45 45.0**	**-7.7**
CDCH				*i* S	**Sn**	**00 46 33.6**	**-11**
CDCH	**Caldera**	**4.39**	**231**	*i* P	**Pn**	**00 45 45.1**	**-7.6**
CDCH				*i* S	**Sn**	**00 46 33.5**	**-11**
VACH	**Vallenar**	**5.39**	**218**	*e*P	**Pn**	**00 45 59.9**	**-5.7**
VACH				*i* S	**Sn**	**00 46 58.7**	**-9.1**
VACH	**Vallenar**	**5.39**	**218**	P	**Pn**	**00 46 00.1**	**-5.5**
VACH				S	**Sn**	**00 47 00.1**	**-7.7**
LCO	**Las Campanas**	**5.70**	**215**	*i*P	**Pn**	**00 46 02.4**	**-7.2**
TLL	**Tololo Astrono**	**6.71**	**209**	*e*P	**Pn**	**00 46 15.4**	**-7.4**
CFAA	**Coronel Fontan**	**7.31**	**188**	P	**Pn**	**00 46 27.8**	**-3.0**
	8.6nm,0.3s,baz=2.1,slow=12,SNR=267						
CFAA				S	**Sn**	**00 47 44.4**	**-8.8**
	37nm,0.3s,baz=85,slow=17,SNR=8.7						
CFAA				P3KPbc		01 23 31.4	
	0.0nm,0.3s,baz=197,slow=7.4,SNR=3.5						
CFAA	**Coronel Fontan**	**7.31**	**188**	P	**Pn**	**00 46 27.8**	**-3.0**
CFAA				S	**Sn**	**00 47 44.4**	**-8.8**
LPAZ	**La Paz**	**8.09**	**352**	P	**Pn**	**00 46 39.5**	**-1.3**
	243nm,0.3s,baz=146,slow=7.5,SNR=1569						
LPAZ				S	**Sn**	**00 48 09.8**	**-1.8**
	65nm,0.3s,baz=5.5,slow=24,SNR=5.1						
LPAZ				LR	LR	00 50 18.7	
	comp=Z,74μm,18.1s,baz=356,slow=41						
LPAZ				P3KPbc		01 23 45.4	
	0.2nm,0.3s,baz=355,slow=5.1,SNR=7.0						
LPAZ	**La Paz**	**8.09**	**352**	P	**Pn**	**00 46 39.5**	**-1.3**
LPAZ				S	**Sn**	**00 48 09.8**	**-1.8**
LPAZ				pmax	pmax		
	comp=Z,243nm,0.3s						
LPAZ				smax			
	comp=N,65nm,0.3s						
LPAZ				MLR	MLR		
	comp=Z,74μm,18.1s						
LPAZ	**La Paz**	**8.09**	**352**	*e*Pn	**Pn**	**00 46 39.3**	**-1.6**
LPAZ				*e*Sn	**Sn**	**00 48 11.6**	**0.0**
MDZ	**Mendoza**	**8.66**	**190**	*e*P	**Pn**	**00 46 45.4**	**-3.0**
MDZ				*i*		00 46 48.4	
MDZ				S	Sn	00 48 00.4	-25
MDZ				S	Sn	00 48 54.1	+29
ARE	**Arequipa**	**8.90**	**331**	*e*P	**Pn**	**00 46 46.0**	**-5.5**
ARE				*e*S	**Sn**	**00 48 12.0**	**-19**
CPUP	**Villa Florida**	**8.98**	**105**	P	**Pn**	**00 46 49.5**	**-3.0**
	comp=Z,19nm,0.3s,baz=266,slow=11,SNR=188						
CPUP				P3KPbc		01 23 34.2	
	comp=Z,0.1nm,0.3s,baz=311,slow=3.2,SNR=6.0						
CPUP	**Villa Florida**	**8.98**	**105**	*e*Pn	**Pn**	**00 46 48.7**	**-3.8**
CPUP				Sn	**Sn**	**00 48 26.1**	**-6.7**
SIV	**San Ignacio**	**10.01**	**35**	P	**Pn**	**00 47 03.5**	**-2.5**
	comp=Z,233nm,0.3s,baz=226,slow=13,SNR=976						
SIV				S	**Sn**	**00 48 49.7**	**-7.7**
	comp=Z,6.3nm,0.3s,baz=232,slow=14,SNR=1.6						
SIV				P3KPbc		01 23 45.7	
	comp=Z,0.1nm,0.3s,baz=234,slow=4.9,SNR=3.4						
SIV	**San Ignacio**	**10.01**	**35**	P	**Pn**	**00 47 03.5**	**-2.5**
SIV				S	**Sn**	**00 48 49.7**	**-7.7**
LPA	**La Plata**	**13.15**	**145**	*de*P	**Pn**	**00 47 43.0**	**-3.3**
	comp=Z,3μm,0.8s						
LPA	**La Plata**	**13.15**	**145**	*de*P	**Pn**	**00 47 46.8**	**+0.5**
LPA				*es*P		00 48 18.0	
LPA				*i* S	**Sn**	**00 50 05.0**	**-7.6**
TRQA	**Tornquist**	**14.33**	**164**	*e*Pn	**Pn**	**00 47 57.2**	**-3.8**
TRQA				*e*Sn	**Sn**	**00 50 41.8**	**+1.1**
NNA	**Nana**	**15.43**	**321**	P	**Pn**	**00 48 13.1**	**-1.4**
	comp=Z,7.3nm,0.3s,baz=162,slow=13,SNR=26						
NNA				S	**S**	**00 51 00.4**	**-5.5**
	comp=Z,18nm,0.3s,baz=229,slow=18,SNR=3.9						
NNA				ScP	ScP	00 56 22.6	+0.7
	comp=Z,0.5nm,0.3s,baz=87,slow=1.3,SNR=5.6						
NNA	**Nana**	**15.43**	**321**	*e*Pn	**Pn**	**00 48 12.9**	**-1.7**
	comp=Z,467nm,1.0s						
SAML	**Samuel**	**15.74**	**14**	*e*P	**Pn**	**00 48 16.4**	**-1.9**
	comp=Z,941nm,0.8s						
PLCA	**Paso Flores**	**16.61**	**189**	P	**Pn**	**00 48 26.0**	**-2.8**
	comp=Z,14nm,0.3s,baz=9.6,slow=13,SNR=446						
PLCA				PcP	PcP	00 53 07.5	+0.4
	comp=Z,4.7nm,0.3s,baz=344,slow=7.4,SNR=3.6						
PLCA				ScP	ScP	00 56 24.6	+0.4
	comp=Z,0.5nm,0.3s,baz=348,slow=5.3,SNR=4.2						
PLCA				P3KPbc		01 23 13.1	
	comp=Z,0.0nm,0.3s,baz=242,slow=7.0,SNR=3.1						
PLCA	**Paso Flores**	**16.61**	**189**	*e*P	**Pn**	**00 48 26.5**	**-2.3**
PLCA	**Paso Flores**	**16.61**	**189**	*e*P	**Pn**	**00 48 26.5**	**-2.3**
BDFB	**Brasilia**	**19.82**	**68**	P	**P**	**00 49 01.6**	**-1.4**
	comp=Z,121nm,0.3s,baz=248,slow=9.7,SNR=683						
BDFB				S	**S**	**00 52 34.8**	**-1.2**
	comp=Z,7.5nm,0.3s,baz=210,slow=11,SNR=1.8						
BDFB				P3KPbc		01 23 18.2	
	comp=Z,0.1nm,0.3s,baz=61,slow=7.9,SNR=7.0						
BDFB	**Brasilia**	**19.82**	**68**	P	**P**	**00 49 03.9**	**+0.9**
BAO	**Brasilia Array**	**19.84**	**68**	P	**P**	**00 48 49.0**	**-14**
ATAH	**Atahualpa**	**20.41**	**326**	P	**P**	**00 49 09.2**	**-0.1**
	comp=Z,124nm,0.8s,baz=165,slow=7.1,SNR=51						
ATAH				S	**S**	**00 52 51.4**	**+4.0**
	comp=Z,59nm,1.1s,baz=306,slow=19,SNR=1.6						
ATAH				ScP	ScP	00 56 35.4	+2.9
	comp=Z,40nm,0.9s,baz=130,slow=5.2,SNR=4.7						
ATAH				P3KPbc		01 23 17.1	
	comp=Z,7.0nm,0.8s,baz=8.6,slow=3.9,SNR=6.0						
CAM4	**Nova Friburgo**	**22.52**	**90**	*i*P	**P**	**00 49 28.9**	**-1.8**
CAM4				*i*		00 49 31.3	
CAM4				*i*		00 49 35.3	
CAM4				*i*		00 49 42.2	
CAM3	**Guarapari**	**24.71**	**87**	*i*P	**P**	**00 49 48.8**	**-1.8**
CAM3				*i*		00 49 49.5	
CAM3				*i*		00 49 53.9	
CAM3				*i*		00 49 59.1	
CAM3				*i*		00 50 20.5	
EFI	**East Falkland**	**28.14**	**168**	*e*P	**P**	**00 50 18.9**	**-2.4**
ROSC	**El Rosal**	**29.89**	**345**	P	**P**	**00 50 36.6**	**-0.2**
	comp=Z,100nm,0.5s,mb5.8,baz=135,slow=7.7,SNR=29						
ROSC				PcP	PcP	00 53 37.4	+2.5
	comp=Z,74nm,0.6s,baz=86,slow=19,SNR=3.8						
ROSC				LR	LR	01 03 22.9	
	comp=Z,17μm,18.2s,baz=187,slow=37						
USHA	**Ushuaia**	**30.47**	**182**	P	**P**	**00 50 40.1**	**-1.8**
	comp=Z,225nm,0.6s,mb6.1,baz=346,slow=6.4,SNR=98						
USHA				PcP	PcP	00 53 36.3	-0.2
	comp=Z,74nm,0.8s,baz=317,slow=5.4,SNR=4.0						
USHA				S	**S**	**00 55 30.9**	**+1.7**
	comp=Z,22nm,0.9s,baz=84,slow=18,SNR=1.7						
PAYG	**Puerto Ayora**	**32.58**	**313**	*e*P	**P**	**00 51 01.9**	**+1.6**
SDV	**Santo Domingo**	**33.22**	**353**	S	**S**	**00 56 14.3**	**+2.4**
	baz=303,slow=17						
SDV				LR	LR	01 06 26.8	
	comp=Z,23μm,18.9s,baz=206,slow=39						
SDV	**Santo Domingo**	**33.22**	**353**	*e*P	**P**	**00 51 04.3**	**-1.6**
PCRV	**Puerto La Cruz**	**34.39**	**4**	S	**S**	**00 56 26.3**	**-3.6**
	comp=Z,29nm,1.0s,baz=251,slow=17,SNR=1.8						

TPP	**Pointe-a-Pierr**	**34.87**	**10**	*i* P	**P**	**00 51 21.9**	**+1.8**
RCBR	**Riachuelo**	**35.08**	**63**	*e*P	**P**	**00 51 20.9**	**-1.0**
TBH	**Brigand Hill**	**35.10**	**10**	*e*P	**P**	**00 51 22.9**	**+0.9**
TRN	**Trinidad (W)**	**35.21**	**10**	*e*P	**P**	**00 51 23.1**	**+0.1**
BOT	**Bacolet**	**35.83**	**11**	*e*P	**P**	**00 51 28.9**	**+0.7**
TPR	**Prospect**	**35.83**	**10**	*i*P	**P**	**00 51 28.9**	**+0.5**
GRW	**Mount Saint Ca**	**36.66**	**9**	*e*P	**P**	**00 51 35.5**	**+0.2**
BUS	**Buena Vista**	**37.45**	**332**	*e*P	**P**	**00 51 44.2**	**+2.2**
QCR	**Quepos**	**37.51**	**331**	*e*P	**P**	**00 51 44.1**	**+1.6**
FCV	**Fort Charlotte**	**37.70**	**9**	*e*P	**P**	**00 51 41.3**	**-2.8**
LCR2	**La Lucha 2**	**37.72**	**332**	*e*P	**P**	**00 51 45.5**	**+1.2**
SVB	**Belmont**	**37.81**	**9**	*e*P	**P**	**00 51 45.0**	**0.0**
SVV	**Soufriere Volc**	**37.86**	**9**	*e*P	**P**	**00 51 44.5**	**-0.8**
LAJ	**Bijagual**	**37.88**	**332**	*e*P	**P**	**00 51 48.2**	**+2.6**
SJS	**Escuela Geolog**	**37.92**	**332**	*e*P	**P**	**00 51 47.3**	**+1.3**
PRS1	**Puriscal**	**38.07**	**332**	*e*P	**P**	**00 51 49.3**	**+2.1**
RPN	**Rapa Nui**	**38.10**	**257**	*e*P	**P**	**00 51 48.9**	**+1.5**
CGA2	**Cerro Gallo 2**	**38.17**	**331**	*e*P	**P**	**00 51 50.6**	**+2.6**
JCR	**Jicaral**	**38.31**	**330**	*e*P	**P**	**00 51 50.7**	**+1.5**
TRTC	**Tortuguero**	**38.35**	**333**	*e*P	**P**	**00 51 51.5**	**+2.0**
VCR	**Vista de Mar**	**38.79**	**330**	*e*P	**P**	**00 51 54.7**	**+1.5**
BIM	**Bigot**	**39.06**	**9**	*e*P	**P**	**00 51 54.2**	**-1.2**
MVM	**Montagne Vaucl**	**39.12**	**9**	*e*P	**P**	**00 51 55.1**	**-0.8**
FDF	**Fort de France**	**39.26**	**9**	*e*P	**P**	**00 51 55.9**	**-1.1**
BBL	**Barber's Block**	**39.99**	**8**	*e*P	**P**	**00 52 01.3**	**-1.8**
TBG	**Guadaloupe-3**	**40.29**	**8**	*e*P	**P**	**00 52 03.0**	**-2.6**
HMG	**Houelmont**	**40.41**	**8**	*e*P	**P**	**00 52 02.2**	**-4.3**
PMSA	**Palmer Station**	**40.47**	**178**	P	**P**	**00 52 06.2**	**-0.9**
	comp=Z,234nm,0.8s,mb5.9,baz=8.8,slow=6.6,SNR=66						
PMSA				LR	LR	01 11 06.3	
	comp=Z,10μm,19.4s,baz=351,slow=39						
LZG	**Guadaloupe-1**	**40.56**	**8**	*e*P	**P**	**00 52 05.3**	**-2.4**
SEG	**Port Louis**	**40.85**	**8**	*e*P	**P**	**00 52 07.0**	**-3.2**
CPD	**Cerro la Pandu**	**42.14**	**2**	*e*P	**P**	**00 52 18.3**	**-2.3**
SJG	**San Juan**	**42.21**	**1**	S	**S**	**00 58 20.7**	**-6.5**
	comp=Z,66nm,1.1s,baz=349,slow=19,SNR=18						
SJG	**San Juan**	**42.21**	**1**	*e*P	**P**	**00 52 18.4**	**-2.7**
SJG				*e**PP	pP	00 52 55.0	-6.0
SJG				*e*S	**S**	**00 58 19.5**	**-7.8**
SJG	**San Juan**	**42.21**	**1**	*e*P	**P**	**00 52 18.4**	**-2.7**
SJG				*e*pP	pP	00 52 55.0	-6.0
SJG				*e*ScP	ScP	00 57 44.8	+0.1
SJG				*e*S	**S**	**00 58 19.5**	**-7.8**
MTP	**Monte Pirata**	**42.21**	**2**	*e*P	**P**	**00 52 17.9**	**-3.2**
HUMP	**Col San Antoni**	**42.24**	**2**	*e*P	**P**	**00 52 19.1**	**-2.3**
MPR	**Mayaguez**	**42.30**	**360**	*e*P	**P**	**00 52 19.0**	**-2.9**
CBYP	**Canovanas**	**42.37**	**2**	*e*P	**P**	**00 52 19.5**	**-3.0**
MASC	**Masc**	**44.81**	**350**	*e*P	**P**	**00 52 41.9**	**0.0**
LMGC	**Las Mercedes**	**45.20**	**347**	*e*P	**P**	**00 52 45.2**	**+0.2**
LMGC				*e*S	**S**	**00 59 03.3**	**-7.4**
	comp=N,3μm,19.5s						
LMGC				*e*			
	comp=E,8μm,19.5s						
MGV	**Manicaragua**	**47.87**	**344**	*e*P	**P**	**00 53 05.6**	**-0.1**
HUIG	**Huatulco**	**48.95**	**322**	*i* P	**P**	**00 53 13.7**	**-0.4**
PNIG	**Pinotepa**	**50.61**	**320**	*i* P	**P**	**00 53 25.1**	**-1.4**
ZIIG	**Zihuatanejo**	**53.55**	**318**	*i* P	**P**	**00 53 48.2**	**0.0**
MONG	**Morelia**	**54.98**	**320**	*i* P	**P**	**00 53 58.7**	**+0.2**
BBSR	**BB Station**	**56.44**	**2**	*e*P	**P**	**00 54 06.9**	**-2.0**
	comp=E,142nm,0.8s,mb5.8						
VNA1	**Neumayer--Stat**	**57.03**	**160**	*i*P	**P**	**00 54 12.3**	**-0.7**
VNA1				*e*		00 54 14.9	
VNA1				*e*		00 54 19.4	
VNA1				*e*		00 55 05.9	
VNA1				*e*		00 55 07.9	
VNA1				*e*		00 55 09.8	
VNA1				*e*		00 55 11.4	
VNA1				*e*		00 55 34.4	
VNA1				*e*		00 56 01.9	
VNA1				*e*		00 56 19.8	
VNA1				*e*		00 56 26.9	
VNA1				*e*		00 56 32.7	
VNA1				*e*		00 58 00.3	
VNA1				*e*		00 58 07.3	

RKT **Rikitea 61.63 256** *e*S **S 01 02 52.8 +0.8**
comp=Z,40µm,30.2s
RKT *e*LR LR 01 13 30.4
comp=Z,57µm,91.8s
NATX Nacogdoches 61.74 333 ⇓ *i*P **P 00 54 44.8 -0.4**
NATX *e*PcP PcP 00 55 25.5 +0.9
NATX *e*sP sP 00 55 50.4 +2.3
CPCT Cooper Cave 61.74 344 *e*P **P 00 54 44.3 -0.9**
SWET Sewanee 61.89 342 *e*P **P 00 54 44.8 -1.5**
OXF Oxford 62.28 339 *e*P **P 00 54 46.7 -2.2**
BLA Blacksburg 62.52 348 ⇓ *i*P **P 00 54 50.0 -0.4**
BLA *e**PP pP 00 55 32.5 -0.9
BLA *e*S **S 01 03 02.9 -0.1**
BLA pmax pmax
comp=Z,220nm,1.1s,mb5.9
BLA Blacksburg 62.52 348 ⇓ *i*P **P 00 54 50.0 -0.4**
comp=Z,304nm,1.1s,mb6.0
BLA *e*pP pP 00 55 32.5 -0.8
BLA *e*S **S 01 03 02.9 -0.2**
TZTN Tazewell 62.54 345 *e*P **P 00 54 49.1 -1.5**
ELN Prospectdale 62.60 348 *e*P **P 00 54 50.5 -0.5**
JCT Junction City 62.93 328 *e*P **P 00 54 52.2 -1.0**
FWV Forest Hill 62.95 348 *e*P **P 00 54 53.4 +0.1**
FWV *e*pP pP 00 55 37.6 +1.3
MET Memphis--Engin 63.01 339 *e*P **P 00 54 54.0 +0.3**
WVT Waverly 63.28 341 ⇓ *i*P **P 00 54 53.2 -2.3**
WVT *e**PP pP 00 55 35.8 -2.7
WVT *e* 00 57 15.6
WVT pmax pmax
comp=Z,573nm,0.9s,mb6.4
WVT Waverly 63.28 341 ⇓ *i*P **P 00 54 53.2 -2.3**
comp=Z,573nm,0.9s,mb6.4
WVT *e*pP pP 00 55 35.8 -2.7
WVT *e*sP sP 00 56 01.6 +3.1
WVT *e*PP PP 00 57 15.6 -1.4
HALT Halls 63.54 340 ⇓ *i*P **P 00 54 55.9 -1.3**
HALT *e*PcP PcP 00 55 35.3 +3.2
HALT *e*pP pP 00 55 42.1 +1.8
HALT *e*sP sP 00 56 02.7 +2.4
NVL N'lazarevskaya 63.56 159 *d i*P **P 00 54 55.6 -1.7**
NVL *i* pP 00 55 40.7 +0.3
NVL *i* 00 57 20.6
NVL *i* S **S 01 03 15.7 -0.3**
NVL *i* *SS sS 01 03 35.0 -56
NVL *e* 01 04 24.5
NVL *i* SS SS 01 07 25.0 -1.7
NVL pmax pmax
comp=Z,758nm,1.0s,mb6.5
NVL MLR MLR
comp=Z,5µm,16.7s
MIAR Mount Ida 63.77 336 *e*P **P 00 54 58.1 -0.6**
UTMT University of 63.79 340 *e*P **P 00 54 58.0 -0.8**
GLAT Glass 63.85 340 *e*P **P 00 54 59.2 0.0**
PARMO Parma 64.36 340 ⇓ *i*P **P 00 55 01.4 -1.2**
PARMO *e*pP pP 00 55 43.2 -2.5
PARMO *e*sP sP 00 56 07.5 +1.8
PARMO *e*PP PP 00 57 26.6 +0.2
MVL Millersville 64.60 352 *e*P **P 00 55 04.6 +0.5**
MCWV Mont Chateau 64.79 349 *e*P **P 00 55 04.7 -0.6**
USIN University of 64.95 342 *e*P **P 00 55 05.0 -1.4**
BRNJ Basking Ridge 65.07 354 *e*P **P 00 55 08.4 +1.3**
CPNY Central Park 65.12 354 *e*P **P 00 55 06.9 -0.5**
SIUC Southern Illin 65.17 341 *e*P **P 00 55 06.5 -1.2**
PAL Palisades 65.33 354 *e*P **P 00 55 09.2 +0.4**
PAL pmax pmax
comp=Z,283nm,1.6s,mb5.8
PAL Palisades 65.33 354 *e*P **P 00 55 09.2 +0.4**
comp=Z,335nm,1.6s,mb5.9
BLO Bloomington 65.77 343 *e*P **P 00 55 10.2 -1.4**
BLO pmax pmax
comp=Z,170nm,0.5s,mb6.1
BLO Bloomington 65.77 343 *e*P **P 00 55 10.2 -1.4**
comp=Z,171nm,0.5s,mb6.1
FVM French Village 65.78 340 *e*P **P 00 55 10.4 -1.3**
ACSO Alum Creek Sta 65.94 347 *e*P **P 00 55 10.9 -1.9**
comp=Z,424nm,0.9s,mb6.3
WMOK Wichita Mounta 66.04 332 *e*P **P 00 55 12.5 -0.8**
WMOK pmax pmax
comp=Z,351nm,1.5s,mb6.0
WMOK Wichita Mounta 66.04 332 *e*P **P 00 55 12.5 -0.9**
comp=Z,351nm,1.5s,mb6.0
SLM Saint Louis 66.32 340 *e*P **P 00 55 13.9 -1.2**
SLM pmax pmax
comp=Z,238nm,1.0s,mb6.0
SLM Saint Louis 66.32 340 *e*P **P 00 55 13.9 -1.2**
comp=Z,237nm,1.0s,mb6.0
QUA2 Belchertown 66.47 356 ⇓ *i*P **P 00 55 15.3 -0.8**
comp=Z,806nm,1.3s,mb6.4
QUA2 *e*pP pP 00 55 57.6 -1.9
QUA2 *e*sP sP 00 56 21.1 +1.6
WES Weston 66.51 357 *e*P **P 00 55 16.5 +0.2**
GDL2 Guadalupe Moun 66.59 326 *e*P **P 00 55 17.3 +0.5**
HRV Harvard--Oak R 66.65 356 *e*P **P 00 55 16.2 -1.0**
MNTX Cornudas Mount 66.72 325 *e*P **P 00 55 19.8 +2.1**
comp=Z,233nm,1.0s,mb6.0
BINY Binghamton 66.73 353 *e*P **P 00 55 17.1 -0.6**
ALLY Alegheny Colle 66.78 349 *e*P **P 00 55 18.2 +0.2**
ERPA Erie 67.21 350 *e*P **P 00 55 19.8 -0.9**
LIC Lamto 67.55 72 *e*P **P 00 55 21.3 -1.6**
comp=Z,401nm,0.7s,mb5.9
LIC *e*R
comp=Z,21µm,19.8s
LIC Lamto 67.55 72 *e*P **P 00 55 21.3 -1.6**
comp=Z,200nm,0.7s,mb6.0
LIC LR LR
comp=Z,11µm,19.8s
FFD Franklin Falls 67.61 356 ⇓ *i*P **P 00 55 23.9 +0.6**
comp=Z,1µm,1.7s,mb6.4
FFD *e*pP pP 00 56 05.8 -1.0
FFD *e*sP sP 00 56 26.8 +0.1
HNH Hanover 67.89 356 *e*P **P 00 55 25.6 +0.7**
DBIC Dimbokro 67.92 71 P **P 00 55 24.2 -0.9**
comp=Z,314nm,0.6s,mb6.2,baz=216,slow=6.9,SNR=521
DBIC pP pP 00 56 07.0 -1.8
comp=Z,30nm,0.5s,baz=142,slow=12,SNR=0.7
DBIC S S 01 04 06.9 -1.9
comp=Z,18nm,0.9s,baz=327,slow=22,SNR=2.4
DBIC PKPPKP 01 23 33.8
comp=Z,9.2nm,1.1s,baz=156,slow=22,SNR=3.5
DBIC LR LR 01 24 27.3
comp=Z,13µm,19.7s,baz=146,slow=35
DBIC Dimbokro 67.92 71 *e*P **P 00 55 23.9 -1.2**
AAM Ann Arbor 68.07 347 *e*P **P 00 55 25.5 -0.6**
AAM pmax pmax
comp=Z,187nm,0.6s,mb6.0
AAM Ann Arbor 68.07 347 *e*P **P 00 55 25.5 -0.7**
comp=Z,187nm,0.6s,mb6.0
NCB Newcomb 68.30 354 *e*P **P 00 55 27.2 -0.3**
LBNH Lisbon 68.40 356 *e*P **P 00 55 28.7 +0.6**
WVL Waterville 68.61 358 *e*P **P 00 55 29.8 +0.3**
comp=Z,249nm,1.5s,mb5.7
EMMW East Machias 68.72 360 *e*P **P 00 55 30.4 +0.2**
comp=Z,247nm,1.4s,mb5.8
KSU1 Kansas State U 68.92 336 ⇓ *i*P **P 00 55 29.5 -1.9**
comp=Z,380nm,1.0s,mb6.1
KSU1 *e*pP pP 00 56 12.3 -2.8
KSU1 *e*S S 01 04 17.9 -2.8
LONY Lake Ozonia 68.98 354 *e*P **P 00 55 31.5 -0.3**
FRNY Flat Rock 69.10 355 *e*P **P 00 55 31.7 -0.8**
PKME Peaks-Kenny Pk 69.30 358 ⇓ *i*P **P 00 55 33.5 -0.3**
comp=Z,392nm,1.5s,mb5.9
PKME *e*PcP PcP 00 55 57.8 +1.8
PKME *e*pP pP 00 56 15.9 -1.6
PKME *e*sP sP 00 56 40.5 +3.1
PKME *e*S S 01 04 20.8 -4.4
MSNY Massena 69.38 354 *e*P **P 00 55 34.3 +0.1**
MSNY *e*pP pP 00 56 18.8 +0.9
MSNY *e*sP sP 00 56 39.6 +1.8
Y22C IRIS PASSCAL I 69.38 325 ⇓P **P 00 55 34.4 +0.2**
baz=70
Y22C ⇓S S 01 04 29.6 +3.6
baz=70
LPM Los Pinos Moun 69.42 326 *e*P **P 00 55 34.6 +0.1**
LENM Lemitar 69.48 325 *e*P **P 00 55 35.8 +1.0**
SADO Sadowa 69.67 351 PKPPKP 01 23 35.5
comp=Z,9.2nm,0.8s,baz=340,slow=6.3,SNR=8.0
SADO LR LR 01 28 15.5
comp=Z,4µm,21.6s,baz=190,slow=38
LAZ Ladron 69.75 325 *e*P **P 00 55 37.4 +0.9**
ANMO Albuquerque 69.83 326 P **P 00 55 36.9 -0.1**
ANMO pP pP 00 56 20.8 0.0
ANMO S S 01 04 33.0 +1.8
ANMO SKSac SKSac 01 05 22.6 +2.6
ANMO SS SS 01 09 12.6 +8.9
ANMO P'P'bc 01 23 39.8
ANMO Albuquerque 69.83 326 PKPPKP 01 23 39.4
comp=Z,11nm,0.9s,baz=323,slow=2.8,SNR=16
ANMO P4KPbc 01 32 21.8
comp=Z,3.5nm,0.8s,baz=165,slow=6.4,SNR=13
ANMO Albuquerque 69.83 326 *e*P **P 00 55 37.2 +0.2**
ANMO pmax pmax
comp=Z,315nm,0.9s
ANMO Albuquerque 69.83 326 *e*P **P 00 55 37.1 +0.2**
comp=Z,315nm,0.9s,mb6.0
TUC Tucson 70.14 321 *e*P **P 00 55 39.3 +0.4**
TUC pmax pmax
comp=Z,287nm,1.3s,mb5.8
TUC Tucson 70.14 321 *e*P **P 00 55 39.3 +0.5**
comp=Z,287nm,1.3s,mb5.8
JFWS Jewell Farm 70.27 342 *e*P **P 00 55 38.2 -1.4**
GLMI Grayling 70.69 347 P **P 00 55 41.3 -0.8**
comp=Z,675nm,0.9s,mb6.4
116A Eloy 70.86 321 ⇑P **P 00 55 43.3 +0.2**
baz=71,SNR=47
116A ⇑S S 01 04 47.4 +4.3
baz=71
EGOM La Gomera 70.89 46 P **P 00 55 42.9 -0.5**
comp=Z,519nm,0.7s,mb6.4
TAOE Nuku Hiva Isla 71.09 269 *e*S S 01 04 47.3 +1.5
comp=Z,25µm,26.5s
TAOE *e*SS SS 01 09 21.9 -1.0
comp=Z,8µm,23.4s
TAOE *e*LR LR 01 17 47.8
comp=Z,58µm,65.7s
115A Sonoran Desert 71.26 321 ⇓P **P 00 55 46.0 +0.4**
baz=72,SNR=50
115A ⇑S S 01 04 53.1 +5.3
baz=72
CCAN Las Canadas 71.33 46 P **P 00 55 46.0 0.0**
comp=Z,140nm,0.7s,mb5.8
SDCO Great Sand Dun 71.58 329 *e*P **P 00 55 49.3 +1.8**
EBAJ Bajamar 71.71 46 P **P 00 55 48.8 +0.5**
comp=Z,63nm,0.8s,mb5.4
EOSO Osorio 71.92 47 P **P 00 55 50.5 +1.0**
comp=Z,159nm,0.7s,mb5.9
Z14A Wintersburg 72.15 321 ⇓P **P 00 55 51.3 +0.4**
baz=72,SNR=25
Z14A ⇓S S 01 05 02.1 +4.1
baz=72
CALA Caldeira 72.16 31 *e*P **P 00 55 53.1 +2.1**
PCND Candelaria 72.18 31 *e*P **P 00 55 52.6 +1.5**
comp=Z,157nm,1.3s,mb5.6
PBOI Pico dos Bois 72.19 31 *e*P **P 00 55 52.4 +1.2**
comp=Z,127nm,1.1s,mb5.6
PCED Cedros 72.20 31 *e*P **P 00 55 54.0 +2.8**
comp=Z,214nm,0.7s,mb6.0
PICO Pico 72.22 31 *e*P **P 00 55 56.9 +5.6**
PTEI Pico do Teixo 72.25 31 *e*P **P 00 55 52.4 +0.9**
comp=Z,188nm,1.3s,mb5.7
PID Ribeirinha 72.32 31 *e*P **P 00 55 53.5 +1.6**
PLUZ Luz 72.38 30 *e*P **P 00 55 56.3 +4.0**
comp=Z,89nm,0.9s,mb5.5
PAMA Santo Amaro 72.48 31 *e*P **P 00 55 54.3 +1.4**
comp=Z,252nm,1.2s,mb5.8
ROSA Rosais 72.48 31 *e*P **P 00 55 53.5 +0.6**
PMAN Manadas 72.49 31 *e*P **P 00 55 53.5 +0.6**
comp=Z,595nm,1.4s,mb6.1
X15A Humboldt 72.57 322 ⇑P **P 00 55 53.7 +0.4**
baz=73,SNR=259
X15A ⇑S S 01 05 07.2 +4.5
baz=73
Y14A Wickenburg 72.60 321 ⇓P **P 00 55 53.7 +0.1**
baz=73,SNR=112
Y14A ⇓S S 01 05 07.6 +4.5
baz=73
PSMN Pico do Norte, 72.69 34 *e*P **P 00 55 55.5 +1.4**
WUAZ Wupatki 72.85 323 *e*P **P 00 55 55.9 +0.9**
comp=Z,387nm,0.9s,mb6.1
PVIA Vitoria 72.85 31 *e*P **P 00 55 56.4 +1.3**
comp=Z,108nm,0.9s,mb5.6
PGRA Graciosa 72.85 31 *e*P **P 00 55 55.5 +0.4**
comp=Z,286nm,1.4s,mb5.8
STGR Santa Cruz 72.88 31 *e*P **P 00 55 55.1 -0.1**
comp=Z,143nm,1.4s,mb5.5
ADH Angra Heroismo 72.91 32 *i* LR LR 01 19 20.0
ASBA Santa Barbara 72.92 32 *e*P **P 00 55 56.7 +1.3**
comp=Z,287nm,0.8s,mb6.1
PPAD Pico dos Padre 72.92 32 *e*P **P 00 55 56.4 +0.9**
comp=Z,189nm,1.2s,mb5.7
X14A Yava 72.92 322 ⇓P **P 00 55 55.9 +0.4**
baz=73
X14A ⇓S S 01 05 10.9 +4.2
baz=73
RIB2 Ribeirinha 72.95 32 *e*P **P 00 55 56.9 +1.3**
comp=Z,223nm,1.0s,mb5.8
PFET Feteiras 72.96 33 *e*P **P 00 55 57.2 +1.5**
PDA Ponta Delgada 72.97 33 *i* P **P 00 55 57.0 +1.3**
PDA *i* pP 00 56 46.0 +6.1
PDA *i* S S 01 05 09.0 +1.8
PDA Ponta Delgada 72.97 33 *e*LR LR 01 18 31.0
PBIS Biscoitos 72.98 32 *e*P **P 00 55 57.0 +1.2**
comp=Z,197nm,1.1s,mb5.8
Y13A Salome 72.99 321 ⇑P **P 00 55 56.2 +0.3**
baz=73
Y13A ⇓S S 01 05 11.7 +4.2
baz=73
FAC Faja de Cima 72.99 33 *e*P **P 00 55 57.6 +1.7**
PSET Sete Cidades 73.00 33 *e*P **P 00 55 57.0 +1.1**
comp=Z,318nm,1.1s,mb6.0
PSAN Santo Antonio 73.02 33 *e*P **P 00 55 57.3 +1.3**
PFAV Pico das Favas 73.03 32 *e*P **P 00 55 57.8 +1.7**
comp=Z,261nm,0.7s,mb6.1
GLA Glamis 73.03 319 *e*P **P 00 55 57.3 +1.2**
GLA Glamis 73.03 319 ⇓P **P 00 55 56.2 +0.1**
baz=73,SNR=139
GLA ⇓S S 01 05 13.0 +5.0
baz=73
PVNV Vila Nova 73.03 32 *e*P **P 00 55 57.9 +1.8**
comp=Z,230nm,0.9s,mb5.9
PRCH Ribeira Ch 73.04 33 *e*P **P 00 55 57.6 +1.4**
comp=Z,100nm,0.4s,mb5.9
CML Chã da Macela 73.04 33 *e*P **P 00 55 57.3 +1.1**
LFA Lagoa do Fogo 73.08 33 *e*P **P 00 55 57.6 +1.2**
VIF Vila Franca 73.08 33 *e*P **P 00 55 58.0 +1.6**
comp=Z,64nm,0.4s,mb5.7
PVER Pico Vermelho 73.08 33 *e*P **P 00 55 57.4 +1.0**
comp=Z,124nm,1.3s,mb5.5
W15A Williams 73.09 323 ⇑P **P 00 55 57.0 +0.5**
baz=73
W15A ⇑S S 01 05 14.0 +5.4
baz=73
MESC Monte Escuro 73.11 33 *e*P **P 00 55 57.7 +1.1**
PCNG Congro 73.12 33 *e*P **P 00 55 57.9 +1.3**
comp=Z,99nm,0.5s,mb5.8
PMAT Coroa da Mata 73.12 33 *e*P **P 00 55 57.5 +0.9**
comp=Z,113nm,0.6s,mb5.8
FRA1 Furnas 73.12 33 *e*P **P 00 55 58.2 +1.6**
CFTV Fuerteventura 73.12 47 P **P 00 55 56.6 -0.1**
comp=Z,146nm,0.7s,mb5.8
MIRA Miradouro 73.19 33 *e*P **P 00 55 58.0 +1.0**
PFAD Fenais da Ajud 73.21 33 *e*P **P 00 55 58.1 +1.0**
SYO Syowa Base 73.23 159 *i* P **P 00 55 55.6 -1.7**
SYO Syowa Base 73.23 159 *e*SH 01 05 17.4
ISCO Idaho Springs 73.27 330 *e*P **P 00 55 58.2 +0.7**
ISCO pmax pmax
comp=Z,271nm,1.0s,mb5.9
ISCO Idaho Springs 73.27 330 *e*P **P 00 55 58.1 +0.6**
comp=Z,252nm,1.0s,mb5.9
Y12C Blythe 73.34 320 ⇑P **P 00 55 58.1 +0.2**
baz=74,SNR=124
Y12C ⇑S S 01 05 16.1 +4.6
baz=74
SBA Scott Base 73.36 190 *e*P **P 00 55 57.7 -0.3**
SBA pmax pmax
comp=Z,413nm,1.2s,mb6.0
SBA Scott Base 73.36 190 *e*P **P 00 55 57.7 -0.3**
comp=Z,413nm,1.2s,mb6.0
PV01 Paradox Valley 73.37 327 ⇓ *e*P **P 00 55 58.4 +0.3**
SMCO Snowmass 73.41 329 *e*P **P 00 56 00.0 +1.7**
comp=Z,405nm,1.0s,mb6.1
PDMCI Parker Dam,Lak 73.51 321 ⇑P **P 00 55 58.6 -0.3**
baz=74,SNR=18
PDMCI ⇓S S 01 05 17.8 +4.4
baz=74
DVTC Desert V Tower 73.52 318 ⇑P **P 00 55 59.4 +0.4**
baz=74,SNR=65
DVTC ⇓S S 01 05 18.6 +5.2
baz=74
SWSC Sam W. Stewart 73.53 319 ⇓P **P 00 55 59.1 +0.1**
baz=74,SNR=28
SWSC ⇑S S 01 05 19.2 +5.7
baz=74
X13A Yucca 73.55 321 ⇓P **P 00 55 59.4 +0.2**
baz=74
X13A ⇓S S 01 05 18.3 +4.6
baz=74
W14A Seligman 73.57 322 ⇓P **P 00 55 59.6 +0.3**
baz=74
W14A ⇑S S 01 05 19.6 +5.6
baz=74
PV10 Paradox Valley 73.80 327 *e*P **P 00 56 00.6 0.0**
MONP Monument Peak 73.87 318 ⇑P **P 00 56 00.9 -0.1**
baz=74,SNR=62
MONP ⇓S S 01 05 22.1 +4.7
baz=74
BAR Barrett 73.88 318 *e*P **P 00 56 01.1 0.0**
W13A Hualapai Mount 73.94 321 ⇑P **P 00 56 02.0 +0.6**
baz=74
W13A ⇓S S 01 05 23.0 +4.8
baz=74
EFAM Famara 73.95 47 P **P 00 56 02.4 +0.9**
comp=Z,202nm,0.7s,mb6.0
TBI Tubuai 74.24 251 *e*P **P 00 56 04.5 +1.4**
comp=Z,1µm,1.0s,mb6.6
TBI Tubuai 74.24 251 *e*S S 01 05 21.4 -0.1
comp=Z,7µm,30.2s
TBI *e*LR LR 01 19 25.3
109C Camp Elliot, M 74.29 318 ⇑P **P 00 56 03.5 +0.1**
baz=75,SNR=5.1
109C ⇓S S 01 05 25.9 +3.9
baz=75
VNDA Vanda 74.36 190 P **P 00 56 03.6 -0.2**
comp=Z,213nm,0.8s,mb5.9,baz=134,slow=5.1,SNR=636
VNDA PKKPbc PKKPbc 01 15 28.0 -2.6
comp=Z,1.1nm,0.8s,baz=315,slow=6.2,SNR=3.7
VNDA PKPPKP 01 23 36.5
comp=Z,3.6nm,1.0s,baz=329,slow=1.5,SNR=6.4
BELC Belle Mtn. 74.39 319 ⇓P **P 00 56 04.3 +0.3**
baz=75,SNR=70
BELC ⇓S S 01 05 28.4 +5.2
baz=75
PFO Pinyon Flat Ob 74.39 319 *e*P **P 00 56 04.4 +0.4**
PFO Pinyon Flat Ob 74.39 319 ⇑P **P 00 56 04.7 +0.7**
baz=75,SNR=95
PFO ⇑S S 01 05 28.5 +5.3
baz=75
PHWY Pilot Hill 74.41 331 *e*P **P 00 56 04.1 0.0**
W12A Cal Nev Ari 74.65 321 ⇑P **P 00 56 05.6 +0.1**
baz=75,SNR=42
W12A ⇓S S 01 05 30.4 +4.3
baz=75
GMRC Granite Mounta 74.74 320 P **P 00 56 06.7 +0.7**
baz=75,SNR=274
GMRC ⇑S S 01 05 31.5 +4.5
baz=75
MURC Murrieta 74.83 318 ⇑P **P 00 56 06.9 +0.4**
baz=75,SNR=52
MURC ⇓S S 01 05 32.8 +4.7
baz=75
V12A Nelson 74.94 321 ⇓P **P 00 56 07.3 +0.1**
baz=75,SNR=164
V12A ⇓S S 01 05 33.7 +4.5
baz=75
SRU San Rafael 75.10 326 ⇓ *i*P **P 00 56 08.2 +0.1**
SRU *e**PP pP 00 56 51.4 -1.2
SRU *e**SP sP 00 57 17.0 +4.8
BBRC Big Bear Sol-O 75.12 319 ⇓P **P 00 56 09.1 +0.9**
baz=75
BBRC ⇑S S 01 05 36.5 +5.3
baz=75
HEC Hector,Ludlow 75.17 320 ⇓P **P 00 56 09.2 +0.8**
baz=75,SNR=61
HEC ⇓S S 01 05 36.6 +4.8
baz=75
SCI San Clemente I 75.24 317 ⇓P **P 00 56 09.5 +0.6**
baz=76,SNR=10
SCI ⇑S S 01 05 35.9 +3.3
baz=76
EYMN Ely 75.25 343 *e*P **P 00 56 08.3 -0.6**
comp=Z,3µm,0.9s,mb6.9
U12A Valley of Fire 75.27 322 ⇓P **P 00 56 09.2 +0.2**
baz=76,SNR=242
U12A ⇓S S 01 05 37.8 +4.9
baz=76
TUQ Turquoise Mtn. 75.35 320 ⇓P **P 00 56 10.0 +0.5**
baz=76,SNR=11
TUQ ⇓S S 01 05 38.5 +4.7
baz=76
CCUT Cedar City 75.43 324 ⇓ *i*P **P 00 56 11.0 +1.1**
CCUT *e*pP pP 00 56 54.6 +0.2
CCUT *e*sP sP 00 57 18.4 +4.3
CIS Catalina Islan 75.44 318 ⇓P **P 00 56 10.1 +0.1**
baz=76,SNR=18
CIS ⇓S S 01 05 38.6 +3.8
baz=76
VAH Vaihoa 75.49 260 *e*P **P 00 56 11.9 +1.6**
comp=Z,2µm,1.0s,mb6.6
MSU Marysvale 75.50 325 ⇓ *e*P **P 00 56 10.8 +0.4**
RWWY Rawlins 75.51 330 *e*P **P 00 56 10.6 +0.2**
comp=Z,410nm,0.9s,mb6.1
BFSC Mount Baldy St 75.55 319 ⇑P **P 00 56 11.0 +0.4**
baz=76,SNR=39
BFSC ⇓S S 01 05 39.6 +3.6
baz=76
FMP Fort Macarthur 75.57 318 ⇓P **P 00 56 11.2 +0.4**
baz=76,SNR=5.7
FMP ⇓S S 01 05 40.1 +3.9
baz=76
TMUT Trail Mountain 75.59 326 *e*P **P 00 56 11.9 +1.0**
RRX Edison Barstow 75.60 319 ⇓P **P 00 56 11.5 +0.6**
baz=76,SNR=11
RRX ⇓S S 01 05 40.5 +4.0
baz=76
ARUT Antelope Range 75.64 324 *e*P **P 00 56 12.2 +1.0**
ARUT *e**PP pP 00 56 57.1 +1.4
ARUT Antelope Range 75.64 324 P **P 00 56 12.4 +1.2**
SUR Sutherland 75.65 119 P **P 00 56 11.9 +0.7**
comp=Z,157nm,0.6s,mb5.8,baz=243,slow=6.7,SNR=154
SUR S S 01 05 38.3 +1.3
comp=Z,6.2nm,1.0s,baz=141,slow=22,SNR=1.6
SUR Sutherland 75.65 119 P **P 00 56 13.5 +2.3**
SNR=12
SUR Sutherland 75.65 119 *e*P **P 00 56 12.0 +0.8**
comp=Z,172nm,0.7s,mb5.8
SHPR Sheep Range 75.67 322 *e*P **P 00 56 12.3 +1.0**
U11A Corn Creek 75.74 322 ⇓P **P 00 56 12.1 +0.4**
baz=76,SNR=14
U11A ⇑S S 01 05 43.2 +5.1
baz=76
GSC Goldstone 75.77 320 *e*P **P 00 56 12.4 +0.5**
GSC Goldstone 75.77 320 ⇑P **P 00 56 12.6 +0.7**
baz=76,SNR=93
GSC ⇓S S 01 05 42.8 +4.4
baz=76
MWC Mount Wilson 75.78 318 *e*P **P 00 56 12.3 +0.3**
PMOR Pomariorio Ree 75.81 260 *e*P **P 00 56 13.8 +1.7**
comp=Z,1µm,0.9s,mb6.4
SHOC Shoshone 75.88 321 ⇑P **P 00 56 12.8 +0.3**
baz=76,SNR=24
SHOC ⇑S S 01 05 43.8 +4.2
baz=76
DECC Green Verdugo 75.96 318 ⇓P **P 00 56 13.3 +0.3**
baz=76,SNR=18
DECC ⇓S S 01 05 44.3 +3.8
baz=76
TVO Taravao 76.01 257 *e*P **P 00 56 14.9 +1.6**
comp=Z,1µm,1.1s,mb6.4
SNCC San Nicolas Is 76.03 317 *e*P **P 00 56 14.6 +1.3**
comp=Z,348nm,0.9s,mb6.0
SNCC San Nicolas Is 76.03 317 ⇑P **P 00 56 13.7 +0.4**
baz=76,SNR=13
SNCC ⇓S S 01 05 45.1 +3.9
baz=76
U10A Ash Meadows, A 76.28 321 ⇑P **P 00 56 15.2 +0.4**
baz=77,SNR=112
U10A ⇓S S 01 05 49.3 +5.4
baz=77
BLG Laguna Peak 76.32 318 ⇑P **P 00 56 15.1 +0.1**
baz=77,SNR=27
BLG ⇑S S 01 05 46.9 +2.5
baz=77
PAE Paea 76.35 257 *e*P **P 00 56 16.7 +1.6**
comp=Z,1µm,1.0s,mb6.4
MPU Maple Canyon 76.35 326 *e*P **P 00 56 16.4 +1.3**
PPT Papeete 76.38 257 *e*P **P 00 56 17.0 +1.7**
comp=Z,583nm,1.3s,mb6.1
PPT Papeete 76.38 257 *e*S S 01 05 44.9 -0.1

comp=Z,9µm,34.1s
PPT eLQ 01 16 53.9
comp=Z,48µm,33.0s
PPT eLR LR 01 20 16.7
comp=Z,40µm,77.2s
PPT Papeete 76.38 257 P **P 00 56 16.7 +1.3**
comp=Z,395nn,1.0s,mb6.0,baz=108,slow=11,SNR=17
PPT Papeete 76.38 257 P **P 00 56 16.7 +1.4**
PPT pmax pmax
comp=Z,395nn,1.0s
LRMC Laurel Mountai 76.42 319 ⇑P **P 00 56 15.8 +0.2**
baz=77,SNR=50
LRMC ⇓S S 01 05 49.0 +3.6
baz=77
OSI Osito Adit 76.45 318 ⇑P **P 00 56 15.6 -0.1**
baz=77
OSI ⇓S S 01 05 48.9 +3.1
baz=77
DAU Daniels Canyon 76.46 327 eP **P 00 56 16.3 +0.5**
NLU North Lily Min 76.53 326 eP **P 00 56 16.9 +0.8**
BSC Santa Cruz Isl 76.59 317 ⇑P **P 00 56 16.8 +0.2**
baz=77,SNR=25
BSC ⇓S S 01 05 49.1 +1.7
baz=77
FURC Furnace Creek, 76.62 321 ⇓P **P 00 56 17.2 +0.5**
baz=77,SNR=121
FURC ⇑S S 01 05 52.1 +4.5
baz=77
MPMC Manual Prospec 76.70 320 ⇓P **P 00 56 17.2 +0.1**
baz=77,SNR=144
MPMC ⇑S S 01 05 52.9 +4.4
baz=77
TOA0 Torodi Ar. Sit 76.70 69 ⇑iP **P 00 56 16.0 -1.1**
TOA0 epP pP 00 57 00.9 -0.9
TOA0 esP sP 00 57 25.4 +4.0
TORD Torodi Ar. Bea 76.70 69 P **P 00 56 16.6 -0.6**
comp=Z,334nm,0.5s,mb6.2,baz=255,slow=5.0,SNR=1556
TORD pP pP 00 57 01.0 -0.8
comp=Z,34nm,0.7s,baz=256,slow=5.3,SNR=0.5
TORD S S 01 05 46.4 -2.2
comp=Z,12nm,1.0s,baz=249,slow=11,SNR=7.2
TORD PKPPKP 01 23 28.9
comp=Z,5.1nm,1.0s,baz=38,slow=1.1,SNR=5.4
TORD LR LR 01 30 30.9
comp=Z,8µm,18.4s,baz=230,slow=36
TORD P4KPbc 01 32 53.9
comp=Z,4.1nm,0.8s,baz=263,slow=4.4,SNR=26
TORD Torodi Ar. Bea 76.70 69 P **P 00 56 16.6 -0.6**
TORD pP pP 00 57 01.0 -0.8
TORD S S 01 05 46.4 -2.2
TORD P'P' 01 23 28.9
TORD LR LR 01 30 30.9
ARVC Arvin 76.86 319 ⇑P **P 00 56 18.2 +0.2**
baz=77,SNR=19
ARVC ⇓S S 01 05 54.1 +3.8
baz=77
DAC Darwin (Calif) 76.91 320 eP **P 00 56 18.4 +0.1**
DAC pmax pmax
comp=Z,208nm,1.0s,mb5.7
DAC Darwin (Calif) 76.91 320 eP **P 00 56 18.4 +0.1**
comp=Z,208nm,1.0s,mb5.7
CTU Camp Tracy 76.92 327 eP **P 00 56 19.2 +0.9**
SBC Santa Barbara 76.94 318 ⇑P **P 00 56 18.6 +0.2**
baz=77,SNR=6.6
SBC ⇑S S 01 05 53.2 +2.1
baz=77
ISA Isabella 77.01 319 eP **P 00 56 19.2 +0.4**
comp=Z,312nm,1.1s,mb5.8
ISA Isabella 77.01 319 P **P 00 56 19.3 +0.4**
baz=77,SNR=169
ISA ⇓S S 01 05 56.1 +4.2
baz=77
TCUT Toone Canyon 77.06 327 eP **P 00 56 20.5 +1.3**
NOQ North Oquirrh 77.07 326 eP **P 00 56 20.3 +1.1**
DUG Dugway 77.08 326 eP **P 00 56 20.1 +0.8**
DUG pmax pmax
comp=Z,237nm,1.0s,mb5.8
DUG Dugway 77.08 326 eP **P 00 56 20.1 +0.8**
comp=Z,237nm,1.0s,mb5.8
GRAC Grapevine Rang 77.28 321 ⇑P **P 00 56 20.8 +0.4**
baz=78,SNR=18
GRAC ⇓S S 01 05 59.9 +5.1
baz=78
Q12A Willow Creek R 77.30 324 ⇑P **P 00 56 20.4 -0.1**
baz=78
Q12A ⇑S S 01 05 59.7 +4.7
baz=78
CWC Cottonwood Cre 77.31 320 ⇓P **P 00 56 20.9 +0.4**
baz=78,SNR=88
CWC ⇓S S 01 05 59.0 +4.0
baz=78
PKM Peak Mountain 77.31 318 ⇑P **P 00 56 20.9 +0.4**
baz=78,SNR=182
PKM ⇓S S 01 05 57.8 +2.7
baz=78
BW06 Boulder Array 77.44 329 eP **P 00 56 21.1 -0.1**
PDAR Pinedale Array 77.44 329 P **P 00 56 21.4 +0.2**
comp=Z,59nm,0.5s,mb5.5,baz=132,slow=7.8,SNR=179
PDAR pP pP 00 57 03.7 -2.2
comp=Z,7.6nm,0.6s,baz=78,slow=8.0,SNR=0.7
PDAR S S 01 05 55.5 -1.0
comp=Z,0.6nm,0.8s,baz=98,slow=11,SNR=0.8
PDAR PKKP PKKPbc 01 15 13.4 -11
comp=Z,1.4nm,0.9s,baz=48,slow=0.6,SNR=4.0
PDAR PKKPbc PKKPbc 01 15 25.8 +1.7
comp=Z,1.6nm,0.6s,baz=72,slow=1.3,SNR=11
PDAR PKPPKP 01 23 24.3
comp=Z,1.7nm,1.0s,baz=343,slow=1.5,SNR=3.7
PDAR P4KPbc 01 32 54.3
comp=Z,0.9nm,0.8s,baz=159,slow=4.6,SNR=6.6
PDAR Pinedale Array 77.44 329 P **P 00 56 21.4 +0.2**
PDAR pP pP 00 57 03.8 -2.2
PDAR S S 01 05 55.5 -1.0
PDAR PKKP PKKPbc 01 15 13.4 -11
PDAR PKKPbc PKKPbc 01 15 25.8 +1.7
PDAR P'P' 01 23 24.3
VES Vestal, Richgr 77.49 319 ⇑P **P 00 56 21.7 +0.1**
baz=78,SNR=106
VES ⇑S S 01 06 00.1 +3.0
baz=78
HWUT Hardware Ranch 77.51 327 eP **P 00 56 21.9 +0.2**
comp=Z,186nm,0.6s,mb5.9
TSUM Tsumeb 77.57 106 P **P 00 56 21.7 -0.3**
comp=Z,155nm,0.8s,mb5.7,baz=231,slow=6.5,SNR=186
TSUM S S 01 05 57.7 -0.2
comp=Z,6.4nm,1.0s,baz=43,slow=18,SNR=3.1
TSUM Tsumeb 77.57 106 P **P 00 56 21.7 -0.3**
TSUM eP 00 56 21.9
TSUM ePcP PcP 00 56 33.1 +1.6
TSUM epP pP 00 57 05.2 -1.5
TSUM esP sP 00 57 25.4 -0.9
TSUM S S 01 05 57.7 -0.2
R10A Warm Springs 77.57 322 P **P 00 56 22.9 +0.9**
baz=78,SNR=204
R10A ⇓S S 01 06 02.6 +4.7
baz=78
P12A McGill 77.66 324 ⇓P **P 00 56 22.8 +0.3**
baz=78,SNR=131
P12A ⇓S S 01 06 03.5 +4.6
baz=78
SMMC Simmler 77.69 318 ⇓P **P 00 56 23.4 +0.7**
baz=78,SNR=83
SMMC ⇓S S 01 06 03.1 +3.9
baz=78
S09A Goldfield 77.70 321 ⇑P **P 00 56 22.8 +0.1**
baz=78,SNR=103
S09A ⇑S S 01 06 03.4 +4.1
baz=78
SPUT South Promonto 77.73 327 eP **P 00 56 22.3 -0.6**
TIN Tinemaha 77.81 320 ⇓P **P 00 56 23.8 +0.5**
baz=78,SNR=37
TIN ⇓S S 01 06 04.8 +4.3
baz=78
RCTC Rector, Farmer 77.90 319 ⇑P **P 00 56 23.1 -0.7**
baz=78,SNR=21
TPH Tonopah 77.94 322 eP **P 00 56 25.3 +1.3**
TPH pmax pmax
comp=Z,236nm,1.1s,mb5.7
TPH Tonopah 77.94 322 eP **P 00 56 25.3 +1.3**
comp=Z,236nm,1.1s,mb5.7
R09A Tonopah 77.97 322 P **P 00 56 24.3 +0.1**
baz=78,SNR=254
R09A ⇑S S 01 06 06.5 +4.3
baz=78
V05C Boulder Hill, 78.00 319 ⇑P **P 00 56 24.5 +0.1**
baz=78,SNR=11
V05C ⇓S S 01 06 05.7 +3.1
baz=78
HELL Mitchell Peak, 78.02 320 P **P 00 56 24.2 -0.2**
baz=78,SNR=210
HELL ⇓S S 01 06 04.5 +1.8
baz=78
O12A Currie 78.14 325 ⇓P **P 00 56 24.9 -0.2**
baz=78,SNR=267
O12A ⇑S S 01 06 08.6 +4.6
baz=78
AHID Auburn Hatcher 78.16 328 eP **P 00 56 26.2 +0.9**
comp=Z,373nm,0.9s,mb6.0
P11A Circle Ranch, 78.17 324 ⇓P **P 00 56 25.4 +0.1**
baz=78,SNR=38
P11A ⇑S S 01 06 08.6 +4.3
baz=78
MTUM Tungsten Hills 78.21 320 eP **P 00 56 25.7 +0.2**
HVU Hansel Valley 78.24 327 eP **P 00 56 25.8 +0.1**
N13A Wendover, West 78.29 325 ⇓P **P 00 56 25.5 -0.4**
baz=79,SNR=89
N13A ⇑S S 01 06 09.9 +4.3
baz=79
V04C Ramage Ranch, 78.44 318 ⇓P **P 00 56 27.1 +0.4**
baz=79,SNR=63
V04C ⇓S S 01 06 10.1 +2.9
baz=79
PKD Parkfield 78.44 318 ⇓P **P 00 56 26.8 +0.1**
baz=79,SNR=30
PKD ⇑S S 01 06 10.3 +3.1
baz=79
Q09A Carvers 78.45 322 ⇑P **P 00 56 27.1 +0.3**
baz=79,SNR=48
Q09A ⇑S S 01 06 11.9 +4.6
baz=79
U05C Westside ANR, 78.45 319 ⇑P **P 00 56 26.7 -0.1**
baz=79
U05C ⇑S S 01 06 10.1 +2.8
baz=79
REDW Red Top Meadow 78.50 329 eP **P 00 56 27.1 0.0**
comp=Z,266nm,0.9s,mb5.9
O11A Cowboy Ranch, 78.53 324 ⇓P **P 00 56 27.5 +0.2**
baz=79
O11A ⇑S S 01 06 11.0 +2.8
baz=79
SNOW Snow King Moun 78.53 329 eP **P 00 56 27.8 +0.5**
comp=Z,260nm,0.8s,mb5.9
SNOW eS S 01 06 10.1 +1.9
ULM Lac du Bonnet 78.55 342 P **P 00 56 26.5 -0.9**
comp=Z,158nm,0.7s,mb5.8,baz=150,slow=7.0,SNR=133
ULM pP pP 00 57 08.4 -3.8
comp=Z,34nm,0.8s,baz=295,slow=21,SNR=0.8
ULM S S 01 06 06.0 -2.4
comp=Z,12nm,1.1s,baz=16,slow=19,SNR=5.5
ULM PKKPbc PKKPbc 01 15 20.4 -1.2
comp=Z,4.1nm,0.5s,baz=346,slow=1.1,SNR=7.4
ULM PKPPKP 01 23 28.1
comp=Z,1.7nm,0.7s,baz=187,slow=3.1,SNR=3.3
ULM Lac du Bonnet 78.55 342 P **P 00 56 26.5 -0.9**
ULM pP pP 00 57 08.4 -3.8
ULM S S 01 06 06.0 -2.3
ULM PKKPbc PKKPbc 01 15 20.4 -1.2
ULM P'P' 01 23 28.1
MLAC Mammoth Lakes 78.56 320 ⇓P **P 00 56 27.9 +0.5**
baz=79,SNR=8.4
MLAC ⇑S S 01 06 12.4 +3.9
baz=79
LOHW Long Hollow 78.58 329 eP **P 00 56 27.5 0.0**
comp=Z,198nm,0.7s,mb5.8
LOHW eS S 01 06 09.7 +1.1
P10A Eureka 78.60 323 ⇓P **P 00 56 28.3 +0.6**
baz=79
P10A ⇓S S 01 06 12.3 +3.3
baz=79
R08A Mina 78.63 321 ⇑P **P 00 56 28.1 +0.3**
baz=79,SNR=13
R08A ⇑S S 01 06 12.9 +3.7
baz=79
KCC Kaiser Creek 78.63 320 ⇑P **P 00 56 27.2 -0.6**
baz=79,SNR=57
KCC ⇓S S 01 06 11.1 +1.8
baz=79
M13A Montello 78.64 326 ⇑P **P 00 56 27.3 -0.5**
baz=79,SNR=90
M13A ⇓S S 01 06 12.9 +3.6
baz=79
TPAW Teton Pass 78.65 329 eP **P 00 56 27.6 -0.3**
comp=Z,283nm,0.9s,mb5.9
T06C Millerton Lake 78.65 319 ⇑P **P 00 56 26.8 -1.1**
baz=79,SNR=44
T06C ⇑S S 01 06 09.6 +0.2
baz=79
RRI2 Red Ridge 78.71 329 eP **P 00 56 28.3 0.0**
RRI2 eS S 01 06 08.9 -1.2
N12A Clover Valley, 78.72 325 ⇓P **P 00 56 28.1 -0.1**
baz=79
N12A ⇑S S 01 06 13.7 +3.5
baz=79
ELK Elko 78.75 325 eP **P 00 56 29.5 +1.1**
ELK pmax pmax
comp=Z,218nm,0.9s
ELK Elko 78.75 325 eP **P 00 56 29.5 +1.0**
comp=Z,218nm,0.9s,mb5.8
MOOW Moose Ponds 78.75 329 eP **P 00 56 28.2 -0.2**
MOOW eS S 01 06 13.1 +2.6
NVAR Mina Array Bea 78.80 321 P **P 00 56 29.6 +0.9**
comp=Z,76nm,0.7s,mb5.4,baz=136,slow=6.2,SNR=141
NVAR PKiKP PKiKP 01 02 09.3 +7.3
comp=Z,2.1nm,0.7s,baz=138,slow=3.4,SNR=4.1
NVAR PKKPbc PKKPbc 01 15 23.5 +2.5
comp=Z,1.4nm,0.5s,baz=62,slow=22,SNR=8.9
NVAR PKPPKP 01 23 33.8
comp=Z,4.2nm,1.0s,baz=282,slow=2.8,SNR=8.4
DCID1 Drake Creek 78.83 329 eP **P 00 56 30.6 +1.7**
SCHQ Schefferville 78.85 0 P **P 00 56 28.2 -0.8**
comp=Z,38nm,0.5s,mb5.3,baz=189,slow=4.0,SNR=64
SCHQ pP pP 00 57 11.8 -2.0
comp=Z,32nm,0.8s,baz=195,slow=3.3,SNR=1.9
SCHQ S S 01 06 10.9 -0.7
comp=Z,9.2nm,1.2s,baz=355,slow=15,SNR=2.8
SCHQ PKKPbc PKKPbc 01 15 20.9 0.0
comp=Z,4.2nm,0.6s,baz=52,slow=7.1,SNR=8.6
U04C Hernandez Rese 78.86 318 ⇑P **P 00 56 29.2 +0.1**
baz=79,SNR=68
U04C ⇓S S 01 06 14.9 +3.2
baz=79
Q08A Gabbs 78.89 322 P **P 00 56 29.0 -0.2**
baz=79,SNR=250
Q08A ⇓S S 01 06 15.1 +3.1
baz=79
V03C Hunter Liggett 78.92 318 ⇑P **P 00 56 30.0 +0.7**
baz=79,SNR=40
V03C ⇑S S 01 06 14.5 +2.3
baz=79
P09A Austin 78.92 323 ⇓P **P 00 56 29.4 0.0**
baz=79,SNR=39
P09A ⇓S S 01 06 15.3 +2.9
baz=79
IMW Indian Meadow 78.95 329 eP **P 00 56 29.6 0.0**
comp=Z,351nm,1.0s,mb6.0
FLWY Flagg Ranch 78.98 330 eP **P 00 56 30.0 +0.3**
comp=Z,483nm,1.1s,mb6.0
R07C Lee Vining 78.99 321 ⇓P **P 00 56 30.4 +0.6**
baz=79
R07C ⇓S S 01 06 16.7 +3.6
baz=79
LRV Little Rabbit 79.05 318 eP **P 00 56 31.9 +1.8**
LRV ePcP PcP 00 56 39.3 +1.4
M12A Wells 79.06 325 ⇑P **P 00 56 29.9 -0.3**
baz=79
M12A ⇑S S 01 06 17.2 +3.4
baz=79
N11A Elko Archery C 79.06 324 ⇓P **P 00 56 29.7 -0.4**
baz=79
N11A ⇑S S 01 06 16.1 +2.3
baz=79
LAO LASA Array 79.10 334 eP **P 00 56 29.9 -0.4**
comp=Z,333nm,0.8s,mb6.0
O10A Cortez Mining, 79.10 324 ⇓P **P 00 56 30.1 -0.3**
baz=79,SNR=84
O10A ⇑S S 01 06 17.3 +3.1
baz=79
T05C Eagle Field, D 79.15 319 ⇑P **P 00 56 31.0 +0.4**
baz=79
T05C ⇓S S 01 06 18.4 +3.7
baz=79
S05C Merced 79.25 319 ⇓P **P 00 56 31.2 +0.1**
baz=80,SNR=56
S05C ⇓S S 01 06 18.2 +2.4
baz=80
S06C San Francisco 79.32 320 ⇓P **P 00 56 31.7 +0.1**
baz=80,SNR=116
S06C ⇑S S 01 06 19.5 +2.9
baz=80
YFT Old Faithful 79.33 330 eP **P 00 56 33.8 +2.2**
HAST UC Hastings Re 79.35 318 ⇑P **P 00 56 32.0 +0.3**
baz=80,SNR=52
HAST ⇓S S 01 06 19.3 +2.5
baz=80
O09A Fish Creek Ran 79.39 323 ⇑P **P 00 56 31.2 -0.7**
baz=80,SNR=122
O09A ⇓S S 01 06 19.5 +2.3
baz=80
N10A Dunphy 79.40 324 ⇓P **P 00 56 31.9 -0.1**
baz=80,SNR=45
N10A ⇑S S 01 06 19.5 +2.0
baz=80
Q07A Schurz 79.44 321 ⇑P **P 00 56 32.4 +0.2**
baz=80,SNR=8.4
Q07A ⇓S S 01 06 21.5 +3.8
baz=80
YNR Norris Junctio 79.46 330 eP **P 00 56 39.3 +7.0**
WAKR Walker 79.50 321 eP **P 00 56 33.1 +0.6**
R06C Coleville 79.52 321 ⇓P **P 00 56 32.6 0.0**
baz=80,SNR=136
R06C ⇓S S 01 06 23.0 +4.4
baz=80
M11A Holland Ranch, 79.53 325 ⇓P **P 00 56 32.8 +0.1**
baz=80,SNR=270
M11A ⇑S S 01 06 21.9 +3.2
baz=80
SAO San Andreas Ge 79.53 318 eP **P 00 56 33.4 +0.7**
P08A Dixie Valley 79.55 322 ⇑P **P 00 56 32.7 0.0**
baz=80,SNR=69
P08A ⇑S S 01 06 23.7 +4.8
baz=80
BMN Battle Mountai 79.59 323 eP **P 00 56 33.1 +0.1**
PACP Pacheco Peak 79.59 319 ⇑P **P 00 56 33.2 +0.1**
baz=80,SNR=34
PACP ⇑S S 01 06 21.8 +2.4
baz=80
CMB Columbia Colle 79.74 320 eP **P 00 56 33.3 -0.5**
CMB Columbia Colle 79.74 320 ⇑P **P 00 56 33.6 -0.2**
baz=80,SNR=76
CMB ⇓S S 01 06 24.0 +3.1
baz=80
GCMT Greycliff 79.84 331 eP **P 00 56 34.2 -0.2**
GCMT ePcP PcP 00 56 41.2 -0.1
GCMT epP pP 00 57 22.1 +2.8
GCMT esP sP 00 57 40.2 +1.4
QLMT Earthquake Lak 79.89 330 eP **P 00 56 36.2 +1.6**
P07A Fallon 79.89 322 ⇑P **P 00 56 34.2 -0.5**
baz=80
P07A ⇑S S 01 06 24.2 +1.6
baz=80
S04C Ingram Canyon, 79.94 319 ⇑P **P 00 56 35.0 +0.1**
baz=80,SNR=40
S04C ⇓S S 01 06 24.4 +1.3
baz=80
M10A I.L. Ranch, Tu 79.99 325 ⇑P **P 00 56 34.9 -0.3**
baz=80,SNR=68
M10A ⇓S S 01 06 25.8 +2.3
baz=80
O08A Rochester Mine 80.00 323 ⇑P **P 00 56 34.4 -0.9**
baz=80
O08A ⇑S S 01 06 25.5 +1.8
baz=80
R05C Kirkwood Meado 80.00 321 ⇑P **P 00 56 35.7 +0.5**
baz=80,SNR=69
R05C ⇑S S 01 06 26.1 +2.4
baz=80
N09A Rock Creek Ran 80.05 324 ⇑P **P 00 56 34.9 -0.6**
baz=80,SNR=84
N09A ⇓S S 01 06 25.0 +0.9
baz=80
R04C Big Horse Ranc 80.21 320 ⇓P **P 00 56 36.4 0.0**
baz=80,SNR=68
R04C ⇓S S 01 06 27.6 +1.7
baz=80
BNLO Ben Lomond (Sa 80.21 318 ⇓P **P 00 56 36.5 +0.1**
baz=80,SNR=21
BNLO ⇓S S 01 06 26.8 +1.0
baz=80
WCN Washoe City 80.22 321 ⇓P **P 00 56 36.7 +0.3**
baz=80,SNR=29
WCN ⇑S S 01 06 28.7 +2.7
baz=80
WENL Wente Brothers 80.28 319 ⇓P **P 00 56 37.2 +0.5**
baz=80,SNR=16
WENL ⇓S S 01 06 29.3 +2.7
baz=80
PAHR Pah Rah Range 80.29 322 eP **P 00 56 37.1 +0.4**
comp=Z,477nm,1.0s,mb6.1
O07A Toulon 80.31 322 ⇑P **P 00 56 36.6 -0.3**
baz=81,SNR=164
O07A ⇑S S 01 06 29.2 +2.3
baz=81
N08A GE Springer Mi 80.33 323 ⇓P **P 00 56 36.3 -0.7**
baz=81,SNR=84
N08A ⇑S S 01 06 29.0 +1.9
baz=81
HLID Hailey 80.37 327 eP **P 00 56 37.6 +0.4**
comp=Z,338nm,0.7s,mb6.1
M09A Marrel Ranch, 80.40 324 ⇓P **P 00 56 37.0 -0.4**
baz=81,SNR=83
M09A ⇓S S 01 06 29.1 +1.2
baz=81
LAVA Lava Cap Winer 80.42 320 ⇑P **P 00 56 37.1 -0.4**
baz=81,SNR=55
LAVA ⇓S S 01 06 29.4 +1.3
baz=81
JRSC Jasper Ridge 80.43 318 ⇓P **P 00 56 37.5 0.0**
baz=81,SNR=11
JRSC ⇑S S 01 06 30.4 +2.3
baz=81
MCMT McKenzie Canyo 80.55 329 eP **P 00 56 38.7 +0.6**
MCMT epP pP 00 57 21.8 -1.4
P06A Stead Airport, 80.56 321 ⇑P **P 00 56 38.2 0.0**
baz=81,SNR=9.9
P06A ⇓S S 01 06 33.7 +4.2
baz=81
BDM Black Diamond 80.56 319 ⇓P **P 00 56 38.5 +0.3**
baz=81,SNR=25
BDM ⇑S S 01 06 31.5 +2.0
baz=81
BOSA Boshof 80.58 117 P **P 00 56 37.9 -0.4**
BOSA S S 01 06 26.8 -3.0
BOSA Boshof 80.58 117 P **P 00 56 38.1 -0.2**
comp=Z,189nm,0.6s,mb5.9,baz=251,slow=4.4,SNR=379
BOSA S S 01 06 29.5 -0.3
comp=Z,6.6nm,0.9s,baz=6.8,slow=20,SNR=3.8
BOSA PKKPbc PKKPbc 01 15 16.1 -1.1
comp=Z,6.3nm,0.6s,baz=104,slow=2.4,SNR=14
BOSA Boshof 80.58 117 P **P 00 56 38.1 -0.2**
BOSA S S 01 06 29.5 -0.2
BOSA 01 15 16.1
BOSA pmax pmax
comp=Z,189nm,0.6s,mb5.9
BOSA smax
comp=N,7.0nm,0.9s
BOZ Bozeman (W) 80.60 330 eP **P 00 56 37.6 -0.8**
SAC San Andreas 80.65 318 eP **P 00 56 39.8 +1.1**
P05C Yuba Gap, Truc 80.71 321 ⇑P **P 00 56 39.4 +0.4**
baz=81,SNR=101
P05C ⇓S S 01 06 32.7 +1.6
baz=81
N07B Gerlach 80.79 323 P **P 00 56 39.1 -0.3**
baz=81,SNR=276
N07B ⇑S S 01 06 34.2 +2.3
baz=81
DLMT Dillon 80.83 329 eP **P 00 56 39.7 0.0**
comp=N,312nm,1.0s,mb5.9
O06A Flanigan 80.85 322 ⇓P **P 00 56 39.6 -0.1**
baz=81,SNR=84
O06A ⇓S S 01 06 33.8 +1.3
baz=81
Q04C Lincoln 80.85 320 ⇑P **P 00 56 39.7 -0.1**
baz=81
Q04C ⇑S S 01 06 34.5 +1.9
baz=81
M08A Happy Creek Ra 80.92 324 ⇓P **P 00 56 39.8 -0.4**
baz=81,SNR=109
M08A ⇓S S 01 06 34.6 +1.3
baz=81
L09A Wilkinson Ranc 80.94 324 ⇑P **P 00 56 39.4 -0.8**
baz=81,SNR=59
L09A ⇑S S 01 06 35.0 +1.6

baz=81
BEKR Beckwourth 80.95 321 ⇓P P **00 56 40.2 0.0**
baz=81,SNR=67
BEKR ⇓S S 01 06 36.4 +2.9
baz=81
FARB Farallon Islan 81.08 318 ⇓P P **00 56 41.0 0.0**
baz=81,SNR=13
FARB ⇓S S 01 06 34.9 0.0
baz=81
Q03C Winters 81.09 320 ⇓P P **00 56 41.6 +0.5**
baz=81
Q03C ⇓S S 01 06 37.5 +2.4
baz=81
MAW Mawson 81.11 163 ⇓*i*P P **00 56 40.0 -1.1**
comp=N,342nm,0.6s,mb6.2
MAW Mawson 81.11 163 P P **00 56 40.2 -1.0**
comp=N,408nm,0.7s,mb6.1,baz=220,slow=6.0,SNR=886
MAW S S 01 06 35.5 +0.3
comp=N,7.2nm,1.1s,baz=26,slow=20,SNR=3.1
MAW PKKPbc PKKPbc 01 15 14.9 -1.0
comp=N,8.9nm,0.7s,baz=337,slow=2.0,SNR=19
MAW Mawson 81.11 163 P P **00 56 40.2 -0.9**
MAW S S 01 06 35.5 +0.3
MAW 01 15 14.9
MAW pmax pmax
comp=Z,408nm,0.7s
MAW smax
comp=N,7.0nm,1.1s
LRM Limekiln Ridge 81.11 330 *e*P P **00 56 41.1 0.0**
CVS Carmenet Viney 81.17 319 ⇑P P **00 56 41.1 -0.4**
baz=81,SNR=43
CVS ⇑S S 01 06 36.8 +1.0
baz=81
OHCM Honcut 81.24 320 *e*P P **00 56 42.4 +0.5**
N06A Buffalo Meadow 81.25 322 P P **00 56 41.5 -0.3**
baz=82,SNR=174
N06A ⇑S S 01 06 38.3 +1.7
baz=82
MCCM Marconi Confer 81.29 319 ⇓*i*P P **00 56 41.5 -0.5**
comp=N,250nm,1.0s,mb5.8
MCCM *e*pP pP 00 57 24.9 -2.3
MCCM *e*sP sP 00 57 48.4 +1.6
MCCM Marconi Confer 81.29 319 ⇑P P **00 56 41.7 -0.4**
baz=82,SNR=10
MCCM ⇑S S 01 06 38.1 +1.1
baz=82
O05C Quincy 81.33 321 ⇑P P **00 56 42.3 0.0**
baz=82
O05C ⇓S S 01 06 38.8 +1.3
baz=82
SUTB Sutter Butte 81.35 320 ⇓P P **00 56 41.6 -0.7**
baz=82,SNR=50
SUTB ⇑S S 01 06 39.2 +1.5
baz=82
ORV Oroville 81.40 320 ⇑P P **00 56 42.4 -0.2**
baz=82,SNR=149
ORV ⇑S S 01 06 39.8 +1.6
baz=82
L08A Fields 81.42 324 ⇓P P **00 56 42.1 -0.6**
baz=82,SNR=218
L08A ⇑S S 01 06 38.9 +0.6
baz=82
K09A Rome 81.44 325 ⇑P P **00 56 42.5 -0.4**
baz=82,SNR=120
K09A ⇓S S 01 06 39.1 +0.4
baz=82
HRY Holter Researc 81.50 331 *e*P P **00 56 43.0 -0.2**
MNRC McLaughlin Nat 81.51 319 ⇓P P **00 56 43.3 +0.1**
baz=82,SNR=17
MNRC ⇑S S 01 06 41.4 +2.1
baz=82
EGMT Eagleton 81.61 333 *e*P P **00 56 43.5 -0.3**
comp=N,187nm,0.8s,mb5.8
ELFS Eagle Lake Fie 81.66 322 ⇑P P **00 56 43.8 -0.2**
baz=82
ELFS ⇑S S 01 06 43.6 +2.8
baz=82
O04C Chester 81.67 321 ⇓P P **00 56 43.7 -0.4**
baz=82
O04C ⇓S S 01 06 43.3 +2.4
baz=82
WVOR Wild Horse Val 81.74 324 ⇓*i*P P **00 56 43.9 -0.5**
WVOR *e**PP pP 00 57 28.2 -1.4
WVOR *e**SP sP 00 57 53.1 +4.0
WVOR *e*S S 01 06 42.1 +0.4
WVOR pmax pmax
comp=Z,74nm,0.9s,mb5.3
WVOR Wild Horse Val 81.74 324 ⇓*i*P P **00 56 43.9 -0.5**
comp=Z,69nm,0.9s,mb5.3
WVOR *e*pP pP 00 57 28.1 -1.5
WVOR *e*sP sP 00 57 53.1 +4.0
WVOR *e*S S 01 06 42.1 +0.4
L07A Adell 81.84 323 P P **00 56 45.1 +0.2**
baz=82,SNR=164
L07A ⇓S S 01 06 44.6 +1.9
baz=82
K08A Mann Creek Ran 81.87 324 ⇑P P **00 56 44.6 -0.5**
baz=82,SNR=165
K08A ⇑S S 01 06 43.7 +0.7
baz=82
J09A Fry Pan Ranch, 81.91 325 ⇑S S 01 06 44.3 +0.9
baz=82
M06C Likely Place G 81.91 322 ⇑P P **00 56 45.1 -0.2**
baz=82,SNR=117
M06C ⇓S S 01 06 46.7 +3.3
baz=82
HOPS Hopland 81.96 319 *e*P P **00 56 46.8 +1.2**
HOPS Hopland 81.96 319 ⇑P P **00 56 45.8 +0.2**
baz=82
HOPS ⇑S S 01 06 46.2 +2.3
baz=82
O03C Acorn Hollow, 82.00 321 ⇑P P **00 56 45.0 -0.8**
baz=82
O03C ⇓S S 01 06 44.6 +0.4
baz=82
GASB Alder Springs 82.17 320 ⇓P P **00 56 47.1 +0.4**
baz=82,SNR=68
GASB ⇓S S 01 06 49.0 +3.0
baz=82
HATC Hat Creek Radi 82.21 321 ⇑P P **00 56 46.4 -0.5**
baz=82,SNR=53
HATC ⇑S S 01 06 47.9 +1.4
baz=82
MDT Midelt 82.25 49 P P **00 56 47.7 +0.6**
comp=Z,122nm,0.7s,mb5.6,baz=238,slow=4.7,SNR=226
MDT pP pP 00 57 30.6 -1.7
comp=Z,6.8nm,0.6s,baz=190,slow=13,SNR=0.5
MDT S S 01 06 48.5 +1.6
comp=Z,3.8nm,1.0s,baz=356,slow=23,SNR=1.4
MDT PKKPbc PKKPbc 01 15 14.5 +1.2
comp=Z,4.2nm,0.9s,baz=12,slow=4.5,SNR=4.3
MDT PKPPKP 01 23 14.7
comp=Z,2.4nm,1.0s,baz=6.6,slow=6.9,SNR=2.8
LBTB Lobatse 82.26 114 P P **00 56 47.1 0.0**
LBTB S S 01 06 43.6 -3.4
LBTB PKKPbc PKKPbc 01 15 13.8 +0.5
LBTB Lobatse 82.26 114 P P **00 56 47.2 +0.1**
comp=Z,226nm,0.5s,mb6.0,baz=258,slow=6.4,SNR=498
LBTB S S 01 06 45.6 -1.4
comp=Z,5.4nm,0.9s,baz=160,slow=23,SNR=2.4
LBTB Lobatse 82.26 114 P P **00 56 47.2 +0.1**
LBTB S S 01 06 45.6 -1.3
LBTB pmax pmax
comp=Z,226nm,0.5s,mb6.1
LBTB smax
comp=N,5.0nm,0.9s
LBTB Lobatse 82.26 114 *e*P P **00 56 47.2 0.0**
comp=N,219nm,0.6s,mb6.0
MORF Marmelete 82.29 43 *e*P P **00 56 47.5 +0.2**
MORF *e*S S 01 06 48.1 +0.8
MORF *e*S S 01 06 48.3 +1.0
MORF AMS AMS 01 33 10.7
comp=Z,5µm,17.8s
MORF Marmelete 82.29 43 *e*P P **00 56 47.5 +0.2**
MORF *e*S S 01 06 48.1 +0.8
MORF pmax pmax
comp=Z,700nm,1.0s,mb6.2
MORF smax
comp=N,1µm,0.9s
MORF MLR MLR
comp=Z,5µm,17.8s
CHMT Chamberlain Mo 82.30 330 *e*P P **00 56 46.9 -0.4**
I09A Lost Marbles R 82.34 326 ⇑P P **00 56 47.1 -0.5**
baz=83,SNR=214
I09A ⇑S S 01 06 48.7 +0.8
baz=83
M05C Lookout 82.39 322 ⇓P P **00 56 47.2 -0.6**
baz=83
M05C ⇓S S 01 06 51.3 +3.0
baz=83
PTEO Sao Teotonio 82.39 43 *e*P P **00 56 49.1 +1.3**
comp=Z,356nm,1.4s,mb5.8
PTEO *e*- pP 00 57 36.8 +3.8
PTEO *e*S S 01 06 50.5 +2.2
P01C Double 8 Ranch 82.42 319 ⇑P P **00 56 48.3 +0.4**
baz=83,SNR=22
P01C ⇑S S 01 06 51.0 +2.4
baz=83
MSO Missoula 82.55 330 *e*P P **00 56 48.4 -0.2**
O02C Red Bluff 82.55 320 ⇓P P **00 56 48.0 -0.6**
baz=83,SNR=33
O02C ⇓S S 01 06 51.7 +1.8
baz=83
WDC Whiskeytown Da 82.67 321 *e*P P **00 56 47.3 -2.0**
WDC Whiskeytown Da 82.67 321 ⇑P P **00 56 47.7 -1.6**
baz=83,SNR=92
WDC ⇓S S 01 06 50.2 -0.9
baz=83
L05A Lakeview 82.68 323 ⇓P P **00 56 49.5 +0.2**
baz=83,SNR=120
L05A ⇑S S 01 06 53.4 +2.3
baz=83
I08A Drewsey 82.73 325 ⇓P P **00 56 49.1 -0.5**
baz=83,SNR=125
I08A ⇑S S 01 06 54.1 +2.4
baz=83
BMO Blue Mountains 82.74 327 *e*P P **00 56 49.9 +0.2**
H09A Durkee 82.79 326 ⇓P P **00 56 49.2 -0.7**
baz=83,SNR=59
H09A ⇓S S 01 06 54.1 +1.7
baz=83
LIS Lisbon 82.86 42 *e*P P **00 56 49.5 -0.8**
LIS *e*S S 01 06 55.7 +2.6
LIS *e*S S 01 06 55.7 +2.6
LIS AMS AMS 01 29 48.9
comp=Z,6µm,23.4s
LIS Lisbon 82.86 42 *e*P P **00 56 49.5 -0.7**
LIS *e*S S 01 06 55.6 +2.5
LIS pmax pmax
comp=Z,200nm,1.0s,mb5.8
LIS smax
comp=N,700nm,1.0s
K06A Valley Falls 82.86 324 P P **00 56 50.2 0.0**
baz=83,SNR=253
K06A ⇓S S 01 06 55.5 +2.4
baz=83
M03C McCloud 82.89 321 ⇑P P **00 56 49.3 -1.1**
baz=83,SNR=36
M03C ⇑S S 01 06 53.4 +0.1
baz=83
PLML Palmela 82.91 42 *e*P P **00 56 51.5 +1.0**
PMAFR Mafra 82.93 42 *e*P P **00 56 50.3 -0.3**
PMAFR Mafra 82.93 42 *e*P P **00 56 50.5 -0.1**
PMAFR *e*pP pP 00 57 33.3 -2.6
PMAFR *e*- pP 00 57 36.0 +0.1
PMAFR *e*S S 01 06 56.4 +2.6
PMAFR Mafra 82.93 42 eLQ 01 18 34.4
PMAFR eLR LR 01 24 03.1
PLOU Loures 82.97 42 *e*P P **00 56 51.8 +1.0**
PLOU Loures 82.97 42 *e*S S 01 06 52.7 -1.4
M04C Macdoel 83.06 322 ⇓P P **00 56 50.6 -0.6**
baz=83,SNR=84
M04C ⇓S S 01 06 57.1 +2.1
baz=83
J06A Christmas Vall 83.12 324 P P **00 56 51.2 -0.3**
baz=83,SNR=232
J06A ⇑S S 01 06 55.4 -0.3
baz=83
EGRO El Granado 83.16 44 P P **00 56 53.0 +1.2**
comp=N,306nm,1.0s,mb6.0
K05A Summer Lake 83.16 323 ⇓S S 01 06 58.4 +2.3
baz=83
H08A Prairie City 83.20 326 ⇑P P **00 56 51.6 -0.4**
baz=84,SNR=149
H08A ⇓S S 01 06 59.3 +2.8
baz=84
PBEJ Beja 83.22 43 *e*P P **00 56 52.4 +0.3**
comp=N,77nm,0.8s,mb5.5
PBEJ *e*S S 01 06 51.1 -5.6
N02C Big Bar 83.27 321 ⇑P P **00 56 52.1 -0.3**
baz=84,SNR=74
N02C ⇑S S 01 06 58.5 +1.3
baz=84
I07A Izee 83.34 325 ⇓P P **00 56 52.3 -0.3**
baz=84,SNR=174
I07A ⇑S S 01 06 59.7 +1.8
baz=84
L04A Klamath Falls 83.35 322 ⇓P P **00 56 52.3 -0.4**
baz=84,SNR=14
L04A ⇑S S 01 06 58.9 +1.0
baz=84
M02C Callahan 83.38 321 ⇑P P **00 56 52.1 -0.8**
baz=84,SNR=24
M02C ⇓S S 01 06 58.4 +0.1
baz=84
ALMR Almeirim 83.48 42 *e*P P **00 56 52.8 -0.6**
YBH Yreka Blue Hor 83.52 322 LR LR 01 33 09.9
comp=N,3µm,21.8s,baz=145,slow=35
YBH Yreka Blue Hor 83.52 322 *e*P P **00 56 52.3 -1.3**
YBH Yreka Blue Hor 83.52 322 ⇑P P **00 56 52.7 -0.9**
baz=84,SNR=64
YBH ⇓S S 01 06 58.0 -1.6
baz=84
K04A Chilquin 83.55 323 ⇓P P **00 56 53.4 -0.3**
baz=84,SNR=22
K04A ⇑S S 01 07 01.0 +1.0
baz=84
KHMM Horse Mountain 83.55 320 *e*P P **00 56 54.8 +1.0**
I06A Prineville 83.62 324 ⇑P P **00 56 53.9 -0.2**
baz=84,SNR=138
I06A ⇓S S 01 07 01.7 +1.1
baz=84
F09A S2 Ranch, Elgi 83.65 327 ⇑S S 01 06 59.9 -1.1
baz=84
JCC Jacoby Creek 83.69 320 ⇑P P **00 56 54.6 +0.1**
baz=84
JCC ⇑S S 01 07 00.6 -0.8
baz=84
BSMT Bassoo Peak 83.69 330 P P **00 56 55.0 +0.5**
J05A Fort Rock 83.72 323 P P **00 56 54.4 -0.2**
baz=84,SNR=167
J05A ⇓S S 01 07 00.2 -1.6
baz=84
ESPR Espera 83.80 45 P P **00 56 56.3 +1.2**
comp=N,109nm,0.7s,mb5.7
EJIF Jimena Fronter 83.80 45 P P **00 56 56.5 +1.5**
EJIF pmax pmax
comp=Z,58nm,0.6s,mb5.5
EJIF Jimena Fronter 83.80 45 P P **00 56 56.5 +1.4**
comp=Z,58nm,0.6s,mb5.5
EMIN Mina Concepcio 83.81 44 P P **00 56 55.5 +0.3**
comp=Z,224nm,1.0s,mb5.8
PTOM Tomar 83.87 42 *e*P P **00 56 55.6 +0.2**
PTOM *e*pP pP 00 57 40.9 +0.1
PTOM *e*S S 01 07 03.4 +0.2
G08A Pilot Rock 83.89 326 ⇓S S 01 07 03.5 +0.1
baz=84
RAR Rarotonga 83.89 250 P P **00 56 55.4 -0.1**
comp=Z,159nm,1.1s,mb5.7,baz=192,slow=5.1,SNR=10
RAR Rarotonga 83.89 250 P P **00 56 55.4 -0.1**
RAR pmax pmax
comp=Z,159nm,1.1s
PESTR Estremoz 83.91 43 *e*P P **00 56 55.9 +0.3**
comp=Z,174nm,1.1s,mb5.7
PESTR *e*- pP 00 57 39.8 -1.2
PESTR *e*S S 01 07 04.3 +0.7
PESTR Estremoz 83.91 43 eLQ 01 19 23.2
PESTR eLR LR 01 24 39.0
KTRM Thompson Ridge 84.01 321 P P **00 56 57.0 +0.9**
F08A Pendleton 84.14 326 ⇓P P **00 56 55.7 -1.1**
baz=84,SNR=21
F08A ⇓S S 01 07 02.7 -3.2
baz=84
WALA Waterton Lakes 84.19 331 *e*P P **00 56 56.0 -1.0**
comp=Z,166nm,0.8s,mb5.8
EBAD Badajoz 84.20 43 P P **00 56 58.1 +1.1**
comp=Z,78nm,0.7s,mb5.5
H06A Lindquist Farm 84.22 325 ⇑P P **00 56 57.0 -0.1**
baz=84,SNR=106
H06A ⇑S S 01 07 05.1 -1.5
baz=84
FFC Flin Flon 84.28 340 ⇓*i*P P **00 56 55.7 -1.8**
FFC *e**PP pP 00 57 40.6 -2.3
FFC *e*S S 01 07 06.5 -0.8
FFC pmax pmax
comp=Z,130nm,1.1s,mb5.6
FFC Flin Flon 84.28 340 ⇓*i*P P **00 56 55.7 -1.8**
comp=Z,130nm,1.1s,mb5.6
FFC *e*pP pP 00 57 40.6 -2.3
FFC *e*sP sP 00 58 06.4 +4.1
FFC *e*S S 01 07 06.5 -0.7
L02A Cave Junction 84.30 321 ⇓P P **00 56 57.3 -0.3**
baz=85,SNR=27
L02A ⇓S S 01 07 04.8 -2.7
baz=85
EMIJ Mijas 84.32 46 P P **00 56 58.0 +0.4**
comp=Z,111nm,0.8s,mb5.6
I05A Bend 84.33 324 ⇑P P **00 56 57.8 +0.1**
baz=85,SNR=98
I05A ⇓S S 01 07 06.4 -1.4
baz=85
M01C Crescent City 84.40 321 ⇓P P **00 56 58.0 -0.1**
baz=85
M01C ⇑S S 01 07 07.7 -0.8
baz=85
PCBR Castelo Branco 84.58 42 *e*P P **00 56 59.0 +0.1**
comp=Z,213nm,1.0s,mb5.8
PCBR *e*pP pP 00 57 44.7 +0.3
PCBR *e*S S 01 07 07.2 -3.0
H05A Madras 84.63 324 ⇑P P **00 56 58.9 -0.3**
baz=85,SNR=22
H05A ⇑S S 01 07 08.6 -2.2
baz=85
KBO Bosley Butte 84.69 321 *e*P P **00 57 00.9 +1.4**
PTO Porto 84.71 40 *e*P P **00 57 00.1 +0.5**
comp=Z,474nm,1.4s,mb6.0
G06A Carlson Farm, 84.71 325 ⇑P P **00 56 59.5 -0.2**
baz=85,SNR=50
G06A ⇓S S 01 07 07.6 -4.0
baz=85
J03A Ideyld Park 84.73 323 ⇓P P **00 56 58.7 -1.0**
baz=85
J03A ⇑S S 01 07 07.6 -4.1
baz=85
WIW Wooded Island 84.84 327 P P **00 57 00.8 +0.6**
PVIS Viseu 84.86 41 *e*P P **00 57 00.3 -0.1**
comp=Z,146nm,1.2s,mb5.6
PVIS *e*pP pP 00 57 44.7 -1.2
PVIS *e*S S 01 07 07.0 -6.0
MTE Manteigas 84.88 41 *e*P P **00 57 00.5 0.0**
comp=Z,355nm,0.7s,mb6.2
MTE *e*- pP 00 57 43.0 -2.9
MTE *e*S S 01 07 08.2 -5.0
MTE Manteigas 84.88 41 eLQ 01 19 27.6
MTE eLR LR 01 25 17.2
comp=Z,6µm,25.3s
PRW Prosser 84.89 326 P P **00 57 01.4 +0.9**
HAWA Hanford 84.94 327 *e*P P **00 57 00.2 -0.5**
RSW Rattlesnake Hi 84.97 327 P P **00 57 01.6 +0.7**
J02A Umpqua 85.06 322 ⇓P P **00 57 01.3 -0.1**
baz=85,SNR=47
J02A ⇓S S 01 07 10.7 -4.3
baz=85
ELOJ Sierra Loja 85.06 46 P P **00 57 02.2 +0.8**
ELOJ pmax pmax
comp=Z,89nm,0.6s,mb5.7
ELOJ Sierra Loja 85.06 46 P P **00 57 02.2 +0.8**
comp=Z,89nm,0.6s,mb5.7
G05A Wamic 85.07 325 ⇓P P **00 57 01.3 -0.1**
baz=85,SNR=78
G05A ⇑S S 01 07 12.5 -2.6
baz=85
NEW Newport 85.08 329 *e*P P **00 56 59.8 -1.6**
EALB Alboran 85.11 47 P P **00 57 01.5 -0.1**
comp=Z,223nm,0.6s,mb6.1
H04A Detroit Lake 85.17 324 ⇑P P **00 57 00.7 -1.2**
baz=85
H04A ⇓S S 01 07 10.9 -5.1
baz=85
KEBM Edson Butte 85.17 322 *e*P P **00 57 02.8 +0.9**
ERON Agron 85.22 46 P P **00 57 02.4 +0.3**
comp=Z,66nm,0.6s,mb5.5
OD2 Odessa Site #2 85.22 328 P P **00 57 02.4 +0.3**
ELUQ Luque 85.23 45 P P **00 57 02.7 +0.5**
ELUQ pmax pmax
comp=Z,434nm,0.9s,mb6.2
ELUQ Luque 85.23 45 P P **00 57 02.7 +0.5**
comp=Z,434nm,0.9s,mb6.2
EGUA Guajares 85.27 46 P P **00 57 02.5 +0.2**
comp=Z,2.9nm,0.6s
EZAM Zamans 85.28 39 P P **00 57 02.5 0.0**
EZAM pmax pmax
comp=Z,127nm,0.6s,mb5.8
EZAM Zamans 85.28 39 P P **00 57 02.5 0.0**
comp=Z,127nm,0.6s,mb5.8
I03A Eugene 85.29 323 ⇑P P **00 57 02.0 -0.5**
baz=86
I03A ⇑S S 01 07 11.1 -6.1
baz=86
FHE Frenchman Hill 85.30 327 P P **00 57 03.4 +0.8**
PVRL Vila Real 85.31 41 *e*P P **00 57 02.6 0.0**
comp=Z,466nm,1.0s,mb6.2
PVRL *e*pP pP 00 57 47.7 -0.4
PVRL *e*S S 01 07 11.6 -5.9
EADA Adamuz 85.38 45 P P **00 57 03.0 0.0**
comp=Z,172nm,0.8s,mb5.8
PCAB Cabril 85.40 40 *e*P P **00 57 03.5 +0.5**
comp=Z,264nm,0.7s,mb6.1
PCAB *e*pP pP 00 57 49.2 +0.6
PCAB *e*S S 01 07 10.8 -7.5
ELOB Lobios 85.48 40 P P **00 57 03.3 -0.1**
comp=Z,98nm,0.6s,mb5.7
ECOG Cogollos-Vega 85.52 46 P P **00 57 04.5 +0.9**
ECOG pmax pmax
comp=Z,74nm,0.8s,mb5.5
ECOG Cogollos-Vega 85.52 46 P P **00 57 04.5 +0.8**
comp=Z,74nm,0.8s,mb5.5
F05A White Salmon 85.58 325 ⇑P P **00 57 03.2 -0.7**
baz=86,SNR=31
F05A ⇑S S 01 07 12.9 -7.1
baz=86
I02A Mapleton 85.62 323 ⇑P P **00 57 03.8 -0.3**
baz=86,SNR=38
I02A ⇑S S 01 07 15.1 -5.3
baz=86
EMAZ Mazaricos 85.62 39 P P **00 57 03.8 -0.3**
comp=Z,57nm,0.6s,mb5.5
G04A Mulino 85.67 324 ⇑P P **00 57 03.7 -0.7**
baz=86
G04A ⇓S S 01 07 14.0 -6.9
baz=86
EBER Berja 85.75 46 P P **00 57 05.4 +0.6**
comp=Z,147nm,0.8s,mb5.8
MPOR Mary's Peak 85.79 323 P P **00 57 05.8 +0.9**
FCC Fort Churchill 85.79 346 *e*P P **00 57 04.2 -0.8**
EBG Ellensburg 85.81 326 P P **00 57 05.8 +0.7**
STS Santiago 85.83 39 P P **00 57 05.0 -0.2**
STS pmax pmax
comp=Z,40nm,0.6s,mb5.3
STS Santiago 85.83 39 P P **00 57 05.0 -0.2**
comp=Z,40nm,0.6s,mb5.3
EBAN Banos Encina 85.89 45 P P **00 57 06.0 +0.5**
EBAN pmax pmax
comp=Z,394nm,0.8s,mb6.2
EBAN Banos Encina 85.89 45 P P **00 57 06.0 +0.6**
comp=Z,394nm,0.8s,mb6.2
F04A Amboy 86.11 325 ⇓P P **00 57 05.6 -0.9**
baz=86
F04A ⇑S S 01 07 16.6 -8.7
baz=86
H02A Toledo 86.14 323 ⇓P P **00 57 07.1 +0.5**
baz=86
H02A ⇑S S 01 07 17.7 -7.8
baz=86
EQES Quesada 86.14 45 P P **00 57 06.7 0.0**
comp=Z,274nm,0.9s,mb6.0
G03A Yamhill 86.17 324 ⇓P P **00 57 06.3 -0.5**
baz=86
G03A ⇑S S 01 07 16.4 -9.3
baz=86
E05A Randle 86.19 326 ⇑P P **00 57 05.9 -1.0**
baz=86,SNR=45
E05A ⇓S S 01 07 15.5 -10
baz=86
PBRG Braganca 86.22 41 *e*P P **00 57 08.0 +0.9**
comp=Z,332nm,1.4s,mb5.9
PBRG *e*pP pP 00 57 52.8 +0.1
PBRG *e*S S 01 07 18.4 -7.8
ENIJ Nijar 86.24 47 P P **00 57 07.1 -0.1**

ENIJ pmax pmax
comp=Z,91nm,0.7s,mb5.6
ENIJ Nijar 86.24 47 P **P** **00 57 07.1 -0.1**
comp=Z,91nm,0.7s,mb5.6
ECAL Calabor 86.30 40 P **P** **00 57 08.4 +0.9**
comp=Z,106nm,1.1s,mb5.5
EHUE Huescar 86.46 46 P **P** **00 57 08.2 -0.1**
EHUE pmax pmax
comp=Z,71nm,0.8s,mb5.5
EHUE Huescar 86.46 46 P **P** **00 57 08.2 -0.1**
comp=Z,71nm,0.8s,mb5.5
NLW Nelson Butte 86.49 327 P **P** **00 57 08.2 -0.2**
ESDC Sonseca Array 86.65 44 P **P** **00 57 10.0 +0.8**
comp=Z,79nm,0.7s,mb5.6,baz=238,slow=4.7,SNR=196
ESDC pP pP 00 57 53.2 -1.6
comp=Z,31nm,1.0s,baz=253,slow=5.3,SNR=0.8
ESDC PKiKP PKiKP 01 02 15.8 +1.3
comp=Z,0.6nm,0.5s,baz=228,slow=2.1,SNR=2.6
ESDC PKKPbc PKKPbc 01 15 04.1 +1.0
comp=Z,1.9nm,0.6s,baz=20,slow=2.4,SNR=8.5
ESDC PKPPKP 01 23 17.5
comp=Z,0.6nm,0.7s,baz=127,slow=2.8,SNR=4.1
ESDC LR LR 01 34 34.7
comp=Z,7μm,20.5s,baz=230,slow=34
ESDC Sonseca Array 86.65 44 P **P** **00 57 10.0 +0.8**
comp=Z,90nm,0.8s,mb5.7
ESLA Sonseca Array 86.65 44 *eP* **P** **00 57 09.4 +0.2**
USTO Oran 86.67 48 P **P** **00 57 12.0 +2.7**
E04A Onalaska 86.70 325 ⇑P **P** **00 57 08.4 -1.0**
baz=87,SNR=9.1
E04A ⇑S S 01 07 18.7 -12
baz=87
F03A Seaside 86.71 324 ⇓P **P** **00 57 08.8 -0.7**
baz=87,SNR=25
F03A ⇑S S 01 07 19.8 -11
baz=87
D05A Enumclaw 86.72 326 ⇑P **P** **00 57 08.2 -1.3**
baz=87,SNR=64
D05A ⇑S S 01 07 20.2 -11
baz=87
ODJA Bouhanifia 86.73 49 P **P** **00 57 13.0 +3.5**
RMW Rattlesnake Mo 86.81 326 P **P** **00 57 09.3 -0.6**
C05A Tolt Reservoir 86.90 326 ⇓P **P** **00 57 08.4 -2.0**
baz=87,SNR=53
C05A ⇑S S 01 07 19.7 -13
baz=87
EPON Pontenova 86.91 39 P **P** **00 57 11.0 +0.6**
comp=Z,58nm,0.6s,mb5.6
EVIA Vianos 86.99 45 P **P** **00 57 11.2 +0.4**
EVIA pmax pmax
comp=Z,84nm,0.6s,mb5.8
EVIA Vianos 86.99 45 P **P** **00 57 11.2 +0.4**
comp=Z,84nm,0.6s,mb5.8
EDM Edmonton 87.07 334 *eP* **P** **00 57 09.0 -2.2**
D04A Dobbs Creek Ra 87.09 326 ⇑P **P** **00 57 10.8 -0.4**
baz=87
D04A ⇓S S 01 07 24.0 -11
baz=87
GUD Guadarrama 87.09 43 P **P** **00 57 12.3 +1.0**
GUD pmax pmax
comp=Z,142nm,1.1s,mb5.7
GUD Guadarrama 87.09 43 P **P** **00 57 12.3 +1.0**
comp=Z,142nm,1.1s,mb5.7
E03A Lebam 87.11 325 ⇓P **P** **00 57 10.6 -0.8**
baz=87,SNR=71
E03A ⇑S S 01 07 22.0 -13
baz=87
EMUR La Murta 87.37 46 P **P** **00 57 12.7 +0.1**
comp=Z,48nm,0.9s,mb5.3
CART Cartagena 87.38 47⇑ *iP* **P** **00 57 11.2 -1.5**
comp=Z,459nm,0.8s,mb6.4
CART *ep*P pP 00 57 56.4 -2.1
CART *es*P sP 00 58 18.5 +0.7
CART *eS* S 01 07 19.9 -18
GNW Green Mountain 87.39 326 *eP* **P** **00 57 12.5 -0.3**
B05A Bryant 87.49 327 ⇑P **P** **00 57 11.7 -1.5**
baz=88,SNR=121
B05A ⇑S S 01 07 24.9 -14
baz=88
C04A Brinnon 87.57 326 ⇓P **P** **00 57 12.7 -0.8**
baz=88
C04A ⇓S S 01 07 24.9 -14
baz=88
D03A Wishkah Elem. 87.59 325 ⇓P **P** **00 57 13.3 -0.4**
baz=88,SNR=38
D03A ⇓S S 01 07 25.0 -14
baz=88
ETOB Tobarra 87.61 45 P **P** **00 57 14.2 +0.4**
comp=Z,118nm,0.8s,mb5.8
OKGL Djebel Kef Gue 87.65 49 P **P** **00 57 17.0 +3.0**
ETRT Tiaret 87.76 49 P **P** **00 57 16.5 +2.0**
EANR 'Ain N'Sour 87.92 49 P **P** **00 57 17.0 +1.8**
A05A Maple Falls 87.97 327 ⇓P **P** **00 57 14.2 -1.2**
baz=88,SNR=62
A05A ⇑S S 01 07 27.2 -16
baz=88
VDB Vedder Mountai 88.00 327 P **P** **00 57 15.0 -0.6**
OSD Olympics--Snow 88.01 326 P **P** **00 57 16.3 +0.6**
EARI Arriondas 88.02 40 P **P** **00 57 16.1 +0.4**
comp=Z,41nm,0.8s,mb5.3
B04A Port Angeles 88.06 326 ⇑P **P** **00 57 15.1 -0.8**
baz=88
B04A ⇑S S 01 07 27.2 -17
baz=88
A04A Legoe Bay, Lum 88.09 327 ⇑P **P** **00 57 15.1 -0.9**
baz=88,SNR=51
A04A ⇓S S 01 07 28.8 -15
baz=88
MIR Mirnyy 88.13 172 *diP* **P** **00 57 16.0 -0.2**
MIR *e* 01 07 44.0
MIR eSSS 01 13 36.0
MIR pmax pmax
comp=Z,130nm,2.0s,mb5.4
MIR MLR MLR
comp=N,2μm,20.0s
MIR MLR MLR
comp=E,2μm,20.0s
MIR MLR MLR
comp=Z,4μm,20.0s
ECHA Ech Chlef 88.21 49 P **P** **00 57 17.5 +0.9**
SNB Saturna Island 88.36 327 P **P** **00 57 16.8 -0.5**
EBNR Beni Rached 88.39 49 P **P** **00 57 20.0 +2.5**
LSZ Lusaka 88.42 106 P **P** **00 57 19.9 +2.3**
comp=Z,142nm,0.7s,mb5.9,baz=238,slow=4.1,SNR=356
LSZ pP pP 00 58 02.1 -1.4
comp=Z,42nm,1.0s,baz=221,slow=23,SNR=0.9
LSZ S S 01 07 35.9 -11
comp=Z,1.5nm,0.7s,baz=46,slow=23,SNR=1.0
LSZ PKKPbc PKKPbc 01 14 59.4 +0.6
comp=Z,34nm,0.9s,baz=61,slow=2.6,SNR=31
LSZ Lusaka 88.42 106 P **P** **00 57 20.2 +2.6**
SNR=88
LSZ Lusaka 88.42 106 P **P** **00 57 19.9 +2.3**
LSZ *PP pP 00 58 02.1 -1.3
LSZ pmax pmax
comp=Z,142nm,0.7s,mb5.9
LSZ Lusaka 88.42 106 *eP* **P** **00 57 19.1 +1.6**
EBEN Beniarda 88.51 46 P **P** **00 57 18.6 +0.7**
comp=Z,108nm,0.8s,mb5.8
ECHE Chera 88.51 45 P **P** **00 57 18.3 +0.3**
ECHE pmax pmax
comp=Z,57nm,0.7s,mb5.6
ECHE Chera 88.51 45 P **P** **00 57 18.3 +0.3**
comp=Z,57nm,0.7s,mb5.6
C03A Quillayute Air 88.54 325 ⇑P **P** **00 57 17.8 -0.3**
baz=89
C03A ⇓S S 01 07 30.5 -18
baz=89
ELAN Lanestosa 89.03 41 P **P** **00 57 20.4 0.0**
comp=Z,58nm,0.6s,mb5.7
EMOS Mosqueruela 89.25 45 P **P** **00 57 22.7 +1.2**
comp=Z,38nm,0.7s,mb5.4
EMHD Djebel Mahouad 89.33 49 P **P** **00 57 23.5 +1.7**
CASY Casey 89.64 179 *eP* **P** **00 57 22.4 -0.9**
ABA Alger-Bouzarea 89.69 49 P **P** **00 57 25.7 +2.2**
EIBI Ibiza 89.71 46 P **P** **00 57 25.0 +1.3**
comp=Z,84nm,0.6s,mb5.8
ESAC San Caprasio 90.00 43 P **P** **00 57 25.9 +1.0**
comp=Z,107nm,0.6s,mb6.0
ERTA Horta de San J 90.09 44 P **P** **00 57 26.4 +1.0**
comp=Z,131nm,1.2s,mb5.7
ELIZ Elizondo 90.14 42 P **P** **00 57 26.5 +0.9**
ELIZ pmax pmax
comp=Z,22nm,0.7s,mb5.2
ELIZ Elizondo 90.14 42 P **P** **00 57 26.5 +0.9**
comp=Z,22nm,0.7s,mb5.2
EALK Alkurruntz 90.18 42 P **P** **00 57 27.3 +1.5**
comp=Z,32nm,0.6s,mb5.4
SJPF Ste Jean 90.30 42 *eP* **P** **00 57 26.5 +0.2**
comp=Z,296nm,0.9s,mb5.9
SJPF *ep*P pP 00 58 14.1 +1.8
SJPF Ste Jean 90.30 42 *eP* **P** **00 57 26.5 +0.2**
SJPF *e**PP pP 00 58 14.1 +1.8
SJPF pmax pmax
comp=Z,148nm,0.9s,mb5.9
SJPF Ste Jean 90.30 42 *eP* **P** **00 57 26.5 +0.2**
comp=Z,148nm,0.9s,mb5.9
SJPF *ep*P pP 00 58 14.1 +1.8
OSSF Osses 90.35 42 *eP* **P** **00 57 26.9 +0.3**
LARF Larrau 90.40 42 *eP* **P** **00 57 27.6 +0.8**
ORDF Ordiarp 90.53 42 *eP* **P** **00 57 26.9 -0.5**
ETSF Etsaut 90.59 42 *eP* **P** **00 57 27.9 +0.2**
comp=Z,226nm,0.9s,mb5.9
ETSF Etsaut 90.59 42 *eP* **P** **00 57 27.9 +0.2**
ETSF pmax pmax
comp=Z,113nm,0.9s,mb5.9
ETSF Etsaut 90.59 42 *eP* **P** **00 57 27.9 +0.2**
comp=Z,113nm,0.9s,mb5.9
ATE Arette 90.60 42 *eP* **P** **00 57 28.5 +0.7**
VAL Valentia 90.71 31⇑ *i*PS SKSac 01 07 42.5 +0.2
EPOB Poblet 90.78 44 P **P** **00 57 28.6 0.0**
comp=Z,25nm,0.7s,mb5.4
REYF Montagne du Re 90.78 42 *eP* **P** **00 57 29.6 +1.0**
EBIE Bielsa 90.90 43 P **P** **00 57 30.2 +1.1**
comp=Z,26nm,0.5s,mb5.5
VIEF Viey 90.94 43 *eP* **P** **00 57 29.7 +0.4**
CKHR Kef el Ahmar 91.02 51 P **P** **00 57 33.0 +3.3**
SET Setif 91.04 50 P **P** **00 57 33.0 +3.2**
LABF Labassere 91.06 42 *eP* **P** **00 57 30.1 +0.2**
ETOS Mallorca 91.07 46 P **P** **00 57 30.3 +0.4**
comp=Z,48nm,0.7s,mb5.6
RESF Ens 91.09 43 *eP* **P** **00 57 31.5 +1.5**
EPF Esparros 91.21 43 *eP* **P** **00 57 30.6 0.0**
comp=Z,116nm,0.9s,mb5.6
EPF Esparros 91.21 43 *eP* **P** **00 57 30.6 0.0**
EPF pmax pmax
comp=Z,58nm,0.9s,mb5.6
EPF Esparros 91.21 43 *eP* **P** **00 57 30.6 0.0**
comp=Z,58nm,0.9s,mb5.6
MELF Melles 91.39 43 *eP* **P** **00 57 31.8 +0.4**
DFRA Djebel Bou Aff 91.54 50 P **P** **00 57 35.5 +3.4**
SALF Salau 91.59 43 *eP* **P** **00 57 33.2 +0.8**
MLS Moulis 91.64 43 *eP* **P** **00 57 32.9 +0.3**
CTEI Djebel Teioual 91.68 51 P **P** **00 57 35.0 +2.2**
OLEF Ile d'Oleron 91.80 39 *eP* **P** **00 57 33.4 +0.1**
CASM Ain Smara 91.83 51 P **P** **00 57 35.5 +2.0**
QUIF Quistinic 91.88 37 *eP* **P** **00 57 32.5 -1.2**
comp=Z,80nm,0.7s,mb5.5
QUIF Quistinic 91.88 37 *eP* **P** **00 57 32.5 -1.2**
QUIF pmax pmax
comp=Z,40nm,0.7s,mb5.6
QUIF Quistinic 91.88 37 *eP* **P** **00 57 32.5 -1.2**
comp=Z,40nm,0.7s,mb5.6
SFJD Kangerlussuaq 91.89 6 P **P** **00 57 32.9 -0.8**
SFJD *pP* pP 00 58 17.7 -2.0
SFJD SKSac SKSac 01 07 45.8 -3.2
SFJD S S 01 08 15.7 -3.4
SFJD Kangerlussuaq 91.89 6 P **P** **00 57 32.4 -1.3**
comp=Z,16nm,0.7s,mb5.2,baz=241,slow=4.1,SNR=6.6
SFJD *pP* pP 00 58 16.8 -2.9
comp=Z,6.3nm,0.5s,baz=178,slow=11,SNR=1.1
SFJD PKKPbc PKKPbc 01 14 48.3 -1.9
comp=Z,17nm,0.8s,baz=58,slow=1.1,SNR=4.3
SFJD Kangerlussuaq 91.89 6 P **P** **00 57 33.1 -0.6**
CPZ Penzance 91.91 34⇑ *eP* **P** **00 57 32.6 -1.2**
CPZ AMb AMB 00 57 35.4
comp=Z,188nm,1.5s,mb5.9
CPZ Penzance 91.91 34⇑ *eP* **P** **00 57 32.6 -1.2**
CPZ AMb AMB 00 57 35.4
comp=Z,188nm,1.5s,mb5.9
VALF Valcebollere 91.92 44 *eP* **P** **00 57 35.3 +1.4**
LRYF La Roche-sur-Y 92.03 39 *eP* **P** **00 57 33.2 -1.2**
CGW Gweek 92.06 35 *eP* **P** **00 57 33.7 -0.8**
CGW Gweek 92.06 35 *eP* **P** **00 57 33.7 -0.8**
ROSF Rostrenen 92.06 37 *eP* **P** **00 57 33.4 -1.1**
comp=Z,206nm,0.9s,mb5.9
ROSF *ep*P pP 00 58 20.9 +0.4
ROSF Rostrenen 92.06 37 *eP* **P** **00 57 33.4 -1.1**
ROSF *e**PP pP 00 58 20.9 +0.4
ROSF pmax pmax
comp=Z,103nm,0.9s,mb5.9
ROSF Rostrenen 92.06 37 *eP* **P** **00 57 33.4 -1.1**
comp=Z,103nm,0.9s,mb5.9
ROSF *ep*P pP 00 58 20.9 +0.4
CKFL Kef-Lekhel 92.06 51 P **P** **00 57 38.0 +3.5**
CMA1 Manaccan 92.10 35 *eP* **P** **00 57 34.2 -0.5**
CMA1 Manaccan 92.10 35 *eP* **P** **00 57 34.2 -0.5**
MCQ Macquarie Isla 92.11 205 *ji P* **P** **00 57 34.8 0.0**
CRQ2 Rosemanowes 2 92.13 35⇑ *eP* **P** **00 57 34.0 -0.8**
CRQ2 AMb AMB 00 57 37.0
comp=Z,113nm,1.5s,mb5.7
CRQ2 Rosemanowes 2 92.13 35⇑ *eP* **P** **00 57 34.0 -0.8**
CRQ2 AMb AMB 00 57 37.0
comp=Z,113nm,1.5s,mb5.7
CARF Carcanieres 92.14 44 *eP* **P** **00 57 35.5 +0.6**
CAEH 'Ain El Ouahch 92.34 51 P **P** **00 57 38.0 +2.2**
FILF Fillols 92.35 44 *eP* **P** **00 57 36.0 +0.1**
CSA1 St Austell 92.38 35 *eP* **P** **00 57 35.4 -0.6**
CSA1 St Austell 92.38 35 *eP* **P** **00 57 35.4 -0.6**
SGMF Saint Gilles 92.41 37 *eP* **P** **00 57 34.7 -1.4**
comp=Z,55nm,0.7s,mb5.4
SGMF Saint Gilles 92.41 37 *eP* **P** **00 57 34.7 -1.4**
SGMF pmax pmax
comp=Z,28nm,0.7s,mb5.4
SGMF Saint Gilles 92.41 37 *eP* **P** **00 57 34.7 -1.4**
comp=Z,28nm,0.7s,mb5.4
LFF La Frestale 92.48 41 *eP* **P** **00 57 35.9 -0.6**
comp=Z,222nm,0.9s,mb5.9
LFF La Frestale 92.48 41 *eP* **P** **00 57 35.9 -0.6**
LFF pmax pmax
comp=Z,111nm,0.9s,mb5.9
LFF La Frestale 92.48 41 *eP* **P** **00 57 35.9 -0.6**
comp=Z,111nm,0.9s,mb5.9
EJON La Jonquera 92.50 44 P **P** **00 57 36.9 +0.4**
comp=Z,25nm,0.8s,mb5.4
SJAF Saint Jean de 92.52 44 *eP* **P** **00 57 37.2 +0.6**
LRDF Laroque-de-Fa 92.53 44 *eP* **P** **00 57 36.7 0.0**
ABSA Djebel Ababsia 92.54 51 P **P** **00 57 38.5 +1.8**
MTLF Montolieu 92.54 43 *eP* **P** **00 57 35.9 -0.8**
comp=Z,220nm,1.3s,mb5.8
MTLF Montolieu 92.54 43 *eP* **P** **00 57 35.9 -0.8**
MTLF pmax pmax
comp=Z,110nm,1.3s,mb5.8
MTLF Montolieu 92.54 43 *eP* **P** **00 57 35.9 -0.8**
comp=Z,110nm,1.3s,mb5.8
CMAH Djebel Manchou 92.67 51 P **P** **00 57 38.0 +0.7**
DYA Yadsworthy 92.93 35⇑ *eP* **P** **00 57 37.5 -1.0**
DYA Yadsworthy 92.93 35⇑ *eP* **P** **00 57 37.5 -1.0**
HTL Hartland 92.97 34 *eP* **P** **00 57 38.0 -0.7**
HTL AMS AMS 01 35 51.2
comp=Z,2μm,19.8s
HTL Hartland 92.97 34 *eP* **P** **00 57 38.0 -0.7**
HTL AMS AMS 01 35 51.2
comp=Z,2μm,19.8s
DCN Croghan 93.00 31 *eP* **P** **00 57 37.9 -1.0**
RJF Les Rejaudoux 93.14 41 *eP* **P** **00 57 38.6 -0.9**
RJF *ep*P pP 00 58 26.4 +0.9
RJF eR
comp=Z,8μm,18.2s
RJF Les Rejaudoux 93.14 41 *eP* **P** **00 57 38.6 -0.9**
RJF *ep*P pP 00 58 26.4 +0.9
RJF LR LR
comp=Z,8μm,18.3s
JVM Valle D.L. Mar 93.14 36 *eP* **P** **00 57 38.5 -1.0**
JVM Valle D.L. Mar 93.14 36 *eP* **P** **00 57 38.5 -1.0**
JRS Jersey 93.19 37 *eP* **P** **00 57 39.6 -0.2**
JRS Jersey 93.19 37 *eP* **P** **00 57 39.6 -0.2**
CAF Calviac 93.27 42 *eP* **P** **00 57 39.6 -0.5**
comp=Z,70nm,0.9s,mb5.5
CAF Calviac 93.27 42 *eP* **P** **00 57 39.6 -0.5**
CAF pmax pmax
comp=Z,35nm,0.9s,mb5.5
CAF Calviac 93.27 42 *eP* **P** **00 57 39.6 -0.5**
comp=Z,35nm,0.9s,mb5.5
DLF Lyons Farm 93.33 32 *eP* **P** **00 57 39.5 -0.9**
HEX Exmoor 93.36 34 *eP* **P** **00 57 39.0 -1.5**
HEX Exmoor 93.36 34 *eP* **P** **00 57 39.0 -1.5**
DSB Dublin 93.37 32 *eP* **P** **00 57 40.0 -0.6**
comp=Z,52nm,0.8s,mb5.7
DSB *ep*P pP 00 58 24.2 -2.4
GRR Gorron 93.42 38 *eP* **P** **00 57 39.4 -1.4**
comp=Z,136nm,0.8s,mb5.8
GRR Gorron 93.42 38 *eP* **P** **00 57 39.4 -1.4**
GRR pmax pmax
comp=Z,68nm,0.8s,mb5.8
GRR Gorron 93.42 38 *eP* **P** **00 57 39.4 -1.4**
comp=Z,68nm,0.8s,mb5.8
URZ Urewera 93.48 225 P **P** **00 57 40.5 -0.6**
comp=Z,44nm,0.8s,mb5.6,baz=61,slow=1.9,SNR=10
KEST Kesra 93.63 52 P **P** **00 57 42.6 +0.9**
comp=Z,19nm,0.8s,mb5.3,baz=180,slow=2.1,SNR=49
KEST S S 01 08 01.6 -33
comp=Z,0.9nm,0.9s,baz=198,slow=22,SNR=1.3
KEST PKKPbc PKKPbc 01 14 46.2 +0.4
comp=Z,3.6nm,0.6s,baz=238,slow=1.2,SNR=20
FLN La Foliniere 93.84 37 *eP* **P** **00 57 41.4 -1.3**
comp=Z,110nm,1.0s,mb5.6
FLN *ep*P pP 00 58 29.0 +0.3
FLN eR
comp=Z,7μm,22.5s
FLN La Foliniere 93.84 37 *eP* **P** **00 57 41.4 -1.3**
FLN *e**PP pP 00 58 29.0 +0.3
FLN pmax pmax
comp=Z,55nm,1.0s,mb5.6
FLN MLR MLR
comp=Z,7μm,22.5s
FLN La Foliniere 93.84 37 *eP* **P** **00 57 41.4 -1.3**
comp=Z,55nm,1.0s,mb5.6
FLN *ep*P pP 00 58 29.0 +0.3
FLN LR LR
comp=Z,7μm,22.5s
RPZ Rata Peaks 93.87 218 P **P** **00 57 42.8 0.0**
comp=Z,62nm,0.8s,mb5.8,baz=62,slow=0.4,SNR=30
LDF La Druitiere 93.95 38 *eP* **P** **00 57 41.9 -1.3**
comp=Z,95nm,0.8s,mb5.7
LDF La Druitiere 93.95 38 *eP* **P** **00 57 41.9 -1.3**
LDF pmax pmax
comp=Z,47nm,0.8s,mb5.7
LDF La Druitiere 93.95 38 *eP* **P** **00 57 41.9 -1.3**
comp=Z,47nm,0.8s,mb5.7
TCF Toulx Ste Croi 94.07 41 *eP* **P** **00 57 42.7 -1.1**
comp=Z,49nm,0.8s,mb5.4
TCF *ep*P pP 00 58 30.6 +0.8
TCF Toulx Ste Croi 94.07 41 *eP* **P** **00 57 42.7 -1.1**
TCF *e**PP pP 00 58 30.6 +0.8
TCF pmax pmax
comp=Z,25nm,0.8s,mb5.4
TCF Toulx Ste Croi 94.07 41 *eP* **P** **00 57 42.7 -1.1**
comp=Z,24nm,0.8s,mb5.4
TCF *ep*P pP 00 58 30.6 +0.8
LBL Lubilhac 94.15 42 *eP* **P** **00 57 45.1 +1.0**
YRE Yr Eifl 94.16 33 *eP* **P** **00 57 43.1 -1.0**
YRE AMb AMB 00 57 49.7
comp=Z,67nm,1.3s,mb5.6
YRE Yr Eifl 94.16 33 *eP* **P** **00 57 43.1 -1.0**
YRE AMb AMB 00 57 49.7
comp=Z,67nm,1.3s,mb5.6
GMM Mts of Mourne 94.17 31 *eP* **P** **00 57 43.0 -1.3**
GMM Mts of Mourne 94.17 31 *eP* **P** **00 57 43.0 -1.3**
HGH Gray Hill 94.20 34 *eP* **P** **00 57 43.2 -1.2**
HGH AMb AMB 00 57 45.5
comp=Z,64nm,1.4s,mb5.5
HGH Gray Hill 94.20 34 *eP* **P** **00 57 43.2 -1.2**
HGH AMb AMB 00 57 45.5
comp=Z,64nm,1.4s,mb5.5
SWK Warminster 94.21 35 *eP* **P** **00 57 43.6 -0.8**
SWK Warminster 94.21 35 *eP* **P** **00 57 43.6 -0.8**
HTR Trewern Hill 94.21 34 *eP* **P** **00 57 43.2 -1.2**
HTR AMb AMB 00 57 46.2
comp=Z,68nm,1.1s,mb5.7
HTR Trewern Hill 94.21 34 *eP* **P** **00 57 43.2 -1.2**
HTR AMb AMB 00 57 46.2
comp=Z,68nm,1.1s,mb5.7
YRC Rhoscolyn 94.25 32 *eP* **P** **00 57 43.4 -1.2**
YRC AMb AMB 00 57 45.7
comp=Z,81nm,1.4s,mb5.7
YRC Rhoscolyn 94.25 32 *eP* **P** **00 57 43.4 -1.2**
YRC AMb AMB 00 57 45.7
comp=Z,81nm,1.4s,mb5.7
PYM Petit Puy Mans 94.27 41 *eP* **P** **00 57 45.3 +0.6**
MCH1 Michaelchurch 94.31 34 P **P** **00 57 43.0 -1.8**
MCH1 AMb AMB 00 57 46.5
comp=Z,94nm,1.6s,mb5.7
MCH1 Michaelchurch 94.31 34 *eP* **P** **00 57 43.0 -1.8**
MCH1 *eP* 00 57 43.0
MCH1 AMb AMB 00 57 46.5
comp=Z,94nm,1.6s,mb5.7
MCH1 AMS AMS 01 45 29.5
comp=Z,2μm,17.5s
MCH1 Michaelchurch 94.31 34 *eP* **P** **00 57 43.0 -1.8**
MCH1 *eP* 00 57 43.0
MCH1 AMb AMB 00 57 46.5
comp=Z,94nm,1.6s,mb5.7
MCH1 AMS AMS 01 45 29.5
comp=Z,2μm,17.5s
WCB1 Church Bay 94.33 32 *eP* **P** **00 57 44.2 -0.8**
WCB1 AMb AMB 00 57 47.5
comp=Z,105nm,1.6s,mb5.7
WCB1 Church Bay 94.33 32 *eP* **P** **00 57 44.2 -0.8**
WCB1 AMb AMB 00 57 47.5
comp=Z,105nm,1.6s,mb5.7
WLF1 Llynfaes 94.35 32 *eP* **P** **00 57 43.9 -1.2**
WLF1 Llynfaes 94.35 32 *eP* **P** **00 57 43.9 -1.2**
YKA Yellowknife Ar 94.44 340 P **P** **00 57 43.9 -1.5**
comp=Z,99nm,0.7s,mb6.0,baz=139,slow=3.9,SNR=141
YKA PKiKP PKiKP 01 02 27.9 +0.3
comp=Z,3.9nm,0.7s,baz=136,slow=1.8,SNR=4.7
YKA PKKPbc PKKPbc 01 14 44.3 +0.7
comp=Z,1.2nm,0.5s,baz=276,slow=22,SNR=6.1
YKA LR LR 01 46 05.9
comp=Z,3μm,18.5s,baz=180,slow=39
YKA Yellowknife Ar 94.44 340 P **P** **00 57 43.9 -1.6**
YKA pmax pmax
comp=Z,99nm,0.7s
YKA Yellowknife Ar 94.44 340 P **P** **00 57 43.9 -1.5**
AGO Saint Agoulin 94.50 41 *eP* **P** **00 57 45.8 +0.1**
YKW3 Yellowknife Ar 94.50 340 *eP* **P** **00 57 44.9 -0.9**
GELF Collangettes 94.56 42 *eP* **P** **00 57 45.8 -0.1**
GELF Grande-Etoile 94.58 44 *eP* **P** **00 57 46.2 +0.1**
GELF *eP* 01 01 35.2
BGF Bois d'Agland 94.58 41 *eP* **P** **00 57 45.2 -0.9**
comp=Z,161nm,1.1s,mb5.8
BGF Bois d'Agland 94.58 41 *eP* **P** **00 57 45.2 -0.9**
BGF pmax pmax
comp=Z,80nm,1.1s,mb5.9
BGF Bois d'Agland 94.58 41 *eP* **P** **00 57 45.2 -0.9**
comp=Z,80nm,1.1s,mb5.9
GCL Cushendall 94.59 30 *eP* **P** **00 57 45.1 -1.0**
GCL Cushendall 94.59 30 *eP* **P** **00 57 45.1 -1.0**
PRAF Pradon 94.62 44 *eP* **P** **00 57 46.7 +0.4**
PRAF *eP* 01 01 36.3
HLM1 Long Mynd 94.66 33 *eP* **P** **00 57 45.2 -1.3**
HLM1 AMb AMB 00 57 48.2
comp=Z,96nm,1.6s,mb5.8
HLM1 Long Mynd 94.66 33 *eP* **P** **00 57 45.2 -1.3**
HLM1 AMb AMB 00 57 48.2
comp=Z,96nm,1.6s,mb5.8
TREF Trevaresse 94.67 44 *eP* **P** **00 57 46.9 +0.4**
SBD1 Bryn Du 94.69 33 *eP* **P** **00 57 45.2 -1.4**
SBD1 AMb AMB 00 57 48.5
comp=Z,86nm,1.3s,mb5.8
SBD1 Bryn Du 94.69 33 *eP* **P** **00 57 45.2 -1.4**
SBD1 AMb AMB 00 57 48.5
comp=Z,86nm,1.3s,mb5.8
BERF Bertagne 94.72 44 *eP* **P** **00 57 48.2 +1.5**
WIM Isle of Man 94.72 32 *eP* **P** **00 57 44.8 -2.0**
WIM AMb AMB 00 57 48.1
comp=Z,109nm,1.3s,mb5.9
WIM Isle of Man 94.72 32 *eP* **P** **00 57 44.8 -2.0**
WIM AMb AMB 00 57 48.1
comp=Z,109nm,1.3s,mb5.9
PLDF La Plantade 94.75 41 *eP* **P** **00 57 47.0 +0.1**
PLDF *e* 01 01 36.5
HYF Humbligny 94.83 40 *eP* **P** **00 57 46.4 -0.8**
PUYF Puyloubier 94.83 44 *eP* **P** **00 57 46.9 -0.3**
VIVF Saint-Julien-l 94.83 43 *eP* **P** **00 57 47.0 -0.3**
comp=Z,170nm,1.3s,mb5.8
VIVF *ep*P pP 00 58 34.7 +1.4
VIVF Saint-Julien-l 94.83 43 *eP* **P** **00 57 47.0 -0.3**
VIVF *e**PP pP 00 58 34.7 +1.4
VIVF pmax pmax
comp=Z,85nm,1.3s,mb5.8
VIVF Saint-Julien-l 94.83 43 *eP* **P** **00 57 47.0 -0.3**
comp=Z,85nm,1.3s,mb5.8
VIVF *ep*P pP 00 58 34.7 +1.4
GIM North Isle of 94.91 31⇑ *eP* **P** **00 57 45.9 -1.7**

GIM North Isle of 94.91 31⇑ eP P 00 57 45.9 -1.7
SMRF Simiane la Rot 94.97 44 *e*P **P 00 57 48.1 +0.2**
comp=Z,310nm,1.5s,mb6.0
SMRF Simiane la Rot 94.97 44 *e*P **P 00 57 48.1 +0.2**
comp=Z,310nm,1.5s,mb6.3
VILF Villemus 94.99 44 *e*P **P 00 57 49.5 +1.5**
AVF Avril sur Loir 95.00 41 *e*P **P 00 57 46.9 -1.1**
comp=Z,59nm,0.9s,mb5.5
AVF *ep*P pP 00 58 34.7 +0.6
AVF Avril sur Loir 95.00 41 *e*P **P 00 57 46.9 -1.1**
AVF *e**PP pP 00 58 34.7 +0.6
AVF pmax pmax
comp=Z,29nm,0.9s,mb5.5
AVF Avril sur Loir 95.00 41 *e*P **P 00 57 46.9 -1.1**
comp=Z,29nm,0.9s,mb5.5
AVF *ep*P pP 00 58 34.7 +0.6
GMK Mull of Kintyr 95.00 30 *e*P **P 00 57 46.3 -1.7**
GMK Mull of Kintyr 95.00 30 *e*P **P 00 57 46.3 -1.7**
OG26 St.-Nazaire-De 95.09 43 *e*P **P 00 57 49.0 +0.6**
TAVF Tavernes 95.10 44 *e*P **P 00 57 49.7 +1.2**
GAL1 Galloway 95.13 31 *e*P **P 00 57 47.4 -1.2**
GAL1 Galloway 95.13 31 *e*P **P 00 57 47.4 -1.2**
STOF St-Etienne Org 95.19 44 *e*P **P 00 57 49.9 +1.0**
STOF *e*P 01 01 36.9
SMF Signal de Mont 95.22 41 *e*P **P 00 57 48.2 -0.8**
comp=Z,92nm,0.9s,mb5.7
SMF Signal de Mont 95.22 41 *e*P **P 00 57 48.2 -0.8**
SMF pmax pmax
comp=Z,46nm,0.9s,mb5.7
SMF Signal de Mont 95.22 41 *e*P **P 00 57 48.2 -0.8**
comp=Z,46nm,0.9s,mb5.7
SSF Saint Saulge 95.23 40 *e*P **P 00 57 47.7 -1.4**
comp=Z,104nm,1.2s,mb5.6
SSF Saint Saulge 95.23 40 *e*P **P 00 57 47.7 -1.4**
SSF pmax pmax
comp=Z,52nm,1.2s,mb5.6
SSF Saint Saulge 95.23 40 *e*P **P 00 57 47.7 -1.4**
comp=Z,52nm,1.2s,mb5.6
LMR La Mourre 95.25 45 *e*P **P 00 57 48.8 -0.3**
comp=Z,336nm,1.5s,mb6.1
LMR La Mourre 95.25 45 *e*P **P 00 57 48.8 -0.3**
LMR pmax pmax
comp=Z,168nm,1.5s,mb6.0
LMR La Mourre 95.25 45 *e*P **P 00 57 48.8 -0.3**
comp=Z,168nm,1.5s,mb6.0
SKP1 Kophill 95.28 35 *e*P **P 00 57 48.0 -1.3**
SKP1 Kophill 95.28 35 *e*P **P 00 57 48.0 -1.3**
VSL Villasalto 95.37 49 *e*P **P 00 57 50.0 +0.3**
comp=Z,47nm,0.7s,mb5.8
FRF La Foret Royal 95.44 44 *e*P **P 00 57 49.7 -0.3**
comp=Z,319nm,1.5s,mb6.0
FRF *ep*P pP 00 58 37.6 +1.5
FRF La Foret Royal 95.44 44 *e*P **P 00 57 49.7 -0.3**
FRF *e**PP pP 00 58 37.6 +1.5
FRF pmax pmax
comp=Z,160nm,1.5s,mb6.0
FRF La Foret Royal 95.44 44 *e*P **P 00 57 49.7 -0.3**
comp=Z,160nm,1.5s,mb6.0
FRF *ep*P pP 00 58 37.6 +1.5
KWE Weaver Farm 95.46 33⇑ *e*P **P 00 57 49.1 -1.0**
KWE Weaver Farm 95.46 33⇑ *e*P **P 00 57 49.1 -1.0**
XDE Dent Fell 95.50 32 *e*P **P 00 57 49.3 -0.9**
XDE AMb AMB 00 57 52.2
comp=Z,108nm,0.9s,mb6.1
XDE Dent Fell 95.50 32 *e*P **P 00 57 49.3 -0.9**
XDE AMb AMB 00 57 52.2
comp=Z,108nm,0.9s,mb6.1
LOR Lormes 95.54 40 *e*P **P 00 57 49.2 -1.3**
comp=Z,38nm,0.8s,mb5.5
LOR *ep*P pP 00 58 36.9 +0.4
LOR *e*R
comp=Z,6µm,21.2s
LOR Lormes 95.54 40 *e*P **P 00 57 49.2 -1.3**
LOR *e**PP pP 00 58 36.9 +0.4
LOR pmax pmax
comp=Z,19nm,0.8s,mb5.5
LOR MLR MLR
comp=Z,6µm,21.3s
LOR Lormes 95.54 40 *e*P **P 00 57 49.2 -1.3**
comp=Z,19nm,0.8s,mb5.5
LOR *ep*P pP 00 58 36.9 +0.4
LOR LR LR
comp=Z,6µm,21.3s
BORG Borgarnes 95.56 18 P **P 00 57 50.4 -0.2**
comp=Z,23nm,1.0s,mb5.5,baz=236,slow=3.8,SNR=9.6
BORG Borgarnes 95.56 18 *e*P **P 00 57 51.5 +1.0**
ORIF Oris-en-Rattie 95.61 43 *e*P **P 00 57 51.0 +0.2**
comp=Z,258nm,1.2s,mb6.1
ORIF *e*R
comp=Z,8µm,22.2s
ORIF Oris-en-Rattie 95.61 43 *e*P **P 00 57 51.0 +0.2**
ORIF pmax pmax
comp=Z,129nm,1.2s,mb6.1
ORIF Oris-en-Rattie 95.61 43 *e*P **P 00 57 51.0 +0.2**
comp=Z,129nm,1.2s,mb6.1
CKE Keswick 95.73 32 *e*P **P 00 57 50.4 -0.9**
CKE Keswick 95.73 32 *e*P **P 00 57 50.4 -0.9**
KBI1 Birley Grange 95.75 33⇑ *e*P **P 00 57 50.5 -1.0**
KBI1 Birley Grange 95.75 33⇑ *e*P **P 00 57 50.5 -1.0**
KSK Scoval 95.78 28 *e*P **P 00 57 51.1 -0.5**
KSK Scoval 95.78 28 *e*P **P 00 57 51.1 -0.5**
BWH Wardlaw 95.80 31⇑ *e*P **P 00 57 50.5 -1.1**
BWH Wardlaw 95.80 31⇑ *e*P **P 00 57 50.5 -1.1**
KAR1 Arisaig 95.83 29 *e*P **P 00 57 50.5 -1.3**
KAR1 Arisaig 95.83 29 *e*P **P 00 57 50.5 -1.3**
DGI Dorgali Grotta 95.90 48 P **P 00 57 52.4 +0.3**
MVIF Mont Vial 95.93 44 *e*P **P 00 57 53.8 +1.6**
MVIF *e* 01 01 42.8
BHH Howats Hill 95.96 31 *e*P **P 00 57 51.2 -1.2**
BHH Howats Hill 95.96 31 *e*P **P 00 57 51.2 -1.2**
REVF Revere 95.99 45 *e*P **P 00 57 53.7 +1.2**
REVF *e* 01 01 44.3
TOUF Mont Tournerai 96.04 44 *e*P **P 00 57 54.0 +1.2**
TOUF *e* 01 01 43.9
LUCF Luceram 96.05 44 *e*P **P 00 57 54.1 +1.3**
ECK Cauldkaine Hil 96.06 31 *e*P **P 00 57 51.0 -1.8**
ECK AMb AMB 00 57 54.4
comp=Z,62nm,1.4s,mb5.8
ECK Cauldkaine Hil 96.06 31 *e*P **P 00 57 51.0 -1.8**
ECK AMb AMB 00 57 54.4
comp=Z,62nm,1.4s,mb5.8
PCOU Corrie 96.06 30 *e*P **P 00 57 51.8 -1.1**
PCOU Corrie 96.06 30 *e*P **P 00 57 51.8 -1.1**
EAB Aberfoyle 96.07 30 *e*P **P 00 57 51.5 -1.3**
EAB Aberfoyle 96.07 30 *e*P **P 00 57 51.5 -1.3**
MBDF Montbardon 96.08 43 *e*P **P 00 57 53.0 +0.1**
comp=Z,190nm,1.3s,mb6.0
MBDF *ep*P pP 00 58 40.8 +1.8
MBDF Montbardon 96.08 43 *e*P **P 00 57 53.0 +0.1**
MBDF *e**PP pP 00 58 40.8 +1.8
MBDF pmax pmax
comp=Z,95nm,1.3s,mb6.0
MBDF Montbardon 96.08 43 *e*P **P 00 57 53.0 +0.1**
comp=Z,95nm,1.3s,mb6.0
MBDF *ep*P pP 00 58 40.8 +1.8
SBF Sospel 96.09 44 *e*P **P 00 57 52.8 -0.2**
comp=Z,339nm,1.2s,mb6.2
SBF Sospel 96.09 44 *e*P **P 00 57 52.8 -0.2**
SBF pmax pmax
comp=Z,169nm,1.2s,mb6.2
SBF Sospel 96.09 44 *e*P **P 00 57 52.8 -0.2**
comp=Z,169nm,1.2s,mb6.2
ESK Eskdalemuir 96.09 31 *e*P **P 00 57 52.1 -0.9**
ESK pmax pmax
comp=Z,56nm,1.2s,mb5.8
ESK Eskdalemuir 96.09 31 *e*P **P 00 57 52.1 -0.9**
comp=Z,56nm,1.2s,mb5.8
EKA Eskdalemuir Ar 96.13 31 P **P 00 57 52.0 -1.2**
comp=Z,10nm,0.7s,mb5.2,baz=240,slow=7.3,SNR=37
EKA PKKPbc PKKPbc 01 14 41.2 +2.1
comp=Z,1.8nm,0.5s,baz=72,slow=4.0,SNR=12
EKA Eskdalemuir Ar 96.13 31 P **P 00 57 52.0 -1.1**
EKA pmax pmax
comp=Z,10.0nm,0.7s
EKA pmax pmax
comp=Z,2.0nm,0.5s
AUTN L'Aution 96.15 44 *e*P **P 00 57 54.9 +1.7**
KPL Plockton 96.16 29 AMS AMS 01 26 51.5
comp=Z,3µm,21.3s
KPL Plockton 96.16 29 *e*P **P 00 57 51.5 -1.8**
KPL AMS AMS 01 26 51.5
comp=Z,3µm,21.3s
KPL Plockton 96.16 29 *e*P **P 00 57 51.5 -1.8**
KPL AMS AMS 01 26 51.5
comp=Z,3µm,21.3s
BNI Bardonecchia 96.17 43 *e*P **P 00 57 53.6 +0.2**
KSB Sheil Bridge 96.19 29 *e*P **P 00 57 52.1 -1.3**
KSB Sheil Bridge 96.19 29 *e*P **P 00 57 52.1 -1.3**
SAOF Saorge 96.23 44 *e*P **P 00 57 54.6 +1.0**
SAOF *e* 01 01 44.5
TCR Colchester 96.24 35 *e*P **P 00 57 52.2 -1.5**
TCR Colchester 96.24 35 *e*P **P 00 57 52.2 -1.5**
DOI San Damiano 96.27 44 P **P 00 57 55.7 +1.9**
EAU Auchinoon 96.28 31 *e*P **P 00 57 52.6 -1.2**
EAU Auchinoon 96.28 31 *e*P **P 00 57 52.6 -1.2**
XAL Allendale 96.31 32⇑ *e*P **P 00 57 53.0 -1.0**
XAL Allendale 96.31 32⇑ *e*P **P 00 57 53.0 -1.0**
KAC Achnashellach 96.41 29 *e*P **P 00 57 53.1 -1.4**
KAC Achnashellach 96.41 29 *e*P **P 00 57 53.1 -1.4**
EBL Broad Law 96.43 31 *e*P **P 00 57 52.5 -2.1**
EBL Broad Law 96.43 31 *e*P **P 00 57 52.5 -2.1**
EDI Edinburgh 96.45 31 *e*P **P 00 57 54.1 -0.5**
EDI AMS AMS 01 38 32.5
comp=Z,5µm,19.4s
EDI Edinburgh 96.45 31 *e*P **P 00 57 54.1 -0.5**
EDI AMS AMS 01 38 32.5
comp=Z,5µm,19.4s
PGF Pioggiola 96.50 46 *e*P **P 00 57 54.6 -0.2**
comp=Z,57nm,0.8s,mb5.6
PGF Pioggiola 96.50 46 *e*P **P 00 57 54.6 -0.2**
PGF pmax pmax
comp=Z,28nm,0.8s,mb5.6
PGF Pioggiola 96.50 46 *e*P **P 00 57 54.6 -0.2**
comp=Z,28nm,0.8s,mb5.7
CABF La Chapelle 96.55 42 *e*P **P 00 57 54.5 -0.6**
comp=Z,116nm,1.3s,mb5.8
CABF La Chapelle 96.55 42 *e*P **P 00 57 54.5 -0.6**
CABF pmax pmax
comp=Z,58nm,1.3s,mb5.8
CABF La Chapelle 96.55 42 *e*P **P 00 57 54.5 -0.6**
comp=Z,58nm,1.3s,mb5.8
XSO Sourhope Farm 96.64 31 *e*P **P 00 57 54.4 -1.1**
XSO Sourhope Farm 96.64 31 *e*P **P 00 57 54.4 -1.1**
ESY Stoneypath 96.71 31 *e*P **P 00 57 54.4 -1.4**
ESY Stoneypath 96.71 31 *e*P **P 00 57 54.4 -1.4**
FIN Finale Ligure 96.75 44 P **P 00 57 56.3 +0.4**
MBAR Mbarara 96.81 94⇑ *e*P **P 00 57 58.6 +2.3**
AEU East Anglia Un 96.82 35⇑ *e*P **P 00 57 55.4 -0.9**
AEU East Anglia Un 96.82 35⇑ *e*P **P 00 57 55.4 -0.9**
MEZF Maizieres J'vi 96.85 40 *e*P **P 00 57 55.3 -1.1**
comp=Z,62nm,0.9s,mb5.6
MEZF *ep*P pP 00 58 43.2 +0.7
MEZF Maizieres J'vi 96.85 40 *e*P **P 00 57 55.3 -1.1**
comp=Z,62nm,0.9s,mb5.9
MEZF *ep*P pP 00 58 43.2 +0.7
BAIF Baives 97.13 38 *e*P **P 00 57 56.4 -1.3**
comp=Z,71nm,1.2s,mb5.6
BAIF Baives 97.13 38 *e*P **P 00 57 56.4 -1.3**
BAIF pmax pmax
comp=Z,36nm,1.2s,mb5.6
BAIF Baives 97.13 38 *e*P **P 00 57 56.4 -1.3**
comp=Z,36nm,1.2s,mb5.6
MVH1 Achvaich 97.15 29 *e*P **P 00 57 56.5 -1.2**
MVH1 Achvaich 97.15 29 *e*P **P 00 57 56.5 -1.2**
THEF They Montfort 97.26 40 *e*P **P 00 57 58.1 -0.2**
THEF *e* 01 01 53.6
AFI Afiamalu 97.35 251 P **P 00 57 59.9 +1.3**
comp=Z,64nm,0.9s,mb5.9,baz=154,slow=5.0,SNR=5.5
AFI Afiamalu 97.35 251 *e*P **P 00 58 00.9 +2.3**
AFI pmax pmax
comp=Z,51nm,0.8s,mb5.9
AFI Afiamalu 97.35 251 *e*P **P 00 58 00.9 +2.2**
comp=Z,51nm,0.8s,mb5.9
LOMF Lomont 97.35 41 *e*P **P 00 57 58.8 +0.1**
LOMF *e*P 01 01 52.1
MCD Coleburn Disti 97.36 29⇑ *e*P **P 00 57 57.5 -1.2**
MCD Coleburn Disti 97.36 29⇑ *e*P **P 00 57 57.5 -1.2**
DOU Dourbes 97.37 38 P **P 00 57 58.2 -0.5**
DOU AP pP 00 58 42.7 -2.2
HAU Haudompre 97.37 40 *e*P **P 00 57 57.6 -1.2**
comp=Z,39nm,0.8s,mb5.5
HAU *e*R
comp=Z,4µm,18.8s
HAU Haudompre 97.37 40 *e*P **P 00 57 57.6 -1.2**
HAU pmax pmax
comp=Z,19nm,0.8s,mb5.5
HAU MLR MLR
comp=Z,4µm,18.8s
HAU Haudompre 97.37 40 *e*P **P 00 57 57.6 -1.2**
comp=Z,19nm,0.8s,mb5.5
HAU LR LR
comp=Z,4µm,18.8s
SNF Seneffe 97.39 38 P **P 00 57 58.9 0.0**
SNF AP pP 00 58 44.6 -0.3
MCGN Macugnaga 97.41 43 P **P 00 58 00.1 +1.2**
GIVF Givet 97.50 38 *e*P **P 00 57 58.2 -1.1**
comp=Z,67nm,0.8s,mb5.7
GIVF *ep*P pP 00 58 46.0 +0.6
GIVF Givet 97.50 38 *e*P **P 00 57 58.2 -1.1**
GIVF *e**PP pP 00 58 46.0 +0.6
GIVF pmax pmax
comp=Z,34nm,0.8s,mb5.7
GIVF Givet 97.50 38 *e*P **P 00 57 58.2 -1.1**
comp=Z,34nm,0.8s,mb5.7
GIVF *ep*P pP 00 58 46.0 +0.6
UCC Uccle 97.58 37 AP pP 00 58 44.8 -1.0
HINF Hinteralfeld 97.58 41 *e*P **P 00 57 58.6 -1.1**
comp=Z,35nm,0.9s,mb5.5
HINF Hinteralfeld 97.58 41 *e*P **P 00 57 58.6 -1.1**
HINF pmax pmax
comp=Z,18nm,0.9s,mb5.5
HINF Hinteralfeld 97.58 41 *e*P **P 00 57 58.6 -1.1**
comp=Z,18nm,0.9s,mb5.5
MAUI Maui 97.65 289 *d* iP **P 00 57 59.5 -0.5**
MOF Molkenrain 97.77 41 *e*P **P 00 58 00.7 +0.2**
MOF *e*P 01 01 55.1
BOB Bobbio (Coli) 97.79 44 P **P 00 58 01.9 +1.3**
BBS Basel-Blauen 97.81 41 *e*P **P 00 58 01.2 +0.5**
BBS *e*P 01 01 56.0
BCLA Clavier 97.92 38 P **P 00 58 00.8 -0.4**
BCLA AP pP 00 58 45.3 -2.0
ECH Echery 97.95 41 *e*P **P 00 58 01.6 +0.2**
ECH *e* 01 01 58.3
PII Pisa 98.02 46 P **P 00 58 02.8 +1.1**
PII pmax pmax
comp=Z,42nm,1.0s,mb5.8
PII Pisa 98.02 46 P **P 00 58 02.8 +1.1**
comp=Z,42nm,1.0s,mb5.8
WLF Walferdange 98.04 39 *e*Pdiff **P 00 58 02.0 +0.2**
WLF *ep*Pdiff pP 00 58 46.5 -1.4
WLF *e*PP PP 01 01 57.3 -5.8
WLF *e*SKSac SKSac 01 08 22.8 +1.1
WLF *e*Sdiff S 01 09 12.1 -0.3
WLF *e*PKKPab 01 15 03.1
WLF Walferdange 98.04 39 P **P 00 58 00.8 -1.0**
WLF AP pP 00 58 47.8 -0.1
WLF Walferdange 98.04 39 *e*P **P 00 58 02.8 +1.0**
WLF pmax pmax
comp=Z,98nm,1.2s,mb6.1
WLF Walferdange 98.04 39 *e*P **P 00 58 02.8 +1.1**
comp=Z,98nm,1.2s,mb6.1
VAE Valguarnera 98.06 53 P **P 00 58 01.6 -0.2**
comp=Z,2.4nm,0.2s,mb5.2,baz=54,slow=8.7,SNR=2.7
VAE S SKSac 01 08 21.9 +0.2
comp=Z,13nm,0.6s,baz=298,slow=14,SNR=3.1
CDF Champ du Feu 98.11 40 *e*P **P 00 58 01.0 -1.1**
comp=Z,155nm,1.5s,mb5.9
CDF *ep*P pP 00 58 48.8 +0.6
CDF Champ du Feu 98.11 40 *e*P **P 00 58 01.0 -1.1**
CDF *e**PP pP 00 58 48.8 +0.6
CDF pmax pmax
comp=Z,78nm,1.5s,mb5.9
CDF Champ du Feu 98.11 40 *e*P **P 00 58 01.0 -1.1**
comp=Z,78nm,1.5s,mb5.9
CDF *ep*P pP 00 58 48.8 +0.6
WLS Welschbruch 98.16 40 *e*P **P 00 58 02.2 -0.1**
WLS *e*P 01 01 58.6
LIBD Limburg 98.18 41 *e*P **P 00 58 02.7 +0.3**
LIBD *e* 01 01 59.4
BDI Bagni Di Lucca 98.22 45 P **P 00 58 02.8 +0.2**
BDI pmax pmax
comp=Z,41nm,1.0s,mb5.8
BDI Bagni Di Lucca 98.22 45 P **P 00 58 02.8 +0.2**
comp=Z,41nm,1.0s,mb5.8
TOLF Tolfa 98.29 48 P **P 00 58 04.1 +1.2**
FELD Feldberg im Sc 98.30 41⇓ *e*P **P 00 58 03.2 +0.3**
FELD *e*P 01 01 59.2
BEBN Eben Emael 98.31 38 P **P 00 58 03.1 +0.1**
BEBN AP pP 00 58 47.8 -1.3
MEM Membach 98.41 38 P **P 00 58 03.2 -0.2**
MEM AP pP 00 58 50.9 +1.4
CSNT Castellina Chi 98.42 46 P **P 00 58 03.3 -0.1**
comp=Z,48nm,0.8s,mb6.0
HGN Heimansgroeve 98.44 38 *e*P **P 00 57 59.0 -4.5**
comp=Z,25nm,2.2s,mb5.2
HGN *ep*P pP 00 58 44.4 -5.3
HGN *e*SKS 01 08 24.5
MNO Monte Soro 98.45 52 P **P 00 58 06.5 +2.9**
SUMG Summit 98.60 8 *e*P **P 00 58 04.1 -0.2**
LANF Langenberg 98.68 40 *e*P **P 00 58 05.5 +0.9**
BFO Black Forest 98.70 41 *e*Pdiff **P 00 58 04.2 -0.5**
BFO *ep*Pdiff pP 00 58 48.3 -2.5
BFO *e*PP PP 01 02 01.8 -6.3
BFO *e*SKSac SKSac 01 08 26.0 +1.0
BFO *e*Sdiff S 01 09 18.0 +0.1
BFO *e*SP SP 01 10 39.7 -4.6
BFO Black Forest 98.70 41 *e*P **P 00 58 04.2 -0.5**
BFO *e* pP 00 58 48.3 -2.5
BFO *e*S S 01 09 18.0 +0.1
BFO *e*SP SP 01 10 39.7 -4.6
SEI Scarperia 98.71 46 P **P 00 58 05.4 +0.7**
SPAK Spaichingen-Ko 98.87 41 *e*P **P 00 58 05.9 +0.4**
SPAK *e*P 01 02 04.8
MNS Montasola 98.88 48 P **P 00 58 06.3 +0.8**
MNS pmax pmax
comp=Z,14nm,0.6s,mb5.6
MNS Montasola 98.88 48 P **P 00 58 06.3 +0.8**
comp=Z,14nm,0.6s,mb5.6
CERT Cerreto 98.90 48 P **P 00 58 06.7 +1.1**
ABH Alteburg 98.94 39 *e*P **P 00 58 06.3 +0.5**
KTD Kalmit 99.00 40 *e*P **P 00 58 06.6 +0.6**
MABI Malga Bissina 99.03 44 P **P 00 58 06.8 +0.6**
BADI Badiali 99.06 46 P **P 00 58 06.3 0.0**
BRMO Bormio 99.12 43 P Pdif 00 58 07.2 +0.6
DAVA Damuels 99.17 42⇑ *i*P Pdif 00 58 06.6 -0.2
comp=Z,100nm,1.7s,SNR=22
AQU L'Aquila 99.35 48⇓ *i*P Pdif 00 58 09.9 +2.3
AQU L'Aquila 99.35 48 *e*P Pdif 00 58 05.6 -2.0
AQU pmax pmax
comp=Z,31nm,0.9s,mb5.7
AQU L'Aquila 99.35 48 *e*Pdif Pdif 00 58 05.6 -2.0
comp=Z,31nm,0.9s
STU Stuttgart 99.41 41 *e*Pdiff Pdif 00 58 08.1 +0.2
STU *ep*Pdiff 00 58 52.6
STU *e*PP PP 01 02 06.7 -6.8
STU *e*SKSac SKSac 01 08 29.9 +1.4
STU *e*SP SP 01 10 49.2 -2.7
STU *e*PKKPbc PKKPbc 01 14 30.6 +0.5
STU Stuttgart 99.41 41 *e*P Pdif 00 58 08.0 +0.1
STU pmax pmax
comp=Z,63nm,1.2s,mb5.9
STU Stuttgart 99.41 41 *e*Pdif Pdif 00 58 08.0 +0.1
comp=Z,63nm,1.2s
WTSB Winterswijk 99.48 37 *e*P Pdif 00 58 06.9 -1.2
comp=Z,43nm,1.0s
WTSB *ep*P pP 00 58 51.9 -2.4
BUG Bochum--Univer 99.50 38 *e*Pdiff Pdif 00 58 07.6 -0.7
BUG *ep*Pdiff 00 58 52.0
BUG *e*SKSac SKSac 01 08 30.5 +1.6
BUG *e*Sdiff Sdif 01 09 23.6 -1.0
BUG *e*SP SP 01 10 47.6 -5.3
TOD Tromm 99.55 40 *e*P Pdif 00 58 08.7 +0.2
TNS Taunus Mts 99.62 39 *e*Pdiff Pdif 00 58 08.7 -0.1
TNS *ep*Pdiff 00 58 53.0
TNS *e*SKSac SKSac 01 08 30.6 +1.1
TNS *e*SP SP 01 10 52.3 -1.8
CTI Castel Tesino 99.74 44 P Pdif 00 58 10.1 +0.8
CTI pmax pmax
comp=Z,133nm,1.6s,mb6.1
CTI Castel Tesino 99.74 44 P Pdif 00 58 10.1 +0.8
comp=Z,133nm,1.6s
MOTA Moosalm 99.95 43⇓ *i*P Pdif 00 58 09.9 -0.4
comp=Z,96nm,1.4s,SNR=26
MOTA Moosalm 99.95 43⇓ *i*P Pdif 00 58 09.9 -0.4
MOTA pmax pmax
comp=Z,96nm,1.4s,mb6.0
SQTA Sankt Quirin 99.96 43⇑ *i*P Pdif 00 58 10.3 0.0
comp=Z,186nm,1.7s,SNR=32
SQTA Sankt Quirin 99.96 43⇑ *i*P Pdif 00 58 10.3 0.0
SQTA pmax pmax
comp=Z,186nm,1.7s,mb6.2
WATA Walderalm 100.24 43⇑ *i*P Pdif 00 58 11.9 +0.3
comp=Z,94nm,1.5s,SNR=18
WTTA Wattenberg 100.24 43⇑ *i*P Pdif 00 58 12.3 +0.7
comp=Z,113nm,1.5s,SNR=15
FUR Furstenfeldbru 100.40 42 *e*Pdiff Pdif 00 58 13.2 +0.9
FUR *ep*Pdiff 00 58 57.3
FUR *e*PP PP 01 02 13.3 -7.7
FUR *e*SKSac SKSac 01 08 35.4 +2.1
FUR *e*Sdiff Sdif 01 09 34.1 +2.0
FUR *e*SP SP 01 10 53.9 -8.6
FUR *e*PKKPbc PKKPbc 01 14 28.1 +0.8
FUR Furstenfeldbru 100.40 42 *e*P Pdif 00 58 13.2 +0.9
FUR *e* 01 08 35.4
FUR *e*S Sdif 01 09 34.1 +2.0
RES Resolute Bay 100.42 353 *e*P Pdif 00 58 11.8 -0.6
UBBA Unterbreizbach 100.77 39 *e*SKSac SKSac 01 08 39.0 +3.9
UBBA *e*SP SP 01 10 58.7 -7.7
PTCC Patocco-Chiusa 100.97 44 P Pdif 00 58 15.3 +0.5
comp=Z,16nm,0.8s
ROBS Robic 101.00 44 *e*Pdiff Pdif 00 58 14.5 -0.5
GRA1 Grafenberg Arr 101.00 40 *e*Pdiff Pdif 00 58 15.6 +0.6
GRA1 *e*SKSac SKSac 01 08 40.0 +3.7
GRA1 *e*SP SP 01 11 01.8 -7.1
GRF Grafenberg Arr 101.00 40 *e*Pdiff Pdif 00 58 15.6 +0.6
GRF *ep*Pdiff 00 58 59.3
GRF *e*SKSac SKSac 01 08 40.0 +3.7
GRF *e*SP SP 01 11 01.8 -7.1
GRF Grafenberg Arr 101.00 40 *e*P Pdif 00 58 15.6 +0.6
GRF *e* 01 08 40.0
GRF Grafenberg Arr 101.00 40 *e*P Pdif 00 58 15.6 +0.6
GRF *e* 01 08 40.0
GTTG Gvttingen 101.06 38 *e*SKSac SKSac 01 08 41.6 +5.1
GTTG *e*SP SP 01 11 03.4 -6.1
CADS Cadrg 101.14 44 *e*Pdiff Pdif 00 58 15.8 +0.3
CADS *ep*Pdiff 00 59 01.1
CADS *e*PP PP 01 02 19.1 -7.4
CADS *e*SKSac SKSac 01 08 39.4 +2.5
CADS *e* 01 09 43.1
KBA Koelnbreinsper 101.23 43⇓ *i*P Pdif 00 58 16.1 +0.1
comp=Z,33nm,1.7s
CEY Cerknica 101.39 45 *e*Pdiff Pdif 00 58 17.1 +0.4
CEY *ep*Pdiff 00 59 02.8
CEY *e*PP PP 01 02 21.5 -6.9
CEY *e* 01 03 06.3
CEY *e* 01 03 58.7
CEY *e*SS SS 01 16 36.7 -8.6
NRDL Niedersach Rie 101.54 37 *e*PP PP 01 02 23.4 -6.1
NRDL *e*SKSac SKSac 01 08 43.9 +5.1
NRDL *e*Sdiff Sdif 01 09 44.0 +2.4
NRDL *e*PKKPab 01 14 48.3
LJU Ljubljana 101.57 45 *e*Pdiff Pdif 00 58 17.7 +0.3
LJU *ep*Pdiff 00 59 03.0
LJU *e*PP PP 01 02 23.5 -6.3
LJU *e* 01 03 08.3
LJU *e*SKSac SKSac 01 08 41.3 +2.4
LJU *e* 01 09 46.2
LJU *e*SP SP 01 11 12.4 -2.5
LJU *e*PKKP PKKPbc 01 14 24.4 +0.4
LJU *e* 01 14 49.7
LJU Ljubljana 101.57 45 *e*P Pdif 00 58 17.7 +0.2
LJU *e* 01 08 41.3
LJU *e* 01 09 46.2
LJU Ljubljana 101.57 45 *e*Pdif Pdif 00 58 17.7 +0.3
LJU *e*PP PP 01 02 23.5 -6.3
LJU *e* 01 03 08.3
LJU *e*SKSac SKSac 01 08 41.3 +2.4
LJU *e* 01 09 46.2
LJU *e*PKKP PKKPbc 01 14 24.4 +0.4
LJU *e* 01 14 49.7
ROTZ Rotzenmuhle 101.62 41 *e*Pdiff Pdif 00 58 18.6 +0.9
ROTZ *ep*Pdiff 00 59 02.6
ROTZ *e*SKSac SKSac 01 08 43.2 +4.0
ROTZ *e*SP SP 01 11 08.2 -7.3
MOX Moxa 101.63 40 *e*Pdiff Pdif 00 58 18.2 +0.5
MOX *e*SKSac SKSac 01 08 43.5 +4.2
MOX *e*SP SP 01 11 08.2 -7.4
MOX *e*PKKPbc PKKPbc 01 14 23.9 +0.1
MOX *e*PKKPab 01 14 47.0

MOX	**Moxa**	**101.63**	**40**	*e*P	Pdif	00 58 19.0	+1.3		
	comp=Z,22nm,1.4s								
MOX				*e*		00 59 04.6			
MOX				*e*		01 08 44.9			
MOX				*e*		01 14 48.3			
MOX									
	comp=Z,3μm,21.0s								
OBKA	**Obir**	**101.77**	**44**	⇓*i*P	Pdif	00 58 18.4	0.0		
	comp=Z,40nm,1.6s,SNR=6.6								
WET	**Wettzell**	**101.77**	**41**	*e*Pdiff	Pdif	00 58 18.4	0.0		
WET				*ep*Pdiff		00 59 03.2			
WET				*e*PP	PP	01 02 23.6	-7.7		
WET				*e*SKSac	SKSac	01 08 42.3	+2.4		
WET				*e*Sdiff	Sdif	01 09 45.7	+2.2		
WET				*e*SP	SP	01 11 09.7	-7.4		
WET				*e*PKKPbc	PKKPbc	01 14 23.6	+0.2		
WET	**Wettzell**	**101.77**	**41**	*e*P	Pdif	00 58 18.4	0.0		
WET				*e*		01 08 42.3			
WET				*e*S	Sdif	01 09 45.7	+2.2		
BOJS	**Bojanci**	**101.83**	**45**	*e*Pdiff	Pdif	00 58 20.1	+1.4		
GUNZ	**Gunzen**	**101.93**	**40**	*e*PKKPab		01 14 46.4			
NKC	**Novy Kostel**	**101.95**	**40**	*e*PDIF	Pdif	00 58 19.8	+0.6		
NKC				*ep*P		00 59 05.7			
NKC				*e*x	x	01 01 16.0			
NKC				*e*x	x	01 02 23.0			
NKC				*e*SKS		01 08 44.4			
NKC				*e*SP	SP	01 11 13.5	-5.5		
NKC				*e*PKKP	PKKPbc	01 14 23.4	+0.5		
NKC	**Novy Kostel**	**101.95**	**40**	*i* P	Pdif	00 58 19.8	+0.6		
NKC				*e*		01 08 44.4			
NKC				*e*		01 11 13.5			
WERD	**Werda**	**101.95**	**40**	*e*PKKPbc	PKKPbc	01 14 22.7	-0.1		
TANN	**Tannenbergstha**	**102.03**	**40**	*e*SP	SP	01 11 12.9	-6.9		
CRES	**Cresnjev**	**102.09**	**45**	*e*Pdiff	Pdif	00 58 20.4	+0.7		
CRES				*e*		00 59 04.6			
CRES				*e*PKKP	PKKPbc	01 14 22.8	+0.3		
MOA	**Molln**	**102.11**	**43**	*i* P	Pdif	00 58 19.9	0.0		
	comp=Z,27nm,0.9s,SNR=16								
GEC2	**GERESS Array S**	**102.15**	**42**	*ep*Pdiff		00 59 04.5			
GEC2				*e*SKSac	SKSac	01 08 43.9	+2.2		
GEC2				*e*Sdiff	Sdif	01 09 50.1	+3.4		
GEC2				*e*SP	SP	01 11 16.1	-5.0		
GEC2				*e*PKKPbc	PKKPbc	01 14 22.7	+0.4		
GEC2	**GERESS Array S**	**102.15**	**42**	*e*Pdif	Pdif	00 58 19.2	-0.9		
GEC2				*e*		00 59 04.7			
GEC2				*e*PP	PP	01 02 30.0	-4.1		
GERES	**GERESS Array B**	**102.15**	**42**	P	Pdif	00 58 19.7	-0.3		
	comp=Z,2.3nm,0.8s,baz=225,slow=3.6,SNR=26								
GERES				pP		00 59 04.0			
	comp=Z,1.8nm,0.7s,baz=186,slow=25,SNR=1.8								
GERES				PP	PP	01 02 29.6	-4.5		
	comp=Z,6.1nm,0.8s,baz=210,slow=7.7,SNR=5.2								
GERES				PKKPbc	PKKPbc	01 14 20.5	-1.8		
	comp=Z,1.2nm,0.5s,baz=108,slow=3.0,SNR=5.7								
GERES				PKPPKP		01 22 38.8			
	comp=Z,2.3nm,0.9s,baz=24,slow=1.6,SNR=9.6								
GERES	**GERESS Array B**	**102.15**	**42**	P	Pdif	00 58 19.7	-0.3		
GERES						01 02 29.6			
KHC	**Kasperske Hory**	**102.19**	**42**	*e*PDIF	Pdif	00 58 20.6	+0.4		
KHC				*ep*P		00 59 05.6			
KHC				*e*x	x	01 01 16.9			
KHC				*e*PP	PP	01 02 35.3	+0.9		
KHC				*e*SKS		01 08 44.2			
KHC				*e*SDIF	Sdif	01 09 49.5	+2.5		
KHC				*e*SP	SP	01 11 15.0	-6.5		
KHC				*e*PKKP	PKKPbc	01 14 21.0	-1.2		
KHC	**Kasperske Hory**	**102.19**	**42**	*i* P	Pdif	00 58 20.6	+0.4		
KHC				*e*		01 02 35.3			
KHC				*e*		01 08 44.2			
KHC				*e*		01 09 49.5			
KHC				*e*		01 11 15.0			
BSEG	**Bad Segeberg**	**102.25**	**36**	*e*Pdiff	Pdif	00 58 19.8	-0.7		
BSEG				*ep*Pdiff		00 59 05.1			
BSEG				*e*PP	PP	01 02 27.4	-7.5		
KMBO	**Kilima Mbogo**	**102.51**	**97**	P	Pdif	00 58 23.3	+1.6		
	comp=Z,2.7nm,0.9s,baz=356,slow=0.7,SNR=6.4								
KMBO				PKKPbc	PKKPbc	01 14 22.9	+1.7		
	comp=Z,3.4nm,0.9s,baz=2.9,slow=6.5,SNR=7.0								
BER	**Bergen**	**102.61**	**29**	*e*		00 59 04.0			
BER				*e*SKSa		01 08 39.9			
BER				*e*SS	SS	01 17 09.8	+7.6		
ARSA	**Arzberg**	**102.67**	**44**	⇑*i*P	Pdif	00 58 23.7	+1.3		
	comp=Z,20nm,1.6s,SNR=7.5								
CLL	**Collm**	**102.70**	**39**	*e*SKSac	SKSac	01 08 47.7	+3.4		
CLL				*e*Sdiff	Sdif	01 09 53.6	+2.3		
CLL				*e*SP	SP	01 11 19.2	-7.7		
CLL				*e*PKKPab		01 14 42.6			
CLL	**Collm**	**102.70**	**39**	*i* Pdif	Pdif	00 58 23.1	+0.6		
	comp=Z,13nm,0.8s								
CLL				*i* pPdif		00 59 09.8			
CLL				*e*x	x	01 01 24.0			
CLL				*e*PP	PP	01 02 35.0	-3.2		
CLL				*e*x	x	01 03 06.0			
CLL				*e*PPP		01 04 53.0			
CLL				*i* SKSac	SKSac	01 08 47.4	+3.1		
CLL				*e*Sdif	Sdif	01 09 56.0	+4.7		
CLL				*e*SP	SP	01 11 24.0	-2.9		
CLL				*i* PKKPbc	PKKPbc	01 14 20.4	-0.3		
	comp=Z,13nm,1.0s								
CLL				*i* x	x	01 14 42.6			
	comp=Z,34nm,1.3s								
CLL				*e*sPKKPbc		01 15 25.0			
CLL				*e*SS	SS	01 17 04.0	+0.6		
CLL				*e*PKPPKPdif		01 22 41.0			
CLL	**Collm**	**102.70**	**39**	*i* P	Pdif	00 58 23.1	+0.6		
CLL				*i*		01 08 47.4			
CLL				*e*S	Sdif	01 09 56.0	+4.7		
CLL	**Collm**	**102.70**	**39**	*i* P	Pdif	00 58 23.1	+0.6		
	comp=Z,13nm,0.8s								
CLL				*i* pP		00 59 09.8			
CLL				*i* SKS		01 08 47.4			
CLL				*e*S	Sdif	01 09 56.0	+4.7		
CLL				*i* PKKP	PKKPbc	01 14 20.4	-0.3		
CLL				*i* PKKP	PKKPbc	01 14 42.6	+22		
CLL				*e*P'P'		01 22 41.0			
MUD	**Monsted U'grnd**	**102.71**	**34**	⇓*i*P	Pdif	00 58 23.4	+0.9		
	comp=Z,47nm,1.5s								
MUD				*i*		00 59 04.6			
MUD				*i* S	SKSac	01 08 49.4	+5.1		
MUD				*i*		01 09 53.2			
MUD				*i*		01 11 31.8			
MUD									
	comp=Z,4μm,22.0s								
MUD	**Monsted U'grnd**	**102.71**	**34**	⇓*i*P	Pdif	00 58 23.4	+0.9		
MUD				pmax	pmax				
	comp=Z,470nm,1.5s								
MUD				MLR	MLR				
	comp=Z,4μm,22.0s								
MUD	**Monsted U'grnd**	**102.71**	**34**	⇓*i*P	Pdif	00 58 23.4	+0.9		
	comp=Z,47nm,1.5s								
MUD				*i*		00 59 04.6			
MUD				*i* S	SKSac	01 08 49.4	+5.1		
MUD				*i*		01 09 53.2			
MUD				*i*		01 11 31.8			
OPO	**Ambohidratompo**	**103.00**	**117**	P	Pdif	00 58 24.9	+1.1		
	comp=Z,5.5nm,1.1s,baz=256,slow=4.2,SNR=2.8								
PRA	**Prague**	**103.06**	**41**	PDIF	Pdif	00 58 26.0	+1.9		
PRA				pP		00 59 13.0			
PRA				PP	PP	01 02 38.0	-2.9		
BRG	**Berggiesshubel**	**103.08**	**40**	*e*SKSac	SKSac	01 08 48.5	+2.4		
BRG				*e*SP	SP	01 11 22.4	-8.4		
BRG				*e*PKKPbc	PKKPbc	01 14 19.7	+0.1		
BRG	**Berggiesshubel**	**103.08**	**40**	*e*P	Pdif	00 58 24.6	+0.5		
	comp=Z,6.2nm,1.1s								
BRG				pP		00 59 09.0			
BRG				sP		00 59 34.0			
BRG				PP	PP	01 02 27.0	-14		
BRG				*i*		01 02 43.7			
	comp=Z,32nm,2.0s								
BRG				SKS		01 08 50.0			
BRG				S	Sdif	01 09 53.0	-1.4		
BRG				PS	PS	01 11 20.0	-34		
BRG				*i* PKKP	PKKPbc	01 14 19.9	+0.4		
	comp=Z,8.0nm,1.0s								
BRG				*e*		01 14 40.2			
	comp=Z,14nm,1.1s								
BRG				SS	SS	01 16 54.0	-15		
BRG				*e*PKPPKP		01 22 36.8			
	comp=Z,7.2nm,1.2s								
BRG									
	comp=N,964nm,17.1s								
BRG									
	comp=E,2μm,19.3s								
BRG									
	comp=Z,2μm,19.2s								
BRG	**Berggiesshubel**	**103.08**	**40**	*e*P	Pdif	00 58 24.7	+0.5		
BRG				*i*		01 02 43.7			
BRG						01 08 50.0			
BRG				S	Sdif	01 09 53.0	-1.4		
BRG				pmax	pmax				
	comp=Z,600nm,1.1s								
BRG				MLR	MLR				
	comp=Z,2μm,19.2s								
BRG	**Berggiesshubel**	**103.08**	**40**	*e*P	Pdif	00 58 24.6	+0.5		
	comp=Z,6.2nm,1.1s								
BRG				pP		00 59 09.0			
BRG				sP		00 59 34.0			
BRG				PP	PP	01 02 27.0	-14		
BRG				*i*		01 02 43.7			
BRG				SKS		01 08 50.0			
BRG				S	Sdif	01 09 53.0	-1.4		
BRG				PS	PS	01 11 20.0	-34		
BRG				*i* PKKP	PKKPbc	01 14 19.9	+0.4		
BRG				*e*		01 14 40.2			
BRG				SS	SS	01 16 54.0	-15		
BRG				*e*P'P'		01 22 36.8			
BRG									
	comp=Z,2μm,19.2s								
PRU	**Pruhonice**	**103.10**	**41**	*e*PDIF	Pdif	00 58 24.9	+0.6		
PRU				*ep*P		00 59 11.9			
PRU				*e*x	x	01 01 19.3			
PRU				*e*PP	PP	01 02 33.1	-8.1		
PRU				*e*SKS		01 08 49.8			
PRU				*e*SDIF	Sdif	01 09 57.5	+2.9		
PRU				*e*SP	SP	01 11 23.8	-7.2		
PRU				*e*PKKP	PKKPbc	01 14 19.3	-0.2		
PRU				*e*x	x	01 14 41.2			
PRU	**Pruhonice**	**103.10**	**41**	*i* P	Pdif	00 58 24.9	+0.6		
PRU				*e*		01 08 49.8			
PRU				*e*		01 09 57.5			
CONA	**Conrad Observa**	**103.13**	**43**	⇑*i*Pdiff	Pdif	00 58 24.9	+0.5		
PVCC	**Panska Ves**	**103.31**	**40**	*e*PDIF	Pdif	00 58 25.6	+0.4		
PVCC				*ep*P		00 59 10.9			
PVCC				*e*PP	PP	01 02 35.6	-7.2		
PVCC				*e*SKS		01 08 50.3			
PVCC	**Panska Ves**	**103.31**	**40**	*i* P	Pdif	00 58 25.6	+0.4		
PVCC				*e*		01 08 50.3			
JMIC	**Jan Mayen**	**103.36**	**17**	*e*	Pdif	00 58 21.6	-3.8		
JMIC				*e*PP	PP	01 02 42.7	-0.5		
JMIC				*i*		01 11 32.4			
TREC	**Trest**	**103.41**	**42**	*e*PDIF	Pdif	00 58 26.1	+0.5		
TREC				*e*SKS		01 08 49.5			
TREC				*e*SDIF	Sdif	01 10 01.8	+4.6		
TREC				*e*PKKP	PKKPbc	01 14 18.9	+0.3		
TREC				*e*x	x	01 14 40.4			
TREC	**Trest**	**103.41**	**42**	*i* P	Pdif	00 58 26.1	+0.5		
TREC				*e*		01 08 49.5			
TREC				*e*		01 10 01.8			
RUE	**Ruedersdorf**	**103.59**	**38**	*e*SKSac	SKSac	01 08 51.1	+2.7		
RUE				*e*SP	SP	01 11 28.7	-7.5		
RUE				*e*PKKPab		01 14 38.0			
ZST	**Bratislava**	**104.01**	**43**	*e*		00 59 12.9			
ZST				*e*PP	PP	01 02 41.5	-6.5		
OHR	**Ohrid**	**104.01**	**51**	*i* P		00 59 16.2			
OHR				*i* PP	PP	01 02 43.1	-4.9		
OHR				*i*		01 08 52.5			
COP	**Copenhagen**	**104.08**	**35**	⇑*i*P		00 59 13.8			
COP				*i*	PP	01 02 42.8	-5.7		
COP				*i* S	SKSac	01 08 56.2	+5.5		
COP				*i*		01 11 39.6			
COP									
	comp=Z,1μm,19.0s								
VRAC	**Vranov**	**104.09**	**42**	Pdiff	Pdif	00 58 29.0	+0.3		
	comp=Z,2.0nm,0.6s,baz=227,slow=6.2,SNR=4.8								
VRAC				pPdiff		00 59 12.4			
	comp=Z,1.5nm,0.5s,baz=238,slow=8.1,SNR=2.5								
VRAC	**Vranov**	**104.09**	**42**	⇓*i*P	Pdif	00 58 30.5	+1.8		
RGN	**Rugen**	**104.12**	**36**	*e*PKiKP	PKiKP	01 02 41.1	-3.8		
UPC	**Upice**	**104.17**	**41**	*e*PDIF	Pdif	00 58 27.6	-1.4		
UPC				*ep*P		00 59 14.1			
UPC				*e*PP	PP	01 02 45.5	-3.6		
UPC				*e*PKKP	PKKPbc	01 14 16.2	-0.1		
UPC				*e*x	x	01 14 34.7			
UPC	**Upice**	**104.17**	**41**	*i* P	Pdif	00 58 27.6	-1.4		
UPC				*e*		01 02 45.5			
INK	**Inuvik**	**104.20**	**339**	Pdiff	Pdif	00 58 28.2	-0.9		
	comp=Z,6.7nm,0.6s,baz=118,slow=3.5,SNR=9.0								
INK				pPdiff		00 59 12.0			
	comp=Z,1.4nm,0.5s,baz=124,slow=14,SNR=1.4								
INK				PKKPbc	PKKPbc	01 14 16.3	+0.1		
	comp=Z,18nm,0.8s,baz=358,slow=2.4,SNR=19								
INK	**Inuvik**	**104.20**	**339**	*e*Pdif	Pdif	00 58 28.1	-1.1		
INK				*e*		00 59 11.0			
KONO	**Kongsberg**	**104.23**	**31**	*e*		00 59 09.0			
KONO				*e*PP	PP	01 02 48.2	-1.4		
KONO				*e*SKSa	SKSac	01 08 51.5	+0.1		
KONO				*i*		01 11 36.3			
DAWY	**Dawson**	**104.29**	**334**	*e*Pdif	Pdif	00 58 28.3	-1.2		
DPC	**Dobruska-Polom**	**104.29**	**41**	*e*PDIF	Pdif	00 58 30.5	+0.9		
DPC				*ep*P		00 59 16.6			
DPC				*e*x	x	01 01 25.8			
DPC				*e*x	x	01 02 38.1			
DPC				*e*SKS		01 08 55.0			
DPC				*e*SKKS	SKKSac	01 09 38.3	+2.2		
DPC				*e*PKKP	PKKPbc	01 14 16.1	+0.2		
DPC				*e*x	x	01 14 36.0			
DPC	**Dobruska-Polom**	**104.29**	**41**	*e*P	Pdif	00 58 30.5	+0.9		
DPC				*e*		01 08 55.0			
DPC				*e*		01 09 38.3			
PKSM	**Moragy**	**104.30**	**46**	⇓*i*P	Pdif	00 58 31.2	+1.6		
SMOL	**Smolenice**	**104.32**	**43**	*e*PP	PP	01 02 44.1	-6.2		
KSP	**Ksiaz**	**104.45**	**41**	*e*Pdiff	Pdif	00 58 32.3	+2.0		
KSP				*e*PP	PP	01 02 47.3	-3.9		
KSP				*e*SKSac	SKSac	01 08 56.6	+4.2		
KSP				*e*SP	SP	01 11 41.6	-3.6		
KSP				*e*PS	PS	01 12 13.9	+6.0		
KSP	**Ksiaz**	**104.45**	**41**	*e*P	Pdif	00 58 30.4	+0.1		
KSP				*e*		01 08 51.3			
KSP	**Ksiaz**	**104.45**	**41**	*e*Pdif	Pdif	00 58 30.4	+0.1		
KSP				*e*		00 59 19.6			
KSP				*e*PP	PP	01 02 46.3	-4.9		
KSP				*e*SKSac	SKSac	01 08 51.3	-1.1		
KSP				*e*SP	SP	01 11 33.3	-12		
KSP				*e*SS	SS	01 17 15.0	-12		
SKO	**Skopje**	**104.76**	**50**	*i* P		00 59 18.6			
SKO				*i* PP	PP	01 02 49.7	-3.8		
SKO				*i*	SKSac	01 08 55.9	+2.1		
MORC	**Moravsky Berou**	**104.83**	**42**	⇓*i*P	Pdif	00 58 33.0	+1.0		
MORC	**Moravsky Berou**	**104.83**	**42**	*e*Pdif	Pdif	00 58 32.9	+0.9		
DAG	**Danmarks Havn**	**105.03**	**10**	*i* P	PKiKP	01 02 50.0	+3.4		
	comp=Z,14nm,1.2s								
DAG	**Danmarks Havn**	**105.03**	**10**	*e*P	PKiKP	01 02 50.0	+3.4		
BSD	**Bornholm Skovb**	**105.18**	**36**	*i* P		00 59 19.6			
BSD				*i* S	SKSac	01 08 59.9	+4.2		
BSD				*i*	SP	01 11 53.8	+1.0		
BSD									
	comp=Z,3μm,20.0s								
VYHS	**Vyhne**	**105.20**	**43**	*e*PDIFF	Pdif	00 58 34.3	+0.7		
VYHS				*e*		00 59 17.2			
VYHS				*e*PP	PP	01 02 51.3	-5.4		
VYHS	**Vyhne**	**105.20**	**43**	*e*Pdif	Pdif	00 58 34.3	+0.7		
VYHS				*e*		00 59 17.2			
VYHS				*e*PP	PP	01 02 51.3	-5.4		
VYHS				*e*		01 08 56.6			
VYHS				*e*S	Sdif	01 10 17.9	+5.8		
VYHS				*e*SP	SP	01 11 53.8	+0.8		
OKC	**Ostrava-Krasne**	**105.22**	**42**	*e*PDIF	Pdif	00 58 34.0	+0.3		
OKC				*ep*P		00 59 17.6			
OKC				*e*x	x	01 02 46.5			
OKC				*e*SKS	SKSac	01 08 56.7	+0.9		
OKC				*e*x	x	01 10 19.2			
OKC				*e*SP	SP	01 11 54.0	+0.8		
OKC				*e*PKKP	PKKPbc	01 14 12.8	-0.4		
OKC				*e*x	x	01 14 30.0			
OKC	**Ostrava-Krasne**	**105.22**	**42**	*e*P	Pdif	00 58 34.0	+0.3		
OKC				*e*		01 08 56.7			
OKC				*e*		01 11 54.0			
EGAK	**Eagle**	**105.29**	**335**	*e*Pdif	Pdif	00 58 32.7	-1.3		
	comp=Z,12nm,0.7s								
EGAK				*e*PKiKP	PKiKP	01 02 43.7	-3.4		
VAY	**Valandovo**	**105.34**	**51**	*i* P		00 59 15.5			
VAY				*i* PP	PP	01 02 53.1	-4.7		
VAY				*i*	SKSac	01 08 55.9	-0.5		
NB2	**NORSAR Subarra**	**105.52**	**30**	Pdif	Pdif	00 58 35.2	+0.2		
	comp=Z,12nm,1.2s,baz=248,slow=4.4								
NOA	**NORSAR Array B**	**105.52**	**30**	Pdiff	Pdif	00 58 35.1	+0.1		
	comp=Z,1.6nm,0.7s,baz=245,slow=4.3,SNR=8.2								
NOA				pPdiff		00 59 18.7			
	comp=Z,0.5nm,0.6s,baz=258,slow=4.6,SNR=2.3								
NOA				PKiKP	PKiKP	01 02 47.4	-0.1		
	comp=Z,1.7nm,0.8s,baz=251,slow=2.2,SNR=3.3								
NOA				PKKPbc	PKKPbc	01 14 12.1	-0.2		
	comp=Z,2.8nm,0.9s,baz=255,slow=2.9,SNR=5.8								
NOA				PKKPab	PKKPab	01 14 28.2	-1.9		
	comp=Z,14nm,0.8s,baz=68,slow=4.6,SNR=34								
NOA				PKPPKP		01 22 31.4			
	comp=Z,5.0nm,1.0s,baz=259,slow=3.2,SNR=9.9								
NOA	**NORSAR Array B**	**105.52**	**30**	Pdif	Pdif	00 58 35.1	+0.1		
NOA				PKPdf	PKiKP	01 02 47.4	-0.1		
NOA				PKKPbc	PKKPbc	01 14 12.1	-0.2		
NOA				PKKPab	PKKPab	01 14 28.2	-1.9		
NOA				P'P'		01 22 31.4			
PSZ	**Piszkesteto**	**105.67**	**44**	⇓*i*P		00 59 08.0			
DIV	**Divide**	**105.79**	**330**	*e*Pdif	Pdif	00 58 36.0	-0.2		
GKP	**Gorka Klasztor**	**105.83**	**38**	*e*Pdiff	Pdif	00 58 38.3	+1.9		
GKP				*e*PP	PP	01 02 48.4	-13		
GKP				*e*SKSac	SKSac	01 09 01.6	+3.0		
GKP				*e*SP	SP	01 11 54.6	-4.9		
GKP				*e*PS	PS	01 12 21.3	-0.8		
KKB	**Krupnik**	**105.88**	**51**	*e*P	PKiKP	01 02 58.3	+10		
BZS	**Buzias**	**106.06**	**47**	⇓*i*P	Pdif	00 58 39.2	+1.8		
BZS	**Buzias**	**106.06**	**47**	⇑*i*P	PKiKP	01 02 48.8	+0.3		
BZS	**Buzias**	**106.06**	**47**	P	PKiKP	01 02 49.1	+0.6		
VTS	**Vitosha**	**106.20**	**50**	*e*P	PP	01 03 00.5	-3.6		
VTS	**Vitosha**	**106.20**	**50**	⇓*i*P	Pdif	00 58 51.0	+13		
KECS	**Kecovo**	**106.23**	**44**	*e*PDIFF	Pdif	00 58 40.8	+2.6		
KECS				*e*		00 59 18.9			
KECS				*e*		01 01 40.2			
MMB	**Musomiste**	**106.25**	**51**	*e*P	PP	01 03 00.5	-4.0		
HFS	**Hagfors**	**106.33**	**31**	Pdiff	Pdif	00 58 37.2	-1.5		
	comp=Z,1.1nm,0.6s,baz=0.0,slow=1.5,SNR=4.6								
HFS				PKiKP	PKiKP	01 02 48.6	-0.4		
	comp=Z,2.9nm,0.5s,baz=171,slow=2.2,SNR=6.4								
HFS				PKKPbc	PKKPbc	01 14 08.8	-1.0		
	comp=Z,6.1nm,0.6s,baz=117,slow=5.2,SNR=14								
HFS				PKKPab	PKKPab	01 14 24.2	-2.2		
	comp=Z,24nm,0.8s,baz=96,slow=4.5,SNR=16								
OJC	**Ojcow**	**106.35**	**42**	*e*Pdif	Pdif	00 58 39.2	+0.5		
OJC				*e*		00 59 24.8			
OJC				*e*PP	PP	01 03 01.5	-3.7		
OJC				*e*SKSac	SKSac	01 09 02.9	+2.0		
OJC				*e*SP	SP	01 12 09.1	+4.2		
OJC				*e*SS	SS	01 18 00.1	+6.9		
OJC				LR	LR				
	comp=Z,13μm,21.4s								
NIE	**Niedzica**	**106.42**	**43**	*e*Pdiff	Pdif	00 58 41.5	+2.5		
NIE				*e*		00 59 28.0			
NIE				*e*		01 09 03.0			
NIE	**Niedzica**	**106.42**	**43**	*e*Pdif	Pdif	00 58 41.5	+2.5		
NIE				*e*		00 59 28.0			
NIE				*e*		01 09 03.0			
PGB	**Panagyurishte**	**106.86**	**51**	*e*P	PP	01 03 05.6	-3.4		
CRVS	**Cervenica-Dubn**	**106.97**	**44**	*e*PDIFF	Pdif	00 58 43.1	+1.6		
CRVS				*e*		01 01 48.8			
CRVS				*e*PP	PP	01 03 04.4	-5.4		
CRVS	**Cervenica-Dubn**	**106.97**	**44**	*e*P	Pdif	00 58 43.1	+1.6		
CRVS				*e*		01 09 02.6			
CRVS				*e*SP	SP	01 12 06.9	-4.4		
CRVS	**Cervenica-Dubn**	**106.97**	**44**	*e*Pdif	Pdif	00 58 43.1	+1.6		
CRVS				*e*		01 01 48.8			
CRVS				*e*PP	PP	01 03 04.4	-5.4		
CRVS				*e*		01 09 02.6			
CRVS				*e*S	Sdif	01 10 30.8	+3.9		
CRVS				*e*SP	SP	01 12 06.9	-4.4		
RZN	**Rozhen**	**106.99**	**52**	*e*P	PP	01 03 04.9	-5.0		
STHS	**Stebnicka Huta**	**106.99**	**43**	*e*PDIFF	Pdif	00 58 44.1	+2.5		
STHS				*e*PP	PP	01 03 05.8	-4.1		
STHS				*e*		01 14 08.2			
STHS	**Stebnicka Huta**	**106.99**	**43**	*e*P	Pdif	00 58 44.1	+2.5		
STHS				*e*		01 03 05.8			
PLD	**Plovdiv**	**107.10**	**51**	*e*P	PP	01 03 07.1	-3.6		
NSS	**Namsos**	**107.11**	**26**	*e*		00 59 20.6			
NSS				*e*PP	PP	01 03 09.0	-1.8		
NSS				*e*SKSa		01 08 08.6			
NSS				*i*		01 12 05.7			
NSS				*e*SS	SS	01 18 08.6	+5.1		
DRGR		**107.14**	**46**	⇓*i*P	Pdif	00 58 44.5	+2.2		
DRGR		**107.14**	**46**	⇑*i*P	PKiKP	01 02 50.9	+0.4		
KDZ	**Kurdzhali**	**107.48**	**52**	*e*P	PP	01 03 04.9	-8.6		
KOLS	**Kolonicke sedl**	**107.50**	**44**	*e*PDIFF	Pdif	00 58 44.8	+1.0		
KOLS				*e*

KIS **Kishinev** **111.24** **47** *i* PKIKP PKiKP 01 02 56.0 -2.2
KIS *i* 01 03 48.0
KIS *e* 01 06 04.0
KIS *i* 01 09 20.0
TOO **Toolangi** **111.25** **207** *e*PKP PP 01 03 45.2 +4.5
comp=Z,23nm,1.2s
EIL **Elat** **111.49** **66** *e*Pdif Pdif 00 59 06.2 +4.6
EIL *e*PKiKP PKiKP 01 02 58.6 -0.1
CSS **Prodhromos** **111.61** **60** *e*PKiKP PKiKP 01 02 59.8 +0.9
KBS **Kingsbay** **111.62** **12** *e* PKiKP 01 03 12.6 +14
KBS *e*SKSa 01 09 20.8
KBS *i* 01 12 54.8
BJO1 **Bjornoya** **112.19** **17** *i*P PKiKP 01 02 55.8 -4.2
BJO1 *i* 01 13 02.3
BJO **Bjornoya** **112.25** **17** *e* PKiKP 01 02 55.8 -4.3
BJO *i* 01 13 02.3
BJO *e*SS SS 01 19 07.3 -4.9
AKASG **Malin Array Be** **112.29** **43** Pdiff Pdif 00 59 08.9 +3.7
comp=Z,0.3nm,0.4s,baz=271,slow=3.5,SNR=4.4
AKASG PKiKP PKiKP 01 02 59.1 -1.0
comp=Z,26nm,0.7s,baz=265,slow=2.8,SNR=61
AKASG PP PP 01 03 43.0 -5.2
comp=Z,7.3nm,0.9s,baz=252,slow=7.3,SNR=7.2
AKASG PKKPbc PKKPbc 01 13 49.6 -1.1
comp=Z,9.1nm,0.5s,baz=63,slow=3.7,SNR=21
AKASG **Malin Array Be** **112.29** **43** *i* PKIKP PKiKP 01 02 59.2 -1.0
AKASG 01 03 43.0
AKASG **Malin Array Be** **112.29** **43** Pdif Pdif 00 59 08.9 +3.7
AKASG PKPdf PKiKP 01 02 59.1 -1.0
AKASG PP PP 01 03 43.0 -5.2
AKASG PKKPbc PKKPbc 01 13 49.6 -1.1
AKBB **Malin Array Si** **112.29** **43** PKIKP PKiKP 01 02 59.3 -0.9
AKBB **Malin Array Si** **112.29** **43** *e*PKiKP PKiKP 01 02 59.0 -1.2
AKBB *e*PP PP 01 03 41.3 -6.8
VSU **Vasula** **112.34** **35** *i* PKIKP PKiKP 01 02 59.5 -0.8
VSU **Vasula** **112.34** **35** *i* PKPr PKiKP 01 02 59.5 -0.8
ANTO **Ankara** **112.41** **55** ǁ *i*P PKiKP 01 03 01.0 +0.6
ANTO **Ankara** **112.41** **55** P PKiKP 01 03 01.8 +1.3
SNR=7.8
ANTO **Ankara** **112.41** **55** PKIKP PKiKP 01 03 01.2 +0.8
FINES **FINESS Array B** **112.53** **31** Pdiff Pdif 00 59 07.0 +0.8
comp=Z,1.0nm,0.9s,baz=282,slow=28,SNR=2.2
FINES PKiKP PKiKP 01 03 00.1 -0.6
comp=Z,5.8nm,0.8s,baz=186,slow=1.9,SNR=9.3
FINES PP PP 01 03 45.5 -4.3
comp=Z,16nm,0.9s,baz=225,slow=5.1,SNR=8.3
FINES PKKPbc PKKPbc 01 13 49.5 -0.5
comp=Z,3.2nm,0.5s,baz=86,slow=4.6,SNR=16
FINES PKKPab PKKPab 01 13 58.0 -1.0
comp=Z,24nm,1.0s,baz=76,slow=5.9,SNR=13
FINES **FINESS Array B** **112.53** **31** *i* PKIKP PKiKP 01 03 00.1 -0.5
FINES 01 03 45.5
FINES **FINESS Array B** **112.53** **31** Pdif Pdif 00 59 07.0 +0.8
FINES PKPdf PKiKP 01 03 00.1 -0.6
FINES PP PP 01 03 45.5 -4.3
FINES PKKPbc PKKPbc 01 13 49.5 -0.5
FINES PKKPab PKKPab 01 13 58.0 -1.0
ATD **Arta Tunnel** **112.65** **87** PKKPab PKKPab 01 14 00.6 +2.1
comp=Z,21nm,1.0s,baz=347,slow=5.7,SNR=8.6
KAF **Kangasniemi** **112.74** **31** *e*p PKiKP 01 02 57.9 -3.1
MMAI **Mount Meron Ar** **112.77** **63** Pdiff Pdif 00 59 11.6 +4.3
comp=Z,0.4nm,0.4s,baz=276,slow=4.0,SNR=3.8
MMAI PKiKP PKiKP 01 03 01.6 +0.5
comp=Z,8.2nm,0.5s,baz=64,slow=2.1,SNR=26
MMAI PKKPbc PKKPbc 01 13 49.0 -0.2
comp=Z,3.7nm,0.6s,baz=64,slow=5.7,SNR=9.1
MMAI PKKPab PKKPab 01 13 57.4 -0.5
comp=Z,31nm,1.0s,baz=77,slow=5.2,SNR=11
BR131 **Keskin Array S** **113.01** **55** Pdif Pdif 00 59 19.2 +11
BR131 *e*PKiKP PKiKP 01 03 02.0 +0.4
BR131 *e*PP PP 01 03 56.0 +2.7
BRTR **Keskin Array B** **113.01** **55** Pdiff Pdif 00 59 13.9 +5.6
comp=Z,0.4nm,0.8s,baz=251,slow=4.3,SNR=2.9
BRTR PKiKP PKiKP 01 03 02.1 +0.5
comp=Z,20nm,0.9s,baz=185,slow=2.3,SNR=22
BRTR PP PP 01 03 50.6 -2.6
comp=Z,9.3nm,1.1s,baz=321,slow=1.6,SNR=4.9
BRTR PKKPbc PKKPbc 01 13 48.9 +0.5
comp=Z,2.1nm,0.7s,baz=130,slow=4.4,SNR=8.8
BRTR PKKPab PKKPab 01 13 56.7 -0.1
comp=Z,14nm,0.8s,baz=108,slow=4.3,SNR=25
BRTR **Keskin Array B** **113.01** **55** *i* PKIKP PKiKP 01 03 02.1 +0.5
BRTR 01 03 50.7
BHL **Bhannes** **113.20** **62** *e*P PP 01 03 51.0 -3.6
ARCES **ARCESS Array B** **113.44** **23** Pdiff Pdif 00 59 16.3 +6.0
comp=Z,0.5nm,0.7s,baz=172,slow=28,SNR=4.0
ARCES PKiKP PKiKP 01 03 01.4 -1.0
comp=Z,4.6nm,0.7s,baz=288,slow=1.2,SNR=8.8
ARCES PKKPbc PKKPbc 01 13 44.7 -2.2
comp=Z,25nm,0.8s,baz=87,slow=3.8,SNR=18
ARCES PKPPKP 01 22 17.8
comp=Z,3.9nm,0.9s,baz=126,slow=2.1,SNR=6.5
ARCES **ARCESS Array B** **113.44** **23** *i* PKIKP PKiKP 01 03 01.4 -1.0
ARCES **ARCESS Array B** **113.44** **23** Pdif Pdif 00 59 16.3 +6.0
ARCES PKPdf PKiKP 01 03 01.4 -1.0
ARCES PKKPbc PKKPbc 01 13 44.7 -2.2
ARCES P'P' 01 22 17.8
ARE0 **ARCESS Array S** **113.44** **23** *e*PKiKP PKiKP 01 03 01.3 -1.1
ARE0 *e*PP PP 01 03 54.0 -2.3
ASF **Jabal al Asfar** **113.77** **64** Pdiff Pdif 00 59 16.8 +5.1
comp=Z,0.7nm,0.4s,baz=268,slow=5.8,SNR=1.8
ASF PKiKP PKiKP 01 03 04.4 +1.4
comp=Z,19nm,0.9s,baz=74,slow=2.3,SNR=23
ASF PKKPab PKKPab 01 13 54.2 +0.8
comp=Z,21nm,1.1s,baz=338,slow=1.9,SNR=14
ASF **Jabal al Asfar** **113.77** **64** *i* PKIKP PKiKP 01 03 04.4 +1.4
PUL **Pulkovo** **114.36** **33** *i* PKIKP PKiKP 01 03 04.0 -0.1
PUL *e* 01 09 32.5
PUL *e*SP SP 01 13 16.0 -5.5
PUL pmax pmax
comp=N,113nm,0.9s
PUL pmax pmax
comp=E,108nm,0.9s
PUL pmax pmax
comp=Z,101nm,0.9s
PUL **Pulkovo** **114.36** **33** ⇑ *i*PKP PKiKP 01 03 03.0 -1.1
SIM **Simferopol'** **114.43** **50** *d* PKIKP PKiKP 01 03 04.3 0.0
SIM 01 03 52.6
SIM *e* 01 09 34.9
SIM *e*SP SP 01 13 14.4 -7.8
SIM pmax pmax
comp=Z,42nm,0.7s
JOF **Joensuu** **115.14** **30** *e*p PKPdf 01 03 03.9 -1.8
MALT **Malatya** **116.36** **58** ǁ *i*P PKPdf 01 03 08.9 +0.9
MALT **Malatya** **116.36** **58** *e*PKPdf PKPdf 01 03 08.8 +0.8
MALT *e* 01 04 12.1
TNA **Tin City** **116.40** **333** *e*PKPdf PKPdf 01 03 07.6 -0.5
LVZ **Lovozero** **116.69** **25** *i* PKIKP PKPdf 01 03 07.8 -0.8
LVZ *e* 01 04 19.2
LVZ *e* 01 09 40.9
LVZ *e*SP SP 01 13 35.6 -7.1
LVZ *e*SS SS 01 20 04.8 -5.8
LVZ pmax pmax
comp=Z,54nm,1.2s
LVZ pmax pmax
comp=N,6.0nm,1.1s
LVZ pmax pmax
comp=E,7.0nm,1.0s
LVZ **Lovozero** **116.69** **25** *i* PKPr PKiKP 01 03 07.7 -0.9
ANN **Anapa** **116.73** **51** *i* PKIKP PKPdf 01 03 07.5 -1.2
ANN *i* 01 04 16.1
ANN *i* SP SP 01 13 44.2 +1.1
ANN pmax pmax
comp=Z,116nm,1.0s
OBN **Obninsk** **117.29** **39** κ *i*PKIKP PKPdf 01 03 09.1 -0.7
OBN *e* 01 03 56.2
OBN *e* 01 04 17.4
OBN *i* 01 09 44.7
OBN *e*PS PS 01 13 52.9 -17
OBN *e*PPS 01 15 12.9
OBN *e*SS SS 01 20 10.5 -7.8
OBN pmax pmax
comp=Z,104nm,0.7s
OBN MLR MLR
comp=Z,3μm,20.0s
OBN **Obninsk** **117.29** **39** *i* PKPr PKiKP 01 03 09.1 -0.7
STKA **Stephens Creek** **117.77** **207** *e*PKP PKPdf 01 03 10.4 -0.3
comp=Z,20nm,1.0s
STKA *e*PKKP PKKPbc 01 13 32.5 +0.5
STKA **Stephens Creek** **117.77** **207** Pdiff Pdif 00 59 32.6 +3.2
comp=Z,1.7nm,0.8s,baz=307,slow=0.9,SNR=3.1
STKA PKP PKPdf 01 03 10.8 +0.1
comp=Z,21nm,0.8s,baz=90,slow=1.2,SNR=24
STKA PKKPbc PKKPbc 01 13 32.6 +0.6
comp=Z,12nm,0.7s,baz=314,slow=4.7,SNR=20
STKA **Stephens Creek** **117.77** **207** Pdif Pdif 00 59 32.6 +3.2
STKA *e*PKPdf PKPdf 01 03 10.7 0.0
STKA *e*PP PP 01 04 24.2 -2.3
MOS **Moscow** **117.93** **38** *e*PKIKP PKPdf 01 03 11.0 0.0
MOS *i* 01 04 23.6
MOS *i* 01 09 47.5
MOS pmax pmax
comp=Z,200nm,1.2s
MOS pmax pmax
comp=Z,89nm,1.0s
TMCR **Tamitsa** **118.18** **29** *i* PKIKP PKPdf 01 03 11.3 -0.2
TMCR pmax pmax
comp=Z,50nm,1.0s
VRSR **Storozhevoye** **118.60** **43** *i* PKIKP PKPdf 01 03 11.3 -1.0
VRSR *e* 01 09 47.8
VRSR pmax pmax
comp=Z,110nm,1.0s
VRSR pmax pmax
comp=N,20nm,0.8s
VRSR pmax pmax
comp=E,50nm,0.9s
VOR **Voronezh** **118.64** **43** *e*PKIKP PKPdf 01 03 11.3 -1.1
VOR *e* 01 09 49.0
VOR pmax pmax
comp=Z,140nm,1.2s
MSL **Mosul** **119.66** **61** *ex* x 01 03 12.0
MSL *ex* x 01 04 37.0
MSL *ex* x 01 10 01.0
MSL *ex* x 01 13 15.0
VRHR **Novokhopersk** **120.13** **44** *e*PKIKP PKPdf 01 03 15.3 +0.1
VRHR *e*SP SP 01 14 06.4 -7.2
VRHR pmax pmax
comp=Z,120nm,0.5s
VRHR pmax pmax
comp=N,50nm,0.7s
VRHR pmax pmax
comp=E,90nm,0.7s
BHD **Baghdad** **120.17** **64** *ex* x 01 03 13.0
BHD *ex* x 01 04 36.0
BHD *ex* x 01 09 55.0
BHD *ex* x 01 11 12.0
BHD *ex* x 01 12 16.0
BHD *ex* x 01 13 18.0
KIV **Kislovodsk** **120.37** **52** P PKPdf 01 03 16.1 +0.4
SNR=48
KIV **Kislovodsk** **120.37** **52** κ *i*PKIKP PKPdf 01 03 15.8 +0.1
KIV *i* 01 04 44.8
KIV *e*PPP 01 07 19.4
KIV *i* 01 09 58.2
KIV *i* 01 14 20.7
KIV *i* SS SS 01 21 03.3 +5.4
KIV pmax pmax
comp=Z,166nm,0.9s
KIV MLR MLR
comp=Z,1μm,19.0s
KIV **Kislovodsk** **120.37** **52** *e*PKPdf PKPdf 01 03 15.6 -0.1
KIV *e*PP PP 01 04 38.9 -5.5
ZEI **Tsey** **121.13** **53** *e*PKIKP PKPdf 01 03 17.8 +0.6
ZEI *e* 01 04 47.8
GNI **Garni** **121.49** **57** PKP PKPdf 01 03 19.1 +1.2
comp=Z,41nm,0.7s,baz=327,slow=2.7,SNR=29
GNI PKKPbc PKKPbc 01 13 20.6 +2.2
comp=Z,5.4nm,0.7s,baz=167,slow=14,SNR=2.7
GNI **Garni** **121.49** **57** P PKPdf 01 03 19.0 +1.1
SNR=16
PECR **Pechory** **121.55** **38** *i* PKIKP PKPdf 01 03 16.4 -1.6
PECR *e* 01 10 00.0
PECR *e* 01 14 19.0
PECR *e*SS SS 01 21 08.5 -4.6
PECR pmax pmax
comp=Z,1μm,1.4s
RST **Umm Al-Ruwaisa** **121.62** **69** *e*P PKPdf 01 03 18.0 -0.1
RST AMb AMB 01 03 21.5
comp=Z,319nm,0.7s
TBLG **Delisi** **121.65** **55** P PKPdf 01 03 18.9 +0.7
MTA **Mtatsminda** **121.69** **55** P PKPdf 01 03 18.6 +0.3
NAY **Al-Naaiem** **121.78** **70** *e*P PKPdf 01 03 18.1 -0.4
NAY AMb AMB 01 03 21.7
comp=Z,66nm,0.8s
MIB **Mutribah** **121.98** **69** *e*P PKPdf 01 03 18.7 -0.1
MIB AMb AMB 01 03 22.2
comp=Z,202nm,0.8s
RDF **Al-Radifah** **121.98** **70** *e*P PKPdf 01 03 19.0 +0.2
RDF AMb AMB 01 03 22.0
comp=Z,179nm,0.6s
DGRG **David-gareji** **122.10** **55** P PKPdf 01 03 19.9 +0.8
UMR **Umm Al-Rimmam** **122.25** **69** *e*P PKPdf 01 03 19.2 -0.1
UMR AMb AMB 01 03 22.8
comp=Z,328nm,0.6s
QRN **Al-Qurain** **122.25** **70** *e*P PKPdf 01 03 19.2 -0.1
QRN AMb AMB 01 03 22.8
comp=Z,169nm,0.7s
NWAO **Narrogin (SRO)** **122.91** **184** PKP PKPdf 01 03 20.1 -0.5
comp=Z,52nm,0.7s,baz=179,slow=2.9,SNR=31
NWAO **Narrogin (SRO)** **122.91** **184** PKIKP PKPdf 01 03 20.3 -0.3
AMKA **Amchitka** **123.31** **317** *e*PKPdf PKPdf 01 03 20.9 -0.4
AMKA *ep*PKPdf pPKPdf 01 04 11.6 +2.1
FORT **Forrest** **123.32** **196** *e*PKP PKPdf 01 03 20.6 -0.8
comp=Z,71nm,0.5s
FORT *e*PKKP PKKPbc 01 13 11.6 +0.2
MAK **Makhachkala** **123.79** **53** *e*PKIKP PKPdf 01 03 23.4 +1.1
MAK *i* 01 05 04.3
MAK *i* SP SP 01 14 41.7 -4.4
MAK *i* PS PS 01 15 07.6 +0.2
MAK pmax pmax
comp=Z,196nm,1.5s
MAK MLR MLR
comp=Z,2μm,20.0s
MAK **Makhachkala** **123.79** **53** ⇑ *i*PKP PKPdf 01 03 23.3 +1.0
MUN **Mundaring** **123.91** **183** *e*P PKPdf 01 03 22.1 -0.4
ABTO **Aybut** **124.13** **85** P PKPdf 01 03 24.3 +1.4
SNR=6.5
KLBR **Kellerberrin** **124.19** **185** *e*P PKPdf 01 03 22.5 -0.5
comp=Z,60nm,0.5s
WHFO **Wadi Hawf** **124.73** **84** P PKPdf 01 03 24.6 +0.6
SNR=14
CTA **Charters Tower** **125.23** **219** *e*PKP PKPdf 01 03 25.4 +0.4
comp=Z,98nm,1.0s
CTA **Charters Tower** **125.23** **219** PKP PKPdf 01 03 25.6 +0.5
comp=Z,152nm,1.0s,baz=148,slow=1.3,SNR=97
CTA PP PP 01 05 13.7 -3.5
comp=Z,18nm,0.9s,baz=227,slow=1.1,SNR=3.2
CTA **Charters Tower** **125.23** **219** PKIKP PKPdf 01 03 25.6 +0.6
CTA 01 05 13.7
CTA pmax pmax
comp=Z,152nm,1.0s
CTAO **Charters Tower** **125.23** **219** *e*P PKPdf 01 03 18.1 -6.9
CTAO *e*PKPdf PKPdf 01 03 25.9 +0.9
CTAO *e*PP PP 01 05 15.7 -1.5
BILL **Bilibino** **125.80** **338** ⇑ *e*PKIKP PKPdf 01 03 21.3 -4.8
BILL *e* 01 04 05.3
BILL *e* 01 05 17.6
BILL *e* 01 10 13.8
BILL *i* 01 15 04.7
BILL *e* 01 16 27.7
BILL pmax pmax
comp=Z,130nm,1.2s
BILL MLR MLR
comp=Z,2μm,22.0s
BILL **Bilibino** **125.80** **338** *i* PKPr PKiKP 01 03 25.5 -1.0
SMY **Shemya** **126.40** **319** *e*PKIKP PKPdf 01 03 26.5 -0.8
SMY *e* 01 04 18.1
SOKR **Solikamsk** **127.67** **32** *i* PKIKP PKPdf 01 03 26.3 -3.4
SOKR 01 10 11.6
SOKR SP SP 01 15 15.3 -4.8
SOKR MLR MLR
comp=Z,4μm,22.0s
ASAR **Alice Springs** **128.14** **205** Pdiff Pdif 01 00 23.0 +7.4
comp=Z,0.8nm,0.9s,baz=163,slow=4.2,SNR=5.4
ASAR PKhKP 01 03 08.5
comp=Z,1.5nm,0.5s,baz=150,slow=1.9,SNR=9.0
ASAR PKP PKPdf 01 03 30.5 -0.1
comp=Z,135nm,0.8s,baz=138,slow=1.8,SNR=95
ASAR PP PP 01 05 33.9 -2.5
comp=Z,31nm,1.1s,baz=149,slow=6.3,SNR=5.1
ASAR PKKP 01 13 41.4
comp=Z,1.9nm,0.5s,baz=351,slow=1.6,SNR=8.4
ASAR SKKPbc 01 16 36.5
comp=Z,4.5nm,0.8s,baz=1.8,slow=3.6,SNR=4.4
ASAR **Alice Springs** **128.14** **205** PKIKP PKPdf 01 03 30.5 -0.1
ASAR 01 05 33.9
ASAR pmax pmax
comp=Z,135nm,0.8s
AS31 **Alice Springs** **128.14** **205** *e*PKPdf PKPdf 01 03 30.5 -0.1
AS31 *e*PP PP 01 05 31.1 -5.3
ASHO **Ashiyiah** **128.53** **77** P PKPdf 01 03 31.7 +0.4
SNR=11
ARQ **Araqi** **128.65** **79** P PKPdf 01 03 32.1 +0.5
SNR=13
BANOM **Banah** **129.00** **76** P PKPdf 01 03 33.1 +0.9
SNR=8.2
BSY **Bisya** **129.12** **80** P PKPdf 01 03 32.9 +0.5
SNR=23
HOQ **Hoqain** **129.41** **79** P PKPdf 01 03 33.1 +0.1
SNR=19
DGAR **Diego Garcia** **129.41** **123** ⇑ *i*PKIKP PKPdf 01 03 34.1 +1.1
ARU **Arti** **129.47** **36** *i* PKIKP PKPdf 01 03 32.4 -0.7
ARU *e* 01 04 18.3
ARU *e* 01 10 23.7
ARU *e*SSS 01 27 46.4
ARU **Arti** **129.47** **36** *e*P PKPdf 01 03 27.4 -5.7
ARU *e*PKPdf PKPdf 01 03 33.2 +0.1
ARU *i* PKPr 01 03 33.8
ARU *ep*PKPdf pPKPdf 01 04 21.0 -0.3
ARU *e*SKP 01 06 37.8
JMDO **Jabal Madar** **129.85** **80** P PKPdf 01 03 34.0 +0.2
SNR=14
SMDO **Samad** **129.96** **80** P PKPdf 01 03 34.3 +0.3
SNR=38
BIDO **Bidbid** **130.13** **79** P PKPdf 01 03 35.3 +1.0
SNR=27
WAKE **Wake Island** **130.17** **275** *e*PKPdf PKPdf 01 03 35.4 +1.0
WAKE *ep*PKPdf pPKPdf 01 04 25.3 +2.7
WAKE *e*SKP 01 06 39.1
WSAR **Wadi Sarin** **130.52** **80** PKP PKPdf 01 03 35.8 +0.7
comp=Z,182nm,0.9s,baz=225,slow=2.3,SNR=62
WSAR SKPbc SKPbc 01 06 43.4 +2.1
comp=Z,118nm,0.9s,baz=249,slow=4.3,SNR=16
AKTO **Aktyubinsk** **130.54** **44** SKPbc SKPbc 01 06 43.1 +1.7
comp=Z,105nm,1.0s,baz=285,slow=3.4,SNR=16
WBK **Wadi Bani Khal** **130.68** **80** P PKPdf 01 03 36.5 +1.1
SNR=35
WB2 **Warramunga Arr** **131.31** **207** *e*PKP PKPdf 01 03 36.8 +0.2
WB2 *e*PKPdf PKPdf 01 03 36.9 +0.3
WB2 *e*SKP 01 06 44.6
WB2 *e*SKPbc SKPbc 01 06 45.1 +0.9
WB2 *e*PKS 01 07 01.6
WRA **Warramunga Arr** **131.32** **207** Pdiff Pdif 01 00 38.5 +8.8
comp=Z,0.4nm,0.8s,baz=159,slow=4.2,SNR=4.2
WRA PKhKP 01 03 15.7
comp=Z,3.6nm,0.7s,baz=166,slow=2.3,SNR=22
WRA PKP PKPdf 01 03 37.1 +0.4
comp=Z,92nm,0.5s,baz=164,slow=1.6,SNR=44
WRA PP PP 01 05 51.9 -5.0
comp=Z,3.6nm,0.7s,baz=167,slow=2.0,SNR=4.4
WRA SKPbc SKPbc 01 06 45.1 +0.8
comp=Z,47nm,0.7s,baz=157,slow=3.8,SNR=13
WRA PKKP 01 13 35.4
comp=Z,1.5nm,0.8s,baz=323,slow=2.3,SNR=5.5
WRA SKKPbc 01 16 18.3
comp=Z,5.7nm,0.9s,baz=335,slow=5.4,SNR=5.5
WRA **Warramunga Arr** **131.32** **207** PKIKP PKPdf 01 03 37.1 +0.5
WRA 01 16 18.3
WRA pmax pmax
comp=Z,92nm,0.5s
WRAB **Tennant Creek** **131.32** **207** *d* PKIKP PKPdf 01 03 36.9 +0.3
WRAB **Tennant Creek** **131.32** **207** *e*PKPdf PKPdf 01 03 37.0 +0.4
WRAB *e*SKP 01 06 44.7
TIXI **Tiksi** **131.81** **353** *e*PKIKP PKPdf 01 03 32.8 -4.8
TIXI pmax pmax
comp=Z,19nm,0.8s
TIXI MLR MLR
comp=Z,1μm,24.0s
TIXI **Tiksi** **131.81** **353** *i* PKPr PKPdf 01 03 37.2 -0.4
AB31 **Akbulak array** **131.99** **45** *i* PKHKP 01 03 23.8
AB31 pmax pmax
comp=Z,473nm,1.4s
PMG **Port Moresby** **132.70** **229** PKhKP 01 03 25.6
comp=Z,30nm,1.0s,baz=169,slow=6.6,SNR=6.0
PMG PKP PKPdf 01 03 40.6 +1.4
comp=Z,252nm,1.1s,baz=246,slow=0.7,SNR=20
PMG SKPbc SKPbc 01 06 51.2 +2.1
comp=Z,139nm,1.0s,baz=172,slow=1.8,SNR=11
PMG **Port Moresby** **132.70** **229** PKIKP PKPdf 01 03 40.6 +1.4
PMG pmax pmax
comp=Z,252nm,1.1s
PMG pmax pmax
comp=N,139nm,1.0s
SEY **Seymchan** **133.39** **336** ⇑ *i*PKIKP PKPdf 01 03 41.1 +0.6
MBWA **Marble Bar** **134.30** **189** P PKPdf 01 03 40.9 -1.3
SNR=6.3
MBWA **Marble Bar** **134.30** **189** *e*PKPdf PKPdf 01 03 39.7 -2.5
MBWA *e*PP PP 01 06 15.4 -0.6
PET **Petropavlovsk** **135.38** **322** *e*PKIKP PKPdf 01 03 36.8 -7.4
PET *i* 01 06 24.8
PET *e*SPP 01 18 13.3
PET pmax pmax
comp=Z,370nm,0.8s
PET **Petropavlovsk** **135.38** **322** *e*PKPdf PKPdf 01 03 43.9 -0.3
PET ⇑ *i*PKP PKPdf 01 03 44.4 +0.2
MA2 **Magadan** **136.04** **333** *e*PKIKP PKPdf 01 03 37.5 -8.0
MA2 *e* 01 06 23.3
MA2 *e* 01 24 05.0
FITZ **Fitzroy Crossi** **136.04** **197** *e*PKP PKPdf 01 03 46.6 +1.1
comp=Z,150nm,0.7s
FITZ *e*SKP 01 07 02.0
FITZ *e*PKS 01 07 18.0
FITZ **Fitzroy Crossi** **136.04** **197** PKhKP 01 03 32.2
comp=Z,13nm,0.6s,baz=202,slow=4.7,SNR=30
FITZ PKP PKPdf 01 03 44.8 -0.7
comp=Z,114nm,0.9s,baz=164,slow=3.6,SNR=23
FITZ SKPbc SKPbc 01 07 01.3 +1.4
comp=Z,13nm,0.7s,baz=211,slow=7.4,SNR=4.1
BRVK **Borovoye** **137.00** **37** *e* PKPdf 01 03 47.3 0.0
BRVK *e* 01 04 34.7
BRVK *e* 01 06 29.0
BRVK **Borovoye** **137.00** **37** *e*PKPdf PKPdf 01 03 47.3 +0.1
BRVK *i* PKPr 01 03 47.9
BRVK *ep*PKPdf pPKPdf 01 04 34.7 -0.7
BRVK *e*PP PP 01 06 29.0 -3.9
BRVK *e*SKPbc SKPbc 01 07 03.0 +0.2
BVAR **Borovoye Array** **137.07** **37** SKPbc SKPbc 01 07 05.0 +2.0
comp=Z,34nm,1.0s,baz=316,slow=4.1,SNR=6.1
KAKA **Kakadu** **138.56** **209** *e*PKP PKPdf 01 03 43.8 -6.3
comp=Z,75nm,0.5s
KAKA *e*SKP 01 07 09.7
KK31 **Karatay Array** **140.52** **51** *i* PKHKP 01 03 45.8
KK31 pmax pmax
comp=Z,21nm,0.6s
KKAR **Karatay Array** **140.52** **51** PKHKP 01 03 45.8
KKAR pmax pmax
comp=Z,14nm,0.7s
YAK **Yakutsk** **140.66** **348** *e*PKHKP 01 03 46.2
YAK *e* 01 03 53.4
YAK *e* 01 04 37.5
YAK *e* 01 06 52.1
YAK **Yakutsk** **140.66** **348** *e*PKPdf PKPdf 01 03 53.4 -0.6
YAK *ep*PKPdf pPKPdf 01 04 37.5 -4.7
YAK *e*PP PP 01 06 52.1 -3.4
YAK *e*SKPdf SKPdf 01 07 12.1 +1.1
TRD **Trivandrum** **142.17** **108** *e*P PKPdf 01 03 54.6 -2.1
TRD AMb AMB 01 04 02.1
comp=Z,172nm,0.8s
TRD *i* x x 01 04 43.5
TRD *ex* x 01 07 17.3
MNGI **Mangalore** **142.22** **100** *ex* PKPdf 01 03 47.4 -9.3
MNGI *i* x x 01 13 41.0
NVS **Novosibirsk** **142.41** **28** *e*PKIKP PKPdf 01 03 52.6 -4.5
NVS pmax pmax
comp=Z,624nm,1.8s
NVS pmax pmax
comp=E,133nm,1.6s
EKS2 **Erkin-Say** **142.95** **51** P PKPdf 01 03 56.3 -1.8
SNR=24
AML **Almayashu** **143.04** **52** P PKPdf 01 03 56.4 -1.8
SNR=65
KAD **Karad** **143.15** **93** *e*P PKPdf 01 03 56.1 -2.2
KAD *eP* 01 03 56.5
POO **Poona** **143.20** **91** ⇑ *i*x PKPdf 01 03 52.0 -6.5
comp=E,220nm,1.0s
USP **Ospenovka** **143.27** **49** P PKPdf 01 03 56.9 -1.7
SNR=50
AAK **Ala-Archa** **143.46** **50** P PKPdf 01 03 57.3 -1.6
SNR=63
AAK **Ala-Archa** **143.46** **50** P PKPdf 01 03 57.6 -1.3
SNR=89
AAK **Ala-Archa** **143.46** **50** *e*PKPdf PKPdf 01 03 56.1 -2.9

AAK					*e*PKPdf	PKPdf	01 04 41.4	+42	
AAK					*e*PP	PP	01 07 10.7	-1.7	
FRU	**Bishkek**	**143.49**	**50**	*i* PKIKP	PKPdf	01 03 56.0	-3.0		
FRU				*i*		01 04 44.0			
FRU				*e*		01 19 23.0			
FRU				pmax	pmax				
	comp=Z,380nm,2.0s								
CHMS	**Chumysh**	**143.53**	**50**	P	PKPdf	01 03 57.6	-1.4		
	SNR=29								
UCH	**Uchtor**	**143.59**	**51**	P	PKPdf	01 04 00.0	+0.9		
	SNR=14								
ZAL	**Zalesovo**	**143.70**	**28**	PKP	PKPdf	01 03 56.6	-2.7		
	comp=Z,128nm,0.7s,baz=165,slow=4.6,SNR=247								
ZAL				pPKP	pPKPdf	01 04 44.7	-2.9		
	comp=Z,78nm,1.1s,baz=237,slow=16,SNR=1.2								
ZAL				SKPbc	SKPbc	01 07 21.7	+1.2		
	comp=Z,59nm,0.9s,baz=184,slow=2.1,SNR=7.0								
ZAL	**Zalesovo**	**143.70**	**28**	PKIKP	PKPdf	01 03 56.6	-2.7		
ZAL						01 04 44.7			
ZAL						01 07 21.7			
ZAL				pmax	pmax				
	comp=Z,128nm,0.7s								
ZAL	**Zalesovo**	**143.70**	**28**	PKP	PKPdf	01 03 56.6	-2.7		
ZAL				pPKP	pPKPdf	01 04 44.7	-2.9		
ZAL				SKPbc	SKPbc	01 07 21.7	+1.2		
KBK	**Karagaybulak**	**143.77**	**50**	P	PKPdf	01 03 58.4	-1.1		
	SNR=98								
TKM2	**Tokmak 2**	**144.14**	**50**	P	PKPdf	01 03 59.0	-1.1		
	SNR=159								
TKM2	**Tokmak 2**	**144.14**	**50**	PKIKP	PKPdf	01 03 58.2	-1.9		
TKM2				pmax	pmax				
	comp=Z,662nm,1.6s								
KZA	**Kyzart**	**144.16**	**51**	P	PKPdf	01 03 59.8	-0.4		
	SNR=146								
PALK	**Pallekele**	**144.74**	**113**	P	PKPdf	01 04 01.3	+0.1		
	SNR=15								
PALK	**Pallekele**	**144.74**	**113**	*e*PKP	PKPdf	01 04 00.9	-0.2		
PALK				*ep*PKPdf	pPKPdf	01 04 47.2	-2.2		
ULHL	**Ulahol**	**144.81**	**50**	P	PKPdf	01 04 01.8	+0.5		
	SNR=47								
AAA	**Alma-Ata**	**144.95**	**48**	*i* PKIKP	PKPdf	01 04 02.0	+0.5		
AAA				*e*SS	SS	01 25 57.0	+1.7		
AAA				pmax	pmax				
	comp=Z,8μm,5.0s								
KRAR	**Krasnoyarsk**	**145.10**	**20**	*d i*PKIKP	PKPdf	01 04 01.3	-0.5		
AJM	**Ajmer**	**145.38**	**78**	*i* P	PKPdf	01 04 04.0	+1.7		
AJM				*i* x	x	01 04 51.0			
KSH	**Kashi**	**145.40**	**55**	*i* PKP	PKPdf	01 04 03.0	+0.7		
KSH				PKS		01 07 37.4			
KSH				PPP		01 10 22.4			
KSH				SKKS	SKKSac	01 13 51.9	-5.9		
KSH				PP	PP				
	comp=Z,5μm,4.6s								
KSH				LR	LR				
	comp=N,3μm,17.4s								
KSH				LR	LR				
	comp=E,5μm,17.0s								
KSH				LR	LR				
	comp=Z,6μm,20.4s								
LATR	**Latur**	**145.63**	**93**	*e*P	PKPdf	01 04 03.5	+0.8		
THN	**Thein Dam**	**146.36**	**68**	*ex*	PKPdf	01 04 04.5	+0.6		
CLNS	**Chul'man**	**146.41**	**348**	*e*PKP2	PKPab	01 04 03.9	-3.0		
CLNS				pmax	pmax				
	comp=N,228nm,1.1s								
CLNS				pmax	pmax				
	comp=Z,610nm,1.1s								
CLNS				pmax	pmax				
	comp=E,230nm,1.3s								
BOD	**Bodaibo**	**146.55**	**359**	⇓*i*PKIKP	PKPdf	01 04 02.8	-1.4		
BOD				pmax	pmax				
	comp=Z,412nm,1.0s								
PONG	**Pong**	**146.59**	**68**	*e*P	PKPdf	01 04 04.0	-0.3		
PONG				*ex*	x	01 07 30.0			
AKL	**Akola**	**146.63**	**89**	*i* P	PKPdf	01 04 06.2	+1.8		
AKL				*i* x	x	01 14 05.5			
YUK	**Yuzh-Kuril'sk**	**146.77**	**314**	PKP2	PKPab	01 04 06.1	-2.2		
YUK				pmax	pmax				
	comp=Z,14μm,3.0s								
YUK				pmax	pmax				
	comp=N,2μm,2.0s								
YUK				pmax	pmax				
	comp=N,190nm,0.5s								
YUK				pmax	pmax				
	comp=Z,280nm,0.5s								
MK31	**Makanchi Array**	**146.79**	**40**	PKIKP	PKPdf	01 04 04.4	-0.3		
MK31				pmax	pmax				
	comp=Z,366nm,0.7s								
MKAR	**Makanchi Array**	**146.79**	**40**	PKPbc	PKPbc	01 04 05.2	-1.5		
	comp=Z,496nm,0.7s,baz=325,slow=1.5,SNR=299								
MKAR	**Makanchi Array**	**146.79**	**40**	PKP2	PKPab	01 04 05.2	-3.2		
MKAR				pmax	pmax				
	comp=Z,496nm,0.7s								
BHK	**Bhakra**	**147.02**	**69**	*ex*	PKPdf	01 04 09.8	+4.8		
BHK				*ex*	x	01 04 44.0			
MDRS	**Chennai**	**147.10**	**104**	*e*P	PKPdf	01 04 05.2	0.0		
MDRS				⇓*e*P		01 04 06.0			
MDRS				*ex*	x	01 04 54.0			
MDRS				*i* sPKP		01 04 58.0			
MDRS				*ex*	x	01 06 05.4			
MDRS				*ex*	x	01 11 25.0			
MDRS				*ex*	x	01 14 05.0			
MDRS				*ex*	x	01 17 38.0			
MDRS				*ex*	x	01 21 21.0			
MDRS				*ex*	x	01 23 30.0			
MDRS				*ex*	x	01 26 10.0			
HYB	**Hyderabad**	**147.16**	**95**	*i* PKP	PKPdf	01 04 06.0	+0.7		
	comp=Z,500nm,1.0s								
HYB				*e*PKPAB	PKPab	01 04 12.0	+2.2		
HYB				*e*		01 04 17.0			
HYB				*e*		01 04 55.0			
HYB				*e*		01 05 02.0			
HYB				*ep*PKPAB		01 05 21.0			
HYB				*es*PKPAB		01 05 57.5			
HYB				*e*PP	PP	01 07 39.0	+4.8		
HYB				*e*		01 08 04.0			
HYB				*e*		01 14 08.0			
HYB				*e*		01 14 42.0			
HYB				*e*		01 17 32.0			
HYB	**Hyderabad**	**147.16**	**95**	*e*P	PKPdf	01 04 06.0	+0.7		
HYB				*e*		01 04 55.0			
YSS	**Yuzh-Sakhalins**	**147.25**	**321**	*d i*PKIKP	PKPdf	01 04 05.0	-0.4		
YSS				*e*		01 04 52.0			
YSS				pmax	pmax				
	comp=E,430nm,1.0s								
YSS				pmax	pmax				
	comp=Z,530nm,1.0s								
YSS	**Yuzh-Sakhalins**	**147.25**	**321**	*e*PKPdf	PKPdf	01 04 05.8	+0.4		
YSS				*ep*PKPdf	pPKPdf	01 04 52.2	-1.5		
YSS				*e*SKP		01 07 23.0			
BHPL	**Bhopal**	**147.49**	**85**	*e*P	PKPdf	01 04 06.3	+0.4		
BHPL				*i* P		01 04 07.2			
BHPL				*i* x	x	01 04 56.0			
BHPL				*i* x	x	01 04 56.1			
BHPL				*ex*	x	01 14 03.9			
BHPL				AMS	AMS	01 14 46.1			
	comp=E,1μm,17.1s								
SDNR	**Sundarnagar**	**147.49**	**69**	*e*P	PKPdf	01 04 07.4	+1.6		
NDI	**New Delhi**	**147.77**	**74**	*e*P	PKPdf	01 04 08.0	+1.7		
NDI				*e*PKPb		01 04 08.0			
NDI				*ex*	x	01 05 00.0			
NDI				*ex*	x	01 05 00.0			
NDI				*ex*	x	01 07 35.0			
NDI				*ex*	x	01 07 35.0			
NDI				*ex*	x	01 14 09.0			
YOGI	**Yogyakarta**	**147.93**	**175**	⇓*e*P	PKPdf	01 04 11.1	+4.6		
YOGI				*e*S		01 04 17.0			
GUMO	**Guam**	**148.09**	**256**	PKPbc	PKPbc	01 04 08.1	-2.1		
	comp=E,4μm,1.0s,baz=177,slow=6.0,SNR=28								
DDI	**Dehra Dun**	**148.48**	**71**	*e*P	PKPdf	01 04 10.0	+2.6		
DDI				*ex*	x	01 04 29.5			
NGP	**Nagpur**	**148.58**	**89**	*e*P	PKPdf	01 04 03.5	-4.1		
NGP				AMP		01 04 13.7			
	comp=Z,426nm,0.8s								
NGP				*ex*	x	01 14 06.5			
NGP				*ex*	x	02 11 06.3			
	comp=Z,4μm,16.5s								
ASAJ	**Asahikawa**	**148.82**	**317**	PKPbc	PKPbc	01 04 09.6	-2.5		
	comp=Z,354nm,1.0s,baz=271,slow=5.4,SNR=47								
ASAJ	**Asahikawa**	**148.82**	**317**	PKIKP	PKPdf	01 04 09.6	+1.6		
ASAJ				pmax	pmax				
	comp=Z,354nm,1.0s								
JBP	**Jabalpur**	**149.80**	**85**	⇓*e*P	PKPdf	01 04 10.2	+0.6		
JBP				*ex*	x	01 04 18.8			
	comp=Z,1μm,1.3s								
JBP				*i* x	x	01 05 05.0			
HABR	**Khabarovsk**	**150.29**	**330**	*e*PKIKP	PKPdf	01 04 10.2	-0.1		
HABR				*e*		01 04 20.9			
PTH	**Pithoragarh**	**150.39**	**73**	*ex*	PKPdf	01 04 19.0	+8.5		
PTH				*ex*	x	01 04 24.2			
KSI	**Kapahiang**	**150.39**	**159**	⇑*i*P	PKPdf	01 04 15.8	+5.3		
LGTI	**Lohaghat**	**150.42**	**73**	*i* P	PKPdf	01 04 13.0	+2.5		
KLR	**Kul'dur**	**151.13**	**334**	*ce*PKIKP	PKPdf	01 04 08.1	-3.5		
KLR				*e*		01 04 55.0			
KLR				*e*		01 07 53.0			
KLR				*e*		01 11 23.0			
KLR				*e*		01 26 58.5			
KLR				*e*		01 27 54.5			
KLR				pmax	pmax				
	comp=Z,200nm,2.0s								
KLR				pmax	pmax				
	comp=Z,3μm,6.0s								
MOY	**Mondy**	**151.21**	**16**	*e*PKIKP	PKPdf	01 04 12.5	+0.8		
MOY				pmax	pmax				
	comp=Z,518nm,1.4s								
IRK	**Irkutsk**	**151.36**	**11**	⇑*i*PKIKP	PKPdf	01 04 12.8	+0.8		
IRK				*e*		01 05 04.7			
IRK				pmax	pmax				
	comp=Z,601nm,1.2s								
VIS	**Vishakhapatnam**	**151.58**	**98**	*i* P	PKPdf	01 04 12.9	+0.6		
VIS				*e*P		01 04 13.2			
VIS				*ex*	x	01 14 24.3			
VIS				AMS	AMS	01 18 52.2			
	comp=Z,2μm,18.5s								
BLSP	**Bilaspur**	**151.59**	**88**	*e*P	PKPdf	01 04 12.0	-0.3		
WMQ	**Urumqi**	**151.61**	**41**	PKP	PKPdf	01 04 12.0	-0.3		
WMQ				PP	PP	01 08 03.0	+3.0		
WMQ				SKS	SKSdf	01 11 02.0	-0.2		
WMQ				SKKS	SKKSac	01 14 34.0	+1.6		
WMQ				SS	SS	01 27 12.0	+2.2		
WMQ				LR	LR				
	comp=N,368nm,18.0s								
WMQ				LR	LR				
	comp=E,274nm,18.0s								
WMQ				LR	LR				
	comp=Z,327nm,18.0s								
TLY	**Talaya**	**151.78**	**12**	P	PKPdf	01 04 13.6	+1.0		
	SNR=39								
TLY	**Talaya**	**151.78**	**12**	*d i*PKIKP	PKPdf	01 04 11.9	-0.7		
TLY				*e*		01 04 59.5			
TLY				pmax	pmax				
	comp=Z,192nm,1.4s								
TLY	**Talaya**	**151.78**	**12**	*e*PKPdf	PKPdf	01 04 13.2	+0.6		
TLY				*e*PKPbc	PKbc	01 04 19.7	+0.6		
TLY				*e*PKPab	PKPab	01 04 28.8	0.0		
TLY				*ep*PKPdf	pPKPdf	01 05 01.1	+0.1		
TLY				*e*SKPdf	SKPdf	01 07 30.1	+1.7		
TLY				*e*PP	PP	01 08 01.0	+0.1		
ZAK	**Zakamensk**	**152.94**	**14**	*e*PKIKP	PKPdf	01 04 15.4	+1.1		
ZAK				*e*		01 05 08.2			
ZAK				*e*		01 08 06.5			
KOLN	**Koldanda**	**153.41**	**76**	*e*P	PKPdf	01 04 15.8	+0.8		
	comp=Z,217nm,1.0s								
GKN	**Gorkha**	**154.32**	**76**	*e*P	PKPdf	01 04 17.0	+0.7		
	comp=Z,269nm,1.0s								
HIA	**Hailar**	**154.57**	**350**	*e*PKIKP	PKPdf	01 04 15.3	-1.3		
HIA				*e*		01 04 40.4			
HIA				*e*		01 05 02.7			
HIA				*e*		01 05 26.3			
HIA	**Hailar**	**154.57**	**350**	*e*PKPdf	PKPdf	01 04 15.3	-1.3		
HIA				*e*PKPab	PKPab	01 04 40.4	-0.2		
HIA				*ep*PKPdf	pPKPdf	01 05 02.7	-2.3		
HIA				*es*PKPdf		01 05 26.3			
HIA				*e*SKPdf	SKPdf	01 07 28.4	-3.6		
PSI	**Prapat**	**154.64**	**145**	PKP	PKPdf	01 04 17.6	+0.8		
	comp=Z,47nm,1.0s,baz=232,slow=2.3,SNR=22								
PSI				PKPbc	PKPbc	01 04 25.9	+0.5		
	comp=Z,53nm,1.0s,baz=251,slow=4.2,SNR=10								
PSI				PKPab	PKPab	01 04 41.6	+0.7		
	comp=Z,165nm,0.8s,baz=181,slow=5.4,SNR=25								
DMN	**Daman**	**154.74**	**77**	*e*P	PKPdf	01 04 17.9	+1.0		
	comp=Z,220nm,0.9s								
KKN	**Kakani**	**154.89**	**76**	*e*P	PKPdf	01 04 17.8	+0.7		
	comp=Z,84nm,0.5s								
PKI	**Pulchoki**	**155.01**	**77**	*e*P	PKPdf	01 04 17.9	+0.7		
	comp=Z,100nm,0.7s								
MJAR	**Matsushiro Arr**	**155.17**	**305**	PKP	PKPdf	01 04 17.9	+0.4		
	comp=Z,45nm,1.1s,baz=41,slow=1.3,SNR=52								
MJAR				PKPbc	PKPdf	01 04 26.9	+10		
	comp=Z,96nm,0.9s,baz=343,slow=1.3,SNR=30								
MJAR				PKPab	PKPab	01 04 43.7	+0.6		
	comp=Z,265nm,0.9s,baz=52,slow=1.9,SNR=22								
MAJO	**Matsushiro**	**155.17**	**305**	*e*PKIKP	PKPdf	01 04 16.3	-1.1		
MAJO				*e*		01 04 25.9			
MAJO				*e*		01 04 44.0			
MAJO				*e*		01 05 07.0			
MAJO				*e*		01 08 19.1			
MAT	**Matsushiro**	**155.17**	**305**	PKP	PKPdf	01 04 16.4	-1.0		
BOK	**Bokaro**	**155.26**	**86**	⇓*i*P	PKPdf	01 04 18.0	+0.4		
BOK				*ex*	x	01 08 23.4			
GUN	**Gumba**	**155.42**	**76**	*e*P	PKPdf	01 04 18.8	+1.0		
	comp=Z,252nm,0.8s								
VLA	**Vladivostok**	**155.65**	**325**	*i* PKIKP	PKPdf	01 04 16.9	-1.2		
MDJ	**Mudanjiang**	**155.67**	**330**	PKP	PKPdf	01 04 18.1	0.0		
MDJ				APKP		01 04 58.0			
MDJ				PKS		01 07 52.3			
MDJ				PP	PP	01 08 23.3	+0.5		
MDJ				LR	LR				
	comp=N,3μm,32.1s								
MDJ				LR	LR				
	comp=E,1μm,26.5s								
MDJ				LR	LR				
	comp=Z,3μm,22.7s								
MDJ	**Mudanjiang**	**155.67**	**330**	*e*PKPdf	PKPdf	01 04 17.0	-1.2		
MDJ				*e*PKPab	PKPab	01 04 44.4	-1.0		
MDJ				*ep*PKPdf	pPKPdf	01 05 04.7	-1.8		
MDJ				*e*PP	PP	01 08 17.2	-5.6		
JIRN	**Jiri**	**155.70**	**76**	*e*P	PKPdf	01 04 19.1	+0.9		
	comp=Z,83nm,0.8s								
KGM	**Kluang**	**155.91**	**156**	P	PKPdf	01 04 19.8	+1.4		
SONM	**Songino Array**	**155.98**	**11**	PKP	PKPdf	01 04 18.4	-0.1		
	comp=Z,52nm,1.0s,baz=282,slow=0.6,SNR=146								
SONM				PKPab	PKPab	01 04 46.9	+0.3		
	comp=Z,33nm,0.6s,baz=314,slow=3.0,SNR=13								
ULN	**Ulaanbaatar**	**156.06**	**10**	*e*PKIKP	PKPdf	01 04 18.4	-0.2		
ULN				*e*		01 05 06.6			
ULN				*e*		01 05 29.0			
ULN	**Ulaanbaatar**	**156.06**	**10**	*e*PKPdf	PKPdf	01 04 18.4	-0.2		
ULN				*e*PKPab	PKPab	01 04 48.5	+1.5		
ULN				*ep*PKPdf	pPKPdf	01 05 06.6	-0.4		
ULN				*es*PKPdf		01 05 29.0			
ULN				*e*SKPdf	SKPdf	01 07 35.4	+1.6		
KSM	**Kuching**	**157.12**	**173**	*e*PKPdf	PKPdf	01 04 19.8	-0.2		
KSM				*e*PKPab	PKPab	01 04 52.0	+0.5		
KSM				*ep*PKPdf	pPKPdf	01 05 08.7	+0.3		
KSM				*es*PKPdf		01 05 31.2			
KSM				*e*PP	PP	01 08 28.6	-2.1		
IPM	**Ipoh**	**157.13**	**148**	P	PKPdf	01 04 21.6	+1.6		
CAL	**Calcutta**	**157.31**	**90**	*e*P	PKPdf	01 04 23.1	+2.9		
	comp=Z,1μm,12.6s								
CAL				⇓*ex*	x	01 04 23.2			
CAL				*ex*	x	01 15 08.5			
CAL				AMP		01 19 17.5			
	comp=Z,1μm,14.9s								
KULM	**Kulim**	**157.64**	**146**	*e*PKPdf	PKPdf	01 04 18.0	-2.7		
KULM				*e*PKPab	PKPab	01 04 52.0	-1.8		
KULM				*ep*PKPdf	pPKPdf	01 05 10.5	+1.5		
KULM				*es*PKPdf		01 05 36.1			
CN2	**Changchun**	**158.07**	**335**	*e*PKP	PKPdf	01 04 20.6	-0.6		
CN2				PKP2	PKPab	01 04 56.4	+0.7		
CN2				APKP		01 05 03.1			
CN2				PP	PP	01 08 38.3	+2.4		
CN2				PP	PP				
	comp=Z,2μm,11.0s								
CN2				LR	LR				
	comp=N,2μm,20.0s								
CN2				LR	LR				
	comp=E,3μm,20.0s								
SNG	**Songkhla**	**159.22**	**143**	P	PKPdf	01 04 24.0	+1.5		
	comp=E,806nm,1.0s								
TSM	**Tawau**	**159.52**	**194**	P	PKPdf	01 04 24.8	+1.9		
LSA	**Lhasa**	**159.84**	**70**	*e*PKIKP	PKPdf	01 04 24.7	+1.5		
LSA				*e*		01 08 43.7			
BUKP	**Musuan**	**159.96**	**217**	*e*P	PKPdf	01 04 24.1	+0.7		
SNY	**Shenyang**	**160.47**	**336**	PKPR	PKPdf	01 04 23.5	-0.4		
SNY				APKP		01 05 03.1			
SNY				PP	PP	01 08 47.9	-1.0		
SNY				SKKS	SKKSac	01 15 12.9	-6.5		
SNY				LR	LR				
	comp=N,2μm,25.8s								
SNY				LR	LR				
	comp=E,1μm,18.6s								
SNY				LR	LR				
	comp=Z,3μm,20.4s								
SHL	**Shillong**	**160.82**	**82**	*e*P	PKPdf	01 04 25.0	+0.7		
IPIL	**Ipil**	**161.16**	**211**	*e*P	PKPdf	01 04 25.3	+0.6		
IPIL				*e*S		01 05 45.9			
GTA	**Gaotai**	**161.30**	**33**	PKP	PKPdf	01 04 24.8	0.0		
GTA				APKP		01 05 06.6			
GTA				PKP2	PKPab	01 05 10.6	+0.8		
GTA				XPKP		01 05 26.0			
GTA				PP	PP	01 08 49.8	-3.6		
GTA				SKS	SKSdf	01 11 13.3	+1.0		
GTA				PPP		01 12 38.0			
GTA				SKKS	SKKSac	01 15 21.5	-2.2		
GTA				SS	SS	01 28 48.8	-4.8		
GTA				PP	PP				
	comp=Z,3μm,8.7s								
GTA				LR	LR				
	comp=N,1μm,20.6s								
GTA				LR	LR				
	comp=E,1μm,24.1s								
GTA				LR	LR				
	comp=Z,3μm,27.9s								
KKM	**Kota Kinabalu**	**161.54**	**190**	P	PKPdf	01 04 26.5	+1.4		
KKM	**Kota Kinabalu**	**161.54**	**190**	*e*PKPdf	PKPdf	01 04 25.3	+0.2		
KKM				*e*PKPab	PKPab	01 05 09.7	-1.1		
KKM				*e*PP	PP	01 08 53.2	-1.5		
INCN	**Inchon**	**162.46**	**321**	P	PKPdf	01 04 26.8	+0.8		
	SNR=15								
INCN	**Inchon**	**162.46**	**321**	*e*PKPdf	PKPdf	01 04 25.5	-0.5		
INCN				*e*PKPab	PKPab	01 05 15.4	+0.6		
NNT	**Nongplab**	**162.85**	**131**	P	PKPdf	01 04 28.0	+1.6		
HHC	**Hu-ho-hao-te**	**163.50**	**4**	*e*PKP	PKPdf	01 04 26.8	-0.2		
HHC				APKP		01 05 13.6			
HHC				XPKP		01 05 27.4			
HHC				PKS		01 07 58.5			
HHC				PP	PP	01 09 02.0	-3.0		
HHC				SKS	SKSdf	01 11 13.8	-0.2		
HHC				PP	PP				
	comp=Z,2μm,11.2s								
HHC				LR	LR				
	comp=N,1μm,28.5s								
HHC				LR	LR				
	comp=E,1μm,29.4s								
HHC				LR	LR				
	comp=Z,3μm,26.5s								
BTO	**Baotou**	**163.59**	**8**	*e*PKP	PKPdf	01 04 27.1	0.0		
DL2	**Dalian**	**163.74**	**335**	*i* PKP	PKPdf	01 04 26.9	-0.3		
DL2				APKP		01 05 11.9			
DL2				PKP2	PKPab	01 05 20.5	+0.1		
DL2				PP	PP	01 09 03.4	-2.9		
DL2				SKKS	SKKSac	01 15 33.9	-2.2		
DL2				PPS		01 22 30.4			
DL2				PP	PP				
	comp=Z,1μm,8.1s								
BJI	**Beijing**	**164.12**	**351**	PKP	PKPdf	01 04 26.1	-1.5		
BJI				PP	PP	01 09 05.9	-2.4		
BJI				PP	PP				
	comp=Z,3μm,9.9s								
BJI				LR	LR				
	comp=N,1μm,29.8s								
BJI				LR	LR				
	comp=E,2μm,27.8s								
BJI				LR	LR				
	comp=Z,4μm,31.8s								
PVCP	**Virac**	**164.99**	**227**	*e*P	PKPdf	01 04 29.7	+1.4		
NST	**Nakhon Sawan**	**165.16**	**123**	⇓P	PKPdf	01 04 29.6	+1.1		
	comp=Z,75nm,1.0s								
OTRP	**Odiongan**	**165.33**	**217**	*e*P	PKPdf	01 04 28.9	+0.3		
ENPP	**El Nido**	**165.57**	**206**	*e*P	PKPdf	01 04 31.1	+2.3		
CHG	**Chiang Mai**	**165.82**	**110**	⇓P	PKPdf	01 04 29.0	0.0		
	comp=Z,82nm,1.0s								
CHTO	**Chiang Mai**	**165.82**	**110**	P	PKPdf	01 04 29.4	+0.4		
	SNR=39								
CHTO	**Chiang Mai**	**165.82**	**110**	*e*PKPdf	PKPdf	01 04 28.3	-0.7		
CHTO				*ep*PKPdf	pPKPdf	01 05 16.4	-1.2		
CHTO				*e*PKPab	PKPab	01 05 30.5	+0.8		
CHTO				*e*PP	PP	01 09 17.9	+0.7		
LZH	**Lanzhou**	**165.89**	**32**	*e*PKP	PKPdf	01 04 30.0	+0.9		
LZH				APKP		01 05 11.8			
LZH				XPKP		01 05 31.8			
LZH				PKS		01 08 01.0			
LZH				PP	PP	01 09 20.0	+2.5		
LZH				SKS	SKSdf	01 11 17.1	+1.4		
LZH				SKKS	SKKSac	01 15 47.0	+0.1		
LZH				SS	SS	01 29 40.0	-0.7		
LZH				PP	PP				
	comp=Z,660nm,4.5s								
BUSP	**Coron**	**165.95**	**210**	*e*P	PKPdf	01 04 30.2	+1.1		
JOW	**Kunigami**	**165.99**	**283**	PKP	PKPdf	01 04 30.1	+0.9		
	comp=Z,128nm,1.0s,baz=294,slow=1.3,SNR=17								
JOW				pPKP	pPKPdf	01 05 15.9	-1.7		
	comp=Z,8.9nm,0.8s,baz=113,slow=8.3,SNR=0.8								
JOW				PKPab	PKPab	01 05 31.9	+1.5		
	comp=Z,71nm,0.8s,baz=122,slow=3.9,SNR=7.4								
TGY	**Tagaytay City**	**167.35**	**218**	PKP	PKPdf	01 04 31.3	+1.1		
	comp=Z,93nm,0.3s,baz=231,slow=14,SNR=2.2								
TGY				PKPab	PKPab	01 05 36.4	+0.1		
	comp=Z,131nm,0.3s,baz=155,slow=14,SNR=2.3								
TGY	**Tagaytay City**	**167.35**	**218**	PKP2	PKPab	01 05 36.4	0.0		
TGY				pmax	pmax				
	comp=Z,131nm,0.3s								
TIA	**Tai'an**	**167.65**	**344**	PKP	PKPdf	01 04 30.5	+0.1		
BALP	**Baler**	**168.24**	**225**	*e*P	PKPdf	01 04 30.4	-0.4		
SCZP	**Santa Cruz**	**169.28**	**219**	*e*P	PKPdf	01 04 32.

	comp=Z,6μm,20.6s							
NACB	**Ninganchiao**	**172.15**	**271**	*e*PKPdf	PKPdf	01 04 34.7	+1.7
NACB				*ep*PKPdf	pPKPdf	01 05 20.5	-1.1
NACB				*e*PKPab	PKPab	01 05 58.3	+0.7
NACB				*e*PP	PP	01 09 48.5	-0.5
YHNB	**Yeheng**	**172.36**	**274**	*e*PKPdf	PKPdf	01 04 31.3	-1.8
YHNB				*ep*PKPdf	pPKPdf	01 05 17.4	-4.3
YHNB				*e*PKPab	PKPab	01 05 57.6	-0.9
YHNB				*e*PP	PP	01 09 48.7	-1.3
WHN	**Wuhan**	**173.71**	**349**	PKP	PKPdf	01 04 34.8	+1.2
WHN				PKP2	PKPab	01 06 04.3	-0.3
WHN				PP	PP	01 09 56.0	-0.6
WHN				SS	SS	01 30 53.4	-4.6
WHN				LR	LR		
	comp=Z,7μm,22.2s						
GYA	**Guiyang**	**173.90**	**68**	*i* PKP	PKPdf	01 04 34.0	+0.3
GYA				APKP		01 05 22.3	
GYA				XPKP		01 05 33.8	
GYA				PKP2	PKPab	01 06 06.5	+1.1
GYA				PKS		01 08 04.8	
GYA				PP	PP	01 10 00.6	+3.0
GYA				SKKS	SKKSac	01 16 26.4	+0.4
GYA				LR	LR		
	comp=N,2μm,25.4s						
GYA				LR	LR		
	comp=E,2μm,25.2s						
GYA				LR	LR		
	comp=Z,2μm,22.2s						
QIZ	**Qiongzhong**	**173.96**	**150**	PKP	PKPdf	01 04 33.9	+0.2
QIZ				PKP2	PKPab	01 06 05.9	+0.2
QIZ				PPP		01 14 08.3	
QIZ				PP	PP		
	comp=Z,4μm,8.8s						
QIZ				LR	LR		
	comp=E,2μm,24.6s						
QIZ				LR	LR		
	comp=Z,2μm,24.6s						
QIZ	**Qiongzhong**	**173.96**	**150**	*e*PKPdf	PKPdf	01 04 34.4	+0.6
QIZ				*ep*PKPdf	pPKPdf	01 05 19.8	-2.5
QIZ				*es*PKPdf		01 05 48.5	
QIZ				*e*PKPab	PKPab	01 06 04.1	-1.6
QIZ				*e*PP	PP	01 09 55.7	-2.1
QZH	**Quanzhou**	**174.87**	**278**	*i* PKP	PKPdf	01 04 35.3	+1.3
QZH				APKP		01 05 23.4	
QZH				PKP2	PKPab	01 06 07.0	-2.7
QZH				PP	PP	01 09 59.3	-2.9
QZH				PP	PP		
	comp=Z,7μm,7.5s						
HKC	**Hong Kong**	**177.70**	**208**	⇓PKPDF	PKPdf	01 04 36.0	+1.4

*IDC **25** 00:52:05.5±1.4, 088S×12732E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.6/16, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=101.0km s-min=20.4km az=72.0*
*ISCJB **25** 00:52:08.1±1.0, 09S±02×1273E±04, h33km, mb3.7/3, Error ellipse: s-maj=63.5km s-min=14.5km az=145.8*
*NEIC **25** 00:52:10.6±0.7, 097S×127.16E, h35km, mb3.7/1, Error ellipse: s-maj=46.5km s-min=10.4km az=72.0*

ISC 25 00:52:10.9±1.0, 10S±02×1271E±04, h35km, n7, σ0§26/7, mb3.7/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**17.09**	**185**	P		**Pn**	**00 56 07.0**	**0.0**
	0.1nm,0.3s,baz=45,slow=10.0,SNR=2.8							
WRAB	**Tennant Creek**	**20.12**	**160**	*e*P		**P**	**00 56 41.8**	**+0.1**
	3.0nm,0.9s							
WRA	**Warramunga Arr**	**20.13**	**160**	P		**P**	**00 56 41.4**	**-0.3**
	0.4nm,0.5s,baz=340,slow=11,SNR=19							
WB2	**Warramunga Arr**	**20.13**	**160**	*e*P		**P**	**00 56 41.6**	**-0.2**
ASAR	**Alice Springs**	**23.49**	**164**	P		**P**	**00 57 17.9**	**+0.4**
	1.1nm,0.6s,mb3.5,baz=346,slow=11,SNR=7.3							
SONM	**Songino Array**	**51.86**	**342**	P		**P**	**01 01 15.9**	**+0.2**
	0.3nm,0.4s,mb3.5,baz=156,slow=7.9,SNR=4.1							
MKAR	**Makanchi Array**	**61.66**	**327**	P		**P**	**01 02 24.8**	**-0.3**
	0.7nm,0.4s,mb4.2,baz=115,slow=7.1,SNR=7.3							

*ISCJB **25** 01:08:46.0±0.7, 2454S±005×6727W±009, h181km±14km, Error ellipse: s-maj=13.6km s-min=7.6km az=174.4*
*IDC **25** 01:08:47.0±1.4, 2441S×6704W, h155km±17km, mb1 3.1/6, mb1mx3.1/20, mbtmp3.5/6, Error ellipse: s-maj=24.5km s-min=17.5km az=62.0*
*NEIC **25** 01:08:48.1, 2464S×6760W, h196km, mb4.2/2, After GUC.*
*GUC **25** 01:08:48.1±0.6, 2464S×6760W, h196km, MD3.7, ML4.4*

ISC 25 01:08:46.9±0.7, 2454S±005×6725W±009, h173km±13km, n17, σ1§04/22, 2C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**2.46**	**321**	P		**Pn**	**01 09 29.9**	**+1.3**
LVC				S		**Sn**	**01 10 00.6**	**-0.4**
	76nm,0.3s,SNR=25							
CPN1	**Cerro Paranal**	**2.88**	**268**	⇓*i*P		**Pn**	**01 09 34.7**	**+1.0**
CPN1				*i* S		**Sn**	**01 10 09.6**	**-0.4**
CPN1				AML		AML	01 10 11.7	
	comp=E,842nm,0.3s							
CEN1	**Los Morros**	**2.94**	**292**	⇓*i*P		**Pn**	**01 09 35.7**	**+1.3**
CEN1				*i* S		**Sn**	**01 10 11.5**	**+0.1**
CEN1				AML		AML	01 10 13.3	
	comp=E,587nm,0.5s							
ANCH	**Antofagasta**	**3.02**	**286**	⇑*i*P		**Pn**	**01 09 36.1**	**+0.7**
ANCH				*i* S		**Sn**	**01 10 12.3**	**-0.7**
ANCH				AML		AML	01 10 13.7	
	comp=N,1μm,0.1s							
ANCH	**Antofagasta**	**3.02**	**286**	⇑*i*P		**Pn**	**01 09 36.1**	**+0.7**
ANCH				*i* S		**Sn**	**01 10 12.3**	**-0.7**
CDCH	**Caldera**	**4.09**	**231**	⇓*i*P		**Pn**	**01 09 48.9**	**-0.1**
CDCH				*i* S		**Sn**	**01 10 35.9**	**-1.6**
CFAA	**Coronel Fontan**	**7.09**	**187**	P		**Pn**	**01 10 29.3**	**+1.2**
	comp=N,0.1nm,0.3s,baz=356,slow=14,SNR=6.6							
CFAA				S		**Sn**	**01 11 47.6**	**-0.4**
	comp=N,0.1nm,0.3s,baz=234,slow=19,SNR=4.6							
LPAZ	**La Paz**	**8.26**	**354**	P		**Pn**	**01 10 43.4**	**-0.1**
	comp=N,0.4nm,0.3s,baz=166,slow=11,SNR=8.4							
CPUP	**Villa Florida**	**9.14**	**103**	P		**Pn**	**01 10 54.2**	**-0.9**
	comp=N,0.2nm,0.3s,baz=276,slow=18,SNR=2.8							
CPUP	**Villa Florida**	**9.14**	**103**	P		**Pn**	**01 10 54.2**	**-0.9**
SIV	**San Ignacio**	**10.29**	**35**	P		**Pn**	**01 11 06.9**	**-3.4**
	comp=N,0.8nm,0.3s,baz=212,slow=17,SNR=16							
TRQA	**Tornquist**	**14.20**	**163**	*e*P		**Pn**	**01 12 04.9**	**+4.6**
	comp=N,3.9nm,0.6s							
NNA	**Nana**	**15.45**	**322**	*e*Pn		**Pn**	**01 12 14.3**	**-1.4**
	comp=N,4.8nm,0.3s							
PLCA	**Paso Flores**	**16.38**	**189**	P		**Pn**	**01 12 30.8**	**+3.7**
	comp=N,0.0nm,0.3s,baz=0.0,slow=10,SNR=3.0							
SJG	**San Juan**	**42.41**	**2**	P		**P**	**01 16 24.6**	**+0.4**
WRA	**Warramunga Arr**	**131.04**	**207**	PKP	PKPdf		01 27 40.5	+2.6
	comp=N,0.1nm,0.4s,baz=154,slow=2.0,SNR=5.6							
MKAR	**Makanchi Array**	**147.09**	**40**	PKPbc	PKPbc		01 28 10.6	+1.3
	comp=N,0.2nm,0.2s,baz=0.0,slow=1.7,SNR=4.2							

IDC 25 01:12:18.5±0.8, 3294N×3963W, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.8/28, mbtmp4.0/11, Error ellipse: s-maj=23.7km s-min=20.5km az=154.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TORD	**Torodi Ar. Bea**	**42.49**	**108**	P		P	01 20 15.5	+0.1
	1.2nm,0.9s,baz=300,slow=5.1,SNR=12							
BDFB	**Brasilia**	**48.97**	**191**	P		P	01 21 07.4	+0.8
	2.3nm,0.7s,baz=16,slow=10,SNR=3.7							
FINES	**FINESS Array B**	**50.14**	**35**	P		P	01 21 15.2	-0.4
	0.9nm,0.7s,baz=268,slow=5.3,SNR=5.4							
AKASG	**Malin Array Be**	**52.37**	**48**	P		P	01 21 30.5	-1.8
	1.2nm,0.6s,baz=275,slow=6.8,SNR=7.5							
PDAR	**Pinedale Array**	**54.64**	**302**	P		P	01 21 48.9	0.0
	2.0nm,0.7s,baz=74,slow=8.4,SNR=19							
LPAZ	**La Paz**	**56.02**	**214**	P		P	01 21 59.5	+0.5
	1.5nm,0.9s,baz=14,slow=8.3,SNR=4.5							
INK	**Inuvik**	**61.23**	**335**	P		P	01 22 35.8	+0.5
	9.2nm,1.3s,baz=99,slow=2.1,SNR=3.5							
NVAR	**Mina Array Bea**	**62.31**	**300**	P		P	01 22 42.3	-0.1
	0.8nm,0.8s,baz=68,slow=4.9,SNR=4.5							
AKTO	**Aktyubinsk**	**69.85**	**42**	P		P	01 23 31.6	+0.7
	2.2nm,0.7s,baz=311,slow=4.2,SNR=6.0							
BVAR	**Borovoye Array**	**75.08**	**36**	P		P	01 24 02.7	+0.5
	1.2nm,0.8s,baz=316,slow=4.1,SNR=5.9							
MKAR	**Makanchi Array**	**84.97**	**36**	P		P	01 24 55.6	0.0
	0.4nm,0.3s,baz=329,slow=4.5,SNR=3.8							

*IDC **25** 01:13:35.3±0.8, 763N×943E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.8/22, mbtmp3.8/11, Error ellipse: s-maj=40.3km s-min=16.9km az=57.0*
*NEIC **25** 01:13:40.1±0.5, 746N×944E, h30km, mb4.4/8, Error ellipse: s-maj=19.5km s-min=7.5km az=54.0*
*ISCJB **25** 01:13:42.8±2.0, 76N±01×944E±01, h69km±19km, mb4.0/18, Error ellipse: s-maj=28.4km s-min=8.3km az=114.9*

ISC 25 01:13:45.2±1.7, 763N±010×944E±01, h73km±16km, n33, σ1§18/31, mb4.0/18, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PSI	**Prapat**	**6.62**	**136**	Pn		**Pn**	**01 15 19.1**	**-0.6**
	2.8nm,0.3s,baz=320,slow=12,SNR=12							
PSI				Sn		**Sn**	**01 16 34.3**	**+0.6**
	2.5nm,0.3s,baz=202,slow=19,SNR=3.8							
KULM	**Kulim**	**6.68**	**110**	*e*Pn		**Pn**	**01 15 17.0**	**-3.6**
QIZ	**Qiongzhong**	**18.84**	**52**	*e*P		**Pn**	**01 18 00.5**	**0.0**
	1.6nm,0.4s							
JIRN	**Jiri**	**21.37**	**340**	*e*P		**P**	**01 18 29.9**	**+3.3**
	43nm,0.9s,mb4.8							
PKI	**Pulchoki**	**21.57**	**338**	*e*P		**P**	**01 18 30.3**	**+1.6**
DMN	**Daman**	**21.71**	**337**	*e*P		**P**	**01 18 31.7**	**+1.5**
	42nm,0.8s,mb4.8							
KKN	**Kakani**	**21.81**	**338**	*e*P		**P**	**01 18 32.0**	**+0.7**
LSA	**Lhasa**	**22.16**	**353**	*e*P		**P**	**01 18 37.8**	**+2.8**
	9.3nm,0.3s,mb4.6							
GKN	**Gorkha**	**22.25**	**337**	*e*P		**P**	**01 18 34.0**	**-1.9**
KOLN	**Koldanda**	**22.47**	**334**	*e*P		**P**	**01 18 36.3**	**-1.9**
	21nm,0.7s,mb4.6							
MBWA	**Marble Bar**	**37.95**	**139**	P		**P**	**01 20 56.3**	**+0.6**
	0.7nm,0.3s,mb4.0							
MKAR	**Makanchi Array**	**40.37**	**347**	P		**P**	**01 21 15.1**	**-0.8**
	1.8nm,0.6s,mb4.1,baz=159,slow=7.1,SNR=9.1							
SONM	**Songino Array**	**41.35**	**12**	P		**P**	**01 21 21.6**	**-2.4**
	0.4nm,0.7s,mb3.3,baz=216,slow=6.2,SNR=2.6							
NWAO	**Narrogin (SRO)**	**45.84**	**153**	P		**P**	**01 21 59.7**	**-0.2**
ZAL	**Zalesovo**	**46.81**	**352**	P		**P**	**01 22 08.1**	**+0.5**
	1.4nm,0.5s,mb3.9,baz=28,slow=19,SNR=4.0							
ZAL	**Zalesovo**	**46.81**	**352**	P		**P**	**01 22 08.1**	**+0.5**
WRA	**Warramunga Arr**	**47.95**	**125**	P		**P**	**01 22 16.1**	**-0.3**
	0.8nm,0.6s,mb3.8,baz=305,slow=8.5,SNR=19							
WRAB	**Tennant Creek**	**47.96**	**125**	*e*P		**P**	**01 22 16.4**	**-0.1**
	4.1nm,0.8s,mb4.3							
WB2	**Warramunga Arr**	**47.96**	**125**	*e*P		**P**	**01 22 16.4**	**-0.1**
BVAR	**Borovoye Array**	**49.28**	**341**	P		**P**	**01 22 25.2**	**-1.5**
	1.0nm,0.7s,mb3.9,baz=125,slow=7.4,SNR=4.5							
BRVK	**Borovoye**	**49.35**	**341**	*e*P		**P**	**01 22 27.3**	**+0.2**
	0.3nm,0.4s,mb3.6							
ASAR	**Alice Springs**	**49.60**	**130**	P		**P**	**01 22 28.8**	**-0.3**
	0.7nm,0.5s,mb3.8,baz=304,slow=7.3,SNR=8.8							
ASAR				PcP		PcP	01 23 50.3	+0.7
	0.7nm,0.8s,baz=323,slow=3.7,SNR=4.4							
AKTK	**Aktyubinsk**	**52.26**	**331**	P		**P**	**01 22 49.9**	**+0.9**
AKTO	**Aktyubinsk**	**52.26**	**331**	P		**P**	**01 22 49.9**	**+0.9**
	1.3nm,0.7s,mb4.1,baz=106,slow=17,SNR=3.7							
STKA	**Stephens Creek**	**59.79**	**134**	P		**P**	**01 23 44.2**	**+1.4**
BRTR	**Keskin Array B**	**62.74**	**311**	P		**P**	**01 24 01.3**	**-1.3**
	0.8nm,0.5s,mb3.9,baz=126,slow=7.1,SNR=4.0							
ARCES	**ARCESS Array B**	**75.56**	**340**	P		**P**	**01 25 21.9**	**-0.1**
	0.3nm,0.3s,mb3.5,baz=109,slow=7.9,SNR=2.9							
GERES	**GERESS Array B**	**78.14**	**318**	P		**P**	**01 25 35.2**	**-1.2**
	0.3nm,0.7s,mb3.2,baz=90,slow=5.6,SNR=4.2							
NB2	**NORSAR Subarra**	**80.04**	**331**	P		**P**	**01 25 47.8**	**+1.0**
	comp=Z,1.5nm,0.8s,mb3.9,baz=92,slow=5.9							
NOA	**NORSAR Array B**	**80.04**	**331**	P		**P**	**01 25 47.6**	**+0.7**
	comp=Z,1.1nm,0.7s,mb3.8,baz=92,slow=5.6,SNR=7.2							
MSU	**Marysvale**	**127.88**	**26**	*e*PKPdf		PKPdf	01 32 46.2	+3.8
CPUP	**Villa Florida**	**147.28**	**232**	PKPbc		PKPbc	01 33 20.6	+0.3
	comp=Z,0.2nm,0.3s,baz=7.8,slow=5.3,SNR=3.0							
CFAA	**Coronel Fontan**	**151.14**	**212**	PKPbc		PKPbc	01 33 31.6	+1.6
	comp=Z,0.3nm,0.4s,baz=126,slow=7.5,SNR=4.3							

*ISCJB **25** 01:31:25.5±2.5, 399N±0.1×780E±02, h10km, Error ellipse: s-maj=22.9km s-min=9.3km az=92.5*
*BJI **25** 01:31:30.6, 4039N×7758E, h14km, ML3.0*
*NNC **25** 01:31:34.8±9.3, 4044N×7722E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=85.3km s-min=66.1km az=109.0*

ISC 25 01:31:26.1±2.6, 399N±01×781E±02, h10km, n14, σ1§13/15, 3C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSH	**Kashi**	**1.64**	**259**	*e*PG		**Pg**	**01 31 57.8**	**+0.3**
KSH				SG		**Sg**	**01 32 18.6**	**-0.2**
KSH				Smax				
	comp=N,210nm,0.3s							
KSH				Smax				
	comp=E,328nm,0.3s							
ULHL	**Ulahol**	**2.75**	**331**	P		**Pn**	**01 32 08.1**	**-2.1**
	SNR=45							
KZA	**Kyzart**	**3.07**	**317**	P		**Pn**	**01 32 14.8**	**+0.2**
	SNR=12							
KNDC	**Almaty**	**3.45**	**347**	⇑Pg		**Pn**	**01 32 25.3**	**+5.5**
	comp=E,50nm,0.5s							
KNDC				⇑Lg			01 33 01.7	
	comp=E,123nm,0.8s							
UCH	**Uchtor**	**3.57**	**313**	P		**Sn**	**01 33 03.9**	**+0.2**
	SNR=6.2							
TKM2	**Tokmak 2**	**3.57**	**330**	P		**Pn**	**01 32 21.1**	**-0.4**
	SNR=19							
TKM2	**Tokmak 2**	**3.57**	**330**	⇓Pn		**Pn**	**01 32 20.8**	**-0.7**
	comp=E,0.7nm,0.5s							
TKM2				⇓Lg			01 33 03.1	
	comp=E,6.4nm,0.7s							
KBK	**Karagaybulak**	**3.64**	**321**	P		**Pn**	**01 32 24.1**	**+1.6**
	SNR=22							
AAK	**Ala-Archa**	**3.85**	**317**	P		**Pn**	**01 32 28.2**	**+2.8**
	SNR=12							
CHMS	**Chumysh**	**4.00**	**323**	P		**Pn**	**01 32 33.6**	**+6.2**
	SNR=5.5							
AML	**Almayashu**	**4.00**	**306**	P		**Pn**	**01 32 26.7**	**-0.8**
	SNR=9.7							
EKS2	**Erkin-Say**	**4.27**	**312**	P		**Pn**	**01 32 30.5**	**-0.6**
	SNR=8.1							
USP	**Ospenovka**	**4.32**	**323**	P		**Pn**	**01 32 36.2**	**+4.4**
	SNR=24							
KK31	**Karatay Array**	**6.52**	**302**	⇑Pg		**Pb**	**01 33 19.2**	**-0.4**
	comp=E,2.1nm,0.8s,baz=130,slow=13,SNR=6.5							
KK31				⇓Lg			01 34 35.1	
	comp=E,2.2nm,0.6s,baz=173,slow=49,SNR=3.5							

*ISCJB **25** 02:23:39.0±0.6, 2417S±005×6726W±009, h186km±14km, mb3.5/1, Error ellipse: s-maj=14.1km s-min=7.6km az=32.5*
*NEIC **25** 02:23:40.2±0.6, 2415S×67.12W, h177km±10km, mb3.6/2, Error ellipse: s-maj=12.2km s-min=8.3km az=99.0*
*IDC **25** 02:23:40.4±1.1, 2411S×67.12W, h174km±16km, mb3.5/1, mb1 3.3/7, mb1mx3.2/20, mbtmp3.8/7, Error ellipse: s-maj=19.4km s-min=15.9km az=105.0*
*GUC **25** 02:23:41.2±0.6, 2450S×6770W, h200km, ML3.9*

ISC 25 02:23:39.9±0.6, 2416S±005×6721W±008, h173km±14km, n17, σ1§25/23, mb3.5/1, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**2.20**	**314**	P		**Pn**	**02 24 20.7**	**+2.0**
	10nm,0.3s,SNR=170							
LVC				S		**Sn**	**02 24 50.4**	**+1.7**
	73nm,0.3s,SNR=31							
CEN1	**Los Morros**	**2.85**	**285**	⇓*i*P		**Pn**	**02 24 27.5**	**+1.1**
CEN1				*i* S		**Sn**	**02 25 02.4**	**0.0**
CEN1				AML		AML	02 25 03.4	
	comp=N,352nm,0.5s							
CPN1	**Cerro Paranal**	**2.95**	**260**	⇑*i*P		**Pn**	**02 24 27.1**	**-0.5**
CPN1				*i* S		**Sn**	**02 25 02.1**	**-2.6**
CPN1				AML		AML	02 25 05.1	
	comp=E,157nm,0.3s							
ANCH	**Antofagasta**	**2.97**	**279**	*i* P		**Pn**	**02 24 27.8**	**0.0**
ANCH				*i* S		**Sn**	**02 25 02.8**	**-2.3**
ANCH				AML		AML	02 25 05.4	
	comp=N,420nm,0.2s							
ANCH	**Antofagasta**	**2.97**	**279**	*i* P		**Pn**	**02 24 27.8**	**0.0**
ANCH				*i* S		**Sn**	**02 25 02.8**	**-2.3**
LCO	**Las Campanas**	**5.75**	**212**	*i* S		**Sn**	**02 26 03.8**	**-5.4**
CFAA	**Coronel Fontan**	**7.47**	**187**	P		**Pn**	**02 25 28.0**	**+1.9**
	comp=N,0.0nm,0.3s,baz=16,slow=22,SNR=6.0							
CFAA	**Coronel Fontan**	**7.47**	**187**	P		**Pn**	**02 25 28.0**	**+1.9**
LPAZ	**La Paz**	**7.88**	**354**	P		**Pn**	**02 25 34.0**	**+2.5**
	comp=N,0.8nm,0.3s,baz=172,slow=9.2,SNR=27							
LPAZ				S		**Sn**	**02 26 58.9**	**-1.0**
	comp=N,0.1nm,0.3s,baz=322,slow=18,SNR=2.7							
CPUP	**Villa Florida**	**9.20**	**106**	P		**Pn**	**02 25 47.9**	**-1.0**
	comp=N,0.2nm,0.3s,baz=265,slow=11,SNR=3.9							
SIV	**San Ignacio**	**9.96**	**36**	P		**Pn**	**02 25 57.8**	**-1.1**
	comp=N,0.5nm,0.3s,baz=216,slow=14,SNR=15							
SIV				S		**Sn**	**02 27 49.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=300,slow=20,SNR=4.2							
TRQA	**Tornquist**	**14.55**	**163**	*e*P		**Pn**	**02 26 57.5**	**-0.1**
	comp=N,2.2nm,0.7s							
SAML	**Samuel**	**15.61**	**15**	*e*P		**Pn**	**02 27 10.2**	**-0.5**
	comp=N,1.2nm,0.6s							
PLCA	**Paso Flores**	**16.76**	**189**	P		**Pn**	**02 27 24.2**	**-0.3**
	comp=N,0.1nm,0.3s,baz=354,slow=10,SNR=1.9							
BDFB	**Brasilia**	**19.92**	**68**	P		**P**	**02 27 58.1**	**-0.1**
	comp=N,0.9nm,0.3s,baz=254,slow=10,SNR=14							
TORD	**Torodi Ar. Bea**	**76.80**	**69**	P		**P**	**02 35 13.0**	**+0.6**
	comp=N,0.7nm,0.6s,mb3.5,baz=255,slow=5.7,SNR=13							
WRA	**Warramunga Arr**	**131.40**	**207**	PKP	PKPdf		02 42 32.1	+0.6
	comp=N,0.2nm,0.8s,baz=167,slow=1.6,SNR=5.3							

KRSC 25 02:34:46, 5118N×15820E, h5km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RUS	**Russkaya**	**1.27**	**9**	*e*P		Pg	02 35 10.7	+0.3
RUS				*i* S		Sg	02 35 28.4	+1.6
GRL	**Gorelyy**	**1.38**	**357**	*e*P		Pn	02 35 12.9	+1.1
GRL				*i* S		Sb	02 35 32.4	+2.3
MIPR	**Malaya Ipel'ka**	**1.42**	**321**	*e*P		Pn	02 35 12.9	+0.5
MIPR				*e*S		Sb	02 35 32.1	+0.8
PET	**Petropavlovsk**	**1.87**	**8**	P		Pn	02 35 19.5	+0.9
PET				*i* S		Sn	02 35 44.1	+1.5
NLC	**Nalytchevo**	**2.12**	**19**	*e*P		Pn	02 35 22.8	+0.8
NLC				*i* S		Sn	02 35 48.7	0.0
SDLR	**Sedlovina**	**2.14**	**11**	*e*P		Pn	02 35 23.6	+1.2
SDLR				*i* S		Sn	02 35 51.1	+1.7
SPN	**Mys Shipunski**	**2.23**	**30**	P		Pn	02 35 25.2	+1.7
SPN				*i* S		Sn	02 35 54.7	+3.3
GNL	**Ganaly**	**2.52**	**357**	*e*P		Pn	02 35 29.7	+2.1
GNL				*e*S		Sn	02 36 02.0	+3.2
MKZ	**Mys Kozlova**	**4.00**	**31**	*e*P		Pn	02 35 49.8	+1.9
MKZ				*i* S		Sn	02 36 35.8	+0.6
KBTR	**Krutoberegovo**	**5.74**	**27**	P		Pn	02 36 14.5	+2.7

MEX 25 02:41:12.2±0.4, 1655N×9469W, h15km±60km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HUIG	**Huatulco**	**1.57**	**241**	*i* P		Pn	02 41 36.0	-3.5
HUIG				*i* S		Sn	02 41 54.8	-4.9
OXX	**Oaxaca**	**2.02**	**285**	*e*P		Pn	02 41 43.0	-2.7
OXX				*i* S		Sn	02 42 07.0	-3.7
VHO	**Vista Hermosa**	**2.03**	**285**	*i* P		Pn	02 41 42.7	-3.1
VHO				*i* S		Sn	02 42 06.4	-4.5
UTMO	**Huajuapan**	**3.24**	**294**	*e*P		Pn	02 42 00.5	-2.0
UTMO				*i* S		Sn	02 42 37.0	-3.8

KRSC 25 02:43:33, 5114N×15827E, h5km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RUS	**Russkaya**	**1.30**	**7**	*e*P		Pn	02 43 59.0	+1.1
RUS				*e*S		Sg	02 44 16.9	+2.0
GRL	**Gorelyy**	**1.42**	**355**	*e*P		Pn	02 44 03.8	+1.4
GRL				*e*S		Sb	02 44 20.8	+2.5
MIPR	**Malaya Ipel'ka**	**1.48**	**321**	*e*P		Pn	02 44 01.0	+0.8
PET	**Petropavlovsk**	**1.90**	**7**	*e*S		Sn	02 44 32.5	+2.1
NLC	**Nalytchevo**	**2.14**	**18**	P		Pn	02 44 10.8	+1.5
NLC				*e*S		Sn	02 44 37.7	+1.4
SDLR	**Sedlovina**	**2.17**	**10**	*e*P		Pn	02 44 11.9	+2.1
SDLR				*e*S		Sn	02 44 39.8	+2.7
SPN	**Mys Shipunski**	**2.24**	**28**	P		Pn	02 44 13.3	+2.6
SPN				*e*S		Sn	02 44 41.8	+3.1
GNL	**Ganaly**	**2.57**	**356**	*e*P		Pn	02 44 18.1	+2.9
GNL				*e*S		Sn	02 44 50.8	+4.0
MKZ	**Mys Kozlova**	**4.01**	**30**	P		Pn	02 44 37.5	+2.4
MKZ				*e*S		Sn	02 45 23.6	+1.1
KBTR	**Krutoberegovo**	**5.75**	**26**	P		Pn	02 45 02.1	+3.1

*SZGRF **25** 02:52:21.1, 2240S×17129W, h33km, Tonga Islands region*
*IDC **25** 02:52:22.1±0.6, 2010S×17426W, h0km, mb4.8/10, mb1 5.0/13, mb1mx4.8/19, mbtmp4.9/13, ML5.6/2, MS3.9/4, Ms1 4.0/4, ms1mx3

comp=Z,15nm,0.3s
CTAO Charters Tower 37.05 263 eP P 02 59 34.2 +0.2
CTAO pmax pmax
comp=Z,23nm,0.6s,mb5.2
CTAO Charters Tower 37.05 263 eP P 02 59 34.2 +0.2
comp=Z,23nm,0.6s,mb5.2
PMG Port Moresby 38.77 280 P P 02 59 48.7 +0.2
comp=Z,41nm,0.9s,mb5.2,baz=82,slow=4.1,SNR=11
PMG Port Moresby 38.77 280⇑iP P 02 59 49.0 +0.5
PMG Port Moresby 38.77 280 eP P 02 59 48.8 +0.2
comp=Z,51nm,1.0s,mb5.2
TOO Toolangi 38.92 235⇑iP P 02 59 50.0 +0.2
comp=Z,26nm,0.6s,mb5.1
TOO Toolangi 38.92 235⇑iP P 02 59 50.0 +0.2
TOO pmax pmax
comp=Z,26nm,0.6s,mb5.1
STKA Stephens Creek 41.09 244⇑iP P 03 00 07.9 +0.1
comp=Z,16nm,0.6s,mb4.8
STKA Stephens Creek 41.09 244 P P 03 00 08.0 +0.1
comp=Z,20nm,0.7s,mb4.9,baz=89,slow=9.6,SNR=58
STKA PcP PcP 03 02 08.2 +1.3
comp=Z,3.7nm,0.8s,baz=88,slow=7.1,SNR=2.9
AS31 Alice Springs 48.02 256 eP P 03 01 02.2 -0.9
ASAR Alice Springs 48.03 256 P P 03 01 02.8 -0.3
comp=Z,18nm,0.8s,mb5.1,baz=88,slow=8.4,SNR=171
ASAR PcP PcP 03 02 31.4 +0.8
comp=Z,3.5nm,0.7s,baz=107,slow=4.0,SNR=6.6
ASAR Alice Springs 48.03 256 P P 03 01 02.8 -0.3
ASAR 03 02 31.5
ASAR pmax pmax
comp=Z,19nm,0.8s
WB2 Warramunga Arr 48.14 261 eP P 03 01 03.1 -0.9
WRAB Tennant Creek 48.14 261⇑eP P 03 01 03.3 -0.7
WRAB Tennant Creek 48.14 261 eP P 03 01 03.2 -0.8
comp=Z,52nm,1.2s,mb5.4
WRA Warramunga Arr 48.15 261 P P 03 01 03.5 -0.6
comp=Z,9.3nm,0.6s,mb5.0,baz=93,slow=5.7,SNR=175
WRA PcP PcP 03 02 32.1 +1.0
comp=Z,2.0nm,0.6s,baz=95,slow=3.5,SNR=4.7
WRA Warramunga Arr 48.15 261 P P 03 01 03.5 -0.6
WRA 03 02 32.1
WRA pmax pmax
comp=Z,9.0nm,0.6s
KAKA Kakadu 51.52 270 eP P 03 01 28.4 -1.3
comp=Z,23nm,0.8s,mb5.2
FORT Forrest 52.65 246⇑iP P 03 01 37.5 -0.6
comp=Z,47nm,0.7s,mb5.5
FITZ Fitzroy Crossi 56.58 261 eP P 03 02 06.5 -0.1
comp=Z,9.3nm,1.4s,mb4.6
SBA Scott Base 58.38 185 eP P 03 02 21.3 +2.1
SBA pmax pmax
comp=Z,11nm,0.9s,mb4.9
SBA Scott Base 58.38 185 eP P 03 02 21.3 +2.1
comp=Z,11nm,0.9s,mb4.9
VNDA Vanda 58.49 186 P P 03 02 21.3 +1.2
comp=Z,3.6nm,0.9s,mb4.4,baz=2.0,slow=6.2,SNR=23
VNDA LR LR 03 25 22.0
comp=Z,268nm,18.3s,MS4.4,baz=244,slow=34
VNDA Vanda 58.49 186 eP P 03 02 20.6 +0.5
VNDA pmax pmax
comp=Z,17nm,1.7s
VNDA Vanda 58.49 186 eP P 03 02 20.6 +0.5
comp=Z,17nm,1.7s,mb4.8
MBWA Marble Bar 61.37 256 eP P 03 02 39.4 -0.4
comp=Z,19nm,0.6s,mb5.4
KLBR Kellerberrin 61.37 244⇑iP P 03 02 39.8 0.0
comp=Z,48nm,0.8s,mb5.7
MUN Mundaring 62.62 244 eP P 03 02 48.9 +0.7
CASY Casey 65.70 205 eP P 03 03 08.6 +0.2
QSPA South Pole Qui 69.82 180 eP P 03 03 34.7 +0.4
comp=Z,14nm,1.1s,mb4.8
MJAR Matsushiro Arr 72.17 321 P P 03 03 49.0 +0.5
comp=Z,4.7nm,0.6s,mb4.6,baz=156,slow=5.5,SNR=14
MJAR Matsushiro Arr 72.17 321 P P 03 03 49.1 +0.5
MJAR pmax pmax
comp=Z,5.0nm,0.6s
ISA Isabella 76.67 44 eP P 03 04 15.2 +0.5
ISA pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
ISA Isabella 76.67 44 eP P 03 04 15.2 +0.5
comp=Z,7.3nm,1.1s,mb4.5
KSM Kuching 76.90 276 eP P 03 04 17.5 +1.4
YSS Yuzh-Sakhalins 77.32 331 eP P 03 04 19.5 +1.1
MTUM Tungsten Hills 77.63 42 eP P 03 04 20.0 -0.1
NVAR Mina Array Bea 78.45 42 P P 03 04 24.7 +0.1
comp=Z,4.0nm,0.7s,mb4.5,baz=227,slow=9.9,SNR=25
SHPR Sheep Range 79.33 45 eP P 03 04 30.2 +0.8
TUC Tucson 80.06 50 eP P 03 04 34.0 +0.5
SSE Sheshan 80.29 308 P P 03 04 35.1 +0.4
SSE AMB AMB
comp=Z,8.0nm,0.8s,mb4.7
SSE AMB AMB
comp=Z,217nm,12.0s
WVOR Wild Horse Val 80.70 38 eP P 03 04 36.7 -0.2
WVOR pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
WVOR Wild Horse Val 80.70 38 eP P 03 04 36.7 -0.2
comp=Z,2.5nm,0.8s,mb4.2
MDJ Mudanjiang 82.40 323 P P 03 04 46.4 +0.5
MDJ AP pP 03 04 58.4 +0.1
MDJ XP sP 03 05 03.3 +0.4
MDJ PP PP 03 07 55.6 +0.5
MDJ S S 03 15 00.5 +1.5
MDJ XS sS 03 15 21.3 +1.6
MDJ AMB AMB
comp=Z,11nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,82nm,4.7s
MDJ LR LR
comp=N,195nm,42.0s,MS4.2
MDJ LR LR
comp=E,136nm,42.0s,MS4.2
MDJ LR LR
comp=Z,173nm,39.0s,MS4.1
MSU Marysvale 82.42 44 eP P 03 04 47.3 +1.4
NJ2 Nanjing 82.49 308 eP P 03 04 46.4 +0.1
NJ2 AP pP 03 04 59.8 +1.1
NJ2 XP sP 03 05 04.9 +1.5
NJ2 PP PP 03 07 57.8 +2.0
NJ2 S S 03 14 57.0 -2.9
NJ2 AMB AMB
comp=Z,30nm,0.6s,mb5.4
NJ2 AMB AMB
comp=Z,610nm,8.6s
NJ2 LR LR
comp=N,170nm,17.0s
NJ2 LR LR
comp=Z,840nm,38.1s
HAWA Hanford 82.69 35 eP P 03 04 47.5 +0.1
DUG Dugway 82.93 43 eP P 03 04 48.4 -0.2
DUG pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
DUG Dugway 82.93 43 eP P 03 04 48.4 -0.3
comp=Z,2.3nm,1.0s,mb4.2
MAW Mawson 82.97 199 eP P 03 04 48.9 +0.1
comp=Z,4.1nm,0.6s,mb4.6
MAW Mawson 82.97 199 P P 03 04 49.1 +0.3
comp=Z,6.2nm,0.9s,mb4.7,baz=121,slow=7.3,SNR=16
MAW Mawson 82.97 199 eP P 03 04 48.9 +0.1
MAW pmax pmax
comp=Z,4.0nm,0.6s
TMUT Trail Mountain 83.48 44 eP P 03 04 52.3 +0.9
MNTX Cornudas Mount 83.74 53 eP P 03 04 52.4 -0.4
comp=Z,1.4nm,0.8s,mb4.1
SPUT South Promonto 83.78 42 eP P 03 04 53.2 +0.2
SRU San Rafael 83.83 45 eP P 03 04 54.0 +0.8
HLID Hailey 83.86 39 eP P 03 04 53.0 -0.4
comp=Z,5.2nm,0.9s,mb4.7
CN2 Changchun 84.31 321 eP P 03 04 57.3 +1.6
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.2
TCUT Toone Canyon 84.33 42 eP P 03 04 55.8 0.0
HWUT Hardware Ranch 84.50 42 eP P 03 04 56.6 0.0
comp=Z,3.9nm,0.8s,mb4.6
ANMO Albuquerque 84.51 50 eP P 03 04 57.5 +0.8
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ANMO Albuquerque 84.51 50 eP P 03 04 57.5 +0.8
comp=Z,4.2nm,1.0s,mb4.5
PV01 Paradox Valley 84.62 46 eP P 03 04 56.9 -0.4
GDL2 Guadalupe Moun 84.74 53 eP P 03 04 58.6 +0.8
TPAW Teton Pass 85.91 41 eP P 03 05 03.1 -0.6
comp=Z,1.3nm,0.5s,mb4.4
MCK McKinley 86.01 11 eP P 03 05 02.8 -1.4
MCK pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
MCK McKinley 86.01 11 eP P 03 05 02.8 -1.3
comp=Z,3.0nm,0.8s,mb4.6
SNOW Snow King Moun 86.01 41 eP P 03 05 04.0 -0.2
comp=Z,3.2nm,0.6s,mb4.7
SMCO Snowmass 86.23 46 eP P 03 05 04.9 -0.3
comp=Z,4.5nm,1.0s,mb4.7
BW06 Boulder Array 86.38 42 eP P 03 05 04.8 -1.2
comp=Z,1.6nm,0.8s,mb4.3
PDAR Pinedale Array 86.38 42 P P 03 05 05.2 -0.8
comp=Z,1.6nm,0.8s,mb4.3,baz=222,slow=2.6,SNR=15
BOZ Bozeman (W) 86.68 39 eP P 03 05 07.2 -0.3
BOZ pmax pmax
comp=Z,3.0nm,1.2s,mb4.4
BOZ Bozeman (W) 86.68 39 eP P 03 05 07.2 -0.3
comp=Z,2.5nm,1.2s,mb4.3
SEY Seymchan 86.99 345⇑iP P 03 05 08.0 -1.0
COLA College 87.25 11 eP P 03 05 08.6 -1.6
COLA pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
COLA College 87.25 11 eP P 03 05 08.6 -1.6
comp=Z,2.2nm,0.7s,mb4.5
KULM Kulim 87.26 277 eP P 03 05 11.8 +1.5
SYO Syowa Base 87.71 192⇑eP P 03 05 11.3 -1.2
SNAA Sanae 88.12 177 eP P 03 05 13.1 -1.3
SNAA e 03 05 14.3
SNAA e pP 03 05 26.7 -0.3
SNAA Sanae 88.12 177 eP P 03 05 12.8 -1.6
SNAA pmax pmax
comp=Z,5.0nm,0.9s
SNAA Sanae 88.12 177 eP P 03 05 12.8 -1.6
comp=Z,4.6nm,0.9s,mb4.7
VNA1 Neumayer-Stat 88.81 175 eP P 03 05 17.4 -0.2
VNA1 e 03 05 18.7
VNA1 e pP 03 05 29.5 -0.7
VNA1 e 06 10 40.3
VNA1 e 06 10 43.4
VNA1 e 06 10 48.3
BILL Bilibino 89.20 353 P P 03 05 15.0 -4.5
BILL 03 08 51.0
BILL MLR MLR
comp=Z,400nm,18.0s,MS4.9
HHC Hu-ho-hao-te 91.75 313 eP P 03 05 32.8 +1.4
HHC AP pP 03 05 43.5 -0.4
HHC XP sP 03 05 47.4 -1.1
HHC PP PP 03 09 14.8 +4.4
HHC SKS 03 16 01.1
HHC S S 03 16 28.8 -0.2
HHC XS sS 03 16 46.3 -3.8
HHC PS PS 03 17 48.6 +5.1
HHC SS SS 03 22 40.8 +3.9
HHC AMB AMB
comp=Z,14nm,1.0s,mb5.2
HHC AMB AMB
comp=Z,240nm,9.4s
HHC LR LR
comp=N,145nm,22.8s,MS4.5
HHC LR LR
comp=E,142nm,21.8s,MS4.5
HHC LR LR
comp=Z,163nm,19.9s,MS4.5
KMI Kunming 92.42 296 P P 03 05 33.6 -0.9
KMI AP pP 03 05 44.1 -2.9
KMI XP sP 03 05 50.6 -1.0
KMI AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
KMI LR LR
comp=Z,299nm,51.2s,MS4.3
YAK Yakutsk 93.25 337 iP P 03 05 37.2 -1.1
CD2 Chengdu 93.67 301 eP P 03 05 39.0 -1.2
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.4
LZH Lanzhou 95.46 306 eP P 03 05 50.9 +2.5
LZH AP pP 03 06 02.9 +1.9
LZH XP sP 03 06 09.0 +3.4
LZH AMB AMB
comp=Z,12nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,50nm,4.1s
ULN Ulaanbaatar 97.52 318 iP P 03 05 56.7 -1.1
SONM Songino Array 97.92 318 PP PP 03 10 03.2 +4.8
comp=Z,0.7nm,0.8s,baz=118,slow=7.6,SNR=4.5
TIXI Tiksi 99.44 344 iP P 03 06 05.2 -1.2
MKAR Makanchi Array 113.61 313 PP PP 03 11 52.4 -1.9
comp=Z,0.6nm,0.7s,baz=36,slow=10,SNR=4.0
ZRNK Zerenda 122.00 320 ePKIKP PKPdf 03 11 16.7 -1.3
ARCES ARCESS Array B 129.27 351 PKP PKPdf 03 11 30.3 -1.6
comp=Z,1.2nm,0.8s,baz=42,slow=2.0,SNR=7.4
ARCES ARCESS Array B 129.27 351 PKIKP PKPdf 03 11 30.3 -1.6
ARCES pmax pmax
comp=Z,1.0nm,0.8s
KMBO Kilima Mbogo 142.56 239 PKhKP 03 11 55.2
comp=Z,2.3nm,0.9s,baz=88,slow=2.0,SNR=6.8
KMBO Kilima Mbogo 142.56 239 PKIKP PKPdf 03 11 55.3 -1.2
KMBO pmax pmax
comp=Z,2.0nm,0.9s
AKASG Malin Array Be 144.43 334 PKP PKPdf 03 11 57.5 -2.3
comp=Z,5.7nm,0.6s,baz=39,slow=4.3,SNR=44
AKASG Malin Array Be 144.43 334 PKHKP 03 11 57.6
AKASG pmax pmax
comp=Z,6.0nm,0.6s
BSEG Bad Segeberg 146.20 355 ePKPbc PKPbc 03 12 04.0 +0.1
MALT Malatya 146.55 310⇓iP PKPbc 03 12 06.8 +1.8
MALT Malatya 146.55 310 ePKPbc PKPbc 03 12 05.4 +0.4
STHS Stebnicka Huta 148.39 341 ePKP PKPbc 03 12 10.6 +0.6
BURAR Bucovina Array 148.48 334⇑iP PKPbc 03 12 12.0 +1.7
CLL Collm 148.49 351 ePKPbc PKPbc 03 12 10.3 0.0
CLL Collm 148.49 351⇑iPKPbc PKPbc 03 12 10.1 -0.2
comp=Z,8.0nm,0.8s
CLL ex x 03 12 34.0
NIE Niedzica 148.67 342 ePKP PKPbc 03 12 11.6 +0.8
UPC Upice 148.74 347 ePKP PKPbc 03 12 11.2 +0.3
UPC epPKP pPKPdf 03 12 24.2 +4.1
CRVS Cervenica-Dubn 148.77 340 ePKP PKPdf 03 12 10.9 +3.8
BRG Berggiesshubel 148.77 350 ePKPbc PKPbc 03 12 11.3 +0.3
BRG Berggiesshubel 148.77 350 ePKP PKPbc 03 12 11.2 +0.2
comp=Z,3.5nm,0.7s
BRG e 03 12 26.1
comp=Z,2.4nm,0.9s
BRG Berggiesshubel 148.77 350 ePKIKP PKPbc 03 12 11.2 +0.2
BRG e 03 12 26.1
BRG pmax pmax
comp=Z,4.0nm,0.7s
FBE Freiberg 148.82 351 ePKPbc PKPbc 03 12 11.6 +0.5
DPC Dobruska-Polom 148.83 347 ePKP PKPbc 03 12 11.3 +0.1
PVCC Panska Ves 149.00 349 ePKP PKPbc 03 12 11.5 -0.1
MORC Moravsky Berou 149.09 345⇑iP PKPbc 03 12 12.2 +0.4
MORC Moravsky Berou 149.09 345 ePKPbc PKPbc 03 12 11.8 0.0
BR131 Keskin Array S 149.24 315 ePKPbc PKPbc 03 12 12.5 +0.3
BRTR Keskin Array B 149.24 315 PKPbc PKPbc 03 12 12.4 +0.3
comp=Z,2.1nm,0.7s,baz=132,slow=3.8,SNR=15
BRTR Keskin Array B 149.24 315 PKIKP PKPbc 03 12 12.5 +0.3
BRTR pmax pmax
comp=Z,2.0nm,0.7s
MOX Moxa 149.32 353 e(P) PKPbc 03 12 12.7 +0.3
WERD Werda 149.43 352 ePKPbc PKPbc 03 12 12.6 -0.1
GUNZ Gunzen 149.51 352 ePKPbc PKPbc 03 12 13.2 +0.3
PRU Pruhonice 149.52 349 ePKP PKPbc 03 12 13.0 +0.1
PRU epPKP pPKPdf 03 12 32.1 +11
NKC Novy Kostel 149.62 352 ePKP PKPbc 03 12 13.6 +0.5
NKC epPKP pPKPdf 03 12 28.2 +6.7
MLR Muntele Rosu 149.84 331⇓iP PKPbc 03 12 14.3 +0.6
VYHS Vyhne 149.93 343 ePKP PKPbc 03 12 14.2 +0.3
VYHS e 03 12 28.7
TREC Trest 150.00 347 ePKP PKPbc 03 12 13.9 -0.2
TNS Taunus Mts 150.02 357 ePKPbc PKPbc 03 12 13.7 -0.4
ROTZ Rotzenmuhle 150.11 352 ePKPbc PKPbc 03 12 14.6 +0.3
PSZ Piszkesteto 150.13 341⇓iP PKPbc 03 12 14.8 +0.4
PSZ Piszkesteto 150.13 341 ePKPbc PKPbc 03 12 14.7 +0.3
GRA1 Grafenberg Arr 150.31 353 ePKPbc PKPbc 03 12 14.1 -0.7
GRF Grafenberg Arr 150.31 353 ePKPbc PKPbc 03 12 14.1 -0.7
KHC Kasperske Hory 150.52 350 ePKP PKPbc 03 12 15.6 +0.3
KHC epPKP pPKPdf 03 12 29.8 +6.9
GEC2 GERESS Array S 150.77 349 ePKPbc PKPbc 03 12 15.9 0.0
GERES GERESS Array B 150.77 349 PKPbc PKPbc 03 12 15.6 -0.3
comp=Z,1.6nm,0.7s,baz=28,slow=2.5,SNR=15
GERES GERESS Array B 150.77 349 PKIKP PKPbc 03 12 15.6 -0.3
GERES pmax pmax
comp=Z,2.0nm,0.7s
FLN La Foliniere 151.12 9 ePKP1 PKPbc 03 12 16.0 -0.7
CONA Conrad Observa 151.21 346⇑iPKiKP PKiKP 03 12 17.2 -0.3
comp=Z,2.4nm,0.7s
GRR Gorron 151.43 9 ePKP1 PKPbc 03 12 16.9 -0.5
BZS Buzias 151.54 336⇑iP PKPbc 03 12 17.8 +0.1
CDF Champ du Feu 151.88 358 ePKP1 PKPbc 03 12 18.5 0.0
comp=Z,5.0nm,0.8s
BFO Black Forest 151.92 356 ePKPbc PKPbc 03 12 17.9 -0.6
EIL Elat 152.01 295 ePKPbc PKPbc 03 12 19.5 +0.7
PKSM Moragy 152.04 341⇑iP PKPbc 03 12 18.6 -0.2
TORD Torodi Ar. Bea 171.92 150 PKPab PKPab 03 13 58.5 +3.5
comp=Z,0.6nm,0.8s,baz=214,slow=4.9,SNR=2.9

CSEM ***25*** *03:33:49.0±1.2, 3871N×2772W, h4km±3km, ML1.6, After PDA*
PDA ***25*** *03:33:49.0±1.2, 3871N×2772W, h4km±3km, MD3.1, ML1.6*
SVSA 25 03:33:49.0±1.2, 3871N×2772W, h4km±3km, MD3.1, ML1.6, Error ellipse: s-maj=2.5km s-min=1.5km az=0.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMAN	**Manadas**	**0.30**	**255**	*i*	P	Pg	03 33 54.2	-0.6
PMAN				*e*	S	Sg	03 33 58.7	0.0
PMAN								
	184nm,0.1s							
PMAN	**Manadas**	**0.30**	**255**	*e*	S	Sg	03 33 58.7	0.0
ASBA	**Santa Barbara**	**0.31**	**89**	*e*	S	Sg	03 33 59.1	+0.1
ASBA								
	30nm,0.1s							
PPAD	**Pico dos Padre**	**0.34**	**92**	*e*	P	Pg	03 33 55.1	-0.4
PPAD					S	Sg	03 33 59.9	0.0
PPAD								
	33nm,0.2s							
PPAD	**Pico dos Padre**	**0.34**	**92**	*e*	P	Pg	03 33 55.1	-0.4
PPAD					S	Sg	03 33 59.9	0.0
PAMA	**Santo Amaro**	**0.36**	**265**	*e*	S	Sg	03 34 00.4	-0.3
PAMA								
	17nm,0.2s							
PBIS	**Biscoitos**	**0.37**	**82**	*e*	P	Pg	03 33 55.6	-0.5
PBIS					S	Sg	03 34 00.5	-0.4
PBIS								
	21nm,0.1s							
PBIS	**Biscoitos**	**0.37**	**82**	*e*	P	Pg	03 33 55.6	-0.5
PBIS					S	Sg	03 34 00.5	-0.4
PGRA	**Graciosa**	**0.38**	**327**	*e*	P	Pg	03 33 55.3	-1.0
PGRA					S	Sg	03 34 00.6	-0.6
PGRA								
	41nm,0.2s							
PGRA	**Graciosa**	**0.38**	**327**	*e*	P	Pg	03 33 55.3	-1.0
PGRA					S	Sg	03 34 00.6	-0.6
ROSA	**Rosais**	**0.41**	**271**	*i*	P	Pg	03 33 56.1	-0.8
ROSA					S	Sg	03 34 01.5	-0.7
PID	**Ribeirinha**	**0.41**	**229**	*e*	P	Pg	03 33 56.7	-0.3
PID					S	Sg	03 34 02.4	0.0
STGR	**Santa Cruz**	**0.43**	**329**	*e*	S	Sg	03 34 02.7	-0.1
STGR								
	14nm,0.1s							
RIB2	**Ribeirinha**	**0.43**	**95**	*e*	P	Pg	03 33 56.4	-0.9
RIB2					S	Sg	03 34 02.3	-0.5
RIB2								
	19nm,0.1s							
RIB2	**Ribeirinha**	**0.43**	**95**	*e*	P	Pg	03 33 56.4	-0.9
RIB2					S	Sg	03 34 02.3	-0.5
PVIA	**Vitoria**	**0.44**	**324**	*e*	S	Sg	03 34 02.6	-0.6
PVIA								
	8.7nm,0.1s							
PVNV	**Vila Nova**	**0.44**	**83**	*e*	P	Pg	03 33 56.5	-1.0
PVNV					S	Sg	03 34 02.8	-0.5
PVNV								
	9.8nm,0.1s							
PVNV	**Vila Nova**	**0.44**	**83**	*e*	P	Pg	03 33 56.5	-1.0
PVNV					S	Sg	03 34 02.8	-0.5
PFAV	**Pico das Favas**	**0.50**	**90**	*e*	P	Pg	03 33 57.5	-1.0
PFAV					S	Sg	03 34 04.3	-0.7
PFAV								
	17nm,0.1s							
PFAV	**Pico das Favas**	**0.50**	**90**	*e*	P	Pg	03 33 57.5	-1.0
PFAV					S	Sg	03 34 04.3	-0.7
PICO	**Pico**	**0.59**	**249**	*e*	S	Sg	03 34 06.9	-1.2
PCED	**Cedros**	**0.77**	**264**	*e*	P	Pg	03 34 01.6	-2.2
PCED					S	Sg	03 34 11.1	-2.8
CALA	**Caldeira**	**0.78**	**261**	*e*	S	Sg	03 34 11.5	-2.6

WEL 25 03:40:09.4±0.2, 3863S×17644E, h102km±2km, ML3.7/8, 3C, Error ellipse: s-maj=1.2km s-min=1.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PATZ	**Paeroa**	**0.29**	**331**		PN	Pn	03 40 24.4	+0.2
TAZ	**Tarawera**	**0.40**	**8**	*e*	PN	Pn	03 40 24.9	+0.1
BKZ	**Black Stump Fm**	**0.54**	**175**	⇑	PN	Pn	03 40 25.8	+0.2
BKZ					SN	Sn	03 40 37.3	-0.5
RITZ	**Rihia Road**	**0.57**	**232**		PN	Pn	03 40 26.2	+0.3
URZ	**Urewera**	**0.65**	**55**		PN	Pn	03 40 26.3	-0.3
KRVZ	**Karewarewa**	**0.77**	**233**		PN	Pn	03 40 27.7	0.0
OTVZ	**Oturere**	**0.80**	**228**	⇑	PN	Pn	03 40 28.2	+0.3
OTVZ					SN	Sn	03 40 41.7	-0.2
WTVZ	**West Tongariro**	**0.82**	**233**		PN	Pn	03 40 28.1	0.0
NGZ	**Ngauruhoe**	**0.85**	**230**		PN	Pn	03 40 28.4	+0.1
TWVZ	**Taurewa**	**0.90**	**240**		PN	Pn	03 40 28.8	-0.1
WPVZ	**Whakapapa**	**0.90**	**230**		PN	Pn	03 40 28.9	0.0
MWZ	**Matawai**	**0.91**	**71**		PN	Pn	03 40 29.2	+0.2
DRZ	**Dome Shelter**	**0.94**	**226**		PN	Pn	03 40 29.5	+0.2
MOVZ	**Moawhango**	**0.94**	**214**	⇑	PN	Pn	03 40 29.0	-0.3
WNVZ	**Wahianoa**	**0.95**	**223**		PN	Pn	03 40 29.5	0.0
KNZ	**Kokohu**	**1.04**	**112**	*e*	PN	Pn	03 40 31.0	+0.5
MTVZ	**Mangateitei**	**1.06**	**225**		PN	Pn	03 40 30.7	0.0
PKVZ	**Pokaka**	**1.07**	**232**		PN	Pn	03 40 30.7	-0.1
HIZ	**Hauiti**	**1.24**	**275**		PN	Pn	03 40 32.8	+0.1
WIZ	**White Island**	**1.25**	**29**		PN	Pn	03 40 32.4	-0.3
VRZ	**Vera Road**	**1.40**	**249**	*e*	PN	Pn	03 40 34.5	0.0
VRZ					SN	Sn	03 40 54.0	+0.4
PXZ	**Pawanui**	**1.44**	**167**		PN	Pn	03 40 34.7	-0.3
TSZ	**Takapari Road**	**1.47**	**194**		PN	Pn	03 40 34.6	-0.8
PUZ	**Puketiti**	**1.54**	**69**		PN	Pn	03 40 36.0	-0.1
PUZ					SN	Sn	03 40 55.9	-0.7
WAZ	**Wanganui**	**1.59**	**225**		PN	Pn	03 40 36.8	0.0
PKE	**Pukeiti**	**1.99**	**253**	*e*	PN	Pn	03 40 42.0	0.0
MRZ	**Mangatainoka R**	**2.13**	**198**	*e*	PN	Pn	03 40 42.1	-1.7

IDC 25 03:41:39.5±1.9, 6093S×3352W, h0km, mb4.0/4, mb1 4.0/5, mb1mx3.7/16, mbtmp3.9/5, ML3.3/1, Error ellipse: s-maj=54.5km s-min=31.6km az=21.0, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNAA	**Sanae**	**16.12**	**144**		Pn	Pn	03 45 25.5	-1.9
	0.1nm,0.3s,baz=325,slow=16,SNR=13							
SNAA					Sn	Sn	03 48 15.6	-11
	0.1nm,0.3s,baz=18,slow=20,SNR=4.3							
SNAA					T		04 00 18.1	
	0.1nm,0.3s,baz=306,slow=17,SNR=3.7							
PLCA	**Paso Flores**	**30.29**	**295**		P	P	03 47 53.7	+1.3
	0.8nm,0.7s,baz=166,slow=4.8,SNR=4.2							
CPUP	**Villa Florida**	**38.19**	**324**		P	P	03 48 58.8	-2.1
	0.6nm,0.5s,baz=152,slow=8.6,SNR=6.5							
DBIC	**Dimbokro**	**71.03**	**30**		P	P	03 52 59.3	+0.1
	3.1nm,0.9s,baz=166,slow=10,SNR=3.9							
TORD	**Torodi Ar. Bea**	**78.96**	**35**		P	P	03 53 45.2	+0.2
	0.9nm,0.6s,baz=196,slow=5.8,SNR=13							

IDC 25 04:28:14.8±3.1, 428S×15303E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/13, mbtmp4.0/3, Error ellipse: s-maj=127.6km s-min=42.3km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WB2	**Warramunga Arr**	**23.95**	**228**	*eP*		P	04 33 31.0	+0.4
WRA	**Warramunga Arr**	**23.96**	**228**	P		P	04 33 31.3	+0.6
	3.0nm,0.5s,baz=54,slow=9.8,SNR=54							
ASAR	**Alice Springs**	**26.68**	**222**	P		P	04 33 56.0	+0.6
	0.8nm,0.5s,baz=56,slow=8.5,SNR=13							
FITZ	**Fitzroy Crossi**	**30.11**	**241**	P		P	04 34 26.0	0.0
	0.7nm,0.3s,baz=47,slow=10,SNR=16							
TORD	**Torodi Ar. Bea**	**150.35**	**289**	PKPbc		PKPbc	04 48 08.8	+0.8
	0.5nm,0.5s,baz=62,slow=2.2,SNR=18							

MEX 25 04:35:29.5±0.5, 1889N×10494W, h11km±25km, MD3.9, 1D, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.61**	**351**	⇓*i*P	Pg	04 35 40.0	-1.4
CJM				*i* S	Sg	04 35 48.5	-1.1
SFJM	**Santa Fe**	**2.39**	**48**	*i* P	Pn	04 36 06.2	-2.4
SFJM				*i* S	Sn	04 36 33.0	-4.9
MEIG	**Mezcala**	**5.14**	**100**	*i* S	Sn	04 37 42.6	-3.0

NNC ***25*** *04:39:31.5±2.5, 3857N×7113E, h0km, mb3.5, mpv3.8, Error ellipse: s-maj=20.1km s-min=16.7km az=121.0*
ISCJB ***25*** *04:39:35.7±1.0, 3860N±007×709E±03, h33km, Error ellipse: s-maj=28.9km s-min=7.6km az=152.0*

ISC 25 04:39:38.1±1.0, 3859N±007×709E±03, h35km, n5, σ1°45/8, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.52**	**356**	⇑Pn	**Pn**	**04 40 41.8**	**-2.3**
	6.6nm,0.3s,baz=171,slow=12,SNR=122						
KK31				⇑Sn	**Sn**	**04 41 36.9**	**+1.5**
	9.2nm,0.5s,baz=174,slow=22,SNR=4.7						
KK31				⇓Lg		04 41 55.5	
	11nm,0.5s,baz=72,slow=21,SNR=5.1						
CEP	**Cherat**	**4.82**	**170**	P	**Pn**	**04 40 48.4**	**+0.3**
CEP				S	**Sn**	**04 41 59.0**	**+16**
THW	**Thamme Wali**	**5.82**	**173**	P	**Pn**	**04 41 02.8**	**+0.9**
AB31	**Akbulak array**	**13.27**	**327**	P	**Pn**	**04 42 42.1**	**-1.9**
	0.6nm,0.4s,baz=145,slow=14,SNR=18						
AB31				⇑S	**Sn**	**04 45 11.9**	**+1.7**
	2.7nm,0.8s,baz=5.3,slow=25,SNR=5.9						
AKTO	**Aktyubinsk**	**14.98**	**326**	⇑P	**Pn**	**04 43 06.1**	**-1.1**
	0.1nm,0.8s						

IDC ***25*** *04:42:10.1±0.7, 5154N×17541W, h0km, mb4.0/8, mb1 4.3/9, mb1mx3.9/25, mbtmp4.1/9, ML3.6/1, Error ellipse: s-maj=42.8km s-min=17.5km az=151.0*
NEIC ***25*** *04:42:14.0±1.6, 5152N×17531W, h23km±11km, mb4.0/8, ML3.9(AEIC), Error ellipse: s-maj=17.5km s-min=5.5km az=166.0*
ISCJB ***25*** *04:42:14.4±1.3, 516N±02×17536W±0.10, h38km±12km, mb4.0/15, Error ellipse: s-maj=26.8km s-min=6.5km az=145.6*

ISC 25 04:42:14.1±2.4, 515N±02×17531W±008, h24km±16km, n35, σ0°91/30, mb4.0/15, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.97**	**45**	P	**Pb**	**04 42 31.9**	**-0.3**
ATKA				S	**Sb**	**04 42 44.2**	**-0.4**
AMKA	**Amchitka**	**3.38**	**270**	P	**Pn**	**04 43 07.1**	**+1.8**
AMKA				S	**Sn**	**04 43 45.1**	**+0.5**
NIKO	**Nikolski**	**4.22**	**67**	*e*Pn	**Pn**	**04 43 15.8**	**-1.2**
AKUT	**Akutan**	**6.34**	**62**	Pn	**Pn**	**04 43 48.2**	**+2.1**
SMY	**Shemya**	**6.63**	**285**	*e*Pn	**Pn**	**04 43 49.3**	**-0.8**
KDAK	**Kodiak Island**	**14.53**	**56**	Pn	**Pn**	**04 45 36.8**	**-1.4**
	0.3nm,0.3s,baz=134,slow=17,SNR=4.4						
TTA	**Tatalina**	**15.40**	**35**	*e*Pn	**Pn**	**04 45 53.0**	**+3.1**
	19nm,1.3s						
SLKM	**Skilak Lake**	**16.56**	**47**	*e*Pn	**Pn**	**04 46 05.5**	**+0.8**
EGAK	**Eagle**	**22.02**	**40**	*e*P	**P**	**04 47 05.6**	**-1.2**
DAWY	**Dawson**	**22.52**	**42**	*e*P	**P**	**04 47 12.9**	**+0.9**
YKA	**Yellowknife Ar**	**33.54**	**47**	P	**P**	**04 48 51.3**	**-0.7**
	1.4nm,0.9s,mb3.9,baz=279,slow=8.6,SNR=2.9						
NEW	**Newport**	**36.77**	**72**	P	**P**	**04 49 19.5**	**-0.3**
	3.9nm,1.0s,mb4.2,baz=302,slow=12,SNR=4.7						
EDM	**Edmonton**	**36.82**	**62**	*e*P	**P**	**04 49 20.3**	**+0.1**
WALA	**Waterton Lakes**	**38.29**	**69**	*e*P	**P**	**04 49 32.1**	**-0.6**
	4.3nm,1.0s,mb4.1						
WVOR	**Wild Horse Val**	**38.83**	**81**	*e*P	**P**	**04 49 37.8**	**+0.7**
	2.2nm,0.9s,mb3.9						
CHMT	**Chamberlain Mo**	**39.72**	**71**	*e*P	**P**	**04 49 45.5**	**+0.9**
HLID	**Hailey**	**40.79**	**76**	*e*P	**P**	**04 49 53.8**	**+0.4**
	1.0nm,1.0s,mb3.4						
MCMT	**McKenzie Canyo**	**41.05**	**74**	*e*P	**P**	**04 49 55.9**	**+0.3**
BOZ	**Bozeman (W)**	**41.34**	**72**	*e*P	**P**	**04 49 58.2**	**+0.2**
	2.6nm,1.0s,mb3.8						
RRI2	**Red Ridge**	**42.78**	**75**	*e*P	**P**	**04 50 10.7**	**+0.9**
	1.8nm,0.8s,mb3.9						
BW06	**Boulder Array**	**44.17**	**74**	*e*P	**P**	**04 50 21.1**	**+0.1**
	3.6nm,0.8s,mb4.2						
BW06				*e*	pP	04 50 28.4	+0.1
PDAR	**Pinedale Array**	**44.17**	**74**	P	**P**	**04 50 21.4**	**+0.5**
	3.2nm,0.7s,mb4.2,baz=314,slow=4.8,SNR=33						
ULM	**Lac du Bonnet**	**47.76**	**58**	P	**P**	**04 50 49.1**	**-0.1**
	1.2nm,0.6s,mb4.1,baz=294,slow=10.0,SNR=2.4						
SONM	**Songino Array**	**48.52**	**298**	PcP	PcP	04 52 19.1	-1.8
	1.1nm,1.0s,baz=62,slow=3.4,SNR=5.4						
WMOK	**Wichita Mounta**	**55.75**	**76**	*e*P	**P**	**04 51 48.6**	**-0.3**
	1.3nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**62.16**	**321**	P	**P**	**04 52 32.4**	**-1.0**
	0.5nm,0.5s,mb3.9,baz=49,slow=4.9,SNR=4.1						
CLL	**Collm**	**77.30**	**355**	*e**PP	pP	04 54 14.0	-0.3
CLL	**Collm**	**77.30**	**355**	*e*pP	pP	04 54 14.0	-0.3
WRA	**Warramunga Arr**	**83.67**	**227**	P	**P**	**04 54 39.4**	**-1.3**
	1.1nm,0.9s,mb4.0,baz=38,slow=6.1,SNR=8.7						
FITZ	**Fitzroy Crossi**	**86.31**	**235**	P	**P**	**04 54 53.5**	**-0.5**
	2.3nm,0.9s,mb4.4,baz=91,slow=6.1,SNR=5.0						
ASAR	**Alice Springs**	**87.11**	**225**	P	**P**	**04 54 57.4**	**-0.6**
	1.4nm,0.8s,mb4.2,baz=28,slow=4.6,SNR=14						
TORD	**Torodi Ar. Bea**	**115.55**	**3**	PKP	PKPdf	05 00 54.7	+0.6
	0.4nm,1.0s,baz=348,slow=2.8,SNR=3.9						
MAW	**Mawson**	**147.94**	**218**	PKPbc	PKPbc	05 01 55.5	-1.8
	3.4nm,0.9s,baz=39,slow=4.0,SNR=9.2						
MAW	**Mawson**	**147.94**	**218**	*e*PKPbc	PKPbc	05 01 55.5	-1.8
BOSA	**Boshof**	**152.41**	**318**	PKPbc	PKPbc	05 02 07.5	-0.6
	4.1nm,0.9s,baz=246,slow=1.3,SNR=3.5						

IDC 25 05:31:03.9±3.1, 907S×10780E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/18, mbtmp3.6/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/28, Error ellipse: s-maj=124.8km s-min=28.7km az=47.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.83**	**116**	P	P	05 36 55.1	+0.2
	0.3nm,0.6s,baz=290,slow=10,SNR=8.1						
ASAR	**Alice Springs**	**28.87**	**123**	LR	LR	05 48 43.0	
	comp=Z,90nm,18.3s,baz=228,slow=37						
SONM	**Songino Array**	**56.66**	**359**	P	P	05 40 50.3	+1.3
	0.5nm,0.5s,baz=178,slow=8.8,SNR=7.3						
MKAR	**Makanchi Array**	**60.09**	**340**	P	P	05 41 12.4	-0.4
	0.3nm,0.5s,baz=148,slow=8.6,SNR=4.3						
BVAR	**Borovoye Array**	**69.57**	**337**	P	P	05 42 13.8	-0.8
	0.5nm,0.4s,baz=156,slow=7.6,SNR=3.6						

MOS ***25*** *05:33:36.5±0.9, 481S×14972E, h33km, mb4.9/6, Error ellipse: s-maj=25.7km s-min=12.9km az=66.8*
ISCJB ***25*** *05:33:39.7±2.6, 499S±009×1497E±0.1, h59km±23km, mb4.6/18, MS3.8/9, Error ellipse: s-maj=17.3km s-min=15.3km az=26.6*
IDC ***25*** *05:33:41.8±4.8, 501S×14971E, h65km±40km, mb4.0/7, mb1 4.1/9, mb1mx3.9/16, mbtmp4.2/9, ML3.4/2, MS3.6/12, Ms1 3.6/12, ms1mx3.4/29, Error ellipse: s-maj=29.5km s-min=25.3km az=41.0*
NEIC ***25*** *05:33:42.2±2.1, 501S×14969E, h70km±19km, mb4.7/12, Error ellipse: s-maj=13.1km s-min=12.1km az=66.0*
BJI ***25*** *05:33:42.2, 500S×14970E, h70km, mB4.9, mb4.6, Ms4.8, Msz4.3*

ISC 25 05:33:42.1±2.3, 504S±010×1498E±01, h67km±21km, n47, σ0°91/44, mb4.5/18, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.07**	**211**	P	**Pn**	**05 34 56.1**	**+0.6**
	6.6nm,0.3s,baz=30,slow=7.0,SNR=13						
PMG				S	**Sn**	**05 35 52.3**	**-0.3**
	baz=308,slow=6.1,SNR=2.4						
PMG				LR	LR	05 36 39.6	
	comp=Z,306nm,20.3s,baz=169,slow=35						
PMG	**Port Moresby**	**5.07**	**211**	*e*P	**Pn**	**05 34 55.8**	**+0.3**
PMG				*e*		05 35 52.1	
PMG				pmax	pmax		
	comp=Z,121nm,0.6s						
PMG	**Port Moresby**	**5.07**	**211**	*e*Pn	**Pn**	**05 34 55.8**	**+0.3**
	comp=Z,121nm,0.6s						
PMG				*e*Sn	**Sn**	**05 35 52.1**	**-0.5**
HNR	**Honiara**	**10.98**	**114**	LR	LR	05 40 10.3	
	comp=Z,136nm,18.1s,baz=357,slow=35						
CTA	**Charters Tower**	**15.35**	**193**	P	**Pn**	**05 37 15.4**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=263,slow=8.5,SNR=1.9						
CTA				LR	LR	05 42 31.3	
	comp=Z,232nm,20.0s,baz=17,slow=34						
KAKA	**Kakadu**	**18.75**	**245**	*e*P	**Pn**	**05 37 52.8**	**-3.9**
	comp=Z,28nm,1.0s						
GUMO	**Guam**	**19.14**	**345**	LR	LR	05 44 11.8	
	comp=Z,125nm,19.4s,baz=63,slow=33						
WRAB	**Tennant Creek**	**21.10**	**224**	*e*P	**P**	**05 38 20.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,51nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**21.10**	**224**	*e*P	**P**	**05 38 20.5**	**-0.5**
	comp=Z,51nm,0.9s,mb4.9						
WB2	**Warramunga Arr**	**21.11**	**224**	*e*P	**P**	**05 38 20.6**	**-0.5**
WRA	**Warramunga Arr**	**21.11**	**224**	P	**P**	**05 38 20.7**	**-0.4**
	comp=Z,24nm,0.8s,mb4.6,baz=48,slow=11,SNR=156						
WRA				LR	LR	05 45 59.3	
	comp=Z,102nm,21.9s,baz=5.0,slow=35						
DZM	**Mont Dzumac**	**23.38**	**138**	P	**P**	**05 38 45.3**	**+0.5**
	comp=Z,3.8nm,0.5s,mb4.0,baz=88,slow=21,SNR=17						
DZM				LR	LR	05 46 14.3	
	comp=Z,366nm,20.4s,baz=24,slow=32						
AS31	**Alice Springs**	**24.03**	**218**	*e*P	**P**	**05 38 51.1**	**+0.4**
ASAR	**Alice Springs**	**24.03**	**218**	P	**P**	**05 38 51.2**	**+0.5**
	comp=Z,4.9nm,0.7s,mb3.9,baz=49,slow=9.5,SNR=46						
ASAR				S	**S**	**05 43 12.8**	**+10**
	comp=Z,0.6nm,0.9s,baz=26,slow=23,SNR=4.1						
FITZ	**Fitzroy Crossi**	**26.94**	**239**	*e*P	**P**	**05 39 16.3**	**-0.8**
	comp=Z,29nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**26.94**	**239**	P	**P**	**05 39 16.3**	**-0.7**
	comp=Z,30nm,1.0s,mb4.8,baz=76,slow=9.4,SNR=30						
FITZ				LR	LR	05 51 16.9	
	comp=Z,73nm,21.6s,baz=66,slow=39						
STKA	**Stephens Creek**	**27.79**	**195**	P	**P**	**05 39 24.2**	**-0.5**
	comp=Z,0.5nm,0.4s,mb3.4,baz=0.7,slow=12,SNR=3.0						
STKA				LR	LR	05 49 08.7	
	comp=Z,221nm,21.6s,baz=20,slow=33						
STKA	**Stephens Creek**	**27.79**	**195**	P	**P**	**05 39 24.2**	**-0.5**
STKA				LR	LR	05 49 08.7	
NWAO	**Narrogin (SRO)**	**41.12**	**223**	LR	LR	05 59 07.9	
	comp=Z,95nm,18.7s,baz=112,slow=37						
URZ	**Urewera**	**41.36**	**147**	LR	LR	05 56 29.7	
	comp=Z,139nm,20.7s,baz=250,slow=33						
RPZ	**Rata Peaks**	**42.84**	**157**	LR	LR	05 57 14.8	
	comp=Z,237nm,18.5s,baz=190,slow=33						
ASAJ	**Asahikawa**	**49.35**	**353**	LR	LR	06 01 06.9	
	comp=Z,69nm,20.0s,baz=210,slow=33						
HHC	**Hu-ho-hao-te**	**57.53**	**326**	*e*P	**P**	**05 43 26.5**	**+2.0**
HHC				AP	pP	05 43 42.6	+0.6
HHC				XP	sP	05 43 49.8	+0.3
HHC				PCP	PcP	05 44 19.8	+2.5
HHC				PP	PP	05 45 35.8	+3.1
HHC				SCP	ScP	05 48 13.3	+2.0
HHC				PCS	PcS	05 48 19.3	+0.8
HHC				S	**S**	**05 51 17.3**	**+0.2**
HHC				PS		05 51 38.9	
HHC				XS	sS	05 51 44.1	-2.5
HHC				SCS	ScS	05 53 06.6	-1.2
HHC				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.1						
HHC				AMB	AMB		
	comp=Z,60nm,5.8s						
HHC				LR	LR		
	comp=N,679nm,17.1s						
HHC				LR	LR		
	comp=E,668nm,15.2s						
HHC				LR	LR		
	comp=Z,315nm,16.1s						
ULN	**Ulaanbaatar**	**64.64**	**330**	*e*P	**P**	**05 44 16.8**	**+4.1**
ULN				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
ULN	**Ulaanbaatar**	**64.64**	**330**	*e*P	**P**	**05 44 16.8**	**+4.1**
	comp=Z,2.0nm,0.8s,mb4.0						
SONM	**Songino Array**	**64.96**	**329**	P	**P**	**05 44 14.5**	**-0.2**
	comp=Z,2.5nm,1.0s,mb4.0,baz=135,slow=6.9,SNR=6.0						
ZAK	**Zakamensk**	**68.16**	**330**	*e*P	**P**	**05 44 32.6**	**-2.5**
JIRN	**Jiri**	**69.35**	**302**	*e*P	**P**	**05 44 42.8**	**+0.3**
GUN	**Gumba**	**69.69**	**302**	*e*P	**P**	**05 44 46.1**	**+1.5**
	comp=Z,13nm,0.5s,mb5.0						
PKI	**Pulchoki**	**69.99**	**302**	*e*P	**P**	**05 44 46.9**	**+0.5**
KKN	**Kakani**	**70.16**	**302**	*e*P	**P**	**05 44 47.8**	**+0.3**
	comp=Z,24nm,1.0s,mb5.0						
KKN	**Kakani**	**70.16**	**302**	*e*P	**P**	**05 44 47.8**	**+0.3**
KKN				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.0						
DMN	**Daman**	**70.26**	**302**	*e*P	**P**	**05 44 48.4**	**+0.3**
	comp=Z,30nm,0.9s,mb5.1						
GKN	**Gorkha**	**70.77**	**302**	*e*P	**P**	**05 44 52.0**	**+0.8**
KOLN	**Koldanda**	**71.58**	**301**	*e*P	**P**	**05 44 55.8**	**-0.3**
	comp=Z,28nm,1.2s,mb5.0						
MIR	**Mirnyy**	**72.64**	**201**	*c i*P	**P**	**05 45 12.5**	**+10**
MIR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
VNDA	**Vanda**	**72.72**	**177**	P	**P**	**05 45 03.3**	**+0.4**
	comp=Z,0.8nm,0.9s,mb3.5,baz=322,slow=6.0,SNR=7.3						
VNDA	**Vanda**	**72.72**	**177**	*e*P	**P**	**05 45 03.5**	**+0.6**
VNDA				pmax	pmax		
	comp=Z,20nm,0.9s						
VNDA	**Vanda**	**72.72**	**177**	*e*P	**P**	**05 45 03.5**	**+0.6**
	comp=Z,1.7nm,0.9s,mb3.9						
MCK	**McKinley**	**82.24**	**23**	*e*P	**P**	**05 45 54.5**	**-1.5**
MCK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
MCK	**McKinley**	**82.24**	**23**	*e*P	**P**	**05 45 54.5**	**-1.5**
	comp=Z,6.9nm,1.1s,mb4.4						
COLA	**College**	**83.19**	**22**	*e*P	**P**	**05 46 00.0**	**-0.9**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
COLA	**College**	**83.19**	**22**	*e*P	**P**	**05 45 60.0**	**-1.0**
	comp=Z,3.8nm,0.9s,mb4.2						
DAWY	**Dawson**	**86.24**	**25**	*e*P	**P**	**05 46 16.8**	**+0.5**
CHKZ	**Chkalovo**	**87.64**	**324**	*e*P	**P**	**05 46 21.7**	**-1.3**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
CHKZ	**Chkalovo**	**87.64**	**324**	*e*P	**P**	**05 46 21.7**	**-1.4**
	comp=Z,2.0nm,1.0s,mb4.1						
TORD	**Torodi Ar. Bea**	**147.51**	**287**	PKPbc	PKPbc	05 53 18.6	+0.1
	comp=Z,1.6nm,1.0s,baz=56,slow=3.7,SNR=5.9						

IDC 25 05:48:21.5±57.0, 1477S×17241W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.9/15, mbtmp4.1/3, Error ellipse: s-maj=1102.0km s-min=187.9km az=78.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.18**	**240**	P	P	05 56 40.0	0.0
	1.1nm,0.6s,baz=103,slow=7.8,SNR=3.3						
WRA	**Warramunga Arr**	**50.92**	**256**	P	P	05 57 24.8	+0.3
	0.6nm,0.5s,baz=92,slow=7.0,SNR=40						
ASAR	**Alice Springs**	**51.22**	**251**	P	P	05 57 27.4	+0.7
	5.3nm,0.5s,baz=88,slow=8.1,SNR=70						

ISCJB ***25*** *05:51:42.5±0.7, 2804N±002×104.17E±002, h20km±5km, mb5.1/190, MS4.6/127, Error ellipse: s-maj=3.4km s-min=2.9km az=2.6*
BJI ***25*** *05:51:42.5, 2808N×10426E, h15km, mB5.0, mb5.2, ML5.2, Ms5.1, Msz4.9*
HRVD ***25*** *05:51:44.4±0.4, 2800N×10431E, h17km±1km, MW5.0/46, Centroid moment Tensor Solution. LP body waves: s5,c6; Mantle waves: s46,c70; Half duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.90±.43; Mθθ 0.79±.23; Mφφ -3.68±.30; Mrθ -1.26±.65; Mθφ -2.49±.17; Mφr -0.04±.55; Best double couple: M0 4.24800×10^16 NP1:φs 355.00000°, δ50.00000°, λ45.00000°. NP2:φs 232.00000°, δ57.00000°, λ130.00000°. Principal axes: T 3.6640, Plg57.0000°, Azm198.0000°; N 1.1750, Plg32.0000°, Azm27.0000°; P -4.8320, Plg4.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***25*** *05:51:44.4±1.0, 2801N×104.15E, h22km±6km, mb5.2/129, MS4.6/92 Error ellipse: s-maj=3.2km s-min=2.4km az=218.0*
NEIC At least one person killed, 31 injured, buildings destroyed and landslides damaged roads in the Doushaguan-Yanjin area. Felt as far north as Chengdu.
IDC ***25*** *05:51:45.9±1.4, 2806N×10424E, h32km±9km, mb4.8/33, mb1 4.8/34, mb1mx4.8/34, mbtmp5.0/34, ML4.8/1, MS4.3/18, Ms1 4.3/18, ms1mx4.1/32, Error ellipse: s-maj=11.6km s-min=7.4km az=58.0*

MOS ***25*** *05:51:46.2±0.9, 2801N×104.18E, h49km, mb5.3/103, MS4.5/48, Error ellipse: s-maj=6.6km s-min=3.5km az=122.0*
SZGRF ***25*** *05:51:49.0, 2789N×103.16E, h33km, mb5.1, MS4.6, Yunnan, China*

ISC 25 05:51:46.2±0.7, 2807N±002×10418E±002, h32km±4km, h27km±4.8km; pP-P, n666, σ0°93/625, mb5.1/190, MS4.6/127, 44C-22D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**2.74**	**125**	P	**Pn**	**05 52 29.0**	**+1.1**
GYA				S	**Sn**	**05 52 59.8**	**0.0**
GYA				SG	**Sb**	**05 53 07.1**	**-0.4**
GYA				Smax			
	comp=N,9μm,0.7s						
GYA				Smax			
	comp=E,9μm,0.6s						
CD2	**Chengdu**	**2.85**	**353**	P	**Pn**	**05 52 31.0**	**+1.6**
CD2				S	**Sn**	**05 53 06.9**	**+4.3**
CD2				SG	**Sb**	**05 53 15.1**	**+4.4**
CD2				Smax			
	comp=N,13μm,0.6s						
CD2				Smax			
	comp=E,19μm,1.0s						
KMI	**Kunming**	**3.21**	**204**	⇑P	**Pn**	**05 52 34.9**	**+0.6**
KMI				PG	Pn	05 52 42.9	+8.6
KMI				SG	**Sb**	**05 53 25.8**	**+4.7**
KMI				Smax			
	comp=N,1μm,1.3s						
KMI				Smax			
	comp=E,844nm,1.0s						
KMI				LR	LR		
	comp=N,19μm,7.2s						
KMI				LR	LR		
	comp=E,21μm,4.7s						
KMI				LR	LR		
	comp=Z,20μm,8.8s						
XAN	**Xi'an**	**7.20**	**33**	P	**Pn**	**05 53 28.9**	**-0.3**
XAN				S	**Sn**	**05 54 49.4**	**-0.6**
XAN				SG	Sn	05 55 32.5	+43
XAN				Smax			
	comp=N,3μm,1.1s						
XAN				Smax			
	comp=E,2μm,1.0s						
XAN				LR	LR		
	comp=N,5μm,7.0s						
XAN				LR	LR		
	comp=E,6μm,6.3s						
XAN				LR	LR		
	comp=Z,10μm,7.6s						
LZH	**Lanzhou**	**7.99**	**358**	*e*P	**Pn**	**05 53 41.6**	**+1.5**
LZH				AP		05 53 44.6	
LZH				XP		05 53 47.8	
LZH				*e*S	**Sn**	**05 55 14.0**	**+4.6**
LZH				XS		05 55 19.0	
LZH				AMB	AMB		
	comp=Z,230nm,1.0s						
LZH				AMB	AMB		
	comp=Z,981nm,4.0s						
LZH				Smax			
	comp=N,748nm,1.0s						
LZH				Smax			
	comp=E,1μm,1.2s						
LZH				LR	LR		
	comp=N,18μm,7.6s						
LZH				LR	LR		
	comp=Z,13μm,10.1s						
WHN	**Wuhan**	**9.21**	**72**	⇑P	**Pn**	**05 53 57.5**	**+0.7**
WHN				S	**Sn**	**05 55 34.6**	**-4.8**
WHN				LR	LR		
	comp=Z,14μm,8.8s						
GZH	**Guangzhou**	**9.65**	**119**	P	**Pn**	**05 54 01.3**	**-1.5**
GZH				AMB	AMB		
	comp=Z,261nm,0.7s						
GZH				LR	LR		
	comp=N,13μm,5.2s						
GZH				LR	LR		
	comp=E,8μm,5.1s						
GZH				LR	LR		
	comp=Z,11μm,9.6s						
CHG	**Chiang Mai**	**10.39**	**209**	⇓P	**Pn**	**05 54 10.1**	**-2.9**
	comp=Z,44nm,0.9s						
CHTO	**Chiang Mai**	**10.39**	**209**	P	**Pn**	**05 54 15.9**	**+3.0**
	SNR=26						
CHTO	**Chiang Mai**	**10.39**	**209**	*e*P	**Pn**	**05 54 13.1**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,40nm,1.2s						
CHTO	**Chiang Mai**	**10.39**	**209**	*e*Pn	**Pn**	**05 54 13.1**	**+0.1**
	comp=Z,40nm,1.2s						
QIZ	**Qiongzhong**	**10.39**	**149**	P	**Pn**	**05 54 11.4**	**-1.6**
QIZ				AP		05 54 15.1	
QIZ				XP		05 54 17.5	
QIZ				S	**Sn**	**05 56 09.3**	**+1.0**
QIZ				LR	LR		
	comp=N,9μm,10.4s						
QIZ				LR	LR		
	comp=Z,11μm,10.0s						
QIZ	**Qiongzhong**	**10.39**	**149**	*e*Pn	**Pn**	**05 54 11.1**	**-1.9**
	comp=Z,22nm,0.6s						
CM31	**Chiang Mai Arr**	**10.71**	**208**	*e*Pn	**Pn**	**05 54 19.3**	**+2.0**
SHL	**Shillong**	**11.26**	**260**	*e*P	**Pn**	**05 54 25.0**	**+0.2**
SHL				*ex*	x	05 57 34.0	
SHL				*ex*	x	05 58 12.0	
LSA	**Lhasa**	**11.53**	**281**	P	**Pn**	**05 54 28.3**	**-0.3**
LSA				S	**Sn**	**05 56 39.3**	**+3.1**
LSA				LR	LR		
	comp=E,3μm,8.9s						
LSA				LR	LR		
	comp=Z,5μm,8.4s						
LSA	**Lhasa**	**11.53**	**281**	*e*P	**Pn**	**05 54 30.2**	**+1.6**
LSA				pmax	pmax		
	comp=Z,58nm,0.8s						
LSA	**Lhasa**	**11.53**	**281**	*e*Pn	**Pn**	**05 54 30.2**	**+1.6**
	comp=Z,58nm,0.8s						
KKTK	**Khon Kaen**	**11.75**	**186**	P	**Pn**	**05 54 33.0**	**+1.5**
	comp=Z,56nm,0.5s						
GTA	**Gaotai**	**11.87**	**343**	⇑P	**Pn**	**05 54 35.0**	**+1.8**
GTA				AP		05 54 38.5	
GTA				XP		05 54 41.1	
GTA				PP		05 54 45.4	
GTA				S	**Sn**	**05 56 49.8**	**+5.2**
GTA				XS		05 56 54.0	
GTA				SS		05 57 04.8	
GTA				LG1		05 57 57.1	
GTA				LG2		05 58 17.8	
GTA				PCP	PcP	06 00 20.4	+1.1
GTA				SCP	ScP	06 03 52.1	+2.3
GTA				SCS	ScS	06 07 26.3	+0.8
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s						
GTA				AMB	AMB		
	comp=Z,174nm,4.9s						
GTA				LR	LR		
	comp=N,5μm,11.8s						
GTA				LR	LR		
	comp=E,10μm,12.9s						
GTA				LR	LR		
	comp=Z,5μm,15.6s						
NST	**Nakhon Sawan**	**12.90**	**198**	P	**Pn**	**05 54 49.7**	**+

TIA LR LR
comp=E,2μm,10.0s
HHC Hu-ho-hao-te 14.12 24 *e*P **Pn** **05 55 03.3 -0.6**
HHC AP 05 55 06.6
HHC PP 05 55 14.8
HHC S **Sn** **05 57 41.1 +1.8**
HHC XS 05 57 47.0
HHC SS 05 57 57.9
HHC PCP PcP 06 00 21.4 -0.7
HHC SCS ScS 06 07 30.3 -0.3
HHC AMB AMB
comp=Z,23nm,0.6s
HHC AMB AMB
comp=Z,104nm,4.3s
HHC LR LR
comp=N,3μm,8.0s
HHC LR LR
comp=E,2μm,6.4s
HHC LR LR
comp=Z,1μm,6.5s
SSE Sheshan 15.10 74 P **Pn** **05 55 16.4 -0.8**
SSE XP sP 05 55 22.9 -12
SSE S **Sn** **05 58 04.8 +1.4**
SSE XS sS 05 58 13.0 -20
SSE AMB AMB
comp=Z,20nm,0.8s
SSE AMB AMB
comp=Z,154nm,7.2s
SSE LR LR
comp=N,4μm,7.7s
SSE LR LR
comp=E,1μm,7.7s
SSE LR LR
comp=Z,3μm,8.6s
CAL Calcutta 15.35 253 *ex* x 05 55 28.5
CAL *ex* x 05 57 02.9
CAL *ex* x 05 57 02.9
CAL *ex* x 05 57 36.2
CAL AMP 06 02 27.6
comp=Z,1μm,0.3s
BJT Baijiatuau 15.49 37 *e*P **Pn** **05 55 21.6 -0.7**
BJT pmax pmax
comp=Z,66nm,0.8s
BJT Baijiatuau 15.49 37 *e*Pn **Pn** **05 55 21.6 -0.7**
comp=Z,66nm,0.8s
BJI Beijing 15.52 37 P **Pn** **05 55 22.3 -0.2**
BJI AMB AMB
comp=Z,19nm,1.3s
BJI LR LR
comp=N,3μm,13.3s
BJI LR LR
comp=E,3μm,13.7s
BJI LR LR
comp=Z,2μm,14.9s
YHNB Yeheng 15.78 98 *e*P **Pn** **05 55 29.9 +3.9**
TATO Taipei 15.80 97 *e*P **Pn** **05 55 32.1 +5.9**
comp=Z,120nm,1.0s
JIRN Jiri 15.92 273 *e*P **Pn** **05 55 26.4 -1.3**
comp=Z,102nm,0.6s
NNT Nongplab 15.96 196 P **Pn** **05 55 31.2 +3.0**
NACB Ninganchiao 16.12 100 *e*P **Pn** **05 55 32.9 +2.6**
GUN Gumba 16.17 274 *e*P **Pn** **05 55 29.8 -1.1**
comp=Z,195nm,0.8s
PKI Pulchoki 16.61 273 *e*P **Pn** **05 55 34.9 -1.7**
comp=Z,152nm,0.6s
PKI Pulchoki 16.61 273 *e*P **Pn** **05 55 34.9 -1.7**
PKI pmax pmax
comp=Z,153nm,0.6s
KKN Kakani 16.71 273 *e*P **Pn** **05 55 36.7 -1.1**
comp=Z,243nm,0.7s
KKN Kakani 16.71 273 *e*P **Pn** **05 55 36.7 -1.1**
KKN pmax pmax
comp=Z,243nm,0.7s
DMN Daman 16.88 273 *e*P **Pn** **05 55 37.9 -2.0**
comp=Z,161nm,0.8s
BOK Bokaro 16.99 260 *e*P **Pn** **05 55 42.5 +1.1**
BOK AMb AMB 05 55 45.9
comp=Z,118nm,1.0s
BOK *e*S **Sn** **05 58 51.2 +1.9**
GKN Gorkha 17.25 274 *e*P **Pn** **05 55 43.1 -1.5**
comp=Z,77nm,0.5s
DL2 Dalian 18.09 49 ⇑P **Pn** **05 55 56.1 +1.1**
DL2 AP pP 05 55 59.4 -4.1
DL2 AMB AMB
comp=Z,80nm,0.6s
DL2 AMB AMB
comp=Z,120nm,4.2s
DL2 LR LR
comp=N,640nm,12.8s
DL2 LR LR
comp=E,620nm,11.8s
DL2 LR LR
comp=Z,860nm,10.3s
KOLN Koldanda 18.19 274 *e*P **Pn** **05 55 53.1 -3.1**
comp=Z,118nm,0.8s
SONM Songino Array 19.80 4 P **Pn** **05 56 14.7 -0.9**
comp=Z,2.9nm,0.3s,baz=183,slow=11,SNR=57
SONM S **Sn** **05 59 56.3 -0.9**
baz=207,slow=2.3,SNR=1.8
SONM Lg 06 02 13.8
comp=Z,0.0nm,0.3s,baz=191,slow=23,SNR=2.6
SONM LR LR 06 04 46.6
comp=Z,2μm,22.0s,baz=181,slow=39
ULN Ulaanbaatar 19.89 6 P **Pn** **05 56 16.1 -0.5**
SNR=8.2
ULN Ulaanbaatar 19.89 6 ⇑*i*P **Pn** **05 56 15.7 -0.9**
ULN Ulaanbaatar 19.89 6 *e*P **Pn** **05 56 15.7 -0.8**
comp=Z,37nm,0.7s
WMQ Urumqi 20.55 324 P **P** **05 56 22.5 +0.4**
WMQ AP 05 56 33.0
WMQ PP 05 56 44.5
WMQ S **S** **06 00 05.0 -5.3**
WMQ XS sS 06 00 21.0 -2.7
WMQ SS 06 00 36.0
WMQ AMB AMB
comp=Z,47nm,1.0s
WMQ AMB AMB
comp=Z,243nm,4.0s
WMQ LR LR
comp=N,2μm,8.0s
WMQ LR LR
comp=E,2μm,8.0s
WMQ LR LR
comp=Z,1μm,8.0s
TGY Tagaytay City 20.89 128 P **P** **05 56 26.0 +0.4**
comp=Z,124nm,0.3s,baz=192,slow=14,SNR=5.5
TGY S **S** **06 00 09.2 -7.6**
comp=Z,174nm,0.2s,baz=148,slow=22,SNR=2.3
TGY Tagaytay City 20.89 128 P **P** **05 56 26.0 +0.3**
TGY S **S** **06 00 09.2 -7.6**
TGY pmax pmax
comp=Z,124nm,0.3s
TGY smax
comp=N,174nm,0.3s
SNY Shenyang 20.94 44 ⇑P **P** **05 56 26.4 +0.2**
SNY S **S** **06 00 18.8 +0.9**
SNY AMB AMB
comp=Z,40nm,0.4s
SNY LR LR
comp=N,1μm,12.0s
SNY LR LR
comp=Z,1μm,12.0s,MS4.6
LGTI Lohaghat 21.02 279 *i* P **P** **05 56 29.5 +2.4**
INCN Inchon 21.04 58 P **P** **05 56 28.8 +1.4**
SNR=11
INCN Inchon 21.04 58 *e*P **P** **05 56 28.5 +1.2**
comp=Z,35nm,0.4s,mb5.0
INCN LR LR
comp=Z,1μm,20.0s,MS4.2
SNG Songkhla 21.06 190 P **P** **05 56 29.0 +1.5**
comp=Z,258nm,0.9s,mb5.6
JOW Kunigami 21.41 88 P **P** **05 56 30.6 -0.7**
comp=Z,62nm,0.4s,mb5.3,baz=233,slow=4.4,SNR=30
JOSI Joshimath 21.60 283 *e*P **P** **05 56 16.2 -17**
JOSI *e*S **S** **06 00 17.2 -14**
VIS Vishakhapatnam 21.76 246 *e*P **P** **05 56 35.8 +0.7**
VIS AMb AMB 05 56 38.6
comp=Z,166nm,0.7s,mb5.6
ZAK Zakamensk 22.29 358 *e*P **P** **05 56 41.2 +0.5**
ZAK pmax pmax
comp=Z,82nm,1.1s,mb5.1
JBP Jabalpur 22.34 263 ⇓*i*x x 06 00 46.0
JBP *i* x x 06 02 49.3
KLP Kalpa 22.74 285 *e*P **P** **05 56 45.1 -0.4**
KLP AMb AMB 05 56 49.2

comp=Z,106nm,0.7s,mb5.4
KLP *e*S **S** **06 00 51.7 -0.7**
KULM Kulim 22.91 189 *e*P **P** **05 56 47.2 0.0**
KULM *e*PcP PcP 06 00 37.8 +0.8
CN2 Changchun 23.20 42 ⇑P **P** **05 56 50.5 +0.2**
CN2 *e*XP sP 05 56 57.5 -5.4
CN2 *e*S **S** **06 00 57.8 -2.0**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.3
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,11.0s,MS4.8
CN2 LR LR
comp=E,1μm,11.0s,MS4.8
CN2 LR LR
comp=Z,2μm,18.0s
AGRA Agra 23.24 274 *e*P **P** **05 56 49.7 -1.1**
AGRA AMb AMB 05 56 51.8
comp=Z,142nm,0.6s,mb5.6
TLY Talaya 23.58 359 P **P** **05 56 55.0 +0.9**
comp=Z,199nm,0.8s,mb5.6,SNR=6.0
TLY Talaya 23.58 359 P **P** **05 56 55.9 +1.8**
SNR=15
TLY Talaya 23.58 359*c i*P **P** **05 56 55.4 +1.3**
TLY *e* 05 57 31.7
TLY *e*S **S** **06 01 09.6 +3.6**
TLY pmax pmax
comp=Z,35nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,2μm,11.0s,MS4.9
TLY Talaya 23.58 359 *e*P **P** **05 56 54.1 0.0**
comp=Z,22nm,0.8s,mb4.6
IPM Ipoh 23.66 188 P **P** **05 56 52.9 -1.9**
MOY Mondy 23.69 355 *e*P **P** **05 56 56.0 +0.9**
NDI New Delhi 23.71 278 *e*P **P** **05 56 52.0 -3.3**
NGP Nagpur 23.84 259 *e*P **P** **05 56 51.3 -5.1**
NGP *ex* x 06 19 47.2
SDNR Sundarnagar 23.84 285 *e*P **P** **05 56 56.6 +0.2**
SDNR *e*S **S** **06 01 12.4 +2.2**
IRK Irkutsk 24.14 0 *e*P **P** **05 57 00.6 +1.4**
IRK pmax pmax
comp=Z,326nm,2.3s,mb5.3
BHK Bhakra 24.31 285 *ex* x 05 57 05.0
HIA Hailar 24.31 25 *e*P **P** **05 57 01.4 +0.7**
HIA pmax pmax
comp=Z,102nm,0.8s
HIA MLR MLR
comp=Z,778nm,21.0s
HIA Hailar 24.31 25 *e*P **P** **05 57 01.4 +0.6**
comp=Z,102nm,0.8s,mb5.3
HIA LR LR
comp=Z,778nm,21.0s,MS4.2
KUDL Kundal 24.41 277 *e*P **P** **05 57 00.5 -1.1**
KUDL AMb AMB 05 57 04.1
comp=Z,44nm,0.6s,mb5.1
KUDL *e*S **S** **06 01 19.3 -0.1**
BHPL Bhopal 24.57 265 *e*P **P** **05 57 02.6 -0.5**
BHPL AMb AMB 05 57 04.9
comp=Z,61nm,0.6s,mb5.3
BHPL *ex* x 06 01 17.3
KKM Kota Kinabalu 24.71 150 P **P** **05 57 04.8 +0.4**
KKM Kota Kinabalu 24.71 150 *e*P **P** **05 57 04.6 +0.2**
PONG Pong 24.72 286 *e*P **P** **05 57 04.0 -0.5**
DLH Dalhousie 24.73 287 *e*P **P** **05 57 02.0 -2.5**
DLH *ex* x 05 57 15.0
CIT Chita 24.93 14 *e*P **P** **05 57 07.0 +0.6**
CIT pmax pmax
comp=Z,149nm,1.1s,mb5.4
THN Thein Dam 24.93 287 *e*P **P** **05 57 05.2 -1.2**
KHET Khetri 25.01 277 *e*P **P** **05 57 06.3 -0.9**
KHET AMb AMB 05 57 09.0
comp=Z,42nm,0.6s,mb5.1
KHET *e*S **S** **06 01 28.1 -1.0**
MK31 Makanchi Array 25.38 323 P **P** **05 57 10.4 0.0**
MK31 pmax pmax
comp=Z,26nm,0.8s,mb4.8
MKAR Makanchi Array 25.38 323 P **P** **05 57 11.1 +0.7**
comp=Z,20nm,0.6s,mb4.8,baz=118,slow=11,SNR=62
MKAR PcP PcP 06 00 41.9 -0.5
comp=Z,6.9nm,0.8s,baz=101,slow=6.3,SNR=5.3
MKAR S **S** **06 01 37.3 +2.5**
comp=Z,1.9nm,0.9s,baz=17,slow=30,SNR=2.0
MKAR ScP ScP 06 04 19.9 +0.6
comp=Z,12nm,0.7s,baz=104,slow=5.1,SNR=30
MKAR Makanchi Array 25.38 323 P **P** **05 57 11.1 +0.7**
MKAR 06 00 41.9
MKAR S **S** **06 01 37.3 +2.4**
MKAR pmax pmax
comp=Z,20nm,0.6s
MKAR smax
comp=N,2.0nm,0.9s
MKAR pmax pmax
comp=N,12nm,0.7s
PSI Prapat 25.63 192 P **P** **05 57 12.9 +0.2**
comp=N,50nm,0.8s,mb5.1,baz=347,slow=7.9,SNR=48
PSI PcP PcP 06 00 43.5 +0.6
comp=N,8.0nm,0.9s,baz=235,slow=7.1,SNR=4.5
PSI LR LR 06 07 05.2
comp=N,984nm,19.1s,MS4.3,baz=187,slow=36
PSI Prapat 25.63 192 P **P** **05 57 12.9 +0.2**
PSI 06 00 43.6
PSI pmax pmax
comp=Z,50nm,0.8s,mb5.1
PSI MLR MLR
comp=Z,984nm,19.1s,MS4.3
HYB Hyderabad 25.85 251 ⇓*i*P **P** **05 57 15.5 +0.7**
comp=Z,100nm,1.0s,mb5.3
HYB *e* 05 57 27.0
HYB *e*S **S** **06 01 40.0 -2.4**
KGM Kluang 25.93 182 P **P** **05 57 15.8 +0.4**
KSH Kashi 25.96 303 *e*P **P** **05 57 20.0 +4.2**
KSH AP pP 05 57 24.3 -0.6
KSH XP sP 05 57 27.6 -1.1
KSH PP 05 58 03.3
KSH PPP 05 58 15.3
KSH PCP PcP 06 00 45.4 +1.7
KSH S **S** **06 01 50.4 +6.2**
KSH XS sS 06 01 57.6 -1.7
KSH SCP ScP 06 04 24.3 +3.4
KSH PCS PcS 06 04 25.3 +0.8
KSH SCS ScS 06 08 12.3 +1.8
KSH AMB AMB
comp=Z,58nm,0.8s,mb5.2
KSH AMB AMB
comp=Z,278nm,2.5s,mb5.3
KSH LR LR
comp=N,2μm,11.5s
KSH LR LR
comp=E,5μm,8.9s
KSH LR LR
comp=Z,2μm,11.3s,MS4.8
MDJ Mudanjiang 26.14 44 P **P** **05 57 17.3 -0.1**
MDJ AP pP 05 57 27.9 +1.4
MDJ S **S** **06 01 47.3 +0.3**
MDJ SCP ScP 06 04 19.4 -2.0
MDJ PCS PcS 06 04 24.3 -0.7
MDJ SCS ScS 06 08 09.6 -1.7
MDJ AMB AMB
comp=Z,22nm,1.5s,mb4.5
MDJ AMB AMB
comp=Z,70nm,4.7s
MDJ LR LR
comp=N,821nm,19.7s,MS4.4
MDJ LR LR
comp=E,490nm,17.5s,MS4.4
MDJ LR LR
comp=Z,546nm,16.4s,MS4.2
MDJ Mudanjiang 26.14 44 *e*P **P** **05 57 17.1 -0.3**
comp=Z,72nm,1.4s,mb5.0
MDJ LR LR
comp=Z,497nm,20.0s,MS4.0
AJM Ajmer 26.27 273 *i* P **P** **05 57 18.0 -0.6**
MDRS Chennai 26.85 241 *ex* x 06 06 52.9
MDRS *ex* x 06 09 16.9
MDRS *ex* x 06 11 52.9
VLA Vladivostok 26.92 49 *e*P **P** **05 57 23.9 -0.5**
TSM Tawau 27.00 149 P **P** **05 57 27.1 +1.9**
LATR Latur 27.08 255 *e*P **P** **05 57 26.0 +0.1**
FRU Bishkek 28.05 309 *e*P **P** **05 57 36.0 +1.5**
FRU *e* 05 58 22.0
FRU *e* 06 02 20.0
FRU *e* 06 02 39.0
FRU MLR MLR

comp=Z,1μm,13.0s,MS4.6
AAK Ala-Archa 28.06 309 *e*P **P** **05 57 35.7 +1.0**
comp=Z,8.4nm,0.9s,mb4.4
AAK LR LR
comp=Z,136nm,19.0s,MS3.6
DAV Davao City (W) 29.10 132 PFAKE 05 58 00.0 +16
DAV LR LR
comp=Z,825nm,19.0s,MS4.4
POO Poona 29.36 258 *ex* x 05 57 44.0
ZAL Zalesovo 29.49 337 P **P** **05 57 46.9 -0.5**
comp=Z,21nm,0.9s,mb4.9,baz=334,slow=8.5,SNR=36
ZAL S **S** **06 02 39.1 -0.7**
comp=Z,1.7nm,0.5s,baz=100,slow=9.9,SNR=1.8
ZAL LR LR 06 10 57.4
comp=Z,1μm,18.3s,MS4.5,baz=329,slow=39
ZAL Zalesovo 29.49 337 P **P** **05 57 46.9 -0.5**
ZAL S **S** **06 02 39.1 -0.7**
ZAL pmax pmax
comp=Z,21nm,0.9s
ZAL smax
comp=N,2.0nm,0.5s
ZAL MLR MLR
comp=Z,1μm,18.3s
KAD Karad 29.60 255 *i* P **P** **05 57 48.3 0.0**
KURK Kurchatov 29.75 326 P **P** **05 57 49.2 -0.5**
comp=Z,159nm,0.9s,mb5.8,SNR=7.2
MAT Matsushiro 29.85 65 P **P** **05 57 48.8 -1.8**
MAT S **S** **06 02 47.8 +2.4**
MAJO Matsushiro 29.86 65 PFAKE 05 58 00.0 +9.4
MAJO LR LR
comp=Z,582nm,19.0s,MS4.2
MJAR Matsushiro Arr 29.86 65 P **P** **05 57 49.3 -1.3**
comp=Z,1.8nm,0.5s,mb4.1,baz=270,slow=9.2,SNR=7.3
MJAR PcP PcP 06 00 53.4 +0.2
comp=Z,1.1nm,0.5s,baz=282,slow=2.4,SNR=4.5
MJAR ScP ScP 06 04 33.5 +0.6
comp=Z,1.0nm,0.3s,baz=251,slow=4.0,SNR=4.3
MJAR LR LR 06 11 21.3
comp=Z,510nm,18.2s,MS4.2,baz=245,slow=39
KLR Kul'dur 29.89 38 *e*P **P** **05 57 47.4 -3.5**
KLR MLR MLR
comp=N,1μm,12.0s,MS5.0
KLR MLR MLR
comp=E,2μm,12.0s,MS5.0
KLR MLR MLR
comp=Z,3μm,12.0s,MS5.2
PALK Pallekele 30.35 231 *e*P **P** **05 57 55.6 +0.7**
comp=Z,40nm,0.9s,mb5.2
BOD Bodaibo 30.52 10 *e*P **P** **05 57 56.3 -0.2**
BOD pmax pmax
comp=Z,12nm,1.1s,mb4.6
NVS Novosibirsk 30.77 336 *e*P **P** **05 57 57.5 -1.1**
NVS *e**PP pP 05 58 16.1 +8.3
NVS *i* S **S** **06 02 59.7 0.0**
NVS pmax pmax
comp=E,33nm,1.7s
NVS pmax pmax
comp=Z,40nm,1.7s,mb5.0
NVS pmax pmax
comp=N,52nm,1.8s
NVS smax
comp=E,82nm,2.6s
KK31 Karatay Array 30.98 308 *i* P **P** **05 57 59.9 -0.6**
KKAR Karatay Array 30.98 308 P **P** **05 57 59.8 -0.7**
HABR Khabarovsk 31.33 41 P **P** **05 58 01.0 -2.6**
HABR *e*S **S** **06 03 03.6 -5.0**
TRD Trivandrum 32.21 238⇓*ex* x 06 04 02.1
CLNS Chul'man 32.29 21 *e*P **P** **05 58 12.5 +0.5**
CLNS *e*PPP 05 59 22.7
CLNS *e* 06 01 03.9
CLNS *e*S **S** **06 03 20.6 -2.9**
CLNS *e*SS SS 06 05 24.4 -18
CLNS *e* 06 08 30.3
CLNS pmax pmax
comp=Z,31nm,0.7s,mb5.2
CLNS pmax pmax
comp=N,20nm,0.9s
CLNS pmax pmax
comp=E,16nm,0.8s
CLNS smax
comp=N,88nm,11.2s
CLNS smax
comp=Z,23nm,10.0s
CLNS smax
comp=E,51nm,10.2s
CLNS MLR MLR
comp=Z,2μm,12.0s,MS5.0
CLNS MLR MLR
comp=N,700nm,11.0s,MS4.9
CLNS MLR MLR
comp=E,1μm,11.0s,MS4.9
ASAJ Asahikawa 34.57 52 P **P** **05 58 30.6 -1.4**
comp=E,6.5nm,0.4s,mb4.9,baz=77,slow=31,SNR=6.2
ASAJ Asahikawa 34.57 52 P **P** **05 58 30.6 -1.3**
ASAJ pmax pmax
comp=Z,7.0nm,0.4s
VOSK Vostochnaya 34.78 324 P **P** **05 58 32.0 -1.7**
VOSK pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BVA0 Borovoye Array 35.24 324 P **P** **05 58 38.0 +0.3**
BVAR Borovoye Array 35.24 324 P **P** **05 58 37.2 -0.5**
comp=Z,3.9nm,0.6s,mb4.5,baz=122,slow=7.2,SNR=14
BVAR PcP PcP 06 01 07.3 -0.7
comp=Z,8.6nm,0.7s,baz=140,slow=3.3,SNR=13
BVAR ScP ScP 06 04 50.7 -0.7
comp=Z,6.0nm,0.8s,baz=129,slow=4.0,SNR=15
BRVK Borovoye 35.32 324 P **P** **05 58 41.3 +2.9**
SNR=6.5
BRVK Borovoye 35.32 324 *e*P **P** **05 58 38.3 0.0**
comp=Z,6.0nm,0.8s,mb4.6
BRVK *e*PcP PcP 06 01 07.7 -0.5
BRVK LR LR
comp=Z,168nm,21.0s,MS3.8
CHKZ Chkalovo 35.48 325 *e*P **P** **05 58 39.4 -0.3**
CHKZ *e* 06 01 08.0
CHKZ pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CHKZ Chkalovo 35.48 325 *e*P **P** **05 58 39.4 -0.3**
comp=Z,9.9nm,0.7s,mb4.8
CHKZ *e*PcP PcP 06 01 08.0 -0.7
YSS Yuzh-Sakhalins 35.48 47 P **P** **05 58 39.9 +0.1**
YSS *e*S **S** **06 04 15.0 +2.1**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.3
YSS MLR MLR
comp=N,1μm,15.0s
YSS MLR MLR
comp=Z,600nm,15.0s,MS4.5
YSS Yuzh-Sakhalins 35.48 47 *e*P **P** **05 58 40.0 +0.2**
YSS LR LR
comp=Z,673nm,22.0s,MS4.4
ZRNK Zerenda 35.93 324 *e*P **P** **05 58 43.3 -0.2**
ZRNK *e* 06 01 09.4
ZRNK pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
ZRNK Zerenda 35.93 324 *e*P **P** **05 58 43.3 -0.3**
comp=Z,8.9nm,0.7s,mb4.8
ZRNK *e*PcP PcP 06 01 09.4 -0.7
YAK Yakutsk 37.92 19 *e*P **P** **05 58 59.5 -1.0**
YAK *e* 06 04 50.5
YAK pmax pmax
comp=Z,51nm,0.8s,mb5.3
YAK pmax pmax
comp=N,13nm,1.0s
YAK MLR MLR
comp=Z,681nm,16.0s,MS4.5
YAK MLR MLR
comp=N,373nm,15.0s
YAK Yakutsk 37.92 19 *e*P **P** **05 59 00.2 -0.3**
comp=N,114nm,0.8s,mb5.7
YAK LR LR
comp=Z,1μm,19.0s,MS4.8
ABKT Ailbek 39.52 297 P **P** **05 59 15.8 +1.9**
comp=Z,388nm,0.7s,mb6.2,SNR=6.7
AB31 Akbulak array 39.78 314 *i* P **P** **05 59 16.7 +0.6**
GUMO Guam 40.47 102 LR LR 06 17 01.9
comp=Z,215nm,18.2s,MS4.0,baz=265,slow=38
WBK Wadi Bani Khal 41.04 273 P **P** **05 59 28.1 +1.6**
SNR=8.5
AKTK Aktyubinsk 41.30 316 P **P** **05 59 29.4 +0.8**
AKTK PcP PcP 06 01 25.7 -1.1
AKTK ScP ScP 06 05 13.7 -0.7
AKTK S **S** **06 05 43.2 +2.5**
AKTO Aktyubinsk 41.30 316 P **P** **05 59 29.4 +0.8**
comp=Z,2.1nm,0.4s,mb4.2,baz=102,slow=11,SNR=11
AKTO PcP PcP 06 01 25.7 -1.1

comp=Z,5.3nm,0.6s,baz=107,slow=7.3,SNR=5.4
AKTO ScP ScP 06 05 13.7 -0.7
comp=Z,2.7nm,0.9s,baz=44,slow=3.4,SNR=7.6
AKTO S **S** **06 05 43.2 +2.5**
comp=Z,0.6nm,0.4s,baz=108,slow=23,SNR=2.2
AKTO Aktyubinsk 41.30 316 P **P** **05 59 29.4 +0.8**
AKTO 06 01 25.7
AKTO S **S** **06 05 43.2 +2.5**
AKTO pmax pmax
comp=Z,20nm,0.4s,mb5.1
AKTO smax
comp=N,1.0nm,0.4s
BIDO Bidbid 41.52 275 P **P** **05 59 31.8 +1.3**
SNR=24
SMDO Samad 41.72 274 P **P** **05 59 33.5 +1.4**
SNR=29
JMDO Jabal Madar 41.88 273 P **P** **05 59 34.0 +0.7**
SNR=9.0
HOQ Hogain 42.22 275 P **P** **05 59 37.2 +1.0**
SNR=11
BSY Bisya 42.56 274 P **P** **05 59 40.6 +1.6**
SNR=31
ARU Arti 42.89 324⇑ *i*P **P** **05 59 41.4 -0.2**
ARU *e* 06 01 24.3
ARU *e*PPP 06 01 56.8
ARU *e*S **S** **06 06 04.7 +0.4**
ARU *e* 06 09 33.2
ARU pmax pmax
comp=Z,20nm,0.9s,mb4.8
ARU MLR MLR
comp=Z,400nm,19.0s,MS4.3
ARU MLR MLR
comp=N,200nm,17.0s,MS4.3
ARU MLR MLR
comp=E,300nm,20.0s,MS4.3
ARU Arti 42.89 324 *e*P **P** **05 59 41.1 -0.5**
comp=E,26nm,1.3s,mb4.8
ARU LR LR
comp=Z,157nm,22.0s,MS3.9
ARQ Araqi 42.99 275 P **P** **05 59 44.0 +1.6**
SNR=6.6
MA2 Magadan 44.60 32 PFAKE 06 00 10.0 +15
MA2 LR LR
comp=Z,224nm,20.0s,MS4.1
SOKR Solikamsk 44.97 328*d i*P **P** **06 00 00.0 +1.7**
SOKR S **S** **06 06 36.9 +2.4**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.1
SOKR MLR MLR
comp=Z,670nm,20.0s,MS4.6
TIXI Tiksi 45.70 11 *e*P **P** **06 00 03.0 -1.1**
SEY Seymchan 46.71 28 *e*P **P** **06 00 11.9 -0.1**
SEY Seymchan 46.71 28 *e*P **P** **06 00 11.0 -1.0**
PET Petropavlovsk 46.90 42 *e*P **P** **06 00 15.7 +2.2**
PET *e*S **S** **06 07 05.3 +3.0**
PET pmax pmax
comp=Z,26nm,1.1s,mb5.1
PET smax
comp=N,300nm,53.2s
PET MLR MLR
comp=Z,500nm,14.0s,MS4.6
PET MLR MLR
comp=N,300nm,15.0s,MS4.8
PET MLR MLR
comp=E,700nm,15.0s,MS4.8
PET Petropavlovsk 46.90 42 PFAKE 06 00 30.0 +16
PET LR LR
comp=Z,348nm,21.0s,MS4.3
KAKA Kakadu 48.92 142 *e*P **P** **06 00 27.1 -2.0**
comp=Z,25nm,0.8s,mb5.3
UMR Umm Al-Rimmam 49.07 286 *e*P **P** **06 00 30.0 -0.3**
UMR AMb AMB 06 00 32.1
comp=Z,48nm,0.5s,mb5.8
QRN Al-Qurain 49.08 285 *e*P **P** **06 00 29.8 -0.6**
QRN AMb AMB 06 00 30.9
comp=Z,125nm,0.6s,mb6.2
KBD Kabd 49.18 286 *e*P **P** **06 00 30.8 -0.3**
KBD AMb AMB 06 00 31.9
comp=Z,150nm,0.5s
MIB Mutribah 49.34 286 *e*P **P** **06 00 32.1 -0.3**
MIB AMb AMB 06 00 33.2
comp=Z,206nm,0.6s
RDF Al-Radifah 49.35 285 *e*P **P** **06 00 32.3 -0.2**
RDF AMb AMB 06 00 34.1
comp=Z,256nm,0.6s
NAY Al-Naaiem 49.54 286 *e*P **P** **06 00 33.4 -0.5**
NAY AMb AMB 06 00 35.4
comp=Z,214nm,0.7s
RST Umm Al-Ruwaisa 49.69 286 *e*P **P** **06 00 34.1 -1.0**
RST AMb AMB 06 00 35.3
comp=Z,109nm,0.7s,mb6.0
GNI Garni 49.83 300 P **P** **06 00 37.7 +1.6**
comp=Z,8.7nm,0.4s,mb5.1,baz=75,slow=1.5,SNR=11
GNI S **S** **06 07 48.0 +4.3**
comp=Z,2.9nm,0.3s,baz=152,slow=23,SNR=1.7
GNI LR LR 06 26 02.7
comp=Z,183nm,19.6s,MS4.1,baz=281,slow=41
GNI Garni 49.83 300 P **P** **06 00 38.2 +2.1**
SNR=9.2
GNI Garni 49.83 300 *e*P **P** **06 00 38.0 +1.9**
GNI pmax pmax
comp=Z,64nm,1.0s
GNI MLR MLR
comp=Z,205nm,19.0s
GNI Garni 49.83 300 *e*P **P** **06 00 38.0 +1.9**
comp=Z,64nm,1.0s,mb5.6
GNI LR LR
comp=Z,205nm,19.0s,MS4.2
ZEI Tsey 50.26 304 *e*P **P** **06 00 40.3 +1.0**
ZEI *e**PP pP 06 00 55.6 +6.7
ZEI pmax pmax
comp=Z,41nm,0.9s,mb5.5
FITZ Fitzroy Crossi 50.39 153 *e*P **P** **06 00 39.3 -1.0**
comp=Z,19nm,0.6s,mb5.3
FITZ Fitzroy Crossi 50.39 153 P **P** **06 00 39.4 -0.9**
comp=Z,12nm,0.7s,mb5.0,baz=349,slow=6.9,SNR=63
FITZ LR LR 06 22 07.7
comp=Z,125nm,18.3s,MS4.0,baz=193,slow=36
KIV Kislovodsk 51.07 305 P **P** **06 00 46.0 +0.5**
comp=Z,583nm,1.0s,SNR=10.0
KIV Kislovodsk 51.07 305 P **P** **06 00 46.5 +1.0**
SNR=24
KIV Kislovodsk 51.07 305α *i*P **P** **06 00 46.2 +0.7**
KIV S **S** **06 08 09.0 +8.1**
KIV *e* 06 13 05.0
KIV pmax pmax
comp=Z,135nm,1.1s,mb5.8
KIV MLR MLR
comp=Z,300nm,17.0s,MS4.4
KIV Kislovodsk 51.07 305 *e*P **P** **06 00 46.1 +0.7**
comp=Z,142nm,1.1s,mb5.8
BHD Baghdad 51.09 291 *ex* x 06 00 42.0
BHD *ex* x 06 07 57.5
BHD *ex* x 06 08 05.0
BHD *ex* x 06 10 31.0
BHD *ex* x 06 11 35.0
MBWA Marble Bar 51.20 161 P **P** **06 00 46.4 -0.1**
SNR=18
MBWA Marble Bar 51.20 161 *e*P **P** **06 00 46.3 -0.2**
comp=Z,46nm,0.7s,mb5.5
MSL Mosul 51.61 296 *ex* x 06 00 47.0
MSL *ex* x 06 08 09.0
VRSR Storozhevoye 53.20 315 *e*P **P** **06 01 01.5 +0.2**
VRSR pmax pmax
comp=Z,20nm,1.0s,mb5.0
VRSR pmax pmax
comp=N,10.0nm,1.4s
VRSR pmax pmax
comp=E,40nm,1.1s
BILL Bilibino 53.89 24α *i*P **P** **06 01 05.6 -0.8**
BILL pmax pmax
comp=Z,19nm,0.6s,mb5.2
BILL MLR MLR
comp=Z,1μm,17.0s,MS5.0
BILL Bilibino 53.89 24 *e*P **P** **06 01 05.7 -0.7**
comp=Z,24nm,0.8s,mb5.2
BILL LR LR
comp=Z,1μm,19.0s,MS4.9
MOS Moscow 54.20 320 *e*P **P** **06 01 09.3 +0.7**
TMCR Tamitsa 54.73 331 *e*P **P** **06 01 11.6 -0.9**
TMCR pmax pmax
comp=Z,50nm,1.0s,mb5.5
ANN Anapa 54.75 307 *e*P **P** **06 01 11.2 -1.4**
ANN *e* pP 06 01 21.3 -0.9
ANN *e*S **S** **06 08 47.4 -3.7**
ANN pmax pmax
comp=Z,40nm,0.7s,mb5.6
ANN MLR MLR
comp=Z,322nm,18.0s,MS4.4
OBN Obninsk 54.79 319⇑ *e*P **P** **06 01 12.5 -0.4**
OBN *e* 06 01 24.1
OBN 06 02 11.0
OBN pmax pmax
comp=Z,24nm,1.0s,mb5.2
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.0
OBN Obninsk 54.79 319 *e*P **P** **06 01 12.8 -0.1**
OBN LR LR
comp=Z,198nm,19.0s,MS4.2
MALT Malatya 54.93 299⇑ *i*P **P** **06 01 15.3 +1.4**
MALT Malatya 54.93 299 *e*P **P** **06 01 14.2 +0.3**
comp=Z,33nm,1.0s,mb5.3
PMG Port Moresby 55.81 126 P **P** **06 01 20.9 +0.6**
comp=Z,20nm,0.6s,mb5.3,baz=305,slow=4.9,SNR=6.5
PMG Port Moresby 55.81 126 P **P** **06 01 20.9 +0.6**
PMG pmax pmax
comp=Z,20nm,0.6s
PMG Port Moresby 55.81 126 *e*P **P** **06 01 20.2 -0.1**
comp=Z,31nm,0.9s,mb5.3
WRAB Tennant Creek 55.94 145 P **P** **06 01 21.0 -0.2**
comp=Z,896nm,0.6s,SNR=36
WRAB Tennant Creek 55.94 145 *e*P **P** **06 01 20.2 -0.9**
WRA Warramunga Arr 55.94 145 P **P** **06 01 20.2 -1.0**
comp=Z,88nm,0.7s,mb5.9,baz=335,slow=8.4,SNR=326
WRA S **S** **06 09 02.7 -4.3**
comp=Z,1.4nm,0.8s,baz=326,slow=16,SNR=7.8
WRA PKPPKP 06 31 20.9
comp=Z,0.8nm,0.9s,baz=158,slow=1.1,SNR=5.6
WRA Warramunga Arr 55.94 145 P **P** **06 01 20.2 -1.0**
WRA S **S** **06 09 02.7 -4.3**
WRA pmax pmax
comp=Z,88nm,0.7s
WRA smax
comp=N,1.0nm,0.8s
WB2 Warramunga Arr 55.95 145 *e*P **P** **06 01 20.1 -1.1**
SMY Shemya 56.21 43 *e*P **P** **06 01 23.9 +0.8**
SMY pmax pmax
comp=Z,61nm,1.0s,mb5.6
SMY MLR MLR
comp=Z,265nm,21.0s,MS4.3
SMY Shemya 56.21 43 *e*P **P** **06 01 23.9 +0.8**
comp=Z,61nm,1.0s,mb5.6
SMY LR LR
comp=Z,265nm,21.0s,MS4.3
LVZ Lovozero 56.61 335 *e*P **P** **06 01 27.6 +1.6**
LVZ *e*S **S** **06 09 10.7 -5.2**
LVZ pmax pmax
comp=N,4.0nm,0.9s
LVZ pmax pmax
comp=Z,16nm,0.9s,mb5.0
LVZ pmax pmax
comp=E,7.0nm,1.1s
LVZ smax
comp=N,57nm,13.4s
LVZ smax
comp=Z,49nm,12.6s
LVZ smax
comp=E,47nm,9.3s
LVZ MLR MLR
comp=E,824nm,18.0s
LVZ MLR MLR
comp=Z,1μm,18.0s,MS5.0
LVZ MLR MLR
comp=N,201nm,12.0s
LVZ Lovozero 56.61 335 *e*P **P** **06 01 25.8 -0.2**
APA Apatity 57.05 334⇓ *i*P **P** **06 01 29.3 +0.2**
APA *e*S **S** **06 09 20.0 -1.6**
APA pmax pmax
comp=Z,25nm,1.2s,mb5.1
APA MLR MLR
comp=Z,1μm,15.0s,MS5.2
SIM Simferopol' 57.07 307*de*P **P** **06 01 29.7 +0.5**
SIM S **S** **06 09 23.6 +1.7**
SIM pmax pmax
comp=Z,32nm,0.7s,mb5.5
JOF Joensuu 57.63 329 *ep* P **P** **06 01 32.3 -0.9**
BHL Bhannes 58.06 294 *e*P **P** **06 01 36.9 +0.6**
BR131 Keskin Array S 58.33 301 *e*P **P** **06 01 38.1 0.0**
comp=Z,9.2nm,0.7s,mb4.9
BRTR Keskin Array B 58.33 301 P **P** **06 01 38.0 -0.1**
comp=Z,12nm,0.8s,mb5.0,baz=110,slow=6.7,SNR=57
BRTR LR LR 06 32 44.4
comp=Z,156nm,18.6s,MS4.2,baz=215,slow=42
BRTR Keskin Array B 58.33 301 *i* P **P** **06 01 38.4 +0.3**
BRTR pmax pmax
comp=Z,12nm,0.8s
MMAI Mount Meron Ar 58.49 293 P **P** **06 01 40.2 +1.0**
comp=Z,3.8nm,0.4s,mb4.8,baz=77,slow=8.7,SNR=14
AS31 Alice Springs 58.89 148 *e*P **P** **06 01 41.6 -0.4**
ASPA Alice Springs 58.89 148 *e*P **P** **06 01 41.6 -0.4**
ASAR Alice Springs 58.89 148 P **P** **06 01 41.9 -0.1**
comp=Z,33nm,0.7s,mb5.5,baz=328,slow=6.5,SNR=303
ASAR PKPPKP 06 31 16.1
comp=Z,0.9nm,1.0s,baz=145,slow=3.4,SNR=6.1
ANTO Ankara 58.94 302⇑ *i*P **P** **06 01 43.5 +1.2**
ANTO Ankara 58.94 302 P **P** **06 01 42.9 +0.6**
SNR=12
ANTO Ankara 58.94 302 *e*P **P** **06 01 42.3 0.0**
ANTO pmax pmax
comp=Z,58nm,1.3s,mb5.5
ANTO MLR MLR
comp=Z,195nm,20.0s,MS4.2
ANTO Ankara 58.94 302 *e*P **P** **06 01 42.3 0.0**
comp=Z,58nm,1.3s,mb5.5
ANTO LR LR
comp=Z,195nm,20.0s,MS4.2
AKASG Malin Array Be 59.52 315 P **P** **06 01 45.6 -0.7**
comp=Z,9.9nm,0.7s,mb5.0,baz=74,slow=6.2,SNR=52
AKASG S **S** **06 09 54.5 +0.6**
comp=Z,0.9nm,0.7s,baz=110,slow=21,SNR=4.4
AKASG LR LR 06 29 01.7
comp=Z,199nm,18.3s,MS4.3,baz=100,slow=38
AKASG Malin Array Be 59.52 315 P **P** **06 01 45.6 -0.8**
AKASG S **S** **06 09 54.5 +0.6**
AKASG pmax pmax
comp=Z,10.0nm,0.7s
AKASG smax
comp=N,1.0nm,0.7s
AKASG MLR MLR
comp=Z,199nm,18.3s
AKBB Malin Array Si 59.52 315 *e*P **P** **06 01 45.3 -1.1**
KEV Kevo 59.52 337 *e*P **P** **06 01 45.7 -0.7**
KEV pmax pmax
comp=Z,14nm,0.6s,mb5.2
KEV MLR MLR
comp=Z,493nm,22.0s,MS4.6
KEV Kevo 59.52 337 *e*P **P** **06 01 45.7 -0.7**
comp=Z,14nm,0.6s,mb5.2
KEV LR LR
comp=Z,493nm,22.0s,MS4.6
CSS Prodhromos 59.66 296 *e*P **P** **06 01 46.8 -0.5**
comp=Z,30nm,0.9s,mb5.3
EIL Elat 59.78 290⇑ *i*P **P** **06 01 48.0 -0.2**
comp=Z,628nm,1.0s
MNK Minsk 59.87 319 *e*P **P** **06 01 42.0 -6.8**
KAF Kangasniemi 59.97 328 *ep* P **P** **06 01 48.9 -0.5**
comp=Z,7.4nm,0.7s,mb4.8,baz=85,slow=6.6
KAF Kangasniemi 59.97 328 *e*P **P** **06 01 48.9 -0.5**
KAF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
ARCES ARCESS Array B 60.05 337 P **P** **06 01 49.4 -0.6**
comp=Z,7.9nm,0.7s,mb4.9,baz=87,slow=7.3,SNR=30
ARCES S **S** **06 10 00.6 -0.1**
comp=Z,1.9nm,1.0s,baz=299,slow=23,SNR=2.4
ARCES LR LR 06 30 00.9
comp=Z,493nm,18.5s,MS4.7,baz=95,slow=38
ARCES ARCESS Array B 60.05 337 P **P** **06 01 49.4 -0.6**
ARCES S **S** **06 10 00.6 -0.1**
ARCES pmax pmax
comp=Z,8.0nm,0.7s
ARCES smax
comp=N,2.0nm,1.0s
ARCES MLR MLR
comp=Z,493nm,18.5s
ARE0 ARCESS Array S 60.05 337 *e*P **P** **06 01 49.1 -0.8**
VSU Vasula 60.05 324 *e*P **P** **06 01 49.9 -0.1**
FIA1 FINESS Array S 60.12 327 *e*P **P** **06 01 49.8 -0.7**
FINES FINESS Array B 60.12 327 P **P** **06 01 49.6 -0.9**
comp=Z,10.0nm,0.8s,mb4.9,baz=78,slow=7.9,SNR=26
FINES LR LR 06 29 40.4
comp=Z,453nm,20.0s,MS4.6,baz=96,slow=38
FINES FINESS Array B 60.12 327 *i* P **P** **06 01 49.9 -0.6**
FINES pmax pmax
comp=Z,10.0nm,0.9s
KLBR Kellerberrin 60.73 167 *e*P **P** **06 01 53.6 -1.0**
comp=Z,16nm,0.7s,mb5.3
ISP Isparta 61.14 300 P **P** **06 01 57.0 -0.4**
ISP Isparta 61.14 300 *e*P **P** **06 01 56.4 -1.0**
comp=Z,63nm,0.9s,mb5.8
TIRR Tirgusor 61.16 308⇑ *i*P **P** **06 01 57.3 -0.3**
TIRR Tirgusor 61.16 308 P **P** **06 01 58.2 +0.6**
TIRR Tirgusor 61.16 308 *e*P **P** **06 01 57.0 -0.5**
NWAO Narrogin (SRO) 61.92 168 P **P** **06 02 02.4 -0.3**
comp=Z,19nm,0.9s,mb5.2,baz=345,slow=6.7,SNR=7.9
NWAO Narrogin (SRO) 61.92 168 P **P** **06 02 02.4 -0.3**
NWAO pmax pmax
comp=Z,19nm,0.9s
NWAO Narrogin (SRO) 61.92 168 P **P** **06 02 02.4 -0.3**
VRI Vrincioaia 62.03 309⇑ *i*P **P** **06 02 04.4 +1.0**
VRI Vrincioaia 62.03 309 ⇑P **P** **06 02 04.3 +0.9**
PLOR Plostina 62.08 309⇓ *i*P **P** **06 02 05.0 +1.2**
PLOR Plostina 62.08 309 ⇑P **P** **06 02 05.0 +1.2**
SPB4 Spitsbergen Ar 62.29 347 *e*P **P** **06 02 04.5 -0.7**
TRO Tromso 62.34 337 *e*P **P** **06 02 04.8 -0.8**
TRO AMb AMB 06 02 08.1
comp=Z,32nm,1.5s,mb5.2
TRO AMS AMS 06 31 45.7
comp=Z,328nm,19.3s,MS4.5
SUW Suwalki 62.64 319 *e*P **P** **06 02 07.6 +0.1**
SUW L 06 30 34.7
comp=Z,0.7nm,19.3s
MLR Muntele Rosu 62.64 309⇓ *i*P **P** **06 02 08.7 +1.2**
MLR Muntele Rosu 62.64 309 ⇑P **P** **06 02 08.3 +0.8**
BURAR Bucovina Array 62.66 312⇓ *i*P **P** **06 02 06.4 -1.3**
BURAR Bucovina Array 62.66 312 ⇑P **P** **06 02 08.0 +0.3**
FORT Forrest 62.80 157 *e*P **P** **06 02 08.2 -0.4**
comp=Z,28nm,0.7s,mb5.5
CTA Charters Tower 62.83 135 *e*P **P** **06 02 08.7 -0.1**
comp=Z,25nm,1.4s,mb5.2
CTA Charters Tower 62.83 135 P **P** **06 02 08.7 -0.1**
comp=Z,20nm,0.8s,mb5.3,baz=346,slow=8.2,SNR=5.4
CTA Charters Tower 62.83 135 P **P** **06 02 08.7 -0.1**
CTA pmax pmax
comp=Z,20nm,0.8s
CTAO Charters Tower 62.83 135 *e*P **P** **06 02 08.5 -0.3**
CTAO pmax pmax
comp=Z,41nm,1.1s,mb5.5
CTAO Charters Tower 62.83 135 *e*P **P** **06 02 08.5 -0.3**
comp=Z,41nm,1.1s,mb5.5
LVV L'vov 62.96 314 *i* P **P** **06 02 07.5 -2.1**
LVV *i* S **S** **06 10 38.5 +0.9**
LVV MLR MLR
comp=Z,200nm,17.0s,MS4.4
KBS Kingsbay 63.09 347 AMS AMS 06 34 20.2
comp=Z,209nm,18.0s,MS4.3
KBS Kingsbay 63.09 347 PFAKE 06 02 20.0 +10
KBS LR LR
comp=Z,342nm,19.0s,MS4.5
VOIR 63.27 309⇓ *i*P **P** **06 02 12.8 +1.1**
ZIMR 63.48 307 P **P** **06 02 14.1 +1.0**
KWP Kalwaria 63.84 314 *e*P **P** **06 02 16.3 +0.9**
TNA Tin City 63.95 28 PFAKE 06 02 30.0 +14
TNA LR LR
comp=Z,225nm,21.0s,MS4.3
KDZ Kurdzhali 63.96 305 P **P** **06 02 16.8 +0.6**
PRK Paraskevi 63.98 302 *e*P **P** **06 02 14.2 -2.1**
RDO Rodhopi 64.00 305 *e*P **P** **06 02 16.4 -0.1**
KOLS Kolonicke sedl 64.28 314 *e*P **P** **06 02 18.0 -0.3**
LOF Lofoten 64.51 335 *e*P **P** **06 02 20.6 +0.7**
LOF AMb AMB 06 02 24.7
comp=Z,85nm,1.4s,mb5.6
DRGR 64.52 311⇑ *i*P **P** **06 02 21.0 +1.1**
DRGR 64.52 311 ⇓P **P** **06 02 21.0 +1.1**
MOR8 Moi Rana 64.57 333 *e*P **P** **06 02 19.2 -1.1**
MOR8 AMb AMB 06 02 22.7
comp=Z,20nm,1.0s,mb5.1
LIA Limnos Island 64.60 303 *e*P **P** **06 02 17.8 -2.7**
PGB Panagyurishte 64.62 306 P **P** **06 02 30.0 +9.5**
CRVS Cervenica-Dubn 64.81 314 *e*P **P** **06 02 22.2 +0.4**
STHS Stebnicka Huta 64.82 314 *e*P **P** **06 02 22.3 +0.5**
STHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
STHS Stebnicka Huta 64.82 314 *e*P **P** **06 02 22.3 +0.5**
comp=Z,5.8nm,1.1s,mb4.5
NVR Nevrokopi 65.16 305 *e*P **P** **06 02 22.9 -1.2**
MMB Musomiste 65.19 305 P **P** **06 02 24.0 -0.3**
VTS Vitosha 65.29 307 P **P** **06 02 25.0 +0.1**
VTS Vitosha 65.29 307⇑ *i*P **P** **06 02 25.3 +0.4**
NIE Niedzica 65.40 314 *e*P **P** **06 02 26.9 +1.2**
SANT Santorini 65.42 300 *e*P **P** **06 02 24.7 -1.1**
comp=Z,57nm,0.5s,mb5.9
OJC Ojcow 65.52 315 *e*P **P** **06 02 25.9 -0.5**
OJC *e*S S 06 11 05.1 -4.2
OJC MLR MLR
comp=Z,2μm,18.8s,MS5.4
KECS Kecovo 65.54 313 *e*P **P** **06 02 26.7 +0.2**
KECS pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
KECS Kecovo 65.54 313 *e*P **P** **06 02 26.7 +0.2**
comp=Z,4.6nm,0.9s,mb4.5
BZS Buzias 65.56 310⇓ *i*P **P** **06 02 27.2 +0.5**
BZS Buzias 65.56 310 ⇓P **P** **06 02 27.2 +0.6**
KKB Krupnik 65.58 306 P **P** **06 02 24.7 -2.1**
NPS Neapolis 65.64 298 *e*P **P** **06 02 26.8 -0.4**
PSZ Piszkesteto 66.07 313⇑ *e*P **P** **06 02 30.3 +0.3**
PSZ Piszkesteto 66.07 313 P **P** **06 02 30.5 +0.5**
VAY Valandovo 66.10 305 *e*P **P** **06 02 28.9 -1.3**
VYHS Vyhne 66.59 314 *e*P **P** **06 02 33.6 +0.3**
VYHS pmax pmax
comp=Z,12nm,1.3s,mb4.8
VYHS Vyhne 66.59 314 *e*P **P** **06 02 33.6 +0.3**
comp=Z,12nm,1.3s,mb4.8
OKC Ostrava-Krasne 66.65 315 *e*P **P** **06 02 33.9 +0.2**
OKC AMS AMS 06 33 00.0
comp=Z,400nm,17.2s
VAM Vamos 66.69 299 *e*P **P** **06 02 33.9 0.0**
BUD Budapest 66.76 313⇑ *e*P **P** **06 02 35.1 +0.8**
GVD Gavdhos 66.96 298 *e*P **P** **06 02 34.8 -0.8**
comp=Z,31nm,0.6s,mb5.5
KZN Kozani 66.99 305 *e*P **P** **06 02 36.8 +1.0**
MORC Moravsky Berou 67.04 315⇓ *i*P **P** **06 02 36.9 +0.7**
MORC Moravsky Berou 67.04 315 *e*P **P** **06 02 36.0 -0.1**
comp=Z,22nm,1.2s,mb5.0
DIVS Divcibare 67.10 309 *e*P **P** **06 02 36.2 -0.4**
VLI Veliai 67.24 301 *e*P **P** **06 02 35.5 -1.9**
NB2 NORSAR Subarra 67.25 328 P **P** **06 02 36.5 -1.0**
comp=Z,18nm,0.8s,mb5.2,baz=74,slow=6.5
NOA NORSAR Array B 67.25 328 P **P** **06 02 36.2 -1.3**
comp=Z,18nm,0.9s,mb5.1,baz=75,slow=6.3,SNR=38
NOA LR LR 06 33 50.2
comp=Z,348nm,18.6s,MS4.6,baz=80,slow=38
NOA NORSAR Array B 67.25 328 P **P** **06 02 36.2 -1.3**
NOA pmax pmax
comp=Z,18nm,0.9s
NOA MLR MLR
comp=Z,348nm,18.6s
PKSM Moragy 67.38 311⇓ *i*P **P** **06 02 39.1 +0.8**
PKSM Moragy 67.38 311⇓ *e*P **P** **06 02 38.8 +0.5**
EVR Evrytania 67.39 303 *e*P **P** **06 02 37.1 -1.3**
NAO01 NORSAR Array S 67.46 328 *e*P **P** **06 02 37.1 -1.7**
comp=Z,10nm,0.9s,mb4.8
UNV Unalaska Valle 67.46 40 PFAKE 06 02 50.0 +11
UNV LR LR
comp=Z,907nm,19.0s,MS5.0
KSP Ksiaz 67.50 317 *e*P **P** **06 02 39.5 +0.4**
KSP L 06 33 52.0
comp=Z,1.0nm,18.8s
KSP Ksiaz 67.50 317 *e*P **P** **06 02 39.4 +0.3**
KSP *e*S S 06 11 33.5 +0.3
BBLS Bajina Basta - 67.57 309 *e*P **P** **06 02 40.5 +1.1**
DPC Dobruska-Polom 67.63 316 *e*P **P** **06 02 40.7 +0.8**
DPC AMS AMS 06 33 40.0
comp=Z,800nm,16.6s
UPC Upice 67.77 316 *e*P **P** **06 02 41.3 +0.5**
UPC *ep*P pP 06 02 48.7 -1.9
VRAC Vranov 67.77 315⇑ *i*P **P** **06 02 41.6 +0.8**
VRAC Vranov 67.77 315 ⇓P **P** **06 02 41.2 +0.5**
ITM Ithomi 67.86 301 *e*P **P** **06 02 39.6 -1.7**
SOP Sopron 68.29 313⇓ *e*P **P** **06 02 44.8 +0.8**
KONO Kongsberg 68.44 327 *e*P **P** **06 02 43.9 -1.1**
KONO Kongsberg 68.44 327 *e*P **P** **06 02 43.0 -2.0**
KONO LR LR
comp=Z,312nm,19.0s,MS4.6
TREC Trest 68.46 315 AMS AMS 06 34 00.0
comp=Z,400nm,15.0s
VLS Valsamata 68.53 303 *e*P **P** **06 02 43.8 -1.8**

PVCC **Panska Ves** 68.64 317 *e*P P 06 02 46.6 +0.4
CONA **Conrad Observa** 68.66 314⇑ *i*P P 06 02 46.6 +0.3
comp=Z,21nm,1.4s,mb4.9,SNR=9.4
PRU **Pruhonice** 68.83 316 *e*P P 06 02 47.3 -0.1
PRU LR LR
comp=Z,700nm,16.1s,MS5.0
BRG **Berggiesshubel** 68.91 317 *e*P P 06 02 47.8 -0.1
comp=Z,11nm,1.0s,mb4.7
BRG **Berggiesshubel** 68.91 317 *i* P P 06 02 47.7 -0.2
comp=Z,6.4nm,1.0s,mb4.5
BRG
comp=N,62nm,11.9s
BRG
comp=E,233nm,16.2s
BRG
comp=Z,336nm,17.5s
BRG **Berggiesshubel** 68.91 317 *i* P P 06 02 47.7 -0.2
BRG pmax pmax
comp=Z,60nm,1.0s,mb5.5
BRG MLR MLR
comp=N,62nm,11.9s,MS4.6
BRG MLR MLR
comp=E,233nm,16.2s,MS4.6
BRG MLR MLR
comp=Z,336nm,17.5s,MS4.6
FBE **Freiberg** 69.24 317 *e*P P 06 02 50.4 +0.4
comp=Z,15nm,0.9s,mb4.9
CLL **Collm** 69.33 318 *e*P P 06 02 50.3 -0.2
comp=Z,9.0nm,0.6s,mb4.9
CLL **Collm** 69.33 318⇑ P P 06 02 50.4 -0.1
comp=Z,logA/T=1.2,mb4.9
CLL *i* 06 02 53.5
CLL *i* *PP pP 06 02 55.9 -4.4
CLL **Collm** 69.33 318⇑ *i*P P 06 02 50.4 -0.1
comp=Z,19nm,1.3s,mb4.9
CLL *i* x x 06 02 53.5
CLL *i* pP pP 06 02 55.9 -4.4
CLL **Collm** 69.33 318⇑ *i*P P 06 02 50.4 -0.1
CLL pmax pmax
comp=Z,19nm,1.3s,mb4.9
CLL MLR MLR
comp=Z,500nm,17.9s,MS4.8
CLL **Collm** 69.33 318⇑ *i*P P 06 02 50.4 -0.1
comp=Z,19nm,1.3s,mb4.9
CLL *i* 06 02 53.5
CLL *i* 06 02 55.9
CLL LR LR
comp=Z,500nm,17.9s,MS4.8
ALE **Alert** 69.44 358 P P 06 02 51.0 -0.2
comp=Z,71nm,1.1s,mb5.5,SNR=5.6
STKA **Stephens Creek** 69.45 146 *e*P P 06 02 50.7 -0.5
comp=Z,14nm,0.6s,mb5.1
STKA **Stephens Creek** 69.45 146 P P 06 02 50.7 -0.5
comp=Z,16nm,0.6s,mb5.1,baz=330,slow=5.4,SNR=38
PERS **Pernice** 69.56 313 *e*P P 06 02 52.1 +0.2
CRES **Cresnjev** 69.61 312 *e*P P 06 02 52.4 +0.2
TTA **Tatalina** 69.67 29 *e*P P 06 02 52.8 +0.2
MOA **Molln** 69.70 314 ⇓ *i*P P 06 02 53.0 +0.2
comp=Z,25nm,1.4s,mb5.0
KHC **Kasperske Hory** 69.70 316 *e*P P 06 02 53.2 +0.4
KHC *e*pP pP 06 02 56.5 -6.2
KHC AMS AMS 06 34 50.0
comp=Z,600nm,17.6s
KHC **Kasperske Hory** 69.70 316 *e*P P 06 02 53.1 +0.3
KHC **Kasperske Hory** 69.70 316 *e*P P 06 02 53.2 +0.4
comp=Z,4.1nm,0.7s,mb4.5
KHC *e* 06 02 56.5
KHC LR LR
comp=Z,600nm,17.6s,MS4.9
GEC2 **GERESS Array S** 69.72 315 *e*P P 06 02 53.4 +0.5
comp=Z,17nm,1.2s,mb4.8
GEC2 **GERESS Array S** 69.72 315 *e*P P 06 02 53.4 +0.5
GEC2 pmax pmax
comp=Z,17nm,1.2s,mb4.8
GERES **GERESS Array B** 69.72 315 P P 06 02 53.0 +0.1
comp=Z,4.2nm,0.6s,mb4.6,baz=76,slow=5.6,SNR=39
GERES LR LR 06 35 32.2
comp=Z,361nm,19.7s,MS4.6,baz=253,slow=38
GERES **GERESS Array B** 69.72 315 P P 06 02 53.0 +0.1
GERES pmax pmax
comp=Z,40nm,0.6s
GERES MLR MLR
comp=Z,361nm,19.7s
BOJS **Bojanci** 69.85 311 *e*P P 06 02 54.2 +0.5
TANN **Tannenbergstha** 69.95 317 *e*P P 06 02 54.1 -0.2
comp=Z,11nm,1.2s,mb4.7
BSEG **Bad Segeberg** 69.98 321 *e*P P 06 02 54.8 +0.3
comp=Z,37nm,1.0s,mb5.3
BSEG **Bad Segeberg** 69.98 321 *e*P P 06 02 54.8 +0.3
BSEG pmax pmax
comp=Z,37nm,1.0s,mb5.3
NKC **Novy Kostel** 70.02 317 *e*P P 06 02 55.2 +0.5
WERD **Werda** 70.03 317 *e*P P 06 02 54.7 -0.1
comp=Z,7.0nm,0.9s,mb4.6
GUNZ **Gunzen** 70.04 317 *e*P P 06 02 54.8 -0.1
comp=Z,15nm,1.1s,mb4.8
WET **Wettzell** 70.13 316 *e*P P 06 02 55.9 +0.5
BER **Bergen** 70.19 329 AMS AMS 06 36 37.9
comp=Z,311nm,18.8s,MS4.6
KMBO **Kilima Mbogo** 70.30 258 P P 06 02 57.2 +0.7
comp=Z,12nm,0.8s,mb4.9,baz=47,slow=10,SNR=32
KMBO LR LR 06 33 46.5
comp=Z,137nm,21.2s,MS4.2,baz=274,slow=36
KMBO **Kilima Mbogo** 70.30 258 P P 06 02 57.2 +0.7
KMBO pmax pmax
comp=Z,12nm,0.8s
KMBO MLR MLR
comp=Z,137nm,21.2s
ROTZ **Rotzenmuhle** 70.33 317 *e*P P 06 02 57.1 +0.5
comp=Z,22nm,1.1s,mb5.0
MOX **Moxa** 70.38 318 *e*P P 06 02 57.0 +0.1
comp=Z,6.0nm,0.9s,mb4.5
MOX **Moxa** 70.38 318 *e*P P 06 02 57.1 +0.2
MOX
comp=Z,400nm,19.0s
SVW2 **Sparrevohn** 70.56 30 *e*P P 06 02 58.6 +0.6
CADS **Cadrg** 70.59 313 *e*P P 06 02 57.9 -0.4
JMIC **Jan Mayen** 70.70 341 AMS AMS 06 37 51.4
comp=Z,314nm,20.2s,MS4.6
GRA1 **Grafenberg Arr** 70.95 317 *e*P P 06 03 00.9 +0.5
GRA1 LR LR
comp=Z,400nm,19.7s,MS4.7
GRF **Grafenberg Arr** 70.95 317 *e*P P 06 03 00.9 +0.5
GRF *e*L 06 35 14.0
comp=Z,357nm,19.7s
GTTG **Gvttingen** 71.03 319 *e*P P 06 03 01.3 +0.4
comp=Z,18nm,0.9s,mb5.0
UBBA **Unterbreizbach** 71.27 318 *e*P P 06 03 02.3 -0.1
comp=Z,4.0nm,0.8s,mb4.4
GRI **Girifalco** 71.38 305 P P 06 03 03.2 +0.2
GRI pmax pmax
comp=Z,38nm,0.5s,mb5.6
GRI **Girifalco** 71.38 305 P P 06 03 03.2 +0.2
comp=Z,38nm,0.5s,mb5.6
CUC **Castrocucco** 71.39 306 P P 06 03 03.3 +0.2
FUR **Furstenfeldbru** 71.47 315 *e*P P 06 03 04.5 +0.9
WTTA **Wattenberg** 71.57 314⇑ *i*P P 06 03 03.8 -0.4
comp=Z,24nm,1.3s,mb5.0
WTTA **Wattenberg** 71.57 314⇑ *i*P P 06 03 03.8 -0.4
WTTA pmax pmax
comp=Z,24nm,1.3s,mb5.0
SQTA **Sankt Quirin** 71.86 314⇑ *i*P P 06 03 05.7 -0.2
comp=Z,12nm,0.9s,mb4.8,SNR=7.8
SQTA **Sankt Quirin** 71.86 314⇑ *i*P P 06 03 05.7 -0.2
SQTA pmax pmax
comp=Z,12nm,0.9s,mb4.8
MOTA **Moosalm** 71.88 314⇑ *i*P P 06 03 05.7 -0.3
comp=Z,13nm,1.0s,mb4.8,SNR=5.5
MOTA **Moosalm** 71.88 314⇑ *i*P P 06 03 05.7 -0.3
MOTA pmax pmax
comp=Z,13nm,1.0s,mb4.8
MIDA **Miranda** 71.89 308 P P 06 03 06.0 -0.1
SOI **Samo** 71.92 304 P P 06 03 06.5 +0.2
SOI pmax pmax
comp=Z,48nm,1.2s,mb5.3
SOI **Samo** 71.92 304 P P 06 03 06.5 +0.2
comp=Z,48nm,1.2s,mb5.3
RNI2 **Rionero Sannit** 71.94 308 P P 06 03 06.6 +0.2
CEL **Celeste** 71.97 304 P P 06 03 06.5 -0.1
TERO **Teramo** 71.98 309 P P 06 03 06.7 0.0
COLA **College** 72.13 25*c* *i*P P 06 03 07.6 +0.1
COLA **College** 72.13 25 *e*P P 06 03 07.0 -0.5
comp=Z,36nm,0.9s,mb5.3
COLA LR LR
comp=Z,253nm,21.0s,MS4.5
MTTG **Motta San Giov** 72.21 304 P P 06 03 08.6 +0.6
comp=Z,32nm,0.5s,mb5.5
AQU **L'Aquila** 72.22 309 ⇓ *i*P P 06 03 09.1 +1.0
AQU **L'Aquila** 72.22 309 *e*P P 06 03 09.0 +0.9
comp=Z,16nm,0.4s,mb5.3
MCK **McKinley** 72.24 27 *e*P P 06 03 08.2 0.0
MCK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
MCK MLR MLR
comp=Z,127nm,19.0s,MS4.2
MCK **McKinley** 72.24 27 *e*P P 06 03 08.2 0.0
comp=Z,6.5nm,0.7s,mb4.7
MCK LR LR
comp=Z,127nm,19.0s,MS4.2
TNS **Taunus Mts** 72.42 318 *e*P P 06 03 09.0 -0.2
comp=Z,12nm,1.0s,mb4.8
TNS **Taunus Mts** 72.42 318 *e*P P 06 03 09.0 -0.2
TNS pmax pmax
comp=Z,12nm,1.0s,mb4.8
STU **Stuttgart** 72.53 316 *e*P P 06 03 09.9 0.0
BUG **Bochum–Univer** 72.63 319 *e*P P 06 03 10.9 +0.4
PMR **Palmer** 73.16 29 *e*P P 06 03 13.2 -0.4
PMR pmax pmax
comp=Z,30nm,0.7s,mb5.3
PMR MLR MLR
comp=Z,203nm,20.0s,MS4.4
PMR **Palmer** 73.16 29 *e*P P 06 03 13.2 -0.4
comp=Z,30nm,0.7s,mb5.3
PMR LR LR
comp=Z,203nm,20.0s,MS4.4
BFO **Black Forest** 73.23 316 P P 06 03 14.1 0.0
comp=Z,80nm,1.0s,mb5.6,SNR=5.7
BFO **Black Forest** 73.23 316 *e*P P 06 03 13.9 -0.2
comp=Z,20nm,1.1s,mb5.0
BFO **Black Forest** 73.23 316 *e*P P 06 03 13.9 -0.2
BFO pmax pmax
comp=Z,20nm,1.1s,mb5.0
KDAK **Kodiak Island** 73.33 33 P P 06 03 14.7 +0.1
comp=Z,18nm,0.6s,mb5.2,baz=317,slow=3.9,SNR=14
FELD **Feldberg im Sc** 73.61 316 *e*P P 06 03 15.4 -0.9
MEM **Membach** 73.69 319 P P 06 03 16.9 +0.1
WLS **Welschbruch** 73.79 316 *e*P P 06 03 16.5 -0.9
CDF **Champ du Feu** 73.84 316 *e*P P 06 03 17.5 -0.1
comp=Z,40nm,1.1s,mb5.0
CDF **Champ du Feu** 73.84 316 *e*P P 06 03 17.5 -0.1
CDF pmax pmax
comp=Z,20nm,1.1s,mb5.0
CDF **Champ du Feu** 73.84 316 *e*P P 06 03 17.5 -0.1
comp=Z,20nm,1.1s,mb5.0
ECH **Echery** 73.99 316 *e*P P 06 03 18.7 +0.2
WLF **Walferdange** 74.00 318 *e*P P 06 03 19.5 +0.9
comp=Z,48nm,1.1s,mb5.3
WLF **Walferdange** 74.00 318 P P 06 03 19.6 +1.1
WLF **Walferdange** 74.00 318 *e*P P 06 03 19.0 +0.4
WLF pmax pmax
comp=Z,47nm,1.1s,mb5.3
WLF **Walferdange** 74.00 318 *e*P P 06 03 19.0 +0.4
comp=Z,47nm,1.1s,mb5.3
BCLA **Clavier** 74.18 319 P P 06 03 20.1 +0.5
HINF **Hinteralfeld** 74.34 316 *e*P P 06 03 20.1 -0.5
comp=Z,19nm,1.0s,mb4.7
HINF **Hinteralfeld** 74.34 316 *e*P P 06 03 20.1 -0.5
HINF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
HINF **Hinteralfeld** 74.34 316 *e*P P 06 03 20.1 -0.5
comp=Z,9.3nm,1.0s,mb4.7
HAU **Haudompre** 74.57 316 *e*P P 06 03 21.5 -0.4
comp=Z,20nm,1.0s,mb4.7
HAU *e*R
comp=Z,570nm,17.8s
HAU **Haudompre** 74.57 316 *e*P P 06 03 21.5 -0.4
HAU pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
HAU MLR MLR
comp=Z,570nm,17.8s,MS4.9
HAU **Haudompre** 74.57 316 *e*P P 06 03 21.5 -0.4
comp=Z,10nm,1.0s,mb4.7
HAU LR LR
comp=Z,570nm,17.8s,MS4.9
GIVF **Givet** 74.59 319 *e*P P 06 03 22.0 -0.1
comp=Z,35nm,1.0s,mb4.9
GIVF **Givet** 74.59 319 *e*P P 06 03 22.0 -0.1
GIVF pmax pmax
comp=Z,17nm,1.0s,mb4.9
GIVF **Givet** 74.59 319 *e*P P 06 03 22.0 -0.1
comp=Z,17nm,1.0s,mb4.9
EGAK **Eagle** 74.63 24 *e*P P 06 03 21.6 -0.7
MENT **Mentasta** 74.68 26 *e*P P 06 03 22.9 +0.3
THEF **They Montfort** 74.70 317 *e*P P 06 03 22.6 -0.1
BAIF **Baives** 74.97 319 *e*P P 06 03 24.2 0.0
comp=Z,42nm,1.2s,mb4.9
BAIF **Baives** 74.97 319 *e*P P 06 03 24.2 0.0
BAIF pmax pmax
comp=Z,21nm,1.2s,mb4.9
BAIF **Baives** 74.97 319 *e*P P 06 03 24.2 0.0
comp=Z,21nm,1.2s,mb4.9
INK **Inuvik** 74.99 19 P P 06 03 23.9 -0.5
comp=Z,30nm,0.8s,mb5.3,baz=317,slow=5.9,SNR=28
INK **Inuvik** 74.99 19 P P 06 03 23.9 -0.4
INK pmax pmax
comp=Z,30nm,0.8s
INK **Inuvik** 74.99 19⇑ *i*P P 06 03 23.6 -0.8
comp=Z,40nm,0.9s,mb5.3
EYAK **Cordova Ski Ar** 75.10 29 *e*P P 06 03 25.5 +0.5
PGF **Pioggiola** 75.14 310 *e*P P 06 03 25.4 +0.2
comp=Z,152nm,1.1s,mb5.5
PGF **Pioggiola** 75.14 310 *e*P P 06 03 25.4 +0.2
PGF pmax pmax
comp=Z,76nm,1.1s,mb5.5
PGF **Pioggiola** 75.14 310 *e*P P 06 03 25.4 +0.2
comp=Z,76nm,1.1s,mb5.5
CABF **La Chapelle** 75.32 315 *e*P P 06 03 25.9 -0.4
comp=Z,17nm,0.8s,mb4.7
CABF **La Chapelle** 75.32 315 *e*P P 06 03 25.9 -0.4
CABF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CABF **La Chapelle** 75.32 315 *e*P P 06 03 25.9 -0.4
comp=Z,8.6nm,0.8s,mb4.7
SAOF **Saorge** 75.50 312 *e*P P 06 03 27.4 +0.1
AUTN **L'Aution** 75.58 312 *e*P P 06 03 27.8 +0.1
BNI **Bardonecchia** 75.61 313 *e*P P 06 03 27.3 -0.6
BNI pmax pmax
comp=Z,22nm,1.1s,mb5.0
BNI **Bardonecchia** 75.61 313 *e*P P 06 03 27.3 -0.6
comp=Z,22nm,1.1s,mb5.0
SBF **Sospel** 75.63 312 *e*P P 06 03 27.8 -0.2
comp=Z,71nm,1.0s,mb5.2
SBF **Sospel** 75.63 312 *e*P P 06 03 27.8 -0.2
SBF pmax pmax
comp=Z,35nm,1.0s,mb5.2
SBF **Sospel** 75.63 312 *e*P P 06 03 27.8 -0.2
comp=Z,35nm,1.0s,mb5.2
TOUF **Mont Tournerai** 75.69 312 *e*P P 06 03 29.5 +1.2
MBDF **Montbardon** 75.69 313 *e*P P 06 03 27.6 -0.8
comp=Z,14nm,0.8s,mb4.7
MBDF **Montbardon** 75.69 313 *e*P P 06 03 27.6 -0.8
MBDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MBDF **Montbardon** 75.69 313 *e*P P 06 03 27.6 -0.8
comp=Z,7.2nm,0.8s,mb4.7
MBAR **Mbarara** 75.70 262*c* *i*P P 06 03 28.3 -0.1
MVIF **Mont Vial** 75.80 312 *e*P P 06 03 28.6 -0.4
TOO **Toolangi** 75.93 147 *e*P P 06 03 29.9 +0.2
comp=Z,8.6nm,0.6s,mb4.9
TOO **Toolangi** 75.93 147 *e*P P 06 03 29.9 +0.2
TOO pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
VSL **Villasalto** 76.15 307 *e*P P 06 03 31.3 +0.3
comp=Z,30nm,1.0s,mb5.2
ORIF **Oris-en-Rattie** 76.18 314 *e*P P 06 03 31.2 0.0
comp=Z,17nm,0.8s,mb4.7
ORIF *e*R
comp=Z,583nm,18.8s
ORIF **Oris-en-Rattie** 76.18 314 *e*P P 06 03 31.2 0.0
ORIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ORIF **Oris-en-Rattie** 76.18 314 *e*P P 06 03 31.2 0.0
comp=Z,8.4nm,0.8s,mb4.7
FRF **La Foret Royal** 76.27 312 *e*P P 06 03 31.4 -0.3
comp=Z,73nm,1.3s,mb5.2
FRF **La Foret Royal** 76.27 312 *e*P P 06 03 31.4 -0.3
FRF pmax pmax
comp=Z,37nm,1.3s,mb5.2
FRF **La Foret Royal** 76.27 312 *e*P P 06 03 31.4 -0.3
comp=Z,36nm,1.3s,mb5.2
LOR **Lormes** 76.41 316 *e*P P 06 03 31.7 -0.8
comp=Z,14nm,0.9s,mb4.6
LOR *e*R
comp=Z,459nm,18.5s
LOR **Lormes** 76.41 316 *e*P P 06 03 31.7 -0.8
LOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
LOR MLR MLR
comp=Z,460nm,18.5s,MS4.8
LOR **Lormes** 76.41 316 *e*P P 06 03 31.7 -0.8
comp=Z,7.2nm,0.9s,mb4.6
LOR LR LR
comp=Z,460nm,18.5s,MS4.8
SUMG **Summit** 76.42 349 *e*P P 06 03 32.3 -0.2
comp=Z,45nm,1.1s,mb5.3
LMR **La Mourre** 76.46 312 *e*P P 06 03 32.6 -0.2
comp=Z,89nm,1.2s,mb5.3
LMR **La Mourre** 76.46 312 *e*P P 06 03 32.6 -0.2
LMR pmax pmax
comp=Z,45nm,1.2s,mb5.3
LMR **La Mourre** 76.46 312 *e*P P 06 03 32.6 -0.2
comp=Z,45nm,1.2s,mb5.3
ESK **Eskdalemuir** 76.51 326 *e*P P 06 03 32.6 -0.5
ESK pmax pmax
comp=Z,11nm,0.9s,mb4.8
ESK MLR MLR
comp=Z,68nm,20.0s,MS4.0
ESK **Eskdalemuir** 76.51 326 *e*P P 06 03 32.6 -0.5
comp=Z,11nm,0.9s,mb4.8
ESK LR LR
comp=Z,68nm,20.0s,MS4.0
SMF **Signal de Mont** 76.70 316 *e*P P 06 03 33.7 -0.4
comp=Z,82nm,1.1s,mb5.3
SMF **Signal de Mont** 76.70 316 *e*P P 06 03 33.7 -0.4
SMF pmax pmax
comp=Z,41nm,1.1s,mb5.3
SMF **Signal de Mont** 76.70 316 *e*P P 06 03 33.7 -0.4
comp=Z,41nm,1.1s,mb5.3
SSF **Saint Saulge** 76.72 316 *e*P P 06 03 33.8 -0.4
comp=Z,36nm,1.0s,mb5.0
SSF **Saint Saulge** 76.72 316 *e*P P 06 03 33.8 -0.4
SSF pmax pmax
comp=Z,18nm,1.0s,mb5.0
SSF **Saint Saulge** 76.72 316 *e*P P 06 03 33.8 -0.4
comp=Z,18nm,1.0s,mb5.0
SMRF **Simiane la Rot** 76.79 313 *e*P P 06 03 34.8 +0.2
AVF **Avril sur Loir** 76.93 316 *e*P P 06 03 35.1 -0.3
comp=Z,44nm,1.0s,mb5.0
AVF **Avril sur Loir** 76.93 316 *e*P P 06 03 35.1 -0.3
AVF pmax pmax
comp=Z,22nm,1.0s,mb5.0
AVF **Avril sur Loir** 76.93 316 *e*P P 06 03 35.1 -0.3
comp=Z,22nm,1.0s,mb5.0
VIVF **Saint-Julien-l** 76.98 314 *e*P P 06 03 35.5 -0.2
comp=Z,54nm,1.3s,mb5.0
VIVF **Saint-Julien-l** 76.98 314 *e*P P 06 03 35.5 -0.2
VIVF pmax pmax
comp=Z,27nm,1.3s,mb5.0
VIVF **Saint-Julien-l** 76.98 314 *e*P P 06 03 35.5 -0.2
comp=Z,27nm,1.3s,mb5.0
PLDF **La Plantade** 77.14 315 *e*P P 06 03 36.6 0.0
BGF **Bois d'Agland** 77.35 316 *e*P P 06 03 37.4 -0.4
comp=Z,16nm,0.7s,mb4.8
BGF **Bois d'Agland** 77.35 316 *e*P P 06 03 37.4 -0.4
BGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
BGF **Bois d'Agland** 77.35 316 *e*P P 06 03 37.4 -0.4
comp=Z,8.0nm,0.7s,mb4.8
AGO **Saint Agoulin** 77.41 316 *e*P P 06 03 38.0 -0.1
KEST **Kesra** 77.78 304 P P 06 03 40.6 +0.4
comp=Z,4.4nm,1.0s,mb4.3,baz=337,slow=2.7,SNR=8.3
TCF **Toulx Ste Croi** 77.86 316 *e*P P 06 03 40.7 +0.1
comp=Z,56nm,1.0s,mb5.1
TCF **Toulx Ste Croi** 77.86 316 *e*P P 06 03 40.7 +0.1
TCF pmax pmax
comp=Z,28nm,1.0s,mb5.2
TCF **Toulx Ste Croi** 77.86 316 *e*P P 06 03 40.7 +0.1
comp=Z,28nm,1.0s,mb5.1
DZM **Mont Dzumac** 78.08 123 P P 06 03 42.7 +0.9
comp=Z,16nm,1.0s,mb4.9,baz=101,slow=13,SNR=8.3
LDF **La Druitiere** 78.16 319 *e*P P 06 03 41.8 -0.5
FLN **La Foliniere** 78.29 319 *e*P P 06 03 42.5 -0.5
comp=Z,102nm,1.6s,mb5.2
FLN *e*R
comp=Z,400nm,19.0s
FLN **La Foliniere** 78.29 319 *e*P P 06 03 42.5 -0.5
FLN pmax pmax
comp=Z,51nm,1.6s,mb5.2
FLN MLR MLR
comp=Z,400nm,19.0s,MS4.8
FLN **La Foliniere** 78.29 319 *e*P P 06 03 42.5 -0.5
comp=Z,51nm,1.6s,mb5.2
FLN LR LR
comp=Z,400nm,19.0s,MS4.8
CAF **Calviac** 78.59 315 *e*P P 06 03 45.1 +0.4
comp=Z,48nm,1.1s,mb5.0
CAF **Calviac** 78.59 315 *e*P P 06 03 45.1 +0.4
CAF pmax pmax
comp=Z,24nm,1.1s,mb5.0
CAF **Calviac** 78.59 315 *e*P P 06 03 45.1 +0.4
comp=Z,24nm,1.1s,mb5.0
GRR **Gorron** 78.69 319 *e*P P 06 03 44.9 -0.3
comp=Z,66nm,1.2s,mb5.1
GRR **Gorron** 78.69 319 *e*P P 06 03 44.9 -0.3
GRR pmax pmax
comp=Z,33nm,1.2s,mb5.1
GRR **Gorron** 78.69 319 *e*P P 06 03 44.9 -0.3
comp=Z,33nm,1.2s,mb5.1
RJF **Les Rejaudoux** 78.76 315 *e*P P 06 03 46.0 +0.4
comp=Z,137nm,1.5s,mb5.4
RJF *e*R
comp=Z,281nm,20.2s
RJF **Les Rejaudoux** 78.76 315 *e*P P 06 03 46.0 +0.4
RJF pmax pmax
comp=Z,69nm,1.5s,mb5.4
RJF MLR MLR
comp=Z,280nm,20.3s,MS4.6
RJF **Les Rejaudoux** 78.76 315 *e*P P 06 03 46.0 +0.4
comp=Z,69nm,1.5s,mb5.4
RJF LR LR
comp=Z,280nm,20.3s,MS4.6
MTLF **Montolieu** 79.25 313 *e*P P 06 03 48.4 +0.1
comp=Z,36nm,1.3s,mb4.8
MTLF **Montolieu** 79.25 313 *e*P P 06 03 48.4 +0.1
MTLF pmax pmax
comp=Z,18nm,1.3s,mb4.8
MTLF **Montolieu** 79.25 313 *e*P P 06 03 48.4 +0.1
comp=Z,18nm,1.3s,mb4.8
LFF **La Frestale** 79.41 315 *e*P P 06 03 49.7 +0.5
SGMF **Saint Gilles** 79.73 319 *e*P P 06 03 50.9 0.0
comp=Z,101nm,1.4s,mb5.3
SGMF **Saint Gilles** 79.73 319 *e*P P 06 03 50.9 0.0
SGMF pmax pmax
comp=Z,50nm,1.4s,mb5.2
SGMF **Saint Gilles** 79.73 319 *e*P P 06 03 50.9 0.0
comp=Z,50nm,1.4s,mb5.3
SKAG **Skagway** 80.01 27 *e*P P 06 03 53.4 +1.0
comp=Z,47nm,1.3s,mb5.3
ROSF **Rostrenen** 80.10 320 *e*P P 06 03 53.1 +0.2
comp=Z,27nm,0.9s,mb4.9
ROSF **Rostrenen** 80.10 320 *e*P P 06 03 53.1 +0.2
ROSF pmax pmax
comp=Z,13nm,0.9s,mb4.9
ROSF **Rostrenen** 80.10 320 *e*P P 06 03 53.1 +0.2
comp=Z,13nm,0.9s,mb4.9
EPF **Esparros** 80.60 314 *e*P P 06 03 56.3 +0.7
EBIE **Bielsa** 80.90 314 P P 06 03 56.1 -1.0
comp=Z,17nm,1.1s,mb4.9
ETSF **Etsaut** 81.24 314 *e*P P 06 03 59.5 +0.5
comp=Z,32nm,1.0s,mb4.9
ETSF **Etsaut** 81.24 314 *e*P P 06 03 59.5 +0.5
ETSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
ETSF **Etsaut** 81.24 314 *e*P P 06 03 59.5 +0.5
comp=Z,16nm,1.0s,mb4.9
SJPF **Ste Jean** 81.55 314 *e*P P 06 04 00.2 -0.4
comp=Z,28nm,0.9s,mb4.9
SJPF **Ste Jean** 81.55 314 *e*P P 06 04 00.2 -0.4
SJPF pmax pmax
comp=Z,14nm,0.9s,mb4.9
SJPF **Ste Jean** 81.55 314 *e*P P 06 04 00.2 -0.4
comp=Z,14nm,0.9s,mb4.9
EALK **Alkurruntz** 81.67 315 P P 06 04 01.2 -0.1
comp=Z,26nm,0.9s,mb5.2
EMOS **Mosqueruela** 82.46 312 P P 06 04 04.8 -0.6
comp=Z,36nm,1.0s,mb5.2
ELAN **Lanestosa** 82.87 315 P P 06 04 07.4 -0.1
comp=Z,36nm,1.1s,mb5.3
ECHE **Chera** 83.18 311 P P 06 04 08.7 -0.4

ECHE pmax pmax
comp=Z,16nm,1.2s,mb4.9
ECHE Chera 83.18 311 P **P** **06 04 08.7 -0.5**
comp=Z,16nm,1.2s,mb4.9
SFJD Kangerlussuaq 83.33 350⇑*i*P **P** **06 04 09.3 -0.6**
comp=Z,37nm,0.9s,mb5.4
SFJD
comp=Z,390nm,18.0s
SFJD Kangerlussuaq 83.33 350⇑*i*P **P** **06 04 09.3 -0.6**
SFJD pmax pmax
comp=Z,37nm,0.9s,mb5.4
SFJD MLR MLR
comp=Z,390nm,18.0s,MS4.8
ETOB Tobarra 84.05 311 P **P** **06 04 14.6 +0.9**
comp=Z,27nm,1.0s,mb5.3
YKA Yellowknife Ar 84.56 17 P **P** **06 04 16.0 -0.2**
comp=Z,8.3nm,0.6s,mb5.1,baz=327,slow=5.1,SNR=24
YKA S S 06 14 35.0 -5.9
comp=Z,2.4nm,0.8s,baz=157,slow=38,SNR=2.9
YKA LR LR 06 47 39.8
comp=Z,84nm,18.6s,MS4.2,baz=315,slow=40
YKA Yellowknife Ar 84.56 17 P **P** **06 04 16.0 -0.2**
YKA S S 06 14 35.0 -5.9
YKA pmax pmax
comp=Z,8.0nm,0.6s
YKA smax
comp=N,2.0nm,0.8s
YKA Yellowknife Ar 84.56 17 P **P** **06 04 16.0 -0.2**
YKA S S 06 14 35.0 -5.9
YKA LR LR 06 47 39.8
EVIA Vianos 84.69 311 P **P** **06 04 16.9 0.0**
EVIA pmax pmax
comp=Z,5.0nm,0.4s,mb5.0
EVIA Vianos 84.69 311 P **P** **06 04 16.9 +0.1**
comp=Z,4.5nm,0.4s,mb5.0
GUD Guadarrama 84.71 313 P **P** **06 04 17.2 +0.3**
GUD pmax pmax
comp=Z,12nm,0.8s,mb5.1
GUD Guadarrama 84.71 313 P **P** **06 04 17.2 +0.2**
comp=Z,12nm,0.8s,mb5.1
EPON Pontenova 85.09 317 P **P** **06 04 17.2 -1.6**
comp=Z,23nm,0.7s,mb5.4
ESDC Sonseca Array 85.10 313 P **P** **06 04 19.1 +0.1**
comp=Z,0.5nm,0.3s,mb4.1,baz=53,slow=6.0,SNR=9.7
ESDC S S 06 14 37.6 -8.8
comp=Z,0.3nm,0.3s,baz=278,slow=39,SNR=3.0
ESDC LR LR 06 46 31.9
comp=Z,107nm,18.0s,MS4.3,baz=10.0,slow=39
ESDC Sonseca Array 85.10 313 P **P** **06 04 18.5 -0.4**
comp=Z,5.0nm,0.9s,mb4.6
ESLA Sonseca Array 85.10 313 PFAKE 06 04 30.0 +11
ESLA LR LR
comp=Z,535nm,19.0s,MS5.0
LSZ Lusaka 85.19 250 P **P** **06 04 20.3 +1.0**
SNR=11
LSZ Lusaka 85.19 250 *e*P **P** **06 04 19.5 +0.2**
LSZ pmax pmax
comp=Z,48nm,0.6s,mb5.8
LSZ Lusaka 85.19 250 *e*P **P** **06 04 19.5 +0.1**
comp=Z,48nm,0.6s,mb5.8
EHUE Huescar 85.19 310 P **P** **06 04 20.3 +0.9**
comp=Z,4.0nm,0.8s,mb4.6
ENIJ Nijar 85.37 310 P **P** **06 04 20.5 +0.2**
ENIJ pmax pmax
comp=Z,12nm,0.7s,mb5.1
ENIJ Nijar 85.37 310 P **P** **06 04 20.5 +0.2**
comp=Z,12nm,0.7s,mb5.1
EQES Quesada 85.52 311 P **P** **06 04 21.3 +0.3**
comp=Z,33nm,1.2s,mb5.4
EBAN Banos Encina 85.80 311 P **P** **06 04 22.2 -0.2**
EBAN pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
EBAN Banos Encina 85.80 311 P **P** **06 04 22.2 -0.2**
comp=Z,5.5nm,0.6s,mb5.0
EBER Berja 85.87 310 P **P** **06 04 23.6 +0.9**
comp=Z,10nm,0.6s,mb5.2
STS Santiago 86.19 317 P **P** **06 04 23.4 -0.9**
STS pmax pmax
comp=Z,14nm,0.8s,mb5.2
STS Santiago 86.19 317 P **P** **06 04 23.4 -0.9**
comp=Z,14nm,0.8s,mb5.2
EADA Adamuz 86.32 312 P **P** **06 04 23.8 -1.1**
comp=Z,26nm,1.0s,mb5.4
EGUA Guajares 86.37 310 P **P** **06 04 25.7 +0.5**
comp=Z,1.1nm,0.6s,mb4.3
ERON Agron 86.43 310 P **P** **06 04 24.7 -0.8**
ELOB Lobios 86.47 316 P **P** **06 04 25.4 -0.4**
comp=Z,20nm,1.0s,mb5.3
MTE Manteigas 86.99 315 *e*P **P** **06 04 29.5 +1.2**
comp=Z,18nm,1.0s,mb5.2
MTE Manteigas 86.99 315 *e*LQ 06 34 09.0
EBAD Badajoz 87.59 313 P **P** **06 04 30.3 -0.8**
comp=Z,24nm,1.2s,mb5.3
PESTR Estremoz 87.89 313 *e*LQ 06 38 50.0
EMIN Mina Concepcio 87.92 312 P **P** **06 04 32.3 -0.4**
comp=Z,14nm,0.8s,mb5.3
LBTB Lobatse 92.19 243 *e*P **P** **06 04 51.8 -0.8**
LBTB pmax pmax
comp=Z,12nm,0.8s,mb5.3
LBTB Lobatse 92.19 243 *e*P **P** **06 04 51.8 -0.8**
comp=Z,12nm,0.8s,mb5.3
EDM Edmonton 92.71 22 *e*P **P** **06 04 55.9 +0.8**
CASY Casey 94.18 177 *e*P **P** **06 05 01.0 -0.8**
comp=Z,6.1nm,1.0s,mb5.0
CASY LR LR
comp=Z,409nm,19.0s,MS4.9
BOSA Boshof 94.23 240 P **P** **06 05 01.0 -1.0**
comp=Z,7.4nm,0.6s,mb5.3,baz=71,slow=2.1,SNR=20
BOSA LR LR 06 44 05.8
comp=Z,94nm,20.3s,MS4.2,baz=68,slow=33
BOSA Boshof 94.23 240 *e*P **P** **06 05 00.8 -1.2**
comp=Z,8.2nm,0.6s,mb5.3
FFC Flin Flon 94.52 15 *e*P **P** **06 05 03.1 -0.3**
FFC pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
FFC Flin Flon 94.52 15 *e*P **P** **06 05 03.1 -0.3**
comp=Z,6.9nm,0.9s,mb5.1
TORD Torodi Ar. Bea 94.60 287 P **P** **06 05 04.0 +0.3**
comp=Z,2.8nm,0.8s,mb4.7,baz=51,slow=4.3,SNR=15
TORD PP PP 06 08 48.8 -3.1
comp=Z,4.0nm,1.1s,baz=56,slow=7.5,SNR=3.9
TORD LR LR 06 52 18.5
comp=Z,95nm,18.7s,MS4.3,baz=15,slow=38
NEW Newport 95.47 26 *e*P **P** **06 05 07.9 +0.2**
comp=Z,1.2nm,0.6s,mb4.5
NEW LR LR
comp=Z,235nm,20.0s,MS4.7
TSUM Tsumeb 95.94 252 PFAKE 06 05 20.0 +10
TSUM LR LR
comp=Z,184nm,21.0s,MS4.5
SCHQ Schefferville 97.07 355 P **P** **06 05 14.1 -0.9**
comp=Z,2.4nm,0.8s,mb4.7,baz=315,slow=7.1,SNR=2.5
SCHQ Schefferville 97.07 355 P **P** **06 05 14.1 -0.9**
SCHQ LR LR
comp=Z,281nm,20.0s,MS4.8
MSO Missoula 97.87 25 PFAKE 06 05 30.0 +11
MSO LR LR
comp=Z,125nm,19.0s,MS4.4
YBH Yreka Blue Hor 98.14 34 PFAKE 06 05 30.0 +10
YBH LR LR
comp=Z,86nm,22.0s,MS4.2
BMO Blue Mountains 98.15 28 PFAKE 06 05 30.0 +10
BMO LR LR
comp=Z,172nm,22.0s,MS4.5
EGMT Eagleton 98.35 22 PFAKE 06 05 30.0 +9.2
EGMT LR LR
comp=Z,204nm,19.0s,MS4.6
WVOR Wild Horse Val 99.51 31 PFAKE 06 05 40.0 +14
WVOR LR LR
comp=Z,221nm,21.0s,MS4.6
BOZ Bozeman (W) 99.73 25 PFAKE 06 05 40.0 +13
BOZ LR LR
comp=Z,171nm,20.0s,MS4.5
ULM Lac du Bonnet 100.02 13 PFAKE 06 05 40.0 +12
ULM LR LR
comp=Z,249nm,20.0s,MS4.7
HLID Hailey 100.41 27 PFAKE 06 05 40.0 +10
HLID LR LR
comp=Z,184nm,20.0s,MS4.6
LAO LASA Array 100.67 21 PFAKE 06 05 40.0 +8.9
LAO LR LR
comp=Z,205nm,20.0s,MS4.6
YMR Madison River 100.81 25 PFAKE 06 05 40.0 +8.3
YMR LR LR
comp=Z,2µm,21.0s,MS5.5
BMN Battle Mountai 101.75 31 PFAKE 06 05 50.0 +14
BMN LR LR
comp=Z,125nm,21.0s,MS4.4
ELK Elko 102.38 30 PFAKE 06 05 50.0 +11
ELK LR LR
comp=Z,238nm,21.0s,MS4.7
AHID Auburn Hatcher 102.39 26 PFAKE 06 05 50.0 +11
AHID LR LR
comp=Z,143nm,20.0s,MS4.5
NVAR Mina Array Bea 102.83 33 PP PP 06 09 46.2 -8.5
comp=Z,0.3nm,0.6s,baz=294,slow=8.7,SNR=3.4
BW06 Boulder Array 102.97 25 PFAKE 06 05 50.0 +8.7
BW06 LR LR
comp=Z,154nm,19.0s,MS4.5
PDAR Pinedale Array 102.97 25 PP PP 06 09 49.7 -6.1
comp=Z,0.3nm,0.7s,baz=345,slow=4.6,SNR=4.8
PDAR PKKP PKKPbc 06 21 56.6 +18
comp=Z,0.7nm,1.0s,baz=147,slow=3.9,SNR=4.3
EYMN Ely 103.03 11 PFAKE 06 05 50.0 +8.4
EYMN LR LR
comp=Z,212nm,20.0s,MS4.7
HWUT Hardware Ranch 103.19 27 PFAKE 06 05 50.0 +7.7
HWUT LR LR
comp=Z,243nm,20.0s,MS4.7
TPH Tonopah 103.63 32 PFAKE 06 06 00.0 +16
TPH LR LR
comp=Z,175nm,21.0s,MS4.6
DUG Dugway 103.87 28 PFAKE 06 06 00.0 +15
DUG LR LR
comp=Z,66nm,20.0s,MS4.2
MPU Maple Canyon 104.51 28 PFAKE 06 06 00.0 +12
MPU LR LR
comp=Z,816nm,20.0s,MS5.3
DAC Darwin (Calif) 104.88 34 PFAKE 06 06 00.0 +10
DAC LR LR
comp=Z,160nm,20.0s,MS4.6
ISCO Idaho Springs 107.00 24 PFAKE 06 10 20.0 +11
ISCO LR LR
comp=Z,255nm,21.0s,MS4.8
LBNH Lisbon 107.95 357 PFAKE 06 10 20.0 +9.5
LBNH LR LR
comp=Z,248nm,21.0s,MS4.8
JFWS Jewell Farm 108.13 11 PFAKE 06 10 20.0 +9.2
JFWS LR LR
comp=Z,212nm,21.0s,MS4.7
NCB Newcomb 108.29 359 PFAKE 06 10 20.0 +8.9
NCB LR LR
comp=Z,154nm,21.0s,MS4.5
SDCO Great Sand Dun 108.86 25 PFAKE 06 10 20.0 +7.8
SDCO LR LR
comp=Z,297nm,21.0s,MS4.8
AAM Ann Arbor 109.61 6 PFAKE 06 10 30.0 +16
AAM LR LR
comp=Z,218nm,20.0s,MS4.7
HRV Harvard--Oak R 109.66 357 PFAKE 06 10 30.0 +16
HRV LR LR
comp=Z,191nm,21.0s,MS4.7
WES Weston 109.77 356 PFAKE 06 10 30.0 +16
WES LR LR
comp=Z,409nm,21.0s,MS5.0
ERPA Erie 110.06 3 PFAKE 06 10 30.0 +16
ERPA LR LR
comp=Z,270nm,22.0s,MS4.8
BINY Binghamton 110.08 0 PFAKE 06 10 30.0 +16
BINY LR LR
comp=Z,138nm,22.0s,MS4.5
VNDA Vanda 110.74 169 PKiKP PKiKP 06 10 14.3 -1.5
comp=Z,0.3nm,0.5s,baz=301,slow=3.7,SNR=4.4
VNDA Vanda 110.74 169 *i* PKIKP PKiKP 06 10 14.3 -1.4
VNDA Vanda 110.74 169 PKPdf PKiKP 06 10 14.3 -1.5
ANMO Albuquerque 110.95 27 *e*PKIKP PKiKP 06 10 16.7 +0.6
ANMO MLR MLR
comp=Z,161nm,20.0s
TUC Tucson 111.36 31 *e*PKIKP PKiKP 06 10 18.1 +1.2
TUC MLR MLR
comp=Z,108nm,19.0s,MS4.5
SSPA Standing Stone 111.61 2 PFAKE 06 10 30.0 +13
SSPA LR LR
comp=Z,172nm,20.0s,MS4.6
ACSO Alum Creek Sta 111.72 6 PFAKE 06 10 30.0 +12
ACSO LR LR
comp=Z,98nm,19.0s,MS4.4
MCWV Mont Chateau 112.51 3 PFAKE 06 10 30.0 +11
MCWV LR LR
comp=Z,210nm,20.0s,MS4.7
WCI Wyandotte Cave 113.32 9 PFAKE 06 10 30.0 +9.4
WCI LR LR
comp=Z,177nm,19.0s,MS4.7
WMOK Wichita Mounta 113.86 21 PFAKE 06 10 30.0 +8.3
WMOK LR LR
comp=Z,266nm,21.0s,MS4.8
CBN Corbin 114.05 1 PFAKE 06 10 30.0 +8.0
CBN LR LR
comp=Z,266nm,20.0s,MS4.8
MNTX Cornudas Mount 114.23 27 *e*PKP PKiKP 06 10 22.6 +0.3
MNTX LR LR
comp=Z,108nm,19.0s,MS4.5
BLA Blacksburg 114.92 4 PFAKE 06 10 40.0 +16
BLA LR LR
comp=Z,15nm,19.0s,MS3.6
WVT Waverly 115.14 11 PFAKE 06 10 40.0 +16
WVT LR LR
comp=Z,208nm,19.0s,MS4.8
MIAR Mount Ida 115.50 16 PFAKE 06 10 40.0 +15
MIAR LR LR
comp=Z,207nm,20.0s,MS4.7
PLAL Pickwick Lake 116.22 11 PFAKE 06 10 40.0 +14
PLAL LR LR
comp=Z,163nm,20.0s,MS4.6
OXF Oxford 116.44 13 PFAKE 06 10 40.0 +13
OXF LR LR
comp=Z,182nm,20.0s,MS4.7
MYNC Murphy 116.70 8 PFAKE 06 10 40.0 +13
MYNC LR LR
comp=Z,247nm,21.0s,MS4.8
JCT Junction City 117.44 23 *e*PKIKP PKPdf 06 10 28.9 +0.3
JCT MLR MLR
comp=Z,144nm,19.0s,MS4.6
NATX Nacogdoches 117.85 18 PFAKE 06 10 40.0 +11
NATX LR LR
comp=Z,304nm,19.0s,MS4.9
QSPA South Pole Qui 117.86 180 *e*P PKPdf 06 10 27.1 -2.3
LRAL Lakeview Retre 118.31 11 PFAKE 06 10 40.0 +10
LRAL LR LR
comp=Z,206nm,19.0s,MS4.8
BBSR BB Station 118.97 349 PFAKE 06 10 40.0 +8.5
BBSR LR LR
comp=Z,112nm,21.0s,MS4.5
HKT Hockley 119.22 20 PFAKE 06 10 40.0 +8.0
HKT LR LR
comp=Z,329nm,19.0s,MS5.0
SNAA Sanae 121.73 201 *e*PKIKP PKPdf 06 10 35.0 -1.8
DWPF Disney 123.88 6 PFAKE 06 10 50.0 +9.1
DWPF LR LR
comp=Z,206nm,21.0s,MS4.8
SJG San Juan 133.14 347 PFAKE 06 11 10.0 +11
SJG LR LR
comp=Z,88nm,20.0s,MS4.5
SDV Santo Domingo 142.92 351 PKhKP 06 11 13.3
comp=Z,26nm,0.9s,baz=21,slow=2.4,SNR=16
SDV Santo Domingo 142.92 351 *e*PKPpre 06 11 13.0
SDV *e*PKPdf PKPdf 06 11 17.6 +1.1
SDV LR LR
comp=Z,87nm,19.0s,MS4.5
CAM3 Guarapari 147.12 275⇑*i*P PKPdf 06 11 25.7 +2.0
CAM3 *i* 06 11 26.2
CAM3 *i* 06 11 30.4
CAM3 *i* 06 11 38.5
ROSC El Rosal 147.23 357 PKPbc PKPbc 06 11 26.6 +0.4
comp=Z,66nm,0.8s,baz=94,slow=2.9,SNR=42
ROSC El Rosal 147.23 357 *e*PKPdf PKPdf 06 11 25.2 +1.3
ROSC *e*PKPbc PKPbc 06 11 27.8 +1.6
CAM4 Nova Friburgo 149.44 273⇓*i*P PKPdf 06 11 32.2 +4.7
CAM4 *i* 06 11 38.0
BDFB Brasilia 151.46 290 PKP PKPdf 06 11 31.3 +0.6
comp=Z,1.7nm,0.7s,baz=136,slow=9.6,SNR=3.9
BDFB PKPbc PKPbc 06 11 36.8 0.0
comp=Z,6.6nm,0.6s,baz=28,slow=3.7,SNR=16
SAML Samuel 157.55 326 *e*PKPdf PKPdf 06 11 39.7 +0.5
SAML LR LR
comp=Z,112nm,20.0s,MS4.7
ATAH Atahualpa 158.90 7 PKPab PKPab 06 12 19.1 +2.2
comp=Z,12nm,1.0s,baz=52,slow=4.1,SNR=4.8
SIV San Ignacio 161.81 308 PKP PKPdf 06 11 44.3 +0.3
comp=Z,2.5nm,0.9s,baz=86,slow=3.7,SNR=6.2
SIV PKPab PKPab 06 12 29.7 0.0
comp=Z,3.2nm,0.7s,baz=93,slow=5.1,SNR=9.6
CPUP Villa Florida 163.45 272 PKP PKPdf 06 11 45.2 -0.4
comp=Z,1.5nm,0.7s,baz=42,slow=3.0,SNR=6.0
CPUP PKPab PKPab 06 12 37.0 +0.2
comp=Z,2.3nm,0.7s,baz=74,slow=3.5,SNR=5.9
TRQA Tornquist 164.73 226 *e*PKPdf PKPdf 06 11 46.1 -0.6
LPAZ La Paz 166.28 327 PKP PKPdf 06 11 49.5 +1.5
comp=Z,5.0nm,1.1s,baz=2.0,slow=2.7,SNR=12
LPAZ PKPab PKPab 06 12 49.1 -0.2
comp=Z,0.8nm,0.6s,baz=10,slow=5.8,SNR=4.6
LPAZ La Paz 166.28 327 PKP PKPdf 06 11 49.5 +1.5
LPAZ PKPab PKPab 06 12 49.1 -0.2
LPAZ LR LR
comp=Z,108nm,19.0s
PLCA Paso Flores 166.65 198 PKP PKPdf 06 11 48.5 +0.1
comp=Z,2.8nm,1.0s,baz=71,slow=10.0,SNR=3.9
PLCA PKPab PKPab 06 12 49.9 -1.0
comp=Z,2.7nm,0.6s,baz=179,slow=2.8,SNR=12
PLCA Paso Flores 166.65 198 *e*PKPdf PKPdf 06 11 48.9 +0.6
LVC Limon Verde 171.72 309 PKPab PKPab 06 13 14.2 +0.8
comp=Z,7.4nm,0.7s,baz=142,slow=0.0,SNR=16
LVC Limon Verde 171.72 309 *e*PKPdf PKPdf 06 11 52.5 +1.1
CFAA Coronel Fontan 172.53 240 PKP PKPdf 06 11 51.6 -0.3
comp=Z,0.5nm,0.9s,baz=190,slow=0.3,SNR=8.1
CFAA PKPab PKPab 06 13 16.3 -0.7
comp=Z,0.6nm,0.6s,baz=124,slow=3.1,SNR=17

IDC 25 06:07:38.0±1.7, 026S×12481E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/16, mbtmp3.8/4, MS4.1/2, Ms1 4.1/2, ms1mx3.0/28, Error ellipse: s-maj=177.0km s-min=25.5km az=63.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.67**	**155**	P	P	06 12 29.6	-0.5
	1.8nm,0.4s,baz=332,slow=11,SNR=33						
ASAR	**Alice Springs**	**24.88**	**160**	P	P	06 13 04.1	+1.8
	1.3nm,0.3s,baz=344,slow=11,SNR=34						
STKA	**Stephens Creek**	**35.22**	**155**	P	P	06 14 32.9	-1.0
	1.4nm,0.7s,baz=321,slow=13,SNR=3.5						
RPZ	**Rata Peaks**	**59.70**	**143**	LR	LR	06 43 25.1	
	comp=Z,160nm,19.3s,baz=88,slow=36						
MKAR	**Makanchi Array**	**59.80**	**327**	P	P	06 17 45.0	+0.1
	0.3nm,0.4s,baz=114,slow=5.0,SNR=4.1						
AFI	**Afiamalu**	**64.17**	**105**	LR	LR	06 42 46.1	
	comp=Z,121nm,19.2s,baz=189,slow=33						

MOS ***25*** *06:10:39.3±1.2, 5278N×10748E, h10km, mb4.3/1, Error ellipse: s-maj=29.3km s-min=16.0km az=60.0*
BYKL 25 06:10:40.6±0.2, 5280N×10737E, h17km±5km, 4C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZRHB	**Zarechye**	**0.28**	**208**⇑*i*	Pg	Pg	06 10 46.7	0.0
ZRHB				*e*Sg	Sg	06 10 50.9	0.0
ZRHB				Pmax			
	278nm,0.2s						
ZRHB				Smax			
	5µm,0.4s						
KELR	**Kotokel**	**0.43**	**95**⇑*i*	Pg	Pg	06 10 48.3	-1.1
KELR				*e*Sg	Sg	06 10 53.8	-1.5
KELR				Pmax			
	1µm,0.2s						
KELR				Smax			
	5µm,0.3s						
TRTB	**Turuntaevo**	**0.59**	**164**⇑*i*	Pg	Pg	06 10 51.7	-0.6
TRTB				*e*Sg	Sg	06 10 59.3	-1.0
TRTB				Pmax			
	385nm,0.2s						
TRTB				Smax			
	1µm,0.3s						
TRG	**Tyrgan**	**0.62**	**267**	*e*Pg	Pg	06 10 52.4	-0.5
TRG				*e*Sg	Sg	06 11 01.6	+0.4
TRG				Pmax			
	66nm,0.2s						
TRG				Smax			
	658nm,0.1s						
FFNB	**Fofonovo**	**0.84**	**206**	*e*Pg	Pg	06 10 56.3	-0.7
FFNB				*e*		06 10 58.7	
FFNB				*e*Sg	Sg	06 11 06.9	-1.2
FFNB				*e*		06 11 10.2	
OGRR	**Ongureny**	**0.86**	**9**⇑*i*	Pg	Pg	06 10 56.5	-0.8
OGRR				*e*Sg	Sg	06 11 07.5	-1.0
OGRR				Pmax			
	35nm,0.3s						
OGRR				Smax			
	284nm,0.5s						
OGRR	**Ongureny**	**0.86**	**9**	*e*PG	Pg	06 10 56.5	-0.8
OGRR				*e*		06 11 07.8	
OGRR				pmax	pmax		
	comp=Z,48nm,0.2s						
OGRR				smax			
	comp=E,283nm,0.5s						
KAB	**Kabansk**	**0.87**	**211**	*e*PG	Pg	06 10 56.2	-1.3
KAB				*e*		06 11 09.0	
KAB				pmax	pmax		
	comp=Z,310nm,0.3s						
KAB				smax			
	comp=E,2µm,0.2s						
STDB	**Stepnoy Dvoret**	**0.88**	**225**	*e*Pg	Pg	06 10 58.6	+0.9
STDB				*e*Pb	Pb	06 10 59.9	+2.5
STDB				*e*Sg	Sg	06 11 11.0	+1.6
STDB				*e*Sb	Sb	06 11 14.7	+5.8
STDB				max			
	comp=E,208nm,0.2s						
STDB				max			
	comp=E,2µm,0.4s						
BTMB	**Babushkin**	**1.45**	**221**	*e*Pg	Pg	06 11 07.2	-1.4
BTMB				*e*Sg	Sg	06 11 26.3	-1.2
BTMB				Pmax			
	comp=E,136nm,0.3s						
BTMB				Smax			
	comp=E,706nm,0.7s						
SYVR	**Suvo**	**1.80**	**60**	*e*Pg	Pg	06 11 12.8	-2.4
SYVR				*e*Sg	Sg	06 11 36.9	-1.7
SYVR				Pmax			
	comp=E,25nm,0.2s						
SYVR				Smax			
	comp=E,87nm,0.3s						
LSTR	**Listvyanka**	**1.82**	**240**⇓*i*	Pg	Pg	06 11 12.3	-3.2
LSTR				*e*Sg	Sg	06 11 36.3	-2.8
LSTR				Pmax			
	comp=E,45nm,0.7s						
LSTR				Smax			
	comp=E,195nm,0.3s						
LSTR	**Listvyanka**	**1.82**	**240**	*e*PN	Pn	06 11 12.2	+1.1
LSTR				*e*		06 11 37.2	
LSTR				pmax	pmax		
	comp=Z,40nm,0.3s						
LSTR				smax			
	comp=N,201nm,0.4s						
IRK	**Irkutsk**	**1.97**	**255**	*e*	Pn	06 11 29.9	+17
IRK				*e*Sg	Sg	06 11 42.7	-1.4
IRK				Smax			
	comp=N,1µm,0.4s						
IRK	**Irkutsk**	**1.97**	**255**	*e*PN	Pn	06 11 16.8	+3.6
IRK				*e*		06 11 41.5	
IRK				pmax	pmax		
	comp=Z,337nm,0.1s						
IRK				smax			
	comp=N,1µm,0.4s						
TLY	**Talaya**	**2.55**	**245**	*e*Pn	Pn	06 11 22.4	+1.2
TLY				*e*Pg	Pg	06 11 25.6	-3.9
TLY				*e*Sn	Sn	06 11 54.1	+2.3
TLY				*e*Sg	Sg	06 11 59.0	-3.6
TLY				Pmax			
	comp=N,6.0nm,0.2s						
TLY				Smax			
	comp=N,49nm,0.2s						
YLYR	**Ulyunkhan**	**3.06**	**46**	*e*Pg	Pg	06 11 35.3	-4.0
YLYR				*e*Sg	Sg	06 12 15.3	-3.7
YLYR				Pmax			
	comp=N,7.0nm,0.2s						
YLYR				Smax			
	comp=N,52nm,1.3s						
ARS	**Arshan**	**3.16**	**256**	*e*Pn	Pn	06 11 30.1	+0.6
ARS				*e*Pg	Pg	06 11 36.7	-4.4
ARS				*e*Sg	Sg	06 12 17.2	-4.9
ARS				Pmax			
	comp=N,47nm,0.6s						
ARS				Smax			
	comp=N,251nm,0.6s						
ARS	**Arshan**	**3.16**	**256**	*e*PN	Pn	06 11 38.6	+9.1

ARS				*e*			06 12 17.8		
ARS					pmax	pmax			
	comp=Z,39nm,0.2s								
ARS					smax				
	comp=E,272nm,0.3s								
NIZ	**Nizh Angarsk**	**3.24**	**22**	*e*Pn		Pn	06 11 29.7	-1.0	
NIZ				*e*Pg		Pg	06 11 37.8	-4.9	
NIZ				*e*			06 12 04.9		
NIZ				*e*Sg		Sg	06 12 19.6	-5.1	
NIZ					Pmax				
	comp=E,15nm,0.3s								
NIZ					Smax				
	comp=E,71nm,0.4s								
ZAK	**Zakamensk**	**3.52**	**228**	*e*		Pn	06 11 50.2	+16	
ZAK				*e*Sg		Sg	06 12 30.5	-3.0	
ZAK					Smax				
	comp=E,52nm,1.4s								
ZAK	**Zakamensk**	**3.52**	**228**	*e*PN		Pn	06 11 36.4	+2.0	
ZAK				*e*			06 11 47.2		
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.0s								
KMO	**Kumora**	**3.82**	**34**	*e*		Pn	06 11 27.0	-12	
KMO				*e*			06 11 41.0		
KMO				*e*Sg		Sg	06 12 39.4	-3.9	
KMO					max				
	comp=Z,7.0nm,0.3s								
KMO					Smax				
	comp=Z,59nm,1.4s								
CIT	**Chita**	**3.87**	**99**	*e*Pg		Pg	06 11 49.5	-5.1	
CIT				*e*Sg		Sg	06 12 39.6	-5.1	
CIT					Pmax				
	comp=Z,19nm,0.8s								
CIT					Smax				
	comp=Z,61nm,0.6s								
MOY	**Mondy**	**4.08**	**256**	*e*Pg		Pg	06 11 54.0	-4.8	
MOY				*e*Sg		Sg	06 12 46.6	-5.1	
MOY					Pmax				
	comp=Z,26nm,0.8s								
MOY					Smax				
	comp=Z,82nm,0.5s								
KPC	**Khapcheranga**	**4.42**	**133**	*e*Pn		Pn	06 11 47.4	+0.6	
KPC				*e*Pg		Pg	06 11 59.8	-5.4	
KPC				*e*Sn		Sn	06 12 38.6	+0.8	
KPC				*e*Sg		Sg	06 12 57.9	-4.5	
KPC					Pmax				
	comp=Z,17nm,0.6s								
KPC					Smax				
	comp=Z,46nm,0.7s								
UKT	**Uakit**	**4.56**	**51**	*e*Pn		Pn	06 11 49.5	+0.7	
UKT				*e*Pg		Pg	06 12 02.2	-5.7	
UKT				*e*Sg		Sg	06 13 01.6	-5.4	
UKT					Pmax				
	comp=Z,3.0nm,0.6s								
UKT					Smax				
	comp=Z,40nm,1.7s								
ORL	**Orlik**	**4.61**	**270**	*e*Pn		Pn	06 11 52.2	+2.7	
ORL				*e*			06 11 57.8		
ORL				*e*Sg		Sg	06 13 03.0	-5.6	
ORL					max				
	comp=Z,3.0nm,0.4s								
ORL					Smax				
	comp=Z,73nm,0.5s								
ORL	**Orlik**	**4.61**	**270**	*e*PN		Pn	06 11 52.2	+2.7	
ORL				*e*			06 12 04.0		
ORL				*e*			06 13 03.5		
ORL					pmax	pmax			
	comp=Z,7.0nm,0.6s								
ORL					smax				
	comp=N,72nm,0.5s								
ULN	**Ulaanbaatar**	**4.95**	**182**	*e*		Pn	06 12 09.8	+16	
ULN				*e*Sg		Sg	06 13 12.2	-7.1	
TUP	**Tupik**	**7.66**	**73**	*e*		Pn	06 12 57.8	+26	
TUP				*e*Sg		Sn	06 14 38.8	+41	
TUP					Smax				
	comp=N,15nm,0.8s								
TUP	**Tupik**	**7.66**	**73**	*e*PG		Pn	06 12 57.1	+26	
TUP				*e*S		Sn	06 13 57.4	-0.4	
TUP				*e*			06 14 37.9		
TUP					pmax	pmax			
	comp=Z,2.0nm,0.5s								
TUP					smax				
	comp=N,23nm,0.9s								

JMA 25 06:11:14.5, 3370N×13026E, h12km, M3.5, 3C-1D
Broadband fault plane solution: P waves. NP1:
ϕ_s284.00000°, δ61.00000°, λ-13.00000°. **NP2:**
ϕ_s20.00000°, δ79.00000°, λ-150.00000°. **Principal axes:**
T Plg12.0000°, Azm149.0000°; N Plg58.0000°, Azm39.0000°; P Plg29.0000°, Azm246.0000°; **Kyushu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFI	**Itaya**	**0.29**	**158**	⇑P	Pg	06 11 20.5	0.0
JFI				S	Sg	06 11 24.8	+0.3
JFA	**Akaike**	**0.45**	**88**	⇓P	Pg	06 11 23.1	-0.2
JFA				S	Sg	06 11 29.4	+0.1
JII	**Iki**	**0.45**	**282**	⇑P	Pg	06 11 23.6	+0.2
JII				S	Sg	06 11 29.8	+0.4
JTU	**Tsushima**	**1.09**	**319**	⇑P	Pb	06 11 34.4	-0.9
JTU				S	Sb	06 11 49.2	-0.2

*NEIC **25** 06:55:36.4, 3093S×7156W, h37km, MG2.9(GUC), After GUC.*
GUC 25 06:55:36.4±0.6, 3093S×7156W, h37km±2km, MD3.8, ML2.9, 5C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OVCH	**Ovalle**	**0.44**	**44**	⇑*i*P	Pn	06 55 46.5	+0.2
OVCH				*i* S	Sn	06 55 53.8	+0.6
OVCH				AML	AML	06 55 57.6	
	comp=E,635nm,0.2s						
OVCH	**Ovalle**	**0.44**	**44**	⇑*i*P	Pn	06 55 46.5	+0.2
OVCH				*i* S	Sn	06 55 53.8	+0.6
CMCH	**Combarbala**	**0.54**	**117**	⇑*i*P	Pn	06 55 47.6	0.0
CMCH				*i* S	Sn	06 55 56.1	+0.7
CMCH				AML	AML	06 55 56.5	
	comp=N,2μm,0.3s						
CMCH	**Combarbala**	**0.54**	**117**	⇑*i*P	Pn	06 55 47.6	0.0
CMCH				*i* S	Sn	06 55 56.1	+0.7
CHNG	**Los Chungos**	**0.95**	**177**	*e*P	Pn	06 55 53.7	+0.4
CHNG				*i* S	Sn	06 56 06.5	+0.9
TLL	**Tololo Astrono**	**1.00**	**41**	*e*P	Pn	06 55 55.0	+1.1
TLL				*i* S	Sn	06 56 09.0	+2.2
TLL				AML	AML	06 56 17.2	
	comp=N,427nm,0.5s						
TLL	**Tololo Astrono**	**1.00**	**41**	*e*P	Pn	06 55 55.0	+1.1
TLL				*i* S	Sn	06 56 09.0	+2.2
LSCH	**La Serena**	**1.05**	**15**	*e*P	Pn	06 55 55.1	+0.5
LSCH				*i* S	Sn	06 56 09.6	+1.5
PTCH	**Petorca**	**1.44**	**158**	*e*P	Pn	06 56 01.1	+1.2
PTCH				*e*S	Sn	06 56 20.4	+2.8
PTCH				AML	AML	06 56 23.6	
	comp=E,517nm,0.5s						
PTCH	**Petorca**	**1.44**	**158**	*e*P	Pn	06 56 01.1	+1.2
PTCH				*e*S	Sn	06 56 20.4	+2.8
LCO	**Las Campanas**	**2.05**	**21**	⇑*i*P	Pn	06 56 09.8	+1.5
LCO				*i* S	Sn	06 56 36.1	+3.4

IDC 25 07:10:35.0±4.9, 2370S×17632W, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.9/14, mbtmp4.0/5, ML4.1/1, Error ellipse: s-maj=116.8km s-min=36.0km az=43.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**15.56**	**200**	Pn	Pn	07 14 15.9	+0.2
	0.7nm,0.3s,baz=55,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**45.39**	**260**	P	P	07 18 55.7	+0.5
	1.2nm,0.9s,baz=104,slow=8.3,SNR=9.0						
WRA	**Warramunga Arr**	**45.78**	**265**	P	P	07 18 58.6	+0.2
	1.0nm,0.5s,baz=104,slow=7.9,SNR=17						
VNDA	**Vanda**	**54.88**	**186**	P	P	07 20 06.7	-0.6
	0.5nm,0.7s,baz=6.3,slow=9.2,SNR=3.4						
MAW	**Mawson**	**79.09**	**200**	P	P	07 22 41.0	-0.3
	1.4nm,0.5s,baz=149,slow=6.2,SNR=9.0						

CASC 25 07:16:23.0±2.8, 1053N×8703W, h36km±999km, MD3.9, ML3.0, 3C-3D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**1.70**	**14**	⇓*e*P	Pn	07 16 50.3	+0.3
COPN				*e*S	Sn	07 17 12.3	+1.7
CONN	**Concepcion**	**1.72**	**53**	⇓*e*P	Pn	07 16 50.9	+0.6
XAVN	**Gruta Xavier**	**1.75**	**23**	*e*P	Pn	07 16 50.5	-0.3
TISN	**Laguna Tiscapa**	**1.77**	**25**	*e*P	Pn	07 16 51.1	+0.1
TISN				*e*S	Sn	07 17 12.8	+0.5
MGAN	**Managua**	**1.78**	**25**	⇑*e*P	Pn	07 16 51.4	+0.2
MGAN				*e*S	Sn	07 17 13.8	+1.2
	comp=N,151nm,0.4s						
APYN	**Apoyeque**	**1.82**	**21**	*e*P	Pn	07 16 51.2	-0.6
LEON	**Leon**	**1.88**	**4**	⇑*e*P	Pn	07 16 52.8	+0.2
MIRN	**Miramar**	**1.93**	**9**	⇑*e*P	Pn	07 16 53.4	+0.2
MIRN				*e*S	Sn	07 17 17.1	+1.0
CNGN	**Cerro Negro**	**1.99**	**9**	*e*P	Pn	07 16 54.0	-0.1
CNGN				*e*S	Sn	07 17 18.8	+1.1
JCR	**Jicaral**	**2.00**	**110**	*e*P	Pn	07 16 54.0	-0.3
JCR				*e*S	Sn	07 17 17.6	-0.5
TELN	**Telica**	**2.07**	**5**	*e*P	Pn	07 16 54.4	-0.8
CRIN	**San Cristobal**	**2.16**	**359**	*e*P	Pn	07 16 55.7	-0.7
CRIN				*e*S	Sn	07 17 23.7	+1.7
CGA2	**Cerro Gallo 2**	**2.57**	**101**	*e*P	Pn	07 17 04.3	+2.2
CGA2				*e*S	Sn	07 17 34.2	+2.1
PRS1	**Puriscal**	**2.73**	**101**	*e*P	Pn	07 17 06.0	+1.8
LAJ	**Bijagual**	**2.93**	**103**	⇓*e*P	Pn	07 17 03.1	-4.0
LCR2	**La Lucha 2**	**3.08**	**104**	*e*P	Pn	07 17 10.5	+1.5

IDC 25 07:46:11.0±2.9, 590S×15298E, h0km, mb3.2/2, mb1 3.6/3, mb1mx3.4/14, mbtmp3.4/3, ML2.7/1, Error ellipse: s-maj=129.4km s-min=40.7km az=136.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.74**	**238**	Pn	Pn	07 47 52.2	+1.1
	0.9nm,0.3s,baz=47,slow=19,SNR=2.4						
PMG				S	Sn	07 49 12.2	+3.6
	1.2nm,0.3s,baz=52,slow=21,SNR=4.6						
WRA	**Warramunga Arr**	**22.87**	**231**	P	P	07 51 15.4	-0.5
	0.9nm,0.9s,baz=53,slow=9.6,SNR=6.2						
ASAR	**Alice Springs**	**25.47**	**224**	P	P	07 51 40.4	-0.3
	0.5nm,0.9s,baz=52,slow=8.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	**150.80**	**286**	PKPbc	PKPbc	08 06 07.0	+1.7
	0.6nm,0.8s,baz=74,slow=2.2,SNR=3.7						

IDC 25 08:01:27.8±22.0, 1766S×17897W, h623km±182km, mb2.7/3, mb1 2.9/4, mb1mx2.7/14, mbtmp3.8/4, Error ellipse: s-maj=218.9km s-min=129.0km az=59.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.40**	**250**	P	P	08 04 30.3	+0.9
	0.2nm,0.3s,baz=30,slow=14,SNR=4.4						
STKA	**Stephens Creek**	**38.28**	**241**	P	P	08 07 56.8	-0.2
	1.0nm,0.7s,baz=27,slow=11,SNR=3.1						
WRA	**Warramunga Arr**	**44.15**	**259**	P	P	08 08 43.2	+0.2
	0.2nm,0.4s,baz=94,slow=6.9,SNR=16						
ASAR	**Alice Springs**	**44.34**	**254**	P	P	08 08 45.1	+0.7
	2.1nm,0.4s,baz=89,slow=8.4,SNR=76						
ASAR				PcP	PcP	08 10 14.7	+0.3
	0.3nm,0.8s,baz=105,slow=4.3,SNR=4.1						

*IDC **25** 08:02:57.9±0.7, 1239N×9508E, h0km, mb4.4/14, mb1 4.5/14, mb1mx4.3/25, mbtmp4.4/14, Error ellipse: s-maj=33.8km s-min=13.5km az=57.0*
*ISCJB **25** 08:02:59.2±4.7, 1246N±008×952E±0.1, h20km±34km, mb4.3/14, Error ellipse: s-maj=24.5km s-min=12.0km az=144.6*
ISC 25 08:03:03.0±4.8, 1250N±008×952E±01, h31km±35km, n17, σ0°74/17, mb4.3/14, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NST	**Nakhon Sawan**	**5.72**	**56**	P	**Pn**	**08 04 25.5**	**-0.3**
SNG	**Songkhla**	**7.51**	**134**	P	**Pn**	**08 04 49.0**	**-1.3**
	510nm,0.9s						
PSI	**Prapat**	**10.32**	**159**	Pn	**Pn**	**08 05 30.3**	**+1.5**
	0.4nm,0.3s,baz=329,slow=13,SNR=4.8						
MKAR	**Makanchi Array**	**35.88**	**345**	P	**P**	**08 10 00.7**	**+0.6**
	6.8nm,0.8s,mb4.6,baz=144,slow=8.7,SNR=11						
SONM	**Songino Array**	**36.45**	**13**	P	**P**	**08 10 05.5**	**+0.6**
	1.6nm,0.9s,mb4.0,baz=188,slow=8.6,SNR=8.9						
ZAL	**Zalesovo**	**42.15**	**351**	P	**P**	**08 10 52.1**	**-0.4**
	1.9nm,0.5s,mb4.0,baz=300,slow=11,SNR=3.2						
FITZ	**Fitzroy Crossi**	**42.74**	**135**	P	**P**	**08 10 56.1**	**-1.2**
	4.4nm,0.6s,mb4.3,baz=12,slow=17,SNR=5.9						
BVAR	**Borovoye Array**	**45.02**	**339**	P	**P**	**08 11 16.1**	**+0.5**
	8.8nm,0.9s,mb4.6,baz=138,slow=7.6,SNR=14						
MJAR	**Matsushiro Arr**	**45.36**	**51**	P	**P**	**08 11 19.0**	**+0.7**
	0.9nm,0.6s,mb3.8,baz=261,slow=11,SNR=4.3						
AKTO	**Aktyubinsk**	**48.48**	**329**	P	**P**	**08 11 42.6**	**-0.1**
	11nm,0.9s,mb4.9,baz=110,slow=9.2,SNR=9.1						
NWAO	**Narrogin (SRO)**	**49.83**	**156**	P	**P**	**08 11 53.6**	**+0.5**
	13nm,1.0s,mb4.9,baz=344,slow=7.4,SNR=3.2						
WRA	**Warramunga Arr**	**50.23**	**129**	P	**P**	**08 11 56.5**	**+0.4**
	4.8nm,0.8s,mb4.6,baz=309,slow=8.3,SNR=47						
ASAR	**Alice Springs**	**52.19**	**133**	P	**P**	**08 12 10.4**	**-0.4**
	2.8nm,0.8s,mb4.2,baz=312,slow=6.9,SNR=24						
BRTR	**Keskin Array B**	**60.30**	**309**	P	**P**	**08 13 07.5**	**-1.2**
	3.2nm,0.7s,mb4.5,baz=114,slow=8.4,SNR=3.2						
STKA	**Stephens Creek**	**62.61**	**136**	P	**P**	**08 13 24.8**	**+0.5**
	3.8nm,0.8s,mb4.5,baz=323,slow=8.7,SNR=8.7						
GERES	**GERESS Array B**	**75.12**	**317**	P	**P**	**08 14 41.9**	**-0.2**
	1.9nm,0.8s,mb4.1,baz=111,slow=5.4,SNR=5.3						
TORD	**Torodi Ar. Bea**	**90.55**	**284**	P	**P**	**08 16 01.7**	**-0.3**
	0.4nm,0.7s,mb3.9,baz=63,slow=4.8,SNR=2.5						

*BJI **25** 08:03:04.7, 1233N×9540E, h41km, mB4.9, mb4.7, Ms4.7, Msz4.4*
*IDC **25** 08:03:04.9±0.4, 1234N×9518E, h0km, mb4.7/27, mb1 4.7/27, mb1mx4.7/30, mbtmp4.6/27, Error ellipse: s-maj=20.2km s-min=10.7km az=56.0*
*MOS **25** 08:03:05.4±1.6, 1218N×9547E, h33km, mb5.1/75, Error ellipse: s-maj=10.4km s-min=4.7km az=119.7*
*ISCJB **25** 08:03:05.4±0.2, 1210N±003×9552E±003, h32km, mb4.8/119, MS4.3/21, Error ellipse: s-maj=4.8km s-min=4.2km az=44.5*
*NEIC **25** 08:03:06.8±0.2, 1215N×9549E, h30km, mb4.9/71, MS4.1/3, Error ellipse: s-maj=9.7km s-min=5.7km az=48.0*
*SZGRF **25** 08:03:09.4, 1188N×9470E, h33km, mb5.0, Andaman Islands, India, region*
ISC 25 08:03:07.8±0.2, 1215N±003×9550E±003, h35km, h33km±1.7km: pP-P, n313, σ1°28/312, mb4.8/119, MS4.3/21, 6C-1D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	**4.16**	**83**	P	**Pn**	**08 04 06.4**	**-2.4**
CHG	**Chiang Mai**	**7.42**	**26**	⇑P	**Pn**	**08 04 55.4**	**+1.9**
	22nm,0.8s						
CHTO	**Chiang Mai**	**7.42**	**26**	*e*P	**Pn**	**08 04 52.2**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,16nm,0.8s						
CHTO	**Chiang Mai**	**7.42**	**26**	*e*Pn	**Pn**	**08 04 52.2**	**-1.3**
	comp=Z,16nm,0.8s						
KULM	**Kulim**	**8.50**	**143**	*e*Pn	**Pn**	**08 05 08.8**	**+0.4**
KULM				*e*Sn	**Sn**	**08 06 43.5**	**+0.4**
BWNR	**Bhubaneshwar**	**12.34**	**312**	*ex*	x	08 05 30.0	
CAL	**Calcutta**	**12.39**	**327**	*ex*	x	08 09 06.7	
CAL				*ex*	x	08 11 59.6	
VIS	**Vishakhapatnam**	**13.00**	**297**	*i* x	x	08 05 53.2	
VIS				AMb	AMB	08 06 02.0	
	comp=Z,65nm,1.2s						
VIS				*i* x	x	08 08 08.2	
SHL	**Shillong**	**13.78**	**346**	*ex*	x	08 06 09.0	
KMI	**Kunming**	**14.61**	**27**	P	**Pn**	**08 06 32.5**	**+0.5**
KMI				AP	pP	08 06 39.0	-8.0
KMI				XP	sP	08 06 42.5	-8.9
KMI				PP		08 06 44.5	
KMI				PPP		08 06 52.3	
KMI				S	**Sn**	**08 09 15.3**	**+2.7**
KMI				XS	sS	08 09 26.5	-19
KMI				SS		08 09 32.0	
KMI				SSS		08 09 45.8	
KMI				AMB	AMB		
	comp=Z,15nm,1.2s						
KMI				AMB	AMB		
	comp=Z,105nm,3.4s						
KMI				LR	LR		
	comp=N,2μm,10.2s						
KMI				LR	LR		
	comp=E,2μm,10.2s						
KMI				LR	LR		
	comp=Z,2μm,11.3s						
BOK	**Bokaro**	**14.75**	**323**	*ex*	x	08 06 24.1	
BOK				AMb	AMB	08 06 31.3	
	comp=Z,11nm,0.4s						
BOK				*i* x	x	08 08 23.7	
MDRS	**Chennai**	**14.91**	**275**	*e*P	**Pn**	**08 06 28.3**	**-7.7**
MDRS				*ex*	x	08 10 01.9	
MDRS				*ex*	x	08 13 45.9	
MDRS				*ex*	x	08 48 20.9	
PALK	**Pallekele**	**15.36**	**253**	*e*Pn	**Pn**	**08 06 41.6**	**-0.3**
	comp=Z,18nm,0.9s						
QIZ	**Qiongzhong**	**15.42**	**62**	P	**Pn**	**08 06 42.3**	**-0.3**
QIZ				AP	pP	08 06 50.8	-5.1
QIZ				XP	sP	08 06 54.8	-5.6
QIZ				S	**S**	**08 09 35.0**	**-12**
QIZ				XS	sS	08 09 46.3	-15
QIZ				AMB	AMB		
	comp=Z,15nm,1.6s						
QIZ				LR	LR		
	comp=N,2μm,17.1s						
QIZ				LR	LR		
	comp=Z,911nm,12.3s						
HYB	**Hyderabad**	**17.20**	**290**	*i* P	**Pn**	**08 07 05.5**	**+0.3**
HYB				*e*S	**S**	**08 10 10.5**	**-13**
GYA	**Guiyang**	**17.70**	**35**	P	**Pn**	**08 07 07.3**	**-4.1**
GYA				AP	pP	08 07 16.8	-4.4
GYA				XP	sP	08 07 20.5	-5.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
GYA				AMB	AMB		
	comp=Z,190nm,3.5s						
GYA				LR	LR		
	comp=N,1μm,10.8s						
GYA				LR	LR		
	comp=E,1μm,11.4s						
GYA				LR	LR		
	comp=Z,1μm,12.0s						
JIRN	**Jiri**	**17.73**	**332**	*e*P	**Pn**	**08 07 07.5**	**-4.3**
	comp=Z,290nm,1.1s						
LSA	**Lhasa**	**17.93**	**348**	*e*P	**Pn**	**08 07 09.6**	**-4.7**
LSA				pmax	pmax		
	comp=Z,97nm,0.7s						
LSA	**Lhasa**	**17.93**	**348**	*e*Pn	**Pn**	**08 07 09.6**	**-4.7**
	comp=Z,98nm,0.7s						
PKI	**Pulchoki**	**18.02**	**330**	*e*P	**Pn**	**08 07 07.0**	**-8.4**
	comp=Z,275nm,1.1s						
GUN	**Gumba**	**18.09**	**332**	*e*P	**Pn**	**08 07 11.1**	**-5.1**
	comp=Z,116nm,0.8s						
KSM	**Kuching**	**18.11**	**125**	*e*Pn	**Pn**	**08 07 17.3**	**+0.7**
DMN	**Daman**	**18.21**	**329**	*e*P	**Pn**	**08 07 10.0**	**-7.7**
	comp=Z,250nm,1.0s						
KKN	**Kakani**	**18.27**	**330**	*e*P	**Pn**	**08 07 11.5**	**-6.9**
	comp=Z,148nm,0.9s						
KKN	**Kakani**	**18.27**	**330**	*e*P	**Pn**	**08 07 11.5**	**-6.9**
KKN				pmax	pmax		
	comp=Z,148nm,0.9s						
GKN	**Gorkha**	**18.77**	**329**	*e*P	**Pn**	**08 07 17.2**	**-7.3**
	comp=Z,95nm,0.7s						
KOLN	**Koldanda**	**19.12**	**326**	*e*P	**Pn**	**08 07 19.0**	**-10**
	comp=Z,149nm,0.6s						
CD2	**Chengdu**	**20.18**	**21**	⇑*i*P	**P**	**08 07 33.3**	**-5.9**
CD2				PP		08 07 51.3	
CD2				S	**S**	**08 11 07.3**	**-16**
CD2				AMB	AMB		
	comp=Z,20nm,0.7s						
CD2				AMB	AMB		
	comp=Z,50nm,4.7s						
CD2				LR	LR		
	comp=E,670nm,12.0s						
CD2				LR	LR		
	comp=Z,440nm,10.8s,MS4.1						
KAD	**Karad**	**21.23**	**287**	*e*P	**P**	**08 07 46.5**	**-4.2**
KKM	**Kota Kinabalu**	**21.33**	**105**	*e*P	**P**	**08 07 52.2**	**+0.6**
POO	**Poona**	**21.81**	**290**	*e*P	**P**	**08 07 48.0**	**-8.8**
POO				*ex*	x	08 08 44.4	
POO				AMb	AMB	08 08 51.9	
	comp=Z,70nm,1.4s,mb4.9						
LGTI	**Lohaghat**	**22.31**	**323**	*ex*	x	08 08 01.0	
NDI	**New Delhi**	**23.70**	**317**	*e*P	**P**	**08 08 09.0**	**-7.4**
AJM	**Ajmer**	**24.25**	**309**	*e*P	**P**	**08 08 16.0**	**-5.4**
XAN	**Xi'an**	**25.00**	**27**	P	**P**	**08 08 21.0**	**-7.2**
XAN				AP		08 08 33.8	
XAN				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.2						
XAN				LR	LR		
	comp=N,542nm,12.7s,MS4.5						
XAN				LR	LR		
	comp=E,818nm,11.0s,MS4.5						
XAN				LR	LR		
	comp=Z,850nm,12.7s,MS4.5						
LZH	**Lanzhou**	**25.00**	**16**	*e*P	**P**	**08 08 24.0**	**-4.3**
LZH				AP	pP	08 08 31.8	-6.4
LZH				PP		08 09 02.5	
LZH				*e*S	**S**	**08 12 46.5**	**-3.3**
LZH				XS	sS	08 13 01.0	-5.3
LZH				SS		08 13 43.5	
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,150nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,12.8s						
LZH				LR	LR		
	comp=Z,2μm,15.2s,MS4.7						
SDNR	**Sundarnagar**	**25.75**	**321**	*e*P	**P**	**08 08 30.4**	**-4.6**
GTA	**Gaotai**	**27.42**	**7**	P	**P**	**08 08 44.5**	**-5.6**
GTA				AP	pP	08 08 53.0	-7.2
GTA				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.2						
GTA				AMB	AMB		
	comp=Z,44nm,3.8s						
GTA				LR	LR		
	comp=N,325nm,13.0s,MS4.3						
GTA				LR	LR		
	comp=E,405nm,11.1s,MS4.3						
GTA				LR	LR		
	comp=Z,400nm,13.8s,MS4.2						
NACB	**Ninganchiao**	**27.48**	**61**	*e*P	**P**	**08 08 50.7**	**+0.1**
NJ2	**Nanjing**	**29.22**	**44**	*e*P	**P**	**08 09 06.5**	**+0.4**
NJ2				AP	pP	08 09 16.0	-0.2
NJ2				XP	sP	08 09 20.0	-0.4
NJ2				PP	PP	08 10 02.3	-10
NJ2				S	**S**	**08 13 57.0**	**+0.6**
NJ2				XS	sS	08 14 13.0	0.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,120nm,4.5s						
NJ2				LR	LR		
	comp=N,970nm,10.1s,MS4.9						
NJ2				LR	LR		
	comp=E,1μm,11.5s,MS4.9						
NJ2				LR	LR		
	comp=Z,970nm,16.3s,MS4.5						
SSE	**Sheshan**	**30.30**	**47**	P	**P**	**08 09 14.8**	**-0.9**
SSE				XP	sP	08 09 27.5	-2.5
SSE				PCP	PcP	08 12 13.3	-2.2
SSE				S	**S**	**08 14 14.3**	**+0.9**
SSE				XS	sS	08 14 29.5	-0.5
SSE				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.4						
SSE				AMB	AMB		
	comp=Z,54nm,6.0s						
SSE				LR	LR		
	comp=N,202nm,14.4s,MS4.1	

HHC SCS ScS 08 19 56.8 -2.0
HHC AMB AMB
comp=Z,9.0nm,0.9s,mb4.6
HHC AMB AMB
comp=Z,73nm,4.4s
HHC LR LR
comp=N,487nm,15.0s,MS4.8
HHC LR LR
comp=E,1µm,12.3s,MS4.8
HHC LR LR
comp=Z,592nm,12.9s,MS4.5
WMQ Urumqi 32.27 349 P P **08 09 32.0 -1.1**
WMQ AP pP 08 09 42.0 -1.2
WMQ XP sP 08 09 46.0 -1.4
WMQ PP PP 08 10 40.0 -6.3
WMQ S S **08 14 42.0 -2.2**
WMQ XS sS 08 14 58.0 -2.8
WMQ SS SS 08 16 37.0 -26
WMQ AMB AMB
comp=Z,28nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,154nm,5.0s
WMQ LR LR
comp=N,235nm,10.0s,MS4.5
WMQ LR LR
comp=E,412nm,10.0s,MS4.5
WMQ LR LR
comp=Z,225nm,10.0s,MS4.2
BJI Beijing 33.24 30 P P **08 09 43.3 +1.7**
BJI AMB AMB
comp=Z,5.0nm,0.5s,mb4.7
BJI LR LR
comp=N,760nm,15.6s,MS4.8
BJI LR LR
comp=E,1µm,12.2s,MS4.8
BJI LR LR
comp=Z,407nm,20.4s
ULHL Ulahol 34.36 334 P P **08 09 52.4 +1.1**
SNR=9.2
TKM2 Tokmak 2 35.19 334 P P **08 09 59.2 +0.9**
SNR=10
AML Almayashu 35.40 332 P P **08 10 01.7 +1.4**
SNR=9.3
AAK Ala-Archa 35.43 333 P P **08 10 01.8 +1.2**
SNR=6.0
AAK Ala-Archa 35.43 333 P P **08 10 01.3 +0.8**
SNR=16
AAK Ala-Archa 35.43 333 *e*P P **08 09 57.9 -2.6**
AAK pmax pmax
comp=Z,16nm,0.8s,mb5.0
AAK Ala-Archa 35.43 333 *e*P P **08 09 57.9 -2.6**
comp=Z,16nm,0.8s,mb5.0
FRU Bishkek 35.54 333 *i* P P **08 10 02.0 +0.6**
FRU *e* 08 11 23.0
FRU pmax pmax
comp=Z,70nm,1.5s,mb5.4
CHMS Chumysh 35.61 333 P P **08 10 02.6 +0.5**
SNR=9.2
EKS2 Erkin-Say 35.78 332 P P **08 10 04.7 +1.2**
SNR=21
USP Ospenovka 35.94 334 P P **08 10 02.0 -2.8**
SNR=27
MKAR Makanchi Array 36.29 345 P P **08 10 08.3 +0.4**
comp=Z,35nm,0.8s,mb5.3,baz=155,slow=7.9,SNR=51
MKAR Makanchi Array 36.29 345 P P **08 10 08.3 +0.4**
MKAR pmax pmax
comp=Z,35nm,0.9s
MKAR Makanchi Array 36.29 345 P P **08 10 08.3 +0.4**
WSAR Wadi Sarin 36.71 293 P P **08 10 12.2 +0.8**
comp=Z,9.4nm,0.9s,mb4.6,baz=100,slow=10,SNR=4.5
SONM Songino Array 36.73 12 P P **08 10 13.8 +2.2**
comp=Z,7.8nm,1.1s,mb4.5,baz=197,slow=7.4,SNR=22
SONM Songino Array 36.73 12 P P **08 10 13.8 +2.2**
SONM pmax pmax
comp=Z,8.0nm,1.1s
ULN Ulaanbaatar 36.90 13 P P **08 10 12.2 -0.9**
SNR=9.1
ULN Ulaanbaatar 36.90 13 *e*P P **08 10 12.3 -0.8**
ULN pmax pmax
comp=Z,25nm,1.8s,mb4.7
ULN Ulaanbaatar 36.90 13 *e*P P **08 10 12.3 -0.8**
comp=Z,25nm,1.8s,mb4.7
SMDO Samad 37.20 292 P P **08 10 18.4 +2.8**
SNR=6.2
KK31 Karatay Array 37.67 330 *i* P P **08 10 15.8 -3.8**
KK31 pmax pmax
comp=Z,18nm,1.2s,mb4.7
KKAR Karatay Array 37.67 330 P P **08 10 15.8 -3.8**
KKAR pmax pmax
comp=Z,23nm,1.3s,mb4.8
BSY Bisya 37.92 291 P P **08 10 21.4 -0.4**
SNR=6.8
ZAK Zakamensk 38.66 8 *e*P P **08 10 22.0 -5.9**
TLY Talaya 39.98 8 P P **08 10 38.8 -0.1**
SNR=16
TLY Talaya 39.98 8 *e*P P **08 10 38.4 -0.5**
TLY *e* 08 12 10.3
TLY pmax pmax
comp=Z,36nm,1.9s,mb4.8
TLY MLR MLR
comp=Z,226nm,16.0s,MS4.1
IRK Irkutsk 40.61 8 *e*P P **08 10 45.6 +1.4**
IRK *e* 08 12 20.8
IRK pmax pmax
comp=Z,49nm,2.2s,mb4.8
MBWA Marble Bar 40.77 144 *e*P P **08 10 45.9 +0.4**
comp=Z,39nm,1.7s,mb4.8
FITZ Fitzroy Crossi 42.29 135 P P **08 11 03.2 +5.3**
comp=Z,4.4nm,0.6s,mb4.2,baz=319,slow=6.0,SNR=19
ZAL Zalesovo 42.55 351 P P **08 11 01.0 +1.0**
comp=Z,8.8nm,0.7s,mb4.6,baz=294,slow=10.0,SNR=33
ZAL Zalesovo 42.55 351 P P **08 11 01.0 +1.0**
ZAL pmax pmax
comp=Z,9.0nm,0.7s
MDJ Mudanjiang 43.56 36 P P **08 11 07.0 -1.2**
MDJ AP pP 08 11 16.0 -2.5
MDJ XP sP 08 11 19.8 -2.9
MDJ PP PP 08 12 49.0 -0.8
MDJ SCP ScP 08 16 42.8 -1.4
MDJ PCS PcS 08 16 46.3 -1.9
MDJ S S **08 17 35.5 +0.6**
MDJ XS sS 08 17 51.0 -0.9
MDJ AMB AMB
comp=Z,4.0nm,0.6s,mb4.3
MDJ AMB AMB
comp=Z,56nm,4.9s
MDJ LR LR
comp=N,121nm,17.9s,MS4.0
MDJ LR LR
comp=E,139nm,18.7s,MS4.0
MDJ LR LR
comp=Z,112nm,17.9s,MS3.8
NVS Novosibirsk 43.67 350 *i* P P **08 11 09.2 +0.1**
NVS *e*S S **08 17 26.4 -10**
NVS pmax pmax
comp=N,30nm,1.5s
NVS pmax pmax
comp=Z,41nm,1.5s,mb4.9
NVS smax
comp=N,46nm,2.2s
VOSK Vostochnaya 45.00 339 P P **08 11 15.0 -4.7**
VOSK pmax pmax
comp=Z,24nm,1.0s,mb5.0
MAJO Matsushiro 45.37 50 *e*P P **08 11 23.0 +0.4**
MAJO pmax pmax
comp=Z,11nm,1.3s,mb4.5
MAJO Matsushiro 45.37 50 *e*P P **08 11 23.0 +0.4**
comp=Z,11nm,1.3s,mb4.5
MAT Matsushiro 45.37 50 P P **08 11 21.0 -1.6**
MAT *e*S S **08 18 01.0 -0.2**
MJAR Matsushiro Arr 45.37 50 PcP PcP 08 13 04.8 +3.1
comp=Z,1.9nm,0.8s,baz=259,slow=3.1,SNR=4.8
BVAR Borovoye Array 45.45 339 P P **08 11 23.7 +0.4**
comp=Z,8.8nm,0.9s,mb4.6,baz=133,slow=8.3,SNR=34
BVAR Borovoye Array 45.45 339 P P **08 11 23.7 +0.4**
BVAR pmax pmax
comp=Z,9.0nm,0.9s
BVAR Borovoye Array 45.45 339 P P **08 11 23.7 +0.4**
BRVK Borovoye 45.52 339 *e*P P **08 11 20.7 -3.1**
BRVK *e*P 08 11 25.3
ZRNK Zerenda 45.89 338 *e*P P **08 11 23.6 -3.2**
ZRNK pmax pmax
comp=Z,15nm,0.8s,mb5.0
ZRNK Zerenda 45.89 338 *e*P P **08 11 23.6 -3.2**
comp=Z,15nm,0.8s,mb5.0
CHKZ Chkalovo 45.91 340 *e*P P **08 11 23.9 -3.0**
CHKZ pmax pmax
comp=Z,42nm,0.8s,mb5.4
CHKZ Chkalovo 45.91 340 *e*P P **08 11 23.9 -3.0**
comp=Z,42nm,0.8s,mb5.4
AB31 Akbulak array 47.22 329 *i* P P **08 11 33.6 -3.6**
AB31 pmax pmax
comp=Z,12nm,0.8s,mb4.9
BOD Bodaibo 47.71 13 *e*P P **08 11 39.3 -1.7**
BOD pmax pmax
comp=Z,30nm,1.9s,mb5.0
GUMO Guam 48.09 83 *e*P P **08 11 44.0 +0.1**
comp=Z,0.1nm,0.3s
MUN Mundaring 48.15 156 *e*P P **08 11 44.0 -0.4**
MUN *e* 08 11 50.7
AKTK Aktyubinsk 48.93 329 P P **08 11 50.1 -0.3**
AKTO Aktyubinsk 48.93 329 P P **08 11 50.1 -0.3**
comp=Z,11nm,0.9s,mb4.9,baz=121,slow=12,SNR=23
AKTO Aktyubinsk 48.93 329 P P **08 11 50.2 -0.2**
AKTO pmax pmax
comp=Z,11nm,0.9s,mb4.9
NWAO Narrogin (SRO) 49.39 156 *e*P P **08 11 53.0 -0.9**
NWAO pmax pmax
comp=Z,42nm,1.1s
NWAO Narrogin (SRO) 49.39 156 *e*P P **08 11 53.0 -0.9**
comp=Z,42nm,1.1s,mb5.4
WRA Warramunga Arr 49.78 129 P P **08 12 02.4 +5.5**
comp=Z,16nm,0.7s,mb5.2,baz=308,slow=8.3,SNR=75
WRA PcP PcP 08 13 19.9 +2.5
comp=Z,2.0nm,0.8s,baz=319,slow=3.1,SNR=3.2
WRA Warramunga Arr 49.78 129 P P **08 12 02.4 +5.5**
WRA 08 13 19.9
WRA pmax pmax
comp=Z,17nm,0.7s
WRAB Tennant Creek 49.79 129‖ *e*P P **08 11 57.0 0.0**
WRAB Tennant Creek 49.79 129 *e*P P **08 11 56.7 -0.3**
comp=Z,31nm,0.8s,mb5.4
WB2 Warramunga Arr 49.79 129 *e*P P **08 11 56.0 -1.0**
WB2 *i* 08 12 02.7
ASAR Alice Springs 51.74 133 P P **08 12 17.4 +5.7**
comp=Z,7.5nm,0.6s,mb4.8,baz=313,slow=6.7,SNR=22
GNI Garni 52.52 312 P P **08 12 19.7 +2.2**
SNR=7.3
GNI Garni 52.52 312 *e*P P **08 12 15.9 -1.6**
GNI pmax pmax
comp=Z,26nm,0.9s
GNI Garni 52.52 312 *e*P P **08 12 15.9 -1.6**
comp=Z,26nm,0.9s,mb5.2
ARU Arti 52.55 335⇑ *i*P P **08 12 14.2 -3.5**
ARU *e* 08 13 26.3
ARU *e*S S **08 19 39.2 -2.9**
ARU *e*SS SS 08 23 17.0 -3.5
ARU pmax pmax
comp=Z,23nm,0.8s,mb5.2
ARU MLR MLR
comp=Z,200nm,23.0s,MS4.1
ARU MLR MLR
comp=N,200nm,21.0s,MS4.3
ARU MLR MLR
comp=E,200nm,21.0s,MS4.3
ARU Arti 52.55 335 *e*P P **08 12 14.7 -3.0**
comp=E,26nm,0.8s,mb5.2
ZEI Tsey 53.93 314 *e*P P **08 12 24.9 -3.0**
ZEI *e**PP pP 08 12 32.2 -6.2
ZEI pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
KIV Kislovodsk 55.15 315 P P **08 12 34.0 -2.7**
KIV *e* 08 12 47.3
KIV *e* 08 15 49.9
KIV pmax pmax
comp=Z,20nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,200nm,20.0s,MS4.2
KIV Kislovodsk 55.15 315 *e*P P **08 12 33.9 -2.8**
comp=Z,13nm,0.6s,mb5.1
OPO Ambohidratompo 56.58 238 P P **08 12 49.7 +2.8**
comp=Z,1.1nm,0.5s,mb4.1,baz=54,slow=11,SNR=3.2
MALT Malatya 56.82 308 *e*P P **08 12 46.2 -2.4**
MALT pmax pmax
comp=Z,12nm,1.3s,mb4.8
MALT Malatya 56.82 308 *e*P P **08 12 46.2 -2.4**
comp=Z,12nm,1.3s,mb4.8
ASF Jabal al Asfar 57.12 300 P P **08 12 48.9 -1.9**
comp=Z,3.1nm,0.7s,mb4.5,baz=284,slow=4.1,SNR=7.2
ASF Jabal al Asfar 57.12 300 P P **08 12 48.9 -1.9**
ASF pmax pmax
comp=Z,3.0nm,0.7s
MMAI Mount Meron Ar 58.47 301 P P **08 13 00.9 +0.7**
comp=Z,0.5nm,0.3s,mb4.1,baz=105,slow=9.1,SNR=3.6
EIL Elat 58.57 297 *e*P P **08 12 58.0 -2.9**
comp=Z,75nm,0.7s,mb5.8
CTA Charters Tower 59.33 122 P P **08 13 12.4 +6.2**
comp=Z,2.0nm,0.8s,mb4.2,baz=302,slow=12,SNR=3.8
CTA Charters Tower 59.33 122 P P **08 13 12.4 +6.2**
CTA pmax pmax
comp=Z,20nm,0.8s
CTAO Charters Tower 59.33 122 *e*P P **08 13 06.6 +0.4**
CTAO pmax pmax
comp=Z,11nm,1.3s,mb4.7
CTAO Charters Tower 59.33 122 *e*P P **08 13 06.6 +0.4**
comp=Z,11nm,1.3s,mb4.7
BR131 Keskin Array S 60.74 309 *e*P P **08 13 12.2 -3.7**
comp=Z,3.4nm,0.6s,mb4.7
BRTR Keskin Array B 60.74 309 P P **08 13 11.7 -4.2**
comp=Z,4.2nm,0.7s,mb4.7,baz=124,slow=7.3,SNR=17
BRTR Keskin Array B 60.74 309 P P **08 13 11.7 -4.2**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR Keskin Array B 60.74 309 P P **08 13 11.7 -4.2**
STKA Stephens Creek 62.16 136 *e*P P **08 13 25.0 -0.4**
comp=Z,3.3nm,0.9s,mb4.5
STKA *e* 08 13 31.1
STKA Stephens Creek 62.16 136 P P **08 13 30.8 +5.3**
comp=Z,9.6nm,0.7s,mb5.0,baz=310,slow=8.5,SNR=18
MOS Moscow 62.19 327 *e*P P **08 13 25.5 -0.2**
MOS pmax pmax
comp=Z,93nm,1.4s,mb5.7
MA2 Magadan 62.39 28 *e*P P **08 13 26.2 -0.8**
MA2 pmax pmax
comp=Z,24nm,1.2s,mb5.2
MA2 Magadan 62.39 28 *e*P P **08 13 26.2 -0.8**
comp=Z,24nm,1.2s,mb5.2
OBN Obninsk 62.54 326⇑ P P **08 13 25.0 -3.0**
OBN pmax pmax
comp=Z,20nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.3
OBN Obninsk 62.54 326 *e*P P **08 13 25.4 -2.6**
comp=Z,88nm,1.8s,mb5.6
AKASG Malin Array Be 65.70 320 P P **08 13 46.6 -2.1**
comp=Z,2.0nm,0.6s,mb4.3,baz=85,slow=5.1,SNR=16
AKASG Malin Array Be 65.70 320 P P **08 13 46.6 -2.1**
AKASG pmax pmax
comp=Z,20nm,0.6s
AKBB Malin Array Si 65.70 320 *e*P P **08 13 45.9 -2.8**
MLR Muntele Rosu 67.11 314 P P **08 13 55.1 -2.6**
comp=Z,7.9nm,1.0s,mb4.7,baz=25,slow=0.3,SNR=6.3
MLR Muntele Rosu 67.11 314 P P **08 13 55.1 -2.7**
MLR pmax pmax
comp=Z,8.0nm,1.0s
HNR Honiara 67.54 106 *e*P P **08 14 00.1 -0.4**
HNR pmax pmax
comp=Z,170nm,1.3s,mb5.9
HNR Honiara 67.54 106 *e*P P **08 14 00.1 -0.3**
comp=Z,170nm,1.3s,mb5.9
JOF Joensuu 67.62 334 *e*p P **08 14 00.9 -0.1**
comp=Z,11nm,0.8s,mb4.9
JOF Joensuu 67.62 334 *e*P P **08 14 00.9 -0.1**
JOF pmax pmax
comp=Z,11nm,0.8s,mb4.9
APA Apatity 68.36 339⇑ *i*P P **08 14 06.7 +1.0**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,400nm,17.0s,MS4.7
FINES FINESS Array B 69.60 331 P P **08 14 13.5 +0.1**
comp=Z,4.1nm,0.7s,mb4.5,baz=113,slow=9.3,SNR=14
FINES FINESS Array B 69.60 331 P P **08 14 13.5 +0.1**
FINES pmax pmax
comp=Z,4.0nm,0.7s
KAF Kangasniemi 69.64 332 *e*p P **08 14 13.7 +0.1**
baz=101,slow=5.9
CRVS Cervenica-Dubn 70.45 318 *e* P **08 14 16.3 -2.3**
STHS Stebnicka Huta 70.63 318 *e*P P **08 14 20.4 +0.7**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
STHS Stebnicka Huta 70.63 318 *e*P P **08 14 20.4 +0.7**
comp=Z,3.6nm,1.0s,mb4.3
KECS Kecovo 71.08 317 *e*P P **08 14 22.7 +0.4**
KECS pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
KECS Kecovo 71.08 317 *e*P P **08 14 22.7 +0.4**
comp=Z,4.7nm,1.3s,mb4.3
PSZ Piszkesteto 71.44 317 *e*P P **08 14 22.2 -2.4**
PSZ pmax pmax
comp=Z,22nm,1.5s,mb4.9
PSZ Piszkesteto 71.44 317 *e*P P **08 14 22.2 -2.4**
comp=Z,22nm,1.5s,mb4.9
OJC Ojcow 71.62 319 *e*P P **08 14 26.5 +0.9**
BILL Bilibino 71.65 22 P P **08 14 26.0 +0.2**
BILL *e* pP 08 14 36.1 -0.6
BILL *e* 08 14 48.6
BILL pmax pmax
comp=Z,15nm,1.9s,mb4.6
BILL MLR MLR
comp=Z,400nm,19.0s,MS4.7
ARCES ARCESS Array B 71.74 340 P P **08 14 26.2 -0.1**
comp=Z,2.0nm,0.7s,mb4.2,baz=86,slow=6.2,SNR=10
LSZ Lusaka 71.98 249 *e*P P **08 14 25.8 -2.0**
LSZ pmax pmax
comp=Z,14nm,1.8s,mb4.6
LSZ Lusaka 71.98 249 *e*P P **08 14 25.8 -2.0**
comp=Z,14nm,1.8s,mb4.6
VYHS Vyhne 72.17 317 *e*P P **08 14 28.9 0.0**
comp=Z,3.5nm,1.1s,mb4.2
MORC Moravsky Berou 73.05 318 *e*P P **08 14 31.8 -2.4**
MORC pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MORC Moravsky Berou 73.05 318 *e*P P **08 14 31.8 -2.4**
comp=Z,7.2nm,0.8s,mb4.7
ZST Bratislava 73.32 317 *e*P P **08 14 36.2 +0.4**
VRAC Vranov 73.67 318 P P **08 14 38.2 +0.4**
comp=Z,4.4nm,0.5s,mb4.7,baz=58,slow=9.5,SNR=3.6
VRAC Vranov 73.67 318 P P **08 14 38.2 +0.4**
VRAC pmax pmax
comp=Z,4.0nm,0.5s
DPC Dobruska-Polom 73.85 319 *e*P P **08 14 36.9 -2.0**
KSP Ksiaz 73.87 320 *e*P P **08 14 37.9 -1.1**
UPC Upice 74.05 319 *e*P P **08 14 41.2 +1.2**
PRU Pruhonice 75.00 319 *e*P P **08 14 43.1 -2.4**
BRG Berggiesshubel 75.36 320 *e*P P **08 14 48.8 +1.2**
comp=Z,10.0nm,0.9s,mb4.8
BRG Berggiesshubel 75.36 320 *e*P P **08 14 45.5 -2.2**
comp=Z,3.0nm,0.9s,mb4.2
BRG *e* 08 14 48.9
comp=Z,6.2nm,0.9s
BRG *e* pP 08 14 56.4 -2.2
comp=Z,4.8nm,1.1s
BRG Berggiesshubel 75.36 320 *e*P P **08 14 45.5 -2.1**
BRG *e* pP 08 14 56.4 -2.2
BRG pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
HFS Hagfors 75.48 329 P P **08 14 48.3 0.0**
comp=Z,5.9nm,0.7s,mb4.7,baz=100,slow=5.0,SNR=14
HFS Hagfors 75.48 329 P P **08 14 48.3 0.0**
HFS pmax pmax
comp=Z,6.0nm,0.7s
VOY Vojsko 75.56 315 *e*P P **08 14 49.4 +0.6**
GEC2 GERESS Array S 75.57 318 *e*P P **08 14 49.7 +0.8**
comp=Z,12nm,0.8s,mb4.9
GEC2 GERESS Array S 75.57 318 *e*P P **08 14 49.7 +0.8**
GEC2 pmax pmax
comp=Z,12nm,0.8s,mb4.9
GERES GERESS Array B 75.57 318 P P **08 14 49.0 +0.2**
comp=Z,7.9nm,0.7s,mb4.8,baz=89,slow=5.5,SNR=30
GERES GERESS Array B 75.57 318 P P **08 14 49.0 +0.1**
GERES pmax pmax
comp=Z,8.0nm,0.7s
GERES GERESS Array B 75.57 318 P P **08 14 49.0 +0.2**
KHC Kasperske Hory 75.64 318 *e*P P **08 14 46.5 -2.8**
KHC *ex* x 08 14 50.0
KHC *e*pP pP 08 14 57.5 -2.7
FBE Freiberg 75.73 320 *e*P P **08 14 51.1 +1.3**
comp=Z,18nm,0.8s,mb5.0
CLL Collm 75.94 320 *e*P P **08 14 51.7 +0.7**
comp=Z,11nm,0.2s,mb5.4
CLL Collm 75.94 320 *e*P P **08 14 52.0 +1.0**
CLL MLR MLR
comp=Z,100nm,15.0s,MS4.2
WET Wettzell 76.10 318 *e*P P **08 14 52.9 +1.0**
comp=Z,14nm,1.3s,mb4.7
WET Wettzell 76.10 318 *e*P P **08 14 52.9 +1.0**
WET pmax pmax
comp=Z,14nm,1.3s,mb4.7
TANN Tannenbergstha 76.32 319 *e*P P **08 14 54.2 +1.1**
comp=Z,8.0nm,1.2s,mb4.5
GUNZ Gunzen 76.40 319 *e*P P **08 14 54.7 +1.1**
comp=Z,10.0nm,1.0s,mb4.7
WERD Werda 76.42 319 *e*P P **08 14 54.6 +0.9**
comp=Z,14nm,1.4s,mb4.7
ROTZ Rotzenmuhle 76.51 319 *e*P P **08 14 55.8 +1.6**
comp=Z,12nm,1.3s,mb4.7
NB2 NORSAR Subarra 76.70 330 P P **08 14 55.3 0.0**
comp=Z,0.3nm,0.7s,baz=89,slow=6.5
NOA NORSAR Array B 76.70 330 P P **08 14 55.6 +0.4**
comp=Z,1.7nm,0.7s,mb4.1,baz=89,slow=5.8,SNR=11
MOX Moxa 76.85 319 *e*P P **08 14 57.0 +0.9**
comp=Z,9.0nm,0.8s,mb4.8
MOX Moxa 76.85 319 *e*P P **08 14 57.0 +0.9**
MOX pmax pmax
comp=Z,18nm,1.2s,mb4.9
GRA1 Grafenberg Arr 77.16 318 *e*P P **08 14 59.3 +1.5**
comp=Z,10.0nm,0.6s,mb4.9
GRF Grafenberg Arr 77.16 318 *e*P P **08 14 59.3 +1.5**
comp=Z,10.0nm,0.6s,mb4.9
GRF Grafenberg Arr 77.16 318 *e*P P **08 14 59.3 +1.5**
GRF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
GRF Grafenberg Arr 77.16 318 *e*P P **08 14 59.3 +1.5**
GRF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
BSEG Bad Segeberg 77.46 323 *e*P P **08 15 00.9 +1.4**
comp=Z,20nm,1.3s,mb4.9
BSEG Bad Segeberg 77.46 323 *e*P P **08 15 00.9 +1.4**
BSEG pmax pmax
comp=Z,20nm,1.3s,mb4.9
LBTB Lobatse 77.47 241 *e*P P **08 14 58.2 -1.4**
LBTB *e*P 08 15 00.6
GTTG Gvttingen 77.83 320 *e*P P **08 15 02.6 +1.0**
comp=Z,16nm,0.7s,mb5.1
TNS Taunus Mts 78.90 319 *e*P P **08 15 08.4 +0.9**
comp=Z,10.0nm,0.8s,mb4.8
TNS Taunus Mts 78.90 319 *e*P P **08 15 08.4 +0.9**
TNS pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BOSA Boshof 78.98 237 P P **08 15 11.4 +3.5**
comp=Z,8.5nm,0.8s,mb4.7,baz=103,slow=6.3,SNR=12
BOSA Boshof 78.98 237 P P **08 15 11.5 +3.5**
BOSA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BOSA Boshof 78.98 237 *e*P P **08 15 05.6 -2.4**
BOSA *e*P 08 15 06.3
BOSA P 08 15 11.4
CASY Casey 78.99 174 *e*P P **08 15 06.7 -1.4**
comp=Z,22nm,1.4s,mb4.9
BUG Bochum--Univer 79.52 320 *e*P P **08 15 12.2 +1.3**
comp=Z,15nm,0.8s,mb5.0
CDF Champ du Feu 79.86 317 *e*P P **08 15 12.7 0.0**
KEST Kesra 79.92 304 P P **08 15 14.2 +1.2**
comp=Z,3.8nm,0.9s,mb4.3,baz=22,slow=11,SNR=6.3
HINF Hinteralfeld 80.21 317 *e*P P **08 15 15.3 +0.7**
HAU Haudompre 80.52 317 *e*P P **08 15 16.2 -0.1**
comp=Z,24nm,0.9s,mb4.8
HAU *e*R
comp=Z,114nm,20.5s
HAU Haudompre 80.52 317 *e*P P **08 15 16.2 -0.1**
HAU pmax pmax
comp=Z,12nm,0.9s,mb4.8
HAU MLR MLR
comp=Z,110nm,20.5s,MS4.2
HAU Haudompre 80.52 317 *e*P P **08 15 16.2 -0.1**
comp=Z,12nm,0.9s,mb4.8
HAU LR LR
comp=Z,110nm,20.5s,MS4.2
MBDF Montbardon 80.67 314 *e*P P **08 15 16.7 -0.4**
comp=Z,24nm,1.1s,mb4.8
MBDF Montbardon 80.67 314 *e*P P **08 15 16.7 -0.4**
MBDF pmax pmax
comp=Z,12nm,1.0s,mb4.8
MBDF Montbardon 80.67 314 *e*P P **08 15 16.7 -0.4**
comp=Z,12nm,1.0s,mb4.8
CABF La Chapelle 80.89 316 *e*P P **08 15 18.6 +0.3**
comp=Z,40nm,1.2s,mb4.9

CABF	**La Chapelle**	**80.89**	**316**	*eP*	**P**	**08 15 18.6**	**+0.3**
CABF				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
CABF	**La Chapelle**	**80.89**	**316**	*eP*	**P**	**08 15 18.6**	**+0.3**
	comp=Z,20nm,1.2s,mb4.9						
FRF	**La Foret Royal**	**80.92**	**313**	*eP*	**P**	**08 15 18.7**	**+0.3**
	comp=Z,38nm,0.9s,mb5.0						
FRF	**La Foret Royal**	**80.92**	**313**	*eP*	**P**	**08 15 18.7**	**+0.3**
FRF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
FRF	**La Foret Royal**	**80.92**	**313**	*eP*	**P**	**08 15 18.7**	**+0.3**
	comp=Z,19nm,0.9s,mb5.0						
LMR	**La Mourre**	**81.05**	**312**	*eP*	**P**	**08 15 19.4**	**+0.3**
	comp=Z,17nm,0.9s,mb4.7						
LMR	**La Mourre**	**81.05**	**312**	*eP*	**P**	**08 15 19.4**	**+0.3**
LMR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LMR	**La Mourre**	**81.05**	**312**	*eP*	**P**	**08 15 19.4**	**+0.3**
	comp=Z,8.4nm,0.9s,mb4.7						
GIVF	**Givet**	**81.23**	**319**	*eP*	**P**	**08 15 20.3**	**+0.2**
ORIF	**Oris-en-Rattie**	**81.27**	**314**	*eP*	**P**	**08 15 20.2**	**-0.1**
	comp=Z,8.6nm,0.8s,mb4.4						
ORIF				*eR*			
	comp=Z,98nm,20.8s						
ORIF	**Oris-en-Rattie**	**81.27**	**314**	*eP*	**P**	**08 15 20.2**	**-0.1**
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ORIF	**Oris-en-Rattie**	**81.27**	**314**	*eP*	**P**	**08 15 20.2**	**-0.1**
	comp=Z,4.3nm,0.8s,mb4.4						
BAIF	**Baives**	**81.62**	**319**	*eP*	**P**	**08 15 22.7**	**+0.5**
	comp=Z,20nm,0.8s,mb4.8						
BAIF	**Baives**	**81.62**	**319**	*eP*	**P**	**08 15 22.7**	**+0.5**
BAIF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
BAIF	**Baives**	**81.62**	**319**	*eP*	**P**	**08 15 22.7**	**+0.5**
	comp=Z,10nm,0.8s,mb4.8						
SMRF	**Simiane la Rot**	**81.63**	**313**	*eP*	**P**	**08 15 23.0**	**+0.8**
	comp=Z,10nm,0.7s,mb4.6						
SMRF	**Simiane la Rot**	**81.63**	**313**	*eP*	**P**	**08 15 23.0**	**+0.8**
	comp=Z,10nm,0.7s,mb4.9						
VIVF	**Saint-Julien-l**	**82.13**	**314**	*eP*	**P**	**08 15 25.1**	**+0.3**
	comp=Z,29nm,1.2s,mb4.8						
VIVF	**Saint-Julien-l**	**82.13**	**314**	*eP*	**P**	**08 15 25.1**	**+0.3**
VIVF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
VIVF	**Saint-Julien-l**	**82.13**	**314**	*eP*	**P**	**08 15 25.1**	**+0.3**
	comp=Z,15nm,1.2s,mb4.8						
LOR	**Lormes**	**82.30**	**317**	*eP*	**P**	**08 15 25.8**	**+0.1**
	comp=Z,14nm,0.8s,mb4.6						
LOR				*eR*			
	comp=Z,97nm,22.8s						
LOR	**Lormes**	**82.30**	**317**	*eP*	**P**	**08 15 25.8**	**+0.1**
LOR				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
LOR				MLR	MLR		
	comp=Z,100nm,22.8s,MS4.1						
LOR	**Lormes**	**82.30**	**317**	*eP*	**P**	**08 15 25.8**	**+0.1**
	comp=Z,6.8nm,0.8s,mb4.6						
LOR				LR	LR		
	comp=Z,100nm,22.8s,MS4.1						
SMF	**Signal de Mont**	**82.41**	**316**	*eP*	**P**	**08 15 26.3**	**0.0**
	comp=Z,22nm,0.9s,mb4.8						
SMF	**Signal de Mont**	**82.41**	**316**	*eP*	**P**	**08 15 26.3**	**0.0**
SMF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
SMF	**Signal de Mont**	**82.41**	**316**	*eP*	**P**	**08 15 26.3**	**0.0**
	comp=Z,11nm,0.9s,mb4.8						
SSF	**Saint Saulge**	**82.57**	**316**	*eP*	**P**	**08 15 27.4**	**+0.3**
	comp=Z,7.7nm,0.7s,mb4.5						
SSF	**Saint Saulge**	**82.57**	**316**	*eP*	**P**	**08 15 27.4**	**+0.3**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
SSF	**Saint Saulge**	**82.57**	**316**	*eP*	**P**	**08 15 27.4**	**+0.3**
	comp=Z,3.8nm,0.7s,mb4.5						
AVF	**Avril sur Loir**	**82.72**	**316**	*eP*	**P**	**08 15 27.9**	**0.0**
	comp=Z,10nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**82.72**	**316**	*eP*	**P**	**08 15 27.9**	**0.0**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**82.72**	**316**	*eP*	**P**	**08 15 27.9**	**0.0**
	comp=Z,5.3nm,0.8s,mb4.6						
MAW	**Mawson**	**82.96**	**192**	P	**P**	**08 15 32.1**	**+3.0**
	comp=Z,5.3nm,1.0s,mb4.5,baz=23,slow=8.9,SNR=8.2						
MAW	**Mawson**	**82.96**	**192**	*eP*	**P**	**08 15 28.4**	**-0.8**
MAW				pmax	pmax		
	comp=Z,21nm,1.0s						
MAW	**Mawson**	**82.96**	**192**	*eP*	**P**	**08 15 28.4**	**-0.8**
	comp=Z,21nm,1.0s,mb5.1						
MAW				P		08 15 32.1	
TCF	**Toulx Ste Croi**	**83.58**	**316**	*eP*	**P**	**08 15 33.0**	**+0.6**
	comp=Z,47nm,1.4s,mb5.1						
TCF	**Toulx Ste Croi**	**83.58**	**316**	*eP*	**P**	**08 15 33.0**	**+0.6**
TCF				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.1						
TCF	**Toulx Ste Croi**	**83.58**	**316**	*eP*	**P**	**08 15 33.0**	**+0.6**
	comp=Z,24nm,1.4s,mb5.1						
CAF	**Calviac**	**83.94**	**315**	*eP*	**P**	**08 15 35.0**	**+0.8**
	comp=Z,20nm,1.0s,mb4.9						
CAF	**Calviac**	**83.94**	**315**	*eP*	**P**	**08 15 35.0**	**+0.8**
CAF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
CAF	**Calviac**	**83.94**	**315**	*eP*	**P**	**08 15 35.0**	**+0.8**
	comp=Z,10.0nm,1.0s,mb4.9						
MTLF	**Montolieu**	**84.14**	**313**	*eP*	**P**	**08 15 35.8**	**+0.6**
	comp=Z,6.7nm,0.7s,mb4.6						
MTLF	**Montolieu**	**84.14**	**313**	*eP*	**P**	**08 15 35.8**	**+0.6**
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
MTLF	**Montolieu**	**84.14**	**313**	*eP*	**P**	**08 15 35.8**	**+0.6**
	comp=Z,3.3nm,0.6s,mb4.6						
RJF	**Les Rejaudoux**	**84.25**	**315**	*eP*	**P**	**08 15 36.6**	**+0.8**
	comp=Z,21nm,0.9s,mb5.0						
RJF				*eR*			
	comp=Z,52nm,20.5s						
RJF	**Les Rejaudoux**	**84.25**	**315**	*eP*	**P**	**08 15 36.6**	**+0.8**
RJF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
RJF				MLR	MLR		
	comp=Z,50nm,20.5s,MS3.9						
RJF	**Les Rejaudoux**	**84.25**	**315**	*eP*	**P**	**08 15 36.6**	**+0.8**
	comp=Z,10nm,0.9s,mb5.0						
RJF				LR	LR		
	comp=Z,50nm,20.5s,MS3.9						
LDF	**La Druitiere**	**84.68**	**318**	*eP*	**P**	**08 15 38.4**	**+0.5**
	comp=Z,19nm,0.8s,mb5.0						
LDF	**La Druitiere**	**84.68**	**318**	*eP*	**P**	**08 15 38.4**	**+0.5**
LDF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
LDF	**La Druitiere**	**84.68**	**318**	*eP*	**P**	**08 15 38.4**	**+0.5**
	comp=Z,9.6nm,0.8s,mb5.0						
FLN	**La Foliniere**	**84.88**	**319**	*eP*	**P**	**08 15 39.4**	**+0.5**
	comp=Z,15nm,0.8s,mb4.9						
FLN				*eR*			
	comp=Z,89nm,20.5s						
FLN	**La Foliniere**	**84.88**	**319**	*eP*	**P**	**08 15 39.4**	**+0.5**
FLN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
FLN				MLR	MLR		
	comp=Z,90nm,20.5s,MS4.1						
FLN	**La Foliniere**	**84.88**	**319**	*eP*	**P**	**08 15 39.4**	**+0.5**
	comp=Z,7.6nm,0.8s,mb4.9						
FLN				LR	LR		
	comp=Z,90nm,20.5s,MS4.1						
EKA	**Eskdalemuir Ar**	**84.98**	**325**	P	**P**	**08 15 41.3**	**+1.8**
	comp=Z,3.0nm,0.7s,mb4.5,baz=82,slow=6.2,SNR=5.2						
EKA	**Eskdalemuir Ar**	**84.98**	**325**	P	**P**	**08 15 41.3**	**+1.8**
EKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**84.98**	**325**	P	**P**	**08 15 41.3**	**+1.8**
GRR	**Gorron**	**85.20**	**318**	*eP*	**P**	**08 15 41.0**	**+0.4**
ETSF	**Etsaut**	**86.22**	**313**	*eP*	**P**	**08 15 46.6**	**+1.0**
	comp=Z,60nm,1.4s,mb5.3						
ETSF	**Etsaut**	**86.22**	**313**	*eP*	**P**	**08 15 46.6**	**+1.0**
ETSF				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.3						
ETSF	**Etsaut**	**86.22**	**313**	*eP*	**P**	**08 15 46.6**	**+1.0**
	comp=Z,30nm,1.4s,mb5.3						
SGMF	**Saint Gilles**	**86.33**	**318**	*eP*	**P**	**08 15 46.8**	**+0.6**
	comp=Z,48nm,1.2s,mb5.3						
SGMF	**Saint Gilles**	**86.33**	**318**	*eP*	**P**	**08 15 46.8**	**+0.6**
SGMF				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.3						
SGMF	**Saint Gilles**	**86.33**	**318**	*eP*	**P**	**08 15 46.8**	**+0.6**
	comp=Z,24nm,1.2s,mb5.3						
SJPF	**Ste Jean**	**86.64**	**313**	*eP*	**P**	**08 15 48.8**	**+1.1**
	comp=Z,28nm,1.0s,mb5.1						
SJPF	**Ste Jean**	**86.64**	**313**	*eP*	**P**	**08 15 48.8**	**+1.1**
SJPF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
SJPF	**Ste Jean**	**86.64**	**313**	*eP*	**P**	**08 15 48.8**	**+1.1**
	comp=Z,14nm,1.0s,mb5.2						
ROSF	**Rostrenen**	**86.78**	**319**	*eP*	**P**	**08 15 49.2**	**+0.8**
	comp=Z,25nm,1.0s,mb5.1						
ROSF	**Rostrenen**	**86.78**	**319**	*eP*	**P**	**08 15 49.2**	**+0.8**
ROSF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
ROSF	**Rostrenen**	**86.78**	**319**	*eP*	**P**	**08 15 49.2**	**+0.8**
	comp=Z,12nm,1.0s,mb5.1						
RPZ	**Rata Peaks**	**88.11**	**135**	P	**P**	**08 15 59.8**	**+5.0**
	comp=Z,7.4nm,0.8s,mb5.0,baz=309,slow=6.0,SNR=5.8						
ESDC	**Sonseca Array**	**89.49**	**310**	P	**P**	**08 16 03.2**	**+1.9**
	comp=Z,2.4nm,0.6s,mb4.7,baz=61,slow=4.4,SNR=9.5						
ESLA	**Sonseca Array**	**89.49**	**310**	*eP*	**P**	**08 15 59.4**	**-1.9**
	comp=Z,0.7nm,0.7s,mb4.1						
SYO	**Syowa Base**	**89.85**	**197**	⇑*e*pP	pP	08 16 10.3	-3.8
MCK	**McKinley**	**90.03**	**24**	*eP*	**P**	**08 16 02.2**	**-1.6**
MCK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.8						
MCK	**McKinley**	**90.03**	**24**	*eP*	**P**	**08 16 02.2**	**-1.6**
	comp=Z,5.7nm,1.1s,mb4.8						
TORD	**Torodi Ar. Bea**	**90.91**	**284**	P	**P**	**08 16 09.7**	**+1.8**
	comp=Z,3.6nm,1.1s,mb4.6,baz=39,slow=2.1,SNR=9.6						
TORD				PP	PP	08 19 45.9	+1.8
	comp=Z,1.2nm,0.9s,baz=50,slow=7.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	**90.91**	**284**	P	**P**	**08 16 09.7**	**+1.8**
TORD				PP	PP	08 19 45.9	+1.8
PMR	**Palmer**	**90.96**	**26**	*eP*	**P**	**08 16 07.0**	**-1.1**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.9						
PMR	**Palmer**	**90.96**	**26**	*eP*	**P**	**08 16 07.0**	**-1.1**
	comp=Z,4.0nm,0.6s,mb4.9						
INK	**Inuvik**	**92.55**	**16**	P	**P**	**08 16 18.0**	**+2.6**
	comp=Z,3.7nm,0.9s,mb4.8,baz=5.2,slow=4.0,SNR=4.5						
INK	**Inuvik**	**92.55**	**16**	P	**P**	**08 16 18.0**	**+2.6**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**92.55**	**16**	P	**P**	**08 16 18.0**	**+2.6**
RAO	**Raoul Island**	**92.91**	**119**	*eP*	**P**	**08 16 17.1**	**0.0**
RAO				pmax	pmax		
	comp=Z,20nm,0.4s,mb5.9						
RAO	**Raoul Island**	**92.91**	**119**	*eP*	**P**	**08 16 17.1**	**0.0**
	comp=Z,198nm,0.4s						
DAWY	**Dawson**	**93.42**	**21**	*eP*	**P**	**08 16 20.6**	**+1.1**
PDAR	**Pinedale Array**	**120.73**	**21**	PKP	PKPdf	08 21 58.5	+2.4
	comp=Z,0.8nm,0.9s,baz=324,slow=2.0,SNR=6.0						
BDFB	**Brasilia**	**144.44**	**260**	PKP	PKPdf	08 22 43.5	+3.3
	comp=Z,1.9nm,0.7s,baz=137,slow=3.0,SNR=4.7						
PLCA	**Paso Flores**	**148.99**	**201**	PKPbc	PKPbc	08 22 55.3	+3.3
	comp=Z,4.1nm,0.8s,baz=150,slow=3.4,SNR=14						
PLCA	**Paso Flores**	**148.99**	**201**	PKP2	PKPab	08 22 55.3	-0.9
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CPUP	**Villa Florida**	**150.80**	**237**	PKPbc	PKPbc	08 22 57.2	+0.8
	comp=Z,1.6nm,0.9s,baz=318,slow=2.8,SNR=4.2						
CPUP	**Villa Florida**	**150.80**	**237**	PKIKP	PKPdf	08 22 57.3	+6.5
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LPAZ	**La Paz**	**163.60**	**254**	PKPab	PKPab	08 24 00.4	+1.8
	comp=Z,1.7nm,1.1s,baz=44,slow=6.0,SNR=3.1						

***IDC* 25 08:15:46.9±1.2, 2458N×14256E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/18, mbtmp4.0/4, ML4.1/1, MS4.3/1, Ms1 4.3/1, ms1mx2.6/28, 1D, Error ellipse: s-maj=89.8km s-min=20.5km az=89.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.53**	**352**	Pn	Pn	08 16 29.1	0.0
	39nm,0.3s,baz=242,slow=7.5,SNR=11						
CBIJ				Sn	Sn	08 16 59.9	-0.8
	38nm,0.3s,baz=287,slow=22,SNR=7.4						
PMG	**Port Moresby**	**34.07**	**172**	LR	LR	08 33 33.2	
	comp=Z,500nm,21.4s,baz=209,slow=31						
WB2	**Warramunga Arr**	**44.97**	**191**	⇓*i*P	P	08 24 03.8	+0.1
WRA	**Warramunga Arr**	**44.97**	**191**	P	P	08 24 03.9	+0.2
	3.3nm,0.5s,baz=10,slow=8.7,SNR=71						
ASAR	**Alice Springs**	**48.69**	**191**	P	P	08 24 32.7	-0.1
	0.3nm,0.6s,baz=13,slow=8.9,SNR=7.7						
NB2	**NORSAR Subarra**	**86.07**	**339**	P	P	08 28 29.9	+0.5
	comp=Z,0.5nm,0.5s,baz=45,slow=4.8						
NOA	**NORSAR Array B**	**86.07**	**339**	P	P	08 28 30.3	+0.8
	comp=Z,0.6nm,0.6s,baz=46,slow=4.7,SNR=4.1						
LPAZ	**La Paz**	**150.13**	**80**	PKPbc	PKPbc	08 35 40.5	+0.9
	comp=Z,0.5nm,0.6s,baz=90,slow=2.0,SNR=5.3						

MOS ***25*** *08:40:55.6±2.7, 3590N×6961E, h131km, mb4.4/3, Error ellipse: s-maj=22.2km s-min=13.6km az=99.5*
NEIC ***25*** *08:41:02.5±2.6, 3629N×7020E, h163km±29km, mb4.7/6, Error ellipse: s-maj=28.6km s-min=6.8km az=59.0*
ISCJB ***25*** *08:41:04.9±0.6, 3651N±005×7054E±009, h203km±9km, mb3.5/5, Error ellipse: s-maj=12.5km s-min=6.4km az=136.6*
IDC ***25*** *08:41:05.2±10.0, 3625N×7031E, h197km±114km, mb3.2/4, mb1 3.2/6, mb1mx3.0/23, mbtmp3.7/6, Error ellipse: s-maj=80.0km s-min=49.4km az=97.0*

ISC 25 08:41:05.6±0.6, 3654N±005×7051E±009, h197km±8km, n32, σ0°75/37, mb3.5/5, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.94**	**157**	⇓P	**Pn**	**08 41 54.6**	**+0.3**
CEP				S	**Sn**	**08 42 27.0**	**-5.4**
CHCP	**Chirah Chowk**	**3.65**	**141**	P	**Pn**	**08 42 03.7**	**+0.8**
THW	**Thamme Wali**	**3.87**	**164**	⇑P	**Pn**	**08 42 05.1**	**-0.5**
SBDP	**Sheikh Budin**	**4.23**	**177**	P	**Pn**	**08 42 09.8**	**-0.4**
SARP	**Sargodha**	**4.94**	**158**	P	**Pn**	**08 42 18.3**	**-0.8**
KK31	**Karatay Array**	**6.56**	**0**	⇓Pn	**Pn**	**08 42 39.4**	**-0.6**
	0.4nm,0.2s,baz=172,slow=12,SNR=15						
KK31				⇑Sn	**Sn**	**08 43 50.1**	**-4.7**
	6.9nm,0.5s,baz=187,slow=22,SNR=5.3						
AAK	**Ala-Archa**	**6.82**	**26**	*e*Pn	**Pn**	**08 42 43.2**	**-0.2**
AAK				*e*Sn	**Sn**	**08 44 00.0**	**-1.0**
MKAR	**Makanchi Array**	**13.49**	**37**	P	**Pn**	**08 44 12.7**	**+3.4**
	0.3nm,0.3s,baz=231,slow=10,SNR=4.4						
KOLN	**Koldanda**	**14.11**	**125**	*e*P	**Pn**	**08 44 16.2**	**-0.7**
	5.1nm,0.4s						
GKN	**Gorkha**	**14.66**	**121**	*e*P	**Pn**	**08 44 23.3**	**-0.4**
AB31	**Akbulak array**	**14.86**	**332**	P	**Pn**	**08 44 27.7**	**+1.5**
	0.6nm,0.4s,baz=140,slow=14,SNR=15						
DMN	**Daman**	**15.23**	**122**	*e*P	**Pn**	**08 44 30.9**	**+0.3**
KKN	**Kakani**	**15.23**	**121**	*e*P	**Pn**	**08 44 30.4**	**-0.3**
	20nm,0.5s						
KKN	**Kakani**	**15.23**	**121**	*e*P	**Pn**	**08 44 30.4**	**-0.3**
KKN				pmax	pmax		
	comp=Z,21nm,0.5s						
PKI	**Pulchoki**	**15.46**	**121**	*e*P	**Pn**	**08 44 33.4**	**0.0**
	comp=Z,24nm,0.7s						
PKI	**Pulchoki**	**15.46**	**121**	*e*P	**Pn**	**08 44 33.4**	**0.0**
PKI				pmax	pmax		
	comp=Z,24nm,0.7s						
GUN	**Gumba**	**15.58**	**119**	*e*P	**Pn**	**08 44 35.7**	**+0.8**
	comp=Z,11nm,0.4s						
JIRN	**Jiri**	**15.95**	**119**	*e*P	**Pn**	**08 44 40.1**	**+0.7**
	comp=Z,19nm,0.4s						
BRVK	**Borovoye**	**16.52**	**360**	*e*P	**Pn**	**08 44 46.5**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**16.52**	**360**	*e*P	**Pn**	**08 44 46.5**	**+0.3**
	comp=Z,1.2nm,0.8s						
AKTK	**Aktyubinsk**	**16.55**	**331**	P	**Pn**	**08 44 47.4**	**+0.7**
AKTK				S	**S**	**08 47 47.7**	**-0.9**
AKTO	**Aktyubinsk**	**16.55**	**331**	P	**Pn**	**08 44 47.4**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=145,slow=12,SNR=3.5						
AKTO				S	**S**	**08 47 47.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=2.5						
FINES	**FINESS Array B**	**37.23**	**326**	P	**P**	**08 47 58.5**	**+0.4**
	comp=Z,2.5nm,1.0s,mb3.7,baz=120,slow=11,SNR=5.8						
FINES	**FINESS Array B**	**37.23**	**326**	P	**P**	**08 47 58.5**	**+0.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**40.96**	**338**	P	**P**	**08 48 29.9**	**+1.0**
	comp=Z,0.4nm,0.4s,mb3.2,baz=113,slow=8.0,SNR=10						
KULM	**Kulim**	**41.59**	**131**	*e*P	**P**	**08 48 33.5**	**-0.5**
NB2	**NORSAR Subarra**	**44.11**	**323**	P	**P**	**08 48 54.3**	**0.0**
	comp=Z,0.5nm,0.4s,mb3.2,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**44.11**	**323**	P	**P**	**08 48 54.3**	**0.0**
	comp=Z,0.9nm,0.7s,mb3.2,baz=97,slow=7.8,SNR=4.6						
NOA	**NORSAR Array B**	**44.11**	**323**	P	**P**	**08 48 54.3**	**0.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LSZ	**Lusaka**	**65.20**	**226**	*e*P	**P**	**08 51 14.7**	**-11**
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
LSZ	**Lusaka**	**65.20**	**226**	*e*P	**P**	**08 51 14.7**	**-11**
	comp=Z,9.7nm,0.9s,mb4.4						
TORD	**Torodi Ar. Bea**	**65.32**	**268**	P	**P**	**08 51 25.5**	**-1.0**
	comp=Z,0.2nm,0.4s,mb3.1,baz=59,slow=5.7,SNR=4.9						

NEIC ***25*** *08:42:39.9, 1931N×10549W, h10km, MD4.3(MEX), After MEX.*

MEX 25 08:42:40.1±0.9, 1931N×10550W, h14km±88km, MD4.3, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**0.47**	**67**	*i* P	Pg	08 42 48.0	-1.4
CJM				*i* S	Sg	08 42 54.2	-1.5
SFJM	**Santa Fe**	**2.59**	**63**	*i* P	Pn	08 43 19.7	-2.0
SFJM				*i* S	Sn	08 43 51.0	-2.0
MOIG	**Morelia**	**4.08**	**84**	*i* P	Pn	08 43 40.2	-2.0
MOIG				*i* S	Sn	08 44 27.8	-2.0
MOIG	**Morelia**	**4.08**	**84**	*i* P	Pn	08 43 43.9	+1.7
MOIG				*i* S	Sn	08 44 30.6	+0.8
ZAIG	**Zacatecas**	**4.40**	**38**	*e*P	Pn	08 43 44.9	-1.5
ZAIG				*i* S	Sn	08 44 34.2	-3.4
ZAIG	**Zacatecas**	**4.40**	**38**	*e*P	Pn	08 43 47.9	+1.5
ZAIG				*i* S	Sn	08 44 34.2	-3.4
MEIG	**Mezcala**	**5.75**	**103**	*i* S	Sn	08 45 09.0	-1.8
PLIG	**Platanillo**	**5.75**	**98**	*i* S	Sn	08 45 08.9	-2.1

NNC ***25*** *08:50:36.4±4.2, 3809N×7127E, h63km±128km, mb3.5, mpv3.6, Error ellipse: s-maj=46.9km s-min=24.8km az=54.0*
NEIC ***25*** *08:50:46.5±11.0, 3920N×7164E, h2km±70km, mb4.1/2, Error ellipse: s-maj=35.0km s-min=13.4km az=192.0*
IDC ***25*** *08:50:46.0±1.0, 3922N×7177E, h0km, mb3.8/7, mb1 3.8/10, mb1mx3.6/24, mbtmp3.7/10, ML3.3/3, MS3.3/1, Ms1 3.4/1, ms1mx2.4/37, Error ellipse: s-maj=20.9km s-min=16.2km az=49.0*
MOS ***25*** *08:50:50.8±1.9, 3940N×7158E, h40km, mb4.2/5, Error ellipse: s-maj=20.7km s-min=11.3km az=86.9*
ISCJB ***25*** *08:50:51.9±0.8, 3938N±005×7155E±009, h50km±11km, mb3.8/8, MS3.3/1, Error ellipse: s-maj=12.0km s-min=7.7km az=176.0*

ISC 25 08:50:52.4±2.8, 3950N±004×7132E±009, h26km±26km, n41, σ1°20/47, mb3.8/8, MS3.3/1, 4C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.19**	**34**	P	**Pn**	**08 51 41.8**	**+0.9**
	SNR=27						
UCH	**Uchtor**	**3.65**	**41**	P	**Pn**	**08 51 48.5**	**+1.3**
	SNR=6.4						
KK31	**Karatay Array**	**3.66**	**351**	⇑P	**Pn**	**08 51 49.0**	**+1.7**
	18nm,0.5s,baz=172,slow=12,SNR=17						
KK31				⇑S	**Sn**	**08 52 47.3**	**+18**
	70nm,0.7s,baz=194,slow=56,SNR=3.8						
EKS2	**Erkin-Say**	**3.67**	**30**	P	**Pn**	**08 51 48.4**	**+0.9**
	SNR=5.5						
KZA	**Kyzart**	**3.94**	**48**	P	**Pn**	**08 51 51.1**	**-0.2**
	SNR=10						
AAK	**Ala-Archa**	**3.95**	**36**	P	**Pn**	**08 51 52.1**	**+0.8**
	SNR=16						
AAK	**Ala-Archa**	**3.95**	**36**	*e*Pn	**Pn**	**08 51 50.8**	**-0.5**
AAK				*e*Sn	**Sn**	**08 52 41.0**	**+4.2**
KBK	**Karagaybulak**	**4.18**	**40**	P	**Pn**	**08 51 54.3**	**-0.3**
	SNR=13						
CHMS	**Chumysh**	**4.35**	**35**	P	**Pn**	**08 51 57.0**	**+0.1**
	SNR=16						
USP	**Ospenovka**	**4.46**	**31**	P	**Pn**	**08 51 58.5**	**+0.2**
	SNR=8.2						
ULHL	**Ulahol**	**4.63**	**52**	P	**Pn**	**08 51 59.9**	**-0.9**
	SNR=7.6						
TKM2	**Tokmak 2**	**4.70**	**42**	P	**Pn**	**08 52 00.9**	**-0.7**
	SNR=15						
TKM2	**Tokmak 2**	**4.70**	**42**	⇑P	**Pn**	**08 52 00.7**	**-0.9**
	1.0nm,0.6s						
CEP	**Cherat**	**5.68**	**175**	P	**Pn**	**08 52 13.6**	**-1.5**
CEP				S	**Sn**	**08 53 26.0**	**+6.5**
CHCP	**Chirah Chowk**	**6.03**	**164**	P	**Pn**	**08 52 21.1**	**+1.2**
THW	**Thamme Wali**	**6.70**	**177**	P	**Pn**	**08 52 28.0**	**-1.1**
MKAR	**Makanchi Array**	**10.83**	**44**

JOF	**Joensuu**	**1.80**	**172**	*e*P		Pn	09 00 27.7	-0.7
JOF				*e*S		Sn	09 00 51.1	-0.8
JOF				MSG			09 00 54.9	
	comp=Z,13nm,0.2s							
OUL	**Oulu**	**2.11**	**283**	*e*P		Pn	09 00 33.0	+0.3
OUL				*e*S		Sn	09 00 58.9	-0.7
APA0	**Apatity Array**	**3.06**	**16**	*e*P		Pn	09 00 46.4	+0.6
APA0				*e*SG		Sg	09 01 33.4	-1.1
APA0	**Apatity Array**	**3.06**	**16**	Pn		Pn	09 00 46.4	+0.6
	baz=192,slow=14							
APA0				Lg			09 01 33.4	
	baz=188,slow=37							
SGF	**Sodankyl**	**3.25**	**330**	*e*P		Pn	09 00 48.2	-0.2
SGF				*e*SB		Sb	09 01 32.2	-2.7
SGF				MSG			09 01 42.9	
	comp=Z,7.3nm,0.2s							
FIA0	**FINESS Array S**	**3.90**	**215**	*e*P		Pn	09 00 57.4	+0.2
FIA0				*e*SG		Sg	09 01 55.9	-5.3
FIA0	**FINESS Array S**	**3.90**	**215**	Pn		Pn	09 00 57.4	+0.2
	baz=35,slow=14							
FIA0				Lg			09 01 55.9	
	baz=33,slow=37							
FINES	**FINESS Array B**	**3.90**	**215**	Pn		Pn	09 00 57.9	+0.7
	comp=Z,0.1nm,0.3s,baz=32,slow=14,SNR=7.7							
FINES				Pg		Pg	09 01 06.2	-4.5
	comp=Z,0.4nm,0.3s,baz=35,slow=14,SNR=10							
FINES				Lg			09 01 55.5	
	comp=Z,0.7nm,0.3s,baz=43,slow=24,SNR=7.7							
KTK1	**Kautokeino**	**5.25**	**329**	*e*P		Pn	09 01 16.6	+0.8
KTK1				AML		AML	09 02 38.5	
	comp=Z,3.7nm,0.5s							
ARA0	**ARCESS Array S**	**5.27**	**340**	Pn		Pn	09 01 13.4	-2.7
	baz=155,slow=14							
ARA0				Sn		Sn	09 02 11.4	-6.2
	baz=154,slow=28							
ARA0				Lg			09 02 34.7	
	baz=165,slow=37							
ARA0	**ARCESS Array S**	**5.27**	**340**	*e*P		Pn	09 01 13.4	-2.7
ARA0				*e*S		Sn	09 02 11.4	-6.2
ARA0				*e*SB		Sb	09 02 34.7	+1.7
ARCES	**ARCESS Array B**	**5.27**	**340**	Pn		Pn	09 01 15.1	-1.0
	comp=Z,0.5nm,0.3s,baz=156,slow=14,SNR=32							
ARCES				Sn		Sn	09 02 13.9	-3.7
	comp=Z,0.5nm,0.3s,baz=152,slow=25,SNR=3.5							
ARCES				Lg			09 02 36.5	
	comp=Z,0.8nm,0.3s,baz=148,slow=30,SNR=8.1							
HFS	**Hagfors**	**9.13**	**248**	*e*P		Pn	09 02 05.4	-3.6
HFS				*e*SG			09 04 39.2	
HFS	**Hagfors**	**9.13**	**248**	P		Pn	09 02 05.4	-3.6
	baz=58,slow=14							
HFS				Lg			09 04 39.2	
	baz=53,slow=37							
NOA	**NORSAR Array B**	**9.63**	**257**	Pn		Pn	09 02 15.6	-0.4
	comp=Z,0.2nm,0.3s,baz=57,slow=13,SNR=2.3							

*ISCJB **25** 09:21:44.4±1.3, 1835S×006E×714W±0.1, h52km±14km, mb3.9/5, Error ellipse: s-maj=24.3km s-min=8.6km az=154.5*
*NEIC **25** 09:21:45.6±1.4, 1834S×7149W, h60km±15km, mb3.8/1, Error ellipse: s-maj=21.7km s-min=12.6km az=95.0*
*IDC **25** 09:21:49.6±5.6, 1858S×7107W, h65km±35km, mb3.7/4, mb1 3.8/7, mb1mx3.6/19, mbtmp3.9/7, ML3.9/3, Error ellipse: s-maj=75.1km s-min=28.1km az=116.0*

ISC 25 09:21:45.4±1.3, 1834S±006×715W±02, h50km±14km, n12, σ1§13/14, mb3.9/5, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**1.87**	**1**	*e*P		**Pn**	**09 22 15.0**	**0.0**
ARE				*e*S		**Sn**	**09 22 37.0**	**-0.4**
LPAZ	**La Paz**	**3.82**	**58**	P		**Pn**	**09 22 43.9**	**+2.2**
	1.8nm,0.3s,baz=251,slow=11,SNR=45							
LPAZ	**La Paz**	**3.82**	**58**	P		**Pn**	**09 22 43.9**	**+2.2**
LVC	**Limon Verde**	**4.90**	**151**	*e*Pn		**Pn**	**09 22 56.2**	**-0.3**
LVC				*e*Sn		**Sn**	**09 23 52.3**	**+0.5**
SIV	**San Ignacio**	**10.25**	**78**	P		**Pn**	**09 24 09.0**	**-0.8**
	1.4nm,0.3s,baz=264,slow=13,SNR=49							
CPUP	**Villa Florida**	**15.33**	**124**	P		**Pn**	**09 25 15.0**	**-3.5**
	0.2nm,0.3s,baz=319,slow=11,SNR=2.7							
CPUP	**Villa Florida**	**15.33**	**124**	P		**Pn**	**09 25 15.0**	**-3.5**
TRQA	**Tornquist**	**21.34**	**159**	*e*P		**P**	**09 26 27.5**	**-0.8**
	2.9nm,0.6s,mb3.8							
PLCA	**Paso Flores**	**22.33**	**178**	P		**P**	**09 26 39.5**	**+0.7**
	2.3nm,1.0s,mb3.5,baz=1.4,slow=11,SNR=4.8							
BDFB	**Brasilia**	**22.63**	**87**	P		**P**	**09 26 41.2**	**-0.8**
	4.8nm,0.5s,mb4.2,baz=274,slow=11,SNR=8.0							
DBIC	**Dimbokro**	**70.26**	**76**	P		**P**	**09 32 55.9**	**+2.5**
	3.9nm,0.9s,mb4.3,baz=214,slow=9.3,SNR=5.1							
TORD	**Torodi Ar. Bea**	**78.66**	**72**	P		**P**	**09 33 41.5**	**-0.6**
	0.6nm,0.7s,mb3.6,baz=267,slow=4.8,SNR=3.2							

*NEIC **25** 09:25:24.2, 2836S×7124W, h34km, ML3.9(GUC), After GUC.*

GUC 25 09:25:24.2±0.7, 2836S×7124W, h34km±6km, ML3.9, 5C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.48**	**117**	⇑*i*P		Pb	09 25 37.1	+2.7
VACH				*i* S		Sb	09 25 44.5	+2.9
VACH				AML		AML	09 25 45.0	
	comp=E,42μm,0.1s							
VACH	**Vallenar**	**0.48**	**117**	⇑*i*P		Pb	09 25 37.1	+2.7
VACH				*i* S		Sb	09 25 44.5	+2.9
LCO	**Las Campanas**	**0.81**	**144**	*e*P		Pn	09 25 39.9	+0.8
LCO				*i* S		Sn	09 25 51.5	+1.6
CPCH	**Copiapo**	**1.27**	**38**	⇓*i*P		Pn	09 25 46.5	+1.0
CPCH				*i* S		Sn	09 26 03.2	+1.9
CPCH				AML		AML	09 26 08.4	
	comp=E,12μm,0.1s							
CPCH	**Copiapo**	**1.27**	**38**	⇓*i*P		Pn	09 25 46.5	+1.0
CPCH				*i* S		Sn	09 26 03.2	+1.9
CDCH	**Caldera**	**1.33**	**16**	*e*P		Pn	09 25 46.3	-0.1
CDCH				*i* S		Sn	09 26 03.8	+0.9
CDCH				AML		AML	09 26 11.1	
	comp=N,486nm,0.2s							
CDCH	**Caldera**	**1.33**	**16**	*e*P		Pn	09 25 46.3	-0.1
CDCH				*i* S		Sn	09 26 03.8	+0.9
TLL	**Tololo Astrono**	**1.84**	**168**	⇑*i*P		Pn	09 25 55.7	+2.3
TLL				*i* S		Sn	09 26 19.3	+3.8
TLL				AML		AML	09 26 29.3	
	comp=N,1μm,0.5s							
TLL	**Tololo Astrono**	**1.84**	**168**	⇑*i*P		Pn	09 25 55.7	+2.3
TLL				*i* S		Sn	09 26 19.3	+3.8
CMCH	**Combarbala**	**2.81**	**176**	⇑*i*P		Pn	09 26 07.0	+0.2
PTCH	**Petorca**	**3.90**	**176**	*e*P		Pn	09 26 22.6	+0.9
PTCH				*i* S		Sn	09 27 08.2	+1.9

IDC 25 09:32:33.1±80.0, 031N×12614E, h640km±345km, mb2.7/3, mb1 2.9/3, mb1mx2.6/16, mbtmp3.7/3, Error ellipse: s-maj=1002.0km s-min=153.5km az=158.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**14.37**	**154**	*e*P		P	09 35 35.7	+1.9
	7.5nm,0.6s							
WRA	**Warramunga Arr**	**21.68**	**159**	P		P	09 36 40.3	+0.4
	1.2nm,0.3s,baz=339,slow=9.8,SNR=68							
WRA				ScP		ScP	09 42 51.3	-0.2
	0.1nm,0.5s,baz=331,slow=2.9,SNR=5.6							
WB2	**Warramunga Arr**	**21.68**	**159**	*e*P		P	09 36 40.0	0.0
ASAR	**Alice Springs**	**25.00**	**163**	P		P	09 37 09.2	-0.1
	0.4nm,0.4s,baz=337,slow=6.6,SNR=19							
ASAR				ScP		ScP	09 43 00.8	+0.3
	0.3nm,0.9s,baz=340,slow=3.8,SNR=4.5							
STKA	**Stephens Creek**	**35.20**	**157**	P		P	09 38 37.3	+1.0
	0.8nm,0.3s,baz=334,slow=9.6,SNR=6.2							

*BJI **25** 10:32:30.2, 660N×14880E, h10km, mB5.0, mb4.7*
*IDC **25** 10:32:31.8±0.6, 664N×14883E, h0km, mb4.4/15, mb1 4.5/16, mb1mx4.5/19, mbtmp4.4/16, ML4.9/1, MS3.6/7, Ms1 3.5/7, ms1mx3.2/23, Error ellipse: s-maj=25.7km s-min=14.6km az=92.0*
*NEIC **25** 10:32:33.2±0.3, 662N×14880E, h10km, mb4.9/16, Error ellipse: s-maj=10.3km s-min=6.9km az=98.0*
*ISCJB **25** 10:32:35.1±0.3, 656N±005×14875E±008, h33km, mb4.6/35, MS3.6/5, Error ellipse: s-maj=12.1km s-min=7.6km az=22.0*
*MOS **25** 10:32:35.3±0.9, 667N×14859E, h33km, mb4.9/19, Error ellipse: s-maj=19.2km s-min=11.6km az=103.2*

ISC 25 10:32:37.2±0.3, 656N±005×14885E±008, h35km, n81, σ0§86/68, mb4.6/35, MS3.6/5, 1C, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**8.01**	**331**	Pn		**Pn**	**10 34 26.8**	**-4.2**
	15nm,0.3s,baz=143,slow=9.1,SNR=12							
GUMO				Sn		**Sn**	**10 35 52.6**	**-7.8**
	5.7nm,0.3s,baz=3.5,slow=19,SNR=2.9							
GUMO	**Guam**	**8.01**	**331**	P		**Pn**	**10 34 26.8**	**-4.2**
GUMO							10 35 52.6	
GUMO				pmax		pmax		
	comp=Z,15nm,0.3s							
GUMO				smax				
	comp=N,6.0nm,0.3s							
PMG	**Port Moresby**	**15.95**	**186**	LR		LR	10 41 42.5	
	comp=N,118nm,19.1s,baz=18,slow=34							
HNR	**Honiara**	**19.36**	**145**	LR		LR	10 43 18.1	
	comp=N,85nm,18.2s,baz=359,slow=33							
KAKA	**Kakadu**	**25.16**	**220**	*e*P		**P**	**10 37 58.4**	**-0.7**
	comp=N,11nm,0.7s,mb4.5							
WRAB	**Tennant Creek**	**29.95**	**208**	*e*P		**P**	**10 38 41.1**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.5							
WRAB	**Tennant Creek**	**29.95**	**208**	*e*P		**P**	**10 38 41.1**	**-0.9**
	comp=Z,8.1nm,0.8s,mb4.5							
WB2	**Warramunga Arr**	**29.96**	**208**	*e*P		**P**	**10 38 40.4**	**-1.7**
WRA	**Warramunga Arr**	**29.96**	**208**	P		**P**	**10 38 42.4**	**+0.3**
	comp=Z,4.0nm,0.7s,mb4.2,baz=32,slow=10,SNR=33							
WRA				PcP		PcP	10 41 44.7	+0.6
	comp=Z,1.3nm,0.6s,baz=22,slow=2.8,SNR=13							
WRA				LR		LR	10 51 29.3	
	comp=Z,150nm,19.7s,MS3.6,baz=355,slow=38							
WRA	**Warramunga Arr**	**29.96**	**208**	P		**P**	**10 38 42.4**	**+0.2**
WRA							10 41 44.7	
WRA				pmax		pmax		
	comp=Z,4.0nm,0.7s							
WRA				MLR		MLR		
	comp=Z,150nm,19.7s							
MJAR	**Matsushiro Arr**	**31.39**	**343**	LR		LR	10 48 59.5	
	comp=Z,134nm,19.5s,MS3.6,baz=175,slow=32							
DZM	**Mont Dzumac**	**33.27**	**149**	P		**P**	**10 39 12.4**	**+1.2**
	comp=Z,4.5nm,0.6s,mb4.5,baz=305,slow=14,SNR=6.9							
AS31	**Alice Springs**	**33.40**	**205**	*e*P		**P**	**10 39 12.1**	**-0.3**
ASAR	**Alice Springs**	**33.41**	**205**	P		**P**	**10 39 12.4**	**0.0**
	comp=Z,4.4nm,0.6s,mb4.5,baz=34,slow=7.3,SNR=66							
ASAR				PcP		PcP	10 41 54.0	+0.6
	comp=Z,1.1nm,0.7s,baz=37,slow=2.6,SNR=11							
ASAR				LR		LR	10 53 48.0	
	comp=Z,72nm,20.1s,MS3.4,baz=1.2,slow=38							
ASAR	**Alice Springs**	**33.41**	**205**	P		**P**	**10 39 12.5**	**+0.1**
ASAR							10 41 54.0	
ASAR				pmax		pmax		
	comp=Z,4.0nm,0.6s							
ASAR				MLR		MLR		
	comp=Z,72nm,20.1s							
ASPA	**Alice Springs**	**33.41**	**205**	*e*P		**P**	**10 39 12.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**33.55**	**223**	*e*P		**P**	**10 39 13.4**	**-0.3**
	comp=Z,12nm,0.6s,mb5.0							
FITZ	**Fitzroy Crossi**	**33.55**	**223**	P		**P**	**10 39 14.0**	**+0.3**
	comp=Z,4.3nm,0.7s,mb4.5,baz=39,slow=11,SNR=25							
STKA	**Stephens Creek**	**38.85**	**190**	*e*P		**P**	**10 39 56.7**	**-2.2**
	comp=Z,2.3nm,0.6s,mb4.1							
STKA	**Stephens Creek**	**38.85**	**190**	P		**P**	**10 39 58.1**	**-0.8**
	comp=Z,2.8nm,0.6s,mb4.2,baz=11,slow=6.6,SNR=9.9							
STKA				LR		LR	10 53 56.2	
	comp=Z,97nm,20.7s,MS3.6,baz=24,slow=33							
MBWA	**Marble Bar**	**39.70**	**225**	*e*P		**P**	**10 40 07.5**	**+1.4**
FORT	**Forrest**	**42.13**	**207**	*e*P		**P**	**10 40 27.9**	**+1.8**
	comp=Z,12nm,0.7s,mb4.6							
LZH	**Lanzhou**	**50.54**	**312**	*e*P		**P**	**10 41 33.0**	**+0.9**
LZH				AP		pP	10 41 37.3	-5.3
LZH				XP		sP	10 41 39.5	-7.2
LZH				AMB		AMB		
	comp=Z,22nm,1.4s,mb4.9							
CIT	**Chita**	**53.82**	**334**	*e*P		**P**	**10 41 46.0**	**-10**
CIT				pmax		pmax		
	comp=Z,6.0nm,1.2s,mb4.4							
SONM	**Songino Array**	**54.71**	**326**	P		**P**	**10 42 03.0**	**+0.1**
	comp=Z,3.4nm,1.0s,mb4.3,baz=134,slow=7.3,SNR=15							
SONM	**Songino Array**	**54.71**	**326**	P		**P**	**10 42 03.0**	**+0.1**
SONM				pmax		pmax		
	comp=Z,3.0nm,1.0s							
GTA	**Gaotai**	**54.80**	**314**	*e*P		**P**	**10 42 05.0**	**+1.4**
GTA				AP		pP	10 42 08.0	-6.2
GTA				XP		sP	10 42 10.8	-7.5
GTA				AMB		AMB		
	comp=Z,4.0nm,0.9s,mb4.5							
ZAK	**Zakamensk**	**57.83**	**327**	*e*P		**P**	**10 42 24.3**	**-0.9**
ZAK				*e*			10 43 17.1	
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.6s,mb4.1							
BILL	**Bilibino**	**62.50**	**7**	⇑*e*P		**P**	**10 42 57.2**	**+0.1**
BILL				pmax		pmax		
	comp=Z,18nm,1.2s,mb5.1							
JIRN	**Jiri**	**62.80**	**298**	*e*P		**P**	**10 42 59.7**	**+0.5**
	comp=Z,22nm,0.7s,mb5.4							
GUN	**Gumba**	**63.10**	**298**	*e*P		**P**	**10 43 02.0**	**+0.8**
PKI	**Pulchoki**	**63.48**	**297**	*e*P		**P**	**10 43 04.1**	**+0.5**
	comp=Z,19nm,0.9s,mb5.2							
PKI	**Pulchoki**	**63.48**	**297**	*e*P		**P**	**10 43 04.1**	**+0.5**
PKI				pmax		pmax		
	comp=Z,19nm,0.9s,mb5.2							
KKN	**Kakani**	**63.61**	**298**	*e*P		**P**	**10 43 05.5**	**+0.9**
	comp=Z,18nm,0.8s,mb5.2							
KKN	**Kakani**	**63.61**	**298**	*e*P		**P**	**10 43 05.5**	**+0.9**
KKN				pmax		pmax		
	comp=Z,18nm,0.8s,mb5.2							
DMN	**Daman**	**63.75**	**297**	*e*P		**P**	**10 43 05.9**	**+0.5**
GKN	**Gorkha**	**64.20**	**298**	*e*P		**P**	**10 43 08.6**	**+0.2**
	comp=Z,40nm,1.0s,mb5.4							
KOLN	**Koldanda**	**65.09**	**297**	*e*P		**P**	**10 43 14.3**	**+0.1**
	comp=Z,18nm,0.9s,mb5.1							
PPT	**Papeete**	**65.35**	**113**	*e*LR		LR	11 02 16.1	
	comp=Z,46nm,25.5s							
PPT	**Papeete**	**65.35**	**113**	*e*T			11 54 02.4	
	comp=Z,2.4nm,0.3s							
PAE	**Paea**	**65.37**	**113**	*e*T			11 54 04.0	
	comp=Z,11nm,0.3s							
TVO	**Taravao**	**65.70**	**113**	*e*T			11 54 28.9	
	comp=Z,4.5nm,0.3s							
PMOR	**Pomariorio Ree**	**66.24**	**109**	*e*T			11 55 09.1	
	comp=Z,4.8nm,0.3s							
MKAR	**Makanchi Array**	**69.27**	**318**	P		**P**	**10 43 40.4**	**-0.3**
	comp=Z,1.6nm,0.6s,mb4.1,baz=99,slow=7.5,SNR=6.5							
MKAR	**Makanchi Array**	**69.27**	**318**	P		**P**	**10 43 40.4**	**-0.3**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.6s							
ZAL	**Zalesovo**	**69.60**	**325**	P		**P**	**10 43 42.1**	**-0.6**
	comp=Z,1.5nm,0.3s,mb4.4,baz=241,slow=2.6,SNR=3.2							
ZAL				LR		LR	11 14 04.8	
	comp=Z,50nm,19.6s,MS3.8,baz=265,slow=36							
ZAL	**Zalesovo**	**69.60**	**325**	P		**P**	**10 43 42.2**	**-0.6**
ZAL				pmax		pmax		
	comp=Z,2.0nm,0.3s							
ZAL				MLR		MLR		
	comp=Z,50nm,19.6s							
NVS	**Novosibirsk**	**70.74**	**326**	*e*P		**P**	**10 43 48.6**	**-1.1**
NVS				pmax		pmax		
	comp=E,9.0nm,1.3s							
NVS				pmax		pmax		
	comp=Z,10.0nm,1.3s,mb4.6							
NVS				pmax		pmax		
	comp=N,3.0nm,1.0s							
EGAK	**Eagle**	**75.62**	**25**	*e*P		**P**	**10 44 18.7**	**+0.1**
DAWY	**Dawson**	**76.19**	**25**	*e*P		**P**	**10 44 21.5**	**-0.3**
CHKZ	**Chkalovo**	**77.77**	**323**	*e*P		**P**	**10 44 29.6**	**-1.1**
CHKZ				pmax		pmax		
	comp=Z,9.0nm,1.0s,mb4.7							
CHKZ	**Chkalovo**	**77.77**	**323**	*e*P		**P**	**10 44 29.6**	**-1.1**
	comp=Z,9.1nm,1.0s,mb4.7							
BRVK	**Borovoye**	**77.92**	**323**	*e*P		**P**	**10 44 32.1**	**+0.6**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.0							
BRVK	**Borovoye**	**77.92**	**323**	*e*P		**P**	**10 44 32.1**	**+0.6**
	comp=Z,2.4nm,0.9s,mb4.1							
ZRNK	**Zerenda**	**78.68**	**323**	*e*P		**P**	**10 44 34.8**	**-0.9**
ZRNK				pmax		pmax		
	comp=Z,11nm,1.1s,mb4.7							
ZRNK	**Zerenda**	**78.68**	**323**	*e*P		**P**	**10 44 34.8**	**-0.9**
	comp=Z,11nm,1.1s,mb4.7							
INK	**Inuvik**	**79.36**	**22**	P		**P**	**10 44 38.9**	**-0.6**
	comp=Z,4.6nm,0.9s,mb4.4,baz=274,slow=7.4,SNR=4.8							
INK	**Inuvik**	**79.36**	**22**	P		**P**	**10 44 38.9**	**-0.6**
INK				pmax		pmax		
	comp=Z,5.0nm,0.9s							
INK	**Inuvik**	**79.36**	**22**	*e*P		**P**	**10 44 39.3**	**-0.2**
RKT	**Rikitea**	**79.96**	**115**	*e*T			12 12 17.7	
	comp=Z,2.0nm,0.3s							
VNDA	**Vanda**	**84.28**	**177**	P		**P**	**10 45 05.4**	**0.0**
	comp=Z,1.3nm,0.8s,mb4.1,baz=346,slow=5.8,SNR=9.5							
YKA	**Yellowknife Ar**	**87.25**	**28**	P		**P**	**10 45 19.1**	**-0.9**
	comp=Z,1.7nm,0.7s,mb4.4,baz=275,slow=5.0,SNR=4.5							
YKA	**Yellowknife Ar**	**87.25**	**28**	P		**P**	**10 45 19.1**	**-1.0**
YKA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
NEW	**Newport**	**87.83**	**42**	*e*P		**P**	**10 45 22.9**	**0.0**
NEW				pmax		pmax		
	comp=Z,6.0nm,1.1s							
NEW	**Newport**	**87.83**	**42**	*e*P		**P**	**10 45 22.9**	**+0.1**
	comp=Z,5.6nm,1.1s,mb4.7							
NVAR	**Mina Array Bea**	**88.19**	**52**	P		**P**	**10 45 25.2**	**+0.7**
	comp=Z,1.0nm,0.8s,mb4.1,baz=253,slow=5.2,SNR=8.1							
MCMT	**McKenzie Canyo**	**91.28**	**45**	*e*P		**P**	**10 45 39.8**	**+0.8**
BOZ	**Bozeman (W)**	**91.97**	**44**	*e*P		**P**	**10 45 42.8**	**+0.6**
BOZ				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.5							
BOZ	**Bozeman (W)**	**91.97**	**44**	*e*P		**P**	**10 45 42.8**	**+0.6**
	comp=Z,2.0nm,0.9s,mb4.5							
PDAR	**Pinedale Array**	**94.02**	**46**	P		**P**	**10 45 51.3**	**-0.4**
	comp=Z,0.4nm,0.7s,mb3.9,baz=249,slow=1.3,SNR=3.9							
SRU	**San Rafael**	**94.08**	**50**	*e*P		**P**	**10 45 52.7**	**+0.8**
SRU				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.9							
SRU	**San Rafael**	**94.08**	**50**	*e*P		**P**	**10 45 52.7**	**+0.7**
	comp=Z,4.1nm,0.8s,mb4.9							
MAW	**Mawson**	**94.49**	**203**	P		**P**	**10 45 53.8**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.6,baz=84,slow=5.3,SNR=4.8							
MAW	**Mawson**	**94.49**	**203**	P		**P**	**10 45 53.8**	**0.0**
MAW				pmax		pmax		
	comp=Z,2.0nm,0.7s							
FINES	**FINESS Array B**	**99.14**	**336**	P		**P**	**10 46 12.3**	**-2.6**
	comp=Z,0.8nm,0.6s,mb4.4,baz=72,slow=6.2,SNR=5.2							
FINES	**FINESS Array B**	**99.14**	**336**	P		**P**	**10 46 12.3**	**-2.6**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.6s							
SAML	**Samuel**	**148.18**	**96**	*e*PKPbc		PKPbc	10 52 20.1	+0.8
CPUP	**Villa Florida**	**148.24**	**131**	PKPbc		PKPbc	10 52 21.2	+1.7
	comp=Z,0.5nm,0.5s,baz=226,slow=8.4,SNR=4.4							
CPUP	**Villa Florida**	**148.24**	**131**	PKP2		PKPab	10 52 21.3	-1.3
CPUP				pmax		pmax		
	comp=Z,1.0nm,0.5s							
DBIC	**Dimbokro**	**150.66**	**296**	PKPbc		PKPbc	10 52 28.8	+3.2
	comp=Z,3.7nm,0.9s,baz=27,slow=2.3,SNR=2.7							
DBIC	**Dimbokro**	**150.66**	**296**	PKIKP		PKPdf	10 52 28.8	+8.8
DBIC				pmax		pmax		
	comp=Z,4.0nm,1.0s							

MOS 25 10:43:23.7±0.6, 4399N×4173E, h10km, mb3.5/1, 4C, Error ellipse: s-maj=99.9km s-min=21.7km az=6.8, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KIV	**Kislovodsk**	**0.69**	**93**	⇑*e*PG		Pg	10 43 37.3	+0.2
KIV				*e*			10 43 47.0	
KIV				pmax		pmax		
	comp=Z,7.0nm,0.2s							
KIV				smax				
	comp=E,11nm,0.2s							
SHAR	**Shatzhatmas**	**0.72**	**110**	⇑*e*PG		Pg	10 43 37.7	0.0
SHAR				*e*S		Sg	10 43 48.1	+1.0
BEYR	**Belyy Ugol+**	**0.79**	**88**	⇑*e*PG		Pg	10 43 39.0	+0.2
BEYR				*e*S		Sg	10 43 50.6	+1.5
PYA	**Pyatigorsk**	**0.96**	**87**	*e*PG		Pg	10 43 42.5	+0.3
PYA				*e*S		Sg	10 43 56.4	+1.8
KUBR	**Kubataba**	**1.23**	**98**	⇑*e*PG		Pg	10 43 47.5	+0.2
KUBR				*e*S		Sb	10 44 04.8	+1.9

NNC 25 11:11:30.0±3.5, 3744N×7235E, h242km±36km, mb1.8, mpv3.5, 3D, Error ellipse: s-maj=58.1km s-min=34.7km az=62.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.83**	**347**	P		Pn	11 12 55.8	0.0
	1.7nm,0.3s,baz=165,slow=12,SNR=30							
KK31				⇓S		S	11 14 04.8	+0.4
	1.8nm,0.4s,baz=0.0,slow=0.1,SNR=5.0							
AB31	**Akbulak array**	**14.84**	**327**	⇓P		Pn	11 14 48.4	-0.2
	0.1nm,0.3s,baz=145,slow=9.9,SNR=3.8							
AKTO	**Aktyubinsk**	**16.56**	**326**	⇓P		P	11 15 07.1	-0.2
	0.1nm,1.4s							

*NEIC **25** 11:20:37.8, 3767N×2090E, h7km, ML3.6(ATH), After ATH.*
*ATH **25** 11:20:37.8, 3767N×2090E, h7km±1km, MD3.6/14, ML3.6*
*ISCJB **25** 11:20:39.4±0.8, 3770N±004×2091E±006, h10km, Error ellipse: s-maj=8.5km s-min=4.1km az=105.0*
*CSEM **25** 11:20:39.8±0.3, 3775N×2094E, h2km, ML3.6, Error ellipse: s-maj=6.6km s-min=3.2km az=55.0*
*THE **25** 11:20:39

NIKO **Nikolski** 3.65 64 P Pn 11 22 14.8 0.0
AMKA **Amchitka** 4.02 271 P Pn 11 22 19.1 -0.8
OKCE **Okmok Cone E** 4.21 60 P Pn 11 22 24.2 +1.7
OKCD **Okmok Cone D** 4.24 60 P Pn 11 22 24.2 +1.3
AKUT **Akutan** 5.80 59 eP Pn 11 22 48.8 +4.5
SPIA **Saint Paul Isl** 6.17 21 P Pn 11 22 50.6 +1.2
SDPT **Sand Point** 9.10 59 ePn Pn 11 23 29.9 +0.3
KDAK **Kodiak Island** 14.02 55 Pn Pn 11 24 34.9 -2.0
3.2nm,0.3s,baz=190,slow=8.2,SNR=16
KDAK Sn **Sn** 11 27 20.9 +10
0.2nm,0.3s,baz=335,slow=22,SNR=2.3
KDAK **Kodiak Island** 14.02 55 eP Pn 11 24 36.0 -0.8
42nm,0.3s
SVW2 **Sparrevohn** 14.10 40 eP Pn 11 24 40.4 +2.4
TTA **Tatalina** 15.07 33 eP Pn 11 24 53.2 +2.2
TTA pmax pmax
comp=Z,107nm,1.6s
TTA **Tatalina** 15.07 33 eP Pn 11 24 53.1 +2.2
comp=Z,107nm,1.6s
SLKM **Skilak Lake** 16.12 47 eP Pn 11 25 02.2 -2.2
PMR **Palmer** 17.05 44 eP Pn 11 25 15.0 -1.1
PMR pmax pmax
comp=Z,5.0nm,0.5s
PMR **Palmer** 17.05 44 eP Pn 11 25 15.0 -1.1
comp=Z,5.4nm,0.5s
SML **Sawmill** 17.48 44 eP Pn 11 25 14.7 -6.9
MCK **McKinley** 18.13 38 eP Pn 11 25 26.8 -2.7
MCK pmax pmax
comp=Z,18nm,1.1s
MCK **McKinley** 18.13 38 eP Pn 11 25 26.8 -2.8
comp=Z,18nm,1.1s
BILL **Bilibino** 19.12 338⇓ eP Pn 11 25 41.6 +0.1
BILL S **S** 11 29 18.0 +3.0
BILL pmax pmax
comp=Z,16nm,1.1s
COLA **College** 19.13 35 eP Pn 11 25 38.4 -3.2
COLA pmax pmax
comp=Z,20nm,0.8s
COLA **College** 19.13 35 eP Pn 11 25 38.4 -3.2
comp=Z,20nm,0.8s
MENT **Mentasta** 19.91 43 eP Pn 11 25 50.6 -0.2
SEY **Seymchan** 21.11 316⇑ eP P 11 26 04.2 +2.2
EGAK **Eagle** 21.64 39 eP P 11 26 06.1 -1.6
DAWY **Dawson** 22.11 42 eP P 11 26 11.6 -1.2
INK **Inuvik** 25.77 34 P P 11 26 47.2 -0.6
comp=Z,6.7nm,0.6s,mb4.4,baz=245,slow=9.1,SNR=20
INK **Inuvik** 25.77 34 P P 11 26 47.2 -0.6
INK pmax pmax
comp=Z,7.0nm,0.6s
DLBC **Dease Lake** 25.93 57 P P 11 26 51.0 +1.7
comp=Z,8.5nm,0.9s,mb4.3,baz=254,slow=8.5,SNR=10
DLBC LR LR 11 36 42.1
comp=Z,160nm,19.1s,MS3.6,baz=151,slow=36
YSS **Yuzh-Sakhalins** 28.12 278⇓ iP P 11 27 10.0 +1.0
YSS pmax pmax
comp=Z,15nm,1.3s,mb4.5
BBB **Bella Bella** 28.16 70 P P 11 27 16.2 +6.8
comp=Z,6.0nm,1.0s,mb4.2,baz=221,slow=3.4,SNR=3.0
BBB **Bella Bella** 28.16 70 P P 11 27 16.2 +6.8
ASAJ **Asahikawa** 29.54 273 P P 11 27 20.8 -0.8
comp=Z,5.2nm,0.7s,mb4.4,baz=113,slow=4.3,SNR=5.9
ASAJ **Asahikawa** 29.54 273 P P 11 27 20.8 -0.7
ASAJ pmax pmax
comp=Z,5.0nm,0.7s
HABR **Khabarovsk** 32.20 285 eP pP 11 28 00.0 +4.0
HABR eS **S** 11 32 59.3 +4.0
YKA **Yellowknife Ar** 33.09 47 P P 11 27 53.7 +0.9
comp=Z,0.9nm,0.5s,mb3.9,baz=275,slow=8.7,SNR=9.0
YKA LR LR 11 43 07.6
comp=Z,300nm,18.6s,MS4.0,baz=270,slow=40
YKA **Yellowknife Ar** 33.09 47 P P 11 27 53.7 +0.9
YKA pmax pmax
comp=Z,10.0nm,0.5s
YKA MLR MLR
comp=Z,300nm,18.6s
YKA **Yellowknife Ar** 33.09 47 P P 11 27 53.7 +0.9
YKA LR LR 11 43 07.6
KLR **Kul'dur** 33.86 288 eP P 11 27 55.0 -4.5
HAWA **Hanford** 35.60 76 eP P 11 28 13.9 -0.6
comp=Z,0.4nm,0.6s
NEW **Newport** 36.17 72 P P 11 28 20.2 +0.8
comp=Z,3.1nm,0.5s,mb4.5,baz=295,slow=6.9,SNR=8.2
NEW **Newport** 36.17 72 P P 11 28 20.2 +0.8
NEW pmax pmax
comp=Z,3.0nm,0.5s
NEW **Newport** 36.17 72 eP P 11 28 19.8 +0.3
comp=Z,16nm,1.0s,mb4.9
EDM **Edmonton** 36.27 63 eP P 11 28 20.5 +0.3
MAT **Matsushiro** 36.61 265 P P 11 28 23.6 +0.4
MDJ **Mudanjiang** 37.34 282 P P 11 28 28.0 -1.3
MDJ PP PP 11 29 53.3 -1.6
MDJ S **S** 11 34 15.0 +0.6
MDJ SCP ScP 11 34 34.5 +2.6
MDJ PCS PcS 11 34 35.8 -0.5
MDJ AMB AMB
comp=Z,8.0nm,0.7s,mb4.7
MDJ AMB AMB
comp=Z,54nm,7.3s
MDJ LR LR
comp=N,32nm,21.5s,MS3.6
MDJ LR LR
comp=E,87nm,17.7s,MS3.6
MDJ LR LR
comp=Z,134nm,20.3s,MS3.7
WALA **Waterton Lakes** 37.70 69 eP P 11 28 32.8 +0.4
comp=Z,9.4nm,0.9s,mb4.5
WVOR **Wild Horse Val** 38.19 81 eP P 11 28 36.9 +0.3
WVOR pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
WVOR **Wild Horse Val** 38.19 81 eP P 11 28 36.9 +0.3
comp=Z,8.7nm,0.9s,mb4.5
MSO **Missoula** 38.75 72 eP P 11 28 41.6 +0.4
comp=Z,6.6nm,1.0s,mb4.3
CHMT **Chamberlain Mo** 39.12 72 eP P 11 28 43.6 -0.7
HRY **Holter Researc** 40.06 71 eP P 11 28 53.0 +0.8
HLID **Hailey** 40.17 77 eP P 11 28 50.8 -2.3
comp=Z,5.7nm,1.0s,mb4.3
CN2 **Changchun** 40.30 284 eP P 11 28 54.5 +0.4
CN2 LR LR
comp=N,200nm,18.0s,MS4.2
CN2 LR LR
comp=E,200nm,18.0s,MS4.2
CN2 LR LR
comp=Z,300nm,21.0s,MS4.1
MCMT **McKenzie Canyo** 40.44 74 eP P 11 28 55.5 +0.2
EGMT **Eagleton** 40.62 69 eP P 11 28 55.3 -1.5
comp=Z,9.1nm,0.8s,mb4.5
BOZ **Bozeman (W)** 40.73 73 eP P 11 28 57.8 +0.1
BOZ pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
BOZ **Bozeman (W)** 40.73 73 eP P 11 28 57.8 +0.1
comp=Z,5.6nm,0.6s,mb4.4
PTRM **Twissleman Ran** 41.26 91 eP P 11 29 03.1 +1.0
FFC **Flin Flon** 41.76 56 eP P 11 29 05.5 -0.6
FFC pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
FFC **Flin Flon** 41.76 56 eP P 11 29 05.5 -0.6
comp=Z,9.7nm,0.9s,mb4.4
IMW **Indian Meadow** 42.09 75 eP P 11 29 08.5 -0.4
comp=Z,6.2nm,0.9s,mb4.2
FLWY **Flagg Ranch** 42.13 74 eP P 11 29 09.8 +0.6
comp=Z,5.5nm,0.8s,mb4.2
RRI2 **Red Ridge** 42.17 75 eP P 11 29 11.0 +1.5
comp=Z,8.4nm,0.8s,mb4.4
HVU **Hansel Valley** 42.17 78 P P 11 29 09.7 +0.2
HVU pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
HVU **Hansel Valley** 42.17 78 P P 11 29 09.7 +0.2
comp=Z,6.7nm,1.0s,mb4.2
TPAW **Teton Pass** 42.31 75 eP P 11 29 13.6 +3.0
comp=Z,10nm,1.3s,mb4.3
LOHW **Long Hollow** 42.45 75 eP P 11 29 16.0 +4.2
comp=Z,2.2nm,0.7s,mb3.9
DAC **Darwin (Calif)** 42.50 88 eP P 11 29 12.8 +0.6
comp=Z,2.6nm,0.8s,mb3.9
DUG **Dugway** 43.07 80 eP P 11 29 16.5 -0.3
DUG pmax pmax
comp=Z,11nm,1.1s,mb4.5
DUG **Dugway** 43.07 80 eP P 11 29 16.5 -0.3
comp=Z,11nm,1.1s,mb4.5
PDAR **Pinedale Array** 43.56 75 P P 11 29 20.6 -0.1
comp=Z,3.5nm,0.9s,mb4.1,baz=316,slow=4.8,SNR=23
NLU **North Lily Min** 43.67 80 eP P 11 29 24.1 +2.5
DAU **Daniels Canyon** 43.90 79 P P 11 29 25.0 +1.5
ARUT **Antelope Range** 44.14 83 eP P 11 29 26.7 +1.3

TMUT **Trail Mountain** 44.60 80 eP P 11 29 28.0 -1.1
SRU **San Rafael** 45.13 80 eP P 11 29 33.9 +0.6
SRU pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
SRU **San Rafael** 45.13 80 eP P 11 29 33.9 +0.6
comp=Z,9.4nm,0.8s,mb4.7
PV10 **Paradox Valley** 46.50 80 eP P 11 29 44.6 +0.5
WUAZ **Wupatki** 46.86 84 eP P 11 29 47.1 +0.2
comp=Z,4.5nm,0.8s,mb4.5
PV01 **Paradox Valley** 46.94 80 eP P 11 29 47.4 -0.2
ULM **Lac du Bonnet** 47.23 59 P P 11 29 49.4 -0.5
comp=Z,4.9nm,0.4s,mb4.8,baz=308,slow=8.2,SNR=23
ISCO **Idaho Springs** 47.71 76 P P 11 29 57.0 +3.4
comp=Z,2.8nm,0.8s,mb4.3
BJI **Beijing** 48.11 285 P P 11 29 52.3 -4.3
BJI AMB AMB
comp=Z,7.0nm,0.4s,mb5.0
TLY **Talaya** 48.37 304 eP P 11 29 58.5 -0.2
TLY pmax pmax
comp=Z,15nm,1.6s,mb4.8
TLY MLR MLR
comp=Z,68nm,18.0s,MS3.7
TLY **Talaya** 48.37 304 eP P 11 29 58.5 -0.2
comp=Z,9.7nm,0.9s,mb4.8
ULN **Ulaanbaatar** 48.73 299⇓ iP P 11 30 01.4 0.0
ULN **Ulaanbaatar** 48.73 299 eP P 11 29 59.0 -2.4
comp=Z,3.9nm,0.8s,mb4.5
SONM **Songino Array** 49.11 299 P P 11 30 03.8 -0.5
comp=Z,1.2nm,0.4s,mb4.2,baz=54,slow=9.2,SNR=11
SONM PcP PcP 11 31 27.5 +0.1
comp=Z,2.2nm,1.0s,baz=72,slow=4.8,SNR=4.3
ZAK **Zakamensk** 49.30 303 eP P 11 30 05.8 0.0
ZAK e 11 31 27.0
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
LAZ **Ladron** 50.22 82 P P 11 30 12.7 -0.1
HHC **Hu-ho-hao-te** 50.37 289 eP P 11 30 13.3 -0.6
HHC PCP PcP 11 31 33.5 +1.5
HHC PP PP 11 32 09.5 -0.1
HHC SCP ScP 11 35 27.3 +2.6
HHC S **S** 11 37 23.5 -0.7
HHC SCS ScS 11 40 01.3 -0.4
HHC SS SS 11 40 52.0 -6.1
HHC AMB AMB
comp=Z,5.0nm,1.1s,mb4.5
HHC AMB AMB
comp=Z,76nm,6.8s
HHC LR LR
comp=N,117nm,18.0s,MS4.1
HHC LR LR
comp=E,91nm,14.4s,MS4.1
HHC LR LR
comp=Z,88nm,17.1s,MS3.8
SSE **Sheshan** 50.83 272 P P 11 30 14.8 -2.6
SSE AMB AMB
comp=Z,21nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,53nm,3.3s
NJ2 **Nanjing** 51.63 275 eP P 11 30 23.3 -0.1
NJ2 PP PP 11 32 21.5 +0.4
NJ2 S **S** 11 37 42.0 +0.3
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
NJ2 AMB AMB
comp=Z,140nm,10.6s
NJ2 LR LR
comp=E,290nm,23.4s
NJ2 LR LR
comp=Z,390nm,18.2s
MNTX **Cornudas Mount** 53.13 84 eP P 11 30 33.7 -0.8
comp=Z,4.1nm,0.8s,mb4.4
WMOK **Wichita Mounta** 55.13 76 eP P 11 30 47.6 -1.5
WMOK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
WMOK **Wichita Mounta** 55.13 76 eP P 11 30 47.6 -1.5
comp=Z,8.6nm,1.0s,mb4.7
XAN **Xi'an** 56.41 284 P P 11 30 58.3 +0.1
XAN AP pP 11 31 11.0 +1.2
XAN AMB AMB
comp=Z,10.0nm,1.3s,mb4.7
FVM **French Village** 57.91 68 P P 11 31 06.4 -2.5
FVM pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
FVM **French Village** 57.91 68 P P 11 31 06.4 -2.4
comp=Z,7.9nm,0.6s,mb4.9
LZH **Lanzhou** 58.05 289 eP P 11 31 10.0 +0.1
LZH AMB AMB
comp=Z,18nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,80nm,4.5s
LZH LR LR
comp=E,390nm,14.9s
LZH LR LR
comp=Z,520nm,16.0s,MS4.7
SCHQ **Schefferville** 58.12 41 P P 11 31 09.6 -0.8
comp=Z,2.6nm,0.7s,mb4.4,baz=338,slow=4.0,SNR=5.7
SCHQ LR LR 11 58 28.6
comp=Z,132nm,18.1s,MS4.1,baz=343,slow=38
GTA **Gaotai** 58.13 295 ⇑P P 11 31 10.3 -0.1
GTA AP pP 11 31 25.5 +3.5
GTA XP sP 11 31 32.0 +5.3
GTA PS 11 39 50.5
GTA AMB AMB
comp=Z,9.0nm,0.8s,mb4.8
GTA AMB AMB
comp=Z,13nm,3.8s
GTA LR LR
comp=N,103nm,17.9s,MS4.1
GTA LR LR
comp=E,114nm,19.4s,MS4.1
GTA LR LR
comp=Z,107nm,19.0s,MS4.0
MIAR **Mount Ida** 58.40 73 eP P 11 31 11.3 -1.0
MIAR pmax pmax
comp=Z,12nm,0.9s,mb4.9
MIAR **Mount Ida** 58.40 73 eP P 11 31 11.3 -1.0
comp=Z,12nm,0.9s,mb4.9
ARCES **ARCESS Array B** 58.43 352 P P 11 31 10.8 -1.6
comp=Z,4.3nm,0.5s,mb4.7,baz=23,slow=7.6,SNR=18
ARCES PcP PcP 11 32 02.5 -0.4
comp=Z,7.4nm,0.6s,baz=15,slow=5.0,SNR=11
ARCES LR LR 11 58 58.3
comp=Z,69nm,18.3s,MS3.8,baz=282,slow=39
ARCES **ARCESS Array B** 58.43 352 P P 11 31 10.9 -1.6
ARCES 11 32 02.5
ARCES pmax pmax
comp=Z,4.0nm,0.5s
ARCES MLR MLR
comp=Z,69nm,18.3s
LVZ **Lovozero** 58.99 348⇑ eP P 11 31 14.8 -1.6
APA **Apatity** 59.46 348⇑ eP P 11 31 16.0 -3.7
APA pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
APA MLR MLR
comp=Z,300nm,19.0s,MS4.4
OXF **Oxford** 60.90 70 eP P 11 31 27.4 -2.1
OXF pmax pmax
comp=Z,12nm,0.4s,mb5.4
OXF **Oxford** 60.90 70 eP P 11 31 27.4 -2.1
comp=Z,12nm,0.4s,mb5.4
WMQ **Urumqi** 61.63 305 eP P 11 31 36.0 +1.6
WMQ PP PP 11 33 54.0 +3.7
WMQ AMB AMB
comp=Z,16nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,124nm,5.0s
WMQ LR LR
comp=N,164nm,15.0s,MS4.4
WMQ LR LR
comp=E,102nm,15.0s,MS4.4
WMQ LR LR
comp=Z,85nm,14.0s,MS4.0
CD2 **Chengdu** 61.71 285 eP P 11 31 35.5 +0.5
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.0
MKAR **Makanchi Array** 62.15 311 P P 11 31 36.5 -1.4
comp=Z,1.2nm,0.4s,mb4.3,baz=44,slow=6.5,SNR=12
MKAR **Makanchi Array** 62.15 311 P P 11 31 36.5 -1.4
BVAR **Borovoye Array** 62.60 322 LR LR 12 01 31.1
comp=Z,178nm,19.3s,MS4.2,baz=293,slow=39
TZTN **Tazewell** 62.85 65 eP P 11 31 41.3 -1.3
BINY **Binghamton** 62.92 56 eP P 11 31 43.2 +0.2
comp=Z,31nm,1.0s,mb5.4
GYA **Guiyang** 63.12 279 P P 11 31 46.5 +2.1
GYA AP pP 11 31 51.8 -4.3
GYA PP PP 11 34 07.5 +4.1
GYA S **S** 11 40 17.0 +4.5
GYA AMB AMB
comp=Z,10.0nm,0.5s,mb5.2
GYA AMB AMB
comp=Z,70nm,4.6s
GYA LR LR
comp=N,240nm,18.4s,MS4.5
GYA LR LR
comp=E,210nm,17.8s,MS4.5
GYA LR LR
comp=Z,190nm,18.0s,MS4.3
ZRNK **Zerenda** 63.18 323 eP P 11 31 43.7 -1.1
ZRNK pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
ZRNK **Zerenda** 63.18 323 eP P 11 31 43.7 -1.1
comp=Z,5.5nm,0.6s,mb4.9
ACCN **Adirondack Com** 63.24 53 eP P 11 31 44.9 -0.3
LBNH **Lisbon** 63.48 52 eP P 11 31 45.0 -1.8
LBNH pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
LBNH **Lisbon** 63.48 52 eP P 11 31 45.0 -1.8
comp=Z,7.3nm,0.9s,mb4.8
FWV **Forest Hill** 63.65 62 eP P 11 31 47.3 -0.5
ARU **Arti** 63.96 330 eP P 11 31 46.8 -3.1
ARU e 11 34 06.4
ARU eS **S** 11 40 22.2 -0.8
BLA **Blacksburg** 64.13 62 eP P 11 31 51.0 0.0
comp=Z,1.1nm,0.8s,mb3.9
JOF **Joensuu** 64.17 347 ep P 11 31 49.4 -1.9
MVL **Millersville** 64.32 58 eP P 11 31 52.8 +0.5
PAL **Palisades** 64.86 55 eP P 11 31 56.0 +0.2
PAL pmax pmax
comp=Z,28nm,1.1s,mb5.2
PAL **Palisades** 64.86 55 eP P 11 31 56.0 +0.3
comp=Z,28nm,1.1s,mb5.2
WES **Weston** 65.15 53 eP P 11 31 57.4 -0.3
WES pmax pmax
comp=Z,21nm,1.1s,mb5.1
WES **Weston** 65.15 53 eP P 11 31 57.4 -0.3
comp=Z,21nm,1.1s,mb5.1
KAF **Kangasniemi** 65.58 350 ep P 11 31 58.5 -2.0
comp=Z,7.7nm,0.6s,mb4.9,baz=11,slow=6.0
KAF **Kangasniemi** 65.58 350 eP P 11 31 58.5 -2.0
KAF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
FINES **FINESS Array B** 66.26 349 P P 11 32 03.1 -1.7
comp=Z,1.4nm,0.4s,mb4.4,baz=14,slow=6.7,SNR=14
FINES LR LR 12 04 14.5
comp=Z,49nm,18.6s,MS3.7,baz=41,slow=39
FINES **FINESS Array B** 66.26 349 P P 11 32 03.2 -1.6
FINES pmax pmax
comp=Z,10.0nm,0.4s
FINES MLR MLR
comp=Z,49nm,18.6s
KMI **Kunming** 66.50 281 P P 11 32 12.0 +5.6
KMI AP pP 11 32 17.5 -0.7
KMI XP sP 11 32 20.8 -2.0
KMI PP PP 11 34 37.0 +3.9
KMI PPP 11 36 11.5
KMI XS sS 11 41 13.0 -0.8
KMI SS SS 11 45 15.3 +3.7
KMI SSS 11 48 11.3
KMI AMB AMB
comp=Z,15nm,0.9s,mb5.0
KMI AMB AMB
comp=Z,45nm,5.6s
KMI LR LR
comp=N,103nm,16.6s,MS4.2
KMI LR LR
comp=E,97nm,19.0s,MS4.2
KMI LR LR
comp=Z,76nm,16.6s,MS4.0
NB2 **NORSAR Subarra** 67.74 357 P P 11 32 13.4 -0.9
comp=Z,8.0nm,0.9s,mb4.8,baz=4.9,slow=6.5
NOA **NORSAR Array B** 67.74 357 P P 11 32 13.6 -0.7
comp=Z,2.9nm,0.6s,mb4.5,baz=3.6,slow=6.4,SNR=17
NOA LR LR 12 02 33.2
comp=Z,32nm,18.6s,MS3.6,baz=350,slow=37
NOA **NORSAR Array B** 67.74 357 P P 11 32 13.6 -0.7
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA MLR MLR
comp=Z,32nm,18.7s
AAK **Ala-Archa** 68.93 313⇓ eP P 11 32 21.4 -0.3
AAK pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
LSA **Lhasa** 70.05 293 eP P 11 32 30.6 +2.0
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
LSA **Lhasa** 70.05 293 eP P 11 32 30.6 +2.0
comp=Z,8.8nm,0.6s,mb4.9
OBN **Obninsk** 70.72 342 P P 11 32 32.0 -0.7
PPT **Papeete** 72.07 155 LR LR 11 59 32.1
comp=Z,144nm,18.7s,MS4.3,baz=342,slow=32
GUN **Gumba** 74.41 295 eP P 11 32 55.9 +1.2
comp=Z,49nm,0.4s,mb5.8
JIRN **Jiri** 74.43 295 eP P 11 32 56.0 +1.2
comp=Z,89nm,0.7s,mb5.8
KKN **Kakani** 74.84 295 eP P 11 32 58.2 +1.0
comp=Z,17nm,0.5s,mb5.2
KKN **Kakani** 74.84 295 eP P 11 32 58.2 +1.0
KKN pmax pmax
comp=Z,17nm,0.5s,mb5.2
BSEG **Bad Segeberg** 74.88 357 eP P 11 32 57.7 +0.3
comp=Z,20nm,0.9s,mb5.0
BSEG **Bad Segeberg** 74.88 357 eP P 11 32 57.7 +0.3
BSEG pmax pmax
comp=Z,20nm,0.9s,mb5.0
PKI **Pulchoki** 74.94 295 eP P 11 32 58.3 +0.6
comp=Z,56nm,1.1s,mb5.4
PKI **Pulchoki** 74.94 295 eP P 11 32 58.3 +0.6
PKI pmax pmax
comp=Z,56nm,1.1s,mb5.4
GKN **Gorkha** 75.04 296 eP P 11 32 58.8 +0.5
DMN **Daman** 75.08 295 eP P 11 32 59.0 +0.5
comp=Z,39nm,1.0s,mb5.3
KOLN **Koldanda** 75.80 297 eP P 11 33 03.1 +0.4
comp=Z,42nm,1.0s,mb5.3
AKASG **Malin Array Be** 76.26 345 P P 11 33 04.0 -1.3
comp=Z,2.8nm,0.4s,mb4.5,baz=15,slow=5.9,SNR=9.6
AKASG **Malin Array Be** 76.26 345 P P 11 33 04.0 -1.3
AKASG pmax pmax
comp=Z,3.0nm,0.4s
NRDL **Niedersach Rie** 76.33 357 eP P 11 33 06.1 +0.4
comp=Z,8.0nm,0.8s,mb4.7
GTTG **Gvttingen** 77.29 357 eP P 11 33 11.3 +0.2
comp=Z,14nm,0.6s,mb5.1
CLL **Collm** 77.40 355 eP P 11 33 11.2 -0.5
comp=Z,9.0nm,0.8s,mb4.8
CLL **Collm** 77.40 355 P P 11 33 11.4 -0.3
comp=Z,logA/T=1.1,mb4.8
CLL *i* *SP sP 11 33 26.9 -1.4
CLL **Collm** 77.40 355 *i* P P 11 33 11.4 -0.3
comp=Z,9.0nm,0.8s,mb4.8
CLL *i* (sP) sP 11 33 26.9 -1.4
CLL **Collm** 77.40 355 *i* P P 11 33 11.4 -0.3
CLL *i* 11 33 26.9
CLL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BUG **Bochum--Univer** 77.45 359 eP P 11 33 11.4 -0.5
comp=Z,13nm,0.9s,mb4.9
FBE **Freiberg** 77.77 355 eP P 11 33 13.6 -0.2
comp=Z,20nm,1.2s,mb4.9
BRG **Berggiesshubel** 77.78 355 eP P 11 33 13.5 -0.3
comp=Z,9.0nm,0.8s,mb4.8
BRG **Berggiesshubel** 77.78 355 *i* P P 11 33 13.4 -0.5
comp=Z,5.2nm,0.8s,mb4.5
BRG **Berggiesshubel** 77.78 355 *i* P P 11 33 13.4 -0.4
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
UPC **Upice** 78.01 353 eP P 11 33 14.9 -0.2
PVCC **Panska Ves** 78.09 354 eP P 11 33 15.5 0.0
MOX **Moxa** 78.13 356 eP P 11 33 15.5 -0.2
comp=Z,12nm,0.9s,mb4.8
MOX **Moxa** 78.13 356 eP P 11 33 15.9 +0.2
comp=Z,15nm,1.1s,mb4.8
MOX **Moxa** 78.13 356 eP P 11 33 15.9 +0.2
MOX pmax pmax
comp=Z,15nm,1.1s,mb4.8
DPC **Dobruska-Polom** 78.15 353 eP P 11 33 16.0 +0.2
DPC eSP sP 11 33 34.0 +1.6
WERD **Werda** 78.29 356 eP P 11 33 16.8 +0.1
comp=Z,8.0nm,1.1s,mb4.6
TANN **Tannenbergstha** 78.32 356 eP P 11 33 16.9 +0.1
comp=Z,7.0nm,1.1s,mb4.5
GUNZ **Gunzen** 78.38 356 eP P 11 33 17.3 +0.2

NKC	Novy Kostel	78.50	356	eP		P		11 33 17.8	0.0
PRU	Pruhonice	78.63	354	eP		P		11 33 18.4	-0.1
TNS	Taunus Mts	78.65	358	eP		P		11 33 18.5	-0.1
	comp=Z,13nm,0.9s,mb4.9								
TNS	Taunus Mts	78.65	358	eP		P		11 33 18.5	-0.1
TNS					pmax	pmax			
	comp=Z,13nm,0.9s,mb4.9								
MANZ	Manzenberg	78.76	356	eP		P		11 33 19.3	0.0
	comp=Z,5.0nm,0.9s,mb4.4								
GIVF	Givet	78.79	1	eP		P		11 33 19.1	-0.3
BAIF	Baives	78.83	1	eP		P		11 33 19.7	+0.1
ROTZ	Rotzenmuhle	78.98	356	eP		P		11 33 20.4	0.0
	comp=Z,7.0nm,0.9s,mb4.6								
ABH	Alteburg	79.00	359	eP		P		11 33 20.4	-0.2
GRA1	Grafenberg Arr	79.10	356	eP		P		11 33 21.2	+0.1
	comp=Z,19nm,0.8s,mb5.1								
GRF	Grafenberg Arr	79.10	356	eP		P		11 33 21.2	+0.1
	comp=Z,19nm,0.8s,mb5.1								
GRF	Grafenberg Arr	79.10	356	eP		P		11 33 21.2	+0.1
GRF					pmax	pmax			
	comp=Z,19nm,0.8s,mb5.1								
GRF	Grafenberg Arr	79.10	356	eP		P		11 33 21.2	+0.1
GRF					pmax	pmax			
	comp=Z,19nm,0.8s,mb5.1								
TOD	Tromm	79.26	358	eP		P		11 33 21.9	-0.1
KHC	Kasperske Hory	79.54	355	eP		P		11 33 23.8	+0.3
KHC				epP		pP		11 33 38.4	+2.8
WET	Wettzell	79.57	355	eP		P		11 33 23.7	+0.1
	comp=Z,5.0nm,1.2s,mb4.3								
WET	Wettzell	79.57	355	eP		P		11 33 23.7	+0.1
WET					pmax	pmax			
	comp=Z,5.0nm,1.2s,mb4.3								
VYHS	Vyhne	79.77	351	eP		P		11 33 24.8	0.0
VYHS					pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0								
VYHS	Vyhne	79.77	351	eP		P		11 33 24.8	0.0
	comp=Z,2.1nm,0.9s,mb4.1								
GEC2	GERESS Array S	79.82	355	eP		P		11 33 24.3	-0.7
	comp=Z,8.0nm,1.0s,mb4.6								
GEC2	GERESS Array S	79.82	355	eP		P		11 33 24.3	-0.7
GEC2					pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.6								
GERES	GERESS Array B	79.82	355	P		P		11 33 25.0	0.0
	comp=Z,3.2nm,0.7s,mb4.3,baz=18,slow=4.6,SNR=20								
GERES	GERESS Array B	79.82	355	P		P		11 33 25.0	0.0
GERES					pmax	pmax			
	comp=Z,3.0nm,0.7s								
LANF	Langenberg	79.90	359	eP		P		11 33 25.4	-0.1
FLN	La Foliniere	79.99	4	eP		P		11 33 25.6	-0.4
FLN				eR					
	comp=Z,48nm,21.0s								
FLN	La Foliniere	79.99	4	eP		P		11 33 25.6	-0.4
FLN					LR	LR			
	comp=Z,50nm,21.0s,MS3.8								
LDF	La Druitiere	80.18	4	eP		P		11 33 26.3	-0.7
	comp=Z,26nm,0.8s,mb4.9								
LDF	La Druitiere	80.18	4	eP		P		11 33 26.3	-0.7
LDF					pmax	pmax			
	comp=Z,13nm,0.8s,mb4.9								
LDF	La Druitiere	80.18	4	eP		P		11 33 26.3	-0.7
	comp=Z,13nm,0.8s,mb4.9								
ROSF	Rostrenen	80.26	6	eP		P		11 33 27.1	-0.3
GRR	Gorron	80.35	4	eP		P		11 33 27.5	-0.4
	comp=Z,8.9nm,0.5s,mb4.6								
GRR	Gorron	80.35	4	eP		P		11 33 27.5	-0.4
GRR					pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.6								
GRR	Gorron	80.35	4	eP		P		11 33 27.5	-0.4
	comp=Z,4.4nm,0.5s,mb4.6								
SGMF	Saint Gilles	80.39	6	eP		P		11 33 27.8	-0.3
	comp=Z,8.6nm,0.5s,mb4.7								
SGMF	Saint Gilles	80.39	6	eP		P		11 33 27.8	-0.3
SGMF					pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.6								
SGMF	Saint Gilles	80.39	6	eP		P		11 33 27.8	-0.3
	comp=Z,4.3nm,0.5s,mb4.6								
MEZF	Maizieres J'vi	80.39	0	eP		P		11 33 28.3	+0.2
WLS	Welschbruch	80.47	359	eP		P		11 33 28.4	-0.1
CDF	Champ du Feu	80.48	359	eP		P		11 33 28.6	0.0
	comp=Z,28nm,0.8s,mb5.0								
CDF	Champ du Feu	80.48	359	eP		P		11 33 28.6	0.0
CDF					pmax	pmax			
	comp=Z,14nm,0.8s,mb4.9								
CDF	Champ du Feu	80.48	359	eP		P		11 33 28.6	0.0
	comp=Z,14nm,0.8s,mb4.9								
BFO	Black Forest	80.54	358	eP		P		11 33 28.2	-0.7
	comp=Z,8.0nm,0.8s,mb4.7								
BFO	Black Forest	80.54	358	eP		P		11 33 28.2	-0.7
BFO					pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.7								
THEF	They Montfort	80.67	360	eP		P		11 33 29.3	-0.3
ECH	Echery	80.67	359	eP		P		11 33 29.5	-0.1
SPAK	Spaichingen-Ko	80.76	358	eP		P		11 33 29.7	-0.4
HAU	Haudompre	80.89	360	eP		P		11 33 30.8	0.0
	comp=Z,29nm,0.8s,mb5.0								
HAU				eR					
	comp=Z,49nm,22.0s								
HAU	Haudompre	80.89	360	eP		P		11 33 30.8	0.0
HAU					pmax	pmax			
	comp=Z,15nm,0.8s,mb5.0								
HAU					MLR	MLR			
	comp=Z,50nm,22.0s,MS3.8								
HAU	Haudompre	80.89	360	eP		P		11 33 30.8	0.0
	comp=Z,15nm,0.8s,mb5.0								
HAU					LR	LR			
	comp=Z,50nm,22.0s,MS3.8								
FELD	Feldberg im Sc	81.00	358	eP		P		11 33 31.0	-0.4
MOF	Molkenrain	81.04	359	eP		P		11 33 31.2	-0.4
HINF	Hinteralfeld	81.08	359	eP		P		11 33 31.5	-0.3
	comp=Z,14nm,0.6s,mb4.8								
HINF	Hinteralfeld	81.08	359	eP		P		11 33 31.5	-0.3
HINF					pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.8								
HINF	Hinteralfeld	81.08	359	eP		P		11 33 31.5	-0.3
	comp=Z,6.8nm,0.6s,mb4.8								
LOMF	Lomont	81.54	359	eP		P		11 33 34.5	+0.3
HYF	Humbligny	81.59	2	eP		P		11 33 34.8	+0.3
LOR	Lormes	81.62	1	iP		P		11 33 34.6	0.0
	comp=Z,23nm,0.8s,mb4.9								
LOR				eR					
	comp=Z,51nm,18.8s								
LOR	Lormes	81.62	1	iP		P		11 33 34.6	0.0
LOR					pmax	pmax			
	comp=Z,12nm,0.8s,mb4.9								
LOR					MLR	MLR			
	comp=Z,50nm,18.8s,MS3.9								
LOR	Lormes	81.62	1	iP		P		11 33 34.6	0.0
	comp=Z,12nm,0.8s,mb4.9								
LOR					LR	LR			
	comp=Z,50nm,18.8s,MS3.9								
SSF	Saint Saulge	81.82	2	iP		P		11 33 35.7	0.0
	comp=Z,23nm,0.7s,mb4.9								
SSF	Saint Saulge	81.82	2	iP		P		11 33 35.7	0.0
SSF					pmax	pmax			
	comp=Z,12nm,0.7s,mb4.9								
SSF	Saint Saulge	81.82	2	iP		P		11 33 35.7	0.0
	comp=Z,12nm,0.7s,mb4.9								
AVF	Avril sur Loir	82.09	2	iP		P		11 33 37.0	-0.1
	comp=Z,19nm,0.7s,mb4.8								
AVF	Avril sur Loir	82.09	2	iP		P		11 33 37.0	-0.1
AVF					pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.8								
AVF	Avril sur Loir	82.09	2	iP		P		11 33 37.0	-0.1
	comp=Z,9.7nm,0.7s,mb4.8								
SMF	Signal de Mont	82.24	1	iP		P		11 33 37.9	0.0
	comp=Z,27nm,0.8s,mb5.1								
SMF	Signal de Mont	82.24	1	iP		P		11 33 37.9	0.0
SMF					pmax	pmax			
	comp=Z,19nm,0.8s,mb5.1								
SMF	Signal de Mont	82.24	1	iP		P		11 33 37.9	0.0
	comp=Z,19nm,0.8s,mb5.1								
CABF	La Chapelle	82.29	360	eP		P		11 33 38.7	+0.6
	comp=Z,38nm,0.9s,mb5.0								
CABF	La Chapelle	82.29	360	eP		P		11 33 38.7	+0.6
CABF					pmax	pmax			
	comp=Z,19nm,0.9s,mb5.0								
CABF	La Chapelle	82.29	360	eP		P		11 33 38.7	+0.6
	comp=Z,19nm,0.9s,mb5.0								
BGF	Bois d'Agland	82.31	2	eP		P		11 33 38.2	-0.1
TCF	Toulx Ste Croi	82.56	2	eP		P		11 33 39.4	-0.2
	comp=Z,16nm,0.8s,mb4.8								
TCF	Toulx Ste Croi	82.56	2	eP		P		11 33 39.4	-0.2
TCF					pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.8								
TCF	Toulx Ste Croi	82.56	2	eP		P		11 33 39.4	-0.2
	comp=Z,8.1nm,0.8s,mb4.8								

AGO	Saint Agoulin	82.82	2	eP		P		11 33 41.9	+1.0
PLDF	La Plantade	82.91	1	eP		P		11 33 42.4	+1.0
PYM	Petit Puy Mans	83.12	2	eP		P		11 33 43.5	+1.0
RJF	Les Rejaudoux	83.53	3	eP		P		11 33 44.2	-0.4
RJF				eR					
	comp=Z,66nm,20.8s								
RJF	Les Rejaudoux	83.53	3	eP		P		11 33 44.2	-0.4
RJF					LR	LR			
	comp=Z,70nm,20.8s,MS4.0								
LBL	Lubilhac	83.64	2	eP		P		11 33 46.1	+0.9
LFF	La Frestale	83.86	4	eP		P		11 33 46.5	+0.2
	comp=Z,13nm,0.7s,mb4.9								
LFF	La Frestale	83.86	4	eP		P		11 33 46.5	+0.2
LFF					pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.9								
LFF	La Frestale	83.86	4	eP		P		11 33 46.5	+0.2
	comp=Z,6.3nm,0.6s,mb4.9								
CAF	Calviac	83.92	3	eP		P		11 33 46.8	+0.2
ORIF	Oris-en-Rattie	83.98	360	eP		P		11 33 47.7	+0.8
ORIF				eR					
	comp=Z,42nm,22.8s								
VIVF	Saint-Julien-l	84.04	1	eP		P		11 33 47.8	+0.6
	comp=Z,7.7nm,0.7s,mb4.6								
VIVF	Saint-Julien-l	84.04	1	eP		P		11 33 47.8	+0.6
VIVF					pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.7								
VIVF	Saint-Julien-l	84.04	1	eP		P		11 33 47.8	+0.6
	comp=Z,3.8nm,0.7s,mb4.6								
WB2	Warramunga Arr	84.11	228	iP		P		11 33 46.3	-1.2
WRA	Warramunga Arr	84.12	228	P		P		11 33 46.3	-1.3
	comp=Z,1.2nm,0.5s,mb4.3,baz=33,slow=5.8,SNR=33								
MBDF	Montbardon	84.17	359	eP		P		11 33 49.0	+1.2
	comp=Z,7.7nm,0.6s,mb4.8								
MBDF	Montbardon	84.17	359	eP		P		11 33 49.0	+1.2
MBDF					pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.7								
MBDF	Montbardon	84.17	359	eP		P		11 33 49.0	+1.2
	comp=Z,3.8nm,0.6s,mb4.7								
STOF	St-Etienne Org	84.90	360	eP		P		11 33 54.8	+3.3
SMRF	Simiane la Rot	84.92	0	eP		P		11 33 52.7	+1.0
	comp=Z,46nm,1.0s,mb5.2								
SMRF	Simiane la Rot	84.92	0	eP		P		11 33 52.7	+1.0
	comp=Z,46nm,1.0s,mb5.6								
VILF	Villemus	85.05	0	eP		P		11 33 54.2	+1.9
PRAF	Pradon	85.09	0	eP		P		11 33 55.5	+3.0
TREF	Trevaresse	85.27	0	eP		P		11 33 55.5	+2.1
TAVF	Tavernes	85.28	360	eP		P		11 33 55.0	+1.6
FRF	La Foret Royal	85.33	359	eP		P		11 33 54.7	+1.0
PUYF	Puyloubier	85.37	0	eP		P		11 33 55.5	+1.6
MTLF	Montolieu	85.51	3	iP		P		11 33 54.9	+0.3
	comp=Z,23nm,1.1s,mb5.0								
MTLF	Montolieu	85.51	3	iP		P		11 33 54.9	+0.3
MTLF					pmax	pmax			
	comp=Z,12nm,1.1s,mb5.0								
MTLF	Montolieu	85.51	3	iP		P		11 33 54.9	+0.3
	comp=Z,12nm,1.1s,mb5.0								
GELF	Grande-Etoile	85.52	0	eP		P		11 33 54.6	0.0
LMR	La Mourre	85.56	359	eP		P		11 33 55.4	+0.6
BERF	Bertagne	85.59	0	eP		P		11 33 55.7	+0.7
SJPF	Ste Jean	85.59	5	eP		P		11 33 55.2	+0.2
EPF	Esparros	85.75	4	eP		P		11 33 56.2	+0.4
ETSF	Etsaut	85.84	5	eP		P		11 33 56.9	+0.7
	comp=Z,12nm,0.8s,mb4.9								
ETSF	Etsaut	85.84	5	eP		P		11 33 56.9	+0.7
ETSF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.9								
ETSF	Etsaut	85.84	5	eP		P		11 33 56.9	+0.7
	comp=Z,5.9nm,0.8s,mb4.9								
BRTR	Keskin Array B	85.95	339	P		P		11 33 56.2	-0.6
	comp=Z,1.7nm,0.9s,mb4.3,baz=56,slow=3.1,SNR=9.3								
BRTR					LR	LR		12 22 06.9	
	comp=Z,26nm,18.1s,MS3.7,baz=194,slow=42								
FITZ	Fitzroy Crossi	86.81	236	eP		P		11 34 00.8	-0.2
	comp=Z,4.6nm,0.7s,mb4.8								
AS31	Alice Springs	87.54	226	eP		P		11 34 04.1	-0.4
ASAR	Alice Springs	87.54	226	P		P		11 34 04.2	-0.4
	comp=Z,1.5nm,0.5s,mb4.4,baz=20,slow=5.2,SNR=48								
ASAR	Alice Springs	87.54	226	P		P		11 34 04.2	-0.3
ASAR					pmax	pmax			
	comp=Z,2.0nm,0.5s								
ASPA	Alice Springs	87.54	226	eP		P		11 34 04.1	-0.4
ESDC	Sonseca Array	88.83	7	P		P		11 34 10.5	-0.1
	comp=Z,1.8nm,0.7s,mb4.5,baz=348,slow=4.4,SNR=9.3								
STKA	Stephens Creek	91.62	216	P		P		11 34 23.4	-0.2
	comp=Z,1.5nm,0.5s,mb4.5,baz=347,slow=7.1,SNR=4.0								
TORD	Torodi Ar. Bea	115.55	4	PKP		PKPdf		11 39 58.1	-0.4
	comp=Z,24nm,0.4s,baz=13,slow=2.1,SNR=4.9								
QSPA	South Pole Qui	141.24	180	eP		PKPdf		11 40 45.9	-1.2
TSUM	Tsumeb	146.46	339	PKPbc		PKPbc		11 40 58.5	+0.9
	comp=Z,11nm,0.9s,baz=333,slow=4.5,SNR=20								
TSUM	Tsumeb	146.46	339	ePKPdf		PKPdf		11 40 55.7	-0.5
MAW	Mawson	148.30	218	PKPbc		PKPbc		11 41 02.2	-0.5
	comp=Z,2.1nm,0.5s,baz=79,slow=1.5,SNR=7.6								
MAW	Mawson	148.30	218	PKP2		PKPbc		11 41 02.2	-0.5
MAW					pmax	pmax			
	comp=Z,2.0nm,0.5s								
LBTB	Lobatse	149.51	323	ePKP2		PKPbc		11 41 06.0	+0.2
BOSA	Boshof	152.87	320	PKPbc		PKPbc		11 41 11.5	-2.0
	comp=Z,3.7nm,0.4s,baz=71,slow=3.5,SNR=8.0								
BOSA					PKPab	PKPab		11 41 23.5	-1.2
	comp=Z,6.5nm,0.6s,baz=54,slow=5.9,SNR=5.9								
BOSA	Boshof	152.87	320	PKPbc		PKPbc		11 41 11.5	-2.1
BOSA					PKPab	PKPab		11 41 23.5	-1.2

*IDC **25** 11:45:41.4±0.9,5147N×174.41W,h0km,mb3.9/12, mb1 4.1/12,mb1mx3.9/23,mbtmp3.9/12,MS3.4/2, Ms1 3.3/2,ms1mx2.8/25,Error ellipse: s-maj=28.5km s-min=20.7km az=157.0*

*MOS **25** 11:45:45.7±0.9,5151N×174.39W,h33km, mb4.2/9, Error ellipse: s-maj=31.2km s-min=11.6km az=83.8*

*ISCJB **25** 11:45:46.3±1.3,5145N±009.×17422W±009,h40km±9km, mb4.3/21,MS3.2/2, Error ellipse: s-maj=15.0km s-min=8.9km az=164.9*

*NEIC **25** 11:45:47.8±0.9,5147N×174.26W,h40km±6km,mb4.8/9, Error ellipse: s-maj=12.3km s-min=5.8km az=169.0*

ISC 25 11:45:47.9±1.2,5153N±009×17424W±009,h40km±9km, n71,σ0°81/70,mb4.3/21,MS3.2/2,1C,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.68	2	P	Pn	11 46 01.2	+0.1
ATKA				S	Sn	11 46 10.4	-0.1
NIKO	Nikolski	3.61	64	eP	Pn	11 46 41.5	+0.1
AMKA	Amchitka	4.04	270	P	Pn	11 46 46.5	-0.8
AKUT	Akutan	5.76	60	eP	Pn	11 47 13.6	+2.8
SPIA	Saint Paul Isl	6.13	21	eP	Pn	11 47 20.2	+4.4
KDAK	Kodiak Island	13.98	55	Pn	Pn	11 49 02.4	-1.0
	0.6nm,0.3s,baz=158,slow=4.2,SNR=3.4						
SVW2	Sparrevohn	14.06	40	eP	Pn	11 49 11.1	+6.7
SLKM	Skilak Lake	16.07	47	eP	Pn	11 49 31.7	+0.8
BILL	Bilibino	19.09	337	eP	Pn	11 50 13.8	+5.7
BILL					pmax	pmax	
	comp=Z,13nm,1.1s						
EGAK	Eagle	21.59	39	eP	P	11 50 34.0	-0.2
DAWY	Dawson	22.07	42	eP	P	11 50 38.7	-0.6
INK	Inuvik	25.72	34	P	P	11 51 14.6	+0.2
	comp=Z,1.9nm,0.6s,mb3.8,baz=255,slow=8.7,SNR=6.4						
INK	Inuvik	25.72	34	P	P	11 51 14.6	+0.2
INK					pmax	pmax	
	comp=Z,2.0nm,0.6s						
INK	Inuvik	25.72	34	eP	P	11 51 14.1	-0.3
DLBC	Dease Lake	25.89	57	P	P	11 51 15.5	-0.4
	comp=Z,0.9nm,0.6s,mb3.5,baz=289,slow=16,SNR=2.0						
DLBC					LR	LR	12 01 56.2
	comp=Z,88nm,18.4s,MS3.3,baz=267,slow=38						
DLBC	Dease Lake	25.89	57	P	P	11 51 15.5	-0.4
DLBC					LR	LR	12 01 56.2
YKA	Yellowknife Ar	33.05	47	LR	LR	12 06 10.5	
	comp=Z,43nm,19.3s,MS3.2,baz=270,slow=37						
NEW	Newport	36.14	72	P	P	11 52 46.8	+0.6
	comp=Z,0.8nm,0.4s,mb4.0,baz=315,slow=7.1,SNR=2.6						
NEW	Newport	36.14	72	P	P	11 52 46.8	+0.6
NEW					pmax	pmax	
	comp=Z,1.0nm,0.4s						
MCMT	McKenzie Canyo	40.41	75	eP	P	11 53 22.5	+0.5
PDAR	Pinedale Array	43.53	75	P	P	11 53 48.0	+0.4
	comp=Z,0.5nm,0.5s,mb3.5,baz=335,slow=4.0,SNR=5.3						
PV01	Paradox Valley	46.91	80	eP	P	11 54 13.8	-0.6
ULM	Lac du Bonnet	47.19	59	P	P	11 54 14.7	-1.8
	comp=Z,1.6nm,0.5s,mb4.2,baz=298,slow=6.8,SNR=4.8						
ARCES	ARCESS Array B	58.39	352	P	P	11 55 38.1	-1.1
	comp=Z,1.2nm,0.5s,mb4.2,baz=23,slow=6.9,SNR=17						
ARCES					PcP	PcP	11 56 29.3 -0.4
	comp=Z,2.1nm,0.7s,baz=15,slow=5.3,SNR=7.4						
ARCES	ARCESS Array B	58.39	352	P		P	11 55 38.1 -1.1
ARCES							11 56 29.3
ARCES					pmax	pmax	
	comp=Z,1.0nm,0.5s						
ARCES					pmax	pmax	
	comp=Z,2.0nm,0.7s						
SIUC	Southern Illin	58.76	68	P	P	11 55 41.9	+0.1
USIN	University of	59.48	66	eP	P	11 55 37.5	-9.3
	comp=Z,39nm,0.8s,mb5.5						
BVAR	Borovoye Array	62.58	322	P	P	11 56 06.5	-1.3
	comp=Z,1.2nm,0.5s,mb4.3,baz=60,slow=5.8,SNR=5.6						
BVAR					PcP	PcP	11 56 46.3 -0.2
	comp=Z,1.6nm,0.5s,baz=69,slow=1.7,SNR=6.6						
BVAR	Borovoye Array	62.58	322	P	P	11 56 06.5	-1.3
BVAR							11 56 46.3
BVAR					pmax	pmax	
	comp=Z,1.0nm,0.5s						
BVAR					pmax	pmax	
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	66.22	349	P	P	11 56 29.9	-1.7
	comp=Z,0.7nm,0.5s,mb3.9,baz=20,slow=6.1,SNR=5.5						
FINES					PcP	PcP	11 57 00.6 -1.0
	comp=Z,0.9nm,0.6s,baz=8.7,slow=2.5,SNR=3.9						
FINES	FINESS Array B	66.22	349	P	P	11 56 29.9	-1.7
FINES							11 57 00.6
FINES					pmax	pmax	
	comp=Z,1.0nm,0.5s						
FINES					pmax	pmax	
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	66.22	349	P	P	11 56 29.9	-1.7
FINES					PcP	PcP	11 57 00.6 -1.0
NB2	NORSAR Subarra	67.70	357	P	P	11 56 40.1	-0.9
	comp=Z,0.4nm,0.5s,mb3.7,baz=7.1,slow=6.2						
NOA	NORSAR Array B	67.70	357	P	P	11 56 40.5	-0.5
	comp=Z,0.6nm,0.6s,mb3.8,baz=2.5,slow=6.3,SNR=4.8						
NOA	NORSAR Array B	67.70	357	P	P	11 56 40.5	-0.5
NOA					pmax	pmax	
	comp=Z,1.0nm,0.6s						
GUN	Gumba	74.41	295	eP	P	11 57 22.6	+0.9
	comp=Z,13nm,0.3s,mb5.3						
JIRN	Jiri	74.43	295	eP	P	11 57 22.9	+1.1
	comp=Z,14nm,0.5s,mb5.2						
KKN	Kakani	74.84	296	eP	P	11 57 25.1	+0.9
PKI	Pulchoki	74.94	295	eP	P	11 57 25.8	+1.1
GKN	Gorkha	75.04	296	eP	P	11 57 26.1	+0.8
DMN	Daman	75.08	296	eP	P	11 57 25.9	+0.3
KOLN	Koldanda	75.80	297	eP	P	11 57 30.5	+0.8
	comp=Z,12nm,0.9s,mb4.8						
GIVF	Givet	78.75	1	eP	P	11 57 46.5	+0.3
GERES	GERESS Array B	79.78	355	P	P	11 57 51.7	-0.1
	comp=Z,0.7nm,0.7s,mb3.7,baz=25,slow=3.5,SNR=6.5						
GERES	GERESS Array B	79.78	355	P	P	11 57 51.7	-0.1
GERES					pmax	pmax	
	comp=Z,1.0nm,0.7s						
FLN	La Foliniere	79.95	4	eP	P	11 57 52.2	-0.5
LDF	La Druitiere	80.14	4	eP	P	11 57 53.4	-0.3
GRR	Gorron	80.31	4	eP	P	11 57 54.5	-0.2
CDF	Champ du Feu	80.44	359	eP	P	11 57 55.6	+0.2
HAU	Haudompre	80.85	360	eP	P	11 57 57.9	+0.3
HINF	Hinteralfeld	81.03	359	eP	P	11 57 58.6	0.0
	comp=Z,5.4nm,0.7s,mb4.3						
HINF	Hinteralfeld	81.03	359	eP	P	11 57 58.6	0.0
HINF					pmax	pmax	
	comp=Z,3.0nm,0.7s,mb4.3						
HINF	Hinteralfeld	81.03	359	eP	P	11 57 58.6	0.0
	comp=Z,2.7nm,0.7s,mb4.3						
LOR	Lormes	81.57	1	eP	P	11 58 01.7	+0.3
	comp=Z,6.5nm,0.7s,mb4.4						
LOR	Lormes	81.57	1	eP	P	11 58 01.7	+0.3
LOR					pmax	pmax	
	comp=Z,3.0nm,0.7s,mb4.3						
LOR	Lormes	81.57	1	eP	P	11 58 01.7	+0.3
	comp=Z,3.3nm,0.7s,mb4.4						
SSF	Saint Saulge	81.78	2	eP	P	11 58 02.8	+0.3
	comp=Z,7.5nm,0.7s,mb4.4						
SSF	Saint Saulge	81.78	2	eP	P	11 58 02.8	+0.3
SSF					pmax	pmax	
	comp=Z,4.0nm,0.7s,mb4.5						
SSF	Saint Saulge	81.78	2	eP	P	11 58 02.8	+0.3
	comp=Z,3.8nm,0.7s,mb4.4						
RKT	Rikitea	81.93	144	eLR	LR	11 58 34.4	
	comp=Z,60nm,38.5s						
AVF	Avril sur Loir	82.04	2	eP	P	11 58 04.1	+0.2
	comp=Z,9.7nm,0.8s,mb4.5						
AVF	Avril sur Loir

ARCES	**ARCESS Array B**	**134.14**	**347**	SKPbc	SKPbc	12 07 44.9	-2.3
	1.3nm,0.6s,baz=8.5,slow=2.5,SNR=8.4						
FINES	**FINESS Array B**	**140.51**	**340**	SKPbc	SKPbc	12 08 03.1	-2.4
	0.6nm,0.6s,baz=104,slow=4.4,SNR=3.3						
TORD	**Torodi Ar. Bea**	**166.57**	**191**	PKPab	PKPab	12 06 59.7	+0.4
	0.7nm,0.7s,baz=186,slow=5.0,SNR=4.1						

*ISCJB **25** 12:31:53.3±0.7, 3533N±003×13682E±005, h45km±12km, Error ellipse: s-maj=7.3km s-min=5.2km az=46.7*
*JMA **25** 12:31:53.4, 3534N×13683E, h43km, M3.9 Broadband fault plane solution: P waves. NP1:ϕs118.00000°, δ57.00000°, λ157.00000°. NP2:ϕs221.00000°, δ71.00000°, λ35.00000°. Principal axes: T Plg38.0000°, Azm84.0000°; N Plg51.0000°, Azm246.0000°; P Plg9.0000°, Azm347.0000°;*
JMA Felt III J1.
*NIED **25** 12:32:00, 3530N×13680E, h41km, Mw3.8 Best double couple: M0 6.52000×10^14 NP1:ϕs231.00000°, δ74.00000°, λ52.00000°. NP2:ϕs122.00000°, δ41.00000°, λ155.00000°.*

ISC 25 12:31:53.7±0.7, 3533N±003×13682E±005, h40km±14km, n10, σ0s34/19, 2C-6D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAO	**Obara**	**0.36**	**99**	⇓P	**Pn**	**12 32 02.5**	**-0.3**
JAO				S	**Sn**	**12 32 09.2**	**+0.1**
JGM	**Miyama**	**0.38**	**348**	⇓P	**Pn**	**12 32 02.7**	**-0.2**
JGM				S	**Sn**	**12 32 09.3**	**-0.1**
TSUJ	**Tsu 2**	**0.70**	**208**	⇓P	**Pn**	**12 32 07.1**	**0.0**
TSUJ				S	**Sn**	**12 32 16.9**	**+0.2**
JIE	**Ise**	**0.94**	**186**	⇓P	**Pn**	**12 32 10.5**	**+0.1**
JIE				S	**Sn**	**12 32 23.3**	**+0.7**
JKG	**Kaga**	**1.03**	**338**	⇓P	**Pn**	**12 32 11.5**	**-0.1**
JKG				S	**Sn**	**12 32 25.3**	**+0.5**
JHE	**Heguri**	**1.15**	**235**	P	**Pn**	**12 32 13.2**	**-0.1**
JHE				S	**Sn**	**12 32 28.1**	**+0.4**
JWT	**Wachi**	**1.16**	**268**	⇑P	**Pn**	**12 32 13.1**	**-0.3**
JWT				S	**Sn**	**12 32 27.9**	**-0.2**
SHZ3	**Shizuoka 3**	**1.17**	**102**	⇑P	**Pn**	**12 32 12.9**	**-0.7**
JKN2	**Miekihoku**	**1.17**	**203**	⇓P	**Pn**	**12 32 13.2**	**-0.4**
JKN2				S	**Sn**	**12 32 28.2**	**-0.2**
MAT	**Matsushiro**	**1.66**	**42**	P	**Pn**	**12 32 20.3**	**0.0**
MAT				S	**Sn**	**12 32 40.9**	**+0.6**

WEL 25 12:46:49.7±0.2, 3969S×17471E, h141km±2km, ML3.5/10, 9C-1D, Error ellipse: s-maj=1.4km s-min=0.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	**Wanganui**	**0.22**	**108**	⇑PN	Pn	12 47 09.3	+0.4
WAZ				SN	Sn	12 47 23.7	+0.3
RAEZ	**Rainy Point**	**0.47**	**328**	*e*PN	Pn	12 47 09.7	-0.1
VRZ	**Vera Road**	**0.56**	**3**	⇑PN	Pn	12 47 10.2	-0.1
VRZ				SN	Sn	12 47 24.9	-1.0
PKVZ	**Pokaka**	**0.63**	**51**	PN	Pn	12 47 10.6	-0.1
NEZ	**North Egmont**	**0.63**	**311**	PN	Pn	12 47 10.1	-0.7
MTVZ	**Mangateitei**	**0.66**	**63**	PN	Pn	12 47 09.7	-1.2
MTVZ				SN	Sn	12 47 25.9	-1.1
NRZ	**Ngariki Road**	**0.70**	**300**	PN	Pn	12 47 11.2	0.0
PKE	**Pukeiti**	**0.75**	**311**	PN	Pn	12 47 11.2	-0.3
PKE				SN	Sn	12 47 27.3	-0.8
TRVZ	**Turoa**	**0.75**	**59**	PN	Pn	12 47 11.8	+0.3
TRVZ				SN	Sn	12 47 27.0	-1.2
WNVZ	**Wahianoa**	**0.77**	**63**	PN	Pn	12 47 11.9	+0.2
WNVZ				SN	Sn	12 47 27.3	-1.1
DRZ	**Dome Shelter**	**0.78**	**58**	*e*PN	Pn	12 47 11.3	-0.4
DRZ				SN	Sn	12 47 27.3	-1.2
FWVZ	**Far West T-bar**	**0.78**	**57**	PN	Pn	12 47 11.8	+0.1
WPVZ	**Whakapapa**	**0.80**	**54**	PN	Pn	12 47 11.9	0.0
TWVZ	**Taurewa**	**0.83**	**43**	PN	Pn	12 47 11.9	-0.2
MOVZ	**Moawhango**	**0.85**	**71**	PN	Pn	12 47 12.0	-0.3
MOVZ				SN	Sn	12 47 26.9	-2.6
NGZ	**Ngauruhoe**	**0.85**	**54**	PN	Pn	12 47 12.3	-0.1
WTVZ	**West Tongariro**	**0.89**	**50**	PN	Pn	12 47 12.6	0.0
KRVZ	**Karewarewa**	**0.93**	**51**	PN	Pn	12 47 12.9	-0.1
TSZ	**Takapari Road**	**1.03**	**112**	⇑PN	Pn	12 47 13.9	+0.1
KATZ	**Kakaramea**	**1.04**	**47**	PN	Pn	12 47 14.0	+0.1
HIZ	**Hauiti**	**1.18**	**5**	*e*PN	Pn	12 47 14.7	-0.5
MRZ	**Mangatainoka R**	**1.18**	**146**	⇑PN	Pn	12 47 15.1	-0.1
KIW	**Kapiti Island**	**1.18**	**173**	PN	Pn	12 47 15.2	0.0
DUWZ	**D'Urville Isla**	**1.27**	**208**	PN	Pn	12 47 16.0	-0.1
TIWZ	**Tintock**	**1.41**	**141**	PN	Pn	12 47 17.5	-0.1
CAW	**Cannon Point**	**1.45**	**169**	⇑PN	Pn	12 47 18.0	0.0
BKZ	**Black Stump Fm**	**1.47**	**70**	PN	Pn	12 47 17.8	-0.4
BFZ	**Birch Farm**	**1.54**	**131**	PN	Pn	12 47 18.8	-0.2
MRW	**Makara Radio**	**1.54**	**180**	⇑*i*PN	Pn	12 47 18.9	0.0
TCW	**Tory Channel**	**1.56**	**192**	PN	Pn	12 47 19.1	0.0
MTW	**Mount Morrison**	**1.59**	**158**	PN	Pn	12 47 19.2	-0.3
WEL	**Wellington**	**1.60**	**179**	PN	Pn	12 47 19.3	-0.3
SNZO	**South Karori**	**1.62**	**180**	PN	Pn	12 47 19.6	-0.3
PXZ	**Pawanui**	**1.69**	**102**	*e*PN	Pn	12 47 20.5	-0.1
BHW	**Baring Head**	**1.73**	**176**	⇑PN	Pn	12 47 20.7	-0.3
MSWZ	**Moikau Station**	**1.77**	**167**	⇑PN	Pn	12 47 21.3	-0.2
PAWZ	**Paruwai Farm**	**1.78**	**162**	⇑PN	Pn	12 47 21.4	-0.3
NNZ	**Nelson**	**1.84**	**213**	⇓PN	Pn	12 47 22.0	-0.3
TUWZ	**Tuamarina**	**1.84**	**198**	PN	Pn	12 47 21.9	-0.4
TRWZ	**Traveller**	**1.86**	**157**	PN	Pn	12 47 22.2	-0.5
QRZ	**Quartz Range**	**2.02**	**235**	PN	Pn	12 47 23.4	-1.1
BSWZ	**Blackbirch Sta**	**2.12**	**197**	PN	Pn	12 47 25.5	-0.2
URZ	**Urewera**	**2.35**	**53**	PN	Pn	12 47 27.0	-1.4
KNZ	**Kokohu**	**2.39**	**75**	PN	Pn	12 47 28.2	-0.7
THZ	**Tophouse**	**2.49**	**213**	PN	Pn	12 47 29.6	-0.6
MWZ	**Matawai**	**2.57**	**59**	PN	Pn	12 47 30.1	-1.2
KHZ	**Kahutara**	**2.87**	**198**	PN	Pn	12 47 34.4	-0.6
DSZ	**Denniston Nort**	**3.02**	**226**	*e*PN	Pn	12 47 35.4	-1.5
PUZ	**Puketiti**	**3.20**	**61**	*e*PN	Pn	12 47 37.4	-1.8
LTZ	**Lake Taylor**	**3.60**	**210**	*e*PN	Pn	12 47 42.7	-1.7
MQZ	**McQueen's Vall**	**4.30**	**200**	*e*PN	Pn	12 47 50.9	-2.7
ODZ	**Otahua Downs**	**6.14**	**208**	*e*PN	Pn	12 48 16.1	-2.1

*ISCJB **25** 12:47:30.7±0.3, 1061N±003×6253W±003, h96km±3km, mb3.9/9, Error ellipse: s-maj=5.5km s-min=3.6km az=109.5*
*IDC **25** 12:47:31.3±1.4, 1076N×6257W, h88km±13km, mb3.6/9, mb1 3.7/10, mb1mx3.5/24, mbtmp3.9/10, Error ellipse: s-maj=19.6km s-min=8.4km az=130.0*
*FUNV **25** 12:47:31.8, 1065N×6240W, h89km, MW3.6*
*TRN **25** 12:47:33.7, 1066N×6242W, h80km, MD3.9*
*NEIC **25** 12:47:35.2, 1082N×6238W, h64km, mb4.5/1, MD3.9(TRN), After TRN.*

ISC 25 12:47:31.7±0.3, 1062N±003×6253W±003, h89km±3km, n33, σ1s11/54, mb3.9/9, 6C-5D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m	ISC
GUIV	**Guiria**	**0.30**	**84**	⇑*i*P	**Pn**	**12 47 44.6**	**-0.4**
GUIV				*e*S	**Sn**	**12 47 53.4**	**-1.5**
GUNV	**Guanoco**	**0.61**	**222**	⇑*i*P	**Pn**	**12 47 48.4**	**+1.2**
GUNV				*e*S	**Sn**	**12 48 00.0**	**+1.2**
CRUV	**Carupano**	**0.70**	**275**	*e*P	**Pn**	**12 47 48.2**	**+0.1**
TCE	**Chacachacare**	**0.77**	**84**	*e*P	**Pn**	**12 47 49.2**	**+0.4**
TCE				*e*S	**Sn**	**12 47 59.5**	**-2.1**
TPP	**Pointe-a-Pierr**	**1.10**	**106**	⇓*i*P	**Pn**	**12 47 54.0**	**+1.5**
TPP				*e*S	**Sn**	**12 48 10.4**	**+2.3**
TRN	**Trinidad (W)**	**1.11**	**88**	⇑*i*P	**Pn**	**12 47 53.1**	**+0.6**
TRN				*e*S	**Sn**	**12 48 07.0**	**-1.2**
TBH	**Brigand Hill**	**1.44**	**95**	*e*P	**Pn**	**12 47 57.5**	**+0.8**
TBH				*e*S	**Sn**	**12 48 14.2**	**-1.4**
GRW	**Mount Saint Ca**	**1.75**	**29**	⇑*e*P	**Pn**	**12 48 01.2**	**+0.6**
GRW				*e*S	**Sn**	**12 48 17.9**	**-4.8**
ORIV	**Oritupano**	**1.76**	**210**	⇑*i*P	**Pn**	**12 48 02.0**	**+1.2**
TPR	**Prospect**	**1.81**	**72**	⇑*i*P	**Pn**	**12 48 02.5**	**+1.1**
TPR				*e*S	**Sn**	**12 48 21.9**	**-2.1**
GRHS	**Sauteurs**	**1.82**	**28**	⇓*e*P	**Pn**	**12 48 01.6**	**+0.1**
GRHS				*e*S	**Sn**	**12 48 23.6**	**-0.5**
GRSS	**Sisters**	**1.90**	**28**	⇓*i*P	**Pn**	**12 48 03.1**	**+0.6**
GRSS				*e*S	**Sn**	**12 48 25.6**	**-0.3**
GRIC	**Isle de Caille**	**1.90**	**29**	*e*P	**Pn**	**12 48 02.8**	**+0.3**
GRIC				*e*S	**Sn**	**12 48 26.0**	**0.0**
PCRV	**Puerto La Cruz**	**2.12**	**258**	P	**Pn**	**12 48 06.3**	**+0.9**
	9.9nm,0.3s,baz=45,slow=5.4,SNR=31						
PCRV				S	**Sn**	**12 48 30.3**	**-0.8**
	17nm,0.3s,baz=182,slow=22,SNR=21						
GRCU	**Cariacou**	**2.12**	**30**	⇓*i*P	**Pn**	**12 48 06.0**	**+0.5**
GRCU				*e*S	**Sn**	**12 48 30.7**	**-0.6**

IBAV	**Isla La Blanqu**	**2.34**	**301**	*e*P	**Pn**	**12 48 08.6**	**+0.3**
IBAV				*e*S	**Sn**	**12 48 36.9**	**+0.5**
GURV	**El Guri**	**2.89**	**191**	⇓*i*P	**Pn**	**12 48 16.1**	**+0.5**
GURV				*e*S	**Sn**	**12 48 48.1**	**-1.5**
CUPV	**Cœpira**	**3.25**	**260**	*e*P	**Pn**	**12 48 21.3**	**+0.7**
CUPV				*e*S	**Sn**	**12 48 58.5**	**+0.2**
MERV	**Las Mercedes**	**3.95**	**250**	*e*P	**Pn**	**12 48 30.8**	**+0.8**
MERV				*e*S	**Sn**	**12 49 14.4**	**-0.8**
CAOV	**Caicara del Or**	**4.97**	**229**	*e*P	**Pn**	**12 48 43.6**	**-0.3**
CAOV				*e*S	**Sn**	**12 49 37.5**	**-2.5**
BAUV	**El Baul**	**5.68**	**253**	*e*P	**Pn**	**12 48 53.2**	**-0.3**
BAUV				*e*S	**Sn**	**12 49 54.9**	**-2.5**
SEG	**Port Louis**	**5.84**	**10**	*e*P	**Pn**	**12 48 57.8**	**+2.1**
SEG				*e*S	**Sn**	**12 50 01.6**	**+0.4**
DEG	**La Desirade**	**5.84**	**14**	*e*P	**Pn**	**12 48 56.8**	**+1.1**
DEG				*e*S	**Sn**	**12 49 57.6**	**-3.6**
SIV	**San Ignacio**	**26.47**	**177**	P	**P**	**12 53 01.8**	**+1.5**
	2.2nm,0.5s,mb3.8,baz=10,slow=12,SNR=6.5						
CPUP	**Villa Florida**	**37.07**	**172**	P	**P**	**12 54 32.7**	**-0.4**
	0.7nm,0.4s,mb3.9,baz=320,slow=5.2,SNR=4.0						
CPUP	**Villa Florida**	**37.07**	**172**	*e*P	**P**	**12 54 32.9**	**-0.2**
	2.7nm,0.4s,mb4.5						
ULM	**Lac du Bonnet**	**48.12**	**332**	P	**P**	**12 56 00.3**	**-2.2**
	2.4nm,0.5s,mb4.2,baz=139,slow=8.9,SNR=5.7						
PLCA	**Paso Flores**	**51.62**	**188**	P	**P**	**12 56 30.4**	**+1.4**
	1.1nm,0.6s,mb4.1,baz=5.3,slow=9.8,SNR=5.0						
PDAR	**Pinedale Array**	**51.88**	**317**	P	**P**	**12 56 29.8**	**-1.1**
	1.2nm,0.6s,mb4.1,baz=117,slow=9.1,SNR=13						
NOA	**NORSAR Array B**	**72.91**	**29**	P	**P**	**12 58 51.6**	**+0.5**
	0.4nm,0.5s,mb3.5,baz=262,slow=6.2,SNR=3.4						
HFS	**Hagfors**	**74.00**	**30**	P	**P**	**12 58 57.4**	**-0.1**
	1.0nm,0.5s,mb3.8,baz=196,slow=8.5,SNR=4.7						
ARCES	**ARCESS Array B**	**79.44**	**21**	P	**P**	**12 59 27.4**	**-0.7**
	0.5nm,0.7s,mb4.3,baz=273,slow=6.9,SNR=5.6						
FINES	**FINESS Array B**	**80.10**	**29**	P	**P**	**12 59 30.4**	**-1.3**
	0.5nm,0.4s,mb3.7,baz=276,slow=3.5,SNR=7.2						

*ISCJB **25** 12:50:36.1±0.4, 5029N±003×1885E±003, h0km, Error ellipse: s-maj=4.6km s-min=2.3km az=28.9*
*IPEC **25** 12:50:37.1±0.2, 5028N×1891E, h3km±1km, ML2.2/4, Error ellipse: s-maj=2.5km s-min=0.8km az=172.0*
*WAR **25** 12:50:37.5, 5024N×1896E, ML2.8, Mining Induced*
*PRU **25** 12:50:38.3, 5025N×1886E, h0km*
*IDC **25** 12:50:39.2±0.9, 5032N×1871E, h0km, mb1 3.2/4, mb1mx3.1/17, mbtmp3.0/4, ML2.7/4, Error ellipse: s-maj=21.3km s-min=8.1km az=148.0*
*CSEM **25** 12:50:40.0±0.3, 5027N×1876E, h2km, ML3.1/5, Error ellipse: s-maj=7.4km s-min=3.5km az=8.0*

ISC 25 12:50:37.4±0.4, 5027N±003×1888E±003, h0km, n31, σ1s19/51, 1C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.48**	**248**	*e*Pg	**Pg**	**12 50 47.7**	**+1.2**
RAC				*e*Sg	**Sg**	**12 50 55.4**	**+2.7**
OJC	**Ojcow**	**0.59**	**94**	*i* Pgd	**Pg**	**12 50 48.0**	**-0.7**
OJC				*e*Sg	**Sg**	**12 50 55.9**	**-0.5**
OKC	**Ostrava-Krasne**	**0.64**	**228**	*e*PG	**Pg**	**12 50 50.1**	**+0.5**
OKC				*e*SG	**Sg**	**12 50 59.2**	**+1.3**
	53nm,0.7s						
OKC	**Ostrava-Krasne**	**0.64**	**228**	*e*Pg	**Pg**	**12 50 49.9**	**+0.3**
MORC	**Moravsky Berou**	**0.99**	**241**	*e*Pg	**Pg**	**12 50 56.0**	**-0.4**
MORC				*e*Sg	**Sg**	**12 51 10.0**	**+0.7**
	30nm,0.2s						
LIKS	**Likavka**	**1.23**	**173**	*e*PG	**Pg**	**12 51 00.4**	**-0.5**
LIKS				*e*SG	**Sg**	**12 51 17.3**	**+0.5**
NIE	**Niedzica**	**1.26**	**132**	*e*Pg	**Pg**	**12 51 00.3**	**-1.2**
NIE				*e*Sg	**Sg**	**12 51 17.1**	**-0.7**
JAVC	**Velka Javorina**	**1.61**	**210**	*e*Pn	**Pn**	**12 51 06.9**	**-0.2**
JAVC				*e*Sg	**Sg**	**12 51 31.1**	**+1.8**
	22nm,0.7s						
DPC	**Dobruska-Polom**	**1.64**	**274**	*e*PG	**Pg**	**12 51 07.0**	**-1.8**
DPC				*e*SG	**Sg**	**12 51 29.2**	**-0.9**
	42nm,0.5s						
KSP	**Ksiaz**	**1.75**	**290**	*e*Pg	**Pg**	**12 51 10.7**	**-0.2**
KSP				*e*Sg	**Sg**	**12 51 34.8**	**+1.3**
STHS	**Stebnicka Huta**	**1.75**	**118**	*e*PN	**Pn**	**12 51 09.6**	**+0.6**
STHS				*e*SN	**Sn**	**12 51 32.8**	**+0.8**
VRAC	**Vranov**	**1.77**	**238**	Pn	**Pn**	**12 51 09.5**	**+0.4**
	2.0nm,0.3s,baz=56,slow=17,SNR=16						
VRAC				Lg		12 51 33.1	
	6.8nm,0.3s,baz=140,slow=21,SNR=18						
VRAC	**Vranov**	**1.77**	**238**	*e*Pn	**Pn**	**12 51 08.8**	**-0.4**
VRAC				*e*Sg	**Sg**	**12 51 32.4**	**-1.7**
	20nm,0.3s						
VYHS	**Vyhne**	**1.77**	**181**	*e*PN	**Pn**	**12 51 08.1**	**-1.2**
VYHS				*e*SN	**Sn**	**12 51 30.8**	**-1.8**
UPC	**Upice**	**1.85**	**279**	*e*PG	**Pg**	**12 51 11.8**	**-1.1**
UPC				*e*SG	**Sg**	**12 51 37.1**	**+0.2**
KRUC	**Moravsky**	**2.02**	**234**	*e*Pn	**Pn**	**12 51 12.7**	**+0.1**
KECS	**Kecovo**	**2.07**	**149**	*e*PN	**Pn**	**12 51 14.9**	**+1.5**
KECS				*e*SN	**Sn**	**12 51 39.5**	**-0.4**
CRVS	**Cervenica-Dubn**	**2.17**	**128**	*e*PN	**Pn**	**12 51 16.7**	**+2.0**
CRVS				*e*		12 51 44.4	
PSZ	**Piszkesteto**	**2.44**	**164**	⇓*e*P	**Pn**	**12 51 23.9**	**+5.4**
KWP	**Kalwaria**	**2.55**	**103**	*e*Pn	**Pn**	**12 51 23.3**	**+3.3**
KWP				*e*Pg	**Pg**	**12 51 29.2**	**+2.9**
KWP				*e*Sg	**Sg**	**12 52 05.5**	**+6.1**
KOLS	**Kolonicke sedl**	**2.58**	**120**	*e*	**Pn**	**12 51 26.8**	**+6.4**
KOLS				*e*		12 52 06.3	
PRU	**Pruhonice**	**2.81**	**266**	*e*SG	**Sg**	**12 52 06.1**	**-1.4**
	8.6nm,0.5s						
BRG	**Berggiesshubel**	**3.21**	**283**	PG	**Pg**	**12 51 38.6**	**-0.2**
BRG				SG	**Sg**	**12 52 21.4**	**+1.0**
	3.2nm,0.5s						
KHC	**Kasperske Hory**	**3.62**	**254**	*e*PN	**Pn**	**12 51 35.5**	**+0.8**
KHC				*e*PG	**Pg**	**12 51 42.5**	**-4.3**
KHC				*e*SG	**Sg**	**12 52 33.0**	**-0.8**
	12nm,0.6s						
GERES	**GERESS Array B**	**3.66**	**249**	Pn	**Pn**	**12 51 35.0**	**-0.2**
	0.1nm,0.3s,baz=77,slow=11,SNR=3.2						
GERES				Pg	**Pg**	**12 51 45.3**	**-2.2**
	0.8nm,0.3s,baz=64,slow=17,SNR=12						
GERES				Lg		12 52 31.5	
	2.5nm,0.3s,baz=62,slow=29,SNR=12						
CLL	**Collm**	**3.87**	**288**	*e*Sg	**Sg**	**12 52 44.0**	**+2.2**
	comp=Z,10.0nm,0.7s						
NKC	**Novy Kostel**	**4.13**	**272**	*e*SG	**Sg**	**12 52 49.0**	**-1.0**
BURAR	**Bucovina Array**	**4.95**	**120**	⇑*i*P	**Pn**	**12 51 52.2**	**-0.7**
AKASG	**Malin Array Be**	**6.62**	**82**	Pn	**Pn**	**12 52 15.9**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=267,slow=12,SNR=5.2						
AKASG				Lg		12 54 09.8	
	comp=Z,0.6nm,0.3s,baz=274,slow=27,SNR=3.7						
FINES	**FINESS Array B**	**11.90**	**17**	Pn	**Pn**	**12 53 24.6**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=8.6						
ARCES	**ARCESS Array B**	**19.59**	**7**	Pn	**Pn**	**12 55 02.8**	**-5.5**
	comp=Z,0.1nm,0.3s,baz=192,slow=11,SNR=4.1						

*ATH **25** 13:24:02.9, 3970N×2399E, h45km, MD2.7/3*
*CSEM **25** 13:24:03.5±0.1, 3969N×2399E, h30km, MD2.7, Error ellipse: s-maj=3.0km s-min=2.1km az=16.0*

THE 25 13:24:06.0, 3983N×2400E, h18km, ML2.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.27**	**291**	*e*Pg	Pg	13 24 11.4	-0.5
PAIG				*e*Sg	Sg	13 24 16.7	+0.7
OUR	**Ouranopolis**	**0.50**	**358**	*e*Pg	Pg	13 24 15.8	-0.3
	comp=Z,6.5nm,0.5s						
PLG	**Polygyros**	**0.69**	**322**	*e*P	Pb	13 24 18.2	-1.3
NEO	**Neokhori**	**0.80**	**229**	*e*P	Pb	13 24 17.6	-3.8
NEO				*e*S	Sb	13 24 28.2	-3.6
LIA	**Limnos Island**	**0.91**	**86**	*e*P	Pb	13 24 20.7	-2.5
HORT	**Hortiatis**	**1.03**	**318**	*e*Pg	Pg	13 24 25.1	-0.9
HORT				*e*Sg	Sg	13 24 39.0	-0.6

*BJI **25** 13:29:59.5, 048N×9725E, h30km, mB5.1, mb4.6, Ms4.0, Msz3.8*
*IDC **25** 13:30:01.9±1.0, 112N×9696E, h0km, mb4.1/11, mb1 4.2/12, mb1mx4.0/22, mbtmp4.1/12, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/20, Error ellipse: s-maj=38.9km s-min=15.0km az=54.0*
*NEIC **25** 13:30:06.7±0.3, 1.17N×97.09E, h30km, mb4.6/8, Error ellipse: s-maj=9.9km s-min=5.3km az=53.0*
*ISCJB **25** 13:30:08.2±1.8, 126N±008×972E±0.1, h57km±15km, mb4.3/22, MS3.7/3, Error ellipse: s-maj=23.8km s-min=7.9km az=122.2*

ISC 25 13:30:10.8±1.7, 131N±008×973E±01, h60km±14km, n35, σ0s90/34, mb4.3/22, MS3.7/3, 2C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.21**	**48**	P	**Pn**	**13 30 44.5**	**-0.7**
	6.5nm,0.3s,baz=248,slow=6.2,SNR=46						
PSI				LR	LR	13 31 33.8	
	comp=Z,298nm,19.4s,baz=320,slow=36						
KULM	**Kulim**	**5.19**	**40**	*e*P	**Pn**	**13 31 25.0**	**-1.0**
KSI	**Kapahiang**	**7.24**	**133**	⇑*e*P	**Pn**	**13 31 56.0**	**+2.0**
KSI	**Kapahiang**	**7.24**	**133**	⇑*e*P	**Sn**	**13 33 13.8**	**-1.0**
KMI	**Kunming**	**24.26**	**12**	P	**P**	**13 35 24.5**	**+2.3**
KMI				XP	sP	13 35 38.3	-5.5
KMI				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.3						
KMI				LR	LR		
	comp=N,321nm,16.3s,MS3.9						
KMI				LR	LR		
	comp=E,174nm,17.3s,MS3.9						
KMI				LR	LR		
	comp=Z,357nm,14.2s,MS4.0						
GYA	**Guiyang**	**26.59**	**19**	P	**P**	**13 35 45.5**	**+2.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
JIRN	**Jiri**	**28.28**	**339**	*e*P	**P**	**13 35 59.1**	**+0.6**
	comp=Z,20nm,0.8s,mb4.8						
PKI	**Pulchoki**	**28.48**	**337**	*e*P	**P**	**13 36 01.2**	**+0.9**
GUN	**Gumba**	**28.62**	**339**	*e*P	**P**	**13 36 01.4**	**-0.1**
	comp=Z,28nm,0.7s,mb5.1						
DMN	**Daman**	**28.64**	**337**	*e*P	**P**	**13 36 05.2**	**+3.5**
KKN	**Kakani**	**28.73**	**337**	*e*P	**P**	**13 36 02.1**	**-0.4**
	comp=Z,17nm,0.8s,mb4.8						
GKN	**Gorkha**	**29.17**	**337**	*e*P	**P**	**13 36 06.6**	**+0.2**
KOLN	**Koldanda**	**29.39**	**335**	*e*P	**P**	**13 36 08.1**	**-0.3**
	comp=Z,10nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**33.93**	**126**	P	**P**	**13 36 47.5**	**-0.7**
	comp=Z,1.0nm,0.7s,mb3.9,baz=317,slow=14,SNR=4.2						
XAN	**Xi'an**	**34.34**	**17**	P	**P**	**13 36 51.0**	**-0.7**
XAN				AP	pP	13 36 58.8	-7.8
XAN				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.5						
GTA	**Gaotai**	**37.99**	**3**	*e*P	**P**	**13 37 23.3**	**+0.4**
GTA				AP	pP	13 37 29.5	-8.5
GTA				XP	sP	13 37 32.5	-12
GTA				PP	PP	13 38 52.0	+1.4
GTA				S	**S**	**13 43 10.3**	**-0.5**
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
GTA				AMB	AMB		
	comp=Z,39nm,4.6s						
GTA				LR	LR		
	comp=N,109nm,16.0s,MS3.8						
GTA				LR	LR		
	comp=E,80nm,16.4s,MS3.8						
GTA				LR	LR		
	comp=Z,92nm,18.6s,MS3.6						
WRA	**Warramunga Arr**	**42.02**	**122**	P	**P**	**13 37 56.3**	**0.0**
	comp=Z,2.0nm,0.6s,mb3.9,baz=302,slow=9.1,SNR=39						
WB2	**Warramunga Arr**	**42.03**	**122**	*e*P	**P**	**13 37 56.5**	**+0.1**
ASAR	**Alice Springs**	**43.40**	**127**	*e*P	**P**	**13 38 07.8**	**+0.4**
	comp=Z,2.2nm,0.9s,mb3.9,baz=298,slow=8.1,SNR=28						
AS31	**Alice Springs**	**43.40**	**127**	*e*P	**P**	**13 38 07.3**	**-0.2**
SONM	**Songino Array**	**47.01**	**8**	P	**P**	**13 38 36.9**	**+0.8**
	comp=Z,2.8nm,0.7s,mb4.3,baz=192,slow=9.4,SNR=7.9						
ULN	**Ulaanbaatar**	**47.14**	**9**	*e*P	**P**	**13 38 37.5**	**+0.4**
	comp=Z,1.1nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	**47.16**	**346**	P	**P**	**13 38 37.3**	**+0.1**
	comp=Z,2.9nm,0.5s,mb4.5,baz=159,slow=7.8,SNR=25						
STKA	**Stephens Creek**	**53.37**	**132**	*e*P	**P**	**13 39 24.8**	**+0.6**
	comp=Z,1.6nm,0.6s,mb4.1						
STKA	**Steph

n41,σ0$85/52,mb4.0/21,MS3.2/2,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**2.03**	**5**	*e*Pn	**Pn**	**14 51 57.1**	**-1.1**
NACB				*e*Sn	**Sn**	**14 52 22.6**	**+0.2**
YHNB	**Yeheng**	**2.52**	**359**	*e*Pn	**Pn**	**14 52 05.6**	**+0.7**
YHNB				*e*Sn	**Sn**	**14 52 33.0**	**-1.4**
YOJ	**Yonaguni jima**	**2.73**	**32**	P	**Pn**	**14 52 08.5**	**+0.6**
YOJ				*e*S	**Sn**	**14 52 39.7**	**0.0**
TATO	**Taipei**	**2.82**	**1**	*e*Pn	**Pn**	**14 52 10.1**	**+0.9**
HATJ	**Hateruma jima**	**2.91**	**49**	P	**Pn**	**14 52 10.6**	**+0.3**
HATJ				*e*S	**Sn**	**14 52 43.4**	**-0.7**
IRIF	**Iriomote-Funau**	**3.05**	**44**	P	**Pn**	**14 52 12.8**	**+0.6**
IRIF				*e*S	**Sn**	**14 52 47.5**	**0.0**
JKRS	**Kuro-shima**	**3.17**	**48**	P	**Pn**	**14 52 14.6**	**+0.7**
JKRS				*e*S	**Sn**	**14 52 49.5**	**-0.9**
JIJ	**Ishigaki jima**	**3.34**	**48**	P	**Pn**	**14 52 15.8**	**-0.5**
JIJ				*e*S	**Sn**	**14 52 53.2**	**-1.5**
QZH	**Quanzhou**	**3.81**	**318**	P	**Pn**	**14 52 22.0**	**-0.7**
QZH				S	**Sn**	**14 53 03.3**	**-2.9**
QZH				Smax			
	comp=N,250nm,0.3s						
QZH				Smax			
	comp=E,220nm,0.7s						
JTJ	**Tarama**	**3.91**	**50**	P	**Pn**	**14 52 24.7**	**+0.6**
JTJ				*e*S	**Sn**	**14 53 08.4**	**-0.3**
JMJ	**Miyako jima 2**	**4.44**	**52**	*e*S	**Sn**	**14 53 22.3**	**+0.4**
JOGS	**Gusukube**	**4.50**	**54**	P	**Pn**	**14 52 33.6**	**+1.5**
JOGS				*e*S	**Sn**	**14 53 23.6**	**+0.5**
JIH	**Iheya**	**7.70**	**49**	P	**Pn**	**14 53 16.5**	**+0.4**
JOW	**Kunigami**	**7.80**	**52**	P	**Pn**	**14 53 17.6**	**+0.2**
	comp=E,4.7nm,0.3s,baz=231,slow=9.7,SNR=23						
JOW				S	**Sn**	**14 54 38.3**	**-6.1**
	baz=124,slow=28,SNR=2.6						
QIZ	**Qiongzhong**	**11.27**	**256**	*e*Pn	**Pn**	**14 54 09.8**	**+4.8**
MAJO	**Matsushiro**	**20.45**	**42**	*e*P	**P**	**14 56 04.2**	**+3.6**
	comp=E,16nm,1.1s						
MAT	**Matsushiro**	**20.45**	**42**	P	**P**	**14 56 04.2**	**+3.6**
ASAJ	**Asahikawa**	**28.04**	**34**	P	**P**	**14 57 13.8**	**-0.2**
	comp=E,1.3nm,0.5s,mb3.8,baz=245,slow=14,SNR=1.8						
ASAJ				LR	LR	15 07 38.5	
	comp=E,32nm,20.9s,MS2.9,baz=179,slow=35						
ULN	**Ulaanbaatar**	**28.14**	**339**	*e*P	**P**	**14 57 15.2**	**+0.4**
	comp=E,2.3nm,0.8s,mb3.9						
SONM	**Songino Array**	**28.33**	**338**	P	**P**	**14 57 17.5**	**+1.0**
	comp=E,3.2nm,0.7s,mb4.0,baz=152,slow=9.8,SNR=5.2						
TLY	**Talaya**	**32.55**	**339**	P	**P**	**14 57 53.2**	**-0.6**
	comp=E,2.5nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**39.97**	**318**	P	**P**	**14 58 58.9**	**+1.7**
	comp=E,1.0nm,0.5s,mb3.8,baz=102,slow=10.0,SNR=7.1						
ZAL	**Zalesovo**	**42.08**	**328**	P	**P**	**14 59 13.6**	**-0.9**
	comp=E,2.9nm,0.4s,mb4.3,baz=62,slow=3.7,SNR=5.6						
WRAB	**Tennant Creek**	**43.68**	**162**	*e*P	**P**	**14 59 26.3**	**-1.2**
	comp=E,4.5nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**43.69**	**162**	P	**P**	**14 59 26.0**	**-1.5**
	comp=E,0.4nm,0.6s,mb3.3,baz=334,slow=11,SNR=10						
ASAR	**Alice Springs**	**47.12**	**164**	P	**P**	**14 59 54.4**	**-0.4**
	comp=E,0.2nm,0.4s,mb3.4,baz=343,slow=7.5,SNR=9.0						
BVAR	**Borovoye Array**	**49.39**	**322**	P	**P**	**15 00 13.3**	**+1.1**
	comp=E,0.7nm,0.5s,mb4.0,baz=105,slow=9.3,SNR=5.2						
CHKZ	**Chkalovo**	**49.47**	**323**	*e*P	**P**	**15 00 12.4**	**-0.4**
	comp=E,1.2nm,0.6s,mb4.1						
ZRNK	**Zerenda**	**50.17**	**321**	*e*P	**P**	**15 00 16.6**	**-1.6**
	comp=E,1.5nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**56.39**	**317**	P	**P**	**15 01 04.7**	**+0.8**
AKTO	**Aktyubinsk**	**56.39**	**317**	P	**P**	**15 01 04.7**	**+0.8**
	comp=E,0.5nm,0.3s,mb4.1,baz=113,slow=13,SNR=3.3						
ARU	**Arti**	**56.87**	**324**	*e*P	**P**	**15 01 07.1**	**-0.1**
	comp=E,3.1nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**57.08**	**160**	P	**P**	**15 01 08.6**	**-0.2**
	comp=E,1.1nm,0.6s,mb4.1,baz=53,slow=5.5,SNR=4.1						
KIV	**Kislovodsk**	**67.04**	**310**	*e*P	**P**	**15 02 16.1**	**+0.5**
	comp=E,7.4nm,0.6s,mb4.9						
ARCES	**ARCESS Array B**	**71.51**	**338**	P	**P**	**15 02 43.3**	**+0.1**
	comp=E,1.8nm,0.7s,mb4.1,baz=72,slow=7.8,SNR=10						
FINES	**FINESS Array B**	**73.31**	**330**	P	**P**	**15 02 54.3**	**+0.3**
	comp=E,1.2nm,0.7s,mb4.0,baz=59,slow=7.4,SNR=7.0						
AKASG	**Malin Array Be**	**74.54**	**319**	P	**P**	**15 03 00.7**	**-0.4**
	comp=E,0.5nm,0.3s,mb3.9,baz=61,slow=6.6,SNR=9.1						
NB2	**NORSAR Subarra**	**80.12**	**332**	P	**P**	**15 03 32.2**	**-0.2**
	comp=E,1.1nm,0.6s,mb4.0,baz=59,slow=5.9						
NOA	**NORSAR Array B**	**80.12**	**332**	P	**P**	**15 03 31.5**	**-0.9**
	comp=E,1.3nm,0.6s,mb4.0,baz=62,slow=5.2,SNR=10						
NOA				LR	LR	15 43 14.0	
	comp=E,27nm,19.6s,MS3.6,baz=35,slow=39						
CLL	**Collm**	**83.81**	**323**	*e*P	**P**	**15 03 52.0**	**+0.3**
GERES	**GERESS Array B**	**84.55**	**321**	P	**P**	**15 03 55.7**	**+0.2**
	comp=E,1.1nm,0.6s,mb4.2,baz=57,slow=4.9,SNR=9.7						

*BJI **25** 15:45:37.4,59.10N×137?80W,h5^km^,mB4.7,mb4.4,Ms4.2,Ms2.9*

*ISCJB **25** 15:45:39.0±0.3,5907N±003×13800W±004,h5^km^, mb4.1/13,MS3.4/2, Error ellipse: s-maj=4.4km s-min=3.0km az=54.9*

*IDC **25** 15:45:40.2±1.0,5924N×137?80W,h0^km^,mb3.8/6, mb1 3.9/10,mb1mx3.8/21,mbtmp3.9/10,ML3.7/4,MS2.8/5, Ms1 2.8/5,ms1mx2.5/34, Error ellipse: s-maj=18.0km s-min=9.6km az=44.0*

*PGC **25** 15:45:42.8,59.10N×137?78W,h5^km^,ML4.2/4,99km southeast of Yakutat, Ak Glacier Bay, Alaska.*

*NEIC **25** 15:45:42.5,59.10N×137?78W,h5^km^,mb4.0/7,ML3.7(PMR), ML3.9(AEIC),MW4.0(PGC),After PGC.*

ISC 25 15:45:41.0±0.7,5913N±003×13795W±004,h5^km^±4^km^,n67, σ1$28/84,mb4.1/13,MS3.4/2,1D,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLBC	**Pleasant Camp**	**0.87**	**67**	⇓P	**Pg**	**15 45 57.6**	**-0.2**
PLBC				S	**Sg**	**15 46 09.1**	**+0.1**
PNL	**Peninsula**	**0.92**	**307**	P	**Pg**	**15 45 58.5**	**0.0**
PNL				S	**Sg**	**15 46 12.1**	**+1.6**
YKU2	**Yakutat**	**0.96**	**294**	P	**Pg**	**15 46 00.4**	**+1.0**
SKAG	**Skagway**	**1.38**	**75**	P	**Pn**	**15 46 06.5**	**-0.5**
SKAG				S	**Sb**	**15 46 24.2**	**-1.0**
HYT	**Haines Junctio**	**1.71**	**7**	Pn	**Pn**	**15 46 11.9**	**+0.4**
HYT				Sn	**Sn**	**15 46 35.5**	**+1.7**
HYT				Trac		15 46 41.0	
	comp=Z,2μm,0.4s						
WHY	**Whitehorse**	**2.18**	**44**	Pn	**Pn**	**15 46 18.6**	**+0.8**
WHY				Pg	**Pg**	**15 46 20.9**	**-1.7**
WHY				Sn	**Sn**	**15 46 46.5**	**+1.3**
WHY				Sg	**Sg**	**15 46 49.9**	**-1.0**
WHY				Trac		15 46 53.0	
	comp=Z,2μm,0.6s						
WHY	**Whitehorse**	**2.18**	**44**	P	**Pn**	**15 46 18.3**	**+0.5**
WHY				S	**Sn**	**15 46 46.0**	**+0.8**
SIT	**Sitka**	**2.50**	**145**	P	**Pn**	**15 46 22.1**	**-0.2**
RAGM	**Ragged Mountai**	**3.63**	**293**	P	**Pn**	**15 46 37.0**	**-0.8**
BMRM	**Bremner River**	**3.81**	**302**	P	**Pn**	**15 46 40.1**	**-0.3**
DLBC	**Dease Lake**	**4.18**	**96**	Pn	**Pn**	**15 46 45.4**	**0.0**
	10nm,0.3s,baz=261,slow=8.5,SNR=107						
DLBC				Sn	**Sn**	**15 47 34.9**	**+0.3**
	26nm,0.3s,baz=345,slow=26,SNR=12						
DLBC				Lg		15 47 49.9	
	57nm,0.3s,baz=114,slow=17,SNR=9.3						
DLBC				LR	LR	15 48 20.9	
	comp=Z,204nm,18.6s,baz=284,slow=39						
DLBC	**Dease Lake**	**4.18**	**96**	Pn	**Pn**	**15 46 45.4**	**0.0**
DLBC				Sn	**Sn**	**15 47 34.9**	**+0.3**
DLBC				Sg	**Sb**	**15 47 48.5**	**+2.8**
DLBC				Trac		15 47 52.8	
	comp=Z,196nm,0.4s						
EYAK	**Cordova Ski Ar**	**4.19**	**293**	P	**Pn**	**15 46 44.5**	**-1.0**
DIV	**Divide**	**4.40**	**300**	P	**Pn**	**15 46 46.9**	**-1.5**
MENT	**Mentasta**	**4.74**	**326**	*e*P	**Pn**	**15 46 55.5**	**+2.4**
DAWY	**Dawson**	**5.00**	**353**	Pn	**Pn**	**15 46 58.3**	**+1.6**
DAWY				Sn	**Sn**	**15 47 56.1**	**+1.3**
DAWY				Sg	**Sg**	**15 48 20.1**	**-1.5**
DAWY				Trac		15 48 30.6	
	comp=Z,92nm,0.6s						
DAWY	**Dawson**	**5.00**	**353**	P	**Pn**	**15 46 56.9**	**+0.2**
EGAK	**Eagle**	**5.87**	**346**	*e*Pn	**Pn**	**15 47 09.8**	**+1.2**
EGAK				*e*Sg	**Sb**	**15 48 44.9**	**+11**
NDB	**Naden**	**5.88**	**150**	Pn	**Pn**	**15 47 08.8**	**+0.1**
RC01	**Rabbit Creek A**	**6.21**	**293**	P	**Pn**	**15 47 12.1**	**-1.3**
SLKM	**Skilak Lake**	**6.34**	**288**	*e*Pn	**Pn**	**15 47 13.5**	**-1.6**
RUBB	**Prince Rupert**	**6.41**	**135**	Pg	**Pb**	**15 47 34.9**	**+1.8**
RUBB				Sg	**Sg**	**15 49 00.5**	**-6.3**
RUBB				Trac		15 49 20.0	
	comp=Z,62nm,0.7s						
VIB	**Van Inlet**	**6.62**	**151**	Trac		15 48 31.7	
	comp=Z,6.0nm,0.3s						
VIB	**Van Inlet**	**6.62**	**151**	Pn	**Pn**	**15 47 22.7**	**+3.8**
VIB				Sn	**Sn**	**15 48 28.3**	**-6.4**
MOBC	**Moresby Island**	**6.84**	**148**	Pn	**Pn**	**15 47 23.8**	**+1.8**
MOBC				Trac		15 48 53.2	
	comp=Z,7.0nm,0.7s						
BNAB	**Bonilla**	**6.96**	**141**	Pn	**Pn**	**15 47 23.4**	**-0.2**
BNAB				Trac		15 49 24.6	
	comp=Z,6.0nm,0.6s						
MCK	**McKinley**	**7.00**	**316**	*e*Pn	**Pn**	**15 47 25.7**	**+1.6**
TRF	**Thorofare Moun**	**7.35**	**311**	P	**Pn**	**15 47 29.4**	**+0.4**
COLA	**College**	**7.40**	**325**	*e*Pn	**Pn**	**15 47 23.1**	**-6.5**
COLA				*e*Sg	**Sg**	**15 49 39.6**	**+1.0**
BNB	**Barry Inlet**	**7.43**	**149**	Pn	**Pn**	**15 47 27.5**	**-2.6**
KTH	**Kantishna Hill**	**7.65**	**311**	P	**Pn**	**15 47 32.6**	**-0.4**
FNBB	**Fort Nelson**	**7.72**	**85**	Pn	**Pn**	**15 47 35.0**	**+1.0**
FNBB				Sn	**Sn**	**15 49 00.2**	**-1.5**
FNBB				Sg	**Sb**	**15 49 38.7**	**+11**
FNBB				Trac		15 49 50.8	
	comp=Z,32nm,0.8s						
KDAK	**Kodiak Island**	**7.80**	**266**	Pn	**Pn**	**15 47 33.6**	**-1.5**
	1.8nm,0.3s,baz=72,slow=11,SNR=9.4						
FSB	**Fort Saint Jam**	**8.80**	**116**	Sg	Sx	15 50 23.2	
FSB				Trac		15 50 39.5	
	comp=Z,5.0nm,0.6s						
BBB	**Bella Bella**	**8.90**	**137**	Pn	**Pn**	**15 47 51.7**	**+1.5**
	0.1nm,0.3s,baz=310,slow=14,SNR=2.4						
BBB				Sn	**Sn**	**15 49 30.6**	**-0.3**
	0.3nm,0.3s,baz=308,slow=21,SNR=3.9						
BBB				Lg		15 50 26.0	
	0.2nm,0.3s,baz=229,slow=22,SNR=3.1						
BBB	**Bella Bella**	**8.90**	**137**	Pn	**Pn**	**15 47 51.0**	**+0.8**
BBB				Sg	Sn	15 50 15.6	+45
BBB				Trac		15 50 47.1	
	comp=Z,7.0nm,0.8s						
BBB	**Bella Bella**	**8.90**	**137**	*e*P	**Pn**	**15 47 51.0**	**+0.8**
SVW2	**Sparrevohn**	**9.02**	**290**	*e*Pn	**Pn**	**15 47 50.1**	**-1.8**
BMBC	**Bull Mountain**	**9.04**	**103**	Trac		15 50 49.0	
	comp=Z,23nm,0.8s						
BMBC	**Bull Mountain**	**9.04**	**103**	Sg	Sx	15 50 23.4	
INK	**Inuvik**	**9.41**	**10**	Pn	**Pn**	**15 47 56.4**	**-0.9**
	0.2nm,0.3s,baz=187,slow=8.2,SNR=3.8						
INK				Sn	**Sn**	**15 49 39.8**	**-3.7**
	0.4nm,0.3s,baz=311,slow=19,SNR=3.5						
INK				Lg		15 50 36.8	
	0.6nm,0.3s,baz=90,slow=14,SNR=4.3						
INK				LR	LR	15 52 13.0	
	comp=Z,36nm,21.8s,baz=346,slow=42						
INK	**Inuvik**	**9.41**	**10**	Pn	**Pn**	**15 47 58.7**	**+1.4**
INK				Sn	**Sn**	**15 49 41.5**	**-2.0**
INK				Trac		15 50 51.9	
	comp=Z,16nm,0.9s						
INK	**Inuvik**	**9.41**	**10**	*e*Pn	**Pn**	**15 47 56.4**	**-0.9**
	4.0nm,0.5s						
YKA	**Yellowknife Ar**	**11.85**	**64**	Pn	**Pn**	**15 48 30.8**	**+0.1**
	baz=263,slow=13,SNR=9.9						
YKA				Lg		15 51 50.9	
	baz=262,slow=28,SNR=4.0						
YKA				LR	LR	15 53 45.1	
	comp=Z,20nm,18.9s,baz=270,slow=41						
YKW3	**Yellowknife Ar**	**11.86**	**63**	Pn	**Pn**	**15 48 32.1**	**+1.4**
YKW3				Sg	Sn	15 51 49.8	+66
YKW3				Trac		15 51 60.0	
	comp=Z,39nm,1.3s						
YBH	**Yreka Blue Hor**	**19.85**	**145**	LR	LR	15 56 59.6	
	comp=Z,59nm,19.1s,baz=333,slow=34						
EGMT	**Eagleton**	**19.93**	**111**	*e*P	**Pn**	**15 50 13.7**	**-1.5**
	5.2nm,0.7s						
FFC	**Flin Flon**	**19.95**	**87**	*e*P	**Pn**	**15 50 14.0**	**-1.5**
	5.7nm,0.8s						
DLMT	**Dillon**	**20.58**	**121**	*e*P	**P**	**15 50 21.4**	**+0.6**
BOZ	**Bozeman (W)**	**20.80**	**119**	*e*P	**P**	**15 50 24.3**	**+1.3**
	1.4nm,0.5s						
MCMT	**McKenzie Canyo**	**20.89**	**122**	*e*P	**P**	**15 50 25.2**	**+1.2**
HLID	**Hailey**	**21.25**	**127**	*e*P	**P**	**15 50 29.3**	**+1.4**
	2.6nm,0.8s,mb3.6						
QLMT	**Earthquake Lak**	**21.52**	**120**	*e*P	**P**	**15 50 28.4**	**-2.4**
GCMT	**Greycliff**	**21.59**	**116**	*e*P	**P**	**15 50 31.7**	**+0.2**
IMW	**Indian Meadow**	**22.47**	**121**	*e*P	**P**	**15 50 44.6**	**+3.6**
	6.6nm,0.8s,mb4.1						
PDAR	**Pinedale Array**	**23.98**	**121**	P	**P**	**15 50 55.8**	**-0.5**
	0.6nm,0.6s,mb3.2,baz=335,slow=5.8,SNR=6.3						
HWUT	**Hardware Ranch**	**24.05**	**125**	*e*P	**P**	**15 50 58.1**	**+1.1**
	2.6nm,0.7s,mb3.8						
ULM	**Lac du Bonnet**	**25.49**	**92**	P	**P**	**15 51 08.9**	**-1.2**
	2.4nm,0.7s,mb3.8,baz=308,slow=10,SNR=3.6						
ULM				LR	LR	16 01 57.1	
	comp=Z,31nm,19.5s,MS2.8,baz=47,slow=38						
JCT	**Junction City**	**38.51**	**121**	*e*P	**P**	**15 53 03.7**	**-0.5**
	18nm,0.9s,mb4.8						
MDJ	**Mudanjiang**	**54.27**	**298**	P	**P**	**15 55 08.0**	**0.0**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,25nm,4.3s						
NB2	**NORSAR Subarra**	**57.79**	**17**	P	**P**	**15 55 31.8**	**-1.4**
	comp=Z,0.4nm,0.5s,mb3.7,baz=342,slow=7.4						
NOA	**NORSAR Array B**	**57.79**	**17**	P	**P**	**15 55 32.1**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.7,baz=343,slow=7.1,SNR=5.2						
FINES	**FINESS Array B**	**59.12**	**9**	P	**P**	**15 55 40.9**	**-1.6**
	comp=Z,0.4nm,0.5s,mb3.8,baz=15,slow=7.9,SNR=7.9						
ZAL	**Zalesovo**	**62.15**	**333**	P	**P**	**15 56 01.2**	**-1.9**
	comp=Z,0.7nm,0.3s,mb4.3,baz=120,slow=3.3,SNR=3.8						
HHC	**Hu-ho-hao-te**	**65.08**	**308**	*e*P	**P**	**15 56 24.8**	**+2.3**
HHC				PCP	PcP	15 56 57.8	+2.5
HHC				PP	PP	15 58 48.0	+2.4
HHC				PCS		16 01 00.0	
HHC				S	S	16 05 05.5	0.0
HHC				PS		16 05 26.3	
HHC				SCS	ScS	16 06 17.0	-1.2
HHC				SS	SS	16 09 19.3	+1.8
HHC				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.1						
HHC				AMB	AMB		
	comp=Z,56nm,5.6s						
HHC				LR	LR		
	comp=N,85nm,26.6s,MS4.0						
HHC				LR	LR		
	comp=E,104nm,26.6s,MS4.0						
HHC				LR	LR		
	comp=Z,74nm,27.5s,MS3.7						
NJ2	**Nanjing**	**69.36**	**298**	*e*P	**P**	**15 56 52.0**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
AKASG	**Malin Array Be**	**70.03**	**9**	P	**P**	**15 56 52.4**	**-1.4**
	comp=Z,0.6nm,0.3s,mb4.0,baz=357,slow=6.3,SNR=9.2						

*ISCJB **25** 16:12:40.0±1.1,153S±02×1750W±0.1,h233^km^±15^km^, mb4.0/12, Error ellipse: s-maj=31.4km s-min=17.3km az=119.8*

*NEIC **25** 16:12:40.6±1.5,1505S×17505W,h232^km^±18^km^,mb3.8/5, Error ellipse: s-maj=30.1km s-min=16.8km az=140.0*

*IDC **25** 16:12:41.8±1.5,1533S×17488W,h242^km^±23^km^,mb3.7/5, mb1 3.9/6,mb1mx3.7/13,mbtmp4.3/6, Error ellipse: s-maj=41.1km s-min=22.4km az=141.0*

ISC 25 16:12:41.5±1.1,153S±02×1750W±01,h233^km^±15^km^,n17, σ0$72/19,mb4.0/12,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.36**	**66**	P	**Pn**	**16 13 36.4**	**-0.6**
	18nm,0.3s,baz=186,slow=22,SNR=33						
AFI				S	**S**	**16 14 22.5**	**+1.6**
	9.3nm,0.3s,baz=114,slow=19,SNR=3.3						
AFI	**Afiamalu**	**3.36**	**66**	P	**Pn**	**16 13 36.4**	**-0.6**
AFI				*e*S	**S**	**16 14 20.5**	**-0.4**
URZ	**Urewera**	**23.93**	**196**	P	**P**	**16 17 33.3**	**-1.0**
	3.5nm,0.5s,mb4.2,baz=90,slow=4.0,SNR=4.9						
CTAO	**Charters Tower**	**37.21**	**257**	*e*P	**P**	**16 19 28.9**	**-1.6**
	1.6nm,0.6s,mb3.7						
STKA	**Stephens Creek**	**42.80**	**239**	P	**P**	**16 20 16.4**	**+0.1**
	1.0nm,0.3s,mb3.7,baz=71,slow=6.5,SNR=6.0						
WB2	**Warramunga Arr**	**48.40**	**257**	*e*P	**P**	**16 21 00.2**	**+0.1**
WRAB	**Tennant Creek**	**48.40**	**257**	*e*P	**P**	**16 20 60.0**	**-0.1**
	4.0nm,0.8s,mb3.8						
WRA	**Warramunga Arr**	**48.41**	**257**	P	**P**	**16 21 00.1**	**0.0**
	0.8nm,0.3s,mb3.5,baz=90,slow=8.2,SNR=61						
AS31	**Alice Springs**	**48.72**	**252**	*e*P	**P**	**16 21 02.9**	**+0.4**
ASAR	**Alice Springs**	**48.72**	**252**	P	**P**	**16 21 03.1**	**+0.6**
	13nm,0.5s,mb4.5,baz=87,slow=7.9,SNR=449						
ASPA	**Alice Springs**	**48.73**	**252**	*e*P	**P**	**16 21 03.1**	**+0.6**
KAKA	**Kakadu**	**51.02**	**266**	*e*P	**P**	**16 21 20.6**	**+0.9**
	4.8nm,0.8s,mb4.0						
MBWA	**Marble Bar**	**61.95**	**254**	*e*P	**P**	**16 22 36.3**	**-0.3**
	12nm,1.2s,mb4.4						
SBA	**Scott Base**	**63.24**	**184**	*e*P	**P**	**16 22 46.2**	**+1.1**
	0.4nm,0.6s,mb3.2						
MA2	**Magadan**	**79.62**	**343**	*e*P	**P**	**16 24 17.6**	**-5.3**
	90nm,1.3s,mb5.2						
PDAR	**Pinedale Array**	**83.19**	**42**	P	**P**	**16 24 41.1**	**-0.4**
	0.6nm,0.7s,mb3.5,baz=211,slow=2.6,SNR=5.9						
WALA	**Waterton Lakes**	**83.68**	**35**	P	**P**	**16 24 43.8**	**-0.2**
	1.7nm,0.8s,mb3.8						

*NEIC **25** 16:22:35.1,3240S×7121W,h49^km^,MG3.3(GUC),After GUC.*

GUC 25 16:22:35.1±0.9,3240S×7121W,h49^km^±4^km^,MD4.0, ML3.3,10C-5D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.23**	**234**	⇓*i*P	Pn	16 22 44.1	+0.6
PACH				*i* S	Sn	16 22 50.1	+0.6
PTCH	**Petorca**	**0.28**	**60**	⇑*i*P	Pn	16 22 44.5	+0.7
PTCH				*i* S	Sn	16 22 51.3	+1.2
PTCH				AML	AML	16 22 52.2	
	comp=N,7μm,0.2s						
PTCH	**Petorca**	**0.28**	**60**	⇑*i*P	Pn	16 22 44.5	+0.7
PTCH				*i* S	Sn	16 22 51.3	+1.2
CHNG	**Los Chungos**	**0.57**	**335**	⇑*i*P	Pn	16 22 47.3	+0.2
CHNG				*i* S	Sn	16 22 55.9	+0.1
CHNG				AML	AML	16 22 57.2	
	comp=N,2μm,0.5s						
JACH	**Jahuel**	**0.59**	**118**	⇓*i*P	Pn	16 22 47.9	+0.5
JACH				*i* S	Sn	16 22 57.7	+1.5
ROCH	**El Roble**	**0.59**	**163**	⇑*i*P	Pn	16 22 48.1	+0.7
ROCH				*i* S	Sn	16 22 58.0	+1.7
IHA	**Instituto Hidr**	**0.72**	**210**	⇓*i*P	Pn	16 22 49.1	+0.1
PEL	**Peldehue**	**0.86**	**149**	⇓*i*P	Pn	16 22 51.7	+0.8
PEL				*i* S	Sn	16 23 04.0	+1.5
PEL				AML	AML	16 23 05.1	
	comp=E,2μm,0.3s						
PEL	**Peldehue**	**0.86**	**149**	⇓*i*P	Pn	16 22 51.7	+0.8
PEL				*i* S	Sn	16 23 04.0	+1.5
LCCH	**Las Cruces**	**1.11**	**196**	⇑*i*P	Pn	16 22 55.1	+0.8
DSCH	**Colegio Aleman**	**1.13**	**152**	⇑*i*P	Pn	16 22 54.9	+0.3
DSCH				*i* S	Sn	16 23 09.9	+0.9
RCDM	**Rinconada Maip**	**1.14**	**163**	*e*P	Pn	16 22 55.2	+0.6
RCDM				*i* S	Sn	16 23 10.2	+1.1
RCDM				AML	AML	16 23 12.4	
	comp=E,2μm,0.1s						
RCDM	**Rinconada Maip**	**1.14**	**163**	*e*P	Pn	16 22 55.2	+0.6
RCDM				*i* S	Sn	16 23 10.2	+1.1
STL	**Santa Lucia**	**1.14**	**155**	*e*P	Pn	16 22 55.1	+0.4
STL				*i* S	Sn	16 23 10.3	+1.2
CLCH	**Cerro Calan**	**1.14**	**150**	⇑*i*P	Pn	16 22 55.5	+0.8
CLCH				*i* S	Sn	16 23 11.1	+1.8
CLCH				AML	AML	16 23 12.3	
	comp=E,609nm,0.3s						
CLCH				AML	AML	16 23 14.0	
	comp=E,909nm,1.1s						
FCH	**Farellones**	**1.21**	**140**	*e*P	Pn	16 22 56.5	+0.9
FCH				*i* S	Sn	16 23 12.9	+2.1
FCH				AML	AML	16 23 13.8	
	comp=E,759nm,0.2s						
CMCH	**Combarbala**	**1.24**	**8**	⇑*i*P	Pn	16 22 55.3	-0.7
CMCH				*i* S	Sn	16 23 11.0	-0.5
CMCH				AML	AML	16 23 15.3	
	comp=E,3μm,0.8s						
CMCH	**Combarbala**	**1.24**	**8**	⇑*i*P	Pn	16 22 55.3	-0.7
CMCH				*i* S	Sn	16 23 11.0	-0.5
ANTU	**Antumapu**	**1.26**	**158**	*e*P	Pn	16 22 57.3	+1.0
ANTU				*i* S	Sn	16 23 13.4	+1.3
ANTU				AML	AML	16 23 20.3	
	comp=N,625nm,0.4s						
ANTU	**Antumapu**	**1.26**	**158**	*e*P	Pn	16 22 57.3	+1.0
ANTU				*i* S	Sn	16 23 13.4	+1.3
TACH	**Talagante**	**1.27**	**170**	*e*P	Pn	16 22 57.2	+0.8
TACH				*i* S	Sn	16 23 13.7	+1.4

comp=E,2μm,0.3s
SAN Santiago 2.09 217↑ *iP* **Pn 16 30 40.0 +0.5**
SAN *i* S **Sn 16 31 06.2 +0.3**
OVCH Ovalle 2.10 303↑ *iP* **Pn 16 30 39.5 -0.1**
OVCH *i* S **Sn 16 31 05.7 -0.4**
OVCH AML AML 16 31 12.5
comp=N,2μm,0.5s
OVCH Ovalle 2.10 303↑ *iP* **Pn 16 30 39.5 -0.1**
OVCH *i* S **Sn 16 31 05.8 -0.3**
TLL Tololo Astrono 2.14 318↑ *iP* **Pn 16 30 41.0 +0.9**
TLL *i* S **Sn 16 31 08.2 +1.2**
TLL AML AML 16 31 10.6
comp=E,3μm,0.3s
TLL Tololo Astrono 2.14 318↑ *iP* **Pn 16 30 41.0 +0.9**
TLL *i* S **Sn 16 31 08.2 +1.2**
PCH Pirque 2.16 211↑ *iP* **Pn 16 30 40.9 +0.6**
PCH *i* S **Sn 16 31 08.0 +0.6**
PCH Pirque 2.16 211↑ *iP* **Pn 16 30 41.0 +0.6**
PCH *i* S **Sn 16 31 08.4 +1.0**
ANTU Antumapu 2.17 214↓ *iP* **Pn 16 30 41.0 +0.5**
ANTU *i* S **Sn 16 31 08.2 +0.5**
ANTU AML AML 16 31 10.2
comp=E,3μm,0.2s
ANTU Antumapu 2.17 214↑ *iP* **Pn 16 30 41.0 +0.5**
ANTU *i* S **Sn 16 31 08.3 +0.7**
RCDM Rinconada Maip 2.20 219↑ *iP* **Pn 16 30 41.0 +0.2**
RCDM *i* S **Sn 16 31 08.5 +0.3**
RCDM AML AML 16 31 09.6
comp=E,3μm,0.3s
RCDM Rinconada Maip 2.20 219↑ *iP* **Pn 16 30 41.0 +0.2**
RCDM *i* S **Sn 16 31 08.5 +0.3**
TACH Talagante 2.39 218↓ *iP* **Pn 16 30 43.0 -0.3**
TACH *i* S **Sn 16 31 12.4 -0.3**
IHA Instituto Hidr 2.44 239↓ *iP* **Pn 16 30 42.8 -1.1**
IHA Instituto Hidr 2.44 239↑ *iP* **Pn 16 30 42.6 -1.3**
CHCH Chadas Angostu 2.49 210↑ *iP* **Pn 16 30 45.0 +0.4**
CHCH *i* S **Sn 16 31 15.0 +0.2**
CHCH Chadas Angostu 2.49 210↑ *iP* **Pn 16 30 45.0 +0.4**
CHCH *i* S **Sn 16 31 15.2 +0.3**
LSCH La Serena 2.59 316↓ *iP* **Pn 16 30 45.8 -0.1**
LSCH *i* S **Sn 16 31 16.0 -1.2**
LSCH La Serena 2.59 316↓ *iP* **Pn 16 30 45.8 -0.1**
LSCH *i* S **Sn 16 31 16.0 -1.2**
CACH El Canelo 2.62 207↓ *iP* **Pn 16 30 47.2 +0.9**
LCCH Las Cruces 2.64 230 *eP* **Pn 16 30 45.6 -1.0**
LCCH *i* S **Sn 16 31 17.1 -1.4**
CICH Cipreses 2.74 202↑ *iP* **Pn 16 30 48.7 +0.8**
LCO Las Campanas 3.06 334↑ *iP* **Pn 16 30 52.2 +0.1**
LCO *i* S **Sn 16 31 28.3 -0.1**
SFDO San Fernando 3.22 208↑ *iP* **Pn 16 30 53.5 -0.7**
SFDO *i* S **Sn 16 31 30.7 -1.4**
VACH Vallenar 3.48 336 *eP* **Pn 16 30 59.2 +1.6**
VACH *i* S **Sn 16 31 38.2 0.0**
VACH Vallenar 3.48 336 P **Pn 16 30 59.2 +1.6**
VACH *i* S **Sn 16 31 38.4 +0.2**
NICH Los Niches 3.65 208 *eP* **Pn 16 30 59.2 -0.6**
TRQA Tornquist 8.60 139 *e*Pn **Pn 16 32 04.8 -1.8**
comp=E,139nm,0.8s
PLCA Paso Flores 9.00 187 P **Pn 16 32 11.5 -0.6**
comp=E,0.3nm,0.3s,baz=359,slow=11,SNR=8.9
PLCA Paso Flores 9.00 187 *e*Pn **Pn 16 32 11.0 -1.1**
CPUP Villa Florida 11.69 65 P **Pn 16 32 44.7 -3.4**
comp=E,1.0nm,0.3s,baz=225,slow=15,SNR=6.3
CPUP Villa Florida 11.69 65 P **Pn 16 32 44.6 -3.5**
comp=E,28nm,0.4s
LPAZ La Paz 15.45 4 P **Pn 16 33 37.3 +0.8**
comp=E,0.2nm,0.3s,baz=176,slow=9.9,SNR=15
LPAZ La Paz 15.45 4 *e*Pn **Pn 16 33 38.9 +2.4**
comp=E,6.9nm,1.0s
SIV San Ignacio 17.36 27 P **Pn 16 33 59.8 -0.2**
comp=E,0.8nm,0.3s,baz=224,slow=12,SNR=12
EFI East Falkland 21.49 161 *eP* **P 16 34 42.3 -1.9**
comp=E,93nm,1.2s,mb5.0
USHA Ushuaia 23.05 179 P **P 16 35 01.2 +1.2**
comp=E,13nm,0.9s,mb4.2,baz=300,slow=8.1,SNR=3.6
SAML Samuel 23.39 15 *eP* **P 16 35 03.2 0.0**
comp=E,7.3nm,0.6s,mb4.2
SAML *e* 16 35 43.9
BDFB Brasilia 25.09 55 P **P 16 35 18.4 -0.2**
comp=E,1.9nm,0.4s,mb3.9,baz=225,slow=8.2,SNR=7.3
VNA3 Neumayer Olymp 50.52 159 *e* **P 16 38 51.6 +0.4**
VNA3 *e* 16 38 56.0
VNA3 *e* 16 38 58.6
VNA1 Neumayer--Stat 50.79 158 *e* **P 16 38 48.5 -4.7**
VNA1 *e* 16 38 53.3
VNA1 *e* 16 38 56.5
SNAA Sanae 52.74 159 P **P 16 39 07.7 -0.1**
comp=E,0.7nm,0.5s,mb4.0,baz=273,slow=7.3,SNR=17
SNAA Sanae 52.74 159 *e* **P 16 39 07.7 -0.1**
SNAA *e* 16 39 12.0
SNAA *e* 16 39 15.2
SNAA Sanae 52.74 159 *eP* **P 16 39 07.3 -0.4**
comp=E,4.0nm,0.9s,mb4.5
SBA Scott Base 65.72 191 *eP* **P 16 40 37.5 +0.3**
comp=E,1.0nm,0.8s,mb3.7
VNDA Vanda 66.73 191 P **P 16 40 45.0 +1.4**
comp=E,0.9nm,0.6s,mb3.8,baz=120,slow=5.6,SNR=9.0
VNDA Vanda 66.73 191 *eP* **P 16 40 44.1 +0.6**
comp=E,2.0nm,0.9s,mb4.0
SYO Syowa Base 67.03 158‖ *eP* **P 16 40 44.2 -1.2**
SYO Syowa Base 67.03 158‖ *es*P sP 16 41 16.4 -11
JCT Junction City 68.40 332 *eP* **P 16 40 54.7 +0.7**
comp=E,5.4nm,0.7s,mb4.5
SWET Sewanee 68.48 345 *eP* **P 16 40 54.3 -0.2**
WVT Waverly 69.79 344 *eP* **P 16 41 02.4 -0.2**
comp=E,18nm,0.6s,mb5.1
WVT *ep*P pP 16 41 31.9 +0.2
MIAR Mount Ida 69.86 339 *eP* **P 16 41 02.6 -0.4**
comp=E,11nm,1.3s,mb4.5
DBIC Dimbokro 72.16 70 P **P 16 41 17.4 +0.5**
comp=E,4.3nm,0.5s,mb4.5,baz=185,slow=7.5,SNR=12
DBIC Dimbokro 72.16 70 *eP* **P 16 41 17.2 +0.3**
SUR Sutherland 73.76 118 P **P 16 41 27.4 +1.0**
comp=E,2.1nm,0.6s,mb4.0,baz=263,slow=8.1,SNR=5.0
MAW Mawson 74.60 163 P **P 16 41 31.2 0.0**
comp=E,1.9nm,0.7s,mb4.0,baz=237,slow=9.7,SNR=5.8
ANMO Albuquerque 75.07 329 *eP* **P 16 41 34.6 +0.7**
comp=E,6.5nm,1.2s,mb4.2
TSUM Tsumeb 77.47 105 P **P 16 41 46.8 -0.6**
comp=E,3.1nm,1.0s,mb4.0,baz=268,slow=8.6,SNR=3.7
TSUM Tsumeb 77.47 105 P **P 16 41 47.0 -0.4**
comp=E,3.1nm,0.8s,mb4.1
BOSA Boshof 78.93 117 P **P 16 41 55.1 -0.5**
comp=E,4.4nm,0.8s,mb4.3,baz=176,slow=5.1,SNR=5.0
LBTB Lobatse 81.01 114 *eP* **P 16 42 06.9 +0.2**
comp=E,4.4nm,0.6s,mb4.5
TORD Torodi Ar. Bea 81.16 69 P **P 16 42 07.9 +0.3**
comp=E,4.6nm,0.7s,mb4.4,baz=283,slow=6.8,SNR=26
TORD pP pP 16 42 38.9 +1.5
comp=E,1.0nm,0.6s,baz=281,slow=6.1,SNR=3.9
HWUT Hardware Ranch 82.82 329 P **P 16 42 14.9 -1.3**
comp=E,1.8nm,0.6s,mb4.1
PDAR Pinedale Array 82.93 331 P **P 16 42 17.1 +0.3**
comp=E,1.1nm,0.7s,mb3.8,baz=149,slow=4.9,SNR=9.8
PDAR pP pP 16 42 48.7 +1.9
comp=E,0.4nm,0.8s,baz=126,slow=4.6,SNR=2.2
IMW Indian Meadow 84.43 331 P **P 16 42 25.0 +0.6**
comp=E,5.9nm,1.3s,mb4.3
ULM Lac du Bonnet 85.03 343 P **P 16 42 26.6 -0.9**
comp=E,1.0nm,0.4s,mb4.1,baz=156,slow=2.4,SNR=3.6
HLID Hailey 85.64 329 *eP* **P 16 42 31.4 +1.0**
comp=E,3.3nm,1.0s,mb4.2
HLID *ep*P pP 16 43 02.5 +1.8
SCHQ Schefferville 86.28 1 P **P 16 42 32.2 -1.4**
comp=E,1.2nm,0.4s,mb4.1,baz=198,slow=14,SNR=3.7
SCHQ Schefferville 86.28 1 P **P 16 42 32.2 -1.4**
LSZ Lusaka 88.16 107 P **P 16 42 43.7 +1.0**
comp=E,2.9nm,1.0s,mb4.3
WALA Waterton Lakes 89.82 332 *eP* **P 16 42 50.6 +0.2**
comp=E,1.9nm,0.7s,mb4.3
ASAR Alice Springs 120.61 205 PKP PKPdf 16 48 42.5 -0.4
comp=E,0.6nm,0.5s,baz=129,slow=1.6,SNR=26
ASAR pPKP pPKPdf 16 49 14.8 +0.1
comp=E,0.2nm,0.7s,baz=124,slow=1.7,SNR=1.9
ARCES ARCESS Array B 121.00 24 PKP PKPdf 16 48 41.7 -2.0
comp=E,1.2nm,1.1s,baz=258,slow=6.1,SNR=4.5
ARCES ARCESS Array B 121.00 24 PKP PKPdf 16 48 41.7 -2.0
WB2 Warramunga Arr 123.85 207 *eP* PKPdf 16 48 48.9 -0.2
WRA Warramunga Arr 123.85 207 PKP PKPdf 16 48 49.0 -0.1
comp=E,2.9nm,0.6s,baz=159,slow=1.8,SNR=84
WRA pPKP pPKPdf 16 49 21.8 +0.9
comp=E,0.4nm,0.5s,baz=162,slow=1.7,SNR=3.0
HYB Hyderabad 147.49 108 *i* PKP PKPdf 16 49 36.0 +3.4
ZAL Zalesovo 151.06 32 PKPbc PKPbc 16 49 44.0 -0.2
comp=E,3.7nm,0.5s,baz=139,slow=1.3,SNR=16
ZAL pPKPbc pPKPbc 16 50 17.1 +1.3
comp=E,2.8nm,0.9s,baz=165,slow=5.3,SNR=4.6
MKAR Makanchi Array 153.49 47 PKPbc PKPbc 16 49 49.0 -0.6
comp=E,1.0nm,0.7s,baz=341,slow=3.0,SNR=5.4
MKAR PKPab PKPab 16 50 02.2 -0.1
comp=E,1.8nm,0.7s,baz=307,slow=4.4,SNR=8.9

*NEIC **25** 17:01:13.7, 2972S×6960W, h145km, MG3.6(GUC), After GUC.*
GUC 25 17:01:13.7±0.7, 2972S×6960W, h145km, ML3.6, 3C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**1.14**	**246**	↓	*iP*	Pn		17 01 40.3	+1.1
TLL					*i*	S	Sn	17 02 00.1	+1.4
TLL					AML	AML		17 02 05.7	
	comp=N,506nm,0.6s								
TLL	**Tololo Astrono**	**1.14**	**246**	↓	*iP*	Pn		17 01 40.3	+1.1
TLL					*i*	S	Sn	17 02 00.1	+1.4
LSCH	**La Serena**	**1.44**	**262**	↑	*iP*	Pn		17 01 42.6	+0.4
LSCH					*i*	S	Sn	17 02 04.2	+0.2
VACH	**Vallenar**	**1.52**	**318**		*eP*	Pn		17 01 44.5	+1.4
VACH					*i*	S	Sn	17 02 06.5	+1.0
VACH					AML	AML		17 02 10.8	
	comp=N,1μm,0.1s								
VACH	**Vallenar**	**1.52**	**318**		*eP*	Pn		17 01 44.5	+1.4
VACH					*i*	S	Sn	17 02 06.5	+1.0
CMCH	**Combarbala**	**1.89**	**219**		*iP*	Pn		17 01 47.5	+0.3
CMCH					*i*	S	Sn	17 02 13.4	+0.5
CMCH					AML	AML		17 02 14.8	
	comp=E,1μm,0.7s								
CMCH	**Combarbala**	**1.89**	**219**		*iP*	Pn		17 01 47.5	+0.3
CMCH					*i*	S	Sn	17 02 13.4	+0.5
CDCH	**Caldera**	**2.84**	**337**	↑	*iP*	Pn		17 01 59.1	+0.3
CDCH					*i*	S	Sn	17 02 30.5	-3.3
CDCH					AML	AML		17 02 33.4	
	comp=N,69nm,0.3s								
CDCH	**Caldera**	**2.84**	**337**	↑	*iP*	Pn		17 01 59.1	+0.3
CDCH					S	Sn		17 02 30.5	-3.3

*ISCJB **25** 17:11:53.0±0.4, 1043N±009×8492W±008, h183km±3km, mb3.8/12, Error ellipse: s-maj=18.2km s-min=5.6km az=82.1*
*CASC **25** 17:11:54.9±2.4, 1059N×8475W, h161km±8km, MD3.9, mb4.0(NEIC)*
*IDC **25** 17:11:56.2±2.7, 1050N×8510W, h211km±24km, mb3.6/9, mb1 3.6/13, mb1mx3.5/23, mbtmp4.2/13, Error ellipse: s-maj=37.2km s-min=15.3km az=30.0*
*NEIC **25** 17:11:57.0±1.7, 1045N×8507W, h222km±16km, mb4.0/5, Error ellipse: s-maj=20.4km s-min=11.4km az=218.0*
ISC 25 17:11:54.2±0.4, 1048N±009×8488W±008, h176km±3km, n42, σ1§10/48, mb3.8/12, **10C-5D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LIM1	**Limonal**	**0.43**	**301**	↑	*iP*		**Pn**	**17 12 17.4**	**-0.8**
LIM1					*i*	S	**Sn**	**17 12 35.3**	**-1.3**
CGA2	**Cerro Gallo 2**	**0.61**	**138**	‖	*eP*		**Pn**	**17 12 18.3**	**-0.7**
JCR	**Jicaral**	**0.66**	**200**	↑	*iP*		**Pn**	**17 12 19.2**	**0.0**
JCR					*eS*		**Sn**	**17 12 40.5**	**+2.0**
PRS1	**Puriscal**	**0.75**	**131**	‖	*eP*		**Pn**	**17 12 19.5**	**-0.3**
VCR	**Vista de Mar**	**0.81**	**245**	↑	*iP*		**Pn**	**17 12 20.2**	**+0.1**
CRZC	**La Cruz**	**0.85**	**304**	‖	*eP*		**Pn**	**17 12 19.7**	**-0.6**
CRZC					*eS*		**Sn**	**17 12 40.5**	**0.0**
LAJ	**Bijagual**	**0.97**	**129**	↑	*eP*		**Pn**	**17 12 20.7**	**-0.5**
SJS	**Escuela Geolog**	**0.98**	**123**		*eP*		**Pn**	**17 12 20.7**	**-0.6**
SJS					*eS*		**Sn**	**17 12 41.0**	**-1.1**
MADN	**Villa Maderas**	**1.12**	**326**	↑	*iP*		**Pn**	**17 12 22.6**	**+0.1**
LCR2	**La Lucha 2**	**1.13**	**130**	↓	*iP*		**Pn**	**17 12 22.0**	**-0.5**
CONN	**Concepcion**	**1.30**	**326**	↑	*iP*		**Pn**	**17 12 24.0**	**+0.1**
BUS	**Buena Vista**	**1.44**	**129**	↓	*iP*		**Pn**	**17 12 25.3**	**+0.1**
TICN	**Ticuantepe**	**2.04**	**320**	↑	*iP*		**Pn**	**17 12 32.6**	**+1.3**
CRUN	**El Crucero**	**2.04**	**317**		*eP*		**Pn**	**17 12 36.5**	**+5.0**
MGAN	**Managua**	**2.13**	**321**		*eP*		**Pn**	**17 12 32.6**	**+0.2**
COPN	**Copaltepe**	**2.38**	**315**	‖	*eP*		**Pn**	**17 12 36.0**	**+0.7**
COPN					*eS*		**Sn**	**17 13 06.4**	**-0.7**
MOMJ	**Momotombo**	**2.51**	**320**		*eP*		**Pn**	**17 12 38.7**	**+1.9**
MIRN	**Miramar**	**2.65**	**318**	↑	*iP*		**Pn**	**17 12 39.5**	**+1.1**
LEON	**Leon**	**2.75**	**315**	‖	*eP*		**Pn**	**17 12 40.4**	**+0.8**
LEON					*eS*		**Sn**	**17 13 13.9**	**-1.1**
TELN	**Telica**	**2.85**	**318**		*eP*		**Pn**	**17 12 42.2**	**+1.4**
CMIG	**Matias Romero**	**11.73**	**305**		P		**Pn**	**17 14 36.4**	**+0.3**
	5.3nm,0.3s,baz=132,slow=9.5,SNR=20								
CMIG					S		**Sn**	**17 16 42.5**	**-3.8**
	0.4nm,0.3s,baz=26,slow=23,SNR=2.8								
CMIG	**Matias Romero**	**11.73**	**305**		P		**Pn**	**17 14 36.4**	**+0.3**
CMIG					S		**Sn**	**17 16 42.5**	**-3.8**
ROSC	**El Rosal**	**11.85**	**117**		P		**Pn**	**17 14 42.8**	**+5.0**
	0.5nm,0.3s,baz=90,slow=20,SNR=2.8								
SDV	**Santo Domingo**	**14.14**	**95**		P		**Pn**	**17 15 08.9**	**+2.2**
	1.2nm,0.3s,baz=3.6,slow=9.4,SNR=3.9								
SDV	**Santo Domingo**	**14.14**	**95**	*e*	Pn		**Pn**	**17 15 07.9**	**+1.2**
	14nm,1.0s								
SJG	**San Juan**	**19.66**	**65**		P		**P**	**17 16 12.6**	**+3.0**
	1.3nm,0.3s,baz=30,slow=19,SNR=4.0								
PCRV	**Puerto La Cruz**	**19.92**	**99**		P		**P**	**17 16 13.6**	**+1.3**
	11nm,0.7s,baz=153,slow=4.5,SNR=4.8								
MIAR	**Mount Ida**	**25.24**	**343**		*eP*		**P**	**17 17 04.6**	**+0.8**
	2.8nm,0.8s,mb3.8								
SAML	**Samuel**	**28.96**	**131**		*eP*		**P**	**17 17 37.9**	**+0.8**
	1.3nm,0.7s,mb3.8								
ULM	**Lac du Bonnet**	**40.68**	**349**		P		**P**	**17 19 14.2**	**-3.1**
	2.8nm,0.8s,mb3.9,baz=208,slow=12,SNR=4.5								
BDFB	**Brasilia**	**44.79**	**125**		P		**P**	**17 19 51.3**	**+1.0**
	2.6nm,0.6s,mb4.0,baz=111,slow=2.1,SNR=3.2								
PLCA	**Paso Flores**	**52.65**	**166**		P		**P**	**17 20 49.6**	**-0.5**
	4.6nm,1.3s,mb4.0								
SUMG	**Summit**	**67.88**	**14**		P		**P**	**17 22 30.9**	**-2.7**
	2.6nm,0.6s,mb4.1								
ESDC	**Sonseca Array**	**76.43**	**52**		P		**P**	**17 23 24.1**	**-0.2**
	1.3nm,0.6s,mb3.8,baz=280,slow=5.8,SNR=9.2								
DBIC	**Dimbokro**	**79.05**	**85**		P		**P**	**17 23 38.5**	**-0.2**
	1.5nm,0.7s,mb3.7,baz=260,slow=6.1,SNR=3.8								
NB2	**NORSAR Subarra**	**83.86**	**29**		P		**P**	**17 24 03.0**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.2,baz=280,slow=5.1								
NOA	**NORSAR Array B**	**83.86**	**29**		P		**P**	**17 24 03.6**	**-0.4**
	comp=Z,0.1nm,0.5s,mb2.8,baz=258,slow=4.9,SNR=3.6								
TORD	**Torodi Ar. Bea**	**84.38**	**78**		P		**P**	**17 24 06.7**	**0.0**
	comp=Z,0.4nm,0.7s,mb3.3,baz=280,slow=6.2,SNR=2.5								
ARCES	**ARCESS Array B**	**87.22**	**19**		P		**P**	**17 24 18.5**	**-2.1**
	comp=Z,1.6nm,1.1s,mb3.8,baz=270,slow=3.6,SNR=6.3								
FINES	**FINESS Array B**	**90.61**	**27**		P		**P**	**17 24 34.5**	**-2.0**
	comp=Z,2.1nm,1.0s,mb4.1,baz=158,slow=2.1,SNR=3.5								
ASAR	**Alice Springs**	**140.81**	**245**		PKP	PKPdf		17 30 58.9	-4.1
	comp=Z,0.3nm,0.7s,baz=106,slow=3.4,SNR=5.4								
WRA	**Warramunga Arr**	**141.08**	**251**		PKP	PKPdf		17 31 00.7	-2.7
	comp=Z,0.1nm,0.4s,baz=50,slow=0.2,SNR=6.8								

MAN 25 17:25:02.7, 1283N×12492E, h5km, mb1.9, ML3.7, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.07**	**316**	↓	*iP*		Pg	17 25 22.6	-0.5
PVCP					*i*	S	Sg	17 25 39.8	+2.8
PVCP	**Virac**	**1.07**	**316**		*eP*		Pg	17 25 22.8	-0.4
PVCP					*eS*		Sg	17 25 29.1	-7.9
BESP	**Borongan**	**1.32**	**157**		*eP*		Pn	17 25 26.3	-1.5
BESP					*eS*		Sg	17 25 46.1	+1.0
MSLP	**Maasin**	**2.68**	**181**		*eP*		Pn	17 25 49.2	+2.7
GUIM	**Jordan**	**3.16**	**226**		*eP*		Pn	17 25 53.7	+0.5
POLP	**Polilio Island**	**3.46**	**303**		*eP*		Pn	17 26 00.0	+2.8
CAUP	**Cauayan**	**5.07**	**324**		*eP*		Pn	17 26 20.6	+1.3

*ATH **25** 17:27:14.6, 4063N×2399E, h44km, MD2.5/3*
*ISCJB **25** 17:27:15.0±0.5, 4086N±002×2309E±005, h13km±5km, Error ellipse: s-maj=5.8km s-min=4.1km az=164.3*
*CSEM **25** 17:27:15.1±0.1, 4086N×2312E, h17km±1km, ML2.0, Error ellipse: s-maj=2.1km s-min=1.9km az=82.0*
*THE **25** 17:27:15.7, 4087N×2309E, h4km, ML2.0*
ISC 25 17:27:15.2±0.9, 4085N±003×2310E±004, h15km±11km, n14, σ0§25/24, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOH	**Sokhos**	**0.20**	**99**		*eP*	g	**Pg**	**17 27 19.8**	**-0.1**
SOH					*eS*	g	**Sg**	**17 27 22.7**	**-0.2**
THE	**Thessaloniki**	**0.24**	**205**		*eP*	g	**Pg**	**17 27 20.4**	**-0.2**
THE					*eS*	g	**Sg**	**17 27 24.4**	**+0.2**
HORT	**Hortiatis**	**0.25**	**180**		*eP*	g	**Pg**	**17 27 20.9**	**+0.1**
HORT					*eS*	g	**Sg**	**17 27 24.6**	**+0.1**
HORT	**Hortiatis**	**0.25**	**180**		*eP*	g	**Pg**	**17 27 20.9**	**+0.1**
HORT					*eS*	g	**Sg**	**17 27 24.6**	**0.0**
KNT	**Kendrikon**	**0.34**	**334**		*eP*	g	**Pg**	**17 27 22.4**	**0.0**
KNT					*eS*	g	**Sg**	**17 27 27.0**	**-0.1**
GRG	**Griva**	**0.54**	**281**		*eP*	g	**Pg**	**17 27 25.9**	**0.0**
PLG	**Polygyros**	**0.55**	**151**		*eP*		**Pg**	**17 27 25.9**	**-0.1**
PLG					*eS*		**Sg**	**17 27 33.4**	**+0.1**
VAY	**Valandovo**	**0.62**	**320**		*eP*	g	**Pg**	**17 27 27.0**	**-0.3**
VAY					*eS*	g	**Sg**	**17 27 35.8**	**+0.3**
VAY	**Valandovo**	**0.62**	**320**		*i* Pg		**Pg**	**17 27 27.0**	**-0.3**
NVR	**Nevrokopi**	**0.76**	**49**		*eP*		**Pg**	**17 27 30.0**	**-0.1**
NVR					*eS*		**Sg**	**17 27 40.0**	**-0.1**
OUR	**Ouranopolis**	**0.85**	**127**		*eP*	g	**Pg**	**17 27 31.9**	**+0.2**
MMB	**Musomiste**	**0.88**	**33**		*eP*	g	**Pg**	**17 27 31.8**	**-0.4**
MMB					*eS*	g	**Sg**	**17 27 44.5**	**+0.8**
MMB	**Musomiste**	**0.88**	**33**		*eP*	g	**Pg**	**17 27 31.8**	**-0.4**
MMB					*eS*	g	**Sg**	**17 27 44.5**	**+0.8**
LIT	**Litokhoron**	**0.88**	**212**		*eP*	g	**Pg**	**17 27 32.4**	**0.0**

*NEIC **25** 17:30:21.3, 2739S×7003W, h89km, MG3.7(GUC), After GUC.*
GUC 25 17:30:21.3±0.7, 2739S×7003W, h89km±6km, ML3.7, 2C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**0.29**	**276**	↓	*iP*		Pn	17 30 34.6	+0.1
CPCH					*i*	S	Sn	17 30 44.9	+0.6
CPCH					AML	AML		17 30 45.5	
	comp=E,30μm,0.1s								
CPCH	**Copiapo**	**0.29**	**276**	↓	*iP*		Pn	17 30 34.6	+0.1
CPCH					*i*	S	Sn	17 30 44.9	+0.6
CDCH	**Caldera**	**0.78**	**294**	↑	*iP*		Pn	17 30 38.3	-0.1
CDCH					*i*	S	Sn	17 30 51.9	+0.6
CDCH					AML	AML		17 30 52.9	
	comp=N,1μm,0.1s								
CDCH	**Caldera**	**0.78**	**294**	↑	*iP*		Pn	17 30 38.3	-0.1
CDCH					*i*	S	Sn	17 30 51.9	+0.6
VACH	**Vallenar**	**1.34**	**208**		*eP*		Pn	17 30 45.6	+0.6
VACH					*i*	S	Sn	17 31 03.5	+0.6
VACH					AML	AML		17 31 04.9	
	comp=E,3μm,0.1s								
VACH	**Vallenar**	**1.34**	**208**		*eP*		Pn	17 30 45.6	+0.6
VACH					*i*	S	Sn	17 31 03.5	+0.6
TLL	**Tololo Astrono**	**2.85**	**194**	↓	*iP*		Pn	17 31 03.6	-1.1
TLL					*i*	S	Sn	17 31 37.2	-0.9
TLL					AML	AML		17 31 39.8	
	comp=E,120nm,0.6s								
TLL	**Tololo Astrono**	**2.85**	**194**	↓	*iP*		Pn	17 31 03.6	-1.1
TLL					*i*	S	Sn	17 31 37.2	-0.9

*IDC **25** 17:44:48.5±1.7, 3654N×527E, h0km, mb3.3/5, mb1 3.4/6, mb1mx3.3/21, mbtmp3.3/6, ML3.2/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/17, Error ellipse: s-maj=32.4km s-min=25.5km az=104.0*
*CSEM **25** 17:44:49.5±0.1, 3665N×540E, h20km, ML3.5/6, Error ellipse: s-maj=2.6km s-min=1.7km az=12.0*
*ISCJB **25** 17:44:49.1±0.3, 3692N±002×538E±002, h10km, mb3.2/5, Error ellipse: s-maj=3.6km s-min=2.6km az=49.7*
*NEIC **25** 17:44:50.3±0.7, 3667N×543E, h10km, MG4.1(MDD), Error ellipse: s-maj=9.0km s-min=5.7km az=164.0*
*MDD **25** 17:44:50.9±0.8, 3661N×543E, h13km±12km, mb4.0/18, Error ellipse: s-maj=9.0km s-min=5.0km az=158.0, PRXIMO*
*CRAAG **25** 17:44:51.6, 3647N×556E, Ml4.0*
*LDG **25** 17:44:53.1±0.3, 3674N×548E, h10km, Ml3.4/13, Error ellipse: s-maj=5.1km s-min=2.7km az=149.0*
ISC 25 17:44:50.6±0.3, 3687N±002×541E±002, h10km, n99, σ1§66/153, mb3.2/5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	**0.49**	**130**			P	**Pg**	**17 44 58.0**	**-2.2**
SET	**Setif**	**0.67**	**181**			P	**Pg**	**17 44 58.0**	**-5.5**
CKHR	**Kef el Ahmar**	**0.85**	**174**			P	**Pg**	**17 45 02.0**	**-5.0**
CASM	**Ain Smara**	**1.06**	**124**			P	**Pg**	**17 45 08.0**	**-3.0**
CTEI	**Djebel Teioual**	**1.14**	**135**			P	**Pb**	**17 45 11.0**	**-1.3**
CKFL	**Kef-Lekhel**	**1.15**	**113**			P	**Pb**	**17 45 10.0**	**-2.6**
CAEH	**'Ain El Ouahch**	**1.16**	**94**			P	**Pb**	**17 45 12.0**	**-0.7**
CMER	**Merouana**	**1.31**	**162**			P	**Pn**	**17 45 11.0**	**-3.9**
CMAH	**Djebel Manchou**	**1.63**	**98**			P	**Pn**	**17 45 17.0**	**-2.4**
ABSA	**Djebel Ababsia**	**1.77**	**109**			P	**Pn**	**17 45 19.0**	**-2.2**
CABS	**Djebel Ababsia**	**1.77**	**109**			P	**Pn**	**17 45 19.0**	**-2.2**
ABA	**Alger-Bouzarea**	**1.91**	**269**			P	**Pn**	**17 45 21.0**	**-2.1**
EMHD	**Djebel Mahouad**	**2.09**	**252**			P	**Pn**	**17 45 28.0**	**+2.4**
EBNR	**Beni Rached**	**3.17**	**261**			P	**Pn**	**17 45 40.0**	**-0.6**
ECHA	**Ech Chlef**	**3.33**	**259**			P	**Pn**	**17 45 42.0**	**-0.8**
ECHF	**Ech Chlef**	**3.35**	**259**			P	**Pn**	**17 45 42.0**	**-1.0**
KEST	**Kesra**	**3.38**	**108**			Pn	**Pn**	**17 45 42.5**	**-0.9**
	2.1nm,0.3s,baz=248,slow=3.7,SNR=34								
KEST						Sn	**Sn**	**17 46 23.6**	**+0.2**
	0.7nm,0.3s,baz=151,slow=20,S

0.8nm,0.1s,SNR=8.7
EMOS S Sn 17 47 21.6 -1.1
2.4nm,0.3s,SNR=7.9
EMOS Mosqueruela 5.78 309 P Pn 17 46 17.1 +0.7
0.8nm,0.1s,SNR=8.7
ETOB Tobarra 5.79 290 P Pn 17 46 17.9 +1.4
1.8nm,0.2s,SNR=6.0
ETOB S Sn 17 47 20.7 -2.3
3.4nm,0.3s
ETOB Tobarra 5.79 290 P Pn 17 46 18.8 +2.3
ETOB S Sn 17 47 21.7 -1.3
ETOB Tobarra 5.79 290 P Pn 17 46 18.8 +2.3
1.8nm,0.2s,SNR=6.0
EJON La Jonquera 5.90 342 P Pn 17 46 20.0 +1.9
1.3nm,0.2s,SNR=7.9
EJON S Sn 17 47 25.9 +0.1
11nm,0.3s,SNR=6.1
EJON La Jonquera 5.90 342 P Pn 17 46 20.0 +1.9
1.3nm,0.2s,SNR=7.9
PGF Pioggiola 6.31 25 *e*Pn Pn 17 46 25.6 +1.9
PGF *e*Sn Sn 17 47 34.6 -1.3
2.7nm,0.2s
PGF Pioggiola 6.31 25 *e*Pn Pn 17 46 25.6 +1.9
PGF *e*Sn Sn 17 47 34.6 -1.3
1.4nm,0.2s
EVIA Vianos 6.51 288 P Pn 17 46 27.2 +0.7
0.9nm,0.2s,SNR=7.9
EVIA S Sn 17 47 38.5 -2.2
1.9nm,0.4s,SNR=7.9
EVIA Vianos 6.51 288 P Pn 17 46 28.1 +1.7
EVIA S Sn 17 47 39.2 -1.6
EVIA Vianos 6.51 288 P Pn 17 46 28.1 +1.7
0.9nm,0.2s,SNR=7.9
LMR La Mourre 6.51 7 *e*Pn Pn 17 46 27.7 +1.2
LMR *e*Sn Sn 17 47 39.6 -1.2
3.1nm,0.2s
LMR La Mourre 6.51 7 *e*Pn Pn 17 46 27.7 +1.2
LMR *e*Sn Sn 17 47 39.6 -1.2
1.5nm,0.2s
EBER Berja 6.65 273 P Pn 17 46 27.8 -0.5
1.0nm,0.2s,SNR=7.9
EBER S Sn 17 47 40.2 -4.0
2.3nm,0.3s,SNR=7.9
EBER Berja 6.65 273 P Pn 17 46 27.8 -0.5
EBER S Sn 17 47 41.1 -3.1
EBER Berja 6.65 273 P Pn 17 46 27.8 -0.5
1.0nm,0.2s,SNR=7.9
ESAC San Caprasio 6.65 319 S Sn 17 47 43.4 -0.9
21nm,0.3s,SNR=7.9
FRF La Foret Royal 6.75 8 *e*Pn Pn 17 46 31.7 +1.9
FRF *e*Sn Sn 17 47 45.4 -1.3
6.3nm,0.2s
FRF La Foret Royal 6.75 8 *e*Pn Pn 17 46 31.7 +1.9
FRF *e*Sn Sn 17 47 45.4 -1.3
3.2nm,0.2s
EQES Quesada 6.82 280 P Pn 17 46 32.1 +1.4
2.0nm,0.2s,SNR=8.5
EQES S Sn 17 47 47.7 -0.6
3.5nm,0.4s,SNR=4.6
EQES Quesada 6.82 280 P Pn 17 46 32.1 +1.4
2.0nm,0.2s,SNR=8.5
EQES S Sn 17 47 47.7 -0.7
3.5nm,0.4s,SNR=4.6
EALB Alboran 6.87 265 S Sn 17 47 46.7 -2.9
2.6nm,0.2s,SNR=7.9
MTLF Montolieu 6.91 340 *e*Pn Pn 17 46 34.0 +2.1
MTLF *e*Sn Sn 17 47 49.6 -1.0
6.2nm,0.3s
EBIE Bielsa 7.08 327 P Pn 17 46 36.7 +2.4
0.2nm,0.1s,SNR=8.4
EBIE S Sn 17 47 54.6 -0.2
1.2nm,0.3s,SNR=7.9
EBIE Bielsa 7.08 327 P Pn 17 46 36.7 +2.4
0.2nm,0.1s,SNR=8.4
EQUE Quentar 7.09 275 P Pn 17 46 34.9 +0.5
0.5nm,0.3s,SNR=4.9
EQUE S Sn 17 47 50.3 -4.5
1.4nm,0.3s,SNR=7.9
EQUE Quentar 7.09 275 P Pn 17 46 34.9 +0.6
0.5nm,0.3s,SNR=4.9
EQUE S Sn 17 47 53.2 -1.7
1.4nm,0.3s,SNR=7.9
SMRF Simiane la Rot 7.10 1 *e*Pn Pn 17 46 37.0 +2.4
SMRF *e*Sn Sn 17 47 54.0 -1.3
2.6nm,0.3s
SMRF Simiane la Rot 7.10 1 P Pn 17 46 37.0 +2.4
SMRF S Sn 17 47 54.0 -1.3
2.6nm,0.3s
SBF Sospel 7.16 12 *e*Pn Pn 17 46 37.0 +1.7
SBF *e*Sn Sn 17 47 54.7 -2.0
3.8nm,0.2s
EPF Esparros 7.28 329 *e*Pn Pn 17 46 40.2 +3.2
EPF *e*Sn Sn 17 47 58.3 -1.4
5.5nm,0.4s
EPF Esparros 7.28 329 *e*Pn Pn 17 46 40.2 +3.2
EPF *e*Sn Sn 17 47 58.3 -1.4
2.8nm,0.4s
ETSF Etsaut 7.57 325 *e*Pn Pn 17 46 44.4 +3.4
ETSF *e*Sn Sn 17 48 05.7 -1.1
3.7nm,0.3s
ETSF Etsaut 7.57 325 *e*Pn Pn 17 46 44.4 +3.4
ETSF *e*Sn Sn 17 48 05.7 -1.1
1.9nm,0.3s
MBDF Montbardon 7.92 7 *e*Pn Pn 17 46 47.9 +2.1
MBDF *e*Sn Sn 17 48 13.2 -2.2
2.9nm,0.4s
MBDF Montbardon 7.92 7 P Pn 17 46 47.9 +2.1
MBDF S Sn 17 48 13.2 -2.2
1.4nm,0.4s
VIVF Saint-Julien-l 8.00 356 *e*Pn Pn 17 46 47.6 +0.7
VIVF *e*Sn Sn 17 48 14.8 -2.6
5.7nm,0.4s
VIVF Saint-Julien-l 8.00 356 *e*Pn Pn 17 46 47.6 +0.7
VIVF *e*Sn Sn 17 48 14.8 -2.6
2.8nm,0.4s
SJPF Ste Jean 8.05 323 *e*Pn Pn 17 46 49.5 +1.9
SJPF *e*Sn Sn 17 48 16.2 -2.4
2.7nm,0.4s
SJPF Ste Jean 8.05 323 P Pn 17 46 49.5 +1.9
SJPF S Sn 17 48 16.2 -2.4
1.4nm,0.4s
ORIF Oris-en-Rattie 8.05 2 *e*Pn Pn 17 46 49.7 +2.1
ORIF *e*Sn Sn 17 48 16.7 -2.0
1.9nm,0.4s
ORIF Oris-en-Rattie 8.05 2 P Pn 17 46 49.7 +2.1
ORIF S Sn 17 48 16.7 -2.0
0.9nm,0.4s
EALK Alkurruntz 8.27 322 P Pn 17 46 53.2 +2.7
0.8nm,0.2s,SNR=7.9
EALK S Sn 17 48 22.7 -1.3
8.7nm,0.3s,SNR=7.9
EALK Alkurruntz 8.27 322 P Pn 17 46 53.5 +3.0
EALK S Sn 17 48 22.9 -1.0
EALK Alkurruntz 8.27 322 P Pn 17 46 53.5 +3.0
0.8nm,0.2s,SNR=7.9
RJF Les Rejaudoux 8.93 342 *e*Sn Sn 17 48 37.6 -2.5
3.2nm,0.3s
RJF Les Rejaudoux 8.93 342 S Sn 17 48 37.6 -2.5
1.6nm,0.3s
ELAN Lanestosa 9.29 316 P Pn 17 47 07.2 +2.6
0.5nm,0.2s,SNR=7.9
ELAN Lanestosa 9.29 316 P Pn 17 47 07.5 +2.9
ELAN Lanestosa 9.29 316 P Pn 17 47 07.4 +2.8
0.5nm,0.2s,SNR=7.9
ECAL Calabor 10.67 302 P Pn 17 47 25.8 +2.3
1.4nm,0.3s,SNR=7.9
ECAL Calabor 10.67 302 P Pn 17 47 25.8 +2.3
1.4nm,0.3s,SNR=7.9
GERES GERESS Array B 13.42 24 LR LR 17 54 11.2
comp=Z,14nm,18.5s,baz=221,slow=41
AKASG Malin Array Be 21.94 43 P P 17 49 45.6 +1.3
0.1nm,0.3s,mb2.8,baz=240,slow=13,SNR=4.1
BRTR Keskin Array B 22.30 74 P P 17 49 50.8 +2.6
0.7nm,0.8s,mb3.1,baz=256,slow=9.3,SNR=5.0
TORD Torodi Ar. Bea 23.85 189 P P 17 50 00.1 -4.0
1.1nm,0.7s,mb3.4,baz=5.5,slow=11,SNR=5.8
NOA NORSAR Array B 24.47 7 P P 17 50 11.9 +2.2
0.2nm,0.6s,mb2.8,baz=195,slow=11,SNR=2.4
MKAR Makanchi Array 56.01 54 P P 17 54 31.3 +2.0
0.9nm,0.7s,mb3.9,baz=259,slow=7.6,SNR=5.7

*ISCJB **25** 18:27:26.5±0.6,5140N±003×16.16E±003,h0km, Error ellipse: s-maj=4.5km s-min=2.5km az=39.0*
*NEIC **25** 18:27:26.7±0.6,5151N×1625E,h5km,ML2.7(CLL), ML2.9(SZGRF), Error ellipse: s-maj=6.9km s-min=4.9km az=208.0*
*IPEC **25** 18:27:26.3±0.3,5153N×1631E,h0km,ML2.3/4, Error ellipse: s-maj=2.0km s-min=1.5km az=37.0*
*CSEM **25** 18:27:27.5±0.2,5146N×1620E,h1km±1km,ML3.3/7, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0*
*WAR **25** 18:27:28.4,5145N×1619E, ML2.7, Mining Induced*
*VIE **25** 18:27:29.4±0.4,5126N×1623E,h0km,mb2.1/3,ML2.9/4, Error ellipse: s-maj=2.4km s-min=2.2km az=174.0 57 km WNW of Breslau Suspected Mining induced.*
*PRU **25** 18:27:29.5,5138N×1611E,h0km*

ISC 25 18:27:26.9±0.6,5147N±003×1619E±003,h0km,n30, σ1§03/53,2C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**174**	*e*Pg		**Pg**	**18 27 39.5**	**+0.5**
KSP				*e*Sg		**Sg**	**18 27 47.8**	**+0.6**
UPC	**Upice**	**0.97**	**187**	*e*Pg		**Pg**	**18 27 45.9**	**+0.4**
DPC	**Dobruska-Polom**	**1.12**	**176**	*e*PG		**Pg**	**18 27 48.4**	**-0.1**
DPC				*e*SG		**Sg**	**18 28 02.8**	**-0.2**
	53nm,0.5s							
DPC	**Dobruska-Polom**	**1.12**	**176**	*e*Pg		**Pg**	**18 27 48.4**	**-0.1**
DPC				*e*Sg		**Sg**	**18 28 03.3**	**+0.3**
PVCC	**Panska Ves**	**1.39**	**228**	*e*Pg		**Pg**	**18 27 53.8**	**+0.2**
PVCC				*e*Sg		**Sg**	**18 28 12.9**	**+1.2**
BRG	**Berggiesshubel**	**1.54**	**248**	PN		**Pn**	**18 27 54.9**	**-0.7**
BRG				PG		**Pg**	**18 27 56.7**	**+0.3**
BRG				SG		**Sg**	**18 28 16.9**	**+0.7**
	29nm,0.4s							
PRU	**Pruhonice**	**1.81**	**216**	*e*PN		**Pn**	**18 27 59.9**	**+0.5**
PRU				*e*PG		**Pg**	**18 28 01.1**	**-0.6**
PRU				*e*SG		**Sg**	**18 28 24.7**	**-0.6**
	44nm,0.5s							
MORC	**Moravsky Berou**	**1.90**	**153**	*e*P		**Pn**	**18 27 59.7**	**-0.9**
MORC	**Moravsky Berou**	**1.90**	**153**	*e*Pn		**Pn**	**18 28 00.3**	**-0.3**
MORC				*e*Sg		**Sg**	**18 28 26.2**	**-1.8**
	17nm,0.3s							
CLL	**Collm**	**2.00**	**267**	*e*Pg		**Pg**	**18 28 05.0**	**-0.4**
CLL				*i* Sg		**Sg**	**18 28 32.1**	**+0.8**
	comp=Z,27nm,0.4s							
OKC	**Ostrava-Krasne**	**2.05**	**142**	*e*PG		**Pg**	**18 28 06.0**	**-0.3**
OKC				*e*SG		**Sg**	**18 28 30.8**	**-2.1**
VRAC	**Vranov**	**2.18**	**173**	*e*Sg		**Sg**	**18 28 36.1**	**-0.8**
	comp=Z,12nm,0.2s							
TREC	**Trest**	**2.22**	**192**	*e*PN		**Pn**	**18 28 05.2**	**+0.2**
TREC				*e*PG		**Pg**	**18 28 08.5**	**-1.0**
KRUC	**Moravsky**	**2.41**	**177**	*e*Pn		**Pn**	**18 28 08.4**	**+0.8**
KRUC				*e*Sg		**Sg**	**18 28 43.6**	**-0.9**
	comp=Z,10nm,0.2s							
OJC	**Ojcow**	**2.61**	**117**	*e*Pg		**Pg**	**18 28 16.3**	**-0.6**
OJC				*e*Sg		**Sg**	**18 28 51.3**	**+0.6**
NKC	**Novy Kostel**	**2.68**	**244**	*e*PN		**Pn**	**18 28 11.5**	**+0.2**
NKC				*e*SG		**Sg**	**18 28 52.5**	**-0.4**
	comp=Z,35nm,0.4s							
JAVC	**Velka Javorina**	**2.78**	**159**	*e*Sg		**Sg**	**18 28 57.3**	**+1.0**
	comp=Z,13nm,0.5s							
KHC	**Kasperske Hory**	**2.88**	**217**	*e*PN		**Pn**	**18 28 14.2**	**+0.2**
KHC				*e*PG		**Pg**	**18 28 20.3**	**-1.8**
KHC				*e*SG		**Sg**	**18 28 57.1**	**-2.3**
	comp=Z,16nm,0.5s							
MOX	**Moxa**	**3.00**	**256**	*e*PG		**Pg**	**18 28 24.8**	**+0.3**
MOX				*e*SG		**Sg**	**18 29 05.0**	**+1.6**
SMOL	**Smolenice**	**3.06**	**164**	*e*		**Pg**	**18 28 27.0**	**+1.3**
SMOL	**Smolenice**	**3.06**	**164**	*e*SG		**Sg**	**18 29 07.9**	**+2.5**
GEC2	**GERESS Array S**	**3.08**	**212**	*e*Pn		**Pn**	**18 28 18.1**	**+1.3**
GEC2				*e*Sg		**Sg**	**18 29 04.6**	**-1.2**
WET	**Wettzell**	**3.15**	**224**	*e*Pn		**Pn**	**18 28 17.9**	**+0.1**
ZST	**Bratislava**	**3.33**	**169**	*e*SG		**Sg**	**18 29 15.3**	**+1.4**
VYHS	**Vyhne**	**3.43**	**149**	*e*SG		**Sg**	**18 29 17.8**	**+0.6**
CONA	**Conrad Observa**	**3.55**	**184**	⇓*i*Pn		**Pn**	**18 28 22.8**	**-0.5**
CONA				⇓*i*Sg		**Sg**	**18 29 19.9**	**-1.1**
	comp=Z,12nm,0.3s							
BSD	**Bornholm Skovb**	**3.73**	**349**	*i* P		**Pn**	**18 28 24.6**	**-1.2**
BSD				*i* S		**Sn**	**18 29 07.0**	**-3.4**
STHS	**Stebnicka Huta**	**3.83**	**120**	*e*PG		**Pg**	**18 28 42.8**	**+2.5**
STHS				*e*SG		**Sg**	**18 29 34.1**	**+4.2**
MOA	**Molln**	**3.83**	**200**	⇑*i*Pn		**Pn**	**18 28 27.5**	**+0.3**
MOA				⇑*i*Sg		**Sg**	**18 29 30.2**	**+0.1**
	comp=Z,9.9nm,0.4s							
KECS	**Kecovo**	**4.08**	**135**	*e*SG		**Sg**	**18 29 42.7**	**+4.8**

*IDC **25** 18:31:18.6±1.5,197S×9967E,h0km,mb4.1/11, mb1 4.2/12,mb1mx3.9/22,mbtmp4.1/12,ML3.4/1, Error ellipse: s-maj=74.5km s-min=14.3km az=53.0*
*ISCJB **25** 18:31:21.7±0.9, 19S±02×998E±02,h33km,mb4.2/13, Error ellipse: s-maj=43.1km s-min=8.2km az=109.1*
*NEIC **25** 18:31:23.3±0.6, 190S×9979E,h30km,mb4.3/4, Error ellipse: s-maj=30.6km s-min=5.8km az=55.0*

ISC 25 18:31:24.0±0.9,19S±02×997E±02,h35km,n26,σ0§74/26, mb4.2/13,1C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**3.37**	**121**	⇑*e*P		**Pn**	**18 32 16.8**	**+2.7**
PSI	**Prapat**	**4.73**	**351**	Pn		**Pn**	**18 32 31.6**	**-1.1**
	1.7nm,0.3s,baz=144,slow=17,SNR=2.6							
KULM	**Kulim**	**7.20**	**8**	*e*P		**Pn**	**18 33 01.6**	**-5.0**
FITZ	**Fitzroy Crossi**	**30.12**	**124**	*e*P		**P**	**18 37 29.6**	**-0.7**
	3.4nm,0.6s,mb4.2							
FITZ	**Fitzroy Crossi**	**30.12**	**124**	P		**P**	**18 37 29.7**	**-0.6**
	2.3nm,0.8s,mb4.0,baz=307,slow=15,SNR=9.1							
LSA	**Lhasa**	**32.46**	**346**	*e*P		**P**	**18 37 52.1**	**+1.2**
	3.4nm,0.6s,mb4.3							
WRA	**Warramunga Arr**	**38.30**	**120**	P		**P**	**18 38 40.7**	**-0.4**
	1.0nm,0.4s,mb3.9,baz=303,slow=9.0,SNR=32							
WRAB	**Tennant Creek**	**38.31**	**120**	*e*P		**P**	**18 38 40.8**	**-0.4**
WB2	**Warramunga Arr**	**38.31**	**120**	*e*P		**P**	**18 38 40.2**	**-1.0**
ASPA	**Alice Springs**	**39.55**	**126**	*e*P		**P**	**18 38 51.1**	**-0.5**
AS31	**Alice Springs**	**39.55**	**126**	*e*P		**P**	**18 38 51.1**	**-0.5**
ASAR	**Alice Springs**	**39.55**	**126**	P		**P**	**18 38 52.2**	**+0.6**
	1.1nm,0.7s,mb3.7,baz=298,slow=8.0,SNR=28							
STKA	**Stephens Creek**	**49.44**	**132**	*e*P		**P**	**18 40 11.2**	**+0.7**
	1.7nm,0.8s,mb4.1							
STKA	**Stephens Creek**	**49.44**	**132**	P		**P**	**18 40 10.6**	**+0.1**
	1.7nm,0.7s,mb4.2,baz=307,slow=5.9,SNR=4.3							
SONM	**Songino Array**	**49.87**	**6**	P		**P**	**18 40 14.3**	**+0.6**
	2.3nm,0.7s,mb4.3,baz=187,slow=9.7,SNR=7.9							
ULN	**Ulaanbaatar**	**49.97**	**6**	*e*P		**P**	**18 40 14.6**	**+0.1**
MKAR	**Makanchi Array**	**50.85**	**345**	P		**P**	**18 40 21.9**	**+0.8**
	3.2nm,0.6s,mb4.5,baz=157,slow=8.2,SNR=35							
ZAL	**Zalesovo**	**57.00**	**350**	P		**P**	**18 41 06.2**	**+0.1**
	3.9nm,0.6s,mb4.6,baz=318,slow=6.4,SNR=15							
BVAR	**Borovoye Array**	**59.98**	**340**	P		**P**	**18 41 26.8**	**0.0**
	1.0nm,0.5s,mb4.1,baz=146,slow=8.3,SNR=11							
BRVK	**Borovoye**	**60.05**	**340**	*e*P		**P**	**18 41 26.9**	**-0.4**
ZRNK	**Zerenda**	**60.40**	**339**	*e*P		**P**	**18 41 29.1**	**-0.6**
CHKZ	**Chkalovo**	**60.45**	**341**	*e*P		**P**	**18 41 30.2**	**+0.2**
	2.3nm,0.8s,mb4.3							
AKTK	**Aktyubinsk**	**63.12**	**332**	P		**P**	**18 41 47.5**	**-0.5**
AKTO	**Aktyubinsk**	**63.12**	**332**	P		**P**	**18 41 47.5**	**-0.5**
	0.9nm,0.6s,mb4.0,baz=125,slow=9.3,SNR=4.0							
FINES	**FINESS Array B**	**83.88**	**332**	P		**P**	**18 43 50.9**	**+0.8**
	0.7nm,0.5s,mb4.1,baz=101,slow=7.3,SNR=11							
ARCES	**ARCESS Array B**	**86.27**	**340**	P		**P**	**18 44 02.5**	**+0.5**
	0.6nm,0.8s,mb3.9,baz=78,slow=5.6,SNR=6.0							

*ISCJB **25** 18:36:47.0±0.6,2785N±004×10420E±006,h10km, mb3.7/3, Error ellipse: s-maj=7.6km s-min=5.3km az=165.5*
*IDC **25** 18:36:47.6±1.5,2702N×10296E,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.4/20,mbtmp3.7/3, Error ellipse: s-maj=390.8km s-min=28.5km az=56.0*
*BJI **25** 18:36:49.2,2805N×10425E,h17km,mB4.3,mb4.7,ML3.5, Ms3.6,Ms3.4*

ISC 25 18:36:49.4±0.6,2787N±004×10420E±006,h10km,n10, σ1§16/17,mb3.7/3,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**2.61**	**122**	P		**Pn**	**18 37 34.8**	**+3.1**
GYA				PG		**Pg**	**18 37 39.5**	**0.0**
GYA				S		**Sn**	**18 38 08.3**	**+4.9**
GYA				SG		**Sg**	**18 38 14.0**	**+0.7**
GYA				Smax				
	comp=N,250nm,0.7s							
GYA				Smax				
	comp=E,180nm,0.7s							
KMI	**Kunming**	**3.03**	**206**	PG		**Pg**	**18 37 47.3**	**-0.2**
KMI				SG		**Sg**	**18 38 27.5**	**+0.7**
KMI				Smax				
	comp=N,28nm,0.9s							
KMI				Smax				
	comp=E,21nm,1.2s							
CD2	**Chengdu**	**3.05**	**353**	P		**Pn**	**18 37 36.8**	**-1.0**
CD2				PG		**Pg**	**18 37 42.0**	**-6.0**
CD2				SG		**Sg**	**18 38 17.0**	**-11**
CD2				Smax				
	comp=N,290nm,0.7s							
CD2				Smax				
	comp=E,510nm,0.7s							
LZH	**Lanzhou**	**8.20**	**358**	*e*P		**Pn**	**18 38 50.5**	**+2.1**
LZH				AP			18 38 53.0	
LZH				XP			18 38 55.0	
LZH				*e*S		**Sn**	**18 40 22.3**	**+1.2**
LZH				XS			18 40 27.3	
LZH				AMB	AMB			
	comp=Z,15nm,1.0s							
LZH				AMB	AMB			
	comp=Z,60nm,4.0s							
LZH				Smax				
	comp=N,29nm,0.8s							
LZH				Smax				
	comp=E,54nm,1.2s							
LZH				LR	LR			
	comp=E,308nm,6.9s							
LZH				LR	LR			
	comp=Z,350nm,9.1s							
NJ2	**Nanjing**	**13.37**	**68**	*e*P		**Pn**	**18 39 55.5**	**-3.8**
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.5s							
MKAR	**Makanchi Array**	**25.55**	**324**	P		**P**	**18 42 18.5**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.3,baz=129,slow=11,SNR=3.2							
WRA	**Warramunga Arr**	**55.77**	**145**	P		**P**	**18 46 25.6**	**-0.8**
	comp=Z,0.5nm,0.3s,mb4.0,baz=333,slow=7.7,SNR=28							
WB2	**Warramunga Arr**	**55.77**	**145**	*e*P		**P**	**18 46 25.4**	**-1.1**
ASPA	**Alice Springs**	**58.70**	**148**	*e*P		**P**	**18 46 46.8**	**-0.4**
ASAR	**Alice Springs**	**58.70**	**148**	P		**P**	**18 46 47.0**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=328,slow=6.6,SNR=18							

*IDC **25** 18:42:32.7±10.0,095S×10099E,h0km,mb3.2/3, mb1 3.4/3,mb1mx3.2/18,mbtmp3.2/3, Error ellipse: s-maj=596.7km s-min=28.2km az=53.0*
*ISCJB **25** 18:42:37.4±1.8,05S±02×1015E±05,h33km,mb3.2/3, Error ellipse: s-maj=73.8km s-min=21.8km az=135.5*

ISC 25 18:42:39.5±1.9,06S±03×1014E±05,h35km,n4,σ0§28/4, mb3.2/3,1C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**3.25**	**159**	⇑*e*P		**Pn**	**18 43 28.0**	**0.0**
WRA	**Warramunga Arr**	**37.51**	**123**	P		**P**	**18 49 50.1**	**+0.2**
	0.1nm,0.5s,mb2.8,baz=304,slow=9.0,SNR=4.3							
ASAR	**Alice Springs**	**38.96**	**128**	P		**P**	**18 50 01.9**	**-0.2**
	0.2nm,0.7s,mb3.0,baz=300,slow=7.8,SNR=4.7							
MKAR	**Makanchi Array**	**50.09**	**343**	P		**P**	**18 51 30.9**	**0.0**
	0.4nm,0.5s,mb3.7,baz=160,slow=7.1,SNR=6.2							

*NEIC **25** 18:45:34.7,3969N×2403E,h33km,MD2.9(ATH),After ATH.*
*ATH **25** 18:45:34.7,3969N×2403E,h33km±4km,MD2.9/5*
*ISCJB **25** 18:45:35.6±0.5,3971N±004×2403E±004,h28km±5km, Error ellipse: s-maj=6.5km s-min=5.0km az=125.7*
*CSEM **25** 18:45:35.4±0.1,3971N×2409E,h15km, ML2.2, Error ellipse: s-maj=1.9km s-min=1.6km az=135.0*
*THE **25** 18:45:35.8,3969N×2407E,h1km, ML2.2*

ISC 25 18:45:35.6±0.5,3970N±004×2403E±004,h27km±5km,n13, σ0§86/20,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.35**	**309**	*e*Pg		**Pb**	**18 45 43.1**	**-0.4**
PAIG				*e*Sg		**Sb**	**18 45 49.1**	**+0.2**
AOS	**Alonnisos**	**0.55**	**192**	*e*Pg		**Pb**	**18 45 45.7**	**-1.0**
	comp=Z,8.6nm,0.3s							
AOS				*e*Sg		**Sb**	**18 45 54.1**	**0.0**
OUR	**Ouranopolis**	**0.63**	**357**	*e*Pg		**Pb**	**18 45 48.0**	**0.0**
	comp=Z,9.0nm,0.5s							
OUR	**Ouranopolis**	**0.63**	**357**	*e*Pg		**Pb**	**18 45 48.0**	**0.0**
	9.0nm,0.5s							
XOR	**Xorichti**	**0.73**	**243**	*e*Pg		**Pb**	**18 45 50.2**	**+0.4**
XOR				*e*Sg		**Sb**	**18 46 00.3**	**+0.9**
NEO	**Neokhori**	**0.74**	**238**	*e*PN		**Pn**	**18 45 49.8**	**-0.5**
NEO				*e*SN		**Sn**	**18 45 59.8**	**-0.8**
PLG	**Polygyros**	**0.81**	**326**	*e*PN		**Pn**	**18 45 50.3**	**-0.9**
PLG				*e*SN		**Sn**	**18 46 01.5**	**-0.7**
LOS	**Limnos**	**0.84**	**74**	*e*Pg		**Pb**	**18 45 51.4**	**-0.2**
LOS				*e*Sg		**Sb**	**18 46 03.0**	**+0.6**
LIA	**Limnos Island**	**0.91**	**77**	*e*PN		**Pn**	**18 45 52.3**	**-0.2**
LIA				*e*SN		**Sn**	**18 46 04.8**	**+0.1**
HORT	**Hortiatis**	**1.14**	**322**	*e*Pg		**Pn**	**18 45 57.3**	**+1.5**
LIT	**Litokhoron**	**1.25**	**289**	*e*Pg		**Pn**	**18 45 59.6**	**+2.3**
NVR	**Nevrokopi**	**1.65**	**356**	*e*PB		**Pb**	**18 46 03.7**	**-1.6**
RDO	**Rodhopi**	**1.84**	**38**	*e*PN		**Pn**	**18 46 06.2**	**+0.8**

*ISCJB **25** 18:50:06.5±1.6,43S±02×1015E±02,h33km,mb3.9/4, Error ellipse: s-maj=33.2km s-min=22.9km az=100.2*
*IDC **25** 18:50:06.9±4.0,372S×10225E,h0km,mb3.7/4,mb1 3.9/4, mb1mx3.6/16,mbtmp3.7/4, Error ellipse: s-maj=167.3km s-min=23.5km az=56.0*

ISC 25 18:50:09.8±1.7,41S±02×1017E±02,h35km,n5,σ1§22/5, mb3.9/4,1C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.06**	**63**	⇑*i*P		**Pn**	**18 50 28.2**	**+0.1**
WRA	**Warramunga Arr**	**35.50**	**119**	P		**P**	**18 57 01.7**	**-1.4**
	0.3nm,0.4s,mb3.6,baz=300,slow=8.4,SNR=4.0							
ASAR	**Alice Springs**	**36.67**	**125**	P		**P**	**18 57 14.4**	**+1.3**
	1.2nm,0.4s,mb4.1,baz=306,slow=8.5,SNR=12							
SONM	**Songino Array**	**51.92**	**4**	P		**P**	**18 59 14.9**	**-0.1**
	1.0nm,0.6s,mb3.9,baz=186,slow=9.3,SNR=8.0							
MKAR	**Makanchi Array**	**53.53**	**344**	P		**P**	**18 59 27.0**	**+0.1**
	0.7nm,0.6s,mb3.6,baz=141,slow=8.4,SNR=8.0							

IDC 25 18:52:52.6±10.0,635S×12917E,h174km±107km,mb3.3/2, mb1 3.3/5,mb1mx3.2/12,mbtmp3.8/5,Error ellipse: s-maj=105.1km s-min=30.8km az=52.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.18**	**196**	P		Pn	18 55 40.8	+0.4
	0.4nm,0.3s,baz=30,slow=12,SNR=19							
FITZ				S		Sn	18 57 46.5	-9.0
	0.3nm,0.3s,baz=281,slow=23,SNR=3.4							
WRA	**Warramunga Arr**	**14.41**	**160**	P		Pn	18 56 08.5	-0.2
	0.1nm,0.3s,baz=341,slow=12,SNR=9.7							
WRA				S		Sn	18 58 44.9	-4.1
	0.2nm,0.3s,baz=330,slow=21,SNR=4.9							
ASAR	**Alice Springs**	**17.81**	**166**	P		Pn	18 56 49.5	-0.2
	0.4nm,0.3s,baz=338,slow=9.2,SNR=25							
STKA	**Stephens Creek**	**27.93**	**157**	P		P	18 58 26.6	+0.1
	1.0nm,0.6s,baz=321,slow=14,SNR=3.1							
MKAR	**Makanchi Array**	**67.23**	**327**	P		P	19 03 28.1	0.0
	0.3nm,0.4s,baz=122,slow=9.4,SNR=7.4							

*ISCJB **25** 18:54:35.0±0.8,4363N±005×105.14W±009,h0km,mb3.9/1, Error ellipse: s-maj=9.3km s-min=6.5km az=0.3*
*IDC **25** 18:54:34.5±2.4,4327N×10528W,h0km,mb3.8/1, mb1 3.9/3,mb1mx3.4/22,mbtmp3.8/3,ML3.5/2,Error

ISCO	**Idaho Springs**	**3.81**	**185**	*e*P		**Pn**	**18 55 37.1**	**+0.5**
GCMT	**Greycliff**	**3.88**	**306**	*e*Pn		**Pn**	**18 55 37.8**	**+0.2**
LOHW	**Long Hollow**	**3.94**	**272**	*e*P		**Pn**	**18 55 38.5**	**+0.1**
FLWY	**Flagg Ranch**	**4.02**	**279**	*e*P		**Pn**	**18 55 39.9**	**+0.3**
MOOW	**Moose Ponds**	**4.04**	**274**	*e*P		**Pn**	**18 55 40.2**	**+0.3**
SNOW	**Snow King Moun**	**4.06**	**270**	*e*P		**Pn**	**18 55 46.3**	**+6.2**
YNR	**Norris Junctio**	**4.11**	**288**	Pn		**Pn**	**18 55 43.3**	**+2.5**
REDW	**Red Top Meadow**	**4.14**	**269**	*e*Pn		**Pn**	**18 55 41.9**	**+0.8**
IMW	**Indian Meadow**	**4.18**	**276**	*e*P		**Pn**	**18 55 42.8**	**+1.0**
TPAW	**Teton Pass**	**4.20**	**271**	*e*Pn		**Pn**	**18 55 42.0**	**0.0**
RRI2	**Red Ridge**	**4.48**	**269**	*e*Pn		**Pn**	**18 55 45.0**	**-0.8**
HWUT	**Hardware Ranch**	**5.12**	**249**	*e*Pn		**Pn**	**18 55 53.4**	**-1.3**
TCUT	**Toone Canyon**	**5.24**	**244**	*e*Pn		**Pn**	**18 55 52.3**	**-4.0**
EGMT	**Eagleton**	**5.46**	**326**	*e*Pn		**Pn**	**18 55 59.2**	**-0.2**
	15nm,0.5s							
DAU	**Daniels Canyon**	**5.53**	**237**	*e*Pn		**Pn**	**18 55 59.4**	**-0.9**
ULM	**Lac du Bonnet**	**9.21**	**40**	Pn		**Pn**	**18 56 50.4**	**-0.4**
ULM				Lg			18 59 26.8	
ULM	**Lac du Bonnet**	**9.21**	**40**	Pn		**Pn**	**18 56 50.4**	**-0.4**
	1.1nm,0.3s,baz=232,slow=12,SNR=7.8							
ULM				Lg			18 59 26.8	
	0.3nm,0.3s,baz=326,slow=22,SNR=4.2							
ARCES	**ARCESS Array B**	**61.53**	**18**	P		**P**	**19 04 54.9**	**-0.7**
	0.9nm,0.8s,mb4.0,baz=327,slow=8.7,SNR=5.6							

NEIC ***25*** *19:26:54.9, 34.00S×72.08W, h32km, ML2.9(GUC), After GUC.*

GUC 25 19:26:54.9±0.7, 34.00S×72.08W, h32km±4km, MD3.7, ML2.9,7C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LNV	**Longovilo**	**0.56**	**85**	⇓*i*P		Pb	19 27 06.2	-0.1
LNV				*i* S		Sb	19 27 14.3	+0.1
LCCH	**Las Cruces**	**0.68**	**39**	⇑*i*P		Pn	19 27 07.7	-0.5
LCCH				*i* S		Sb	19 27 17.4	+0.1
TACH	**Talagante**	**1.01**	**70**	⇓*i*P		Pn	19 27 12.9	0.0
SFDO	**San Fernando**	**1.07**	**125**	⇑*i*P		Pn	19 27 13.7	0.0
RCDM	**Rinconada Maip**	**1.18**	**65**	*e*P		Pn	19 27 15.3	+0.2
RCDM				*i* S		Sn	19 27 30.8	+0.6
RCDM				AML		AML	19 27 37.2	
	comp=N,271nm,0.4s							
RCDM	**Rinconada Maip**	**1.18**	**65**	*e*P		Pn	19 27 15.3	+0.2
RCDM				*i* S		Sn	19 27 30.8	+0.6
CHCH	**Chadas Angostu**	**1.19**	**87**	*e*P		Pn	19 27 15.9	+0.6
CHCH				*i* S		Sn	19 27 31.6	+1.2
NICH	**Los Niches**	**1.22**	**145**	⇑*i*P		Pn	19 27 16.2	+0.5
NICH				*i* S		Sn	19 27 33.1	+1.9
CACH	**El Canelo**	**1.24**	**96**	*e*P		Pn	19 27 17.1	+1.2
CACH				*i* S		Sn	19 27 34.4	+2.9
ANTU	**Antumapu**	**1.28**	**71**	⇓*i*P		Pn	19 27 17.8	+1.2
ANTU				*i* S		Sn	19 27 34.4	+1.8
ANTU				AML		AML	19 27 39.5	
	comp=E,374nm,0.7s							
ANTU	**Antumapu**	**1.28**	**71**	⇓*i*P		Pn	19 27 17.8	+1.2
ANTU				*i* S		Sn	19 27 34.4	+1.8
PCH	**Pirque**	**1.36**	**74**	*e*P		Pn	19 27 18.4	+0.7
PCH				*i* S		Sn	19 27 37.0	+2.4
ROCH	**El Roble**	**1.36**	**41**	⇓*i*P		Pn	19 27 18.6	+0.9
ROCH				*i* S		Sn	19 27 37.4	+2.8
CICH	**Cipreses**	**1.41**	**103**	⇑*i*P		Pn	19 27 19.5	+1.1
CLCH	**Cerro Calan**	**1.42**	**65**	⇑*i*P		Pn	19 27 20.1	+1.6
CLCH				*i* S		Sn	19 27 38.2	+2.1
CLCH				AML		AML	19 27 45.1	
	comp=N,315nm,0.4s							
CLCH				AML		AML	19 27 45.7	
	comp=N,347nm,0.2s							
TALC	**Talca**	**1.44**	**165**	⇑*i*P		Pn	19 27 19.7	+0.9
TALC				*i* S		Sn	19 27 38.7	+2.1
PEL	**Peldehue**	**1.45**	**54**	⇑*i*P		Pn	19 27 20.1	+1.3
PEL				AML		AML	19 27 46.7	
	comp=E,737nm,0.6s							
PACH	**Papudo**	**1.56**	**20**	*e*P		Pn	19 27 22.1	+1.7
FCH	**Farellones**	**1.64**	**66**	*e*P		Pn	19 27 23.3	+1.8
FCH				*i* S		Sn	19 27 45.4	+4.0
FCH				AML		AML	19 27 51.3	
	comp=N,290nm,0.3s							
JACH	**Jahuel**	**1.81**	**44**	*e*P		Pn	19 27 25.6	+1.7
JACH				*e*S		Sn	19 27 48.9	+3.1

IDC 25 19:27:04.9±2.2, 299N×12575E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/16, mbtmp3.2/4, Error ellipse: s-maj=154.5km s-min=25.4km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.96**	**180**	P		P	19 31 49.7	+0.3
	1.2nm,0.7s,baz=358,slow=11,SNR=6.1							
WRA	**Warramunga Arr**	**24.30**	**160**	P		P	19 32 24.5	+0.6
	0.3nm,0.4s,baz=331,slow=11,SNR=5.1							
ASAR	**Alice Springs**	**27.66**	**164**	P		P	19 32 54.4	0.0
	0.3nm,1.0s,baz=338,slow=7.2,SNR=4.3							
MKAR	**Makanchi Array**	**57.61**	**326**	P		P	19 36 56.7	+0.1
	0.2nm,0.3s,baz=119,slow=7.8,SNR=5.8							

ISCJB ***25*** *19:31:40.9±2.0, 11.10S±0.05×163.50E±0.04, h32km±13km, mb4.9/46, MS4.3/22, Error ellipse: s-maj=9.3km s-min=5.3km az=142.9*

MOS ***25*** *19:31:41.5±0.9, 1098S×16354E, h33km, mb5.0/15, MS4.2/7, Error ellipse: s-maj=11.5km s-min=9.3km az=164.4*

NEIC ***25*** *19:31:43.2±1.4, 1101S×16353E, h39km±12km, mb5.0/24, Error ellipse: s-maj=9.6km s-min=7.8km az=157.0*

HRVD ***25*** *19:31:43.2±0.3, 1093S×16352E, h19km±1km, MW5.0/73, Centroid moment Tensor Solution. LP body waves: s27,c38;Mantle waves: s73,c111; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.70±.12; Mθθ-2.09±.10; Mφφ 1.39±.09; Mrθ 0.58±.21; Mrφ-2.66±.09; Mθφ-1.61±.25; Best double couple: M=3.63100×10^16 NP1:ϕ=254.00000°, δ60.00000°, λ7.00000°. NP2: ϕ=161.00000°, δ84.00000°, λ150.00000°. Principal axes: T 3.3620, Plg25.0000°, Azm113.0000°; N 0.5330, Plg60.0000°, Azm331.0000°; P -3.9000, Plg16.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***25*** *19:31:44.6±1.8, 1108S×16347E, h48km±16km, mb4.4/10, mb1 4.6/14, mb1mx4.6/15, mbtmp4.7/14, ML4.5/3, MS4.3/16, Ms1 4.3/16, ms1mx4.2/23 Error ellipse: s-maj=18.1km s-min=12.7km az=142.0*

BJI ***25*** *19:31:45.4, 1045S×16325E, h38km, mB5.0, mb4.6, Ms4.6, Msz4.3*

ISC 25 19:31:43.7±1.1, 1106S±0.05×16351E±0.04, h39km±10km, h38km±3.7km: pP-P, n273, σ0.6 64/264, mb4.9/46, MS4.3/22, 61C-84D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**3.87**	**294**	P		**Pn**	**19 32 40.6**	**0.0**
	98nm,0.3s,baz=106,slow=2.1,SNR=27							
HNR				S		**Sn**	**19 33 29.8**	**+5.0**
	132nm,0.3s,baz=78,slow=14,SNR=4.3							
HNR				LR		LR	19 34 14.9	
	comp=Z,6μm,18.9s,baz=175,slow=39							
HNR	**Honiara**	**3.87**	**294**	P		**Pn**	**19 32 40.6**	**0.0**
HNR				S		**Sn**	**19 33 29.8**	**+5.0**
HNR				pmax		pmax		
	comp=Z,98nm,0.3s							
HNR				smax				
	comp=N,132nm,0.3s							
HNR				MLR		MLR		
	comp=Z,6μm,18.9s							
DZM	**Mont Dzumac**	**11.30**	**166**	*e*P		**Pn**	**19 34 20.7**	**-1.9**
DZM				*e*S		**Sn**	**19 36 22.3**	**-5.3**
DZM	**Mont Dzumac**	**11.30**	**166**	P		**Pn**	**19 34 21.7**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=350,slow=16,SNR=29							
DZM				S		**Sn**	**19 36 23.6**	**-4.0**
	comp=Z,0.5nm,0.3s,baz=94,slow=17,SNR=3.4							
DZM				LR		LR	19 38 04.9	
	comp=Z,1μm,18.8s,baz=188,slow=34							
PMG	**Port Moresby**	**16.18**	**274**	P		**Pn**	**19 35 28.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=2.5							
CTA	**Charters Tower**	**18.88**	**240**	⇓*i*P		**Pn**	**19 36 03.2**	**+1.7**
	comp=Z,54nm,0.9s							
CTA	**Charters Tower**	**18.88**	**240**	P		**Pn**	**19 36 02.6**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=68,slow=12,SNR=54							
CTA				LR		LR	19 42 35.4	
	comp=Z,1μm,18.9s,baz=60,slow=35							

CTA	**Charters Tower**	**18.88**	**240**	⇓*i*P		**Pn**	**19 36 03.2**	**+1.7**
CTA				pmax		pmax		
	comp=Z,54nm,0.9s							
CTAO	**Charters Tower**	**18.88**	**240**	*e*P		**Pn**	**19 36 02.8**	**+1.3**
CTAO				pmax		pmax		
	comp=Z,84nm,1.0s							
CTAO	**Charters Tower**	**18.88**	**240**	*e*P		**Pn**	**19 36 02.8**	**+1.3**
	comp=Z,84nm,1.0s							
ARMA	**Armidale**	**22.20**	**208**	*e*P		**P**	**19 36 38.6**	**+2.0**
AFI	**Afiamalu**	**24.29**	**99**	P		**P**	**19 36 55.6**	**-1.7**
	comp=Z,35nm,0.9s,mb4.8,baz=228,slow=7.0,SNR=4.4							
AFI				LR		LR	19 44 25.5	
	comp=Z,837nm,19.5s,MS4.2,baz=230,slow=31							
RAO	**Raoul Island**	**25.06**	**139**	LR		LR	19 44 41.6	
	comp=Z,391nm,21.6s,MS3.9,baz=8.1,slow=31							
STKA	**Stephens Creek**	**28.96**	**221**	*e*P		**P**	**19 37 39.7**	**+0.3**
	comp=Z,6.5nm,0.9s,mb4.4							
STKA	**Stephens Creek**	**28.96**	**221**	P		**P**	**19 37 40.0**	**+0.6**
	comp=Z,5.5nm,0.8s,mb4.4,baz=22,slow=12,SNR=15							
STKA				LR		LR	19 48 25.4	
	comp=Z,849nm,20.6s,MS4.3,baz=33,slow=35							
WRAB	**Tennant Creek**	**29.41**	**249**	*e*P		**P**	**19 37 42.8**	**-0.6**
WRAB				pmax		pmax		
	comp=Z,62nm,1.2s,mb5.2							
WRAB	**Tennant Creek**	**29.41**	**249**	*e*P		**P**	**19 37 42.8**	**-0.6**
	comp=Z,62nm,1.2s,mb5.2							
WB2	**Warramunga Arr**	**29.41**	**249**	⇓*i*P		**P**	**19 37 42.8**	**-0.6**
WB2				*e*S		**S**	**19 42 32.8**	**-1.9**
WRA	**Warramunga Arr**	**29.43**	**249**	P		**P**	**19 37 43.0**	**-0.5**
	comp=Z,22nm,1.0s,mb4.8,baz=78,slow=9.1,SNR=117							
WRA				S		**S**	**19 42 34.4**	**-0.5**
	comp=Z,6.7nm,1.0s,baz=79,slow=14,SNR=13							
WRA	**Warramunga Arr**	**29.43**	**249**	P		**P**	**19 37 43.0**	**-0.5**
WRA				S		**S**	**19 42 34.4**	**-0.5**
WRA				pmax		pmax		
	comp=Z,22nm,1.0s							
WRA				smax				
	comp=N,7.0nm,1.0s							
KAKA	**Kakadu**	**30.44**	**264**	*e*P		**P**	**19 37 50.8**	**-1.7**
	comp=N,11nm,0.6s,mb4.8							
AS31	**Alice Springs**	**30.84**	**242**	*e*P		**P**	**19 37 55.2**	**-0.8**
ASAR	**Alice Springs**	**30.84**	**242**	P		**P**	**19 37 55.2**	**-0.8**
	comp=N,19nm,1.1s,mb4.8,baz=61,slow=10,SNR=127							
ASAR				S		**S**	**19 42 55.9**	**-1.1**
	comp=N,0.9nm,0.9s,baz=64,slow=17,SNR=4.8							
ASAR				LR		LR	19 49 58.8	
	comp=N,764nm,18.2s,MS4.4,baz=74,slow=36							
ASAR	**Alice Springs**	**30.84**	**242**	P		**P**	**19 37 55.3**	**-0.7**
ASAR				S		**S**	**19 42 55.9**	**-1.1**
ASAR				pmax		pmax		
	comp=Z,19nm,1.1s							
ASAR				smax				
	comp=N,1.0nm,0.9s							
ASAR				MLR		MLR		
	comp=Z,764nm,18.2s							
ASPA	**Alice Springs**	**30.84**	**242**	*e*P		**P**	**19 37 55.2**	**-0.8**
TOO	**Toolangi**	**30.97**	**209**	*e*P		**P**	**19 38 00.9**	**+3.8**
	comp=Z,6.0nm,0.9s,mb4.4							
TOO	**Toolangi**	**30.97**	**209**	*e*P		**P**	**19 38 00.9**	**+3.8**
TOO				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.4							
FITZ	**Fitzroy Crossi**	**37.26**	**255**	*e*P		**P**	**19 38 49.8**	**-1.9**
	comp=Z,23nm,0.8s,mb5.1							
FITZ	**Fitzroy Crossi**	**37.26**	**255**	P		**P**	**19 38 50.8**	**-0.9**
	comp=Z,11nm,0.6s,mb4.8,baz=84,slow=8.1,SNR=48							
FITZ				LR		LR	19 54 13.0	
	comp=Z,558nm,18.5s,MS4.4,baz=84,slow=36							
FORT	**Forrest**	**38.25**	**234**	*e*P		**P**	**19 39 00.3**	**+0.2**
	comp=Z,16nm,0.8s,mb4.8							
MBWA	**Marble Bar**	**43.12**	**251**	*e*P		**P**	**19 39 39.5**	**-0.7**
	comp=Z,21nm,1.0s,mb4.8							
PAE	**Paea**	**45.82**	**104**	*e*P		**P**	**19 40 02.2**	**+0.5**
	comp=Z,58nm,1.2s,mb5.4							
PPT	**Papeete**	**45.82**	**104**	*e*LQ			19 51 06.9	
	comp=Z,566nm,27.0s							
PPT				*e*LR		LR	19 52 56.9	
	comp=Z,268nm,22.5s,baz=277							
PPT	**Papeete**	**45.82**	**104**	LR		LR	19 56 38.2	
	comp=Z,367nm,19.3s,MS4.3,baz=285,slow=33							
TVO	**Taravao**	**46.13**	**104**	*e*P		**P**	**19 40 05.1**	**+0.9**
	comp=Z,58nm,0.9s,mb5.5							
TBI	**Tubuai**	**46.36**	**112**	*e*LR		LR	19 53 13.2	
	comp=Z,761nm,30.0s,baz=286							
PMOR	**Pomariorio Ree**	**47.43**	**100**	*e*P		**P**	**19 40 15.1**	**+0.7**
	comp=Z,51nm,1.2s,mb5.3							
NWAO	**Narrogin (SRO)**	**47.64**	**235**	LR		LR	20 00 13.5	
	comp=Z,700nm,18.3s,MS4.7,baz=93,slow=36							
VAH	**Vaihoa**	**47.68**	**101**	*e*P		**P**	**19 40 16.8**	**+0.5**
	comp=Z,83nm,1.2s,mb5.7							
MAT	**Matsushiro**	**53.01**	**334**	P		**P**	**19 40 56.7**	**+0.1**
SSE	**Sheshan**	**58.36**	**317**	P		**P**	**19 41 35.5**	**+0.6**
SSE				XP		sP	19 41 48.3	-2.7
SSE				PCP		PcP	19 42 24.0	-1.6
SSE				PP		PP	19 43 46.0	+1.7
SSE				AMB		AMB		
	comp=Z,28nm,0.6s,mb5.5							
SSE				LR		LR		
	comp=N,97nm,22.6s,MS4.0							
SSE				LR		LR		
	comp=E,102nm,22.9s,MS4.0							
SSE				LR		LR		
	comp=Z,96nm,19.9s,MS3.9							
RKT	**Rikitea**	**59.64**	**110**	*e*S		**S**	**19 49 57.8**	**+6.4**
RKT	comp=Z,54nm,28.5s			*e*SS		SS	19 53 43.1	-4.2
RKT	comp=Z,62nm,31.5s			*e*LR		LR	19 59 22.6	
	comp=Z,603nm,27.2s							
NJ2	**Nanjing**	**60.51**	**317**	*e*P		**P**	**19 41 52.0**	**+2.2**
NJ2				AP		pP	19 42 02.3	+1.0
NJ2				XP		sP	19 42 06.0	+0.1
NJ2				PP		PP	19 44 09.0	+5.6
NJ2				XS		sS	19 50 22.0	+0.3
NJ2				AMB		AMB		
	comp=Z,50nm,1.0s,mb5.6							
NJ2				AMB		AMB		
	comp=Z,140nm,4.2s							
NJ2				LR		LR		
	comp=N,150nm,24.4s							
NJ2				LR		LR		
	comp=E,200nm,13.7s							
NJ2				LR		LR		
	comp=Z,260nm,25.0s,MS4.3							
YSS	**Yuzh-Sakhalins**	**60.66**	**344**	*e*P		**P**	**19 41 51.3**	**+0.5**
YSS				*e*			19 42 30.3	
YSS				MLR		MLR		
	comp=Z,300nm,18.0s,MS4.5							
YSS	**Yuzh-Sakhalins**	**60.66**	**344**	*e*P		**P**	**19 41 51.1**	**+0.3**
	comp=Z,21nm,1.2s,mb5.1							
MDJ	**Mudanjiang**	**63.36**	**334**	P		**P**	**19 42 09.8**	**+0.8**
MDJ				AMB		AMB		
	comp=Z,6.0nm,1.0s,mb4.7							
MDJ				AMB		AMB		
	comp=Z,53nm,6.3s							
MDJ				LR		LR		
	comp=N,28nm,17.5s,MS4.0							
MDJ				LR		LR		
	comp=E,94nm,21.3s,MS4.0							
MDJ				LR		LR		
	comp=Z,89nm,23.6s,MS3.9							
PET	**Petropavlovsk**	**63.96**	**357**	*e*P		**P**	**19 42 19.5**	**+6.6**
PET				*e*PS			19 51 13.5	
HABR	**Khabarovsk**	**64.40**	**339**	*e*P		**P**	**19 42 16.8**	**+1.0**
HABR				*e*S		**S**	**19 50 57.9**	**+6.3**
CN2	**Changchun**	**64.65**	**330**	*e*P		**P**	**19 42 14.1**	**-3.3**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.8							
CN2				LR		LR		
	comp=N,200nm,18.0s,MS4.5							
CN2				LR		LR		
	comp=E,200nm,18.0s,MS4.5							
CN2				LR		LR		
	comp=Z,200nm,16.0s,MS4.4							
KLR	**Kul'dur**	**66.22**	**338**	*e*P		**P**	**19 42 24.1**	**-3.5**
VNDA	**Vanda**	**66.45**	**180**	P		**P**	**19 42 30.3**	**+1.3**
	comp=Z,2.6nm,0.9s,mb4.2,baz=348,slow=5.8,SNR=9.4							
VNDA				LR		LR	20 09 34.2	
	comp=Z,115nm,18.3s,MS4.1,baz=360,slow=34							
VNDA	**Vanda**	**66.45**	**180**	P		**P**	**19 42 30.3**	**+1.2**
VNDA				pmax		pmax		
	comp=Z,3.0nm,0.9s							
VNDA				MLR		MLR		
	comp=Z,115nm,18.3s							
SBA	**Scott Base**	**66.80**	**179**	*e*P		**P**	**19 42 32.3**	**+1.0**
SBA				pmax		pmax		
	comp=Z,24nm,1.6s,mb5.0							

SBA	**Scott Base**	**66.80**	**179**	*e*P		**P**	**19 42 32.3**	**+1.0**
	comp=Z,24nm,1.6s,mb5.0							
XAN	**Xi'an**	**68.53**	**313**	P		**P**	**19 42 42.3**	**+0.2**
XAN				AP		pP	19 42 52.5	-1.3
XAN				AMB		AMB		
	comp=Z,5.0nm,1.0s,mb4.4							
KMI	**Kunming**	**69.27**	**302**	P		**P**	**19 42 48.5**	**+1.7**
KMI				AP		pP	19 43 02.5	+4.0
KMI				XP		sP	19 43 08.0	+5.0
KMI				AMB		AMB		
	comp=Z,11nm,1.3s,mb4.6							
KMI				AMB		AMB		
	comp=Z,93nm,4.4s							
KMI				LR		LR		
	comp=N,158nm,18.3s,MS4.3							
KMI				LR		LR		
	comp=E,114nm,22.1s,MS4.3							
KMI				LR		LR		
	comp=Z,153nm,25.9s,MS4.1							
LZH	**Lanzhou**	**73.16**	**313**	*e*P		**P**	**19 43 10.5**	**+0.2**
LZH				PP		PP	19 45 56.0	+2.5
LZH				*e*S		S	19 52 40.0	+4.7
LZH				XS		sS	19 52 46.3	-8.5
LZH				AMB		AMB		
	comp=Z,21nm,1.4s,mb4.9							
LZH				AMB		AMB		
	comp=Z,80nm,5.0s							
LZH				LR		LR		
	comp=E,421nm,16.0s							
LZH				LR		LR		
	comp=Z,820nm,17.2s,MS5.1							
CIT	**Chita**	**76.09**	**331**	*e*P		**P**	**19 43 27.4**	**+0.1**
ULN	**Ulaanbaatar**	**77.04**	**325**	*e*P		**P**	**19 43 33.5**	**+0.9**
ULN	**Ulaanbaatar**	**77.04**	**325**	*e*P		**P**	**19 43 32.8**	**+0.1**
	comp=Z,7.6nm,1.0s,mb4.6							
SONM	**Songino Array**	**77.39**	**325**	P		**P**	**19 43 35.6**	**+0.9**
	comp=Z,2.1nm,0.8s,mb4.1,baz=144,slow=6.1,SNR=13							
SONM				LR		LR	20 16 18.5	
	comp=Z,113nm,18.1s,MS4.2,baz=316,slow=35							
SONM	**Songino Array**	**77.39**	**325**	P		**P**	**19 43 35.6**	**+1.0**
SONM				pmax		pmax		
	comp=Z,2.0nm,0.8s							
SONM				MLR		MLR		
	comp=Z,113nm,18.1s							
GTA	**Gaotai**	**77.50**	**315**	*e*P		**P**	**19 43 37.0**	**+1.8**
GTA				AP		pP	19 43 47.0	-0.1
GTA				XP		sP	19 43 50.8	-0.7
GTA				AMB		AMB		
	comp=Z,4.0nm,1.2s,mb4.2							
GTA				AMB		AMB		
	comp=Z,89nm,4.6s							
GTA				LR		LR		
	comp=N,100nm,17.2s,MS4.4							
GTA				LR		LR		
	comp=E,121nm,18.3s,MS4.4							
GTA				LR		LR		
	comp=Z,151nm,22.2s,MS4.3							
YAK	**Yakutsk**	**77.50**	**344**	*e*P		**P**	**19 43 34.7**	**-0.6**
YAK				pmax		pmax		
	comp=Z,7.0nm,0.6s,mb4.8							
SVW2	**Sparrevohn**	**78.82**	**19**	*e*P		**P**	**19 43 42.1**	**-0.4**
BILL	**Bilibino**	**78.92**	**1**	*e*P		**P**	**19 43 42.2**	**-0.9**
BILL				*e*			19 54 31.9	
BILL				*e*			20 02 06.4	
BILL				pmax		pmax		
	comp=Z,14nm,1.1s,mb4.8							
BILL				MLR		MLR		
	comp=Z,100nm,18.0s,MS4.2							
QSPA	**South Pole Qui**	**78.94**	**180**	*e*P		**P**	**19 43 43.9**	**+0.7**
	comp=Z,14nm,1.2s,mb4.8							
BOD	**Bodaibo**	**79.62**	**336**	*e*P		**P**	**19 43 43.3**	**-3.6**
ZAK	**Zakamensk**	**80.47**	**326**	*e*P		**P**	**19 43 51.4**	**-0.1**
TLY	**Talaya**	**80.93**	**327**	*e*P		**P**	**19 43 53.4**	**-0.6**
MAW	**Mawson**	**83.88**	**202**	*e*P		**P**	**19 44 10.4**	**+1.0**
	comp=Z,7.8nm,1.0s,mb4.8							
MAW	**Mawson**	**83.88**	**202**	P		**P**	**19 44 10.6**	**+1.3**
	comp=Z,10nm,1.0s,mb4.9,baz=98,slow=7.9,SNR=13							
MAW				LR		LR	20 15 53.3	
	comp=Z,146nm,20.3s,MS4.3,baz=306,slow=32							
MAW	**Mawson**	**83.88**	**202**	*e*P		**P**	**19 44 10.4**	**+1.0**
MAW				pmax		pmax		
	comp=Z,8.0nm,1.0s							
FARB	**Farallon Islan**	**83.96**	**50**	⇑P		**P**	**19 44 09.2**	**-0.6**
	baz=84							
COLA	**College**	**84.00**	**19**	*e*P		**P**	**19 44 08.8**	**-1.1**
COLA				pmax		pmax		
	comp=Z,11nm,0.8s,mb5.0							
COLA	**College**	**84.00**	**19**	*e*P		**P**	**19 44 08.8**	**-1.2**
	comp=Z,10nm,0.8s,mb5.0							
GUN	**Gumba**	**84.42**	**300**	*e*P		**P**	**19 44 13.6**	**+1.5**
HAST	**UC Hastings Re**	**84.65**	**51**	⇓P		**P**	**19 44 13.0**	**-0.2**
	baz=85							
PKI	**Pulchoki**	**84.73**	**299**	*e*P		**P**	**19 44 14.2**	**+0.5**
MNRC	**McLaughlin Nat**	**84.75**	**49**	⇓P		**P**	**19 44 14.0**	**+0.2**
	baz=85							
N02C	**Big Bar**	**84.75**	**47**	⇓P		**P**	**19 44 14.3**	**+0.6**
	baz=85							
V03C	**Hunter Liggett**	**84.78**	**52**	⇑P		**P**	**19 44 14.3**	**+0.4**
	baz=85							
GASB	**Alder Springs**	**84.79**	**48**	⇓P		**P**	**19 44 14.4**	**+0.4**
	baz=85							
BDM	**Black Diamond**	**84.89**	**50**	⇑P		**P**	**19 44 14.3**	**-0.2**
	baz=85							
KKN	**Kakani**	**84.90**	**299**	*e*P		**P**	**19 44 14.5**	**0.0**
O02C	**Red Bluff**	**84.92**	**48**	⇑P		**P**	**19 44 14.9**	**+0.3**
	baz=85,SNR=5.7							
V04C	**Ramage Ranch,**	**84.95**	**52**	⇓P		**P**	**19 44 14.7**	**-0.1**
	baz=85					

baz=86,SNR=8.7
T06C Millerton Lake 86.24 51 ⇓P P 19 44 20.6 -0.6
baz=86
CIS Catalina Islan 86.27 55 ⇑P P 19 44 20.6 -0.7
baz=86
G03A Yamhill 86.27 43 ⇓P P 19 44 21.4 +0.1
baz=86
F03A Seaside 86.29 42 ⇓P P 19 44 22.0 +0.5
baz=86
KOLN Koldanda 86.33 299 *e*P P 19 44 19.4 -2.2
C03A Quillayute Air 86.35 40 ⇓P P 19 44 22.2 +0.5
baz=86
DAWY Dawson 86.37 22 P P 19 44 21.1 -0.7
S06C San Francisco 86.39 50 P P 19 44 21.6 -0.3
baz=86,SNR=12
ARVC Arvin 86.40 53 ⇓P P 19 44 22.0 0.0
baz=86
VES Vestal, Richgr 86.40 53 ⇓P P 19 44 21.5 -0.5
baz=86
K04A Chilquin 86.45 46 ⇓P P 19 44 22.0 -0.2
baz=86
R05C Kirkwood Meado 86.46 50 ⇑P P 19 44 22.0 -0.3
baz=86
M05C Lookout 86.47 47 ⇑P P 19 44 22.2 -0.1
baz=86
E03A Lebam 86.50 41 ⇑P P 19 44 22.3 -0.2
baz=87
ELFS Eagle Lake Fie 86.55 48 ⇑P P 19 44 22.7 0.0
baz=87
BEKR Beckwourth 86.59 48 ⇑P P 19 44 22.6 -0.3
baz=87,SNR=7.8
KCC Kaiser Creek 86.63 51 ⇓P P 19 44 22.2 -0.9
baz=87,SNR=5.6
HELL Mitchell Peak, 86.68 52 ⇑P P 19 44 22.5 -0.8
baz=87,SNR=15
G04A Mulino 86.77 43 ⇑P P 19 44 23.2 -0.5
baz=87
H04A Detroit Lake 86.80 43 ⇑P P 19 44 23.2 -0.7
baz=87
ISA Isabella 86.82 53 ⇑P P 19 44 23.6 -0.4
baz=87
WCN Washoe City 86.87 49 ⇓P P 19 44 23.9 -0.4
baz=87
R06C Coleville 86.87 50 ⇑P P 19 44 24.3 0.0
baz=87,SNR=6.4
P06A Stead Airport, 86.88 49 ⇑P P 19 44 24.0 -0.3
baz=87
L05A Lakeview 86.91 46 ⇓P P 19 44 24.5 0.0
baz=87
M06C Likely Place G 86.91 47 ⇓P P 19 44 24.0 -0.4
baz=87,SNR=6.3
EDW2 Edwards Air Fo 86.99 54 ⇓P P 19 44 24.8 0.0
baz=87,SNR=12
J05A Fort Rock 87.00 45 ⇑P P 19 44 24.9 -0.1
baz=87,SNR=9.2
F04A Amboy 87.04 42 ⇓P P 19 44 24.6 -0.5
baz=87
B04A Port Angeles 87.05 40 ⇓P P 19 44 25.9 +0.8
baz=87
R07C Lee Vining 87.06 50 ⇓P P 19 44 25.1 0.0
baz=87,SNR=5.8
K05A Summer Lake 87.07 46 ⇓P P 19 44 25.4 +0.1
baz=87,SNR=10.0
O06A Flanigan 87.07 48 ⇑P P 19 44 24.8 -0.4
baz=87,SNR=11
BFSC Mount Baldy St 87.09 54 ⇓P P 19 44 24.9 -0.4
baz=87,SNR=6.1
MLAC Mammoth Lakes 87.09 51 ⇓P P 19 44 25.6 +0.3
baz=87
MTUM Tungsten Hills 87.22 51 *e*P P 19 44 26.1 +0.1
N06A Buffalo Meadow 87.23 48 ⇑P P 19 44 25.7 -0.4
baz=87,SNR=7.3
I05A Bend 87.25 44 ⇑P P 19 44 26.2 0.0
baz=87
PAHR Pah Rah Range 87.26 49 *e*P P 19 44 26.3 +0.1
comp=Z,18nm,1.1s,mb5.2
C04A Brinnon 87.28 40 ⇓P P 19 44 26.1 -0.1
baz=87
CWC Cottonwood Cre 87.34 52 ⇓P P 19 44 26.3 -0.2
baz=87
TIN Tinemaha 87.39 52 ⇓P P 19 44 26.6 -0.2
baz=87
H05A Madras 87.43 44 ⇓P P 19 44 26.5 -0.5
baz=88
K06A Valley Falls 87.54 46 ⇑P P 19 44 27.4 -0.1
baz=88,SNR=7.2
G05A Wamic 87.56 43 ⇓P P 19 44 27.4 -0.2
baz=88
F05A White Salmon 87.66 42 ⇑P P 19 44 28.0 -0.1
baz=88
DAC Darwin (Calif) 87.68 53 *e*P P 19 44 28.0 -0.2
DAC pmax pmax
comp=Z,15nm,1.5s,mb5.0
DAC Darwin (Calif) 87.68 53 *e*P P 19 44 28.0 -0.1
comp=Z,15nm,1.5s,mb5.0
MPMC Manual Prospec 87.70 53 ⇑P P 19 44 28.2 0.0
baz=88,SNR=6.6
D05A Enumclaw 87.73 41 ⇓P P 19 44 28.7 +0.3
baz=88
MONP Monument Peak 87.74 56 ⇓P P 19 44 28.6 +0.2
baz=88,SNR=6.2
J06A Christmas Vall 87.75 45 ⇑P P 19 44 28.2 -0.3
baz=88,SNR=9.0
O07A Toulon 87.77 49 ⇓P P 19 44 28.3 -0.3
baz=88,SNR=7.9
A04A Legoe Bay, Lum 87.78 40 ⇑P P 19 44 29.8 +1.1
baz=88
R08A Mina 87.84 50 ⇑P P 19 44 28.3 -0.6
baz=88
N07B Gerlach 87.87 48 ⇓P P 19 44 29.0 -0.1
baz=88,SNR=8.0
PFO Pinyon Flat Ob 87.89 55 *e*P P 19 44 29.0 -0.2
PFO pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
PFO Pinyon Flat Ob 87.89 55 *e*P P 19 44 29.0 -0.2
comp=Z,9.9nm,1.0s,mb5.0
PFO Pinyon Flat Ob 87.89 55 ⇓P P 19 44 28.9 -0.2
baz=88
I06A Prineville 87.91 45 ⇓P P 19 44 29.4 +0.1
baz=88,SNR=12
L07A Adell 87.96 47 ⇑P P 19 44 29.7 +0.2
baz=88,SNR=6.7
B05A Bryant 88.01 40 ⇓P P 19 44 30.5 +0.7
baz=88
G06A Carlson Farm, 88.01 43 ⇑P P 19 44 29.5 -0.3
baz=88
GSC Goldstone 88.04 54 ⇑P P 19 44 29.7 -0.2
baz=88
GRAC Grapevine Rang 88.04 52 ⇓P P 19 44 29.7 -0.2
baz=88
H06A Lindquist Farm 88.06 44 ⇑P P 19 44 30.5 +0.5
baz=88,SNR=8.1
C05A Tolt Reservoir 88.09 41 ⇑P P 19 44 30.4 +0.2
baz=88
Q08A Gabbs 88.11 50 ⇓P P 19 44 30.0 -0.2
baz=88,SNR=6.3
SWSC Sam W. Stewart 88.26 56 ⇑P P 19 44 31.1 +0.2
baz=88
FURC Furnace Creek, 88.30 52 ⇑P P 19 44 31.1 0.0
baz=88
HEC Hector,Ludlow 88.30 54 ⇓P P 19 44 30.9 -0.2
baz=88
S09A Goldfield 88.34 51 P P 19 44 31.2 -0.2
baz=88,SNR=6.9
BELC Belle Mtn. 88.36 55 ⇓P P 19 44 31.0 -0.4
baz=88,SNR=12
I07A Izee 88.44 45 ⇓P P 19 44 31.9 +0.1
baz=88,SNR=16
N08A GE Springer Mi 88.48 48 ⇓P P 19 44 31.8 -0.1
baz=88
M08A Happy Creek Ra 88.49 47 ⇑P P 19 44 32.3 +0.3
baz=88,SNR=6.2
WVOR Wild Horse Val 88.58 46 *e*P P 19 44 32.2 -0.2
WVOR pmax pmax
comp=Z,19nm,1.1s,mb5.3
WVOR Wild Horse Val 88.58 46 *e*P P 19 44 32.2 -0.2
comp=Z,18nm,1.1s,mb5.3
R09A Tonopah 88.59 51 P P 19 44 32.3 -0.2
baz=89,SNR=8.6
SHOC Shoshone 88.61 53 ⇓P P 19 44 32.1 -0.4
baz=89
Q09A Carvers 88.67 50 ⇑P P 19 44 32.8 -0.1
baz=89
U10A Ash Meadows, A 88.70 53 ⇑P P 19 44 33.0 0.0
baz=89
L08A Fields 88.72 47 ⇓P P 19 44 33.4 +0.3
baz=89,SNR=17
K08A Mann Creek Ran 88.77 46 ⇓P P 19 44 33.1 -0.2
baz=89,SNR=7.4
TUQ Turquoise Mtn. 88.77 54 ⇑P P 19 44 33.1 -0.3
baz=89
N09A Rock Creek Ran 88.95 48 ⇓P P 19 44 34.4 +0.2
baz=89
O09A Fish Creek Ran 89.01 49 ⇓P P 19 44 34.5 0.0
baz=89
I08A Drewsey 89.04 45 ⇑P P 19 44 34.5 -0.1
baz=89
GLA Glamis 89.08 56 ⇑P P 19 44 35.3 +0.5
baz=89,SNR=7.1
M09A Marrel Ranch, 89.15 48 ⇑P P 19 44 35.5 +0.3
baz=89
L09A Wilkinson Ranc 89.16 47 ⇓P P 19 44 35.4 +0.2
baz=89,SNR=7.6
R10A Warm Springs 89.19 51 ⇓P P 19 44 35.6 +0.3
baz=89,SNR=6.4
K09A Rome 89.30 46 ⇑P P 19 44 36.0 +0.2
baz=89,SNR=17
Y12C Blythe 89.49 56 ⇑P P 19 44 37.0 +0.3
baz=90
O10A Cortez Mining, 89.55 49 ⇑P P 19 44 37.2 +0.1
baz=90
W12A Cal Nev Ari 89.58 54 ⇑P P 19 44 37.3 +0.2
baz=90
I09A Lost Marbles R 89.63 45 ⇑P P 19 44 37.1 -0.2
baz=90
NEE2 Needles Airpor 89.65 55 ⇑P P 19 44 37.7 +0.3
baz=90
V12A Nelson 89.69 54 ⇑P P 19 44 37.9 +0.3
baz=90
TRCR Troy Canyon 89.75 51 *e*P P 19 44 37.6 -0.3
M10A I.L. Ranch, Tu 89.84 48 ⇓P P 19 44 38.7 +0.3
baz=90,SNR=7.3
H09A Durkee 89.87 44 ⇑P P 19 44 38.4 -0.1
baz=90
P11A Circle Ranch, 89.92 50 ⇓P P 19 44 39.1 +0.3
baz=90
PDMCI Parker Dam,Lak 89.92 55 ⇑P P 19 44 38.9 -0.2
baz=90,SNR=5.2
Y13A Salome 90.06 56 ⇑P P 19 44 39.9 +0.5
baz=90
U12A Valley of Fire 90.10 53 ⇑P P 19 44 40.0 +0.4
baz=90
X13A Yucca 90.24 55 ⇓P P 19 44 41.1 +0.8
baz=90,SNR=5.9
N11A Elko Archery C 90.25 49 ⇓P P 19 44 40.2 -0.1
baz=90
W13A Hualapai Mount 90.31 54 ⇓P P 19 44 41.1 +0.6
baz=90,SNR=5.4
M11A Holland Ranch, 90.36 48 ⇓P P 19 44 41.5 +0.7
baz=90,SNR=8.2
Q12A Willow Creek R 90.50 50 ⇓P P 19 44 41.8 +0.4
baz=90,SNR=11
P12A McGill 90.54 50 P P 19 44 42.2 +0.6
baz=91,SNR=15
Z14A Wintersburg 90.68 56 ⇑P P 19 44 42.7 +0.4
baz=91
Y14A Wickenburg 90.76 56 ⇑P P 19 44 42.9 +0.3
baz=91
N12A Clover Valley, 90.77 49 P P 19 44 43.3 +0.6
baz=91,SNR=5.8
O12A Currie 90.85 49 P P 19 44 43.5 +0.4
baz=91,SNR=32
X14A Yava 90.97 55 ⇓P P 19 44 44.2 +0.5
baz=91
W14A Seligman 90.98 54 ⇑P P 19 44 44.2 +0.5
baz=91,SNR=7.1
M12A Wells 91.00 48 ⇑P P 19 44 44.0 +0.3
baz=91,SNR=12
CCUT Cedar City 91.28 52 *e*P P 19 44 45.4 +0.4
N13A Wendover, West 91.39 49 ⇓P P 19 44 45.8 +0.3
baz=91
X15A Humboldt 91.50 55 ⇓P P 19 44 46.8 +0.7
baz=92
116A Eloy 91.53 57 ⇓P P 19 44 46.8 +0.6
baz=92
M13A Montello 91.53 48 P P 19 44 46.6 +0.4
baz=92,SNR=14
W15A Williams 91.62 55 ⇑P P 19 44 47.6 +0.9
baz=92
HLID Hailey 91.86 46 *e*P P 19 44 47.7 0.0
comp=Z,14nm,1.2s,mb5.2
MKAR Makanchi Array 92.04 317 P P 19 44 49.6 +1.1
comp=Z,1.0nm,0.7s,mb4.2,baz=103,slow=5.4,SNR=7.1
MKAR Makanchi Array 92.04 317 P P 19 44 49.6 +1.0
MKAR pmax pmax
comp=Z,10.0nm,0.7s
BGU Big Grassy Mou 92.27 49 *e*P P 19 44 49.7 +0.1
MSU Marysvale 92.40 51 *e*P P 19 44 51.2 +1.0
HVU Hansel Valley 92.64 48 *e*P P 19 44 51.5 +0.1
HVU pmax pmax
comp=Z,11nm,1.1s,mb5.2
HVU Hansel Valley 92.64 48 *e*P P 19 44 51.5 +0.1
comp=Z,10nm,1.1s,mb5.2
CHMT Chamberlain Mo 93.41 43 *e*P P 19 44 54.2 -0.7
NVS Novosibirsk 93.42 325 *e*P P 19 44 47.7 -7.2
NVS pmax pmax
comp=N,4.0nm,1.4s
NVS pmax pmax
comp=E,6.0nm,1.4s
NVS pmax pmax
comp=Z,7.0nm,1.4s,mb4.9
WALA Waterton Lakes 93.45 41 *e*P P 19 44 54.3 -0.7
comp=Z,7.0nm,1.1s,mb5.0
BOZ Bozeman (W) 94.25 44 *e*P P 19 44 58.8 0.0
BOZ pmax pmax
comp=Z,9.0nm,1.4s,mb5.0
BOZ Bozeman (W) 94.25 44 *e*P P 19 44 58.8 0.0
comp=Z,9.2nm,1.4s,mb5.0
PDAR Pinedale Array 95.18 48 P P 19 45 02.6 -0.4
comp=Z,4.8nm,1.2s,mb4.8,baz=267,slow=3.0,SNR=10
PDAR LR LR 20 22 10.1
comp=Z,102nm,19.1s,MS4.3,baz=55,slow=32
EGMT Eagleton 95.95 42 *e*P P 19 45 05.6 -0.9
comp=Z,3.9nm,0.7s,mb5.0
YKA Yellowknife Ar 96.00 28 P P 19 45 04.6 -2.1
comp=Z,2.4nm,0.9s,mb4.6,baz=260,slow=5.0,SNR=7.1
YKA LR LR 20 23 28.2
comp=Z,197nm,18.5s,MS4.6,baz=270,slow=32
YKA Yellowknife Ar 96.00 28 P P 19 45 04.6 -2.1
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA MLR MLR
comp=Z,197nm,18.5s
YKA Yellowknife Ar 96.00 28 P P 19 45 04.6 -2.1
YKA LR LR 20 23 28.2
ARCES ARCESS Array B 115.79 345 PKP PKPdf 19 50 20.6 -1.4
comp=Z,0.7nm,0.7s,baz=48,slow=1.8,SNR=8.5
ARCES ARCESS Array B 115.79 345 PKIKP PKPdf 19 50 20.6 -1.3
ARCES pmax pmax
comp=Z,1.0nm,0.7s
GOF Gofitskoye 119.17 316 *e*P Pdif 19 46 46.1 -3.8
LPAZ La Paz 122.13 117 PKP PKPdf 19 50 33.5 -0.7
comp=Z,0.5nm,0.6s,baz=5.8,slow=6.3,SNR=4.0
LPAZ La Paz 122.13 117 PKIKP PKPdf 19 50 33.5 -0.7
LPAZ pmax pmax
comp=Z,1.0nm,0.6s
NB2 NORSAR Subarra 126.12 344 PKPd PKPdf 19 50 40.8 -1.0
comp=Z,1.9nm,1.1s,baz=34,slow=2.0
NOA NORSAR Array B 126.12 344 PKP PKPdf 19 50 39.0 -2.8
comp=Z,0.5nm,0.8s,baz=40,slow=2.1,SNR=2.7
BRTR Keskin Array B 127.35 312 PKP PKPdf 19 50 43.6 -0.5
comp=Z,1.4nm,1.1s,baz=236,slow=1.3,SNR=3.8
BRTR Keskin Array B 127.35 312 PKIKP PKPdf 19 50 43.6 -0.5
BRTR pmax pmax
comp=Z,1.0nm,1.1s
GERES GERESS Array B 134.72 332 PKP PKPdf 19 50 58.2 +0.1
comp=Z,0.5nm,0.8s,baz=207,slow=0.6,SNR=5.1
GERES GERESS Array B 134.72 332 PKIKP PKPdf 19 50 58.2 +0.1
GERES pmax pmax
comp=Z,1.0nm,0.8s
KEST Kesra 146.07 321 PKPbc PKPbc 19 51 20.8 +1.4
comp=Z,1.9nm,0.9s,baz=209,slow=8.9,SNR=4.2
ESDC Sonseca Array 149.41 341 PKPbc PKPbc 19 51 29.2 +0.7
comp=Z,1.0nm,0.8s,baz=45,slow=2.3,SNR=5.2

IDC 25 19:59:40.9±59.0, 1669S×17562W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/11, mbtmp4.0/3, MS4.5/1, Ms1 4.5/1, ms1mx2.9/31, Error ellipse: s-maj=1109.0km s-min=178.0km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.55**	**241**	P	P	20 07 30.4	+0.3
	0.7nm,0.6s,baz=84,slow=9.2,SNR=2.5						
WB2	**Warramunga Arr**	**47.47**	**258**	*e*P	P	20 08 17.3	-0.1
WRA	**Warramunga Arr**	**47.48**	**258**	P	P	20 08 17.8	+0.3
	0.7nm,0.5s,baz=95,slow=7.2,SNR=44						
WRA				LR	LR	20 26 04.1	
	comp=Z,453nm,18.6s,baz=345,slow=33						
ASAR	**Alice Springs**	**47.69**	**253**	P	P	20 08 19.5	+0.4
	3.5nm,0.5s,baz=87,slow=8.6,SNR=89						

MAN 25 20:02:23.7, 1654N×12033E, h30km, mb1.9, ML3.7, MS0.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BCPH	**Baguio City Da**	**0.28**	**123**	⇓*e*P	Pb	20 02 32.5	+1.5
BCPH				*e*S	Sb	20 02 39.5	+3.6
BOLP	**Bolinao**	**0.43**	**249**	*e*P	Pb	20 02 34.3	+1.2
ABRA	**Dolores**	**1.16**	**18**	*e*P	Pn	20 02 37.1	-6.8
CAUP	**Cauayan**	**1.48**	**74**	*e*P	Pn	20 02 48.4	0.0
APYP	**Conner**	**1.58**	**33**	*e*P	Pn	20 02 49.8	+0.1
APYP				*e*S	Sn	20 03 00.3	-8.7

*ISCJB **25** 20:03:01.7±0.6, 3883N×003×2127E×003, h1km±6km, Error ellipse: s-maj=4.6km s-min=4.1km az=36.3*
*NEIC **25** 20:03:02.3, 3882N×2122E, h6km, MD3.2(ATH), After ATH.*
*CSEM **25** 20:03:02.4±0.1, 3883N×2123E, h2km, MD3.2, Error ellipse: s-maj=1.2km s-min=1.1km az=20.0*
*THE **25** 20:03:02.8, 3884N×2126E, h0km, ML2.6*
*ATH **25** 20:03:02.3, 3882N×2122E, h6km±5km, MD3.2/9*
ISC 25 20:03:02.5±0.5, 3882N±003×2125E±003, h10km±6km, n17, σ1§20/26, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.45**	**78**	⇓*i*PB	**Pg**	**20 03 11.4**	**+0.1**
EVR				*e*SB	**Sg**	**20 03 18.5**	**+1.3**
LKD	**Levkas**	**0.48**	**256**	*e*Pg	**Pg**	**20 03 11.4**	**-0.5**
LKD				*e*Sg	**Sg**	**20 03 20.2**	**+1.9**
RLS	**Riolos of Patr**	**0.78**	**167**	*e*PB	**Pb**	**20 03 17.5**	**-0.7**
RLS				*e*SB	**Sb**	**20 03 28.4**	**-0.4**
VLS	**Valsamata**	**0.83**	**219**	*e*PB	**Pb**	**20 03 17.1**	**-1.8**
VLS				*e*SB	**Sb**	**20 03 29.5**	**-0.6**
AGG	**Agios Georgios**	**0.87**	**76**	*e*Pg	**Pg**	**20 03 19.2**	**-0.1**
AGG				*e*Sg	**Sg**	**20 03 31.9**	**+1.3**
JAN	**Janina**	**0.89**	**340**	*e*PG	**Pg**	**20 03 18.6**	**-1.0**
JAN				*e*SB	**Sb**	**20 03 31.0**	**-0.9**
MEV	**Metsovon**	**0.96**	**359**	*e*Pg	**Pg**	**20 03 20.3**	**-0.8**
	comp=Z,12nm,0.4s						
MEV				*e*Sg	**Sg**	**20 03 34.3**	**+0.7**
IGT	**Igoumenitsa**	**1.00**	**315**	*e*Pg	**Pg**	**20 03 20.8**	**-1.0**
IGT				*e*Sg	**Sg**	**20 03 36.6**	**+1.7**
LKR	**Lokris**	**1.38**	**97**	*e*PG	**Pg**	**20 03 28.2**	**-0.8**
KEK	**Kerkira**	**1.43**	**309**	*e*PB	**Pb**	**20 03 29.5**	**+0.2**
KEK				*e*SB	**Sb**	**20 03 48.9**	**+1.3**
KZN	**Kozani**	**1.54**	**15**	*e*PB	**Pb**	**20 03 31.4**	**+0.4**
LIT	**Litokhoron**	**1.60**	**37**	*e*Pg	**Pg**	**20 03 30.9**	**-2.2**
NEO	**Neokhori**	**1.61**	**72**	*e*PG	**Pg**	**20 03 32.6**	**-0.8**
ITM	**Ithomi**	**1.73**	**162**	*e*PN	**Pn**	**20 03 35.0**	**+2.5**
FNA	**Florina**	**1.96**	**3**	*e*Pb	**Pb**	**20 03 36.9**	**-1.4**
VLI	**Veliai**	**2.49**	**147**	*e*PN	**Pn**	**20 03 45.9**	**+2.9**
KNT	**Kendrikon**	**2.66**	**28**	*e*Pn	**Pn**	**20 03 45.9**	**+0.5**

*MOS **25** 20:16:22.5±0.9, 633S×12991E, h112km, mb5.3/36, Error ellipse: s-maj=10.5km s-min=5.9km az=111.3*
*BJI **25** 20:16:24.4, 672S×13020E, h164km, mB4.8, mb5.1*
*ISCJB **25** 20:16:26.8±0.5, 644S±002×13000E±003, h156km±5km, mb5.2/97, Error ellipse: s-maj=5.2km s-min=3.5km az=134.0*
*NEIC **25** 20:16:28.6±0.1, 640S×12996E, mb5.4/34, Error ellipse: s-maj=5.0km s-min=3.2km az=63.0*
*CSEM **25** 20:16:28.0, 653S×13003E, h174km, mb5.6*
*HRVD **25** 20:16:28.6±0.2, 641S×13007E, h172km±1km, MW5.3/88, Centroid moment Tensor Solution. LP body waves: s71,c112;Mantle waves: s88,c155; Half duration: 1§1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.48±.02; $M_{\theta\theta}$-0.14±.02; $M_{\phi\phi}$0.61±.02; $M_{r\theta}$0.17±.01; $M_{\theta\phi}$0.01±.02; $M_{\phi r}$0.89±.01; Best double couple: $M_0$1.06200×10^{17} NP1:ϕ_s346.00000°,δ17.00000°,λ-113.00000°. NP2: ϕ_s190.00000°,δ75.00000°,λ-83.00000°. Principal axes: T 1.1220, Plg29.0000°, Azm275.0000°; N -0.1200, Plg6.0000°, Azm8.0000°; P -1.0020, Plg60.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **25** 20:16:29.6±0.6, 635S×13003E, h165km±4km, mb5.0/26, mb1 4.9/28, mb1mx4.9/30, mbtmp5.4/28, MS4.1/11, Ms1 4.1/11, ms1mx3.7/29 Error ellipse: s-maj=10.5km s-min=6.1km az=63.0*
ISC 25 20:16:28.5±0.5, 642S±003×13002E±003, h154km±5km, h164km±2.0km: pP-P, n402, σ1§16/290, mb5.2/97, 50C-36D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**3.27**	**326**	P	**Pn**	**20 17 21.7**	**+2.3**
	2μm,1.2s						
SWI	**Sorong**	**5.66**	**13**	P	**Pn**	**20 17 49.4**	**-1.2**
	446nm,0.4s						
KAKA	**Kakadu**	**6.69**	**159**	⇑*i*P	**Pn**	**20 18 03.3**	**-1.0**
	1μm,0.4s						
KAKA				*e*S	**Sn**	**20 19 13.5**	**-6.0**
BAKI	**Biak**	**7.99**	**50**	P	**Pn**	**20 18 21.0**	**-0.7**
	7μm,1.1s						
WSI	**Waingapu**	**10.15**	**251**	P	**Pn**	**20 18 49.0**	**-1.4**
	2μm,0.9s						
MMPI	**Merauke**	**10.47**	**102**	P	**Pn**	**20 18 54.3**	**-0.3**
	854nm,1.0s						
JAY	**Jayapura**	**11.33**	**70**	P	**Pn**	**20 19 05.1**	**-0.8**
	247nm,0.9s						
PCI	**Palu**	**11.55**	**298**	P	**Pn**	**20 19 10.7**	**+2.0**
	3μm,1.1s						
FITZ	**Fitzroy Crossi**	**12.37**	**200**	*e*P	**Pn**	**20 19 17.0**	**-2.4**
	82nm,0.4s						
FITZ				*e*S	**Sn**	**20 21 28.3**	**-7.9**
FITZ	**Fitzroy Crossi**	**12.37**	**200**	P	**Pn**	**20 19 17.4**	**-1.9**
	6.1nm,0.3s,baz=37,slow=11,SNR=68						
FITZ				S	**Sn**	**20 21 26.4**	**-10**
	24nm,0.3s,baz=302,slow=22,SNR=5.0						
FITZ				LR	LR	20 24 59.7	
	comp=Z,428nm,19.4s,baz=27,slow=41						
WRAB	**Tennant Creek**	**14.07**	**163**	*d*P	**Pn**	**20 19 38.0**	**-3.0**
WRAB	**Tennant Creek**	**14.07**	**163**	*e*P	**Pn**	**20 19 37.2**	**-3.8**
	1μm,1.2s						
WRA	**Warramunga Arr**	**14.08**	**163**	P	**Pn**	**20 19 37.9**	**-3.2**
	9.1nm,0.3s,baz=348,slow=13,SNR=342						
WRA				S	**Sn**	**20 22 08.8**	**-8.4**
	53nm,0.3s,baz=334,slow=22,SNR=4.7						
WRA				ScP	ScP	20 28 06.1	-2.1
	baz=325,slow=2.2,SNR=5.8						
WRA	**Warramunga Arr**	**14.08**	**163**	P	**Pn**	**20 19 37.9**	**-3.2**
WRA				S	**Sn**	**20 22 08.8**	**-8.4**
WRA				pmax	pmax		
	comp=Z,9.0nm,0.3s						
WRA				smax			
	comp=N,53nm,0.3s						
WB2	**Warramunga Arr**	**14.08**	**163**	*e*P	**Pn**	**20 19 37.3**	**-3.8**
WB2				*e*S	**Sn**	**20 22 04.9**	**-12**
CTBH	**Cotabato--PC H**	**14.73**	**337**	*e*P	**Pn**	**20 19 52.8**	**+3.5**
DNP	**Denpasar**	**14.85**	**260**	P	**Pn**	**20 19 52.2**	**+1.4**
	comp=N,856nm,0.9s						
NBBI	**Negara**	**15.40**	**262**	P	**Pn**	**20 19 57.2**	**-0.3**
	comp=N,617nm,1.1s						
PAGZ	**Pagadian**	**15.65**	**335**	*e*P	**Pn**	**20 20 04.8**	**+4.2**
IPIL	**Ipil**	**15.95**	**332**	*e*P	**Pn**	**20 20 04.8**	**+0.5**
KMMI	**Kalianget**	**15.96**	**267**	P	**Pn**	**20 20 06.9**	**+2.5**
	comp=N,998nm,1.1s						
TSM	**Tawau**	**16.14**	**311**	P	**Pn**	**20 20 08.8**	**+2.2**
SNPH	**Sibulan**	**17.06**	**337**	*e*P	**Pn**	**20 20 19.5**	**+1.8**
TBP	**Tagbilaran**	**17.14**	**339**	*e*P	**Pn**	**20 20 21.0**	**+2.2**
PMG	**Port Moresby**	**17.23**	**101**	P	**Pn**	**20 20 19.1**	**-0.6**
	comp=N,2.6nm,0.3s,baz=299,slow=7.7,SNR=36						
PMG				LR	LR	20 26 06.9	
	comp=N,497nm,20.6s,baz=285,slow=34						
PMG				ScP	ScP	20 28 14.1	-0.1
	comp=N,0.2nm,0.3s,baz=78,slow=1.3,SNR=4.6						
PMG	**Port Moresby**	**17.23**	**101**	*e*P	**Pn**	**20 20 20.8**	**+1.0**
PMG	**Port Moresby**	**17.23**	**101**	P	**Pn**	**20 20 19.1**	**-0.6**
PMG				LR	LR	20 26 06.9	

PMG ScP ScP 20 28 14.1 -0.1
KRKI Karangkates 17.51 263 P **Pn** **20 20 21.0 -2.2**
comp=N,946nm,0.7s
AS31 Alice Springs 17.55 168 *eP* **Pn** **20 20 23.2 -0.3**
AS31 *eS* **S** **20 23 29.2 -7.4**
ASPA Alice Springs 17.55 168 *eP* **Pn** **20 20 23.2 -0.3**
ASPA *eS* **S** **20 23 29.2 -7.4**
ASAR Alice Springs 17.55 168 P **Pn** **20 20 22.7 -0.8**
comp=N,28nm,0.3s,baz=342,slow=9.2,SNR=1293
ASAR S **S** **20 23 28.1 -8.5**
comp=N,7.1nm,0.3s,baz=338,slow=13,SNR=5.5
ASAR LR LR 20 28 07.9
comp=N,860nm,18.7s,baz=351,slow=40
ASAR ScP ScP 20 28 12.7 -2.2
comp=N,2.5nm,0.3s,baz=340,slow=2.2,SNR=13
ASAR ScS ScS 20 31 50.9 -4.1
baz=318,slow=1.7,SNR=5.7
ASAR P3KPbc 20 55 11.9
comp=N,0.0nm,0.3s,baz=161,slow=3.5,SNR=5.6
ASAR Alice Springs 17.55 168 P **Pn** **20 20 22.7 -0.8**
ASAR S **S** **20 23 28.1 -8.5**
ASAR LR LR 20 28 07.9
ASAR ScP ScP 20 28 12.7 -2.2
ASAR ScS ScS 20 31 50.9 -4.1
MBWA Marble Bar 17.72 213 P **Pn** **20 20 25.9 +0.3**
SNR=7.4
MBWA Marble Bar 17.72 213 *eP* **Pn** **20 20 25.0 -0.6**
comp=Z,94nm,0.8s
KKM Kota Kinabalu 18.53 312 P **P** **20 20 34.4 +1.3**
KKM Kota Kinabalu 18.53 312 *eP* **P** **20 20 33.7 +0.6**
BATP Bataraza 19.42 321 *eP* **P** **20 20 42.5 -0.3**
BJII Banjamegara 20.19 266 P **P** **20 20 49.5 -1.5**
comp=Z,402nm,1.4s
ENPP El Nido 20.44 329 *eP* **P** **20 20 53.9 +0.1**
PVCP Virac 20.73 344 *eP* **P** **20 20 58.2 +1.4**
BUSP Coron 20.75 332 *eP* **P** **20 20 56.9 -0.1**
CTA Charters Tower 20.80 132 ⇓*iP* **P** **20 20 58.7 +1.1**
comp=Z,152nm,0.8s
CTA *eS* **S** **20 24 41.8 +0.7**
CTA Charters Tower 20.80 132 P **P** **20 20 58.8 +1.2**
comp=Z,224nm,0.8s,baz=306,slow=11,SNR=195
CTA S **S** **20 24 41.1 0.0**
comp=Z,23nm,0.9s,baz=43,slow=22,SNR=7.3
CTA Charters Tower 20.80 132 P **P** **20 20 58.8 +1.2**
CTA S **S** **20 24 41.1 0.0**
CTA pmax pmax
comp=Z,224nm,0.8s
CTA smax
comp=N,23nm,1.0s
CTAO Charters Tower 20.80 132 *eP* **P** **20 20 58.6 +1.0**
CTAO pmax pmax
comp=Z,431nm,1.1s
CTAO Charters Tower 20.80 132 *eP* **P** **20 20 58.6 +0.9**
comp=Z,431nm,1.1s
KSM Kuching 21.19 291 *eP* **P** **20 21 01.8 +0.1**
BOAC Boac 21.36 338 *eP* **P** **20 21 02.2 -1.3**
JCJI Jatiwangi 21.61 269 P **P** **20 21 04.3 -1.9**
comp=Z,1µm,1.2s,mb6.3
LUBP Lubang 22.25 334 *eP* **P** **20 21 11.2 -1.7**
LUBP Lubang 22.25 334 *eP* **P** **20 21 12.6 -0.3**
LEM Lembang 22.26 268 P **P** **20 21 10.8 -2.2**
comp=Z,864nm,1.1s,mb6.1
TGY Tagaytay City 22.30 336 P **P** **20 21 14.2 +0.9**
comp=Z,321nm,0.6s,baz=184,slow=3.3,SNR=38
TGY S **S** **20 25 05.9 -1.1**
comp=Z,94nm,0.4s,baz=342,slow=22,SNR=8.0
TGY Tagaytay City 22.30 336 P **P** **20 21 14.2 +0.9**
TGY S **S** **20 25 05.9 -1.1**
TGY pmax pmax
comp=Z,321nm,0.6s
TGY smax
comp=N,94nm,0.4s
POLP Polillo Island 22.49 339 *eP* **P** **20 21 12.8 -2.3**
CBJI Citeko 23.03 269 P **P** **20 21 16.8 -3.2**
comp=N,2µm,0.9s
BALP Baler 23.56 339 *eP* **P** **20 21 24.2 -0.6**
SBJI Serang 23.75 269 P **P** **20 21 26.5 -0.1**
comp=N,374nm,1.2s,mb5.8
FORT Forrest 24.30 184 *eP* **P** **20 21 31.2 -0.4**
comp=N,118nm,0.7s,mb5.5
FORT *eS* **S** **20 25 36.3 -2.9**
CAUP Cauayan 24.59 341 *eP* **P** **20 21 33.3 -0.9**
GUMO Guam 24.75 37 P **P** **20 21 35.6 -0.1**
comp=N,180nm,0.7s,mb5.7,baz=192,slow=8.3,SNR=14
GUMO Guam 24.75 37 P **P** **20 21 35.6 -0.1**
GUMO pmax pmax
comp=Z,180nm,0.7s,mb5.7
APYP Conner 25.64 340 *eP* **P** **20 21 41.2 -2.5**
KSI Kapahiang 27.46 274 P **P** **20 22 03.6 +3.6**
comp=Z,174nm,1.1s,mb5.6
KSI Kapahiang 27.46 274⇑*eP* **P** **20 22 05.1 +5.1**
STKA Stephens Creek 27.54 158⇓*iP* **P** **20 22 00.5 -0.2**
comp=Z,62nm,0.5s,mb5.6
STKA *eS* sS 20 27 19.6 -7.8
STKA Stephens Creek 27.54 158 P **P** **20 22 00.6 -0.1**
comp=Z,71nm,0.5s,mb5.7,baz=332,slow=8.4,SNR=358
STKA LR LR 20 34 24.0
comp=Z,775nm,18.1s,baz=336,slow=39
KLBR Kellerberrin 27.54 203 *eP* **P** **20 22 00.5 -0.2**
comp=Z,15nm,0.4s,mb5.1
KLBR *eS* sS 20 27 19.4 -8.1
KGM Kluang 27.95 287 P **P** **20 22 04.9 +0.6**
MUN Mundaring 28.51 205 *eP* **P** **20 22 09.5 +0.2**
MUN *eS* sS 20 27 41.0 -1.8
NWAO Narrogin (SRO) 28.93 203 P **P** **20 22 13.6 +0.6**
comp=Z,10nm,0.4s,mb5.0,baz=66,slow=8.1,SNR=38
NWAO LR LR 20 35 22.2
comp=Z,268nm,19.4s,baz=188,slow=39
NWAO Narrogin (SRO) 28.93 203 P **P** **20 22 13.6 +0.6**
NWAO pmax pmax
comp=Z,10.0nm,0.4s
NWAO MLR MLR
comp=Z,269nm,19.4s
ADE Adelaide 29.51 165⇑*iP* **P** **20 22 19.7 +1.5**
HNR Honiara 29.78 98 P **P** **20 22 20.2 -0.4**
comp=Z,208nm,0.7s,mb6.0,baz=250,slow=1.8,SNR=7.3
HNR LR LR 20 34 13.9
comp=Z,594nm,21.3s,baz=358,slow=36
HNR Honiara 29.78 98 P **P** **20 22 20.2 -0.4**
HNR pmax pmax
comp=Z,208nm,0.7s,mb6.0
HNR MLR MLR
comp=Z,595nm,21.3s
PPI Padang Panjang 30.15 280 P **P** **20 22 23.9 +0.1**
comp=Z,415nm,1.0s,mb6.1
IPM Ipoh 30.91 290 P **P** **20 22 30.3 -0.2**
ARMA Armidale 31.33 142 *eP* **P** **20 22 35.4 +1.2**
KULM Kulim 31.55 291 *eP* **P** **20 22 35.1 -1.0**
YHNB Yeheng 32.03 345 *eP* **P** **20 22 40.2 -0.2**
QIZ Qiongzhong 32.17 322 P **P** **20 22 37.5 -4.1**
QIZ AP pP 20 23 14.0 -0.2
QIZ S **S** **20 27 35.8 -7.1**
QIZ SS SS 20 29 54.0 -14
QIZ AMB AMB
comp=Z,57nm,1.1s,mb5.2
QIZ AMB AMB
comp=Z,95nm,5.7s
QIZ Qiongzhong 32.17 322 *eP* **P** **20 22 39.1 -2.4**
comp=Z,47nm,0.9s,mb5.2
SNG Songkhla 32.30 294 P **P** **20 22 43.0 +0.3**
comp=Z,206nm,0.8s,mb5.9
PSI Prapat 32.37 286 P **P** **20 22 41.9 -1.4**
comp=Z,56nm,0.8s,mb5.3,baz=116,slow=4.9,SNR=52
PSI ScP ScP 20 28 53.4 -3.1
comp=Z,12nm,0.8s,baz=359,slow=1.7,SNR=9.5
PSI Prapat 32.37 286 P **P** **20 22 41.9 -1.4**
PSI pmax pmax
comp=Z,56nm,0.8s,mb5.3
PSI pmax pmax
comp=N,12nm,0.8s
JOW Kunigami 33.10 357 P **P** **20 22 50.5 +0.9**
comp=N,97nm,0.7s,mb5.6,baz=184,slow=8.7,SNR=53
JOW ScP ScP 20 28 56.3 -2.7
comp=N,18nm,0.8s,baz=154,slow=3.3,SNR=4.9
GZH Guangzhou 33.56 331 P **P** **20 22 55.5 +1.9**
GZH S **S** **20 28 07.3 +3.0**
GZH LR LR
comp=N,210nm,14.0s
GZH LR LR
comp=E,263nm,15.2s
GZH LR LR
comp=Z,283nm,17.4s
RIV Riverview 33.57 147 *eP* **P** **20 22 55.6 +1.9**
CNB Canberra Magne 33.81 151 *eP* **P** **20 22 56.9 +1.1**
comp=Z,113nm,0.9s,mb5.6
TOO Toolangi 34.05 158⇓*iP* **P** **20 22 59.7 +1.8**
comp=Z,55nm,0.6s,mb5.5
TOO Toolangi 34.05 158⇓*iP* **P** **20 22 59.7 +1.8**
TOO pmax pmax
comp=Z,55nm,0.6s,mb5.5
CBIJ Chichi jima 35.34 19 P **P** **20 23 07.2 -1.8**
comp=Z,129nm,0.5s,mb5.8,baz=245,slow=6.6,SNR=30
CBIJ S **S** **20 28 27.4 -4.3**
comp=Z,89nm,0.9s,baz=93,slow=22,SNR=6.1
BSI Banda Aceh 36.63 288 P **P** **20 23 15.4 -4.5**
comp=Z,105nm,1.3s,mb5.3
NST Nakhon Sawan 36.86 307 P **P** **20 23 22.8 +1.0**
SSE Sheshan 38.25 348 P **P** **20 23 32.0 -1.5**
SSE AP pP 20 24 06.3 -0.7
SSE XP sP 20 24 24.5 0.0
SSE S **S** **20 29 10.8 -5.0**
SSE SS SS 20 32 04.5 -6.1
SSE AMB AMB
comp=Z,31nm,0.7s,mb5.0
SSE AMB AMB
comp=Z,73nm,6.4s
SSE LR LR
comp=N,144nm,20.1s
SSE LR LR
comp=E,19nm,20.2s
SSE LR LR
comp=Z,54nm,17.5s
DZM Mont Dzumac 38.44 118 *eP* **P** **20 23 32.1 -2.9**
DZM Mont Dzumac 38.44 118 P **P** **20 23 35.7 +0.7**
comp=Z,32nm,0.8s,mb5.0,baz=293,slow=7.2,SNR=21
CHG Chiang Mai 39.59 310 ⇑P **P** **20 23 45.0 +0.3**
comp=Z,98nm,0.8s,mb5.5
CHTO Chiang Mai 39.59 310 P **P** **20 23 45.3 +0.7**
SNR=22
CHTO Chiang Mai 39.59 310 *eP* **P** **20 23 44.6 -0.1**
CHTO pmax pmax
comp=Z,73nm,0.8s,mb5.4
CHTO Chiang Mai 39.59 310 *eP* **P** **20 23 44.6 -0.1**
comp=Z,73nm,0.8s,mb5.4
WHN Wuhan 39.71 339 *eP* **P** **20 23 46.8 +1.2**
NJ2 Nanjing 39.71 345 *eP* **P** **20 23 45.5 -0.2**
NJ2 AP pP 20 24 23.5 +4.2
NJ2 XP sP 20 24 43.3 +6.5
NJ2 PP PP 20 25 24.0 +3.9
NJ2 S **S** **20 29 34.0 -3.7**
NJ2 XS sS 20 30 42.0 +5.6
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.0
NJ2 AMB AMB
comp=Z,250nm,11.4s
NJ2 LR LR
comp=N,210nm,19.2s
NJ2 LR LR
comp=E,180nm,14.8s
NJ2 LR LR
comp=Z,140nm,11.1s
GYA Guiyang 39.77 326⇑*iP* **P** **20 23 46.3 +0.2**
GYA S **S** **20 29 31.5 -7.0**
GYA AMB AMB
comp=Z,30nm,0.7s,mb5.0
GYA AMB AMB
comp=Z,130nm,6.8s
GYA LR LR
comp=N,350nm,18.6s
GYA LR LR
comp=E,260nm,22.1s
GYA LR LR
comp=Z,240nm,17.4s
JHJ Hachijo jima 2 40.40 13 LR LR 20 38 51.2
comp=Z,211nm,18.7s,baz=102,slow=33
KMI Kunming 41.09 321 P **P** **20 23 58.0 +1.1**
KMI AP pP 20 24 36.8 +6.0
KMI PP PP 20 25 35.0 +0.1
KMI PPP 20 26 10.8
KMI SCP ScP 20 29 28.5 -0.3
KMI S **S** **20 29 51.0 -7.1**
KMI XS sS 20 31 00.5 +3.5
KMI AMB AMB
comp=Z,71nm,1.2s,mb5.2
KMI AMB AMB
comp=Z,204nm,6.3s
KMI LR LR
comp=N,168nm,18.8s
KMI LR LR
comp=E,114nm,17.4s
KMI LR LR
comp=Z,178nm,17.4s
MAJO Matsushiro 43.42 10 *eP* **P** **20 24 14.6 -1.2**
MAJO pmax pmax
comp=Z,96nm,0.8s,mb5.5
MAJO Matsushiro 43.42 10 *eP* **P** **20 24 14.6 -1.3**
comp=Z,96nm,0.8s,mb5.5
CD2 Chengdu 44.83 327 *eP* **P** **20 24 25.3 -1.8**
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
XAN Xi'an 44.93 335 P **P** **20 24 27.0 -0.8**
XAN AMB AMB
comp=Z,41nm,0.9s,mb5.1
BJT Baijiatuau 47.95 346 *eP* **P** **20 24 51.0 -0.3**
BJT pmax pmax
comp=Z,37nm,0.6s
BJT Baijiatuau 47.95 346 *eP* **P** **20 24 51.0 -0.4**
comp=Z,37nm,0.6s,mb5.2
BJI Beijing 47.97 346 P **P** **20 24 51.0 -0.5**
BJI AMB AMB
comp=Z,55nm,0.7s,mb5.3
BJI LR LR
comp=N,123nm,18.4s
BJI LR LR
comp=E,122nm,17.1s
BJI LR LR
comp=Z,102nm,20.9s
SNY Shenyang 48.38 354 ⇓P **P** **20 24 54.5 -0.1**
SNY S **S** **20 31 40.5 -2.7**
SNY SCS ScS 20 34 25.5 -5.9
SNY SS SS 20 35 08.5 -6.3
SNY AMB AMB
comp=Z,14nm,0.8s,mb4.6
SNY LR LR
comp=N,163nm,21.9s
SNY LR LR
comp=Z,125nm,20.1s
LZH Lanzhou 48.91 332 *eP* **P** **20 24 59.5 +0.8**
LZH AP pP 20 25 35.0 +1.4
LZH XP sP 20 25 54.3 +3.6
LZH PCP PcP 20 26 23.0 +2.3
LZH PP PP 20 26 54.5 +1.1
LZH SCP ScP 20 30 00.0 -1.1
LZH PCS PcS 20 30 17.0 -0.1
LZH *eS* **S** **20 31 47.0 -3.6**
LZH XS sS 20 32 52.0 +0.8
LZH SCS ScS 20 34 33.0 -2.0
LZH SS SS 20 35 17.0 -6.3
LZH AMB AMB
comp=Z,76nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,160nm,4.0s
VLA Vladivostok 49.34 2 *eP* **P** **20 25 01.1 -0.9**
VLA pmax pmax
comp=Z,43nm,0.8s,mb5.1
CN2 Changchun 50.16 356 ⇓P **P** **20 25 07.8 -0.4**
CN2 *eS* **S** **20 32 02.5 -5.5**
CN2 AMB AMB
comp=Z,30nm,0.5s,mb5.2
CN2 LR LR
comp=N,200nm,15.0s
CN2 LR LR
comp=E,200nm,15.0s
CN2 LR LR
comp=Z,200nm,16.0s
MDJ Mudanjiang 50.80 360 P **P** **20 25 12.5 -0.5**
MDJ AMB AMB
comp=Z,41nm,0.8s,mb5.1
MDJ AMB AMB
comp=Z,46nm,5.2s
MDJ LR LR
comp=N,62nm,19.9s
MDJ LR LR
comp=E,23nm,21.9s
MDJ LR LR
comp=Z,76nm,23.9s
MDJ Mudanjiang 50.80 360 *eP* **P** **20 25 12.7 -0.3**
comp=Z,32nm,0.7s,mb5.1
PALK Pallekele 51.05 285 *eP* **P** **20 25 13.4 -1.4**
comp=Z,36nm,0.9s,mb5.0
ASAJ Asahikawa 51.57 12 P **P** **20 25 18.9 +0.1**
comp=Z,34nm,0.7s,mb5.1,baz=230,slow=12,SNR=47
ASAJ LR LR 20 44 23.7
comp=Z,116nm,20.5s,baz=182,slow=32
ASAJ Asahikawa 51.57 12 P **P** **20 25 18.9 +0.2**
ASAJ pmax pmax
comp=Z,34nm,0.7s
ASAJ MLR MLR
comp=Z,116nm,20.5s
RPZ Rata Peaks 51.67 143 P **P** **20 25 20.6 +1.1**
comp=Z,119nm,0.9s,mb5.5,baz=319,slow=2.4,SNR=39
RPZ LR LR 20 49 03.3
comp=Z,226nm,18.5s,baz=330,slow=38
LSA Lhasa 51.80 316 P **P** **20 25 21.8 +1.4**
LSA Lhasa 51.80 316 *eP* **P** **20 25 21.6 +1.2**
comp=Z,81nm,0.7s,mb5.5
VIS Vishakhapatnam 51.97 298 *eP* **P** **20 25 21.9 +0.3**
VIS AMb AMB 20 25 23.3
comp=Z,215nm,0.6s,mb6.0
BOK Bokaro 52.50 306 *eP* **P** **20 25 25.6 0.0**
URZ Urewera 53.04 134 P **P** **20 25 29.5 0.0**
comp=Z,24nm,0.8s,mb5.0,baz=306,slow=3.8,SNR=13
MDRS Chennai 53.10 292 *eP* **P** **20 25 29.9 0.0**
MDRS AMb AMB 20 25 31.1
comp=Z,147nm,1.4s,mb5.5
GTA Gaotai 53.48 331⇑*iP* **P** **20 25 32.8 0.0**
GTA AP pP 20 26 10.0 +1.8
GTA XP sP 20 26 27.3 +2.1
GTA PP PP 20 27 36.0 +1.2
GTA SCP ScP 20 30 19.8 -1.0
GTA S **S** **20 32 49.3 -4.1**
GTA SCS ScS 20 35 03.8 -2.8
GTA AMB AMB
comp=Z,41nm,0.9s,mb5.2
GTA AMB AMB
comp=Z,87nm,5.7s
GTA LR LR
comp=N,118nm,16.0s
GTA LR LR
comp=E,114nm,16.4s
GTA LR LR
comp=Z,125nm,15.3s
YSS Yuzh-Sakhalins 54.33 11⇓*eP* **P** **20 25 38.2 -0.7**
YSS *eS* **S** **20 33 02.0 -2.8**
YSS pmax pmax
comp=Z,30nm,0.8s,mb5.1
YSS Yuzh-Sakhalins 54.33 11 *eP* **P** **20 25 38.6 -0.3**
comp=Z,25nm,0.6s,mb5.1
GUN Gumba 54.59 311 *eP* **P** **20 25 41.3 +0.5**
comp=Z,512nm,0.7s
PKI Pulchoki 54.77 310 *eP* **P** **20 25 42.1 0.0**
comp=Z,170nm,0.7s,mb5.9
PKI Pulchoki 54.77 310 *eP* **P** **20 25 42.1 0.0**
PKI pmax pmax
comp=Z,170nm,0.7s,mb5.9
HABR Khabarovsk 54.84 4⇓*iP* **P** **20 25 42.8 +0.2**
HABR *eS* **S** **20 33 12.6 +1.0**
HABR pmax pmax
comp=Z,76nm,1.6s,mb5.2
TRD Trivandrum 54.94 285 *eP* **P** **20 25 43.0 -0.3**
TRD AMb AMB 20 25 47.6
comp=Z,67nm,0.6s,mb5.6
KKN Kakani 54.98 310 *eP* **P** **20 25 43.5 -0.1**
comp=Z,258nm,0.7s,mb6.0
KKN Kakani 54.98 310 *eP* **P** **20 25 43.5 -0.1**
KKN pmax pmax
comp=Z,258nm,0.7s,mb6.1
DMN Daman 55.02 310 *eP* **P** **20 25 44.3 +0.4**
comp=Z,326nm,0.9s,mb6.1
KLR Kul'dur 55.44 1 *eP* **P** **20 25 43.7 -3.2**
KLR *e* pP 20 26 20.7 -1.9
KLR *e* 20 26 38.9
KLR pmax pmax
comp=Z,36nm,1.0s,mb5.1
GKN Gorkha 55.58 310 *eP* **P** **20 25 47.8 -0.1**
comp=Z,401nm,0.7s
HYB Hyderabad 56.08 296⇑*iP* **P** **20 25 50.0 -1.5**
comp=Z,120nm,1.0s,mb5.7
HYB *ep*P pP 20 26 33.5 +6.3
HYB Hyderabad 56.08 296⇑*eP* **P** **20 25 50.0 -1.5**
HYB *e* 20 26 34.0
HYB pmax pmax
comp=Z,120nm,1.0s,mb5.7
HYB Hyderabad 56.08 296⇑*eP* **P** **20 25 50.0 -1.5**
comp=Z,120nm,1.0s,mb5.7
HYB *e* 20 26 34.0
KOLN Koldanda 56.25 309 *eP* **P** **20 25 52.8 +0.1**
comp=Z,361nm,0.9s,mb6.2
AFI Afiamalu 57.65 102 P **P** **20 26 03.7 +1.2**
comp=Z,96nm,0.9s,mb5.6,baz=107,slow=18,SNR=5.6
AFI Afiamalu 57.65 102 P **P** **20 26 03.7 +1.2**
AFI pmax pmax
comp=Z,96nm,0.9s,mb5.6
ULN Ulaanbaatar 57.73 342 P **P** **20 26 04.0 +1.0**
SNR=12
ULN Ulaanbaatar 57.73 342*c* *iP* **P** **20 26 03.6 +0.6**
SONM Songino Array 57.91 341 P **P** **20 26 04.9 +0.7**
comp=Z,7.7nm,0.6s,mb4.8,baz=157,slow=7.1,SNR=46
SONM pP pP 20 26 40.8 +0.6
comp=Z,7.0nm,1.0s,baz=169,slow=9.1,SNR=1.9
SONM ScP ScP 20 30 36.0 -4.3
comp=Z,1.9nm,0.9s,baz=155,slow=4.6,SNR=3.6
SONM S **S** **20 33 50.4 -1.6**
comp=Z,1.4nm,1.1s,baz=161,slow=11,SNR=3.5
SONM Songino Array 57.91 341 P **P** **20 26 04.9 +0.6**
SONM *PP pP 20 26 40.8 +0.6
SONM S **S** **20 33 50.4 -1.6**
SONM pmax pmax
comp=Z,8.0nm,0.6s
SONM smax
comp=N,1.0nm,1.1s
BHPL Bhopal 59.23 302 *eP* **P** **20 26 12.9 -0.5**
BHPL AMb AMB 20 26 15.5
comp=Z,82nm,1.6s,mb5.3
LGTI Lohaghat 59.64 309 *i* P **P** **20 26 17.0 +0.7**
KAD Karad 59.98 294 *i* P **P** **20 26 18.3 -0.3**
POO Poona 60.67 295⇓*iP* **P** **20 26 19.5 -3.8**
comp=Z,100nm,1.0s,mb5.6
ZAK Zakamensk 61.13 341 *eP* **P** **20 26 26.7 +0.3**
ZAK *e* pP 20 27 07.5 +4.8
ZAK pmax pmax
comp=Z,28nm,1.0s,mb5.0
NDI New Delhi 61.65 307 *eP* **P** **20 26 27.0 -2.9**
TLY Talaya 62.14 342 P **P** **20 26 34.2 +1.1**
SNR=11
TLY Talaya 62.14 342 *eP* **P** **20 26 33.6 +0.5**
TLY *eS* **S** **20 34 44.4 -1.7**
TLY *e*SSS 20 41 40.0
TLY pmax pmax
comp=Z,60nm,0.6s,mb5.6
AJM Ajmer 62.82 304 *i* P **P** **20 26 37.0 -0.6**
WMQ Urumqi 62.93 327 P **P** **20 26 38.5 +0.2**
WMQ AMB AMB
comp=Z,35nm,1.0s,mb5.1
MOY Mondy 62.98 340 *eP* **P** **20 26 40.1 +1.4**
SDNR Sundarnagar 63.10 310 *eP* **P** **20 26 40.2 +0.7**
BHK Bhakra 63.48 310 *ex* x 20 26 46.0
PET Petropavlovsk 64.00 19 *eP* **P** **20 26 45.5 +0.1**
PET pmax pmax
comp=Z,54nm,1.1s,mb5.3
PET Petropavlovsk 64.00 19 *eP* **P** **20 26 45.4 +0.1**
comp=Z,43nm,1.0s,mb5.2
THN Thein Dam 64.47 310 *eP* **P** **20 26 47.2 -1.2**
BOD Bodaibo 65.33 351 *eP* **P** **20 26 53.2 -0.8**
BOD pmax pmax
comp=Z,11nm,1.0s,mb4.6
MKAR Makanchi Array 67.76 327 P **P** **20 27 09.7 +0.3**
comp=Z,53nm,0.6s,mb5.5,baz=113,slow=8.4,SNR=589
MKAR pP pP 20 27 47.9 +1.5
comp=Z,11nm,0.8s,baz=110,slow=6.0,SNR=1.1
MKAR S S 20 35 52.6 -2.1
comp=Z,1.1nm,0.8s,baz=116,slow=16,SNR=8.1
MKAR Makanchi Array 67.76 327 P **P** **20 27 09.7 +0.3**
MKAR *PP pP 20 27 47.9 +1.5
MKAR S S 20 35 52.6 -2.1
MKAR pmax pmax
comp=Z,53nm,0.6s
MKAR smax
comp=N,1.0nm,0.8s

YAK **Yakutsk** 68.25 360 *e*P P 20 27 11.1 -1.4
YAK *i* *PP pP 20 27 36.3 -13
YAK *i* pP 20 27 50.5 +0.9
YAK *e*S S 20 35 57.5 -3.1
YAK *i* 20 36 52.5
YAK pmax pmax
comp=Z,90nm,0.8s,mb5.5
YAK pmax pmax
comp=N,23nm,1.1s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK smax
comp=E,45nm,1.4s
YAK smax
comp=Z,13nm,1.4s
YAK smax
comp=N,43nm,1.5s
YAK **Yakutsk** 68.25 360 *e*P P 20 27 11.3 -1.2
comp=N,189nm,0.8s,mb5.9
KZA **Kyzart** 69.36 319 P P 20 27 21.0 +1.7
SNR=46
TKM2 **Tokmak 2** 69.56 320 P P 20 27 21.6 +1.1
SNR=42
KBK **Karagaybulak** 69.84 320 P P 20 27 23.6 +1.4
SNR=22
UCH **Uchtor** 69.91 319 P P 20 27 24.6 +1.9
SNR=10
AAK **Ala-Archa** 70.12 320 P P 20 27 25.2 +1.3
SNR=25
AAK **Ala-Archa** 70.12 320 P P 20 27 24.3 +0.3
SNR=35
AAK **Ala-Archa** 70.12 320 *e*P P 20 27 24.0 0.0
AAK pmax pmax
comp=Z,65nm,1.0s,mb5.3
AAK **Ala-Archa** 70.12 320 *e*P P 20 27 24.0 +0.1
comp=Z,65nm,1.0s,mb5.3
CHMS **Chumysh** 70.13 320 P P 20 27 24.3 +0.2
SNR=13
FRU **Bishkek** 70.14 320 *i* P P 20 27 24.0 -0.1
FRU *e* 20 27 52.0
FRU *e* 20 28 09.0
FRU pmax pmax
comp=Z,60nm,1.8s,mb5.0
AML **Almayashu** 70.39 319 P P 20 27 27.4 +1.8
SNR=76
USP **Ospenovka** 70.42 320 P P 20 27 26.4 +0.6
SNR=31
EKS2 **Erkin-Say** 70.59 319 P P 20 27 27.9 +1.1
SNR=64
SEY **Seymchan** 71.24 11 *c* *i*P P 20 27 30.8 0.0
AMKA **Amchitka** 71.35 30 *e*P P 20 27 31.1 -0.3
KURK **Kurchatov** 72.04 329 P P 20 27 35.3 -0.2
comp=Z,217nm,0.9s,mb5.9,SNR=37
NVS **Novosibirsk** 72.36 334 *e*P P 20 27 35.2 -2.3
NVS *e**PP pP 20 28 14.1 -0.8
NVS pmax pmax
comp=N,9.0nm,0.9s
NVS pmax pmax
comp=E,10.0nm,0.9s
NVS pmax pmax
comp=Z,12nm,0.9s,mb4.6
VNDA **Vanda** 73.01 173 P P 20 27 40.8 -0.5
comp=Z,26nm,0.9s,mb5.0,baz=321,slow=6.4,SNR=146
VNDA LR LR 20 57 46.8
comp=Z,130nm,21.4s,baz=340,slow=34
VNDA **Vanda** 73.01 173 P P 20 27 40.8 -0.5
VNDA pmax pmax
comp=Z,26nm,0.9s
VNDA MLR MLR
comp=Z,130nm,21.4s
SBA **Scott Base** 73.90 172 *e*P P 20 27 46.8 +0.3
SBA pmax pmax
comp=Z,23nm,1.0s,mb4.9
SBA **Scott Base** 73.90 172 *e*P P 20 27 46.8 +0.3
comp=Z,23nm,1.0s,mb4.9
WBK **Wadi Bani Khal** 75.19 295 P P 20 27 55.2 +1.3
SNR=11
MAW **Mawson** 75.49 201 *e*P P 20 27 55.9 +0.3
comp=Z,19nm,0.8s,mb4.8
MAW **Mawson** 75.49 201 P P 20 27 55.1 -0.5
comp=Z,23nm,0.8s,mb4.9,baz=72,slow=7.0,SNR=53
MAW LR LR 20 59 37.9
comp=Z,84nm,18.4s,baz=235,slow=34
MAW **Mawson** 75.49 201 *e*P P 20 27 55.9 +0.3
MAW pmax pmax
comp=Z,19nm,0.8s
WSAR **Wadi Sarin** 75.64 296 P P 20 27 57.3 +0.8
comp=Z,38nm,0.9s,mb5.0,baz=100,slow=7.5,SNR=20
KIP **Kipapa** 75.74 66 *e*P P 20 27 57.9 +0.9
JMDO **Jabal Madar** 75.91 295 P P 20 27 58.9 +0.8
SNR=10
SMDO **Samad** 76.11 296 P P 20 28 00.3 +1.1
SNR=25
BIDO **Bidbid** 76.15 296 P P 20 28 00.8 +1.4
SNR=37
BSY **Bisya** 76.81 295 P P 20 28 04.0 +0.9
SNR=16
HOQ **Hoqain** 76.89 296 P P 20 28 04.4 +0.9
SNR=19
ARQ **Araqi** 77.55 296 P P 20 28 08.1 +0.9
SNR=13
BVAR **Borovoye Array** 77.59 328 P P 20 28 07.1 -0.4
comp=Z,5.4nm,0.6s,mb4.3,baz=131,slow=10,SNR=58
BVAR pP pP 20 28 46.3 +0.9
comp=Z,14nm,1.1s,baz=129,slow=6.1,SNR=3.1
BRVK **Borovoye** 77.66 328 P P 20 28 07.8 0.0
SNR=8.3
BRVK **Borovoye** 77.66 328 *e*P P 20 28 07.4 -0.4
BRVK pmax pmax
comp=Z,24nm,1.1s,mb4.7
BRVK **Borovoye** 77.66 328 *e*P P 20 28 07.4 -0.5
comp=Z,24nm,1.1s,mb4.7
CHKZ **Chkalovo** 77.78 328 *e*P P 20 28 07.7 -0.8
CHKZ pmax pmax
comp=Z,24nm,1.0s,mb4.8
CHKZ **Chkalovo** 77.78 328 *e*P P 20 28 07.7 -0.8
comp=Z,24nm,1.0s,mb4.8
TIXI **Tiksi** 77.92 360 *e*P P 20 28 08.0 -1.3
TIXI pmax pmax
comp=Z,39nm,1.0s,mb5.0
HATD **Hatta, Dubai** 78.22 297 P P 20 28 12.0 +1.1
SNR=6.2
ASHO **Ashiyiah** 78.25 297 P P 20 28 12.0 +0.9
SNR=8.4
ZRNK **Zerenda** 78.29 327 *e*P P 20 28 10.7 -0.6
ZRNK pmax pmax
comp=Z,37nm,1.2s,mb4.9
ZRNK **Zerenda** 78.29 327 *e*P P 20 28 10.7 -0.6
comp=Z,37nm,1.2s,mb4.9
BILL **Bilibino** 78.55 13 P P 20 28 18.0 +5.3
BILL 20 31 15.0
TBI **Tubuai** 78.80 112 *e*P P 20 28 16.6 +2.5
comp=Z,144nm,0.9s,mb5.6
PAE **Paea** 78.95 107 *e*P P 20 28 17.2 +2.3
comp=Z,46nm,1.0s,mb5.1
PPT **Papeete** 78.96 107 *e*P P 20 28 17.4 +2.4
comp=Z,32nm,1.2s,mb4.8
WHFO **Wadi Hawf** 79.00 290 P P 20 28 15.9 +0.7
SNR=7.1
TVO **Taravao** 79.26 107 *e*P P 20 28 19.2 +2.6
comp=Z,150nm,1.3s,mb5.5
ABTO **Aybut** 79.34 289 P P 20 28 18.0 +1.0
SNR=12
PMOR **Pomariorio Ree** 80.74 104 *e*P P 20 28 27.0 +2.4
comp=Z,52nm,0.8s,mb5.2
VAH **Vaihoa** 80.98 104 *e*P P 20 28 28.1 +2.3
comp=Z,37nm,0.9s,mb5.0
QSPA **South Pole Qui** 83.55 180 *e*P P 20 28 38.4 -0.8
comp=Z,32nm,0.8s,mb5.1
AKTK **Aktyubinsk** 83.63 322 P P 20 28 39.3 -0.3
AKTK pP pP 20 29 19.2 +1.2
AKTO **Aktyubinsk** 83.63 322 P P 20 28 39.3 -0.3
comp=Z,5.0nm,0.6s,mb4.4,baz=106,slow=6.7,SNR=19
AKTO pP pP 20 29 19.2 +1.2
comp=Z,12nm,1.1s,baz=90,slow=7.0,SNR=2.4
AKTO **Aktyubinsk** 83.63 322 P P 20 28 39.3 -0.3
AKTO *PP pP 20 29 19.3 +1.3
AKTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
SDPT **Sand Point** 83.83 33 *e*P P 20 28 40.0 -0.6
SYO **Syowa Base** 84.20 201⇑ *e*P P 20 28 41.8 -0.7
SYO **Syowa Base** 84.20 201⇑ *e*P PcP 20 28 52.5 +6.5
ARU **Arti** 85.23 328⇓ *i*P P 20 28 46.2 -1.4
ARU *i* pP 20 29 25.8 -0.4
ARU *e* 20 32 06.0
ARU *e*S S 20 38 54.9 -10
ARU *e*SS SS 20 44 44.1 +1.7
ARU *e*SSS 20 48 15.9
ARU pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
ARU **Arti** 85.23 328 *e*P P 20 28 46.2 -1.4
comp=Z,10nm,0.6s,mb4.7
QRN **Al-Qurain** 86.18 299 *e*P P 20 28 51.5 -0.8
QRN AMb AMB 20 28 54.1
comp=Z,60nm,0.8s,mb5.4
RDF **Al-Radifah** 86.52 299 *e*P P 20 28 53.6 -0.3
RDF AMb AMB 20 28 54.6
comp=Z,45nm,0.9s,mb5.3
NAY **Al-Naaiem** 86.84 300 *e*P P 20 28 54.9 -0.7
NAY AMb AMB 20 28 57.1
comp=Z,22nm,0.6s,mb5.2
MIB **Mutribah** 86.84 300 *e*P P 20 28 55.1 -0.4
MIB AMb AMB 20 28 58.0
comp=Z,53nm,1.2s,mb5.2
RST **Umm Al-Ruwaisa** 87.09 300 *e*P P 20 28 55.9 -0.8
RST AMb AMB 20 28 59.6
comp=Z,55nm,0.8s,mb5.4
SOKR **Solikamsk** 87.12 331 *e*P P 20 29 04.1 +7.2
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SVW2 **Sparrevohn** 88.12 28 *e*P P 20 29 01.6 -0.1
KDAK **Kodiak Island** 88.72 32 P P 20 29 04.6 +0.1
comp=Z,13nm,0.7s,mb5.0,baz=228,slow=6.1,SNR=12
KDAK **Kodiak Island** 88.72 32 P P 20 29 04.6 +0.1
SLKM **Skilak Lake** 90.52 29 *e*P P 20 29 11.0 -1.9
MCK **McKinley** 91.76 26 *e*P P 20 29 16.1 -2.5
MCK pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MCK **McKinley** 91.76 26 *e*P P 20 29 16.1 -2.5
comp=Z,3.7nm,0.7s,mb4.5
KMBO **Kilima Mbogo** 92.63 269 P P 20 29 24.0 +1.4
comp=Z,3.5nm,0.9s,mb4.5,baz=58,slow=6.1,SNR=8.6
KMBO **Kilima Mbogo** 92.63 269 P P 20 29 24.0 +1.4
KMBO pmax pmax
comp=Z,4.0nm,1.0s
KMBO **Kilima Mbogo** 92.63 269 P P 20 29 24.0 +1.4
EGAK **Eagle** 95.26 25 *e*P P 20 29 33.7 -1.0
DAWY **Dawson** 95.99 26 *e*P P 20 29 37.5 -0.5
SNAA **Sanae** 96.23 193 P P 20 29 39.1 +0.1
comp=Z,4.5nm,0.9s,mb4.8,baz=135,slow=3.8,SNR=44
SNAA PKKPbc PKKPbc 20 46 23.6 -0.9
comp=Z,1.0nm,0.7s,baz=39,slow=0.5,SNR=17
SNAA **Sanae** 96.23 193⇓ *i*P P 20 29 38.8 -0.3
OBN **Obninsk** 97.20 325 P P 20 29 50.0 +6.5
OBN *e* 20 30 22.0
OBN pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
VNA1 **Neumayer--Stat** 98.19 193⇓ *i*P P 20 29 48.1 +0.2
VNA1 *e* pP 20 30 29.3 +2.3
INK **Inuvik** 98.32 22 P P 20 29 46.5 -1.9
comp=Z,3.6nm,1.0s,mb4.8,baz=300,slow=9.1,SNR=4.2
INK PP PP 20 33 55.8 +5.6
comp=Z,3.7nm,1.1s,baz=261,slow=9.5,SNR=3.5
INK **Inuvik** 98.32 22 P P 20 29 46.6 -1.9
INK 20 33 55.8
INK pmax pmax
comp=Z,4.0nm,1.0s
BRTR **Keskin Array B** 98.97 309 P P 20 29 50.4 -1.0
comp=Z,0.5nm,0.7s,baz=149,slow=4.0,SNR=4.4
BRTR PKKPbc PKKPbc 20 46 18.1 +1.2
comp=Z,0.6nm,0.8s,baz=274,slow=5.9,SNR=4.0
ARCES **ARCESS Array B** 101.05 340 P Pdif 20 29 58.9 -1.8
comp=Z,1.4nm,0.6s,baz=79,slow=6.3,SNR=13
ARCES PKiKP PKiKP 20 34 25.6 +0.6
comp=Z,0.5nm,0.6s,baz=90,slow=2.5,SNR=4.3
ARCES PKKPbc PKKPbc 20 46 10.6 -0.5
comp=Z,0.7nm,0.5s,baz=255,slow=3.3,SNR=8.8
AKASG **Malin Array Be** 101.78 320 PP PP 20 34 16.6 +0.2
comp=Z,0.1nm,0.2s,baz=73,slow=6.6,SNR=4.4
FINES **FINESS Array B** 102.27 331 P Pdif 20 30 03.9 -2.2
comp=Z,0.7nm,0.6s,baz=90,slow=3.8,SNR=5.3
FINES **FINESS Array B** 102.27 331 P Pdif 20 30 03.9 -2.2
FINES pmax pmax
comp=Z,1.0nm,0.6s
I02A **Mapleton** 106.04 46 ⇓P PKiKP 20 34 36.3 +2.2
baz=106
M02C **Callahan** 107.06 49 ⇑P PKiKP 20 34 35.4 -0.6
baz=107
YBH **Yreka Blue Hor** 107.13 48 ⇓P PKiKP 20 34 36.3 +0.2
baz=107
YKA **Yellowknife Ar** 107.23 26 PKiKP PKiKP 20 34 35.3 -1.0
comp=Z,3.9nm,0.6s,baz=295,slow=1.8,SNR=23
YKA PKKPbc PKKPbc 20 45 50.9 -1.7
comp=Z,0.5nm,0.6s,baz=118,slow=2.9,SNR=5.2
MNRC **McLaughlin Nat** 107.65 51 ⇑P PKiKP 20 34 37.1 0.0
baz=108
J05A **Fort Rock** 108.00 47 ⇓P PKiKP 20 34 37.5 -0.3
baz=108
H06A **Lindquist Farm** 108.42 45 ⇑P PKiKP 20 34 38.4 -0.1
baz=108
HFS **Hagfors** 108.47 332 PKKPbc PKKPbc 20 45 47.4 -1.3
comp=Z,1.2nm,0.7s,baz=209,slow=2.7,SNR=4.9
L05A **Lakeview** 108.47 48 ⇓P PKiKP 20 34 39.7 +1.0
baz=108
HAST **UC Hastings Re** 108.61 54 ⇓P PKiKP 20 34 40.3 +1.4
baz=109
K06A **Valley Falls** 108.79 47 ⇓P PKiKP 20 34 40.4 +1.1
baz=109
J06A **Christmas Vall** 108.79 47 ⇑P PKiKP 20 34 39.6 +0.3
baz=109
LAVA **Lava Cap Winer** 108.98 51 ⇑P PKiKP 20 34 40.2 +0.6
baz=109
H07A **Lands Inn, Kim** 108.99 45 ⇓P PKiKP 20 34 40.8 +1.2
baz=109
I07A **Izee** 109.12 46 ⇑P PKiKP 20 34 39.9 0.0
baz=109
BEKR **Beckwourth** 109.13 50 ⇑P PKiKP 20 34 40.3 +0.5
baz=109
NB2 **NORSAR Subarra** 109.28 333 Pdif Pdif 20 30 35.5 -1.7
comp=Z,0.7nm,0.8s,baz=67,slow=4.4
NOA **NORSAR Array B** 109.28 333 Pdiff Pdif 20 30 35.1 -2.1
comp=Z,0.7nm,0.8s,baz=69,slow=4.5,SNR=4.2
NOA PKiKP PKiKP 20 34 39.8 -0.4
comp=Z,0.3nm,0.8s,baz=262,slow=4.0,SNR=5.2
NOA PP PP 20 35 12.4 +0.8
comp=Z,0.7nm,0.8s,baz=74,slow=7.9,SNR=4.2
NOA PKKPbc PKKPbc 20 45 46.5 +0.4
comp=Z,1.4nm,0.8s,baz=64,slow=2.7,SNR=9.3
NOA PKKPab PKKPab 20 45 59.7 +0.9
comp=Z,1.1nm,1.0s,baz=250,slow=4.0,SNR=3.5
NOA **NORSAR Array B** 109.28 333 Pdif Pdif 20 30 35.1 -2.1
NOA PKPdf PKiKP 20 34 39.8 -0.4
NOA PP PP 20 35 12.4 +0.8
NOA PKKPbc PKKPbc 20 45 46.5 +0.4
NOA PKKPab PKKPab 20 45 59.7 +0.8
G08A **Pilot Rock** 109.29 44 ⇑P PKiKP 20 34 40.9 +0.7
baz=109
N06A **Buffalo Meadow** 109.41 49 ⇑P PKiKP 20 34 40.8 +0.5
baz=109
O06A **Flanigan** 109.50 50 ⇑P PKiKP 20 34 41.6 +1.0
baz=110
K07A **Rock Creek Ran** 109.54 47 ⇑P PKiKP 20 34 41.5 +0.8
baz=110
L07A **Adell** 109.58 48 ⇑P PKiKP 20 34 41.8 +1.1
baz=110
S06C **San Francisco** 109.79 52 ⇑P PKiKP 20 34 42.0 +0.9
baz=110
T06C **Millerton Lake** 110.01 53 ⇑P PKiKP 20 34 42.2 +0.7
baz=110
K08A **Mann Creek Ran** 110.08 47 ⇓P PKiKP 20 34 42.8 +1.1
baz=110
PKM **Peak Mountain** 110.17 55 ⇑P PKiKP 20 34 43.5 +1.7
baz=110
O07A **Toulon** 110.22 50 ⇓P PKiKP 20 34 43.0 +1.1
baz=110
L08A **Fields** 110.28 47 ⇓P PKiKP 20 34 43.1 +1.1
baz=110
M08A **Happy Creek Ra** 110.38 48 ⇑P PKiKP 20 34 43.3 +1.1
baz=110
K09A **Rome** 110.64 47 ⇑P PKiKP 20 34 43.6 +0.9
baz=111
N08A **GE Springer Mi** 110.68 49 ⇓P PKiKP 20 34 43.8 +1.0
baz=111
L09A **Wilkinson Ranc** 110.81 48 ⇑P PKiKP 20 34 44.2 +1.2
baz=111
P08A **Dixie Valley** 110.89 50 ⇓P PKiKP 20 34 43.4 +0.2
baz=111
N09A **Rock Creek Ran** 111.12 49 ⇑P PKiKP 20 34 44.6 +1.0
baz=111
EDW2 **Edwards Air Fo** 111.66 55 ⇓P PKiKP 20 34 45.4 +0.7
baz=112
CLL **Collm** 111.71 323 *e*PP PP 20 35 31.0 +1.9
CLL **Collm** 111.71 323 *e*PP PP 20 35 31.0 +1.9
S09A **Goldfield** 111.87 52 ⇓P PKiKP 20 34 46.1 +1.1
baz=112
R09A **Tonopah** 111.91 51 ⇑P PKiKP 20 34 46.3 +1.2
baz=112
MPMC **Manual Prospec** 111.91 54 ⇑P PKiKP 20 34 46.5 +1.4
baz=112
GERES **GERESS Array B** 112.00 320 PKiKP PKiKP 20 34 45.0 -0.3
comp=Z,1.2nm,0.5s,baz=76,slow=1.9,SNR=16
GERES PP PP 20 35 27.6 -3.6
comp=Z,0.7nm,0.8s,baz=76,slow=5.6,SNR=3.9
GERES PKKPbc PKKPbc 20 45 48.5 +11
comp=Z,1.1nm,0.9s,baz=256,slow=2.8,SNR=8.3
GERES **GERESS Array B** 112.00 320 *i* PKiKP PKiKP 20 34 45.0 -0.3
GERES 20 35 27.6
GERES pmax pmax
comp=Z,1.0nm,0.5s
MSO **Missoula** 112.35 42 *e*P PKiKP 20 34 45.9 0.0
GSC **Goldstone** 112.57 55 ⇑P PKiKP 20 34 47.9 +1.5
baz=113
U10A **Ash Meadows, A** 112.78 53 ⇓P PKiKP 20 34 48.5 +1.7
baz=113
CHMT **Chamberlain Mo** 112.79 42 *e*P PKiKP 20 34 46.8 0.0
HLID **Hailey** 112.83 45 *e*P PKiKP 20 34 48.4 +1.5
SHOC **Shoshone** 112.90 54 ⇓P PKiKP 20 34 48.4 +1.3
baz=113
M12A **Wells** 112.95 48 ⇑P PKiKP 20 34 48.3 +1.2
baz=113
N12A **Clover Valley,** 112.97 48 ⇓P PKiKP 20 34 48.5 +1.3
baz=113
PFO **Pinyon Flat Ob** 113.09 56 ⇑P PKiKP 20 34 48.7 +1.3
baz=113
MONP **Monument Peak** 113.22 57 ⇑P PKiKP 20 34 48.5 +0.9
baz=113
O12A **Currie** 113.31 49 ⇑P PKiKP 20 34 48.7 +0.9
baz=113
BELC **Belle Mtn.** 113.42 56 ⇓P PKiKP 20 34 49.1 +1.1
baz=114
MCMT **McKenzie Canyo** 113.61 44 *e*P PKiKP 20 34 49.5 +1.1
V12A **Nelson** 114.08 54 ⇑P PKiKP 20 34 51.1 +1.9
baz=114
U12A **Valley of Fire** 114.20 53 ⇓P PKiKP 20 34 50.6 +1.1
baz=114
BOZ **Bozeman (W)** 114.22 43 *e*PKIKP PKiKP 20 34 50.4 +0.9
HVU **Hansel Valley** 114.43 47 *e*PKIKP PKiKP 20 34 50.7 +0.8
GLA **Glamis** 114.52 57 ⇓P PKiKP 20 34 51.7 +1.6
baz=115
Y12C **Blythe** 114.67 56 ⇑P PKiKP 20 34 51.6 +1.2
baz=115
W13A **Hualapai Mount** 114.96 54 ⇑P PKiKP 20 34 52.4 +1.4
baz=115
X13A **Yucca** 115.09 55 ⇓P PKiKP 20 34 52.6 +1.4
baz=115
Y13A **Salome** 115.23 56 ⇓P PKiKP 20 34 52.4 +0.9
baz=115
GCMT **Greycliff** 115.49 42 *e*P PKPdf 20 34 52.8 +0.8
TCUT **Toone Canyon** 115.59 47 *e*P PKPdf 20 34 53.1 +1.0
W14A **Seligman** 115.59 54 ⇑P PKPdf 20 34 53.6 +1.5
baz=116
MSU **Marysvale** 115.63 50 *e*PKIKP PKPdf 20 34 54.0 +1.8
X14A **Yava** 115.88 55 ⇑P PKPdf 20 34 54.2 +1.5
baz=116
Y14A **Wickenburg** 115.88 55 ⇑P PKPdf 20 34 53.8 +1.0
baz=116
Z14A **Wintersburg** 116.03 56 ⇑P PKPdf 20 34 54.0 +1.0
baz=116
CDF **Champ du Feu** 116.17 321 *e*PKIKP PKPdf 20 34 52.9 -0.4
TMUT **Trail Mountain** 116.18 49 *e*P PKPdf 20 34 54.7 +1.4
X15A **Humboldt** 116.41 55 ⇑P PKPdf 20 34 54.9 +1.2
baz=116
PDAR **Pinedale Array** 116.47 45 PKP PKPdf 20 34 54.3 +0.4
comp=Z,4.8nm,0.7s,baz=295,slow=0.9,SNR=45
PDAR SKP 20 38 13.6
comp=Z,1.9nm,0.8s,baz=272,slow=1.7,SNR=9.4
PDAR SKKPbc 20 48 51.4
comp=Z,0.9nm,0.6s,baz=113,slow=4.8,SNR=7.9
HINF **Hinteralfeld** 116.65 321 *e*PKIKP PKPdf 20 34 53.1 -1.1
comp=Z,7.1nm,0.7s
115A **Sonoran Desert** 116.74 57 ⇓P PKPdf 20 34 55.5 +1.1
baz=117
SRU **San Rafael** 116.74 49 *e*PKIKP PKPdf 20 34 55.3 +0.9
HAU **Haudompre** 116.90 321 *e*PKIKP PKPdf 20 34 54.6 -0.1
WUAZ **Wupatki** 116.90 53 *e*PKPdf PKPdf 20 34 56.1 +1.5
USHA **Ushuaia** 117.05 168 PKP PKPdf 20 34 55.1 +0.2
comp=Z,44nm,1.4s,baz=299,slow=2.0,SNR=5.9
USHA SKP 20 38 13.9
comp=Z,9.9nm,0.8s,baz=274,slow=3.6,SNR=3.6
116A **Eloy** 117.20 57 ⇑P PKPdf 20 34 56.6 +1.3
baz=117
LAO **LASA Array** 117.44 40 *e*PKPdf PKPdf 20 34 56.7 +0.9
MEZF **Maizieres J'vi** 117.51 322 *e*PKIKP PKPdf 20 34 55.9 +0.1
comp=Z,6.3nm,0.6s
CABF **La Chapelle** 117.58 320 *e*PKIKP PKPdf 20 34 55.6 -0.4
comp=Z,8.4nm,0.5s
MBDF **Montbardon** 117.80 318 *e*PKIKP PKPdf 20 34 56.3 -0.1
comp=Z,14nm,0.9s
TUC **Tucson** 118.01 57 *e*PKIKP PKPdf 20 34 58.1 +1.3
PV10 **Paradox Valley** 118.05 50 *e*PKPdf PKPdf 20 34 58.0 +1.1
ORIF **Oris-en-Rattie** 118.33 318 *e*PKIKP PKPdf 20 34 56.8 -0.6
comp=Z,3.7nm,0.6s
KEST **Kesra** 118.50 307 PKP PKPdf 20 34 56.9 -0.9
comp=Z,1.9nm,1.0s,baz=279,slow=11,SNR=4.2
KEST PP PP 20 36 14.6 -2.2
comp=Z,3.3nm,0.9s,baz=0.9,slow=1.1,SNR=6.1
LOR **Lormes** 118.74 321 *e*PKIKP PKPdf 20 34 57.5 -0.7
comp=Z,14nm,1.1s
SMRF **Simiane la Rot** 118.86 317 *e*PKIKP PKPdf 20 34 58.2 -0.3
SMF **Signal de Mont** 119.00 321 *e*PKIKP PKPdf 20 34 57.8 -0.9
SSF **Saint Saulge** 119.04 321 *e*PKIKP PKPdf 20 34 58.2 -0.6
comp=Z,8.8nm,0.8s
VIVF **Saint-Julien-l** 119.15 318 *e*PKIKP PKPdf 20 34 58.4 -0.6
AVF **Avril sur Loir** 119.25 321 *e*PKIKP PKPdf 20 34 58.2 -1.0
comp=Z,1.8nm,0.4s
BGF **Bois d'Agland** 119.66 321 *e*PKIKP PKPdf 20 34 59.6 -0.4
comp=Z,20nm,0.8s
TCF **Toulx Ste Croi** 120.17 321 *e*PKIKP PKPdf 20 35 00.5 -0.5
comp=Z,6.5nm,0.8s
ANMO **Albuquerque** 120.94 53 *e*PKIKP PKPdf 20 35 03.8 +1.3
LPM **Los Pinos Moun** 120.97 54 *e*PKPdf PKPdf 20 35 03.8 +1.3
MTLF **Montolieu** 121.36 318 *e*PKIKP PKPdf 20 35 02.7 -0.6
ULM **Lac du Bonnet** 121.95 33 PKP PKPdf 20 35 03.3 -1.1
comp=Z,15nm,0.6s,baz=314,slow=2.3,SNR=26
MNTX **Cornudas Mount** 122.62 56 *e*PKPdf PKPdf 20 35 06.7 +1.0
EPF **Esparros** 122.74 318 *e*PKIKP PKPdf 20 35 05.8 -0.1
comp=Z,2.1nm,0.5s
ETSF **Etsaut** 123.40 318 *e*PKIKP PKPdf 20 35 07.3 +0.1
comp=Z,10nm,0.9s
WMOK **Wichita Mounta** 127.02 51 *e*PKIKP PKPdf 20 35 14.0 -0.1
ESDC **Sonseca Array** 127.11 316 PP PP 20 37 15.8 +1.0
comp=Z,4.0nm,1.0s,baz=70,slow=7.0,SNR=9.5
JCT **Junction City** 127.56 56 *e*PKIKP PKPdf 20 35 15.9 +0.8
TORD **Torodi Ar. Bea** 128.72 282 PKP PKPdf 20 35 18.2 +0.9
comp=Z,3.1nm,0.6s,baz=73,slow=2.3,SNR=40
TORD pPKP pPKPdf 20 35 59.6 +1.6
comp=Z,1.5nm,0.8s,baz=93,slow=2.8,SNR=2.1
TORD SKPbc 20 38 21.4
comp=Z,18nm,0.8s,baz=70,slow=3.4,SNR=27
TORD PKKPbc 20 44 37.1
comp=Z,2.1nm,0.9s,baz=284,slow=4.9,SNR=7.3
JFWS **Jewell Farm** 129.23 38 *e*PKIKP PKPdf 20 35 18.0 -0.3
PLCA **Paso Flores** 129.41 160 PKP PKPdf 20 35 19.7 +1.0
comp=Z,8.9nm,0.9s,baz=201,slow=2.6,SNR=15
PLCA SKPbc 20 38 25.0
comp=Z,10.0nm,0.8s,baz=223,slow=3.4,SNR=18
PLCA **Paso Flores** 129.41 160 PKP PKPdf 20 35 19.7 +1.0
PLCA SKPbc 20 38 25.0
SCHQ **Schefferville** 129.86 13 PKP PKPdf 20 35 20.1 +0.6
comp=Z,7.6nm,0.9s,baz=307,slow=2.6,SNR=6.3
SCHQ SKPbc 20 38 25.1
comp=Z,44nm,0.8s,baz=359,slow=3.8,SNR=45
MIAR **Mount Ida** 131.06 49 *e*PKIKP PKPdf 20 35 23.0 +1.2
FVM **French Village** 131.74 43 *e*PKIKP PKPdf 20 35 23.0 -0.1
DBIC **Dimbokro** 135.19 273 PKP PKPdf 20 35 31.2 +1.7
comp=Z,1.6nm,0.3s,baz=17,slow=1.3,SNR=13
DBIC SKPbc SKPbc 20 38 44.2 -1.8
comp=Z,23nm,0.7s,baz=79,slow=4.5,SNR=27
DBIC **Dimbokro** 135.19 273 PKP PKPdf 20 35 31.2 +1.7
DBIC SKPbc SKPbc 20 38 44.2 -1.8
LIC **Lamto** 135.34 272 *e*PKIKP PKPdf 20 35 30.9 +1.1
comp=Z,10.0nm,0.4s
LONY **Lake Ozonia** 136.31 25 PKPdf PKPdf 20 35 31.1 -0.6
NCB **Newcomb** 136.98 26 *e*PKPdf PKPdf 20 35 32.9 0.0
BINY **Binghamton** 137.56 29 *e*PKPdf PKPdf 20 35 34.1 +0.1
MYNC **Murphy** 137.57 43 *e*PKIKP PKPdf 20 35 34.6 +0.6
SSPA **Standing Stone** 137.77 32 *e*PKPdf PKPdf 20 35 34.1 -0.3
CFAA **Coronel Fontan** 138.36 156 PKhKP 20 35 27.9
comp=Z,0.5nm,0.5s,baz=203,slow=5.4,SNR=8.9

CFAA PKP PKPdf 20 35 35.4 0.0
comp=Z,1.1nm,0.6s,baz=244,slow=4.1,SNR=10
CFAA SKPbc SKPbc 20 38 53.9 -1.5
comp=Z,2.3nm,0.8s,baz=225,slow=3.2,SNR=24
CFAA Coronel Fontan 138.36 156 PKP PKPdf 20 35 35.4 0.0
CFAA SKPbc SKPbc 20 38 53.9 -1.5
LVC Limon Verde 145.70 148 *e*PKPdf PKPdf 20 35 51.0 +2.5
CPUP Villa Florida 146.67 168 PKP PKPdf 20 35 50.9 +0.8
comp=Z,42nm,0.7s,baz=177,slow=3.0,SNR=97
CPUP PKPbc PKPbc 20 35 53.0 +1.0
comp=Z,42nm,0.7s,baz=176,slow=1.9,SNR=97
CPUP SKPbc SKPbc 20 39 14.9 -1.1
comp=Z,27nm,0.8s,baz=159,slow=1.4,SNR=18
NNA Nana 147.62 124 *e*PKPbc PKPbc 20 35 55.0 +0.4
CAM4 Nova Friburgo 150.49 194⇑*i*P PKPbc 20 36 03.6 +1.8
CAM4 *i* 20 36 06.1
CAM4 *i* 20 36 10.3
LPAZ La Paz 151.16 142 PKP PKPdf 20 35 58.9 +1.6
comp=Z,3.9nm,0.8s,baz=225,slow=0.9,SNR=14
LPAZ PKPbc PKPbc 20 36 05.5 +2.2
comp=Z,28nm,0.9s,baz=102,slow=4.4,SNR=49
LPAZ PKPab PKPab 20 36 14.7 +3.0
comp=Z,46nm,0.8s,baz=195,slow=7.1,SNR=28
CAM3 Guarapari 151.46 199⇑*i*P PKPbc 20 36 04.8 +0.7
CAM3 *i* 20 36 04.8
ROSC El Rosal 155.72 92 PKP PKPdf 20 36 05.5 +1.6
comp=Z,4.4nm,0.3s,baz=88,slow=21,SNR=3.8
ROSC PKPab PKPab 20 36 34.0 +3.0
comp=Z,23nm,0.7s,baz=110,slow=20,SNR=8.5
BDFB Brasilia 157.99 185 PKP PKPdf 20 36 07.7 +0.9
comp=Z,3.9nm,0.7s,baz=35,slow=0.6,SNR=5.8
BDFB PKPab PKPab 20 36 41.9 +1.1
comp=Z,3.2nm,0.7s,baz=188,slow=2.8,SNR=3.8
BDFB Brasilia 157.99 185 PKP2 PKPab 20 36 41.9 +1.1
BDFB pmax pmax
comp=Z,3.0nm,0.7s
SDV Santo Domingo 159.38 82 *e*PKPdf PKPdf 20 36 09.4 +1.0
SDV *e*PKPab PKPab 20 36 49.0 +2.2
SAML Samuel 159.84 139 *e*PKPdf PKPdf 20 36 10.2 +1.3
SAML *e*PKPab PKPab 20 36 48.6 -0.2

*ISCJB **25** 20:20:03.8±0.6, 3969N±003×2406E±005, h24km±5km, Error ellipse: s-maj=6.7km s-min=4.8km az=31.3*
*NEIC **25** 20:20:03.5, 3969N×2402E, h33km, MD2.8(ATH), After ATH.*
*ATH **25** 20:20:03.5, 3969N×2402E, h33km±2km, MD2.8/5*
*CSEM **25** 20:20:04.0±0.1, 3968N×2402E, h30km, ML2.1, Error ellipse: s-maj=3.7km s-min=2.6km az=104.0*
*THE **25** 20:20:04.4, 3966N×2403E, h15km, ML2.1*
ISC 25 20:20:03.8±0.7,**3969N**±003×**2406E**±005,**h22**km±6km,**n14,** σ0**98**/23,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.38**	**309**	*e*Pg			**Pb**	**20 20 11.9**	**+0.1**
PAIG				*e*Sg			**Sb**	**20 20 17.9**	**+0.6**
AOS	**Alonnisos**	**0.54**	**195**	*e*Pg			**Pb**	**20 20 14.3**	**-0.1**
AOS				*e*Sg			**Sb**	**20 20 21.7**	**0.0**
OUR	**Ouranopolis**	**0.65**	**355**	*e*Pg			**Pb**	**20 20 16.6**	**+0.2**
comp=Z,6.5nm,0.5s									
XOR	**Xorichti**	**0.74**	**245**	*e*Pg			**Pb**	**20 20 18.8**	**+0.8**
XOR				*e*Sg			**Sb**	**20 20 28.5**	**+0.8**
NEO	**Neokhori**	**0.75**	**240**	*e*PN			**Pn**	**20 20 18.4**	**-0.7**
NEO				*e*SN			**Sn**	**20 20 28.4**	**-1.4**
PLG	**Polygyros**	**0.83**	**326**	*e*PN			**Pn**	**20 20 19.0**	**-1.2**
PLG				*e*SN			**Sn**	**20 20 30.4**	**-1.4**
LIA	**Limnos Island**	**0.89**	**76**	*e*PN			**Pn**	**20 20 21.4**	**+0.4**
LIA				*e*SN			**Sn**	**20 20 34.0**	**+0.8**
HORT	**Hortiatis**	**1.17**	**321**	*e*Pg			**Pn**	**20 20 25.2**	**+0.4**
HORT				*e*Sg			**Sb**	**20 20 41.3**	**+1.3**
SOH	**Sokhos**	**1.26**	**335**	*e*Pg			**Pn**	**20 20 27.1**	**+1.1**
SOH				*e*Sg			**Sn**	**20 20 44.4**	**+2.1**
LKR	**Lokris**	**1.32**	**219**	*e*PN			**Pn**	**20 20 27.1**	**+0.2**
AGG	**Agios Georgios**	**1.50**	**244**	*e*Pg			**Pn**	**20 20 29.8**	**+0.5**
AGG				*e*Sg			**Sn**	**20 20 48.3**	**+0.1**
NVR	**Nevrokopi**	**1.67**	**355**	*e*PB			**Pb**	**20 20 32.4**	**-1.4**
KNT	**Kendrikon**	**1.72**	**329**	*e*Pb			**Pb**	**20 20 33.5**	**-1.2**
MMB	**Musomiste**	**1.92**	**352**	*e*Pb			**Pb**	**20 20 35.8**	**-2.2**

MAN 25 20:21:01.1, 1016N×12224E, h6km, mb3.7, ML4.8, MS2.9, 3C, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.58**	**37**	*e*P			Pg	20 21 12.6	+0.4
GUIM				*e*S			Sg	20 21 19.9	0.0
SNPH	**Sibulan**	**1.28**	**129**⇑	*i*P			Pn	20 21 25.0	-0.4
SNPH				*i* S			Sg	20 21 41.0	-1.1
CUYO	**Cuyo Island**	**1.38**	**300**	*e*P			Pn	20 21 26.3	-0.6
RCP	**Roxas**	**1.48**	**20**⇑	*e*P			Pn	20 21 28.5	+0.2
RCP				*e*S			Sn	20 21 48.5	+0.6
LLP	**Lapu-Lapu**	**1.71**	**85**⇑	*e*P			Pn	20 21 30.1	-1.3
LLP				*e*S			Sn	20 21 50.5	-3.1
DCPH	**Dipolog City**	**1.91**	**145**	*e*P			Pn	20 21 33.6	-0.6
DCPH				*i* S			Sn	20 21 58.3	-0.3
IPIL	**Ipil**	**2.38**	**172**	*e*P			Pn	20 21 41.3	+0.7
PAGZ	**Pagadian**	**2.56**	**154**	*e*P			Pn	20 21 44.6	+1.6
MSLP	**Maasin**	**2.58**	**90**	*e*P			Pn	20 21 43.5	+0.1
ENPP	**El Nido**	**2.95**	**291**	*e*P			Pn	20 21 48.2	-0.3

*IDC **25** 20:28:59.1±1.0, 2408N×12261E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/20, mbtmp3.7/6, ML2.8/1, Error ellipse: s-maj=32.3km s-min=21.0km az=62.0*
*NEIC **25** 20:29:00.6±0.6, 2403N×12262E, h10km, mb4.6/2, Error ellipse: s-maj=14.0km s-min=9.2km az=208.0*
*ISCJB **25** 20:29:03.9±0.8, 2405N±0.10×12250E±005, h50km±9km, mb3.9/7, Error ellipse: s-maj=16.6km s-min=6.8km az=19.6*
*JMA **25** 20:29:03.7±0.3, 2405N×12249E, h31km, M3.0*
ISC 25 20:29:03.5±1.1,**2405N**±008×**12249E**±004,**h27**km±8km, **n18,** σ0**88**/24,**mb3.9**/7,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.63**	**49**	P			**Pb**	**20 29 15.9**	**0.0**
YOJ				*e*S			**Sb**	**20 29 24.3**	**-0.1**
NACB	**Ninganchiao**	**0.82**	**279**	*e*P			**Pb**	**20 29 18.6**	**-0.6**
IRIF	**Iriomote-Funau**	**1.17**	**76**	P			**Pn**	**20 29 24.4**	**+0.3**
IRIF				*e*S			**Sn**	**20 29 40.0**	**+0.9**
YHNB	**Yeheng**	**1.19**	**302**	*e*P			**Pn**	**20 29 25.5**	**+1.2**
HATJ	**Hateruma jima**	**1.21**	**89**	P			**Pn**	**20 29 24.5**	**0.0**
HATJ				*e*S			**Sn**	**20 29 40.3**	**+0.3**
TATO	**Taipei**	**1.30**	**316**	*e*P			**Pn**	**20 29 27.7**	**+1.9**
JKRS	**Kuro-shima**	**1.40**	**82**	P			**Pn**	**20 29 27.7**	**+0.4**
JKRS				*e*S			**Sn**	**20 29 45.8**	**+0.9**
JIJ	**Ishigaki jima**	**1.54**	**78**	P			**Pn**	**20 29 29.1**	**-0.1**
JIJ				*e*S			**Sn**	**20 29 48.6**	**+0.3**
JTJ	**Tarama**	**2.10**	**73**	P			**Pn**	**20 29 37.3**	**+0.4**
JOW	**Kunigami**	**5.92**	**61**	Pn			**Pn**	**20 30 27.4**	**-1.9**
0.6nm,0.3s,baz=137,slow=19,SNR=4.0									
JOW				Sn			**Sn**	**20 31 34.1**	**-2.2**
0.3nm,0.3s,baz=127,slow=19,SNR=2.0									
MKAR	**Makanchi Array**	**39.27**	**316**	P			**P**	**20 36 30.0**	**+0.2**
0.5nm,0.6s,mb3.5,baz=97,slow=9.9,SNR=8.7									
WRA	**Warramunga Arr**	**45.22**	**164**	P			**P**	**20 37 18.0**	**-0.3**
1.1nm,0.7s,mb3.8,baz=345,slow=8.7,SNR=6.4									
BVAR	**Borovoye Array**	**48.53**	**320**	P			**P**	**20 37 44.2**	**+0.1**
0.8nm,0.6s,mb3.9,baz=103,slow=6.7,SNR=5.1									
BRVK	**Borovoye**	**48.60**	**321**	*e*P			**P**	**20 37 43.0**	**-1.7**
5.7nm,1.4s,mb4.4									
ASAR	**Alice Springs**	**48.71**	**166**	P			**P**	**20 37 45.5**	**+0.1**
0.4nm,0.5s,mb3.7,baz=353,slow=14,SNR=7.3									
NWAO	**Narrogin (SRO)**	**56.88**	**185**	*e*P			**P**	**20 38 45.3**	**-0.6**
9.1nm,1.1s,mb4.7									
FINES	**FINESS Array B**	**72.16**	**330**	P			**P**	**20 40 25.4**	**-0.3**
0.3nm,0.5s,mb3.5,baz=46,slow=8.0,SNR=5.1									
FINES	**FINESS Array B**	**72.16**	**330**	P			**P**	**20 40 25.4**	**-0.3**

IDC 25 20:32:23.6±2.1,**3353S**×**17930W, h0**km,**mb3.4**/2, **mb1 3.7**/3,**mb1mx3.6**/11,**mbtmp3.6**/3,**ML3.6**/1,**Error ellipse: s-maj=60.2km s-min=38.3km az=136.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.55**	**211**	Pn			Pn	20 33 46.5	-0.9
1.7nm,0.3s,baz=8.1,slow=7.1,SNR=15									
URZ				Sn			Sn	20 34 46.5	-5.4
3.5nm,0.3s,baz=123,slow=18,SNR=6.2									
ASAR	**Alice Springs**	**41.95**	**271**	P		P		20 40 16.2	+0.2
0.2nm,0.5s,baz=114,slow=7.6,SNR=5.3									
WRA	**Warramunga Arr**	**43.22**	**276**	P		P		20 40 26.8	+0.4
0.4nm,0.5s,baz=116,slow=8.3,SNR=14									
FINES	**FINESS Array B**	**147.65**	**337**	PKPbc		PKPbc		20 52 08.8	-1.2
0.4nm,0.5s,baz=35,slow=4.5,SNR=12									
NB2	**NORSAR Subarra151.64**	**349**		PKPa		PKPbc		20 52 18.3	-1.6
comp=Z,0.3nm,0.6s,baz=16,slow=2.4									
NOA	**NORSAR Array B151.64**	**349**		PKPbc		PKPbc		20 52 18.7	-1.2
comp=Z,0.3nm,0.6s,baz=14,slow=4.1,SNR=4.0									

*ISCJB **25** 20:39:44.0±1.6, 3095S±04×762E±03, h10km, mb4.0/8, Error ellipse: s-maj=56.2km s-min=23.0km az=55.2*
*IDC **25** 20:39:44.0±1.5, 3080S×76.15E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/16, mbtmp3.9/6, Error ellipse: s-maj=62.0km s-min=28.4km az=25.0*
*NEIC **25** 20:39:45.4±1.2, 3094S×76.11E, h10km, mb4.5/2, Error ellipse: s-maj=47.5km s-min=20.1km az=207.0*
ISC 25 20:39:46.1±1.5,**3075**±03×**762E**±03,**h10**km,**n12,** σ0**65**/11, **mb4.0**/8,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**51.35**	**97**	P		P		**20 48 51.8**	**+1.1**
1.0nm,1.1s,mb3.7,baz=233,slow=7.7,SNR=4.9									
ASAR				PcP		PcP		20 50 04.7	-0.7
0.4nm,0.8s,baz=262,slow=3.5,SNR=4.7									
WRA	**Warramunga Arr**	**53.14**	**93**	P		P		**20 49 03.1**	**-1.0**
1.7nm,1.1s,mb3.9,baz=249,slow=7.7,SNR=5.4									
MKAR	**Makanchi Array**	**77.36**	**4**	P		P		**20 51 40.7**	**-0.4**
2.5nm,1.0s,mb4.1,baz=196,slow=7.1,SNR=8.7									
MKAR	**Makanchi Array**	**77.36**	**4**	P		P		**20 51 40.7**	**-0.4**
AKTK	**Aktyubinsk**	**82.39**	**348**	P		P		**20 52 08.5**	**+0.1**
AKTO	**Aktyubinsk**	**82.39**	**348**	P		P		**20 52 08.5**	**+0.1**
0.4nm,0.3s,mb3.8,baz=181,slow=4.8,SNR=4.3									
SONM	**Songino Array**	**82.78**	**20**	P		P		**20 52 09.3**	**-1.1**
0.5nm,0.5s,mb3.8,baz=194,slow=3.0,SNR=4.6									
ZRNK	**Zerenda**	**83.56**	**356**	*e*P		P		**20 52 14.7**	**+0.2**
3.2nm,1.0s,mb4.4									
BRVK	**Borovoye**	**83.59**	**356**	*e*P		P		**20 52 15.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**83.72**	**289**	P		P		**20 52 14.9**	**-0.3**
0.5nm,0.7s,mb3.7,baz=126,slow=5.8,SNR=3.3									
CHKZ	**Chkalovo**	**84.19**	**357**	*e*P		P		**20 52 18.3**	**+0.7**
3.5nm,0.9s,mb4.5									
YKA	**Yellowknife Ar**	**147.46**	**9**	PKPbc		PKPbc		20 59 29.5	-0.8
1.5nm,0.7s,baz=330,slow=3.5,SNR=4.6									

IDC 25 20:47:32.8±1.6,**3094S**×**7608E, h0**km,**mb3.8**/5,**mb1 3.9**/5, **mb1mx3.6**/16,**mbtmp3.8**/5,**Error ellipse: s-maj=71.4km s-min=28.8km az=29.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**51.41**	**97**	P		P		20 56 40.0	+0.6
0.5nm,0.7s,baz=251,slow=5.9,SNR=8.7									
ASAR				PcP		PcP		20 57 53.4	-0.6
0.3nm,0.8s,baz=231,slow=2.6,SNR=4.3									
WRA	**Warramunga Arr**	**53.23**	**93**	P		P		20 56 53.4	+0.5
0.6nm,0.9s,baz=248,slow=7.2,SNR=5.2									
WRA				PcP		PcP		20 58 00.6	-0.2
0.2nm,0.6s,baz=246,slow=2.9,SNR=5.9									
MKAR	**Makanchi Array**	**77.57**	**4**	P		P		20 59 29.7	-0.9
1.2nm,0.9s,baz=176,slow=6.7,SNR=5.6									
TORD	**Torodi Ar. Bea**	**83.70**	**289**	P		P		21 00 03.7	+0.3
0.5nm,0.8s,baz=123,slow=5.3,SNR=2.9									
BVAR	**Borovoye Array**	**83.75**	**357**	P		P		21 00 04.1	+0.4
0.9nm,0.6s,baz=171,slow=8.9,SNR=9.6									
YKA	**Yellowknife Ar**	**147.69**	**9**	PKPbc		PKPbc		21 07 18.2	-1.0
0.6nm,0.6s,baz=322,slow=3.7,SNR=5.6									

MOS 25 21:06:29.7±0.3,**4284N×4424E, h19**km,**mb3.5**/1,**1C-5D, Error ellipse: s-maj=19.3km s-min=17.8km az=135.7, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LACR	**Lac**	**0.04**	**109**⇑	*i*PG			Pg	21 06 34.1	+1.0
LACR				*i* S			Sg	21 06 36.4	+1.1
ZEI	**Tsey**	**0.26**	**255**⇓	*i*PG			Pg	21 06 36.9	+1.2
ZEI				*i* S			Sg	21 06 41.3	+1.5
KORR	**Kora**	**0.28**	**333**⇓	*i*PG			Pg	21 06 37.6	+1.6
KORR				*i* S			Sg	21 06 42.4	+2.2
ARNR	**Ardon**	**0.35**	**4**⇓	*i*PG			Pg	21 06 38.7	+1.5
ARNR				*i* S			Sg	21 06 44.5	+2.3
VLKR	**Vladikavkaz**	**0.38**	**57**⇓	*i*PG			Pg	21 06 38.9	+1.2
VLKR				*i* S			Sg	21 06 44.8	+1.7
SNJR	**Sundja**	**0.48**	**61**⇓	*i*PG			Pg	21 06 40.6	+1.2
SNJR				*e*S			Sg	21 06 47.7	+1.8
DIGR	**Digorskoe uzhe**	**0.49**	**277**	*e*PG			Pg	21 06 41.1	+1.4
DIGR				*e*S			Sg	21 06 48.5	+2.2

*ISCJB **25** 21:12:27.2±1.5, 3085S±04×761E±03, h10km, mb3.9/9, Error ellipse: s-maj=58.1km s-min=21.8km az=53.9*
*IDC **25** 21:12:27.0±1.6, 3083S×7608E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/17, mbtmp3.9/7, Error ellipse: s-maj=69.5km s-min=26.6km az=29.0*
*NEIC **25** 21:12:28.5±1.1, 3088S×7604E, h10km, mb4.3/2, Error ellipse: s-maj=45.3km s-min=17.5km az=207.0*
ISC 25 21:12:29.4±1.5,**306S**±04×**761E**±03,**h10**km,**n13,** σ0**51**/11, **mb3.9**/9,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**51.40**	**97**	P			**P**	**21 21 35.0**	**+0.6**
1.2nm,1.1s,mb3.8,baz=240,slow=7.7,SNR=5.6									
ASAR				PcP			PcP	21 22 47.6	-1.3
1.2nm,1.2s,baz=262,slow=3.6,SNR=4.4									
WRA	**Warramunga Arr**	**53.19**	**93**	P			**P**	**21 21 47.3**	**-0.4**
1.4nm,1.0s,mb3.9,baz=246,slow=7.4,SNR=5.0									
MKAR	**Makanchi Array**	**77.26**	**4**	P			**P**	**21 24 23.2**	**-0.7**
1.6nm,0.9s,mb4.0,baz=198,slow=6.9,SNR=6.8									
BRTR	**Keskin Array B**	**80.36**	**328**	P			**P**	**21 24 42.1**	**+1.2**
0.5nm,0.7s,mb3.6,baz=145,slow=5.3,SNR=3.2									
AKTK	**Aktyubinsk**	**82.29**	**348**	P			**P**	**21 24 51.1**	**0.0**
AKTO	**Aktyubinsk**	**82.29**	**348**	P			**P**	**21 24 51.1**	**0.0**
0.7nm,0.7s,mb3.7,baz=198,slow=7.2,SNR=4.8									
BVAR	**Borovoye Array**	**83.45**	**357**	P			**P**	**21 24 57.2**	**0.0**
1.5nm,0.8s,mb4.1,baz=157,slow=8.0,SNR=13									
BRVK	**Borovoye**	**83.49**	**356**	*e*P			**P**	**21 24 57.5**	**+0.1**
1.0nm,1.3s,mb3.8									
TORD	**Torodi Ar. Bea**	**83.65**	**289**	P			**P**	**21 24 57.7**	**-0.5**
0.7nm,0.8s,mb3.8,baz=126,slow=5.5,SNR=3.8									
TORD	**Torodi Ar. Bea**	**83.65**	**289**	P			**P**	**21 24 57.7**	**-0.6**
CHKZ	**Chkalovo**	**84.09**	**357**	*e*P			**P**	**21 25 00.4**	**-0.1**
3.5nm,0.9s,mb4.5									
YKA	**Yellowknife Ar**	**147.37**	**9**	PKPbc		PKPbc		21 32 11.7	-1.6
1.5nm,0.8s,baz=319,slow=4.2,SNR=6.1									
YKA	**Yellowknife Ar**	**147.37**	**9**	PKPbc		PKPbc		21 32 11.7	-1.6

*NEIC **25** 21:26:19.9, 3973N×2403E, h31km, ML3.2(ATH), After ATH.*
*ATH **25** 21:26:19.9, 3973N×2403E, h31km±2km, MD3.1/12, ML3.2*
*ISCJB **25** 21:26:20.4±0.4, 3970N±002×2407E±003, h21km±5km, Error ellipse: s-maj=4.2km s-min=3.9km az=67.1*
*CSEM **25** 21:26:20.7±0.1, 3969N×2406E, h25km, ML2.6, Error ellipse: s-maj=2.0km s-min=1.5km az=95.0*
*THE **25** 21:26:20.7, 3967N×2407E, h12km, ML2.6*
ISC 25 21:26:20.1±0.4,**3970N**±002×**2405E**±003,**h18**km±4km,**n32,** σ0**91**/43,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.36**	**308**	*e*Pg			**Pg**	**21 26 28.3**	**+0.6**
PAIG				*e*Sg			**Sg**	**21 26 34.3**	**+1.4**
AOS	**Alonnisos**	**0.55**	**194**	*e*Pg			**Pg**	**21 26 30.9**	**-0.2**
AOS				*e*Sg			**Sg**	**21 26 38.2**	**-0.2**
OUR	**Ouranopolis**	**0.64**	**355**	*e*Pg			**Pg**	**21 26 33.3**	**+0.7**
XOR	**Xorichti**	**0.74**	**244**	*e*Pg			**Pg**	**21 26 35.2**	**+0.5**
XOR				*e*Sg			**Sg**	**21 26 45.2**	**+0.7**
XOR	**Xorichti**	**0.74**	**244**	*e*Pg			**Pg**	**21 26 35.2**	**+0.5**
XOR				*e*Sg			**Sg**	**21 26 45.2**	**+0.6**
NEO	**Neokhori**	**0.75**	**239**	*e*PN			**Pb**	**21 26 34.9**	**+0.3**
NEO				*e*SN			**Sb**	**21 26 46.0**	**+1.5**
PLG	**Polygyros**	**0.82**	**326**	*e*PN			**Pb**	**21 26 35.5**	**-0.2**
PLG				*e*SN			**Sb**	**21 26 46.3**	**-0.1**
LOS	**Limnos**	**0.83**	**73**	*e*Pg			**Pg**	**21 26 36.6**	**+0.3**
LOS				*e*Sg			**Sg**	**21 26 48.2**	**+1.0**
LIA	**Limnos Island**	**0.89**	**77**	*e*PN			**Pb**	**21 26 37.5**	**+0.5**
LIA				*e*SN			**Sb**	**21 26 50.2**	**+1.6**
HORT	**Hortiatis**	**1.16**	**321**	*e*Pg			**Pg**	**21 26 42.4**	**0.0**
SOH	**Sokhos**	**1.24**	**335**	*e*Pg			**Pg**	**21 26 43.4**	**-0.6**
SOH				*e*Sg			**Sg**	**21 27 00.3**	**0.0**
THE	**Thessaloniki**	**1.25**	**319**	*e*Pg			**Pg**	**21 26 43.4**	**-0.8**
THE				*e*Sg			**Sg**	**21 27 01.1**	**+0.5**
LIT	**Litokhoron**	**1.27**	**289**	*e*Pg			**Pg**	**21 26 43.3**	**-1.3**
LKR	**Lokris**	**1.33**	**218**	*e*PB			**Pb**	**21 26 43.7**	**-0.8**
AGG	**Agios Georgios**	**1.50**	**244**	*e*Pg			**Pg**	**21 26 46.5**	**-2.5**
NVR	**Nevrokopi**	**1.65**	**355**	*e*PN			**Pn**	**21 26 48.8**	**+0.6**
PTL	**Penteli**	**1.66**	**185**	*e*PN			**Pn**	**21 26 48.5**	**+0.3**
KNT	**Kendrikon**	**1.70**	**329**	*e*Pb			**Pb**	**21 26 50.1**	**-0.8**
ATH	**Athens Observa**	**1.75**	**189**	*e*PB			**Pb**	**21 26 51.0**	**-0.6**
PRK	**Paraskevi**	**1.78**	**104**	*e*PB			**Pb**	**21 26 51.3**	**-0.8**
GRG	**Griva**	**1.78**	**315**	*e*Pb			**Pb**	**21 26 51.3**	**-0.8**
GRG				*e*Sb			**Sb**	**21 27 14.3**	**+0.2**
RDO	**Rodhopi**	**1.84**	**38**	*e*PN			**Pn**	**21 26 50.5**	**-0.2**
KVR	**Kavouri**	**1.88**	**187**	*e*PB			**Pb**	**21 26 53.0**	**-0.9**
MMB	**Musomiste**	**1.90**	**353**	*e*Pb			**Pb**	**21 26 52.0**	**-2.2**
MMB	**Musomiste**	**1.90**	**353**	P			**Pn**	**21 26 51.5**	**-0.1**
EVR	**Evrytania**	**1.91**	**246**	*e*PN			**Pn**	**21 26 52.0**	**+0.3**
ALN	**Alexandroupoli**	**1.94**	**51**	*e*Pb			**Pb**	**21 26 52.6**	**-2.2**
NAIG	**Nisos Aigina**	**1.99**	**193**	*e*PN			**Pn**	**21 26 54.0**	**+1.2**
RZN	**Rozhen**	**2.05**	**14**	P			**Pn**	**21 26 54.2**	**+0.6**
KDZ	**Kurdzhali**	**2.21**	**28**	P			**Pn**	**21 26 54.9**	**-0.9**
KKB	**Krupnik**	**2.29**	**342**	P			**Pn**	**21 26 57.6**	**+0.7**
FNA	**Florina**	**2.32**	**299**	*e*Pn			**Pn**	**21 26 58.6**	**+1.4**

*ISCJB **25** 21:28:13.4±0.5, 3970N±003×2404E±003, h10km±5km, Error ellipse: s-maj=4.8km s-min=4.3km az=131.5*
*THE **25** 21:28:13.9, 3968N×2406E, h10km, ML2.1*
*CSEM **25** 21:28:13.8±0.1, 3970N×2402E, h2km, ML2.1, Error ellipse: s-maj=2.9km s-min=2.5km az=149.0*
*NEIC **25** 21:28:13.6, 3969N×2405E, h13km, MD2.7(ATH), After ATH.*
*ATH **25** 21:28:13.6, 3969N×2405E, h13km±2km, MD2.7/4*
ISC 25 21:28:13.8±0.5,**3970N**±003×**2404E**±003,**h17**km±5km,**n16,** σ0**74**/27,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.36**	**310**	*e*Pg			**Pg**	**21 28 21.3**	**+0.2**
PAIG				*e*Sg			**Sg**	**21 28 27.1**	**+1.0**
AOS	**Alonnisos**	**0.54**	**193**	*e*Pg			**Pg**	**21 28 23.7**	**-0.8**
AOS				*e*Sg			**Sg**	**21 28 32.4**	**+0.5**
AOS	**Alonnisos**	**0.54**	**193**	*e*Pg			**Pg**	**21 28 23.7**	**-0.8**
AOS				*e*Sg			**Sg**	**21 28 32.3**	**+0.5**
OUR	**Ouranopolis**	**0.64**	**356**	*e*Pg			**Pg**	**21 28 26.1**	**-0.2**
comp=Z,4.0nm,0.4s									
XOR	**Xorichti**	**0.73**	**243**	*e*Pg			**Pg**	**21 28 28.2**	**+0.1**
XOR				*e*Sg			**Sg**	**21 28 38.1**	**+0.3**
NEO	**Neokhori**	**0.74**	**238**	*e*PB			**Pb**	**21 28 27.9**	**-0.3**
NEO				*e*SB			**Sb**	**21 28 38.3**	**+0.3**
PLG	**Polygyros**	**0.81**	**326**	*e*PB			**Pb**	**21 28 28.3**	**-1.1**
PLG				*e*SB			**Sb**	**21 28 40.4**	**+0.3**
LOS	**Limnos**	**0.84**	**73**	*e*Pg			**Pg**	**21 28 29.8**	**-0.3**
LOS				*e*Sg			**Sg**	**21 28 41.4**	**+0.2**
LOS	**Limnos**	**0.84**	**73**	*e*Pg			**Pg**	**21 28 29.8**	**-0.3**
LOS				*e*Sg			**Sg**	**21 28 41.3**	**+0.1**
LIA	**Limnos Island**	**0.91**	**77**	*e*PB			**Pb**	**21 28 30.7**	**-0.3**
LIA				*e*SB			**Sb**	**21 28 43.0**	**+0.2**
SOH	**Sokhos**	**1.24**	**335**	*e*Pg			**Pg**	**21 28 36.3**	**-1.3**
SOH				*e*Sg			**Sg**	**21 28 54.2**	**+0.4**
LIT	**Litokhoron**	**1.25**	**289**	*e*Pg			**Pn**	**21 28 36.6**	**+0.1**
AGG	**Agios Georgios**	**1.48**	**243**	*e*Pg			**Pn**	**21 28 39.4**	**-0.3**

*NEIC **25** 21:33:22.7±3.7, 10.30S×164.40E, h63km±12km, mb4.3/4, Error ellipse: s-maj=64.1km s-min=12.8km az=46.0*
*ISCJB **25** 21:33:23.7±4.3, 10.55S±0.4×164.2E±0.3, h66km±19km, mb4.0/5, Error ellipse: s-maj=80.5km s-min=15.1km az=76.6*
*IDC **25** 21:33:26.3±6.7, 10.76S×164.04E, h53km±28km, mb3.9/4, mb1 4.1/7, mb1mx3.8/14, mbtmp4.2/7, ML3.9/3, MS3.5/6, Ms1 3.5/6, ms1mx3.1/24, Error ellipse: s-maj=91.6km s-min=18.6km az=45.0*

ISC 25 21:33:28.4±3.5, 109S±03×1639E±03, h55km±15km, n16, σ0.9/96/15, mb4.1/5, MS3.5/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.15**	**290**	P	**Pn**	**21 34 28.1**	**-1.1**
	52nm,0.3s,baz=98,slow=2.8,SNR=8.6						
HNR				S	**Sn**	**21 35 17.2**	**+0.7**
	34nm,0.3s,baz=258,slow=2.8,SNR=3.5						
HNR				LR	LR	21 36 10.4	
	comp=Z,708nm,18.6s,baz=178,slow=39						
DZM	**Mont Dzumac**	**11.37**	**168**	*eP*	**Pn**	**21 36 09.7**	**+1.6**
DZM	**Mont Dzumac**	**11.37**	**168**	P	**Pn**	**21 36 09.2**	**+1.1**
	0.3nm,0.3s,baz=328,slow=17,SNR=21						
DZM				S	**Sn**	**21 38 10.3**	**-3.3**
	0.2nm,0.3s,baz=330,slow=20,SNR=3.9						
DZM				LR	LR	21 39 43.2	
	comp=Z,84nm,21.7s,baz=241,slow=33						
CTA	**Charters Tower**	**19.28**	**240**	*eP*	**Pn**	**21 37 50.3**	**+0.2**
	7.0nm,0.9s						
CTA	**Charters Tower**	**19.28**	**240**	P	**Pn**	**21 37 49.6**	**-0.5**
	0.1nm,0.3s,baz=70,slow=14,SNR=11						
CTAO	**Charters Tower**	**19.28**	**240**	*eP*	**Pn**	**21 37 50.5**	**+0.4**
	12nm,1.1s						
AFI	**Afiamalu**	**23.94**	**100**	LR	LR	21 46 04.6	
	comp=Z,152nm,18.7s,MS3.5,baz=64,slow=32						
STKA	**Stephens Creek**	**29.33**	**221**	P	**P**	**21 39 27.2**	**+1.5**
	1.2nm,0.7s,mb3.7,baz=70,slow=11,SNR=3.1						
WRAB	**Tennant Creek**	**29.82**	**249**	*eP*	**P**	**21 39 30.2**	**0.0**
	8.8nm,1.0s,mb4.4						
WB2	**Warramunga Arr**	**29.82**	**249**	*eP*	**P**	**21 39 30.0**	**-0.2**
WRA	**Warramunga Arr**	**29.84**	**249**	P	**P**	**21 39 30.1**	**-0.2**
	3.3nm,0.9s,mb4.1,baz=78,slow=8.9,SNR=22						
GUMO	**Guam**	**30.79**	**322**	LR	LR	21 51 16.4	
	comp=Z,59nm,19.8s,MS3.2,baz=27,slow=35						
ASAR	**Alice Springs**	**31.25**	**242**	P	**P**	**21 39 42.4**	**-0.3**
	1.4nm,0.7s,mb3.9,baz=64,slow=9.8,SNR=20						
ASAR				LR	LR	21 50 43.0	
	comp=Z,132nm,20.7s,MS3.6,baz=178,slow=33						
FITZ	**Fitzroy Crossi**	**37.67**	**255**	*eP*	**P**	**21 40 37.5**	**-0.7**
	6.1nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**37.67**	**255**	P	**P**	**21 40 37.6**	**-0.6**
	3.9nm,0.8s,mb4.2,baz=74,slow=12,SNR=14						
MAW	**Mawson**	**84.17**	**202**	LR	LR	22 16 04.1	
	comp=Z,51nm,21.1s,MS3.9,baz=99,slow=30						

IDC 25 21:40:57.7±5.8, 675S×12891E, h143km±56km, mb3.5/1, mb1 3.6/4, mb1mx3.4/12, mbtmp3.9/4, Error ellipse: s-maj=62.9km s-min=22.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.73**	**195**	P	Pn	21 43 42.0	+1.4
	0.6nm,0.3s,baz=40,slow=14,SNR=34						
FITZ				S	Sn	21 45 49.1	-0.9
	0.4nm,0.3s,baz=43,slow=23,SNR=3.8						
WRA	**Warramunga Arr**	**14.14**	**159**	P	Pn	21 44 11.7	+0.2
	0.4nm,0.3s,baz=336,slow=13,SNR=21						
WRA				S	Sn	21 46 41.1	-6.9
	0.6nm,0.3s,baz=331,slow=22,SNR=8.2						
ASAR	**Alice Springs**	**17.50**	**165**	P	Pn	21 44 53.6	+0.8
	0.5nm,0.3s,baz=340,slow=10.0,SNR=55						
ASAR				S	S	21 48 06.0	-0.2
	0.2nm,0.3s,baz=350,slow=22,SNR=5.1						
MKAR	**Makanchi Array**	**67.42**	**327**	P	P	21 51 37.7	-0.1
	0.4nm,0.3s,baz=114,slow=7.3,SNR=9.1						

*ISCJB **25** 22:05:40.7±1.4, 416N±0.1×72.35E±0.07, h10km, Error ellipse: s-maj=16.1km s-min=7.2km az=3.0*
*KNET **25** 22:05:42.8±0.7, 4.173N×72.77E, h0km, ml3.1, Error ellipse: s-maj=5.9km s-min=3.9km az=131.0*
*NNC **25** 22:05:47.5±4.4, 4.169N×72.57E, h124km±49km, mb2.7, mpv3.2, Error ellipse: s-maj=57.1km s-min=15.5km az=174.0*

ISC 25 22:05:42.7±1.4, 415N±01×7247E±007, h10km, n14, σ1.1§12/24, 13C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**1.09**	**56**	⇓P	**Pb**	**22 05 58.3**	**-5.4**
	69nm,0.2s,SNR=93						
AML				⇑S	**Sg**	**22 06 10.3**	**-7.6**
	111nm,0.1s						
EKS2	**Erkin-Say**	**1.49**	**40**	⇓P	**Pn**	**22 06 05.8**	**-3.6**
	24nm,0.2s,SNR=64						
EKS2				⇑S	**Sn**	**22 06 22.7**	**-6.3**
	38nm,0.2s						
AAK	**Ala-Archa**	**1.87**	**53**	⇓P	**Pn**	**22 06 13.3**	**-1.4**
	64nm,0.3s,SNR=31						
AAK				⇓S	**Sn**	**22 06 36.9**	**-1.4**
	54nm,0.2s						
KK31	**Karatay Array**	**2.14**	**318**	⇑P	**Pn**	**22 06 22.0**	**+3.6**
	6.5nm,0.2s,baz=128,slow=14,SNR=93						
KZA	**Kyzart**	**2.15**	**74**	⇑P	**Pn**	**22 06 17.4**	**-1.2**
	60nm,0.2s,SNR=35						
KZA				⇑S	**Sn**	**22 06 44.9**	**-0.3**
	146nm,0.3s						
KBK	**Karagaybulak**	**2.16**	**58**	⇓P	**Pn**	**22 06 17.9**	**-0.8**
	48nm,0.2s,SNR=26						
KBK				⇑S	**Sn**	**22 06 45.9**	**+0.4**
	147nm,0.3s						
CHMS	**Chumysh**	**2.24**	**48**	⇓P	**Pn**	**22 06 19.1**	**-0.6**
	21nm,0.2s,SNR=33						
CHMS				⇑S	**Sn**	**22 06 47.2**	**-0.3**
	98nm,0.3s						
USP	**Ospenovka**	**2.30**	**40**	⇓P	**Pn**	**22 06 20.3**	**-0.2**
	53nm,0.2s,SNR=46						
USP				⇓S	**Sn**	**22 06 49.2**	**+0.3**
	130nm,0.4s						
TKM2	**Tokmak 2**	**2.71**	**58**	⇓P	**Pn**	**22 06 27.3**	**+1.1**
	75nm,0.4s,SNR=87						
TKM2				⇑S	**Sn**	**22 07 00.9**	**+1.9**
	132nm,0.3s						
TKM2	**Tokmak 2**	**2.71**	**58**	⇑P	**Pn**	**22 06 27.5**	**+1.3**
	4.8nm,0.6s						
TKM2				⇓S	**Sn**	**22 07 00.9**	**+1.9**
	26nm,1.1s						
ULHL	**Ulahol**	**2.91**	**74**	⇑P	**Pn**	**22 06 29.3**	**+0.4**
	15nm,0.2s,SNR=30						
ULHL				⇑S	**Sn**	**22 07 06.5**	**+2.6**
	64nm,0.4s						
VOSK	**Vostochnaya**	**11.24**	**355**	⇑P	**Pn**	**22 08 22.7**	**-0.7**
	5.3nm,2.1s						
ZRNK	**Zerenda**	**11.66**	**350**	⇑P	**Pn**	**22 08 29.0**	**-0.1**
	2.6nm,1.6s						
AB31	**Akbulak array**	**11.70**	**316**	P	**Pn**	**22 08 30.5**	**+0.8**
	0.7nm,0.3s,baz=118,slow=15,SNR=28						

*NEIC **25** 22:17:23.8, 3398S×7200W, h34km, ML3.0(GUC), After GUC.*

GUC 25 22:17:23.8±0.8, 3398S×7200W, h34km±6km, MD3.9, ML3.0, 8C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNV	**Longovilo**	**0.49**	**87**	⇓*i*P	Pb	22 17 34.2	0.0
LNV				*i* S	Sb	22 17 41.5	0.0
LCCH	**Las Cruces**	**0.62**	**35**	⇑*i*P	Pn	22 17 35.7	-0.4
LCCH				*i* S	Sn	22 17 45.2	+0.3
TACH	**Talagante**	**0.94**	**70**	*e*P	Pn	22 17 40.6	+0.1
TACH				*i* S	Sn	22 17 53.8	+1.0
IHA	**Instituto Hidr**	**1.00**	**17**	⇑*i*P	Pn	22 17 41.6	+0.3
IHA				*i* S	Sn	22 17 55.1	+0.9
SFDO	**San Fernando**	**1.03**	**128**	⇓*i*P	Pn	22 17 41.8	0.0
SFDO				*i* S	Sn	22 17 56.9	+1.9
RCDM	**Rinconada Maip**	**1.11**	**64**	*e*P	Pn	22 17 43.5	+0.7
RCDM				*i* S	Sn	22 17 57.6	+0.7
RCDM				AML	AML	22 18 01.4	
	comp=E,373nm,0.3s						
RCDM	**Rinconada Maip**	**1.11**	**64**	*e*P	Pn	22 17 43.5	+0.7
RCDM				*i* S	Sn	22 17 57.6	+0.7
CHCH	**Chadas Angostu**	**1.12**	**88**	*e*P	Pn	22 17 43.9	+0.9
CACH	**El Canelo**	**1.17**	**97**	*e*P	Pn	22 17 45.0	+1.3
NICH	**Los Niches**	**1.20**	**148**	*e*P	Pn	22 17 44.5	+0.3
NICH				*i* S	Sn	22 18 01.0	+1.8
ANTU	**Antumapu**	**1.21**	**70**	*e*P	Pn	22 17 45.1	+0.9
ANTU				*e*S	Sn	22 18 01.4	+2.0
ANTU				AML	AML	22 18 07.0	
	comp=E,414nm,0.2s						
ANTU	**Antumapu**	**1.21**	**70**	*e*P	Pn	22 17 45.1	+0.9
ANTU				*e*S	Sn	22 18 01.4	+2.0
PCH	**Pirque**	**1.29**	**74**	⇑*i*P	Pn	22 17 46.4	+1.1
ROCH	**El Roble**	**1.30**	**40**	⇓*i*P	Pn	22 17 46.6	+1.1
CICH	**Cipreses**	**1.35**	**105**	*e*P	Pn	22 17 47.4	+1.3
CLCH	**Cerro Calan**	**1.35**	**65**	⇑*i*P	Pn	22 17 48.1	+1.9
CLCH				*i* S	Sn	22 18 05.7	+2.8
CLCH				AML	AML	22 18 13.1	
	comp=N,311nm,0.3s						
PEL	**Peldehue**	**1.38**	**53**	⇑*i*P	Pn	22 17 48.1	+1.6
PEL				*i* S	Sn	22 18 07.7	+4.1
PEL				AML	AML	22 18 15.3	
	comp=E,722nm,0.7s						
PEL	**Peldehue**	**1.38**	**53**	⇑*i*P	Pn	22 17 48.1	+1.6
PEL				S	Sn	22 18 07.7	+4.1
TALC	**Talca**	**1.45**	**168**	⇓*i*P	Pn	22 17 47.5	0.0
TALC				*i* S	Sn	22 18 06.5	+1.3
TALC				AML	AML	22 18 09.0	
	comp=N,951nm,0.2s						
TALC	**Talca**	**1.45**	**168**	⇓*i*P	Pn	22 17 47.5	0.0
TALC				*i* S	Sn	22 18 06.5	+1.3
PACH	**Papudo**	**1.52**	**18**	⇑*i*P	Pn	22 17 50.2	+1.7
FCH	**Farellones**	**1.56**	**66**	*e*P	Pn	22 17 50.9	+1.8
FCH				*i* S	Sn	22 18 12.5	+4.3
FCH				AML	AML	22 18 16.8	
	comp=E,333nm,0.2s						
JACH	**Jahuel**	**1.75**	**43**	*e*P	Pn	22 17 53.5	+1.8
CHNG	**Los Chungos**	**2.13**	**11**	⇑*i*P	Pn	22 17 56.7	-0.3

*IDC **25** 22:31:00.8±2.2, 25.27N×123.10E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.7/4, MS3.5/4, Ms1 3.5/4, ms1mx2.8/31, Error ellipse: s-maj=166.7km s-min=24.1km az=63.0*
*ISCJB **25** 22:31:04.7±0.8, 24.91N±0.08×122.56E±0.07, h33km, mb3.9/6, MS3.5/5, Error ellipse: s-maj=11.5km s-min=8.7km az=147.8*
*NEIC **25** 22:31:07.3±0.7, 24.88N×122.31E, h35km, mb4.4/2, Error ellipse: s-maj=14.8km s-min=11.1km az=49.0*
*BJI **25** 22:31:16.4, 25.36N×121.76E, h30km, mB4.2, ML4.0, Ms3.9, Msz3.5*

ISC 25 22:31:07.1±0.8, 2492N±008×12242E±008, h35km, n14, σ0.9/98/14, mb3.9/6, MS3.5/5, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TATO	**Taipei**	**0.84**	**274**	⇓*i*Pn	**Pn**	**22 31 21.3**	**-1.1**
YHNB	**Yeheng**	**0.98**	**255**	⇓*i*Pn	**Pn**	**22 31 23.1**	**-1.2**
YHNB				*e*Sn	**Sn**	**22 31 39.5**	**+2.6**
NACB	**Ninganchiao**	**1.05**	**225**	*e*Pn	**Pn**	**22 31 24.0**	**-1.3**
NACB				*e*Sn	**Sn**	**22 31 38.7**	**-0.1**
QZH	**Quanzhou**	**3.47**	**271**	P	**Pn**	**22 31 58.5**	**0.0**
QZH				S	**Sn**	**22 32 44.3**	**+5.9**
QZH				Smax			
	comp=N,160nm,0.6s						
QZH				Smax			
	comp=E,190nm,0.8s						
GTA	**Gaotai**	**23.88**	**313**	*e*P	**P**	**22 36 18.0**	**+0.7**
GTA				AMB	AMB		
	comp=Z,36nm,3.8s						
GTA				LR	LR		
	comp=N,253nm,12.2s,MS3.9						
GTA				LR	LR		
	comp=E,140nm,13.4s,MS3.9						
GTA				LR	LR		
	comp=Z,133nm,13.4s,MS3.6						
ASAJ	**Asahikawa**	**25.24**	**36**	LR	LR	22 46 46.2	
	comp=Z,110nm,18.3s,MS3.4,baz=113,slow=38						
SONM	**Songino Array**	**26.15**	**335**	LR	LR	22 47 29.1	
	comp=Z,76nm,18.6s,MS3.3,baz=99,slow=38						
MKAR	**Makanchi Array**	**38.60**	**315**	P	**P**	**22 38 27.4**	**+0.7**
	comp=Z,2.2nm,0.7s,mb4.0,baz=102,slow=11,SNR=15						
WRAB	**Tennant Creek**	**46.07**	**164**	P	**P**	**22 39 27.8**	**+0.3**
	comp=Z,2.6nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**46.08**	**164**	P	**P**	**22 39 27.6**	**0.0**
	comp=Z,1.0nm,0.9s,mb3.8,baz=346,slow=8.4,SNR=6.0						
WRA				pP	pP	22 39 34.6	-3.3
	comp=Z,1.5nm,0.8s,baz=347,slow=8.8,SNR=9.2						
ZRNK	**Zerenda**	**48.61**	**320**	*e*P	**P**	**22 39 47.5**	**+0.3**
	comp=Z,7.9nm,1.3s,mb4.6						
ASAR	**Alice Springs**	**49.57**	**166**	P	**P**	**22 39 55.6**	**+1.1**
	comp=Z,0.4nm,0.9s,mb3.5,baz=335,slow=6.3,SNR=3.7						
ASAR				pP	pP	22 40 02.5	-2.4
	comp=Z,0.9nm,0.8s,baz=336,slow=6.0,SNR=6.4						
FINES	**FINESS Array B**	**71.38**	**330**	LR	LR	23 16 22.6	
	comp=Z,49nm,20.0s,MS3.8,baz=59,slow=38						
NOA	**NORSAR Array B**	**78.10**	**332**	P	**P**	**22 43 01.1**	**-1.2**
	comp=Z,0.3nm,0.7s,mb3.3,baz=60,slow=5.7,SNR=3.1						
NOA				LR	LR	23 19 57.9	
	comp=Z,22nm,19.8s,MS3.5,baz=345,slow=38						

*ISCJB **25** 22:45:04.8±3.2, 42S±0.1×152.9E±0.1, h59km±25km, mb4.3/12, MS3.2/1, Error ellipse: s-maj=23.9km s-min=19.1km az=133.4*
*IDC **25** 22:45:06.2±2.5, 4.35S×152.74E, h46km±20km, mb4.0/8, mb1 4.2/8, mb1mx4.1/12, mbtmp4.3/8, MS3.2/2, Ms1 3.2/2, ms1mx2.8/17, Error ellipse: s-maj=26.3km s-min=18.7km az=134.0*
*NEIC **25** 22:45:09.6±2.5, 4.33S×152.76E, h83km±20km, mb4.7/5, Error ellipse: s-maj=17.8km s-min=15.0km az=210.0*

ISC 25 22:45:08.1±2.3, 42S±01×1529E±01, h75km±17km, n23, σ0.9/67/22, mb4.2/12, 1C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.64**	**228**	P	**Pn**	**22 46 57.4**	**+0.7**
	1.9nm,0.3s,baz=39,slow=15,SNR=4.7						
PMG				S	**Sn**	**22 48 21.3**	**-0.4**
	6.4nm,0.3s,baz=125,slow=21,SNR=12						
PMG				LR	LR	22 49 32.9	
	comp=Z,128nm,18.0s,baz=229,slow=36						
PMG	**Port Moresby**	**7.64**	**228**	*e*Pn	**Pn**	**22 46 57.0**	**+0.3**
PMG				P		22 46 57.4	
PMG				S	**Sn**	**22 48 21.3**	**-0.4**
PMG				*e*Sn	**Sn**	**22 48 23.3**	**+1.6**
PMG				LR	LR	22 49 32.9	
KAKA	**Kakadu**	**21.87**	**246**	⇑*i*P	**P**	**22 49 54.0**	**-0.6**
	4.5nm,0.4s,mb4.2						
DZM	**Mont Dzumac**	**22.08**	**145**	P	**P**	**22 49 56.6**	**-0.2**
	4.7nm,0.5s,mb4.1,baz=323,slow=11,SNR=14						
WRAB	**Tennant Creek**	**23.85**	**228**	*e*P	**P**	**22 50 14.2**	**-0.1**
	53nm,0.8s,mb4.9						
WB2	**Warramunga Arr**	**23.86**	**228**	⇓*i*P	**P**	**22 50 14.3**	**-0.1**
WRA	**Warramunga Arr**	**23.86**	**228**	P	**P**	**22 50 14.4**	**-0.1**
	27nm,0.8s,mb4.6,baz=52,slow=9.5,SNR=181						
WRA				PcP	PcP	22 53 57.6	+2.0
	1.4nm,0.6s,baz=54,slow=2.2,SNR=6.2						
WRA				S	**S**	**22 54 25.9**	**+0.8**
	1.0nm,0.8s,baz=54,slow=15,SNR=5.8						
WRA				ScP	ScP	22 57 32.2	+5.0
	1.2nm,0.9s,baz=54,slow=2.8,SNR=8.8						
AS31	**Alice Springs**	**26.60**	**222**	*e*P	**P**	**22 50 39.0**	**-0.4**
ASAR	**Alice Springs**	**26.61**	**222**	P	**P**	**22 50 39.5**	**+0.2**
	5.5nm,0.6s,mb4.3,baz=54,slow=8.6,SNR=25						
ASAR				PcP	PcP	22 54 03.9	+2.2
	0.5nm,0.7s,baz=64,slow=3.4,SNR=4.2						
ASAR				ScP	ScP	22 57 40.1	+5.1
	1.0nm,0.9s,baz=38,slow=3.6,SNR=8.0						
STKA	**Stephens Creek**	**29.46**	**200**	P	**P**	**22 51 04.9**	**+0.2**
	2.6nm,0.7s,mb4.0,baz=28,slow=12,SNR=5.4						
STKA				LR	LR	23 03 02.9	
	comp=Z,60nm,21.1s,baz=25,slow=37						
FITZ	**Fitzroy Crossi**	**29.99**	**241**	*e*P	**P**	**22 51 08.8**	**-0.6**
	12nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**29.99**	**241**	P	**P**	**22 51 08.8**	**-0.6**
	4.0nm,0.4s,mb4.4,baz=74,slow=10,SNR=40						
FORT	**Forrest**	**35.26**	**219**	*e*P	**P**	**22 51 54.7**	**-0.8**
	11nm,0.6s,mb4.9						
VNDA	**Vanda**	**73.38**	**178**	P	**P**	**22 56 32.2**	**+0.3**
	0.3nm,0.5s,mb3.4,baz=336,slow=7.2,SNR=5.5						
VNDA	**Vanda**	**73.38**	**178**	P	**P**	**22 56 32.2**	**+0.3**
MKAR	**Makanchi Array**	**79.95**	**319**	P	**P**	**22 57 10.8**	**+1.8**
	0.3nm,0.5s,mb3.4,baz=97,slow=6.1,SNR=2.9						
AAK	**Ala-Archa**	**84.33**	**313**	P	**P**	**22 57 30.8**	**-1.0**
	2.3nm,0.4s,mb4.4						
MAW	**Mawson**	**86.11**	**203**	P	**P**	**22 57 41.2**	**+0.5**
	1.4nm,0.8s,mb4.0,baz=86,slow=4.8,SNR=6.1						
NB2	**NORSAR Subarra116.41**	**340**		PKPd	PKPdf	23 03 43.6	+0.5
	comp=Z,0.3nm,0.6s,baz=44,slow=2.0						
NOA	**NORSAR Array B116.41**	**340**		PKP	PKPdf	23 03 43.6	+0.5
	comp=Z,0.3nm,0.7s,baz=45,slow=1.9,SNR=4.4						
GERES	**GERESS Array B 123.62**	**329**		PKP	PKPdf	23 03 58.6	+1.7
	comp=Z,0.5nm,0.6s,baz=327,slow=2.2,SNR=5.2						
TORD	**Torodi Ar. Bea**	**150.19**	**289**	PKPbc	PKPbc	23 04 52.1	+1.7
	comp=Z,3.5nm,0.4s,baz=72,slow=2.2,SNR=97						
BDFB	**Brasilia**	**151.41**	**134**	PKPbc	PKPbc	23 04 56.0	+2.8
	comp=Z,6.0nm,0.7s,baz=192,slow=1.5,SNR=8.9						

GUC 25 22:48:03.3±0.5, 3397S×7202W, h8km±2km, MD3.5, ML2.4, 5C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNV	**Longovilo**	**0.50**	**89**	*e*P	Pg	22 48 13.9	+0.9
LNV				*i* S	Sg	22 48 21.3	+1.6
LCCH	**Las Cruces**	**0.62**	**37**	⇑*i*P	Pg	22 48 15.5	+0.3
LCCH				*i* S	Sg	22 48 24.9	+1.7
TACH	**Talagante**	**0.95**	**71**	⇑*i*P	Pg	22 48 20.9	-0.6
TACH				*i* S	Sg	22 48 34.4	+0.5
RCDM	**Rinconada Maip**	**1.12**	**65**	*e*P	Pg	22 48 23.6	-1.2
RCDM				*i* S	Sg	22 48 38.5	-0.7
RCDM				AML	AML	22 48 41.3	
	comp=E,112nm,0.1s						
CHCH	**Chadas Angostu**	**1.14**	**89**	*e*P	Pg	22 48 24.2	-0.9
CHCH				*i* S	Sg	22 48 40.2	+0.4
CACH	**El Canelo**	**1.19**	**98**	*e*P	Pb	22 48 25.6	-0.5
PCH	**Pirque**	**1.30**	**75**	*e*P	Pn	22 48 26.9	-0.9
ROCH	**El Roble**	**1.30**	**41**	⇑*i*P	Pn	22 48 27.0	-0.8
CICH	**Cipreses**	**1.37**	**105**	⇓*i*P	Pn	22 48 27.4	-1.3
CICH				*i* S	Sb	22 48 46.7	-0.2
PEL	**Peldehue**	**1.38**	**54**	⇑*i*P	Pn	22 48 27.9	-1.0
PEL				*i* S	Sb	22 48 46.9	-0.3
PEL				AML	AML	22 48 50.6	
	comp=E,137nm,0.4s						
PACH	**Papudo**	**1.51**	**19**	*e*P	Pn	22 48 30.3	-0.3
FCH	**Farellones**	**1.57**	**67**	⇑*i*P	Pn	22 48 31.5	-0.1
FCH				*i* S	Sn	22 48 53.2	+1.1
FCH				AML	AML	22 48 56.6	
	comp=E,85nm,0.2s						
JACH	**Jahuel**	**1.75**	**43**	*e*P	Pn	22 48 33.9	-0.1

*LDG **25** 22:56:34.6±0.2, 42.24N×71.96E, h10km, Md2.2/3, Ml2.2/9, Error ellipse: s-maj=2.8km s-min=1.2km az=162.0*
*STR **25** 22:56:35.3±0.2, 42.27N×71.95E, h2km±1km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

MDD 25 22:56:35.7±0.2, 4227N×197E, h4km±8km, mbLg1.5/19, 2C, Error ellipse: s-maj=2.1km s-min=1.6km az=10.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VALF	**Valcebollere**	**0.14**	**15**	Pg	Pg	22 56 38.3	-0.1
VALF				Sg	Sg	22 56 40.5	+0.3
VALF	**Valcebollere**	**0.14**	**15**	Pg	Pg	22 56 38.4	0.0
VALF				Lg		22 56 40.6	
CBRU	**Bruguera**	**0.16**	**84**	Pg	Pg	22 56 38.6	-0.2
CBRU				Lg		22 56 41.3	
	27nm,0.1s						
CLLI	**Llivia**	**0.21**	**1**	Pg	Pg	22 56 39.5	-0.3
CLLI				Lg		22 56 42.7	
	22nm,0.2s						
OLT	**Olot**	**0.40**	**108**	Pg	Pg	22 56 42.9	-0.4
OLT				Lg		22 56 48.4	
CARF	**Carcanieres**	**0.46**	**13**	Pg	Pg	22 56 44.3	-0.2
CARF				Sg	Sg	22 56 50.4	-0.1
CARF	**Carcanieres**	**0.46**	**13**	Pg	Pg	22 56 44.4	0.0
CARF				Lg		22 56 50.5	
CORG	**Organya**	**0.48**	**266**	Pg	Pg	22 56 44.2	-0.8
CORG				Lg		22 56 51.6	
	1.4nm,0.0s						
FILF	**Fillols**	**0.53**	**56**	Pg	Pg	22 56 43.7	-2.1
FILF				Sg	Sg	22 56 50.1	-2.5
FILF	**Fillols**	**0.53**	**56**	Pg	Pg	22 56 43.7	-2.1
FILF				Lg		22 56 49.5	
CFON	**Fontmartina**	**0.61**	**145**	Pg	Pg	22 56 46.9	-0.6
CFON				Lg		22 56 55.4	
	4.4nm,0.1s						
CSOR	**Sort**	**0.63**	**280**	Pg	Pg	22 56 47.3	-0.5
CSOR				Lg		22 56 56.0	
	4.9nm,0.3s						
EJON	**La Jonquera**	**0.70**	**75**	⇑Pg	Pg	22 56 48.6	-0.6
	3.0nm,0.1s,SNR=18						
EJON				Lg		22 56 57.9	
	7.8nm,0.1s,SNR=17						
SALF	**Salau**	**0.76**	**311**	Pg	Pg	22 56 49.5	-0.7
SALF				Sg	Sg	22 56 59.5	-0.6
SALF	**Salau**	**0.76**	**311**	Pg	Pg	22 56 49.7	-0.6
SALF				Lg		22 56 59.4	
CAVN	**Les Avellanes**	**0.98**	**247**	Lg		22 57 06.6	
	5.8nm,0.1s						
MTLF	**Montolieu**	**1.09**	**10**	*e*Pg	Pg	22 56 56.1	-0.5
MTLF				*e*Sg	Sg	22 57 10.3	-0.3
	6.1nm,0.3s						
MTLF	**Montolieu**	**1.09**	**10**	Pg	Pg	22 56 56.1	-0.5
MTLF				Lg		22 57 10.3	
	3.0nm,0.3s						
EPOB	**Poblet**	**1.13**	**216**	⇑Pg	Pg	22 56 56.4	-1.0
	2.8nm,0.1s,SNR=18

RJF Lg 22 58 11.5
0.8nm,0.2s
VIVF Saint-Julien-I 3.25 36 *e*Pg Pg 22 57 35.4 -2.6
VIVF *e*Sg Sg 22 58 17.6 -2.5
0.7nm,0.2s
VIVF Saint-Julien-I 3.25 36 Pg Pg 22 57 35.4 -2.6
VIVF Lg 22 58 17.6
0.3nm,0.2s
TCF Toulx Ste Croi 4.02 2 *e*Pg Pg 22 57 49.6 -3.2
TCF *e*Sg Sg 22 58 41.8 -3.1
1.1nm,0.3s
TCF Toulx Ste Croi 4.02 2 Pg Pg 22 57 49.6 -3.2
TCF Lg 22 58 41.8
0.6nm,0.3s

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*ISCJB **25** 22:57:35.2±0.6,2426S±005×6709W±007,h181m±9km, mb3.5/4, Error ellipse: s-maj=11.0km s-min=7.4km az=16.9*
*NEIC **25** 22:57:35.9±0.5,2424S×6708W,h173km±7km,mb4.2/4, Error ellipse: s-maj=9.4km s-min=6.9km az=99.0*
*IDC **25** 22:57:36.5±1.1,2420S×6701W,h176km±11km,mb3.4/4, mb1 3.6/10,mb1mx3.5/19,mbtmp4.0/10,Error ellipse: s-maj=16.1km s-min=14.0km az=77.0*
*GUC **25** 22:57:37.8±0.4,2443S×6744W,h190km,ML4.5*
ISC 25 22:57:36.3±0.5,2426S±005×**6709W**±007,**h175**km±9km, **n29,σ0 95/39,mb3.5**/4,**4C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
LVC	**Limon Verde**	**2.34**	**314**	P		**Pn**	**22 58 18.5**	**+1.7**
LVC				S		**Sn**	**22 58 49.9**	**+1.6**
	80nm,0.3s,SNR=6.8							
LVC	**Limon Verde**	**2.34**	**314**	*e*Pn		**Pn**	**22 58 18.2**	**+1.4**
LVC				*e*Sn		**Sn**	**22 58 49.0**	**+0.8**
CEN1	**Los Morros**	**2.98**	**286**	⇓	*i*P	**Pn**	**22 58 25.9**	**+1.6**
CEN1				*i* S		**Sn**	**22 59 02.2**	**+0.5**
CEN1				AML	AML		22 59 06.5	
	comp=N,640nm,0.8s							
CPN1	**Cerro Paranal**	**3.04**	**263**	⇑	*i*P	**Pn**	**22 58 25.5**	**+0.4**
CPN1				*i* S		**Sn**	**22 59 02.0**	**-1.1**
CPN1				AML	AML		22 59 09.1	
	comp=E,853nm,0.4s							
ANCH	**Antofagasta**	**3.09**	**280**	⇑	*i*P	**Pn**	**22 58 26.4**	**+0.6**
ANCH				*i* S		**Sn**	**22 59 03.1**	**-1.1**
ANCH				AML	AML		22 59 05.9	
	comp=N,1μm,0.4s							
ANCH	**Antofagasta**	**3.09**	**280**	⇑	*i*P	**Pn**	**22 58 26.4**	**+0.6**
ANCH				*i* S		**Sn**	**22 59 03.1**	**-1.1**
CDCH	**Caldera**	**4.38**	**230**	⇑	*i*P	**Pn**	**22 58 40.4**	**-1.6**
CDCH				*i* S		**Sn**	**22 59 29.2**	**-4.3**
CFAA	**Coronel Fontan**	**7.38**	**188**	P		**Pn**	**22 59 21.3**	**-0.1**
	comp=N,0.1nm,0.3s,baz=6.4,slow=12,SNR=15							
CFAA				S		**Sn**	**23 00 38.6**	**-5.8**
	comp=N,0.5nm,0.3s,baz=266,slow=18,SNR=13							
CFAA	**Coronel Fontan**	**7.38**	**188**	P		**Pn**	**22 59 21.3**	**-0.1**
CFAA				S		**Sn**	**23 00 38.6**	**-5.8**
LPAZ	**La Paz**	**8.00**	**353**	P		**Pn**	**22 59 30.3**	**+0.9**
	comp=N,3.7nm,0.3s,baz=167,slow=8.4,SNR=72							
LPAZ				S		**Sn**	**23 00 58.0**	**-1.0**
	comp=N,0.5nm,0.3s,baz=333,slow=21,SNR=9.1							
LPAZ	**La Paz**	**8.00**	**353**	*e*Pn		**Pn**	**22 59 29.8**	**+0.4**
	comp=N,9.4nm,0.4s							
LPAZ				*e*Sn		**Sn**	**23 00 58.4**	**-0.6**
ARE	**Arequipa**	**8.79**	**331**	*e*P		**Pn**	**22 59 39.0**	**-0.9**
ARE				*e*S		**Sn**	**23 01 12.0**	**-5.9**
CPUP	**Villa Florida**	**9.07**	**105**	P		**Pn**	**22 59 43.7**	**+0.1**
	comp=N,0.3nm,0.3s,baz=268,slow=8.1,SNR=4.0							
CPUP	**Villa Florida**	**9.07**	**105**	*e*Pn		**Pn**	**22 59 43.9**	**+0.3**
SIV	**San Ignacio**	**9.98**	**36**	P		**Pn**	**22 59 54.0**	**-1.6**
	comp=N,0.5nm,0.3s,baz=218,slow=14,SNR=20							
SIV				S		**Sn**	**23 01 33.4**	**-13**
	baz=232,slow=19,SNR=2.0							
TRQA	**Tornquist**	**14.43**	**164**	*e*Pn		**Pn**	**23 00 51.8**	**-0.6**
	comp=N,19nm,0.7s							
SAML	**Samuel**	**15.68**	**14**	*e*Pn		**Pn**	**23 01 06.1**	**-1.7**
	comp=N,4.1nm,0.9s							
PLCA	**Paso Flores**	**16.68**	**189**	P		**Pn**	**23 01 20.2**	**+0.4**
	comp=N,0.1nm,0.3s,baz=1.4,slow=16,SNR=4.9							
PLCA	**Paso Flores**	**16.68**	**189**	*e*Pn		**Pn**	**23 01 19.9**	**+0.1**
	comp=N,5.1nm,0.9s							
BDFB	**Brasilia**	**19.86**	**68**	P		**P**	**23 01 54.0**	**+0.2**
	comp=N,1.6nm,0.3s,baz=251,slow=11,SNR=16							
BAO	**Brasilia Array**	**19.88**	**68**	P		**P**	**23 01 55.0**	**+1.0**
VNDA	**Vanda**	**74.43**	**190**	P		**P**	**23 08 55.5**	**+0.5**
	comp=N,0.5nm,0.9s,mb3.3,baz=146,slow=3.6,SNR=3.4							
TORD	**Torodi Ar. Bea**	**76.74**	**69**	P		**P**	**23 09 08.0**	**-0.2**
	comp=N,1.2nm,0.7s,mb3.6,baz=262,slow=5.9,SNR=19							
PDAR	**Pinedale Array**	**77.33**	**329**	P		**P**	**23 09 11.6**	**+0.2**
	comp=N,0.4nm,0.5s,mb3.3,baz=138,slow=8.2,SNR=3.2							
BOSA	**Boshof**	**80.69**	**117**	P		**P**	**23 09 30.5**	**+0.8**
	comp=N,1.0nm,0.4s,mb3.8,baz=244,slow=19,SNR=8.9							
BOSA	**Boshof**	**80.69**	**117**	P		**P**	**23 09 30.5**	**+0.8**
BRG	**Berggiesshubel**	**103.06**	**40**	*e*P		PKiKP	23 15 38.3	+4.4
	comp=N,2.7nm,1.0s							
WRA	**Warramunga Arr**	**131.35**	**207**	PKP		PKPdf	23 16 28.3	+0.7
	comp=N,0.2nm,0.5s,baz=154,slow=1.8,SNR=5.1							
MKAR	**Makanchi Array**	**146.78**	**40**	PKPbc		PKPbc	23 16 57.9	+0.4
	comp=N,0.9nm,0.8s,baz=298,slow=3.4,SNR=4.8							

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*BGS **25** 22:59:33.9±1.4,1495N×9080W,h110km,mb4.9*
*CASC **25** 22:59:39.3±2.4,1486N×9123W,h193km±5km,MD4.6, ML4.3*
*ISCJB **25** 22:59:41.3±0.1,1497N±003×9098W±002,h183km, mb4.5/121,Error ellipse: s-maj=4.5km s-min=2.1km az=71.7*
*NEIC **25** 22:59:41.9±0.5,1474N×9103W,h191km±4km,mb4.6/91, MD5.0(MEX),Error ellipse: s-maj=5.2km s-min=4.7km az=206.0*
*SZGRF **25** 22:59:42.3,1380N×9014W,h192km,mb4.8,Near coast of Guatemala*
*IDC **25** 22:59:42.3±0.6,1497N×9097W,h184km±4km,mb4.3/22, mb1 4.4/23,mb1mx4.4/24,mbtmp4.8/23,MS3.4/4, Ms1 3.4/4,ms1mx2.9/28,Error ellipse: s-maj=15.8km s-min=7.3km az=68.0*
*MOS **25** 22:59:43.3±0.9,1497N×9094W,h206km,mb5.0/8,Error ellipse: s-maj=8.5km s-min=5.7km az=83.9*
*HRVD **25** 22:59:45.4±0.4,1501N×9135W,h188km±3km,MW4.9/66, Centroid moment Tensor Solution. LP body waves: s31,c33;Mantle waves: s66,c85; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.26±.12; Mθθ-1.33±.13; Mϕϕ0.07±.17; Mrθ1.27±.09; Mrϕ0.47±.13; Mθϕ-2.31±.11; Best double couple: Mo2.94900×10¹⁶ NP1:ϕ266.00000°,δ20.00000°,λ35.00000°. NP2: ϕ144.00000°,δ79.00000°,λ107.00000°. Principal axes: T 3.1730, Plg53.0000°, Azm74.0000°; N -0.4440, Plg17.0000°, Azm320.0000°; P -2.7260, Plg32.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MEX **25** 22:59:46.9±1.0,1497N×9157W,h83km±35km,MD5.0*
ISC 25 22:59:43.2±0.1,**1498N**±003×**9092W**±002,**h185**km, **h185**km±1.9km;**pP-P,n505,σ1 10/491,mb4.5**/121, **133C-67D,Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
FUG	**Fuego 3**	**0.53**	**172**	⇓	*i*P	**Pn**	**23 00 07.2**	**-1.5**
GCG	**Guatemala City**	**0.54**	**136**	⇑	*e*P	**Pn**	**23 00 08.7**	**0.0**
GCG				*e*S		**Sn**	**23 00 29.1**	**+0.8**
PCG	**Pacaya**	**0.66**	**152**	⇑	*e*P	**Pn**	**23 00 08.7**	**-0.5**
NBG	**Las Nubes**	**0.68**	**125**	⇑	*e*P	**Pn**	**23 00 07.2**	**-2.1**
TER	**Terranova**	**0.71**	**161**	⇓	*e*P	**Pn**	**23 00 07.7**	**-1.8**
JAT	**Jato**	**0.95**	**227**	⇓	*e*P	**Pn**	**23 00 07.2**	**-3.8**
JAT				*e*S		**Sn**	**23 00 27.2**	**-5.3**
MTO2	**Montecristo 2**	**1.61**	**111**	⇓	*i*P	x	23 00 31.9	
MTO2				*e*S		x	23 01 00.7	
RTR	**El Retiro**	**1.64**	**131**	⇓	*e*P	x	23 00 31.0	
RTR				*e*S		x	23 01 00.3	
BOQS	**Boqueron**	**2.02**	**128**	⇑	*e*P	x	23 00 35.1	
BOQS				*e*S		x	23 01 05.9	
LBRS	**Las Brisas**	**2.20**	**124**	⇓	*e*P	x	23 00 37.5	
LBRS				*e*S		x	23 01 13.3	
LFRS	**El Faro**	**2.25**	**127**	⇓	*e*P	x	23 00 37.6	
LFRS				*e*S		x	23 01 12.0	
LCBS	**La Ceiba**	**2.30**	**125**	⇓	*e*P	x	23 00 38.4	
LCBS				*e*S		x	23 01 11.3	
SCIG		**3.97**	**356**	*i* P		**Pn**	**23 00 44.1**	**+0.1**
SCIG				*i* S		**Sn**	**23 01 30.5**	**-1.2**
CMIG	**Matias Romero**	**4.35**	**299**	P		**Pn**	**23 00 43.7**	**-5.2**
	157nm,0.3s,baz=107,slow=8.3,SNR=1015							
CMIG				S		**Sn**	**23 01 29.6**	**-11**
	279nm,0.3s,baz=121,slow=12,SNR=26							
CMIG	**Matias Romero**	**4.35**	**299**	⇑	*i*P	**Pn**	**23 00 43.7**	**-5.1**
CMIG				*i* S		**Sn**	**23 01 26.3**	**-14**
CMIG	**Matias Romero**	**4.35**	**299**	*i* P		**Pn**	**23 00 43.1**	**-5.7**
CMIG				*i* S		**Sn**	**23 01 29.2**	**-11**
CRIN	**San Cristobal**	**4.39**	**121**	*e*P		**Pn**	**23 00 51.3**	**+2.5**
TELN	**Telica**	**4.62**	**120**	*e*P		**Pn**	**23 00 54.7**	**+2.4**
LEON	**Leon**	**4.67**	**123**	*e*P		**Pn**	**23 00 53.9**	**+0.9**
CNGN	**Cerro Negro**	**4.79**	**120**	*e*P		**Pn**	**23 00 55.6**	**+1.1**
MIRN	**Miramar**	**4.81**	**121**	*e*P		**Pn**	**23 00 56.3**	**+1.6**
MOMJ	**Momotombo**	**4.97**	**120**	*e*P		**Pn**	**23 00 59.1**	**+2.3**
COPN	**Copaltepe**	**5.05**	**123**	⇑	*i*P	**Pn**	**23 00 59.1**	**+1.3**
HUIG	**Huatulco**	**5.07**	**280**	⇑	*i*P	**Pn**	**23 00 51.0**	**-7.0**
HUIG				*i* S		**Sn**	**23 01 40.0**	**-17**
HUIG	**Huatulco**	**5.07**	**280**	*i* P		**Pn**	**23 00 50.9**	**-7.1**
HUIG				*i* S		**Sn**	**23 01 40.4**	**-16**
XAVN	**Gruta Xavier**	**5.28**	**122**	*e*P		**Pn**	**23 01 02.6**	**+1.8**
TISN	**Laguna Tiscapa**	**5.33**	**121**	*e*P		**Pn**	**23 01 04.1**	**+2.6**
MGAN	**Managua**	**5.35**	**121**	*i*		**Sn**	**23 02 04.5**	**+1.1**
	comp=E,544nm,0.5s							
TICN	**Ticuantepe**	**5.42**	**122**	*e*P		**Pn**	**23 01 04.8**	**+2.2**
VHO	**Vista Hermosa**	**5.96**	**291**	⇑	*i*P	**Pn**	**23 01 06.0**	**-3.7**
VHO				*i* S		**Sn**	**23 02 04.9**	**-13**
VHO	**Vista Hermosa**	**5.96**	**291**	*i* P		**Pn**	**23 01 06.0**	**-3.7**
VHO				*i* S		**Sn**	**23 02 04.8**	**-13**
CONN	**Concepcion**	**6.17**	**123**	*e*P		**Pn**	**23 01 13.7**	**+1.3**
RIN3	**Volcan Rincon**	**6.82**	**127**	⇓	*e*P	**Pn**	**23 01 22.4**	**+1.5**
LIM1	**Limonal**	**6.97**	**127**	⇑	*i*P	**Pn**	**23 01 24.1**	**+1.2**
LVIG	**Laguna Verde**	**7.06**	**313**	*i* P		**Pn**	**23 01 20.2**	**-3.8**
LVIG				*i* S		**Sn**	**23 02 32.3**	**-11**
LVIG	**Laguna Verde**	**7.06**	**313**	*i* P		**Pn**	**23 01 19.4**	**-4.6**
LVIG				*i* S		**Sn**	**23 02 32.2**	**-12**
TPIG	**Tehuac#an**	**7.06**	**300**	*i* P		**Pn**	**23 01 20.4**	**-3.6**
TPIG				*i* S		**Sn**	**23 02 31.1**	**-13**
VCR	**Vista de Mar**	**7.07**	**132**	⇑	*e*P	**Pn**	**23 01 25.4**	**+1.3**
PNIG	**Pinotepa**	**7.08**	**282**	*i* P		**Pn**	**23 01 19.0**	**-5.3**
PNIG				*i* S		**Sn**	**23 02 31.7**	**-13**
PNIG	**Pinotepa**	**7.08**	**282**	*i* P		**Pn**	**23 01 19.0**	**-5.3**
PNIG				*i* S		**Sn**	**23 02 27.7**	**-17**
UTMO	**Huajuapan**	**7.19**	**294**	*i* P		**Pn**	**23 01 21.8**	**-3.9**
UTMO				*i* S		**Sn**	**23 02 34.5**	**-12**
VACR	**Volcan Arenal**	**7.56**	**126**	*e*P		**Pn**	**23 01 32.0**	**+1.4**
JCR	**Jicaral**	**7.63**	**131**	⇓	*e*P	**Pn**	**23 01 32.5**	**+1.1**
CAO	**Cobano**	**7.73**	**132**	⇓	*e*P	**Pn**	**23 01 34.0**	**+1.1**
EPA	**Esparza**	**7.92**	**128**	⇓	*e*P	**Pn**	**23 01 36.6**	**+1.3**
CGA2	**Cerro Gallo 2**	**8.00**	**127**	*e*P		**Pn**	**23 01 38.2**	**+1.8**
POA2	**Poas 2**	**8.07**	**125**	*e*P		**Pn**	**23 01 39.0**	**+1.7**
PRS1	**Puriscal**	**8.14**	**127**	*e*P		**Pn**	**23 01 40.2**	**+2.0**
LAJ	**Bijagual**	**8.36**	**127**	⇓	*e*P	**Pn**	**23 01 39.0**	**-2.1**
PPM	**Popocatepetl**	**8.42**	**300**	*i* P		**Pn**	**23 01 40.6**	**-1.2**
PPM				*i* S		**Sn**	**23 03 09.4**	**-6.7**
PPM	**Popocatepetl**	**8.42**	**300**	*i* P		**Pn**	**23 01 40.8**	**-1.1**
PPM				*i* S		**Sn**	**23 03 04.9**	**-11**
OCM	**Ochomogo**	**8.47**	**126**	⇑	*i*P	**Pn**	**23 01 43.6**	**+1.1**
LCR2	**La Lucha 2**	**8.53**	**127**	*e*P		**Pn**	**23 01 45.0**	**+1.7**
YAIG	**Yautepec**	**8.70**	**297**	*i* P		**Pn**	**23 01 43.4**	**-2.1**
BUS	**Buena Vista**	**8.83**	**127**	⇑	*e*P	**Pn**	**23 01 49.2**	**+1.9**
MEIG	**Mezcala**	**8.84**	**291**	*i* P		**Pn**	**23 01 44.7**	**-2.8**
MEIG				*i* S		**Sn**	**23 03 16.5**	**-10**
PLIG	**Platanillo**	**8.89**	**294**	*i* P		**Pn**	**23 01 45.7**	**-2.4**
PLIG				*i* S		**Sn**	**23 03 20.5**	**-7.1**
PLIG	**Platanillo**	**8.89**	**294**	*i* P		**Pn**	**23 01 45.7**	**-2.4**
PLIG				*i* S		**Sn**	**23 03 12.9**	**-15**
IIZ	**Mezontepec**	**8.99**	**299**	*i* P		**Pn**	**23 01 47.3**	**-2.0**
IIZ				*i* S		**Sn**	**23 03 16.5**	**-13**
CAIG	**El Cayaco**	**9.22**	**284**	*i* P		**Pn**	**23 01 47.9**	**-4.5**
CAIG				*i* S		**Sn**	**23 03 22.3**	**-13**
CTCR	**Cotoan**	**10.01**	**126**	*e*P		**Pn**	**23 02 03.4**	**+0.6**
ZIIG	**Zihuatanejo**	**10.46**	**286**	*i* P		**Pn**	**23 02 06.6**	**-1.9**
MOIG	**Morelia**	**10.86**	**297**	*i* P		**Pn**	**23 02 13.5**	**-0.2**
MGV	**Manicaragua**	**12.56**	**54**	*e*P		**Pn**	**23 02 31.4**	**-4.2**
MBJ	**Montego Bay**	**12.97**	**73**	⇓	*i*P	**Pn**	**23 02 49.7**	**+9.0**
MCJ	**Malvern**	**13.03**	**75**	⇓	*i*P	**Pn**	**23 02 50.5**	**+9.0**
BBJ	**Bamboo Saint A**	**13.51**	**74**	⇓	*i*P	**Pn**	**23 02 55.7**	**+8.1**
STH	**Stony Hill**	**13.88**	**75**	⇓	*i*P	**Pn**	**23 02 59.5**	**+7.4**
GWJ	**Greenwich**	**13.95**	**75**	⇓	*i*P	**Pn**	**23 03 00.3**	**+7.3**
RCC	**Rio Carpintero**	**15.35**	**69**	*e*P		**Pn**	**23 03 14.9**	**+4.6**
HKT	**Hockley**	**15.57**	**344**	*e*Pn		**Pn**	**23 03 13.3**	**+0.4**
HKT				*e*			23 03 51.5	
DWPF	**Disney**	**15.76**	**32**	*e*Pn		**Pn**	**23 03 17.9**	**+2.7**
	comp=E,94nm,0.8s							
MASC	**Masc**	**16.73**	**70**	*e*P		**Pn**	**23 03 31.4**	**+4.5**
NATX	**Nacogdoches**	**17.05**	**349**	*e*P		**Pn**	**23 03 31.1**	**+0.4**
	comp=E,48nm,0.6s							
JCT	**Junction City**	**17.45**	**334**	*e*P		**Pn**	**23 03 35.0**	**-0.5**
LRAL	**Lakeview Retre**	**18.33**	**11**	*e*Pn		**Pn**	**23 03 46.8**	**+1.1**
	comp=E,82nm,0.8s							
ROSC	**El Rosal**	**19.17**	**120**	P		**P**	**23 03 55.0**	**+2.4**
	comp=E,0.6nm,0.3s,baz=103,slow=16,SNR=14							
OXF	**Oxford**	**19.50**	**4**	*e*P		**P**	**23 03 56.9**	**+0.8**
PLAL	**Pickwick Lake**	**20.08**	**7**	*e*P		**P**	**23 04 03.3**	**+0.9**
SWET	**Sewanee**	**20.64**	**12**	*e*P		**P**	**23 04 10.5**	**+2.1**
SDV	**Santo Domingo**	**20.74**	**105**	P		**P**	**23 04 09.3**	**-0.1**
	comp=E,86nm,0.9s,baz=321,slow=6.2,SNR=14							
SDV	**Santo Domingo**	**20.74**	**105**	*e*P		**P**	**23 04 09.1**	**-0.3**
	comp=E,58nm,0.7s							
WMOK	**Wichita Mounta**	**20.91**	**342**	*e*P		**P**	**23 04 09.8**	**-1.4**
MYNC	**Murphy**	**20.92**	**16**	*e*P		**P**	**23 04 13.8**	**+2.5**
GDL2	**Guadalupe Moun**	**21.07**	**327**	*e*pP		pP	**23 04 46.0**	**+1.5**
JSCJ	**Jenkinsville**	**21.11**	**23**	*e*P		**P**	**23 04 15.3**	**+2.0**
JSC				*e*S		**S**	**23 07 56.7**	**-0.6**
CPCT	**Cooper Cave**	**21.18**	**15**	*e*P		**P**	**23 04 16.4**	**+2.4**
WVT	**Waverly**	**21.24**	**7**	*e*P		**P**	**23 04 14.6**	**-0.1**
WVT							23 08 10.1	
WVT					pmax	pmax		
	comp=Z,23nm,0.7s,mb4.6							
WVT	**Waverly**	**21.24**	**7**	*e*P		**P**	**23 04 14.6**	**-0.1**
	comp=Z,23nm,0.7s,mb4.6							
WVT					PcP	PcP	23 08 10.1	-1.8
WVT				*e*ScP		ScP	23 11 29.2	-2.0
MNTX	**Cornudas Mount**	**21.25**	**324**	*e*P		**P**	**23 04 14.5**	**-0.3**
MNTX				*e*pP			23 04 47.5	
GLAT	**Glass**	**21.25**	**4**	*e*P		**P**	**23 04 14.9**	**+1.4**
PARMO	**Parma**	**21.62**	**3**	*e*P		**P**	**23 04 19.2**	**+0.5**
SIUC	**Southern Illin**	**22.70**	**4**	*e*P		**P**	**23 04 30.0**	**+1.0**
SIUC				*e*pP			23 05 04.3	
FVM	**French Village**	**22.92**	**1**	*e*P		**P**	**23 04 29.8**	**-1.2**
USIN	**University of**	**23.08**	**7**	*e*P		**P**	**23 04 33.2**	**+0.8**
	comp=Z,53nm,0.6s,mb5.2							
CNNC	**Cliffs of the**	**23.32**	**28**	*e*P		**P**	**23 04 36.6**	**+1.9**
	comp=Z,303nm,0.6s							
WCI	**Wyandotte Cave**	**23.52**	**9**	*e*P		**P**	**23 04 36.8**	**+0.4**
SLM	**Saint Louis**	**23.57**	**1**	*e*P		**P**	**23 04 38.1**	**+1.1**
SJG	**San Juan**	**23.94**	**79**	P		**P**	**23 04 40.7**	**+0.4**
	comp=Z,26nm,0.7s,mb4.9,baz=284,slow=7.1,SNR=5.6							
SJG	**San Juan**	**23.94**	**79**	*e*P		**P**	**23 04 41.0**	**+0.7**
	comp=Z,20nm,0.8s,mb4.7							
LENM	**Lemitar**	**23.98**	**326**	*e*pP		pP	23 05 17.4	+1.3
BLA	**Blacksburg**	**24.03**	**21**	*e*P		**P**	**23 04 42.8**	**+1.7**
	comp=Z,38nm,0.7s,mb5.0							
FWV	**Forest Hill**	**24.23**	**20**	*e*P		**P**	**23 04 44.6**	**+1.7**
ANMO	**Albuquerque**	**24.31**	**328**	pP		pP	23 05 19.3	-0.3
	comp=Z,3.2nm,0.7s,baz=137,slow=12,SNR=5.6							
ANMO					ScP	ScP	23 11 39.9	+0.6
	comp=Z,1.7nm,0.7s,baz=178,slow=5.0,SNR=4.5							
ANMO	**Albuquerque**	**24.31**	**328**	*e*pP		pP	23 05 20.0	+0.5
BLO	**Bloomington**	**24.41**	**8**	*e*P		**P**	**23 04 44.7**	**+0.1**
	comp=Z,32nm,0.7s,mb5.0							
KSU1	**Kansas State U**	**24.55**	**349**	*e*P		**P**	**23 04 45.7**	**-0.1**
	comp=Z,45nm,0.7s,mb5.1							
TUC	**Tucson**	**25.00**	**317**	*e*P		**P**	**23 04 50.2**	**+0.3**
TUC					pmax	pmax		
	comp=Z,39nm,0.6s,mb5.1							
TUC	**Tucson**	**25.00**	**317**	*e*P		**P**	**23 04 50.2**	**+0.3**
	comp=Z,39nm,0.6s,mb5.1							
ATAH	**Atahualpa**	**25.12**	**150**	P		**P**	**23 04 53.5**	**+2.5**
	comp=Z,11nm,0.7s,mb4.5,baz=354,slow=6.7,SNR=7.7							
ATAH					PcP	PcP	23 08 22.5	+2.4
	comp=Z,10nm,0.7s,baz=20,slow=2.5,SNR=6.2							
116A	**Eloy**	**25.76**	**316**	⇓	P	**P**	**23 04 57.0**	**+0.2**
	baz=26,SNR=6.5							
CBN	**Corbin**	**26.05**	**25**	*e*P		**P**	**23 05 01.7**	**+2.4**
ACSO	**Alum Creek Sta**	**26.10**	**14**	*e*P		**P**	**23 05 01.2**	**+1.4**
	comp=Z,91nm,0.7s,mb5.5							
115A	**Sonoran Desert**	**26.20**	**316**	⇓	P	**P**	**23 05 01.1**	**+0.5**
	baz=26							
MCWV	**Mont Chateau**	**26.43**	**19**	*e*P		**P**	**23 05 04.5**	**+1.7**
	comp=Z,20nm,0.6s,mb4.9							
SCIA	**State Center**	**26.91**	**356**	P		**P**	**23 05 06.9**	**-0.1**
	comp=Z,156nm,0.4s,mb5.0							
Z14A	**Wintersburg**	**27.08**	**316**	⇑	P	**P**	**23 05 09.2**	**+0.7**
	baz=27							
X15A	**Humboldt**	**27.32**	**319**	⇑	P	**P**	**23 05 11.3**	**+0.6**
	baz=27							
WUAZ	**Wupatki**	**27.47**	**322**	*e*P		**P**	**23 05 13.5**	**+1.5**
	comp=Z,16nm,0.6s,mb4.8							
Y14A	**Wickenburg**	**27.47**	**317**	⇓	P	**P**	**23 05 12.3**	**+0.2**
	baz=27							
X14A	**Yava**	**27.72**	**318**	⇑	P	**P**	**23 05 14.9**	**+0.6**
	baz=28							
W15A	**Williams**	**27.79**	**320**	⇓	P	**P**	**23 05 16.0**	**+1.1**
	baz=28							
JFWS	**Jewell Farm**	**27.84**	**1**	*e*P		**P**	**23 05 17.3**	**+1.9**
PV01	**Paradox Valley**	**27.85**	**329**	*e*P		**P**	**23 05 16.2**	**+0.8**
Y13A	**Salome**	**27.94**	**316**	⇑	P	**P**	**23 05 16.7**	**+0.5**
	baz=28							
SSPA	**Standing Stone**	**27.97**	**21**	*e*P		**P**	**23 05 18.3**	**+1.8**
MVL	**Millersville**	**28.00**	**24**	*e*P		**P**	**23 05 19.1**	**+2.4**
MVL				*e*pP		pP	23 05 53.1	-1.4
ALLY	**Alegheny Colle**	**28.17**	**17**	*e*P		**P**	**23 05 19.5**	**+1.3**
GLA	**Glamis**	**28.18**	**314**	*e*P		**P**	**23 05 19.4**	**+1.1**
GLA				*e**PP		pP	23 05 55.7	-0.5
GLA	**Glamis**	**28.18**	**314**	⇑	P	**P**	**23 05 18.8**	**+0.5**
	baz=28							
W14A	**Seligman**	**28.32**	**319**	⇑	P	**P**	**23 05 20.5**	**+1.0**
	baz=28							
Y12C	**Blythe**	**28.37**	**315**	⇓	P	**P**	**23 05 20.4**	**+0.4**
	baz=28							
X13A	**Yucca**	**28.41**	**318**	⇓	P	**P**	**23 05 20.8**	**+0.4**
	baz=28							
PDMCI	**Parker Dam,Lak**	**28.43**	**317**	⇓	P	**P**	**23 05 21.0**	**+0.4**
	baz=28							
ERPA	**Erie**	**28.64**	**17**	*e*P		**P**	**23 05 23.9**	**+1.5**
	comp=Z,36nm,0.6s,mb5.3							
W13A	**Hualapai Mount**	**28.75**	**318**	⇓	P	**P**	**23 05 24.4**	**+1.0**
	baz=28,SNR=7.7							
SWSC	**Sam W. Stewart**	**28.80**	**313**	⇑	P	**P**	**23 05 24.2**	**+0.4**
	baz=28							
DVTC	**Desert V Tower**	**28.87**	**312**	⇑	P	**P**	**23 05 24.8**	**+0.4**
	baz=29							
MONP	**Monument Peak**	**29.22**	**312**	⇓	P	**P**	**23 05 28.1**	**+0.5**
	baz=29							
BRNJ	**Basking Ridge**	**29.31**	**26**	*e*P		**P**	**23 05 27.6**	**-0.7**
	comp=Z,87nm,1.1s,mb5.4							
BBSR	**BB Station**	**29.48**	**49**	*e*P		**P**	**23 05 32.4**	**+2.5**
W12A	**Cal Nev Ari**	**29.52**	**318**	⇓	P	**P**	**23 05 30.9**	**+0.8**
	baz=29							
BELC	**Belle Mtn.**	**29.52**	**314**	⇑	P	**P**	**23 05 30.9**	**+0.8**
	baz=29							
PFO	**Pinyon Flat Ob**	**29.62**	**313**	⇓	P	**P**	**23 05 31.9**	**+0.8**
	baz=29							
CPNY	**Central Park**	**29.65**	**27**	*e*P		**P**	**23 05 32.1**	**+0.8**
	comp=Z,50nm,0.9s,mb

baz=34
M11A Holland Ranch, 34.04 326 ⇑P P **23 06 10.4 +0.8**
baz=34
U04C Hernandez Rese 34.09 314 ⇑P P **23 06 10.6 +0.5**
baz=34
S06C San Francisco 34.27 317 ⇑P P **23 06 13.2 +1.5**
baz=34,SNR=5.4
T05C Eagle Field, D 34.29 315 ⇓P P **23 06 12.9 +1.1**
baz=34
S05C Merced 34.30 316 ⇓P P **23 06 12.7 +0.8**
baz=34
WAKR Walker 34.36 318 *e*pP pP 23 06 51.7 +0.8
R06C Coleville 34.38 318 ⇑P P **23 06 13.7 +1.2**
baz=34
M10A I.L. Ranch, Tu 34.51 325 ⇑P P **23 06 14.7 +1.0**
baz=34
N09A Rock Creek Ran 34.63 323 ⇓P P **23 06 15.1 +0.4**
baz=34
HAST UC Hastings Re 34.64 314 ⇑P P **23 06 15.2 +0.4**
baz=34
CMB Columbia Colle 34.71 317 *e*P P **23 06 16.5 +1.1**
CMB Columbia Colle 34.71 317 ⇑P P **23 06 16.2 +0.8**
baz=34
PACP Pacheco Peak 34.77 315 ⇑P P **23 06 16.1 +0.2**
baz=34
HLID Hailey 34.85 330 *e*P P **23 06 16.2 -0.3**
comp=Z,1.7nm,0.8s,mb3.7
R05C Kirkwood Meado 34.88 318 ⇑P P **23 06 17.8 +1.0**
baz=35
N08A GE Springer Mi 34.94 323 ⇓P P **23 06 18.3 +1.0**
baz=35
M09A Marrel Ranch, 34.96 324 ⇑P P **23 06 17.8 +0.3**
baz=35
O07A Toulon 34.99 321 ⇑P P **23 06 18.2 +0.4**
baz=35
PAHR Pah Rah Range 35.03 320 *e*pP pP 23 06 57.9 +1.1
S04C Ingram Canyon, 35.06 316 ⇓P P **23 06 18.7 +0.4**
baz=35
R04C Big Horse Banc 35.20 317 ⇓P P **23 06 20.3 +0.7**
baz=35
P06A Stead Airport, 35.33 320 ⇑P P **23 06 21.7 +1.0**
baz=35
LAVA Lava Cap Winer 35.34 318 ⇑P P **23 06 21.3 +0.6**
baz=35
ULM Lac du Bonnet 35.41 355 P P **23 06 20.2 -1.1**
comp=Z,28nm,0.7s,mb5.0,baz=174,slow=9.0,SNR=38
ULM ScP ScP 23 12 14.0 -1.2
comp=Z,5.6nm,0.7s,baz=206,slow=5.2,SNR=7.5
ULM LR LR 23 21 55.2
comp=Z,44nm,21.1s,baz=222,slow=38
ULM Lac du Bonnet 35.41 355 P P **23 06 20.2 -1.1**
ULM ScP ScP 23 12 14.0 -1.2
ULM LR LR 23 21 55.2
WENL Wente Brothers 35.41 315 ⇓P P **23 06 22.4 +1.0**
baz=35
BNLO Ben Lomond (Sa 35.44 314 ⇓P P **23 06 22.5 +0.8**
baz=35
M08A Happy Creek Ra 35.51 323 ⇑P P **23 06 22.8 +0.6**
baz=35
P05C Yuba Gap, Truc 35.56 319 ⇓P P **23 06 23.7 +1.0**
baz=35
O06A Flanigan 35.58 320 P P **23 06 24.1 +1.3**
baz=35,SNR=8.3
LRM Limekiln Ridge 35.68 334 *e*P P **23 06 24.1 +0.4**
LRM *e*pP pP 23 07 02.5 +0.1
BEKR Beckwourth 35.73 320 ⇓P P **23 06 25.1 +1.0**
baz=36
N06A Buffalo Meadow 35.93 321 P P **23 06 26.5 +0.7**
baz=36,SNR=5.9
K09A Rome 35.96 326 P P **23 06 27.0 +1.0**
baz=36,SNR=23
L08A Fields 35.96 324 P P **23 06 26.1 0.0**
baz=36,SNR=7.3
ORV Oroville 36.28 318 ⇓P P **23 06 29.5 +0.8**
baz=36
SUTB Sutter Butte 36.28 318 ⇓P P **23 06 29.7 +0.9**
baz=36
WVOR Wild Horse Val 36.29 324 *e*P P **23 06 28.7 -0.1**
WVOR pmax pmax
comp=Z,50nm,0.7s,mb5.2
WVOR Wild Horse Val 36.29 324 *e*P P **23 06 28.7 -0.1**
comp=Z,4.6nm,0.7s,mb4.2
WVOR *e*pP pP 23 07 06.6 -1.1
SAML Samuel 36.35 129 *e*P P **23 06 27.6 -1.7**
comp=Z,42nm,0.7s,mb5.2
K08A Mann Creek Ran 36.40 325 P P **23 06 30.4 +0.6**
baz=36,SNR=23
J09A Fry Pan Ranch, 36.41 326 ⇓P P **23 06 30.4 +0.5**
baz=36
L07A Adell 36.42 323 ⇑P P **23 06 30.4 +0.5**
baz=36
EGMT Eagleton 36.45 339 *e*P P **23 06 30.2 0.0**
MNRC McLaughlin Nat 36.52 317 ⇑P P **23 06 31.7 +0.9**
baz=36
K07A Rock Creek Ran 36.80 324 P P **23 06 33.6 +0.5**
baz=37,SNR=11
I09A Lost Marbles R 36.83 327 P P **23 06 33.4 0.0**
baz=37,SNR=14
M05C Lookout 37.09 321 ⇑P P **23 06 35.9 +0.3**
baz=37
GASB Alder Springs 37.12 318 ⇑P P **23 06 36.1 +0.2**
baz=37
BMO Blue Mountains 37.22 328 *e*P P **23 06 36.0 -0.7**
I08A Drewsey 37.23 326 ⇓P P **23 06 37.2 +0.5**
baz=37
J07A Hines 37.27 325 ⇓P P **23 06 37.4 +0.2**
baz=37
O02C Red Bluff 37.45 318 ⇑P P **23 06 38.9 +0.3**
baz=37
WDC Whiskeytown Da 37.51 319 ⇑P P **23 06 38.6 -0.5**
baz=37
J06A Christmas Vall 37.67 324 ⇓P P **23 06 40.3 -0.1**
baz=38
H08A Prairie City 37.69 327 ⇑P P **23 06 41.2 +0.6**
baz=38
M04C Macdoel 37.76 321 ⇑P P **23 06 41.4 +0.2**
baz=38
I07A Izee 37.84 326 ⇓P P **23 06 42.1 +0.1**
baz=38
LPAZ La Paz 38.36 143 P P **23 06 47.0 +0.7**
comp=Z,15nm,0.7s,mb4.7,baz=326,slow=8.0,SNR=54
LPAZ PcP PcP 23 08 56.7 +0.8
comp=Z,6.8nm,1.2s,baz=12,slow=5.5,SNR=3.7
LPAZ LR LR 23 21 27.6
comp=Z,38nm,18.4s,baz=198,slow=34
LPAZ La Paz 38.36 143 P P **23 06 47.0 +0.7**
LPAZ 23 08 56.7
LPAZ La Paz 38.36 143 P P **23 06 47.0 +0.7**
LPAZ PcP PcP 23 08 56.7 +0.8
LPAZ LR LR 23 21 27.6
WALA Waterton Lakes 38.86 336 *e*P P **23 06 50.4 0.0**
comp=Z,2.3nm,0.9s,mb3.8
I05A Bend 38.87 325 ⇑P P **23 06 50.4 -0.1**
baz=39
G06A Carlson Farm, 39.21 326 ⇑P P **23 06 53.7 +0.4**
baz=39
J03A Ideyld Park 39.36 322 ⇓P P **23 06 55.0 +0.4**
baz=39
G05A Wamic 39.58 326 ⇑P P **23 06 56.7 +0.3**
baz=39
NEW Newport 39.60 332 *e*P P **23 06 55.5 -1.0**
H04A Detroit Lake 39.71 325 ⇓P P **23 06 57.1 -0.4**
baz=40
J02A Umpqua 39.72 322 ⇓P P **23 06 57.7 +0.2**
baz=40
I03A Eugene 39.90 323 ⇑P P **23 06 59.0 0.0**
baz=40
F05A White Salmon 40.07 327 ⇓P P **23 07 00.3 -0.1**
baz=40
E05A Randle 40.67 327 ⇑P P **23 07 05.2 -0.1**
baz=40
G03A Yamhill 40.71 325 ⇑P P **23 07 05.7 0.0**
baz=40
D05A Enumclaw 41.20 328 ⇓P P **23 07 09.1 -0.5**
baz=41
E04A Onalaska 41.20 327 ⇓P P **23 07 09.1 -0.6**
baz=41
C05A Tolt Reservoir 41.38 328 ⇑P P **23 07 10.4 -0.7**
baz=41
E03A Lebam 41.62 326 ⇓P P **23 07 12.5 -0.6**
baz=41
B05A Bryant 41.96 329 ⇑P P **23 07 14.4 -1.4**
baz=42
C04A Brinnon 42.05 328 ⇑P P **23 07 15.6 -1.0**
baz=42
EDM Edmonton 42.06 340 *e*P P **23 07 16.2 -0.5**
B04A Port Angeles 42.54 328 ⇑P P **23 07 20.0 -0.6**
baz=42
A04A Legoe Bay, Lum 42.57 329 ⇑P P **23 07 19.8 -0.9**
baz=42
SIV San Ignacio 42.62 135 P P **23 07 20.6 -0.5**
comp=Z,44nm,0.8s,mb5.1,baz=311,slow=8.4,SNR=174
SIV PcP PcP 23 09 10.0 +0.3
comp=Z,7.8nm,0.7s,baz=340,slow=2.2,SNR=8.4
LVC Limon Verde 43.13 150 *e*P P **23 07 26.1 +0.9**
comp=Z,18nm,0.8s,mb4.7
FCC Fort Churchill 43.77 358 *e*P P **23 07 29.6 -0.8**
comp=Z,30nm,0.7s,mb5.0
FCC *e* 23 09 14.3
SCHQ Schefferville 43.95 20 P P **23 07 32.0 +0.2**
comp=Z,73nm,0.7s,mb5.4,baz=218,slow=6.7,SNR=134
SCHQ LR LR 23 26 12.5
comp=Z,49nm,20.8s,baz=214,slow=36
YKA Yellowknife Ar 50.33 346 P P **23 08 20.0 -1.0**
comp=Z,9.0nm,0.6s,mb4.6,baz=148,slow=7.6,SNR=62
YKA pP pP 23 09 00.5 -1.6
comp=Z,4.1nm,0.7s,baz=148,slow=7.5,SNR=4.7
YKA sP sP 23 09 21.4 -1.2
comp=Z,3.6nm,0.8s,baz=146,slow=7.6,SNR=2.8
YKA ScP ScP 23 13 13.0 -2.2
comp=Z,1.1nm,0.7s,baz=138,slow=4.3,SNR=5.8
YKA Yellowknife Ar 50.33 346 P P **23 08 20.1 -1.0**
YKA pP pP 23 09 00.6 -1.6
YKA sP sP 23 09 21.4 -1.2
YKA ScP ScP 23 13 13.0 -2.2
CFAA Coronel Fontan 51.18 155 P P **23 08 27.3 -0.1**
comp=Z,1.4nm,0.7s,mb3.7,baz=334,slow=6.0,SNR=25
BDFB Brasilia 52.18 124 P P **23 08 34.0 -0.9**
comp=Z,8.3nm,0.7s,mb4.5,baz=293,slow=8.6,SNR=14
BDFB LR LR 23 30 22.8
comp=Z,64nm,18.1s,baz=239,slow=35
CPUP Villa Florida 52.47 141 P P **23 08 35.2 -1.8**
comp=Z,9.0nm,0.7s,mb4.5,baz=315,slow=8.3,SNR=36
CPUP PcP PcP 23 09 45.0 0.0
comp=Z,4.8nm,0.6s,baz=310,slow=2.9,SNR=8.2
PLCA Paso Flores 58.56 162 P P **23 09 20.0 -0.4**
comp=Z,20nm,0.8s,mb5.0,baz=337,slow=8.0,SNR=38
PLCA pP pP 23 10 00.4 -2.4
comp=Z,2.6nm,0.9s,baz=338,slow=4.8,SNR=1.6
TRQA Tornquist 59.34 154 *e*P P **23 09 23.4 -2.3**
comp=Z,22nm,1.3s,mb4.8
TRQA *e*PcP PcP 23 10 09.7 -2.0
INK Inuvik 59.81 343 *e*P P **23 09 23.9 -5.0**
comp=Z,396nm,0.7s
CAM4 Nova Friburgo 60.17 127 ⇓*i*P P **23 09 28.7 -2.7**
CAM4 *i* 23 09 29.7
CAM4 *i* 23 09 35.4
CAM3 Guarapari 60.90 124 (P) P **23 09 34.5 -1.9**
CAM3 *i* 23 09 36.1
SLKM Skilak Lake 62.14 331 *e*P P **23 09 43.5 -1.1**
KDAK Kodiak Island 62.44 328 P P **23 09 45.8 -0.8**
comp=Z,3.2nm,0.4s,mb4.5,baz=67,slow=2.4,SNR=8.2
MCK McKinley 62.75 335 *e*P P **23 09 47.4 -1.3**
comp=Z,18nm,1.3s,mb4.8
COLA College 62.78 336 *e*P P **23 09 47.2 -1.7**
comp=Z,5.4nm,0.6s,mb4.5
SVW2 Sparrevohn 64.82 331 *e*P P **23 10 00.1 -2.0**
SUMG Summit 65.02 15 *e*P P **23 10 03.2 -0.3**
comp=Z,20nm,0.7s,mb5.1
CHGN Chignik 65.20 325 *e*P P **23 10 02.8 -1.8**
BORG Borgarnes 67.88 26 *e*P P **23 10 21.7 +0.1**
comp=Z,18nm,1.0s,mb4.8
EMAZ Mazaricos 74.11 49 P P **23 10 58.1 -0.9**
comp=Z,8.0nm,0.6s,mb4.6
STS Santiago 74.43 49 ⇑P P **23 10 59.8 -1.1**
comp=Z,7.3nm,0.7s,mb4.5
ELOB Lobios 74.90 50 P P **23 11 02.2 -1.4**
comp=Z,4.0nm,0.8s,mb4.1
KAR1 Arisaig 74.92 34 *e*P P **23 11 02.7 -1.0**
KAR1 Arisaig 74.92 34 *e*P P **23 11 02.7 -1.0**
KPL Plockton 74.99 34 *e*P P **23 11 02.9 -1.2**
KPL Plockton 74.99 34 *e*P P **23 11 02.9 -1.2**
KSB Sheil Bridge 75.12 34⇑*e*P P **23 11 03.8 -1.1**
KSB Sheil Bridge 75.12 34⇑*e*P P **23 11 03.8 -1.1**
KAC Achnashellach 75.17 34 *e*P P **23 11 04.1 -1.1**
KAC Achnashellach 75.17 34 *e*P P **23 11 04.1 -1.1**
GMK Mull of Kintyr 75.18 36 *e*P P **23 11 04.0 -1.2**
GMK Mull of Kintyr 75.18 36 *e*P P **23 11 04.0 -1.2**
PMSU Muirshiel 75.61 36 *e*P P **23 11 06.6 -1.0**
PMSU Muirshiel 75.61 36 *e*P P **23 11 06.6 -1.0**
GAL1 Galloway 75.73 37 *e*P P **23 11 07.1 -1.2**
GAL1 Galloway 75.73 37 *e*P P **23 11 07.1 -1.2**
EAB Aberfoyle 75.81 35 *e*P P **23 11 07.7 -1.1**
EAB Aberfoyle 75.81 35 *e*P P **23 11 07.7 -1.1**
WIM Isle of Man 75.82 37 *e*P P **23 11 07.9 -0.9**
WIM AMb AMB 23 11 11.8
comp=Z,42nm,2.3s,mb4.7
WIM Isle of Man 75.82 37 *e*P P **23 11 07.9 -0.9**
WIM AMb AMB 23 11 11.8
comp=Z,42nm,2.3s,mb4.7
ECAL Calabor 75.87 50 P P **23 11 08.0 -1.2**
comp=Z,5.9nm,0.8s,mb4.3
ORE Reay 75.89 33 *e*P P **23 11 09.0 -0.3**
ORE Reay 75.89 33 *e*P P **23 11 09.0 -0.3**
EGRO El Granado 75.90 55 P P **23 11 08.9 -0.4**
comp=Z,8.0nm,0.8s,mb4.4
CGH1 Goonhilly 75.97 42 *e*P P **23 11 08.7 -1.0**
CGH1 Goonhilly 75.97 42 *e*P P **23 11 08.7 -1.0**
YRC Rhoscolyn 75.98 38 *e*P P **23 11 09.0 -0.8**
YRC AMb AMB 23 11 15.2
comp=Z,42nm,1.3s,mb4.9
YRC Rhoscolyn 75.98 38 *e*P P **23 11 09.0 -0.8**
YRC AMb AMB 23 11 15.2
comp=Z,42nm,1.3s,mb4.9
MCD Coleburn Disti 76.26 34⇑*e*P P **23 11 10.6 -0.7**
MCD Coleburn Disti 76.26 34⇑*e*P P **23 11 10.6 -0.7**
EAU Auchinoon 76.34 35 *e*P P **23 11 10.2 -1.6**
EAU Auchinoon 76.34 35 *e*P P **23 11 10.2 -1.6**
HSA Swansea 76.41 40⇑*e*P P **23 11 11.1 -1.0**
HSA Swansea 76.41 40⇑*e*P P **23 11 11.1 -1.0**
MME1 Meikle Cairn 76.44 34 *e*P P **23 11 11.1 -1.2**
MME1 Meikle Cairn 76.44 34 *e*P P **23 11 11.1 -1.2**
EMIN Mina Concepcio 76.50 54 P P **23 11 12.0 -0.7**
comp=Z,4.7nm,0.6s,mb4.3
ESK Eskdalemuir 76.54 36 P P **23 11 12.6 -0.3**
comp=Z,346nm,0.5s,SNR=17
ESK Eskdalemuir 76.54 36⇑*e*P P **23 11 11.9 -1.1**
comp=Z,34nm,0.6s,mb5.2
ECK Cauldkaine Hil 76.60 36⇑*e*P P **23 11 12.1 -1.2**
ECK AMb AMB 23 11 13.0
comp=Z,50nm,0.6s,mb5.3
ECK Cauldkaine Hil 76.60 36⇑*e*P P **23 11 12.1 -1.2**
ECK AMb AMB 23 11 13.0
comp=Z,50nm,0.6s,mb5.3
ESY Stoneypath 76.80 35 *e*P P **23 11 13.6 -0.7**
ESY Stoneypath 76.80 35 *e*P P **23 11 13.6 -0.7**
HTR Trewern Hill 76.91 39 *e*P P **23 11 13.7 -1.3**
HTR AMb AMB 23 11 14.5
comp=Z,28nm,1.6s,mb4.6
HTR Trewern Hill 76.91 39 *e*P P **23 11 13.7 -1.3**
HTR AMb AMB 23 11 14.5
comp=Z,28nm,1.6s,mb4.6
XSO Sourhope Farm 77.06 36⇑*e*P P **23 11 14.8 -1.0**
XSO AMb AMB 23 11 15.6
comp=Z,22nm,0.7s,mb4.9
XSO Sourhope Farm 77.06 36⇑*e*P P **23 11 14.8 -1.0**
XSO AMb AMB 23 11 15.6
comp=Z,22nm,0.7s,mb4.9
HLM1 Long Mynd 77.09 39 *e*P P **23 11 14.3 -1.6**
HLM1 AMb AMB 23 11 15.1
comp=Z,23nm,0.8s,mb4.8
HLM1 Long Mynd 77.09 39 *e*P P **23 11 14.3 -1.6**
HLM1 AMb AMB 23 11 15.1
comp=Z,23nm,0.8s,mb4.8
ESPR Espera 77.28 55 P P **23 11 16.9 -0.2**
comp=Z,4.4nm,0.8s,mb4.1
ROSF Rostrenen 77.42 43⇑*i*P P **23 11 16.5 -1.3**
comp=Z,22nm,0.9s,mb4.5
ROSF Rostrenen 77.42 43⇑*i*P P **23 11 16.5 -1.3**
comp=Z,11nm,0.9s,mb4.5
QUIF Quistinic 77.56 44⇑*i*P P **23 11 17.4 -1.2**
comp=Z,15nm,0.7s,mb4.5
QUIF Quistinic 77.56 44⇑*i*P P **23 11 17.4 -1.2**
comp=Z,7.6nm,0.7s,mb4.4
KWE Weaver Farm 77.64 38 *e*P P **23 11 18.6 -0.4**
KWE Weaver Farm 77.64 38 *e*P P **23 11 18.6 -0.4**
KBI1 Birley Grange 77.79 38 *e*P P **23 11 18.9 -1.0**
KBI1 Birley Grange 77.79 38 *e*P P **23 11 18.9 -1.0**
SGMF Saint Gilles 77.91 43⇑*i*P P **23 11 19.0 -1.5**
comp=Z,15nm,0.7s,mb4.4
SGMF Saint Gilles 77.91 43⇑*i*P P **23 11 19.0 -1.5**
comp=Z,7.3nm,0.7s,mb4.4
GUD Guadarrama 77.99 51 ⇑P P **23 11 20.7 -0.3**
comp=Z,9.2nm,0.6s,mb4.6
EADA Adamuz 78.08 54 P P **23 11 20.8 -0.6**
comp=Z,2.3nm,0.6s,mb4.0
EMIJ Mijas 78.19 55 P P **23 11 21.7 -0.4**
comp=Z,2.2nm,0.5s,mb4.0
ESDC Sonseca Array 78.29 52 P P **23 11 22.0 -0.7**
comp=Z,4.1nm,0.7s,mb4.2,baz=285,slow=5.7,SNR=30
ESDC pP pP 23 12 08.6 +1.2
comp=Z,1.7nm,0.8s,baz=293,slow=5.4,SNR=2.4
ESDC Sonseca Array 78.29 52 ⇑P P **23 11 21.7 -0.9**
comp=Z,5.1nm,0.5s,mb4.4
ESLA Sonseca Array 78.29 52 *e*P P **23 11 21.8 -0.9**
comp=Z,3.5nm,1.0s,mb3.9
AMKA Amchitka 78.32 320 *e*P P **23 11 21.6 -1.2**
ELOJ Sierra Loja 78.58 54 P P **23 11 24.0 -0.2**
comp=Z,3.4nm,0.7s,mb4.1
EBAN Banos Encina 78.69 53 ⇑P P **23 11 23.7 -1.1**
comp=Z,2.6nm,0.6s,mb4.0
ERON Agron 78.88 55 P P **23 11 25.6 -0.2**
comp=Z,3.7nm,0.5s,mb4.3
GRR Gorron 79.00 43⇑*i*P P **23 11 25.5 -1.0**
comp=Z,39nm,0.6s,mb4.9
GRR Gorron 79.00 43⇑*i*P P **23 11 25.5 -1.0**
comp=Z,20nm,0.6s,mb4.9
ECOG Cogollos-Vega 79.02 54 ⇑P P **23 11 26.8 +0.2**
comp=Z,8.0nm,0.6s,mb4.5
TSA1 Sevenoaks 79.14 40 *e*P P **23 11 26.3 -1.0**
TSA1 Sevenoaks 79.14 40 *e*P P **23 11 26.3 -1.0**
FLN La Foliniere 79.18 42⇑*i*P P **23 11 26.5 -1.0**
comp=Z,36nm,0.6s,mb4.9
FLN La Foliniere 79.18 42⇑*i*P P **23 11 26.5 -1.0**
comp=Z,18nm,0.6s,mb4.9
EQES Quesada 79.31 54 P P **23 11 27.5 -0.7**
comp=Z,2.1nm,0.8s,mb3.8
LDF La Druitiere 79.45 42⇑*i*P P **23 11 27.9 -1.0**
comp=Z,22nm,0.7s,mb4.3
LDF La Druitiere 79.45 42⇑*i*P P **23 11 27.9 -1.0**
comp=Z,11nm,0.7s,mb4.6
EBER Berja 79.62 55 ⇑P P **23 11 29.5 -0.4**
comp=Z,6.7nm,0.6s,mb4.5
EHUE Huescar 79.68 54 ⇑P P **23 11 29.6 -0.6**
comp=Z,2.8nm,0.7s,mb4.0
ETSF Etsaut 80.23 48 *e*P P **23 11 32.5 -0.6**
comp=Z,7.6nm,0.9s,mb4.0
ETSF Etsaut 80.23 48 *e*P P **23 11 32.5 -0.6**
comp=Z,3.8nm,0.9s,mb4.0
ETOB Tobarra 80.33 53 P P **23 11 31.4 -2.2**
comp=Z,5.1nm,0.8s,mb4.2
LFF La Frestale 80.74 46 *e*P P **23 11 34.7 -1.1**
EBIE Bielsa 80.78 48 P P **23 11 35.6 -0.5**
comp=Z,3.7nm,0.6s,mb4.2
EMOS Mosqueruela 80.80 51 P P **23 11 36.4 +0.3**
comp=Z,9.0nm,0.8s,mb4.5
EPF Esparros 80.85 48⇑*i*P P **23 11 35.4 -1.0**
comp=Z,12nm,1.0s,mb4.2
EPF Esparros 80.85 48⇑*i*P P **23 11 35.4 -1.0**
comp=Z,6.1nm,1.0s,mb4.2
BILL Bilibino 80.94 338⇑*e*P P **23 11 35.6 -1.3**
BILL *e* pP 23 12 21.5 -0.4
BILL pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
RJF Les Rejaudoux 81.20 46 *e*P P **23 11 36.9 -1.4**
comp=Z,17nm,0.9s,mb4.4
RJF Les Rejaudoux 81.20 46 *e*P P **23 11 36.9 -1.4**
comp=Z,8.6nm,0.9s,mb4.4
TCF Toulx Ste Croi 81.46 44 *e*P P **23 11 38.2 -1.4**
comp=Z,18nm,0.8s,mb4.5
TCF Toulx Ste Croi 81.46 44 *e*P P **23 11 38.2 -1.4**
comp=Z,8.8nm,0.8s,mb4.4
HYF Humbligny 81.54 43 *e*P P **23 11 38.9 -1.1**
CAF Calviac 81.66 46 *e*P P **23 11 39.4 -1.3**
BGF Bois d'Agland 81.83 44⇑*i*P P **23 11 40.2 -1.4**
comp=Z,19nm,0.7s,mb4.5
BGF Bois d'Agland 81.83 44⇑*i*P P **23 11 40.2 -1.4**
comp=Z,9.4nm,0.7s,mb4.5
BAIF Baives 81.91 40 *e*P P **23 11 40.9 -1.1**
comp=Z,9.1nm,0.9s,mb4.1
BAIF Baives 81.91 40 *e*P P **23 11 40.9 -1.1**
comp=Z,4.6nm,0.9s,mb4.1
AVF Avril sur Loir 82.12 44⇑*i*P P **23 11 41.3 -1.8**
comp=Z,9.9nm,0.8s,mb4.2
AVF Avril sur Loir 82.12 44⇑*i*P P **23 11 41.3 -1.8**
comp=Z,4.9nm,0.8s,mb4.2
MTLF Montolieu 82.12 47⇑*i*P P **23 11 41.9 -1.2**
comp=Z,1.5nm,0.9s,mb4.3
MTLF Montolieu 82.12 47⇑*i*P P **23 11 41.9 -1.2**
comp=Z,7.7nm,0.9s,mb4.3
DOU Dourbes 82.15 40 P P **23 11 42.2 -1.0**
SSF Saint Saulge 82.16 43⇑*i*P P **23 11 41.7 -1.6**
comp=Z,12nm,0.7s,mb4.3
SSF Saint Saulge 82.16 43⇑*i*P P **23 11 41.7 -1.6**
comp=Z,6.2nm,0.7s,mb4.3
GIVF Givet 82.29 40 *e*P P **23 11 42.9 -1.0**
LOR Lormes 82.34 43 *e*P P **23 11 42.9 -1.3**
comp=Z,23nm,0.8s,mb4.5
LOR Lormes 82.34 43 *e*P P **23 11 42.9 -1.3**
comp=Z,11nm,0.8s,mb4.5
SMF Signal de Mont 82.48 44⇑*i*P P **23 11 43.2 -1.7**
comp=Z,9.0nm,0.6s,mb4.2
SMF Signal de Mont 82.48 44⇑*i*P P **23 11 43.2 -1.7**
comp=Z,4.5nm,0.6s,mb4.3
BCLA Clavier 82.51 40 P P **23 11 44.5 -0.6**
NA001 NORSAR Array S 82.70 29 *e*P P **23 11 45.4 -0.7**
comp=Z,1.5nm,0.5s,mb4.0
NB2 NORSAR Subarra 82.79 29 P P **23 11 46.2 -0.3**
comp=Z,4.3nm,0.7s,mb4.3,baz=289,slow=5.3
NOA NORSAR Array B 82.79 29 P P **23 11 46.4 -0.1**
comp=Z,3.5nm,0.7s,mb4.2,baz=290,slow=5.2,SNR=37
NOA pP pP 23 12 31.6 -0.2
comp=Z,2.4nm,0.9s,baz=289,slow=5.1,SNR=4.8
HGN Heimansgroeve 82.81 39 *e*P P **23 11 45.4 -1.3**
comp=Z,12nm,0.8s,mb4.7
MEZF Maizieres J'vi 82.83 42⇑*i*P P **23 11 45.7 -1.0**
comp=Z,24nm,0.7s,mb4.8
MEZF Maizieres J'vi 82.83 42⇑*i*P P **23 11 45.7 -1.0**
comp=Z,24nm,0.7s,mb5.0
WTSB Winterswijk 83.02 38 *e*P P **23 11 46.8 -1.0**
comp=Z,15nm,0.9s,mb4.7
WLF Walferdange 83.23 40 P P **23 11 48.5 -0.3**
VIVF Saint-Julien-l 83.48 45 *e*P P **23 11 48.9 -1.2**
HAU Haudompre 83.79 42⇑*i*P P **23 11 50.6 -1.0**
comp=Z,24nm,0.6s,mb4.8
HAU Haudompre 83.79 42⇑*i*P P **23 11 50.6 -1.0**
comp=Z,12nm,0.6s,mb4.8
CABF La Chapelle 83.99 43⇑*i*P P **23 11 52.1 -0.5**
comp=Z,17nm,0.9s,mb4.5
CABF La Chapelle 83.99 43⇑*i*P P **23 11 52.1 -0.5**
comp=Z,8.4nm,0.9s,mb4.5
HINF Hinteralfeld 84.17 42⇑*i*P P **23 11 52.3 -1.3**
comp=Z,7.6nm,0.6s,mb4.3
HINF Hinteralfeld 84.17 42⇑*i*P P **23 11 52.3 -1.3**
comp=Z,3.8nm,0.6s,mb4.3
CDF Champ du Feu 84.28 42⇑*i*P P **23 11 53.1 -1.0**
comp=Z,7.9nm,0.7s,mb4.2
CDF Champ du Feu 84.28 42⇑*i*P P **23 11 53.1 -1.0**
comp=Z,4.0nm,0.7s,mb4.3
ORIF Oris-en-Rattie 84.29 45 *e*P P **23 11 53.6 -0.6**
TNS Taunus Mts 84.50 40 *e*P P **23 11 54.8 -0.4**
comp=Z,11nm,0.9s,mb4.6
TNS Taunus Mts 84.50 40 *e*P P **23 11 54.8 -0.4**
TNS pmax pmax
comp=Z,11nm,0.9s,mb4.6
DBIC Dimbokro 84.52 85 P P **23 11 54.9 -0.5**
comp=Z,1.9nm,0.7s,mb4.0,baz=280,slow=7.8,SNR=5.5
DBIC Dimbokro 84.52 85 *e*P P **23 11 53.7 -1.6**
comp=Z,7.2nm,1.1s,mb4.3
DBIC *e*PcP PcP 23 11 57.9 -0.7
NRDL Niedersach Rie 84.83 37 *e*P P **23 11 57.4 +0.5**
comp=Z,8.0nm,0.9s,mb4.5
ARCES ARCESS Array B 84.89 18 P P **23 11 55.5 -1.7**
comp=Z,2.8nm,0.5s,mb4.2,baz=287,slow=4.3,SNR=58
ARCES pP pP 23 12 38.5 -4.1
comp=Z,1.1nm,0.6s,baz=293,slow=6.3,SNR=2.4
ARCES PP PP 23 15 14.3 -1.9
comp=Z,2.6nm,0.7s,baz=298,slow=7.8,SNR=11
ARCES PKKPbc PKKPbc 23 30 02.7 -1.3
comp=Z,0.3nm,0.4s,baz=135,slow=2.6,SNR=8.3
ARCES ARCESS Array B 84.89 18 P P **23 11 55.5 -1.7**
ARCES 23 15 14.4
ARCES ARCESS Array B 84.89 18 P P **23 11 55.5 -1.7**
ARCES pP pP 23 12 38.5 -4.1
ARCES PP PP 23 15 14.3 -1.9
ARCES PKKPbc PKKPbc 23 30 02.7 -1.3
MBDF Montbardon 84.96 45 *e*P P **23 11 56.5 -1.0**
comp=Z,13nm,0.7s,mb4.5
MBDF Montbardon 84.96 45 *e*P P **23 11 56.5 -1.0**

	comp=Z,6.5nm,0.7s,mb4.5								
BFO	**Black Forest**	**84.97**	**41**	*e*P		**P**	**23 11 56.2**	**-1.4**
	comp=Z,8.0nm,1.1s,mb4.4								
BFO				*e*pP		pP	23 12 44.1	+1.1
BFO	**Black Forest**	**84.97**	**41**	*e*P		**P**	**23 11 56.2**	**-1.4**
BFO				*e**PP		pP	23 12 44.1	+1.1
BFO				pmax		pmax			
	comp=Z,8.0nm,1.1s,mb4.4								
GTTG	**Guttingen**	**85.03**	**38**	*e*P		**P**	**23 11 57.6**	**-0.3**
	comp=Z,17nm,0.5s,mb5.0								
LMR	**La Mourre**	**85.16**	**47**	*e*P		**P**	**23 11 57.6**	**-0.9**
FRF	**La Foret Royal**	**85.19**	**46**⇑	*i*P		**P**	**23 11 57.8**	**-0.9**
	comp=Z,19nm,0.8s,mb4.6								
FRF	**La Foret Royal**	**85.19**	**46**⇑	*i*P		**P**	**23 11 57.8**	**-0.9**
	comp=Z,9.5nm,0.8s,mb4.6								
UBBA	**Unterbreizbach**	**85.27**	**39**	*e*P		**P**	**23 11 58.4**	**-0.7**
	comp=Z,4.0nm,0.7s,mb4.3								
MOX	**Moxa**	**86.30**	**39**	*e*P		**P**	**23 12 03.5**	**-0.6**
	comp=Z,6.0nm,0.9s,mb4.3								
MOX				*e*pP		pP	23 12 51.4	+1.7
MOX	**Moxa**	**86.30**	**39**	*e*P		**P**	**23 12 03.8**	**-0.3**
GRA1	**Grafenberg Arr**	**86.37**	**40**	*e*P		**P**	**23 12 04.2**	**-0.3**
	comp=Z,12nm,1.1s,mb4.5								
GRA1				*e*pP		pP	23 12 50.7	+0.6
GRF	**Grafenberg Arr**	**86.37**	**40**	*e*P		**P**	**23 12 04.2**	**-0.3**
	comp=Z,12nm,1.1s,mb4.5								
GRF				*e*pP		pP	23 12 50.7	+0.6
GRF	**Grafenberg Arr**	**86.37**	**40**	*e*P		**P**	**23 12 04.2**	**-0.3**
GRF				*e**PP		pP	23 12 50.7	+0.6
GRF				pmax		pmax			
	comp=Z,12nm,1.1s,mb4.5								
WERD	**Werda**	**86.78**	**39**	*e*P		**P**	**23 12 06.1**	**-0.4**
	comp=Z,9.0nm,1.4s,mb4.4								
WERD				*e*pP		pP	23 12 52.0	-0.1
WERD				*e*sP		sP	23 13 10.7	-0.8
MANZ	**Manzenberg**	**86.82**	**39**	*e*P		**P**	**23 12 05.8**	**-0.8**
	comp=Z,2.0nm,1.0s,mb3.9								
GUNZ	**Gunzen**	**86.83**	**39**	*e*P		**P**	**23 12 06.2**	**-0.5**
	comp=Z,12nm,1.5s,mb4.5								
GUNZ				*e*sP		sP	23 13 11.5	-0.2
TANN	**Tannenbergstha**	**86.89**	**39**	*e*pP		pP	23 12 53.1	+0.5
CLL	**Collm**	**86.91**	**38**	P		**P**	**23 12 07.0**	**-0.1**
	comp=Z,logA/T=0.7,mb4.3								
CLL				*e**PP		pP	23 12 52.0	-0.7
CLL				*e**SP		sP	23 13 11.0	-1.1
CLL	**Collm**	**86.91**	**38**	*i* P		**P**	**23 12 07.0**	**-0.1**
	comp=Z,5.0nm,0.9s,mb4.3								
CLL				*e*pP		pP	23 12 52.0	-0.7
CLL				*e*sP		sP	23 13 11.0	-1.1
CLL	**Collm**	**86.91**	**38**	*i* P		**P**	**23 12 07.0**	**-0.1**
CLL				pmax		pmax			
	comp=Z,5.0nm,0.9s,mb4.3								
CLL	**Collm**	**86.91**	**38**	*i* P		**P**	**23 12 07.0**	**-0.1**
	comp=Z,5.0nm,0.9s,mb4.3								
CLL				*e*		pP	23 12 52.0	-0.7
ROTZ	**Rotzenmuhle**	**86.95**	**39**	*e*P		**P**	**23 12 07.2**	**-0.1**
	comp=Z,2.0nm,0.9s,mb4.0								
PGF	**Pioggiola**	**87.13**	**47**	*e*P		**P**	**23 12 06.9**	**-1.3**
FBE	**Freiberg**	**87.25**	**38**	*e*P		**P**	**23 12 08.9**	**+0.2**
	comp=Z,5.0nm,0.8s,mb4.4								
WET	**Wettzell**	**87.58**	**40**	*e*P		**P**	**23 12 09.8**	**-0.5**
	comp=Z,10.0nm,1.5s,mb4.4								
WET	**Wettzell**	**87.58**	**40**	*e*P		**P**	**23 12 09.8**	**-0.5**
WET				pmax		pmax			
	comp=Z,10.0nm,1.5s,mb4.4								
GEC2	**GERESS Array S**	**88.19**	**40**	*e*P		**P**	**23 12 12.4**	**-0.8**
	comp=Z,1.0nm,0.8s,mb3.7								
GEC2	**GERESS Array S**	**88.19**	**40**	*e*P		**P**	**23 12 12.4**	**-0.8**
GEC2				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.7								
GERES	**GERESS Array B**	**88.19**	**40**	P		**P**	**23 12 12.5**	**-0.6**
	comp=Z,1.0nm,0.6s,mb3.8,baz=306,slow=4.5,SNR=11								
GERES				pP		pP	23 12 58.2	-0.7
	comp=Z,2.0nm,1.1s,baz=180,slow=2.1,SNR=3.6								
KAF	**Kangasniemi**	**88.92**	**25**	*e*pkp		**P**	**23 12 13.9**	**-2.7**
	baz=288,slow=3.0								
TORD	**Torodi Ar. Bea**	**89.14**	**77**	P		**P**	**23 12 15.0**	**-2.6**
	comp=Z,0.5nm,0.6s,mb3.7,baz=291,slow=3.7,SNR=11								
TORD				PKKPbc		PKKPbc	23 29 56.4	+2.6
	comp=Z,0.2nm,0.4s,baz=59,slow=1.5,SNR=9.6								
TORD	**Torodi Ar. Bea**	**89.14**	**77**	P		**P**	**23 12 15.0**	**-2.6**
TORD				PKKPbc		PKKPbc	23 29 56.4	+2.6
FINES	**FINESS Array B**	**89.17**	**25**	P		**P**	**23 12 16.2**	**-1.6**
	comp=Z,1.5nm,0.8s,mb4.0,baz=275,slow=3.8,SNR=12								
FINES				pP		pP	23 13 03.0	-0.7
	comp=Z,1.6nm,0.8s,baz=27,slow=2.1,SNR=3.2								
FINES				PP		PP	23 15 50.2	-0.4
	comp=Z,2.2nm,0.8s,baz=299,slow=2.0,SNR=7.8								
FINES	**FINESS Array B**	**89.17**	**25**	P		**P**	**23 12 16.2**	**-1.6**
FINES				pP		pP	23 13 03.0	-0.7
FINES				PP		PP	23 15 50.2	-0.4
KEST	**Kesra**	**89.47**	**53**	P		**P**	**23 12 18.2**	**-1.0**
	comp=Z,1.6nm,0.8s,mb4.0,baz=260,slow=1.9,SNR=5.0								
JOF	**Joensuu**	**90.43**	**23**	*e*pkp		**P**	**23 12 21.5**	**-2.2**
AKASG	**Malin Array Be**	**96.34**	**34**	P		PP	23 16 45.4	-1.3
	comp=Z,2.5nm,0.9s,baz=301,slow=7.1,SNR=7.0								
BRTR	**Keskin Array B**	**105.03**	**41**	PKKPbc		PKKPbc	23 29 09.8	-0.6
	comp=Z,0.2nm,0.8s,baz=128,slow=2.3,SNR=4.0								
SONM	**Songino Array**	**115.58**	**347**	PKKPbc		PKKPbc	23 28 35.3	-1.0
	comp=Z,1.2nm,0.5s,baz=191,slow=1.5,SNR=5.5								
MKAR	**Makanchi Array**	**118.21**	**5**	PKP		PKPdf	23 18 05.6	-2.6
	comp=Z,0.5nm,0.5s,baz=303,slow=3.0,SNR=7.8								
MKAR	**Makanchi Array**	**118.21**	**5**	PKPdf		PKPdf	23 18 05.6	-2.6
BOSA	**Boshof**	**119.82**	**115**	PKP		PKPdf	23 18 10.5	-0.8
	comp=Z,5.0nm,0.8s,baz=242,slow=2.1,SNR=8.7								
BOSA	**Boshof**	**119.82**	**115**	PKP		PKPdf	23 18 10.5	-0.8
LBTB	**Lobatse**	**119.97**	**110**	*e*PKIKP		PKPdf	23 18 10.3	-1.3
LSZ	**Lusaka**	**121.40**	**99**	*e*PKIKP		PKPdf	23 18 14.1	-0.3
MAW	**Mawson**	**124.72**	**168**	*e*P		PKPdf	23 18 19.1	-1.6
	comp=Z,6.9nm,0.5s								
MAW	**Mawson**	**124.72**	**168**	PKP		PKPdf	23 18 19.4	-1.3
	comp=Z,8.6nm,0.5s,baz=177,slow=2.2,SNR=34								
CTA	**Charters Tower**	**125.46**	**256**⇑	*i*P		PKPdf	23 18 22.0	-0.1
	comp=Z,2.9nm,0.5s								
STKA	**Stephens Creek**	**129.44**	**241**	*e*P		PKPdf	23 18 29.4	-0.3
	comp=Z,3.5nm,0.9s								
STKA	**Stephens Creek**	**129.44**	**241**	PKP		PKPdf	23 18 29.8	0.0
	comp=Z,3.7nm,0.8s,baz=49,slow=4.6,SNR=10								
STKA				pPKP		pPKPdf	23 19 16.5	-1.4
	comp=Z,1.5nm,0.8s,baz=63,slow=6.2,SNR=2.4								
STKA				SKPbc			23 21 34.1		
	comp=Z,1.6nm,0.7s,baz=106,slow=5.4,SNR=3.9								
WB2	**Warramunga Arr**	**136.63**	**257**	*e*P		PKPdf	23 18 42.6	-0.6
WRAB	**Tennant Creek**	**136.63**	**257**	*e*PKIKP		PKPdf	23 18 42.8	-0.4
WRA	**Warramunga Arr**	**136.64**	**257**	PKHKP			23 18 32.1		
	comp=Z,1.5nm,0.8s,baz=89,slow=3.8,SNR=12								
WRA				PKP		PKPdf	23 18 43.5	+0.2
	comp=Z,5.1nm,0.4s,baz=88,slow=2.6,SNR=71								
WRA				SKPbc		SKPbc	23 21 59.2	+0.8
	comp=Z,2.5nm,1.0s,baz=89,slow=2.3,SNR=8.7								
WRA	**Warramunga Arr**	**136.64**	**257**	PKP		PKPdf	23 18 43.5	+0.2
WRA				SKPbc		SKPbc	23 21 59.2	+0.8
ASAR	**Alice Springs**	**136.97**	**251**	PKHKP			23 18 32.1		
	comp=Z,1.0nm,0.5s,baz=104,slow=3.6,SNR=18								
ASAR				PKP		PKPdf	23 18 44.0	+0.2
	comp=Z,3.3nm,0.6s,baz=89,slow=2.1,SNR=18								
ASAR				SKPbc		SKPbc	23 21 59.7	+0.3
	comp=Z,1.0nm,0.8s,baz=105,slow=3.6,SNR=5.3								
ASAR	**Alice Springs**	**136.97**	**251**	PKP		PKPdf	23 18 44.0	+0.2
ASAR				SKPbc		SKPbc	23 21 59.7	+0.3
FITZ	**Fitzroy Crossi**	**144.85**	**260**⇑	*i*P		PKPdf	23 18 57.5	-0.5
	comp=Z,26nm,0.6s								
KKM	**Kota Kinabalu**	**145.94**	**306**	*e*PKPdf		PKPdf	23 19 00.1	+0.2
MUN	**Mundaring**	**150.04**	**231**	*e*P		PKPdf	23 19 06.8	+0.2
MBWA	**Marble Bar**	**150.25**	**254**	*e*PKPdf		PKPdf	23 19 06.6	-0.3
MBWA				*e*PKPbc		PKPbc	23 19 11.3	-0.9

*NEIC **25** 23:00:53.1±1.3, 688S×12980E, h35km, Error ellipse: s-maj=36.0km s-min=15.0km az=71.0*

IDC 25 23:00:48.9±2.2, 688S×12948E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.5/12, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=87.4km s-min=28.9km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
FITZ	**Fitzroy Crossi**	**11.77**	**198**	Pn		Pn	23 03 39.9		+2.0
	0.1nm,0.3s,baz=286,slow=3.7,SNR=12								
FITZ				Sn		Sn	23 05 39.4		-11
	0.3nm,0.3s,baz=302,slow=21,SNR=9.1								
WRAB	**Tennant Creek**	**13.81**	**160**	*e*Pn		Pn	23 04 05.3		-0.6
	3.9nm,0.6s								
WRAB				*e*Sn		Sn	23 06 27.1		-13
WRA	**Warramunga Arr**	**13.82**	**160**	Pn		Pn	23 04 04.5		-1.5
	0.3nm,0.3s,baz=340,slow=14,SNR=40								
WRA				Sn		Sn	23 06 26.9		-13
	0.6nm,0.3s,baz=328,slow=22,SNR=12								
ASAR	**Alice Springs**	**17.23**	**166**	P		Pn	23 04 50.8		0.0
	0.1nm,0.3s,baz=347,slow=9.7,SNR=4.8								
ASAR				S		Sn	23 07 49.8		-13
	0.2nm,0.3s,baz=326,slow=20,SNR=4.7								
MKAR	**Makanchi Array**	**67.84**	**327**	P		P	23 11 48.9		+0.1
	0.1nm,0.3s,baz=116,slow=8.1,SNR=4.8								
MKAR	**Makanchi Array**	**67.84**	**327**	P		P	23 11 48.9		+0.1

*ISCJB **25** 23:21:05.7±3.0, 107S±02×164.0E±02, h66km±17km, mb4.5/8, Error ellipse: s-maj=49.6km s-min=14.2km az=75.2*

*NEIC **25** 23:21:05.8±3.4, 1050S×164.20E, h67km±13km, mb4.5/6, Error ellipse: s-maj=59.0km s-min=13.5km az=48.0*

*IDC **25** 23:21:07.6±6.5, 1080S×163.95E, h53km±28km, mb4.1/4, mb1 4.3/7, mb1mx3.9/15, mbtmp4.4/7, ML4.4/3, MS3.4/7, Ms1 3.4/7, ms1mx3.2/24, Error ellipse: s-maj=92.2km s-min=18.6km az=46.0*

ISC 25 23:21:06.7±2.7, 106S±02×1641E±02, h62km±14km, n21, σ0§80/21, mb4.5/8, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
HNR	**Honiara**	**4.24**	**286**	P		**Pn**	**23 22 09.3**		**+0.5**
	96nm,0.3s,baz=108,slow=4.5,SNR=13								
HNR				S		**Sn**	**23 22 56.5**		**-0.4**
	69nm,0.3s,baz=268,slow=19,SNR=3.0								
HNR				LR		LR	23 23 50.1		
	comp=Z,463nm,18.1s,baz=359,slow=39								
DZM	**Mont Dzumac**	**11.62**	**169**	*e*P		**Pn**	**23 23 49.6**		**0.0**
DZM				*e*S		**Sn**	**23 25 47.6**		**-10**
DZM	**Mont Dzumac**	**11.62**	**169**	P		**Pn**	**23 23 49.8**		**+0.1**
	1.1nm,0.3s,baz=313,slow=14,SNR=11								
DZM				S		**Sn**	**23 25 50.7**		**-7.0**
	0.2nm,0.3s,baz=315,slow=20,SNR=4.1								
DZM				LR		LR	23 27 33.0		
	comp=Z,69nm,19.1s,baz=79,slow=34								
PMG	**Port Moresby**	**16.71**	**273**	LR		LR	23 30 19.2		
	comp=Z,109nm,19.3s,baz=99,slow=33								
CTA	**Charters Tower**	**19.59**	**239**	*e*P		**Pn**	**23 25 30.4**		**-1.1**
	10.0nm,1.0s								
CTA	**Charters Tower**	**19.59**	**239**	P		**Pn**	**23 25 30.6**		**-1.0**
	0.4nm,0.3s,baz=66,slow=12,SNR=15								
CTA				LR		LR	23 32 21.0		
	comp=Z,123nm,18.2s,baz=239,slow=35								
CTAO	**Charters Tower**	**19.59**	**239**	*e*P		**Pn**	**23 25 30.1**		**-1.5**
	13nm,0.9s								
STKA	**Stephens Creek**	**29.67**	**221**	P		**P**	**23 27 08.0**		**+1.5**
	2.2nm,0.7s,mb4.0,baz=48,slow=13,SNR=6.1								
STKA	**Stephens Creek**	**29.67**	**221**	P		**P**	**23 27 08.0**		**+1.5**
WRAB	**Tennant Creek**	**30.10**	**249**	*e*P		**P**	**23 27 10.1**		**-0.2**
	11nm,1.0s,mb4.5								
WB2	**Warramunga Arr**	**30.10**	**248**	*e*P		**P**	**23 27 10.2**		**-0.1**
WRA	**Warramunga Arr**	**30.11**	**248**	P		**P**	**23 27 10.4**		**0.0**
	1.8nm,0.3s,mb4.2,baz=79,slow=8.9,SNR=29								
GUMO	**Guam**	**30.68**	**321**	LR		LR	23 37 47.7		
	comp=Z,50nm,20.1s,baz=48,slow=32								
KAKA	**Kakadu**	**31.05**	**263**	*e*P		**P**	**23 27 18.4**		**-0.3**
	6.6nm,0.5s,mb4.7								
AS31	**Alice Springs**	**31.54**	**242**	*e*P		**P**	**23 27 22.7**		**-0.3**
ASAR	**Alice Springs**	**31.55**	**242**	P		**P**	**23 27 22.9**		**-0.1**
	2.9nm,0.6s,mb4.3,baz=63,slow=9.9,SNR=48								
ASAR				LR		LR	23 39 22.7		
	comp=Z,91nm,20.6s,baz=110,slow=35								
FITZ	**Fitzroy Crossi**	**37.92**	**254**	*e*P		**P**	**23 28 17.9**		**-0.1**
	7.1nm,0.5s,mb4.7								
FITZ	**Fitzroy Crossi**	**37.92**	**254**	P		**P**	**23 28 18.0**		**0.0**
	5.0nm,0.6s,mb4.4,baz=104,slow=10,SNR=30								
MBWA	**Marble Bar**	**43.80**	**251**	*e*P		**P**	**23 29 08.0**		**+1.7**
	2.7nm,0.4s,mb4.3								
MAW	**Mawson**	**84.51**	**202**	LR		LR	00 04 23.5		
	comp=Z,66nm,20.1s,baz=238,slow=31								
PMSA	**Palmer Station**	**96.66**	**161**	*e*P		**P**	**23 34 28.9**		**-1.1**
	12nm,0.7s,mb5.4								

IDC 25 23:25:32.7±3.0, 5536S×2902W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, MS3.4/2, Ms1 3.4/2, ms1mx2.9/17, Error ellipse: s-maj=99.2km s-min=38.8km az=6.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
PLCA	**Paso Flores**	**30.86**	**281**	LR		LR	23 42 15.3		
	comp=Z,51nm,19.5s,baz=280,slow=32								
CPUP	**Villa Florida**	**35.58**	**313**	P		P	23 32 31.8		0.0
	0.4nm,0.4s,baz=146,slow=8.8,SNR=3.8								
LPAZ	**La Paz**	**49.13**	**307**	P		P	23 34 22.4		+0.3
	0.9nm,0.7s,baz=163,slow=8.4,SNR=5.4								
LPAZ				LR		LR	23 54 05.3		
	comp=Z,47nm,21.0s,baz=34,slow=35								
TORD	**Torodi Ar. Bea**	**72.98**	**31**	P		P	23 37 04.0		-0.1
	0.8nm,0.6s,baz=199,slow=6.6,SNR=18								
FINES	**FINESS Array B**	**124.26**	**28**	PKP		PKPdf	23 44 31.5		-1.9
	0.5nm,0.5s,baz=151,slow=3.2,SNR=5.6								
YKA	**Yellowknife Ar**	**134.96**	**319**	PKP		PKPdf	23 44 52.0		-1.7
	0.6nm,0.8s,baz=125,slow=2.4,SNR=4.2								

*IDC **25** 23:26:50.5±2.5, 635N×12762E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/17, mbtmp3.5/5, Error ellipse: s-maj=157.3km s-min=22.5km az=69.0*

*ISCJB **25** 23:26:52.2±1.8, 66N±03×1282E±08, h33km, mb3.6/7, Error ellipse: s-maj=115.1km s-min=15.8km az=140.1*

*NEIC **25** 23:26:55.0±1.7, 646N×12799E, h35km, mb4.2/2, Error ellipse: s-maj=114.0km s-min=15.6km az=70.0*

ISC 25 23:26:55.1±1.9, 65N±03×1279E±08, h35km, n7, σ0§76/7, mb3.6/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
FITZ	**Fitzroy Crossi**	**24.51**	**185**	P		**P**	**23 32 11.0**		**-0.1**
	0.8nm,0.8s,mb3.3,baz=358,slow=15,SNR=3.4								
WRAB	**Tennant Creek**	**26.98**	**167**	P		**P**	**23 32 33.0**		**-0.4**
	2.0nm,0.8s,mb3.7								
WRA	**Warramunga Arr**	**26.98**	**167**	P		**P**	**23 32 32.6**		**-0.9**
	0.1nm,0.3s,mb2.8,baz=345,slow=9.6,SNR=5.2								
ASAR	**Alice Springs**	**30.50**	**169**	P		**P**	**23 33 06.5**		**+1.6**
	0.1nm,0.3s,mb3.1,baz=0.8,slow=8.4,SNR=3.3								
MKAR	**Makanchi Array**	**56.05**	**324**	P		**P**	**23 36 30.9**		**+0.5**
	1.2nm,0.5s,mb4.2,baz=113,slow=6.8,SNR=24								
ZRNK	**Zerenda**	**66.47**	**326**	*e*P		**P**	**23 37 40.8**		**-0.2**
	3.8nm,0.7s,mb4.5								
BRTR	**Keskin Array B**	**89.22**	**310**	P		**P**	**23 39 46.9**		**-0.4**
	0.6nm,0.9s,mb3.9,baz=78,slow=3.4,SNR=2.9								

*LDG **25** 23:36:54.9±0.1, 49.34N×683E, h1km, Md2.2/3, Ml2.1/5, Error ellipse: s-maj=1.4km s-min=0.9km az=39.0, Suspected Mining induced.*

BGR 25 23:36:53.7±0.5, 4935N×684E, h1km, ML1.3/3, Error ellipse: s-maj=8.9km s-min=5.6km az=36.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
WLF	**Walferdange**	**0.55**	**306**	*e*Pg		Pg	23 37 04.8		+0.5
	SNR=1.3								
WLF				*e*Sg		Sg	23 37 10.6		-0.8
	SNR=1.7								
CDF	**Champ du Feu**	**0.98**	**163**	*e*Pg		Pg	23 37 13.3		+0.8
CDF				*e*Sg		Sg	23 37 25.6		+0.4
	2.9nm,0.2s								
TNS	**Taunus Mts**	**1.36**	**49**	*e*Sg		Sg	23 37 36.9		-0.5
	SNR=2.2								
HAU	**Haudompre**	**1.38**	**194**	*e*Pg		Pg	23 37 20.5		+0.3
HAU				*e*Sg		Sg	23 37 38.3		+0.2
	2.4nm,0.2s								
BFO	**Black Forest**	**1.42**	**135**	*e*Pg		Pg	23 37 21.1		+0.3
	SNR=2.2								
BFO				*e*Sg		Sg	23 37 38.0		-1.2
	SNR=2.8								
HINF	**Hinteralfeld**	**1.53**	**180**	*e*Pg		Pg	23 37 23.1		0.0
HINF				*e*Sg		Sg	23 37 43.1		+0.2
	6.2nm,0.2s								
BAIF	**Baives**	**1.85**	**294**	*e*Pg		Pg	23 37 29.3		+0.1
BAIF				*e*Sg		Sg	23 37 52.8		-0.4
	0.9nm,0.3s								

*ISCJB **25** 23:38:07.2±0.4, 6771N×003×2020E±006, h0km, Error ellipse: s-maj=4.1km s-min=3.3km az=142.7*

*NAO **25** 23:38:10.9±1.9, 6778N×2061E, ML2.0*

*HEL **25** 23:38:11.3±0.2, 6787N×2024E, h0km, ML1.8(BER), ML2.0(NAO), Explosion*

*IDC **25** 23:38:11.0±1.2, 6780N×2079E, h0km, mb1 2.5/3, mb1mx2.5/19, mbtmp2.4/3, ML2.4/2, Error ellipse: s-maj=17.7km s-min=6.9km az=118.0*

*BER **25** 23:38:12.1±5.3, 6788N×2008E, h0km, ML1.8, ML2.0(NAO), Suspected explosion*

ISC 25 23:38:09.2±0.4, 6779N±003×2020E±006, h0km, n28, σ1§10/38, Sweden

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
KIF	**Kilpisjarvi**	**1.24**	**10**	*e*PB		**Pb**	**23 38 33.3**		**-0.2**
KIF				*e*SB		**Sb**	**23 38 49.0**		**-1.0**
KTK1	**Kautokeino**	**1.66**	**41**	*e*P		**Pn**	**23 38 40.5**		**+0.9**
KTK1				*e*SN		**Sn**	**23 39 01.5**		**-0.1**
KTK1				AML		AML	23 39 06.2		
	comp=Z,12nm,0.4s								
TRO	**Tromso**	**1.91**	**346**	*e*P		**Pn**	**23 38 42.8**		**-0.2**
TRO				*e*S		**Sn**	**23 39 07.5**		**-0.2**
TRO				AML		AML	23 39 09.1		
	comp=Z,12nm,0.3s								
SGF	**Sodankyl**	**2.45**	**95**	*e*P		**Pn**	**23 38 51.5**		**+1.1**
SGF				*e*SG		**Sg**	**23 39 26.5**		**-1.4**
LOF	**Lofoten**	**2.54**	**281**	*e*SG		**Sg**	**23 39 31.5**		**+0.8**
LOF				AML		AML	23 39 33.7		
	comp=Z,9.7nm,0.4s								
ARCES	**ARCESS Array B**	**2.61**	**46**	Pn		**Pn**	**23 38 53.5**		**+0.8**
	comp=Z,0.8nm,0.3s,baz=230,slow=14,SNR=15								
ARCES				Lg			23 39 27.6		
	comp=Z,3.0nm,0.3s,baz=226,slow=25,SNR=20								
ARA0	**ARCESS Array S**	**2.61**	**46**	Pn		**Pn**	**23 38 53.6**		**+0.9**
	baz=226,slow=16								
ARA0				Sn		**Sn**	**23 39 25.5**		**+0.4**
	baz=227,slow=28								
ARA0	**ARCESS Array S**	**2.61**	**46**	*e*P		**Pn**	**23 38 53.6**		**+0.9**
ARA0				*e*S		**Sn**	**23 39 25.5**		**+0.4**
MOR8	**Moi Rana**	**2.79**	**237**	*e*SG		**Sg**	**23 39 33.4**		**-5.4**
MOR8				AML		AML	23 39 36.4		
	comp=Z,13nm,0.3s								
KEV	**Kevo**	**3.16**	**48**	*e*PB		**Pb**	**23 39 04.4**		**-1.9**
KEV				*e*S		**Sn**	**23 39 39.6**		**+0.9**
STOK	**Stokkvaagen**	**3.17**	**246**	*e*SG		**Sg**	**23 39 50.0**		**-1.2**
OUL	**Oulu**	**3.55**	**137**	*e*SB		**Sb**	**23 39 59.1**		**+2.5**
KU4	**Liikasenvaara**	**3.94**	**107**	*e*SG		**Sg**	**23 40 14.1**		**-1.7**
MSF	**Maaselka**	**3.97**	**114**	*e*SG		**Sg**	**23 40 16.4**		**-0.3**
NSS	**Namsos**	**4.68**	**229**	*e*SG		**Sg**	**23 40 37.3**		**-2.2**
KJN	**Kajaani**	**4.83**	**137**	*e*SG		**Sg**	**23 40 38.8**		**-5.5**
APA0	**Apatity Array**	**4.88**	**86**	Pn		**Pn**	**23 39 24.0**		**+0.2**
	baz=309,slow=14								
APA0				Sn		**Sn**	**23 40 19.9**		**-1.0**
	baz=297,slow=28								
APA0				Lg			23 40 35.6		
	baz=279,slow=28								
APA0	**Apatity Array**	**4.88**	**86**	*e*P		**Pn**	**23 39 24.0**		**+0.2**
APA0				*e*S		**Sn**	**23 40 19.9**		**-1.0**
APA0				*e*SB		**Sb**	**23 40 35.6**		**+0.9**
FIA0	**FINESS Array S**	**6.85**	**156**	Pn		**Pn**	**23 39 52.0**		**+1.0**
	baz=349,slow=14								
FIA0				Sn		**Sn**	**23 41 09.7**		**0.0**
	baz=347,slow=28								
FIA0				Lg			23 41 42.8		
	baz=348,slow=28								
FIA0	**FINESS Array S**	**6.85**	**156**	*e*P		**Pn**	**23 39 52.0**		**+1.0**
FIA0				*e*S		**Sn**	**23 41 09.7**		**0.0**
FIA0				*e*SG		**Sg**	**23 41 42.8**		**-6.6**
FINES

KVR				*e*SN	**Sg**	00 04 11.0	-0.6	
MGER	**Gerania Oros**	**0.72**	**225**	⇓*i*PN	**Pg**	00 04 02.8	-0.6	
MGER				*e*SN	**Sg**	00 04 13.5	+0.7	
LKR	**Lokris**	**0.72**	**282**	*e*PN	**Pg**	00 04 02.8	-0.7	
LKR				SN	**Sg**	00 04 13.4	+0.5	
NAIG	**Nisos Aigina**	**0.81**	**204**	⇓*i*PN	**Pg**	00 04 04.0	-1.1	
NAIG				*e*SN	**Sg**	00 04 16.0	+0.3	
NEO	**Neokhori**	**0.96**	**327**	*e*PN	**Pn**	00 04 07.4	-1.7	
XOR	**Xorichti**	**1.03**	**328**	*e*Pg	**Pg**	00 04 09.5	+0.2	
XOR				*e*Sg	**Sg**	00 04 23.6	+0.9	
XOR	**Xorichti**	**1.03**	**328**	*e*Pg	**Pg**	00 04 09.5	+0.2	
XOR				*e*Sg	**Sg**	00 04 23.5	+0.8	
PAIG	**Paliouri**	**1.44**	**353**	*e*Pg	**Pn**	00 04 15.2	-0.4	
EVR	**Evrytania**	**1.69**	**285**	*e*PN	**Pn**	00 04 19.6	+0.5	
CHOS	**Chios island**	**1.70**	**93**	*e*Pb	**Pn**	00 04 19.1	-0.1	
LOS	**Limnos**	**1.70**	**32**	*e*Pb	**Pn**	00 04 19.0	-0.3	
LIA	**Limnos Island**	**1.72**	**35**	*e*PN	**Pn**	00 04 18.9	-0.5	
OUR	**Ouranopolis**	**1.83**	**2**	*e*Pb	**Pn**	00 04 20.9	-0.1	
	comp=Z,6.8nm,0.5s							
PLG	**Polygyros**	**1.91**	**349**	*e*PN	**Pn**	00 04 21.8	-0.2	
APE	**Apeiranthos**	**1.93**	**137**	*e*Sn	**Sn**	00 04 49.3	+2.7	
APE				*e*Sn	**Sg**	00 04 51.8	+0.3	
APE	**Apeiranthos**	**1.93**	**137**	*e*PB	**Pn**	00 04 21.4	-0.9	
APE				SN	**Sn**	00 04 46.9	+0.3	
VLI	**Veliai**	**1.94**	**204**	*e*PB	**Pn**	00 04 22.2	-0.3	
LIT	**Litokhoron**	**1.94**	**326**	*e*Pb	**Pn**	00 04 22.5	0.0	
RLS	**Riolos of Patr**	**1.96**	**258**	*e*PN	**Pn**	00 04 23.9	+1.0	
RLS				SN	**Sn**	00 04 48.8	+1.2	
PRK	**Paraskevi**	**2.00**	**67**	*e*PN	**Pn**	00 04 23.8	+0.5	
ITM	**Ithomi**	**2.04**	**230**	*e*PN	**Pn**	00 04 24.5	+0.5	
THE	**Thessaloniki**	**2.25**	**342**	*e*Pn	**Pn**	00 04 26.9	+0.1	
THE				*e*Sn	**Sn**	00 04 52.4	-2.1	
KYTH	**Kithira**	**2.32**	**198**	*e*PN	**Pn**	00 04 28.5	+0.8	
SOH	**Sokhos**	**2.36**	**350**	*e*Pn	**Pn**	00 04 28.8	+0.5	
KZN	**Kozani**	**2.44**	**318**	*e*PN	**Pn**	00 04 30.0	+0.5	
SMG	**Samos**	**2.45**	**108**	*e*PB	**Pn**	00 04 29.6	+0.1	
LKD	**Levkas**	**2.55**	**276**	*e*Pn	**Pb**	00 04 33.8	-1.7	
VLS	**Valsamata**	**2.62**	**264**	*e*PB	**Pn**	00 04 33.9	+2.0	
JAN	**Janina**	**2.64**	**297**	*e*PB	**Pn**	00 04 33.3	+1.1	
GRG	**Griva**	**2.71**	**335**	*e*Pn	**Pn**	00 04 33.5	+0.3	
GRG				*e*Sn	**Sn**	00 05 04.8	-1.2	
KNT	**Kendrikon**	**2.77**	**344**	*e*Pn	**Pn**	00 04 34.7	+0.8	
NVR	**Nevrokopi**	**2.85**	**359**	*e*PN	**Pn**	00 04 34.9	-0.1	
RDO	**Rodhopi**	**2.93**	**25**	*e*PN	**Pn**	00 04 35.4	-0.7	
VAY	**Valandovo**	**3.00**	**340**	*e*Pn	**Pn**	00 04 36.7	-0.4	
VAY				*e*Sn	**Sn**	00 05 00.6	-12	
FNA	**Florina**	**3.00**	**320**	*e*Pn	**Pn**	00 04 38.0	+0.9	
FNA				*e*Sn	**Sn**	00 05 12.1	-1.0	
MMB	**Musomiste**	**3.09**	**358**	*e*Pn	**Pn**	00 04 38.2	-0.1	
VAM	**Vamos**	**3.10**	**175**	*e*PN	**Pn**	00 04 39.5	+1.1	
BIA	**Bitola**	**3.21**	**323**	*e*Pn	**Pg**	00 04 51.1	+0.2	
BIA				*e*Sn	**Sn**	00 05 16.3	-1.9	
SIVA	**Sivas**	**3.55**	**168**	*e*Pn	**Pn**	00 04 47.4	+2.7	

NEIC ***26*** *00:15:58.1±4.8, 1646S×17549E, h35km, mb3.7/2, Error ellipse: s-maj=99.8km s-min=35.6km az=113.0*
ISCJB ***26*** *00:17:08.8±3.6, 186S±0.1×169.8E±0.4, h282km±8km, mb3.5/5, Error ellipse: s-maj=66.9km s-min=17.6km az=21.4*
IDC ***26*** *00:17:11.0±4.5, 1869S×16971E, h275km±41km, mb3.3/4, mb1 3.4/5, mb1mx3.2/13, mbtmp3.9/5, Error ellipse: s-maj=81.6km s-min=37.1km az=161.0*

ISC 26 00:17:10.5±3.6,**187S**±01×**1698E**±04,**h273**km±8km,**n12,**
σ0§62/12,**mb3.5/5,1D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BKM	**Butte a Klehm**	**1.74**	**304**	⇓*i*P		**Pn**	**00 17 53.0**	**+0.2**
BKM				S		**S**	**00 18 26.2**	**-0.1**
DZM	**Mont Dzumac**	**4.60**	**222**	*e*P		**Pn**	**00 18 21.9**	**-0.4**
DZM	**Mont Dzumac**	**4.60**	**222**	P		**Pn**	**00 18 22.2**	**0.0**
	1.0nm,0.3s,baz=66,slow=18,SNR=13							
DZM				S		**S**	**00 19 19.7**	**0.0**
	1.9nm,0.3s,baz=85,slow=22,SNR=3.7							
CTA	**Charters Tower**	**22.21**	**262**	P		**P**	**00 21 46.0**	**+1.5**
	1.3nm,0.6s,mb3.4,baz=96,slow=9.2,SNR=3.3							
CTA	**Charters Tower**	**22.21**	**262**	P		**P**	**00 21 46.0**	**+1.5**
CTAO	**Charters Tower**	**22.21**	**262**	*e*P		**P**	**00 21 45.8**	**+1.3**
	1.5nm,0.7s,mb3.4							
STKA	**Stephens Creek**	**28.57**	**237**	P		**P**	**00 22 41.9**	**+0.4**
	0.9nm,0.7s,mb3.3,baz=58,slow=10,SNR=7.7							
WRAB	**Tennant Creek**	**33.40**	**262**	P		**P**	**00 23 22.9**	**-0.8**
	0.6nm,0.4s,mb3.5							
WRA	**Warramunga Arr**	**33.41**	**262**	P		**P**	**00 23 23.0**	**-0.8**
	0.3nm,0.4s,mb3.2,baz=94,slow=8.9,SNR=3.2							
ASAR	**Alice Springs**	**33.74**	**255**	P		**P**	**00 23 26.4**	**-0.2**
	3.2nm,0.4s,mb4.2,baz=82,slow=8.9,SNR=44							
ARCES	**ARCESS Array B**	**124.63**	**346**	PKP		PKPdf	00 35 37.3	-0.2
	0.9nm,1.0s,baz=89,slow=1.6,SNR=7.3							
GERES	**GERESS Array B**	**144.21**	**333**	PKP		PKPdf	00 36 13.0	-0.8
	0.2nm,0.3s,baz=27,slow=6.6,SNR=5.5							

ISCJB ***26*** *00:50:03.1±0.3, 6629N×003×14201W±007, h10km, mb4.2/15, MS3.7/14, Error ellipse: s-maj=4.1km s-min=3.9km az=163.2*
BJI ***26*** *00:50:03.2, 6630N×14230W, h22km, mB4.6, mb4.5, Ms4.5, Ms2.4*
NEIC ***26*** *00:50:06.3, 6628N×14229W, h22km, mb4.2/4, ML4.2(PGC), ML4.4(AEIC), After AEIC.*
IDC ***26*** *00:50:06.7±1.0, 6642N×14188W, h0km, mb3.7/6, mb1 4.0/9, mb1mx3.8/22, mbtmp3.9/9, ML4.3/3, MS3.6/13, Ms1 3.6/13, ms1mx3.4/35, Error ellipse: s-maj=19.0km s-min=13.0km az=49.0*
PGC ***26*** *00:50:06.2, 6634N×14199W, h5km, ML4.2/2, 280km northwest of Dawson, Yt Eastern Alaska.*

ISC 26 00:50:05.1±0.3,**6627N**±002×**14204W**±007,**h10**km,**n58,**
σ1§45/74,**mb4.2**/15,**MS3.7**/14,**Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EGAK	**Eagle**	**1.54**	**166**	*e*Pn		**Pn**	**00 50 31.7**	**-1.0**
EGAK				*e*Sg		**Sg**	**00 50 55.5**	**+0.8**
DAWY	**Dawson**	**2.48**	**152**	Pn		**Pn**	**00 50 46.3**	**+0.8**
DAWY				Pg		**Pg**	**00 50 51.1**	**-1.5**
DAWY				Sn		**Sn**	**00 51 18.6**	**+2.7**
DAWY				Sg		**Sg**	**00 51 24.1**	**-0.7**
DAWY				Trac			00 51 33.2	
	comp=Z,415nm,0.5s							
DAWY	**Dawson**	**2.48**	**152**	P		**Pn**	**00 50 46.3**	**+0.8**
DAWY				S		**Sn**	**00 51 18.3**	**+2.5**
COLA	**College**	**2.79**	**243**	P		**Pn**	**00 50 48.7**	**-1.2**
COLA				S		**Sn**	**00 51 22.4**	**-1.2**
COLD	**Coldfoot**	**3.38**	**290**	P		**Pn**	**00 50 57.4**	**-0.5**
COLD				S		**Sn**	**00 51 35.0**	**-3.0**
MENT	**Mentasta**	**3.42**	**193**	P		**Pn**	**00 50 59.0**	**+0.5**
MCK	**McKinley**	**3.88**	**232**	P		**Pn**	**00 51 04.2**	**-0.6**
INK	**Inuvik**	**3.88**	**54**	Pn		**Pn**	**00 51 05.8**	**+1.0**
	9.9nm,0.3s,baz=238,slow=16,SNR=88							
INK				Sn		**Sn**	**00 51 49.3**	**-1.2**
	12nm,0.3s,baz=190,slow=15,SNR=11							
INK				Lg			00 52 06.5	
	25nm,0.3s,baz=328,slow=29,SNR=7.0							
INK				LR		LR	00 53 04.0	
	comp=Z,372nm,18.7s,baz=240,slow=47							
INK	**Inuvik**	**3.88**	**54**	Pn		**Pn**	**00 51 05.8**	**+1.0**
INK				Pg		**Pg**	**00 51 19.6**	**+0.1**
INK				Sn		**Sn**	**00 51 51.2**	**+0.8**
INK				Sg		**Sg**	**00 52 08.0**	**-1.8**
INK				Trac			00 52 19.1	
	comp=Z,242nm,0.5s							
INK	**Inuvik**	**3.88**	**54**	*e*Pn		**Pn**	**00 51 05.3**	**+0.5**
TRF	**Thorofare Moun**	**4.52**	**235**	P		**Pn**	**00 51 13.2**	**-0.3**
KTH	**Kantishna Hill**	**4.66**	**238**	P		**Pn**	**00 51 13.9**	**-1.6**
DIV	**Divide**	**5.42**	**200**	P		**Pn**	**00 51 27.8**	**+1.8**
BMRM	**Bremner River**	**5.45**	**193**	P		**Pn**	**00 51 28.0**	**+1.7**
PMR	**Palmer**	**5.64**	**217**	*e*P		**Pn**	**00 51 30.3**	**+1.3**
HYT	**Haines Junctio**	**5.83**	**158**	Pn		**Pn**	**00 51 32.8**	**+1.3**
HYT				Sg		**Sg**	**00 53 10.0**	**-2.2**
HYT				Trac			00 53 15.4	
	comp=Z,54nm,0.5s							
HYT	**Haines Junctio**	**5.83**	**158**	*e*Pn		**Pn**	**00 51 32.8**	**+1.3**
HYT				*e*Sg		**Sg**	**00 53 10.0**	**-2.2**
EYAK	**Cordova Ski Ar**	**5.98**	**198**	*e*Pn		**Pn**	**00 51 34.1**	**+0.5**
RC01	**Rabbit Creek A**	**6.22**	**217**	P		**Pn**	**00 51 39.2**	**+2.3**
WHY	**Whitehorse**	**6.48**	**147**	Pn		**Pn**	**00 51 40.9**	**+0.5**
WHY				Sn		**Sn**	**00 52 53.8**	**-0.6**
WHY				Sg		**Sg**	**00 53 29.7**	**-3.3**
WHY				Trac			00 53 56.5	
	comp=Z,35nm,0.8s							
WHY	**Whitehorse**	**6.48**	**147**	P		**Pn**	**00 51 40.3**	**-0.1**
SLKM	**Skilak Lake**	**6.85**	**216**	*e*Pn		**Pn**	**00 51 47.8**	**+2.2**
TTA	**Tatalina**	**6.88**	**247**	*e*P		**Pn**	**00 51 46.1**	**+0.1**
PLBC	**Pleasant Camp**	**7.31**	**157**	Sg		**Sg**	**00 53 57.3**	**-2.5**
SVW2	**Sparrevohn**	**7.94**	**236**	*e*Pn		**Pn**	**00 51 58.9**	**-1.6**
SVW2				*e*P			00 51 59.3	
DLBC	**Dease Lake**	**9.62**	**139**	Pn		**Pn**	**00 52 25.7**	**+2.1**
	1.2nm,0.3s,baz=341,slow=8.7,SNR=9.3							
DLBC				Lg			00 55 16.4	
	0.8nm,0.3s,baz=54,slow=19,SNR=10							
DLBC				LR		LR	00 56 20.8	
	comp=Z,510nm,19.3s,baz=102,slow=39							
DLBC	**Dease Lake**	**9.62**	**139**	Pn		**Pn**	**00 52 25.2**	**+1.7**
DLBC				Sg		Sn	00 55 04.3	+53
DLBC				Trac			00 55 41.3	
	comp=Z,24nm,0.9s							
DLBC	**Dease Lake**	**9.62**	**139**	Pn		**Pn**	**00 52 25.2**	**+1.7**
DLBC				*e*Sg		Sn	00 55 04.3	+53
YKW3	**Yellowknife Ar**	**12.36**	**95**	Pn		**Pn**	**00 52 58.5**	**-2.5**
YKW3				Pn		**Pn**	**00 52 58.6**	**-2.5**
YKW3				Sn		**Sn**	**00 55 08.7**	**-10**
YKW3				Sn		**Sn**	**00 55 08.8**	**-10**
YKW3				Trac			00 55 14.8	
	comp=Z,11nm,0.6s							
YKW3				Trac			00 55 52.6	
	comp=Z,12nm,0.7s							
YKW3	**Yellowknife Ar**	**12.36**	**95**	*e*Pn		**Pn**	**00 52 58.5**	**-2.5**
YKW3				*e*Sn		**Sn**	**00 55 08.7**	**-10**
YKA	**Yellowknife Ar**	**12.40**	**95**	Pn		**Pn**	**00 52 59.1**	**-2.4**
	baz=298,slow=13,SNR=23							
YKA				Sn		**Sn**	**00 55 11.4**	**-8.3**
	baz=298,slow=22,SNR=6.5							
YKA				Lg			00 56 43.0	
	baz=315,slow=30,SNR=4.6							
YKA				LR		LR	00 58 02.9	
	comp=Z,432nm,18.1s,baz=275,slow=39							
NEW	**Newport**	**22.24**	**132**	LR		LR	01 05 05.0	
	comp=Z,111nm,18.9s,MS3.3,baz=161,slow=40							
CHMT	**Chamberlain Mo**	**24.65**	**128**	*e*P		**P**	**00 55 27.5**	**+1.8**
ULM	**Lac du Bonnet**	**28.23**	**102**	LR		LR	01 08 36.6	
	comp=Z,23nm,21.6s,MS2.7,baz=274,slow=39							
PDAR	**Pinedale Array**	**29.53**	**127**	P		**P**	**00 56 13.6**	**+3.9**
	3.3nm,1.0s,mb4.0,baz=341,slow=6.9,SNR=19							
SCHQ	**Schefferville**	**36.33**	**71**	LR		LR	01 12 17.6	
	comp=Z,113nm,19.0s,MS3.7,baz=20,slow=37							
OXF	**Oxford**	**44.06**	**109**	*e*P		**P**	**00 58 15.4**	**+2.3**
	34nm,1.3s,mb4.9							
ARCES	**ARCESS Array B**	**44.19**	**6**	P		**P**	**00 58 14.6**	**+0.4**
	0.7nm,0.7s,mb3.5,baz=357,slow=8.5,SNR=5.6							
ARCES				LR		LR	01 16 05.6	
	comp=Z,46nm,19.9s,MS3.4,baz=173,slow=35							
MDJ	**Mudanjiang**	**49.59**	**290**	P		**P**	**00 58 52.8**	**-3.6**
MDJ				PP		PP	01 00 46.5	-4.2
MDJ				SCP		ScP	01 04 10.8	-2.6
MDJ				PCS		PcS	01 04 12.0	-2.6
MDJ				S		**S**	**01 05 59.5**	**-5.0**
MDJ				SCS		ScS	01 08 44.8	-3.4
MDJ				AMB		AMB		
	comp=Z,3.0nm,0.8s,mb4.4							
MDJ				AMB		AMB		
	comp=Z,37nm,5.0s							
MDJ				LR		LR		
	comp=N,74nm,16.9s,MS3.7							
MDJ				LR		LR		
	comp=E,17nm,19.0s,MS3.7							
MDJ				LR		LR		
	comp=Z,68nm,21.1s,MS3.6							
NB2	**NORSAR Subarra**	**51.47**	**16**	P		**P**	**00 59 13.5**	**+2.9**
	comp=Z,4.7nm,1.7s,mb4.1,baz=346,slow=7.9							
NOA	**NORSAR Array B**	**51.47**	**16**	P		**P**	**00 59 11.6**	**+1.0**
	comp=Z,0.5nm,0.8s,mb3.5,baz=348,slow=7.6,SNR=4.4							
NOA	**NORSAR Array B**	**51.47**	**16**	P		**P**	**00 59 11.6**	**+1.0**
CN2	**Changchun**	**51.84**	**293**	*e*P		**P**	**00 59 09.0**	**-4.4**
FINES	**FINESS Array B**	**52.29**	**7**	P		**P**	**00 59 17.9**	**+1.2**
	comp=Z,0.8nm,0.5s,mb3.9,baz=8.9,slow=7.5,SNR=15							
FINES				LR		LR	01 19 00.6	
	comp=Z,25nm,20.7s,MS3.2,baz=110,slow=33							
MJAR	**Matsushiro Arr**	**53.13**	**278**	LR		LR	01 22 45.1	
	comp=Z,113nm,19.8s,MS3.9,baz=335,slow=37							
SONM	**Songino Array**	**54.87**	**310**	P		**P**	**00 59 38.7**	**+3.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=25,slow=7.2,SNR=3.4							
SONM				LR		LR	01 25 34.0	
	comp=Z,112nm,18.5s,MS4.0,baz=37,slow=39							
ZAL	**Zalesovo**	**54.98**	**328**	LR		LR	01 25 56.9	
	comp=Z,69nm,21.8s,MS3.7,baz=335,slow=39							
CHKZ	**Chkalovo**	**57.84**	**338**	*e*P		**P**	**00 59 57.2**	**+0.4**
	comp=Z,2.1nm,0.9s,mb4.2							
BRVK	**Borovoye**	**58.49**	**338**	*e*P		**P**	**01 00 02.0**	**+0.6**
	comp=Z,1.5nm,1.0s,mb4.0							
BJI	**Beijing**	**58.50**	**298**	P		**P**	**01 00 01.0**	**-0.4**
BJI				S		**S**	**01 07 59.8**	**-5.1**
BJI				AMB		AMB		
	comp=Z,4.0nm,0.7s,mb4.6							
BJI				LR		LR		
	comp=N,139nm,17.2s,MS4.3							
BJI				LR		LR		
	comp=E,167nm,18.4s,MS4.3							
BJI				LR		LR		
	comp=Z,145nm,25.4s							
ZRNK	**Zerenda**	**58.78**	**339**	*e*P		**P**	**01 00 03.2**	**-0.2**
	comp=Z,2.2nm,0.9s,mb4.2							
AKASG	**Malin Array Be**	**63.17**	**6**	P		**P**	**01 00 38.0**	**-4.1**
	comp=Z,0.3nm,0.2s,mb4.0,baz=356,slow=6.4,SNR=4.9							
GTA	**Gaotai**	**64.51**	**311**	*e*P		**P**	**01 00 38.0**	**-4.1**
GTA				PCP		PcP	01 01 13.5	-2.7
GTA				SCP			01 05 14.5	
GTA				PCS			01 05 15.5	
GTA				S		**S**	**01 09 12.8**	**-8.4**
GTA				SCS		ScS	01 10 26.8	-10
GTA				AMB		AMB		
	comp=Z,3.0nm,0.9s,mb4.3							
GTA				AMB		AMB		
	comp=Z,39nm,4.9s							
GTA				LR		LR		
	comp=N,138nm,19.0s,MS4.2							
GTA				LR		LR		
	comp=E,89nm,19.0s,MS4.2							
GTA				LR		LR		
	comp=Z,167nm,21.7s,MS4.2							
NJ2	**Nanjing**	**64.63**	**292**	*e*P		**P**	**01 00 43.0**	**+0.2**
LZH	**Lanzhou**	**66.28**	**306**	*e*P		**P**	**01 00 48.0**	**-5.5**
LZH				AMB		AMB		
	comp=Z,13nm,1.0s,mb4.9							
BRTR	**Keskin Array B**	**74.28**	**3**	LR		LR	01 34 58.2	
	comp=Z,30nm,20.6s,MS3.6,baz=171,slow=36							
KMI	**Kunming**	**76.72**	**303**	P		**P**	**01 01 55.0**	**-1.5**
KMI				AP		pP	01 01 59.8	0.0
KMI				PP		PP	01 04 50.3	+1.4
KMI				S		S	01 11 41.3	-2.1
KMI				SS		SS	01 16 35.0	-4.0
KMI				AMB		AMB		
	comp=Z,8.0nm,0.7s,mb4.8							
KMI				AMB		AMB		
	comp=Z,25nm,4.2s							
KMI				LR		LR		
	comp=N,107nm,15.7s,MS4.4							
KMI				LR		LR		
	comp=E,101nm,18.9s,MS4.4							
KMI				LR		LR		
	comp=Z,106nm,17.8s,MS4.2							
PPT	**Papeete**	**83.78**	**187**	LR		LR	01 32 21.3	
	comp=Z,108nm,19.6s,MS4.2,baz=348,slow=30							

SOF ***26*** *01:03:20.6, 3942N×24.18E, h10km, MD2.8*
ATH ***26*** *01:03:26.4, 3970N×2406E, h32km±6km, MD3.3/14, ML3.2*
CSEM ***26*** *01:03:26.8±0.1, 3968N×2409E, h20km, ML2.7, Error ellipse: s-maj=1.8km s-min=1.3km az=96.0*
ISCJB ***26*** *01:03:26.6±0.4, 3968N×002×2408E±003, h22km±4km, Error ellipse: s-maj=3.9km s-min=3.4km az=26.4*
NEIC ***26*** *01:03:26.4, 3970N×2406E, h32km, ML3.2(ATH), After ATH.*
THE ***26*** *01:03:27.0, 3969N×2406E, h12km, ML2.7*

ISC 26 01:03:26.6±0.4,**3970N**±002×**2405E**±003,**h18**km±3km,**n47,**
σ1§07/62,**2C-3D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PAIG	**Paliouri**	**0.37**	**309**	*e*Pg		**Pg**	**01 03 34.5**	**+0.1**
PAIG				*e*Sg		**Sg**	**01 03 40.6**	**+1.1**
AOS	**Alonnisos**	**0.54**	**194**	*e*Pg		**Pg**	**01 03 37.2**	**-0.3**
AOS				*e*Sg		**Sg**	**01 03 45.7**	**+1.0**
OUR	**Ouranopolis**	**0.64**	**355**	*e*Pg		**Pg**	**01 03 39.6**	**+0.3**
OUR				*e*Sg		**Sg**	**01 03 48.5**	**+0.6**
XOR	**Xorichti**	**0.74**	**244**	*e*Pg		**Pg**	**01 03 41.3**	**+0.1**
XOR				*e*Sg		**Sg**	**01 03 51.7**	**+0.7**
NEO	**Neokhori**	**0.75**	**239**	*e*PN		**Pn**	**01 03 41.3**	**-0.9**
NEO				*e*SN		**Sn**	**01 03 52.2**	**-0.9**
PLG	**Polygyros**	**0.82**	**326**	*e*PN		**Pn**	**01 03 41.9**	**-1.3**
PLG				*e*SN		**Sn**	**01 03 54.0**	**-0.9**
LOS	**Limnos**	**0.83**	**73**	*e*Pg		**Pg**	**01 03 42.9**	**+0.1**
LOS				*e*Sg		**Sg**	**01 03 54.6**	**+0.8**
LIA	**Limnos Island**	**0.90**	**77**	*e*PN		**Pn**	**01 03 43.9**	**-0.4**
LIA				*e*SN		**Sn**	**01 03 56.1**	**-0.6**
HORT	**Hortiatis**	**1.16**	**321**	*e*Pg		**Pg**	**01 03 47.9**	**-1.1**
HORT				*e*Sg		**Sg**	**01 04 05.0**	**+0.7**
SOH	**Sokhos**	**1.25**	**335**	*e*Pg		**Pg**	**01 03 49.7**	**-1.0**
SOH				*e*Sg		**Sg**	**01 04 07.4**	**+0.5**
THE	**Thessaloniki**	**1.25**	**319**	*e*Pg		**Pg**	**01 03 49.6**	**-1.2**
	comp=Z,2.2nm,0.4s							
THE				*e*Sg		**Sg**	**01 04 07.2**	**0.0**
LIT	**Litokhoron**	**1.27**	**289**	*e*Pg		**Pg**	**01 03 49.4**	**-1.7**
LIT				*e*Sg		**Sg**	**01 04 07.1**	**-0.6**
LKR	**Lokris**	**1.32**	**218**	⇑*i*PB		**Pb**	**01 03 49.7**	**-1.2**
AGG	**Agios Georgios**	**1.49**	**244**	*e*Pg		**Pg**	**01 03 52.5**	**-2.9**
PTL	**Penteli**	**1.65**	**185**	*e*PN		**Pn**	**01 03 54.5**	**-0.1**
NVR	**Nevrokopi**	**1.66**	**355**	*e*PB		**Pb**	**01 03 55.1**	**-1.5**
KNT	**Kendrikon**	**1.71**	**329**	*e*Pb		**Pb**	**01 03 56.3**	**-1.1**
ATH	**Athens Observa**	**1.74**	**189**	*e*PB		**Pb**	**01 03 56.5**	**-1.5**
PRK	**Paraskevi**	**1.78**	**104**	*e*PB		**Pb**	**01 03 58.0**	**-0.6**
GRG	**Griva**	**1.78**	**316**	*e*Pb		**Pb**	**01 03 57.5**	**-1.2**
GRG				*e*Sb		**Sb**	**01 04 21.1**	**+0.4**
MGER	**Gerania Oros**	**1.81**	**200**	*e*PN		**Pn**	**01 03 57.0**	**+0.1**
RDO	**Rodhopi**	**1.84**	**38**	*e*PN		**Pn**	**01 03 56.8**	**-0.5**
KVR	**Kavouri**	**1.88**	**187**	*e*PN		**Pn**	**01 03 57.7**	**-0.1**
EVR	**Evrytania**	**1.90**	**247**	*e*PN		**Pn**	**01 03 58.9**	**+0.8**
MMB	**Musomiste**	**1.91**	**353**	*e*Pb		**Pb**	**01 03 58.2**	**-2.6**
MMB	**Musomiste**	**1.91**	**353**	P		**Pn**	**01 03 58.0**	**-0.2**
ALN	**Alexandroupoli**	**1.94**	**51**	*e*Pb		**Pb**	**01 03 58.3**	**-3.1**
VAY	**Valandovo**	**1.98**	**326**	*e*Pn		**Pn**	**01 03 59.2**	**+0.1**
VAY	**Valandovo**	**1.98**	**326**	*e*Pn		**Pn**	**01 04 03.8**	**+4.6**
VAY				*i* Sg		**Sg**	**01 04 31.3**	**+1.0**
VAY	**Valandovo**	**1.98**	**326**	*e*Pn		**Pn**	**01 03 59.2**	**+0.1**
VAY				*i* Sg		**Sg**	**01 04 31.2**	**+0.9**
CHOS	**Chios island**	**2.04**	**129**	*e*Pn		**Pn**	**01 04 00.5**	**+0.5**
CHOS	**Chios island**	**2.04**	**129**	*e*Pn		**Pn**	**01 04 00.4**	**+0.5**
RZN	**Rozhen**	**2.05**	**14**	P		**Pn**	**01 04 00.6**	**+0.4**
KDZ	**Kurdzhali**	**2.21**	**28**	P		**Pn**	**01 04 01.5**	**-0.9**
KKB	**Krupnik**	**2.29**	**342**	P		**Pn**	**01 04 04.0**	**+0.6**
FNA	**Florina**	**2.32**	**299**	*e*Pn		**Pn**	**01 04 04.8**	**+1.0**
PLD	**Plovdiv**	**2.46**	**11**	*e*Pn		**Pn**	**01 04 07.1**	**+1.4**
JAN	**Janina**	**2.47**	**270**	*e*PN		**Pn**	**01 04 07.0**	**+1.1**
RLS	**Riolos of Patr**	**2.60**	**232**	*e*PN		**Pn**	**01 04 08.9**	**+1.3**
VTS	**Vitosha**	**2.96**	**348**	P		**Pn**	**01 04 14.0**	**+1.3**
ITM	**Ithomi**	**3.01**	**214**	*e*PN		**Pn**	**01 04 15.2**	**+1.8**
VLS	**Valsamata**	**3.10**	**242**	*e*PN		**Pn**	**01 04 16.6**	**+2.1**
VLI	**Veliai**	**3.10**	**197**	*e*PN		**Pn**	**01 04 14.7**	**+0.1**
VOIR		**5.79**	**7**	⇑*i*P		**Pn**	**01 04 52.8**	**+1.3**
MLR	**Muntele Rosu**	**5.96**	**13**	⇓*i*P		**Pn**	**01 04 55.5**	**+1.6**
PLOR	**Plostina**	**6.44**	**16**	⇓*i*P		**Pn**	**01 05 04.1**	**+3.6**
VRI	**Vrincioaia**	**6.47**	**17**	⇓*i*P		**Pn**	**01 05 04.3**	**+3.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**8.68**	**240**	LR	LR	01 45 56.4	
	comp=Z,37nm,18.2s,baz=0.3,slow=37						
SONM	**Songino Array**	**30.61**	**286**	P	P	01 46 51.4	-0.2
	0.2nm,0.6s,baz=95,slow=10,SNR=3.5						
MKAR	**Makanchi Array**	**45.90**	**295**	P	P	01 48 59.8	-0.4
	0.8nm,0.8s,baz=69,slow=6.9,SNR=3.8						
BVAR	**Borovoye Array**	**49.42**	**308**	P	P	01 49 28.1	+0.5
	0.4nm,0.5s,baz=58,slow=8.7,SNR=3.8						
FINES	**FINESS Array B**	**62.00**	**334**	P	P	01 50 57.7	-0.2
	0.7nm,0.4s,baz=40,slow=8.3,SNR=20						
PDAR	**Pinedale Array**	**63.49**	**55**	P	P	01 51 08.1	+0.2
	0.5nm,0.9s,baz=325,slow=4.4,SNR=4.0						
NB2	**NORSAR Subarra**	**66.10**	**341**	P	P	01 51 23.8	-1.0
	comp=Z,0.5nm,0.6s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**66.10**	**341**	P	P	01 51 24.1	-0.7
	comp=Z,0.5nm,0.5s,baz=25,slow=6.3,SNR=6.0						
AKASG	**Malin Array Be**	**69.67**	**326**	P	P	01 51 45.9	-1.4
	comp=Z,0.9nm,0.4s,baz=33,slow=6.4,SNR=4.2						

*IDC **26** 01:42:59.0±3.8, 430S×15271E, h12km±21km, mb4.2/8, mb1 4.3/9, mb1mx4.0/17, mbtmp4.3/9, ML2.4/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/19, Error ellipse: s-maj=25.6km s-min=23.0km az=16.0*

*NEIC **26** 01:42:59.0±0.9, 441S×15260E, h10km, mb4.7/3, Error ellipse: s-maj=23.2km s-min=16.9km az=162.0*

*ISCJB **26** 01:43:01.5±1.0, 45S±01×1526E±0.1, h33km, mb4.2/10, MS3.4/3, Error ellipse: s-maj=22.0km s-min=14.3km az=139.3*

ISC 26 01:43:03.0±1.0, 44S±01×1527E±0.1, h35km, n23, σ0≤81/18, mb4.2/10, MS3.4/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.42**	**227**	Pn	**Pn**	**01 44 47.9**	**-0.7**
	0.3nm,0.3s,baz=342,slow=13,SNR=2.9						
PMG				Sn	**Sn**	**01 46 17.8**	**+6.3**
	0.9nm,0.3s,baz=240,slow=20,SNR=3.4						
PMG	**Port Moresby**	**7.42**	**227**	*e*Pn	**Pn**	**01 44 42.7**	**-5.9**
	31nm,1.0s						
PMG				*e*Sn	**Sn**	**01 46 12.6**	**+1.1**
HNR	**Honiara**	**8.77**	**125**	LR	LR	01 48 04.7	
	comp=Z,75nm,20.8s,baz=355,slow=35						
DZM	**Mont Dzumac**	**22.06**	**144**	P	**P**	**01 47 52.8**	**-1.8**
	4.7nm,0.6s,mb4.1,baz=346,slow=14,SNR=11						
DZM				LR	LR	01 55 31.2	
	comp=Z,92nm,18.1s,MS3.2,baz=210,slow=34						
WRAB	**Tennant Creek**	**23.62**	**228**	*e*P	**P**	**01 48 10.6**	**-0.2**
	22nm,0.8s,mb4.6						
WB2	**Warramunga Arr**	**23.63**	**228**	*e*P	**P**	**01 48 10.3**	**-0.6**
WRA	**Warramunga Arr**	**23.64**	**228**	P	**P**	**01 48 10.7**	**-0.3**
	9.8nm,0.7s,mb4.4,baz=53,slow=9.6,SNR=74						
WRA				ScP	ScP	01 55 33.0	+2.7
	0.8nm,0.9s,baz=43,slow=2.9,SNR=5.4						
WRA				LR	LR	01 57 30.3	
	comp=Z,59nm,20.9s,MS3.0,baz=175,slow=37						
AS31	**Alice Springs**	**26.38**	**222**	*e*P	**P**	**01 48 35.9**	**0.0**
ASAR	**Alice Springs**	**26.38**	**222**	P	**P**	**01 48 36.0**	**0.0**
	1.8nm,0.5s,mb3.9,baz=57,slow=8.7,SNR=20						
ASAR				ScP	ScP	01 55 40.8	+2.7
	0.2nm,0.4s,baz=349,slow=1.3,SNR=5.1						
STKA	**Stephens Creek**	**29.26**	**200**	P	**P**	**01 49 01.6**	**0.0**
	0.8nm,0.6s,mb3.6,baz=8.4,slow=14,SNR=3.1						
FITZ	**Fitzroy Crossi**	**29.76**	**241**	*e*P	**P**	**01 49 05.2**	**-0.9**
	5.0nm,1.1s,mb4.2						
FITZ	**Fitzroy Crossi**	**29.76**	**241**	P	**P**	**01 49 05.7**	**-0.4**
	1.5nm,0.6s,mb3.9,baz=49,slow=11,SNR=9.6						
MBWA	**Marble Bar**	**36.08**	**240**	*e*P	**P**	**01 50 00.9**	**-0.3**
RPZ	**Rata Peaks**	**42.40**	**160**	P	**P**	**01 50 54.5**	**+0.6**
	11nm,0.8s,mb4.5,baz=322,slow=3.1,SNR=4.7						
VNDA	**Vanda**	**73.24**	**178**	P	**P**	**01 54 32.0**	**+1.5**
	1.9nm,0.7s,mb4.2,baz=321,slow=6.8,SNR=12						
QSPA	**South Pole Qui**	**85.57**	**180**	*e*P	**P**	**01 55 38.9**	**+1.4**
	5.4nm,0.9s,mb4.8						
MAW	**Mawson**	**85.91**	**203**	LR	LR	02 31 53.3	
	comp=Z,57nm,19.4s,MS4.0,baz=61,slow=34						
BVAR	**Borovoye Array**	**88.85**	**323**	P	**P**	**01 55 53.5**	**+0.1**
	0.9nm,0.7s,mb4.2,baz=102,slow=6.7,SNR=7.1						
CFAA	**Coronel Fontan**	**127.10**	**136**	PKP	PKPdf	02 02 03.5	+0.2
	0.1nm,0.7s,baz=255,slow=4.9,SNR=4.6						
LPAZ	**La Paz**	**134.71**	**118**	PKP	PKPdf	02 02 20.1	+2.3
	0.5nm,0.6s,baz=304,slow=3.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**150.07**	**289**	PKPbc	PKPbc	02 02 49.9	+0.1
	2.1nm,0.7s,baz=68,slow=2.0,SNR=29						
TORD				PKPab	PKPab	02 02 55.5	-0.2
	1.5nm,0.7s,baz=74,slow=2.6,SNR=10						
TORD	**Torodi Ar. Bea**	**150.07**	**289**	PKPbc	PKPbc	02 02 49.9	+0.1
TORD				PKPab	PKPab	02 02 55.5	-0.2
BDFB	**Brasilia**	**151.43**	**135**	PKPbc	PKPbc	02 02 53.4	+0.4
	3.3nm,0.8s,baz=309,slow=4.7,SNR=5.8						
BDFB				PKPab	PKPab	02 03 01.0	-0.3
	1.9nm,0.7s,baz=207,slow=4.5,SNR=2.9						

CASC 26 01:50:44.1±2.7, 1050N×8698W, h35km±999km, MD3.8, ML2.9, 5C-4D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MADN	**Villa Maderas**	**1.68**	**57**	*e*P	Pn	01 51 12.4	+1.4
TICN	**Ticuantepe**	**1.69**	**25**	*e*P	Pn	01 51 12.3	+1.2
CONN	**Concepcion**	**1.70**	**51**↑	*e*P	Pn	01 51 12.0	+0.8
CONN				*e*S	Sn	01 51 35.4	+3.7
LIM1	**Limonal**	**1.70**	**83**↓	*e*P	Pn	01 51 10.3	-1.0
LIM1				*e*S	Sn	01 51 31.7	-0.1
COPN	**Copaltepe**	**1.71**	**13**↓	*e*P	Pn	01 51 11.5	+0.1
MGAN	**Managua**	**1.79**	**23**	*e*P	Pn	01 51 12.6	+0.2
MGAN				*e*S	Sn	01 51 34.9	+0.9
	comp=E,139nm,0.2s						
LEON	**Leon**	**1.91**	**2**↑	*e*P	Pn	01 51 13.9	-0.2
JCR	**Jicaral**	**1.94**	**109**	*e*P	Pn	01 51 14.5	-0.1
JCR				*e*S	Sn	01 51 38.2	+0.5
MOMJ	**Momotombo**	**1.95**	**13**	*e*P	Pn	01 51 14.4	-0.2
MOMJ				*e*S	Sn	01 51 38.1	+0.2
MIRN	**Miramar**	**1.95**	**8**↓	*e*P	Pn	01 51 14.5	-0.2
CNGN	**Cerro Negro**	**2.01**	**8**↓	*e*P	Pn	01 51 15.0	-0.5
CNGN				*e*S	Sn	01 51 40.0	+0.6
EPA	**Esparza**	**2.40**	**102**	*e*S	Sn	01 51 48.9	0.0
CGA2	**Cerro Gallo 2**	**2.52**	**101**	*e*P	Pn	01 51 24.1	+1.6
CGA2				*e*S	Sn	01 51 52.3	+0.4
PRS1	**Puriscal**	**2.67**	**101**	*e*P	Pn	01 51 25.8	+1.2
LAJ	**Bijagual**	**2.88**	**102**↓	*e*P	Pn	01 51 23.0	-4.4
LCR2	**La Lucha 2**	**3.02**	**104**↑	*e*P	Pn	01 51 30.8	+1.4
LCR2				*e*S	Sn	01 52 05.7	+1.4
OCM	**Ochomogo**	**3.03**	**101**↑	*i*P	Pn	01 51 31.1	+1.6
BUS	**Buena Vista**	**3.30**	**106**	*e*P	Pn	01 51 34.4	+1.1
BUS				*e*S	Sn	01 52 13.2	+1.9

*NEIC **26** 01:53:44.9±5.2, 6.13S×129.36E, h35km, Error ellipse: s-maj=63.9km s-min=34.9km az=168.0*

IDC 26 01:54:08.7±9.7, 782S×12928E, h144km±80km, mb3.5/1, mb1 3.6/4, mb1mx3.2/14, mbtmp3.9/4, Error ellipse: s-maj=70.4km s-min=53.0km az=13.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.82**	**199**	P	Pn	01 56 39.4	-0.2
	0.4nm,0.3s,baz=22,slow=15,SNR=27						
FITZ				S	Sn	01 58 39.5	+0.5
	1.3nm,0.3s,baz=115,slow=22,SNR=13						
WRAB	**Tennant Creek**	**13.01**	**158**	*e*Pn	Pn	01 57 09.0	+1.0
	5.7nm,0.6s						
WRAB				*e*Sn	Sn	01 59 30.9	-0.9
WRA	**Warramunga Arr**	**13.01**	**158**	P	Pn	01 57 07.5	-0.7
	0.3nm,0.3s,baz=344,slow=12,SNR=4.5						
WRA				S	Sn	01 59 31.7	-0.2
	0.8nm,0.3s,baz=331,slow=23,SNR=6.4						
AS31	**Alice Springs**	**16.37**	**165**	*e*Pn	Pn	01 57 52.6	+2.4
ASAR	**Alice Springs**	**16.37**	**165**	P	Pn	01 57 52.2	+2.1
	1.0nm,0.3s,baz=345,slow=11,SNR=63						
ASAR				S	S	02 00 54.0	+1.6
	0.2nm,0.3s,baz=347,slow=28,SNR=4.1						
STKA	**Stephens Creek**	**26.54**	**156**	P	P	01 59 32.9	0.0
	1.1nm,0.6s,baz=337,slow=11,SNR=3.8						

*ISCJB **26** 01:57:02.5±0.5, 43.15N±0.003×45.41E±0.003, h7km±4km, Error ellipse: s-maj=5.3km s-min=2.9km az=36.5*

*CSEM **26** 01:57:02.1, 43.02N×45.38E, h20km, mb4.2, After OBN*

*MOS **26** 01:57:02.7±0.8, 43.02N×45.38E, h20km, mb4.2/1, Error ellipse: s-maj=17.8km s-min=7.3km az=21.6*

*TIF **26** 01:57:03.5, 43.19N×45.18E, h13km±4km*

ISC 26 01:57:03.3±0.4, 4316N±0.003×4541E±0.003, h14km±4km, n22, σ1≤34/41, 1C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.45**	**259**	*i*Pg	**Pg**	**01 57 12.2**	**0.0**
SNJR				*i*Sg	**Sg**	**01 57 20.3**	**+2.1**
VLKR	**Vladikavkaz**	**0.55**	**259**	*i*Pg	**Pg**	**01 57 13.7**	**-0.4**
VLKR				*i*Sg	**Sg**	**01 57 23.1**	**+1.7**
TRKR	**Terskaya**	**0.75**	**319**	*i*Pg	**Pg**	**01 57 18.5**	**+0.6**
TRKR				*i*Sg	**Sg**	**01 57 31.5**	**+3.7**
BTLR	**Botlikh**	**0.77**	**129**	*e*PG	**Pg**	**01 57 16.5**	**-1.8**
BTLR				*e*S	**Sg**	**01 57 28.5**	**+0.1**
ARNR	**Ardon**	**0.83**	**273**	*i*Pg	**Pg**	**01 57 18.5**	**-0.9**
ARNR				*i*Sg	**Sg**	**01 57 31.5**	**+1.2**
KMSR	**Komsomolskaya**	**0.85**	**285**	*i*Pg	**Pg**	**01 57 19.2**	**-0.5**
KMSR				*i*Sg	**Sg**	**01 57 32.6**	**+1.8**
LACR	**Lac**	**0.88**	**248**	*i*Pg	**Pg**	**01 57 18.5**	**-1.9**
LACR				*i*Sg	**Sg**	**01 57 31.3**	**-0.7**
KORR	**Kora**	**0.99**	**266**	*i*Pg	**Pg**	**01 57 20.8**	**-1.6**
KORR				*i*Sg	**Sg**	**01 57 35.4**	**+0.1**
PRTR	**Priterechnaya**	**1.02**	**306**	*i*Pg	**Pg**	**01 57 22.4**	**-0.5**
PRTR				*i*Sg	**Sg**	**01 57 38.2**	**+2.0**
DBC	**Dubki**	**1.05**	**97**	*i*PG	**Pb**	**01 57 21.5**	**-1.7**
DBC				*i*S	**Sb**	**01 57 38.2**	**+1.4**
UNCR	**Uncukul**	**1.11**	**113**	*i*PG	**Pg**	**01 57 23.3**	**-1.3**
UNCR				*i*S	**Sg**	**01 57 40.0**	**+0.9**
UNCR				pmax	pmax		
	comp=Z,36nm,0.2s						
UNCR	**Uncukul**	**1.11**	**113**	*i*Pg	**Pg**	**01 57 23.3**	**-1.3**
	comp=Z,36nm,0.2s						
UNCR				*i*Sg	**Sg**	**01 57 40.0**	**+0.9**
KRNR	**Karanay**	**1.15**	**106**	*e*PG	**Pg**	**01 57 24.1**	**-1.3**
KRNR				*e*S	**Sg**	**01 57 41.9**	**+2.3**
ZEI	**Tsey**	**1.18**	**251**	*e*Pg	Pn	**01 57 23.6**	**-1.8**
ZEI				*i*Sg	**Sb**	**01 57 38.8**	**-1.7**
DIGR	**Digorskoe uzhe**	**1.37**	**260**	*i*Pg	Pn	**01 57 25.9**	**-2.1**
DIGR				*i*Sg	**Sn**	**01 57 44.3**	**-1.6**
TBLG	**Delisi**	**1.51**	**200**	P	Pn	**01 57 30.8**	**+0.8**
TBLG				S	**Sn**	**01 57 50.7**	**+1.2**
MTA	**Mtatsminda**	**1.53**	**198**	P	Pn	**01 57 31.0**	**+0.7**
MTA				S	**Sn**	**01 57 50.5**	**+0.6**
KUBR	**Kubataba**	**1.59**	**294**	*e*Pn	Pn	**01 57 33.0**	**+1.9**
KUBR				*e*Sg	**Sg**	**01 57 53.4**	**-1.2**
DGRG	**David-gareji**	**1.71**	**181**	P	**Pg**	**01 57 35.2**	**-0.9**
DGRG				S	**Sg**	**01 58 00.2**	**+2.0**
BEYR	**Belyy Ugol+**	**2.07**	**295**	*i*Pn	Pn	**01 57 37.2**	**-0.5**
SHAR	**Shatzhatmas**	**2.08**	**287**	*i*PN	Pn	**01 57 38.9**	**+1.1**
KIV	**Kislovodsk**	**2.14**	**293**↑	*i*PN	Pn	**01 57 38.4**	**-0.2**

*NEIC **26** 02:25:02.4, 3153S×7163W, h39km, MG3.4(GUC), After GUC.*

GUC 26 02:25:02.4±0.6, 3153S×7163W, h39km±1km, MD3.6, ML3.4, 4C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.37**	**163**↑	*i*P	Pn	02 25 11.4	0.0
CHNG				*i*S	Sn	02 25 17.9	+0.3
CMCH	**Combarbala**	**0.64**	**56**↑	*i*P	Pn	02 25 15.1	+0.1
CMCH				*i*S	Sn	02 25 25.0	+0.9
CMCH				AML	AML	02 25 28.4	
	comp=E,4μm,0.7s						
CMCH	**Combarbala**	**0.64**	**56**↑	*i*P	Pn	02 25 15.1	+0.1
CMCH				*i*S	Sn	02 25 25.0	+0.9
PTCH	**Petorca**	**0.94**	**141**↓	*i*P	Pn	02 25 19.7	+0.6
PTCH				*i*S	Sn	02 25 32.3	+1.0
PTCH				AML	AML	02 25 33.0	
	comp=E,7μm,0.1s						
PTCH	**Petorca**	**0.94**	**141**↓	*i*P	Pn	02 25 19.7	+0.6
PTCH				*i*S	Sn	02 25 32.3	+1.0
OVCH	**Ovalle**	**0.99**	**22**	*i*P	Pn	02 25 20.6	+0.8
OVCH				*i*S	Sn	02 25 34.1	+1.6
PACH	**Papudo**	**1.01**	**171**	*i*P	Pn	02 25 20.5	+0.4
PACH				*i*S	Sn	02 25 34.9	+1.7
JACH	**Jahuel**	**1.44**	**143**↓	*i*P	Pn	02 25 27.4	+1.4
JACH				*i*S	Sn	02 25 46.7	+3.0
TLL	**Tololo Astrono**	**1.53**	**28**	*i*P	Pn	02 25 28.6	+1.4
TLL				*i*S	Sn	02 25 48.9	+2.9
TLL				AML	AML	02 25 53.4	
	comp=N,606nm,0.3s						
TLL	**Tololo Astrono**	**1.53**	**28**	*i*P	Pn	02 25 28.6	+1.4
TLL				*i*S	Sn	02 25 48.9	+2.9
RCDM	**Rinconada Maip**	**2.07**	**161**	AML	AML	02 26 05.4	
	comp=E,436nm,0.1s						
CLCH	**Cerro Calan**	**2.07**	**154**↑	*i*P	Pn	02 25 35.4	+0.7
CLCH				*i*S	Sn	02 26 00.8	+1.5
CLCH				AML	AML	02 26 11.7	
	comp=N,350nm,0.4s						
FCH	**Farellones**	**2.12**	**148**	*e*P	Pn	02 25 36.6	+1.3
FCH				*i*S	Sn	02 26 02.9	+2.5
FCH				AML	AML	02 26 09.6	
	comp=N,172nm,0.2s						
PCH	**Pirque**	**2.29**	**156**↓	*i*P	Pn	02 25 39.0	+1.4
PCH				*i*S	Sn	02 26 07.1	+2.6
CHCH	**Chadas Angostu**	**2.53**	**161**	*i*P	Pn	02 25 42.0	+1.1
CHCH				*i*S	Sn	02 26 12.2	+1.7

*ISCJB **26** 02:41:42.0±0.6, 6628N±0.004×14192W±0.08, h10km, Error ellipse: s-maj=6.1km s-min=4.6km az=134.4*

*NEIC **26** 02:41:45.0, 66.19N×142.30W, h9km, ML3.1(AEIC), After AEIC.*

*PGC **26** 02:41:45.2, 6627N×142.32W, h5km, ML3.1/2, 280km northwest of Dawson, Yt Eastern Alaska.*

ISC 26 02:41:44.2±0.5, 6623N±0.003×14201W±0.08, h10km, n13, σ1≤47/26, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.50**	**166**	*e*Pn	**Pn**	**02 42 12.0**	**+0.7**
EGAK				*e*Sn	**Sn**	**02 42 32.8**	**+1.9**
DAWY	**Dawson**	**2.44**	**152**	Pn	**Pn**	**02 42 25.6**	**+1.5**
DAWY				Sn	**Sn**	**02 42 57.0**	**+2.9**
DAWY				Sg	**Sg**	**02 43 02.1**	**-0.6**
DAWY				Trac		02 43 05.9	
	comp=Z,34nm,0.2s						
DAWY	**Dawson**	**2.44**	**152**	P	**Pn**	**02 42 25.7**	**+1.5**
DAWY				S	**Sn**	**02 42 56.9**	**+2.8**
COLA	**College**	**2.79**	**243**	P	**Pn**	**02 42 27.4**	**-1.4**
COLA				S	**Sn**	**02 43 03.4**	**+0.9**
COLD	**Coldfoot**	**3.40**	**291**	P	**Pn**	**02 42 37.4**	**+0.1**
COLD				S	**Sn**	**02 43 17.2**	**-0.5**
MCK	**McKinley**	**3.87**	**233**	*e*Pn	**Pn**	**02 42 42.3**	**-1.4**
MCK				*e*Pg	**Pg**	**02 42 53.8**	**-4.4**
MCK				*e*Sg	**Sg**	**02 43 40.6**	**-7.8**
INK	**Inuvik**	**3.90**	**54**	Pn	**Pn**	**02 42 46.7**	**+2.5**
INK				Sn	**Sn**	**02 43 30.8**	**+0.8**
INK				Sg	**Sg**	**02 43 49.2**	**-0.2**
INK				Trac		02 43 56.6	
	comp=Z,22nm,0.5s						
INK	**Inuvik**	**3.90**	**54**	*e*Pn	**Pn**	**02 42 46.2**	**+2.0**
INK				*e*Pg	**Pg**	**02 42 56.5**	**-2.5**
INK				*e*Sn	**Sn**	**02 43 27.8**	**-2.2**
INK				*e*Sg	**Sg**	**02 43 50.1**	**+0.6**
TRF	**Thorofare Moun**	**4.50**	**235**	P	**Pn**	**02 42 52.3**	**-0.2**
HYT	**Haines Junctio**	**5.79**	**158**	Pn	**Pn**	**02 43 12.6**	**+2.4**
HYT				Sg	**Sg**	**02 44 47.9**	**-2.2**
HYT				Trac		02 44 55.1	
	comp=Z,29nm,1.1s						
WHY	**Whitehorse**	**6.44**	**147**	Trac		02 45 15.7	
	comp=Z,5.0nm,0.7s						
WHY	**Whitehorse**	**6.44**	**147**	Sg	**Sg**	**02 45 09.1**	**-1.8**
YKW3	**Yellowknife Ar**	**12.35**	**95**	Pn	**Pn**	**02 44 39.6**	**-0.4**

*IDC **26** 03:17:38.6±2.5, 970S×10825E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/17, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=104.2km s-min=19.9km az=51.0*

*ISCJB **26** 03:17:45.8±5.0, 95S±02×1086E±0.03, h64km±41km, mb3.6/5, Error ellipse: s-maj=46.8km s-min=19.3km az=128.6*

ISC 26 03:17:46.6±5.1, 95S±02×1086E±03, h49km±43km, n7, σ0≤59/8, mb3.6/5, 1C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**2.35**	**46**↑	*e*P	**Pn**	**03 18 22.8**	**0.0**
YOGI				*e*S	**Sn**	**03 18 50.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**18.64**	**119**	P	**Pn**	**03 22 00.9**	**+0.1**
	0.1nm,0.3s,baz=283,slow=9.0,SNR=5.2						
WRA	**Warramunga Arr**	**26.95**	**116**	P	**P**	**03 23 23.0**	**-0.3**
	0.4nm,0.6s,mb3.1,baz=285,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**28.00**	**123**	P	**P**	**03 23 33.6**	**+0.9**
	0.3nm,0.6s,mb3.1,baz=298,slow=9.2,SNR=5.8						
STKA	**Stephens Creek**	**37.83**	**131**	P	**P**	**03 24 57.8**	**-0.6**
	0.4nm,0.4s,mb3.5,baz=276,slow=12,SNR=3.0						
SONM	**Songino Array**	**57.09**	**358**	P	**P**	**03 27 28.0**	**+0.2**
	0.7nm,0.5s,mb4.0,baz=174,slow=7.8,SNR=7.7						
MKAR	**Makanchi Array**	**60.73**	**340**	P	**P**	**03 27 52.9**	**-0.2**
	1.2nm,0.5s,mb4.2,baz=143,slow=7.3,SNR=14						

IDC 26 03:32:40.2±2.7, 973S×15128E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.4/12, mbtmp3.5/5, ML3.0/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/14, Error ellipse: s-maj=69.8km s-min=35.1km az=124.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.08**	**274**	Pn	Pn	03 33 45.1	+1.3
	6.0nm,0.3s,baz=70,slow=10,SNR=8.9						
PMG				LR	LR	03 35 20.7	
	comp=Z,124nm,18.7s,baz=237,slow=39						
WRA	**Warramunga Arr**	**19.25**	**236**	P	Pn	03 37 06.0	-1.0
	0.1nm,0.3s,baz=60,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**21.62**	**228**	P	P	03 37 32.0	+0.1
	0.4nm,0.8s,baz=61,slow=12,SNR=4.1						
FITZ	**Fitzroy Crossi**	**26.22**	**249**	P	P	03 38 16.6	-0.1
	0.8nm,0.6s,baz=9.0,slow=19,SNR=4.1						
SONM	**Songino Array**	**69.72**	**330**	P	P	03 43 51.4	-0.6
	0.4nm,0.7s,baz=114,slow=3.5,SNR=3.2						
TORD	**Torodi Ar. Bea**	**150.01**	**279**	PKPbc	PKPbc	03 52 34.6	+1.9
	0.8nm,0.9s,baz=70,slow=2.3,SNR=4.8						

*ISCJB **26** 03:39:30.2±0.7, 4896N±0.004×12909W±0.06, h10km, mb4.8/1, MS3.9/1, Error ellipse: s-maj=6.4km s-min=4.7km az=72.8*

*BJI **26** 03:39:30.0, 4890N×12930W, h9km, mB4.7, mb4.5, Ms4.3, Msz3.9*

*NEIC **26** 03:39:30.0, 4887N×12929W, h9km, mb4.1/1, MW4.0(PGC), After PGC.*

*PGC **26** 03:39:30.5, 4887N×12929W, h10km, MLSn3.7/1, Mw4.1, 244km southwest of Pt. Hardy, Bc West of Vancouver Island, British Columbia*

ISC 26 03:39:31.5±0.7, 4900N±004×12908W±006, h10km, n45, σ1≤02/64, mb4.8/1, MS3.9/1, 2C, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.44**	**36**	Pn	**Pn**	**03 39 57.1**	**-0.5**
BPBC				Sn	**Sn**	**03 40 16.1**	**-0.4**
	comp=Z,214nm,0.3s						
BPBC				Trac		03 40 17.5	
	comp=Z,214nm,0.3s						
BPBC	**Brooks Peninsu**	**1.44**	**36**	Pn	**Pn**	**03 39 57.1**	**-0.5**
BPBC				Sn	**Sn**	**03 40 16.1**	**-0.4**
EDB	**Eliza Dome**	**1.55**	**55**↑	Pn	**Pn**	**03 39 58.7**	**-0.5**
EDB				Sn	**Sn**	**03 40 18.7**	**-0.6**
EDB				Trac		03 40 21.8	
	comp=Z,15nm,0.1s						
EDB	**Eliza Dome**	**1.55**	**55**	Pn	**Pn**	**03 39 58.7**	**-0.5**
EDB				Sn	**Sn**	**03 40 18.7**	**-0.6**
ETB	**Estevan Point**	**1.71**	**76**↑	Pn	**Pn**	**03 40 01.1**	**-0.3**
HOLB	**Holberg**	**1.75**	**20**	Pn	**Pn**	**03 40 01.5**	**-0.4**
HOLB				Sn	**Sn**	**03 40 23.1**	**-1.1**
	comp=Z,37nm,0.1s						
HOLB				Trac		03 40 27.7	
	comp=Z,37nm,0.1s						
HOLB	**Holberg**	**1.75**	**20**	Pn	**Pn**	**03 40 01.5**	**-0.4**
HOLB				Sn	**Sn**	**03 40 13.1**	**-11**
MAYB	**Maynard**	**1.87**	**41**	Pn	**Pn**	**03 40 03.3**	**-0.2**
MAYB				Sn	**Sn**	**03 40 26.1**	**-1.1**
	comp=Z,11nm,0.1s						
MAYB				Trac		03 40 33.4	
	comp=Z,11nm,0.1s						
MAYB	**Maynard**	**1.87**	**41**	Pn	**Pn**	**03 40 03.3**	**-0.2**
MAYB				Sn	**Sn**	**03 40 26.1**	**-1.1**
WOSB	**Woss**	**2.00**	**54**↑	Pn	**Pn**	**03 40 05.8**	**+0.4**
WOSB				Sn	**Sn**	**03 40 32.3**	**+1.8**
	comp=Z,49nm,0.2s						
WOSB				Trac		03 40 33.1	
	comp=Z,49nm,0.2s						
WOSB	**Woss**	**2.00**	**54**	Pn	**Pn**	**03 40 05.8**	**+0.4**
WOSB				Sn	**Sn**	**03 40 32.3**	**+1.8**
PHC	**Port Hardy**	**2.01**	**31**	Pn	**Pn**	**03 40 05.6**	**+0.1**
PHC				Sn	**Sn**	**03 40 29.7**	**-1.0**
PHC				Trac		03 40 31.5	
	comp=Z,34nm,0.2s						
PHC	**Port Hardy**	**2.01**	**31**	Pn	**Pn**	**03 40 05.6**	**+0.1**
PHC				Sn	**Sn**	**03 40 29.7**	**-1.0**
GDR	**Gold River**	**2.14**	**68**	Pn	**Pn**	**03 40 07.0**	**-0.3**

comp=Z,10.0nm,0.8s,mb4.8

HHC				AMB	AMB		
	comp=Z,54nm,5.4s						
HHC				LR	LR		
	comp=N,110nm,29.4s,MS4.1						
HHC				LR	LR		
	comp=E,84nm,30.4s,MS4.1						
HHC				LR	LR		
	comp=Z,77nm,32.3s,MS3.8						
NJ2	**Nanjing**	**79.20**	**307**	*eP*	**P**	**03 51 36.5**	**-0.2**
WMQ	**Urumqi**	**82.10**	**334**	*eP*	**P**	**03 51 52.0**	**-0.2**

*ISCJB **26** 04:07:50.6±1.1, 6776N±004×340E±02, h0km, Error ellipse: s-maj=9.2km s-min=5.7km az=15.1*
*HEL **26** 04:07:54.6±0.3, 6772N×3371E, h0km, ML2.7, ML2.4(BER), ML2.0(NAO), Explosion*
*CSEM **26** 04:07:54.7±0.3, 6775N×3352E, h0km±1km, ML2.0, Error ellipse: s-maj=7.3km s-min=2.7km az=97.0, Mining explosion.*
*NAO **26** 04:07:54.2±1.3, 6768N×3371E, ML2.0*
*IDC **26** 04:07:57.4±2.2, 6769N×3322E, h0km, mb1 3.1/4, mb1mx3.0/21, mbtmp3.0/4, ML2.6/4, Error ellipse: s-maj=22.6km s-min=9.2km az=77.0*

ISC 26 04:07:52.9±1.0, 6768N±003×337E±02, h0km, n27, σ1§47/49, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**0.28**	**255**	*i* P	**Pg**	**04 07 59.5**	**+1.2**
APA0				*i* S	**Sg**	**04 08 03.8**	**+1.9**
APA0				*e*RG		04 08 05.3	
APA0	**Apatity Array**	**0.28**	**255**	Pg	**Pg**	**04 07 59.5**	**+1.2**
	baz=80,slow=14						
APA0				Lg		04 08 03.8	
	baz=82,slow=37						
APA0				Rg		04 08 05.3	
	baz=80,slow=37						
KU4	**Liikasenvaara**	**2.09**	**233**	*e*P	**Pn**	**04 08 31.1**	**+2.0**
KU4				*e*S	**Sn**	**04 08 58.8**	**+2.9**
KU4	**Liikasenvaara**	**2.09**	**233**	P	**Pn**	**04 08 31.1**	**+1.9**
KU4				S	**Sn**	**04 08 58.7**	**+2.9**
MSF	**Maaselka**	**2.56**	**228**	*e*PB	**Pb**	**04 08 39.4**	**-0.3**
MSF				*e*SB	**Sb**	**04 09 12.8**	**+1.0**
SGF	**Sodankyl**	**2.76**	**268**	*e*PB	**Pb**	**04 08 42.8**	**-0.4**
SGF				*e*SB	**Sb**	**04 09 17.6**	**0.0**
KEV	**Kevo**	**3.21**	**314**	*e*P	**Pn**	**04 08 46.3**	**+1.7**
KEV				*e*S	**Sn**	**04 09 24.1**	**+0.6**
KEV				MSG		04 09 40.3	
	comp=Z,29nm,0.4s						
KEV	**Kevo**	**3.21**	**314**	P	**Pn**	**04 08 46.2**	**+1.6**
KEV				S	**Sn**	**04 09 24.1**	**+0.6**
	comp=Z,29nm,0.4s						
ARA0	**ARCESS Array S**	**3.53**	**306**	*e*P	**Pn**	**04 08 50.2**	**+1.2**
ARA0				*e*PG	**Pg**	**04 08 58.3**	**-2.3**
ARA0				*e*S	**Sn**	**04 09 30.9**	**-0.6**
ARA0				*e*SG	**Sg**	**04 09 41.2**	**-5.3**
ARA0	**ARCESS Array S**	**3.53**	**306**	Pn	**Pn**	**04 08 50.2**	**+1.2**
	baz=123,slow=16						
ARA0				Pg	**Pg**	**04 08 58.3**	**-2.3**
	baz=117,slow=16						
ARA0				Sn	**Sn**	**04 09 30.9**	**-0.6**
	baz=118,slow=28						
ARA0				Lg		04 09 41.2	
	baz=122,slow=37						
ARCES	**ARCESS Array B**	**3.53**	**306**	Pn	**Pn**	**04 08 50.0**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=122,slow=15,SNR=119						
ARCES				Pg	**Pg**	**04 08 58.4**	**-2.3**
	comp=Z,1.6nm,0.3s,baz=118,slow=15,SNR=18						
ARCES				Sn	**Sn**	**04 09 31.8**	**+0.3**
	comp=Z,2.3nm,0.3s,baz=116,slow=24,SNR=22						
ARCES				Lg		04 09 41.6	
	comp=Z,3.5nm,0.3s,baz=121,slow=30,SNR=12						
OUL	**Oulu**	**4.08**	**234**	*e*PG	**Pg**	**04 09 08.1**	**-3.0**
OUL				*e*SG	**Sg**	**04 10 02.0**	**-2.0**
OUL				MSG		04 10 03.0	
	comp=Z,9.9nm,0.5s						
OUL	**Oulu**	**4.08**	**234**	Pg	**Pg**	**04 09 08.1**	**-3.0**
OUL				Sg	**Sg**	**04 10 02.0**	**-2.0**
	comp=Z,9.9nm,0.5s						
KTK1	**Kautokeino**	**4.10**	**294**	*e*P	**Pn**	**04 08 58.6**	**+1.8**
KTK1				AML	AML	04 10 08.0	
	comp=Z,19nm,0.6s						
KIF	**Kilpisjarvi**	**4.96**	**291**	*e*P	**Pn**	**04 09 09.0**	**+0.4**
KIF				*e*S	**Sn**	**04 10 05.4**	**-1.3**
KIF				MSG		04 10 28.1	
	comp=Z,13nm,0.4s						
KIF	**Kilpisjarvi**	**4.96**	**291**	P	**Pn**	**04 09 09.0**	**+0.4**
KIF				S	**Sn**	**04 10 05.4**	**-1.3**
	comp=Z,13nm,0.4s						
TRO	**Tromso**	**5.74**	**297**	*e*P	**Pn**	**04 09 20.0**	**+0.8**
TRO				AML	AML	04 10 58.8	
	comp=Z,5.5nm,0.4s						
SUF	**Sumiainen**	**5.90**	**216**	*e*P	**Pn**	**04 09 24.3**	**+2.7**
SUF				*e*S	**Sn**	**04 10 28.8**	**-1.2**
FIA0	**FINESS Array S**	**7.06**	**211**	Pn	**Pn**	**04 09 37.4**	**-0.2**
	baz=7.1,slow=12						
FIA0				Sn	**Sn**	**04 10 53.8**	**-4.7**
	baz=7.1,slow=22						
FIA0				Lg		04 11 28.4	
	baz=25,slow=28						
FIA0	**FINESS Array S**	**7.06**	**211**	*e*P	**Pn**	**04 09 37.4**	**-0.2**
FIA0				*e*S	**Sn**	**04 10 53.8**	**-4.7**
FIA0	**FINESS Array S**	**7.06**	**211**	Pn	**Pn**	**04 09 37.4**	**-0.2**
	baz=7.1,slow=12						
FIA0				Sn	**Sn**	**04 10 53.8**	**-4.7**
	baz=7.1,slow=22						
FINES	**FINESS Array B**	**7.06**	**211**	Pn	**Pn**	**04 09 37.7**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=30,slow=16,SNR=4.8						
FINES				Sn	**Sn**	**04 10 56.0**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=20,slow=18,SNR=4.0						
FINES				Lg		04 11 31.1	
	comp=Z,0.7nm,0.3s,baz=41,slow=25,SNR=9.2						
MOR8	**Moi Rana**	**7.71**	**268**	AML	AML	04 11 57.5	
	comp=Z,5.7nm,0.7s						
MOR8	**Moi Rana**	**7.71**	**268**	AML	AML	04 11 57.5	
	comp=Z,5.7nm,0.7s						
HFS	**Hagfors**	**11.56**	**239**	Pn	**Pn**	**04 10 37.0**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=45,slow=15,SNR=4.1						
HFS				Sn	**Sn**	**04 12 43.5**	**-5.3**
	comp=Z,0.1nm,0.3s,baz=58,slow=27,SNR=4.0						
HFS				Lg		04 13 55.3	
	comp=Z,0.1nm,0.3s,baz=64,slow=29,SNR=3.8						
SPA0	**Spitsbergen Ar**	**11.62**	**342**	*e*P	**Pn**	**04 10 38.0**	**-2.0**
NOA	**NORSAR Array B**	**11.73**	**246**	Pn	**Pn**	**04 10 40.3**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=48,slow=11,SNR=2.7						
NOA				Lg		04 14 00.8	
	comp=Z,0.1nm,0.3s,baz=214,slow=16,SNR=4.0						

*NEIC **26** 04:15:07.4, 3738N×2067E, h23km, MD3.6(ATH), After ATH.*
*CSEM **26** 04:15:07.4, 3738N×2067E, h23km, MD3.6/7, After ATH*

ATH 26 04:15:07.4, 3738N×2067E, h23km, MD3.6/7, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.80**	**355**	*e*PN	Pn	04 15 23.2	0.0
VLS				*e*SN	Sn	04 15 35.0	+0.6
RLS	**Riolos of Patr**	**0.93**	**43**	*e*PN	Pn	04 15 25.2	+0.2
RLS				*e*SN	Sn	04 15 38.2	+0.7
ITM	**Ithomi**	**1.02**	**101**	*e*PN	Pn	04 15 26.9	+0.6
ITM				*e*SN	Sn	04 15 41.6	+1.7
EVR	**Evrytania**	**1.78**	**30**	*e*PN	Pn	04 15 38.6	+1.9
EVR				*e*SN	Sn	04 16 02.0	+3.4
VLI	**Veliai**	**1.93**	**109**	*e*PN	Pn	04 15 41.2	+2.4
LKR	**Lokris**	**2.23**	**55**	*e*PB	Pb	04 15 45.5	-1.6
NEO	**Neokhori**	**2.78**	**45**	*e*PN	Pn	04 15 52.6	+2.1

*IDC **26** 04:45:04.5±1.1, 2375S×6491W, h0km, mb3.7/2, mb1 4.0/7, mb1mx3.8/18, mbtmp3.8/7, ML4.1/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/25, Error ellipse: s-maj=20.7km s-min=18.6km az=68.0*
*ISCJB **26** 04:45:08.4±1.2, 2356S±007×6481W±009, h40km±14km, mb3.9/4, MS3.9/1, Error ellipse: s-maj=13.8km s-min=10.9km az=11.5*
*NEIC **26** 04:45:10.0±0.9, 2348S×6477W, h37km±11km, mb4.3/2, Error ellipse: s-maj=16.0km s-min=10.1km az=54.0*

ISC 26 04:45:06.4±2.2, 2371S±007×6479W±008, h9km±16km, n17, σ1§36/19, mb3.9/4, MS3.9/1, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**3.95**	**285**	Pn	**Pn**	**04 46 07.4**	**+0.2**
	0.4nm,0.3s,baz=140,slow=0.0,SNR=6.0						
CPUP	**Villa Florida**	**7.25**	**113**	Pn	**Pn**	**04 46 54.4**	**+1.8**
	11nm,0.3s,baz=272,slow=11,SNR=48						
CPUP				Pg	**Pg**	**04 47 24.7**	**-0.6**
	16nm,0.3s,baz=259,slow=11,SNR=5.5						
CPUP				Lg		04 48 57.9	
	20nm,0.3s,baz=184,slow=16,SNR=2.5						
CPUP				LR	LR	04 50 15.7	
	comp=Z,140nm,19.8s,baz=226,slow=42						
CPUP	**Villa Florida**	**7.25**	**113**	Pn	**Pn**	**04 46 54.4**	**+1.8**
CPUP				Pg	**Pg**	**04 47 24.7**	**-0.6**
CPUP				Lg		04 48 57.9	
CPUP				LR	LR	04 50 15.7	
LPAZ	**La Paz**	**8.03**	**336**	Pn	**Pn**	**04 47 03.5**	**+0.3**
	1.0nm,0.3s,baz=139,slow=11,SNR=26						
LPAZ				Sn	**Sn**	**04 48 36.2**	**+2.2**
	1.1nm,0.3s,baz=33,slow=2.6,SNR=3.1						
LPAZ	**La Paz**	**8.03**	**336**	Pn	**Pn**	**04 47 03.5**	**+0.3**
LPAZ				Sn	**Sn**	**04 48 36.2**	**+2.2**
CFAA	**Coronel Fontan**	**8.44**	**200**	Pn	**Pn**	**04 47 08.6**	**-0.2**
	0.1nm,0.3s,baz=14,slow=13,SNR=18						
CFAA				Lg		04 49 27.0	
	0.4nm,0.3s,baz=106,slow=12,SNR=4.4						
SIV	**San Ignacio**	**8.44**	**25**	Pn	**Pn**	**04 47 10.4**	**+1.6**
	4.1nm,0.3s,baz=221,slow=12,SNR=61						
SIV				Sn	**Sn**	**04 48 43.4**	**-0.8**
	5.6nm,0.3s,baz=236,slow=21,SNR=2.6						
SIV				Lg		04 49 34.5	
	4.7nm,0.3s,baz=137,slow=22,SNR=3.1						
TRQA	**Tornquist**	**14.50**	**171**	*e*P	**Pn**	**04 48 35.7**	**+3.9**
SAML	**Samuel**	**14.76**	**6**	*e*Pn	**Pn**	**04 48 32.1**	**-3.2**
	5.6nm,0.5s						
SAML				*e*Sn	**Sn**	**04 51 11.5**	**-7.5**
PLCA	**Paso Flores**	**17.65**	**195**	LR	LR	04 55 57.4	
	comp=Z,90nm,21.1s,baz=4.0,slow=37						
BDFB	**Brasilia**	**17.71**	**66**	LR	LR	04 56 48.1	
	comp=Z,66nm,18.6s,baz=30,slow=40						
WVT	**Waverly**	**63.38**	**339**	*e*P	**P**	**04 55 32.7**	**-3.4**
	3.5nm,1.0s,mb4.4						
TORD	**Torodi Ar. Bea**	**74.58**	**68**	P	**P**	**04 56 46.0**	**+0.3**
	1.2nm,0.8s,mb3.9,baz=257,slow=5.8,SNR=18						
VNDA	**Vanda**	**75.32**	**189**	LR	LR	05 31 09.2	
	comp=Z,60nm,19.2s,MS3.9,baz=296,slow=37						
PDAR	**Pinedale Array**	**77.95**	**328**	P	**P**	**04 57 03.8**	**-1.2**
	0.3nm,0.8s,mb3.3,baz=126,slow=4.7,SNR=2.7						
HLID	**Hailey**	**80.97**	**326**	*e*P	**P**	**04 57 20.4**	**-0.9**
	2.6nm,1.1s,mb4.1						
MKAR	**Makanchi Array**	**145.00**	**41**	PKPbc	PKPdf	05 04 42.9	-1.2
	0.6nm,0.6s,baz=289,slow=3.7,SNR=4.3						

*ISCJB **26** 04:48:15.2±1.7, 3927N±010×7240E±009, h47km±15km, mb3.5/7, Error ellipse: s-maj=18.3km s-min=8.4km az=59.8*
*MOS **26** 04:48:15.4±1.2, 3940N×7245E, h44km, mb4.0/1, Error ellipse: s-maj=22.8km s-min=10.8km az=92.7*
*IDC **26** 04:48:16.0±4.9, 3922N×7260E, h38km±40km, mb3.4/7, mb1 3.6/10, mb1mx3.4/24, mbtmp3.7/10, ML3.2/3, Error ellipse: s-maj=40.3km s-min=18.1km az=11.0*
*NEIC **26** 04:48:17.9±4.1, 3949N×7245E, h39km±28km, Error ellipse: s-maj=42.9km s-min=13.6km az=186.0*
*NNC **26** 04:48:21.8±5.9, 3989N×7261E, h31km±31km, mb3.7, mpv3.2, Error ellipse: s-maj=43.7km s-min=26.5km az=31.0*
*BJI **26** 04:48:21.6, 3865N×7334E, h39km, ML3.2*

ISC 26 04:48:12.7±2.5, 3917N±007×7232E±006, h13km±16km, n35, σ1§00/41, mb3.5/7, 9C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.85**	**82**	*e*P	**Pn**	**04 48 58.5**	**+0.7**
KSH				S	**Sn**	**04 49 31.5**	**-0.5**
KSH				Smax			
	comp=N,356nm,0.7s						
KSH				Smax			
	comp=E,318nm,0.7s						
AML	**Almayashu**	**3.14**	**19**	P	**Pn**	**04 49 02.2**	**+0.4**
	SNR=126						
EKS2	**Erkin-Say**	**3.66**	**17**	P	**Pn**	**04 49 10.4**	**+1.5**
	SNR=12						
KZA	**Kyzart**	**3.66**	**37**	P	**Pn**	**04 49 09.2**	**+0.2**
	SNR=17						
AAK	**Ala-Archa**	**3.83**	**25**	P	**Pn**	**04 49 12.0**	**+0.7**
	SNR=17						
AAK	**Ala-Archa**	**3.83**	**25**	*e*Pn	**Pn**	**04 49 10.3**	**-1.0**
AAK				*e*Sn	**Sn**	**04 49 56.5**	**+0.4**
KBK	**Karagaybulak**	**4.01**	**29**	P	**Pn**	**04 49 14.5**	**+0.7**
	SNR=9.7						
KK31	**Karatay Array**	**4.16**	**341**	⇑Pn	**Pn**	**04 49 17.2**	**+1.3**
	comp=E,6.9nm,0.3s,baz=148,slow=11,SNR=211						
KK31				⇓Sn	**Sn**	**04 50 04.5**	**+0.2**
	comp=E,28nm,0.5s,baz=199,slow=68,SNR=7.1						
KK31				⇑Lg		04 50 16.7	
	comp=E,24nm,0.5s,baz=145,slow=71,SNR=5.2						
CHMS	**Chumysh**	**4.24**	**25**	P	**Pn**	**04 49 17.8**	**+0.8**
	SNR=9.4						
ULHL	**Ulahol**	**4.28**	**43**	P	**Pn**	**04 49 18.0**	**+0.5**
	SNR=19						
USP	**Ospenovka**	**4.41**	**21**	P	**Pn**	**04 49 19.5**	**+0.2**
	SNR=5.8						
TKM2	**Tokmak 2**	**4.49**	**32**	P	**Pn**	**04 49 20.4**	**0.0**
	SNR=6.6						
TKM2	**Tokmak 2**	**4.49**	**32**	⇓Pn	**Pn**	**04 49 20.3**	**-0.1**
	comp=E,1.6nm,0.8s						
TKM2				⇑Pg	**Pg**	**04 49 29.8**	**-8.9**
TKM2				⇑Lg		04 50 21.8	
	comp=E,1.8nm,0.5s						
MKAR	**Makanchi Array**	**10.54**	**41**	Pn	**Pn**	**04 50 42.6**	**-0.9**
	comp=E,0.0nm,0.3s,baz=214,slow=10.0,SNR=10						
AB31	**Akbulak array**	**13.42**	**323**	⇓Pn	**Pn**	**04 51 20.7**	**-2.1**
	comp=E,2.0nm,0.4s,baz=130,slow=14,SNR=46						
AB31				⇑Sn	**Sn**	**04 53 38.6**	**-13**
	comp=E,3.8nm,0.8s,baz=132,slow=24,SNR=4.6						
VOSK	**Vostochnaya**	**13.59**	**357**	⇓Lg		04 55 07.0	
	comp=E,10nm,1.6s						
BVAR	**Borovoye Array**	**13.92**	**355**	Pn	**Pn**	**04 51 27.7**	**-1.9**
	comp=E,0.3nm,0.3s,baz=169,slow=10.0,SNR=2.8						
ZRNK	**Zerenda**	**13.97**	**352**	⇑Pn	**Pn**	**04 51 27.0**	**-3.3**
	comp=E,1.8nm,0.7s						
ZRNK				⇓Sn	**Sn**	**04 53 55.0**	**-10**
	comp=E,0.8nm,0.6s						
ZRNK				⇑Lg		04 55 28.1	
	comp=E,4.8nm,1.0s						
ZRNK	**Zerenda**	**13.97**	**352**	*e*P	**Pn**	**04 51 27.8**	**-2.5**
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZRNK	**Zerenda**	**13.97**	**352**	*e*Pn	**Pn**	**04 51 27.8**	**-2.5**
	comp=Z,2.7nm,0.7s						
CHKZ	**Chkalovo**	**14.56**	**356**	*e*P	**Pn**	**04 51 38.1**	**-0.2**
AKTK	**Aktyubinsk**	**15.13**	**323**	Pn	**Pn**	**04 51 45.9**	**-0.2**
AKTO	**Aktyubinsk**	**15.13**	**323**	⇑Pn	**Pn**	**04 51 51.9**	**+5.8**
	comp=Z,0.2nm,0.6s						
AKTO				⇑Sn	**Sn**	**04 54 23.3**	**-10**
AKTO	**Aktyubinsk**	**15.13**	**323**	Pn	**Pn**	**04 51 45.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=129,slow=14,SNR=6.4						
SONM	**Songino Array**	**26.01**	**59**	P	**P**	**04 53 44.2**	**-1.1**
	comp=Z,0.8nm,0.7s,mb3.4,baz=261,slow=10,SNR=6.0						
SONM	**Songino Array**	**26.01**	**59**	P	**P**	**04 53 44.2**	**-1.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**29.73**	**284**	P	**P**	**04 54 20.9**	**+2.3**
	comp=Z,0.5nm,0.7s,mb3.4,baz=81,slow=8.9,SNR=2.9						
BRTR	**Keskin Array B**	**29.73**	**284**	P	**P**	**04 54 20.9**	**+2.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**35.90**	**324**	P	**P**	**04 55 12.8**	**+0.3**
	comp=Z,0.4nm,0.3s,mb3.8,baz=119,slow=9.2,SNR=8.9						
ARCES	**ARCESS Array B**	**39.11**	**336**	P	**P**	**04 55 39.3**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.5,baz=108,slow=9.3,SNR=11						
ARCES	**ARCESS Array B**	**39.11**	**336**	P	**P**	**04 55 39.3**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Sudbarra**	**42.92**	**321**	P	**P**	**04 56 10.4**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.3,baz=92,slow=8.6						
NOA	**NORSAR Array B**	**42.92**	**321**	P	**P**	**04 56 10.5**	**-0.5**
	comp=Z,0.2nm,0.4s,mb3.2,baz=93,slow=7.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**66.84**	**268**	P	**P**	**04 59 05.2**	**+1.0**
	comp=Z,0.4nm,0.4s,mb3.8,baz=48,slow=5.5,SNR=7.6						
WRA	**Warramunga Arr**	**82.54**	**123**	P	**P**	**05 00 34.3**	**-0.9**
	comp=Z,0.4nm,0.8s,mb3.5,baz=326,slow=4.9,SNR=4.8						

NNC 26 04:51:25.3±11.0, 4001N×7257E, h32km±46km, mb3.1, mpv2.7,5C-2D, Error ellipse: s-maj=75.5km s-min=43.3km az=20.0, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**3.45**	**334**	⇓Pn	Pn	04 52 16.0	-0.9
	3.2nm,0.3s,baz=150,slow=12,SNR=6.7						
KK31				⇑Sn	Sn	04 53 03.5	+6.9
	7.8nm,0.4s						
KK31				⇑Lg		04 53 15.8	
	12nm,0.5s						
TKM2	**Tokmak 2**	**3.69**	**37**	⇓Pn	Pn	04 52 20.3	+0.3
	0.3nm,0.5s						
TKM2				⇑Lg		04 53 22.4	
	0.9nm,0.5s						
AB31	**Akbulak array**	**12.88**	**320**	⇑Sn	Sn	04 56 40.7	-7.5
	2.1nm,0.6s						
AKTO	**Aktyubinsk**	**14.59**	**320**	⇑Pn	Pn	04 54 50.8	+1.3
	0.1nm,0.6s						

JMA 26 04:52:50.5±0.4, 4492N×14886E, h167km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.73**	**236**	P	Pn	04 53 35.5	+0.3
NEM2				*e*S	Sn	04 54 10.4	+0.6
JRA	**Rausu**	**2.85**	**251**	P	Pn	04 53 37.3	+0.6
JAK	**Akkeshi**	**3.57**	**239**	P	Pn	04 53 46.1	+0.4
JAK				*e*S	Sn	04 54 29.1	+0.5
JAR	**Ashorobuto**	**4.01**	**248**	P	Pn	04 53 52.5	+1.2
JOB	**Onbets**	**4.15**	**243**	P	Pn	04 53 54.1	+1.0
JOB				*e*S	Sn	04 54 41.8	-0.2
JKK2	**Kamakawa 2**	**4.50**	**259**	P	Pn	04 53 57.6	-0.1
JCH	**Churui**	**4.60**	**242**	*e*S	Sn	04 54 51.0	-1.4
JEM	**Erimo**	**5.06**	**237**	P	Pn	04 54 06.4	+1.4
JNBK	**Urakawa-nobuka**	**5.16**	**241**	P	Pn	04 54 05.8	-0.5
JKB	**Kayabe**	**6.46**	**245**	P	Pn	04 54 22.3	-1.0
JKB				*e*S	Sn	04 55 32.2	-4.1
JYM2	**Yakumo 2**	**6.78**	**249**	P	Pn	04 54 26.9	-0.7
JSR	**Shiriuchi**	**7.04**	**244**	P	Pn	04 54 30.1	-0.9
JSR				*e*S	Sn	04 55 46.1	-4.0
JTM	**Tenmabayashi**	**7.06**	**237**	P	Pn	04 54 30.7	-0.6
JTM				*e*S	Sn	04 55 45.9	-4.8
JANG	**Nango**	**7.07**	**233**	*e*S	Sn	04 55 46.2	-4.7
JOSM	**Okushiri--Mats**	**7.39**	**251**	P	Pn	04 54 34.6	-1.1
OFUJ	**Ofunato**	**7.92**	**225**	*e*S	Sn	04 56 10.0	-1.2
JRG	**Rokugo**	**8.23**	**231**	*e*S	Sn	04 56 17.3	-1.4
JIO	**Ouri**	**8.56**	**224**	*e*S	Sn	04 56 25.0	-1.6

*IDC **26** 05:00:42.3±2.0, 4837N×15498E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/21, mbtmp3.8/6, ML3.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/29, Error ellipse: s-maj=51.8km s-min=29.7km az=148.0*
*MOS **26** 05:00:43.5±2.0, 4808N×155.11E, h40km, mb4.1/5, Error ellipse: s-maj=23.3km s-min=16.1km az=61.9*
*ISCJB **26** 05:00:46.4±2.0, 483N±01×1549E±02, h50km±14km, mb3.9/6, Error ellipse: s-maj=34.8km s-min=9.9km az=80.5*
*NEIC **26** 05:00:47.2±1.1, 4834N×15481E, h35km, mb4.1/2, Error ellipse: s-maj=29.9km s-min=16.4km az=132.0*

ISC 26 05:00:48.2±1.8, 483N±01×1549E±03, h51km±12km, n18, σ0§81/19, mb3.9/6, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.51**	**18**	*e*PN	**Pn**	**05 01 25.6**	**-0.9**
SKR				*e*S	**Sn**	**05 01 56.3**	**+0.3**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,120nm,0.5s						
SKR				smax			
	comp=E,150nm,0.5s						
SKR				smax			
	comp=Z,80nm,0.5s						
KUR	**Kuril'sk**	**5.72**	**240**	*e*PN	**Pn**	**05 02 04.5**	**-6.1**
KUR				pmax	pmax		
	comp=Z,90nm,0.7s						
YSS	**Yuzh-Sakhalins**	**8.32**	**265**	⇓*e*PN	**Pn**	**05 02 47.9**	**+1.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ASAJ	**Asahikawa**	**9.50**	**248**	Pn	**Pn**	**05 03 01.6**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=83,slow=14,SNR=13						
ASAJ				LR	LR	05 06 19.5	
	comp=Z,53nm,20.4s,baz=282,slow=35						
MJAR	**Matsushiro Arr**	**16.99**	**232**	P	**Pn**	**05 04 41.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=39,slow=10,SNR=6.2						
CHKZ	**Chkalovo**	**50.37**	**310**	*e*P	**P**	**05 09 39.1**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
CHKZ	**Chkalovo**	**50.37**	**310**	*e*P	**P**	**05 09 39.0**	**-1.1**
	comp=Z,0.8nm,0.4s,mb4.1						
ZRNK	**Zerenda**	**51.57**	**310**	*e*P	**P**	**05 09 48.7**	**-0.5**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
ZRNK	**Zerenda**	**51.57**	**310**	*e*P	**P**	**05 09 48.7**	**-0.5**
	comp=Z,1.3nm,0.5s,mb4.1						
ARCES	**ARCESS Array B**	**56.79**	**341**	P	**P**	**05 10 27.2**	**+0.1**
	comp=Z,0.5nm,0.7s,mb3.6,baz=28,slow=8.6,SNR=3.8						
ARCES	**ARCESS Array B**	**56.79**	**341**	P	**P**	**05 10 27.2**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**62.86**	**55**	P	**P**	**05 11 09.5**	**+0.7**
	comp=Z,0.5nm,0.8s,mb3.7,baz=349,slow=1.5,SNR=5.3						
FINES	**FINESS Array B**	**63.15**	**335**	P	**P**	**05 11 10.4**	**-0.3**
	comp=Z,0.6nm,0.

ASPA	Alice Springs	22.37	215	eP	P	05 06 48.9	+1.1
ASPA				eS	S	05 10 45.2	+4.0
DZM	Mont Dzumac	24.43	134	P	P	05 07 07.9	+1.3
	2.5nm,0.5s,mb4.0,baz=342,slow=9.6,SNR=5.8						
FITZ	Fitzroy Crossi	24.89	238	eP	P	05 07 11.0	+0.2
	15nm,0.4s,mb4.9						
FITZ	Fitzroy Crossi	24.89	238	P	P	05 07 11.5	+0.7
	8.5nm,0.4s,mb4.6,baz=57,slow=11,SNR=19						
STKA	Stephens Creek	26.78	192	eP	P	05 07 27.4	-0.4
	2.4nm,0.4s,mb4.2						
STKA	Stephens Creek	26.78	192	P	P	05 07 27.7	-0.1
	2.4nm,0.5s,mb4.1,baz=354,slow=8.9,SNR=15						
CNB	Canberra Magne	29.63	177	eP	P	05 07 53.0	0.0
	6.8nm,0.8s,mb4.4						
KLBR	Kellerberrin	38.16	224	eP	P	05 09 06.0	-0.6
	5.8nm,0.4s,mb4.6						
MJAR	Matsushiro Arr	42.84	349	P	P	05 09 45.5	+0.6
	2.8nm,0.8s,mb3.9,baz=168,slow=8.8,SNR=8.0						
MJAR	Matsushiro Arr	42.84	349	P	P	05 09 45.5	+0.6
NJ2	Nanjing	46.43	326	eP	P	05 10 13.0	-0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
HHC	Hu-ho-hao-te	56.85	328	eP	P	05 11 32.0	+1.4
HHC				AP	pP	05 12 09.3	+0.6
HHC				PCP	PcP	05 12 23.5	-0.8
HHC				XP	sP	05 12 28.0	+1.2
HHC				PP	PP	05 13 42.3	+3.6
HHC				SCP	ScP	05 16 08.3	+0.2
HHC				PCS	PcS	05 16 24.8	-0.5
HHC				S	S	05 19 12.0	+0.9
HHC				XS	sS	05 20 17.0	-0.2
HHC				SCS	ScS	05 21 01.5	-1.8
HHC				SS	SS	05 23 05.3	+3.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,40nm,6.2s						
HHC				LR	LR		
	comp=N,97nm,20.9s						
HHC				LR	LR		
	comp=E,107nm,21.8s						
HHC				LR	LR		
	comp=Z,85nm,21.8s						
ULN	Ulaanbaatar	64.09	331	eP	P	05 12 20.3	+0.7
	comp=Z,1.4nm,0.7s,mb3.9						
SONM	Songino Array	64.39	330	P	P	05 12 22.5	+0.9
	comp=Z,1.0nm,0.7s,mb3.8,baz=165,slow=5.0,SNR=5.8						
VNDA	Vanda	72.29	177	P	P	05 13 10.3	-0.3
	comp=Z,1.9nm,0.8s,mb3.9,baz=332,slow=6.4,SNR=15						
VNDA	Vanda	72.29	177	eP	P	05 13 09.9	-0.8
	comp=Z,2.4nm,0.9s,mb3.9						
WMQ	Urumqi	72.94	319	eP	P	05 13 15.0	+0.5
MKAR	Makanchi Array	77.63	320	P	P	05 13 41.3	0.0
	comp=Z,0.8nm,0.5s,mb3.6,baz=106,slow=7.7,SNR=7.8						
ZAL	Zalesovo	79.05	328	P	P	05 13 47.7	-1.3
	comp=Z,1.4nm,0.4s,mb3.9,baz=25,slow=4.1,SNR=4.4						
ZAL	Zalesovo	79.05	328	P	P	05 13 47.7	-1.3
MAW	Mawson	82.91	203	P	P	05 14 08.8	-0.6
	comp=Z,2.3nm,0.6s,mb4.1,baz=100,slow=8.4,SNR=6.0						
QSPA	South Pole Qui	84.38	180	eP	P	05 14 16.1	-0.9
	comp=Z,5.8nm,0.9s,mb4.3						
BVAR	Borovoye Array	86.85	324	P	P	05 14 27.4	-1.8
	comp=Z,1.7nm,0.8s,mb4.0,baz=108,slow=4.8,SNR=8.2						
CHKZ	Chkalovo	86.87	324	eP	P	05 14 27.1	-2.1
	comp=Z,0.8nm,0.6s,mb3.7						
ZRNK	Zerenda	87.65	324	eP	P	05 14 30.5	-2.5
	comp=Z,1.3nm,0.6s,mb3.9						
TORD	Torodi Ar. Bea	145.67	285	PKPbc	PKPbc	05 21 22.2	-0.4
	comp=Z,0.8nm,0.4s,baz=70,slow=3.7,SNR=29						
TORD	Torodi Ar. Bea	145.67	285	PKPbc	PKPbc	05 21 22.2	-0.4
SAML	Samuel	145.99	115	ePKPbc	PKPbc	05 21 23.1	-0.4

*ISCJB **26** 05:14:51.0±1.0, 36.22N±0.007×80.8E±0.1, h10km, mb3.3/6, Error ellipse: s-maj=12.6km s-min=10.7km az=174.2*
*IDC **26** 05:14:50.4±1.2, 36.03N×80.45E, h0km, mb3.4/6, mb1 3.8/9, mb1mx3.6/24, mbtmp3.7/9, ML4.1/3, Error ellipse: s-maj=27.8km s-min=22.7km az=67.0*
*NEIC **26** 05:14:51.9±0.8, 36.03N×80.46E, h10km, mb3.7/3, Error ellipse: s-maj=14.4km s-min=12.4km az=57.0*
*BJI **26** 05:14:53.6, 36.26N×80.95E, h10km, ML3.8*
*NNC **26** 05:14:57.9±5.8, 36.43N×80.56E, h19km±32km, mb3.2, mpv2.8, Error ellipse: s-maj=36.2km s-min=26.2km az=97.0*

ISC 26 05:14:51.8±2.5, 36.14N±0.007×80.7E±0.1, h5km±16km, n24, σ1°36/28, mb3.3/6, 7C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	5.02	314	ePG	Pg	05 16 24.8	-3.3
KSH				S	Sn	05 17 15.3	+9.1
KSH				Smax			
	comp=N,197nm,0.5s						
KSH				Smax			
	comp=E,171nm,0.6s						
TKM2	Tokmak 2	7.83	331	⇑Pn	Pn	05 16 49.5	+3.3
	comp=E,0.5nm,0.9s						
TKM2				⇓Lg		05 18 58.6	
	comp=E,1.5nm,0.7s						
KK31	Karatay Array	10.47	315	⇓Pn	Pn	05 17 25.6	+3.1
	comp=E,0.4nm,0.4s,baz=138,slow=12,SNR=7.2						
KK31				⇓Sn	Sn	05 19 22.9	+2.6
	comp=E,0.6nm,0.5s						
KK31				⇓⇓Lg		05 20 15.5	
	comp=E,1.8nm,0.7s,baz=48,slow=30,SNR=2.8						
MK02	Makanchi Array	10.69	6	⇑Pn	Pn	05 17 25.9	+0.4
	comp=E,3.5nm,0.5s,baz=182,slow=13						
MK02				⇑Sn	Sn	05 19 23.0	-2.5
	comp=E,4.5nm,0.8s,baz=184,slow=24						
MKAR	Makanchi Array	10.71	6	Pn	Pn	05 17 27.1	+1.3
	comp=E,2.0nm,0.3s,baz=184,slow=12,SNR=46						
MKAR				Sn	Sn	05 19 25.5	-0.6
	comp=E,0.7nm,0.3s,baz=191,slow=23,SNR=5.8						
VOSK	Vostochnaya	17.94	341	⇓P	Pn	05 19 02.2	+0.3
	comp=E,1.4nm,0.6s						
ZAL	Zalesovo	18.02	8	P	Pn	05 19 03.2	+0.2
	comp=E,0.9nm,0.3s,baz=290,slow=9.4,SNR=7.5						
ZAL	Zalesovo	18.02	8	P	Pn	05 19 03.2	+0.2
BVA0	Borovoye Array	18.37	340	P	Pn	05 19 07.7	+0.4
	comp=E,0.3nm,0.4s,baz=171,slow=11,SNR=11						
BVAR	Borovoye Array	18.37	340	P	Pn	05 19 07.5	+0.3
	comp=E,1.2nm,0.3s,baz=143,slow=11,SNR=11						
BRVK	Borovoye	18.43	340	eP	Pn	05 19 08.4	+0.4
	comp=E,60nm,2.0s						
ZRNK	Zerenda	18.71	338	⇑P	Pn	05 19 10.8	-0.6
	comp=E,1.6nm,0.5s						
ZRNK	Zerenda	18.71	338	eP	Pn	05 19 10.6	-0.8
	comp=E,2.3nm,0.5s						
CHKZ	Chkalovo	18.89	341	⇑P	Pn	05 19 12.8	-0.8
	comp=E,0.8nm,0.7s						
CHKZ	Chkalovo	18.89	341	eP	Pn	05 19 12.8	-0.8
	comp=E,1.3nm,0.6s						
AB31	Akbulak array	20.02	317	⇑P	Pn	05 19 23.8	-1.5
	comp=E,0.5nm,0.5s,baz=120,slow=9.7,SNR=4.2						
AKTK	Aktyubinsk	21.70	318	P	P	05 19 43.6	0.0
AKTO	Aktyubinsk	21.70	318	⇑P	P	05 19 46.0	+2.4
	comp=E,0.1nm,1.1s,mb2.1						
AKTO	Aktyubinsk	21.70	318	P	P	05 19 43.6	0.0
	comp=E,0.4nm,0.3s,mb3.3,baz=90,slow=12,SNR=2.9						
SONM	Songino Array	22.29	50	P	P	05 19 52.3	+2.4
	comp=E,0.6nm,0.5s,mb3.3,baz=239,slow=11,SNR=6.7						
FINES	FINESS Array B	42.25	324	P	P	05 22 45.0	-0.9
	comp=E,0.6nm,0.8s,mb3.3,baz=128,slow=12,SNR=3.4						
ARCES	ARCESS Array B	44.58	336	P	P	05 23 03.5	-1.3
	comp=E,0.9nm,0.9s,mb3.6,baz=97,slow=6.3,SNR=4.7						
TORD	Torodi Ar. Bea	73.54	274	P	P	05 26 24.1	-1.6
	comp=E,0.6nm,0.5s,mb3.8,baz=50,slow=5.5,SNR=6.4						
WRA	Warramunga Arr	75.39	128	P	P	05 26 36.5	+0.1
	comp=E,0.5nm,1.2s,mb3.3,baz=327,slow=5.6,SNR=6.9						

*CSEM **26** 05:16:18.7±0.1, 34.61N×24.08E, h30km, MD3.5, Error ellipse: s-maj=5.4km s-min=1.7km az=79.0*
*ISCJB **26** 05:16:19.3±0.8, 34.61N±0.06×24.1E±0.1, h40km±22km, Error ellipse: s-maj=18.8km s-min=9.3km az=151.9*
*ATH **26** 05:16:19.4, 34.69N×24.10E, h43km±1km, MD3.5/6*
*NEIC **26** 05:16:19.4, 34.69N×24.10E, h43km, MD3.5(ATH), After ATH.*
*HLW **26** 05:16:28.5, 34.10N×24.33E, h33km, Mb3.4*

ISC 26 05:16:20.8±1.0, 34.69N±0.005×240E±0.1, h33km±9km, n14, σ0°68/16, 7C, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.16	17	eP	Pb	05 16 27.0	+0.1
VAM	Vamos	0.73	11	eP	Pn	05 16 34.0	-0.8
VAM				eS	Sn	05 16 45.3	+0.5
NPS	Neapolis	1.42	66	eP	Pn	05 16 43.0	-1.3
KYTH	Kithira	1.79	333	eP	Pn	05 16 50.0	+0.7
VLI	Veliai	2.21	337	eP	Pn	05 16 55.4	+0.2
APE	Apeiranthos	2.67	27	eP	Pn	05 17 01.1	-0.4
SWA2		5.56	167	⇑P	Pn	05 17 40.3	-0.9
SWA1		5.59	165	⇑P	Pn	05 17 41.1	-0.5
SWA1				S	Sn	05 18 37.1	-7.6
AWBH		7.59	145	⇑P	Pn	05 18 08.7	-0.3
FYM	Al Fayyum	7.75	128	⇑P	Pn	05 18 11.9	+0.6
AYT	Al 'Ayyat	7.81	128	P	Pn	05 18 13.1	+0.9
GLL	Jalalah	8.26	126	⇑P	Pn	05 18 19.5	+1.2
HFRF	Wahat Farafira	8.36	153	⇑P	Pn	05 18 19.5	-0.2
HDK1	Dakhla	10.23	152	⇑P	Pn	05 18 45.3	+0.1

IDC 26 05:58:23.0±60.0, 1456S×16905E, h0km, mb4.5/3, mb1 4.7/3, mb1mx4.0/12, mbtmp4.5/3, 1C, Error ellipse: s-maj=1020.0km s-min=110.9km az=66.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	30.43	231	eP	P	06 04 37.1	0.0
	1.6nm,0.3s						
STKA	Stephens Creek	30.43	231	P	P	06 04 37.1	+0.1
	1.9nm,0.3s,baz=47,slow=8.0,SNR=13						
WB2	Warramunga Arr	33.53	256	eP	P	06 05 04.4	+0.1
WRA	Warramunga Arr	33.54	256	P	P	06 05 05.2	+0.8
	2.0nm,0.5s,baz=87,slow=8.9,SNR=49						
ASAR	Alice Springs	34.35	249	P	P	06 05 11.5	+0.1
	4.2nm,0.4s,baz=77,slow=9.4,SNR=100						
ASPA	Alice Springs	34.35	249	⇑P	P	06 05 11.6	+0.1
KAKA	Kakadu	35.61	268	eP	P	06 05 23.1	+0.8
	3.6nm,0.4s						
FITZ	Fitzroy Crossi	41.74	259	eP	P	06 06 11.8	-2.0
	4.3nm,0.5s						

MOS 26 06:03:09.3±0.5, 4280N×4400E, h15km, mb3.5/1, 4C, Error ellipse: s-maj=20.4km s-min=12.8km az=50.6, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEI	Tsey	0.08	249	ePG	Pg	06 03 13.7	+1.3
ZEI				eS	Sg	06 03 15.7	+1.4
LACR	Lac	0.22	83	⇑iPG	Pg	06 03 15.5	+1.3
LACR				iS	Sg	06 03 18.8	+1.2
KORR	Kora	0.29	10	⇑iPG	Pg	06 03 16.7	+1.2
KORR				iS	Sg	06 03 20.7	+1.1
DIGR	Digorskoe uzhe	0.32	288	ePG	Pg	06 03 17.8	+1.8
DIGR				eS	Sg	06 03 22.7	+2.2
ARNR	Ardon	0.44	28	⇑iPG	Pg	06 03 19.3	+1.2
ARNR				iS	Sg	06 03 25.4	+1.3
VLKR	Vladikavkaz	0.56	63	ePG	Pg	06 03 21.5	+1.2
VLKR				eS	Sg	06 03 29.2	+1.5
KMSR	Komsomolskaya	0.61	21	⇑iPG	Pg	06 03 22.5	+1.2
KMSR				eS	Sg	06 03 30.3	+1.5
SNJR	Sundja	0.66	65	ePG	Pg	06 03 23.4	+1.3
SNJR				eS	Sg	06 03 32.4	+1.6

IDC 26 06:22:03.8±66.0, 1471S×16852E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/12, mbtmp3.9/3, Error ellipse: s-maj=1114.0km s-min=120.5km az=67.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	29.93	231	P	P	06 28 13.3	-0.1
	0.7nm,0.4s,baz=52,slow=12,SNR=4.3						
WRA	Warramunga Arr	33.00	256	P	P	06 28 41.2	+0.8
	0.5nm,0.5s,baz=87,slow=9.0,SNR=13						
ASAR	Alice Springs	33.81	249	P	P	06 28 47.8	+0.3
	1.1nm,0.4s,baz=80,slow=8.8,SNR=36						

*ISCJB **26** 07:10:37.5±0.4, 40.37S±0.003×174.40E±0.06, h104km±5km, mb3.4/2, Error ellipse: s-maj=7.6km s-min=3.9km az=45.5*
*IDC **26** 07:10:37.3±1.9, 40.36S×174.59E, h96km±23km, mb3.1/2, mb1 3.2/4, mb1mx3.2/11, mbtmp3.4/4, Error ellipse: s-maj=40.3km s-min=17.5km az=136.0*
*WEL **26** 07:10:38.7±0.2, 40.35S×174.41E, h98km±3km, ML3.7/17, Error ellipse: s-maj=1.3km s-min=0.7km az=90.0*
*NEIC **26** 07:10:38.8, 40.35S×174.43E, h98km, ML3.7(WEL), After WEL.*

ISC 26 07:10:38.3±0.4, 4036S±0.003×17442E±0.06, h100km±5km, n86, σ0°71/96, mb3.4/2, 23C-5D, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	D'Urville Isla	0.58	220	PN	Pn	07 10 54.6	0.0
DUWZ				SN	Sn	07 11 05.9	-0.9
KIW	Kapiti Island	0.63	143	⇑P	Pn	07 10 55.2	+0.2
KIW				S	Sn	07 11 06.6	-0.9
KIW	Kapiti Island	0.63	143	⇑PN	Pn	07 10 55.2	+0.2
KIW				SN	Sn	07 11 06.3	-1.2
WAZ	Wanganui	0.75	36	⇑P	Pn	07 10 56.6	+0.5
WAZ				S	Sn	07 11 09.9	+0.5
WAZ	Wanganui	0.75	36	PN	Pn	07 10 56.6	+0.5
WAZ				SN	Sn	07 11 09.7	+0.3
TCW	Tory Channel	0.86	187	⇑P	Pn	07 10 57.7	+0.6
TCW				S	Sn	07 11 10.6	-0.7
TCW	Tory Channel	0.86	187	PN	Pn	07 10 57.7	+0.5
TCW				SN	Sn	07 11 10.6	-0.7
MRW	Makara Radio	0.89	166	⇑P	Pn	07 10 58.2	+0.7
MRW				S	Sn	07 11 11.5	-0.5
MRW	Makara Radio	0.89	166	⇑PN	Pn	07 10 58.2	+0.7
MRW				SN	Sn	07 11 11.5	-0.4
CAW	Cannon Point	0.90	147	⇑P	Pn	07 10 58.2	+0.7
CAW	Cannon Point	0.90	147	⇑PN	Pn	07 10 58.2	+0.6
MRZ	Mangatainoka R	0.94	109	⇑P	Pn	07 10 58.2	+0.2
MRZ	Mangatainoka R	0.94	109	⇑PN	Pn	07 10 58.2	+0.3
WEL	Wellington	0.96	164	P	Pn	07 10 58.8	+0.6
WEL	Wellington	0.96	164	PN	Pn	07 10 58.8	+0.5
SNZO	South Karori	0.97	167	⇑P	Pn	07 10 58.9	+0.6
SNZO	South Karori	0.97	167	PN	Pn	07 10 58.9	+0.5
RAEZ	Rainy Point	1.07	359	P	Pn	07 11 00.0	+0.6
RAEZ	Rainy Point	1.07	359	PN	Pn	07 10 60.0	+0.5
NRZ	Ngariki Road	1.09	340	PN	Pn	07 10 59.9	+0.3
BHW	Baring Head	1.10	162	⇑P	Pn	07 11 00.2	+0.4
BHW	Baring Head	1.10	162	⇑PN	Pn	07 11 00.2	+0.4
NEZ	North Egmont	1.12	347	P	Pn	07 11 00.0	+0.1
NEZ	North Egmont	1.12	347	PN	Pn	07 10 59.9	0.0
TUWZ	Tuamarina	1.13	198	PN	Pn	07 11 00.4	+0.3
MTW	Mount Morrison	1.15	134	⇑P	Pn	07 11 00.6	+0.3
MTW	Mount Morrison	1.15	134	PN	Pn	07 11 00.6	+0.3
NNZ	Nelson	1.16	222	⇓P	Pn	07 11 00.6	+0.1
NNZ	Nelson	1.16	222	PN	Pn	07 11 00.6	+0.2
NWEZ	Newall Road	1.17	339	⇓P	Pn	07 11 00.7	+0.2
NWEZ	Newall Road	1.17	339	PN	Pn	07 11 00.7	+0.2
TIWZ	Tintock	1.20	111	PN	Pn	07 11 01.0	+0.2
PKE	Pukeiti	1.21	344	⇓P	Pn	07 11 01.1	+0.1
PKE	Pukeiti	1.21	344	PN	Pn	07 11 01.0	0.0
TSZ	Takapari Road	1.22	76	⇑P	Pn	07 11 01.1	0.0
TSZ	Takapari Road	1.22	76	⇑PN	Pn	07 11 01.0	-0.1
MSWZ	Moikau Station	1.23	149	⇑P	Pn	07 11 01.8	+0.6
MSWZ	Moikau Station	1.23	149	⇑PN	Pn	07 11 01.8	+0.5
VRZ	Vera Road	1.26	12	⇑P	Pn	07 11 01.9	+0.3
MTVZ	Mangateitei	1.27	40	PN	Pn	07 11 01.6	-0.1
PAWZ	Paruwai Farm	1.28	143	⇑P	Pn	07 11 02.3	+0.5
PAWZ	Paruwai Farm	1.28	143	⇑PN	Pn	07 11 02.3	+0.5
PKVZ	Pokaka	1.29	34	PN	Pn	07 11 01.8	-0.1
TRVZ	Turoa	1.37	40	PN	Pn	07 11 03.6	+0.7
WNVZ	Wahianoa	1.38	42	P	Pn	07 11 03.1	+0.1
WNVZ	Wahianoa	1.38	42	PN	Pn	07 11 03.1	+0.2
CMWZ	Cape Campbell	1.40	186	SN	Sn	07 11 22.7	+0.7
DRZ	Dome Shelter	1.40	40	P	Pn	07 11 04.2	+0.9
DRZ	Dome Shelter	1.40	40	ePN	Pn	07 11 03.0	-0.2
MOVZ	Moawhango	1.40	48	⇑P	Pn	07 11 03.1	-0.2
MOVZ	Moawhango	1.40	48	PN	Pn	07 11 03.0	-0.3
FWVZ	Far West T-bar	1.41	39	⇓P	Pn	07 11 03.5	+0.1
FWVZ	Far West T-bar	1.41	39	PN	Pn	07 11 03.5	+0.1
BSWZ	Blackbirch Sta	1.41	197	P	Pn	07 11 04.5	+1.1
TRWZ	Traveller	1.42	137	PN	Pn	07 11 03.6	+0.2
BFZ	Birch Farm	1.43	103	⇓P	Pn	07 11 03.6	0.0
BFZ	Birch Farm	1.43	103	PN	Pn	07 11 03.6	-0.1
WPVZ	Whakapapa	1.45	37	P	Pn	07 11 03.9	+0.1
TUVZ	Tukino	1.45	42	P	Pn	07 11 04.0	+0.1
TUVZ	Tukino	1.45	42	PN	Pn	07 11 03.9	+0.1
NGZ	Ngauruhoe	1.50	38	P	Pn	07 11 04.4	0.0
QRZ	Quartz Range	1.51	251	⇑P	Pn	07 11 04.0	-0.6
QRZ	Quartz Range	1.51	251	PN	Pn	07 11 03.9	-0.7
TWVZ	Taurewa	1.51	32	P	Pn	07 11 04.4	-0.2
OTVZ	Oturere	1.54	39	PN	Pn	07 11 04.8	-0.1
WTVZ	West Tongariro	1.54	36	P	Pn	07 11 04.8	-0.1
KATZ	Kakaramea	1.70	36	P	Pn	07 11 07.2	+0.2
THZ	Tophouse	1.81	219	P	Pn	07 11 08.8	+0.5
HIZ	Hauiti	1.88	11	P	Pn	07 11 09.3	+0.1
KHZ	Kahutara	2.16	197	eP	Pn	07 11 13.4	+0.6
KHZ	Kahutara	2.16	197	ePN	Pn	07 11 13.3	+0.5
DSZ	Dennistoun Nort	2.41	234	P	Pn	07 11 15.8	-0.4
DSZ	Dennistoun Nort	2.41	234	PN	Pn	07 11 15.7	-0.5
KNZ	Kokohu	2.85	63	eP	Pn	07 11 19.9	-2.1
KNZ	Kokohu	2.85	63	PN	Pn	07 11 19.9	-2.1
LTZ	Lake Taylor	2.91	213	P	Pn	07 11 21.8	-0.9
LTZ	Lake Taylor	2.91	213	PN	Pn	07 11 21.8	-0.9
URZ	Urewera	2.96	46	P	Pn	07 11 21.2	-2.3
	0.7nm,0.3s,baz=223,slow=6.9,SNR=8.2						
URZ				S	Sn	07 11 55.4	-2.9
	13nm,0.3s,baz=42,slow=14,SNR=23						
URZ	Urewera	2.96	46	eP	Pn	07 11 21.0	-2.5
URZ	Urewera	2.96	46	PN	Pn	07 11 20.4	-3.1
MQZ	McQueen's Vall	3.59	201	PN	Pn	07 11 30.6	-1.3
RPZ	Rata Peaks	4.18	216	P	Pn	07 11 39.9	0.0
	0.2nm,0.3s,baz=149,slow=8.4,SNR=3.0						
RPZ				S	Sn	07 12 24.1	-3.6
	2.3nm,0.3s,baz=198,slow=24,SNR=14						
ODZ	Otahua Downs	5.44	209	eP	Pn	07 11 55.1	-1.8
ASAR	Alice Springs	37.80	284	P	P	07 17 45.4	+0.5
	0.2nm,0.4s,mb3.3,baz=121,slow=6.8,SNR=6.6						
WRA	Warramunga Arr	39.76	289	P	P	07 18 01.7	+0.5
	0.4nm,0.5s,mb3.5,baz=126,slow=8.2,SNR=13						
TORD	Torodi Ar. Bea	152.15	195	PKPbc	PKPbc	07 30 21.9	-0.2
	0.4nm,0.9s,baz=166,slow=4.7,SNR=4.3						

*NIED **26** 07:49:00, 41.10N×142.80E, h26km, Mw3.7 Best double couple: M0 4.33000×10^14 NP1:φs312.00000°, δ54.00000°, λ112.00000°. NP2:φs97.00000°, δ42.00000°, λ63.00000°.*
*JMA **26** 07:49:35.7±0.2, 41.11N×142.83E, h13km±3km, M4.0 Broadband fault plane solution: P waves. NP1: φs146.00000°, δ37.00000°, λ127.00000°. NP2: φs283.00000°, δ61.00000°, λ66.00000°. Principal axes: T Plg65.0000°, Azm149.0000°; N Plg21.0000°, Azm295.0000°; P Plg13.0000°, Azm30.0000°;*
*ISCJB **26** 07:49:36.9±0.6, 41.10N±0.004×142.89E±0.06, h47km±8km, mb3.5/6 Error ellipse: s-maj=9.1km s-min=4.3km az=65.0*
*IDC **26** 07:49:41.5±2.2, 41.15N×142.77E, h69km±20km, mb3.3/6, mb1 3.4/8, mb1mx3.3/21, mbtmp3.6/8, MS2.9/1, Ms1 2.9/1, ms1mx2.4/19, Error ellipse: s-maj=40.2km s-min=14.5km az=90.0*

ISC 26 07:49:37.9±0.6, 4113N±0.004×14288E±0.06, h39km±8km, n22, σ0°88/34, mb3.5/6, 1C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	Erimo	0.91	13	⇓P	Pn	07 49 53.0	-1.2
JEM				eS	Sn	07 50 05.5	-0.6
JNBK	Urakawa-nobuka	1.15	355	⇓P	Pn	07 49 57.1	-0.5
JNBK				eS	Sn	07 50 12.6	+0.5
JANG	Nango	1.28	234	P	Pn	07 49 58.2	-1.1
JOT	Ohata	1.40	281	⇑P	Pn	07 50 00.3	-0.6
JOT				eS	Sn	07 50 17.5	-0.7
JTM	Tenmabayashi	1.41	257	⇓P	Pn	07 50 00.8	-0.3
JTM				eS	Sn	07 50 18.8	+0.4
JCH	Churui	1.53	14	⇓P	Pn	07 50 02.8	+0.1
JCH				eS	Sn	07 50 22.4	+1.1
JKB	Kayabe	1.58	299	P	Pn	07 50 02.7	-0.7
JKB				eS	Sn	07 50 21.6	-1.0
JBT2	Biratori 2	1.69	347	P	Pn	07 50 05.9	+0.9
JEW	Eniwo	2.01	329	P	Pn	07 50 09.9	+0.5
JEW				eS	Sn	07 50 34.2	+0.9
JFR	Furan	2.04	354	P	Pn	07 50 10.9	+1.1
JOM	Ohasama	2.05	217	P	Pn	07 50 10.3	+0.4
JOM				eS	Sn	07 50 35.1	+0.9
JAR	Ashorobuto	2.27	17	⇓P	Pn	07 50 12.5	-0.3
JAR				eS	Sn	07 50 40.0	+0.5
JAK	Akkeshi	2.31	35	P	Pn	07 50 12.9	-0.5
JAK				eS	Sn	07 50 38.6	-1.9
ASAJ	Asahikawa	2.99	356	P	Pn	07 50 25.1	+2.3
	5.0nm,0.3s,baz=186,slow=13,SNR=20						
ASAJ				S	Sn	07 51 01.6	+4.1
	7.1nm,0.3s,baz=307,slow=30,SNR=13						
MAT	Matsushiro	5.85	220	P	Pn	07 51 02.0	-0.1
MAT				eS	Sn	07 52 07.3	-0.6
MJAR	Matsushiro Arr	5.85	220	P	Pn	07 51 05.2	+3

115A	Sonoran Desert	13.39	348	⇑P		Pn	07 55 09.5	+0.4
	baz=13							
CMIG	Matias Romero	13.54	98	Pn		Pn	07 55 12.5	+1.4
	1.0nm,0.3s,baz=290,slow=12,SNR=20							
CMIG				LR		LR	08 00 13.6	
	comp=Z,1μm,19.1s,baz=269,slow=36							
JCT	Junction City	13.62	35	ePn		Pn	07 55 13.9	+1.8
Z14A	Wintersburg	14.19	346	⇑P		Pn	07 55 20.2	+0.4
	baz=14							
GLA	Glamis	14.42	340	ePn		Pn	07 55 22.5	-0.5
GLA	Glamis	14.42	340	⇓P		Pn	07 55 23.0	0.0
	baz=14							
DVTC	Desert V Tower	14.53	335	⇑P		Pn	07 55 25.3	+0.8
	baz=14							
Y22C	IRIS PASSCAL I	14.54	7	⇑P		Pn	07 55 24.7	+0.1
	baz=15							
Y14A	Wickenburg	14.75	347	⇑P		Pn	07 55 27.8	+0.2
	baz=15							
BAR	Barrett	14.78	333	ePn		Pn	07 55 29.0	+1.1
LPM	Los Pinos Moun	14.81	7	ePn		Pn	07 55 29.2	+0.9
Y13A	Salome	14.83	344	⇑P		Pn	07 55 28.5	-0.2
	baz=15							
LAZ	Ladron	14.84	6	ePn		Pn	07 55 29.6	+0.9
MONP	Monument Peak	14.86	335	⇑P		Pn	07 55 29.6	+0.6
	baz=15							
Y12C	Blythe	14.97	342	⇓P		Pn	07 55 30.1	-0.4
	baz=15							
X15A	Humboldt	15.13	349	⇑P		Pn	07 55 32.6	-0.2
	baz=15,SNR=9.8							
X14A	Yava	15.24	347	⇑P		Pn	07 55 33.4	-0.7
	baz=15,SNR=6.0							
PDMCI	Parker Dam,Lak	15.38	343	⇑P		Pn	07 55 35.2	-0.7
	baz=15							
ANMO	Albuquerque	15.46	8	Pn		Pn	07 55 36.1	-0.9
	0.0nm,0.3s,baz=203,slow=11,SNR=6.7							
ANMO				LR		LR	08 01 46.4	
	comp=Z,492nm,20.1s,baz=192,slow=38							
ANMO	Albuquerque	15.46	8	ePn		Pn	07 55 37.7	+0.7
	20nm,1.5s							
X13A	Yucca	15.57	345	⇑P		Pn	07 55 38.8	+0.3
	baz=16,SNR=6.4							
BELC	Belle Mtn.	15.68	338	⇓P		Pn	07 55 40.0	+0.1
	baz=16							
HKT	Hockley	15.72	46	ePn		Pn	07 55 39.4	-1.0
MURC	Murrieta	15.79	334	⇑P		Pn	07 55 40.9	-0.5
	baz=16							
W15A	Williams	15.81	350	⇑P		Pn	07 55 41.8	+0.1
	baz=16,SNR=17							
NEE2	Needles Airpor	15.95	343	⇑P		Pn	07 55 43.4	0.0
	baz=16							
W14A	Seligman	16.00	348	⇓P		Pn	07 55 44.2	+0.1
	baz=16							
WUAZ	Wupatki	16.02	353	ePn		Pn	07 55 45.0	+0.7
	51nm,1.5s							
W13A	Hualapai Mount	16.07	345	⇓P		Pn	07 55 44.7	-0.2
	baz=16							
GMRC	Granite Mounta	16.27	340	⇓P		Pn	07 55 47.1	-0.5
	baz=16							
W12A	Cal Nev Ari	16.52	343	⇓P		Pn	07 55 52.3	+1.6
	baz=16							
HEC	Hector,Ludlow	16.55	338	⇑P		Pn	07 55 50.3	-0.7
	baz=17							
V12A	Nelson	16.91	343	⇓P		Pn	07 55 55.9	+0.2
	baz=17,SNR=5.7							
TUQ	Turquoise Mtn.	16.96	340	⇑P		Pn	07 55 56.2	-0.1
	baz=17							
GSC	Goldstone	17.14	338	ePn		Pn	07 56 00.4	+1.8
GSC	Goldstone	17.14	338	⇑P		Pn	07 55 57.8	-0.8
	baz=17							
EDW2	Edwards Air Fo	17.23	334	⇑P		Pn	07 56 00.7	+1.0
	baz=17							
SHOC	Shoshone	17.50	340	⇓P		Pn	07 56 02.3	-0.8
	baz=18,SNR=6.7							
WMOK	Wichita Mounta	17.56	29	ePn		Pn	07 56 03.9	+0.1
	5.1nm,1.1s							
U11A	Corn Creek	17.71	343	⇑P		Pn	07 56 04.9	-0.8
	baz=18							
SHPR	Sheep Range	17.73	343	ePn		Pn	07 56 05.6	-0.3
U10A	Ash Meadows, A	17.99	340	⇓P		Pn	07 56 08.8	-0.3
	baz=18							
PKM	Peak Mountain	18.05	330	⇑P		Pn	07 56 08.8	-1.1
	baz=18							
MPMC	Manual Prospec	18.07	337	⇓P		Pn	07 56 09.3	-0.8
	baz=18							
ISA	Isabella	18.10	334	eP		Pn	07 56 12.8	+2.3
ISA	Isabella	18.10	334	⇓P		Pn	07 56 09.9	-0.6
	baz=18							
FURC	Furnace Creek,	18.21	339	⇑P		Pn	07 56 11.5	-0.3
	baz=18							
DAC	Darwin (Calif)	18.30	337	ePn		Pn	07 56 13.8	+0.9
	10nm,1.5s							
CCUT	Cedar City	18.32	349	ePn		Pn	07 56 14.2	+1.1
SMMC	Simmler	18.48	330	⇓P		Pn	07 56 14.7	-0.3
	baz=18							
PV01	Paradox Valley	18.48	1	eP		Pn	07 56 15.9	+0.7
VES	Vestal, Richgr	18.51	333	⇑P		Pn	07 56 13.8	-1.6
	baz=18							
ARUT	Antelope Range	18.56	349	eP		Pn	07 56 16.8	+0.6
PV10	Paradox Valley	18.73	360	eP		Pn	07 56 17.3	-0.8
PTRM	Twissleman Ran	18.86	330	eP		Pn	07 56 20.8	+1.0
GRAC	Grapevine Rang	18.87	339	⇓P		Pn	07 56 20.4	+0.6
	baz=19,SNR=7.5							
RCTC	Rector, Farmer	18.97	334	⇓P		Pn	07 56 21.0	-0.1
	baz=19							
MSU	Marysvale	19.07	352	eP		Pn	07 56 22.7	+0.4
HELL	Mitchell Peak,	19.20	335	⇑P		Pn	07 56 21.6	-2.3
	baz=19,SNR=15							
PKD	Parkfield	19.25	330	⇓P		Pn	07 56 23.4	-1.0
	baz=19							
S09A	Goldfield	19.47	340	⇑P		Pn	07 56 25.6	-1.5
	baz=20,SNR=13							
SRU	San Rafael	19.51	356	eP		Pn	07 56 26.4	-1.1
	5.1nm,1.0s							
MTUM	Tungsten Hills	19.61	337	ePn		Pn	07 56 30.8	+2.1
U04C	Hernandez Rese	19.70	330	⇓P		Pn	07 56 27.5	-2.4
	baz=20							
R10A	Warm Springs	19.71	343	⇑P		Pn	07 56 28.4	-1.7
	baz=20,SNR=12							
T06C	Millerton Lake	19.76	334	⇓P		Pn	07 56 29.3	-1.3
	baz=20,SNR=6.5							
TPH	Tonopah	19.79	340	eP		Pn	07 56 31.7	+0.7
	6.5nm,0.8s							
KCC	Kaiser Creek	19.88	335	⇑P		Pn	07 56 29.3	-2.7
	baz=20							
R09A	Tonopah	19.90	341	⇑P		Pn	07 56 29.6	-2.6
	baz=20							
Q12A	Willow Creek R	20.05	346	⇓P		P	07 56 31.6	-0.7
	baz=20							
HAST	UC Hastings Re	20.09	329	⇑P		P	07 56 31.8	-0.9
	baz=20							
MIAR	Mount Ida	20.17	39	eP		P	07 56 33.8	+0.1
	6.9nm,1.1s							
S05C	Merced	20.31	333	⇑P		P	07 56 34.5	-0.6
	baz=20,SNR=6.9							
R08A	Mina	20.33	339	⇑P		P	07 56 34.7	-0.7
	baz=20,SNR=9.4							
R07C	Lee Vining	20.44	337	⇑P		P	07 56 36.2	-0.3
	baz=20,SNR=8.6							
NLU	North Lily Min	20.48	353	ePn		P	07 56 39.7	+2.7
P12A	McGill	20.48	347	⇓P		P	07 56 36.7	-0.3
	baz=20							
MPU	Maple Canyon	20.50	354	eP		P	07 56 37.9	+0.8
	12nm,1.1s							
S06C	San Francisco	20.57	335	⇓P		P	07 56 37.7	-0.2
	baz=21,SNR=8.0							
Q08A	Gabbs	20.74	340	⇑P		P	07 56 39.4	-0.3
	baz=21,SNR=10							
P11A	Circle Ranch,	20.76	345	⇓P		P	07 56 39.4	-0.6
	baz=21							
DUG	Dugway	20.81	352	eP		P	07 56 40.8	+0.2
	16nm,1.1s							
S04C	Ingram Canyon,	20.89	331	⇑P		P	07 56 41.8	+0.5
	baz=21							
CMB	Columbia Colle	20.92	334	eP		P	07 56 41.4	-0.3
	5.8nm,0.9s							
CMB	Columbia Colle	20.92	334	⇓P		P	07 56 41.3	-0.4
	baz=21							
WAKR	Walker	20.95	336	eP		P	07 56 43.4	+1.4
R06C	Coleville	20.97	336	⇓P		P	07 56 42.1	-0.2
	baz=21,SNR=7.9							
BNLO	Ben Lomond (Sa	20.98	329	⇑P		P	07 56 42.4	0.0
	baz=21							
P10A	Eureka	21.00	344	⇓P		P	07 56 42.0	-0.6
	baz=21							
CTU	Camp Tracy	21.18	354	eP		P	07 56 45.5	+1.0
	8.7nm,0.9s,mb4.1							
WENL	Wente Brothers	21.18	331	⇑P		P	07 56 43.6	-0.9
	baz=21							
O12A	Currie	21.21	348	⇑P		P	07 56 44.2	-0.7
	baz=21							
O11A	Cowboy Ranch,	21.28	346	⇑P		P	07 56 44.8	-0.8
	baz=21							
R05C	Kirkwood Meado	21.37	335	⇑P		P	07 56 45.9	-0.7
	baz=21,SNR=8.8							
P08A	Dixie Valley	21.54	340	⇓P		P	07 56 47.4	-1.0
	baz=22							
TCUT	Toone Canyon	21.57	355	eP		P	07 56 48.3	-0.4
O10A	Cortez Mining,	21.64	344	⇓P		P	07 56 48.9	-0.6
	baz=22							
LAVA	Lava Cap Winer	21.68	334	⇓P		P	07 56 49.8	-0.1
	baz=22							
N13A	Wendover, West	21.68	349	⇓P		P	07 56 49.4	-0.5
	baz=22,SNR=8.2							
O09A	Fish Creek Ran	21.71	343	⇓P		P	07 56 49.7	-0.6
	baz=22,SNR=7.1							
WCN	Washoe City	21.77	337	⇓P		P	07 56 51.0	+0.1
	baz=22							
N12A	Clover Valley,	21.84	347	⇑P		P	07 56 51.5	-0.1
	baz=22							
PAHR	Pah Rah Range	21.99	338	eP		P	07 56 56.0	+2.8
	34nm,1.6s,mb4.5							
Q04C	Lincoln	22.02	333	⇑P		P	07 56 53.6	+0.1
	baz=22							
N10A	Dunphy	22.05	344	⇑P		P	07 56 52.6	-1.3
	baz=22							
HWUT	Hardware Ranch	22.07	355	eP		P	07 56 55.3	+1.3
	13nm,1.2s,mb4.2							
P05C	Yuba Gap, Truc	22.09	335	⇓P		P	07 56 52.9	-1.4
	baz=22							
M13A	Montello	22.16	349	⇑P		P	07 56 54.9	-0.2
	baz=22							
O07A	Toulon	22.22	339	⇑P		P	07 56 55.6	-0.1
	baz=22,SNR=8.8							
M12A	Wells	22.35	348	⇓P		P	07 56 56.8	-0.3
	baz=22							
HVU	Hansel Valley	22.37	352	eP		P	07 57 02.4	+5.1
N09A	Rock Creek Ran	22.44	343	⇓P		P	07 56 57.2	-0.8
	baz=22							
OHCM	Honcut	22.48	334	eP		P	07 56 59.6	+1.1
BEKR	Beckwourth	22.49	336	⇓P		P	07 56 58.0	-0.6
	baz=22,SNR=9.8							
M11A	Holland Ranch,	22.55	346	⇓P		P	07 56 59.0	-0.2
	baz=23							
N08A	GE Springer Mi	22.55	341	⇑P		P	07 56 58.9	-0.4
	baz=23,SNR=7.4							
ORV	Oroville	22.67	334	⇓P		P	07 57 00.2	-0.2
	baz=23,SNR=7.5							
M10A	I.L. Ranch, Tu	22.81	345	⇑P		P	07 57 01.1	-0.8
	baz=23,SNR=6.6							
N07B	Gerlach	22.81	340	⇑P		P	07 57 01.1	-0.9
	baz=23							
N06A	Buffalo Meadow	23.07	338	⇑P		P	07 57 04.1	-0.7
	baz=23,SNR=7.0							
BW06	Boulder Array	23.12	359	eP		P	07 57 07.6	+2.4
	12nm,1.5s,mb4.1							
PDAR	Pinedale Array	23.12	359	P		P	07 57 02.5	-2.7
	0.6nm,1.0s,mb3.0,baz=182,slow=6.3,SNR=3.3							
PDAR				LR		LR	08 05 32.4	
	comp=Z,398nm,21.7s,MS3.8,baz=190,slow=35							
M08A	Happy Creek Ra	23.24	342	⇓P		P	07 57 07.3	+0.9
	baz=23							
L09A	Wilkinson Ranc	23.57	344	⇓P		P	07 57 09.6	-0.3
	baz=24							
M06C	Likely Place G	23.70	338	⇑P		P	07 57 11.1	-0.1
	baz=24							
LRAL	Lakeview Retre	23.71	51	eP		P	07 57 11.2	0.0
	8.0nm,1.1s,mb4.1							
L08A	Fields	23.91	343	⇓P		P	07 57 12.1	-1.0
	baz=24							
PLAL	Pickwick Lake	23.97	46	eP		P	07 57 12.5	-1.2
	9.4nm,1.0s,mb4.2							
L07A	Adell	24.05	341	⇓P		P	07 57 13.5	-0.9
	baz=24							
M05C	Lookout	24.08	337	⇑P		P	07 57 13.6	-1.1
	baz=24							
K09A	Rome	24.22	344	⇓P		P	07 57 15.0	-0.9
	baz=24,SNR=5.7							
WVOR	Wild Horse Val	24.22	342	eP		P	07 57 16.1	+0.2
	9.5nm,1.0s,mb4.2							
HLID	Hailey	24.35	350	eP		P	07 57 17.8	+0.7
	5.1nm,1.0s,mb3.9							
K08A	Mann Creek Ran	24.45	343	⇑P		P	07 57 17.6	-0.4
	baz=24,SNR=7.5							
L05A	Lakeview	24.57	338	⇑P		P	07 57 18.8	-0.3
	baz=25							
K07A	Rock Creek Ran	24.64	341	⇑P		P	07 57 19.5	-0.2
	baz=25,SNR=6.6							
WVT	Waverly	24.79	44	eP		P	07 57 21.4	+0.2
	9.1nm,1.2s,mb4.2							
RSSD	Black Hills	24.80	8	eP		P	07 57 20.6	-0.6
	5.1nm,1.1s,mb4.0							
J09A	Fry Pan Ranch,	24.83	345	⇓P		P	07 57 20.4	-1.1
	baz=25,SNR=7.7							
YBH	Yreka Blue Hor	25.00	335	LR		LR	08 06 42.0	
	comp=Z,509nm,21.2s,MS4.0,baz=157,slow=36							
K06A	Valley Falls	25.05	340	⇑P		P	07 57 23.4	-0.1
	baz=25							
QLMT	Earthquake Lak	25.26	356	eP		P	07 57 26.7	+1.3
MCMT	McKenzie Canyo	25.38	353	eP		P	07 57 26.8	+0.3
I09A	Lost Marbles R	25.42	345	⇑P		P	07 57 26.6	-0.2
	baz=26							
I08A	Drewsey	25.57	344	⇑P		P	07 57 28.6	+0.4
	baz=26							
SWET	Sewanee	25.57	48	eP		P	07 57 28.6	+0.4
J05A	Fort Rock	25.80	339	⇑P		P	07 57 32.3	+1.9
	baz=26							
I07A	Izee	25.98	342	⇓P		P	07 57 33.5	+1.5
	baz=26							
H09A	Durkee	26.05	346	⇑P		P	07 57 34.2	+1.6
	baz=26							
I06A	Prineville	26.07	341	⇓P		P	07 57 34.8	+2.1
	baz=26							
BMO	Blue Mountains	26.15	346	eP		P	07 57 35.0	+1.6
	7.3nm,1.5s,mb4.0							
H08A	Prairie City	26.16	344	⇓P		P	07 57 36.2	+2.7
	baz=26							
I05A	Bend	26.59	340	⇓P		P	07 57 40.0	+2.5
	baz=27							
CPCT	Cooper Cave	26.68	49	eP		P	07 57 39.1	+0.8
H06A	Lindquist Farm	26.82	342	⇓P		P	07 57 41.8	+2.2
	baz=27							
F09A	S2 Ranch, Elgi	27.09	346	⇓P		P	07 57 43.3	+1.3
	baz=27							
LAO	LASA Array	27.12	4	eP		P	07 57 40.7	-1.6
	17nm,1.4s,mb4.4							
HRY	Holter Researc	27.16	356	eP		P	07 57 42.9	+0.3
MSO	Missoula	27.48	352	eP		P	07 57 49.2	+3.7
	5.0nm,1.1s,mb4.0							
CHMT	Chamberlain Mo	27.49	354	eP		P	07 57 46.4	+0.9
E05A	Randle	28.90	341	⇑P		P	07 57 58.4	+0.2
	baz=29							
NEW	Newport	29.37	349	P		P	07 58 00.9	-1.4
	1.1nm,0.7s,mb3.7,baz=117,slow=11,SNR=3.0							
NEW				LR		LR	08 10 33.6	
	comp=Z,300nm,19.0s,MS3.9,baz=170,slow=38							
NEW	Newport	29.37	349	eP		P	07 58 03.3	+1.0
	3.5nm,1.0s,mb4.0							
E03A	Lebam	29.46	339	⇑P		P	07 58 04.3	+1.2
	baz=30							
D05A	Enumclaw	29.53	342	⇓P		P	07 58 05.5	+1.8
	baz=30							
B05A	Bryant	30.54	343	⇓P		P	07 58 14.4	+1.8
	baz=31							
A04A	Legoe Bay, Lum	31.12	342	⇑P		P	07 58 19.6	+1.8
	baz=31							
ULM	Lac du Bonnet	32.31	16	P		P	07 58 28.8	+0.6
	2.1nm,0.8s,mb4.0,baz=267,slow=19,SNR=3.3							
ULM				LR		LR	08 12 06.3	
	comp=Z,373nm,19.8s,MS4.1,baz=206,slow=37							
SADO	Sadowa	35.23	38	LR		LR	08 13 17.1	
	comp=Z,551nm,20.0s,MS4.3,baz=249,slow=36							
SDV	Santo Domingo	38.51	101	LR		LR	08 16 05.7	
	comp=Z,169nm,20.0s,MS3.9,baz=124,slow=37							
SDV	Santo Domingo	38.51	101	eP		P	07 59 23.2	+1.6
	7.0nm,0.8s,mb4.4							
ATAH	Atahualpa	40.01	128	P		P	07 59 34.9	+0.8
	0.9nm,0.7s,mb3.6,baz=0.0,slow=13,SNR=2.1							
ATAH				LR		LR	08 12 35.0	
	comp=Z,337nm,19.1s,MS4.2,baz=309,slow=31							
SJG	San Juan	40.42	85	LR		LR	08 17 17.0	
	comp=Z,276nm,20.5s,MS4.1,baz=270,slow=37							
YKA	Yellowknife Ar	43.05	356	P		P	07 59 56.1	-3.0
	1.9nm,0.8s,mb3.9,baz=171,slow=7.7,SNR=7.0							
YKA				LR		LR	08 18 26.7	
	comp=Z,377nm,20.0s,MS4.3,baz=180,slow=37							
SCHQ	Schefferville	47.41	32	P		P	08 00 37.3	+3.6
	3.7nm,0.9s,mb4.3,baz=229,slow=6.4,SNR=3.7							
SCHQ				LR		LR	08 22 02.1	
	comp=Z,221nm,19.3s,MS4.1,baz=253,slow=38							
RKT	Rikitea	49.48	212	eS		S	08 07 57.3	-0.5
	213nm,28.8s							
RKT				eLQ			08 12 35.7	
	510nm,31.5s							
RKT				eLR		LR	08 14 58.2	
	306nm,26.2s,baz=26							
KDAK	Kodiak Island	49.71	331	LR		LR	08 18 39.5	
	comp=Z,195nm,21.4s,MS4.1,baz=140,slow=32							
INK	Inuvik	51.10	349	eP		P	08 01 02.3	+0.4
	5.5nm,0.9s,mb4.5							
SAML	Samuel	53.22	118	eP		P	08 01 16.9	-0.7
	3.5nm,1.0s,mb4.2							
LPAZ	La Paz	53.64	129	P		P	08 01 22.6	+1.8
	1.7nm,0.9s,mb4.0,baz=324,slow=7.8,SNR=8.2							
LPAZ				LR		LR	08 21 04.3	
	comp=Z,397nm,21.1s,MS4.5,baz=147,slow=32							
LPAZ	La Paz	53.64	129	eP		P	08 01 22.6	+1.9
	11nm,1.6s,mb4.5							
PPT	Papeete	54.39	230	eS		S	08 09 04.9	-0.4
	367nm,27.0s							
PPT				eLR		LR	08 17 02.7	
	791nm,26.5s,baz=40							
PPT	Papeete	54.39	230	LR		LR	08 17 45.4	
	comp=Z,341nm,20.3s,MS4.4,baz=67,slow=29							
TBI	Tubuai	58.19	225	eS		S	08 09 55.7	0.0
	246nm,27.8s							
TBI				eLQ			08 15 54.5	
	322nm,31.0s							
TBI				eLR		LR	08 18 44.4	
	451nm,27.5s,baz=43							
RAR	Rarotonga	64.19	234	LR		LR	08 22 44.3	
	comp=Z,354nm,18.2s,MS4.6,baz=107,slow=29							
BDFB	Brasilia	69.36	116	P		P	08 03 06.4	-0.6
	1.9nm,0.6s,mb4.2,baz=283,slow=9.6,SNR=3.3							
BDFB				LR		LR	08 31 57.2	
	comp=Z,350nm,21.5s,MS4.6,baz=7.1,slow=34							
PLCA	Paso Flores	69.80	150	P		P	08 03 09.7	-0.1
	1.3nm,1.0s,mb3.8,baz=38,slow=7.8,SNR=2.5							
PLCA	Paso Flores	69.80	150	eP		P	08 03 10.7	+0.9
	9.6nm,1.6s,mb4.5							
AFI	Afiamalu	70.25	247	LR		LR	08 26 01.8	
	comp=Z,332nm,18.8s,MS4.6,baz=105,slow=29							
ARCES	ARCESS Array B	85.42	15	P		P	08 04 35.0	-1.9
	1.3nm,0.9s,mb4.1,baz=333,slow=5.3,SNR=6.1							
ARCES				LR		LR	08 43 24.9	
	comp=Z,182nm,21.9s,MS4.4,baz=316,slow=36							
ESDC	Sonseca Array	88.61	48	LR		LR	08 42 28.9	
	comp=Z,88nm,19.5s,MS4.2,baz=230,slow=34							
GERES	GERESS Array B	94.91	34	LR		LR	08 46 28.8	
	comp=Z,200nm,19.7s,MS4.6,baz=100,slow=34							
MDJ	Mudanjiang	96.81	322	P		P	08 05 30.0	-0.3
MDJ				AP		pP	08 05 33.3	+2.0
MDJ				PP		PP	08 09 24.3	-0.9
MDJ				S		S	08 16 51.5	-1.6
MDJ				XS		sS	08 16 57.0	+2.2
MDJ				AMB		AMB		
	comp=Z,2.0nm,0.8s,mb4.6							
MDJ				LR		LR		
	comp=N,154nm,33.4s							
MDJ				LR		LR		
	comp=E,63nm,40.0s							
MDJ				LR		LR		
	comp=Z,44nm,26.7s							
HHC	Hu-ho-hao-te	109.09	329	ePDIF		Pdif	08 06 25.0	0.0
HHC				PP		PP	08 11 01.3	+4.2
HHC				S		Sdif	08 18 32.3	-3.6
HHC				PP		PP		
	comp=Z,48nm,8.5s							
HHC				LR		LR		
	comp=N,138nm,20.5s,MS4.7							
HHC				LR		LR		
	comp=E,179nm,19.6s,MS4.7							
HHC				LR		LR		
	comp=Z,52nm,19.9s,MS4.1							
SSE	Sheshan	110.34	315	PKP		PKiKP	08 10 32.5	+0.9
SSE				LR		LR		
	comp=N,332nm,18.6s,MS5.0							
SSE				LR		LR		
	comp=E,54nm,18.6s,MS5.0							
SSE				LR		LR		
	comp=Z,213nm,14.3s,MS4.9							
NJ2	Nanjing	111.24	318	ePKP		PKiKP	08 10 30.5	-2.8
LZH	Lanzhou	116.55	331	ePKP		PKPdf	08 10 40.5	-2.9
LZH				XPKP			08 10 45.8	
LZH				LR		LR		
	comp=N,136nm,19.4s							
LZH				LR		LR		
	comp=Z,345nm,20.5s,MS5.0							
WRA	Warramunga Arr	120.81	258	PKP		PKPdf	08 10 49.7	-2.0
	comp=Z,0.2nm,0.6s,baz=74,slow=2.7,SNR=4.6							
BOSA	Boshof	137.42	111	ePKPdf		PKPdf	08 11 23.3	+0.2
PSI	Prapat	144.75	306	PKP		PKPdf	08 11 37.0	+0.6
	comp=Z,2.2nm,0.3s,baz=254,slow=1.0,SNR=7.7							

ATH ***26*** *07:56:10.8, 3866N×2130E, h16km±1km, MD3.4/8*
NEIC ***26*** *07:56:10.8, 3866N×2130E, h16km, MD3.4(ATH), After ATH.*
ISCJB ***26*** *07:56:11.2±0.4, 3868N±002×2131E±003, h10km, Error ellipse: s-maj=3.9km s-min=3.4km az=2.2*
CSEM ***26*** *07:56:11.1±0.1, 3868N×2130E, h1km±1km, MD3.4, Error ellipse: s-maj=2.5km s-min=1.8km az=138.0*
THE ***26*** *07:56:12.3, 3872N×2133E, h0km, ML2.8*
ISC 26 07:56:11.4±0.5, 3867N±002×2131E±004, h3km±6km, n15, σ0°66/25, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EVR	Evrytania	0.46	57	ePB		Pg		07 56 19.8	-0.4
EVR				eSB		Sg		07 56 27.2	+1.0
LKD	Levkas	0.52	275	ePg		Pg		07 56 20.5	-0.8
RLS	Riolos of Patr	0.62	169	ePN		Pg		07

nsta2 refers to surface waves, cutoff=50s.

*NEIC **26** 08:06:17.5±0.3, 1954N×10895W, h10km, mb4.8/51 Error ellipse: s-maj=5.6km s-min=2.7km az=222.0*

*BJI **26** 08:06:17.5, 1950N×10890W, h10km, mB5.5, mb5.1, Ms5.0, Msz4.6*

*MEX **26** 08:06:18.4±0.5, 1978N×10877W, h10km, MD4.6*

ISC 26 08:06:17.4±0.3, **1949N**±004×**10893W**±003, **h10**km, **(h30**km±1.8km**:pP-P), n387,** σ**0.78**/371, **mb4.6**/51, **MS4.4**/16, **88C-64D, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**3.66**	**89**	eP	**Pn**	**08 07 10.5**	**-3.5**
CJM				iS	**Sn**	**08 07 51.2**	**-6.1**
MAIG	**Mazatlaan**	**4.35**	**32**	eP	**Pn**	**08 07 24.0**	**+0.4**
MAIG				iS	**Sn**	**08 08 04.0**	**-10**
LPIG	**La Paz**	**4.76**	**345**	Pn	**Pn**	**08 07 27.0**	**-2.1**
	5.7nm,0.3s,baz=334,slow=1.1,SNR=22						
LPIG				LR	LR	08 08 57.5	
	comp=Z,5μm,20.1s,baz=189,slow=35						
LPIG	**La Paz**	**4.76**	**345**	iP	**Pn**	**08 07 24.8**	**-4.4**
LPIG				iS	**Sn**	**08 08 16.2**	**-8.2**
SFJM	**Santa Fe**	**5.62**	**79**	iP	**Pn**	**08 07 41.0**	**0.0**
SFJM	**Santa Fe**	**5.62**	**79**	iP	**Pn**	**08 07 42.2**	**+1.2**
MOIG	**Morelia**	**7.30**	**87**	eP	**Pn**	**08 08 02.9**	**-1.1**
MOIG	**Morelia**	**7.30**	**87**	iP	**Pn**	**08 08 05.0**	**+1.0**
CAIG	**El Cayaco**	**8.58**	**105**	eP	**Pn**	**08 08 20.7**	**-0.9**
CAIG	**El Cayaco**	**8.58**	**105**	iP	**Pn**	**08 08 24.2**	**+2.6**
MEIG	**Mezcala**	**8.96**	**99**	eP	**Pn**	**08 08 24.8**	**-2.0**
PLIG	**Platanillo**	**8.99**	**95**	eP	**Pn**	**08 08 24.8**	**-2.4**
PLIG	**Platanillo**	**8.99**	**95**	iP	**Pn**	**08 08 28.4**	**+1.2**
IIZ	**Mezontepec**	**9.15**	**90**	eP	**Pn**	**08 08 29.2**	**-0.2**
YAIG	**Yautepec**	**9.34**	**92**	iP	**Pn**	**08 08 32.5**	**+0.5**
YAIG	**Yautepec**	**9.34**	**92**	iP	**Pn**	**08 08 35.7**	**+3.7**
PPM	**Popocatepetl**	**9.74**	**91**	iP	**Pn**	**08 08 38.0**	**+0.5**
LNIG	**Linares**	**10.28**	**57**	iP	**Pn**	**08 08 41.2**	**-3.8**
LNIG				iS	**Sn**	**08 10 33.7**	**-6.5**
UTMO	**Huajuapan**	**10.67**	**97**	iP	**Pn**	**08 08 51.9**	**+1.6**
TPIG	**Tehuac#an**	**10.99**	**94**	eP	**Pn**	**08 08 54.3**	**-0.3**
VHO	**Vista Hermosa**	**11.83**	**100**	iP	**Pn**	**08 09 01.2**	**-4.9**
VHO	**Vista Hermosa**	**11.83**	**100**	iP	**Pn**	**08 09 07.8**	**+1.7**
MNTX	**Cornudas Mount**	**12.57**	**14**	ePn	**Pn**	**08 09 17.3**	**+1.2**
TUC	**Tucson**	**12.87**	**353**	eP	**Pn**	**08 09 21.3**	**+0.9**
116A	**Eloy**	**13.25**	**350**	P	**Pn**	**08 09 27.2**	**+1.7**
	baz=13,SNR=22						
GDL2	**Guadalupe Moun**	**13.30**	**17**	ePn	**Pn**	**08 09 28.7**	**+2.5**
115A	**Sonoran Desert**	**13.48**	**348**	P	**Pn**	**08 09 30.7**	**+2.0**
	baz=14,SNR=17						
CMIG	**Matias Romero**	**13.55**	**98**	Pn	**Pn**	**08 09 31.1**	**+1.5**
	1.3nm,0.3s,baz=282,slow=11,SNR=24						
CMIG				LR	LR	08 14 30.9	
	comp=Z,1μm,18.4s,baz=272,slow=36						
JCT	**Junction City**	**13.71**	**35**	eP	**Pn**	**08 09 31.9**	**+0.2**
Z14A	**Wintersburg**	**14.27**	**346**	⇑P	**Pn**	**08 09 40.7**	**+1.2**
	baz=14,SNR=20						
GLA	**Glamis**	**14.50**	**340**	eP	**Pn**	**08 09 42.7**	**+0.2**
GLA	**Glamis**	**14.50**	**340**	⇑P	**Pn**	**08 09 43.1**	**+0.6**
	baz=14,SNR=26						
DVTC	**Desert V Tower**	**14.60**	**335**	⇑P	**Pn**	**08 09 44.3**	**+0.4**
	baz=15						
Y22C	**IRIS PASSCAL I**	**14.63**	**7**	⇑P	**Pn**	**08 09 45.8**	**+1.4**
	baz=15						
LENM	**Lemitar**	**14.72**	**6**	ePn	**Pn**	**08 09 45.3**	**-0.2**
SWSC	**Sam W. Stewart**	**14.73**	**337**	P	**Pn**	**08 09 45.7**	**0.0**
	baz=15,SNR=5.2						
Y14A	**Wickenburg**	**14.84**	**347**	⇓P	**Pn**	**08 09 47.8**	**+0.6**
	baz=15,SNR=44						
BAR	**Barrett**	**14.85**	**334**	ePn	**Pn**	**08 09 47.2**	**-0.2**
LPM	**Los Pinos Moun**	**14.90**	**7**	ePn	**Pn**	**08 09 48.4**	**+0.3**
Y13A	**Salome**	**14.92**	**344**	⇓P	**Pn**	**08 09 49.3**	**+1.0**
	baz=15						
MONP	**Monument Peak**	**14.93**	**335**	⇑P	**Pn**	**08 09 48.2**	**-0.3**
	baz=15						
LAZ	**Ladron**	**14.94**	**6**	ePn	**Pn**	**08 09 48.9**	**+0.4**
Y12C	**Blythe**	**15.05**	**342**	⇑P	**Pn**	**08 09 50.7**	**+0.7**
	baz=15,SNR=26						
109C	**Camp Elliot, M**	**15.22**	**333**	⇓P	**Pn**	**08 09 53.1**	**+0.8**
	baz=15						
X15A	**Humboldt**	**15.22**	**350**	P	**Pn**	**08 09 53.5**	**+1.2**
	baz=15,SNR=58						
X14A	**Yava**	**15.33**	**348**	P	**Pn**	**08 09 54.8**	**+1.0**
	baz=15,SNR=36						
PDMCI	**Parker Dam,Lak**	**15.46**	**344**	⇓P	**Pn**	**08 09 55.9**	**+0.5**
	baz=16,SNR=25						
ANMO	**Albuquerque**	**15.55**	**8**	Pn	**Pn**	**08 09 56.0**	**-0.6**
	0.0nm,0.3s,baz=192,slow=12,SNR=19						
ANMO				LR	LR	08 15 38.2	
	comp=Z,2μm,19.3s,baz=191,slow=36						
ANMO	**Albuquerque**	**15.55**	**8**	d iP	**Pn**	**08 09 57.6**	**+1.0**
ANMO	**Albuquerque**	**15.55**	**8**	ePn	**Pn**	**08 09 56.4**	**-0.3**
	14nm,0.9s						
PFO	**Pinyon Flat Ob**	**15.58**	**336**	eP	**Pn**	**08 09 57.2**	**+0.2**
PFO				pmax	pmax		
	comp=Z,24nm,0.8s						
PFO	**Pinyon Flat Ob**	**15.58**	**336**	ePn	**Pn**	**08 09 57.2**	**+0.2**
	comp=Z,24nm,0.8s						
PFO	**Pinyon Flat Ob**	**15.58**	**336**	⇓P	**Pn**	**08 09 56.9**	**-0.1**
	baz=16						
X13A	**Yucca**	**15.66**	**345**	P	**Pn**	**08 09 58.6**	**+0.6**
	baz=16,SNR=52						
BELC	**Belle Mtn.**	**15.76**	**338**	⇓P	**Pn**	**08 10 00.2**	**+0.8**
	baz=16,SNR=62						
HKT	**Hockley**	**15.79**	**46**	eP	**Pn**	**08 09 59.0**	**-0.8**
HKT				pmax	pmax		
	comp=Z,140nm,1.7s						
HKT	**Hockley**	**15.79**	**46**	ePn	**Pn**	**08 09 59.0**	**-0.8**
	comp=Z,140nm,1.7s						
MURC	**Murrieta**	**15.87**	**334**	⇑P	**Pn**	**08 10 01.1**	**+0.4**
	baz=16,SNR=33						
W15A	**Williams**	**15.90**	**350**	⇑P	**Pn**	**08 10 02.7**	**+1.5**
	baz=16,SNR=34						
SCI	**San Clemente I**	**15.95**	**329**	⇑P	**Pn**	**08 10 02.7**	**+0.9**
	baz=16						
NEE2	**Needles Airpor**	**16.03**	**343**	⇓P	**Pn**	**08 10 03.4**	**+0.5**
	baz=16,SNR=7.8						
W14A	**Seligman**	**16.09**	**348**	P	**Pn**	**08 10 04.9**	**+1.3**
	baz=16,SNR=61						
WUAZ	**Wupatki**	**16.11**	**353**	ePn	**Pn**	**08 10 04.3**	**+0.5**
	comp=Z,132nm,1.4s						
WUAZ				epP	pP	08 10 16.3	+6.3
W13A	**Hualapai Mount**	**16.15**	**345**	P	**Pn**	**08 10 05.5**	**+1.0**
	baz=16,SNR=18						
CIS	**Catalina Islan**	**16.23**	**330**	⇑P	**Pn**	**08 10 04.9**	**-0.6**
	baz=16,SNR=6.2						
GMRC	**Granite Mounta**	**16.36**	**340**	P	**Pn**	**08 10 07.8**	**+0.8**
	baz=16,SNR=41						
W12A	**Cal Nev Ari**	**16.60**	**343**	⇓P	**Pn**	**08 10 10.8**	**+0.7**
	baz=17,SNR=6.7						
BFSC	**Mount Baldy St**	**16.61**	**334**	⇑P	**Pn**	**08 10 10.2**	**-0.1**
	baz=17,SNR=12						
HEC	**Hector,Ludlow**	**16.63**	**338**	⇑P	**Pn**	**08 10 11.0**	**+0.5**
	baz=17,SNR=11						
MWC	**Mount Wilson**	**16.77**	**333**	eP	**Pn**	**08 10 15.6**	**+3.3**
DECC	**Green Verdugo**	**16.91**	**332**	⇓P	**Pn**	**08 10 14.2**	**+0.1**
	baz=17						
RRX	**Edison Barstow**	**16.91**	**337**	⇑P	**Pn**	**08 10 14.6**	**+0.5**
	baz=17						
V12A	**Nelson**	**17.00**	**343**	P	**Pn**	**08 10 16.3**	**+1.1**
	baz=17,SNR=47						
TUQ	**Turquoise Mtn.**	**17.04**	**340**	⇓P	**Pn**	**08 10 16.9**	**+1.2**
	baz=17,SNR=20						
BLG	**Laguna Peak**	**17.12**	**330**	⇓P	**Pn**	**08 10 16.9**	**+0.2**
	baz=17						
GSC	**Goldstone**	**17.22**	**338**	eP	**Pn**	**08 10 18.2**	**+0.3**
GSC	**Goldstone**	**17.22**	**338**	⇓P	**Pn**	**08 10 18.6**	**+0.7**
	baz=17,SNR=23						
EDW2	**Edwards Air Fo**	**17.30**	**334**	⇓P	**Pn**	**08 10 19.2**	**+0.3**
	baz=17,SNR=12						
U12A	**Valley of Fire**	**17.58**	**345**	⇑P	**Pn**	**08 10 23.4**	**+0.9**
	baz=18,SNR=17						
SHOC	**Shoshone**	**17.58**	**340**	⇑P	**Pn**	**08 10 23.3**	**+0.9**
	baz=18,SNR=18						
WMOK	**Wichita Mounta**	**17.65**	**29**	eP	**Pn**	**08 10 22.8**	**-0.5**
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMOK	**Wichita Mounta**	**17.65**	**29**	ePn	**Pn**	**08 10 22.8**	**-0.5**
	comp=Z,8.2nm,0.9s						
LRMC	**Laurel Mountai**	**17.70**	**336**	⇑P	**Pn**	**08 10 24.4**	**+0.5**
	baz=18						
NATX	**Nacogdoches**	**17.71**	**44**	ePn	**Pn**	**08 10 23.6**	**-0.5**
	comp=Z,101nm,1.2s						
U11A	**Corn Creek**	**17.80**	**343**	⇑P	**Pn**	**08 10 25.8**	**+0.7**
	baz=18,SNR=14						
SHPR	**Sheep Range**	**17.81**	**343**	ePn	**Pn**	**08 10 26.3**	**+1.0**
ARVC	**Arvin**	**17.87**	**333**	⇓P	**Pn**	**08 10 26.7**	**+0.7**
	baz=18,SNR=13						
U10A	**Ash Meadows, A**	**18.07**	**340**	⇓P	**Pn**	**08 10 29.7**	**+1.1**
	baz=18,SNR=21						
PKM	**Peak Mountain**	**18.12**	**330**	⇑P	**Pn**	**08 10 29.6**	**+0.4**
	baz=18,SNR=16						
MPMC	**Manual Prospec**	**18.14**	**337**	⇑P	**Pn**	**08 10 30.2**	**+0.8**
	baz=18,SNR=45						
ISA	**Isabella**	**18.18**	**334**	eP	**Pn**	**08 10 29.8**	**0.0**
ISA	**Isabella**	**18.18**	**334**	⇓P	**Pn**	**08 10 30.4**	**+0.6**
	baz=18,SNR=20						
FURC	**Furnace Creek,**	**18.29**	**339**	⇓P	**Pn**	**08 10 31.6**	**+0.4**
	baz=18,SNR=8.1						
DAC	**Darwin (Calif)**	**18.38**	**337**	eP	**Pn**	**08 10 32.5**	**+0.3**
DAC				pmax	pmax		
	comp=Z,66nm,1.5s						
DAC	**Darwin (Calif)**	**18.38**	**337**	ePn	**Pn**	**08 10 32.5**	**+0.3**
	comp=Z,66nm,1.5s						
CCUT	**Cedar City**	**18.40**	**349**	ePn	**Pn**	**08 10 33.3**	**+0.7**
SMMC	**Simmler**	**18.55**	**330**	⇓P	**Pn**	**08 10 34.5**	**+0.2**
	baz=18,SNR=7.6						
PV01	**Paradox Valley**	**18.58**	**1**	eP	**Pn**	**08 10 35.0**	**+0.3**
VES	**Vestal, Richgr**	**18.58**	**333**	⇓P	**Pn**	**08 10 34.9**	**+0.2**
	baz=19,SNR=13						
ARUT	**Antelope Range**	**18.65**	**349**	eP	**Pn**	**08 10 36.1**	**+0.5**
CWC	**Cottonwood Cre**	**18.70**	**336**	⇓P	**Pn**	**08 10 36.5**	**+0.3**
	baz=19						
PV10	**Paradox Valley**	**18.82**	**360**	eP	**Pn**	**08 10 36.9**	**-0.7**
PTRM	**Twissleman Ran**	**18.93**	**331**	eP	**Pn**	**08 10 38.5**	**-0.5**
GRAC	**Grapevine Rang**	**18.95**	**339**	P	**Pn**	**08 10 39.4**	**+0.3**
	baz=19,SNR=22						
V05C	**Boulder Hill,**	**18.96**	**332**	⇑P	**Pn**	**08 10 39.6**	**+0.2**
	baz=19						
RCTC	**Rector, Farmer**	**19.05**	**334**	⇑P	**Pn**	**08 10 39.9**	**-0.5**
	baz=19,SNR=15						
MSU	**Marysvale**	**19.16**	**352**	eP	**Pn**	**08 10 41.6**	**-0.2**
V04C	**Ramage Ranch,**	**19.23**	**329**	⇑P	**Pn**	**08 10 41.9**	**-0.6**
	baz=19,SNR=5.8						
HELL	**Mitchell Peak,**	**19.28**	**335**	P	**Pn**	**08 10 42.8**	**-0.4**
	baz=19,SNR=64						
TIN	**Tinemaha**	**19.30**	**337**	⇑P	**Pn**	**08 10 43.2**	**-0.2**
	baz=19						
PKD	**Parkfield**	**19.32**	**330**	⇑P	**Pn**	**08 10 42.9**	**-0.8**
	baz=19,SNR=22						
U05C	**Westside ANR,**	**19.45**	**332**	⇓P	**Pn**	**08 10 44.7**	**-0.5**
	baz=19						
S09A	**Goldfield**	**19.55**	**340**	P	**Pn**	**08 10 45.6**	**-0.9**
	baz=20,SNR=95						
SRU	**San Rafael**	**19.60**	**356**	eP	**Pn**	**08 10 45.8**	**-1.2**
SRU				pmax	pmax		
	comp=Z,38nm,1.2s						
SRU	**San Rafael**	**19.60**	**356**	eP	**Pn**	**08 10 45.8**	**-1.2**
	comp=Z,38nm,1.2s						
MTUM	**Tungsten Hills**	**19.69**	**337**	eP	**Pn**	**08 10 46.9**	**-1.2**
V03C	**Hunter Liggett**	**19.71**	**329**	⇓P	**Pn**	**08 10 47.3**	**-1.0**
	baz=20,SNR=7.8						
U04C	**Hernandez Rese**	**19.77**	**331**	⇓P	**Pn**	**08 10 48.2**	**-0.9**
	baz=20,SNR=30						
R10A	**Warm Springs**	**19.80**	**343**	P	**Pn**	**08 10 48.9**	**-0.5**
	baz=20,SNR=56						
TMUT	**Trail Mountain**	**19.83**	**355**	eP	**Pn**	**08 10 48.7**	**-1.1**
T06C	**Millerton Lake**	**19.84**	**334**	P	**Pn**	**08 10 48.1**	**-1.8**
	baz=20,SNR=28						
TPH	**Tonopah**	**19.87**	**340**	eP	**Pn**	**08 10 49.5**	**-0.8**
TPH				pmax	pmax		
	comp=Z,58nm,1.3s						
TPH	**Tonopah**	**19.87**	**340**	eP	**Pn**	**08 10 49.5**	**-0.8**
	comp=Z,58nm,1.3s						
KCC	**Kaiser Creek**	**19.95**	**335**	⇓P	**Pn**	**08 10 49.8**	**-1.5**
	baz=20,SNR=33						
R09A	**Tonopah**	**19.98**	**341**	⇑P	**Pn**	**08 10 50.1**	**-1.4**
	baz=20,SNR=43						
MLAC	**Mammoth Lakes**	**20.03**	**336**	⇓P	**P**	**08 10 51.4**	**+1.0**
	baz=20						
Q12A	**Willow Creek R**	**20.14**	**347**	⇓P	**P**	**08 10 52.4**	**+0.8**
	baz=20,SNR=46						
HAST	**UC Hastings Re**	**20.16**	**329**	P	**P**	**08 10 51.9**	**+0.2**
	baz=20,SNR=16						
T05C	**Eagle Field, D**	**20.16**	**332**	⇑P	**P**	**08 10 52.2**	**+0.4**
	baz=20						
MIAR	**Mount Ida**	**20.25**	**39**	eP	**P**	**08 10 52.1**	**-0.7**
MIAR				pmax	pmax		
	comp=Z,100nm,1.0s						
MIAR	**Mount Ida**	**20.25**	**39**	eP	**P**	**08 10 52.1**	**-0.7**
	comp=Z,9.8nm,1.0s						
S05C	**Merced**	**20.39**	**333**	⇓P	**P**	**08 10 53.9**	**-0.4**
	baz=20						
SAO	**San Andreas Ge**	**20.41**	**330**	eP	**P**	**08 10 54.6**	**+0.1**
SAO				pmax	pmax		
	comp=Z,74nm,1.5s						
SAO	**San Andreas Ge**	**20.41**	**330**	eP	**P**	**08 10 54.5**	**0.0**
	comp=Z,74nm,1.5s						
R08A	**Mina**	**20.41**	**339**	⇑P	**P**	**08 10 55.3**	**+0.7**
	baz=20						
R07C	**Lee Vining**	**20.52**	**337**	P	**P**	**08 10 56.8**	**+1.1**
	baz=20,SNR=26						
PACP	**Pacheco Peak**	**20.53**	**331**	⇑P	**P**	**08 10 55.7**	**-0.2**
	baz=20,SNR=6.7						
Q09A	**Carvers**	**20.56**	**341**	⇑P	**P**	**08 10 56.5**	**+0.3**
	baz=21						
P12A	**McGill**	**20.57**	**347**	⇑P	**P**	**08 10 56.3**	**0.0**
	baz=21,SNR=30						
NLU	**North Lily Min**	**20.57**	**353**	eP	**P**	**08 10 56.0**	**-0.2**
MPU	**Maple Canyon**	**20.59**	**354**	eP	**P**	**08 10 57.0**	**+0.6**
	comp=Z,68nm,1.5s						
S06C	**San Francisco**	**20.65**	**335**	⇑P	**P**	**08 10 56.6**	**-0.5**
	baz=21,SNR=21						
Q08A	**Gabbs**	**20.82**	**340**	P	**P**	**08 10 59.7**	**+0.8**
	baz=21,SNR=79						
P11A	**Circle Ranch,**	**20.84**	**345**	⇑P	**P**	**08 10 59.9**	**+0.7**
	baz=21,SNR=14						
DUG	**Dugway**	**20.90**	**352**	eP	**P**	**08 11 00.1**	**+0.3**
DUG				pmax	pmax		
	comp=Z,47nm,1.1s						
DUG	**Dugway**	**20.90**	**352**	eP	**P**	**08 11 00.1**	**+0.2**
	comp=Z,47nm,1.1s						
S04C	**Ingram Canyon,**	**20.96**	**331**	P	**P**	**08 11 00.2**	**-0.2**
	baz=21,SNR=10						
CMB	**Columbia Colle**	**21.00**	**334**	eP	**P**	**08 11 00.3**	**-0.6**
CMB				pmax	pmax		
	comp=Z,31nm,1.1s						
CMB	**Columbia Colle**	**21.00**	**334**	eP	**P**	**08 11 00.3**	**-0.5**
	comp=Z,31nm,1.1s						
CMB	**Columbia Colle**	**21.00**	**334**	⇑P	**P**	**08 11 00.3**	**-0.6**
	baz=21,SNR=24						
WAKR	**Walker**	**21.03**	**336**	eP	**P**	**08 11 02.2**	**+1.0**
R06C	**Coleville**	**21.05**	**336**	⇓P	**P**	**08 11 02.4**	**+1.0**
	baz=21,SNR=49						
BNLO	**Ben Lomond (Sa**	**21.05**	**329**	⇑P	**P**	**08 11 01.2**	**-0.2**
	baz=21,SNR=8.1						
P10A	**Eureka**	**21.09**	**344**	⇑P	**P**	**08 11 02.6**	**+0.8**
	baz=21,SNR=9.9						
Q07A	**Schurz**	**21.18**	**338**	⇓P	**P**	**08 11 03.7**	**+0.8**
	baz=21						
P09A	**Austin**	**21.21**	**342**	⇑P	**P**	**08 11 03.3**	**+0.2**
	baz=21,SNR=7.7						
WENL	**Wente Brothers**	**21.25**	**331**	⇓P	**P**	**08 11 04.3**	**+0.8**
	baz=21,SNR=13						
NOQ	**North Oquirrh**	**21.27**	**353**	eP	**P**	**08 11 03.9**	**+0.1**
	comp=Z,21nm,0.8s,mb4.5						
CTU	**Camp Tracy**	**21.27**	**354**	eP	**P**	**08 11 04.0**	**+0.2**
	comp=Z,28nm,1.0s,mb4.5						
JRSC	**Jasper Ridge**	**21.30**	**330**	⇑P	**P**	**08 11 04.0**	**-0.1**
	baz=21						
O12A	**Currie**	**21.30**	**348**	⇓P	**P**	**08 11 04.2**	**+0.1**
	baz=21,SNR=47						
O11A	**Cowboy Ranch,**	**21.37**	**346**	P	**P**	**08 11 05.3**	**+0.4**
	baz=21,SNR=37						
R04C	**Big Horse Ranc**	**21.41**	**333**	⇓P	**P**	**08 11 05.5**	**+0.1**
	baz=21,SNR=15						
R05C	**Kirkwood Meado**	**21.44**	**336**	P	**P**	**08 11 06.2**	**+0.5**
	baz=21,SNR=34						
BDM	**Black Diamond**	**21.57**	**331**	⇓P	**P**	**08 11 07.6**	**+0.5**
	baz=22						
P08A	**Dixie Valley**	**21.62**	**341**	⇓P	**P**	**08 11 08.3**	**+0.7**
	baz=22						
BGU	**Big Grassy Mou**	**21.65**	**352**	eP	**P**	**08 11 07.9**	**0.0**
TCUT	**Toone Canyon**	**21.66**	**355**	eP	**P**	**08 11 08.3**	**+0.3**
O10A	**Cortez Mining,**	**21.73**	**344**	⇑P	**P**	**08 11 09.1**	**+0.4**
	baz=22,SNR=14						
P07A	**Fallon**	**21.75**	**339**	⇓P	**P**	**08 11 09.7**	**+0.7**
	baz=22						
LAVA	**Lava Cap Winer**	**21.75**	**334**	P	**P**	**08 11 09.0**	**0.0**
	baz=22,SNR=10						
N13A	**Wendover, West**	**21.77**	**349**	⇓P	**P**	**08 11 09.3**	**+0.1**
	baz=22,SNR=17						
O09A	**Fish Creek Ran**	**21.80**	**343**	P	**P**	**08 11 09.9**	**+0.5**
	baz=22,SNR=35						
WCN	**Washoe City**	**21.84**	**337**	P	**P**	**08 11 10.9**	**+0.9**
	baz=22,SNR=44						
ELK	**Elko**	**21.86**	**347**	eP	**P**	**08 11 10.3**	**+0.1**
ELK				pmax	pmax		
	comp=Z,40nm,1.1s						
ELK	**Elko**	**21.86**	**347**	eP	**P**	**08 11 10.3**	**+0.1**
	comp=Z,40nm,1.1s,mb4.8						
FARB	**Farallon Islan**	**21.90**	**329**	⇑P	**P**	**08 11 10.4**	**-0.1**
	baz=22						
N12A	**Clover Valley,**	**21.92**	**348**	⇓P	**P**	**08 11 10.9**	**+0.1**
	baz=22,SNR=18						
SPUT	**South Promonto**	**21.95**	**353**	eP	**P**	**08 11 10.5**	**-0.6**
N11A	**Elko Archery C**	**22.04**	**346**	⇑P	**P**	**08 11 12.1**	**+0.1**
	baz=22						
BMN	**Battle Mountai**	**22.05**	**343**	eP	**P**	**08 11 12.2**	**0.0**
BMN				pmax	pmax		
	comp=Z,68nm,1.5s,mb4.9						
BMN	**Battle Mountai**	**22.05**	**343**	eP	**P**	**08 11 12.2**	**0.0**
	comp=Z,68nm,1.5s,mb4.9						
PAHR	**Pah Rah Range**	**22.07**	**338**	eP	**P**	**08 11 12.6**	**+0.2**
	comp=Z,66nm,1.3s,mb4.9						
Q04C	**Lincoln**	**22.09**	**333**	⇑P	**P**	**08 11 12.8**	**+0.2**
	baz=22,SNR=8.9						
N10A	**Dunphy**	**22.13**	**345**	⇑P	**P**	**08 11 13.1**	**+0.1**
	baz=22						
HWUT	**Hardware Ranch**	**22.16**	**355**	eP	**P**	**08 11 13.4**	**+0.1**
	comp=Z,28nm,0.9s,mb4.7						
CVS	**Carmenet Viney**	**22.16**	**331**	⇑P	**P**	**08 11 13.0**	**-0.3**
	baz=22						
P05C	**Yuba Gap, Truc**	**22.17**	**335**	⇓P	**P**	**08 11 14.0**	**+0.6**
	baz=22,SNR=21						
O08A	**Rochester Mine**	**22.19**	**341**	⇑P	**P**	**08 11 14.0**	**+0.3**
	baz=22						
Q03C	**Winters**	**22.19**	**332**	⇓P	**P**	**08 11 14.5**	**+0.8**
	baz=22						
MCCM	**Marconi Confer**	**22.20**	**330**	⇑P	**P**	**08 11 14.7**	**+1.0**
	baz=22						
P06A	**Stead Airport,**	**22.23**	**337**	⇑P	**P**	**08 11 14.6**	**+0.6**
	baz=22,SNR=6.3						
M13A	**Montello**	**22.25**	**350**	⇓P	**P**	**08 11 13.8**	**-0.5**
	baz=22						
KSU1	**Kansas State U**	**22.25**	**26**	eP	**P**	**08 11 14.6**	**+0.3**
O07A	**Toulon**	**22.30**	**340**	⇓P	**P**	**08 11 15.3**	**+0.4**
	baz=22,SNR=44						
NSHM	**Saint Helena R**	**22.37**	**331**	eP	**P**	**08 11 15.5**	**-0.1**
M12A	**Wells**	**22.44**	**348**	⇑P	**P**	**08 11 16.3**	**0.0**
	baz=22,SNR=32						
HVU	**Hansel Valley**	**22.46**	**352**	eP	**P**	**08 11 15.9**	**-0.6**
HVU				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.6						
HVU	**Hansel Valley**	**22.46**	**352**	eP	**P**	**08 11 15.9**	**-0.6**
	comp=Z,19nm,0.8s,mb4.6						
N09A	**Rock Creek Ran**	**22.52**	**343**	⇑P	**P**	**08 11 17.0**	**-0.2**
	baz=22,SNR=9.6						
OHCM	**Honcut**	**22.55**	**334**	eP	**P**	**08 11 17.4**	**-0.1**
BEKR	**Beckwourth**	**22.56**	**337**	⇑P	**P**	**08 11 17.9**	**+0.2**
	baz=23,SNR=20						
MNRC	**McLaughlin Nat**	**22.59**	**332**	⇑P	**P**	**08 11 18.6**	**+0.7**
	baz=23						
SUTB	**Sutter Butte**	**22.59**	**333**	⇑P	**P**	**08 11 17.6**	**-0.3**
	baz=23						
O06A	**Flanigan**	**22.63**	**338**	⇑P	**P**	**08 11 18.6**	**+0.3**
	baz=23,SNR=11						
N08A	**GE Springer Mi**	**22.63**	**342**	P	**P**	**08 11 18.3**	**-0.1**
	baz=23,SNR=28						
M11A	**Holland Ranch,**	**22.64**	**346**	⇓P	**P**	**08 11 18.8**	**+0.4**
	baz=23,SNR=10						
ORV	**Oroville**	**22.74**	**334**	P	**P**	**08 11 19.9**	**+0.3**
	baz=23,SNR=24						
O05C	**Quincy**	**22.86**	**336**	⇑P	**P**	**08 11 21.4**	**+0.6**
	baz=23						
OXF	**Oxford**	**22.88**	**45**	eP	**P**	**08 11 20.6**	**-0.4**
OXF				pmax	pmax		
	comp=Z,55nm,1.2s,mb4.9						
OXF	**Oxford**	**22.88**	**45**	eP	**P**	**08 11 20.6**	**-0.4**
	comp=Z,55nm,1.2s,mb4.9						
N07B	**Gerlach**	**22.89**	**340**	P	**P**	**08 11 21.1**	**0.0**
	baz=23,SNR=16						
M10A	**I.L. Ranch, Tu**	**22.90**	**345**	⇓P	**P**	**08 11 21.5**	**+0.3**
	baz=23,SNR=22						
HOPS	**Hopland**	**22.97**	**331**	eP	**P**	**08 11 21.9**	**0.0**
	comp=Z,22nm,1.1s,mb4.5						
HOPS	**Hopland**	**22.97**	**331**	⇓P	**P**	**08 11 21.8**	**-0.1**
	baz=23						
M09A	**Marrel Ranch,**	**23.04**	**343**	⇓P	**P**	**08 11 22.8**	**+0.1**
	baz=23,SNR=9.2						
N06A	**Buffalo Meadow**	**23.15**	**339**	⇑P	**P**	**08 11 24.1**	**+0.3**
	baz=23,SNR=31						
BW06	**Boulder Array**	**23.21**	**359**	eP	**P**	**08 11 23.6**	**-0.9**
	comp=Z,52nm,1.6s,mb4.7						
PDAR	**Pinedale Array**	**23.21**	**359**	P	**P**	**08 11 23.5**	**-1.0**
	comp=Z,5.8nm,0.8s,mb4.1,baz=169,slow=8.8,SNR=37						
PDAR				LR	LR	08 20 15.3	
	comp=Z,435nm,20.7s,MS3.9,baz=188,slow=36						
O04C	**Chester**	**23.23**	**336**	P	**P**	**08 11 25.3**	**+0.6**
	baz=23,SNR=13						
AHID	**Auburn Hatcher**	**23.27**	**356**	eP	**P**	**08 11 25.4**	**+0.3**
	comp=Z,16nm,0.8s,mb4.5						
M08A	**Happy Creek Ra**	**23.32**	**342**	⇑P	**P**	**08 11 25.9**	**+0.2**
	baz=23,SNR=21						
GASB	**Alder Springs**	**23.34**	**332**	⇑P	**P**	**08 11 26.3**	**+0.4**
	baz=23,SNR=5.4						
ELFS	**Eagle Lake Fie**	**23.36**	**337**	⇓P	**P**	**08 11 26.0**	**0.0**
	baz=23						
L09A	**Wilkinson Ranc**	**23.65**	**344**	P	**P**	**08 11 28.8**	**-0.2**
	baz=24,SNR=15						
LRAL	**Lakeview Retre**	**23.78**	**51**	eP	**P**	**08 11 29.6**	**-0.6**
	comp=Z,42nm,1.5s,mb4.7						
M06C	**Likely Place G**	**23.78**	**338**	P	**P**	**08 11 30.5**	**+0.3**
	baz=24,SNR=17						
HATC	**Hat Creek Radi**	**23.80**	**336**	P	**P**	**08 11 31.1**	**+0.7**
	baz=24,SNR=7.2						
L08A	**Fields**	**23.99**	**343**	⇓P	**P**	**08 11 31.8**	**-0.3**
	baz=24,SNR=16						
WDC	**Whiskeytown Da**	**24.04**	**334**	eP	**P**	**08 11 30.5**	**-2.0**
	comp=Z,6.2nm,0.8s,mb4.1						
WDC	**Whiskeytown Da**	**24.04**	**334**	⇑P	**P**	**08 11 31.1**	**-1.4**
	baz=24						
PLAL	**Pickwick Lake**	**24.05**	**46**	eP	**P**	**08 11 31.9**	**-0.7**
	comp=Z,35nm,1.1s,mb4.7						
L07A	**Adell**	**24.13**	**341**	⇑P	**P**	**08 11 33.6**	**+0.2**
	baz=24,SNR=15						
M05C	**Lookout**	**24.16**	**337**	⇑P	**P**	**08 11 33.3**	**-0.3**
	baz=24,SNR=12						
K09A	**Rome**	**24.30**	**344**	P	**P**	**08 11 34.8**	**-0.2**
	baz=24,SNR=38						
WVOR	**Wild Horse Val**	**24.30**	**342**	eP	**P**	**08 11 34.3**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.7						
WVOR	**Wild Horse Val**	**24.30**	**342**	eP	**P**	**08 11 34.3**	**-0.6**
	comp=Z,35nm,1.0s,mb4.7						
HLID	**Hailey**	**24.44**	**350**	eP	**P**	**08 11 36.3**	**+0.2**
	comp=Z,23nm,1.0s,mb4.6						
M03C	**McCloud**	**24.45**	**335**	⇓P	**P**	**08 11 35.8**	**-0.5**
	baz=24						
FVM	**French Village**	**24.46**	**37**	eP	**P**	**08 11 35.7**	**-0.7**
FVM				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.5						
FVM	**French Village**	**24.46**	**37**	eP	**P**	**08 11 35.7**	**-0.7**
	comp=Z,24nm,1.3s,mb4.5						
K08A	**Mann Creek Ran**	**24.53**	**343**	⇓P	**P**	**08 11 36.9**	**-0.2**
	baz=24,SNR=37						
N02C	**Big Bar**	**24.56**	**333**	⇑P	**P**	**08 11 36.8**	**-0.5**
	baz=25						
L05A	**Lakeview**	**24.65**	**338**	⇓P	**P**	**08 11 38.3**	**+0.2**
	baz=25,SNR=16						
K07A	**Rock Creek Ran**	**24.72**	**342**	⇑P	**P**	**08 11 38.8**	**+0.1**
	baz=25,SNR=21						
M04C	**Macdoel**	**24.78**	**337**	⇑P	**P**	**08 11 38.9**	**-0.4**
	baz=25						
WVT	**Waverly**	**24.87**	**44**	eP	**P**	**08 11 38.8**	**-1.3**
WVT				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.6						
WVT	**Waverly**	**24.87**	**44**	eP	**P**	**08 11 38.8**	**-1.3**
	comp=Z,26nm,1.3s,mb4.6						
RSSD	**Black Hills**	**24.89**	**8**	eP	**P**	**08 11 40.5**	**+0.2**
	comp=Z,5.9nm,0.8s,mb4.2						
J09A	**Fry Pan Ranch,**	**24.91**	**345**	P	**P**	**08 11 40.4**	**-0.1**
	baz=25,SNR=33						
YFT	**Old Faithful**	**24.94**	**357**	eP	**P**	**08 11 41.2**	**+0.5**
SIUC	**Southern Illin**	**24.99**	**39**	eP	**P**	**08 11 40.9**	**-0.3**
	comp=Z,18nm,1.0s,mb4.6						
YBH	**Yreka Blue Hor**	**25.08**	**335**	P	**P**	**08 11 40.3**	**-1.7**
	comp=Z,2.2nm,0.8s,mb3.7,baz=269,slow=3.1,SNR=4.6						
YBH				LR	LR	08 20 51.8	
	comp=Z,591nm,21.2s,MS4.1,baz=158,slow=35						
YBH	**Yreka Blue Hor**	**25.08**	**335**	⇑P	**P**	**08 11 41.5**	**-0.4**
	baz=25						

K06A	**Valley Falls**	**25.13**	**340**	P		**P**	**08 11 42.5**	**0.0**
	baz=25,SNR=22								
L04A	**Klamath Falls**	**25.14**	**337**	⇑P		**P**	**08 11 41.9**	**-0.7**
	baz=25								
YMR	**Madison River**	**25.16**	**357**	*e*P		**P**	**08 11 42.9**	**+0.2**
	comp=Z,49nm,1.2s,mb4.9								
YNR	**Norris Junctio**	**25.19**	**357**	*e*P		**P**	**08 11 44.1**	**+1.1**
K05A	**Summer Lake**	**25.27**	**339**	⇓P		**P**	**08 11 43.4**	**-0.3**
	baz=25,SNR=11								
QLMT	**Earthquake Lak**	**25.35**	**356**	*e*P		**P**	**08 11 44.7**	**+0.2**
J07A	**Hines**	**25.36**	**342**	⇑P		**P**	**08 11 44.0**	**-0.6**
	baz=25,SNR=6.8								
K04A	**Chilquin**	**25.46**	**338**	⇓P		**P**	**08 11 45.2**	**-0.3**
	baz=26								
MCMT	**McKenzie Canyo**	**25.47**	**354**	*e*P		**P**	**08 11 46.1**	**+0.5**
I09A	**Lost Marbles R**	**25.50**	**345**	⇓P		**P**	**08 11 45.0**	**-0.9**
	baz=26,SNR=9.1								
J06A	**Christmas Vall**	**25.50**	**341**	⇑P		**P**	**08 11 45.4**	**-0.4**
	baz=26,SNR=12								
SWET	**Sewanee**	**25.64**	**48**	*e*P		**P**	**08 11 46.5**	**-0.6**
I08A	**Drewsey**	**25.65**	**344**	⇑P		**P**	**08 11 46.3**	**-0.9**
	baz=26,SNR=11								
J05A	**Fort Rock**	**25.88**	**339**	⇓P		**P**	**08 11 49.0**	**-0.3**
	baz=26,SNR=17								
I07A	**Izee**	**26.07**	**342**	⇑P		**P**	**08 11 50.6**	**-0.4**
	baz=26,SNR=8.7								
USIN	**University of**	**26.09**	**41**	*e*P		**P**	**08 11 51.2**	**+0.1**
	comp=Z,29nm,0.6s,mb5.0								
KBO	**Bosley Butte**	**26.10**	**334**	*e*P		**P**	**08 11 55.9**	**+4.6**
H09A	**Durkee**	**26.14**	**346**	⇑P		**P**	**08 11 50.7**	**-0.9**
	baz=26								
I06A	**Prineville**	**26.15**	**341**	⇑P		**P**	**08 11 51.1**	**-0.6**
	baz=26,SNR=8.3								
BOZ	**Bozeman (W)**	**26.18**	**356**	*e*P		**P**	**08 11 51.5**	**-0.5**
BOZ					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.3								
BOZ	**Bozeman (W)**	**26.18**	**356**	*e*P		**P**	**08 11 51.5**	**-0.5**
	comp=Z,10nm,1.0s,mb4.3								
BMO	**Blue Mountains**	**26.23**	**346**	*e*P		**P**	**08 11 51.4**	**-1.1**
GCMT	**Greycliff**	**26.23**	**359**	*e*P		**P**	**08 11 52.0**	**-0.5**
H08A	**Prairie City**	**26.25**	**344**	⇑P		**P**	**08 11 51.5**	**-1.1**
	baz=26,SNR=7.5								
LRM	**Limekiln Ridge**	**26.42**	**354**	*e*P		**P**	**08 11 54.1**	**0.0**
J03A	**Ideyld Park**	**26.57**	**337**	⇓P		**P**	**08 11 55.2**	**-0.4**
	baz=27								
I05A	**Bend**	**26.68**	**340**	⇑P		**P**	**08 11 56.0**	**-0.5**
	baz=27								
CPCT	**Cooper Cave**	**26.75**	**49**	*e*P		**P**	**08 11 56.9**	**-0.3**
J02A	**Umpqua**	**26.80**	**336**	⇑P		**P**	**08 11 57.2**	**-0.4**
	baz=27								
H06A	**Lindquist Farm**	**26.90**	**342**	⇓P		**P**	**08 11 58.1**	**-0.4**
	baz=27,SNR=11								
G08A	**Pilot Rock**	**27.04**	**344**	⇓P		**P**	**08 11 58.7**	**-1.0**
	baz=27								
H05A	**Madras**	**27.10**	**340**	⇑P		**P**	**08 11 59.5**	**-0.8**
	baz=27								
WCI	**Wyandotte Cave**	**27.11**	**42**	*e*pP		pP	08 12 10.2	+6.8
F09A	**S2 Ranch, Elgi**	**27.18**	**346**	⇑P		**P**	**08 11 60.0**	**-1.0**
	baz=27,SNR=12								
I03A	**Eugene**	**27.20**	**337**	⇑P		**P**	**08 12 00.3**	**-0.9**
	baz=27,SNR=6.9								
LAO	**LASA Array**	**27.21**	**4**	*e*P		**P**	**08 12 00.4**	**-0.9**
	comp=Z,24nm,1.2s,mb4.6								
HRY	**Holter Researc**	**27.25**	**356**	*e*P		**P**	**08 12 01.4**	**-0.3**
H04A	**Detroit Lake**	**27.44**	**339**	⇑P		**P**	**08 12 02.1**	**-1.2**
	baz=27,SNR=6.3								
G06A	**Carlson Farm,**	**27.45**	**342**	⇑P		**P**	**08 12 02.4**	**-1.0**
	baz=28,SNR=5.7								
MSO	**Missoula**	**27.57**	**353**	*e*P		**P**	**08 12 04.3**	**-0.3**
	comp=Z,45nm,1.7s,mb4.8								
CHMT	**Chamberlain Mo**	**27.58**	**354**	*e*P		**P**	**08 12 04.2**	**-0.3**
G05A	**Wamic**	**27.66**	**341**	⇓P		**P**	**08 12 04.4**	**-0.9**
	baz=28								
G04A	**Mulino**	**28.00**	**339**	⇑P		**P**	**08 12 07.4**	**-0.9**
	baz=28								
HAWA	**Hanford**	**28.21**	**344**	*e*P		**P**	**08 12 10.3**	**+0.1**
	comp=Z,1.5nm,1.8s,mb3.3								
HAWA				*e*PP		PP	08 13 11.8	-2.1
F05A	**White Salmon**	**28.28**	**341**	⇑P		**P**	**08 12 10.7**	**-0.2**
	baz=28,SNR=8.0								
G03A	**Yamhill**	**28.37**	**338**	⇑P		**P**	**08 12 11.4**	**-0.3**
	baz=28								
EGMT	**Eagleton**	**28.47**	**359**	*e*P		**P**	**08 12 11.9**	**-0.6**
	comp=Z,20nm,1.2s,mb4.6								
MDW	**Midway**	**28.47**	**344**	P		**P**	**08 12 12.6**	**0.0**
F04A	**Amboy**	**28.62**	**340**	⇑P		**P**	**08 12 12.8**	**-1.1**
	baz=29,SNR=6.2								
EBG	**Ellensburg**	**28.96**	**343**	P		**P**	**08 12 17.3**	**+0.4**
E05A	**Randle**	**28.98**	**342**	⇓P		**P**	**08 12 16.7**	**-0.4**
	baz=29								
E04A	**Onalaska**	**29.31**	**340**	⇓P		**P**	**08 12 19.5**	**-0.4**
	baz=29,SNR=5.7								
NEW	**Newport**	**29.46**	**349**	P		**P**	**08 12 20.9**	**-0.4**
	comp=Z,5.2nm,0.9s,mb4.3,baz=155,slow=7.6,SNR=15								
NEW					LR	LR	08 24 53.7		
	comp=Z,396nm,20.6s,MS4.0,baz=172,slow=38								
NEW	**Newport**	**29.46**	**349**	*e*P		**P**	**08 12 20.5**	**-0.8**
NEW					pmax	pmax			
	comp=Z,37nm,1.6s								
NEW	**Newport**	**29.46**	**349**	*e*P		**P**	**08 12 20.5**	**-0.8**
	comp=Z,37nm,1.6s,mb4.9								
WTV	**Waterville**	**29.53**	**345**	P		**P**	**08 12 22.0**	**0.0**
E03A	**Lebam**	**29.54**	**339**	⇑P		**P**	**08 12 22.1**	**0.0**
	baz=30,SNR=7.0								
ETW	**Entiat**	**29.54**	**344**	P		**P**	**08 12 22.2**	**+0.1**
D05A	**Enumclaw**	**29.61**	**342**	⇓P		**P**	**08 12 22.4**	**-0.3**
	baz=30								
WALA	**Waterton Lakes**	**29.77**	**353**	*e*P		**P**	**08 12 23.1**	**-0.9**
	comp=Z,7.1nm,0.9s,mb4.4								
WRW	**Wenatchee Ridg**	**29.92**	**344**	P		**P**	**08 12 25.6**	**+0.2**
NLW	**Nelson Butte**	**29.98**	**345**	P		**P**	**08 12 26.2**	**+0.3**
C05A	**Tolt Reservoir**	**29.99**	**343**	⇓P		**P**	**08 12 25.0**	**-1.0**
	baz=30								
HDW	**Hoodsport**	**30.35**	**341**	P		**P**	**08 12 29.0**	**-0.2**
C04A	**Brinnon**	**30.39**	**341**	⇓P		**P**	**08 12 28.3**	**-1.2**
	baz=30								
FWV	**Forest Hill**	**30.40**	**48**	*e*P		**P**	**08 12 29.5**	**-0.2**
JCW	**Jim Creek**	**30.51**	**343**	P		**P**	**08 12 29.7**	**-0.9**
B05A	**Bryant**	**30.62**	**343**	⇑P		**P**	**08 12 30.3**	**-1.3**
	baz=31								
RPW	**Rockport**	**30.63**	**343**	P		**P**	**08 12 30.8**	**-0.9**
OSD	**Olympics--Snow**	**30.70**	**340**	P		**P**	**08 12 32.8**	**+0.5**
B04A	**Port Angeles**	**30.85**	**341**	⇑P		**P**	**08 12 32.8**	**-0.8**
	baz=31								
C03A	**Quillayute Air**	**31.10**	**339**	⇑P		**P**	**08 12 34.5**	**-1.3**
	baz=31								
A04A	**Legoe Bay, Lum**	**31.21**	**342**	⇑P		**P**	**08 12 36.2**	**-0.6**
	baz=31,SNR=8.7								
A05A	**Maple Falls**	**31.28**	**343**	⇑P		**P**	**08 12 36.3**	**-1.2**
	baz=31,SNR=5.3								
MCWV	**Mont Chateau**	**32.08**	**45**	*e*P		**P**	**08 12 44.1**	**-0.3**
	comp=Z,24nm,1.1s,mb5.0								
ULM	**Lac du Bonnet**	**32.40**	**16**	P		**P**	**08 12 45.5**	**-1.7**
	comp=Z,6.0nm,1.0s,mb4.4,baz=223,slow=9.1,SNR=6.4								
ULM					LR	LR	08 25 20.7		
	comp=Z,427nm,18.1s,MS4.2,baz=207,slow=35								
EDM	**Edmonton**	**33.84**	**355**	*e*P		**P**	**08 12 58.6**	**-1.2**
SSPA	**Standing Stone**	**33.87**	**45**	*e*P		pP	08 13 07.3	+4.2
ROSC	**El Rosal**	**36.71**	**109**	P		**P**	**08 13 27.8**	**+3.3**
	comp=Z,8.8nm,0.9s,mb4.6,baz=267,slow=17,SNR=8.8								
SDV	**Santo Domingo**	**38.51**	**100**	P		P	**08 13 42.3**	**+2.5**
	comp=Z,17nm,1.0s,mb4.7,baz=332,slow=6.4,SNR=14								
SDV	**Santo Domingo**	**38.51**	**100**	*e*P		**P**	**08 13 40.7**	**+0.9**
	comp=Z,18nm,0.9s,mb4.8								
ATAH	**Atahualpa**	**39.96**	**128**	P		**P**	**08 13 56.8**	**+4.9**
	comp=Z,12nm,1.0s,mb4.6,baz=309,slow=6.4,SNR=11								
SJG	**San Juan**	**40.44**	**85**	P		**P**	**08 13 56.3**	**+0.4**
	comp=Z,34nm,1.0s,mb5.0,baz=287,slow=2.8,SNR=3.6								
CPD	**Cerro la Pandu**	**40.67**	**85**	*e*P		**P**	**08 13 58.0**	**+0.2**
MTP	**Monte Pirata**	**41.01**	**85**	*e*P		**P**	**08 14 01.5**	**+1.0**
MTP					*e*pP	pP	08 14 11.3	+7.6
YKA	**Yellowknife Ar**	**43.14**	**356**	P		**P**	**08 14 16.0**	**-2.0**
	comp=Z,4.6nm,0.8s,mb4.2,baz=171,slow=7.7,SNR=19								
YKA					LR	LR	08 32 27.8		
	comp=Z,471nm,18.2s,MS4.4,baz=180,slow=36								
YKW3	**Yellowknife Ar**	**43.21**	**356**	*e*P		**P**	**08 14 16.5**	**-2.0**
NNA	**Nana**	**44.47**	**132**	*e*P		**P**	**08 14 29.6**	**+1.0**
	comp=Z,24nm,0.7s,mb5.0								
SCHQ	**Schefferville**	**47.50**	**32**	LR		LR	08 36 29.8		
	comp=Z,189nm,19.3s,MS4.1,baz=287,slow=38								
DAWY	**Dawson**	**49.04**	**343**	*e*P		**P**	**08 15 03.8**	**-0.7**
RKT	**Rikitea**	**49.40**	**212**	*e*S		**S**	**08 22 14.4**	**+0.3**
	comp=Z,187nm,32.0s								
RKT				*e*LQ			08 26 53.8		
	comp=Z,356nm,32.2s								
RKT				*e*LR		LR	08 29 16.1		
	comp=Z,266nm,27.2s								
KDAK	**Kodiak Island**	**49.78**	**331**	P		**P**	**08 15 10.0**	**-0.1**
	comp=Z,16nm,1.1s,mb5.0,baz=180,slow=2.0,SNR=4.1								
KDAK	**Kodiak Island**	**49.78**	**331**	P		**P**	**08 15 10.0**	**-0.1**
EGAK	**Eagle**	**50.09**	**343**	*e*P		**P**	**08 15 11.8**	**-0.6**
SLKM	**Skilak Lake**	**50.28**	**335**	*e*P		**P**	**08 15 13.7**	**-0.3**
PMR	**Palmer**	**50.52**	**336**	*e*P		**P**	**08 15 15.9**	**+0.2**
INK	**Inuvik**	**51.18**	**349**	*e*P		**P**	**08 15 19.8**	**-0.9**
INK					pmax	pmax			
	comp=Z,12nm,0.8s								
INK	**Inuvik**	**51.18**	**349**	*e*P		**P**	**08 15 19.8**	**-1.0**
	comp=Z,12nm,0.8s,mb4.9								
SAML	**Samuel**	**53.19**	**118**	*e*P		**P**	**08 15 35.2**	**-0.4**
	comp=Z,13nm,1.0s,mb4.8								
LPAZ	**La Paz**	**53.60**	**129**	P		**P**	**08 15 41.1**	**+2.5**
	comp=Z,6.0nm,0.9s,mb4.5,baz=334,slow=8.2,SNR=23								
LPAZ	**La Paz**	**53.60**	**129**	*e*P		**P**	**08 15 40.2**	**+1.5**
LPAZ				*e*			08 16 46.7		
LPAZ					pmax	pmax			
	comp=Z,14nm,1.2s								
LPAZ	**La Paz**	**53.60**	**129**	*e*P		**P**	**08 15 40.2**	**+1.6**
	comp=Z,14nm,1.2s,mb4.8								
LPAZ				*e*PcP		PcP	08 16 46.6	+1.5
PPT	**Papeete**	**54.32**	**230**	*e*S		**S**	**08 23 23.0**	**+1.2**
	comp=Z,305nm,27.2s								
PPT				*e*LR		LR	08 31 20.7		
	comp=Z,640nm,26.8s,baz=41								
PPT	**Papeete**	**54.32**	**230**	LR		LR	08 32 14.1		
	comp=Z,357nm,20.9s,MS4.4,baz=76,slow=29								
LVC	**Limon Verde**	**57.26**	**135**	*e*P		**P**	**08 16 06.0**	**+0.9**
	comp=Z,11nm,0.9s,mb4.9								
TBI	**Tubuai**	**58.11**	**225**	*e*S		**S**	**08 24 14.0**	**+1.9**
	comp=Z,256nm,30.5s								
TBI				*e*LR		LR	08 33 02.4		
	comp=Z,400nm,28.2s,baz=41								
SUMG	**Summit**	**65.71**	**18**	*e*P		**P**	**08 17 01.2**	**-0.9**
	comp=Z,9.4nm,0.8s,mb4.9								
BDFB	**Brasilia**	**69.33**	**116**	P		**P**	**08 17 26.9**	**+1.8**
	comp=Z,19nm,1.2s,mb4.9,baz=265,slow=5.5,SNR=9.2								
PLCA	**Paso Flores**	**69.73**	**150**	P		**P**	**08 17 29.9**	**+2.4**
	comp=Z,5.8nm,1.1s,mb4.4,baz=4.1,slow=9.0,SNR=5.0								
PLCA					LR	LR	08 41 18.9		
	comp=Z,549nm,18.2s,MS4.8,baz=327,slow=30								
PLCA	**Paso Flores**	**69.73**	**150**	P		**P**	**08 17 29.9**	**+2.4**
PLCA					LR	LR	08 41 18.9		
BILL	**Bilibino**	**70.16**	**337**	*i* P		**P**	**08 17 29.3**	**-0.8**
BILL				*e*S		S	08 26 46.1	+4.7
BILL					pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6								
BILL					MLR	MLR			
	comp=Z,200nm,27.0s,MS4.2								
ARCES	**ARCESS Array B**	**85.51**	**15**	P		**P**	**08 18 54.5**	**-1.1**
	comp=Z,2.9nm,0.9s,mb4.5,baz=328,slow=4.4,SNR=11								
ARE0	**ARCESS Array S**	**85.51**	**15**	*e*P		**P**	**08 18 54.9**	**-0.7**
ARE0				*e*pP		pP	08 19 03.5	+4.7
KEV	**Kevo**	**85.70**	**14**	*e*P		**P**	**08 18 56.0**	**-0.5**
KEV				*e**PP		pP	08 19 04.4	+4.6
NB2	**NORSAR Subarra**	**86.61**	**25**	P		**P**	**08 19 00.4**	**-0.6**
	comp=Z,0.9nm,0.6s,mb4.2,baz=305,slow=5.1								
NOA	**NORSAR Array B**	**86.61**	**25**	P		**P**	**08 19 00.5**	**-0.5**
	comp=Z,0.5nm,0.8s,mb3.8,baz=305,slow=4.5,SNR=2.4								
LVZ	**Lovozero**	**88.87**	**13**	*i* P		pP	08 19 18.3	+3.2
PMSA	**Palmer Station**	**90.76**	**162**	LR		LR	08 50 18.9		
	comp=Z,107nm,20.7s,MS4.3,baz=236,slow=29								
MDJ	**Mudanjiang**	**96.87**	**322**	P		**P**	**08 19 47.3**	**-1.4**
MDJ				S		S	08 31 08.5	-2.5
MDJ				AMB		AMB			
	comp=Z,2.0nm,0.5s,mb4.8								
MDJ				AMB		AMB			
	comp=Z,43nm,4.4s								
MDJ				LR		LR			
	comp=N,136nm,21.8s,MS4.5								
MDJ				LR		LR			
	comp=E,63nm,20.4s,MS4.5								
MDJ				LR		LR			
	comp=Z,84nm,19.1s,MS4.2								
CN2	**Changchun**	**99.74**	**323**	*e*P		Pdif	08 19 59.8	-1.8
HHC	**Hu-ho-hao-te**	**109.16**	**329**	*e*PDIF		Pdif	08 20 42.5	-0.9
HHC				PP		PP	08 25 19.0	+3.2
HHC				S		Sdif	08 32 49.5	-4.3
HHC				SS		SS	08 40 33.5	-2.3
HHC				PP		PP			
	comp=Z,41nm,6.2s								
HHC				LR		LR			
	comp=N,113nm,19.0s,MS4.7								
HHC				LR		LR			
	comp=E,160nm,20.9s,MS4.7								
HHC				LR		LR			
	comp=Z,146nm,23.7s,MS4.5								
SANT	**Santorini**	**109.68**	**38**	*e*Pdif		Pdif	08 20 53.5	+7.7
SSE	**Sheshan**	**110.40**	**315**	PKP		PKiKP	08 24 51.3	+1.5
SSE				LR		LR			
	comp=N,332nm,18.6s,MS5.0								
SSE				LR		LR			
	comp=E,54nm,18.6s,MS5.0								
SSE				LR		LR			
	comp=Z,213nm,14.3s,MS4.9								
NJ2	**Nanjing**	**111.29**	**318**	*e*PKP		PKiKP	08 24 53.0	+1.5
NJ2				PKS			08 28 28.0		
NJ2				SKS		SKSdf	08 32 00.0	-3.6
NJ2				PP		PP			
	comp=Z,110nm,11.6s								
NJ2				LR		LR			
	comp=N,300nm,16.6s								
NJ2				LR		LR			
	comp=E,240nm,28.8s								
NJ2				LR		LR			
	comp=Z,310nm,36.5s								
WMQ	**Urumqi**	**115.18**	**347**	*e*PDIF		Pdif	08 21 12.0	+1.8
WMQ				PP		PP	08 26 04.0	+5.1
WMQ				LR		LR			
	comp=N,135nm,16.0s,MS5.0								
WMQ				LR		LR			
	comp=E,241nm,16.0s,MS5.0								
WMQ				LR		LR			
	comp=Z,122nm,16.0s,MS4.6								
GNI	**Garni**	**115.79**	**22**	*e*PKIKP		PKPdf	08 25 00.2	+0.1
LZH	**Lanzhou**	**116.62**	**331**	*e*PKP		PKPdf	08 24 57.3	-4.4
LZH				XPKP			08 25 03.5		
LZH				LR		LR			
	comp=N,159nm,19.6s								
LZH				LR		LR			
	comp=Z,297nm,20.5s,MS4.9								
WB2	**Warramunga Arr**	**120.77**	**258**	*e*P		PKPdf	08 25 18.6	+8.9
WRA	**Warramunga Arr**	**120.78**	**258**	PKP		PKPdf	08 25 11.3	+1.6
	comp=Z,0.3nm,0.5s,baz=80,slow=2.6,SNR=8.8								
CD2	**Chengdu**	**120.86**	**327**	*e*PKP		PKPdf	08 25 07.0	-2.8
ASAR	**Alice Springs**	**121.83**	**254**	PKP		PKPdf	08 25 12.2	+0.5
	comp=Z,0.6nm,1.0s,baz=85,slow=1.8,SNR=5.2								
KMI	**Kunming**	**126.00**	**324**	PKP		PKPdf	08 25 19.5	-0.2
KMI				SS		SS	08 44 14.5	-0.2
KMI				LR		LR			
	comp=Z,106nm,22.5s,MS4.5								
PSI	**Prapat**	**144.79**	**306**	PKP		PKPdf	08 25 53.6	-0.9
	comp=Z,9.5nm,0.9s,baz=148,slow=0.2,SNR=7.4								

NEIC 26 08:17:28.3±1.0, 899S×10933W, h10km, mb4.6/6, Error ellipse: s-maj=30.2km s-min=16.7km az=70.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**40.79**	**104**	*e*P	P	08 25 11.2	+1.5
	7.6nm,1.3s						
SAML	**Samuel**	**45.56**	**94**	*e*P	P	08 25 48.2	-0.1
	9.6nm,1.0s						
MIAR	**Mount Ida**	**45.80**	**18**	*e*P	P	08 25 50.4	+0.3
	5.1nm,0.9s						
PLAL	**Pickwick Lake**	**48.13**	**24**	*e*P	P	08 26 09.2	+0.8
	9.3nm,1.0s						
WVT	**Waverly**	**49.24**	**23**	*e*P	P	08 26 17.2	+0.3
	3.0nm,0.8s						
WVT				*e*		08 26 22.7	
MCMT	**McKenzie Canyo**	**53.66**	**357**	*e*P	P	08 26 51.0	+1.0
EDM	**Edmonton**	**62.06**	**357**	*e*P	P	08 27 47.7	-1.4
QSPA	**South Pole Qui**	**81.09**	**180**	*e*P	P	08 29 43.9	+0.2
	7.7nm,1.0s						

CSEM 26 08:17:57.8, 3866N×2129E, h21km, MD3.5/10, After ATH
NEIC 26 08:17:57.8, 3866N×2129E, h21km, MD3.5(ATH), After ATH.
ATH 26 08:17:57.8, 3866N×2129E, h21km±1km, MD3.5/10, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.48**	**58**	*e*PB	Pb	08 18 07.0	-0.5
EVR				*e*SB	Sb	08 18 14.5	+0.3
RLS	**Riolos of Patr**	**0.62**	**167**	*e*PN	Pn	08 18 10.2	-1.1
RLS				*e*SN	Sb	08 18 19.4	+1.3
VLS	**Valsamata**	**0.73**	**229**	*e*PB	Pb	08 18 11.5	-0.3
VLS				*e*SB	Sb	08 18 23.3	+1.9
JAN	**Janina**	**1.05**	**341**	*e*PN	Pn	08 18 18.0	+0.7
JAN				*e*SB	Sb	08 18 32.6	+2.0
LKR	**Lokris**	**1.34**	**90**	*e*PN	Pn	08 18 23.5	+2.3
LKR				*e*SN	Sn	08 18 41.3	+2.9
ITM	**Ithomi**	**1.56**	**161**	*e*PN	Pn	08 18 26.5	+2.2
KEK	**Kerkira**	**1.56**	**313**	*e*PN	Pn	08 18 26.0	+1.6
NEO	**Neokhori**	**1.64**	**66**	*e*PN	Pn	08 18 27.6	+2.2
NEO				*e*SB	Sb	08 18 49.8	+2.2
VLI	**Veliai**	**2.34**	**146**	*e*PB	Pb	08 18 37.8	-1.4
PLG	**Polygyros**	**2.39**	**44**	*e*PN	Pn	08 18 37.3	+1.6

BJI 26 08:20:39.1, 990S×108.10E, h10km, mb4.6
NEIC 26 08:20:41.1±0.8, 991S×108.14E, h10km, mb4.7/2, Error ellipse: s-maj=46.1km s-min=9.1km az=45.0
ISCJB 26 08:20:43.0±1.1, 98S±03×1083E±03, h33km, mb4.1/9, MS4.0/1, Error ellipse: s-maj=51.7km s-min=11.4km az=94.9
IDC 26 08:20:44.7±1.2, 991S×10820E, h32km±6km, mb3.9/6, mb1 3.9/7, mb1mx3.7/17, mbtmp4.0/7, ML3.4/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/25, Error ellipse: s-maj=58.2km s-min=16.3km az=48.0
ISC 26 08:20:45.3±1.1, 99S±03×1083E±03, h35km, h35km±.5km:pP-P, n18, σ0946/11, mb4.1/9, MS4.0/1, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**15.63**	**323**	LR	LR	08 32 01.4	
	comp=Z,88nm,18.0s,baz=124,slow=44						
FITZ	**Fitzroy Crossi**	**18.75**	**118**	P	**Pn**	**08 25 01.6**	**-0.1**
	0.1nm,0.3s,baz=286,slow=12,SNR=6.6						
WRA	**Warramunga Arr**	**27.09**	**115**	P	**P**	**08 26 24.1**	**-0.6**
	2.2nm,0.9s,mb3.7,baz=287,slow=11,SNR=12						
ASAR	**Alice Springs**	**28.07**	**123**	P	**P**	**08 26 34.1**	**+0.6**
	1.3nm,0.8s,mb3.6,baz=298,slow=9.0,SNR=15						
STKA	**Stephens Creek**	**37.84**	**130**	P	**P**	**08 27 58.6**	**+0.1**
	4.3nm,0.9s,mb4.2,baz=299,slow=7.0,SNR=11						
XAN	**Xi'an**	**43.65**	**1**	P	**P**	**08 28 46.5**	**+0.1**
XAN				AP	pP	08 28 56.5	-0.2
XAN				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.2						
WMQ	**Urumqi**	**56.59**	**342**	*e*P	**P**	**08 30 25.0**	**+0.5**
SONM	**Songino Array**	**57.45**	**359**	P	**P**	**08 30 31.0**	**+0.5**
	comp=Z,1.3nm,0.5s,mb4.2,baz=176,slow=7.4,SNR=13						
SONM				pP	pP	08 30 41.0	-0.2
	comp=Z,1.7nm,0.6s,baz=175,slow=8.5,SNR=7.1						
MKAR	**Makanchi Array**	**60.97**	**340**	P	**P**	**08 30 54.8**	**-0.1**
	comp=Z,1.7nm,0.6s,mb4.4,baz=139,slow=7.2,SNR=23						
MKAR				pP	pP	08 31 05.0	-0.6
	comp=Z,2.7nm,0.6s,baz=135,slow=7.2,SNR=14						
CHKZ	**Chkalovo**	**70.87**	**337**	*e*P	**P**	**08 31 57.7**	**-0.9**
	comp=Z,6.6nm,0.9s,mb4.6						
CHKZ				*e*	pP	08 32 08.6	-0.8
ZRNK	**Zerenda**	**70.94**	**336**	*e*P	**P**	**08 31 58.7**	**-0.3**
	comp=Z,1.8nm,0.6s,mb4.2						
ZRNK				*e*	pP	08 32 09.0	-0.9
VNDA	**Vanda**	**72.96**	**169**	LR	LR	09 01 25.2	
	comp=Z,69nm,18.6s,MS4.0,baz=9.7,slow=34						
BRTR	**Keskin Array B**	**84.64**	**312**	P	**P**	**08 33 15.6**	**+0.3**
	comp=Z,0.9nm,0.7s,mb4.0,baz=125,slow=6.5,SNR=5.1						
BRTR				pP	pP	08 33 25.8	-0.5
	comp=Z,1.4nm,0.7s,baz=138,slow=7.5,SNR=5.3						
TBI	**Tubuai**	**97.22**	**115**	*e*LQ		08 34 36.6	
	comp=Z,580nm,29.5s						
TBI				*e*LR	LR	08 36 25.1	
	comp=Z,228nm,28.2s,baz=69						
PPT	**Papeete**	**98.47**	**109**	*e*LQ		08 34 10.8	
	comp=Z,936n

VAY					*e*Sn	**Sb**	**08 35 31.3**	**0.0**
VAY	**Valandovo**	**2.76**	**291**		*e*Pn	**Pn**	**08 34 51.9**	**-0.3**
GRG	**Griva**	**2.79**	**283**		*e*Pn	**Pn**	**08 34 53.1**	**+0.5**
HRT	**Hereke**	**2.84**	**80**		*e*PN	**Pn**	**08 34 54.3**	**+1.0**
ADVT	**Abdulvahap**	**2.87**	**87**		*e*PN	**Pn**	**08 34 54.2**	**+0.5**
SILT	**Sile**	**2.89**	**73**		PN	**Pn**	**08 34 53.6**	**-0.3**
SZH	**Strazhica**	**2.90**	**359**		P	**Pn**	**08 34 54.9**	**+0.8**
SZH	**Strazhica**	**2.90**	**359**		P	**Pn**	**08 34 53.9**	**-0.2**
VTS	**Vitosha**	**3.05**	**318**	⇓	*i*P	**Pn**	**08 35 04.2**	**+8.0**
VTS	**Vitosha**	**3.05**	**318**		P	**Pn**	**08 34 56.0**	**-0.2**
APE	**Apeiranthos**	**3.31**	**186**	⇓	*i*P	**Pn**	**08 34 59.7**	**-0.1**
APE	**Apeiranthos**	**3.31**	**186**	⇓	P	**Pn**	**08 34 59.7**	**-0.1**
ESKT	**Eskisehir**	**3.83**	**101**		*e*PN	**Pn**	**08 35 07.7**	**+0.7**
TIRR	**Tirgusor**	**4.47**	**23**	⇑	*i*P	**Pn**	**08 35 15.5**	**-0.2**
TIRR	**Tirgusor**	**4.47**	**23**	⇑	P	**Pn**	**08 35 15.5**	**-0.1**
KIZT	**Kizilcal**	**4.79**	**106**		*e*PN	**Pn**	**08 35 21.1**	**+1.0**
VOIR		**5.12**	**353**	⇓	*i*P	**Pn**	**08 35 27.5**	**+2.9**
MLR	**Muntele Rosu**	**5.12**	**360**	⇓	*i*P	**Pn**	**08 35 25.5**	**+0.8**
PLOR	**Plostina**	**5.50**	**5**	⇓	*i*P	**Pn**	**08 35 31.4**	**+1.5**
VRI	**Vrincioaia**	**5.53**	**5**	⇓	*i*P	**Pn**	**08 35 31.8**	**+1.6**

IDC 26 08:43:28.9±1.4, 2117S×6845W, h113km±11km, mb3.8/4, mb1 3.9/7, mb1mx3.6/18, mbtmp4.2/7, Error ellipse: s-maj=42.2km s-min=13.8km az=111.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.50**	**197**	P	Pn	08 43 55.1	-0.7
	46nm,0.3s,SNR=581						
LVC				S	Sn	08 44 16.9	+0.7
	274nm,0.3s,SNR=20						
LPAZ	**La Paz**	**4.87**	**4**	P	Pn	08 44 40.8	+0.9
	1.8nm,0.3s,baz=194,slow=6.8,SNR=46						
SIV	**San Ignacio**	**8.69**	**55**	P	Pn	08 45 31.4	-0.2
	7.3nm,0.3s,baz=246,slow=11,SNR=173						
PLCA	**Paso Flores**	**19.58**	**185**	P	P	08 47 48.5	+0.5
	0.4nm,0.3s,baz=1.1,slow=10,SNR=16						
BDFB	**Brasilia**	**20.15**	**78**	P	P	08 47 55.4	+1.4
	11nm,0.4s,baz=266,slow=9.7,SNR=24						
SNAA	**Sanae**	**62.45**	**161**	P	P	08 53 39.6	-0.4
	0.4nm,0.8s,baz=214,slow=6.2,SNR=9.8						
DBIC	**Dimbokro**	**68.23**	**73**	P	P	08 54 17.6	+0.4
	3.4nm,0.7s,baz=205,slow=3.5,SNR=7.8						
TORD	**Torodi Ar. Bea**	**76.84**	**70**	P	P	08 55 08.6	+0.3
	1.1nm,0.4s,baz=254,slow=5.1,SNR=27						
MKAR	**Makanchi Array**	**145.12**	**36**	PKPbc	PKPbc	09 02 52.9	+0.2
	0.3nm,0.4s,baz=352,slow=3.7,SNR=4.2						

*ISCJB **26** 08:48:02.5±0.3, 2722N±004×10278E±003, h16km, mb4.5/50, MS3.9/7, Error ellipse: s-maj=6.1km s-min=4.1km az=14.4*
*NEIC **26** 08:48:03.5±0.2, 2725N×10276E, h10km, mb4.6/29, Error ellipse: s-maj=7.1km s-min=4.9km az=204.0*
*IDC **26** 08:48:04.5±0.5, 2732N×10281E, h14km±3km, mb4.2/17, mb1 4.3/17, mb1mx4.2/23, mbtmp4.3/17, MS3.9/1, Ms1 3.9/1, ms1mx2.9/30, Error ellipse: s-maj=20.8km s-min=11.1km az=53.0*
*BJI **26** 08:48:04.3, 2728N×10300E, h12km, mB4.5, mb4.3, ML4.5, Ms4.3, Msz4.0*
*MOS **26** 08:48:05.4±1.1, 2735N×10288E, h33km, mb4.7/36, Error ellipse: s-maj=11.3km s-min=6.1km az=113.3*
*SZGRF **26** 08:48:14.5, 2780N×103.14E, h33km, mb4.6, Yunnan, China*

ISC 26 08:48:04.6±0.2, 2722N±003×10276E±003, h17km, h17km±1.4km: pP-P, n159, σ1§08/171, mb4.5/50, MS3.9/7, 8C-8D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.09**	**181**	PG	**Pg**	**08 48 43.8**	**-1.0**
KMI				SG	**Sg**	**08 49 10.8**	**-1.1**
KMI				Smax			
	comp=N,2μm,1.4s						
KMI				Smax			
	comp=E,2μm,0.6s						
KMI				LR	LR		
	comp=N,5μm,3.8s						
KMI				LR	LR		
	comp=E,8μm,6.2s						
CD2	**Chengdu**	**3.77**	**13**	P	**Pn**	**08 49 04.3**	**+2.3**
CD2				PG	**Pg**	**08 49 13.0**	**-3.9**
CD2				S	**Sn**	**08 49 42.0**	**-4.1**
CD2				SG	**Sg**	**08 50 00.5**	**-5.4**
CD2				Smax			
	comp=N,1μm,0.8s						
CD2				Smax			
	comp=E,2μm,0.7s						
XAN	**Xi'an**	**8.62**	**36**	P	**Pn**	**08 50 07.5**	**-1.0**
XAN				AP		08 50 12.5	
XAN				S	**Sn**	**08 51 52.5**	**+7.2**
XAN				SS		08 51 59.5	
XAN				AMB	AMB		
	comp=Z,9.0nm,0.9s						
XAN				AMB	AMB		
	comp=Z,51nm,8.4s						
XAN				LR	LR		
	comp=N,828nm,9.1s						
XAN				LR	LR		
	comp=E,875nm,9.1s						
XAN				LR	LR		
	comp=Z,689nm,7.2s						
CHTO	**Chiang Mai**	**9.08**	**204**	*e*P	**Pn**	**08 50 21.7**	**+6.8**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	**9.08**	**204**	*e*Pn	**Pn**	**08 50 21.7**	**+6.8**
	comp=Z,7.9nm,0.9s						
CM31	**Chiang Mai Arr**	**9.41**	**203**	*e*Pn	**Pn**	**08 50 25.2**	**+5.8**
GZH	**Guangzhou**	**10.43**	**111**	P	**Pn**	**08 50 34.5**	**+1.1**
GZH				S	**Sn**	**08 52 33.5**	**+3.6**
GZH				LR	LR		
	comp=N,442nm,5.6s						
GZH				LR	LR		
	comp=E,791nm,13.4s						
GZH				LR	LR		
	comp=Z,1μm,12.7s						
QIZ	**Qiongzhong**	**10.43**	**140**	P	**Pn**	**08 50 31.3**	**-2.1**
QIZ				AP		08 50 37.5	
QIZ				S	**Sn**	**08 52 25.5**	**-4.5**
QIZ				AMB	AMB		
	comp=Z,8.0nm,1.6s						
QIZ				LR	LR		
	comp=N,812nm,9.6s						
QIZ				LR	LR		
	comp=E,739nm,10.5s						
QIZ				LR	LR		
	comp=Z,2μm,10.5s						
WHN	**Wuhan**	**10.68**	**69**	P	**Pn**	**08 50 35.5**	**-1.3**
WHN				S	**Sn**	**08 52 30.5**	**-5.5**
WHN				LR	LR		
	comp=Z,1μm,20.2s						
GTA	**Gaotai**	**12.40**	**349**	*e*P	**Pn**	**08 51 06.0**	**+5.7**
GTA				XP		08 51 14.8	
GTA				S	**Sn**	**08 53 27.0**	**+8.9**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s						
GTA				AMB	AMB		
	comp=Z,26nm,4.5s						
GTA				LR	LR		
	comp=N,669nm,11.8s						
GTA				LR	LR		
	comp=E,678nm,17.1s						
GTA				LR	LR		
	comp=Z,521nm,9.9s						
JIRN	**Jiri**	**14.72**	**275**	*e*P	**Pn**	**08 51 32.6**	**+0.5**
NJ2	**Nanjing**	**14.79**	**67**	*e*P	**Pn**	**08 51 32.5**	**-0.5**
NJ2				AP	pP	08 51 36.0	-7.6
NJ2				XP	sP	08 51 39.5	-6.3
NJ2				PP		08 51 44.0	
NJ2				S	**Sn**	**08 54 17.0**	**+0.5**
NJ2				XS	sS	08 54 22.0	-20
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,90nm,8.0s						
NJ2				LR	LR		
	comp=N,610nm,16.0s						
NJ2				LR	LR		
	comp=E,1μm,18.0s						
NJ2				LR	LR		
	comp=Z,1μm,14.4s						
GUN	**Gumba**	**14.99**	**277**	*e*P	**Pn**	**08 51 36.1**	**+0.4**
	comp=Z,34nm,0.5s						
PKI	**Pulchoki**	**15.42**	**275**	*e*P	**Pn**	**08 51 40.9**	**-0.4**
	comp=Z,41nm,0.6s						
PKI	**Pulchoki**	**15.42**	**275**	*e*P	**Pn**	**08 51 40.9**	**-0.4**
PKI				pmax	pmax		
	comp=Z,41nm,0.6s						
KKN	**Kakani**	**15.53**	**276**	*e*P	**Pn**	**08 51 42.6**	**-0.1**
	comp=Z,61nm,0.7s						
KKN	**Kakani**	**15.53**	**276**	*e*P	**Pn**	**08 51 42.6**	**-0.1**
KKN				pmax	pmax		
	comp=Z,61nm,0.7s						
DMN	**Daman**	**15.69**	**275**	*e*P	**Pn**	**08 51 44.3**	**-0.5**
	comp=Z,76nm,1.0s						
GKN	**Gorkha**	**16.09**	**277**	*e*P	**Pn**	**08 51 48.8**	**-1.2**
BJI	**Beijing**	**16.95**	**38**	P	**Pn**	**08 52 02.3**	**+1.4**
BJI				S	**Sn**	**08 55 09.5**	**+0.6**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.9s						
BJI				LR	LR		
	comp=N,492nm,11.1s						
BJI				LR	LR		
	comp=E,481nm,13.2s						
BJI				LR	LR		
	comp=Z,165nm,13.8s						
KOLN	**Koldanda**	**17.02**	**276**	*e*P	**Pn**	**08 52 00.1**	**-1.6**
	comp=Z,34nm,0.8s						
WMQ	**Urumqi**	**20.55**	**328**	*e*P	**P**	**08 52 45.0**	**+2.7**
WMQ				XP	sP	08 52 52.0	+2.7
WMQ				PP		08 53 07.0	
WMQ				S	**S**	**08 56 31.0**	**-0.6**
WMQ				SS		08 57 01.0	
WMQ				AMB	AMB		
	comp=Z,21nm,0.8s						
WMQ				LR	LR		
	comp=N,423nm,8.0s						
WMQ				LR	LR		
	comp=E,392nm,8.0s						
WMQ				LR	LR		
	comp=Z,257nm,7.0s						
SONM	**Songino Array**	**20.77**	**7**	P	**P**	**08 52 45.0**	**+0.3**
	comp=Z,5.4nm,0.7s,baz=187,slow=12,SNR=16						
SONM	**Songino Array**	**20.77**	**7**	P	**P**	**08 52 45.0**	**+0.3**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ULN	**Ulaanbaatar**	**20.88**	**8**	*i* P	**P**	**08 52 46.4**	**+0.5**
SNY	**Shenyang**	**22.42**	**44**	*e*P	**P**	**08 53 02.3**	**-0.1**
SNY				AP		08 53 07.0	
SNY				XP	sP	08 53 10.0	+0.6
SNY				PP		08 53 29.8	
SNY				XS	sS	08 57 16.0	+0.1
SNY				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.4						
SNY				AMB	AMB		
	comp=Z,85nm,4.9s						
SNY				LR	LR		
	comp=N,252nm,14.5s,MS3.9						
SNY				LR	LR		
	comp=E,222nm,15.1s,MS3.9						
SNY				LR	LR		
	comp=Z,202nm,12.9s,MS3.7						
JOW	**Kunigami**	**22.72**	**85**	P	**P**	**08 53 06.0**	**+0.4**
	comp=Z,21nm,0.7s,mb4.7,baz=300,slow=11,SNR=9.3						
ZAK	**Zakamensk**	**23.13**	**1**	*e*P	**P**	**08 53 09.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
HYB	**Hyderabad**	**24.39**	**251**	*i* P	**P**	**08 53 26.5**	**+4.5**
HYB	**Hyderabad**	**24.39**	**251**	*e*P	**P**	**08 53 27.0**	**+5.0**
PSI	**Prapat**	**24.56**	**189**	P	**P**	**08 53 25.9**	**+2.4**
	comp=Z,4.7nm,0.7s,mb4.2,baz=292,slow=8.2,SNR=4.9						
PSI	**Prapat**	**24.56**	**189**	P	**P**	**08 53 26.0**	**+2.5**
PSI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
CN2	**Changchun**	**24.67**	**42**	*e*P	**P**	**08 53 21.3**	**-3.2**
CN2				*e*AP		08 53 28.0	
CN2				*e*S	**S**	**08 57 35.3**	**-10**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
CN2				AMB	AMB		
	comp=Z,60nm,3.0s						
CN2				LR	LR		
	comp=N,190nm,18.0s,MS3.9						
CN2				LR	LR		
	comp=E,290nm,18.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,13.0s,MS3.8						
MKAR	**Makanchi Array**	**25.34**	**326**	P	**P**	**08 53 31.2**	**+0.6**
	comp=Z,1.7nm,0.5s,mb3.8,baz=123,slow=8.8,SNR=22						
MKAR				PcP	PcP	08 57 02.9	-0.2
	comp=Z,2.3nm,0.8s,baz=98,slow=5.0,SNR=5.9						
MKAR				ScP	ScP	09 00 40.1	-1.4
	comp=Z,1.2nm,0.7s,baz=101,slow=6.3,SNR=9.9						
MKAR	**Makanchi Array**	**25.34**	**326**	P	**P**	**08 53 31.2**	**+0.6**
MKAR				PcP	PcP	08 57 02.9	-0.2
MKAR	**Makanchi Array**	**25.34**	**326**	P	**P**	**08 53 31.2**	**+0.6**
MKAR				PcP	PcP	08 57 02.9	-0.2
MKAR				ScP	ScP	09 00 40.1	-1.4
CIT	**Chita**	**26.07**	**15**	*e*P	**P**	**08 53 40.0**	**+2.8**
AAK	**Ala-Archa**	**27.64**	**311**	*e*P	**P**	**08 53 53.3**	**+1.9**
AAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.4						
AAK	**Ala-Archa**	**27.64**	**311**	*e*P	**P**	**08 53 53.3**	**+1.9**
	comp=Z,10nm,1.1s,mb4.4						
ZAL	**Zalesovo**	**29.80**	**338**	P	**P**	**08 54 09.4**	**-1.1**
	comp=Z,1.5nm,0.5s,mb4.0,baz=10,slow=5.4,SNR=5.4						
ZAL				LR	LR	09 07 04.9	
	comp=Z,237nm,18.7s,MS3.9,baz=137,slow=38						
ZAL	**Zalesovo**	**29.80**	**338**	P	**P**	**08 54 09.5**	**-1.0**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL				MLR	MLR		
	comp=Z,237nm,18.7s						
MAJO	**Matsushiro**	**31.35**	**64**	*e*P	**P**	**08 54 19.4**	**-4.9**
MAJO				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.6						
MAJO	**Matsushiro**	**31.35**	**64**	*e*P	**P**	**08 54 19.4**	**-4.9**
	comp=Z,15nm,1.6s,mb4.6						
MJAR	**Matsushiro Arr**	**31.35**	**64**	P	**P**	**08 54 23.8**	**-0.5**
	comp=Z,0.6nm,0.5s,mb3.7,baz=254,slow=9.0,SNR=4.0						
MJAR				PcP	PcP	08 57 17.6	-0.3
	comp=Z,0.9nm,0.7s,baz=276,slow=3.8,SNR=4.1						
MJAR				ScP	ScP	09 00 59.6	-0.6
	comp=Z,1.5nm,0.5s,baz=153,slow=5.8,SNR=7.5						
BOD	**Bodaibo**	**31.59**	**11**	*e*P	**P**	**08 54 21.4**	**-5.0**
CLNS	**Chul'man**	**33.54**	**22**	*e*P	**P**	**08 54 44.2**	**+0.8**
CLNS				*e*'PP	pP	08 54 55.2	+6.6
CLNS				*e*PPP		08 55 59.6	
CLNS				*e*		08 57 30.7	
CLNS				*e*S	**S**	**08 59 56.3**	**-8.5**
CLNS				pmax	pmax		
	comp=E,3.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
CLNS				pmax	pmax		
	comp=N,4.0nm,0.7s						
CLNS				smax			
	comp=N,9.0nm,0.8s						
CLNS				smax			
	comp=E,8.0nm,0.8s						
CLNS				smax			
	comp=Z,7.0nm,0.7s						
CLNS				MLR	MLR		
	comp=Z,210nm,11.0s,MS4.1						
CLNS				MLR	MLR		
	comp=N,100nm,12.0s,MS4.1						
CLNS				MLR	MLR		
	comp=E,210nm,13.0s,MS4.1						
BRVK	**Borovoye**	**35.29**	**326**	*e*P	**P**	**08 54 58.3**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**35.29**	**326**	*e*P	**P**	**08 54 58.3**	**-0.4**
	comp=Z,2.3nm,0.6s,mb4.3						
CHKZ	**Chkalovo**	**35.48**	**327**	*e*P	**P**	**08 55 00.3**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
CHKZ	**Chkalovo**	**35.48**	**327**	*e*P	**P**	**08 55 00.3**	**+0.1**
	comp=Z,2.4nm,0.7s,mb4.2						
ZRNK	**Zerenda**	**35.88**	**325**	*e*P	**P**	**08 55 06.2**	**+2.5**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
ZRNK	**Zerenda**	**35.88**	**325**	*e*P	**P**	**08 55 06.2**	**+2.5**
	comp=Z,2.3nm,0.9s,mb4.1						
YAK	**Yakutsk**	**39.14**	**20**	*i* P	**P**	**08 55 27.4**	**-3.9**
ARU	**Arti**	**42.86**	**325**	⇑	*i*P	**P**	**08 56 02.4**	**+0.5**
ARU				*e*		08 57 43.1	
ARU				*e*PPP		08 58 13.6	
ARU				*e*S	**S**	**09 02 25.7**	**0.0**
ARU				*e*SS	SS	09 05 36.2	-0.9
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ARU	**Arti**	**42.86**	**325**	*e*P	**P**	**08 56 02.6**	**+0.6**
	comp=Z,5.2nm,0.7s,mb4.4						
SEY	**Seymchan**	**48.05**	**28**	*i* P	**P**	**08 56 42.5**	**-0.5**
KAKA	**Kakadu**	**49.04**	**140**	*e*P	**P**	**08 56 49.4**	**-1.3**
	comp=Z,9.8nm,0.9s,mb4.8						
KIV	**Kislovodsk**	**50.54**	**306**	*c i*P	**P**	**08 57 07.0**	**+4.9**
KIV				*e*		08 58 19.8	
KIV				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.9						
MALT	**Malatya**	**54.25**	**299**	*e*P	**P**	**08 57 33.3**	**+3.7**
MALT				pmax	pmax		
	comp=Z,13nm,0.3s,mb5.3						
MALT	**Malatya**	**54.25**	**299**	*e*P	**P**	**08 57 33.3**	**+3.7**
	comp=Z,13nm,0.3s,mb5.3						
OBN	**Obninsk**	**54.62**	**320**	⇑	*e*P	**P**	**08 57 32.6**	**+0.3**
OBN				*e*		08 58 34.0	
OBN				*e*S	**S**	**09 05 11.9**	**+0.5**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,22.0s,MS3.8						
TMCR	**Tamitsa**	**54.86**	**331**	*e*P	**P**	**08 57 32.7**	**-1.3**
TMCR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
BILL	**Bilibino**	**55.18**	**24**	*i* P	**P**	**08 57 35.1**	**-1.2**
BILL				*e*S	**S**	**09 05 12.6**	**-6.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.0						
WRAB	**Tennant Creek**	**55.98**	**144**	*e*P	**P**	**08 57 42.2**	**+0.1**
WRAB				*e*'PP	pP	08 57 48.6	+1.2
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
WRAB	**Tennant Creek**	**55.98**	**144**	*e*P	**P**	**08 57 42.2**	**+0.1**
	comp=Z,12nm,0.7s,mb5.0						
WRAB				*e*pP	pP	08 57 48.6	+1.2
WRA	**Warramunga Arr**	**55.98**	**144**	P	**P**	**08 57 42.8**	**+0.7**
	comp=Z,9.1nm,0.7s,mb4.9,baz=331,slow=7.9,SNR=51						
WRA	**Warramunga Arr**	**55.98**	**144**	P	**P**	**08 57 42.8**	**+0.7**
WRA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WB2	**Warramunga Arr**	**55.99**	**144**	⇓	*i*P	**P**	**08 57 42.8**	**+0.6**
LVZ	**Lovozero**	**56.85**	**335**	*i* P	**P**	**08 57 48.2**	**-0.1**
LVZ				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
APA	**Apatity**	**57.27**	**335**	⇓	*i*P	**P**	**08 57 50.6**	**-0.7**
APA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
BRTR	**Keskin Array B**	**57.70**	**302**	P	**P**	**08 57 54.5**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.9,baz=116,slow=5.6,SNR=5.1						
BRTR				pP	pP	08 57 58.6	-1.0
	comp=Z,1.3nm,0.8s,baz=115,slow=8.3,SNR=4.8						
BRTR	**Keskin Array B**	**57.70**	**302**	P	**P**	**08 57 54.6**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRTR				pmax	pmax		
	comp=N,1.0nm,0.8s						
JOF	**Joensuu**	**57.71**	**329**	*e*p	**P**	**08 57 54.2**	**-0.1**
	comp=N,13nm,0.6s,mb5.2						
JOF	**Joensuu**	**57.71**	**329**	*e*P	**P**	**08 57 54.2**	**-0.1**
JOF				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
AS31	**Alice Springs**	**58.85**	**146**	*e*P	**P**	**08 58 03.5**	**+1.1**
ASPA	**Alice Springs**	**58.85**	**146**	*e*P	**P**	**08 58 03.5**	**+1.1**
ASAR	**Alice Springs**	**58.86**	**146**	P	**P**	**08 58 03.5**	**+1.1**
	comp=Z,3.7nm,0.7s,mb4.6,baz=329,slow=6.6,SNR=42						
ASAR				pP	pP	08 58 08.2	+0.5
	comp=Z,3.7nm,0.7s,baz=327,slow=6.6,SNR=35						
ASAR	**Alice Springs**	**58.86**	**146**	P	**P**	**08 58 03.5**	**+1.1**
ASAR				pmax	pmax		
	comp=N,4.0nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	**Malin Array Be**	**59.23**	**315**	P	**P**	**08 58 04.7**	**-0.2**
	comp=Z,4.8nm,0.5s,mb4.8,baz=72,slow=7.1,SNR=17						
AKASG				pP	pP	08 58 09.3	-1.0
	comp=Z,4.9nm,0.5s,baz=70,slow=6.8,SNR=20						
AKASG	**Malin Array Be**	**59.23**	**315**	P	**P**	**08 58 04.7**	**-0.2**
AKASG				pmax	pmax		
	comp=N,5.0nm,0.5s						
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KEV	**Kevo**	**59.81**	**337**	*e*p	**P**	**08 58 08.3**	**-0.7**
	comp=Z,7.3nm,0.7s,mb4.8						
KEV	**Kevo**	**59.81**	**337**	*e*P	**P**	**08 58 08.3**	**-0.7**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
VSU	**Vasula**	**59.99**	**324**	*i* P	**P**	**08 58 10.3**	**+0.1**
FIA1	**IFINESS Array S**	**60.16**	**327**	*e*P	**P**	**08 58 11.2**	**-0.2**
FINES	**FINESS Array B**	**60.16**	**327**	P	**P**	**08 58 11.2**	**-0.2**
	comp=Z,3.7nm,0.7s,mb4.5,baz=95,slow=8.2,SNR=24						
FINES				pP	pP	08 58 15.5	-1.2
	comp=Z,3.7nm,0.7s,baz=94,slow=7.5,SNR=15						
FINES	**FINESS Array B**	**60.16**	**327**	P	**P**	**08 58 11.2**	**-0.2**
FINES				pmax	pmax		
	comp=N,4.0nm,0.7s						
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ARCES	**ARCESS Array B**	**60.33**	**337**	P	**P**	**08 58 12.1**	**-0.4**
	comp=Z,3.0nm,0.6s,mb4.5,baz=87,slow=7.6,SNR=18						
ARCES				pP	pP	08 58 16.8	-1.1
	comp=Z,3.4nm,0.7s,baz=83,slow=7.7,SNR=12						
ARCES	**ARCESS Array B**	**60.33**	**337**	P	**P**	**08 58 12.1**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES				pmax	pmax		
	comp=N,3.0nm,0.7s						
ARCES	**ARCESS Array B**	**60.33**	**337**	P	**P**	**08 58 12.1**	**-0.4**
ARCES				pP	pP	08 58 16.8	-1.1
ARE0	**ARCESS Array S**	**60.33**	**337**	*e*P	**P**	**08 58 12.7**	**+0.2**
VRI	**Vrincioaia**	**61.60**	**310**	⇓	*i*P	**P**	**08 58 23.0**	**+1.9**
VRI	**Vrincioaia**	**61.60**	**310**	⇓	P	**P**	**08 58 23.0**	**+1.8**
PLOR	**Plostina**	**61.65**	**310**	⇑	*i*P	**P**	**08 58 23.7**	**+2.2**
MLR	**Muntele Rosu**	**62.21**	**309**	⇑	*i*P	**P**	**08 58 27.5**	**+2.3**
MLR	**Muntele Rosu**	**62.21**	**309**	⇑	P	**P**	**08 58 27.6**	**+2.3**
BURAR	**Bucovina Array**	**62.29**	**312**	⇑	*i*P	**P**	**08 58 26.6**	**+0.8**
BURAR	**Bucovina Array**	**62.29**	**312**	⇑	P	**P**	**08 58 26.6**	**+0.8**
KOLS	**Kolonicke sedl**	**63.95**	**314**	*e*sP	pP	08 58 42.1	-0.2
CRVS	**Cervenica-Dubn**	**64.48**	**314**	*e*sP	pP	08 58 46.7	+1.0
STHS	**Stebnicka Huta**	**64.51**	**314**	*e*P	**P**	**08 58 41.6**	**+1.1**
STHS				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.2						
STHS	**Stebnicka Huta**	**64.51**	**314**	*e*P	**P**	**08 58 41.6**	**+1.1**
	comp=Z,3.9nm,1.7s,mb4.2						
VTS	**Vitosha**	**64.78**	**307**	⇓	*i*P	**P**

comp=Z,1.0nm,0.6s
GERES pmax pmax
comp=N,2.0nm,0.7s
STKA Stephens Creek 69.45 145 P **P 08 59 12.6 +0.7**
comp=N,1.9nm,0.8s,mb4.1,baz=310,slow=5.8,SNR=4.6
STKA Stephens Creek 69.45 145 P **P 08 59 12.6 +0.7**
GRA1 Grafenberg Arr 70.70 317 *e*P **P 08 59 25.3 +5.7**
comp=N,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 70.70 317 *e*P **P 08 59 25.3 +5.7**
comp=Z,5.0nm,0.9s,mb4.4
GRF pmax pmax
GRF Grafenberg Arr 70.70 317 *e*P **P 08 59 25.3 +5.7**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
COLA College 73.42 25 *i* P **P 08 59 35.1 -0.8**
COLA College 73.42 25 *e*P **P 08 59 35.3 -0.6**
comp=Z,5.4nm,0.8s,mb4.5
CDF Champ du Feu 73.59 316 *e*P **P 08 59 35.7 -1.1**
HINF Hinteralfeld 74.08 316 *e*P **P 08 59 38.9 -0.8**
PMR Palmer 74.50 28 *e*P **P 08 59 40.8 -1.4**
PMR pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
PMR Palmer 74.50 28 *e*P **P 08 59 40.8 -1.3**
comp=Z,6.5nm,0.7s,mb4.7
SBF Sospel 75.26 312 *e*P **P 08 59 46.1 -0.5**
comp=Z,52nm,0.9s,mb5.2
SBF Sospel 75.26 312 *e*P **P 08 59 46.1 -0.5**
SBF pmax pmax
comp=Z,26nm,0.9s,mb5.2
SBF Sospel 75.26 312 *e*P **P 08 59 46.1 -0.5**
comp=Z,26nm,0.9s,mb5.2
MBDF Montbardon 75.35 313 *e*P **P 08 59 46.5 -0.6**
ORIF Oris-en-Rattie 75.86 313 *e*P **P 08 59 49.1 -0.9**
LOR Lormes 76.15 316 *e*P **P 08 59 50.6 -1.1**
comp=Z,7.3nm,0.8s,mb4.4
LOR Lormes 76.15 316 *e*P **P 08 59 50.6 -1.1**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LOR Lormes 76.15 316 *e*P **P 08 59 50.6 -1.1**
comp=Z,3.7nm,0.8s,mb4.4
INK Inuvik 76.19 19 *e*P **P 08 59 50.9 -1.0**
INK pmax pmax
comp=Z,4.0nm,1.0s
INK Inuvik 76.19 19 *e*P **P 08 59 50.9 -1.0**
comp=Z,4.3nm,1.0s,mb4.3
SMF Signal de Mont 76.43 316 *e*P **P 08 59 53.7 +0.4**
SSF Saint Saulge 76.46 316 *e*P **P 08 59 52.9 -0.5**
comp=Z,11nm,0.8s,mb4.5
SSF Saint Saulge 76.46 316 *e*P **P 08 59 52.9 -0.5**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SSF Saint Saulge 76.46 316 *e*P **P 08 59 52.9 -0.5**
comp=Z,5.3nm,0.8s,mb4.5
AVF Avril sur Loir 76.67 316 *e*P **P 08 59 54.1 -0.5**
comp=Z,12nm,0.9s,mb4.5
AVF Avril sur Loir 76.67 316 *e*P **P 08 59 54.1 -0.5**
AVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
AVF Avril sur Loir 76.67 316 *e*P **P 08 59 54.1 -0.5**
comp=Z,5.8nm,0.9s,mb4.5
DAWY Dawson 76.95 24 *e*P **P 08 59 55.7 -0.5**
SUMG Summit 77.01 349 *e*P **P 08 59 56.4 -0.2**
comp=Z,10nm,0.9s,mb4.8
SUMG *e*pP pP 09 00 02.2 +0.1
TCF Toulx Ste Croi 77.60 316 *e*P **P 08 59 58.7 -1.1**
comp=Z,14nm,0.9s,mb4.6
TCF Toulx Ste Croi 77.60 316 *e*P **P 08 59 58.7 -1.1**
TCF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
TCF Toulx Ste Croi 77.60 316 *e*P **P 08 59 58.7 -1.1**
comp=Z,7.2nm,0.9s,mb4.6
CAF Calviac 78.30 315 *e*P **P 09 00 02.9 -0.8**
YKA Yellowknife Ar 85.73 16 P **P 09 00 41.9 -0.9**
comp=Z,1.9nm,0.8s,mb4.3,baz=334,slow=4.3,SNR=4.3
YKA Yellowknife Ar 85.73 16 P **P 09 00 41.9 -0.9**
YKA pmax pmax
comp=Z,2.0nm,0.8s
JCT Junction City 118.70 22 *e*PKIKP PKPdf 09 06 52.3 +0.5
SDV Santo Domingo 143.54 349 PKhKP 09 07 34.0
comp=Z,2.0nm,0.5s,baz=0.0,slow=7.1,SNR=3.2
ROSC El Rosal 147.99 355 PKPbc PKPbc 09 07 51.1 +2.0
comp=Z,7.0nm,0.6s,baz=128,slow=6.0,SNR=8.4

*ISCJB **26** 09:09:52.8±1.9, 349S±02×1793W±03, h274km±17km, mb2.9/2, Error ellipse: s-maj=50.2km s-min=22.6km az=58.5.*
*IDC **26** 09:09:56.9±8.3, 34.33S×179.58E, h206km±86km, mb3.0/2, mb1 3.3/3, mb1mx3.1/10, mbtmp3.6/3, Error ellipse: s-maj=101.6km s-min=45.3km az=1.0*
ISC 26 09:09:54.6±1.8, **350S**±02×**1793W**±03, **h273**km±17km, **n17, σ0s89/20, mb2.9/2, East of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.18**	**217**	*e*PN	**Pn**	**09 10 50.7**	**+0.3**
PUZ	**Puketiti**	**3.62**	**212**	*e*PN	**Pn**	**09 10 55.3**	**+0.3**
PUZ				SN	**S**	**09 11 44.7**	**+1.5**
MWZ	**Matawai**	**4.17**	**217**	*e*PN	**Pn**	**09 11 01.4**	**+0.1**
MWZ				SN	**S**	**09 11 54.7**	**+0.1**
URZ	**Urewera**	**4.33**	**221**	P	**Pn**	**09 11 04.1**	**+1.0**
	4.6nm,0.3s,baz=278,slow=2.7,SNR=72						
URZ				S	**S**	**09 11 56.6**	**-1.2**
	13nm,0.3s,baz=347,slow=4.0,SNR=23						
URZ	**Urewera**	**4.33**	**221**	*e*PN	**Pn**	**09 11 01.6**	**-1.5**
KNZ	**Kokohu**	**4.66**	**211**	*e*PN	**Pn**	**09 11 07.8**	**+0.8**
BKZ	**Black Stump Fm**	**5.32**	**218**	*e*PN	**Pn**	**09 11 14.3**	**-0.6**
PXZ	**Pawanui**	**5.85**	**210**	*e*PN	**Pn**	**09 11 21.1**	**-0.2**
PXZ				SN	**S**	**09 12 30.4**	**-0.5**
TSZ	**Takapari Road**	**6.27**	**216**	*e*PN	**Pn**	**09 11 26.1**	**-0.4**
BFZ	**Birch Farm**	**6.65**	**211**	SN	**S**	**09 12 50.3**	**+1.5**
MRZ	**Mangatainoka R**	**6.93**	**214**	*e*PN	**Pn**	**09 11 33.7**	**-0.9**
KIW	**Kapiti Island**	**7.40**	**217**	*e*PN	**Pn**	**09 11 40.3**	**-0.1**
THZ	**Tophouse**	**9.09**	**220**	*e*PN	**Pn**	**09 11 59.6**	**-1.9**
KHZ	**Kahutara**	**9.25**	**215**	*e*PN	**Pn**	**09 12 03.6**	**+0.1**
ASAR	**Alice Springs**	**42.00**	**273**	P	**P**	**09 17 20.8**	**+1.4**
	0.5nm,0.5s,mb3.0,baz=111,slow=7.9,SNR=14						
WRA	**Warramunga Arr**	**43.41**	**278**	P	**P**	**09 17 30.5**	**-0.1**
	0.5nm,0.6s,mb2.9,baz=120,slow=7.2,SNR=13						
FINES	**FINESS Array B**	**149.04**	**336**	PKPbc	PKPbc	09 29 16.6	+6.3
	0.4nm,0.5s,baz=29,slow=4.4,SNR=5.2						

*ISCJB **26** 09:26:37.4±0.7, 1255N±006×1448E±03, h33km, mb4.0/5, Error ellipse: s-maj=42.2km s-min=8.4km az=10.8*
*IDC **26** 09:26:39.8±5.0, 1272N×1449.3E, h53km±99km, mb3.8/4, mb1 3.9/4, mb1mx3.4/19, mbtmp4.0/4, Error ellipse: s-maj=89.1km s-min=51.4km az=167.0*
ISC 26 09:26:39.2±0.8, **1263N**±006×**1449E**±03, **h35**km, **n9, σ0s45/10, mb4.0/5, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.96**	**0**	P	**Pn**	**09 26 56.2**	**+0.1**
	624nm,0.3s,baz=199,slow=0.6,SNR=666						
GUMO				S	**Sn**	**09 27 08.4**	**-0.1**
	863nm,0.3s,baz=149,slow=21,SNR=73						
WB2	**Warramunga Arr**	**33.98**	**198**	*e*P	**P**	**09 33 19.5**	**+0.2**
WRA	**Warramunga Arr**	**33.98**	**198**	P	**P**	**09 33 19.7**	**+0.4**
	1.5nm,0.7s,mb4.0,baz=24,slow=9.0,SNR=28						
FITZ	**Fitzroy Crossi**	**35.95**	**212**	*e*P	**P**	**09 33 35.7**	**-0.6**
	3.8nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**37.63**	**197**	P	**P**	**09 33 50.6**	**+0.1**
	0.6nm,0.5s,mb3.6,baz=23,slow=12,SNR=19						
ASPA	**Alice Springs**	**37.63**	**197**	*e*P	**P**	**09 33 51.3**	**+0.7**
DZM	**Mont Dzumac**	**40.46**	**148**	P	**P**	**09 34 14.3**	**+0.1**
	4.4nm,0.8s,mb4.2,baz=319,slow=9.3,SNR=9.2						
STKA	**Stephens Creek**	**44.36**	**184**	*e*P	**P**	**09 34 45.1**	**-0.9**
	1.2nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**44.36**	**184**	P	**P**	**09 34 45.0**	**-0.9**
	1.3nm,0.4s,mb4.0,baz=15,slow=8.9,SNR=11						

GUC 26 10:25:29.1±0.6, **2735S**×**7091W, h63**km±3km, **MD3.0, ML3.5, 3C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDCH	**Caldera**	**0.28**	**14**	⇑*i*P	Pn	10 25 39.7	+0.3
CDCH				*i* S	Sn	10 25 47.2	+0.4
CPCH	**Copiapo**	**0.49**	**91**	⇑*i*P	Pn	10 25 41.7	+0.5
CPCH				*i* S	Sn	10 25 50.7	+0.7
CPCH				AML	AML	10 25 51.4	
	comp=E,15μm,0.1s						
VACH	**Vallenar**	**1.23**	**174**	⇑*i*P	Pn	10 25 50.7	+0.5
VACH				*i* S	Sn	10 26 06.7	+0.8
VACH				AML	AML	10 26 08.6	
	comp=E,1μm,0.1s						
CPN1	**Cerro Paranal**	**2.75**	**10**	*i* P	Pn	10 26 12.1	+1.3
CPN1				*i* S	Sn	10 26 44.5	+1.7
CPN1				AML	AML	10 26 45.0	
	comp=E,51nm,0.1s						

PRE 26 10:40:48.7±0.6, **2199S**×**3324E, h5**km, **ML5.0, Mozambique**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**7.63**	**245**	*e*P	Pn	10 42 41.2	+0.7
LBTB				*e*S	Sn	10 44 04.1	-3.3
LBTB				AML	AML	10 45 08.7	
	comp=Z,119nm,0.6s						
KSD	**Kokstad**	**9.18**	**201**	*e*P	Pn	10 43 02.8	+1.1
KSD				*e*S	Sn	10 44 40.5	-4.9
KSD				AML	AML	10 46 08.5	
	comp=Z,55nm,0.7s						
BOSA	**Boshof**	**9.78**	**226**	*e*P	Pn	10 43 11.6	+1.6
BOSA				*e*S	Sn	10 44 55.7	-4.4
BOSA				AML	AML	10 46 17.7	
	comp=Z,53nm,0.7s						
UPI	**Upington**	**12.57**	**237**	*e*P	Pn	10 43 50.0	+1.9
UPI				*e*S	Sn	10 46 02.0	-6.4
UPI				AML	AML	10 46 48.5	
	comp=Z,14nm,0.6s						

WEL 26 11:10:26.9±0.1, **3935S**×**17552E, h12**km, **ML3.1**/**26, 7C-5D, Error ellipse: s-maj=1.1km s-min=0.9km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRVZ	**Turoa**	**0.06**	**26**	⇓PG	Pg	11 10 29.8	+0.6
TRVZ				SG	Sg	11 10 31.9	+1.0
WNVZ	**Wahianoa**	**0.07**	**71**	⇓PG	Pg	11 10 29.7	+0.4
WNVZ				SG	Sg	11 10 32.2	+1.1
DRZ	**Dome Shelter**	**0.08**	**27**	⇑PG	Pg	11 10 30.0	+0.6
FWVZ	**Far West T-bar**	**0.10**	**16**	⇑PG	Pg	11 10 30.1	+0.4
TUVZ	**Tukino**	**0.13**	**53**	⇓PG	Pg	11 10 30.6	+0.5
PKVZ	**Pokaka**	**0.14**	**294**	⇑PG	Pg	11 10 30.3	0.0
WPVZ	**Whakapapa**	**0.15**	**9**	⇓PG	Pg	11 10 30.7	+0.4
NGZ	**Ngauruhoe**	**0.18**	**21**	PG	Pg	11 10 31.2	+0.2
MOVZ	**Moawhango**	**0.19**	**108**	⇑PG	Pg	11 10 30.8	-0.3
OTVZ	**Oturere**	**0.22**	**32**	⇓PG	Pg	11 10 31.9	+0.3
WTVZ	**West Tongariro**	**0.24**	**14**	⇑PG	Pg	11 10 32.0	+0.1
KRVZ	**Karewarewa**	**0.27**	**21**	⇑PG	Pg	11 10 32.5	0.0
TWVZ	**Taurewa**	**0.28**	**347**	⇑PG	Pg	11 10 32.5	-0.2
KATZ	**Kakaramea**	**0.40**	**20**	P*	Pg	11 10 34.6	-0.2
RATZ	**Rangitukua**	**0.52**	**22**	P*	Pb	11 10 37.0	-0.9
WAZ	**Wanganui**	**0.58**	**225**	P*	Pb	11 10 37.4	-1.5
WATZ	**Wairara**	**0.66**	**15**	P*	Pb	11 10 39.6	-0.7
BKZ	**Black Stump Fm**	**0.78**	**77**	P*	Pb	11 10 41.4	-0.9
TSZ	**Takapari Road**	**0.79**	**154**	P*	Pb	11 10 41.3	-1.2
RAEZ	**Rainy Point**	**0.87**	**274**	P*	Pb	11 10 43.2	-0.7
HIZ	**Hauiti**	**0.98**	**328**	P*	Pb	11 10 44.7	-1.1
NEZ	**North Egmont**	**1.10**	**274**	P*	Pb	11 10 47.3	-0.6
PKE	**Pukeiti**	**1.20**	**277**	P*	Pb	11 10 48.9	-0.5
NRZ	**Ngariki Road**	**1.23**	**270**	P*	Pb	11 10 49.1	-0.9
PXZ	**Pawanui**	**1.24**	**124**	P*	Pb	11 10 50.3	+0.1
NWEZ	**Newall Road**	**1.28**	**273**	PN	Pn	11 10 50.4	-0.1
MRZ	**Mangatainoka R**	**1.31**	**178**	PN	Pn	11 10 50.4	-0.6
BFZ	**Birch Farm**	**1.44**	**157**	PN	Pn	11 10 53.1	+0.3
TIWZ	**Tintock**	**1.45**	**169**	PN	Pn	11 10 52.9	0.0
KIW	**Kapiti Island**	**1.58**	**197**	PN	Pn	11 10 54.0	-0.7
TOZ	**Tahuroa Road**	**1.62**	**360**	P*	Pb	11 10 55.0	-1.6
CAW	**Cannon Point**	**1.79**	**191**	PN	Pn	11 10 57.7	+0.1
MTW	**Mount Morrison**	**1.81**	**180**	*e*PN	Pn	11 10 57.4	-0.4
MWZ	**Matawai**	**1.87**	**58**	*e*P*	Pb	11 10 59.4	-1.5
DUWZ	**D'Urville Isla**	**1.90**	**220**	*e*PN	Pn	11 10 59.4	+0.4
MRW	**Makara Radio**	**1.98**	**198**	*e*PN	Pn	11 10 60.0	-0.2
TCW	**Tory Channel**	**2.09**	**207**	*e*PN	Pn	11 11 01.1	-0.6

*CSEM **26** 11:19:47.4±0.6, 3844N×2838W, h5km±5km, ML1.7, Error ellipse: s-maj=2.7km s-min=1.3km az=14.0, After PDA*
*PDA **26** 11:19:47.4±0.6, 3844N×2838W, h5km±5km, MD2.7, ML1.7, Error ellipse: s-maj=2.7km s-min=1.3km az=14.0*
SVSA 26 11:19:47.4±0.6, **3844N×2838W, h5**km±5km, **MD2.7, ML1.7, Error ellipse: s-maj=2.7km s-min=1.3km az=14.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PICO	**Pico**	**0.07**	**326**	*e*P	Pg	11 19 48.9	-0.1
PICO				*e*S	Sg	11 19 50.4	+0.3
PID	**Ribeirinha**	**0.20**	**90**	*e*P	Pg	11 19 51.3	0.0
PID				*e*S	Sg	11 19 54.2	+0.2
HOR	**Horta**	**0.22**	**293**	*e*S	Sg	11 19 54.4	-0.1
CALA	**Caldeira**	**0.29**	**299**	*i* P	Pg	11 19 52.9	-0.2
CALA				*e*S	Sg	11 19 57.2	+0.3
CALA	**Caldeira**	**0.29**	**299**	*e*S	Sg	11 19 57.2	+0.3
PMAN	**Manadas**	**0.29**	**50**	*e*P	Pg	11 19 52.8	-0.3
PMAN				*e*S	Sg	11 19 57.5	+0.5
PMAN							
	47nm,0.1s						
PMAN	**Manadas**	**0.29**	**50**	*e*P	Pg	11 19 52.8	-0.3
PMAN				*e*S	Sg	11 19 57.5	+0.5
ROSA	**Rosais**	**0.30**	**21**	*i* P	Pg	11 19 52.8	-0.3
ROSA				*e*S	Sg	11 19 56.9	-0.1
ROSA	**Rosais**	**0.30**	**21**	*e*S	Sg	11 19 56.9	-0.1
PCED	**Cedros**	**0.32**	**306**	*e*P	Pg	11 19 53.0	-0.5
PCED				*e*S	Sg	11 19 57.6	-0.1
PCED							
	22nm,0.1s						
PCED	**Cedros**	**0.32**	**306**	*e*P	Pg	11 19 53.0	-0.5
PCED				*e*S	Sg	11 19 57.6	-0.1

PRE 26 11:30:11.3±0.3, **2288S**×**3291E, h5**km, **ML4.2, Mozambique**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**7.02**	**251**	*e*P	Pn	11 31 55.7	+1.0
LBTB				*e*S	Sn	11 33 12.1	-2.8
LBTB				AML	AML	11 34 17.8	
	comp=Z,20nm,0.6s						
KSD	**Kokstad**	**8.24**	**202**	*e*P	Pn	11 32 12.6	+1.1
KSD				*e*S	Sn	11 33 40.9	-4.1
KSD				AML	AML	11 35 26.8	
	comp=Z,17nm,0.7s						
BOSA	**Boshof**	**8.95**	**229**	*e*P	Pn	11 32 22.4	+1.2
BOSA				*e*S	Sn	11 33 58.4	-4.1
BOSA				AML	AML	11 35 40.1	
	comp=Z,14nm,0.6s						
UPI	**Upington**	**11.85**	**240**	*e*P	Pn	11 33 02.5	+1.7
UPI				*e*S	Sn	11 35 07.6	-5.9
UPI				AML	AML	11 35 34.0	
	comp=Z,5.3nm,0.6s						

*FUNV **26** 11:55:11.5, 1074N×6181W, h49km, MW3.0*
*ISCJB **26** 11:55:12.4±0.8, 1066N±006×6205W±004, h62km±8km, Error ellipse: s-maj=10.1km s-min=5.8km az=6.6*
*NEIC **26** 11:55:14.8, 1072N×6195W, h46km, MD3.1(TRN), After TRN.*
*TRN **26** 11:55:14.8, 1072N×6195W, h47km, MD3.1*
ISC 26 11:55:13.5±0.7, **1067N**±006×**6204W**±003, **h54**km±8km, **n16, σ0s84/28, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.18**	**262**	*e*P	**Pn**	**11 55 21.9**	**-0.2**
GUIV				*e*S	**Sn**	**11 55 28.5**	**+0.2**
TCE	**Chacachacare**	**0.29**	**85**	⇑*i*P	**Pn**	**11 55 22.8**	**-0.1**
TCE				*e*S	**Sn**	**11 55 29.0**	**-0.6**
TRN	**Trinidad (W)**	**0.63**	**92**	*e*P	**Pn**	**11 55 26.1**	**-0.5**
TRN				*e*S	**Sn**	**11 55 34.7**	**-1.4**
TPP	**Pointe-a-Pierr**	**0.68**	**121**	*e*P	**Pn**	**11 55 27.3**	**+0.1**
TPP				*e*S	**Sn**	**11 55 37.8**	**+0.6**
TBH	**Brigand Hill**	**0.98**	**101**	*e*P	**Pn**	**11 55 33.9**	**+2.8**
TBH				*e*S	**Sn**	**11 55 48.2**	**+4.2**
GUNV	**Guanoco**	**1.02**	**240**	*e*P	**Pn**	**11 55 32.6**	**+1.0**
GUNV				*e*S	**Sn**	**11 55 48.5**	**+3.5**
CRUV	**Carupano**	**1.17**	**270**	*e*P	**Pn**	**11 55 33.7**	**0.0**
CRUV				*e*S	**Sn**	**11 55 50.2**	**+1.6**
ITEV	**Isla Los Testi**	**1.27**	**303**	*e*P	**Pn**	**11 55 34.5**	**-0.4**
ITEV				*e*S	**Sn**	**11 55 50.8**	**0.0**
TPR	**Prospect**	**1.34**	**68**	*e*P	**Pn**	**11 55 36.6**	**+0.6**
ORIV	**Oritupano**	**2.08**	**220**	*e*P	**Pn**	**11 55 46.0**	**0.0**
ORIV				*e*S	**Sn**	**11 56 11.1**	**+0.3**
PCRV	**Puerto La Cruz**	**2.60**	**259**	*e*P	**Pn**	**11 55 53.9**	**+0.9**
PCRV				*e*S	**Sn**	**11 56 23.6**	**+0.3**
PRGV	**PARIAGUAN**	**3.19**	**234**	*e*P	**Pn**	**11 56 01.1**	**-0.1**
PRGV				*e*S	**Sn**	**11 56 37.4**	**-0.6**
BIRV	**Birongo**	**4.16**	**268**	*e*S	**Sn**	**11 57 01.3**	**-0.4**
MERV	**Las Mercedes**	**4.42**	**252**	*e*P	**Pn**	**11 56 17.4**	**-0.7**
MERV				*e*S	**Sn**	**11 57 07.0**	**-1.2**
CAOV	**Caicara del Or**	**5.38**	**232**	*e*P	**Pn**	**11 56 30.2**	**-0.9**
BAUV	**El Baul**	**6.16**	**254**	*e*P	**Pn**	**11 56 41.1**	**-0.7**

*CSEM **26** 12:27:02.7, 4259N×4668E, h36km, mb4.0, After OBN*
MOS 26 12:27:02.7±3.4, **4259N×4668E, h36**km, **mb4.0**/1, **Error ellipse: s-maj=16.1km s-min=10.7km az=32.0, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XNZR	**Khunzakh**	**0.05**	**161**	*i* P	Pn	12 27 11.0	+2.3
XNZR				*i* S	Sn	12 27 16.5	+3.8
XNZR				pmax	pmax		
	comp=Z,44nm,0.2s						
XNZR	**Khunzakh**	**0.05**	**161**	*i* P	Pn	12 27 11.0	+2.3
	comp=Z,44nm,0.2s						
XNZR				*i* S	Sn	12 27 16.5	+3.8
UNCR	**Uncukul**	**0.15**	**33**	*i* P	Pn	12 27 10.2	+1.0
UNCR				*e*S	Sn	12 27 16.2	+2.6
UNCR				pmax	pmax		
	comp=Z,43nm,0.2s						
UNCR	**Uncukul**	**0.15**	**33**	*i* P	Pn	12 27 10.2	+1.0
	comp=Z,43nm,0.2s						
UNCR				*e*S	Sn	12 27 16.2	+2.6
KRNR	**Karanay**	**0.29**	**35**	*e*P	Pn	12 27 12.0	+1.4
KRNR				*i* S	Sn	12 27 19.8	+3.9
BTLR	**Botlikh**	**0.35**	**283**	*e*P	Pn	12 27 03.0	-8.3
DBC	**Dubki**	**0.44**	**14**	*e*P	Pn	12 27 12.5	-0.1
DBC				*e*S	Sn	12 27 20.5	+1.1
SNJR	**Sundja**	**1.46**	**290**	*e*P	Pn	12 27 27.8	+1.3
SNJR				*e*S	Sn	12 27 46.1	+1.7
VLKR	**Vladikavkaz**	**1.54**	**288**	*e*P	Pn	12 27 29.0	+1.3
VLKR				*i* S	Sn	12 27 48.2	+1.7
LACR	**Lac**	**1.77**	**278**	*i* P	Pn	12 27 31.9	+1.0
LACR				*i* S	Sn	12 27 53.2	+1.0
TRKR	**Terskaya**	**1.82**	**309**	*i* P	Pn	12 27 35.2	+3.7
TRKR				*i* S	Sn	12 27 58.8	+5.4
ARNR	**Ardon**	**1.87**	**290**	*e*P	Pn	12 27 34.3	+2.2
ARNR				*e*S	Sn	12 27 57.1	+2.7
KMSR	**Komsomolskaya**	**1.92**	**295**	*i* P	Pn	12 27 35.3	+2.4
KMSR				*i* S	Sn	12 27 59.0	+3.2
KORR	**Kora**	**1.99**	**285**	*i* P	Pn	12 27 35.5	+1.7
KORR				*i* S	Sn	12 27 59.4	+2.0
ZEI	**Tsey**	**2.06**	**276**	*e*P	Pn	12 27 35.9	+1.1
ZEI				*e*S	Sn	12 28 00.0	+0.7

*LDG **26** 12:56:29.5±0.1, 4310N×064W, h2km, Md1.7/3, Ml1.7/1, Error ellipse: s-maj=8.5km s-min=1.2km az=177.0*
*STR **26** 12:56:29.4±0.3, 4311N×064W, h2km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
MDD 26 12:56:29.9±0.3, **4310N×064W, h0**km, **mbLg0.8**/5, **Error ellipse: s-maj=3.7km s-min=1.6km az=15.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATE	**Arette**	**0.05**	**256**	Pg	Pg	12 56 30.6	-0.2
ATE				Sg	Sg	12 56 31.6	+0.1
ATE	**Arette**	**0.05**	**256**	Pg	Pg	12 56 30.6	-0.2
REYF	**Montagne du Re**	**0.18**	**99**	Pg	Pg	12 56 33.1	-0.2
REYF				Sg	Sg	12 56 36.0	+0.3
REYF	**Montagne du Re**	**0.18**	**99**	Pg	Pg	12 56 33.2	-0.2
REYF				Lg		12 56 36.1	
ORDF	**Ordiarp**	**0.25**	**298**	Pg	Pg	12 56 34.1	-0.5
ORDF				Lg		12 56 38.1	
LARF	**Larrau**	**0.27**	**257**	Pg	Pg	12 56 34.6	-0.4
LARF				Sg	Sg	12 56 38.8	+0.4
LARF	**Larrau**	**0.27**	**257**	Pg	Pg	12 56 34.6	-0.4
LARF				Lg		12 56 38.8	
FDAF	**Les Forges d'A**	**0.28**	**170**	Pg	Pg	12 56 35.1	-0.2
FDAF				Lg		12 56 39.2	
SJPF	**Ste Jean**	**0.43**	**272**	*e*Pg	Pg	12 56 37.6	-0.6
SJPF				*e*Sg	Sg	12 56 43.5	-0.3
	3.3nm,0.2s						
SJPF	**Ste Jean**	**0.43**	**272**	Pg	Pg	12 56 37.6	-0.6
SJPF				Lg		12 56 43.5	
	1.6nm,0.2s						
EALK	**Alkurruntz**	**0.65**	**281**	Pg	Pg	12 56 42.1	-0.2
	0.3nm,0.1s,SNR=7.9						
EALK				Lg		12 56 50.6	
	2.0nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**0.70**	**125**	Pg	Pg	12 56 42.8	-0.6
	1.3nm,0.4s,SNR=10						
EBIE				Lg		12 56 52.0	
	1.9nm,0.4s,SNR=12						
EPF	**Esparros**	**0.72**	**95**	*e*Pg	Pg	12 56 43.4	-0.3
EPF				*e*Sg	Sg	12 56 52.2	-0.8
	3.2nm,0.3s						
EPF	**Esparros**	**0.72**	**95**	Pg	Pg	12 56 43.4	-0.3
EPF				Lg		12 56 52.2	
	1.6nm,0.3s						
MTLF	**Montolieu**	**2.10**	**82**	*e*Pg	Pg	12 57 08.9	-1.2
MTLF				*e*Sg	Sg	12 57 35.7	-1.7
	0.9nm,0.3s						
MTLF	**Montolieu**	**2.10**	**82**	Pg	Pg	12 57 08.9	-1.2
MTLF				Lg		12 57 35.7	
	0.4nm,0.3s						

*PDA **26** 13:11:09.5±0.7, 3865N×2854W, h5km, MD2.8, ML1.5, Error ellipse: s-maj=2.6km s-min=1.4km az=165.0*
*CSEM **26** 13:11:09.5±0.7, 3865N×2854W, h5km, ML1.5, Error ellipse: s-maj=2.6km s-min=1.4km az=165.0, After PDA*
SVSA 26 13:11:09.5±0.7, **3865N×2854W, h5**km, **MD2.8, ML1.5, Error ellipse: s-maj=2.6km s-min=1.4km az=165.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**0.13**	**259

h12km↓3.9km**:pP-P,n85,**σ1**§10/97,mb4.7/37,MS3.6/10,**
1C-1D,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.96**	**116**	*eP*	**Pn**	**13 21 26.5**	**+4.0**
	54nm,0.4s						
KAKA				*eS*	**Sn**	**13 22 53.5**	**-8.6**
FITZ	**Fitzroy Crossi**	**9.30**	**171**	*eP*	**Pn**	**13 21 27.8**	**+0.7**
	31nm,0.4s						
FITZ				*eS*	**Sn**	**13 23 03.8**	**-6.5**
FITZ	**Fitzroy Crossi**	**9.30**	**171**	P	**Pn**	**13 21 28.1**	**+1.1**
	4.6nm,0.3s,baz=8.9,slow=9.6,SNR=197						
FITZ				S	**Sn**	**13 23 01.1**	**-9.2**
	39nm,0.3s,baz=255,slow=16,SNR=14						
FITZ				LR	LR	13 25 54.9	
	comp=Z,182nm,20.2s,baz=12,slow=43						
MBWA	**Marble Bar**	**12.96**	**199**	*e*Pn	**Pn**	**13 22 15.7**	**-1.6**
MBWA				*e*Sn	**Sn**	**13 24 28.9**	**-11**
WRA	**Warramunga Arr**	**14.76**	**139**	P	**Pn**	**13 22 41.8**	**+0.2**
	3.2nm,0.3s,baz=319,slow=13,SNR=119						
WRA				S	**Sn**	**13 25 14.6**	**-9.2**
	4.6nm,0.3s,baz=314,slow=22,SNR=15						
WRA				LR	LR	13 29 24.5	
	comp=Z,163nm,18.4s,baz=305,slow=41						
WRAB	**Tennant Creek**	**14.76**	**139**	*e*P	**Pn**	**13 22 39.9**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,34nm,0.6s						
WRAB	**Tennant Creek**	**14.76**	**139**	*e*Pn	**Pn**	**13 22 39.9**	**-1.7**
	comp=Z,34nm,0.6s						
WRAB				*e*Sn	**Sn**	**13 25 06.4**	**-17**
WB2	**Warramunga Arr**	**14.77**	**139**	*e*P	**Pn**	**13 22 40.7**	**-1.0**
WB2				*e*S	**Sn**	**13 25 12.7**	**-11**
KKM	**Kota Kinabalu**	**16.80**	**331**	*e*Pn	**Pn**	**13 23 13.6**	**+5.7**
KSM	**Kuching**	**17.23**	**306**	*e*Pn	**Pn**	**13 23 17.1**	**+3.9**
CBJI	**Citeko**	**17.36**	**277**	P	**Pn**	**13 23 14.8**	**0.0**
	comp=Z,181nm,0.9s						
AS31	**Alice Springs**	**17.41**	**149**	*e*Pn	**Pn**	**13 23 16.6**	**+1.0**
AS31				*e*Sn	**Sn**	**13 26 15.8**	**-13**
ASPA	**Alice Springs**	**17.41**	**149**	*e*P	**Pn**	**13 23 16.8**	**+1.3**
ASPA				*e*S	**S**	**13 26 18.4**	**-17**
ASAR	**Alice Springs**	**17.42**	**149**	P	**Pn**	**13 23 15.7**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=322,slow=12,SNR=87						
ASAR				S	**S**	**13 26 18.4**	**-17**
	comp=Z,1.7nm,0.3s,baz=323,slow=22,SNR=14						
ASAR				LR	LR	13 30 51.6	
	comp=Z,126nm,21.9s,baz=359,slow=40						
ASAR				ScP	ScP	13 31 23.1	-4.3
	baz=329,slow=2.0,SNR=4.5						
ASAR	**Alice Springs**	**17.42**	**149**	P	**Pn**	**13 23 15.7**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PMG	**Port Moresby**	**22.68**	**93**	P	**P**	**13 24 25.5**	**+12**
	comp=Z,19nm,0.6s,mb4.7,baz=251,slow=4.0,SNR=12						
PMG	**Port Moresby**	**22.68**	**93**	*e*P	**P**	**13 24 25.2**	**+12**
KLBR	**Kellerberrin**	**23.40**	**194**	*e*P	**P**	**13 24 21.0**	**-0.1**
	comp=Z,6.7nm,0.5s,mb4.3						
CTA	**Charters Tower**	**24.07**	**120**	*e*P	**P**	**13 24 30.5**	**+3.3**
	comp=Z,4.0nm,0.6s,mb4.0						
CTA	**Charters Tower**	**24.07**	**120**	P	**P**	**13 24 30.2**	**+2.9**
	comp=Z,5.3nm,0.6s,mb4.2,baz=294,slow=12,SNR=9.2						
CTA	**Charters Tower**	**24.07**	**120**	P	**P**	**13 24 30.2**	**+3.0**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTA	**Charters Tower**	**24.07**	**120**	P	**P**	**13 24 30.2**	**+2.9**
CTAO	**Charters Tower**	**24.07**	**120**	*e*P	**P**	**13 24 29.9**	**+2.7**
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
CTAO	**Charters Tower**	**24.07**	**120**	*e*P	**P**	**13 24 29.9**	**+2.7**
	comp=Z,5.0nm,0.6s,mb4.1						
MUN	**Mundaring**	**24.17**	**197**	*e*P	**P**	**13 24 27.8**	**-0.4**
NWAO	**Narrogin (SRO)**	**24.80**	**194**	P	**P**	**13 24 33.4**	**-0.5**
	comp=Z,3.5nm,0.4s,mb4.3,baz=30,slow=7.6,SNR=14						
NWAO	**Narrogin (SRO)**	**24.80**	**194**	P	**P**	**13 24 33.4**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NWAO	**Narrogin (SRO)**	**24.80**	**194**	*e*P	**P**	**13 24 33.2**	**-0.7**
	comp=Z,29nm,1.2s,mb4.7						
PSI	**Prapat**	**27.72**	**294**	LR	LR	13 38 04.2	
	comp=Z,144nm,18.7s,MS3.6,baz=294,slow=41						
STKA	**Stephens Creek**	**28.04**	**147**	*e*P	**P**	**13 25 04.6**	**+1.5**
	comp=Z,2.1nm,0.7s,mb3.9						
STKA	**Stephens Creek**	**28.04**	**147**	P	**P**	**13 25 04.7**	**+1.6**
	comp=Z,2.1nm,0.7s,mb3.9,baz=314,slow=10,SNR=6.7						
STKA				LR	LR	13 37 45.5	
	comp=Z,51nm,18.1s,MS3.1,baz=18,slow=40						
HNR	**Honiara**	**35.30**	**94**	LR	LR	13 42 11.4	
	comp=Z,41nm,18.4s,MS3.2,baz=180,slow=39						
KMI	**Kunming**	**39.72**	**329**	P	**P**	**13 26 45.0**	**+0.8**
KMI				AP	pP	13 26 49.3	-5.8
KMI				PP	PP	13 28 20.3	+4.5
KMI				S	**S**	**13 32 50.5**	**+5.3**
KMI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.4						
KMI				AMB	AMB		
	comp=Z,46nm,3.2s						
KMI				LR	LR		
	comp=N,77nm,15.2s,MS3.8						
KMI				LR	LR		
	comp=E,67nm,17.0s,MS3.8						
KMI				LR	LR		
	comp=Z,73nm,21.1s,MS3.5						
NJ2	**Nanjing**	**40.99**	**353**	*e*P	**P**	**13 26 54.3**	**-0.5**
NJ2				AP	pP	13 26 58.8	-6.9
NJ2				XP	sP	13 27 01.3	-9.0
NJ2				S	**S**	**13 33 03.0**	**-1.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,200nm,8.6s						
NJ2				LR	LR		
	comp=N,380nm,23.3s,MS4.3						
NJ2				LR	LR		
	comp=E,220nm,18.4s,MS4.3						
NJ2				LR	LR		
	comp=Z,220nm,16.1s,MS4.1						
CD2	**Chengdu**	**44.13**	**334**	*e*P	**P**	**13 27 20.0**	**-0.2**
CD2				AP	pP	13 27 24.5	-6.8
CD2				XP	sP	13 27 27.3	-8.5
CD2				PP	PP	13 29 04.8	+1.3
CD2				S	**S**	**13 33 52.5**	**+2.1**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CD2				LR	LR		
	comp=E,90nm,15.2s						
CD2				LR	LR		
	comp=Z,80nm,12.6s,MS3.8						
MJAR	**Matsushiro Arr**	**47.04**	**15**	P	**P**	**13 27 43.2**	**0.0**
	comp=Z,4.3nm,0.7s,mb4.5,baz=193,slow=8.4,SNR=20						
MJAR	**Matsushiro Arr**	**47.04**	**15**	P	**P**	**13 27 43.2**	**0.0**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAJO	**Matsushiro**	**47.04**	**15**	*e*P	**P**	**13 27 43.5**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
MAJO	**Matsushiro**	**47.04**	**15**	*e*P	**P**	**13 27 43.5**	**+0.2**
	comp=Z,8.5nm,0.9s,mb4.7						
LZH	**Lanzhou**	**48.63**	**338**	*e*P	**P**	**13 27 59.5**	**+3.9**
LZH				AP	pP	13 28 07.0	+0.3
LZH				AMB	AMB		
	comp=Z,25nm,1.2s,mb5.1						
LSA	**Lhasa**	**49.80**	**322**	P	**P**	**13 28 06.0**	**+1.5**
HHC	**Hu-ho-hao-te**	**50.81**	**348**	*e*P	**P**	**13 28 13.5**	**+1.4**
HHC				AP	pP	13 28 18.3	-5.0
HHC				XP	sP	13 28 20.8	-7.0
HHC				PCP	PcP	13 29 30.0	+1.4
HHC				PP	PP	13 30 11.0	+2.5
HHC				SCP	ScP	13 33 24.3	+2.6
HHC				PCS	PcS	13 33 26.0	0.0
HHC				S	**S**	**13 35 29.3**	**+4.0**
HHC				SCS	ScS	13 38 00.8	+1.1
HHC				SS	SS	13 39 01.8	+1.7
HHC				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.9						
HHC				AMB	AMB		
	comp=Z,57nm,4.4s						
HHC				LR	LR		
	comp=N,120nm,19.9s,MS4.0						
HHC				LR	LR		
	comp=E,94nm,18.0s,MS4.0						
HHC				LR	LR		
	comp=Z,49nm,20.9s,MS3.5						
GUN	**Gumba**	**52.05**	**316**	*e*P	**P**	**13 28 21.7**	**+0.3**
	comp=Z,61nm,0.6s,mb5.7						
PKI	**Pulchoki**	**52.16**	**315**	*e*P	**P**	**13 28 22.0**	**-0.2**
	comp=Z,57nm,0.6s,mb5.7						
PKI	**Pulchoki**	**52.16**	**315**	*e*P	**P**	**13 28 22.0**	**-0.2**
PKI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
KKN	**Kakani**	**52.39**	**315**	*e*P	**P**	**13 28 24.0**	**+0.1**
	comp=Z,36nm,0.7s,mb5.4						
KKN	**Kakani**	**52.39**	**315**	*e*P	**P**	**13 28 24.0**	**+0.1**
KKN				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.4						
DMN	**Daman**	**52.40**	**315**	*e*P	**P**	**13 28 23.8**	**-0.2**
	comp=Z,29nm,0.7s,mb5.3						
GKN	**Gorkha**	**52.96**	**315**	*e*P	**P**	**13 28 27.8**	**-0.4**
	comp=Z,40nm,0.6s,mb5.5						
GTA	**Gaotai**	**53.08**	**336**	*e*P	**P**	**13 28 32.5**	**+3.5**
GTA				AP	pP	13 28 39.0	-1.3
GTA				XP	sP	13 28 43.0	-1.8
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.5						
MDJ	**Mudanjiang**	**53.45**	**5**	P	**P**	**13 28 32.3**	**+0.6**
MDJ				AP	pP	13 28 35.5	-7.5
MDJ				PP	PP	13 30 33.0	+0.7
MDJ				SCP	ScP	13 33 36.5	+3.4
MDJ				PCS	PcS	13 33 37.8	+0.4
MDJ				S	**S**	**13 36 06.8**	**+5.4**
MDJ				AMB	AMB		
	comp=Z,21nm,0.8s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,35nm,4.8s						
MDJ				LR	LR		
	comp=N,45nm,36.0s						
MDJ				LR	LR		
	comp=E,28nm,21.8s						
KOLN	**Koldanda**	**53.55**	**314**	*e*P	**P**	**13 28 32.2**	**-0.3**
	comp=E,61nm,0.7s,mb5.6						
ULN	**Ulaanbaatar**	**58.48**	**347**	*i* P	**P**	**13 29 07.9**	**+0.2**
ULN	**Ulaanbaatar**	**58.48**	**347**	*e*P	**P**	**13 29 07.2**	**-0.5**
	comp=E,7.4nm,1.3s,mb4.6						
SONM	**Songino Array**	**58.60**	**346**	P	**P**	**13 29 08.0**	**-0.6**
	comp=E,1.6nm,0.6s,mb4.2,baz=163,slow=8.5,SNR=11						
SONM	**Songino Array**	**58.60**	**346**	P	**P**	**13 29 08.0**	**-0.6**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WMQ	**Urumqi**	**62.00**	**331**	*e*P	**P**	**13 29 32.0**	**+0.2**
WMQ				XP	sP	13 29 39.0	-8.7
WMQ				PP	PP	13 31 50.0	+1.6
WMQ				S	**S**	**13 37 54.0**	**+0.5**
WMQ				AMB	AMB		
	comp=Z,24nm,1.2s,mb5.2						
WMQ				LR	LR		
	comp=N,28nm,14.0s,MS3.7						
WMQ				LR	LR		
	comp=E,32nm,15.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,30nm,14.0s,MS3.6						
MKAR	**Makanchi Array**	**66.78**	**330**	P	**P**	**13 30 02.2**	**-0.8**
	comp=Z,6.2nm,0.7s,mb4.7,baz=129,slow=7.1,SNR=52						
MKAR	**Makanchi Array**	**66.78**	**330**	P	**P**	**13 30 02.3**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BOD	**Bodaibo**	**66.96**	**354**	*e*P	**P**	**13 30 03.3**	**-0.9**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
AAK	**Ala-Archa**	**68.38**	**323**↓	*e*P	**P**	**13 30 12.3**	**-0.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
AAK	**Ala-Archa**	**68.38**	**323**	*e*P	**P**	**13 30 11.8**	**-1.3**
	comp=Z,5.4nm,0.7s,mb4.7						
YAK	**Yakutsk**	**70.80**	**3**↑	*e*P	**P**	**13 30 28.1**	**0.0**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
YAK	**Yakutsk**	**70.80**	**3**	*e*P	**P**	**13 30 26.6**	**-1.5**
	comp=Z,17nm,0.8s,mb5.0						
ZAL	**Zalesovo**	**70.84**	**337**	P	**P**	**13 30 26.3**	**-2.0**
	comp=Z,2.2nm,0.8s,mb4.2,baz=328,slow=3.5,SNR=10						
ZAL	**Zalesovo**	**70.84**	**337**	P	**P**	**13 30 26.3**	**-2.0**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAW	**Mawson**	**71.16**	**201**	P	**P**	**13 30 29.9**	**-0.3**
	comp=Z,0.8nm,0.2s,mb4.3,baz=54,slow=9.2,SNR=3.7						
MAW	**Mawson**	**71.16**	**201**	P	**P**	**13 30 29.9**	**-0.3**
MAW				pmax	pmax		
	comp=Z,10.0nm,0.2s						
VNDA	**Vanda**	**71.37**	**172**	P	**P**	**13 30 30.6**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.9,baz=315,slow=7.8,SNR=9.4						
VNDA				LR	LR	13 59 10.8	
	comp=Z,46nm,18.8s,MS3.8,baz=308,slow=34						
VNDA	**Vanda**	**71.37**	**172**	*e*P	**P**	**13 30 31.4**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.5						
WSAR	**Wadi Sarin**	**71.57**	**298**	P	**P**	**13 30 33.0**	**+0.3**
	comp=Z,4.8nm,0.7s,mb4.5,baz=105,slow=12,SNR=5.2						
SBA	**Scott Base**	**72.32**	**171**	*e*P	**P**	**13 30 37.6**	**+0.4**
SBA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
SBA	**Scott Base**	**72.32**	**171**	*e*P	**P**	**13 30 37.6**	**+0.3**
	comp=Z,1.7nm,0.8s,mb4.0						
ZRNK	**Zerenda**	**77.31**	**329**	*e*P	**P**	**13 31 04.5**	**-1.6**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
ZRNK	**Zerenda**	**77.31**	**329**	*e*P	**P**	**13 31 04.5**	**-1.6**
	comp=Z,5.2nm,1.1s,mb4.4						
AKTO	**Aktyubinsk**	**82.08**	**324**	LR	LR	14 09 23.1	
	comp=Z,20nm,18.6s,MS3.5,baz=287,slow=37						
ARU	**Arti**	**84.30**	**329**	P	**P**	**13 31 40.9**	**-2.5**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
ARU	**Arti**	**84.30**	**329**	P	**P**	**13 31 40.9**	**-2.5**
	comp=Z,3.2nm,0.5s,mb4.7						
SNAA	**Sanae**	**92.48**	**195**	*e*P	**P**	**13 32 22.5**	**0.0**
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SNAA	**Sanae**	**92.48**	**195**	*e*P	**P**	**13 32 22.5**	**0.0**
	comp=Z,1.7nm,0.8s,mb4.4						
LSZ	**Lusaka**	**93.42**	**254**	*e*P	**P**	**13 32 27.7**	**+0.8**
LSZ				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.9						
LSZ	**Lusaka**	**93.42**	**254**	*e*P	**P**	**13 32 27.7**	**+0.8**
	comp=Z,6.3nm,1.3s,mb4.9						
LBTB	**Lobatse**	**94.00**	**244**	*e*P	**P**	**13 32 32.4**	**+2.9**
LBTB				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.1						
LBTB	**Lobatse**	**94.00**	**244**	*e*P	**P**	**13 32 32.4**	**+2.9**
	comp=Z,8.9nm,1.1s,mb5.1						
TORD	**Torodi Ar. Bea**	**123.49**	**280**	PKP	PKPdf	13 38 08.3	-0.3
	comp=Z,0.9nm,0.6s,baz=47,slow=1.9,SNR=8.6						

WEL 26 13:31:03.2±1.0**,3633S**×**17826E,h236**km↓8km**,ML3.5/9,**
Error ellipse: s-maj=20.1km s-min=17.6km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**1.74**	**180**	*e*PN	Pn	13 31 42.1	0.0
PUZ				SN	S	13 32 11.2	-1.6
MWZ	**Matawai**	**2.08**	**196**	*e*PN	Pn	13 31 45.7	+0.3
URZ	**Urewera**	**2.13**	**205**	*e*PN	Pn	13 31 45.9	+0.1
URZ				SN	S	13 32 19.6	+0.3
KNZ	**Kokohu**	**2.73**	**190**	*e*PN	Pn	13 31 52.9	+1.1
BKZ	**Black Stump Fm**	**3.16**	**206**	*e*PN	Pn	13 31 57.6	+0.9
PXZ	**Pawanui**	**3.86**	**196**	*e*PN	Pn	13 32 05.5	+0.9
BFZ	**Birch Farm**	**4.62**	**199**	*e*PN	Pn	13 32 15.2	+1.3
MRZ	**Mangatainoka R**	**4.81**	**205**	*e*PN	Pn	13 32 16.6	+0.4
KIW	**Kapiti Island**	**5.23**	**209**	*e*PN	Pn	13 32 22.0	+0.6
CAW	**Cannon Point**	**5.38**	**207**	*e*PN	Pn	13 32 24.1	+0.8
TCW	**Tory Channel**	**5.78**	**211**	*e*PN	Pn	13 32 28.7	+0.4
TUWZ	**Tuamarina**	**6.10**	**212**	*e*PN	Pn	13 32 31.9	-0.4
KHZ	**Kahutara**	**7.09**	**210**	*e*PN	Pn	13 32 45.2	+0.3

INMG ***26*** *14:14:43.6*±*1.4,3749N*×*682W,h4*km↓*4km,ML2.0,Error ellipse: s-maj=2.8km s-min=2.2km az=40.0*
CSEM ***26*** *14:14:44.3*±*0.1,3749N*×*681W,h20km,ML2.6/7,Error ellipse: s-maj=2.3km s-min=1.5km az=5.0*
IGIL ***26*** *14:14:44.5,3753N*×*680W,h0km,ML2.2*
MDD 26 14:14:43.6±0.3**,3749N**×**684W,h11**km**,mbLg2.3/12,**
1C-1D,Error ellipse: s-maj=3.5km s-min=1.7km az=163.0,PRXIMO,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIN	**Mina Concepcio**	**0.31**	**25**	↓Pg	Pg	14 14 49.6	-0.3
	31nm,0.1s,SNR=18						
EMIN				Lg		14 14 53.8	
	45nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**0.31**	**25**	Pg	Pg	14 14 49.6	-0.2
	31nm,0.1s,SNR=18						
EMIN				Lg		14 14 53.8	
	45nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**0.52**	**276**	⇑Pg	Pg	14 14 53.5	-0.2
	6.8nm,0.0s,SNR=18						
EGRO				Lg		14 14 59.9	
	30nm,0.1s,SNR=19						
EGRO	**El Granado**	**0.52**	**276**	Pg	Pg	14 14 53.5	-0.2
	6.8nm,0.0s,SNR=18						
EGRO				Lg		14 14 59.9	
	30nm,0.1s,SNR=19						
PBEJ	**Beja**	**0.98**	**304**	*e*P	Pg	14 15 01.6	-0.9
PBEJ				*e*S	Sg	14 15 15.5	+0.3
PBEJ							
	28nm,0.1s						
PBEJ	**Beja**	**0.98**	**304**	*e*P	Pg	14 15 01.6	-0.9
PBEJ				*e*S	Sg	14 15 15.5	+0.3
	28nm,0.1s						
ESPR	**Espera**	**0.99**	**128**	Pg	Pg	14 15 02.0	-0.8
	8.6nm,0.2s,SNR=14						
ESPR				Lg		14 15 15.1	
	70nm,0.3s,SNR=9.1						
ESPR	**Espera**	**0.99**	**128**	Pg	Pg	14 15 02.0	-0.8
	8.6nm,0.2s,SNR=14						
EBAD	**Badajoz**	**1.28**	**354**	Pg	Pg	14 15 06.7	-1.4
	0.5nm,0.1s,SNR=7.9						
EBAD				Lg		14 15 23.8	
	52nm,0.1s,SNR=17						
EBAD	**Badajoz**	**1.28**	**354**	Pn	Pn	14 15 06.7	-0.7
	0.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**1.28**	**354**	Pg	Pg	14 15 07.4	-0.7
	9.0nm,0.1s,SNR=52						
MORF	**Marmelete**	**1.46**	**263**	*e*P	Pn	14 15 10.6	+0.7
MORF				*e*S	Sn	14 15 29.7	+0.7
MORF				*e*S	Sn	14 15 29.7	+0.7
MORF				AML	AML	14 15 33.3	
	comp=E,28nm,0.2s						
MORF	**Marmelete**	**1.46**	**263**	*e*P	Pn	14 15 10.6	+0.7
MORF				*e*S	Sn	14 15 29.7	+0.7
PESTR	**Estremoz**	**1.50**	**337**	*e*Pn	Pn	14 15 10.0	-0.5
PESTR	**Estremoz**	**1.50**	**337**	*e*Pg	Pg	14 15 11.2	-1.3
PESTR				*e*Sg	Sg	14 15 31.0	-1.0
PESTR							
	comp=E,11nm,0.1s						
PESTR	**Estremoz**	**1.50**	**337**	*e*Pg	Pg	14 15 11.2	-1.3
PESTR				*e*Sg	Sg	14 15 31.0	-1.0
	comp=E,11nm,0.1s						
PTEO	**Sao Teotonio**	**1.50**	**273**	*e*Pg	Pg	14 15 11.0	-1.5
PTEO				*e*Sg	Sg	14 15 31.8	-0.2
PTEO							
	comp=E,14nm,0.3s						
PTEO	**Sao Teotonio**	**1.50**	**273**	*e*Pg	Pg	14 15 11.0	-1.5
PTEO				*e*Sg	Sg	14 15 31.8	-0.2
	comp=E,14nm,0.3s						
EJIF	**Jimena Fronter**	**1.50**	**133**	Pg	Pg	14 15 11.5	-1.0
	comp=E,0.7nm,0.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.50**	**133**	Pg	Pg	14 15 12.6	+0.1
	comp=E,0.7nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**1.89**	**118**	Pg	Pg	14 15 18.0	-1.8
	comp=E,0.3nm,0.1s,SNR=7.9						
EMIJ				Lg		14 15 42.9	
	comp=E,2.7nm,0.2s,SNR=5.9						
EMIJ	**Mijas**	**1.89**	**118**	Pg	Pg	14 15 19.4	-0.5
	comp=E,0.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.91**	**68**	Pn	Pn	14 15 15.4	-0.8
	comp=E,0.1nm,0.0s,SNR=7.9						
EADA				Pg	Pg	14 15 17.8	-2.5
	comp=E,0.3nm,0.1s,SNR=5.1						
EADA				Sn	Sn	14 15 37.7	-2.6
	comp=E,1.3nm,0.1s,SNR=7.9						
EADA				Lg		14 15 43.9	
	comp=E,5.0nm,0.1s,SNR=9.6						
EADA	**Adamuz**	**1.91**	**68**	Pn	Pn	14 15 15.4	-0.8
	comp=E,0.1nm,0.0s,SNR=7.9						
EADA	**Adamuz**	**1.91**	**68**	Pg	Pg	14 15 17.8	-2.5
	comp=E,0.3nm,0.1s,SNR=5.1						
EADA				Sn	Sn	14 15 37.7	-2.5
	comp=E,1.3nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**2.04**	**87**	Lg		14 15 47.2	
	comp=E,4.3nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.17**	**98**	Pn	Pn	14 15 17.3	-2.3
	comp=E,0.6nm,0.1s,SNR=4.0						
PCBR	**Castelo Branco**	**2.40**	**348**	*e*Pn	Pn	14 15 22.7	-0.2
PCBR				*e*Sn	Sn	14 15 51.0	-1.4
PCBR				*e*Sg	Sg	14 15 59.6	-1.3
PCBR							
	comp=E,5.5nm,0.3s						
PCBR	**Castelo Branco**	**2.40**	**348**	Pn	Pn	14 15 22.7	-0.2
PCBR				Sn	Sn	14 15 51.0	-1.4
PCBR				Lg		14 15 59.6	
	comp=E,2.8nm,0.3s						
PCBR	**Castelo Branco**	**2.40**	**348**	*e*Pn	Pn	14 15 22.7	-0.2
PCBR				*e*Sn	Sn	14 15 51.0	-1.4
PMAFR	**Mafra**	**2.42**	**308**	*e*Sg	Sg	14 16 01.3	-0.2
PTOM	**Tomar**	**2.46**	**330**	*e*Pg	Pg	14 15 28.4	-2.4
PTOM							
	comp=E,5.1nm,0.2s						
EBAN	**Banos Encina**	**2.51**	**73**	Pn	Pn	14 15 22.8	-1.5
	comp=E,1.0nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**2.72**	**95**	Pn	Pn	14 15 26.1	-1.1
	comp=E,0.2nm,0.1s,SNR=6.0						
EQUE				Sn	Sn	14 15 56.9	-3.2
	comp=E,0.3nm,0.1s,SNR=7.9						
EQUE				Lg		14 16 09.0	
	comp=E,0.5nm,0.1s,SNR=7.9						
EQES	**Quesada**	**3.00**	**83**	Pn	Pn	14 15 28.8	-2.4
	comp=E,0.4nm,0.1s,SNR=6.8						
EQES				Sn	Sn	14 16 03.7	-3.5
	comp=E,1.3nm,0.2s,SNR=7.9						
EQES				Lg		14 16 18.0	
	comp=E,0.8nm,0.1s				

WRA			ScP	ScP	14 37 03.8	+0.8
	0.3nm,1.0s,baz=90,slow=4.9,SNR=6.1					
ASAR	**Alice Springs**	**49.59 251**	P	P	14 31 54.8	+0.2
	1.7nm,0.7s,baz=86,slow=7.9,SNR=36					
ARCES	**ARCESS Array B 123.78 352**		PKP	PKPdf	14 41 59.8	-0.5
	0.3nm,0.7s,baz=45,slow=3.6,SNR=4.5					

ISCJB ***26*** *15:10:09.7±0.6, 4029N±003×2536E±005, h10km±5km, Error ellipse: s-maj=5.9km s-min=4.3km az=9.5*
NEIC ***26*** *15:10:09.5, 4026N×2538E, h26km±1km, MD3.3(ATH), After ATH.*
ATH ***26*** *15:10:09.5, 4026N×2538E, h26km±1km, MD3.3/5*
CSEM ***26*** *15:10:10.4±0.1, 4027N×2537E, h20km, MD3.3, Error ellipse: s-maj=1.8km s-min=1.3km az=117.0*
THE ***26*** *15:10:10.4, 4031N×2536E, h6km, ML3.0*
ISC 26 15:10:10.3±0.5, 4029N±002×2535E±005, h13km±4km, n13, σ0$70/22, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	**0.41**	**198**	*e*PB	**Pg**	**15 10 18.4**	**0.0**
LIA				*e*SB	**Sg**	**15 10 24.2**	**+0.3**
LOS	**Limnos**	**0.41**	**211**	*e*Pg	**Pg**	**15 10 18.3**	**-0.1**
LOS				*e*Sg	**Sg**	**15 10 24.1**	**+0.2**
ALN	**Alexandroupoli**	**0.81**	**41**	*e*Pg	**Pg**	**15 10 25.4**	**-0.5**
ALN				*e*Sg	**Sg**	**15 10 36.4**	**0.0**
RDO	**Rodhopi**	**0.87**	**9**	*e*PN	**Pg**	**15 10 27.5**	**+0.4**
RDO				*e*SN	**Sg**	**15 10 39.2**	**+0.8**
OUR	**Ouranopolis**	**1.05**	**273**	*e*Pg	**Pg**	**15 10 29.9**	**-0.6**
	comp=Z,8.0nm,0.3s						
PRK	**Paraskevi**	**1.26**	**145**	*e*PN	**Pn**	**15 10 33.1**	**-0.5**
PRK				*e*SN	**Sn**	**15 10 49.1**	**-1.3**
PLG	**Polygyros**	**1.46**	**274**	*e*PN	**Pn**	**15 10 36.0**	**-0.4**
PLG				*e*SN	**Sn**	**15 10 55.1**	**-0.3**
NVR	**Nevrokopi**	**1.55**	**314**	*e*PN	**Pn**	**15 10 37.5**	**-0.1**
NVR				*e*SN	**Sn**	**15 10 59.0**	**+1.4**
SRS	**Serrai**	**1.57**	**302**	*e*Pg	**Pn**	**15 10 37.6**	**-0.3**
AOS	**Alonnisos**	**1.59**	**226**	*e*Pg	**Pn**	**15 10 38.5**	**+0.3**
MMB	**Musomiste**	**1.79**	**317**	*e*Pb	**Pn**	**15 10 40.8**	**-0.1**
MMB				*e*Sb	**Sb**	**15 11 04.2**	**-1.1**
CHOS	**Chios island**	**1.98**	**164**	*e*Pn	**Pn**	**15 10 43.1**	**-0.3**
CHOS				*e*Sn	**Sn**	**15 11 10.1**	**+2.0**
KNT	**Kendrikon**	**2.06**	**296**	*e*Pn	**Pn**	**15 10 45.0**	**+0.4**

ISCJB ***26*** *15:16:37.5±2.2, 63S±0.1×130.1E±0.2, h117km±22km, mb4.0/3, Error ellipse: s-maj=33.4km s-min=14.1km az=142.2*
NEIC ***26*** *15:16:37.5±1.2, 623S×13000E, h100km, mb4.2/7, Error ellipse: s-maj=25.2km s-min=16.8km az=69.0*
IDC ***26*** *15:16:42.0±4.6, 644S×12993E, h149km±46km, mb3.5/3, mb1 3.6/6, mb1mx3.4/15, mbtmp4.1/6, Error ellipse: s-maj=36.6km s-min=18.9km az=64.0*
ISC 26 15:16:46.3±1.4, 678S±008×1300E±01, h144km±12km, n17, σ1$26/27, mb3.9/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.38**	**158**	*e*P	**Pn**	**15 18 19.6**	**+1.6**
	17nm,0.3s						
KAKA				*i* S	**Sn**	**15 19 31.1**	**+1.4**
FITZ	**Fitzroy Crossi**	**12.02**	**200**	*e*P	**Pn**	**15 19 33.4**	**+0.5**
	1.9nm,0.2s						
FITZ				*e*S	**Sn**	**15 21 41.2**	**-4.3**
FITZ	**Fitzroy Crossi**	**12.02**	**200**	P	**Pn**	**15 19 33.5**	**+0.6**
	0.2nm,0.3s,baz=181,slow=15,SNR=14						
FITZ				S	**Sn**	**15 21 44.2**	**-1.3**
	1.5nm,0.3s,baz=124,slow=20,SNR=10.0						
WRAB	**Tennant Creek**	**13.75**	**162**	*e*Pn	**Pn**	**15 19 53.5**	**-1.7**
	15nm,0.4s						
WRAB				*e*Sn	**Sn**	**15 22 18.6**	**-8.7**
WRA	**Warramunga Arr**	**13.76**	**162**	P	**Pn**	**15 19 54.3**	**-1.0**
	0.5nm,0.3s,baz=345,slow=11,SNR=26						
WRA				S	**Sn**	**15 22 23.3**	**-4.2**
	1.8nm,0.3s,baz=333,slow=22,SNR=10						
WRA	**Warramunga Arr**	**13.76**	**162**	P	**Pn**	**15 19 54.3**	**-1.0**
WRA				S	**Sn**	**15 22 23.3**	**-4.2**
WB2	**Warramunga Arr**	**13.76**	**162**	*e*P	**Pn**	**15 19 54.7**	**-0.6**
WB2				*i*		15 19 59.8	
WB2				*e*S	**Sn**	**15 22 25.0**	**-2.5**
AS31	**Alice Springs**	**17.21**	**168**	*e*P	**Pn**	**15 20 38.7**	**+0.8**
AS31				*e*S	**S**	**15 23 49.0**	**0.0**
ASAR	**Alice Springs**	**17.21**	**168**	P	**Pn**	**15 20 38.6**	**+0.6**
	2.9nm,0.3s,baz=352,slow=9.8,SNR=133						
ASAR				S	**S**	**15 23 51.5**	**+2.5**
	0.4nm,0.3s,baz=354,slow=26,SNR=5.7						
ASPA	**Alice Springs**	**17.21**	**168**	*e*P	**Pn**	**15 20 38.7**	**+0.7**
ASPA				*e*S	**S**	**15 23 49.0**	**0.0**
CTA	**Charters Tower**	**20.61**	**131**	*e*P	**P**	**15 21 13.5**	**-0.7**
	1.8nm,0.6s						
CTA	**Charters Tower**	**20.61**	**131**	P	**P**	**15 21 13.1**	**-1.1**
	2.1nm,0.6s,baz=294,slow=9.8,SNR=8.5						
CTAO	**Charters Tower**	**20.61**	**131**	*e*P	**P**	**15 21 13.5**	**-0.7**
	2.3nm,0.6s						
STKA	**Stephens Creek**	**27.23**	**158**	*e*P	**P**	**15 22 15.0**	**-1.7**
	2.7nm,1.9s,mb3.5						
STKA	**Stephens Creek**	**27.23**	**158**	P	**P**	**15 22 14.9**	**-1.8**
	0.6nm,0.3s,mb3.7,baz=343,slow=7.7,SNR=12						
TLY	**Talaya**	**62.45**	**342**	P	**P**	**15 26 54.9**	**+0.7**
	6.0nm,1.0s,mb4.4						
MKAR	**Makanchi Array**	**68.02**	**327**	P	**P**	**15 27 23.1**	**-6.9**
	1.0nm,0.5s,mb3.8,baz=109,slow=6.7,SNR=7.9						

BJI ***26*** *15:32:40.1, 4249N×1843E, h8km, mB5.1, mb4.7, Ms4.1, Msz3.8*
STR ***26*** *15:32:45.9±0.0, 4201N×1968E, h10km±1km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
SZGRF ***26*** *15:32:45.4, 4160N×1936E, h10km, Albania*
PRU ***26*** *15:32:45.7, 4189N×1984E, h0km*
ISCJB ***26*** *15:32:47.9±0.1, 42098N±0009×1927E±001, h10km, mb4.3/16, MS3.6/4, Error ellipse: s-maj=1.3km s-min=1.3km az=71.8*
MOS ***26*** *15:32:47.2±1.0, 4206N×1920E, h10km, mb4.5/8, Error ellipse: s-maj=4.0km s-min=2.5km az=112.6*
TIR ***26*** *15:32:47.5, 4203N×1936E, h46km, Ml4.0*
THE ***26*** *15:32:48.7, 4213N×1928E, h4km, ML3.7*
CSEM ***26*** *15:32:49.3±0.0, 4213N×1933E, h15km, mb4.4/2, ML4.9/4, Error ellipse: s-maj=1.0km s-min=0.7km az=127.0*
PDG ***26*** *15:32:49.2±1.9, 4208N×1930E, h18km±3km*
NEIC ***26*** *15:32:49.3±0.5, 4206N×1929E, h9km±3km, mb4.2/5, ML3.9(THE), ML4.1(PDG), ML4.2(ROM), ML4.4(BUC), Error ellipse: s-maj=2.5km s-min=2.1km az=188.0*
NEIC Felt at Podgorica.
ROM ***26*** *15:32:49.3±0.2, 4195N×1930E, h10km, Ml4.2/47, Error ellipse: s-maj=3.6km s-min=1.9km az=130.0*
LDG ***26*** *15:32:51.7±0.1, 4204N×1929E, h10km, Ml4.0/20, Error ellipse: s-maj=2.4km s-min=1.6km az=20.0*
IDC ***26*** *15:32:54.7±1.6, 4218N×1926E, h68km±16km, mb3.6/7, mb1 3.8/19, mb1mx3.7/29, mbtmp3.9/19, MS3.1/5, Ms1 3.1/5, ms1mx2.7/30, Error ellipse: s-maj=14.0km s-min=12.5km az=132.0*
HLW ***26*** *15:33:06.9, 4083N×2104E, h33km, Mb4.0*
ISC 26 15:32:49.6±0.2, 42053N±0009×1931E±001, h11km±1km, n408, σ1$09/546, mb4.3/16, MS3.6/4, 43C-48D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.10**	**205**	*i*↓P	**Pg**	**15 32 53.0**	**+0.7**
ULC				*e*Sg	**Sg**	**15 32 56.3**	**+2.1**
SDA	**Shkodra**	**0.14**	**91**	*i* Pg	**Pg**	**15 32 52.4**	**-0.5**
SDA				*i* Sg	**Sg**	**15 32 55.3**	**0.0**
TTG	**Podgorica**	**0.38**	**355**	*e*Pg	**Pg**	**15 32 56.6**	**-0.5**
TTG				*e*Sg	**Sg**	**15 33 02.8**	**+0.7**
BUM	**Brajici-Budva**	**0.39**	**309**	*i*↓Pg	**Pg**	**15 32 57.5**	**+0.1**
BUM				*e*Sg	**Sg**	**15 33 03.8**	**+1.2**
BCI	**Bajram Curri**	**0.65**	**61**	*i* Pg	**Pg**	**15 33 00.4**	**-1.7**
BCI				*i* Sg	**Sg**	**15 33 10.2**	**-0.4**
HCY	**Herceg Novi**	**0.72**	**304**	*i*↓Pg	**Pg**	**15 33 02.7**	**-0.8**
HCY				*e*Sg	**Sg**	**15 33 14.4**	**+1.5**
PVY	**Plav**	**0.73**	**42**	*i*↓Pg	**Pg**	**15 33 01.9**	**-1.9**
PVY				*e*Sg	**Sg**	**15 33 13.5**	**+0.1**
NKY	**Niksic**	**0.79**	**343**	*i*↑Pg	**Pg**	**15 33 03.6**	**-1.3**
NKY				*e*Sg	**Sg**	**15 33 16.0**	**+0.8**
TIR	**Tirane**	**0.82**	**149**	*e*Sg	**Sg**	**15 33 18.7**	**+2.6**
TIR	**Tirane**	**0.82**	**149**	*i* pg?	**Sg**	**15 33 18.7**	**+2.6**
TIR	**Tirane**	**0.82**	**149**	Pn	**Pn**	**15 33 03.8**	**-3.2**
	5µm,0.4s						
TIR				*e*Sg	**Sg**	**15 33 18.7**	**+2.6**
KKS	**Kukesi**	**0.82**	**88**	*i* Pg	**Pg**	**15 33 03.7**	**-1.8**
KKS				*i* Sg	**Sg**	**15 33 15.4**	**-0.8**
KKS	**Kukesi**	**0.82**	**88**	*e*Pg	**Pg**	**15 33 03.7**	**-1.8**
IVA	**Berane**	**0.93**	**28**	*i*↓Pg	**Pg**	**15 33 05.7**	**-1.8**
IVA				*e*Sg	**Sg**	**15 33 20.0**	**+0.4**
TREB	**Trebinje**	**0.97**	**313**	P	**Pg**	**15 33 07.0**	**-1.3**
TREB				S	**Sg**	**15 33 21.9**	**+1.0**
BRY	**Bratogost**	**1.02**	**327**	*i*↑Pg	**Pg**	**15 33 07.6**	**-1.5**
BRY				*e*Sg	**Sg**	**15 33 24.0**	**+1.6**
UPM	**Unac-Piva**	**1.19**	**346**	*i*↑Pg	**Pg**	**15 33 10.2**	**-2.1**
UPM				*e*Sg	**Sg**	**15 33 29.1**	**+1.3**
PLE	**Pljevlja**	**1.28**	**3**	*e*Pg	**Pg**	**15 33 12.5**	**-1.6**
PLE				*e*Sg	**Sg**	**15 33 31.4**	**+0.6**
SJES	**Sjenica**	**1.30**	**21**	Pg	**Pg**	**15 33 12.4**	**-2.2**
SJES				Sg	**Sg**	**15 33 30.2**	**-1.3**
OHR	**Ohrid**	**1.46**	**130**	*i* Pn	**Pn**	**15 33 15.0**	**-0.9**
SKO	**Skopje**	**1.59**	**92**	*e*Pb	**Pb**	**15 33 17.7**	**-1.3**
SKO	**Skopje**	**1.59**	**92**	*i* Pn	**Pn**	**15 33 17.6**	**-0.1**
SKO				*i* Sn	**Sn**	**15 33 40.0**	**+1.8**
SKO	**Skopje**	**1.59**	**92**	*i* Pn	**Pn**	**15 33 17.5**	**-0.2**
SKO				*i* Sn	**Sn**	**15 33 40.0**	**+1.8**
BIA	**Bitola**	**1.83**	**124**	*e*Pb	**Pb**	**15 33 21.3**	**-1.8**
BIA				*e*Sb	**Sb**	**15 33 46.2**	**+0.2**
BIA	**Bitola**	**1.83**	**124**	*i* Pn	**Pn**	**15 33 21.2**	**+0.2**
BIA				*i* Sn	**Sn**	**15 33 48.0**	**+3.8**
BIA	**Bitola**	**1.83**	**124**	*i* Pn	**Pn**	**15 33 21.2**	**+0.2**
BIA				*i* Sn	**Sn**	**15 33 47.9**	**+3.7**
LCI	**Lecce**	**1.94**	**208**	Pn	**Pn**	**15 33 21.1**	**-1.4**
	453nm,0.5s						
BAI	**Bari**	**2.05**	**243**	*i*↓Pn	**Pn**	**15 33 23.3**	**-0.7**
SCTE	**Santa Cesarea**	**2.08**	**198**	Pn	**Pn**	**15 33 22.7**	**-1.7**
DIVS	**Divcibare**	**2.10**	**14**	*i* Pn	**Pn**	**15 33 25.0**	**+0.3**
DIVS					**Sn**	**15 33 50.5**	**-0.4**
DIVS	**Divcibare**	**2.10**	**14**	*e*Sn	**Sn**	**15 33 50.1**	**-0.8**
DIVS	**Divcibare**	**2.10**	**14**	Pn	**Pn**	**15 33 25.0**	**+0.3**
DIVS				*e*Sn	**Sn**	**15 33 50.1**	**-0.8**
GRUS	**Gruza**	**2.10**	**29**	*i* Pn	**Pn**	**15 33 24.1**	**-0.6**
GRUS				Sn	**Sn**	**15 33 50.5**	**-0.4**
NOCI	**Noci**	**2.11**	**234**	Pn	**Pn**	**15 33 23.9**	**-0.9**
SG1	**Sgolgore (BA)**	**2.32**	**239**	*i*↓Pn	**Pn**	**15 33 26.9**	**-0.8**
AMUR	**Altamura**	**2.33**	**241**	Pn	**Pn**	**15 33 27.3**	**-0.5**
AMUR				Sn	**Sn**	**15 33 54.6**	**-1.9**
	789nm,0.3s						
KEK	**Kerkira**	**2.37**	**171**	*e*P	**Pn**	**15 33 27.6**	**-0.7**
CDT	**Castel del Mon**	**2.47**	**248**	*i*↓Pn	**Pn**	**15 33 29.4**	**-0.4**
FGMS	**Monte Sant'Ang**	**2.53**	**263**	Pn	**Pn**	**15 33 30.4**	**-0.1**
FGMS				Sn	**Sn**	**15 33 59.9**	**-1.4**
	294nm,0.2s						
MS1	**Monte Sant'Ang**	**2.54**	**263**	*i*↓Pn	**Pn**	**15 33 30.3**	**-0.4**
KZN	**Kozani**	**2.55**	**132**	*e*P	**Pn**	**15 33 31.8**	**+1.0**
VAY	**Valandovo**	**2.55**	**106**	*i* Pn	**Pn**	**15 33 30.5**	**-0.4**
VAY				*i* Sn	**Sn**	**15 34 03.2**	**+1.3**
VAY	**Valandovo**	**2.55**	**106**	*i* Pn	**Pn**	**15 33 30.4**	**-0.5**
VAY				*i* Sn	**Sn**	**15 34 03.1**	**+1.2**
MSAG	**Monte S. Angel**	**2.56**	**263**	Pn	**Pn**	**15 33 30.7**	**-0.3**
MSAG				Sn	**Sn**	**15 34 00.8**	**-1.3**
	1µm,0.6s						
GRG	**Griva**	**2.57**	**114**	*e*Pn	**Pn**	**15 33 31.8**	**+0.7**
GRG				*e*Sn	**Sn**	**15 34 04.4**	**+2.0**
MIGL	**Miglionico**	**2.60**	**237**	Pn	**Pn**	**15 33 30.9**	**-0.6**
IGT	**Igoumenitsa**	**2.64**	**162**	*e*Pn	**Pn**	**15 33 32.0**	**0.0**
IGT				*e*Sn	**Sn**	**15 34 06.7**	**+2.7**
SVIS	**Svilajnac**	**2.64**	**31**	*e*Pn	**Pn**	**15 33 32.2**	**+0.1**
SVIS				Sn	**Sn**	**15 34 04.5**	**+0.3**
JAN	**Janina**	**2.67**	**153**	*e*P	**Pn**	**15 33 32.0**	**-0.4**
SGRT	**San Giovanni R**	**2.68**	**265**	Pn	**Pn**	**15 33 32.2**	**-0.4**
SGRT				Sn	**Sn**	**15 34 02.9**	**-2.1**
	831nm,0.6s						
PALZ	**Palazzo San Ge**	**2.75**	**247**	Pn	**Pn**	**15 33 33.3**	**-0.3**
	2µm,1.0s						
RGNG	**Rignano Grg**	**2.81**	**263**	Pn	**Pn**	**15 33 33.9**	**-0.4**
KNT	**Kendrikon**	**2.84**	**107**	*e*Pn	**Pn**	**15 33 35.0**	**+0.3**
	comp=Z,8.0nm,0.7s						
KNT	**Kendrikon**	**2.84**	**107**	*e*Pn	**Pn**	**15 33 35.0**	**+0.2**
	8.0nm,0.7s						
BEO	**Belgrade**	**2.89**	**16**	*e*Pn	**Pn**	**15 33 34.6**	**-0.9**
BEO				Sn	**Sn**	**15 34 09.0**	**-1.3**
ORI	**Oriolo Calabro**	**2.94**	**228**	Pn	**Pn**	**15 33 35.9**	**-0.3**
	939nm,0.4s						
VTS	**Vitosha**	**2.94**	**78**	*i*↓P	**Pn**	**15 33 37.2**	**+1.0**
VTS	**Vitosha**	**2.94**	**78**	↓P	**Pn**	**15 33 37.2**	**+1.0**
VTS				S	**Sn**	**15 34 11.5**	**0.0**
VTS	**Vitosha**	**2.94**	**78**	↓P	**Pn**	**15 33 36.7**	**+0.4**
VTS				S	**Sn**	**15 34 11.5**	**0.0**
VTS	**Vitosha**	**2.94**	**78**	↓P	**Pn**	**15 33 36.7**	**+0.5**
VTS				S	**Sn**	**15 34 11.5**	**0.0**
VTS				*e*Sn	**Sn**	**15 34 12.3**	**+0.8**
VULT	**Monte Vulture**	**2.98**	**250**	Pn	**Pn**	**15 33 36.9**	**+0.1**
	791nm,0.6s						
FG4	**Candela**	**2.99**	**253**	Pn	**Pn**	**15 33 37.1**	**+0.2**
	885nm,0.5s						
SCHR	**S. Chirico Rap**	**3.06**	**234**	Pn	**Pn**	**15 33 37.5**	**-0.4**
	251nm,0.7s						
SGTA	**Sant Agata di**	**3.10**	**254**	Pn	**Pn**	**15 33 38.6**	**+0.3**
	535nm,0.5s						
LIT	**Litokhoron**	**3.10**	**128**	*e*Pn	**Pn**	**15 33 38.7**	**+0.3**
	comp=Z,3.5nm,0.7s						
FG2	**Serracapriola**	**3.10**	**267**	Pn	**Pn**	**15 33 38.8**	**+0.3**
	496nm,0.2s						
BLY	**Banja Luka**	**3.11**	**331**	P	**Pn**	**15 33 38.2**	**-0.3**
BLY				S	**Sn**	**15 34 15.6**	**0.0**
FG5	**Orsara di Pugl**	**3.12**	**257**	Pn	**Pn**	**15 33 39.3**	**+0.6**
	410nm,0.6s						
FGSL	**Fruska Gora**	**3.12**	**7**	Pn	**Pn**	**15 33 38.5**	**-0.2**
FGSL				Sn	**Sn**	**15 34 15.0**	**-1.0**
MRLC	**Muro Lucano**	**3.15**	**247**	Pn	**Pn**	**15 33 38.7**	**-0.4**
	511nm,0.6s						
SIRI	**Monte Sirino -**	**3.20**	**235**	Pn	**Pn**	**15 33 40.1**	**+0.3**
	426nm,0.5s						
HORT	**Hortiatis**	**3.21**	**116**	*e*Pn	**Pn**	**15 33 40.3**	**+0.4**
CAFE	**Carife**	**3.22**	**253**	Pn	**Pn**	**15 33 40.2**	**+0.1**
	421nm,0.6s						
MTSN	**Montesano sull**	**3.22**	**238**	Pn	**Pn**	**15 33 39.8**	**-0.3**
	462nm,0.8s						
SLCN	**Sala Consilina**	**3.23**	**240**	Pn	**Pn**	**15 33 40.1**	**-0.1**
SOH	**Sokhos**	**3.28**	**111**	*e*Pn	**Pn**	**15 33 41.4**	**+0.5**
CIGN	**Sant'Elia a Pi**	**3.31**	**265**	Pn	**Pn**	**15 33 41.8**	**+0.5**
	551nm,1.1s						
CUC	**Castrocucco**	**3.35**	**233**	Pn	**Pn**	**15 33 41.5**	**-0.3**
	450nm,0.5s						
SRS	**Serrai**	**3.35**	**105**	*e*Pn	**Pn**	**15 33 42.0**	**+0.2**
MCRV	**Calabrutti - M**	**3.36**	**249**	Pn	**Pn**	**15 33 41.6**	**-0.4**
	548nm,0.2s						
CDRU	**Civita di Ruta**	**3.40**	**244**	Pn	**Pn**	**15 33 42.2**	**-0.3**
	257nm,0.2s						
CSSN	**Cassano Irpino**	**3.43**	**251**	Pn	**Pn**	**15 33 42.7**	**-0.3**
FRES	**Fresagrandinar**	**3.46**	**270**	Pn	**Pn**	**15 33 44.3**	**+1.0**
	806nm,0.8s						
PSB1	**Pescosannita**	**3.47**	**258**	Pn	**Pn**	**15 33 44.1**	**+0.6**
	274nm,0.5s						
NVR	**Nevrokopi**	**3.48**	**100**	*e*P	**Pn**	**15 33 44.5**	**+0.8**
CMPR	**Campora**	**3.48**	**241**	Pn	**Pn**	**15 33 43.2**	**-0.5**
	400nm,0.5s						
DJES	**Djerdap**	**3.49**	**41**	*e*Pn	**Pn**	**15 33 43.7**	**0.0**
DJES				Sn	**Sn**	**15 34 23.3**	**-1.7**
SACR	**S. Croce Del S**	**3.51**	**261**	Pn	**Pn**	**15 33 44.6**	**+0.6**
	297nm,0.5s						
PLG	**Polygyros**	**3.54**	**117**	*e*P	**Pn**	**15 33 45.2**	**+0.7**
BSSO	**Busso**	**3.56**	**263**	Pn	**Pn**	**15 33 45.5**	**+0.8**
	364nm,0.6s						
TRIV	**Trivento**	**3.56**	**267**	Pn	**Pn**	**15 33 45.9**	**+1.1**
	514nm,0.7s						
SERS	**Sersale**	**3.61**	**214**	Pn	**Pn**	**15 33 44.0**	**-1.5**
	114nm,0.5s						
EVR	**Evrytania**	**3.67**	**148**	*e*P	**Pn**	**15 33 47.6**	**+1.4**
MIDA	**Miranda**	**3.80**	**265**	Pn	**Pn**	**15 33 48.6**	**+0.6**
	345nm,0.4s						
AGG	**Agios Georgios**	**3.80**	**142**	*e*Pn	**Pn**	**15 33 49.3**	**+1.2**
VAGA	**Valle Agricola**	**3.85**	**262**	Pn	**Pn**	**15 33 49.9**	**+1.2**
	637nm,0.5s						
RNI2	**Rionero Sannit**	**3.87**	**267**	Pn	**Pn**	**15 33 50.1**	**+1.2**
	439nm,0.5s						
GRI	**Girifalco**	**3.91**	**215**	Pn	**Pn**	**15 33 48.3**	**-1.2**
	118nm,0.5s						
RHK3	**Tenkes**	**3.91**	**349**	*i*↓P	**Pn**	**15 33 50.1**	**+0.6**
RHK3				*e*S	**Sn**	**15 34 34.9**	**-0.5**
	4.5nm,0.2s						
MOCO	**Biccari - m.te**	**3.92**	**262**	Pn	**Pn**	**15 33 40.2**	**-9.4**
	507nm,0.8s						
OUR	**Ouranopolis**	**3.92**	**114**	*e*Pn	**Pn**	**15 33 50.4**	**+0.6**
OUR	**Ouranopolis**	**3.92**	**114**	*e*Pn	**Pn**	**15 33 50.3**	**+0.6**
PAIG	**Paliouri**	**3.93**	**121**	*e*Pn	**Pn**	**15 33 49.9**	**0.0**
BZS	**Buzias**	**3.93**	**24**	*i*↓P	**Pn**	**15 33 49.9**	**0.0**
BZS	**Buzias**	**3.93**	**24**	↓P	**Pn**	**15 33 49.9**	**+0.1**
BZS				S	**Sn**	**15 34 35.0**	**-1.0**
BZS	**Buzias**	**3.93**	**24**	↓P	**Pn**	**15 33 49.9**	**0.0**
BZS				S	**Sn**	**15 34 35.0**	**-1.0**
CERA	**Filignano**	**3.98**	**265**	Pn	**Pn**	**15 33 51.9**	**+1.4**
	551nm,0.7s						
XOR	**Xorichti**	**3.99**	**131**	*e*Pn	**Pn**	**15 33 50.9**	**+0.2**
VLS	**Valsamata**	**3.99**	**165**	*e*P	**Pn**	**15 33 49.6**	**-1.1**
PLD	**Plovdiv**	**4.02**	**87**	*e*Pn	**Pn**	**15 33 51.0**	**0.0**
INTR	**Introdaqua**	**4.02**	**271**	Pn	**Pn**	**15 33 51.3**	**+0.2**
	925nm,0.9s						
NEO	**Neokhori**	**4.05**	**131**	*e*P	**Pn**	**15 33 53.0**	**+1.5**
RFI	**Roccamonfina**	**4.06**	**261**	Pn	**Pn**	**15 33 52.8**	**+1.2**
	27nm,0.6s						
VCEL	**Villa Celiera**	**4.07**	**277**	Pn	**Pn**	**15 33 52.9**	**+1.1**
	487nm,0.5s						
NVLJ	**Novalja**	**4.09**	**309**	*i* Pn	**Pn**	**15 33 52.3**	**+0.2**
NVLJ				*i* Sn	**Sn**	**15 34 40.8**	**+0.8**
NVLJ	**Novalja**	**4.09**	**309**	*i* Pn	**Pn**	**15 33 52.2**	**+0.1**
NVLJ				*i* Sn	**Sn**	**15 34 40.7**	**+0.7**
SDI	**San Donato**	**4.12**	**267**	Pn	**Pn**	**15 33 53.7**	**+1.3**
	145nm,0.3s						
GZR	**Gura Zlata**	**4.18**	**36**	↑P	**Pn**	**15 33 53.4**	**+0.1**
GZR	**Gura Zlata**	**4.18**	**36**	↑P	**Pn**	**15 33 53.4**	**+0.1**
GZR				S	**Sn**	**15 34 41.9**	**-0.2**
GZR	**Gura Zlata**	**4.18**	**36**	↑P	**Pn**	**15 33 53.4**	**+0.1**
GZR				S	**Sn**	**15 34 41.8**	**-0.3**
PKSM	**Moragy**	**4.18**	**354**	↑*i*P	**Pn**	**15 33 53.0**	**-0.3**
PKSM	**Moragy**	**4.18**	**354**	↑P	**Pn**	**15 33 53.0**	**-0.3**
PKSM				S	**Sn**	**15 34 42.3**	**+0.1**
PKSM	**Moragy**	**4.18**	**354**	↑*i*Pn	**Pn**	**15 33 53.1**	**-0.2**
PKSM				*e*Sn	**Sn**	**15 34 41.1**	**-1.1**
PKSM				S	**Sn**	**15 34 42.3**	**+0.1**
PLAC	**Placanica**	**4.22**	**212**	Pn	**Pn**	**15 33 52.3**	**-1.5**
	42nm,0.6s						
VVLD	**Villa Vallelon**	**4.24**	**269**	Pn	**Pn**	**15 33 54.8**	**+0.7**
	442nm,0.6s						
FAGN	**Fagnano**	**4.26**	**275**	Pn	**Pn**	**15 33 55.1**	**+0.7**
	989nm,0.5s						
TERO	**Teramo**	**4.27**	**280**	Pn	**Pn**	**15 33 54.9**	**+0.5**
	271nm,0.4s						
RLS	**Riolos of Patr**	**4.32**	**157**	*e*P	**Pn**	**15 33 55.3**	**+0.1**
AQU	**L'Aquila**	**4.40**	**276**	Pn	**Pn**	**15 33 57.8**	**+1.6**
	160nm,0.4s						
AQU	**L'Aquila**	**4.40**	**276**	*e*Pn	**Pn**	**15 33 56.8**	**+0.5**
AQU				*e*Sn	**Sn**	**15 34 41.0**	**-6.4**
AQU	**L'Aquila**	**4.40**	**276**	*e*Pn	**Pn**	**15 33 56.8**	**+0.6**
AQU	**L'Aquila**	**4.40**	**276**	*i*↓P	**Pn**	**15 33 57.4**	**+1.2**
AQU				*e*Sn	**Sn**	**15 34 41.0**	**-6.4**
AQU				S	**Sn**	**15 34 47.8**	**+0.4**
LKR	**Lokris**	**4.42**	**139**	*e*P	**Pn**	**15 33 57.2**	**+0.7**
AOI	**Ancona**	**4.46**	**292**	Pn	**Pn**	**15 33 57.3**	**+0.2**
	628nm,1.2s						
AOS	**Alonnisos**	**4.52**	**128**	*e*Pn	**Pn**	**15 33 58.6**	**+0.7**
BOJS	**Bojanci**	**4.53**	**321**	*i* Pn	**Pn**	**15 33 58.9**	**+0.8**
BOJS				*e*Sn	**Sn**	**15 34 52.7**	**+2.0**
GIUL	**Giuliano Di Ro**	**4.55**	**266**	Pn	**Pn**	**15 33 58.7**	**+0.3**
	168nm,0.7s						
PKS9	**Tamasi**	**4.59**	**351**	↑*e*P	**Pn**	**15 33 59.5**	**+0

PSZ Piszkesteto 5.88 4 ⇓P Pn 15 34 16.5 -0.1
PSZ S Sn 15 35 22.1 -1.9
PSZ Piszkesteto 5.88 4 ⇓*i*Pn Pn 15 34 16.7 +0.1
PSZ *e*Sn Sn 15 35 20.4 -3.6
PSZ S Sn 15 35 22.1 -1.9
MLR Muntele Rosu 5.91 52 P Pn 15 34 18.1 +1.1
comp=Z,2.3nm,0.3s,baz=227,slow=20,SNR=15
MLR S Sn 15 35 27.0 +2.4
comp=Z,4.2nm,0.3s,baz=121,slow=16,SNR=6.2
MLR Muntele Rosu 5.91 52 ⇓*i*P Pn 15 34 18.5 +1.5
MLR Muntele Rosu 5.91 52 S Sn 15 35 26.4 +1.7
MLR Muntele Rosu 5.91 52 ⇓P Pn 15 34 19.1 +2.1
MLR Muntele Rosu 5.91 52 ⇓P Pn 15 34 18.5 +1.5
MLR ⇓P 15 34 19.1
MLR S Sn 15 35 26.4 +1.7
MLR Muntele Rosu 5.91 52 ⇓P Pn 15 34 18.5 +1.5
MLR S Sn 15 35 26.4 +1.7
ROBS Robic 5.91 317 *i*Pn Pn 15 34 16.8 -0.2
ROBS *i*Sn Sn 15 35 25.3 +0.6
VAE Valguarnera 5.92 221 P Pn 15 34 23.3 +6.1
comp=Z,3.0nm,0.3s,baz=97,slow=5.6,SNR=5.5
VAE Valguarnera 5.92 221 P Pn 15 34 23.3 +6.1
SOP Sopron 5.96 342 ⇑*i* Pn 15 34 19.5 +1.8
SOP *e* 16 32 27.7
SOP Sopron 5.96 342 ⇑*i*Pn Pn 15 34 19.5 +1.8
SOP *e*S Sn 15 35 27.7 +1.8
PRK Paraskevi 5.99 116 *e*P Pn 15 34 20.0 +1.8
VLI Veliai 6.02 151 *e*P Pn 15 34 19.6 +1.0
CSNT Castellina Chi 6.07 286 Pn Pn 15 34 19.2 0.0
comp=Z,26nm,0.8s
GMNA Gemona 6.07 316 Pn Pn 15 34 19.6 +0.4
comp=Z,193nm,0.9s
MAON Monte Argentar 6.08 276 Pn Pn 15 34 19.6 +0.2
comp=Z,52nm,0.6s
PTCC Patocco-Chiusa 6.10 318 Pn Pn 15 34 19.5 -0.1
comp=Z,16nm,0.4s
SEI Scarperia 6.16 292 Pn Pn 15 34 22.1 +1.7
comp=Z,59nm,0.6s
GRFL Gerfalco 6.25 283 Pn Pn 15 34 22.0 +0.4
comp=Z,5.0nm,0.8s
ZST Bratislava 6.34 347 *e*PN Pn 15 34 24.8 +1.9
ZST *e*SN Sn 15 35 33.4 -1.8
FNVD Fontana Vidola 6.35 292 Pn Pn 15 34 24.8 +1.7
comp=Z,43nm,1.2s
CONA Conrad Observa 6.36 339 ⇓*i*Pn Pn 15 34 23.8 +0.6
SNR=27
CONA ⇓*i*Sn Sn 15 35 36.1 +0.2
VYHS Vyhne 6.45 357 *e*P Pn 15 34 25.3 +0.9
VYHS *e* 15 35 36.7
VYHS MLR MLR
comp=Z,100nm,2.0s
VYHS Vyhne 6.45 357 *e*P Pn 15 34 25.3 +0.9
comp=Z,100nm,2.0s
VYHS *e*S Sn 15 35 36.7 -1.3
KECS Kecovo 6.48 7 *e*PN Pn 15 34 26.0 +1.1
KECS *e*SN Sn 15 35 36.5 -2.4
ZCCA Zocca 6.51 293 Pn Pn 15 34 27.6 +2.4
comp=Z,13nm,0.4s
PLOR Plostina 6.52 52 ⇓*i*P Pn 15 34 26.6 +1.2
FVI Forni Avoltri 6.52 316 Pn Pn 15 34 26.4 +1.0
PZZT Monte Pizzetto 6.52 291 Pn Pn 15 34 25.9 +0.5
comp=Z,29nm,0.4s
VRI Vrincioaia 6.57 52 ⇑*i*P Pn 15 34 27.9 +1.8
VRI Vrincioaia 6.57 52 ⇓P Pn 15 34 28.0 +1.9
VRI Vrincioaia 6.57 52 ⇑P Pn 15 34 27.9 +1.7
VRI ⇓P 15 34 28.0
KBA Koelnbreinsper 6.58 322 ⇑*i*Pn Pn 15 34 26.8 +0.5
SNR=22
KBA ⇓*i*Sn Sn 15 35 42.0 +0.7
KBA Koelnbreinsper 6.58 322 *e*Pn Pn 15 34 26.7 +0.4
SMOL Smolenice 6.59 349 *e*SN Sn 15 35 41.2 -0.4
PII Pisa 6.66 287 Pn Pn 15 34 27.1 -0.3
comp=Z,23nm,0.2s
PII Pisa 6.66 287 P Pn 15 34 27.1 -0.3
PII pmax pmax
comp=Z,23nm,0.2s
GSCL Gusciola 6.77 293 Pn Pn 15 34 30.3 +1.4
comp=Z,65nm,1.3s
CTI Castel Tesino 6.81 308 Pn Pn 15 34 28.6 -0.8
MOA Molln 6.81 330 ⇑*i*Sn Sn 15 35 47.9 +1.0
MOA Molln 6.81 330 ⇓*i*Pn Pn 15 34 30.5 +1.1
SNR=30
MOA ⇑*i*Sn Sn 15 35 47.9 +1.0
MOA Molln 6.81 330 *e*Pn Pn 15 34 30.5 +1.1
MOA *e*Sn Sn 15 35 49.1 +2.2
MOA Molln 6.81 330 Pn Pn 15 34 30.5 +1.1
comp=Z,29nm,8.0s
VLC Villacollemand 6.86 291 *e*Pn Pn 15 34 28.9 -1.2
VLC *e*Sn Sn 15 35 43.5 -4.6
VLC Villacollemand 6.86 291 *e*Pn Pn 15 34 28.9 -1.2
VLC *e*Sn Sn 15 35 43.5 -4.6
UZH Uzhgorod 6.91 17 *e*P Pn 15 34 28.0 -2.7
UZH *e*S Sn 15 35 44.0 -5.2
APE Apeiranthos 6.92 134 *i*P Pn 15 34 30.2 -0.7
BURAR Bucovina Array 6.97 35 ⇑*i*P Pn 15 34 32.8 +1.2
BURAR Bucovina Array 6.97 35 ⇑P Pn 15 34 32.8 +1.2
BURAR S Sn 15 35 51.6 +0.8
BURAR Bucovina Array 6.97 35 ⇑P Pn 15 34 32.8 +1.2
BURAR S Sn 15 35 51.6 +0.8
LIKS Likavka 7.00 359 *e*SN Sn 15 35 51.2 -0.3
CRVS Cervenica-Dubn 7.01 12 *e*P Pn 15 34 33.1 +0.9
CRVS *e* 15 35 49.3
CRVS MLR MLR
comp=Z,100nm,1.8s
CRVS Cervenica-Dubn 7.01 12 *e*P Pn 15 34 33.1 +0.9
comp=Z,100nm,1.8s
CRVS *e*S Sn 15 35 49.3 -2.6
TIRR Tirgusor 7.07 67 ⇓*i*P Pn 15 34 34.3 +1.4
TIRR Tirgusor 7.07 67 *e*Pn Pn 15 34 32.6 -0.3
TIRR Tirgusor 7.07 67 *e*Pn Pn 15 34 32.6 -0.3
TIRR Tirgusor 7.07 67 P Pn 15 34 34.4 +1.5
KOLS Kolonicke sedl 7.19 16 *e*P Pn 15 34 35.7 +1.1
KOLS *e* 15 35 54.3
KOLS MLR MLR
comp=Z,100nm,1.7s
KOLS Kolonicke sedl 7.19 16 *e*P Pn 15 34 35.7 +1.1
comp=Z,100nm,1.7s
KOLS *e*S Sn 15 35 54.3 -1.9
SALO Salr 7.28 302 Pn Pn 15 34 35.6 -0.3
comp=Z,363nm,0.7s
MAGA Magasa 7.29 304 Pn Pn 15 34 34.9 -1.0
APPI Appiano 7.29 310 Pn Pn 15 34 35.9 -0.1
comp=Z,51nm,0.5s
NIE Niedzica 7.40 5 *e*Pn Pn 15 34 38.9 +1.4
NIE *e*Sn Sn 15 36 00.1 -1.3
SANT Santorini 7.42 138 *e*Pn Pn 15 34 37.9 +0.2
SANT Santorini 7.42 138 *e*Pn Pn 15 34 37.9 +0.2
STHS Stebnicka Huta 7.49 10 *e*PN Pn 15 34 40.4 +1.7
STHS *e*SN Sn 15 36 02.8 -0.8
MABI Malga Bissina 7.49 305 Pn Pn 15 34 38.3 -0.4
VRAC Vranov 7.50 346 P Pn 15 34 39.7 +0.9
comp=Z,0.6nm,0.3s,baz=96,slow=13,SNR=3.8
VRAC S Sn 15 36 02.9 -0.9
comp=Z,2.1nm,0.3s,baz=202,slow=5.5,SNR=7.2
VRAC LR LR 15 37 49.1
comp=Z,151nm,18.8s,baz=171,slow=40
VRAC Vranov 7.50 346 P Pn 15 34 39.7 +0.8
VRAC S Sn 15 36 02.9 -1.0
VRAC pmax pmax
comp=Z,1.0nm,0.3s
VRAC smax
comp=N,2.0nm,0.3s
WTTA Wattenberg 7.55 316 ⇑*i*Sn Sn 15 36 05.3 +0.2
WTTA Wattenberg 7.55 316 ⇑*i*Pn Pn 15 34 39.7 +0.1
SNR=32
WTTA ⇑*i*Sn Sn 15 36 05.3 +0.2
WTTA Wattenberg 7.55 316 *e*Pn Pn 15 34 39.7 +0.1
WTTA *e*Sn Sn 15 36 05.0 -0.1
WTTA Wattenberg 7.55 316 Pn Pn 15 34 39.7 +0.1
comp=N,31nm,6.0s
WTTA *i*S Sn 15 36 05.3 +0.2
WATA Walderalm 7.63 316 ⇓*i*Sn Sn 15 36 08.2 +1.2
WATA Walderalm 7.63 316 ⇓*i*Pn Pn 15 34 41.2 +0.6
SNR=31
WATA ⇓*i*Sn Sn 15 36 08.2 +1.2
WATA Walderalm 7.63 316 Pn Pn 15 34 41.2 +0.6
comp=N,30nm,7.0s
WATA *i*S Sn 15 36 08.2 +1.2
PGF Pioggiola 7.66 277 *e*Pn Pn 15 34 41.4 +0.4
BOB Bobbio (Coli) 7.67 294 Pn Pn 15 34 41.4 +0.2
comp=N,13nm,0.3s
BOB Bobbio (Coli) 7.67 294 P Pn 15 34 41.4 +0.2
BOB pmax pmax
comp=Z,13nm,0.3s
SQTA Sankt Quirin 7.75 315 ⇑*i*Sn Sn 15 36 11.5 +1.6
SQTA Sankt Quirin 7.75 315 ⇑*i*Pn Pn 15 34 42.9 +0.6
SNR=35
SQTA ⇑*i*Sn Sn 15 36 11.5 +1.6
SQTA Sankt Quirin 7.75 315 Pn Pn 15 34 42.9 +0.7
comp=Z,34nm,7.0s
SQTA *i*S Sn 15 36 11.5 +1.6
BRMO Bormio 7.79 308 Pn Pn 15 34 43.1 +0.3
comp=Z,25nm,1.0s
MORC Moravsky Berou 7.82 352 *e*Pn Pn 15 34 44.3 +1.0
comp=Z,7.5nm,0.6s
MORC *e*Sn Sn 15 36 09.4 -2.4
MORC Moravsky Berou 7.82 352 ⇑*i*P Pn 15 34 44.6 +1.3
MORC S Sn 15 36 11.5 -0.3
OKC Ostrava-Krasne 7.83 354 *e*PN Pn 15 34 44.7 +1.3
GEC2 GERESS Array S 7.85 332 *e*Pn Pn 15 34 44.3 +0.6
GEC2 *e*Sn Sn 15 36 14.0 +1.5
GERES GERESS Array B 7.85 332 P Pn 15 34 44.1 +0.4
comp=Z,2.6nm,0.3s,baz=155,slow=13,SNR=53
GERES S Sn 15 36 12.4 -0.1
comp=Z,1.3nm,0.3s,baz=149,slow=23,SNR=3.5
GERES LR LR 15 38 15.7
comp=Z,152nm,18.3s,baz=280,slow=42
GERES GERESS Array B 7.85 332 P Pn 15 34 44.1 +0.4
GERES S Sn 15 36 12.4 -0.1
GERES pmax pmax
comp=Z,3.0nm,0.3s
GERES smax
comp=N,1.0nm,0.3s
MDI Monti di Nese 7.86 301 Pn Pn 15 34 42.6 -1.2
MOTA Moosalm 7.88 315 ⇑*i*Sn Sn 15 36 14.7 +1.5
MOTA Moosalm 7.88 315 ⇑*i*Pn Pn 15 34 44.3 +0.3
SNR=39
MOTA ⇑*i*Sn Sn 15 36 14.7 +1.5
MOTA Moosalm 7.88 315 Pn Pn 15 34 44.3 +0.2
comp=N,38nm,9.0s
MOTA *i*S Sn 15 36 14.7 +1.5
KWP Kalwaria 7.94 16 *e*Pn Pn 15 34 47.3 +2.4
VSL Villasalto 7.96 255 *e*Pn Pn 15 34 43.1 -2.0
VSL *e*Sn Sn 15 36 11.0 -4.1
VSL Villasalto 7.96 255 *e*Pn Pn 15 34 43.1 -2.0
VSL *e*Sn Sn 15 36 11.0 -4.1
GVD Gavdhos 8.12 151 Pn Pn 15 34 47.4 +0.1
GVD Gavdhos 8.12 151 Pn Pn 15 34 47.4 0.0
KHC Kasperske Hory 8.14 332 *e*PN Pn 15 34 48.0 +0.4
KHC *e*SN Sn 15 36 20.1 +0.6
KHC Kasperske Hory 8.14 332 *e*Pn Pn 15 34 48.0 +0.4
KHC *e*Sn Sn 15 36 20.1 +0.6
OJC Ojcow 8.18 2 *e*P Pn 15 34 49.4 +1.3
OJC *e*S Sn 15 36 21.5 +1.0
DAVOX Davos 8.24 308 Pn Pn 15 34 50.0 +1.0
WET Wettzell 8.40 330 *e*Pn Pn 15 34 51.3 +0.1
LVV L'vov 8.43 21 *e*P Pn 15 34 52.0 +0.3
DAVA Damuels 8.51 311 ⇑*i*Sn Sn 15 36 30.0 +1.2
DAVA Damuels 8.51 311 ⇓*i*Pn Pn 15 34 53.2 +0.5
SNR=5.8
DAVA ⇑*i*Sn Sn 15 36 30.0 +1.2
DAVA Damuels 8.51 311 *e*Pn Pn 15 34 53.2 +0.5
DAVA Damuels 8.51 311 Pn Pn 15 34 53.2 +0.5
comp=N,5.0nm,8.0s
DPC Dobruska-Polom 8.55 347 *e*PN Pn 15 34 54.8 +1.5
PRU Pruhonice 8.60 339 *e*PN Pn 15 34 55.5 +1.6
SAOF Saorge 8.82 287 P Pn 15 34 56.5 -0.5
SBF Sospel 8.89 286 *e*Pn Pn 15 34 57.1 -0.9
SBF *e*Sn Sn 15 36 32.1 -6.0
comp=N,35nm,0.6s
AUTN L'Aution 8.92 287 P Pn 15 34 58.3 0.0
TOUF Mont Tournerai 9.05 287 P Pn 15 35 00.0 -0.1
ROTZ Rotzenmuhle 9.16 330 *e*Pn Pn 15 35 01.0 -0.6
ROTZ *e*Sn Sn 15 36 45.6 +0.9
MANZ Manzenberg 9.38 330 *e*Pn Pn 15 35 04.1 -0.5
FRF La Foret Royal 9.43 283 *e*Pn Pn 15 35 04.8 -0.5
FRF *e*Sn Sn 15 36 45.0 -6.3
comp=N,7.6nm,0.4s
MBDF Montbardon 9.51 291 *e*Pn Pn 15 35 04.7 -1.7
MBDF *e*Sn Sn 15 36 47.3 -6.0
comp=N,15nm,0.5s
LMR La Mourre 9.51 282 *e*Pn Pn 15 35 06.3 -0.2
LMR *e*Sn Sn 15 36 46.9 -6.4
comp=N,9.6nm,0.5s
BRG Berggiesshubel 9.56 339 *e*P Pn 15 35 07.7 +0.5
comp=N,2.5nm,0.8s
BRG Berggiesshubel 9.56 339 *e*P Pn 15 35 07.7 +0.5
BRG pmax pmax
comp=Z,3.0nm,0.8s
ISP Isparta 9.57 112 *i*P Pn 15 35 12.8 +5.5
TANN Tannenbergstha 9.61 333 *e*Pn Pn 15 35 08.1 +0.3
TANN *e*Sn Sn 15 36 56.8 +1.1
GUNZ Gunzen 9.61 332 *e*Pn Pn 15 35 07.9 +0.1
BNI Bardonecchia 9.65 292 *e*P Pn 15 35 07.1 -1.2
BNI pmax pmax
comp=Z,9.0nm,0.8s
BNI Bardonecchia 9.65 292 *e*P Pn 15 35 07.1 -1.2
comp=Z,9.2nm,0.8s
BNI *e*Sn Sn 15 36 40.7 -16
BNI Bardonecchia 9.65 292 *e*P Pn 15 35 07.1 -1.2
comp=Z,9.2nm,0.8s
FBE Freiberg 9.77 337 *e*Pn Pn 15 35 10.9 +0.9
STU Stuttgart 9.78 317 *e*P Pn 15 35 08.1 -2.0
STU pmax pmax
comp=Z,17nm,0.6s
STU Stuttgart 9.78 317 *e*Pn Pn 15 35 08.1 -2.0
comp=Z,17nm,0.6s
STU Stuttgart 9.78 317 *e*Pn Pn 15 35 08.1 -2.0
comp=Z,17nm,0.6s
FELD Feldberg im Sc 9.90 310 P Pn 15 35 10.4 -1.3
BFO Black Forest 9.97 313 *e*Pn Pn 15 35 10.3 -2.4
BBS Basel-Blauen 9.98 307 P Pn 15 35 12.7 -0.2
KEST Kesra 10.00 234 P Pn 15 35 15.2 +2.0
comp=Z,0.1nm,0.3s,baz=224,slow=17,SNR=4.5
MOX Moxa 10.10 331 *e*Pn Pn 15 35 14.3 -0.2
MOX Moxa 10.10 331 *e*PN Pn 15 35 14.2 -0.3
MOX *e*SN Sn 15 37 31.3 +24
MOX
comp=Z,100nm,15.0s
MOX Moxa 10.10 331 *e*Pn Pn 15 35 14.2 -0.3
MOX *e*Sn Sn 15 37 31.3 +24
ORIF Oris-en-Rattie 10.17 291 *e*Pn Pn 15 35 15.3 -0.2
ORIF *e*Sn Sn 15 37 02.7 -6.8
comp=Z,10.0nm,0.5s
CLL Collm 10.22 337 *e*Pn Pn 15 35 16.9 +0.8
CLL Collm 10.22 337 *i*PN Pn 15 35 16.3 +0.2
comp=Z,logA/T=1.0
CLL *e* 15 35 28.0
CLL *e* 15 37 41.0
CLL *e*SG Sn 15 38 18.0 +67
CLL Collm 10.22 337 *i*Pn Pn 15 35 16.3 +0.2
comp=Z,10.0nm,1.0s
CLL *ex* x 15 35 28.0
CLL *e*Sb Sn 15 37 41.0 +30
CLL *e*Sg Sn 15 38 18.0 +67
CLL Collm 10.22 337 *i*P Pn 15 35 16.3 +0.2
CLL pmax pmax
comp=Z,10.0nm,1.0s
CLL MLR MLR
comp=Z,200nm,15.3s
SMRF Simiane la Rot 10.24 285 *e*Pn Pn 15 35 15.9 -0.5
SMRF *e*Sn Sn 15 37 03.8 -7.4
comp=Z,1.0nm,0.3s
LOMF Lomont 10.34 305 P Pn 15 35 16.8 -1.0
MOF Molkenrain 10.39 308 P Pn 15 35 17.6 -0.9
CABF La Chapelle 10.51 300 *e*Pn Pn 15 35 18.6 -1.5
CABF *e*Sn Sn 15 37 10.9 -6.9
comp=Z,7.1nm,0.4s
HINF Hinteralfeld 10.54 307 *e*Pn Pn 15 35 19.7 -0.8
HINF *e*Sn Sn 15 37 12.3 -6.2
comp=Z,4.6nm,0.3s
WLS Welschbruch 10.55 311 P Pn 15 35 19.6 -1.1
ECH Echery 10.56 310 P Pn 15 35 19.8 -1.0
CDF Champ du Feu 10.60 311 *e*Pn Pn 15 35 19.1 -2.2
CDF *e*Sn Sn 15 37 13.5 -6.4
comp=Z,4.7nm,0.5s
HAU Haudompre 10.93 307 *e*Pn Pn 15 35 24.9 -0.9
HAU *e*Sn Sn 15 37 21.0 -7.0
comp=Z,6.9nm,0.3s
VIVF Saint-Julien-l 11.00 290 *e*Pn Pn 15 35 24.7 -2.2
VIVF *e*Sn Sn 15 37 22.4 -7.5
comp=Z,5.5nm,0.6s
AKASG Malin Array Be 11.02 35 P Pn 15 35 27.6 +0.4
comp=Z,0.2nm,0.3s,baz=225,slow=13,SNR=14
BR131 Keskin Array S 11.10 97 *e*Pn Pn 15 35 39.2 +11
BR131 *e* 15 35 48.0
BRTR Keskin Array B 11.10 97 P Pn 15 35 29.6 +1.5
comp=Z,0.2nm,0.3s,baz=278,slow=11,SNR=5.0
BRTR Keskin Array B 11.10 97 P Pn 15 35 29.6 +1.4
TNS Taunus Mts 11.10 321 *e*Pn Pn 15 35 27.7 -0.6
THEF They Montfort 11.24 308 P Pn 15 35 30.1 -0.1
MEZF Maizieres J'vi 11.93 308 *e*Pn Pn 15 35 38.9 -0.6
SMF Signal de Mont 11.98 298 *e*Pn Pn 15 35 37.8 -2.5
SMF *e*Sn Sn 15 37 45.3 -8.6
comp=Z,8.3nm,0.4s
LOR Lormes 12.17 301 *e*Pn Pn 15 35 41.0 -1.8
LOR *e*Sn Sn 15 37 50.4 -8.0
comp=Z,8.0nm,0.3s
SSF Saint Saulge 12.33 299 *e*Pn Pn 15 35 43.3 -1.7
SSF *e*Sn Sn 15 37 53.9 -8.4
comp=Z,6.0nm,0.5s
AVF Avril sur Loir 12.35 298 *e*Pn Pn 15 35 43.7 -1.6
AVF *e*Sn Sn 15 37 54.0 -8.8
comp=Z,1.6nm,0.3s
HMAT Matruh 12.59 148 ⇑P Pn 15 35 41.4 -7.3
BGF Bois d'Agland 12.62 296 *e*Pn Pn 15 35 46.5 -2.5
BGF *e*Sn Sn 15 38 00.9 -8.6
comp=Z,13nm,0.4s
MTLF Montolieu 12.64 282 *e*Pn Pn 15 35 48.4 -0.9
GIVF Givet 12.86 314 *e*Pn Pn 15 35 51.4 -0.9
TCF Toulx Ste Croi 12.98 295 *e*Pn Pn 15 35 53.7 -0.2
TCF *e*Sn Sn 15 38 09.6 -8.7
comp=Z,1.7nm,0.3s
BAIF Baives 13.18 313 *e*Pn Pn 15 35 56.0 -0.6
SWA1 13.78 156 ⇑P Pn 15 35 58.5 -6.3
MMAI Mount Meron Ar 15.61 120 P Pn 15 36 31.3 +1.7
comp=Z,0.7nm,0.3s,baz=317,slow=10,SNR=5.1
HFRF Wahat Farafira 16.60 151 ⇑P Pn 15 36 37.4 -4.8
VSU Vasula 17.08 13 ⇑*e*P Pn 15 36 49.5 +1.2
OBN Obninsk 17.29 35 *e*P Pn 15 36 54.4 +3.5
OBN pmax pmax
comp=Z,3.0nm,0.7s
EIL Elat 17.67 129 Pn Pn 15 36 50.7 -4.9
HFS Hagfors 18.43 351 P Pn 15 37 02.8 -2.2
comp=Z,1.7nm,0.3s,baz=165,slow=12,SNR=59
HFS LR LR 15 43 40.1
comp=Z,43nm,19.1s,baz=168,slow=35
HDK1 Dakhla 18.46 150 ⇑P Pn 15 37 03.6 -1.7
KONO Kongsberg 18.62 344 *i*P Pn 15 37 04.3 -2.9
NAO01 NORSAR Array S 19.50 348 *e*P Pn 15 37 12.8 -5.1
comp=Z,9.8nm,0.6s
NB2 NORSAR Subarra 19.64 348 P Pn 15 37 15.6 -4.0
comp=Z,1.5nm,0.4s,baz=162,slow=11
NOA NORSAR Array B 19.64 348 P Pn 15 37 15.4 -4.2
comp=Z,1.2nm,0.3s,baz=150,slow=9.9,SNR=34
NOA LR LR 15 45 23.0
comp=Z,39nm,18.6s,baz=165,slow=38
NOA NORSAR Array B 19.64 348 P Pn 15 37 15.4 -4.2
NOA pmax pmax
comp=Z,1.0nm,0.3s
NOA MLR MLR
comp=Z,39nm,18.6s
EKA Eskdalemuir Ar 19.79 320 P Pn 15 37 18.2 -3.1
comp=Z,0.3nm,0.3s,baz=112,slow=8.7,SNR=10
EKA Eskdalemuir Ar 19.79 320 P Pn 15 37 18.2 -3.2
ESK Eskdalemuir 19.81 320 *e*P Pn 15 37 17.3 -4.3
ESK pmax pmax
comp=Z,20nm,1.4s
ESK Eskdalemuir 19.81 320 *e*P Pn 15 37 17.3 -4.3
comp=Z,20nm,1.4s
ESK Eskdalemuir 19.81 320 *e*P Pn 15 37 17.3 -4.3
comp=Z,20nm,1.4s
FINES FINESS Array B 19.84 10 P Pn 15 37 18.2 -3.8
comp=Z,0.4nm,0.3s,baz=180,slow=12,SNR=23
FIA1 FINESS Array S 19.85 10 *e*P Pn 15 37 17.9 -4.1
KAF Kangasniemi 20.52 9 *e*p P 15 37 25.9 -1.9
comp=Z,2.4nm,0.3s
KAF Kangasniemi 20.52 9 *e*P P 15 37 25.9 -1.9
KAF pmax pmax
comp=Z,2.0nm,0.3s
JOF Joensuu 22.07 15 *e*p P 15 37 42.5 -1.9
comp=Z,3.0nm,0.4s,mb4.1
JOF Joensuu 22.07 15 *e*P P 15 37 42.5 -1.9
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.1
TMCR Tamitsa 24.64 20 *e*P P 15 38 08.6 -1.5
TMCR pmax pmax
comp=Z,10.0nm,0.4s,mb4.7
TMCR Tamitsa 24.64 20 *e*P P 15 38 08.6 -1.5
comp=Z,10.0nm,0.4s,mb4.7
ARCES ARCESS Array B 27.74 5 P P 15 38 34.7 -3.3
comp=Z,2.6nm,0.8s,mb3.9,baz=187,slow=8.6,SNR=15
ARCES LR LR 15 50 56.4
comp=Z,57nm,18.6s,MS3.2,baz=259,slow=39
ARCES ARCESS Array B 27.74 5 P P 15 38 34.7 -3.3
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,57nm,18.6s
TORD Torodi Ar. Bea 32.62 213 P P 15 39 20.8 -0.4
comp=Z,3.3nm,0.6s,mb4.5,baz=16,slow=9.6,SNR=26
ZRNK Zerenda 34.63 54 *e*P P 15 39 38.9 +0.1
ZRNK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
ZRNK Zerenda 34.63 54 *e*P P 15 39 38.9 +0.1
comp=Z,1.7nm,0.9s,mb4.0
BRVK Borovoye 35.40 54 *e*P P 15 39 40.3 -5.1
BRVK pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
BRVK Borovoye 35.40 54 *e*P P 15 39 40.3 -5.1
comp=Z,2.9nm,0.5s,mb4.5
BRVK Borovoye 35.40 54 *e*P P 15 39 40.3 -5.1
comp=Z,3.0nm,0.5s,mb4.5
BVAR Borovoye Array 35.47 54 P P 15 39 44.6 -1.3
comp=Z,1.2nm,0.7s,mb3.9,baz=270,slow=7.4,SNR=10.0
BVAR Borovoye Array 35.47 54 P P 15 39 44.6 -1.4
BVAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 44.17 61 P P 15 40 55.6 -2.7
comp=Z,0.9nm,0.5s,mb3.8,baz=287,slow=8.4,SNR=8.9
MKAR Makanchi Array 44.17 61 P P 15 40 55.6 -2.7
MKAR pmax pmax
comp=Z,1.0nm,0.5s
WMQ Urumqi 48.78 63 *e*P P 15 41 31.0 -3.5
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.1
WMQ LR LR
comp=N,29nm,12.0s,MS3.7
WMQ LR LR
comp=E,37nm,13.0s,MS3.7
WMQ LR LR
comp=Z,30nm,12.0s,MS3.5
SONM Songino Array 58.76 52 P P 15 42 46.1 -1.5
comp=Z,1.0nm,0.9s,mb3.9,baz=305,slow=8.7,SNR=4.6
SONM Songino Array 58.76 52 P P 15 42 46.1 -1.5
SONM pmax pmax
comp=Z,1.0nm,0.9s
HHC Hu-ho-hao-te 65.64 56 *e*P P 15 43 29.3 -4.4
HHC PCP PcP 15 44 00.5 -4.6
HHC PP PP 15 45 56.5 -1.6
HHC PCS 15 48 04.0
HHC S S 15 52 06.3 -13
HHC AMB AMB
comp=Z,10.0nm,1.1s,mb4.8
HHC AMB AMB
comp=Z,61nm,3.9s
HHC LR LR
comp=N,88nm,22.8s,MS4.1
HHC LR LR
comp=E,103nm,21.8s,MS4.1
HHC LR LR
comp=Z,122nm,24.7s,MS4.0
KMI Kunming 68.96 75 P P 15 43 50.5 -4.3
KMI AMB AMB
comp=Z,5.0nm,0.6s,mb4.6
MDJ Mudanjiang 73.58 44 P P 15 44 16.5 -6.2
MDJ PP PP 15 47 00.8 -5.9
MDJ S S 15 53 41.0 -12
MDJ SCS ScS 15 54 19.0 -13
MDJ AMB AMB
comp=Z,4.0nm,0.9s,mb4.3
MDJ AMB AMB
comp=Z,29nm,4.1s
MDJ LR LR
comp=N,22nm,16.6s,MS3.6
MDJ LR LR
comp=E,10.0nm,17.0s,MS3.6
MDJ LR LR
comp=Z,23nm,16.2s,MS3.5
NJ2 Nanjing 75.67 60 *e*P P 15 44 31.5 -3.3
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
PDAR Pinedale Array 83.84 325 P P 15 45 16.3 -2.9

comp=Z,0.3nm,0.6s,mb3.6,baz=51,slow=7.1,SNR=3.6
MJAR Matsushiro Arr 83.93 45 P **P** **15 45 17.4 -2.2**
comp=Z,0.4nm,0.5s,mb3.8,baz=307,slow=10,SNR=4.2

ISCJB ***26*** *15:33:35.5±0.3, 5470N±003×15987E±009, h167km±2km, mb3.8/15, Error ellipse: s-maj=9.2km s-min=3.7km az=39.5*
MOS ***26*** *15:33:35.0±1.2, 5480N×15959E, h166km, mb3.9/10, Error ellipse: s-maj=21.1km s-min=9.4km az=84.8*
KRSC ***26*** *15:33:35, 5466N×15998E, h159km, ML4.1*
NEIC ***26*** *15:33:37.4±1.5, 5471N×15951E, h179km±15km, mb4.1/5, Error ellipse: s-maj=23.3km s-min=19.9km az=111.0*
IDC ***26*** *15:33:40.6±5.4, 5488N×15929E, h198km±53km, mb3.3/11, mb1 3.5/12, mb1mx3.3/25, mbtmp3.9/12, Error ellipse: s-maj=18.8km s-min=12.6km az=120.0*

ISC 26 15:33:36.3±0.3, 5469N±003×15987E±009, h164km±2km, n66, σ1§06/96, mb3.8/15, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUMR	**Tumrok**	**0.61**	**15**	*i* P	**Pn**	**15 34 00.3**	**+0.5**
TUMR				*i* S	**Sn**	**15 34 18.1**	**+0.3**
KII	**Karymskiy**	**0.70**	**201**	P	**Pn**	**15 34 00.8**	**+0.5**
KII				S	**Sn**	**15 34 19.6**	**+0.9**
KII	**Karymskiy**	**0.70**	**201**	*i* P	**Pn**	**15 34 00.8**	**+0.5**
KII				*i* S	**Sn**	**15 34 19.6**	**+0.9**
KMNR	**Kamenistaya**	**1.09**	**11**	*i* P	**Pn**	**15 34 03.8**	**+0.7**
KMNR				*i* S	**Sn**	**15 34 24.3**	**+0.6**
MKZ	**Mys Kozlova**	**1.09**	**96**	P	**Pn**	**15 34 02.8**	**-0.3**
MKZ				S	**Sn**	**15 34 22.6**	**-1.1**
MKZ	**Mys Kozlova**	**1.09**	**96**	*i* P	**Pn**	**15 34 02.8**	**-0.3**
MKZ				*i* S	**Sn**	**15 34 22.6**	**-1.1**
KPT	**Kopyto**	**1.29**	**9**	*i* P	**Pn**	**15 34 04.9**	**0.0**
KPT				*e*S	**Sn**	**15 34 26.1**	**-0.8**
KOZ	**Kozyrevsk**	**1.37**	**0**	P	**Pn**	**15 34 05.7**	**0.0**
KOZ				S	**Sn**	**15 34 27.6**	**-0.6**
KOZ	**Kozyrevsk**	**1.37**	**0**	*i* P	**Pn**	**15 34 05.7**	**0.0**
KOZ				*i* S	**Sn**	**15 34 27.6**	**-0.6**
KOZR	**Kozyr**	**1.38**	**1**	PN	**Pn**	**15 34 05.7**	**0.0**
KOZR				S	**Sn**	**15 34 27.6**	**-0.7**
ZLN	**Zelenaya**	**1.43**	**21**	*i* P	**Pn**	**15 34 07.1**	**+0.9**
ZLN				*e*S	**Sn**	**15 34 30.3**	**+1.0**
GNL	**Ganaly**	**1.51**	**229**	*i* P	**Pn**	**15 34 07.4**	**+0.4**
GNL				*i* S	**Sn**	**15 34 30.3**	**-0.4**
NLC	**Nalytchevo**	**1.56**	**192**	P	**Pn**	**15 34 07.4**	**-0.1**
NLC				S	**Sn**	**15 34 30.7**	**-0.8**
NLC	**Nalytchevo**	**1.56**	**192**	*i* P	**Pn**	**15 34 07.4**	**-0.1**
NLC				*i* S	**Sn**	**15 34 30.7**	**-0.8**
AVH	**Avacha**	**1.58**	**206**	*i* P	**Pn**	**15 34 08.9**	**+1.2**
AVH				*i* S	**Sn**	**15 34 33.2**	**+1.3**
KRSR	**Krestovskiy**	**1.58**	**14**	*i* P	**Pn**	**15 34 08.1**	**+0.4**
KRSR				*i* S	**Sn**	**15 34 31.9**	**0.0**
SPN	**Mys Shipunski**	**1.60**	**177**	P	**Pn**	**15 34 07.1**	**-0.8**
SPN				S	**Sn**	**15 34 29.7**	**-2.6**
SPN	**Mys Shipunski**	**1.60**	**177**	*i* P	**Pn**	**15 34 07.1**	**-0.8**
SPN				*i* S	**Sn**	**15 34 29.7**	**-2.6**
SRDR	**Sredinnyy**	**1.63**	**357**	*i* P	**Pn**	**15 34 08.6**	**+0.3**
SRDR				*i* S	**Sn**	**15 34 32.0**	**-0.9**
KLY	**Klyuchi**	**1.69**	**15**	P	**Pn**	**15 34 09.5**	**+0.7**
KLY				S	**Sn**	**15 34 34.2**	**+0.3**
KLY	**Klyuchi**	**1.69**	**15**	*i* P	**Pn**	**15 34 09.5**	**+0.7**
KLY				*i* S	**Sn**	**15 34 34.2**	**+0.3**
PET	**Petropavlovsk**	**1.82**	**204**	P	**Pn**	**15 34 10.6**	**+0.3**
PET				S	**Sn**	**15 34 36.0**	**-0.4**
PET	**Petropavlovsk**	**1.82**	**204**	⇓ *i* PN	**Pn**	**15 34 10.5**	**+0.2**
PET				*e*S	**Sn**	**15 34 36.4**	**0.0**
PET				pmax	pmax		
	comp=Z,35nm,0.4s						
PET				pmax	pmax		
	comp=Z,200nm,2.4s						
PET				smax			
	comp=E,200nm,4.0s						
PET				smax			
	comp=N,351nm,0.6s						
PET				smax			
	comp=E,312nm,0.5s						
PET	**Petropavlovsk**	**1.82**	**204**	*e*Pn	**Pn**	**15 34 10.2**	**0.0**
PET				*e*Sn	**Sn**	**15 34 36.3**	**-0.2**
PET	**Petropavlovsk**	**1.82**	**204**	*i* P	**Pn**	**15 34 10.6**	**+0.3**
PET				*i* S	**Sn**	**15 34 36.0**	**-0.4**
SRKR	**Sorokina**	**2.10**	**20**	*i* P	**Pn**	**15 34 14.3**	**+0.9**
SRKR				*i* S	**Sn**	**15 34 42.2**	**+0.2**
KBTR	**Krutoberegovo**	**2.27**	**47**	P	**Pn**	**15 34 15.3**	**0.0**
KBTR				S	**Sn**	**15 34 43.8**	**-1.6**
KBTR	**Krutoberegovo**	**2.27**	**47**	*i* P	**Pn**	**15 34 15.3**	**0.0**
KBTR				*i* S	**Sn**	**15 34 43.8**	**-1.6**
GRL	**Gorelyy**	**2.40**	**207**	*i* P	**Pn**	**15 34 18.1**	**+1.3**
RUS	**Russkaya**	**2.40**	**200**	P	**Pn**	**15 34 16.4**	**-0.5**
RUS				S	**Sn**	**15 34 46.3**	**-2.0**
RUS	**Russkaya**	**2.40**	**200**	*i* P	**Pn**	**15 34 16.4**	**-0.5**
RUS				*i* S	**Sn**	**15 34 46.3**	**-2.0**
MIPR	**Malaya Ipel'ka**	**3.05**	**219**	P	**Pn**	**15 34 25.1**	**+0.3**
MA2	**Magadan**	**6.96**	**318**	*e*PN	**Pn**	**15 35 16.8**	**+1.0**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MA2	**Magadan**	**6.96**	**318**	*e*Pn	**Pn**	**15 35 16.8**	**+1.0**
	comp=Z,3.5nm,0.7s						
YSS	**Yuzh-Sakhalins**	**13.28**	**241**	*e*PN	**Pn**	**15 36 44.1**	**+5.6**
ASAJ	**Asahikawa**	**15.39**	**234**	P	**Pn**	**15 37 07.0**	**+2.2**
	comp=Z,1.3nm,0.3s,baz=34,slow=2.3,SNR=15						
ASAJ	**Asahikawa**	**15.39**	**234**	P	**Pn**	**15 37 07.0**	**+2.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	**17.32**	**307**	*e*P	**Pn**	**15 37 25.4**	**-2.8**
YAK				pmax	pmax		
	comp=Z,24nm,0.6s						
YAK	**Yakutsk**	**17.32**	**307**	*e*P	**Pn**	**15 37 25.4**	**-2.8**
	comp=Z,24nm,0.6s						
YAK				*e*PcP	PcP	15 41 49.9	-11
MAJO	**Matsushiro**	**23.48**	**228**	*e*P	**P**	**15 38 31.3**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
MAJO	**Matsushiro**	**23.48**	**228**	*e*P	**P**	**15 38 31.3**	**+0.3**
	comp=Z,5.1nm,0.6s,mb4.1						
MJAR	**Matsushiro Arr**	**23.48**	**228**	P	**P**	**15 38 31.5**	**+0.5**
	comp=Z,2.1nm,0.6s,mb3.8,baz=313,slow=16,SNR=16						
MJAR	**Matsushiro Arr**	**23.48**	**228**	P	**P**	**15 38 31.5**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR	**Matsushiro Arr**	**23.48**	**228**	P	**P**	**15 38 31.5**	**+0.5**
MCK	**McKinley**	**26.99**	**50**	P	**P**	**15 39 03.9**	**+1.1**
INK	**Inuvik**	**32.70**	**39**	P	**P**	**15 39 53.8**	**+0.7**
	comp=Z,1.4nm,0.7s,mb3.8,baz=285,slow=8.9,SNR=11						
INK	**Inuvik**	**32.70**	**39**	P	**P**	**15 39 53.8**	**+0.8**
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TLY	**Talaya**	**33.06**	**288**	*e*P	**P**	**15 39 56.8**	**+0.6**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**47.36**	**294**	P	**P**	**15 41 50.6**	**-3.1**
	comp=Z,0.8nm,0.5s,mb3.6,baz=54,slow=7.9,SNR=5.1						
MKAR	**Makanchi Array**	**47.36**	**294**	P	**P**	**15 41 50.6**	**-3.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**49.30**	**307**	P	**P**	**15 42 05.5**	**-3.0**
	comp=Z,1.6nm,0.5s,mb3.9,baz=68,slow=8.0,SNR=8.5						
BVAR	**Borovoye Array**	**49.30**	**307**	P	**P**	**15 42 05.5**	**-3.0**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZRNK	**Zerenda**	**49.99**	**308**	*e*P	**P**	**15 42 10.7**	**-3.0**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
ZRNK	**Zerenda**	**49.99**	**308**	*e*P	**P**	**15 42 10.7**	**-3.0**
	comp=Z,1.3nm,0.6s,mb3.7						
AAK	**Ala-Archa**	**54.27**	**295**	P	**P**	**15 42 40.5**	**-4.8**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.8s,mb4.2						
AAK	**Ala-Archa**	**54.27**	**295**	P	**P**	**15 42 40.5**	**-4.8**
	comp=Z,9.1nm,1.8s,mb4.2						
PDAR	**Pinedale Array**	**56.87**	**62**	P	**P**	**15 43 06.1**	**+2.3**
	comp=Z,1.4nm,0.6s,mb4.0,baz=350,slow=2.8,SNR=15						
FINES	**FINESS Array B**	**58.60**	**336**	P	**P**	**15 43 13.1**	**-2.8**
	comp=Z,0.4nm,0.4s,mb3.6,baz=38,slow=9.6,SNR=5.9						
NOA	**NORSAR Array B**	**61.97**	**343**	P	**P**	**15 43 38.2**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.2,baz=23,slow=6.6,SNR=2.8						
HFS	**Hagfors**	**62.39**	**342**	P	**P**	**15 43 41.1**	**-0.5**
	comp=Z,0.4nm,0.5s,mb3.5,baz=62,slow=3.5,SNR=4.1						
EKA	**Eskdalemuir Ar**	**69.46**	**350**	P	**P**	**15 44 25.4**	**-1.3**
	comp=Z,0.9nm,0.7s,mb3.6,baz=36,slow=7.2,SNR=3.5						
EKA	**Eskdalemuir Ar**	**69.46**	**350**	P	**P**	**15 44 25.4**	**-1.3**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**77.48**	**205**	P	**P**	**15 45 13.7**	**+0.2**
	comp=Z,1.7nm,0.8s,mb3.7,baz=20,slow=6.1,SNR=33						
WRA	**Warramunga Arr**	**77.48**	**205**	P	**P**	**15 45 13.7**	**+0.2**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**81.16**	**204**	P	**P**	**15 45 34.2**	**+0.7**
	comp=Z,1.2nm,0.9s,mb3.5,baz=15,slow=5.6,SNR=16						
ASAR	**Alice Springs**	**81.16**	**204**	P	**P**	**15 45 34.2**	**+0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

ISCJB ***26*** *16:00:52.4±1.9, 380S±003×14005E±005, h25km±13km, mb4.6/26, MS3.8/10, Error ellipse: s-maj=8.1km s-min=5.7km az=174.0*
IDC ***26*** *16:00:55.3±6.3, 372S×14004E, h33km±47km, mb4.1/6, mb1 4.3/8, mb1mx4.2/11, mbtmp4.4/8, ML4.0/2, MS3.9/9, Ms1 3.9/9, ms1mx3.5/16, Error ellipse: s-maj=26.9km s-min=18.0km az=45.0*
NEIC ***26*** *16:00:56.7±1.3, 375S×14004E, h46km±12km, mb4.9/16, Error ellipse: s-maj=10.2km s-min=7.5km az=47.0*
BJI ***26*** *16:00:56.6, 380S×14000E, h46km, mB5.1, mb4.8, Ms4.3, Msz4.2*
MOS ***26*** *16:00:56.9±3.1, 4.10S×14050E, h33km, mb5.0/7, Error ellipse: s-maj=16.1km s-min=9.5km az=107.7*

ISC 26 16:00:57.9±1.1, 386S±004×14001E±005, h53km±10km, h55km±4.9km: pP-P, n74, σ1§18/78, mb4.6/26, MS3.9/9, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.99**	**128**	Pn	**Pn**	**16 03 04.8**	**-0.2**
	4.1nm,0.3s,baz=345,slow=6.8,SNR=24						
PMG				Sn	**Sn**	**16 04 45.0**	**+0.3**
	1.1nm,0.3s,baz=9.6,slow=21,SNR=3.7						
PMG	**Port Moresby**	**8.99**	**128**	*e*P	**Pn**	**16 03 05.2**	**+0.2**
PMG				pmax	pmax		
	comp=Z,49nm,0.7s						
PMG	**Port Moresby**	**8.99**	**128**	*e*Pn	**Pn**	**16 03 05.2**	**+0.2**
	comp=Z,49nm,0.7s						
KAKA	**Kakadu**	**11.55**	**220**	*e*P	**Pn**	**16 03 39.7**	**-0.3**
	comp=Z,134nm,0.4s						
KAKA				*e*S	**Sn**	**16 05 48.6**	**+1.2**
WRAB	**Tennant Creek**	**16.91**	**199**	*i* P	**Pn**	**16 04 48.9**	**-1.8**
WRAB	**Tennant Creek**	**16.91**	**199**	*e*Pn	**Pn**	**16 04 48.2**	**-2.5**
	comp=Z,133nm,0.8s						
WB2	**Warramunga Arr**	**16.91**	**199**	*e*P	**Pn**	**16 04 48.9**	**-1.9**
WB2				*e*		16 04 55.0	
WB2				*e*S	**S**	**16 07 57.1**	**-8.6**
WRA	**Warramunga Arr**	**16.92**	**199**	Pn	**Pn**	**16 04 50.0**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=17,slow=13,SNR=67						
WRA				Sn	**Sn**	**16 07 56.2**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=11,slow=22,SNR=5.0						
WRA				Lg		16 09 59.0	
	comp=Z,0.4nm,0.3s,baz=20,slow=29,SNR=4.0						
WRA				LR	LR	16 11 55.2	
	comp=Z,517nm,18.2s,baz=340,slow=39						
WRA	**Warramunga Arr**	**16.92**	**199**	P	**Pn**	**16 04 50.0**	**-0.8**
WRA						16 07 56.2	
CTA	**Charters Tower**	**17.24**	**160**	*e*P	**Pn**	**16 04 57.1**	**+2.2**
	comp=Z,6.9nm,0.6s						
CTA				*e*		16 05 12.6	
CTA	**Charters Tower**	**17.24**	**160**	P	**Pn**	**16 04 58.1**	**+3.2**
	comp=Z,1.3nm,0.3s,baz=335,slow=12,SNR=23						
CTA				Lg		16 10 06.3	
	comp=Z,0.3nm,0.3s,baz=238,slow=23,SNR=3.3						
CTA				LR	LR	16 12 03.0	
	comp=Z,270nm,19.5s,baz=344,slow=38						
CTAO	**Charters Tower**	**17.24**	**160**	*e*P	**Pn**	**16 04 57.0**	**+2.1**
CTAO				pmax	pmax		
	comp=Z,17nm,0.8s						
CTAO	**Charters Tower**	**17.24**	**160**	*e*Pn	**Pn**	**16 04 57.0**	**+2.1**
	comp=Z,17nm,0.8s						
DAV	**Davao City (W)**	**18.03**	**307**	Pn	**Pn**	**16 05 04.6**	**0.0**
FITZ	**Fitzroy Crossi**	**19.96**	**224**	*e*P	**Pn**	**16 05 27.5**	**-0.1**
	comp=Z,16nm,0.3s						
FITZ				*e*S	**S**	**16 09 04.9**	**-2.2**
FITZ	**Fitzroy Crossi**	**19.96**	**224**	P	**Pn**	**16 05 27.0**	**-0.6**
	comp=Z,19nm,0.7s,baz=51,slow=12,SNR=63						
FITZ				S	**S**	**16 09 06.4**	**-0.6**
	comp=Z,25nm,0.7s,baz=203,slow=15,SNR=7.6						
FITZ				LR	LR	16 14 02.7	
	comp=Z,231nm,18.0s,baz=244,slow=39						
AS31	**Alice Springs**	**20.56**	**196**	*e*P	**P**	**16 05 33.4**	**+1.5**
ASAR	**Alice Springs**	**20.56**	**196**	P	**P**	**16 05 33.5**	**+1.5**
	comp=Z,96nm,0.6s,baz=28,slow=7.4,SNR=567						
ASAR				S	**S**	**16 09 20.1**	**+1.1**
	comp=Z,2.5nm,0.6s,baz=11,slow=28,SNR=4.3						
ASAR				LR	LR	16 14 02.5	
	comp=Z,427nm,18.3s,MS3.9,baz=11,slow=38						
ASAR	**Alice Springs**	**20.56**	**196**	P	**P**	**16 05 33.5**	**+1.5**
ASAR				S	**S**	**16 09 20.1**	**+1.1**
HNR	**Honiara**	**20.56**	**107**	P	**P**	**16 05 32.0**	**0.0**
HNR				pmax	pmax		
	comp=Z,216nm,1.2s						
HNR	**Honiara**	**20.56**	**107**	P	**P**	**16 05 32.0**	**0.0**
	comp=Z,216nm,1.2s						
ASPA	**Alice Springs**	**20.56**	**196**	*e*P	**P**	**16 05 33.4**	**+1.4**
ASPA				*e*S	**S**	**16 09 26.9**	**+7.9**
KKM	**Kota Kinabalu**	**25.71**	**292**	P	**P**	**16 06 24.5**	**+1.4**
MBWA	**Marble Bar**	**26.16**	**227**	*e*P	**P**	**16 06 29.5**	**+2.4**
	comp=Z,7.1nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**27.91**	**177**	*e*P	**P**	**16 06 42.7**	**-0.1**
	comp=Z,3.7nm,1.1s,mb3.9						
STKA	**Stephens Creek**	**27.91**	**177**	P	**P**	**16 06 42.9**	**0.0**
	comp=Z,1.4nm,0.5s,mb3.8,baz=359,slow=9.9,SNR=5.6						
STKA				LR	LR	16 19 08.5	
	comp=Z,357nm,18.6s,MS4.0,baz=21,slow=39						
KSM	**Kuching**	**30.15**	**280**	P	**P**	**16 07 01.9**	**-0.8**
DZM	**Mont Dzumac**	**31.38**	**128**	P	**P**	**16 07 13.6**	**+0.1**
	comp=Z,4.8nm,0.8s,mb4.4,baz=312,slow=15,SNR=6.2						
NWAO	**Narrogin (SRO)**	**35.92**	**214**	P	**P**	**16 07 47.9**	**-5.0**
NWAO				pmax	pmax		
	comp=Z,23nm,1.2s						
NWAO	**Narrogin (SRO)**	**35.92**	**214**	P	**P**	**16 07 47.9**	**-5.0**
	comp=Z,23nm,1.2s,mb5.0						
KULM	**Kulim**	**40.35**	**283**	*e*P	**P**	**16 08 31.1**	**+0.9**
NJ2	**Nanjing**	**40.98**	**332**	*e*P	**P**	**16 08 36.0**	**+0.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
PSI	**Prapat**	**41.59**	**279**	P	**P**	**16 08 40.9**	**+0.5**
	comp=Z,63nm,0.8s,mb5.3,baz=101,slow=5.3,SNR=58						
PSI	**Prapat**	**41.59**	**279**	P	**P**	**16 08 40.9**	**+0.5**
CD2	**Chengdu**	**48.90**	**318**	*e*P	**P**	**16 09 37.8**	**-0.5**
CD2				XP	sP	16 10 00.5	+1.8
CD2				PP	PP	16 11 32.0	0.0
CD2				S	**S**	**16 16 35.8**	**-2.4**
CD2				SS	SS	16 20 02.8	-6.5
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.3						
CD2				AMB	AMB		
	comp=Z,60nm,6.2s						
MDJ	**Mudanjiang**	**49.15**	**350**	P	**P**	**16 09 41.0**	**+0.7**
MDJ				AP	pP	16 09 54.5	0.0
MDJ				XP	sP	16 10 00.5	-0.1
MDJ				PP	PP	16 11 35.0	+0.7
MDJ				SCP	ScP	16 14 54.0	+0.4
MDJ				PCS	PcS	16 15 00.0	+0.6
MDJ				S	**S**	**16 16 43.5**	**+1.8**
MDJ				XS	sS	16 17 06.8	+1.2
MDJ				SCS	ScS	16 19 28.3	+0.8
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,49nm,5.7s						
MDJ				LR	LR		
	comp=N,32nm,19.4s,MS3.4						
MDJ				LR	LR		
	comp=E,13nm,17.4s,MS3.4						
MDJ				LR	LR		
	comp=Z,48nm,21.3s,MS3.5						
HHC	**Hu-ho-hao-te**	**51.54**	**333**	*e*P	**P**	**16 10 02.0**	**+3.7**
HHC				AP	pP	16 10 17.8	+5.2
HHC				PCP	PcP	16 11 14.3	+2.6
HHC				PP	PP	16 12 01.0	+5.0
HHC				SCP	ScP	16 15 05.3	+1.5
HHC				PCS	PcS	16 15 11.8	+2.1
HHC				S	**S**	**16 17 17.0**	**+2.1**
HHC				SCS	ScS	16 19 43.3	-0.5
HHC				SS	SS	16 20 51.5	+0.1
HHC				AMB	AMB		
HHC				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,65nm,6.7s						
HHC				LR	LR		
	comp=N,81nm,18.0s,MS4.0						
HHC				LR	LR		
	comp=E,89nm,18.0s,MS4.0						
HHC				LR	LR		
	comp=Z,92nm,19.0s,MS3.8						
KLR	**Kul'dur**	**53.35**	**353**	*e*P	**P**	**16 10 07.6**	**-4.2**
GTA	**Gaotai**	**56.76**	**323**	*e*P	**P**	**16 10 35.8**	**-0.5**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.4s,mb4.0						
ULN	**Ulaanbaatar**	**59.05**	**335**	*i* P	**P**	**16 10 54.6**	**+2.3**
ULN	**Ulaanbaatar**	**59.05**	**335**	P	**P**	**16 10 50.0**	**-2.4**
	comp=Z,6.3nm,1.7s,mb4.4						
SONM	**Songino Array**	**59.30**	**334**	P	**P**	**16 10 52.5**	**-1.6**
	comp=Z,0.4nm,0.6s,mb3.6,baz=138,slow=9.0,SNR=3.1						
SONM				LR	LR	16 34 22.9	
	comp=Z,56nm,19.0s,MS3.7,baz=54,slow=34						
PKI	**Pulchoki**	**61.16**	**304**	*e*P	**P**	**16 11 07.5**	**+0.7**
KKN	**Kakani**	**61.35**	**304**	*e*P	**P**	**16 11 08.3**	**+0.2**
	comp=Z,45nm,1.3s,mb5.4						
KKN	**Kakani**	**61.35**	**304**	*e*P	**P**	**16 11 08.3**	**+0.2**
KKN				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.4						
DMN	**Daman**	**61.42**	**304**	*e*P	**P**	**16 11 09.6**	**+1.0**
	comp=Z,22nm,1.0s,mb5.2						
GKN	**Gorkha**	**61.96**	**304**	*e*P	**P**	**16 11 12.8**	**+0.6**
	comp=Z,11nm,0.5s,mb5.2						
KOLN	**Koldanda**	**62.73**	**304**	*e*P	**P**	**16 11 17.4**	**+0.1**
	comp=Z,16nm,1.0s,mb5.1						
MA2	**Magadan**	**63.81**	**6**	*e*P	**P**	**16 11 22.6**	**-1.9**
MA2				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
MA2	**Magadan**	**63.81**	**6**	*e*P	**P**	**16 11 22.6**	**-1.9**
	comp=Z,14nm,1.3s,mb4.8						
YAK	**Yakutsk**	**66.18**	**355**	*i* P	**P**	**16 11 36.3**	**-3.6**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
YAK	**Yakutsk**	**66.18**	**355**	P	**P**	**16 11 31.1**	**-8.7**
	comp=Z,9.4nm,0.9s,mb4.8						
WMQ	**Urumqi**	**66.71**	**321**	*e*P	**P**	**16 11 43.0**	**-0.2**
WMQ				AP	pP	16 12 00.0	+2.0
WMQ				XP	sP	16 12 07.0	+3.0
WMQ				PP	PP	16 14 13.0	+2.4
WMQ				S	S	16 20 28.0	-3.0
WMQ				SS	SS	16 24 48.0	-1.4
WMQ				AMB	AMB		
	comp=Z,21nm,1.0s,mb5.1						
WMQ				LR	LR		
	comp=N,28nm,14.0s,MS3.9						
WMQ				LR	LR		
	comp=E,42nm,14.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,24nm,13.0s,MS3.6						
PPT	**Papeete**	**70.18**	**107**	LR	LR	16 39 58.0	
	comp=Z,82nm,20.5s,MS4.0,baz=141,slow=33						
MKAR	**Makanchi Array**	**71.48**	**322**	P	**P**	**16 12 12.4**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.9,baz=108,slow=8.0,SNR=5.5						
VNDA	**Vanda**	**74.53**	**175**	P	**P**	**16 12 30.9**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.1,baz=327,slow=6.6,SNR=9.9						
VNDA				LR	LR	16 42 55.6	
	comp=Z,80nm,21.8s,MS4.0,baz=333,slow=34						
VNDA	**Vanda**	**74.53**	**175**	*e*P	**P**	**16 12 30.2**	**-0.7**
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VNDA	**Vanda**	**74.53**	**175**	*e*P	**P**	**16 12 30.2**	**-0.6**
	comp=Z,3.4nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**74.92**	**316**	*i* P	**P**	**16 12 38.9**	**+5.8**
SBA	**Scott Base**	**75.28**	**174**	*e*P	**P**	**16 12 35.6**	**+0.4**
SBA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
SBA	**Scott Base**	**75.28**	**174**	*e*P	**P**	**16 12 35.6**	**+0.4**
	comp=Z,3.8nm,1.0s,mb4.3						
MAW	**Mawson**	**81.56**	**202**	P	**P**	**16 13 08.5**	**-1.3**
	comp=Z,2.6nm,0.7s,mb4.2,baz=45,slow=9.1,SNR=6.3						
MAW				LR	LR	16 47 39.4	
	comp=Z,78nm,18.7s,MS4.1,baz=71,slow=34						
ZRNK	**Zerenda**	**81.76**	**325**	P	**P**	**16 13 09.2**	**-1.6**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
ZRNK	**Zerenda**	**81.76**	**325**	P	**P**	**16 13 09.2**	**-1.7**
	comp=Z,2.3nm,0.8s,mb4.2						
QSPA	**South Pole Qui**	**86.10**	**180**	*e*P	**P**	**16 13 33.4**	**+0.5**
	comp=Z,20nm,0.8s,mb5.4						
ARU	**Arti**	**88.46**	**327**	*i* P	**P**	**16 13 40.1**	**-4.2**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.3						
DAWY	**Dawson**	**89.33**	**26**	*e*P	**P**	**16 13 47.0**	**-1.4**
DAWY				*e*	pP	16 13 59.4	-4.5
ARCES	**ARCESS Array B**	**102.01**	**341**	P	Pdif	16 14 43.8	-2.3
	comp=Z,0.7nm,0.5s,baz=77,slow=5.2,SNR=10						
TORD	**Torodi Ar. Bea**	**137.81**	**285**

BRG 16 15 21.0
BRG smax
comp=N,441nm,0.5s
BRG Berggiesshubel 1.51 244 Pg **Pg** **16 15 01.1 +0.9**
BRG Sg **Sg** **16 15 21.1 +1.3**
RUE Ruedersdorf 1.70 304 *e*Pn **Pn** **16 15 02.5 +0.5**
RUE *e*Sg **Sg** **16 15 28.8 +3.0**
RUE Ruedersdorf 1.70 304 *e*Pn **Pn** **16 15 02.5 +0.4**
RUE *e*Sg **Sg** **16 15 28.8 +3.0**
RUE Ruedersdorf 1.70 304 Pn **Pn** **16 15 02.5 +0.4**
RUE Sg **Sg** **16 15 28.8 +3.0**
PRA Prague 1.82 216 ⇓PG **Pg** **16 15 04.0 -2.1**
PRA Sg **Sg** **16 15 30.0 +0.2**
FBE Freiberg 1.83 251 *e*Sg **Sg** **16 15 30.2 +0.1**
GKP Gorka Klasztor 1.85 22 *e*Pn **Pn** **16 15 06.7 +2.5**
GKP *e*Pg **Pg** **16 15 12.2 +5.5**
GKP *e*Sg **Sg** **16 15 35.8 +5.0**
PRU Pruhonice 1.85 213 *e*PN **Pn** **16 15 04.0 -0.2**
PRU *e*PG **Pg** **16 15 05.8 -0.9**
PRU *e*SG **Sg** **16 15 29.2 -1.5**
comp=N,393nm,0.4s
PRU Pruhonice 1.85 213 *e*P **Pn** **16 15 04.0 -0.2**
PRU *e* 16 15 29.2
PRU smax
comp=N,393nm,0.4s
CLL Collm 1.95 264 *e*Pn **Pn** **16 15 05.7 +0.2**
CLL Collm 1.95 264 *i* Pn **Pn** **16 15 05.5 0.0**
CLL *i* Pg **Pg** **16 15 09.1 +0.6**
CLL *i* x x 16 15 12.2
CLL *i* Sg **Sg** **16 15 34.9 +1.1**
comp=Z,462nm,0.7s
CLL *i* x x 16 15 41.3
CLL Collm 1.95 264 *i* Pn **Pn** **16 15 05.5 0.0**
CLL *i* Pg **Pg** **16 15 09.1 +0.6**
CLL *i* Sg **Sg** **16 15 34.9 +1.1**
CLL Collm 1.95 264 *i* Pg **Pg** **16 15 09.1 +0.6**
CLL *i* S **Sg** **16 15 34.9 +1.1**
RAC Raciborz 1.99 137 *e*Pn **Pn** **16 15 05.4 -0.7**
RAC *e*Pg **Pg** **16 15 08.9 -0.5**
RAC *e*Sg **Sg** **16 15 34.5 -0.7**
MORC Moravsky Berou 2.01 152 ⇓*i*P **Pn** **16 15 06.2 -0.2**
MORC Moravsky Berou 2.01 152 *e*Pn **Pn** **16 15 06.0 -0.4**
MORC *e*Sn **Sn** **16 15 30.9 -1.3**
MORC Moravsky Berou 2.01 152 ⇓*i*Pn **Pn** **16 15 06.0 -0.4**
MORC *e*Sn **Sn** **16 15 30.9 -1.3**
MORC *e*Sg **Sg** **16 15 33.5 -2.3**
comp=Z,445nm,0.5s
OKC Ostrava-Krasne 2.17 142 *e*PG **Pg** **16 15 12.1 -0.6**
OKC *e*SG **Sg** **16 15 39.7 -1.1**
comp=Z,461nm,0.6s
OKC Ostrava-Krasne 2.17 142 *e*P **Pg** **16 15 12.1 -0.6**
OKC *e* 16 15 39.7
OKC smax
comp=N,461nm,0.6s
VRAC Vranov 2.28 172 Pn **Pn** **16 15 10.2 +0.1**
comp=N,13nm,0.3s,baz=351,slow=15,SNR=35
VRAC Lg 16 15 42.2
comp=N,34nm,0.3s,baz=74,slow=22,SNR=6.6
VRAC Vranov 2.28 172 ⇓*i*P **Pn** **16 15 10.2 +0.2**
VRAC Vranov 2.28 172 ⇓*i*Pn **Pn** **16 15 10.0 0.0**
VRAC *e*Sg **Sg** **16 15 41.9 -2.4**
comp=N,290nm,0.6s
TREC Trest 2.30 190 *e*PN **Pn** **16 15 10.3 0.0**
TREC *e*PG **Pg** **16 15 14.5 -0.8**
KRUC Moravsky 2.51 175 ⇓*i*Pn **Pn** **16 15 13.2 0.0**
KRUC *e*Sg **Sg** **16 15 49.3 -2.5**
comp=N,428nm,0.9s
TANN Tannenbergstha 2.56 245 *e*Pn **Pn** **16 15 14.8 +0.9**
TANN *e*Sg **Sg** **16 15 52.9 -0.6**
WERD Werda 2.63 246 *e*Pn **Pn** **16 15 15.5 +0.6**
WERD *e*Sg **Sg** **16 15 56.1 +0.2**
GUNZ Gunzen 2.66 245 *e*Pn **Pn** **16 15 16.2 +0.9**
NKC Novy Kostel 2.66 241 *e*PN **Pn** **16 15 16.1 +0.8**
NKC *e*PG **Pg** **16 15 21.8 -0.4**
NKC *e*SG **Sg** **16 15 57.5 +0.9**
comp=N,604nm,0.5s
OJC Ojcow 2.71 118 *e*Pn **Pn** **16 15 14.4 -1.5**
OJC *e*Pg **Pg** **16 15 22.8 -0.3**
OJC *e*Sg **Sg** **16 15 57.4 -0.8**
JAVC Velka Javorina 2.89 159 *e*Sg **Sg** **16 16 02.4 -1.6**
comp=N,548nm,1.2s
KHC Kasperske Hory 2.91 214 *e*PN **Pn** **16 15 18.9 +0.1**
KHC *e*PG **Pg** **16 15 25.2 -1.8**
KHC *e*SG **Sg** **16 16 03.2 -1.6**
comp=N,235nm,0.6s
KHC Kasperske Hory 2.91 214 *e*P **Pn** **16 15 18.9 +0.1**
KHC *e* 16 16 03.2
KHC smax
comp=N,235nm,0.6s
MOX Moxa 2.96 254 *e*Pn **Pn** **16 15 19.8 +0.4**
MOX *e*Pg **Pg** **16 15 28.2 +0.2**
MOX *e*Sg **Sg** **16 16 08.1 +1.7**
MOX Moxa 2.96 254 *e*PN **Pn** **16 15 19.9 +0.4**
MOX *e*PG **Pg** **16 15 28.2 +0.2**
MOX *e*SG **Sg** **16 16 08.1 +1.7**
ROTZ Rotzenmuhle 3.05 236 *e*Pn **Pn** **16 15 21.3 +0.6**
GEC2 GERESS Array S 3.12 210 *e*Pn **Pn** **16 15 22.0 +0.4**
GERES GERESS Array B 3.12 210 Pn **Pn** **16 15 21.7 +0.1**
comp=N,15nm,0.3s,baz=32,slow=11,SNR=323
GERES Pg **Pg** **16 15 27.9 -3.1**
comp=N,30nm,0.3s,baz=29,slow=16,SNR=54
GERES Sn **Sn** **16 15 58.8 -0.8**
comp=N,20nm,0.3s,baz=28,slow=26,SNR=8.0
GERES Lg 16 16 09.2
comp=N,30nm,0.3s,baz=33,slow=27,SNR=9.0
GERES GERESS Array B 3.12 210 Pg **Pg** **16 15 27.9 -3.1**
SMOL Smolenice 3.17 164 *e*SG **Sg** **16 16 14.1 +1.1**
SMOL Smolenice 3.17 164 *e*P **Pg** **16 15 31.8 -0.1**
SMOL *e*Sg **Sg** **16 16 14.1 +1.1**
SMOL Smolenice 3.17 164 *e* **Pg** **16 15 31.8 -0.1**
LIKS Likavka 3.17 141 *e*PN **Pn** **16 15 24.2 +1.9**
LIKS *e*SG **Sg** **16 16 15.6 +2.5**
WET Wettzell 3.17 222 *e*Pn **Pn** **16 15 22.4 +0.1**
WET Wettzell 3.17 222 *e*Pn **Pn** **16 15 22.4 +0.1**
RGN Rugen 3.43 332 *e*Pn **Pn** **16 15 25.2 -0.7**
RGN Rugen 3.43 332 *e*Pn **Pn** **16 15 25.2 -0.7**
ZST Bratislava 3.43 169 *e*PN **Pn** **16 15 26.8 +0.9**
ZST *e* 16 15 35.9
ZST Bratislava 3.43 169 *e*Pn **Pn** **16 15 26.9 +1.0**
ZST *e* 16 15 35.9
ZST *e*Sg **Sg** **16 16 19.1 -2.3**
ZST Bratislava 3.43 169 *e*Pn **Pn** **16 15 26.9 +1.0**
ZST *e*Sg **Sg** **16 16 19.1 -2.3**
NIE Niedzica 3.45 127 *e*Pn **Pn** **16 15 26.5 +0.4**
NIE *e*Pg **Pg** **16 15 35.4 -1.9**
NIE *e*Sg **Sg** **16 16 19.1 -2.8**
VYHS Vyhne 3.54 149 *e*PN **Pn** **16 15 27.5 +0.1**
VYHS *e* 16 15 40.1
VYHS Vyhne 3.54 149 *e*SG **Sg** **16 16 27.9 +2.8**
VYHS Vyhne 3.54 149 *e*Pn **Pn** **16 15 27.5 +0.1**
VYHS *e* 16 15 40.1
VYHS *e*Sg **Sg** **16 16 27.9 +2.8**
GRA1 Grafenberg Arr 3.62 241 *e*Pn **Pn** **16 15 29.4 +0.9**
GRA1 Grafenberg Arr 3.62 241 Pn **Pn** **16 15 29.4 +0.9**
GRF Grafenberg Arr 3.62 241 *e*Pn **Pn** **16 15 29.4 +0.9**
BSD Bornholm Skovb 3.63 349 *i* P **Pn** **16 15 29.1 +0.5**
BSD *i* S **Sn** **16 16 11.2 -1.0**
BSD *e*S **Sg** **16 16 26.9 -1.0**
BSD Bornholm Skovb 3.63 349 *i* P **Pn** **16 15 29.1 +0.5**
BSD *i* S **Sn** **16 16 11.2 -1.0**
CONA Conrad Observa 3.64 182 *i* Pn **Pn** **16 15 29.4 +0.7**
SNR=42
CONA ⇓*i*Sg **Sg** **16 16 25.5 -2.6**
comp=N,142nm,0.5s
SOP Sopron 3.89 175 ⇑*e*Pn **Pn** **16 15 32.9 +0.7**
SOP *e*SB **Sb** **16 16 33.9 +5.6**
MOA Molln 3.90 198 ⇓*i*Pn **Pn** **16 15 32.7 +0.4**
SNR=104
MOA ⇓*i*Sg **Sg** **16 16 35.9 -0.5**
comp=N,117nm,0.5s
MOA Molln 3.90 198 Pn **Pn** **16 15 32.7 +0.4**
comp=N,104nm,3.0s
MOA Sg **Sg** **16 16 35.9 -0.5**
comp=N,117nm,0.5s
UBBA Unterbreizbach 3.90 261 *e*Pn **Pn** **16 15 32.7 +0.4**
UBBA *e*Sg **Sg** **16 16 36.9 +0.4**
UBBA Unterbreizbach 3.90 261 Pn **Pn** **16 15 32.7 +0.4**
UBBA Sg **Sg** **16 16 36.9 +0.4**
STHS Stebnicka Huta 3.93 121 *e*PN **Pn** **16 15 33.5 +0.7**
STHS *e* 16 15 48.9
STHS Stebnicka Huta 3.93 121 *e*SG **Sg** **16 16 42.1 +4.6**
STHS Stebnicka Huta 3.93 121 *e*Pn **Pn** **16 15 33.6 +0.8**

KECS Kecovo 4.19 136 *e*PN **Pn** **16 15 36.3 0.0**
KECS *e* 16 15 53.0
KECS Kecovo 4.19 136 *e*SG **Sg** **16 16 47.9 +2.2**
KECS Kecovo 4.19 136 *e*Pn **Pn** **16 15 36.3 0.0**
KECS *e* 16 15 53.0
KECS *e*Sg **Sg** **16 16 47.9 +2.2**
BSEG Bad Segeberg 4.24 306 *e*Pn **Pn** **16 15 35.5 -1.4**
BSEG Bad Segeberg 4.24 306 *e*Pn **Pn** **16 15 35.5 -1.5**
BSEG Bad Segeberg 4.24 306 Pn **Pn** **16 15 35.5 -1.5**
ARSA Arzberg 4.33 185 *i* Pn **Pn** **16 15 39.5 +1.2**
SNR=28
ARSA ⇑*i*Sg **Sg** **16 16 46.8 -3.4**
comp=N,172nm,0.8s
ARSA Arzberg 4.33 185 Pn **Pn** **16 15 39.5 +1.3**
comp=N,28nm,1.0s
ARSA Sg **Sg** **16 16 46.8 -3.5**
comp=N,172nm,0.8s
CRVS Cervenica-Dubn 4.36 126 *e*PN **Pn** **16 15 39.4 +0.8**
CRVS *e* 16 15 58.3
CRVS Cervenica-Dubn 4.36 126 *e*SG **Sg** **16 16 56.1 +4.9**
CRVS Cervenica-Dubn 4.36 126 *e*Pn **Pn** **16 15 39.4 +0.8**
CRVS *e* 16 15 58.3
CRVS *e*Sg **Sg** **16 16 56.1 +4.9**
PSZ Piszkesteto 4.40 144 ⇑*i*Pn **Pn** **16 15 40.1 +0.9**
PSZ *e*Sg **Sg** **16 17 00.7 +8.1**
PSZ Piszkesteto 4.40 144 ⇓*i*P **Pn** **16 15 40.0 +0.8**
PSZ Piszkesteto 4.40 144 ⇑*i*P **Pn** **16 15 40.1 +0.9**
FUR Furstenfeldbru 4.61 224 *e*Pn **Pn** **16 15 43.1 +1.1**
FUR Furstenfeldbru 4.61 224 *e*Pn **Pn** **16 15 43.1 +1.1**
KWP Kalwaria 4.64 112 *e*Pn **Pn** **16 15 42.4 -0.1**
KWP *e*Pg **Pg** **16 15 57.4 -2.7**
KWP *e*Sg **Sg** **16 17 03.1 +2.9**
COP Copenhagen 4.67 334 *i* P **Pn** **16 15 42.0 -1.0**
COP *i* S **Sn** **16 16 37.5 -0.4**
COP Copenhagen 4.67 334 *e*P **Pn** **16 15 42.0 -1.0**
COP *i* S **Sn** **16 16 37.5 -0.4**
KOLS Kolonicke sedl 4.76 121 *e*PN **Pn** **16 15 44.1 -0.1**
KOLS *e* 16 16 05.8
KBA Koelnbreinsper 4.83 203 *i* Pn **Pn** **16 15 46.2 +1.1**
SNR=61
KBA ⇑*i*Sg **Sg** **16 17 02.0 -4.4**
comp=N,45nm,0.4s
UZH Uzhgorod 4.95 124 *e*P **Pn** **16 15 47.0 +0.2**
UZH *e*S **Sn** **16 16 50.0 +5.2**
UZH MLR MLR
comp=Z,60nm,1.2s
UZH Uzhgorod 4.95 124 *e*P **Pn** **16 15 47.0 +0.2**
comp=Z,60nm,1.2s
UZH *e*S **Sn** **16 16 50.0 +5.2**
SUW Suwalki 4.96 58 Pn **Pn** **16 15 46.7 -0.2**
PERS Pernice 4.97 188 *i* Pn **Pn** **16 15 48.1 +1.0**
TNS Taunus Mts 5.02 258 *e*Pn **Pn** **16 15 48.1 +0.4**
TNS Taunus Mts 5.02 258 *e*Pn **Pn** **16 15 48.1 +0.4**
TOD Tromm 5.04 250 P **Pn** **16 15 47.5 -0.5**
TOD S **Sn** **16 16 38.9 -7.9**
GROS Grobnik 5.12 185 *i* Pn **Pn** **16 15 49.9 +0.9**
WATA Walderalm 5.15 217 ⇑*i*Pn **Pn** **16 15 50.3 +0.8**
SNR=17
WATA ⇓*i*Sg **Sg** **16 17 13.7 -2.9**
comp=Z,50nm,0.5s
WATA Walderalm 5.15 217 Pn **Pn** **16 15 50.3 +0.8**
comp=Z,16nm,6.0s
WATA Sg **Sg** **16 17 13.7 -2.9**
comp=Z,50nm,0.5s
WTTA Wattenberg 5.19 216 ⇓*i*Pn **Pn** **16 15 51.1 +1.1**
SNR=17
WTTA ⇓*i*Sg **Sg** **16 17 19.4 +1.6**
comp=Z,59nm,0.7s
WTTA Wattenberg 5.19 216 Pn **Pn** **16 15 51.1 +1.1**
comp=Z,17nm,2.0s
WTTA Sg **Sg** **16 17 19.4 +1.6**
comp=Z,59nm,0.7s
STU Stuttgart 5.23 240 *e*Pn **Pn** **16 15 50.1 -0.6**
STU *e*Pg **Pg** **16 16 11.6 +0.1**
STU *e*Sg **Sg** **16 17 18.2 -1.1**
STU Stuttgart 5.23 240 *e*Pn **Pn** **16 15 50.1 -0.6**
STU Stuttgart 5.23 240 *e*P **Pn** **16 15 50.1 -0.6**
STU Stuttgart 5.23 240 *e*Pg **Pg** **16 16 11.6 +0.1**
MOTA Moosalm 5.32 220 ⇑*i*Pn **Pn** **16 15 52.2 +0.3**
SNR=29
MOTA ⇑*i*Sg **Sg** **16 17 21.3 -1.0**
comp=Z,85nm,0.7s
MOTA Moosalm 5.32 220 Pn **Pn** **16 15 52.2 +0.3**
comp=Z,29nm,1.0s
MOTA Sg **Sg** **16 17 21.3 -0.9**
comp=Z,85nm,0.7s
LVV L'vov 5.34 106 *d* iP **Pn** **16 16 00.1 +7.9**
LVV *i* S **Sn** **16 16 53.3 -1.1**
SQTA Sankt Quirin 5.38 218 ⇓*i*Pn **Pn** **16 15 53.1 +0.4**
SNR=22
SQTA ⇑*i*Sg **Sg** **16 17 24.7 +0.5**
comp=Z,33nm,0.5s
PTCC Patocco-Chiusa 5.46 200 *i* Pnu 16 15 54.8
comp=Z,33nm,0.6s
GOLS Golise 5.56 183 *i* Pn **Pn** **16 15 56.3 +1.1**
KTD Kalmit 5.58 249 P **Pn** **16 15 56.3 +0.8**
ROBS Robic 5.58 199 *i* Pn **Pn** **16 15 55.9 +0.4**
ROBS Robic 5.58 199 *i* Pn **Pn** **16 15 55.8 +0.3**
PKSM Moragy 5.61 162 ⇑*i*Pn **Pn** **16 15 56.6 +0.7**
PKSM *e*Sn **Sn** **16 17 07.8 +6.8**
GMNA Gemona 5.61 201 Pn **Pn** **16 15 55.7 -0.2**
comp=Z,343nm,0.8s
LJU Ljubljana 5.62 191 *i* Pn **Pn** **16 15 57.3 +1.4**
ABH Alteburg 5.68 256 P **Pn** **16 15 57.4 +0.6**
VOY Vojsko 5.72 196 *e*Pn **Pn** **16 15 57.8 +0.5**
VOY *e* 16 16 19.3
VOY *e*(Sn) **Sg** **16 17 34.9 0.0**
VOY *e* 16 17 35.8
CRES Cresnjev 5.75 184 *i* Pn **Pn** **16 15 58.7 +0.9**
WTSB Winterswijk 5.78 278 *e*Pn **Pn** **16 15 58.8 +0.6**
comp=Z,25nm,0.7s
WTSB *e*Sn **Sn** **16 17 19.3 +14**
DAVA Damuels 5.89 226 *i* Pn **Pn** **16 15 59.8 +0.2**
SNR=14
DAVA ⇑*i*Sg **Sg** **16 17 42.3 +2.0**
DAVA Damuels 5.89 226 *i* Pn **Pn** **16 15 59.8 +0.2**
DAVA *i* Sg **Sg** **16 17 42.4 +2.0**
LANF Langenberg 5.90 247 P **Pn** **16 15 59.6 -0.3**
BFO Black Forest 5.96 240 *e*Pn **Pn** **16 15 59.4 -1.2**
APPI Appiano 6.00 214 Pn **Pn** **16 16 03.0 +1.7**
comp=Z,168nm,0.9s
BOJS Bojanci 6.08 186 *i* Pn **Pn** **16 16 03.4 +1.0**
CTI Castel Tesino 6.24 210 P **Pn** **16 16 06.7 +2.1**
CTI pmax pmax
comp=Z,41nm,0.5s
CTI Castel Tesino 6.24 210 Pn **Pn** **16 16 06.7 +2.1**
comp=Z,41nm,0.5s
BRMO Bormio 6.32 219 Pn **Pn** **16 16 07.5 +1.9**
comp=Z,6.6nm,0.6s
MUD Monsted U'grnd 6.38 323 *i* P **Pn** **16 16 06.1 -0.3**
MUD *e* 16 16 11.9
MUD *i* 16 16 41.8
MEM Membach 6.42 265 P **Pn** **16 16 08.0 +1.0**
HGN Heimansgroeve 6.44 267 *e*Pn **Pn** **16 16 09.6 +2.4**
comp=Z,8.0nm,1.6s
HGN *e*Sn **Sb** **16 17 39.8 -1.8**
HGN *e*Sg **Sg** **16 17 57.3 -0.7**
DRGR 6.45 135 ⇓*i*P **Pn** **16 16 07.6 +0.2**
DRGR 6.45 135 ⇓P **Pn** **16 16 07.6 +0.2**
WLS Welschbruch 6.45 244 P **Pn** **16 16 06.8 -0.6**
CDF Champ du Feu 6.50 244 *e*Pn **Pn** **16 16 07.0 -1.0**
CDF *e*Sg **Sg** **16 17 59.3 -0.5**
comp=Z,118nm,0.8s
WLF Walferdange 6.60 257 *e*Pn **Pn** **16 16 10.3 +0.8**
WLF Walferdange 6.60 257 P **Pn** **16 16 10.1 +0.6**
WLF Walferdange 6.60 257 *e*Pn **Pn** **16 16 08.0 -1.4**
WLF *e*Sg **Sg** **16 18 04.6 +1.4**
WLF Walferdange 6.60 257 *e*Pn **Pn** **16 16 08.0 -1.5**
WLF *e*Sg **Sg** **16 18 04.6 +1.4**
MABI Malga Bissina 6.62 216 Pn **Pn** **16 16 11.5 +1.7**
comp=Z,4.2nm,0.5s
ECH Echery 6.67 243 P **Pn** **16 16 09.5 -0.9**
TUE Stuetta 6.75 224 Pn **Pn** **16 16 14.4 +2.9**
comp=Z,11nm,0.6s
MOF Molkenrain 6.89 241 P **Pn** **16 16 14.3 +0.9**
BCLA Clavier 6.90 265 P **Pn** **16 16 13.5 -0.2**
BZS Buzias 6.99 146 ⇓*i*P **Pn** **16 16 16.5 +1.8**
HINF Hinteralfeld 7.06 242 *e*Pn **Pn** **16 16 15.3 -0.5**
HINF *e*Sn **Sn** **16 17 32.9 -3.9**
HINF *e*Sg **Sg** **16 18 16.2 -1.8**
comp=Z,150nm,1.1s
HINF Hinteralfeld 7.06 242 *e*P **Pn** **16 16 15.3 -0.5**
HINF *e* 16 17 32.9

HINF Hinteralfeld 7.06 242 *e*Pn **Pn** **16 16 15.3 -0.5**
HINF *e*Sg **Sg** **16 18 16.2 -1.8**
comp=Z,75nm,1.1s
BURAR Bucovina Array 7.13 120 ⇑*i*P **Pn** **16 16 16.7 0.0**
BURAR Bucovina Array 7.13 120 ⇑P **Pn** **16 16 16.7 0.0**
HAU Haudompre 7.24 244 *e*Pg **Pg** **16 16 48.0 -1.9**
HAU *e*Sg **Sg** **16 18 23.3 -0.3**
comp=Z,52nm,0.6s
HAU Haudompre 7.24 244 *e*Pn **Pn** **16 16 18.1 -0.1**
HAU *e*Pg **Pg** **16 16 48.0 -1.9**
HAU *e*Sg **Sg** **16 18 23.3 -0.3**
GIVF Givet 7.28 263 *e*Pn **Pn** **16 16 20.1 +1.3**
GIVF *e*Sg **Sg** **16 18 22.2 -2.9**
comp=Z,16nm,0.4s
GIVF Givet 7.28 263 *e*P **Pn** **16 16 20.1 +1.3**
GIVF *e*Sg **Sg** **16 18 22.2 -2.9**
comp=Z,8.1nm,0.4s
THEF They Montfort 7.33 247 P **Pn** **16 16 18.7 -0.7**
DOU Dourbes 7.42 263 P **Pn** **16 16 22.0 +1.2**
SNF Seneffe 7.52 267 P **Pn** **16 16 21.4 -0.7**
BAIF Baives 7.67 263 *e*Pn **Pn** **16 16 26.3 +2.1**
BAIF *e*Sg **Sg** **16 18 34.4 -3.3**
comp=Z,44nm,0.9s
BAIF Baives 7.67 263 *e*P **Pn** **16 16 26.3 +2.1**
BAIF *e*Sg **Sg** **16 18 34.4 -3.3**
comp=Z,22nm,0.9s
MEZF Maizieres J'vi 7.74 251 *e*Pn **Pn** **16 16 25.7 +0.6**
MEZF *e*Sg **Sg** **16 18 38.3 -1.3**
comp=Z,77nm,0.9s
BOB Bobbio (Coli) 8.11 216 P **Pn** **16 16 31.7 +1.5**
BOB pmax pmax
comp=Z,17nm,0.5s
BOB Bobbio (Coli) 8.11 216 Pn **Pn** **16 16 31.7 +1.5**
comp=Z,17nm,0.5s
CABF La Chapelle 8.22 237 *e*Pn **Pn** **16 16 30.5 -1.2**
CABF *e*Sg **Sg** **16 18 53.8 -1.3**
comp=Z,118nm,1.0s
AKASG Malin Array Be 8.31 91 Pn **Pn** **16 16 30.7 -2.2**
comp=Z,5.5nm,0.3s,baz=276,slow=13,SNR=12
AKASG Sn **Sn** **16 18 02.7 -4.8**
comp=Z,3.7nm,0.3s,baz=303,slow=17,SNR=5.7
AKASG Lg 16 18 59.5
comp=Z,1.3nm,0.3s,baz=277,slow=27,SNR=4.0
AKASG Malin Array Be 8.31 91 P **Pn** **16 16 30.7 -2.2**
AKASG 16 18 02.7
AKASG pmax pmax
comp=Z,6.0nm,0.3s
AKASG smax
comp=N,4.0nm,0.3s
VLC Villacollemand 8.33 210 *e*Pn **Pn** **16 16 34.7 +1.5**
VLC Villacollemand 8.33 210 *e*Pn **Pn** **16 16 34.7 +1.4**
HFS Hagfors 8.70 352 Pn **Pn** **16 16 37.0 -1.2**
comp=N,0.8nm,0.3s,baz=170,slow=14,SNR=30
HFS Sn **Sn** **16 18 13.7 -3.4**
comp=N,0.5nm,0.3s,baz=182,slow=23,SNR=3.1
HFS Hagfors 8.70 352 P **Pn** **16 16 37.0 -1.3**
HFS 16 18 13.7
HFS pmax pmax
comp=Z,1.0nm,0.3s
HFS smax
comp=N,1.0nm,0.3s
KONO Kongsberg 8.90 338 *i* P **Pn** **16 16 41.4 +0.4**
MLR Muntele Rosu 8.92 129 Pg Px 16 17 05.1
comp=N,0.2nm,0.3s,baz=155,slow=9.1,SNR=5.3
BNI Bardonecchia 9.03 228 *e*P **Pn** **16 16 43.2 +0.4**
BNI pmax pmax
comp=Z,3.0nm,0.6s
BNI Bardonecchia 9.03 228 *e*Pn **Pn** **16 16 43.1 +0.3**
comp=Z,2.8nm,0.6s
LOR Lormes 9.05 246 *e*Pn **Pn** **16 16 42.4 -0.7**
LOR *e*Sg **Sg** **16 19 18.3 -3.5**
comp=Z,45nm,1.0s
LOR Lormes 9.05 246 *e*Pn **Pn** **16 16 42.4 -0.7**
LOR *e*Sg **Sg** **16 19 18.3 -3.5**
comp=Z,23nm,1.0s
FIN Finale Ligure 9.05 219 P **Pn** **16 16 44.7 +1.6**
FIN pmax pmax
comp=Z,6.0nm,0.9s
FIN Finale Ligure 9.05 219 Pn **Pn** **16 16 44.7 +1.6**
comp=Z,6.3nm,0.9s
VSU Vasula 9.22 37 *i* P **Pn** **16 16 47.1 +1.6**
MBDF Montbardon 9.24 226 *e*Pn **Pn** **16 16 45.9 +0.2**
MBDF *e*Sg Sn 16 19 26.4 +56
comp=Z,29nm,1.0s
SSF Saint Saulge 9.37 246 *e*Pn **Pn** **16 16 46.3 -1.1**
SSF *e*Sg Sn 16 19 28.3 +55
comp=Z,52nm,1.1s
SSF Saint Saulge 9.37 246 *e*Pn **Pn** **16 16 46.3 -1.1**
SSF *e*Sg Sn 16 19 28.3 +55
comp=Z,26nm,1.1s
SMF Signal de Mont 9.41 243 *e*Pn **Pn** **16 16 47.5 -0.6**
SMF *e*Sg Sn 16 19 29.7 +55
comp=Z,60nm,1.0s
SMF Signal de Mont 9.41 243 *e*Pn **Pn** **16 16 47.5 -0.6**
SMF *e*Sg Sn 16 19 29.7 +55
comp=Z,30nm,1.0s
IMI Imperia 9.43 219 Pn **Pn** **16 16 48.7 +0.4**
comp=Z,12nm,0.4s
ORIF Oris-en-Rattie 9.51 230 *e*Pn **Pn** **16 16 49.3 0.0**
ORIF *e*Sn **Sn** **16 18 32.5 -4.4**
ORIF *e*Sg Sn 16 19 34.0 +57
comp=Z,76nm,1.2s
ORIF Oris-en-Rattie 9.51 230 *e*P **Pn** **16 16 49.3 0.0**
ORIF *e* 16 18 32.5
AVF Avril sur Loir 9.60 245 *e*Pn **Pn** **16 16 49.6 -1.1**
AVF *e*Sn **Sn** **16 18 33.7 -5.6**
AVF *e*Sg Sn 16 19 36.8 +58
comp=Z,80nm,1.1s
AVF Avril sur Loir 9.60 245 *e*P **Pn** **16 16 49.6 -1.1**
AVF *e* 16 18 33.7
SBF Sospel 9.65 220 *e*Pn **Pn** **16 16 51.8 +0.5**
NAO01 NORSAR Array S 9.74 345 *e*Pn **Pn** **16 16 49.6 -3.0**
NAO01 NORSAR Array S 9.74 345 *e*Pn **Pn** **16 16 49.6 -3.0**
NOA NORSAR Array B 9.88 346 Pn **Pn** **16 16 52.0 -2.4**
comp=Z,0.7nm,0.3s,baz=174,slow=13,SNR=11
NOA Sn **Sn** **16 18 41.7 -4.4**
comp=Z,0.5nm,0.3s,baz=137,slow=24,SNR=3.2
NOA NORSAR Array B 9.88 346 P **Pn** **16 16 52.0 -2.4**
NOA 16 18 41.7
NOA pmax pmax
comp=Z,1.0nm,0.3s
NOA smax
comp=N,1.0nm,0.3s
BGF Bois d'Agland 10.02 245 *e*Sg Sx 16 19 48.4
comp=N,44nm,0.8s
BGF Bois d'Agland 10.02 245 *e*Sg Sx 16 19 48.4
comp=N,22nm,0.8s
VIVF Saint-Julien-l 10.14 233 *e*Pn **Pn** **16 16 57.8 -0.2**
VIVF *e*Sg Sn 16 19 53.2 +61
comp=N,2.1nm,0.3s
FRF La Foret Royal 10.22 222 *e*Pn **Pn** **16 16 59.9 +0.7**
TCF Toulx Ste Croi 10.54 245 *e*Sn **Sn** **16 18 56.5 -5.7**
TCF *e*Sg Sn 16 20 05.3 +63
comp=N,20nm,0.9s
TIRR Tirgusor 10.88 126 Pn **Pn** **16 16 57.3 -11**
FINES FINESS Array B 11.32 25 Pn **Pn** **16 17 12.1 -2.1**
comp=N,1.1nm,0.3s,baz=197,slow=11,SNR=59
FINES Sn **Sn** **16 19 13.7 -7.8**
comp=N,1.0nm,0.3s,baz=211,slow=20,SNR=6.7
FINES FINESS Array B 11.32 25 P **Pn** **16 17 12.1 -2.1**
FINES 16 19 13.7
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES smax
comp=N,1.0nm,0.3s
FIA1 FINESS Array S 11.33 25 *e*Pn **Pn** **16 17 12.2 -2.1**
FIA1 *e*Sn **Sn** **16 19 11.4 -10**
EKA Eskdalemuir Ar 12.07 296 Pn **Pn** **16 17 21.2 -3.2**
comp=N,0.7nm,0.3s,baz=100,slow=14,SNR=18
EKA Sn **Sn** **16 19 37.7 -2.1**
comp=N,0.2nm,0.3s,baz=100,slow=23,SNR=3.7
EKA Eskdalemuir Ar 12.07 296 P **Pn** **16 17 21.2 -3.2**
EKA 16 19 37.7
EKA pmax pmax
comp=Z,1.0nm,0.3s
ESK Eskdalemuir 12.09 296 *e*Pn **Pn** **16 17 19.9 -4.9**
ESK *e*Sn **Sn** **16 19 29.0 -11**
OBN Obninsk 12.74 66 *e*P **Pn** **16 17 32.8 -0.7**
OBN *e*S **Sn** **16 19 55.8 -0.3**
OBN pmax pmax
comp=Z,9.0nm,0.8s
TMCR Tamitsa 17.07 34 *e*P **Pn** **16 18 23.5 -7.8**
TMCR pmax pmax
comp=Z,10.0nm,0.6s
ARCES ARCESS Array B 18.58 10 Pn **Pn** **16 18 47.0 -2.9**

comp=Z,1.0nm,0.3s,baz=193,slow=14,SNR=32
ARCES ARCESS Array B 18.58 10 P **Pn 16 18 47.0 -2.9**
ARCES pmax pmax
comp=Z,1.0nm,0.3s
GNI Garni 22.84 109 *i* P **P 16 19 39.6 +3.8**
ARU Arti 25.13 62 *e*P **P 16 19 57.4 -0.4**
ARU *e*PPP 16 20 39.1
ARU *e*S **S 16 24 23.2 -0.3**
ARU *e*SS 16 25 12.4
AKTK Aktyubinsk 26.16 76 P **P 16 20 07.5 +0.4**
comp=Z,3.0nm,0.7s,mb4.0
AKTO Aktyubinsk 26.16 76 P **P 16 20 07.5 +0.3**
comp=Z,2.6nm,0.7s,mb4.0,baz=283,slow=9.6,SNR=8.9
AKTO Aktyubinsk 26.16 76 P **P 16 20 07.5 +0.4**
AKTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
NVS Novosibirsk 38.97 58 *e*P **P 16 21 59.8 +0.8**
AAK Ala-Archa 39.78 79⇓ *e*P **P 16 22 04.8 -1.0**
AAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.0
AAK Ala-Archa 39.78 79 *e*P **P 16 22 04.8 -1.0**
comp=Z,5.0nm,1.2s,mb4.0
TORD Torodi Ar. Bea 40.04 202 P **P 16 22 07.9 0.0**
comp=Z,1.5nm,0.6s,mb3.8,baz=14,slow=8.3,SNR=10
ZAL Zalesovo 40.18 59 P **P 16 22 10.6 +1.5**
comp=Z,0.7nm,0.3s,mb3.8,baz=161,slow=3.3,SNR=4.0
ZAL Zalesovo 40.18 59 P **P 16 22 10.6 +1.5**
ZAL pmax pmax
comp=Z,1.0nm,0.3s
MKAR Makanchi Array 42.21 69 P **P 16 22 26.6 +0.8**
comp=Z,0.5nm,0.4s,mb3.6,baz=289,slow=7.6,SNR=4.3
MKAR Makanchi Array 42.21 69 P **P 16 22 26.7 +0.9**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
SONM Songino Array 54.90 55 P **P 16 24 05.0 +1.4**
comp=Z,1.0nm,0.8s,mb3.9,baz=300,slow=9.6,SNR=5.7
SONM Songino Array 54.90 55 P **P 16 24 05.0 +1.4**
SONM pmax pmax
comp=Z,1.0nm,0.8s
YAK Yakutsk 55.17 32 *i* P **P 16 24 05.2 -0.3**
YAK pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
ULN Ulaanbaatar 55.22 55 *e*P **P 16 24 07.5 +1.6**
PDAR Pinedale Array 74.89 322 P **P 16 26 15.3 +1.5**
comp=Z,0.5nm,0.5s,mb3.8,baz=61,slow=6.5,SNR=5.9
PPT Papeete 144.23 336 *e*LR LR 16 34 18.3
comp=Z,70nm,27.8s

NEIC ***26*** *16:43:00.2, 37.14S×177.43E, h5km, ML3.7(WEL), After WEL.*

WEL 26 16:43:00.2±0.3, 3715S×17743E, h5km, ML3.7/5, Error ellipse: s-maj=2.8km s-min=2.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.43**	**207**	P	Pg	16 43 09.1	+0.6
WIZ				S	Sg	16 43 13.9	-0.2
WIZ	**White Island**	**0.43**	**207**	PG	Pg	16 43 09.2	+0.7
WIZ				SG	Sg	16 43 13.8	-0.3
MXZ	**Matakaoa Point**	**0.81**	**121**	P	Pg	16 43 15.1	-0.8
MXZ				S	Sg	16 43 25.8	-0.6
MXZ	**Matakaoa Point**	**0.81**	**121**	P*	Pb	16 43 15.1	-1.7
MXZ				S*	Sb	16 43 25.8	-2.3
PUZ	**Puketiti**	**1.14**	**145**	P	Pg	16 43 22.0	0.0
PUZ	**Puketiti**	**1.14**	**145**	P*	Pb	16 43 22.0	-0.3
URZ	**Urewera**	**1.14**	**193**	P	Pg	16 43 20.7	-1.4
URZ	**Urewera**	**1.14**	**193**	P*	Pb	16 43 20.7	-1.7
URZ				S*	Sb	16 43 35.0	-2.6
MWZ	**Matawai**	**1.19**	**176**	*e*P	Pg	16 43 21.1	-2.0
MWZ	**Matawai**	**1.19**	**176**	*e*P*	Pb	16 43 21.1	-2.2
KARZ	**Kaharoa**	**1.29**	**227**	*e*P	Pn	16 43 23.4	-1.4
KARZ	**Kaharoa**	**1.29**	**227**	*e*P*	Pb	16 43 23.4	-1.6
KUZ	**Kuaotunu**	**1.43**	**286**	*e*P	Pn	16 43 25.7	-1.1
KUZ	**Kuaotunu**	**1.43**	**286**	*e*PN	Pn	16 43 25.7	-1.1
BKZ	**Black Stump Fm**	**2.15**	**200**	*e*P	Pn	16 43 35.2	-1.5
BKZ	**Black Stump Fm**	**2.15**	**200**	*e*P*	Pb	16 43 35.2	-4.4
WCZ	**Waipu Caves**	**2.76**	**295**	*e*P	Pn	16 43 45.4	+0.3
WCZ	**Waipu Caves**	**2.76**	**295**	*e*PN	Pn	16 43 45.4	+0.3
OUZ	**Omahuta**	**3.65**	**301**	PN	Pn	16 43 58.3	+1.0

IDC ***26*** *16:48:03.0±1.1, 600S×130.24E, h0km, mb4.3/4, mb1 4.7/7, mb1mx4.4/13, mbtmp4.6/7, ML4.7/1, Error ellipse: s-maj=54.3km s-min=18.7km az=67.0*

NEIC ***26*** *16:48:12.6±2.3, 623S×130.19E, h87km±25km, mb4.2/11, Error ellipse: s-maj=18.4km s-min=11.8km az=212.0*

ISCJB ***26*** *16:48:13.3±1.6, 634S±0.06×1302E±0.1, h115km±17km, mb4.6/12, Error ellipse: s-maj=17.4km s-min=8.3km az=138.9*

ISC 26 16:48:18.5±1.1, 661S±0.05×13012E±0.09, h155km±11km, n30, σ0s96/40, mb4.4/12, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.47**	**160**	*e*P	**Pn**	**16 49 51.7**	**+0.2**
	127nm,0.2s						
KAKA				*e*S	**Sn**	**16 51 04.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**12.23**	**201**	*e*P	**Pn**	**16 51 08.7**	**+1.2**
	24nm,0.2s						
FITZ				*e*S	**Sn**	**16 53 21.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**12.23**	**201**	Pn	**Pn**	**16 51 08.6**	**+1.2**
	6.1nm,0.3s,baz=35,slow=11,SNR=101						
FITZ				Sn	**Sn**	**16 53 20.2**	**-2.5**
	4.7nm,0.3s,baz=91,slow=9.5,SNR=7.0						
WRAB	**Tennant Creek**	**13.86**	**163**	*e*Pn	**Pn**	**16 51 27.3**	**-1.1**
	34nm,0.4s						
WRAB				*e*Sn	**Sn**	**16 53 55.3**	**-6.6**
WRA	**Warramunga Arr**	**13.87**	**163**	Pn	**Pn**	**16 51 27.5**	**-0.9**
	3.7nm,0.3s,baz=348,slow=14,SNR=147						
WRA				Sn	**Sn**	**16 53 56.7**	**-5.4**
	6.3nm,0.3s,baz=342,slow=22,SNR=7.9						
WB2	**Warramunga Arr**	**13.87**	**163**	*e*P	**Pn**	**16 51 27.5**	**-1.0**
WB2				*e*S	**Sn**	**16 53 57.5**	**-4.7**
PMG	**Port Moresby**	**17.09**	**100**	P	**Pn**	**16 52 08.3**	**+0.2**
	0.6nm,0.3s,baz=270,slow=14,SNR=3.8						
PMG	**Port Moresby**	**17.09**	**100**	*e*Pn	**Pn**	**16 52 06.9**	**-1.2**
PMG				*e*Sn	**Sn**	**16 55 02.2**	**-17**
AS31	**Alice Springs**	**17.34**	**168**	*e*P	**Pn**	**16 52 14.1**	**+3.1**
AS31				*e*S	**S**	**16 55 22.3**	**-0.1**
ASPA	**Alice Springs**	**17.34**	**168**	*e*P	**Pn**	**16 52 14.1**	**+3.1**
ASPA				*e*S	**S**	**16 55 22.3**	**-0.1**
ASAR	**Alice Springs**	**17.34**	**168**	P	**Pn**	**16 52 14.3**	**+3.3**
	6.1nm,0.3s,baz=350,slow=10,SNR=756						
ASAR				S	**S**	**16 55 22.2**	**-0.2**
	1.5nm,0.3s,baz=346,slow=26,SNR=7.6						
MBWA	**Marble Bar**	**17.61**	**214**	*e*Pn	**Pn**	**16 52 18.9**	**+4.6**
	22nm,1.4s						
CTA	**Charters Tower**	**20.60**	**132⇓**	*i*P	**P**	**16 52 48.3**	**+2.9**
	4.1nm,0.6s						
CTA	**Charters Tower**	**20.60**	**132**	P	**P**	**16 52 48.7**	**+3.3**
	3.9nm,0.6s,baz=311,slow=11,SNR=15						
CTAO	**Charters Tower**	**20.60**	**132**	*e*P	**P**	**16 52 48.1**	**+2.7**
	5.6nm,0.8s						
KSM	**Kuching**	**21.35**	**291**	*e*P	**P**	**16 52 53.0**	**-0.3**
STKA	**Stephens Creek**	**27.32**	**158**	*e*P	**P**	**16 53 52.7**	**+4.0**
	2.3nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**27.32**	**158**	P	**P**	**16 53 53.2**	**+4.6**
	4.3nm,0.7s,mb4.2,baz=336,slow=8.4,SNR=8.5						
GUN	**Gumba**	**54.79**	**311**	*e*P	**P**	**16 57 31.8**	**-0.3**
	33nm,0.6s,mb5.2						
PKI	**Pulchoki**	**54.97**	**310**	*e*P	**P**	**16 57 33.8**	**+0.4**
KKN	**Kakani**	**55.18**	**310**	*e*P	**P**	**16 57 35.4**	**+0.5**
	10nm,0.4s,mb4.9						
DMN	**Daman**	**55.22**	**310**	*e*P	**P**	**16 57 35.5**	**+0.3**
	10nm,0.4s,mb4.9						
GKN	**Gorkha**	**55.78**	**310**	*e*P	**P**	**16 57 39.7**	**+0.5**
	22nm,0.3s,mb5.4						
KOLN	**Koldanda**	**56.45**	**310**	*e*P	**P**	**16 57 44.3**	**+0.3**
	12nm,0.6s,mb4.9						
ULN	**Ulaanbaatar**	**57.94**	**342**	*e*P	**P**	**16 57 53.6**	**-0.8**
	1.8nm,0.8s,mb4.0						
SONM	**Songino Array**	**58.12**	**341**	P	**P**	**16 57 55.1**	**-0.5**
	0.8nm,0.5s,mb3.8,baz=161,slow=7.7,SNR=4.3						
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**16 59 00.8**	**+0.2**
	4.4nm,0.5s,mb4.4,baz=120,slow=7.3,SNR=28						
AAK	**Ala-Archa**	**70.33**	**320**	*e*P	**P**	**16 59 15.8**	**+0.7**
	5.2nm,1.2s,mb4.1						
BRVK	**Borovoye**	**77.88**	**328**	P	**P**	**16 59 58.1**	**-0.8**
	2.0nm,0.9s,mb3.8						
ZRNK	**Zerenda**	**78.51**	**327**	*e*P	**P**	**17 00 01.7**	**-0.7**
	1.0nm,0.6s,mb3.6						

NEIC ***26*** *16:59:43.1, 34.49S×72.06W, h28km, ML3.1(GUC), After GUC.*

GUC 26 16:59:43.1±0.6, 3449S×7206W, h28km±2km, MD3.5, ML3.1, 7C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNV	**Longovilo**	**0.76**	**45⇓**	*i*P	Pb	16 59 57.3	-0.4
LNV				*i* S	Sb	17 00 07.3	-0.3
NICH	**Los Niches**	**0.85**	**127⇑**	*i*P	Pn	16 59 58.5	-0.7
NICH				*i* S	Sb	17 00 10.1	-0.2
SFDO	**San Fernando**	**0.87**	**98⇑**	*i*P	Pn	16 59 59.1	-0.3
SFDO				*i* S	Sb	17 00 11.1	+0.3
LCCH	**Las Cruces**	**1.09**	**22**	*e*P	Pn	17 00 02.0	-0.5
LCCH				*i* S	Sn	17 00 17.0	+0.3
TACH	**Talagante**	**1.25**	**48**	*i* P	Pn	17 00 04.5	-0.2
TACH				*i* S	Sn	17 00 21.3	+0.7
CACH	**El Canelo**	**1.26**	**73**	*i* P	Pn	17 00 05.8	+0.9
CACH				*i* S	Sn	17 00 22.8	+1.9
CHCH	**Chadas Angostu**	**1.29**	**65⇑**	*i*P	Pn	17 00 05.8	+0.6
CHCH				*i* S	Sn	17 00 22.8	+1.2
CICH	**Cipreses**	**1.36**	**83⇓**	*i*P	Pn	17 00 07.0	+0.8
CICH				*i* S	Sn	17 00 24.8	+1.4
RCDM	**Rinconada Maip**	**1.44**	**46**	*i* P	Pn	17 00 07.6	+0.3
RCDM				*i* S	Sn	17 00 26.3	+1.0
RCDM				AML	AML	17 00 32.2	
	comp=E,411nm,0.1s						
RCDM	**Rinconada Maip**	**1.44**	**46**	*i* P	Pn	17 00 07.6	+0.3
RCDM				*i* S	Sn	17 00 26.3	+1.0
ANTU	**Antumapu**	**1.50**	**52**	AML	AML	17 00 33.8	
	comp=E,621nm,0.5s						
PCH	**Pirque**	**1.55**	**56⇑**	*i*P	Pn	17 00 09.7	+0.9
PCH				*i* S	Sn	17 00 29.8	+1.9
SAN	**Santiago**	**1.56**	**49**	AML	AML	17 00 35.9	
	comp=N,404nm,0.4s						
FSR	**Penalolen**	**1.62**	**52**	AML	AML	17 00 35.9	
	comp=E,325nm,0.3s						
SJCH	**San Jose de Ma**	**1.65**	**59**	*i* P	Pn	17 00 11.3	+1.1
SJCH				*i* S	Sn	17 00 32.7	+2.2
SJCH				AML	AML	17 00 35.5	
	comp=E,424nm,0.3s						
SJCH	**San Jose de Ma**	**1.65**	**59**	*i* P	Pn	17 00 11.3	+1.1
SJCH				*i* S	Sn	17 00 32.7	+2.2
CLCH	**Cerro Calan**	**1.67**	**50⇓**	*i*P	Pn	17 00 11.8	+1.3
CLCH				*i* S	Sn	17 00 33.6	+2.7
CLCH				AML	AML	17 00 42.2	
	comp=N,371nm,0.5s						
ROCH	**El Roble**	**1.75**	**30⇑**	*i*P	Pn	17 00 13.2	+1.6
ROCH				*i* S	Sn	17 00 36.0	+3.1
FCH	**Farellones**	**1.87**	**52⇑**	*i*P	Pn	17 00 15.1	+1.9
FCH				*i* S	Sn	17 00 39.7	+3.7
FCH				AML	AML	17 00 43.4	
	comp=N,298nm,0.2s						
JACH	**Jahuel**	**2.18**	**35⇑**	*i*P	Pn	17 00 19.0	+1.5
JACH				*i* S	Sn	17 00 46.6	+3.0

IDC ***26*** *17:06:10.7±2.5, 943S×109.45E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/16, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=125.4km s-min=25.9km az=49.0*

NEIC ***26*** *17:06:11.1±1.6, 970S×109.12E, h10km, mb4.4/3, Error ellipse: s-maj=93.1km s-min=10.5km az=225.0*

ISCJB ***26*** *17:06:12.8±2.1, 965S±0.06×1092E±0.06, h33km, mb3.8/7, Error ellipse: s-maj=121.1km s-min=13.8km az=88.9*

ISC 26 17:06:15.1±2.2, 965S±0.06×1092E±0.06, h35km, n9, σ0s31/9, mb3.8/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.04**	**120**	P	**Pn**	**17 10 22.9**	**0.0**
	0.2nm,0.3s,baz=289,slow=10.0,SNR=14						
FITZ				S	S	17 13 25.3	-23
	0.0nm,0.3s,baz=126,slow=23,SNR=4.4						
WRA	**Warramunga Arr**	**26.34**	**116**	P	**P**	**17 11 47.6**	**-0.2**
	0.4nm,0.7s,mb3.0,baz=288,slow=11,SNR=4.6						
WRAB	**Tennant Creek**	**26.35**	**116**	P	**P**	**17 11 48.0**	**+0.2**
	7.4nm,1.2s,mb4.1						
ASAR	**Alice Springs**	**27.41**	**124**	P	**P**	**17 11 57.0**	**-0.3**
	0.3nm,0.7s,mb3.0,baz=296,slow=8.8,SNR=10						
STKA	**Stephens Creek**	**37.28**	**131**	P	**P**	**17 13 23.9**	**+0.3**
	2.2nm,0.8s,mb4.0,baz=319,slow=9.3,SNR=4.9						
STKA	**Stephens Creek**	**37.28**	**131**	P	**P**	**17 13 23.9**	**+0.3**
MKAR	**Makanchi Array**	**61.09**	**339**	P	**P**	**17 16 26.1**	**+0.5**
	1.1nm,0.8s,mb4.0,baz=162,slow=7.0,SNR=4.3						
CHKZ	**Chkalovo**	**71.03**	**337**	*e*P	**P**	**17 17 29.4**	**0.0**
	2.0nm,0.7s,mb4.2						
ZRNK	**Zerenda**	**71.12**	**336**	*e*P	**P**	**17 17 29.5**	**-0.5**
	1.7nm,0.5s,mb4.2						

ISCJB ***26*** *17:08:17.3±0.4, 2601N±0.07×4486W±0.07, h10km, mb4.3/34, MS3.7/21, Error ellipse: s-maj=10.2km s-min=8.6km az=135.7*

IDC ***26*** *17:08:17.7±0.6, 2602N×4489W, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.1/24, mbtmp4.1/17, MS3.7/21, Ms1 3.7/21, ms1mx3.6/28, Error ellipse: s-maj=19.0km s-min=13.9km az=129.0*

NEIC ***26*** *17:08:19.0±0.3, 2600N×4484W, h10km, mb4.5/23, Error ellipse: s-maj=8.1km s-min=6.9km az=151.0*

HRVD ***26*** *17:08:19.0±0.8, 2630N×4479W, h12km, MW4.8/47, Centroid moment Tensor Solution. LP body waves: s7,c8;Mantle waves: s47,c53; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.47±.09; Mθφ1.01±.11; Mφφ0.45±.09; Mrθ0.19±.43; Mθθ0.72±.07; Mφr-0.90±.31; Best double couple: M0 1.72700×10^16 NP1:φ256.00000°, δ43.00000°, λ-53.00000°. NP2:φ31.00000°, δ57.00000°, λ-119.00000°. Principal axes: T 1.5560, Plg8.0000°, Azm141.0000°; N 0.3360, Plg24.0000°, Azm48.0000°; P -1.8970, Plg65.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 26 17:08:19.4±0.4, 2604N±0.07×4485W±0.07, h10km, n55, σ0s84/44, mb4.3/34, MS3.7/21, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBSR	**BB Station**	**18.43**	**295**	P	**Pn**	**17 12 36.7**	**+1.9**
	17nm,0.9s						
SJG	**San Juan**	**21.24**	**252**	LR	LR	17 19 26.6	
	comp=Z,216nm,18.8s,MS3.6,baz=270,slow=32						
PCRV	**Puerto La Cruz**	**24.49**	**233**	LR	LR	17 21 25.8	
	comp=Z,100nm,21.2s,MS3.3,baz=49,slow=32						
SDV	**Santo Domingo**	**29.83**	**240**	LR	LR	17 24 26.2	
	comp=Z,79nm,21.9s,MS3.3,baz=153,slow=32						
SCHQ	**Schefferville**	**32.98**	**337**	LR	LR	17 26 53.6	
	comp=Z,95nm,20.3s,MS3.5,baz=125,slow=34						
ROSC	**El Rosal**	**35.20**	**238**	LR	LR	17 26 50.5	
	comp=Z,78nm,19.8s,MS3.5,baz=21,slow=32						
ESDC	**Sonseca Array**	**36.62**	**58**	P	**P**	**17 15 26.6**	**+0.8**
	0.8nm,0.8s,mb3.6,baz=266,slow=8.5,SNR=4.1						
WVT	**Waverly**	**37.89**	**296**	*e*P	**P**	**17 15 37.2**	**+0.6**
	6.7nm,1.2s,mb4.2						
SAML	**Samuel**	**39.08**	**210**	*e*P	**P**	**17 15 45.5**	**-1.1**
	6.2nm,0.9s,mb4.3						
BDFB	**Brasilia**	**41.55**	**185**	P	**P**	**17 16 07.2**	**+0.2**
	3.9nm,0.7s,mb4.2,baz=15,slow=12,SNR=5.4						
BDFB				LR	LR	17 31 27.1	
	comp=Z,119nm,21.0s,MS3.7,baz=22,slow=34						
MIAR	**Mount Ida**	**42.58**	**294**	P	**P**	**17 16 15.5**	**+0.1**
	11nm,1.4s,mb4.4						
DBIC	**Dimbokro**	**42.69**	**110**	P	**P**	**17 16 17.1**	**+0.8**
	7.4nm,0.8s,mb4.5,baz=296,slow=9.8,SNR=8.5						
DBIC				LR	LR	17 30 39.3	
	comp=Z,210nm,21.6s,MS4.0,baz=290,slow=31						
DBIC	**Dimbokro**	**42.69**	**110**	*e*P	**P**	**17 16 16.9**	**+0.5**
	10nm,0.8s,mb4.6						
TORD	**Torodi Ar. Bea**	**45.46**	**97**	P	**P**	**17 16 38.6**	**+0.1**
	2.5nm,1.0s,mb4.0,baz=301,slow=7.2,SNR=8.9						
TORD				LR	LR	17 34 51.4	
	comp=Z,160nm,18.4s,MS4.0,baz=285,slow=35						
ULM	**Lac du Bonnet**	**45.73**	**316**	P	**P**	**17 16 41.8**	**+1.1**
	5.0nm,0.8s,mb4.5,baz=93,slow=6.1,SNR=3.7						
ULM				LR	LR	17 33 29.2	
	comp=Z,119nm,20.1s,MS3.8,baz=93,slow=33						
SUMG	**Summit**	**46.71**	**3**	*e*P	**P**	**17 16 48.5**	**+0.1**
	16nm,1.0s,mb4.9						
WMOK	**Wichita Mounta**	**46.85**	**294**	*e*P	**P**	**17 16 49.2**	**-0.3**
	7.1nm,1.3s,mb4.4						
KEST	**Kesra**	**46.99**	**64**	P	**P**	**17 16 51.9**	**+1.2**
	2.6nm,1.0s,mb4.1,baz=212,slow=5.5,SNR=4.6						
LPAZ	**La Paz**	**47.78**	**211**	P	**P**	**17 16 57.7**	**+0.9**
	3.3nm,0.6s,mb4.6,baz=12,slow=8.8,SNR=16						
LPAZ				LR	LR	17 36 54.0	
	comp=Z,41nm,20.7s,MS3.4,baz=284,slow=36						
LPAZ	**La Paz**	**47.78**	**211**	*e*P	**P**	**17 16 56.9**	**+0.1**
	5.4nm,0.8s,mb4.6						
GERES	**GERESS Array B**	**50.37**	**47**	P	**P**	**17 17 16.0**	**-0.6**
	0.4nm,0.7s,mb3.6,baz=275,slow=6.6,SNR=5.1						
GERES				LR	LR	17 37 40.7	
	comp=Z,23nm,18.1s,MS3.2,baz=288,slow=35						
NB2	**NORSAR Subarra**	**51.25**	**31**	P	**P**	**17 17 23.6**	**+0.4**
	comp=Z,6.0nm,1.4s,mb4.3,baz=253,slow=7.9						
NOA	**NORSAR Array B**	**51.25**	**31**	P	**P**	**17 17 24.0**	**+0.7**
	comp=Z,1.8nm,0.9s,mb4.0,baz=254,slow=7.8,SNR=6.4						
NOA				LR	LR	17 35 28.9	
	comp=Z,44nm,18.3s,MS3.5,baz=260,slow=32						
MORC	**Moravsky Berou**	**52.93**	**46**	P	**P**	**17 17 34.2**	**-1.5**
	comp=Z,1.9nm,0.9s,mb4.0						
ANMO	**Albuquerque**	**53.10**	**295**	P	**P**	**17 17 36.4**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.8,baz=135,slow=4.3,SNR=3.5						
ANMO	**Albuquerque**	**53.10**	**295**	P	**P**	**17 17 36.2**	**-0.8**
	comp=Z,1.6nm,1.0s,mb3.9						
CPUP	**Villa Florida**	**53.44**	**194**	P	**P**	**17 17 38.3**	**-1.2**
	comp=Z,0.8nm,0.5s,mb3.9,baz=349,slow=6.5,SNR=4.1						
LVC	**Limon Verde**	**53.69**	**208**	*e*P	**P**	**17 17 42.1**	**+0.8**
	comp=Z,12nm,1.0s,mb4.8						
PDAR	**Pinedale Array**	**54.66**	**305**	P	**P**	**17 17 48.1**	**-0.2**
	comp=Z,1.2nm,0.8s,mb4.0,baz=87,slow=7.6,SNR=9.7						
PDAR				LR	LR	17 39 41.4	
	comp=Z,134nm,18.1s,MS4.0,baz=82,slow=34						
YKA	**Yellowknife Ar**	**57.91**	**329**	LR	LR	17 42 02.0	
	comp=Z,155nm,20.4s,MS4.1,baz=90,slow=35						
HLID	**Hailey**	**58.12**	**307**	*e*P	**P**	**17 18 13.4**	**+0.4**
	comp=Z,2.0nm,0.9s,mb4.2						
FINES	**FINESS Array B**	**58.39**	**32**	P	**P**	**17 18 15.0**	**+0.1**
	comp=Z,2.5nm,1.0s,mb4.2,baz=243,slow=7.5,SNR=7.0						
FINES				LR	LR	17 40 26.1	
	comp=Z,44nm,18.7s,MS3.6,baz=216,slow=33						
FINES	**FINESS Array B**	**58.39**	**32**	P	**P**	**17 18 15.0**	**+0.1**
FINES				LR	LR	17 40 26.1	
FIA1	**FINESS Array S**	**58.39**	**32**	P	**P**	**17 18 14.9**	**0.0**
ARCES	**ARCESS Array B**	**58.99**	**23**	P	**P**	**17 18 18.9**	**-0.3**
	comp=Z,2.9nm,0.8s,mb4.3,baz=282,slow=5.9,SNR=11						
ARCES				LR	LR	17 39 20.1	
	comp=Z,32nm,18.3s,MS3.5,baz=83,slow=32						
NEW	**Newport**	**59.48**	**312**	*e*P	**P**	**17 18 22.3**	**-0.2**
	comp=Z,13nm,1.3s,mb4.8						
KEV	**Kevo**	**59.55**	**23**	*e*P	**P**	**17 18 19.9**	**-3.1**
	comp=Z,9.7nm,1.2s,mb4.7						
AKASG	**Malin Array Be**	**60.40**	**45**	P	**P**	**17 18 28.0**	**-0.9**
	comp=Z,2.5nm,0.7s,mb4.4,baz=273,slow=6.1,SNR=12						
BR131	**Keskin Array S**	**65.39**	**56**	*e*P	**P**	**17 19 02.7**	**+0.6**
	comp=Z,1.8nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**65.39**	**56**	P	**P**	**17 19 03.0**	**+0.9**
	comp=Z,2.1nm,0.8s,mb4.2,baz=261,slow=5.8,SNR=13						
BRTR				LR	LR	17 44 27.8	
	comp=Z,23nm,19.2s,MS3.4,baz=308,slow=33						
INK	**Inuvik**	**65.60**	**336**	*e*P	**P**	**17 18 59.4**	**-4.0**
	comp=Z,7.1nm,1.0s,mb4.7						
DAWY	**Dawson**	**68.85**	**332**	*e*P	**P**	**17 19 23.4**	**-0.6**
MALT	**Malatya**	**69.36**	**57**	*e*P	**P**	**17 19 28.3**	**+1.1**
	comp=Z,3.6nm,1.0s,mb4.3						
PLCA	**Paso Flores**	**70.60**	**200**	P	**P**	**17 19 35.0**	**+0.2**
	comp=Z,4.6nm,0.9s,mb4.4,baz=25,slow=8.7,SNR=10						
PLCA				LR	LR	17 50 11.9	
	comp=Z,43nm,19.2s,MS3.7,baz=1.3,slow=36						
PLCA	**Paso Flores**	**70.60**	**200**	*e*P	**P**	**17 19 34.2**	**-0.6**
	comp=Z,8.0nm,1.1s,mb4.6						
COLA	**College**	**72.03**	**334**	P	**P**	**17 19 41.9**	**-1.6**
	comp=Z,11nm,1.1s,mb4.7						
MCK	**McKinley**	**72.92**	**333**	P	**P**	**17 19 48.4**	**-0.4**
	comp=Z,3.7nm,1.0s,mb4.3						
KDAK	**Kodiak Island**	**77.18**	**328**	LR	LR	17 54 08.3	
	comp=Z,73nm,18.9s,MS4.0,baz=274,slow=36						
ZRNK	**Zerenda**	**82.67**	**34**	*e*P	**P**	**17 20 43.1**	**0.0**
	comp=Z,4.9nm,1.1s,mb4.5						
CHKZ	**Chkalovo**	**83.06**	**33**	*e*P	**P**	**17 20 44.9**	**-0.2**
	comp=Z,3.1nm,1.0s,mb4.3						
BRVK	**Borovoye**	**83.25**	**33**	*e*P	**P**	**17 20 46.5**	**+0.4**
	comp=Z,2.8nm,1.0s,mb4.2						
KMBO	**Kilima Mbogo**	**83.39**	**94**	LR	LR	17 57 36.4	
	comp=Z,174nm,18.7s,MS4.5,baz=88,slow=36						
BOSA	**Boshof**	**86.50**	**124**	LR	LR	17 54 08.4	
	comp=Z,81nm,19.1s,MS4.1,baz=107,slow=32						
MAW	**Mawson**	**120.55**	**155**	PKhKP		17 27 06.4	
	comp=Z,4.1nm,0.7s,baz=153,slow=15,SNR=10						
VNDA	**Vanda**	**126.94**	**187**	PKP	PKPdf	17 27 21.8	-1.7
	comp=Z,1.2nm,1.0s,baz=284,slow=1.9,SNR=4.4						

IDC ***26*** *17:36:34.3±2.9, 565S×154.37E, h412km±26km, mb3.3/5, mb1 3.5/7, mb1mx3.2/16, mbtmp4.1/7, Error ellipse: s-maj=35.7km s-

comp=Z,100nm,19.9s,baz=2.9,slow=36
WRAB Tennant Creek 19.53 213 *e*P **Pn 17 50 22.4 -0.7**
6.6nm,0.6s
WB2 Warramunga Arr 19.54 213 *e*P **Pn 17 50 22.4 -0.7**
WRA Warramunga Arr 19.54 213 P **Pn 17 50 22.3 -0.9**
0.7nm,0.3s,baz=32,slow=11,SNR=49
WRA LR LR 17 58 21.4
comp=Z,128nm,20.3s,baz=225,slow=39
AS31 Alice Springs 22.85 209 *e*P **P 17 50 58.6 +1.2**
ASAR Alice Springs 22.86 209 P **P 17 50 58.7 +1.3**
2.6nm,0.8s,mb3.7,baz=34,slow=10,SNR=48
ASAR LR LR 18 00 18.1
comp=Z,120nm,21.9s,MS3.3,baz=10,slow=38
ASPA Alice Springs 22.86 209 *e*P **P 17 50 58.6 +1.2**
FITZ Fitzroy Crossi 24.24 232 *e*P **P 17 51 09.9 -0.9**
4.7nm,0.6s,mb4.1
FITZ Fitzroy Crossi 24.24 232 P **P 17 51 09.9 -0.9**
2.8nm,0.6s,mb3.9,baz=44,slow=16,SNR=8.5
DZM Mont Dzumac 27.24 134 LR LR 18 01 03.9
comp=Z,104nm,19.2s,MS3.4,baz=347,slow=32
STKA Stephens Creek 28.29 187 LR LR 18 03 37.2
comp=Z,81nm,21.1s,MS3.3,baz=23,slow=37
SONM Songino Array 61.73 331 P **P 17 56 13.1 +1.1**
0.3nm,0.6s,mb3.6,baz=147,slow=8.6,SNR=4.9
BVAR Borovoye Array 84.11 324 P **P 17 58 23.2 -1.3**
1.4nm,0.9s,mb4.1,baz=116,slow=6.6,SNR=7.5

*IDC **26** 17:49:59.4±1.2, 108N×12529E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/17, mbtmp3.9/6, ML3.9/1, Error ellipse: s-maj=123.7km s-min=19.0km az=66.0*
*ISCJB **26** 17:50:02.7±0.7, 08N±0.1×1245E±0.2, h33km, mb4.1/8, Error ellipse: s-maj=34.3km s-min=10.3km az=122.9*
*NEIC **26** 17:50:05.3±0.6, 060N×12440E, h35km, mb4.5/3, Error ellipse: s-maj=36.6km s-min=9.8km az=60.0*

ISC 26 17:50:05.2±0.7, 07N±01×1246E±02, h35km, n15, σ1§15/14, mb4.1/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**9.85**	**303**	*e*P		**Pn**		**17 52 23.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**18.75**	**177**	P		**Pn**		**17 54 24.1**	**+2.4**
	0.3nm,0.3s,baz=10.0,slow=12,SNR=14								
WRAB	**Tennant Creek**	**22.67**	**155**	*e*P		**P**		**17 55 02.4**	**-1.1**
	3.5nm,0.5s,mb4.0								
WRA	**Warramunga Arr**	**22.68**	**155**	P		**P**		**17 55 02.5**	**-1.0**
	2.5nm,0.4s,mb4.0,baz=334,slow=11,SNR=41								
WB2	**Warramunga Arr**	**22.68**	**155**	*e*P		**P**		**17 55 02.7**	**-0.9**
AS31	**Alice Springs**	**25.90**	**160**	*e*P		**P**		**17 55 34.2**	**+0.3**
ASAR	**Alice Springs**	**25.90**	**160**	P		**P**		**17 55 34.1**	**+0.3**
	1.7nm,0.5s,mb3.9,baz=350,slow=14,SNR=39								
ASAR				PcP		PcP		17 59 02.5	+0.4
	0.6nm,0.5s,baz=349,slow=2.3,SNR=14								
ASPA	**Alice Springs**	**25.90**	**160**	*e*P		**P**		**17 55 34.4**	**+0.5**
STKA	**Stephens Creek**	**36.23**	**155**	*e*P		**P**		**17 57 04.8**	**0.0**
	2.3nm,0.8s,mb4.2								
STKA	**Stephens Creek**	**36.23**	**155**	P		**P**		**17 57 04.9**	**+0.1**
	1.9nm,0.5s,mb4.3,baz=332,slow=9.5,SNR=6.7								
TLY	**Talaya**	**53.73**	**344**	*e*P		**P**		**17 59 26.6**	**+2.7**
	4.4nm,0.8s,mb4.4								
MKAR	**Makanchi Array**	**58.82**	**327**	P		**P**		**18 00 01.0**	**+0.9**
	0.3nm,0.3s,mb3.8,baz=118,slow=7.4,SNR=9.2								
MKAR				PcP		PcP		18 00 49.6	+0.2
	0.9nm,0.6s,baz=122,slow=3.8,SNR=8.6								
YAK	**Yakutsk**	**61.26**	**3**	*e*P		**P**		**18 00 15.7**	**-1.2**
	5.7nm,0.7s,mb4.8								
VNDA	**Vanda**	**80.76**	**172**	P		**P**		**18 02 14.9**	**-0.1**
	0.5nm,0.7s,mb3.6,baz=322,slow=6.2,SNR=3.8								
TORD	**Torodi Ar. Bea**	**121.71**	**286**	PKP		PKPdf		18 08 56.7	+1.4
	0.2nm,0.3s,baz=62,slow=1.9,SNR=6.1								

CASC 26 18:24:31.6±2.5, 876N×8288W, h17km±7km, MD3.9, 8C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.19**	**80**	⇑*i*P		Pg		18 24 36.6	+0.3
BRU2				*e*S		Sg		18 24 41.0	+1.5
ACR	**Cerro Adams**	**0.30**	**250**	⇑*e*P		Pg		18 24 38.2	+0.2
ACR				*e*S		Sg		18 24 43.9	+1.5
BRU	**Baru**	**0.32**	**81**	⇑*i*P		Pg		18 24 38.4	0.0
BRU				*e*S		Sg		18 24 46.0	+3.0
DVD	**David**	**0.53**	**127**	⇑*e*P		Pg		18 24 40.5	-1.7
DVD				*e*S		Sg		18 24 50.6	+1.2
CNI	**Changuinola**	**0.75**	**29**	⇓*i*P		Pn		18 24 45.2	-0.9
BUS	**Buena Vista**	**1.17**	**313**	⇑*i*P		Pn		18 24 52.5	-0.7
BUS				*e*S		Sb		18 25 08.2	-0.1
LCR2	**La Lucha 2**	**1.48**	**312**	⇑*e*P		Pn		18 24 56.7	-0.7
LCR2				*e*S		Sn		18 25 17.0	+0.7
VTU	**Volcan Turrial**	**1.52**	**325**	⇓*i*P		Pn		18 24 59.0	+1.0
VTU				*e*S		Sn		18 25 19.2	+1.7
OCM	**Ochomogo**	**1.55**	**317**	⇑*i*P		Pn		18 24 58.1	-0.4
OCM				*e*S		Sn		18 25 18.9	+0.7
IRZ2	**Volcan Irazu 2**	**1.56**	**320**	⇓*e*P		Pn		18 24 58.9	+0.2
LAJ	**Bijagual**	**1.64**	**312**	*e*P		Pn		18 25 03.5	+3.8
SJS	**Escuela Geolog**	**1.65**	**315**	⇓*e*P		Pn		18 25 00.2	+0.4
SJS				*e*S		Sn		18 25 22.2	+1.7
PRS1	**Puriscal**	**1.86**	**311**	⇓*i*P		Pn		18 25 02.1	-0.6
PRS1				*e*S		Sn		18 25 25.3	-0.5
POA2	**Poas 2**	**1.95**	**316**	⇑*e*P		Pn		18 25 04.8	+0.9
CGA2	**Cerro Gallo 2**	**2.00**	**309**	*e*P		Pn		18 25 04.9	+0.3
CGA2				*e*S		Sn		18 25 30.3	+1.0
EPA	**Esparza**	**2.09**	**306**	*e*P		Pn		18 25 05.5	-0.3
EPA				*e*S		Sn		18 25 33.7	+2.3
JCR	**Jicaral**	**2.45**	**296**	*e*P		Pn		18 25 11.0	+0.2
VACR	**Volcan Arenal**	**2.46**	**314**	*e*P		Pn		18 25 12.8	+1.9
AZU	**Azuero**	**2.75**	**110**	*e*P		Pn		18 25 15.0	0.0
ACH	**Altos**	**2.92**	**92**	*e*P		Pn		18 25 17.3	0.0
CRZC	**La Cruz**	**3.45**	**309**	*e*P		Pn		18 25 25.5	+0.9

*ISCJB **26** 18:43:01.6±2.4, 249S±02×1799E±04, h500km, mb3.6/6, Error ellipse: s-maj=46.7km s-min=23.9km az=141.9*
*IDC **26** 18:43:01.5±4.0, 2478S×17991E, h478km±32km, mb3.1/5, mb1 3.3/6, mb1mx3.1/14, mbtmp4.1/6, Error ellipse: s-maj=51.2km s-min=38.8km az=106.0*
*NEIC **26** 18:43:02.7±1.8, 2495S×17995E, h500km, mb4.0/2, Error ellipse: s-maj=38.0km s-min=19.3km az=70.0*

ISC 26 18:43:02.6±2.4, 250S±02×1800W±04, h500km, n8, σ0§47/8, mb3.6/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.49**	**190**	P		**P**		**18 45 56.8**	**0.0**
	1.6nm,0.3s,baz=264,slow=12,SNR=9.9								
CTA	**Charters Tower**	**31.50**	**272**	P		**P**		**18 48 43.1**	**+0.4**
	3.8nm,0.6s,mb4.0,baz=102,slow=11,SNR=12								
CTAO	**Charters Tower**	**31.50**	**272**	*e*P		**P**		**18 48 43.2**	**+0.5**
	4.1nm,0.6s,mb4.0								
ASAR	**Alice Springs**	**41.87**	**262**	P		**P**		**18 50 08.6**	**+0.3**
	0.7nm,0.6s,mb3.3,baz=86,slow=8.6,SNR=11								
WRAB	**Tennant Creek**	**42.34**	**267**	*e*P		**P**		**18 50 11.2**	**-0.8**
	2.9nm,0.8s,mb3.8								
WRA	**Warramunga Arr**	**42.35**	**267**	P		**P**		**18 50 11.6**	**-0.5**
	0.9nm,0.4s,mb3.5,baz=99,slow=8.1,SNR=26								
WRA				ScP		ScP		18 54 59.3	+2.5
	0.2nm,0.6s,baz=105,slow=3.9,SNR=4.9								
FITZ	**Fitzroy Crossi**	**50.76**	**266**	P		**P**		**18 51 16.5**	**+0.6**
	1.6nm,0.9s,mb3.3,baz=121,slow=13,SNR=4.8								
MJAR	**Matsushiro Arr**	**72.77**	**326**	P		**P**		**18 53 39.6**	**0.0**
	0.9nm,0.7s,mb3.4,baz=153,slow=6.1,SNR=5.3								

MAN 26 18:48:45.9, 589N×12599E, h145km, mb2.8, ML4.2, MS5.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.09**	**14**	*e*P		Pn		18 49 10.9	0.0
MATI				*e*S		Sn		18 49 31.3	+1.3
KCP	**Kidapawan**	**1.43**	**321**	*e*P		Pn		18 49 16.0	+1.7
KCP				*i* S		Sn		18 49 37.0	+0.9
BUKP	**Musuan**	**2.19**	**335**	*e*P		Pn		18 49 23.6	+0.7
BUKP				*e*S		Sn		18 49 52.6	+1.2
CGP	**Cagayan de Oro**	**2.86**	**333**	⇑*e*P		Pn		18 49 31.8	+0.5
CGP				*i* S		Sn		18 50 06.6	+0.4

KRSC 26 19:29:54, 5431N×16051E, h85km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.68**	**247**	*e*P		Pn		19 30 12.3	+2.4
KII				*i* S		Sn		19 30 25.4	+3.7
MKZ	**Mys Kozlova**	**0.75**	**70**	*i* P		Pn		19 30 12.3	+1.7
MKZ				*i* S		Sn		19 30 25.7	+2.7
TUMR	**Tumrok**	**1.00**	**348**	*i* P		Pn		19 30 15.2	+1.9
TUMR				*i* S		Sn		19 30 30.1	+2.3
SPN	**Mys Shipunski**	**1.25**	**194**	*i* P		Pn		19 30 17.6	+1.3
SPN				*i* S		Sn		19 30 34.4	+1.3
NLC	**Nalytchevo**	**1.33**	**212**	*i* P		Pn		19 30 19.0	+1.6
NLC				*i* S		Sn		19 30 37.2	+2.2
KMNR	**Kamenistaya**	**1.46**	**354**	*e*P		Pn		19 30 20.8	+1.8
KMNR				*i* S		Sn		19 30 39.9	+2.1
AVH	**Avacha**	**1.48**	**226**	*i* P		Pn		19 30 21.7	+2.4
AVH				*i* S		Sn		19 30 41.4	+3.0
GNL	**Ganaly**	**1.64**	**249**	*i* P		Pn		19 30 23.2	+1.9
GNL				*i* S		Sn		19 30 44.0	+2.1
KPT	**Kopyto**	**1.67**	**354**	*e*P		Pn		19 30 23.2	+1.5
KPT				*i* S		Sn		19 30 44.7	+2.1
PET	**Petropavlovsk**	**1.70**	**221**	*e*P		Pn		19 30 24.0	+2.0
PET				*i* S		Sn		19 30 45.6	+2.3
ZLN	**Zelenaya**	**1.72**	**6**	*e*P		Pn		19 30 25.0	+2.7
ZLN				*i* S		Sn		19 30 46.5	+2.7
KOZ	**Kozyrevsk**	**1.79**	**348**	*e*P		Pn		19 30 24.5	+1.3
KRSR	**Krestovskiy**	**1.91**	**1**	P		Pn		19 30 26.6	+1.8
KRSR				*i* S		Sn		19 30 50.2	+1.9
KLY	**Klyuchi**	**2.01**	**2**	P		Pn		19 30 28.2	+2.1
KLY				*i* S		Sn		19 30 52.7	+2.1
SRDR	**Sredinnyy**	**2.06**	**348**	*e*P		Pn		19 30 27.6	+0.8
RUS	**Russkaya**	**2.23**	**213**	*e*P		Pn		19 30 30.3	+1.3
KBTR	**Krutoberegovo**	**2.32**	**34**	*e*P		Pn		19 30 31.4	+1.2
KBTR				*i* S		Sn		19 30 58.3	+0.4
SRKR	**Sorokina**	**2.38**	**9**	*e*P		Pn		19 30 33.7	+2.6
SRKR				*i* S		Sn		19 31 02.2	+2.8

IDC 26 19:45:17.8±3.6, 859S×10806E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.7/3, Error ellipse: s-maj=144.4km s-min=29.1km az=49.0, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.81**	**117**	P		P		19 51 09.0	+0.3
	0.2nm,0.5s,baz=290,slow=11,SNR=3.3								
SONM	**Songino Array**	**56.20**	**359**	P		P		19 55 00.1	+0.6
	1.0nm,0.6s,baz=176,slow=7.8,SNR=7.1								
MKAR	**Makanchi Array**	**59.73**	**340**	P		P		19 55 24.0	-0.3
	0.6nm,0.4s,baz=146,slow=6.9,SNR=13								

*ISCJB **26** 19:46:07.0±0.5, 4182N±002×2344E±004, h8km±5km, Error ellipse: s-maj=4.7km s-min=3.8km az=67.6*
*SOF **26** 19:46:06.8, 4188N×2354E, h8km, MD2.5*
*CSEM **26** 19:46:06.4±0.1, 4189N×2347E, h8km, MD2.5, Error ellipse: s-maj=2.2km s-min=1.5km az=106.0*
*THE **26** 19:46:07.6, 4183N×2343E, h11km, ML2.6*
*NEIC **26** 19:46:08.8, 4174N×2352E, h18km, MD3.5(ATH), After ATH.*
*ATH **26** 19:46:08.8, 4174N×2352E, h18km, MD3.5/4*

ISC 26 19:46:07.6±0.5, 4183N±003×2344E±004, h10km±4km, n21, σ0§79/34, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.27**	**279**	*i* Pg		**Pg**		**19 46 13.4**	**+0.4**
MMB	**Musomiste**	**0.32**	**137**	*e*Pg		**Pg**		**19 46 14.2**	**+0.3**
MMB				*e*Sg		**Sg**		**19 46 19.1**	**+0.9**
MMB	**Musomiste**	**0.32**	**137**	*i* Pg		**Pg**		**19 46 14.2**	**+0.3**
MMB				*e*Sg		**Sg**		**19 46 19.1**	**+0.9**
NVR	**Nevrokopi**	**0.57**	**146**	*e*PB		**Pg**		**19 46 18.0**	**-0.6**
NVR				*e*SB		**Sg**		**19 46 24.9**	**-1.2**
SRS	**Serrai**	**0.72**	**171**	*e*Pg		**Pg**		**19 46 20.9**	**-0.5**
SRS				*e*Sg		**Sg**		**19 46 31.4**	**+0.7**
KNT	**Kendrikon**	**0.78**	**212**	*e*Pg		**Pg**		**19 46 22.4**	**-0.1**
KNT				*e*Sg		**Sg**		**19 46 33.9**	**+1.2**
VTS	**Vitosha**	**0.79**	**347**	*e*Pg		**Pg**		**19 46 22.5**	**-0.2**
VTS				*e*Sg		**Sg**		**19 46 33.4**	**+0.5**
VTS	**Vitosha**	**0.79**	**347**	Pg		**Pg**		**19 46 21.8**	**-0.9**
VAY	**Valandovo**	**0.82**	**233**	*e*Pg		**Pg**		**19 46 23.3**	**-0.1**
VAY				*e*Sg		**Sg**		**19 46 35.0**	**+0.8**
RZN	**Rozhen**	**0.96**	**98**	*e*Pg		**Pg**		**19 46 24.9**	**-1.2**
PLD	**Plovdiv**	**0.98**	**73**	*e*Pg		**Pg**		**19 46 25.9**	**-0.6**
PLD				*e*Sg		**Sg**		**19 46 40.8**	**+1.6**
PLD	**Plovdiv**	**0.98**	**73**	Pg		**Pg**		**19 46 25.2**	**-1.2**
SOH	**Sokhos**	**1.00**	**184**	*e*Pg		**Pg**		**19 46 26.2**	**-0.6**
GRG	**Griva**	**1.17**	**222**	*e*Pg		**Pb**		**19 46 28.8**	**-1.0**
GRG				*e*Sg		**Sg**		**19 46 45.4**	**+0.2**
THE	**Thessaloniki**	**1.24**	**197**	*e*Pg		**Pn**		**19 46 30.5**	**-0.5**
THE				*e*Sg		**Sg**		**19 46 47.9**	**+0.3**
HORT	**Hortiatis**	**1.25**	**192**	*e*Pg		**Pg**		**19 46 30.7**	**-0.9**
HORT				*e*Sg		**Sg**		**19 46 47.8**	**-0.1**
PLG	**Polygyros**	**1.45**	**180**	*e*PN		**Pn**		**19 46 34.1**	**+0.3**
KDZ	**Kurdzhali**	**1.49**	**96**	P		**Pn**		**19 46 33.3**	**-1.0**
OUR	**Ouranopolis**	**1.54**	**164**	*e*Pg		**Pn**		**19 46 34.6**	**-0.5**
OUR				*e*Sg		**Sn**		**19 46 54.9**	**-0.3**
RDO	**Rodhopi**	**1.71**	**113**	*e*PN		**Pn**		**19 46 38.3**	**+0.8**
RDO				*e*SN		**Sn**		**19 47 00.6**	**+1.2**
LIA	**Limnos Island**	**2.33**	**145**	*e*PN		**Pn**		**19 46 47.2**	**+1.2**

*ISCJB **26** 20:06:27.4±0.9, 3802N±003×893W±007, h10km, Error ellipse: s-maj=7.7km s-min=4.2km az=167.7*
*INMG **26** 20:06:27.7±1.2, 3798N×9.14W, h19km±4km, ML1.7, Error ellipse: s-maj=10.7km s-min=2.2km az=77.0*
*MDD **26** 20:06:27.7±1.8, 3800N×909W, h21km±17km, mb3.5/3, mbLg1.7/7, Error ellipse: s-maj=26.4km s-min=11.7km az=66.0, PRXIMO*
*IGIL **26** 20:06:28.2, 3802N×906W, h2km, ML1.8*

ISC 26 20:06:27.4±0.9, 3802N±003×895W±006, h10km, n12, σ1§13/22, Portugal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**0.51**	**160**	*e*Pg		**Pg**		**20 06 37.9**	**+0.5**
PTEO				*e*Sg		**Sg**		**20 06 45.2**	**+1.1**
PTEO									
	16nm,0.3s								
MORF	**Marmelete**	**0.76**	**162**	*e*P		**Pg**		**20 06 42.2**	**+0.2**
MORF				*e*S		**Sg**		**20 06 52.5**	**+0.7**
MORF				*e*S		**Sg**		**20 06 52.5**	**+0.7**
MORF				AML		AML		20 06 54.1	
	comp=N,25nm,0.2s								
MORF	**Marmelete**	**0.76**	**162**	*e*P		**Pg**		**20 06 42.2**	**+0.2**
MORF				*e*S		**Sg**		**20 06 52.5**	**+0.6**
PBEJ	**Beja**	**0.85**	**90**	*e*P		**Pg**		**20 06 45.4**	**+1.5**
PBEJ				*e*S		**Sg**		**20 06 58.0**	**+3.0**
PBEJ									
	comp=N,12nm,0.1s								
PMAFR	**Mafra**	**0.97**	**344**	*e*S		**Sg**		**20 06 58.0**	**-0.6**
EGRO	**El Granado**	**1.26**	**112**	P		**Pn**		**20 06 49.9**	**-1.2**
	comp=N,0.8nm,0.1s,SNR=7.9								
EGRO				S		**Sb**		**20 07 07.0**	**-0.5**
	comp=N,3.3nm,0.1s,SNR=8.1								
PESTR	**Estremoz**	**1.36**	**51**	*e*P		**Pn**		**20 06 53.5**	**+1.1**
PESTR				*e*S		**Sb**		**20 07 11.8**	**+1.4**
PTOM	**Tomar**	**1.65**	**15**	*e*S		**Sn**		**20 07 18.5**	**+0.9**
EBAD	**Badajoz**	**1.69**	**64**	P		**Pn**		**20 06 56.1**	**-0.9**
	comp=N,0.5nm,0.1s,SNR=5.6								
EBAD				S		**Sn**		**20 07 19.0**	**+0.4**
	comp=N,2.6nm,0.1s,SNR=9.3								
EMIN	**Mina Concepcio**	**1.82**	**97**	P		**Pn**		**20 06 57.4**	**-1.4**
	comp=N,0.1nm,0.1s,SNR=10.0								
EMIN				S		**Sn**		**20 07 20.4**	**-1.5**
	comp=N,0.3nm,0.1s,SNR=7.9								
ESPR	**Espera**	**2.72**	**114**	P		**Pn**		**20 07 10.3**	**-0.9**
	comp=N,0.2nm,0.2s,SNR=4.0								
ESPR				S		**Sn**		**20 07 43.3**	**-0.8**
	comp=N,1.5nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**3.45**	**86**	S		**Sn**		**20 08 00.5**	**-1.7**
	comp=N,0.5nm,0.1s,SNR=7.9								

*ISCJB **26** 20:17:32.0±1.3, 1019S±008×161.1E±0.1, h95km±10km, mb4.0/12, Error ellipse: s-maj=19.3km s-min=13.0km az=154.2*
*NEIC **26** 20:17:32.8±0.5, 1013S×161.17E, mb4.3/6, Error ellipse: s-maj=13.4km s-min=10.6km az=92.0*
*IDC **26** 20:17:32.8±2.2, 1021S×161.11E, h86km±16km, mb3.7/8, mb1 3.9/9, mb1mx3.8/13, mbtmp4.1/9, MS2.9/4, Ms1 2.9/4, ms1mx2.8/18, Error ellipse: s-maj=27.4km s-min=17.3km az=77.0*

ISC 26 20:17:32.6±1.3, 1017S±008×1612E±01, h86km±10km, h89km±1.6km: pP-P, n23, σ0§79/25, mb4.0/12, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.40**	**301**	P		**Pn**		**20 17 56.2**	**-0.6**
	402nm,0.3s,baz=105,slow=3.1,SNR=99								
HNR				S		**Sn**		**20 18 14.9**	**-0.4**
	470nm,0.3s,baz=118,slow=4.0,SNR=7.2								
HNR	**Honiara**	**1.40**	**301**	*e*Pn		**Pn**		**20 17 56.1**	**-0.8**
HNR				*e*Sn		**Sn**		**20 18 16.1**	**+0.9**
DZM	**Mont Dzumac**	**12.87**	**157**	*e*P		**Pn**		**20 20 32.0**	**-0.2**
DZM				*e*S		**Sn**		**20 22 34.6**	**-19**
DZM	**Mont Dzumac**	**12.87**	**157**	P		**Pn**		**20 20 32.2**	**+0.1**
	1.4nm,0.3s,baz=299,slow=23,SNR=36								
DZM				S		**Sn**		**20 22 43.0**	**-11**
	0.3nm,0.3s,baz=60,slow=19,SNR=3.1								
DZM				LR		LR		20 24 25.4	
	comp=Z,48nm,21.6s,baz=347,slow=32								
PMG	**Port Moresby**	**13.82**	**272**	LR		LR		20 24 17.7	
	comp=Z,62nm,20.5s,baz=313,slow=29								
CTA	**Charters Tower**	**17.43**	**234**	P		**Pn**		**20 21 32.7**	**+2.5**
	0.3nm,0.3s,baz=67,slow=14,SNR=6.0								
CTA				LR		LR		20 25 44.6	
	comp=Z,36nm,20.5s,baz=258,slow=28								
CTA	**Charters Tower**	**17.43**	**234**	P		**Pn**		**20 21 32.7**	**+2.5**
CTA				LR		LR		20 25 44.6	
CTAO	**Charters Tower**	**17.43**	**234**	*e*P		**Pn**		**20 21 33.0**	**+2.8**
	17nm,1.5s								
WRAB	**Tennant Creek**	**27.61**	**246**	*e*P		**P**		**20 23 11.2**	**-0.6**
WRAB				*e*pP		pP		20 23 31.6	+0.2
WRA	**Warramunga Arr**	**27.63**	**246**	P		**P**		**20 23 12.0**	**+0.1**
	1.2nm,0.5s,mb3.7,baz=73,slow=9.3,SNR=45								
WRA				pP		pP		20 23 31.8	+0.3
	2.8nm,0.6s,baz=76,slow=9.4,SNR=13								
WRA				PcP		PcP		20 26 27.2	-0.1
	0.5nm,0.6s,baz=70,slow=2.4,SNR=5.8								
GUMO	**Guam**	**28.61**	**325**	LR		LR		20 33 48.6	
	comp=Z,27nm,21.7s,baz=208,slow=34								
ASAR	**Alice Springs**	**29.26**	**239**	P		**P**		**20 23 26.9**	**+0.4**
	0.5nm,0.5s,mb3.4,baz=63,slow=10,SNR=9.7								
ASAR				pP		pP		20 23 46.2	+0.2
	1.5nm,0.8s,baz=66,slow=9.7,SNR=8.3								
MBWA	**Marble Bar**	**41.24**	**250**	*e*P		**P**		**20 25 08.5**	**-0.6**
MJAR	**Matsushiro Arr**	**51.24**	**336**	P		**P**		**20 26 27.3**	**-0.1**
	1.4nm,0.6s,mb4.2,baz=160,slow=8.2,SNR=8.6								
MAJO	**Matsushiro**	**51.24**	**336**	*e*P		**P**		**20 26 27.1**	**-0.3**
	3.1nm,0.6s,mb4.5								
VNDA	**Vanda**	**67.33**	**180**	P		**P**		**20 28 18.0**	**-0.4**
	1.1nm,0.8s,mb3.8,baz=343,slow=5.3,SNR=8.3								
MA2	**Magadan**	**70.01**	**354**	*e*P		**P**		**20 28 34.5**	**-0.5**
	5.9nm,0.9s,mb4.4								
SONM	**Songino Array**	**75.34**	**325**	P		**P**		**20 29 07.3**	**+0.7**
	1.6nm,0.6s,mb4.0,baz=138,slow=5.5,SNR=14								
QSPA	**South Pole Qui**	**79.83**	**180**	*e*P		**P**		**20 29 31.1**	**-0.5**
	3.7nm,0.8s,mb4.3								
MCK	**McKinley**	**82.81**	**20**	*e*P		**P**		**20 29 47.2**	**-0.1**
	5.9nm,1.1s,mb4.3								
MAW	**Mawson**	**83.82**	**202**	P		**P**		**20 29 51.7**	**-0.8**
	0.9nm,0.5s,mb3.9,baz=68,slow=6.3,SNR=4.7								
NVAR	**Mina Array Bea**	**88.93**	**51**	P		**P**		**20 30 19.4**	**+1.9**
	0.4nm,0.6s,mb3.6,baz=227,slow=4.6,SNR=4.3								
MKAR	**Makanchi Array**	**89.82**	**318**	P		**P**		**20 30 21.7**	**0.0**
	0.4nm,0.6s,mb3.7,baz=126,slow=3.9,SNR=4.8								

*ISCJB **26** 20:24:58.2±0.7, 2438S±008×677W±0.1, h219km±16km, mb3.2/1, Error ellipse: s-maj=18.3km s-min=11.8km az=27.1*
*GUC **26** 20:24:58.2±0.7, 2460S×6774W, h210km, MD3.7, ML4.1*
*NEIC **26** 20:24:58.6, 2454S×6793W, h244km, mb3.7/3, After GUC.*
*IDC **26** 20:25:01.3±1.3, 2381S×6723W, h200km±14km, mb3.2/1, mb1 3.3/4, mb1mx3.1/17, mbtmp3.7/4, Error ellipse: s-maj=28.1km s-min=22.0km az=12.0*

ISC 26 20:24:59.1±0.7, 2439S±008×676W±01, h209km±16km, n18, σ1§04/24, mb3.2/1, 1C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.12**	**326**	P		**Pn**		**20 25 38.7**	**-0.8**
	10nm,0.3s,baz=329,slow=0.0,SNR=101								
LVC				S		**Sn**		**20

1.6nm,0.6s,baz=131,slow=27
AKTO Aktyubinsk 14.61 321 ⇑Pn Pn 21 02 54.6 +3.4
0.1nm,0.6s

GUC 26 20:59:56.3±0.4, 2536S×6924W, h42km±8km, MD3.6, ML2.6, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPN1	**Cerro Paranal**	**1.28**	**304**	*i* P	Pn	21 00 19.4	+1.7
CPN1				*i* S	Sn	21 00 36.9	+3.2
CPN1				AML	AML	21 00 38.8	
	comp=N,322nm,0.3s						
ANCH	**Antofagasta**	**1.98**	**327**	⇑*i* P	Pn	21 00 28.1	+0.9
ANCH				*i* S	Sn	21 00 52.2	+1.4
CEN1	**Los Morros**	**2.14**	**336**	⇑*i* P	Pn	21 00 28.9	-0.7
CEN1				*i* S	Sn	21 00 54.0	-0.9
CEN1				AML	AML	21 00 57.5	
	comp=E,39nm,0.6s						
CDCH	**Caldera**	**2.23**	**220**	*e*P	Pn	21 00 31.7	+1.0
CDCH				*i* S	Sn	21 00 58.3	+1.3
CDCH				AML	AML	21 01 03.5	
	comp=N,62nm,0.8s						

NIED ***26*** *21:04:00, 40.80N×141.80E, h101km, Mw4.2 Best double couple: M₀2.41000×10¹⁵ NP1:φs40.00000°, δ81.00000°, λ104.00000°. NP2:φs162.00000°, δ16.00000°, λ33.00000°.*
SZGRF ***26*** *21:04:02.5, 40.43N×141.36E, h33km, mb4.5, Near east coast of eastern Honshu, Japan*
BJI ***26*** *21:04:07.3, 41.00N×141.99E, h114km, mB4.7, mb4.7*
IDC ***26*** *21:04:08.7±2.2, 40.70N×141.60E, h94km±20km, mb4.1/16, mb1 4.2/19, mb1mx4.1/24, mbtmp4.5/19, MS3.1/2, Ms1 3.1/2, ms1mx2.2/27, Error ellipse: s-maj=15.9km s-min=12.5km az=98.0*
MOS ***26*** *21:04:08.4±0.8, 40.82N×141.57E, h98km, mb4.5/45, Error ellipse: s-maj=10.5km s-min=5.0km az=102.3*
ISCJB ***26*** *21:04:09.2±0.3, 40.78N±0.003×141.71E±0.004, h110km±1km, mb4.4/75, Error ellipse: s-maj=5.7km s-min=3.9km az=44.1*
JMA ***26*** *21:04:10.2±0.1, 40.80N×141.80E, h102km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs168.00000°, δ29.00000°, λ36.00000°. NP2:φs45.00000°, δ74.00000°, λ114.00000°. Principal axes: T Plg55.0000°, Azm345.0000°; N Plg23.0000°, Azm218.0000°; P Plg25.0000°, Azm117.0000°;*
JMA Felt II J1.
NEIC ***26*** *21:04:10.2, 40.80N×141.80E, h102km, mb4.5/42, MW4.2(NIED), After JMA.*
NEIC Recorded [2 JMA] in Aomori and Iwate Prefectures. Also recorded [2 JMA] in southwestern Hokkaido.
ISC 26 21:04:10.1±0.3, 4079N±002×14171E±004, h106km±1km, h105km±3.1km; pP-P, n209, ₀0°90/231, mb4.4/75, 28C-10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JANG	**Nango**	**0.44**	**199**	⇑P	Pn	**21 04 25.9**	**-0.2**
JANG				S	Sn	**21 04 37.3**	**-0.8**
JTM	**Tenmabayashi**	**0.48**	**270**	⇓P	Pn	**21 04 26.3**	**-0.1**
JTM				S	Sn	**21 04 38.4**	**-0.2**
JOT	**Ohata**	**0.77**	**320**	⇓P	Pn	**21 04 28.7**	**0.0**
JOT				S	Sn	**21 04 42.9**	**+0.3**
JAH	**Hinai**	**1.01**	**234**	⇑P	Pn	**21 04 31.8**	**+0.7**
JAH				S	Sn	**21 04 48.0**	**+1.1**
JKB	**Kayabe**	**1.21**	**335**	⇓P	Pn	**21 04 33.4**	**+0.2**
JKB				S	Sn	**21 04 50.9**	**+0.2**
JSR	**Shiriuchi**	**1.22**	**308**	⇓P	Pn	**21 04 33.6**	**+0.2**
JSR				S	Sn	**21 04 52.7**	**+1.8**
JIW	**Iwasaki**	**1.31**	**262**	⇓P	Pn	**21 04 35.3**	**+0.9**
JOM	**Ohasama**	**1.35**	**194**	⇑P	Pn	**21 04 34.9**	**0.0**
JOM				S	Sn	**21 04 53.6**	**-0.1**
JEM	**Erimo**	**1.64**	**41**	P	Pn	**21 04 38.3**	**-0.1**
JEM				*e*S	Sn	**21 04 58.5**	**-1.4**
JYM2	**Yakumo 2**	**1.66**	**323**	⇓P	Pn	**21 04 39.3**	**+0.7**
JYM2				S	Sn	**21 05 01.2**	**+0.9**
JNBK	**Urakawa-nobuka**	**1.68**	**28**	P	Pn	**21 04 39.2**	**+0.3**
JNBK				*e*S	Sn	**21 05 01.4**	**+0.6**
JMK	**Ichinoseki**	**1.88**	**192**	⇑P	Pn	**21 04 41.1**	**-0.2**
JMK				*e*S	Sn	**21 05 04.0**	**-1.1**
ASAJ	**Asahikawa**	**3.39**	**11**	P	Pn	**21 05 01.1**	**-0.1**
	18nm,0.3s,baz=213,slow=12,SNR=157						
ASAJ				S	Sn	**21 05 37.2**	**-3.3**
	17nm,0.3s,baz=163,slow=11,SNR=11						
ASAJ	**Asahikawa**	**3.39**	**11**	P	Pn	**21 05 01.1**	**0.0**
ASAJ				S	Sn	**21 05 37.3**	**-3.3**
ASAJ				pmax	pmax		
	comp=Z,18nm,0.3s						
ASAJ				smax			
	comp=N,17nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.47**	**42**	*e*P	Pn	**21 05 14.9**	**-0.8**
YUK				*i* S	Sn	**21 06 01.9**	**-4.7**
YUK				pmax	pmax		
	comp=N,170nm,0.4s						
YUK				pmax	pmax		
	comp=Z,350nm,0.4s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,690nm,0.5s						
YUK				smax			
	comp=N,3μm,0.8s						
YUK				smax			
	comp=E,1μm,0.8s						
MAJO	**Matsushiro**	**5.05**	**214**	*e*P	Pn	**21 05 24.1**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,20nm,0.6s						
MAJO	**Matsushiro**	**5.05**	**214**	*e*Pn	Pn	**21 05 24.1**	**+0.6**
	comp=Z,20nm,0.6s						
MAT	**Matsushiro**	**5.05**	**214**	P	Pn	**21 05 24.0**	**+0.5**
MAT				*e*S	Sn	**21 06 23.2**	**+2.6**
MJAR	**Matsushiro Arr**	**5.05**	**214**	P	Pn	**21 05 24.3**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=24,slow=16,SNR=19						
MJAR	**Matsushiro Arr**	**5.05**	**214**	P	Pn	**21 05 24.3**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**5.05**	**214**	P	Pn	**21 05 24.2**	**+0.7**
YSS	**Yuzh-Sakhalins**	**6.21**	**7**	⇑*e*P	Pn	**21 05 39.2**	**0.0**
YSS				pmax	pmax		
	comp=Z,25nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.21**	**7**	*e*Pn	Pn	**21 05 38.9**	**-0.3**
	comp=Z,24nm,0.4s						
JHJ	**Hachijo jima 2**	**7.81**	**192**	P	Pn	**21 05 57.8**	**-3.2**
	comp=Z,17nm,0.3s,baz=264,slow=19,SNR=11						
JHJ				S	Sn	**21 07 20.6**	**-7.2**
	comp=Z,26nm,0.3s,baz=224,slow=23,SNR=10						
HABR	**Khabarovsk**	**9.02**	**331**	P	Pn	**21 06 13.0**	**-4.5**
HABR				*e*		21 07 50.6	
MDJ	**Mudanjiang**	**9.70**	**297**	P	Pn	**21 06 25.0**	**-1.7**
MDJ				AMB	AMB		
	comp=Z,8.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,45nm,5.2s						
KLR	**Kul'dur**	**10.98**	**324**	*e*P	Pn	**21 06 41.0**	**-3.0**
INCN	**Inchon**	**12.16**	**259**	Pn	Pn	**21 06 56.8**	**-2.9**
	comp=Z,9.3nm,0.3s						
CN2	**Changchun**	**12.41**	**289**	*e*P	Pn	**21 07 02.5**	**-0.5**
CN2				*e*XP		21 07 29.5	
CN2				*e*S	Sn	**21 09 16.8**	**-2.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s						
CN2				AMB	AMB		
	comp=Z,500nm,4.0s						
CBIJ	**Chichi jima**	**13.67**	**178**	P	Pn	**21 07 15.7**	**-3.8**
	comp=Z,3.2nm,0.3s,baz=22,slow=19,SNR=7.1						
CBIJ				S	Sn	**21 09 37.6**	**-12**
	comp=Z,8.1nm,0.3s,baz=292,slow=23,SNR=6.5						
SNY	**Shenyang**	**13.67**	**280**	⇑P	Pn	**21 07 18.0**	**-1.5**
SNY				AMB	AMB		
	comp=Z,10.0nm,2.3s						
MA2	**Magadan**	**19.64**	**14**	*e*P	P	**21 08 30.4**	**0.0**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MA2	**Magadan**	**19.64**	**14**	*e*P	P	**21 08 30.1**	**-0.3**
	comp=Z,6.9nm,0.6s						
NJ2	**Nanjing**	**20.31**	**252**	*e*P	P	**21 08 40.0**	**+2.4**
NJ2				AP		21 08 59.0	
NJ2				PP		21 09 04.8	
NJ2				XP	sP	21 09 11.8	+1.1
NJ2				S	S	**21 12 16.0**	**-3.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,120nm,3.6s						
NJ2				LR	LR		
	comp=N,150nm,13.5s						
NJ2				LR	LR		
	comp=E,120nm,13.9s						
NJ2				LR	LR		
	comp=Z,210nm,17.4s						
CIT	**Chita**	**22.28**	**310**	*e*P	P	**21 08 56.8**	**-1.8**
YAK	**Yakutsk**	**22.48**	**345**	*e*P	P	**21 08 58.5**	**-2.2**
YAK				*e**PP		21 09 17.1	
YAK				*e*		21 12 53.5	
YAK				*e*S	S	**21 12 54.5**	**-5.1**
YAK				*e**SS	sS	21 13 27.2	-8.5
YAK				*e*		21 20 06.6	
YAK				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.4						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				smax			
	comp=E,14nm,1.5s						
YAK				smax			
	comp=N,16nm,1.0s						
YAK	**Yakutsk**	**22.48**	**345**	*e*P	P	**21 08 57.1**	**-3.6**
	comp=N,38nm,0.6s,mb4.9						
HHC	**Hu-ho-hao-te**	**22.76**	**280**	*e*P	P	**21 09 02.5**	**-1.1**
HHC				AP		21 09 23.0	
HHC				PP		21 09 34.0	
HHC				PCP	PcP	21 12 54.5	+3.0
HHC				S	S	**21 12 59.0**	**-5.2**
HHC				SS		21 13 48.5	
HHC				SCS	ScS	21 20 05.8	+0.6
HHC				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.6						
HHC				AMB	AMB		
	comp=Z,63nm,4.3s						
HHC				LR	LR		
	comp=N,1μm,17.6s						
HHC				LR	LR		
	comp=E,1μm,20.2s						
HHC				LR	LR		
	comp=Z,62nm,16.5s						
SEY	**Seymchan**	**23.07**	**12**	*d i*P	P	**21 09 06.0**	**-0.4**
BOD	**Bodaibo**	**24.56**	**323**	*e*P	P	**21 09 17.6**	**-2.4**
BOD				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**25.62**	**298**	*i* P	P	**21 09 30.3**	**+0.7**
ULN	**Ulaanbaatar**	**25.62**	**298**	*e*P	P	**21 09 29.4**	**-0.2**
	comp=Z,1.8nm,0.6s,mb3.7						
SONM	**Songino Array**	**26.06**	**298**	P	P	**21 09 33.7**	**+0.1**
	comp=Z,3.6nm,0.5s,mb4.0,baz=89,slow=8.6,SNR=32						
SONM				LR	LR	21 20 45.8	
	comp=Z,37nm,18.1s,baz=42,slow=38						
SONM	**Songino Array**	**26.06**	**298**	P	P	**21 09 33.7**	**+0.1**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,37nm,18.1s						
LZH	**Lanzhou**	**29.87**	**273**	*e*P	P	**21 10 10.5**	**+3.0**
LZH				AP	pP	21 10 32.5	+1.6
LZH				XP	sP	21 10 44.5	+1.3
LZH				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.5						
LZH				AMB	AMB		
	comp=Z,70nm,4.5s						
BILL	**Bilibino**	**30.38**	**18**	*i* P	P	**21 10 13.0**	**+1.0**
BILL				*e*		21 13 10.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
TIXI	**Tiksi**	**31.60**	**352**	*i* P	P	**21 10 22.5**	**-0.2**
GTA	**Gaotai**	**31.86**	**281**	*e*P	P	**21 10 25.0**	**0.0**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.4s,mb3.6						
CD2	**Chengdu**	**32.09**	**264**	*e*P	P	**21 10 26.5**	**-0.5**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
GYA	**Guiyang**	**32.26**	**255**	P	P	**21 10 29.0**	**+0.5**
GYA				AP	pP	21 10 51.0	-1.1
GYA				PP	PP	21 11 38.8	-4.5
GYA				S	S	**21 15 32.3**	**-1.8**
GYA				SCP	ScP	21 16 50.0	+1.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,70nm,4.8s						
GYA				LR	LR		
	comp=N,210nm,16.7s						
GYA				LR	LR		
	comp=E,200nm,17.0s						
GYA				LR	LR		
	comp=Z,190nm,17.2s						
KMI	**Kunming**	**35.91**	**256**	P	P	**21 11 00.5**	**+0.4**
KMI				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.5						
WMQ	**Urumqi**	**39.47**	**293**	*e*P	P	**21 11 31.0**	**+1.0**
WMQ				AP	pP	21 11 54.0	-0.2
WMQ				XP	sP	21 12 06.0	-0.2
WMQ				PP	PP	21 13 07.0	+4.4
WMQ				S	S	**21 17 25.0**	**+0.8**
WMQ				XS	sS	21 18 05.0	-0.9
WMQ				SS	SS	21 20 16.0	-6.6
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,25nm,14.0s						
WMQ				LR	LR		
	comp=E,23nm,14.0s						
WMQ				LR	LR		
	comp=Z,18nm,13.0s						
NVS	**Novosibirsk**	**40.49**	**311**	*i* P	P	**21 11 36.9**	**-1.6**
MK31	**Makanchi Array**	**42.41**	**299**	P	P	**21 11 53.9**	**-0.3**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**42.41**	**299**	P	P	**21 11 54.2**	**0.0**
	comp=Z,7.4nm,0.5s,mb4.7,baz=76,slow=10,SNR=99						
MKAR	**Makanchi Array**	**42.41**	**299**	P	P	**21 11 54.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KDAK	**Kodiak Island**	**44.21**	**44**	P	P	**21 12 08.3**	**-0.3**
	comp=Z,3.8nm,0.5s,mb4.4,baz=310,slow=7.9,SNR=3.6						
COLA	**College**	**45.81**	**34**	*i* P	P	**21 12 23.7**	**+2.4**
GUN	**Gumba**	**47.12**	**272**	*e*P	P	**21 12 32.3**	**+0.8**
	comp=Z,26nm,0.4s,mb5.3						
KKN	**Kakani**	**47.64**	**273**	*e*P	P	**21 12 36.3**	**+0.8**
	comp=Z,16nm,0.6s,mb5.0						
KKN	**Kakani**	**47.64**	**273**	*e*P	P	**21 12 36.3**	**+0.8**
KKN				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
PKI	**Pulchoki**	**47.65**	**272**	*e*P	P	**21 12 35.9**	**+0.3**
	comp=Z,6.8nm,0.5s,mb4.7						
PKI	**Pulchoki**	**47.65**	**272**	*e*P	P	**21 12 35.9**	**+0.3**
PKI				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
CHKZ	**Chkalovo**	**47.97**	**311**	⇑*i* P	P	**21 12 37.8**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.8						
CHKZ	**Chkalovo**	**47.97**	**311**	⇑*i* P	P	**21 12 37.8**	**-0.3**
	comp=Z,7.9nm,0.5s,mb4.8						
VOSK	**Vostochnaya**	**48.01**	**309**	P	P	**21 12 37.9**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
GKN	**Gorkha**	**48.02**	**273**	*e*P	P	**21 12 38.8**	**+0.4**
	comp=Z,14nm,0.5s,mb5.1						
BRVK	**Borovoye**	**48.33**	**310**	⇑*i* P	P	**21 12 40.6**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	**48.33**	**310**	⇑*i* P	P	**21 12 40.5**	**-0.3**
	comp=Z,5.1nm,0.8s,mb4.4						
KOLN	**Koldanda**	**48.92**	**274**	*e*P	P	**21 12 46.1**	**+0.7**
	comp=Z,9.0nm,0.5s,mb5.0						
AAK	**Ala-Archa**	**48.99**	**296**	*i* P	P	**21 12 45.1**	**-0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
ZRNK	**Zerenda**	**49.10**	**310**	⇑*i* P	P	**21 12 46.8**	**0.0**
ZRNK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
ZRNK	**Zerenda**	**49.10**	**310**	⇑*i* P	P	**21 12 46.8**	**0.0**
	comp=Z,8.2nm,0.7s,mb4.8						
INK	**Inuvik**	**50.96**	**28**	P	P	**21 13 01.6**	**+0.8**
	comp=Z,4.7nm,0.4s,mb4.9,baz=302,slow=5.7,SNR=12						
INK	**Inuvik**	**50.96**	**28**	P	P	**21 13 01.6**	**+0.8**
INK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KKAR	**Karatay Array**	**51.51**	**298**	*i* P	P	**21 13 04.7**	**-0.2**
ARU	**Arti**	**53.74**	**317**	⇑*i* P	P	**21 13 21.0**	**-0.3**
ARU				*e*		21 15 22.9	
ARU				*e*PPP		21 16 32.6	
ARU				*e*S	S	**21 20 47.1**	**-0.4**
ARU				*e*		21 22 58.8	
ARU				*e*SS	SS	21 24 29.5	0.0
ARU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
ARU	**Arti**	**53.74**	**317**	⇑*i* P	P	**21 13 20.9**	**-0.4**
	comp=Z,6.6nm,0.7s,mb4.8						
DLBC	**Dease Lake**	**55.56**	**40**	P	P	**21 13 34.9**	**+0.4**
	comp=Z,11nm,0.6s,mb5.1,baz=320,slow=11,SNR=12						
AB31	**Akbulak array**	**55.74**	**308**	P	P	**21 13 35.4**	**-0.4**
AB31				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
AKTO	**Aktyubinsk**	**56.38**	**310**	P	P	**21 13 39.8**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**60.57**	**339**	P	P	**21 14 09.0**	**-0.4**
	comp=Z,1.2nm,0.5s,mb4.2,baz=56,slow=8.0,SNR=33						
ARCES	**ARCESS Array B**	**60.57**	**339**	P	P	**21 14 09.0**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**60.57**	**339**	P	P	**21 14 09.0**	**-0.4**
WRAB	**Tennant Creek**	**60.80**	**188**	*e*P	P	**21 14 09.7**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**60.80**	**188**	*e*P	P	**21 14 09.7**	**-1.3**
	comp=Z,2.3nm,0.6s,mb4.4						
WB2	**Warramunga Arr**	**60.81**	**188**	*e*P	P	**21 14 09.7**	**-1.3**
WRA	**Warramunga Arr**	**60.81**	**188**	P	P	**21 14 10.0**	**-1.0**
	comp=Z,1.9nm,0.5s,mb4.4,baz=5.7,slow=6.9,SNR=73						
WRA	**Warramunga Arr**	**60.81**	**188**	P	P	**21 14 10.0**	**-1.0**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	**Joensuu**	**62.77**	**331**	*e*p	P	**21 14 23.5**	**-0.7**
	comp=Z,4.6nm,0.4s,mb4.8						
JOF	**Joensuu**	**62.77**	**331**	*e*P	P	**21 14 23.5**	**-0.7**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
AS31	**Alice Springs**	**64.53**	**188**	*e*P	P	**21 14 35.3**	**-0.5**
ASAR	**Alice Springs**	**64.53**	**188**	P	P	**21 14 35.4**	**-0.4**
	comp=Z,1.2nm,0.6s,mb3.9,baz=2.3,slow=7.7,SNR=29						
ASAR	**Alice Springs**	**64.53**	**188**	P	P	**21 14 35.4**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASPA	**Alice Springs**	**64.54**	**188**	*e*P	P	**21 14 35.3**	**-0.5**
KAF	**Kangasniemi**	**65.09**	**332**	*e*p	P	**21 14 38.5**	**-0.9**
	comp=Z,4.7nm,0.6s,mb4.5,baz=49,slow=6.1						
KAF	**Kangasniemi**	**65.09**	**332**	*e*P	P	**21 14 38.5**	**-0.9**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
OBN	**Obninsk**	**65.24**	**322**	*e*P	P	**21 14 40.3**	**-0.1**
OBN				*e**PP	pP	21 15 06.2	-0.4
OBN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
FIA1	**FINESS Array S**	**65.61**	**332**	*e*P	P	**21 14 41.7**	**-1.1**
FINES	**FINESS Array B**	**65.61**	**332**	P	P	**21 14 42.1**	**-0.6**
	comp=Z,5.7nm,0.7s,mb4.5,baz=61,slow=7.3,SNR=68						
FINES	**FINESS Array B**	**65.61**	**332**	P	P	**21 14 42.1**	**-0.6**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GOF	**Gofitskoye**	**67.79**	**311**	*e*P	P	**21 15 00.2**	**+3.6**
GOF				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.3						
KIV	**Kislovodsk**	**68.64**	**310**	⇓*e*P	P	**21 15 03.4**	**+1.5**
KIV				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.0						
NB2	**NORSAR Subarra**	**70.82**	**337**	P	P	**21 15 14.4**	**-0.8**
	comp=Z,3.3nm,0.7s,mb4.3,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**70.82**	**337**	P	P	**21 15 14.7**	**-0.5**
	comp=Z,3.3nm,0.7s,mb4.3,baz=38,slow=6.1,SNR=36						
NOA				LR	LR	21 50 47.7	
	comp=Z,11nm,19.1s,baz=65,slow=40						
NOA	**NORSAR Array B**	**70.82**	**337**	P	P	**21 15 14.7**	**-0.5**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,11nm,19.1s						
ANN	**Anapa**	**71.11**	**313**	*e*P	P	**21 15 11.7**	**-5.3**
ANN				*e*		21 15 33.1	
ANN				*i **PP	pP	21 15 37.8	-5.8
ANN				*e*S	S	21 24 14.2	-11
ANN				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
AKASG	**Malin Array Be**	**71.48**	**322**	P	P	**21 15 18.8**	**-0.5**
	comp=Z,5.3nm,0.5s,mb4.7,baz=44,slow=6.1,SNR=44						
AKASG	**Malin Array Be**	**71.48**	**322**	P	P	**21 15 18.8**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG	**Malin Array Be**	**71.48**	**322**	P	P	**21 15 18.8**	**-0.5**
BOZ	**Bozeman (W)**	**71.88**	**45**	*e*P	P	**21 15 22.8**	**+1.2**
BOZ				*e*	pP	21 15 50.3	+2.0
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
BOZ	**Bozeman (W)**	**71.88**	**45**	*e*P	P	**21 15 22.8**	**+1.2**
	comp=Z,1.8nm,0.6s,mb4.1						
BOZ				*e*PcP	PcP	21 15 50.3	+10
NVAR	**Mina Array Bea**	**72.58**	**54**	P	P	**21 15 27.6**	**+1.8**
	baz=297,slow=6.6						
MALT	**Malatya**	**74.66**	**307**	⇑*i* P	P	**21 15 39.4**	**+1.5**
MALT	**Malatya**	**74.66**	**307**	*e*P	P	**21 15 38.7**	**+0.8**
MALT				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
MALT	**Malatya**	**74.66**	**307**	*e*P	P	**21 15 38.7**	**+0.8**
	comp=Z,7.0nm,1.1s,mb4.3						
PDAR	**Pinedale Array**	**74.89**	**46**	P	P	**21 15 40.1**	**+0.8**
	comp=Z,0.7nm,0.6s,mb3.5,baz=287,slow=1.9,SNR=8.9						
KWP	**Kalwaria**	**75.22**	**324**	*e*P	P	**21 15 41.9**	**+0.7**
BURAR	**Bucovina Array**	**75.52**	**321**	⇑*i* P	P	**21 15 43.2**	**+0.3**
KOLS	**Kolonicke sedl**	**75.92**	**324**	*e*P	P	**21 15 45.4**	**+0.2**
STHS	**Stebnicka Huta**	**76.03**	**325**	*e*P	P	**21 15 46.9**	**+1.1**
STHS				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
STHS	**Stebnicka Huta**	**76.03**	**325**	*e*P	P	**21 15 46.9**	**+1.1**
	comp=Z,3.9nm,0.7s,mb4.2						
OJC	**Ojcow**	**76.06**	**326**	*e*P	P	**21 15 45.9**	**-0.1**
CRVS	**Cervenica-Dubn**	**76.31**	**324**	*e*P	P	**21 15 48.2**	**+0.8**
NIE	**Niedzica**	**76.43**	**325**	*e*P	P	**21 15 49.0**	**+0.9**
BRTR	**Keskin Array B**	**76.55**	**311**	P	P	**21 15 49.1**	**+0.4**
	comp=Z,1.4nm,0.6s,mb3.9,baz=83,slow=3.9,SNR=11						
BRTR	**Keskin Array B**	**76.55**	**311**	P	P	**21 15 49.1**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BSEG	**Bad Segeberg**	**76.82**	**333**	*e*P	P	**21 15 50.0**	**-0.3**
	comp=Z,6.0nm,0.7s,mb4.4						
BSEG	**Bad Segeberg**	**76.82**	**333**	*e*P	P	**21 15 50.0**	**-0.3**
BSEG				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
KECS	**Kecovo**	**77.06**	**324**	*e*P	P	**21 15 52.1**	**+0.5**
KECS				pmax	pmax		
	comp=Z,2.0nm,0

comp=Z,5.0nm,0.8s,mb4.3
PVCC Panska Ves 77.97 329 *e*P **P 21 15 57.3 +0.6**
VRAC Vranov 78.10 327⇓*i*P **P 21 15 58.4 +1.0**
SMOL Smolenice 78.36 326 *e*P **P 21 16 00.4 +1.6**
PRU Pruhonice 78.41 328 *e*P **P 21 15 59.5 +0.4**
TREC Trest 78.57 327 *e*P **P 21 16 00.2 +0.2**
GUNZ Gunzen 78.97 330 *e*P **P 21 16 02.0 -0.2**
comp=Z,2.0nm,0.8s,mb4.0
MOX Moxa 79.02 330 *e*P **P 21 16 02.4 0.0**
comp=Z,2.0nm,0.7s,mb4.1
MANZ Manzenberg 79.36 330 *e*P **P 21 16 04.5 +0.2**
comp=Z,2.0nm,0.6s,mb4.1
KHC Kasperske Hory 79.47 328 *e*P **P 21 16 05.1 +0.2**
KHC *e*pP pP 21 16 36.2 +4.2
GEC2 GERESS Array S 79.64 328 *e*P **P 21 16 06.1 +0.3**
GEC2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
GERES GERESS Array B 79.64 328 P **P 21 16 05.5 -0.3**
comp=Z,1.0nm,0.4s,mb4.0,baz=35,slow=5.9,SNR=23
GERES GERESS Array B 79.64 328 P **P 21 16 05.5 -0.3**
GERES pmax pmax
comp=Z,1.0nm,0.4s
WET Wettzell 79.73 329 *e*P **P 21 16 06.7 +0.4**
comp=Z,5.0nm,0.9s,mb4.3
WET Wettzell 79.73 329 *e*P **P 21 16 06.7 +0.4**
WET pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
GRA1 Grafenberg Arr 79.94 330 *e*P **P 21 16 07.8 +0.4**
comp=Z,6.0nm,0.8s,mb4.5
GRF Grafenberg Arr 79.94 330 *e*P **P 21 16 07.8 +0.4**
comp=Z,6.0nm,0.8s,mb4.5
GRF Grafenberg Arr 79.94 330 *e*P **P 21 16 07.8 +0.4**
GRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
GRF Grafenberg Arr 79.94 330 *e*P **P 21 16 07.9 +0.5**
GRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
GRF Grafenberg Arr 79.94 330 *e*P **P 21 16 07.9 +0.5**
comp=Z,6.0nm,0.8s,mb4.5
TNS Taunus Mts 80.53 332 *e*P **P 21 16 10.8 +0.2**
comp=Z,3.0nm,0.7s,mb4.2
TNS Taunus Mts 80.53 332 *e*P **P 21 16 10.8 +0.2**
TNS pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
FUR Furstenfeldbru 81.15 329 *e*P **P 21 16 14.3 +0.4**
comp=Z,11nm,0.7s,mb4.8
FUR Furstenfeldbru 81.15 329 *e*P **P 21 16 14.3 +0.4**
FUR pmax pmax
comp=Z,11nm,0.7s,mb4.8
SCHQ Schefferville 81.67 16 P **P 21 16 16.6 0.0**
comp=Z,1.7nm,0.7s,mb4.0,baz=342,slow=6.4,SNR=2.5
CDF Champ du Feu 82.46 331 *e*P **P 21 16 19.9 -0.9**
comp=Z,8.4nm,1.0s,mb4.2
CDF Champ du Feu 82.46 331 *e*P **P 21 16 19.9 -0.9**
CDF pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
CDF Champ du Feu 82.46 331 *e*P **P 21 16 19.9 -0.9**
comp=Z,4.2nm,1.0s,mb4.2
HINF Hinteralfeld 83.12 331 *e*P **P 21 16 23.4 -0.8**
HAU Haudompre 83.14 332 *e*P **P 21 16 23.8 -0.5**
comp=Z,6.0nm,0.8s,mb4.2
HAU Haudompre 83.14 332 *e*P **P 21 16 23.8 -0.5**
HAU pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
HAU Haudompre 83.14 332 *e*P **P 21 16 23.8 -0.5**
comp=Z,3.0nm,0.8s,mb4.2
LOR Lormes 84.65 333⇑*i*P **P 21 16 31.5 -0.5**
comp=Z,21nm,1.0s,mb4.7
LOR Lormes 84.65 333⇑*i*P **P 21 16 31.5 -0.5**
LOR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
LOR Lormes 84.65 333⇑*i*P **P 21 16 31.5 -0.5**
comp=Z,10nm,1.0s,mb4.7
SSF Saint Saulge 84.95 333⇑*i*P **P 21 16 32.5 -1.0**
comp=Z,2.3nm,0.5s,mb4.1
SSF Saint Saulge 84.95 333⇑*i*P **P 21 16 32.5 -1.0**
SSF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
SSF Saint Saulge 84.95 333⇑*i*P **P 21 16 32.5 -1.0**
comp=Z,1.1nm,0.4s,mb4.1
SMF Signal de Mont 85.19 332 *e*P **P 21 16 34.5 -0.2**
comp=Z,12nm,0.9s,mb4.5
SMF Signal de Mont 85.19 332 *e*P **P 21 16 34.5 -0.2**
SMF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SMF Signal de Mont 85.19 332 *e*P **P 21 16 34.5 -0.2**
comp=Z,6.0nm,0.9s,mb4.5
AVF Avril sur Loir 85.24 333⇑*i*P **P 21 16 34.7 -0.2**
comp=Z,17nm,0.7s,mb4.5
AVF Avril sur Loir 85.24 333⇑*i*P **P 21 16 34.7 -0.2**
AVF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
AVF Avril sur Loir 85.24 333⇑*i*P **P 21 16 34.7 -0.2**
comp=Z,8.4nm,0.7s,mb4.8
MBDF Montbardon 85.75 330 *e*P **P 21 16 36.9 -0.5**
comp=Z,12nm,0.8s,mb4.5
MBDF Montbardon 85.75 330 *e*P **P 21 16 36.9 -0.5**
MBDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MBDF Montbardon 85.75 330 *e*P **P 21 16 36.9 -0.5**
comp=Z,5.8nm,0.8s,mb4.6
ORIF Oris-en-Rattie 85.92 330 *e*P **P 21 16 38.2 -0.1**
comp=Z,12nm,0.9s,mb4.6
ORIF Oris-en-Rattie 85.92 330 *e*P **P 21 16 38.2 -0.1**
ORIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ORIF Oris-en-Rattie 85.92 330 *e*P **P 21 16 38.2 -0.1**
comp=Z,6.3nm,0.9s,mb4.5
TCF Toulx Ste Croi 86.07 333 *e*P **P 21 16 39.0 0.0**
VIVF Saint-Julien-l 86.43 331 *e*P **P 21 16 40.8 0.0**
RJF Les Rejaudoux 87.17 333 *e*P **P 21 16 44.5 +0.2**
comp=Z,5.9nm,0.8s,mb4.2
RJF Les Rejaudoux 87.17 333 *e*P **P 21 16 44.5 +0.2**
RJF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
RJF Les Rejaudoux 87.17 333 *e*P **P 21 16 44.5 +0.2**
comp=Z,3.0nm,0.8s,mb4.3
CAF Calviac 87.31 333 *e*P **P 21 16 45.7 +0.7**
comp=Z,6.8nm,0.6s,mb4.4
CAF Calviac 87.31 333 *e*P **P 21 16 45.7 +0.7**
CAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CAF Calviac 87.31 333 *e*P **P 21 16 45.7 +0.7**
comp=Z,3.4nm,0.6s,mb4.5
ETSF Etsaut 89.99 333⇑*i*P **P 21 16 58.2 +0.5**
comp=Z,20nm,1.2s,mb4.8
ETSF Etsaut 89.99 333⇑*i*P **P 21 16 58.2 +0.5**
ETSF pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
ETSF Etsaut 89.99 333⇑*i*P **P 21 16 58.2 +0.5**
comp=Z,9.9nm,1.2s,mb4.8
ESDC Sonseca Array 94.02 334 P **P 21 17 16.2 -0.1**
comp=Z,0.1nm,0.3s,mb3.6,baz=17,slow=4.4,SNR=6.8
SNAA Sanae 144.39 198 PKP PKPdf 21 23 31.3 -2.6
comp=Z,0.4nm,0.7s,baz=180,slow=3.2,SNR=10
SNAA Sanae 144.39 198 *e*PKPdf PKPdf 21 23 31.0 -2.8
SNAA *e* 21 23 33.5
SNAA *e* 21 24 02.0
SNAA *e* 21 24 09.0

ISCJB ***26*** *21:18:30.1±1.2, 176S±03×1788W±03, h555km±35km, mb3.9/7, Error ellipse: s-maj=63.8km s-min=22.4km az=95.5*
NEIC ***26*** *21:18:30.4±0.8, 1755S×17885W, h530km±19km, mb3.7/5, Error ellipse: s-maj=36.8km s-min=13.6km az=141.0*
IDC ***26*** *21:18:31.3±1.8, 1758S×17893W, h536km±24km, mb3.4/4, mb1 3.6/6, mb1mx3.3/14, mbtmp4.4/6, Error ellipse: s-maj=50.5km s-min=15.6km az=144.0*
ISC 26 21:18:30.8±1.1, 175S±03×1789W±03, h534km±28km, n19, σ0§48/16, mb3.9/7, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.71**	**63**	P	**P**	**21 20 24.7**	**-0.4**
	4.6nm,0.3s,baz=94,slow=14,SNR=5.6						
DZM	**Mont Dzumac**	**14.55**	**250**	P	**P**	**21 21 35.7**	**-0.1**
	0.4nm,0.3s,baz=56,slow=18,SNR=11						
ARMA	**Armidale**	**29.76**	**239**	*e*P	**P**	**21 23 54.7**	**+0.7**
CTA	**Charters Tower**	**33.09**	**260**	*e*P	**P**	**21 24 22.9**	**+0.4**
	1.2nm,0.6s,mb3.6						
CTAO	**Charters Tower**	**33.09**	**260**	*e*P	**P**	**21 24 22.7**	**+0.3**
	0.8nm,0.5s,mb3.5						
CNB	**Canberra Magne**	**33.32**	**232**	*e*P	**P**	**21 24 24.4**	**0.0**
	4.2nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**38.44**	**241**	*e*P	**P**	**21 25 07.0**	**+0.2**
	2.1nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**38.44**	**241**	P	**P**	**21 25 07.3**	**+0.5**
	2.4nm,0.5s,mb4.0,baz=69,slow=11,SNR=15						
WB2	**Warramunga Ar**	**44.27**	**259**	*e*P	**P**	**21 25 52.6**	**-0.3**
WRAB	**Tennant Creek**	**44.27**	**259**	P	**P**	**21 25 52.3**	**-0.7**
	1.9nm,0.8s,mb3.7						
WRA	**Warramunga Arr**	**44.28**	**259**	P	**P**	**21 25 52.8**	**-0.2**
	1.0nm,0.6s,mb3.6,baz=97,slow=7.3,SNR=40						
AS31	**Alice Springs**	**44.48**	**254**⇓*i*P		**P**	**21 25 54.7**	**+0.1**
ASAR	**Alice Springs**	**44.48**	**254**	P	**P**	**21 25 54.8**	**+0.2**
	11nm,0.6s,mb4.6,baz=89,slow=7.9,SNR=354						
ASAR				S	**S**	**21 31 49.2**	**-1.6**
	0.3nm,0.8s,baz=84,slow=16,SNR=4.3						
ASPA	**Alice Springs**	**44.49**	**254**⇓*i*P		**P**	**21 25 54.7**	**+0.1**
MJAR	**Matsushiro Arr**	**67.36**	**324**	P	**P**	**21 28 33.5**	**+0.6**
	1.4nm,0.5s,mb3.8,baz=152,slow=5.5,SNR=9.0						
FINES	**FINESS Array B**	**132.72**	**344**	PKP	PKPdf	21 36 43.7	-1.3
	0.8nm,0.9s,baz=64,slow=3.5,SNR=3.8						
BRTR	**Keskin Array B**	**144.22**	**315**	PKP	PKPdf	21 37 05.8	-0.1
	1.0nm,0.7s,baz=72,slow=4.0,SNR=7.3						
MMAI	**Mount Meron Ar**	**145.59**	**303**	PKPbc	PKPbc	21 37 10.3	+0.6
	1.4nm,0.5s,baz=72,slow=5.4,SNR=4.9						
GERES	**GERESS Array B**	**147.15**	**345**	PKPbc	PKPbc	21 37 13.7	-0.2
	1.0nm,0.5s,baz=32,slow=2.8,SNR=16						

ISCJB ***26*** *21:21:59.6±0.6, 5265S±009×14.1W±02, h10km, mb4.3/12, MS3.6/11, Error ellipse: s-maj=18.0km s-min=10.5km az=118.4*
IDC ***26*** *21:21:59.8±0.7, 5265S×14.05W, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.0/18, mbtmp4.1/10, MS3.6/12, Ms1 3.6/12, ms1mx3.5/23, Error ellipse: s-maj=22.4km s-min=17.4km az=35.0*
NEIC ***26*** *21:22:01.1±0.4, 5262S×14.07W, h10km, mb4.7/6, Error ellipse: s-maj=13.3km s-min=9.2km az=54.0*
ISC 26 21:22:01.3±0.6, 5270S±009×141W±02, h10km, n30, σ0§68/18, mb4.3/12, MS3.6/11, 1C-1D, Southwestern Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**18.20**	**174**⇓*i*		**Pn**	**21 26 14.4**	**+0.4**
VNA1				*e*		21 26 18.2	
VNA1				*e*		21 26 21.5	
SNAA	**Sanae**	**19.67**	**169**	P	**Pn**	**21 26 30.5**	**-1.3**
	0.1nm,0.3s,baz=336,slow=11,SNR=42						
SNAA				LR	LR	21 32 31.4	
	comp=Z,40nm,19.5s,baz=344,slow=32						
SNAA	**Sanae**	**19.67**	**169**⇑*i*		**Pn**	**21 26 30.3**	**-1.5**
SNAA				*e*		21 26 33.7	
SNAA				*e*		21 26 37.9	
SNAA				*e*		21 26 45.7	
SNAA				*e*		21 26 48.5	
SNAA				*e*		21 26 58.5	
USHA	**Ushuaia**	**31.54**	**244**	LR	LR	21 37 26.2	
	comp=Z,197nm,18.8s,MS3.8,baz=246,slow=29						
SUR	**Sutherland**	**32.28**	**65**	LR	LR	21 38 17.4	
	comp=Z,113nm,21.3s,MS3.5,baz=46,slow=30						
QSPA	**South Pole Qui**	**37.55**	**180**	*e*P	**P**	**21 29 16.2**	**+0.6**
	14nm,0.7s,mb4.8						
BOSA	**Boshof**	**37.62**	**66**	P	**P**	**21 29 16.9**	**+0.6**
	4.2nm,1.1s,mb4.1,baz=186,slow=9.2,SNR=2.0						
BOSA				LR	LR	21 41 48.4	
	comp=Z,112nm,18.1s,MS3.7,baz=218,slow=32						
MAW	**Mawson**	**38.21**	**143**	P	**P**	**21 29 20.2**	**-1.0**
	2.5nm,0.8s,mb4.0,baz=259,slow=13,SNR=6.5						
PLCA	**Paso Flores**	**39.55**	**264**	LR	LR	21 43 59.7	
	comp=Z,98nm,19.9s,MS3.6,baz=182,slow=33						
CPUP	**Villa Florida**	**41.61**	**292**	P	**P**	**21 29 49.0**	**-0.5**
	0.8nm,0.5s,mb3.6,baz=103,slow=8.0,SNR=4.4						
CPUP				LR	LR	21 42 21.9	
	comp=Z,60nm,21.2s,MS3.4,baz=163,slow=29						
CFAA	**Coronel Fontan**	**44.14**	**277**	P	**P**	**21 30 09.8**	**-0.1**
	0.4nm,0.6s,mb3.3,baz=150,slow=9.2,SNR=8.2						
BDFB	**Brasilia**	**45.66**	**311**	P	**P**	**21 30 22.4**	**+0.3**
	2.2nm,0.5s,mb4.3,baz=178,slow=14,SNR=3.7						
BDFB				LR	LR	21 45 36.5	
	comp=Z,33nm,18.1s,MS3.3,baz=140,slow=31						
SBA	**Scott Base**	**49.71**	**180**	*e*P	**P**	**21 30 54.6**	**+1.1**
	12nm,0.9s,mb4.9						
LSZ	**Lusaka**	**50.02**	**58**	LR	LR	21 49 11.8	
	comp=Z,73nm,20.0s,MS3.7,baz=267,slow=33						
VNDA	**Vanda**	**50.02**	**179**	P	**P**	**21 30 56.3**	**+0.4**
	4.8nm,0.8s,mb4.6,baz=216,slow=7.9,SNR=26						
VNDA				LR	LR	21 50 07.9	
	comp=Z,74nm,19.2s,MS3.7,baz=191,slow=34						
VNDA	**Vanda**	**50.02**	**179**	*e*P	**P**	**21 30 56.2**	**+0.3**
	8.4nm,1.1s,mb4.7						
VNDA				LR	LR	21 50 07.9	
LVC	**Limon Verde**	**51.17**	**284**	P	**P**	**21 31 05.6**	**+1.1**
	6.4nm,0.7s,mb4.7,baz=325,slow=0.1,SNR=12						
LVC	**Limon Verde**	**51.17**	**284**	*e*P	**P**	**21 31 04.0**	**-0.5**
	8.0nm,0.8s,mb4.7						
LPAZ	**La Paz**	**55.67**	**290**	P	**P**	**21 31 37.8**	**+0.3**
	1.2nm,0.8s,mb4.0,baz=131,slow=9.3,SNR=6.9						
LPAZ				LR	LR	21 52 42.9	
	comp=Z,42nm,20.9s,MS3.5,baz=267,slow=33						
LPAZ	**La Paz**	**55.67**	**290**	*e*P	**P**	**21 31 37.0**	**-0.5**
	1.2nm,0.8s,mb4.0						
LPAZ				LR	LR	21 52 42.9	
SAML	**Samuel**	**58.94**	**299**	*e*P	**P**	**21 32 00.3**	**-0.3**
	2.8nm,0.6s,mb4.5						
KMBO	**Kilima Mbogo**	**66.68**	**58**	LR	LR	22 02 10.6	
	comp=Z,48nm,18.6s,MS3.7,baz=200,slow=36						
TORD	**Torodi Ar. Bea**	**66.97**	**17**	P	**P**	**21 32 53.7**	**-0.4**
	2.7nm,1.0s,mb4.2,baz=200,slow=5.3,SNR=11						
ESDC	**Sonseca Array**	**92.42**	**8**	LR	LR	22 13 52.0	
	comp=Z,44nm,21.7s,MS3.9,baz=120,slow=34						
FINES	**FINESS Array B**	**118.19**	**21**	PKP	PKPdf	21 40 46.7	-1.9
	0.4nm,0.9s,baz=157,slow=3.9,SNR=3.7						
MSU	**Marysvale**	**124.03**	**290**	*e*PKPdf	PKPdf	21 40 59.4	-0.4
ARCES	**ARCESS Array B**	**125.30**	**16**	PKP	PKPdf	21 41 00.0	-2.2
	1.2nm,0.8s,baz=225,slow=0.8,SNR=6.4						
PDAR	**Pinedale Array**	**125.44**	**296**	PKP	PKPdf	21 41 00.8	-1.7
	0.3nm,0.7s,baz=133,slow=6.3,SNR=5.2						
BVAR	**Borovoye Array**	**126.64**	**49**	PKP	PKPdf	21 41 04.5	-0.3
	0.7nm,0.6s,baz=25,slow=5.0						
SONM	**Songino Array**	**142.57**	**73**	PKP	PKPdf	21 41 31.9	-2.5
	0.7nm,0.8s,baz=240,slow=2.8,SNR=3.9						

NEIC ***26*** *21:33:04.6, 19.17N×104.99W, h15km, MD4.3(MEX), After MEX.*
MEX 26 21:33:04.8±0.4, 1918N×10498W, h15km±15km, MD4.3, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**0.32**	**350**	*i* P	Pg	21 33 10.8	-0.7
CJM				*i* S	Sg	21 33 15.4	-0.7
SFJM	**Santa Fe**	**2.24**	**54**	*i* P	Pn	21 33 38.2	-3.1
SFJM				*i* S	Sn	21 34 05.5	-3.2
MOIG	**Morelia**	**3.61**	**81**	*i* P	Pn	21 33 59.6	-0.5
MOIG				*i* S	Sn	21 34 39.0	-3.6
ZAIG	**Zacatecas**	**4.22**	**32**	*i* P	Pn	21 34 06.9	-1.6
ZAIG				*i* S	Sn	21 34 55.1	-2.5
ZAIG	**Zacatecas**	**4.22**	**32**	*i* P	Pn	21 34 06.9	-1.6
ZAIG				*i* S	Sn	21 34 56.9	-0.8
MEIG	**Mezcala**	**5.24**	**103**	*i* S	Sn	21 35 18.7	-3.9
PLIG	**Platanillo**	**5.25**	**98**	*i* S	Sn	21 35 20.2	-2.7

IDC ***26*** *21:48:29.7±2.5, 123S×133.34E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.5/15, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=95.2km s-min=26.6km az=79.0*
NEIC 26 21:48:36.4±1.7, 132S×13343E, h55km, mb3.3/1, Error ellipse: s-maj=64.0km s-min=17.8km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.35**	**204**	P	Pn	21 52 46.5	-0.3
	0.1nm,0.3s,baz=11,slow=16,SNR=4.6						
WRAB	**Tennant Creek**	**18.52**	**177**	*e*P	Pn	21 52 47.7	-1.1
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**18.53**	**177**	P	Pn	21 52 48.4	-0.6
	0.2nm,0.3s,baz=356,slow=12,SNR=13						
ASAR	**Alice Springs**	**22.21**	**179**	P	P	21 53 29.3	+1.2
	1.1nm,0.7s,baz=1.4,slow=10,SNR=12						
MKAR	**Makanchi Array**	**65.53**	**324**	P	P	21 59 14.1	+0.2
	0.4nm,0.7s,baz=109,slow=8.1,SNR=4.5						

ISCJB ***26*** *22:08:09.4±3.2, 389N×102×732E±02, h33km, Error ellipse: s-maj=33.8km s-min=14.6km az=33.3*
NNC ***26*** *22:08:14.8±2.3, 3968N×7362E, h12km±4km, mb3.4, mpv3.0, Error ellipse: s-maj=13.7km s-min=8.9km az=6.0*
ISC 26 22:08:10.1±3.5, 389N±02×733E±02, h35km, n8, σ1§06/10, 6C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.28**	**5**	P	**Pn**	**22 08 58.5**	**-0.4**
	SNR=21						
KZA	**Kyzart**	**3.54**	**24**	P	**Pn**	**22 09 03.0**	**+0.5**
	SNR=12						
EKS2	**Erkin-Say**	**3.81**	**6**	P	**Pn**	**22 09 05.6**	**-0.6**
	SNR=10.0						
KBK	**Karagaybulak**	**3.99**	**18**	P	**Pn**	**22 09 08.6**	**-0.2**
	SNR=8.3						
ULHL	**Ulahol**	**4.06**	**33**	P	**Pn**	**22 09 12.0**	**+2.3**
	SNR=6.2						
TKM2	**Tokmak 2**	**4.42**	**23**	⇑Pn	**Pn**	**22 09 12.6**	**-1.9**
	0.4nm,0.6s						
TKM2				⇑Lg		22 10 07.8	
	2.1nm,0.7s						
KK31	**Karatay Array**	**4.72**	**335**	Pn	**Pn**	**22 09 20.1**	**+1.3**
	2.9nm,0.5s,baz=132,slow=12,SNR=30						
KK31				⇑Pg	**Pn**	**22 09 30.5**	**+12**
	3.2nm,0.4s,baz=148,slow=15,SNR=12						
KK31				⇑Sn	**Sn**	**22 10 12.6**	**+0.3**
	3.0nm,0.4s,baz=138,slow=34,SNR=4.1						
KK31				⇑Lg		22 10 27.1	
	11nm,0.6s,baz=139,slow=28,SNR=7.0						
AB31	**Akbulak array**	**14.11**	**322**	⇑P	**Pn**	**22 11 27.2**	**-0.3**
	1.0nm,0.8s,baz=132,slow=13,SNR=5.7						

BJI ***26*** *22:12:22.7, 1020S×10870E, h10km, mb4.4*
IDC ***26*** *22:12:24.4±1.1, 1010S×10875E, h0km, mb4.1/8, mb1 4.1/9, mb1mx3.9/18, mbtmp4.1/9, ML3.9/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/23, Error ellipse: s-maj=63.4km s-min=16.3km az=44.0*
NEIC ***26*** *22:12:25.8±0.6, 1017S×10865E, h10km, mb4.6/3, Error ellipse: s-maj=23.0km s-min=7.9km az=51.0*
ISCJB ***26*** *22:12:27.3±0.6, 1027S±007×10863E±008, h33km, mb4.1/12, MS3.5/2, Error ellipse: s-maj=11.8km s-min=9.7km az=144.1*
ISC 26 22:12:27.2±4.9, 1023S±007×10862E±009, h17km±31km, n21, σ0§88/20, mb4.1/12, MS3.5/2, 1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOGI	**Yogyakarta**	**2.91**	**35**⇓*e*P		**Pn**	**22 13 14.2**	**+1.5**
YOGI				*e*S	**Sn**	**22 13 47.3**	**0.0**
KSM	**Kuching**	**11.75**	**8**	Pn	**Pn**	**22 15 12.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**18.25**	**117**	P	**Pn**	**22 16 38.8**	**-0.8**
	0.3nm,0.3s,baz=293,slow=11,SNR=18						
FITZ				S	**Sn**	**22 19 43.0**	**-20**
	0.1nm,0.3s,baz=230,slow=20,SNR=4.7						
NWAO	**Narrogin (SRO)**	**23.94**	**162**	LR	LR	22 27 15.3	
	comp=Z,72nm,20.1s,MS3.1,baz=42,slow=37						
WRA	**Warramunga Ar**	**26.60**	**114**	P	**P**	**22 18 03.4**	**-1.2**
	1.5nm,0.8s,mb3.6,baz=286,slow=11,SNR=12						
WRAB	**Tennant Creek**	**26.61**	**114**	*e*P	**P**	**22 18 05.4**	**+0.7**
	1.7nm,0.6s,mb3.8						
ASAR	**Alice Springs**	**27.56**	**122**	P	**P**	**22 18 13.9**	**+0.7**
	0.8nm,0.7s,mb3.5,baz=294,slow=9.2,SNR=5.7						
STKA	**Stephens Creek**	**37.32**	**130**	P	**P**	**22 19 38.2**	**-0.3**
	1.3nm,0.8s,mb3.8,baz=316,slow=7.3,SNR=4.9						
STKA	**Stephens Creek**	**37.32**	**130**	*e*P	**P**	**22 19 39.5**	**+1.1**
LSA	**Lhasa**	**43.12**	**338**	P	**P**	**22 20 28.0**	**+1.4**
GTA	**Gaotai**	**50.06**	**351**	*e*P	**P**	**22 21 21.5**	**+0.5**
GTA				AP	pP	22 21 26.5	+0.1
GTA				XP	sP	22 21 29.5	+1.0
GTA				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb4.1						
SONM	**Songino Array**	**57.84**	**358**	P	**P**	**22 22 17.4**	**-0.4**
	comp=Z,1.0nm,0.5s,mb4.1,baz=177,slow=7.8,SNR=5.7						
MKAR	**Makanchi Array**	**61.45**	**340**	P	**P**	**22 22 42.2**	**-0.5**
	comp=Z,3.2nm,0.8s,mb4.5,baz=147,slow=7.7,SNR=18						
MKAR	**Makanchi Array**	**61.45**	**340**	P	**P**	**22 22 42.2**	**-0.5**
BVAR	**Borovoye Array**	**70.95**	**337**	P	**P**	**22 23 42.9**	**-0.7**
	comp=Z,3.5nm,0.6s,mb4.5,baz=146,slow=8.2,SNR=24						
CHKZ	**Chkalovo**	**71.36**	**337**	*e*P	**P**	**22 23 45.6**	**-0.6**
	comp=Z,8.2nm,0.6s,mb4.8						
ZRNK	**Zerenda**	**71.44**	**336**	*e*P	**P**	**22 23 45.8**	**-0.9**
	comp=Z,4.6nm,0.8s,mb4.5						
MMAI	**Mount Meron Ar**	**81.78**	**306**	P	**P**	**22 24 46.5**	**+1.4**
	comp=Z,0.3nm,0.4s,mb3.6,baz=96,slow=5.8,SNR=3.9						
BRTR	**Keskin Array B**	**85.16**	**312**	P	**P**	**22 25 02.4**	**-0.1**
	comp=Z,1.6nm,0.9s,mb4.1,baz=122,slow=5.2,SNR=9.3						
ARCES	**ARCESS Array B**	**97.11**	**339**	LR	LR	23 16 56.4	
	comp=Z,29nm,19.8s,MS3.8,baz=264,slow=40						
WMOK	**Wichita Mounta**	**145.06**	**41**	*e*PKPdf	PKPdf	22 32 03.5	-0.1

CSEM ***26*** *22:22:12.3±0.9, 3859N×2943W, h2km±15km, ML2.1, Error ellipse: s-maj=21.3km s-min=14.1km az=86.0, After PDA*
PDA ***26*** *22:22:12.3±0.9, 3859N×2943W, h2km±15km, MD3.4, ML2.1, Error ellipse: s-maj=21.3km s-min=14.1km az=86.0*
SVSA 26 22:22:12.3±0.9, 3859N×2943W, h2km±15km, MD3.4, ML2.1, Error ellipse: s-maj=21.3km s-min=14.1km az=86.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.57**	**91**	*e*P	Pg	22 22 22.3	-0.9
HOR	**Horta**	**0.63**	**96**	*e*P	Pg	22 22 23.0	-1.4
HOR				*e*S	Sg	22 22 31.6	-0.9
PCND	**Candelaria**	**0.77**	**99**	*e*P	Pg	22 22 25.0	-2.0
PCND				*e*S	Sg	22 22 34.7	-2.3
PCND							
	32nm,0.1s						
PICO	**Pico**	**0.79**	**96**	*e*P	Pg	22 22 25.8	-1.7
PICO				*e*S	Sg	22 22 35.5	-2.3
PBOI	**Pico dos Bois**	**0.84**	**100**	*e*S	Sg	22 22 36.9	-2.4
PBOI							
	28nm,0.1s						
PTEI	**Pico do Teixo**	**0.85**	**96**	*e*P	Pg	22 22 26.5	-2.0
PTEI				*e*S	Sg	22 22 37.1	-2.4
PTEI							
	36nm,0.2s						
ROSA	**Rosais**	**0.94**	**82**	*e*P	Pg	22 22 27.9	-2.4
ROSA				*e*S	Sg	22 22 38.8	-3.7
PID	**Ribeirinha**	**1.04**	**98**	*e*rx		22 22 29.5	

ISCJB ***26*** *22:38:29.2±1.5, 2908S±006×708W±02, h79km±16km, mb3.8/3, Error ellipse: s-maj=25.8km s-min=10.4km az=168.

SIV	**San Ignacio**	**15.79**	**36**	P	**Pn**	**22 42 08.9**	**+0.4**
	0.1nm,0.3s,baz=202,slow=10,SNR=7.2						
SAML	**Samuel**	**21.25**	**21**	*e*P	**P**	**22 43 03.7**	**-7.0**
	1.9nm,0.8s,mb3.5						
USHA	**Ushuaia**	**25.78**	**177**	LR	LR	22 53 51.9	
	comp=Z,74nm,18.9s,baz=102,slow=36						
PPT	**Papeete**	**72.14**	**260**	LR	LR	23 13 53.2	
	comp=Z,62nm,18.8s,baz=162,slow=29						
BOSA	**Boshof**	**81.37**	**118**	P	**P**	**22 50 38.4**	**-0.6**
	2.2nm,0.8s,mb4.0,baz=225,slow=2.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**81.49**	**70**	P	**P**	**22 50 39.9**	**+0.2**
	0.8nm,0.5s,mb3.8,baz=255,slow=8.8,SNR=28						

*ISCJB **26** 22:41:49.7±0.9, 3731N±006×720E±0.1, h177km±19km, Error ellipse: s-maj=18.6km s-min=5.8km az=133.7*
*NEIC **26** 22:41:53.4±9.0, 3749N×7353E, h10km, Error ellipse: s-maj=207.0km s-min=9.9km az=70.0*
*NNC **26** 22:41:56.7±4.3, 3819N×7112E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=43.5km s-min=33.4km az=136.0*

ISC 26 22:41:50.6±0.9, **3728N**±005×**721E**±01, **h151**km±19km, **n22, σ1°00/29, 8C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.01**	**14**	P	**Pn**	**22 43 04.3**	**+0.3**
	SNR=38						
EKS2	**Erkin-Say**	**5.54**	**13**	P	**Pn**	**22 43 11.5**	**+0.4**
	SNR=9.9						
AAK	**Ala-Archa**	**5.66**	**18**	P	**Pn**	**22 43 13.7**	**+0.9**
	SNR=7.6						
AAK	**Ala-Archa**	**5.66**	**18**	*e*Pn	**Pn**	**22 43 11.3**	**-1.4**
	8.3nm,0.6s						
AAK				*e*Sn	**Sn**	**22 44 07.5**	**-9.4**
THN	**Thein Dam**	**5.69**	**147**	*e*P	**Pn**	**22 43 14.7**	**+1.7**
THN				*ex*	x	22 44 19.4	
ULHL	**Ulahol**	**5.91**	**32**	P	**Pn**	**22 43 16.7**	**+0.7**
	SNR=15						
KK31	**Karatay Array**	**5.94**	**349**	⇑Pn	**Pn**	**22 43 15.5**	**-0.9**
	2.7nm,0.3s,baz=274,slow=33,SNR=7.3						
KK31				⇑Sn	**Sn**	**22 44 16.9**	**-6.6**
	8.4nm,0.3s,baz=271,slow=11,SNR=18						
CHMS	**Chumysh**	**6.07**	**19**	P	**Pn**	**22 43 18.9**	**+0.7**
	SNR=5.9						
TKM2	**Tokmak 2**	**6.25**	**25**	⇑Pn	**Pn**	**22 43 21.0**	**+0.5**
	0.2nm,0.5s						
TKM2				⇑Sn	**Sn**	**22 44 29.2**	**-1.8**
	0.7nm,0.8s						
SDNR	**Sundarnagar**	**7.04**	**143**	*e*P	**Pn**	**22 43 31.8**	**+0.7**
SDNR				*ex*	x	22 44 49.2	
KLP	**Kalpa**	**7.67**	**136**	*e*P	**Pn**	**22 43 40.1**	**+0.6**
KLP				*e*S	**Sn**	**22 44 52.5**	**-13**
KLP				AML	AML	22 45 08.8	
	comp=N,101nm,0.6s						
KLP				AML	AML	22 45 11.1	
	comp=E,78nm,0.5s						
KHET	**Khetri**	**9.70**	**160**	*e*S	**Sn**	**22 45 51.9**	**-2.0**
KHET				AML	AML	22 45 53.9	
	comp=E,13nm,0.7s						
KHET				AML	AML	22 45 54.3	
	comp=N,8.0nm,0.5s						
KUDL	**Kundal**	**9.84**	**157**	*ex*	x	22 44 04.9	
KUDL				*e*S	**Sn**	**22 45 50.5**	**-6.7**
KUDL				AML	AML	22 45 59.7	
	comp=N,7.9nm,0.2s						
KUDL				AML	AML	22 46 00.1	
	comp=E,7.9nm,0.2s						
SONA	**Sohna**	**9.94**	**153**	*e*S	**Sn**	**22 45 53.4**	**-6.3**
SONA				AML	AML	22 45 57.5	
	comp=E,19nm,0.2s						
SONA				AML	AML	22 46 01.1	
	comp=N,34nm,0.4s						
KOLN	**Koldanda**	**13.57**	**131**	*e*P	**Pn**	**22 44 56.7**	**-0.2**
	comp=N,6.9nm,0.3s						
GKN	**Gorkha**	**14.04**	**128**	*e*P	**Pn**	**22 45 02.7**	**-0.2**
	comp=N,23nm,0.4s						
GKN				*e*S	**Sn**	**22 47 29.9**	**-8.6**
KKN	**Kakani**	**14.60**	**127**	*e*P	**Pn**	**22 45 09.3**	**-0.6**
DMN	**Daman**	**14.62**	**128**	*e*P	**Pn**	**22 45 10.1**	**0.0**
	comp=N,14nm,0.4s						
PKI	**Pulchoki**	**14.84**	**127**	*e*P	**Pn**	**22 45 13.3**	**+0.5**
AB31	**Akbulak array**	**14.86**	**328**	⇑Pn	**Pn**	**22 45 11.5**	**-1.6**
	comp=N,0.6nm,0.3s,baz=136,slow=13,SNR=33						
AB31				⇑Sn	**Sn**	**22 47 41.7**	**-16**
	comp=N,4.3nm,0.7s						
GUN	**Gumba**	**14.91**	**125**	*e*P	**Pn**	**22 45 13.8**	**+0.1**
	comp=N,19nm,0.4s						
AKTO	**Aktyubinsk**	**16.57**	**327**	⇑Pn	**Pn**	**22 45 35.4**	**+1.4**
	comp=N,0.1nm,0.9s						
AKTO				⇑Sn	**Sn**	**22 48 28.4**	**-11**
	comp=N,0.2nm,1.5s						

*ISCJB **26** 22:47:11.1±0.8, 3732S±005×17775E±0.10, h174km±4km, mb3.9/5, Error ellipse: s-maj=12.8km s-min=7.9km az=166.9*
*NEIC **26** 22:47:12.8, 3699S×17771E, h132km, mb4.1/1, After WEL.*
*WEL **26** 22:47:13.0±0.4, 3700S×17771E, h132km±4km, ML4.5/21, Error ellipse: s-maj=2.6km s-min=2.1km az=0.0*
*IDC **26** 22:47:14.7±1.5, 3728S×17734E, h159km±7km, mb3.6/4, mb1 3.7/5, mb1mx3.5/12, mbtmp4.1/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/21, Error ellipse: s-maj=29.3km s-min=22.3km az=51.0*

ISC 26 22:47:12.3±0.8, **3732S**×005×**17772E**±010, **h167**km±5km, **n116, σ1§20/118, mb3.9/5, 1C-11D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.47**	**244**	P	**Pn**	**22 47 33.5**	**-1.9**
WIZ	**White Island**	**0.47**	**244**	PN	**Pn**	**22 47 33.5**	**-1.9**
MXZ	**Matakaoa Point**	**0.52**	**118**	P	**Pn**	**22 47 33.9**	**-1.8**
MXZ				S	**Sn**	**22 47 49.0**	**-4.6**
MXZ	**Matakaoa Point**	**0.52**	**118**	PN	**Pn**	**22 47 33.9**	**-1.7**
MXZ				SN	**Sn**	**22 47 49.0**	**-4.6**
PUZ	**Puketiti**	**0.86**	**151**	P	**Pn**	**22 47 37.5**	**-0.1**
PUZ				S	**Sn**	**22 47 56.6**	**-0.5**
PUZ	**Puketiti**	**0.86**	**151**	PN	**Pn**	**22 47 37.5**	**-0.1**
PUZ				SN	**Sn**	**22 47 56.6**	**-0.5**
MWZ	**Matawai**	**1.02**	**189**	P	**Pn**	**22 47 39.4**	**+0.5**
MWZ	**Matawai**	**1.02**	**189**	PN	**Pn**	**22 47 39.4**	**+0.5**
URZ	**Urewera**	**1.05**	**207**	P	**Pn**	**22 47 39.4**	**+0.3**
	120nm,0.3s,baz=360,slow=16,SNR=706						
URZ				S	**Sn**	**22 48 00.4**	**+0.7**
	217nm,0.3s,baz=90,slow=24,SNR=24						
URZ	**Urewera**	**1.05**	**207**	⇓P	**Pn**	**22 47 39.4**	**+0.3**
URZ	**Urewera**	**1.05**	**207**	⇓PN	**Pn**	**22 47 39.4**	**+0.3**
MARZ	**Manawahe**	**1.06**	**231**	P	**Pn**	**22 47 39.1**	**-0.1**
MARZ	**Manawahe**	**1.06**	**231**	PN	**Pn**	**22 47 39.1**	**-0.1**
EDRZ	**Edgecumbe**	**1.11**	**225**	P	**Pn**	**22 47 39.8**	**+0.3**
EDRZ	**Edgecumbe**	**1.11**	**225**	PN	**Pn**	**22 47 39.8**	**+0.3**
TAZ	**Tarawera**	**1.32**	**226**	P	**Pn**	**22 47 42.3**	**+0.8**
TAZ	**Tarawera**	**1.32**	**226**	PN	**Pn**	**22 47 42.3**	**+0.9**
KARZ	**Kaharoa**	**1.37**	**239**	P	**Pn**	**22 47 41.8**	**-0.1**
KARZ	**Kaharoa**	**1.37**	**239**	PN	**Pn**	**22 47 41.8**	**0.0**
PATZ	**Paeroa**	**1.57**	**227**	P	**Pn**	**22 47 45.1**	**+1.3**
PATZ	**Paeroa**	**1.57**	**227**	PN	**Pn**	**22 47 45.1**	**+1.3**
KNZ	**Kokohu**	**1.70**	**181**	P	**Pn**	**22 47 46.7**	**+1.5**
KNZ	**Kokohu**	**1.70**	**181**	PN	**Pn**	**22 47 46.7**	**+1.5**
KUZ	**Kuaotunu**	**1.70**	**289**	P	**Pn**	**22 47 42.0**	**-3.2**
KUZ	**Kuaotunu**	**1.70**	**289**	PN	**Pn**	**22 47 42.0**	**-3.2**
MKAZ	**Moumakai**	**2.05**	**275**	⇓P	**Pn**	**22 47 47.7**	**-1.3**
MKAZ	**Moumakai**	**2.05**	**275**	⇓PN	**Pn**	**22 47 47.7**	**-1.3**
BKZ	**Black Stump Fm**	**2.08**	**207**	P	**Pn**	**22 47 50.1**	**+0.7**
BKZ	**Black Stump Fm**	**2.08**	**207**	PN	**Pn**	**22 47 50.1**	**+0.7**
OTAZ	**Otara**	**2.27**	**279**	PN	**Pn**	**22 47 50.4**	**-1.1**
KATZ	**Kakaramea**	**2.30**	**223**	P	**Pn**	**22 47 53.6**	**+1.7**
KATZ	**Kakaramea**	**2.30**	**223**	PN	**Pn**	**22 47 53.6**	**+1.7**
MTAZ	**Motutapu**	**2.31**	**282**	P	**Pn**	**22 47 50.4**	**-1.6**
MTAZ	**Motutapu**	**2.31**	**282**	PN	**Pn**	**22 47 50.4**	**-1.6**
KRVZ	**Karewarewa**	**2.41**	**222**	PN	**Pn**	**22 47 54.8**	**+1.6**
OTVZ	**Oturere**	**2.45**	**221**	⇓PN	**Pn**	**22 47 55.2**	**+1.6**
WTVZ	**West Tongariro**	**2.46**	**223**	P	**Pn**	**22 47 55.2**	**+1.5**
WTVZ	**West Tongariro**	**2.46**	**223**	PN	**Pn**	**22 47 55.2**	**+1.4**
KAAZ	**Kauri Point**	**2.47**	**281**	P	**Pn**	**22 47 52.8**	**-1.0**
KAAZ	**Kauri Point**	**2.47**	**281**	PN	**Pn**	**22 47 52.8**	**-1.1**
NGZ	**Ngauruhoe**	**2.49**	**221**	P	**Pn**	**22 47 55.7**	**+1.5**
NGZ	**Ngauruhoe**	**2.49**	**221**	PN	**Pn**	**22 47 55.7**	**+1.6**
TWVZ	**Taurewa**	**2.51**	**225**	⇓P	**Pn**	**22 47 55.8**	**+1.5**
TWVZ	**Taurewa**	**2.51**	**225**	PN	**Pn**	**22 47 55.8**	**+1.5**
TUVZ	**Tukino**	**2.54**	**219**	P	**Pn**	**22 47 55.9**	**+1.2**
TUVZ	**Tukino**	**2.54**	**219**	PN	**Pn**	**22 47 55.9**	**+1.2**
WPVZ	**Whakapapa**	**2.54**	**222**	P	**Pn**	**22 47 56.2**	**+1.4**
WPVZ	**Whakapapa**	**2.54**	**222**	PN	**Pn**	**22 47 56.2**	**+1.4**
WTAZ	**Waiatarua**	**2.55**	**278**	⇓P	**Pn**	**22 47 54.1**	**-0.7**
WTAZ	**Waiatarua**	**2.55**	**278**	⇓PN	**Pn**	**22 47 54.1**	**-0.7**
HIZ	**Hauiti**	**2.56**	**241**	⇑P	**Pn**	**22 47 56.7**	**+1.7**
HIZ	**Hauiti**	**2.56**	**241**	⇓PN	**Pn**	**22 47 56.7**	**+1.8**
FWVZ	**Far West T-bar**	**2.58**	**221**	⇓P	**Pn**	**22 47 56.8**	**+1.6**
FWVZ	**Far West T-bar**	**2.58**	**221**	⇓PN	**Pn**	**22 47 56.8**	**+1.6**
DRZ	**Dome Shelter**	**2.59**	**220**	P	**Pn**	**22 47 56.6**	**+1.3**
DRZ				S	Sn	22 48 00.0	-29
DRZ	**Dome Shelter**	**2.59**	**220**	PN	**Pn**	**22 47 56.6**	**+1.4**
MOVZ	**Moawhango**	**2.60**	**216**	P	**Pn**	**22 47 56.0**	**+0.6**
MOVZ	**Moawhango**	**2.60**	**216**	PN	**Pn**	**22 47 56.0**	**+0.7**
WNVZ	**Wahianoa**	**2.61**	**219**	P	**Pn**	**22 47 56.7**	**+1.2**
WNVZ	**Wahianoa**	**2.61**	**219**	PN	**Pn**	**22 47 56.7**	**+1.2**
PKVZ	**Pokaka**	**2.71**	**223**	PN	**Pn**	**22 47 57.9**	**+1.1**
MTVZ	**Mangateitei**	**2.72**	**220**	PN	**Pn**	**22 47 58.2**	**+1.4**
PXZ	**Pawanui**	**2.79**	**194**	PN	**Pn**	**22 47 58.4**	**+0.7**
TSZ	**Takapari Road**	**3.06**	**206**	P	**Pn**	**22 48 01.2**	**+0.1**
TSZ	**Takapari Road**	**3.06**	**206**	PN	**Pn**	**22 48 01.2**	**+0.1**
WAZ	**Wanganui**	**3.24**	**221**	P	**Pn**	**22 48 04.0**	**+0.7**
WAZ	**Wanganui**	**3.24**	**221**	PN	**Pn**	**22 48 04.0**	**+0.6**
BFZ	**Birch Farm**	**3.55**	**198**	P	**Pn**	**22 48 07.6**	**+0.4**
BFZ	**Birch Farm**	**3.55**	**198**	PN	**Pn**	**22 48 07.6**	**+0.4**
MRZ	**Mangatainoka R**	**3.73**	**206**	P	**Pn**	**22 48 09.0**	**-0.5**
MRZ	**Mangatainoka R**	**3.73**	**206**	PN	**Pn**	**22 48 09.0**	**-0.5**
TIWZ	**Tintock**	**3.73**	**202**	PN	**Pn**	**22 48 09.9**	**+0.4**
KIW	**Kapiti Island**	**4.16**	**211**	P	**Pn**	**22 48 14.4**	**-0.6**
KIW	**Kapiti Island**	**4.16**	**211**	PN	**Pn**	**22 48 14.4**	**-0.6**
MTW	**Mount Morrison**	**4.20**	**204**	P	**Pn**	**22 48 15.2**	**-0.4**
MTW	**Mount Morrison**	**4.20**	**204**	PN	**Pn**	**22 48 15.2**	**-0.4**
TRWZ	**Traveller**	**4.37**	**201**	PN	**Pn**	**22 48 17.3**	**-0.4**
PAWZ	**Paruwai Farm**	**4.43**	**203**	P	**Pn**	**22 48 17.6**	**-0.9**
PAWZ	**Paruwai Farm**	**4.43**	**203**	PN	**Pn**	**22 48 17.6**	**-0.8**
MSWZ	**Moikau Station**	**4.51**	**204**	P	**Pn**	**22 48 18.9**	**-0.7**
MSWZ	**Moikau Station**	**4.51**	**204**	PN	**Pn**	**22 48 18.5**	**-1.1**
MRW	**Makara Radio**	**4.55**	**210**	P	**Pn**	**22 48 19.4**	**-0.7**
MRW	**Makara Radio**	**4.55**	**210**	*e*PN	**Pn**	**22 48 19.0**	**-1.1**
DUWZ	**D'Urville Isla**	**4.56**	**219**	*e*PN	**Pn**	**22 48 19.3**	**-1.0**
WEL	**Wellington**	**4.57**	**209**	P	**Pn**	**22 48 19.9**	**-0.5**
WEL	**Wellington**	**4.57**	**209**	PN	**Pn**	**22 48 19.6**	**-0.7**
SNZO	**South Karori**	**4.62**	**210**	P	**Pn**	**22 48 20.1**	**-0.9**
SNZO	**South Karori**	**4.62**	**210**	PN	**Pn**	**22 48 19.8**	**-1.2**
SNZO				PN	**Sn**	**22 49 15.2**	**+0.5**
BHW	**Baring Head**	**4.64**	**208**	P	**Pn**	**22 48 20.3**	**-1.0**
BHW	**Baring Head**	**4.64**	**208**	PN	**Pn**	**22 48 19.7**	**-1.6**
TCW	**Tory Channel**	**4.72**	**213**	P	**Pn**	**22 48 21.1**	**-1.1**
TCW	**Tory Channel**	**4.72**	**213**	PN	**Pn**	**22 48 20.9**	**-1.3**
TUWZ	**Tuamarina**	**5.04**	**214**	PN	**Pn**	**22 48 25.0**	**-1.5**
NNZ	**Nelson**	**5.15**	**220**	*e*P	**Pn**	**22 48 27.0**	**-0.9**
BSWZ	**Blackbirch Sta**	**5.30**	**213**	P	**Pn**	**22 48 29.0**	**-0.9**
QRZ	**Quartz Range**	**5.35**	**228**	*e*P	**Pn**	**22 48 29.5**	**-1.0**
THZ	**Tophouse**	**5.79**	**219**	*e*P	**Pn**	**22 48 34.9**	**-1.4**
THZ	**Tophouse**	**5.79**	**219**	*e*PN	**Pn**	**22 48 34.1**	**-2.3**
KHZ	**Kahutara**	**6.02**	**211**	SN	**Sn**	**22 49 46.2**	**-1.5**
LTZ	**Lake Taylor**	**6.87**	**216**	*e*P	**Pn**	**22 48 48.4**	**-2.2**
LTZ	**Lake Taylor**	**6.87**	**216**	*e*PN	**Pn**	**22 48 48.0**	**-2.6**
MQZ	**McQueen's Vall**	**7.46**	**210**	*e*P	**Pn**	**22 48 55.7**	**-2.6**
MQZ	**McQueen's Vall**	**7.46**	**210**	*e*PN	**Pn**	**22 48 55.6**	**-2.8**
RPZ	**Rata Peaks**	**8.16**	**216**	P	**Pn**	**22 49 06.3**	**-1.4**
	1.5nm,0.3s,baz=0.0,slow=11,SNR=7.0						
RPZ				S	**Sn**	**22 50 34.4**	**-4.3**
	3.6nm,0.3s,baz=154,slow=22,SNR=14						
ODZ	**Otahua Downs**	**9.38**	**212**	*e*P	**Pn**	**22 49 22.0**	**-1.7**
ODZ	**Otahua Downs**	**9.38**	**212**	*e*PN	**Pn**	**22 49 21.8**	**-2.0**
CTA	**Charters Tower**	**32.30**	**293**	LR	LR	23 05 10.0	
	comp=Z,77nm,21.4s,baz=233,slow=34						
ASAR	**Alice Springs**	**39.79**	**277**	P	**P**	**22 54 30.1**	**+1.2**
	1.0nm,0.5s,mb3.7,baz=122,slow=7.8,SNR=22						
ASAR				PcP	PcP	22 56 32.1	+0.4
	0.4nm,0.6s,baz=119,slow=3.6,SNR=4.1						
WRAB	**Tennant Creek**	**41.43**	**282**	*e*P	**P**	**22 54 43.2**	**+0.9**
	1.8nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**41.43**	**282**	P	**P**	**22 54 43.2**	**+0.8**
	1.0nm,0.3s,mb3.9,baz=120,slow=7.7,SNR=20						
FITZ	**Fitzroy Crossi**	**49.28**	**278**	P	**P**	**22 55 45.5**	**+1.4**
	0.8nm,0.5s,mb3.6,baz=125,slow=7.5,SNR=7.4						
MAW	**Mawson**	**64.58**	**203**	P	**P**	**22 57 35.8**	**+4.2**
	1.5nm,0.6s,mb4.0,baz=119,slow=5.2,SNR=6.6						
ARCES	**ARCESS Array B**	**144.41**	**344**	PKP	PKPdf	23 06 27.8	-0.7
	0.7nm,0.6s,baz=67,slow=3.2,SNR=8.4						
ARCES	**ARCESS Array B**	**144.41**	**344**	PKP	PKPdf	23 06 27.8	-0.7
DBIC	**Dimbokro**	**149.40**	**175**	PKPbc	PKPbc	23 06 44.1	+2.7
	3.2nm,0.8s,baz=180,slow=2.0,SNR=3.1						
TORD	**Torodi Ar. Bea**	**155.67**	**189**	PKPbc	PKPdf	23 06 58.1	+12
	0.3nm,0.4s,baz=156,slow=2.7,SNR=16						
TORD				PKPab	PKPab	23 07 16.4	+3.4
	0.5nm,0.4s,baz=168,slow=3.5,SNR=13						

*NIED **26** 22:53:00, 3600N×13950E, h71km, Mw3.7 Best double couple: M₀3.87000×10¹⁴ NP1:φs227.00000°, δ57.00000°, λ58.00000°. NP2:φs95.00000°, δ45.00000°, λ129.00000°.*
JMA 26 22:52:55.7±0.1, **3601N**×**13949E, h61**km±1km, **M3.3, 3C-4D**
Broadband fault plane solution: P waves. NP1: φs34.00000°, δ50.00000°, λ31.00000°. **NP2:**φs283.00000°, δ67.00000°, λ136.00000°. **Principal axes:** T Plg47.0000°, Azm241.0000°; N Plg41.0000°, Azm81.0000°; P Plg10.0000°, Azm342.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHU	**Hanno**	**0.23**	**227**	P	Pn	22 53 05.8	+0.4
JHU				S	Sn	22 53 13.0	+0.5
TOK	**Tokyo**	**0.39**	**146**	⇓P	Pn	22 53 07.6	+1.0
JAG	**Ashikaga**	**0.41**	**356**	⇑P	Pn	22 53 07.3	+0.4
JAG				S	Sn	22 53 15.7	+0.7
JRY	**Ryogami san**	**0.48**	**271**	⇑P	Pn	22 53 07.7	+0.2
JRY				S	Sn	22 53 16.5	+0.4
JKT	**Katashina**	**0.78**	**346**	⇓P	Pn	22 53 11.2	+0.2
JKT				S	Sn	22 53 22.8	+0.6
JOD2	**Odawara 2**	**0.81**	**204**	⇓P	Pn	22 53 10.5	-0.9
JOD2				*e*S	Sn	22 53 21.8	-1.1
JYN	**Shimob**	**0.92**	**237**	⇑P	Pn	22 53 12.6	-0.2
JYN				S	Sn	22 53 25.3	-0.1
MAT	**Matsushiro**	**1.17**	**298**	P	Pn	22 53 16.1	+0.2
MAT				S	Sn	22 53 31.4	+0.4
MAT	**Matsushiro**	**1.17**	**298**	P	Pn	22 53 16.1	+0.2
MAT				S	Sn	22 53 31.5	+0.5
JIM2	**Oshima 3**	**1.29**	**182**	P	Pn	22 53 16.2	-1.4
JIM2				*e*S	Sn	22 53 32.0	-2.0
JHK	**Hiroka**	**1.29**	**343**	⇓P	Pn	22 53 18.0	+0.4
JHK				*e*S	Sn	22 53 35.1	+1.1

*NEIC **26** 22:54:14.2±1.4, 5705S×13033E, h35km Error ellipse: s-maj=39.9km s-min=15.5km az=73.0*

IDC 26 22:54:09.6±2.2, **5685**×**13013E, h0**km, **mb3.9**/1, **mb1 3.7**/4, **mb1mx3.6**/12, **mbtmp3.6**/4, **ML3.6**/3, **Error ellipse: s-maj=97.3km s-min=27.1km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.10**	**199**	Pn	Pn	22 57 18.7	+1.8
	0.5nm,0.3s,baz=34,slow=10,SNR=25						
FITZ				Sn	Sn	22 59 34.4	-9.0
	0.7nm,0.3s,baz=234,slow=19,SNR=7.7						
WRAB	**Tennant Creek**	**14.75**	**164**	*e*Pn	Pn	22 57 40.5	+1.1
	4.6nm,0.5s						
WRAB				*e*Sn	Sn	23 00 07.9	-16
WRA	**Warramunga Arr**	**14.75**	**164**	Pn	Pn	22 57 39.4	0.0
	0.3nm,0.3s,baz=345,slow=12,SNR=18						
WRA				Sn	Sn	23 00 08.8	-15
	0.8nm,0.3s,baz=344,slow=26,SNR=9.2						
ASAR	**Alice Springs**	**18.24**	**169**	P	Pn	22 58 23.5	-0.7
	0.1nm,0.3s,baz=353,slow=12,SNR=7.2						
ASAR				S	Sn	23 01 33.4	-15
	0.2nm,0.3s,baz=328,slow=14,SNR=7.3						
MKAR	**Makanchi Array**	**67.21**	**326**	P	P	23 05 05.8	+0.2
	0.5nm,0.4s,baz=110,slow=7.7,SNR=12						

*TRN **26** 22:54:42.8, 1826N×6369W, h87km, MD3.8*
*ISCJB **26** 22:54:43.2±0.7, 1825N±008×6369W±003, h97km±6km, Error ellipse: s-maj=14.2km s-min=2.8km az=37.4*
*NEIC **26** 22:54:45.8, 1835N×6378W, h90km, MD3.8(TRN), MD3.9(RSPR), After RSPR.*
*RSPR **26** 22:54:45.8, 1835N×6378W, h90km±1km, MD3.9/15, MD3.9/15*

ISC 26 22:54:44.3±0.7, **1826N**±008×**6370W**±003, **h89**km±6km, **n38, σ0§49/64, 27C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STMA	**St. Maarten, A**	**0.60**	**111**	*e*P	**Pn**	**22 54 59.9**	**+0.2**
STMA				*e*S	**Sn**	**22 55 11.4**	**+0.1**
ABV	**Anegada**	**0.77**	**308**	⇑*e*P	**Pn**	**22 55 01.9**	**+0.5**
ABV				*e*S	**Sn**	**22 55 13.7**	**-0.4**
SABS	**Saba**	**0.77**	**146**	*i* P	**Pn**	**22 55 01.6**	**+0.2**
SABS				*e*S	**Sn**	**22 55 14.5**	**+0.3**
SABT	**Saba**	**0.77**	**146**	*i* P	**Pn**	**22 55 01.6**	**+0.2**
SABT				*e*S	**Sn**	**22 55 14.5**	**+0.3**
TBVI	**Tortola**	**0.88**	**280**	⇓*e*P	**Pn**	**22 55 02.7**	**+0.1**
TBVI				*e*S	**Sn**	**22 55 15.6**	**-0.6**
STAT	**Sint Eustatius**	**1.02**	**138**	*e*P	**Pn**	**22 55 05.0**	**+0.9**
STAT				*e*S	**Sn**	**22 55 20.0**	**+0.9**
STVI	**Saint Thomas**	**1.21**	**275**	⇑*i*P	**Pn**	**22 55 06.5**	**+0.2**
STVI				*e*S	**Sn**	**22 55 22.4**	**-0.5**
CULB	**Culebra**	**1.55**	**272**	⇑*e*P	**Pn**	**22 55 10.5**	**-0.1**
CULB				*e*S	**Sn**	**22 55 29.5**	**-1.1**
MTP	**Monte Pirata**	**1.78**	**265**	⇑*e*P	**Pn**	**22 55 13.8**	**+0.3**
MTP				*e*S	**Sn**	**22 55 35.2**	**-0.5**
HUMP	**Col San Antoni**	**2.05**	**267**	⇑*e*P	**Pn**	**22 55 17.3**	**+0.3**
HUMP				*e*S	**Sn**	**22 55 42.1**	**0.0**
CBYP	**Canovanas**	**2.05**	**271**	⇑*e*P	**Pn**	**22 55 16.8**	**-0.3**
CBYP				*e*S	**Sn**	**22 55 41.5**	**-0.6**
CPD	**Cerro la Pandu**	**2.12**	**264**	⇑*e*P	**Pn**	**22 55 18.3**	**+0.3**
CPD				*e*S	**Sn**	**22 55 44.0**	**+0.2**
CPD	**Cerro la Pandu**	**2.12**	**264**	⇑*e*P	**Pn**	**22 55 18.3**	**+0.3**
CPD				*e*S	**Sn**	**22 55 43.9**	**+0.2**
BPA	**Boggy Peak**	**2.13**	**124**	*e*P	**Pn**	**22 55 17.1**	**-1.0**
BPA				*e*S	**Sn**	**22 55 42.6**	**-1.3**
SJG	**San Juan**	**2.34**	**267**	⇑*e*P	**Pn**	**22 55 21.5**	**+0.6**
SJG				*e*S	**Sn**	**22 55 48.5**	**-0.3**
ICM	**Isla Caja Muer**	**2.71**	**263**	⇑*e*P	**Pn**	**22 55 26.1**	**+0.2**
ICM				*e*S	**Sn**	**22 55 57.6**	**-0.2**
CELP	**Cerrillos**	**2.75**	**267**	⇑*e*P	**Pn**	**22 55 26.8**	**+0.5**
CELP				*e*S	**Sn**	**22 55 59.0**	**+0.3**
OBIP	**Obispado Ponce**	**2.77**	**266**	⇑*e*P	**Pn**	**22 55 27.2**	**+0.5**
OBIP				*e*S	**Sn**	**22 55 59.6**	**+0.3**
SEG	**Port Louis**	**2.79**	**131**	⇑*e*P	**Pn**	**22 55 26.2**	**-0.7**
LZG	**Guadaloupe-1**	**2.79**	**139**	⇑*e*P	**Pn**	**22 55 26.8**	**-0.1**
PORP	**Portuguez**	**2.80**	**266**	⇑*e*P	**Pn**	**22 55 28.7**	**+1.6**
AOPR	**Arecibo Observ**	**2.90**	**272**	⇑*e*P	**Pn**	**22 55 28.7**	**+0.3**
AOPR				*e*S	**Sn**	**22 56 02.5**	**0.0**
BCG	**Bois Riant Cap**	**2.93**	**137**	*e*P	**Pn**	**22 55 29.1**	**+0.2**
SCG	**Saint Claude**	**2.94**	**139**	*e*P	**Pn**	**22 55 28.8**	**-0.1**
HMG	**Houelmont**	**2.96**	**140**	⇑*e*P	**Pn**	**22 55 29.1**	**-0.1**
PHG	**Guadaloupe-2**	**2.97**	**138**	*e*P	**Pn**	**22 55 29.7**	**+0.3**
DOG	**Dongo Capester**	**2.97**	**138**	⇑*e*P	**Pn**	**22 55 29.4**	**0.0**
LRS	**Lares**	**2.99**	**271**	⇑*e*P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.47**	**207**	PN	Pn	23 35 10.2	-0.4
DCZ				SN	Sn	23 35 24.0	-0.8
MSZ	**Milford Sound**	**0.51**	**41**	*e*PN	Pn	23 35 10.9	0.0
MSZ				SN	Sn	23 35 24.8	-0.4
MLZ	**Mavora Lakes**	**0.58**	**120**	⇑PN	Pn	23 35 11.2	-0.1
WHZ	**Wether Hill Ro**	**0.90**	**158**	⇑PN	Pn	23 35 13.9	+0.1
WHZ				SN	Sn	23 35 29.8	-0.6
WKZ	**Wanaka**	**1.13**	**79**	PN	Pn	23 35 15.9	-0.1
EAZ	**Earnscleugh**	**1.32**	**98**	⇑PN	Pn	23 35 17.6	-0.3
JCZ	**Jackson Bay**	**1.36**	**44**	⇓*e*PN	Pn	23 35 17.6	-0.6
TUZ	**Tuapeka**	**1.77**	**121**	⇓PN	Pn	23 35 22.8	-0.2
SYZ	**Scrubby Hill**	**1.89**	**142**	PN	Pn	23 35 24.2	-0.2
SYZ				SN	Sn	23 35 47.2	-2.1
LBZ	**Lake Benmore**	**2.06**	**72**	*e*PN	Pn	23 35 24.7	-1.8
FOZ	**Fox Glacier**	**2.19**	**48**	*e*PN	Pn	23 35 26.8	-1.3
ODZ	**Otahua Downs**	**2.26**	**91**	*e*PN	Pn	23 35 27.6	-1.3
WVZ	**Waitaha Valley**	**3.09**	**51**	*e*PN	Pn	23 35 36.7	-2.9
LTZ	**Lake Taylor**	**4.16**	**58**	*e*PN	Pn	23 35 50.4	-3.2
LTZ				SN	Sn	23 36 37.0	-4.5
DSZ	**Denniston Nort**	**4.58**	**45**	PN	Pn	23 35 56.6	-2.7

PDG ***26*** *23:40:17.5,5160N×179.30W,h33km*

BGS ***26*** *23:40:34.0±1.5,5036N×179.82E,h33km,mb5.7,MS5.1*

ISCJB ***26*** *23:40:37.5±0.1,5135N±002×17959W±002,h30km, mb5.7/326,MS5.4/74,Error ellipse: s-maj=3.6km s-min=1.4km az=15.6*

BJI ***26*** *23:40:37.3,5147N×17939W,h39km,mB5.5,mb5.6,Ms5.4, Msz5.1*

IDC ***26*** *23:40:38.0±1.5,5127N×17943W,h26km±8km,mb5.3/27, mb1 5.4/28,mb1mx5.4/29,mbtmp5.5/28,ML5.6/1,MS5.4/12, Ms1 5.4/12,ms1mx4.8/41,Error ellipse: s-maj=14.5km s-min=10.0km az=141.0*

MOS ***26*** *23:40:38.2±0.9,5143N×17944W,h33km,mb5.9/122, MS5.5/30,Error ellipse: s-maj=6.7km s-min=3.6km az=95.5*

HRVD ***26*** *23:40:39.5±0.2,5120N×17942W,h22km±1km,MW5.7/93, Centroid moment Tensor Solution. LP body waves: s82,c164;Mantle waves: s93,c210; Half duration: 1ŝ7 Moment tensor: Scale 10¹⁷Nm; Mrr 1.70±.05; Mθθ -1.84±.05; Mϕϕ 0.14±.04; Mrθ 3.99±.21; Mθϕ 0.42±.03; Mϕr 0.34±.07; Best double couple: Mo 4.39900×10¹⁷ NP1:ϕs 298.00000°,δ 14.00000°,λ 121.00000°. NP2: ϕs 87.00000°,δ 78.00000°,λ 83.00000°. Principal axes: T 4.3570, Plg 56.0000°, Azm 347.0000°; N 0.0840, Plg 7.0000°, Azm 88.0000°; P -4.4410, Plg 33.0000°, Azm 183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***26*** *23:40:39.5±0.1,5133N×17957W,h35km,mb5.8/190, MS5.6/18,MW5.6 Error ellipse: s-maj=3.8km s-min=2.2km az=186.0,Moment Tensor Solution. s60 Moment tensor: Scale 10¹⁷Nm; Mrr 0.48; Mθθ -0.47; Mϕϕ -0.02; Mrθ 3.38; Mθϕ 0.16; Mϕr 0.33; Best double couple: Mo 3.40000×10¹⁷ NP1:ϕs 85.00000°,δ 86.00000°,λ 87.00000°. NP2: ϕs 306.00000°,δ 5.00000°,λ 131.00000°. Principal axes: T 3.4600, Plg 49.0000°, Azm 351.0000°; N -0.0500, Plg 3.0000°, Azm 85.0000°; P -3.4100, Plg 41.0000°, Azm 178.0000°;*

SZGRF ***26*** *23:40:42.0,5168N×178.35W,h33km,mb5.9,MS5.5, Andreanof Islands, Aleutian Islands, United States*

CRAAG ***26*** *23:40:42.8,5135N×179.41W,Mb5.6*

ISC 26 23:40:39.4±0.1,5146N±002×17960W±002,h31km, h31km±2.3km:pP-P,n1343,σ0ˢ89/1435,mb5.7/326, MS5.4/74,374C-154D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.69**	**264**	P	**Pn**	**23 40 53.3**	**+0.3**
AMKA				S	**Sb**	**23 41 05.0**	**+2.7**
SMY	**Shemya**	**4.09**	**291**	P	**Pn**	**23 41 43.8**	**+4.1**
SMY				S	**Sn**	**23 42 35.3**	**+8.9**
NIKO	**Nikolski**	**6.78**	**73**	P	**Pn**	**23 42 17.6**	**+0.9**
OKCE	**Okmok Cone E**	**7.26**	**70**	P	**Pn**	**23 42 25.9**	**+2.6**
OKCD	**Okmok Cone D**	**7.30**	**70**	P	**Pn**	**23 42 26.1**	**+2.3**
SPIA	**Saint Paul Isl**	**7.92**	**40**	P	**Pn**	**23 42 37.3**	**+5.0**
AKLV	**Akutan Long Va**	**8.70**	**67**	P	**Pn**	**23 42 46.2**	**+3.2**
AKUT	**Akutan**	**8.80**	**67**	P	**Pn**	**23 42 46.4**	**+2.0**
SDPT	**Sand Point** 276nm,0.4s	**12.05**	**64**	*e*P	**Pn**	**23 43 29.3**	**+0.4**
CHGN	**Chignik**	**13.38**	**60**	*e*P	**Pn**	**23 43 46.9**	**-0.2**
PET	**Petropavlovsk**	**13.41**	**285**	⇑*i*P	**Pn**	**23 43 49.7**	**+2.2**
PET				*i*S	**Sn**	**23 46 18.5**	**+3.1**
PET	comp=Z,1μm,5.5s			pmax	pmax		
PET	comp=E,1μm,5.6s			pmax	pmax		
PET	comp=Z,1μm,12.4s			pmax	pmax		
PET	comp=N,74nm,0.7s			smax			
PET	comp=Z,12μm,20.0s			MLR	MLR		
PET	comp=Z,10μm,21.0s			MLR	MLR		
PET	**Petropavlovsk**	**13.41**	**285**	*e*Pn	**Pn**	**23 43 52.8**	**+5.3**
PET				*e*Sn	**Sn**	**23 46 24.7**	**+9.3**
SKR	**Severo-Kuril's**	**15.27**	**277**	*e*P	**Pn**	**23 44 10.0**	**-2.6**
SKR	comp=N,100nm,0.9s			pmax	pmax		
SKR	comp=E,130nm,0.9s			pmax	pmax		
SKR	comp=Z,330nm,0.9s			pmax	pmax		
SKR	comp=N,8μm,18.0s			MLR	MLR		
SKR	comp=E,7μm,18.0s			MLR	MLR		
SKR	comp=Z,6μm,18.0s			MLR	MLR		
TNA	**Tin City**	**15.36**	**19**	*e*P	**Pn**	**23 44 20.1**	**+6.4**
SVW2	**Sparrevohn**	**16.36**	**45**	*e*P	**Pn**	**23 44 28.7**	**+2.0**
KDAK	**Kodiak Island** comp=Z,2μm,0.7s,SNR=55	**16.80**	**57**	Pn	**Pn**	**23 44 29.2**	**-3.0**
KDAK	**Kodiak Island** comp=Z,21nm,0.3s,baz=250,slow=6.5,SNR=74	**16.80**	**57**	Pn	**Pn**	**23 44 30.0**	**-2.3**
KDAK	comp=Z,3.5nm,0.3s,baz=341,slow=23,SNR=6.7			Sn	**Sn**	**23 47 34.3**	**-3.6**
KDAK	comp=Z,12μm,18.8s,baz=248,slow=38			LR	LR	23 51 25.1	
KDAK	**Kodiak Island**	**16.80**	**57**	*e*Pn	**Pn**	**23 44 29.3**	**-2.9**
TTA	**Tatalina**	**17.06**	**39**	*e*P	**Pn**	**23 44 35.8**	**+0.3**
TTA	comp=Z,794nm,1.4s			pmax	pmax		
TTA	**Tatalina** comp=Z,794nm,1.4s	**17.06**	**39**	*e*P	**Pn**	**23 44 35.8**	**+0.3**
BILL	**Bilibino**	**18.00**	**343**	*c i*P	**Pn**	**23 44 51.3**	**+4.1**
BILL				*e*S	**Sn**	**23 48 13.7**	**+6.7**
BILL	comp=Z,91nm,0.9s			pmax	pmax		
BILL	comp=Z,27μm,26.0s			MLR	MLR		
BILL	**Bilibino**	**18.00**	**343**	⇑*i*P	**Pn**	**23 44 51.4**	**+4.2**
MA2	**Magadan**	**18.50**	**308**	*c i*P	**Pn**	**23 44 54.8**	**+1.5**
MA2				*e*S	**Sn**	**23 48 19.0**	**-0.1**
MA2	comp=Z,60nm,0.9s			pmax	pmax		
MA2	comp=N,12μm,15.8s			MLR	MLR		
MA2	**Magadan**	**18.50**	**308**	*e*Pn	**Pn**	**23 44 57.7**	**+4.4**
SLKM	**Skilak Lake**	**18.62**	**50**	*e*P	**Pn**	**23 44 54.5**	**-0.1**
SEY	**Seymchan**	**18.85**	**318**	⇑*e*P	**Pn**	**23 44 59.9**	**+2.4**
SEY	**Seymchan**	**18.85**	**318**	⇑*e*P	**Pn**	**23 44 59.0**	**+1.5**
PMR	**Palmer**	**19.44**	**47**	*e*P	**Pn**	**23 45 04.9**	**+0.4**
PMR	comp=Z,11nm,0.3s			pmax	pmax		
PMR	**Palmer** comp=Z,11nm,0.3s	**19.44**	**47**	*e*P	**Pn**	**23 45 04.9**	**+0.4**
PMR				*e*P		23 45 05.2	
MCK	**McKinley**	**20.27**	**41**	*e*P	**P**	**23 45 11.9**	**-0.3**
MID	**Middleton Isla**	**20.30**	**54**	*e*P	**P**	**23 45 13.8**	**+1.3**
EYAK	**Cordova Ski Ar**	**20.78**	**51**	*e*P	**P**	**23 45 16.1**	**-1.7**
DIV	**Divide**	**20.88**	**49**	*e*P	**P**	**23 45 17.5**	**-1.4**
COLA	**College**	**21.16**	**38**	*c i*P	**P**	**23 45 22.1**	**+0.2**
COLA	**College**	**21.16**	**38**	⇑*i*P	**P**	**23 45 22.2**	**+0.3**
MENT	**Mentasta**	**22.24**	**45**	*e*P	**P**	**23 45 34.6**	**+1.1**
EGAK	**Eagle**	**23.82**	**41**	*e*P	**P**	**23 45 48.8**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**24.21**	**266**	*e*P	**P**	**23 45 53.0**	**-0.1**
YUK				*e*		23 46 27.3	
YUK				*e*PPP		23 46 36.0	
YUK				*e*S	**S**	**23 50 11.0**	**+1.6**
YUK	comp=Z,2μm,4.0s			pmax	pmax		
YUK	comp=N,2μm,3.0s			pmax	pmax		
YUK	comp=E,2μm,3.0s			pmax	pmax		
YUK	comp=N,6μm,9.0s			smax			
YUK	comp=E,3μm,7.0s			smax			
YUK	comp=Z,6μm,19.0s,MS5.1			MLR	MLR		
YUK	comp=N,6μm,18.0s,MS5.3			MLR	MLR		
YUK	comp=E,6μm,18.0s,MS5.3			MLR	MLR		
DAWY	**Dawson**	**24.39**	**43**	*e*P	**P**	**23 45 52.9**	**-1.9**
YSS	**Yuzh-Sakhalins**	**24.81**	**274**	*e*P	**P**	**23 46 00.0**	**+1.4**
YSS				*e*		23 46 06.5	
YSS				*e*PP		23 46 18.0	
YSS				*e*		23 46 41.0	
YSS				*e*		23 49 35.0	
YSS				*e*S	**S**	**23 50 18.0**	**-1.2**
YSS	comp=N,160nm,1.0s			pmax	pmax		
YSS	comp=E,280nm,1.0s			pmax	pmax		
YSS	comp=Z,310nm,1.0s,mb5.8			pmax	pmax		
YSS	comp=Z,6μm,18.0s,MS5.1			MLR	MLR		
YSS	comp=N,3μm,14.0s,MS5.3			MLR	MLR		
YSS	comp=E,5μm,14.0s,MS5.3			MLR	MLR		
YSS	**Yuzh-Sakhalins** comp=E,248nm,0.8s,mb5.8	**24.81**	**274**	*e*P	**P**	**23 46 00.6**	**+2.0**
SKAG	**Skagway** comp=E,66nm,0.8s,mb5.2	**25.91**	**55**	*e*P	**P**	**23 46 10.2**	**+1.6**
SKAG	comp=Z,13μm,19.0s,MS5.5			LR	LR		
ASAJ	**Asahikawa** comp=Z,107nm,0.9s,mb5.4,baz=37,slow=5.0,SNR=57	**26.20**	**269**	P	**P**	**23 46 12.2**	**+1.0**
CRAG	**Craig**	**27.55**	**63**	*e*P	**P**	**23 46 23.4**	**+0.1**
INK	**Inuvik** comp=Z,22nm,0.5s,mb5.0,baz=246,slow=10,SNR=17	**27.68**	**35**	P	**P**	**23 46 24.4**	**-0.1**
INK	comp=Z,25nm,0.8s,baz=250,slow=3.0,SNR=5.1			PcP	PcP	23 49 40.1	-0.9
INK	comp=Z,27nm,0.8s,baz=241,slow=5.8,SNR=3.1			ScP	ScP	23 53 18.5	-0.8
INK	**Inuvik**	**27.68**	**35**	*e*P	**P**	**23 46 24.2**	**-0.3**
DLBC	**Dease Lake** comp=Z,12nm,0.7s,mb4.8,baz=288,slow=12,SNR=17	**28.73**	**56**	P	**P**	**23 46 34.4**	**+0.5**
HABR	**Khabarovsk**	**28.97**	**282**	⇑*i*P	**P**	**23 46 38.9**	**+2.9**
HABR				*e*S	**S**	**23 51 28.0**	**+3.2**
HABR	comp=Z,86nm,1.1s,mb5.4			pmax	pmax		
YAK	**Yakutsk**	**28.99**	**311**	*e*P	**P**	**23 46 36.6**	**+0.5**
YAK				*e*PP	pP	23 46 44.4	-0.9
YAK				*e*		23 47 27.2	
YAK				*e*		23 49 45.4	
YAK				*e*S	**S**	**23 51 25.2**	**+0.1**
YAK				*e*SSS		23 52 59.5	
YAK				*e*		23 57 15.1	
YAK	comp=N,4.0nm,1.1s			pmax	pmax		
YAK	comp=E,20nm,1.1s			pmax	pmax		
YAK	comp=Z,38nm,1.1s,mb5.0			pmax	pmax		
YAK	comp=Z,37nm,0.9s,mb5.1			pmax	pmax		
YAK	comp=N,11nm,1.6s			pmax	pmax		
YAK	comp=E,10.0nm,0.8s			pmax	pmax		
YAK	comp=N,15nm,1.1s			smax			
YAK	comp=E,18nm,1.1s			smax			
YAK	comp=Z,4μm,24.0s,MS5.0			MLR	MLR		
YAK	comp=N,2μm,21.0s,MS5.0			MLR	MLR		
YAK	comp=E,4μm,25.0s,MS5.0			MLR	MLR		
YAK	**Yakutsk**	**28.99**	**311**	*e*P	**P**	**23 46 36.8**	**+0.6**
TIXI	**Tiksi**	**30.32**	**331**	*e*P	**P**	**23 46 52.2**	**+4.3**
TIXI				*e*		23 47 56.3	
TIXI				*e*S	**S**	**23 51 42.1**	**-3.9**
TIXI				*e*SS	SS	23 53 30.6	-25
TIXI	comp=Z,120nm,0.9s,mb5.6			pmax	pmax		
TIXI	comp=Z,11μm,17.0s,MS5.6			MLR	MLR		
KLR	**Kul'dur**	**30.68**	**285**	*e*P	**P**	**23 46 49.0**	**-2.1**
KLR				*e*S	**S**	**23 51 48.0**	**-3.6**
KLR				*e*		23 53 39.0	
KLR	comp=Z,700nm,6.5s			pmax	pmax		
KLR	comp=E,96nm,1.0s			pmax	pmax		
KLR	comp=Z,200nm,1.0s,mb5.9			pmax	pmax		
KLR	comp=E,2μm,14.0s			MLR	MLR		
KLR	comp=Z,3μm,14.0s,MS5.2			MLR	MLR		
CLNS	**Chul'man**	**32.17**	**302**	*e*P	**P**	**23 47 06.5**	**+2.3**
CLNS				*e*PP	pP	23 47 13.3	-0.1
CLNS				*e*		23 48 10.2	
CLNS				*e*PPP		23 48 22.7	
CLNS				*e*S	**S**	**23 52 12.7**	**-2.3**
CLNS				*e*SSS		23 54 28.5	
CLNS	comp=Z,26nm,1.1s,mb5.0			pmax	pmax		
CLNS	comp=N,16nm,0.9s			pmax	pmax		
CLNS	comp=E,16nm,1.0s			pmax	pmax		
CLNS	comp=E,39nm,14.1s			smax			
CLNS	comp=Z,152nm,14.0s			smax			
CLNS	comp=Z,10μm,25.0s,MS5.4			MLR	MLR		
CLNS	comp=E,6μm,23.0s			MLR	MLR		
MAJO	**Matsushiro**	**33.30**	**260**	*e*P	**P**	**23 47 14.9**	**+0.8**
MAJO				*e*PP	pP	23 47 30.2	+6.9
MAT	**Matsushiro**	**33.30**	**260**	P	**P**	**23 47 15.0**	**+0.9**
MAT				S	**S**	**23 52 32.0**	**-0.6**
MJAR	**Matsushiro Arr** comp=E,10nm,0.8s,mb4.8,baz=51,slow=8.9,SNR=38	**33.30**	**260**	P	**P**	**23 47 14.8**	**+0.6**
MJAR	comp=E,7.3nm,1.0s,baz=52,slow=1.8,SNR=5.3			PcP	PcP	23 49 55.9	+0.1
MJAR	**Matsushiro Arr**	**33.30**	**260**	P	**P**	**23 47 14.8**	**+0.7**
MJAR						23 49 55.9	
MJAR	comp=Z,110nm,0.8s			pmax	pmax		
VLA	**Vladivostok**	**33.40**	**275**	*i* P	**P**	**23 47 19.3**	**+4.3**
MDJ	**Mudanjiang**	**34.06**	**279**	P	**P**	**23 47 21.0**	**+0.2**
MDJ				PP	PP	23 48 39.3	+1.1
MDJ				PCP	PcP	23 49 59.5	+1.6
MDJ	comp=Z,67nm,0.9s,mb5.6			AMB	AMB		
MDJ	comp=Z,227nm,6.0s			AMB	AMB		
MDJ	comp=N,2μm,21.0s,MS4.9			LR	LR		
MDJ	comp=E,1μm,22.3s,MS4.9			LR	LR		
MDJ	comp=Z,2μm,22.3s,MS4.7			LR	LR		
KIP	**Kipapa**	**34.38**	**143**	*c i*P	**P**	**23 47 21.8**	**-1.7**
KIP	**Kipapa**	**34.38**	**143**	*e*P	**P**	**23 47 22.0**	**-1.5**
C03A	**Quillayute Air** baz=35,SNR=10	**35.06**	**74**	⇑P	**P**	**23 47 31.1**	**+1.7**
C03A				⇓S	**S**	**23 53 02.7**	**+3.0**
OTR	**Olympics--Tyee**	**35.13**	**73**	P	**P**	**23 47 31.6**	**+1.6**
OBC	**Olympics--Boni**	**35.31**	**73**	P	**P**	**23 47 32.7**	**+1.2**
YKW3	**Yellowknife Ar**	**35.52**	**46**	*e*P	**P**	**23 47 32.2**	**-1.1**
YKA	**Yellowknife Ar** comp=Z,38nm,0.6s,mb5.5,baz=281,slow=7.0,SNR=114	**35.54**	**46**	P	**P**	**23 47 32.6**	**-0.9**
YKA	comp=Z,15nm,0.8s,baz=293,slow=3.1,SNR=8.9			PcP	PcP	23 50 01.7	-0.5
YKA	comp=Z,28nm,0.7s,baz=298,slow=3.2,SNR=13			ScP	ScP	23 53 45.1	-0.6
YKA	**Yellowknife Ar**	**35.54**	**46**	P	**P**	**23 47 32.6**	**-0.9**
YKA						23 50 01.7	
YKA	comp=Z,38nm,0.6s			pmax	pmax		
B04A	**Port Angeles** baz=36,SNR=25	**35.65**	**73**	⇓P	**P**	**23 47 35.4**	**+1.0**
B04A	baz=36			⇑S	**S**	**23 53 09.0**	**+0.3**
HKL	**Haleakala**	**35.70**	**141**	P	**P**	**23 47 34.0**	**-0.9**
A04A	**Legoe Bay, Lum** baz=36,SNR=13	**35.82**	**71**	⇑P	**P**	**23 47 36.9**	**+0.9**
A04A	baz=36			⇓S	**S**	**23 53 13.2**	**+1.7**
D03A	**Wishkah Elem.** baz=36,SNR=11	**35.92**	**74**	⇑P	**P**	**23 47 38.1**	**+1.3**
D03A	baz=36			⇓S	**S**	**23 53 16.1**	**+3.2**
A05A	**Maple Falls** baz=36,SNR=21	**36.07**	**71**	P	**P**	**23 47 38.2**	**+0.2**
A05A	baz=36			⇑S	**S**	**23 53 15.7**	**+0.6**
C04A	**Brinnon** baz=36,SNR=53	**36.12**	**73**	⇑P	**P**	**23 47 39.4**	**+0.9**
C04A	baz=36			⇑S	**S**	**23 53 18.9**	**+3.0**
E03A	**Lebam** baz=36,SNR=21	**36.32**	**75**	⇑P	**P**	**23 47 41.3**	**+1.1**
E03A	baz=36			⇓S	**S**	**23 53 20.8**	**+1.8**
B05A	**Bryant** baz=36,SNR=89	**36.39**	**72**	⇓P	**P**	**23 47 41.4**	**+0.6**
B05A	baz=36			⇑S	**S**	**23 53 22.3**	**+2.2**
D04A	**Dobbs Creek Ra** baz=36	**36.51**	**74**	⇑P	**P**	**23 47 43.3**	**+1.5**
F03A	**Seaside** baz=36,SNR=11	**36.62**	**76**	⇓P	**P**	**23 47 43.5**	**+0.7**
F03A	baz=36			⇑S	**S**	**23 53 25.2**	**+1.6**
E04A	**Onalaska** baz=37,SNR=22	**36.81**	**75**	⇓P	**P**	**23 47 45.7**	**+1.4**
C05A	**Tolt Reservoir** baz=37,SNR=50	**36.90**	**72**	⇑P	**P**	**23 47 45.6**	**+0.5**
RMW	**Rattlesnake Mo**	**36.94**	**73**	P	**P**	**23 47 46.3**	**+0.8**
D05A	**Enumclaw** baz=37,SNR=77	**36.96**	**73**	P	**P**	**23 47 46.8**	**+1.2**
D05A	baz=37			⇑S	**S**	**23 53 30.3**	**+1.5**
H02A	**Toledo** baz=37,SNR=5.1	**36.98**	**78**	⇓P	**P**	**23 47 46.8**	**+1.0**
CN2	**Changchun**	**37.04**	**280**	*e*P	**P**	**23 47 47.0**	**+0.7**
CN2				PCP	PcP	23 50 07.5	+0.8
CN2	comp=Z,50nm,0.9s,mb5.3			AMB	AMB		
CN2	comp=Z,500nm,4.0s			AMB	AMB		
CN2	comp=N,4μm,17.0s,MS5.4			LR	LR		
CN2	comp=E,3μm,17.0s,MS5.4			LR	LR		
CN2	comp=Z,5μm,20.0s,MS5.3			LR	LR		
G03A	**Yamhill** baz=37,SNR=16	**37.10**	**77**	⇑P	**P**	**23 47 47.6**	**+0.8**
G03A	baz=37			⇓S	**S**	**23 53 32.7**	**+1.8**
LON	**Longmire**	**37.28**	**74**	P	**P**	**23 47 48.9**	**+0.6**
F04A	**Amboy** baz=37,SNR=47	**37.31**	**75**	⇑P	**P**	**23 47 49.1**	**+0.5**
F04A	baz=37			⇑S	**S**	**23 53 34.1**	**0.0**
E05A	**Randle** baz=37,SNR=54	**37.40**	**74**	P	**P**	**23 47 49.7**	**+0.3**
E05A	baz=37			⇑S	**S**	**23 53 36.0**	**+0.5**
I02A	**Mapleton** baz=37,SNR=7.3	**37.44**	**79**	⇓P	**P**	**23 47 50.6**	**+0.9**
I02A	baz=37			⇓S	**S**	**23 53 35.4**	**-0.6**
COR	**Corvallis**	**37.46**	**78**	P	**P**	**23 47 51.0**	**+1.2**
COR	**Corvallis**	**37.46**	**78**	*e*P	**P**	**23 47 50.9**	**+1.0**
G04A	**Mulino** baz=38,SNR=47	**37.64**	**76**	P	**P**	**23 47 52.0**	**+0.6**
G04A	baz=38			⇑S	**S**	**23 53 40.8**	**+1.6**
TWW	**Teanaway**	**37.65**	**73**	P	**P**	**23 47 52.4**	**+0.8**
KEBM	**Edson Butte**	**37.73**	**81**	*e*P	**P**	**23 47 53.9**	**+1.7**
I03A	**Eugene** baz=38,SNR=12	**37.79**	**79**	⇑P	**P**	**23 47 53.4**	**+0.7**
I03A	baz=38			⇑S	**S**	**23 53 43.4**	**+2.0**
J02A	**Umpqua** baz=38,SNR=32	**37.93**	**80**	⇑P	**P**	**23 47 54.7**	**+0.8**
EBG	**Ellensburg**	**37.95**	**73**	P	**P**	**23 47 54.4**	**+0.4**
H04A	**Detroit Lake** baz=38,SNR=73	**38.09**	**77**	⇑P	**P**	**23 47 55.9**	**+0.7**
H04A	baz=38			⇑S	**S**	**23 53 47.3**	**+1.4**
BROR	**Big Rock Looko**	**38.14**	**78**	P	**P**	**23 47 56.6**	**+0.9**
KBO	**Bosley Butte**	**38.16**	**82**	*e*P	**P**	**23 47 57.3**	**+1.5**
J03A	**Ideyld Park** baz=38,SNR=30	**38.31**	**79**	⇑P	**P**	**23 47 58.1**	**+1.1**
J03A	baz=38			⇑S	**S**	**23 53 50.2**	**+1.0**
G05A	**Wamic** baz=38,SNR=48	**38.33**	**76**	⇑P	**P**	**23 47 58.0**	**+0.8**
G05A	baz=38			⇓S	**S**	**23 53 50.0**	**+0.5**
F06A	**Goldendale** baz=38	**38.39**	**75**	⇓P	**P**	**23 47 58.2**	**+0.6**
M01C	**Crescent City** baz=38	**38.43**	**82**	⇓P	**P**	**23 47 58.8**	**+0.8**
M01C	baz=38			⇑S	**S**	**23 53 53.7**	**+2.7**
L02A	**Cave Junction** baz=38,SNR=18	**38.58**	**81**	⇑P	**P**	**23 48 00.1**	**+0.8**
BKCOR	**Black Crater**	**38.59**	**77**	P	**P**	**23 48 00.2**	**+0.8**
WIFE	**Three Sisters-**	**38.64**	**78**	P	**P**	**23 48 00.9**	**+1.0**
H05A	**Madras** baz=39,SNR=27	**38.69**	**76**	P	**P**	**23 48 00.8**	**+0.5**
H05A	baz=39			⇑S	**S**	**23 53 54.6**	**-0.4**
KRMB	**Red Mountain**	**38.74**	**82**	*e*P	**P**	**23 48 01.4**	**+0.8**
G06A	**Carlson Farm,** baz=39,SNR=34	**38.75**	**75**	P	**P**	**23 48 01.2**	**+0.5**
G06A	baz=39			⇑S	**S**	**23 53 56.9**	**+1.1**
OD2	**Odessa Site #2**	**38.81**	**71**	P	**P**	**23 48 01.2**	**-0.1**
HAWA	**Hanford**	**38.82**	**73**	*e*P	**P**	**23 48 01.2**	**-0.2**
I05A	**Bend** baz=39,SNR=31	**38.92**	**77**	P	**P**	**23 48 02.9**	**+0.7**
I05A	baz=39			⇑S	**S**	**23 53 59.5**	**+1.0**
JCC	**Jacoby Creek** baz=39	**39.07**	**83**	⇑P	**P**	**23 48 03.8**	**+0.4**
JCC	baz=39			⇓S	**S**	**23 54 02.8**	**+2.1**
VIPM	**Ingram Point**	**39.13**	**76**	P	**P**	**23 48 04.7**	**+0.7**
H06A	**Lindquist Farm** baz=39,SNR=100	**39.19**	**76**	P	**P**	**23 48 04.5**	**+0.1**
H06A	baz=39			⇓S	**S**	**23 54 03.6**	**+1.1**
EDM	**Edmonton**	**39.21**	**61**	*e*P	**P**	**23 48 03.7**	**-0.9**
KHMM	**Horse Mountain**	**39.22**	**83**	*e*P	**P**	**23 48 06.2**	**+1.5**
SNY	**Shenyang**	**39.27**	**279**	⇑P	**P**	**23 48 06.0**	**+0.9**
SNY				XP	sP	23 48 24.3	+6.2
SNY	comp=Z,85nm,1.2s,mb5.3			AMB	AMB		
SNY	comp=Z,475nm,6.3s			AMB	AMB		
SNY	comp=N,2μm,21.1s,MS5.3			LR	LR		
SNY	comp=E,4μm,19.1s,MS5.3			LR	LR		
SNY	comp=Z,5μm,18.0s,MS5.4			LR	LR		
G07A	**Ruggs Ranch, H** baz=39	**39.31**	**75**	⇑P	**P**	**23 48 05.7**	**+0.2**
NEW	**Newport** comp=Z,100nm,0.8s,mb5.6,baz=300,slow=7.1,SNR=104	**39.33**	**69**	P	**P**	**23 48 04.8**	**-0.8**

NEW Newport 39.33 69 *e*P **P 23 48 07.9 +2.3**
NEW pmax pmax
comp=Z,74nm,0.7s
NEW Newport 39.33 69 *e*P **P 23 48 04.7 -0.8**
comp=Z,74nm,0.7s,mb5.5
YBH Yreka Blue Hor 39.37 81 P **P 23 48 06.8 +0.9**
comp=Z,47nm,0.8s,mb5.3,baz=304,slow=3.7,SNR=44
YBH Yreka Blue Hor 39.37 81 *e*P **P 23 48 06.9 +1.0**
YBH pmax pmax
comp=Z,114nm,0.9s
YBH Yreka Blue Hor 39.37 81 *e*P **P 23 48 06.9 +1.0**
comp=Z,114nm,0.9s,mb5.6
YBH Yreka Blue Hor 39.37 81 P **P 23 48 07.0 +1.1**
baz=39,SNR=51
YBH ⇑S **S 23 54 06.9 +1.8**
baz=39
J05A Fort Rock 39.41 78 P **P 23 48 07.4 +1.1**
baz=39,SNR=87
J05A ⇑S **S 23 54 08.3 +2.4**
baz=39
M02C Callahan 39.47 82 ⇑P **P 23 48 07.8 +1.1**
baz=39,SNR=24
M02C ⇑S **S 23 54 09.5 +2.8**
baz=39
K04A Chilquin 39.48 80 ⇑P **P 23 48 07.5 +0.7**
baz=39,SNR=18
N02C Big Bar 39.51 83 ⇓P **P 23 48 07.8 +0.7**
baz=39,SNR=19
F08A Pendleton 39.58 73 ⇓P **P 23 48 07.8 +0.2**
baz=39
F08A ⇑S **S 23 54 08.8 +0.5**
baz=39
L04A Klamath Falls 39.62 80 ⇑P **P 23 48 08.8 +0.7**
baz=40,SNR=53
L04A ⇑S **S 23 54 10.0 +0.9**
baz=40
I06A Prineville 39.68 77 P **P 23 48 09.2 +0.7**
baz=40,SNR=18
I06A ⇓S **S 23 54 11.9 +1.9**
baz=40
G08A Pilot Rock 39.73 74 ⇓P **P 23 48 09.0 +0.1**
baz=40,SNR=67
G08A ⇑S **S 23 54 10.1 -0.5**
baz=40
H07A Lands Inn, Kim 39.73 76 ⇓P **P 23 48 09.0 0.0**
baz=40
M04C Macdoel 39.88 81 P **P 23 48 10.9 +0.8**
baz=40,SNR=80
M04C ⇓S **S 23 54 13.1 +0.3**
baz=40
RES Resolute Bay 39.88 24 *e*P **P 23 48 13.9 +3.7**
RES pmax pmax
comp=Z,76nm,1.0s,mb5.4
RES Resolute Bay 39.88 24 *e*P **P 23 48 13.9 +3.8**
comp=Z,76nm,1.0s,mb5.4
INCN Inchon 39.92 271 P **P 23 48 13.0 +2.5**
SNR=7.1
INCN Inchon 39.92 271 *e*P **P 23 48 12.5 +2.0**
comp=Z,105nm,0.9s,mb5.6
K05A Summer Lake 39.93 79 P **P 23 48 11.8 +1.2**
baz=40,SNR=67
K05A ⇓S **S 23 54 16.4 +2.7**
baz=40
M03C McCloud 39.99 81 P **P 23 48 11.7 +0.6**
baz=40,SNR=21
M03C ⇑S **S 23 54 15.8 +1.3**
baz=40
KIPM Iron Peak 39.99 84 *e*P **P 23 48 11.4 +0.3**
I07A Izee 40.04 76 ⇓P **P 23 48 12.0 +0.5**
baz=40,SNR=274
I07A ⇓S **S 23 54 17.3 +2.0**
baz=40
CIT Chita 40.06 298 *e*P **P 23 48 12.6 +0.9**
CIT *e* pP 23 48 20.6 -0.4
CIT *e* 23 48 31.4
CIT pmax pmax
comp=Z,189nm,1.0s,mb5.8
J06A Christmas Vall 40.09 78 P **P 23 48 12.6 +0.6**
baz=40,SNR=108
J06A ⇓S **S 23 54 18.1 +2.0**
baz=40
WDC Whiskeytown Da 40.13 83 *e*P **P 23 48 12.6 +0.4**
WDC Whiskeytown Da 40.13 83 P **P 23 48 12.7 +0.5**
baz=40,SNR=25
WDC ⇓S **S 23 54 18.4 +1.8**
baz=40
F09A S2 Ranch, Elgi 40.14 73 P **P 23 48 12.6 +0.3**
baz=40,SNR=40
F09A ⇑S **S 23 54 16.7 -0.1**
baz=40
O02C Red Bluff 40.21 83 P **P 23 48 13.8 +0.9**
baz=40,SNR=29
O02C ⇓S **S 23 54 19.4 +1.6**
baz=40
K06A Valley Falls 40.28 78 P **P 23 48 14.3 +0.8**
baz=40,SNR=127
K06A ⇑S **S 23 54 21.7 +2.8**
baz=40
P01C Double 8 Ranch 40.28 85 ⇑P **P 23 48 13.5 0.0**
baz=40,SNR=16
H08A Prairie City 40.31 75 P **P 23 48 14.1 +0.3**
baz=40,SNR=50
H08A ⇑S **S 23 54 20.5 +1.2**
baz=40
L05A Lakeview 40.35 80 P **P 23 48 15.2 +1.1**
baz=40,SNR=48
J07A Hines 40.54 77 ⇑P **P 23 48 16.2 +0.6**
baz=40,SNR=68
M05C Lookout 40.54 81 P **P 23 48 16.3 +0.7**
baz=40,SNR=42
M05C ⇓S **S 23 54 24.6 +1.8**
baz=40
GASB Alder Springs 40.56 84 ⇑P **P 23 48 16.6 +0.8**
baz=40,SNR=18
HATC Hat Creek Radi 40.66 82 ⇓P **P 23 48 17.1 +0.5**
baz=40,SNR=34
I08A Drewsey 40.70 76 ⇑P **P 23 48 17.5 +0.5**
baz=41,SNR=79
HOPS Hopland 40.73 85 *e*P **P 23 48 17.5 +0.3**
comp=Z,95nm,1.1s,mb5.3
HOPS Hopland 40.73 85 ⇑P **P 23 48 16.9 -0.3**
baz=41,SNR=9.1
O03C Acorn Hollow, 40.78 83 ⇑P **P 23 48 17.4 -0.3**
baz=41
WALA Waterton Lakes 40.80 67 *e*P **P 23 48 17.0 -0.8**
comp=Z,105nm,1.0s,mb5.4
H09A Durkee 40.84 74 P **P 23 48 18.2 +0.1**
baz=41,SNR=70
H09A ⇑S **S 23 54 27.3 +0.1**
baz=41
BSMT Bassoo Peak 40.89 69 *e*P **P 23 48 18.1 -0.5**
K07A Rock Creek Ran 40.96 78 P **P 23 48 19.8 +0.7**
baz=41,SNR=201
K07A ⇓S **S 23 54 29.1 +0.1**
baz=41
M06C Likely Place G 41.05 80 P **P 23 48 20.5 +0.7**
baz=41,SNR=46
M06C ⇑S **S 23 54 31.9 +1.6**
baz=41
J08A Circle Bar Ran 41.06 77 ⇓P **P 23 48 20.5 +0.6**
baz=41,SNR=59
J08A ⇑S **S 23 54 32.0 +1.5**
baz=41
I09A Lost Marbles R 41.17 75 ⇑P **P 23 48 20.9 +0.1**
baz=41,SNR=40
I09A ⇓S **S 23 54 32.9 +0.8**
baz=41
O04C Chester 41.18 82 ⇓P **P 23 48 21.5 +0.5**
baz=41,SNR=34
O04C ⇓S **S 23 54 32.7 +0.4**
baz=41
MNRC McLaughlin Nat 41.19 85 P **P 23 48 21.7 +0.6**
baz=41,SNR=13
MNRC ⇑S **S 23 54 35.6 +3.1**
baz=41
ELFS Eagle Lake Fie 41.23 81 ⇓P **P 23 48 22.0 +0.7**
baz=41,SNR=28
ELFS ⇓S **S 23 54 34.5 +1.5**
baz=41
L07A Adell 41.28 79 ⇓P **P 23 48 22.5 +0.7**
baz=41,SNR=150
L07A ⇑S **S 23 54 35.6 +1.8**
baz=41
NSHM Saint Helena R 41.31 85 *e*P **P 23 48 22.1 +0.1**
MCCM Marconi Confer 41.37 86 ⇓P **P 23 48 21.6 -0.8**
baz=41
ORV Oroville 41.38 83 P **P 23 48 22.0 -0.6**
baz=41,SNR=26
ORV ⇓S **S 23 54 33.6 -1.6**
baz=41
SUTB Sutter Butte 41.39 84 ⇑P **P 23 48 22.0 -0.7**
baz=41,SNR=7.9
SUTB ⇑S **S 23 54 36.2 +0.8**
baz=41
K08A Mann Creek Ran 41.40 77 ⇓P **P 23 48 23.3 +0.6**
baz=41,SNR=113
K08A ⇓S **S 23 54 35.8 +0.3**
baz=41
WVOR Wild Horse Val 41.48 78 *e*P **P 23 48 23.5 +0.2**
WVOR pmax pmax
comp=Z,382nm,0.5s,mb6.3
WVOR Wild Horse Val 41.48 78 *e*P **P 23 48 23.5 +0.2**
comp=Z,382nm,0.5s,mb6.3
O05C Quincy 41.50 82 P **P 23 48 23.9 +0.4**
baz=41,SNR=27
O05C ⇑S **S 23 54 37.7 +0.8**
baz=41
J09A Fry Pan Ranch, 41.50 76 P **P 23 48 23.9 +0.3**
baz=41,SNR=70
J09A ⇑S **S 23 54 37.7 +0.7**
baz=41
CVS Carmenet Viney 41.51 85 ⇓P **P 23 48 22.9 -0.7**
baz=41,SNR=11
OHCM Honcut 41.52 83 *e*P **P 23 48 23.1 -0.6**
FARB Farallon Islan 41.56 87 ⇓P **P 23 48 23.5 -0.6**
baz=41
Q03C Winters 41.61 85 ⇓P **P 23 48 25.3 +0.9**
baz=42
N06A Buffalo Meadow 41.71 81 ⇑P **P 23 48 25.5 +0.3**
baz=42,SNR=159
N06A ⇓S **S 23 54 39.4 -0.6**
baz=42
L08A Fields 41.79 78 P **P 23 48 26.3 +0.4**
baz=42,SNR=106
L08A ⇑S **S 23 54 42.2 +0.9**
baz=42
Q04C Lincoln 41.88 84 ⇑P **P 23 48 26.1 -0.5**
baz=42
Q04C ⇑S **S 23 54 44.0 +1.4**
baz=42
K09A Rome 41.88 77 P **P 23 48 26.8 +0.1**
baz=42,SNR=63
K09A ⇓S **S 23 54 41.9 -0.8**
baz=42
BEKR Beckwourth 41.90 82 P **P 23 48 26.8 0.0**
baz=42,SNR=45
BEKR ⇓S **S 23 54 43.8 +0.9**
baz=42
MSO Missoula 41.91 69 *e*P **P 23 48 25.1 -1.8**
comp=Z,66nm,0.8s,mb5.3
O06A Flanigan 42.05 81 ⇑P **P 23 48 28.2 +0.1**
baz=42,SNR=78
O06A ⇑S **S 23 54 46.1 +0.9**
baz=42
P05C Yuba Gap, Truc 42.08 83 P **P 23 48 28.2 0.0**
baz=42,SNR=30
P05C ⇑S **S 23 54 46.3 +0.8**
baz=42
BDM Black Diamond 42.12 85 ⇓P **P 23 48 28.4 -0.2**
baz=42
DL2 Dalian 42.18 276 ⇑P **P 23 48 30.3 +1.2**
DL2 XP sP 23 48 47.3 +5.1
DL2 PP PP 23 50 12.3 +5.3
DL2 AMB AMB
comp=Z,40nm,0.9s,mb5.0
DL2 AMB AMB
comp=Z,140nm,6.4s
DL2 LR LR
comp=N,1μm,17.7s,MS4.9
DL2 LR LR
comp=E,790nm,16.8s,MS4.9
DL2 LR LR
comp=Z,1μm,18.0s,MS4.9
M08A Happy Creek Ra 42.20 79 P **P 23 48 29.8 +0.5**
baz=42,SNR=80
M08A ⇓S **S 23 54 48.6 +1.3**
baz=42
N07B Gerlach 42.22 80 P **P 23 48 29.8 +0.4**
baz=42,SNR=139
JRSC Jasper Ridge 42.22 86 ⇓P **P 23 48 28.8 -0.6**
baz=42
CHMT Chamberlain Mo 42.27 69 *e*P **P 23 48 28.6 -1.2**
P06A Stead Airport, 42.30 82 ⇑P **P 23 48 30.3 +0.3**
baz=42,SNR=11
L09A Wilkinson Ranc 42.30 78 P **P 23 48 30.4 +0.3**
baz=42,SNR=62
L09A ⇑S **S 23 54 49.9 +1.0**
baz=42
LAVA Lava Cap Winer 42.33 84 P **P 23 48 29.9 -0.4**
baz=42,SNR=32
LAVA ⇑S **S 23 54 50.5 +1.2**
baz=42
WENL Wente Brothers 42.39 86 ⇓P **P 23 48 30.5 -0.3**
baz=42,SNR=6.5
BNLO Ben Lomond (Sa 42.43 87 ⇓P **P 23 48 30.2 -0.9**
baz=42,SNR=8.8
R04C Big Horse Ranc 42.51 84 ⇓P **P 23 48 31.0 -0.8**
baz=42
R04C ⇓S **S 23 54 52.0 0.0**
baz=42
PAHR Pah Rah Range 42.60 82 *e*P **P 23 48 31.8 -0.7**
comp=Z,168nm,1.0s,mb5.7
WCN Washoe City 42.61 82 P **P 23 48 32.9 +0.3**
baz=42,SNR=29
WCN ⇑S **S 23 54 52.7 -0.6**
baz=42
O07A Toulon 42.64 81 P **P 23 48 33.3 +0.4**
baz=42,SNR=123
S04C Ingram Canyon, 42.73 86 ⇓P **P 23 48 33.0 -0.6**
baz=43,SNR=10
S04C ⇓S **S 23 54 56.2 +1.1**
baz=43
N08A GE Springer Mi 42.73 79 P **P 23 48 33.8 +0.2**
baz=43,SNR=36
N08A ⇑S **S 23 54 54.8 -0.5**
baz=43
R05C Kirkwood Meado 42.77 83 P **P 23 48 34.1 +0.2**
baz=43,SNR=31
R05C ⇑S **S 23 54 56.9 +1.1**
baz=43
M09A Marrel Ranch, 42.78 78 ⇓P **P 23 48 34.4 +0.5**
baz=43,SNR=32
CMB Columbia Colle 42.99 84 *e*P **P 23 48 35.6 -0.1**
CMB Columbia Colle 42.99 84 P **P 23 48 35.6 0.0**
baz=43,SNR=33
CMB ⇑S **S 23 54 59.7 +0.7**
baz=43
P07A Fallon 43.00 81 ⇑P **P 23 48 36.1 +0.4**
baz=43
O08A Rochester Mine 43.01 80 ⇑P **P 23 48 36.0 +0.2**
baz=43
PACP Pacheco Peak 43.06 86 P **P 23 48 36.2 0.0**
baz=43,SNR=24
N09A Rock Creek Ran 43.07 79 P **P 23 48 36.5 +0.1**
baz=43,SNR=102
N09A ⇑S **S 23 55 00.6 +0.5**
baz=43
SAO San Andreas Ge 43.12 86 *e*P **P 23 48 36.3 -0.4**
HRY Holter Researc 43.20 69 *e*P **P 23 48 36.5 -0.9**
R06C Coleville 43.27 83 P **P 23 48 38.5 +0.5**
baz=43,SNR=45
M10A I.L. Ranch, Tu 43.28 78 P **P 23 48 38.5 +0.5**
baz=43,SNR=63
HAST UC Hastings Re 43.29 87 ⇑P **P 23 48 37.7 -0.4**
baz=43,SNR=26
HAST ⇑S **S 23 55 02.8 -0.5**
baz=43
WAKR Walker 43.29 83 *e*P **P 23 48 38.5 +0.4**
LRM Limekiln Ridge 43.32 70 *e*P **P 23 48 37.4 -0.9**
HLID Hailey 43.40 74 *e*P **P 23 48 32.6 -6.4**
comp=Z,162nm,1.0s,mb5.7
P08A Dixie Valley 43.41 81 ⇓P **P 23 48 39.6 +0.5**
baz=43,SNR=30
S06C San Francisco 43.42 84 P **P 23 48 39.0 -0.1**
baz=43,SNR=60
S06C ⇓S **S 23 55 06.3 +1.1**
baz=43
Q07A Schurz 43.42 82 ⇓P **P 23 48 39.2 +0.1**
baz=43
S05C Merced 43.45 85 ⇑P **P 23 48 38.7 -0.7**
baz=43,SNR=7.2
S05C ⇓S **S 23 55 06.9 +1.2**
baz=43
BMN Battle Mountai 43.50 79 *e*P **P 23 48 40.0 +0.2**
BMN pmax pmax
comp=Z,134nm,1.0s,mb5.6
BMN Battle Mountai 43.50 79 *e*P **P 23 48 40.0 +0.2**
comp=Z,134nm,1.0s,mb5.6
T05C Eagle Field, D 43.52 86 ⇓P **P 23 48 40.1 +0.2**
baz=43
MCMT McKenzie Canyo 43.63 71 *e*P **P 23 48 40.0 -0.8**
O09A Fish Creek Ran 43.68 80 P **P 23 48 41.6 +0.4**
baz=44,SNR=98
O09A ⇓S **S 23 55 10.4 +1.4**
baz=44
EGMT Eagleton 43.71 66 *e*P **P 23 48 40.2 -1.3**
comp=Z,65nm,0.7s,mb5.5
V03C Hunter Liggett 43.72 87 ⇑P **P 23 48 41.4 -0.1**
baz=44,SNR=23
N10A Dunphy 43.77 78 ⇓P **P 23 48 42.3 +0.3**
baz=44,SNR=7.1
N10A ⇑S **S 23 55 11.2 +0.8**
baz=44
U04C Hernandez Rese 43.78 86 P **P 23 48 42.3 +0.2**
baz=44,SNR=24
U04C ⇓S **S 23 55 10.3 -0.2**
baz=44
R07C Lee Vining 43.79 83 P **P 23 48 42.6 +0.5**
baz=44,SNR=23
R07C ⇑S **S 23 55 11.4 +0.7**
baz=44
M11A Holland Ranch, 43.79 77 ⇑P **P 23 48 42.8 +0.7**
baz=44,SNR=177
M11A ⇑S **S 23 55 12.4 +1.7**
baz=44
BOZ Bozeman (W) 43.90 70 *e*P **P 23 48 42.3 -0.7**
Q08A Gabbs 44.01 82 P **P 23 48 43.9 0.0**
baz=44,SNR=48
Q08A ⇓S **S 23 55 13.5 -0.4**
baz=44
O10A Cortez Mining, 44.03 79 ⇓P **P 23 48 44.6 +0.5**
baz=44,SNR=16
T06C Millerton Lake 44.05 85 ⇓P **P 23 48 43.6 -0.6**
baz=44,SNR=29
T06C ⇓S **S 23 55 13.1 -1.3**
baz=44
P09A Austin 44.08 80 P **P 23 48 45.0 +0.5**
baz=44,SNR=37
KCC Kaiser Creek 44.09 84 ⇑P **P 23 48 44.4 -0.2**
baz=44,SNR=25
KCC ⇓S **S 23 55 15.2 +0.1**
baz=44
N11A Elko Archery C 44.18 78 ⇓P **P 23 48 45.6 +0.3**
baz=44,SNR=18
N11A ⇓S **S 23 55 16.9 +0.5**
baz=44
V04C Ramage Ranch, 44.19 87 ⇓P **P 23 48 45.2 -0.1**
baz=44,SNR=12
V04C ⇓S **S 23 55 16.8 +0.2**
baz=44
PKD Parkfield 44.20 87 ⇑P **P 23 48 44.9 -0.5**
baz=44,SNR=25
MLAC Mammoth Lakes 44.20 84 ⇑P **P 23 48 46.0 +0.5**
baz=44
R08A Mina 44.21 82 ⇓P **P 23 48 45.6 +0.1**
baz=44,SNR=20
R08A ⇓S **S 23 55 16.2 -0.7**
baz=44
M12A Wells 44.33 77 P **P 23 48 47.0 +0.5**
baz=44,SNR=71
M12A ⇑S **S 23 55 20.6 +2.0**
baz=44
P10A Eureka 44.45 80 ⇓P **P 23 48 47.8 +0.4**
baz=44,SNR=26
P10A ⇓S **S 23 55 20.2 -0.2**
baz=44
QLMT Earthquake Lak 44.47 71 *e*P **P 23 48 47.4 -0.2**
Q09A Carvers 44.49 81 P **P 23 48 48.4 +0.6**
baz=44,SNR=25
Q09A ⇑S **S 23 55 20.4 -0.4**
baz=44
FFC Flin Flon 44.50 54 *e*P **P 23 48 45.9 -1.9**
FFC pmax pmax
comp=Z,140nm,0.8s,mb5.8
FFC Flin Flon 44.50 54 *e*P **P 23 48 45.9 -2.0**
comp=Z,14nm,0.8s,mb4.8
ELK Elko 44.53 78 *e*P **P 23 48 48.6 +0.5**
ELK pmax pmax
comp=Z,116nm,0.8s
ELK Elko 44.53 78 *e*P **P 23 48 48.5 +0.5**
comp=Z,116nm,0.8s,mb5.8
MTUM Tungsten Hills 44.54 84 *e*P **P 23 48 48.5 +0.4**
N12A Clover Valley, 44.59 77 P **P 23 48 48.9 +0.3**
baz=44,SNR=71
N12A ⇓S **S 23 55 22.6 +0.3**
baz=44
PTRM Twissleman Ran 44.59 87 *e*P **P 23 48 48.7 +0.2**
O11A Cowboy Ranch, 44.64 79 ⇓P **P 23 48 49.3 +0.3**
baz=44
O11A ⇓S **S 23 55 23.1 0.0**
baz=44
V05C Boulder Hill, 44.65 86 ⇑P **P 23 48 49.1 +0.1**
baz=44
HELL Mitchell Peak, 44.68 85 P **P 23 48 48.6 -0.6**
baz=44,SNR=57
HELL ⇑S **S 23 55 24.5 +0.9**
baz=44
RCTC Rector, Farmer 44.78 85 ⇓P **P 23 48 49.3 -0.8**
baz=45
RCTC ⇓S **S 23 55 25.0 -0.1**
baz=45
M13A Montello 44.82 76 ⇑P **P 23 48 50.6 +0.3**
baz=45,SNR=17
M13A ⇓S **S 23 55 26.4 +0.7**
baz=45
YMR Madison River 44.83 70 *e*P **P 23 48 50.3 -0.1**
comp=Z,174nm,0.8s,mb5.9
BJI Beijing 44.87 281 P **P 23 48 52.0 +1.3**
BJI AMB AMB
comp=Z,78nm,0.8s,mb5.6
BJI LR LR
comp=N,3μm,17.6s,MS5.4
BJI LR LR
comp=E,3μm,22.5s,MS5.4
BJI LR LR
comp=Z,3μm,33.3s
R09A Tonopah 44.92 82 P **P 23 48 51.2 0.0**
baz=45,SNR=103
R09A ⇑S **S 23 55 27.9 +0.8**
baz=45
TPH Tonopah 44.93 82 *e*P **P 23 48 51.7 +0.5**
TPH pmax pmax
comp=Z,119nm,1.0s,mb5.7
TPH Tonopah 44.93 82 *e*P **P 23 48 51.7 +0.5**
comp=Z,119nm,1.0s,mb5.7
P11A Circle Ranch, 44.93 79 ⇑P **P 23 48 51.7 +0.4**
baz=45,SNR=33
TIN Tinemaha 44.94 84 ⇓P **P 23 48 51.6 +0.3**
baz=45,SNR=13
SMMC Simmler 44.94 87 ⇑P **P 23 48 51.4 0.0**
baz=45,SNR=6.1
GCMT Greycliff 44.97 68 *e*P **P 23 48 51.1 -0.4**
IRK Irkutsk 44.97 302 *e*P **P 23 48 51.7 +0.1**
IRK pmax pmax
comp=Z,145nm,1.1s,mb5.7
YNR Norris Junctio 44.98 70 *e*P **P 23 48 52.1 +0.5**
YFT Old Faithful 45.03 71 *e*P **P 23 48 53.3 +1.3**
N13A Wendover, West 45.10 77 ⇑P **P 23 48 52.8 +0.3**
baz=45,SNR=25
N13A ⇓S **S 23 55 29.6 -0.1**
baz=45
O12A Currie 45.12 78 P **P 23 48 52.9 +0.1**
baz=45,SNR=126
S09A Goldfield 45.14 82 P **P 23 48 52.9 -0.1**
baz=45,SNR=50
S09A ⇑S **S 23 55 31.6 +1.3**
baz=45
VES Vestal, Richgr 45.18 86 P **P 23 48 52.3 -0.9**
baz=45,SNR=29
PKM Peak Mountain 45.32 87 ⇓P **P 23 48 54.5 +0.1**
baz=45,SNR=29
PKM ⇓S **S 23 55 32.4 -0.6**
baz=45
R10A Warm Springs 45.37 81 P **P 23 48 54.5 -0.2**
baz=45,SNR=66
HVU Hansel Valley 45.42 75 *e*P **P 23 48 56.3 +1.2**
CWC Cottonwood Cre 45.42 84 ⇑P **P 23 48 54.8 -0.3**
baz=45,SNR=7.1
P12A McGill 45.50 79 ⇑P **P 23 48 55.8 +0.1**
baz=45,SNR=42
P12A ⇓S **S 23 55 35.4 -0.1**
baz=45
GRAC Grapevine Rang 45.51 83 ⇓P **P 23 48 55.9 +0.1**
baz=45,SNR=13

TLY **Talaya** 45.60 302 P P 23 48 58.1 +1.6
SNR=15
TLY **Talaya** 45.60 302 *c* iP P 23 48 57.4 +0.9
TLY *e* 23 50 33.7
TLY eS S 23 55 39.9 +3.0
TLY pmax pmax
comp=Z,67nm,0.8s,mb5.6
TLY MLR MLR
comp=Z,6μm,25.0s,MS5.4
TLY Talaya 45.60 302 eP P **23 48 57.8 +1.3**
ISA Isabella 45.67 85 eP P **23 48 59.7 +2.6**
ISA Isabella 45.67 85 ⇓P P **23 48 56.1 -1.0**
baz=46,SNR=15
SBC Santa Barbara 45.69 88 ⇓P P **23 48 56.8 -0.4**
baz=46
BGU Big Grassy Mou 45.77 76 eP P **23 48 57.7 -0.2**
TRCR Troy Canyon 45.77 81 eP P **23 48 57.6 -0.3**
ULN Ulaanbaatar 45.77 296 P P **23 48 59.5 +1.6**
SNR=20
ULN Ulaanbaatar 45.77 296 *c* iP P **23 48 59.2 +1.3**
ULN Ulaanbaatar 45.77 296 ⇑iP P **23 48 59.3 +1.4**
ARVC Arvin 45.79 86 ⇓P P **23 48 57.2 -0.9**
baz=46,SNR=8.5
Q12A Willow Creek R 45.81 79 ⇓P P **23 48 58.4 +0.2**
baz=46,SNR=50
Q12A ⇓S S **23 55 40.1 +0.1**
baz=46
DAC Darwin (Calif) 45.83 84 eP P **23 48 58.1 -0.2**
AHID Auburn Hatcher 45.84 73 eP P **23 48 58.9 +0.4**
comp=Z,171nm,1.2s,mb5.8
SPUT South Promonto 45.89 75 eP P **23 48 59.1 +0.2**
BSC Santa Cruz Isl 46.03 88 ⇓P P **23 48 59.0 -1.0**
baz=46
MPMC Manual Prospec 46.03 84 P P **23 48 59.8 -0.1**
baz=46,SNR=38
MPMC ⇑S S **23 55 42.0 -1.1**
baz=46
FURC Furnace Creek, 46.16 83 P P **23 49 00.8 -0.1**
baz=46,SNR=48
FURC ⇑S S **23 55 44.6 -0.4**
baz=46
SONM Songino Array 46.16 296 P P **23 49 02.5 +1.5**
comp=Z,21nm,0.7s,mb5.2,baz=56,slow=8.2,SNR=71
SONM PcP PcP 23 50 37.8 +1.3
comp=Z,9.8nm,0.7s,baz=54,slow=2.0,SNR=2.7
SONM ScP ScP 23 54 28.3 +0.9
comp=Z,11nm,0.8s,baz=37,slow=2.3,SNR=8.7
SONM Songino Array 46.16 296 P P **23 49 02.5 +1.5**
SONM 23 50 37.8
OSI Osito Adit 46.19 87 P P **23 49 00.9 -0.3**
baz=46,SNR=8.1
HWUT Hardware Ranch 46.25 74 eP P **23 49 01.7 0.0**
comp=Z,99nm,0.9s,mb5.7
FCC Fort Churchill 46.27 46 eP P **23 49 00.8 -1.0**
FCC pmax pmax
comp=Z,72nm,1.2s,mb5.5
FCC Fort Churchill 46.27 46 eP P **23 49 00.8 -1.0**
comp=Z,72nm,1.2s,mb5.5
LRMC Laurel Mountai 46.28 85 P P **23 49 01.2 -0.7**
baz=46,SNR=35
BLG Laguna Peak 46.31 88 ⇑P P **23 49 01.2 -0.9**
baz=46,SNR=10
DUG Dugway 46.34 77 eP P **23 49 01.8 -0.6**
DUG pmax pmax
comp=Z,103nm,0.8s,mb5.8
DUG Dugway 46.34 77 eP P **23 49 01.8 -0.6**
comp=Z,103nm,0.8s,mb5.8
LAO LASA Array 46.45 66 eP P **23 49 03.0 -0.3**
comp=Z,160nm,0.8s,mb6.0
EDW2 Edwards Air Fo 46.48 86 P P **23 49 02.8 -0.7**
baz=46,SNR=21
EDW2 ⇓S S **23 55 48.9 -0.6**
baz=46
ZAK Zakamensk 46.48 301 ⇑iP P **23 49 04.9 +1.4**
ZAK pmax pmax
comp=Z,62nm,1.1s,mb5.5
NOQ North Oquirrh 46.48 76 eP P **23 49 03.8 +0.2**
U10A Ash Meadows, A 46.52 83 ⇑P P **23 49 03.8 0.0**
baz=46,SNR=28
U10A ⇓S S **23 55 51.2 +1.0**
baz=46
SNCC San Nicolas Is 46.59 89 eP P **23 49 04.7 +0.4**
comp=Z,148nm,1.1s,mb5.8
SNCC San Nicolas Is 46.59 89 ⇓P P **23 49 03.9 -0.4**
baz=46,SNR=5.1
TIA Tai'an 46.66 277 P P **23 49 05.3 +0.4**
TIA AMB AMB
comp=Z,64nm,1.0s,mb5.5
TIA LR LR
comp=N,677nm,18.0s,MS5.0
TIA LR LR
comp=E,1μm,17.0s,MS5.0
DECC Green Verdugo 46.68 87 ⇑P P **23 49 04.0 -1.0**
baz=46
CTU Camp Tracy 46.69 75 eP P **23 49 05.2 +0.1**
PDAR Pinedale Array 46.76 72 P P **23 49 05.1 -0.6**
comp=E,121nm,0.7s,mb6.0,baz=298,slow=4.1,SNR=291
PDAR PKPPKP 00 20 29.6
comp=E,0.3nm,0.7s,baz=132,slow=2.2,SNR=3.6
MWC Mount Wilson 46.86 87 eP P **23 49 06.1 -0.4**
SHOC Shoshone 46.88 84 ⇓P P **23 49 06.2 -0.5**
baz=47,SNR=24
NLU North Lily Min 46.94 76 eP P **23 49 07.2 +0.1**
GSC Goldstone 46.94 85 eP P **23 49 06.3 -0.8**
GSC Goldstone 46.94 85 ⇑P P **23 49 06.7 -0.4**
baz=47,SNR=55
MOY Mondy 47.00 303 eP P **23 49 09.2 +1.6**
MOY pmax pmax
comp=Z,73nm,1.4s,mb5.4
FMP Fort Macarthur 47.06 87 ⇑P P **23 49 06.9 -1.1**
baz=47
RRX Edison Barstow 47.09 85 ⇑P P **23 49 07.7 -0.6**
baz=47
BFSC Mount Baldy St 47.10 86 ⇑P P **23 49 07.6 -0.7**
baz=47,SNR=26
U11A Corn Creek 47.11 82 ⇓P P **23 49 08.4 0.0**
baz=47
MPU Maple Canyon 47.17 76 eP P **23 49 09.7 +0.9**
HHC Hu-ho-hao-te 47.18 285 eP P **23 49 11.0 +2.0**
HHC XP sP 23 49 29.5 +7.3
HHC PCP PcP 23 50 42.3 +2.1
HHC PP PP 23 51 02.5 +2.5
HHC AMB AMB
comp=Z,63nm,0.9s,mb5.5
HHC AMB AMB
comp=Z,508nm,4.6s
HHC LR LR
comp=N,2μm,21.8s,MS5.3
HHC LR LR
comp=E,2μm,20.0s,MS5.3
HHC LR LR
comp=Z,2μm,20.8s,MS5.1
CIS Catalina Islan 47.19 88 ⇓P P **23 49 07.8 -1.2**
baz=47
SHPR Sheep Range 47.19 82 eP P **23 49 08.6 -0.5**
GUMO Guam 47.37 230 P P **23 49 08.1 -2.4**
comp=Z,69nm,0.6s,mb5.8,baz=154,slow=3.1,SNR=10
GUMO Guam 47.37 230 P P **23 49 08.1 -2.4**
GUMO pmax pmax
comp=Z,69nm,0.6s,mb5.8
SCI San Clemente I 47.38 88 ⇑P P **23 49 10.1 -0.5**
baz=47
TUQ Turquoise Mtn. 47.40 84 ⇓P P **23 49 10.1 -0.6**
baz=47,SNR=23
TUQ ⇑S S **23 56 01.3 -1.5**
baz=47
ARUT Antelope Range 47.44 80 eP P **23 49 10.7 -0.3**
SSE Sheshan 47.50 268 P P **23 49 11.5 +0.1**
SSE XP sP 23 49 29.0 +4.4
SSE S S **23 56 00.8 -3.3**
SSE SS SS 23 59 30.3 -1.8
SSE AMB AMB
comp=Z,59nm,0.8s,mb5.6
SSE AMB AMB
comp=Z,284nm,8.3s
SSE LR LR
comp=N,565nm,22.7s,MS4.8
SSE LR LR
comp=E,900nm,22.7s,MS4.8
SSE LR LR
comp=Z,1μm,23.4s,MS4.8
HEC Hector,Ludlow 47.55 85 ⇓P P **23 49 11.1 -0.7**
baz=47,SNR=19
BBRC Big Bear Sol-O 47.55 86 ⇑P P **23 49 11.3 -0.5**
baz=47
U12A Valley of Fire 47.62 82 ⇑P P **23 49 12.2 -0.2**
baz=48,SNR=27
U12A ⇓S S **23 56 05.6 -0.3**
baz=48
CCUT Cedar City 47.64 80 eP P **23 49 11.7 -0.9**
MSU Marysvale 47.76 78 eP P **23 49 15.1 +1.6**
MURC Murrieta 47.81 87 ⇓P P **23 49 13.0 -0.9**
baz=48,SNR=13
TMUT Trail Mountain 47.87 77 eP P **23 49 14.8 +0.5**
V12A Nelson 47.88 83 ⇓P P **23 49 14.0 -0.4**
baz=48,SNR=16
V12A ⇓S S **23 56 09.1 -0.5**
baz=48
GMRC Granite Mounta 47.99 84 ⇑P P **23 49 14.7 -0.6**
baz=48,SNR=47
W12A Cal Nev Ari 48.15 83 ⇓P P **23 49 16.0 -0.4**
baz=48,SNR=9.0
BTO Baotou 48.26 286 eP P **23 49 19.8 +2.4**
PFO Pinyon Flat Ob 48.27 86 eP P **23 49 16.5 -0.9**
PFO pmax pmax
comp=Z,80nm,1.2s,mb5.6
PFO Pinyon Flat Ob 48.27 86 eP P **23 49 16.5 -0.9**
comp=Z,80nm,1.2s,mb5.6
PFO Pinyon Flat Ob 48.27 86 ⇑P P **23 49 16.5 -0.9**
baz=48,SNR=19
BELC Belle Mtn. 48.30 85 P P **23 49 16.6 -1.0**
baz=48,SNR=32
NJ2 Nanjing 48.31 271 eP P **23 49 20.5 +2.8**
NJ2 XP sP 23 49 39.0 +8.1
NJ2 PP PP 23 51 13.8 +3.5
NJ2 AMB AMB
comp=Z,40nm,0.9s,mb5.5
NJ2 AMB AMB
comp=Z,90nm,5.0s
NJ2 LR LR
comp=N,1μm,26.9s
NJ2 LR LR
comp=E,740nm,11.2s
NJ2 LR LR
comp=Z,730nm,10.1s
109C Camp Elliot, M 48.34 87 ⇓P P **23 49 17.0 -0.9**
baz=48,SNR=12
109C ⇓S S **23 56 15.2 -0.9**
baz=48
SRU San Rafael 48.40 76 eP P **23 49 18.3 -0.1**
NEE2 Needles Airpor 48.65 84 ⇑P P **23 49 19.4 -0.9**
baz=48
KRAR Krasnoyarsk 48.65 312 *i* P P **23 49 23.2 +2.8**
KRAR pmax pmax
comp=Z,37nm,0.6s,mb5.6
BAR Barrett 48.75 87 eP P **23 49 20.5 -0.6**
MONP Monument Peak 48.77 87 ⇑P P **23 49 20.7 -0.6**
baz=49,SNR=26
W13A Hualapai Mount 48.89 83 P P **23 49 21.8 -0.4**
baz=49,SNR=23
DVTC Desert V Tower 49.12 87 ⇑P P **23 49 23.3 -0.7**
baz=49,SNR=25
SWSC Sam W. Stewart 49.12 86 ⇑P P **23 49 22.8 -1.1**
baz=49,SNR=13
RSSD Black Hills 49.19 67 eP P **23 49 23.5 -1.0**
RSSD *e**PP pP 23 49 32.4 -1.6
PDMCI Parker Dam,Lak 49.26 84 ⇓P P **23 49 24.2 -0.8**
baz=49,SNR=11
X13A Yucca 49.26 83 ⇓P P **23 49 24.0 -0.9**
baz=49,SNR=28
X13A ⇓S S **23 56 27.9 -1.0**
baz=49
W14A Seligman 49.31 82 P P **23 49 25.2 -0.2**
baz=49,SNR=46
W14A ⇑S S **23 56 28.6 -1.1**
baz=49
Y12C Blythe 49.38 85 P P **23 49 25.3 -0.6**
baz=49,SNR=36
Y12C ⇑S S **23 56 29.8 -0.9**
baz=49
GLA Glamis 49.66 85 eP P **23 49 27.3 -0.7**
GLA Glamis 49.66 85 ⇑P P **23 49 27.4 -0.6**
baz=50,SNR=55
GLA ⇓S S **23 56 33.8 -0.7**
baz=50
KBS Kingsbay 49.69 357 eP P **23 49 28.4 +0.1**
KBS *e*PP PP 23 51 24.9 +2.0
KBS *i* 23 55 10.8
KBS AMS AMS 00 13 42.1
comp=Z,2μm,18.5s,MS5.1
KBS Kingsbay 49.69 357 eP P **23 49 29.1 +0.7**
PV10 Paradox Valley 49.76 76 eP P **23 49 28.9 0.0**
Y13A Salome 49.77 84 P P **23 49 28.3 -0.6**
baz=50,SNR=32
Y13A ⇑S S **23 56 35.5 -0.6**
baz=50
W15A Williams 49.84 82 P P **23 49 29.7 +0.3**
baz=50,SNR=30
X14A Yava 49.92 83 ⇓P P **23 49 29.8 -0.2**
baz=50,SNR=50
X14A ⇑S S **23 56 37.5 -0.7**
baz=50
ULM Lac du Bonnet 50.06 56 P P **23 49 28.6 -2.4**
comp=Z,6.9nm,0.4s,mb5.0,baz=306,slow=7.8,SNR=16
ULM ScP ScP 23 54 42.2 -1.8
comp=Z,5.6nm,0.7s,baz=317,slow=8.2,SNR=4.3
ULM Lac du Bonnet 50.06 56 P P **23 49 28.6 -2.4**
ULM ScP ScP 23 54 42.2 -1.8
WUAZ Wupatki 50.17 81 eP P **23 49 31.8 -0.1**
Y14A Wickenburg 50.20 83 P P **23 49 31.3 -0.8**
baz=50,SNR=16
PV01 Paradox Valley 50.20 76 eP P **23 49 31.7 -0.5**
SPB4 Spitsbergen Ar 50.26 356 eP P **23 49 32.9 +0.3**
X15A Humboldt 50.31 82 P P **23 49 32.9 -0.1**
baz=50,SNR=48
X15A ⇓S S **23 56 43.0 -0.7**
baz=50
Z14A Wintersburg 50.62 84 ⇓P P **23 49 34.4 -1.0**
baz=50
Z14A ⇑S S **23 56 46.0 -2.0**
baz=50
DAG Danmarks Havn 51.47 6 ⇓*i* P P **23 49 41.0 -0.7**
comp=Z,48nm,1.0s,mb5.4
DAG
comp=Z,12μm,21.0s
DAG Danmarks Havn 51.47 6 ⇓*i* P P **23 49 41.0 -0.7**
DAG pmax pmax
comp=Z,48nm,1.0s,mb5.4
DAG MLR MLR
comp=N,8μm,21.0s
DAG MLR MLR
comp=Z,12μm,21.0s,MS5.9
115A Sonoran Desert 51.51 84 ⇓P P **23 49 41.8 -0.2**
baz=51,SNR=41
116A Eloy 51.93 84 P P **23 49 44.6 -0.5**
baz=52,SNR=24
116A ⇑S S **23 57 05.3 -0.7**
baz=52
WHN Wuhan 52.15 273 P P **23 49 47.3 +0.5**
WHN LR LR
comp=Z,3μm,23.8s,MS5.3
SDCO Great Sand Dun 52.31 74 eP P **23 49 48.8 +0.8**
comp=Z,116nm,1.0s,mb5.8
SDCO *e*pP pP 23 50 00.8 +3.2
TUC Tucson 52.67 83 eP P **23 49 49.8 -0.9**
TUC pmax pmax
comp=Z,99nm,1.3s,mb5.6
TUC Tucson 52.67 83 eP P **23 49 49.8 -0.9**
comp=Z,99nm,1.3s,mb5.6
XAN Xi'an 53.15 280 P P **23 49 54.5 +0.3**
XAN AP pP 23 50 01.0 -2.7
XAN PP PP 23 51 59.0 +4.7
XAN S S **23 57 23.5 +0.8**
XAN AMB AMB
comp=Z,34nm,1.0s,mb5.2
XAN LR LR
comp=N,244nm,16.3s,MS4.6
XAN LR LR
comp=E,376nm,16.9s,MS4.6
XAN LR LR
comp=Z,397nm,17.8s,MS4.5
FRB Frobisher Bay 53.22 31 LR LR 00 14 27.2
comp=Z,7μm,19.1s,MS5.7,baz=45,slow=38
SUMG Summit 53.34 14 eP P **23 49 55.4 -0.2**
QZH Quanzhou 53.45 265 ⇑*i* P P **23 49 58.0 +1.6**
QZH LR LR
comp=N,2μm,24.6s
QZH LR LR
comp=E,720nm,13.8s
QZH LR LR
comp=Z,2μm,19.1s
LAZ Ladron 53.52 79 eP P **23 49 57.1 +0.2**
ANMO Albuquerque 53.56 78 eP P **23 49 56.9 -0.3**
ANMO pmax pmax
comp=Z,82nm,1.1s
ANMO Albuquerque 53.56 78 eP P **23 49 56.9 -0.3**
comp=Z,82nm,1.1s,mb5.6
BJO Bjornoya 53.69 354 eP P **23 49 58.5 +0.3**
BJO *e* 23 55 36.8
BJO eS S **23 57 30.3 +0.3**
BJO AMS AMS 00 28 42.7
comp=Z,2μm,17.9s,MS5.1
BJO1 Bjornoya 53.71 354 eP P **23 49 58.5 +0.2**
BJO1 *e* 23 55 36.8
BJO1 LR LR
comp=Z,2μm,17.9s,MS5.1
EYMN Ely 53.74 56 eP P **23 49 56.9 -1.7**
comp=Z,115nm,1.2s,mb5.7
NVS Novosibirsk 53.76 315 eP P **23 49 57.5 -1.2**
NVS *i* 23 51 03.0
NVS pmax pmax
comp=N,6.0nm,0.8s
NVS pmax pmax
comp=E,9.0nm,0.8s
NVS pmax pmax
comp=Z,15nm,0.8s,mb5.0
LENM Lemitar 53.77 79 eP P **23 49 59.0 +0.2**
Y22C IRIS PASSCAL I 53.87 79 ⇑P P **23 49 59.9 +0.5**
baz=54
LPM Los Pinos Moun 53.89 78 eP P **23 49 59.7 +0.1**
LZH Lanzhou 54.88 286 eP P **23 50 08.0 +1.2**
LZH XP sP 23 50 25.0 +4.9
LZH PP PP 23 52 13.0 +3.2
LZH AMB AMB
comp=Z,99nm,1.2s,mb5.7
LZH AMB AMB
comp=Z,480nm,4.5s
LZH LR LR
comp=E,3μm,15.0s
LZH LR LR
comp=Z,4μm,16.5s,MS5.6
GTA Gaotai 55.07 291 ⇑P P **23 50 09.3 +1.1**
GTA XP sP 23 50 28.3 +6.8
GTA PP PP 23 52 16.3 +4.8
GTA PPP 23 53 32.5
GTA AMB AMB
comp=Z,44nm,1.1s,mb5.4
GTA AMB AMB
comp=Z,523nm,7.2s
GTA LR LR
comp=N,4μm,17.5s,MS5.6
GTA LR LR
comp=E,3μm,17.9s,MS5.6
GTA LR LR
comp=Z,5μm,16.4s,MS5.7
SFJD Kangerlussuaq 55.76 22 *i* P P **23 50 11.3 -1.9**
comp=Z,42nm,0.9s,mb5.5
SFJD Kangerlussuaq 55.76 22 P P **23 50 12.2 -1.0**
MNTX Cornudas Mount 56.43 80 eP P **23 50 17.5 -0.5**
comp=Z,114nm,0.9s,mb5.9
KSU1 Kansas State U 56.67 68 eP P **23 50 18.1 -1.6**
GDL2 Guadalupe Moun 56.71 79 eP P **23 50 19.3 -0.7**
SCIA State Center 56.73 63 eP P **23 50 18.9 -1.2**
KEV Kevo 57.55 349 P P **23 50 25.4 -0.5**
KEV pmax pmax
comp=Z,14nm,0.8s,mb5.0
KEV Kevo 57.55 349 eP P **23 50 24.8 -1.0**
comp=Z,14nm,0.8s,mb5.0
JFWS Jewell Farm 57.69 60 eP P **23 50 25.0 -1.9**
JMIC Jan Mayen 57.69 3 P P **23 50 26.6 -0.3**
comp=Z,169nm,1.1s,mb6.0,baz=140,slow=6.7,SNR=3.0
JMIC LR LR 00 14 14.4
comp=Z,844nm,19.7s,MS4.9,baz=176,slow=35
JMIC Jan Mayen 57.69 3 eP P **23 50 27.9 +1.0**
JMIC *i* 23 54 05.9
JMIC AMS AMS 00 20 37.5
comp=Z,1μm,19.4s,MS5.1
ARCES ARCESS Array B 57.93 350 P P **23 50 27.8 -0.7**
comp=Z,38nm,0.8s,mb5.5,baz=12,slow=6.8,SNR=79
ARCES PKP2bc 00 20 14.3
comp=Z,2.1nm,0.9s,baz=204,slow=3.6,SNR=6.4
ARCES ARCESS Array B 57.93 350 P P **23 50 27.8 -0.7**
ARCES ⇑*e* 00 20 14.3
ARE0 ARCESS Array S 57.93 350 eP P **23 50 27.8 -0.7**
GZH Guangzhou 58.08 268 P P **23 50 26.0 -3.6**
GZH S S **23 58 21.8 -6.6**
GZH LR LR
comp=N,796nm,21.8s,MS4.9
GZH LR LR
comp=E,663nm,20.8s,MS4.9
GZH LR LR
comp=Z,2μm,20.5s,MS5.1
LVZ Lovozero 58.24 345 *c* iP P **23 50 29.5 -1.2**
LVZ *i* 23 52 41.6
LVZ eS S **23 58 25.9 -4.6**
LVZ *i* SSS 00 04 42.7
LVZ pmax pmax
comp=Z,157nm,0.9s,mb6.0
LVZ pmax pmax
comp=N,60nm,1.0s
LVZ pmax pmax
comp=E,14nm,0.9s
LVZ smax
comp=N,74nm,1.8s
LVZ smax
comp=Z,155nm,3.5s
LVZ smax
comp=E,92nm,2.5s
LVZ MLR MLR
comp=E,2μm,23.0s,MS5.5
LVZ MLR MLR
comp=Z,6μm,23.0s,MS5.7
LVZ MLR MLR
comp=N,4μm,24.0s,MS5.5
LVZ Lovozero 58.24 345 ⇑*i* P P **23 50 29.8 -0.9**
WMOK Wichita Mounta 58.35 73 eP P **23 50 30.8 -0.7**
WMOK pmax pmax
comp=Z,60nm,0.8s,mb5.7
WMOK Wichita Mounta 58.35 73 eP P **23 50 30.8 -0.7**
comp=Z,60nm,0.8s,mb5.7
TRO Tromso 58.46 352 eP P **23 50 29.1 -3.2**
TRO ⇑*i* P 23 50 30.9
TRO AMb AMB 23 50 33.3
comp=Z,75nm,0.8s,mb5.8
TRO *e*PP PP 23 52 43.6 +1.8
TRO *e* 23 56 08.3
TRO eS S **23 58 30.0 -3.4**
TRO AMS AMS 00 24 48.5
comp=Z,1μm,18.4s,MS5.1
TRO Tromso 58.46 352 ⇑*i* P P **23 50 30.9 -1.4**
TRO pmax pmax
comp=Z,75nm,0.8s,mb5.8
TRO Tromso 58.46 352 ⇑*i* P P **23 50 30.9 -1.4**
comp=Z,75nm,0.8s,mb5.8
CD2 Chengdu 58.47 281 ⇑*i* P P **23 50 32.8 +0.5**
CD2 XP sP 23 50 52.0 +6.4
CD2 PCP PcP 23 51 22.5 -0.2
CD2 PP PP 23 52 44.5 +2.7
CD2 AMB AMB
comp=Z,30nm,1.0s,mb5.3
CD2 AMB AMB
comp=Z,180nm,6.2s
CD2 LR LR
comp=N,720nm,22.8s
CD2 LR LR
comp=Z,400nm,18.0s,MS4.6
BALP Baler 58.52 255 eP P **23 50 33.0 +0.3**
PVCP Virac 58.65 251 eP P **23 50 35.0 +1.4**
KTK1 Kautokeino 58.67 351 eP P **23 50 34.2 +0.5**
KTK1 AMb AMB 23 50 38.0
comp=Z,66nm,1.0s,mb5.6
KTK1 Kautokeino 58.67 351 eP P **23 50 34.2 +0.5**
comp=Z,66nm,1.0s,mb5.6
APA Apatity 58.73 346 ⇑*i* P P **23 50 33.0 -1.2**
APA *i* pP 23 50 44.0 +0.2
APA *i* 23 50 51.0
APA *i* 23 51 23.0
APA *i* S S **23 58 35.0 -2.0**
APA pmax pmax
comp=Z,40nm,1.2s,mb5.3
WMQ Urumqi 58.88 302 P P **23 50 36.5 +1.3**
WMQ XP sP 23 50 56.0 +7.5
WMQ PP PP 23 52 49.0 +3.6
WMQ AMB AMB
comp=Z,175nm,1.0s,mb6.0
WMQ LR LR
comp=N,7μm,15.0s,MS6.0

WMQ LR LR
comp=E,6µm,15.0s,MS6.0
WMQ LR LR
comp=Z,6µm,14.0s,MS5.9
BOLP Bolinao 59.03 257 *e*P **P** **23 50 36.3 0.0**
SCZP Santa Cruz 59.50 257 *e*P **P** **23 50 41.3 +1.9**
MK31 Makanchi Array 59.59 308 P **P** **23 50 40.0 -0.1**
MK31 pmax pmax
comp=Z,38nm,0.7s,mb5.5
MKAR Makanchi Array 59.59 308 P **P** **23 50 40.0 0.0**
comp=Z,58nm,0.8s,mb5.7,baz=47,slow=6.7,SNR=109
MKAR Makanchi Array 59.59 308 P **P** **23 50 40.1 0.0**
MKAR pmax pmax
comp=Z,58nm,0.8s
GYA Guiyang 59.81 275 P **P** **23 50 42.0 +0.4**
GYA PP PP 23 52 58.3 +4.6
GYA SCP ScP 23 55 19.0 -7.7
GYA AMB AMB
comp=Z,70nm,0.7s,mb5.8
GYA AMB AMB
comp=Z,400nm,6.2s
GYA LR LR
comp=N,880nm,19.4s,MS5.1
GYA LR LR
comp=E,1µm,23.0s,MS5.1
GYA LR LR
comp=Z,960nm,20.9s,MS4.9
CHKZ Chkalovo 59.93 320 *e*P **P** **23 50 43.7 +1.3**
CHKZ pmax pmax
comp=Z,44nm,1.2s,mb5.4
CHKZ Chkalovo 59.93 320 *e*P **P** **23 50 43.7 +1.3**
comp=Z,44nm,1.2s,mb5.4
SCHQ Schefferville 60.25 38 P **P** **23 50 43.1 -1.6**
comp=Z,79nm,0.8s,mb5.8,baz=319,slow=6.9,SNR=85
SOKR Solikamsk 60.32 331 *e*P **P** **23 50 44.6 -0.5**
SOKR S **S** **23 59 13.7 +16**
SOKR MLR MLR
comp=Z,3µm,22.0s,MS5.4
LOF Lofoten 60.33 354 *e*P **P** **23 50 46.2 +1.0**
LOF AMb AMB 23 50 52.1
comp=Z,79nm,1.0s,mb5.7
LOF Lofoten 60.33 354 *e*P **P** **23 50 46.2 +1.0**
comp=Z,79nm,1.0s,mb5.7
VOSK Vostochnaya 60.48 319 P **P** **23 50 45.5 -0.7**
VOSK pmax pmax
comp=Z,23nm,0.9s,mb5.2
BVAR Borovoye Array 60.50 319 PKP2bc 00 20 05.8
comp=Z,1.1nm,0.8s,baz=211,slow=5.0,SNR=3.9
BRVK Borovoye 60.52 319 P **P** **23 50 47.5 +1.1**
SNR=18
BRVK Borovoye 60.52 319 P **P** **23 50 47.4 +0.9**
BRVK pmax pmax
comp=Z,26nm,0.8s,mb5.4
BRVK Borovoye 60.52 319 *e*P **P** **23 50 47.0 +0.6**
comp=Z,26nm,0.8s,mb5.4
SLM Saint Louis 60.63 64 *e*P **P** **23 50 45.9 -1.3**
JCT Junction City 60.70 77 *e*P **P** **23 50 48.1 +0.4**
OTRP Odiongan 60.89 252 *e*P **P** **23 50 49.6 +0.6**
FVM French Village 60.97 65 *e*P **P** **23 50 47.4 -2.2**
TMCR Tamitsa 61.05 342⇑*i*P **P** **23 50 49.3 -0.7**
TMCR pmax pmax
comp=Z,80nm,0.8s,mb5.9
ZRNK Zerenda 61.12 320 P **P** **23 50 50.1 -0.4**
ZRNK pmax pmax
comp=Z,27nm,0.8s,mb5.4
ZRNK Zerenda 61.12 320 *e*P **P** **23 50 49.9 -0.7**
comp=Z,82nm,2.1s,mb5.5
MIAR Mount Ida 61.57 69 *e*P **P** **23 50 52.6 -1.0**
AAM Ann Arbor 61.64 57 *e*P **P** **23 50 52.9 -1.2**
AAM pmax pmax
comp=Z,54nm,0.7s,mb5.8
AAM Ann Arbor 61.64 57 *e*P **P** **23 50 52.9 -1.1**
comp=Z,54nm,0.7s,mb5.8
SIUC Southern Illin 61.84 64 *e*P **P** **23 50 53.2 -2.2**
STOK Stokkvaagen 62.15 354 *e*P **P** **23 50 56.9 -0.6**
STOK AMb AMB 23 50 59.4
comp=Z,186nm,0.8s,mb6.3
STOK Stokkvaagen 62.15 354 *e*P **P** **23 50 56.9 -0.6**
comp=Z,186nm,0.8s,mb6.3
MOR8 Moi Rana 62.21 354 *e*P **P** **23 50 55.8 -2.1**
MOR8 AMb AMB 23 50 58.5
comp=Z,93nm,0.8s,mb6.0
MOR8 Moi Rana 62.21 354 *e*P **P** **23 50 55.8 -2.1**
comp=Z,93nm,0.8s,mb6.0
ARU Arti 62.27 328 *e*P **P** **23 50 57.7 -0.6**
ARU *e* 23 51 16.3
ARU *e* 23 51 36.3
ARU *e* 23 53 12.0
ARU *e*PPP 23 54 45.2
ARU *e*S **S** **23 59 20.6 -1.6**
ARU *e* 00 00 42.6
ARU *e*SS SS 00 03 23.4 -2.3
ARU Arti 62.27 328⇑*i*P **P** **23 50 57.7 -0.6**
PARMO Parma 62.28 65 *e*P **P** **23 50 57.3 -1.1**
BLO Bloomington 62.31 61 *e*P **P** **23 50 57.1 -1.5**
USIN University of 62.54 63 *e*P **P** **23 50 59.2 -0.9**
HBAR Harrisburg 62.55 67 *e*P **P** **23 50 58.8 -1.4**
GNAR Gosnell 62.62 66 *e*pP pP 23 51 19.9 +10
BUKP Musuan 62.69 246 *e*P **P** **23 51 00.8 -0.3**
GLAT Glass 62.83 65 *e*P **P** **23 51 02.1 +0.1**
NATX Nacogdoches 62.90 72 *e*P **P** **23 50 54.7 -7.7**
comp=Z,51nm,0.7s,mb5.8
UTMT University of 63.01 65 *e*P **P** **23 51 03.2 0.0**
WCI Wyandotte Cave 63.11 62 *e*P **P** **23 51 01.8 -2.1**
HNR Honiara 63.17 203 *e*P **P** **23 51 01.8 -2.5**
HNR pmax pmax
comp=Z,75nm,0.8s,mb5.9
HNR Honiara 63.17 203 *e*P **P** **23 51 01.8 -2.5**
comp=Z,75nm,0.8s,mb5.9
KMI Kunming 63.22 277⇑P **P** **23 51 06.3 +1.7**
KMI PP PP 23 53 25.3 +1.5
KMI PPP 23 55 00.8
KMI AMB AMB
comp=Z,28nm,1.0s,mb5.3
KMI AMB AMB
comp=Z,256nm,4.6s
KMI LR LR
comp=N,952nm,23.2s,MS5.0
KMI LR LR
comp=E,754nm,26.5s,MS5.0
KMI LR LR
comp=Z,880nm,29.9s,MS4.8
QIZ Qiongzhong 63.27 267 P **P** **23 51 05.5 +0.6**
QIZ AMB AMB
comp=Z,33nm,1.1s,mb5.4
QIZ AMB AMB
comp=Z,185nm,7.9s
QIZ LR LR
comp=N,528nm,18.0s,MS5.2
QIZ LR LR
comp=E,1µm,18.8s,MS5.2
QIZ LR LR
comp=Z,1µm,20.4s,MS5.1
MET Memphis--Engin 63.27 67 *e*P **P** **23 51 05.0 +0.1**
ENPP El Nido 63.35 254 *e*P **P** **23 51 06.6 +1.1**
JOF Joensuu 63.39 345 *e*p **P** **23 51 03.7 -2.0**
comp=Z,84nm,0.9s,mb5.9
JOF Joensuu 63.39 345 *e*P **P** **23 51 03.7 -2.0**
JOF pmax pmax
comp=Z,84nm,0.9s,mb5.9
ACSO Alum Creek Sta 63.47 58 *e*P **P** **23 51 05.2 -1.1**
HKT Hockley 63.48 75 *e*P **P** **23 51 06.1 -0.3**
ERPA Erie 63.67 55 *e*P **P** **23 51 06.9 -0.7**
comp=Z,80nm,0.7s,mb5.9
WVT Waverly 63.75 64 P **P** **23 51 06.6 -1.5**
WVT pmax pmax
comp=Z,120nm,0.8s,mb6.0
WVT Waverly 63.75 64 *e*P **P** **23 51 06.8 -1.4**
comp=Z,118nm,0.8s,mb6.0
ALLY Alegheny Colle 63.93 55 *e*P **P** **23 51 08.5 -0.8**
KVTX Kingsville 63.96 78 *e*P **P** **23 51 09.0 -0.5**
NSS Namsos 64.00 354 *e*P **P** **23 51 08.4 -1.4**
NSS AMS AMS 00 23 31.7
comp=Z,2µm,21.3s,MS5.3
MSNY Massena 64.10 50 *e*P **P** **23 51 08.3 -2.2**
PLAL Pickwick Lake 64.43 65 *e*P **P** **23 51 11.1 -1.5**
LONY Lake Ozonia 64.52 50 *e*P **P** **23 51 10.9 -2.3**
FRNY Flat Rock 64.83 49 *e*P **P** **23 51 12.5 -2.6**
KAF Kangasniemi 64.92 347 *ep* **P** **23 51 14.8 -1.0**
comp=Z,122nm,1.0s,mb5.9,baz=14,slow=5.8
KAF Kangasniemi 64.92 347 *e*P **P** **23 51 14.8 -1.0**
KAF pmax pmax
comp=Z,122nm,1.0s,mb5.9
NCB Newcomb 65.17 50 *e*P **P** **23 51 15.5 -1.9**
AFI Afiamalu 65.45 172 LR LR 00 13 51.1
comp=Z,2µm,21.5s,MS5.4,baz=77,slow=30
SWET Sewanee 65.48 64 *e*P **P** **23 51 17.9 -1.5**
MCWV Mont Chateau 65.54 57 *e*P **P** **23 51 19.0 -0.9**
FIA1 FINESS Array S 65.59 347 *e*P **P** **23 51 18.9 -1.3**
FINES FINESS Array B 65.59 347 P **P** **23 51 19.1 -1.0**
comp=Z,70nm,0.9s,mb5.7,baz=27,slow=6.4,SNR=170
FINES PKP2bc 00 19 58.8
comp=Z,3.2nm,1.0s,baz=184,slow=2.6,SNR=6.3
FINES LR LR 00 25 58.2
comp=Z,5µm,20.1s,MS5.7,baz=27,slow=41
FINES FINESS Array B 65.59 347 P **P** **23 51 19.1 -1.0**
FINES ⇑*e* 00 19 58.8
FINES LR LR 00 25 58.2
BINY Binghamton 65.63 52 *e*P **P** **23 51 19.5 -0.9**
comp=Z,145nm,1.0s,mb6.0
TKM2 Tokmak 2 65.68 309 P **P** **23 51 22.4 +1.7**
SNR=15
SSPA Standing Stone 65.83 55 *e*P **P** **23 51 20.7 -1.0**
ULHL Ulahol 65.86 308 P **P** **23 51 24.1 +2.3**
SNR=27
ACCN Adirondack Com 65.88 50 *e*P **P** **23 51 19.8 -2.2**
USP Ospenovka 65.95 310 P **P** **23 51 24.1 +1.6**
SNR=55
CHMS Chumysh 66.03 309 P **P** **23 51 24.4 +1.5**
SNR=20
LBNH Lisbon 66.06 49 *e*P **P** **23 51 22.1 -1.0**
CPCT Cooper Cave 66.10 63 *e*P **P** **23 51 25.1 +1.8**
KBK Karagaybulak 66.19 309 P **P** **23 51 25.5 +1.5**
SNR=22
FRU Bishkek 66.22 309 *e*P **P** **23 51 25.5 +1.3**
FRU pmax pmax
comp=Z,112nm,2.0s,mb5.5
AAK Ala-Archa 66.43 309 P **P** **23 51 27.2 +1.7**
SNR=21
AAK Ala-Archa 66.43 309 P **P** **23 51 26.1 +0.6**
SNR=23
AAK Ala-Archa 66.43 309⇑*i*P **P** **23 51 26.1 +0.6**
LRAL Lakeview Retre 66.46 66 *e*P **P** **23 51 24.3 -1.4**
KZA Kyzart 66.48 308 P **P** **23 51 30.1 +4.2**
SNR=8.5
PUL Pulkovo 66.52 344 *e*P **P** **23 51 25.7 -0.4**
PUL *e*PPP 23 55 30.9
PUL *e*S S 00 00 11.1 -3.6
PUL pmax pmax
comp=N,152nm,0.9s
PUL pmax pmax
comp=Z,94nm,0.9s,mb5.8
PUL pmax pmax
comp=E,84nm,0.8s
PUL smax
comp=N,215nm,11.9s
PUL smax
comp=Z,85nm,10.1s
PUL smax
comp=E,90nm,11.4s
FWV Forest Hill 66.56 59 *e*P **P** **23 51 25.5 -0.8**
DOMB Dombas 66.64 356 *e*P **P** **23 51 26.2 -0.6**
DOMB AMb AMB 23 51 30.2
comp=Z,78nm,1.3s,mb5.6
DOMB Dombas 66.64 356 *e*P **P** **23 51 26.2 -0.6**
comp=Z,78nm,1.3s,mb5.6
PECR Pechory 66.69 335 *i* P **P** **23 51 26.0 -1.2**
PECR *e*S S 00 00 17.6 +0.8
PECR *e*PS 00 00 36.0
PECR *e* 00 01 20.0
PECR pmax pmax
comp=Z,600nm,1.0s,mb6.6
PECR MLR MLR
comp=Z,6µm,20.0s,MS5.8
PECR MLR MLR
comp=N,2µm,19.0s,MS5.7
PECR MLR MLR
comp=E,4µm,17.0s,MS5.7
EKS2 Erkin-Say 66.75 310 P **P** **23 51 29.4 +1.9**
SNR=75
ELN Prospectdale 66.85 59 *e*P **P** **23 51 27.2 -1.0**
LSA Lhasa 66.94 289 P **P** **23 51 31.3 +2.5**
LSA AMB AMB
comp=Z,110nm,0.9s,mb5.9
BLA Blacksburg 67.04 59 P **P** **23 51 28.8 -0.6**
BLA Blacksburg 67.04 59 *e*P **P** **23 51 28.4 -1.0**
comp=Z,5.0nm,0.8s
PMG Port Moresby 67.06 216 P **P** **23 51 27.7 -1.8**
comp=Z,16nm,0.8s,mb5.1,baz=16,slow=5.3,SNR=7.7
PMG Port Moresby 67.06 216 P **P** **23 51 28.1 -1.5**
PMG pmax pmax
comp=Z,23nm,0.8s
MVL Millersville 67.09 54 *e*P **P** **23 51 28.6 -1.1**
AML Almayashu 67.19 309 P **P** **23 51 32.8 +2.4**
SNR=78
AKTK Aktyubinsk 67.33 324 *i* P **P** **23 51 30.9 -0.3**
AKTO Aktyubinsk 67.33 324 P **P** **23 51 30.8 -0.4**
BRNJ Basking Ridge 67.47 53 *e*P **P** **23 51 31.8 -0.4**
NB2 NORSAR Subarra 67.52 354 P **P** **23 51 31.8 -0.6**
comp=Z,89nm,0.8s,mb5.8,baz=7.5,slow=6.5
NOA NORSAR Array B 67.52 354 P **P** **23 51 31.9 -0.6**
comp=Z,70nm,0.7s,mb5.8,baz=6.8,slow=6.3,SNR=200
NOA PKP2bc 00 19 48.1
comp=Z,1.9nm,0.8s,baz=157,slow=3.1,SNR=10
NOA NORSAR Array B 67.52 354 P **P** **23 51 31.9 -0.6**
NOA ⇑*e* 00 19 48.1
HRV Harvard--Oak R 67.55 50 P **P** **23 51 31.3 -1.3**
HRV pmax pmax
comp=Z,54nm,1.0s,mb5.5
HRV Harvard--Oak R 67.55 50 *e*P **P** **23 51 31.2 -1.5**
comp=Z,54nm,0.9s,mb5.6
PAL Palisades 67.56 52 *e*P **P** **23 51 31.5 -1.2**
PAL pmax pmax
comp=Z,92nm,0.8s,mb5.9
PAL Palisades 67.56 52 *e*P **P** **23 51 31.5 -1.2**
comp=Z,92nm,0.8s,mb5.9
AB31 Akbulak array 67.57 322 *i* P **P** **23 51 32.3 -0.5**
AB31 Akbulak array 67.57 322 *i* P **P** **23 51 32.4 -0.4**
CPNY Central Park 67.69 52 *e*P **P** **23 51 32.5 -1.0**
NAO01 NORSAR Array S 67.73 354 *e*P **P** **23 51 33.1 -0.7**
comp=Z,24nm,0.8s,mb5.3
KK31 Karatay Array 67.96 312 *i* P **P** **23 51 35.7 +0.5**
KK31 pmax pmax
comp=Z,76nm,0.8s,mb5.8
KK31 Karatay Array 67.96 312 *i* P **P** **23 51 35.8 +0.6**
KKAR Karatay Array 67.96 312 *i* P **P** **23 51 35.7 +0.5**
KKAR pmax pmax
comp=Z,61nm,0.8s,mb5.7
KSH Kashi 68.05 306 P **P** **23 51 38.0 +2.2**
KSH XP sP 23 51 57.5 +8.3
KSH PCP PcP 23 52 03.5 +1.7
KSH PP PP 23 54 11.5 +5.5
KSH PPP 23 55 49.3
KSH SCP 23 55 58.5
KSH PCS 23 56 06.5
KSH AMB AMB
comp=Z,129nm,1.1s,mb5.9
KSH LR LR
comp=N,2µm,16.5s,MS5.8
KSH LR LR
comp=E,4µm,17.5s,MS5.8
KSH LR LR
comp=Z,2µm,19.5s,MS5.4
VSU Vasula 68.35 345⇑*i*P **P** **23 51 36.9 -0.8**
BER Bergen 68.44 357 *e*P **P** **23 51 34.9 -3.3**
BER *e*PP PP 23 54 08.7 -0.7
BER *i* 23 57 19.1
BER AMS AMS 00 22 17.3
comp=Z,1µm,21.5s,MS5.0
BER Bergen 68.44 357 *e*P **P** **23 51 34.9 -3.3**
BER *e* 23 54 07.5
BER MLR MLR
comp=Z,1µm,21.5s,MS5.0
BER Bergen 68.44 357 *e*P **P** **23 51 34.9 -3.3**
BER *e* 23 54 07.5
BER *i* 23 57 19.1
BER LR LR
comp=Z,1µm,21.5s,MS5.0
OSL Oslo 68.65 354 *e*P **P** **23 51 40.1 +0.6**
OSL AMb AMB 23 51 42.8
comp=Z,157nm,0.9s,mb5.9
OSL Oslo 68.65 354 *e*P **P** **23 51 40.1 +0.6**
comp=Z,157nm,0.9s,mb5.9
LRW Lerwick 68.75 1 P **P** **23 51 40.6 +0.4**
LRW Lerwick 68.75 1 *e*P **P** **23 51 40.6 +0.4**
LRW *e*P 23 51 40.6
LRW AMS AMS 00 28 27.4
comp=Z,648nm,19.0s,MS4.9
LRW Lerwick 68.75 1 *e*P **P** **23 51 40.6 +0.4**
LRW *e*P 23 51 40.6
LRW AMS AMS 00 28 27.4
comp=Z,648nm,19.0s,MS4.9
JSC Jenkinsville 68.76 62 *e*P **P** **23 51 39.4 -0.8**
MOS Moscow 68.80 338 *e*P **P** **23 51 39.7 -0.8**
MOS *e* 23 51 52.7
MOS *e* 23 52 06.4
MOS pmax pmax
comp=Z,100nm,0.8s,mb5.8
MOS pmax pmax
comp=Z,154nm,0.8s,mb6.0
CHRT Chiangrai 68.92 276⇑P **P** **23 51 44.0 +2.7**
comp=Z,224nm,0.8s,mb6.2
KONO Kongsberg 69.00 355 *e*P **P** **23 51 38.3 -3.4**
KONO *e*PP PP 23 54 13.7 -0.6
KONO *i* 23 57 16.6
KONO Kongsberg 69.00 355*c i*P **P** **23 51 41.4 -0.3**
KONO Kongsberg 69.00 355 *e*P **P** **23 51 42.0 +0.2**
KONO *e* 23 54 11.4
KONO *i* 23 57 16.6
KONO LR LR
comp=Z,19µm,20.1s,MS6.3
KKM Kota Kinabalu 69.36 253 P **P** **23 51 46.0 +2.1**
KKM Kota Kinabalu 69.36 253 *e*P **P** **23 51 44.0 +0.1**
BLS5 Blasjo 69.37 357 *e*P **P** **23 51 44.4 +0.4**
BLS5 AMb AMB 23 51 48.3
comp=Z,51nm,1.1s,mb5.4
BLS5 Blasjo 69.37 357 *e*P **P** **23 51 44.4 +0.4**
comp=Z,51nm,1.1s,mb5.4
OBN Obninsk 69.62 339*c i*P **P** **23 51 44.9 -0.6**
OBN *e**PP pP 23 52 03.5 +8.2
OBN *e* 23 52 07.5
OBN *e*S S 00 00 48.7 -3.0
OBN pmax pmax
comp=Z,147nm,1.0s,mb5.9
OBN MLR MLR
comp=Z,9µm,21.0s,MS6.0
TSM Tawau 69.77 251 P **P** **23 51 47.3 +0.9**
CNNC Cliffs of the 69.87 59 *e*P **P** **23 51 46.4 -0.7**
CHTO Chiang Mai 70.24 276 P **P** **23 51 50.6 +1.3**
SNR=7.8
CHTO Chiang Mai 70.24 276 *e*P **P** **23 51 49.7 +0.3**
CHTO pmax pmax
comp=Z,250nm,0.9s,mb6.1
CHTO Chiang Mai 70.24 276 *e*P **P** **23 51 49.7 +0.3**
comp=Z,25nm,0.9s,mb5.2
OBR Brabster 70.25 2 *e*P **P** **23 51 50.0 +0.6**
OBR Brabster 70.25 2 *e*P **P** **23 51 50.0 +0.6**
MVH1 Achvaich 70.92 3 *e*P **P** **23 51 53.6 +0.1**
MVH1 Achvaich 70.92 3 *e*P **P** **23 51 53.6 +0.1**
MCD Coleburn Disti 71.28 2 *e*P **P** **23 51 55.3 -0.4**
MCD Coleburn Disti 71.28 2 *e*P **P** **23 51 55.3 -0.4**
KAC Achnashellach 71.31 3 *e*P **P** **23 51 56.8 +0.9**
KAC Achnashellach 71.31 3 *e*P **P** **23 51 56.8 +0.9**
GUN Gumba 71.36 291 *e*P **P** **23 51 58.0 +1.8**
comp=Z,989nm,0.9s,mb6.7
KPL Plockton 71.45 3 *e*P **P** **23 51 56.9 +0.2**
KPL AMS AMS 00 28 07.3
comp=Z,2µm,19.3s,MS5.4
KPL Plockton 71.45 3 *e*P **P** **23 51 56.9 +0.2**
KPL AMS AMS 00 28 07.3
comp=Z,2µm,19.3s,MS5.4
MME1 Meikle Cairn 71.56 2 *e*P **P** **23 51 57.3 0.0**
MME1 Meikle Cairn 71.56 2 *e*P **P** **23 51 57.3 0.0**
KSB Sheil Bridge 71.59 3 *e*P **P** **23 51 58.1 +0.5**
KSB Sheil Bridge 71.59 3 *e*P **P** **23 51 58.1 +0.5**
PMOR Pomariorio Ree 71.72 148 *e*P **P** **23 51 56.9 -1.4**
comp=Z,156nm,1.0s,mb5.9
KKN Kakani 71.80 292 *e*P **P** **23 52 00.3 +1.5**
comp=Z,288nm,0.8s,mb6.3
KKN Kakani 71.80 292 *e*P **P** **23 52 00.3 +1.5**
KKN pmax pmax
comp=Z,288nm,0.8s,mb6.3
NST Nakhon Sawan 71.86 272 P **P** **23 52 00.0 +0.8**
KAR1 Arisaig 71.87 4 *e*P **P** **23 51 59.9 +0.7**
KAR1 Arisaig 71.87 4 *e*P **P** **23 51 59.9 +0.7**
PKI Pulchoki 71.89 291 *e*P **P** **23 52 00.9 +1.5**
comp=Z,215nm,0.9s,mb6.1
PKI Pulchoki 71.89 291 *e*P **P** **23 52 00.9 +1.5**
PKI pmax pmax
comp=Z,215nm,0.9s,mb6.1
GKN Gorkha 72.01 292 *e*P **P** **23 52 01.3 +1.2**
comp=Z,337nm,0.9s,mb6.3
VRHR Novokhopersk 72.02 334 *e*P **P** **23 52 00.0 -0.1**
VRHR *e**PP pP 23 52 14.0 +4.0
VRHR *e*S S 00 01 19.2 -0.4
VRHR pmax pmax
comp=Z,100nm,0.6s,mb5.9
VRHR pmax pmax
comp=N,200nm,1.3s
VRHR pmax pmax
comp=E,70nm,0.5s
VRHR smax
comp=N,20nm,0.7s
VRHR smax
comp=E,10.0nm,0.7s
VRHR smax
comp=Z,10.0nm,1.8s
VAH Vaihoa 72.03 147 *e*P **P** **23 51 58.7 -1.5**
comp=Z,180nm,1.0s,mb6.0
DMN Daman 72.04 292 *e*P **P** **23 52 01.7 +1.5**
comp=Z,216nm,0.9s,mb6.1
MUD Monsted U'grnd 72.21 355⇑*i*P **P** **23 52 01.4 +0.1**
comp=Z,71nm,0.9s,mb5.6
MUD *i* S S 00 01 27.9 +6.1
MUD
comp=Z,2µm,20.0s
MUD Monsted U'grnd 72.21 355⇑*i*P **P** **23 52 01.4 +0.1**
MUD *i* S S 00 01 27.9 +6.1
MUD pmax pmax
comp=Z,71nm,0.9s,mb5.6
MUD MLR MLR
comp=Z,2µm,20.0s,MS5.3
MUD Monsted U'grnd 72.21 355⇑*i*P **P** **23 52 01.4 +0.1**
comp=Z,71nm,0.9s,mb5.6
MUD *i* S S 00 01 27.9 +6.1
VRSR Storozhevoye 72.56 336 *e*P **P** **23 52 02.8 -0.6**
VRSR pmax pmax
comp=E,20nm,0.9s
VRSR pmax pmax
comp=Z,50nm,0.9s,mb5.4
VRSR pmax pmax
comp=N,80nm,1.0s
VRSR MLR MLR
comp=Z,3µm,22.0s,MS5.5
VRSR MLR MLR
comp=E,2µm,20.0s
EAB Aberfoyle 72.65 3⇑*e*P **P** **23 52 04.2 +0.3**
EAB Aberfoyle 72.65 3⇑*e*P **P** **23 52 04.2 +0.3**
COP Copenhagen 72.76 353 *i* P **P** **23 52 04.8 +0.3**
comp=E,121nm,0.9s,mb5.8
COP *i* S S 00 01 29.0 +0.9
COP
comp=Z,1µm,20.0s
COP Copenhagen 72.76 353 *i* P **P** **23 52 04.8 +0.3**
COP *i* S S 00 01 29.0 +0.9
COP pmax pmax
comp=Z,120nm,0.9s,mb5.8
COP MLR MLR
comp=Z,1µm,20.0s,MS5.1
KOLN Koldanda 72.79 293 *e*P **P** **23 52 05.8 +1.1**
comp=Z,192nm,0.8s,mb6.1
PCOU Corrie 72.86 3 *e*P **P** **23 52 05.7 +0.6**
PCOU Corrie 72.86 3 *e*P **P** **23 52 05.7 +0.6**
EDI Edinburgh 72.94 2 *e*P **P** **23 52 07.2 +1.5**
EDI AMS AMS 00 26 29.2
comp=Z,1µm,22.7s,MS5.1
EDI Edinburgh 72.94 2 *e*P **P** **23 52 07.2 +1.5**
EDI AMS AMS 00 26 29.2
comp=Z,1µm,22.7s,MS5.1
ESY Stoneypath 72.96 2⇑*e*P **P** **23 52 05.3 -0.4**
ESY Stoneypath 72.96 2⇑*e*P **P** **23 52 05.3 -0.4**
EAU Auchinoon 73.02 2⇑*e*P **P** **23 52 05.8 -0.3**
EAU Auchinoon 73.02 2⇑*e*P **P** **23 52 05.8 -0.3**
EBL Broad Law 73.10 2 *e*P **P** **23 52 07.1 +0.5**
EBL Broad Law 73.10 2 *e*P **P** **23 52 07.1 +0.5**
BSD Bornholm Skovb 73.11 351⇑*i*P **P** **23 52 05.7 -0.9**
comp=Z,83nm,0.8s,mb5.7
BSD *e*S S 00 01 40.7 +8.6
BSD Bornholm Skovb 73.11 351⇑*i*P **P** **23 52 05.7 -0.9**
BSD pmax pmax
comp=Z,83nm,0.8s,mb5.7
SUW Suwalki 73.19 346 *e*P **P** **23 52 05.8 -1.3**
SUW *e*PcP PcP 23 52 18.8 -4.7
DWPF Disney 73.31 66 *e*P **P** **23 52 07.5 -0.3**
comp=Z,122nm,0.8s,mb5.9

DLH	**Dalhousie**	**73.39**	**301**	*e*P	**P**	**23 52 08.0**	**+0.3**			
XSO	**Sourhope Farm**	**73.40**	**2**	*e*P	**P**	**23 52 08.6**	**+0.3**			
XSO				AMb	AMB	23 52 13.3				
comp=Z,133nm,1.0s,mb5.8										
XSO	**Sourhope Farm**	**73.40**	**2**	*e*P	**P**	**23 52 08.6**	**+0.3**			
XSO				AMb	AMB	23 52 13.3				
comp=Z,133nm,1.0s,mb5.8										
LGTI	**Lohaghat**	**73.42**	**296**	*i* P	**P**	**23 52 11.0**	**+2.6**			
GMK	**Mull of Kintyr**	**73.45**	**4**	*e*P	**P**	**23 52 08.9**	**+0.3**			
GMK	**Mull of Kintyr**	**73.45**	**4**	*e*P	**P**	**23 52 08.9**	**+0.3**			
ESK	**Eskdalemuir**	**73.55**	**2**	*e*P	**P**	**23 52 08.8**	**-0.4**			
ESK				AMS	AMS	00 26 57.0				
comp=Z,1μm,21.4s,MS5.2										
ESK	**Eskdalemuir**	**73.55**	**2**	*e*P	**P**	**23 52 08.8**	**-0.4**			
ESK				AMS	AMS	00 26 57.0				
comp=Z,1μm,21.4s,MS5.2										
ESK	**Eskdalemuir**	**73.55**	**2**	*e*P	**P**	**23 52 09.3**	**+0.1**			
ESK				pmax	pmax					
comp=Z,44nm,0.8s,mb5.4										
ESK	**Eskdalemuir**	**73.55**	**2**	*e*P	**P**	**23 52 09.2**	**0.0**			
comp=Z,44nm,0.8s,mb5.4										
PPT	**Papeete**	**73.58**	**150**	*e*PP	PP	23 54 44.5	-9.1			
comp=Z,131nm,28.0s										
PPT	**Papeete**	**73.58**	**150**	*e*S	S	00 01 32.5	-4.9			
comp=Z,1μm,25.5s										
PPT				*e*LR	LR	00 14 25.1				
comp=Z,6μm,28.5s,baz=347										
PPT	**Papeete**	**73.58**	**150**	LR	LR	00 19 17.0				
comp=Z,1μm,20.9s,MS5.2,baz=328,slow=32										
THN	**Thein Dam**	**73.60**	**301**	*e*P	**P**	**23 52 10.1**	**+0.6**			
SDNR	**Sundarnagar**	**73.65**	**300**	*e*P	**P**	**23 52 10.4**	**+0.6**			
SDNR				*e*x	x	23 57 49.4				
ECK	**Cauldkaine Hil**	**73.69**	**2**⇑	*e*P	**P**	**23 52 10.2**	**+0.1**			
ECK				AMb	AMB	23 52 12.9				
comp=Z,70nm,1.0s,mb5.5										
ECK	**Cauldkaine Hil**	**73.69**	**2**⇑	*e*P	**P**	**23 52 10.2**	**+0.1**			
ECK				AMb	AMB	23 52 12.9				
comp=Z,70nm,1.0s,mb5.5										
GCL	**Cushendall**	**73.70**	**4**	*e*P	**P**	**23 52 09.8**	**-0.3**			
GCL	**Cushendall**	**73.70**	**4**	*e*P	**P**	**23 52 09.8**	**-0.3**			
SMLA	**Simla**	**73.83**	**300**	*e*P	**P**	**23 52 12.0**	**+1.1**			
SMLA				AMb	AMB	23 52 14.4				
comp=Z,410nm,0.7s,mb6.5										
PONG	**Pong**	**73.85**	**301**	*e*P	**P**	**23 52 11.0**	**0.0**			
GAL1	**Galloway**	**73.96**	**3**	P	**P**	**23 52 11.6**	**0.0**			
GAL1	**Galloway**	**73.96**	**3**	*e*P	**P**	**23 52 11.1**	**-0.5**			
GAL1				*e*P		23 52 11.6				
GAL1				AMS	AMS	00 29 31.7				
comp=Z,2μm,20.6s,MS5.4										
GAL1	**Galloway**	**73.96**	**3**	*e*P	**P**	**23 52 11.1**	**-0.5**			
GAL1				*e*P		23 52 11.6				
GAL1				AMS	AMS	00 29 31.7				
comp=Z,2μm,20.6s,MS5.4										
BHK	**Bhakra**	**74.01**	**300**	*e*x	x	23 52 17.0				
BHK				*e*x	x	23 57 55.5				
XAL	**Allendale**	**74.03**	**2**	*e*P	**P**	**23 52 12.3**	**+0.3**			
XAL	**Allendale**	**74.03**	**2**	*e*P	**P**	**23 52 12.3**	**+0.3**			
DZM	**Mont Dzumac**	**74.23**	**193**	*e*P	**P**	**23 52 11.7**	**-1.5**			
DZM	**Mont Dzumac**	**74.23**	**193**	LR	LR	00 18 14.5				
comp=Z,3μm,21.7s,MS5.6,baz=344,slow=30										
BOK	**Bokaro**	**74.46**	**289**	*e*P	**P**	**23 52 15.6**	**+1.1**			
BOK				AMb	AMB	23 52 18.8				
comp=Z,109nm,1.1s,mb5.7										
GMM	**Mts of Mourne**	**74.54**	**4**	*e*P	**P**	**23 52 14.5**	**-0.5**			
GMM	**Mts of Mourne**	**74.54**	**4**	*e*P	**P**	**23 52 14.5**	**-0.5**			
WIM	**Isle of Man**	**74.68**	**3**⇑	*e*P	**P**	**23 52 16.3**	**+0.5**			
WIM				AMb	AMB	23 52 20.8				
comp=Z,178nm,1.0s,mb6.0										
WIM	**Isle of Man**	**74.68**	**3**⇑	*e*P	**P**	**23 52 16.3**	**+0.5**			
WIM				AMb	AMB	23 52 20.8				
comp=Z,178nm,1.0s,mb6.0										
GKP	**Gorka Klasztor**	**74.69**	**350**	*e*P	**P**	**23 52 15.4**	**-0.5**			
GKP				*e*PcP	PcP	23 52 24.9	-5.1			
GKP	**Gorka Klasztor**	**74.69**	**350**	*e*S	S	00 01 48.9	-1.0			
WAR	**Warsaw**	**75.22**	**347**	*e*P	**P**	**23 52 19.6**	**+0.7**			
WAR				*e*PcP	PcP	23 52 27.2	-5.1			
WAR	**Warsaw**	**75.22**	**347**	*e*S	S	00 01 56.7	+1.0			
AKASG	**Malin Array Be**	**75.32**	**342**	P	**P**	**23 52 18.9**	**-0.6**			
comp=Z,145nm,0.8s,mb6.0,baz=20,slow=5.8,SNR=236										
AKASG				LR	LR	00 31 53.1				
comp=Z,3μm,19.1s,MS5.6,baz=0.0,slow=41										
LHO	**Holmfirth**	**75.35**	**1**	*e*P	**P**	**23 52 19.0**	**-0.7**			
LHO	**Holmfirth**	**75.35**	**1**	*e*P	**P**	**23 52 19.0**	**-0.7**			
DCN	**Croghan**	**75.37**	**5**⇑	*i*P	**P**	**23 52 19.7**	**-0.1**			
DLF	**Lyons Farm**	**75.46**	**4**⇑	*i*P	**P**	**23 52 20.2**	**-0.1**			
KBI1	**Birley Grange**	**75.65**	**1**	*e*P	**P**	**23 52 21.0**	**-0.4**			
KBI1	**Birley Grange**	**75.65**	**1**	*e*P	**P**	**23 52 21.0**	**-0.4**			
NDI	**New Delhi**	**75.69**	**298**	*i* P	**P**	**23 52 21.5**	**-0.1**			
NDI				*e*P		23 52 22.0				
NDI				*e*P		23 52 22.2				
NDI				AMb	AMB	23 52 24.8				
comp=Z,97nm,0.7s,mb5.8										
NDI				*e*x	x	00 02 00.0				
ALBI	**Allahabad**	**75.70**	**293**	*i* P	**P**	**23 52 21.0**	**-0.7**			
YRE	**Yr Eifl**	**75.86**	**3**	*e*P	**P**	**23 52 21.6**	**-1.0**			
YRE				AMb	AMB	23 52 32.3				
comp=Z,69nm,1.2s,mb5.5										
YRE	**Yr Eifl**	**75.86**	**3**	*e*P	**P**	**23 52 21.6**	**-1.0**			
YRE				AMb	AMB	23 52 32.3				
comp=Z,69nm,1.2s,mb5.5										
KWE	**Weaver Farm**	**75.88**	**1**	*e*P	**P**	**23 52 23.1**	**+0.4**			
KWE	**Weaver Farm**	**75.88**	**1**	*e*P	**P**	**23 52 23.1**	**+0.4**			
SBD1	**Bryn Du**	**75.97**	**2**⇑	*e*P	**P**	**23 52 23.9**	**+0.7**			
SBD1	**Bryn Du**	**75.97**	**2**⇑	*e*P	**P**	**23 52 23.9**	**+0.7**			
ABA1	**Baconsthorpe**	**76.03**	**360**	*e*P	**P**	**23 52 23.1**	**-0.4**			
ABA1	**Baconsthorpe**	**76.03**	**360**	*e*P	**P**	**23 52 23.1**	**-0.4**			
KAKA	**Kakadu**	**76.22**	**228**	*e*P	**P**	**23 52 22.8**	**-1.8**			
comp=Z,80nm,0.8s,mb5.7										
AEU	**East Anglia Un**	**76.29**	**359**	*e*P	**P**	**23 52 25.4**	**+0.3**			
AEU	**East Anglia Un**	**76.29**	**359**	*e*P	**P**	**23 52 25.4**	**+0.3**			
HLM1	**Long Mynd**	**76.36**	**2**⇑	*e*P	**P**	**23 52 25.9**	**+0.4**			
HLM1				AMb	AMB	23 52 31.8				
comp=Z,60nm,1.0s,mb5.5										
HLM1	**Long Mynd**	**76.36**	**2**⇑	*e*P	**P**	**23 52 25.9**	**+0.4**			
HLM1				AMb	AMB	23 52 31.8				
comp=Z,60nm,1.0s,mb5.5										
KSM	**Kuching**	**76.53**	**255**	*e*P	**P**	**23 52 26.5**	**+0.1**			
HTR	**Trewern Hill**	**76.79**	**2**⇑	*e*P	**P**	**23 52 27.6**	**-0.3**			
HTR				AMb	AMB	23 52 30.7				
comp=Z,134nm,1.0s,mb5.8										
HTR	**Trewern Hill**	**76.79**	**2**⇑	*e*P	**P**	**23 52 27.6**	**-0.3**			
HTR				AMb	AMB	23 52 30.7				
comp=Z,134nm,1.0s,mb5.8										
WTSB	**Winterswijk**	**76.81**	**356**⇑	*e*P	**P**	**23 52 27.4**	**-0.6**			
comp=Z,115nm,0.9s,mb5.8										
WTSB				*e*P		23 56 23.7				
comp=Z,23nm,1.1s										
WTSB				⇑*e*P		23 58 06.6				
comp=Z,129nm,1.0s										
MCH1	**Michaelchurch**	**76.88**	**2**⇑	*e*P	**P**	**23 52 28.3**	**-0.1**			
MCH1				*e*P		23 52 28.3				
MCH1				AMS	AMS	00 31 11.3				
comp=Z,609nm,22.3s,MS4.9										
MCH1	**Michaelchurch**	**76.88**	**2**⇑	*e*P	**P**	**23 52 28.3**	**-0.1**			
MCH1				*e*P		23 52 28.3				
MCH1				AMS	AMS	00 31 11.3				
comp=Z,609nm,22.3s,MS4.9										
CLL	**Collm**	**77.06**	**352**⇑	*i*P	**P**	**23 52 28.7**	**-0.7**			
comp=Z,78nm,0.9s,mb5.6										
CLL				*e*pP	pP	23 52 49.6	+10			
CLL				*e*PP	PP	23 55 23.5	+0.5			
CLL				*e*PPP		23 57 14.9				
CLL				*e*PPPP		23 58 21.8				
CLL				*e*S	S	00 02 16.1	+0.2			
CLL				*e*PPS		00 03 15.9				
CLL				*e*LR	LR	00 18 09.3				
CLL				*e*L		00 28 34.3				
comp=Z,4μm,22.0s										
CLL	**Collm**	**77.06**	**352**	⇑P	**P**	**23 52 28.8**	**-0.6**			
comp=Z,logA/T=1.9,mb5.6										
CLL				*e*PPP		23 57 18.0				
CLL				*e*S	S	00 02 13.0	-2.9			
CLL				*e*SCS	ScS	00 02 44.0	-0.3			
CLL				*e*PPS		00 03 08.0				
CLL				*e**SSS		00 07 35.0				
CLL				*e*		00 08 43.0				
CLL				*e*		00 13 22.0				
CLL	**Collm**	**77.06**	**352**⇑	*i*P	**P**	**23 52 28.8**	**-0.6**			
comp=Z,77nm,0.9s,mb5.6										
CLL				*e*PPP		23 57 18.0				
CLL				*e*S	S	00 02 13.0	-2.9			
CLL				*e*ScS	ScS	00 02 44.0	-0.3			
CLL				*e*PPS		00 03 08.0				
CLL				*e*SS		00 07 35.0				
CLL				*e*x	x	00 08 43.0				
CLL				*e*x	x	00 13 22.0				
CLL				Lm		00 33 00.0				
comp=N,3μm,18.8s										
CLL				Lm		00 33 00.0				
comp=E,600nm,19.8s										
CLL				Lm		00 33 00.0				
comp=Z,4μm,18.8s										
CLL	**Collm**	**77.06**	**352**⇑	*i*P	**P**	**23 52 28.8**	**-0.6**			
CLL				*e*S	S	00 02 13.0	-2.9			
CLL				LR	LR					
comp=Z,4μm,18.8s,MS5.7										
CLL	**Collm**	**77.06**	**352**⇑	*i*P	**P**	**23 52 28.8**	**-0.6**			
comp=Z,77nm,0.9s,mb5.6										
CLL				*e*S	S	00 02 13.0	-2.9			
CLL				LR	LR					
comp=Z,4μm,18.8s,MS5.7										
HSA	**Swansea**	**77.10**	**3**	*e*P	**P**	**23 52 30.0**	**+0.4**			
HSA	**Swansea**	**77.10**	**3**	*e*P	**P**	**23 52 30.0**	**+0.4**			
LVV	**L'vov**	**77.11**	**345**	*e*P	**P**	**23 52 29.7**	**0.0**			
KSP	**Ksiaz**	**77.19**	**350**	*e*P	**P**	**23 52 29.7**	**-0.4**			
KSP				*e*PcP	PcP	23 52 39.1	-1.7			
KSP	**Ksiaz**	**77.19**	**350**	*e*P	**P**	**23 52 29.6**	**-0.5**			
KSP				*e*S	S	00 02 12.0	-5.4			
KSP				LR	LR					
comp=Z,8μm,24.2s,MS5.9										
KSP				*e*SKS		00 02 32.2				
KSP	**Ksiaz**	**77.19**	**350**	*e*S	S	00 02 16.6	-0.8			
SKP1	**Kophill**	**77.19**	**1**	*e*P	**P**	**23 52 29.8**	**-0.3**			
SKP1	**Kophill**	**77.19**	**1**	*e*P	**P**	**23 52 29.8**	**-0.3**			
HGH	**Gray Hill**	**77.25**	**2**⇑	*e*P	**P**	**23 52 30.2**	**-0.3**			
HGH				AMb	AMB	23 52 32.8				
comp=Z,210nm,1.0s,mb6.0										
HGH	**Gray Hill**	**77.25**	**2**⇑	*e*P	**P**	**23 52 30.2**	**-0.3**			
HGH				AMb	AMB	23 52 32.8				
comp=Z,210nm,1.0s,mb6.0										
CTA	**Charters Tower**	**77.27**	**213**	*e*P	**P**	**23 52 28.6**	**-2.0**			
comp=Z,51nm,0.9s,mb5.5										
CTA	**Charters Tower**	**77.27**	**213**	*e*P	**P**	**23 52 28.6**	**-2.0**			
CTA				pmax	pmax					
comp=Z,51nm,0.9s										
CTAO	**Charters Tower**	**77.27**	**213**	P	**P**	**23 52 28.4**	**-2.2**			
CTAO				pmax	pmax					
comp=Z,61nm,0.9s,mb5.5										
CTAO	**Charters Tower**	**77.27**	**213**	*e*P	**P**	**23 52 28.2**	**-2.3**			
comp=Z,61nm,0.8s,mb5.6										
OJC	**Ojcow**	**77.36**	**347**	*e*P	**P**	**23 52 30.8**	**-0.3**			
OJC				*e*S	S	00 02 15.2	-4.1			
OJC				MLR	MLR					
comp=Z,16μm,19.5s,MS6.3										
SWN1	**Swindon**	**77.39**	**1**	*e*P	**P**	**23 52 31.1**	**-0.2**			
SWN1	**Swindon**	**77.39**	**1**	*e*P	**P**	**23 52 31.1**	**-0.2**			
BRG	**Berggiesshubel**	**77.40**	**351**	*i* P	**P**	**23 52 30.8**	**-0.5**			
comp=Z,36nm,0.9s,mb5.3										
BRG				*i* pP	pP	23 52 52.4	+11			
comp=Z,18nm,1.4s										
BRG				S	S	00 02 23.0	+3.3			
BRG	**Berggiesshubel**	**77.40**	**351**	*i* P	**P**	**23 52 30.8**	**-0.5**			
BRG				S	S	00 02 23.0	+3.3			
BRG				pmax	pmax					
comp=Z,36nm,0.9s,mb5.3										
MAK	**Makhachkala**	**77.46**	**327**	*i* P	**P**	**23 52 30.7**	**-0.9**			
MAK				*i*		23 55 31.7				
MAK				*i* PPP		23 57 24.0				
MAK				*e*S	S	00 02 18.0	-2.3			
MAK				*e*		00 02 56.8				
MAK				pmax	pmax					
comp=Z,31nm,0.4s,mb5.6										
MAK				MLR	MLR					
comp=Z,11μm,25.0s,MS6.1										
KWP	**Kalwaria**	**77.51**	**345**	*e*P	**P**	**23 52 32.5**	**+0.6**			
KWP	**Kalwaria**	**77.51**	**345**	*e*S	S	00 02 20.7	-0.1			
UPC	**Upice**	**77.55**	**350**	*e*P	**P**	**23 52 32.1**	**0.0**			
DPC	**Dobruska-Polom**	**77.67**	**350**	*e*P	**P**	**23 52 32.8**	**0.0**			
DPC				AMS	AMS	00 33 10.0				
comp=Z,3μm,19.3s										
TSA1	**Sevenoaks**	**77.68**	**0**	*e*P	**P**	**23 52 32.8**	**-0.1**			
TSA1	**Sevenoaks**	**77.68**	**0**	*e*P	**P**	**23 52 32.8**	**-0.1**			
PVCC	**Panska Ves**	**77.68**	**351**	*e*P	**P**	**23 52 32.5**	**-0.4**			
PVCC				AMS	AMS	00 30 50.0				
comp=Z,4μm,20.0s										
RAC	**Raciborz**	**77.71**	**348**	*e*P	**P**	**23 52 33.3**	**+0.3**			
SWK	**Warminster**	**77.75**	**2**	*e*P	**P**	**23 52 33.2**	**-0.1**			
SWK	**Warminster**	**77.75**	**2**	*e*P	**P**	**23 52 33.2**	**-0.1**			
HEX	**Exmoor**	**77.79**	**3**	*e*P	**P**	**23 52 33.0**	**-0.5**			
HEX	**Exmoor**	**77.79**	**3**	*e*P	**P**	**23 52 33.0**	**-0.5**			
MOX	**Moxa**	**77.83**	**353**	*e*P	**P**	**23 52 33.4**	**-0.3**			
comp=Z,85nm,0.9s,mb5.7										
MOX	**Moxa**	**77.83**	**353**	*e*P	**P**	**23 52 33.4**	**-0.3**			
MOX				pmax	pmax					
comp=Z,85nm,0.9s,mb5.7										
HTL	**Hartland**	**77.84**	**3**	*e*P	**P**	**23 52 34.1**	**+0.3**			
HTL				AMS	AMS	00 32 20.0				
comp=Z,646nm,20.1s,MS5.0										
HTL	**Hartland**	**77.84**	**3**	*e*P	**P**	**23 52 34.1**	**+0.3**			
HTL				AMS	AMS	00 32 20.0				
comp=Z,646nm,20.1s,MS5.0										
STHS	**Stebnicka Huta**	**77.94**	**346**	*e*P	**P**	**23 52 35.3**	**+1.0**			
STHS				pmax	pmax					
comp=Z,76nm,0.8s,mb5.7										
STHS	**Stebnicka Huta**	**77.94**	**346**	*e*P	**P**	**23 52 35.3**	**+1.0**			
comp=Z,76nm,0.8s,mb5.7										
BLSP	**Bilaspur**	**77.95**	**290**	*e*P	**P**	**23 52 36.0**	**+1.6**			
OKC	**Ostrava-Krasne**	**77.96**	**348**	*e*P	**P**	**23 52 34.0**	**-0.4**			
OKC				AMS	AMS	00 32 30.0				
comp=Z,3μm,18.8s										
BEBN	**Eben Emael**	**78.03**	**357**	P	**P**	**23 52 34.4**	**-0.4**			
HGN	**Heimansgroeve**	**78.05**	**356**⇑	*e*P	**P**	**23 52 34.8**	**-0.1**			
comp=Z,208nm,0.9s,mb6.0										
HGN				*e*PcP	PcP	23 52 42.4	-2.1			
HGN				⇑*e*P		23 58 13.5				
comp=Z,189nm,0.9s										
UCC	**Uccle**	**78.07**	**357**	P	**P**	**23 52 34.7**	**-0.3**			
NIE	**Niedzica**	**78.08**	**347**	*e*P	**P**	**23 52 35.4**	**+0.3**			
MORC	**Moravsky Berou**	**78.09**	**349**⇑	*i*P	**P**	**23 52 35.0**	**-0.2**			
MORC	**Moravsky Berou**	**78.09**	**349**	P	**P**	**23 52 34.7**	**-0.5**			
MORC				pmax	pmax					
comp=Z,50nm,0.9s,mb5.4										
PRA	**Prague**	**78.15**	**351**	⇑P	**P**	**23 52 35.0**	**-0.5**			
KIV	**Kislovodsk**	**78.15**	**330**	P	**P**	**23 52 36.5**	**+1.0**			
SNR=12										
KIV	**Kislovodsk**	**78.15**	**330***c*	*i*P	**P**	**23 52 35.8**	**+0.3**			
KIV				*e*S	S	00 02 25.8	-2.0			
KIV				pmax	pmax					
comp=Z,36nm,0.9s,mb5.3										
KIV				MLR	MLR					
comp=Z,4μm,21.0s,MS5.7										
NKC	**Novy Kostel**	**78.17**	**352**	*e*P	**P**	**23 52 35.5**	**-0.1**			
NKC				AMS	AMS	00 36 10.0				
comp=Z,3μm,17.7s										
MEM	**Membach**	**78.20**	**356**	P	**P**	**23 52 35.5**	**-0.2**			
PRU	**Pruhonice**	**78.22**	**351**	*e*P	**P**	**23 52 35.3**	**-0.6**			
PRU				AMS	AMS	00 31 10.0				
comp=Z,4μm,20.0s										
KOLS	**Kolonicke sedl**	**78.25**	**345**	*i* P	**P**	**23 52 36.3**	**+0.2**			
MENF	**Mencas**	**78.35**	**359**	*e*P	**P**	**23 52 36.3**	**-0.3**			
SNF	**Seneffe**	**78.36**	**357**	P	**P**	**23 52 36.6**	**0.0**			
JBP	**Jabalpur**	**78.40**	**292**⇑	*e*P	**P**	**23 52 38.4**	**+1.5**			
JBP				*e*x	x	23 52 55.1				
comp=Z,124nm,1.3s										
JBP				*i* x	x	23 58 17.4				
CRVS	**Cervenica-Dubn**	**78.41**	**346**	*i* P	**P**	**23 52 37.3**	**+0.4**			
BCLA	**Clavier**	**78.42**	**357**	P	**P**	**23 52 36.5**	**-0.4**			
DYA	**Yadsworthy**	**78.42**	**3**	*e*P	**P**	**23 52 37.2**	**+0.3**			
DYA	**Yadsworthy**	**78.42**	**3**	*e*P	**P**	**23 52 37.2**	**+0.3**			
CSA1	**St Austell**	**78.47**	**3**	*e*P	**P**	**23 52 37.3**	**0.0**			
CSA1	**St Austell**	**78.47**	**3**	*e*P	**P**	**23 52 37.3**	**0.0**			
LIKS	**Likavka**	**78.60**	**348**	*e*P	**P**	**23 52 39.3**	**+1.3**			
LIKS				pmax	pmax					
comp=Z,109nm,0.8s,mb5.8										
LIKS	**Likavka**	**78.60**	**348**	*e*P	**P**	**23 52 39.3**	**+1.3**			
comp=Z,109nm,0.8s,mb5.8										
CRQ2	**Rosemanowes 2**	**78.64**	**4**	*e*P	**P**	**23 52 38.1**	**-0.1**			
CRQ2				AMb	AMB	23 52 40.3				
comp=Z,78nm,0.9s,mb5.6										
CRQ2	**Rosemanowes 2**	**78.64**	**4**	*e*P	**P**	**23 52 38.1**	**-0.1**			
CRQ2				AMb	AMB	23 52 40.3				
comp=Z,78nm,0.9s,mb5.6										
VRAC	**Vranov**	**78.67**	**349**⇑	*i*P	**P**	**23 52 38.5**	**+0.2**			
VRAC	**Vranov**	**78.67**	**349**	⇑P	**P**	**23 52 38.5**	**+0.2**			
CGW	**Gweek**	**78.71**	**4**	*e*P	**P**	**23 52 38.1**	**-0.4**			
CGW	**Gweek**	**78.71**	**4**	*e*P	**P**	**23 52 38.1**	**-0.4**			
GIVF	**Givet**	**78.75**	**357**⇑	*i*P	**P**	**23 52 38.5**	**-0.3**			
comp=Z,196nm,0.9s,mb5.7										
GIVF	**Givet**	**78.75**	**357**⇑	*i*P	**P**	**23 52 38.5**	**-0.3**			
GIVF				pmax	pmax					
comp=Z,98nm,0.9s,mb5.7										
GIVF	**Givet**	**78.75**	**357**⇑	*i*P	**P**	**23 52 38.5**	**-0.3**			
comp=Z,98nm,0.9s,mb5.7										
DOU	**Dourbes**	**78.76**	**357**	P	**P**	**23 52 38.6**	**-0.3**			
TREC	**Trest**	**78.80**	**350**	*e*P	**P**	**23 52 38.8**	**-0.3**			
TREC				AMS	AMS	00 34 40.0				
comp=Z,4μm,19.9s										
GRA1	**Grafenberg Arr**	**78.81**	**353**	*e*P	**P**	**23 52 39.2**	**+0.1**			
comp=Z,104nm,0.9s,mb5.8										
GRA1				LR	LR					
comp=Z,2μm,20.1s,MS5.5										
GRF	**Grafenberg Arr**	**78.81**	**353**	*e*P	**P**	**23 52 39.2**	**+0.1**			
comp=Z,104nm,0.9s,mb5.8										
GRF				*e*L		00 35 30.3				
comp=Z,2μm,20.1s										
GRF	**Grafenberg Arr**	**78.81**	**353**	*e*P	**P**	**23 52 39.2**	**+0.1**			
GRF				pmax	pmax					
comp=Z,104nm,0.9s,mb5.8										
GRF				MLR	MLR					
comp=Z,2μm,20.1s,MS5.5										
BAIF	**Baives**	**78.81**	**357**⇑	*i*P	**P**	**23 52 39.1**	**0.0**			
comp=Z,322nm,0.9s,mb6.0										
BAIF	**Baives**	**78.81**	**357**⇑	*i*P	**P**	**23 52 39.1**	**0.0**			
comp=Z,161nm,0.9s,mb6.0										
AJM	**Ajmer**	**78.83**	**298**	*i* P	**P**	**23 52 39.0**	**-0.2**			
ZEI	**Tsey**	**78.84**	**329**	*e*P	**P**	**23 52 39.5**	**+0.2**			
ZEI				*e**PP	pP	23 52 55.6	+6.4			
ZEI				pmax	pmax					
comp=Z,63nm,0.9s,mb5.5										
ABH	**Alteburg**	**78.86**	**355**	*e*P	**P**	**23 52 39.1**	**-0.3**			
ANN	**Anapa**	**78.92**	**334**	*e*P	**P**	**23 52 38.3**	**-1.4**			
ANN				*e*	pP	23 52 46.6	-3.0			
ANN				*i* *PP	pP	23 52 56.7	+7.1			
ANN				*e*		23 55 38.6				
ANN				*e*S	S	00 02 32.3	-3.7			
ANN				*e*SS	SS	00 07 38.8	-2.6			
ANN				pmax	pmax					
comp=Z,41nm,1.0s,mb5.3										
ANN				MLR	MLR					
comp=Z,2μm,22.0s,MS5.5										
KIS	**Kishinev**	**78.93**	**341**	*e*P	**P**	**23 52 40.0**	**+0.2**			
KIS				*e*		23 55 37.0				
KIS				*e*PPP		23 57 38.0				
KIS				*e*S	S	00 02 32.0	-4.1			
KIS				*e*PS		00 02 52.0				
KIS				*e*		00 03 20.0				
KECS	**Kecovo**	**78.96**	**347**	*e*P	**P**	**23 52 40.3**	**+0.3**			
KECS				pmax	pmax					
comp=Z,50nm,0.8s,mb5.5										
KECS	**Kecovo**	**78.96**	**347**	*e*P	**P**	**23 52 40.3**	**+0.3**			
comp=Z,50nm,0.8s,mb5.5										
IAS	**Iasi**

comp=Z,143nm,0.8s,mb6.0
WLS Welschbruch 80.33 355 *e*P **P 23 52 47.1 -0.3**
CDF Champ du Feu 80.34 355⇑*i*P **P 23 52 47.0 -0.4**
comp=Z,88nm,0.9s,mb5.4
CDF Champ du Feu 80.34 355⇑*i*P **P 23 52 47.0 -0.4**
CDF pmax pmax
comp=Z,44nm,0.9s,mb5.4
CDF Champ du Feu 80.34 355⇑*i*P **P 23 52 47.0 -0.4**
comp=Z,44nm,0.9s,mb5.4
MEZF Maizieres J'vi 80.34 357⇑*i*P **P 23 52 47.3 -0.1**
comp=Z,250nm,0.9s,mb5.8
MEZF Maizieres J'vi 80.34 357⇑*i*P **P 23 52 47.3 -0.1**
comp=Z,250nm,0.9s,mb6.1
MOA Molln 80.36 351⇑*i*P **P 23 52 47.4 -0.2**
comp=Z,29nm,1.1s,mb5.1,SNR=27
KGM Kluang 80.38 261 P **P 23 52 49.4 +1.8**
VRI Vrincioaia 80.43 342⇑*i*P **P 23 52 49.2 +1.3**
VRI Vrincioaia 80.43 342 ⇑P **P 23 52 48.6 +0.7**
VRI Vrincioaia 80.43 342 ⇑P **P 23 52 49.2 +1.3**
PLOR Plostina 80.46 342⇑*i*P **P 23 52 49.1 +1.0**
NGP Nagpur 80.51 292 *e*P **P 23 52 44.6 -3.7**
NGP *ex* x 23 52 46.8
comp=Z,138nm,0.9s
NGP *e*S S 00 02 47.0 -5.8
GRR Gorron 80.53 1⇑*i*P **P 23 52 48.0 -0.4**
comp=Z,325nm,0.8s,mb6.0
GRR Gorron 80.53 1⇑*i*P **P 23 52 48.0 -0.4**
GRR pmax pmax
comp=Z,163nm,0.8s,mb6.0
GRR Gorron 80.53 1⇑*i*P **P 23 52 48.0 -0.4**
comp=Z,163nm,0.8s,mb6.0
ROSF Rostrenen 80.54 2⇑*i*P **P 23 52 48.2 -0.3**
comp=Z,284nm,1.3s,mb5.7
ROSF Rostrenen 80.54 2⇑*i*P **P 23 52 48.2 -0.3**
ROSF pmax pmax
comp=Z,142nm,1.3s,mb5.7
ROSF Rostrenen 80.54 2⇑*i*P **P 23 52 48.2 -0.3**
comp=Z,142nm,1.3s,mb5.7
ECH Echery 80.54 355 *e*P **P 23 52 48.2 -0.3**
PKS7 Kunszentmiklos 80.56 347⇓*e*P **P 23 52 49.5 +0.9**
SPAK Spaichingen-Ko 80.56 354 *e*P **P 23 52 48.4 -0.2**
LIBD Limburg 80.58 355 *e*P **P 23 52 48.4 -0.3**
THEF They Montfort 80.58 356 *e*P **P 23 52 48.6 -0.1**
PKSN Nyarlorinc 80.60 347⇓*e*P **P 23 52 50.0 +1.1**
SGMF Saint Gilles 80.64 2⇑*i*P **P 23 52 48.7 -0.3**
comp=Z,226nm,0.7s,mb5.9
SGMF Saint Gilles 80.64 2⇑*i*P **P 23 52 48.7 -0.3**
SGMF pmax pmax
comp=Z,113nm,0.7s,mb5.9
SGMF Saint Gilles 80.64 2⇑*i*P **P 23 52 48.7 -0.3**
comp=Z,113nm,0.7s,mb5.9
VIS Vishakhapatnam 80.64 287 *e*P **P 23 52 49.0 -0.1**
VIS AMb AMB 23 52 52.9
comp=Z,62nm,0.8s,mb5.6
HAU Haudompre 80.79 356⇑*i*P **P 23 52 49.4 -0.4**
comp=Z,147nm,0.9s,mb5.6
HAU *e*R
comp=Z,4µm,21.5s
HAU Haudompre 80.79 356⇑*i*P **P 23 52 49.4 -0.4**
HAU pmax pmax
comp=Z,73nm,0.9s,mb5.6
HAU MLR MLR
comp=Z,4µm,21.5s,MS5.7
HAU Haudompre 80.79 356⇑*i*P **P 23 52 49.4 -0.4**
comp=Z,73nm,0.9s,mb5.6
HAU LR LR
comp=Z,4µm,21.5s,MS5.7
ARSA Arzberg 80.82 350⇓*i*P **P 23 52 50.5 +0.5**
comp=Z,81nm,1.1s,mb5.6,SNR=115
FELD Feldberg im Sc 80.83 355 *e*P **P 23 52 49.5 -0.6**
MOF Molkenrain 80.90 355 *e*P **P 23 52 50.1 -0.3**
GNI Garni 80.91 327 P **P 23 52 52.2 +1.7**
SNR=6.8
GNI P 23 52 52.5
SNR=12
GNI Garni 80.91 327 P **P 23 52 51.4 +0.9**
GNI pmax pmax
comp=Z,36nm,0.9s
GNI Garni 80.91 327⇑*i*P **P 23 52 51.6 +1.1**
SLE Schleitheim 80.91 354⇑*i*P **P 23 52 49.9 -0.6**
comp=Z,60nm,0.9s,mb5.5
MLR Muntele Rosu 80.94 342⇑*i*P **P 23 52 52.5 +1.8**
MLR Muntele Rosu 80.94 342 ⇑P **P 23 52 52.5 +1.8**
HINF Hinteralfeld 80.95 356⇑*i*P **P 23 52 50.0 -0.7**
comp=Z,69nm,0.9s,mb5.3
HINF Hinteralfeld 80.95 356⇑*i*P **P 23 52 50.0 -0.7**
HINF pmax pmax
comp=Z,34nm,0.9s,mb5.3
HINF Hinteralfeld 80.95 356⇑*i*P **P 23 52 50.0 -0.7**
comp=Z,34nm,0.9s,mb5.3
QUIF Quistinic 80.96 2⇑*i*P **P 23 52 50.4 -0.3**
comp=Z,202nm,0.9s,mb5.7
QUIF Quistinic 80.96 2⇑*i*P **P 23 52 50.4 -0.3**
QUIF pmax pmax
comp=Z,101nm,0.9s,mb5.8
QUIF Quistinic 80.96 2⇑*i*P **P 23 52 50.4 -0.3**
comp=Z,101nm,0.9s,mb5.8
WATA Walderalm 81.12 352⇑*i*P **P 23 52 51.8 +0.2**
comp=Z,89nm,1.0s,mb5.7,SNR=48
WATA Walderalm 81.12 352⇑*i*P **P 23 52 51.8 +0.2**
WATA pmax pmax
comp=Z,89nm,1.0s,mb5.7
WEIN Weingarten 81.12 354⇑*i*P **P 23 52 51.2 -0.4**
comp=Z,134nm,1.1s,mb5.8
MOTA Moosalm 81.15 353⇑*i*P **P 23 52 51.7 -0.1**
comp=Z,84nm,1.1s,mb5.6,SNR=98
MOTA Moosalm 81.15 353⇑*i*P **P 23 52 51.7 -0.1**
MOTA pmax pmax
comp=Z,84nm,1.1s,mb5.6
VOIR 81.17 343⇓*i*P **P 23 52 53.1 +1.3**
VOIR 81.17 343 ⇓P **P 23 52 53.1 +1.3**
WTTA Wattenberg 81.19 352 *i*P **P 23 52 52.4 +0.4**
comp=Z,148nm,1.0s,mb5.9,SNR=99
KBA Koelnbreinsper 81.22 351 *i*P **P 23 52 52.8 +0.7**
comp=Z,268nm,0.9s,mb6.2,SNR=590
KBA Koelnbreinsper 81.22 351 *i*P **P 23 52 52.8 +0.7**
KBA pmax pmax
comp=Z,268nm,0.9s,mb6.2
WILA Wila 81.24 354⇑*i*P **P 23 52 52.0 -0.2**
comp=Z,90nm,0.9s,mb5.7
SQTA Sankt Quirin 81.26 353 *i*P **P 23 52 52.7 +0.3**
comp=Z,57nm,1.0s,mb5.5,SNR=76
SQTA Sankt Quirin 81.26 353 *i*P **P 23 52 52.7 +0.3**
SQTA pmax pmax
comp=Z,57nm,1.0s,mb5.5
BBS Basel-Blauen 81.27 355 *e*P **P 23 52 51.9 -0.5**
DAVA Damuels 81.30 353⇑*i*P **P 23 52 52.4 -0.1**
comp=Z,48nm,1.2s,mb5.3,SNR=14
ZUR Zurich 81.30 354⇑*i*P **P 23 52 52.2 -0.4**
comp=Z,197nm,1.1s,mb6.0
BOURR Bourrignon 81.35 355⇑*i*P **P 23 52 52.3 -0.6**
comp=Z,112nm,0.9s,mb5.8
BALST Balsthal 81.39 355⇑*i*P **P 23 52 52.6 -0.4**
comp=Z,107nm,1.2s,mb5.7
LOMF Lomont 81.42 356 *e*P **P 23 52 52.9 -0.3**
TIRR Tirgusor 81.43 340⇑*i*P **P 23 52 54.0 +0.7**
TIRR Tirgusor 81.43 340 P **P 23 52 53.6 +0.3**
TIRR Tirgusor 81.43 340 ⇑P **P 23 52 54.0 +0.8**
PKSM Moragy 81.45 347⇑*i*P **P 23 52 52.9 -0.5**
PKSM Moragy 81.45 347⇑*e*P **P 23 52 52.9 -0.5**
PERS Pernice 81.47 350 *i*P **P 23 52 53.7 +0.2**
PLONS Plons 81.57 354⇑*i*P **P 23 52 52.8 -1.2**
comp=Z,53nm,0.9s,mb5.5
BZS Buzias 81.59 345⇓*i*P **P 23 52 54.6 +0.5**
BZS Buzias 81.59 345 P **P 23 52 54.2 +0.1**
BZS Buzias 81.59 345 ⇓P **P 23 52 54.6 +0.5**
LOR Lormes 81.61 358⇑*i*P **P 23 52 53.8 -0.4**
comp=Z,120nm,1.0s,mb5.5
LOR *e*R
comp=Z,4µm,20.5s
LOR Lormes 81.61 358⇑*i*P **P 23 52 53.8 -0.4**
LOR pmax pmax
comp=Z,60nm,1.0s,mb5.5
LOR MLR MLR
comp=Z,4µm,20.5s,MS5.7
LOR Lormes 81.61 358⇑*i*P **P 23 52 53.8 -0.4**
comp=Z,60nm,1.0s,mb5.5
LOR LR LR
comp=Z,4µm,20.5s,MS5.7
GZR Gura Zlata 81.61 344⇓*i*P **P 23 52 55.0 +0.8**
GZR Gura Zlata 81.61 344 P **P 23 52 54.7 +0.5**
HYF Humbligny 81.64 358⇑*i*P **P 23 52 54.3 0.0**
OBKA Obir 81.66 350⇑*i*P **P 23 52 54.6 +0.2**
comp=Z,112nm,0.9s,mb5.8,SNR=214
MUO Muotathal 81.70 354⇑*i*P **P 23 52 53.7 -1.0**
comp=Z,130nm,1.0s,mb5.8
WRAB Tennant Creek 81.71 223*c i*P **P 23 52 53.0 -1.7**
WRAB Tennant Creek 81.71 223 *e*P **P 23 52 52.4 -2.4**
comp=Z,66nm,0.9s,mb5.6
WB2 Warramunga Arr 81.72 223⇓*i*P **P 23 52 52.5 -2.3**
WRA Warramunga Arr 81.72 223 P **P 23 52 52.6 -2.2**
comp=Z,36nm,0.8s,mb5.3,baz=36,slow=6.2,SNR=230
WRA PKKPbc PKKPbc 00 11 25.3 -1.0
comp=Z,0.9nm,0.9s,baz=224,slow=2.3,SNR=4.4
LLS Linth-Limmern 81.80 354⇑*i*P **P 23 52 54.7 -0.5**
comp=Z,50nm,0.9s,mb5.5
DAVOX Davos 81.80 353⇑*i*P **P 23 52 55.3 +0.1**
comp=Z,180nm,1.2s,mb5.9
BNALP Bannalp 81.81 354⇑*i*P **P 23 52 55.2 -0.1**
comp=Z,112nm,1.0s,mb5.7
SSF Saint Saulge 81.83 358⇑*i*P **P 23 52 55.0 -0.3**
comp=Z,165nm,1.0s,mb5.6
SSF Saint Saulge 81.83 358⇑*i*P **P 23 52 55.0 -0.3**
SSF pmax pmax
comp=Z,83nm,1.0s,mb5.6
SSF Saint Saulge 81.83 358⇑*i*P **P 23 52 55.0 -0.3**
comp=Z,83nm,1.0s,mb5.6
BRANT Les Verrieres 81.85 356⇑*i*P **P 23 52 55.4 0.0**
comp=Z,149nm,1.2s,mb5.8
PTCC Patocco-Chiusa 81.88 351 *i* Pu **P 23 52 55.0 -0.6**
comp=Z,45nm,0.6s,mb5.6
HASLI Hasliberg 81.94 355⇑*i*P **P 23 52 55.6 -0.3**
comp=Z,132nm,1.6s,mb5.6
APPI Appiano 82.00 352 *i* Pu **P 23 52 55.8 -0.5**
CADS Cadrg 82.02 351 *e*P **P 23 52 55.2 -1.1**
GMNA Gemona 82.02 351 *i* Pr **P 23 52 55.9 -0.5**
comp=Z,823nm,0.9s,mb6.7
BUC1 Bucharest 82.03 342⇑*i*P **P 23 52 56.7 +0.3**
BUC1 Bucharest 82.03 342 P **P 23 52 56.8 +0.4**
BUC1 Bucharest 82.03 342 ⇑P **P 23 52 56.7 +0.3**
AKL Akola 82.03 293 *e*P **P 23 52 57.7 +1.3**
AKL AMb AMB 23 53 14.2
comp=Z,122nm,1.4s,mb5.6
WIMIS Wimmis 82.06 355⇑*i*P **P 23 52 55.8 -0.8**
comp=Z,58nm,0.9s,mb5.5
AVF Avril sur Loir 82.10 358⇑*i*P **P 23 52 56.4 -0.4**
comp=Z,202nm,1.0s,mb5.7
AVF Avril sur Loir 82.10 358⇑*i*P **P 23 52 56.4 -0.4**
AVF pmax pmax
comp=Z,101nm,1.0s,mb5.7
AVF Avril sur Loir 82.10 358⇑*i*P **P 23 52 56.4 -0.4**
comp=Z,101nm,1.0s,mb5.7
LJU Ljubljana 82.12 350 *i* P **P 23 52 57.1 +0.2**
VDL Val di Lei 82.12 354⇑*i*P **P 23 52 56.4 -0.5**
comp=Z,126nm,0.8s,mb5.9
TUE Stuetta 82.15 354 *i* Pu **P 23 52 57.6 +0.6**
BERNI Berninapass 82.16 353⇑*i*P **P 23 52 57.3 +0.2**
comp=Z,96nm,1.1s,mb5.7
CABF La Chapelle 82.19 356⇑*i*P **P 23 52 57.3 0.0**
comp=Z,183nm,0.9s,mb5.7
CABF La Chapelle 82.19 356⇑*i*P **P 23 52 57.3 0.0**
CABF pmax pmax
comp=Z,92nm,0.9s,mb5.7
CABF La Chapelle 82.19 356⇑*i*P **P 23 52 57.3 0.0**
comp=Z,92nm,0.9s,mb5.7
VOY Vojsko 82.20 351 *e*P **P 23 52 56.7 -0.6**
VOY *e* pP 23 53 05.8 -1.5
VOY *e* 23 53 23.2
FUSIO Fusio 82.21 354⇑*i*P **P 23 52 57.4 0.0**
comp=Z,72nm,0.8s,mb5.6
SMF Signal de Mont 82.23 358⇑*i*P **P 23 52 57.0 -0.5**
comp=Z,322nm,1.0s,mb5.9
SMF Signal de Mont 82.23 358⇑*i*P **P 23 52 57.0 -0.5**
SMF pmax pmax
comp=Z,161nm,1.0s,mb5.9
SMF Signal de Mont 82.23 358⇑*i*P **P 23 52 57.0 -0.5**
comp=Z,161nm,1.0s,mb5.9
EZM Errum 82.24 329 *e*P **P 23 52 56.8 -0.7**
LKBD Leukerbad 82.34 355⇑*i*P **P 23 52 57.5 -0.5**
comp=Z,133nm,0.9s,mb5.9
BGF Bois d'Agland 82.34 358⇑*i*P **P 23 52 57.7 -0.4**
comp=Z,124nm,0.9s,mb5.5
BGF Bois d'Agland 82.34 358⇑*i*P **P 23 52 57.7 -0.4**
BGF pmax pmax
comp=Z,62nm,0.9s,mb5.5
BGF Bois d'Agland 82.34 358⇑*i*P **P 23 52 57.7 -0.4**
comp=Z,62nm,0.9s,mb5.5
SENIN Lac Senin 82.38 355⇑*i*P **P 23 52 58.1 -0.1**
comp=Z,164nm,3.0s
CTI Castel Tesino 82.39 352 *i* P **P 23 52 57.8 -0.5**
CTI pmax pmax
comp=Z,35nm,0.6s,mb5.5
CTI Castel Tesino 82.39 352 *i* Pu **P 23 52 57.8 -0.5**
comp=Z,35nm,0.6s,mb5.5
DJES Djerdap 82.39 344 *i* P **P 23 52 56.9 -1.4**
AIGLE Aigle 82.42 355⇑*i*P **P 23 52 58.2 -0.2**
comp=Z,50nm,0.8s,mb5.5
DIKM Dikmen 82.43 334 *e*P **P 23 52 58.5 0.0**
MABI Malga Bissina 82.48 353 P **P 23 52 58.5 -0.3**
BEO Belgrade 82.54 346 *i* P **P 23 52 58.5 -0.6**
BOJS Bojanci 82.57 350 *i* P **P 23 52 59.1 -0.2**
SALAN Lac Salanfe 82.61 355⇑*i*P **P 23 52 58.3 -1.2**
comp=Z,53nm,1.0s,mb5.5
TCF Toulx Ste Croi 82.62 359⇑*i*P **P 23 52 59.1 -0.4**
comp=Z,148nm,0.9s,mb5.7
TCF Toulx Ste Croi 82.62 359⇑*i*P **P 23 52 59.1 -0.4**
TCF pmax pmax
comp=Z,74nm,0.9s,mb5.7
TCF Toulx Ste Croi 82.62 359⇑*i*P **P 23 52 59.1 -0.4**
comp=Z,74nm,0.9s,mb5.7
MMK Mattmark 82.65 355⇑*i*P **P 23 53 00.3 +0.6**
comp=Z,115nm,0.8s,mb6.0
DIX Grande Dixence 82.66 355⇑*i*P **P 23 52 59.4 -0.3**
comp=Z,154nm,0.9s,mb6.0
MUGIO Muggio 82.72 354⇑*i*P **P 23 53 00.4 +0.4**
comp=Z,104nm,0.9s,mb5.9
KVT Kavak 82.74 334 *e*P **P 23 53 00.7 +0.5**
AGO Saint Agoulin 82.84 358 *e*P **P 23 53 01.3 +0.6**
PRD Provadia 82.85 340 *i* P **P 23 53 01.7 +1.0**
EZC Erman 82.87 330 *e*P **P 23 53 01.6 +0.8**
PLDF La Plantade 82.91 358 *e*P **P 23 53 01.4 +0.4**
SVIS Svilajnac 82.94 345 *i* P **P 23 53 00.7 -0.4**
SZH Strazhica 83.09 342 *i* P **P 23 53 03.5 +1.6**
PYM Petit Puy Mans 83.15 358 *e*P **P 23 53 02.9 +0.7**
DIVS Divcibare 83.32 346⇑*i*P **P 23 53 02.9 -0.3**
DIVS Divcibare 83.32 346 *e*P **P 23 53 03.1 -0.1**
TOS Tosya 83.33 335 *e*P **P 23 53 03.5 +0.3**
GRUS Gruza 83.41 345 *i* P **P 23 53 03.2 -0.4**
SAFT Safranbolu 83.49 336 *e*P **P 23 53 04.2 +0.2**
NVLJ Novalja 83.54 350 *i* P **P 23 53 03.3 -1.0**
SVSK Karacayir 83.55 333 *e*P **P 23 53 04.4 +0.1**
HKR Hakkari 83.56 327 *e*P **P 23 53 04.4 0.0**
RJF Les Rejaudoux 83.61 359⇑*i*P **P 23 53 04.1 -0.5**
comp=Z,156nm,1.0s,mb5.8
RJF *e*R
comp=Z,3µm,21.2s
RJF Les Rejaudoux 83.61 359⇑*i*P **P 23 53 04.1 -0.5**
RJF pmax pmax
comp=Z,78nm,1.0s,mb5.8
RJF MLR MLR
comp=Z,3µm,21.3s,MS5.7
RJF Les Rejaudoux 83.61 359⇑*i*P **P 23 53 04.1 -0.5**
comp=Z,78nm,1.0s,mb5.8
RJF LR LR
comp=Z,3µm,21.3s,MS5.7
LBL Lubilhac 83.66 358 *e*P **P 23 53 05.5 +0.6**
HYB Hyderabad 83.72 290⇓*i*P **P 23 53 05.5 +0.3**
comp=Z,100nm,1.0s,mb5.9
HYB *e*pP pP 23 53 15.0 -0.2
HYB *e*sP sP 23 53 20.5 +1.7
HYB *e*S S 00 03 24.0 -1.7
HYB Hyderabad 83.72 290⇓*e*P **P 23 53 05.5 +0.3**
HYB pmax pmax
comp=Z,100nm,1.0s,mb5.9
HYB Hyderabad 83.72 290⇓*e*P **P 23 53 05.5 +0.3**
comp=Z,100nm,1.0s,mb5.9
BNI Bardonecchia 83.72 356 *e*P **P 23 53 06.4 +1.2**
BNI pmax pmax
comp=Z,105nm,0.9s,mb6.0
BNI Bardonecchia 83.72 356 *e*P **P 23 53 06.3 +1.2**
comp=Z,105nm,0.9s,mb6.0
JMB Yambol 83.72 341 *e*P **P 23 53 05.1 -0.1**
JMB Yambol 83.72 341 *i* P **P 23 53 05.5 +0.3**
BTMT Batman 83.76 329 *e*P **P 23 53 06.0 +0.6**
PTK Pertek 83.78 330 *e*P **P 23 53 04.9 -0.6**
BOB Bobbio (Coli) 83.84 354 *i* P **P 23 53 06.4 +0.6**
BOB Bobbio (Coli) 83.84 354 *i* Pu **P 23 53 06.4 +0.6**
CANT Cankiri 83.84 335 *e*P **P 23 53 06.9 +1.1**
ORIF Oris-en-Rattie 83.89 356⇑*i*P **P 23 53 06.5 +0.5**
comp=Z,168nm,0.9s,mb5.9
ORIF *e*R
comp=Z,3µm,21.0s
ORIF Oris-en-Rattie 83.89 356⇑*i*P **P 23 53 06.5 +0.5**
ORIF pmax pmax
comp=Z,84nm,0.9s,mb5.9
ORIF Oris-en-Rattie 83.89 356⇑*i*P **P 23 53 06.5 +0.5**
comp=Z,84nm,0.9s,mb5.9
CUKT Cukurca 83.90 327 *e*P **P 23 53 04.9 -1.2**
RKT Rikitea 83.95 139 *e*PP PP 23 56 14.9 -5.2
comp=Z,95nm,28.8s
RKT Rikitea 83.95 139 *e*S S 00 03 23.2 -4.9
comp=Z,409nm,26.2s
RKT *e*LR LR 00 19 15.6
comp=Z,4µm,25.2s,baz=331
CORM Corum 83.97 334 *e*P **P 23 53 06.6 +0.1**
LFF La Frestale 83.98 360⇑*i*P **P 23 53 06.3 -0.2**
comp=Z,224nm,0.9s,mb6.0
LFF La Frestale 83.98 360⇑*i*P **P 23 53 06.3 -0.2**
comp=Z,112nm,0.9s,mb6.0
CAF Calviac 83.99 359⇑*i*P **P 23 53 06.5 0.0**
comp=Z,160nm,0.9s,mb5.8
CAF Calviac 83.99 359⇑*i*P **P 23 53 06.5 0.0**
CAF pmax pmax
comp=Z,80nm,0.9s,mb5.8
CAF Calviac 83.99 359⇑*i*P **P 23 53 06.5 0.0**
comp=Z,80nm,0.9s,mb5.8
VIVF Saint-Julien-l 84.00 357⇑*i*P **P 23 53 06.6 0.0**
comp=Z,101nm,0.9s,mb5.7
VIVF Saint-Julien-l 84.00 357⇑*i*P **P 23 53 06.6 0.0**
VIVF pmax pmax
comp=Z,50nm,0.9s,mb5.6
VIVF Saint-Julien-l 84.00 357⇑*i*P **P 23 53 06.6 0.0**
comp=Z,50nm,0.9s,mb5.7
MBDF Montbardon 84.04 355⇑*i*P **P 23 53 07.3 +0.5**
comp=Z,182nm,0.9s,mb5.9
MBDF Montbardon 84.04 355⇑*i*P **P 23 53 07.3 +0.5**
MBDF pmax pmax
comp=Z,91nm,0.9s,mb5.9
MBDF Montbardon 84.04 355⇑*i*P **P 23 53 07.3 +0.5**
comp=Z,91nm,0.9s,mb5.9
PGB Panagyurishte 84.12 343 *i* P **P 23 53 07.5 +0.3**
FITZ Fitzroy Crossi 84.12 231⇓*i*P **P 23 53 06.3 -0.9**
comp=Z,110nm,0.6s,mb6.2
PLE Pljevlja 84.16 346⇓*i*P **P 23 53 08.5 +1.0**
DOI San Damiano 84.23 355 *i* P **P 23 53 06.9 -0.9**
DOI pmax pmax
comp=Z,104nm,1.0s,mb5.9
DOI San Damiano 84.23 355 *i* Pr **P 23 53 06.9 -0.9**
comp=Z,104nm,1.0s,mb5.9
VTS Vitosha 84.25 343 *e*P **P 23 53 07.9 0.0**
VTS Vitosha 84.25 343 *i* P **P 23 53 08.2 +0.3**
VTS Vitosha 84.25 343⇑*i*P **P 23 53 07.7 -0.2**
VTS Vitosha 84.25 343 P **P 23 53 08.3 +0.4**
BARS Barje 84.27 344 *e*P **P 23 53 07.6 -0.4**
EDRB Edirne 84.28 341 *e*P **P 23 53 06.3 -1.7**
YOZ Yozgat 84.29 334 *e*P **P 23 53 08.3 +0.2**
UPM Unac-Piva 84.36 347⇓*i*P **P 23 53 08.1 -0.3**
VLC Villacollemand 84.37 353 *e*P **P 23 53 08.5 0.0**
comp=Z,92nm,0.9s,mb5.9
DIY Diyarbakir 84.43 329 *e*P **P 23 53 08.8 0.0**
PLD Plovdiv 84.45 342 *e*P **P 23 53 09.3 +0.4**
BDI Bagni Di Lucca 84.45 353 P **P 23 53 08.3 -0.6**
FIN Finale Ligure 84.47 354 *i* P **P 23 53 08.4 -0.6**
FIN pmax pmax
comp=Z,72nm,0.8s,mb5.8
FIN Finale Ligure 84.47 354 *i* Pr **P 23 53 08.4 -0.6**
comp=Z,72nm,0.8s,mb5.8
IVA Berane 84.53 346⇓*i*P **P 23 53 09.4 +0.1**
MDU Mudurnu 84.59 337 *e*P **P 23 53 09.2 -0.4**
MYA Malataya 84.60 331 *e*P **P 23 53 10.0 +0.4**
MALT Malatya 84.61 331⇑*i*P **P 23 53 10.5 +0.8**
MALT Malatya 84.61 331 P **P 23 53 10.6 +0.9**
MALT Malatya 84.61 331 ⇑P **P 23 53 10.5 +0.8**
HRT Hereke 84.62 338 *e*P **P 23 53 08.8 -1.0**
BR131 Keskin Array S 84.66 335 *e*P **P 23 53 09.3 -0.6**
comp=Z,45nm,0.8s,mb5.7
BRTR Keskin Array B 84.66 335 P **P 23 53 10.2 +0.2**
comp=Z,54nm,0.8s,mb5.7,baz=45,slow=2.4,SNR=194
BRTR PKPPKP 00 19 16.0
comp=Z,0.6nm,0.9s,baz=187,slow=7.2,SNR=3.7
BRTR LR LR 00 36 30.5
comp=Z,2µm,21.0s,MS5.4,baz=21,slow=40
BRY Bratogost 84.71 347⇓*i*P **P 23 53 10.1 -0.1**
TOUF Mont Tournerai 84.72 355 *e*P **P 23 53 10.5 +0.2**
NKY Niksic 84.73 346⇓*i*P **P 23 53 10.2 -0.1**
AUTN L'Aution 84.73 355 *e*P **P 23 53 10.4 +0.1**
SAOF Saorge 84.73 355 *e*P **P 23 53 09.9 -0.4**
ANTO Ankara 84.75 336 *e*P **P 23 53 09.0 -1.4**
ANTO Ankara 84.75 336⇑*i*P **P 23 53 10.7 +0.3**
ANTO Ankara 84.75 336 ⇓P **P 23 53 11.2 +0.8**
SNR=19
ANTO Ankara 84.75 336 ⇑P **P 23 53 10.7 +0.3**
PVY Plav 84.79 346⇓*i*P **P 23 53 10.4 -0.2**
PII Pisa 84.80 353 P **P 23 53 09.7 -0.9**
PII pmax pmax
comp=Z,72nm,0.7s,mb5.9
PII Pisa 84.80 353 P **P 23 53 09.7 -0.9**
comp=Z,72nm,0.7s,mb5.9
STOF St-Etienne Org 84.81 356 *e*P **P 23 53 11.1 +0.4**
LUCF Luceram 84.84 355 *e*P **P 23 53 10.7 -0.2**
SMRF Simiane la Rot 84.84 356⇑*i*P **P 23 53 11.5 +0.6**
comp=Z,212nm,0.9s,mb6.0
SMRF Simiane la Rot 84.84 356⇑*i*P **P 23 53 11.5 +0.6**
comp=Z,212nm,0.9s,mb6.3
MVIF Mont Vial 84.85 355 *e*P **P 23 53 10.9 0.0**
BADI Badiali 84.86 351 P **P 23 53 11.4 +0.5**
SBF Sospel 84.86 355⇑*i*P **P 23 53 10.6 -0.4**
comp=Z,470nm,0.9s,mb6.3
SBF Sospel 84.86 355⇑*i*P **P 23 53 10.6 -0.4**
SBF pmax pmax
comp=Z,235nm,0.9s,mb6.3
SBF Sospel 84.86 355⇑*i*P **P 23 53 10.6 -0.4**
comp=Z,235nm,0.9s,mb6.3
BNN Bunyan 84.87 333 *e*P **P 23 53 10.6 -0.4**
CING Cingoli 84.90 351 *i* Pu **P 23 53 11.5 +0.4**
VILF Villemus 84.96 356 *e*P **P 23 53 12.2 +0.7**
ADVT Abdulvahap 84.97 338 *e*P **P 23 53 10.1 -1.5**
CSNT Castellina Chi 84.98 352 P **P 23 53 10.8 -0.8**
comp=Z,139nm,0.8s,mb6.1
KKB Krupnik 84.98 343 P **P 23 53 13.7 +2.1**
REVF Revere 84.99 355 *e*P **P 23 53 11.3 -0.3**
PRAF Pradon 85.03 357 *e*P **P 23 53 12.6 +0.8**
TTG Podgorica 85.06 346⇓*i*P **P 23 53 11.9 -0.1**
GEMT Gemlik 85.10 338 *e*P **P 23 53 11.1 -1.1**
MMB Musomiste 85.13 343 *e*P **P 23 53 12.7 +0.4**
MMB Musomiste 85.13 343 *i* P **P 23 53 13.3 +1.0**
HCY Herceg Novi 85.16 347⇓*i*P **P 23 53 11.9 -0.6**
SKO Skopje 85.16 344 *e*P **P 23 53 13.9 +1.5**
SKO Skopje 85.16 344 *e*P **P 23 53 14.1 +1.6**
TAVF Tavernes 85.18 356 *e*P **P 23 53 13.1 +0.5**
TREF Trevaresse 85.20 356 *e*P **P 23 53 13.1 +0.4**
AS31 Alice Springs 85.21 222 *e*P **P 23 53 11.3 -1.4**
FRF La Foret Royal 85.21 355⇑*i*P **P 23 53 12.3 -0.4**
comp=Z,180nm,0.9s,mb5.9
FRF La Foret Royal 85.21 355⇑*i*P **P 23 53 12.3 -0.4**
FRF pmax pmax
comp=Z,90nm,0.9s,mb5.9
FRF La Foret Royal 85.21 355⇑*i*P **P 23 53 12.3 -0.4**
comp=Z,90nm,0.9s,mb5.9
ASAR Alice Springs 85.21 222 P **P 23 53 11.2 -1.5**
comp=Z,35nm,0.8s,mb5.5,baz=27,slow=4.8,SNR=228
ASAR LR LR 00 28 41.7
comp=Z,2µm,19.9s,MS5.4,baz=25,slow=34
ASPA Alice Springs 85.21 222 *e*P **P 23 53 11.3 -1.4**
BUM Brajici-Budva 85.24 346⇓*i*P **P 23 53 13.0 +0.1**
ASS Assisi 85.26 351 P **P 23 53 13.2 +0.2**
ASS pmax pmax
comp=Z,14nm,0.8s,mb5.1
ASS Assisi 85.26 351 P **P 23 53 13.2 +0.2**
comp=Z,14nm,0.8s,mb5.2
PUYF Puyloubier 85.28 356 *e*P **P 23 53 13.7 +0.6**
RKY Sarkoy-Tekirda 85.31 340 *e*P **P 23 53 13.4 +0.2**
GRFL Gerfalco 85.33 352 P **P 23 53 13.1 -0.2**
comp=Z,222nm,0.8s,mb6.3
NVR Nevrokopi 85.34 342 *e*P **P 23 53 13.3 0.0**
ALN Alexandroupoli 85.34 341 *e*P **P 23 53 13.2 -0.2**
ARMA Armidale 85.37 205 *e*P **P 23 53 12.5 -1.0**
EPON Pontenova 85.37 6 P **P 23 53 12.7 -0.8**
comp=Z,94nm,1.0s,mb5.9
GELF Grande-Etoile 85.44 356 *e*P **P 23 53 13.5 -0.4**
LMR La Mourre 85.44 356⇑*i*P **P 23 53 13.6 -0.3**
comp=Z,193nm,0.9s,mb5.9
LMR La Mourre 85.44 356⇑*i*P **P 23 53 13.6 -0.3**
LMR pmax pmax
comp=Z,97nm,0.9s,mb5.9

LMR La Mourre 85.44 356⇑ *i*P P 23 53 13.6 -0.3
comp=Z,97nm,0.9s,mb5.9
BNT Bandirma 85.46 339 *e*P P 23 53 14.2 +0.2
ENEZ Enez 85.47 341 *e*P P 23 53 13.8 -0.3
EARI Arriondas 85.50 4 P **P 23 53 13.3 -0.8**
comp=Z,84nm,0.9s,mb5.9
ULC Ulcinj 85.52 346⇓ *i*P P 23 53 14.5 +0.2
POO Poona 85.56 294⇓ *i*x x 23 53 12.0
comp=Z,170nm,1.0s
POO *ex* x 23 54 04.9
MTLF Montolieu 85.57 359⇑ *i*P P 23 53 14.4 -0.1
comp=Z,126nm,1.0s,mb5.8
MTLF Montolieu 85.57 359⇑ *i*P P 23 53 14.4 -0.1
comp=Z,63nm,1.0s,mb5.8
ESKT Eskisehir 85.57 337 *e*P P 23 53 13.4 -1.1
VAY Valandovo 85.60 343 *e*P P 23 53 13.9 -0.8
VAY Valandovo 85.60 343 *e*P P 23 53 15.3 +0.7
SRS Serrai 85.61 343 *e*P P 23 53 15.3 +0.6
EMAZ Mazaricos 85.62 7 P **P 23 53 13.4 -1.4**
comp=Z,87nm,1.3s,mb5.8
ELAN Lanestosa 85.63 3 P **P 23 53 14.9 +0.1**
comp=Z,154nm,0.8s,mb6.3
OSSF Osses 85.66 1 *e*P P 23 53 14.4 -0.5
EALK Alkurruntz 85.69 1 P **P 23 53 15.1 0.0**
comp=Z,50nm,0.6s,mb5.9
KNT Kendrikon 85.70 343 *e*P P 23 53 15.2 +0.1
STS Santiago 85.72 7 P **P 23 53 13.8 -1.4**
STS pmax pmax
comp=Z,26nm,0.8s,mb5.5
STS Santiago 85.72 7 P **P 23 53 13.8 -1.4**
comp=Z,26nm,0.8s,mb5.5
ELIZ Elizondo 85.74 1⇑ *i*P P 23 53 16.0 +0.6
comp=Z,14nm,0.7s,mb5.3
SJPF Ste Jean 85.80 1⇑ *i*P P 23 53 15.9 +0.2
comp=Z,75nm,0.7s,mb5.7
SJPF Ste Jean 85.80 1⇑ *i*P P 23 53 15.9 +0.2
comp=Z,38nm,0.7s,mb5.7
LARF Larrau 85.88 1 *e*P P 23 53 16.4 +0.4
AQU L'Aquila 85.89 350⇑ *i*P P 23 53 16.1 0.0
AQU L'Aquila 85.89 350⇑ P P 23 53 16.1 +0.1
EPF Esparros 85.89 0⇑ *i*P P 23 53 15.2 -0.9
comp=Z,72nm,0.9s,mb5.6
EPF Esparros 85.89 0⇑ *i*P P 23 53 15.2 -0.9
EPF pmax pmax
comp=Z,36nm,0.9s,mb5.6
EPF Esparros 85.89 0⇑ *i*P P 23 53 15.2 -0.9
comp=Z,36nm,0.9s,mb5.6
KIZT Kizilcal 85.92 336 *e*P P 23 53 15.6 -0.6
SOH Sokhos 85.94 343 *e*P P 23 53 15.9 -0.4
MLS Moulis 85.96 359 *e*P P 23 53 16.9 +0.4
LRDF Laroque-de-Fa 85.97 358 *e*P P 23 53 17.6 +1.1
GRG Griva 85.98 343 *e*P P 23 53 16.3 -0.2
ETSF Etsaut 86.02 1⇑ *i*P P 23 53 16.9 +0.2
comp=Z,93nm,0.7s,mb5.8
ETSF Etsaut 86.02 1⇑ *i*P P 23 53 16.9 +0.2
comp=Z,47nm,0.7s,mb5.8
TIR Tirane 86.03 345 *e*P P 23 53 17.2 +0.4
GAZ Gaziantep 86.03 331 *e*P P 23 53 16.9 +0.1
PGF Pioggiola 86.08 354⇑ *i*P P 23 53 16.7 -0.3
comp=Z,346nm,0.9s,mb6.3
PGF Pioggiola 86.08 354⇑ *i*P P 23 53 16.7 -0.3
PGF pmax pmax
comp=Z,173nm,0.9s,mb6.3
PGF Pioggiola 86.08 354⇑ *i*P P 23 53 16.7 -0.3
comp=Z,173nm,0.9s,mb6.3
OHR Ohrid 86.11 345 *e*P P 23 53 17.3 +0.1
BIA Bitola 86.11 344 *e*P P 23 53 17.4 +0.2
BIA Bitola 86.11 344 *e*P P 23 53 16.6 -0.6
MDRS Chennai 86.11 286 *e*P P 23 53 17.2 0.0
RESF Ens 86.11 0 *e*P P 23 53 17.9 +0.7
KOZT Kozan 86.15 332 *e*P P 23 53 16.7 -0.7
SALF Salau 86.16 359 *e*P P 23 53 18.6 +1.2
HORT Hortiatis 86.21 343 *e*P P 23 53 16.6 -1.1
FGMS Monte Sant'Ang 86.23 348 P **P 23 53 18.3 +0.5**
comp=Z,94nm,0.7s,mb6.1
EBIE Bielsa 86.24 0 P **P 23 53 18.9 +1.1**
comp=Z,84nm,0.9s,mb6.0
MTCE Montecelio 86.28 351 P **P 23 53 18.3 +0.3**
OUR Ouranopolis 86.30 342 *e*P P 23 53 16.8 -1.4
CERT Cerreto 86.33 351 P **P 23 53 18.2 -0.1**
FNA Florina 86.33 344 *e*P P 23 53 17.7 -0.6
KAD Karad 86.34 293 *e*P P 23 53 18.9 +0.5
KAD *e*P 23 53 19.0
KAD AMb AMB 23 53 20.5
comp=Z,52nm,0.6s,mb5.9
PLG Polygyros 86.36 343 *e*P P 23 53 18.1 -0.3
EZAM Zamans 86.44 7 P **P 23 53 17.8 -1.0**
comp=Z,42nm,0.9s,mb5.7
EJON La Jonquera 86.45 358 P **P 23 53 19.7 +0.9**
comp=Z,5.8nm,0.6s,mb5.0
LIA Limnos Island 86.48 341 *e*P P 23 53 18.7 -0.3
MIDA Miranda 86.50 350 P **P 23 53 20.4 +1.3**
VALF Valcebollere 86.51 359 *e*P P 23 53 20.4 +1.2
SRBC Serra Branca 86.51 22 *e*P P 23 53 20.5 +1.3
CEYT Ceyhan 86.61 332 *e*P P 23 53 19.8 +0.2
KONT Konya--Tatoy 86.67 335 *e*P P 23 53 19.8 -0.1
KZN Kozani 86.73 344 *e*P P 23 53 10.6 -10
FG5 Orsara di Pugl 86.73 349 P **P 23 53 21.4 +1.1**
comp=Z,25nm,0.7s,mb5.5
PAIG Paliouri 86.75 342 *e*P P 23 53 19.0 -1.3
ELOB Lobios 86.76 6 P **P 23 53 19.9 -0.5**
comp=Z,46nm,0.9s,mb5.7
ROSA Rosais 86.77 22 *e*P P 23 53 21.4 +1.0
ECAL Calabor 86.77 5 P **P 23 53 20.0 -0.5**
comp=Z,23nm,0.7s,mb5.5
CALA Caldeira 86.79 22 *e*P P 23 53 20.9 +0.4
LIT Litokhoron 86.80 343 *e*P P 23 53 19.6 -1.0
FG4 Candela 86.85 349 P **P 23 53 22.3 +1.5**
comp=Z,213nm,1.2s,mb6.2
PRK Paraskevi 86.88 340 *e*P P 23 53 20.5 -0.5
PBRG Braganca 86.91 5 *e*P P 23 53 20.7 -0.4
comp=Z,38nm,0.7s,mb5.7
PCAB Cabril 86.92 6 *e*P P 23 53 21.7 +0.5
comp=Z,42nm,1.1s,mb5.6
PICO Pico 86.93 22 *e*P P 23 53 21.6 +0.4
PID Ribeirinha 87.06 22 *e*P P 23 53 21.9 +0.1
ESAC San Caprasio 87.20 1⇑ P P 23 53 22.4 -0.1
comp=Z,131nm,0.9s,mb6.2
BHD Baghdad 87.20 324 *ex* x 23 53 20.0
BHD *ex* x 00 03 47.0
BHD *ex* x 00 03 54.0
BHD *ex* x 23 56 46.0
LCI Lecce 87.29 347 P **P 23 53 23.3 +0.4**
LCI pmax pmax
comp=Z,49nm,0.8s,mb5.8
LCI Lecce 87.29 347 P **P 23 53 23.3 +0.4**
comp=Z,49nm,0.8s,mb5.8
MEV Metsovon 87.33 344 *e*P P 23 53 24.3 +1.2
PVRL Vila Real 87.38 6 *e*P P 23 53 23.0 -0.4
comp=Z,52nm,0.7s,mb5.9
XOR Xorichti 87.38 343 *e*P P 23 53 21.8 -1.6
NEO Neokhori 87.43 342 *e*P P 23 53 22.9 -0.8
PTO Porto 87.45 7 *e*P P 23 53 24.0 +0.3
comp=Z,50nm,0.9s,mb5.8
JAN Janina 87.52 344 *e*P P 23 53 24.8 +0.7
SLCN Sala Consilina 87.57 348 P **P 23 53 24.7 +0.4**
KEK Kerkira 87.64 345 *e*P P 23 53 24.3 -0.3
IGT Igoumenitsa 87.73 345 *e*P P 23 53 24.2 -0.9
CHOS Chios island 87.75 340 *e*P P 23 53 23.9 -1.3
ORI Oriolo Calabro 87.78 348 P **P 23 53 26.6 +1.3**
AGG Agios Georgios 87.88 343 *e*P P 23 53 23.9 -1.9
PVIS Viseu 87.92 6 *e*P P 23 53 25.6 -0.4
comp=Z,90nm,0.9s,mb6.0
EVR Evrytania 88.07 343 *e*P P 23 53 26.0 -0.7
GUD Guadarrama 88.19 3⇑ P P 23 53 26.2 -1.1
GUD pmax pmax
comp=Z,30nm,0.8s,mb5.6
GUD Guadarrama 88.19 3⇑ P P 23 53 26.2 -1.0
comp=Z,30nm,0.8s,mb5.6
PDA Ponta Delgada 88.28 20 *i* LR LR 00 23 47.0
ELL Elmali 88.43 337 *e*P P 23 53 27.2 -1.2
LKD Levkas 88.48 344 *e*P P 23 53 26.5 -2.1
EMOS Mosqueruela 88.55 1 P **P 23 53 30.9 +1.9**
comp=Z,36nm,0.9s,mb5.7
BANOM Banah 88.67 312 P **P 23 53 30.3 +0.8**
SNR=14
RIV Riverview 88.73 204 *e*P P 23 53 28.9 -0.9
BODT Bodrum 88.75 339 *e*P P 23 53 28.7 -1.2
PCBR Castelo Branco 88.82 6 *e*P P 23 53 29.6 -0.6
comp=Z,48nm,0.8s,mb5.9
RLS Riolos of Patr 88.97 344 *e*P P 23 53 30.9 0.0
PTOM Tomar 88.97 7 *e*P P 23 53 30.7 -0.3
comp=Z,116nm,0.9s,mb6.2
VLS Valsamata 89.00 344 *e*P P 23 53 29.9 -1.2

VSL Villasalto 89.08 353 *e*P P 23 53 31.0 -0.5
comp=Z,35nm,0.9s,mb5.7
ESBB Sonseca Array 89.17 3 P **P 23 53 31.3 -0.6**
comp=Z,51nm,1.3s,mb5.7
ESDC Sonseca Array 89.17 3 P **P 23 53 30.8 -1.1**
comp=Z,23nm,0.8s,mb5.6,baz=354,slow=4.3,SNR=101
ESDC Sonseca Array 89.17 3⇑P P 23 53 30.6 -1.2
comp=Z,29nm,0.8s,mb5.7
ESLA Sonseca Array 89.17 3 *e*P P 23 53 31.0 -0.8
comp=Z,7.2nm,0.9s,mb5.0
MIB Mutribah 89.17 321 *e*P P 23 53 30.8 -1.1
MIB AMb AMB 23 53 33.5
comp=Z,110nm,0.8s,mb6.2
ECHE Chera 89.32 1 P **P 23 53 33.0 +0.4**
ECHE pmax pmax
comp=Z,14nm,0.8s,mb5.3
ECHE Chera 89.32 1 P **P 23 53 33.0 +0.5**
comp=Z,14nm,0.8s,mb5.3
ARG Arkhangelos 89.37 338 *e*P P 23 53 31.8 -1.0
URZ Urewera 89.39 183 P **P 23 53 29.3 -3.6**
comp=Z,31nm,1.0s,mb5.6,baz=23,slow=1.9,SNR=6.7
URZ LR LR 00 27 39.4
comp=Z,3μm,21.8s,MS5.6,baz=303,slow=32
BHL Bhannes 89.53 331 *e*P P 23 53 33.4 -0.1
PMAFR Mafra 89.57 8 *e*P P 23 53 33.6 -0.1
PMAFR Mafra 89.57 8 *e*LR LR 00 24 18.3
RST Umm Al-Ruwaisa 89.58 321 *e*P P 23 53 33.3 -0.5
RST AMb AMB 23 53 35.5
comp=Z,34nm,0.9s,mb5.7
PLOU Loures 89.65 7 *e*P P 23 53 34.3 +0.2
comp=Z,92nm,1.0s,mb6.1
MBWA Marble Bar 89.65 234 *e*P P 23 53 32.5 -1.6
comp=Z,22nm,0.7s,mb5.6
NAY Al-Naaiem 89.70 320 *e*P P 23 53 33.8 -0.6
NAY AMb AMB 23 53 35.7
comp=Z,26nm,0.8s,mb5.6
STKA Stephens Creek 89.72 212 *e*P P 23 53 33.1 -1.4
comp=Z,58nm,0.8s,mb6.0
STKA Stephens Creek 89.72 212 P **P 23 53 33.2 -1.3**
comp=Z,67nm,0.8s,mb6.0,baz=350,slow=6.3,SNR=118
STKA LR LR 00 31 22.1
comp=Z,3μm,21.3s,MS5.7,baz=19,slow=34
ITM Ithomi 89.74 343 *e*P P 23 53 34.0 -0.5
SJG San Juan 89.76 61 P **P 23 53 34.8 +0.2**
SJG pmax pmax
comp=Z,120nm,1.2s
SJG San Juan 89.76 61 *e*P P 23 53 34.7 +0.1
comp=Z,116nm,1.3s,mb6.0
PESTR Estremoz 89.78 6 *e*P P 23 53 34.0 -0.7
comp=Z,55nm,0.8s,mb5.9
PESTR Estremoz 89.78 6 *e*LR LR 00 23 39.5
ASHO Ashiyiah 89.83 311 P **P 23 53 36.3 +1.3**
SNR=6.6
RDF Al-Radifah 89.86 320 *e*P P 23 53 34.3 -0.8
RDF AMb AMB 23 53 36.7
comp=Z,77nm,0.9s,mb6.0
QRN Al-Qurain 89.88 320 *e*P P 23 53 35.4 +0.3
QRN AMb AMB 23 53 36.7
comp=Z,62nm,0.8s,mb6.0
EBAD Badajoz 89.93 6 P **P 23 53 34.8 -0.6**
comp=Z,28nm,0.8s,mb5.6
CPD Cerro la Pandu 89.95 61 *e*P P 23 53 35.6 +0.1
VLI Veliai 90.00 342 *e*P P 23 53 33.0 -2.7
MTP Monte Pirata 90.09 60 *e*P P 23 53 36.9 +0.7
HOQ Hoqain 90.17 310 P **P 23 53 36.6 +0.1**
SNR=7.7
EBEN Beniarda 90.21 0 P **P 23 53 36.9 +0.2**
comp=Z,36nm,1.0s,mb5.7
EVIA Vianos 90.24 2 P **P 23 53 36.5 -0.4**
comp=Z,19nm,0.6s,mb5.6
ETOB Tobarra 90.26 2 P **P 23 53 37.0 +0.1**
comp=Z,52nm,0.9s,mb5.9
PBEJ Beja 90.60 7 *e*P P 23 53 38.1 -0.4
comp=Z,38nm,1.1s,mb5.6
CNB Canberra Magne 90.60 205 *e*P P 23 53 38.0 -0.6
comp=Z,30nm,0.9s,mb5.6
EADA Adamuz 90.64 4⇑P P 23 53 38.0 -0.7
comp=Z,54nm,1.0s,mb5.8
EBAN Banos Encina 90.68 3 P **P 23 53 38.4 -0.6**
comp=Z,31nm,0.8s,mb5.7
ARQ Araqi 90.76 310 P **P 23 53 39.7 +0.4**
SNR=12
JMDO Jabal Madar 90.82 309 P **P 23 53 40.2 +0.7**
SNR=12
NPS Neapolis 90.85 340 *e*P P 23 53 39.9 +0.2
ZKR Zakros 90.86 339 *e*P P 23 53 36.8 -3.0
EMIN Mina Concepcio 90.93 6⇑P P 23 53 39.0 -1.1
comp=Z,61nm,0.9s,mb5.9
BSY Bisya 90.94 309 P **P 23 53 40.2 +0.1**
SNR=21
VAM Vamos 91.01 341 *e*P P 23 53 40.3 -0.2
EQES Quesada 91.06 3 P **P 23 53 40.0 -0.7**
comp=Z,36nm,1.5s,mb5.5
EHUE Huescar 91.06 2⇑P P 23 53 39.8 -0.9
comp=Z,12nm,0.8s,mb5.3
EMUR La Murta 91.06 1⇑P P 23 53 39.4 -1.3
comp=Z,18nm,0.7s,mb5.5
EGRO El Granado 91.11 6 P **P 23 53 38.6 -2.3**
comp=Z,52nm,1.3s,mb5.7
ELUQ Luque 91.26 4 P **P 23 53 41.1 -0.5**
comp=Z,17nm,1.0s,mb5.3
ECOG Cogollos-Vega 91.57 3 P **P 23 53 42.2 -0.9**
comp=Z,24nm,1.0s,mb5.5
TRD Trivandrum 91.67 286 *e*P P 23 53 43.8 +0.3
TRD AMb AMB 23 53 48.6
comp=Z,49nm,0.9s,mb5.8
ELOJ Sierra Loja 91.68 4 P **P 23 53 42.8 -0.8**
comp=Z,31nm,0.8s,mb5.7
ERON Agron 91.82 3 P **P 23 53 42.8 -1.4**
comp=Z,7.6nm,0.9s,mb5.0
ESPR Esperra 91.88 5⇑P P 23 53 43.8 -0.7
comp=Z,71nm,0.9s,mb6.0
ENIJ Nijar 91.91 2 P **P 23 53 43.3 -1.4**
comp=Z,6.9nm,0.5s,mb5.2
EBER Berja 91.97 3 P **P 23 53 43.3 -1.6**
comp=Z,16nm,1.0s,mb5.3
EGUA Guajares 92.01 3⇑P P 23 53 44.3 -0.8
comp=Z,3.0nm,0.7s,mb4.7
EMIJ Mijas 92.23 4⇑P P 23 53 45.8 -0.4
comp=Z,59nm,0.8s,mb6.0
EJIF Jimena Fronter 92.31 5⇑P P 23 53 46.2 -0.2
comp=Z,19nm,0.8s,mb5.5
EBNR Beni Rached 92.62 359 P **P 23 53 55.0 +7.1**
EMHD Djebel Mahouad 92.69 358 P **P 23 53 42.5 -5.7**
KEST Kesra 92.83 353 P **P 23 53 48.5 -0.4**
comp=Z,7.2nm,0.8s,mb5.1,baz=315,slow=3.6,SNR=24
EANR `Ain N'Sour 92.96 359 P **P 23 53 49.0 -0.5**
ETRT Tiaret 93.52 359 P **P 23 53 52.0 -0.1**
TOO Toolangi 93.78 207 *e*P P 23 53 52.0 -1.3
comp=Z,8.0nm,0.7s,mb5.3
TOO Toolangi 93.78 207 *e*P P 23 53 52.0 -1.3
TOO pmax pmax
comp=Z,8.0nm,0.7s,mb5.3
SDV Santo Domingo 94.66 70 *e*P P 23 53 56.5 -0.8
comp=Z,17nm,0.8s,mb5.5
RPZ Rata Peaks 95.14 187 P **P 23 53 56.5 -2.9**
comp=Z,16nm,0.7s,mb5.6,baz=45,slow=10.0,SNR=3.1
ROSC El Rosal 95.66 75 P **P 23 54 03.8 +1.9**
comp=Z,1.6nm,0.3s,mb4.9,baz=107,slow=11,SNR=2.1
ROSC El Rosal 95.66 75 *e*P P 23 54 04.0 +2.2
WHFO Wadi Hawf 96.71 310 P **P 23 54 05.9 -0.7**
SNR=6.5
TORD Torodi Ar. Bea 115.66 359 PKP PKPdf 23 59 17.5 -0.9
comp=Z,8.9nm,0.7s,baz=347,slow=2.3,SNR=93
TORD PP PP 00 00 17.7 -3.4
comp=Z,3.6nm,0.8s,baz=0.8,slow=6.6,SNR=5.3
TORD SKP 00 02 51.0
comp=Z,0.9nm,0.8s,baz=360,slow=4.3,SNR=4.0
TORD PKKPbc PKKPbc 00 09 48.6 -2.1
comp=Z,6.3nm,0.8s,baz=164,slow=2.3,SNR=15
LPAZ La Paz 115.94 84 PKP PKPdf 23 59 18.4 -0.5
comp=Z,0.5nm,0.5s,baz=336,slow=14,SNR=3.5
SIV San Ignacio 120.06 78 PKP PKPdf 23 59 25.0 -1.9
comp=Z,2.5nm,0.9s
SIV PP PP 00 00 50.4 -1.3
comp=Z,3.7nm,0.8s,baz=342,slow=6.2,SNR=6.7
KMBO Kilima Mbogo 121.05 316 PKP PKPdf 23 59 29.0 +0.2
comp=Z,6.7nm,0.9s,baz=30,slow=2.7,SNR=21
KMBO Kilima Mbogo 121.05 316 PKIKP PKPdf 23 59 29.0 +0.2
KMBO pmax pmax
comp=Z,7.0nm,0.9s
DBIC Dimbokro 121.93 6 PKP PKPdf 23 59 30.0 -0.5
comp=Z,18nm,0.5s,baz=358,slow=3.0,SNR=63
DBIC Dimbokro 121.93 6 PKIKP PKPdf 23 59 30.0 -0.5
DBIC pmax pmax
comp=Z,19nm,0.5s
LIC Lamto 122.36 6 *e*PKIKP PKPdf 23 59 30.6 -0.7
comp=Z,82nm,0.8s
LIC *e*R
comp=Z,2μm,23.0s
LIC Lamto 122.36 6 *e*PKPdf PKPdf 23 59 30.6 -0.7
LIC LR LR
comp=Z,1μm,23.0s,MS5.5
BDFB Brasilia 127.53 65 PKP PKPdf 23 59 41.3 +0.1
comp=Z,6.6nm,0.8s,baz=221,slow=4.9,SNR=8.9
BDFB Brasilia 127.53 65 PKIKP PKPdf 23 59 41.3 +0.1
BDFB pmax pmax
comp=Z,7.0nm,0.8s
VNDA Vanda 129.23 185 PKP PKPdf 23 59 41.8 -2.7
comp=Z,1.0nm,0.6s,baz=299,slow=3.0,SNR=10
VNDA SKP 00 03 13.6
comp=Z,1.9nm,0.8s,baz=292,slow=4.6,SNR=3.8
CPUP Villa Florida 130.09 83 PKP PKPdf 23 59 45.2 -0.8
comp=Z,4.6nm,0.9s,baz=309,slow=3.0,SNR=6.4
CPUP SKPbc 00 03 03.3
comp=Z,8.2nm,0.8s,baz=306,slow=7.9,SNR=3.6
CPUP Villa Florida 130.09 83 PKIKP PKPdf 23 59 45.2 -0.8
CPUP pmax pmax
comp=Z,5.0nm,0.9s
CPUP pmax pmax
comp=N,8.0nm,0.9s
CPUP Villa Florida 130.09 83 PKP PKPdf 23 59 45.2 -0.8
CPUP SKPbc 00 03 03.3
PLCA Paso Flores 131.47 107 PKP PKPdf 23 59 47.5 -1.1
comp=N,19nm,0.9s,baz=301,slow=2.2,SNR=30
PLCA SKPbc SKPbc 00 03 09.0 -2.6
comp=N,17nm,0.9s,baz=318,slow=3.6,SNR=14
PLCA Paso Flores 131.47 107 PKIKP PKPdf 23 59 47.5 -1.2
PLCA pmax pmax
comp=Z,19nm,0.9s
PLCA pmax pmax
comp=N,17nm,1.0s
TSUM Tsumeb 145.08 331 PKPbc PKPbc 00 00 13.3 +0.3
comp=N,66nm,0.9s,baz=344,slow=7.0,SNR=85
PMSA Palmer Station 145.13 137 PKP PKPdf 00 00 10.8 -2.8
comp=N,79nm,0.8s,baz=299,slow=2.6,SNR=22
PMSA SKPbc SKPbc 00 03 47.9 -2.9
comp=N,14nm,0.9s,baz=308,slow=1.9,SNR=3.7
MAW Mawson 146.24 218 PKPbc PKPbc 00 00 14.1 -2.5
comp=N,37nm,0.6s,baz=82,slow=3.9,SNR=89
LBTB Lobatse 147.32 314 PKPdf PKPdf 00 00 20.4 +3.1
BOSA Boshof 150.55 311 PKPbc PKPbc 00 00 28.4 +0.4
comp=N,80nm,0.8s,baz=39,slow=1.9,SNR=98
BOSA PKPab PKPab 00 00 34.6 -0.1
comp=N,80nm,0.8s,baz=17,slow=1.7,SNR=20
BOSA Boshof 150.55 311 PKIKP PKPbc 00 00 28.4 +0.5
BOSA *e* 00 00 34.6
BOSA pmax pmax
comp=Z,80nm,0.8s
BOSA pmax pmax
comp=Z,80nm,0.8s
SYO Syowa Base 154.48 212⇓ *e*PKPdf PKPdf 00 00 25.2 -3.1
SYO Syowa Base 154.48 212⇑ *e*PKPbc PKPbc 00 00 34.0 -2.7
SYO Syowa Base 154.48 212⇑ *e*pPKPdf pPKPdf 00 00 47.2 +8.5
SNAA Sanae 159.66 177 PKP PKPdf 00 00 31.7 -3.2
comp=Z,0.7nm,0.7s,baz=326,slow=0.8,SNR=10
SNAA PKPab PKPab 00 01 09.9 -3.6
comp=Z,8.1nm,0.8s,baz=183,slow=3.0,SNR=26
SNAA Sanae 159.66 177 *e* PKPdf 00 00 31.4 -3.5
SNAA *e* 00 01 09.5
SNAA *e* 00 01 15.8
SNAA *e* 00 01 23.5
SNAA *e* 00 01 29.6
SNAA *e* 00 01 36.3
SNAA *e* 00 01 58.1
SNAA Sanae 159.66 177 PKP2 PKPab 00 01 09.9 -3.6
SNAA pmax pmax
comp=Z,8.0nm,0.8s
NVL N'lazarevskaya 159.93 191⇓ *i* PKP2 PKPab 00 01 10.1 -4.6
NVL *e* 00 31 12.0
NVL pmax pmax
comp=Z,45nm,0.8s
VNA1 Neumayer--Stat 160.33 171 *e* PKPdf 00 00 33.3 -2.4
VNA1 *e* 00 00 47.5
VNA1 *e* 00 00 55.4
VNA1 *e* 00 01 13.4
VNA1 *e* 00 01 19.6
VNA1 *e* 00 01 26.3
VNA1 *e* 00 01 34.2
VNA1 *e* 00 01 42.6
VNA1 *e* 00 02 03.8

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*ISCJB **26** 23:44:33.4±0.2, 5130N±006×17950W±004, h31km, mb5.1/113, MS5.3/8, Error ellipse: s-maj=8.1km s-min=3.0km az=24.3*

*SZGRF **26** 23:44:33.4, 5085N×17954W, h33km, mb5.1, Andreanof Islands, Aleutian Islands, United States*

*MOS **26** 23:44:34.2±0.8, 5142N×17954W, h33km, mb5.3/65, Error ellipse: s-maj=13.2km s-min=6.3km az=88.4*

*IDC **26** 23:44:35.2±7.5, 5137N×17949W, h33km±55km, mb4.7/24, mb1 4.8/25, mb1mx4.8/28, mbtmp4.9/25, ML5.2/1, MS5.8/1, Ms1 5.8/1, ms1mx3.5/39, Error ellipse: s-maj=19.4km s-min=14.8km az=166.0*

*NEIC **26** 23:44:35.4±0.3, 5138N×17960W, h35km, mb5.2/84, Error ellipse: s-maj=8.4km s-min=3.7km az=186.0*

*BJI **26** 23:44:35.4, 5140N×17960W, h35km, mB5.1, mb5.0, Ms5.4, Msz5.2*

ISC 26 23:44:35.1±0.2, 5138N±006×17956W±004, h33km, h33km±3.4km: pP-P, n478, σ0°78/471, mb5.1/113, MS5.3/8, 80C-65D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.71**	**271**	P	**Pn**	**23 44 49.7**	**+0.8**
AMKA				S	**Sn**	**23 45 00.7**	**+2.1**
ATKA	**Atka Island**	**3.43**	**74**	P	**Pn**	**23 45 27.0**	**+0.8**
ATKA				S	**Sn**	**23 46 08.8**	**+3.1**
SMY	**Shemya**	**4.14**	**292**	P	**Pn**	**23 45 41.3**	**+5.3**
SMY				S	**Sn**	**23 46 32.3**	**+9.1**
NIKO	**Nikolski**	**6.78**	**72**	P	**Pn**	**23 46 13.9**	**+1.7**
SPIA	**Saint Paul Isl**	**7.96**	**40**	P	**Pn**	**23 46 33.2**	**+4.7**
AKGG	**Akutan Green G**	**8.70**	**66**	P	**Pn**	**23 46 41.2**	**+2.7**
AKLV	**Akutan Long Va**	**8.71**	**66**	P	**Pn**	**23 46 42.5**	**+3.9**
PET	**Petropavlovsk**	**13.46**	**286**	*e*P	**Pn**	**23 47 44.4**	**+0.7**
PET	**Petropavlovsk**	**13.46**	**286**	Pn	**Pn**	**23 47 40.4**	**-3.3**
KDAK	**Kodiak Island**	**16.82**	**57**	Pn	**Pn**	**23 48 25.4**	**-2.6**
	9.1nm,0.3s,baz=311,slow=4.1,SNR=8.2						
DIV	**Divide**	**20.92**	**49**	*e*P	**P**	**23 49 11.0**	**-3.7**
COLA	**College**	**21.21**	**38**	*e*P	**P**	**23 49 18.8**	**+0.9**
YSS	**Yuzh-Sakhalins**	**24.85**	**275**	*e*P	**P**	**23 49 57.0**	**+2.6**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.0						
YSS				pmax	pmax		
	comp=E,40nm,1.0s						
YSS	**Yuzh-Sakhalins**	**24.85**	**275**	*e*P	**P**	**23 49 56.4**	**+2.0**
	comp=E,33nm,0.8s,mb4.9						
INK	**Inuvik**	**27.73**	**35**	P	**P**	**23 50 20.6**	**+0.1**
	comp=E,14nm,0.7s,mb4.7,baz=245,slow=12,SNR=8.9						
INK	**Inuvik**	**27.73**	**35**	P	**P**	**23 50 20.6**	**+0.2**
INK				pmax	pmax		
	comp=Z,14nm,0.7s						
MJAR	**Matsushiro Arr**	**33.31**	**260**	P	**P**	**23 51 10.6**	**+0.9**
	comp=Z,2.7nm,0.8s,mb4.2,baz=54,slow=8.6,SNR=2.8						
MJAR	**Matsushiro Arr**	**33.31**	**260**	P	**P**	**23 51 10.6**	**+0.9**
MJAR				pmax	pmax		
	comp=Z,30nm,0.8s						
MDJ	**Mudanjiang**	**34.10**	**279**	P	**P**	**23 51 21.8**	**+5.2**
MDJ				AP	pP	23 51 30.5	+4.3
MDJ				XP	sP	23 51 34.3	+4.0
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,89nm,5.8s						
MDJ				LR	LR		
	comp=N,698nm,22.1s,MS5.0						
MDJ				LR	LR		
	comp=E,3μm,21.2s,MS5.0						
MDJ				LR	LR		
	comp=Z,4μm,22.1s,MS5.1						
C03A	**Quillayute Air**	**35.06**	**73**	⇓P	**P**	**23 51 26.3**	**+1.5**
	baz=35						
YKA	**Yellowknife Ar**	**35.58**	**46**	P	**P**	**23 51 28.4**	**-0.9**
	comp=Z,19nm,0.6s,mb5.2,baz=281,slow=7.9,SNR=17						
YKA	**Yellowknife Ar**	**35.58**	**46**	P	**P**	**23 51 28.4**	**-0.9**
YKA				pmax	pmax		
	comp=Z,19nm,0.6s						
B04A	**Port Angeles**	**35.65**	**73**	⇑P	**P**	**23 51 30.6**	**+0.7**
	baz=36						
A04A	**Legoe Bay, Lum**	**35.83**	**71**	⇓P	**P**	**23 51 32.2**	**+0.8**

baz=36
D03A **Wishkah Elem.** 35.92 74 ⇓P P 23 51 32.9 +0.7
baz=36
A05A **Maple Falls** 36.07 71 ⇑P P 23 51 33.5 0.0
baz=36,SNR=6.2
C04A **Brinnon** 36.12 73 ⇓P P 23 51 34.5 +0.6
baz=36,SNR=7.7
E03A **Lebam** 36.31 75 ⇓P P 23 51 36.3 +0.7
baz=36,SNR=9.5
B05A **Bryant** 36.39 72 ⇓P P 23 51 36.4 +0.2
baz=36,SNR=11
F03A **Seaside** 36.62 76 ⇑P P 23 51 38.4 +0.2
baz=36
E04A **Onalaska** 36.80 75 ⇓P P 23 51 40.7 +0.9
baz=37,SNR=5.3
C05A **Tolt Reservoir** 36.90 72 ⇓P P 23 51 40.8 +0.2
baz=37,SNR=6.1
D05A **Enumclaw** 36.96 73 ⇓P P 23 51 42.3 +1.3
baz=37,SNR=7.5
H02A **Toledo** 36.98 78 ⇑P P 23 51 41.7 +0.5
baz=37
G03A **Yamhill** 37.09 77 ⇑P P 23 51 42.5 +0.3
baz=37,SNR=5.6
LON **Longmire** 37.27 74 *eP* P 23 51 45.0 +1.2
F04A **Amboy** 37.31 75 ⇓P P 23 51 44.3 +0.2
baz=37,SNR=12
E05A **Randle** 37.40 74 ⇑P P 23 51 44.8 0.0
baz=37
I02A **Mapleton** 37.43 79 ⇓P P 23 51 45.3 +0.2
baz=37
COR **Corvallis** 37.45 78 *eP* P 23 51 46.6 +1.4
COR pmax pmax
comp=Z,48nm,0.7s,mb5.4
COR **Corvallis** 37.45 78 *eP* P 23 51 46.6 +1.3
comp=Z,48nm,0.7s,mb5.4
G04A **Mulino** 37.64 76 ⇑P P 23 51 47.1 +0.3
baz=38,SNR=8.5
I03A **Eugene** 37.78 79 ⇑P P 23 51 48.6 +0.6
baz=38
J02A **Umpqua** 37.92 80 ⇓P P 23 51 49.5 +0.3
baz=38
H04A **Detroit Lake** 38.08 77 ⇓P P 23 51 51.0 +0.5
baz=38,SNR=12
J03A **Ideyld Park** 38.30 79 ⇑P P 23 51 53.2 +0.8
baz=38,SNR=6.8
G05A **Wamic** 38.32 76 ⇓P P 23 51 53.0 +0.4
baz=38,SNR=9.2
L02A **Cave Junction** 38.56 81 ⇑P P 23 51 55.2 +0.5
baz=38
H05A **Madras** 38.69 76 ⇓P P 23 51 55.7 +0.1
baz=39,SNR=5.9
G06A **Carlson Farm,** 38.74 75 ⇑P P 23 51 56.4 +0.3
baz=39
HAWA **Hanford** 38.82 73 *eP* P 23 51 57.2 +0.4
I05A **Bend** 38.91 77 ⇑P P 23 51 57.9 +0.3
baz=39,SNR=5.2
H06A **Lindquist Farm** 39.18 76 ⇓P P 23 51 59.8 0.0
baz=39,SNR=8.2
KHMM **Horse Mountain** 39.20 83 *eP* P 23 52 07.8 +7.8
EDM **Edmonton** 39.23 60 *eP* P 23 51 59.8 -0.4
NEW **Newport** 39.33 69 P P 23 52 01.1 0.0
comp=Z,32nm,0.8s,mb5.1,baz=306,slow=7.2,SNR=9.1
NEW **Newport** 39.33 69 P P 23 52 01.1 +0.1
NEW pmax pmax
comp=Z,32nm,0.8s
NEW **Newport** 39.33 69 *eP* P 23 52 00.9 -0.1
comp=Z,44nm,0.9s,mb5.2
YBH **Yreka Blue Hor** 39.35 81 P P 23 52 02.6 +1.4
comp=Z,24nm,0.8s,mb5.0,baz=340,slow=4.8,SNR=8.6
YBH **Yreka Blue Hor** 39.35 81 P P 23 52 02.6 +1.4
YBH pmax pmax
comp=Z,24nm,0.8s
YBH **Yreka Blue Hor** 39.35 81 *eP* P 23 52 06.0 +4.8
comp=Z,28nm,0.9s,mb5.0
YBH **Yreka Blue Hor** 39.35 81 ⇑P P 23 52 01.8 +0.6
baz=39,SNR=8.9
J05A **Fort Rock** 39.41 78 ⇑P P 23 52 02.2 +0.5
baz=39,SNR=7.6
M02C **Callahan** 39.45 82 ⇑P P 23 52 03.2 +1.1
baz=39
K04A **Chilquin** 39.47 79 ⇑P P 23 52 02.7 +0.5
baz=39
N02C **Big Bar** 39.50 83 ⇑P P 23 52 02.4 -0.1
baz=39
F08A **Pendleton** 39.57 73 ⇓P P 23 52 02.8 -0.2
baz=39
L04A **Klamath Falls** 39.61 80 ⇓P P 23 52 03.7 +0.4
baz=40,SNR=7.6
I06A **Prineville** 39.68 77 ⇓P P 23 52 03.7 -0.3
baz=40
G08A **Pilot Rock** 39.73 74 ⇓P P 23 52 04.1 -0.2
baz=40
M04C **Macdoel** 39.86 81 ⇑P P 23 52 05.7 +0.2
baz=40,SNR=6.3
K05A **Summer Lake** 39.92 79 ⇑P P 23 52 06.6 +0.6
baz=40
M03C **McCloud** 39.98 81 ⇓P P 23 52 06.7 +0.3
baz=40
I07A **Izee** 40.03 76 ⇑P P 23 52 07.0 +0.1
baz=40,SNR=12
J06A **Christmas Vall** 40.09 78 ⇑P P 23 52 07.7 +0.3
baz=40,SNR=9.7
WDC **Whiskeytown Da** 40.11 83 *eP* P 23 52 12.4 +4.8
WDC **Whiskeytown Da** 40.11 83 ⇑P P 23 52 07.6 0.0
baz=40
F09A **S2 Ranch, Elgi** 40.14 73 ⇑P P 23 52 07.8 0.0
baz=40,SNR=6.7
O02C **Red Bluff** 40.19 83 ⇑P P 23 52 08.3 +0.1
baz=40
K06A **Valley Falls** 40.27 78 ⇓P P 23 52 08.9 0.0
baz=40,SNR=8.6
H08A **Prairie City** 40.31 75 ⇑P P 23 52 09.0 -0.2
baz=40
L05A **Lakeview** 40.34 80 ⇑P P 23 52 09.6 +0.2
baz=40
M05C **Lookout** 40.53 81 ⇓P P 23 52 11.1 +0.1
baz=40,SNR=5.2
J07A **Hines** 40.53 77 ⇑P P 23 52 11.3 +0.2
baz=40,SNR=5.6
HATC **Hat Creek Radi** 40.65 82 ⇑P P 23 52 11.8 -0.2
baz=40,SNR=6.3
I08A **Drewsey** 40.69 76 ⇑P P 23 52 12.4 0.0
baz=41,SNR=6.5
O03C **Acorn Hollow,** 40.77 83 ⇑P P 23 52 13.0 0.0
baz=41
H09A **Durkee** 40.84 74 ⇑P P 23 52 13.8 +0.3
baz=41
BSMT **Bassoo Peak** 40.90 69 *eP* P 23 52 14.7 +0.6
K07A **Rock Creek Ran** 40.95 78 ⇓P P 23 52 14.8 +0.3
baz=41,SNR=15
J08A **Circle Bar Ran** 41.05 76 ⇑P P 23 52 15.2 -0.1
baz=41
I09A **Lost Marbles R** 41.16 75 P P 23 52 16.9 +0.7
baz=41,SNR=5.1
O04C **Chester** 41.17 82 ⇓P P 23 52 16.5 +0.2
baz=41
MNRC **McLaughlin Nat** 41.17 85 ⇓P P 23 52 16.8 +0.4
baz=41
ELFS **Eagle Lake Fie** 41.22 81 ⇓P P 23 52 17.1 +0.4
baz=41
L07A **Adell** 41.27 79 ⇑P P 23 52 17.5 +0.4
baz=41,SNR=8.8
ORV **Oroville** 41.36 83 ⇑P P 23 52 18.5 +0.7
baz=41
SUTB **Sutter Butte** 41.38 84 ⇓P P 23 52 17.2 -0.8
baz=41
K08A **Mann Creek Ran** 41.39 77 ⇓P P 23 52 18.1 0.0
baz=41
O05C **Quincy** 41.48 82 ⇓P P 23 52 18.7 -0.2
baz=41
J09A **Fry Pan Ranch,** 41.50 76 ⇑P P 23 52 18.8 -0.2
baz=41
N06A **Buffalo Meadow** 41.69 81 ⇑P P 23 52 20.9 +0.3
baz=42,SNR=5.7
L08A **Fields** 41.78 78 ⇑P P 23 52 21.5 +0.2
baz=42,SNR=6.2
K09A **Rome** 41.88 77 ⇓P P 23 52 22.3 +0.2
baz=42
BEKR **Beckwourth** 41.88 82 ⇓P P 23 52 21.9 -0.3
baz=42
O06A **Flanigan** 42.04 81 ⇓P P 23 52 23.5 +0.1
baz=42,SNR=5.4
P05C **Yuba Gap, Truc** 42.06 83 ⇑P P 23 52 23.6 0.0
baz=42
M08A **Happy Creek Ra** 42.19 79 ⇓P P 23 52 24.3 -0.3
baz=42
JRSC **Jasper Ridge** 42.20 86 ⇑P P 23 52 23.7 -1.1
baz=42
N07B **Gerlach** 42.21 80 ⇑P P 23 52 25.0 +0.2
baz=42,SNR=6.7
CHMT **Chamberlain Mo** 42.27 69 *eP* P 23 52 25.2 -0.1
P06A **Stead Airport,** 42.28 82 ⇑P P 23 52 25.1 -0.3
baz=42
L09A **Wilkinson Ranc** 42.30 78 ⇓P P 23 52 25.4 -0.1
baz=42,SNR=7.9
LAVA **Lava Cap Winer** 42.31 84 ⇓P P 23 52 25.0 -0.6
baz=42
PAHR **Pah Rah Range** 42.58 82 *eP* P 23 52 28.3 +0.5
WCN **Washoe City** 42.59 82 ⇓P P 23 52 27.7 -0.2
baz=42
O07A **Toulon** 42.63 81 ⇓P P 23 52 28.2 0.0
baz=42,SNR=5.8
S04C **Ingram Canyon,** 42.71 85 ⇓P P 23 52 28.4 -0.5
baz=43
N08A **GE Springer Mi** 42.72 79 ⇓P P 23 52 28.7 -0.2
baz=43
R05C **Kirkwood Meado** 42.76 83 ⇑P P 23 52 28.8 -0.4
baz=43
M09A **Marrel Ranch,** 42.77 78 ⇑P P 23 52 29.4 0.0
baz=43
CMB **Columbia Colle** 42.97 84 ⇓P P 23 52 30.7 -0.2
baz=43
N09A **Rock Creek Ran** 43.06 79 ⇑P P 23 52 31.2 -0.5
baz=43,SNR=14
HRY **Holter Researc** 43.21 68 *eP* P 23 52 33.1 +0.2
R06C **Coleville** 43.26 83 ⇓P P 23 52 33.4 +0.1
baz=43
HAST **UC Hastings Re** 43.27 87 ⇑P P 23 52 32.9 -0.5
baz=43
M10A **I.L. Ranch, Tu** 43.27 77 ⇑P P 23 52 33.5 +0.1
baz=43
LRM **Limekiln Ridge** 43.32 70 *eP* P 23 52 33.9 +0.1
S06C **San Francisco** 43.40 84 ⇑P P 23 52 34.3 -0.1
baz=43
Q07A **Schurz** 43.40 82 ⇑P P 23 52 34.3 -0.2
baz=43
BMN **Battle Mountai** 43.49 79 *eP* P 23 52 36.4 +1.2
MCMT **McKenzie Canyo** 43.63 71 *eP* P 23 52 35.7 -0.6
O09A **Fish Creek Ran** 43.66 80 ⇑P P 23 52 36.8 +0.2
baz=44
N10A **Dunphy** 43.76 78 ⇑P P 23 52 37.3 0.0
baz=44
U04C **Hernandez Rese** 43.76 86 ⇑P P 23 52 37.2 -0.2
baz=44
R07C **Lee Vining** 43.77 83 ⇓P P 23 52 37.6 +0.2
baz=44
M11A **Holland Ranch,** 43.78 77 ⇓P P 23 52 38.2 +0.7
baz=44,SNR=10
Q08A **Gabbs** 43.99 82 ⇑P P 23 52 39.3 +0.1
baz=44,SNR=5.8
O10A **Cortez Mining,** 44.02 79 ⇑P P 23 52 39.5 +0.1
baz=44
T06C **Millerton Lake** 44.03 85 ⇓P P 23 52 39.0 -0.5
baz=44
P09A **Austin** 44.07 80 ⇑P P 23 52 40.1 +0.3
baz=44
KCC **Kaiser Creek** 44.08 84 ⇑P P 23 52 39.7 -0.1
baz=44
N11A **Elko Archery C** 44.18 78 ⇑P P 23 52 40.7 0.0
baz=44
R08A **Mina** 44.20 82 ⇑P P 23 52 40.5 -0.3
baz=44
M12A **Wells** 44.33 77 ⇑P P 23 52 41.9 0.0
baz=44,SNR=8.6
P10A **Eureka** 44.44 80 ⇑P P 23 52 42.4 -0.4
baz=44
QLMT **Earthquake Lak** 44.47 71 *eP* P 23 52 43.3 +0.2
Q09A **Carvers** 44.47 81 ⇑P P 23 52 42.4 -0.6
baz=44
ELK **Elko** 44.52 78 *eP* P 23 52 44.7 +1.3
ELK pmax pmax
comp=Z,33nm,0.8s
ELK **Elko** 44.52 78 *eP* P 23 52 44.7 +1.3
comp=Z,33nm,0.8s,mb5.2
MTUM **Tungsten Hills** 44.53 84 *eP* P 23 52 44.6 +1.2
N12A **Clover Valley,** 44.58 77 ⇓P P 23 52 44.0 0.0
baz=44,SNR=9.0
O11A **Cowboy Ranch,** 44.63 79 ⇓P P 23 52 44.3 0.0
baz=44
HELL **Mitchell Peak,** 44.66 85 ⇑P P 23 52 43.6 -1.0
baz=45
M13A **Montello** 44.81 76 ⇑P P 23 52 45.6 -0.2
baz=45,SNR=6.0
YMR **Matson River** 44.84 70 *eP* P 23 52 46.4 +0.4
R09A **Tonopah** 44.91 82 ⇓P P 23 52 45.9 -0.6
baz=45,SNR=17
TPH **Tonopah** 44.91 82 *eP* P 23 52 50.6 +4.0
P11A **Circle Ranch,** 44.92 79 ⇓P P 23 52 46.3 -0.3
baz=45
GCMT **Greycliff** 44.97 68 *eP* P 23 52 46.6 -0.4
YNR **Norris Junctio** 44.98 70 *eP* P 23 52 48.6 +1.5
YFT **Old Faithful** 45.03 71 *eP* P 23 52 49.7 +2.2
N13A **Wendover, West** 45.09 77 ⇑P P 23 52 47.8 -0.1
baz=45,SNR=7.3
O12A **Currie** 45.11 78 ⇓P P 23 52 47.9 -0.2
baz=45,SNR=9.2
S09A **Goldfield** 45.13 82 ⇑P P 23 52 48.0 -0.2
baz=45,SNR=5.0
R10A **Warm Springs** 45.35 81 ⇓P P 23 52 50.0 -0.1
baz=45,SNR=5.4
HVU **Hansel Valley** 45.41 75 *eP* P 23 52 51.7 +1.2
P12A **McGill** 45.49 79 ⇑P P 23 52 50.8 -0.3
baz=45,SNR=9.8
GRAC **Grapevine Rang** 45.49 83 ⇑P P 23 52 50.6 -0.5
baz=45
ISA **Isabella** 45.65 85 ⇑P P 23 52 51.7 -0.7
baz=46
TLY **Talaya** 45.66 302 *eP* P 23 52 53.8 +1.3
TLY pmax pmax
comp=Z,16nm,1.1s,mb4.9
TLY MLR MLR
comp=Z,6µm,20.0s,MS5.5
TLY **Talaya** 45.66 302 *eP* P 23 52 53.6 +1.1
TRCR **Troy Canyon** 45.76 80 *eP* P 23 52 53.4 +0.2
BGU **Big Grassy Mou** 45.76 76 *eP* P 23 52 53.5 +0.2
Q12A **Willow Creek R** 45.80 79 ⇑P P 23 52 53.1 -0.5
baz=46
FURC **Furnace Creek,** 46.14 83 ⇑P P 23 52 55.4 -0.9
baz=46,SNR=5.4
SONM **Songino Array** 46.22 296 P P 23 52 58.6 +1.7
comp=Z,5.8nm,0.7s,mb4.6,baz=58,slow=9.1,SNR=4.4
SONM **Songino Array** 46.22 296 P P 23 52 58.6 +1.7
SONM pmax pmax
comp=Z,6.0nm,0.7s
HWUT **Hardware Ranch** 46.24 74 *eP* P 23 52 58.2 +1.1
LRMC **Laurel Mountai** 46.26 85 ⇑P P 23 52 56.1 -1.1
baz=46
BLG **Laguna Peak** 46.29 88 ⇓P P 23 52 56.3 -1.2
baz=46
DUG **Dugway** 46.33 77 *eP* P 23 52 58.7 +0.9
DUG pmax pmax
comp=Z,57nm,0.9s,mb5.5
DUG **Dugway** 46.33 77 *eP* P 23 52 58.7 +0.9
comp=Z,57nm,0.9s,mb5.5
EDW2 **Edwards Air Fo** 46.46 86 ⇓P P 23 52 57.8 -0.9
baz=46
LAO **LASA Array** 46.46 65 *eP* P 23 52 59.0 +0.2
comp=Z,39nm,0.6s,mb5.5
NOQ **North Oquirrh** 46.48 76 *eP* P 23 53 00.3 +1.4
CTU **Camp Tracy** 46.68 75 *eP* P 23 53 01.4 +0.8
PDAR **Pinedale Array** 46.76 72 P P 23 53 01.0 -0.2
comp=Z,41nm,0.6s,mb5.5,baz=304,slow=3.3,SNR=32
SHOC **Shoshone** 46.87 84 ⇓P P 23 53 01.4 -0.6
baz=47,SNR=7.2
GSC **Goldstone** 46.92 85 *eP* P 23 53 06.6 +4.2
GSC **Goldstone** 46.92 85 ⇓P P 23 53 01.9 -0.5
baz=47,SNR=5.6
NLU **North Lily Min** 46.93 76 *eP* P 23 53 03.5 +1.0
BFSC **Mount Baldy St** 47.08 86 ⇑P P 23 53 02.8 -0.8
baz=47
MPU **Maple Canyon** 47.16 76 *eP* P 23 53 05.3 +1.0
HHC **Hu-ho-hao-te** 47.23 285 *eP* P 23 53 09.5 +4.7
HHC AP pP 23 53 19.5 +4.7
HHC XP sP 23 53 23.3 +4.6
HHC PCP PcP 23 54 40.8 +5.0
HHC AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
HHC AMB AMB
comp=Z,88nm,5.8s
HHC LR LR
comp=N,3µm,16.1s
HHC LR LR
comp=E,3µm,21.2s
HHC LR LR
comp=Z,4µm,20.6s,MS5.4
TUQ **Turquoise Mtn.** 47.39 84 ⇑P P 23 53 05.8 -0.2
baz=47
ARUT **Antelope Range** 47.43 80 *eP* P 23 53 07.1 +0.7
U12A **Valley of Fire** 47.61 82 ⇑P P 23 53 07.5 -0.2
baz=48,SNR=6.0
CCUT **Cedar City** 47.63 80 *eP* P 23 53 08.0 +0.1
TMUT **Trail Mountain** 47.86 77 *eP* P 23 53 11.2 +1.5
V12A **Nelson** 47.87 83 ⇑P P 23 53 09.2 -0.6
baz=48
GMRC **Granite Mounta** 47.98 84 ⇓P P 23 53 09.8 -0.7
baz=48
BELC **Belle Mtn.** 48.27 85 ⇓P P 23 53 11.8 -1.1
baz=48
NJ2 **Nanjing** 48.34 271 *eP* P 23 53 12.3 -1.1
NJ2 AP pP 23 53 28.0 +4.7
NJ2 XP sP 23 53 35.0 +7.7
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
NJ2 AMB AMB
comp=Z,120nm,11.1s
NJ2 LR LR
comp=N,5µm,23.9s
NJ2 LR LR
comp=E,2µm,17.4s
NJ2 LR LR
comp=Z,2µm,16.0s
SRU **San Rafael** 48.39 76 *eP* P 23 53 17.0 +3.1
W13A **Hualapai Mount** 48.87 83 ⇑P P 23 53 17.4 -0.1
baz=49,SNR=6.5
RSSD **Black Hills** 49.20 67 *eP* P 23 53 19.3 -0.7
X13A **Yucca** 49.24 83 ⇓P P 23 53 19.2 -1.1
baz=49
W14A **Seligman** 49.30 82 ⇑P P 23 53 20.1 -0.6
baz=49,SNR=6.0
Y12C **Blythe** 49.36 85 ⇓P P 23 53 20.3 -0.9
baz=49
GLA **Glamis** 49.63 85 *eP* P 23 53 22.8 -0.6
GLA **Glamis** 49.63 85 ⇑P P 23 53 22.4 -1.0
baz=50
Y13A **Salome** 49.75 84 ⇓P P 23 53 23.4 -0.8
baz=50
PV10 **Paradox Valley** 49.76 76 *eP* P 23 53 24.5 +0.2
W15A **Williams** 49.83 81 ⇓P P 23 53 24.4 -0.4
baz=50
X14A **Yava** 49.90 83 ⇓P P 23 53 24.6 -0.7
baz=50,SNR=6.4
ULM **Lac du Bonnet** 50.08 56 P P 23 53 24.9 -1.8
comp=Z,3.2nm,0.6s,mb4.6,baz=278,slow=7.7,SNR=3.6
WUAZ **Wupatki** 50.16 81 *eP* P 23 53 26.8 -0.5
Y14A **Wickenburg** 50.18 83 ⇓P P 23 53 26.3 -1.1
baz=50
PV01 **Paradox Valley** 50.20 76 *eP* P 23 53 27.7 +0.1
X15A **Humboldt** 50.30 82 ⇓P P 23 53 27.7 -0.6
baz=50,SNR=5.8
SPB4 **Spitsbergen Ar** 50.34 356 *eP* P 23 53 29.5 +0.8
115A **Sonoran Desert** 51.49 84 ⇓P P 23 53 36.4 -0.9
baz=51
116A **Eloy** 51.91 84 ⇑P P 23 53 39.6 -0.9
baz=52
TUC **Tucson** 52.66 83 *eP* P 23 53 45.9 -0.1
FRB **Frobisher Bay** 53.28 31 P P 23 53 49.9 -0.6
comp=Z,39nm,0.8s,mb5.4,baz=315,slow=9.3,SNR=10
FRB **Frobisher Bay** 53.28 31 P P 23 53 49.9 -0.6
SUMG **Summit** 53.41 14 *eP* P 23 53 52.8 +1.3
comp=Z,29nm,1.0s,mb5.2
LAZ **Ladron** 53.51 79 *eP* P 23 53 53.0 +0.8
ANMO **Albuquerque** 53.56 78 P P 23 53 53.2 +0.6
comp=Z,5.0nm,0.9s,mb4.5,baz=338,slow=6.8,SNR=5.9
ANMO **Albuquerque** 53.56 78 P P 23 53 53.2 +0.6
LENM **Lemitar** 53.76 79 *eP* P 23 53 57.6 +3.5
Y22C **IRIS PASSCAL I** 53.86 79 ⇑P P 23 53 54.1 -0.8
baz=54
LPM **Los Pinos Moun** 53.88 78 *eP* P 23 53 57.7 +2.7
LZH **Lanzhou** 54.93 286 *eP* P 23 54 08.5 +5.9
LZH AP pP 23 54 18.3 +5.6
LZH XP sP 23 54 22.0 +5.4
LZH AMB AMB
comp=Z,26nm,1.2s,mb5.1
LZH AMB AMB
comp=Z,115nm,5.0s
LZH LR LR
comp=E,1µm,15.0s
LZH LR LR
comp=Z,2µm,16.3s,MS5.2
GTA **Gaotai** 55.12 291 *eP* P 23 54 05.0 +1.0
GTA AP pP 23 54 20.0 +5.9
GTA AMB AMB
comp=Z,9.0nm,0.9s,mb4.8
GTA AMB AMB
comp=Z,200nm,9.5s
GTA LR LR
comp=N,985nm,26.2s
GTA LR LR
comp=E,1µm,20.2s
GTA LR LR
comp=Z,627nm,27.8s,MS4.5
SFJD **Kangerlussuaq** 55.83 22 P P 23 54 08.5 -0.5
comp=Z,9.1nm,0.8s,mb4.8,baz=328,slow=6.8,SNR=3.0
SFJD PcP PcP 23 55 06.6 -1.1
comp=Z,7.7nm,0.8s,baz=309,slow=2.2,SNR=2.9
KSU1 **Kansas State U** 56.68 68 *eP* P 23 54 13.6 -1.6
SCIA **State Center** 56.75 63 *eP* P 23 54 14.9 -0.8
ARCES **ARCESS Array B** 58.01 350 P P 23 54 23.5 -1.1
comp=Z,5.6nm,0.7s,mb4.7,baz=26,slow=7.1,SNR=5.2
ARCES PcP PcP 23 55 15.8 -0.5
comp=Z,22nm,1.2s,baz=12,slow=6.2,SNR=7.1
CD2 **Chengdu** 58.51 281 *eP* P 23 54 31.5 +3.5
CD2 AP pP 23 54 41.8 +3.6
CD2 PCP PcP 23 55 22.0 +3.7
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
CD2 AMB AMB
comp=Z,40nm,6.4s
CD2 LR LR
comp=N,1µm,19.2s
CD2 LR LR
comp=Z,1µm,16.8s,MS5.1
WMQ **Urumqi** 58.94 302 *eP* P 23 54 33.0 +2.0
WMQ AP pP 23 54 43.0 +1.8
WMQ XP sP 23 54 47.0 +1.9
WMQ AMB AMB
comp=Z,48nm,1.0s,mb5.5
WMQ AMB AMB
comp=Z,894nm,5.0s
WMQ LR LR
comp=N,4µm,15.0s,MS5.8
WMQ LR LR
comp=E,3µm,15.0s,MS5.8
WMQ LR LR
comp=Z,3µm,14.0s,MS5.6
MKAR **Makanchi Array** 59.66 308 P P 23 54 36.1 +0.1
comp=Z,8.0nm,0.7s,mb4.9,baz=50,slow=6.2,SNR=10
SCHQ **Schefferville** 60.30 38 P P 23 54 39.6 -0.8
comp=Z,23nm,0.7s,mb5.3,baz=322,slow=7.0,SNR=6.8
SLM **Saint Louis** 60.64 64 *eP* P 23 54 41.7 -1.0
JCT **Junction City** 60.69 77 *eP* P 23 54 45.3 +2.2
comp=Z,16nm,0.8s,mb5.2
FVM **French Village** 60.98 65 *eP* P 23 54 43.6 -1.4
comp=Z,28nm,0.7s,mb5.5
SIUC **Southern Illin** 61.86 64 *eP* P 23 54 50.7 -0.2
comp=Z,40nm,0.8s,mb5.6
SADO **Sadowa** 62.21 52 P P 23 54 52.0 -1.4
comp=Z,14nm,0.8s,mb5.1,baz=309,slow=4.8,SNR=4.3
BLO **Bloomington** 62.33 61 *eP* P 23 54 53.2 -0.9
USIN **University of** 62.55 63 *eP* P 23 54 54.9 -0.7
UTMT **University of** 63.02 65 *eP* P 23 54 59.0 +0.2
WCI **Wyandotte Cave** 63.12 62 *eP* P 23 54 58.1 -1.3
KMI **Kunming** 63.25 277 P P 23 55 05.5 +5.2
KMI AMB AMB
comp=Z,7.0nm,1.2s,mb4.7
JOF **Joensuu** 63.48 345 *ep* P 23 55 01.1 -0.6
comp=Z,14nm,0.8s,mb5.1
JOF **Joensuu** 63.48 345 *eP* P 23 55 01.1 -0.6
JOF pmax pmax
comp=Z,14nm,0.8s,mb5.1
HKT **Hockley** 63.48 75 *eP* P 23 55 02.1 +0.3
HKT pmax pmax
comp=Z,26nm,1.3s,mb5.2
HKT **Hockley** 63.48 75 *eP* P 23 55 02.1 +0.3
comp=Z,26nm,1.3s,mb5.2
ERPA **Erie** 63.70 55 *eP* P 23 55 03.4 +0.2
ALLY **Alegheny Colle** 63.96 55 *eP* P 23 55 04.9 0.0
MSNY **Massena** 64.13 50 *eP* P 23 55 04.5 -1.6
KAF **Kangasniemi** 65.01 347 *ep* P 23 55 10.5 -1.3
comp=Z,11nm,0.8s,mb5.0
KAF **Kangasniemi** 65.01 347 *eP* P 23 55 10.5 -1.3

KAF pmax pmax
comp=Z,11nm,0.8s,mb4.9
MCWV Mont Chateau 65.56 57 *eP* **P 23 55 15.5 +0.1**
comp=Z,19nm,0.8s,mb5.2
BINY Binghamton 65.66 52 *eP* **P 23 55 15.8 -0.2**
comp=Z,46nm,1.1s,mb5.4
FINES FINESS Array B 65.68 347 P **P 23 55 15.7 -0.5**
comp=Z,9.6nm,0.8s,mb4.9,baz=28,slow=8.6,SNR=6.5
FINES FINESS Array B 65.68 347 P **P 23 55 15.7 -0.4**
FINES pmax pmax
comp=Z,10.0nm,0.8s
ACCN Adirondack Com 65.91 50 *eP* **P 23 55 16.7 -0.9**
LBNH Lisbon 66.09 49 *eP* **P 23 55 18.2 -0.6**
LBNH pmax pmax
comp=Z,16nm,0.8s,mb5.1
LBNH Lisbon 66.09 49 *eP* **P 23 55 18.2 -0.6**
comp=Z,16nm,0.8s,mb5.1
CPCT Cooper Cave 66.11 63 *eP* **P 23 55 18.7 -0.2**
LRAL Lakeview Retre 66.47 66 *eP* **P 23 55 20.1 -1.1**
comp=Z,19nm,0.8s,mb5.2
MVL Millersville 67.12 54 *eP* **P 23 55 25.3 -0.1**
NOA NORSAR Array B 67.60 354 P **P 23 55 28.4 0.0**
comp=Z,10nm,0.7s,mb5.0,baz=6.8,slow=6.3,SNR=12
NOA NORSAR Array B 67.60 354 P **P 23 55 28.5 +0.1**
NOA pmax pmax
comp=Z,10.0nm,0.7s
CPNY Central Park 67.72 52 *eP* **P 23 55 29.1 0.0**
KONO Kongsberg 69.08 355 *eP* **P 23 55 38.1 +0.4**
DWPF Disney 73.33 66 *eP* **P 23 56 01.9 -1.5**
comp=Z,37nm,0.7s,mb5.4
AKASG Malin Array Be 75.40 342 P **P 23 56 14.9 -0.5**
comp=Z,23nm,0.8s,mb5.2,baz=22,slow=6.0,SNR=14
AKASG Malin Array Be 75.40 342 P **P 23 56 15.0 -0.4**
AKASG pmax pmax
comp=Z,23nm,0.8s
KAKA Kakadu 76.18 228 *eP* **P 23 56 18.9 -1.0**
comp=Z,12nm,0.8s,mb4.9
CLL Collm 77.14 352 P **P 23 56 25.5 +0.2**
comp=Z,logA/T=1.3,mb5.0
CLL *i* *SP pP 23 56 31.7 -4.0
CLL Collm 77.14 352 *i* P **P 23 56 25.5 +0.2**
comp=Z,17nm,0.9s,mb5.0
CLL *i* sP pP 23 56 31.7 -4.0
CLL Collm 77.14 352 *i* P **P 23 56 25.5 +0.2**
CLL pmax pmax
comp=Z,17nm,0.9s,mb5.0
BRG Berggiesshubel 77.48 351 *e*PP PcP 23 56 37.3 -0.2
comp=Z,8.1nm,0.9s
KWP Kalwaria 77.59 345 *eP* **P 23 56 27.6 -0.2**
KWP pmax pmax
comp=Z,57nm,0.6s,mb5.7
KWP Kalwaria 77.59 345 *eP* **P 23 56 27.6 -0.2**
comp=Z,57nm,0.6s,mb5.7
UPC Upice 77.63 350 *eP* **P 23 56 27.9 -0.1**
DPC Dobruska-Polom 77.75 350 *eP* **P 23 56 29.0 +0.3**
MOX Moxa 77.91 353 *eP* **P 23 56 29.8 +0.2**
comp=Z,18nm,1.0s,mb5.0
MOX Moxa 77.91 353 *eP* **P 23 56 29.8 +0.2**
MOX pmax pmax
comp=Z,18nm,1.0s,mb5.0
STHS Stebnicka Huta 78.03 346 *eP* **P 23 56 31.6 +1.4**
OKC Ostrava-Krasne 78.04 348 *eP* **P 23 56 30.6 +0.3**
BEBN Eben Emael 78.11 357 P **P 23 56 31.1 +0.4**
HGN Heimansgroeve 78.13 356 *eP* **P 23 56 31.3 +0.5**
comp=Z,43nm,0.9s,mb5.4
UCC Uccle 78.15 357 P **P 23 56 31.0 +0.1**
NKC Novy Kostel 78.25 352 *eP* **P 23 56 31.2 -0.3**
MEM Membach 78.28 356 P **P 23 56 32.5 +0.9**
PRU Pruhonice 78.30 351 *eP* **P 23 56 31.6 -0.1**
KOLS Kolonicke sedl 78.34 345 *eP* **P 23 56 32.5 +0.5**
KOLS Kolonicke sedl 78.34 345 *eP* **P 23 56 32.6 +0.6**
SNF Seneffe 78.44 357 P **P 23 56 32.5 0.0**
CRVS Cervenica-Dubn 78.50 346 *eP* **P 23 56 33.1 +0.3**
BCLA Clavier 78.50 357 P **P 23 56 32.9 +0.1**
GIVF Givet 78.83 357 *eP* **P 23 56 34.3 -0.4**
comp=Z,36nm,0.9s,mb5.0
GIVF Givet 78.83 357 *eP* **P 23 56 34.3 -0.4**
GIVF pmax pmax
comp=Z,18nm,0.9s,mb5.0
GIVF Givet 78.83 357 *eP* **P 23 56 34.3 -0.4**
comp=Z,18nm,0.9s,mb5.0
DOU Dourbes 78.84 357 P **P 23 56 34.9 +0.2**
TREC Trest 78.89 350 *eP* **P 23 56 35.4 +0.4**
BAIF Baives 78.89 358 *eP* **P 23 56 35.0 0.0**
comp=Z,52nm,0.8s,mb5.2
BAIF Baives 78.89 358 *eP* **P 23 56 35.0 0.0**
BAIF pmax pmax
comp=Z,26nm,0.8s,mb5.2
BAIF Baives 78.89 358 *eP* **P 23 56 35.0 0.0**
comp=Z,26nm,0.8s,mb5.2
GRA1 Grafenberg Arr 78.89 353 *eP* **P 23 56 34.7 -0.3**
comp=Z,21nm,0.9s,mb5.1
GRF Grafenberg Arr 78.89 353 *eP* **P 23 56 34.7 -0.3**
comp=Z,21nm,0.9s,mb5.1
GRF Grafenberg Arr 78.89 353 *eP* **P 23 56 34.7 -0.3**
GRF pmax pmax
comp=Z,21nm,0.9s,mb5.1
GRF Grafenberg Arr 78.89 353 *eP* **P 23 56 34.7 -0.3**
GRF pmax pmax
comp=Z,21nm,0.9s,mb5.1
KECS Kecovo 79.05 347 *eP* **P 23 56 36.6 +0.7**
WLF Walferdange 79.22 356 P **P 23 56 37.4 +0.6**
WLF Walferdange 79.22 356 *eP* **P 23 56 37.4 +0.6**
WLF pmax pmax
comp=Z,19nm,0.8s,mb5.1
WLF Walferdange 79.22 356 *eP* **P 23 56 37.4 +0.6**
comp=Z,20nm,0.8s,mb5.1
KHC Kasperske Hory 79.25 351 *eP* **P 23 56 37.0 +0.1**
VYHS Vyhne 79.27 348 *eP* **P 23 56 37.8 +0.7**
VYHS Vyhne 79.27 348 *eP* **P 23 56 37.9 +0.8**
SMOL Smolenice 79.43 349 *eP* **P 23 56 39.0 +1.1**
GERES GERESS Array B 79.52 351 P **P 23 56 38.3 -0.1**
comp=Z,6.2nm,0.7s,mb4.7,baz=29,slow=5.5,SNR=16
GERES GERESS Array B 79.52 351 P **P 23 56 38.3 -0.1**
GERES pmax pmax
comp=Z,6.0nm,0.7s
PSZ Piszkesteto 79.69 347 *eP* **P 23 56 39.7 +0.4**
PSZ pmax pmax
comp=Z,13nm,1.0s,mb4.8
PSZ Piszkesteto 79.69 347 *eP* **P 23 56 39.7 +0.4**
comp=Z,13nm,1.0s,mb4.8
FLN La Foliniere 80.24 1 *eP* **P 23 56 41.6 -0.7**
comp=Z,77nm,1.0s,mb5.3
FLN La Foliniere 80.24 1 *eP* **P 23 56 41.6 -0.7**
FLN pmax pmax
comp=Z,38nm,1.0s,mb5.3
FLN La Foliniere 80.24 1 *eP* **P 23 56 41.6 -0.7**
comp=Z,38nm,1.0s,mb5.3
LDF La Druitiere 80.41 0 *eP* **P 23 56 42.4 -0.8**
comp=Z,51nm,0.8s,mb5.2
LDF La Druitiere 80.41 0 *eP* **P 23 56 42.4 -0.8**
LDF pmax pmax
comp=Z,25nm,0.8s,mb5.2
LDF La Druitiere 80.41 0 *eP* **P 23 56 42.4 -0.8**
comp=Z,25nm,0.8s,mb5.2
CDF Champ du Feu 80.42 355 *eP* **P 23 56 42.8 -0.5**
comp=Z,25nm,0.8s,mb4.9
CDF Champ du Feu 80.42 355 *eP* **P 23 56 42.8 -0.5**
CDF pmax pmax
comp=Z,12nm,0.8s,mb4.9
CDF Champ du Feu 80.42 355 *eP* **P 23 56 42.8 -0.5**
comp=Z,12nm,0.8s,mb4.9
MEZF Maizieres J'vi 80.42 357 *eP* **P 23 56 43.2 -0.1**
comp=Z,57nm,1.0s,mb5.2
MEZF Maizieres J'vi 80.42 357 *eP* **P 23 56 43.2 -0.1**
comp=Z,57nm,1.0s,mb5.5
GRR Gorron 80.61 1 *eP* **P 23 56 43.9 -0.4**
comp=Z,61nm,0.8s,mb5.3
GRR Gorron 80.61 1 *eP* **P 23 56 43.9 -0.4**
GRR pmax pmax
comp=Z,31nm,0.8s,mb5.3
GRR Gorron 80.61 1 *eP* **P 23 56 43.9 -0.4**
comp=Z,30nm,0.8s,mb5.3
ROSF Rostrenen 80.62 3 *eP* **P 23 56 44.0 -0.3**
comp=Z,29nm,0.9s,mb4.9
ROSF Rostrenen 80.62 3 *eP* **P 23 56 44.0 -0.3**
ROSF pmax pmax
comp=Z,15nm,0.9s,mb4.9
ROSF Rostrenen 80.62 3 *eP* **P 23 56 44.0 -0.3**
comp=Z,14nm,0.9s,mb4.9
SGMF Saint Gilles 80.72 2 *eP* **P 23 56 44.5 -0.4**
comp=Z,61nm,0.8s,mb5.3
SGMF Saint Gilles 80.72 2 *eP* **P 23 56 44.5 -0.4**
SGMF pmax pmax
comp=Z,31nm,0.8s,mb5.3
SGMF Saint Gilles 80.72 2 *eP* **P 23 56 44.5 -0.4**
comp=Z,30nm,0.8s,mb5.3
HAU Haudompre 80.87 356 *eP* **P 23 56 45.2 -0.5**
comp=Z,26nm,0.9s,mb4.9
HAU Haudompre 80.87 356 *eP* **P 23 56 45.2 -0.5**
HAU pmax pmax
comp=Z,13nm,0.9s,mb4.9
HAU Haudompre 80.87 356 *eP* **P 23 56 45.2 -0.5**
comp=Z,13nm,0.9s,mb4.9
ARSA Arzberg 80.90 350 *i* P **P 23 56 46.6 +0.7**
comp=Z,18nm,1.0s,mb5.0,SNR=12
HINF Hinteralfeld 81.03 356 *eP* **P 23 56 45.9 -0.7**
comp=Z,23nm,1.0s,mb4.8
HINF Hinteralfeld 81.03 356 *eP* **P 23 56 45.9 -0.7**
HINF pmax pmax
comp=Z,12nm,1.0s,mb4.8
HINF Hinteralfeld 81.03 356 *eP* **P 23 56 45.9 -0.7**
comp=Z,12nm,1.0s,mb4.8
QUIF Quistinic 81.04 2 *eP* **P 23 56 46.0 -0.6**
comp=Z,16nm,0.7s,mb4.8
QUIF Quistinic 81.04 2 *eP* **P 23 56 46.0 -0.6**
QUIF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
QUIF Quistinic 81.04 2 *eP* **P 23 56 46.0 -0.6**
comp=Z,7.8nm,0.7s,mb4.8
KBA Koelnbreinsper 81.30 351 *i* P **P 23 56 49.0 +1.0**
comp=Z,70nm,0.8s,mb5.6,SNR=32
KBA Koelnbreinsper 81.30 351 *i* P **P 23 56 49.0 +1.0**
KBA pmax pmax
comp=Z,70nm,0.8s,mb5.6
KBA Koelnbreinsper 81.30 351 *i* P **P 23 56 49.0 +1.0**
comp=Z,70nm,0.8s,mb5.6
WRA Warramunga Arr 81.68 223 P **P 23 56 48.9 -1.1**
comp=Z,3.1nm,0.7s,mb4.4,baz=32,slow=6.0,SNR=5.8
WRA Warramunga Arr 81.68 223 P **P 23 56 48.9 -1.1**
WRA pmax pmax
comp=Z,3.0nm,0.7s
LOR Lormes 81.69 358 *eP* **P 23 56 49.7 -0.4**
comp=Z,32nm,1.0s,mb4.9
LOR Lormes 81.69 358 *eP* **P 23 56 49.7 -0.4**
LOR pmax pmax
comp=Z,16nm,1.0s,mb4.9
LOR Lormes 81.69 358 *eP* **P 23 56 49.7 -0.4**
comp=Z,16nm,1.0s,mb4.9
HYF Humbligny 81.72 358 *eP* **P 23 56 50.1 -0.1**
OBKA Obir 81.74 350 *i* P **P 23 56 51.2 +0.9**
SNR=21
SSF Saint Saulge 81.91 358 *eP* **P 23 56 50.8 -0.4**
comp=Z,26nm,1.0s,mb4.8
SSF Saint Saulge 81.91 358 *eP* **P 23 56 50.8 -0.4**
SSF pmax pmax
comp=Z,13nm,1.0s,mb4.8
SSF Saint Saulge 81.91 358 *eP* **P 23 56 50.8 -0.4**
comp=Z,13nm,1.0s,mb4.8
AVF Avril sur Loir 82.18 358 *eP* **P 23 56 52.2 -0.4**
comp=Z,35nm,1.0s,mb5.0
AVF Avril sur Loir 82.18 358 *eP* **P 23 56 52.2 -0.4**
AVF pmax pmax
comp=Z,18nm,1.0s,mb5.0
AVF Avril sur Loir 82.18 358 *eP* **P 23 56 52.2 -0.4**
comp=Z,18nm,1.0s,mb5.0
CABF La Chapelle 82.27 356 *eP* **P 23 56 53.1 0.0**
comp=Z,24nm,0.9s,mb4.8
CABF La Chapelle 82.27 356 *eP* **P 23 56 53.1 0.0**
CABF pmax pmax
comp=Z,12nm,0.9s,mb4.8
CABF La Chapelle 82.27 356 *eP* **P 23 56 53.1 0.0**
comp=Z,12nm,0.9s,mb4.8
SMF Signal de Mont 82.32 358 *eP* **P 23 56 52.8 -0.5**
comp=Z,68nm,1.1s,mb5.2
SMF Signal de Mont 82.32 358 *eP* **P 23 56 52.8 -0.5**
SMF pmax pmax
comp=Z,34nm,1.1s,mb5.2
SMF Signal de Mont 82.32 358 *eP* **P 23 56 52.8 -0.5**
comp=Z,34nm,1.1s,mb5.2
BGF Bois d'Agland 82.42 358 *eP* **P 23 56 53.5 -0.4**
comp=Z,41nm,1.1s,mb5.0
BGF Bois d'Agland 82.42 358 *eP* **P 23 56 53.5 -0.4**
BGF pmax pmax
comp=Z,20nm,1.1s,mb5.0
BGF Bois d'Agland 82.42 358 *eP* **P 23 56 53.5 -0.4**
comp=Z,20nm,1.1s,mb5.0
TCF Toulx Ste Croi 82.70 359 *eP* **P 23 56 55.0 -0.4**
comp=Z,25nm,0.9s,mb4.9
TCF Toulx Ste Croi 82.70 359 *eP* **P 23 56 55.0 -0.4**
TCF pmax pmax
comp=Z,12nm,0.9s,mb4.9
TCF Toulx Ste Croi 82.70 359 *eP* **P 23 56 55.0 -0.4**
comp=Z,12nm,0.9s,mb4.9
RJF Les Rejaudoux 83.70 359 *eP* **P 23 56 59.9 -0.6**
comp=Z,54nm,1.4s,mb5.2
RJF Les Rejaudoux 83.70 359 *eP* **P 23 56 59.9 -0.6**
RJF pmax pmax
comp=Z,27nm,1.4s,mb5.2
RJF Les Rejaudoux 83.70 359 *eP* **P 23 56 59.9 -0.6**
comp=Z,27nm,1.4s,mb5.2
ORIF Oris-en-Rattie 83.97 356 *eP* **P 23 57 02.4 +0.5**
comp=Z,26nm,0.9s,mb5.0
ORIF Oris-en-Rattie 83.97 356 *eP* **P 23 57 02.4 +0.5**
ORIF pmax pmax
comp=Z,13nm,0.9s,mb5.1
ORIF Oris-en-Rattie 83.97 356 *eP* **P 23 57 02.4 +0.5**
comp=Z,13nm,0.9s,mb5.1
LFF La Frestale 84.06 360 *eP* **P 23 57 02.1 -0.3**
comp=Z,78nm,1.0s,mb5.5
LFF La Frestale 84.06 360 *eP* **P 23 57 02.1 -0.3**
LFF pmax pmax
comp=Z,39nm,1.0s,mb5.5
LFF La Frestale 84.06 360 *eP* **P 23 57 02.1 -0.3**
comp=Z,39nm,1.0s,mb5.5
CAF Calviac 84.07 359 *eP* **P 23 57 02.3 -0.1**
comp=Z,43nm,1.0s,mb5.2
CAF Calviac 84.07 359 *eP* **P 23 57 02.3 -0.1**
CAF pmax pmax
comp=Z,21nm,1.0s,mb5.2
CAF Calviac 84.07 359 *eP* **P 23 57 02.3 -0.1**
comp=Z,21nm,1.0s,mb5.2
VIVF Saint-Julien-l 84.08 357 *eP* **P 23 57 02.5 +0.1**
comp=Z,14nm,0.8s,mb4.8
VIVF Saint-Julien-l 84.08 357 *eP* **P 23 57 02.5 +0.1**
VIVF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
VIVF Saint-Julien-l 84.08 357 *eP* **P 23 57 02.5 +0.1**
comp=Z,7.2nm,0.8s,mb4.8
FITZ Fitzroy Crossi 84.09 231 *eP* **P 23 57 01.8 -0.7**
comp=Z,19nm,0.6s,mb5.4
MBDF Montbardon 84.12 355 *eP* **P 23 57 03.2 +0.5**
comp=Z,24nm,0.8s,mb5.1
MBDF Montbardon 84.12 355 *eP* **P 23 57 03.2 +0.5**
MBDF pmax pmax
comp=Z,12nm,0.8s,mb5.1
MBDF Montbardon 84.12 355 *eP* **P 23 57 03.2 +0.5**
comp=Z,12nm,0.8s,mb5.1
MALT Malatya 84.69 331 *eP* **P 23 57 06.6 +1.0**
BR131 Keskin Array S 84.75 335 *eP* **P 23 57 06.8 +1.0**
BRTR Keskin Array B 84.75 335 P **P 23 57 06.7 +0.9**
comp=Z,8.3nm,0.8s,mb4.9,baz=61,slow=3.0,SNR=10
SMRF Simiane la Rot 84.92 356 *eP* **P 23 57 07.3 +0.6**
comp=Z,57nm,1.0s,mb5.4
SMRF Simiane la Rot 84.92 356 *eP* **P 23 57 07.3 +0.6**
comp=Z,57nm,1.0s,mb5.7
SBF Sospel 84.95 355 *eP* **P 23 57 06.4 -0.4**
comp=Z,107nm,1.0s,mb5.6
SBF Sospel 84.95 355 *eP* **P 23 57 06.4 -0.4**
SBF pmax pmax
comp=Z,53nm,1.0s,mb5.6
SBF Sospel 84.95 355 *eP* **P 23 57 06.4 -0.4**
comp=Z,53nm,1.0s,mb5.6
ASAR Alice Springs 85.16 222 P **P 23 57 07.0 -0.9**
comp=Z,2.6nm,0.7s,mb4.5,baz=25,slow=6.0,SNR=7.0
FRF La Foret Royal 85.29 355 *eP* **P 23 57 08.1 -0.4**
comp=Z,31nm,0.8s,mb5.2
FRF La Foret Royal 85.29 355 *eP* **P 23 57 08.1 -0.4**
FRF pmax pmax
comp=Z,16nm,0.8s,mb5.2
FRF La Foret Royal 85.29 355 *eP* **P 23 57 08.1 -0.4**
comp=Z,16nm,0.8s,mb5.2
EPON Ponenova 85.45 6 P **P 23 57 07.9 -1.4**
comp=Z,48nm,1.4s,mb5.4
LMR La Mourre 85.52 356 *eP* **P 23 57 09.4 -0.3**
comp=Z,72nm,1.3s,mb5.4
LMR La Mourre 85.52 356 *eP* **P 23 57 09.4 -0.3**
LMR pmax pmax
comp=Z,36nm,1.3s,mb5.4
LMR La Mourre 85.52 356 *eP* **P 23 57 09.4 -0.3**
comp=Z,36nm,1.3s,mb5.4
EARI Arriondas 85.58 4 P **P 23 57 10.2 +0.2**
comp=Z,49nm,1.6s,mb5.5
MTLF Montolieu 85.65 359 *eP* **P 23 57 10.3 0.0**
comp=Z,18nm,0.9s,mb5.0
MTLF Montolieu 85.65 359 *eP* **P 23 57 10.3 0.0**
MTLF pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
MTLF Montolieu 85.65 359 *eP* **P 23 57 10.3 0.0**
comp=Z,9.1nm,0.9s,mb5.0
ELAN Lanestosa 85.71 3 P **P 23 57 09.6 -1.1**
comp=Z,31nm,0.7s,mb5.6
EALK Alkurruntz 85.77 1 P **P 23 57 10.7 -0.2**
comp=Z,56nm,1.5s,mb5.6
STS Santiago 85.79 7 P **P 23 57 10.6 -0.4**
STS pmax pmax
comp=Z,11nm,0.9s,mb5.1
STS Santiago 85.79 7 P **P 23 57 10.6 -0.4**
comp=Z,11nm,0.9s,mb5.1
SJPF Ste Jean 85.88 1 *eP* **P 23 57 11.8 +0.3**
comp=Z,23nm,0.7s,mb5.2
SJPF Ste Jean 85.88 1 *eP* **P 23 57 11.8 +0.3**
SJPF pmax pmax
comp=Z,12nm,0.7s,mb5.2
SJPF Ste Jean 85.88 1 *eP* **P 23 57 11.8 +0.3**
comp=Z,12nm,0.7s,mb5.2
AQU L'Aquila 85.97 350 *eP* **P 23 57 13.1 +1.2**
AQU pmax pmax
comp=Z,18nm,0.7s,mb5.4
AQU L'Aquila 85.97 350 *eP* **P 23 57 13.1 +1.2**
comp=Z,18nm,0.7s,mb5.4
EPF Esparros 85.97 0 *eP* **P 23 57 11.1 -0.8**
comp=Z,11nm,0.8s,mb4.8
EPF Esparros 85.97 0 *eP* **P 23 57 11.1 -0.8**
EPF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
EPF Esparros 85.97 0 *eP* **P 23 57 11.1 -0.8**
comp=Z,5.3nm,0.8s,mb4.8
ETSF Etsaut 86.10 1 *eP* **P 23 57 12.7 +0.1**
comp=Z,33nm,0.7s,mb5.3
ETSF Etsaut 86.10 1 *eP* **P 23 57 12.7 +0.1**
ETSF pmax pmax
comp=Z,16nm,0.7s,mb5.4
ETSF Etsaut 86.10 1 *eP* **P 23 57 12.7 +0.1**
comp=Z,16nm,0.7s,mb5.4
PGF Pioggiola 86.16 354 *eP* **P 23 57 12.6 -0.3**
comp=Z,70nm,0.9s,mb5.6
PGF Pioggiola 86.16 354 *eP* **P 23 57 12.6 -0.3**
PGF pmax pmax
comp=Z,35nm,0.9s,mb5.6
PGF Pioggiola 86.16 354 *eP* **P 23 57 12.6 -0.3**
comp=Z,35nm,0.9s,mb5.6
EBIE Bielsa 86.32 0 P **P 23 57 14.9 +1.2**
comp=Z,9.9nm,0.8s,mb5.1
GUD Guadarrama 88.27 3 P **P 23 57 22.1 -1.0**
GUD pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
GUD Guadarrama 88.27 3 P **P 23 57 22.1 -1.0**
comp=Z,9.9nm,1.1s,mb5.0
ESDC Sonseca Array 89.25 3 P **P 23 57 26.9 -0.8**
comp=Z,3.1nm,0.7s,mb4.8,baz=348,slow=4.0,SNR=10
ESDC Sonseca Array 89.25 3 P **P 23 57 26.2 -1.5**
comp=Z,7.2nm,0.9s,mb5.0
STKA Stephens Creek 89.67 212 *eP* **P 23 57 29.1 -0.5**
comp=Z,5.7nm,0.8s,mb5.0
STKA Stephens Creek 89.67 212 P **P 23 57 29.2 -0.4**
comp=Z,6.5nm,0.7s,mb5.1,baz=353,slow=4.4,SNR=6.5
SJG San Juan 89.78 61 *eP* **P 23 57 30.3 +0.2**
CPD Cerro la Pandu 89.96 61 *eP* **P 23 57 31.8 +0.8**
MTP Monte Pirata 90.11 60 *eP* **P 23 57 32.3 +0.6**
EVIA Vianos 90.33 2 P **P 23 57 31.2 -1.5**
EVIA pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
EVIA Vianos 90.33 2 P **P 23 57 31.2 -1.5**
comp=Z,8.8nm,1.2s,mb5.0
EADA Adamuz 90.72 4 P **P 23 57 34.5 -0.1**
comp=Z,28nm,2.3s,mb5.2
EBAN Banos Encina 90.76 3 P **P 23 57 33.0 -1.7**
EBAN pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
EBAN Banos Encina 90.76 3 P **P 23 57 33.0 -1.7**
comp=Z,7.1nm,1.0s,mb5.0
EMIN Mina Concepcio 91.01 6 P **P 23 57 31.3 -4.6**
comp=Z,12nm,0.9s,mb5.2
EHUE Huescar 91.14 2 P **P 23 57 33.9 -2.6**
EHUE pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
EHUE Huescar 91.14 2 P **P 23 57 33.9 -2.6**
comp=Z,4.4nm,1.0s,mb4.7
ELUQ Luque 91.34 4 P **P 23 57 36.0 -1.4**
ELUQ pmax pmax
comp=Z,41nm,1.8s,mb5.5
ELUQ Luque 91.34 4 P **P 23 57 36.0 -1.5**
comp=Z,41nm,1.8s,mb5.5
ELOJ Sierra Loja 91.76 4 P **P 23 57 38.5 -0.8**
ELOJ pmax pmax
comp=Z,12nm,1.1s,mb5.1
ELOJ Sierra Loja 91.76 4 P **P 23 57 38.5 -0.8**
comp=Z,12nm,1.1s,mb5.1
ESPR Espera 91.95 5 P **P 23 57 37.2 -3.0**
comp=Z,13nm,1.0s,mb5.2
EMIJ Mijas 92.31 4 P **P 23 57 40.4 -1.5**
comp=Z,15nm,1.0s,mb5.3
EJIF Jimena Fronter 92.39 5 P **P 23 57 40.7 -1.6**
EJIF pmax pmax
comp=Z,15nm,1.4s,mb5.1
EJIF Jimena Fronter 92.39 5 P **P 23 57 40.7 -1.5**
comp=Z,15nm,1.4s,mb5.1
RPZ Rata Peaks 95.06 187 LR LR 00 33 26.9
comp=Z,5um,21.4s,MS5.9,baz=39,slow=31
TORD Torodi Ar. Bea 115.74 359 PKP PKPdf 00 03 13.3 -0.7
comp=Z,1.9nm,0.8s,baz=33,slow=1.8,SNR=11
TORD PKKPbc PKKPbc 00 13 43.7 -2.2
comp=Z,1.8nm,0.9s,baz=171,slow=3.8,SNR=4.8
TORD Torodi Ar. Bea 115.74 359 PKP PKPdf 00 03 13.3 -0.7
TORD PKKPbc PKKPbc 00 13 43.7 -2.2
DBIC Dimbokro 122.01 6 PKP PKPdf 00 03 25.4 -0.6
comp=Z,5.1nm,0.7s,baz=79,slow=2.1,SNR=16
DBIC Dimbokro 122.01 6 PKIKP PKPdf 00 03 25.4 -0.6
DBIC pmax pmax
comp=Z,5.0nm,0.7s
TSUM Tsumeb 145.16 331 PKPbc PKPbc 00 04 10.1 +1.4
comp=Z,9.3nm,0.8s,baz=320,slow=0.8,SNR=4.7
MAW Mawson 146.19 218 PKPbc PKPbc 00 04 11.0 -0.9
comp=Z,6.0nm,0.6s,baz=70,slow=4.3,SNR=7.9
BOSA Boshof 150.62 311 PKPbc PKPbc 00 04 24.1 +0.6
comp=Z,13nm,0.7s,baz=8.1,slow=1.0,SNR=6.4
BOSA PKPab PKPab 00 04 29.9 -0.5
comp=Z,14nm,0.8s,baz=12,slow=2.6,SNR=4.5
SYO Syowa Base 154.42 212 *i*ePKPdf PKPbc 00 04 29.8 -2.2

BGS ***26*** *23:46:12.7±1.5, 50.40N×179.23W, h33km, mb5.6, MS5.2*
MOS ***26*** *23:46:16.7±0.9, 51.32N×179.52W, h33km, mb5.9/80, MS5.5/16, Error ellipse: s-maj=8.2km s-min=4.2km az=93.5*
BJI ***26*** *23:46:16.1, 51.60N×179.83W, h20km, mB5.5, mb5.5, Ms5.6, Msz5.4*
NEIC ***26*** *23:46:18.5±0.1, 51.38N×179.54W, h35km, mb5.7/160, MS5.6/6, MW5.7, Error ellipse: s-maj=4.4km s-min=2.5km az=184.0, Moment Tensor Solution. s67 Moment tensor: Scale 10^{17}Nm; M_{rr}2.62; $M_{\theta\theta}$-4.48; $M_{\phi\phi}$1.86; $M_{r\theta}$1.83; $M_{\theta\phi}$-0.44; $M_{r\phi}$0.34; Best double couple: M_o4.00000×10^{17} NP1:$\phi_8$78.00000°, δ59.00000°, λ79.00000°. NP2: ϕ_s279.00000°, δ32.00000°, λ108.00000°. Principal axes: T 3.1000, Plg73.0000°, Azm320.0000°; N 1.8500, Plg10.0000°, Azm83.0000°; P -4.9600, Plg14.0000°, Azm176.0000°;*
NEIC Felt on Adak.
HRVD ***26*** *23:46:18.5±0.1, 51.09N×179.47W, h34km, MW5.8/98, Centroid moment Tensor Solution. LP body waves: s81,c147; Mantle waves: s98,c262; Half duration: 1s8 Moment tensor: Scale 10^{17}Nm; M_{rr}3.86±.07; $M_{\theta\theta}$-4.39±.05; $M_{\phi\phi}$0.53±.04; $M_{r\theta}$3.16±.08; $M_{\theta\phi}$0.28±.04; $M_{r\phi}$0.37±.07; Best double couple: M_o5.22000×10^{17} NP1:$\phi_8$281.00000°, δ27.00000°, λ103.00000°. NP2: ϕ_s87.00000°, δ64.00000°, λ84.00000°. Principal axes: T 4.9750, Plg70.0000°, Azm343.0000°; N 0.4940, Plg6.0000°, Azm89.0000°; P -5.4650, Plg19.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
ISCJB ***26*** *23:46:19.3±0.1, 51.37N×179.44W×0.02, h55km, mb5.6/277, MS5.5/39 Error ellipse: s-maj=4.1km s-min=1.7km az=15.8*

IDC ***26*** *23:46:19.8±1.3,5145N×17943W,h46km±10km,mb5.1/34, mb1 5.2/35,mb1mx5.1/37,mbtmp5.4/35,ML5.6/1,MS5.4/9, Ms1 5.4/9,ms1mx5.1/34,Error ellipse: s-maj=13.5km s-min=8.2km az=155.0*

SZGRF ***26*** *23:46:19.6,5144N×17871W,h33km, mb5.9,Andreanof Islands, Aleutian Islands, United States*

CRAAG ***26*** *23:46:21.1,5148N×17939W,Mw5.7*

ISC 26 23:46:21.0±0.1,5146N±003×17946W±002,h57km, h57km±2.9km:pP-P,n1087,σ0s84/1063,mb5.6/277, MS5.5/39,315C-107D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AMKA	**Amchitka**	**0.78**	**264**	P		**Pn**	**23 46 32.7**	**-3.3**
AMKA				S		Sn	23 46 44.1	-3.0
ATKA	**Atka Island**	**3.35**	**75**	P		**Pn**	**23 47 10.5**	**-0.4**
ATKA				S		Sn	23 47 51.4	+2.0
SMY	**Shemya**	**4.17**	**290**	P		**Pn**	**23 47 23.4**	**+1.3**
SMY				*e*Pn		Pn	23 47 24.0	+1.9
SMY				S		Sn	23 48 13.7	+4.2
NIKO	**Nikolski**	**6.69**	**73**	P		**Pn**	**23 47 57.3**	**+0.6**
SPIA	**Saint Paul Isl**	**7.86**	**40**	P		**Pn**	**23 48 15.7**	**+3.0**
AKUT	**Akutan**	**8.72**	**67**	P		**Pn**	**23 48 28.3**	**+3.9**
SDPT	**Sand Point** 92nm,0.3s	**11.97**	**64**	*e*P		**Pn**	**23 49 08.2**	**-0.7**
CHGN	**Chignik**	**13.31**	**60**	*e*P		**Pn**	**23 49 26.9**	**-0.2**
PET	**Petropavlovsk**	**13.49**	**285**	*e*P		**Pn**	**23 49 30.7**	**+1.1**
PET				*e*S		**Sn**	**23 51 58.5**	**+0.6**
PET	comp=Z,109nm,0.9s			pmax	pmax			
PET	comp=N,84nm,1.2s			smax				
PET	comp=Z,17μm,20.0s			MLR	MLR			
PET	comp=Z,13μm,19.0s			MLR	MLR			
PET	**Petropavlovsk**	**13.49**	**285**	*e*Pn		**Pn**	**23 49 27.9**	**-1.7**
TNA	**Tin City**	**15.33**	**18**	*e*P		**Pn**	**23 49 58.9**	**+5.2**
SKR	**Severo-Kuril's**	**15.36**	**277**	*e*P		**Pn**	**23 49 52.0**	**-2.1**
SKR	comp=N,180nm,1.0s			pmax	pmax			
SKR	comp=E,180nm,1.0s			pmax	pmax			
SKR	comp=Z,310nm,1.0s			pmax	pmax			
SVW2	**Sparrevohn**	**16.30**	**44**	*e*P		**Pn**	**23 50 09.0**	**+2.9**
KDAK	**Kodiak Island** comp=Z,21nm,0.3s,baz=257,slow=8.1,SNR=13	**16.73**	**57**	P		**Pn**	**23 50 09.0**	**-2.5**
KDAK				S		**S**	**23 53 13.2**	**-11**
	comp=Z,1.8nm,0.3s,baz=339,slow=17,SNR=7.1							
KDAK	**Kodiak Island**	**16.73**	**57**	*e*Pn		**Pn**	**23 50 08.2**	**-3.3**
TTA	**Tatalina**	**17.00**	**39**	*e*P		**Pn**	**23 50 17.4**	**+2.5**
BILL	**Bilibino**	**18.03**	**343**	*c i*P		**Pn**	**23 50 30.2**	**+2.7**
BILL	comp=Z,163nm,1.6s			pmax	pmax			
BILL	comp=Z,17μm,15.0s			MLR	MLR			
BILL	**Bilibino**	**18.03**	**343**	*e*P		**Pn**	**23 50 30.6**	**+3.1**
SLKM	**Skilak Lake**	**18.55**	**49**	*e*P		**Pn**	**23 50 35.2**	**+1.4**
SLKM	**Skilak Lake**	**18.55**	**49**	*e*P		**Pn**	**23 50 34.0**	**+0.2**
MA2	**Magadan**	**18.57**	**307**	*e*P		**Pn**	**23 50 33.2**	**-0.9**
SEY	**Seymchan**	**18.91**	**318**	*i*P		**Pn**	**23 50 39.7**	**+1.6**
PMR	**Palmer**	**19.37**	**47**	*e*P		**Pn**	**23 50 43.8**	**+0.2**
PMR	comp=Z,62nm,0.6s			pmax	pmax			
PMR	**Palmer** comp=Z,62nm,0.6s	**19.37**	**47**	*e*P		**Pn**	**23 50 43.8**	**+0.2**
PMR				*e*Pn		**Pn**	**23 50 45.1**	**+1.4**
MCK	**McKinley**	**20.21**	**41**	P		**P**	**23 50 53.9**	**+2.8**
MCK	comp=Z,120nm,1.0s			pmax	pmax			
MCK	**McKinley** comp=Z,125nm,1.0s	**20.21**	**41**	*e*P		**P**	**23 50 51.6**	**+0.5**
EYAK	**Cordova Ski Ar**	**20.71**	**51**	*e*P		**P**	**23 50 57.3**	**+0.7**
DIV	**Divide**	**20.82**	**49**	*e*Pn		**P**	**23 50 59.7**	**+2.0**
COLA	**College**	**21.10**	**38**	*d i*P		**P**	**23 51 01.9**	**+1.1**
COLA	**College**	**21.10**	**38**	*e*P		**P**	**23 51 02.2**	**+1.4**
MENT	**Mentasta**	**22.18**	**45**	*e*P		**P**	**23 51 13.3**	**+1.0**
DAWY	**Dawson**	**24.33**	**43**	*e*P		**P**	**23 51 33.0**	**-0.3**
DAWY				*e*ScP		ScP	23 58 51.9	+6.5
YSS	**Yuzh-Sakhalins**	**24.90**	**275**	⇑*e*P		**P**	**23 51 39.1**	**+0.6**
YSS	comp=N,60nm,1.0s			pmax	pmax			
YSS	comp=E,120nm,1.0s			pmax	pmax			
YSS	comp=Z,160nm,1.0s,mb5.5			MLR	MLR			
YSS	comp=Z,7μm,18.0s,MS5.2			MLR	MLR			
YSS	**Yuzh-Sakhalins** comp=E,273nm,0.8s,mb5.8	**24.90**	**275**	*e*P		**P**	**23 51 39.3**	**+0.8**
SKAG	**Skagway** comp=E,44nm,1.0s,mb4.9	**25.84**	**55**	*e*P		**P**	**23 51 48.3**	**+1.3**
SKAG	comp=Z,13μm,19.0s,MS5.5			LR	LR			
ASAJ	**Asahikawa** comp=Z,150nm,1.1s,mb5.4,baz=35,slow=6.3,SNR=12	**26.29**	**269**	P		**P**	**23 51 51.0**	**-0.2**
ASAJ				PcP	PcP		23 55 15.8	-0.3
ASAJ	comp=Z,24nm,1.0s,baz=267,slow=4.7,SNR=4.4			LR	LR		00 00 42.6	
ASAJ	comp=Z,5μm,21.1s,MS5.0,baz=82,slow=33 **Asahikawa**	**26.29**	**269**	P		**P**	**23 51 51.0**	**-0.1**
ASAJ							23 55 15.8	
ASAJ	comp=Z,151nm,1.1s			pmax	pmax			
ASAJ	comp=Z,5μm,21.1s			MLR	MLR			
INK	**Inuvik** comp=Z,25nm,0.7s,mb5.0,baz=247,slow=13,SNR=13	**27.63**	**35**	P		**P**	**23 52 02.3**	**-0.9**
INK				PcP	PcP		23 55 18.9	-0.4
INK	comp=Z,15nm,0.7s,baz=165,slow=1.2,SNR=5.9			LR	LR		00 03 48.2	
INK	comp=Z,12μm,19.2s,MS5.5,baz=0.0,slow=38 **Inuvik**	**27.63**	**35**	P		**P**	**23 52 02.3**	**-0.9**
INK							23 55 18.9	
INK	comp=Z,250nm,0.7s			pmax	pmax			
INK	comp=Z,12μm,19.2s			MLR	MLR			
INK	**Inuvik**	**27.63**	**35**	*e*P		**P**	**23 52 06.0**	**+2.8**
INK				PcP	PcP		23 55 18.9	-0.4
INK				LR	LR		00 03 48.2	
DLBC	**Dease Lake** comp=Z,9.4nm,0.8s,mb4.6,baz=310,slow=13,SNR=4.2	**28.66**	**56**	P		**P**	**23 52 11.9**	**-0.4**
DLBC	comp=Z,11μm,19.5s,MS5.5,baz=275,slow=38			LR	LR		00 04 38.1	
HABR	**Khabarovsk**	**29.05**	**282**	⇑*i*P		**P**	**23 52 15.6**	**-0.2**
HABR				*e*S		**S**	**23 57 03.8**	**+0.6**
HABR	comp=Z,128nm,1.0s,mb5.6			pmax	pmax			
YAK	**Yakutsk**	**29.05**	**311**	*e*P		**P**	**23 52 17.6**	**+1.8**
YAK				*e*			23 53 22.2	
YAK				*e*S		**S**	**23 57 10.1**	**+6.9**
YAK				*e*SS		SS	23 59 01.1	-7.0
YAK				*e*			00 02 53.5	
YAK	comp=Z,31nm,1.1s,mb5.0			pmax	pmax			
YAK	comp=N,13nm,1.5s			pmax	pmax			
YAK	comp=E,20nm,1.2s			smax				
YAK	comp=N,35nm,1.6s			smax				
YAK	comp=E,23nm,1.2s							
YAK	**Yakutsk**	**29.05**	**311**	*e*P		**P**	**23 52 18.2**	**+2.4**
TIXI	**Tiksi**	**30.36**	**331**	*i* P		**P**	**23 52 31.5**	**+4.1**
TIXI	comp=Z,110nm,0.9s,mb5.6			pmax	pmax			
KLR	**Kul'dur**	**30.76**	**285**	⇓*i*P		**P**	**23 52 28.0**	**-2.9**
KLR	comp=E,240nm,1.4s			pmax	pmax			
KLR	comp=Z,400nm,1.4s,mb6.1			MLR	MLR			
KLR	comp=E,2μm,14.0s			MLR	MLR			
BBB	comp=Z,4μm,14.0s,MS5.2 **Bella Bella** comp=Z,23nm,0.8s,mb5.1,baz=290,slow=6.5,SNR=7.1	**31.21**	**68**	P		**P**	**23 52 34.9**	**+0.1**
MAJO	**Matsushiro**	**33.39**	**260**	*e*P		**P**	**23 52 56.7**	**+2.7**
MAJO	comp=Z,73nm,1.1s,mb5.5			pmax	pmax			
MAJO	**Matsushiro** comp=Z,73nm,1.1s,mb5.5	**33.39**	**260**	*e*P		**P**	**23 52 52.1**	**-1.8**
MAT	**Matsushiro**	**33.39**	**260**	P		**P**	**23 52 53.3**	**-0.7**
MAT				S		**S**	**23 58 09.0**	**-2.0**
MJAR	**Matsushiro Arr** comp=Z,15nm,0.8s,mb5.0,baz=50,slow=8.0,SNR=22	**33.39**	**260**	P		**P**	**23 52 53.1**	**-0.8**
MJAR				PcP	PcP		23 55 33.6	-0.8
MJAR	comp=Z,12nm,0.8s,baz=74,slow=2.3,SNR=11			ScP	ScP		23 59 15.4	+1.5
MJAR	comp=Z,2.6nm,1.0s,baz=53,slow=2.5,SNR=4.3			LR	LR		00 05 24.4	
MDJ	comp=Z,4μm,19.4s,MS5.1,baz=70,slow=34 **Mudanjiang**	**34.15**	**279**	P		**P**	**23 52 59.5**	**-1.1**
MDJ				AP	pP		23 53 12.5	-2.4
MDJ				PP	PP		23 54 16.5	-2.2
MDJ				PCP	PcP		23 55 37.3	+0.7
MDJ				S	**S**		**23 58 23.5**	**+0.8**
MDJ				SCP	ScP		23 59 17.5	+0.9
MDJ				PCS	PcS		23 59 23.0	+0.2
MDJ	comp=Z,64nm,0.9s,mb5.5			AMB	AMB			
MDJ	comp=Z,227nm,7.4s			AMB	AMB			
MDJ	comp=N,698nm,22.1s,MS5.0			LR	LR			
MDJ	comp=E,3μm,21.2s,MS5.0			LR	LR			
MDJ	comp=Z,4μm,22.1s,MS5.1			LR	LR			
JHJ	**Hachijo jima 2** comp=Z,289nm,0.9s,mb6.2,baz=193,slow=2.6,SNR=3.8	**34.72**	**254**	P		**P**	**23 53 07.0**	**+1.5**
JHJ				LR	LR		00 04 35.6	
C03A	comp=Z,3μm,20.5s,MS5.0,baz=164,slow=32 **Quillayute Air** baz=35	**34.98**	**74**	⇓P		**P**	**23 53 07.5**	**-0.2**
YKW3	**Yellowknife Ar**	**35.46**	**46**	*e*P		**P**	**23 53 11.0**	**-0.8**
YKA	**Yellowknife Ar** comp=Z,32nm,0.5s,mb5.5,baz=282,slow=8.1,SNR=22	**35.48**	**46**	P		**P**	**23 53 11.1**	**-0.9**
YKA				PcP	PcP		23 55 39.2	-1.2
YKA	comp=Z,22nm,1.0s,baz=291,slow=2.8,SNR=7.4			ScP	ScP		23 59 22.8	+1.4
YKA	comp=Z,3.5nm,0.6s,baz=292,slow=3.4,SNR=8.7			LR	LR		00 09 35.2	
YKA	comp=Z,16μm,18.6s,MS5.8,baz=275,slow=39 **Yellowknife Ar**	**35.48**	**46**	P		**P**	**23 53 11.1**	**-0.9**
YKA							23 55 39.2	
YKA	comp=Z,32nm,0.5s			pmax	pmax			
YKA	comp=Z,16μm,18.7s			MLR	MLR			
YKA	**Yellowknife Ar**	**35.48**	**46**	P		**P**	**23 53 11.2**	**-0.8**
YKA				PcP	PcP		23 55 39.2	-1.2
YKA				ScP	ScP		23 59 22.8	+1.4
YKA				LR	LR		00 09 35.2	
B04A	**Port Angeles** baz=36	**35.56**	**73**	⇑P		**P**	**23 53 12.1**	**-0.7**
A04A	**Legoe Bay, Lum** baz=36	**35.74**	**71**	⇓P		**P**	**23 53 13.7**	**-0.5**
D03A	**Wishkah Elem.** baz=36	**35.84**	**74**	⇓P		**P**	**23 53 14.9**	**-0.2**
A05A	**Maple Falls** baz=36	**35.98**	**71**	⇑P		**P**	**23 53 15.9**	**-0.4**
C04A	**Brinnon** baz=36,SNR=36	**36.04**	**73**	⇑P		**P**	**23 53 16.7**	**-0.1**
E03A	**Lebam** baz=36,SNR=25	**36.23**	**75**	⇓P		**P**	**23 53 18.8**	**+0.3**
B05A	**Bryant** baz=36,SNR=61	**36.31**	**72**	⇓P		**P**	**23 53 19.0**	**-0.1**
F03A	**Seaside** baz=36	**36.54**	**76**	⇑P		**P**	**23 53 21.5**	**+0.4**
E04A	**Onalaska** baz=37,SNR=12	**36.72**	**75**	⇓P		**P**	**23 53 22.5**	**-0.1**
C05A	**Tolt Reservoir** baz=37,SNR=38	**36.81**	**72**	⇓P		**P**	**23 53 23.3**	**-0.1**
D05A	**Enumclaw** baz=37,SNR=42	**36.88**	**73**	⇑P		**P**	**23 53 24.2**	**+0.3**
G03A	**Yamhill** baz=37,SNR=12	**37.01**	**77**	⇓P		**P**	**23 53 25.1**	**0.0**
CN2	**Changchun**	**37.12**	**280**	*e*P		**P**	**23 53 25.0**	**-1.1**
CN2				PCP	PcP		23 55 46.5	+1.1
CN2				*e*S	**S**		**23 59 04.5**	**-3.8**
CN2	comp=Z,50nm,0.9s,mb5.3			AMB	AMB			
CN2	comp=Z,600nm,4.0s			AMB	AMB			
CN2	comp=N,3μm,17.0s,MS5.4			LR	LR			
CN2	comp=E,4μm,17.0s,MS5.4			LR	LR			
CN2	comp=Z,5μm,17.0s,MS5.4			LR	LR			
LON	**Longmire**	**37.19**	**74**	*e*P		**P**	**23 53 27.6**	**+1.0**
F04A	**Amboy** baz=37,SNR=28	**37.23**	**75**	⇑P		**P**	**23 53 26.6**	**-0.3**
E05A	**Randle** baz=37,SNR=16	**37.32**	**74**	⇓P		**P**	**23 53 27.8**	**+0.1**
I02A	**Mapleton** baz=37,SNR=6.3	**37.35**	**79**	⇑P		**P**	**23 53 28.7**	**+0.7**
COR	**Corvallis**	**37.37**	**78**	*e*P		**P**	**23 53 29.7**	**+1.5**
COR	comp=Z,259nm,1.1s,mb6.0			pmax	pmax			
COR	**Corvallis** comp=Z,259nm,1.1s,mb6.0	**37.37**	**78**	*e*P		**P**	**23 53 29.7**	**+1.5**
G04A	**Mulino** baz=38,SNR=22	**37.56**	**77**	⇑P		**P**	**23 53 30.1**	**+0.3**
BOD	**Bodaibo**	**37.60**	**306**	*e*P		**P**	**23 53 29.2**	**-0.8**
BOD				*e*			23 59 20.2	
BOD	comp=Z,111nm,1.3s,mb5.4			pmax	pmax			
KEBM	**Edson Butte**	**37.65**	**81**	*e*P		**P**	**23 53 32.5**	**+2.1**
I03A	**Eugene** baz=38,SNR=11	**37.71**	**79**	⇓P		**P**	**23 53 32.1**	**+1.1**
CBIJ	**Chichi jima** comp=Z,78nm,0.7s,mb5.5	**37.74**	**245**	P		**P**	**23 53 30.6**	**-0.7**
CBIJ	comp=Z,3μm,20.6s,MS5.1,baz=54,slow=32			LR	LR		00 06 39.2	
J02A	**Umpqua** baz=38	**37.85**	**80**	⇓P		**P**	**23 53 32.7**	**+0.5**
H04A	**Detroit Lake** baz=38,SNR=30	**38.00**	**77**	⇓P		**P**	**23 53 33.5**	**0.0**
KBO	**Bosley Butte**	**38.07**	**82**	*e*P		**P**	**23 53 39.0**	**+5.0**
J03A	**Ideyld Park** baz=38,SNR=23	**38.22**	**79**	⇓P		**P**	**23 53 35.2**	**-0.1**
G05A	**Wamic** baz=38,SNR=14	**38.24**	**76**	⇓P		**P**	**23 53 35.3**	**-0.2**
F06A	**Goldendale** baz=38	**38.30**	**75**	⇓P		**P**	**23 53 35.6**	**-0.4**
M01C	**Crescent City** baz=38	**38.34**	**82**	⇓P		**P**	**23 53 35.7**	**-0.6**
L02A	**Cave Junction** baz=38,SNR=6.3	**38.49**	**81**	⇓P		**P**	**23 53 37.7**	**+0.2**
H05A	**Madras** baz=38,SNR=25	**38.61**	**77**	⇓P		**P**	**23 53 38.2**	**-0.3**
KRMB	**Red Mountain**	**38.66**	**82**	*e*P		**P**	**23 53 42.8**	**+3.8**
G06A	**Carlson Farm,** baz=39,SNR=12	**38.66**	**75**	⇑P		**P**	**23 53 39.0**	**0.0**
HAWA	**Hanford**	**38.74**	**73**	*e*P		**P**	**23 53 39.9**	**+0.3**
I05A	**Bend** baz=39,SNR=16	**38.84**	**77**	⇑P		**P**	**23 53 40.0**	**-0.5**
H06A	**Lindquist Farm** baz=39,SNR=23	**39.10**	**76**	⇓P		**P**	**23 53 42.3**	**-0.4**
KHMM	**Horse Mountain**	**39.13**	**83**	*e*P		**P**	**23 53 47.4**	**+4.4**
EDM	**Edmonton**	**39.13**	**61**	*e*P		**P**	**23 53 42.4**	**-0.6**
G07A	**Ruggs Ranch, H** baz=39	**39.23**	**75**	⇓P		**P**	**23 53 43.5**	**-0.3**
NEW	**Newport** comp=Z,60nm,0.7s,mb5.4,baz=308,slow=7.1,SNR=20	**39.24**	**69**	P		**P**	**23 53 43.6**	**-0.3**
NEW	**Newport** comp=Z,60nm,0.7s	**39.24**	**69**	P		**P**	**23 53 43.6**	**-0.3**
NEW				pmax	pmax			
NEW	**Newport** comp=Z,236nm,1.3s,mb5.8	**39.24**	**69**	*e*P		**P**	**23 53 43.6**	**-0.3**
YBH	**Yreka Blue Hor** comp=Z,72nm,1.0s,mb5.3,baz=278,slow=5.2,SNR=11	**39.28**	**81**	P		**P**	**23 53 45.3**	**+1.1**
YBH	**Yreka Blue Hor**	**39.28**	**81**	*e*P		**P**	**23 53 46.0**	**+1.9**
YBH	**Yreka Blue Hor** baz=39,SNR=17	**39.28**	**81**	⇓P		**P**	**23 53 44.7**	**+0.5**
J05A	**Fort Rock** baz=39,SNR=38	**39.33**	**78**	⇑P		**P**	**23 53 45.1**	**+0.5**
M02C	**Callahan** baz=39,SNR=14	**39.38**	**82**	⇑P		**P**	**23 53 45.0**	**0.0**
K04A	**Chilquin** baz=39,SNR=8.2	**39.39**	**80**	⇑P		**P**	**23 53 44.7**	**-0.4**
N02C	**Big Bar** baz=39,SNR=12	**39.43**	**83**	⇑P		**P**	**23 53 45.8**	**+0.4**
F08A	**Pendleton** baz=39	**39.49**	**74**	⇑P		**P**	**23 53 45.5**	**-0.4**
L04A	**Klamath Falls** baz=40,SNR=20	**39.54**	**80**	⇑P		**P**	**23 53 46.1**	**-0.2**
I06A	**Prineville** baz=40,SNR=15	**39.60**	**77**	⇓P		**P**	**23 53 46.2**	**-0.7**
G08A	**Pilot Rock** baz=40,SNR=20	**39.65**	**74**	⇑P		**P**	**23 53 46.5**	**-0.8**
H07A	**Lands Inn, Kim** baz=40	**39.65**	**76**	⇓P		**P**	**23 53 47.0**	**-0.3**
M04C	**Macdoel** baz=40,SNR=26	**39.79**	**81**	⇑P		**P**	**23 53 47.7**	**-0.7**
RES	**Resolute Bay**	**39.84**	**24**	*e*P		**P**	**23 53 52.8**	**+4.0**
K05A	**Summer Lake** baz=40,SNR=19	**39.84**	**79**	⇑P		**P**	**23 53 49.1**	**+0.2**
M03C	**McCloud** baz=40	**39.90**	**82**	⇑P		**P**	**23 53 50.0**	**+0.6**
KIPM	**Iron Peak**	**39.91**	**84**	*e*P		**P**	**23 53 49.9**	**+0.5**
I07A	**Izee** baz=40,SNR=30	**39.95**	**76**	⇓P		**P**	**23 53 49.4**	**-0.4**
J06A	**Christmas Vall** baz=40,SNR=24	**40.01**	**78**	⇓P		**P**	**23 53 50.4**	**+0.2**
INCN	**Inchon** comp=Z,188nm,1.1s,mb5.7	**40.01**	**271**	*e*P		**P**	**23 53 50.8**	**+0.5**
WDC	**Whiskeytown Da**	**40.04**	**83**	*e*P		**P**	**23 53 54.1**	**+3.6**
WDC	**Whiskeytown Da** baz=40,SNR=9.1	**40.04**	**83**	⇑P		**P**	**23 53 50.4**	**-0.1**
F09A	**S2 Ranch, Elgi** baz=40,SNR=22	**40.06**	**73**	⇓P		**P**	**23 53 50.5**	**-0.1**
O02C	**Red Bluff** baz=40,SNR=13	**40.12**	**83**	⇑P		**P**	**23 53 51.6**	**+0.4**
CIT	**Chita**	**40.14**	**298**	*e*P		**P**	**23 53 51.3**	**0.0**
CIT				*e*			23 53 59.8	
CIT	comp=Z,334nm,1.8s,mb5.8			pmax	pmax			
P01C	**Double 8 Ranch** baz=40,SNR=7.9	**40.20**	**85**	⇑P		**P**	**23 53 52.6**	**+0.8**
K06A	**Valley Falls** baz=40,SNR=18	**40.20**	**78**	⇓P		**P**	**23 53 51.5**	**-0.3**
H08A	**Prairie City** baz=40,SNR=16	**40.23**	**75**	⇑P		**P**	**23 53 51.6**	**-0.4**
L05A	**Lakeview** baz=40,SNR=23	**40.26**	**80**	⇓P		**P**	**23 53 52.7**	**+0.4**
J07A	**Hines** baz=40,SNR=17	**40.46**	**77**	⇑P		**P**	**23 53 54.1**	**+0.2**
M05C	**Lookout** baz=40,SNR=27	**40.46**	**81**	⇑P		**P**	**23 53 53.9**	**0.0**
GASB	**Alder Springs** baz=40,SNR=16	**40.48**	**84**	⇑P		**P**	**23 53 56.5**	**+2.4**
HATC	**Hat Creek Radi** baz=40,SNR=5.7	**40.57**	**82**	⇑P		**P**	**23 53 56.4**	**+1.5**
I08A	**Drewsey** baz=40,SNR=23	**40.62**	**76**	⇑P		**P**	**23 53 54.9**	**-0.4**
HOPS	**Hopland**	**40.65**	**85**	*e*P		**P**	**23 53 56.9**	**+1.3**
HOPS	**Hopland** baz=41	**40.65**	**85**	⇓P		**P**	**23 53 55.1**	**-0.4**
H09A	**Durkee** baz=41,SNR=13	**40.76**	**74**	⇑P		**P**	**23 53 55.3**	**-1.1**
BSMT	**Bassoo Peak**	**40.81**	**69**	*e*P		**P**	**23 53 56.9**	**0.0**
BSMT				*e*ScP		PcS	23 59 53.4	+5.6
K07A	**Rock Creek Ran** baz=41,SNR=47	**40.87**	**78**	⇑P		**P**	**23 53 56.7**	**-0.6**
M06C	**Likely Place G** baz=41,SNR=14	**40.96**	**81**	⇓P		**P**	**23 53 57.5**	**-0.6**
J08A	**Circle Bar Ran** baz=41,SNR=18	**40.98**	**77**	⇑P		**P**	**23 53 57.4**	**-0.9**
I09A	**Lost Marbles R** baz=41,SNR=13	**41.08**	**75**	⇑P		**P**	**23 53 58.0**	**-1.1**
O04C	**Chester** baz=41,SNR=18	**41.09**	**82**	⇓P		**P**	**23 53 59.2**	**0.0**
MNRC	**McLaughlin Nat** baz=41,SNR=10.0	**41.11**	**85**	⇓P		**P**	**23 53 59.7**	**+0.4**
ELFS	**Eagle Lake Fie** baz=41	**41.14**	**81**	⇑P		**P**	**23 53 59.9**	**+0.3**
L07A	**Adell** baz=41,SNR=44	**41.19**	**79**	⇑P		**P**	**23 53 59.7**	**-0.3**
NSHM	**Saint Helena R**	**41.22**	**85**	*e*P		**P**	**23 54 01.3**	**+1.1**
ORV	**Oroville** baz=41,SNR=12	**41.29**	**83**	⇓P		**P**	**23 54 01.0**	**+0.2**
SUTB	**Sutter Butte** baz=41,SNR=5.5	**41.31**	**84**	⇑P		**P**	**23 54 01.0**	**+0.1**
K08A	**Mann Creek Ran** baz=41,SNR=20	**41.32**	**77**	⇓P		**P**	**23 54 00.7**	**-0.3**
O05C	**Quincy** baz=41,SNR=13	**41.41**	**82**	⇑P		**P**	**23 54 01.8**	**0.0**
J09A	**Fry Pan Ranch,** baz=41,SNR=27	**41.42**	**76**	⇓P		**P**	**23 54 01.1**	**-0.7**
CVS	**Carmenet Viney** baz=41	**41.42**	**85**	⇑P		**P**	**23 54 02.7**	**+0.8**
OHCM	**Honcut**	**41.43**	**84**	*e*P		**P**	**23 54 04.4**	**+2.4**
FARB	**Farallon Islan** baz=41	**41.48**	**87**	⇓P		**P**	**23 54 02.2**	**-0.2**
Q03C	**Winters** baz=41	**41.52**	**85**	⇓P		**P**	**23 54 03.8**	**+1.1**
N06A	**Buffalo Meadow** baz=42,SNR=17	**41.62**	**81**	⇓P		**P**	**23 54 03.6**	**+0.1**
L08A	**Fields** baz=42,SNR=17	**41.71**	**78**	⇓P		**P**	**23 54 04.2**	**0.0**
Q04C	**Lincoln** baz=42	**41.80**	**84**	⇑P		**P**	**23 54 03.8**	**-1.1**
K09A	**Rome** baz=42,SNR=16	**41.80**	**77**	⇓P		**P**	**23 54 04.8**	**-0.2**
BEKR	**Beckwourth** baz=42,SNR=10	**41.81**	**82**	⇓P		**P**	**23 54 04.6**	**-0.5**
MSO	**Missoula** comp=Z,213nm,1.3s,mb5.6	**41.83**	**70**	*e*P		**P**	**23 54 04.8**	**-0.4**
MSO				*e*ScP		PcS	23 59 58.3	+6.5
O06A	**Flanigan** baz=42,SNR=9.6	**41.97**	**81**	⇓P		**P**	**23 54 06.5**	**+0.1**
P05C	**Yuba Gap, Truc** baz=42,SNR=14	**41.99**	**83**	⇑P		**P**	**23 54 07.9**	**+1.4**
BDM	**Black Diamond** baz=42	**42.03**	**85**	⇓P		**P**	**23 54 07.0**	**+0.1**
M08A	**Happy Creek Ra** baz=42,SNR=20	**42.11**	**79**	⇑P		**P**	**23 54 07.1**	**-0.5**
N07B	**Gerlach** baz=42,SNR=27	**42.13**	**80**	⇓P		**P**	**23 54 07.1**	**-0.6**
JRSC	**Jasper Ridge** baz=42	**42.13**	**86**	⇑P		**P**	**23 54 07.7**	**0.0**
CHMT	**Chamberlain Mo**	**42.19**	**69**	*e*P		**P**	**23 54 07.8**	**-0.3**
P06A	**Stead Airport,** baz=42	**42.21**	**82**	⇓P		**P**	**23 54 08.0**	**-0.3**
L09A	**Wilkinson Ranc** baz=42,SNR=19	**42.22**	**78**	⇓P		**P**	**23 54 08.1**	**-0.3**
LAVA	**Lava Cap Winer** baz=42,SNR=15	**42.24**	**84**	⇓P		**P**	**23 54 09.3**	**+0.7**
DL2	**Dalian**	**42.27**	**277**	⇑P		**P**	**23 54 08.5**	**-0.3**
DL2				XP	pP		23 54 23.0	-0.4
DL2				PCP	PcP		23 56 04.5	+2.8
DL2	comp=Z,50nm,1.0s,mb5.1			AMB	AMB			
DL2	comp=Z,230nm,6.8s			AMB	AMB			
DL2	comp=N,1μm,17.1s,MS4.9			LR	LR			
DL2	comp=E,1μm,16.9s,MS4.9			LR	LR			
DL2	comp=Z,2μm,17.5s,MS5.0			LR	LR			
WENL	**Wente Brothers** baz=42	**42.30**	**86**	⇑P		**P**	**23 54 09.0**	**0.0**
BNLO	**Ben Lomond (Sa** baz=42,SNR=5.1	**42.35**	**87**	⇑P		**P**	**23 54 10.3**	**+0.8**
R04C	**Big Horse Ranc** baz=42	**42.42**	**84**	⇓P		**P**	**23 54 09.3**	**-0.7**
PAHR	**Pah Rah Range** comp=Z,292nm,0.2s	**42.51**	**82**	*e*P		**P**	**23 54 11.3**	**+0.6**
WCN	**Washoe City** baz=42,SNR=18	**42.52**	**82**	⇓P		**P**	**23 54 11.2**	**+0.3**
O07A	**Toulon** baz=42,SNR=15	**42.55**	**81**	⇓P		**P**	**23 54 10.9**	**-0.2**
S04C	**Ingram Canyon,** baz=43	**42.64**	**86**	⇑P		**P**	**23 54 11.3**	**-0.5**
N08A	**GE Springer Mi** baz=43,SNR=19	**42.65**	**80**	⇑P		**P**	**23 54 11.3**	**-0.6**
R05C	**Kirkwood Meado** ba

PACP	Pacheco Peak	42.98	86	⇑P		P	23 54 14.7	+0.2		
	baz=43,SNR=8.6									
N09A	Rock Creek Ran	42.98	79	⇑P		P	23 54 14.3	-0.3		
	baz=43,SNR=23									
SAO	San Andreas Ge	43.03	87	*eP*		P	23 54 17.5	+2.5		
HRY	Holter Researc	43.12	69	*eP*		P	23 54 15.1	-0.6		
HRY				*e*ScP	PcS		00 00 03.1	+6.0		
R06C	Coleville	43.18	83	⇑P		P	23 54 15.8	-0.4		
	baz=43,SNR=12									
M10A	I.L. Ranch, Tu	43.19	78	⇓P		P	23 54 15.5	-0.8		
	baz=43,SNR=11									
HAST	UC Hastings Re	43.20	87	⇑P		P	23 54 15.4	-1.0		
	baz=43,SNR=9.2									
LRM	Limekiln Ridge	43.24	70	*eP*		P	23 54 16.6	-0.1		
LRM				*e*ScP	PcS		00 00 04.2	+6.6		
HLID	Hailey	43.32	74	*eP*		P	23 54 17.5	+0.2		
	comp=Z,129nm,1.0s,mb5.6									
HLID				*e*ScP	ScP		23 59 56.2	+4.6		
P08A	Dixie Valley	43.33	81	⇓P		P	23 54 16.8	-0.5		
	baz=43									
Q07A	Schurz	43.33	82	⇓P		P	23 54 18.4	+1.0		
	baz=43									
S06C	San Francisco	43.33	84	⇑P		P	23 54 17.6	+0.2		
	baz=43,SNR=15									
S05C	Merced	43.36	85	⇑P		P	23 54 17.3	-0.4		
	baz=43									
BMN	Battle Mountai	43.41	79	*eP*		P	23 54 18.8	+0.7		
T05C	Eagle Field, D	43.43	86	⇓P		P	23 54 17.8	-0.4		
	baz=43									
MCMT	McKenzie Canyo	43.55	71	*eP*		P	23 54 18.6	-0.5		
O09A	Fish Creek Ran	43.59	80	⇓P		P	23 54 19.2	-0.3		
	baz=44,SNR=17									
V03C	Hunter Liggett	43.63	87	⇓P		P	23 54 20.0	+0.2		
	baz=44,SNR=9.2									
N10A	Dunphy	43.68	79	⇑P		P	23 54 20.3	0.0		
	baz=44									
U04C	Hernandez Rese	43.70	87	⇑P		P	23 54 20.0	-0.3		
	baz=44,SNR=8.4									
R07C	Lee Vining	43.70	83	⇓P		P	23 54 19.9	-0.5		
	baz=44,SNR=14									
M11A	Holland Ranch,	43.70	77	⇓P		P	23 54 20.5	+0.2		
	baz=44,SNR=32									
Q08A	Gabbs	43.92	82	⇓P		P	23 54 21.3	-0.8		
	baz=44,SNR=15									
O10A	Cortez Mining,	43.94	79	⇓P		P	23 54 22.5	+0.2		
	baz=44,SNR=15									
NVAR	Mina Array Bea	43.95	82	P		P	23 54 21.0	-1.4		
NVAR	Mina Array Bea	43.95	82	P		P	23 54 21.0	-1.4		
T06C	Millerton Lake	43.96	85	⇓P		P	23 54 21.4	-1.1		
	baz=44,SNR=6.5									
P09A	Austin	43.99	80	⇑P		P	23 54 22.5	-0.2		
	baz=44,SNR=8.6									
KCC	Kaiser Creek	44.01	84	⇓P		P	23 54 23.7	+0.9		
	baz=44,SNR=14									
N11A	Elko Archery C	44.10	78	⇑P		P	23 54 23.1	-0.4		
	baz=44,SNR=6.6									
V04C	Ramage Ranch,	44.10	87	P		P	23 54 25.0	+1.4		
	baz=44,SNR=5.9									
PKD	Parkfield	44.11	87	⇑P		P	23 54 24.5	+0.8		
	baz=44,SNR=8.6									
MLAC	Mammoth Lakes	44.12	84	⇑P		P	23 54 24.6	+0.9		
	baz=44									
R08A	Mina	44.12	82	⇑P		P	23 54 24.1	+0.3		
	baz=44									
U05C	Westside ANR,	44.13	86	⇑P		P	23 54 24.6	+0.8		
	baz=44									
M12A	Wells	44.25	77	⇑P		P	23 54 24.9	+0.1		
	baz=44,SNR=27									
P10A	Eureka	44.37	80	⇑P		P	23 54 26.8	+1.1		
	baz=44,SNR=7.9									
QLMT	Earthquake Lak	44.38	71	*eP*		P	23 54 21.8	-4.1		
QLMT				*e*ScP	PcS		00 00 07.2	+5.0		
Q09A	Carvers	44.40	81	⇑P		P	23 54 26.1	+0.1		
	baz=44									
ELK	Elko	44.45	78	*eP*		P	23 54 27.0	+0.7		
ELK				pmax	pmax					
	comp=Z,55nm,0.8s									
ELK	Elko	44.45	78	*eP*		P	23 54 27.0	+0.7		
	comp=Z,55nm,0.8s,mb5.3									
MTUM	Tungsten Hills	44.46	84	*eP*		P	23 54 27.0	+0.6		
N12A	Clover Valley,	44.50	77	⇑P		P	23 54 27.0	+0.2		
	baz=44,SNR=33									
O11A	Cowboy Ranch,	44.55	79	⇑P		P	23 54 27.2	0.0		
	baz=44									
V05C	Boulder Hill,	44.56	86	⇑P		P	23 54 27.4	+0.2		
	baz=44									
HELL	Mitchell Peak,	44.59	85	⇓P		P	23 54 28.5	+0.9		
	baz=44,SNR=9.6									
RCTC	Rector, Farmer	44.69	85	⇓P		P	23 54 27.3	-1.0		
	baz=45									
M13A	Montello	44.74	76	⇑P		P	23 54 28.1	-0.5		
	baz=45,SNR=15									
YMR	Madison River	44.75	71	*eP*		P	23 54 29.1	+0.3		
	comp=Z,558nm,1.3s,mb6.2									
R09A	Tonopah	44.83	82	⇓P		P	23 54 29.1	-0.3		
	baz=45,SNR=20									
TPH	Tonopah	44.84	82	*eP*		P	23 54 32.8	+3.3		
TPH				pmax	pmax					
	comp=Z,67nm,0.9s,mb5.5									
TPH	Tonopah	44.84	82	*eP*		P	23 54 32.8	+3.3		
	comp=Z,67nm,0.9s,mb5.5									
P11A	Circle Ranch,	44.84	79	⇑P		P	23 54 29.1	-0.4		
	baz=45,SNR=17									
TIN	Tinemaha	44.85	84	⇑P		P	23 54 29.6	+0.1		
	baz=45									
SMMC	Simmler	44.86	87	⇑P		P	23 54 29.6	0.0		
	baz=45									
GCMT	Greycliff	44.88	69	*eP*		P	23 54 29.5	-0.3		
YNR	Norris Junctio	44.89	70	*eP*		P	23 54 27.4	-2.4		
YNR				*e*ScP	PcS		00 00 07.6	+3.3		
YFT	Old Faithful	44.95	71	*eP*		P	23 54 26.5	-3.8		
BJI	Beijing	44.95	282	P		P	23 54 30.5	+0.1		
BJI				AMB	AMB					
	comp=Z,41nm,0.9s,mb5.3									
N13A	Wendover, West	45.01	77	⇑P		P	23 54 30.5	-0.4		
	baz=45,SNR=14									
O12A	Currie	45.03	78	⇑P		P	23 54 30.0	-1.0		
	baz=45,SNR=25									
IRK	Irkutsk	45.05	302	*eP*		P	23 54 30.7	-0.4		
IRK				*e*	pP		23 54 40.9	-5.0		
IRK				*e*			23 56 13.3			
IRK				pmax	pmax					
	comp=Z,186nm,1.2s,mb5.8									
S09A	Goldfield	45.06	82	⇓P		P	23 54 30.1	-1.1		
	baz=45									
VES	Vestal, Richgr	45.09	86	⇑P		P	23 54 30.8	-0.7		
	baz=45,SNR=13									
PKM	Peak Mountain	45.24	87	⇑P		P	23 54 32.3	-0.3		
	baz=45,SNR=12									
R10A	Warm Springs	45.28	81	⇓P		P	23 54 32.6	-0.4		
	baz=45									
HVU	Hansel Valley	45.33	75	*eP*		P	23 54 34.0	+0.6		
CWC	Cottonwood Cre	45.33	84	⇓P		P	23 54 33.1	-0.3		
	baz=45									
P12A	McGill	45.41	79	⇑P		P	23 54 33.2	-0.8		
	baz=45,SNR=16									
GRAC	Grapevine Rang	45.42	83	⇓P		P	23 54 34.3	+0.3		
	baz=45,SNR=6.8									
ISA	Isabella	45.58	86	*eP*		P	23 54 36.3	+0.9		
ISA	Isabella	45.58	86	⇓P		P	23 54 35.7	+0.3		
	baz=46,SNR=9.5									
TLY	Talaya	45.67	302	P		P	23 54 37.1	+1.1		
	SNR=17									
TLY	Talaya	45.67	302	*c iP*		P	23 54 38.8	+2.8		
TLY				pmax	pmax					
	comp=Z,92nm,0.9s,mb5.7									
TLY				MLR	MLR					
	comp=Z,4μm,17.0s,MS5.4									
TLY	Talaya	45.67	302	*eP*		P	23 54 31.2	-4.8		
BGU	Big Grassy Mou	45.68	76	*eP*		P	23 54 36.8	+0.6		
TRCR	Troy Canyon	45.68	81	*eP*		P	23 54 36.5	+0.3		
ARVC	Arvin	45.71	86	⇑P		P	23 54 37.0	+0.7		
	baz=46									
Q12A	Willow Creek R	45.73	79	⇑P		P	23 54 36.4	-0.1		
	baz=46,SNR=20									
AHID	Auburn Hatcher	45.76	73	*eP*		P	23 54 37.4	+0.6		
SPUT	South Promonto	45.81	75	*eP*		P	23 54 39.3	+2.1		
ULN	Ulaanbaatar	45.85	296	*c iP*		P	23 54 38.2	+0.7		
BSC	Santa Cruz Isl	45.94	88	⇑P		P	23 54 38.2	0.0		
	baz=46									
MPMC	Manual Prospec	45.94	84	⇑P		P	23 54 38.3	+0.1		
	baz=46									
FURC	Furnace Creek,	46.07	84	⇑P		P	23 54 38.6	-0.6		
	baz=46,SNR=8.9									
OSI	Osito Adit	46.10	87	⇓P		P	23 54 39.8	+0.4		
	baz=46									
HWUT	Hardware Ranch	46.16	74	*eP*		P	23 54 38.2	-1.7		
	comp=Z,101nm,1.1s,mb5.7									
JOW	Kunigami	46.18	258	P		P	23 54 40.0	-0.1		
	comp=Z,65nm,0.9s,mb5.5,baz=34,slow=5.4,SNR=4.4									
LRMC	Laurel Mountai	46.19	85	⇓P		P	23 54 40.1	0.0		
	baz=46									
FCC	Fort Churchill	46.20	46	*eP*		P	23 54 41.2	+1.0		
FCC				pmax	pmax					
	comp=Z,95nm,1.3s,mb5.6									
FCC	Fort Churchill	46.20	46	*eP*		P	23 54 41.2	+0.9		
	comp=Z,95nm,1.3s,mb5.6									
BLG	Laguna Peak	46.22	88	⇑P		P	23 54 40.1	-0.3		
	baz=46									
SONM	Songino Array	46.24	296	P		P	23 54 40.5	0.0		
	comp=Z,22nm,0.7s,mb5.2,baz=70,slow=6.6,SNR=17									
SONM				PcP	PcP		23 56 16.1	+0.8		
	comp=Z,18nm,0.9s,baz=78,slow=1.9,SNR=3.8									
SONM				ScP	ScP		00 00 06.7	+3.0		
	comp=Z,7.2nm,0.9s,baz=41,slow=2.7,SNR=6.4									
SONM				LR	LR		00 14 56.0			
	comp=Z,10μm,20.1s,MS5.8,baz=59,slow=37									
DUG	Dugway	46.26	77	*eP*		P	23 54 41.3	+0.6		
LAO	LASA Array	46.37	66	*eP*		P	23 54 41.8	+0.3		
	comp=Z,21nm,0.8s,mb5.1									
EDW2	Edwards Air Fo	46.39	86	⇓P		P	23 54 41.7	0.0		
	baz=46,SNR=7.3									
NOQ	North Oquirrh	46.40	76	*eP*		P	23 54 42.6	+0.9		
U10A	Ash Meadows, A	46.44	83	⇑P		P	23 54 41.6	-0.4		
	baz=46,SNR=7.1									
DECC	Green Verdugo	46.59	87	P		P	23 54 43.4	+0.1		
	baz=46									
CTU	Camp Tracy	46.60	76	*eP*		P	23 54 43.6	+0.3		
BW06	Boulder Array	46.68	72	*eP*		P	23 54 43.7	-0.2		
	comp=Z,240nm,1.1s,mb6.0									
PDAR	Pinedale Array	46.68	72	P		P	23 54 43.6	-0.3		
	comp=Z,87nm,0.7s,mb5.8,baz=318,slow=2.5,SNR=34									
PDAR				ScP	ScP		00 00 08.1	+2.5		
	comp=Z,2.0nm,0.9s,baz=323,slow=1.4,SNR=3.9									
PDAR				PKPPKP			00 26 05.0			
	comp=Z,0.7nm,0.9s,baz=180,slow=0.7,SNR=3.8									
TIA	Tai'an	46.74	277	P		P	23 54 43.8	-0.7		
TIA				AMB	AMB					
	comp=Z,67nm,1.0s,mb5.5									
MWC	Mount Wilson	46.78	87	*eP*		P	23 54 47.6	+2.9		
SHOC	Shoshone	46.80	84	⇑P		P	23 54 46.3	+1.4		
	baz=47,SNR=9.1									
NLU	North Lily Min	46.85	77	*eP*		P	23 54 46.2	+0.9		
GSC	Goldstone	46.85	85	*eP*		P	23 54 47.3	+2.0		
GSC				*e*ScP	PcS		00 00 18.5	+6.0		
GSC	Goldstone	46.85	85	⇑P		P	23 54 46.5	+1.1		
	baz=47,SNR=10									
RRX	Edison Barstow	47.01	85	⇑P		P	23 54 46.6	0.0		
	baz=47									
BFSC	Mount Baldy St	47.02	86	⇓P		P	23 54 47.1	+0.5		
	baz=47,SNR=9.2									
U11A	Corn Creek	47.02	83	⇑P		P	23 54 46.8	+0.2		
	baz=47									
MOY	Mondy	47.07	303	*eP*		P	23 54 47.6	+0.6		
MOY				pmax	pmax					
	comp=Z,165nm,2.4s,mb5.5									
MPU	Maple Canyon	47.08	76	*eP*		P	23 54 47.6	+0.5		
SHPR	Sheep Range	47.10	82	*eP*		P	23 54 50.4	+3.1		
HHC	Hu-ho-hao-te	47.27	285	*eP*		P	23 54 48.8	+0.2		
HHC				XP	sP		23 55 04.8	-5.2		
HHC				PCP	PcP		23 56 20.5	+1.6		
HHC				PP	PP		23 56 40.5	+0.5		
HHC				AMB	AMB					
	comp=Z,26nm,1.5s,mb4.9									
HHC				AMB	AMB					
	comp=Z,537nm,4.4s									
HHC				LR	LR					
	comp=N,3μm,16.1s,MS5.4									
HHC				LR	LR					
	comp=E,3μm,20.4s,MS5.4									
HHC				LR	LR					
	comp=Z,4μm,20.4s,MS5.4									
TUQ	Turquoise Mtn.	47.32	84	⇑P		P	23 54 48.4	-0.6		
	baz=47									
ARUT	Antelope Range	47.36	80	*eP*		P	23 54 49.3	0.0		
GUMO	Guam	47.44	230	P		P	23 54 48.9	-1.0		
	comp=Z,42nm,0.8s,mb5.4,baz=185,slow=12,SNR=5.6									
GUMO	Guam	47.44	230	P		P	23 54 48.9	-1.0		
GUMO				pmax	pmax					
	comp=Z,43nm,0.8s,mb5.4									
HEC	Hector,Ludlow	47.46	85	⇑P		P	23 54 51.3	+1.3		
	baz=47									
U12A	Valley of Fire	47.54	82	⇑P		P	23 54 50.2	-0.5		
	baz=48,SNR=10									
CCUT	Cedar City	47.55	80	*eP*		P	23 54 51.3	+0.5		
MSU	Marysvale	47.68	78	*eP*		P	23 54 52.7	+0.9		
MSU				*e*ScP	PcS		00 00 23.5	+7.6		
MURC	Murrieta	47.72	87	⇑P		P	23 54 53.0	+0.9		
	baz=48,SNR=6.8									
TMUT	Trail Mountain	47.78	77	*eP*		P	23 54 55.0	+2.5		
V12A	Nelson	47.80	83	⇑P		P	23 54 52.1	-0.6		
	baz=48									
GMRC	Granite Mounta	47.91	84	⇑P		P	23 54 53.1	-0.4		
	baz=48,SNR=7.2									
W12A	Cal Nev Ari	48.06	83	⇓P		P	23 54 54.5	-0.2		
	baz=48									
PFO	Pinyon Flat Ob	48.18	86	*eP*		P	23 54 58.0	+2.4		
PFO	Pinyon Flat Ob	48.18	86	⇓P		P	23 54 56.0	+0.3		
	baz=48									
BELC	Belle Mtn.	48.21	85	⇑P		P	23 54 55.5	-0.3		
	baz=48,SNR=6.3									
109C	Camp Elliot, M	48.25	87	⇑P		P	23 54 56.3	+0.1		
	baz=48,SNR=5.9									
SRU	San Rafael	48.31	76	*eP*		P	23 54 58.5	+1.8		
NJ2	Nanjing	48.40	271	*eP*		P	23 54 59.0	+1.7		
NJ2				PP	PP		23 56 52.0	+1.8		
NJ2				AMB	AMB					
	comp=Z,90nm,0.8s,mb5.8									
NJ2				AMB	AMB					
	comp=Z,1μm,4.8s									
NJ2				LR	LR					
	comp=N,3μm,23.1s,MS5.2									
NJ2				LR	LR					
	comp=E,1μm,27.4s,MS5.2									
NJ2				LR	LR					
	comp=Z,1μm,26.1s,MS4.7									
BAR	Barrett	48.66	87	*eP*		P	23 55 01.4	+2.1		
MONP	Monument Peak	48.68	87	⇓P		P	23 54 58.9	-0.6		
	baz=49,SNR=8.8									
KRAR	Krasnoyarsk	48.72	312	*i P*		P	23 55 01.3	+1.6		
W13A	Hualapai Mount	48.80	83	⇓P		P	23 54 59.8	-0.6		
	baz=49,SNR=9.5									
DVTC	Desert V Tower	49.04	87	P		P	23 55 03.3	+1.1		
	baz=49,SNR=7.0									
SWSC	Sam W. Stewart	49.04	86	⇓P		P	23 55 01.8	-0.4		
	baz=49,SNR=6.0									
RSSD	Black Hills	49.11	67	*eP*		P	23 55 01.6	-1.2		
RSSD				pmax	pmax					
	comp=Z,138nm,1.3s,mb5.8									
RSSD	Black Hills	49.11	67	*eP*		P	23 55 01.6	-1.2		
	comp=Z,138nm,1.3s,mb5.8									
PDMCI	Parker Dam,Lak	49.17	84	⇑P		P	23 55 03.1	-0.1		
	baz=49,SNR=8.1									
X13A	Yucca	49.17	83	⇓P		P	23 55 03.3	+0.1		
	baz=49,SNR=9.1									
W14A	Seligman	49.23	82	⇑P		P	23 55 03.4	-0.3		
	baz=49,SNR=12									
Y12C	Blythe	49.29	85	⇑P		P	23 55 03.8	-0.3		
	baz=49,SNR=6.8									
GLA	Glamis	49.57	86	*eP*		P	23 55 06.3	0.0		
GLA	Glamis	49.57	86	⇓P		P	23 55 06.0	-0.3		
	baz=50,SNR=9.6									
PV10	Paradox Valley	49.68	76	*eP*		P	23 55 09.1	+2.0		
Y13A	Salome	49.68	84	⇑P		P	23 55 06.8	-0.4		
	baz=50									
KBS	Kingsbay	49.70	357	*eP*		P	23 55 08.3	+1.1		
KBS				pmax	pmax					
	comp=Z,87nm,0.8s,mb5.8									
KBS	Kingsbay	49.70	357	*eP*		P	23 55 08.3	+1.1		
	comp=Z,87nm,0.8s,mb5.8									
W15A	Williams	49.76	82	⇑P		P	23 55 07.7	0.0		
	baz=50,SNR=9.8									
X14A	Yava	49.83	83	⇑P		P	23 55 07.7	-0.6		
	baz=50,SNR=14									
ULM	Lac du Bonnet	49.98	56	P		P	23 55 09.1	-0.3		
	comp=Z,8.0nm,0.4s,mb5.1,baz=307,slow=7.7,SNR=16									
WUAZ	Wupatki	50.09	81	*eP*		P	23 55 11.1	+0.9		
	comp=Z,146nm,1.1s,mb5.9									
Y14A	Wickenburg	50.11	83	⇑P		P	23 55 10.1	-0.2		
	baz=50									
PV01	Paradox Valley	50.12	76	*eP*		P	23 55 10.2	-0.2		
X15A	Humboldt	50.23	82	⇑P		P	23 55 10.8	-0.4		
	baz=50,SNR=8.7									
SPB4	Spitsbergen Ar	50.26	356	*eP*		P	23 55 11.7	+0.2		
	comp=Z,101nm,1.1s,mb5.7									
Z14A	Wintersburg	50.53	84	⇓P		P	23 55 13.7	+0.1		
	baz=50									
115A	Sonoran Desert	51.42	84	⇑P		P	23 55 19.6	-0.7		
	baz=51,SNR=8.7									
116A	Eloy	51.84	84	⇑P		P	23 55 23.0	-0.3		
	baz=52,SNR=7.9									
YHNB	Yeheng	52.01	262	*eP*		P	23 55 24.1	-0.5		
SDCO	Great Sand Dun	52.22	75	*eP*		P	23 55 28.6	+2.4		
	comp=Z,121nm,1.1s,mb5.7									
WHN	Wuhan	52.24	273	P		P	23 55 25.5	-0.8		
WHN				LR	LR					
	comp=Z,3μm,16.4s,MS5.4									
TUC	Tucson	52.58	83	*eP*		P	23 55 28.8	-0.1		
TUC				pmax	pmax					
	comp=Z,81nm,1.2s,mb5.5									
TUC	Tucson	52.58	83	*eP*		P	23 55 28.8	-0.1		
	comp=Z,81nm,1.2s,mb5.5									
FRB	Frobisher Bay	53.17	31	P		P	23 55 32.0	-1.2		
	comp=Z,118nm,0.8s,mb5.9,baz=316,slow=8.2,SNR=19									
FRB	Frobisher Bay	53.17	31	P		P	23 55 32.0	-1.2		
FRB				pmax	pmax					
	comp=Z,118nm,0.8s									
SUMG	Summit	53.32	14	*eP*		P	23 55 34.5	+0.3		
	comp=Z,98nm,1.0s,mb5.7									
LAZ	Ladron	53.43	79	*eP*		P	23 55 35.5	+0.4		
ANMO	Albuquerque	53.48	78	P		P	23 55 35.6	+0.2		
	comp=Z,35nm,1.1s,mb5.2,baz=310,slow=8.0,SNR=20									
ANMO	Albuquerque	53.48	78	*eP*		P	23 55 35.2	-0.2		
QZH	Quanzhou	53.54	265	⇑*iP*		P	23 55 36.0	+0.1		
QZH				LR	LR					
	comp=N,3μm,21.9s,MS5.4									
QZH				LR	LR					
	comp=E,2μm,22.3s,MS5.4									
QZH				LR	LR					
	comp=Z,3μm,19.0s,MS5.4									
EYMN	Ely	53.67	57	*eP*		P	23 55 35.8	-1.1		
	comp=Z,130nm,1.3s,mb5.7									
LENM	Lemitar	53.69	79	*eP*		P	23 55 37.8	+0.8		
Y22C	IRIS PASSCAL I	53.78	79	⇓P		P	23 55 38.0	+0.3		
	baz=54									
LPM	Los Pinos Moun	53.80	79	*eP*		P	23 55 38.5	+0.7		
NVS	Novosibirsk	53.82	315	*eP*		P	23 55 34.8	-3.1		
NVS				*e*			23 56 41.5			
NVS				pmax	pmax					
	comp=Z,22nm,1.0s,mb5.0									
NVS				pmax	pmax					
	comp=N,16nm,1.2s									
NVS				pmax	pmax					
	comp=E,17nm,1.1s									
LZH	Lanzhou	54.96	286	*eP*		P	23 55 47.0	+0.7		
LZH				AP	pP		23 56 00.5	-0.9		
LZH				PP	PP		23 57 52.0	+2.3		
LZH				AMB	AMB					
	comp=Z,194nm,1.5s,mb5.9									
LZH				AMB	AMB					
	comp=Z,345nm,4.0s									
LZH				LR	LR					
	comp=E,4μm,15.0s									
LZH				LR	LR					
	comp=Z,5μm,16.5s,MS5.7									
GTA	Gaotai	55.15	291	⇑P		P	23 55 48.3	+0.7		
GTA				AP	pP		23 56 00.0	-2.8		
GTA				PP	PP		23 57 53.0	+1.6		
GTA				AMB	AMB					
	comp=Z,57nm,1.1s,mb5.5									
GTA				AMB	AMB					
	comp=Z,668nm,9.9s									
GTA				LR	LR					
	comp=N,4μm,18.6s,MS5.6									
GTA				LR	LR					
	comp=E,3μm,17.9s,MS5.6									
GTA				LR	LR					
	comp=Z,5μm,16.4s,MS5.7									
SFJD	Kangerlussuaq	55.73	22	P		P	23 55 50.9	-0.9		
	comp=Z,38nm,0.9s,mb5.4,baz=300,slow=6.7,SNR=9.4									
SFJD				PKP2bc			00 26 05.5			
	comp=Z,8.6nm,1.0s,baz=6.2,slow=4.2,SNR=3.9									
SFJD	Kangerlussuaq	55.73	22	⇑*iP*		P	23 55 50.8	-1.0		
	comp=Z,29nm,0.7s,mb5.4									
SFJD				*i* S	sS		00 04 04.1	+4.4		
SFJD										
	comp=Z,3μm,19.0s									
KSU1	Kansas State U	56.59	68	*eP*		P	23 55 56.6	-1.3		
GDL2	Guadalupe Moun	56.63	79	*eP*		P	23 55 60.0	+1.8		
SCIA	State Center	56.66	63	*eP*		P	23 55 56.9	-1.5		
JFWS	Jewell Farm	57.62	60	*eP*		P	23 56 03.9	-1.3		
ARCES	ARCESS Array B	57.94

comp=Z,174nm,0.9s,mb6.2
PARMO **Parma** 62.20 65 *e*P P 23 56 35.6 -1.0
MOR8 **Moi Rana** 62.22 354 *e*P P 23 56 34.9 -1.8
MOR8 AMb AMB 23 56 40.4
comp=Z,73nm,0.9s,mb5.8
MOR8 **Moi Rana** 62.22 354 *e*P P 23 56 34.9 -1.8
comp=Z,73nm,0.9s,mb5.8
BLO **Bloomington** 62.24 61 *e*P P 23 56 36.0 -0.8
ARU **Arti** 62.31 328 *e*P P 23 56 37.2 -0.2
comp=Z,24nm,0.7s,mb5.4
USIN **University of** 62.46 63 *e*P P 23 56 37.7 -0.6
HBAR **Harrisburg** 62.47 67 *e*P P 23 56 37.8 -0.6
GNAR **Gosnell** 62.55 66 *e*P P 23 56 39.1 +0.3
comp=Z,5µm,1.5s
GLAT **Glass** 62.75 65 *e*P P 23 56 40.2 0.0
BUKP **Musuan** 62.77 247 *e*P P 23 56 42.4 +2.0
NATX **Nacogdoches** 62.81 72 *e*P P 23 56 40.9 +0.2
comp=Z,55nm,0.8s,mb5.7
BORG **Borgarnes** 62.89 10 P P 23 56 40.7 -0.5
comp=Z,20nm,0.8s,mb5.3,baz=71,slow=1.3,SNR=6.2
BORG **Borgarnes** 62.89 10 P P 23 56 40.7 -0.5
UTMT **University of** 62.93 65 *e*P P 23 56 40.8 -0.7
WCI **Wyandotte Cave** 63.03 62 *e*P P 23 56 41.0 -1.1
KMI **Kunming** 63.30 277 P P 23 56 44.3 +0.4
KMI PP PP 23 59 07.3 +3.7
KMI AMB AMB
comp=Z,40nm,1.5s,mb5.3
KMI AMB AMB
comp=Z,289nm,4.3s
KMI LR LR
comp=N,2µm,16.3s,MS5.5
KMI LR LR
comp=E,1µm,18.2s,MS5.5
KMI LR LR
comp=Z,1µm,21.5s,MS5.1
QIZ **Qiongzhong** 63.35 267 P P 23 56 44.5 +0.3
QIZ AMB AMB
comp=Z,35nm,1.1s,mb5.4
QIZ AMB AMB
comp=Z,353nm,11.6s
QIZ LR LR
comp=N,779nm,17.8s
QIZ LR LR
comp=Z,1µm,17.2s,MS5.2
ACSO **Alum Creek Sta** 63.40 58 *e*P P 23 56 44.1 -0.4
HKT **Hockley** 63.40 75 *e*P P 23 56 44.2 -0.4
comp=Z,114nm,1.4s,mb5.8
JOF **Joensuu** 63.41 345 *e*p P 23 56 43.7 -0.9
comp=Z,207nm,1.2s,mb6.1
ENPP **El Nido** 63.44 254 *e*P P 23 56 46.8 +2.0
ERPA **Erie** 63.60 55 *e*P P 23 56 45.8 -0.1
ALLY **Alegheny Colle** 63.86 55 *e*P P 23 56 47.4 -0.2
OXF **Oxford** 63.93 67 *e*P P 23 56 47.9 -0.2
MSNY **Massena** 64.03 50 *e*P P 23 56 46.8 -1.9
PLAL **Pickwick Lake** 64.35 66 *e*P P 23 56 49.7 -1.1
comp=Z,52nm,0.6s,mb5.7
LONY **Lake Ozonia** 64.45 50 *e*P P 23 56 49.6 -1.8
FRNY **Flat Rock** 64.76 49 *e*P P 23 56 51.4 -2.1
KAF **Kangasniemi** 64.94 347 *e*p P 23 56 53.1 -1.5
comp=Z,192nm,1.2s,mb6.0,baz=14,slow=5.9
NCB **Newcomb** 65.10 50 *e*P P 23 56 54.2 -1.5
comp=Z,77nm,1.4s,mb5.5
SWET **Sewanee** 65.40 64 *e*P P 23 56 57.1 -0.5
MCWV **Mont Chateau** 65.47 57 *e*P P 23 56 57.7 -0.3
comp=Z,77nm,0.9s,mb5.7
BINY **Binghamton** 65.56 53 *e*P P 23 56 58.3 -0.4
FINES **FINESS Array B** 65.61 347 P P 23 56 58.0 -1.0
comp=Z,44nm,0.8s,mb5.5,baz=7.9,slow=7.0,SNR=23
FINES PKP2bc 00 25 46.8
comp=Z,2.3nm,1.0s,baz=0.0,slow=1.9,SNR=4.9
FINES **FINESS Array B** 65.61 347 P P 23 56 58.0 -1.0
FINES ⇑*e* 00 25 46.8
TKM2 **Tokmak 2** 65.74 309 P P 23 57 01.5 +1.6
SNR=18
SSPA **Standing Stone** 65.76 55 *e*P P 23 56 58.6 -1.3
ACCN **Adirondack Com** 65.81 50 *e*P P 23 56 58.9 -1.4
ULHL **Ulahol** 65.93 308 P P 23 57 02.5 +1.5
SNR=28
LBNH **Lisbon** 65.99 49 *e*P P 23 57 00.2 -1.3
comp=Z,66nm,1.0s,mb5.6
USP **Ospenovka** 66.01 310 P P 23 57 03.2 +1.6
SNR=32
CPCT **Cooper Cave** 66.02 63 *e*P P 23 57 01.3 -0.3
CHMS **Chumysh** 66.09 309 P P 23 57 03.5 +1.4
SNR=14
KBK **Karagaybulak** 66.26 309 P P 23 57 05.0 +1.8
SNR=14
FRU **Bishkek** 66.28 309 *e*P P 23 57 05.5 +2.2
FRU pmax pmax
comp=Z,288nm,2.0s,mb6.0
LRAL **Lakeview Retre** 66.38 66 *e*P P 23 57 02.8 -1.2
FWV **Forest Hill** 66.48 59 *e*P P 23 57 04.2 -0.3
AAK **Ala-Archa** 66.49 309 P P 23 57 06.5 +1.9
SNR=15
AAK **Ala-Archa** 66.49 309 *c i*P P 23 57 04.5 -0.2
DOMB **Dombas** 66.64 356 *e*P P 23 57 05.0 -0.6
DOMB AMb AMB 23 57 10.4
comp=Z,117nm,1.4s,mb5.7
DOMB **Dombas** 66.64 356 *e*P P 23 57 05.0 -0.6
comp=Z,117nm,1.4s,mb5.7
ELN **Prospectdale** 66.78 59 *e*P P 23 57 06.0 -0.4
EKS2 **Erkin-Say** 66.82 310 P P 23 57 08.8 +2.1
SNR=7.4
BLA **Blacksburg** 66.97 59 *e*P P 23 57 06.6 -1.1
comp=Z,2.7nm,0.8s
MVL **Millersville** 67.02 54 *e*P P 23 57 07.5 -0.5
LSA **Lhasa** 67.02 289 P P 23 57 09.5 +1.5
LSA AMB AMB
comp=Z,60nm,0.7s,mb5.7
FOO **Floro** 67.23 358 *e*P P 23 57 09.5 +0.1
AML **Almayashu** 67.26 309 P P 23 57 11.7 +2.2
SNR=32
BRNJ **Basking Ridge** 67.40 53 *e*P P 23 57 10.6 +0.1
HRV **Harvard--Oak R** 67.48 50 *e*P P 23 57 09.7 -1.2
HRV pmax pmax
comp=Z,72nm,1.1s,mb5.6
HRV **Harvard--Oak R** 67.48 50 *e*P P 23 57 09.7 -1.2
comp=Z,72nm,1.1s,mb5.6
PAL **Palisades** 67.48 52 *e*P P 23 57 10.3 -0.6
PAL pmax pmax
comp=Z,101nm,1.1s,mb5.8
PAL **Palisades** 67.48 52 *e*P P 23 57 10.3 -0.7
comp=Z,101nm,1.1s,mb5.8
NOA **NORSAR Array B** 67.53 354 P P 23 57 10.9 -0.3
comp=Z,51nm,0.8s,mb5.6,baz=5.9,slow=6.3,SNR=48
NOA **NORSAR Array B** 67.53 354 P P 23 57 10.9 -0.3
NOA pmax pmax
comp=Z,51nm,0.9s
CPNY **Central Park** 67.62 52 *e*P P 23 57 11.3 -0.5
AB31 **Akbulak array** 67.62 322 *e*P P 23 57 11.3 -0.5
NAO01 **NORSAR Array S** 67.74 355 *e*P P 23 57 12.3 -0.2
KK31 **Karatay Array** 68.02 312 *i*P P 23 57 14.9 +0.6
KK31 pmax pmax
comp=Z,105nm,0.8s,mb5.9
KKAR **Karatay Array** 68.02 312 P P 23 57 14.9 +0.6
KKAR pmax pmax
comp=Z,90nm,0.9s,mb5.8
KSH **Kashi** 68.12 306 P P 23 57 17.3 +2.4
KSH PCP PcP 23 57 42.5 +1.9
KSH PP PP 23 59 50.0 +4.3
KSH AMB AMB
comp=Z,148nm,1.0s,mb6.0
KSH LR LR
comp=N,2µm,14.6s,MS5.7
KSH LR LR
comp=E,3µm,15.6s,MS5.7
KSH LR LR
comp=Z,3µm,19.0s,MS5.6
VSU **Vasula** 68.37 346 *c i*P P 23 57 15.7 -0.8
JSC **Jenkinsville** 68.69 62 *e*P P 23 57 18.3 -0.2
LRW **Lerwick** 68.75 1 *e*P P 23 57 19.1 +0.2
LRW **Lerwick** 68.75 1 *e*P P 23 57 19.1 +0.2
MOS **Moscow** 68.83 339 *e*P P 23 57 18.3 -1.1
MOS *e* pP 23 57 30.8 -4.2
MOS *e* 23 57 46.2
MOS pmax pmax
comp=Z,300nm,1.5s,mb6.0
MOS pmax pmax
comp=Z,155nm,0.9s,mb5.9
KONO **Kongsberg** 69.00 355 *e*P P 23 57 20.9 +0.4
BLS5 **Blasjo** 69.37 357 *e*P P 23 57 23.1 +0.4
BLS5 AMb AMB 23 57 28.4
comp=Z,76nm,1.3s,mb5.5
BLS5 **Blasjo** 69.37 357 *e*P P 23 57 23.1 +0.4
comp=Z,76nm,1.3s,mb5.5

OBN **Obninsk** 69.64 339 *c i*P P 23 57 23.7 -0.7
OBN *e**PP pP 23 57 45.0 +4.9
OBN pmax pmax
comp=Z,116nm,1.5s,mb5.6
OBN MLR MLR
comp=Z,5µm,16.0s,MS5.9
OBN **Obninsk** 69.64 339 *e*P P 23 57 24.0 -0.4
CNNC **Cliffs of the** 69.80 59 *e*P P 23 57 25.2 -0.1
CHTO **Chiang Mai** 70.32 276 P P 23 57 28.9 +0.3
SNR=8.0
CHTO **Chiang Mai** 70.32 276 P P 23 57 27.9 -0.7
CHTO pmax pmax
comp=Z,24nm,1.0s,mb5.1
KSK **Scoval** 71.28 4 *e*P P 23 57 34.8 +0.5
KSK **Scoval** 71.28 4 *e*P P 23 57 34.8 +0.5
MCD **Coleburn Disti** 71.28 2 *e*P P 23 57 34.3 -0.1
MCD **Coleburn Disti** 71.28 2 *e*P P 23 57 34.3 -0.1
KAC **Achnashellach** 71.30 3 *e*P P 23 57 34.6 +0.1
KAC **Achnashellach** 71.30 3 *e*P P 23 57 34.6 +0.1
GUN **Gumba** 71.44 291 ⇑*i*P P 23 57 36.6 +1.3
comp=Z,775nm,0.8s,mb6.7
KPL **Plockton** 71.44 4 *e*P P 23 57 35.0 -0.3
KPL **Plockton** 71.44 4 *e*P P 23 57 35.0 -0.3
KSB **Sheil Bridge** 71.58 3⇑*e*P P 23 57 36.0 -0.2
KSB **Sheil Bridge** 71.58 3⇑*e*P P 23 57 36.0 -0.2
PMOR **Pomariorio Ree** 71.67 148 *e*P P 23 57 37.2 +0.4
comp=Z,114nm,1.3s,mb5.7
KAR1 **Arisaig** 71.86 4 *e*P P 23 57 38.5 +0.7
KAR1 **Arisaig** 71.86 4 *e*P P 23 57 38.5 +0.7
KKN **Kakani** 71.88 292 ⇑*i*P P 23 57 38.9 +0.9
comp=Z,276nm,0.8s,mb6.3
KKN **Kakani** 71.88 292 ⇑*i*P P 23 57 38.9 +0.9
KKN pmax pmax
comp=Z,277nm,0.8s,mb6.2
PKI **Pulchoki** 71.97 292 ⇑*i*P P 23 57 39.3 +0.8
comp=Z,253nm,0.8s,mb6.2
PKI **Pulchoki** 71.97 292 ⇑*i*P P 23 57 39.3 +0.8
PKI pmax pmax
comp=Z,253nm,0.8s,mb6.2
MNK **Minsk** 71.98 344 *e*P P 23 57 33.0 -5.6
VRHR **Novokhopersk** 72.05 334 *e*P P 23 57 37.4 -1.6
VRHR *e*PP pP 23 57 52.5 -2.3
VRHR pmax pmax
comp=Z,20nm,1.3s,mb4.9
VRHR pmax pmax
comp=N,20nm,1.1s
VRHR pmax pmax
comp=E,10.0nm,1.0s
VRHR MLR MLR
comp=Z,2µm,21.0s,MS5.4
VRHR MLR MLR
comp=N,2µm,22.0s
VRHR MLR MLR
comp=E,960nm,14.0s
GKN **Gorkha** 72.09 292 ⇑*i*P P 23 57 40.0 +0.7
comp=E,296nm,0.9s,mb6.2
VOR **Voronezh** 72.12 336 P P 23 57 38.0 -1.4
VOR pmax pmax
comp=N,70nm,1.5s
VOR pmax pmax
comp=E,50nm,1.5s
VOR pmax pmax
comp=Z,80nm,1.5s,mb5.4
DMN **Daman** 72.12 292 ⇑*i*P P 23 57 40.4 +1.0
comp=Z,219nm,0.9s,mb6.1
MUD **Monsted U'grnd** 72.21 355 ⇑*i*P P 23 57 40.0 0.0
comp=Z,85nm,1.1s,mb5.6
MUD **Monsted U'grnd** 72.21 355 ⇑*i*P P 23 57 40.0 0.0
MUD pmax pmax
comp=Z,85nm,1.1s,mb5.6
VRSR **Storozhevoye** 72.59 336 *e*P P 23 57 41.7 -0.5
VRSR pmax pmax
comp=Z,50nm,1.0s,mb5.4
VRSR pmax pmax
comp=N,40nm,0.7s
VRSR pmax pmax
comp=E,20nm,0.8s
EAB **Aberfoyle** 72.64 3⇑*e*P P 23 57 42.4 -0.2
EAB **Aberfoyle** 72.64 3⇑*e*P P 23 57 42.4 -0.2
COP **Copenhagen** 72.77 353 ⇑*i*P P 23 57 43.3 0.0
comp=E,86nm,0.9s,mb5.7
COP **Copenhagen** 72.77 353 ⇑*i*P P 23 57 43.3 0.0
COP pmax pmax
comp=Z,86nm,0.9s,mb5.7
KOLN **Koldanda** 72.87 293 ⇑*i*P P 23 57 44.5 +0.6
comp=Z,172nm,0.9s,mb6.0
EDI **Edinburgh** 72.94 2 *e*P P 23 57 44.5 +0.2
EDI **Edinburgh** 72.94 2 *e*P P 23 57 44.5 +0.2
ESY **Stoneypath** 72.96 2⇑*e*P P 23 57 43.7 -0.7
ESY **Stoneypath** 72.96 2⇑*e*P P 23 57 43.7 -0.7
EAU **Auchinoon** 73.01 2⇑*e*P P 23 57 44.8 +0.1
EAU **Auchinoon** 73.01 2⇑*e*P P 23 57 44.8 +0.1
EBL **Broad Law** 73.09 2⇑*e*P P 23 57 44.4 -0.8
EBL **Broad Law** 73.09 2⇑*e*P P 23 57 44.4 -0.8
BSD **Bornholm Skovb** 73.12 351 ⇑*i*P P 23 57 44.6 -0.8
comp=Z,58nm,0.7s,mb5.6
BSD **Bornholm Skovb** 73.12 351 ⇑*i*P P 23 57 44.6 -0.8
BSD pmax pmax
comp=Z,58nm,0.7s,mb5.6
SUW **Suwalki** 73.20 346 *e*P P 23 57 44.8 -1.1
SUW *e* 23 57 48.1
DWPF **Disney** 73.23 66 *e*P P 23 57 46.7 +0.7
XSO **Sourhope Farm** 73.39 2⇑*e*P P 23 57 47.0 +0.1
XSO AMb AMB 23 57 51.5
comp=Z,202nm,1.3s,mb5.9
XSO **Sourhope Farm** 73.39 2⇑*e*P P 23 57 47.0 +0.1
XSO AMb AMB 23 57 51.5
comp=Z,202nm,1.3s,mb5.9
GMK **Mull of Kintyr** 73.44 4 *e*P P 23 57 47.2 -0.1
GMK **Mull of Kintyr** 73.44 4 *e*P P 23 57 47.2 -0.1
PPT **Papeete** 73.54 150 *e*SS SS 00 12 03.5 +6.5
comp=Z,1µm,26.2s
PPT *e*LR LR 00 20 20.3
comp=Z,5µm,28.5s,baz=343
ESK **Eskdalemuir** 73.55 2 *e*P P 23 57 47.5 -0.4
ESK **Eskdalemuir** 73.55 2 *e*P P 23 57 47.5 -0.4
ESK **Eskdalemuir** 73.55 2 *e*P P 23 57 47.6 -0.3
ESK pmax pmax
comp=Z,63nm,1.0s,mb5.5
ESK **Eskdalemuir** 73.55 2 *e*P P 23 57 47.5 -0.3
comp=Z,63nm,1.0s,mb5.5
BWH **Wardlaw** 73.68 3 *e*P P 23 57 48.2 -0.5
BWH **Wardlaw** 73.68 3 *e*P P 23 57 48.2 -0.5
ECK **Cauldkaine Hil** 73.68 2⇑*e*P P 23 57 48.2 -0.5
ECK AMb AMB 23 57 53.0
comp=Z,78nm,1.3s,mb5.5
ECK **Cauldkaine Hil** 73.68 2⇑*e*P P 23 57 48.2 -0.5
ECK AMb AMB 23 57 53.0
comp=Z,78nm,1.3s,mb5.5
GCL **Cushendall** 73.69 4 *e*P P 23 57 47.6 -1.1
GCL **Cushendall** 73.69 4 *e*P P 23 57 47.6 -1.1
BHH **Howats Hill** 73.77 2 *e*P P 23 57 48.4 -0.7
BHH **Howats Hill** 73.77 2 *e*P P 23 57 48.4 -0.7
GAL1 **Galloway** 73.95 3 *e*P P 23 57 49.9 -0.4
GAL1 **Galloway** 73.95 3 *e*P P 23 57 49.9 -0.4
XAL **Allendale** 74.02 2 *e*P P 23 57 50.4 -0.3
XAL AMb AMB 23 57 55.0
comp=Z,108nm,1.2s,mb5.7
XAL **Allendale** 74.02 2 *e*P P 23 57 50.4 -0.3
XAL AMb AMB 23 57 55.0
comp=Z,108nm,1.2s,mb5.7
GMM **Mts of Mourne** 74.53 4 *e*P P 23 57 53.3 -0.4
GMM **Mts of Mourne** 74.53 4 *e*P P 23 57 53.3 -0.4
WIM **Isle of Man** 74.67 3 *e*P P 23 57 54.4 0.0
WIM AMb AMB 23 57 59.5
comp=Z,180nm,1.9s,mb5.7
WIM **Isle of Man** 74.67 3 *e*P P 23 57 54.4 0.0
WIM AMb AMB 23 57 59.5
comp=Z,180nm,1.9s,mb5.7
GKP **Gorka Klasztor** 74.70 350 *e*P P 23 57 54.2 -0.4
GKP *e* 23 57 57.3
GKP L 00 27 27.2
comp=Z,3.8nm,24.9s
WAR **Warsaw** 75.24 347 *e*P P 23 57 57.9 +0.2
WAR *e* 23 58 00.9
WAR L 00 25 47.0
comp=Z,2.1nm,22.4s
AKASG **Malin Array Be** 75.34 342 P P 23 57 57.8 -0.5
comp=Z,134nm,0.8s,mb5.9,baz=20,slow=5.9,SNR=39
AKASG **Malin Array Be** 75.34 342 P P 23 57 57.8 -0.5
AKASG pmax pmax
comp=Z,134nm,0.8s
LHO **Holmfirth** 75.35 1⇑*e*P P 23 57 57.8 -0.5
LHO **Holmfirth** 75.35 1⇑*e*P P 23 57 57.8 -0.5

DCN **Croghan** 75.36 5 *e*P P 23 57 57.2 -1.2
WCB1 **Church Bay** 75.45 3 *e*P P 23 57 59.1 +0.2
WCB1 AMb AMB 23 58 03.6
comp=Z,113nm,1.6s,mb5.5
WCB1 **Church Bay** 75.45 3 *e*P P 23 57 59.1 +0.2
WCB1 AMb AMB 23 58 03.6
comp=Z,113nm,1.6s,mb5.5
DLF **Lyons Farm** 75.45 4 *e*P P 23 57 58.1 -0.8
DSB **Dublin** 75.51 4 *e*P P 23 57 59.6 +0.4
comp=Z,68nm,1.0s,mb5.5
KBI1 **Birley Grange** 75.64 1 *e*P P 23 57 59.7 -0.3
KBI1 **Birley Grange** 75.64 1 *e*P P 23 57 59.7 -0.3
RUE **Ruedersdorf** 75.83 352 *e*P P 23 58 01.4 +0.3
comp=Z,95nm,0.8s,mb5.8
YRE **Yr Eifl** 75.85 3 *e*P P 23 58 01.1 -0.1
YRE AMb AMB 23 58 07.9
comp=Z,141nm,1.7s,mb5.6
YRE **Yr Eifl** 75.85 3 *e*P P 23 58 01.1 -0.1
YRE AMb AMB 23 58 07.9
comp=Z,141nm,1.7s,mb5.6
SBD1 **Bryn Du** 75.96 2 *e*P P 23 58 01.9 0.0
SBD1 AMb AMB 23 58 07.1
comp=Z,171nm,2.0s,mb5.6
SBD1 **Bryn Du** 75.96 2 *e*P P 23 58 01.9 0.0
SBD1 AMb AMB 23 58 07.1
comp=Z,171nm,2.0s,mb5.6
ABA1 **Baconsthorpe** 76.02 360 *e*P P 23 58 02.3 +0.1
ABA1 **Baconsthorpe** 76.02 360 *e*P P 23 58 02.3 +0.1
KAKA **Kakadu** 76.28 228 *e*P P 23 58 01.6 -2.0
comp=Z,65nm,0.9s,mb5.6
AEU **East Anglia Un** 76.29 360 *e*P P 23 58 03.2 -0.5
AEU **East Anglia Un** 76.29 360 *e*P P 23 58 03.2 -0.5
HLM1 **Long Mynd** 76.36 2 *e*P P 23 58 03.6 -0.5
HLM1 AMb AMB 23 58 09.2
comp=Z,99nm,1.5s,mb5.5
HLM1 **Long Mynd** 76.36 2 *e*P P 23 58 03.6 -0.5
HLM1 AMb AMB 23 58 09.2
comp=Z,99nm,1.5s,mb5.5
HTR **Trewern Hill** 76.79 2 *e*P P 23 58 06.4 -0.1
HTR AMb AMB 23 58 10.9
comp=Z,159nm,1.1s,mb5.8
HTR **Trewern Hill** 76.79 2 *e*P P 23 58 06.4 -0.1
HTR AMb AMB 23 58 10.9
comp=Z,159nm,1.1s,mb5.8
MCH1 **Michaelchurch** 76.87 2 P P 23 58 06.8 -0.2
MCH1 AMb AMB 23 58 11.3
comp=Z,114nm,1.1s,mb5.7
MCH1 **Michaelchurch** 76.87 2⇑*e*P P 23 58 06.8 -0.2
MCH1 ⇑*e* 23 58 06.8
MCH1 AMb AMB 23 58 11.3
comp=Z,114nm,1.1s,mb5.7
MCH1 **Michaelchurch** 76.87 2⇑*e*P P 23 58 06.8 -0.2
MCH1 ⇑*e* 23 58 06.8
MCH1 AMb AMB 23 58 11.3
comp=Z,114nm,1.1s,mb5.7
CLL **Collm** 77.06 352 ⇑P P 23 58 07.6 -0.5
comp=Z,logA/T=1.6,mb5.3
CLL *i* *PP pP 23 58 10.7 -13
CLL *i* *SP sP 23 58 12.5 -18
CLL *i* 23 58 16.8
CLL *e*PPP 00 02 46.0
CLL *e*S S 00 07 50.0 -2.4
CLL *e*PPS 00 08 51.0
CLL *e*SS SS 00 13 18.0 +28
CLL **Collm** 77.06 352 ⇑*i*P P 23 58 07.6 -0.5
comp=Z,33nm,0.8s,mb5.3
CLL *i* pP pP 23 58 10.7 -13
comp=Z,67nm,1.0s
CLL *i* sP sP 23 58 12.5 -18
CLL *i* x x 23 58 16.8
CLL *e*PPP 00 02 46.0
CLL *e*S S 00 07 50.0 -2.4
CLL *e*PPS 00 08 51.0
CLL *e*SS SS 00 13 18.0 +28
CLL **Collm** 77.06 352 ⇑*i*P P 23 58 07.6 -0.5
CLL pmax pmax
comp=Z,33nm,0.8s,mb5.3
CLL **Collm** 77.06 352 ⇑*i*P P 23 58 07.6 -0.5
comp=Z,33nm,0.8s,mb5.3
CLL *i* pP pP 23 58 10.7 -13
HSA **Swansea** 77.09 3 *e*P P 23 58 08.4 +0.2
HSA **Swansea** 77.09 3 *e*P P 23 58 08.4 +0.2
LVV **L'vov** 77.13 345 *e*P P 23 58 08.3 -0.1
SKP1 **Kophill** 77.19 1 *e*P P 23 58 08.7 0.0
SKP1 **Kophill** 77.19 1 *e*P P 23 58 08.7 0.0
KSP **Ksiaz** 77.20 350 *e*P P 23 58 08.6 -0.2
KSP *e* 23 58 11.8
KSP L 00 29 06.6
comp=Z,6.6nm,24.2s
KSP **Ksiaz** 77.20 350⇑*e*P P 23 58 08.5 -0.3
KSP *e*pP pP 23 58 11.7 -13
KSP *e*S S 00 07 44.0 -10
KSP LR LR
comp=Z,7µm,21.1s,MS5.9
HGH **Gray Hill** 77.24 2 *e*P P 23 58 09.0 0.0
HGH AMb AMB 23 58 17.6
comp=Z,170nm,1.1s,mb5.9
HGH **Gray Hill** 77.24 2 *e*P P 23 58 09.0 0.0
HGH AMb AMB 23 58 17.6
comp=Z,170nm,1.1s,mb5.9
CTA **Charters Tower** 77.32 213 *e*P P 23 58 07.7 -1.8
comp=Z,20nm,1.0s,mb5.0
CTA **Charters Tower** 77.32 213 *e*P P 23 58 07.7 -1.8
CTA pmax pmax
comp=Z,20nm,1.0s
CTAO **Charters Tower** 77.32 213 *e*P P 23 58 07.9 -1.6
OJC **Ojcow** 77.38 347 *e*P P 23 58 09.8 0.0
OJC *e*S S 00 08 01.0 +5.1
OJC MLR MLR
comp=Z,17µm,18.3s,MS6.4
SWN1 **Swindon** 77.38 1 *e*P P 23 58 10.0 +0.1
SWN1 **Swindon** 77.38 1 *e*P P 23 58 10.0 +0.1
BRG **Berggiesshubel** 77.41 351 ⇑*i*P P 23 58 09.9 -0.1
BRG S S 00 07 55.0 -1.2
BRG pmax pmax
comp=Z,36nm,1.0s,mb5.3
BRG MLR MLR
comp=N,887nm,21.2s,MS5.4
BRG MLR MLR
comp=E,2µm,21.9s,MS5.4
BRG MLR MLR
comp=Z,1µm,20.4s,MS5.2
BRG **Berggiesshubel** 77.41 351 ⇑*i*P P 23 58 09.9 -0.1
comp=Z,18nm,0.8s,mb5.1
BRG *i* 23 58 12.7
BRG S S 00 07 55.0 -1.2
BRG LR LR
comp=Z,1µm,20.4s,MS5.2
MAK **Makhachkala** 77.51 327 *e*P P 23 58 09.6 -0.9
MAK *e* 00 01 09.9
MAK *e*S S 00 07 55.7 -1.5
MAK *e* 00 08 21.9
MAK pmax pmax
comp=Z,55nm,0.9s,mb5.5
MAK MLR MLR
comp=Z,8µm,19.0s,MS6.1
KWP **Kalwaria** 77.53 345 *e*P P 23 58 11.2 +0.5
KWP *e* 23 58 14.4
UPC **Upice** 77.56 350 ⇑*i*P P 23 58 10.7 -0.1
UPC *ex* x 23 58 13.8
DPC **Dobruska-Polom** 77.68 350 ⇑*i*P P 23 58 11.6 +0.1
PVCC **Panska Ves** 77.69 351 ⇑*i*P P 23 58 11.4 -0.2
PVCC *ex* x 23 58 14.8
RAC **Raciborz** 77.72 348 *e*P P 23 58 12.1 +0.4
RAC LR LR
comp=Z,4µm,19.0s,MS5.7
SWK **Warminster** 77.74 2 *e*P P 23 58 11.0 -0.8
SWK **Warminster** 77.74 2 *e*P P 23 58 11.0 -0.8
HEX **Exmoor** 77.78 3 *e*P P 23 58 12.1 0.0
HEX **Exmoor** 77.78 3 *e*P P 23 58 12.1 0.0
MOX **Moxa** 77.84 353 *e*P P 23 58 12.2 -0.2
comp=Z,110nm,1.2s,mb5.7
MOX **Moxa** 77.84 353 *e*P P 23 58 12.2 -0.2
MOX pmax pmax
comp=Z,110nm,1.2s,mb5.7
STHS **Stebnicka Huta** 77.96 346 *e*P P 23 58 14.2 +1.1
STHS pmax pmax
comp=Z,96nm,1.1s,mb5.6
STHS **Stebnicka Huta** 77.96 346 *e*P P 23 58 14.2 +1.1
comp=Z,96nm,1.1s,mb5.6
OKC **Ostrava-Krasne** 77.97 348 ⇑*i*P P 23 58 13.1 0.0
OKC *ex* x 23 58 16.3
BEBN **Eben Emael** 78.03 357 P P 23 58 13.3 -0.2
UCC **Uccle** 78.07 358 P P 23 58 13.5 -0.2

NIE Niedzica 78.09 347 eP P 23 58 14.2 +0.4
MORC Moravsky Berou 78.11 349⇑iP P 23 58 13.6 -0.3
MORC Moravsky Berou 78.11 349 P P 23 58 14.3 +0.4
MORC Moravsky Berou 78.11 349 eP P 23 58 14.2 +0.3
comp=Z,51nm,0.9s,mb5.5
PRA Prague 78.16 351⇑P P 23 58 14.0 -0.2
NKC Novy Kostel 78.18 352⇑iP P 23 58 14.4 +0.1
NKC ex x 23 58 17.4
KIV Kislovodsk 78.19 330 P P 23 58 14.9 +0.5
SNR=10
KIV Kislovodsk 78.19 330c iP P 23 58 14.4 0.0
KIV e 23 58 22.9
KIV eS S 00 08 03.0 -1.6
KIV pmax pmax
comp=Z,30nm,1.3s,mb5.1
KIV MLR MLR
comp=Z,3µm,18.0s,MS5.7
KIV Kislovodsk 78.19 330 eP P 23 58 13.9 -0.5
comp=Z,60nm,1.2s,mb5.4
MEM Membach 78.20 356 P P 23 58 14.4 0.0
PRU Pruhonice 78.23 351⇑iP P 23 58 14.3 -0.2
PRU ex x 23 58 17.5
KOLS Kolonicke sedl 78.27 346 eP P 23 58 15.1 +0.3
MENF Mencas 78.35 359⇑eP P 23 58 15.2 0.0
SNF Seneffe 78.36 358 P P 23 58 15.4 +0.1
DYA Yadsworthy 78.41 3 eP P 23 58 15.2 -0.4
DYA Yadsworthy 78.41 3 eP P 23 58 15.2 -0.4
BCLA Clavier 78.42 357 P P 23 58 15.4 -0.1
CRVS Cervenica-Dubn 78.43 346 eP P 23 58 16.0 +0.3
CSA1 St Austell 78.46 4 eP P 23 58 15.4 -0.4
CSA1 St Austell 78.46 4 eP P 23 58 15.4 -0.4
LIKS Likavka 78.62 348 eP P 23 58 18.0 +1.3
LIKS e 23 58 21.1
LIKS pmax pmax
comp=Z,61nm,0.9s,mb5.5
LIKS Likavka 78.62 348 eP P 23 58 18.0 +1.3
comp=Z,61nm,0.9s,mb5.5
LIKS e 23 58 21.1
CRQ2 Rosemanowes 2 78.63 4 eP P 23 58 15.9 -0.9
CRQ2 AMb AMB 23 58 22.4
comp=Z,92nm,1.2s,mb5.6
CRQ2 Rosemanowes 2 78.63 4 eP P 23 58 15.9 -0.9
CRQ2 AMb AMB 23 58 22.4
comp=Z,92nm,1.2s,mb5.6
MGV Manicaragua 78.68 69 eP P 23 58 18.4 +1.4
VRAC Vranov 78.68 349⇑iP P 23 58 17.2 +0.2
VRAC Vranov 78.68 349 P P 23 58 17.4 +0.3
CGW Gweek 78.70 4 eP P 23 58 15.8 -1.4
CGW Gweek 78.70 4 eP P 23 58 15.8 -1.4
GIVF Givet 78.75 357⇑iP P 23 58 17.4 0.0
comp=Z,236nm,1.1s,mb5.7
GIVF Givet 78.75 357⇑iP P 23 58 17.4 0.0
GIVF pmax pmax
comp=Z,118nm,1.1s,mb5.7
GIVF Givet 78.75 357⇑iP P 23 58 17.4 0.0
comp=Z,118nm,1.1s,mb5.7
CGH1 Goonhilly 78.75 4 eP P 23 58 16.9 -0.5
CGH1 Goonhilly 78.75 4 eP P 23 58 16.9 -0.5
DOU Dourbes 78.76 357 P P 23 58 17.5 0.0
BAIF Baives 78.81 358⇑iP P 23 58 18.0 +0.2
comp=Z,328nm,1.0s,mb5.9
BAIF Baives 78.81 358⇑iP P 23 58 18.0 +0.2
BAIF pmax pmax
comp=Z,164nm,1.0s,mb5.9
BAIF Baives 78.81 358⇑iP P 23 58 18.0 +0.2
comp=Z,164nm,1.0s,mb5.9
GRA1 Grafenberg Arr 78.81 353 eP P 23 58 17.9 +0.1
comp=Z,130nm,1.0s,mb5.8
GRF Grafenberg Arr 78.81 353 eP P 23 58 17.9 +0.1
comp=Z,130nm,1.0s,mb5.8
GRF Grafenberg Arr 78.81 353 eP P 23 58 17.9 +0.1
GRF pmax pmax
comp=Z,130nm,1.0s,mb5.8
GRF Grafenberg Arr 78.81 353 eP P 23 58 17.9 +0.1
GRF pmax pmax
comp=Z,130nm,1.0s,mb5.8
TREC Trest 78.81 350⇑iP P 23 58 17.7 -0.1
TREC ex x 23 58 20.6
ABH Alteburg 78.86 355⇑eP P 23 58 18.0 0.0
ZEI Tsey 78.88 329 eP P 23 58 18.9 +0.8
ZEI e*PP pP 23 58 36.2 +2.1
ZEI e 00 01 17.9
ZEI pmax pmax
comp=Z,77nm,1.1s,mb5.5
ANN Anapa 78.95 334 eP P 23 58 12.8 -5.7
ANN e 23 58 21.8
ANN i *PP pP 23 58 32.0 -2.5
ANN pmax pmax
comp=Z,27nm,1.3s,mb5.0
KIS Kishinev 78.95 341 eP P 23 58 17.0 -1.5
KIS e pP 23 58 33.0 -1.5
KIS e 00 01 17.0
KIS eS S 00 08 08.0 -4.7
KIS MLR MLR
comp=N,4µm,17.0s,MS5.9
KIS MLR MLR
comp=E,2µm,17.0s,MS5.9
KIS MLR MLR
comp=Z,6µm,17.0s,MS6.0
KIS MLR MLR
comp=Z,6µm,17.0s
KECS Kecovo 78.98 347 eP P 23 58 19.3 +0.6
KECS pmax pmax
comp=Z,67nm,0.9s,mb5.6
KECS Kecovo 78.98 347 eP P 23 58 19.3 +0.6
comp=Z,67nm,0.9s,mb5.6
TBI Tubuai 79.02 152 eLR LR 00 22 59.1
comp=Z,4µm,23.8s,baz=337
IAS Iasi 79.02 342||iP P 23 58 19.4 +0.5
IAS Iasi 79.02 342 P P 23 58 19.1 +0.2
BURAR Bucovina Array 79.06 343⇑iP P 23 58 19.7 +0.6
BURAR Bucovina Array 79.06 343 ⇑P P 23 58 19.7 +0.6
TOD Tromm 79.07 355⇑eP P 23 58 19.1 -0.1
WLF Walferdange 79.14 356 P P 23 58 19.9 +0.4
WLF Walferdange 79.14 356 eP P 23 58 19.8 +0.2
WLF pmax pmax
comp=Z,99nm,0.9s,mb5.7
WLF Walferdange 79.14 356 eP P 23 58 19.8 +0.3
comp=Z,99nm,0.9s,mb5.7
KHC Kasperske Hory 79.17 351⇑iP P 23 58 19.9 +0.2
KHC ex x 23 58 23.1
VYHS Vyhne 79.20 348 eP P 23 58 20.3 +0.4
VYHS pmax pmax
comp=Z,54nm,1.0s,mb5.4
VYHS Vyhne 79.20 348 eP P 23 58 20.3 +0.4
comp=Z,54nm,1.0s,mb5.4
SMOL Smolenice 79.36 349 eP P 23 58 21.7 +0.9
SOC Sochi 79.43 332 iP P 23 58 21.2 +0.1
SOC e*PP pP 23 58 38.5 +1.4
SOC e 00 01 18.0
SOC eS S 00 08 13.0 -4.8
SOC eSS SS 00 13 32.8 +6.8
SOC pmax pmax
comp=Z,64nm,1.1s,mb5.5
SOC MLR MLR
comp=Z,5µm,20.0s,MS5.9
GERES GERESS Array B 79.44 351 P P 23 58 21.1 -0.1
comp=Z,24nm,0.8s,mb5.2,baz=26,slow=5.2,SNR=43
GERES GERESS Array B 79.44 351 P P 23 58 21.1 -0.1
GERES pmax pmax
comp=Z,24nm,0.8s
MTA Mtatsminda 79.55 328 S P 23 58 22.8 +1.0
DGRG David-gareji 79.57 327 S P 23 58 16.8 -5.1
PSZ Piszkesteto 79.62 347⇑iP P 23 58 23.0 +0.8
PSZ Piszkesteto 79.62 347 P P 23 58 23.1 +0.9
PSZ Piszkesteto 79.62 347 eP P 23 58 23.0 +0.8
comp=Z,144nm,1.0s,mb5.9
JVM Valle D.L. Mar 79.67 2 eP P 23 58 22.1 -0.4
JVM Valle D.L. Mar 79.67 2 eP P 23 58 22.1 -0.4
SIM Simferopol' 79.68 336ceP P 23 58 22.1 -0.4
SIM i 23 58 26.0
SIM eS S 00 08 17.3 -3.1
SIM pmax pmax
comp=Z,13nm,1.1s,mb4.8
SIM MLR MLR
comp=Z,5µm,17.7s,MS5.9
JRS Jersey 79.70 2 eP P 23 58 21.2 -1.4
JRS Jersey 79.70 2 eP P 23 58 21.2 -1.4
ZST Bratislava 79.71 349 eP P 23 58 24.0 +1.3
ZST pmax pmax
comp=Z,115nm,1.0s,mb5.8
ZST Bratislava 79.71 349 eP P 23 58 24.0 +1.3
comp=Z,115nm,1.0s,mb5.8
LANF Langenberg 79.75 355⇑eP P 23 58 22.8 -0.1
STU Stuttgart 79.87 354 eP P 23 58 23.4 -0.1
STU pmax pmax
comp=Z,90nm,1.0s,mb5.7
STU Stuttgart 79.87 354 eP P 23 58 23.0 -0.5
comp=Z,90nm,0.9s,mb5.7
CONA Conrad Observa 80.12 350⇑iP P 23 58 25.5 +0.7
FLN La Foliniere 80.15 1⇑iP P 23 58 24.7 -0.4
comp=Z,406nm,1.1s,mb6.0
FLN La Foliniere 80.15 1⇑iP P 23 58 24.7 -0.4
FLN pmax pmax
comp=Z,203nm,1.1s,mb6.0
FLN La Foliniere 80.15 1⇑iP P 23 58 24.7 -0.4
comp=Z,203nm,1.1s,mb6.0
BUD Budapest 80.17 347||eP P 23 58 26.1 +1.0
DRGR 80.29 345⇑iP P 23 58 26.1 +0.3
DRGR 80.29 345 P P 23 58 26.4 +0.6
LDF La Druitiere 80.32 0⇑iP P 23 58 25.5 -0.5
comp=Z,293nm,0.9s,mb5.9
LDF La Druitiere 80.32 0⇑iP P 23 58 25.5 -0.5
LDF pmax pmax
comp=Z,146nm,0.9s,mb5.9
LDF La Druitiere 80.32 0⇑iP P 23 58 25.5 -0.5
comp=Z,146nm,0.9s,mb5.9
WLS Welschbruch 80.33 355⇑eP P 23 58 26.0 0.0
CDF Champ du Feu 80.34 355⇑iP P 23 58 25.9 -0.2
comp=Z,89nm,1.0s,mb5.4
CDF Champ du Feu 80.34 355⇑iP P 23 58 25.9 -0.2
CDF pmax pmax
comp=Z,45nm,1.0s,mb5.3
CDF Champ du Feu 80.34 355⇑iP P 23 58 25.9 -0.2
comp=Z,44nm,1.0s,mb5.3
PKSG 80.34 348||eP P 23 58 27.1 +1.0
MEZF Maizieres J'vi 80.34 357⇑iP P 23 58 26.2 +0.1
comp=Z,326nm,1.1s,mb5.9
MEZF Maizieres J'vi 80.34 357⇑iP P 23 58 26.2 +0.1
comp=Z,326nm,1.1s,mb6.2
MOA Molln 80.37 351⇑iP P 23 58 26.3 +0.1
comp=Z,124nm,2.6s,mb5.4,SNR=16
VRI Vrincioaia 80.46 342 P P 23 58 27.5 +0.8
GRR Gorron 80.52 1⇑iP P 23 58 26.9 -0.1
comp=Z,278nm,0.9s,mb5.9
GRR Gorron 80.52 1⇑iP P 23 58 26.9 -0.1
GRR pmax pmax
comp=Z,139nm,0.9s,mb5.9
GRR Gorron 80.52 1⇑iP P 23 58 26.9 -0.1
comp=Z,139nm,0.9s,mb5.9
ROSF Rostrenen 80.53 3⇑iP P 23 58 27.0 -0.1
comp=Z,298nm,1.3s,mb5.8
ROSF Rostrenen 80.53 3⇑iP P 23 58 27.0 -0.1
ROSF pmax pmax
comp=Z,149nm,1.3s,mb5.8
ROSF Rostrenen 80.53 3⇑iP P 23 58 27.0 -0.1
comp=Z,149nm,1.3s,mb5.8
ECH Echery 80.54 356⇑eP P 23 58 27.1 0.0
SPAK Spaichingen-Ko 80.57 354⇑eP P 23 58 27.5 +0.2
PKS7 Kunszentmiklos 80.57 347||eP P 23 58 28.4 +1.1
THEF They Montfort 80.58 356⇑eP P 23 58 27.3 -0.1
LIBD Limburg 80.58 355⇑eP P 23 58 27.3 -0.1
PKSN Nyarlorinc 80.62 347⇑eP P 23 58 28.8 +1.2
SGMF Saint Gilles 80.63 2⇑iP P 23 58 27.6 0.0
comp=Z,300nm,0.9s,mb5.9
SGMF Saint Gilles 80.63 2⇑iP P 23 58 27.6 0.0
SGMF pmax pmax
comp=Z,150nm,0.9s,mb5.9
SGMF Saint Gilles 80.63 2⇑iP P 23 58 27.6 0.0
comp=Z,150nm,0.9s,mb5.9
HAU Haudompre 80.79 356⇑iP P 23 58 28.3 -0.2
comp=Z,174nm,1.1s,mb5.6
HAU Haudompre 80.79 356⇑iP P 23 58 28.3 -0.2
HAU pmax pmax
comp=Z,87nm,1.1s,mb5.6
HAU Haudompre 80.79 356⇑iP P 23 58 28.3 -0.2
comp=Z,87nm,1.1s,mb5.6
ARSA Arzberg 80.83 350 iP P 23 58 29.3 +0.6
comp=Z,115nm,1.3s,mb5.7,SNR=44
FELD Feldberg im Sc 80.84 355⇑eP P 23 58 28.6 -0.1
MOF Molkenrain 80.91 356⇑eP P 23 58 28.6 -0.5
SLE Schleitheim 80.92 355⇑iP P 23 58 28.8 -0.3
comp=Z,154nm,1.9s,mb5.6
GNI Garni 80.95 327 P P 23 58 31.4 +2.1
SNR=6.8
GNI Garni 80.95 327 eP P 23 58 31.1 +1.8
QUIF Quistinic 80.95 3⇑iP P 23 58 29.2 -0.1
comp=Z,147nm,1.0s,mb5.6
QUIF Quistinic 80.95 3⇑iP P 23 58 29.2 -0.1
QUIF pmax pmax
comp=Z,73nm,1.0s,mb5.6
QUIF Quistinic 80.95 3⇑iP P 23 58 29.2 -0.1
comp=Z,73nm,1.0s,mb5.6
HINF Hinteralfeld 80.95 356⇑iP P 23 58 29.0 -0.3
comp=Z,82nm,1.1s,mb5.3
HINF Hinteralfeld 80.95 356⇑iP P 23 58 29.0 -0.3
HINF pmax pmax
comp=Z,41nm,1.1s,mb5.3
HINF Hinteralfeld 80.95 356⇑iP P 23 58 29.0 -0.3
comp=Z,41nm,1.1s,mb5.3
MLR Muntele Rosu 80.97 342⇑iP P 23 58 29.7 +0.3
MLR Muntele Rosu 80.97 342 P P 23 58 31.0 +1.6
STEIN Stein am Rhein 80.99 354⇑iP P 23 58 29.5 0.0
comp=Z,142nm,1.0s,mb5.8
WEIN Weingarten 81.12 354⇑iP P 23 58 30.2 0.0
comp=Z,183nm,1.4s,mb5.8
WATA Walderalm 81.13 352 iP P 23 58 30.5 +0.2
comp=Z,88nm,1.0s,mb5.7,SNR=54
WATA Walderalm 81.13 352 iP P 23 58 30.5 +0.2
WATA pmax pmax
comp=Z,88nm,1.0s,mb5.6
MOTA Moosalm 81.16 353⇑iP P 23 58 30.5 +0.1
comp=Z,102nm,1.1s,mb5.7,SNR=36
MOTA Moosalm 81.16 353⇑iP P 23 58 30.5 +0.1
MOTA pmax pmax
comp=Z,102nm,1.1s,mb5.7
SULZ Sulz-Cheisache 81.18 355⇑iP P 23 58 30.4 -0.1
comp=Z,173nm,1.1s,mb5.9
VOIR 81.19 343||iP P 23 58 31.6 +1.0
VOIR 81.19 343 ||P P 23 58 31.6 +1.0
WTTA Wattenberg 81.19 352 iP P 23 58 31.2 +0.6
comp=Z,209nm,1.2s,mb5.9,SNR=51
WTTA Wattenberg 81.19 352 iP P 23 58 31.2 +0.6
WTTA pmax pmax
comp=Z,209nm,1.2s,mb5.9
KBA Koelnbreinsper 81.23 351 iP P 23 58 31.7 +1.0
comp=Z,427nm,1.1s,mb6.3,SNR=224
KBA Koelnbreinsper 81.23 351 iP P 23 58 31.7 +0.9
KBA pmax pmax
comp=Z,427nm,1.1s,mb6.3
WILA Wila 81.24 354⇑iP P 23 58 30.9 0.0
comp=Z,208nm,1.5s,mb5.8
SQTA Sankt Quirin 81.27 353 iP P 23 58 31.5 +0.5
comp=Z,76nm,1.0s,mb5.6,SNR=46
SQTA Sankt Quirin 81.27 353 iP P 23 58 31.5 +0.5
SQTA pmax pmax
comp=Z,76nm,1.0s,mb5.6
BBS Basel-Blauen 81.27 355⇑eP P 23 58 30.8 -0.2
DAVA Damuels 81.31 354||iP P 23 58 31.3 +0.1
comp=Z,80nm,1.4s,mb5.5,SNR=15
ZUR Zurich 81.31 354⇑iP P 23 58 31.2 0.0
comp=Z,215nm,1.1s,mb6.0
BOURR Bourrignon 81.36 355⇑iP P 23 58 31.3 -0.2
comp=Z,206nm,1.7s,mb5.8
BALST Balsthal 81.39 355⇑iP P 23 58 31.3 -0.4
comp=Z,183nm,1.4s,mb5.8
LOMF Lomont 81.42 356⇑eP P 23 58 31.9 +0.1
TIRR Tirgusor 81.46 340||iP P 23 58 31.2 -0.8
TIRR Tirgusor 81.46 340 P P 23 58 32.6 +0.6
PKSM Moragy 81.47 347⇑iP P 23 58 31.5 -0.5
PKSM Moragy 81.47 347 P P 23 58 32.1 +0.1
PERS Pernice 81.48 350 eP P 23 58 32.5 +0.4
PLONS Plons 81.58 354⇑iP P 23 58 31.6 -1.0
comp=Z,165nm,1.6s,mb5.7
BZS Buzias 81.61 345⇑iP P 23 58 32.9 +0.1
BZS Buzias 81.61 345 P P 23 58 33.4 +0.6
LOR Lormes 81.61 358⇑iP P 23 58 32.7 -0.1
comp=Z,218nm,1.1s,mb5.7
LOR Lormes 81.61 358⇑iP P 23 58 32.7 -0.1
LOR pmax pmax
comp=Z,109nm,1.1s,mb5.7
LOR Lormes 81.61 358⇑iP P 23 58 32.7 -0.1
comp=Z,109nm,1.1s,mb5.7
GZR Gura Zlata 81.63 344⇑iP P 23 58 33.7 +0.8
GZR Gura Zlata 81.63 344 P P 23 58 33.6 +0.7
HYF Humbligny 81.64 359⇑iP P 23 58 33.2 +0.3
OBKA Obir 81.67 350 iP P 23 58 33.5 +0.4
comp=Z,133nm,1.1s,mb5.8,SNR=60
MUO Muotathal 81.70 354⇑iP P 23 58 31.7 -1.6
comp=Z,236nm,2.2s,mb5.7
WRAB Tennant Creek 81.77 223c iP P 23 58 34.2 +0.5
WRAB Tennant Creek 81.77 223 eP P 23 58 33.3 -0.3
comp=Z,67nm,1.1s,mb5.5
WB2 Warramunga Arr 81.78 223 eP P 23 58 31.8 -1.9
WRA Warramunga Arr 81.79 223 P P 23 58 31.8 -1.9
comp=Z,17nm,0.8s,mb5.0,baz=35,slow=6.0,SNR=26
WRA PKiKP PKiKP 00 03 58.7 +1.9
comp=Z,0.6nm,0.8s,baz=0.2,slow=1.8,SNR=4.7
WRA PKKPbc PKKPbc 00 17 06.1 +1.6
comp=Z,0.4nm,0.8s,baz=226,slow=2.4,SNR=5.0
LLS Linth-Limmern 81.80 354⇑iP P 23 58 32.7 -1.1
comp=Z,81nm,1.4s,mb5.5
DAVOX Davos 81.81 354⇑iP P 23 58 34.2 +0.3
comp=Z,108nm,1.0s,mb5.7
BNALP Bannalp 81.81 355⇑iP P 23 58 33.6 -0.3
comp=Z,91nm,1.1s,mb5.6
SSF Saint Saulge 81.83 358⇑iP P 23 58 33.9 -0.1
comp=Z,216nm,1.2s,mb5.7
SSF Saint Saulge 81.83 358⇑iP P 23 58 33.9 -0.1
SSF pmax pmax
comp=Z,108nm,1.2s,mb5.7
SSF Saint Saulge 81.83 358⇑iP P 23 58 33.9 -0.1
comp=Z,108nm,1.2s,mb5.7
BRANT Les Verrieres 81.85 356⇑iP P 23 58 34.6 +0.5
comp=Z,131nm,1.1s,mb5.8
FUORN Ofenpass 81.94 353⇑iP P 23 58 34.5 -0.1
comp=Z,131nm,0.8s,mb5.9
HASLI Hasliberg 81.94 355⇑iP P 23 58 34.4 -0.2
comp=Z,124nm,1.4s,mb5.6
CADS Cadrg 82.03 351 eP P 23 58 34.1 -0.9
BUC1 Bucharest 82.05 342 P P 23 58 35.3 +0.2
WIMIS Wimmis 82.06 355⇑iP P 23 58 34.8 -0.4
comp=Z,107nm,1.8s,mb5.5
AVF Avril sur Loir 82.10 358⇑iP P 23 58 35.3 -0.1
comp=Z,194nm,1.0s,mb5.7
AVF Avril sur Loir 82.10 358⇑iP P 23 58 35.3 -0.1
AVF pmax pmax
comp=Z,97nm,1.0s,mb5.7
AVF Avril sur Loir 82.10 358⇑iP P 23 58 35.3 -0.1
comp=Z,97nm,1.0s,mb5.7
LJU Ljubljana 82.13 350 iP P 23 58 35.1 -0.5
LJU ePP PP 00 01 49.5 +5.3
VDL Val di Lei 82.13 354⇑iP P 23 58 35.3 -0.3
comp=Z,114nm,0.9s,mb5.8
BERNI Berninapass 82.17 353⇑iP P 23 58 35.4 -0.3
comp=Z,85nm,1.0s,mb5.6
CABF La Chapelle 82.19 356⇑iP P 23 58 36.1 +0.2
comp=Z,258nm,1.1s,mb5.8
CABF La Chapelle 82.19 356⇑iP P 23 58 36.1 +0.2
CABF pmax pmax
comp=Z,129nm,1.1s,mb5.8
CABF La Chapelle 82.19 356⇑iP P 23 58 36.1 +0.2
comp=Z,129nm,1.1s,mb5.8
VOY Vojsko 82.21 351 eP P 23 58 35.5 -0.5
VOY e pP 23 58 53.8 +1.8
VOY e 23 59 02.6
FUSIO Fusio 82.22 354⇑iP P 23 58 36.3 +0.3
comp=Z,116nm,1.0s,mb5.8
SMF Signal de Mont 82.23 358⇑iP P 23 58 36.0 -0.1
comp=Z,334nm,1.1s,mb5.9
SMF Signal de Mont 82.23 358⇑iP P 23 58 36.0 -0.1
SMF pmax pmax
comp=Z,167nm,1.1s,mb5.9
SMF Signal de Mont 82.23 358⇑iP P 23 58 36.0 -0.1
comp=Z,167nm,1.1s,mb5.9
BGF Bois d'Agland 82.34 358⇑iP P 23 58 36.6 -0.1
comp=Z,154nm,1.1s,mb5.6
BGF Bois d'Agland 82.34 358⇑iP P 23 58 36.6 -0.1
BGF pmax pmax
comp=Z,77nm,1.1s,mb5.5
BGF Bois d'Agland 82.34 358⇑iP P 23 58 36.6 -0.1
comp=Z,77nm,1.1s,mb5.5
LKBD Leukerbad 82.34 355⇑iP P 23 58 36.4 -0.3
comp=Z,106nm,1.0s,mb5.7
DJES Djerdap 82.41 344 iP P 23 58 36.1 -0.9
AIGLE Aigle 82.42 356⇑iP P 23 58 36.5 -0.6
comp=Z,68nm,0.9s,mb5.6
GRYON Gryon 82.50 355⇑iP P 23 58 37.3 -0.2
comp=Z,65nm,1.0s,mb5.6
BEO Belgrade 82.56 346 iP P 23 58 37.7 -0.1
BOJS Bojanci 82.58 350 eP P 23 58 37.8 -0.2
TCF Toulx Ste Croi 82.62 359⇑iP P 23 58 38.0 -0.1
comp=Z,106nm,0.9s,mb5.6
TCF Toulx Ste Croi 82.62 359⇑iP P 23 58 38.0 -0.1
TCF pmax pmax
comp=Z,53nm,0.9s,mb5.6
TCF Toulx Ste Croi 82.62 359⇑iP P 23 58 38.0 -0.1
comp=Z,53nm,0.9s,mb5.6
MMK Mattmark 82.66 355⇑iP P 23 58 37.3 -1.0
comp=Z,138nm,0.9s,mb6.0
MUGIO Muggio 82.72 354⇑iP P 23 58 37.7 -0.9
comp=Z,73nm,0.8s,mb5.8
RCC Rio Carpintero 82.81 67 eP P 23 58 39.4 +0.3
AGO Saint Agoulin 82.84 358 eP P 23 58 39.8 +0.5
PRD Provadia 82.88 341 iP P 23 58 40.3 +0.9
PLDF La Plantade 82.91 358 eP P 23 58 40.3 +0.7
SVIS Svilajnac 82.96 345 iP P 23 58 39.3 -0.5
SZH Strazhica 83.11 342 iP P 23 58 42.2 +1.6
PYM Petit Puy Mans 83.15 358 eP P 23 58 41.2 +0.4
DIVS Divcibare 83.34 346||iP P 23 58 41.5 -0.3
DIVS Divcibare 83.34 346 eP P 23 58 42.1 +0.3
GRUS Gruza 83.43 345 iP P 23 58 42.2 -0.1
RJF Les Rejaudoux 83.61 359⇑iP P 23 58 43.0 -0.2
comp=Z,212nm,1.2s,mb5.8
RJF Les Rejaudoux 83.61 359⇑iP P 23 58 43.0 -0.2
RJF pmax pmax
comp=Z,106nm,1.2s,mb5.8
RJF Les Rejaudoux 83.61 359⇑iP P 23 58 43.0 -0.2
comp=Z,106nm,1.2s,mb5.8
LBL Lubilhac 83.66 358 eP P 23 58 44.0 +0.5
BNI Bardonecchia 83.72 356 eP P 23 58 45.2 +1.4
JMB Yambol 83.75 341 eP P 23 58 44.4 +0.4
HYB Hyderabad 83.80 290 iP P 23 58 43.5 -0.7
comp=Z,130nm,1.0s,mb6.0
HYB e 23 58 47.0
HYB e 23 58 54.0
HYB eS S 00 09 04.0 +1.1
HYB Hyderabad 83.80 290 eP P 23 58 43.5 -0.7
HYB pmax pmax
comp=Z,130nm,1.0s,mb6.0
HYB Hyderabad 83.80 290 eP P 23 58 43.5 -0.7
comp=Z,130nm,1.0s,mb6.0
ORIF Oris-en-Rattie 83.89 356⇑iP P 23 58 45.4 +0.8
comp=Z,190nm,1.0s,mb5.9
ORIF Oris-en-Rattie 83.89 356⇑iP P 23 58 45.4 +0.8
comp=Z,95nm,1.0s,mb5.9
RKT Rikitea 83.90 140 eSS SS 00 14 43.2 +11
comp=Z,569nm,26.8s
RKT eLR LR 00 25 11.9
comp=Z,3µm,28.0s,baz=330
LFF La Frestale 83.98 360⇑iP P 23 58 45.2 +0.1
comp=Z,387nm,1.1s,mb6.1
LFF La Frestale 83.98 360⇑iP P 23 58 45.2 +0.1
comp=Z,193nm,1.1s,mb6.2
CAF Calviac 83.99 359⇑iP P 23 58 45.4 +0.3
comp=Z,271nm,1.1s,mb6.0
CAF Calviac 83.99 359⇑iP P 23 58 45.4 +0.3
comp=Z,135nm,1.1s,mb6.0
VIVF Saint-Julien-l 84.00 357⇑iP P 23 58 45.5 +0.3
comp=Z,114nm,1.0s,mb5.7
VIVF Saint-Julien-l 84.00 357⇑iP P 23 58 45.5 +0.3
comp=Z,57nm,1.0s,mb5.7
MBDF Montbardon 84.04 356⇑iP P 23 58 46.1 +0.7
comp=Z,158nm,1.0s,mb5.8
MBDF Montbardon 84.04 356⇑iP P 23 58 46.1 +0.7
comp=Z,79nm,1.0s,mb5.8
PGB Panagyurishte 84.14 343 P P 23 58 46.1 +0.2
PLE Pljevlja 84.18 346||iP P 23 58 47.4 +1.3
FITZ Fitzroy Crossi 84.19 231 eP P 23 58 45.2 -1.0
comp=Z,119nm,1.0s,mb6.0
VTS Vitosha 84.28 343 eP P 23 58 46.7 +0.1
VTS Vitosha 84.28 343 iP P 23 58 46.7 +0.1
VTS Vitosha 84.28 343⇑iP P 23 58 46.1 -0.5
VTS Vitosha 84.28 343 P P 23 58 46.9 +0.3
BARS Barje 84.29 344 iP P 23 58 44.6 -2.1
DIM Dimitrovgrad 84.36 342 iP P 23 58 47.8 +0.8
UPM Unac-Piva 84.38 347||iP P 23 58 47.3 +0.1
VLC Villacollemand 84.38 353 eP P 23 58 47.6 +0.4
comp=Z,83nm,1.1s,mb5.6
PLD Plovdiv 84.47 342 eP P 23 58 47.3 -0.2
PLD Plovdiv 84.47 342 iP P 23 58 48.0 +0.4
IVA Berane 84.55 346||iP P 23 58 48.6 +0.6
MALT Malatya 84.65 331⇑iP P 23 58 49.2 +0.7
MALT Malatya 84.65 331 P P 23 58 49.6 +1.1
MALT Malatya 84.65 331 eP P 23 58 49.4 +0.9
comp=Z,71nm,1.1s,mb5.7

BR131	Keskin Array S	84.70	335	*e*P		P	23 58 49.1	+0.4
	comp=Z,41nm,0.9s,mb5.6								
BRTR	Keskin Array B	84.70	335	P		P	23 58 48.5	-0.2
	comp=Z,46nm,0.9s,mb5.6,baz=53,slow=2.9,SNR=30								
BRTR	Keskin Array B	84.70	335	P		P	23 58 48.6	-0.1
BRTR					pmax	pmax			
	comp=Z,46nm,0.9s								
BRY	Bratogost	84.72	347	*i*P		P	23 58 49.0	+0.1
TOUF	Mont Tournerai	84.73	355	*e*P		P	23 58 49.3	+0.4
AUTN	L'Aution	84.74	355	*e*P		P	23 58 48.8	-0.1
SAOF	Saorge	84.74	355	*e*P		P	23 58 48.8	-0.1
NKY	Niksic	84.75	346	*i*P		P	23 58 48.9	-0.1
ANTO	Ankara	84.78	336	*i*P		P	23 58 49.3	+0.1
ANTO	Ankara	84.78	336	P		P	23 58 50.2	+1.0
	SNR=21								
STOF	St-Etienne Org	84.81	356	*e*P		P	23 58 49.9	+0.6
PVY	Plav	84.81	346	*i*P		P	23 58 49.1	-0.2
SMRF	Simiane la Rot	84.84	356	*i*P		P	23 58 50.4	+0.9
	comp=Z,298nm,1.0s,mb6.1								
SMRF	Simiane la Rot	84.84	356	*i*P		P	23 58 50.4	+0.9
	comp=Z,298nm,1.0s,mb6.4								
LUCF	Luceram	84.84	355	*e*P		P	23 58 49.6	+0.1
MVIF	Mont Vial	84.85	355	*e*P		P	23 58 49.8	+0.3
SBF	Sospel	84.87	355	*i*P		P	23 58 49.5	-0.1
	comp=Z,345nm,0.9s,mb6.2								
SBF	Sospel	84.87	355	*i*P		P	23 58 49.5	-0.1
	comp=Z,172nm,0.9s,mb6.2								
VILF	Villemus	84.96	356	*e*P		P	23 58 51.0	+0.9
REVF	Revere	85.00	355	*e*P		P	23 58 50.2	0.0
PRAF	Pradon	85.03	357	*e*P		P	23 58 51.4	+1.0
TTG	Podgorica	85.08	346	*i*P		P	23 58 50.7	+0.1
MMB	Musomiste	85.15	343	*e*P		P	23 58 51.1	+0.1
MMB	Musomiste	85.15	343	*i*P		P	23 58 51.8	+0.8
HCY	Herceg Novi	85.18	347	*i*P		P	23 58 50.9	-0.3
TAVF	Tavernes	85.18	356	*e*P		P	23 58 51.9	+0.7
SKO	Skopje	85.18	345	*e*P		P	23 58 55.5	+4.3
FRF	La Foret Royal	85.21	356	*i*P		P	23 58 51.2	-0.1
	comp=Z,189nm,1.0s,mb5.9								
FRF	La Foret Royal	85.21	356	*i*P		P	23 58 51.2	-0.1
	comp=Z,95nm,1.0s,mb5.9								
RDO	Rodhopi	85.23	341	*e*P		P	23 58 51.9	+0.5
BUM	Brajici-Budva	85.26	346	*i*P		P	23 58 51.7	+0.2
AS31	Alice Springs	85.27	222	*e*P		P	23 58 50.0	-1.6
ASAR	Alice Springs	85.27	222	P		P	23 58 50.5	-1.1
	comp=Z,18nm,0.8s,mb5.2,baz=29,slow=4.7,SNR=29								
ASPA	Alice Springs	85.27	222	*e*P		P	23 58 50.0	-1.6
PUYF	Puyloubier	85.28	356	*e*P		P	23 58 52.5	+0.8
EPON	Pontenova	85.36	6	P		P	23 58 52.2	+0.2
	comp=Z,213nm,1.8s,mb6.0								
NVR	Nevrokopi	85.36	343	*e*P		P	23 58 52.1	+0.1
ALN	Alexandroupoli	85.37	341	*e*P		P	23 58 51.8	-0.3
ARMA	Armidale	85.41	205	*e*P		P	23 58 51.5	-0.8
GELF	Grande-Etoile	85.44	356	*e*P		P	23 58 53.4	+0.9
LMR	La Mourre	85.44	356	*i*P		P	23 58 52.5	0.0
	comp=Z,214nm,1.0s,mb6.0								
LMR	La Mourre	85.44	356	*i*P		P	23 58 52.5	0.0
	comp=Z,107nm,1.0s,mb5.9								
EARI	Arriondas	85.49	4	P		P	23 58 52.8	+0.1
	comp=Z,93nm,1.4s,mb5.6								
BERF	Bertagne	85.50	356	*e*P		P	23 58 53.6	+0.8
ULC	Ulcinj	85.54	346	*i*P		P	23 58 53.4	+0.5
MTLF	Montolieu	85.57	359	*e*P		P	23 58 53.3	+0.2
	comp=Z,152nm,1.1s,mb5.8								
MTLF	Montolieu	85.57	359	*e*P		P	23 58 53.3	+0.2
	comp=Z,76nm,1.1s,mb5.8								
EMAZ	Mazaricos	85.61	7	P		P	23 58 53.3	0.0
	comp=Z,67nm,1.5s,mb5.7								
VAY	Valandovo	85.62	344	*e*P		P	23 58 53.5	+0.1
VAY	Valandovo	85.62	344	*e*P		P	23 58 54.7	+1.3
ELAN	Lanestosa	85.63	3	P		P	23 58 53.2	-0.2
	comp=Z,192nm,1.1s,mb6.2								
SRS	Serrai	85.64	343	*e*P		P	23 58 52.7	-0.7
EALK	Alkurruntz	85.68	1	P		P	23 58 54.1	+0.5
	comp=Z,25nm,0.7s,mb5.6								
STS	Santiago	85.70	7	P		P	23 58 54.4	+0.6
STS					pmax	pmax			
	comp=Z,28nm,0.9s,mb5.5								
STS	Santiago	85.70	7	P		P	23 58 54.4	+0.7
	comp=Z,28nm,0.9s,mb5.5								
KNT	Kendrikon	85.72	343	*e*P		P	23 58 54.0	+0.1
ELIZ	Elizondo	85.74	2	P		P	23 58 54.2	+0.3
	comp=Z,18nm,0.9s,mb5.3								
SJPF	Ste Jean	85.80	1	*i*P		P	23 58 54.8	+0.6
	comp=Z,68nm,0.7s,mb5.7								
SJPF	Ste Jean	85.80	1	*i*P		P	23 58 54.8	+0.6
	comp=Z,34nm,0.7s,mb5.7								
LARF	Larrau	85.87	1	*e*P		P	23 58 55.5	+0.9
EPF	Esparros	85.89	0	*e*P		P	23 58 54.1	-0.6
	comp=Z,60nm,0.8s,mb5.5								
EPF	Esparros	85.89	0	*e*P		P	23 58 54.1	-0.6
	comp=Z,30nm,0.8s,mb5.5								
AQU	L'Aquila	85.90	350	*i*P		P	23 58 55.1	+0.4
AQU	L'Aquila	85.90	350	P		P	23 58 56.0	+1.3
AQU	L'Aquila	85.90	350	*e*P		P	23 58 55.3	+0.5
MLS	Moulis	85.96	360	*e*P		P	23 58 56.0	+1.0
SOH	Sokhos	85.97	343	*e*P		P	23 58 54.6	-0.5
LRDF	Laroque-de-Fa	85.97	359	*e*P		P	23 58 55.9	+0.8
GRG	Griva	86.01	344	*e*P		P	23 58 55.6	+0.3
ETSF	Etsaut	86.02	1	*i*P		P	23 58 55.8	+0.5
	comp=Z,77nm,0.7s,mb5.7								
ETSF	Etsaut	86.02	1	*i*P		P	23 58 55.8	+0.5
ETSF					pmax	pmax			
	comp=Z,38nm,0.7s,mb5.7								
ETSF	Etsaut	86.02	1	*i*P		P	23 58 55.8	+0.5
	comp=Z,38nm,0.7s,mb5.7								
VIEF	Viey	86.03	0	*e*P		P	23 58 56.1	+0.7
RESF	Ens	86.11	0	*e*P		P	23 58 56.9	+1.1
OHR	Ohrid	86.13	345	*e*P		P	23 58 58.5	+2.6
HORT	Hortiatis	86.23	343	*e*P		P	23 58 55.8	-0.6
EBIE	Bielsa	86.23	0	P		P	23 58 57.3	+1.0
	comp=Z,82nm,1.0s,mb5.9								
OUR	Ouranopolis	86.32	342	*e*P		P	23 58 56.5	-0.3
FNA	Florina	86.35	344	*e*P		P	23 58 56.6	-0.4
PLG	Polygyros	86.38	343	*e*P		P	23 58 56.0	-1.1
LIA	Limnos Island	86.50	341	*e*P		P	23 58 56.7	-1.0
KZN	Kozani	86.75	344	*e*P		P	23 58 58.0	-0.9
ELOB	Lobios	86.75	6	P		P	23 58 58.1	-0.8
	comp=Z,156nm,2.2s,mb5.8								
ECAL	Calabor	86.76	5	P		P	23 58 58.5	-0.5
	comp=Z,50nm,1.4s,mb5.6								
PAIG	Paliouri	86.77	342	*e*P		P	23 58 57.5	-1.5
LIT	Litokhoron	86.82	343	*e*P		P	23 58 58.4	-0.8
PBRG	Braganca	86.90	5	*e*P		P	23 58 59.2	-0.4
	comp=Z,20nm,0.7s,mb5.5								
PRK	Paraskevi	86.91	340	*e*P		P	23 58 58.8	-0.9
ESAC	San Caprasio	87.19	1	P		P	23 59 01.9	+0.8
	comp=Z,110nm,1.0s,mb6.0								
MEV	Metsovon	87.35	344	*e*P		P	23 59 02.8	+0.9
PVRL	Vila Real	87.36	6	*e*P		P	23 59 01.8	-0.1
	comp=Z,27nm,0.9s,mb5.5								
EPOB	Poblet	87.56	360	P		P	23 59 03.6	+0.8
	comp=Z,58nm,1.0s,mb5.8								
KEK	Kerkira	87.66	345	*e*P		P	23 59 02.5	-0.8
IGT	Igoumenitsa	87.75	345	*e*P		P	23 59 03.3	-0.4
CHOS	Chios island	87.78	340	*e*P		P	23 59 02.9	-1.0
AGG	Agios Georgios	87.90	343	*e*P		P	23 59 02.9	-1.5
PVIS	Viseu	87.91	6	*e*P		P	23 59 04.2	-0.3
	comp=Z,36nm,1.1s,mb5.5								
EVR	Evrytania	88.09	344	*e*P		P	23 59 04.5	-0.9
GUD	Guadarrama	88.18	4	P		P	23 59 05.1	-0.7
GUD					pmax	pmax			
	comp=Z,33nm,0.8s,mb5.6								
GUD	Guadarrama	88.18	4	P		P	23 59 05.1	-0.7
	comp=Z,33nm,0.8s,mb5.6								
LKD	Levkas	88.50	344	*e*P		P	23 59 06.8	-0.5
EMOS	Mosqueruela	88.55	1	P		P	23 59 08.8	+1.2
	comp=Z,130nm,2.1s,mb5.9								
BANOM	Banah	88.73	312	P		P	23 59 08.2	-0.1
	SNR=11								
RIV	Riverview	88.77	204	*e*P		P	23 59 10.6	+2.1
PCBR	Castelo Branco	88.81	6	*e*P		P	23 59 08.2	-0.5
	comp=Z,32nm,1.4s,mb5.5								
PTOM	Tomar	88.96	7	*e*P		P	23 59 08.9	-0.6
	comp=Z,58nm,1.4s,mb5.7								
RLS	Riolos of Patr	88.99	344	*e*P		P	23 59 05.6	-4.0
VLS	Valsamata	89.03	344	*e*P		P	23 59 09.1	-0.7
MPR	Mayaguez	89.06	62	*e*P		P	23 59 13.3	+3.4
VSL	Villasalto	89.09	353	*e*P		P	23 59 09.9	-0.1
ESDC	Sonseca Array	89.16	3	P		P	23 59 09.7	-0.7
	comp=Z,36nm,1.1s,mb5.6,baz=353,slow=4.0,SNR=27								
ESDC					LR	LR	00 39 12.1		
	comp=Z,2μm,20.8s,MS5.4,baz=15,slow=36								
ESDC	Sonseca Array	89.16	3	P		P	23 59 09.6	-0.8
	comp=Z,30nm,1.4s,mb5.4								
ESLA	Sonseca Array	89.16	3	*e*P		P	23 59 10.1	-0.3
MIB	Mutribah	89.22	321	*e*P		P	23 59 09.2	-1.5
MIB					AMb	AMB	23 59 14.6		
	comp=Z,88nm,0.7s,mb6.2								
UMR	Umm Al-Rimmam	89.30	320	*e*P		P	23 59 09.6	-1.5
UMR					AMb	AMB	23 59 15.4		
	comp=Z,49nm,0.8s,mb5.9								
ECHE	Chera	89.32	1	P		P	23 59 11.6	+0.5
	comp=Z,16nm,1.1s,mb5.2								
URZ	Urewera	89.40	183	P		P	23 59 10.7	-0.8
	comp=Z,12nm,0.9s,mb5.2,baz=339,slow=12,SNR=2.8								
ARG	Arkhangelos	89.40	338	*e*P		P	23 59 10.3	-1.2
RST	Umm Al-Ruwaisa	89.63	321	*e*P		P	23 59 11.0	-1.6
RST					AMb	AMB	23 59 19.4		
	comp=Z,35nm,1.0s,mb5.6								
SJG	San Juan	89.68	61	*e*P		P	23 59 12.7	-0.1
CBYP	Canovanas	89.71	61	*e*P		P	23 59 13.1	+0.1
NAY	Al-Naaiem	89.75	321	*e*P		P	23 59 12.3	-0.8
NAY					AMb	AMB	23 59 18.1		
	comp=Z,33nm,1.2s,mb5.6								
ITM	Ithomi	89.76	343	*e*P		P	23 59 14.1	+0.9
PESTR	Estremoz	89.77	6	*e*P		P	23 59 12.2	-1.0
	comp=Z,37nm,1.1s,mb5.6								
STKA	Stephens Creek	89.77	212	*e*P		P	23 59 12.5	-0.7
	comp=Z,43nm,1.0s,mb5.7								
STKA	Stephens Creek	89.77	212	P		P	23 59 12.6	-0.7
	comp=Z,51nm,1.0s,mb5.8,baz=357,slow=6.8,SNR=28								
HUMP	Col San Antoni	89.82	61	*e*P		P	23 59 13.9	+0.4
CPD	Cerro la Pandu	89.87	61	*e*P		P	23 59 14.4	+0.7
EBAD	Badajoz	89.92	6	P		P	23 59 13.3	-0.6
	comp=Z,45nm,1.2s,mb5.7								
RDF	Al-Radifah	89.92	320	*e*P		P	23 59 13.1	-0.9
RDF					AMb	AMB	23 59 18.5		
	comp=Z,111nm,1.2s,mb6.0								
QRN	Al-Qurain	89.93	320	*e*P		P	23 59 12.0	-1.9
QRN					AMb	AMB	23 59 21.8		
	comp=Z,107nm,1.4s,mb6.0								
MTP	Monte Pirata	90.02	60	*e*P		P	23 59 15.2	+0.8
VLI	Veliai	90.02	342	*e*P		P	23 59 14.1	-0.3
EBEN	Beniarda	90.21	1	P		P	23 59 14.7	-0.6
	comp=Z,37nm,1.4s,mb5.5								
EVIA	Vianos	90.24	2	P		P	23 59 15.5	+0.1
	comp=Z,11nm,0.8s,mb5.2								
HOQ	Hogain	90.24	310	P		P	23 59 15.8	+0.3
	SNR=6.5								
ETOB	Tobarra	90.25	2	P		P	23 59 15.6	+0.1
	comp=Z,70nm,1.1s,mb5.9								
PBEJ	Beja	90.58	7	*e*P		P	23 59 15.9	-1.1
	comp=Z,23nm,1.2s,mb5.4								
EADA	Adamuz	90.64	4	P		P	23 59 16.9	-0.4
	comp=Z,80nm,1.1s,mb6.0								
CNB	Canberra Magne	90.64	205	*e*P		P	23 59 19.2	+1.9
	comp=Z,25nm,1.1s,mb5.5								
EBAN	Banos Encina	90.67	3	P		P	23 59 17.0	-0.4
EBAN					pmax	pmax			
	comp=Z,9.0nm,0.7s,mb5.2								
EBAN	Banos Encina	90.67	3	P		P	23 59 17.0	-0.5
	comp=Z,8.8nm,0.7s,mb5.2								
ARQ	Araqi	90.83	310	P		P	23 59 18.1	-0.1
	SNR=12								
NPS	Neapolis	90.88	340	*e*P		P	23 59 16.0	-2.4
JMDO	Jabal Madar	90.88	309	P		P	23 59 18.3	-0.1
	SNR=6.8								
EMIN	Mina Concepcio	90.92	6	P		P	23 59 17.7	-0.9
	comp=Z,55nm,1.0s,mb5.8								
BSY	Bisya	91.00	310	P		P	23 59 19.1	+0.1
	SNR=8.1								
VAM	Vamos	91.04	341	*e*P		P	23 59 18.3	-0.8
EQES	Quesada	91.06	3	P		P	23 59 19.0	-0.2
	comp=Z,28nm,0.9s,mb5.6								
EHUE	Huescar	91.06	2	P		P	23 59 19.5	+0.3
EHUE					pmax	pmax			
	comp=Z,41nm,1.2s,mb5.6								
EHUE	Huescar	91.06	2	P		P	23 59 19.5	+0.2
	comp=Z,41nm,1.2s,mb5.6								
EMUR	La Murta	91.06	1	P		P	23 59 18.5	-0.8
	comp=Z,35nm,1.0s,mb5.7								
EGRO	El Granado	91.10	6	P		P	23 59 18.9	-0.6
	comp=Z,78nm,1.2s,mb5.9								
KARN	Karanos	91.10	341	*e*P		P	23 59 17.6	-1.8
ELUQ	Luque	91.25	4	P		P	23 59 19.9	-0.2
ELUQ					pmax	pmax			
	comp=Z,70nm,0.8s,mb6.0								
ELUQ	Luque	91.25	4	P		P	23 59 19.9	-0.2
	comp=Z,7.0nm,0.8s,mb5.0								
CART	Cartagena	91.32	1	*e*P		P	23 59 19.4	-1.1
ECOG	Cogollos-Vega	91.56	3	P		P	23 59 21.5	0.0
	comp=Z,14nm,0.8s,mb5.3								
ELOJ	Sierra Loja	91.67	4	P		P	23 59 22.0	0.0
	comp=Z,53nm,1.1s,mb5.8								
ESPR	Espera	91.86	5	P		P	23 59 22.7	-0.3
	comp=Z,68nm,0.9s,mb6.0								
ENIJ	Nijar	91.91	2	P		P	23 59 24.8	+1.6
	comp=Z,15nm,1.0s,mb5.3								
EBER	Berja	91.96	3	P		P	23 59 23.6	+0.1
	comp=Z,7.5nm,0.7s,mb5.1								
EMIJ	Mijas	92.22	4	P		P	23 59 23.7	-0.9
	comp=Z,24nm,0.7s,mb5.6								
EJIF	Jimena Fronter	92.30	5	P		P	23 59 24.8	-0.2
	comp=Z,36nm,1.1s,mb5.6								
EBNR	Beni Rached	92.62	359	P		P	23 59 29.0	+2.6
EMHD	Jebel Mahouad	92.69	358	P		P	23 59 20.0	-6.8
KEST	Kesra	92.83	353	P		P	23 59 25.9	-1.5
	comp=Z,5.8nm,1.0s,mb5.0,baz=240,slow=2.7,SNR=14								
EANR	'Ain N'Sour	92.96	360	P		P	23 59 24.0	-4.0
ETRT	Tiaret	93.52	359	P		P	23 59 31.0	+0.4
TOO	Toolangi	93.82	207	*e*P		P	23 59 33.4	+1.4
	comp=Z,6.4nm,1.0s,mb5.0								
TORD	Torodi Ar. Bea	115.66	359	PKP		PKPdf	00 04 56.3	-0.5
	comp=Z,2.8nm,0.4s,baz=359,slow=2.0,SNR=22								
TORD				PP		PP	00 05 51.6	-8.3	
	comp=Z,3.0nm,0.9s,baz=7.1,slow=8.8,SNR=4.4								
TORD				PKKPbc		PKKPbc	00 15 29.2	0.0	
	comp=Z,3.6nm,0.8s,baz=173,slow=2.4,SNR=17								
TORD	Torodi Ar. Bea	115.66	359	PKP		PKPdf	00 04 56.3	-0.5	
TORD				PP		PP	00 05 51.6	-8.3	
TORD				PKKPbc		PKKPbc	00 15 29.2	0.0	
SIV	San Ignacio	119.98	78	PKP		PKPdf	00 05 04.6	-0.5	
	comp=Z,0.9nm,0.5s,baz=267,slow=2.2,SNR=3.3								
SIV				PP		PP	00 06 32.5	+2.6	
	comp=Z,5.3nm,1.1s,baz=322,slow=8.4,SNR=9.2								
KMBO	Kilima Mbogo	121.11	316	PKP		PKPdf	00 05 08.0	+0.7	
	comp=Z,4.1nm,0.9s,baz=315,slow=2.6,SNR=6.5								
KMBO	Kilima Mbogo	121.11	316	PKIKP		PKPdf	00 05 08.0	+0.7	
KMBO				pmax		pmax			
	comp=Z,40nm,0.9s								
DRV	Dumont d'Urvil	121.74	198	PP		PP	00 06 39.0	-2.9	
DRV				SP		SP	00 16 32.0	+3.0	
DRV				SS		SS	00 23 24.0	+10	
DBIC	Dimbokro	121.92	6	PKP		PKPdf	00 05 08.6	-0.2	
	comp=Z,19nm,0.7s,baz=355,slow=2.9,SNR=22								
DBIC	Dimbokro	121.92	6	*e*PKIKP		PKPdf	00 05 09.1	+0.3	
LIC	Lamto	122.35	7	*e*PKIKP		PKPdf	00 05 09.0	-0.7	
	comp=Z,70nm,0.9s								
CFAA	Coronel Fontan	126.88	96	PKP		PKPdf	00 05 17.2	-1.1	
	comp=Z,2.2nm,0.9s,baz=276,slow=3.6,SNR=13								
CFAA				SKP			00 08 46.9		
	comp=Z,0.4nm,0.8s,baz=276,slow=2.6,SNR=3.5								
BDFB	Brasilia	127.44	65	PKP		PKPdf	00 05 19.8	+0.4	
	comp=Z,5.0nm,0.8s,baz=208,slow=7.9,SNR=3.7								
BDFB	Brasilia	127.44	65	PKIKP		PKPdf	00 05 19.8	+0.4	
BDFB				pmax		pmax			
	comp=Z,50nm,0.8s								
VNDA	Vanda	129.24	185	PKP		PKPdf	00 05 21.4	-1.4	
	comp=Z,2.5nm,1.0s,baz=332,slow=3.8,SNR=3.2								
VNDA	Vanda	129.24	185	PKIKP		PKPdf	00 05 21.4	-1.4	
VNDA				pmax		pmax			
	comp=Z,30nm,1.0s								
SBA	Scott Base	129.32	184	*e*PKIKP		PKPdf	00 05 24.1	+1.1	
CPUP	Villa Florida	130.00	83	PKP		PKPdf	00 05 22.3	-2.0	
	comp=Z,2.9nm,0.8s,baz=142,slow=3.4,SNR=3.0								
CPUP				SKP			00 08 52.2		
	comp=Z,3.2nm,0.7s,baz=354,slow=1.9,SNR=3.6								
PLCA	Paso Flores	131.39	107	PKP		PKPdf	00 05 26.4	-0.5	
	comp=Z,28nm,0.9s,baz=298,slow=1.8,SNR=15								
PLCA				SKPbc		SKPbc	00 08 47.8	+0.6	
	comp=Z,10.0nm,1.1s,baz=276,slow=3.8,SNR=5.7								
PLCA	Paso Flores	131.39	107	PKIKP		PKPdf	00 05 26.4	-0.5	
PLCA				pmax		pmax			
	comp=Z,29nm,0.9s								
PLCA				pmax		pmax			
	comp=N,10.0nm,1.1s								
MIR	Mirnyy	134.76	214	PKHKP			00 05 18.0		
MIR				pmax		pmax			
	comp=Z,120nm,1.0s								
TRQA	Tornquist	134.98	98	*e*PKPdf		PKPdf	00 05 32.6	-1.1	
QSPA	South Pole Qui	141.21	180	*e*P		PKPdf	00 05 38.6	-6.5	
EFI	East Falkland	144.43	114	*e*PKPdf		PKPdf	00 05 49.8	-1.0	
PMSA	Palmer Station	145.08	137	PKPbc		PKPbc	00 05 50.3	-1.1	
	comp=Z,56nm,1.0s,baz=286,slow=3.2,SNR=8.5								
TSUM	Tsumeb	145.12	331	PKPbc		PKPbc	00 05 52.0	+0.4	
	comp=Z,95nm,1.0s,baz=7.8,slow=3.7,SNR=32								
MAW	Mawson	146.29	218	*e*P		PKPdf	00 05 52.5	-1.5	
	comp=Z,27nm,0.8s								
MAW	Mawson	146.29	218	PKPbc		PKPbc	00 05 52.8	-2.4	
	comp=Z,29nm,0.8s,baz=94,slow=3.4,SNR=21								
MAW	Mawson	146.29	218	PKP2		PKPab	00 05 52.8	-3.3	
MAW				pmax		pmax			
	comp=Z,29nm,0.8s								
BOSA	Boshof	150.61	311	PKPbc		PKPbc	00 06 06.3	-0.2	
	comp=Z,52nm,0.8s,baz=18,slow=2.8,SNR=18								
BOSA				PKPab		PKPab	00 06 14.1	+0.6	
	comp=Z,66nm,0.8s,baz=43,slow=2.8,SNR=13								
BOSA	Boshof	150.61	311	*e*PKIKP		PKPbc	00 06 06.8	+0.3	
SNAA	Sanae	159.66	177	PKP		PKPdf	00 06 12.0	-1.3	
	comp=Z,1.4nm,0.8s,baz=201,slow=11,SNR=3.8								
SNAA				PKPab		PKPab	00 06 50.8	-1.3	
	comp=Z,3.0nm,0.9s,baz=204,slow=4.1,SNR=6.4								
SNAA	Sanae	159.66	177	*e*		PKPdf	00 06 11.8	-1.5	
SNAA				*e*			00 06 50.7		
SNAA				*e*			00 06 56.8		
SNAA				*e*			00 06 59.4		
SNAA				*e*			00 07 05.6		
SNAA				*e*			00 07 08.8		
SNAA				*e*			00 07 17.2		
SNAA				*e*			00 07 26.4		
VNA1	Neumayer--Stat	160.32	171	*e*		PKPdf	00 06 13.6	-0.4	
VNA1				*e*			00 06 29.0		
VNA1				*e*			00 06 32.0		
VNA1				*e*			00 06 39.4		
VNA1				*e*			00 06 53.6		
VNA1				*e*			00 07 00.5		
VNA1				*e*			00 07 03.3		
VNA1				*e*			00 07 09.6		
VNA1				*e*			00 07 12.9		
VNA1				*e*			00 07 20.2		
VNA1				*e*			00 07 28.8		

KRSC 26 23:47:03,5461N×16171E,h16km,ML3.6,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.06	168	*i* P		Pg	23 47 07.8	+1.8
MKZ				*i* S		Sg	23 47 10.8	+2.8
TUMR	Tumrok	1.13	307	*e*P		Pb	23 47 23.7	-0.4
TUMR				*i* S		Sb	23 47 38.7	+0.2
KMNR	Kamenistaya	1.43	324	*e*P		Pn	23 47 28.7	+0.5
KMNR				*i* S		Sn	23 47 46.3	-0.3
ZLN	Zelenaya	1.50	340	*e*P		Pn	23 47 30.4	+1.1
ZLN				*i* S		Sn	23 47 49.8	+1.3
KPT	Kopyto	1.60	329	*e*P		Pn	23 47 31.8	+1.1
KPT				*i* S		Sn	23 47 52.6	+1.6
KBTR	Krutoberegovo	1.72	21	*e*P		Pn	23 47 34.0	+1.7
KBTR				*i* S		Sn	23 47 56.1	+2.2
KRSR	Krestovskiy	1.74	338	P		Pn	23 47 33.2	+0.7
KRSR				*i* S		Sn	23 47 55.3	+1.0
KOZ	Kozyrevsk	1.79	325	*e*P		Pn	23 47 34.9	+1.7
KO

INK pmax pmax
comp=Z,8.0nm,0.8s
INK Inuvik 27.58 35 P **P 00 00 57.7 0.0**
HABR Khabarovsk 28.96 282 *e*P **P 00 01 10.4 +0.4**
HABR *e*S **S 00 05 58.3 -0.2**
KLR Kul'dur 30.67 285 *e*P **P 00 01 22.7 -2.4**
KLR pmax pmax
comp=E,28nm,1.0s
KLR pmax pmax
comp=Z,40nm,1.0s,mb5.2
BBB Bella Bella 31.23 68 P **P 00 01 29.4 -0.6**
comp=Z,11nm,0.8s,mb4.8,baz=274,slow=9.3,SNR=3.1
MAT Matsushiro 33.34 260 P **P 00 01 48.0 -0.6**
MJAR Matsushiro Arr 33.34 260 P **P 00 01 47.7 -0.9**
comp=Z,2.2nm,0.8s,mb4.1,baz=51,slow=8.2,SNR=8.0
MJAR Matsushiro Arr 33.34 260 P **P 00 01 47.7 -0.9**
MJAR pmax pmax
comp=Z,20nm,0.8s
MDJ Mudanjiang 34.07 279 P **P 00 01 54.5 -0.4**
MDJ AP pP 00 02 11.5 +6.5
MDJ PP PP 00 03 12.8 +0.5
MDJ S **S 00 07 16.0 -2.2**
MDJ SCP ScP 00 08 09.0 -5.1
MDJ PCS PcS 00 08 17.0 -1.1
MDJ SCS ScS 00 12 11.3 -4.9
MDJ AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
MDJ LR LR
comp=N,156nm,13.2s
MDJ LR LR
comp=E,487nm,18.9s
MDJ LR LR
comp=Z,566nm,16.1s,MS4.4
OBC Olympics--Boni 35.26 73 P **P 00 02 06.8 +1.6**
YKA Yellowknife Ar 35.45 46 P **P 00 02 05.9 -0.8**
comp=Z,11nm,0.7s,mb4.9,baz=281,slow=7.1,SNR=29
YKA PcP PcP 00 04 34.4 -1.5
comp=Z,2.5nm,0.9s,baz=277,slow=3.1,SNR=4.1
YKA Yellowknife Ar 35.45 46 P **P 00 02 05.9 -0.9**
YKA 00 04 34.4
YKA pmax pmax
comp=Z,11nm,0.7s
B04A Port Angeles 35.59 73 ⇑P **P 00 02 08.1 +0.1**
baz=36
A05A Maple Falls 36.01 71 ⇑P **P 00 02 11.0 -0.6**
baz=36
C04A Brinnon 36.07 73 ⇓P **P 00 02 11.7 -0.4**
baz=36
MBW Mount Baker 36.22 71 P **P 00 02 13.5 +0.2**
E03A Lebam 36.27 75 ⇓P **P 00 02 13.8 0.0**
baz=36,SNR=7.2
B05A Bryant 36.34 72 ⇑P **P 00 02 14.1 -0.3**
baz=36,SNR=10
E04A Onalaska 36.76 75 ⇓P **P 00 02 17.9 -0.1**
baz=37
C05A Tolt Reservoir 36.84 73 ⇓P **P 00 02 18.6 -0.1**
baz=37
D05A Enumclaw 36.91 73 ⇑P **P 00 02 19.4 +0.2**
baz=37,SNR=7.2
H02A Toledo 36.94 78 ⇓P **P 00 02 20.1 +0.5**
baz=37
CN2 Changchun 37.04 280 *e*P **P 00 02 20.0 -0.4**
CN2 *e*PP PP 00 03 44.3 -0.8
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
G03A Yamhill 37.05 77 ⇑P **P 00 02 19.9 -0.6**
baz=37
LON Longmire 37.23 74 *e*P **P 00 02 22.5 +0.5**
F04A Amboy 37.26 76 ⇑P **P 00 02 21.5 -0.8**
baz=37,SNR=7.2
MTMW Mount Mitchell 37.34 75 P **P 00 02 23.4 +0.4**
E05A Randle 37.35 74 ⇑P **P 00 02 22.7 -0.3**
baz=37
BOD Bodaibo 37.48 306 *e*P **P 00 02 23.7 -0.4**
BOD pmax pmax
comp=Z,15nm,1.2s,mb4.7
G04A Mulino 37.59 77 ⇓P **P 00 02 24.7 -0.4**
baz=38,SNR=7.9
VLMM Larch Mountain 37.69 76 P **P 00 02 26.2 +0.3**
TBM Table Mountain 37.75 73 P **P 00 02 26.3 -0.1**
I03A Eugene 37.75 79 ⇑P **P 00 02 25.2 -1.2**
baz=38
WTV Waterville 37.87 72 P **P 00 02 27.2 -0.3**
EBG Ellensburg 37.89 73 P **P 00 02 27.8 +0.1**
J02A Umpqua 37.89 80 ⇑P **P 00 02 27.6 0.0**
baz=38
H04A Detroit Lake 38.04 77 P **P 00 02 29.2 +0.3**
baz=38,SNR=8.2
VFP Flag Point 38.15 76 P **P 00 02 30.0 +0.2**
EPH Ephrata 38.25 72 P **P 00 02 30.2 -0.4**
J03A Ideyld Park 38.26 79 ⇓P **P 00 02 30.8 0.0**
baz=38,SNR=6.0
G05A Wamic 38.28 76 ⇓P **P 00 02 30.9 0.0**
baz=38,SNR=5.8
M01C Crescent City 38.39 82 ⇓P **P 00 02 31.3 -0.5**
baz=38
L02A Cave Junction 38.54 81 ⇓P **P 00 02 32.6 -0.5**
baz=38
H05A Madras 38.65 77 ⇑P **P 00 02 32.9 -1.1**
baz=38
G06A Carlson Farm, 38.70 75 ⇓P **P 00 02 33.6 -0.8**
baz=39
HAWA Hanford 38.77 73 *e*P **P 00 02 35.2 +0.2**
I05A Bend 38.88 77 ⇓P **P 00 02 35.4 -0.5**
baz=39
H06A Lindquist Farm 39.14 76 P **P 00 02 38.0 -0.1**
baz=39,SNR=10
NEW Newport 39.27 69 P **P 00 02 38.0 -1.1**
comp=Z,18nm,0.9s,mb4.8,baz=305,slow=6.9,SNR=16
NEW Newport 39.27 69 P **P 00 02 38.0 -1.1**
NEW pmax pmax
comp=Z,18nm,0.9s
YBH Yreka Blue Hor 39.33 81 P **P 00 02 38.8 -0.8**
comp=Z,16nm,0.9s,mb4.7,baz=303,slow=4.4,SNR=3.6
YBH Yreka Blue Hor 39.33 81 *e*P **P 00 02 43.1 +3.5**
YBH pmax pmax
comp=Z,17nm,1.0s
YBH Yreka Blue Hor 39.33 81 *e*P **P 00 02 43.0 +3.4**
comp=Z,17nm,1.0s,mb4.7
YBH Yreka Blue Hor 39.33 81 ⇓P **P 00 02 39.4 -0.3**
baz=39,SNR=7.7
J05A Fort Rock 39.37 78 ⇓P **P 00 02 39.9 -0.1**
baz=39,SNR=13
M02C Callahan 39.43 82 ⇓P **P 00 02 40.2 -0.3**
baz=39
K04A Chilquin 39.44 80 ⇑P **P 00 02 39.8 -0.8**
baz=39
N02C Big Bar 39.48 83 ⇑P **P 00 02 39.9 -1.0**
baz=39
F08A Pendleton 39.52 74 ⇓P **P 00 02 41.0 -0.3**
baz=39
L04A Klamath Falls 39.58 80 ⇓P **P 00 02 41.7 0.0**
baz=40
I06A Prineville 39.64 77 ⇑P **P 00 02 42.0 -0.3**
baz=40
G08A Pilot Rock 39.68 74 ⇑P **P 00 02 41.4 -1.1**
baz=40,SNR=6.3
M04C Macdoel 39.84 81 ⇑P **P 00 02 44.0 +0.1**
baz=40,SNR=8.2
K05A Summer Lake 39.89 79 ⇑P **P 00 02 43.9 -0.4**
baz=40,SNR=9.1
M03C McCloud 39.95 82 ⇓P **P 00 02 44.7 -0.1**
baz=40
I07A Izee 39.99 76 P **P 00 02 45.0 -0.2**
baz=40,SNR=20
CIT Chita 40.03 298 *e*P **P 00 02 45.9 +0.4**
J06A Christmas Vall 40.05 78 P **P 00 02 45.6 0.0**
baz=40,SNR=16
F09A S2 Ranch, Elgi 40.09 73 ⇓P **P 00 02 45.7 -0.3**
baz=40
WDC Whiskeytown Da 40.09 83 *e*pP **P 00 02 47.0 +1.0**
WDC Whiskeytown Da 40.09 83 ⇓P **P 00 02 46.7 +0.7**
baz=40
O02C Red Bluff 40.17 83 ⇑P **P 00 02 48.1 +1.4**
baz=40
K06A Valley Falls 40.24 78 ⇑P **P 00 02 47.1 -0.1**
baz=40,SNR=12
P01C Double 8 Ranch 40.25 85 ⇓P **P 00 02 47.7 +0.4**
baz=40
H08A Prairie City 40.26 75 ⇓P **P 00 02 46.4 -1.0**
baz=40
L05A Lakeview 40.30 80 ⇑P **P 00 02 47.6 -0.2**
baz=40
J07A Hines 40.50 77 ⇓P **P 00 02 48.9 -0.5**
baz=40,SNR=6.4
M05C Lookout 40.50 81 ⇑P **P 00 02 49.0 -0.5**
baz=40,SNR=7.8

GASB Alder Springs 40.53 84 ⇓P **P 00 02 50.2 +0.6**
baz=40
HATC Hat Creek Radi 40.62 82 ⇓P **P 00 02 49.9 -0.5**
baz=40,SNR=5.5
I08A Drewsey 40.65 76 P **P 00 02 50.3 -0.4**
baz=40,SNR=11
WALA Waterton Lakes 40.74 67 *e*pP pP 00 02 59.4 -2.2
BSMT Bassoo Peak 40.83 69 P **P 00 02 51.4 -0.7**
BMO Blue Mountains 40.90 74 *e*P **P 00 02 52.4 -0.4**
K07A Rock Creek Ran 40.91 78 P **P 00 02 52.7 -0.1**
baz=41,SNR=24
M06C Likely Place G 41.01 81 ⇓P **P 00 02 53.7 +0.2**
baz=41
J08A Circle Bar Ran 41.01 77 ⇑P **P 00 02 53.4 -0.2**
baz=41
I09A Lost Marbles R 41.12 75 P **P 00 02 54.1 -0.4**
baz=41,SNR=5.6
O04C Chester 41.15 82 ⇑P **P 00 02 56.0 +1.3**
baz=41
MNRC McLaughlin Nat 41.16 85 ⇑P **P 00 02 55.0 +0.2**
baz=41
ELFS Eagle Lake Fie 41.19 82 ⇑P **P 00 02 55.8 +0.7**
baz=41
L07A Adell 41.24 79 P **P 00 02 55.8 +0.3**
baz=41,SNR=14
ORV Oroville 41.34 83 ⇓P **P 00 02 56.3 0.0**
baz=41
K08A Mann Creek Ran 41.35 77 ⇑P **P 00 02 55.9 -0.5**
baz=41,SNR=7.2
SUTB Sutter Butte 41.36 84 ⇑P **P 00 02 57.3 +0.8**
baz=41
J09A Fry Pan Ranch, 41.46 76 ⇓P **P 00 02 56.8 -0.4**
baz=41,SNR=8.1
O05C Quincy 41.46 82 ⇑P **P 00 02 57.2 -0.1**
baz=41
N06A Buffalo Meadow 41.67 81 ⇑P **P 00 02 58.3 -0.7**
baz=42,SNR=8.3
L08A Fields 41.75 78 ⇑P **P 00 02 58.7 -0.9**
baz=42,SNR=9.5
K09A Rome 41.84 77 ⇓P **P 00 02 59.7 -0.7**
baz=42
MSO Missoula 41.85 70 *e*P **P 00 02 59.8 -0.7**
comp=Z,15nm,1.0s,mb4.6
BEKR Beckwourth 41.86 82 ⇓P **P 00 02 59.7 -0.9**
baz=42
O06A Flanigan 42.01 81 ⇓P **P 00 03 01.7 -0.1**
baz=42,SNR=7.6
P05C Yuba Gap, Truc 42.05 83 ⇑P **P 00 03 01.7 -0.4**
baz=42
M08A Happy Creek Ra 42.15 79 ⇑P **P 00 03 02.0 -1.0**
baz=42,SNR=6.7
N07B Gerlach 42.18 80 ⇓P **P 00 03 03.2 0.0**
baz=42,SNR=22
CHMT Chamberlain Mo 42.21 69 *e*P **P 00 03 02.1 -1.3**
L09A Wilkinson Ranc 42.26 78 P **P 00 03 03.8 -0.1**
baz=42,SNR=6.0
LAVA Lava Cap Winer 42.30 84 ⇑P **P 00 03 04.1 0.0**
baz=42
PAHR Pah Rah Range 42.56 82 *e*P **P 00 03 09.2 +3.0**
WCN Washoe City 42.57 82 ⇓P **P 00 03 07.3 +0.9**
baz=42
O07A Toulon 42.60 81 ⇑P **P 00 03 06.8 +0.2**
baz=42,SNR=11
N08A GE Springer Mi 42.69 80 ⇑P **P 00 03 07.2 -0.2**
baz=43
M09A Marrel Ranch, 42.74 78 ⇑P **P 00 03 07.2 -0.5**
baz=43
R05C Kirkwood Meado 42.74 83 ⇓P **P 00 03 07.6 -0.2**
baz=43
CMB Columbia Colle 42.95 84 *e*P **P 00 03 14.6 +5.1**
CMB Columbia Colle 42.95 84 ⇑P **P 00 03 08.9 -0.6**
baz=43
N09A Rock Creek Ran 43.02 79 P **P 00 03 09.8 -0.2**
baz=43,SNR=13
PACP Pacheco Peak 43.03 86 ⇑P **P 00 03 12.1 +2.0**
baz=43
HRY Holter Researc 43.14 69 *e*P **P 00 03 10.2 -0.8**
M10A I.L. Ranch, Tu 43.23 78 ⇑P **P 00 03 11.4 -0.3**
baz=43,SNR=6.0
R06C Coleville 43.24 83 ⇑P **P 00 03 12.0 +0.3**
baz=43,SNR=8.0
WAKR Walker 43.26 83 *e*P **P 00 03 14.8 +2.9**
HAST UC Hastings Re 43.26 87 ⇑P **P 00 03 11.4 -0.5**
baz=43
LRM Limekiln Ridge 43.26 70 *e*P **P 00 03 11.1 -0.8**
HLID Haley 43.35 74 *e*P **P 00 03 15.1 +2.4**
P08A Dixie Valley 43.37 81 ⇓P **P 00 03 13.6 +0.8**
baz=43
S06C San Francisco 43.38 84 ⇑P **P 00 03 13.2 +0.2**
baz=43,SNR=6.4
S05C Merced 43.42 85 ⇑P **P 00 03 14.8 +1.6**
baz=43
BMN Battle Mountai 43.46 79 *e*P **P 00 03 13.2 -0.3**
BMN pmax pmax
comp=Z,20nm,1.0s,mb4.8
BMN Battle Mountai 43.46 79 *e*P **P 00 03 13.2 -0.4**
comp=Z,20nm,1.0s,mb4.8
MCMT McKenzie Canyo 43.57 71 *e*P **P 00 03 13.5 -1.0**
O09A Fish Creek Ran 43.63 80 ⇑P **P 00 03 15.0 0.0**
baz=44,SNR=6.6
V03C Hunter Liggett 43.69 87 ⇓P **P 00 03 16.7 +1.3**
baz=44
N10A Dunphy 43.73 79 ⇑P **P 00 03 16.4 +0.7**
baz=44
M11A Holland Ranch, 43.74 77 P **P 00 03 15.6 -0.3**
baz=44,SNR=9.4
R07C Lee Vining 43.75 83 ⇑P **P 00 03 16.8 +0.9**
baz=44
U04C Hernandez Rese 43.75 87 ⇓P **P 00 03 17.5 +1.5**
baz=44
Q08A Gabbs 43.97 82 ⇑P **P 00 03 17.2 -0.5**
baz=44,SNR=8.0
O10A Cortez Mining, 43.98 79 ⇓P **P 00 03 18.0 +0.3**
baz=44
T06C Milnrton Lake 44.02 85 ⇑P **P 00 03 17.8 -0.2**
baz=44
P09A Austin 44.04 80 ⇑P **P 00 03 18.6 +0.4**
baz=44
KCC Kaiser Creek 44.06 84 ⇑P **P 00 03 19.8 +1.4**
baz=44
N11A Elko Archery C 44.14 78 ⇑P **P 00 03 19.5 +0.5**
baz=44
PKD Parkfield 44.17 87 ⇑P **P 00 03 20.6 +1.3**
baz=44
M12A Wells 44.29 77 P **P 00 03 20.4 +0.2**
baz=44,SNR=6.8
QLMT Earthquake Lak 44.41 71 *e*P **P 00 03 20.6 -0.5**
P10A Eureka 44.41 80 ⇑P **P 00 03 21.4 +0.2**
baz=44
Q09A Carvers 44.45 81 ⇑P **P 00 03 22.5 +1.0**
baz=44
ELK Elko 44.49 78 *e*P **P 00 03 22.1 +0.3**
ELK pmax pmax
comp=Z,15nm,0.8s
ELK Elko 44.49 78 *e*P **P 00 03 22.1 +0.3**
comp=Z,15nm,0.8s,mb4.8
MTUM Tungsten Hills 44.51 84 *e*P **P 00 03 25.4 +3.4**
N12A Clover Valley, 44.54 78 P **P 00 03 22.2 -0.1**
baz=44,SNR=7.4
O11A Cowboy Ranch, 44.60 79 ⇑P **P 00 03 22.5 -0.1**
baz=44
HELL Mitchell Peak, 44.65 85 ⇓P **P 00 03 22.3 -0.8**
baz=44
M13A Montello 44.77 76 P **P 00 03 23.8 -0.3**
baz=45,SNR=10
BJI Beijing 44.87 281 *e*P **P 00 03 25.3 +0.5**
BJI AMB AMB
comp=Z,7.0nm,0.8s,mb4.5
R09A Tonopah 44.88 82 P **P 00 03 24.9 0.0**
baz=45,SNR=30
P11A Circle Ranch, 44.89 79 ⇑P **P 00 03 25.4 +0.5**
baz=45
TIN Tinemaha 44.91 84 ⇓P **P 00 03 26.0 +0.9**
baz=45
YNR Norris Junctio 44.92 70 *e*P **P 00 03 25.5 +0.3**
YFT Old Faithful 44.97 71 *e*P **P 00 03 26.9 +1.2**
N13A Wendover, West 45.05 77 P **P 00 03 26.2 -0.1**
baz=45,SNR=6.8
O12A Currie 45.07 78 P **P 00 03 25.8 -0.6**
baz=45,SNR=14
S09A Goldfield 45.11 82 ⇑P **P 00 03 25.8 -0.9**
baz=45,SNR=7.8
VES Vestal, Richgr 45.15 86 ⇑P **P 00 03 26.2 -0.9**
baz=45
R10A Warm Springs 45.33 81 ⇑P **P 00 03 28.0 -0.4**
baz=45,SNR=6.6
HVU Hansel Valley 45.37 75 *e*P **P 00 03 29.6 +0.8**

P12A McGill 45.45 79 ⇑P **P 00 03 29.6 +0.1**
baz=45,SNR=10
TLY Talaya 45.56 302 *e*P **P 00 03 31.8 +1.5**
TLY *e* pP 00 03 41.3 +0.7
TLY pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
ULN Ulaanbaatar 45.75 296 *c i*P **P 00 03 32.8 +1.0**
ULN Ulaanbaatar 45.75 296 *e*P **P 00 03 32.1 +0.3**
comp=Z,8.5nm,0.8s,mb4.7
Q12A Willow Creek R 45.77 79 ⇑P **P 00 03 32.0 +0.1**
baz=46
DAC Darwin (Calif) 45.79 84 *e*pP pP 00 03 48.9 +6.3
MPMC Manual Prospec 46.00 84 ⇑P **P 00 03 35.2 +1.5**
baz=46
FURC Furnace Creek, 46.12 84 ⇑P **P 00 03 36.1 +1.3**
baz=46,SNR=7.1
SONM Songino Array 46.13 296 P **P 00 03 34.7 -0.1**
comp=Z,2.7nm,0.9s,mb4.2,baz=178,slow=12,SNR=4.1
SONM Songino Array 46.13 296 P **P 00 03 34.7 -0.1**
SONM pmax pmax
comp=Z,30nm,0.9s
HWUT Hardware Ranch 46.20 74 *e*P **P 00 03 35.0 -0.4**
comp=Z,11nm,0.9s,mb4.8
LRMC Laurel Mountai 46.25 85 ⇑P **P 00 03 36.2 +0.5**
baz=46
DUG Dugway 46.29 77 *e*P **P 00 03 36.8 +0.7**
LAO LASA Array 46.38 66 *e*P **P 00 03 36.3 -0.5**
comp=Z,15nm,0.6s,mb5.1
NOQ North Oquirrh 46.44 76 *e*P **P 00 03 37.3 +0.1**
ZAK Zakamensk 46.45 301 *e*P **P 00 03 38.7 +1.4**
ZAK *e* 00 05 11.1
ZAK pmax pmax
comp=Z,14nm,1.4s,mb4.7
EDW2 Edwards Air Fo 46.45 86 ⇓P **P 00 03 37.9 +0.6**
baz=46
U10A Ash Meadows, A 46.49 83 ⇑P **P 00 03 39.1 +1.5**
baz=46
CTU Camp Tracy 46.64 76 *e*P **P 00 03 38.7 -0.1**
BW06 Boulder Array 46.71 72 *e*P **P 00 03 39.2 -0.1**
comp=Z,22nm,0.7s,mb5.2
PDAR Pinedale Array 46.71 72 P **P 00 03 38.4 -1.0**
comp=Z,20nm,0.6s,mb5.2,baz=311,slow=3.3,SNR=92
SHOC Shoshone 46.85 84 ⇑P **P 00 03 42.0 +1.5**
baz=47
NLU North Lily Min 46.89 77 *e*P **P 00 03 40.5 -0.3**
GSC Goldstone 46.91 85 *e*P **P 00 03 42.5 +1.6**
GSC Goldstone 46.91 85 ⇓P **P 00 03 42.0 +1.1**
baz=47
BFSC Mount Baldy St 47.07 86 ⇓P **P 00 03 42.0 -0.2**
baz=47
MPU Maple Canyon 47.12 76 *e*P **P 00 03 44.0 +1.4**
TUQ Turquoise Mtn. 47.37 84 ⇑P **P 00 03 45.2 +0.7**
baz=47,SNR=5.2
HEC Hector,Ludlow 47.51 85 ⇑P **P 00 03 46.5 +0.9**
baz=47
U12A Valley of Fire 47.59 82 ⇓P **P 00 03 47.2 +1.0**
baz=48
MSU Marysvale 47.72 78 *e*P **P 00 03 47.1 -0.1**
V12A Nelson 47.85 83 ⇓P **P 00 03 49.0 +0.8**
baz=48
GMRC Granite Mounta 47.96 84 ⇓P **P 00 03 49.2 +0.1**
baz=48,SNR=5.1
BELC Belle Mtn. 48.26 86 ⇓P **P 00 03 52.9 +1.5**
baz=48
NJ2 Nanjing 48.33 271 *e*P **P 00 03 54.3 +2.4**
NJ2 PP PP 00 05 47.5 +2.9
NJ2 S **S 00 10 48.0 -1.6**
NJ2 AMB AMB
comp=Z,90nm,0.5s,mb6.1
NJ2 AMB AMB
comp=Z,1μm,4.5s
NJ2 LR LR
comp=N,3μm,20.3s,MS5.2
NJ2 LR LR
comp=E,1μm,21.4s,MS5.2
NJ2 LR LR
comp=Z,1μm,26.4s,MS4.7
SRU San Rafael 48.35 76 *e*P **P 00 03 52.2 +0.1**
W13A Hualapai Mount 48.85 83 ⇓P **P 00 03 57.4 +1.4**
baz=49,SNR=6.2
SWSC Sam W. Stewart 49.10 86 ⇓P **P 00 03 58.5 +0.7**
baz=49
RSSD Black Hills 49.13 67 *e*P **P 00 04 03.3 +5.2**
X13A Yucca 49.22 83 ⇓P **P 00 03 59.0 +0.2**
baz=49
PDMCI Parker Dam,Lak 49.22 84 ⇓P **P 00 03 58.9 +0.1**
baz=49
W14A Seligman 49.28 82 ⇑P **P 00 03 59.8 +0.6**
baz=49,SNR=7.0
Y12C Blythe 49.35 85 ⇓P **P 00 04 00.3 +0.5**
baz=49
GLA Glamis 49.62 86 *e*P **P 00 04 01.5 -0.4**
GLA Glamis 49.62 86 ⇓P **P 00 04 02.4 +0.5**
baz=50
PV10 Paradox Valley 49.72 76 *e*P **P 00 04 03.5 +1.0**
Y13A Salome 49.74 84 ⇓P **P 00 04 02.9 +0.2**
baz=50
W15A Williams 49.80 82 ⇑P **P 00 04 04.1 +0.9**
baz=50
X14A Yava 49.88 83 ⇓P **P 00 04 04.7 +0.8**
baz=50,SNR=10
ULM Lac du Bonnet 49.98 56 P **P 00 04 02.4 -2.2**
comp=Z,1.8nm,0.5s,mb4.3,baz=280,slow=3.5,SNR=4.3
WUAZ Wupatki 50.13 81 *e*P **P 00 04 05.7 -0.1**
comp=Z,23nm,1.0s,mb5.2
SPB4 Spitsbergen Ar 50.15 356 *e*P **P 00 04 06.3 +0.5**
PV01 Paradox Valley 50.15 76 *e*P **P 00 04 04.9 -1.0**
Y14A Wickenburg 50.16 83 ⇓P **P 00 04 07.0 +1.0**
baz=50
X15A Humboldt 50.28 82 ⇑P **P 00 04 07.3 +0.4**
baz=50,SNR=7.1
Z14A Wintersburg 50.59 84 ⇑P **P 00 04 10.4 +1.2**
baz=50
115A Sonoran Desert 51.48 84 ⇓P **P 00 04 16.7 +0.8**
baz=51,SNR=5.2
116A Eloy 51.90 84 ⇑P **P 00 04 19.2 +0.2**
baz=52
TUC Tucson 52.64 83 *e*P **P 00 04 30.6 +6.1**
FRB Frobisher Bay 53.11 31 P **P 00 04 27.2 -0.8**
comp=Z,25nm,0.9s,mb5.2,baz=328,slow=8.8,SNR=15
FRB Frobisher Bay 53.11 31 P **P 00 04 27.2 -0.8**
LAZ Ladron 53.47 79 *e*P **P 00 04 30.4 -0.2**
ANMO Albuquerque 53.52 78 P **P 00 04 30.1 -0.9**
comp=Z,3.4nm,0.9s,mb4.3,baz=307,slow=8.7,SNR=7.1
ANMO Albuquerque 53.52 78 *e*P **P 00 04 35.0 +4.0**
EYMN Ely 53.66 57 *e*P **P 00 04 30.7 -1.3**
LENM Lemitar 53.73 79 *e*P **P 00 04 34.8 +2.3**
Y22C IRIS PASSCAL I 53.83 79 ⇓P **P 00 04 34.7 +1.5**
baz=54
LPM Los Pinos Moun 53.84 79 *e*P **P 00 04 35.5 +2.2**
LZH Lanzhou 54.87 286 *e*P **P 00 04 41.8 +1.0**
LZH AMB AMB
comp=Z,22nm,1.4s,mb5.0
GTA Gaotai 55.05 291 P **P 00 04 43.0 +0.9**
GTA PCP PcP 00 05 48.8 +5.5
GTA PP PP 00 06 46.0 +0.5
GTA PCS PcS 00 09 45.8 +2.6
GTA S **S 00 12 27.0 +4.9**
GTA SCS ScS 00 14 28.3 -0.3
GTA AMB AMB
comp=Z,17nm,1.0s,mb5.0
GTA AMB AMB
comp=Z,267nm,7.6s
GTA LR LR
comp=N,3μm,16.4s,MS5.6
GTA LR LR
comp=E,3μm,19.4s,MS5.6
GTA LR LR
comp=Z,6μm,17.1s,MS5.7
MNTX Cornudas Mount 56.39 80 *e*P **P 00 04 50.6 -1.1**
comp=Z,12nm,0.9s,mb4.9
KSU1 Kansas State U 56.61 68 *e*P **P 00 04 51.3 -2.0**
GDL2 Guadalupe Moun 56.67 79 *e*P **P 00 04 53.2 -0.5**
KEV Kevo 57.44 349 *ep* **P 00 04 58.8 -0.4**
comp=Z,1.1nm,0.4s,mb4.2
KEV Kevo 57.44 349 *e*P **P 00 04 58.8 -0.4**
KEV pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
JFWS Jewell Farm 57.62 60 *e*P **P 00 04 58.5 -1.9**
ARCES ARCESS Array B 57.82 350 P **P 00 05 01.5 -0.3**
comp=Z,4.8nm,0.8s,mb4.6,baz=26,slow=6.9,SNR=16
ARCES ARCESS Array B 57.82 350 P **P 00 05 01.5 -0.3**
ARCES pmax pmax
comp=Z,5.0nm,0.8s
ARCES ARCESS Array B 57.82 350 P **P 00 05 01.5 -0.3**
LVZ Lovozero 58.14 345 ⇓P **P 00 05 03.9 -0.1**

LVZ pmax pmax
comp=Z,27nm,1.4s,mb5.1
WMOK Wichita Mounta 58.30 73 *e*P **P 00 05 04.2 -1.0**
WMOK pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
WMOK Wichita Mounta 58.30 73 *e*P **P 00 05 04.2 -1.0**
comp=Z,8.7nm,1.1s,mb4.7
CD2 Chengdu 58.47 281 *e*P **P 00 05 06.0 -0.4**
CD2 PCP PcP 00 05 55.8 -0.9
CD2 PP PP 00 07 17.8 +1.9
CD2 PCS PcS 00 09 56.0 -2.3
CD2 S **S 00 13 01.3 -5.9**
CD2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.8
CD2 AMB AMB
comp=Z,40nm,5.6s
CD2 LR LR
comp=N,420nm,16.8s
CD2 LR LR
comp=Z,680nm,15.6s,MS4.9
APA Apatity 58.63 346⇓ *e*P **P 00 05 14.2 +6.7**
APA pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
WMQ Urumqi 58.83 302 P **P 00 05 09.5 +0.6**
WMQ XP sP 00 05 29.0 +5.3
WMQ PP PP 00 07 22.0 +2.9
WMQ S **S 00 13 08.0 -4.0**
WMQ SS SS 00 17 04.0 -1.6
WMQ AMB AMB
comp=Z,31nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,220nm,5.0s
WMQ LR LR
comp=N,958nm,15.0s,MS5.2
WMQ LR LR
comp=E,876nm,15.0s,MS5.2
WMQ LR LR
comp=Z,865nm,15.0s,MS5.0
MKAR Makanchi Array 59.54 308 P **P 00 05 13.8 +0.1**
comp=Z,6.6nm,0.6s,mb4.9,baz=46,slow=6.8,SNR=32
MKAR Makanchi Array 59.54 308 P **P 00 05 13.9 +0.1**
MKAR pmax pmax
comp=Z,7.0nm,0.6s
SCHQ Schefferville 60.15 38 P **P 00 05 16.6 -1.4**
comp=Z,12nm,0.8s,mb5.0,baz=324,slow=7.6,SNR=22
BVAR Borovoye Array 60.43 319 P **P 00 05 19.7 -0.2**
comp=Z,3.2nm,0.5s,mb4.6,baz=54,slow=7.5,SNR=13
BVAR Borovoye Array 60.43 319 P **P 00 05 19.7 -0.2**
BVAR pmax pmax
comp=Z,3.0nm,0.5s
JCT Junction City 60.66 77 *e*P **P 00 05 21.8 +0.4**
FVM French Village 60.91 65 *e*P **P 00 05 21.1 -2.0**
FVM pmax pmax
comp=Z,16nm,0.8s,mb5.2
FVM French Village 60.91 65 *e*P **P 00 05 21.1 -2.0**
comp=Z,16nm,0.8s,mb5.2
MIAR Mount Ida 61.51 70 *e*P **P 00 05 26.3 -0.9**
MIAR pmax pmax
comp=Z,14nm,0.9s,mb5.1
MIAR Mount Ida 61.51 70 *e*P **P 00 05 26.3 -0.9**
comp=Z,14nm,0.9s,mb5.1
SIUC Southern Illin 61.78 64 *e*P **P 00 05 27.6 -1.4**
SADO Sadowa 62.10 52 P **P 00 05 29.5 -1.7**
comp=Z,11nm,0.9s,mb5.0,baz=328,slow=5.5,SNR=4.1
SADO Sadowa 62.10 52 P **P 00 05 29.5 -1.7**
ARU Arti 62.19 328 *e*P **P 00 05 29.7 -2.1**
ARU *e*S **S 00 13 50.8 -4.1**
BLO Bloomington 62.24 61 *e*P **P 00 05 30.9 -1.2**
USIN University of 62.47 63 *e*P **P 00 05 32.6 -1.1**
KMI Kunming 63.23 277 P **P 00 05 40.0 +1.3**
KMI S **S 00 14 04.5 -3.4**
KMI AMB AMB
comp=Z,7.0nm,0.9s,mb4.8
KMI LR LR
comp=N,1μm,17.1s,MS5.3
KMI LR LR
comp=E,1μm,17.1s,MS5.3
KMI LR LR
comp=Z,2μm,18.5s,MS5.2
JOF Joensuu 63.29 345 *e*p **P 00 05 37.5 -1.6**
comp=Z,9.6nm,0.8s,mb5.0
JOF Joensuu 63.29 345 *e*P **P 00 05 37.5 -1.6**
JOF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
ALLY Alegheny Colle 63.85 55 *e*P **P 00 05 42.0 -0.8**
PLAL Pickwick Lake 64.37 66 *e*P **P 00 05 44.6 -1.6**
KAF Kangasniemi 64.82 347 *e*p **P 00 05 47.1 -2.1**
comp=Z,8.9nm,0.7s,mb4.9,baz=14,slow=5.8
KAF Kangasniemi 64.82 347 *e*P **P 00 05 47.1 -2.1**
KAF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
SWET Sewanee 65.41 64 *e*P **P 00 05 51.5 -1.5**
FIA1 FINESS Array S 65.49 347 *e*P **P 00 05 52.8 -0.7**
FINES FINESS Array B 65.49 347 P **P 00 05 52.9 -0.7**
comp=Z,6.2nm,0.8s,mb4.7,baz=34,slow=7.1,SNR=26
FINES FINESS Array B 65.49 347 P **P 00 05 52.9 -0.6**
FINES pmax pmax
comp=Z,6.0nm,0.8s
BINY Binghamton 65.55 53 *e*P **P 00 05 52.9 -1.0**
SSPA Standing Stone 65.75 55 *e*P **P 00 05 54.0 -1.2**
LBNH Lisbon 65.97 49 *e*P **P 00 05 55.3 -1.3**
LBNH pmax pmax
comp=Z,12nm,0.9s,mb4.9
LBNH Lisbon 65.97 49 *e*P **P 00 05 55.3 -1.3**
comp=Z,12nm,0.9s,mb4.9
CPCT Cooper Cave 66.03 63 *e*P **P 00 05 55.9 -1.1**
AAK Ala-Archa 66.37 309 *d*iP **P 00 05 59.9 +0.7**
AAK pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
LRAL Lakeview Retre 66.40 66 *e*P **P 00 05 57.6 -1.7**
comp=Z,10nm,0.8s,mb4.9
FWV Forest Hill 66.48 59 *e*P **P 00 05 59.0 -0.9**
ELN Prospectdale 66.78 59 *e*P **P 00 06 00.9 -0.8**
LSA Lhasa 66.92 289 P **P 00 06 05.0 +2.3**
LSA AP pP 00 06 15.5 +2.0
LSA XP sP 00 06 21.8 +4.2
LSA AMB AMB
comp=Z,20nm,0.7s,mb5.3
LSA LR LR
comp=N,1μm,17.4s,MS5.6
LSA LR LR
comp=E,3μm,17.4s,MS5.6
LSA LR LR
comp=Z,1μm,17.4s,MS5.1
AKTK Aktyubinsk 67.25 324 P **P 00 06 04.4 -0.4**
AKTO Aktyubinsk 67.25 324 P **P 00 06 04.4 -0.4**
comp=Z,2.4nm,0.6s,mb4.4,baz=360,slow=7.3,SNR=8.0
NOA NORSAR Array B 67.41 354 P **P 00 06 05.8 0.0**
comp=Z,8.8nm,0.7s,mb4.9,baz=6.7,slow=6.3,SNR=54
NOA NORSAR Array B 67.41 354 P **P 00 06 05.8 0.0**
NOA pmax pmax
comp=Z,9.0nm,0.7s
NOA NORSAR Array B 67.41 354 P **P 00 06 05.8 0.0**
NAO01 NORSAR Array S 67.62 354 *e*P **P 00 06 08.3 +1.2**
JSC Jenkinsville 68.69 62 *e*P **P 00 06 12.9 -0.9**
MOS Moscow 68.70 338 *e*P **P 00 06 13.2 -0.7**
KONO Kongsberg 68.89 355 *e*P **P 00 06 15.5 +0.4**
KONO pmax pmax
comp=Z,13nm,0.8s,mb4.9
KONO Kongsberg 68.89 355 *e*P **P 00 06 15.5 +0.4**
comp=Z,13nm,0.8s,mb4.9
OBN Obninsk 69.52 339 *i*P **P 00 06 18.4 -0.6**
OBN *e* pP 00 06 31.0 +1.2
OBN *e* 00 08 51.8
OBN *e*SS SS 00 19 51.5 -0.6
OBN pmax pmax
comp=Z,17nm,0.7s,mb5.1
OBN MLR MLR
comp=Z,700nm,15.0s,MS5.0
OBN Obninsk 69.52 339 *e*P **P 00 06 19.0 0.0**
comp=Z,18nm,0.8s,mb5.1
GUN Gumba 71.34 291 *e*P **P 00 06 31.4 +1.3**
comp=Z,105nm,0.7s,mb5.9
KKN Kakani 71.78 292 *e*P **P 00 06 33.7 +1.0**
comp=Z,40nm,0.7s,mb5.5
KKN Kakani 71.78 292 *e*P **P 00 06 33.7 +1.0**
KKN pmax pmax
comp=Z,40nm,0.7s,mb5.5
PKI Pulchoki 71.87 291 *e*P **P 00 06 34.2 +0.9**
comp=Z,33nm,0.7s,mb5.4
PKI Pulchoki 71.87 291 *e*P **P 00 06 34.2 +0.9**
PKI pmax pmax
comp=Z,33nm,0.7s,mb5.4
GKN Gorkha 71.99 292 *e*P **P 00 06 34.9 +0.9**
comp=Z,42nm,0.7s,mb5.5

DMN Daman 72.02 292 *e*P **P 00 06 35.5 +1.3**
comp=Z,35nm,0.7s,mb5.4
MUD Monsted U'grnd 72.10 355 *i*P **P 00 06 35.7 +1.0**
comp=Z,13nm,1.0s,mb4.8
MUD Monsted U'grnd 72.10 355 *i*P **P 00 06 35.7 +1.0**
MUD pmax pmax
comp=Z,13nm,1.0s,mb4.8
COP Copenhagen 72.65 353 *i*P **P 00 06 37.0 -0.9**
comp=Z,20nm,1.0s,mb5.0
COP Copenhagen 72.65 353 *e*P **P 00 06 37.0 -0.9**
COP pmax pmax
comp=Z,20nm,1.0s,mb5.0
COP Copenhagen 72.65 353 *e*P **P 00 06 37.0 -0.9**
comp=Z,20nm,1.0s,mb5.0
KOLN Koldanda 72.76 293 *e*P **P 00 06 39.3 +0.7**
comp=Z,31nm,0.9s,mb5.2
KLP Kalpa 72.89 299 *e*P **P 00 06 40.0 +0.6**
KLP AMb AMB 00 06 42.4
comp=Z,50nm,1.1s,mb5.4
BSD Bornholm Skovb 73.00 351 *i*P **P 00 06 39.8 -0.2**
comp=Z,14nm,0.9s,mb4.9
BSD
comp=Z,3μm,19.0s
BSD Bornholm Skovb 73.00 351 *i*P **P 00 06 39.8 -0.2**
BSD pmax pmax
comp=Z,14nm,0.9s,mb4.9
BSD MLR MLR
comp=Z,3μm,19.0s,MS5.7
BSD Bornholm Skovb 73.00 351 *i*P **P 00 06 39.8 -0.2**
comp=Z,14nm,0.9s,mb4.9
SUW Suwalki 73.08 346 *e*P **P 00 06 39.3 -1.2**
SUW L 00 25 21.2
comp=Z,4.2nm,24.3s
SDNR Sundarnagar 73.61 300 *e*P **P 00 06 44.6 +1.0**
KKR Kurukshetra 74.89 299 *e*P **P 00 06 49.7 -1.3**
AKASG Malin Array Be 75.22 342 P **P 00 06 52.5 -0.5**
comp=Z,25nm,0.8s,mb5.2,baz=20,slow=5.8,SNR=53
AKASG Malin Array Be 75.22 342 P **P 00 06 52.5 -0.5**
AKASG pmax pmax
comp=Z,25nm,0.9s
NDI New Delhi 75.66 298 *e*P **P 00 06 54.5 -1.0**
KAKA Kakadu 76.31 228 *e*P **P 00 06 56.8 -2.4**
comp=Z,10nm,0.8s,mb4.8
KUDL Kundal 76.48 298 *e*P **P 00 07 00.9 +0.7**
WTSB Winterswijk 76.70 356 *e*P **P 00 07 01.3 -0.1**
comp=Z,19nm,0.9s,mb5.0
KHET Khetri 76.91 299 *e*P **P 00 07 02.4 -0.2**
KHET AMb AMB 00 07 04.2
comp=Z,23nm,1.0s,mb5.1
CLL Collm 76.95 352 P **P 00 07 02.4 -0.4**
comp=Z,logA/T=1.1,mb4.8
CLL *i* *SP PcP 00 07 08.8 -5.0
CLL Collm 76.95 352 *i*P **P 00 07 02.4 -0.4**
comp=Z,10.0nm,0.8s,mb4.8
CLL *i* sP PcP 00 07 08.8 -5.0
CLL Collm 76.95 352 *i*P **P 00 07 02.4 -0.4**
CLL *e* 00 07 09.0
CLL pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CLL Collm 76.95 352 *i*P **P 00 07 02.4 -0.4**
comp=Z,10.0nm,0.8s,mb4.8
CLL *e* 00 07 09.0
LVV L'vov 77.01 345 *e*P **P 00 07 03.4 +0.2**
OJC Ojcow 77.26 347 *e*P **P 00 07 04.4 -0.2**
BRG Berggiesshubel 77.29 351 *i*P **P 00 07 04.3 -0.5**
comp=Z,6.1nm,0.9s,mb4.5
BRG Berggiesshubel 77.29 351 *i*P **P 00 07 04.3 -0.4**
BRG pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KWP Kalwaria 77.41 345 *e*P **P 00 07 06.0 +0.6**
KWP L 00 28 00.0
comp=Z,4.3nm,24.9s
UPC Upice 77.44 350 *e*P **P 00 07 05.1 -0.5**
DPC Dobruska-Polom 77.56 350 *e*P **P 00 07 05.9 -0.4**
PVCC Panska Ves 77.57 351 *e*P **P 00 07 05.9 -0.4**
MOX Moxa 77.72 353 *e*P **P 00 07 07.2 +0.1**
comp=Z,14nm,0.9s,mb4.9
MOX
comp=Z,1μm,20.0s
MOX Moxa 77.72 353 *e*P **P 00 07 07.2 +0.1**
MOX pmax pmax
comp=Z,14nm,0.9s,mb4.9
MOX MLR MLR
comp=Z,1μm,20.0s,MS5.2
STHS Stebnicka Huta 77.84 346 *e*P **P 00 07 08.9 +1.1**
STHS pmax pmax
comp=Z,15nm,0.9s,mb4.9
STHS Stebnicka Huta 77.84 346 *e*P **P 00 07 08.9 +1.1**
comp=Z,15nm,0.9s,mb4.9
OKC Ostrava-Krasne 77.85 348 *e*P **P 00 07 08.1 +0.2**
BEBN Eben Emael 77.91 357 P **P 00 07 08.4 +0.2**
HGN Heimansgroeve 77.94 356 *e*P **P 00 07 08.2 -0.2**
comp=Z,26nm,0.9s,mb5.1
MORC Moravsky Berou 77.98 349⇓ *i*P **P 00 07 09.0 +0.4**
MORC Moravsky Berou 77.98 349⇓ *i*P **P 00 07 09.0 +0.4**
NKC Novy Kostel 78.06 352 *e*P **P 00 07 09.1 +0.1**
KIV Kislovodsk 78.07 330 *i*P **P 00 07 09.2 +0.1**
KIV *e*S S 00 16 58.4 -2.2
KIV *e*SS SS 00 22 01.2 -1.1
KIV pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
KIV MLR MLR
comp=Z,1μm,18.0s,MS5.2
MEM Membach 78.09 356 P **P 00 07 09.5 +0.3**
PRU Pruhonice 78.11 351 *e*P **P 00 07 08.9 -0.4**
SNF Seneffe 78.25 357 P **P 00 07 10.8 +0.7**
BCLA Clavier 78.30 357 P **P 00 07 10.4 +0.1**
VRAC Vranov 78.56 349⇓ *i*P **P 00 07 12.4 +0.6**
VRAC Vranov 78.56 349 P **P 00 07 12.1 +0.3**
GIVF Givet 78.64 357⇑ *i*P **P 00 07 12.1 -0.1**
comp=Z,35nm,1.0s,mb4.9
GIVF Givet 78.64 357⇑ *i*P **P 00 07 12.1 -0.1**
GIVF pmax pmax
comp=Z,17nm,1.0s,mb4.9
GIVF Givet 78.64 357⇑ *i*P **P 00 07 12.1 -0.1**
comp=Z,17nm,1.0s,mb4.9
DOU Dourbes 78.65 357 P **P 00 07 12.3 +0.1**
TREC Trest 78.70 350 *e*P **P 00 07 11.8 -0.7**
BAIF Baives 78.70 358⇑ *i*P **P 00 07 12.7 +0.2**
comp=Z,42nm,0.9s,mb5.1
BAIF Baives 78.70 358⇑ *i*P **P 00 07 12.7 +0.2**
BAIF pmax pmax
comp=Z,21nm,0.9s,mb5.1
BAIF Baives 78.70 358⇑ *i*P **P 00 07 12.7 +0.2**
comp=Z,21nm,0.9s,mb5.1
GRA1 Grafenberg Arr 78.70 353 *e*P **P 00 07 13.1 +0.6**
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 78.70 353 *e*P **P 00 07 13.1 +0.6**
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 78.70 353 *e*P **P 00 07 13.1 +0.6**
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 78.70 353 *e*P **P 00 07 13.1 +0.6**
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 78.70 353 *e*P **P 00 07 13.1 +0.6**
comp=Z,18nm,0.9s,mb5.0
IAS Iasi 78.89 342⇑ *i*P **P 00 07 14.3 +0.7**
IAS Iasi 78.89 342 P **P 00 07 13.7 0.0**
BURAR Bucovina Array 78.93 343⇓ *i*P **P 00 07 14.6 +0.8**
WLF Walferdange 79.03 356 P **P 00 07 14.8 +0.5**
KHC Kasperske Hory 79.05 351 *e*P **P 00 07 14.6 +0.1**
VYHS Vyhne 79.08 348 *e*P **P 00 07 15.1 +0.5**
VYHS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
GERES GERESS Array B 79.32 351 P **P 00 07 15.7 -0.2**
comp=Z,5.0nm,0.7s,mb4.6,baz=25,slow=5.2,SNR=48
GERES GERESS Array B 79.32 351 P **P 00 07 15.7 -0.3**
GERES pmax pmax
comp=Z,5.0nm,0.7s
PSZ Piszkesteto 79.50 347⇓ *i*P **P 00 07 17.9 +1.0**
PSZ Piszkesteto 79.50 347 P **P 00 07 17.6 +0.7**
CONA Conrad Observa 80.00 350⇑ *i*P **P 00 07 20.2 +0.5**
SNR=7.7
FLN La Foliniere 80.04 1 *e*P **P 00 07 19.4 -0.5**
comp=Z,114nm,1.3s,mb5.3
FLN La Foliniere 80.04 1 *e*P **P 00 07 19.4 -0.5**
FLN pmax pmax
comp=Z,57nm,1.3s,mb5.3
FLN La Foliniere 80.04 1 *e*P **P 00 07 19.4 -0.5**
comp=Z,57nm,1.3s,mb5.3
DRGR 80.16 345⇓ *i*P **P 00 07 21.1 +0.6**
DRGR 80.16 345⇓ *i*P **P 00 07 21.1 +0.6**
LDF La Druitiere 80.22 0⇑ *i*P **P 00 07 20.2 -0.6**
comp=Z,38nm,0.8s,mb5.1

LDF La Druitiere 80.22 0⇑ *i*P **P 00 07 20.2 -0.6**
LDF pmax pmax
comp=Z,19nm,0.8s,mb5.1
LDF La Druitiere 80.22 0⇑ *i*P **P 00 07 20.2 -0.6**
comp=Z,19nm,0.8s,mb5.1
CDF Champ du Feu 80.22 355⇑ *i*P **P 00 07 20.6 -0.3**
comp=Z,14nm,0.8s,mb4.6
CDF Champ du Feu 80.22 355⇑ *i*P **P 00 07 20.6 -0.3**
CDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CDF Champ du Feu 80.22 355⇑ *i*P **P 00 07 20.6 -0.3**
comp=Z,6.8nm,0.8s,mb4.6
MEZF Maizieres J'vi 80.23 357 *e*P **P 00 07 20.9 0.0**
comp=Z,45nm,1.0s,mb5.1
MEZF Maizieres J'vi 80.23 357 *e*P **P 00 07 20.9 0.0**
comp=Z,45nm,1.0s,mb5.3
MOA Molln 80.25 351⇑ *i*P **P 00 07 20.9 -0.1**
comp=Z,3.4nm,0.7s,mb4.4,SNR=5.7
VRI Vrincioaia 80.33 342⇓ *i*P **P 00 07 22.1 +0.7**
VRI Vrincioaia 80.33 342⇓ *i*P **P 00 07 22.1 +0.7**
PLOR Plostina 80.36 342⇑ *i*P **P 00 07 22.6 +1.0**
GRR Gorron 80.42 1⇑ *i*P **P 00 07 21.7 -0.2**
comp=Z,41nm,0.8s,mb5.1
GRR Gorron 80.42 1⇑ *i*P **P 00 07 21.7 -0.2**
GRR pmax pmax
comp=Z,21nm,0.8s,mb5.1
GRR Gorron 80.42 1⇑ *i*P **P 00 07 21.7 -0.2**
comp=Z,20nm,0.8s,mb5.1
ROSF Rostrenen 80.42 3 *e*P **P 00 07 21.9 0.0**
SGMF Saint Gilles 80.52 2⇑ *i*P **P 00 07 22.3 -0.2**
comp=Z,44nm,0.8s,mb5.1
SGMF Saint Gilles 80.52 2⇑ *i*P **P 00 07 22.3 -0.2**
SGMF pmax pmax
comp=Z,22nm,0.8s,mb5.1
SGMF Saint Gilles 80.52 2⇑ *i*P **P 00 07 22.3 -0.2**
comp=Z,22nm,0.8s,mb5.1
HAU Haudompre 80.67 356⇑ *i*P **P 00 07 23.0 -0.3**
comp=Z,20nm,0.9s,mb4.8
HAU Haudompre 80.67 356⇑ *i*P **P 00 07 23.0 -0.3**
HAU pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
HAU Haudompre 80.67 356⇑ *i*P **P 00 07 23.0 -0.3**
comp=Z,10nm,0.9s,mb4.8
ARSA Arzberg 80.71 350⇑ *i*P **P 00 07 23.9 +0.5**
comp=Z,14nm,1.1s,mb4.8,SNR=8.6
HINF Hinteralfeld 80.84 356⇑ *i*P **P 00 07 23.6 -0.6**
comp=Z,12nm,0.9s,mb4.5
HINF Hinteralfeld 80.84 356⇑ *i*P **P 00 07 23.6 -0.6**
HINF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
HINF Hinteralfeld 80.84 356⇑ *i*P **P 00 07 23.6 -0.6**
comp=Z,6.2nm,0.9s,mb4.5
MLR Muntele Rosu 80.84 342⇑ *i*P **P 00 07 26.2 +2.0**
MLR Muntele Rosu 80.84 342 P **P 00 07 26.0 +1.9**
QUIF Quistinic 80.85 2 *e*P **P 00 07 24.0 -0.2**
comp=Z,22nm,0.9s,mb4.8
QUIF Quistinic 80.85 2 *e*P **P 00 07 24.0 -0.2**
QUIF pmax pmax
comp=Z,11nm,0.9s,mb4.8
QUIF Quistinic 80.85 2 *e*P **P 00 07 24.0 -0.2**
comp=Z,11nm,0.9s,mb4.8
WATA Walderalm 81.01 352⇑ *e*P **P 00 07 25.3 +0.2**
comp=Z,13nm,1.0s,mb4.8,SNR=7.5
WATA Walderalm 81.01 352⇑ *e*P **P 00 07 25.3 +0.2**
WATA pmax pmax
comp=Z,13nm,1.0s,mb4.8
WATA Walderalm 81.01 352⇑ *e*P **P 00 07 25.3 +0.2**
comp=Z,13nm,1.0s,mb4.8
MOTA Moosalm 81.04 353⇑ *i*P **P 00 07 25.3 0.0**
comp=Z,15nm,1.2s,mb4.8,SNR=11
MOTA Moosalm 81.04 353⇑ *i*P **P 00 07 25.3 +0.1**
MOTA pmax pmax
comp=Z,15nm,1.2s,mb4.8
VOIR 81.06 343⇑ *i*P **P 00 07 26.4 +1.1**
VOIR 81.06 343⇑ P **P 00 07 26.4 +1.1**
WTTA Wattenberg 81.08 352⇑ *i*P **P 00 07 25.8 +0.4**
comp=Z,21nm,1.0s,mb5.0,SNR=18
WTTA Wattenberg 81.08 352⇑ *i*P **P 00 07 25.8 +0.4**
WTTA pmax pmax
comp=Z,21nm,1.0s,mb5.0
KBA Koelnbreinsper 81.11 351 *i*P **P 00 07 26.4 +0.9**
comp=Z,39nm,0.9s,mb5.3,SNR=86
KBA Koelnbreinsper 81.11 351 *i*P **P 00 07 26.4 +0.8**
KBA pmax pmax
comp=Z,39nm,0.9s,mb5.3
TIRR Tirgusor 81.34 340⇓ *i*P **P 00 07 27.1 +0.3**
TIRR Tirgusor 81.34 340⇓ P **P 00 07 27.1 +0.3**
PKSM Moragy 81.34 347⇓ *i*P **P 00 07 26.7 -0.1**
PKSM Moragy 81.34 347 P **P 00 07 26.5 -0.3**
PERS Pernice 81.36 350 *e*P **P 00 07 27.3 +0.4**
BZS Buzias 81.48 345⇓ *i*P **P 00 07 28.0 +0.4**
BZS Buzias 81.48 345 P **P 00 07 27.7 +0.1**
LOR Lormes 81.50 358⇑ *i*P **P 00 07 27.5 -0.1**
comp=Z,17nm,0.9s,mb4.7
LOR Lormes 81.50 358⇑ *i*P **P 00 07 27.5 -0.1**
LOR pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LOR Lormes 81.50 358⇑ *i*P **P 00 07 27.5 -0.1**
comp=Z,8.7nm,0.9s,mb4.7
GZR Gura Zlata 81.51 344⇓ *i*P **P 00 07 28.5 +0.8**
GZR Gura Zlata 81.51 344⇓ *i*P **P 00 07 28.5 +0.8**
HYF Humbligny 81.52 358 *e*P **P 00 07 27.9 +0.1**
OBKA Obir 81.55 350⇑ *i*P **P 00 07 28.0 +0.1**
SNR=26
FVI Forni Avoltri 81.64 351 P **P 00 07 29.2 +0.8**
FVI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
FVI Forni Avoltri 81.64 351 P **P 00 07 29.2 +0.8**
comp=Z,5.4nm,0.8s,mb4.5
SSF Saint Saulge 81.71 358⇑ *i*P **P 00 07 28.6 -0.2**
comp=Z,24nm,1.0s,mb4.8
SSF Saint Saulge 81.71 358⇑ *i*P **P 00 07 28.6 -0.2**
SSF pmax pmax
comp=Z,12nm,1.0s,mb4.8
SSF Saint Saulge 81.71 358⇑ *i*P **P 00 07 28.6 -0.2**
comp=Z,12nm,1.0s,mb4.8
PTCC Patocco-Chiusa 81.77 351 *i*Pr 00 07 28.8
comp=Z,7.4nm,0.7s
WRAB Tennant Creek 81.81 223 *i*P **P 00 07 26.0 -3.3**
WRA Warramunga Arr 81.82 223 P **P 00 07 26.2 -3.2**
comp=Z,1.5nm,0.7s,mb4.0,baz=34,slow=6.2,SNR=12
CADS Cadrg 81.91 351 *e*P **P 00 07 32.3 +2.5**
GMNA Gemona 81.91 351 P **P 00 07 29.5 -0.3**
comp=Z,75nm,0.7s,mb5.7
AVF Avril sur Loir 81.99 358 *e*P **P 00 07 29.9 -0.3**
comp=Z,32nm,1.0s,mb4.9
AVF Avril sur Loir 81.99 358 *e*P **P 00 07 29.9 -0.3**
AVF pmax pmax
comp=Z,16nm,1.0s,mb4.9
AVF Avril sur Loir 81.99 358 *e*P **P 00 07 29.9 -0.3**
comp=Z,16nm,1.0s,mb4.9
TUE Stuetta 82.04 354 P **P 00 07 31.1 +0.6**
CABF La Chapelle 82.08 356⇑ *i*P **P 00 07 30.8 +0.1**
comp=Z,23nm,1.0s,mb4.8
CABF La Chapelle 82.08 356⇑ *i*P **P 00 07 30.8 +0.1**
CABF pmax pmax
comp=Z,12nm,1.0s,mb4.8
CABF La Chapelle 82.08 356⇑ *i*P **P 00 07 30.8 +0.1**
comp=Z,12nm,1.0s,mb4.8
SMF Signal de Mont 82.12 358⇑ *i*P **P 00 07 30.7 -0.2**
comp=Z,43nm,1.0s,mb5.0
SMF Signal de Mont 82.12 358⇑ *i*P **P 00 07 30.7 -0.2**
SMF pmax pmax
comp=Z,21nm,1.0s,mb5.0
SMF Signal de Mont 82.12 358⇑ *i*P **P 00 07 30.7 -0.2**
comp=Z,21nm,1.0s,mb5.0
CRES Cresnjev 82.12 349 *e*P **P 00 07 30.7 -0.2**
BGF Bois d'Agland 82.23 358⇑ *i*P **P 00 07 31.3 -0.2**
comp=Z,19nm,1.0s,mb4.7
BGF Bois d'Agland 82.23 358⇑ *i*P **P 00 07 31.3 -0.2**
BGF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BGF Bois d'Agland 82.23 358⇑ *i*P **P 00 07 31.3 -0.2**
comp=Z,9.6nm,1.0s,mb4.7
CEY Cerknica 82.32 350 *e*P **P 00 07 31.6 -0.4**
BEO Belgrade 82.44 346 *i*P **P 00 07 32.5 -0.1**
BOJS Bojanci 82.46 350 *e*P **P 00 07 32.5 -0.2**
TCF Toulx Ste Croi 82.51 359 *e*P **P 00 07 32.7 -0.3**
comp=Z,20nm,0.9s,mb4.8
TCF Toulx Ste Croi 82.51 359 *e*P **P 00 07 32.7 -0.3**
TCF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TCF Toulx Ste Croi 82.51 359 *e*P **P 00 07 32.7 -0.3**
comp=Z,9.8nm,0.9s,mb4.8
PSI Prapat 82.53 265 P **P 00 07 31.8 -1.3**
comp=Z,7.0nm,0.7s,mb4.8,baz=346,slow=4.1,SNR=7.6

PSI	**Prapat**	**82.53**	**265**	P		**P**	**00 07 31.8**	**-1.3**
PSI				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.8								
ORO	**Oropa**	**82.97**	**355**	P		**P**	**00 07 38.6**	**+3.3**
ORO				pmax	pmax				
	comp=Z,10.0nm,0.9s,mb4.8								
ORO	**Oropa**	**82.97**	**355**	P		**P**	**00 07 38.6**	**+3.3**
	comp=Z,10.0nm,0.9s,mb4.8								
DIVS	**Divcibare**	**83.22**	**346**	⇓*i*P		**P**	**00 07 35.5**	**-1.1**
GRUS	**Gruza**	**83.31**	**345**	*i* P		**P**	**00 07 36.7**	**-0.4**
RJF	**Les Rejaudoux**	**83.50**	**359**	⇑*i*P		**P**	**00 07 37.7**	**-0.4**
	comp=Z,22nm,1.1s,mb4.9								
RJF	**Les Rejaudoux**	**83.50**	**359**	⇑*i*P		**P**	**00 07 37.7**	**-0.4**
RJF				pmax	pmax				
	comp=Z,11nm,1.1s,mb4.9								
RJF	**Les Rejaudoux**	**83.50**	**359**	⇑*i*P		**P**	**00 07 37.7**	**-0.4**
	comp=Z,11nm,1.1s,mb4.9								
BOB	**Bobbio (Coli)**	**83.73**	**354**	P		**P**	**00 07 40.1**	**+0.8**
BOB				pmax	pmax				
	comp=Z,48nm,0.6s,mb5.8								
BOB	**Bobbio (Coli)**	**83.73**	**354**	P		**P**	**00 07 40.1**	**+0.8**
	comp=Z,48nm,0.6s,mb5.8								
ORIF	**Oris-en-Rattie**	**83.78**	**356**	⇑*i*P		**P**	**00 07 40.1**	**+0.6**
	comp=Z,28nm,1.0s,mb5.0								
ORIF	**Oris-en-Rattie**	**83.78**	**356**	⇑*i*P		**P**	**00 07 40.1**	**+0.6**
ORIF				pmax	pmax				
	comp=Z,14nm,1.0s,mb5.0								
ORIF	**Oris-en-Rattie**	**83.78**	**356**	⇑*i*P		**P**	**00 07 40.1**	**+0.6**
	comp=Z,14nm,1.0s,mb5.0								
LFF	**La Frestale**	**83.87**	**360**	⇑*i*P		**P**	**00 07 40.0**	**0.0**
	comp=Z,49nm,0.9s,mb5.3								
LFF	**La Frestale**	**83.87**	**360**	⇑*i*P		**P**	**00 07 40.0**	**0.0**
LFF				pmax	pmax				
	comp=Z,24nm,0.9s,mb5.3								
LFF	**La Frestale**	**83.87**	**360**	⇑*i*P		**P**	**00 07 40.0**	**0.0**
	comp=Z,24nm,0.9s,mb5.3								
CAF	**Calviac**	**83.88**	**359**	*e*P		**P**	**00 07 40.1**	**+0.1**
	comp=Z,38nm,1.0s,mb5.2								
CAF	**Calviac**	**83.88**	**359**	*e*P		**P**	**00 07 40.1**	**+0.1**
CAF				pmax	pmax				
	comp=Z,19nm,1.0s,mb5.2								
CAF	**Calviac**	**83.88**	**359**	*e*P		**P**	**00 07 40.1**	**+0.1**
	comp=Z,19nm,1.0s,mb5.2								
VIVF	**Saint-Julien-l**	**83.89**	**357**	⇑*i*P		**P**	**00 07 40.2**	**+0.1**
	comp=Z,15nm,0.8s,mb4.8								
VIVF	**Saint-Julien-l**	**83.89**	**357**	⇑*i*P		**P**	**00 07 40.2**	**+0.1**
VIVF				pmax	pmax				
	comp=Z,8.0nm,0.8s,mb4.9								
VIVF	**Saint-Julien-l**	**83.89**	**357**	⇑*i*P		**P**	**00 07 40.2**	**+0.1**
	comp=Z,7.5nm,0.8s,mb4.9								
MBDF	**Montbardon**	**83.93**	**355**	⇑*i*P		**P**	**00 07 40.9**	**+0.6**
	comp=Z,18nm,0.8s,mb5.0								
MBDF	**Montbardon**	**83.93**	**355**	⇑*i*P		**P**	**00 07 40.9**	**+0.6**
MBDF				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb5.0								
MBDF	**Montbardon**	**83.93**	**355**	⇑*i*P		**P**	**00 07 40.9**	**+0.6**
	comp=Z,8.9nm,0.8s,mb5.0								
ZCCA	**Zocca**	**84.03**	**352**	P		**P**	**00 07 42.4**	**+1.6**
	comp=Z,14nm,0.6s,mb5.3								
VTS	**Vitosha**	**84.15**	**343**	⇓*i*P		**P**	**00 07 41.8**	**+0.4**
VTS	**Vitosha**	**84.15**	**343**	⇓P		**P**	**00 07 41.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**84.21**	**231**	⇑*i*P		**P**	**00 07 39.8**	**-1.9**
	comp=Z,9.8nm,0.6s,mb5.1								
SEI	**Scarperia**	**84.29**	**352**	P		**P**	**00 07 43.7**	**+1.6**
	comp=Z,50nm,0.6s,mb5.8								
SFI	**Santa Sofia**	**84.39**	**352**	P		**P**	**00 07 43.9**	**+1.3**
SFI				pmax	pmax				
	comp=Z,15nm,0.7s,mb5.2								
SFI	**Santa Sofia**	**84.39**	**352**	P		**P**	**00 07 43.9**	**+1.3**
	comp=Z,15nm,0.7s,mb5.2								
MALT	**Malatya**	**84.52**	**331**	⇓*i*P		**P**	**00 07 44.4**	**+1.1**
MALT	**Malatya**	**84.52**	**331**	⇓P		**P**	**00 07 44.4**	**+1.1**
BR131	**Keskin Array S**	**84.57**	**335**	*e*P		**P**	**00 07 43.8**	**+0.3**
	comp=Z,6.3nm,0.8s,mb4.8								
BRTR	**Keskin Array B**	**84.57**	**335**	P		**P**	**00 07 43.7**	**+0.2**
	comp=Z,7.4nm,0.8s,mb4.9,baz=49,slow=3.1,SNR=37								
BRTR	**Keskin Array B**	**84.57**	**335**	P		**P**	**00 07 43.7**	**+0.2**
BRTR				pmax	pmax				
	comp=Z,7.0nm,0.8s								
SMRF	**Simiane la Rot**	**84.73**	**356**	⇑*i*P		**P**	**00 07 45.1**	**+0.8**
	comp=Z,32nm,0.9s,mb5.2								
SMRF	**Simiane la Rot**	**84.73**	**356**	⇑*i*P		**P**	**00 07 45.1**	**+0.8**
	comp=Z,32nm,0.9s,mb5.5								
SBF	**Sospel**	**84.75**	**355**	⇑*i*P		**P**	**00 07 44.2**	**-0.3**
	comp=Z,88nm,0.9s,mb5.6								
SBF	**Sospel**	**84.75**	**355**	⇑*i*P		**P**	**00 07 44.2**	**-0.3**
SBF				pmax	pmax				
	comp=Z,44nm,0.9s,mb5.6								
SBF	**Sospel**	**84.75**	**355**	⇑*i*P		**P**	**00 07 44.2**	**-0.3**
	comp=Z,44nm,0.9s,mb5.6								
CDCA	**Citt' di Caste**	**84.80**	**351**	P		**P**	**00 07 45.7**	**+1.0**
	comp=Z,77nm,1.0s,mb5.8								
CSNT	**Castellina Chi**	**84.87**	**352**	P		**P**	**00 07 44.8**	**-0.2**
	comp=Z,37nm,1.0s,mb5.5								
FRF	**La Foret Royal**	**85.10**	**355**	*e*P		**P**	**00 07 45.9**	**-0.3**
	comp=Z,32nm,0.9s,mb5.2								
FRF	**La Foret Royal**	**85.10**	**355**	*e*P		**P**	**00 07 45.9**	**-0.3**
FRF				pmax	pmax				
	comp=Z,16nm,0.9s,mb5.2								
FRF	**La Foret Royal**	**85.10**	**355**	*e*P		**P**	**00 07 45.9**	**-0.3**
	comp=Z,16nm,0.9s,mb5.2								
EPON	**Pontenova**	**85.25**	**6**	P		**P**	**00 07 44.4**	**-2.6**
	comp=Z,37nm,1.5s,mb5.3								
ASAR	**Alice Springs**	**85.31**	**222**	P		**P**	**00 07 44.9**	**-2.4**
	comp=Z,1.5nm,0.7s,mb4.2,baz=27,slow=5.6,SNR=18								
LMR	**La Mourre**	**85.33**	**356**	⇑*i*P		**P**	**00 07 47.2**	**-0.1**
	comp=Z,23nm,0.8s,mb5.1								
LMR	**La Mourre**	**85.33**	**356**	⇑*i*P		**P**	**00 07 47.2**	**-0.1**
LMR				pmax	pmax				
	comp=Z,11nm,0.8s,mb5.0								
LMR	**La Mourre**	**85.33**	**356**	⇑*i*P		**P**	**00 07 47.2**	**-0.1**
	comp=Z,11nm,0.8s,mb5.0								
EARI	**Arriondas**	**85.38**	**4**	P		**P**	**00 07 46.5**	**-1.1**
	comp=Z,82nm,2.0s,mb5.5								
MTLF	**Montolieu**	**85.46**	**359**	*e*P		**P**	**00 07 48.0**	**0.0**
	comp=Z,33nm,1.2s,mb5.0								
MTLF	**Montolieu**	**85.46**	**359**	*e*P		**P**	**00 07 48.0**	**0.0**
MTLF				pmax	pmax				
	comp=Z,17nm,1.2s,mb5.0								
MTLF	**Montolieu**	**85.46**	**359**	*e*P		**P**	**00 07 48.0**	**0.0**
	comp=Z,16nm,1.2s,mb5.0								
ELAN	**Lanestosa**	**85.52**	**3**	P		**P**	**00 07 47.1**	**-1.2**
	comp=Z,81nm,1.9s,mb5.6								
SJPF	**Ste Jean**	**85.69**	**1**	⇑*i*P		**P**	**00 07 49.7**	**+0.6**
	comp=Z,11nm,0.6s,mb5.0								
SJPF	**Ste Jean**	**85.69**	**1**	⇑*i*P		**P**	**00 07 49.7**	**+0.6**
	comp=Z,5.7nm,0.6s,mb5.0								
AQU	**L'Aquila**	**85.78**	**350**	⇑*i*P		**P**	**00 07 50.5**	**+0.9**
EPF	**Esparros**	**85.78**	**0**	*e*P		**P**	**00 07 48.9**	**-0.7**
	comp=Z,12nm,0.9s,mb4.8								
EPF	**Esparros**	**85.78**	**0**	*e*P		**P**	**00 07 48.9**	**-0.7**
EPF				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.8								
EPF	**Esparros**	**85.78**	**0**	*e*P		**P**	**00 07 48.9**	**-0.7**
	comp=Z,5.8nm,0.9s,mb4.8								
MNS	**Montasola**	**85.82**	**351**	P		**P**	**00 07 49.2**	**-0.6**
ETSF	**Etsaut**	**85.91**	**1**	⇑*i*P		**P**	**00 07 50.5**	**+0.3**
	comp=Z,20nm,0.7s,mb5.2								
ETSF	**Etsaut**	**85.91**	**1**	⇑*i*P		**P**	**00 07 50.5**	**+0.3**
ETSF				pmax	pmax				
	comp=Z,10.0nm,0.7s,mb5.2								
ETSF	**Etsaut**	**85.91**	**1**	⇑*i*P		**P**	**00 07 50.5**	**+0.3**
	comp=Z,9.9nm,0.7s,mb5.2								
PGF	**Pioggiola**	**85.97**	**354**	⇑*i*P		**P**	**00 07 50.4**	**-0.1**
	comp=Z,53nm,0.8s,mb5.5								
PGF	**Pioggiola**	**85.97**	**354**	⇑*i*P		**P**	**00 07 50.4**	**-0.1**
PGF				pmax	pmax				
	comp=Z,27nm,0.8s,mb5.5								
PGF	**Pioggiola**	**85.97**	**354**	⇑*i*P		**P**	**00 07 50.4**	**-0.1**
	comp=Z,27nm,0.8s,mb5.5								
EBIE	**Bielsa**	**86.12**	**0**	P		**P**	**00 07 51.0**	**-0.3**
	comp=Z,8.8nm,0.7s,mb5.1								
GUD	**Guadarrama**	**88.08**	**3**	P		**P**	**00 07 59.7**	**-1.1**
GUD				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.8								
GUD	**Guadarrama**	**88.08**	**3**	P		**P**	**00 07 59.7**	**-1.1**
	comp=Z,3.5nm,0.7s,mb4.7								
ESDC	**Sonseca Array**	**89.05**	**3**	P		**P**	**00 08 04.3**	**-1.0**
	comp=Z,3.0nm,0.7s,mb4.7,baz=352,slow=4.0,SNR=19								
ESDC	**Sonseca Array**	**89.05**	**3**	P		**P**	**00 08 03.8**	**-1.5**
	comp=Z,4.7nm,0.7s,mb4.9								
STKA	**Stephens Creek**	**89.83**	**212**	*e*P		**P**	**00 08 06.0**	**-3.0**
	comp=Z,4.1nm,0.9s,mb4.8								
STKA	**Stephens Creek**	**89.83**	**212**	P		**P**	**00 08 05.4**	**-3.6**
	comp=Z,3.1nm,0.7s,mb4.8,baz=359,slow=6.3,SNR=6.4								
CPD	**Cerro la Pandu**	**89.87**	**61**	*e*P		**P**	**00 08 09.0**	**-0.2**
MTP	**Monte Pirata**	**90.02**	**60**	*e*P		**P**	**00 08 09.8**	**-0.1**
ETOB	**Tobarra**	**90.14**	**2**	P		**P**	**00 08 09.3**	**-1.2**
	comp=Z,14nm,1.3s,mb5.1								
EADA	**Adamuz**	**90.53**	**4**	P		**P**	**00 08 09.3**	**-3.0**
	comp=Z,14nm,1.4s,mb5.1								
ELOJ	**Sierra Loja**	**91.56**	**4**	P		**P**	**00 08 15.4**	**-1.7**
ELOJ				pmax	pmax				
	comp=Z,9.0nm,1.2s,mb5.0								
ELOJ	**Sierra Loja**	**91.56**	**4**	P		**P**	**00 08 15.4**	**-1.7**
	comp=Z,9.0nm,1.2s,mb5.0								
ESPR	**Espera**	**91.76**	**5**	P		**P**	**00 08 16.2**	**-1.8**
	comp=Z,16nm,1.1s,mb5.3								
KEST	**Kesra**	**92.72**	**353**	P		**P**	**00 08 22.4**	**0.0**
	comp=Z,1.2nm,0.9s,mb4.3,baz=229,slow=4.6,SNR=4.1								
TORD	**Torodi Ar. Bea**	**115.55**	**359**	PKP	PKPdf		00 13 49.7	-2.5	
	comp=Z,1.5nm,0.7s,baz=348,slow=1.5,SNR=9.0								
TORD				PKKPbc	PKKPbc		00 24 22.7	-2.4	
	comp=Z,0.4nm,0.7s,baz=187,slow=1.8,SNR=4.5								
TORD	**Torodi Ar. Bea**	**115.55**	**359**	PKP	PKPdf		00 13 49.7	-2.5	
TORD				PKKPbc	PKKPbc		00 24 22.7	-2.4	
KMBO	**Kilima Mbogo**	**120.98**	**316**	PKP	PKPdf		00 14 03.3	+0.7	
	comp=Z,1.1nm,0.8s,baz=191,slow=6.6,SNR=4.1								
KMBO	**Kilima Mbogo**	**120.98**	**316**	PKIKP	PKPdf		00 14 03.3	+0.7	
KMBO				pmax	pmax				
	comp=Z,1.0nm,0.8s								
DBIC	**Dimbokro**	**121.81**	**6**	PKP	PKPdf		00 14 03.0	-1.3	
	comp=Z,3.3nm,0.8s,baz=305,slow=7.7,SNR=7.8								
DBIC	**Dimbokro**	**121.81**	**6**	PKIKP	PKPdf		00 14 03.0	-1.2	
DBIC				pmax	pmax				
	comp=Z,3.0nm,0.8s								
CFAA	**Coronel Fontan**	**126.95**	**96**	PKP	PKPdf		00 14 11.7	-2.4	
	comp=Z,0.2nm,0.5s,baz=213,slow=4.0,SNR=3.6								
PLCA	**Paso Flores**	**131.48**	**106**	PKP	PKPdf		00 14 20.3	-2.4	
	comp=Z,2.6nm,0.9s,baz=216,slow=4.2,SNR=5.0								
PLCA	**Paso Flores**	**131.48**	**106**	PKIKP	PKPdf		00 14 20.3	-2.4	
PLCA				pmax	pmax				
	comp=Z,3.0nm,0.9s								
PLCA	**Paso Flores**	**131.48**	**106**	PKP	PKPdf		00 14 20.3	-2.4	
TSUM	**Tsumeb**	**144.99**	**331**	PKPbc	PKPdf		00 14 46.1	-1.3	
	comp=Z,13nm,1.0s,baz=30,slow=2.3,SNR=12								
MAW	**Mawson**	**146.34**	**218**	PKPbc	PKPbc		00 14 47.0	-3.9	
	comp=Z,3.8nm,0.7s,baz=71,slow=2.2,SNR=11								
LBTB	**Lobatse**	**147.25**	**315**	*e*PKP2	PKPab		00 14 54.0	-1.4	
BOSA	**Boshof**	**150.49**	**311**	PKPbc	PKPbc		00 15 01.1	-0.7	
	comp=Z,9.6nm,0.7s,baz=343,slow=1.4,SNR=19								
BOSA				PKPab	PKPab		00 15 08.2	-0.2	
	comp=Z,11nm,0.9s,baz=18,slow=3.3,SNR=8.8								
SYO	**Syowa Base**	**154.59**	**212**	⇓*e*PKPab	PKPab		00 15 25.4	-0.3	
SNAA	**Sanae**	**159.77**	**177**	PKPab	PKPab		00 15 43.7	-4.3	
	comp=Z,0.7nm,0.9s,baz=202,slow=8.2,SNR=3.1								
SNAA	**Sanae**	**159.77**	**177**	PKP2	PKPab		00 15 43.7	-4.3	
SNAA				pmax	pmax				
	comp=Z,1.0nm,0.9s								

WEL 26 23:59:03.5±0.4, 3793S×17637E, h157km±3km, ML3.6/19, 2C, Error ellipse: s-maj=4.9km s-min=4.7km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**0.67**	**120**	⇑PN		Pn	23 59 26.5	0.0
URZ				SN		Sn	23 59 44.1	0.0
MWZ	**Matawai**	**0.99**	**114**	PN		Pn	23 59 29.1	+0.2
BKZ	**Black Stump Fm**	**1.24**	**176**	⇑PN		Pn	23 59 31.0	0.0
OTVZ	**Oturere**	**1.35**	**204**	PN		Pn	23 59 32.6	+0.6
TUVZ	**Tukino**	**1.45**	**203**	PN		Pn	23 59 33.3	+0.2
KNZ	**Kokohu**	**1.49**	**137**	*e*PN		Pn	23 59 34.0	+0.5
PUZ	**Puketiti**	**1.49**	**96**	*e*PN		Pn	23 59 33.1	-0.4
WNVZ	**Wahianoa**	**1.52**	**203**	PN		Pn	23 59 33.7	-0.1
MOVZ	**Moawhango**	**1.55**	**198**	PN		Pn	23 59 33.6	-0.5
WAZ	**Wanganui**	**2.12**	**210**	*e*PN		Pn	23 59 39.9	-0.5
PXZ	**Pawanui**	**2.13**	**170**	PN		Pn	23 59 39.9	-0.6
TSZ	**Takapari Road**	**2.15**	**188**	PN		Pn	23 59 39.7	-1.0
BFZ	**Birch Farm**	**2.75**	**182**	PN		Pn	23 59 46.2	-1.6
MRZ	**Mangatainoka R**	**2.79**	**192**	PN		Pn	23 59 46.5	-2.1
MRZ				SN		Sn	00 00 20.9	-2.5
TIWZ	**Tintock**	**2.87**	**187**	PN		Pn	23 59 47.6	-1.8
KIW	**Kapiti Island**	**3.14**	**201**	PN		Pn	23 59 50.1	-2.7
MTW	**Mount Morrison**	**3.29**	**192**	PN		Pn	23 59 51.8	-3.0
CAW	**Cannon Point**	**3.33**	**197**	PN		Pn	23 59 52.4	-2.9
DUWZ	**D'Urville Isla**	**3.44**	**213**	*e*PN		Pn	23 59 53.9	-2.7
TRWZ	**Traveller**	**3.50**	**188**	PN		Pn	23 59 54.4	-3.1
PAWZ	**Paruwai Farm**	**3.52**	**192**	PN		Pn	23 59 54.5	-3.2
MRW	**Makara Radio**	**3.54**	**201**	PN		Pn	23 59 54.9	-3.1
MSWZ	**Moikau Station**	**3.58**	**194**	PN		Pn	23 59 55.2	-3.4
SNZO	**South Karori**	**3.61**	**200**	PN		Pn	23 59 55.5	-3.4
TCW	**Tory Channel**	**3.66**	**206**	PN		Pn	23 59 56.2	-3.3
BHW	**Baring Head**	**3.66**	**198**	PN		Pn	23 59 56.2	-3.3
TUWZ	**Tuamarina**	**3.97**	**207**	*e*PN		Pn	23 59 60.0	-3.5
NNZ	**Nelson**	**4.01**	**214**	PN		Pn	00 00 00.7	-3.4
QRZ	**Quartz Range**	**4.15**	**225**	*e*PN		Pn	00 00 01.8	-4.1
THZ	**Tophouse**	**4.67**	**214**	*e*PN		Pn	00 00 08.8	-3.8
KHZ	**Kahutara**	**4.98**	**205**	PN		Pn	00 00 12.5	-4.2

*ISCJB **27** 00:01:11.6±0.4, 3896S±003×175.10E±006, h220km±3km, mb3.8/4, Error ellipse: s-maj=8.2km s-min=4.7km az=43.2*
*IDC **27** 00:01:11.4±1.3, 3913S×17532E, h227km±15km, mb3.3/2, mb1 3.5/3, mb1mx3.3/11, mbtmp3.9/3, Error ellipse: s-maj=45.4km s-min=22.4km az=152.0*
*WEL **27** 00:01:13.8±0.2, 3885S×17520E, h212km±1km, ML4.6/24, Error ellipse: s-maj=2.0km s-min=1.7km az=90.0*
*NEIC **27** 00:01:13.3, 3885S×175.14E, h216km, mb4.1/2, After WEL.*

ISC 27 00:01:12.4±0.4, 3897S±003×17512E±006, h218km±3km, n111, σ0§90/141, mb3.8/4, 22C-13D, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWVZ	**Taurewa**	**0.27**	**112**	⇑P		**Pn**	**00 01 41.6**	**+0.7**
TWVZ				S		**S**	**00 02 02.8**	**-0.3**
TWVZ	**Taurewa**	**0.27**	**112**	⇑PN		**Pn**	**00 01 41.6**	**+0.8**
TWVZ				SN		**S**	**00 02 02.8**	**-0.3**
VRZ	**Vera Road**	**0.32**	**241**	P		**Pn**	**00 01 41.5**	**+0.5**
VRZ	**Vera Road**	**0.32**	**241**	⇑PN		**Pn**	**00 01 41.5**	**+0.5**
VRZ				SN		**S**	**00 02 03.0**	**-0.2**
PKVZ	**Pokaka**	**0.37**	**151**	⇑PN		**Pn**	**00 01 42.1**	**+1.0**
PKVZ				SN		**S**	**00 02 03.6**	**+0.1**
WTVZ	**West Tongariro**	**0.40**	**112**	P		**Pn**	**00 01 42.0**	**+0.8**
WTVZ	**West Tongariro**	**0.40**	**112**	PN		**Pn**	**00 01 42.0**	**+0.9**
WTVZ				SN		**S**	**00 02 03.3**	**-0.2**
WPVZ	**Whakapapa**	**0.41**	**125**	P		**Pn**	**00 01 42.3**	**+1.1**
WPVZ	**Whakapapa**	**0.41**	**125**	⇑PN		**Pn**	**00 01 42.3**	**+1.1**
WPVZ				SN		**S**	**00 02 03.6**	**-0.1**
NGZ	**Ngauruhoe**	**0.43**	**119**	P		**Pn**	**00 01 42.2**	**+0.9**
NGZ	**Ngauruhoe**	**0.43**	**119**	PN		**Pn**	**00 01 42.2**	**+1.0**
NGZ				SN		**S**	**00 02 03.6**	**-0.1**
FWVZ	**Far West T-bar**	**0.44**	**130**	⇓P		**Pn**	**00 01 42.5**	**+1.2**
FWVZ	**Far West T-bar**	**0.44**	**130**	⇓PN		**Pn**	**00 01 42.5**	**+1.2**
FWVZ				SN		**S**	**00 02 03.7**	**-0.2**
KATZ	**Kakaramea**	**0.45**	**91**	P		**Pn**	**00 01 42.1**	**+0.8**
KATZ	**Kakaramea**	**0.45**	**91**	PN		**Pn**	**00 01 42.0**	**+0.6**
KATZ				SN		**S**	**00 02 02.8**	**-1.1**
DRZ	**Dome Shelter**	**0.46**	**131**	P		**Pn**	**00 01 42.6**	**+1.2**
DRZ	**Dome Shelter**	**0.46**	**131**	⇓PN		**Pn**	**00 01 42.6**	**+1.3**
DRZ				SN		**S**	**00 02 04.1**	**+0.2**
OTVZ	**Oturere**	**0.47**	**114**	PN		**Pn**	**00 01 42.2**	**+0.8**
OTVZ				SN		**S**	**00 02 04.0**	**0.0**
HIZ	**Hauiti**	**0.50**	**336**	⇓P		**Pn**	**00 01 41.7**	**+0.2**
HIZ	**Hauiti**	**0.50**	**336**	⇑PN		**Pn**	**00 01 41.7**	**+0.2**
HIZ				SN		**S**	**00 02 03.6**	**-0.6**
TUVZ	**Tukino**	**0.51**	**126**	P		**Pn**	**00 01 42.7**	**+1.2**
TUVZ	**Tukino**	**0.51**	**126**	⇑PN		**Pn**	**00 01 42.7**	**+1.2**
TUVZ				SN		**S**	**00 02 04.2**	**0.0**
WNVZ	**Wahianoa**	**0.52**	**134**	P		**Pn**	**00 01 42.6**	**+1.1**
WNVZ	**Wahianoa**	**0.52**	**134**	PN		**Pn**	**00 01 42.6**	**+1.1**
RATZ	**Rangitukua**	**0.52**	**79**	P		**Pn**	**00 01 42.2**	**+0.7**
RATZ	**Rangitukua**	**0.52**	**79**	PN		**Pn**	**00 01 42.1**	**+0.5**
RATZ				SN		**S**	**00 02 03.5**	**-0.8**
WATZ	**Wairara**	**0.55**	**62**	P		**Pn**	**00 01 42.1**	**+0.5**
WATZ	**Wairara**	**0.55**	**62**	PN		**Pn**	**00 01 42.3**	**+0.7**
WATZ				SN		**S**	**00 02 03.8**	**-0.7**
RITZ	**Rihia Road**	**0.58**	**91**	P		**Pn**	**00 01 42.4**	**+0.6**
RITZ	**Rihia Road**	**0.58**	**91**	PN		**Pn**	**00 01 42.4**	**+0.7**
RITZ				SN		**S**	**00 02 04.8**	**+0.2**
MOVZ	**Moawhango**	**0.66**	**132**	⇑P		**Pn**	**00 01 42.9**	**+0.8**
MOVZ	**Moawhango**	**0.66**	**132**	⇑PN		**Pn**	**00 01 42.9**	**+0.8**
MOVZ				SN		**S**	**00 02 04.0**	**-1.2**
HATZ	**Hinemaiaia**	**0.77**	**84**	P		**Pn**	**00 01 42.9**	**+0.3**
HATZ	**Hinemaiaia**	**0.77**	**84**	PN		**Pn**	**00 01 42.8**	**+0.2**
HATZ				SN		**S**	**00 02 04.6**	**-1.6**
WAZ	**Wanganui**	**0.79**	**187**	P		**Pn**	**00 01 44.2**	**+1.5**
WAZ	**Wanganui**	**0.79**	**187**	⇑PN		**Pn**	**00 01 44.2**	**+1.4**
WAZ				SN		**S**	**00 02 06.9**	**+0.5**
NEZ	**North Egmont**	**0.85**	**249**	P		**Pn**	**00 01 44.2**	**+1.2**
NEZ	**North Egmont**	**0.85**	**249**	⇓PN		**Pn**	**00 01 44.2**	**+1.2**
PKE	**Pukeiti**	**0.91**	**255**	P		**Pn**	**00 01 44.2**	**+0.8**
PKE	**Pukeiti**	**0.91**	**255**	⇑PN		**Pn**	**00 01 44.2**	**+0.8**
NRZ	**Ngariki Road**	**0.99**	**248**	P		**Pn**	**00 01 44.7**	**+0.9**
NRZ	**Ngariki Road**	**0.99**	**248**	⇓PN		**Pn**	**00 01 44.7**	**+0.9**
NWEZ	**Newall Road**	**1.02**	**252**	P		**Pn**	**00 01 45.1**	**+1.1**
NWEZ	**Newall Road**	**1.02**	**252**	⇑PN		**Pn**	**00 01 45.1**	**+1.1**
PATZ	**Paeroa**	**1.07**	**57**	P		**Pn**	**00 01 44.6**	**+0.2**
PATZ	**Paeroa**	**1.07**	**57**	PN		**Pn**	**00 01 44.5**	**+0.2**
BKZ	**Black Stump Fm**	**1.09**	**101**	P		**Pn**	**00 01 45.1**	**+0.6**
BKZ	**Black Stump Fm**	**1.09**	**101**	⇓PN		**Pn**	**00 01 45.1**	**+0.6**
BKZ				SN		**S**	**00 02 08.0**	**-1.5**
TSZ	**Takapari Road**	**1.27**	**149**	P		**Pn**	**00 01 47.1**	**+1.3**
TSZ	**Takapari Road**	**1.27**	**149**	⇑PN		**Pn**	**00 01 47.1**	**+1.4**
TSZ				SN		**S**	**00 02 11.6**	**-0.2**
TAZ	**Tarawera**	**1.32**	**56**	P		**Pn**	**00 01 46.2**	**+0.1**
TAZ	**Tarawera**	**1.32**	**56**	⇑PN		**Pn**	**00 01 46.2**	**0.0**
TGRZ	**Tauranga**	**1.53**	**36**	P		**Pn**	**00 01 47.5**	**-0.4**
TGRZ	**Tauranga**	**1.53**	**36**	⇓PN		**Pn**	**00 01 47.4**	**-0.4**
TGRZ				SN		**S**	**00 02 13.9**	**-1.7**
URZ	**Urewera**	**1.72**	**66**	P		**Pn**	**00 01 48.7**	**-0.8**
	262nm,0.3s,baz=251,slow=5.6,SNR=467							
URZ				S		**S**	**00 02 14.7**	**-3.8**
	114nm,0.3s,baz=135,slow=22,SNR=32							
URZ	**Urewera**	**1.72**	**66**	P		**Pn**	**00 01 48.7**	**-0.8**
URZ	**Urewera**	**1.72**	**66**

ARCES	**ARCESS Array B**	57.52	350	P		**P**	00 23 14.6	0.0
	0.9nm,0.7s,mb3.9,baz=32,slow=9.3,SNR=3.6							
MKAR	**Makanchi Array**	59.33	308	P		**P**	00 23 27.1	-0.1
	0.6nm,0.3s,mb4.1,baz=45,slow=6.8,SNR=16							
SCHQ	**Schefferville**	59.93	38	P		**P**	00 23 30.5	-0.8
	1.9nm,0.6s,mb4.3,baz=328,slow=5.7,SNR=6.6							
BVAR	**Borovoye Array**	60.19	319	P		**P**	00 23 34.3	+1.1
	0.5nm,0.3s,mb4.0,baz=48,slow=7.9,SNR=4.9							
BVAR				PcP		PcP	00 24 17.9	-0.8
	0.7nm,0.5s,baz=46,slow=5.2,SNR=4.1							
FINES	**FINESS Array B**	65.19	347	P		**P**	00 24 05.8	-0.7
	0.3nm,0.7s,mb3.5,baz=12,slow=7.5,SNR=7.5							
NB2	**NORSAR Subarra**	67.11	354	P		**P**	00 24 18.9	+0.1
	comp=Z,0.7nm,0.5s,mb4.0,baz=6.5,slow=6.5							
NOA	**NORSAR Array B**	67.11	354	P		**P**	00 24 19.1	+0.3
	comp=Z,0.9nm,0.6s,mb4.0,baz=7.2,slow=6.3,SNR=11							
AKASG	**Malin Array Be**	74.92	341	P		**P**	00 25 05.9	-0.3
	comp=Z,0.7nm,0.4s,mb3.9,baz=21,slow=5.9,SNR=6.0							
GERES	**GERESS Array B**	79.03	351	P		**P**	00 25 29.5	+0.2
	comp=Z,0.7nm,0.5s,mb3.8,baz=25,slow=6.2,SNR=8.8							
KBA	**Koelnbreinsper**	80.81	351	⇑*iP*		**P**	00 25 40.1	+1.1
	comp=Z,5.3nm,0.6s,mb4.7							
WRA	**Warramunga Arr**	82.02	223	P		**P**	00 25 46.4	+1.0
	comp=Z,0.3nm,0.9s,mb3.2,baz=34,slow=6.5,SNR=3.0							
TORD	**Torodi Ar. Bea**	115.25	359	PKP		PKiKP	00 32 04.5	-2.3
	comp=Z,0.4nm,1.0s,baz=350,slow=2.4,SNR=4.3							
DBIC	**Dimbokro**	121.52	6	PKP		PKPdf	00 32 16.6	-2.2
	comp=Z,2.6nm,1.0s,baz=11,slow=5.1,SNR=4.6							
LBTB	**Lobatse**	147.02	315	PKPbc		PKPbc	00 33 07.5	-0.6
	comp=Z,2.6nm,0.7s,baz=63,slow=2.3,SNR=5.8							
BOSA	**Boshof**	150.27	312	PKPbc		PKPbc	00 33 14.3	-2.1
	comp=Z,3.1nm,1.1s,baz=150,slow=20,SNR=4.4							

CSEM ***27*** *00:27:08.0±0.9, 3789N×2606W, h0km±2km, ML2.3, Error ellipse: s-maj=4.5km s-min=1.1km az=27.0, After PDA*
PDA ***27*** *00:27:08.0±0.9, 3789N×2606W, h0km±2km, MD2.7, ML2.3, Error ellipse: s-maj=4.5km s-min=1.1km az=27.0*
SVSA 27 00:27:08.0±0.9, 3789N×2606W, h0km±2km, MD2.7, ML2.3, Error ellipse: s-maj=4.5km s-min=1.1km az=27.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SET2	**Ginetes**	0.20	103	*e*P	Pg	00 27 12.0	+0.1
SET2				*e*S	Sg	00 27 15.0	+0.5
SET4	**Mosteiros**	0.20	94	*e*P	Pg	00 27 11.9	0.0
SET4				*e*S	Sg	00 27 15.0	+0.5
PFET	**Feteiras**	0.22	109	*e*P	Pg	00 27 12.3	0.0
PFET				*e*S	Sg	00 27 15.5	+0.3
PSAN	**Santo Antonio**	0.26	98	*e*P	Pg	00 27 13.1	+0.1
PSAN				*e*S	Sg	00 27 16.7	+0.2
PSET	**Sete Cidades**	0.27	104	*e*P	Pg	00 27 12.1	-1.1
PSET				*e*S	Sg	00 27 16.4	-0.4
PSET	224nm,0.2s						
PSET	**Sete Cidades**	0.27	104	*e*P	Pg	00 27 12.1	-1.1
PSET				*e*S	Sg	00 27 16.4	-0.4
FAC	**Faja de Cima**	0.34	110	*e*P	Pg	00 27 14.3	-0.2
FAC				*e*S	Sg	00 27 19.6	+0.7
PDA	**Ponta Delgada**	0.34	114	*e*S	Sg	00 27 19.0	0.0
CML	**Cha da Macela**	0.42	106	*e*P	Pg	00 27 15.7	-0.4
CML				*e*S	Sg	00 27 21.7	+0.2
PVER	**Pico Vermelho**	0.44	102	*e*P	Pg	00 27 16.2	-0.2
PVER				*e*S	Sg	00 27 22.5	+0.4
PVER	204nm,0.3s						
PVER	**Pico Vermelho**	0.44	102	*e*P	Pg	00 27 16.2	-0.2
PVER				*e*S	Sg	00 27 22.5	+0.4
LFA	**Lagoa do Fogo**	0.47	104	*e*P	Pg	00 27 16.6	-0.4
LFA				*e*S	Sg	00 27 23.3	+0.3
PMAT	**Coroa da Mata**	0.47	99	*e*P	Pg	00 27 16.4	-0.6
PMAT				*e*S	Sg	00 27 23.1	+0.1
PMAT	156nm,0.3s						
PMAT	**Coroa da Mata**	0.47	99	*e*P	Pg	00 27 16.4	-0.6
PMAT				*e*S	Sg	00 27 23.1	+0.1
PRCH	**Ribeira Ch**	0.48	109	*e*P	Pg	00 27 16.8	-0.5
PRCH				*e*S	Sg	00 27 23.7	+0.2
PRCH	139nm,0.3s						
PRCH	**Ribeira Ch**	0.48	109	*e*P	Pg	00 27 16.8	-0.5
PRCH				*e*S	Sg	00 27 23.7	+0.2
MESC	**Monte Escuro**	0.49	101	*e*P	Pg	00 27 16.9	-0.5
MESC				*e*S	Sg	00 27 24.2	+0.4
VIF	**Vila Franca**	0.51	106	*e*S	Sg	00 27 24.5	+0.2
VIF	53nm,0.2s						
PCNG	**Congro**	0.54	103	*e*S	Sg	00 27 25.1	-0.1
PCNG	42nm,0.3s						
PFAD	**Fenais da Ajud**	0.58	95	*e*S	Sg	00 27 25.9	-0.8
MIRA	**Miradouro**	0.62	99	*e*P	Pg	00 27 18.8	-1.1
PFAV	**Pico das Favas**	1.15	316	*e*S	Sg	00 27 40.5	-4.6
PFAV	14nm,0.1s						
RIB2	**Ribeirinha**	1.18	312	*e*S	Sg	00 27 41.3	-4.5
RIB2	30nm,0.3s						
PSMN	**Pico do Norte,**	1.18	138	*e*S	Sg	00 27 41.4	-4.7
PVNV	**Vila Nova**	1.23	316	*e*S	Sg	00 27 42.5	-5.0
PVNV	23nm,0.1s						
ROSA	**Rosais**	1.91	296	*e*P	Pn	00 27 36.6	-5.2
ROSA				*e*S	Sn	00 27 58.6	-7.9
PICO	**Pico**	1.96	289	*e*P	Pn	00 27 38.0	-4.5
PICO				*e*S	Sn	00 28 00.5	-7.4
CALA	**Caldeira**	2.20	289	*e*P	Pn	00 27 41.0	-4.7

BJI ***27*** *00:27:51.3, 5135N×17927W, h5km, mB5.1, mb4.9, Ms4.7, Msz4.5*
ISCJB ***27*** *00:27:54.0±0.2, 5123N±004×17958W±003, h10km, mb4.9/184, MS4.5/8, Error ellipse: s-maj=5.9km s-min=2.3km az=16.3*
NEIC ***27*** *00:27:56.9, 5104N×17940W, h8km, mb5.0/136, ML4.8(AEIC), After AEIC.*
IDC ***27*** *00:27:56.2±4.2, 5129N×17950W, h16km±25km, mb4.5/23, mb1 4.7/24, mb1mx4.6/26, mbtmp4.6/24, ML5.1/1, MS4.4/2, Ms1 4.4/2, ms1mx3.6/33, Error ellipse: s-maj=18.6km s-min=11.4km az=151.0*
MOS ***27*** *00:28:02.1±0.8, 5206N×17999E, h33km, mb5.1/101, Error ellipse: s-maj=14.2km s-min=4.6km az=95.7*
SZGRF ***27*** *00:28:02.6, 5167N×17923W, h33km, mb5.0, Andreanof Islands, Aleutian Islands, United States*
ISC 27 00:27:55.6±0.2, 5134N±004×17959W±003, h10km, n626, σ0884/625, mb4.9/183, MS4.5/8, 177C-88D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	0.69	274	P	**Pg**	00 28 13.7	+4.7
AMKA				S	**Sg**	00 28 25.1	+7.1
ATKA	**Atka Island**	3.46	73	P	**Pn**	00 28 51.2	+1.7
ATKA				S	**Sn**	00 29 32.7	+2.1
SMY	**Shemya**	4.14	292	P	**Pn**	00 29 04.1	+5.3
NIKO	**Nikolski**	6.81	72	P	**Pn**	00 29 37.8	+2.3
OKCD	**Okmok Cone D**	7.33	69	P	**Pn**	00 29 46.1	+3.4
SPIA	**Saint Paul Isl**	8.01	39	P	**Pn**	00 29 57.2	+5.3
AKUT	**Akutan**	8.84	66	*e*Pn	**Pn**	00 30 07.5	+4.1
SDPT	**Sand Point**	12.10	63	*e*Pn	**Pn**	00 30 49.7	+1.7
PET	**Petropavlovsk**	13.45	286	*e*P	**Pn**	00 31 13.3	+6.9
PET	comp=Z,700nm,16.0s			MLR	MLR		
TNA	**Tin City**	15.47	18	*e*Pn	**Pn**	00 31 36.6	+2.8
	comp=Z,27nm,1.2s						
SVW2	**Sparrevohn**	16.45	44	*e*P	**Pn**	00 31 49.6	+3.2
KDAK	**Kodiak Island**	16.86	57	Pn	**Pn**	00 31 49.0	-2.7
	comp=Z,6.1nm,0.3s,baz=168,slow=5.7,SNR=29						
KDAK				Sn	**Sn**	00 34 53.4	-5.7
	comp=Z,0.1nm,0.3s,baz=357,slow=20,SNR=2.8						
KDAK	**Kodiak Island**	16.86	57	*e*Pn	**Pn**	00 31 51.0	-0.7
TTA	**Tatalina**	17.15	38	*e*P	**Pn**	00 31 57.8	+2.5
BILL	**Bilibino**	18.12	343	*ce*P	**Pn**	00 32 11.6	+4.3
BILL				pmax	pmax		
	comp=Z,56nm,1.7s						
BILL				MLR	MLR		
	comp=Z,1μm,20.0s						
BILL	**Bilibino**	18.12	343	*e*P	**Pn**	00 32 11.5	+4.2
	comp=Z,48nm,0.9s						
MA2	**Magadan**	18.58	308	*e*P	**Pn**	00 32 18.6	+5.6
MA2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MA2	**Magadan**	18.58	308	*e*P	**Pn**	00 32 18.6	+5.6
	comp=Z,4.3nm,0.7s						
SLKM	**Skilak Lake**	18.69	49	*e*P	**Pn**	00 32 15.8	+1.5
PMR	**Palmer**	19.52	47	*e*P	**Pn**	00 32 26.4	+2.1
PMR				pmax	pmax		
	comp=Z,20nm,0.6s						
PMR	**Palmer**	19.52	47	*e*P	**Pn**	00 32 26.4	+2.1
	comp=Z,20nm,0.6s						
MCK	**McKinley**	20.36	41	*e*P	**P**	00 32 32.5	+0.4
MCK				pmax	pmax		
	comp=Z,12nm,0.7s						
MCK	**McKinley**	20.36	41	*e*P	**P**	00 32 32.5	+0.4
	comp=Z,12nm,0.7s						
DIV	**Divide**	20.96	49	*e*P	**P**	00 32 40.7	+2.0
	comp=Z,93nm,0.6s						
COLA	**College**	21.25	38	*d iP*	**P**	00 32 43.1	+1.3
COLA	**College**	21.25	38	*e*P	**P**	00 32 42.5	+0.7
	comp=Z,68nm,1.1s,mb4.9						
MENT	**Mentasta**	22.33	45	*e*P	**P**	00 32 55.9	+2.6
EGAK	**Eagle**	23.91	41	*e*P	**P**	00 33 08.8	-0.7
DAWY	**Dawson**	24.48	43	*e*P	**P**	00 33 13.9	-0.8
YSS	**Yuzh-Sakhalins**	24.83	275	*e*P	**P**	00 33 17.9	0.0
YSS				pmax	pmax		
	comp=Z,39nm,0.9s,mb4.9						
YSS	**Yuzh-Sakhalins**	24.83	275	*e*P	**P**	00 33 17.9	0.0
	comp=Z,39nm,0.9s,mb4.9						
ASAJ	**Asahikawa**	26.21	269	P	**P**	00 33 28.9	-1.5
	comp=Z,22nm,1.1s,mb4.6,baz=61,slow=3.5,SNR=9.1						
ASAJ	**Asahikawa**	26.21	269	P	**P**	00 33 29.0	-1.4
ASAJ				pmax	pmax		
	comp=Z,22nm,1.1s						
INK	**Inuvik**	27.78	35	P	**P**	00 33 43.9	-0.7
	comp=Z,6.9nm,0.8s,mb4.3,baz=43,slow=7.1,SNR=7.1						
INK				PcP	PcP	00 36 59.1	-1.8
	comp=Z,2.9nm,0.5s,baz=287,slow=2.7,SNR=4.1						
INK				LR	LR	00 46 12.8	
	comp=Z,478nm,18.2s,MS4.1,baz=263,slow=40						
INK	**Inuvik**	27.78	35	P	**P**	00 33 43.9	-0.7
INK						00 36 59.1	
INK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
INK				MLR	MLR		
	comp=Z,478nm,18.3s						
DLBC	**Dease Lake**	28.80	56	P	**P**	00 33 53.5	-0.1
	comp=Z,1.7nm,0.7s,mb3.9,baz=292,slow=17,SNR=2.8						
HABR	**Khabarovsk**	29.00	282	*e*P	**P**	00 33 56.9	+1.5
HABR				*e*S	**S**	00 38 46.2	-0.2
KLR	**Kul'dur**	30.71	285	⇓*iP*	**P**	00 34 08.8	-1.8
KLR				pmax	pmax		
	comp=E,38nm,1.2s						
KLR				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.2						
MJAR	**Matsushiro Arr**	33.29	260	P	**P**	00 34 34.2	+1.0
	comp=Z,1.9nm,0.7s,mb4.1,baz=54,slow=8.6,SNR=7.8						
MJAR				PcP	PcP	00 37 14.2	-1.1
	comp=Z,0.5nm,0.4s,baz=60,slow=2.4,SNR=5.2						
MJAR	**Matsushiro Arr**	33.29	260	P	**P**	00 34 34.2	+1.0
MJAR						00 37 14.3	
MJAR				pmax	pmax		
	comp=Z,20nm,0.7s						
MAJO	**Matsushiro**	33.29	260	*e*P	**P**	00 34 35.0	+1.8
MAJO				pmax	pmax		
	comp=Z,30nm,0.4s,mb5.6						
MAJO	**Matsushiro**	33.29	260	*e*P	**P**	00 34 35.0	+1.8
	comp=Z,2.6nm,0.4s,mb4.5						
MAT	**Matsushiro**	33.29	260	P	**P**	00 34 34.1	+0.9
MDJ	**Mudanjiang**	34.09	279	P	**P**	00 34 41.3	+1.1
MDJ				XP	sP	00 34 54.0	+9.5
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,368nm,11.8s						
YKA	**Yellowknife Ar**	35.62	46	P	**P**	00 34 52.3	-1.1
	comp=Z,9.5nm,0.6s,mb4.9,baz=281,slow=7.2,SNR=41						
YKA				PcP	PcP	00 37 21.4	-0.6
	comp=Z,3.1nm,0.9s,baz=291,slow=2.2,SNR=4.2						
YKA				LR	LR	00 51 14.8	
	comp=Z,699nm,18.6s,MS4.5,baz=270,slow=39						
YKA	**Yellowknife Ar**	35.62	46	P	**P**	00 34 52.4	-1.0
YKA						00 37 21.4	
B04A	**Port Angeles**	35.68	73	⇓P	**P**	00 34 54.0	+0.1
	baz=36						
A04A	**Legoe Bay, Lum**	35.86	71	⇓P	**P**	00 34 55.3	-0.2
	baz=36						
A05A	**Maple Falls**	36.10	71	⇑P	**P**	00 34 57.3	-0.2
	baz=36						
C04A	**Brinnon**	36.15	73	⇑P	**P**	00 34 58.3	+0.3
	baz=36,SNR=5.3						
E03A	**Lebam**	36.35	75	⇑P	**P**	00 35 00.2	+0.5
	baz=36						
B05A	**Bryant**	36.43	72	⇓P	**P**	00 35 00.6	+0.3
	baz=36,SNR=12						
F03A	**Seaside**	36.65	76	⇓P	**P**	00 35 02.3	+0.1
	baz=36						
E04A	**Onalaska**	36.83	74	⇓P	**P**	00 35 04.3	+0.5
	baz=37						
C05A	**Tolt Reservoir**	36.93	72	⇑P	**P**	00 35 04.8	+0.2
	baz=37,SNR=5.8						
D05A	**Enumclaw**	36.99	73	⇑P	**P**	00 35 05.1	0.0
	baz=37,SNR=6.8						
H02A	**Toledo**	37.01	78	⇑P	**P**	00 35 05.3	+0.1
	baz=37						
CN2	**Changchun**	37.07	280	*e*P	**P**	00 35 06.3	+0.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
G03A	**Yamhill**	37.12	77	⇑P	**P**	00 35 06.5	+0.3
	baz=37						
F04A	**Amboy**	37.34	75	⇑P	**P**	00 35 08.1	0.0
	baz=37,SNR=8.1						
E05A	**Randle**	37.43	74	⇑P	**P**	00 35 08.8	-0.1
	baz=37						
BOD	**Bodaibo**	37.60	307	⇓*iP*	**P**	00 35 10.3	0.0
BOD				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
G04A	**Mulino**	37.67	76	⇑P	**P**	00 35 10.7	-0.2
	baz=38,SNR=6.9						
I03A	**Eugene**	37.81	79	⇑P	**P**	00 35 12.0	-0.1
	baz=38						
SSOR	**Sweet Springs**	37.86	77	P	**P**	00 35 13.8	+1.3
J02A	**Umpqua**	37.95	80	⇓P	**P**	00 35 13.1	-0.2
	baz=38						
EBG	**Ellensburg**	37.98	73	P	**P**	00 35 14.4	+1.0
H04A	**Detroit Lake**	38.11	77	⇓P	**P**	00 35 14.4	-0.2
	baz=38,SNR=6.2						
BROR	**Big Rock Looko**	38.17	78	P	**P**	00 35 16.2	+1.1
VFP	**Flag Point**	38.23	76	P	**P**	00 35 16.7	+1.1
J03A	**Ideyld Park**	38.32	79	⇑P	**P**	00 35 17.3	+0.9
	baz=38,SNR=7.4						
G05A	**Wamic**	38.35	76	⇑P	**P**	00 35 17.1	+0.5
	baz=38						
H05A	**Madras**	38.72	76	⇓P	**P**	00 35 20.1	+0.3
	baz=38						
SNIWA	**Snively Ranch**	38.74	73	P	**P**	00 35 20.6	+0.7
G06A	**Carlson Farm,**	38.77	75	⇑P	**P**	00 35 20.3	+0.1
	baz=39						
RSW	**Rattlesnake Hi**	38.81	73	P	**P**	00 35 21.4	+0.8
HAWA	**Hanford**	38.85	73	*e*P	**P**	00 35 21.0	+0.2
	comp=Z,1.3nm,0.9s						
H2OWA	**Water**	38.92	73	P	**P**	00 35 21.9	+0.5
I05A	**Bend**	38.95	77	⇑P	**P**	00 35 21.8	+0.1
	baz=39						
H06A	**Lindquist Farm**	39.21	76	⇑P	**P**	00 35 23.8	-0.1
	baz=39,SNR=12						
EDM	**Edmonton**	39.27	60	*e*P	**P**	00 35 23.0	-1.3
NEW	**Newport**	39.36	69	P	**P**	00 35 24.9	-0.2
	comp=Z,12nm,0.8s,mb4.7,baz=295,slow=7.6,SNR=25						
NEW	**Newport**	39.36	69	P	**P**	00 35 25.0	-0.1
NEW				pmax	pmax		
	comp=Z,12nm,0.8s						
YBH	**Yreka Blue Hor**	39.38	81	*e*P	**P**	00 35 26.6	+1.3
YBH				pmax	pmax		
	comp=Z,13nm,1.0s						
YBH	**Yreka Blue Hor**	39.38	81	*e*P	**P**	00 35 26.6	+1.3
	comp=Z,13nm,1.0s,mb4.6						
YBH	**Yreka Blue Hor**	39.38	81	⇑P	**P**	00 35 25.3	0.0
	baz=39,SNR=6.6						
J05A	**Fort Rock**	39.44	78	⇓P	**P**	00 35 25.9	+0.2
	baz=39,SNR=11						
M02C	**Callahan**	39.48	82	⇑P	**P**	00 35 26.2	+0.1
	baz=39						
K04A	**Chiluin**	39.50	79	⇓P	**P**	00 35 26.2	0.0
	baz=39						
N02C	**Big Bar**	39.52	83	⇑P	**P**	00 35 26.1	-0.4
	baz=39						
L04A	**Klamath Falls**	39.64	80	⇓P	**P**	00 35 27.6	+0.2
	baz=39,SNR=10						
I06A	**Prineville**	39.71	77	⇑P	**P**	00 35 28.1	+0.1
	baz=40						
G08A	**Pilot Rock**	39.76	74	⇓P	**P**	00 35 28.5	+0.1
	baz=40						
M04C	**Macdoel**	39.89	81	⇑P	**P**	00 35 30.0	+0.4
	baz=40,SNR=5.5						
K05A	**Summer Lake**	39.95	79	⇓P	**P**	00 35 30.2	+0.2
	baz=40,SNR=10						
M03C	**McCloud**	40.00	81	⇑P	**P**	00 35 30.6	+0.1
	baz=40						
I07A	**Izee**	40.06	76	⇑P	**P**	00 35 31.2	+0.2
	baz=40,SNR=19						
J06A	**Christmas Vall**	40.12	78	⇑P	**P**	00 35 31.8	+0.4
	baz=40,SNR=16						
CIT	**Chita**	40.12	298	*e*P	**P**	00 35 31.5	0.0
CIT				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.2						
WDC	**Whiskeytown Da**	40.14	83	⇑P	**P**	00 35 31.7	+0.1
	baz=40						
F09A	**S2 Ranch, Elgi**	40.17	73	⇓P	**P**	00 35 31.8	0.0
	baz=40						
O02C	**Red Bluff**	40.22	83	⇑P	**P**	00 35 32.4	+0.1
	baz=40						
K06A	**Valley Falls**	40.30	78	⇑P	**P**	00 35 33.4	+0.4
	baz=40,SNR=19						
H08A	**Prairie City**	40.34	75	P	**P**	00 35 33.5	+0.3
	baz=40,SNR=11						
L05A	**Lakeview**	40.36	80	⇑P	**P**	00 35 33.9	+0.4
	baz=40						
M05C	**Lookout**	40.56	81	⇑P	**P**	00 35 35.4	+0.3
	baz=40,SNR=7.8						
J07A	**Hines**	40.56	77	⇓P	**P**	00 35 35.5	+0.4
	baz=40,SNR=8.6						
HATC	**Hat Creek Radi**	40.67	81	⇑P	**P**	00 35 36.4	+0.4
	baz=40						
I08A	**Drewsey**	40.73	76	⇓P	**P**	00 35 36.6	+0.2
	baz=40,SNR=9.6						
WALA	**Waterton Lakes**	40.84	66	*e*P	**P**	00 35 37.2	-0.2
	comp=Z,7.3nm,0.7s,mb4.4						
H09A	**Durkee**	40.87	74	⇓P	**P**	00 35 37.7	0.0
	baz=41						
K07A	**Rock Creek Ran**	40.98	78	⇑P	**P**	00 35 39.3	+0.7
	baz=41,SNR=21						
BMO	**Blue Mountains**	40.98	74	*e*P	**P**	00 35 38.3	-0.3
	comp=Z,5.6nm,0.8s,mb4.2						
M06C	**Likely Place G**	41.06	80	⇓P	**P**	00 35 39.7	+0.5
	baz=41						
J08A	**Circle Bar Ran**	41.08	76	⇑P	**P**	00 35 39.6	+0.2
	baz=41,SNR=6.4						
I09A	**Lost Marbles R**	41.19	75	⇑P	**P**	00 35 40.2	-0.1
	baz=41						
O04C	**Chester**	41.19	82	⇑P	**P**	00 35 40.3	0.0
	baz=41						
MNRC	**McLaughlin Nat**	41.20	85	⇑P	**P**	00 35 40.8	+0.4
	baz=41						
L07A	**Adell**	41.30	79	⇓P	**P**	00 35 41.8	+0.6
	baz=41,SNR=15						
ORV	**Oroville**	41.39	83	⇑P	**P**	00 35 42.1	+0.2
	baz=41						
SUTB	**Sutter Butte**	41.40	84	⇑P	**P**	00 35 41.9	-0.1
	baz=41						
K08A	**Mann Creek Ran**	41.42	77	⇓P	**P**	00 35 42.3	+0.2
	baz=41,SNR=11						
WVOR	**Wild Horse Val**	41.50	78	*e*P	**P**	00 35 43.1	+0.3
WVOR				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
WVOR	**Wild Horse Val**	41.50	78	*e*P	**P**	00 35 43.1	+0.3
	comp=Z,14nm,0.8s,mb4.6						
O05C	**Quincy**	41.51	82	⇓P	**P**	00 35 42.6	-0.2
	baz=41						
J09A	**Fry Pan Ranch,**	41.53	76	⇑P	**P**	00 35 42.9	-0.2
	baz=41,SNR=8.7						
N06A	**Buffalo Meadow**	41.72	80	⇓P	**P**	00 35 45.1	+0.5
	baz=42,SNR=17						
L08A	**Fields**	41.81	78	⇓P	**P**	00 35 45.3	-0.1
	baz=42,SNR=12						
K09A	**Rome**	41.91	77	⇓P	**P**	00 35 46.4	+0.3
	baz=42,SNR=7.4						
BEKR	**Beckwourth**	41.91	82	⇑P	**P**	00 35 46.0	-0.1
	baz=42						
MSO	**Missoula**	41.95	69	*e*P	**P**	00 35 45.8	-0.7
	comp=Z,9.4nm,0.9s,mb4.4						
O06A	**Flanigan**	42.07	81	⇑P	**P**	00 35 47.5	+0.1
	baz=42,SNR=10						
P05C	**Yuba Gap, Truc**	42.09	83	⇓P	**P**	00 35 48.0	+0.3
	baz=42						
M08A	**Happy Creek Ra**	42.22	79	⇑P	**P**	00 35 49.0	+0.4
	baz=42,SNR=9.2						
N07B	**Gerlach**	42.24	80	⇑P	**P**	00 35 49.4	+0.6
	baz=42,SNR=27						
CHMT	**Chamberlain Mo**	42.31	69	*e*P	**P**	00 35 48.7	-0.7
L09A	**Wilkinson Ranc**	42.33	78	⇓P	**P**	00 35 50.0	+0.5
	baz=42						
LAVA	**Lava Cap Winer**	42.34	84	⇑P	**P**	00 35 50.3	+0.6
	baz=42						
PAHR	**Pah Rah Range**	42.61	81	*e*P	**P**	00 35 52.4	+0.5
	comp=Z,22nm,1.2s,mb4.8						
WCN	**Washoe City**	42.62	82	⇓P	**P**	00 35 52.4	+0.4
	baz=42						
O07A	**Toulon**	42.66	81	⇑P	**P**	00 35 52.7	+0.5
	baz=42,SNR=17						
ALE	**Alert**	42.75	10	P	**P**	00 35 53.0	0.0
	comp=Z,52nm,1.1s,mb5.2,SNR=5.0						
N08A	**GE Springer Mi**	42.75	79	⇓P	**P**	00 35 53.3	+0.3
	baz=42,SNR=13						
R05C	**Kirkwood Meado**	42.78	83	⇑P	**P**

baz=44
M12A Wells 44.36 77 ⇓P **P 00 36 06.3 +0.3**
baz=44
P10A Eureka 44.47 80 ⇓P **P 00 36 07.1 +0.2**
baz=44
Q09A Carvers 44.50 81 ⇓P **P 00 36 06.9 -0.2**
baz=44
QLMT Earthquake Lak 44.50 70 *eP* **P 00 36 07.2 0.0**
ELK Elko 44.55 78 *eP* **P 00 36 07.9 +0.4**
ELK pmax pmax
comp=Z,11nm,0.9s
ELK Elko 44.55 78 *eP* **P 00 36 07.9 +0.4**
comp=Z,11nm,0.9s,mb4.7
MTUM Tungsten Hills 44.55 84 *eP* **P 00 36 07.8 +0.3**
N12A Clover Valley, 44.61 77 ⇑P **P 00 36 08.2 +0.2**
baz=44,SNR=9.5
O11A Cowboy Ranch, 44.66 78 ⇑P **P 00 36 08.3 -0.1**
baz=44,SNR=9.9
HELL Mitchell Peak, 44.69 85 ⇑P **P 00 36 08.8 +0.2**
baz=44
M13A Montello 44.85 76 ⇑P **P 00 36 10.1 +0.2**
baz=45
YMR Madison River 44.87 70 *eP* **P 00 36 09.8 -0.3**
comp=Z,24nm,0.8s,mb5.1
BJI Beijing 44.90 282 *eP* **P 00 36 12.0 +1.7**
BJI AMB AMB
comp=Z,13nm,0.8s,mb4.8
R09A Tonopah 44.93 82 P **P 00 36 10.5 -0.1**
baz=45,SNR=29
P11A Circle Ranch, 44.95 79 ⇓P **P 00 36 11.0 +0.3**
baz=45
TIN Tinemaha 44.95 84 ⇑P **P 00 36 11.3 +0.6**
baz=45
GCMT Greycliff 45.01 68 *eP* **P 00 36 10.7 -0.5**
YNR Norris Junctio 45.01 70 *eP* **P 00 36 10.7 -0.5**
YFT Old Faithful 45.07 71 *eP* **P 00 36 12.3 +0.6**
N13A Wendover, West 45.12 77 ⇑P **P 00 36 12.2 +0.2**
baz=45
O12A Currie 45.14 78 ⇑P **P 00 36 12.3 +0.1**
baz=45
S09A Goldfield 45.16 82 ⇑P **P 00 36 12.5 +0.1**
baz=45,SNR=6.8
VES Vestal, Richgr 45.18 86 ⇑P **P 00 36 12.5 -0.1**
baz=45
R10A Warm Springs 45.38 81 ⇓P **P 00 36 14.6 +0.4**
baz=45
HVU Hansel Valley 45.44 75 *eP* **P 00 36 14.6 0.0**
HVU pmax pmax
comp=Z,16nm,0.7s,mb5.0
HVU Hansel Valley 45.44 75 *eP* **P 00 36 14.6 0.0**
comp=Z,16nm,0.7s,mb5.0
P12A McGill 45.52 79 P **P 00 36 15.9 +0.7**
baz=45,SNR=12
TLY Talaya 45.66 302 *eP* **P 00 36 18.4 +2.0**
TLY pmax pmax
comp=Z,12nm,1.5s,mb4.6
TRCR Troy Canyon 45.79 80 *eP* **P 00 36 17.7 +0.3**
BGU Big Grassy Mou 45.79 76 *eP* **P 00 36 17.9 +0.5**
Q12A Willow Creek R 45.83 79 ⇓P **P 00 36 17.2 -0.4**
baz=46
MPMC Manual Prospec 46.04 84 ⇓P **P 00 36 19.8 +0.5**
baz=46
FURC Furnace Creek, 46.17 83 ⇓P **P 00 36 20.3 -0.1**
baz=46,SNR=6.9
SONM Songino Array 46.22 296 P **P 00 36 22.6 +1.8**
comp=Z,4.2nm,0.5s,mb4.6,baz=64,slow=7.7,SNR=23
SONM ScP ScP 00 41 48.0 -1.7
comp=Z,0.5nm,0.5s,baz=43,slow=2.6,SNR=3.0
SONM Songino Array 46.22 296 P **P 00 36 22.6 +1.8**
SONM pmax pmax
comp=Z,4.0nm,0.5s
SONM pmax pmax
comp=N,1.0nm,0.5s
HWUT Hardware Ranch 46.28 74 *eP* **P 00 36 21.1 -0.1**
comp=N,8.4nm,0.7s,mb4.8
LRMC Laurel Mountai 46.28 85 ⇓P **P 00 36 21.7 +0.4**
baz=46
DUG Dugway 46.36 77 *eP* **P 00 36 22.1 +0.2**
DUG pmax pmax
comp=Z,26nm,1.0s,mb5.1
DUG Dugway 46.36 77 *eP* **P 00 36 22.1 +0.2**
comp=Z,26nm,1.0s,mb5.1
U10A Ash Meadows, A 46.53 83 ⇓P **P 00 36 24.1 +0.9**
baz=46
ZAK Zakamensk 46.55 301 *eP* **P 00 36 24.1 +0.8**
ZAK pmax pmax
comp=Z,16nm,1.4s,mb4.8
CTU Camp Tracy 46.71 75 *eP* **P 00 36 24.4 -0.2**
comp=Z,10nm,0.7s,mb4.9
PDAR Pinedale Array 46.80 72 P **P 00 36 25.1 -0.2**
comp=Z,16nm,0.6s,mb5.2,baz=306,slow=3.6,SNR=196
SHOC Shoshone 46.89 84 ⇓P **P 00 36 26.5 +0.5**
baz=47
GSC Goldstone 46.95 85 ⇑P **P 00 36 26.3 -0.2**
baz=47,SNR=6.1
NLU North Lily Min 46.96 76 *eP* **P 00 36 26.6 0.0**
MPU Maple Canyon 47.19 76 *eP* **P 00 36 27.8 -0.6**
comp=Z,7.2nm,0.7s,mb4.7
HHC Hu-ho-hao-te 47.22 285 *eP* **P 00 36 29.8 +1.2**
HHC PCP PcP 00 38 00.8 +0.9
HHC PP PP 00 38 20.8 +1.3
HHC SCP ScP 00 41 48.5 -5.4
HHC PCS PcS 00 41 54.0 -1.0
HHC S **S 00 43 16.8 -4.7**
HHC SCS ScS 00 46 15.0 -7.9
HHC SS SS 00 46 37.8 -11
HHC AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
HHC AMB AMB
comp=Z,439nm,8.4s
HHC LR LR
comp=N,250nm,16.4s,MS4.5
HHC LR LR
comp=E,269nm,15.1s,MS4.5
HHC LR LR
comp=Z,495nm,14.9s,MS4.6
TUQ Turquoise Mtn. 47.41 84 ⇓P **P 00 36 30.2 +0.1**
baz=47
ARUT Antelope Range 47.46 80 *eP* **P 00 36 30.7 +0.2**
SSE Sheshan 47.50 268 *eP* **P 00 36 30.5 -0.3**
SSE AMB AMB
comp=Z,18nm,0.7s,mb5.1
SSE AMB AMB
comp=Z,351nm,12.0s
U12A Valley of Fire 47.64 82 ⇓P **P 00 36 32.3 +0.4**
baz=47,SNR=5.7
CCUT Cedar City 47.66 80 *eP* **P 00 36 32.5 +0.5**
MSU Marysvale 47.78 78 *eP* **P 00 36 33.5 +0.5**
TMUT Trail Mountain 47.89 77 *eP* **P 00 36 34.1 +0.3**
GMRC Granite Mounta 48.00 84 ⇑P **P 00 36 34.3 -0.4**
baz=48,SNR=6.0
W12A Cal Nev Ari 48.16 83 ⇑P **P 00 36 34.9 -0.9**
baz=48
PFO Pinyon Flat Ob 48.27 86 ⇓P **P 00 36 36.7 -0.1**
baz=48
BELC Belle Mtn. 48.30 85 ⇑P **P 00 36 35.4 -1.6**
baz=48
SRU San Rafael 48.42 76 *eP* **P 00 36 38.1 +0.2**
SRU pmax pmax
comp=Z,15nm,0.5s,mb5.3
SRU San Rafael 48.42 76 *eP* **P 00 36 38.1 +0.2**
comp=Z,16nm,0.5s,mb5.3
W13A Hualapai Mount 48.90 83 ⇓P **P 00 36 41.2 -0.4**
baz=49
RSSD Black Hills 49.24 67 *eP* **P 00 36 43.2 -1.0**
RSSD pmax pmax
comp=Z,17nm,1.3s,mb4.9
RSSD Black Hills 49.24 67 *eP* **P 00 36 43.2 -0.9**
comp=Z,17nm,1.3s,mb4.9
X13A Yucca 49.27 83 ⇓P **P 00 36 43.9 -0.5**
baz=49
W14A Seligman 49.33 82 ⇓P **P 00 36 44.1 -0.7**
baz=49
Y12C Blythe 49.39 84 ⇓P **P 00 36 44.9 -0.5**
baz=49
GLA Glamis 49.66 85 ⇑P **P 00 36 46.7 -0.7**
baz=49
Y13A Salome 49.78 84 ⇑P **P 00 36 46.7 -1.6**
baz=50
PV10 Paradox Valley 49.79 76 *eP* **P 00 36 48.9 +0.5**
KBS Kingsbay 49.81 357 *i* P **P 00 36 49.7 +1.1**
W15A Williams 49.85 81 ⇓P **P 00 36 47.6 -1.2**
baz=50
X14A Yava 49.93 83 ⇓P **P 00 36 48.8 -0.7**
baz=50,SNR=5.6
ULM Lac du Bonnet 50.12 56 P **P 00 36 49.1 -1.8**
comp=Z,1.3nm,0.4s,mb4.3,baz=298,slow=10,SNR=6.2

WUAZ Wupatki 50.19 80 *eP* **P 00 36 51.5 +0.1**
comp=Z,9.6nm,0.8s,mb4.9
Y14A Wickenburg 50.21 83 ⇑P **P 00 36 50.9 -0.7**
baz=50
PV01 Paradox Valley 50.23 76 *eP* **P 00 36 51.5 -0.2**
X15A Humboldt 50.33 82 ⇑P **P 00 36 52.0 -0.5**
baz=50
SPB4 Spitsbergen Ar 50.38 356 *eP* **P 00 36 52.5 -0.4**
115A Sonoran Desert 51.52 84 ⇓P **P 00 37 00.3 -1.1**
baz=51
116A Eloy 51.94 84 ⇓P **P 00 37 03.2 -1.4**
baz=52
TUC Tucson 52.68 83 *eP* **P 00 37 08.9 -1.2**
TUC pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TUC Tucson 52.68 83 *eP* **P 00 37 08.9 -1.2**
comp=Z,6.0nm,1.0s,mb4.5
SUMG Summit 53.46 14 *eP* **P 00 37 15.4 -0.4**
comp=Z,13nm,0.9s,mb4.9
ANMO Albuquerque 53.59 78⇑ *eP* **P 00 37 17.2 +0.4**
LENM Lemitar 53.79 79 *eP* **P 00 37 21.2 +3.0**
EYMN Ely 53.81 56 *eP* **P 00 37 16.9 -1.5**
comp=Z,15nm,1.4s,mb4.7
NVS Novosibirsk 53.84 315 *eP* **P 00 37 17.4 -1.3**
NVS *i* 00 38 23.0
LPM Los Pinos Moun 53.91 78 *eP* **P 00 37 19.5 +0.4**
LZH Lanzhou 54.92 286 *eP* **P 00 37 28.0 +1.5**
LZH PCP PcP 00 38 29.0 +0.6
LZH AMB AMB
comp=Z,38nm,1.3s,mb5.3
LZH AMB AMB
comp=Z,150nm,5.0s
LZH LR LR
comp=E,450nm,15.4s
LZH LR LR
comp=Z,689nm,17.0s,MS4.8
GTA Gaotai 55.12 291 *eP* **P 00 37 29.3 +1.4**
GTA PCP PcP 00 38 33.3 +4.1
GTA PP PP 00 39 33.3 +2.1
GTA PPP 00 40 42.8
GTA SCP ScP 00 42 27.0 -0.9
GTA PCS PcS 00 42 31.3 +2.2
GTA S **S 00 45 05.5 -5.2**
GTA XS sS 00 45 22.0 +6.0
GTA SCS ScS 00 47 11.0 -6.3
GTA AMB AMB
comp=Z,23nm,1.0s,mb5.2
GTA AMB AMB
comp=Z,317nm,7.6s
GTA LR LR
comp=N,323nm,16.7s,MS4.6
GTA LR LR
comp=E,278nm,16.7s,MS4.6
GTA LR LR
comp=Z,279nm,17.9s,MS4.4
MNTX Cornudas Mount 56.45 80 *eP* **P 00 37 36.6 -0.8**
comp=Z,11nm,0.9s,mb4.9
KSU1 Kansas State U 56.72 67 *eP* **P 00 37 38.0 -1.4**
KEV Kevo 57.67 349 *ep* **P 00 37 44.9 -1.2**
comp=Z,4.1nm,0.9s,mb4.5
KEV Kevo 57.67 349 *eP* **P 00 37 44.9 -1.2**
KEV pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
JFWS Jewell Farm 57.75 60 *eP* **P 00 37 44.8 -1.9**
JFWS pmax pmax
comp=Z,12nm,0.6s,mb5.1
JFWS Jewell Farm 57.75 60 *eP* **P 00 37 44.8 -1.9**
comp=Z,12nm,0.6s,mb5.1
ARCES ARCESS Array B 58.05 350 P **P 00 37 48.1 -0.6**
comp=Z,3.6nm,0.7s,mb4.5,baz=30,slow=8.1,SNR=17
ARCES ARCESS Array B 58.05 350 P **P 00 37 48.1 -0.7**
ARCES pmax pmax
comp=Z,4.0nm,0.7s
WMOK Wichita Mounta 58.38 73 *eP* **P 00 37 50.4 -0.7**
WMOK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WMOK Wichita Mounta 58.38 73 *eP* **P 00 37 50.4 -0.7**
comp=Z,10.0nm,0.9s,mb4.8
CD2 Chengdu 58.49 281 *eP* **P 00 37 50.5 -1.4**
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
KURK Kurchatov 58.69 313 P **P 00 37 53.6 +0.4**
comp=Z,73nm,0.8s,mb5.8,SNR=15
APA Apatity 58.85 346⇓ *eP* **P 00 37 54.0 -0.4**
WMQ Urumqi 58.95 302 P **P 00 37 56.0 +1.0**
WMQ PP PP 00 40 09.0 +3.8
WMQ S **S 00 45 56.0 -5.2**
WMQ SS SS 00 49 52.0 -2.8
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,102nm,5.0s
WMQ LR LR
comp=N,427nm,15.0s,MS4.8
WMQ LR LR
comp=E,416nm,15.0s,MS4.8
WMQ LR LR
comp=Z,435nm,15.0s,MS4.7
MK31 Makanchi Array 59.67 308 P **P 00 38 00.4 +0.4**
MK31 pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
MKAR Makanchi Array 59.67 308 P **P 00 38 00.3 +0.3**
comp=Z,5.6nm,0.4s,mb5.0,baz=46,slow=6.7,SNR=84
MKAR Makanchi Array 59.67 308 P **P 00 38 00.3 +0.3**
MKAR pmax pmax
comp=Z,6.0nm,0.4s
GYA Guiyang 59.83 275 P **P 00 38 02.0 +0.9**
GYA PP PP 00 40 16.5 +3.4
GYA SCP ScP 00 42 42.0 -6.7
GYA S **S 00 46 07.8 -4.8**
GYA SCS ScS 00 47 43.3 -8.4
GYA SS SS 00 50 06.0 -2.7
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
GYA AMB AMB
comp=Z,90nm,4.3s
GYA LR LR
comp=N,240nm,18.7s,MS4.5
GYA LR LR
comp=E,280nm,18.6s,MS4.5
GYA LR LR
comp=Z,190nm,19.4s,MS4.2
CHKZ Chkalovo 60.03 320 P **P 00 38 02.9 +0.4**
CHKZ pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
SCHQ Schefferville 60.34 38 P **P 00 38 03.6 -1.0**
comp=Z,12nm,0.7s,mb5.1,baz=325,slow=6.3,SNR=28
BRVK Borovoye 60.62 319 *eP* **P 00 38 05.9 -0.6**
BRVK pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
BRVK Borovoye 60.62 319 *eP* **P 00 38 05.9 -0.7**
comp=Z,4.6nm,0.6s,mb4.8
SLM Saint Louis 60.68 64 *eP* **P 00 38 05.9 -1.0**
SLM pmax pmax
comp=Z,21nm,0.6s,mb5.4
SLM Saint Louis 60.68 64 *eP* **P 00 38 05.9 -1.1**
comp=Z,21nm,0.6s,mb5.4
FVM French Village 61.02 65 *eP* **P 00 38 07.5 -1.8**
FVM pmax pmax
comp=Z,12nm,0.6s,mb5.2
FVM French Village 61.02 65 *eP* **P 00 38 07.5 -1.8**
comp=Z,12nm,0.6s,mb5.2
TMCR Tamitsa 61.16 342 *eP* **P 00 38 08.4 -1.8**
TMCR pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
ZRNK Zerenda 61.22 320 *eP* **P 00 38 10.1 -0.5**
ZRNK *e* 00 38 52.4
ZRNK pmax pmax
comp=Z,15nm,0.9s,mb5.1
ZRNK Zerenda 61.22 320 *eP* **P 00 38 10.1 -0.5**
comp=Z,15nm,0.9s,mb5.1
ZRNK *e*PcP PcP 00 38 52.4 -0.8
MIAR Mount Ida 61.61 69 *eP* **P 00 38 12.4 -0.8**
MIAR pmax pmax
comp=Z,21nm,1.1s,mb5.2
MIAR Mount Ida 61.61 69 *eP* **P 00 38 12.4 -0.8**
comp=Z,21nm,1.1s,mb5.2
PARMO Parma 62.33 65 *eP* **P 00 38 16.8 -1.3**
BLO Bloomington 62.37 61 *eP* **P 00 38 17.3 -1.1**
BLO pmax pmax
comp=Z,17nm,0.8s,mb5.2
BLO Bloomington 62.37 61 *eP* **P 00 38 17.3 -1.1**
comp=Z,17nm,0.8s,mb5.2
ARU Arti 62.38 328 *eP* **P 00 38 18.0 -0.4**
ARU *e* 00 38 53.7
ARU *e* 00 40 36.4
ARU *eS* **S 00 46 42.8 -2.2**
USIN University of 62.59 63 *eP* **P 00 38 18.9 -0.9**
comp=Z,38nm,0.6s,mb5.7
WCI Wyandotte Cave 63.16 62 *eP* **P 00 38 22.4 -1.3**
WCI pmax pmax
comp=Z,16nm,0.8s,mb5.2
WCI Wyandotte Cave 63.16 62 *eP* **P 00 38 22.4 -1.3**
comp=Z,16nm,0.8s,mb5.2
KMI Kunming 63.24 277 P **P 00 38 25.0 +0.9**
KMI S **S 00 46 52.3 -3.6**
KMI AMB AMB
comp=Z,9.0nm,0.7s,mb5.0
KMI LR LR
comp=N,244nm,16.4s,MS4.6
KMI LR LR
comp=E,235nm,16.4s,MS4.6
KMI LR LR
comp=Z,278nm,18.2s,MS4.5
JOF Joensuu 63.51 345 *ep* **P 00 38 23.7 -2.2**
comp=Z,11nm,0.8s,mb4.9
JOF Joensuu 63.51 345 *eP* **P 00 38 23.7 -2.2**
JOF pmax pmax
comp=Z,11nm,0.8s,mb4.9
WVT Waverly 63.80 64 *eP* **P 00 38 26.9 -1.0**
WVT pmax pmax
comp=Z,14nm,0.8s,mb5.0
WVT Waverly 63.80 64 *eP* **P 00 38 26.9 -1.0**
comp=Z,14nm,0.8s,mb5.0
ALLY Alegheny Colle 64.00 55 *eP* **P 00 38 28.4 -0.7**
OXF Oxford 64.05 67 *eP* **P 00 38 28.8 -0.7**
OXF pmax pmax
comp=Z,11nm,0.6s,mb5.1
OXF Oxford 64.05 67 *eP* **P 00 38 28.8 -0.7**
comp=Z,113nm,0.6s
PLAL Pickwick Lake 64.48 65 *eP* **P 00 38 31.2 -1.1**
comp=Z,24nm,0.6s,mb5.4
KAF Kangasniemi 65.04 347 *ep* **P 00 38 33.1 -2.9**
comp=Z,6.7nm,0.7s,mb4.8,baz=18,slow=6.1
KAF Kangasniemi 65.04 347 *eP* **P 00 38 33.1 -2.9**
KAF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
SWET Sewanee 65.53 64 *eP* **P 00 38 37.7 -1.4**
MCWV Mont Chateau 65.61 57 *eP* **P 00 38 38.5 -1.2**
comp=Z,9.4nm,1.0s,mb4.8
BINY Binghamton 65.70 52 *eP* **P 00 38 39.4 -0.9**
comp=Z,26nm,1.0s,mb5.2
FIA1 FINESS Array S 65.71 347 *eP* **P 00 38 39.1 -1.2**
FINES FINESS Array B 65.71 347 P **P 00 38 39.3 -1.0**
comp=Z,7.5nm,0.9s,mb4.7,baz=35,slow=7.0,SNR=35
FINES FINESS Array B 65.71 347 P **P 00 38 39.3 -1.0**
FINES pmax pmax
comp=Z,8.0nm,0.9s
SSPA Standing Stone 65.90 55 *eP* **P 00 38 40.5 -1.0**
comp=Z,8.2nm,0.8s,mb4.8
ACCN Adirondack Com 65.95 50 *eP* **P 00 38 39.1 -2.7**
CPCT Cooper Cave 66.15 63 *eP* **P 00 38 42.0 -1.2**
LRAL Lakeview Retre 66.50 66 *eP* **P 00 38 43.7 -1.7**
comp=Z,12nm,0.8s,mb5.0
AAK Ala-Archa 66.51 309*c iP* **P 00 38 46.2 +0.8**
AAK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
ELN Prospectdale 66.91 59 *eP* **P 00 38 46.9 -1.1**
LSA Lhasa 66.98 289 P **P 00 38 51.0 +2.5**
LSA AMB AMB
comp=Z,20nm,0.7s,mb5.3
NB2 NORSAR Subarra 67.64 354 P **P 00 38 52.1 -0.5**
comp=Z,15nm,0.9s,mb5.0,baz=6.9,slow=6.5
NOA NORSAR Array B 67.64 354 P **P 00 38 52.1 -0.6**
comp=Z,7.4nm,0.6s,mb4.9,baz=6.7,slow=6.2,SNR=65
NOA NORSAR Array B 67.64 354 P **P 00 38 52.1 -0.5**
NOA pmax pmax
comp=Z,7.0nm,0.6s
AB31 Akbulak array 67.67 322 *eP* **P 00 38 52.5 -0.3**
KK31 Karatay Array 68.04 312 *i* P **P 00 38 55.7 +0.5**
KK31 pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KKAR Karatay Array 68.04 312 *i* P **P 00 38 55.7 +0.5**
KKAR pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
JSC Jenkinsville 68.82 61 *eP* **P 00 38 58.8 -1.2**
KONO Kongsberg 69.12 355⇑ *eP* **P 00 39 02.4 +0.5**
OBN Obninsk 69.73 339⇓ *iP* **P 00 39 05.5 -0.2**
OBN *e* 00 41 36.8
OBN pmax pmax
comp=Z,24nm,1.2s,mb5.0
GUN Gumba 71.41 291 *eP* **P 00 39 17.8 +1.9**
comp=Z,109nm,0.5s,mb6.0
KKN Kakani 71.85 292 *eP* **P 00 39 20.1 +1.5**
comp=Z,48nm,0.5s,mb5.7
KKN Kakani 71.85 292 *eP* **P 00 39 20.1 +1.5**
KKN pmax pmax
comp=Z,48nm,0.5s,mb5.7
PKI Pulchoki 71.94 292 *eP* **P 00 39 20.5 +1.4**
comp=Z,31nm,0.6s,mb5.4
PKI Pulchoki 71.94 292 *eP* **P 00 39 20.5 +1.4**
PKI pmax pmax
comp=Z,31nm,0.6s,mb5.4
GKN Gorkha 72.06 292 *eP* **P 00 39 21.1 +1.2**
comp=Z,38nm,0.5s,mb5.6
DMN Daman 72.09 292 *eP* **P 00 39 21.5 +1.5**
comp=Z,24nm,0.5s,mb5.4
MUD Monsted U'grnd 72.33 355⇑ *iP* **P 00 39 21.4 -0.1**
comp=Z,24nm,1.1s,mb5.0
MUD Monsted U'grnd 72.33 355⇑ *iP* **P 00 39 21.4 -0.1**
MUD pmax pmax
comp=Z,24nm,1.1s,mb5.0
KOLN Koldanda 72.84 293 *eP* **P 00 39 25.8 +1.3**
comp=Z,15nm,0.6s,mb5.1
COP Copenhagen 72.88 353 *i* P **P 00 39 24.5 -0.2**
comp=Z,18nm,1.0s,mb5.0
COP Copenhagen 72.88 353 *i* P **P 00 39 24.5 -0.2**
COP pmax pmax
comp=Z,18nm,1.0s,mb5.0
BSD Bornholm Skovb 73.23 351 *i* P **P 00 39 25.6 -1.2**
comp=Z,10.0nm,0.9s,mb4.8
BSD Bornholm Skovb 73.23 351 *i* P **P 00 39 25.6 -1.2**
BSD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SUW Suwalki 73.30 346 *eP* **P 00 39 26.1 -1.1**
SUW Suwalki 73.30 346 *eP* **P 00 39 25.7 -1.5**
comp=Z,30nm,1.0s,mb5.2
SDNR Sundarnagar 73.72 300 *eP* **P 00 39 31.0 +1.3**
GKP Gorka Klasztor 74.81 350 *eP* **P 00 39 35.5 -0.5**
AKASG Malin Array Be 75.43 342 P **P 00 39 39.0 -0.7**
comp=Z,13nm,0.7s,mb5.0,baz=20,slow=5.8,SNR=66
AKASG Malin Array Be 75.43 342 P **P 00 39 39.0 -0.6**
AKASG pmax pmax
comp=Z,13nm,0.7s
AKASG Malin Array Be 75.43 342 P **P 00 39 39.0 -0.7**
ALBI Allahabad 75.75 293 *eP* **P 00 39 40.0 -1.4**
KAKA Kakadu 76.14 228 *eP* **P 00 39 42.7 -1.0**
comp=Z,7.6nm,0.8s,mb4.7
WTSB Winterswijk 76.93 356 *eP* **P 00 39 48.0 -0.1**
comp=Z,21nm,0.6s,mb5.2
CTA Charters Tower 77.17 213 P **P 00 39 48.4 -1.1**
comp=Z,0.7nm,0.3s,mb4.1,baz=60,slow=8.1,SNR=3.7
CTA Charters Tower 77.17 213 P **P 00 39 48.4 -1.1**
CLL Collm 77.18 352⇑ P **P 00 39 48.9 -0.6**
comp=Z,logA/T=1.1,mb4.8
CLL Collm 77.18 352⇑ *iP* **P 00 39 48.9 -0.6**
comp=Z,11nm,0.8s,mb4.8
CLL Collm 77.18 352⇑ *iP* **P 00 39 48.9 -0.6**
CLL pmax pmax
comp=Z,11nm,0.8s,mb4.8
LVV L'vov 77.23 345 *eP* **P 00 39 49.4 -0.4**
OJC Ojcow 77.48 347 *eP* **P 00 39 51.2 -0.1**
BRG Berggiesshubel 77.52 351 *i* P **P 00 39 50.9 -0.5**
comp=Z,5.2nm,0.8s,mb4.5
BRG Berggiesshubel 77.52 351 *i* P **P 00 39 50.9 -0.6**
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KWP Kalwaria 77.63 345 *eP* **P 00 39 52.5 +0.4**
UPC Upice 77.67 350 *eP* **P 00 39 51.9 -0.4**
DPC Dobruska-Polom 77.79 350 *eP* **P 00 39 53.0 0.0**
PVCC Panska Ves 77.80 351 *eP* **P 00 39 52.8 -0.2**
MOX Moxa 77.95 353 *eP* **P 00 39 53.6 -0.3**
comp=Z,16nm,1.1s,mb4.9
MOX Moxa 77.95 353 *eP* **P 00 39 53.6 -0.3**
MOX pmax pmax
comp=Z,16nm,1.1s,mb4.9
STHS Stebnicka Huta 78.06 346 *eP* **P 00 39 55.4 +0.9**
STHS Stebnicka Huta 78.06 346 *eP* **P 00 39 55.5 +1.0**
STHS pmax pmax
comp=Z,12nm,0.8s,mb4.9
STHS Stebnicka Huta 78.06 346 *eP* **P 00 39 55.5 +1.0**

comp=Z,12nm,0.8s,mb4.9
OKC Ostrava-Krasne 78.08 348 *e*P **P 00 39 54.4 -0.2**
BEBN Eben Emael 78.15 357 P **P 00 39 55.0 +0.1**
HGN Heimansgroeve 78.17 356 *e*P **P 00 39 54.9 -0.2**
comp=Z,26nm,0.9s,mb5.2
UCC Uccle 78.19 357 P **P 00 39 54.7 -0.5**
NIE Niedzica 78.19 347 *e*P **P 00 39 55.4 +0.2**
MORC Moravsky Berou 78.21 349⇓*i*P **P 00 39 55.6 +0.3**
MORC Moravsky Berou 78.21 349⇓P **P 00 39 55.6 +0.3**
KIV Kislovodsk 78.26 330⇓*e*P **P 00 39 56.1 +0.5**
KIV *e*S SKSac 00 50 00.7 -9.5
KIV pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
NKC Novy Kostel 78.29 352 *e*P **P 00 39 55.6 -0.1**
MEM Membach 78.32 356 P **P 00 39 55.8 -0.1**
PRU Pruhonice 78.34 351 *e*P **P 00 39 55.4 -0.6**
KOLS Kolonicke sedl 78.37 345 *e*P **P 00 39 56.6 +0.4**
SNF Seneffe 78.48 357 P **P 00 39 57.4 +0.6**
CRVS Cervenica-Dubn 78.53 346 *e*P **P 00 39 57.5 +0.4**
BCLA Clavier 78.54 357 P **P 00 39 56.9 -0.3**
VRAC Vranov 78.78 349⇓*i*P **P 00 39 58.8 +0.3**
VRAC Vranov 78.78 349⇓P **P 00 39 58.8 +0.3**
VRAC Vranov 78.78 349 P **P 00 39 58.6 +0.1**
GIVF Givet 78.87 357 *e*P **P 00 39 58.7 -0.2**
DOU Dourbes 78.88 357 P **P 00 39 58.9 -0.1**
TREC Trest 78.92 350 *e*P **P 00 39 59.0 -0.2**
GRA1 Grafenberg Arr 78.93 353 *e*P **P 00 39 59.5 +0.2**
comp=Z,18nm,1.0s,mb5.0
GRF Grafenberg Arr 78.93 353 *e*P **P 00 39 59.5 +0.2**
comp=Z,18nm,1.0s,mb5.0
GRF Grafenberg Arr 78.93 353 *e*P **P 00 39 59.5 +0.2**
GRF pmax pmax
comp=Z,18nm,1.0s,mb5.0
BAIF Baives 78.93 358⇑*i*P **P 00 39 59.3 0.0**
comp=Z,46nm,0.9s,mb5.1
BAIF Baives 78.93 358⇑P **P 00 39 59.3 0.0**
BAIF pmax pmax
comp=Z,23nm,0.9s,mb5.1
BAIF Baives 78.93 358⇑*i*P **P 00 39 59.3 0.0**
comp=Z,23nm,0.9s,mb5.1
KECS Kecovo 79.08 347 *e*P **P 00 40 00.5 +0.4**
KECS pmax pmax
comp=Z,11nm,1.0s,mb4.7
KECS Kecovo 79.08 347 *e*P **P 00 40 00.5 +0.4**
comp=Z,11nm,1.0s,mb4.7
IAS Iasi 79.11 342⇓*i*P **P 00 40 00.3 0.0**
IAS Iasi 79.11 342 P **P 00 40 00.7 +0.5**
BURAR Bucovina Array 79.15 343⇓*i*P **P 00 40 01.2 +0.7**
BURAR Bucovina Array 79.15 343⇓P **P 00 40 01.2 +0.7**
WLF Walferdange 79.26 356 P **P 00 40 01.6 +0.5**
KHC Kasperske Hory 79.28 351 *e*P **P 00 40 01.2 0.0**
KHC Kasperske Hory 79.28 351*c i*P **P 00 40 01.3 +0.1**
VYHS Vyhne 79.30 348 *e*P **P 00 40 01.7 +0.4**
VYHS pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
VYHS Vyhne 79.30 348 *e*P **P 00 40 01.7 +0.4**
comp=Z,8.5nm,1.1s,mb4.6
SMOL Smolenice 79.47 349 *e*P **P 00 40 03.1 +0.9**
GERES GERESS Array B 79.55 351 P **P 00 40 02.3 -0.4**
comp=Z,4.6nm,0.5s,mb4.6,baz=24,slow=5.7,SNR=61
GERES GERESS Array B 79.55 351 P **P 00 40 02.3 -0.4**
GERES pmax pmax
comp=Z,5.0nm,0.5s
PSZ Piszkesteto 79.72 347 P **P 00 40 04.6 +1.0**
ZST Bratislava 79.82 349 *e*P **P 00 40 05.0 +0.9**
ZST pmax pmax
comp=Z,16nm,1.0s,mb4.9
ZST Bratislava 79.82 349 *e*P **P 00 40 05.0 +0.9**
comp=Z,16nm,1.0s,mb4.9
CONA Conrad Observa 80.23 350 *i*P **P 00 40 06.8 +0.4**
comp=Z,7.3nm,0.7s,mb4.7,SNR=13
FLN La Foliniere 80.28 1⇑*i*P **P 00 40 06.1 -0.5**
comp=Z,34nm,0.9s,mb5.0
FLN La Foliniere 80.28 1⇑P **P 00 40 06.1 -0.5**
FLN pmax pmax
comp=Z,17nm,0.9s,mb5.0
FLN La Foliniere 80.28 1⇑*i*P **P 00 40 06.1 -0.5**
comp=Z,17nm,0.9s,mb5.0
DRGR 80.38 345⇓*i*P **P 00 40 07.7 +0.5**
DRGR 80.38 345 P **P 00 40 07.6 +0.5**
LDF La Druitiere 80.45 0⇑*i*P **P 00 40 06.9 -0.6**
comp=Z,28nm,0.6s,mb5.0
LDF La Druitiere 80.45 0⇑P **P 00 40 06.9 -0.6**
LDF pmax pmax
comp=Z,14nm,0.6s,mb5.1
LDF La Druitiere 80.45 0⇑*i*P **P 00 40 06.9 -0.6**
comp=Z,14nm,0.6s,mb5.1
CDF Champ du Feu 80.46 355⇑*i*P **P 00 40 07.2 -0.4**
comp=Z,13nm,0.8s,mb4.6
CDF Champ du Feu 80.46 355⇑P **P 00 40 07.2 -0.4**
CDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CDF Champ du Feu 80.46 355⇑*i*P **P 00 40 07.2 -0.4**
comp=Z,6.5nm,0.8s,mb4.6
MEZF Maizieres J'vi 80.46 357⇑*i*P **P 00 40 07.6 0.0**
comp=Z,50nm,1.0s,mb5.1
MEZF Maizieres J'vi 80.46 357⇑*i*P **P 00 40 07.6 0.0**
comp=Z,50nm,1.0s,mb5.1
MOA Molln 80.48 351 *i*P **P 00 40 07.7 +0.1**
comp=Z,13nm,1.6s,mb4.6,SNR=6.0
VRI Vrincioaia 80.55 342⇓*i*P **P 00 40 08.4 +0.3**
VRI Vrincioaia 80.55 342⇓P **P 00 40 08.3 +0.3**
PLOR Plostina 80.58 342⇓*i*P **P 00 40 08.8 +0.6**
GRR Gorron 80.65 1⇑*i*P **P 00 40 08.2 -0.4**
comp=Z,54nm,0.9s,mb5.2
GRR Gorron 80.65 1⇑*i*P **P 00 40 08.2 -0.4**
GRR pmax pmax
comp=Z,27nm,0.9s,mb5.2
GRR Gorron 80.65 1⇑*i*P **P 00 40 08.2 -0.4**
comp=Z,27nm,0.9s,mb5.2
ROSF Rostrenen 80.66 2 *e*P **P 00 40 08.3 -0.3**
comp=Z,46nm,1.0s,mb5.0
ROSF Rostrenen 80.66 2 *e*P **P 00 40 08.3 -0.3**
ROSF pmax pmax
comp=Z,23nm,1.0s,mb5.1
ROSF Rostrenen 80.66 2 *e*P **P 00 40 08.3 -0.3**
comp=Z,23nm,1.0s,mb5.1
SGMF Saint Gilles 80.76 2⇑*i*P **P 00 40 08.9 -0.3**
comp=Z,42nm,0.8s,mb5.1
SGMF Saint Gilles 80.76 2⇑P **P 00 40 08.9 -0.3**
SGMF pmax pmax
comp=Z,21nm,0.8s,mb5.1
SGMF Saint Gilles 80.76 2⇑*i*P **P 00 40 08.9 -0.3**
comp=Z,21nm,0.8s,mb5.1
HAU Haudompre 80.91 356⇑*i*P **P 00 40 09.6 -0.4**
comp=Z,22nm,0.9s,mb4.8
HAU Haudompre 80.91 356⇑P **P 00 40 09.6 -0.4**
HAU pmax pmax
comp=Z,11nm,0.9s,mb4.8
HAU Haudompre 80.91 356⇑*i*P **P 00 40 09.6 -0.4**
comp=Z,11nm,0.9s,mb4.8
ARSA Arzberg 80.94 350⇑*i*P **P 00 40 10.7 +0.6**
comp=Z,9.4nm,0.7s,mb4.8,SNR=13
ARSA Arzberg 80.94 350⇑P **P 00 40 10.7 +0.6**
comp=Z,9.4nm,0.7s,mb4.8
GNI Garni 81.01 327⇓*e*P **P 00 40 12.2 +1.7**
MLR Muntele Rosu 81.06 342⇑*i*P **P 00 40 12.6 +1.8**
MLR Muntele Rosu 81.06 342 P **P 00 40 12.4 +1.6**
HINF Hinteralfeld 81.07 356⇑*i*P **P 00 40 10.2 -0.7**
comp=Z,12nm,0.9s,mb4.5
HINF Hinteralfeld 81.07 356⇑P **P 00 40 10.2 -0.7**
HINF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
HINF Hinteralfeld 81.07 356⇑*i*P **P 00 40 10.2 -0.7**
comp=Z,6.0nm,0.9s,mb4.5
QUIF Quistinic 81.08 2 *e*P **P 00 40 10.5 -0.4**
comp=Z,68nm,1.2s,mb5.1
QUIF Quistinic 81.08 2 *e*P **P 00 40 10.5 -0.4**
QUIF pmax pmax
comp=Z,34nm,1.2s,mb5.2
QUIF Quistinic 81.08 2 *e*P **P 00 40 10.5 -0.4**
comp=Z,34nm,1.2s,mb5.2
WATA Walderalm 81.24 352⇑*i*P **P 00 40 11.9 +0.1**
comp=Z,16nm,1.1s,mb4.9
WATA Walderalm 81.24 352⇑P **P 00 40 11.9 +0.2**
WATA pmax pmax
comp=Z,16nm,1.1s,mb4.9
MOTA Moosalm 81.27 353⇓*i*P **P 00 40 11.8 -0.1**
comp=Z,18nm,1.2s,mb4.9,SNR=13
MOTA Moosalm 81.27 353⇓*i*P **P 00 40 11.8 -0.1**
MOTA pmax pmax
comp=Z,18nm,1.2s,mb4.9
VOIR 81.28 343⇓*i*P **P 00 40 13.3 +1.3**
VOIR 81.28 343⇓P **P 00 40 13.3 +1.3**
WTTA Wattenberg 81.31 352⇑*i*P **P 00 40 12.5 +0.4**
comp=Z,21nm,0.7s,mb5.2,SNR=10.0
WTTA Wattenberg 81.31 352⇑*i*P **P 00 40 12.5 +0.4**
WTTA pmax pmax
comp=Z,21nm,0.7s,mb5.2
KBA Koelnbreinsper 81.33 351 *i*P **P 00 40 13.0 +0.8**
comp=Z,44nm,0.6s,mb5.5,SNR=60
KBA Koelnbreinsper 81.33 351 *i*P **P 00 40 13.0 +0.7**
KBA pmax pmax
comp=Z,44nm,0.6s,mb5.6
SQTA Sankt Quirin 81.39 353⇑*i*P **P 00 40 12.7 +0.2**
comp=Z,14nm,1.1s,mb4.8,SNR=11
SQTA Sankt Quirin 81.39 353⇑*i*P **P 00 40 12.7 +0.2**
SQTA pmax pmax
comp=Z,14nm,1.1s,mb4.8
PKSM Moragy 81.57 347⇓*i*P **P 00 40 13.3 -0.2**
PKSM Moragy 81.57 347 P **P 00 40 13.0 -0.5**
PERS Pernice 81.59 350 *i*P **P 00 40 13.9 +0.3**
WRAB Tennant Creek 81.63 223 *e*P **P 00 40 12.0 -1.8**
WRAB pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
WRAB Tennant Creek 81.63 223 *e*P **P 00 40 12.0 -1.8**
comp=Z,9.2nm,1.1s,mb4.6
WB2 Warramunga Arr 81.63 223 *e*P **P 00 40 12.6 -1.2**
WRA Warramunga Arr 81.64 223 P **P 00 40 12.7 -1.2**
comp=Z,2.2nm,0.9s,mb4.1,baz=32,slow=5.6,SNR=12
BZS Buzias 81.70 345⇑*i*P **P 00 40 14.4 +0.2**
BZS Buzias 81.70 345 P **P 00 40 14.3 +0.1**
GZR Gura Zlata 81.73 344⇓*i*P **P 00 40 15.1 +0.8**
GZR Gura Zlata 81.73 344 P **P 00 40 14.8 +0.4**
LOR Lormes 81.73 358⇑*i*P **P 00 40 14.1 -0.2**
comp=Z,32nm,1.2s,mb4.8
LOR Lormes 81.73 358⇑P **P 00 40 14.1 -0.2**
LOR pmax pmax
comp=Z,16nm,1.2s,mb4.8
LOR Lormes 81.73 358⇑*i*P **P 00 40 14.1 -0.2**
comp=Z,16nm,1.2s,mb4.8
HYF Humbligny 81.76 358⇑*i*P **P 00 40 14.5 0.0**
OBKA Obir 81.78 350⇓*i*P **P 00 40 15.4 +0.8**
comp=Z,14nm,0.7s,mb5.0,SNR=20
FVI Forni Avoltri 81.87 351 *i*P **P 00 40 15.7 +0.6**
FVI pmax pmax
comp=Z,17nm,1.3s,mb4.8
FVI Forni Avoltri 81.87 351 *i*Pu **P 00 40 15.7 +0.6**
comp=Z,16nm,1.3s,mb4.8
SSF Saint Saulge 81.95 358⇑*i*P **P 00 40 15.2 -0.3**
comp=Z,11nm,0.7s,mb4.6
SSF Saint Saulge 81.95 358⇑*i*P **P 00 40 15.2 -0.3**
SSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
SSF Saint Saulge 81.95 358⇑*i*P **P 00 40 15.2 -0.3**
comp=Z,5.7nm,0.7s,mb4.6
PTCC Patocco-Chiusa 82.00 351 *i*Pr **P 00 40 15.3 -0.5**
comp=Z,8.6nm,0.8s,mb4.7
CADS Cadrg 82.14 351 *e*P **P 00 40 15.5 -1.0**
BRMO Bormio 82.19 353 *i*Pr **P 00 40 17.7 +0.9**
AVF Avril sur Loir 82.22 358⇑*i*P **P 00 40 16.6 -0.3**
comp=Z,27nm,1.1s,mb4.8
AVF Avril sur Loir 82.22 358⇑*i*P **P 00 40 16.6 -0.3**
AVF pmax pmax
comp=Z,13nm,1.1s,mb4.8
AVF Avril sur Loir 82.22 358⇑*i*P **P 00 40 16.6 -0.3**
comp=Z,13nm,1.1s,mb4.8
CABF La Chapelle 82.31 356⇑*i*P **P 00 40 17.5 +0.1**
comp=Z,12nm,0.8s,mb4.6
CABF La Chapelle 82.31 356⇑*i*P **P 00 40 17.5 +0.1**
CABF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CABF La Chapelle 82.31 356⇑*i*P **P 00 40 17.5 +0.1**
comp=Z,5.9nm,0.8s,mb4.6
CRES Cresnjev 82.35 349 *e*P **P 00 40 17.0 -0.6**
SMF Signal de Mont 82.35 358⇑*i*P **P 00 40 17.3 -0.3**
comp=Z,30nm,0.9s,mb4.9
SMF Signal de Mont 82.35 358⇑*i*P **P 00 40 17.3 -0.3**
SMF pmax pmax
comp=Z,15nm,0.9s,mb4.9
SMF Signal de Mont 82.35 358⇑*i*P **P 00 40 17.3 -0.3**
comp=Z,15nm,0.9s,mb4.9
BGF Bois d'Agland 82.46 358 *e*P **P 00 40 18.0 -0.2**
CTI Castel Tesino 82.51 352 *i*P **P 00 40 18.2 -0.2**
CTI Castel Tesino 82.51 352 *i*Pr **P 00 40 18.2 -0.2**
CEY Cerknica 82.55 350 *e*P **P 00 40 18.0 -0.6**
BOJS Bojanci 82.69 350 *e*P **P 00 40 18.8 -0.6**
TCF Toulx Ste Croi 82.74 359⇑*i*P **P 00 40 19.3 -0.4**
comp=Z,16nm,0.8s,mb4.8
TCF Toulx Ste Croi 82.74 359⇑*i*P **P 00 40 19.3 -0.4**
TCF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
TCF Toulx Ste Croi 82.74 359⇑*i*P **P 00 40 19.3 -0.4**
comp=Z,7.8nm,0.8s,mb4.8
DIVS Divcibare 83.44 346⇓*i*P **P 00 40 22.5 -0.7**
DIVS Divcibare 83.44 346 *i*P **P 00 40 24.1 +0.9**
GRUS Gruza 83.53 345 *i*P **P 00 40 23.2 -0.5**
RJF Les Rejaudoux 83.73 359⇑*i*P **P 00 40 24.3 -0.5**
comp=Z,27nm,1.1s,mb5.0
RJF Les Rejaudoux 83.73 359⇑*i*P **P 00 40 24.3 -0.5**
RJF pmax pmax
comp=Z,13nm,1.1s,mb5.0
RJF Les Rejaudoux 83.73 359⇑*i*P **P 00 40 24.3 -0.5**
comp=Z,13nm,1.1s,mb5.0
HYB Hyderabad 83.76 290 *i*P **P 00 40 25.0 +0.1**
HYB Hyderabad 83.76 290 *e*P **P 00 40 25.0 +0.1**
BNI Bardonecchia 83.84 356 *e*P **P 00 40 26.3 +1.0**
BNI pmax pmax
comp=Z,21nm,1.1s,mb5.2
BNI Bardonecchia 83.84 356 *e*P **P 00 40 26.3 +1.0**
comp=Z,22nm,1.1s,mb5.2
BOB Bobbio (Coli) 83.96 354 *i*P **P 00 40 26.6 +0.7**
BOB Bobbio (Coli) 83.96 354 *i*Pu **P 00 40 26.6 +0.7**
ORIF Oris-en-Rattie 84.01 356 *e*P **P 00 40 26.8 +0.6**
comp=Z,19nm,0.9s,mb4.9
ORIF Oris-en-Rattie 84.01 356 *e*P **P 00 40 26.8 +0.6**
ORIF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
ORIF Oris-en-Rattie 84.01 356 *e*P **P 00 40 26.8 +0.6**
comp=Z,9.6nm,0.9s,mb4.9
FITZ Fitzroy Crossi 84.05 231⇑*i*P **P 00 40 26.0 -0.4**
comp=Z,8.2nm,0.5s,mb5.1
LFF La Frestale 84.11 360⇑*i*P **P 00 40 26.5 -0.2**
comp=Z,26nm,0.7s,mb5.2
LFF La Frestale 84.11 360⇑*i*P **P 00 40 26.5 -0.2**
LFF pmax pmax
comp=Z,13nm,0.7s,mb5.2
LFF La Frestale 84.11 360⇑*i*P **P 00 40 26.5 -0.2**
comp=Z,13nm,0.7s,mb5.2
CAF Calviac 84.11 359⇑*i*P **P 00 40 26.7 0.0**
comp=Z,23nm,0.9s,mb5.0
CAF Calviac 84.11 359⇑*i*P **P 00 40 26.7 0.0**
CAF pmax pmax
comp=Z,12nm,0.9s,mb5.0
CAF Calviac 84.11 359⇑*i*P **P 00 40 26.7 0.0**
comp=Z,12nm,0.9s,mb5.0
VIVF Saint-Julien-l 84.12 357⇑*i*P **P 00 40 26.9 +0.2**
comp=Z,12nm,0.9s,mb4.7
VIVF Saint-Julien-l 84.12 357⇑*i*P **P 00 40 26.9 +0.2**
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
VIVF Saint-Julien-l 84.12 357⇑*i*P **P 00 40 26.9 +0.2**
comp=Z,6.0nm,0.9s,mb4.7
MBDF Montbardon 84.16 355⇑*i*P **P 00 40 27.5 +0.6**
comp=Z,26nm,0.9s,mb5.1
MBDF Montbardon 84.16 355⇑*i*P **P 00 40 27.5 +0.6**
MBDF pmax pmax
comp=Z,13nm,0.9s,mb5.1
MBDF Montbardon 84.16 355⇑*i*P **P 00 40 27.5 +0.6**
comp=Z,13nm,0.9s,mb5.1
ZCCA Zocca 84.25 352 *i*Pu **P 00 40 29.0 +1.6**
comp=Z,12nm,0.6s,mb5.2
VTS Vitosha 84.37 343⇓*i*P **P 00 40 28.3 +0.3**
VTS Vitosha 84.37 343 P **P 00 40 28.2 +0.2**
SEI Scarperia 84.52 352 P **P 00 40 29.9 +1.2**
comp=Z,50nm,0.6s,mb5.8
SFI Santa Sofia 84.62 352 *i*P **P 00 40 30.3 +1.0**
SFI pmax pmax
comp=Z,48nm,1.2s,mb5.5
SFI Santa Sofia 84.62 352 *i*Pu **P 00 40 30.3 +1.0**
comp=Z,48nm,1.2s,mb5.5
MALT Malatya 84.72 331⇓*i*P **P 00 40 31.0 +1.2**
MALT Malatya 84.72 331 P **P 00 40 30.7 +0.9**
BR131 Keskin Array S 84.78 335 *e*P **P 00 40 29.7 -0.3**
comp=Z,5.3nm,0.8s,mb4.7
BRTR Keskin Array B 84.78 335 P **P 00 40 30.3 +0.2**
comp=Z,5.9nm,0.8s,mb4.8,baz=49,slow=2.9,SNR=43
BRTR Keskin Array B 84.78 335 P **P 00 40 30.3 +0.2**
BRTR pmax pmax
comp=Z,6.0nm,0.8s
SMRF Simiane la Rot 84.96 356⇑*i*P **P 00 40 31.7 +0.7**
comp=Z,76nm,1.2s,mb5.4
SMRF Simiane la Rot 84.96 356⇑*i*P **P 00 40 31.7 +0.7**
comp=Z,76nm,1.2s,mb5.7
SBF Sospel 84.98 355 *e*P **P 00 40 30.8 -0.3**
comp=Z,85nm,1.0s,mb5.5
SBF Sospel 84.98 355 *e*P **P 00 40 30.8 -0.3**
SBF pmax pmax
comp=Z,42nm,1.0s,mb5.5
SBF Sospel 84.98 355 *e*P **P 00 40 30.8 -0.3**
comp=Z,42nm,1.0s,mb5.5
CDCA Citt' di Caste 85.03 351 P **P 00 40 31.9 +0.6**
comp=Z,92nm,1.2s,mb5.8
CSNT Castellina Chi 85.10 352 P **P 00 40 31.2 -0.5**
ASAR Alice Springs 85.12 222 P **P 00 40 31.4 -0.4**
comp=Z,1.5nm,0.7s,mb4.2,baz=25,slow=5.6,SNR=24
FRF La Foret Royal 85.33 355⇑*i*P **P 00 40 32.6 -0.2**
comp=Z,26nm,0.8s,mb5.1
FRF La Foret Royal 85.33 355⇑*i*P **P 00 40 32.6 -0.2**
FRF pmax pmax
comp=Z,13nm,0.8s,mb5.1
FRF La Foret Royal 85.33 355⇑*i*P **P 00 40 32.6 -0.2**
comp=Z,13nm,0.8s,mb5.1
ASS Assisi 85.38 351 P **P 00 40 33.4 +0.3**
GRFL Gerfalco 85.45 352 *i*Pu **P 00 40 33.1 -0.3**
EPON Pontenova 85.49 6 P **P 00 40 30.2 -3.4**
comp=Z,64nm,2.0s,mb5.4
LMR La Mourre 85.56 356⇑*i*P **P 00 40 33.9 -0.1**
comp=Z,25nm,0.8s,mb5.2
LMR La Mourre 85.56 356⇑*i*P **P 00 40 33.9 -0.1**
LMR pmax pmax
comp=Z,13nm,0.8s,mb5.2
LMR La Mourre 85.56 356⇑*i*P **P 00 40 33.9 -0.1**
comp=Z,13nm,0.8s,mb5.2
EARI Arriondas 85.62 4 P **P 00 40 29.4 -4.9**
comp=Z,64nm,1.6s,mb5.6
MTLF Montlieu 85.69 359⇑*i*P **P 00 40 34.7 +0.1**
comp=Z,28nm,1.0s,mb5.1
MTLF Montlieu 85.69 359⇑P **P 00 40 34.7 +0.1**
MTLF pmax pmax
comp=Z,14nm,1.0s,mb5.2
MTLF Montlieu 85.69 359⇑*i*P **P 00 40 34.7 +0.1**
comp=Z,14nm,1.0s,mb5.1
ELAN Lanestosa 85.75 3 P **P 00 40 31.5 -3.5**
comp=Z,52nm,1.7s,mb5.5
EALK Alkurruntz 85.81 1 P **P 00 40 35.5 +0.3**
comp=Z,66nm,2.4s,mb5.4
SJPF Ste Jean 85.92 1⇑*i*P **P 00 40 36.2 +0.4**
comp=Z,15nm,0.7s,mb5.1
SJPF Ste Jean 85.92 1⇑P **P 00 40 36.2 +0.4**
SJPF pmax pmax
comp=Z,8.0nm,0.7s,mb5.1
SJPF Ste Jean 85.92 1⇑*i*P **P 00 40 36.2 +0.4**
comp=Z,7.6nm,0.7s,mb5.0
AQU L'Aquila 86.01 350⇑*i*P **P 00 40 37.1 +0.9**
AQU L'Aquila 86.01 350⇑P **P 00 40 37.1 +0.9**
EPF Esparros 86.01 0 *e*P **P 00 40 35.5 -0.7**
comp=Z,12nm,0.9s,mb4.8
EPF Esparros 86.01 0 *e*P **P 00 40 35.5 -0.7**
EPF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
EPF Esparros 86.01 0 *e*P **P 00 40 35.5 -0.7**
comp=Z,5.9nm,0.9s,mb4.8
ETSF Etsaut 86.14 1⇑*i*P **P 00 40 37.2 +0.3**
comp=Z,16nm,0.6s,mb5.1
ETSF Etsaut 86.14 1⇑*i*P **P 00 40 37.2 +0.3**
ETSF pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
ETSF Etsaut 86.14 1⇑*i*P **P 00 40 37.2 +0.3**
comp=Z,7.8nm,0.6s,mb5.1
PGF Pioggiola 86.20 354⇑*i*P **P 00 40 37.0 -0.1**
comp=Z,30nm,0.8s,mb5.3
PGF Pioggiola 86.20 354⇑*i*P **P 00 40 37.0 -0.1**
PGF pmax pmax
comp=Z,15nm,0.8s,mb5.3
PGF Pioggiola 86.20 354⇑*i*P **P 00 40 37.0 -0.1**
comp=Z,15nm,0.8s,mb5.3
EBIE Bielsa 86.36 0 P **P 00 40 36.5 -1.4**
comp=Z,21nm,1.2s,mb5.2
GUD Guadarrama 88.31 3 P **P 00 40 44.9 -2.5**
GUD pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
GUD Guadarrama 88.31 3 P **P 00 40 44.9 -2.5**
comp=Z,6.8nm,1.0s,mb4.8
ESDC Sonseca Array 89.29 3 P **P 00 40 51.2 -0.8**
comp=Z,3.9nm,0.6s,mb4.7,baz=349,slow=4.5,SNR=19
ESDC Sonseca Array 89.29 3 P **P 00 40 50.1 -1.9**
comp=Z,4.3nm,0.6s,mb5.0
STKA Stephens Creek 89.62 212 P **P 00 40 53.2 -0.3**
comp=Z,6.3nm,0.9s,mb4.9,baz=16,slow=3.4,SNR=6.5
EVIA Vianos 90.36 2 P **P 00 40 54.8 -2.2**
EVIA pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
EVIA Vianos 90.36 2 P **P 00 40 54.8 -2.2**
comp=Z,5.6nm,0.9s,mb4.9
EADA Adamuz 90.76 4 P **P 00 40 55.8 -3.0**
comp=Z,7.5nm,1.0s,mb5.0
EBAN Banos Encina 90.80 3 P **P 00 40 56.2 -2.8**
EBAN pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
EBAN Banos Encina 90.80 3 P **P 00 40 56.2 -2.8**
comp=Z,5.7nm,0.8s,mb5.0
EHUE Huescar 91.19 2 P **P 00 40 57.9 -2.9**
EHUE pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
EHUE Huescar 91.19 2 P **P 00 40 57.9 -2.9**
comp=Z,2.5nm,0.8s,mb4.6
ELOJ Sierra Loja 91.80 4 P **P 00 41 02.7 -1.0**
ELOJ pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
ELOJ Sierra Loja 91.80 4 P **P 00 41 02.7 -1.0**
comp=Z,4.4nm,1.0s,mb4.7
ERON Agron 91.94 3 P **P 00 41 02.6 -1.7**
comp=Z,0.7nm,0.6s,mb4.2
ESPR Espera 92.00 5 P **P 00 41 02.9 -1.6**
comp=Z,22nm,1.2s,mb5.4
ENIJ Nijar 92.03 2 P **P 00 41 03.3 -1.4**
ENIJ pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
ENIJ Nijar 92.03 2 P **P 00 41 03.3 -1.5**
comp=Z,3.5nm,0.6s,mb4.9
EMIJ Mijas 92.35 4 P **P 00 41 04.1 -2.1**
comp=Z,12nm,1.0s,mb5.2
KEST Kesra 92.95 353 P **P 00 41 08.5 -0.5**
comp=Z,0.7nm,0.6s,mb4.3,baz=333,slow=3.5,SNR=5.9
TORD Torodi Ar. Bea 115.78 359 PKP PKPdf 00 46 37.0 -1.3
comp=Z,0.6nm,0.7s,baz=351,slow=2.3,SNR=12
KMBO Kilima Mbogo 121.14 316 PKP PKPdf 00 46 48.4 -0.2
comp=Z,0.6nm,0.7s,baz=241,slow=24,SNR=3.4
DBIC Dimbokro 122.05 6 PKP PKPdf 00 46 49.3 -1.0
comp=Z,3.4nm,0.7s,baz=267,slow=3.5,SNR=15
DBIC Dimbokro 122.05 6 PKIKP PKPdf 00 46 49.3 -1.0
DBIC pmax pmax
comp=Z,3.0nm,0.7s
PLCA Paso Flores 131.43 107 PKP PKPdf 00 47 06.8 -1.5
comp=Z,2.7nm,0.6s,baz=287,slow=2.4,SNR=7.1
PLCA Paso Flores 131.43 107 PKIKP PKPdf 00 47 06.8 -1.4
PLCA pmax pmax
comp=Z,3.0nm,0.6s
TSUM Tsumeb 145.18 331 *e*PKP PKPdf 00 47 32.8 -0.5
MAW Mawson 146.15 218 PKPbc PKPbc 00 47 33.7 -2.2
comp=Z,2.8nm,0.5s,baz=94,slow=4.0,SNR=12
LBTB Lobatse 147.40 314 *e*PKIKP PKPdf 00 47 39.9 +2.8
BOSA Boshof 150.63 311 PKPbc PKPbc 00 47 47.7 0.0
comp=Z,7.4nm,0.7s,baz=29,slow=3.7,SNR=17
BOSA Boshof 150.63 311 *e*PKPbc PKPbc 00 47 47.6 -0.1

NEIC ***27*** *00:28:13.9, 19.18N×63.49W, h25km, MD3.9(RSPR), After RSPR.*

RSPR 27 00:28:13.9, 1918N×6349W, h25km±30km**, MD3.9**/12**, MD3.9**/12**, 35C-13D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**0.92**	**241**⇑	*e*P	Pb	00 28 28.4	-2.7
ABV	**Anegada**	**0.92**	**241**	*e*P	Pb	00 28 28.3	-2.9
ABV	**Anegada**	**0.92**	**241**	*e*S	Sb	00 28 40.1	-2.8
STMA	**St. Maarten, A**	**1.19**	**162**	*e*P	Pn	00 28 32.9	-2.0
STMA				*e*S	Sn	00 28 43.9	-6.3
TBVI	**Tortola**	**1.31**	**235**⇑	*e*P	Pn	00 28 33.3	-3.3
TBVI	**Tortola**	**1.31**	**235**	*e*S	Sn	00 28 49.7	-3.6
TBVI	**Tortola**	**1.31**	**235**⇑	*e*P	Pn	00 28 33.4	-3.2
TBVI	**Tortola**	**1.31**	**235**	*e*S	Sn	00 28 50.2	-3.0

TBVI	**Tortola**	**1.31**	**235**⇑	*e*P		Pn	00 28 33.4	-3.2
TBVI				eS		Sn	00 28 50.2	-3.0
STVI	**Saint Thomas**	**1.61**	**240**⇑	*e*P		Pn	00 28 38.5	-2.3
STVI	**Saint Thomas**	**1.61**	**240**	eS		Sn	00 28 59.0	-1.8
STVI	**Saint Thomas**	**1.61**	**240**⇑	*e*P		Pn	00 28 38.5	-2.3
STVI	**Saint Thomas**	**1.61**	**240**	eS		Sn	00 28 57.9	-2.9
STVI	**Saint Thomas**	**1.61**	**240**⇑	*e*P		Pn	00 28 38.5	-2.3
STVI				eS		Sn	00 28 57.9	-2.9
CULB	**Culebra**	**1.94**	**243**⇑	*e*P		Pn	00 28 43.2	-2.0
CULB	**Culebra**	**1.94**	**243**	eS		Sn	00 29 06.7	-2.1
CULB	**Culebra**	**1.94**	**243**	eS		Sn	00 29 06.5	-2.3
MTP	**Monte Pirata**	**2.23**	**242**⇑	*e*P		Pn	00 28 47.5	-1.8
MTP	**Monte Pirata**	**2.23**	**242**	eS		Sn	00 29 14.5	-1.6
MTP	**Monte Pirata**	**2.23**	**242**⇓	*e*P		Pn	00 28 47.8	-1.6
MTP	**Monte Pirata**	**2.23**	**242**	eS		Sn	00 29 12.8	-3.2
MTP	**Monte Pirata**	**2.23**	**242**⇓	*e*P		Pn	00 28 47.8	-1.6
MTP				eS		Sn	00 29 12.8	-3.2
CBYP	**Canovanas**	**2.42**	**248**⇑	*e*P		Pn	00 28 50.5	-1.3
CBYP	**Canovanas**	**2.42**	**248**	eS		Sn	00 29 18.0	-2.6
CBYP	**Canovanas**	**2.42**	**248**⇑	*e*P		Pn	00 28 50.6	-1.3
CBYP	**Canovanas**	**2.42**	**248**	eS		Sn	00 29 17.9	-2.7
CBYP	**Canovanas**	**2.42**	**248**⇑	*e*P		Pn	00 28 50.6	-1.3
CBYP				eS		Sn	00 29 17.9	-2.7
HUMP	**Col San Antoni**	**2.46**	**246**⇑	*e*P		Pn	00 28 50.7	-1.7
HUMP	**Col San Antoni**	**2.46**	**246**	eS		Sn	00 29 19.5	-2.2
HUMP	**Col San Antoni**	**2.46**	**246**⇑	*e*P		Pn	00 28 50.7	-1.8
HUMP	**Col San Antoni**	**2.46**	**246**	eS		Sn	00 29 19.5	-2.3
HUMP	**Col San Antoni**	**2.46**	**246**⇑	*e*P		Pn	00 28 50.7	-1.8
HUMP				eS		Sn	00 29 19.5	-2.3
CPD	**Cerro la Pandu**	**2.57**	**244**⇑	*e*P		Pn	00 28 52.7	-1.2
CPD	**Cerro la Pandu**	**2.57**	**244**	eS		Sn	00 29 21.6	-2.7
CPD	**Cerro la Pandu**	**2.57**	**244**⇑	*e*P		Pn	00 28 52.7	-1.2
CPD	**Cerro la Pandu**	**2.57**	**244**	eS		Sn	00 29 22.0	-2.3
CPD	**Cerro la Pandu**	**2.57**	**244**⇑	*e*P		Pn	00 28 52.7	-1.2
CPD				eS		Sn	00 29 22.0	-2.3
SJG	**San Juan**	**2.74**	**248**	*e*Pn		Pn	00 28 54.5	-1.7
SJG				eSn		Sn	00 29 26.6	-1.9
CELP	**Cerrillos**	**3.13**	**250**⇓	*e*P		Pn	00 29 00.5	-1.2
CELP				eS		Sn	00 29 36.3	-1.9
CELP	**Cerrillos**	**3.13**	**250**⇓	*e*P		Pn	00 29 00.4	-1.2
CELP	**Cerrillos**	**3.13**	**250**⇓	*e*P		Pn	00 29 00.4	-1.2
ICM	**Isla Caja Muer**	**3.15**	**247**⇑	*e*P		Pn	00 29 01.2	-0.7
ICM	**Isla Caja Muer**	**3.15**	**247**⇓	*e*P		Pn	00 29 02.4	+0.5
ICM	**Isla Caja Muer**	**3.15**	**247**⇓	*e*P		Pn	00 29 02.4	+0.5
OBIP	**Obispado Ponce**	**3.17**	**250**⇑	*e*P		Pn	00 29 00.8	-1.3
OBIP	**Obispado Ponce**	**3.17**	**250**	eS		Sn	00 29 37.0	-2.0
OBIP	**Obispado Ponce**	**3.17**	**250**⇑	*e*P		Pn	00 29 00.8	-1.3
OBIP	**Obispado Ponce**	**3.17**	**250**	eS		Sn	00 29 36.3	-2.8
OBIP	**Obispado Ponce**	**3.17**	**250**⇑	*e*P		Pn	00 29 00.8	-1.3
OBIP				eS		Sn	00 29 36.3	-2.8
AOPR	**Arecibo Observ**	**3.20**	**256**⇑	*e*P		Pn	00 29 00.9	-1.8
AOPR	**Arecibo Observ**	**3.20**	**256**	eS		Sn	00 29 38.8	-1.2
AOPR	**Arecibo Observ**	**3.20**	**256**⇓	*e*P		Pn	00 29 01.3	-1.4
AOPR	**Arecibo Observ**	**3.20**	**256**	eS		Sn	00 29 36.4	-3.6
AOPR	**Arecibo Observ**	**3.20**	**256**⇓	*e*P		Pn	00 29 01.3	-1.4
AOPR				eS		Sn	00 29 36.4	-3.6
LRS	**Lares**	**3.30**	**255**⇑	*e*P		Pn	00 29 02.5	-1.4
LRS	**Lares**	**3.30**	**255**⇑	*e*P		Pn	00 29 02.0	-2.0
LRS	**Lares**	**3.30**	**255**⇑	*e*P		Pn	00 29 02.0	-2.0
LZG	**Guadaloupe-1**	**3.44**	**151**	*e*P		Pn	00 29 02.4	-3.4
AGPR	**Aguadilla, PR**	**3.50**	**259**	eS		Sn	00 29 45.2	-2.2
AGPR	**Aguadilla, PR**	**3.50**	**259**⇑	*e*P		Pn	00 29 05.3	-1.5
AGPR	**Aguadilla, PR**	**3.50**	**259**	eS		Sn	00 29 44.0	-3.4
AGPR	**Aguadilla, PR**	**3.50**	**259**⇓	*e*P		Pn	00 29 05.1	-1.6
AGPR	**Aguadilla, PR**	**3.50**	**259**⇓	*e*P		Pn	00 29 05.1	-1.6
AGPR				eS		Sn	00 29 44.0	-3.4
LSP	**Las Mesas**	**3.55**	**254**	eS		Sn	00 29 46.8	-1.8
LSP	**Las Mesas**	**3.55**	**254**⇑	*e*P		Pn	00 29 06.3	-1.1
LSP	**Las Mesas**	**3.55**	**254**	eS		Sn	00 29 46.4	-2.2
LSP	**Las Mesas**	**3.55**	**254**⇓	*e*P		Pn	00 29 06.5	-1.0
LSP	**Las Mesas**	**3.55**	**254**⇓	*e*P		Pn	00 29 06.5	-1.0
LSP				eS		Sn	00 29 46.4	-2.2
MGP	**Maguayo**	**3.61**	**252**⇑	*e*P		Pn	00 29 07.0	-1.2
MGP	**Maguayo**	**3.61**	**252**⇑	*e*P		Pn	00 29 07.1	-1.1
MGP	**Maguayo**	**3.61**	**252**⇑	*e*P		Pn	00 29 07.1	-1.1
CRPR	**Cabo Rojo, PR**	**3.63**	**252**	eS		Sn	00 29 48.6	-1.8
CRPR	**Cabo Rojo, PR**	**3.63**	**252**⇑	*e*P		Pn	00 29 07.3	-1.2
CRPR	**Cabo Rojo, PR**	**3.63**	**252**⇑	*e*P		Pn	00 29 07.2	-1.3
CRPR	**Cabo Rojo, PR**	**3.63**	**252**⇑	*e*P		Pn	00 29 07.2	-1.3

CSEM ***27*** *00:37:55.4±0.5, 3701N×2456W, h0km, ML2.1, Error ellipse: s-maj=4.7km s-min=2.3km az=109.0, After PDA*
PDA ***27*** *00:37:55.4±0.5, 3701N×2456W, h0km, MD2.8, ML2.1, Error ellipse: s-maj=4.7km s-min=2.3km az=109.0*

SVSA 27 00:37:55.4±0.5, 3701N×2456W, h0km, MD2.8, ML2.1, Error ellipse: s-maj=4.7km s-min=2.3km az=109.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.41**	**269**	*e*P	Pg	00 38 03.0	-0.2
PSMN				eS	Sg	00 38 08.6	+0.1
MIRA	**Miradouro**	**0.96**	**324**	*e*P	Pg	00 38 11.2	-2.7
MIRA				eS	Sg	00 38 23.1	-3.3
VIF	**Vila Franca**	**1.02**	**316**	eS	Sg	00 38 24.6	-3.5
VIF							
	14nm,0.1s						
PRCH	**Ribeira Ch**	**1.03**	**314**	eS	Sg	00 38 24.7	-3.7
PRCH							
	27nm,0.1s						
PFAD	**Fenais da Ajud**	**1.03**	**324**	eS	Sg	00 38 24.9	-3.6
MESC	**Monte Escuro**	**1.05**	**318**	eS	Sg	00 38 25.3	-4.0
PMAT	**Coroa da Mata**	**1.09**	**318**	eS	Sg	00 38 26.0	-4.3
PMAT							
	12nm,0.2s						
CML	**Cha da Macela**	**1.09**	**314**	*e*P	Pg	00 38 13.3	-3.1
CML				eS	Sg	00 38 26.5	-4.1
FAC	**Faja de Cima**	**1.16**	**311**	eS	Sg	00 38 28.0	-4.6

MAN 27 00:51:36.2, 1283N×12105E, h1km, mb2.5, ML4.0, MS3.5, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.68**	**352**	*e*P	Pg	00 51 49.0	-0.1
BOAC	**Boac**	**1.00**	**51**	*e*P	Pg	00 51 53.8	-1.5
BOAC				eS	Sg	00 52 08.4	+0.2
OTRP	**Odiongan**	**1.06**	**116**	*e*P	Pg	00 51 56.6	+0.2
BUSP	**Coron**	**1.17**	**225**	*e*P	Pg	00 52 00.5	+1.9
BUSP				eS	Sg	00 52 17.1	+3.4
LUBP	**Lubang**	**1.19**	**319**	*e*P	Pg	00 51 59.3	-0.8
AUQP	**San Andres**	**1.66**	**73**	*e*P	Pn	00 52 06.7	+0.3
CUYO	**Cuyo Island**	**1.97**	**181**	*e*P	Pn	00 52 11.1	+0.5
POLP	**Polilio Island**	**2.08**	**25**	*e*P	Pn	00 52 13.3	+1.1
ENPP	**El Nido**	**2.26**	**225**	*e*P	Pn	00 52 16.2	+1.5
BALP	**Baler**	**2.94**	**10**	*e*P	Pn	00 52 25.9	+1.8
BOLP	**Bolinao**	**3.70**	**343**	*e*P	Pn	00 52 37.7	+3.2

BJI ***27*** *01:06:50.2, 5180N×17899W, h5km, mB4.8, mb4.6, Ms4.4, Msz4.1*
IDC ***27*** *01:06:51.6±0.8, 5137N×17960W, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.3/24, mbtmp4.2/18, ML4.9/1, Error ellipse: s-maj=23.7km s-min=15.9km az=168.0*
NEIC ***27*** *01:06:54.5, 5106N×17943W, h5km, mb4.5/45, ML4.2(AEIC), After AEIC.*
MOS ***27*** *01:06:55.8±0.9, 5139N×17955W, h33km, mb4.7/33, Error ellipse: s-maj=13.5km s-min=6.7km az=87.2*
ISCJB ***27*** *01:06:57.1±0.7, 5141N±008×17945W±004, h42km±6km, mb4.4/67, MS4.2/1, Error ellipse: s-maj=12.8km s-min=4.4km az=175.9*

ISC 27 01:06:58.8±0.7, 5150N±008×17947W±004, h44km±6km, n196, n0ẽ92/199, mb4.4/67, MS4.2/1, 9C-5D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.78**	**262**⇓	*i*Pn	**Pn**	**01 07 11.2**	**-2.3**
AMKA				eSn	**Sn**	**01 07 22.1**	**-1.8**
AMKA				S	**Sn**	**01 07 22.5**	**-1.5**
ATKA	**Atka Island**	**3.34**	**76**	P	**Pn**	**01 07 49.1**	**+0.5**
SMY	**Shemya**	**4.15**	**290**	*e*Pn	**Pn**	**01 08 01.2**	**+1.5**
SMY				eSn	**Sn**	**01 08 47.8**	**+0.8**
NIKO	**Nikolski**	**6.69**	**73**	P	**Pn**	**01 08 35.6**	**+1.1**
SPIA	**Saint Paul Isl**	**7.83**	**40**	P	**Pn**	**01 08 54.7**	**+4.5**
KDAK	**Kodiak Island**	**16.71**	**57**	Pn	**Pn**	**01 10 47.2**	**-2.5**
	4.5nm,0.3s,baz=247,slow=5.3,SNR=23						
KDAK				Sn	**Sn**	**01 13 53.5**	**-0.7**
	0.2nm,0.3s,baz=186,slow=8.8,SNR=3.0						
KDAK	**Kodiak Island**	**16.71**	**57**	Pn	**Pn**	**01 10 47.2**	**-2.5**
KDAK				Sn	**Sn**	**01 13 53.5**	**-0.7**
TTA	**Tatalina**	**16.98**	**39**	*e*P	**Pn**	**01 10 55.5**	**+2.5**
TTA				pmax	pmax		
	comp=Z,15nm,1.0s						
TTA	**Tatalina**	**16.98**	**39**	*e*P	**Pn**	**01 10 55.5**	**+2.4**
	comp=Z,15nm,1.0s						
BILL	**Bilibino**	**17.99**	**343**	*de*P	**Pn**	**01 11 11.5**	**+5.9**
BILL				eS	**S**	**01 14 18.0**	**-12**
BILL				pmax	pmax		
	comp=Z,15nm,1.1s						
BILL				MLR	MLR		
	comp=Z,500nm,19.0s						
MCK	**McKinley**	**20.18**	**41**	*e*P	**P**	**01 11 30.6**	**+1.0**
MCK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MCK	**McKinley**	**20.18**	**41**	*e*P	**P**	**01 11 30.6**	**+0.9**
	comp=Z,2.2nm,0.4s						
DIV	**Divide**	**20.79**	**49**	*e*P	**P**	**01 11 37.7**	**+1.4**
	comp=Z,43nm,0.8s						
COLA	**College**	**21.08**	**38**	*e*P	**P**	**01 11 38.5**	**-0.8**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
COLA	**College**	**21.08**	**38**	*e*P	**P**	**01 11 38.5**	**-0.8**
	comp=Z,8.2nm,0.8s,mb4.1						
EGAK	**Eagle**	**23.73**	**41**	*e*P	**P**	**01 12 06.2**	**-0.7**
DAWY	**Dawson**	**24.31**	**43**	*e*P	**P**	**01 12 11.6**	**-0.5**
YSS	**Yuzh-Sakhalins**	**24.89**	**274**	*e*P	**P**	**01 12 18.5**	**+1.0**
INK	**Inuvik**	**27.60**	**35**	P	**P**	**01 12 42.4**	**+0.5**
	comp=Z,1.0nm,0.5s,mb3.7,baz=220,slow=12,SNR=4.6						
INK	**Inuvik**	**27.60**	**35**	*e*P	**P**	**01 12 42.7**	**+0.8**
INK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
INK	**Inuvik**	**27.60**	**35**	*e*P	**P**	**01 12 42.7**	**+0.7**
	comp=Z,2.2nm,1.0s,mb3.7						
KLR	**Kul'dur**	**30.75**	**285**	*e*P	**P**	**01 13 06.4**	**-3.4**
MDJ	**Mudanjiang**	**34.14**	**279**	P	**P**	**01 13 42.0**	**+2.5**
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,153nm,13.0s						
YKA	**Yellowknife Ar**	**35.45**	**46**	P	**P**	**01 13 50.2**	**-0.7**
	comp=Z,2.5nm,0.5s,mb4.4,baz=281,slow=7.0,SNR=18						
YKA	**Yellowknife Ar**	**35.45**	**46**	P	**P**	**01 13 50.2**	**-0.7**
LON	**Longmire**	**37.19**	**74**	*e*P	**P**	**01 14 06.7**	**+1.0**
BOD	**Bodaibo**	**37.57**	**306**	*e*P	**P**	**01 14 08.0**	**-0.9**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
HAWA	**Hanford**	**38.73**	**73**	*e*P	**P**	**01 14 19.2**	**+0.6**
NEW	**Newport**	**39.23**	**69**	*e*P	**P**	**01 14 22.0**	**-0.9**
NEW				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NEW	**Newport**	**39.23**	**69**	*e*P	**P**	**01 14 22.0**	**-0.8**
	comp=Z,4.9nm,0.8s,mb4.3						
YBH	**Yreka Blue Hor**	**39.28**	**81**	P	**P**	**01 14 24.3**	**+1.0**
	comp=Z,4.0nm,0.8s,mb4.2,baz=312,slow=5.7,SNR=8.7						
BSMT	**Bassoo Peak**	**40.80**	**69**	*e*P	**P**	**01 14 36.1**	**+0.3**
BMO	**Blue Mountains**	**40.86**	**74**	*e*P	**P**	**01 14 35.8**	**-0.6**
	comp=Z,1.6nm,0.7s,mb3.8						
WVOR	**Wild Horse Val**	**41.38**	**78**	*e*P	**P**	**01 14 41.1**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
WVOR	**Wild Horse Val**	**41.38**	**78**	*e*P	**P**	**01 14 41.1**	**+0.4**
	comp=Z,4.6nm,0.7s,mb4.2						
CHMT	**Chamberlain Mo**	**42.18**	**69**	*e*P	**P**	**01 14 45.9**	**-1.2**
HRY	**Holter Researc**	**43.11**	**69**	*e*P	**P**	**01 14 54.5**	**-0.2**
LRM	**Limekiln Ridge**	**43.23**	**70**	*e*P	**P**	**01 14 55.9**	**+0.2**
HLID	**Hailey**	**43.31**	**74**	*e*P	**P**	**01 14 55.1**	**-1.2**
MCMT	**McKenzie Canyo**	**43.54**	**71**	*e*P	**P**	**01 14 57.6**	**-0.5**
EGMT	**Eagleton**	**43.61**	**66**	*e*P	**P**	**01 14 57.6**	**-1.1**
	comp=Z,6.5nm,0.9s,mb4.4						
BOZ	**Bozeman (W)**	**43.80**	**70**	*e*P	**P**	**01 15 00.2**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
BOZ	**Bozeman (W)**	**43.80**	**70**	*e*P	**P**	**01 15 00.2**	**-0.1**
	comp=Z,8.5nm,0.8s,mb4.5						
QLMT	**Earthquake Lak**	**44.38**	**71**	*e*P	**P**	**01 15 05.2**	**+0.3**
GCMT	**Greycliff**	**44.87**	**69**	*e*P	**P**	**01 15 08.7**	**-0.1**
YFT	**Old Faithful**	**44.94**	**71**	*e*P	**P**	**01 15 11.7**	**+2.3**
HVU	**Hansel Valley**	**45.33**	**75**	*e*P	**P**	**01 15 14.2**	**+1.8**
HVU				*e*		01 16 58.7	
SONM	**Songino Array**	**46.22**	**296**	P	**P**	**01 15 19.1**	**-0.4**
	comp=Z,1.0nm,0.5s,mb4.0,baz=56,slow=7.5,SNR=6.5						
DUG	**Dugway**	**46.25**	**77**	*e*P	**P**	**01 15 20.2**	**+0.5**
ZAK	**Zakamensk**	**46.53**	**301**	*e*P	**P**	**01 15 20.7**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
BW06	**Boulder Array**	**46.67**	**72**	*e*P	**P**	**01 15 23.1**	**0.0**
	comp=Z,5.3nm,0.6s,mb4.7						
PDAR	**Pinedale Array**	**46.67**	**72**	P	**P**	**01 15 22.8**	**-0.2**
	comp=Z,5.2nm,0.5s,mb4.7,baz=318,slow=3.6,SNR=72						
GSC	**Goldstone**	**46.85**	**85**	*e*P	**P**	**01 15 28.1**	**+3.6**
MSU	**Marysvale**	**47.67**	**78**	*e*P	**P**	**01 15 31.6**	**+0.7**
TMUT	**Trail Mountain**	**47.78**	**77**	*e*P	**P**	**01 15 33.5**	**+1.8**
SRU	**San Rafael**	**48.31**	**76**	*e*P	**P**	**01 15 36.2**	**+0.4**
PV10	**Paradox Valley**	**49.67**	**76**	*e*P	**P**	**01 15 46.6**	**+0.4**
WUAZ	**Wupatki**	**50.08**	**81**	*e*P	**P**	**01 15 52.5**	**+3.2**
	comp=Z,8.0nm,0.9s,mb4.8						
PV01	**Paradox Valley**	**50.11**	**76**	*e*P	**P**	**01 15 49.2**	**-0.4**
LZH	**Lanzhou**	**54.95**	**286**	*e*P	**P**	**01 16 28.0**	**+2.7**
LZH				AP	pP	01 16 31.5	-6.3
LZH				XP	sP	01 16 33.5	-9.3
LZH				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,50nm,4.0s						
GTA	**Gaotai**	**55.13**	**291**	*e*P	**P**	**01 16 26.8**	**+0.1**
GTA				XP	sP	01 16 40.3	-3.9
GTA				PP	PP	01 18 31.8	+1.5
GTA				PCS	PcS	01 21 24.3	-3.2
GTA				S	**S**	**01 24 07.0**	**+0.6**
GTA				SCS	ScS	01 26 08.3	-3.9
GTA				SS	SS	01 27 53.5	+2.7
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.6						
GTA				AMB	AMB		
	comp=Z,179nm,8.0s						
GTA				LR	LR		
	comp=N,98nm,12.9s,MS4.2						
GTA				LR	LR		
	comp=E,82nm,12.9s,MS4.2						
GTA				LR	LR		
	comp=Z,114nm,12.9s,MS4.1						
MNTX	**Cornudas Mount**	**56.34**	**80**	*e*P	**P**	**01 16 35.4**	**+0.1**
	comp=Z,4.2nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	**57.90**	**350**	P	**P**	**01 16 44.8**	**-1.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=24,slow=9.1,SNR=9.1						
MKAR	**Makanchi Array**	**59.63**	**308**	P	**P**	**01 16 57.8**	**-0.6**
	comp=Z,1.3nm,0.3s,mb4.4,baz=46,slow=6.8,SNR=24						
SCHQ	**Schefferville**	**60.17**	**38**	P	**P**	**01 17 00.9**	**-1.2**
	comp=Z,4.2nm,0.6s,mb4.6,baz=336,slow=6.0,SNR=14						
BVAR	**Borovoye Array**	**60.53**	**319**	P	**P**	**01 17 03.8**	**-0.7**
	comp=Z,1.4nm,0.3s,mb4.5,baz=46,slow=6.3,SNR=10						
MIAR	**Mount Ida**	**61.48**	**70**	*e*P	**P**	**01 17 10.6**	**-0.3**
KMI	**Kunming**	**63.30**	**277**	P	**P**	**01 17 25.5**	**+2.4**
KMI				AP	pP	01 17 30.8	-4.9
KMI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb5.0						
WVT	**Waverly**	**63.66**	**65**	*e*P	**P**	**01 17 24.5**	**-1.0**
WVT				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WVT	**Waverly**	**63.66**	**65**	*e*P	**P**	**01 17 24.5**	**-1.0**
	comp=Z,2.3nm,0.6s,mb4.4						
PLAL	**Pickwick Lake**	**64.34**	**66**	*e*P	**P**	**01 17 28.8**	**-1.2**
	comp=Z,11nm,0.8s,mb4.9						
SWET	**Sewanee**	**65.39**	**64**	*e*P	**P**	**01 17 35.4**	**-1.4**
FINES	**FINESS Array B**	**65.57**	**347**	P	**P**	**01 17 36.0**	**-1.9**
	comp=Z,1.2nm,0.7s,mb4.0,baz=19,slow=7.4,SNR=12						
LRAL	**Lakeview Retre**	**66.37**	**66**	*e*P	**P**	**01 17 40.4**	**-2.7**
	comp=Z,4.8nm,0.8s,mb4.6						
AAK	**Ala-Archa**	**66.47**	**309**	*i* P	**P**	**01 17 44.4**	**+0.7**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
NB2	**NORSAR Subarra**	**67.49**	**354**	P	**P**	**01 17 49.6**	**-0.6**
	comp=Z,2.7nm,0.8s,mb4.3,baz=6.5,slow=6.5						
NOA	**NORSAR Array B**	**67.49**	**354**	P	**P**	**01 17 49.9**	**-0.3**
	comp=Z,2.1nm,0.6s,mb4.4,baz=6.9,slow=6.2,SNR=24						
GUN	**Gumba**	**71.42**	**291**	*e*P	**P**	**01 18 15.6**	**+1.1**
	comp=Z,27nm,0.4s,mb5.5						
KKN	**Kakani**	**71.86**	**292**	*e*P	**P**	**01 18 17.9**	**+0.8**
	comp=Z,20nm,0.7s,mb5.2						
KKN	**Kakani**	**71.86**	**292**	*e*P	**P**	**01 18 17.9**	**+0.8**
KKN				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
PKI	**Pulchoki**	**71.95**	**292**	*e*P	**P**	**01 18 18.0**	**+0.3**
	comp=Z,5.6nm,0.4s,mb4.8						
PKI	**Pulchoki**	**71.95**	**292**	*e*P	**P**	**01 18 18.0**	**+0.3**
PKI				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
GKN	**Gorkha**	**72.07**	**292**	*e*P	**P**	**01 18 19.0**	**+0.6**
	comp=Z,15nm,0.4s,mb5.2						
DMN	**Daman**	**72.10**	**292**	*e*P	**P**	**01 18 18.5**	**-0.1**
KOLN	**Koldanda**	**72.85**	**293**	*e*P	**P**	**01 18 23.4**	**+0.4**
AKASG	**Malin Array Be**	**75.30**	**342**	P	**P**	**01 18 36.5**	**-0.9**
	comp=Z,1.5nm,0.5s,mb4.2,baz=19,slow=5.7,SNR=16						
CLL	**Collm**	**77.03**	**352**	*i* P	**P**	**01 18 46.3**	**-0.8**
KWP	**Kalwaria**	**77.49**	**345**	*e*P	**P**	**01 18 49.9**	**+0.2**
KWP				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
KWP	**Kalwaria**	**77.49**	**345**	*e*P	**P**	**01 18 49.9**	**+0.2**
	comp=Z,214nm,0.9s						
UPC	**Upice**	**77.52**	**350**	*e*P	**P**	**01 18 49.7**	**-0.2**
DPC	**Dobruska-Polom**	**77.64**	**350**	*e*P	**P**	**01 18 50.4**	**-0.2**
STHS	**Stebnicka Huta**	**77.92**	**346**	*e*P	**P**	**01 18 53.0**	**+0.9**
STHS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
STHS	**Stebnicka Huta**	**77.92**	**346**	*e*P	**P**	**01 18 53.0**	**+0.9**
	comp=Z,2.4nm,0.7s,mb4.2						
MORC	**Moravsky Berou**	**78.07**	**349**⇓	*i*P	**P**	**01 18 52.8**	**-0.1**
NKC	**Novy Kostel**	**78.14**	**352**	*e*P	**P**	**01 18 53.2**	**-0.1**
PRU	**Pruhonice**	**78.19**	**351**	*e*P	**P**	**01 18 51.1**	**-2.5**
KOLS	**Kolonicke sedl**	**78.24**	**346**	*e*P	**P**	**01 18 54.1**	**+0.2**
KOLS				*es*P	sP	01 18 58.1	-14
CRVS	**Cervenica-Dubn**	**78.39**	**346**	*e*P	**P**	**01 18 55.1**	**+0.4**
BAIF	**Baives**	**78.77**	**358**	*e*P	**P**	**01 18 57.0**	**+0.2**
	comp=Z,6.1nm,0.6s,mb4.4						
BAIF	**Baives**	**78.77**	**358**	*e*P	**P**	**01 18 57.0**	**+0.2**
BAIF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
BAIF	**Baives**	**78.77**	**358**	*e*P	**P**	**01 18 57.0**	**+0.2**
	comp=Z,3.0nm,0.6s,mb4.4						
KECS	**Kecovo**	**78.94**	**347**	*e*P	**P**	**01 18 58.0**	**+0.2**
KECS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
KECS	**Kecovo**	**78.94**	**347**	*e*P	**P**	**01 18 58.0**	**+0.2**
	comp=Z,2.2nm,0.7s,mb4.2						
BURAR	**Bucovina Array**	**79.02**	**343**⇑	*i*P	**P**	**01 18 58.1**	**-0.1**
KHC	**Kasperske Hory**	**79.13**	**351**	*e*P	**P**	**01 18 58.7**	**-0.1**
VYHS	**Vyhne**	**79.16**	**348**	*e*P	**P**	**01 18 59.2**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
VYHS	**Vyhne**	**79.16**	**348**	*e*P	**P**	**01 18 59.2**	**+0.2**
	comp=Z,1.8nm,1.1s,mb3.9						
GERES	**GERESS Array B**	**79.40**	**351**	P	**P**	**01 19 00.1**	**-0.2**
	comp=Z,1.3nm,0.5s,mb4.1,baz=24,slow=5.6,SNR=19						
ZST	**Bratislava**	**79.67**	**349**	*e*P	**P**	**01 19 02.6**	**+0.8**
ZST				pmax	pmax		
	comp=Z,5.0nm,1.0

ORIF	**Oris-en-Rattie**	**83.85**	**356**	*e*P		**P**	**01 19 24.3**	**+0.5**
	comp=Z,0.9nm,0.4s,mb4.2								
LFF	**La Frestale**	**83.94**	**360**	*e*P		**P**	**01 19 24.2**	**0.0**
	comp=Z,7.8nm,0.6s,mb4.7								
LFF	**La Frestale**	**83.94**	**360**	*e*P		**P**	**01 19 24.2**	**0.0**
LFF				pmax	pmax				
	comp=Z,4.0nm,0.6s,mb4.7								
LFF	**La Frestale**	**83.94**	**360**	*e*P		**P**	**01 19 24.2**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.7								
CAF	**Calviac**	**83.95**	**359**	*e*P		**P**	**01 19 24.4**	**+0.2**
	comp=Z,7.3nm,0.8s,mb4.5								
CAF	**Calviac**	**83.95**	**359**	*e*P		**P**	**01 19 24.4**	**+0.2**
CAF				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.6								
CAF	**Calviac**	**83.95**	**359**	*e*P		**P**	**01 19 24.4**	**+0.2**
	comp=Z,3.7nm,0.8s,mb4.6								
VIVF	**Saint-Julien-l**	**83.96**	**357**	*e*P		**P**	**01 19 24.5**	**+0.2**
MBDF	**Montbardon**	**84.00**	**356**	*e*P		**P**	**01 19 25.3**	**+0.8**
	comp=Z,3.7nm,0.6s,mb4.4								
MBDF	**Montbardon**	**84.00**	**356**	*e*P		**P**	**01 19 25.3**	**+0.8**
MBDF				pmax	pmax				
	comp=Z,2.0nm,0.6s,mb4.4								
MBDF	**Montbardon**	**84.00**	**356**	*e*P		**P**	**01 19 25.3**	**+0.8**
	comp=Z,1.9nm,0.6s,mb4.4								
BRTR	**Keskin Array B**	**84.66**	**335**	P		**P**	**01 19 27.8**	**-0.1**
	comp=Z,1.6nm,0.8s,mb4.2,baz=72,slow=2.8,SNR=12								
SMRF	**Simiane la Rot**	**84.81**	**356**	*e*P		**P**	**01 19 29.3**	**+0.7**
	comp=Z,16nm,1.0s,mb4.8								
SMRF	**Simiane la Rot**	**84.81**	**356**	*e*P		**P**	**01 19 29.3**	**+0.7**
	comp=Z,16nm,1.0s,mb5.1								
SBF	**Sospel**	**84.83**	**355**	*e*P		**P**	**01 19 29.4**	**+0.7**
FRF	**La Foret Royal**	**85.17**	**356**	*e*P		**P**	**01 19 30.3**	**-0.1**
	comp=Z,6.5nm,0.6s,mb4.6								
FRF	**La Foret Royal**	**85.17**	**356**	*e*P		**P**	**01 19 30.3**	**-0.1**
FRF				pmax	pmax				
	comp=Z,3.0nm,0.6s,mb4.6								
FRF	**La Foret Royal**	**85.17**	**356**	*e*P		**P**	**01 19 30.3**	**-0.1**
	comp=Z,3.3nm,0.6s,mb4.6								
ASAR	**Alice Springs**	**85.29**	**222**	P		**P**	**01 19 29.6**	**-1.4**
	comp=Z,0.3nm,0.6s,mb3.6,baz=22,slow=5.7,SNR=5.9								
LMR	**La Mourre**	**85.41**	**356**	*e*P		**P**	**01 19 31.6**	**0.0**
MTLF	**Montolieu**	**85.53**	**359**	*e*P		**P**	**01 19 32.4**	**+0.2**
SJPF	**Ste Jean**	**85.76**	**1**	*e*P		**P**	**01 19 34.0**	**+0.7**
EPF	**Esparros**	**85.85**	**0**	*e*P		**P**	**01 19 33.4**	**-0.4**
ETSF	**Etsaut**	**85.98**	**1**	*e*P		**P**	**01 19 34.9**	**+0.5**
	comp=Z,7.1nm,0.7s,mb4.7								
ETSF	**Etsaut**	**85.98**	**1**	*e*P		**P**	**01 19 34.9**	**+0.5**
ETSF				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.8								
ETSF	**Etsaut**	**85.98**	**1**	*e*P		**P**	**01 19 34.9**	**+0.5**
	comp=Z,3.5nm,0.7s,mb4.7								
PGF	**Pioggiola**	**86.04**	**354**	*e*P		**P**	**01 19 34.7**	**-0.1**
ESDC	**Sonseca Array**	**89.12**	**3**	P		**P**	**01 19 48.7**	**-0.8**
	comp=Z,0.6nm,0.5s,mb4.2,baz=355,slow=4.4,SNR=6.9								
TORD	**Torodi Ar. Bea**	**115.62**	**359**	PKP		PKPdf	01 25 34.8	-1.3	
	comp=Z,1.3nm,0.4s,baz=136,slow=2.0,SNR=8.5								
DBIC	**Dimbokro**	**121.88**	**6**	PKP		PKPdf	01 25 47.6	-0.5	
	comp=Z,1.3nm,0.4s,baz=136,slow=2.0,SNR=8.5								
LBTB	**Lobatse**	**147.35**	**315**	PKPbc		PKPbc	01 26 37.5	-0.1	
	comp=Z,6.1nm,0.7s,baz=28,slow=1.8,SNR=14								
BOSA	**Boshof**	**150.59**	**312**	PKPbc		PKPbc	01 26 45.5	-0.3	
	comp=Z,4.1nm,0.9s,baz=252,slow=11,SNR=6.5								

*ISCJB **27** 01:23:41.5±0.2,4257N±002×4578E±002,h10km, Error ellipse: s-maj=2.9km s-min=1.7km az=4.8*
*CSEM **27** 01:23:41.8±0.2,4244N×4577E,h2km,ML4.2/2, Error ellipse: s-maj=4.7km s-min=2.2km az=10.0*
*TIF **27** 01:23:42.3,4250N×4571E,h26km±4km*
*MOS **27** 01:23:42.4±1.0,4263N×4589E,h23km,mb4.5/1, Error ellipse: s-maj=11.0km s-min=5.8km az=24.1*

ISC 27 01:23:42.1±0.3,4253N±002×4577E±002,h10km,n54, σ1§38/98,5C-3D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.36**	**68**	*e*Pg	**Pg**	**01 23 48.0**	**-1.2**
BTLR				*i* S	**Sg**	**01 23 54.0**	**+0.1**
BTLR				pmax	pmax		
	comp=Z,1μm,0.1s						
BTLR	**Botlikh**	**0.36**	**68**	*e*Pg	**Pg**	**01 23 48.0**	**-1.2**
	comp=Z,1μm,0.1s						
BTLR				*i* Sg	**Sg**	**01 23 54.0**	**+0.1**
XNZR	**Khunzakh**	**0.69**	**89**	*i* Pg	**Pg**	**01 23 54.7**	**-0.7**
XNZR				*i* Sg	**Sg**	**01 24 05.0**	**+0.5**
UNCR	**Uncukul**	**0.78**	**76**	*e*Pg	**Pg**	**01 23 54.7**	**-2.4**
UNCR				*e*S	**Sg**	**01 24 07.2**	**0.0**
UNCR				pmax	pmax		
	comp=Z,287nm,0.2s						
UNCR	**Uncukul**	**0.78**	**76**	*e*Pg	**Pg**	**01 23 54.7**	**-2.4**
	comp=Z,287nm,0.2s						
UNCR				*e*Sg	**Sg**	**01 24 07.2**	**0.0**
DLMR	**Dylym**	**0.83**	**49⇑**	*i*PG	**Pg**	**01 23 55.0**	**-3.1**
DLMR				*i* S	**Sg**	**01 24 07.0**	**-1.9**
DLMR				pmax	pmax		
	comp=Z,1μm,0.2s						
DLMR	**Dylym**	**0.83**	**49**	*i* Pg	**Pg**	**01 23 55.0**	**-3.1**
	comp=Z,1μm,0.2s						
DLMR				*i* Sg	**Sg**	**01 24 07.0**	**-1.9**
KRNR	**Karanay**	**0.89**	**70⇑**	*i*PG	**Pg**	**01 23 56.8**	**-2.4**
KRNR				*i* S	**Sg**	**01 24 09.8**	**-0.9**
KRNR				pmax	pmax		
	comp=Z,199nm,0.2s						
KRNR	**Karanay**	**0.89**	**70**	*i* Pg	**Pg**	**01 23 56.8**	**-2.4**
	comp=Z,199nm,0.2s						
KRNR				*i* Sg	**Sg**	**01 24 09.8**	**-0.9**
SNJR	**Sundja**	**0.89**	**307**	*i* Pg	**Pg**	**01 23 59.6**	**+0.4**
SNJR				*i* Sg	**Sg**	**01 24 13.9**	**+3.1**
GNBR	**Gunib**	**0.89**	**99⇓**	*i*PG	**Pg**	**01 23 58.3**	**-1.0**
GNBR				*i* S	**Sg**	**01 24 11.3**	**+0.3**
GNBR				pmax	pmax		
	comp=Z,76nm,0.2s						
GNBR	**Gunib**	**0.89**	**99**	*i* Pg	**Pg**	**01 23 58.3**	**-1.0**
	comp=Z,76nm,0.2s						
GNBR				*i* Sg	**Sg**	**01 24 11.3**	**+0.3**
DBC	**Dubki**	**0.92**	**58⇓**	*i*PG	**Pg**	**01 23 57.0**	**-2.8**
DBC				*e*S	**Sg**	**01 24 12.7**	**+0.9**
DBC				pmax	pmax		
	comp=Z,193nm,0.2s						
DBC	**Dubki**	**0.92**	**58**	*i* Pg	**Pg**	**01 23 57.0**	**-2.8**
	comp=Z,193nm,0.2s						
DBC				*e*Sg	**Sg**	**01 24 12.7**	**+0.9**
VLKR	**Vladikavkaz**	**0.96**	**303**	*i* Pg	**Pg**	**01 24 00.4**	**-0.1**
VLKR				*i* Sg	**Sg**	**01 24 15.3**	**+2.3**
BUJR	**Buynaksk**	**1.03**	**73**	*i* PG	**Pg**	**01 24 01.7**	**-0.2**
BUJR				*e*S	**Sg**	**01 24 17.5**	**+2.3**
BUJR				pmax	pmax		
	comp=Z,91nm,0.2s						
BUJR	**Buynaksk**	**1.03**	**73**	*i* Pg	**Pg**	**01 24 01.7**	**-0.2**
	comp=Z,91nm,0.2s						
BUJR				*e*Sg	**Sg**	**01 24 17.5**	**+2.3**
TBLG	**Delisi**	**1.11**	**224**	P	**Pb**	**01 24 02.2**	**-1.3**
TBLG				S	**Sg**	**01 24 17.2**	**-0.8**
MTA	**Mtatsminda**	**1.11**	**221**	P	**Pb**	**01 24 02.0**	**-1.4**
MTA				S	**Sg**	**01 24 17.0**	**-1.0**
DGRG	**David-gareji**	**1.12**	**196**	P	**Pb**	**01 24 03.6**	**0.0**
DGRG				S	**Sb**	**01 24 20.3**	**+2.0**
LACR	**Lac**	**1.13**	**286**	*i* Pg	**Pg**	**01 24 01.9**	**-1.9**
LACR				*i* Sg	**Sg**	**01 24 17.9**	**-0.6**
ARNR	**Ardon**	**1.28**	**301**	*i* Pg	**Pg**	**01 24 05.4**	**-1.3**
ARNR				*i* Sg	**Sg**	**01 24 24.1**	**+0.8**
MAK	**Makhachkala**	**1.34**	**71⇑**	*i*PG	**Pg**	**01 24 09.2**	**+1.2**
MAK				*i*		01 24 30.1	
MAK				pmax	pmax		
	comp=Z,289nm,0.7s						
MAK				smax			
	comp=N,2μm,0.6s						
MAK				smax			
	comp=E,1μm,0.5s						
MAK	**Makhachkala**	**1.34**	**71**	*i* Pg	**Pg**	**01 24 09.2**	**+1.2**
	comp=E,289nm,0.7s						
MAK				*i* Sg	**Sg**	**01 24 30.1**	**+4.7**
	comp=E,2μm,0.6s						
GOR	**Gori**	**1.35**	**247**	P	**Pn**	**01 24 06.1**	**-0.9**
GOR				S	**Sb**	**01 24 23.9**	**-1.0**
KORR	**Kora**	**1.37**	**294**	*i* Pg	**Pg**	**01 24 06.4**	**-2.1**
KORR				*i* Sg	**Sg**	**01 24 25.7**	**-0.6**
KMSR	**Komsomolskaya**	**1.37**	**308**	*i* Pg	**Pg**	**01 24 07.4**	**-1.1**
KMSR				*i* Sg	**Sg**	**01 24 27.4**	**+1.1**
SGKR	**Sergokala**	**1.40**	**92**	*e*Pg	**Pg**	**01 24 07.0**	**-1.9**
SGKR				*i* Sg	**Sg**	**01 24 27.0**	**-0.1**
ZEI	**Tsey**	**1.40**	**280**	*e*PG	**Pg**	**01 24 08.8**	**-0.3**
ZEI				*e*		01 24 27.8	
ZEI				pmax	pmax		
	comp=Z,87nm,0.2s						
ZEI				smax			
	comp=E,165nm,0.2s						
ZEI	**Tsey**	**1.40**	**280**	*e*Pg	**Pg**	**01 24 08.8**	**-0.3**
	comp=E,87nm,0.2s						
ZEI				*e*Sg	**Sg**	**01 24 27.8**	**+0.5**
TRKR	**Terskaya**	**1.41**	**328**	*i* Pg	**Pg**	**01 24 08.9**	**-0.4**
TRKR				*i* Sg	**Sg**	**01 24 30.1**	**+2.5**
URKR	**Urkarakh**	**1.43**	**104**	*e*PG	**Pg**	**01 24 05.0**	**-4.5**
URKR				*e*S	**Sg**	**01 24 29.0**	**+1.0**
URKR				pmax	pmax		
	comp=Z,122nm,0.3s						
URKR	**Urkarakh**	**1.43**	**104**	*e*Pg	**Pg**	**01 24 05.0**	**-4.5**
	comp=Z,122nm,0.3s						
URKR				*e*Sg	**Sg**	**01 24 29.0**	**+1.0**
KZR	**Kazreti**	**1.53**	**222**	P	**Pn**	**01 24 08.8**	**-0.8**
KZR				S	**Sn**	**01 24 28.5**	**-1.0**
PRTR	**Priterechnaya**	**1.64**	**319**	*i* Pn	**Pn**	**01 24 11.5**	**+0.5**
PRTR				*i* Sg	**Sg**	**01 24 34.5**	**-0.2**
DIGR	**Digorskoe uzhe**	**1.66**	**284**	*i* Pn	**Pn**	**01 24 09.8**	**-1.5**
DRN	**Derbent**	**1.96**	**104**	*i* PN	**Pn**	**01 24 16.5**	**+1.1**
DRN				*e*S	**Sn**	**01 24 44.0**	**+3.9**
KSMR	**Kasumkent**	**1.98**	**117**	*e*PN	**Pn**	**01 24 17.5**	**+1.8**
KSMR				*i* S	**Sg**	**01 24 47.0**	**+1.1**
KSMR				pmax	pmax		
	comp=Z,142nm,0.4s						
KSMR	**Kasumkent**	**1.98**	**117**	*e*Pn	**Pn**	**01 24 17.5**	**+1.8**
	comp=Z,142nm,0.4s						
KSMR				*i* Sg	**Sg**	**01 24 47.0**	**+1.1**
GNI	**Garni**	**2.50**	**198**	PN	**Pn**	**01 24 24.6**	**+1.7**
GNI				SN	**Sn**	**01 24 56.5**	**+3.0**
GNI	**Garni**	**2.50**	**198**	*i* PN	**Pn**	**01 24 25.4**	**+2.5**
GNI				*i* S	**Sn**	**01 24 59.3**	**+5.8**
GNI				pmax	pmax		
	comp=Z,144nm,0.6s						
GNI				smax			
	comp=Z,885nm,0.6s						
GNI	**Garni**	**2.50**	**198**	*i* Pn	**Pn**	**01 24 25.4**	**+2.5**
	comp=Z,144nm,0.6s						
GNI				*i* Sn	**Sn**	**01 24 59.3**	**+5.8**
	comp=Z,885nm,0.6s						
SHAR	**Shatzhatmas**	**2.57**	**299⇑**	*e*PN	**Pn**	**01 24 25.6**	**+1.7**
SHAR				*e*S	**Sn**	**01 25 01.7**	**+6.5**
BEYR	**Belyy Ugol+**	**2.62**	**305**	*e*Pn	**Pn**	**01 24 24.3**	**-0.2**
BEYR				*e*Sn	**Sn**	**01 25 02.1**	**+5.8**
KIV	**Kislovodsk**	**2.67**	**303⇓**	*e*PN	**Pn**	**01 24 25.7**	**+0.6**
KIV				*e*S	**Sn**	**01 25 05.0**	**+7.5**
KARS	**Kars**	**2.78**	**227**	*e*PN	**Pn**	**01 24 29.9**	**+3.2**
GOF	**Gofitskoye**	**3.21**	**323**	*e*Pn	**Pn**	**01 24 25.7**	**-6.9**
BCA	**Borcka**	**3.28**	**252**	*e*PN	**Pn**	**01 24 36.4**	**+2.8**
BCA	**Borcka**	**3.28**	**252**	*e*SN	**Sn**	**01 25 18.3**	**+5.7**
CLDR	**Caldiran**	**3.67**	**203**	*e*PN	**Pn**	**01 24 40.3**	**+1.4**
EZM	**Erzurum**	**4.24**	**233**	*e*P	**Pn**	**01 24 49.8**	**+3.1**
ANN	**Anapa**	**6.46**	**293**	*e*P	**Pn**	**01 25 20.9**	**+3.6**
AB31	**Akbulak array**	**11.93**	**51**	Pn	**Pn**	**01 26 33.9**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=252,slow=13,SNR=13						
AB31				⇑Sn	**Sn**	**01 28 39.7**	**-5.8**
	comp=Z,1.4nm,0.7s,baz=253,slow=21,SNR=6.1						
AB31	**Akbulak array**	**11.93**	**51**	Pn	**Pn**	**01 26 33.8**	**+1.5**
	comp=Z,0.4nm,0.5s,SNR=13						
AB31				Sn	**Sn**	**01 28 39.7**	**-5.8**
	comp=Z,1.4nm,0.7s,SNR=6.1						

*ISCJB **27** 01:27:28.0±0.8,2968S±006×179.1W±02,h334km±12km, mb3.6/5, Error ellipse: s-maj=33.6km s-min=8.1km az=20.6*
*IDC **27** 01:27:29.4±1.0,2938S×17904W,h344km±11km,mb3.4/4, mb1 3.6/5,mb1mx3.4/11,mbtmp4.3/5, Error ellipse: s-maj=33.9km s-min=23.7km az=29.0*
*NEIC **27** 01:27:29.6±1.3,2971S×17917W,h336km±19km,mb3.7/1, Error ellipse: s-maj=45.8km s-min=17.5km az=91.0*

ISC 27 01:27:29.4±0.9,2984S±007×1793W±03,h317km±12km, n27,σ1§49/31,mb3.7/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.31**	**64**	P	**Pn**	**01 28 14.5**	**+1.4**
	234nm,0.3s,baz=279,slow=23,SNR=18						
RAO				S	**S**	**01 28 46.1**	**-1.9**
	29nm,0.3s,baz=89,slow=18,SNR=2.4						
RAO	**Raoul Island**	**1.31**	**64**	P	**Pn**	**01 28 14.5**	**+1.4**
RAO				S	**S**	**01 28 46.1**	**-1.9**
URZ	**Urewera**	**8.92**	**199**	P	**Pn**	**01 29 39.3**	**+5.1**
	6.1nm,0.3s,baz=248,slow=3.8,SNR=32						
URZ				S	**S**	**01 31 19.6**	**+3.6**
	0.9nm,0.3s,baz=11,slow=12,SNR=8.3						
URZ	**Urewera**	**8.92**	**199**	*e*P	**Pn**	**01 29 37.9**	**+3.6**
URZ	**Urewera**	**8.92**	**199**	*e*PN	**Pn**	**01 29 37.9**	**+3.7**
BFZ	**Birch Farm**	**11.42**	**197**	*e*P	**Pn**	**01 30 07.8**	**+3.2**
BFZ	**Birch Farm**	**11.42**	**197**	*e*PN	**Pn**	**01 30 07.8**	**+3.2**
MRZ	**Mangatainoka R**	**11.59**	**200**	*e*P	**Pn**	**01 30 07.0**	**+0.4**
MRZ	**Mangatainoka R**	**11.59**	**200**	*e*PN	**Pn**	**01 30 07.0**	**+0.4**
MRZ				SN	**S**	**01 32 14.5**	**-1.4**
TIWZ	**Tintock**	**11.61**	**199**	*e*PN	**Pn**	**01 30 09.3**	**+2.4**
TIWZ				SN	**S**	**01 32 16.9**	**+0.6**
KIW	**Kapiti Island**	**11.98**	**202**	SN	**S**	**01 32 23.7**	**-0.9**
NNZ	**Nelson**	**12.83**	**206**	SN	**S**	**01 32 41.2**	**-2.3**
THZ	**Tophouse**	**13.48**	**206**	*e*P	**Pn**	**01 30 27.8**	**-1.5**
THZ	**Tophouse**	**13.48**	**206**	*e*PN	**Pn**	**01 30 27.8**	**-1.5**
THZ				SN	**S**	**01 32 56.8**	**-0.8**
KHZ	**Kahutara**	**13.83**	**203**	*e*P	**Pn**	**01 30 32.9**	**-0.5**
KHZ	**Kahutara**	**13.83**	**203**	*e*PN	**Pn**	**01 30 32.9**	**-0.5**
DZM	**Mont Dzumac**	**14.99**	**298**	P	**P**	**01 30 49.1**	**+3.7**
	0.4nm,0.3s,baz=202,slow=23,SNR=6.4						
MQZ	**McQueen's Vall**	**15.27**	**203**	SN	**S**	**01 33 33.1**	**-0.6**
RPZ	**Rata Peaks**	**15.86**	**206**	S	**S**	**01 33 48.1**	**+2.6**
	0.2nm,0.3s,baz=14,slow=18,SNR=2.7						
STKA	**Stephens Creek**	**33.54**	**256**	P	**P**	**01 33 40.6**	**+0.6**
	2.2nm,0.4s,mb4.0,baz=108,slow=9.7,SNR=4.0						
STKA	**Stephens Creek**	**33.54**	**256**	*e*P	**P**	**01 33 40.7**	**+0.6**
ASAR	**Alice Springs**	**42.04**	**267**	P	**P**	**01 34 50.4**	**-0.2**
	1.6nm,0.5s,mb3.5,baz=99,slow=6.6,SNR=44						
WRAB	**Tennant Creek**	**42.97**	**272**	*e*P	**P**	**01 34 57.4**	**-0.7**
	2.4nm,0.5s,mb3.7						
WRA	**Warramunga Arr**	**42.98**	**272**	P	**P**	**01 34 57.4**	**-0.7**
	1.5nm,0.5s,mb3.5,baz=111,slow=7.1,SNR=45						
MAW	**Mawson**	**72.45**	**201**	P	**P**	**01 38 21.1**	**-0.6**
	1.3nm,0.8s,mb3.6,baz=153,slow=2.3,SNR=3.5						
FINES	**FINESS Array B**	**144.24**	**339**	PKP	PKPdf	01 46 21.4	-6.3
	0.4nm,0.5s,baz=47,slow=2.8,SNR=10						
TORD	**Torodi Ar. Bea**	**163.37**	**183**	PKPab	PKPab	01 47 47.1	+0.1
	0.3nm,0.5s,baz=176,slow=3.0,SNR=13						

MAN 27 01:48:38.2,1159N×12198E,h18km,mb2.7,ML4.2,MS2.6, 1C,Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCP	**Roxas**	**0.75**	**92⇑**	*e*P	Pb	01 48 52.4	-0.2
RCP				*e*S	Sb	01 49 06.1	+3.5
OTRP	**Odiongan**	**0.77**	**3**	*e*P	Pb	01 48 54.0	+1.0
OTRP				*e*S	Sb	01 49 05.0	+1.9
GUIM	**Jordan**	**1.13**	**148**	*e*P	Pn	01 48 58.4	-0.6
CUYO	**Cuyo Island**	**1.20**	**232**	*e*P	Pn	01 48 59.1	-0.8
BUSP	**Coron**	**1.79**	**283**	*e*P	Pn	01 49 08.6	+0.4
BOAC	**Boac**	**1.86**	**356**	*e*P	Pn	01 49 10.4	+1.3
ENPP	**El Nido**	**2.54**	**262**	*e*P	Pn	01 49 18.6	+0.2
SNPH	**Sibulan**	**2.55**	**151**	*e*P	Pn	01 49 21.5	+2.9
LUBP	**Lubang**	**2.72**	**322**	*e*P	Pn	01 49 14.9	-6.1
PAGZ	**Pagadian**	**3.96**	**159**	*e*P	Pn	01 49 38.8	+0.8

*IDC **27** 02:12:12.7±1.7,1321S×16663E,h0km,mb3.9/5, mb1 3.9/6,mb1mx3.8/12,mbtmp3.8/6,ML3.3/1, Error ellipse: s-maj=45.9km s-min=26.3km az=82.0*
*ISCJB **27** 02:12:16.0±1.2,1323S±009×1666E±02,h33km,mb4.0/6, Error ellipse: s-maj=30.9km s-min=11.9km az=159.3*
*NEIC **27** 02:12:19.4±3.7,1336S×16664E,h48km±28km,mb4.2/3, Error ellipse: s-maj=35.2km s-min=21.2km az=224.0*

ISC 27 02:12:20.3±4.3,1345±02×1667E±02,h56km±33km,n10, σ0§68/11,mb4.0/6,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.64**	**181**	*e*P	**Pn**	**02 14 22.7**	**+0.1**
DZM	**Mont Dzumac**	**8.64**	**181**	Pn	**Pn**	**02 14 22.2**	**-0.4**
	0.3nm,0.3s,baz=106,slow=21,SNR=9.5						
DZM				Sn	**Sn**	**02 16 04.6**	**+6.0**
	0.2nm,0.3s,baz=4.7,slow=20,SNR=1.8						
CTA	**Charters Tower**	**20.64**	**248**	P	**P**	**02 16 55.9**	**+0.8**
	0.8nm,0.3s,baz=297,slow=10,SNR=2.6						
ASAR	**Alice Springs**	**32.63**	**247**	P	**P**	**02 18 45.6**	**-1.0**
	0.4nm,0.7s,mb3.5,baz=71,slow=9.5,SNR=9.4						
VNDA	**Vanda**	**64.18**	**181**	P	**P**	**02 22 49.6**	**+0.5**
	0.9nm,0.7s,mb3.9,baz=32,slow=6.0,SNR=5.2						
VNDA	**Vanda**	**64.18**	**181**	*e*P	**P**	**02 22 49.3**	**+0.2**
	1.0nm,0.8s,mb3.9						
QSPA	**South Pole Qui**	**76.63**	**180**	*e*P	**P**	**02 24 05.8**	**+0.8**
	4.4nm,1.0s,mb4.3						
SONM	**Songino Array**	**81.07**	**324**	P	**P**	**02 24 29.0**	**-0.3**
	0.7nm,0.6s,mb3.8,baz=139,slow=3.7,SNR=5.8						
SNAA	**Sanae**	**94.85**	**183**	*e*P	**P**	**02 25 35.2**	**-0.9**
	0.6nm,0.6s,mb4.2						
MKAR	**Makanchi Array**	**95.83**	**317**	P	**P**	**02 25 41.1**	**+0.5**
	0.9nm,0.6s,mb4.3,baz=90,slow=6.1,SNR=5.7						

*TIF **27** 02:37:17.1,4241N×4284E,h10km±3km*
*ISCJB **27** 02:37:18.6±0.6,4267N±002×4308E±004,h10km, Error ellipse: s-maj=4.3km s-min=2.9km az=118.8*
*CSEM **27** 02:37:21.0,4272N×4327E,h16km,mb4.3, After OBN MOS **27** 02:37:21.1±0.8,4272N×4327E,h16km,mb4.3/1, Error ellipse: s-maj=11.1km s-min=6.9km az=72.8*

ISC 27 02:37:19.0±0.6,4264N±002×4307E±004,h10km,n22, σ1§03/43,1C-2D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIGR	**Digorskoe uzhe**	**0.46**	**55**	*i* Pg	**Pg**	**02 37 27.4**	**-0.5**
DIGR				*i* Sg	**Sg**	**02 37 34.5**	**+0.5**
ZEI	**Tsey**	**0.62**	**78**	*e*Pg	**Pg**	**02 37 30.8**	**-0.3**
ZEI				*e*Sg	**Sg**	**02 37 40.4**	**+1.1**
KORR	**Kora**	**0.86**	**58**	*i* Pg	**Pg**	**02 37 34.8**	**-0.7**
KORR				*i* Sg	**Sg**	**02 37 47.4**	**+0.7**
LACR	**Lac**	**0.92**	**78**	*i* Pg	**Pg**	**02 37 35.7**	**-1.1**
LACR				*i* Sg	**Sg**	**02 37 49.0**	**+0.3**
GOR	**Gori**	**1.01**	**130**	P	**Pg**	**02 37 37.1**	**-1.3**
GOR				S	**Sg**	**02 37 52.5**	**+0.9**
ARNR	**Ardon**	**1.04**	**58**	*i* Pg	**Pg**	**02 37 38.3**	**-0.8**
ARNR				*i* Sg	**Sg**	**02 37 53.4**	**+0.7**
SHAR	**Shatzhatmas**	**1.14**	**345⇓**	*e*PG	**Pg**	**02 37 40.6**	**-0.4**
SHAR				*e*S	**Sb**	**02 37 56.0**	**+0.3**
KMSR	**Komsomolskaya**	**1.16**	**50**	*i* Pg	**Pg**	**02 37 40.5**	**-0.7**
KMSR				*i* Sg	**Sg**	**02 37 57.2**	**+1.0**
KUBR	**Kubataba**	**1.19**	**12**	*e*Pg	**Pg**	**02 37 42.2**	**+0.4**
KUBR				*e*Sg	**Sg**	**02 38 00.0**	**+2.8**
VLKR	**Vladikavkaz**	**1.25**	**70**	*i* Pg	**Pg**	**02 37 41.8**	**-1.2**
VLKR				*i* Sg	**Sg**	**02 37 59.4**	**+0.2**
KIV0	**Kislovodsk Arr**	**1.34**	**348**	*e*Pg	**Pg**	**02 37 44.5**	**-0.3**
KIV0				*e*Sg	**Sg**	**02 38 02.7**	**+0.4**
KIV	**Kislovodsk**	**1.34**	**348⇑**	*e*PG	**Pg**	**02 37 44.5**	**-0.4**
KIV				*e*S	**Sb**	**02 38 02.9**	**+1.3**
SNJR	**Sundja**	**1.35**	**71**	*i* Pg	**Pg**	**02 37 43.3**	**-1.6**
SNJR				*i* Sg	**Sg**	**02 38 02.2**	**-0.2**
BEYR	**Belyy Ugol+**	**1.38**	**352**	*i* Pg	**Pg**	**02 37 45.3**	**-0.3**
BEYR				*e*Sg	**Sg**	**02 38 03.8**	**+0.2**
PYA	**Pyatigorsk**	**1.39**	**360⇓**	*e*PG	**Pg**	**02 37 45.1**	**-0.7**
PYA				*e*S	**Sn**	**02 38 05.1**	**+2.1**
PRTR	**Priterechnaya**	**1.42**	**38**	*i* Pg	**Pg**	**02 37 44.8**	**-1.5**
PRTR				*i* Sg	**Sg**	**02 38 04.6**	**-0.1**
TBLG	**Delisi**	**1.54**	**126**	P	**Pn**	**02 37 46.3**	**-0.2**
TBLG				S	**Sn**	**02 38 07.6**	**+1.2**
MTA	**Mtatsminda**	**1.59**	**126**	P	**Pn**	**02 37 46.9**	**-0.3**
MTA				S	**Sn**	**02 38 09.5**	**+1.6**
KZR	**Kazreti**	**1.61**	**141**	P	**Pn**	**02 37 46.6**	**-0.8**
KZR				S	**Sn**	**02 38 09.0**	**+0.7**
TRKR	**Terskaya**	**1.63**	**48**	*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.60**	**91**	*e*P	Pg	02 53 57.3	-1.3
HOR	**Horta**	**0.66**	**96**	*e*P	Pg	02 53 58.2	-1.6
HOR				*e*S	Sg	02 54 06.4	-1.9
PCND	**Candelaria**	**0.80**	**99**	*e*S	Sg	02 54 09.7	-3.1
PCND	12nm,0.1s						
PICO	**Pico**	**0.82**	**96**	*e*P	Pg	02 54 00.4	-2.5
PICO				*e*S	Sg	02 54 10.5	-3.0
PBOI	**Pico dos Bois**	**0.87**	**100**	*e*rx		02 54 10.6	
PTEI	**Pico do Teixo**	**0.88**	**96**	*e*rx		02 54 11.3	
ROSA	**Rosais**	**0.97**	**82**	*e*P	Pg	02 54 02.3	-3.4
PID	**Ribeirinha**	**1.07**	**98**	*e*rx		02 54 07.5	

IDC ***27*** *02:54:06.9±0.9,2194S×17030E, h0km, mb4.2/9, mb1 4.3/10,mb1mx4.3/13,mbtmp4.2/10,ML4.0/1,MS3.7/12, Ms1 3.7/12, ms1mx3.5/30, Error ellipse: s-maj=25.0km s-min=23.3km az=13.0*

ISCJB ***27*** *02:54:09.5±4.3,2207S±0.10×170.12E±009, h25km±29km, mb4.5/19,MS3.7/11, Error ellipse: s-maj=16.2km s-min=14.1km az=146.4*

LDG ***27*** *02:54:10.4±0.5,2099S×17006E, h10km, Mb4.4/2, Error ellipse: s-maj=42.8km s-min=6.6km az=151.0*

BJI ***27*** *02:54:10.6, 22.10S×170.20E, h28km, mB4.9, mb4.8, Ms4.7, Msz4.5*

NEIC ***27*** *02:54:11.6±0.4, 22.11S×170.18E, mb4.5/12, Error ellipse: s-maj=14.4km s-min=10.0km az=170.0*

ISC 27 02:54:11.1±4.4,2208S±009×17016E±009, h24km±30km, h29km±2.5km:pP-P,n87,σ1§03/30,mb4.5/19,MS3.7/11,7D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.44**	**269**	*e*P	**Pn**	**02 55 03.1**	**-0.2**
DZM	**Mont Dzumac**	**3.44**	**269**	Pn	**Pn**	**02 55 03.0**	**-0.2**
	13nm,0.3s,baz=87,slow=18,SNR=536						
DZM				Sn	**Sn**	**02 55 41.9**	**-1.3**
	11nm,0.3s,baz=112,slow=16,SNR=4.3						
BKM	**Butte a Klehm**	**4.75**	**337**	⇓*i*P	**Pn**	**02 55 20.7**	**-0.4**
RAO	**Raoul Island**	**12.90**	**126**	LR	LR	03 01 01.9	
	comp=Z,578nm,19.3s,baz=286,slow=32						
URZ	**Urewera**	**17.20**	**161**	LR	LR	03 03 42.9	
	comp=Z,261nm,19.9s,baz=339,slow=33						
RPZ	**Rata Peaks**	**21.59**	**178**	LR	LR	03 05 47.4	
	comp=Z,101nm,21.8s,MS3.2,baz=150,slow=32						
CTA	**Charters Tower**	**22.39**	**271**	*e*P	**P**	**02 59 09.5**	**+1.9**
	5.3nm,0.7s,mb4.1						
CTA	**Charters Tower**	**22.39**	**271**	P	**P**	**02 59 09.6**	**+2.0**
	2.0nm,0.5s,mb3.8,baz=97,slow=12,SNR=2.7						
CTAO	**Charters Tower**	**22.39**	**271**	*e*P	**P**	**02 59 09.6**	**+2.0**
	6.8nm,0.8s,mb4.1						
CTAO				*e*pP		02 59 18.1	
CNB	**Canberra Magne**	**22.45**	**229**	*e*P	**P**	**02 59 07.2**	**-1.0**
	58nm,1.8s,mb4.7						
PMG	**Port Moresby**	**25.42**	**296**	P	**P**	**02 59 38.3**	**+1.4**
	7.0nm,0.6s,mb4.3,baz=96,slow=15,SNR=3.6						
PMG				LR	LR	03 08 07.8	
	comp=Z,244nm,20.0s,MS3.7,baz=237,slow=33						
STKA	**Stephens Creek**	**27.19**	**243**	*e*P	**P**	**02 59 54.1**	**+1.3**
	5.4nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**27.19**	**243**	P	**P**	**02 59 54.5**	**+1.7**
	6.2nm,0.6s,mb4.3,baz=91,slow=12,SNR=13						
STKA				LR	LR	03 09 40.2	
	comp=Z,166nm,22.0s,MS3.6,baz=32,slow=34						
RAR	**Rarotonga**	**27.95**	**94**	LR	LR	03 07 36.9	
	comp=Z,27nm,19.5s,MS2.8,baz=106,slow=29						
AS31	**Alice Springs**	**33.38**	**260**	*e*P	**P**	**03 00 48.1**	**+0.6**
ASAR	**Alice Springs**	**33.38**	**260**	P	**P**	**03 00 47.5**	**0.0**
	1.6nm,0.8s,mb4.0,baz=87,slow=8.9,SNR=16						
ASAR				PcP	PcP	03 03 30.9	+2.1
	1.2nm,0.9s,baz=105,slow=3.1,SNR=5.3						
WB2	**Warramunga Arr**	**33.45**	**267**	*e*P	**P**	**03 00 47.5**	**-0.6**
WRAB	**Tennant Creek**	**33.45**	**267**	*e*P	**P**	**03 00 47.3**	**-0.9**
	4.8nm,0.9s,mb4.4						
WRA	**Warramunga Arr**	**33.46**	**267**	P	**P**	**03 00 47.7**	**-0.5**
	1.7nm,0.7s,mb4.1,baz=98,slow=8.4,SNR=30						
WRA				PcP	PcP	03 03 30.4	+1.4
	1.1nm,0.9s,baz=97,slow=2.0,SNR=4.9						
WRA				LR	LR	03 14 22.0	
	comp=Z,176nm,18.5s,MS3.8,baz=90,slow=36						
KAKA	**Kakadu**	**37.09**	**278**	*e*P	**P**	**03 01 19.5**	**0.0**
	4.7nm,0.4s,mb4.7						
PPT	**Papeete**	**38.07**	**91**	*e*LQ		03 10 07.2	
	379nm,33.2s						
PPT				*e*LR	LR	03 11 44.5	
	202nm,30.5s						
FITZ	**Fitzroy Crossi**	**41.89**	**267**	*e*P	**P**	**03 01 59.9**	**+0.5**
	12nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**41.89**	**267**	LR	LR	03 20 06.9	
	comp=Z,142nm,20.4s,MS3.8,baz=279,slow=37						
GUMO	**Guam**	**43.26**	**323**	LR	LR	03 16 29.9	
	comp=Z,71nm,20.3s,MS3.6,baz=198,slow=31						
MBWA	**Marble Bar**	**46.71**	**261**	*e*P	**P**	**03 02 39.6**	**+1.6**
	7.0nm,0.7s,mb4.7						
NWAO	**Narrogin (SRO)**	**47.74**	**245**	LR	LR	03 21 46.5	
	comp=Z,274nm,21.2s,MS4.2,baz=74,slow=35						
RKT	**Rikitea**	**50.41**	**102**	*e*LR	LR	03 17 28.7	
	100nm,29.8s						
VNDA	**Vanda**	**55.63**	**182**	P	**P**	**03 03 44.9**	**-0.1**
	0.8nm,0.8s,mb3.8,baz=350,slow=7.2,SNR=6.8						
VNDA	**Vanda**	**55.63**	**182**	*e*P	**P**	**03 03 44.6**	**-0.4**
	0.9nm,0.7s,mb3.9						
VNDA				*e*pP	pP	03 03 52.7	+0.3
JOW	**Kunigami**	**63.30**	**318**	LR	LR	03 28 10.5	
	comp=Z,63nm,19.9s,MS3.8,baz=298,slow=32						
MJAR	**Matsushiro Arr**	**65.65**	**332**	P	**P**	**03 04 51.1**	**-2.2**
	1.9nm,0.7s,mb4.2,baz=165,slow=7.0,SNR=6.0						
QSPA	**South Pole Qui**	**67.99**	**180**	*e*P	**P**	**03 05 07.2**	**-1.0**
	9.2nm,1.1s,mb4.7						
NJ2	**Nanjing**	**72.84**	**316**	*e*P	**P**	**03 05 37.0**	**-0.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
MAW	**Mawson**	**76.14**	**202**	P	**P**	**03 05 57.4**	**+0.4**
	comp=Z,2.3nm,0.9s,mb4.1,baz=90,slow=7.9,SNR=5.1						
MAW	**Mawson**	**76.14**	**202**	*e*P	**P**	**03 05 57.5**	**+0.5**
	comp=Z,2.9nm,0.7s,mb4.3						
KMI	**Kunming**	**80.50**	**302**	P	**P**	**03 06 23.3**	**+2.2**
KMI				AP	pP	03 06 30.8	+2.0
KMI				XP	sP	03 06 33.5	+1.9
KMI				AMB	AMB		
	comp=Z,14nm,0.5s,mb5.2						
HHC	**Hu-ho-hao-te**	**82.92**	**319**	*e*P	**P**	**03 06 34.0**	**+0.1**
HHC				AP	pP	03 06 44.5	+2.9
HHC				XP	sP	03 06 48.3	+3.9
HHC				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,73nm,4.3s						
HHC				LR	LR		
	comp=N,151nm,19.0s,MS4.5						
HHC				LR	LR		
	comp=E,131nm,17.2s,MS4.5						
HHC				LR	LR		
	comp=Z,187nm,18.2s,MS4.5						
SNAA	**Sanae**	**86.37**	**182**	*e*P	**P**	**03 06 50.8**	**-0.5**
	comp=Z,18nm,1.7s,mb5.0						
SONM	**Songino Array**	**89.99**	**323**	P	**P**	**03 07 08.5**	**-0.1**
	comp=Z,1.4nm,0.7s,mb4.4,baz=146,slow=6.2,SNR=8.3						
PLCA	**Paso Flores**	**95.85**	**138**	LR	LR	03 44 21.3	
	comp=Z,52nm,19.0s,MS4.0,baz=185,slow=31						
POO	**Poona**	**102.40**	**285**	*ex*	x	03 08 54.0	
BDFB	**Brasilia**	**127.04**	**132**	PKP	PKPdf	03 13 12.5	-0.6
	comp=Z,0.7nm,0.3s,baz=278,slow=5.8,SNR=3.2						
ARCES	**ARCESS Array B**	**128.02**	**345**	PKP	PKPdf	03 13 13.3	-1.7
	comp=Z,0.8nm,0.6s,baz=52,slow=2.0,SNR=9.0						
ARCES	**ARCESS Array B**	**128.02**	**345**	PKP	PKPdf	03 13 13.3	-1.7
FINES	**FINESS Array B**	**133.53**	**337**	PKP	PKPdf	03 13 24.4	-1.0
	comp=Z,0.7nm,0.9s,baz=29,slow=4.4,SNR=5.3						
KOLS	**Kolonicke sedl**	**143.04**	**324**	*e*PKP	PKPdf	03 13 41.6	-1.2
DRGR		**143.97**	**321**	⇓*i*P	PKPdf	03 13 42.6	-1.9
KECS	**Kecovo**	**144.26**	**325**	*e*PKP	PKPdf	03 13 43.9	-1.1
PSZ	**Piszkesteto**	**144.92**	**325**	⇓*i*P	PKPdf	03 13 45.2	-0.9
PSZ	**Piszkesteto**	**144.92**	**325**	*e*PKPdf	PKPdf	03 13 45.4	-0.8
MORC	**Moravsky Berou**	**144.94**	**329**	⇓*i*P	PKPdf	03 13 45.0	-1.2
MORC	**Moravsky Berou**	**144.94**	**329**	*e*PKPdf	PKPdf	03 13 44.5	-1.7
DPC	**Dobruska-Polom**	**145.12**	**330**	*e*PKP	PKPdf	03 13 45.8	-0.7
DPC				*ex*	x	03 13 53.6	
VYHS	**Vyhne**	**145.12**	**326**	*e*PKP	PKPdf	03 13 46.2	-0.3
UPC	**Upice**	**145.15**	**331**	*e*PKP	PKPdf	03 13 45.9	-0.6
UPC				*ex*	x	03 13 53.5	
VTS	**Vitosha**	**145.70**	**314**	⇓*i*P	PKPdf	03 13 48.0	+0.5
VRAC	**Vranov**	**145.71**	**329**	⇓*i*P	PKPdf	03 13 47.5	0.0
PVCC	**Panska Ves**	**145.77**	**332**	*e*PKP	PKPdf	03 13 47.8	+0.2
BRG	**Berggiesshubel**	**145.78**	**333**	*i* P	PKPdf	03 13 47.6	0.0
	comp=Z,11nm,0.9s						
SMOL	**Smolenice**	**145.83**	**327**	*e*PKP	PKPdf	03 13 48.8	+1.1
CLL	**Collm**	**145.84**	**334**	*i* PKPbc	PKPbc	03 13 47.2	-1.1
	comp=Z,17nm,0.8s						
PRU	**Pruhonice**	**146.18**	**331**	*e*PKP	PKPdf	03 13 48.7	+0.4
ZST	**Bratislava**	**146.20**	**327**	*e*PKP	PKPdf	03 13 50.1	+1.8
TREC	**Trest**	**146.24**	**330**	*e*PKP	PKPdf	03 13 49.1	+0.7
ESK	**Eskdalemuir**	**146.44**	**353**	*e*PKPbc	PKPbc	03 13 45.6	-4.5
PKSM	**Moragy**	**146.62**	**323**	⇓*i*P	PKPdf	03 13 50.1	+1.1
NKC	**Novy Kostel**	**146.89**	**334**	*e*PKP	PKPdf	03 13 51.0	+1.5
KHC	**Kasperske Hory**	**147.23**	**331**	*e*PKP	PKPdf	03 13 52.0	+1.9
KHC				*ex*	x	03 13 56.3	
GERES	**GERESS Array B**	**147.38**	**331**	PKPbc	PKPbc	03 13 52.3	-0.5
	comp=Z,2.8nm,0.6s,baz=27,slow=2.9,SNR=32						
GRA1	**Grafenberg Arr**	**147.81**	**334**	*e*PKP	PKPdf	03 13 53.2	+2.2
GRF	**Grafenberg Arr**	**147.81**	**334**	*e*PKP	PKPdf	03 13 53.2	+2.2
WLF	**Walferdange**	**149.71**	**339**	*e*PKPdf	PKPdf	03 13 52.0	-2.1
WLF				*e*PKPbc	PKPbc	03 13 56.8	-2.0
GIVF	**Givet**	**149.74**	**341**	*e*PKP1	PKPbc	03 13 58.2	-0.7
	comp=Z,25nm,1.0s						
BAIF	**Baives**	**149.96**	**342**	*e*PKP1	PKPbc	03 13 58.9	-0.5
CDF	**Champ du Feu**	**150.38**	**337**	*e*PKP1	PKPbc	03 13 59.7	-0.7
	comp=Z,4.4nm,0.7s						
HINF	**Hinteralfeld**	**151.03**	**336**	*e*PKP1	PKPbc	03 14 01.1	-0.9
	comp=Z,4.8nm,0.7s						
HAU	**Haudompre**	**151.06**	**337**	*e*PKP1	PKPbc	03 14 01.3	-0.7
	comp=Z,7.5nm,0.7s						
MEZF	**Maizieres J'vi**	**151.08**	**339**	*e*PKP1	PKPbc	03 14 01.1	-1.0
	comp=Z,12nm,0.7s						
CABF	**La Chapelle**	**152.33**	**336**	*e*PKP1	PKPbc	03 14 04.1	-0.8
	comp=Z,6.3nm,0.7s						
LOR	**Lormes**	**152.55**	**340**	*e*PKP1	PKPbc	03 14 04.6	-0.8
SSF	**Saint Saulge**	**152.84**	**340**	*e*PKP1	PKPbc	03 14 05.3	-0.8
SMF	**Signal de Mont**	**153.10**	**339**	*e*PKP1	PKPbc	03 14 05.9	-0.7
AVF	**Avril sur Loir**	**153.13**	**340**	*e*PKP1	PKPbc	03 14 06.1	-0.6
TCF	**Toulx Ste Croi**	**153.94**	**341**	*e*PKP1	PKPbc	03 14 06.6	-1.9
SBF	**Sospel**	**153.99**	**331**	*e*PKP1	PKPbc	03 14 06.3	-2.3
TORD	**Torodi Ar. Bea**	**165.87**	**233**	PKP	PKPdf	03 14 15.5	+1.7
	comp=Z,0.4nm,0.7s,baz=67,slow=1.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**165.87**	**233**	PKP	PKPdf	03 14 15.5	+1.7

BJI ***27*** *02:58:18.0, 66.30N×142.30W, h10km, mb4.5, mB4.8, Ms4.4, Msz3.8*

ISCJB ***27*** *02:58:21.2±0.3, 6626N±003×14227W±008, h10km, mb4.0/26, MS3.7/6, Error ellipse: s-maj=5.0km s-min=4.3km az=96.1*

IDC ***27*** *02:58:22.4±1.0, 6641N×14186W, h0km, mb3.8/8, mb1 4.2/11,mb1mx3.9/24,mbtmp3.9/11,ML3.8/3,MS3.4/3, Ms1 3.5/3,ms1mx3.0/36, Error ellipse: s-maj=19.1km s-min=11.0km az=60.0*

PGC ***27*** *02:58:22.5, 6634N×142.14W, h5km, ML4.1/2, Mw4.5, 283km northwest of Dawson, Yt Eastern Alaska.*

NEIC ***27*** *02:58:23.1±0.3, 6627N×142.32W, h10km, mb4.1/17, ML4.3(AEIC), MW4.5(PGC), Error ellipse: s-maj=5.3km s-min=4.6km az=1.0*

ISC 27 02:58:22.8±0.3,6625N±003×14223W±008,h10km, (h17km±4.3km:pP-P),n66,σ1§22/94,mb4.0/26,MS3.7/6, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.55**	**163**	*e*Pn	**Pn**	**02 58 49.3**	**-1.1**
EGAK				*e*Sn	**Sn**	**02 59 09.4**	**-1.1**
DAWY	**Dawson**	**2.50**	**150**	Pn	**Pn**	**02 59 02.8**	**-0.7**
DAWY				Sn	**Sn**	**02 59 24.0**	**0.0**
DAWY				Sg	**Sg**	**02 59 39.5**	**-3.7**
DAWY				Trac		02 59 42.9	
	comp=Z,269nm,0.2s						
DAWY	**Dawson**	**2.50**	**150**	*e*Pn	**Pn**	**02 59 02.8**	**-0.7**
DAWY				*e*Pg	**Pg**	**02 59 09.3**	**-1.4**
DAWY				*S*	**Sn**	**02 59 25.6**	**-8.4**
DAWY				*e*Sn	**Sn**	**02 59 31.6**	**-2.5**
DAWY				*e*Sg	**Sg**	**02 59 38.8**	**-4.4**
COLA	**College**	**2.72**	**242**	P	**Pn**	**02 59 06.0**	**-0.5**
COLA				S	**Sn**	**02 59 45.4**	**+6.0**
COLD	**Coldfoot**	**3.31**	**291**	P	**Pn**	**02 59 14.2**	**-0.4**
MENT	**Mentasta**	**3.39**	**192**	*e*P	**Pn**	**02 59 16.1**	**+0.4**
MCK	**McKinley**	**3.81**	**231**	P	**Pn**	**02 59 21.0**	**-0.5**
INK	**Inuvik**	**3.96**	**55**	Pn	**Pn**	**02 59 22.7**	**-0.8**
	6.0nm,0.3s,baz=241,slow=15,SNR=86						
INK				Sn	**Sn**	**03 00 06.8**	**-3.1**
	16nm,0.3s,baz=182,slow=15,SNR=18						
INK				Lg		03 00 20.0	
	16nm,0.3s,baz=181,slow=33,SNR=3.8						
INK	**Inuvik**	**3.96**	**55**	Pn	**Pn**	**02 59 22.4**	**-1.1**
INK				Sn	**Sn**	**03 00 07.6**	**-2.4**
INK				Trac		03 00 09.2	
	comp=Z,307nm,0.8s						
INK	**Inuvik**	**3.96**	**55**	*e*Pn	**Pn**	**02 59 22.8**	**-0.8**
INK				*e*Pg	**Pg**	**02 59 35.1**	**-3.5**
INK				*e*Sn	**Sn**	**03 00 07.7**	**-2.3**
INK				*e*Sg	**Sg**	**03 00 23.2**	**-6.6**
TRF	**Thorofare Moun**	**4.44**	**234**	P	**Pn**	**02 59 30.4**	**+0.2**
KTH	**Kantishna Hill**	**4.59**	**238**	P	**Pn**	**02 59 31.8**	**-0.3**
PMR	**Palmer**	**5.58**	**216**	P	**Pn**	**02 59 44.7**	**-1.1**
HYT	**Haines Junctio**	**5.84**	**157**	Pn	**Pn**	**02 59 49.4**	**0.0**
HYT				Sg	**Sg**	**03 01 28.2**	**-2.1**
HYT				Trac		03 01 33.7	
	comp=Z,433nm,1.0s						
HYT	**Haines Junctio**	**5.84**	**157**	*e*Pn	**Pn**	**02 59 49.4**	**0.0**
HYT				*e*Sg	**Sg**	**03 01 28.2**	**-2.1**
EYAK	**Cordova Ski Ar**	**5.94**	**197**	*e*Pn	**Pn**	**02 59 53.0**	**+2.2**
RC01	**Rabbit Creek A**	**6.16**	**216**	P	**Pn**	**02 59 52.5**	**-1.4**
WHY	**Whitehorse**	**6.50**	**146**	Pn	**Pn**	**02 59 58.0**	**-0.5**
WHY				Sg	**Sg**	**03 01 43.5**	**-8.0**
WHY				Trac		03 01 50.7	
	comp=Z,40nm,0.6s						
WHY	**Whitehorse**	**6.50**	**146**	Pn	**Pn**	**02 59 58.0**	**-0.5**
WHY				*e*Sg	**Sg**	**03 01 43.5**	**-8.0**
SLKM	**Skilak Lake**	**6.79**	**216**	*e*Pn	**Pn**	**03 00 04.3**	**+1.9**
TTA	**Tatalina**	**6.80**	**247**	Pn	**Pn**	**03 00 01.6**	**-1.0**
TTA				*e*Pg	**Pg**	**03 00 29.6**	**-3.3**
TTA				*e*Sg	**Sg**	**03 01 57.5**	**-3.5**
YKU2	**Yakutat**	**6.87**	**169**	*e*P	**Pn**	**03 00 05.6**	**+2.1**
PLBC	**Pleasant Camp**	**7.33**	**156**	*e*Pn	**Pn**	**03 00 10.7**	**+0.9**
PLBC				*e*Sg	**Sg**	**03 02 11.3**	**-6.6**
SVW2	**Sparrevohn**	**7.86**	**235**	*e*P	**Pn**	**03 00 17.4**	**+0.3**
DLBC	**Dease Lake**	**9.66**	**138**	Pn	**Pn**	**03 00 42.0**	**+0.2**
	1.4nm,0.3s,baz=316,slow=11,SNR=28						
DLBC				Sn	**Sn**	**03 02 26.8**	**-3.5**
	0.3nm,0.3s,baz=8.5,slow=25,SNR=3.0						
DLBC				Lg		03 03 22.2	
	0.7nm,0.3s,baz=65,slow=26,SNR=9.0						
DLBC	**Dease Lake**	**9.66**	**138**	Pn	**Pn**	**03 00 41.7**	**-0.1**
DLBC				Sg	Sn	03 03 26.2	+56
DLBC				Trac		03 03 32.9	
	comp=Z,44nm,0.9s						
DLBC	**Dease Lake**	**9.66**	**138**	Pn	**Pn**	**03 00 42.0**	**+0.2**
DLBC				Sn	**Sn**	**03 02 26.8**	**-3.5**
DLBC				Lg		03 03 22.2	
FNBB	**Fort Nelson**	**11.49**	**121**	Pn	**Pn**	**03 01 05.8**	**-1.0**
FNBB				Sg	Sn	03 04 16.7	+62
FNBB				Trac		03 04 53.5	
	comp=Z,20nm,1.1s						
FNBB	**Fort Nelson**	**11.49**	**121**	*e*Pn	**Pn**	**03 01 05.8**	**-1.0**
FNBB				*e*Sg	Sn	03 04 16.7	+62
YKW3	**Yellowknife Ar**	**12.44**	**94**	Pn	**Pn**	**03 01 15.4**	**-4.3**
YKW3				Pn	**Pn**	**03 01 15.5**	**-4.3**
YKW3				Sn	**Sn**	**03 03 25.1**	**-13**
YKW3				Sn	**Sn**	**03 03 25.8**	**-13**
YKW3				Trac		03 05 04.1	
	comp=Z,31nm,0.9s						
YKA	**Yellowknife Ar**	**12.47**	**95**	Pn	**Pn**	**03 01 13.9**	**-6.4**
	baz=297,slow=13,SNR=7.4						
YKA				Sn	**Sn**	**03 03 25.8**	**-13**
	baz=295,slow=23,SNR=9.6						
NEW	**Newport**	**22.29**	**132**	P	**P**	**03 03 21.1**	**+1.0**
	1.2nm,0.6s,mb3.5,baz=345,slow=10,SNR=3.6						
NEW				LR	LR	03 12 58.0	
	comp=Z,104nm,18.9s,MS3.3,baz=337,slow=39						
NEW	**Newport**	**22.29**	**132**	*e*P	**P**	**03 03 20.6**	**+0.5**
	1.1nm,0.4s,mb3.6						
WALA	**Waterton Lakes**	**22.60**	**126**	*e*P	**P**	**03 03 23.8**	**+0.3**
	11nm,1.1s,mb4.2						
EGMT	**Eagleton**	**24.90**	**121**	*e*P	**P**	**03 03 46.0**	**+0.2**
	4.8nm,0.8s,mb4.1						
HRY	**Holter Researc**	**25.34**	**126**	*e*P	**P**	**03 03 50.2**	**+0.4**
WVOR	**Wild Horse Val**	**27.20**	**140**	*e*P	**P**	**03 04 07.5**	**+0.9**
	2.6nm,0.9s,mb3.8						
HLID	**Hailey**	**27.34**	**132**	*e*P	**P**	**03 04 08.6**	**+0.7**
	1.3nm,0.9s,mb3.5						
BW06	**Boulder Array**	**29.58**	**126**	*e*P	**P**	**03 04 28.7**	**+0.9**
	4.1nm,0.9s,mb4.2						
PDAR	**Pinedale Array**	**29.58**	**126**	P	**P**	**03 04 29.4**	**+1.6**
	3.5nm,0.8s,mb4.1,baz=349,slow=5.8,SNR=30						
RSSD	**Black Hills**	**30.28**	**118**	*e*P	**P**	**03 04 34.4**	**+0.4**
	1.1nm,0.6s,mb3.8						
DUG	**Dugway**	**30.91**	**133**	*e*P	**P**	**03 04 40.8**	**+1.2**
	4.5nm,0.9s,mb4.3						
NVAR	**Mina Array Bea**	**31.05**	**142**	P	**P**	**03 04 43.0**	**+2.2**
	2.7nm,0.7s,mb4.2,baz=334,slow=8.0						
SRU	**San Rafael**	**32.59**	**131**	*e*P	**P**	**03 04 55.8**	**+1.4**
	6.7nm,1.1s,mb4.5						
MSU	**Marysvale**	**32.65**	**133**	*e*P	**P**	**03 04 56.9**	**+2.0**
ANMO	**Albuquerque**	**37.69**	**128**	*e*P	**P**	**03 05 39.5**	**+1.3**
	6.2nm,1.3s,mb4.2						
TUC	**Tucson**	**38.84**	**135**	*e*P	**P**	**03 05 49.7**	**+1.7**
	3.5nm,1.3s,mb3.9						
WMOK	**Wichita Mounta**	**40.47**	**119**	*e*P	**P**	**03 06 01.8**	**+0.3**
	3.1nm,0.9s,mb4.0						
MNTX	**Cornudas Mount**	**41.03**	**129**	*e*P	**P**	**03 06 06.7**	**+0.5**
	0.9nm,0.9s,mb3.4						
WVT	**Waverly**	**43.31**	**106**	*e*P	**P**	**03 06 24.8**	**0.0**
	2.7nm,0.7s,mb4.1						
JCT	**Junction City**	**43.98**	**123**	*e*P	**P**	**03 06 30.2**	**0.0**
	5.1nm,0.8s,mb4.3						
ARCES	**ARCESS Array B**	**44.22**	**6**	P	**P**	**03 06 32.3**	**+0.2**
	1.7nm,1.0s,mb3.7,baz=354,slow=7.3,SNR=5.4						
NOA	**NORSAR Array B**	**51.51**	**16**	P	**P**	**03 07 27.8**	**-0.7**
	0.7nm,0.8s,mb3.6,baz=348,slow=7.7,SNR=3.4						
NOA				LR	LR	03 30 43.8	
	comp=Z,24nm,19.1s,MS3.2,baz=340,slow=38						
FINES	**FINESS Array B**	**52.32**	**7**	P	**P**	**03 07 34.1**	**-0.5**
	0.6nm,0.5s,mb3.8,baz=4.1,slow=7.4,SNR=15						
CHKZ	**Chkalovo**	**57.83**	**338**	*e*P	**P**	**03 08 13.8**	**-0.6**
	1.4nm,0.8s,mb4.0						
ZRNK	**Zerenda**	**58.77**	**338**	*e*P	**P**	**03 08 21.6**	**+0.6**
	1.1nm,0.8s,mb3.9						
HHC	**Hu-ho-hao-te**	**59.34**	**302**	*e*P	**P**	**03 08 25.0**	**+0.1**
HHC				AP	pP	03 08 29.8	+1.6
HHC				XP	sP	03 08 32.0	+2.6
HHC				PCP	PcP	03 09 13.8	+0.9
HHC				PP	PP	03 10 37.3	+1.4
HHC				SCP	ScP	03 13 13.0	-0.7
HHC				PCS	PcS	03 13 14.0	-0.9
HHC				S	**S**	**03 16 29.3**	**-4.2**
HHC				SCS	ScS	03 18 10.8	-4.4
HHC				SS	SS	03 20 26.0	-2.1
HHC				AMB	AMB		
	comp=Z,65nm,4.4s						
HHC				LR	LR		
	comp=N,134nm,21.8s,MS4.1						
HHC				LR	LR		
	comp=E,89nm,21.8s,MS4.1						
HHC				LR	LR		
	comp=Z,60nm,22.8s,MS3.7						
MKAR	**Makanchi Array**	**62.23**	**327**	P	**P**	**03 08 43.4**	**-1.2**
	comp=Z,0.3nm,0.5s,mb3.7,baz=40,slow=7.5,SNR=2.8						
AKASG	**Malin Array Be**	**63.20**	**6**	P	**P**	**03 08 49.8**	**-1.3**
	comp=Z,0.2nm,0.4s,mb3.6,baz=358,slow=6.8,SNR=4.1						
WMQ	**Urumqi**	**63.76**	**322**	*e*P	**P**	**03 08 57.0**	**+2.2**
WMQ				XP	sP	03 09 04.0	+4.7
WMQ				PP	PP	03 11 19.0	+4.0
WMQ				S	**S**	**03 17 30.0**	**+0.4**
WMQ				SCS	ScS	03 18 46.0	-2.5
WMQ				AMB	AMB		
	comp=Z,121nm,5.0s						
WMQ				LR	LR		
	comp=N,95nm,15.0s,MS4.2						
WMQ				LR	LR		
	com

baz=99
LMGC *eSG* **Sn** **03 10 28.2 -1.5**
comp=N,19nm,0.1s
LMGC *e*
comp=E,13nm,0.1s
RCC Rio Carpintero 2.14 25 *eP* **Pn** **03 10 08.1 +1.5**
RCC *eS* **Sn** **03 10 32.5 0.0**
comp=N,3.5nm,0.8s
RCC *e*
comp=E,3.9nm,0.8s

CSEM ***27*** *03:11:27.8±0.6, 3860N×2947W, h6km±10km, ML1.9, Error ellipse: s-maj=10.1km s-min=10.0km az=109.0, After PDA*
PDA ***27*** *03:11:27.8±0.6, 3860N×2947W, h6km±10km, MD3.4, ML1.9, Error ellipse: s-maj=10.1km s-min=10.0km az=109.0*
SVSA 27 03:11:27.8±0.6, 3860N×2947W, h6km±10km, MD3.4, ML1.9, Error ellipse: s-maj=10.1km s-min=10.0km az=109.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.60**	**92**	*eP*		Pg	03 11 37.9	-1.4
CALA				*eS*		Sg	03 11 45.8	-1.4
HOR	**Horta**	**0.66**	**96**	*eP*		Pg	03 11 38.7	-1.8
HOR				*eS*		Sg	03 11 46.9	-2.2
PCND	**Candelaria**	**0.80**	**99**	*eS*		Sg	03 11 50.4	-3.1
PCND	20nm,0.2s							
PICO	**Pico**	**0.82**	**97**	*eP*		Pg	03 11 41.2	-2.4
PICO				*eS*		Sg	03 11 51.2	-3.1
PBOI	**Pico dos Bois**	**0.87**	**101**	*eS*		Sg	03 11 52.5	-3.4
PBOI	36nm,0.2s							
PTEI	**Pico do Teixo**	**0.88**	**97**	*eP*		Pg	03 11 41.9	-2.7
PTEI				*eS*		Sg	03 11 52.2	-3.8
PTEI				*erx*			03 11 56.6	
PTEI	11nm,0.2s							
ROSA	**Rosais**	**0.97**	**83**	*eP*		Pg	03 11 43.1	-3.3
ROSA				*eS*		Sg	03 11 54.4	-4.5
PID	**Ribeirinha**	**1.07**	**98**	*erx*			03 11 45.0	

ISCJB ***27*** *03:20:04.0±0.3, 6628N×003W×14228W±007, h10km, mb4.0/26, MS3.5/5, Error ellipse: s-maj=4.3km s-min=4.2km az=147.9*
BJI ***27*** *03:20:04.5, 6569N×142.70W, h34km, mB4.8, mb4.6, Ms4.3, Msz4.0*
PGC ***27*** *03:20:05.5, 6630N×142.16W, h1km, ML4.4/2, Mw4.5, 280km northwest of Dawson, Yt Eastern Alaska.*
NEIC ***27*** *03:20:06.1±0.3, 6626N×14229W, h10km, mb4.1/14, ML4.4(AEIC), MW4.5(PGC), Error ellipse: s-maj=5.0km s-min=4.6km az=169.0*
IDC ***27*** *03:20:06.7±0.7, 6644N×14157W, h0km, mb3.8/11, mb1 4.1/15, mb1mx3.9/28, mbtmp3.9/15, ML4.2/4, MS3.2/6, Ms1 3.2/6, ms1mx2.9/36, Error ellipse: s-maj=12.3km s-min=9.9km az=81.0*
ISC 27 03:20:05.6±0.3, 6627N±002×14208W±006, h10km, n69, σ1§33/99, mb4.0/26, MS3.5/5, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.55**	**165**	*eP*	n	**Pn**	**03 20 32.2**	**-1.0**
EGAK				*eS*	n	**Sn**	**03 20 53.8**	**+0.4**
DAWY	**Dawson**	**2.49**	**152**	P	n	**Pn**	**03 20 45.9**	**-0.2**
DAWY				S	n	**Sn**	**03 21 17.4**	**+0.8**
DAWY				Sg		**Sg**	**03 21 22.8**	**-2.7**
DAWY	12nm,0.3s,baz=232,slow=15,SNR=83			Trac			03 21 24.1	
DAWY	**Dawson**	**2.49**	**152**	*eP*	n	**Pn**	**03 20 45.6**	**-0.5**
DAWY				*eP*	b	**Pb**	**03 20 50.3**	**-0.1**
DAWY				*eP*	g	**Pg**	**03 20 53.1**	**-0.2**
DAWY				*eS*	n	**Sn**	**03 21 13.3**	**-3.3**
DAWY				*eS*	g	**Sg**	**03 21 23.6**	**-2.0**
COLA	**College**	**2.78**	**242**	P	n	**Pn**	**03 20 48.6**	**-1.6**
COLA				S		**Sn**	**03 21 26.3**	**+2.6**
COLD	**Coldfoot**	**3.36**	**290**	P	n	**Pn**	**03 20 55.9**	**-2.2**
MENT	**Mentasta**	**3.42**	**193**	*eP*	n	**Pn**	**03 20 58.6**	**-0.4**
MCK	**McKinley**	**3.87**	**232**	P	n	**Pn**	**03 21 03.4**	**-1.7**
MCK				S		**Sn**	**03 21 52.1**	**+1.6**
INK	**Inuvik**	**3.90**	**54**	P	n	**Pn**	**03 21 05.4**	**-0.1**
INK	23nm,0.3s,baz=201,slow=14,SNR=9.2			Sn		**Sn**	**03 21 49.2**	**-2.1**
INK	24nm,0.3s,baz=332,slow=25,SNR=6.3			Lg			03 22 01.4	
INK	comp=Z,218nm,21.8s,baz=241,slow=39			LR	LR		03 22 27.3	
INK	**Inuvik**	**3.90**	**54**	Pn	n	**Pn**	**03 21 05.5**	**-0.1**
INK				Pg		**Pg**	**03 21 17.6**	**-2.7**
INK				Sn		**Sn**	**03 21 50.6**	**-0.7**
INK				Sg		**Sg**	**03 22 07.3**	**-3.5**
INK	comp=Z,366nm,0.5s			Trac			03 22 18.8	
INK	**Inuvik**	**3.90**	**54**	*eP*	n	**Pn**	**03 21 05.3**	**-0.3**
INK				*eS*	n	**Sn**	**03 21 50.6**	**-0.8**
INK				*eS*	g	**Sg**	**03 22 10.4**	**-0.4**
TRF	**Thorofare Moun**	**4.50**	**235**	P	n	**Pn**	**03 21 12.7**	**-1.1**
KTH	**Kantishna Hill**	**4.65**	**238**	P	n	**Pn**	**03 21 14.1**	**-1.8**
PMR	**Palmer**	**5.63**	**217**	*eP*	n	**Pn**	**03 21 30.4**	**+1.1**
HYT	**Haines Junctio**	**5.83**	**157**	Pn	n	**Pn**	**03 21 32.8**	**+0.7**
HYT				Sg		**Sg**	**03 23 07.3**	**-5.6**
HYT	comp=Z,301nm,0.8s			Trac			03 23 15.6	
HYT	**Haines Junctio**	**5.83**	**157**	Pn	n	**Pn**	**03 21 32.8**	**+0.7**
HYT				Sg		**Sg**	**03 23 07.3**	**-5.6**
EYAK	**Cordova Ski Ar**	**5.97**	**198**	*eP*	n	**Pn**	**03 21 35.4**	**+1.3**
EYAK				*eSg*		**Sg**	**03 23 14.8**	**-2.6**
WHY	**Whitehorse**	**6.49**	**147**	Pn	n	**Pn**	**03 21 41.0**	**-0.1**
WHY				Sg		**Sg**	**03 23 13.1**	**-2.7**
WHY	comp=Z,72nm,0.9s			Trac			03 23 34.0	
WHY	**Whitehorse**	**6.49**	**147**	Pn	n	**Pn**	**03 21 41.0**	**-0.1**
WHY				*eSg*		**Sg**	**03 23 31.1**	**-2.7**
SLKM	**Skilak Lake**	**6.84**	**216**	*eP*	n	**Pn**	**03 21 46.6**	**+0.7**
TTA	**Tatalina**	**6.86**	**247**	*eP*		**Pn**	**03 21 45.0**	**-1.2**
PLBC	**Pleasant Camp**	**7.32**	**156**	*eP*	n	**Pn**	**03 21 53.6**	**+1.1**
PLBC				Sg		**Sg**	**03 23 55.2**	**-5.2**
SKAG	**Skagway**	**7.50**	**153**	*eP*		**Pn**	**03 21 55.5**	**+0.6**
SVW2	**Sparrevohn**	**7.92**	**235**	*eP*	n	**Pn**	**03 22 00.4**	**-0.4**
DLBC	**Dease Lake**	**9.63**	**139**	Pn	n	**Pn**	**03 22 24.2**	**0.0**
DLBC	1.4nm,0.3s,baz=325,slow=8.4,SNR=31			Sn		**Sn**	**03 24 09.8**	**-2.6**
DLBC	0.2nm,0.3s,baz=192,slow=20,SNR=2.8			Lg			03 25 06.8	
DLBC	1.2nm,0.3s,baz=96,slow=25,SNR=7.8			LR	LR		03 26 21.6	
DLBC	**Dease Lake**	**9.63**	**139**	Pn	n	**Pn**	**03 22 24.9**	**+0.6**
DLBC				Sg		Sn	03 25 06.7	+54
DLBC	comp=Z,35nm,0.7s			Trac			03 25 16.4	
KDAK	**Kodiak Island**	**9.82**	**215**	Pn	n	**Pn**	**03 22 29.9**	**+3.0**
KDAK	0.1nm,0.3s,baz=306,slow=19,SNR=2.6	0.4nm,0.3s,baz=307,slow=20,SNR=2.4		Sn		**Sn**	**03 24 17.3**	**0.0**
KDAK	**Kodiak Island**	**9.82**	**215**	*eP*	n	**Pn**	**03 22 27.9**	**+1.0**
FNBB	**Fort Nelson**	**11.44**	**121**	Pn	n	**Pn**	**03 22 49.3**	**+0.2**
FNBB				Sn		**Sn**	**03 24 54.8**	**-2.2**
FNBB				Sg			03 26 07.1	
FNBB	comp=Z,21nm,1.0s			Trac			03 26 25.0	
FNBB	**Fort Nelson**	**11.44**	**121**	*eP*	n	**Pn**	**03 22 49.3**	**+0.2**
FNBB				*eSn*		**Sn**	**03 24 54.8**	**-2.2**
FNBB				*eSg*			03 26 07.1	
YKW3	**Yellowknife Ar**	**12.38**	**95**	Pn	n	**Pn**	**03 22 58.2**	**-3.6**
YKW3				Pn	n	**Pn**	**03 22 58.3**	**-3.6**
YKW3				Sn	n	**Sn**	**03 25 08.5**	**-11**
YKW3				Sn	n	**Sn**	**03 25 11.1**	**-8.7**
YKW3	comp=Z,15nm,0.5s			Trac			03 25 27.8	
YKW3	comp=Z,13nm,0.4s			Trac			03 25 27.8	
YKW3	**Yellowknife Ar**	**12.38**	**95**	Pn	n	**Pn**	**03 22 58.2**	**-3.6**
YKW3				*eSn*		**Sn**	**03 25 08.5**	**-11**
YKA	**Yellowknife Ar**	**12.42**	**95**	Pn	n	**Pn**	**03 22 58.9**	**-3.5**
YKA	baz=296,slow=13,SNR=25			Sn		**Sn**	**03 25 09.2**	**-11**
	baz=295,slow=23,SNR=7.2							
YKA	baz=309,slow=28,SNR=2.5			Lg			03 26 32.5	
YKA	comp=Z,205nm,20.7s,baz=290,slow=39			LR	LR		03 28 02.5	
NEW	**Newport**	**22.25**	**132**	P	n	**Pn**	**03 25 06.2**	**+3.6**
NEW	1.5nm,0.7s,mb3.5,baz=1.2,slow=14,SNR=3.8			LR	LR		03 35 27.9	
NEW	**Newport**	**22.25**	**132**	*eP*	n	**Pn**	**03 25 03.4**	**+0.8**
WALA	**Waterton Lakes**	**22.57**	**126**	*eP*	n	**Pn**	**03 25 05.9**	**0.0**
CHMT	**Chamberlain Mo**	**24.66**	**128**	*eP*	n	**Pn**	**03 25 26.8**	**+0.4**
HRY	**Holter Researc**	**25.30**	**126**	*eP*	n	**Pn**	**03 25 32.9**	**+0.6**
BOZ	**Bozeman (W)**	**26.30**	**127**	*eP*	n	**Pn**	**03 25 42.8**	**+1.5**
HLID	**Hailey**	**27.31**	**133**	*eP*	n	**Pn**	**03 25 51.8**	**+1.3**
ULM	**Lac du Bonnet**	**28.25**	**102**	LR	LR		03 36 52.3	
BW06	**Boulder Array**	**29.55**	**127**	*eP*	n	**Pn**	**03 26 11.8**	**+1.5**
PDAR	**Pinedale Array**	**29.55**	**127**	P	n	**Pn**	**03 26 11.9**	**+1.6**
DUG	**Dugway**	**30.88**	**133**	*eP*	n	**Pn**	**03 26 23.4**	**+1.3**
NVAR	**Mina Array Bea**	**31.03**	**142**	P	n	**Pn**	**03 26 26.0**	**+2.6**
NVAR	**Mina Array Bea**	**31.03**	**142**	P		**Pn**	**03 26 26.0**	**+2.6**
SRU	**San Rafael**	**32.56**	**131**	*eP*	n	**Pn**	**03 26 38.8**	**+1.9**
PV01	**Paradox Valley**	**34.06**	**129**	*eP*	n	**Pn**	**03 26 51.5**	**+1.4**
SCHQ	**Schefferville**	**36.34**	**71**	LR	LR		03 43 47.8	
ANMO	**Albuquerque**	**37.65**	**128**	*eP*	n	**Pn**	**03 27 22.9**	**+2.1**
WMOK	**Wichita Mounta**	**40.42**	**119**	*eP*	n	**Pn**	**03 27 44.7**	**+0.7**
WVT	**Waverly**	**43.26**	**107**	*eP*	n	**Pn**	**03 28 07.6**	**+0.4**
JCT	**Junction City**	**43.94**	**123**	*eP*	n	**Pn**	**03 28 13.3**	**+0.6**
OXF	**Oxford**	**44.08**	**109**	*eP*	n	**Pn**	**03 28 14.2**	**+0.4**
PLAL	**Pickwick Lake**	**44.18**	**108**	*eP*	n	**Pn**	**03 28 16.1**	**+1.6**
ARCES	**ARCESS Array B**	**44.19**	**6**	P	n	**Pn**	**03 28 15.8**	**+1.2**
NOA	**NORSAR Array B**	**51.48**	**16**	P	n	**Pn**	**03 29 11.7**	**+0.5**
FINES	**FINESS Array B**	**52.29**	**7**	P	n	**Pn**	**03 29 16.8**	**-0.5**
FINES	**FINESS Array B**	**52.29**	**7**	P	n	**Pn**	**03 29 16.8**	**-0.5**
HFS	**Hagfors**	**52.63**	**15**	P	n	**Pn**	**03 29 20.3**	**+0.5**
EKA	**Eskdalemuir Ar**	**54.82**	**27**	P	n	**Pn**	**03 29 35.9**	**0.0**
CHKZ	**Chkalovo**	**57.83**	**338**	*eP*	n	**Pn**	**03 29 55.8**	**-1.5**
BVAR	**Borovoye Array**	**58.50**	**338**	P	n	**Pn**	**03 30 02.7**	**+0.8**
HHC	**Hu-ho-hao-te**	**59.38**	**302**	*eP*	n	**Pn**	**03 30 07.0**	**-1.1**
HHC				PCP	PcP		03 30 55.5	-0.4
HHC				PP	PP		03 32 19.5	+0.4
HHC				SCP	ScP		03 34 55.0	-1.7
HHC				S	**S**		**03 38 12.5**	**-4.3**
HHC				SCS	ScS		03 39 53.0	-5.4
HHC				SS	SS		03 42 08.5	-3.1
HHC	comp=Z,10.0nm,1.1s,mb4.8			AMB	AMB			
HHC	comp=Z,69nm,4.7s			AMB	AMB			
HHC	comp=N,97nm,19.9s,MS4.2			LR	LR			
HHC	comp=E,139nm,21.8s,MS4.2			LR	LR			
HHC	comp=Z,175nm,15.9s			LR	LR			
AKASG	**Malin Array Be**	**63.17**	**6**	P	n	**Pn**	**03 30 34.0**	**+0.3**
WMQ	**Urumqi**	**63.78**	**322**	*eP*	n	**Pn**	**03 30 38.0**	**+0.2**
WMQ				PP	PP		03 33 00.0	+2.0
WMQ				S	**S**		**03 39 10.0**	**-2.7**
WMQ				SCS	ScS		03 40 26.0	-5.5
WMQ				SS	SS		03 43 20.0	-0.6
WMQ	comp=Z,113nm,5.0s			AMB	AMB			
WMQ	comp=N,48nm,14.0s,MS4.0			LR	LR			
WMQ	comp=E,65nm,15.0s,MS4.0			LR	LR			
WMQ	comp=Z,41nm,14.0s,MS3.8			LR	LR			
SSE	**Sheshan**	**64.58**	**289**	*eP*	n	**Pn**	**03 30 40.8**	**-2.2**
SSE	comp=Z,45nm,3.5s			AMB	AMB			
LZH	**Lanzhou**	**66.26**	**306**	*eP*	n	**Pn**	**03 30 53.5**	**-0.4**
LZH				AP	pP		03 30 58.5	+1.3
LZH	comp=Z,50nm,4.0s			AMB	AMB			
ESDC	**Sonseca Array**	**69.58**	**33**	P	n	**Pn**	**03 31 15.5**	**+0.7**
CD2	**Chengdu**	**71.03**	**304**	*eP*	n	**Pn**	**03 31 22.0**	**-1.7**
CD2	comp=Z,10.0nm,1.2s,mb4.6			AMB	AMB			

ATH ***27*** *03:24:46.9, 3866N×2131E, h18km±1km, MD4.0/18, ML3.8*
NEIC ***27*** *03:24:46.9, 3866N×2131E, h18km, mb3.9/3, MD3.6(PDG), ML3.4(ROM), ML3.5(THE), ML4.0(ATH), After ATH.*
ISCJB ***27*** *03:24:46.4±0.4, 3869N±002×2121E±002, h8km±3km, mb3.6/12, Error ellipse: s-maj=2.6km s-min=2.1km az=16.9*
PDG ***27*** *03:24:47.7±0.5, 3872N×2124E, h11km±1km*
MOS ***27*** *03:24:47.0±0.7, 3868N×2122E, h13km, mb4.0/7, Error ellipse: s-maj=6.7km s-min=4.3km az=90.7*
THE ***27*** *03:24:48.1, 3868N×2138E, h0km, ML3.6*
CSEM ***27*** *03:24:48.1±0.1, 3866N×2129E, h10km, ML3.8, Error ellipse: s-maj=1.5km s-min=1.0km az=8.0*
IDC ***27*** *03:24:51.2±1.3, 3877N×2117E, h50km±20km, mb3.2/7, mb1 3.3/13, mb1mx3.3/27, mbtmp3.4/13, ML3.5/7, Error ellipse: s-maj=15.0km s-min=11.5km az=10.0*
ROM ***27*** *03:24:54.9±0.1, 3882N×2056E, h10km, Md3.2/27, Ml3.4/20, Error ellipse: s-maj=5.4km s-min=0.0km az=15.0*
ISC 27 03:24:47.4±0.4, 3868N±002×2125E±002, h5km±3km, n176, σ1§03/229, mb3.6/12, 18C-12D, Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LKD	**Levkas**	**0.47**	**274**	*eP*	g	**Pg**	**03 24 56.9**	**+0.5**
LKD				*eSg*		**Sg**	**03 25 07.4**	**+4.9**
EVR	**Evrytania**	**0.50**	**61**	*eP*	B	**Pg**	**03 24 56.2**	**-0.7**
EVR				*eSB*		**Sg**	**03 25 03.2**	**-0.2**
RLS	**Riolos of Patr**	**0.64**	**165**	P	PN	**Pg**	**03 24 59.5**	**-0.2**
RLS				*eSN*		**Sg**	**03 25 08.3**	**+0.3**
VLS	**Valsamata**	**0.72**	**226**	*eP*	B	**Pg**	**03 25 00.7**	**-0.5**
VLS				*eSN*		**Sg**	**03 25 12.7**	**+2.1**
AGG	**Agios Georgios**	**0.91**	**67**	*eSg*		**Sg**	**03 25 15.8**	**-0.8**
AGG				*eSg*		**Sg**	**03 25 24.8**	**+8.1**
JAN	**Janina**	**1.03**	**342**	*eP*	N	**Pn**	**03 25 06.8**	**-1.7**
JAN				*eSN*		**Sn**	**03 25 21.9**	**-1.3**
IGT	**Igoumenitsa**	**1.11**	**320**	*eP*	g	**Pg**	**03 25 08.5**	**-0.3**
IGT				*eSg*		**Sg**	**03 25 27.5**	**+4.3**
LKR	**Lokris**	**1.37**	**91**	*eP*	N	**Pn**	**03 25 11.3**	**-1.9**
LKR				*eSN*		**Sn**	**03 25 29.8**	**-1.9**
KEK	**Kerkira**	**1.53**	**313**	*eP*	N	**Pn**	**03 25 15.3**	**-0.1**
KEK				*eSN*		**Sn**	**03 25 37.6**	**+1.9**
ITM	**Ithomi**	**1.59**	**160**	*eP*	N	**Pn**	**03 25 15.8**	**-0.4**
ITM				*eSN*		**Sn**	**03 25 37.2**	**+0.1**
NEO	**Neokhori**	**1.66**	**67**	*eP*	N	**Pn**	**03 25 16.5**	**-0.7**
NEO				*eSN*		**Sn**	**03 25 38.9**	**0.0**
XOR	**Xorichti**	**1.66**	**65**	*eSg*		**Sg**	**03 25 38.3**	**-2.4**
XOR				*eSg*		**Sg**	**03 25 41.1**	**+0.4**
KZN	**Kozani**	**1.68**	**14**	P	PN	**Pg**	**03 25 17.3**	**-0.1**
KZN				*eSN*		**Sn**	**03 25 40.0**	**+0.7**
MGER	**Gerania Oros**	**1.72**	**113**	*eP*	N	**Pn**	**03 25 18.0**	**-0.1**
TPE	**Tepelena**	**1.88**	**330**	*eP*	N	**Pn**	**03 25 24.8**	**+4.6**
NAIG	**Nisos Aigina**	**1.99**	**117**	*eP*	N	**Pn**	**03 25 22.0**	**+0.3**
ATH	**Athens Observa**	**2.06**	**109**	*eP*	N	**Pn**	**03 25 22.8**	**+0.1**
ATH				*eSN*		**Sn**	**03 25 47.5**	**-1.3**
AOS	**Alonnisos**	**2.11**	**76**	*eP*	N	**Pn**	**03 25 22.4**	**-0.9**
AOS				*eSn*		**Sn**	**03 25 49.1**	**-0.9**
PTL	**Penteli**	**2.15**	**106**	*eP*	N	**Pn**	**03 25 23.0**	**-0.9**
KVR	**Kavouri**	**2.16**	**112**	*eP*	N	**Pn**	**03 25 23.5**	**-0.5**
PAIG	**Paliouri**	**2.26**	**56**	*eP*	N	**Pn**	**03 25 24.5**	**-0.9**
PAIG				*eSn*		**Sn**	**03 25 53.6**	**0.0**
BIA	**Bitola**	**2.34**	**1**	*eP*	N	**Pn**	**03 25 27.5**	**+1.0**
BIA				*eSn*		**Sn**	**03 26 00.8**	**+5.2**
THE	**Thessaloniki**	**2.36**	**34**	*eP*	N	**Pn**	**03 25 26.2**	**-0.6**
THE				*eSn*		**Sn**	**03 25 56.5**	**+0.4**
VLI	**Veliai**	**2.37**	**145**	*eP*	N	**Pn**	**03 25 27.5**	**+0.6**
HORT	**Hortiatis**	**2.39**	**36**	*eP*	N	**Pn**	**03 25 26.8**	**-0.4**
PLG	**Polygyros**	**2.40**	**44**	*eP*	N	**Pn**	**03 25 26.4**	**-0.9**
GRG	**Griva**	**2.44**	**21**	*eP*	N	**Pn**	**03 25 27.9**	**0.0**
OHR	**Ohrid**	**2.46**	**352**	*eP*	N	**Pn**	**03 25 32.5**	**-2.0**
OHR				*eSn*		**Sg**	**03 26 07.6**	**+1.4**
OHR	**Ohrid**	**2.46**	**352**	*eP*	N	**Pn**	**03 25 29.4**	**+1.3**
SCTE	**Santa Cesarea**	**2.57**	**304**	Pn	N	**Pn**	**03 25 29.0**	**-0.7**
SOH	**Sokhos**	**2.69**	**36**	*eP*	N	**Pn**	**03 25 31.5**	**+0.2**
SOH				*eSn*		**Sn**	**03 26 04.8**	**+0.6**
KYTH	**Kithira**	**2.78**	**149**	*eP*	B	**Pn**	**03 25 34.0**	**+1.4**
KNT	**Kendrikon**	**2.79**	**27**	*eP*	N	**Pn**	**03 25 32.9**	**+0.2**
VAY	**Valandovo**	**2.83**	**21**	*eP*	N	**Pn**	**03 25 33.2**	**0.0**
VAY	**Valandovo**	**2.83**	**21**	*eP*	N	**Pn**	**03 25 32.8**	**-0.4**
VAY				*eSn*		**Sn**	**03 26 09.0**	**+1.3**
VAY	**Valandovo**	**2.83**	**21**	*eP*	N	**Pn**	**03 25 33.2**	**0.0**
VAY				*eSn*		**Sn**	**03 26 09.0**	**+1.3**
LCI	**Lecce**	**2.94**	**305**	Pn	N	**Pn**	**03 25 34.9**	**+0.1**
SRS	**Serrai**	**3.03**	**36**	*eP*	N	**Pn**	**03 25 35.7**	**-0.3**
SRS				*eSn*		**Sn**	**03 26 13.7**	**+1.0**
SRS	**Serrai**	**3.03**	**36**	*eP*	N	**Pn**	**03 25 35.7**	**-0.3**
SRS				*eSn*		**Sn**	**03 26 13.6**	**+0.9**
LOS	**Limnos**	**3.23**	**66**	*eP*	N	**Pn**	**03 25 38.6**	**-0.1**
LIA	**Limnos Island**	**3.29**	**67**	*eP*	N	**Pn**	**03 25 39.3**	**-0.2**
NVR	**Nevrokopi**	**3.34**	**36**	*eP*	N	**Pn**	**03 25 40.5**	**+0.3**
NVR				*eSN*		**Sn**	**03 26 20.3**	**0.0**
MMB	**Musomiste**	**3.47**	**32**	*eP*	N	**Pn**	**03 25 42.0**	**-0.1**
MMB				*eSn*		**Sn**	**03 26 24.9**	**+1.3**
SERS	**Sersale**	**3.58**	**277**	Pn	N	**Pn**	**03 25 43.3**	**-0.3**
ULC	**Ulcinj**	**3.62**	**336**	P	PN	**Pn**	**03 25 43.7**	**-0.4**
ULC				*eSn*		**Sn**	**03 26 27.3**	**0.0**
APE	**Apeiranthos**	**3.75**	**114**	*eP*	N	**Pn**	**03 25 46.2**	**+0.4**
APE	**Apeiranthos**	**3.75**	**114**	P	P	**Pn**	**03 25 46.7**	**+0.8**
CHOS	**Chios island**	**3.78**	**93**	*eP*	N	**Pn**	**03 25 46.1**	**-0.2**
PLAC	**Placanica**	**3.78**	**268**	Pn	N	**Pn**	**03 25 46.3**	**0.0**
GRI	**Girifalco**	**3.78**	**274**	Pn	N	**Pn**	**03 25 46.1**	**-0.2**
NOCI	**Noci**	**3.86**	**304**	Pn	N	**Pn**	**03 25 47.7**	**+0.3**
ORI	**Oriolo Calabro**	**3.97**	**292**	Pn	N	**Pn**	**03 25 49.3**	**+0.3**
VAM	**Vamos**	**4.03**	**143**	*eP*	N	**Pn**	**03 25 51.2**	**+1.5**
PVY	**Plav**	**4.03**	**346**	P	PN	**Pn**	**03 25 50.5**	**+0.7**
PVY				*eSn*		**Sn**	**03 26 37.7**	**+0.3**
BUM	**Brajici-Budva**	**4.04**	**334**	P	PN	**Pn**	**03 25 49.4**	**-0.5**
BUM				*eSn*		**Sn**	**03 26 37.5**	**-0.1**
BUM	**Brajici-Budva**	**4.04**	**334**	P	PN	**Pn**	**03 25 49.3**	**-0.6**
BUM				*eSn*		**Sn**	**03 26 37.5**	**-0.1**
TTG	**Podgorica**	**4.04**	**339**	P	PN	**Pn**	**03 25 50.5**	**+0.6**
TTG				*eSn*		**Sn**	**03 26 37.7**	**0.0**
RDO	**Rodhopi**	**4.12**	**52**	*eP*	N	**Pn**	**03 25 51.0**	**+0.1**
SOI	**Samo**	**4.13**	**263**	Pn	N	**Pn**	**03 25 51.5**	**+0.4**
SG1	**Sgolgore (BA)**	**4.13**	**303**	*eP*	N	**Pn**	**03 25 50.6**	**-0.6**
BAI	**Bari**	**4.15**	**307**	*eP*	N	**Pn**	**03 25 50.5**	**-0.9**
VTS	**Vitosha**	**4.18**	**20**	*eP*	N	**Pn**	**03 25 53.1**	**+1.2**
VTS				*eSn*		**Sn**	**03 26 43.0**	**+1.9**
VTS	**Vitosha**	**4.18**	**20**	P	PN	**Pn**	**03 25 53.1**	**+1.2**
AMUR	**Altamura**	**4.22**	**303**	Pn	N	**Pn**	**03 25 52.3**	**0.0**
CEL	**Celeste**	**4.23**	**266**	Pn	N	**Pn**	**03 25 52.5**	**0.0**
ALN	**Alexandroupoli**	**4.31**	**58**	*eP*	N	**Pn**	**03 25 53.8**	**+0.3**
HCY	**Herceg Novi**	**4.31**	**332**	P	PN	**Pn**	**03 25 53.6**	**0.0**
HCY				*eSn*		**Sn**	**03 26 44.2**	**0.0**
HCY	**Herceg Novi**	**4.31**	**332**	P	PN	**Pn**	**03 25 53.6**	**0.0**
HCY				*eSn*		**Sn**	**03 26 44.2**	**-0.1**
IVA	**Berane**	**4.31**	**347**	P	PN	**Pn**	**03 25 54.5**	**+0.8**
IVA				*eSn*		**Sn**	**03 26 45.3**	**+0.9**
PLD	**Plovdiv**	**4.32**	**36**	*eP*	N	**Pn**	**03 25 53.9**	**+0.1**
PLD				*eSn*		**Sn**	**03 26 46.0**	**+1.5**
PLD	**Plovdiv**	**4.32**	**36**	*eP*	N	**Pn**	**03 25 53.8**	**+0.1**
CUC	**Castrocucco**	**4.42**	**289**	Pn	N	**Pn**	**03 25 56.2**	**+1.1**
SIRI	**Monte Sirino -**	**4.43**	**291**	Pn	N	**Pn**	**03 25 55.4**	**+0.1**
IDI	**Anoyia**	**4.46**	**138**	P		**Pn**	**03 25 56.6**	**+0.8**
IDI	2.4nm,0.3s,baz=273,slow=18,SNR=3.8			S		**Sn**	**03 26 50.5**	**+2.5**
NKY	**Niksic**	**4.47**	**338**	P	PN	**Pn**	**03 25 55.9**	**+0.1**
NKY				*eSn*		**Sn**	**03 26 47.6**	**-0.6**
SMG	**Samos**	**4.50**	**101**	*eP*	N	**Pn**	**03 25 56.8**	**+0.5**
CDT	**Castel del Mon**	**4.52**	**304**	*eP*	N	**Pn**	**03 25 55.2**	**-1.3**
MTSN	**Montesano sull**	**4.54**	**292**	Pn	N	**Pn**	**03 25 57.2**	**+0.4**
SLCN	**Sala Consilina**	**4.67**	**293**	Pn	N	**Pn**	**03 25 59.5**	**+1.0**
BRY	**Bratogost**	**4.69**	**335**	P	PN	**Pn**	**03 25 59.1**	**+0.3**
BRY				*eSn*		**Sn**	**03 26 52.9**	**-0.8**
BRY	**Bratogost**	**4.69**	**335**	P	PN	**Pn**	**03 25 59.2**	**+0.3**
BRY				*eSn*		**Sn**	**03 26 52.8**	**-0.9**
PLE	**Pljevlja**	**4.86**	**344**	P	PN	**Pn**	**03 26 01.3**	**+0.2**
PLE				*eSn*		**Sn**	**03 26 57.1**	**-0.6**
UPM	**Unac-Piva**	**4.86**	**339**	P	PN	**Pn**	**03 26 01.8**	**+0.7**
UPM				*eSn*		**Sn**	**03 26 57.2**	**-0.5**
CMPR	**Campora**	**4.88**	**291**	Pn	N	**Pn**	**03 26 02.9**	**+1.4**
MRLC	**Muro Lucano**	**4.91**	**297**	Pn	N	**Pn**	**03 26 01.9**	**+0.1**
VPL	**Vulcano Piano**	**4.92**	**268**	Pn	N	**Pn**	**03 26 01.5**	**-0.6**
CDRU	**Civita di Ruta**	**4.94**	**293**	Pn	N	**Pn**	**03 26 03.1**	**+0.9**
SLNA	**Salina**	**5.03**	**271**	Pn	N	**Pn**	**03 26 03.3**	**-0.2**
**FG

SDI					pmax	pmax				
	comp=Z,19nm,0.7s									
INTR	**Introdacqua**	**6.53**	**303**		Pn	**Pn**	**03**	**26**	**23.5**	**-0.5**
	comp=Z,53nm,0.7s									
VVLD	**Villa Vallelon**	**6.65**	**301**		Pn	**Pn**	**03**	**26**	**26.8**	**+1.1**
	comp=Z,39nm,0.7s									
VCEL	**Villa Celiera**	**6.76**	**306**		Pn	**Pn**	**03**	**26**	**27.3**	**+0.1**
FAGN	**Fagnano**	**6.86**	**304**		Pn	**Pn**	**03**	**26**	**30.5**	**+1.9**
	comp=Z,47nm,0.5s									
AQU	**L'Aquila**	**7.02**	**304**	‖	*i*P	**Pn**	**03**	**26**	**38.7**	**+7.9**
AQU	**L'Aquila**	**7.02**	**304**		*e*P	**Pn**	**03**	**26**	**31.5**	**+0.7**
AQU					pmax	pmax				
	comp=Z,16nm,0.9s									
AQU	**L'Aquila**	**7.02**	**304**		*e*Pn	**Pn**	**03**	**26**	**31.5**	**+0.7**
	comp=Z,16nm,0.9s									
AQU	**L'Aquila**	**7.02**	**304**		*e*Pn	**Pn**	**03**	**26**	**31.5**	**+0.7**
	comp=Z,16nm,0.9s									
TERO	**Teramo**	**7.02**	**307**		Pn	**Pn**	**03**	**26**	**30.7**	**-0.2**
	comp=Z,21nm,0.5s									
LNSS	**Leonessa**	**7.37**	**305**		Pn	**Pn**	**03**	**26**	**36.5**	**+0.8**
	comp=Z,45nm,0.6s									
NVLJ	**Novalja**	**7.58**	**323**		*i* Pn	**Pn**	**03**	**26**	**35.5**	**-3.0**
NVLJ					*i* Sn	**Sn**	**03**	**27**	**57.6**	**-7.2**
MLR	**Muntele Rosu**	**7.65**	**26**		P	**Pn**	**03**	**26**	**41.0**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=154,slow=7.9,SNR=9.6									
MLR					S	**Sn**	**03**	**28**	**08.0**	**+1.5**
	baz=319,slow=19,SNR=1.6									
MLR	**Muntele Rosu**	**7.65**	**26**	‖	*i*P	**Pn**	**03**	**26**	**41.5**	**+2.0**
MLR	**Muntele Rosu**	**7.65**	**26**		P	**Pn**	**03**	**26**	**41.0**	**+1.5**
MLR					S	**Sn**	**03**	**28**	**08.0**	**+1.5**
MLR					pmax	pmax				
	comp=Z,1.0nm,0.3s									
PKSM	**Moragy**	**7.77**	**346**	‖	*i*P	**Pn**	**03**	**26**	**44.8**	**+3.6**
PKSM	**Moragy**	**7.77**	**346**	‖	*e*P	**Pn**	**03**	**26**	**47.3**	**+6.1**
BOJS	**Bojanci**	**8.15**	**329**		*i* Pn	**Pn**	**03**	**26**	**44.6**	**-1.8**
BOJS					*i* Sn	**Sn**	**03**	**28**	**12.7**	**-6.1**
BOJS										
	comp=Z,5.0nm,0.3s									
PLOR	**Plostina**	**8.21**	**27**	‖	*i*P	**Pn**	**03**	**26**	**49.4**	**+2.3**
VRI	**Vrincioaia**	**8.25**	**28**	‖	*i*P	**Pn**	**03**	**26**	**50.3**	**+2.6**
VOY	**Vojsko**	**9.14**	**326**		*e*Sn	**Sn**	**03**	**28**	**38.7**	**-4.6**
VOJS	**Vojsko**	**9.15**	**326**		*e*Pn	**Pn**	**03**	**26**	**58.8**	**-1.2**
OBIA	**Obir**	**9.25**	**330**	‖	*i*Pn	**Pn**	**03**	**27**	**00.0**	**-1.4**
OBKA				‖	*i*Sn	**Sn**	**03**	**28**	**40.5**	**-5.4**
PSZ	**Piszkesteto**	**9.29**	**354**	‖	*e*	**Pn**	**03**	**27**	**04.9**	**+2.9**
PSZ	**Piszkesteto**	**9.29**	**354**	‖	*i*P	**Pn**	**03**	**27**	**04.3**	**+2.3**
BR131	**Keskin Array S**	**9.67**	**80**		*e*Pn	**Pn**	**03**	**27**	**09.4**	**+2.1**
	comp=Z,0.9nm,0.4s									
BR131	**Keskin Array S**	**9.67**	**80**		*e*Pn	**Pn**	**03**	**27**	**09.4**	**+2.2**
	comp=Z,0.9nm,0.4s									
BRTR	**Keskin Array B**	**9.67**	**80**		P	**Pn**	**03**	**27**	**09.4**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=256,slow=12,SNR=8.9									
KECS	**Kecovo**	**9.82**	**357**		*e*Pn	**Pn**	**03**	**27**	**13.4**	**+4.2**
KEST	**Kesra**	**9.94**	**256**		P	**Pn**	**03**	**27**	**11.1**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=0.8,slow=17,SNR=4.2									
KEST					S	**Sn**	**03**	**29**	**02.6**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=232,slow=19,SNR=2.2									
VYHS	**Vyhne**	**9.97**	**351**		*e*PN	**Pn**	**03**	**27**	**16.2**	**+4.9**
VYHS					*e*SN	**Sn**	**03**	**29**	**00.4**	**-3.1**
VYHS	**Vyhne**	**9.97**	**351**		*e*Pn	**Pn**	**03**	**27**	**16.2**	**+4.9**
VYHS					*e*Sn	**Sn**	**03**	**29**	**00.5**	**-3.0**
KOLS	**Kolonicke sedl**	**10.28**	**4**		*e*PN	**Pn**	**03**	**27**	**18.9**	**+3.4**
MOA	**Molln**	**10.48**	**333**	‖	*i*Pn	**Pn**	**03**	**27**	**17.7**	**-0.6**
MOA				‖	*i*Sn	**Sn**	**03**	**29**	**11.5**	**-4.6**
MORC	**Moravsky Berou**	**11.41**	**348**		*e*Pn	**Pn**	**03**	**27**	**29.7**	**-1.3**
GERES	**GERESS Array B**	**11.53**	**334**		P	**Pn**	**03**	**27**	**30.1**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=154,slow=14,SNR=3.7									
ESDC	**Soseca Array**	**19.56**	**281**		P	**Pn**	**03**	**29**	**14.6**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=77,slow=11,SNR=6.0									
HFS	**Hagfors**	**22.00**	**350**		P	**P**	**03**	**29**	**39.6**	**-2.9**
	comp=Z,1.3nm,0.5s,mb3.6,baz=167,slow=12,SNR=6.1									
HFS	**Hagfors**	**22.00**	**350**		P	**P**	**03**	**29**	**39.6**	**-2.9**
HFS					pmax	pmax				
	comp=Z,1.0nm,0.5s									
FINES	**FINESS Array B**	**22.99**	**6**		P	**P**	**03**	**29**	**49.0**	**-3.9**
	comp=Z,0.7nm,0.6s,mb3.2,baz=149,slow=15,SNR=4.2									
FINES	**FINESS Array B**	**22.99**	**6**		P	**P**	**03**	**29**	**49.0**	**-3.9**
FINES					pmax	pmax				
	comp=Z,1.0nm,0.6s									
NB2	**NORSAR Subarra**	**23.25**	**348**		P	**P**	**03**	**29**	**53.5**	**-2.2**
	comp=Z,1.0nm,0.7s,mb3.4,baz=160,slow=11									
NOA	**NORSAR Array B**	**23.25**	**348**		P	**P**	**03**	**29**	**52.3**	**-3.3**
	comp=Z,0.2nm,0.5s,mb2.8,baz=160,slow=9.5,SNR=3.4									
EKA	**Eskdalemuir Ar**	**23.36**	**323**		P	**P**	**03**	**29**	**55.2**	**-1.7**
	comp=Z,0.9nm,0.7s,mb3.3,baz=109,slow=14,SNR=3.1									
EKA	**Eskdalemuir Ar**	**23.36**	**323**		P	**P**	**03**	**29**	**55.2**	**-1.7**
EKA					pmax	pmax				
	comp=Z,1.0nm,0.7s									
KAF	**Kangasniemi**	**23.67**	**6**		*e*p	**P**	**03**	**29**	**55.2**	**-4.8**
	comp=Z,0.9nm,0.4s,mb3.5									
KAF	**Kangasniemi**	**23.67**	**6**		*e*P	**P**	**03**	**29**	**55.2**	**-4.8**
KAF					pmax	pmax				
	comp=Z,1.0nm,0.4s,mb3.6									
JOF	**Joensuu**	**25.03**	**11**		*e*p	**P**	**03**	**30**	**09.2**	**-3.2**
	comp=Z,0.9nm,0.5s,mb3.6									
JOF	**Joensuu**	**25.03**	**11**		*e*P	**P**	**03**	**30**	**09.2**	**-3.2**
JOF					pmax	pmax				
	comp=Z,1.0nm,0.5s,mb3.6									
TORD	**Torodi Ar. Bea**	**30.78**	**220**		P	**P**	**03**	**31**	**02.1**	**-1.7**
	comp=Z,0.2nm,0.5s,mb3.2,baz=32,slow=9.0,SNR=6.4									
ARCES	**ARCESS Array B**	**31.00**	**3**		P	**P**	**03**	**31**	**02.2**	**-3.7**
	comp=Z,0.3nm,0.6s,mb3.3,baz=192,slow=9.7,SNR=6.8									
KEV	**Kevo**	**31.29**	**4**		*e*p	**P**	**03**	**31**	**00.4**	**-8.0**
	comp=Z,2.7nm,0.8s,mb4.1									
KEV	**Kevo**	**31.29**	**4**		*e*P	**P**	**03**	**31**	**00.4**	**-8.0**
KEV					pmax	pmax				
	comp=Z,3.0nm,0.8s,mb4.2									
CHKZ	**Chkalovo**	**36.53**	**49**		P	**P**	**03**	**31**	**54.2**	**+0.3**
CHKZ					pmax	pmax				
	comp=Z,1.0nm,0.8s,mb3.7									
CHKZ	**Chkalovo**	**36.53**	**49**		P	**P**	**03**	**31**	**54.1**	**+0.3**
	comp=Z,1.3nm,0.8s,mb3.8									
MKAR	**Makanchi Array**	**44.55**	**59**		P	**P**	**03**	**32**	**59.2**	**-0.9**
	comp=Z,0.7nm,0.6s,mb3.7,baz=268,slow=8.4,SNR=1.8									
MKAR	**Makanchi Array**	**44.55**	**59**		P	**P**	**03**	**32**	**59.2**	**-1.0**
MKAR					pmax	pmax				
	comp=Z,1.0nm,0.6s									
ZAL	**Zalesovo**	**44.92**	**49**		P	**P**	**03**	**33**	**00.3**	**-2.8**
	comp=Z,2.5nm,0.3s,mb4.6,baz=180,slow=3.6,SNR=3.2									
ZAL	**Zalesovo**	**44.92**	**49**		P	**P**	**03**	**33**	**00.3**	**-2.8**
ZAL					pmax	pmax				
	comp=Z,3.0nm,0.3s									
ZAL	**Zalesovo**	**44.92**	**49**		P	**P**	**03**	**33**	**00.3**	**-2.8**

*NEIC **27** 03:28:27.7, 3865N×2131E, h15km, MD3.5(ATH), After ATH.*
*ATH **27** 03:28:27.7, 3865N×2131E, h15km±1km, MD3.5/6*
*CSEM **27** 03:28:27.7, 3865N×2131E, h15km, MD3.5/6, After ATH*
*ISCJB **27** 03:28:28.1±0.5, 3864N±003×2132E±005, h10km, Error ellipse: s-maj=5.3km s-min=4.6km az=36.7*

ISC 27 03:28:27.9±0.8, 3868N±004×2130E±005, h1km±7km, n13, σ0s93/20, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.46**	**59**	*e*PB	**Pg**	**03 28 36.5**	**-0.3**
EVR				*e*SB	**Sg**	**03 28 43.5**	**+0.7**
RLS	**Riolos of Patr**	**0.64**	**168**	*e*PB	**Pg**	**03 28 40.2**	**+0.1**
VLS	**Valsamata**	**0.75**	**228**	*e*PB	**Pg**	**03 28 41.5**	**-0.8**
VLS				*e*SN	**Sg**	**03 28 53.0**	**+0.9**
JAN	**Janina**	**1.03**	**340**	*e*PN	**Pn**	**03 28 48.0**	**-1.5**
JAN				*e*SN	**Sn**	**03 29 02.5**	**-2.1**
LKR	**Lokris**	**1.33**	**91**	*e*PN	**Pn**	**03 28 52.2**	**-1.4**
KEK	**Kerkira**	**1.56**	**312**	*e*PN	**Pn**	**03 28 57.0**	**+0.3**
KEK				*e*SN	**Sn**	**03 29 19.1**	**+1.6**
ITM	**Ithomi**	**1.58**	**161**	*e*PN	**Pn**	**03 28 57.2**	**+0.2**
NEO	**Neokhori**	**1.62**	**67**	*e*PN	**Pn**	**03 28 58.0**	**+0.4**
NEO				*e*SN	**Sn**	**03 29 20.1**	**+0.9**
KZN	**Kozani**	**1.67**	**13**	*e*PN	**Pn**	**03 28 59.0**	**+0.8**
BIA	**Bitola**	**2.34**	**0**	*e*Pn	**Pn**	**03 29 05.9**	**-1.5**
BIA				*e*Sn	**Sn**	**03 29 37.4**	**+0.7**
VLI	**Veliai**	**2.35**	**146**	*e*PB	**Pn**	**03 29 07.5**	**-0.1**
OHR	**Ohrid**	**2.46**	**351**	*e*Pn	**Pb**	**03 29 13.3**	**+0.4**
OHR				*e*Sn	**Sb**	**03 29 43.9**	**+0.3**
VAY	**Valandovo**	**2.81**	**20**	*e*Pn	**Pb**	**03 29 19.0**	**+0.1**

*IDC **27** 03:32:21.2±5.4, 5103N×1558 7E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, Error ellipse: s-maj=124.9km s-min=38.5km az=115.0*
*MOS **27** 03:32:33.2±2.4, 5085N×1547 1E, h90km, mb4.1/2, Error ellipse: s-maj=36.6km s-min=21.5km az=90.8*

*ISCJB **27** 03:32:35.8±1.0, 507N±0.1×1556E±0.2, h146km±6km, mb3.5/3, Error ellipse: s-maj=30.2km s-min=9.7km az=99.7.*
*KRSC **27** 03:32:36, 5036N×1564 5E, h94km, ML4.0*

ISC 27 03:32:37.0±0.9, 507N±0.1×1556E±0.2, h144km±6km, n21, σ1s30/31, mb3.5/3, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**0.21**	**345**	*e*P	**Pn**	**03 32 56.1**	**-0.5**
ALID				*i* S	**Sn**	**03 33 10.0**	**-1.4**
SKR	**Severo-Kuril's**	**0.31**	**88** ‖	*i*PN	**Pn**	**03 32 50.0**	**-6.8**
SKR				*i* S	**Sn**	**03 33 03.7**	**-8.2**
SKR				pmax	pmax		
	comp=N,410nm,0.4s						
SKR				pmax	pmax		
	comp=E,160nm,0.4s						
SKR				pmax	pmax		
	comp=Z,960nm,0.4s						
SKR				smax			
	comp=N,4μm,1.0s						
SKR				smax			
	comp=E,2μm,1.0s						
SKR				smax			
	comp=N,770nm,0.5s						
SKR				smax			
	comp=E,460nm,0.5s						
MIPR	**Malaya Ipel'ka**	**1.75**	**23**	*e*P	**Pn**	**03 33 09.9**	**+1.0**
MIPR				*i* S	**Sn**	**03 33 34.2**	**+0.9**
GRL	**Gorelyy**	**2.42**	**38**	*e*P	**Pn**	**03 33 17.2**	**+0.4**
GRL				*i* S	**Sn**	**03 33 46.6**	**-0.9**
RUS	**Russkaya**	**2.52**	**44**	*e*P	**Pn**	**03 33 18.1**	**+0.1**
RUS				*i* S	**Sn**	**03 33 48.7**	**-0.9**
PET	**Petropavlovsk**	**3.01**	**37**	*e*PN	**Pn**	**03 33 26.4**	**+2.2**
PET				*e*S	**Sn**	**03 34 03.2**	**+2.5**
PET				smax			
	comp=N,120nm,0.5s						
PET				smax			
	comp=E,82nm,0.6s						
PET	**Petropavlovsk**	**3.01**	**37**	*e*P	**Pn**	**03 33 25.0**	**+0.8**
PET				*i* S	**Sn**	**03 34 00.1**	**-0.6**
AVH	**Avacha**	**3.23**	**35**	*e*P	**Pn**	**03 33 28.9**	**+1.8**
GNL	**Ganaly**	**3.34**	**24**	*e*P	**Pn**	**03 33 31.0**	**+2.5**
NLC	**Nalytchevo**	**3.40**	**41**	*e*P	**Pn**	**03 33 29.0**	**-0.2**
NLC				*i* S	**Sn**	**03 34 07.0**	**-2.6**
SPN	**Mys Shipunski**	**3.65**	**46**	*e*P	**Pn**	**03 33 32.4**	**-0.1**
SPN				*i* S	**Sn**	**03 34 12.3**	**-3.1**
TUMR	**Tumrok**	**5.36**	**29**	*e*P	**Pn**	**03 33 58.6**	**+3.5**
MKZ	**Mys Kozlova**	**5.38**	**41**	*e*P	**Pn**	**03 33 55.5**	**+0.2**
MKZ				*i* S	**Sn**	**03 34 52.3**	**-4.1**
KBTR	**Krutoberegovo**	**7.01**	**35**	*e*P	**Pn**	**03 34 18.8**	**+1.7**
MJAR	**Matsushiro Arr**	**18.87**	**228**	P	**P**	**03 36 46.7**	**+0.6**
	comp=E,0.2nm,0.3s,baz=20,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**46.70**	**295**	P	**P**	**03 40 51.0**	**-0.3**
	comp=E,0.2nm,0.3s,mb3.2,baz=59,slow=5.9,SNR=4.0						
BVAR	**Borovoye Array**	**49.71**	**308**	P	**P**	**03 41 14.2**	**-0.2**
	comp=E,1.0nm,0.5s,mb3.7,baz=62,slow=11,SNR=5.9						
BVAR	**Borovoye Array**	**49.71**	**308**	P	**P**	**03 41 14.2**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**54.70**	**341**	P	**P**	**03 41 49.5**	**-1.7**
	comp=Z,1.3nm,1.0s,mb3.6,baz=32,slow=7.1,SNR=5.2						
ARCES	**ARCESS Array B**	**54.70**	**341**	P	**P**	**03 41 49.5**	**-1.6**
ARCES				pmax	pmax		
	comp=Z,1.0nm,1.0s						
FINES	**FINESS Array B**	**61.20**	**335**	P	**P**	**03 42 35.0**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=35,slow=10,SNR=5.3						

*IDC **27** 03:35:01.9±1.7, 5151N×1795 5W, h0km, mb3.9/13, mb1 4.1/14, mb1mx3.9/26, mbtmp4.0/14, ML4.4/1, Error ellipse: s-maj=47.5km s-min=18.5km az=8.0*
*NEIC **27** 03:35:04.8, 5106N×1794 0W, h16km, mb4.0/7, ML3.9(AEIC), After AEIC.*
*ISCJB **27** 03:35:06.6±0.6, 517N±0.1×1795 4W±009, h33km, mb3.9/21, Error ellipse: s-maj=17.0km s-min=7.3km az=164.8*

ISC 27 03:35:09.0±0.7, 518N±01×17950W±009, h35km, n39, σ0s96/38, mb3.9/21, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.87**	**239**	P	**Pn**	**03 35 20.7**	**-4.0**
ATKA	**Atka Island**	**3.30**	**81**	P	**Pn**	**03 35 58.5**	**+0.4**
SMY	**Shemya**	**4.03**	**285**	P	**Pn**	**03 36 11.9**	**+3.7**
NIKO	**Nikolski**	**6.62**	**76**	P	**Pn**	**03 36 45.5**	**+1.8**
KDAK	**Kodiak Island**	**16.55**	**58**	Pn	**Pn**	**03 38 56.9**	**-1.4**
	1.3nm,0.3s,baz=305,slow=17,SNR=8.1						
KDAK				Sn	**Sn**	**03 42 01.0**	**+0.2**
	0.3nm,0.3s,baz=135,slow=19,SNR=2.0						
KDAK	**Kodiak Island**	**16.55**	**58**	Pn	**Pn**	**03 38 56.9**	**-1.4**
KDAK				Sn	**Sn**	**03 42 01.0**	**+0.2**
EGAK	**Eagle**	**23.50**	**42**	*e*P	**P**	**03 40 16.5**	**+0.8**
DAWY	**Dawson**	**24.08**	**44**	*e*P	**P**	**03 40 21.3**	**+0.3**
YKA	**Yellowknife Ar**	**35.24**	**47**	P	**P**	**03 41 59.4**	**-0.5**
	0.7nm,0.6s,mb3.8,baz=282,slow=9.6,SNR=4.8						
YKA	**Yellowknife Ar**	**35.24**	**47**	P	**P**	**03 41 59.4**	**-0.6**
NEW	**Newport**	**39.13**	**70**	P	**P**	**03 42 31.8**	**-1.3**
	1.1nm,0.4s,mb3.9,baz=287,slow=11,SNR=3.3						
NEW	**Newport**	**39.13**	**70**	*e*P	**P**	**03 42 32.2**	**-0.9**
	1.4nm,0.4s,mb4.0						
YBH	**Yreka Blue Hor**	**39.25**	**82**	P	**P**	**03 42 36.0**	**+2.0**
	0.9nm,0.6s,mb3.6,baz=256,slow=8.3,SNR=3.2						
HLID	**Hailey**	**43.24**	**74**	*e*P	**P**	**03 43 07.0**	**+0.2**
	1.9nm,0.9s,mb3.8						
BOZ	**Bozeman (W)**	**43.71**	**70**	*e*P	**P**	**03 43 09.7**	**-0.9**
	1.5nm,0.8s,mb3.8						
NVAR	**Mina Array Bea**	**43.93**	**83**	P	**P**	**03 43 12.2**	**-0.1**
	0.7nm,0.8s,mb3.5,baz=304,slow=6.7,SNR=5.6						
SONM	**Songino Array**	**46.05**	**296**	P	**P**	**03 43 29.0**	**-0.2**
	0.5nm,0.5s,mb3.7,baz=78,slow=9.4,SNR=3.4						
DUG	**Dugway**	**46.19**	**77**	*e*P	**P**	**03 43 29.5**	**-0.9**
	2.8nm,0.9s,mb4.2						
BW06	**Boulder Array**	**46.59**	**72**	*e*P	**P**	**03 43 32.2**	**-1.2**
	1.1nm,0.5s,mb4.0						
PDAR	**Pinedale Array**	**46.59**	**72**	P	**P**	**03 43 32.5**	**-0.9**
	1.9nm,0.6s,mb4.2,baz=316,slow=3.8,SNR=22						
MSU	**Marysvale**	**47.63**	**78**	*e*P	**P**	**03 43 42.2**	**+0.7**
SRU	**San Rafael**	**48.25**	**77**	*e*P	**P**	**03 43 46.4**	**+0.1**
	2.5nm,0.7s,mb4.3						
PV01	**Paradox Valley**	**50.05**	**76**	*e*P	**P**	**03 44 00.3**	**+0.2**
MNTX	**Cornudas Mount**	**56.30**	**80**	*e*P	**P**	**03 44 46.7**	**+0.6**
	1.4nm,1.0s,mb4.0						
ARCES	**ARCESS Array B**	**57.57**	**350**	P	**P**	**03 44 54.5**	**-0.6**
	2.1nm,1.0s,mb4.1,baz=23,slow=9.6,SNR=4.7						
MKAR	**Makanchi Array**	**59.41**	**308**	P	**P**	**03 45 07.5**	**-0.5**
	0.5nm,0.3s,mb4.0,baz=49,slow=6.9,SNR=12						
SCHQ	**Schefferville**	**59.92**	**38**	P	**P**	**03 45 10.3**	**-1.1**
	1.7nm,0.6s,mb4.3,baz=195,slow=11,SNR=3.6						
SCHQ	**Schefferville**	**59.92**	**38**	P	**P**	**03 45 10.3**	**-1.1**
FINES	**FINESS Array B**	**65.25**	**347**	P	**P**	**03 45 46.1**	**-0.8**
	0.4nm,0.6s,mb3.6,baz=20,slow=8.1,SNR=7.1						
AKTK	**Aktyubinsk**	**67.06**	**324**	P	**P**	**03 46 00.4**	**+1.8**
AKTO	**Aktyubinsk**	**67.06**	**324**	P	**P**	**03 46 00.4**	**+1.8**
	0.7nm,0.6s,mb3.9,baz=354,slow=9.2,SNR=3.2						
NB2	**NORSAR Subarra**	**67.15**	**354**	P	**P**	**03 45 59.0**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.9,baz=6.5,slow=6.5						
NOA	**NORSAR Array B**	**67.15**	**354**	P	**P**	**03 45 59.4**	**+0.3**
	comp=Z,0.8nm,0.6s,mb4.0,baz=7.1,slow=6.2,SNR=8.5						
HFS	**Hagfors**	**67.88**	**353**	P	**P**	**03 46 03.6**	**-0.2**
	comp=Z,1.3nm,0.4s,mb4.3,baz=29,slow=3.4,SNR=15						
EKA	**Eskdalemuir Ar**	**73.16**	**2**	P	**P**	**03 46 36.8**	**+0.8**
	comp=Z,0.9nm,0.7s,mb3.8,baz=23,slow=11,SNR=3.5						
GERES	**GERESS Array B**	**79.07**	**351**	P	**P**	**03 47 09.1**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.7,baz=27,slow=5.4,SNR=8.2						
TORD	**Torodi Ar. Bea**	**115.29**	**359**	PKP	PKPdf	03 53 44.7	-2.0
	comp=Z,0.3nm,0.7s,baz=357,slow=2.1,SNR=6.8						
TORD	**Torodi Ar. Bea**	**115.29**	**359**	PKP	PKPdf	03 53 44.7	-2.0
DBIC	**Dimbokro**	**121.55**	**6**	PKP	PKPdf	03 53 57.1	-1.6
	comp=Z,1.1nm,0.4s,baz=330,slow=4.9,SNR=5.1						

*BJI **27** 03:40:13.6, 61.16N×1656 0E, h6km, mB4.6, mb4.6, Ms4.2, Msz3.9*
*KRSC **27** 03:40:14, 6078N×1670 9E, h26km, ML3.8*
*MOS **27** 03:40:14.8±1.1, 6089N×1657 7E, h10km, mb4.1/14, Error ellipse: s-maj=23.4km s-min=12.8km az=88.0*
*IDC **27** 03:40:15.1±0.8, 6088N×1657 7E, h0km, mb3.7/14, mb1 3.9/14, mb1mx3.8/25, mbtmp3.7/14, MS3.5/3, Ms1 3.5/3, ms1mx2.9/31, Error ellipse: s-maj=24.4km s-min=17.0km az=171.0*
*NEIC **27** 03:40:16.7±0.5, 6089N×1657 8E, h10km, mb4.1/6, Error ellipse: s-maj=15.6km s-min=7.1km az=171.0*

*ISCJB **27** 03:40:17.6±1.9, 6088N±005×1658 1E±0.10, h29km±15km, mb4.0/23, MS3.5/4, Error ellipse: s-maj=10.3km s-min=6.2km az=108.7*

ISC 27 03:40:20.8±0.8, 6081N±005×16590E±010, h44km±8km, n56, σ1s17/59, mb4.0/23, MS3.5/4, 1D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMKR	**Semkarok**	**4.83**	**211**	*e*P	**Pn**	**03 41 30.1**	**-0.8**
SRKR	**Sorokina**	**4.84**	**213**	*e*P	**Pn**	**03 41 31.6**	**+0.6**
KBTR	**Krutoberegovo**	**4.89**	**201**	*e*P	**Pn**	**03 41 30.4**	**-1.3**
KBTR				*i* S	**Sn**	**03 42 25.2**	**-1.8**
BDR	**Baidarnaya**	**4.91**	**212**	*e*P	**Pn**	**03 41 31.9**	**0.0**
ZLN	**Zelenaya**	**5.50**	**211**	*e*P	**Pn**	**03 41 41.7**	**+1.6**
TUMR	**Tumrok**	**6.33**	**211**	*e*P	**Pn**	**03 41 53.6**	**+2.2**
MKZ	**Mys Kozlova**	**6.66**	**201**	*e*P	**Pn**	**03 41 55.0**	**-0.9**
MKZ				*i* S	**Sn**	**03 43 08.0**	**-2.5**
BILL	**Bilibino**	**7.26**	**1** ‖	*e*PN	**Pn**	**03 42 04.0**	**-0.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MA2	**Magadan**	**7.64**	**267**	*e*PN	**Pn**	**03 42 07.4**	**-2.1**
MA2				pmax	pmax		
	comp=Z,26nm,0.6s						
MA2	**Magadan**	**7.64**	**267**	*e*Pn	**Pn**	**03 42 07.4**	**-2.1**
	comp=Z,26nm,0.6s						
MA2				*e*Sn	**Sn**	**03 43 35.6**	**+0.8**
GNL	**Ganaly**	**8.33**	**215**	*e*P	**Pn**	**03 42 20.4**	**+1.5**
RUS	**Russkaya**	**9.32**	**209**	P	**Pn**	**03 42 35.2**	**+2.7**
YAK	**Yakutsk**	**17.23**	**290**	*e*P	**Pn**	**03 44 21.2**	**+3.1**
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.6s						
MCK	**McKinley**	**20.88**	**62**	*e*P	**P**	**03 44 59.3**	**+0.3**
MCK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MCK	**McKinley**	**20.88**	**62**	*e*P	**P**	**03 44 59.3**	**+0.3**
	comp=Z,5.8nm,1.0s						
COLA	**College**	**21.11**	**59**	*e*P	**P**	**03 45 02.9**	**+1.4**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.1						
COLA	**College**	**21.11**	**59**	*e*P	**P**	**03 45 02.9**	**+1.4**
	comp=Z,9.6nm,1.1s,mb4.0						
EGAK	**Eagle**	**23.92**	**57**	*e*P	**P**	**03 45 28.8**	**-1.7**
DAWY	**Dawson**	**24.86**	**59**	*e*P	**P**	**03 45 39.5**	**+0.4**
INK	**Inuvik**	**26.02**	**48**	P	**P**	**03 45 49.5**	**-0.1**
	comp=Z,1.6nm,0.5s,mb3.8,baz=327,slow=4.8,SNR=8.8						
INK	**Inuvik**	**26.02**	**48**	P	**P**	**03 45 49.5**	**-0.1**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**26.02**	**48**	*e*P	**P**	**03 45 49.6**	**0.0**
	comp=Z,3.6nm,0.9s,mb3.9						
BOD	**Bodaibo**	**26.08**

CSEM ***27*** *03:56:01.5±0.1, 3867N×2129E, h0km±1km, MD3.5, Error ellipse: s-maj=2.4km s-min=1.6km az=164.0*
THE ***27*** *03:56:01.2, 3862N×2128E, h2km, ML2.5*
ATH ***27*** *03:56:01.5, 3866N×2129E, h14km±4km, MD3.5/7*
ISC 27 03:56:01.4±0.6, 3866N±004×2126E±004, h6km±7km, n16, σ0§81/22, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD	**Levkas**	**0.48**	**276**	*e*Pg	**Pg**	**03 56 11.1**	**+0.4**
EVR	**Evrytania**	**0.50**	**59**	*e*PB	**Pg**	**03 56 10.6**	**-0.5**
EVR				*e*SB	**Sg**	**03 56 17.9**	**+0.3**
VLS	**Valsamata**	**0.71**	**228**	*e*PG	**Pg**	**03 56 15.2**	**+0.1**
VLS				*e*SB	**Sb**	**03 56 26.5**	**+0.2**
AGG	**Agios Georgios** comp=Z,6.0nm,0.5s	**0.91**	**66**	*e*Pg	**Pg**	**03 56 18.2**	**-0.7**
AGG				*e*Sg	**Sg**	**03 56 32.2**	**+1.5**
JAN	**Janina**	**1.05**	**342**	*e*PB	**Pb**	**03 56 21.3**	**-0.7**
JAN				*e*SB	**Sb**	**03 56 36.1**	**+0.2**
MEV	**Metsovon** comp=Z,9.7nm,0.8s	**1.13**	**359**	*e*Pg	**Pg**	**03 56 22.5**	**-0.5**
IGT	**Igoumenitsa**	**1.13**	**321**	*e*Pg	**Pg**	**03 56 22.6**	**-0.6**
IGT				*e*Sg	**Sg**	**03 56 40.5**	**+2.6**
LKR	**Lokris**	**1.36**	**90**	*e*PG	**Pg**	**03 56 26.6**	**-0.9**
KEK	**Kerkira**	**1.55**	**313**	*e*PG	**Pg**	**03 56 30.4**	**-0.8**
ITM	**Ithomi**	**1.57**	**160**	*e*PB	**Pb**	**03 56 31.8**	**+1.0**
NEO	**Neokhori**	**1.66**	**66**	*e*PB	**Pb**	**03 56 32.0**	**-0.4**
XOR	**Xorichti**	**1.66**	**64**	*e*Sb	**Sb**	**03 56 53.7**	**0.0**
XOR				*e*Sb	**Sb**	**03 56 55.6**	**+2.0**
FNA	**Florina**	**2.12**	**2**	*e*Pn	**Pn**	**03 56 37.1**	**-0.4**
PAIG	**Paliouri**	**2.26**	**55**	*e*Pn	**Pn**	**03 56 38.8**	**-0.5**
OUR	**Ouranopolis**	**2.69**	**51**	*e*Pn	**Pn**	**03 56 44.8**	**-0.4**
KNT	**Kendrikon**	**2.80**	**26**	*e*Pn	**Pn**	**03 56 47.1**	**+0.3**

MOS ***27*** *03:58:31.3±0.8, 4.08N×96.14E, h33km, mb5.1/20, Error ellipse: s-maj=19.3km s-min=8.3km az=118.0*
ISCJB ***27*** *03:58:32.9±0.3, 394N±004×9596E±004, h45km, mb4.5/56, MS3.8/11, Error ellipse: s-maj=6.1km s-min=4.4km az=73.1*
IDC ***27*** *03:58:34.0±0.5, 4.06N×96.12E, h41km±4km, mb4.1/22, mb1 4.2/22, mb1mx4.2/24, mbtmp4.3/22, MS3.6/4, Ms1 3.6/4, ms1mx3.1/21, Error ellipse: s-maj=17.2km s-min=10.6km az=55.0*
NEIC ***27*** *03:58:34.4±0.2, 399N×96.00E, mb4.6/21, Error ellipse: s-maj=8.6km s-min=5.0km az=225.0*
BJI ***27*** *03:58:34.3, 4.00N×96.00E, h43km, mB4.6, mb4.7, Ms4.1, Msz4.0*
ISC 27 03:58:35.2±0.2, 395N±004×9594E±003, h47km, h47km±1.2km:pP-P, n139, σ1§14/119, mb4.5/56, MS3.8/11, 8C-7D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSI	**Tuntungan** 0.0nm,0.0s	**2.66**	**100**	P	**Pn**	**03 59 18.2**	**+2.7**
PSI	**Prapat** 29nm,0.3s,baz=292,slow=9.1,SNR=146	**3.19**	**111**	P	**Pn**	**03 59 24.7**	**+1.9**
PSI				S	**Sn**	**04 00 00.5**	**+0.8**
PSI	24nm,0.3s,baz=314,slow=12,SNR=6.4			LR	LR	04 00 54.5	
PSI	comp=Z,470nm,18.2s,baz=62,slow=45 **Prapat**	**3.19**	**111**	P	**Pn**	**03 59 24.7**	**+1.8**
PSI				S	**Sn**	**04 00 00.5**	**+0.8**
KULM	**Kulim**	**4.88**	**74**	*e*Pn	**Pn**	**03 59 46.7**	**+0.7**
KULM				*e*Sn	**Sn**	**04 00 40.2**	**-1.0**
IPM	**Ipoh**	**5.10**	**84**	P	**Pn**	**03 59 51.1**	**+2.1**
PPI	**Padang Panjang** 0.0nm,0.0s	**6.25**	**134**	P	**Pn**	**03 59 59.0**	**-5.8**
KGM	**Kluang**	**7.62**	**104**	P	**Pn**	**04 00 24.7**	**+1.1**
KSI	**Kapahiang** 0.0nm,0.0s	**10.06**	**139**	P	**Pn**	**04 00 57.6**	**+0.5**
KSM	**Kuching**	**14.56**	**99**	*e*P	**Pn**	**04 02 02.4**	**+4.0**
CHTO	**Chiang Mai**	**15.06**	**11**	*e*P	**Pn**	**04 02 08.4**	**+3.6**
CHTO	comp=Z,15nm,0.9s			pmax	pmax		
CHTO	**Chiang Mai** comp=Z,15nm,0.9s	**15.06**	**11**	*e*P	**Pn**	**04 02 08.4**	**+3.6**
CHTO				*ep*P	pP	04 02 19.6	-0.6
PALK	**Pallekele**	**15.51**	**283**	*e*Pn	**Pn**	**04 02 13.0**	**+2.3**
QIZ	**Qiongzhong**	**20.23**	**41**	P	**P**	**04 03 07.0**	**+0.7**
QIZ				AP		04 03 16.5	
QIZ				XP	sP	04 03 23.5	+0.4
QIZ				S	**S**	**04 06 54.5**	**+3.9**
QIZ				XS	sS	04 07 04.0	-4.3
QIZ	comp=Z,7.0nm,1.4s			AMB	AMB		
QIZ	comp=Z,117nm,3.5s			AMB	AMB		
QIZ	comp=E,177nm,17.0s			LR	LR		
QIZ	comp=Z,148nm,18.7s,MS3.4			LR	LR		
KKM	**Kota Kinabalu**	**20.31**	**83**	*e*P	**P**	**04 03 07.6**	**+0.5**
KMI	**Kunming**	**22.04**	**17**	P	**P**	**04 03 31.0**	**+5.2**
KMI				S	**S**	**04 07 24.8**	**-1.5**
KMI	comp=Z,5.0nm,0.7s,mb4.0			AMB	AMB		
KMI	comp=N,142nm,15.4s,MS3.7			LR	LR		
KMI	comp=E,149nm,13.9s,MS3.7			LR	LR		
KMI	comp=Z,166nm,20.0s			LR	LR		
JIRN	**Jiri** comp=Z,25nm,0.5s,mb5.0	**25.34**	**339**	*e*P	**P**	**04 03 58.1**	**+0.4**
PKI	**Pulchoki**	**25.55**	**338**	*e*P	**P**	**04 03 59.3**	**-0.2**
GUN	**Gumba**	**25.68**	**339**	*e*P	**P**	**04 04 00.5**	**-0.2**
DMN	**Daman**	**25.69**	**337**	*e*P	**P**	**04 04 01.1**	**+0.3**
KKN	**Kakani** comp=Z,17nm,0.7s,mb4.7	**25.79**	**338**	*e*P	**P**	**04 04 01.4**	**-0.3**
KKN	**Kakani** comp=Z,17nm,0.7s,mb4.7	**25.79**	**338**	*e*P	**P**	**04 04 01.4**	**-0.3**
KKN				pmax	pmax		
GKN	**Gorkha** comp=Z,19nm,0.3s,mb5.1	**26.23**	**337**	*e*P	**P**	**04 04 05.3**	**-0.4**
KOLN	**Koldanda** comp=Z,31nm,0.7s,mb5.0	**26.45**	**335**	*e*P	**P**	**04 04 07.6**	**0.0**
CD2	**Chengdu**	**27.81**	**15**	*e*P	**P**	**04 04 19.5**	**-0.4**
CD2	comp=Z,10.0nm,0.8s,mb4.5			AMB	AMB		
CD2	comp=Z,30nm,4.5s			AMB	AMB		
LZH	**Lanzhou**	**32.80**	**12**	*e*P	**P**	**04 05 03.0**	**-0.9**
LZH				AP	pP	04 05 15.5	-0.8
LZH				XP	sP	04 05 20.0	-1.8
LZH	comp=Z,13nm,1.0s,mb4.8			AMB	AMB		
LZH	comp=Z,61nm,4.4s			AMB	AMB		
LZH	comp=E,450nm,15.0s			LR	LR		
LZH	comp=Z,677nm,16.2s,MS4.4			LR	LR		
NJ2	**Nanjing**	**35.27**	**35**	*e*P	**P**	**04 05 26.5**	**+1.1**
NJ2				AP	pP	04 05 38.8	+1.1
NJ2				XP	sP	04 05 44.0	+0.8
NJ2				PP	PP	04 06 46.5	+0.5
NJ2				S	**S**	**04 10 54.0**	**-1.9**
NJ2				XS	sS	04 11 14.0	-2.6
NJ2	comp=Z,10.0nm,0.5s,mb5.0			AMB	AMB		
NJ2	comp=Z,20nm,3.5s			AMB	AMB		
NJ2	comp=N,170nm,17.7s,MS4.0			LR	LR		
NJ2	comp=E,120nm,15.2s,MS4.0			LR	LR		
NJ2	comp=Z,200nm,15.2s,MS4.0			LR	LR		
GTA	**Gaotai**	**35.47**	**5**	*e*P	**P**	**04 05 28.3**	**+1.2**
GTA				AP	pP	04 05 40.8	+1.3
GTA				XP	sP	04 05 46.0	+1.0
GTA				PP	PP	04 06 44.8	-3.4
GTA				PPP		04 07 03.0	
GTA				S	**S**	**04 11 00.3**	**+1.3**
GTA				XS	sS	04 11 21.5	+1.7
GTA				SS	SS	04 13 21.0	-14
GTA				SCS	ScS	04 15 44.3	+1.9
GTA	comp=Z,4.0nm,0.8s,mb4.4			AMB	AMB		
GTA	comp=Z,64nm,6.1s			AMB	AMB		
GTA	comp=N,71nm,17.1s,MS3.7			LR	LR		
GTA	comp=E,71nm,14.5s,MS3.7			LR	LR		
GTA	comp=Z,82nm,14.8s,MS3.6			LR	LR		
SWI	**Sorong** comp=Z,395nm,0.8s	**35.62**	**97**	P	**P**	**04 05 25.9**	**-2.5**
SSE	**Sheshan**	**35.98**	**39**	*e*P	**P**	**04 05 31.5**	**0.0**
SSE	comp=Z,22nm,0.7s,mb5.2			AMB	AMB		
SSE	comp=Z,55nm,5.5s			AMB	AMB		
SSE	comp=N,12nm,19.7s,MS3.3			LR	LR		
SSE	comp=E,51nm,19.8s,MS3.3			LR	LR		
SSE	comp=Z,46nm,19.2s,MS3.3			LR	LR		
FITZ	**Fitzroy Crossi** comp=Z,7.3nm,0.3s	**36.58**	**128**	*e*P	pP	04 05 46.9	-2.1
FITZ				*e*S	tx	04 07 38.1	
FITZ	**Fitzroy Crossi** comp=Z,4.6nm,0.7s,mb4.5,baz=308,slow=5.4,SNR=25	**36.58**	**128**	P	**P**	**04 05 34.6**	**-1.9**
FITZ	**Fitzroy Crossi**	**36.58**	**128**	P	**P**	**04 05 34.6**	**-1.9**
FITZ				*e*P	pP	04 05 46.9	-2.1
FITZ				*e*S	rx	04 07 38.1	
HHC	**Hu-ho-hao-te**	**39.33**	**19**	*e*P	**P**	**04 06 01.0**	**+1.2**
HHC				AP	pP	04 06 13.3	+1.0
HHC				XP	sP	04 06 18.8	+1.0
HHC				PP	PP	04 07 36.5	+5.9
HHC				PCP	PcP	04 08 08.3	+0.7
HHC				SCP	ScP	04 11 52.8	+0.5
HHC				PCS	PcS	04 11 58.0	+0.6
HHC				S	**S**	**04 11 59.0**	**+1.3**
HHC				XS	sS	04 12 19.8	+1.2
HHC				SS	SS	04 14 47.5	-5.1
HHC				SCS	ScS	04 16 03.5	-0.7
HHC	comp=Z,11nm,0.9s,mb4.6			AMB	AMB		
HHC	comp=Z,57nm,6.4s			AMB	AMB		
HHC	comp=N,127nm,17.1s,MS3.9			LR	LR		
HHC	comp=E,79nm,16.1s,MS3.9			LR	LR		
HHC	comp=Z,97nm,16.5s,MS3.7			LR	LR		
BJI	**Beijing**	**40.31**	**24**	*e*P	**P**	**04 06 09.0**	**+1.1**
BJI	comp=Z,10.0nm,0.7s,mb4.7			AMB	AMB		
WMQ	**Urumqi**	**40.37**	**351**	*e*P	**P**	**04 06 10.0**	**+1.6**
WMQ				AP	pP	04 06 22.0	+1.1
WMQ				XP	sP	04 06 28.0	+1.6
WMQ				PP	PP	04 07 48.0	+6.1
WMQ				S	**S**	**04 12 14.0**	**+0.9**
WMQ	comp=Z,21nm,1.0s,mb4.8			AMB	AMB		
WMQ	comp=Z,112nm,4.0s			AMB	AMB		
WMQ	comp=N,45nm,13.0s,MS3.8			LR	LR		
WMQ	comp=E,71nm,13.0s,MS3.8			LR	LR		
WMQ	comp=Z,36nm,12.0s,MS3.4			LR	LR		
MUN	**Mundaring**	**40.60**	**153**	*e*P	**P**	**04 06 10.2**	**-0.1**
KLBR	**Kellerberrin** comp=Z,7.0nm,0.7s,mb4.4	**41.00**	**151**	*e*P	**P**	**04 06 13.2**	**-0.4**
NWAO	**Narrogin (SRO)** comp=Z,11nm,0.8s,mb4.5,baz=327,slow=9.8,SNR=5.8	**41.87**	**153**	P	**P**	**04 06 20.6**	**-0.1**
AAK	**Ala-Archa**	**42.99**	**337**	*e*P	**P**	**04 06 29.9**	**+0.1**
AAK				*e*	pP	04 06 42.6	+0.2
AAK	comp=Z,5.0nm,0.8s,mb4.3			pmax	pmax		
AAK	**Ala-Archa** comp=Z,4.7nm,0.8s,mb4.3	**42.99**	**337**	*e*P	**P**	**04 06 29.9**	**+0.1**
AAK				*e*	pP	04 06 42.5	+0.1
MK31	**Makanchi Array**	**44.28**	**347**	P	**P**	**04 06 38.7**	**-1.5**
MK31	comp=Z,3.0nm,0.5s,mb4.3			pmax	pmax		
MKAR	**Makanchi Array** comp=Z,2.6nm,0.4s,mb4.3,baz=153,slow=7.6,SNR=38	**44.28**	**347**	P	**P**	**04 06 38.9**	**-1.3**
MKAR				pP	pP	04 06 50.1	-2.8
MKAR	**Makanchi Array** comp=Z,3.2nm,0.4s,baz=157,slow=6.6,SNR=7.8	**44.28**	**347**	P	**P**	**04 06 38.9**	**-1.3**
MKAR				pP	pP	04 06 50.1	-2.8
WRA	**Warramunga Arr** comp=Z,5.2nm,0.5s,mb4.6,baz=302,slow=9.0,SNR=12	**44.58**	**124**	P	**P**	**04 06 41.3**	**-1.3**
WRAB	**Tennant Creek**	**44.58**	**124**	*e*P	**P**	**04 06 41.7**	**-0.9**
WRAB	comp=Z,10.0nm,0.6s,mb4.8			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,10nm,0.6s,mb4.8	**44.58**	**124**	*e*P	**P**	**04 06 41.7**	**-0.9**
SONM	**Songino Array** comp=Z,3.5nm,0.5s,mb4.4,baz=190,slow=9.0,SNR=35	**44.63**	**10**	P	**P**	**04 06 42.3**	**-0.7**
SONM				PcP	PcP	04 08 24.4	-0.7
ULN	**Ulaanbaatar** comp=Z,2.0nm,0.6s,mb4.1	**44.78**	**11**	*e*P	**P**	**04 06 42.9**	**-1.3**
ULN				*e*	pP	04 06 53.6	-3.3
ULN	comp=Z,2.0nm,0.6s,mb4.1			pmax	pmax		
ULN	**Ulaanbaatar** comp=Z,2.2nm,0.6s,mb4.2	**44.78**	**11**	*e*P	**P**	**04 06 42.9**	**-1.3**
ULN				*e*	pP	04 06 53.6	-3.3
SNY	**Shenyang**	**45.09**	**29**	⇑P	**P**	**04 06 44.0**	**-2.6**
SNY	comp=Z,12nm,0.5s,mb5.0			AMB	AMB		
ASPA	**Alice Springs**	**46.07**	**128**	*e*P	**P**	**04 06 53.6**	**-0.8**
ASPA				*e*S	rx	04 09 43.0	
AS31	**Alice Springs**	**46.07**	**128**	*e*P	**P**	**04 06 53.6**	**-0.8**
AS31				*e*S	rx	04 09 43.0	
ASAR	**Alice Springs** comp=Z,3.5nm,0.5s,mb4.5,baz=295,slow=7.6,SNR=63	**46.07**	**128**	P	**P**	**04 06 52.8**	**-1.5**
CN2	**Changchun**	**47.48**	**29**	*e*P	**P**	**04 07 05.0**	**-0.4**
CN2				*e*XP	sP	04 07 23.0	-0.6
CN2				*e*S	**S**	**04 13 56.5**	**-0.2**
MDJ	**Mudanjiang**	**50.13**	**31**	P	**P**	**04 07 26.8**	**+1.0**
MDJ	comp=Z,5.0nm,0.9s,mb4.5			AMB	AMB		
MDJ	comp=Z,62nm,2.8s,mb5.2			AMB	AMB		
VLA	**Vladivostok**	**50.36**	**34**	*i*P	**P**	**04 07 30.2**	**+2.7**
VLA				*e*		04 08 40.5	
VLA	comp=Z,11nm,0.7s,mb5.0			pmax	pmax		
MJAR	**Matsushiro Arr** comp=Z,86nm,18.5s,MS3.8,baz=240,slow=37	**50.57**	**45**	LR	LR	04 29 18.6	
ZAL	**Zalesovo** comp=Z,7.4nm,0.5s,mb4.9,baz=309,slow=5.4,SNR=22	**50.65**	**352**	P	**P**	**04 07 28.3**	**-1.4**
ZAL				pP	pP	04 07 40.4	-2.2
PMG	**Port Moresby** comp=Z,8nm,0.7s,mb4.8,baz=265,slow=7.1,SNR=5.3	**52.74**	**105**	P	**P**	**04 07 44.6**	**-0.6**
PMG	**Port Moresby** comp=Z,11nm,0.6s	**52.74**	**105**	*e*P	**P**	**04 07 44.1**	**-1.2**
PMG				pmax	pmax		
PMG	**Port Moresby** comp=Z,3.0nm,0.6s,mb4.4	**52.74**	**105**	*e*P	**P**	**04 07 44.1**	**-1.2**
VOSK	**Vostochnaya**	**52.81**	**341**	P	**P**	**04 07 44.4**	**-1.3**
VOSK	comp=Z,1.0nm,0.5s,mb4.0			pmax	pmax		
OPO	**Ambohidratompo** comp=Z,1.4nm,0.3s,mb4.3,baz=16,slow=4.4,SNR=7.4	**52.96**	**243**	P	**P**	**04 07 48.4**	**+1.5**
ZRNK	**Zerenda**	**53.65**	**340**	P	**P**	**04 07 50.6**	**-1.4**
ZRNK	comp=Z,1.0nm,0.5s,mb4.0			pmax	pmax		
ZRNK	**Zerenda** comp=Z,3.0nm,0.6s,mb4.4	**53.65**	**340**	*e*P	**P**	**04 07 50.5**	**-1.4**
CHKZ	**Chkalovo**	**53.73**	**342**	P	**P**	**04 07 51.6**	**-1.0**
CHKZ	comp=Z,4.0nm,0.6s,mb4.5			pmax	pmax		
CHKZ	**Chkalovo** comp=Z,9.3nm,0.6s,mb4.9	**53.73**	**342**	*e*P	**P**	**04 07 51.4**	**-1.2**
CHKZ				*ep*P	pP	04 08 04.0	-1.5
AB31	**Akbulak array**	**54.51**	**332**	P	**P**	**04 07 57.7**	**-0.5**
AB31	comp=Z,6.0nm,0.8s,mb4.7			pmax	pmax		
CTAO	**Charters Tower**	**54.88**	**118**	*e*P	**P**	**04 08 00.2**	**-0.7**
CTAO	comp=Z,6.0nm,0.9s,mb4.6			pmax	pmax		
CTAO	**Charters Tower** comp=Z,5.6nm,0.9s,mb4.6	**54.88**	**118**	*e*P	**P**	**04 08 00.1**	**-0.7**
HABR	**Khabarovsk**	**55.51**	**31**	*e*P	**P**	**04 08 08.3**	**+2.8**
STKA	**Stephens Creek** comp=Z,4.3nm,0.7s,mb4.6	**56.13**	**133**	*e*P	**P**	**04 08 09.2**	**-0.7**
STKA	**Stephens Creek** comp=Z,4.7nm,0.7s,mb4.6,baz=310,slow=8.6,SNR=12	**56.13**	**133**	P	**P**	**04 08 09.5**	**-0.4**
KMBO	**Kilima Mbogo** comp=Z,0.5nm,0.3s,mb4.0,baz=52,slow=9.9,SNR=5.2	**58.86**	**266**	P	**P**	**04 08 31.2**	**+2.1**
KMBO	**Kilima Mbogo**	**58.86**	**266**	P	**P**	**04 08 31.2**	**+2.1**
ARU	**Arti**	**60.17**	**337**	*e*P	**P**	**04 08 46.6**	**+8.5**
ARU				*e*S	**S**	**04 17 01.8**	**+13**
BR131	**Keskin Array S** comp=Z,1.2nm,0.5s,mb4.2	**66.34**	**312**	*e*P	**P**	**04 09 18.2**	**-0.7**
BRTR	**Keskin Array B** comp=Z,2.2nm,0.9s,mb4.2,baz=132,slow=7.4,SNR=12	**66.34**	**312**	P	**P**	**04 09 18.3**	**-0.7**
BRTR	comp=Z,1.7nm,0.6s,baz=137,slow=7.1,SNR=6.7			pP	pP	04 09 31.9	-0.3
OBN	**Obninsk**	**69.63**	**328**	*e*P	pP	04 09 52.0	-1.0
OBN				*e*S	S	04 19 05.0	+20
OBN	comp=Z,17nm,1.0s,mb4.9			pmax	pmax		
TIRR	**Tirgusor**	**71.28**	**316**	⇑*i*P	pP	04 10 03.2	+0.1
AKASG	**Malin Array Be** comp=Z,0.3nm,0.3s,mb3.6,baz=91,slow=4.5,SNR=4.6	**72.32**	**322**	P	**P**	**04 09 54.9**	**-1.1**
VRI	**Vrincioaia**	**72.76**	**317**	⇓*i*P	pP	04 10 12.7	+0.7
PLOR	**Plostina**	**72.81**	**317**	⇑*i*P	pP	04 10 13.8	+1.5
TMCR	**Tamitsa**	**72.91**	**337**	*e*P	pP	04 10 11.7	-1.2
TMCR	comp=Z,10.0nm,0.8s,mb4.8			pmax	pmax		
MLR	**Muntele Rosu**	**73.21**	**316**	⇑*i*P	pP	04 10 16.2	+1.5
BURAR	**Bucovina Array**	**74.14**	**318**	⇑*i*P	**P**	**04 10 07.7**	**+1.1**
BOSA	**Boshof** comp=Z,3.9nm,1.0s,mb4.3,baz=175,slow=11,SNR=3.2	**75.07**	**239**	P	**P**	**04 10 12.7**	**+0.6**
BOSA				LR	LR	04 39 52.6	
MAW	**Mawson** comp=Z,4.5nm,0.6s,mb4.6	**75.10**	**192**	⇓*i*P	**P**	**04 10 12.5**	**+0.3**
MAW	**Mawson** comp=Z,5.4nm,0.6s,mb4.6,baz=25,slow=6.3,SNR=21	**75.10**	**192**	P	**P**	**04 10 12.5**	**+0.3**
MAW	**Mawson**	**75.10**	**192**	⇓*i*P	**P**	**04 10 12.5**	**+0.3**
MAW	comp=Z,5.0nm,0.6s			pmax	pmax		
APA	**Apatity**	**76.12**	**339**	⇑*i*P	pP	04 10 30.8	-0.8
APA	comp=Z,16nm,1.0s,mb4.9			pmax	pmax		
KWP	**Kalwaria**	**76.16**	**320**	*e*P	pP	04 10 32.6	+0.8
KWP	**Kalwaria**	**76.16**	**320**	*e*P	**P**	**04 10 19.0**	**+0.7**
KWP				*e**PP	pP	04 10 32.0	+0.2
KWP	comp=Z,16nm,1.0s,mb4.9			pmax	pmax		
KWP	**Kalwaria** comp=Z,16nm,1.0s,mb4.9	**76.16**	**320**	*e*P	**P**	**04 10 19.0**	**+0.7**
KWP				*ep*P	pP	04 10 32.0	+0.2
KOLS	**Kolonicke sedl**	**76.32**	**319**	*es*P	pP	04 10 34.3	+1.6
SUW	**Suwalki**	**76.71**	**325**	*e*P	pP	04 10 34.0	-1.0
CRVS	**Cervena-Dubn**	**76.84**	**319**	*es*P	sP	04 10 37.6	-3.3
FINES	**FINESS Array B** comp=Z,0.8nm,0.9s,mb3.6,baz=104,slow=5.9,SNR=14	**76.99**	**332**	P	**P**	**04 10 22.3**	**-0.7**
FINES				pP	pP	04 10 33.7	-2.9
FINES	**FINESS Array B** comp=Z,3.7nm,0.6s,baz=98,slow=6.2,SNR=12	**76.99**	**332**	P	**P**	**04 10 22.3**	**-0.7**
FINES				pP	pP	04 10 33.7	-2.9
STHS	**Stebnicka Huta**	**77.06**	**320**	*es*P	pP	04 10 39.0	+2.1
KECS	**Kecovo**	**77.42**	**319**	*es*P	pP	04 10 40.2	+1.3
NIE	**Niedzica**	**77.67**	**320**	*e*P	pP	04 10 41.0	+0.7
PSZ	**Piszkesteto**	**77.73**	**318**	⇓*i*P	pP	04 10 41.7	+1.0
PSZ	**Piszkesteto**	**77.73**	**318**	*e*P	**P**	**04 10 26.1**	**-1.0**
PSZ				*e**PP	pP	04 10 40.6	-0.1
PSZ	comp=Z,5.0nm,0.9s,mb4.4			pmax	pmax		
PSZ	**Piszkesteto** comp=Z,4.8nm,0.9s,mb4.4	**77.73**	**318**	*e*P	**P**	**04 10 26.1**	**-1.0**
PSZ				*ep*P	pP	04 10 40.6	-0.1
OJC	**Ojcow**	**78.11**	**320**	*e*P	pP	04 10 42.9	+0.1
PKSM	**Moragy**	**78.37**	**316**	⇑*i*P	**P**	**04 10 30.3**	**-0.3**
VYHS	**Vyhne**	**78.50**	**319**	*es*P	pP	04 10 46.1	+1.1
MORC	**Moravsky Berou**	**79.50**	**320**	⇓*i*P	**P**	**04 10 37.5**	**+0.7**
MORC	**Moravsky Berou**	**79.50**	**320**	*e*P	**P**	**04 10 36.9**	**+0.1**
MORC				*e**PP	pP	04 10 50.5	0.0
MORC	comp=Z,5.0nm,1.2s,mb4.3			pmax	pmax		
MORC	**Moravsky Berou** comp=Z,4.8nm,1.2s,mb4.3	**79.50**	**320**	*e*P	**P**	**04 10 36.9**	**+0.1**
MORC				*ep*P	pP	04 10 50.5	0.0
ARCES	**ARCESS Array B** comp=Z,1.0nm,0.5s,mb4.0,baz=94,slow=6.4,SNR=26	**79.53**	**340**	P	**P**	**04 10 36.2**	**-0.8**
ARCES				pP	pP	04 10 47.7	-3.0
ARCES	comp=Z,9.5nm,0.9s,baz=103,slow=6.9,SNR=10			LR	LR	04 48 36.9	
ARCES	comp=Z,38nm,20.9s,MS3.7,baz=34,slow=38			*PP	pP	04 10 47.7	-3.0
ARCES	**ARCESS Array B**	**79.53**	**340**	P	**P**	**04 10 36.3**	**-0.7**
ARCES	**ARCESS Array B**	**79.53**	**340**	P	**P**	**04 10 36.2**	**-0.8**
ARCES				pP	pP	04 10 47.7	-3.0
ARCES				LR	LR	04 48 36.9	
ZST	**Bratislava**	**79.62**	**318**	*es*P	pP	04 10 51.9	+0.8
TSUM	**Tsumeb** comp=Z,2.1nm,0.6s,mb4.2	**80.33**	**250**	*e*P	**P**	**04 10 43.0**	**+1.6**
GCIS	**Gornji Cirnik**	**80.42**	**316**	*e*P	**P**	**04 10 42.4**	**+0.6**
GCIS				*e*	pP	04 10 57.0	+1.5
GROS	**Grobnik**	**80.56**	**316**	*e*P	**P**	**04 10 43.0**	**+0.5**
GROS				*e*	pP	04 10 57.3	+1.1
LEGS	**Legarje**	**80.65**	**316**	*e*P	**P**	**04 10 43.5**	**+0.5**
BRG	**Berggiesshubel** comp=Z,3.1nm,1.2s	**81.89**	**321**	*e*(P)	pP	04 11 04.5	+1.2
GERES	**GERESS Array B** comp=Z,1.1nm,0.8s,mb3.9,baz=96,slow=6.8,SNR=14	**81.92**	**319**	P	**P**	**04 10 50.2**	**+0.4**
GERES				pP	pP	04 11 03.6	+0.1
SYO	**Syowa Base** comp=Z,2.9nm,0.8s,baz=120,slow=4.0,SNR=11	**82.22**	**198**	⇑*e*P	**P**	**04 10 51.0**	**-0.4**
GRA1	**Grafenberg Arr**	**83.58**	**319**	*e*P	pP	04 11 12.1	0.0
GRF	**Grafenberg Arr** comp=Z,5.0nm,1.6s	**83.58**	**319**	*e*P	pP	04 11 12.1	0.0
GRF	**Grafenberg Arr** comp=Z,5.0nm,1.6s,mb4.4	**83.58**	**319**	*e*P	pP	04 11 12.1	0.0
GRF				pmax	pmax		
NB2	**NORSAR Subarra** comp=Z,1.2nm,1.1s,mb3.9,baz=94,slow=5.1	**84.00**	**331**	P	**P**	**04 10 59.0**	**-1.6**
NOA	**NORSAR Array B** comp=Z,0.2nm,0.4s,mb3.6,baz=90,slow=6.3,SNR=3.3	**84.00**	**331**	P	**P**	**04 10 59.8**	**-0.8**
NOA				pP	pP	04 11 12.3	-2.0
KEST	**Kesra** comp=Z,2.2nm,0.7s,mb4.4,baz=83,slow=14,SNR=9.1	**84.95**	**305**	P	**P**	**04 11 05.9**	**+0.6**
KEST				pP	pP	04 11 19.1	0.0
VNDA	**Vanda** comp=Z,0.9nm,0.6s,mb4.3,baz=299,slow=5.5,SNR=8.2	**88.75**	**169**	P	**P**	**04 11 22.4**	**-1.4**
VNDA	**Vanda** comp=Z,1.0nm,0.6s	**88.75**	**169**	*e*P	**P**	**04 11 22.7**	**-1.1**
VNDA				pmax	pmax		
VNDA	**Vanda** comp=Z,1.1nm,0.6s,mb4.4	**88.75**	**169**	*e*P	**P**	**04 11 22.7**	**-1.2**
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.6s,mb4.3,baz=92,slow=5.6,SNR=19	**93.23**	**283**	P	**P**	**04 11 45.5**	**+0.9**
ULM	**Lac du Bonnet** comp=Z,2.0nm,0.6s,baz=344,slow=6.2,SNR=5.5	**125.06**	**9**	PKP	PKPdf	04 17 27.7	-2.6
ULM	**

SET4				*e*S		Sg	04 13 20.6	+0.7
PFET	**Feteiras**	**0.23**	**105**	*e*P		Pg	04 13 17.6	+0.1
PFET				*e*S		Sg	04 13 20.9	+0.5
PSAN	**Santo Antonio**	**0.27**	**95**	*e*P		Pg	04 13 18.5	+0.2
PSAN				*e*S		Sg	04 13 22.2	+0.4
FAC	**Faja de Cima**	**0.34**	**107**	*e*P		Pg	04 13 19.8	0.0
FAC				*e*S		Sg	04 13 25.0	+0.8
CML	**Cha da Macela**	**0.42**	**104**	*e*P		Pg	04 13 21.1	-0.2
PVER	**Pico Vermelho**	**0.44**	**100**	*e*P		Pg	04 13 21.5	-0.2
PVER				*e*S		Sg	04 13 27.6	+0.2
PVER								
	92nm,0.3s							
PVER	**Pico Vermelho**	**0.44**	**100**	*e*P		Pg	04 13 21.5	-0.2
PVER				*e*S		Sg	04 13 27.6	+0.2
LFA	**Lagoa do Fogo**	**0.47**	**102**	*e*P		Pg	04 13 21.8	-0.4
LFA				*e*S		Sg	04 13 28.5	+0.2
PMAT	**Coroa da Mata**	**0.47**	**97**	*e*P		Pg	04 13 21.8	-0.5
PMAT				*e*S		Sg	04 13 28.5	+0.1
PMAT								
	63nm,0.2s							
PMAT	**Coroa da Mata**	**0.47**	**97**	*e*P		Pg	04 13 21.8	-0.5
PMAT				*e*S		Sg	04 13 28.5	+0.1
PRCH	**Ribeira Ch**	**0.48**	**108**	*e*S		Sg	04 13 28.9	+0.1
PRCH								
	83nm,0.3s							
MESC	**Monte Escuro**	**0.50**	**99**	*e*P		Pg	04 13 22.1	-0.6
MESC				*e*S		Sg	04 13 29.0	-0.1
VIF	**Vila Franca**	**0.51**	**105**	*e*S		Sg	04 13 29.6	0.0
VIF								
	23nm,0.2s							
PCNG	**Congro**	**0.54**	**101**	*e*S		Sg	04 13 30.4	-0.1
PCNG								
	21nm,0.2s							
PFAD	**Fenais da Ajud**	**0.59**	**93**	*e*S		Sg	04 13 31.1	-1.0
MIRA	**Miradouro**	**0.63**	**98**	*e*P		Pg	04 13 24.1	-1.1
MIRA				*e*S		Sg	04 13 33.0	-0.4
PFAV	**Pico das Favas**	**1.16**	**316**	*e*S		Sg	04 13 45.9	-4.5
PFAV								
	14nm,0.2s							
RIB2	**Ribeirinha**	**1.18**	**313**	*e*S		Sg	04 13 46.4	-4.7
RIB2								
	12nm,0.1s							
PVNV	**Vila Nova**	**1.23**	**316**	*e*S		Sg	04 13 47.4	-5.4
PVNV								
	9.7nm,0.1s							
ROSA	**Rosais**	**1.91**	**297**	*e*P		Pn	04 13 41.9	-5.1
PICO	**Pico**	**1.96**	**289**	*e*P		Pn	04 13 43.4	-4.3
CALA	**Caldeira**	**2.19**	**290**	*e*P		Pn	04 13 46.2	-4.7

IDC ***27*** *04:37:43.6±0.9, 1694N×11987E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/19, mbtmp3.8/8, Error ellipse: s-maj=152.2km s-min=17.2km az=66.0*
ISCJB ***27*** *04:37:47.3±1.9, 1661N±009×119.1E±0.1, h35km±18km, mb3.7/8, Error ellipse: s-maj=21.3km s-min=14.5km az=167.3*
MAN ***27*** *04:37:47.4, 1658N×119.14E, h21km, mb2.0, ML3.7, MS3.2*
NEIC ***27*** *04:37:53.4±1.7, 1692N×11987E, h78km±16km, Error ellipse: s-maj=99.1km s-min=11.6km az=66.0*

ISC 27 04:37:46.1±2.0, 1664N±009×11909E±008, h14km±12km, n17, σ0°80/18, mb3.7/8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
BOLP	**Bolinao**	**0.83**	**108**	*e*P	**Pg**	**04**	**38 02.0**	**-0.1**
SCZP	**Santa Cruz**	**1.16**	**137**	*e*P	**Pn**	**04**	**38 07.7**	**-0.3**
BCPH	**Baguio City Da**	**1.45**	**100**	⇑*e*P	**Pn**	**04**	**38 10.7**	**-1.2**
BCPH				*i* S	**Sn**	**04**	**38 30.9**	**+0.1**
BALP	**Baler**	**2.55**	**110**	*e*P	**Pn**	**04**	**38 28.6**	**+1.6**
CAUP	**Cauayan**	**2.63**	**83**	*e*P	**Pn**	**04**	**38 33.3**	**+5.1**
CVP	**Callao Caves**	**2.82**	**67**	*e*P	**Pn**	**04**	**38 31.0**	**+0.3**
TGY	**Tagaytay City**	**3.08**	**144**	Pn	**Pn**	**04**	**38 38.6**	**+4.2**
	20nm,0.3s,baz=300,slow=20,SNR=1.9							
LUBP	**Lubang**	**3.09**	**159**	*e*P	**Pn**	**04**	**38 34.6**	**+0.1**
SONM	**Songino Array**	**32.82**	**344**	P	**P**	**04**	**44 18.6**	**-0.6**
	0.3nm,0.5s,mb3.5,baz=156,slow=11,SNR=2.8							
WRA	**Warramunga Arr**	**39.31**	**157**	P	**P**	**04**	**45 14.1**	**-0.6**
	0.7nm,0.6s,mb3.5,baz=338,slow=9.4,SNR=4.8							
ASAR	**Alice Springs**	**42.59**	**160**	P	**P**	**04**	**45 42.0**	**+0.4**
	1.0nm,0.5s,mb3.8,baz=340,slow=6.9,SNR=7.3							
MKAR	**Makanchi Array**	**42.77**	**323**	P	**P**	**04**	**45 45.0**	**+1.9**
	0.4nm,0.3s,mb3.6,baz=133,slow=10.0,SNR=6.5							
STKA	**Stephens Creek**	**52.84**	**156**	P	**P**	**04**	**47 01.1**	**-0.1**
	1.3nm,0.5s,mb4.1,baz=327,slow=9.8,SNR=5.5							
STKA	**Stephens Creek**	**52.84**	**156**	*e*P	**P**	**04**	**47 01.3**	**0.0**
ARCES	**ARCESS Array B**	**75.80**	**339**	P	**P**	**04**	**49 31.5**	**-0.2**
	1.2nm,0.7s,mb3.9,baz=69,slow=7.0,SNR=6.6							
FINES	**FINESS Array B**	**76.98**	**330**	P	**P**	**04**	**49 38.0**	**-0.3**
	1.1nm,1.0s,mb3.7,baz=83,slow=6.0,SNR=7.7							
NOA	**NORSAR Array B**	**83.95**	**332**	P	**P**	**04**	**50 15.0**	**-0.8**
	0.5nm,0.7s,mb3.7,baz=63,slow=4.9,SNR=4.0							

IDC ***27*** *04:49:03.3±1.5, 2772S×7156W, h0km, mb4.0/1, mb1 3.8/5, mb1mx3.6/19, mbtmp3.7/5, ML3.7/4, MS2.8/2, Ms1 2.8/2, ms1mx2.4/20, Error ellipse: s-maj=39.5km s-min=21.7km az=96.0*
ISCJB ***27*** *04:49:06.0±0.8, 2779S±003×7149W±008, h33km, mb4.2/2, Error ellipse: s-maj=10.4km s-min=4.1km az=14.3*
GUC ***27*** *04:49:07.1±0.7, 2789S×7133W, h26km±6km, MD4.1, ML4.1*
NEIC ***27*** *04:49:07.1, 2789S×7133W, h26km, mb4.0/2, ML4.1(GUC), After GUC.*

ISC 27 04:49:08.3±0.7, 2782S±003×7137W±009, h35km, n24, σ0°97/34, mb4.2/2, 2C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
CDCH	**Caldera**	**0.89**	**33**	⇑*i*P	**Pn**	**04**	**49 23.4**	**-0.8**
CDCH				*i* S	**Sn**	**04**	**49 36.3**	**+0.5**
CDCH				AML	AML	04	49 40.4	
	comp=N,2μm,0.4s							
CDCH	**Caldera**	**0.89**	**33**	⇑*i*P	**Pn**	**04**	**49 23.4**	**-0.8**
CDCH				*i* S	**Sn**	**04**	**49 36.3**	**+0.5**
VACH	**Vallenar**	**0.93**	**144**	⇓*i*P	**Pn**	**04**	**49 24.4**	**-0.5**
VACH				*i* S	**Sn**	**04**	**49 35.8**	**-1.2**
VACH				AML	AML	04	49 39.5	
	comp=N,9μm,0.2s							
VACH	**Vallenar**	**0.93**	**144**	⇓*i*P	**Pn**	**04**	**49 24.4**	**-0.5**
VACH				*i* S	**Sn**	**04**	**49 35.8**	**-1.2**
CPCH	**Copiapo**	**1.01**	**63**	*e*P	**Pn**	**04**	**49 25.7**	**-0.3**
CPCH				*i* S	**Sn**	**04**	**49 38.6**	**-0.5**
LCO	**Las Campanas**	**1.33**	**154**	⇓*i*P	**Pn**	**04**	**49 29.1**	**-1.2**
LCO				*i* S	**Sn**	**04**	**49 46.2**	**-0.6**
LSCH	**La Serena**	**2.09**	**177**	*e*P	**Pn**	**04**	**49 40.5**	**-0.3**
LSCH				*i* S	**Sn**	**04**	**50 05.9**	**+0.4**
TLL	**Tololo Astrono**	**2.39**	**168**	*e*P	**Pn**	**04**	**49 45.4**	**+0.4**
TLL				*i* S	**Sn**	**04**	**50 14.5**	**+1.4**
TLL				AML	AML	04	50 23.9	
	comp=N,2μm,0.6s							
TLL	**Tololo Astrono**	**2.39**	**168**	*e*P	**Pn**	**04**	**49 45.4**	**+0.4**
TLL				*i* S	**Sn**	**04**	**50 14.5**	**+1.4**
CMCH	**Combarbala**	**3.36**	**175**	*e*P	**Pn**	**04**	**49 56.8**	**-1.5**
CMCH				*i* S	**Sn**	**04**	**50 36.0**	**-0.9**
CMCH				AML	AML	04	50 52.8	
	comp=N,2μm,0.8s							
CMCH	**Combarbala**	**3.36**	**175**	*e*P	**Pn**	**04**	**49 56.8**	**-1.5**
CMCH				*i* S	**Sn**	**04**	**50 36.0**	**-0.9**
CFAA	**Coronel Fontan**	**4.66**	**145**	Pn	**Pn**	**04**	**50 18.2**	**+2.1**
	comp=N,0.6nm,0.3s,baz=320,slow=12,SNR=75							
CFAA				Sn	**Sn**	**04**	**51 14.8**	**+5.9**
	comp=N,1.5nm,0.3s,baz=166,slow=16,SNR=6.9							
CFAA	**Coronel Fontan**	**4.66**	**145**	Pn	**Pn**	**04**	**50 18.2**	**+2.1**
CFAA				Sn	**Sn**	**04**	**51 14.8**	**+5.9**
LVC	**Limon Verde**	**5.64**	**24**	Pn	**Pn**	**04**	**50 29.8**	**+0.2**
	comp=N,1.0nm,0.3s,baz=309,slow=0.1,SNR=16							
LVC				Lg		04	52 01.6	
	comp=N,7.1nm,0.3s,baz=315,slow=16,SNR=5.1							
LPAZ	**La Paz**	**11.86**	**15**	Pn	**Pn**	**04**	**51 53.6**	**-1.3**
	comp=N,0.2nm,0.3s,baz=220,slow=7.0,SNR=7.0							
CPUP	**Villa Florida**	**12.60**	**86**	Pn	**Pn**	**04**	**52 06.1**	**+1.1**
	comp=N,0.2nm,0.3s,baz=318,slow=14,SNR=2.8							
CPUP				LR	LR	04	57 22.1	
	comp=N,46nm,20.3s,baz=328,slow=39							
TRQA	**Tornquist**	**12.89**	**145**	*e*Pn	**Pn**	**04**	**52 10.8**	**+1.8**
	comp=N,3.0nm,0.7s							
PLCA	**Paso Flores**	**12.90**	**177**	LR	LR	04	57 33.0	
	comp=N,41nm,19.8s,baz=181,slow=39							
SIV	**San Ignacio**	**15.15**	**41**	Pn	**Pn**	**04**	**52 34.5**	**-5.0**
	comp=N,0.1nm,0.3s,baz=245,slow=17,SNR=3.4							
SAML	**Samuel**	**20.30**	**24**	*e*P	**P**	**04**	**53 41.1**	**+0.1**
	comp=N,1.3nm,0.8s							

WCI	**Wyandotte Cave**	**67.17**	**347**	*e*P	**P**	**04**	**59 59.0**	**+0.3**
	comp=N,3.4nm,0.6s,mb4.5							
TORD	**Torodi Ar. Bea**	**81.58**	**70**	P	**P**	**05**	**01 23.6**	**+1.2**
	comp=N,1.4nm,1.1s,mb3.8,baz=237,slow=4.0,SNR=15							
WRA	**Warramunga Arr**	**126.40**	**210**	PKP	PKPdf	05	08 08.4	+1.0
	comp=N,0.2nm,0.6s,baz=152,slow=1.5,SNR=6.6							
MKAR	**Makanchi Array**	**151.97**	**40**	PKPbc	PKPbc	05	09 00.6	+1.0
	comp=N,0.5nm,0.7s,baz=329,slow=4.2,SNR=4.9							

ISCJB ***27*** *05:28:45.0±0.6, 2426S±004×6680W±006, h185km±5km, mb4.1/17, Error ellipse: s-maj=8.8km s-min=6.6km az=164.9*
IDC ***27*** *05:28:47.0±1.1, 2413S×6675W, h187km±10km, mb3.8/7, mb1 3.8/14, mb1mx3.7/21, mbtmp4.2/14, Error ellipse: s-maj=15.3km s-min=13.5km az=41.0*
NEIC ***27*** *05:28:46.3±0.6, 2420S×6677W, h183km±5km, mb4.2/14, Error ellipse: s-maj=8.0km s-min=6.6km az=81.0*
GUC ***27*** *05:28:48.9±0.5, 2440S×6726W, h200km, ML4.7*

ISC 27 05:28:46.0±0.6, 2427S±004×6679W±006, h179km±5km, n55, σ1°§05/55, mb4.1/17, 2C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
LVC	**Limon Verde**	**2.55**	**310**	P	**Pn**	**05**	**29 31.7**	**+2.6**
	32nm,0.3s,baz=315,slow=19,SNR=645							
LVC				S	**Sn**	**05**	**30 03.9**	**+1.3**
	83nm,0.3s,baz=135,slow=20,SNR=23							
CEN1	**Los Morros**	**3.24**	**285**	⇓*i*P	**Pn**	**05**	**29 39.5**	**+2.1**
CEN1				*i* S	**Sn**	**05**	**30 17.7**	**+0.2**
CEN1				AML	AML	05	30 20.3	
	comp=N,1μm,0.9s							
CPN1	**Cerro Paranal**	**3.31**	**263**	*e*P	**Pn**	**05**	**29 39.2**	**+0.9**
CPN1				*i* S	**Sn**	**05**	**30 18.0**	**-1.1**
CPN1				AML	AML	05	30 20.2	
	comp=E,927nm,0.2s							
ANCH	**Antofagasta**	**3.36**	**279**	⇑*i*P	**Pn**	**05**	**29 40.0**	**+1.1**
ANCH				*i* S	**Sn**	**05**	**30 18.6**	**-1.6**
ANCH				AML	AML	05	30 22.0	
	comp=N,2μm,0.3s							
ANCH	**Antofagasta**	**3.36**	**279**	⇑*i*P	**Pn**	**05**	**29 40.0**	**+1.1**
ANCH				*i* S	**Sn**	**05**	**30 18.6**	**-1.6**
CDCH	**Caldera**	**4.59**	**232**	*e*P	**Pn**	**05**	**29 53.6**	**-0.9**
CDCH				*i* S	**Sn**	**05**	**30 44.1**	**-4.1**
CFAA	**Coronel Fontan**	**7.42**	**190**	P	**Pn**	**05**	**30 30.6**	**-0.9**
	comp=N,0.2nm,0.3s,baz=280,slow=5.2,SNR=9.5							
CFAA				S	**Sn**	**05**	**31 50.8**	**-4.3**
	comp=N,1.6nm,0.3s,baz=194,slow=13,SNR=17							
LPAZ	**La Paz**	**8.04**	**351**	P	**Pn**	**05**	**30 40.8**	**+1.2**
	comp=N,1.8nm,0.3s,baz=157,slow=11,SNR=60							
LPAZ				S	**Sn**	**05**	**32 08.7**	**-1.0**
	comp=N,0.4nm,0.3s,baz=356,slow=22,SNR=5.3							
LPAZ	**La Paz**	**8.04**	**351**	*e*Pn	**Pn**	**05**	**30 40.4**	**+0.8**
LPAZ				*e*Sn	**Sn**	**05**	**32 08.2**	**-1.5**
CPUP	**Villa Florida**	**8.81**	**105**	P	**Pn**	**05**	**30 49.9**	**+0.1**
	comp=N,0.6nm,0.3s,baz=274,slow=12,SNR=13							
CPUP	**Villa Florida**	**8.81**	**105**	P	**Pn**	**05**	**30 49.9**	**+0.1**
ARE	**Arequipa**	**8.93**	**330**	P	**Pn**	**05**	**30 50.0**	**-1.3**
ARE				*e*S	**Sn**	**05**	**32 26.0**	**-4.9**
SIV	**San Ignacio**	**9.83**	**34**	P	**Pn**	**05**	**31 02.8**	**-0.4**
	comp=N,1.1nm,0.3s,baz=232,slow=12,SNR=18							
SIV				S	**Sn**	**05**	**32 46.1**	**-6.4**
	comp=N,0.2nm,0.3s,baz=225,slow=16,SNR=2.7							
TRQA	**Tornquist**	**14.35**	**164**	*e*Pn	**Pn**	**05**	**31 58.8**	**-2.1**
	comp=N,10.0nm,0.6s							
NNA	**Nana**	**15.49**	**320**	P	**Pn**	**05**	**32 15.6**	**+0.6**
	comp=N,0.6nm,0.3s,baz=250,slow=15,SNR=4.2							
NNA	**Nana**	**15.49**	**320**	*e*P	**Pn**	**05**	**32 14.8**	**-0.2**
	comp=N,22nm,1.0s							
SAML	**Samuel**	**15.62**	**13**	*e*P	**Pn**	**05**	**32 16.2**	**-0.3**
	comp=N,1.2nm,0.5s							
PLCA	**Paso Flores**	**16.72**	**190**	P	**Pn**	**05**	**32 29.8**	**-0.1**
	comp=N,0.2nm,0.3s,baz=20,slow=12,SNR=5.6							
PLCA	**Paso Flores**	**16.72**	**190**	P	**Pn**	**05**	**32 29.8**	**-0.1**
BDFB	**Brasilia**	**19.61**	**68**	P	**P**	**05**	**33 01.3**	**+0.8**
	comp=N,0.6nm,0.3s,baz=240,slow=10,SNR=8.1							
SNAA	**Sanae**	**59.04**	**161**	*e*	**P**	**05**	**38 27.6**	**+0.6**
SNAA				*e*		05	38 35.6	
SNAA				*e*		05	39 14.2	
SNAA	**Sanae**	**59.04**	**161**	*e*P	**P**	**05**	**38 27.1**	**+0.1**
	comp=N,2.4nm,0.7s,mb4.1							
SWET	**Sewanee**	**61.87**	**342**	*e*P	**P**	**05**	**38 45.1**	**-1.1**
JCT	**Junction City**	**62.97**	**328**	*e*P	**P**	**05**	**38 53.5**	**0.0**
	comp=N,1.2nm,0.7s,mb4.1							
WVT	**Waverly**	**63.27**	**341**	*e*P	**P**	**05**	**38 54.0**	**-1.4**
	comp=N,5.5nm,0.6s,mb4.6							
WCI	**Wyandotte Cave**	**64.80**	**343**	*e*P	**P**	**05**	**39 03.9**	**-1.6**
	comp=N,4.8nm,0.6s,mb4.5							
QSPA	**South Pole Qui**	**65.94**	**180**	*e*P	**P**	**05**	**39 13.8**	**+1.0**
	comp=N,8.2nm,0.5s,mb4.8							
MNTX	**Cornudas Mount**	**66.77**	**325**	*e*P	**P**	**05**	**39 17.5**	**-0.5**
	comp=N,1.9nm,0.8s,mb4.0							
ANMO	**Albuquerque**	**69.87**	**326**	*e*P	**P**	**05**	**39 38.2**	**+0.9**
	comp=N,0.7nm,0.5s,mb3.6							
VNDA	**Vanda**	**74.47**	**190**	P	**P**	**05**	**40 05.5**	**+0.9**
	comp=N,1.0nm,1.0s,mb3.5,baz=146,slow=5.2,SNR=5.6							
MSU	**Marysvale**	**75.55**	**325**	*e*P	**P**	**05**	**40 11.5**	**+0.7**
TOA0	**Torodi Ar. Sit**	**76.49**	**69**	*e*P	**P**	**05**	**40 16.0**	**0.0**
TORD	**Torodi Ar. Bea**	**76.49**	**69**	P	**P**	**05**	**40 15.8**	**-0.3**
	comp=N,1.1nm,0.3s,mb3.9,baz=257,slow=5.3,SNR=38							
PDAR	**Pinedale Array**	**77.47**	**329**	P	**P**	**05**	**40 21.5**	**0.0**
	comp=N,0.6nm,0.5s,mb3.5,baz=129,slow=7.6,SNR=6.4							
HWUT	**Hardware Ranch**	**77.55**	**327**	*e*P	**P**	**05**	**40 22.1**	**+0.2**
	comp=N,1.7nm,0.6s,mb3.9							
ULM	**Lac du Bonnet**	**78.54**	**341**	P	**P**	**05**	**40 26.6**	**-0.8**
	comp=N,2.0nm,0.5s,mb4.0,baz=144,slow=4.9,SNR=8.4							
ULM	**Lac du Bonnet**	**78.54**	**341**	*e*P	**P**	**05**	**40 26.5**	**-0.9**
	comp=N,2.4nm,0.6s,mb4.0							
SCHQ	**Schefferville**	**78.77**	**360**	P	**P**	**05**	**40 27.5**	**-1.2**
	comp=N,1.7nm,0.8s,mb3.7,baz=228,slow=9.8,SNR=4.2							
HLID	**Hailey**	**80.41**	**327**	*e*P	**P**	**05**	**40 39.0**	**+1.5**
	comp=N,2.9nm,0.7s,mb4.0							
MCMT	**McKenzie Canyo**	**80.58**	**329**	*e*P	**P**	**05**	**40 39.5**	**+1.1**
MAW	**Mawson**	**81.13**	**163**	P	**P**	**05**	**40 42.2**	**+0.9**
	comp=N,3.5nm,0.6s,mb4.2,baz=208,slow=6.4,SNR=14							
CASY	**Casey**	**89.72**	**179**	*e*P	**P**	**05**	**41 24.8**	**+1.0**
	comp=N,5.9nm,0.8s,mb4.6							
YKA	**Yellowknife Ar**	**94.44**	**340**	P	**P**	**05**	**41 44.9**	**-0.6**
	comp=N,1.1nm,0.5s,mb4.2,baz=136,slow=4.8,SNR=7.7							
YKA	**Yellowknife Ar**	**94.44**	**340**	P	**P**	**05**	**41 44.9**	**-0.6**
ASAR	**Alice Springs**	**128.29**	**204**	PKP	PKPdf	05	47 31.5	+0.5
	comp=N,1.6nm,0.7s,baz=134,slow=1.8,SNR=32							
AS31	**Alice Springs**	**128.30**	**204**	*e*P	PKPdf	05	47 31.5	+0.5
ASPA	**Alice Springs**	**128.30**	**204**	*e*P	PKPdf	05	47 31.5	+0.5
WB2	**Warramunga Arr**	**131.47**	**207**	*e*P	PKPdf	05	47 37.5	+0.4
WRA	**Warramunga Arr**	**131.48**	**207**	PKP	PKPdf	05	47 37.9	+0.8
	comp=N,1.2nm,0.4s,baz=159,slow=1.8,SNR=59							
WRAB	**Tennant Creek**	**131.48**	**207**	*e*PKPdf	PKPdf	05	47 37.8	+0.7
ZRNK	**Zerenda**	**136.16**	**38**	*e*PKPdf	PKPdf	05	47 46.6	+0.7
ZAL	**Zalesovo**	**143.54**	**28**	PKP	PKPdf	05	47 57.2	-2.0
	comp=N,2.2nm,0.6s,baz=194,slow=2.7,SNR=7.5							
MKAR	**Makanchi Array**	**146.61**	**40**	PKPbc	PKPbc	05	48 05.0	-1.4
	comp=N,5.7nm,0.8s,baz=297,slow=1.1,SNR=39							
MKAR	**Makanchi Array**	**146.61**	**40**	PKPbc	PKPbc	05	48 05.0	-1.4
MJAR	**Matsushiro Arr**	**155.28**	**305**	PKPab	PKPab	05	48 44.0	+0.2
	comp=N,0.7nm,0.6s,baz=57,slow=4.6,SNR=4.1							

ISCJB ***27*** *05:50:40.8±1.6, 2548N±002×1416E±07, h201km±24km, mb3.4/3, Error ellipse: s-maj=98.7km s-min=19.8km az=154.3*
IDC ***27*** *05:50:41.6±1.5, 2542N×14162E, h197km±25km, mb3.3/3, mb1 3.4/5, mb1mx3.0/20, mbtmp3.9/5, Error ellipse: s-maj=105.1km s-min=18.1km az=85.0*
JMA ***27*** *05:50:43.3±0.2, 2549N×14054E, h94km, M4.3*

ISC 27 05:50:42.1±1.4, 255N±002×1417E±07, h203km±23km, n11, σ0°60/14, mb3.4/3, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
JHHJ	**Haha-jima-NKT**	**1.22**	**21**	P	**Pn**	**05**	**51 14.2**	**+0.5**
JHHJ				S	**Sn**	**05**	**51 37.5**	**-0.7**
CBIJ	**Chichi jima**	**1.66**	**15**	P	**Pn**	**05**	**51 18.7**	**+1.3**
	24nm,0.3s,baz=306,slow=22,SNR=29							
CBIJ				S	**Sn**	**05**	**51 45.1**	**+0.2**
	34nm,0.3s,baz=94,slow=23,SNR=6.0							
CBIJ	**Chichi jima**	**1.66**	**15**	P	**Pn**	**05**	**51 18.6**	**+1.2**
CBIJ				S	**Sn**	**05**	**51 44.2**	**-0.7**
JHJ	**Hachijo jima 2**	**7.78**	**348**	P	**Pn**	**05**	**52 32.4**	**0.0**
	3.8nm,0.3s,baz=46,slow=20,SNR=4.1							
BSO3	**Boso 3**	**9.34**	**354**	P	**Pn**	**05**	**52 51.7**	**-0.9**
JOD2	**Odawara 2**	**10.00**	**348**	P	**Pn**	**05**	**53 01.3**	**+0.1**
JHO	**Hitachi**	**11.13**	**355**	P	**Pn**	**05**	**53 11.0**	**-4.7**
MJAR	**Matsushiro Arr**	**11.41**	**346**	P	**Pn**	**05**	**53 19.7**	**+0.3**

	0.2nm,0.3s,baz=169,slow=12,SNR=2.8							
WRA	**Warramunga Arr**	**45.72**	**190**	P	**P**	**05**	**58 42.4**	**-0.6**
	0.9nm,0.4s,mb3.5,baz=11,slow=8.7,SNR=37							
FINES	**FINESS Array B**	**79.19**	**334**	P	**P**	**06**	**02 24.5**	**+0.1**
	0.4nm,0.3s,mb3.5,baz=74,slow=5.5,SNR=15							
NOA	**NORSAR Array B**	**84.93**	**338**	P	**P**	**06**	**02 54.6**	**+0.3**
	0.2nm,0.5s,mb3.1,baz=48,slow=4.7,SNR=2.2							

NEIC ***27*** *05:57:12.6, 3225S×7181W, h11km, ML2.8(GUC), After GUC.*

GUC 27 05:57:12.6±0.6, 3225S×7181W, h11km±2km, MD3.6, ML2.8, 11C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
PACH	**Papudo**	**0.42**	**132**	⇓*i*P	**Pg**	**05**	**57 21.6**	**+0.7**
PACH				*i* S	**Sg**	**05**	**57 28.1**	**+1.6**
CHNG	**Los Chungos**	**0.45**	**36**	⇓*i*P	**Pg**	**05**	**57 22.0**	**+0.6**
CHNG				*i* S	**Sg**	**05**	**57 29.0**	**+1.6**
PTCH	**Petorca**	**0.74**	**91**	⇑*i*P	**Pg**	**05**	**57 26.8**	**-0.2**
PTCH				*i* S	**Sg**	**05**	**57 37.5**	**+0.8**
PTCH				AML	AML	05	57 39.2	
	comp=N,832nm,0.2s							
PTCH	**Petorca**	**0.74**	**91**	⇑*i*P	**Pg**	**05**	**57 26.8**	**-0.2**
PTCH				*i* S	**Sg**	**05**	**57 37.5**	**+0.8**
ROCH	**El Roble**	**0.98**	**137**	⇑*i*P	**Pg**	**05**	**57 31.1**	**-0.5**
ROCH				*i* S	**Sg**	**05**	**57 44.9**	**+0.5**
JACH	**Jahuel**	**1.11**	**113**	⇑*i*P	**Pb**	**05**	**57 32.7**	**-1.2**
JACH				*i* S	**Sb**	**05**	**57 48.0**	**-0.4**
LCCH	**Las Cruces**	**1.24**	**171**	⇓*i*P	**Pn**	**05**	**57 34.2**	**-1.6**
LCCH				*i* S	**Sb**	**05**	**57 51.1**	**-0.8**
CMCH	**Combarbala**	**1.27**	**33**	⇑*i*P	**Pn**	**05**	**57 34.2**	**-2.1**
CMCH				*i* S	**Sb**	**05**	**57 51.0**	**-2.0**
CMCH				AML	AML	05	57 56.9	
	comp=E,411nm,0.6s							
CMCH	**Combarbala**	**1.27**	**33**	⇑*i*P	**Pn**	**05**	**57 34.2**	**-2.1**
CMCH				*i* S	**Sb**	**05**	**57 51.0**	**-2.0**
PEL	**Peldehue**	**1.30**	**134**	⇑*i*P	**Pn**	**05**	**57 35.6**	**-1.1**
PEL				*i* S	**Sb**	**05**	**57 52.9**	**-0.8**
PEL				AML	AML	05	57 56.5	
	comp=E,644nm,0.3s							
PEL	**Peldehue**	**1.30**	**134**	⇑*i*P	**Pn**	**05**	**57 35.6**	**-1.1**
PEL				*i* S	**Sb**	**05**	**57 52.9**	**-0.8**
RCDM	**Rinconada Maip**	**1.50**	**146**	*e*P	**Pn**	**05**	**57 38.7**	**-0.7**
RCDM				*i* S	**Sn**	**05**	**57 58.3**	**-0.6**
RCDM				AML	AML	05	58 01.6	
	comp=E,159nm,0.1s							
RCDM	**Rinconada Maip**	**1.50**	**146**	*e*P	**Pn**	**05**	**57 38.7**	**-0.7**
RCDM				*i* S	**Sn**	**05**	**57 58.3**	**-0.6**
CLCH	**Cerro Calan**	**1.56**	**137**	*e*P	**Pn**	**05**	**57 39.8**	**-0.6**
CLCH	

	2.4nm,0.2s,SNR=7.6							
EJON	**La Jonquera**	**5.76**	**341**	Pn		**Pn**	**05 59 26.4**	**+0.9**
EJON				Sn		**Sn**	**06 00 32.7**	**+1.1**
EJON	**La Jonquera**	**5.76**	**341**	Pn		**Pn**	**05 59 26.4**	**+0.9**
	SNR=7.9							
EJON				Sn		**Sn**	**06 00 32.7**	**+1.1**
	2.4nm,0.2s,SNR=7.6							
PGF	**Pioggiola**	**6.18**	**26**	*e*Pn		**Pn**	**05 59 32.4**	**+1.1**
PGF				*e*Sn		**Sn**	**06 00 40.8**	**-1.3**
	1.8nm,0.2s							
PGF	**Pioggiola**	**6.18**	**26**	P		**Pn**	**05 59 32.4**	**+1.1**
PGF				S		**Sn**	**06 00 40.8**	**-1.3**
	0.9nm,0.2s							
LMR	**La Mourre**	**6.37**	**7**	*e*Pn		**Pn**	**05 59 34.5**	**+0.6**
LMR				*e*Sn		**Sn**	**06 00 46.5**	**-0.1**
	5.1nm,0.2s							
LMR	**La Mourre**	**6.37**	**7**	*e*Pn		**Pn**	**05 59 34.5**	**+0.6**
LMR				*e*Sn		**Sn**	**06 00 46.5**	**-0.1**
	2.5nm,0.2s							
FRF	**La Foret Royal**	**6.60**	**8**	*e*Pn		**Pn**	**05 59 38.6**	**+1.4**
FRF				*e*Sn		**Sn**	**06 00 51.6**	**-0.9**
	2.2nm,0.2s							
FRF	**La Foret Royal**	**6.60**	**8**	*e*Pn		**Pn**	**05 59 38.6**	**+1.4**
FRF				*e*Sn		**Sn**	**06 00 51.6**	**-0.9**
	1.1nm,0.2s							
MTLF	**Montolieu**	**6.77**	**340**	*e*Pn		**Pn**	**05 59 40.9**	**+1.5**
MTLF				*e*Sn		**Sn**	**06 00 57.3**	**+0.8**
	4.1nm,0.3s							
MTLF	**Montolieu**	**6.77**	**340**	P		**Pn**	**05 59 40.9**	**+1.5**
MTLF				S		**Sn**	**06 00 57.3**	**+0.8**
	2.0nm,0.3s							
EQES	**Quesada**	**6.79**	**279**	P		**Pn**	**05 59 38.7**	**-1.0**
	0.0nm,0.1s,SNR=7.1							
EQES				S		**Sn**	**06 00 55.8**	**-1.2**
	1.9nm,0.3s,SNR=8.2							
EQES	**Quesada**	**6.79**	**279**	Pn		**Pn**	**05 59 39.4**	**-0.3**
EQES				Sn		**Sn**	**06 00 57.4**	**+0.4**
EQES	**Quesada**	**6.79**	**279**	Pn		**Pn**	**05 59 39.4**	**-0.3**
	SNR=7.1							
EQES				Sn		**Sn**	**06 00 57.4**	**+0.4**
	1.9nm,0.3s,SNR=8.2							
SMRF	**Simiane la Rot**	**6.95**	**1**	*e*Pn		**Pn**	**05 59 43.7**	**+1.8**
SMRF				*e*Sn		**Sn**	**06 01 01.5**	**+0.5**
	1.7nm,0.3s							
SMRF	**Simiane la Rot**	**6.95**	**1**	P		**Pn**	**05 59 43.7**	**+1.8**
SMRF				S		**Sn**	**06 01 01.5**	**+0.5**
	1.7nm,0.3s							
EBIE	**Bielsa**	**6.95**	**326**	P		**Pn**	**05 59 44.4**	**+2.4**
	0.0nm,0.1s,SNR=7.9							
EBIE	**Bielsa**	**6.95**	**326**	Pn		**Pn**	**05 59 44.4**	**+2.4**
	SNR=7.9							
SBF	**Sospel**	**7.01**	**12**	*e*Pn		**Pn**	**05 59 43.8**	**+1.0**
SBF				*e*Sn		**Sn**	**06 01 01.4**	**-1.1**
	5.8nm,0.3s							
SBF	**Sospel**	**7.01**	**12**	*e*Pn		**Pn**	**05 59 43.8**	**+1.0**
SBF				*e*Sn		**Sn**	**06 01 01.4**	**-1.1**
	2.9nm,0.3s							
EPF	**Esparros**	**7.15**	**329**	*e*Pn		**Pn**	**05 59 46.7**	**+2.1**
EPF				*e*Sn		**Sn**	**06 01 06.3**	**+0.4**
	1.4nm,0.2s							
EPF	**Esparros**	**7.15**	**329**	*e*Pn		**Pn**	**05 59 46.7**	**+2.1**
EPF				*e*Sn		**Sn**	**06 01 06.3**	**+0.4**
	0.7nm,0.2s							
ETSF	**Etsaut**	**7.44**	**324**	*e*Pn		**Pn**	**05 59 50.5**	**+1.8**
ETSF				*e*Sn		**Sn**	**06 01 12.5**	**-0.6**
	3.1nm,0.4s							
ETSF	**Etsaut**	**7.44**	**324**	*e*Pn		**Pn**	**05 59 50.5**	**+1.8**
ETSF				*e*Sn		**Sn**	**06 01 12.5**	**-0.6**
	1.5nm,0.4s							
MBDF	**Montbardon**	**7.77**	**7**	*e*Pn		**Pn**	**05 59 54.7**	**+1.5**
MBDF				*e*Sn		**Sn**	**06 01 19.5**	**-1.7**
	0.6nm,0.2s							
MBDF	**Montbardon**	**7.77**	**7**	*e*Pn		**Pn**	**05 59 54.7**	**+1.5**
MBDF				*e*Sn		**Sn**	**06 01 19.5**	**-1.7**
	0.3nm,0.2s							
VIVF	**Saint-Julien-l**	**7.85**	**356**	*e*Pn		**Pn**	**05 59 54.1**	**-0.2**
VIVF				*e*Sn		**Sn**	**06 01 21.0**	**-2.1**
	1.4nm,0.2s							
VIVF	**Saint-Julien-l**	**7.85**	**356**	*e*Pn		**Pn**	**05 59 54.1**	**-0.2**
VIVF				*e*Sn		**Sn**	**06 01 21.0**	**-2.1**
	0.7nm,0.2s							
ORIF	**Oris-en-Rattie**	**7.90**	**2**	*e*Pn		**Pn**	**05 59 56.0**	**+1.0**
EALK	**Alkurruntz**	**8.14**	**322**	P		**Pn**	**06 00 00.2**	**+1.9**
	0.2nm,0.1s,SNR=7.9							
EALK				S		**Sn**	**06 01 28.7**	**-1.6**
	7.2nm,0.5s,SNR=7.9							
CAF	**Calviac**	**8.29**	**343**	*e*Sn		**Sn**	**06 01 32.5**	**-1.5**
	1.0nm,0.3s							
CAF	**Calviac**	**8.29**	**343**	*e*Sn		**Sn**	**06 01 32.5**	**-1.5**
	0.5nm,0.3s							

*ISCJB **27** 06:29:40.4±0.7, 24.31S±0.006×67.1W±0.1, h176km±11km, mb3.6/3, Error ellipse: s-maj=15.5km s-min=9.6km az=160.4*
*IDC **27** 06:29:41.3±1.1, 24.28S×67.09W, h168km±13km, mb3.5/1, mb1 3.5/7, mb1mx3.3/20, mbtmp4.0/7, Error ellipse: s-maj=18.2km s-min=15.9km az=74.0*
*NEIC **27** 06:29:41.2±0.7, 24.28S×67.08W, h169km±8km, mb3.8/5, Error ellipse: s-maj=12.1km s-min=9.3km az=77.0*

ISC 27 06:29:41.4±0.7, 2431S±006×671W±01, h168km±11km, n20, σ0=89/22, mb3.6/3, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.39**	**315**	P	**Pn**	**06 30 23.3**	**+1.2**
	17nm,0.3s,baz=135,slow=19,SNR=192						
LVC				S	**Sn**	**06 30 53.5**	**-0.1**
	145nm,0.3s,baz=315,slow=16,SNR=32						
CFAA	**Coronel Fontan**	**7.34**	**188**	P	**Pn**	**06 31 25.3**	**-0.6**
	0.1nm,0.3s,baz=354,slow=13,SNR=9.0						
CFAA				S	**Sn**	**06 32 42.2**	**-6.2**
	0.1nm,0.3s,baz=98,slow=23,SNR=6.4						
LPAZ	**La Paz**	**8.04**	**353**	P	**Pn**	**06 31 36.5**	**+1.3**
	1.1nm,0.3s,baz=167,slow=10,SNR=44						
LPAZ				S	**Sn**	**06 33 04.8**	**-0.3**
	0.1nm,0.3s,baz=27,slow=16,SNR=5.9						
LPAZ	**La Paz**	**8.04**	**353**	*e*Pn	**Pn**	**06 31 36.0**	**+0.7**
LPAZ				*e*Sn	**Sn**	**06 33 05.9**	**+0.8**
ARE	**Arequipa**	**8.84**	**331**	*e*P	**Pn**	**06 31 44.0**	**-1.8**
ARE				*e*S	**Sn**	**06 33 18.0**	**-6.2**
CPUP	**Villa Florida**	**9.04**	**105**	P	**Pn**	**06 31 49.3**	**+0.9**
	0.3nm,0.3s,baz=265,slow=12,SNR=10						
CPUP	**Villa Florida**	**9.04**	**105**	*e*Pn	**Pn**	**06 31 49.0**	**+0.6**
SIV	**San Ignacio**	**10.01**	**35**	P	**Pn**	**06 32 00.2**	**-1.0**
	1.1nm,0.3s,baz=218,slow=14,SNR=39						
SIV				S	**Sn**	**06 33 42.7**	**-10**
	0.1nm,0.3s,baz=233,slow=18,SNR=3.2						
SAML	**Samuel**	**15.72**	**14**	*e*P	**Pn**	**06 33 12.5**	**-1.2**
	2.4nm,0.9s						
PLCA	**Paso Flores**	**16.64**	**189**	P	**Pn**	**06 33 24.9**	**0.0**
	0.1nm,0.3s,baz=328,slow=12,SNR=2.2						
PLCA	**Paso Flores**	**16.64**	**189**	*e*P	**Pn**	**06 33 31.7**	**+6.8**
	3.1nm,0.6s						
BDFB	**Brasilia**	**19.86**	**68**	P	**P**	**06 33 59.9**	**+0.5**
	1.4nm,0.3s,baz=248,slow=8.6,SNR=18						
BDFB	**Brasilia**	**19.86**	**68**	*e*P	**P**	**06 33 59.9**	**+0.5**
	13nm,0.7s						
SNAA	**Sanae**	**59.08**	**161**	*e*P	**P**	**06 39 23.6**	**-0.3**
	1.4nm,0.9s,mb3.8						
SNAA				*e*		06 40 10.3	
ANMO	**Albuquerque**	**69.77**	**326**	*e*P	**P**	**06 40 34.5**	**+1.2**
	0.7nm,0.6s,mb3.6						
TORD	**Torodi Ar. Bea**	**76.73**	**69**	P	**P**	**06 41 14.1**	**0.0**
	0.5nm,0.3s,mb3.5,baz=259,slow=5.4,SNR=20						
ASAR	**Alice Springs**	**128.15**	**205**	PKP	PKPdf	06 48 27.6	0.0
	0.4nm,0.8s,baz=120,slow=1.9,SNR=4.3						
WRA	**Warramunga Arr**	**131.33**	**207**	PKP	PKPdf	06 48 33.8	+0.2
	0.2nm,0.4s,baz=159,slow=1.8,SNR=7.7						
MKAR	**Makanchi Array**	**146.80**	**40**	PKPbc	PKPbc	06 49 03.7	+0.1
	0.5nm,0.5s,baz=316,slow=3.3,SNR=6.8						
MKAR	**Makanchi Array**	**146.80**	**40**	PKPbc	PKPbc	06 49 03.7	+0.1

WEL 27 06:32:41.4±0.1, 4608S×16802E, h19km±1km, ML3.5/8, 2C-1D, Error ellipse: s-maj=1.3km s-min=0.7km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHZ	**Wether Hill Ro**	**0.19**	**345**	P*	Pg	06 32 46.4	+0.2
WHZ				S*	Sg	06 32 49.7	+0.1
WHZ				S*	Sg	06 32 49.8	+0.3
MLZ	**Mavora Lakes**	**0.74**	**8**	⇑P*	Pb	06 32 54.7	-1.0
MLZ				*e*S*	Sb	06 33 03.9	-1.4
MLZ				S*	Sb	06 33 04.1	-1.2
APZ	**The Paps**	**0.76**	**182**	P*	Pb	06 32 55.4	-0.5
APZ				S*	Sb	06 33 05.5	-0.3
DCZ	**Deep Cove**	**0.85**	**314**	⇓P*	Pb	06 32 56.8	-0.8
DCZ				S*	Sb	06 33 08.3	-0.3
SYZ	**Scrubby Hill**	**0.90**	**121**	P*	Pb	06 32 58.0	-0.5
SYZ				S*	Sb	06 33 09.8	-0.2
TUZ	**Tuapeka**	**1.13**	**84**	PN	Pn	06 33 01.7	-0.5
TUZ				SN	Sn	06 33 16.5	-0.7
EAZ	**Earnscleugh**	**1.24**	**47**	⇑PN	Pn	06 33 03.3	-0.4
EAZ				SN	Sn	06 33 18.4	-1.5
MSZ	**Milford Sound**	**1.41**	**357**	PN	Pn	06 33 05.3	-0.7
MSZ				SN	Sn	06 33 23.6	-0.5
WKZ	**Wanaka**	**1.43**	**30**	PN	Pn	06 33 06.6	+0.2
WKZ				SN	Sn	06 33 25.1	+0.3
HHSZ	**Highcliff Hill**	**1.81**	**85**	*e*PN	Pn	06 33 11.5	0.0
HHSZ				SN	Sn	06 33 33.4	-0.6
JCZ	**Jackson Bay**	**2.07**	**15**	*e*PN	Pn	06 33 16.5	+1.4
ODZ	**Otahua Downs**	**2.11**	**62**	*e*PN	Pn	06 33 15.0	-0.7
ODZ				SN	Sn	06 33 40.1	-1.4
LBZ	**Lake Benmore**	**2.28**	**43**	PN	Pn	06 33 17.1	-0.9
FOZ	**Fox Glacier**	**2.78**	**26**	*e*PN	Pn	06 33 25.8	+0.9

CASC 27 06:49:48.1±4.7, 1580N×8953W, h28km±90km, MD3.8, 1C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RBDL	**Robledal**	**1.68**	**185**	⇑*e*P	x	06 50 36.3	
RBDL				*e*S	x	06 51 00.1	
SBLS	**San Blas**	**1.95**	**183**	⇓*e*P	x	06 50 36.7	
SBLS				*e*S	x	06 51 01.1	
LFRS	**El Faro**	**2.21**	**168**	⇓*e*P	x	06 50 45.0	
LFRS				*e*S	x	06 51 13.7	

*NEIC **27** 06:57:30.8, 3846S×17571E, h153km, MG3.9(WEL), After WEL.*

WEL 27 06:57:30.6±0.2, 3849S×17574E, h156km±2km, ML4.0/14, 4C-2D, Error ellipse: s-maj=2.1km s-min=1.8km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WPVZ	**Whakapapa**	**0.73**	**192**	P	Pn	06 57 54.3	+0.4
WPVZ	**Whakapapa**	**0.73**	**192**	PN	Pn	06 57 54.3	+0.3
FWVZ	**Far West T-bar**	**0.78**	**191**	P	Pn	06 57 54.6	+0.3
FWVZ	**Far West T-bar**	**0.78**	**191**	PN	Pn	06 57 54.6	+0.3
FWVZ				SN	Sn	06 58 12.1	-0.2
TUVZ	**Tukino**	**0.78**	**185**	P	Pn	06 57 54.6	+0.3
TUVZ	**Tukino**	**0.78**	**185**	PN	Pn	06 57 54.6	+0.3
TUVZ				SN	Sn	06 58 12.2	-0.2
WNVZ	**Wahianoa**	**0.84**	**188**	P	Pn	06 57 55.0	+0.3
WNVZ	**Wahianoa**	**0.84**	**188**	PN	Pn	06 57 55.0	+0.2
WNVZ				SN	Sn	06 58 12.7	-0.4
BKZ	**Black Stump Fm**	**0.90**	**139**	⇑P	Pn	06 57 55.4	+0.3
BKZ	**Black Stump Fm**	**0.90**	**139**	⇓PN	Pn	06 57 55.4	+0.2
BKZ				SN	Sn	06 58 13.7	-0.2
MOVZ	**Moawhango**	**0.92**	**179**	⇑PN	Pn	06 57 55.1	-0.2
MOVZ				SN	Sn	06 58 12.5	-1.6
VRZ	**Vera Road**	**1.00**	**230**	P	Pn	06 57 55.6	-0.3
VRZ	**Vera Road**	**1.00**	**230**	PN	Pn	06 57 55.6	-0.3
VRZ				SN	Sn	06 58 15.1	-0.2
URZ	**Urewera**	**1.10**	**78**	P	Pn	06 57 56.7	-0.1
URZ	**Urewera**	**1.10**	**78**	PN	Pn	06 57 56.7	-0.1
URZ				SN	Sn	06 58 17.1	+0.2
WAZ	**Wanganui**	**1.39**	**205**	*e*P	Pn	06 57 59.0	-0.5
WAZ	**Wanganui**	**1.39**	**205**	*e*PN	Pn	06 57 59.0	-0.5
WAZ				SN	Sn	06 58 21.1	-0.6
MWZ	**Matawai**	**1.41**	**84**	P	Pn	06 58 00.0	+0.3
MWZ				S	Sn	06 58 21.7	-0.3
MWZ	**Matawai**	**1.41**	**84**	PN	Pn	06 58 00.0	+0.3
MWZ				SN	Sn	06 58 21.7	-0.4
NEZ	**North Egmont**	**1.50**	**238**	P	Pn	06 58 00.7	+0.1
NEZ	**North Egmont**	**1.50**	**238**	PN	Pn	06 58 00.7	+0.1
PKE	**Pukeiti**	**1.54**	**242**	P	Pn	06 58 00.8	-0.2
PKE	**Pukeiti**	**1.54**	**242**	PN	Pn	06 58 00.8	-0.2
PKE				SN	Sn	06 58 24.3	-0.1
TSZ	**Takapari Road**	**1.58**	**174**	⇑PN	Pn	06 58 01.1	-0.3
TSZ				SN	Sn	06 58 25.1	0.0
KNZ	**Kokohu**	**1.60**	**110**	*e*P	Pn	06 58 02.4	+0.7
KNZ	**Kokohu**	**1.60**	**110**	PN	Pn	06 58 02.2	+0.6
PUZ	**Puketiti**	**2.02**	**79**	P	Pn	06 58 06.5	+0.2
PUZ	**Puketiti**	**2.02**	**79**	PN	Pn	06 58 06.5	+0.2
PUZ				SN	Sn	06 58 33.7	-0.2
MRZ	**Mangatainoka R**	**2.17**	**183**	P	Pn	06 58 06.5	-1.6
MRZ	**Mangatainoka R**	**2.17**	**183**	⇑PN	Pn	06 58 06.5	-1.6
MRZ				SN	Sn	06 58 33.1	-3.9
BFZ	**Birch Farm**	**2.22**	**170**	P	Pn	06 58 07.5	-1.2
BFZ	**Birch Farm**	**2.22**	**170**	PN	Pn	06 58 07.5	-1.2
BFZ				SN	Sn	06 58 36.1	-1.9
MXZ	**Matakaoa Point**	**2.23**	**66**	P	Pn	06 58 09.2	+0.5
MXZ	**Matakaoa Point**	**2.23**	**66**	⇓PN	Pn	06 58 09.2	+0.5
TIWZ	**Tintock**	**2.29**	**177**	PN	Pn	06 58 07.9	-1.5
KIW	**Kapiti Island**	**2.46**	**195**	P	Pn	06 58 09.3	-2.1
KIW	**Kapiti Island**	**2.46**	**195**	PN	Pn	06 58 09.3	-2.2
CAW	**Cannon Point**	**2.67**	**191**	P	Pn	06 58 11.6	-2.4
CAW	**Cannon Point**	**2.67**	**191**	PN	Pn	06 58 11.6	-2.4
MTW	**Mount Morrison**	**2.67**	**184**	P	Pn	06 58 11.6	-2.5
MTW	**Mount Morrison**	**2.67**	**184**	PN	Pn	06 58 11.6	-2.5
MRW	**Makara Radio**	**2.85**	**196**	P	Pn	06 58 13.6	-2.7
WEL	**Wellington**	**2.89**	**195**	P	Pn	06 58 14.1	-2.7
PAWZ	**Paruwai Farm**	**2.90**	**185**	P	Pn	06 58 14.2	-2.7
SNZO	**South Karori**	**2.93**	**195**	P	Pn	06 58 14.3	-3.0
TCW	**Tory Channel**	**2.94**	**202**	P	Pn	06 58 14.7	-2.8
MSWZ	**Moikau Station**	**2.95**	**187**	P	Pn	06 58 14.7	-2.8
BHW	**Baring Head**	**2.99**	**193**	P	Pn	06 58 15.1	-3.0
NNZ	**Nelson**	**3.28**	**213**	*e*P	Pn	06 58 18.1	-3.6
QRZ	**Quartz Range**	**3.41**	**226**	*e*P	Pn	06 58 19.3	-4.0
BSWZ	**Blackbirch Sta**	**3.52**	**203**	P	Pn	06 58 21.6	-3.2
THZ	**Tophouse**	**3.93**	**213**	*e*P	Pn	06 58 25.9	-4.1
KHZ	**Kahutara**	**4.27**	**202**	P	Pn	06 58 30.7	-3.8
DSZ	**Denniston Nort**	**4.44**	**222**	*e*P	Pn	06 58 32.2	-4.5

*ISCJB **27** 07:01:41.0±0.6, 2397S±0.005×6664W±0.007, h197km±6km, mb3.7/12, Error ellipse: s-maj=11.3km s-min=7.6km az=145.3*
*NEIC **27** 07:01:41.8±0.6, 2395S×6667W, h191km±6km, mb4.1/11, Error ellipse: s-maj=9.0km s-min=6.3km az=74.0*
*IDC **27** 07:01:42.0±1.0, 2394S×6663W, h193km±9km, mb3.5/6, mb1 3.8/13, mb1mx3.6/21, mbtmp4.2/13, Error ellipse: s-maj=14.3km s-min=12.8km az=64.0*

ISC 27 07:01:42.0±0.6, 2398S±005×6666W±007, h191km±6km, n37, σ0=93/39, mb3.8/12, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.48**	**303**	P	**Pn**	**07 02 26.1**	**+1.1**
	120nm,0.3s,SNR=1422						
LVC				S	**Sn**	**07 02 59.9**	**+1.3**
	59nm,0.3s,SNR=14						
CFAA	**Coronel Fontan**	**7.73**	**190**	P	**Pn**	**07 03 30.9**	**-0.7**
	0.3nm,0.3s,baz=354,slow=12,SNR=38						
CFAA				S	**Sn**	**07 04 53.1**	**-5.6**
	1.2nm,0.3s,baz=190,slow=14,SNR=20						
CFAA	**Coronel Fontan**	**7.73**	**190**	P	**Pn**	**07 03 30.9**	**-0.7**
CFAA				S	**Sn**	**07 04 53.1**	**-5.6**
LPAZ	**La Paz**	**7.77**	**349**	P	**Pn**	**07 03 32.9**	**+0.7**
	2.2nm,0.3s,baz=168,slow=8.3,SNR=99						
LPAZ				S	**Sn**	**07 04 57.9**	**-1.8**
	1.0nm,0.3s,baz=58,slow=24,SNR=5.9						
LPAZ	**La Paz**	**7.77**	**349**	*e*Pn	**Pn**	**07 03 32.9**	**+0.7**
LPAZ				*e*Sn	**Sn**	**07 04 59.1**	**-0.6**
ARE	**Arequipa**	**8.74**	**328**	*e*P	**Pn**	**07 03 43.0**	**-1.9**
ARE				*e*S	**Sn**	**07 05 16.0**	**-6.8**
CPUP	**Villa Florida**	**8.77**	**107**	P	**Pn**	**07 03 45.3**	**+0.1**
	1.9nm,0.3s,baz=267,slow=10,SNR=46						
CPUP	**Villa Florida**	**8.77**	**107**	*e*Pn	**Pn**	**07 03 45.7**	**+0.4**
SIV	**San Ignacio**	**9.52**	**34**	P	**Pn**	**07 03 54.4**	**-0.6**
	1.6nm,0.3s,baz=217,slow=14,SNR=90						
TRQA	**Tornquist**	**14.60**	**165**	*e*Pn	**Pn**	**07 04 58.7**	**-0.8**
	6.2nm,0.6s						
SAML	**Samuel**	**15.31**	**13**	*e*P	**Pn**	**07 05 07.6**	**-0.7**
	1.7nm,0.7s						
NNA	**Nana**	**15.35**	**319**	P	**Pn**	**07 05 08.6**	**-0.1**
	0.7nm,0.3s,baz=172,slow=12,SNR=4.1						
PLCA	**Paso Flores**	**17.03**	**190**	P	**Pn**	**07 05 26.4**	**-2.5**
	0.3nm,0.3s,baz=16,slow=14,SNR=13						
PLCA	**Paso Flores**	**17.03**	**190**	*e*P	**Pn**	**07 05 28.0**	**-0.9**
	5.8nm,0.6s						
BDFB	**Brasilia**	**19.39**	**68**	P	**P**	**07 05 54.0**	**+0.8**
	1.3nm,0.3s,baz=248,slow=12,SNR=35						
BDFB	**Brasilia**	**19.39**	**68**	*e*P	**P**	**07 05 53.9**	**+0.6**
	29nm,0.7s						
BAO	**Brasilia Array**	**19.41**	**68**	P	**P**	**07 05 55.0**	**+1.5**
SNAA	**Sanae**	**59.27**	**161**	*e*P	**P**	**07 11 23.6**	**+0.3**
	0.9nm,0.6s,mb3.8						
SNAA				*e*PcP	PcP	07 12 09.2	-0.2
JCT	**Junction City**	**62.79**	**328**	*e*P	**P**	**07 11 47.0**	**0.0**
	2.3nm,0.8s,mb4.1						
WVT	**Waverly**	**63.04**	**341**	*e*P	**P**	**07 11 46.9**	**-1.7**
	2.7nm,0.5s,mb4.3						
WVT				*e*PcP	PcP	07 12 21.6	-3.1
QSPA	**South Pole Qui**	**66.23**	**180**	*e*P	**P**	**07 12 10.2**	**+0.9**
	7.0nm,0.5s,mb4.8						
ANMO	**Albuquerque**	**69.70**	**326**	*e*P	**P**	**07 12 31.5**	**+0.6**
	1.0nm,0.6s,mb3.7						
VNDA	**Vanda**	**74.78**	**190**	P	**P**	**07 13 01.0**	**0.0**
	1.1nm,1.0s,mb3.5,baz=140,slow=2.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**76.27**	**69**	P	**P**	**07 13 09.2**	**-0.3**
	1.5nm,0.5s,mb3.8,baz=259,slow=5.4,SNR=24						
PDAR	**Pinedale Array**	**77.28**	**329**	P	**P**	**07 13 15.4**	**+0.3**
	0.3nm,0.4s,mb3.2,baz=137,slow=6.7,SNR=4.3						
NVAR	**Mina Array Bea**	**78.71**	**321**	P	**P**	**07 13 23.0**	**0.0**
	0.2nm,0.7s,mb2.9,baz=155,slow=8.5,SNR=4.0						
NVAR	**Mina Array Bea**	**78.71**	**321**	P	**P**	**07 13 23.0**	**0.0**
HLID	**Hailey**	**80.24**	**327**	*e*P	**P**	**07 13 32.2**	**+1.0**
	2.0nm,0.7s,mb3.9						
MCMT	**McKenzie Canyo**	**80.40**	**329**	*e*P	**P**	**07 13 33.1**	**+1.0**
MAW	**Mawson**	**81.37**	**163**	P	**P**	**07 13 37.7**	**+0.5**
	2.4nm,0.8s,mb3.9,baz=213,slow=4.3,SNR=8.0						
MAW	**Mawson**	**81.37**	**163**	*e*P	**P**	**07 13 37.8**	**+0.6**
	2.1nm,0.6s,mb3.9						
YKA	**Yellowknife Ar**	**94.21**	**340**	P	**P**	**07 14 38.2**	**-0.9**
	0.8nm,0.6s,mb4.0,baz=140,slow=4.8,SNR=5.2						
YKA	**Yellowknife Ar**	**94.21**	**340**	P	**P**	**07 14 38.2**	**-0.9**
ASAR	**Alice Springs**	**128.61**	**204**	PKP	PKPdf	07 20 26.2	+0.1
	1.2nm,0.6s,baz=145,slow=2.1,SNR=6.6						
WRA	**Warramunga Arr**	**131.79**	**207**	PKP	PKPdf	07 20 32.9	+0.7
	0.7nm,0.4s,baz=161,slow=1.8,SNR=12						
ZAL	**Zalesovo**	**143.22**	**28**	PKP	PKPdf	07 20 50.6	-2.6
	1.0nm,0.4s,baz=170,slow=4.1,SNR=3.5						
MKAR	**Makanchi Array**	**146.31**	**40**	PKPbc	PKPbc	07 20 59.0	-1.0
	3.8nm,0.8s,baz=331,slow=1.7,SNR=29						

*CSEM **27** 07:07:08.0, 1893S×16929E, h33km, mb5.5*
*SZGRF **27** 07:07:27.2, 20.11S×17030E, h226km, Vanuatu Islands*
*BJI **27** 07:07:30.9, 1867S×16958E, h237km, mB4.9, mb4.7*
*ISCJB **27** 07:07:31.5±0.1, 1891S±004×16921E±003, h236km, mb4.9/78, Error ellipse: s-maj=5.8km s-min=3.5km az=130.2*
*HRVD **27** 07:07:32.7±0.2, 1893S×16924E, h243km±1km, MW5.2/80, Centroid moment Tensor Solution. LP body waves: s62,c91;Mantle waves: s80,c117; Half duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.88±.15; Mθθ-1.53±.16; Mφφ-3.35±.17; Mrθ2.71±.17; Mrφ-0.41±.17; Mθφ-5.50±.16; Best double couple: M○7.29900×10^16^ NP1:φ8.00000°, δ18.00000°, λ116.00000°. NP2: φ161.00000°, δ74.00000°, λ82.00000°. Principal axes: T 8.3280, Plg61.0000°, Azm58.0000°; N -2.0570, Plg8.0000°, Azm163.0000°; P -6.2710, Plg28.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **27** 07:07:32.6±0.1, 1891S×16928E, mb5.1/48 Error ellipse: s-maj=7.6km s-min=4.6km az=147.0*
*MOS **27** 07:07:32.8±1.2, 1888S×16923E, h249km, mb5.2/28, Error ellipse: s-maj=9.5km s-min=7.5km az=55.9*
*IDC **27** 07:07:33.5±0.6, 1894S×16919E, h246km±4km, mb4.5/18, mb1 4.6/21, mb1mx4.6/22, mbtmp5.1/21, Error ellipse: s-maj=9.0km s-min=8.2km az=152.0*
*LDG **27** 07:07:34.0±0.2, 1892S×16882E, h250km, Mb5.0/2, Error ellipse: s-maj=19.1km s-min=4.5km az=113.0*

**ISC 27 07:07:33.0±0.1, 1892S±004×16923E±003, h238km, h238km±1.5km:pP-P, n586, σ0=62/421, mb4.9/

WRA PKiKP PKiKP 07 23 47.0 -2.1
comp=Z,0.5nm,0.8s,baz=49,slow=0.0,SNR=6.8
WRA Warramunga Arr 32.89 262 P **P** **07 13 43.6 -1.1**
WRA pP pP 07 14 32.5 0.0
WRA S **S** **07 18 41.6 -2.9**
WRA ScP ScP 07 19 45.4 +0.9
AS31 Alice Springs 33.20 256 ⇓*iP* **P** **07 13 47.4 0.0**
AS31 *eS* **S** **07 18 48.3 -0.9**
ASAR Alice Springs 33.20 256 P **P** **07 13 47.4 -0.1**
comp=Z,98nm,0.4s,mb5.7,baz=82,slow=8.9,SNR=1876
ASAR pP pP 07 14 31.8 -3.5
comp=Z,21nm,0.7s,baz=84,slow=9.0,SNR=3.1
ASAR S **S** **07 18 47.7 -1.5**
comp=Z,2.9nm,0.8s,baz=82,slow=17,SNR=7.3
ASAR ScP ScP 07 19 46.8 +1.3
comp=Z,1.9nm,0.8s,baz=97,slow=4.1,SNR=6.6
ASAR PKiKP PKiKP 07 23 47.1 -2.3
comp=Z,0.2nm,0.4s,baz=48,slow=1.9,SNR=4.7
ASAR Alice Springs 33.20 256 P **P** **07 13 47.4 -0.1**
ASAR S **S** **07 18 47.7 -1.5**
ASAR pmax pmax
comp=Z,98nm,0.4s
ASAR pmax pmax
comp=N,21nm,0.7s
ASAR smax
comp=N,3.0nm,0.8s
ASPA Alice Springs 33.20 256 ⇓*iP* **P** **07 13 47.4 -0.1**
ASPA *eS* **S** **07 18 48.3 -1.0**
KAKA Kakadu 35.89 274 ⇓*iP* **P** **07 14 10.2 -0.2**
comp=N,14nm,0.4s,mb4.8
FITZ Fitzroy Crossi 41.27 264 ⇓*iP* **P** **07 14 55.6 +0.5**
comp=N,108nm,1.2s,mb5.2
FITZ *e*pP pP 07 15 48.1 +3.5
FITZ *e*S **S** **07 20 51.8 +1.0**
FITZ Fitzroy Crossi 41.27 264 P **P** **07 14 55.6 +0.6**
comp=N,53nm,0.9s,mb5.0,baz=106,slow=7.7,SNR=13
FITZ pP pP 07 15 41.3 -3.3
comp=N,10nm,0.9s,baz=118,slow=11,SNR=3.4
FITZ S **S** **07 20 50.6 -0.2**
comp=N,2.2nm,0.9s,baz=278,slow=17,SNR=2.8
MBWA Marble Bar 46.41 259 *e*P **P** **07 15 36.3 +0.4**
comp=N,43nm,0.6s,mb5.0
MBWA *e*pP pP 07 16 29.9 +3.4
KLBR Kellerberrin 47.85 244 *e*P **P** **07 15 46.0 -0.9**
comp=N,27nm,0.8s,mb4.6
KLBR *e*pP pP 07 16 36.0 -1.9
HON Honolulu 51.27 40 *e*P **P** **07 16 12.7 +0.1**
KIP Kipapa 51.33 40 *e*P **P** **07 16 12.4 -0.7**
KIP pmax pmax
comp=Z,53nm,0.9s,mb5.0
KIP Kipapa 51.33 40 *e*P **P** **07 16 12.4 -0.7**
comp=Z,53nm,0.9s,mb5.0
RKT Rikitea 51.99 105 *e*S **S** **07 23 24.7 +2.2**
comp=Z,137nm,29.0s
VNDA Vanda 58.75 182 P **P** **07 17 05.0 -1.1**
comp=Z,3.7nm,0.9s,mb4.0,baz=358,slow=6.9,SNR=16
VNDA pP pP 07 17 59.0 -0.2
comp=Z,2.0nm,0.7s,baz=0.8,slow=6.7,SNR=2.9
VNDA Vanda 58.75 182 P **P** **07 17 05.0 -1.1**
VNDA *PP pP 07 17 59.0 -0.2
VNDA pmax pmax
comp=Z,40nm,0.9s
VNDA pmax pmax
comp=N,2.0nm,0.7s
VNDA Vanda 58.75 182 *e*P **P** **07 17 04.9 -1.1**
comp=N,6.9nm,1.1s,mb4.2
VNDA *e*pP pP 07 17 58.9 -0.3
SBA Scott Base 58.99 181 *e*P **P** **07 17 07.1 -0.6**
SBA *e**PP pP 07 17 58.9 -2.0
SBA pmax pmax
comp=Z,54nm,1.1s,mb5.1
SBA Scott Base 58.99 181 *e*P **P** **07 17 07.1 -0.6**
comp=Z,54nm,1.1s,mb5.1
SBA *e*pP pP 07 17 58.9 -2.0
JOW Kunigami 60.39 318 P **P** **07 17 16.8 -0.4**
comp=Z,7.8nm,0.9s,mb4.3,baz=175,slow=8.6,SNR=3.7
JOW pP pP 07 18 13.1 +2.4
comp=Z,14nm,0.9s,baz=3.1,slow=7.0,SNR=3.1
KSM Kuching 61.30 283 *e*P **P** **07 17 23.9 +0.6**
KSM *e*pP pP 07 18 19.3 +2.3
MJAR Matsushiro Arr 62.47 332 P **P** **07 17 30.0 -1.1**
comp=Z,12nm,1.0s,mb4.5,baz=163,slow=6.8,SNR=24
MJAR pP pP 07 18 26.5 +1.6
comp=Z,3.3nm,0.9s,baz=172,slow=7.9,SNR=2.7
MJAR Matsushiro Arr 62.47 332 P **P** **07 17 30.0 -1.1**
MJAR *PP pP 07 18 26.5 +1.6
MJAR pmax pmax
comp=Z,12nm,1.0s
MAJO Matsushiro 62.47 332 *e*P **P** **07 17 30.8 -0.3**
MAJO *e**PP pP 07 18 25.9 +1.0
MAT Matsushiro 62.47 332 P **P** **07 17 30.5 -0.6**
MAT S **S** **07 25 40.0 +1.1**
YHNB Yeheng 63.63 311 *e*P **P** **07 17 39.4 +0.6**
ASAJ Asahikawa 67.30 340 P **P** **07 18 02.8 +0.6**
comp=Z,40nm,1.0s,mb5.0,baz=224,slow=12,SNR=20
ASAJ Asahikawa 67.30 340 P **P** **07 18 02.8 +0.6**
ASAJ pmax pmax
comp=Z,40nm,1.0s
MIR Mirnyy 67.32 205*d* *i*P **P** **07 18 03.0 +0.7**
MIR *i* pP 07 18 58.0 +1.0
MIR pmax pmax
comp=Z,160nm,1.1s,mb5.6
SSE Sheshan 67.83 316 *e*P **P** **07 18 07.0 +1.5**
SSE PCP PcP 07 18 31.5 +1.2
SSE AP pP 07 19 02.3 +2.1
SSE XP sP 07 19 28.5 +2.7
SSE PP PP 07 20 39.5 +1.2
SSE S S 07 26 45.0 +0.9
SSE ScS ScS 07 27 40.0 -1.0
SSE XS sS 07 28 20.0 -0.1
SSE AMB AMB
comp=Z,32nm,0.7s,mb5.1
SSE AMB AMB
comp=Z,55nm,5.5s
SSE LR LR
comp=N,22nm,27.7s
SSE LR LR
comp=E,44nm,27.8s
SSE LR LR
comp=Z,38nm,21.9s
QIZ Qiongzhong 69.42 300 P **P** **07 18 17.5 +2.2**
QIZ S S 07 27 06.8 +4.1
YSS Yuzh-Sakhalins 69.77 341 *e*P **P** **07 18 18.0 +0.6**
YSS Yuzh-Sakhalins 69.77 341 *e*P **P** **07 18 17.8 +0.4**
comp=Z,42nm,1.1s,mb5.0
NJ2 Nanjing 69.97 316 *e*P **P** **07 18 20.0 +1.3**
NJ2 AP pP 07 19 12.5 -1.2
NJ2 XP sP 07 19 36.3 -2.9
NJ2 PP PP 07 21 00.3 +3.5
NJ2 S S 07 27 05.0 -4.2
NJ2 XS sS 07 28 43.0 -2.8
NJ2 AMB AMB
comp=Z,50nm,1.0s,mb5.1
NJ2 AMB AMB
comp=Z,150nm,10.8s
NJ2 LR LR
comp=N,150nm,13.3s
NJ2 LR LR
comp=E,190nm,18.8s
NJ2 LR LR
comp=Z,230nm,16.3s
QSPA South Pole Qui 71.14 180 ⇑*iP* **P** **07 18 24.5 -1.2**
comp=Z,33nm,1.0s,mb4.9
SMY Shemya 71.47 3 *e*P **P** **07 18 26.8 -0.8**
SMY pmax pmax
comp=Z,247nm,1.3s,mb5.7
SMY Shemya 71.47 3 *e*P **P** **07 18 26.8 -0.8**
comp=Z,247nm,1.3s,mb5.7
WHN Wuhan 72.13 312 P **P** **07 18 32.8 +1.2**
PET Petropavlovsk 72.22 353 *e*P **P** **07 18 31.5 -0.6**
PET *e**PP pP 07 19 27.4 -0.1
PET *e*S S 07 27 31.9 -3.1
PET pmax pmax
comp=Z,58nm,1.3s,mb5.0
PET smax
comp=N,100nm,15.8s
DL2 Dalian 72.75 323 P **P** **07 18 35.8 +0.5**
DL2 AMB AMB
comp=Z,20nm,0.9s,mb4.8
MDJ Mudanjiang 72.84 332 P **P** **07 18 36.3 +0.6**
MDJ AP pP 07 19 30.0 -1.3
MDJ XP sP 07 19 55.0 -1.7
MDJ PP PP 07 21 21.5 +0.3
MDJ S S 07 27 47.0 +5.1
MDJ XS sS 07 29 19.3 0.0
MDJ AMB AMB
comp=Z,18nm,1.1s,mb4.6
MDJ AMB AMB
comp=Z,99nm,3.9s
MDJ LR LR
comp=N,63nm,33.0s
MDJ LR LR
comp=E,61nm,35.1s
MDJ LR LR
comp=Z,29nm,20.4s
HABR Khabarovsk 73.70 337 ⇑*iP* **P** **07 18 41.7 +0.9**
HABR *e*S S 07 27 54.3 +2.7
HABR pmax pmax
comp=Z,65nm,1.7s,mb5.0
SNY Shenyang 73.71 326 ⇓P **P** **07 18 40.5 -0.4**
SNY AMB AMB
comp=Z,8.0nm,0.2s,mb5.0
NIKO Nikolski 74.07 14 *e*P **P** **07 18 41.6 -1.3**
CN2 Changchun 74.18 329 *e*P **P** **07 18 44.0 +0.4**
CN2 *e*AP pP 07 19 40.3 +1.0
CN2 *e*S S 07 27 59.0 +2.0
CN2 AMB AMB
comp=Z,60nm,1.0s,mb5.2
CN2 AMB AMB
comp=Z,150nm,3.0s
KLR Kul'dur 75.58 336 *e*P **P** **07 18 49.0 -2.5**
KLR *e*S S 07 28 09.5 -2.8
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,100nm,1.8s,mb5.1
GYA Guiyang 75.63 305 P **P** **07 18 53.0 +1.2**
GYA AP pP 07 19 49.5 +1.7
GYA XP sP 07 20 10.5 -2.6
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
GYA AMB AMB
comp=Z,270nm,4.4s
GYA LR LR
comp=N,240nm,20.8s
GYA LR LR
comp=E,280nm,21.4s
GYA LR LR
comp=Z,260nm,21.0s
BJI Beijing 76.69 321 *e*P **P** **07 18 57.8 0.0**
BJI AP pP 07 19 52.8 -1.0
BJI AMB AMB
comp=Z,15nm,1.0s,mb4.6
BJI AMB AMB
comp=Z,130nm,2.7s,mb5.1
KMI Kunming 78.10 302 ⇑P **P** **07 19 07.5 +1.9**
KMI AP pP 07 20 02.5 +0.6
KMI XP sP 07 20 28.5 +1.4
KMI PP PP 07 22 13.5 +8.1
KMI PPP 07 24 00.5
KMI S S 07 28 42.0 +2.4
KMI XS sS 07 30 22.3 +4.0
KMI SS SS 07 33 49.3 +2.7
KMI SSS 07 37 13.3
KMI AMB AMB
comp=Z,19nm,1.1s,mb4.6
KMI AMB AMB
comp=Z,36nm,3.1s
KMI LR LR
comp=N,358nm,10.0s
KMI LR LR
comp=E,125nm,11.7s
KMI LR LR
comp=Z,82nm,16.2s
MAW Mawson 78.73 202 *e*P **P** **07 19 08.8 -0.2**
comp=Z,5.1nm,0.9s,mb4.2
MAW *e*pP pP 07 20 02.1 -3.3
MAW Mawson 78.73 202 P **P** **07 19 08.8 -0.2**
comp=Z,5.4nm,0.8s,mb4.2,baz=111,slow=6.1,SNR=15
MAW pP pP 07 20 07.0 +1.6
comp=Z,9.4nm,1.0s,baz=100,slow=6.1,SNR=6.3
MAW Mawson 78.73 202 P **P** **07 19 08.8 -0.2**
MAW *PP pP 07 20 07.0 +1.6
MAW pmax pmax
comp=Z,50nm,0.9s
MA2 Magadan 79.65 351 *e*P **P** **07 19 13.6 -0.4**
HHC Hu-ho-hao-te 79.97 319 *e*P **P** **07 19 16.3 +0.6**
HHC AP pP 07 20 10.5 -1.8
HHC PP PP 07 22 23.3 +2.4
HHC S S 07 29 01.8 +2.5
HHC SKS 07 29 07.5
HHC PS 07 30 19.0
HHC XS sS 07 30 34.8 -3.7
HHC SS SS 07 34 21.0 +6.4
HHC AMB AMB
comp=Z,12nm,1.2s,mb4.4
HHC AMB AMB
comp=Z,45nm,3.8s
CD2 Chengdu 80.04 307 *e*P **P** **07 19 17.3 +1.2**
CD2 AP pP 07 20 11.0 -1.6
CD2 XP sP 07 20 34.5 -3.3
CD2 PP PP 07 22 24.3 +2.8
CD2 S S 07 29 02.0 +2.0
CD2 SS SS 07 34 21.5 +5.9
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
CD2 AMB AMB
comp=Z,30nm,6.8s
LZH Lanzhou 82.51 312 *e*P **P** **07 19 31.0 +2.0**
LZH AP pP 07 20 26.0 +0.1
LZH XP sP 07 20 48.5 -2.5
LZH PP PP 07 22 46.0 +4.2
LZH *e*S S 07 29 28.3 +2.9
LZH XS sS 07 31 05.0 -0.2
LZH AMB AMB
comp=Z,42nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,105nm,4.0s
KDAK Kodiak Island 82.73 20 P **P** **07 19 30.6 +0.4**
comp=Z,404nm,1.2s,mb6.0,SNR=6.3
KDAK Kodiak Island 82.73 20 *e*P **P** **07 19 29.5 -0.6**
comp=Z,111nm,1.2s,mb5.5
SVW2 Sparrevohn 84.59 16 *e*P **P** **07 19 38.9 -0.7**
FARB Farallon Islan 84.95 47 ⇑P **P** **07 19 41.0 -0.4**
baz=85
SYO Syowa Base 85.24 196 ⇑*e*P **P** **07 19 41.0 -1.8**
SYO Syowa Base 85.24 196 ⇑*e*pP pP 07 20 37.0 -3.1
MCCM Marconi Confer 85.25 47 ⇑P **P** **07 19 42.6 -0.2**
baz=85
BNLO Ben Lomond (Sa 85.27 48 ⇑P **P** **07 19 42.9 0.0**
baz=85,SNR=6.9
JRSC Jasper Ridge 85.35 48 ⇓P **P** **07 19 43.2 -0.1**
baz=86,SNR=8.2
HAST UC Hastings Re 85.37 49 ⇑P **P** **07 19 43.9 +0.4**
baz=86,SNR=25
V03C Hunter Liggett 85.43 50 ⇓P **P** **07 19 44.2 +0.5**
baz=86,SNR=12
SNCC San Nicolas Is 85.45 53 ⇓P **P** **07 19 43.8 -0.1**
baz=86
V04C Ramage Ranch, 85.52 50 ⇑P **P** **07 19 44.5 +0.3**
baz=86,SNR=8.7
HOPS Hopland 85.52 46 *e*P **P** **07 19 44.0 -0.2**
comp=Z,56nm,1.2s,mb5.2
HOPS Hopland 85.52 46 P **P** **07 19 44.4 +0.2**
baz=86,SNR=8.7
P01C Double 8 Ranch 85.57 46 ⇑P **P** **07 19 44.7 +0.2**
baz=86,SNR=6.8
SAO San Andreas Ge 85.61 49 *e*P **P** **07 19 44.8 +0.1**
SAO pmax pmax
comp=Z,42nm,1.1s,mb5.1
SAO San Andreas Ge 85.61 49 *e*P **P** **07 19 44.8 +0.1**
comp=Z,42nm,1.1s,mb5.1
NSHM Saint Helena R 85.62 47 *e*P **P** **07 19 44.1 -0.6**
KIPM Iron Peak 85.64 45 *e*P **P** **07 19 44.6 -0.2**
CVS Carmenet Viney 85.64 47 ⇑P **P** **07 19 44.6 -0.2**
baz=86,SNR=15
SLKM Skilak Lake 85.64 19 *e*P **P** **07 19 43.6 -1.2**
SLKM *e**PP pP 07 20 42.9 +0.8
BSC Santa Cruz Isl 85.70 52 ⇓P **P** **07 19 44.9 -0.2**
baz=86
JCC Jacoby Creek 85.76 44 ⇑P **P** **07 19 45.5 +0.2**
baz=86
WENL Wente Brothers 85.79 48 ⇑P **P** **07 19 45.9 +0.4**
baz=86,SNR=5.8
SBC Santa Barbara 85.83 52 ⇑P **P** **07 19 46.0 +0.2**
baz=86
PACP Pacheco Peak 85.84 49 ⇑P **P** **07 19 46.2 +0.4**
baz=86,SNR=21
BDM Black Diamond 85.87 48 ⇓P **P** **07 19 46.3 +0.4**
baz=86
PKD Parkfield 85.89 50 P **P** **07 19 46.3 +0.3**
baz=86,SNR=18
MNRC McLaughlin Nat 85.90 47 ⇑P **P** **07 19 46.5 +0.4**
baz=86,SNR=16
U04C Hernandez Rese 85.91 49 P **P** **07 19 46.9 +0.8**
baz=86,SNR=24
PKM Peak Mountain 85.96 51 ⇓P **P** **07 19 46.7 +0.4**
baz=86,SNR=9.4
KHMM Horse Mountain 85.98 44 *e*P **P** **07 19 46.4 -0.1**
TNA Tin City 85.99 9 *e*P **P** **07 19 47.0 +0.5**
comp=Z,50nm,1.4s,mb5.0
PTRM Twissleman Ran 86.00 50 *e*P **P** **07 19 46.5 0.0**
PTRM *e*pP pP 07 20 43.7 -0.3
SMMC Simmler 86.01 51 ⇑P **P** **07 19 46.8 +0.2**
baz=86,SNR=9.2
TTA Tatalina 86.03 15 *e*P **P** **07 19 45.9 -0.8**
S04C Ingram Canyon, 86.04 48 ⇑P **P** **07 19 46.9 +0.1**
baz=86,SNR=26
GASB Alder Springs 86.07 46 ⇑P **P** **07 19 47.7 +0.8**
baz=86,SNR=33
SCI San Clemente I 86.08 53 ⇓P **P** **07 19 46.9 0.0**
baz=86
Q03C Winters 86.08 47 ⇑P **P** **07 19 47.7 +0.7**
baz=86,SNR=6.3
BLG Laguna Peak 86.17 52 ⇓P **P** **07 19 46.9 -0.5**
baz=86
KRMB Red Mountain 86.18 44 *e*P **P** **07 19 47.5 +0.1**
M01C Crescent City 86.20 43 ⇑P **P** **07 19 47.8 +0.3**
baz=86
T05C Eagle Field, D 86.23 49 ⇑P **P** **07 19 48.4 +0.7**
baz=86
N02C Big Bar 86.24 45 ⇑P **P** **07 19 48.0 +0.3**
baz=86,SNR=15
O02C Red Bluff 86.28 45 ⇓P **P** **07 19 48.5 +0.6**
baz=86,SNR=41
V05C Boulder Hill, 86.32 50 ⇑P **P** **07 19 48.9 +0.8**
baz=86
CIS Catalina Islan 86.37 53 ⇑P **P** **07 19 47.9 -0.4**
baz=86
SUTB Sutter Butte 86.52 47 ⇓P **P** **07 19 48.7 -0.4**
baz=87,SNR=24
YAK Yakutsk 86.56 342 *e*P **P** **07 19 48.4 -0.9**
YAK pmax pmax
comp=Z,18nm,1.2s,mb4.7
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.3s
FMP Fort Macarthur 86.58 53 ⇓P **P** **07 19 49.4 0.0**
baz=87
Q04C Lincoln 86.62 47 P **P** **07 19 49.4 -0.2**
baz=87,SNR=6.9
WDC Whiskeytown Da 86.64 45 *e*P **P** **07 19 49.8 +0.2**
WDC pmax pmax
comp=Z,54nm,1.3s,mb5.1
WDC Whiskeytown Da 86.64 45 *e*P **P** **07 19 49.8 +0.2**
comp=Z,54nm,1.3s,mb5.1
WDC Whiskeytown Da 86.64 45 ⇑P **P** **07 19 49.7 +0.1**
baz=87,SNR=30
OSI Osito Adit 86.64 52 ⇓P **P** **07 19 49.7 0.0**
baz=87
R04C Big Horse Ranc 86.66 48 ⇓P **P** **07 19 49.1 -0.6**
baz=87
S05C Merced 86.67 49 P **P** **07 19 49.9 0.0**
baz=87,SNR=28
L02A Cave Junction 86.69 43 ⇑P **P** **07 19 50.1 +0.2**
baz=87,SNR=5.2
O03C Acorn Hollow, 86.70 46 ⇑P **P** **07 19 49.7 -0.3**
baz=87,SNR=15
BILL Bilibino 86.73 359 ⇑*e*P **P** **07 19 48.8 -1.3**
BILL *e**PP pP 07 20 46.4 -1.1
BILL *e* 07 23 24.1
BILL pmax pmax
comp=Z,51nm,1.2s,mb5.1
BILL Bilibino 86.73 359 *e*P **P** **07 19 49.3 -0.8**
comp=Z,6.2nm,0.6s,mb4.5
BILL *e*pP pP 07 20 47.1 -0.5
OHCM Honcut 86.77 47 *e*P **P** **07 19 50.2 -0.1**
DECC Green Verdugo 86.78 52 ⇓P **P** **07 19 49.9 -0.5**
baz=87
ARVC Arvin 86.79 51 ⇑P **P** **07 19 50.4 0.0**
baz=87,SNR=11
M02C Callahan 86.81 44 ⇓P **P** **07 19 51.1 +0.6**
baz=87,SNR=33
PMR Palmer 86.83 19 *e*P **P** **07 19 50.1 -0.5**
PMR pmax pmax
comp=Z,30nm,1.5s,mb4.8
PMR Palmer 86.83 19 *e*P **P** **07 19 50.1 -0.5**
comp=Z,30nm,1.5s,mb4.8
ORV Oroville 86.86 46 ⇓P **P** **07 19 50.3 -0.4**
baz=87,SNR=37
GTA Gaotai 86.90 313 P **P** **07 19 51.5 +0.6**
GTA AP pP 07 20 47.5 -0.9
GTA XP sP 07 21 09.8 -3.5
GTA PP PP 07 23 22.0 +4.7
GTA PPP 07 25 21.3
GTA SKS 07 29 55.5
GTA S S 07 30 10.3 +1.7
GTA XS sS 07 31 46.5 -3.0
GTA SS SS 07 36 02.3 +5.6
GTA AMB AMB
comp=Z,12nm,1.4s,mb4.4
GTA AMB AMB
comp=Z,79nm,7.2s
GTA LR LR
comp=N,38nm,12.5s
GTA LR LR
comp=E,73nm,12.2s
GTA LR LR
comp=Z,77nm,14.1s
VES Vestal, Richgr 86.91 51 ⇓P **P** **07 19 50.5 -0.5**
baz=87,SNR=14
CMB Columbia Colle 86.94 48 *e*P **P** **07 19 51.0 -0.1**
CMB pmax pmax
comp=Z,42nm,1.0s,mb5.1
CMB Columbia Colle 86.94 48 *e*P **P** **07 19 51.0 -0.1**
comp=Z,42nm,1.0s,mb5.1
CMB Columbia Colle 86.94 48 P **P** **07 19 51.0 -0.1**
baz=87,SNR=69
SONM Songino Array 86.96 323 P **P** **07 19 50.7 -0.5**
comp=Z,14nm,0.9s,mb4.7,baz=136,slow=5.1,SNR=71
SONM pP pP 07 20 47.8 -0.9
comp=Z,7.9nm,1.1s,baz=133,slow=5.0,SNR=7.0
SONM PKKP PKKPbc 07 37 43.1 +0.6
comp=Z,0.7nm,0.9s,baz=298,slow=3.2,SNR=4.0
T06C Millerton Lake 86.97 49 P **P** **07 19 51.2 0.0**
baz=87,SNR=30
MWC Mount Wilson 86.97 52 *e*P **P** **07 19 51.3 0.0**
RCTC Rector, Farmer 87.00 50 ⇓P **P** **07 19 50.8 -0.6**
baz=87
LAVA Lava Cap Winer 87.02 47 P **P** **07 19 51.4 -0.1**
baz=87,SNR=19
YBH Yreka Blue Hor 87.07 44 *e*P **P** **07 19 52.2 +0.5**
YBH pmax pmax
comp=Z,60nm,1.2s
YBH Yreka Blue Hor 87.07 44 *e*P **P** **07 19 52.2 +0.5**
comp=Z,60nm,1.2s,mb5.2
YBH Yreka Blue Hor 87.07 44 P **P** **07 19 52.3 +0.5**
baz=87,SNR=32
109C Camp Elliot, M 87.14 54 ⇑P **P** **07 19 51.9 -0.2**
baz=87,SNR=9.5
PMSA Palmer Station 87.22 160 P **P** **07 19 51.2 -1.2**
comp=Z,16nm,0.8s,mb4.8,baz=246,slow=2.8,SNR=6.3
PMSA Palmer Station 87.22 160 *e*P **P** **07 19 50.4 -2.0**
PMSA *e*pP pP 07 20 46.4 -3.6
M03C McCloud 87.24 45 ⇓P **P** **07 19 52.6 0.0**
baz=87,SNR=36
S06C San Francisco 87.26 48 P **P** **07 19 52.6 0.0**
baz=87,SNR=46
ISA Isabella 87.28 51 *e*P **P** **07 19 52.9 +0.2**
comp=Z,0.1nm,1.1s
ISA Isabella 87.28 51 P **P** **07 19 52.9 +0.1**
baz=87,SNR=33
BFSC Mount Baldy St 87.28 53 ⇑P **P** **07 19 52.5 -0.2**
baz=87,SNR=14
J02A Umpqua 87.30 42 ⇑P **P** **07 19 53.0 +0.2**
baz=87,SNR=6.4
EDW2 Edwards Air Fo 87.30 52 P **P** **07 19 53.0 +0.2**
baz=87,SNR=20
HELL Mitchell Peak, 87.32 50 ⇓P **P** **07 19 52.7 -0.2**
baz=87,SNR=24
MURC Murrieta 87.36 53 ⇑P **P** **07 19 52.9 -0.2**
baz=88,SNR=8.4
P05C Yuba Gap, Truc 87.36 47 ⇑P **P** **07 19 53.3 +0.2**
baz=88,SNR=30
BAR Barrett 87.38 54 *e*P **P** **07 19 53.4 +0.2**
KCC Kaiser Creek 87.39 49 ⇓P **P** **07 19 53.2 -0.1**

baz=88,SNR=11
I02A **Mapleton** 87.45 42 ⇑P P 07 19 53.9 +0.4
baz=88
O05C **Quincy** 87.45 46 ⇑P P 07 19 53.5 0.0
baz=88,SNR=7.3
R05C **Kirkwood Meado** 87.46 48 P P 07 19 53.8 +0.2
baz=88,SNR=35
HATC **Hat Creek Radi** 87.47 45 ⇑P P 07 19 53.9 +0.2
baz=88,SNR=22
O04C **Chester** 87.50 46 P P 07 19 54.0 +0.3
baz=88,SNR=32
MONP **Monument Peak** 87.66 54 P P 07 19 55.0 +0.5
baz=88,SNR=18
M04C **Macdoel** 87.67 44 ⇑P P 07 19 54.8 +0.2
baz=88,SNR=11
H02A **Toledo** 87.67 41 ⇓P P 07 19 54.8 +0.2
baz=88
J03A **Ideyld Park** 87.69 43 P P 07 19 55.0 +0.3
baz=88,SNR=5.2
I03A **Eugene** 87.78 42 ⇓P P 07 19 55.4 +0.3
baz=88
LRMC **Laurel Mountai** 87.78 51 ⇑P P 07 19 55.2 +0.1
baz=88,SNR=28
BEKR **Beckwourth** 87.79 47 P P 07 19 55.4 +0.2
baz=88,SNR=42
DVTC **Desert V Tower** 87.81 54 ⇓P P 07 19 55.2 -0.1
baz=88,SNR=7.4
L04A **Klamath Falls** 87.82 44 ⇓P P 07 19 55.3 0.0
baz=88,SNR=8.6
R06C **Coleville** 87.82 48 ⇑P P 07 19 55.6 +0.3
baz=88,SNR=39
WAKR **Walker** 87.82 48 *e*P P 07 19 55.7 +0.4
BBRC **Big Bear Sol-O** 87.85 53 ⇓P P 07 19 55.4 0.0
baz=88
MLAC **Mammoth Lakes** 87.87 49 ⇓P P 07 19 55.8 +0.3
baz=88,SNR=8.9
ELFS **Eagle Lake Fie** 87.88 46 ⇑P P 07 19 55.7 +0.2
baz=88,SNR=5.3
CWC **Cottonwood Cre** 87.90 50 ⇓P P 07 19 55.6 0.0
baz=88,SNR=5.6
R07C **Lee Vining** 87.92 49 ⇑P P 07 19 56.1 +0.4
baz=88,SNR=13
PFO **Pinyon Flat Ob** 87.93 54 *e*P P 07 19 55.7 -0.1
PFO pmax pmax
comp=Z,50nm,1.4s,mb5.2
PFO **Pinyon Flat Ob** 87.93 54 *e*P P 07 19 55.7 -0.1
comp=Z,50nm,1.4s,mb5.2
PFO **Pinyon Flat Ob** 87.93 54 ⇑P P 07 19 55.7 -0.1
baz=88,SNR=11
M05C **Lookout** 87.93 45 ⇓P P 07 19 56.0 +0.2
baz=88,SNR=8.1
MTUM **Tungsten Hills** 87.94 49 *e*P P 07 19 55.6 -0.3
MTUM *e*pP pP 07 20 51.5 -2.0
WCN **Washoe City** 87.95 47 ⇑P P 07 19 56.2 +0.3
baz=88,SNR=14
P06A **Stead Airport** 88.02 47 ⇓P P 07 19 56.5 +0.3
baz=88,SNR=14
RRX **Edison Barstow** 88.04 52 ⇑P P 07 19 56.1 -0.2
baz=88
TIN **Tinemaha** 88.06 50 ⇑P P 07 19 56.3 0.0
baz=88,SNR=6.2
K04A **Chilquin** 88.13 44 ⇑P P 07 19 56.9 +0.2
baz=88
SWSC **Sam W. Stewart** 88.16 54 ⇓P P 07 19 56.8 -0.1
baz=88,SNR=7.6
MPMC **Manual Prospec** 88.17 51 P P 07 19 57.2 +0.3
baz=88,SNR=38
DAC **Darwin (Calif)** 88.19 51 *e*P P 07 19 57.1 +0.1
DAC pmax pmax
comp=Z,65nm,1.4s,mb5.3
DAC **Darwin (Calif)** 88.19 51 *e*P P 07 19 57.1 +0.1
comp=Z,65nm,1.4s,mb5.3
O06A **Flanigan** 88.29 46 ⇓P P 07 19 57.5 0.0
baz=88,SNR=63
M06C **Likely Place G** 88.31 45 ⇑P P 07 19 57.8 +0.2
baz=88,SNR=25
HBO **Huckleberry Mo** 88.33 42 P P 07 19 57.7 0.0
GSC **Goldstone** 88.36 52 *e*P P 07 19 57.9 +0.1
GSC **Goldstone** 88.36 52 P P 07 19 58.0 +0.1
baz=88,SNR=14
PAHR **Pah Rah Range** 88.39 47 *e*P P 07 19 57.6 -0.3
PAHR *e*pP pP 07 20 55.6 -0.1
G03A **Yamhill** 88.43 41 ⇓P P 07 19 58.4 +0.2
baz=89
BELC **Belle Mtn.** 88.44 53 P P 07 19 58.6 +0.4
baz=88,SNR=34
Q07A **Schurz** 88.45 48 ⇓P P 07 19 58.4 +0.1
baz=89,SNR=7.8
L05A **Lakeview** 88.46 44 ⇑P P 07 19 59.0 +0.7
baz=89,SNR=38
HEC **Hector,Ludlow** 88.52 52 ⇑P P 07 19 58.4 -0.2
baz=89,SNR=13
N06A **Buffalo Meadow** 88.54 46 P P 07 19 58.8 +0.1
baz=89,SNR=60
MCK **McKinley** 88.55 17 *e*P P 07 19 56.8 -1.9
comp=Z,5.6nm,1.0s,mb4.3
MCK *e*pP pP 07 20 54.0 -2.4
F03A **Seaside** 88.56 40 ⇑P P 07 19 58.9 +0.1
baz=89
NVAR **Mina Array Bea** 88.59 49 P P 07 19 59.0 +0.1
comp=Z,18nm,1.1s,mb4.8,baz=220,slow=5.2,SNR=94
GRAC **Grapevine Rang** 88.65 50 ⇓P P 07 19 59.4 +0.2
baz=89,SNR=49
P07A **Fallon** 88.66 47 ⇑P P 07 19 59.5 +0.3
baz=89
R08A **Mina** 88.70 49 ⇑P P 07 19 59.5 +0.1
baz=89,SNR=22
K05A **Summer Lake** 88.73 44 ⇑P P 07 19 59.9 +0.4
baz=89,SNR=42
J05A **Fort Rock** 88.76 43 ⇑P P 07 20 00.2 +0.5
baz=89,SNR=60
FURC **Furnace Creek,** 88.81 51 ⇑P P 07 19 59.7 -0.2
baz=89,SNR=23
H04A **Detroit Lake** 88.81 42 ⇓P P 07 19 59.5 -0.4
baz=89,SNR=24
E03A **Lebam** 88.85 40 ⇑P P 07 20 00.0 -0.1
baz=89,SNR=14
G04A **Mulino** 88.87 41 ⇑P P 07 19 59.9 -0.4
baz=89,SNR=11
BKCOR **Black Crater** 88.94 42 P P 07 20 00.7 +0.2
O07A **Toulon** 88.94 47 P P 07 20 00.7 +0.2
baz=89,SNR=39
C03A **Quillayute Air** 88.95 38 ⇑P P 07 20 00.9 +0.3
baz=89
GLA **Glamis** 88.95 55 *e*P P 07 20 00.5 -0.1
GLA **Glamis** 88.95 55 ⇓P P 07 20 01.0 +0.4
baz=89,SNR=34
SHOC **Shoshone** 89.00 51 ⇓P P 07 20 00.5 -0.4
baz=89,SNR=29
GMRC **Granite Mounta** 89.01 53 P P 07 20 01.0 +0.1
baz=89,SNR=25
D03A **Wishkah Elem.** 89.01 39 ⇑P P 07 20 01.5 +0.7
baz=89,SNR=7.2
Q08A **Gabbs** 89.04 48 ⇑P P 07 20 00.8 -0.2
baz=89,SNR=38
BOD **Bodaibo** 89.04 334 *e*P P 07 19 59.5 -1.5
BOD pmax pmax
comp=Z,17nm,1.3s,mb4.7
S09A **Goldfield** 89.06 50 P P 07 20 01.1 -0.1
baz=89,SNR=35
TUQ **Turquoise Mtn.** 89.07 52 ⇑P P 07 20 01.3 +0.1
baz=89,SNR=40
N07B **Gerlach** 89.14 46 ⇑P P 07 20 01.7 +0.2
baz=89,SNR=32
I05A **Bend** 89.15 42 ⇓P P 07 20 01.6 +0.1
baz=89,SNR=16
U10A **Ash Meadows, A** 89.17 51 ⇑P P 07 20 02.1 +0.4
baz=89,SNR=39
K06A **Valley Falls** 89.18 44 P P 07 20 01.9 +0.2
baz=89,SNR=34
TPH **Tonopah** 89.21 49 *e*P P 07 20 01.9 +0.1
TPH pmax pmax
comp=Z,53nm,1.4s,mb5.2
TPH **Tonopah** 89.21 49 *e*P P 07 20 01.9 0.0
comp=Z,53nm,1.4s,mb5.2
F04A **Amboy** 89.25 40 ⇓P P 07 20 01.8 -0.2
baz=89,SNR=15
M07A **Soldier Meadow** 89.27 46 P P 07 20 02.3 +0.2
baz=89
P08A **Dixie Valley** 89.29 47 ⇓P P 07 20 02.6 +0.4
baz=89,SNR=16
LVP **Lakeview Peak** 89.33 40 P P 07 20 02.4 +0.1
E04A **Onalaska** 89.39 40 ⇑P P 07 20 02.8 +0.2
baz=90,SNR=7.4
R09A **Tonopah** 89.39 49 P P 07 20 02.6 0.0
baz=90,SNR=35
H05A **Madras** 89.39 42 ⇑P P 07 20 02.6 0.0
baz=90
L07A **Adell** 89.44 45 P P 07 20 03.5 +0.7
baz=90,SNR=75
J06A **Christmas Vall** 89.45 44 ⇓P P 07 20 02.7 -0.2
baz=90,SNR=33
Y12C **Blythe** 89.46 54 P P 07 20 03.4 +0.5
baz=90,SNR=31
SNAA **Sanae** 89.48 183 ⇓*i*P P 07 20 01.3 -1.8
SNAA *e* 07 20 02.3
SNAA *e* pP 07 20 57.1 -3.8
SNAA *e* pP 07 20 58.6 -2.3
SNAA *e* pP 07 21 01.2 +0.3
SNAA *e* 07 21 06.4
SNAA *e* 07 21 10.4
SNAA **Sanae** 89.48 183 *e*P P 07 20 00.9 -2.2
SNAA *e**PP pP 07 20 57.2 -3.7
SNAA pmax pmax
comp=Z,43nm,1.4s
SNAA **Sanae** 89.48 183 *e*P P 07 20 00.9 -2.2
comp=Z,43nm,1.4s,mb5.1
SNAA *e*pP pP 07 20 57.2 -3.7
O08A **Rochester Mine** 89.49 47 ⇑P P 07 20 03.3 +0.2
baz=90
MENT **Mentasta** 89.51 20 *e*P P 07 20 07.0 +3.8
Q09A **Carvers** 89.56 49 ⇓P P 07 20 03.5 +0.1
baz=90,SNR=6.7
D04A **Dobbs Creek Ra** 89.58 39 ⇓P P 07 20 03.9 +0.3
baz=90,SNR=7.8
G05A **Wamic** 89.61 41 ⇑P P 07 20 03.4 -0.3
baz=90,SNR=9.0
B04A **Port Angeles** 89.63 38 ⇓P P 07 20 04.1 +0.4
baz=90,SNR=8.2
N08A **GE Springer Mi** 89.72 46 P P 07 20 04.4 +0.2
baz=90,SNR=20
VIPM **Ingram Point** 89.72 42 P P 07 20 04.3 +0.1
I06A **Prineville** 89.72 43 ⇑P P 07 20 04.4 +0.2
baz=90,SNR=31
COLA **College** 89.73 17 *e*P P 07 20 01.9 -2.3
COLA **College** 89.73 17 *e*P P 07 20 01.5 -2.8
comp=Z,21µm,2.9s
COLA *e*pP pP 07 20 59.9 -2.2
C04A **Brinnon** 89.77 39 ⇓P P 07 20 04.5 +0.1
baz=90,SNR=23
K07A **Rock Creek Ran** 89.80 44 P P 07 20 04.9 +0.4
baz=90,SNR=67
W12A **Cal Nev Ari** 89.81 52 ⇓P P 07 20 04.9 +0.3
baz=90,SNR=34
U11A **Corn Creek** 89.87 51 ⇑P P 07 20 05.1 +0.2
baz=90,SNR=11
P09A **Austin** 89.89 48 ⇑P P 07 20 04.9 -0.1
baz=90,SNR=7.0
E05A **Randle** 89.95 40 ⇑P P 07 20 04.8 -0.4
baz=90,SNR=28
R10A **Warm Springs** 89.96 49 ⇑P P 07 20 05.6 +0.3
baz=90,SNR=60
PDMCI **Parker Dam,Lak** 89.97 54 P P 07 20 05.6 +0.2
baz=90,SNR=38
V12A **Nelson** 89.99 52 ⇓P P 07 20 05.5 +0.1
baz=90,SNR=31
H06A **Lindquist Farm** 90.00 42 P P 07 20 05.2 -0.2
baz=90,SNR=71
LON **Lonmire** 90.01 40 *e*P P 07 20 05.1 -0.4
Y13A **Salome** 90.02 54 ⇑P P 07 20 06.2 +0.6
baz=90
ZAK **Zakamensk** 90.03 324 ⇑*i*P P 07 20 05.4 -0.2
ZAK *e* pP 07 21 01.3 -2.1
ZAK pmax pmax
comp=Z,10.0nm,1.5s,mb4.4
G06A **Carlson Farm,** 90.04 42 ⇓P P 07 20 05.2 -0.5
baz=90,SNR=15
J07A **Hines** 90.05 44 ⇑P P 07 20 05.6 -0.1
baz=90,SNR=39
SHPR **Sheep Range** 90.07 51 *e*P P 07 20 06.2 +0.4
WVOR **Wild Horse Val** 90.09 45 *e*P P 07 20 05.9 0.0
WVOR *e**PP pP 07 21 04.8 +1.1
WVOR pmax pmax
comp=Z,84nm,1.2s,mb5.5
WVOR **Wild Horse Val** 90.09 45 *e*P P 07 20 05.9 0.0
comp=Z,84nm,1.2s,mb5.5
WVOR *e*pP pP 07 21 04.8 +1.1
D05A **Enumclaw** 90.11 39 P P 07 20 06.5 +0.5
baz=90,SNR=28
O09A **Fish Creek Ran** 90.11 47 P P 07 20 06.3 +0.3
baz=90,SNR=30
SKAG **Skagway** 90.16 25 *e*P P 07 20 05.7 -0.5
comp=Z,78nm,1.2s,mb5.4
N09A **Rock Creek Ran** 90.17 47 P P 07 20 06.5 +0.2
baz=90,SNR=14
L08A **Fields** 90.18 45 ⇓P P 07 20 06.7 +0.3
baz=90,SNR=44
FMW **Mount Fremont** 90.18 40 P P 07 20 06.3 0.0
BMN **Battle Mountai** 90.20 47 *e*P P 07 20 06.7 +0.3
I07A **Izee** 90.24 43 P P 07 20 07.0 +0.3
baz=90,SNR=48
K08A **Mann Creek Ran** 90.32 45 P P 07 20 07.2 +0.3
baz=90,SNR=54
X13A **Yucca** 90.32 53 P P 07 20 07.4 +0.4
baz=90,SNR=39
RMW **Rattlesnake Mo** 90.35 39 P P 07 20 07.0 -0.1
P10A **Eureka** 90.39 48 ⇓P P 07 20 07.5 +0.2
baz=90,SNR=8.2
A04A **Legoe Bay, Lum** 90.41 38 P P 07 20 07.5 +0.1
baz=90,SNR=69
M09A **Marrel Ranch,** 90.46 46 ⇑P P 07 20 07.9 +0.3
baz=91,SNR=20
W13A **Hualapai Mount** 90.47 53 ⇑P P 07 20 08.0 +0.3
baz=91,SNR=35
TLY **Talaya** 90.49 325 *e*P P 07 20 07.2 -0.6
TLY pmax pmax
comp=Z,21nm,1.6s,mb4.7
TLY **Talaya** 90.49 325 *e*P P 07 20 07.2 -0.5
comp=Z,21nm,1.6s,mb4.7
TLY *e*pP pP 07 21 00.3 -5.3
TRCR **Troy Canyon** 90.50 49 *e*P P 07 20 07.6 -0.2
U12A **Valley of Fire** 90.50 52 ⇑P P 07 20 08.1 +0.3
baz=91,SNR=31
C05A **Tolt Reservoir** 90.53 39 ⇓P P 07 20 07.6 -0.4
baz=91,SNR=23
Z14A **Wintersburg** 90.53 55 ⇑P P 07 20 08.4 +0.5
baz=91,SNR=15
B05A **Bryant** 90.55 38 ⇓P P 07 20 07.8 -0.2
baz=91,SNR=43
L09A **Wilkinson Ranc** 90.56 45 P P 07 20 08.5 +0.4
baz=91,SNR=47
J08A **Circle Bar Ran** 90.60 44 ⇓P P 07 20 08.2 0.0
baz=91,SNR=34
CMW **Cultus Mountai** 90.61 38 P P 07 20 08.3 0.0
JCW **Jim Creek** 90.62 39 P P 07 20 08.2 -0.1
O10A **Cortez Mining,** 90.64 47 ⇓P P 07 20 08.6 +0.2
baz=91,SNR=7.2
VNA1 **Neumayer--Stat** 90.66 181 ⇓*i*P P 07 20 07.2 -1.3
VNA1 *e* 07 20 08.2
VNA1 *e* pP 07 21 03.6 -2.8
VNA1 *e* pP 07 21 05.2 -1.2
VNA1 *e* pP 07 21 07.4 +1.0
VNA1 *e* 07 21 11.1
VNA1 *e* 07 21 14.7
VNA1 *e* 07 21 19.0
Y14A **Wickenburg** 90.70 54 ⇑P P 07 20 08.8 +0.1
baz=91,SNR=24
TWW **Teanaway** 90.76 40 P P 07 20 09.8 +0.7
I08A **Drewsey** 90.77 43 ⇓P P 07 20 09.0 0.0
baz=91,SNR=19
K09A **Rome** 90.81 45 P P 07 20 09.3 +0.1
baz=91,SNR=80
N10A **Dunphy** 90.81 47 ⇑P P 07 20 09.1 -0.1
baz=91,SNR=7.6
115A **Sonoran Desert** 90.84 56 ⇓P P 07 20 09.5 +0.1
baz=91,SNR=17
EBG **Ellensburg** 90.84 40 P P 07 20 09.3 -0.1
P11A **Circle Ranch,** 90.86 48 ⇑P P 07 20 09.7 +0.2
baz=91,SNR=12
A05A **Maple Falls** 90.91 38 ⇑P P 07 20 09.1 -0.6
baz=91,SNR=9.0
H08A **Prairie City** 90.97 43 P P 07 20 09.8 -0.2
baz=91,SNR=20
X14A **Yava** 90.99 54 ⇑P P 07 20 10.7 +0.6
baz=91,SNR=39
J09A **Fry Pan Ranch,** 91.07 44 P P 07 20 10.6 +0.2
baz=91,SNR=75
M10A **I.L. Ranch, Tu** 91.12 46 ⇑P P 07 20 11.2 +0.5
baz=91,SNR=33
G08A **Pilot Rock** 91.12 42 ⇓P P 07 20 10.5 -0.1
baz=91,SNR=44
W14A **Seligman** 91.12 53 P P 07 20 11.5 +0.8
baz=91,SNR=40
O11A **Cowboy Ranch,** 91.17 48 P P 07 20 11.2 +0.3
baz=91,SNR=26
116A **Eloy** 91.20 56 ⇑P P 07 20 11.4 +0.4
baz=91,SNR=30
HAWA **Hanford** 91.25 41 *e*P P 07 20 10.5 -0.7
Q12A **Willow Creek R** 91.32 49 ⇑P P 07 20 11.8 +0.2
baz=91,SNR=16
I09A **Lost Marbles R** 91.34 44 ⇑P P 07 20 11.1 -0.6
baz=92,SNR=14
N11A **Elko Archery C** 91.39 47 ⇑P P 07 20 12.0 +0.1
baz=92
P12A **McGill** 91.43 49 P P 07 20 12.6 +0.4
baz=92,SNR=16
F08A **Pendleton** 91.46 42 ⇑P P 07 20 11.8 -0.4
baz=92,SNR=16
X15A **Humboldt** 91.50 54 ⇓P P 07 20 12.9 +0.5
baz=92,SNR=67
M11A **Holland Ranch,** 91.60 47 ⇓P P 07 20 13.2 +0.3
baz=92,SNR=17
EGAK **Eagle** 91.62 19 *e*P P 07 20 11.2 -1.8
EGAK *e*pP pP 07 21 09.3 -1.5
H09A **Durkee** 91.68 43 ⇑P P 07 20 12.9 -0.4
baz=92,SNR=11
DAWY **Dawson** 91.69 20 *e*P P 07 20 11.5 -1.8
DAWY *e*pP pP 07 21 10.2 -1.0
ELK **Elko** 91.70 47 *e*P P 07 20 14.0 +0.6
ELK pmax pmax
comp=Z,25nm,1.1s
ELK **Elko** 91.70 47 *e*P P 07 20 14.0 +0.7
comp=Z,25nm,1.1s,mb5.0
W15A **Williams** 91.73 53 ⇑P P 07 20 14.2 +0.7
baz=92,SNR=17
CCUT **Cedar City** 91.80 51 *e*P P 07 20 13.9 +0.1
TUC **Tucson** 91.83 57 *e*P P 07 20 14.1 +0.1
TUC pmax pmax
comp=Z,42nm,1.1s,mb5.3
TUC **Tucson** 91.83 57 *e*P P 07 20 14.1 +0.2
comp=Z,42nm,1.1s,mb5.3
ARUT **Antelope Range** 91.84 51 *e*P P 07 20 14.1 +0.1
O12A **Currie** 91.86 48 P P 07 20 14.1 0.0
baz=92,SNR=21
N12A **Clover Valley,** 91.89 47 ⇓P P 07 20 14.3 +0.1
baz=92,SNR=15
F09A **S2 Ranch, Elgi** 91.97 42 ⇓P P 07 20 14.1 -0.5
baz=92
BMO **Blue Mountains** 91.99 43 *e*P P 07 20 13.6 -1.1
BMO *e**PP pP 07 21 12.3 -0.3
BMO pmax pmax
comp=Z,24nm,1.5s,mb4.9
BMO **Blue Mountains** 91.99 43 *e*P P 07 20 13.6 -1.2
comp=Z,24nm,1.5s,mb4.9
BMO *e*pP pP 07 21 12.2 -0.3
M12A **Wells** 92.19 47 P P 07 20 15.8 +0.2
baz=92,SNR=10
N13A **Wendover, West** 92.47 48 ⇓P P 07 20 16.6 -0.3
baz=93,SNR=5.8
PNT **Penticton** 92.49 38 P P 07 20 16.6 -0.4
WUAZ **Wupatki** 92.53 53 *e*P P 07 20 17.2 +0.1
comp=Z,53nm,1.2s,mb5.4
M13A **Montello** 92.69 47 ⇑P P 07 20 17.8 -0.2
baz=93
MSU **Marysvale** 93.03 50 *e*P P 07 20 19.2 -0.3
MSU *e**PP pP 07 21 18.4 +1.0
DUG **Dugway** 93.20 49 *e*P P 07 20 19.7 -0.6
DUG pmax pmax
comp=Z,12nm,1.2s,mb4.8
DUG **Dugway** 93.20 49 *e*P P 07 20 19.6 -0.6
comp=Z,12nm,1.2s,mb4.8
HLID **Hailey** 93.38 45 *e*P P 07 20 20.7 -0.4
HLID *e*pP pP 07 21 19.2 +0.3
NLU **North Lily Min** 93.64 49 *e*P P 07 20 21.9 -0.3
HVU **Hansel Valley** 93.82 47 *e*P P 07 20 22.3 -0.8
MPU **Maple Canyon** 93.97 49 *e*P P 07 20 23.7 -0.1
comp=Z,11nm,1.1s,mb4.8
TMUT **Trail Mountain** 94.02 50 *e*P P 07 20 24.1 +0.1
TMUT *e*pP pP 07 21 23.9 +1.9
CTU **Camp Tracy** 94.14 48 *e*P P 07 20 24.3 -0.3
CTU *e*pP pP 07 21 25.1 +2.6
SRU **San Rafael** 94.45 50 *e*P P 07 20 25.6 -0.4
SRU pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SRU **San Rafael** 94.45 50 *e*P P 07 20 25.6 -0.4
comp=Z,10nm,1.0s,mb4.8
HWUT **Hardware Ranch** 94.60 48 *e*P P 07 20 25.8 -0.9
comp=Z,11nm,0.9s,mb4.4
BSMT **Bassoo Peak** 94.80 41 *e*P P 07 20 27.1 -0.5
MCMT **McKenzie Canyo** 94.90 44 *e*P P 07 20 27.6 -0.4
CHMT **Chamberlain Mo** 95.41 42 *e*P P 07 20 29.4 -1.0
Y22C **IRIS PASSCAL I** 95.48 56 ⇑P P 07 20 29.2 -1.5
baz=96
LRM **Limekiln Ridge** 95.52 43 *e*P P 07 20 30.4 -0.4
PV01 **Paradox Valley** 95.55 52 *e*P P 07 20 30.8 -0.2
LPM **Los Pinos Moun** 95.78 56 *e*P P 07 20 31.4 -0.6
QLMT **Earthquake Lak** 95.84 45 *e*P P 07 20 31.6 -0.8
MNTX **Cornudas Mount** 95.94 59 *e*P P 07 20 32.5 -0.3
comp=Z,18nm,1.4s,mb5.1
MNTX *e*pP pP 07 21 29.9 -0.9
BOZ **Bozeman (W)** 96.00 44 *e*P P 07 20 32.9 -0.1
BOZ pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
BOZ **Bozeman (W)** 96.00 44 *e*P P 07 20 32.9 -0.2
comp=Z,9.4nm,1.2s,mb4.9
ANMO **Albuquerque** 96.12 55 *e*P P 07 20 33.7 +0.1
ANMO **Albuquerque** 96.12 55 *e*P P 07 20 33.4 -0.2
comp=Z,8.5nm,1.2s,mb4.8
HRY **Holter Researc** 96.25 43 *e*P P 07 20 33.6 -0.5
BW06 **Boulder Array** 96.40 47 *e*P P 07 20 34.2 -0.7
PDAR **Pinedale Array** 96.40 47 P P 07 20 34.1 -0.7
comp=Z,3.8nm,1.1s,mb4.5,baz=245,slow=3.1,SNR=16
PDAR PP PP 07 24 30.9 -0.9
comp=Z,0.3nm,0.8s,baz=242,slow=3.2,SNR=3.9
GDL2 **Guadalupe Moun** 96.92 58 *e*P P 07 20 36.6 -0.6
WMQ **Urumqi** 96.98 314 *e*P P 07 20 39.0 +1.5
WMQ AMB AMB
comp=Z,20nm,1.0s,mb5.3
GCMT **Greycliff** 97.34 44 *e*P P 07 20 38.5 -0.5
EGMT **Eagleton** 98.02 42 *e*P P 07 20 38.7 -3.5
comp=Z,4.4nm,0.5s,mb5.0
PLCA **Paso Flores** 98.78 138 P P 07 20 46.1 +0.6
comp=Z,3.1nm,0.9s,mb4.3,baz=217,slow=12,SNR=2.6
YKA **Yellowknife Ar** 100.38 27 P Pdif 07 20 52.3 -0.3
comp=Z,4.7nm,0.9s,baz=255,slow=5.2,SNR=10
MKAR **Makanchi Array** 101.50 316 pP 07 21 54.4
comp=Z,0.6nm,0.7s,baz=85,slow=3.2,SNR=2.9
BVAR **Borovoye Array** 110.17 321 PKiKP PKiKP 07 25 35.2 -1.1
comp=Z,0.8nm,0.4s,baz=112,slow=3.1,SNR=6.7
BVAR **Borovoye Array** 110.17 321 *i* PKiKP PKiKP 07 25 35.2 -1.1
BVAR pmax pmax
comp=Z,1.0nm,0.4s
ARU **Arti** 116.97 324 *i* PKiKP PKPdf 07 25 47.4 -1.9
ARU *e* 07 27 00.6
ARU *e* 07 32 15.7
ARU *e*SP SP 07 36 21.4 +0.5
ARU *e*SS SS 07 42 47.7 -3.2
BOSA **Boshof** 121.31 217 PKP PKPdf 07 25 57.9 +0.3
comp=Z,5.4nm,1.0s,baz=137,slow=8.5,SNR=8.2
BOSA **Boshof** 121.31 217 PKiKP PKPdf 07 25 57.9 +0.2
BOSA pmax pmax
comp=Z,5.0nm,1.0s
BOSA **Boshof** 121.31 217 PKP PKPdf 07 25 57.9 +0.3
SCHQ **Schefferville** 124.65 36 PKP PKPdf 07 26 02.4 -1.7
comp=Z,1.5nm,0.6s,baz=234,slow=1.8,SNR=3.7
ARCES **ARCESS Array B 124.75 345** PKP PKPdf 07 26 01.9 -2.4
comp=Z,3.8nm,0.4s,baz=80,slow=2.1,SNR=93
ARCES pPKP pPKPdf 07 27 02.4 -2.6
comp=Z,1.9nm,0.7s,baz=76,slow=0.5,SNR=3.5
ARCES **ARCESS Array B 124.75 345** PKiKP PKPdf 07 26 01.9 -2.4
ARCES 07 27 02.4
ARCES pmax pmax
comp=Z,4.0nm,0.4s
ARCES pmax pmax
comp=N,2.0nm,0.7s
ARCES **ARCESS Array B 124.75 345** PKP PKPdf 07 26 01.9 -2.4
ARCES pPKP pPKPdf 07 27 02.4 -2.6
SJG **San Juan** 127.66 81 *e*PKiKP PKPdf 07 26 08.6 -1.2
GNI **Garni** 128.16 307 ⇑*i*PKiKP PKPdf 07 26 11.7 +0.9
KIV **Kislovodsk** 129.05 312 ⇑*i*PKiKP PKPdf 07 26 11.2 -1.3
KIV *e* 07 33 03.9
KIV *e*PS PS 07 38 09.6 -25
KIV *e*SS SS 07 45 47.2 +24
KIV pmax pmax
comp=Z,10.0nm,1.3s
OBN **Obninsk** 129.22 327 ⇑*i*PKiKP PKPdf 07 26 11.7 -1.1
OBN *e* 07 27 11.9
OBN *e*SS SS 07 45 22.2 -3.2
OBN *e*SSS 07 50 10.6

OBN				pmax	pmax		
	comp=Z,30nm,1.6s						
BDFB	**Brasilia**	**129.77 131**		PKP	PKPdf	07 26 13.0	-0.9
	comp=Z,3.1nm,0.6s,baz=77,slow=17,SNR=6.8						
BDFB	**Brasilia**	**129.77 131**		PKIKP	PKPdf	07 26 13.0	-0.8
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**130.29 338**		PKP	PKPdf	07 26 13.0	-1.8
	comp=Z,0.9nm,0.5s,baz=85,slow=1.8,SNR=14						
FINES				pPKP	pPKPdf	07 27 17.0	+1.4
	comp=Z,0.4nm,0.5s,baz=343,slow=2.0,SNR=1.8						
FINES				SKPbc	SKPbc	07 29 14.0	-1.3
	comp=Z,1.4nm,0.6s,baz=75,slow=4.9,SNR=8.1						
FINES	**FINESS Array B**	**130.29 338**		PKP	PKPdf	07 26 13.0	-1.8
FINES				pPKP	pPKPdf	07 27 17.0	+1.4
FINES				SKPbc	SKPbc	07 29 14.0	-1.3
NB2	**NORSAR Subarra**	**135.13 345**		PKPd	PKPdf	07 26 23.1	-0.8
	comp=Z,1.0nm,0.6s,baz=30,slow=1.9						
NOA	**NORSAR Array B**	**135.13 345**		PKP	PKPdf	07 26 22.6	-1.4
	comp=Z,0.9nm,0.6s,baz=30,slow=2.1,SNR=8.7						
NOA	**NORSAR Array B**	**135.13 345**		PKIKP	PKPdf	07 26 22.6	-1.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKSG				pmax	pmax		
	comp=N,1.0nm,0.5s						
AKASG	**Malin Array Be**	**135.23 325**		PKP	PKPdf	07 26 22.5	-1.6
AKASG				SKPbc	SKPbc	07 29 31.7	-0.5
	comp=Z,0.8nm,0.4s,baz=59,slow=2.0,SNR=8.6						
AKASG				SKPbc	SKPbc	07 29 31.7	-0.5
	comp=Z,0.9nm,0.5s,baz=47,slow=3.9,SNR=8.6						
AKASG	**Malin Array Be**	**135.23 325**		PKIKP	PKPdf	07 26 22.5	-1.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG				pmax	pmax		
	comp=N,1.0nm,0.5s						
AKASG	**Malin Array Be**	**135.23 325**		PKP	PKPdf	07 26 22.5	-1.6
AKASG				SKPbc	SKPbc	07 29 31.7	-0.5
BRTR	**Keskin Array B**	**136.61 308**		PKP	PKPdf	07 26 26.1	-0.6
	comp=N,1.2nm,0.7s,baz=104,slow=4.0,SNR=7.3						
BRTR	**Keskin Array B**	**136.61 308**		PKIKP	PKPdf	07 26 26.1	-0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIS	**Kishinev**	**137.25 320**		*e*PKIKP	PKPdf	07 26 25.0	-2.9
KOLS	**Kolonicke sedl**	**139.96 326**		*e*PKP	PKPdf	07 26 33.2	+0.4
CRVS	**Cervenica-Dubn**	**140.40 326**		*e*PKP	PKPdf	07 26 30.0	-3.6
PSZ	**Piszkesteto**	**141.83 326**⇑		*e*P	PKPdf	07 26 32.2	-4.0
PSZ	**Piszkesteto**	**141.83 326**⇑		*e*P	PKPdf	07 26 32.3	-3.9
DPC	**Dobruska-Polom**	**141.94 332**		*e*PKP	PKPdf	07 26 31.1	-5.3
DPC				*ex*	x	07 26 36.2	
DPC				*ep*PKP	pPKPdf	07 27 34.2	-3.0
UPC	**Upice**	**141.97 332**		*e*PKP	PKPdf	07 26 31.1	-5.3
VYHS	**Vyhne**	**142.01 328**		*e*PKP	PKPdf	07 26 33.3	-3.2
PVCC	**Panska Ves**	**142.58 333**		*e*PKP	PKPdf	07 26 32.9	-4.6
BRG	**Berggiesshubel**	**142.58 334**		*e*PKP	PKPdf	07 26 32.8	-4.7
	comp=Z,11nm,1.4s						
BRG	**Berggiesshubel**	**142.58 334**		*e*PKHKP		07 26 32.8	
BRG						07 29 53.7	
BRG				pmax	pmax		
	comp=Z,11nm,1.4s						
CLL	**Collm**	**142.62 335**⇓		*i*PKIKP	PKPdf	07 26 33.0	-4.6
	comp=Z,logA/T=1.1						
CLL				*i*		07 28 49.6	
CLL	**Collm**	**142.62 335**⇓		*i*PKPdf	PKPdf	07 26 33.0	-4.6
	comp=Z,27nm,2.0s						
CLL				*i* x	x	07 28 49.6	
CLL	**Collm**	**142.62 335**⇓		*i*P	PKPdf	07 26 33.0	-4.6
CLL				*e*		07 26 43.0	
CLL				*i*		07 28 49.6	
PRU	**Pruhonice**	**142.99 333**		*e*PKP	PKPdf	07 26 34.4	-3.8
TREC	**Trest**	**143.07 331**		*e*PKP	PKPdf	07 26 34.7	-3.7
ZST	**Bratislava**	**143.07 329**		*e*PKP	PKPdf	07 26 37.1	-1.3
TANN	**Tannenbergstha**	**143.53 335**		*e*PKPbc	PKPdf	07 26 36.3	-2.9
PKSM	**Moragy**	**143.57 325**⇑		*e*PKIKP	PKPdf	07 26 36.6	-2.7
WERD	**Werda**	**143.57 335**		*e*PKPbc	PKPdf	07 26 36.1	-3.2
GUNZ	**Gunzen**	**143.63 335**		*e*PKPbc	PKPdf	07 26 36.6	-2.8
NKC	**Novy Kostel**	**143.68 335**		*e*PKP	PKPdf	07 26 36.7	-2.8
MOX	**Moxa**	**143.69 336**		*e*PKPbc	PKPdf	07 26 36.4	-3.1
MOX	**Moxa**	**143.69 336**		*e*PKP	PKPdf	07 26 36.8	-2.7
	comp=Z,46nm,1.5s						
SOP	**Sopron**	**143.69 328**⇓		*i*PKP/D	PKPdf	07 26 37.7	-1.8
GRUS	**Gruza**	**143.74 320**		*e*PKP	PKPdf	07 26 36.9	-2.6
VAY	**Valandovo**	**143.87 315**		*e*PKP	PKPdf	07 26 36.4	-3.4
MANZ	**Manzenberg**	**144.01 335**		*e*PKPbc	PKPdf	07 26 38.2	-1.8
KHC	**Kasperske Hory**	**144.05 333**		*e*PKP	PKPdf	07 26 37.7	-2.4
DIVS	**Divcibare**	**144.06 321**⇑		PKP	PKPdf	07 26 38.1	-2.0
ROTZ	**Rotzenmuhle**	**144.14 334**		*e*PKPbc	PKPdf	07 26 38.5	-1.8
UBBA	**Unterbreizbach**	**144.15 337**		*e*PKPbc	PKPdf	07 26 37.8	-2.5
GEC2	**GERESS Array S**	**144.21 332**		*e*PKPbc	PKPdf	07 26 38.2	-2.2
GERES	**GERESS Array B**	**144.21 332**		PKP	PKPdf	07 26 37.8	-2.6
	comp=Z,8.2nm,0.7s,baz=44,slow=4.1,SNR=69						
GERES				pPKP	pPKPdf	07 27 40.1	-1.2
	comp=Z,1.8nm,0.7s,baz=46,slow=3.9,SNR=3.4						
GERES	**GERESS Array B**	**144.21 332**		PKIKP	PKPdf	07 26 37.8	-2.6
GERES						07 27 40.1	
GERES				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GERES				pmax	pmax		
	comp=N,2.0nm,0.7s						
WTSB	**Winterswijk**	**144.25 341**		*e*PKP	PKPdf	07 26 37.8	-2.6
	comp=N,22nm,1.4s						
SKO	**Skopje**	**144.29 317**		*e*PKP	PKPdf	07 26 39.9	-0.6
WET	**Wettzell**	**144.34 333**		*e*PKPbc	PKPdf	07 26 38.9	-1.7
ARSA	**Arzberg**	**144.50 329**⇑		*i*P	PKPdf	07 26 39.8	-1.1
	comp=N,43nm,1.3s,SNR=26						
BUG	**Bochum--Univer**	**144.56 340**		*e*PKPbc	PKPdf	07 26 38.7	-2.3
GRA1	**Grafenberg Arr**	**144.60 335**		*e*PKPbc	PKPdf	07 26 40.0	-1.1
GRF	**Grafenberg Arr**	**144.60 335**		*e*PKPbc	PKPdf	07 26 40.0	-1.1
MOA	**Molln**	**144.68 330**		*i* P	PKPdf	07 26 40.3	-0.9
	comp=N,79nm,1.1s,SNR=45						
KOGS	**Kog**	**144.68 327**		*e*PKPbc	PKPdf	07 26 40.0	-1.2
GROS	**Grobnik**	**145.05 328**		*e*PKPbc	PKPbc	07 26 40.9	-0.9
OHR	**Ohrid**	**145.14 316**		*e*PKP	PKPdf	07 26 41.1	-0.9
TNS	**Taunus Mts**	**145.20 338**		*e*PKPbc	PKPbc	07 26 41.6	-0.7
OBKA	**Obir**	**145.50 329**⇑		*i*P	PKPdf	07 26 42.4	-0.2
	comp=N,24nm,1.3s						
CRES	**Cresnjev**	**145.51 327**		*e*PKPbc	PKPbc	07 26 42.9	-0.3
CRES				*ep*PKPbc		07 27 41.9	
DLF	**Lyons Farm**	**145.53 356**		*e*P	PKPdf	07 26 42.1	-0.6
DCN	**Croghan**	**145.53 356**		*e*P	PKPdf	07 26 42.0	-0.7
HGN	**Heimansgroeve**	**145.56 341**		*e*PKP	PKPdf	07 26 42.2	-0.5
	comp=N,44nm,1.9s						
TOD	**Tromm**	**145.59 337**		PKP2	PKPab	07 26 42.5	-1.6
BEBN	**Eben Emael**	**145.61 341**		PKPbc	PKPbc	07 26 43.4	-0.1
KBA	**Koelnbreinsper**	**145.67 330**		*i* P	PKPdf	07 26 43.1	+0.2
	SNR=9.7						
MEM	**Membach**	**145.68 341**		PKPbc	PKPbc	07 26 42.9	-0.9
MEM				APKP		07 27 41.8	
FUR	**Furstenfeldbru**	**145.77 333**		*e*PKPbc	PKPbc	07 26 43.6	-0.4
FUR				*ep*PKPbc	pPKPbc	07 27 39.9	-3.9
ABH	**Alteburg**	**145.80 339**		PKP	PKPdf	07 26 43.2	+0.1
LJU	**Ljubljana**	**145.83 328**		*i* PKPbc	PKPbc	07 26 43.6	-0.6
LJU				*ep*PKPbc	pPKPbc	07 27 42.5	-1.5
UCC	**Uccle**	**145.99 343**		PKPbc	PKPbc	07 26 43.6	-1.0
BCLA	**Clavier**	**146.06 342**		PKPbc	PKPbc	07 26 44.5	-0.3
BCLA				E		07 27 56.2	
STU	**Stuttgart**	**146.13 336**		*e*PKPbc	PKPbc	07 26 44.3	-0.8
STU				*ep*PKPbc	pPKPbc	07 27 41.7	-3.3
STU	**Stuttgart**	**146.13 336**		*e*PKPdf	PKPdf	07 26 43.3	-0.3
PTCC	**Patocco-Chiusa**	**146.15 329**		PKP	PKPdf	07 26 43.9	+0.2
VOY	**Vojsko**	**146.15 329**		*e*PKPbc	PKPbc	07 26 44.0	-1.1
VOY				*ep*PKPbc	pPKPbc	07 27 43.5	-1.5
SNF	**Seneffe**	**146.28 343**		PKPbc	pPKPbc	07 27 45.0	-0.4
WATA	**Walderalm**	**146.28 332**⇑		*i*P	PKPdf	07 26 44.6	+0.7
	comp=N,27nm,1.3s,SNR=7.4						
FVI	**Forni Avoltri**	**146.28 330**		PKP2	PKPab	07 26 44.8	-2.0
WTTA	**Wattenberg**	**146.31 332**⇓		*i*P	PKPdf	07 26 43.5	-0.5
	comp=N,56nm,1.7s,SNR=17						
WLF	**Walferdange**	**146.45 340**		*e*PKPbc	PKPbc	07 26 45.5	-0.5
WLF				*ep*PKPbc	pPKPbc	07 27 43.1	-2.9
WLF	**Walferdange**	**146.45 340**		PKPbc	PKPbc	07 26 45.9	-0.1
WLF				APKP		07 27 45.0	
WLF				E		07 27 58.1	
WLF	**Walferdange**	**146.45 340**		*e*PKPdf	PKPdf	07 26 44.7	+0.5
LANF	**Langenberg**	**146.47 338**		PKP	PKPdf	07 26 45.6	+1.4
MOTA	**Moosalm**	**146.48 333**⇓		*i*P	PKPdf	07 26 45.3	+1.1
	comp=N,37nm,1.2s,SNR=17						
GIVF	**Givet**	**146.48 342**⇑		*i*PKP1	PKPbc	07 26 45.2	-0.9
	comp=N,46nm,0.8s						
SQTA	**Sankt Quirin**	**146.53 332**⇑		*i*P	PKPdf	07 26 45.6	+1.3
	comp=N,23nm,1.0s,SNR=11						
DOU	**Dourbes**	**146.56 342**		PKPbc	PKPbc	07 26 45.5	-0.8
DOU				APKP		07 27 44.5	
DOU				E		07 27 57.4	
BAIF	**Baives**	**146.70 342**⇑		*i*PKP1	PKPbc	07 26 45.9	-0.8
	comp=N,35nm,0.7s						
BFO	**Black Forest**	**146.82 336**		*e*PKPbc	PKPbc	07 26 45.9	-1.1
DAVA	**Damuels**	**147.05 334**⇑		*i*P	PKPdf	07 26 47.1	+1.9
	comp=N,26nm,1.4s,SNR=6.9						
WLS	**Welschbruch**	**147.11 338**		PKP	PKPdf	07 26 46.7	+1.4
CDF	**Champ du Feu**	**147.14 338**⇑		*i*PKP1	PKPbc	07 26 47.1	-0.8
	comp=N,47nm,0.9s						
CTI	**Castel Tesino**	**147.22 331**		PKP2	PKPab	07 26 47.5	-3.0
FELD	**Feldberg im Sc**	**147.32 336**		PKP	PKPdf	07 26 47.3	+1.6
ECH	**Echery**	**147.35 338**		PKP	PKPdf	07 26 47.3	+1.6
BRMO	**Bormio**	**147.47 332**		PKP	PKPbc	07 26 48.5	-0.3
MOF	**Molkenrain**	**147.66 337**		PKP	PKPbc	07 26 48.4	-0.9
THEF	**They Montfort**	**147.75 339**		PKP	PKPbc	07 26 48.4	-1.2
HINF	**Hinteralfeld**	**147.80 337**⇑		*i*PKP1	PKPbc	07 26 48.6	-1.1
	comp=N,12nm,0.7s						
HAU	**Haudompre**	**147.82 338**⇑		*i*PKP1	PKPbc	07 26 48.8	-0.9
	comp=N,21nm,0.6s						
MEZF	**Maizieres J'vi**	**147.82 340**⇑		*i*PKP1	PKPbc	07 26 49.3	-0.4
	comp=N,78nm,0.9s						
TUE	**Stuetta**	**147.91 333**		*i* PKPu	PKPbc	07 26 49.5	-0.5
RGNG	**Rignano Grg**	**148.10 321**		PKP	PKPbc	07 26 49.8	-0.7
LOMF	**Lomont**	**148.20 337**		PKP	PKPbc	07 26 49.7	-1.0
CING	**Cingoli**	**148.35 326**		*i* PKPu	PKPbc	07 26 51.0	-0.1
SFI	**Santa Sofia**	**148.69 328**		PKP2	PKPbc	07 26 52.2	+0.2
MRLC	**Muro Lucano**	**148.71 320**		PKP	PKPdf	07 26 51.8	+3.9
ZCCA	**Zocca**	**148.79 329**		PKP	PKPdf	07 26 48.8	+0.7
CDCA	**Citt' di Caste**	**148.80 327**		PKP	PKPbc	07 26 52.3	0.0
SEI	**Scarperia**	**148.82 328**		PKP	PKPbc	07 26 52.9	+0.6
ASS	**Assisi**	**148.86 326**		PKP2	PKPbc	07 26 51.7	-0.7
FNVD	**Fontana Vidola**	**148.86 329**		PKP	PKPbc	07 26 52.7	+0.3
INTR	**Introdacqua**	**148.87 323**		PKP	PKPdf	07 26 46.5	-1.7
RNI2	**Rionero Sannit**	**148.92 322**		PKP	PKPbc	07 26 53.2	+0.7
AQU	**L'Aquila**	**148.93 324**		*e*PKPbc	PKPbc	07 26 52.5	-0.1
AQU				*ep*PKPdf	pPKPdf	07 27 49.4	+0.2
GSCL	**Gusciola**	**148.98 330**		PKP	PKPbc	07 26 51.7	-1.0
FLN	**La Foliniere**	**149.09 347**⇑		*i*PKP1	PKPbc	07 26 51.7	-1.3
	comp=N,50nm,0.8s						
CABF	**La Chapelle**	**149.09 337**⇑		*i*PKP1	PKPbc	07 26 52.6	-0.4
	comp=N,40nm,0.7s						
VVLD	**Villa Vallelon**	**149.12 323**		PKP	PKPbc	07 26 52.1	-0.9
ORO	**Oropa**	**149.16 334**		PKHKP	PKPbc	07 26 51.9	-1.2
LDF	**La Druitiere**	**149.16 346**⇑		*i*PKP1	PKPbc	07 26 51.9	-1.3
	comp=N,33nm,1.0s						
CSNT	**Castellina Chi**	**149.28 328**		*i* PKPr	PKPbc	07 26 51.8	-1.6
LOR	**Lormes**	**149.29 340**⇑		*i*PKP1	PKPbc	07 26 52.6	-0.9
	comp=N,38nm,0.8s						
PII	**Pisa**	**149.48 329**		PKHKP	PKPbc	07 26 51.9	-2.0
MTCE	**Montecelio**	**149.51 324**		*i* PKPu	PKPbc	07 26 52.8	-1.2
GRR	**Gorron**	**149.52 347**⇑		*i*PKP1	PKPbc	07 26 52.9	-1.1
SSF	**Saint Saulge**	**149.59 341**⇑		*i*PKP1	PKPbc	07 26 53.4	-0.8
	comp=N,46nm,0.8s						
HYF	**Humbligny**	**149.67 342**		*e*PKP1	PKPbc	07 26 53.9	-0.5
SOI	**Samo**	**149.84 315**		*i* PKP2	PKPbc	07 26 54.7	-0.1
SOI	**Samo**	**149.84 315**		*i* PKPu	PKPbc	07 26 54.7	-0.1
SMF	**Signal de Mont**	**149.85 340**		*e*PKP1	PKPbc	07 26 53.7	-1.1
	comp=N,37nm,1.0s						
AVF	**Avril sur Loir**	**149.88 340**⇑		*i*PKP1	PKPbc	07 26 53.5	-1.4
	comp=N,37nm,1.2s						
SGMF	**Saint Gilles**	**149.98 349**		*e*PKP1	PKPbc	07 26 53.8	-1.3
ROSF	**Rostrenen**	**150.03 350**		*e*PKP1	PKPbc	07 26 53.8	-1.4
	comp=N,19nm,0.8s						
BNI	**Bardonecchia**	**150.16 335**		*e*PKPdf	PKPdf	07 26 50.6	+0.3
BNI				*e*PKPbc	PKPbc	07 26 55.0	-0.6
BGF	**Bois d'Agland**	**150.24 341**⇑		*i*PKP1	PKPbc	07 26 54.8	-1.0
	comp=N,23nm,0.7s						
MBDF	**Montbardon**	**150.39 334**		*e*PKP1	PKPbc	07 26 55.2	-0.9
	comp=N,9.7nm,0.7s						
QUIF	**Quistinic**	**150.42 350**		*e*PKP1	PKPbc	07 26 55.0	-1.2
PLDF	**La Plantade**	**150.51 339**		PKP	PKPbc	07 26 55.5	-0.9
ORIF	**Oris-en-Rattie**	**150.59 336**⇑		*i*PKP1	PKPbc	07 26 55.9	-0.7
	comp=N,18nm,0.5s						
TCF	**Toulx Ste Croi**	**150.68 341**⇑		*i*PKP1	PKPbc	07 26 55.8	-1.0
	comp=N,24nm,0.8s						
SBF	**Sospel**	**150.81 332**		*e*PKP1	PKPbc	07 26 55.8	-1.3
	comp=N,36nm,0.7s						
PYM	**Petit Puy Mans**	**150.91 340**		PKP	PKPbc	07 26 56.3	-1.0
PGF	**Pioggiola**	**151.10 329**⇑		*i*PKP1	PKPbc	07 26 56.9	-0.9
	comp=N,54nm,0.6s						
VIVF	**Saint-Julien-l**	**151.11 337**⇑		*i*PKP1	PKPbc	07 26 57.0	-0.8
	comp=N,15nm,0.8s						
LBL	**Lubilhac**	**151.29 339**		PKP	PKPbc	07 26 58.5	+0.3
FRF	**La Foret Royal**	**151.39 333**		*e*PKP1	PKPbc	07 26 57.3	-1.1
	comp=N,10nm,0.6s						
SMRF	**Simiane la Rot**	**151.50 335**		*e*PKP1	PKPbc	07 26 58.1	-0.6
LMR	**La Mourre**	**151.63 333**		*e*PKP1	PKPbc	07 26 58.2	-0.8
	comp=N,26nm,0.8s						
RJF	**Les Rejaudoux**	**151.77 341**⇑		*i*PKP1	PKPbc	07 26 58.3	-1.0
	comp=N,7.6nm,0.7s						
CAF	**Calviac**	**151.94 340**		*e*PKP1	PKPbc	07 26 58.8	-0.9
	comp=N,4.2nm,0.5s						
LFF	**La Frestale**	**152.34 342**		*e*PKP1	PKPbc	07 26 59.6	-1.0
MTLF	**Montolieu**	**153.30 339**		*e*PKP1	PKPbc	07 27 01.2	-1.5
ETSF	**Etsaut**	**154.58 342**		*e*PKP1	PKPbc	07 27 07.1	+1.7
	comp=N,1.6nm,0.4s						
KEST	**Kesra**	**155.59 317**		PKPab	PKPab	07 27 26.7	+1.3
	comp=N,4.0nm,0.9s,baz=299,slow=2.2,SNR=6.6						
ESDC	**Sonseca Array**	**158.49 346**		PKPab	PKPab	07 27 37.2	-0.7
	comp=N,0.4nm,0.5s,baz=0.0,slow=1.8,SNR=4.7						
DBIC	**Dimbokro**	**166.54 206**		PKP	PKPdf	07 27 07.3	-2.4
	comp=N,5.6nm,1.0s,baz=138,slow=5.1,SNR=3.2						
DBIC	**Dimbokro**	**166.54 206**		PKIKP	PKPdf	07 27 07.3	-2.4
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TOA0	**Torodi Ar. Sit**	**166.72 246**		*e*PKPdf	PKPdf	07 27 09.2	-0.6
TOA0				*ep*PKPdf	pPKPdf	07 28 05.5	-5.5
TORD	**Torodi Ar. Bea**	**166.72 246**		PKP	PKPdf	07 27 09.1	-0.8
	comp=Z,8.6nm,1.1s,baz=345,slow=0.6,SNR=24						
TORD				PKPab	PKPab	07 28 09.1	-5.0
	comp=Z,2.6nm,1.0s,baz=117,slow=2.9,SNR=5.9						
TORD				pPKPab	pPKPab	07 29 09.9	-2.4
	comp=Z,3.2nm,1.1s,baz=94,slow=4.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**166.72 246**		PKP	PKPdf	07 27 09.1	-0.8
TORD				PKPab	PKPab	07 28 09.1	-5.0
TORD				pPKPab	pPKPab	07 29 09.9	-2.4

*ISCJB **27** 07:24:60.0±0.6, 4937N±003×685E±004, h0km, Error ellipse: s-maj=4.5km s-min=3.3km az=98.8*
*LDG **27** 07:25:01.9±0.1, 4939N×688E, h1km, Md2.2/3, Ml2.4/8, Error ellipse: s-maj=2.2km s-min=1.8km az=30.0, Suspected Mining induced.*
*BGR **27** 07:25:01.6±0.5, 4938N×688E, h1km, ML1.4/3, Error ellipse: s-maj=8.9km s-min=4.4km az=34.0*

ISC 27 07:25:01.3±0.6, 4938N±003×686E±004, h0km, n11, σ0§55/18, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WLF	**Walferdange**	**0.54**	**302**	*e*Pg	**Pg**	**07 25 13.0**	**+1.2**
	SNR=1.9						
WLF				*e*Sg	**Sg**	**07 25 18.5**	**-0.2**
	SNR=3.0						
CDF	**Champ du Feu**	**1.00**	**164**	*e*Pg	**Pg**	**07 25 20.9**	**+0.4**
CDF				*e*Sg	**Sg**	**07 25 34.0**	**+0.5**
	7.9nm,0.2s						
TNS	**Taunus Mts**	**1.33**	**50**	*e*Sg	**Sg**	**07 25 43.5**	**-0.6**
	SNR=3.1						
HAU	**Haudompre**	**1.41**	**194**	*e*Pg	**Pg**	**07 25 28.6**	**+0.2**
HAU				*e*Sg	**Sg**	**07 25 47.1**	**+0.4**
	6.2nm,0.2s						
BFO	**Black Forest**	**1.43**	**137**	*e*Pg	**Pg**	**07 25 28.7**	**0.0**
	SNR=3.0						
BFO				*e*Sg	**Sg**	**07 25 46.3**	**-0.8**
	SNR=7.1						
MEZF	**Maizieres J'vi**	**1.48**	**234**	*e*Sg	**Sg**	**07 25 48.5**	**-0.3**
	4.8nm,0.4s						
GIVF	**Givet**	**1.51**	**300**	*e*Pg	**Pg**	**07 25 30.4**	**+0.2**
GIVF				*e*Sg	**Sg**	**07 25 49.8**	**0.0**
	4.6nm,0.3s						
HINF	**Hinteralfeld**	**1.56**	**180**	*e*Pg	**Pg**	**07 25 31.2**	**0.0**
HINF				*e*Sg	**Sg**	**07 25 51.3**	**-0.1**
	16nm,0.2s						
BAIF	**Baives**	**1.85**	**293**	*e*Pg	**Pg**	**07 25 37.4**	**+0.6**
BAIF				*e*Sg	**Sg**	**07 25 59.9**	**-0.9**
	1.7nm,0.2s						
LOR	**Lormes**	**2.91**	**225**	*e*Sg	**Sg**	**07 26 33.9**	**-0.8**
	1.6nm,0.3s						
GEC2	**GERESS Array S**	**4.53**	**94**	*e*Pn	**Pn**	**07 26 11.5**	**+0.4**
	SNR=3.7						

*NEIC **27** 07:26:07.3, 3868N×2128E, h5km, MD3.2(ATH), After ATH.*
*CSEM **27** 07:26:07.5±0.2, 3870N×2128E, h18km±5km, MD3.2, Error ellipse: s-maj=4.4km s-min=3.9km az=146.0*

*THE **27** 07:26:07.9, 3872N×2128E, h9km*
*ATH **27** 07:26:07.2, 3868N×2128E, h5km, MD3.2/5*
*ISCJB **27** 07:26:08.1±0.6, 3868N±003×2129E±004, h23km±13km, Error ellipse: s-maj=6.1km s-min=5.2km az=94.3*

ISC 27 07:26:07.7±0.6, 3870N±003×2128E±004, h13km±11km, n9, σ0§92/16, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.47**	**62**	*e*PB	**Pg**	**07 26 16.0**	**-1.0**
EVR				*e*SB	**Sg**	**07 26 23.8**	**+0.6**
LKD	**Levkas**	**0.49**	**271**	*e*Pg	**Pg**	**07 26 16.8**	**-0.6**
LKD				*e*Sg	**Sg**	**07 26 24.9**	**+1.0**
RLS	**Riolos of Patr**	**0.66**	**167**⇑	*i*PG	**Pg**	**07 26 19.4**	**-1.1**
RLS				*e*SB	**Sg**	**07 26 29.9**	**+0.7**
VLS	**Valsamata**	**0.75**	**226**	*e*PB	**Pg**	**07 26 20.6**	**-1.7**
VLS				*e*SB	**Sg**	**07 26 32.8**	**+0.6**
AGG	**Agios Georgios**	**0.88**	**68**	*e*Pg	**Pg**	**07 26 23.9**	**-0.9**
AGG				*e*Sg	**Sg**	**07 26 37.4**	**+1.1**
JAN	**Janina**	**1.01**	**341**	*e*PN	**Pn**	**07 26 27.3**	**-0.4**
MEV	**Metsovon**	**1.08**	**358**	*e*Pg	**Pg**	**07 26 28.5**	**-0.1**
MEV				*e*Sg	**Sg**	**07 26 42.9**	**+0.1**
IGT	**Igoumenitsa**	**1.11**	**319**	*e*Pg	**Pg**	**07 26 28.3**	**-0.9**
IGT				*e*Sg	**Sg**	**07 26 44.7**	**+1.1**
ITM	**Ithomi**	**1.60**	**161**	*e*PB	**Pb**	**07 26 38.6**	**+1.4**

*NNC **27** 07:34:18.6±7.8, 3871N×7179E, h49km±327km, mb3.5, mpv3.1, Error ellipse: s-maj=70.3km s-min=40.6km az=17.0*
*ISCJB **27** 07:34:23.4±1.0, 3917N±008×724E±0.1, h33km, mb3.2/4, MS3.0/1, Error ellipse: s-maj=12.6km s-min=10.9km az=73.9*
*IDC **27** 07:34:29.6±7.5, 3949N×7252E, h70km±67km, mb3.0/4, mb1 3.3/8, mb1mx3.1/25, mbtmp3.5/8, ML3.4/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/9, Error ellipse: s-maj=58.6km s-min=24.2km az=8.0*

ISC 27 07:34:27.2±2.8, 393N±02×725E±01, h52km±25km, n18, σ1§01/20, mb3.2/4, MS3.0/1, 2C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.98**	**17**	P	**Pn**	**07 35 12.9**	**+0.8**
	SNR=53						
KZA	**Kyzart**	**3.48**	**36**	P	**Pn**	**07 35 18.1**	**-0.7**
	SNR=14						
EKS2	**Erkin-Say**	**3.51**	**15**	P	**Pn**	**07 35 20.6**	**+1.4**
	SNR=5.5

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.27**	**353**	P	Pn	08 16 06.4	+0.9
	0.4nm,0.3s,baz=170,slow=7.3,SNR=16						
CPUP	**Villa Florida**	**9.34**	**109**	P	Pn	08 16 33.2	+1.0
	0.1nm,0.3s,baz=266,slow=13,SNR=2.4						
PLCA	**Paso Flores**	**17.39**	**189**	P	P	08 18 08.9	-0.3
	0.1nm,0.3s,baz=5.6,slow=7.6,SNR=4.2						
BDFB	**Brasilia**	**19.65**	**70**	P	P	08 18 33.5	-0.1
	1.3nm,0.3s,baz=247,slow=9.5,SNR=25						
TORD	**Torodi Ar. Bea**	**76.53**	**69**	P	P	08 25 48.0	+0.9
	0.5nm,0.5s,baz=258,slow=5.0,SNR=12						

IDC 27 08:22:28.8±1.4, 1164N×9218E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/20, mbtmp3.7/7, Error ellipse: s-maj=106.1km s-min=18.9km az=53.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.02**	**348**	P	P	08 29 31.9	+0.3
	0.7nm,0.7s,baz=159,slow=7.3,SNR=7.1						
WRA	**Warramunga Arr**	**52.04**	**127**	P	P	08 31 40.2	+0.1
	0.8nm,0.5s,baz=300,slow=10.0,SNR=24						
WB2	**Warramunga Arr**	**52.05**	**127**	*e*P	P	08 31 40.4	+0.2
ASAR	**Alice Springs**	**53.82**	**131**	P	P	08 31 53.3	0.0
	0.2nm,0.4s,baz=309,slow=6.9,SNR=6.2						
STKA	**Stephens Creek**	**64.10**	**134**	P	P	08 33 05.9	+1.2
	1.1nm,0.8s,baz=319,slow=10,SNR=5.3						
ARCES	**ARCESS Array B**	**71.08**	**340**	P	P	08 33 48.5	-0.3
	0.9nm,0.8s,baz=83,slow=7.4,SNR=3.9						
GERES	**GERESS Array B**	**73.75**	**318**	P	P	08 34 05.0	+0.3
	0.5nm,0.6s,baz=74,slow=5.7,SNR=4.4						
NB2	**NORSAR Subarra**	**75.52**	**330**	P	P	08 34 14.9	-0.1
	comp=Z,0.6nm,0.7s,baz=92,slow=5.9						
NOA	**NORSAR Array B**	**75.52**	**330**	P	P	08 34 14.9	-0.1
	comp=Z,0.5nm,0.8s,baz=96,slow=5.0,SNR=4.4						

ISCJB 27 08:33:38.3±1.1, 1903N±006×6468W±003, h26km±6km, Error ellipse: s-maj=10.7km s-min=5.2km az=175.1
RSPR 27 08:33:39.2, 1896N×6456W, h48km±1km, MD3.6/16, MD3.6/16
NEIC 27 08:33:39.2, 1896N×6456W, h48km, MD3.6(RSPR), After RSPR.
ISC 27 08:33:38.3±1.1, 1902N±006×6473W±003, h15km±5km, n22, σ0§61/39, 16C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.48**	**128**	↑*e*P	**Pg**	**08 33 47.7**	**-0.1**
ABV	**Anegada**	**0.48**	**128**	*e*S	**Sg**	**08 33 54.1**	**-0.1**
TBVI	**Tortola**	**0.61**	**170**	↑*i*P	**Pg**	**08 33 50.1**	**-0.2**
TBVI				*e*S	**Sg**	**08 33 58.6**	**+0.1**
STVI	**Saint Thomas**	**0.70**	**198**	↑*i*P	**Pg**	**08 33 52.3**	**+0.2**
STVI				*e*S	**Sg**	**08 34 02.5**	**+1.2**
CULB	**Culebra**	**0.92**	**216**	↑*e*P	**Pb**	**08 33 55.4**	**-0.6**
CULB	**Culebra**	**0.92**	**216**	*e*S	**Sb**	**08 34 08.1**	**0.0**
MTP	**Monte Pirata**	**1.21**	**220**	↑*e*P	**Pn**	**08 34 00.2**	**-0.5**
MTP				*e*S	**Sb**	**08 34 15.5**	**-0.9**
CBYP	**Canovanas**	**1.31**	**235**	↑*e*P	**Pn**	**08 34 01.4**	**-0.6**
CBYP				*e*S	**Sb**	**08 34 18.5**	**-0.7**
HUMP	**Col San Antoni**	**1.38**	**231**	↓*i*P	**Pn**	**08 34 02.5**	**-0.6**
HUMP				*e*S	**Sn**	**08 34 20.4**	**-0.7**
CPD	**Cerro la Pandu**	**1.50**	**229**	↑*e*P	**Pn**	**08 34 04.3**	**-0.4**
CPD				*e*S	**Sn**	**08 34 23.7**	**-0.2**
SJG	**San Juan**	**1.63**	**236**	↑*e*P	**Pn**	**08 34 06.0**	**-0.5**
SJG				*e*S	**Sn**	**08 34 26.7**	**-0.5**
SABT	**Saba**	**1.98**	**134**	*e*P	**Pn**	**08 34 12.2**	**+0.8**
SABT				*e*S	**Sn**	**08 34 39.1**	**+3.1**
CELP	**Cerrillos**	**1.99**	**242**	↑*e*P	**Pn**	**08 34 11.4**	**-0.1**
CELP				*e*S	**Sn**	**08 34 36.8**	**+0.5**
OBIP	**Obispado Ponce**	**2.03**	**242**	↑*e*P	**Pn**	**08 34 12.1**	**0.0**
OBIP				*e*S	**Sn**	**08 34 37.1**	**-0.1**
AOPR	**Arecibo Observ**	**2.04**	**251**	↑*e*P	**Pn**	**08 34 12.1**	**-0.1**
AOPR				*e*S	**Sn**	**08 34 37.9**	**+0.6**
ICM	**Isla Caja Muer**	**2.04**	**237**	↑*e*P	**Pn**	**08 34 12.3**	**+0.1**
ICM				*e*S	**Sn**	**08 34 37.5**	**+0.1**
LRS	**Lares**	**2.13**	**250**	↑*e*P	**Pn**	**08 34 13.2**	**-0.2**
LRS				*e*S	**Sn**	**08 34 40.1**	**+0.4**
AGPR	**Aguadilla, PR**	**2.33**	**257**	↑*e*P	**Pn**	**08 34 16.3**	**+0.2**
AGPR				*e*S	**Sn**	**08 34 45.2**	**+0.8**
LSP	**Las Mesas**	**2.39**	**250**	↑*e*P	**Pn**	**08 34 17.0**	**0.0**
LSP				*e*S	**Sn**	**08 34 46.6**	**+0.6**
CRPR	**Cabo Rojo, PR**	**2.48**	**246**	↑*e*P	**Pn**	**08 34 18.4**	**+0.2**
CRPR				*e*S	**Sn**	**08 34 48.9**	**+0.8**
LZG	**Guadaloupe-1**	**4.02**	**135**	*e*P	**Pn**	**08 34 40.6**	**+1.2**
LZG				*e*S	**Sn**	**08 35 25.3**	**-0.9**
DEG	**La Desirade**	**4.42**	**127**	*e*P	**Pn**	**08 34 44.1**	**-0.8**

IDC 27 08:44:17.1±4.2, 3164N×13652E, h291km±74km, mb2.7/3, mb1 3.0/6, mb1mx2.8/21, mbtmp3.6/6, Error ellipse: s-maj=105.2km s-min=16.3km az=65.0
JMA 27 08:44:18.5±0.4, 3216N×13801E, h407km, M3.6
ISCJB 27 08:44:19.4±0.6, 3221N±005×1382E±0.1, h395km±8km, mb2.8/3, Error ellipse: s-maj=14.5km s-min=8.1km az=150.6
ISC 27 08:44:20.8±0.6, 3229N±007×1382E±01, h389km±9km, n20, σ1§31/30, mb2.8/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.57**	**58**	P	**Pn**	**08 45 14.8**	**+1.7**
	18nm,0.3s,baz=83,slow=10,SNR=15						
JHJ				S	**S**	**08 45 59.8**	**+4.4**
	26nm,0.3s,baz=264,slow=23,SNR=7.9						
JHJ2	**Mitsune**	**1.59**	**58**	P	**Pn**	**08 45 14.4**	**+1.1**
JWZ	**Kozaga**	**2.44**	**301**	P	**Pn**	**08 45 17.2**	**-1.5**
JOD2	**Odawara 2**	**3.06**	**14**	P	**Pn**	**08 45 25.8**	**+2.2**
BSO3	**Boso 3**	**3.16**	**37**	P	**Pn**	**08 45 24.5**	**0.0**
BSO3				S	**S**	**08 46 15.7**	**-0.2**
JYN	**Shimob**	**3.21**	**5**	P	**Pn**	**08 45 26.9**	**+2.0**
BSO1	**Boso 1**	**3.31**	**44**	P	**Pn**	**08 45 25.8**	**+0.1**
BSO1				S	**S**	**08 46 16.5**	**-1.7**
JAI	**Aioi**	**3.49**	**296**	P	**Pn**	**08 45 25.4**	**-2.0**
JRY	**Ryogami san**	**3.77**	**9**	P	**Pn**	**08 45 31.4**	**+1.5**
JRY				S	**S**	**08 46 25.6**	**-0.2**
JWT	**Wachi**	**3.79**	**323**	P	**Pn**	**08 45 29.7**	**-0.5**
MJAR	**Matsushiro Arr**	**4.25**	**0**	P	**Pn**	**08 45 35.5**	**+0.9**
	0.9nm,0.3s,baz=186,slow=9.3,SNR=18						
MJAR				S	**S**	**08 46 36.1**	**+1.8**
	0.4nm,0.3s,baz=116,slow=20,SNR=4.6						
MAT	**Matsushiro**	**4.25**	**0**	P	**Pn**	**08 45 35.1**	**+0.6**
MAT				S	**S**	**08 46 34.1**	**-0.2**
MAT	**Matsushiro**	**4.25**	**0**	P	**Pn**	**08 45 35.3**	**+0.8**
JAG	**Ashikaga**	**4.25**	**14**	P	**Pn**	**08 45 34.5**	**-0.1**
JAG				S	**S**	**08 46 32.4**	**-2.1**
JHO	**Hitachi**	**4.74**	**24**	P	**Pn**	**08 45 40.1**	**+0.6**
JHO				S	**S**	**08 46 41.4**	**-1.9**
CBIJ	**Chichi jima**	**6.22**	**145**	P	**Pn**	**08 45 53.9**	**-1.6**
	4.9nm,0.3s,baz=282,slow=20,SNR=8.5						
CBIJ				S	**S**	**08 47 07.1**	**-5.4**
	21nm,0.3s,baz=269,slow=22,SNR=16						
JMK	**Ichinoseki**	**7.09**	**19**	P	**Pn**	**08 46 06.3**	**+1.2**
JMK				S	**S**	**08 47 27.3**	**-3.0**
MKAR	**Makanchi Array**	**44.57**	**306**	P	**P**	**08 51 55.1**	**-0.9**
	0.3nm,0.4s,mb2.9,baz=84,slow=7.3,SNR=4.6						
WRA	**Warramunga Arr**	**52.06**	**185**	P	**P**	**08 52 51.5**	**-1.0**
	0.2nm,0.3s,mb2.8,baz=0.1,slow=7.6,SNR=13						
ASAR	**Alice Springs**	**55.79**	**185**	P	**P**	**08 53 20.1**	**+1.0**
	0.3nm,0.9s,mb2.6,baz=11,slow=11,SNR=3.5						

ISCJB 27 09:40:29.3±1.5, 3771N±006×2042E±009, h4km, Error ellipse: s-maj=11.5km s-min=7.6km az=105.7
THE 27 09:40:29.4, 3770N×2030E, h3km
NEIC 27 09:40:29.8, 3775N×2043E, h4km, MD3.5(ATH), After ATH.
ATH 27 09:40:29.8, 3775N×2043E, h4km, MD3.5/4
CSEM 27 09:40:31.4±0.6, 3775N×2051E, h2km, MD3.5, Error ellipse: s-maj=11.7km s-min=6.0km az=62.0
ISC 27 09:40:29.2±1.5, 3768N±006×2039E±009, h4km, n8, σ1§12/13, 1D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.52**	**18**	↓*i*PG	**Pg**	**09 40 38.3**	**-0.9**
VLS				*e*SG	**Sg**	**09 40 45.0**	**-0.9**
RLS	**Riolos of Patr**	**0.93**	**66**	*e*PG	**Pg**	**09 40 46.1**	**-1.0**
RLS				*e*SG	**Sg**	**09 40 58.5**	**-0.7**
LKD	**Levkas**	**1.04**	**11**	*e*Pg	**Pg**	**09 40 47.6**	**-1.6**
LKD				*e*Sg	**Sg**	**09 41 04.7**	**+2.0**
ITM	**Ithomi**	**1.32**	**112**	*e*PB	**Pn**	**09 40 54.6**	**+0.1**
EVR	**Evrytania**	**1.66**	**42**	*e*PB	**Pn**	**09 41 01.0**	**+1.9**
IGT	**Igoumenitsa**	**1.85**	**359**	*e*Pb	**Pn**	**09 41 00.4**	**-1.3**
IGT				*e*Sb	**Sn**	**09 41 25.6**	**+0.2**
AGG	**Agios Georgios**	**2.03**	**48**	*e*Pn	**Pn**	**09 41 05.3**	**+1.1**
AGG				*e*Sn	**Sn**	**09 41 30.8**	**+0.8**
MEV	**Metsovon**	**2.20**	**17**	*e*Pn	**Pn**	**09 41 07.1**	**+0.6**

IDC 27 10:00:27.0±11.0, 808S×12916E, h75km±87km, mb3.4/1, mb1 3.5/3, mb1mx3.1/13, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=150.7km s-min=81.6km az=74.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.81**	**157**	P	Pn	10 03 25.6	-0.5
	0.4nm,0.3s,baz=332,slow=13,SNR=33						
WRA				S	Sn	10 05 46.8	0.0
	0.8nm,0.3s,baz=337,slow=22,SNR=10						
ASAR	**Alice Springs**	**16.15**	**164**	P	Pn	10 04 11.0	+1.7
	0.2nm,0.3s,baz=338,slow=9.8,SNR=25						
ASAR				S	S	10 07 09.7	-6.9
	0.2nm,0.3s,baz=242,slow=14,SNR=5.4						
STKA	**Stephens Creek**	**26.35**	**156**	P	P	10 05 56.0	0.0
	0.5nm,0.5s,baz=338,slow=8.5,SNR=3.7						

ISCJB 27 10:09:07.0±1.0, 3596N±006×470W±003, h87km±8km, Error ellipse: s-maj=10.2km s-min=4.6km az=3.6
CSEM 27 10:09:06.1±0.6, 3585N×476W, h67km±8km, mb3.1/7, Error ellipse: s-maj=12.4km s-min=5.6km az=9.0
NEIC 27 10:09:07.6, 3579N×467W, h69km, MG3.1(MDD), After MDD.
INMG 27 10:09:08.8±1.0, 3591N×474W, h69km±6km, ML2.1, Error ellipse: s-maj=4.6km s-min=4.2km az=10.0
MDD 27 10:09:08.4±1.1, 3584N×461W, h66km±13km, mb3.0/15, Error ellipse: s-maj=11.5km s-min=5.5km az=7.0, PRXIMO
ISC 27 10:09:07.8±1.0, 3593N±006×469W±003, h78km±10km, n43, σ1§26/78, 1C-6D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIJ	**Mijas**	**0.64**	**354**	↓P	**Pn**	**10 09 22.7**	**0.0**
	1.7nm,0.1s,SNR=18						
EMIJ				S	**Sn**	**10 09 33.3**	**-0.4**
	19nm,0.1s,SNR=28						
EJIF	**Jimena Fronter**	**0.82**	**310**	P	**Pn**	**10 09 26.7**	**+2.1**
	0.9nm,0.2s,SNR=6.4						
EJIF				S	**Sn**	**10 09 38.4**	**+1.2**
	0.8nm,0.1s,SNR=7.0						
EJIF	**Jimena Fronter**	**0.82**	**310**	P	**Pn**	**10 09 26.8**	**+2.2**
EJIF				S	**Sn**	**10 09 39.2**	**+2.0**
EJIF	**Jimena Fronter**	**0.82**	**310**	S	**Sn**	**10 09 39.2**	**+2.0**
	0.8nm,0.1s,SNR=7.0						
EGUA	**Guajares**	**1.28**	**45**	P	**Pn**	**10 09 29.9**	**-0.3**
	0.6nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**10 09 44.8**	**-2.2**
	1.2nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**1.28**	**45**	P	**Pn**	**10 09 29.9**	**-0.3**
EGUA				S	**Sn**	**10 09 45.4**	**-1.6**
ESPR	**Espera**	**1.33**	**315**	P	**Pn**	**10 09 32.4**	**+1.5**
	0.6nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**10 09 50.8**	**+2.6**
	2.3nm,0.2s,SNR=9.8						
ESPR	**Espera**	**1.33**	**315**	P	**Pn**	**10 09 28.9**	**-2.0**
ESPR				S	**Sn**	**10 09 47.3**	**-0.9**
ESPR	**Espera**	**1.33**	**315**	P	**Pn**	**10 09 28.9**	**-2.0**
	0.6nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**10 09 47.3**	**-0.9**
	2.3nm,0.2s,SNR=9.8						
EALB	**Alboran**	**1.34**	**89**	P	**Pn**	**10 09 29.4**	**-1.6**
	1.5nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**10 09 44.5**	**-4.0**
	3.9nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.34**	**89**	P	**Pn**	**10 09 29.4**	**-1.6**
EALB				S	**Sn**	**10 09 45.8**	**-2.7**
EALB	**Alboran**	**1.34**	**89**	P	**Pn**	**10 09 29.4**	**-1.6**
	1.5nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**1.62**	**38**	S	**Sn**	**10 09 54.3**	**-0.7**
	1.0nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**1.62**	**38**	S	**Sn**	**10 09 57.7**	**+2.8**
	1.0nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.66**	**12**	P	**Pn**	**10 09 36.5**	**+1.3**
	0.9nm,0.2s,SNR=7.9						
ELUQ				S	**Sn**	**10 09 56.6**	**+0.7**
	1.3nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.66**	**12**	P	**Pn**	**10 09 36.5**	**+1.3**
ELUQ				S	**Sn**	**10 09 58.6**	**+2.7**
ELUQ	**Luque**	**1.66**	**12**	P	**Pn**	**10 09 36.5**	**+1.3**
	0.9nm,0.2s,SNR=7.9						
ELUQ				S	**Sn**	**10 09 58.6**	**+2.7**
	1.3nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.74**	**56**	P	**Pn**	**10 09 36.7**	**+0.5**
	0.5nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**10 09 55.9**	**-1.9**
	0.5nm,0.1s,SNR=4.6						
EBER	**Berja**	**1.74**	**56**	P	**Pn**	**10 09 37.0**	**+0.8**
EBER				S	**Sn**	**10 09 55.9**	**-1.9**
EBER	**Berja**	**1.74**	**56**	P	**Pn**	**10 09 37.0**	**+0.8**
	0.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.24**	**2**	↓P	**Pn**	**10 09 44.0**	**+1.2**
	1.0nm,0.0s,SNR=18						
EADA				S	**Sn**	**10 10 10.2**	**+0.7**
	1.5nm,0.2s,SNR=6.5						
EADA	**Adamuz**	**2.24**	**2**	↓P	**Pn**	**10 09 44.0**	**+1.2**
EADA				S	**Sn**	**10 10 11.4**	**+1.9**
EADA	**Adamuz**	**2.24**	**2**	P	**Pn**	**10 09 44.0**	**+1.2**
	1.0nm,0.0s,SNR=18						
EADA				S	**Sn**	**10 10 11.4**	**+1.9**
	1.5nm,0.2s,SNR=6.5						
EQES	**Quesada**	**2.27**	**34**	P	**Pn**	**10 09 45.0**	**+1.7**
	0.4nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**10 10 12.4**	**+1.9**
	0.6nm,0.2s,SNR=5.7						
EQES	**Quesada**	**2.27**	**34**	P	**Pn**	**10 09 45.0**	**+1.7**
EQES				S	**Sn**	**10 10 11.4**	**+0.9**
EQES	**Quesada**	**2.27**	**34**	P	**Pn**	**10 09 45.0**	**+1.7**
	0.4nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**10 10 11.4**	**+0.9**
	0.6nm,0.2s,SNR=5.7						
EBAN	**Banos Encina**	**2.34**	**18**	P	**Pn**	**10 09 45.2**	**+0.9**
	0.7nm,0.1s,SNR=7.9						
EBAN				S	**Sn**	**10 10 12.2**	**0.0**
	0.1nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.43**	**320**	↓P	**Pn**	**10 09 45.8**	**+0.4**
	5.6nm,0.0s,SNR=18						
EMIN				S	**Sn**	**10 10 13.3**	**-0.9**
	1.8nm,0.1s,SNR=5.0						
EMIN	**Mina Concepcio**	**2.43**	**320**	P	**Pn**	**10 09 45.8**	**+0.4**
	5.6nm,0.0s,SNR=18						
EMIN				S	**Sn**	**10 10 13.3**	**-0.9**
	1.8nm,0.1s,SNR=5.0						
EGRO	**El Granado**	**2.76**	**306**	↓P	**Pn**	**10 09 49.9**	**0.0**
	3.9nm,0.1s,SNR=18						
EGRO				S	**Sn**	**10 10 20.8**	**-1.4**
	4.7nm,0.1s,SNR=11						
EGRO	**El Granado**	**2.76**	**306**	↓P	**Pn**	**10 09 49.9**	**0.0**
EGRO				S	**Sn**	**10 10 20.2**	**-2.0**
EGRO	**El Granado**	**2.76**	**306**	P	**Pn**	**10 09 49.9**	**+0.1**
	3.9nm,0.1s,SNR=18						
EGRO				S	**Sn**	**10 10 20.2**	**-2.0**
	4.7nm,0.1s,SNR=11						
EVIA	**Vianos**	**3.22**	**32**	P	**Pn**	**10 09 56.3**	**+0.3**
	1.0nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**10 10 31.7**	**-1.6**
	0.8nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**3.30**	**310**	*e*S	**Sn**	**10 10 34.0**	**-1.2**
PBEJ							
	3.7nm,0.1s						
PBEJ	**Beja**	**3.30**	**310**	*e*S	**Sn**	**10 10 34.0**	**-1.2**
	3.7nm,0.1s						
EBAD	**Badajoz**	**3.38**	**327**	↑P	**Pn**	**10 09 59.0**	**+0.8**
	2.1nm,0.1s,SNR=18						
EBAD				S	**Sn**	**10 10 36.6**	**-0.5**
	7.0nm,0.1s,SNR=12						
EBAD	**Badajoz**	**3.38**	**327**	P	**Pn**	**10 09 59.0**	**+0.8**
	2.1nm,0.1s,SNR=18						
EBAD				S	**Sn**	**10 10 36.6**	**-0.5**
	7.0nm,0.1s,SNR=12						
PTEO	**Sao Teotonio**	**3.62**	**298**	*e*S	**Sn**	**10 10 41.9**	**-1.2**
ETOB	**Tobarra**	**3.69**	**42**	P	**Pn**	**10 10 03.2**	**+0.8**
	0.3nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**10 10 44.1**	**-0.7**
	0.1nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.69**	**42**	P	**Pn**	**10 10 03.2**	**+0.7**
	0.3nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**10 10 44.1**	**-0.7**
PESTR	**Estremoz**	**3.73**	**323**	*e*P	**Pn**	**10 10 03.8**	**+0.7**
PESTR				*e*S	**Sn**	**10 10 44.9**	**-1.0**
PESTR							
	1.3nm,0.1s						
PESTR	**Estremoz**	**3.73**	**323**	*e*P	**Pn**	**10 10 03.8**	**+0.7**
PESTR				*e*S	**Sn**	**10 10 44.9**	**-1.0**
	1.3nm,0.1s						
PCBR	**Castelo Branco**	**4.49**	**331**	*e*P	**Pn**	**10 10 14.3**	**+1.0**
PCBR				*e*S	**Sn**	**10 11 03.0**	**-1.2**

MAN 27 10:19:29.6, 1434N×12390E, h36km, mb2.5, ML4.1, MS4.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.78**	**162**	↓*i*P	Pn	10 19 45.2	+1.2
PVCP				*e*S	Sn	10 19 55.3	+0.8
PVCP	**Virac**	**0.78**	**162**	*e*P	Pn	10 19 45.1	+1.1
POLP	**Polilio Island**	**1.94**	**282**	*e*P	Pn	10 20 00.9	+0.9
BALP	**Baler**	**2.65**	**302**	*e*P	Pn	10 20 10.3	+0.6

NEIC 27 10:29:01.3±4.1, 4446N×12972W, h10km, mb4.1/2, Error ellipse: s-maj=47.4km s-min=18.3km az=79.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OOW	**Octopus West**	**5.05**	**48**	P	Pn	10 30 16.9	-0.2
OTR	**Olympics--Tyee**	**5.20**	**44**	P	Pn	10 30 19.0	-0.1
BROR	**Big Rock Looko**	**5.21**	**90**	P	Pn	10 30 18.2	-1.1
TDL	**Tradedollar La**	**5.61**	**68**	P	Pn	10 30 24.0	-0.7
HDW	**Hoodsport**	**5.63**	**53**	P	Pn	10 30 24.9	-0.1
MEW	**McNeil Island**	**5.65**	**58**	P	Pn	10 30 25.8	+0.4
BKCOR	**Black Crater**	**5.75**	**89**	P	Pn	10 30 26.3	-0.5
RVC	**Mount Rainier-**	**5.97**	**63**	P	Pn	10 30 30.4	+0.7
ASR	**Mount Adams--S**	**5.97**	**71**	P	Pn	10 30 29.4	-0.4
RCM	**Mount Rainier-**	**6.08**	**64**	P	Pn	10 30 31.5	+0.2
RPW	**Rockport**	**6.93**	**52**	P	Pn	10 30 43.2	+0.3
MSO	**Missoula**	**11.30**	**72**	*e*Pn	Pn	10 31 42.4	-0.4
	1.6nm,0.8s						
MCMT	**McKenzie Canyo**	**12.03**	**82**	*e*Pn	Pn	10 31 55.5	+2.7
SRU	**San Rafael**	**15.27**	**104**	*e*P	Pn	10 32 42.8	+5.9
	11nm,0.7s						
WMOK	**Wichita Mounta**	**25.61**	**102**	*e*P	P	10 34 30.9	+0.1
	2.2nm,0.8s						

IDC 27 10:29:09.3±3.0, 950S×10792E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.5/18, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=120.3km s-min=21.6km az=50.0
ISCJB 27 10:29:10.7±1.2, 97S±01×1077E±01, h33km, mb3.5/4, Error ellipse: s-maj=18.5km s-min=14.5km az=86.1
ISC 27 10:29:13.5±1.2, 97S±01×1077E±01, h35km, n6, σ1§13/7, mb3.5/4, 1C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**3.17**	**54**	↑*i*P	**Pn**	**10 29 58.1**	**-2.7**
YOGI				*i* S	**Sn**	**10 30 38.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.30**	**118**	P	**Pn**	**10 33 36.8**	**+0.3**
	0.1nm,0.3s,baz=92,slow=18,SNR=7.6						
WRA	**Warramunga Arr**	**27.65**	**115**	P	**P**	**10 34 56.6**	**-1.2**
	0.4nm,0.5s,mb3.3,baz=286,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**28.61**	**122**	P	**P**	**10 35 07.6**	**+1.2**
	0.4nm,0.7s,mb3.3,baz=299,slow=9.2,SNR=9.9						
SONM	**Songino Array**	**57.29**	**359**	P	**P**	**10 38 58.3**	**+0.7**
	0.2nm,0.4s,mb3.5,baz=156,slow=7.9,SNR=2.9						
MKAR	**Makanchi Array**	**60.64**	**340**	P	**P**	**10 39 20.8**	**-0.1**
	0.5nm,0.5s,mb3.9,baz=147,slow=7.7,SNR=5.9						

NEIC 27 10:49:17.4, 3946N×2288E, h21km, ML3.4(ATH), After ATH.
CSEM 27 10:49:17.7±0.1, 3950N×2287E, h16km±1km, ML2.8, Error ellipse: s-maj=2.3km s-min=2.0km az=85.0
ATH 27 10:49:17.4, 3946N×2288E, h21km±1km, MD3.3/9, ML3.4
ISCJB 27 10:49:18.5±0.4, 3945N±002×2291E±004, h22km±5km, Error ellipse: s-maj=5.1km s-min=3.7km az=51.8
THE 27 10:49:18.2, 3946N×2288E, h12km, ML2.8
ISC 27 10:49:17.8±0.4, 3947N±002×2286E±003, h12km±4km, n28, σ0§70/44, 2C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.28**	**112**	*e*Pg	**Pg**	**10 49 23.2**	**-0.2**
XOR				*e*Sg	**Sg**	**10 49 27.6**	**+0.4**
NEO	**Neokhori**	**0.32**	**120**	↓*i*PB	**Pg**	**10 49 24.0**	**-0.3**
NEO				*e*SB	**Sg**	**10 49 29.1**	**+0.4**
AGG	**Agios Georgios**	**0.61**	**223**	*e*Sg	**Sg**	**10 49 38.4**	**+0.8**
AGG				*e*Sg	**Sg**	**10 49 41.6**	**+4.0**
PAIG	**Paliouri**	**0.78**	**54**	*e*Pg	**Pg**	**10 49 33.0**	**+0.2**
PAIG				*e*Sg	**Sg**	**10 49 44.5**	**+1.4**
LKR	**Lokris**	**0.82**	**173**	*e*PN	**Pg**

	1.5nm,0.4s,mb3.8							
STKA	**Stephens Creek**	**35.59**	**247**	P	**P**		**11 58 18.9**	**-0.4**
	1.6nm,0.4s,mb3.8,baz=92,slow=9.6,SNR=6.7							
AS31	**Alice Springs**	**42.74**	**259**	⇑*i*P	**P**		**11 59 16.9**	**-0.2**
ASAR	**Alice Springs**	**42.74**	**259**	P	**P**		**11 59 16.9**	**-0.3**
	1.5nm,0.4s,mb3.8,baz=96,slow=7.4,SNR=90							
ASPA	**Alice Springs**	**42.74**	**259**	⇑*i*P	**P**		**11 59 16.9**	**-0.2**
WB2	**Warramunga Arr**	**43.02**	**265**	⇑*i*P	**P**		**11 59 18.8**	**-0.5**
WRA	**Warramunga Arr**	**43.03**	**265**	P	**P**		**11 59 19.0**	**-0.4**
	1.7nm,0.3s,mb3.9,baz=93,slow=8.6,SNR=145							
KAKA	**Kakadu**	**46.78**	**274**	*e*P	**P**		**11 59 48.3**	**0.0**
	1.8nm,0.4s,mb3.9							
FITZ	**Fitzroy Crossi**	**51.46**	**265**	*e*P	**P**		**12 00 23.6**	**+0.7**
	1.7nm,0.4s,mb3.7							
FITZ	**Fitzroy Crossi**	**51.46**	**265**	P	**P**		**12 00 23.3**	**+0.3**
	1.0nm,0.4s,mb3.5,baz=90,slow=10,SNR=14							
VNDA	**Vanda**	**55.37**	**185**	P	**P**		**12 00 50.5**	**-0.2**
	0.5nm,0.9s,mb2.9,baz=350,slow=6.5,SNR=5.2							

NEIC ***27*** *12:11:00.7, 3393S×7048W, h13km, ML2.8(GUC), After GUC.*

GUC 27 12:11:00.7±0.9, 3393S×7048W, h13km±1km, MD3.7, ML2.8, 13C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCH	**Chadas Angostu**	**0.15**	**267**	⇑*i*P	Pg	12 11 04.9	+0.6
CHCH				*i* S	Sg	12 11 07.2	+0.4
CACH	**El Canelo**	**0.22**	**208**	⇓*i*P	Pg	12 11 06.0	+0.6
SJCH	**San Jose de Ma**	**0.30**	**20**	⇑*i*P	Pg	12 11 07.2	+0.3
SJCH				*i* S	Sg	12 11 12.2	+1.1
SJCH				AML	AML	12 11 12.8	
	comp=E,2μm,0.6s						
SJCH	**San Jose de Ma**	**0.30**	**20**	⇑*i*P	Pg	12 11 07.2	+0.3
SJCH				*i* S	Sg	12 11 12.2	+1.1
PCH	**Pirque**	**0.30**	**354**	⇓*i*P	Pg	12 11 07.9	+1.0
PCH				*i* S	Sg	12 11 13.0	+1.8
ANTU	**Antumapu**	**0.38**	**340**	*e*P	Pg	12 11 09.0	+0.8
ANTU				*i* S	Sg	12 11 15.0	+1.6
ANTU				AML	AML	12 11 15.7	
	comp=N,716nm,0.7s						
ANTU	**Antumapu**	**0.38**	**340**	*e*P	Pg	12 11 09.0	+0.8
ANTU				*i* S	Sg	12 11 15.0	+1.6
CICH	**Cipreses**	**0.40**	**173**	⇑*i*P	Pg	12 11 08.7	+0.1
CICH				*i* S	Sg	12 11 14.1	+0.1
FSR	**Penalolen**	**0.45**	**354**	*e*P	Pg	12 11 10.1	+0.5
FSR				*i* S	Sg	12 11 17.1	+1.6
FSR				AML	AML	12 11 17.7	
	comp=E,1μm,0.4s						
FSR	**Penalolen**	**0.45**	**354**	*e*P	Pg	12 11 10.1	+0.5
FSR				*i* S	Sg	12 11 17.1	+1.6
TACH	**Talagante**	**0.47**	**305**	*e*P	Pg	12 11 10.3	+0.3
TACH				*i* S	Sg	12 11 17.1	+0.8
LACH	**Colegio Las Am**	**0.47**	**354**	*i* S	Sg	12 11 17.4	+1.0
SAN	**Santiago**	**0.49**	**342**	*i* S	Sg	12 11 18.3	+1.3
SAN				AML	AML	12 11 19.2	
	comp=E,769nm,0.2s						
STL	**Santa Lucia**	**0.51**	**344**	⇑*i*P	Pg	12 11 10.8	+0.1
STL				*i* S	Sg	12 11 18.2	+0.8
RCDM	**Rinconada Maip**	**0.52**	**328**	*e*P	Pg	12 11 11.4	+0.6
RCDM				*i* S	Sg	12 11 18.8	+1.1
RCDM				AML	AML	12 11 19.0	
	comp=E,672nm,0.1s						
RCDM	**Rinconada Maip**	**0.52**	**328**	*e*P	Pg	12 11 11.4	+0.6
RCDM				*i* S	Sg	12 11 18.8	+1.1
CLCH	**Cerro Calan**	**0.53**	**354**	*e*P	Pg	12 11 11.7	+0.6
CLCH				*i* S	Sg	12 11 19.7	+1.6
CLCH				AML	AML	12 11 20.6	
	comp=E,1μm,0.4s						
FCH	**Farellones**	**0.62**	**15**	⇓*i*P	Pg	12 11 13.3	+0.6
FCH				*i* S	Sg	12 11 22.2	+1.4
FCH				AML	AML	12 11 22.7	
	comp=E,1μm,0.3s						
LNV	**Longovilo**	**0.78**	**267**	*e*P	Pg	12 11 15.0	-0.7
LNV				*i* S	Sg	12 11 25.4	-0.6
PEL	**Peldehue**	**0.80**	**347**	⇑*i*P	Pg	12 11 16.4	+0.2
PEL				*i* S	Sg	12 11 27.4	+0.7
PEL				AML	AML	12 11 28.8	
	comp=N,659nm,0.3s						
PEL	**Peldehue**	**0.80**	**347**	⇑*i*P	Pg	12 11 16.4	+0.2
PEL				*i* S	Sg	12 11 27.4	+0.7
SFDO	**San Fernando**	**0.82**	**213**	⇑*i*P	Pg	12 11 15.9	-0.7
LCCH	**Las Cruces**	**1.02**	**296**	⇑*i*P	Pb	12 11 19.2	-0.9
LCCH				*i* S	Sb	12 11 32.3	-1.1
NICH	**Los Niches**	**1.24**	**210**	⇓*i*P	Pn	12 11 22.8	-0.9
NICH				*i* S	Sb	12 11 39.0	-0.9
PTCH	**Petorca**	**1.70**	**347**	⇑*i*P	Pn	12 11 31.0	+1.0
PTCH				*i* S	Sn	12 11 53.4	+1.7
PTCH				AML	AML	12 11 56.6	
	comp=N,300nm,0.4s						
PTCH	**Petorca**	**1.70**	**347**	⇑*i*P	Pn	12 11 31.0	+1.0
PTCH				*i* S	Sn	12 11 53.4	+1.7
TALC	**Talca**	**1.75**	**213**	⇑*i*P	Pn	12 11 31.0	+0.2
TALC				*i* S	Sn	12 11 53.3	+0.3
TALC				AML	AML	12 11 56.2	
	comp=N,1μm,0.2s						
TALC	**Talca**	**1.75**	**213**	⇑*i*P	Pn	12 11 31.0	+0.2
TALC				*i* S	Sn	12 11 53.3	+0.3

MOS 27 12:18:57.8±0.6, 4377N×4458E, h7km, mb3.5/1, 1C-6D, Error ellipse: s-maj=21.5km s-min=10.4km az=74.2, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKR	**Terskaya**	**0.12**	**114**	⇓*i*PG	Pg	12 19 02.1	+1.7
TRKR				*i* S	Sg	12 19 08.5	+6.3
PRTR	**Priterechnaya**	**0.22**	**264**	⇓*i*PG	Pg	12 19 04.0	+1.9
PRTR				*i* S	Sg	12 19 11.8	+6.7
KMSR	**Komsomolskaya**	**0.45**	**208**	⇓*i*PG	Pg	12 19 08.7	+2.1
KMSR				*e*S	Sg	12 19 20.0	+7.5
VLKR	**Vladikavkaz**	**0.73**	**174**	⇑*i*PG	Pg	12 19 12.8	+1.0
VLKR				*i* S	Sg	12 19 26.9	+5.6
KORR	**Kora**	**0.78**	**209**	⇓*i*PG	Pg	12 19 13.9	+1.1
KORR				*i* S	Sg	12 19 29.0	+6.0
LACR	**Lac**	**0.97**	**192**	⇓*i*PG	Pg	12 19 16.5	+0.1
LACR				*i* S	Sg	12 19 33.3	+4.3
ZEI	**Tsey**	**1.12**	**207**	⇓*i*PG	Pg	12 19 18.4	-0.9
ZEI				*e*S	Sg	12 19 36.7	+2.9
DIGR	**Digorskoe uzhe**	**1.14**	**220**	*e*PG	Pg	12 19 18.8	-0.8
DIGR				*e*S	Sg	12 19 37.3	+2.9

IDC 27 12:27:32.7±7.7, 3090S×17942E, h446km±85km, mb2.9/3, mb1 3.1/4, mb1mx3.0/11, mbtmp3.9/4, Error ellipse: s-maj=87.8km s-min=42.2km az=19.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.59**	**194**	P	P	12 29 25.0	+1.5
	3.2nm,0.3s,baz=0.0,slow=9.1,SNR=26						
URZ				S	S	12 30 52.1	-2.3
	1.0nm,0.3s,baz=58,slow=23,SNR=8.7						
STKA	**Stephens Creek**	**32.20**	**258**	P	P	12 33 22.9	+0.6
	0.5nm,0.3s,baz=95,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**40.87**	**269**	P	P	12 34 34.4	+0.1
	0.4nm,0.5s,baz=107,slow=7.3,SNR=11						
WRA	**Warramunga Arr**	**41.91**	**274**	P	P	12 34 42.5	0.0
	0.7nm,0.4s,baz=111,slow=8.0,SNR=48						
FINES	**FINESS Array B**	**144.81**	**338**	PKP	PKPdf	12 46 16.1	-1.7
	0.6nm,0.3s,baz=58,slow=5.2,SNR=12						

ISCJB ***27*** *12:31:23.7±0.8, 3415N±005×243E±0.1, h10km, Error ellipse: s-maj=17.6km s-min=5.7km az=153.0*
CSEM ***27*** *12:31:25.9±0.4, 3420N×2426E, h40km, ML2.7, Error ellipse: s-maj=20.0km s-min=8.0km az=24.0*
NEIC ***27*** *12:31:26.2, 3429N×2441E, h4km, MD3.3(ATH), After ATH.*
ATH ***27*** *12:31:26.2, 3430N×2441E, h18km±8km, MD3.3/4*
HLW ***27*** *12:31:26.4, 3445N×2465E, h30km, Mb2.7*
ISC 27 12:31:25.4±1.9, 3422N±007×244E±02, h14km±21km, n8, σ0§98/10, 3C, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.66**	**339**	*e*PN	**Pg**	**12 31 38.0**	**-0.2**
GVD				*e*SN	**Sg**	**12 31 46.5**	**-0.4**
VAM	**Vamos**	**1.19**	**353**	*e*PN	**Pn**	**12 31 47.5**	**-0.2**
XRY	**Khrisi**	**1.27**	**59**	*e*PN	**Pn**	**12 31 49.0**	**+0.2**
NPS	**Neapolis**	**1.46**	**44**	*e*PN	**Pn**	**12 31 52.0**	**+0.7**
SWA2		**5.05**	**169**	⇑P	**Pn**	**12 32 42.0**	**+1.3**
SWA1		**5.08**	**167**	P	**Pn**	**12 32 42.4**	**+1.4**
SWA1				S	**Sn**	**12 33 37.7**	**-1.8**
HBRG	**Burj al 'Arab**	**5.88**	**127**	⇑P	**Pn**	**12 32 50.6**	**-1.6**
HFRF	**Wahat Farafira**	**7.82**	**153**	⇑P	**Pn**	**12 33 19.3**	**+0.4**

IDC ***27*** *12:32:24.6±2.5, 3820N×6815E, h0km, mb3.8/5, mb1 3.9/8, mb1mx3.6/24, mbtmp3.8/8, ML3.5/3, Error ellipse: s-maj=43.1km s-min=21.6km az=4.0*
NNC ***27*** *12:32:33.1±3.8, 3900N×6805E, h18km±18km, mb3.8, mpv3.3, Error ellipse: s-maj=21.2km s-min=16.9km az=163.0*
ISCJB ***27*** *12:32:34.1±1.3, 3911N±006×6812E±008, h44km±14km, mb3.7/5, Error ellipse: s-maj=12.1km s-min=9.2km az=91.3*
NEIC ***27*** *12:32:34.3±1.6, 3896N×6828E, h35km, Error ellipse: s-maj=23.1km s-min=13.2km az=184.0*
ISC 27 12:32:36.0±1.2, 3909N±007×6814E±008, h47km±12km, n34, σ1§33/47, mb3.7/5, 11C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.39**	**23**	⇓Pn	**Pn**	**12 33 41.5**	**+1.3**
	2.8nm,0.3s,baz=85,slow=37,SNR=38						
KK31				⇑Sn	**Sn**	**12 34 38.1**	**+8.1**
	4.8nm,0.3s,baz=308,slow=17,SNR=4.3						
KK31				⇓Lg		12 34 56.5	
	61nm,0.5s						
AML	**Almayashu**	**5.21**	**52**	P	**Pn**	**12 33 50.8**	**-0.5**
	SNR=21						
EKS2	**Erkin-Say**	**5.57**	**48**	P	**Pn**	**12 33 58.7**	**+2.4**
	SNR=6.1						
AAK	**Ala-Archa**	**5.98**	**52**	P	**Pn**	**12 34 04.0**	**+2.1**
	SNR=6.1						
AAK	**Ala-Archa**	**5.98**	**52**	*e*P	**Pn**	**12 34 01.2**	**-0.7**
	11nm,0.4s						
KZA	**Kyzart**	**6.18**	**59**	P	**Pn**	**12 34 04.5**	**-0.2**
	SNR=12						
KBK	**Karagaybulak**	**6.27**	**53**	P	**Pn**	**12 34 06.7**	**+0.8**
	SNR=11						
TKM2	**Tokmak 2**	**6.82**	**53**	P	**Pn**	**12 34 13.2**	**-0.2**
	SNR=13						
TKM2	**Tokmak 2**	**6.82**	**53**	⇑Pn	**Pn**	**12 34 13.1**	**-0.2**
	0.5nm,0.4s						
TKM2				⇑Sn	**Sn**	**12 35 35.0**	**+5.3**
	0.6nm,0.6s						
TKM2				⇑Lg		12 36 09.7	
	2.2nm,0.8s						
AB31	**Akbulak array**	**11.74**	**333**	Pn	**Pn**	**12 35 20.4**	**-0.4**
	2.8nm,0.5s,baz=150,slow=11,SNR=77						
AB31				⇓Sn	**Sn**	**12 37 28.3**	**-2.0**
	4.7nm,0.6s,baz=157,slow=23,SNR=6.5						
MK08	**Makanchi Array**	**12.88**	**49**	P	**Pn**	**12 35 34.1**	**-2.2**
MKAR	**Makanchi Array**	**12.90**	**49**	Pn	**Pn**	**12 35 35.4**	**-1.2**
	0.2nm,0.3s,baz=241,slow=12,SNR=12						
MKAR	**Makanchi Array**	**12.90**	**49**	Pn	**Pn**	**12 35 35.4**	**-1.2**
AKTK	**Aktyubinsk**	**13.42**	**331**	Pn	**Pn**	**12 35 43.9**	**+0.3**
AKTK					**Sn**	**12 38 10.9**	**-0.4**
AKTO	**Aktyubinsk**	**13.42**	**331**	⇑Pn	**Pn**	**12 35 44.1**	**+0.5**
AKTO				⇓Sn	**Sn**	**12 38 10.4**	**-0.9**
	0.2nm,0.8s						
AKTO	**Aktyubinsk**	**13.42**	**331**	Pn	**Pn**	**12 35 43.9**	**+0.3**
	0.5nm,0.3s,baz=144,slow=14,SNR=12						
AKTO					**Sn**	**12 38 10.9**	**-0.4**
	0.6nm,0.3s,baz=163,slow=22,SNR=5.7						
VOSK	**Vostochnaya**	**13.78**	**7**	⇑Pn	**Pn**	**12 35 48.1**	**-0.5**
	1.3nm,0.7s						
VOSK				⇑Sn	**Sn**	**12 38 17.6**	**-2.5**
	4.5nm,1.1s						
ZRNK	**Zerenda**	**13.88**	**2**	⇑Pn	**Pn**	**12 35 49.3**	**-0.6**
	2.0nm,0.8s						
ZRNK				⇑Sn	**Sn**	**12 38 23.9**	**+1.4**
	5.0nm,0.5s						
ZRNK	**Zerenda**	**13.88**	**2**	*e*Pn	**Pn**	**12 35 49.0**	**-1.0**
	2.6nm,0.6s						
BVA0	**Borovoye Array**	**14.03**	**6**	⇑Pn	**Pn**	**12 35 54.7**	**+2.7**
	0.4nm,0.6s						
BVA0				⇓Sn	**Sn**	**12 38 27.5**	**+1.4**
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**14.03**	**6**	Pn	**Pn**	**12 35 50.2**	**-1.8**
	0.2nm,0.3s,baz=163,slow=16,SNR=5.3						
BVAR					**Sn**	**12 38 29.5**	**+3.4**
	0.6nm,0.3s,baz=179,slow=22,SNR=5.3						
BRVK	**Borovoye**	**14.05**	**5**	*e*Pn	**Pn**	**12 35 52.8**	**+0.4**
	2.9nm,0.6s						
BRVK				*e*Sn	**Sn**	**12 38 26.1**	**-0.7**
CHKZ	**Chkalovo**	**14.69**	**6**	⇑Pn	**Pn**	**12 36 02.9**	**+2.1**
	1.3nm,0.6s						
CHKZ				⇓Sn	**Sn**	**12 38 42.6**	**+0.3**
	2.8nm,0.6s						
CHKZ	**Chkalovo**	**14.69**	**6**	*e*P	**Pn**	**12 36 02.8**	**+2.0**
	1.8nm,0.6s						
CHKZ				*e*Sn	**Sn**	**12 38 39.8**	**-2.5**
ZAL	**Zalesovo**	**18.69**	**32**	P	**Pn**	**12 36 49.4**	**-1.6**
	0.4nm,0.3s,baz=250,slow=12,SNR=9.1						
ZAL	**Zalesovo**	**18.69**	**32**	P	**Pn**	**12 36 49.4**	**-1.6**
SONM	**Songino Array**	**28.86**	**60**	P	**P**	**12 38 28.2**	**-1.8**
	0.2nm,0.3s,mb3.3,baz=263,slow=9.9,SNR=3.0						
FINES	**FINESS Array B**	**34.07**	**325**	P	**P**	**12 39 16.8**	**+1.1**
	0.4nm,0.3s,mb3.8,baz=122,slow=9.7,SNR=11						
ARCES	**ARCESS Array B**	**37.89**	**337**	P	**P**	**12 39 49.7**	**+1.3**
	1.5nm,0.7s,mb3.8,baz=115,slow=8.1,SNR=7.9						
ARCES	**ARCESS Array B**	**37.89**	**337**	P	**P**	**12 39 49.7**	**+1.3**
NB2	**NORSAR Subarra**	**40.95**	**322**	P	**P**	**12 40 14.1**	**+0.2**
	comp=Z,1.2nm,0.3s,mb4.0,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**40.95**	**322**	P	**P**	**12 40 14.3**	**+0.4**
	comp=Z,1.2nm,0.4s,mb3.9,baz=97,slow=8.1,SNR=10						
YKA	**Yellowknife Ar**	**78.74**	**1**	P	**P**	**12 44 33.3**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=352,slow=5.8,SNR=6.3						
YKA	**Yellowknife Ar**	**78.74**	**1**	P	**P**	**12 44 33.3**	**-0.1**

ISCJB ***27*** *12:35:24.5±3.0, 166S±05×1794W±03, h600km, mb3.8/7, Error ellipse: s-maj=65.6km s-min=29.2km az=55.5*
IDC ***27*** *12:35:24.5±3.4, 1668S×17942W, h570km±37km, mb3.1/5, mb1 3.3/5, mb1mx3.1/13, mbtmp4.1/5, Error ellipse: s-maj=34.7km s-min=22.1km az=168.0*
NEIC ***27*** *12:35:26.5±1.1, 1660S×17945W, h600km, mb3.4/2, Error ellipse: s-maj=37.0km s-min=24.4km az=174.0*
ISC 27 12:35:26.2±3.1, 167S±05×1793W±03, h600km, n17, σ0§83/15, mb3.8/7, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTAO	**Charters Tower**	**32.80**	**259**	*e*P	**P**	**12 41 11.6**	**0.0**
STKA	**Stephens Creek**	**38.46**	**240**	*e*P	**P**	**12 41 56.9**	**-1.3**
	2.7nm,1.0s,mb3.7						
STKA	**Stephens Creek**	**38.46**	**240**	P	**P**	**12 41 56.9**	**-1.3**
	1.6nm,0.5s,mb3.8,baz=310,slow=20,SNR=5.2						
WB2	**Warramunga Arr**	**43.98**	**258**	⇓*i*P	**P**	**12 42 41.2**	**-0.5**
WRAB	**Tennant Creek**	**43.99**	**258**	*e*P	**P**	**12 42 41.3**	**-0.4**
	2.0nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**44.00**	**258**	P	**P**	**12 42 41.5**	**-0.3**
	1.2nm,0.4s,mb3.7,baz=94,slow=7.1,SNR=31						
AS31	**Alice Springs**	**44.28**	**253**	*e*P	**P**	**12 42 43.7**	**-0.3**
ASAR	**Alice Springs**	**44.28**	**253**	P	**P**	**12 42 43.8**	**-0.2**
	9.5nm,0.5s,mb4.6,baz=89,slow=7.8,SNR=210						
ASAR				PcP	PcP	12 44 15.1	+0.3
	0.5nm,0.5s,baz=108,slow=3.8,SNR=5.0						
ASAR				S	**S**	**12 48 37.4**	**+2.0**
	0.5nm,0.9s,baz=95,slow=14,SNR=5.9						
ASPA	**Alice Springs**	**44.29**	**253**	*e*P	**P**	**12 42 43.7**	**-0.3**
KAKA	**Kakadu**	**46.73**	**268**	*e*P	**P**	**12 43 04.0**	**+1.4**
	2.4nm,0.3s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.36**	**260**	*e*P	**P**	**12 43 39.6**	**-4.2**
	3.5nm,1.3s,mb3.5						
FITZ	**Fitzroy Crossi**	**52.36**	**260**	P	**P**	**12 43 44.8**	**+1.0**
	0.7nm,0.4s,mb3.3,baz=88,slow=14,SNR=10						
VNDA	**Vanda**	**61.58**	**185**	P	**P**	**12 44 47.2**	**+0.8**
	0.4nm,0.5s,mb2.9,baz=352,slow=1.7,SNR=5.4						
VNDA	**Vanda**	**61.58**	**185**	*e*P	**P**	**12 44 47.3**	**+0.8**
	0.4nm,0.5s,mb2.9						
CLL	**Collm**	**144.08**	**347**	*i* PKIKP	PKPdf	12 53 54.8	+0.3
GERES	**GERESS Array B**	**146.21**	**344**	PKPbc	PKPbc	12 54 01.4	+1.0
	0.8nm,0.6s,baz=8.8,slow=3.2,SNR=7.7						
TORD	**Torodi Ar. Bea**	**176.34**	**196**	PKP	PKPdf	12 54 28.5	+0.2
	0.5nm,0.7s,baz=74,slow=3.3,SNR=6.5						

IDC 27 12:45:24.6±3.5, 2295S×17506W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/13, mbtmp3.8/4, MS3.5/1, Ms1 3.4/1, ms1mx2.3/29, Error ellipse: s-maj=151.9km s-min=54.7km az=155.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**36.04**	**267**	*e*P	P	12 52 29.4	+1.8
	3.0nm,0.8s						
CTA	**Charters Tower**	**36.04**	**267**	P	P	12 52 29.2	+1.6
	3.0nm,0.6s,baz=85,slow=9.7,SNR=10						
STKA	**Stephens Creek**	**39.29**	**247**	*e*P	P	12 52 54.9	-0.2
	1.1nm,0.8s						
STKA	**Stephens Creek**	**39.29**	**247**	P	P	12 52 54.5	-0.6
	0.6nm,0.4s,baz=105,slow=12,SNR=4.3						
STKA				LR	LR	13 06 30.4	
	comp=Z,64nm,19.9s,baz=207,slow=32						
ASAR	**Alice Springs**	**46.67**	**259**	P	P	12 53 54.7	-0.2
	0.2nm,0.3s,baz=97,slow=7.0,SNR=11						
ASPA	**Alice Springs**	**46.68**	**259**	*e*P	P	12 53 54.8	-0.2
WB2	**Warramunga Arr**	**47.01**	**264**	*e*P	P	12 53 57.6	+0.1
WRA	**Warramunga Arr**	**47.02**	**264**	P	P	12 53 57.8	+0.2
	0.6nm,0.3s,baz=97,slow=8.3,SNR=25						
ARCES	**ARCESS Array B**	**131.79**	**350**	PKP	PKPdf	13 04 38.8	-0.9
	0.9nm,0.8s,baz=256,slow=3.1,SNR=6.2						

ISCJB ***27*** *12:50:03.8±0.6, 3860N±003×2134E±003, h7km±4km, Error ellipse: s-maj=5.2km s-min=3.9km az=150.9*
NEIC ***27*** *12:50:03.8, 3866N×2130E, h20km±2km, MD3.6(ATH), After ATH.*
ATH ***27*** *12:50:03.8, 3866N×2130E, h20km±2km, MD3.6/9*
CSEM ***27*** *12:50:04.6±0.1, 3865N×2123E, h10km, MD3.6, Error ellipse: s-maj=2.2km s-min=1.8km az=149.0*
THE ***27*** *12:50:04.6, 3858N×2137E, h5km, ML3.0*
ISC 27 12:50:04.4±0.5, 3861N±003×2134E±003, h6km±4km, n26, σ1§18/43, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.48**	**50**	⇑*i*PB	**Pg**	**12 50 13.0**	**-0.6**
EVR				*e*SB	**Sg**	**12 50 21.0**	**+1.2**
LKD	**Levkas**	**0.55**	**280**	*e*Pg	**Pg**	**12 50 13.4**	**-1.5**
LKD				*e*Sg	**Sg**	**12 50 23.6**	**+1.5**
RLS	**Riolos of Patr**	**0.56**	**170**	⇑*i*PN	**Pg**	**12 50 16.3**	**+1.0**
VLS	**Valsamata**	**0.73**	**234**	*e*PB	**Pg**	**12 50 47.4**	**-1.1**
VLS				*e*SN	**Sg**	**12 50 29.7**	**+1.7**
AGG	**Agios Georgios**	**0.88**	**62**	*e*Pg	**Pg**	**12 50 20.6**	**-0.6**
	comp=Z,8.0nm,0.3s						
AGG				*e*Sg	**Sg**	**12 50 34.1**	**+1.5**
JAN	**Janina**	**1.11**	**340**	*e*PN	**Pn**	**12 50 23.6**	**-2.8**
IGT	**Igoumenitsa**	**1.21**	**320**	*e*Pg	**Pg**	**12 50 25.3**	**-2.3**
IGT				*e*Sg	**Sg**	**12 50 46.0**	**+2.8**
LKR	**Lokris**	**1.30**	**88**	*e*PN	**Pn**	**12 50 28.4**	**-0.7**
ITM	**Ithomi**	**1.50**	**162**	*e*PN	**Pn**	**12 50 32.5**	**+0.6**
KEK	**Kerkira**	**1.62**	**313**	*e*PN	**Pn**	**12 50 32.1**	**-1.4**
KEK				*e*SN	**Sn**	**12 50 54.5**	**-0.2**
NEO	**Neokhori**	**1.62**	**64**	*e*PN	**Pn**	**12 50 33.3**	**-0.2**
XOR	**Xorichti**	**1.63**	**62**	*e*Pb	**Pb**	**12 50 33.5**	**-1.4**
XOR				*e*Sb	**Sb**	**12 50 54.6**	**-1.0**
LIT	**Litokhoron**	**1.73**	**31**	*e*Pb	**Pb**	**12 50 34.6**	**-2.1**
	comp=Z,2.5nm,0.5s						
LIT				*e*Sb	**Sb**	**12 50 58.3**	**-0.3**
AOS	**Alonnisos**	**2.06**	**74**	*e*Pn	**Pn**	**12 50 39.3**	**-0.3**
AOS				*e*Sn	**Sn**	**12 51 06.3**	**+0.8**
FNA	**Florina**	**2.17**	**1**	*e*Pn	**Pn**	**12 50 41.3**	**+0.3**
FNA				*e*Sn	**Sn**	**12 51 09.9**	**+1.8**
PAIG	**Paliouri**	**2.24**	**53**	*e*Pn	**Pn**	**12 50 42.0**	**0.0**
PAIG				*e*Sn	**Sn**	**12 51 10.3**	**+0.3**
VLI	**Veliai**	**2.28**	**146**	*e*PB	**Pb**	**12 50 46.0**	**+0.1**
BIA	**Bitola**	**2.40**	**360**	*e*Pn	**Pn**	**12 50 44.7**	**+0.4**
BIA				*e*Sn	**Sn**	**12 51 14.8**	**+0.9**
BIA	**Bitola**	**2.40**	**360**	*e*Pn	**Pn**	**12 50 44.6**	**+0.4**
BIA				*e*Sn	**Sn**	**12 51 14.8**	**+0.9**
SOH	**Sokhos**	**2.70**	**35**	*e*Pn	**Pn**	**12 50 48.5**	**+0.2**
SOH				*e*Sn	**Sn**	**12 51 22.7**	**+1.5**
KNT	**Kendrikon**	**2.81**	**25**	*e*Pn	**Pn**	**12 50 50.4**	**+0.5**
KNT	**Kendrikon**	**2.81**	**25**	*e*Pn	**Pn**	**12 50 50.3**	**+0.4**
VAY	**Valandovo**	**2.87**	**19**	*e*Pn	**Pn**	**12 50 49.3**	**-1.3**
VAY				*e*Sn	**Sn**	**12 51 23.3**	**-2.1**
VAY	**Valandovo**	**2.87**	**19**	*e*Pn	**Pn**	**12 50 49.3**	**-1.3**
VAY				*e*Sn	**Sn**	**12 51 23.2**	**-2.2**
SRS	**Serrai**	**3.04**	**34**	*e*Pn	**Pn**	**12 50 53.0**	**0.0**
MMB	**Musomiste**	**3.49**	**31**	*e*

RAGM	**Ragged Mountai**	2.90	83	P		Pn	13 06 25.8	-0.6
BMRM	**Bremner River**	3.01	72	P		Pn	13 06 27.7	-0.2
MCK	**McKinley**	3.64	11	*e*P		Pn	13 06 37.8	+1.3
TTA	**Tatalina**	3.82	319	*e*P		Pn	13 06 38.3	-0.6
MENT	**Mentasta**	4.26	47	*e*P		Pn	13 06 46.4	+1.5
COLA	**College**	4.86	13	*e*P		Pn	13 06 53.6	+0.4
CHGN	**Chignik**	5.71	231	*e*P		Pn	13 07 05.6	+0.7
EGAK	**Eagle**	6.32	39	*e*P		Pn	13 07 13.4	+0.3
DAWY	**Dawson**	6.50	48	*e*P		Pn	13 07 16.3	+0.7
SKAG	**Skagway**	7.68	89	*e*P		Pn	13 07 32.6	+0.9
DLBC	**Dease Lake**	10.60	91	P		Pn	13 08 11.6	-0.1
	0.3nm,0.3s,baz=277,slow=14,SNR=7.3							
DLBC	**Dease Lake**	10.60	91	P		Pn	13 08 11.6	-0.1
YKA	**Yellowknife Ar**	17.23	67	P		Pn	13 09 37.1	-1.7
	baz=278,slow=13,SNR=2.9							
NEW	**Newport**	22.59	107	pP		pP	13 10 53.5	+1.9
	1.7nm,1.0s,baz=317,slow=11,SNR=3.7							
YBH	**Yreka Blue Hor**	25.13	125	P		P	13 11 01.9	+0.4
	0.9nm,0.8s,mb3.2,baz=108,slow=19,SNR=1.6							
YBH				pP		pP	13 11 19.9	+2.8
	2.2nm,1.0s,baz=234,slow=5.3,SNR=3.4							
YBH				LR		LR	13 18 47.8	
	comp=Z,39nm,20.6s,baz=320,slow=31							
NVAR	**Mina Array Bea**	29.74	122	P		P	13 11 42.3	-0.4
	0.1nm,0.5s,mb2.8							
PDAR	**Pinedale Array**	30.23	107	pP		pP	13 12 03.7	+0.9
	0.6nm,0.7s,baz=335,slow=6.6,SNR=4.6							
ARCES	**ARCESS Array B**	50.54	2	P		P	13 14 32.8	-1.6
	1.1nm,0.8s,mb3.9,baz=6.3,slow=12,SNR=4.2							
ARCES				pP		pP	13 14 55.6	+4.5
	2.9nm,1.0s,baz=8.9,slow=8.6,SNR=2.6							
SONM	**Songino Array**	55.69	307	P		P	13 15 13.5	+1.3
	1.1nm,0.7s,mb4.0,baz=42,slow=6.7,SNR=8.2							
SONM				pP		pP	13 15 34.9	+5.8
	0.9nm,0.8s,baz=38,slow=7.2,SNR=3.9							
FINES	**FINESS Array B**	58.67	2	P		P	13 15 33.7	+0.5
	0.4nm,0.7s,mb3.6,baz=257,slow=33,SNR=3.4							
FINES				pP		pP	13 15 52.6	+2.2
	0.3nm,0.5s,baz=358,slow=6.3,SNR=1.7							
MKAR	**Makanchi Array**	65.06	323	P		P	13 16 15.5	-0.7
	0.4nm,0.5s,mb3.5,baz=27,slow=5.6,SNR=4.9							

*ISCJB **27** 13:27:39.0±0.7, 24.46S±004.4×672.4W±0.1, h180km±17km, mb3.7/1, Error ellipse: s-maj=19.9km s-min=5.6km az=18.3*
*NEIC **27** 13:27:40.5±0.7, 24.37S×6726W, h180km±15km, mb3.9/2, Error ellipse: s-maj=24.0km s-min=8.5km az=103.0*
*GUC **27** 13:27:40.2±0.8, 24.63S×6744W, h200km, ML4.2*
*IDC **27** 13:27:42.2±0.9, 24.51S×6783W, h205km±13km, mb3.6/1, mb1 3.4/5, mb1mx3.2/17, mbtmp3.8/5, Error ellipse: s-maj=33.8km s-min=12.6km az=83.0*

ISC 27 13:27:40.0±0.7, 2449S±004×671W±01, h163km±17km, n22, σ1$15/32, mb3.7/1, 2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	2.50	318	P		Pn	13 28 23.3	+1.6
	26nm,0.3s,SNR=432							
LVC				S		Sn	13 28 54.7	+0.7
	9.7nm,0.3s,SNR=7.1							
LVC	**Limon Verde**	2.50	318	*e*Pn		Pn	13 28 22.9	+1.2
LVC				*e*Sn		Sn	13 28 52.5	-1.5
CPN1	**Cerro Paranal**	3.01	267	⇓*i*P		Pn	13 28 28.9	+1.0
CPN1				*i* S		Sn	13 29 04.9	-0.3
CPN1				AML		AML	13 29 08.9	
	comp=E,390nm,0.4s							
CEN1	**Los Morros**	3.04	291	⇓*i*P		Pn	13 28 29.8	+1.4
CEN1				*i* S		Sn	13 29 05.4	-0.4
CEN1				AML		AML	13 29 09.1	
	comp=E,461nm,0.7s							
CPCH	**Copiapo**	4.09	225	*e*P		Pn	13 28 41.5	-0.2
CPCH				*i* S		Sn	13 29 28.3	-1.5
LCO	**Las Campanas**	5.53	215	*e*P		Pn	13 29 00.8	+0.2
LCO				*i* S		Sn	13 30 03.0	-0.7
TLL	**Tololo Astrono**	6.54	209	*e*P		Pn	13 29 15.3	+1.4
TLL				*e*S		Sn	13 30 27.6	-0.1
CFAA	**Coronel Fontan**	7.16	188	P		Pn	13 29 24.8	+2.7
	comp=E,0.1nm,0.3s,baz=9.0,slow=12,SNR=9.3							
CFAA				S		Sn	13 30 41.8	-0.6
	comp=E,0.2nm,0.3s,baz=104,slow=20,SNR=11							
CFAA	**Coronel Fontan**	7.16	188	P		Pn	13 29 24.8	+2.7
CFAA				S		Sn	13 30 41.8	-0.6
LPAZ	**La Paz**	8.22	353	P		Pn	13 29 36.9	+0.8
	comp=E,1.7nm,0.3s,baz=137,slow=5.4,SNR=36							
LPAZ				S		Sn	13 31 04.0	-3.8
	comp=E,0.1nm,0.3s,baz=333,slow=18,SNR=5.0							
LPAZ	**La Paz**	8.22	353	*e*Pn		Pn	13 29 36.2	+0.1
LPAZ				S		Sn	13 31 04.0	-3.8
CPUP	**Villa Florida**	9.02	104	P		Pn	13 29 58.8	+12
	comp=E,0.3nm,0.3s,baz=263,slow=11,SNR=4.4							
CPUP	**Villa Florida**	9.02	104	*e*P		Pn	13 29 58.4	+12
SIV	**San Ignacio**	10.17	35	P		Pn	13 30 00.4	-1.5
	comp=E,0.6nm,0.3s,baz=218,slow=14,SNR=18							
TRQA	**Tornquist**	14.21	163	*e*P		Pn	13 30 57.9	+4.0
	comp=E,8.2nm,0.7s							
SAML	**Samuel**	15.90	14	*e*P		Pn	13 31 13.2	-1.6
	comp=E,2.2nm,0.8s							
PLCA	**Paso Flores**	16.45	189	P		Pn	13 31 19.8	-1.7
	comp=E,0.1nm,0.3s,baz=356,slow=15,SNR=3.5							
PLCA	**Paso Flores**	16.45	189	P		Pn	13 31 19.9	-1.5
BDFB	**Brasilia**	19.95	67	P		P	13 31 59.6	+0.2
	comp=E,5.0nm,0.8s,baz=262,slow=5.4,SNR=5.2							
DBIC	**Dimbokro**	68.05	71	*e*P		P	13 38 21.8	+0.1
TORD	**Torodi Ar. Bea**	76.83	69	P		P	13 39 14.6	+0.8
	comp=E,1.0nm,0.5s,mb3.7,baz=261,slow=5.7,SNR=15							
MKAR	**Makanchi Array**	146.96	40	PKPbc		PKPbc	13 47 02.0	-1.2
	comp=E,0.9nm,0.6s,baz=292,slow=3.5,SNR=11							

*ISCJB **27** 13:41:14.5±0.8, 3722N±006×1684E±004, h10km, Error ellipse: s-maj=8.7km s-min=4.3km az=153.3*
*ROM **27** 13:41:18.3±0.5, 3726N×1695E, h38km, Md2.8/14, Ml3.0/9, Error ellipse: s-maj=7.7km s-min=2.8km az=54.0*
*NEIC **27** 13:41:18.3, 3726N×1695E, h38km, MD2.8(ROM), After ROM.*
*CSEM **27** 13:41:19.5±0.1, 3733N×1683E, h40km, MD2.8/14, Error ellipse: s-maj=3.1km s-min=1.5km az=164.0*
*THE **27** 13:41:24.1, 3761N×1731E, h7km*

ISC 27 13:41:14.9±0.8, 3721N±006×1689E±004, h10km, n25, σ1$28/33, 1C-6D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SOI	**Samo**	1.08	322	⇓*i*Pg		Pg	13 41 37.4	+1.7
	128nm,0.5s							
MTTG	**Motta San Giov**	1.24	310	⇓*i*Pg		Pg	13 41 39.7	+1.1
MTTG				Sg		Sg	13 41 55.1	+0.5
	92nm,0.4s							
PLAC	**Placanica**	1.29	344	⇓*i*Pg		Pg	13 41 39.9	+0.3
	69nm,0.3s							
CEL	**Celeste**	1.31	323	⇓*i*Pg		Pg	13 41 40.4	+0.4
	130nm,0.4s							
HAGA	**Augusta**	1.39	273	Pg		Pg	13 41 41.7	+0.2
SCLL	**Scilla**	1.40	318	⇓*i*Pg		Pg	13 41 41.7	0.0
	36nm,0.4s							
HAVL	**Avola**	1.44	260	Pg		Pg	13 41 43.3	+0.9
HAVL				Sg		Sg	13 42 00.4	-0.7
	554nm,0.3s							
MSI	**Messina ING**	1.45	313	⇑*i*Pg		Pg	13 41 43.2	+0.5
	418nm,0.2s							
SSY	**Sortino**	1.46	268	Pg		Pg	13 41 42.9	+0.1
MMME	**Mongiuffi-Meli**	1.49	299	⇓*i*Pg		Pg	13 41 43.3	-0.1
	138nm,0.4s							
MSRU	**Castanea**	1.52	314	Pg		Pg	13 41 43.9	-0.1
	128nm,0.5s							
HVZN	**Vizzini**	1.74	270	Pg		Pg	13 41 47.4	-0.8
	867nm,0.5s							
SERS	**Sersale**	1.83	355	Pg		Pg	13 41 47.3	-2.6
	79nm,0.4s							
VPL	**Vulcano Piano**	1.91	308	Pg		Pg	13 41 48.8	-2.7
	195nm,0.4s							
RAFF	**Raffo Rosso**	2.02	271	Pg		Pg	13 41 51.7	-1.9
RAFF				Sg		Sg	13 42 16.0	-3.8
LKD	**Levkas**	3.32	62	*e*Pn		Pn	13 42 09.9	+3.1
LKD				*e*Sn		Sn	13 42 45.0	-1.4
LKD	**Levkas**	3.32	62	*e*Pn		Pn	13 42 09.9	+3.0
LKD				*e*Sn		Sn	13 42 45.0	-1.4
IGT	**Igoumenitsa**	3.56	48	*e*Pn		Pn	13 42 11.9	+1.7
IGT				*e*Sn		Sn	13 42 50.7	-1.5
PE1	**Pezze di Greco**	3.61	6	*e*Pn		Pn	13 42 11.1	+0.3
SG1	**Sgolgore (BA)**	3.63	357	*e*Pn		Pn	13 42 11.6	+0.6
BAI	**Bari**	3.89	360	*e*Pn		Pn	13 42 14.5	-0.2
CDT	**Castel del Mon**	3.89	353	*e*Pn		Pn	13 42 15.0	+0.3
MEV	**Metsovon**	4.26	52	*e*Pn		Pn	13 42 23.2	+3.4
	comp=Z,3.0nm,0.3s							
MEV				*e*Sn		Sn	13 43 07.7	-1.9
AGG	**Agios Georgios**	4.65	66	*e*Sn		Sn	13 43 18.8	-0.4
AGG				*e*Sn		Sn	13 43 25.8	+6.6
XOR	**Xorichti**	5.40	65	*e*Pn		Pn	13 42 38.9	+3.4

*CSEM **27** 13:54:23.8±0.4, 3866N×2860W, h5km±8km, ML1.2, Error ellipse: s-maj=3.1km s-min=2.3km az=92.0, After PDA*
*PDA **27** 13:54:23.8±0.4, 3866N×2860W, h5km±8km, MD2.7, ML1.2, Error ellipse: s-maj=3.1km s-min=2.3km az=92.0*

SVSA 27 13:54:23.8±0.4, 3866N×2860W, h5km±8km, MD2.7, ML1.2, Error ellipse: s-maj=3.1km s-min=2.3km az=92.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CALA	**Caldeira**	0.11	225	*e*P		Pg	13 54 26.1	0.0
CALA				*e*S		Sg	13 54 27.9	+0.2
PICO	**Pico**	0.21	139	*e*P		Pg	13 54 27.5	-0.4
PICO				*e*S		Sg	13 54 30.8	+0.1
PCND	**Candelaria**	0.22	150	*e*P		Pg	13 54 27.9	-0.2
PCND				*e*S		Sg	13 54 31.1	+0.1
PCND								
	20nm,0.2s							
ROSA	**Rosais**	0.29	78	*e*S		Sg	13 54 32.9	-0.3

*IDC **27** 13:59:54.5±1.4, 4875S×10685E, h0km, mb4.1/6, mb1 4.2/7, mb1mx4.0/14, mbtmp4.0/7, ML1.5/1, MS4.0/11, Ms1 4.0/11, ms1mx3.8/20, Error ellipse: s-maj=50.5km s-min=20.1km az=117.0*
*ISCJB **27** 13:59:55.1±1.0, 488S±01×107.1E±04, h10km, mb4.2/9, MS4.0/11, Error ellipse: s-maj=37.1km s-min=14.2km az=50.8*
*NEIC **27** 13:59:56.8±1.1, 4876S×10693E, h10km, mb4.6/2, Error ellipse: s-maj=43.3km s-min=15.6km az=115.0*

ISC 27 13:59:56.3±1.1, 488S±01×1069E±04, h10km, n25, σ0$99/14, mb4.2/9, MS4.0/11, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	17.68	30	P		Pn	14 03 59.7	-2.9
	0.1nm,0.3s,baz=211,slow=5.9,SNR=1.8							
NWAO	**Narrogin (SRO)**	17.68	30	P		Pn	14 03 59.7	-2.9
MAW	**Mawson**	28.92	213	LR		LR	14 14 19.0	
	comp=Z,132nm,20.4s,MS3.5,baz=243,slow=30							
STKA	**Stephens Creek**	31.07	70	P		P	14 06 13.2	-1.3
	2.0nm,1.0s,mb3.9,baz=165,slow=12,SNR=2.5							
STKA				LR		LR	14 16 18.3	
	comp=Z,317nm,22.0s,MS3.9,baz=207,slow=32							
ASPA	**Alice Springs**	32.93	50	*e*P		P	14 06 31.0	+0.2
ASAR	**Alice Springs**	32.93	50	P		P	14 06 31.2	+0.4
	2.1nm,0.7s,mb4.2,baz=214,slow=8.4,SNR=53							
ASAR				LR		LR	14 18 04.2	
	comp=Z,211nm,21.9s,MS3.8,baz=198,slow=33							
AS31	**Alice Springs**	32.93	50	*e*P		P	14 06 31.0	+0.1
FITZ	**Fitzroy Crossi**	34.21	33	*e*P		P	14 06 44.4	+2.4
	5.2nm,1.0s,mb4.4							
VNDA	**Vanda**	35.42	162	P		P	14 06 52.9	+0.5
	2.6nm,0.9s,mb4.2,baz=288,slow=9.3,SNR=10							
VNDA				LR		LR	14 20 06.7	
	comp=Z,406nm,19.0s,MS4.2,baz=294,slow=34							
WRA	**Warramunga Arr**	36.28	47	P		P	14 06 60.0	+0.2
	3.5nm,0.8s,mb4.4,baz=207,slow=9.9,SNR=46							
WB2	**Warramunga Arr**	36.29	47	*e*P		P	14 06 59.9	0.0
WRAB	**Tennant Creek**	36.29	47	*e*P		P	14 07 00.3	+0.4
	12nm,0.8s,mb4.9							
WRAB				*e*			14 07 06.0	
CTA	**Charters Tower**	42.58	62	*e*P		P	14 07 58.8	+6.5
	5.0nm,0.9s,mb4.2							
CTA	**Charters Tower**	42.58	62	LR		LR	14 25 31.8	
	comp=Z,247nm,18.2s,MS4.1,baz=214,slow=36							
RPZ	**Rata Peaks**	43.50	108	LR		LR	14 22 00.8	
	comp=Z,113nm,21.4s,MS3.7,baz=208,slow=30							
SNAA	**Sanae**	50.11	203	P		P	14 08 51.0	-0.6
	0.8nm,0.7s,mb3.9,baz=157,slow=8.0,SNR=6.9							
PMG	**Port Moresby**	51.73	54	LR		LR	14 27 02.0	
	comp=Z,102nm,21.1s,MS3.8,baz=234,slow=32							
DZM	**Mont Dzumac**	53.79	82	LR		LR	14 27 12.4	
	comp=Z,118nm,21.8s,MS3.9,baz=284,slow=30							
BOSA	**Boshof**	63.75	256	LR		LR	14 30 55.8	
	comp=Z,167nm,21.1s,MS4.2,baz=155,slow=29							
KMBO	**Kilima Mbogo**	75.82	285	LR		LR	14 37 08.1	
	comp=Z,74nm,18.7s,MS4.0,baz=90,slow=30							
PLCA	**Paso Flores**	90.81	182	LR		LR	14 51 07.7	
	comp=Z,136nm,20.0s,MS4.4,baz=180,slow=34							
SONM	**Songino Array**	96.27	360	P		P	14 13 24.7	-0.2
	0.7nm,0.7s,mb4.2,baz=139,slow=3.4,SNR=4.3							
MSU	**Marysvale**	150.24	95	*e*PKPbc		PKPbc	14 19 49.4	+1.8
MNTX	**Cornudas Mount**	150.33	113	*e*PKPbc		PKPbc	14 19 49.2	+1.4
PDAR	**Pinedale Array**	154.07	90	PKPbc		PKPbc	14 19 54.2	-2.0
	0.2nm,0.6s,baz=242,slow=3.2,SNR=2.3							

*KRSC **27** 14:04:18, 6065N×167.41E, h19km, ML3.8*
*ISCJB **27** 14:04:21.5±0.5, 6088N±004×1658E±0.1, h10km, mb3.7/10, MS3.3/3, Error ellipse: s-maj=9.3km s-min=5.3km az=58.1*
*MOS **27** 14:04:21.8±2.5, 6097N×166.15E, h10km, mb3.8/8, Error ellipse: s-maj=33.2km s-min=19.2km az=87.5*
*IDC **27** 14:04:21.3±1.1, 6087N×16592E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/21, mbtmp3.6/8, MS3.4/3, Ms1 3.4/3, ms1mx2.9/25, Error ellipse: s-maj=34.7km s-min=21.2km az=166.0*
*NEIC **27** 14:04:26.4±1.9, 6084N×16584E, h36km±16km, mb3.9/1, Error ellipse: s-maj=22.1km s-min=10.1km az=158.0*

ISC 27 14:04:27.0±0.9, 6085N±006×1659E±01, h44km±12km, n36, σ0$98/37, mb3.7/10, MS3.3/3, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SMKR	**Semkarok**	4.87	210	*e*P		Pn	14 05 36.8	-0.8
SRKR	**Sorokina**	4.88	213	*e*P		Pn	14 05 38.0	+0.2
KBTR	**Krutoberegovo**	4.93	201	*e*P		Pn	14 05 36.9	-1.6
KBTR				*i* S		Sn	14 06 34.1	-0.2
BDR	**Baidarnaya**	4.95	212	*e*P		Pn	14 05 38.0	-0.7
ZLN	**Zelenaya**	5.54	211	*e*P		Pn	14 05 47.1	+0.2
KMNR	**Kamenistaya**	5.92	213	*e*P		Pn	14 05 54.8	+2.7
TUMR	**Tumrok**	6.37	211	*e*P		Pn	14 05 59.6	+1.4
MKZ	**Mys Kozlova**	6.70	201	*e*P		Pn	14 06 01.7	-1.0
MKZ				*i* S		Sn	14 07 17.1	-0.6
BILL	**Bilibino**	7.22	1	*e*PN		Pn	14 06 09.8	-0.1
BILL				pmax	pmax			
	comp=Z,9.0nm,0.6s							
BILL	**Bilibino**	7.22	1	*e*Pn		Pn	14 06 09.8	-0.1
	comp=Z,9.5nm,0.6s							
MA2	**Magadan**	7.66	267	*i* PN		Pn	14 06 22.9	+7.0
MA2	**Magadan**	7.66	267	*e*Pn		Pn	14 06 14.2	-1.7
	comp=Z,17nm,0.5s							
MA2				*e*Sn		Sn	14 07 41.5	+0.3
GNL	**Ganaly**	8.37	215	*e*P		Pn	14 06 27.8	+2.1
SPN	**Mys Shipunski**	8.41	205	P		Pn	14 06 26.4	+0.2
COLA	**College**	21.08	59	P		P	14 09 08.7	+1.3
COLA				pmax	pmax			
	comp=Z,7.0nm,1.2s,mb3.9							
COLA	**College**	21.08	59	P		P	14 09 08.7	+1.2
	comp=Z,7.1nm,1.2s,mb3.9							
EGAK	**Eagle**	23.89	58	*e*P		P	14 09 35.8	-0.7
BOD	**Bodaibo**	26.08	287	*e*P		P	14 09 56.5	+0.1
BOD				pmax	pmax			
	comp=Z,3.0nm,1.7s,mb3.5							
MJAR	**Matsushiro Arr**	30.01	228	LR		LR	14 24 18.7	
	comp=Z,55nm,19.6s,MS3.2,baz=15,slow=40							
YKA	**Yellowknife Ar**	35.53	52	P		P	14 11 19.9	+0.3
	comp=Z,0.9nm,0.7s,mb3.8,baz=305,slow=8.4,SNR=4.9							
YKA	**Yellowknife Ar**	35.53	52	P		P	14 11 19.9	+0.2
YKA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	35.53	52	P		P	14 11 19.9	+0.3
SONM	**Songino Array**	35.75	276	P		P	14 11 21.8	+0.3
	comp=Z,0.5nm,0.9s,mb3.4,baz=44,slow=8.8,SNR=4.2							
SONM				LR		LR	14 26 40.4	
	comp=Z,57nm,22.0s,MS3.3,baz=302,slow=38							
SONM	**Songino Array**	35.75	276	P		P	14 11 21.8	+0.3
SONM				pmax	pmax			
	comp=Z,1.0nm,0.9s							
SONM				MLR	MLR			
	comp=Z,57nm,22.0s							
ZAL	**Zalesovo**	41.59	298	LR		LR	14 32 16.1	
	comp=Z,51nm,18.5s,MS3.4,baz=287,slow=40							
MKAR	**Makanchi Array**	47.87	293	P		P	14 13 00.6	+0.1
	comp=Z,0.5nm,0.6s,mb3.7,baz=38,slow=6.1,SNR=6.9							
MKAR	**Makanchi Array**	47.87	293	P		P	14 13 00.6	+0.1
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
PDAR	**Pinedale Array**	51.37	70	P		P	14 13 28.4	+1.2
	comp=Z,0.9nm,0.9s,mb3.7,baz=347,slow=6.1,SNR=6.9							
ULM	**Lac du Bonnet**	51.41	54	P		P	14 13 25.7	-1.7
	comp=Z,0.9nm,0.4s,mb4.0,baz=111,slow=2.7,SNR=5.4							
FINES	**FINESS Array B**	54.21	338	P		P	14 13 47.2	-0.9
	comp=Z,0.5nm,0.8s,mb3.5,baz=3.8,slow=12,SNR=3.9							
FINES	**FINESS Array B**	54.21	338	P		P	14 13 47.2	-0.9
FINES				pmax	pmax			
	comp=Z,1.0nm,0.8s							
FINES	**FINESS Array B**	54.21	338	P		P	14 13 47.2	-0.9
NOA	**NORSAR Array B**	56.89	346	P		P	14 14 07.2	-0.1
	comp=Z,0.5nm,0.5s,mb3.8,baz=14,slow=7.3,SNR=2.7							
NOA	**NORSAR Array B**	56.89	346	P		P	14 14 07.2	-0.1
NOA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
WRA	**Warramunga Arr**	84.45	210	P		P	14 16 55.2	+0.3
	comp=Z,0.5nm,0.9s,mb3.7,baz=11,slow=5.5,SNR=9.5							
WRA	**Warramunga Arr**	84.45	210	P		P	14 16 55.2	+0.3
WRA				pmax	pmax			
	comp=Z,1.0nm,0.9s							

*CSEM **27** 14:12:19.0±0.1, 3662N×532E, h2km, ML3.4, Error ellipse: s-maj=3.8km s-min=2.0km az=23.0*
*ISCJB **27** 14:12:20.3±0.9, 3666N±0.10×535E±006, h19km±19km, Error ellipse: s-maj=16.0km s-min=7.4km az=179.4*
*CRAAG **27** 14:12:21.6, 3642N×555E, Ml3.4*
*MDD **27** 14:12:21.4±0.7, 3653N×536E, h5km±10km, mb3.6/6, Error ellipse: s-maj=8.0km s-min=4.8km az=0.0, PRXIMO*
*NEIC **27** 14:12:24.6, 3688N×520E, h0km, MG3.8(MDD), After MDD.*

ISC 27 14:12:20.9±0.8, 3660N±007×538E±005, h17km±8km, n29, σ1$41/40, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SET	**Setif**	0.40	178	P		Pg	14 12 28.0	-1.1
DFRA	**Djebel Bou Aff**	0.41	98	P		Pg	14 12 28.5	-0.6
CKHR	**Kef el Ahmar**	0.59	170	P		Pg	14 12 30.0	-2.6
AKF	**Akfadou**	0.65	273	P		Pg	14 12 34.0	+0.3
CASM	**Ain Smara**	0.96	110	P		Pb	14 12 39.0	-0.1
CTEI	**Djebel Teioual**	0.99	123	P		Pb	14 12 40.5	+0.9
CMER	**Merouana**	1.07	157	P		Pb	14 12 45.0	+4.1
CKFL	**Kef-Lekhel**	1.10	100	P		Pb	14 12 42.3	+0.8
ATAF	**Djebel Tarf**	1.15	231	P		Pn	14 12 41.8	-0.4
CAEH	**'Ain El Ouahch**	1.20	81	P		Pn	14 12 40.0	-2.9
CMAH	**Djebel Manchou**	1.64	89	P		Pn	14 12 50.0	+1.0
EMHD	**Djebel Mahouad**	2.00	259	P		Pg	14 13 02.0	+2.8
ETOS	**Mallorca**	3.75	328	P		Pn	14 13 18.7	+0.7
	2.0nm,0.1s,SNR=6.2							
ETOS				S		Sn	14 14 01.4	-0.5
	1.0nm,0.2s,SNR=7.9							
ETOS	**Mallorca**	3.75	328	P		Pn	14 13 18.7	+0.7
ETOS				S		Sn	14 13 57.4	-4.5
ETOS	**Mallorca**	3.75	328	P		Pn	14 13 18.7	+0.7
	2.0nm,0.1s,SNR=6.2							
EIBI	**Ibiza**	4.01	308	P		Pn	14 13 22.3	+0.7
	3.5nm,0.3s,SNR=7.9							
EIBI				S		Sn	14 14 07.5	-0.6
	1.8nm,0.2s,SNR=7.9							
EIBI	**Ibiza**	4.01	308	P		Pn	14 13 22.3	+0.7
EIBI				S		Sn	14 14 05.4	-2.7
EIBI	**Ibiza**	4.01	308	P		Pn	14 13 22.3	+0.7
	3.5nm,0.3s,SNR=7.9							
EIBI				S		Sn	14 14 05.4	-2.8
	1.8nm,0.2s,SNR=7.9							
EBEN	**Beniarda**	4.92	297	P		Pn	14 13 34.7	+0.6
	0.3nm,0.2s,SNR=7.9							
EBEN				S		Sn	14 14 29.8	-0.7
	0.2nm,0.2s,SNR=7.9							
EBEN	**Beniarda**	4.92	297	P		Pn	14 13 34.7	+0.6
EBEN				S		Sn	14 14 26.8	-3.8
EBEN	**Beniarda**	4.92	297	P		Pn	14 13 34.7	+0.7
	0.3nm,0.2s,SNR=7.9							
EPOB	**Poblet**	5.81	326	P		Pn	14 13 47.0	+0.7
	0.6nm,0.2s,SNR=7.9							
EPOB				S		Sn	14 14 49.4	-3.2
	0.8nm,0.3s,SNR=7.9							
EPOB	**Poblet**	5.81	326	P		Pn	14 13 45.6	-0.7
EPOB				S	

σ0§82/12, mb3.7/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.44**	**301**	P	**Pn**	**14 22 31.0**	**+1.1**
	3.8nm,0.3s,baz=277,slow=7.4,SNR=4.4						
HNR				S	**Sn**	**14 23 52.0**	**-0.9**
	1.0nm,0.3s,baz=212,slow=1.5,SNR=2.0						
HNR	**Honiara**	**7.44**	**301**	*e*P	**Pn**	**14 22 31.0**	**+1.2**
HNR				S	**Sn**	**14 23 52.0**	**-0.9**
DZM	**Mont Dzumac**	**8.70**	**180**	P	**Pn**	**14 22 46.6**	**-0.5**
	0.8nm,0.3s,baz=208,slow=21,SNR=11						
STKA	**Stephens Creek**	**29.31**	**227**	P	**P**	**14 26 44.1**	**+1.6**
	1.0nm,0.7s,mb3.7,baz=128,slow=14,SNR=4.1						
WRA	**Warramunga Arr**	**31.40**	**254**	P	**P**	**14 27 01.1**	**0.0**
	0.2nm,0.5s,mb3.2,baz=86,slow=9.4,SNR=6.6						
ASAR	**Alice Springs**	**32.44**	**247**	P	**P**	**14 27 09.7**	**-0.5**
	0.4nm,0.7s,mb3.4,baz=72,slow=9.6,SNR=11						
ASAR				PcP	PcP	14 29 56.4	-0.3
	0.2nm,0.7s,baz=84,slow=2.6,SNR=4.2						
VNDA	**Vanda**	**64.24**	**181**	P	**P**	**14 31 13.3**	**-1.4**
	0.5nm,0.8s,mb3.6,baz=350,slow=6.5,SNR=5.3						
VNDA	**Vanda**	**64.24**	**181**	*e*P	**P**	**14 31 14.2**	**-0.6**
SBA	**Scott Base**	**64.53**	**180**	P	**P**	**14 31 16.9**	**+0.2**
	1.4nm,0.8s,mb4.0						
MKAR	**Makanchi Array**	**95.63**	**317**	P	**P**	**14 34 05.0**	**-0.1**
	0.5nm,0.6s,mb4.1,baz=88,slow=6.1,SNR=7.0						

JMA 27 14:32:05.7±0.2, 4393N×14806E, h79km, M3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.77**	**252**	P	Pn	14 32 34.9	+0.4
NEM2				*e*S	Sn	14 32 56.8	+0.4
JRA	**Rausu**	**2.12**	**271**	P	Pn	14 32 39.4	+0.2
JRA				*e*S	Sn	14 33 05.4	+0.7
JNK	**Nakash**	**2.44**	**263**	P	Pn	14 32 43.9	+0.4
JNK				*e*S	Sn	14 33 13.1	+0.6
JAK	**Akkeshi**	**2.62**	**250**	P	Pn	14 32 46.3	+0.4
JAK				*e*S	Sn	14 33 17.6	+0.9
JTKR	**Abashiri--Toko**	**3.00**	**272**	P	Pn	14 32 51.0	0.0
JAR	**Ashorobuto**	**3.18**	**260**	P	Pn	14 32 54.5	+1.1
JAR				*e*S	Sn	14 33 31.4	+1.1
JCH	**Churui**	**3.67**	**251**	P	Pn	14 33 00.7	+0.6
JCH				*e*S	Sn	14 33 42.7	+0.4
JKK2	**Kamakawa 2**	**3.84**	**271**	P	Pn	14 33 03.2	+0.8
JFR	**Furan**	**4.05**	**261**	P	Pn	14 33 06.8	+1.6
JNBK	**Urakawa-nobuka**	**4.22**	**249**	P	Pn	14 33 07.8	+0.2
JNBK				*e*S	Sn	14 33 56.2	+0.6
JKB	**Kayabe**	**5.55**	**251**	P	Pn	14 33 26.0	+0.3
JKB				*e*S	Sn	14 34 26.1	-2.0
JOT	**Ohata**	**5.76**	**246**	P	Pn	14 33 28.3	-0.3
JOT				*e*S	Sn	14 34 30.6	-2.7
JANG	**Nango**	**6.02**	**236**	P	Pn	14 33 32.1	-0.1
JANG				*e*S	Sn	14 34 37.2	-2.5

*ISCJB **27** 14:32:10.3±0.7, 3864N±003×2133E±004, h5km±7km, Error ellipse: s-maj=6.4km s-min=4.8km az=105.4*
*NEIC **27** 14:32:10.9, 3864N×2132E, h17km, MD3.4(ATH), After ATH.*
*THE **27** 14:32:10.9, 3866N×2132E, h0km, ML2.8*
*ATH **27** 14:32:10.9, 3864N×2132E, h17km±3km, MD3.4/8*
*CSEM **27** 14:32:11.1±0.2, 3866N×2132E, h2km, MD3.4, Error ellipse: s-maj=5.3km s-min=4.6km az=172.0*

ISC 27 14:32:11.3±0.6, 3865N±003×2131E±004, h11km±6km, n13, σ1§03/20, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.47**	**55**	*e*PB	**Pg**	**14 32 19.7**	**-0.8**
EVR				*e*SB	**Sg**	**14 32 27.7**	**+0.9**
LKD	**Levkas**	**0.52**	**277**	*e*Pg	**Pg**	**14 32 20.1**	**-1.5**
LKD				*e*Sg	**Sg**	**14 32 29.7**	**+1.3**
RLS	**Riolos of Patr**	**0.60**	**168**	*e*PN	**Pg**	**14 32 23.1**	**+0.1**
VLS	**Valsamata**	**0.74**	**231**	*e*PB	**Pg**	**14 32 24.0**	**-1.6**
VLS				*e*SN	**Sg**	**14 32 36.5**	**+1.2**
AGG	**Agios Georgios**	**0.88**	**64**	*e*Pg	**Pg**	**14 32 27.6**	**-0.6**
AGG				*e*Sg	**Sg**	**14 32 40.4**	**+0.7**
JAN	**Janina**	**1.07**	**340**	*e*PN	**Pn**	**14 32 31.2**	**-1.1**
MEV	**Metsovon**	**1.14**	**357**	*e*Pg	**Pg**	**14 32 31.7**	**-1.5**
MEV				*e*Sg	**Sg**	**14 32 48.6**	**+0.6**
IGT	**Igoumenitsa**	**1.17**	**319**	*e*Pg	**Pb**	**14 32 31.8**	**-1.8**
IGT				*e*Sg	**Sg**	**14 32 49.9**	**+1.0**
LKR	**Lokris**	**1.32**	**89**	*e*PN	**Pn**	**14 32 35.6**	**-0.1**
ITM	**Ithomi**	**1.54**	**162**	*e*PN	**Pn**	**14 32 39.6**	**+0.8**
KEK	**Kerkira**	**1.59**	**313**	*e*PN	**Pn**	**14 32 41.0**	**+1.6**
NEO	**Neokhori**	**1.63**	**66**	*e*PN	**Pn**	**14 32 40.3**	**+0.4**
LIT	**Litokhoron**	**1.71**	**32**	*e*Pb	**Pn**	**14 32 41.1**	**-0.1**
LIT				*e*Sb	**Sb**	**14 33 04.7**	**+0.3**

*IDC **27** 14:37:33.6±0.7, 942S×10833E, h0km, mb4.2/11, mb1 4.2/12, mb1mx4.1/18, mbtmp4.1/12, ML3.4/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/26, Error ellipse: s-maj=29.6km s-min=14.5km az=61.0*
*NEIC **27** 14:37:35.2±0.3, 945S×10830E, h10km, mb4.3/9, Error ellipse: s-maj=13.6km s-min=5.0km az=50.0*
*BJI **27** 14:37:35.2, 940S×10830E, h10km, mb4.5*
*ISCJB **27** 14:37:36.8±0.4, 945S±007×10835E±008, h33km, mb4.2/20, Error ellipse: s-maj=14.1km s-min=6.9km az=101.7*

ISC 27 14:37:39.0±0.4, 950S±008×10829E±010, h35km, n41, σ0§68/37, mb4.2/20, 1C-1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**2.59**	**50**	⇑*i*P	**Pn**	**14 38 14.9**	**-3.5**
YOGI				*i* S	**Sn**	**14 39 00.0**	**+11**
MBWA	**Marble Bar**	**15.99**	**138**	*e*P	**Pn**	**14 41 16.9**	**-4.4**
FITZ	**Fitzroy Crossi**	**18.88**	**119**	*e*P	**Pn**	**14 41 57.3**	**+0.2**
	3.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.88**	**119**	P	**Pn**	**14 41 57.3**	**+0.3**
	0.1nm,0.3s,baz=259,slow=5.2,SNR=6.5						
FITZ				LR	LR	14 48 17.4	
	comp=Z,59nm,19.2s,baz=78,slow=34						
KAKA	**Kakadu**	**23.91**	**100**	*e*P	**P**	**14 42 50.0**	**+0.5**
	3.9nm,0.6s,mb4.0						
BUKP	**Musuan**	**24.02**	**45**	*e*P	**P**	**14 42 51.7**	**+1.1**
NWAO	**Narrogin (SRO)**	**24.74**	**162**	P	**P**	**14 42 56.9**	**-0.2**
	5.7nm,1.0s,mb4.0,baz=315,slow=16,SNR=3.1						
NWAO	**Narrogin (SRO)**	**24.74**	**162**	P	**P**	**14 42 56.9**	**-0.2**
WRA	**Warramunga Arr**	**27.21**	**115**	P	**P**	**14 43 19.0**	**-0.4**
	1.5nm,0.6s,mb3.7,baz=286,slow=12,SNR=20						
WRA				PcP	PcP	14 46 40.3	+1.3
	0.5nm,0.6s,baz=298,slow=1.8,SNR=9.6						
WRAB	**Tennant Creek**	**27.21**	**115**	*e*P	**P**	**14 43 19.7**	**+0.2**
	4.9nm,0.9s,mb4.0						
WB2	**Warramunga Arr**	**27.22**	**115**	*e*P	**P**	**14 43 19.5**	**0.0**
ASPA	**Alice Springs**	**28.23**	**123**	*e*P	**P**	**14 43 28.9**	**+0.3**
AS31	**Alice Springs**	**28.23**	**123**	*e*P	**P**	**14 43 28.9**	**+0.3**
ASAR	**Alice Springs**	**28.23**	**123**	P	**P**	**14 43 28.8**	**+0.1**
	1.3nm,0.7s,mb3.6,baz=296,slow=8.6,SNR=15						
ASAR				PcP	PcP	14 46 42.8	+1.3
	0.7nm,0.6s,baz=306,slow=2.1,SNR=16						
CHTO	**Chiang Mai**	**29.60**	**342**	*e*P	**P**	**14 43 40.0**	**-0.8**
	7.5nm,1.1s,mb4.3						
STKA	**Stephens Creek**	**38.04**	**131**	⇓*i*P	**P**	**14 44 54.2**	**+0.2**
	3.9nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**38.04**	**131**	P	**P**	**14 44 54.3**	**+0.3**
	3.8nm,0.7s,mb4.2,baz=299,slow=9.2,SNR=11						
PKI	**Pulchoki**	**43.00**	**330**	*e*P	**P**	**14 45 35.1**	**+0.2**
GUN	**Gumba**	**43.05**	**330**	*e*P	**P**	**14 45 36.4**	**+1.1**
DMN	**Daman**	**43.19**	**329**	*e*P	**P**	**14 45 36.9**	**+0.5**
	16nm,0.7s,mb4.9						
KKN	**Kakani**	**43.25**	**330**	*e*P	**P**	**14 45 37.4**	**+0.5**
	22nm,0.8s,mb4.9						
XAN	**Xi'an**	**43.30**	**1**	P	**P**	**14 45 37.3**	**0.0**
XAN				AP	pP	14 45 47.8	+0.1
XAN				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
GKN	**Gorkha**	**43.74**	**329**	*e*P	**P**	**14 45 41.1**	**+0.2**
KOLN	**Koldanda**	**44.09**	**328**	*e*P	**P**	**14 45 44.4**	**+0.7**
GTA	**Gaotai**	**49.29**	**351**	*e*P	**P**	**14 46 25.3**	**+0.9**
GTA				AP	pP	14 46 29.5	-5.3
GTA				XP	sP	14 46 32.5	-6.5
GTA				AMB	AMB		
	comp=Z,3.0nm,1.4s,mb4.1						
MJAR	**Matsushiro Arr**	**53.74**	**30**	P	**P**	**14 46 55.5**	**-2.1**
	comp=Z,1.9nm,0.7s,mb4.1,baz=213,slow=7.2,SNR=12						
SONM	**Songino Array**	**57.10**	**358**	P	**P**	**14 47 22.0**	**+0.2**
	comp=Z,1.2nm,0.7s,mb4.1,baz=174,slow=8.3,SNR=11						
SONM				PcP	PcP	14 48 16.9	+0.5
	comp=Z,0.9nm,0.7s,baz=173,slow=5.4,SNR=4.0						
ULN	**Ulaanbaatar**	**57.12**	**359**	*e*P	**P**	**14 47 21.2**	**-0.8**
MKAR	**Makanchi Array**	**60.65**	**340**	P	**P**	**14 47 46.6**	**+0.1**
	comp=Z,6.8nm,0.6s,mb5.0,baz=137,slow=7.0,SNR=88						
MAW	**Mawson**	**65.37**	**197**	P	**P**	**14 48 17.5**	**-0.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=198,slow=2.2,SNR=6.9						
ZAL	**Zalesovo**	**66.25**	**345**	P	**P**	**14 48 22.6**	**-0.9**
	comp=Z,0.9nm,0.3s,mb4.2,baz=217,slow=3.2,SNR=5.1						
CHKZ	**Chkalovo**	**70.56**	**337**	*e*P	**P**	**14 48 50.2**	**-0.2**
	comp=Z,1.6nm,0.4s,mb4.3						
ZRNK	**Zerenda**	**70.64**	**336**	*e*P	**P**	**14 48 50.5**	**-0.4**
	comp=Z,2.2nm,0.9s,mb4.1						
VNDA	**Vanda**	**73.30**	**169**	*e*P	**P**	**14 49 06.3**	**-0.5**
BRTR	**Keskin Array B**	**84.43**	**312**	P	**P**	**14 50 08.5**	**+0.6**
	comp=Z,0.8nm,0.7s,mb4.0,baz=114,slow=6.0,SNR=5.6						
ARCES	**ARCESS Array B**	**96.31**	**339**	P	**P**	**14 51 02.8**	**-1.2**
	comp=Z,0.6nm,0.6s,mb4.2,baz=60,slow=7.2,SNR=5.0						
WMOK	**Wichita Mounta**	**144.72**	**40**	*e*PKPdf	PKPdf	14 57 11.7	-0.3
NCB	**Newcomb**	**145.59**	**3**	*e*PKPbc	PKPbc	14 57 14.5	+0.7
JCT	**Junction City**	**146.51**	**47**	*e*PKPbc	PKPbc	14 57 18.4	+1.9
MIAR	**Mount Ida**	**148.02**	**35**	*e*PKPbc	PKPbc	14 57 20.5	-0.2
WVT	**Waverly**	**149.70**	**26**	*e*PKPbc	PKPbc	14 57 26.1	+1.1

*IDC **27** 14:48:26.7±0.6, 945S×10822E, h0km, mb4.6/16, mb1 4.5/17, mb1mx4.5/20, mbtmp4.5/17, ML3.8/1, MS3.9/8, Ms1 3.8/8, ms1mx3.5/22, Error ellipse: s-maj=22.6km s-min=12.5km az=63.0*
*NEIC **27** 14:48:28.4±0.3, 946S×10830E, h10km, mb4.8/21, Error ellipse: s-maj=10.8km s-min=5.0km az=52.0*
*BJI **27** 14:48:28.3, 950S×10830E, h10km, mB4.9, mb4.8, Ms4.5, Msz4.2*
*ISCJB **27** 14:48:29.2±0.3, 954S±004×10823E±004, h28km, mb4.8/60, MS4.0/18, Error ellipse: s-maj=7.5km s-min=4.7km az=95.0*
*MOS **27** 14:48:32.5±0.9, 890S×10848E, h33km, mb5.1/15, Error ellipse: s-maj=21.3km s-min=9.7km az=104.7*

ISC 27 14:48:31.0±0.3, 957S±004×10819E±004, h28km, h28km±1.8km:pP-P, n131, σ1§00/120, mb4.8/60, MS4.0/18, 6C-1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.68**	**34**	P	**Pn**	**14 49 11.3**	**-1.0**
	253nm,1.3s						
YOGI	**Yogyakarta**	**2.71**	**50**	⇑*e*P	**Pn**	**14 49 14.9**	**+2.2**
YOGI				*i* S	**Sn**	**14 49 51.2**	**+6.6**
LEM	**Lembang**	**2.78**	**348**	P	**Pn**	**14 49 14.3**	**+0.6**
	897nm,0.8s						
JCJI	**Jatiwangi**	**3.06**	**1**	P	**Pn**	**14 49 15.2**	**-2.3**
	2μm,0.7s						
CBJI	**Citeko**	**3.40**	**337**	P	**Pn**	**14 49 17.7**	**-4.4**
	2μm,0.6s						
SBJI	**Serang**	**3.99**	**329**	P	**Pn**	**14 49 32.3**	**+2.0**
	209nm,0.9s						
KRKI	**Karangkates**	**4.44**	**72**	P	**Pn**	**14 49 36.4**	**0.0**
	2μm,0.9s						
NBBI	**Negara**	**6.46**	**80**	P	**Pn**	**14 50 05.3**	**+1.0**
	664nm,0.7s						
DNP	**Denpasar**	**6.99**	**83**	P	**Pn**	**14 50 12.0**	**+0.5**
	744nm,0.6s						
KSI	**Kapahiang**	**8.09**	**316**	P	**Pn**	**14 50 25.7**	**-0.9**
	332nm,0.8s						
PCI	**Palu**	**14.43**	**54**	P	**Pn**	**14 51 56.5**	**+3.1**
	65nm,1.1s						
MBWA	**Marble Bar**	**16.01**	**137**	*e*P	**Pn**	**14 52 08.9**	**-5.3**
	5.2nm,0.7s						
KULM	**Kulim**	**16.56**	**333**	*e*P	**Pn**	**14 52 23.0**	**+1.8**
KKM	**Kota Kinabalu**	**17.45**	**28**	*e*P	**Pn**	**14 52 30.9**	**-1.4**
FITZ	**Fitzroy Crossi**	**18.93**	**118**	*e*P	**Pn**	**14 52 49.4**	**-1.1**
	13nm,1.2s						
FITZ				*e*S	**Sn**	**14 56 02.0**	**-20**
FITZ	**Fitzroy Crossi**	**18.93**	**118**	P	**Pn**	**14 52 50.6**	**+0.1**
	0.2nm,0.3s,baz=294,slow=9.2,SNR=18						
BSI	**Banda Aceh**	**19.72**	**319**	P	**Pn**	**14 53 00.4**	**+0.5**
	87nm,1.0s						
AAI	**Ambon**	**20.70**	**75**	P	**P**	**14 53 08.7**	**-0.3**
	70nm,1.1s						
KAKA	**Kakadu**	**23.99**	**100**	*e*P	**P**	**14 53 43.0**	**-0.2**
	11nm,0.6s,mb4.5						
BUKP	**Musuan**	**24.14**	**45**	*e*P	**P**	**14 53 44.7**	**+0.2**
NWAO	**Narrogin (SRO)**	**24.70**	**162**	P	**P**	**14 53 50.5**	**+0.8**
	2.9nm,0.6s,mb4.0,baz=54,slow=19,SNR=4.6						
NWAO	**Narrogin (SRO)**	**24.70**	**162**	P	**P**	**14 53 50.5**	**+0.8**
WRA	**Warramunga Arr**	**27.27**	**115**	P	**P**	**14 54 12.9**	**0.0**
	5.1nm,0.6s,mb4.2,baz=287,slow=11,SNR=40						
WRA				PcP	PcP	14 57 33.2	+1.0
	1.3nm,0.5s,baz=299,slow=1.9,SNR=8.1						
WRAB	**Tennant Creek**	**27.27**	**115**	*e*P	**P**	**14 54 12.5**	**-0.4**
	10nm,0.8s,mb4.4						
WB2	**Warramunga Arr**	**27.28**	**115**	*e*P	**P**	**14 54 12.8**	**-0.2**
WB2				*e*PCP	PcP	14 57 33.4	+1.2
WB2				*e*S	S	14 59 26.3	+36
ASPA	**Alice Springs**	**28.27**	**123**	*e*P	**P**	**14 54 21.9**	**0.0**
ASPA				*e*PCP	PcP	14 57 36.1	+1.5
ASPA				*e*S	S	14 59 46.8	+41
AS31	**Alice Springs**	**28.28**	**123**	*e*P	**P**	**14 54 21.9**	**0.0**
AS31				*e*PcP	PcP	14 57 36.1	+1.5
AS31				*e*S	S	14 59 46.8	+41
ASAR	**Alice Springs**	**28.28**	**123**	P	**P**	**14 54 21.8**	**-0.1**
	5.7nm,0.8s,mb4.2,baz=301,slow=8.7,SNR=40						
ASAR				PcP	PcP	14 57 35.9	+1.3
	2.1nm,0.6s,baz=299,slow=2.0,SNR=20						
ASAR				LR	LR	15 04 45.2	
	comp=Z,113nm,18.3s,MS3.5,baz=166,slow=35						
QIZ	**Qiongzhong**	**28.46**	**3**	P	**P**	**14 54 24.3**	**+0.8**
QIZ				AP	pP	14 54 31.8	0.0
QIZ				S	**S**	**14 59 13.5**	**+4.3**
QIZ				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb4.1						
QIZ				AMB	AMB		
	comp=Z,74nm,2.7s,mb4.8						
QIZ				LR	LR		
	comp=N,210nm,16.0s						
QIZ				LR	LR		
	comp=Z,234nm,15.9s,MS3.9						
NANT	**Nan**	**29.14**	**345**	P	**P**	**14 54 28.0**	**-1.6**
CM31	**Chiang Mai Arr**	**29.30**	**342**	*e*P	**P**	**14 54 30.9**	**-0.1**
	comp=Z,4.3nm,0.5s,mb4.4						
CHG	**Chiang Mai**	**29.64**	**342**	⇑P	**P**	**14 54 34.3**	**+0.3**
	comp=Z,20nm,0.8s,mb4.9						
CHTO	**Chiang Mai**	**29.64**	**342**	*e*P	**P**	**14 54 33.6**	**-0.4**
	comp=Z,18nm,1.0s,mb4.8						
JAY	**Jayapura**	**33.06**	**80**	P	**P**	**14 55 04.4**	**+0.3**
	comp=Z,6.9nm,0.7s,mb4.7						
KMI	**Kunming**	**34.89**	**351**	P	**P**	**14 55 22.0**	**+2.0**
KMI				AP	pP	14 55 26.8	-1.5
KMI				PP	PP	14 56 42.0	+2.7
KMI				S	**S**	**15 00 56.0**	**+6.6**
KMI				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.7						
KMI				AMB	AMB		
	comp=Z,49nm,4.7s						
KMI				LR	LR		
	comp=N,303nm,16.3s,MS4.4						
KMI				LR	LR		
	comp=E,464nm,18.4s,MS4.4						
KMI				LR	LR		
	comp=Z,309nm,14.3s,MS4.2						
GYA	**Guiyang**	**35.84**	**358**	⇑*i*P	**P**	**14 55 28.3**	**+0.2**
GYA				AP	pP	14 55 35.3	-1.2
GYA				PP	PP	14 56 49.5	-0.3
GYA				S	**S**	**15 01 04.5**	**+0.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,4.0s						
GYA				LR	LR		
	comp=N,240nm,18.4s,MS4.2						
GYA				LR	LR		
	comp=E,270nm,17.9s,MS4.2						
GYA				LR	LR		
	comp=Z,260nm,18.0s,MS4.0						
STKA	**Stephens Creek**	**38.07**	**131**	*e*P	**P**	**14 55 47.7**	**+0.6**
	comp=Z,12nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**38.07**	**131**	P	**P**	**14 55 47.8**	**+0.7**
	comp=Z,14nm,0.7s,mb4.8,baz=306,slow=7.8,SNR=35						
STKA				PcP	PcP	14 58 01.8	-0.1
	comp=Z,1.4nm,0.7s,baz=108,slow=3.2,SNR=3.6						
CTA	**Charters Tower**	**38.16**	**110**	*e*P	**P**	**14 55 49.0**	**+1.1**
	comp=Z,3.9nm,0.6s,mb4.3						
WHN	**Wuhan**	**40.32**	**8**	P	**P**	**14 56 06.5**	**+0.6**
CD2	**Chengdu**	**40.47**	**354**	*e*P	**P**	**14 56 07.5**	**+0.4**
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
CD2				AMB	AMB		
	comp=Z,50nm,5.2s						
JOW	**Kunigami**	**41.10**	**28**	P	**P**	**14 56 11.9**	**-0.4**
	comp=Z,25nm,0.9s,mb4.8,baz=216,slow=7.2,SNR=12						
SSE	**Sheshan**	**42.31**	**17**	*e*P	**P**	**14 56 22.0**	**-0.2**
SSE				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,19nm,3.6s						
NJ2	**Nanjing**	**42.62**	**13**	*e*P	**P**	**14 56 24.3**	**-0.5**
NJ2				AP	pP	14 56 31.3	-2.0
NJ2				PP	PP	14 58 05.8	+2.0
NJ2				S	**S**	**15 02 45.0**	**-0.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,180nm,9.2s						
NJ2				LR	LR		
	comp=N,300nm,16.3s						
NJ2				LR	LR		
	comp=E,240nm,10.2s						
NJ2				LR	LR		
	comp=Z,280nm,15.0s,MS4.3						
PKI	**Pulchoki**	**43.01**	**330**	*e*P	**P**	**14 56 28.4**	**+0.5**
GUN	**Gumba**	**43.06**	**331**	*e*P	**P**	**14 56 29.4**	**+1.0**
	comp=Z,94nm,0.8s,mb5.6						
DMN	**Daman**	**43.20**	**329**	*e*P	**P**	**14 56 30.1**	**+0.7**
	comp=Z,63nm,0.8s,mb5.4						
KKN	**Kakani**	**43.26**	**330**	*e*P	**P**	**14 56 30.0**	**+0.1**
	comp=Z,50nm,0.8s,mb5.3						
KKN	**Kakani**	**43.26**	**330**	*e*P	**P**	**14 56 30.0**	**+0.1**
KKN				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.3						
XAN	**Xi'an**	**43.37**	**1**	P	**P**	**14 56 30.5**	**-0.3**
XAN				AP	pP	14 56 40.8	+1.5
XAN				AMB	AMB		
	comp=Z,28nm,1.0s,mb5.0						
GKN	**Gorkha**	**43.75**	**329**	*e*P	**P**	**14 56 34.1**	**+0.2**
	comp=Z,32nm,0.5s,mb5.3						
KOLN	**Koldanda**	**44.10**	**328**	*e*P	**P**	**14 56 36.9**	**+0.2**
	comp=Z,60nm,0.8s,mb5.4						
LZH	**Lanzhou**	**45.59**	**355**	*e*P	**P**	**14 56 49.5**	**+0.9**
LZH				AP	pP	14 57 00.3	+3.2
LZH				XP	sP	14 57 03.0	+2.5
LZH				AMB	AMB		
	comp=Z,39nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,120nm,4.0s						
LZH				LR	LR		
	comp=E,494nm,14.2s						
LZH				LR	LR		
	comp=Z,850nm,15.3s,MS4.8						
GTA	**Gaotai**	**49.34**	**351**	P	**P**	**14 57 19.0**	**+1.3**
GTA				AP	pP	14 57 26.3	0.0
GTA				PCP	PcP	14 58 41.0	+0.9
GTA				PP	PP	14 59 14.3	+2.5
GTA				PPP		15 00 08.5	
GTA				SCP	ScP	15 02 34.0	+0.7
GTA				PCS	PcS	15 02 35.5	-1.1
GTA				S	**S**	**15 04 26.5**	**+4.0**
GTA				SCS	ScS	15 07 07.5	-0.1
GTA				SS	SS	15 07 55.8	+1.5
GTA				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.7						
GTA				AMB	AMB		
	comp=Z,48nm,6.5s						
GTA				LR	LR		
	comp=N,93nm,21.7s,MS4.2						
GTA				LR	LR		
	comp=E,234nm,22.4s,MS4.2						
GTA				LR	LR		
	comp=Z,188nm,19.8s,MS4.1						
BJI	**Beijing**	**49.91**	**8**	*e*P	**P**	**14 57 21.3**	**-0.7**
BJI				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
BJI				LR	LR		
	comp=N,148nm,19.4s,MS4.2						
BJI				LR	LR		
	comp=E,161nm,15.9s,MS4.2						
BJI				LR	LR		
	comp=Z,36nm,28.9s						
HHC	**Hu-ho-hao-te**	**50.26**	**3**	*e*P	**P**	**14 57 26.0**	**+1.3**
HHC				AP	pP	14 57 33.0	-0.3
HHC				PCP	PcP	14 58 44.5	+1.1
HHC				PP	PP	14 59 23.5	+3.3
HHC				PCS	PcS	15 02 40.8	+0.3
HHC				S	**S**	**15 04 37.3**	**+2.0**
HHC				SCS	ScS	15 07 13.5	-0.4
HHC				SS	SS	15 08 08.5	-0.4
HHC				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.9						
HHC				AMB	AMB		
	comp=Z,62nm,3.6s						
HHC				LR	LR		
	comp=N,116nm,15.2s,MS4.3						
HHC				LR	LR		
	comp=E,195nm,14.2s,MS4.3						
HHC				LR	LR		
	comp=Z,124nm,15.3s,MS4.0						
HNR	**Honiara**	**51.01**	**94**	P	**P**	**14 57 31.7**	**+1.3**
	comp=Z,25nm,0.3s,mb5.5,baz=294,slow=19						
MAJO	**Matsushiro**	**53.85**	**30**	*e*P	**P**	**14 57 47.8**	**-3.6**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MAJO	**Matsushiro**	**53.85**	**30**	*e*P	**P**	**14 57 47.8**	**-3.6**
	comp=Z,4.2nm,0.7s,mb4.5						
MAT	**Matsushiro**	**53.85**	**30**	P

MOY	**Mondy**	**61.30**	**355**	*e*P		**P**	**14 58 44.0**	**+0.1**
YSS	**Yuzh-Sakhalins**	**64.14**	**26**	*e*P		**P**	**14 59 01.0**	**-1.8**
YSS				*e*			14 59 11.5	
YSS				pmax	pmax			
	comp=Z,30nm,1.0s,mb5.3							
YSS	**Yuzh-Sakhalins**	**64.14**	**26**	*e*P		**P**	**14 59 00.0**	**-2.8**
	comp=Z,24nm,1.1s,mb5.2							
YSS				*e*			14 59 12.0	
MAW	**Mawson**	**65.28**	**197**	*e*P		**P**	**14 59 10.4**	**+0.2**
	comp=Z,1.8nm,0.6s,mb4.3							
MAW	**Mawson**	**65.28**	**197**	P		**P**	**14 59 10.8**	**+0.6**
	comp=Z,1.8nm,0.4s,mb4.5,baz=48,slow=6.1,SNR=10							
MAW	**Mawson**	**65.28**	**197**	*e*P		**P**	**14 59 10.4**	**+0.2**
MAW				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ZAL	**Zalesovo**	**66.29**	**345**	P		**P**	**14 59 15.6**	**-1.1**
	comp=Z,4.5nm,1.0s,mb4.4,baz=342,slow=3.1,SNR=14							
ZAL				LR	LR		15 31 48.1	
	comp=Z,90nm,20.0s,MS4.0,baz=78,slow=39							
ZAL	**Zalesovo**	**66.29**	**345**	P		**P**	**14 59 15.6**	**-1.1**
ZAL				LR	LR		15 31 48.1	
KRAR	**Krasnoyarsk**	**66.57**	**351**	*e*P		**P**	**14 59 18.0**	**-0.5**
KRAR				pmax	pmax			
	comp=Z,34nm,1.3s,mb5.2							
BOD	**Bodaibo**	**67.32**	**3**	*e*P		**P**	**14 59 21.7**	**-1.6**
BOD				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.7							
VOSK	**Vostochnaya**	**69.71**	**337**	P		**P**	**14 59 37.4**	**-0.8**
VOSK				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2							
BVA0	**Borovoye Array**	**70.18**	**337**	P		**P**	**14 59 40.4**	**-0.7**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.8							
BVAR	**Borovoye Array**	**70.18**	**337**	LR	LR		15 35 30.7	
	comp=Z,71nm,18.8s,MS3.9,baz=317,slow=40							
CHKZ	**Chkalovo**	**70.59**	**337**	*e*P		**P**	**14 59 43.1**	**-0.5**
CHKZ				*e*			14 59 53.6	
CHKZ				pmax	pmax			
	comp=Z,11nm,0.9s,mb4.8							
CHKZ	**Chkalovo**	**70.59**	**337**	*e*P		**P**	**14 59 43.1**	**-0.5**
	comp=Z,11nm,0.9s,mb4.8							
CHKZ				*e*			14 59 53.6	
ZRNK	**Zerenda**	**70.67**	**336**	*e*P		**P**	**14 59 43.4**	**-0.7**
ZRNK				*e*	pP		14 59 53.5	+0.5
ZRNK				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.5							
ZRNK	**Zerenda**	**70.67**	**336**	*e*P		**P**	**14 59 43.4**	**-0.6**
	comp=Z,4.9nm,0.8s,mb4.5							
ZRNK				*e*	pP		14 59 53.5	+0.5
KMBO	**Kilima Mbogo**	**71.02**	**272**	LR	LR		15 25 28.1	
	comp=Z,74nm,20.1s,MS3.9,baz=84,slow=31							
AB31	**Akbulak array**	**72.21**	**329**	P		**P**	**14 59 53.3**	**-0.1**
AB31				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.3							
VNDA	**Vanda**	**73.24**	**169**	P		**P**	**14 59 59.5**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.9,baz=315,slow=6.3,SNR=12							
VNDA	**Vanda**	**73.24**	**169**	*e*P		**P**	**14 59 59.5**	**0.0**
VNDA				pmax	pmax			
	comp=Z,3.0nm,0.9s							
VNDA	**Vanda**	**73.24**	**169**	*e*P		**P**	**14 59 59.5**	**0.0**
	comp=Z,2.5nm,0.9s,mb4.1							
YAK	**Yakutsk**	**73.32**	**10**	*e*P		**P**	**14 59 58.5**	**-1.5**
YAK				*e*			15 00 08.9	
YAK				pmax	pmax			
	comp=Z,20nm,1.1s,mb5.0							
YAK				pmax	pmax			
	comp=N,8.0nm,1.3s							
YAK				pmax	pmax			
	comp=E,4.0nm,1.4s							
YAK	**Yakutsk**	**73.32**	**10**	*e*P		**P**	**14 59 58.3**	**-1.7**
	comp=E,23nm,0.8s,mb5.2							
GNI	**Garni**	**76.59**	**315**	*e*P		**P**	**15 00 21.4**	**+2.5**
GNI				pmax	pmax			
	comp=Z,12nm,1.7s							
MA2	**Magadan**	**76.85**	**21**	*e*P		**P**	**15 00 19.7**	**-0.6**
MA2				*e*			15 00 30.4	
MA2				pmax	pmax			
	comp=Z,14nm,1.0s,mb4.8							
MA2	**Magadan**	**76.85**	**21**	*e*P		**P**	**15 00 19.7**	**-0.6**
	comp=Z,14nm,1.0s,mb4.8							
MA2				*e*			15 00 30.4	
ARU	**Arti**	**77.43**	**334**	⇓*i*P		**P**	**15 00 23.1**	**-0.5**
ARU				*e*	pP		15 00 33.1	+0.5
ARU				*e*			15 03 17.2	
ARU				*e*PPP			15 05 01.9	
ARU				*e*S	S		15 10 11.2	-1.2
ARU				*e*SS	SS		15 15 13.1	+1.7
ARU				pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.6							
BOSA	**Boshof**	**79.32**	**243**	LR	LR		15 32 07.2	
	comp=Z,95nm,19.1s,MS4.2,baz=156,slow=33							
KIV	**Kislovodsk**	**79.56**	**318**	*e*P		**P**	**15 00 36.0**	**+0.6**
KIV				*e*			15 03 34.5	
KIV				*e*S	S		15 10 26.5	-8.8
KIV				pmax	pmax			
	comp=Z,13nm,1.2s,mb4.7							
VRHR	**Novokhopersk**	**83.16**	**324**	*e*P		**P**	**15 00 54.5**	**+0.1**
VRHR				pmax	pmax			
	comp=Z,20nm,0.5s,mb5.4							
VRHR				pmax	pmax			
	comp=N,10.0nm,0.6s							
VRHR				pmax	pmax			
	comp=E,10.0nm,0.9s							
ANN	**Anapa**	**83.37**	**317**	*e*P		**P**	**15 01 02.7**	**+7.2**
ANN				pmax	pmax			
	comp=Z,28nm,1.1s,mb5.2							
BRTR	**Keskin Array B**	**84.41**	**312**	P		**P**	**15 01 01.5**	**+0.7**
	comp=Z,3.2nm,1.0s,mb4.4,baz=134,slow=7.0,SNR=14							
SNAA	**Sanae**	**87.44**	**197**	*e*P		**P**	**15 01 15.9**	**+0.1**
SNAA				*e*			15 01 19.8	
SNAA				*e*	pP		15 01 24.0	-0.9
SNAA				*e*			17 29 59.8	
SNAA				*e*			17 30 01.6	
SNAA				*e*			17 32 59.6	
SNAA				*e*			17 33 11.9	
OBN	**Obninsk**	**87.51**	**327**	⇑*e*P		**P**	**15 01 15.8**	**-0.3**
OBN				*e**PP	pP		15 01 26.3	+1.1
OBN				*e*			15 04 39.6	
OBN				pmax	pmax			
	comp=Z,26nm,1.2s,mb5.3							
BILL	**Bilibino**	**87.53**	**19**	⇑*e*P		**P**	**15 01 14.5**	**-1.7**
BILL				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.9							
VNA1	**Neumayer--Stat**	**89.47**	**197**	*e*P		**P**	**15 01 24.0**	**-1.4**
VNA1				*e*			15 01 27.3	
VNA1				*e*			17 30 06.2	
VNA1				*e*			17 30 10.8	
VNA1				*e*			17 33 07.2	
VNA3	**Neumayer Olymp**	**89.59**	**197**	*e*P		**P**	**15 01 26.4**	**+0.4**
VNA3				*e*			15 01 29.2	
VNA3				*e*	pP		15 01 36.2	+1.1
VNA3				*e*			15 01 38.0	
VNA3				*e*			17 30 07.0	
VNA3				*e*			17 30 28.2	
VNA3				*e*			17 30 39.9	
VNA3				*e*			17 33 09.5	
VNA3				*e*			17 33 20.9	
VNA3				*e*			17 33 25.7	
AKASG	**Malin Array Be**	**90.42**	**321**	P		**P**	**15 01 28.8**	**-1.0**
	comp=Z,0.3nm,0.3s,mb4.0,baz=86,slow=4.5,SNR=4.8							
AKASG				PP	PP		15 05 02.4	-2.0
	comp=Z,0.4nm,0.5s,baz=95,slow=5.2,SNR=5.5							
FINES	**FINESS Array B**	**94.58**	**331**	P		**P**	**15 01 48.6**	**-0.4**
	comp=Z,0.8nm,0.6s,mb4.3,baz=90,slow=1.9,SNR=6.6							
FINES				LR	LR		15 46 52.2	
	comp=Z,42nm,18.1s,MS3.9,baz=92,slow=37							
ARCES	**ARCESS Array B**	**96.34**	**339**	P		**P**	**15 01 56.0**	**-1.1**
	comp=Z,1.2nm,0.8s,mb4.4,baz=101,slow=6.3,SNR=11							
ARCES				LR	LR		15 51 01.1	
	comp=Z,54nm,18.8s,MS4.0,baz=286,slow=39							
ARCES	**ARCESS Array B**	**96.34**	**339**	P		**P**	**15 01 56.0**	**-1.1**
ARCES				LR	LR		15 51 01.1	
YKA	**Yellowknife Ar**	**118.83**	**21**	PKiKP	PKiKP		15 07 16.3	-0.4
	comp=Z,1.0nm,0.7s,baz=333,slow=2.0,SNR=8.8							
ANMO	**Albuquerque**	**139.52**	**46**	⇑*i*PKiKP	PKPdf		15 07 59.5	+3.7
WMOK	**Wichita Mounta**	**144.84**	**40**	*e*PKiKP	PKPdf		15 08 05.4	+0.1
LONY	**Lake Ozonia**	**145.00**	**3**	*e*PKP	PKPdf		15 08 05.4	-0.1
NCB	**Newcomb**	**145.66**	**3**	*e*PKP	PKPdf		15 08 07.7	+1.0
NCB				*e*			15 08 18.1	
JCT	**Junction City**	**146.63**	**47**	*e*PKP2	PKPab		15 08 11.4	+0.4
BINY	**Binghamton**	**147.29**	**6**	*e*PKPbc	PKPbc		15 08 12.6	+0.9
ACSO	**Alum Creek Sta**	**147.89**	**16**	*e*PKPbc	PKPbc		15 08 14.0	+0.6
MIAR	**Mount Ida**	**148.14**	**35**	*e*PKP2	PKPab		15 08 15.3	-1.7
SSPA	**Standing Stone**	**148.59**	**9**	*e*PKPbc	PKPbc		15 08 16.0	+0.8
WCI	**Wyandotte Cave**	**148.63**	**22**	*e*PKP2	PKPab		15 08 16.1	-2.9
HKT	**Hockley**	**149.75**	**45**	*e*PKP2	PKPab		15 08 20.2	-3.3
WVT	**Waverly**	**149.81**	**26**	*e*PKP2	PKPab		15 08 19.0	-4.8
OXF	**Oxford**	**150.40**	**30**	*e*PKP2	PKPab		15 08 20.6	-5.6
PLAL	**Pickwick Lake**	**150.66**	**28**	*e*PKPbc	PKPbc		15 08 20.4	+0.1
FWV	**Forest Hill**	**150.95**	**15**	*e*PKPbc	PKPbc		15 08 21.5	+0.5
ELN	**Prospectdale**	**151.30**	**15**	*e*PKPbc	PKPbc		15 08 22.2	+0.3
SWET	**Sewanee**	**151.40**	**25**	*e*PKPbc	PKPbc		15 08 22.4	+0.4
CPCT	**Cooper Cave**	**151.75**	**22**	*e*PKPbc	PKPbc		15 08 23.9	+1.0

CSEM ***27*** *15:06:57.5±0.1, 3154N×57.14E, h14km, ML3.7, Error ellipse: s-maj=1.6km s-min=1.0km az=155.0*
ISCJB ***27*** *15:06:58.0±0.3, 3167N±002×5706E±002, h10km, mb3.2/3, Error ellipse: s-maj=3.5km s-min=2.5km az=3.5*
NEIC ***27*** *15:06:58.1, 3152N×57.15E, h14km, ML3.7(THR), MN3.9(TEH), After THR.*
THR ***27*** *15:06:58.5±0.8, 3150N×57.17E, h18km±6km, ML3.7*
IDC ***27*** *15:06:59.2±1.7, 3165N×57.10E, h0km, mb3.3/4, mb1 3.5/6, mb1mx3.3/25, mbtmp3.4/6, ML3.1/2, Error ellipse: s-maj=32.8km s-min=29.1km az=134.0*
TEH ***27*** *15:07:00.0, 3157N×57.12E, h9km, Mn3.9*

ISC 27 15:06:59.2±0.3, 3159N±002×5711E±002, h10km, n46, σ1$07/70, mb3.2/3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBAF	**Bafgh**	**1.32**	**271**	*e*Pg	**Pn**	**15 07 21.9**	**-1.8**
IBAF				*e*Sg	**Sb**	**15 07 40.8**	**-0.2**
KRBR	**Kerman**	**1.63**	**191**	*e*PG	**Pn**	**15 07 27.1**	**-0.8**
KRBR				*e*SG	**Sn**	**15 07 48.0**	**-0.8**
KRBR				AML	AML	15 07 52.7	
	comp=E,2μm,0.4s						
KRBR				AML	AML	15 07 53.2	
	comp=N,1μm,0.5s						
KRBR	**Kerman**	**1.63**	**191**	*e*Pg	**Pn**	**15 07 27.0**	**-0.9**
KRBR				*e*Sg	**Sn**	**15 07 48.0**	**-0.9**
	SNR=92						
IKOO		**1.81**	**62**	*e*Pn	**Pn**	**15 07 30.2**	**-0.3**
IKOO				*e*Sg	**Sg**	**15 07 56.3**	**-1.2**
ITEG		**1.91**	**46**	*e*Pn	**Pn**	**15 07 31.6**	**-0.2**
ITEG				*e*Sg	**Sg**	**15 07 58.4**	**-2.1**
IMEH	**Mehriz**	**2.14**	**265**	*e*Pn	**Pn**	**15 07 35.3**	**+0.3**
IMEH				*e*Sg	**Sg**	**15 08 06.3**	**-1.8**
ICHK	**Chekchek**	**2.39**	**287**	*e*Pn	**Pn**	**15 07 39.6**	**+1.2**
IDAH		**2.60**	**63**	*e*Pn	**Pn**	**15 07 41.8**	**+0.4**
IDAH				*e*Sg	**Sg**	**15 08 21.6**	**-1.3**
IMON		**2.69**	**53**	*e*Pn	**Pn**	**15 07 43.4**	**+0.9**
IMON				*e*Sg	**Sg**	**15 08 24.8**	**-0.8**
ISAD	**Sadrabad**	**2.94**	**277**	*e*Sn	**Sn**	**15 08 20.6**	**-0.7**
ISAD				*e*Sg	**Sg**	**15 08 32.0**	**-1.6**
ZHSF	**Zahedan**	**3.72**	**121**	*e*Pn	**Pn**	**15 07 55.6**	**-1.1**
ZHSF				*e*SG	**Sb**	**15 08 51.8**	**+1.6**
ZHSF				AML	AML	15 09 02.4	
	comp=N,118nm,0.6s						
ZHSF				AML	AML	15 09 04.1	
	comp=E,86nm,0.6s						
ZHSF	**Zahedan**	**3.72**	**121**	*e*Pn	**Pn**	**15 07 56.0**	**-0.7**
ZHSF				*e*Sg	**Sb**	**15 08 51.0**	**+0.9**
NASN	**Na'in**	**3.84**	**289**	*e*Pn	**Pn**	**15 08 00.7**	**+2.3**
NASN				*e*SG	**Sg**	**15 09 00.4**	**-2.3**
NASN				AML	AML	15 09 10.1	
	comp=N,80nm,0.4s						
NASN				AML	AML	15 09 14.1	
	comp=E,88nm,0.6s						
NASN	**Na'in**	**3.84**	**289**	*e*Pn	**Pn**	**15 07 59.0**	**+0.6**
NASN				*e*Sg	**Sg**	**15 08 59.0**	**-3.7**
IPAR	**Pars**	**3.91**	**245**	*e*Pn	**Pn**	**15 08 00.0**	**+0.7**
IPAR				*e*Sg	**Sg**	**15 09 03.9**	**-0.8**
ISRV	**Sarvestan**	**4.09**	**239**	*e*Pn	**Pn**	**15 08 01.9**	**+0.1**
ISRV				*e*Sg	**Sg**	**15 09 09.4**	**-1.2**
IGAR	**Garneh**	**4.23**	**280**	*e*Sg	**Sg**	**15 09 14.6**	**-0.5**
BNDS	**Bandar-Abbas**	**4.25**	**191**	*e*PN	**Pn**	**15 08 03.6**	**-0.4**
BNDS	**Bandar-Abbas**	**4.25**	**191**	*e*Pn	**Pn**	**15 08 03.0**	**-1.0**
IZEF	**Zefreh**	**4.26**	**289**	*e*Pn	**Pn**	**15 08 04.9**	**+0.8**
IANJ	**Anjiloo**	**4.70**	**326**	*e*Pn	**Pn**	**15 08 10.5**	**+0.3**
GHIR	**Ghir-Karzin**	**4.86**	**228**	*e*PN	**Pn**	**15 08 12.8**	**+0.4**
GHIR	**Ghir-Karzin**	**4.86**	**228**	*e*Pn	**Pn**	**15 08 12.0**	**-0.4**
IMOG	**Moghan**	**4.88**	**22**	*e*Pn	**Pn**	**15 08 13.0**	**+0.4**
IMOG				*e*Sg	**Sg**	**15 09 35.0**	**-0.8**
ISFB	**Sefidab**	**4.94**	**305**	*e*Pn	**Pn**	**15 08 13.7**	**+0.2**
ISFB				*e*Sg	**Sg**	**15 09 39.5**	**+1.6**
IKLH	**Kalahroud**	**4.99**	**292**	*e*Pn	**Pn**	**15 08 14.8**	**+0.7**
IPAY	**Payeh**	**5.10**	**17**	*e*Pn	**Pn**	**15 08 16.5**	**+0.9**
ILAS	**Lasjerd**	**5.14**	**319**	*e*Pn	**Pn**	**15 08 16.8**	**+0.6**
ILAS				*e*Sg	**Sg**	**15 09 45.1**	**+1.0**
ISHM	**Shahmirzad**	**5.28**	**324**	*e*Pn	**Pn**	**15 08 18.7**	**+0.6**
ISHM				*e*Sg	**Sg**	**15 09 47.7**	**-1.0**
IMYA	**Miamay**	**5.36**	**27**	*e*Pn	**Pn**	**15 08 19.3**	**+0.1**
IMYA				*e*Sg	**Sg**	**15 09 50.0**	**-1.1**
IPIR	**Pirpir**	**5.39**	**283**	*e*Pn	**Pn**	**15 08 20.2**	**+0.6**
IPIR				*e*Sg	**Sg**	**15 09 50.1**	**-2.1**
IKIA	**Kiasar**	**5.42**	**329**	*e*Pn	**Pn**	**15 08 22.3**	**+2.2**
IFIR	**Firoozkooh**	**5.44**	**319**	*e*Pn	**Pn**	**15 08 20.3**	**0.0**
IFIR				*e*Sg	**Sg**	**15 09 54.4**	**+0.6**
IVRN	**Varamin**	**5.65**	**308**	*e*Pn	**Pn**	**15 08 23.5**	**+0.3**
IVRN				*e*Sg	**Sg**	**15 10 01.0**	**+0.5**
IDMV	**Damavand**	**5.81**	**315**	*e*Pn	**Pn**	**15 08 26.9**	**+1.4**
IDMV				*e*Sg	**Sg**	**15 10 05.6**	**-0.3**
IAFJ	**Afjeh**	**6.20**	**315**	*e*Pn	**Pn**	**15 08 31.0**	**+0.3**
IMHD	**Mahdasht**	**6.75**	**309**	*e*Pn	**Pn**	**15 08 38.7**	**+0.3**
WSAR	**Wadi Sarin**	**8.42**	**170**	Pn	**Pn**	**15 09 02.9**	**+1.6**
	comp=E,0.1nm,0.3s,baz=233,slow=10,SNR=3.0						
WSAR	**Wadi Sarin**	**8.42**	**170**	Pn	**Pn**	**15 09 02.9**	**+1.6**
AKTK	**Aktyubinsk**	**18.84**	**2**	P	**Pn**	**15 11 18.1**	**-1.6**
AKTK	**Aktyubinsk**	**18.84**	**2**	P	**Pn**	**15 11 18.1**	**-1.7**
AKTO	**Aktyubinsk**	**18.84**	**2**	P	**Pn**	**15 11 18.1**	**-1.6**
	comp=E,0.1nm,0.3s,baz=180,slow=12,SNR=5.4						
BRTR	**Keskin Array B**	**20.69**	**300**	P	**P**	**15 11 40.7**	**+1.3**
	comp=E,0.7nm,0.7s,baz=121,slow=11,SNR=5.3						
BVAR	**Borovoye Array**	**23.49**	**20**	P	**P**	**15 12 10.6**	**+1.3**
	comp=E,0.5nm,0.5s,mb3.2,baz=202,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**24.58**	**45**	P	**P**	**15 12 20.9**	**+1.5**
	comp=E,0.3nm,0.5s,mb3.1,baz=231,slow=7.4,SNR=5.1						
ESDC	**Sonseca Array**	**49.46**	**297**	P	**P**	**15 15 51.2**	**+1.6**
	comp=E,0.1nm,0.3s,mb3.3,baz=66,slow=8.3,SNR=5.1						

CSEM ***27*** *15:23:48.9±0.3, 3849N×2832W, h8km±3km, MD2.7, Error ellipse: s-maj=4.1km s-min=1.1km az=27.0, After PDA*
PDA ***27*** *15:23:48.9±0.3, 3849N×2832W, h8km±3km, MD2.7, Error ellipse: s-maj=4.1km s-min=1.1km az=27.0*

SVSA 27 15:23:48.9±0.3, 3849N×2832W, h8km±3km, MD2.7, Error ellipse: s-maj=4.1km s-min=1.1km az=27.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PICO	**Pico**	**0.08**	**281**	*e*P	**Pg**	15 23 51.0	+0.1
PICO				*e*S	Sg	15 23 52.5	+0.1
PID	**Ribeirinha**	**0.17**	**105**	*e*P	Pg	15 23 52.3	-0.1
PID				*e*S	Sg	15 23 54.6	-0.1
ROSA	**Rosais**	**0.24**	**15**	*e*P	Pg	15 23 53.5	-0.2
ROSA				*e*S	Sg	15 23 56.7	-0.3
CALA	**Caldeira**	**0.31**	**288**	*e*S	Sg	15 23 58.3	-0.9

NNC 27 15:33:29.5±2.8, 5239N×8668E, h0km, mb4.0, mpv4.0, 3C-2D, Error ellipse: s-maj=26.9km s-min=13.2km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK09	**Makanchi Array**	**6.30**	**209**	⇑Pn	Pn	15 35 03.5	-0.2
	4.1nm,0.3s,baz=30,slow=13						
MK09				⇓Sn	Sn	15 36 19.2	+2.8
	3.0nm,0.4s,baz=33,slow=30						
MK09				⇑Lg		15 36 46.8	
	9.9nm,0.9s,baz=23,slow=32						
VOSK	**Vostochnaya**	**9.57**	**278**	Sn	Sn	15 37 37.4	+0.7
CHKZ	**Chkalovo**	**9.76**	**284**	⇑Pn	Pn	15 35 51.7	+0.5
	0.4nm,0.2s						
CHKZ				⇓Sn	Sn	15 37 42.2	+0.7
	0.6nm,0.2s						
ZRNK	**Zerenda**	**10.75**	**280**	Pn	Pn	15 36 04.9	+0.2
ZRNK				Sn	Sn	15 38 06.7	+1.0

MOS 27 15:57:08.5±0.8, 4421N×4261E, h11km, mb3.5/1, 2C-2D, Error ellipse: s-maj=42.1km s-min=13.7km az=110.8,

Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEYR	**Belyy Ugol+**	**0.25**	**143**	*i* PG	Pg	15 57 15.0	+1.3
BEYR				*e*S	Sg	15 57 17.8	+0.7
KIV	**Kislovodsk**	**0.26**	**168**	*i* PG	Pg	15 57 15.5	+1.6
KIV				*e*S	Sg	15 57 18.5	+1.0
KIV0	**Kislovodsk Arr**	**0.26**	**166**	⇑*e*PG	Pg	15 57 15.4	+1.5
KIV0				*e*S	Sg	15 57 18.6	+1.1
PYA	**Pyatigorsk**	**0.37**	**119**	⇑*e*PG	Pg	15 57 16.8	+1.0
PYA				*e*S	Sg	15 57 22.0	+1.2
SHAR	**Shatzhatmas**	**0.47**	**175**	⇓*i*PG	Pg	15 57 19.4	+1.7
SHAR				*i* S	Sg	15 57 25.3	+1.3
KUBR	**Kubataba**	**0.71**	**125**	⇓*e*PG	Pg	15 57 24.0	+1.8
KUBR				*i* S	Sg	15 57 33.5	+2.0

BJI ***27*** *16:11:31.5, 17.15S×173.34W, h23km, mB5.0, mb4.9, Ms4.6, Msz4.1*
IDC ***27*** *16:11:34.1±0.9, 1637S×17397W, h0km, mb4.3/8, mb1 4.5/10, mb1mx4.3/17, mbtmp4.4/10, ML3.8/2, MS3.5/4, Ms1 3.5/4, ms1mx2.9/27, Error ellipse: s-maj=29.3km s-min=19.5km az=128.0*
ISCJB ***27*** *16:11:35.1±4.6, 1645S±008×1739W±0.1, h17km±35km, mb4.5/14, MS3.6/6, Error ellipse: s-maj=19.0km s-min=13.1km az=33.6*
NEIC ***27*** *16:11:37.4±3.4, 1640S×17392W, h24km±25km, mb4.4/4, Error ellipse: s-maj=13.3km s-min=9.4km az=123.0*

ISC 27 16:11:37.9±4.6, 1645S±008×1739W±01, h24km±34km, n31, σ0$61/28, mb4.5/14, MS3.6/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.25**	**39**	Pn	**Pn**	**16 12 27.5**	**+0.2**
	74nm,0.3s,baz=22,slow=2.1,SNR=313						
AFI				Sn	**Sn**	**16 12 59.8**	**-5.3**
	242nm,0.3s,baz=275,slow=18,SNR=20						
AFI	**Afiamalu**	**3.25**	**39**	*e*P	**Pn**	**16 12 27.3**	**0.0**
AFI				S	**Sn**	**16 12 57.4**	**-7.8**
RAR	**Rarotonga**	**14.17**	**112**	Pn	**Pn**	**16 14 56.7**	**-0.3**
	3.7nm,0.3s,baz=250,slow=11,SNR=10						
MXZ	**Matakaoa Point**	**22.13**	**197**	PN	**P**	**16 16 32.9**	**+1.3**
MWZ	**Matawai**	**23.07**	**197**	PN	**P**	**16 16 41.1**	**-0.5**
URZ	**Urewera**	**23.12**	**198**	P	**P**	**16 16 41.5**	**-0.7**
	31nm,0.5s,mb5.0,baz=48,slow=5.7,SNR=22						
URZ				LR	LR	16 24 57.0	
	comp=Z,122nm,18.1s,MS3.4,baz=114,slow=35						
URZ	**Urewera**	**23.12**	**198**	PN	**P**	**16 16 41.8**	**-0.4**
BFZ	**Birch Farm**	**25.61**	**198**	PN	**P**	**16 17 05.2**	**-0.1**
HNR	**Honiara**	**26.42**	**282**	LR	LR	16 25 09.3	
	comp=Z,52nm,19.7s,MS3.1,baz=178,slow=31						
RPZ	**Rata Peaks**	**30.04**	**202**	P	**P**	**16 17 45.6**	**+0.7**
	6.5nm,0.5s,mb4.4,baz=45,slow=7.1,SNR=3.9						
STKA	**Stephens Creek**	**43.11**	**241**	*e*P	**P**	**16 19 36.1**	**-0.1**
	3.8nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**43.11**	**241**	P	**P**	**16 19 36.4**	**+0.2**
	4.8nm,0.9s,mb4.2,baz=102,slow=7.1,SNR=7.1						
STKA				LR	LR	16 34 56.4	
	comp=Z,64nm,19.3s,MS3.5,baz=204,slow=33						
WB2	**Warramunga Arr**	**49.15**	**258**	*e*P	**P**	**16 20 23.5**	**-0.2**
WRA	**Warramunga Arr**	**49.16**	**258**	P	**P**	**16 20 23.3**	**-0.4**
	0.5nm,0.7s,mb3.6,baz=91,slow=7.0,SNR=8.8						
AS31	**Alice Springs**	**49.35**	**253**	*e*P	**P**	**16 20 25.1**	**-0.1**
ASAR	**Alice Springs**	**49.35**	**253**	P	**P**	**16 20 25.1**	**-0.1**
	3.5nm,0.7s,mb4.5,baz=89,slow=7.9,SNR=102						
ASPA	**Alice Springs**	**49.35**	**253**	*e*P	**P**	**16 20 25.1**	**-0.1**
SBA	**Scott Base**	**62.17**	**185**	*e*P	**P**	**16 21 58.0**	**+0.8**
	5.3nm,1.0s,mb4.6						
VNDA	**Vanda**	**62.29**	**186**	P	**P**	**16 21 58.7**	**+0.7**
	2.2nm,0.8s,mb4.3,baz=14,slow=6.6,SNR=14						
VNDA	**Vanda**	**62.29**	**186**	*e*P	**P**	**16 21 58.3**	**+0.4**
	2.9nm,1.0s,mb4.4						
QSPA	**South Pole Qui**	**73.60**	**180**	*e*P	**P**	**16 23 08.0**	**-1.1**
	4.3nm,1.1s,mb4.3						
NJ2	**Nanjing**	**80.43**	**307**	*e*P	**P**	**16 23 48.3**	**+0.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
PDAR	**Pinedale Array**	**83.36**	**42**	P	**P**	**16 24 03.1**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.60**	**167**	P		P		16 48 03.2	-0.2
	0.3nm,0.4s,baz=349,slow=10,SNR=7.2								
ASAR	**Alice Springs**	**26.13**	**170**	P		P		16 48 37.1	+0.2
	0.5nm,0.6s,baz=351,slow=8.1,SNR=16								
STKA	**Stephens Creek**	**35.91**	**162**	⇑*iP*		P		16 50 03.8	+0.6
	1.4nm,0.3s								
STKA	**Stephens Creek**	**35.91**	**162**	P		P		16 50 03.7	+0.6
	1.9nm,0.4s,baz=349,slow=6.9,SNR=19								

ISCJB ***27*** *16:45:59.3±2.7,52S±0.1×1466E±0.2,h111km±23km, mb3.7/6,Error ellipse: s-maj=26.1km s-min=21.7km az=141.4*

IDC ***27*** *16:46:01.0±3.4,521S×14657E,h113km±30km,mb3.6/6, mb1 3.8/8,mb1mx3.7/13,mbtmp4.0/8,MS2.6/1,Ms1 2.6/1, ms1mx2.0/21,Error ellipse: s-maj=36.3km s-min=23.1km az=80.0*

NEIC ***27*** *16:46:00.8±2.5,5.15S×14659E,h116km±21km,mb4.2/4, Error ellipse: s-maj=23.8km s-min=20.2km az=105.0*

ISC 27 16:46:01.1±2.5,52S±01×1466E±02,h112km±22km,n19, σ0§44/17,mb3.7/6,1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.22**	**172**	P		**Pn**		**16 47 03.4**	**0.0**
	0.9nm,0.3s,baz=221,slow=8.3,SNR=16								
PMG				S		**Sn**		**16 47 51.6**	**-0.1**
	9.5nm,0.3s,baz=179,slow=20,SNR=23								
HNR	**Honiara**	**13.90**	**108**	LR		LR		16 54 06.8	
	comp=Z,24nm,19.3s,baz=359,slow=35								
KAKA	**Kakadu**	**15.84**	**241**	*eP*		**Pn**		**16 49 37.2**	**-0.5**
	5.1nm,0.5s								
WRAB	**Tennant Creek**	**18.88**	**218**	*eP*		**P**		**16 50 13.1**	**+0.5**
	7.9nm,0.4s								
WB2	**Warramunga Arr**	**18.89**	**218**	⇓*iP*		**P**		**16 50 13.1**	**+0.4**
WRA	**Warramunga Arr**	**18.89**	**218**	P		**P**		**16 50 13.2**	**+0.4**
	1.5nm,0.3s,baz=38,slow=12,SNR=125								
AS31	**Alice Springs**	**22.06**	**212**	*eP*		**P**		**16 50 46.9**	**+0.1**
ASAR	**Alice Springs**	**22.06**	**212**	P		**P**		**16 50 47.0**	**+0.2**
	3.5nm,0.6s,mb3.9,baz=46,slow=7.9,SNR=113								
ASPA	**Alice Springs**	**22.06**	**212**	*eP*		**P**		**16 50 46.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**24.16**	**236**	*eP*		**P**		**16 51 05.6**	**-1.2**
	17nm,0.5s,mb4.6								
FITZ	**Fitzroy Crossi**	**24.16**	**236**	P		**P**		**16 51 06.0**	**-0.8**
	10nm,0.5s,mb4.4,baz=66,slow=9.6,SNR=53								
STKA	**Stephens Creek**	**26.95**	**189**	P		**P**		**16 51 32.1**	**0.0**
	0.9nm,0.7s,mb3.4,baz=323,slow=18,SNR=3.6								
STKA	**Stephens Creek**	**26.95**	**189**	P		**P**		**16 51 32.3**	**+0.3**
SONM	**Songino Array**	**63.50**	**331**	P		**P**		**16 56 20.0**	**+0.6**
	0.5nm,0.7s,mb3.4,baz=164,slow=6.5,SNR=4.3								
VNDA	**Vanda**	**72.73**	**177**	P		**P**		**16 57 16.5**	**-0.5**
	0.3nm,0.5s,mb3.4,baz=320,slow=6.5,SNR=10.0								
VNDA	**Vanda**	**72.73**	**177**	*eP*		**P**		**16 57 16.6**	**-0.5**
	0.9nm,0.6s,mb3.8								
MKAR	**Makanchi Array**	**76.62**	**320**	P		**P**		**16 57 39.1**	**-0.4**
	0.4nm,0.5s,mb3.4,baz=101,slow=9.3,SNR=5.1								
TORD	**Torodi Ar. Bea**	**144.49**	**285**	PKP		PKPdf		17 05 22.0	-2.2
	0.3nm,0.6s,baz=89,slow=3.3,SNR=3.7								
TORD	**Torodi Ar. Bea**	**144.49**	**285**	PKP		PKPdf		17 05 22.0	-2.2

ISK ***27*** *16:46:13.4,3797N×2695E,h32km,MD2.8*

CSEM 27 16:46:13.4,3797N×2695E,h32km,MD2.8,After ISK, Dodecanese Islands

CASC 27 16:53:21.5±2.1,1271N×8920W,h29km±42km,MD4.6,1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.96**	**21**	*eP*		x		16 53 56.6	
SNVI				*eS*		x		16 54 10.9	
SNET	**Serv Nac Est T**	**0.97**	**358**	⇓*iP*		x		16 53 26.5	
SNET				*eS*		x		16 53 39.9	
VSM	**San Miguel**	**1.15**	**51**	*eP*		x		16 53 58.6	
VSM				*eS*		x		16 54 15.2	
LEON	**Leon**	**2.27**	**97**	*eP*		Pn		16 53 57.4	+0.3
MIRN	**Miramar**	**2.44**	**96**	*eP*		Pn		16 54 00.2	+0.8
CNGN	**Cerro Negro**	**2.45**	**95**	*eP*		Pn		16 53 59.0	-0.5
COPN	**Copaltepe**	**2.60**	**101**	*eP*		Pn		16 54 02.3	+0.7
COPN				*eS*		Sn		16 54 33.4	+1.3
MOMJ	**Momotombo**	**2.61**	**96**	*eP*		Pn		16 54 01.4	-0.3
MOMJ				*eS*		Sn		16 54 32.0	-0.4
APYN	**Apoyeque**	**2.82**	**99**	*eP*		Pn		16 54 05.2	+0.6
XAVN	**Gruta Xavier**	**2.86**	**101**	*eP*		Pn		16 54 04.0	-1.1
XAVN				*eS*		Sn		16 54 40.5	+1.9
CONN	**Concepcion**	**3.67**	**108**	*eP*		Pn		16 54 18.2	+1.9
JCR	**Jicaral**	**4.91**	**125**	*eP*		Pn		16 54 34.0	+0.7
PRS1	**Puriscal**	**5.50**	**119**	*eP*		Pn		16 54 41.7	+0.2
LCR2	**La Lucha 2**	**5.89**	**120**	*eP*		Pn		16 54 48.3	+1.6
BUS	**Buena Vista**	**6.19**	**120**	*eP*		Pn		16 54 52.3	+1.4

ISCJB ***27*** *16:56:31.3±0.9,129N±0.1×890W±0.1,h33km,mb4.3/9, MS3.8/2,Error ellipse: s-maj=25.8km s-min=5.2km az=95.1*

IDC ***27*** *16:56:33.1±3.2,1354N×8894W,h0km,mb4.2/5,mb1 4.3/6, mb1mx3.8/20,mbtmp4.1/6,ML3.5/1,MS3.8/2,Ms1 3.8/2, ms1mx2.7/33,Error ellipse: s-maj=62.1km s-min=38.1km az=171.0*

BJI ***27*** *16:56:35.7,1340N×8900W,h21km*

NEIC ***27*** *16:56:35.8±4.5,1338N×8898W,h22km±33km,mb4.5/5, Error ellipse: s-maj=22.8km s-min=13.8km az=46.0*

CASC ***27*** *16:56:39.7±2.8,1213N×8891W,h75km±120km,MD4.5, mb4.5(NEIC)*

ISC 27 16:56:34.0±0.8,130N±01×889W±01,h35km,n36,σ1§40/25, mb4.3/9,MS3.8/2,3C-4D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.66**	**4**	*eP*		x		16 57 10.9	
SNVI				*eS*		x		16 57 29.0	
LFRS	**El Faro**	**0.69**	**345**	*eP*		x		16 57 05.6	
LCBS	**La Ceiba**	**0.71**	**352**	*eP*		x		16 57 06.6	
VSM	**San Miguel**	**0.76**	**51**	⇑*eP*		x		16 57 08.8	
VSM				*eS*		x		16 57 27.4	
LBRS	**Las Brisas**	**0.80**	**349**	*eP*		x		16 57 07.8	
LFU	**La Fuente**	**0.83**	**344**	⇓*eP*		x		16 57 07.6	
LFU				*eS*		x		16 57 27.8	
BQQS	**Boqueron**	**0.87**	**334**	⇓*eP*		x		16 57 07.2	
BQQS				*eS*		x		16 57 27.8	
SBLS	**San Blas**	**1.14**	**321**	⇓*eP*		x		16 57 08.7	
SNJE	**San Jose**	**1.16**	**322**	⇓*eP*		x		16 57 09.2	
RTR	**El Retiro**	**1.20**	**322**	*eP*		x		16 57 09.6	
RBDL	**Robledal**	**1.40**	**326**	*eP*		x		16 57 12.2	
MTO2	**Montecristo 2**	**1.52**	**342**	*eP*		x		16 57 16.9	
MTO2				*eS*		x		16 57 44.3	
CRZC	**La Cruz**	**3.78**	**121**	*eP*		**Pn**		**16 57 31.8**	**+2.1**
JCR	**Jicaral**	**4.81**	**129**	*eP*		**Pn**		**16 57 43.9**	**0.0**
JCR				*eS*		**Sn**		**16 58 37.3**	**-1.0**
CGA2	**Cerro Gallo 2**	**5.22**	**123**	*eP*		**Pn**		**16 57 51.4**	**+1.9**
PRS1	**Puriscal**	**5.36**	**123**	⇑*eP*		**Pn**		**16 57 53.0**	**+1.6**
PRS1				*eS*		**Sn**		**16 58 48.9**	**-3.0**
LCR2	**La Lucha 2**	**5.75**	**123**	*eP*		**Pn**		**16 57 58.5**	**+1.7**
LCR2				*eS*		**Sn**		**16 58 60.0**	**-1.5**
BUS	**Buena Vista**	**6.05**	**123**	⇑*eP*		**Pn**		**16 58 03.3**	**+2.4**
BUS				*eS*		**Sn**		**16 59 06.8**	**-2.1**
CMIG	**Matias Romero**	**7.11**	**306**	Pn		**Pn**		**16 58 14.2**	**-1.3**
	0.9nm,0.3s,baz=104,slow=10,SNR=14								
CMIG				Sn		**Sn**		**16 59 45.8**	**+11**
	1.1nm,0.3s,baz=268,slow=17,SNR=3.3								
ROSC	**El Rosal**	**16.46**	**118**	*eP*		**Pn**		**17 00 29.1**	**+7.0**
LRAL	**Lakeview Retre**	**20.07**	**5**	*eP*		**P**		**17 01 07.7**	**+3.5**
	6.6nm,0.8s								
OXF	**Oxford**	**21.47**	**359**	P		**P**		**17 01 20.3**	**+0.9**
	46nm,0.9s,mb4.8								
MIAR	**Mount Ida**	**21.92**	**350**	*eP*		**P**		**17 01 25.1**	**+0.9**
ATAH	**Atahualpa**	**22.39**	**152**	LR		LR		17 08 46.2	
	comp=Z,60nm,19.8s,MS3.0,baz=182,slow=32								
WMOK	**Wichita Mounta**	**23.48**	**339**	*eP*		**P**		**17 01 37.7**	**-2.8**
	7.1nm,0.9s,mb4.1								
WCI	**Wyandotte Cave**	**25.28**	**5**	*eP*		**P**		**17 01 57.2**	**+0.3**
	8.7nm,0.8s,mb4.3								
SADO	**Sadowa**	**32.79**	**13**	P		**P**		**17 03 03.5**	**-0.2**
	4.1nm,0.6s,mb4.6,baz=215,slow=11,SNR=5.6								
PDAR	**Pinedale Array**	**34.69**	**333**	P		**P**		**17 03 19.6**	**-0.7**
	0.2nm,0.5s,mb3.3,baz=128,slow=12,SNR=3.0								
EYMN	**Ely**	**34.96**	**357**	*eP*		**P**		**17 03 21.8**	**-0.8**
	9.2nm,0.8s,mb4.8								
NVAR	**Mina Array Bea**	**36.41**	**319**	P		**P**		**17 03 35.6**	**+0.5**
	baz=139,slow=8.4								
ULM	**Lac du Bonnet**	**37.64**	**353**	P		**P**		**17 03 44.6**	**-0.8**
	3.0nm,0.6s,mb4.2,baz=168,slow=7.7,SNR=7.8								
SCHQ	**Schefferville**	**45.22**	**18**	P		**P**		**17 04 47.6**	**0.0**
	6.3nm,0.8s,mb4.5,baz=208,slow=8.2,SNR=11								
YKA	**Yellowknife Ar**	**52.77**	**345**	P		**P**		**17 05 44.6**	**-0.9**
	3.2nm,0.8s,mb4.3,baz=144,slow=7.5,SNR=10								
USHA	**Ushuaia**	**69.70**	**168**	LR		LR		17 34 30.1	
	comp=Z,283nm,21.0s,MS4.5,baz=203,slow=32								
WRA	**Warramunga Arr**	**138.06**	**255**	PKP		PKPdf		17 16 01.1	+6.1
	0.5nm,0.7s,baz=86,slow=2.2,SNR=7.9								
ASAR	**Alice Springs**	**138.15**	**249**	PKP		PKPdf		17 16 00.6	+5.4
	0.2nm,0.5s,baz=82,slow=2.0,SNR=6.8								

IDC ***27*** *16:58:48.5±0.4,1068N×9196E,h0km,mb4.3/19, mb1 4.4/19,mb1mx4.3/24,mbtmp4.3/19,Error ellipse: s-maj=18.8km s-min=11.6km az=58.0*

ISCJB ***27*** *16:58:50.2±1.4,1057N±004×9192E±004,h28km±10km, mb4.5/45,MS3.9/7,Error ellipse: s-maj=7.4km s-min=5.6km az=67.1*

MOS ***27*** *16:58:50.9±0.8,1060N×9192E,h33km,mb4.8/13,Error ellipse: s-maj=18.9km s-min=7.9km az=110.1*

BJI ***27*** *16:58:51.6,1065N×9206E,h36km,mB4.7,mb4.6,Ms4.2, Msz4.1*

NEIC ***27*** *16:58:54.4±1.4,1064N×9202E,h43km±13km,mb4.5/14, Error ellipse: s-maj=13.0km s-min=5.3km az=56.0*

ISC 27 16:58:53.6±0.8,1061N±004×9193E±004,h36km±7km, h41km±3.8km:pP-P,n90,σ0§96/94,mb4.5/45,MS3.9/7, 3C-2D,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.31**	**38**	*eP*		Px		16 58 56.5	
PBA				*eS*		Sx		16 59 14.8	
PBA				*ex*		x		16 59 28.2	
	comp=E,8μm,0.9s								
PBA				*ex*		x		16 59 28.5	
	comp=N,11μm,1.0s								
KULM	**Kulim**	**10.12**	**121**	*eP*		**Pn**		**17 01 16.7**	**+0.3**
VIS	**Vishakhapatnam**	**10.93**	**311**	*eP*		**Pn**		**17 01 23.3**	**-4.0**
VIS				*eS*		**Sn**		**17 03 15.8**	**-12**
VIS				AML		AML		17 03 19.1	
	comp=N,54nm,0.9s								
VIS				AML		AML		17 03 21.4	
	comp=E,58nm,0.4s								
MDRS	**Chennai**	**11.69**	**283**	*ex*		**Pn**		**17 01 36.9**	**-1.0**
SALM	**Salem**	**13.51**	**276**	*ex*		**Pn**		**17 02 03.0**	**+0.3**
SALM				*eS*		**Sn**		**17 04 20.0**	**-12**
HYB	**Hyderabad**	**14.63**	**299**	*iP*		**Pn**		**17 02 17.0**	**-0.9**
HYB				*eS*		**Sn**		**17 05 00.0**	**+1.2**
SHL	**Shillong**	**14.87**	**360**	*ex*		x		17 02 08.8	
TRD	**Trivandrum**	**14.91**	**263**	*ex*		**Pn**		**17 02 19.9**	**-1.8**
TRD				*eS*		**Sn**		**17 04 54.4**	**-11**
KMI	**Kunming**	**17.70**	**34**	P		**Pn**		**17 02 57.0**	**-0.2**
KMI				S		**S**		**17 06 15.3**	**-4.3**
KMI				AMB		AMB			
	comp=Z,7.0nm,1.1s								
KMI				AMB		AMB			
	comp=Z,62nm,4.2s								
KMI				LR		LR			
	comp=N,121nm,12.2s								
KMI				LR		LR			
	comp=E,95nm,13.0s								
KMI				LR		LR			
	comp=Z,74nm,15.9s								
PKI	**Pulchoki**	**17.95**	**341**	*eP*		**Pn**		**17 03 01.0**	**+0.8**
	comp=Z,29nm,0.8s								
PKI	**Pulchoki**	**17.95**	**341**	*eP*		**Pn**		**17 03 01.0**	**+0.8**
PKI				pmax		pmax			
	comp=Z,29nm,0.8s								
DMN	**Daman**	**18.09**	**340**	*eP*		**Pn**		**17 03 03.3**	**+1.4**
	comp=Z,40nm,0.7s								
KKN	**Kakani**	**18.20**	**341**	*eP*		**Pn**		**17 03 03.8**	**+0.6**
GKN	**Gorkha**	**18.61**	**339**	*eP*		**Pn**		**17 03 08.1**	**-0.1**
KOLN	**Koldanda**	**18.78**	**336**	*eP*		**Pn**		**17 03 12.5**	**+2.2**
	comp=Z,19nm,0.6s								
LSA	**Lhasa**	**19.00**	**358**	P		**Pn**		**17 03 12.3**	**-0.7**
LSA				AMB		AMB			
	comp=Z,20nm,0.6s								
QIZ	**Qiongzhong**	**19.22**	**62**	P		**Pn**		**17 03 15.0**	**-0.6**
QIZ				S		**S**		**17 06 46.0**	**-4.2**
GYA	**Guiyang**	**21.02**	**39**	⇑*iP*		**P**		**17 03 33.0**	**-1.1**
GYA				AP				17 03 44.5	
GYA				XP		sP		17 03 50.0	+1.9
GYA				PP				17 03 55.3	
GYA				S		**S**		**17 07 17.8**	**-8.3**
GYA				AMB		AMB			
	comp=Z,20nm,0.8s,mb4.5								
GYA				AMB		AMB			
	comp=Z,60nm,3.8s								
GYA				LR		LR			
	comp=N,140nm,14.6s,MS3.7								
GYA				LR		LR			
	comp=E,160nm,14.2s,MS3.7								
GYA				LR		LR			
	comp=Z,150nm,14.0s,MS3.5								
LZH	**Lanzhou**	**27.57**	**21**	*eP*		**P**		**17 04 37.3**	**+0.3**
LZH				AMB		AMB			
	comp=Z,21nm,1.2s,mb4.6								
LZH				AMB		AMB			
	comp=Z,80nm,4.4s								
XAN	**Xi'an**	**28.03**	**31**	P		P		**17 04 39.3**	**-1.9**
XAN				AP		pP		17 04 46.3	-5.2
XAN				AMB		AMB			
	comp=Z,8.0nm,0.7s,mb4.5								
GTA	**Gaotai**	**29.52**	**12**	*eP*		**P**		**17 04 55.0**	**+0.5**
GTA				AP		pP		17 05 06.3	+1.5
GTA				XP		sP		17 05 12.3	+3.1
GTA				S		**S**		**17 09 45.0**	**-1.7**
GTA				XS		sS		17 10 04.5	+0.7
GTA				SS		SS		17 11 18.5	-34
GTA				SCS		ScS		17 15 34.5	+1.8
GTA				AMB		AMB			
	comp=Z,10.0nm,1.8s,mb4.2								
GTA				AMB		AMB			
	comp=Z,236nm,6.2s								
GTA				LR		LR			
	comp=N,57nm,10.6s,MS3.5								
GTA				LR		LR			
	comp=E,37nm,11.4s,MS3.5								
GTA				LR		LR			
	comp=Z,34nm,11.4s,MS3.2								
NJ2	**Nanjing**	**32.76**	**45**	*eP*		**P**		**17 05 24.3**	**+1.4**
NJ2				AMB		AMB			
	comp=Z,10.0nm,0.5s,mb5.0								
WMQ	**Urumqi**	**33.29**	**354**	*eP*		**P**		**17 05 29.0**	**+1.4**
WMQ				AP		pP		17 05 41.0	+3.1
WMQ				PP		PP		17 06 42.0	-1.2
WMQ				S		**S**		**17 10 45.0**	**-0.5**
WMQ				SS		SS		17 12 51.0	-19
WMQ				AMB		AMB			
	comp=Z,18nm,1.0s,mb5.0								
WMQ				AMB		AMB			
	comp=Z,104nm,4.0s								
WMQ				LR		LR			
	comp=N,45nm,12.0s,MS3.6								
WMQ				LR		LR			
	comp=E,48nm,12.0s,MS3.6								
WMQ				LR		LR			
	comp=Z,36nm,12.0s,MS3.3								
SSE	**Sheshan**	**33.92**	**49**	*eP*		**P**		**17 05 33.0**	**-0.1**
SSE				AMB		AMB			
	comp=Z,28nm,0.7s,mb5.3								
SSE				AMB		AMB			
	comp=Z,33nm,3.5s								
HHC	**Hu-ho-hao-te**	**34.75**	**27**	*eP*		**P**		**17 05 42.3**	**+2.0**
HHC				AP		pP		17 05 54.0	+3.4
HHC				XP		sP		17 05 59.8	+4.8
HHC				PP		PP		17 07 00.5	+1.1
HHC				PCP		PcP		17 08 15.3	+2.0
HHC				S		**S**		**17 11 09.0**	**+0.9**
HHC				XS		sS		17 11 29.0	+3.8
HHC				SCP		ScP		17 11 55.3	-0.5
HHC				PCS		PcS		17 11 59.3	-0.6
HHC				SS		SS		17 13 24.0	-16
HHC				AMB		AMB			
	comp=Z,14nm,1.4s,mb4.7								
HHC				AMB		AMB			
	comp=Z,50nm,5.3s								
HHC				LR		LR			
	comp=N,556nm,12.6s,MS4.6								
HHC				LR		LR			
	comp=E,371nm,10.7s,MS4.6								
HHC				LR		LR			
	comp=Z,373nm,13.5s,MS4.3								
AAK	**Ala-Archa**	**35.35**	**338**	*eP*		**P**		**17 05 45.2**	**-0.2**
AAK				pmax		pmax			
	comp=Z,5.0nm,1.3s,mb4.3								
BJI	**Beijing**	**36.35**	**32**	*eP*		**P**		**17 05 54.0**	**0.0**
BJI				AMB		AMB			
	comp=Z,20nm,0.9s,mb5.0								
MKAR	**Makanchi Array**	**36.98**	**349**	P		**P**		**17 05 59.3**	**-0.1**
	comp=Z,6.1nm,0.7s,mb4.5,baz=160,slow=7.6,SNR=62								
MKAR				PcP		PcP		17 08 20.2	+0.3
	comp=Z,1.0nm,0.5s,baz=212,slow=3.4,SNR=6.6								
JOW	**Kunigami**	**37.84**	**60**	P		**P**		**17 06 07.0**	**+0.4**
	comp=Z,6.0nm,0.5s,mb4.6,baz=259,slow=4.8,SNR=11								
SONM	**Songino Array**	**39.05**	**15**	P		**P**		**17 06 17.2**	**+0.3**
	comp=Z,5.0nm,0.9s,mb4.3,baz=205,slow=7.3,SNR=30								
SONM				PcP		PcP		17 08 27.5	+1.1
	comp=Z,1.6nm,0.7s,baz=197,slow=3.2,SNR=6.7								
ULN	**Ulaanbaatar**	**39.25**	**16**	*eP*		**P**		**17 06 17.5**	**-1.0**
ULN				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.1								
ULN	**Ulaanbaatar**	**39.25**	**16**	*eP*		**P**		**17 06 17.5**	**-1.0**
	comp=Z,2.5nm,0.7s,mb4.0								
ZAK	**Zakamensk**	**40.74**	**11**	*eP*		**P**		**17 06 31.1**	**+0.2**
ZAK				*e*				17 08 31.3	
ZAL	**Zalesovo**	**43.58**	**354**	P		**P**		**17 06 53.6**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.1,baz=311,slow=9.0,SNR=8.5								
FITZ	**Fitzroy Crossi**	**43.84**	**130**	*eP*		**P**		**17 06 55.4**	**-0.6**
	comp=Z,14nm,0.6s,mb4.9								
FITZ	**Fitzroy Crossi**	**43.84**	**130**	P		**P**		**17 06 55.7**	**-0.3**
	comp=Z,9.5nm,0.7s,mb4.7,baz=323,slow=6.3,SNR=57								
CN2	**Changchun**	**43.97**	**35**	*eP*		**P**		**17 06 56.8**	**-0.3**
CN2				AMB		AMB			
	comp=Z,10.0nm,0.7s,mb4.7								
ZRNK	**Zerenda**	**46.09**	**341**	*eP*		**P**		**17 07 13.0**	**-1.0**
ZRNK				pmax		pmax			
	comp=Z,1.0nm,0.6s,mb3.9								
ZRNK	**Zerenda**	**46.09**	**341**	*eP*		**P**		**17 07 13.0**	**-1.0**
	comp=Z,1.4nm,0.6s,mb4.1								
CHKZ	**Chkalovo**	**46.21**	**343**	*eP*		**P**		**17 07 14.9**	**-0.1**
CHKZ				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.5								
CHKZ	**Chkalovo**	**46.21**	**343**	*eP*		**P**		**17 07 14.9**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.5								
KAKA	**Kakadu**	**46.42**	**119**	*eP*		**P**		**17 07 15.6**	**-1.0**
	comp=Z,4.9nm,0.5s,mb4.7								
MDJ	**Mudanjiang**	**46.85**	**37**	P		**P**		**17 07 20.0**	**+0.1**
MDJ				AP		pP		17 07 31.3	+0.7
MDJ				XP		sP		17 07 36.5	+1.6
MDJ				PCP		PcP		17 08 52.3	-0.2
MDJ				PP		PP		17 09 10.0	-0.4
MDJ				SCP		ScP		17 12 42.5	-0.8
MDJ				PCS		PcS		17 12 47.3	-0.1
MDJ				S		**S**		**17 14 08.5**	**+0.5**
MDJ				XS		sS		17 14 27.8	+2.2
MDJ				AMB		AMB			
	comp=Z,9.0nm,2.2s,mb4.3								
MDJ				AMB		AMB			
	comp=Z,59nm,3.6s								
MDJ				LR		LR			
	comp=N,726nm,23.4s,MS4.8								
MDJ				LR		LR			
	comp=E,993nm,20.0s,MS4.8								
MDJ				LR		LR			
	comp=Z,496nm,11.7s								
MUN	**Mundaring**	**48.30**	**152**	*eP*		**P**		**17 07 32.1**	**+0.9**
KLBR	**Kellerberrin**	**48.72**	**150**	*eP*		**P**		**17 07 34.9**	**+0.5**
	comp=Z,8.1nm,0.7s,mb4.9								
MAT	**Matsushiro**	**49.03**	**50**	P		**P**		**17 07 36.2**	**-0.6**
MJAR	**Matsushiro Arr**	**49.03**	**50**	P		**P**		**17 07 37.6**	**+0.8**
	comp=Z,2.4nm,0.7s,mb4.3,baz=231,slow=6.7,SNR=14								
MJAR				PcP		PcP		17 09 01.2	+1.0
	comp=Z,0.4nm,0.4s,baz=243,slow=2.3,SNR=5.2								
NWAO	**Narrogin (SRO)**	**49.57**	**152**	P		**P**		**17 07 41.4**	**+0.5**
	comp=Z,9.2nm,0.8s,mb4.9,baz=329,slow=13,SNR=8.3								
NWAO	**Narrogin (SRO)**	**49.57**	**152**	P		**P**		**17 07 41.4**	**+0.5**
BOD	**Bodaibo**	**50.05**	**15**	*eP*		**P**		**17 07 44.2**	**-0.4**
BOD				pmax		pmax			
	comp=Z,5.0nm,0.9s,mb4.5								
GNI	**Garni**	**50.98**	**314**	*eP*		**P**		**17 07 53.0**	**+1.4**
WRA	**Warramunga Arr**	**51.62**	**126**	P		**P**		**17 07 56.4**	**0.0**
	comp=Z,9.2nm,0.6s,mb4.9,baz=305,slow=8.7,SNR=37								
WRA				PcP		PcP		17 09 10.9	+1.1
	comp=Z,0.6nm,0.6s,baz=315,slow=2.9,SNR=5.1								
WRAB	**Tennant Creek**	**51.63**	**126**	*eP*		**P**		**17 07 56.4**	**0.0**
WRAB				pmax		pmax			
	comp=Z,19nm,0.6s,mb5.2								
WRAB	**Tennant Creek**	**51.63**	**126**	*eP*		**P**		**17 07 56.4**	**-0.1**
	comp=Z,19nm,0.6s,mb5.2								
WB2	**Warramunga Arr**	**51.63**	**126**	*eP*		**P**		**17 07 55.1**	**-1.4**
ARU	**Arti**	**52.53**	**337**	⇓*iP*		**P**		**17 08 01.9**	**-1.3**
ARU				*e*PPP				17 11 03.8	
ARU				*eS*		**S**		**17 15 26.9**	**-0.5**
ARU		

comp=Z,4.7nm,1.2s,mb4.3
TORD Torodi Ar. Bea 87.86 283 P **P** **17 11 41.3 +2.2**
comp=Z,0.7nm,0.7s,mb4.0,baz=83,slow=4.7,SNR=4.9
PDAR Pinedale Array 123.36 19 PKP PKPdf 17 17 47.5 +0.8
comp=Z,0.7nm,0.6s,baz=20,slow=1.5,SNR=7.5
NVAR Mina Array Bea 123.63 28 PKP PKPdf 17 17 49.5 +2.3
comp=Z,1.2nm,0.6s,baz=298,slow=1.9,SNR=7.1
PLCA Paso Flores 146.24 204 PKPbc PKPbc 17 18 32.4 +2.3
comp=Z,2.1nm,0.9s,baz=206,slow=6.2,SNR=4.1
PLCA Paso Flores 146.24 204 PKPbc PKPbc 17 18 32.4 +2.3
CPUP Villa Florida 147.04 237 PKPbc PKPbc 17 18 34.5 +2.1
comp=Z,0.4nm,0.4s,baz=127,slow=3.2,SNR=3.8
CMIG Matias Romero 151.66 14 PKPbc PKPbc 17 18 45.4 +1.3
comp=Z,4.5nm,0.7s,baz=345,slow=3.3,SNR=7.8
CFAA Coronel Fontan 152.19 218 PKPbc PKPbc 17 18 47.1 +1.9
comp=Z,0.3nm,0.6s,baz=310,slow=5.0,SNR=5.3

ISCJB ***27*** *17:01:53.9±0.5, 4260N±002×4347E±004, h10km, Error ellipse: s-maj=4.0km s-min=2.5km az=127.0*
TIF ***27*** *17:01:54.6, 4257N×4357E, h24km±1km*
CSEM ***27*** *17:01:56.1, 4267N×4367E, h16km, mb4.2, After OBN*
MOS ***27*** *17:01:56.1±1.1, 4267N×4367E, h16km, mb4.2/1, Error ellipse: s-maj=12.2km s-min=6.4km az=87.0*

ISC 27 17:01:53.9±0.6, 4256N±002×4346E±004, h5km±5km, n26, σ1§04/50, 1C-2D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DIGR	**Digorskoe uzhe**	**0.35**	**15**	*i*	Pg		**Pg**	**17 02 00.6**	**0.0**
DIGR				*i*	Sg		**Sg**	**17 02 06.1**	**+0.9**
ZEI	**Tsey**	**0.39**	**57**	*i*	PG		**Pg**	**17 02 01.7**	**+0.3**
ZEI				*e*				17 02 07.4	
ZEI					pmax		pmax		
	comp=Z,591nm,0.2s								
ZEI					smax				
	comp=N,959nm,0.2s								
ZEI	**Tsey**	**0.39**	**57**	*i*	Pg		**Pg**	**17 02 01.7**	**+0.3**
	comp=N,591nm,0.2s								
ZEI				*e*	Sg		**Sg**	**17 02 07.4**	**+1.0**
	comp=N,959nm,0.2s								
LACR	**Lac**	**0.67**	**67**	*i*	Pg		**Pg**	**17 02 06.1**	**-0.7**
LACR				*i*	Sg		**Sg**	**17 02 15.7**	**+0.1**
KORR	**Kora**	**0.69**	**40**	*i*	Pg		**Pg**	**17 02 06.6**	**-0.6**
KORR				*i*	Sg		**Sg**	**17 02 16.6**	**+0.5**
GOR	**Gori**	**0.75**	**140**		P		**Pg**	**17 02 08.4**	**+0.1**
GOR					S		**Sg**	**17 02 19.5**	**+1.4**
ARNR	**Ardon**	**0.87**	**44**	*i*	Pg		**Pg**	**17 02 10.0**	**-0.6**
ARNR				*i*	Sg		**Sg**	**17 02 22.3**	**+0.4**
VLKR	**Vladikavkaz**	**1.02**	**61**	*i*	Pg		**Pg**	**17 02 12.6**	**-0.9**
VLKR				*i*	Sg		**Sg**	**17 02 26.9**	**+0.2**
DUS	**Dusheti**	**1.04**	**117**		P		**Pg**	**17 02 18.6**	**+4.8**
DUS					S		**Sg**	**17 02 30.0**	**+2.8**
SNJR	**Sundja**	**1.12**	**63**	*i*	Pg		**Pg**	**17 02 14.4**	**-1.0**
SNJR				*i*	Sg		**Sg**	**17 02 29.9**	**0.0**
KUBR	**Kubataba**	**1.24**	**358**	*i*	Pg		**Pg**	**17 02 18.3**	**+0.7**
KUBR				*e*	Sg		**Sg**	**17 02 36.4**	**+2.7**
TBLG	**Delisi**	**1.27**	**131**		P		**Pg**	**17 02 17.5**	**-0.6**
TBLG					S		**Sg**	**17 02 35.1**	**+0.5**
SHAR	**Shatzhatmas**	**1.31**	**334**	*e*	PG		**Pg**	**17 02 19.0**	**-0.1**
SHAR				*e*	S		**Sg**	**17 02 36.9**	**+0.8**
MTA	**Mtatsminda**	**1.32**	**131**		P		**Pn**	**17 02 18.2**	**-0.7**
MTA					S		**Sg**	**17 02 36.1**	**-0.2**
PRTR	**Priterechnaya**	**1.33**	**27**	*i*	Pg		**Pg**	**17 02 18.0**	**-1.5**
PRTR				*i*	Sg		**Sg**	**17 02 36.2**	**-0.6**
KZR	**Kazreti**	**1.38**	**148**		P		**Pn**	**17 02 18.9**	**-0.9**
KZR					S		**Sb**	**17 02 37.2**	**-0.9**
TRKR	**Terskaya**	**1.49**	**38**	*i*	Pg		**Pg**	**17 02 20.4**	**-2.1**
TRKR				*i*	Sg		**Sg**	**17 02 40.3**	**-1.5**
PYA	**Psytigorsk**	**1.50**	**349**	⇓*i*	PG		**Pg**	**17 02 22.0**	**-0.6**
PYA				*e*	S		**Sn**	**17 02 42.4**	**+1.0**
KIV0	**Kislovodsk Arr**	**1.50**	**339**	*e*	Pg		**Pg**	**17 02 22.0**	**-0.6**
KIV0				*i*	Sg		**Sg**	**17 02 43.5**	**+1.4**
KIV	**Kislovodsk**	**1.50**	**338**	⇑*e*	PG		**Pg**	**17 02 21.9**	**-0.8**
KIV				*e*	S		**Sn**	**17 02 40.3**	**-1.2**
KIV					pmax		pmax		
	comp=Z,42nm,0.7s								
KIV	**Kislovodsk**	**1.50**	**338**	*e*	Pg		**Pg**	**17 02 21.9**	**-0.8**
	comp=Z,42nm,0.7s								
KIV				*e*	Sg		**Sn**	**17 02 40.3**	**-1.2**
BEYR	**Belyy Ugol+**	**1.52**	**342**	*i*	Pg		**Pg**	**17 02 22.6**	**-0.5**
BEYR				*i*	Sg		**Sg**	**17 02 43.1**	**+0.3**
DGRG	**David-gareji**	**1.81**	**127**		P		**Pn**	**17 02 27.5**	**+1.7**
DGRG					S		**Sn**	**17 02 52.5**	**+3.4**
GOF	**Gofitskoye**	**2.51**	**353**	*e*	Pn		**Pn**	**17 02 38.4**	**+3.0**
GNI	**Garni**	**2.60**	**158**	*d*	iPN		**Pn**	**17 02 41.0**	**+4.4**
GNI				*i*	S		**Sn**	**17 03 15.6**	**+7.1**
GNI					pmax		pmax		
	comp=Z,14nm,0.6s								
GNI	**Garni**	**2.60**	**158**	*i*	Pn		**Pn**	**17 02 41.0**	**+4.4**
	comp=Z,14nm,0.6s								
GNI				*i*	Sn		**Sn**	**17 03 15.6**	**+7.1**

CASC 27 17:05:34.0±1.4, 842N×8277W, h0km±4km, MD3.7, 2C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.31**	**87**	⇓*i*	P		Pg	17 05 41.2	+1.3
DVD					eS		Sg	17 05 46.9	+2.9
CTCR	**Cotoan**	**0.47**	**1**	⇑*i*	P		Pg	17 05 45.3	+2.3
CNI	**Changuinola**	**1.02**	**14**	⇑*i*	P		Pg	17 05 53.9	+0.4
CNI					eS		Sg	17 06 08.4	+1.7
BUS	**Buena Vista**	**1.49**	**319**	⇓*e*	P		Pn	17 06 00.9	-1.2
LCR2	**La Lucha 2**	**1.79**	**317**	*e*	P		Pn	17 06 06.3	+0.2
LCR2					eS		Sn	17 06 31.1	+1.4
PRS1	**Puriscal**	**2.18**	**316**	*e*	P		Pn	17 06 10.7	-0.7
PRS1					eS		Sn	17 06 40.9	+1.8

NIED ***27*** *17:11:00, 2490N×123.10E, h122km, Mw5.4 Best double couple: M0 1.20000×10^17 NP1:φs67.00000°, δ89.00000°, λ99.00000°. NP2:φs165.00000°, δ9.00000°, λ.8.00000°.*
CSEM ***27*** *17:11:15.9, 2492N×12280E, h139km, mb5.5*
MOS ***27*** *17:11:15.9±0.7, 2505N×123.12E, h153km, mb5.6/128, Error ellipse: s-maj=8.6km s-min=5.1km az=105.8*
ISCJB ***27*** *17:11:16.6±0.1, 2491N±001×12288E±002, h147km, mb5.4/280, Error ellipse: s-maj=2.2km s-min=1.9km az=156.4*
IDC ***27*** *17:11:16.7±1.3, 2500N×123.16E, h140km±11km, mb5.0/26, mb1 5.0/29, mb1mx5.0/30, mbtmp5.3/29, MS4.0/9, Ms1 4.0/9, ms1mx3.6/25, Error ellipse: s-maj=12.5km s-min=7.7km az=59.0*
HRVD ***27*** *17:11:17.4±0.1, 2482N×12296E, h145km, MW5.4/97, Centroid moment Tensor Solution. LP body waves: s82,c162; Mantle waves: s97,c200; Half duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr 0.28±.02; Mθθ-0.28±.03; Mφφ 0.00±.03; Mrθ 1.61±.02; Mθφ-0.29±.02; Mφr 0.38±.02; Best double couple: M0 1.70100×10^17 NP1:φs207.00000°, δ9.00000°, λ.41.00000°. NP2: φs77.00000°, δ84.00000°, λ.97.00000°. Principal axes: T 1.6440, Plg50.0000°, Azm354.0000°; N 0.1140, Plg7.0000°, Azm256.0000°; P -1.7580, Plg39.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
JMA ***27*** *17:11:17.7±0.2, 2489N×12308E, h124km±3km, M5.3*
JMA Felt II J1.
BJI ***27*** *17:11:17.7, 2496N×12301E, h166km, mB5.5, mb5.5*
SZGRF ***27*** *17:11:17.6, 2519N×12352E, h150km, mb5.8, Northeast of Taiwan*
NEIC ***27*** *17:11:17.5±0.1, 2495N×12294E, h146km, mb5.5/168, ME5.3, MW5.4, Error ellipse: s-maj=3.2km s-min=3.0km az=52.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^17 Nm; Mrr 0.27; Mθθ-0.14; Mφφ-0.13; Mrθ 1.43; Mθφ-0.26; Mrr 0.30; Best double couple: M0 1.50000×10^17 NP1:φs77.00000°, δ85.00000°, λ.99.00000°. NP2: φs197.00000°, δ10.00000°, λ.30.00000°. Principal axes: T 1.5100, Plg49.0000°, Azm357.0000°; N -0.0200, Plg9.0000°, Azm256.0000°; P -1.4900, Plg39.0000°, Azm159.0000°; Broadband fault plane solution: P waves. NP1:φs258.00000°, δ5.00000°, λ.90.00000°. NP2: φs78.00000°, δ85.00000°, λ.90.00000°. Principal axes: T Plg50.0000°, Azm348.0000°; N Plg0.0000°, Azm0.0000°; P Plg40.0000°, Azm168.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt on Taiwan. Recorded [3 TAP] in Hua-lien and I-lan; [2 TAP] in Miao-li, Nan-t'ou, T'ai-chung, T'ai-tung and T'ao-yuan; [1 TAP] in Chang-hua, Chia-i, Hsin-chu and Yun-lin Counties. Recorded [2 JMA] on Iriomote-jima and Ishigaki-jima; [1 JMA] on Miyako-jima, Tarama-shima and Yonaguni-jima, Ryukyu Islands.

ISC 27 17:11:18.2±0.1, 2492N±001×12290E±002, h149km, h149km±1.8km:pP-P, n1121, σ1§00/1126, mb5.4/280, 296C-107D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**167**		P		**Pn**	**17 11 35.6**	**-3.6**
YOJ					S		**Sn**	**17 11 50.0**	**-5.2**
IRIF	**Iriomote-Funau**	**0.95**	**127**		P		**Pn**	**17 11 38.2**	**-4.2**
IRIF					S		**Sn**	**17 11 53.7**	**-7.2**
HATJ	**Hateruma jima**	**1.19**	**136**		P		**Pn**	**17 11 40.8**	**-3.7**
HATJ					S		**Sn**	**17 11 58.1**	**-6.6**
JKRS	**Kuro-shima**	**1.22**	**124**		P		**Pn**	**17 11 41.2**	**-3.6**
JKRS					S		**Sn**	**17 11 58.5**	**-6.6**
JIJ	**Ishigaki jima**	**1.26**	**116**		P		**Pn**	**17 11 40.9**	**-4.3**
JIJ					S		**Sn**	**17 11 58.1**	**-7.7**
TATO	**Taipei**	**1.28**	**273**		P		**Pn**	**17 11 44.6**	**-0.8**
	SNR=149								
TATO	**Taipei**	**1.28**	**273**	⇑*i*	Pn		**Pn**	**17 11 44.1**	**-1.3**
TATO				*e*	Sn		**Sn**	**17 12 00.1**	**-6.1**
NACB	**Ninganchiao**	**1.40**	**238**	⇑*i*	Pn		**Pn**	**17 11 43.9**	**-2.7**
YHNB	**Yeheng**	**1.41**	**260**	⇑*i*	Pn		**Pn**	**17 11 45.5**	**-1.2**
YHNB					eSn		**Sn**	**17 12 06.7**	**-1.7**
JTJ	**Tarama**	**1.66**	**99**		P		**Pn**	**17 11 45.8**	**-3.6**
JTJ					S		**Sn**	**17 12 06.7**	**-6.6**
JMJ	**Miyako jima 2**	**2.18**	**92**		P		**Pn**	**17 11 52.0**	**-3.3**
JMJ					S		**Sn**	**17 12 17.5**	**-6.4**
JOGS	**Gusukube**	**2.28**	**93**		P		**Pn**	**17 11 53.2**	**-3.4**
JOGS					eS		**Sn**	**17 12 20.1**	**-6.0**
JKE	**Kume jima 2**	**3.78**	**67**		P		**Pn**	**17 12 11.7**	**-3.8**
JKE					eS		**Sn**	**17 12 54.6**	**-5.4**
QZH	**Quanzhou**	**3.91**	**271**	⇑*i*	P		**Pn**	**17 12 16.5**	**-0.7**
QZH					XP			17 12 56.0	
QZH					S		**Sn**	**17 13 00.0**	**-3.0**
QZH					Smax				
	comp=N,4μm,0.8s								
QZH					Smax				
	comp=E,2μm,0.9s								
QZH					LR	LR			
	comp=N,11μm,7.3s								
QZH					LR	LR			
	comp=E,5μm,7.6s								
QZH					LR	LR			
	comp=Z,9μm,10.3s								
JAGN	**Aguni-jima**	**4.26**	**66**		P		**Pn**	**17 12 17.7**	**-4.0**
JAGN					eS		**Sn**	**17 13 05.1**	**-6.0**
NAH1	**Naha**	**4.51**	**73**		P		**Pn**	**17 12 21.3**	**-3.8**
NAH1					eS		**Sn**	**17 13 09.6**	**-7.6**
JJT2	**Tamagusuku 2**	**4.55**	**73**		P		**Pn**	**17 12 21.5**	**-4.0**
JJT2					eS		**Sn**	**17 13 11.1**	**-6.9**
JIH	**Iheya**	**5.03**	**64**		P		**Pn**	**17 12 27.3**	**-4.5**
JIH					eS		**Sn**	**17 13 22.2**	**-7.1**
JOW	**Kunigami**	**5.20**	**67**		P		**Pn**	**17 12 29.1**	**-5.1**
	comp=Z,128nm,0.3s,baz=232,slow=10,SNR=881								
JOW					S		**Sn**	**17 13 25.7**	**-7.9**
	comp=Z,208nm,0.3s,baz=113,slow=25,SNR=12								
JOW	**Kunigami**	**5.20**	**67**		P		**Pn**	**17 12 29.0**	**-5.2**
JOW					eS		**Sn**	**17 13 25.2**	**-8.4**
JTK	**Tokunoshima**	**6.13**	**61**		P		**Pn**	**17 12 41.1**	**-5.5**
JTK					eS		**Sn**	**17 13 46.7**	**-9.1**
SSE	**Sheshan**	**6.34**	**347**	⇓	P		**Pn**	**17 12 49.3**	**0.0**
SSE					S		**Sn**	**17 13 58.8**	**-1.9**
SSE					AMB	AMB			
	comp=Z,1μm,1.0s								
SSE					AMB	AMB			
	comp=Z,698nm,8.0s								
SSE					Smax				
	comp=N,249nm,1.6s								
SSE					Smax				
	comp=E,294nm,1.3s								
SSE					LR	LR			
	comp=N,901nm,8.1s								
SSE					LR	LR			
	comp=E,2μm,8.1s								
SSE					LR	LR			
	comp=Z,6μm,11.2s								
SGCP	**Mt. Cagua**	**6.69**	**187**	*e*	P		**Pn**	**17 12 52.1**	**-1.9**
JAM	**Amami Oshima**	**6.94**	**58**		P		**Pn**	**17 12 51.5**	**-5.8**
JAM					eS		**Sn**	**17 14 04.5**	**-10**
JZK	**Kikaishima**	**7.18**	**60**		P		**Pn**	**17 12 55.1**	**-5.4**
JZK					eS		**Sn**	**17 14 12.8**	**-8.0**
APYP	**Conner**	**7.19**	**193**	*e*	P		**Pn**	**17 12 59.8**	**-0.9**
CVP	**Callao Caves**	**7.25**	**188**	⇑*i*	P		**Pn**	**17 12 59.0**	**-2.5**
ABRA	**Dolores**	**7.51**	**196**	*e*	P		**Pn**	**17 13 03.6**	**-1.4**
JMZ	**Minamidaito 2**	**7.58**	**81**		P		**Pn**	**17 13 00.0**	**-5.9**
JMZ					eS		**Sn**	**17 14 17.9**	**-13**
PALP	**Palanan**	**7.83**	**183**	⇓*e*	P		**Pn**	**17 13 06.8**	**-2.4**
PALP					eS		**Sn**	**17 14 41.8**	**+5.3**
PALP	**Palanan**	**7.83**	**183**	*e*	P		**Pn**	**17 13 07.3**	**-1.9**
JNN	**Nakanoshima**	**7.91**	**50**		P		**Pn**	**17 13 01.9**	**-8.3**
NJ2	**Nanjing**	**7.95**	**334**	*e*	P		**Pn**	**17 13 11.5**	**+0.7**
NJ2					XP			17 13 45.3	
NJ2					S		**Sn**	**17 14 39.0**	**-0.3**
NJ2					AMB	AMB			
	comp=Z,2μm,1.0s								
NJ2					AMB	AMB			
	comp=Z,3μm,3.6s								
NJ2					Smax				
	comp=N,810nm,0.5s								
NJ2					Smax				
	comp=E,190nm,0.5s								
NJ2					LR	LR			
	comp=N,4μm,10.3s								
NJ2					LR	LR			
	comp=E,9μm,9.9s								
NJ2					LR	LR			
	comp=Z,10μm,8.6s								
CAUP	**Cauayan**	**8.00**	**187**	*e*	P		**Pn**	**17 13 11.4**	**-0.1**
BCPH	**Baguio City Da**	**8.77**	**195**	⇑*e*	P		**Pn**	**17 13 21.2**	**-0.5**
BOLP	**Bolinao**	**8.94**	**199**	*e*	P		**Pn**	**17 13 23.7**	**-0.4**
BALP	**Baler**	**9.21**	**188**	*e*	P		**Pn**	**17 13 25.5**	**-2.1**
JSU	**Suzuyama**	**9.35**	**44**		P		**Pn**	**17 13 26.4**	**-3.1**
WHN	**Wuhan**	**9.42**	**308**	⇓	P		**Pn**	**17 13 31.5**	**+1.1**
WHN					S		**Sn**	**17 15 15.5**	**+0.7**
WHN					LR	LR			
	comp=Z,9μm,5.1s								
PCPH	**Palayan**	**9.46**	**191**	⇑*e*	P		**Pn**	**17 13 30.5**	**-0.5**
SCZP	**Santa Cruz**	**9.52**	**198**	*e*	P		**Pn**	**17 13 31.1**	**-0.6**
POLP	**Polilio Island**	**10.18**	**185**	*e*	P		**Pn**	**17 13 40.0**	**-0.4**
JNU	**Nakatsue**	**10.75**	**39**		P		**Pn**	**17 13 45.4**	**-2.6**
LQP	**Lukban**	**10.83**	**187**	*e*	P		**Pn**	**17 13 58.2**	**+9.2**
TGY	**Tagaytay City**	**10.92**	**190**	⇑*e*	P		**Pn**	**17 13 51.2**	**+1.0**
TGY	**Tagaytay City**	**10.92**	**190**		P		**Pn**	**17 13 50.9**	**+0.7**
	comp=Z,15nm,0.3s,baz=220,slow=1.9,SNR=14								
TGY	**Tagaytay City**	**10.92**	**190**		P		**Pn**	**17 13 50.9**	**+0.7**
TGY					pmax		pmax		
	comp=Z,15nm,0.3s								
GQP	**Guinayangan**	**10.96**	**182**	⇑*e*	P		**Pn**	**17 13 50.4**	**-0.5**
JTU	**Tsushima**	**11.11**	**29**		P		**Pn**	**17 13 52.8**	**0.0**
PVCP	**Virac**	**11.32**	**174**	⇑*i*	P		**Pn**	**17 13 56.9**	**+1.4**
PVCP					eS		**Sn**	**17 15 56.7**	**-4.0**
PVCP	**Virac**	**11.32**	**174**	*e*	P		**Pn**	**17 13 56.4**	**+0.9**
LUBP	**Lubang**	**11.40**	**193**	*e*	P		**Pn**	**17 13 55.5**	**-1.1**
BOAC	**Boac**	**11.44**	**185**	*e*	P		**Pn**	**17 13 56.7**	**-0.4**
AUQP	**San Andres**	**11.54**	**181**	*e*	P		**Pn**	**17 13 60.0**	**+1.6**
TIA	**Tai'an**	**12.30**	**338**	⇑	P		**Pn**	**17 14 10.0**	**+1.7**
TIA					S		**Sn**	**17 16 31.0**	**+6.8**
TIA					LR	LR			
	comp=N,1μm,5.0s								
TIA					LR	LR			
	comp=E,1μm,6.0s								
OTRP	**Odiongan**	**12.52**	**184**	*e*	P		**Pn**	**17 14 11.3**	**+0.3**
INCN	**Inchon**	**12.93**	**13**	*e*	P		**Pn**	**17 14 17.6**	**+1.3**
	SNR=72								
INCN	**Inchon**	**12.93**	**13**	*e*	Pn		**Pn**	**17 14 16.4**	**+0.1**
	comp=E,3μm,1.4s								
JMN	**Monobe**	**12.98**	**45**		P		**Pn**	**17 14 09.5**	**-7.6**
JMN					S		**Sn**	**17 16 27.0**	**-14**
BUSP	**Coron**	**13.10**	**192**	*e*	P		**Pn**	**17 14 17.7**	**-0.8**
KALP	**Kalibo**	**13.18**	**182**	⇓*e*	P		**Pn**	**17 14 20.7**	**+1.1**
QIZ	**Qiongzhong**	**13.45**	**247**		P		**Pn**	**17 14 22.8**	**-0.2**
QIZ					S		**Sn**	**17 16 52.0**	**+0.1**
QIZ					AMB	AMB			
	comp=Z,106nm,1.0s								
QIZ					LR	LR			
	comp=N,2μm,13.3s								
QIZ					LR	LR			
	comp=Z,1μm,11.2s								
PLP	**Palo**	**13.82**	**171**	*e*	P		**Pn**	**17 14 29.3**	**+1.6**
OCLP	**Ormoc**	**13.89**	**173**	*e*	P		**Pn**	**17 14 29.1**	**+0.5**
JAD	**Aida**	**13.96**	**42**		P		**Pn**	**17 14 22.2**	**-7.3**
JAD					S		**Sn**	**17 16 48.5**	**-16**
DL2	**Dalian**	**13.99**	**356**	⇑*i*	P		**Pn**	**17 14 31.0**	**+1.1**
DL2					SCP		ScP	17 22 59.5	+0.6
DL2					SCS		ScS	17 26 35.0	-1.1
DL2					AMB	AMB			
	comp=Z,120nm,0.8s								
DL2					AMB	AMB			
	comp=Z,700nm,6.5s								
ENPP	**El Nido**	**14.03**	**194**	*e*	P		**Pn**	**17 14 29.4**	**-0.9**
CUYO	**Cuyo Island**	**14.11**	**188**	*e*	P		**Pn**	**17 14 31.4**	**+0.1**
GUIM	**Jordan**	**14.22**	**181**	*e*	P		**Pn**	**17 14 33.4**	**+0.7**
LLP	**Lapu-Lapu**	**14.56**	**176**	*e*	P		**Pn**	**17 14 36.1**	**-0.9**
GYA	**Guiyang**	**14.72**	**279**	⇑*i*	P		**Pn**	**17 14 40.0**	**+1.0**
GYA					S		**Sn**	**17 17 24.8**	**+2.5**
GYA					PCP		PcP	17 19 42.5	+2.2
GYA					SCP		ScP	17 23 02.0	+1.8
GYA					SCS		ScS	17 26 37.0	-1.0
GYA					AMB	AMB			
	comp=Z,160nm,1.0s								
GYA					AMB	AMB			
	comp=Z,600nm,7.8s								
GYA					LR	LR			
	comp=N,2μm,9.6s								
GYA					LR	LR			
	comp=E,1μm,7.9s								
GYA					LR	LR			
	comp=Z,1μm,9.9s								
MSLP	**Maasin**	**14.82**	**172**	*e*	P		**Pn**	**17 14 40.1**	**-0.2**
TBP	**Tagbilaran**	**15.17**	**176**	*e*	P		**Pn**	**17 14 44.4**	**-0.2**
XAN	**Xi'an**	**15.18**	**310**		P		**Pn**	**17 14 45.5**	**+0.8**
XAN					S		**S**	**17 17 32.8**	**-6.1**
XAN					AMB	AMB			
	comp=Z,365nm,1.6s								
XAN					AMB	AMB			
	comp=Z,1μm,9.7s								
XAN					LR	LR			
	comp=N,2μm,6.1s								
XAN					LR	LR			
	comp=E,879nm,5.9s								
XAN					LR	LR			
	comp=Z,2μm,9.8s								
SCPH	**Surigao**	**15.25**	**170**	⇑*e*	P		**Pn**	**17 14 45.3**	**-0.4**
PPR	**Puerto Princes**	**15.57**	**195**	*e*	P		**Pn**	**17 14 49.8**	**+0.2**
BUTP	**Butuan**	**16.07**	**170**	*e*	P		**Pn**	**17 14 56.1**	**+0.4**
BJI	**Beijing**	**16.10**	**341**	*e*	P		**Pn**	**17 14 57.3**	**+1.2**
BJI					XP		sP	17 15 36.5	-4.4
BJI					SCP		ScP	17 23 00.5	-2.2
BJI					AMB	AMB			
	comp=Z,276nm,1.0s								
BJI					AMB	AMB			
	comp=Z,4μm,3.4s								
JGF	**Kuroka**	**16.39**	**46**		P		**Pn**	**17 14 57.5**	**-2.1**
JSG	**Sagara**	**16.43**	**50**		P		**Pn**	**17 15 03.8**	**+3.7**
CGP	**Cagayan de Oro**	**16.46**	**174**	*e*	P		**Pn**	**17 14 59.4**	**-1.1**
BATP	**Bataraza**	**16.75**	**198**	*e*	P		**Pn**	**17 15 04.9**	**+1.0**
JHJ	**Hachijo jima 2**	**16.86**	**57**		P		**Pn**	**17 15 04.9**	**-0.4**
	comp=Z,26nm,0.3s,baz=193,slow=7.4,SNR=22								
SNY	**Shenyang**	**16.88**	**2**	⇑	P		**Pn**	**17 15 04.3**	**-1.2**
SNY					S		**S**	**17 18 14.3**	**+1.3**
SNY					SS			17 18 33.3	
SNY					AMB	AMB			
	comp=Z,139nm,1.4s								
SNY					AMB	AMB			
	comp=Z,2μm,14.3s								
SNY					LR	LR			
	comp=Z,1μm,11.4s								
SNY					LR	LR			
	comp=N,1μm,12.0s								
SNY					LR	LR			
	comp=E,1μm,14.4s								
JHJ2	**Mitsune**	**16.89**	**57**		P		**Pn**	**17 15 06.2**	**+0.6**
PAGZ	**Pagadian**	**16.98**	**178**	*e*	P		**Pn**	**17 15 06.0**	**-0.7**
IPIL	**Ipil**	**17.04**	**181**	⇓*e*	P		**Pn**	**17 15 06.7**	**-0.7**
IPIL	**Ipil**	**17.04**	**181**	*e*	P		**Pn**	**17 15 06.1**	**-1.3**
BUKP	**Musuan**	**17.07**	**173**	*e*	P		**Pn**	**17 15 07.6**	**-0.2**
JOD2	**Odawara 2**	**17.37**	**50**		P		**Pn**	**17 15 09.1**	**-2.3**
CBIJ	**Chichi jima**	**17.47**	**79**		P		**Pn**	**17 15 10.6**	**-2.1**
	comp=E,19nm,0.3s,baz=280,slow=5.3,SNR=13								
CBIJ	**Chichi jima**	**17.47**	**79**		P		**Pn**	**17 15 10.0**	**-2.6**
MAJO	**Matsushiro**	**17.51**	**45**	*e*	P		**Pn**	**17 15 08.8**	**-4.3**
MAJO					pmax		pmax		
	comp=Z,115nm,1.4s								
MAJO	**Matsushiro**	**17.51**	**45**	*e*	P		**Pn**	**17 15 08.8**	**-4.2**
	comp=Z,118nm,1.4s								
MAT	**Matsushiro**	**17.51**	**45**		P		**Pn**	**17 15 08.6**	**-4.5**
MAT					S		**S**	**17 18 29.9**	**+3.7**
MAT	**Matsushiro**	**17.51**	**45**		P		**Pn**	**17 15 08.7**	**-4.4**
MAT					S		**S**	**17 18 29.9**	**+3.7**
MJAR	**Matsushiro Arr**	**17.51**	**45**		P		**Pn**	**17 15 09.1**	**-4.0**
	comp=Z,1.9nm,0.3s,baz=238,slow=9.8,SNR=61								
MJAR					ScP		ScP	17 23 05.6	+0.1
	comp=Z,0.2nm,0.3s,baz=243,slow=2.6,SNR=23								
MJAR	**Matsushiro Arr**	**17.51**	**45**		P		**Pn**	**17 15 09.1**	**-4

BTO	**Baotou**	**18.99**	**329**	*e*P		**P**		**17 15 29.5**	**+1.3**
BTO				S		**S**		**17 18 52.3**	**-3.5**
BTO				LR		LR			
	comp=N,102nm,12.7s								
BTO				LR		LR			
	comp=E,81nm,9.8s								
VLA	**Vladivostok**	**19.60**	**20**	*d i*P		**P**		**17 15 33.5**	**-1.3**
VLA				pmax		pmax			
	comp=Z,358nm,1.8s								
VLA				MLR		MLR			
	comp=Z,600nm,12.5s								
VLA	**Vladivostok**	**19.60**	**20**	*i* Pr		**P**		**17 15 33.3**	**-1.5**
JYA	**Atsumi**	**19.71**	**42**	P		**P**		**17 15 32.2**	**-3.8**
JYA				S		**S**		**17 19 04.5**	**-5.6**
LZH	**Lanzhou**	**19.80**	**309**⇑	*i*P		**P**		**17 15 39.0**	**+2.1**
LZH				S		**S**		**17 19 12.0**	**+0.2**
LZH				XS		sS		17 19 44.0	-11
LZH				PCP		PcP		17 19 50.3	+1.9
LZH				SCP		ScP		17 23 12.5	+1.9
LZH				PCS		PcS		17 23 27.3	+1.4
LZH				AMB		AMB			
	comp=Z,370nm,1.0s								
LZH				AMB		AMB			
	comp=Z,2μm,4.0s								
KKM	**Kota Kinabalu**	**19.83**	**200**⇓	*i*P		**P**		**17 15 37.5**	**+0.2**
JMM	**Marumori**	**19.95**	**45**	P		**P**		**17 15 32.8**	**-5.8**
JMM				S		**S**		**17 19 05.2**	**-10**
MDJ	**Mudanjiang**	**20.39**	**14**	P		**P**		**17 15 42.3**	**-1.0**
MDJ				S		**S**		**17 19 24.0**	**+0.6**
MDJ				PCP		PcP		17 19 49.3	-0.2
MDJ				XS		sS		17 20 04.0	-3.5
MDJ				SCP		ScP		17 23 13.5	+1.5
MDJ				PCS		PcS		17 23 27.3	0.0
MDJ				AMB		AMB			
	comp=Z,110nm,0.6s								
MDJ				AMB		AMB			
	comp=Z,502nm,5.8s								
MDJ				LR		LR			
	comp=N,447nm,20.7s								
MDJ				LR		LR			
	comp=E,835nm,20.7s								
MDJ				LR		LR			
	comp=Z,496nm,13.1s								
JOM	**Ohasama**	**21.22**	**42**	P		**P**		**17 15 46.6**	**-5.5**
JOM				S		**S**		**17 19 32.8**	**-6.7**
NANT	**Nan**	**21.47**	**258**	⇑P		**P**		**17 15 54.0**	**-0.7**
	comp=Z,638nm,1.0s,mb5.9								
JTM	**Tenmabayashi**	**21.92**	**39**	P		**P**		**17 15 54.0**	**-5.5**
JOT	**Ohata**	**22.30**	**38**	P		**P**		**17 15 57.5**	**-5.9**
JSH	**Shimam**	**22.63**	**34**	P		**P**		**17 16 02.5**	**-4.0**
CHG	**Chiang Mai**	**23.03**	**259**	⇓P		**P**		**17 16 11.5**	**+1.4**
	comp=Z,150nm,1.1s,mb5.3								
CHTO	**Chiang Mai**	**23.03**	**259**	⇑P		**P**		**17 16 11.9**	**+1.8**
	SNR=156								
CHTO	**Chiang Mai**	**23.03**	**259**	*e*P		**P**		**17 16 11.8**	**+1.7**
CHTO				*e*				17 19 55.8	
CHTO				pmax		pmax			
	comp=Z,102nm,0.6s,mb5.4								
CHTO	**Chiang Mai**	**23.03**	**259**	*e*P		**P**		**17 16 11.8**	**+1.7**
	comp=Z,103nm,0.6s,mb5.4								
CHTO				*e*PcP		PcP		17 19 55.8	+1.1
NST	**Nakhon Sawan**	**23.22**	**251**	P		**P**		**17 16 13.6**	**+1.7**
	comp=Z,79nm,0.7s,mb5.2								
JEW	**Eniwo**	**23.51**	**36**	P		**P**		**17 16 10.6**	**-3.9**
ERM	**Erimo**	**23.91**	**40**	P		**P**		**17 16 14.4**	**-3.8**
	comp=Z,1μm,0.5s,SNR=28								
ERM	**Erimo**	**23.91**	**40**	P		**P**		**17 16 14.6**	**-3.6**
JEM	**Erimo**	**23.91**	**40**	P		**P**		**17 16 14.2**	**-4.0**
GTA	**Gaotai**	**24.21**	**312**	*i*P		**P**		**17 16 21.0**	**+0.1**
GTA				PP				17 17 08.0	
GTA				PCP		PcP		17 19 58.8	+1.5
GTA				S		**S**		**17 20 29.5**	**+1.1**
GTA				SS				17 21 35.5	
GTA				SCP		ScP		17 23 23.3	+1.5
GTA				PCS		PcS		17 23 36.0	-1.2
GTA				SCS		ScS		17 27 10.3	+0.9
GTA				AMB		AMB			
	comp=Z,129nm,1.3s,mb5.3								
GTA				AMB		AMB			
	comp=Z,694nm,6.8s								
GTA				LR		LR			
	comp=N,828nm,14.8s								
GTA				LR		LR			
	comp=E,846nm,10.6s								
GTA				LR		LR			
	comp=Z,660nm,11.4s								
ASAJ	**Asahikawa**	**24.99**	**35**	P		**P**		**17 16 25.1**	**-2.9**
	comp=Z,45nm,0.4s,mb5.4,baz=230,slow=8.5,SNR=94								
ASAJ				LR		LR		17 25 43.2	
	comp=Z,248nm,20.6s,baz=52,slow=35								
ASAJ	**Asahikawa**	**24.99**	**35**	P		**P**		**17 16 25.2**	**-2.8**
NNT	**Nongplab**	**25.08**	**245**	P		**P**		**17 16 31.3**	**+2.5**
KLR	**Kul'dur**	**25.24**	**14**κ	*i*P		**P**		**17 16 26.7**	**-3.5**
KLR				*e*		pP		17 16 59.0	-2.3
KLR				pmax		pmax			
	comp=E,140nm,1.4s								
KLR				pmax		pmax			
	comp=Z,280nm,1.4s,mb5.6								
KLR				pmax		pmax			
	comp=Z,1μm,9.5s								
KLR				MLR		MLR			
	comp=N,1μm,12.0s								
KLR				MLR		MLR			
	comp=E,1μm,12.0s								
KLR				MLR		MLR			
	comp=Z,3μm,12.0s								
JMP	**Maruseppu**	**25.32**	**36**	P		**P**		**17 16 28.9**	**-2.0**
JWK2	**Keihoku**	**25.49**	**32**	P		**P**		**17 16 31.7**	**-0.8**
ULN	**Ulaanbaatar**	**26.11**	**335**	P		**P**		**17 16 38.1**	**0.0**
	SNR=59								
ULN	**Ulaanbaatar**	**26.11**	**335**	*e*P		**P**		**17 16 37.4**	**-0.7**
ULN				*e*		pP		17 17 11.3	+2.1
ULN				pmax		pmax			
	comp=Z,137nm,1.3s,mb5.4								
ULN	**Ulaanbaatar**	**26.11**	**335**	*e*P		**P**		**17 16 37.4**	**-0.7**
	comp=Z,137nm,1.3s,mb5.4								
ULN				*e*		pP		17 17 11.3	+2.1
ULN				*e*ScP		ScP		17 23 26.7	-0.5
KSM	**Kuching**	**26.29**	**209**⇓	*i*P		**P**		**17 16 39.8**	**+0.1**
SONM	**Songino Array**	**26.34**	**334**	P		**P**		**17 16 39.8**	**-0.4**
	comp=Z,46nm,0.9s,mb5.1,baz=151,slow=10,SNR=265								
SONM				PcP		PcP		17 20 02.7	+0.6
	comp=Z,9.7nm,1.1s,baz=90,slow=1.5,SNR=3.6								
SONM				ScP		ScP		17 23 27.6	-0.3
	comp=Z,18nm,1.1s,baz=162,slow=3.0,SNR=24								
YUK	**Yuzh-Kuril'sk**	**26.72**	**39**	*e*P		**P**		**17 16 40.8**	**-2.7**
YUK				pmax		pmax			
	comp=N,150nm,0.5s								
YUK				pmax		pmax			
	comp=Z,190nm,0.5s,mb6.0								
YSS	**Yuzh-Sakhalins**	**27.09**	**31**	*e*P		**P**		**17 16 44.0**	**-2.9**
YSS				*e*		pP		17 17 19.0	+0.9
YSS				pmax		pmax			
	comp=Z,80nm,0.9s,mb5.3								
YSS				MLR		MLR			
	comp=Z,500nm,14.0s								
YSS	**Yuzh-Sakhalins**	**27.09**	**31**	*e*P		**P**		**17 16 44.0**	**-2.9**
	comp=Z,89nm,0.8s,mb5.5								
YSS				*e*PcP		PcP		17 20 04.4	+0.5
YSS				*e*ScP		ScP		17 23 30.0	-0.2
CIT	**Chita**	**27.99**	**348**	*e*P		**P**		**17 16 53.1**	**-1.7**
CIT				*e*		pP		17 17 25.7	-0.5
CIT				*e*				17 20 01.3	
CIT				pmax		pmax			
	comp=Z,166nm,2.1s,mb5.4								
SHL	**Shillong**	**28.03**	**278**	*e*P		**P**		**17 16 56.1**	**+0.9**
SHL				AMb		AMB		17 17 05.0	
	comp=Z,953nm,1.8s,mb6.2								
LSA	**Lhasa**	**28.56**	**287**	P		**P**		**17 17 01.8**	**+1.9**
LSA				AMB		AMB			
	comp=Z,50nm,0.9s,mb5.2								
KULM	**Kulim**	**28.93**	**231**	*e*P		**P**		**17 17 04.5**	**+1.3**
KULM				*e*PcP		PcP		17 20 09.0	+0.6
ZAK	**Zakamensk**	**29.61**	**334**⇓	*i*P		**P**		**17 17 07.8**	**-1.4**
ZAK				pmax		pmax			
	comp=Z,27nm,1.4s,mb4.8								
TLY	**Talaya**	**30.51**	**336**	P		**P**		**17 17 16.3**	**-0.8**
	comp=Z,544nm,0.8s,mb6.3,SNR=22								
TLY	**Talaya**	**30.51**	**336**	P		**P**		**17 17 17.0**	**-0.1**
	SNR=28								
TLY	**Talaya**	**30.51**	**336***c*	*i*P		**P**		**17 17 16.5**	**-0.6**
TLY				*e*		pP		17 17 47.6	-1.1
TLY				*e*				17 18 20.1	
TLY				*e*				17 22 07.4	
TLY				pmax		pmax			
	comp=Z,106nm,1.0s,mb5.5								
TLY				MLR		MLR			
	comp=Z,324nm,13.0s								
TLY	**Talaya**	**30.51**	**336**	*e*P		**P**		**17 17 16.4**	**-0.7**
	comp=E,65nm,0.8s,mb5.4								
IRK	**Irkutsk**	**30.74**	**337**	*e*P		**P**		**17 17 17.8**	**-1.4**
IRK				*e*				17 18 36.2	
IRK				*e*				17 27 38.7	
IRK				pmax		pmax			
	comp=Z,166nm,2.0s,mb5.4								
MOY	**Mondy**	**31.52**	**334**	*e*P		**P**		**17 17 25.4**	**-0.6**
MOY				pmax		pmax			
	comp=Z,210nm,2.3s,mb5.5								
CLNS	**Chul'man**	**31.92**	**2**	*e*P		**P**		**17 17 27.3**	**-2.2**
CLNS				*e*		pP		17 18 02.5	+1.3
CLNS				*e*PPP				17 18 38.2	
CLNS				*e*				17 20 14.3	
CLNS				*e*S		**S**		**17 22 18.5**	**-11**
CLNS				pmax		pmax			
	comp=N,160nm,1.0s								
CLNS				pmax		pmax			
	comp=Z,190nm,1.0s,mb5.8								
CLNS				pmax		pmax			
	comp=E,90nm,1.1s								
CLNS				smax					
	comp=E,61nm,12.4s								
CLNS				smax					
	comp=Z,52nm,11.8s								
CLNS				smax					
	comp=N,102nm,13.2s								
CLNS				MLR		MLR			
	comp=Z,500nm,13.0s								
CLNS				MLR		MLR			
	comp=N,200nm,12.0s								
CLNS				MLR		MLR			
	comp=E,200nm,11.0s								
GUN	**Gumba**	**33.21**	**283**	*e*P		**P**		**17 17 42.0**	**+1.3**
	comp=E,61nm,0.6s,mb5.5								
BOD	**Bodaibo**	**33.49**	**351**	*e*P		**P**		**17 17 40.6**	**-2.5**
BOD				*e*				17 19 05.8	
BOD				pmax		pmax			
	comp=Z,170nm,1.3s,mb5.6								
BOD				pmax		pmax			
	comp=Z,200nm,1.6s,mb5.6								
PKI	**Pulchoki**	**33.65**	**283**	*e*P		**P**		**17 17 45.4**	**+0.9**
	comp=Z,96nm,1.1s,mb5.5								
PKI	**Pulchoki**	**33.65**	**283**	*e*P		**P**		**17 17 45.4**	**+0.9**
PKI				pmax		pmax			
	comp=Z,96nm,1.1s,mb5.4								
BOK	**Bokaro**	**33.67**	**276**	*e*P		**P**		**17 17 44.9**	**+0.1**
BOK				AMb		AMB		17 17 48.8	
	comp=Z,141nm,1.1s,mb5.6								
KKN	**Kakani**	**33.75**	**283**	*e*P		**P**		**17 17 46.4**	**+1.0**
	comp=Z,122nm,1.0s,mb5.6								
KKN	**Kakani**	**33.75**	**283**	*e*P		**P**		**17 17 46.4**	**+1.0**
KKN				pmax		pmax			
	comp=Z,122nm,1.0s,mb5.6								
DMN	**Daman**	**33.91**	**283**	*e*P		**P**		**17 17 47.9**	**+1.1**
	comp=Z,151nm,1.1s,mb5.6								
WMQ	**Urumqi**	**34.30**	**312**	P		**P**		**17 17 50.0**	**-0.1**
WMQ				AP		pP		17 18 21.0	-1.1
WMQ				PP		PP		17 19 10.0	-0.8
WMQ				S		**S**		**17 23 06.0**	**-0.2**
WMQ				SS		SS		17 25 26.0	-15
WMQ				AMB		AMB			
	comp=Z,97nm,1.0s,mb5.5								
WMQ				AMB		AMB			
	comp=Z,524nm,4.0s								
WMQ				LR		LR			
	comp=N,389nm,10.0s								
WMQ				LR		LR			
	comp=E,378nm,10.0s								
WMQ				LR		LR			
	comp=Z,536nm,11.0s								
GKN	**Gorkha**	**34.30**	**284**	*e*P		**P**		**17 17 50.8**	**+0.6**
	comp=Z,148nm,1.1s,mb5.6								
YOGI	**Yogyakarta**	**34.78**	**202**⇑	*e*P		**P**		**17 17 55.6**	**+1.3**
KOLN	**Koldanda**	**35.23**	**283**	*e*P		**P**		**17 17 59.1**	**+0.9**
	comp=Z,92nm,1.1s,mb5.3								
SKR	**Severo-Kuril's**	**36.24**	**36**	*e*P		**P**		**17 17 58.4**	**-8.4**
SKR				pmax		pmax			
	comp=Z,2μm,2.0s,mb6.5								
SKR				pmax		pmax			
	comp=N,80nm,0.5s								
SKR				pmax		pmax			
	comp=E,80nm,0.5s								
SKR				pmax		pmax			
	comp=Z,90nm,0.5s,mb5.7								
ALBI	**Allahabad**	**37.10**	**280**	*e*P		**P**		**17 18 12.5**	**-1.6**
YAK	**Yakutsk**	**37.38**	**5**	*e*P		**P**		**17 18 14.1**	**-2.3**
YAK				*e*				17 20 31.1	
YAK				pmax		pmax			
	comp=Z,198nm,0.9s,mb5.7								
YAK	**Yakutsk**	**37.38**	**5**	*e*P		**P**		**17 18 14.1**	**-2.3**
	comp=Z,198nm,0.9s,mb5.7								
YAK				*e*PcP		PcP		17 20 31.1	-1.0
YAK				*e*ScP		ScP		17 24 04.7	-0.6
VIS	**Vishakhapatnam**	**37.45**	**267**	*e*P		**P**		**17 18 16.7**	**-0.3**
KRAR	**Krasnoyarsk**	**37.98**	**333***c*	*i*P		**P**		**17 18 20.2**	**-1.3**
KRAR				pmax		pmax			
	comp=Z,104nm,1.3s,mb5.3								
KAKA	**Kakadu**	**38.54**	**165**	*e*P		**P**		**17 18 24.4**	**-1.7**
	comp=Z,145nm,0.9s,mb5.6								
PET	**Petropavlovsk**	**38.83**	**34**α	*i*P		**P**		**17 18 25.5**	**-3.0**
PET				*e**PP		pP		17 18 58.1	-2.9
PET				*e*S		**S**		**17 24 12.8**	**-2.3**
PET				pmax		pmax			
	comp=Z,300nm,2.5s,mb5.5								
PET				pmax		pmax			
	comp=Z,112nm,0.6s,mb5.7								
PET				smax					
	comp=N,200nm,8.1s								
PET				MLR		MLR			
	comp=Z,200nm,19.0s								
PET	**Petropavlovsk**	**38.83**	**34**	*e*P		**P**		**17 18 25.4**	**-3.2**
	comp=Z,58nm,0.6s,mb5.4								
MK31	**Makanchi Array**	**38.92**	**315**	P		**P**		**17 18 29.0**	**-0.3**
MK31				pmax		pmax			
	comp=Z,73nm,0.6s,mb5.5								
MKAR	**Makanchi Array**	**38.92**	**315**	P		**P**		**17 18 29.2**	**-0.1**
	comp=Z,147nm,0.8s,mb5.7,baz=97,slow=9.9,SNR=787								
MKAR				PcP		PcP		17 20 36.9	0.0
	comp=Z,26nm,0.8s,baz=87,slow=6.2,SNR=5.7								
MKAR				ScP		ScP		17 24 11.3	+0.1
	comp=Z,5.0nm,0.7s,baz=90,slow=6.1,SNR=7.5								
MKAR	**Makanchi Array**	**38.92**	**315**	P		**P**		**17 18 29.2**	**-0.1**
MKAR								17 20 36.9	
MKAR								17 24 11.3	
MKAR				pmax		pmax			
	comp=Z,147nm,0.8s								
MKAR	**Makanchi Array**	**38.92**	**315**	P		**P**		**17 18 29.2**	**-0.1**
MKAR				PcP		PcP		17 20 36.9	0.0
MKAR				ScP		ScP		17 24 11.3	+0.1
MA2	**Magadan**	**39.72**	**22***c*	*i*P		**P**		**17 18 32.7**	**-3.2**
MA2				*e**PP		pP		17 19 03.3	-5.2
MA2				*e*				17 19 22.9	
MA2				*e*				17 20 11.7	
MA2				*e*PPP				17 20 38.7	
MA2				*e*S		**S**		**17 24 28.3**	**-0.1**
MA2				*e*				17 28 19.8	
MA2				pmax		pmax			
	comp=Z,40nm,1.3s,mb4.9								
MA2	**Magadan**	**39.72**	**22**	*e*P		**P**		**17 18 32.9**	**-3.0**
	comp=Z,26nm,1.2s,mb4.7								
MA2				*e*PcP		PcP		17 20 38.9	-0.5
MA2				*e*ScP		ScP		17 24 13.3	-1.0
NGP	**Nagpur**	**40.40**	**274**	*e*P		**P**		**17 18 39.5**	**-2.0**
ZAL	**Zalesovo**	**40.50**	**326**	P		**P**		**17 18 41.0**	**-1.3**
	comp=Z,86nm,0.8s,mb5.4,baz=360,slow=8.6,SNR=300								
ZAL				LR		LR		17 37 12.6	
	comp=Z,368nm,18.8s,baz=348,slow=38								
ZAL	**Zalesovo**	**40.50**	**326**	P		**P**		**17 18 41.0**	**-1.3**
ZAL				pmax		pmax			
	comp=Z,86nm,0.8s								
ZAL				MLR		MLR			
	comp=Z,368nm,18.8s								
SMLA	**Simla**	**40.62**	**289**	*e*P		**P**		**17 18 43.3**	**0.0**
SMLA				AMb		AMB		17 18 47.2	
	comp=Z,107nm,1.1s,mb5.4								
NDI	**New Delhi**	**40.76**	**286**	*e*P		**P**		**17 18 43.8**	**-0.7**
NDI				AMb		AMB		17 18 48.0	
	comp=Z,142nm,1.3s,mb5.5								
NDI				*ex*		x		17 24 41.0	
PMG	**Port Moresby**	**41.51**	**142**	*e*P		**P**		**17 18 49.2**	**-1.4**
PMG				pmax		pmax			
	comp=Z,251nm,1.3s								
PMG	**Port Moresby**	**41.51**	**142**	*e*P		**P**		**17 18 49.2**	**-1.4**
	comp=Z,251nm,1.3s,mb5.7								
NVS	**Novosibirsk**	**41.75**	**326**⇑	*i*P		**P**		**17 18 50.4**	**-2.1**
NVS				*i* *PP		pP		17 19 24.0	-1.4
NVS				*i*				17 20 32.3	
NVS				*e*				17 28 31.0	
NVS				pmax		pmax			
	comp=Z,178nm,1.7s,mb5.4								
NVS				pmax		pmax			
	comp=N,67nm,1.8s								
NVS				pmax		pmax			
	comp=E,88nm,2.0s								
KSH	**Kashi**	**41.82**	**302**	P		**P**		**17 18 56.0**	**+2.9**
KSH				AP		pP		17 19 27.8	+1.8
KSH				PP		PP		17 20 37.3	+4.4
KSH				PCP		PcP		17 20 48.3	+2.0
KSH				PPP				17 22 13.5	
KSH				S		**S**		**17 25 02.5**	**+3.0**
KSH				SS		SS		17 28 08.5	-3.1
KSH				SCS		ScS		17 28 40.5	+0.5
KSH				AMB		AMB			
	comp=Z,145nm,1.2s,mb5.5								
KSH				LR		LR			
	comp=N,436nm,6.9s								
KSH				LR		LR			
	comp=E,454nm,7.8s								
HYB	**Hyderabad**	**41.88**	**269**⇑	*i*P		**P**		**17 18 55.0**	**+1.4**
	comp=E,100nm,1.0s,mb5.4								
HYB				*e*ScP		ScP		17 24 23.0	+0.2
HYB				*e*S		**S**		**17 25 04.0**	**+3.7**
HYB				*e*				17 25 46.0	
HYB				*e*ScS		ScS		17 28 34.0	-6.3
HYB	**Hyderabad**	**41.88**	**269**⇑	*e*P		**P**		**17 18 55.0**	**+1.4**
HYB				pmax		pmax			
	comp=Z,100nm,1.0s,mb5.4								
HYB	**Hyderabad**	**41.88**	**269**⇑	*e*P		**P**		**17 18 55.0**	**+1.4**
	comp=Z,100nm,1.0s,mb5.4								
ULHL	**Ulahol**	**41.98**	**306**	P		**P**		**17 18 56.1**	**+1.7**
	SNR=19								
KURK	**Kurchatov**	**42.55**	**319**	P		**P**		**17 18 58.5**	**-0.5**
	comp=Z,2μm,0.6s								
TKM2	**Tokmak 2**	**42.56**	**307**	P		**P**		**17 19 00.3**	**+1.3**
	SNR=242								
KZA	**Kyzart**	**42.68**	**306**	P		**P**		**17 19 02.4**	**+2.3**
	SNR=104								
SEY	**Seymchan**	**42.76**	**19**⇑	*e*P		**P**		**17 18 58.0**	**-2.7**
FITZ	**Fitzroy Crossi**	**42.84**	**176**⇓	*i*P		**P**		**17 18 59.9**	**-1.5**
	comp=Z,151nm,1.0s,mb5.6								
FITZ				*e*PCP		PcP		17 20 49.8	+0.1
FITZ				*e*SCP		ScP		17 24 26.8	+0.2
FITZ				*e*S		SS		17 28 44.4	+13
KBK	**Karagaybulak**	**42.99**	**307**	P		**P**		**17 19 03.9**	**+1.3**
	SNR=90								
CHMS	**Chumysh**	**43.18**	**307**	P		**P**		**17 19 05.0**	**+0.9**
	SNR=100								
FRU	**Bishkek**	**43.26**	**307**⇑	*i*P		**P**		**17 19 05.0**	**+0.3**
FRU				*e*		pP		17 19 39.0	+1.2
FRU				pmax		pmax			
	comp=Z,240nm,1.4s,mb5.6								
AJM	**Ajmer**	**43.31**	**283**	*ex*		x		17 19 15.0	
AAK	**Ala-Archa**	**43.31**	**306**	P		**P**		**17 19 06.5**	**+1.3**
	SNR=28								
AAK	**Ala-Archa**	**43.31**	**306**	P		**P**		**17 19 05.3**	**+0.1**
	comp=Z,397nm,0.9s,mb6.0,SNR=18								
AAK	**Ala-Archa**	**43.31**	**306**	P		**P**		**17 19 05.6**	**+0.4**
	SNR=32								
AAK	**Ala-Archa**	**43.31**	**306***c*	*e*P		**P**		**17 19 05.2**	**0.0**
AAK				pmax		pmax			
	comp=Z,58nm,0.9s,mb5.2								
AAK	**Ala-Archa**	**43.31**	**306**	*e*P		**P**		**17 19 05.1**	**-0.1**
	comp=Z,57nm,0.8s,mb5.2								
AAK				*e*PcP		PcP		17 20 51.1	-0.2
USP	**Ospenovka**	**43.41**	**307**	P		**P**		**17 19 06.8**	**+0.9**
	SNR=42								
AML	**Almayashu**	**43.84**	**306**	P		**P**		**17 19 11.2**	**+1.9**
	SNR=29								
EKS2	**Erkin-Say**	**43.84**	**306**	P		**P**		**17 19 10.6**	**+1.2**
	SNR=78								
KAD	**Karad**	**45.88**	**270**	*i* P		**P**		**17 19 26.9**	**+1.4**
MBWA	**Marble Bar**	**45.90**	**184**	P		**P**		**17 19 25.1**	**-0.6**
	SNR=18								
MBWA	**Marble Bar**	**45.90**	**184**	*e*P		**P**		**17 19 24.4**	**-1.2**
	comp=Z,210nm,1.1s,mb5.7								
MBWA				*e*PcP		PcP		17 21 00.1	0.0
WRAB	**Tennant Creek**	**45.95**	**165**	P		**P**		**17 19 25.0**	**-1.1**
	comp=Z,3μm,1.0s								
WRAB	**Tennant Creek**	**45.95**	**165**	*e*P		**P**		**17 19 25.8**	**-0.3**
WRAB				pmax		pmax			
	comp=Z,670nm,1.0s,mb6.2								
WRAB	**Tennant Creek**	**45.95**	**165**	*e*P		**P**		**17 19 25.8**	**-0.3**
	comp=Z,461nm,1.0s,mb6.1								
WRA	**Warramunga Arr**	**45.96**	**165**	P		**P**		**17 19 25.6**	**-0.5**
	comp=Z,300nm,0.8s,mb6.0,baz=348,slow=9.0,SNR=549								
WRA				S		**S**		**17 25 58.4**	**-1.1**
	comp=Z,10nm,0.9s,baz=344,slow=14,SNR=20								
WRA	**Warramunga Arr**	**45.96**	**165**	P		**P**		**17 19 25.6**	**-0.5**
WRA				S		**S**		**17 25 58.4**	**-1.1**
WRA				pmax		pmax			
	comp=Z,300nm,0.9s								
WRA				smax					
	comp=N,11nm,0.9s								
WB2	**Warramunga Arr**	**45.96**	**165**	*e*P		**P**		**17 19 25.3**	**-0.8**
WB2				*e*S		**S**		**17 25 57.3**	**-2.2**
WB2				*e*SCS		ScS		17 29 03.1	-3.1
KK31	**Karatay Array**	**46.28**	**307**	*i* P		**P**		**17 19 29.1**	**+0.5**
KKAR	**Karatay Array**	**46.28**	**307**	*i* P		**P**		**17 19 29.0**	**+0.4**
KKAR				pmax		pmax			
	comp=Z,300nm,0.4s,mb6.3								
TRD	**Trivandrum**	**46.67**	**258**	*e*P		**P**		**17 19 32.5**	**+0.8**
TRD				AMb		AMB		17 19 35.8	
	comp=Z,72nm,0.7s,mb5.4								
TIXI	**Tiksi**	**46.88**	**3**	*e*P		**P**		**17 19 28.9**	**-4.4**
TIXI				*e*				17 21 18.8	
TIXI				*e*S		**S**		**17 26 12.1**	**-0.6**
TIXI				pmax		pmax			
	comp=Z,154nm,1.5s,mb5.4								
TIX

ZRNK eScP ScP 17 24 50.4 -1.5
AS31 Alice Springs 49.46 167 eP **P** **17 19 53.0 -0.1**
AS31 eS **S** **17 26 48.8 -0.1**
AS31 eScS ScS 17 29 26.7 -2.7
ASAR Alice Springs 49.46 167 P **P** **17 19 53.0 -0.1**
comp=Z,80nm,0.8s,mb5.4,baz=349,slow=7.0,SNR=1169
ASAR ScP ScP 17 24 58.8 +4.6
comp=Z,1.7nm,0.8s,baz=349,slow=4.2,SNR=4.8
ASAR S **S** **17 26 50.5 +1.6**
comp=Z,16nm,0.9s,baz=358,slow=23,SNR=33
ASAR ScS ScS 17 29 27.5 -1.9
comp=Z,1.5nm,0.9s,baz=346,slow=7.0,SNR=4.5
ASAR Alice Springs 49.46 167 P **P** **17 19 53.0 -0.1**
ASAR S **S** **17 26 50.5 +1.6**
ASAR 17 29 27.5
ASAR pmax pmax
comp=Z,80nm,0.8s
ASAR smax
comp=N,17nm,0.9s
ASPA Alice Springs 49.46 167 eP **P** **17 19 53.0 -0.1**
ASPA eS **S** **17 26 48.8 -0.1**
ASPA eSCS ScS 17 29 26.7 -2.7
HNR Honiara 49.70 129 eP **P** **17 19 54.3 -0.6**
HNR pmax pmax
comp=Z,44nm,0.8s,mb5.1
HNR Honiara 49.70 129 eP **P** **17 19 54.3 -0.6**
comp=Z,51nm,0.8s,mb5.2
CTA Charters Tower 50.17 151⇓ *i*P **P** **17 19 58.6 +0.1**
comp=Z,80nm,1.2s,mb5.2
CTA eSCP ScP 17 24 57.7 +0.4
CTA Charters Tower 50.17 151⇓ *i*P **P** **17 19 58.6 +0.1**
CTA pmax pmax
comp=Z,80nm,1.2s
CTAO Charters Tower 50.17 151 eP **P** **17 19 58.8 +0.3**
CTAO pmax pmax
comp=Z,258nm,1.4s,mb5.7
CTAO Charters Tower 50.17 151 eP **P** **17 19 58.8 +0.3**
comp=Z,258nm,1.4s,mb5.7
BILL Bilibino 50.47 20 eP **P** **17 19 58.9 -1.8**
BILL *e* 17 21 16.8
BILL pmax pmax
comp=Z,32nm,1.0s,mb4.9
BILL Bilibino 50.47 20 eP **P** **17 19 58.9 -1.8**
comp=Z,32nm,1.0s,mb4.9
BILL ePcP PcP 17 21 16.8 +0.2
AB31 Akbulak array 54.05 314⇑ eP **P** **17 20 27.5 +0.4**
AKTK Aktyubinsk 55.35 315 P **P** **17 20 36.4 -0.1**
AKTO Aktyubinsk 55.35 315 P **P** **17 20 36.4 -0.1**
comp=Z,54nm,1.0s,mb5.2,baz=89,slow=7.5,SNR=124
AKTO Aktyubinsk 55.35 315 P **P** **17 20 36.4 0.0**
AKTO pmax pmax
comp=Z,54nm,1.0s,mb5.2
ARU Arti 55.47 323 P **P** **17 20 36.8 -0.5**
comp=Z,2μm,0.4s
ARU Arti 55.47 323⇑ *i*P **P** **17 20 36.4 -0.9**
ARU *e* pP 17 21 09.1 -2.8
ARU *e* 17 21 33.8
ARU *e* 17 22 39.1
ARU ePPP 17 23 57.6
ARU eS **S** **17 28 09.4 -1.2**
ARU *e* 17 30 03.7
ARU pmax pmax
comp=Z,227nm,0.9s,mb5.9
ARU Arti 55.47 323 eP **P** **17 20 36.4 -0.9**
comp=Z,353nm,1.0s,mb6.0
ARU ePcP PcP 17 21 34.3 -1.3
ABKT Ailbek 55.78 300 P **P** **17 20 40.0 +0.5**
comp=Z,324nm,1.4s,mb6.0,SNR=31
ABKT Ailbek 55.78 300 P **P** **17 20 41.0 +1.5**
KLBR Kellerberrin 56.41 185 eP **P** **17 20 43.2 -0.8**
comp=Z,90nm,0.8s,mb5.7
SOKR Solikamsk 56.78 326*c i*P **P** **17 20 45.7 -0.9**
SOKR pmax pmax
comp=Z,130nm,1.0s,mb5.7
MUN Mundaring 56.94 187 eP **P** **17 20 46.6 -1.1**
MUN ePCP PcP 17 21 41.0 -0.3
NIKO Nikolski 57.51 42 eP **P** **17 20 49.4 -2.3**
comp=Z,63nm,0.6s,mb5.6
NWAO Narrogin (SRO) 57.77 186 eP **P** **17 20 53.4 -0.2**
NWAO pmax pmax
comp=Z,165nm,1.1s
NWAO Narrogin (SRO) 57.77 186 eP **P** **17 20 53.4 -0.2**
comp=Z,165nm,1.1s,mb5.8
WBK Wadi Bani Khal 58.07 282 P **P** **17 20 57.6 +2.0**
SNR=6.7
BIDO Bidbid 58.57 283 P **P** **17 21 01.1 +2.0**
SNR=18
SMDO Samad 58.76 283 P **P** **17 21 02.3 +1.9**
SNR=8.3
JMDO Jabal Madar 58.90 282 P **P** **17 21 03.1 +1.7**
SNR=7.0
STKA Stephens Creek 59.23 161⇓ *i*P **P** **17 21 03.1 -0.6**
comp=Z,68nm,1.0s,mb5.4
STKA epP pP 17 21 36.1 -2.6
STKA Stephens Creek 59.23 161 P **P** **17 21 03.3 -0.4**
comp=Z,47nm,0.6s,mb5.5,baz=341,slow=6.6,SNR=118
HOQ Hoqain 59.27 284 P **P** **17 21 05.7 +1.7**
SNR=16
BANOM Banah 59.54 287 P **P** **17 21 07.9 +2.2**
SNR=11
BSY Bisya 59.60 283 P **P** **17 21 07.8 +1.6**
SNR=6.7
ARQ Araqi 60.03 284 P **P** **17 21 10.9 +1.7**
SNR=10
ASHO Ashiyiah 60.08 285 P **P** **17 21 11.2 +1.7**
SNR=7.9
ADE Adelaide 61.41 165⇓ *i*P **P** **17 21 18.9 +0.4**
ARMA Armidale 61.53 152 eP **P** **17 21 20.2 +0.9**
ARMA epP pP 17 21 51.2 -3.3
DZM Mont Dzumac 63.00 134 eP **P** **17 21 29.2 +0.2**
MAK Makhachkala 63.09 307 *i* P **P** **17 21 28.8 -0.8**
MAK *e**PP pP 17 22 01.5 -3.6
MAK *i* 17 23 48.6
MAK ePPP 17 25 26.7
MAK eS **S** **17 29 49.6 +1.0**
MAK pmax pmax
comp=Z,134nm,1.6s,mb5.5
MAK Makhachkala 63.09 307 eP **P** **17 21 30.0 +0.4**
PECR Pechory 63.51 322 *i* P **P** **17 21 31.0 -1.4**
PECR *i* pP 17 22 07.0 -0.9
PECR pmax pmax
comp=Z,500nm,2.0s,mb6.0
RBK Rabkut 63.89 278 P **P** **17 21 36.2 +1.3**
SNR=11
TTA Tatalina 64.09 30 eP **P** **17 21 35.7 -0.5**
WHFO Wadi Hawf 64.14 279 P **P** **17 21 37.3 +0.7**
SNR=11
RIV Riverview 64.31 154 eP **P** **17 21 38.8 +1.2**
SVW2 Sparrevohn 64.45 32 eP **P** **17 21 37.8 -0.8**
ABTO Aybut 64.76 278 P **P** **17 21 41.8 +1.2**
SNR=7.7
CNB Canberra Magne 64.94 156 eP **P** **17 21 42.0 +0.3**
comp=Z,122nm,1.0s,mb5.7
CNB epP pP 17 22 15.7 -1.6
TMCR Tamitsa 65.65 331*c i*P **P** **17 21 45.7 -0.6**
TMCR pmax pmax
comp=Z,380nm,1.5s,mb6.0
VRHR Novokhopersk 65.67 317 eP **P** **17 21 45.9 -0.5**
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=Z,200nm,0.6s,mb6.1
VRHR pmax pmax
comp=E,110nm,0.7s
GNI Garni 65.67 305 P **P** **17 21 48.1 +1.6**
comp=E,19nm,1.0s,mb4.9,baz=157,slow=4.0,SNR=33
GNI Garni 65.67 305⇑ P **P** **17 21 48.7 +2.2**
SNR=27
GNI Garni 65.67 305 P **P** **17 21 48.1 +1.7**
GNI pmax pmax
comp=Z,19nm,1.0s
GNI Garni 65.67 305 eP **P** **17 21 48.1 +1.6**
comp=Z,150nm,1.4s,mb5.6
TOO Toolangi 65.69 160 eP **P** **17 21 46.6 +0.1**
comp=Z,58nm,1.0s,mb5.4
TOO Toolangi 65.69 160 eP **P** **17 21 46.6 +0.1**
TOO pmax pmax
comp=Z,58nm,1.0s,mb5.4
ZEI Tsey 65.73 308 eP **P** **17 21 46.6 -0.2**
ZEI *e**PP pP 17 22 16.1 -6.4
ZEI pmax pmax
comp=Z,80nm,1.2s,mb5.4
UMR Umm Al-Rimmam 65.92 293 eP **P** **17 21 48.6 +0.6**
UMR AMb AMB 17 21 49.2
comp=Z,89nm,0.7s,mb5.7

QRN Al-Qurain 65.98 292 eP **P** **17 21 48.6 +0.2**
QRN AMb AMB 17 21 50.3
comp=Z,169nm,0.9s,mb5.9
KBD Kabd 66.05 292 eP **P** **17 21 49.4 +0.5**
KBD AMb AMB 17 21 51.0
comp=Z,421nm,1.0s,mb6.2
MIB Mutribah 66.17 293 eP **P** **17 21 50.1 +0.5**
MIB AMb AMB 17 21 51.6
comp=Z,182nm,0.9s,mb5.9
RDF Al-Radifah 66.24 292 eP **P** **17 21 50.7 +0.6**
RDF AMb AMB 17 21 52.1
comp=Z,272nm,1.0s,mb6.0
KIV Kislovodsk 66.34 309 P **P** **17 21 51.9 +1.2**
comp=Z,776nm,1.6s,mb6.3,SNR=34
KIV Kislovodsk 66.34 309 P **P** **17 21 51.6 +0.9**
SNR=32
KIV Kislovodsk 66.34 309⇑ eP **P** **17 21 51.1 +0.4**
KIV e*PP pP 17 22 27.0 +0.5
KIV *e* 17 24 19.3
KIV *i* S S 17 30 33.0 +4.6
KIV eSS SS 17 34 46.8 -0.8
KIV pmax pmax
comp=Z,213nm,1.2s,mb5.8
KIV MLR MLR
comp=Z,100nm,17.0s
KIV Kislovodsk 66.34 309 eP **P** **17 21 51.3 +0.6**
comp=Z,280nm,1.4s,mb5.9
KIV *e* pP 17 22 26.5 0.0
KDAK Kodiak Island 66.41 36 P **P** **17 21 50.1 -1.0**
comp=Z,290nm,1.2s,mb6.0,SNR=11
KDAK Kodiak Island 66.41 36 P **P** **17 21 50.2 -0.9**
NAY Al-Naaiem 66.41 292 eP **P** **17 21 51.2 +0.1**
NAY AMb AMB 17 21 52.9
comp=Z,109nm,0.8s,mb5.7
LVZ Lovozero 66.53 336 P **P** **17 21 50.1 -1.8**
comp=Z,174nm,1.4s,mb5.7,SNR=15
LVZ Lovozero 66.53 336*c i*P **P** **17 21 50.6 -1.3**
LVZ *e*S S 17 30 28.9 -1.7
LVZ *e*SS SS 17 34 47.8 -2.6
LVZ pmax pmax
comp=Z,46nm,1.5s,mb5.1
LVZ pmax pmax
comp=N,16nm,1.4s
LVZ pmax pmax
comp=E,12nm,0.7s
LVZ Lovozero 66.53 336⇑ eP **P** **17 21 50.7 -1.2**
RST Umm Al-Ruwaisa 66.54 293 eP **P** **17 21 51.6 -0.3**
RST AMb AMB 17 21 53.5
comp=Z,94nm,0.8s,mb5.7
VOR Voronezh 67.04 318 eP **P** **17 21 54.5 -0.6**
VOR pmax pmax
comp=N,80nm,1.3s
VOR pmax pmax
comp=E,400nm,1.3s
APA Apatity 67.05 335⇓ *i*P **P** **17 21 54.0 -1.2**
APA *i* 17 22 20.6
APA *i* pP 17 22 29.0 -2.0
APA *e*S S 17 30 27.0 -10
APA *e* 17 31 27.0
APA pmax pmax
comp=Z,200nm,1.5s,mb5.7
APA MLR MLR
comp=Z,400nm,13.0s
MCK McKinley 67.16 29 eP **P** **17 21 54.2 -1.7**
MCK *e* 17 22 22.4
MCK pmax pmax
comp=Z,54nm,1.6s,mb5.1
MCK McKinley 67.16 29 eP **P** **17 21 54.2 -1.7**
comp=Z,110nm,1.6s,mb5.4
MCK ePcP PcP 17 22 22.4 -0.4
MOS Moscow 67.18 322 eP **P** **17 21 54.3 -1.7**
MOS *e* 17 22 21.2
MOS e*PP pP 17 22 28.9 -3.0
MOS pmax pmax
comp=Z,500nm,1.5s,mb6.1
MOS pmax pmax
comp=Z,282nm,1.3s,mb5.9
COLA College 67.42 28 eP **P** **17 21 55.5 -2.0**
COLA pmax pmax
comp=Z,16nm,1.0s,mb4.8
COLA College 67.42 28 eP **P** **17 21 55.5 -2.1**
comp=Z,16nm,1.0s,mb4.8
PMR Palmer 67.46 31 eP **P** **17 21 56.5 -1.3**
PMR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
PMR Palmer 67.46 31 eP **P** **17 21 56.5 -1.3**
comp=Z,10nm,0.6s,mb4.8
MSL Mosul 67.87 301 *ex* x 17 22 04.0
OBN Obninsk 67.89 322 P **P** **17 21 59.0 -1.5**
comp=Z,890nm,0.4s,SNR=14
OBN Obninsk 67.89 322⇑ eP **P** **17 21 59.4 -1.1**
OBN e*PP pP 17 22 35.0 -1.4
OBN *i* S S 17 30 48.4 +1.4
OBN pmax pmax
comp=Z,140nm,1.2s,mb5.6
OBN MLR MLR
comp=Z,100nm,20.0s
OBN Obninsk 67.89 322 eP **P** **17 21 58.9 -1.6**
comp=Z,255nm,1.2s,mb5.8
OBN ePcP PcP 17 22 24.9 -1.0
SOC Sochi 68.52 309 *i* P **P** **17 22 05.5 +1.1**
SOC e*PP pP 17 22 40.7 +0.3
SOC *e*S S 17 30 53.1 -1.3
SOC pmax pmax
comp=Z,120nm,1.4s,mb5.4
SOC Sochi 68.52 309 *i* P **P** **17 22 05.7 +1.3**
JOF Joensuu 68.84 331 *ep* **P** **17 22 04.6 -1.8**
comp=Z,16nm,0.3s,mb5.2
JOF Joensuu 68.84 331 eP **P** **17 22 04.6 -1.8**
JOF pmax pmax
comp=Z,16nm,0.3s,mb5.2
KEV Kevo 68.88 338 *ep* **P** **17 22 04.8 -1.8**
comp=Z,19nm,0.5s,mb5.1
KEV Kevo 68.88 338 eP **P** **17 22 04.8 -1.8**
KEV pmax pmax
comp=Z,19nm,0.5s,mb5.1
SPB4 Spitsbergen Ar 69.11 348 eP **P** **17 22 06.4 -1.6**
DIV Divide 69.14 31 eP **P** **17 22 07.3 -0.9**
comp=Z,106nm,1.5s,mb5.3
ARCES ARCESS Array B 69.44 338 P **P** **17 22 09.0 -1.1**
comp=Z,6.3nm,0.4s,mb4.7,baz=70,slow=6.8,SNR=73
ARCES ARCESS Array B 69.44 338 P **P** **17 22 09.0 -1.1**
ARCES pmax pmax
comp=Z,6.0nm,0.4s
KBS Kingsbay 69.62 349 eP **P** **17 22 10.3 -0.8**
KBS *e*S S 17 31 02.9 -4.5
KBS AMS AMS 17 54 35.1
comp=Z,95nm,20.9s
KBS Kingsbay 69.62 349 eP **P** **17 22 07.5 -3.7**
KBS *e* 17 30 57.9
KBS LR LR
comp=Z,90nm,20.9s
MENT Mentasta 69.63 29 eP **P** **17 22 10.6 -0.6**
ANN Anapa 69.80 311*c i*P **P** **17 22 11.9 -0.4**
ANN *i* *PP pP 17 22 47.1 -1.3
ANN *i* S S 17 31 10.4 +1.0
ANN pmax pmax
comp=Z,222nm,1.3s,mb5.7
PUL Pulkovo 70.08 327 eP **P** **17 22 13.1 -0.9**
PUL *e*S S 17 31 10.0 -2.8
PUL pmax pmax
comp=Z,216nm,0.9s,mb5.9
PUL pmax pmax
comp=N,140nm,1.0s
PUL pmax pmax
comp=E,261nm,1.0s
PUL smax
comp=N,69nm,11.3s
PUL smax
comp=E,101nm,11.0s
PUL Pulkovo 70.08 327⇑ eP **P** **17 22 14.2 +0.2**
EGAK Eagle 70.23 27 eP **P** **17 22 13.5 -1.4**
comp=E,35nm,1.2s,mb5.0
KTK1 Kautokeino 70.37 338⇑ *i*P **P** **17 22 15.6 -0.2**
KTK1 AMb AMB 17 22 18.1
comp=Z,56nm,1.7s,mb5.0
KTK1 Kautokeino 70.37 338 eP **P** **17 22 15.6 -0.2**
comp=Z,56nm,1.7s,mb5.0
MALT Malatya 70.88 304⇑ *i*P **P** **17 22 20.3 +1.4**
MALT Malatya 70.88 304 eP **P** **17 22 20.1 +1.3**
comp=Z,206nm,1.2s,mb5.7
DAWY Dawson 71.17 27 eP **P** **17 22 19.4 -1.2**
KAF Kangasniemi 71.29 330 *ep* **P** **17 22 19.9 -1.4**
comp=Z,15nm,0.4s,mb5.1
KAF Kangasniemi 71.29 330 eP **P** **17 22 19.9 -1.4**

KAF pmax pmax
comp=Z,15nm,0.4s,mb5.1
TRO Tromso 71.60 339 *i* P **P** **17 22 20.9 -2.3**
TRO AMb AMB 17 22 23.0
comp=Z,34nm,1.7s,mb4.8
TRO AMS AMS 17 55 44.1
comp=Z,76nm,21.6s
TRO Tromso 71.60 339 *i* P **P** **17 22 20.9 -2.3**
comp=Z,34nm,1.7s,mb4.8
FIA1 FINESS Array S 71.60 330 eP **P** **17 22 22.1 -1.0**
FINES FINESS Array B 71.60 330 P **P** **17 22 22.3 -0.9**
comp=Z,12nm,0.5s,mb4.9,baz=56,slow=5.9,SNR=213
FINES LR LR 17 57 01.5
comp=Z,241nm,18.8s,baz=73,slow=38
FINES FINESS Array B 71.60 330 P **P** **17 22 22.3 -0.9**
FINES pmax pmax
comp=Z,12nm,0.5s
FINES MLR MLR
comp=Z,241nm,18.8s
FINES FINESS Array B 71.60 330 P **P** **17 22 22.3 -0.9**
FINES LR LR 17 57 01.5
INK Inuvik 71.96 22 eP **P** **17 22 23.7 -1.6**
INK pmax pmax
comp=Z,56nm,1.2s
INK Inuvik 71.96 22 eP **P** **17 22 23.7 -1.6**
comp=Z,2μm,1.2s
SIM Simferopol' 72.02 312*c i*P **P** **17 22 25.8 +0.1**
SIM e*PP pP 17 22 42.1 -20
SIM e*SP sP 17 23 02.0 -16
SIM *e* 17 25 05.0
SIM *e*S S 17 31 36.0 +0.9
SIM *e*SS sS 17 32 34.0 -3.8
SIM pmax pmax
comp=Z,87nm,0.7s,mb5.6
VSU Vasula 72.23 327⇑ *i*P **P** **17 22 25.5 -1.4**
MNK Minsk 72.93 323 eP **P** **17 22 24.0 -7.0**
MNK pmax pmax
comp=Z,330nm,1.6s,mb5.8
MNK pmax pmax
comp=N,540nm,2.0s
LBOS 73.24 278 eP **P** **17 22 34.4 +1.6**
AKASG Malin Array Be 73.36 319 P **P** **17 22 32.6 -0.9**
comp=N,27nm,0.6s,mb5.2,baz=58,slow=6.1,SNR=187
AKASG PP PP 17 25 16.8 -2.2
comp=N,4.6nm,1.0s,baz=61,slow=8.8,SNR=4.3
AKASG Malin Array Be 73.36 319 P **P** **17 22 32.7 -0.9**
AKASG 17 25 16.8
AKASG pmax pmax
comp=Z,27nm,0.6s
AKASG Malin Array Be 73.36 319 P **P** **17 22 32.6 -0.9**
AKASG PP PP 17 25 16.8 -2.2
AKBB Malin Array Si 73.36 319 eP **P** **17 22 32.6 -1.0**
FKH Fakeheh 73.70 301 eP **P** **17 22 37.1 +1.5**
BR131 Keskin Array S 73.99 307 eP **P** **17 22 37.3 +0.1**
comp=Z,31nm,0.8s,mb5.1
BRTR Keskin Array B 73.99 307 P **P** **17 22 38.0 +0.7**
comp=Z,56nm,1.0s,mb5.2,baz=102,slow=5.3,SNR=128
BRTR Keskin Array B 73.99 307 P **P** **17 22 38.0 +0.7**
BRTR pmax pmax
comp=Z,56nm,1.0s
LOF Lofoten 74.00 338 eP **P** **17 22 37.6 +0.3**
LOF AMb AMB 17 22 39.4
comp=Z,28nm,1.4s,mb4.8
LOF Lofoten 74.00 338 eP **P** **17 22 37.6 +0.3**
comp=Z,28nm,1.4s,mb4.8
BHL Bhannes 74.40 300 eP **P** **17 22 40.1 +0.5**
ANTO Ankara 74.56 307 P **P** **17 22 41.3 +0.7**
SNR=26
ANTO Ankara 74.56 307 eP **P** **17 22 40.7 +0.2**
ANTO pmax pmax
comp=Z,167nm,1.4s,mb5.5
ANTO Ankara 74.56 307 eP **P** **17 22 40.7 +0.1**
comp=Z,167nm,1.4s,mb5.5
MOR8 Moi Rana 74.57 336 eP **P** **17 22 38.4 -2.2**
MOR8 AMb AMB 17 22 40.5
comp=Z,48nm,1.6s,mb4.9
MOR8 Moi Rana 74.57 336 eP **P** **17 22 38.4 -2.2**
comp=Z,48nm,1.6s,mb4.9
SKAG Skagway 74.60 31 eP **P** **17 22 40.9 +0.1**
comp=Z,116nm,1.5s,mb5.3
KIS Kishinev 74.86 315 eP **P** **17 22 39.0 -3.3**
KIS *e* pP 17 23 16.0 -2.8
MMAI Mount Meron Ar 74.90 300 P **P** **17 22 44.4 +1.9**
comp=Z,34nm,0.7s,mb5.1,baz=74,slow=8.8,SNR=56
SIT Sitka 75.54 34 eP **P** **17 22 46.6 +0.4**
SIT pmax pmax
comp=Z,172nm,1.4s,mb5.5
SIT Sitka 75.54 34 eP **P** **17 22 46.6 +0.4**
comp=Z,172nm,1.4s,mb5.5
SUW Suwalki 75.65 323 eP **P** **17 22 46.3 -0.5**
CSS Prodhromos 75.84 302 eP **P** **17 22 48.2 +0.3**
DAG Danmarks Havn 75.88 352⇓ *i*P **P** **17 22 46.0 -2.1**
comp=Z,12nm,1.2s,mb4.4
DAG Danmarks Havn 75.88 352⇓ *i*P **P** **17 22 46.0 -2.1**
DAG pmax pmax
comp=Z,120nm,1.2s,mb5.4
TIRR Tirgusor 76.02 313⇓ *i*P **P** **17 22 48.3 -0.6**
TIRR Tirgusor 76.02 313 P **P** **17 22 48.9 0.0**
TIRR Tirgusor 76.02 313 eP **P** **17 22 48.5 -0.3**
comp=Z,41nm,0.8s,mb5.1
NSS Namsos 76.26 335 eP **P** **17 22 48.2 -2.1**
NSS Namsos 76.26 335 eP **P** **17 22 45.6 -4.6**
EIL Elat 76.43 297 eP **P** **17 22 51.9 +0.7**
comp=Z,2μm,1.3s
VRI Vrincioaia 76.61 314⇑ *i*P **P** **17 22 52.6 +0.4**
VRI Vrincioaia 76.61 314 P **P** **17 22 52.8 +0.5**
PLOR Plostina 76.67 314⇑ *i*P **P** **17 22 53.4 +0.9**
LVV L'vov 76.79 319⇑ *i*P **P** **17 22 52.8 -0.4**
LVV *e*S S 17 32 24.8 -3.4
LVV *e* 17 33 04.2
LVV MLR MLR
comp=N,200nm,19.0s
LVV MLR MLR
comp=E,300nm,19.0s
LVV MLR MLR
comp=Z,100nm,17.0s
BURAR Bucovina Array 76.91 316⇓ *i*P **P** **17 22 54.0 +0.1**
ISP Isparta 76.94 306 eP **P** **17 22 53.8 -0.3**
ISP Isparta 76.94 306 P **P** **17 22 54.2 +0.1**
PRD Provadia 77.16 312 eP **P** **17 22 55.2 -0.1**
MLR Muntele Rosu 77.26 314 P **P** **17 22 56.0 +0.1**
comp=Z,43nm,0.8s,mb5.1,baz=4.6,slow=3.7,SNR=79
MLR Muntele Rosu 77.26 314⇑ *i*P **P** **17 22 56.0 +0.1**
MLR Muntele Rosu 77.26 314 P **P** **17 22 56.1 +0.2**
WAR Warsaw 77.55 322 eP **P** **17 22 58.1 +0.6**
BUC1 Bucharest 77.65 313 P **P** **17 22 59.1 +1.1**
KWP Kalwaria 77.65 319 eP **P** **17 22 58.4 +0.4**
HFS Hagfors 77.69 331 P **P** **17 22 57.7 -0.6**
comp=Z,11nm,0.4s,mb4.8,baz=101,slow=6.2,SNR=74
HFS Hagfors 77.69 331 P **P** **17 22 57.7 -0.5**
HFS pmax pmax
comp=Z,11nm,0.4s
VOIR 77.86 314⇑ *i*P **P** **17 22 59.0 -0.2**
VOIR 77.86 314⇑ P **P** **17 22 59.0 -0.2**
JMB Yambol 78.00 311 eP **P** **17 23 00.8 +0.9**
KOLS Kolonicke sedl 78.20 319 eP **P** **17 23 01.0 0.0**
NB2 NORSAR Subarra 78.30 332 P **P** **17 23 00.3 -1.3**
comp=Z,20nm,0.6s,mb4.9,baz=55,slow=5.6
NOA NORSAR Array B 78.30 332 P **P** **17 23 00.3 -1.3**
comp=Z,13nm,0.5s,mb4.8,baz=54,slow=5.6,SNR=91
NOA PP PP 17 26 00.8 +0.2
comp=Z,2.3nm,0.8s,baz=67,slow=8.2,SNR=4.1
NOA NORSAR Array B 78.30 332 P **P** **17 23 00.3 -1.3**
NOA 17 26 00.8
NOA pmax pmax
comp=Z,13nm,0.5s
NOA NORSAR Array B 78.30 332 P **P** **17 23 00.3 -1.3**
NOA PP PP 17 26 00.8 +0.2
ZIMR 78.36 313 P **P** **17 23 02.2 +0.3**
JMIC Jan Mayen 78.52 345 PKKPbc PKKPbc 17 42 01.8 +4.2
comp=Z,46nm,0.6s,baz=141,slow=6.9,SNR=3.6
JMIC Jan Mayen 78.52 345 eP **P** **17 22 54.7 -8.1**
JMIC *e* 17 26 02.9
JMIC AMS AMS 18 00 31.3
comp=Z,128nm,20.2s
NAO01 NORSAR Array S 78.54 332 eP **P** **17 23 01.2 -1.8**
comp=Z,5.9nm,0.5s,mb4.5
STHS Stebnicka Huta 78.61 319 eP **P** **17 23 03.7 +0.4**
STHS pmax pmax
comp=Z,29nm,1.0s,mb4.9
STHS Stebnicka Huta 78.61 319 eP **P** **17 23 03.7 +0.4**
comp=Z,29nm,1.0s,mb4.9
CRVS Cervenica-Dubn 78.70 319 eP **P** **17 23 04.2 +0.4**
DRGR 78.81 316⇑ *i*P **P** **17 23 04.7 +0.3**
DRGR 78.81 316 P **P** **17 23 04.8 +0.4**

DIM	**Dimitrovgrad**	**78.88**	**311**	*i* P		**P**	**17 23 04.6**	**-0.2**
ALN	**Alexandroupoli**	**78.98**	**310**	*e*P		**P**	**17 23 05.5**	**+0.2**
OJC	**Ojcow**	**79.11**	**320**	*e*P		**P**	**17 23 06.0**	**0.0**
NIE	**Niedzica**	**79.16**	**320**	*e*Pc		**P**	**17 23 06.9**	**+0.6**
GKP	**Gorka Klasztor**	**79.18**	**324**	*e*P		**P**	**17 23 06.1**	**-0.3**
RDO	**Rodhopi**	**79.23**	**310**	*e*P		**P**	**17 23 07.0**	**+0.3**
GZR	**Gura Zlata**	**79.35**	**315**	P		**P**	**17 23 07.9**	**+0.5**
PLD	**Plovdiv**	**79.42**	**311**	*e*P		**P**	**17 23 07.6**	**-0.2**
PLD	**Plovdiv**	**79.42**	**311**	*i* P		**P**	**17 23 07.2**	**-0.5**
KECS	**Kecovo**	**79.46**	**319**	*e*P		**P**	**17 23 08.2**	**+0.3**
KECS					pmax	pmax		
	comp=Z,57nm,1.8s,mb4.9							
KECS	**Kecovo**	**79.46**	**319**	*e*P		**P**	**17 23 08.2**	**+0.3**
	comp=Z,57nm,1.8s,mb4.9							
PRK	**Paraskevi**	**79.48**	**308**	*e*P		**P**	**17 23 08.5**	**+0.5**
BSD	**Bornholm Skovb**	**79.52**	**326**	⇑*i*P		**P**	**17 23 07.4**	**-0.9**
	comp=Z,117nm,1.1s,mb5.4							
BSD				*i*		pP	17 23 46.3	+1.1
BSD				*i*			17 33 04.1	
BSD					pmax	pmax		
	comp=Z,120nm,1.1s,mb5.4							
BSD					MLR	MLR		
	comp=Z,150nm,17.0s							
BSD	**Bornholm Skovb**	**79.52**	**326**	⇑*i*P		**P**	**17 23 07.4**	**-0.9**
	comp=Z,117nm,1.1s,mb5.4							
BSD				*i*		pP	17 23 46.3	+1.1
BSD				*i*			17 33 04.1	
RZN	**Rozhen**	**79.58**	**311**	*i* P		**P**	**17 23 08.4**	**-0.2**
PGB	**Panagyurishte**	**79.61**	**312**	*i* P		**P**	**17 23 08.0**	**-0.7**
SMG	**Samos**	**79.68**	**307**	*e*P		**P**	**17 23 09.0**	**-0.1**
KONO	**Kongsberg**	**79.72**	**332**	*e*P		**P**	**17 23 04.4**	**-5.0**
KONO				*e*S		S	17 33 04.9	+5.4
KONO	**Kongsberg**	**79.72**	**332**	⇑*e*P		**P**	**17 23 07.8**	**-1.5**
KONO					LR	LR		
	comp=Z,690nm,20.2s							
CHOS	**Chios island**	**79.97**	**308**	*e*P		**P**	**17 23 09.3**	**-1.4**
BZS	**Buzias**	**79.99**	**316**	⇑*i*P		**P**	**17 23 10.3**	**-0.5**
BZS	**Buzias**	**79.99**	**316**	P		**P**	**17 23 10.3**	**-0.5**
LIKS	**Likavka**	**80.03**	**320**	*e*P		**P**	**17 23 12.0**	**+1.0**
LIKS					pmax	pmax		
	comp=Z,74nm,1.2s,mb5.2							
LIKS	**Likavka**	**80.03**	**320**	*e*P		**P**	**17 23 12.0**	**+1.0**
	comp=Z,74nm,1.2s,mb5.2							
PSZ	**Piszkesteto**	**80.06**	**318**	⇑*i*P		**P**	**17 23 11.2**	**0.0**
PSZ	**Piszkesteto**	**80.06**	**318**	⇑*i*P		**P**	**17 23 11.3**	**+0.1**
PSZ	**Piszkesteto**	**80.06**	**318**	P		**P**	**17 23 11.5**	**+0.3**
RAC	**Raciborz**	**80.10**	**321**	*e*P		**P**	**17 23 11.7**	**+0.3**
VTS	**Vitosha**	**80.23**	**312**	*e*P		**P**	**17 23 12.7**	**+0.6**
VTS	**Vitosha**	**80.23**	**312**	*i* P		**P**	**17 23 12.2**	**+0.1**
VTS	**Vitosha**	**80.23**	**312**	⇑*i*P		**P**	**17 23 12.8**	**+0.7**
OKC	**Ostrava-Krasne**	**80.23**	**321**	*e*P		**P**	**17 23 12.2**	**+0.1**
OKC				*e*S		S	17 33 05.5	+0.6
OKC					AMS	AMS	17 53 00.0	
	comp=Z,200nm,23.9s							
OKC	**Ostrava-Krasne**	**80.23**	**321**	*e*P		**P**	**17 23 12.2**	**+0.1**
OKC				*e*S		S	17 33 05.5	+0.6
MMB	**Musomiste**	**80.30**	**311**	*e*P		**P**	**17 23 12.1**	**-0.3**
VYHS	**Vyhne**	**80.44**	**319**	*e*P		**P**	**17 23 13.7**	**+0.5**
VYHS					pmax	pmax		
	comp=Z,61nm,1.1s,mb5.1							
VYHS	**Vyhne**	**80.44**	**319**	*e*P		**P**	**17 23 13.7**	**+0.5**
	comp=Z,61nm,1.1s,mb5.1							
COP	**Copenhagen**	**80.47**	**327**	⇑*i*P		**P**	**17 23 13.2**	**-0.2**
	comp=Z,24nm,0.6s,mb5.0							
COP				*i*		pP	17 23 52.0	+1.6
COP				*e*			17 26 18.5	
COP				*i* S			17 34 01.0	
COP	**Copenhagen**	**80.47**	**327**	⇑*i*P		**P**	**17 23 13.2**	**-0.2**
COP				*i*		pP	17 23 52.0	+1.6
COP				*e*			17 26 18.5	
COP					pmax	pmax		
	comp=Z,24nm,0.6s,mb5.0							
MORC	**Moravsky Berou**	**80.61**	**321**	⇑*i*P		**P**	**17 23 14.2**	**+0.1**
MORC	**Moravsky Berou**	**80.61**	**321**	P		**P**	**17 23 14.3**	**+0.2**
MORC	**Moravsky Berou**	**80.61**	**321**	*e*P		**P**	**17 23 14.1**	**0.0**
	comp=Z,60nm,1.1s,mb5.1							
KKB	**Krupnik**	**80.62**	**312**	*i* P		**P**	**17 23 13.5**	**-0.7**
OUR	**Ouranopolis**	**80.64**	**310**	*e*P		**P**	**17 23 14.0**	**-0.3**
BUD	**Budapest**	**80.78**	**318**	⇑*i*P		**P**	**17 23 15.1**	**+0.1**
KSP	**Ksiaz**	**80.82**	**322**	*e*P		**P**	**17 23 15.6**	**+0.4**
KSP	**Ksiaz**	**80.82**	**322**	⇑*e*P		**P**	**17 23 15.3**	**+0.1**
KSP				*e*pP		pP	17 23 52.5	+0.2
KSP				*e*S		S	17 33 09.0	-2.0
SOH	**Sokhos**	**80.88**	**311**	*e*P		**P**	**17 23 14.8**	**-0.8**
APE	**Apeiranthos**	**80.89**	**307**	*e*P		**P**	**17 23 11.7**	**-3.9**
APE	**Apeiranthos**	**80.89**	**307**	*e*P		**P**	**17 23 13.9**	**-1.7**
PLG	**Polygyros**	**81.00**	**310**	*e*P		**P**	**17 23 15.0**	**-1.2**
PAIG	**Paliouri**	**81.03**	**310**	*e*P		**P**	**17 23 15.4**	**-0.9**
DPC	**Dobruska-Polom**	**81.04**	**322**	*e*PCP		PcP	17 23 16.8	-5.6
DPC					AMS	AMS	17 51 40.0	
KNT	**Kendrikon**	**81.05**	**311**	*e*P		**P**	**17 23 17.4**	**+1.0**
UPC	**Upice**	**81.14**	**322**	*e*P		**P**	**17 23 17.1**	**+0.2**
HORT	**Hortiatis**	**81.15**	**311**	*e*P		**P**	**17 23 15.8**	**-1.1**
ZKR	**Zakros**	**81.18**	**305**	*e*P		**P**	**17 23 17.0**	**-0.2**
VAY	**Valandovo**	**81.20**	**311**	*e*P		**P**	**17 23 16.2**	**-1.0**
VAY	**Valandovo**	**81.20**	**311**	*e*P		**P**	**17 23 16.4**	**-0.9**
SMOL	**Smolenice**	**81.26**	**320**	*e*P		**P**	**17 23 19.1**	**+1.5**
VRAC	**Vranov**	**81.38**	**321**	P		**P**	**17 23 18.7**	**+0.6**
	comp=Z,69nm,0.9s,mb5.3,baz=73,slow=5.2,SNR=88							
VRAC	**Vranov**	**81.38**	**321**	⇓*i*P		**P**	**17 23 18.5**	**+0.3**
VRAC	**Vranov**	**81.38**	**321**	P		**P**	**17 23 18.8**	**+0.6**
RUE	**Ruedersdorf**	**81.40**	**324**	*e*P		**P**	**17 23 18.1**	**-0.2**
	comp=Z,137nm,1.1s,mb5.5							
RUE	**Ruedersdorf**	**81.40**	**324**	*e*P		**P**	**17 23 17.8**	**-0.5**
	comp=Z,111nm,1.0s,mb5.4							
GRG	**Griva**	**81.47**	**311**	*e*P		**P**	**17 23 17.9**	**-0.7**
NPS	**Neapolis**	**81.57**	**305**	*e*P		**P**	**17 23 20.0**	**+0.8**
PKSM	**Moragy**	**81.59**	**317**	⇑*i*P		**P**	**17 23 19.2**	**-0.1**
PKSM	**Moragy**	**81.59**	**317**	P		**P**	**17 23 19.5**	**+0.2**
ZST	**Bratislava**	**81.60**	**319**	*e*P		**P**	**17 23 20.0**	**+0.6**
ZST					pmax	pmax		
	comp=Z,160nm,1.1s,mb5.6							
ZST	**Bratislava**	**81.60**	**319**	*e*P		**P**	**17 23 20.0**	**+0.6**
	comp=Z,16nm,1.1s,mb4.5							
MUD	**Monsted U'grnd**	**81.62**	**329**	⇑*i*P		**P**	**17 23 18.9**	**-0.6**
	comp=Z,52nm,1.1s,mb5.1							
MUD				*i*		pP	17 23 59.1	+2.5
MUD				*e*			17 26 30.0	
MUD				*e*S			17 34 24.3	
MUD					pmax	pmax		
	comp=Z,100nm,17.0s							
MUD	**Monsted U'grnd**	**81.62**	**329**	⇑*i*P		**P**	**17 23 18.9**	**-0.6**
MUD				*i*		pP	17 23 59.1	+2.5
MUD				*e*			17 26 30.0	
MUD					pmax	pmax		
	comp=Z,52nm,1.1s,mb5.1							
MUD					MLR	MLR		
	comp=Z,100nm,17.0s							
MUD	**Monsted U'grnd**	**81.62**	**329**	⇑*i*P		**P**	**17 23 18.9**	**-0.6**
	comp=Z,52nm,1.1s,mb5.1							
MUD				*i*		pP	17 23 59.1	+2.5
MUD				*e*			17 26 30.0	
MUD				*e*S			17 34 24.3	
XRY	**Khrisi**	**81.67**	**304**	*e*P		**P**	**17 23 20.0**	**+0.3**
SKO	**Skopje**	**81.68**	**312**	*e*P		**P**	**17 23 20.9**	**+1.1**
SKO	**Skopje**	**81.68**	**312**	*e*P		**P**	**17 23 20.4**	**+0.6**
YKA	**Yellowknife Ar**	**81.69**	**23**	P		**P**	**17 23 18.6**	**-1.1**
	comp=Z,16nm,0.8s,mb4.7,baz=305,slow=5.3,SNR=66							
YKA					PKKPbc	PKKPbc	17 41 48.2	-2.3
	comp=Z,1.7nm,0.6s,baz=127,slow=2.3,SNR=11							
YKA					LR	LR	17 59 24.4	
	comp=Z,66nm,20.3s,baz=335,slow=35							
YKA	**Yellowknife Ar**	**81.69**	**23**	P		**P**	**17 23 18.6**	**-1.1**
YKA					PKKPbc	PKKPbc	17 41 48.2	-2.3
YKA					LR	LR	17 59 24.4	
DIVS	**Divcibare**	**81.70**	**315**	*e*P		**P**	**17 23 19.4**	**-0.4**
LIT	**Litokhoron**	**81.78**	**310**	*e*P		**P**	**17 23 19.2**	**-1.0**
SUMG	**Summit**	**81.93**	**354**	*e*P		**P**	**17 23 20.5**	**-0.6**
	comp=Z,55nm,1.3s,mb5.0							
TREC	**Trest**	**82.02**	**321**	*e*P		**P**	**17 23 21.8**	**+0.3**
BRG	**Berggiesshubel**	**82.11**	**323**	*e*P		**P**	**17 23 21.8**	**-0.2**
	comp=Z,40nm,1.1s,mb5.0							
BRG	**Berggiesshubel**	**82.11**	**323**	*i* P		**P**	**17 23 21.8**	**-0.2**
	comp=Z,24nm,1.1s,mb4.7							
BRG				*i*			17 23 30.3	
	comp=Z,8.7nm,1.1s							
BRG				*e*pP		pP	17 23 55.0	-4.2
	comp=Z,3.7nm,1.0s							
BRG					sP	sP	17 24 14.0	-0.9
BRG				*e*PP		PP	17 26 18.7	-13
	comp=Z,4.8nm,1.0s							
BRG					S	S	17 33 24.0	-0.2
BRG					PS		17 34 11.0	
BRG								
	comp=N,36nm,14.4s							
BRG								
	comp=E,93nm,11.9s							
BRG								
	comp=Z,120nm,14.7s							
BRG	**Berggiesshubel**	**82.11**	**323**	*i* P		**P**	**17 23 21.8**	**-0.2**
BRG				*SP		sP	17 24 14.0	-0.9
BRG				S		S	17 33 24.0	-0.2
BRG				PS			17 34 11.0	
BRG					pmax	pmax		
	comp=Z,24nm,1.1s,mb4.7							
BRG					MLR	MLR		
	comp=N,36nm,14.4s							
BRG					MLR	MLR		
	comp=E,93nm,11.9s							
BRG					MLR	MLR		
	comp=Z,120nm,14.7s							
BRG	**Berggiesshubel**	**82.11**	**323**	*i* P		**P**	**17 23 21.8**	**-0.2**
	comp=Z,24nm,1.1s,mb4.7							
BRG				*i*			17 23 30.3	
BRG				*e*pP		pP	17 23 55.0	-4.2
BRG				sP		sP	17 24 14.0	-0.9
BRG				*e*PP		PP	17 26 18.7	-13
BRG				S		S	17 33 24.0	-0.2
BRG				PS			17 34 11.0	
BRG				LR		LR		
	comp=Z,120nm,14.7s							
SOP	**Sopron**	**82.17**	**319**	⇑*i*P		**P**	**17 23 22.5**	**+0.2**
PRU	**Pruhonice**	**82.22**	**322**	*e*PCP		PcP	17 23 22.5	-5.0
PRU				*e*S		S	17 33 26.3	+1.0
PRU					AMS	AMS	17 59 50.0	
	comp=Z,200nm,13.9s							
PRA	**Prague**	**82.24**	**322**	PCP		PcP	17 23 23.0	-4.6
FNA	**Florina**	**82.25**	**311**	*e*P		**P**	**17 23 21.9**	**-0.8**
SIVA	**Sivas**	**82.27**	**305**	*e*P		**P**	**17 23 22.8**	**0.0**
IVA	**Berane**	**82.31**	**314**	⇑*i*P		**P**	**17 23 22.2**	**-0.8**
PVY	**Plav**	**82.38**	**313**	⇑*i*P		**P**	**17 23 22.8**	**-0.6**
CLL	**Collm**	**82.40**	**323**	*e*P		**P**	**17 23 23.1**	**-0.4**
	comp=Z,65nm,0.9s,mb5.3							
CLL	**Collm**	**82.40**	**323**	⇑P		**P**	**17 23 23.1**	**-0.4**
	comp=Z,logA/T=1.9,mb5.3							
CLL				*e*PP		pP	17 24 01.0	+0.3
CLL				*e*PP		PP	17 26 34.0	-0.4
CLL				*e*PPP			17 27 07.0	
CLL				*e*PPP			17 28 27.0	
CLL				*e*S		S	17 33 23.0	-4.2
CLL	**Collm**	**82.40**	**323**	⇑*i*P		**P**	**17 23 23.1**	**-0.4**
	comp=Z,66nm,0.9s,mb5.3							
CLL				*e*pP		pP	17 24 01.0	+0.3
CLL				*e*PP		PP	17 26 34.0	-0.4
	comp=Z,24nm,1.1s							
CLL				*e*pPP			17 27 07.0	
CLL				*e*PPP			17 28 27.0	
CLL				*e*S		S	17 33 23.0	-4.2
CLL	**Collm**	**82.40**	**323**	⇑*i*P		**P**	**17 23 23.1**	**-0.4**
CLL				*e*			17 26 34.0	
CLL					pmax	pmax		
	comp=Z,66nm,0.9s,mb5.3							
CLL	**Collm**	**82.40**	**323**	⇑*i*P		**P**	**17 23 23.1**	**-0.4**
	comp=Z,66nm,0.9s,mb5.3							
CLL				*e*pP		pP	17 23 55.0	-5.7
CLL				*e*PP		PP	17 26 34.0	-0.4
FBE	**Freiberg**	**82.41**	**323**	*e*P		**P**	**17 23 23.5**	**-0.1**
	comp=Z,84nm,1.0s,mb5.3							
FBE				*e*pP		pP	17 24 00.9	+0.2
PLE	**Plievlja**	**82.43**	**314**	⇑*i*P		**P**	**17 23 23.8**	**+0.1**
BSEG	**Bad Segeberg**	**82.43**	**327**	*e*P		**P**	**17 23 23.5**	**-0.2**
	comp=Z,49nm,1.0s,mb5.1							
BSEG	**Bad Segeberg**	**82.43**	**327**	*e*P		**P**	**17 23 23.5**	**-0.2**
BSEG					pmax	pmax		
	comp=Z,49nm,1.0s,mb5.1							
CONA	**Conrad Observa**	**82.46**	**320**	*i* P		**P**	**17 23 24.3**	**+0.4**
	SNR=34							
VAM	**Vamos**	**82.56**	**305**	*e*P		**P**	**17 23 24.8**	**+0.5**
EVR	**Evrytania**	**82.77**	**309**	*e*P		**P**	**17 23 24.7**	**-0.7**
UPM	**Unac-Piva**	**82.80**	**314**	⇑*i*P		**P**	**17 23 25.2**	**-0.4**
GVD	**Gavdhos**	**82.89**	**305**	*e*P		**P**	**17 23 25.6**	**-0.4**
	comp=Z,59nm,0.3s,mb5.8							
VLI	**Veliai**	**82.92**	**307**	*e*P		**P**	**17 23 25.0**	**-1.2**
NKY	**Niksic**	**82.92**	**314**	⇑*i*P		**P**	**17 23 25.6**	**-0.6**
TTG	**Podgorica**	**82.93**	**314**	⇑*i*P		**P**	**17 23 25.5**	**-0.7**
KOGS	**Kog**	**82.94**	**318**	⇑*i*P		**P**	**17 23 25.9**	**-0.4**
ARSA	**Arzberg**	**82.99**	**319**	⇑*i*P		**P**	**17 23 26.5**	**-0.1**
	comp=Z,161nm,2.1s,mb5.4,SNR=16							
TIR	**Tirane**	**83.02**	**312**	*e*P		**P**	**17 23 26.6**	**-0.1**
ULC	**Ulcinj**	**83.15**	**313**	⇑*i*P		**P**	**17 23 26.9**	**-0.5**
TANN	**Tannenbergstha**	**83.16**	**323**	*e*P		**P**	**17 23 27.3**	**-0.1**
	comp=Z,33nm,1.2s,mb4.9							
BRY	**Bratogost**	**83.18**	**314**	⇑*i*P		**P**	**17 23 27.3**	**-0.2**
KHC	**Kasperske Hory**	**83.19**	**321**	*e*PCP		PcP	17 23 27.7	-4.1
KHC				*e*S		S	17 33 31.2	-4.0
KHC					AMS	AMS	17 56 30.0	
	comp=Z,100nm,18.6s							
KHC	**Kasperske Hory**	**83.19**	**321**	⇑*i*P		**P**	**17 23 27.7**	**+0.1**
WERD	**Werda**	**83.22**	**323**	*e*P		**P**	**17 23 27.4**	**-0.4**
	comp=Z,43nm,1.3s,mb5.0							
WERD				*e*pP		pP	17 24 04.9	-0.1
BUM	**Brajici-Budva**	**83.22**	**314**	*e*P		**P**	**17 23 27.3**	**-0.5**
GUNZ	**Gunzen**	**83.25**	**323**	*e*P		**P**	**17 23 27.8**	**-0.1**
	comp=Z,67nm,1.2s,mb5.2							
NKC	**Novy Kostel**	**83.26**	**323**	*e*PCP		PcP	17 23 28.2	-3.9
NKC					AMS	AMS	17 57 30.0	
GEC2	**GERESS Array S**	**83.26**	**321**	*e*P		**P**	**17 23 28.1**	**+0.1**
	comp=Z,80nm,1.0s,mb5.4							
GEC2	**GERESS Array S**	**83.26**	**321**	*e*P		**P**	**17 23 28.1**	**+0.1**
GEC2					pmax	pmax		
	comp=Z,80nm,1.0s,mb5.4							
GERES	**GERESS Array B**	**83.26**	**321**	P		**P**	**17 23 28.0**	**0.0**
	comp=Z,42nm,0.8s,mb5.2,baz=57,slow=4.9,SNR=266							
GERES					LR	LR	18 04 42.4	
	comp=Z,109nm,20.1s,baz=289,slow=38							
GERES	**GERESS Array B**	**83.26**	**321**	P		**P**	**17 23 28.0**	**0.0**
GERES					pmax	pmax		
	comp=Z,42nm,0.8s							
GERES					MLR	MLR		
	comp=Z,109nm,20.1s							
HCY	**Herceg Novi**	**83.42**	**314**	⇑*i*P		**P**	**17 23 28.1**	**-0.6**
MOA	**Molln**	**83.44**	**320**	*i* P		**P**	**17 23 29.1**	**+0.2**
	comp=Z,269nm,2.4s,mb5.5,SNR=73							
ITM	**Ithomi**	**83.45**	**308**	*e*P		**P**	**17 23 28.5**	**-0.4**
MOX	**Moxa**	**83.50**	**323**	*e*P		**P**	**17 23 28.6**	**-0.6**
	comp=Z,36nm,1.2s,mb5.0							
MOX	**Moxa**	**83.50**	**323**	*e*P		**P**	**17 23 29.3**	**+0.1**
	comp=Z,52nm,1.5s,mb5.0							
MOX								
	comp=Z,100nm,16.0s							
MOX	**Moxa**	**83.50**	**323**	*e*P		**P**	**17 23 29.3**	**+0.1**
MOX					pmax	pmax		
	comp=Z,52nm,1.5s,mb5.0							
MOX					MLR	MLR		
	comp=Z,100nm,16.0s							
MANZ	**Manzenberg**	**83.57**	**323**	*e*P		**P**	**17 23 29.8**	**+0.3**
	comp=Z,42nm,1.3s,mb5.0							
WET	**Wettzell**	**83.58**	**322**	*e*P		**P**	**17 23 29.5**	**-0.1**
	comp=Z,41nm,1.2s,mb5.0							
WET	**Wettzell**	**83.58**	**322**	*e*P		**P**	**17 23 29.5**	**-0.1**
WET					pmax	pmax		
	comp=Z,41nm,1.2s,mb5.0							
ROTZ	**Rotzenmuhle**	**83.63**	**322**	*e*P		**P**	**17 23 30.2**	**+0.4**
	comp=Z,56nm,1.0s,mb5.2							
CRES	**Cresnjev**	**83.73**	**318**	⇑*e*P		**P**	**17 23 30.3**	**0.0**
CRES				*i*		pP	17 24 08.3	+0.6
GTTG	**Gvttingen**	**83.90**	**325**	*e*P		**P**	**17 23 31.1**	**-0.1**
	comp=Z,101nm,1.5s,mb5.3							
OBKA	**Obir**	**83.94**	**319**	⇑*i*P		**P**	**17 23 31.2**	**-0.2**
	comp=Z,74nm,1.2s,mb5.3,SNR=19							
VLS	**Valsamata**	**83.95**	**309**	*e*P		**P**	**17 23 31.0**	**-0.5**
BOJS	**Bojanci**	**84.01**	**318**	⇑*i*P		**P**	**17 23 31.9**	**+0.2**
LJU	**Ljubljana**	**84.19**	**318**	⇑*e*P		**P**	**17 23 32.4**	**-0.2**
	comp=Z,141nm,1.0s,mb5.7							
LJU				*e*			17 33 45.8	
LJU				*e*			17 34 43.1	
LJU	**Ljubljana**	**84.19**	**318**	⇑*e*P		**P**	**17 23 32.4**	**-0.3**
LJU				*e*			17 33 45.8	
LJU				*e*			17 34 43.1	
LJU					pmax	pmax		
	comp=Z,141nm,1.0s,mb5.7							
GRA1	**Grafenberg Arr**	**84.22**	**323**	*e*P		**P**	**17 23 32.9**	**+0.1**
	comp=Z,128nm,1.5s,mb5.4							
GRF	**Grafenberg Arr**	**84.22**	**323**	*e*P		**P**	**17 23 32.9**	**+0.1**
	comp=Z,128nm,1.5s,mb5.4							
GRF	**Grafenberg Arr**	**84.22**	**323**	*e*P		**P**	**17 23 32.9**	**+0.1**
GRF					pmax	pmax		
	comp=Z,128nm,1.5s,mb5.4							
GRF	**Grafenberg Arr**	**84.22**	**323**	*e*P		**P**	**17 23 32.9**	**+0.1**
GRF					pmax	pmax		
	comp=Z,128nm,1.5s,mb5.4							
UBBA	**Unterbreizbach**	**84.27**	**324**	*e*P		**P**	**17 23 32.7**	**-0.4**
	comp=Z,82nm,1.6s,mb5.2							
KBA	**Koelnbreinsper**	**84.37**	**320**	⇑*i*P		**P**	**17 23 33.1**	**-0.5**
	comp=Z,47nm,1.1s,mb5.1,SNR=6.6							
KBA	**Koelnbreinsper**	**84.37**	**320**	⇑*i*P		**P**	**17 23 33.1**	**-0.5**
KBA					pmax	pmax		
	comp=Z,47nm,1.1s,mb5.1							
CEY	**Cerknica**	**84.40**	**318**	⇑*e*P		**P**	**17 23 33.6**	**-0.2**
CEY				*e*		pP	17 24 10.6	-0.5
CEY				*e*			17 33 41.9	
CADS	**Cadrg**	**84.57**	**319**	⇑*e*P		**P**	**17 23 33.6**	**-1.0**
VOY	**Vojsko**	**84.57**	**319**	⇑*e*P		**P**	**17 23 33.8**	**-0.8**
VOY				*e*		pP	17 24 10.3	-1.7
PTCC	**Patocco-Chiusa**	**84.71**	**319**	*i* Pu		**P**	**17 23 34.3**	**-1.0**
	comp=Z,44nm,1.4s,mb5.0							
GMNA	**Gemona**	**84.84**	**319**	*i* Pr		**P**	**17 23 35.7**	**-0.2**
	comp=Z,246nm,1.1s,mb5.8							
FVI	**Forni Avoltri**	**84.95**	**319**	P		**P**	**17 23 35.4**	**-1.1**
FUR	**Furstenfeldbru**	**85.00**	**321**	*e*P		**P**	**17 23 36.8**	**+0.1**
	comp=Z,218nm,1.0s,mb5.8							
FUR				*e*pP		pP	17 24 14.5	+0.4
FUR	**Furstenfeldbru**	**85.00**	**321**	*e*P		**P**	**17 23 36.8**	**+0.1**
FUR				*e*PP		pP	17 24 14.5	+0.4
FUR					pmax	pmax		
	comp=Z,218nm,1.0s,mb5.8							
WATA	**Walderalm**	**85.26**	**321**	⇑*i*P		**P**	**17 23 37.7**	**-0.3**
	comp=Z,38nm,1.1s,mb5.0,SNR=19							
WATA	**Walderalm**	**85.26**	**321**	⇑*i*P		**P**	**17 23 37.7**	**-0.3**
WATA					pmax	pmax		
	comp=Z,38nm,1.1s,mb5.0							
WTTA	**Wattenberg**	**85.27**	**320**	⇑*i*P		**P**	**17 23 37.6**	**-0.5**
	comp=Z,123nm,1.3s,mb5.5,SNR=33							
WTTA	**Wattenberg**	**85.27**	**320**	⇑*i*P		**P**	**17 23 37.6**	**-0.5**
WTTA					pmax	pmax		
	comp=Z,123nm,1.3s,mb5.5							
WTSB	**Winterswijk**	**85.30**	**326**	*e*P		**P**	**17 23 37.9**	**-0.3**
	comp=Z,68nm,1.2s,mb5.2							
BUG	**Bochum--Univer**	**85.36**	**326**	*e*P		**P**	**17 23 38.1**	**-0.4**
	comp=Z,150nm,1.2s,mb5.6							
TNS	**Taunus Mts**	**85.43**	**324**	*e*P		**P**	**17 23 38.9**	**0.0**
	comp=Z,46nm,1.1s,mb5.1							
TNS	**Taunus Mts**	**85.43**	**324**	*e*P		**P**	**17 23 38.9**	**0.0**
TNS					pmax	pmax		
	comp=Z,46nm,1.1s,mb5.1							
MOTA	**Moosalm**	**85.53**	**321**	⇑*i*P		**P**	**17 23 38.7**	**-0.7**
	comp=Z,31nm,1.1s,mb5.0,SNR=16							
MOTA	**Moosalm**	**85.53**	**321**	⇑*i*P		**P**	**17 23 38.7**	**-0.7**
MOTA					pmax	pmax		
	comp=Z,31nm,1.1s,mb5.0							
SQTA	**Sankt Quirin**	**85.54**	**321**	⇑*i*P		**P**	**17 23 39.1**	**-0.3**
	comp=Z,51nm,1.1s,mb5.2,SNR=25							
SQTA	**Sankt Quirin**	**85.54**	**321**	⇑*i*P		**P**	**17 23 39.1**	**-0.3**
SQTA					pmax	pmax		
	comp=Z,51nm,1.1s,mb5.2							
TOD	**Tromm**	**85.58**	**323**	⇑*e*P		**P**	**17 23 39.3**	**-0.3**
C03A	**Quillayute Air**	**85.63**	**39**	⇑P		**P**	**17 23 40.6**	**+0.7**
	baz=85							
RGNG	**Rignano Grg**	**85.69**	**314**	*i* Pr		**P**	**17 23 40.4**	**+0.2**
STU	**Stuttgart**	**85.83**	**323**	*e*P		**P**	**17 23 40.6**	**-0.2**
	comp=Z,69nm,1.1s,mb5.3							
STU	**Stuttgart**	**85.83**

WLF **Walferdange** 86.97 324 *e*P P 17 23 46.4 0.0
comp=Z,130nm,1.0s,mb5.7
WLF *e* pP 17 24 23.2 -0.7
E03A Lebam 86.97 39 ⇑P P 17 23 46.9 +0.5
baz=87
FELD Feldberg im Sc 86.99 322⇑*e*P P 17 23 45.9 -0.6
LLS Linth-Limmern 87.00 321⇑*i*P P 17 23 45.7 -0.9
comp=Z,182nm,2.3s,mb5.5
CRE Caprese Michel 87.00 317 P P 17 23 47.1 +0.5
CRE pmax pmax
comp=Z,49nm,1.3s,mb5.2
CRE Caprese Michel 87.00 317 P P 17 23 47.1 +0.5
comp=Z,49nm,1.3s,mb5.2
TUE Stuetta 87.02 321 *i* Pu P 17 23 46.8 +0.2
WLS Welschbruch 87.04 323⇑*e*P P 17 23 45.7 -1.1
LIBD Limburg 87.06 323⇑*e*P P 17 23 46.4 -0.4
CDF Champ du Feu 87.09 323⇑*i*P P 17 23 46.7 -0.3
comp=Z,280nm,1.3s,mb5.7
CDF Champ du Feu 87.09 323⇑*i*P P 17 23 46.7 -0.3
CDF pmax pmax
comp=Z,140nm,1.3s,mb5.6
CDF Champ du Feu 87.09 323⇑*i*P P 17 23 46.7 -0.3
comp=Z,140nm,1.3s,mb5.6
SULZ Sulz-Cheisache 87.13 322⇑*i*P P 17 23 46.3 -0.9
comp=Z,220nm,1.7s,mb5.7
MUO Muotathal 87.15 321⇑*i*P P 17 23 46.4 -0.9
comp=Z,409nm,2.5s,mb5.8
SOI Samo 87.16 311 P P 17 23 47.8 +0.5
CEL Celeste 87.17 311 P P 17 23 47.8 +0.4
FNVD Fontana Vidola 87.22 318 P P 17 23 48.8 +1.2
UCC Uccle 87.22 326 P P 17 23 47.0 -0.6
ECH Echery 87.26 323⇑*e*P P 17 23 47.0 -0.8
HTW Haystack Looko 87.28 38 P P 17 23 48.3 +0.4
F03A Seaside 87.31 40 ⇑P P 17 23 48.6 +0.6
baz=87
BNALP Bannalp 87.32 321⇑*i*P P 17 23 46.5 -1.6
comp=Z,115nm,1.6s,mb5.5
C05A Tolt Reservoir 87.38 38 ⇓P P 17 23 48.6 +0.3
baz=87,SNR=26
GIVF Givet 87.40 325⇑*i*P P 17 23 48.0 -0.5
comp=Z,173nm,1.4s,mb5.4
GIVF Givet 87.40 325⇑*i*P P 17 23 48.0 -0.5
GIVF pmax pmax
comp=Z,87nm,1.4s,mb5.4
GIVF Givet 87.40 325⇑*i*P P 17 23 48.0 -0.5
comp=Z,86nm,1.4s,mb5.4
FUSIO Fusio 87.42 321⇑*i*P P 17 23 47.8 -0.8
comp=Z,209nm,1.6s,mb5.7
E04A Onalaska 87.42 39 ⇓P P 17 23 49.3 +0.7
baz=87
MTTG Motta San Giov 87.44 311 P P 17 23 50.0 +1.4
comp=Z,65nm,0.7s,mb5.6
GSCL Gusciola 87.44 318 *i* Pu P 17 23 49.6 +0.9
comp=Z,44nm,1.0s,mb5.2
RMW Rattlesnake Mo 87.45 38 P P 17 23 49.5 +0.8
BALST Balsthal 87.47 322⇑*i*P P 17 23 47.2 -1.6
comp=Z,206nm,1.7s,mb5.7
MOF Molkenrain 87.49 323⇑*e*P P 17 23 47.4 -1.5
CSNT Castellina Chi 87.49 317 *i* Pu P 17 23 48.2 -0.7
comp=Z,48nm,1.0s,mb5.3
BBS Basel-Blauen 87.50 322⇑*e*P P 17 23 47.0 -1.9
D05A Enumclaw 87.50 38 ⇓P P 17 23 49.9 +0.9
baz=87,SNR=19
ERBM Eremo 87.51 318 P P 17 23 50.2 +1.2
comp=Z,56nm,1.0s,mb5.3
DOU Dourbes 87.52 325 P P 17 23 48.1 -1.0
HASLI Hasliberg 87.54 321⇑*i*P P 17 23 48.7 -0.4
comp=Z,241nm,1.8s,mb5.7
HINF Hinteralfeld 87.66 323⇑*i*P P 17 23 48.9 -0.8
comp=Z,88nm,1.2s,mb5.2
HINF Hinteralfeld 87.66 323⇑*i*P P 17 23 48.9 -0.8
HINF pmax pmax
comp=Z,44nm,1.2s,mb5.2
HINF Hinteralfeld 87.66 323⇑*i*P P 17 23 48.9 -0.8
comp=Z,44nm,1.2s,mb5.2
BOURR Bourrignon 87.70 322⇑*i*P P 17 23 48.4 -1.5
comp=Z,169nm,1.8s,mb5.6
H02A Toledo 87.74 41 ⇑P P 17 23 50.9 +0.8
baz=88
BAIF Baives 87.74 326⇑*i*P P 17 23 49.7 -0.4
comp=Z,112nm,1.3s,mb5.2
BAIF Baives 87.74 326⇑*i*P P 17 23 49.7 -0.4
BAIF pmax pmax
comp=Z,56nm,1.3s,mb5.2
BAIF Baives 87.74 326⇑*i*P P 17 23 49.7 -0.4
comp=Z,56nm,1.3s,mb5.2
EKA Eskdalemuir Ar 87.80 332 P P 17 23 49.5 -0.9
comp=Z,5.1nm,0.6s,mb4.5,baz=48,slow=3.2,SNR=18
G03A Yamhill 87.81 40 ⇑P P 17 23 50.5 0.0
baz=88,SNR=6.2
FMW Mount Fremont 87.83 38 P P 17 23 51.1 +0.6
HAU Haudompre 87.83 323⇑*i*P P 17 23 49.8 -0.7
comp=Z,124nm,1.3s,mb5.3
HAU *e*R
comp=Z,72nm,17.5s
HAU Haudompre 87.83 323⇑*i*P P 17 23 49.8 -0.7
HAU pmax pmax
comp=Z,62nm,1.3s,mb5.3
HAU MLR MLR
comp=Z,70nm,17.5s
HAU Haudompre 87.83 323⇑*i*P P 17 23 49.8 -0.7
comp=Z,62nm,1.3s,mb5.3
HAU LR LR
comp=Z,70nm,17.5s
LON Longmire 87.85 38 P P 17 23 50.9 +0.3
WIMIS Wimmis 87.89 321⇑*i*P P 17 23 48.7 -2.1
comp=Z,198nm,2.1s,mb5.6
THEF They Montfort 87.89 323⇑*e*P P 17 23 50.1 -0.7
BOB Bobbio (Coli) 87.90 319 P P 17 23 51.1 +0.3
BOB pmax pmax
comp=Z,30nm,0.8s,mb5.2
BOB Bobbio (Coli) 87.90 319 P P 17 23 51.1 +0.3
comp=Z,30nm,0.8s,mb5.2
LOMF Lomont 87.94 322⇑*e*P P 17 23 49.8 -1.3
F04A Amboy 87.97 39 ⇑P P 17 23 51.3 +0.2
baz=88,SNR=13
E05A Randle 87.99 39 ⇓P P 17 23 51.5 +0.2
baz=88,SNR=18
MTMW Mount Mitchell 88.04 39 P P 17 23 52.5 +1.0
MMK Mattmark 88.05 321⇑*i*P P 17 23 50.3 -1.2
comp=Z,297nm,1.4s,mb5.9
LKBD Leukerbad 88.05 321⇑*i*P P 17 23 49.3 -2.2
comp=Z,94nm,1.1s,mb5.5
EDM Edmonton 88.20 30 *e*P P 17 23 52.1 -0.2
TORNY Torny 88.20 322⇑*i*P P 17 23 51.1 -1.2
comp=Z,297nm,2.5s,mb5.7
COR Corvallis 88.21 41 *e*P P 17 23 53.6 +1.3
COR pmax pmax
comp=Z,37nm,0.8s,mb5.3
COR Corvallis 88.21 41 *e*P P 17 23 53.5 +1.3
comp=Z,37nm,0.8s,mb5.3
I02A Mapleton 88.21 42 ⇓P P 17 23 53.3 +0.9
baz=88
MEZF Maizieres J'vi 88.23 324⇑*i*P P 17 23 52.2 -0.2
comp=Z,242nm,1.4s,mb5.5
MEZF Maizieres J'vi 88.23 324⇑*i*P P 17 23 52.2 -0.2
comp=Z,242nm,1.4s,mb5.8
SENIN Lac Senin 88.25 321⇑*i*P P 17 23 51.7 -0.8
comp=Z,211nm,2.6s,mb5.5
ORO Oropa 88.28 320 P P 17 23 51.8 -0.8
ORO pmax pmax
comp=Z,21nm,0.8s,mb5.0
ORO Oropa 88.28 320 P P 17 23 51.8 -0.8
comp=Z,21nm,0.8s,mb5.0
G04A Mulino 88.34 40 ⇓P P 17 23 53.6 +0.7
baz=88,SNR=9.5
DIX Grande Dixence 88.35 321⇑*i*P P 17 23 52.2 -0.8
comp=Z,193nm,1.9s,mb5.6
BRANT Les Verrieres 88.38 322⇑*i*P P 17 23 51.8 -1.3
comp=Z,170nm,1.6s,mb5.6
GRYON Gryon 88.42 321⇑*i*P P 17 23 52.7 -0.6
comp=Z,109nm,1.2s,mb5.6
AIGLE Aigle 88.46 321⇑*i*P P 17 23 52.9 -0.6
comp=Z,176nm,1.3s,mb5.7
EBG Ellensburg 88.46 38 P P 17 23 54.3 +0.8
MENF Mencas 88.47 327 *e*P P 17 23 50.6 -3.0
F05A White Salmon 88.55 39 ⇓P P 17 23 54.8 +0.9
baz=88
SALAN Lac Salanfe 88.56 321⇑*i*P P 17 23 52.9 -1.1
comp=Z,121nm,1.2s,mb5.7
I03A Eugene 88.56 41 ⇑P P 17 23 55.0 +1.0
baz=88
EMV Vieux Emosson 88.65 321⇑*i*P P 17 23 53.2 -1.2
comp=Z,245nm,2.7s,mb5.7
TDH Tom, Dick, Har 88.70 40 P P 17 23 55.5 +0.9
J02A Umpqua 88.72 42 ⇓P P 17 23 55.6 +0.9
baz=88

EPH Ephrata 88.73 37 P P 17 23 55.1 +0.3
CABF La Chapelle 88.79 322⇑*i*P P 17 23 54.6 -0.4
comp=Z,108nm,1.5s,mb5.3
CABF La Chapelle 88.79 322⇑*i*P P 17 23 54.6 -0.4
CABF pmax pmax
comp=Z,54nm,1.5s,mb5.3
CABF La Chapelle 88.79 322⇑*i*P P 17 23 54.6 -0.4
comp=Z,54nm,1.5s,mb5.3
H04A Detroit Lake 88.81 40 ⇓P P 17 23 55.6 +0.4
baz=88,SNR=11
VFP Flag Point 88.87 40 P P 17 23 56.3 +0.9
G05A Wamic 89.00 40 ⇑P P 17 23 56.7 +0.7
baz=89,SNR=5.9
J03A Ideyld Park 89.09 42 P P 17 23 57.6 +1.2
baz=89,SNR=10
IRO Indian Ridge 89.16 41 P P 17 23 57.4 +0.7
GBB Gable Butte 89.16 38 P P 17 23 57.5 +0.7
OD2 Odessa Site #2 89.19 37 P P 17 23 57.3 +0.4
M01C Crescent City 89.22 43 ⇓P P 17 23 58.1 +1.0
baz=89
WRD Warden 89.31 37 P P 17 23 58.0 +0.5
BKCOR Black Crater 89.32 40 P P 17 23 58.4 +0.9
HAWA Hanford 89.34 38 *e*P P 17 23 58.1 +0.5
comp=Z,162nm,1.4s,mb5.8
BNI Bardonecchia 89.36 321 *e*P P 17 23 57.4 -0.3
BNI pmax pmax
comp=Z,63nm,1.1s,mb5.5
BNI Bardonecchia 89.36 321 *e*P P 17 23 57.4 -0.4
comp=Z,63nm,1.1s,mb5.5
L02A Cave Junction 89.37 43 ⇑P P 17 23 58.6 +0.8
baz=89,SNR=6.0
H05A Madras 89.39 40 P P 17 23 58.7 +0.9
baz=89,SNR=9.2
G06A Carlson Farm, 89.39 39 ⇓P P 17 23 58.7 +0.8
baz=89,SNR=26
PGF Pioggiola 89.40 317⇑*i*P P 17 23 57.8 -0.1
comp=Z,184nm,1.1s,mb5.6
PGF Pioggiola 89.40 317⇑*i*P P 17 23 57.8 -0.1
PGF pmax pmax
comp=Z,92nm,1.1s,mb5.6
PGF Pioggiola 89.40 317⇑*i*P P 17 23 57.8 -0.1
comp=Z,92nm,1.1s,mb5.6
SAOF Saorge 89.46 319 *e*P P 17 23 57.3 -0.9
MBDF Montbardon 89.50 320⇑*i*P P 17 23 57.6 -0.7
comp=Z,62nm,1.2s,mb5.1
MBDF Montbardon 89.50 320⇑*i*P P 17 23 57.6 -0.7
MBDF pmax pmax
comp=Z,31nm,1.2s,mb5.1
MBDF Montbardon 89.50 320⇑*i*P P 17 23 57.6 -0.7
comp=Z,31nm,1.2s,mb5.1
NEW Newport 89.51 35 *e*P P 17 23 58.7 +0.3
NEW pmax pmax
comp=Z,148nm,1.4s
NEW Newport 89.51 35 *e*P P 17 23 58.7 +0.3
comp=Z,144nm,1.4s,mb5.7
KRMB Red Mountain 89.53 44 *e*P P 17 23 59.8 +1.3
SBF Sospel 89.60 319⇑*i*P P 17 23 58.3 -0.5
comp=Z,184nm,1.0s,mb5.7
SBF Sospel 89.60 319⇑*i*P P 17 23 58.3 -0.5
SBF pmax pmax
comp=Z,92nm,1.0s,mb5.7
SBF Sospel 89.60 319⇑*i*P P 17 23 58.3 -0.5
comp=Z,92nm,1.0s,mb5.7
LOR Lormes 89.62 323⇑*i*P P 17 23 58.1 -0.8
comp=Z,81nm,1.2s,mb5.2
LOR *e*R
comp=Z,111nm,20.5s
LOR Lormes 89.62 323⇑*i*P P 17 23 58.1 -0.8
LOR pmax pmax
comp=Z,41nm,1.2s,mb5.2
LOR MLR MLR
comp=Z,110nm,20.5s
LOR Lormes 89.62 323⇑*i*P P 17 23 58.1 -0.8
comp=Z,41nm,1.2s,mb5.2
LOR LR LR
comp=Z,110nm,20.5s
TOUF Mont Tournerai 89.63 319 *e*P P 17 23 57.7 -1.2
LUCF Luceram 89.64 319 *e*P P 17 23 58.3 -0.7
I05A Bend 89.65 40 ⇓P P 17 23 59.7 +0.6
baz=89,SNR=8.2
MVIF Mont Vial 89.75 319 *e*P P 17 23 56.8 -2.7
VIPM Ingram Point 89.83 40 P P 17 24 00.9 +1.0
JCC Jacoby Creek 89.84 44 ⇓P P 17 24 00.9 +1.0
baz=90
H06A Lindquist Farm 89.86 40 ⇑P P 17 24 00.7 +0.7
baz=90,SNR=23
ORIF Oris-en-Rattie 89.90 321⇑*i*P P 17 24 00.1 -0.1
comp=Z,131nm,1.1s,mb5.5
ORIF *e*R
comp=Z,111nm,18.0s
ORIF Oris-en-Rattie 89.90 321⇑*i*P P 17 24 00.1 -0.1
ORIF pmax pmax
comp=Z,66nm,1.1s,mb5.5
ORIF Oris-en-Rattie 89.90 321⇑*i*P P 17 24 00.1 -0.1
comp=Z,66nm,1.1s,mb5.5
SSF Saint Saulge 89.94 323⇑*i*P P 17 23 59.7 -0.7
comp=Z,50nm,1.2s,mb5.0
SSF Saint Saulge 89.94 323⇑*i*P P 17 23 59.7 -0.7
SSF pmax pmax
comp=Z,25nm,1.2s,mb5.0
SSF Saint Saulge 89.94 323⇑*i*P P 17 23 59.7 -0.7
comp=Z,25nm,1.2s,mb5.0
SMF Signal de Mont 90.01 323⇑*i*P P 17 24 00.1 -0.6
comp=Z,228nm,1.2s,mb5.7
SMF Signal de Mont 90.01 323⇑*i*P P 17 24 00.1 -0.6
SMF pmax pmax
comp=Z,114nm,1.2s,mb5.7
SMF Signal de Mont 90.01 323⇑*i*P P 17 24 00.1 -0.6
comp=Z,114nm,1.2s,mb5.7
F08A Pendleton 90.12 38 P P 17 24 02.5 +1.3
baz=90,SNR=33
YBH Yreka Blue Hor 90.16 43 *e*P P 17 24 02.1 +0.7
YBH pmax pmax
comp=Z,67nm,1.4s
YBH Yreka Blue Hor 90.16 43 *e*P P 17 24 02.1 +0.7
comp=Z,68nm,1.4s,mb5.4
YBH Yreka Blue Hor 90.16 43 P P 17 24 02.5 +1.1
baz=90,SNR=24
J05A Fort Rock 90.17 41 ⇑P P 17 24 02.6 +1.1
baz=90,SNR=43
AVF Avril sur Loir 90.19 323⇑*i*P P 17 24 00.8 -0.8
comp=Z,141nm,1.3s,mb5.4
AVF Avril sur Loir 90.19 323⇑*i*P P 17 24 00.8 -0.8
AVF pmax pmax
comp=Z,70nm,1.3s,mb5.4
AVF Avril sur Loir 90.19 323⇑*i*P P 17 24 00.8 -0.8
comp=Z,70nm,1.3s,mb5.4
FRF La Foret Royal 90.24 319⇑*i*P P 17 24 01.3 -0.5
comp=Z,126nm,1.0s,mb5.5
FRF La Foret Royal 90.24 319⇑*i*P P 17 24 01.3 -0.5
FRF pmax pmax
comp=Z,63nm,1.0s,mb5.5
FRF La Foret Royal 90.24 319⇑*i*P P 17 24 01.3 -0.5
comp=Z,63nm,1.0s,mb5.5
K04A Chilquin 90.26 42 ⇑P P 17 24 02.8 +0.9
baz=90,SNR=6.5
M02C Callahan 90.26 43 ⇓P P 17 24 02.8 +0.9
baz=90,SNR=16
HYF Humbligny 90.28 324 *e*P P 17 24 01.8 -0.2
N02C Big Bar 90.30 44 P P 17 24 02.7 +0.6
baz=90,SNR=14
G08A Pilot Rock 90.32 38 ⇑P P 17 24 02.7 +0.6
baz=90,SNR=34
I06A Prineville 90.40 40 P P 17 24 03.9 +1.4
baz=90,SNR=49
L04A Klamath Falls 90.42 42 P P 17 24 03.6 +1.0
baz=90,SNR=13
STOF St-Etienne Org 90.42 320 *e*P P 17 24 03.3 +0.6
OCF Saint Nazaire 90.43 321⇑*e*P P 17 24 02.8 +0.1
OG26 St.-Nazaire-De 90.43 321⇑*e*P P 17 24 02.8 +0.1
LMR La Mourre 90.46 319⇑*i*P P 17 24 02.5 -0.3
comp=Z,224nm,1.2s,mb5.7
LMR La Mourre 90.46 319⇑*i*P P 17 24 02.5 -0.3
LMR pmax pmax
comp=Z,112nm,1.2s,mb5.7
LMR La Mourre 90.46 319⇑*i*P P 17 24 02.5 -0.3
comp=Z,112nm,1.2s,mb5.7
LHEM Herd Peak 90.52 43 P P 17 24 03.9 +0.8
PLDF La Plantade 90.54 323 *e*P P 17 24 02.9 -0.3
TAVF Tavernes 90.56 320 *e*P P 17 24 03.1 -0.2
BGF Bois d'Agland 90.60 323⇑*i*P P 17 24 02.9 -0.6
comp=Z,96nm,1.4s,mb5.3
BGF Bois d'Agland 90.60 323⇑*i*P P 17 24 02.9 -0.6
BGF pmax pmax
comp=Z,48nm,1.4s,mb5.3
BGF Bois d'Agland 90.60 323⇑*i*P P 17 24 02.9 -0.6
comp=Z,48nm,1.4s,mb5.3

VILF Villemus 90.62 320 *e*P P 17 24 03.5 -0.1
VIVF Saint-Julien-l 90.62 321⇑*i*P P 17 24 03.3 -0.3
comp=Z,234nm,1.1s,mb5.8
VIVF Saint-Julien-l 90.62 321⇑*i*P P 17 24 03.3 -0.3
VIVF pmax pmax
comp=Z,117nm,1.1s,mb5.8
VIVF Saint-Julien-l 90.62 321⇑*i*P P 17 24 03.3 -0.3
comp=Z,117nm,1.1s,mb5.8
SMRF Simiane la Rot 90.63 320⇑*i*P P 17 24 03.6 0.0
comp=Z,144nm,1.3s,mb5.5
SMRF Simiane la Rot 90.63 320⇑*i*P P 17 24 03.6 0.0
comp=Z,144nm,1.3s,mb5.8
WALA Waterton Lakes 90.65 33 *e*P P 17 24 04.5 +0.7
comp=Z,192nm,1.4s,mb5.9
F09A S2 Ranch, Elgi 90.65 38 P P 17 24 04.7 +0.9
baz=90,SNR=26
M04C Macdoel 90.67 43 ⇓P P 17 24 04.6 +0.8
baz=90,SNR=41
K05A Summer Lake 90.70 41 ⇑P P 17 24 05.2 +1.2
baz=90,SNR=36
I07A Izee 90.73 40 P P 17 24 05.3 +1.2
baz=90,SNR=34
KIPM Iron Peak 90.75 45 P P 17 24 05.3 +1.2
AGO Saint Agoulin 90.76 323 *e*P P 17 24 03.7 -0.5
COLF Collangettes 90.78 322⇑*e*P P 17 24 04.2 -0.1
M03C McCloud 90.78 43 ⇓P P 17 24 05.0 +0.6
baz=90,SNR=21
J06A Christmas Vall 90.84 41 ⇓P P 17 24 05.8 +1.2
baz=91,SNR=64
VSL Villasalto 90.86 315 *e*P P 17 24 04.1 -0.5
comp=Z,64nm,1.0s,mb5.6
LDF La Druitiere 90.87 326 *e*P P 17 24 03.5 -1.2
comp=Z,163nm,1.7s,mb5.5
LDF La Druitiere 90.87 326 *e*P P 17 24 03.5 -1.2
LDF pmax pmax
comp=Z,82nm,1.7s,mb5.5
LDF La Druitiere 90.87 326 *e*P P 17 24 03.5 -1.2
comp=Z,82nm,1.7s,mb5.5
WDC Whiskeytown Da 90.92 44 *e*P P 17 24 05.0 +0.1
WDC pmax pmax
comp=Z,42nm,1.3s,mb5.3
WDC Whiskeytown Da 90.92 44 *e*P P 17 24 05.0 0.0
comp=Z,42nm,1.3s,mb5.3
WDC Whiskeytown Da 90.92 44 ⇓P P 17 24 05.5 +0.5
baz=91,SNR=21
FLN La Foliniere 90.94 326 *e*P P 17 24 03.5 -1.6
comp=Z,50nm,1.4s,mb5.0
FLN *e*R
comp=Z,211nm,20.2s
FLN La Foliniere 90.94 326 *e*P P 17 24 03.5 -1.6
FLN pmax pmax
comp=Z,25nm,1.4s,mb5.0
FLN MLR MLR
comp=Z,210nm,20.3s
FLN La Foliniere 90.94 326 *e*P P 17 24 03.5 -1.6
comp=Z,25nm,1.4s,mb5.0
FLN LR LR
comp=Z,210nm,20.3s
H08A Prairie City 90.94 39 ⇑P P 17 24 06.2 +1.1
baz=91,SNR=45
BERF Bertagne 90.95 320 *e*P P 17 24 04.2 -0.9
PRAF Pradon 90.97 320 *e*P P 17 24 05.3 +0.1
O02C Red Bluff 90.99 44 ⇑P P 17 24 06.4 +1.1
baz=91,SNR=29
PYM Petit Puy Mans 91.01 323 *e*P P 17 24 03.6 -1.8
P01C Double 8 Ranch 91.03 45 ⇓P P 17 24 06.1 +0.6
baz=91
K06A Valley Falls 91.04 41 ⇓P P 17 24 06.6 +1.1
baz=91,SNR=74
GELF Grande-Etoile 91.07 320 *e*P P 17 24 04.2 -1.4
TCF Toulx Ste Croi 91.12 323 *e*P P 17 24 05.6 -0.3
comp=Z,126nm,1.5s,mb5.4
TCF Toulx Ste Croi 91.12 323 *e*P P 17 24 05.6 -0.3
TCF pmax pmax
comp=Z,63nm,1.5s,mb5.4
TCF Toulx Ste Croi 91.12 323 *e*P P 17 24 05.6 -0.3
comp=Z,63nm,1.5s,mb5.4
L05A Lakeview 91.13 42 ⇓P P 17 24 07.2 +1.2
baz=91,SNR=36
FCC Fort Churchill 91.17 18 *e*P P 17 24 05.3 -0.8
FCC pmax pmax
comp=Z,54nm,1.4s,mb5.4
FCC Fort Churchill 91.17 18 *e*P P 17 24 05.3 -0.8
comp=Z,54nm,1.4s,mb5.4
LBL Lubilhac 91.20 322 *e*P P 17 24 06.2 -0.1
J07A Hines 91.26 40 P P 17 24 08.1 +1.6
baz=91,SNR=99
GASB Alder Springs 91.32 45 P P 17 24 08.3 +1.5
baz=91,SNR=43
I08A Drewsey 91.37 39 ⇑P P 17 24 08.1 +1.1
baz=91,SNR=42
GRR Gorron 91.38 326 *e*P P 17 24 06.1 -1.0
comp=Z,33nm,1.1s,mb5.0
GRR Gorron 91.38 326 *e*P P 17 24 06.1 -1.0
GRR pmax pmax
comp=Z,16nm,1.1s,mb5.0
GRR Gorron 91.38 326 *e*P P 17 24 06.1 -1.0
comp=Z,16nm,1.1s,mb5.0
CASY Casey 91.39 185 *e*P P 17 24 06.7 -0.5
comp=Z,27nm,1.1s,mb5.2
CASY *e* pP 17 24 40.1 -4.8
H09A Durkee 91.43 38 P P 17 24 08.5 +1.2
baz=91,SNR=56
HATC Hat Creek Radi 91.46 43 P P 17 24 08.1 +0.7
baz=91,SNR=32
HOPS Hopland 91.47 45 ⇑P P 17 24 08.2 +0.7
baz=91,SNR=7.3
BMO Blue Mountains 91.52 38 *e*P P 17 24 08.1 +0.4
comp=Z,85nm,1.2s,mb5.7
LASF Ste Croix 91.56 321⇑*i*P P 17 24 08.0 +0.1
comp=Z,216nm,1.2s,mb5.8
O03C Acorn Hollow, 91.57 44 ⇓P P 17 24 08.2 +0.3
baz=91
K07A Rock Creek Ran 91.70 41 P P 17 24 09.9 +1.3
baz=91,SNR=96
J08A Circle Bar Ran 91.76 40 ⇓P P 17 24 10.1 +1.3
baz=92,SNR=39
I09A Lost Marbles R 91.81 39 P P 17 24 10.2 +1.1
baz=92,SNR=68
FFC Flin Flon 91.83 24 P P 17 24 08.6 -0.6
comp=Z,239nm,1.1s,mb6.1,SNR=6.5
FFC Flin Flon 91.83 24 P P 17 24 08.3 -0.9
M06C Likely Place G 91.84 42 P P 17 24 10.3 +1.1
baz=92,SNR=36
MNRC McLaughlin Nat 91.94 45 ⇑P P 17 24 10.7 +1.0
baz=92,SNR=20
O04C Chester 91.97 43 ⇑P P 17 24 10.7 +0.8
baz=92,SNR=37
ELFS Eagle Lake Fie 92.03 43 ⇑P P 17 24 11.1 +1.0
baz=92,SNR=21
NSHM Saint Helena R 92.03 46 *e*P P 17 24 09.8 -0.3
CAF Calviac 92.05 322⇑*i*P P 17 24 10.4 +0.2
comp=Z,229nm,1.1s,mb5.8
CAF Calviac 92.05 322⇑*i*P P 17 24 10.4 +0.2
CAF pmax pmax
comp=Z,114nm,1.1s,mb5.8
CAF Calviac 92.05 322⇑*i*P P 17 24 10.4 +0.2
comp=Z,114nm,1.1s,mb5.8
L07A Adell 92.05 41 ⇓P P 17 24 11.6 +1.4
baz=92,SNR=155
MCCM Marconi Confer 92.06 46 ⇑P P 17 24 11.6 +1.3
baz=92
MSO Missoula 92.09 35 *e*P P 17 24 10.1 -0.3
comp=Z,56nm,1.3s,mb5.4
RJF Les Rejaudoux 92.11 323 *e*P P 17 24 10.8 +0.3
comp=Z,246nm,1.2s,mb5.8
RJF *e*R
comp=Z,77nm,19.5s
RJF Les Rejaudoux 92.11 323 *e*P P 17 24 10.8 +0.3
RJF pmax pmax
comp=Z,123nm,1.2s,mb5.8
RJF MLR MLR
comp=Z,80nm,19.5s
RJF Les Rejaudoux 92.11 323 *e*P P 17 24 10.8 +0.3
comp=Z,123nm,1.2s,mb5.8
RJF LR LR
comp=Z,80nm,19.5s
K08A Mann Creek Ran 92.13 40 P P 17 24 11.7 +1.1
baz=92,SNR=57
ORV Oroville 92.15 44 P P 17 24 10.6 -0.1
baz=92,SNR=32
SUTB Sutter Butte 92.16 45 ⇓P P 17 24 10.4 -0.3
baz=92
J09A Fry Pan Ranch, 92.18 40 ⇓P P 17 24 11.7 +0.9
baz=92,SNR=30
WVOR Wild Horse Val 92.22 41 *e*P P 17 24 11.9 +0.9

WVOR pmax pmax
comp=Z,82nm,1.3s,mb5.6
WVOR Wild Horse Val 92.22 41 *e*P **P 17 24 11.9 +0.9**
comp=Z,76nm,1.3s,mb5.6
CVS Carmenet Viney 92.23 46 ⇑P **P 17 24 11.1 +0.1**
baz=92,SNR=11
FARB Farallon Islan 92.23 46 ⇑P **P 17 24 11.0 0.0**
baz=92
O05C Quincy 92.29 44 ⇓P **P 17 24 11.8 +0.5**
baz=92,SNR=7.2
OHCM Honcut 92.29 44 *e*P **P 17 24 10.8 -0.5**
SGMF Saint Gilles 92.31 327 *e*P **P 17 24 10.3 -1.1**
comp=Z,53nm,1.1s,mb5.2
SGMF Saint Gilles 92.31 327 *e*P **P 17 24 10.3 -1.1**
SGMF pmax pmax
comp=Z,26nm,1.1s,mb5.2
SGMF Saint Gilles 92.31 327 *e*P **P 17 24 10.3 -1.1**
comp=Z,26nm,1.1s,mb5.2
Q03C Winters 92.35 45 ⇑P **P 17 24 12.7 +1.1**
baz=92
CHMT Chamberlain Mo 92.39 35 *e*P **P 17 24 11.7 -0.1**
N06A Buffalo Meadow 92.50 43 ⇑P **P 17 24 12.9 +0.7**
baz=92,SNR=40
M07A Soldier Meadow 92.53 42 ⇓P **P 17 24 13.5 +1.1**
baz=92,SNR=10
L08A Fields 92.54 41 ⇑P **P 17 24 13.7 +1.3**
baz=92,SNR=105
K09A Rome 92.59 40 ⇓P **P 17 24 13.6 +0.9**
baz=92,SNR=96
ROSF Rostrenen 92.61 327 *e*P **P 17 24 11.6 -1.2**
comp=Z,52nm,1.1s,mb5.2
ROSF Rostrenen 92.61 327 *e*P **P 17 24 11.6 -1.2**
ROSF pmax pmax
comp=Z,26nm,1.1s,mb5.3
ROSF Rostrenen 92.61 327 *e*P **P 17 24 11.6 -1.2**
comp=Z,26nm,1.1s,mb5.3
Q04C Lincoln 92.64 45 ⇓P **P 17 24 13.4 +0.4**
baz=92
BEKR Beckwourth 92.69 43 ⇑P **P 17 24 13.6 +0.5**
baz=92,SNR=20
LFF La Frestale 92.77 323 *e*P **P 17 24 13.8 +0.3**
comp=Z,234nm,1.6s,mb5.8
LFF La Frestale 92.77 323 *e*P **P 17 24 13.8 +0.3**
LFF pmax pmax
comp=Z,117nm,1.6s,mb5.8
LFF La Frestale 92.77 323 *e*P **P 17 24 13.8 +0.3**
comp=Z,117nm,1.6s,mb5.8
BDM Black Diamond 92.83 46 ⇓P **P 17 24 14.4 +0.6**
baz=93
QUIF Quistinic 92.84 327 *e*P **P 17 24 12.4 -1.4**
comp=Z,30nm,1.1s,mb5.0
QUIF Quistinic 92.84 327 *e*P **P 17 24 12.4 -1.4**
QUIF pmax pmax
comp=Z,15nm,1.1s,mb5.0
QUIF Quistinic 92.84 327 *e*P **P 17 24 12.4 -1.4**
comp=Z,15nm,1.1s,mb5.0
O06A Flanigan 92.85 43 ⇑P **P 17 24 14.5 +0.7**
baz=93,SNR=69
P05C Yuba Gap, Truc 92.86 44 ⇑P **P 17 24 14.3 +0.4**
baz=93,SNR=11
JRSC Jasper Ridge 92.90 46 ⇓P **P 17 24 14.2 +0.1**
baz=93
MTLF Montolieu 92.95 321 ⇑*i*P **P 17 24 14.3 0.0**
comp=Z,176nm,1.2s,mb5.8
MTLF Montolieu 92.95 321 ⇑*i*P **P 17 24 14.3 0.0**
MTLF pmax pmax
comp=Z,88nm,1.2s,mb5.8
MTLF Montolieu 92.95 321 ⇑*i*P **P 17 24 14.3 0.0**
comp=Z,88nm,1.2s,mb5.8
KEST Kesra 92.96 312 P **P 17 24 15.1 +0.7**
comp=Z,17nm,0.9s,mb5.2,baz=27,slow=1.1,SNR=27
KEST LR LR 18 10 29.6
comp=Z,32nm,19.7s,baz=275,slow=38
N07B Gerlach 93.01 42 ⇑P **P 17 24 15.3 +0.7**
baz=93,SNR=32
L09A Wilkinson Ranc 93.04 41 ⇓P **P 17 24 15.9 +1.1**
baz=93,SNR=24
P06A Stead Airport, 93.09 43 ⇑P **P 17 24 15.7 +0.7**
baz=93
WENL Wente Brothers 93.09 46 ⇑P **P 17 24 15.3 +0.3**
baz=93,SNR=5.4
BNLO Ben Lomond (Sa 93.10 47 ⇑P **P 17 24 14.7 -0.3**
baz=93,SNR=9.4
LAVA Lava Cap Winer 93.10 45 ⇑P **P 17 24 14.9 -0.1**
baz=93,SNR=23
HRY Holter Researc 93.25 34 *e*P **P 17 24 16.0 +0.2**
R04C Big Horse Ranc 93.26 45 ⇑P **P 17 24 15.4 -0.4**
baz=93
PAHR Pah Rah Range 93.39 43 *e*P **P 17 24 16.9 +0.5**
comp=Z,102nm,1.3s,mb5.8
EGMT Eagleton 93.40 32 *e*P **P 17 24 16.6 +0.2**
comp=Z,79nm,1.4s,mb5.7
WCN Washoe City 93.40 44 ⇓P **P 17 24 17.1 +0.7**
baz=93,SNR=12
O07A Toulon 93.44 43 ⇓P **P 17 24 17.2 +0.7**
baz=93,SNR=49
S04C Ingram Canyon, 93.44 46 ⇓P **P 17 24 16.7 +0.1**
baz=93,SNR=14
N08A GE Springer Mi 93.52 42 ⇑P **P 17 24 18.0 +1.1**
baz=93,SNR=86
M09A Marrel Ranch, 93.54 41 ⇓P **P 17 24 18.1 +1.1**
baz=93,SNR=11
R05C Kirkwood Meado 93.55 44 ⇑P **P 17 24 17.5 +0.4**
baz=93,SNR=17
CMB Columbia Colle 93.74 45 *e*P **P 17 24 18.0 0.0**
CMB pmax pmax
comp=Z,86nm,1.3s,mb5.7
CMB Columbia Colle 93.74 45 *e*P **P 17 24 18.0 0.0**
comp=Z,84nm,1.3s,mb5.7
CMB Columbia Colle 93.74 45 P **P 17 24 18.2 +0.3**
baz=94,SNR=52
PACP Pacheco Peak 93.75 46 P **P 17 24 18.7 +0.7**
baz=94,SNR=21
O08A Rochester Mine 93.80 42 ⇑P **P 17 24 19.6 +1.3**
baz=94
P07A Fallon 93.80 43 ⇑P **P 17 24 19.2 +1.0**
baz=94
MLS Moulis 93.83 321⇑*e*P **P 17 24 17.6 -0.8**
N09A Rock Creek Ran 93.84 41 ⇑P **P 17 24 19.3 +0.9**
baz=94,SNR=10
HAST UC Hastings Re 93.93 47 ⇑P **P 17 24 19.1 +0.3**
baz=94,SNR=15
MIR Mirnyy 93.95 192*c i*P **P 17 24 19.0 +0.1**
MIR pmax pmax
comp=Z,21nm,1.2s,mb5.1
MCMT McKenzie Canyo 93.97 36 *e*P **P 17 24 19.2 +0.2**
M10A I.L. Ranch, Tu 94.01 40 ⇓P **P 17 24 20.4 +1.2**
baz=94,SNR=26
R06C Coleville 94.05 44 ⇓P **P 17 24 20.1 +0.7**
baz=94,SNR=33
BOZ Bozeman (W) 94.07 35 *e*P **P 17 24 19.7 +0.2**
BOZ pmax pmax
comp=Z,38nm,1.3s,mb5.4
BOZ Bozeman (W) 94.07 35 *e*P **P 17 24 19.7 +0.2**
comp=Z,38nm,1.3s,mb5.4
S06C San Francisco 94.18 45 ⇓P **P 17 24 20.3 +0.3**
baz=94,SNR=43
S05C Merced 94.18 46 ⇓P **P 17 24 19.6 -0.4**
baz=94,SNR=12
P08A Dixie Valley 94.21 43 ⇑P **P 17 24 21.5 +1.4**
baz=94,SNR=5.9
Q07A Schurz 94.21 44 ⇓P **P 17 24 20.9 +0.8**
baz=94
EPF Esparros 94.21 322 *e*P **P 17 24 19.5 -0.6**
comp=Z,24nm,1.0s,mb5.0
EPF Esparros 94.21 322 *e*P **P 17 24 19.5 -0.6**
EPF pmax pmax
comp=Z,12nm,1.0s,mb5.0
EPF Esparros 94.21 322 *e*P **P 17 24 19.5 -0.6**
comp=Z,12nm,1.0s,mb5.0
T05C Eagle Field, D 94.22 46 ⇓P **P 17 24 20.7 +0.5**
baz=94
BMN Battle Mountai 94.28 42 *e*P **P 17 24 21.5 +1.0**
BMN pmax pmax
comp=Z,68nm,1.3s,mb5.6
BMN Battle Mountai 94.28 42 *e*P **P 17 24 21.5 +1.1**
comp=Z,68nm,1.3s,mb5.6
V03C Hunter Liggett 94.35 47 ⇓P **P 17 24 21.6 +0.8**
baz=94,SNR=6.7
RESF Ens 94.36 322⇑*e*P **P 17 24 21.1 +0.3**
U04C Hernandez Rese 94.45 47 P **P 17 24 22.1 +0.8**
baz=94,SNR=10
O09A Fish Creek Ran 94.46 42 P **P 17 24 22.6 +1.3**
baz=94,SNR=36
VIEF Viey 94.48 322⇑*e*P **P 17 24 21.6 +0.2**
M11A Holland Ranch, 94.51 40 ⇑P **P 17 24 23.3 +1.8**
baz=94,SNR=20

N10A Dunphy 94.53 41 ⇑P **P 17 24 22.7 +1.1**
baz=94
R07C Lee Vining 94.56 44 ⇑P **P 17 24 22.6 +0.8**
baz=94,SNR=21
QLMT Earthquake Lak 94.72 35 P **P 17 24 22.9 +0.4**
T06C Millerton Lake 94.78 45 P **P 17 24 22.9 +0.2**
baz=94,SNR=21
O10A Cortez Mining, 94.80 41 ⇑P **P 17 24 24.2 +1.4**
baz=94,SNR=10
ETSF Etsaut 94.80 322⇑*i*P **P 17 24 23.2 +0.4**
comp=Z,72nm,1.2s,mb5.5
ETSF Etsaut 94.80 322⇑*i*P **P 17 24 23.2 +0.4**
ETSF pmax pmax
comp=Z,36nm,1.2s,mb5.5
ETSF Etsaut 94.80 322*i*P **P 17 24 23.2 +0.4**
comp=Z,36nm,1.2s,mb5.5
Q08A Gabbs 94.80 43 P **P 17 24 23.5 +0.7**
baz=94,SNR=35
V04C Ramage Ranch, 94.81 47 ⇓P **P 17 24 23.7 +0.8**
baz=95
KCC Kaiser Creek 94.84 45 P **P 17 24 23.5 +0.4**
baz=95,SNR=18
PKD Parkfield 94.85 47 ⇓P **P 17 24 23.3 +0.2**
baz=95,SNR=14
P09A Austin 94.87 42 ⇓P **P 17 24 24.0 +0.8**
baz=95,SNR=6.0
N11A Elko Archery C 94.93 41 ⇑P **P 17 24 24.5 +1.1**
baz=95
MLAC Mammoth Lakes 94.97 45 ⇓P **P 17 24 24.5 +0.8**
baz=95
R08A Mina 95.00 44 ⇓P **P 17 24 24.6 +0.8**
baz=95
M12A Wells 95.03 40 P **P 17 24 25.4 +1.5**
baz=95,SNR=31
PPT Papeete 95.07 107 *e*S S 17 35 22.4 -3.5
comp=Z,663nm,25.8s
PPT *e*LR LR 17 54 49.3
comp=Z,338nm,33.5s
YNR Norris Junctio 95.20 35 *e*P **P 17 24 26.5 +1.8**
P10A Eureka 95.24 42 ⇑P **P 17 24 25.8 +1.0**
baz=95,SNR=7.1
ELK Elko 95.27 40 *e*P **P 17 24 26.5 +1.5**
ELK pmax pmax
comp=Z,68nm,1.8s
ELK Elko 95.27 40 *e*P **P 17 24 26.5 +1.5**
comp=Z,68nm,1.8s,mb5.6
Q09A Carvers 95.28 43 ⇓P **P 17 24 25.7 +0.7**
baz=95
YFT Old Faithful 95.29 35 *e*P **P 17 24 26.8 +1.7**
MTUM Tungsten Hills 95.31 45 *e*P **P 17 24 25.2 0.0**
N12A Clover Valley, 95.31 40 ⇓P **P 17 24 26.3 +1.1**
baz=95,SNR=21
V05C Boulder Hill, 95.32 47 ⇑P **P 17 24 25.8 +0.6**
baz=95
O11A Cowboy Ranch, 95.40 41 ⇑P **P 17 24 26.5 +0.9**
baz=95,SNR=22
HELL Mitchell Peak, 95.42 45 ⇓P **P 17 24 25.3 -0.4**
baz=95,SNR=28
RCTC Rector, Farmer 95.49 46 ⇓P **P 17 24 26.3 +0.3**
baz=95
M13A Montello 95.50 39 ⇓P **P 17 24 26.8 +0.7**
baz=95
SMMC Simmler 95.58 47 ⇓P **P 17 24 27.1 +0.7**
baz=95,SNR=5.9
TIN Tinemaha 95.70 45 ⇓P **P 17 24 27.5 +0.6**
baz=95
P11A Circle Ranch, 95.71 42 ⇑P **P 17 24 27.9 +1.0**
baz=95,SNR=9.0
R09A Tonopah 95.72 43 ⇑P **P 17 24 27.7 +0.7**
baz=95,SNR=41
TPH Tonopah 95.72 43 *e*P **P 17 24 27.5 +0.5**
TPH pmax pmax
comp=Z,55nm,1.0s,mb5.8
TPH Tonopah 95.72 43 *e*P **P 17 24 27.5 +0.5**
comp=Z,55nm,1.0s,mb5.8
N13A Wendover, West 95.80 40 ⇑P **P 17 24 28.4 +1.0**
baz=96
O12A Currie 95.86 41 P **P 17 24 28.4 +0.7**
baz=96,SNR=15
VES Vestal, Richgr 95.88 46 ⇓P **P 17 24 27.2 -0.5**
baz=96,SNR=5.3
S09A Goldfield 95.93 44 ⇓P **P 17 24 28.4 +0.4**
baz=96,SNR=13
PKM Peak Mountain 95.94 47 ⇑P **P 17 24 28.9 +0.9**
baz=96,SNR=6.9
LAO LASA Array 96.04 32 *e*P **P 17 24 27.2 -1.2**
comp=Z,32nm,1.3s,mb5.5
R10A Warm Springs 96.16 43 ⇑P **P 17 24 29.8 +0.8**
baz=96,SNR=23
CWC Cottonwood Cre 96.17 45 ⇓P **P 17 24 29.5 +0.4**
baz=96
P12A McGill 96.27 41 P **P 17 24 30.4 +0.9**
baz=96,SNR=20
GRAC Grapevine Rang 96.28 44 P **P 17 24 30.3 +0.7**
baz=96,SNR=13
ISA Isabella 96.38 46 ⇑P **P 17 24 29.5 -0.5**
baz=96,SNR=5.1
BGU Big Grassy Mou 96.43 39 P **P 17 24 29.6 -0.7**
ARVC Arvin 96.46 47 ⇑P **P 17 24 30.2 -0.2**
baz=96
TRCR Troy Canyon 96.56 42 *e*P **P 17 24 31.8 +0.9**
DAC Darwin (Calif) 96.58 45 *e*P **P 17 24 31.1 +0.2**
DAC pmax pmax
comp=Z,27nm,1.2s,mb5.5
DAC Darwin (Calif) 96.58 45 *e*P **P 17 24 31.1 +0.2**
comp=Z,27nm,1.2s,mb5.5
Q12A Willow Creek R 96.59 42 P **P 17 24 32.2 +1.2**
baz=96,SNR=6.7
MPMC Manual Prospec 96.78 45 P **P 17 24 32.3 +0.5**
baz=96,SNR=22
BLG Laguna Peak 96.91 48 ⇓P **P 17 24 32.5 +0.1**
baz=97
FURC Furnace Creek, 96.93 45 P **P 17 24 33.1 +0.6**
baz=97,SNR=14
LRMC Laurel Mountai 97.00 46 P **P 17 24 33.2 +0.4**
baz=97,SNR=13
DUG Dugway 97.04 40 *e*P **P 17 24 34.1 +1.1**
DUG pmax pmax
comp=Z,33nm,1.4s,mb5.5
DUG Dugway 97.04 40 *e*P **P 17 24 34.1 +1.1**
comp=Z,33nm,1.4s,mb5.5
PDAR Pinedale Array 97.12 36 P **P 17 24 33.0 -0.4**
comp=Z,1.5nm,0.7s,mb4.5,baz=338,slow=1.6,SNR=14
PDAR PP PP 17 28 30.1 -1.1
comp=Z,0.4nm,0.8s,baz=308,slow=7.3,SNR=3.4
PDAR LR LR 18 09 45.9
comp=Z,60nm,21.4s,baz=162,slow=36
EDW2 Edwards Air Fo 97.16 46 ⇓P **P 17 24 34.0 +0.4**
baz=97,SNR=8.7
U10A Ash Meadows, A 97.30 44 ⇑P **P 17 24 34.8 +0.6**
baz=97,SNR=8.9
DECC Green Verdugo 97.31 47 P **P 17 24 34.2 -0.1**
baz=97
NLU North Lily Min 97.62 39 *e*P **P 17 24 36.2 +0.6**
SHOC Shoshone 97.65 45 ⇑P **P 17 24 36.3 +0.6**
baz=97
ULM Lac du Bonnet 97.66 24 P **P 17 24 34.7 -1.1**
comp=Z,1.0nm,0.4s,mb4.6,baz=340,slow=9.4,SNR=3.2
ULM LR LR 18 08 57.9
comp=Z,87nm,20.7s,baz=15,slow=36
GSC Goldstone 97.68 45 ⇓P **P 17 24 36.3 +0.4**
baz=97,SNR=9.7
BFSC Mount Baldy St 97.77 47 ⇓P **P 17 24 36.2 0.0**
baz=98
CIS Catalina Islan 97.77 48 ⇓P **P 17 24 36.1 -0.1**
baz=98
MPU Maple Canyon 97.83 39 *e*P **P 17 24 37.9 +1.3**
comp=Z,2.8nm,0.7s,mb4.8
U11A Corn Creek 97.89 44 ⇓P **P 17 24 37.2 +0.4**
baz=98
TUQ Turquoise Mtn. 98.17 45 ⇑P **P 17 24 38.2 +0.2**
baz=98,SNR=12
HEC Hector,Ludlow 98.28 46 ⇓P **P 17 24 38.9 +0.4**
baz=98
MURC Murrieta 98.45 47 ⇑P **P 17 24 39.4 0.0**
baz=98
V12A Nelson 98.67 44 ⇓P **P 17 24 40.7 +0.4**
baz=98,SNR=6.5
ESDC Sonseca Array 98.86 321 P **P 17 24 41.1 0.0**
comp=Z,3.0nm,1.0s,mb4.7,baz=34,slow=4.4,SNR=10
ESDC PP PP 17 28 32.8 -12
comp=Z,2.9nm,0.9s,baz=47,slow=8.7,SNR=6.7
ESDC LR LR 18 13 18.0
comp=Z,67nm,20.6s,baz=105,slow=38
PFO Pinyon Flat Ob 98.94 47 *e*P **P 17 24 42.1 +0.6**
PFO pmax pmax
comp=Z,12nm,1.1s,mb5.2
PFO Pinyon Flat Ob 98.94 47 *e*P **P 17 24 42.1 +0.6**
comp=Z,12nm,1.1s,mb5.2
PFO Pinyon Flat Ob 98.94 47 ⇓P **P 17 24 41.8 +0.3**
baz=99,SNR=7.6
109C Camp Elliot, M 98.95 48 ⇓P **P 17 24 41.8 +0.3**
baz=99
RSSD Black Hills 98.97 32 *e*P **P 17 24 41.5 -0.1**
RSSD pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
RSSD Black Hills 98.97 32 *e*P **P 17 24 41.5 -0.2**
comp=Z,9.2nm,1.2s,mb5.1
BELC Belle Mtn. 99.00 46 ⇓P **P 17 24 41.9 +0.1**
baz=99
SRU San Rafael 99.08 39 P **P 17 24 43.0 +0.9**
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
SRU San Rafael 99.08 39 P **P 17 24 43.0 +0.9**
comp=Z,4.1nm,0.8s,mb4.9
MONP Monument Peak 99.40 47 ⇓P Pdif 17 24 44.2 +0.6
baz=99
W13A Hualapai Mount 99.67 44 ⇑P Pdif 17 24 45.2 +0.4
baz=99
DVTC Desert V Tower 99.76 47 ⇑P Pdif 17 24 45.7 +0.5
baz=100
SWSC Sam W. Stewart 99.79 47 ⇓P Pdif 17 24 45.7 +0.4
baz=100
PDMCI Parker Dam,Lak 100.02 45 ⇓P Pdif 17 24 46.6 +0.3
baz=100
X13A Yucca 100.03 44 ⇓P Pdif 17 24 46.6 +0.2
baz=100
W14A Seligman 100.11 44 ⇑P Pdif 17 24 47.1 +0.4
baz=100
Y12C Blythe 100.12 45 ⇑P Pdif 17 24 47.3 +0.5
baz=100
SCHQ Schefferville 100.14 6 PP PP 17 28 48.0 -6.2
comp=Z,3.1nm,0.8s,baz=10,slow=11,SNR=3.7
GLA Glamis 100.36 46 ⇑P Pdif 17 24 48.6 +0.7
baz=100,SNR=6.8
Y13A Salome 100.53 45 ⇓P Pdif 17 24 49.4 +0.8
baz=100
W15A Williams 100.64 43 ⇓P Pdif 17 24 49.7 +0.7
baz=100
X14A Yava 100.70 44 ⇓P Pdif 17 24 50.1 +0.8
baz=100
PV01 Paradox Valley 100.86 39 *e*P Pdif 17 24 49.9 -0.1
WUAZ Wupatki 100.97 42 *e*Pdif Pdif 17 24 51.0 +0.4
comp=Z,11nm,1.1s
Y14A Wickenburg 100.97 45 ⇑P Pdif 17 24 51.2 +0.6
baz=101
X15A Humboldt 101.11 44 ⇓P Pdif 17 24 52.1 +0.9
baz=101,SNR=8.1
Z14A Wintersburg 101.38 45 ⇓P Pdif 17 24 52.8 +0.5
baz=101
115A Sonoran Desert 102.27 45 ⇑P Pdif 17 24 57.3 +1.0
baz=102
MAW Mawson 102.31 200 P Pdif 17 24 55.6 -0.9
comp=Z,2.1nm,0.6s,baz=59,slow=5.0,SNR=8.9
MAW PP PP 17 29 07.2 -3.4
comp=Z,1.4nm,0.8s,baz=53,slow=13,SNR=4.0
MAW PKKPbc PKKPbc 17 40 57.0 -0.7
comp=Z,2.3nm,0.8s,baz=203,slow=5.0,SNR=6.2
MAW Mawson 102.31 200 P Pdif 17 24 55.6 -0.9
MAW 17 29 07.2
116A Eloy 102.69 45 ⇓P Pdif 17 24 59.0 +0.8
baz=102
VNDA Vanda 104.79 172 PP PP 17 29 26.6 -2.5
comp=Z,4.0nm,0.9s,baz=314,slow=7.9,SNR=4.9
VNDA PKKPbc PKKPbc 17 40 50.5 +0.2
comp=Z,1.9nm,1.0s,baz=138,slow=2.0,SNR=6.7
MNTX Cornudas Mount 107.22 42 *e*PKiKP PKiKP 17 29 26.7 +0.1
TORD Torodi Ar. Bea 111.32 297 Pdiff Pdif 17 25 37.5 +1.0
comp=Z,1.0nm,1.0s,baz=86,slow=4.6,SNR=4.2
TORD PKiKP PKiKP 17 29 34.5 +0.2
comp=Z,2.1nm,0.6s,baz=23,slow=3.1,SNR=13
TORD PP PP 17 30 10.2 -6.3
comp=Z,2.5nm,1.0s,baz=39,slow=3.4,SNR=4.2
TORD PKKPbc PKKPbc 17 40 41.5 +12
comp=Z,2.2nm,1.1s,baz=247,slow=3.7,SNR=5.2
TORD Torodi Ar. Bea 111.32 297 Pdif Pdif 17 25 37.5 +1.0
TORD PKPdf PKiKP 17 29 34.5 +0.2
TORD PP PP 17 30 10.2 -6.3
TORD PKKPbc PKKPbc 17 40 41.5 +12
JCT Junction City 111.38 39 *e*PKiKP PKiKP 17 29 34.9 +0.5
QSPA South Pole Qui 114.70 180 *e*P PKiKP 17 29 39.4 -1.4
DBIC Dimbokro 120.26 295 PKP PKPdf 17 29 52.0 +0.5
comp=Z,7.5nm,0.7s,baz=49,slow=4.1,SNR=13
DBIC Dimbokro 120.26 295 PKiKP PKPdf 17 29 52.0 +0.6
DBIC pmax pmax
comp=Z,8.0nm,0.7s
LIC Lamto 120.64 294 *e*PKiKP PKPdf 17 29 52.4 +0.2
comp=Z,27nm,0.9s
LIC *e*R
comp=Z,114nm,21.8s
LIC Lamto 120.64 294 *e*PKPdf PKPdf 17 29 52.4 +0.2
LIC LR LR
comp=Z,60nm,21.8s
CMIG Matias Romero 124.33 45 PKP PKPdf 17 30 00.0 +0.8
comp=Z,12nm,0.9s,baz=345,slow=3.2,SNR=14
SNAA Sanae 124.42 198 PKP PKPdf 17 29 58.2 -1.3
comp=Z,1.3nm,0.5s,baz=184,slow=3.4,SNR=39
SNAA PKKPbc PKKPbc 17 39 42.2 -0.6
comp=Z,0.5nm,1.0s,baz=327,slow=5.9,SNR=5.3
SNAA Sanae 124.42 198 *e*PKPdf PKPdf 17 29 57.7 -1.7
SDV Santo Domingo 143.91 23 PKP PKPdf 17 30 34.7 -0.9
comp=Z,40nm,0.5s,baz=15,slow=1.6,SNR=59
SDV Santo Domingo 143.91 23 *e*PKPpre PKPdf 17 30 34.6 -1.1
SDV *e*SKPbc SKPbc 17 34 02.5 +2.1
PCRV Puerto La Cruz 144.35 13 PKP PKPdf 17 30 35.0 -1.5
comp=Z,90nm,0.6s,baz=334,slow=2.0,SNR=46
ROSC El Rosal 145.99 32 PKPbc PKPbc 17 30 42.0 +1.7
comp=Z,26nm,0.5s,baz=105,slow=0.6,SNR=53
ROSC El Rosal 145.99 32 *e*PKP PKPdf 17 30 41.6 +2.3
PLCA Paso Flores 160.64 148 PKP PKPdf 17 30 59.8 -0.3
comp=Z,2.2nm,1.0s,baz=84,slow=13,SNR=3.6
PLCA Paso Flores 160.64 148 PKIKP PKPdf 17 30 59.8 -0.3
PLCA pmax pmax
comp=Z,2.0nm,1.0s
LPAZ La Paz 166.58 52 PKP PKPdf 17 31 07.8 +2.2
comp=Z,8.3nm,0.9s,baz=26,slow=2.5,SNR=35
LPAZ La Paz 166.58 52 *e*PKPdf PKPdf 17 31 07.6 +1.9
LPAZ *e*PKPab PKPab 17 32 08.4 -0.3
BDFB Brasilia 167.44 316 PKP PKPdf 17 31 07.3 +1.1
comp=Z,19nm,0.9s,baz=89,slow=0.6,SNR=21
BDFB Brasilia 167.44 316 PKIKP PKPdf 17 31 07.3 +1.0
BDFB pmax pmax
comp=Z,19nm,0.9s
CFAA Coronel Fontan 168.14 127 PKP PKPdf 17 31 06.7 0.0
comp=Z,0.7nm,0.8s,baz=275,slow=3.7,SNR=6.8
CFAA Coronel Fontan 168.14 127 PKP PKPdf 17 31 06.7 0.0
CPUP Villa Florida 178.58 172 PKP PKPdf 17 31 11.2 +0.5
comp=Z,0.7nm,0.6s,baz=44,slow=2.6,SNR=4.9
CPUP Villa Florida 178.58 172 PKIKP PKPdf 17 31 11.2 +0.5
CPUP pmax pmax
comp=Z,1.0nm,0.6s

ISCJB ***27*** *17:26:24.9±0.5,490S±0.1×1073E±0.2,h10km, mb4.5/19, MS4.3/11, Error ellipse: s-maj=20.7km s-min=12.1km az=58.9*

IDC ***27*** *17:26:24.4±1.0,4876S×10695E,h0km,mb4.1/7, mb1 4.3/7,mb1mx4.1/13,mbtmp4.1/7,MS4.0/6,Ms1 4.0/6, ms1mx3.6/17,Error ellipse: s-maj=45.1km s-min=20.4km az=117.0*

BJI ***27*** *17:26:26.1,4860S×10670E,h10km,mB5.2,mb5.0,Ms4.9, Msz4.6*

NEIC ***27*** *17:26:26.1±0.6,4860S×10671E,h10km,mb4.4/5,Error ellipse: s-maj=26.8km s-min=10.8km az=114.0*

MOS ***27*** *17:26:27.7±1.5,4869S×10666E,h10km,mb5.0/6,Error ellipse: s-maj=45.7km s-min=20.2km az=67.7*

ISC 27 17:26:26.2±0.5,489S±01×1071E±02,h10km, (h15km±1.6km:pP-P),n54,σ0s91/36,mb4.5/19,MS4.3/11, 2C,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CASY	**Casey**	**17.48**	**175**	*e*P		**Pn**	**17 30 36.7**	**+6.7**
MAW	**Mawson**	**28.91**	**214**	LR		LR	17 41 54.3	
	comp=Z,124nm,18.5s,MS3.5,baz=238,slow=32							
STKA	**Stephens Creek**	**30.95**	**69**	*e*P		**P**	**17 32 48.9**	**+5.6**
	2.8nm,0.8s,mb4.1							
STKA	**Stephens Creek**	**30.95**	**69**	P		**P**	**17 32 43.2**	**-0.1**
	1.3nm,0.8s,mb3.8,baz=183,slow=19,SNR=1.7							
STKA				PcP		PcP	17 35 39.1	-0.4
	1.7nm,0.9s,baz=198,slow=9.4,SNR=3.7							
STKA	**Stephens Creek**	**30.95**	**69**	P		**P**	**17 32 43.2**	**-0.1**
STKA				*e*P			17 32 48.9	

STKA					PcP	PcP	17 35 39.1	-0.4
ASPA	**Alice Springs**	**32.87**	**50**	*e*P	**P**		**17 32 59.9**	**-0.3**
ASPA				*e*sP	sP		17 33 05.1	+0.5
ASAR	**Alice Springs**	**32.88**	**50**	P	**P**		**17 32 59.8**	**-0.5**
	2.0nm,0.7s,mb4.2,baz=213,slow=8.4,SNR=40							
ASAR				PcP	PcP		17 35 44.1	-0.7
	0.5nm,1.0s,baz=214,slow=1.5,SNR=4.7							
AS31	**Alice Springs**	**32.88**	**50**	*e*P	**P**		**17 32 59.9**	**-0.4**
AS31				*e*sP	sP		17 33 05.1	+0.5
FITZ	**Fitzroy Crossi**	**34.22**	**32**	*e*P	**P**		**17 33 12.7**	**+0.7**
	5.0nm,1.0s,mb4.4							
VNDA	**Vanda**	**35.25**	**162**	P	**P**		**17 33 21.9**	**+1.0**
	2.9nm,0.9s,mb4.2,baz=289,slow=8.3,SNR=10							
VNDA				LR	LR		17 46 36.3	
	comp=Z,338nm,18.9s,MS4.1,baz=260,slow=34							
VNDA	**Vanda**	**35.25**	**162**	*e*P	**P**		**17 33 21.8**	**+0.9**
VNDA				pmax	pmax			
	comp=Z,40nm,0.9s							
VNDA	**Vanda**	**35.25**	**162**	*e*P	**P**		**17 33 21.8**	**+1.0**
	comp=Z,3.8nm,0.9s,mb4.3							
WRA	**Warramunga Arr**	**36.24**	**47**	P	**P**		**17 33 28.7**	**-0.7**
	comp=Z,3.5nm,0.7s,mb4.4,baz=211,slow=8.3,SNR=21							
WRA				PcP	PcP		17 35 54.2	-0.3
	comp=Z,1.1nm,0.7s,baz=227,slow=2.4,SNR=4.1							
WRA				LR	LR		17 47 14.5	
	comp=Z,188nm,19.0s,MS3.9,baz=345,slow=34							
WRA	**Warramunga Arr**	**36.24**	**47**	P	**P**		**17 33 28.7**	**-0.6**
WRA							17 35 54.2	
WB2	**Warramunga Arr**	**36.24**	**47**	*e*P	**P**		**17 33 28.8**	**-0.6**
WB2				*e*sP	sP		17 33 34.3	+0.6
WRAB	**Tennant Creek**	**36.25**	**47**	*e*P	**P**		**17 33 29.0**	**-0.4**
WRAB				*e*			17 33 34.4	
WRAB				pmax	pmax			
	comp=Z,14nm,0.8s,mb4.9							
WRAB	**Tennant Creek**	**36.25**	**47**	*e*P	**P**		**17 33 29.0**	**-0.4**
	comp=Z,14nm,0.8s,mb4.9							
WRAB				*e*			17 33 34.4	
CTA	**Charters Tower**	**42.48**	**61**	*e*P	**P**		**17 34 23.0**	**+1.5**
	comp=Z,4.2nm,0.9s,mb4.1							
CTA				*e*sP	sP		17 34 27.1	+1.3
CTA	**Charters Tower**	**42.48**	**61**	*e*P	**P**		**17 34 23.0**	**+1.5**
CTA				pmax	pmax			
	comp=Z,40nm,0.9s							
CTAO	**Charters Tower**	**42.48**	**61**	P	**P**		**17 34 22.8**	**+1.3**
CTAO				pmax	pmax			
	comp=Z,13nm,0.9s,mb4.6							
CTAO	**Charters Tower**	**42.48**	**61**	P	**P**		**17 34 22.8**	**+1.3**
	comp=Z,13nm,0.9s,mb4.6							
SNAA	**Sanae**	**50.06**	**203**	P	**P**		**17 35 20.9**	**-0.2**
	comp=Z,1.6nm,0.9s,mb4.0,baz=150,slow=12,SNR=9.9							
SNAA				LR	LR		17 53 46.8	
	comp=Z,35nm,19.0s,MS3.4,baz=43,slow=33							
SNAA	**Sanae**	**50.06**	**203**	*e*P	**P**		**17 35 20.5**	**-0.6**
SNAA				*e*	pP		17 35 23.8	-0.5
SNAA				*e*	pP		17 35 25.2	+0.9
SNAA				*e*			17 35 30.3	
VNA3	**Neumayer Olymp**	**52.03**	**201**	*e*P	**P**		**17 35 35.3**	**-0.6**
VNA3				*e*	pP		17 35 38.1	-1.0
VNA3				*e*	pP		17 35 39.4	+0.3
VNA3				*e*			17 35 45.2	
BOSA	**Boshof**	**63.89**	**256**	LR	LR		17 57 23.9	
	comp=Z,166nm,20.5s,MS4.2,baz=209,slow=29							
KMI	**Kunming**	**73.83**	**356**	P	**P**		**17 38 02.3**	**+1.4**
KMI				AMB	AMB			
	comp=Z,4.0nm,1.1s,mb4.3							
WHN	**Wuhan**	**79.38**	**6**	*e*P	**P**		**17 38 36.5**	**+4.1**
CD2	**Chengdu**	**79.54**	**357**	*e*P	**P**		**17 38 33.5**	**+0.3**
CD2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8							
SSE	**Sheshan**	**80.66**	**12**	*e*P	**P**		**17 38 40.0**	**+0.7**
SSE				AMB	AMB			
	comp=Z,13nm,0.7s,mb5.0							
SSE				AMB	AMB			
	comp=Z,51nm,4.7s							
NJ2	**Nanjing**	**81.30**	**10**	*e*P	**P**		**17 38 41.8**	**-0.9**
NJ2				AP	pP		17 38 46.5	+0.5
NJ2				XP	sP		17 38 48.8	+1.6
NJ2				PP	PP		17 41 48.8	+0.5
NJ2				S	S		17 48 49.0	-4.4
NJ2				AMB	AMB			
	comp=Z,20nm,1.0s,mb5.0							
NJ2				AMB	AMB			
	comp=Z,50nm,3.7s							
NJ2				LR	LR			
	comp=N,1μm,16.3s,MS5.6							
NJ2				LR	LR			
	comp=E,2μm,19.9s,MS5.6							
NJ2				LR	LR			
	comp=Z,1μm,28.6s							
LZH	**Lanzhou**	**84.70**	**357**	*e*P	**P**		**17 39 05.5**	**+5.2**
LZH				AP	pP		17 39 12.0	+8.4
LZH				AMB	AMB			
	comp=Z,14nm,1.0s,mb5.0							
LZH				AMB	AMB			
	comp=Z,66nm,4.0s							
LZH				LR	LR			
	comp=E,472nm,16.9s							
LZH				LR	LR			
	comp=Z,688nm,17.9s,MS5.1							
JHJ	**Hachijo jima 2**	**86.73**	**27**	LR	LR		18 11 42.7	
	comp=Z,364nm,21.6s,MS4.7,baz=322,slow=31							
GTA	**Gaotai**	**88.20**	**354**	*e*P	**P**		**17 39 18.3**	**+0.8**
GTA				AP	pP		17 39 22.0	+1.2
GTA				XP	sP		17 39 25.3	+3.3
GTA				PP	PP		17 42 47.8	+3.3
GTA				PPP			17 44 47.5	
GTA				S	S		17 50 01.0	-1.0
GTA				AMB	AMB			
	comp=Z,2.0nm,1.4s,mb4.2							
GTA				AMB	AMB			
	comp=Z,100nm,8.0s							
GTA				LR	LR			
	comp=N,52nm,12.2s,MS4.2							
GTA				LR	LR			
	comp=E,47nm,15.2s,MS4.2							
GTA				LR	LR			
	comp=Z,57nm,16.7s,MS4.1							
MJAR	**Matsushiro Arr**	**89.48**	**25**	P	**P**		**17 39 22.7**	**-0.8**
	comp=Z,1.0nm,1.0s,mb4.1,baz=149,slow=15,SNR=2.9							
HHC	**Hu-ho-hao-te**	**89.49**	**3**	*e*P	**P**		**17 39 25.0**	**+1.5**
HHC				AP	pP		17 39 30.0	+3.1
HHC				XP	sP		17 39 32.0	+3.9
HHC				PP	PP		17 43 00.0	+5.2
HHC				SKS			17 49 53.3	
HHC				S	S		17 50 14.8	+0.7
HHC				XS	sS		17 50 22.5	+2.8
HHC				AMB	AMB			
	comp=Z,9.0nm,0.6s,mb5.3							
HHC				AMB	AMB			
	comp=Z,126nm,4.8s							
HHC				LR	LR			
	comp=N,61nm,29.7s,MS4.1							
HHC				LR	LR			
	comp=E,75nm,28.5s,MS4.1							
HHC				LR	LR			
	comp=Z,84nm,28.6s,MS4.0							
WMQ	**Urumqi**	**93.93**	**346**	*e*P	**P**		**17 39 43.0**	**-1.1**
MDJ	**Mudanjiang**	**95.22**	**16**	P	**P**		**17 39 50.8**	**+0.8**
MDJ				AP	pP		17 39 54.0	+0.6
MDJ				XP	sP		17 39 55.3	+0.7
MDJ				AMB	AMB			
	comp=Z,5.0nm,1.5s,mb4.7							
MDJ				AMB	AMB			
	comp=Z,56nm,3.9s							
MDJ				LR	LR			
	comp=N,57nm,16.1s,MS4.2							
MDJ				LR	LR			
	comp=E,50nm,18.5s,MS4.2							
MDJ				LR	LR			
	comp=Z,103nm,17.1s,MS4.4							
AAK	**Ala-Archa**	**95.60**	**336**	*e*P	**P**		**17 39 46.1**	**-5.6**
AAK				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb5.2							
SONM	**Songino Array**	**96.39**	**360**	P	**P**		**17 39 53.3**	**-2.0**
	comp=Z,0.4nm,0.7s,mb3.9,baz=197,slow=3.4,SNR=3.7							
DAWY	**Dawson**	**142.25**	**41**	PKPpre	PKPdf		17 45 57.0	-1.9
WDC	**Whiskeytown Da**	**144.31**	**84**	*e*PKIKP	PKPdf		17 46 00.7	-1.8
CMB	**Columbia Colle**	**144.38**	**90**	PKIKP	PKPdf		17 46 03.3	+0.7
YBH	**Yreka Blue Hor**	**144.77**	**83**	PKP	PKPdf		17 46 03.3	0.0
	comp=Z,3.9nm,0.9s,baz=258,slow=2.4,SNR=8.2							
YBH	**Yreka Blue Hor**	**144.77**	**83**	*e*PKP	PKPdf		17 46 02.7	-0.6
YBH				*e*			17 46 08.2	
INK	**Inuvik**	**144.89**	**34**	PKP	PKPdf		17 46 01.1	-2.4
	comp=Z,3.1nm,0.9s,baz=208,slow=4.2,SNR=4.0							
INK	**Inuvik**	**144.89**	**34**	*e*PKP	PKPdf		17 46 01.3	-2.2
DAG	**Danmarks Havn**	**145.12**	**341**	⇑*i*P	PKPbc		17 46 05.1	+1.7
	comp=Z,15nm,1.1s							
DAG	**Danmarks Havn**	**145.12**	**341**	⇑*i*PKIKP	PKPdf		17 46 05.1	+1.2
DAG				pmax	pmax			
	comp=Z,15nm,1.1s							
WVOR	**Wild Horse Val**	**147.77**	**84**	*e*PKP2	PKPab		17 46 11.3	-2.3
WUAZ	**Wupatki**	**148.84**	**101**	PKPbc	PKPbc		17 46 14.6	+0.6
HAWA	**Hanford**	**148.85**	**77**	PKPbc	PKPbc		17 46 14.3	+0.3
MSU	**Marysvale**	**150.05**	**95**	*e*PKIKP	PKPbc		17 46 19.3	+2.3
MSU				*e*			17 46 24.2	
MNTX	**Cornudas Mount**	**150.12**	**113**	*e*PKPbc	PKPbc		17 46 17.1	-0.1
DUG	**Dugway**	**150.52**	**92**	*e*PKIKP	PKPbc		17 46 18.1	0.0

SKO ***27*** *17:27:17.1,3845N×2120E,h7km*
NEIC ***27*** *17:27:18.9,3871N×2125E,h13km,ML3.7(ATH),After ATH.*
CSEM ***27*** *17:27:18.7±0.1,3870N×2129E,h2km,ML3.7,Error ellipse: s-maj=2.4km s-min=2.1km az=50.0*
THE ***27*** *17:27:18.8,3864N×2130E,h0km,ML3.2*
ATH ***27*** *17:27:18.9,3870N×2125E,h12km±4km,MD3.4/12,ML3.7*
ISCJB ***27*** *17:27:19.1±0.4,3869N±002×2129E±003,h2km,Error ellipse: s-maj=3.5km s-min=3.1km az=46.9*

ISC 27 17:27:19.6±0.5,3868N±002×2129E±003,h1km±5km,n25,σ1§32/37,1D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.47**	**60**	*e*PB		**Pg**	**17 27 27.9**	**-0.6**
EVR				*e*SB		**Sg**	**17 27 35.8**	**+1.2**
LKD	**Levkas**	**0.50**	**273**	*e*Pg		**Pg**	**17 27 28.2**	**-1.0**
LKD				*e*Sg		**Sg**	**17 27 36.6**	**+0.9**
RLS	**Riolos of Patr**	**0.64**	**167**	*e*PB		**Pg**	**17 27 31.2**	**-0.6**
RLS				*e*SB		**Sg**	**17 27 41.7**	**+1.6**
VLS	**Valsamata**	**0.75**	**228**	*e*PB		**Pg**	**17 27 32.1**	**-1.8**
VLS				*e*SB		**Sg**	**17 27 44.8**	**+1.2**
AGG	**Agios Georgios**	**0.88**	**67**	*e*Pg		**Pg**	**17 27 35.5**	**-1.0**
AGG				*e*Sg		**Sg**	**17 27 49.3**	**+1.4**
JAN	**Janina**	**1.03**	**341**	⇓*i*PN		**Pn**	**17 27 38.7**	**-2.5**
MEV	**Metsovon**	**1.10**	**358**	*e*Pg		**Pg**	**17 27 39.8**	**-1.0**
MEV				*e*Sg		**Sg**	**17 27 57.1**	**+2.0**
IGT	**Igoumenitsa**	**1.13**	**319**	*e*Pg		**Pg**	**17 27 39.9**	**-1.4**
IGT				*e*Sg		**Sg**	**17 27 58.4**	**+2.4**
LKR	**Lokris**	**1.34**	**91**	*e*PN		**Pn**	**17 27 43.6**	**-1.8**
KEK	**Kerkira**	**1.55**	**312**	*e*PG		**Pn**	**17 27 46.8**	**-1.5**
ITM	**Ithomi**	**1.58**	**161**	*e*PG		**Pn**	**17 27 48.4**	**-0.3**
XOR	**Xorichti**	**1.63**	**65**	*e*Pb		**Pn**	**17 27 49.0**	**-0.4**
KZN	**Kozani**	**1.67**	**13**	*e*PB		**Pn**	**17 27 50.0**	**+0.1**
LIT	**Litokhoron**	**1.69**	**33**	*e*Pb		**Pn**	**17 27 49.4**	**-0.9**
LIT				*e*Sb		**Sn**	**17 28 12.6**	**0.0**
MGER	**Gerania Oros**	**1.70**	**114**	*e*PN		**Pn**	**17 27 51.0**	**+0.7**
NAIG	**Nisos Aigina**	**1.96**	**117**	*e*PN		**Pn**	**17 27 55.0**	**+1.1**
ATH	**Athens Observa**	**2.03**	**110**	*e*PG		**Pg**	**17 27 57.5**	**-1.1**
FNA	**Florina**	**2.10**	**2**	*e*Pn		**Pn**	**17 27 56.2**	**+0.3**
FNA				*e*Sn		**Sn**	**17 28 24.2**	**+1.6**
PTL	**Penteli**	**2.12**	**107**	*e*PG		**Pn**	**17 27 58.0**	**+1.9**
PAIG	**Paliouri**	**2.23**	**55**	*e*Pn		**Pn**	**17 27 56.3**	**-1.4**
BIA	**Bitola**	**2.34**	**1**	*e*Pn		**Pn**	**17 27 59.3**	**+0.2**
BIA				*e*Sn		**Sn**	**17 28 30.2**	**+1.8**
VLI	**Veliai**	**2.35**	**146**	*e*PN		**Pn**	**17 28 01.0**	**+1.7**
PLG	**Polygyros**	**2.37**	**44**	*e*PN		**Pn**	**17 27 58.0**	**-1.6**
VAY	**Valandovo**	**2.81**	**20**	*e*Pn		**Pn**	**17 28 06.0**	**+0.3**
VAY				*e*Sn		**Sb**	**17 28 42.8**	**-2.8**
VAY	**Valandovo**	**2.81**	**20**	*e*Pn		**Pn**	**17 28 05.9**	**+0.2**
VAY				*e*Sn		**Sb**	**17 28 42.7**	**-2.9**

MAN 27 17:32:41.5,969N×12455E,h10km,mb2.8,ML4.2,MS2.5,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.53**	**34**	*e*P		Pg	17 32 51.9	0.0
MSLP				*e*S		Sg	17 33 00.5	+1.5
TBP	**Tagbilaran**	**0.68**	**270**	*e*P		Pg	17 32 54.5	-0.2
TBP				*e*S		Sg	17 33 04.6	+1.1
LLP	**Lapu-Lapu**	**0.85**	**317**	*e*P		Pg	17 32 56.6	-1.3
LLP				*e*S		Sg	17 33 08.1	-0.8
CGP	**Cagayan de Oro**	**1.24**	**173**	⇓*i*P		Pn	17 33 02.9	-2.0
CGP				*i* S		Sb	17 33 19.6	-1.3
BUKP	**Musuan**	**1.87**	**164**	*e*P		Pn	17 33 13.9	+0.4
GUIM	**Jordan**	**2.14**	**296**	*e*P		Pn	17 33 17.8	+0.5
PAGZ	**Pagadian**	**2.17**	**212**	*e*P		Pn	17 33 18.5	+0.9
IPIL	**Ipil**	**2.72**	**226**	*e*P		Pn	17 33 26.4	+1.1

NIED ***27*** *18:02:00,3590N×14160E,h26km,Mw4.0 Best double couple: M₀1.11000×10¹⁵ NP1:φ₀17.00000°,δ72.00000°, λ85.00000° NP2:φ₀212.00000°,δ18.00000°,λ105.00000°.*
BJI ***27*** *18:02:52.2,3580N×14180E,h5km,mB4.7,mb4.3*
IDC ***27*** *18:02:53.5±1.1,3583N×14178E,h0km,mb3.9/11, mb1 4.0/15,mb1mx3.9/23,mbtmp3.9/15,ML3.9/4,MS3.4/4, Ms1 3.4/4,ms1mx2.9/34,Error ellipse: s-maj=36.0km s-min=15.5km az=80.0*
ISCJB ***27*** *18:02:54.3±1.4,3585N±003×14180E±008,h19km±9km, mb3.9/16,MS3.5/2,Error ellipse: s-maj=10.4km s-min=5.6km az=16.5*
NEIC ***27*** *18:02:54.2±4.3,3578N×14177E,h6km±26km,mb4.1/3, Error ellipse: s-maj=14.8km s-min=9.9km az=90.0*
MOS ***27*** *18:02:56.2±1.1,3587N×14182E,h33km,mb4.2/13,Error ellipse: s-maj=18.5km s-min=9.9km az=118.8*
JMA ***27*** *18:02:57.4±0.2,3589N×14158E,h31km±3km,M3.6*

ISC 27 18:02:55.7±1.5,3584N±003×14169E±007,h14km±8km, n49,σ0§78/54,mb3.9/16,MS3.5/2,3C-2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.69**	**259**	P		**Pg**	**18 03 09.3**	**+0.1**
CHOJ				S		**Sg**	**18 03 17.9**	**-0.5**
JHO	**Hitachi**	**1.19**	**310**	⇓P		**Pn**	**18 03 16.7**	**-1.2**
JYT	**Yasato**	**1.27**	**288**	⇓P		**Pn**	**18 03 17.6**	**-1.5**
BSO1	**Boso 1**	**1.32**	**207**	P		**Pn**	**18 03 20.4**	**+0.7**
BSO1				*e*S		**Sb**	**18 03 37.3**	**+0.2**
BSO3	**Boso 3**	**1.42**	**223**	P		**Pn**	**18 03 21.4**	**+0.3**
ONAJ	**Iwakimizuishig**	**1.45**	**330**	⇑P		**Pn**	**18 03 21.0**	**-0.5**
JFK	**Kawauchi**	**1.66**	**337**	⇑P		**Pn**	**18 03 24.0**	**-0.4**
JAG	**Ashikaga**	**1.91**	**288**	P		**Pn**	**18 03 26.9**	**-0.8**
JFT	**Otama**	**2.00**	**327**	⇑P		**Pn**	**18 03 29.8**	**+0.8**
MJAR	**Matsushiro Arr**	**2.90**	**285**	Pn		**Pn**	**18 03 42.3**	**+0.8**
	12nm,0.3s,baz=89,slow=11,SNR=106							
MJAR				LR		LR	18 05 02.0	
	comp=Z,493nm,18.3s,baz=105,slow=44							
MAJO	**Matsushiro**	**2.91**	**285**	*e*P		**Pn**	**18 03 42.2**	**+0.7**
MAT	**Matsushiro**	**2.91**	**285**	P		**Pn**	**18 03 42.0**	**+0.5**
MAT				S		**Sn**	**18 04 16.8**	**+0.6**
JHJ	**Hachijo jima 2**	**3.14**	**211**	Pn		**Pn**	**18 03 45.8**	**+1.0**
	55nm,0.3s,baz=83,slow=21,SNR=18							
JHJ				Sn		**Sn**	**18 04 20.4**	**-1.6**
	100nm,0.3s,baz=256,slow=23,SNR=12							
ASAJ	**Asahikawa**	**8.29**	**5**	Pn		**Pn**	**18 04 55.9**	**+0.4**
	0.9nm,0.3s,baz=216,slow=15,SNR=9.6							
ASAJ				Sn		**Sn**	**18 06 27.9**	**-1.1**
	1.1nm,0.3s,baz=90,slow=26,SNR=4.3							
ASAJ				LR		LR	18 08 49.3	
	comp=Z,119nm,19.9s,baz=343,slow=43							
ASAJ	**Asahikawa**	**8.29**	**5**	P		**Pn**	**18 04 55.9**	**+0.4**
ASAJ							18 06 27.9	
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASAJ				smax				
	comp=N,1.0nm,0.3s							
CBIJ	**Chichi jima**	**8.73**	**177**	Pn		**Pn**	**18 05 01.1**	**-0.4**
	comp=N,6.7nm,0.3s,baz=290,slow=19,SNR=9.9							
CBIJ				Sn		**Sn**	**18 06 31.2**	**-8.5**
	comp=N,5.7nm,0.3s,baz=311,slow=22,SNR=4.7							
YSS	**Yuzh-Sakhalins**	**11.13**	**4**	P		**Pn**	**18 05 34.7**	**+0.3**
ULN	**Ulaanbaatar**	**28.22**	**306**	*e*P		**P**	**18 08 49.8**	**+1.7**
ULN				pmax	pmax			
	comp=Z,4.0nm,1.3s,mb3.9							
ULN	**Ulaanbaatar**	**28.22**	**306**	*e*P		**P**	**18 08 49.8**	**+1.7**
	comp=Z,4.5nm,1.3s,mb3.9							
SONM	**Songino Array**	**28.65**	**306**	P		**P**	**18 08 52.0**	**+0.2**
	comp=Z,1.1nm,0.6s,mb3.7,baz=111,slow=9.3,SNR=13							
SONM				LR		LR	18 20 56.8	
	comp=Z,58nm,19.9s,MS3.2,baz=320,slow=38							
SONM	**Songino Array**	**28.65**	**306**	P		**P**	**18 08 52.0**	**+0.1**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.6s							
SONM				MLR	MLR			
	comp=Z,58nm,19.9s							
BOD	**Bodaibo**	**28.66**	**329**	*e*P		**P**	**18 08 50.6**	**-1.4**
BOD				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2							
GTA	**Gaotai**	**33.15**	**289**	*e*P		**P**	**18 09 31.8**	**+0.3**
GTA				AP	pP		18 09 36.0	+0.2
GTA				XP	sP		18 09 39.0	+1.5
GTA				AMB	AMB			
	comp=Z,3.0nm,1.2s,mb4.1							
ZAL	**Zalesovo**	**42.90**	**313**	P		**P**	**18 10 52.8**	**-1.0**
	comp=Z,1.1nm,0.5s,mb3.8,baz=20,slow=7.4,SNR=5.9							
ZAL	**Zalesovo**	**42.90**	**313**	P		**P**	**18 10 52.8**	**-1.0**
ZAL				pmax	pmax			
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**44.95**	**303**	P		**P**	**18 11 10.6**	**+0.3**
	comp=Z,1.2nm,0.6s,mb3.9,baz=82,slow=8.8,SNR=13							
MKAR	**Makanchi Array**	**44.95**	**303**	P		**P**	**18 11 10.6**	**+0.4**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
BRVK	**Borovoye**	**51.60**	**313**	*e*P		**P**	**18 12 02.1**	**+0.5**
BRVK				pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.8							
BRVK	**Borovoye**	**51.60**	**313**	*e*P		**P**	**18 12 02.1**	**+0.5**
	comp=Z,1.3nm,0.8s,mb3.9							
ZRNK	**Zerenda**	**52.38**	**313**	*e*P		**P**	**18 12 07.2**	**-0.2**
ZRNK				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.4							
ZRNK	**Zerenda**	**52.38**	**313**	*e*P		**P**	**18 12 07.2**	**-0.2**
	comp=Z,4.6nm,1.0s,mb4.4							
WRA	**Warramunga Arr**	**55.91**	**188**	P		**P**	**18 12 33.4**	**+0.3**
	comp=Z,1.2nm,0.8s,mb4.0,baz=7.4,slow=7.3,SNR=9.4							
WRA	**Warramunga Arr**	**55.91**	**188**	P		**P**	**18 12 33.4**	**+0.3**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
ARU	**Arti**	**57.41**	**319**	*e*P		**P**	**18 12 43.3**	**-0.4**
AS31	**Alice Springs**	**59.64**	**188**	*e*P		**P**	**18 12 58.2**	**-1.1**
ASAR	**Alice Springs**	**59.64**	**188**	P		**P**	**18 12 58.7**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.7,baz=116,slow=8.1,SNR=29							
DZM	**Mont Dzumac**	**62.18**	**154**	LR		LR	18 35 45.4	
	comp=Z,60nm,19.4s,MS3.8,baz=353,slow=32							
ARCES	**ARCESS Array B**	**65.19**	**340**	P		**P**	**18 13 36.8**	**+0.3**
	comp=Z,1.3nm,0.8s,mb4.0,baz=49,slow=11,SNR=4.9							
ARCES	**ARCESS Array B**	**65.19**	**340**	P		**P**	**18 13 36.8**	**+0.3**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.8s							
FINES	**FINESS Array B**	**69.97**	**333**	P		**P**	**18 14 06.9**	**+0.2**
	comp=Z,1.2nm,0.8s,mb3.9,baz=101,slow=3.9,SNR=5.3							
FINES	**FINESS Array B**	**69.97**	**333**	P		**P**	**18 14 06.9**	**+0.2**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.8s							
NB2	**NORSAR Subarra**	**75.37**	**338**	P		**P**	**18 14 39.2**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=41,slow=6.2							
NOA	**NORSAR Array B**	**75.37**	**338**	P		**P**	**18 14 38.9**	**+0.1**
	comp=Z,0.7nm,0.8s,mb3.6,baz=37,slow=6.0,SNR=4.2							
NOA	**NORSAR Array B**	**75.37**	**338**	P		**P**	**18 14 38.9**	**+0.1**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
AKASG	**Malin Array Be**	**75.38**	**323**	P		**P**	**18 14 38.8**	**0.0**
	comp=Z,0.8nm,0.4s,mb4.0,baz=48,slow=6.3,SNR=8.6							
AKASG	**Malin Array Be**	**75.38**	**323**	P		**P**	**18 14 38.8**	**0.0**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
BRTR	**Keskin Array B**	**79.81**	**312**	P		**P**	**18 15 05.3**	**+1.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=89,slow=5.6,SNR=5.3							
BRTR	**Keskin Array B**	**79.81**	**312**	P		**P**	**18 15 05.4**	**+1.8**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
GERES	**GERESS Array B**	**83.84**	**328**	P		**P**	**18 15 25.2**	**+0.4**
	comp=Z,0.1nm,0.3s,mb3.5,baz=84,slow=5.5,SNR=3.6							

ISCJB ***27*** *18:04:19.0±0.2,4377N±002×1765E±002,h10km,Error ellipse: s-maj=2.5km s-min=1.9km az=93.2*
PDG ***27*** *18:04:19.0±0.9,4372N×1760E,h10km±1km*
ROM ***27*** *18:04:19.0±1.1,4366N×1781E,h10km,Md3.4/6,Ml3.5/3, Error ellipse: s-maj=19.2km s-min=5.9km az=103.0*
PRU ***27*** *18:04:19.5,4460N×1953E,h0km*
NEIC ***27*** *18:04:20.0±0.2,4366N×1776E,h10km,ML3.3(BUC), ML3.3(PDG),ML3.5(ROM),Error ellipse: s-maj=3.7km s-min=2.9km az=46.0*
CSEM ***27*** *18:04:22.2±0.1,4367N×1754E,h10km,ML3.4/7,Error ellipse: s-maj=2.4km s-min=1.4km az=34.0*
LDG ***27*** *18:04:24.0±0.2,4379N×1747E,h8km,Ml3.4/12,Error ellipse: s-maj=4.3km s-min=2.9km az=105.0*

ISC 27 18:04:20.4±0.4,4373N±002×1767E±003,h9km±4km,n113,σ1§31/179,22C-20D,Northwestern Balkan Peninsula

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

OBKA	**Obir**	**3.55**	**323**	*i* Pn	**Pn**	**18 05 16.6**	**+1.1**
OBKA				*i* Sn	**Sn**	**18 05 56.6**	**-1.0**
OBKA	**Obir**	**3.55**	**323**	Pn	**Pn**	**18 05 16.6**	**+1.0**
	comp=Z,5.0nm,2.0s						
OBKA				Sn	**Sn**	**18 06 01.0**	**+3.4**
PKSG		**3.69**	**8**	*e*P	**Pn**	**18 05 17.6**	**0.0**
ASS	**Assisi**	**3.72**	**261**	Pn	**Pn**	**18 05 18.3**	**+0.4**
	comp=Z,2.0nm,0.5s						
ARSA	**Arzberg**	**3.83**	**337**	⇑*i* Sn	**Sn**	**18 06 02.0**	**-2.5**
ARSA	**Arzberg**	**3.83**	**337**	⇑*i* Pn	**Pn**	**18 05 19.7**	**+0.3**
	SNR=22						
ARSA				⇑*i* Sn	**Sn**	**18 06 05.9**	**+1.4**
ARSA	**Arzberg**	**3.83**	**337**	⇑*i* Pn	**Pn**	**18 05 19.7**	**+0.3**
ARSA				*i* Sn	**Sn**	**18 06 02.0**	**-2.5**
ARSA	**Arzberg**	**3.83**	**337**	Pn	**Pn**	**18 05 19.7**	**+0.3**
	comp=Z,21nm,7.0s						
ARSA				Sn	**Sn**	**18 06 05.9**	**+1.4**
BUD	**Budapest**	**3.87**	**14**	*e*Pg	**Pg**	**18 05 35.6**	**+1.1**
BUD				*e*Sg	**Sg**	**18 06 25.0**	**+0.4**
BADI	**Badiali**	**3.95**	**269**	Pn	**Pn**	**18 05 23.0**	**+1.9**
SOP	**Sopron**	**4.03**	**349**	*e*SB	**Sn**	**18 06 09.7**	**+0.3**
PTCC	**Patocco-Chiusa**	**4.06**	**313**	Pn	**Pn**	**18 05 23.2**	**+0.6**
	comp=Z,14nm,0.5s						
CRE	**Caprese Michel**	**4.15**	**270**	Pn	**Pn**	**18 05 25.4**	**+1.5**
	comp=Z,9.0nm,0.4s						
VTS	**Vitosha**	**4.21**	**104**	⇑*i*P	**Pg**	**18 05 38.3**	**-2.7**
VTS	**Vitosha**	**4.21**	**104**	⇑P	**Pg**	**18 05 38.3**	**-2.7**
SFI	**Santa Sofia**	**4.22**	**274**	Pn	**Pn**	**18 05 25.6**	**+0.8**
	comp=Z,10.0nm,0.5s						
CONA	**Conrad Observa**	**4.38**	**344**	⇑*i* Pn	**Pn**	**18 05 26.9**	**-0.2**
	SNR=10.0						
CONA				⇓*i* Sn	**Sn**	**18 06 19.0**	**+0.9**
PSZ	**Piszkesteto**	**4.46**	**20**	*e*PB	**Pn**	**18 05 28.3**	**+0.2**
PSZ				*e*		18 05 44.7	
PSZ				*e*Sg	**Sg**	**18 06 45.8**	**+2.1**
PSZ	**Piszkesteto**	**4.46**	**20**	⇓*i*P	**Pn**	**18 05 25.1**	**-3.0**
PSZ	**Piszkesteto**	**4.46**	**20**	*e*Pn	**Pn**	**18 05 28.3**	**+0.2**
ZST	**Bratislava**	**4.48**	**355**	*e*PN	**Pn**	**18 05 29.9**	**+1.5**
ZST				*e*SN	**Sn**	**18 06 18.2**	**-2.4**
FVI	**Forni Avoltri**	**4.49**	**311**	Pn	**Pn**	**18 05 29.6**	**+1.1**
	comp=Z,53nm,1.2s						
SMOL	**Smolenice**	**4.78**	**358**	*e*PN	**Pn**	**18 05 36.1**	**+3.5**
SMOL				*e*SN	**Sn**	**18 06 28.8**	**+0.7**
VYHS	**Vyhne**	**4.83**	**9**	*e*PN	**Pn**	**18 05 34.1**	**+0.9**
VYHS				*e*SN	**Sn**	**18 06 28.1**	**-1.1**
VYHS	**Vyhne**	**4.83**	**9**	*e*Pn	**Pn**	**18 05 34.1**	**+0.9**
VYHS				*e*Sn	**Sn**	**18 06 28.1**	**-1.1**
CTI	**Castel Tesino**	**4.87**	**300**	Pn	**Pn**	**18 05 33.8**	**+0.1**
	comp=Z,20nm,0.5s						
KECS	**Kecovo**	**5.14**	**21**	*e*SN	**Sn**	**18 06 32.5**	**-4.3**
APPI	**Appiano**	**5.32**	**303**	Pn	**Pn**	**18 05 40.9**	**+0.9**
	comp=Z,22nm,0.6s						
MAGA	**Magasa**	**5.42**	**295**	Pn	**Pn**	**18 05 40.7**	**-0.6**
	comp=Z,71nm,0.4s						
WTTA	**Wattenberg**	**5.52**	**312**	⇓*i* Sn	**Sn**	**18 06 43.6**	**-2.6**
WTTA	**Wattenberg**	**5.52**	**312**	⇑*i* Pn	**Pn**	**18 05 43.9**	**+1.3**
WTTA				⇓*i* Sn	**Sn**	**18 06 49.4**	**+3.2**
WTTA	**Wattenberg**	**5.52**	**312**	⇑*i* Pn	**Pn**	**18 05 43.9**	**+1.3**
WTTA				*i* Sn	**Sn**	**18 06 43.6**	**-2.6**
MABI	**Malga Bissina**	**5.59**	**297**	Pn	**Pn**	**18 05 43.8**	**+0.2**
	comp=Z,2.0nm,0.4s						
WATA	**Walderalm**	**5.60**	**312**	⇓*i* Sn	**Sn**	**18 06 47.3**	**-0.8**
WATA	**Walderalm**	**5.60**	**312**	⇑*i* Pn	**Pn**	**18 05 44.6**	**+0.9**
WATA				*i* Sn	**Sn**	**18 06 47.3**	**-0.8**
WATA	**Walderalm**	**5.60**	**312**	Pn	**Pn**	**18 05 44.6**	**+0.9**
VRAC	**Vranov**	**5.63**	**353**	⇓*i*P	**Pn**	**18 05 44.6**	**+0.5**
VRAC	**Vranov**	**5.63**	**353**	⇓P	**Pn**	**18 05 44.6**	**+0.4**
SQTA	**Sankt Quirin**	**5.73**	**310**	⇓*i* Sn	**Sn**	**18 06 51.8**	**+0.5**
SQTA	**Sankt Quirin**	**5.73**	**310**	⇑*i* Pn	**Pn**	**18 05 47.0**	**+1.4**
	SNR=7.1						
SQTA				⇑*i* Sn	**Sn**	**18 06 55.6**	**+4.3**
SQTA	**Sankt Quirin**	**5.73**	**310**	⇑*i* Pn	**Pn**	**18 05 47.0**	**+1.4**
SQTA				*i* Sn	**Sn**	**18 06 51.8**	**+0.5**
SQTA	**Sankt Quirin**	**5.73**	**310**	Pn	**Pn**	**18 05 47.0**	**+1.5**
	comp=Z,7.0nm,1.0s						
SQTA				Sn	**Sn**	**18 06 55.6**	**+4.2**
CRVS	**Cervenica-Dubn**	**5.80**	**26**	*e*PN	**Pn**	**18 05 49.2**	**+2.7**
CRVS				*e*SN	**Sn**	**18 06 52.2**	**-0.8**
BRMO	**Bormio**	**5.85**	**300**	Pn	**Pn**	**18 05 49.0**	**+1.8**
	comp=Z,2.0nm,0.4s						
MOTA	**Moosalm**	**5.86**	**310**	⇓*i* Sn	**Sn**	**18 06 54.7**	**+0.1**
MOTA	**Moosalm**	**5.86**	**310**	⇑*i* Pn	**Pn**	**18 05 48.4**	**+1.0**
	SNR=15						
MOTA				⇓*i* Sn	**Sn**	**18 06 54.7**	**+0.1**
MOTA	**Moosalm**	**5.86**	**310**	Pn	**Pn**	**18 05 48.4**	**+1.1**
	comp=Z,15nm,2.0s						
MORC	**Moravsky Berou**	**6.05**	**359**	⇓*i*P	**Pn**	**18 05 51.5**	**+1.6**
MORC	**Moravsky Berou**	**6.05**	**359**	⇓P	**Pn**	**18 05 51.5**	**+1.6**
KHC	**Kasperske Hory**	**6.09**	**334**	*e*PN	**Pn**	**18 05 51.0**	**+0.4**
KHC				*e*SN	**Sn**	**18 06 58.2**	**-2.2**
	comp=Z,4.0nm,0.4s						
DAVOX	**Davos**	**6.29**	**302**	Pn	**Pn**	**18 05 54.8**	**+1.6**
PGF	**Pioggiola**	**6.46**	**262**	*e*Pn	**Pn**	**18 05 55.8**	**+0.3**
SBF	**Sospel**	**7.41**	**275**	*e*Pn	**Pn**	**18 06 09.2**	**+0.6**
SBF				*e*Sn	**Sn**	**18 07 26.0**	**-6.8**
	comp=Z,2.8nm,0.2s						
SBF	**Sospel**	**7.41**	**275**	*e*Pn	**Pn**	**18 06 09.2**	**+0.6**
SBF				*e*Sn	**Sn**	**18 07 26.0**	**-6.8**
	comp=Z,1.4nm,0.2s						
MBDF	**Montbardon**	**7.89**	**281**	*e*Pn	**Pn**	**18 06 13.2**	**-2.1**
MBDF				*e*Sn	**Sn**	**18 07 37.0**	**-7.7**
	comp=Z,5.4nm,0.4s						
FRF	**La Foret Royal**	**8.00**	**273**	*e*Pn	**Pn**	**18 06 15.4**	**-1.3**
FRF				*e*Sn	**Sn**	**18 07 39.9**	**-7.4**
	comp=Z,4.1nm,0.4s						
LMR	**La Mourre**	**8.12**	**271**	*e*Pn	**Pn**	**18 06 15.9**	**-2.5**
LMR				*e*Sn	**Sn**	**18 07 43.0**	**-7.3**
	comp=Z,6.8nm,0.5s						
ORIF	**Oris-en-Rattie**	**8.54**	**282**	*e*Pn	**Pn**	**18 06 23.2**	**-0.9**
ORIF				*e*Sn	**Sn**	**18 07 52.8**	**-7.8**
	comp=Z,5.8nm,0.5s						
HINF	**Hinteralfeld**	**8.59**	**302**	*e*Pn	**Pn**	**18 06 24.0**	**-0.9**
CDF	**Champ du Feu**	**8.61**	**307**	*e*Pn	**Pn**	**18 06 24.2**	**-0.9**
CDF				*e*Sn	**Sn**	**18 07 54.8**	**-7.4**
	comp=Z,2.1nm,0.4s						
CDF	**Champ du Feu**	**8.61**	**307**	*e*Pn	**Pn**	**18 06 24.2**	**-0.9**
CDF				*e*Sn	**Sn**	**18 07 54.8**	**-7.4**
	comp=Z,1.0nm,0.4s						
CABF	**La Chapelle**	**8.68**	**293**	*e*Pn	**Pn**	**18 06 25.4**	**-0.6**
SMRF	**Simiane la Rot**	**8.75**	**276**	*e*Pn	**Pn**	**18 06 27.1**	**+0.1**
SMRF				*e*Sn	**Sn**	**18 07 57.1**	**-8.6**
	comp=Z,1.8nm,0.3s						
SMRF	**Simiane la Rot**	**8.75**	**276**	*e*Pn	**Pn**	**18 06 27.1**	**+0.1**
SMRF				*e*Sn	**Sn**	**18 07 57.1**	**-8.6**
	comp=Z,0.9nm,0.3s						
HAU	**Haudompre**	**8.98**	**302**	*e*Pn	**Pn**	**18 06 29.3**	**-0.9**
HAU				*e*Sn	**Sn**	**18 08 03.1**	**-8.3**
	comp=Z,2.8nm,0.3s						
HAU	**Haudompre**	**8.98**	**302**	*e*Pn	**Pn**	**18 06 29.3**	**-0.9**
HAU				*e*Sn	**Sn**	**18 08 03.1**	**-8.3**
	comp=Z,1.4nm,0.3s						
VIVF	**Saint-Julien-l**	**9.39**	**281**	*e*Pn	**Pn**	**18 06 33.6**	**-2.2**
VIVF				*e*Sn	**Sn**	**18 08 13.1**	**-8.4**
	comp=Z,0.9nm,0.3s						
VIVF	**Saint-Julien-l**	**9.39**	**281**	*e*Pn	**Pn**	**18 06 33.6**	**-2.2**
VIVF				*e*Sn	**Sn**	**18 08 13.1**	**-8.4**
	comp=Z,0.4nm,0.3s						
LASF	**Ste Croix**	**9.98**	**277**	*e*Sn	**Sn**	**18 08 27.2**	**-8.8**
SMF	**Signal de Mont**	**10.19**	**291**	*e*Pn	**Pn**	**18 06 45.8**	**-1.0**
SMF				*e*Sn	**Sn**	**18 08 32.3**	**-8.8**
	comp=Z,2.0nm,0.3s						
SMF	**Signal de Mont**	**10.19**	**291**	*e*Pn	**Pn**	**18 06 45.8**	**-1.0**
SMF				*e*Sn	**Sn**	**18 08 32.3**	**-8.8**
	comp=Z,1.0nm,0.3s						
LOR	**Lormes**	**10.32**	**295**	*e*Pn	**Pn**	**18 06 47.2**	**-1.4**
LOR				*e*Sn	**Sn**	**18 08 35.9**	**-8.4**
	comp=Z,2.1nm,0.3s						
LOR	**Lormes**	**10.32**	**295**	*e*Pn	**Pn**	**18 06 47.2**	**-1.4**
LOR				*e*Sn	**Sn**	**18 08 35.9**	**-8.4**
	comp=Z,1.0nm,0.3s						
AVF	**Avril sur Loir**	**10.55**	**292**	*e*Pn	**Pn**	**18 06 50.3**	**-1.4**
AVF				*e*Sn	**Sn**	**18 08 40.5**	**-9.4**
	comp=Z,1.2nm,0.4s						
AVF	**Avril sur Loir**	**10.55**	**292**	*e*Pn	**Pn**	**18 06 50.3**	**-1.4**
AVF				*e*Sn	**Sn**	**18 08 40.5**	**-9.4**
	comp=Z,0.6nm,0.4s						

NIED **27** *18:20:00, 35.90N×14.160E, h26km, Mw4.3 Best double couple: M0 3.32000×10^15 NP1: φs 16.00000°, δ 69.00000°, λ 85.00000°. NP2: φs 211.00000°, δ 21.00000°, λ 104.00000°.*
IDC **27** *18:20:40.6±0.6, 35.86N×14.165E, h0km, mb4.1/14, mb1 4.3/18, mb1mx4.2/25, mbtmp4.2/18, ML4.2/4, MS3.6/9,*

Ms1 3.6/9, ms1mx3.3/23, Error ellipse: s-maj=21.7km s-min=13.5km az=82.0
BJI **27** *18:20:40.2, 35.90N×141.70E, h12km, mB4.7, mb4.7, Ms3.9, Msz3.8*
NEIC **27** *18:20:42.2±3.0, 35.88N×141.69E, h13km±18km, mb4.8/14, MW4.3(NIED), Error ellipse: s-maj=7.8km s-min=5.7km az=99.0*
ISCJB **27** *18:20:43.1±1.1, 35.86N±0.03×141.64E±0.06, h32km±7km, mb4.5/36, MS3.8/9, Error ellipse: s-maj=8.3km s-min=5.1km az=6.1*
MOS **27** *18:20:43.0±0.8, 35.90N×141.74E, h33km, mb4.7/19, Error ellipse: s-maj=12.9km s-min=7.0km az=116.4*
JMA **27** *18:20:43.9±0.2, 35.89N×141.57E, h34km±3km, M4.1*

ISC 27 18:20:43.2±1.2, 35.88N±0.03×141.62E±0.06, h18km±7km, n102, σ0§79/105, mb4.5/36, MS3.8/9, 4C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.65**	**255**	⇓P	**Pg**	**18 20 55.8**	**-0.1**
CHOJ				S	**Sg**	**18 21 04.7**	**+0.2**
JHO	**Hitachi**	**1.12**	**311**	⇓P	**Pn**	**18 21 03.1**	**-0.9**
JYT	**Yasato**	**1.21**	**287**	⇓P	**Pn**	**18 21 03.9**	**-1.2**
BSO1	**Boso 1**	**1.33**	**204**	P	**Pn**	**18 21 06.5**	**-0.3**
BSO4	**Boso 4**	**1.37**	**230**	⇑P	**Pn**	**18 21 07.5**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.39**	**332**	P	**Pn**	**18 21 07.1**	**-0.5**
BSO3	**Boso 3**	**1.41**	**221**	⇓P	**Pn**	**18 21 07.8**	**-0.1**
JFK	**Kawauchi**	**1.60**	**338**	⇑P	**Pn**	**18 21 10.3**	**-0.3**
JFK				*e*S	**Sn**	**18 21 30.2**	**-0.6**
JAG	**Ashikaga**	**1.84**	**288**	⇓P	**Pn**	**18 21 13.1**	**-0.7**
JFT	**Otama**	**1.94**	**328**	⇑P	**Pn**	**18 21 16.1**	**+1.0**
JFT				*e*S	**Sn**	**18 21 38.0**	**-1.0**
MJAR	**Matsushiro Arr**	**2.84**	**284**	Pn	**Pn**	**18 21 29.1**	**+1.5**
	42nm,0.3s,baz=109,slow=30,SNR=358						
MJAR				LR	LR	18 22 48.5	
	comp=Z,918nm,18.3s,baz=110,slow=45						
MAJO	**Matsushiro**	**2.84**	**285**	*e*P	**Pn**	**18 21 28.5**	**+0.9**
MAT	**Matsushiro**	**2.84**	**285**	P	**Pn**	**18 21 28.2**	**+0.6**
MAT				S	**Sn**	**18 22 02.0**	**+0.7**
JHJ	**Hachijo jima 2**	**3.14**	**209**	Pn	**Pn**	**18 21 32.1**	**+0.4**
	113nm,0.3s,baz=34,slow=4.1,SNR=42						
JHJ				Sn	**Sn**	**18 22 06.8**	**-2.0**
	238nm,0.3s,baz=242,slow=23,SNR=9.1						
JHJ				LR	LR	18 22 53.3	
	comp=Z,298nm,18.5s,baz=280,slow=42						
ASAJ	**Asahikawa**	**8.26**	**5**	Pn	**Pn**	**18 22 41.2**	**-0.9**
	2.3nm,0.3s,baz=272,slow=5.5,SNR=21						
ASAJ				Sn	**Sn**	**18 24 14.2**	**-0.7**
	2.6nm,0.3s,baz=349,slow=29,SNR=6.2						
ASAJ				LR	LR	18 26 36.0	
	comp=Z,286nm,20.8s,baz=168,slow=43						
ASAJ	**Asahikawa**	**8.26**	**5**	P	**Pn**	**18 22 41.2**	**-0.9**
ASAJ						18 24 14.3	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,286nm,20.8s						
CBIJ	**Chichi jima**	**8.77**	**177**	Pn	**Pn**	**18 22 46.5**	**-2.5**
	comp=Z,9.9nm,0.3s,baz=359,slow=8.2,SNR=32						
CBIJ				Sn	**Sn**	**18 24 17.2**	**-10**
	comp=Z,14nm,0.3s,baz=292,slow=22,SNR=4.6						
YUK	**Yuzh-Kuril'sk**	**8.77**	**20**	*e*P	**Pn**	**18 22 51.0**	**+2.0**
YUK				*e*S	**Sn**	**18 24 20.0**	**-7.4**
YUK				smax			
	comp=N,310nm,0.9s						
YUK				smax			
	comp=E,340nm,0.5s						
KUR	**Kuril'sk**	**10.48**	**25**	P	**Pn**	**18 23 17.0**	**+4.6**
YSS	**Yuzh-Sakhalins**	**11.10**	**4**	*e*P	**Pn**	**18 23 20.0**	**-0.9**
YSS	**Yuzh-Sakhalins**	**11.10**	**4**	*e*P	**Pn**	**18 23 19.6**	**-1.3**
	comp=E,11nm,0.8s						
CLNS	**Chul'man**	**23.81**	**337**	*e*P	**P**	**18 25 48.4**	**-6.6**
CLNS				pmax	pmax		
	comp=N,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.9s						
CLNS				MLR	MLR		
	comp=N,100nm,14.0s						
CLNS				MLR	MLR		
	comp=Z,200nm,14.0s,MS3.7						
MA2	**Magadan**	**24.45**	**11**	P	**P**	**18 26 00.3**	**-0.5**
MA2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
MA2	**Magadan**	**24.45**	**11**	P	**P**	**18 26 00.3**	**-0.5**
	comp=Z,9.5nm,1.0s,mb4.2						
XAN	**Xi'an**	**26.80**	**276**	P	**P**	**18 26 20.0**	**-2.1**
XAN				AP	pP	18 26 29.3	+1.7
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
YAK	**Yakutsk**	**27.23**	**348**	*e*P	**P**	**18 26 25.2**	**-0.8**
YAK				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.6						
YAK	**Yakutsk**	**27.23**	**348**	*e*P	**P**	**18 26 25.2**	**-0.8**
	comp=Z,13nm,0.7s,mb4.6						
ULN	**Ulaanbaatar**	**28.16**	**306**	*e*P	**P**	**18 26 34.0**	**-0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**28.16**	**306**	*e*P	**P**	**18 26 34.0**	**-0.3**
	comp=Z,5.7nm,0.9s,mb4.2						
SONM	**Songino Array**	**28.58**	**306**	P	**P**	**18 26 38.0**	**-0.1**
	comp=Z,3.4nm,0.6s,mb4.2,baz=109,slow=9.0,SNR=29						
SONM				LR	LR	18 38 34.0	
	comp=Z,152nm,18.4s,MS3.6,baz=287,slow=38						
SONM	**Songino Array**	**28.58**	**306**	P	**P**	**18 26 38.0**	**-0.1**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,152nm,18.4s						
BOD	**Bodaibo**	**28.60**	**329**	*e*P	**P**	**18 26 38.2**	**0.0**
BOD				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
LZH	**Lanzhou**	**30.45**	**282**	*e*P	**P**	**18 26 54.3**	**-0.3**
LZH				XP	sP	18 27 02.0	-0.4
LZH				AMB	AMB		
	comp=Z,22nm,1.2s,mb4.8						
ZAK	**Zakamensk**	**31.13**	**310**	*e*P	**P**	**18 27 00.3**	**-0.3**
GTA	**Gaotai**	**33.08**	**289**	*e*P	**P**	**18 27 18.0**	**+0.2**
GTA				AP	pP	18 27 22.3	-1.0
GTA				XP	sP	18 27 25.5	-0.1
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
GTA				AMB	AMB		
	comp=Z,61nm,4.6s						
GTA				LR	LR		
	comp=N,62nm,14.4s,MS3.8						
GTA				LR	LR		
	comp=E,100nm,13.7s,MS3.8						
GTA				LR	LR		
	comp=Z,135nm,14.8s,MS3.8						
WMQ	**Urumqi**	**41.52**	**298**	P	**P**	**18 28 30.5**	**+1.2**
WMQ				AMB	AMB		
	comp=Z,32nm,1.0s,mb4.9						
ZAL	**Zalesovo**	**42.84**	**313**	P	**P**	**18 28 40.1**	**+0.1**
	comp=Z,2.8nm,0.6s,mb4.2,baz=20,slow=7.4,SNR=17						
ZAL				LR	LR	18 47 49.4	
	comp=Z,99nm,19.2s,MS3.7,baz=104,slow=38						
ZAL	**Zalesovo**	**42.84**	**313**	P	**P**	**18 28 40.1**	**+0.1**
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAL				MLR	MLR		
	comp=Z,99nm,19.2s						
NVS	**Novosibirsk**	**43.77**	**315**	*i* P	**P**	**18 28 46.8**	**-0.7**
NVS				pmax	pmax		
	comp=E,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
MK31	**Makanchi Array**	**44.88**	**303**	P	**P**	**18 28 56.5**	**0.0**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
MKAR	**Makanchi Array**	**44.88**	**303**	P	**P**	**18 28 56.7**	**+0.2**
	comp=Z,5.7nm,0.9s,mb4.4,baz=82,slow=9.9,SNR=31						
MKAR	**Makanchi Array**	**44.88**	**303**	P	**P**	**18 28 56.7**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	**Makanchi Array**	**44.88**	**303**	P	**P**	**18 28 56.7**	**+0.2**
GUN	**Gumba**	**47.45**	**277**	*e*P	**P**	**18 29 17.6**	**+0.9**
	comp=Z,35nm,0.7s,mb5.4						
PKI	**Pulchoki**	**47.97**	**277**	*e*P	**P**	**18 29 20.9**	**+0.2**
	comp=Z,24nm,0.7s,mb5.3						
PKI	**Pulchoki**	**47.97**	**277**	*e*P	**P**	**18 29 20.9**	**+0.2**
PKI				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.3						
KKN	**Kakani**	**47.98**	**277**	*e*P	**P**	**18 29 21.5**	**+0.7**
	comp=Z,38nm,0.8s,mb5.5						
KKN	**Kakani**	**47.98**	**277**	*e*P	**P**	**18 29 21.5**	**+0.7**
KKN				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.5						
DMN	**Daman**	**48.20**	**277**	*e*P	**P**	**18 29 22.8**	**+0.3**
	comp=Z,12nm,0.6s,mb5.1						
GKN	**Gorkha**	**48.41**	**278**	*e*P	**P**	**18 29 24.6**	**+0.5**
	comp=Z,104nm,0.8s						
KOLN	**Koldanda**	**49.34**	**278**	*e*P	**P**	**18 29 32.1**	**+0.8**
TKM2	**Tokmak 2**	**50.34**	**299**	P	**P**	**18 29 40.4**	**+1.6**
TKM2				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
VOSK	**Vostochnaya**	**51.18**	**313**	P	**P**	**18 29 45.1**	**-0.1**
VOSK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CHKZ	**Chkalovo**	**51.23**	**314**	*e*P	**P**	**18 29 44.9**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
CHKZ	**Chkalovo**	**51.23**	**314**	*e*P	**P**	**18 29 44.9**	**-0.6**
	comp=Z,5.8nm,0.6s,mb4.7						
BRVK	**Borovoye**	**51.54**	**313**	*e*P	**P**	**18 29 48.2**	**+0.3**
ZRNK	**Zerenda**	**52.31**	**313**	*e*P	**P**	**18 29 53.8**	**+0.1**
ZRNK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
ZRNK	**Zerenda**	**52.31**	**313**	*e*P	**P**	**18 29 53.8**	**+0.1**
	comp=Z,11nm,1.0s,mb4.8						
KKAR	**Karatay Array**	**53.86**	**301**	P	**P**	**18 30 05.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**55.78**	**198**	*e*P	**P**	**18 30 19.1**	**+0.2**
	comp=Z,5.0nm,1.2s,mb4.4						
FITZ	**Fitzroy Crossi**	**55.78**	**198**	P	**P**	**18 30 19.3**	**+0.4**
	comp=Z,1.6nm,0.5s,mb4.3,baz=8.3,slow=7.9,SNR=20						
WRAB	**Tennant Creek**	**55.93**	**188**	*e*P	**P**	**18 30 19.7**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.3						
WRAB	**Tennant Creek**	**55.93**	**188**	*e*P	**P**	**18 30 19.7**	**-0.3**
	comp=Z,38nm,1.3s,mb5.3						
WB2	**Warramunga Arr**	**55.94**	**188**	*e*P	**P**	**18 30 19.7**	**-0.4**
WRA	**Warramunga Arr**	**55.94**	**188**	P	**P**	**18 30 20.2**	**+0.1**
	comp=Z,1.9nm,0.4s,mb4.5,baz=6.3,slow=7.4,SNR=20						
WRA	**Warramunga Arr**	**55.94**	**188**	P	**P**	**18 30 20.2**	**+0.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARU	**Arti**	**57.34**	**319**	⇑*i*P	**P**	**18 30 29.9**	**-0.2**
ARU				*e*		18 30 39.8	
ARU				*e*S	**S**	**18 38 16.6**	**-9.1**
ARU				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
ARU				MLR	MLR		
	comp=Z,80nm,17.0s,MS3.9						
ARU				MLR	MLR		
	comp=N,40nm,15.0s,MS3.9						
ARU				MLR	MLR		
	comp=E,60nm,16.0s,MS3.9						
ARU	**Arti**	**57.34**	**319**	*e*P	**P**	**18 30 29.7**	**-0.4**
	comp=E,7.7nm,0.6s,mb4.9						
ARU				*e*		18 30 40.3	
AB31	**Akbulak array**	**58.82**	**311**	P	**P**	**18 30 40.1**	**-0.3**
AKTO	**Aktyubinsk**	**59.58**	**313**	P	**P**	**18 30 45.1**	**-0.6**
AS31	**Alice Springs**	**59.67**	**188**	*e*P	**P**	**18 30 46.6**	**+0.3**
ASAR	**Alice Springs**	**59.67**	**188**	P	**P**	**18 30 46.5**	**+0.2**
	comp=E,0.7nm,0.4s,mb4.0,baz=4.8,slow=8.1,SNR=15						
ASPA	**Alice Springs**	**59.67**	**188**	*e*P	**P**	**18 30 46.6**	**+0.3**
KEV	**Kevo**	**64.58**	**339**	*e*p	**P**	**18 31 19.1**	**-0.2**
ARCES	**ARCESS Array B**	**65.14**	**340**	P	**P**	**18 31 23.3**	**+0.4**
	comp=E,1.9nm,0.8s,mb4.2,baz=52,slow=8.0,SNR=9.1						
ARCES	**ARCESS Array B**	**65.14**	**340**	P	**P**	**18 31 23.3**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**65.14**	**340**	P	**P**	**18 31 23.3**	**+0.4**
JOF	**Joensuu**	**67.06**	**332**	*e*p	**P**	**18 31 34.6**	**-0.6**
	comp=Z,3.0nm,0.4s,mb4.7						
JOF	**Joensuu**	**67.06**	**332**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**2.80**	**41**⇑	*eP*	**Pn**	**18 33 29.6**	**+0.6**
YOGI				*eS*	**Sn**	**18 34 01.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**18.51**	**118**	P	**Pn**	**18 36 59.1**	**-1.3**
	0.2nm,0.3s,baz=293,slow=7.7,SNR=27						
WRA	**Warramunga Arr**	**26.86**	**115**	P	**P**	**18 38 24.9**	**+0.8**
	1.0nm,0.8s,mb3.4,baz=285,slow=12,SNR=5.0						
WRAB	**Tennant Creek**	**26.87**	**115**	P	**P**	**18 38 21.0**	**-3.1**
	2.7nm,0.4s,mb4.1						
ASAR	**Alice Springs**	**27.84**	**122**	P	**P**	**18 38 35.4**	**+2.5**
	0.5nm,0.6s,mb3.3,baz=299,slow=9.3,SNR=18						
SONM	**Songino Array**	**57.57**	**358**	P	**P**	**18 42 33.0**	**0.0**
	0.5nm,0.5s,mb3.8,baz=186,slow=8.4,SNR=5.7						
ULN	**Ulaanbaatar**	**57.58**	**359**	*eP*	**P**	**18 42 34.1**	**+1.1**
	1.1nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**61.15**	**340**	P	**P**	**18 42 56.7**	**-1.0**
	0.2nm,0.6s,mb3.4,baz=136,slow=6.9,SNR=3.7						
CHKZ	**Chkalovo**	**71.06**	**337**	P	**P**	**18 44 00.8**	**-0.5**
	0.4nm,0.4s,mb3.7						

*NEIC **27** 18:46:54.9, 40.13S×176.70E, h54km, ML3.7(WEL), After WEL.*

WEL 27 18:46:55.2±0.1, 4007S×17659E, h47km±2km, ML3.6/5, 19C-9D, Error ellipse: s-maj=1.7km s-min=0.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.21**	**80**	⇑PN	Pn	18 47 03.2	-0.2
PXZ				SN	Sn	18 47 09.5	+0.4
TSZ	**Takapari Road**	**0.48**	**271**	⇓P	Pn	18 47 05.9	-0.2
TSZ				S	Sn	18 47 13.4	-0.5
TSZ	**Takapari Road**	**0.48**	**271**	⇓PN	Pn	18 47 05.9	-0.3
TSZ				SN	Sn	18 47 13.5	-0.4
TSZ				SN	Sn	18 47 13.5	-0.4
BFZ	**Birch Farm**	**0.67**	**203**	⇓P	Pn	18 47 08.7	+0.3
BFZ				S	Sn	18 47 19.0	+1.1
BFZ	**Birch Farm**	**0.67**	**203**	⇑PN	Pn	18 47 08.7	+0.3
BFZ				SN	Sn	18 47 18.6	+0.7
TIWZ	**Tintock**	**0.89**	**217**	PN	Pn	18 47 11.7	+0.3
BKZ	**Black Stump Fm**	**0.90**	**355**	⇓P	Pn	18 47 11.7	+0.1
BKZ	**Black Stump Fm**	**0.90**	**355**	⇑PN	Pn	18 47 11.7	+0.1
BKZ				SN	Sn	18 47 23.1	-0.4
MOVZ	**Moawhango**	**0.93**	**315**	⇑P	Pn	18 47 12.4	+0.6
MOVZ				S	Sn	18 47 24.4	+0.4
MOVZ	**Moawhango**	**0.93**	**315**	⇑PN	Pn	18 47 12.4	+0.5
MOVZ				SN	Sn	18 47 24.2	+0.2
MRZ	**Mangatainoka R**	**0.98**	**232**	⇑P	Pn	18 47 12.7	+0.2
MRZ	**Mangatainoka R**	**0.98**	**232**	⇑PN	Pn	18 47 12.7	+0.1
MRZ				SN	Sn	18 47 25.5	+0.3
WNVZ	**Wahianoa**	**1.07**	**314**	⇑P	Pn	18 47 14.9	+1.1
WNVZ				S	Sn	18 47 29.0	+1.5
WNVZ	**Wahianoa**	**1.07**	**314**	⇑PN	Pn	18 47 14.9	+1.2
WNVZ				SN	Sn	18 47 29.0	+1.5
TUVZ	**Tukino**	**1.08**	**317**	⇑P	Pn	18 47 15.2	+1.3
TUVZ	**Tukino**	**1.08**	**317**	⇑PN	Pn	18 47 15.2	+1.3
TUVZ				SN	Sn	18 47 28.8	+1.1
MTVZ	**Mangateitei**	**1.10**	**308**	PN	Pn	18 47 15.4	+1.1
MTVZ				SN	Sn	18 47 29.6	+1.3
TRVZ	**Turoa**	**1.11**	**313**	PN	Pn	18 47 15.6	+1.2
TRVZ				SN	Sn	18 47 29.5	+0.9
DRZ	**Dome Shelter**	**1.12**	**315**	P	Pn	18 47 15.9	+1.4
DRZ	**Dome Shelter**	**1.12**	**315**	PN	Pn	18 47 15.7	+1.2
DRZ				SN	Sn	18 47 29.2	+0.4
FWVZ	**Far West T-bar**	**1.14**	**315**	P	Pn	18 47 16.1	+1.3
FWVZ	**Far West T-bar**	**1.14**	**315**	PN	Pn	18 47 16.1	+1.3
FWVZ				SN	Sn	18 47 29.9	+0.6
OTVZ	**Oturere**	**1.15**	**321**	⇑PN	Pn	18 47 15.9	+1.0
OTVZ				SN	Sn	18 47 30.9	+1.3
NGZ	**Ngauruhoe**	**1.18**	**319**	⇑PN	Pn	18 47 16.2	+1.0
WPVZ	**Whakapapa**	**1.18**	**316**	⇓P	Pn	18 47 16.5	+1.2
WPVZ	**Whakapapa**	**1.18**	**316**	⇓PN	Pn	18 47 16.5	+1.1
WPVZ				SN	Sn	18 47 31.7	+1.4
KRVZ	**Karewarewa**	**1.22**	**323**	⇑PN	Pn	18 47 17.3	+1.4
WTVZ	**West Tongariro**	**1.23**	**320**	PN	Pn	18 47 16.8	+0.9
RITZ	**Rihia Road**	**1.23**	**332**	PN	Pn	18 47 17.6	+1.6
PKVZ	**Pokaka**	**1.24**	**309**	PN	Pn	18 47 17.0	+0.9
WAZ	**Wanganui**	**1.28**	**284**	*eP*	Pn	18 47 18.3	+1.7
WAZ	**Wanganui**	**1.28**	**284**	*e*PN	Pn	18 47 18.3	+1.7
KATZ	**Kakaramea**	**1.29**	**327**	⇑P	Pn	18 47 18.5	+1.6
KATZ	**Kakaramea**	**1.29**	**327**	⇑PN	Pn	18 47 18.5	+1.6
TWVZ	**Taurewa**	**1.34**	**318**	*eP*	Pn	18 47 18.3	+0.9
TWVZ	**Taurewa**	**1.34**	**318**	PN	Pn	18 47 18.3	+0.9
KNZ	**Kokohu**	**1.34**	**39**	*eP*	Pn	18 47 17.1	-0.4
KNZ	**Kokohu**	**1.34**	**39**	PN	Pn	18 47 17.1	-0.4
RATZ	**Rangitukua**	**1.36**	**332**	PN	Pn	18 47 19.1	+1.4
MTW	**Mount Morrison**	**1.37**	**217**	P	Pn	18 47 17.2	-0.7
MTW	**Mount Morrison**	**1.37**	**217**	PN	Pn	18 47 17.2	-0.7
MTW				SN	Sn	18 47 33.5	-1.4
WHTZ	**Whakaora**	**1.48**	**340**	P	Pn	18 47 19.5	+0.1
TRWZ	**Traveller**	**1.50**	**207**	⇑PN	Pn	18 47 18.8	-0.8
TRWZ				SN	Sn	18 47 37.7	-0.3
KIW	**Kapiti Island**	**1.51**	**238**	P	Pn	18 47 19.8	0.0
KIW	**Kapiti Island**	**1.51**	**238**	PN	Pn	18 47 19.8	0.0
KIW				SN	Sn	18 47 37.9	-0.4
CAW	**Cannon Point**	**1.56**	**228**	P	Pn	18 47 19.9	-0.6
CAW	**Cannon Point**	**1.56**	**228**	PN	Pn	18 47 19.9	-0.5
CAW				SN	Sn	18 47 38.8	-0.6
PAWZ	**Paruwai Farm**	**1.58**	**214**	P	Pn	18 47 20.0	-0.8
PAWZ	**Paruwai Farm**	**1.58**	**214**	PN	Pn	18 47 20.0	-0.8
PAWZ				SN	Sn	18 47 39.8	-0.3
MSWZ	**Moikau Station**	**1.69**	**217**	P	Pn	18 47 21.0	-1.3
MSWZ	**Moikau Station**	**1.69**	**217**	PN	Pn	18 47 21.0	-1.2
MSWZ				SN	Sn	18 47 41.9	-0.8
VRZ	**Vera Road**	**1.70**	**303**	*eP*	Pn	18 47 23.6	+1.2
PATZ	**Paeroa**	**1.71**	**351**	P	Pn	18 47 23.1	+0.6
PATZ	**Paeroa**	**1.71**	**351**	⇓PN	Pn	18 47 23.1	+0.6
TAZ	**Tarawera**	**1.83**	**358**	⇑PN	Pn	18 47 24.5	+0.2
MRW	**Makara Radio**	**1.85**	**231**	P	Pn	18 47 23.8	-0.7
MRW	**Makara Radio**	**1.85**	**231**	PN	Pn	18 47 23.8	-0.6
MRW				SN	Sn	18 47 46.2	-0.4
URZ	**Urewera**	**1.85**	**13**	⇓P	Pn	18 47 23.9	-0.6
URZ	**Urewera**	**1.85**	**13**	⇓PN	Pn	18 47 23.9	-0.6
URZ				SN	Sn	18 47 45.1	-1.6
BHW	**Baring Head**	**1.87**	**224**	P	Pn	18 47 23.9	-0.9
BHW	**Baring Head**	**1.87**	**224**	PN	Pn	18 47 23.9	-0.9
BHW				SN	Sn	18 47 46.0	-1.2
MWZ	**Matawai**	**1.88**	**23**	⇑PN	Pn	18 47 24.1	-0.7
MWZ				SN	Sn	18 47 47.0	-0.3
SNZO	**South Karori**	**1.90**	**229**	*e*Pn	Pn	18 47 24.2	-0.9
HIZ	**Hauiti**	**2.06**	**318**	P	Pn	18 47 28.0	+0.7
HIZ	**Hauiti**	**2.06**	**318**	PN	Pn	18 47 27.7	+0.4
NEZ	**North Egmont**	**2.08**	**292**	P	Pn	18 47 30.7	+3.0
TCW	**Tory Channel**	**2.10**	**236**	P	Pn	18 47 27.0	-0.9
TCW	**Tory Channel**	**2.10**	**236**	PN	Pn	18 47 27.0	-0.9
PKE	**Pukeiti**	**2.19**	**293**	P	Pn	18 47 31.8	+2.6
PKE	**Pukeiti**	**2.19**	**293**	PN	Pn	18 47 31.7	+2.5
PKE				SN	Sn	18 47 56.0	+1.0
PUZ	**Puketiti**	**2.38**	**34**	P	Pn	18 47 30.6	-1.1
PUZ	**Puketiti**	**2.38**	**34**	PN	Pn	18 47 30.2	-1.4
PUZ				SN	Sn	18 47 58.4	-1.2
TUWZ	**Tuamarina**	**2.43**	**235**	PN	Pn	18 47 31.3	-1.1
MXZ	**Matakaoa Point**	**2.84**	**29**	*eP*	Pn	18 47 37.8	-0.2
QRZ	**Quartz Range**	**3.19**	**255**	*eP*	Pn	18 47 42.4	-0.5
THZ	**Tophouse**	**3.27**	**238**	*eP*	Pn	18 47 42.8	-1.1

MAN 27 19:02:57, 1523N×12443E, h21km, mb1.9, ML3.7, MS5.4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.65**	**189**	*eP*	Pn	19 03 24.6	-0.1
PVCP				*eS*	Sn	19 03 45.8	+0.6
POLP	**Polilio Island**	**2.45**	**259**	*eP*	Pn	19 03 37.6	+1.8
BALP	**Baler**	**2.79**	**281**	*eP*	Pn	19 03 40.5	0.0
CAUP	**Cauayan**	**3.02**	**305**	*eP*	Pn	19 03 44.4	+0.7
APYP	**Conner**	**4.02**	**311**	*eP*	Pn	19 03 58.7	+1.4
OCLP	**Ormoc**	**4.16**	**178**	*eP*	Pn	19 04 20.4	+21

*BJI **27** 19:11:52.9, 2444N×12178E, h14km, mb4.4, ML3.6*
*ISCJB **27** 19:11:58.5±0.7, 2481N±009×12172E±004, h100km±16km, Error ellipse: s-maj=14.6km s-min=5.6km az=169.1*
*JMA **27** 19:12:00.9±0.2, 2485N×12185E, h93km, M3.7*
*NIED **27** 19:12:00, 2480N×12190E, h65km, Mw3.8 Best double couple: M0 6.49000×10^14 NP1:φs303.00000°, δ79.00000°, λ-61.00000°. NP2:φs52.00000°, δ31.00000°, λ-158.00000°.*

ISC 27 19:12:00.0±0.7, 2477N±009×12172E±004, h83km±21km, n19, σ0872/31, 1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.22**	**105**	P	**Pn**	**19 12 22.4**	**+0.5**
YOJ				*eS*	**Sn**	**19 12 38.8**	**+0.5**
IRIF	**Iriomote-Funau**	**1.88**	**103**	P	**Pn**	**19 12 30.4**	**0.0**
IRIF				S	**Sn**	**19 12 53.0**	**-0.6**
HATJ	**Hateruma jima**	**2.03**	**110**	P	**Pn**	**19 12 33.2**	**+0.8**
HATJ				*eS*	**Sn**	**19 12 57.0**	**-0.1**
JKRS	**Kuro-shima**	**2.15**	**104**	P	**Pn**	**19 12 34.7**	**+0.7**
JKRS				*eS*	**Sn**	**19 12 59.6**	**-0.4**
JIJ	**Ishigaki jima**	**2.25**	**100**	P	**Pn**	**19 12 35.5**	**+0.3**
JIJ				S	**Sn**	**19 13 00.9**	**-1.3**
JTJ	**Tarama**	**2.72**	**92**	P	**Pn**	**19 12 42.4**	**+0.8**
JTJ				*eS*	**Sn**	**19 13 13.2**	**-0.3**
QZH	**Quanzhou**	**2.84**	**274**	⇓*iP*	**Pn**	**19 12 43.8**	**+0.5**
QZH				S	**Sn**	**19 13 15.3**	**-1.3**
QZH				Smax			
	comp=N,250nm,0.7s						
QZH				Smax			
	comp=E,130nm,0.5s						
JMJ	**Miyako jima 2**	**3.25**	**89**	*eS*	**Sn**	**19 13 26.1**	**-0.3**
JOGS	**Gusukube**	**3.35**	**89**	P	**Pn**	**19 12 50.9**	**+0.7**
JOGS				*eS*	**Sn**	**19 13 28.7**	**-0.2**
JKE	**Kume jima 2**	**4.83**	**70**	P	**Pn**	**19 13 11.5**	**+1.2**
JKE				*eS*	**Sn**	**19 14 06.0**	**+1.1**
JAGN	**Aguni-jima**	**5.30**	**69**	P	**Pn**	**19 13 17.8**	**+1.1**
JAGN				*eS*	**Sn**	**19 14 16.0**	**-0.4**
JJT2	**Tamagusuku 2**	**5.62**	**75**	P	**Pn**	**19 13 21.2**	**+0.2**
JIH	**Iheya**	**6.06**	**67**	P	**Pn**	**19 13 27.2**	**+0.2**
JIH				*eS*	**Sn**	**19 14 34.5**	**-0.4**
JOW	**Kunigami**	**6.25**	**69**	P	**Pn**	**19 13 29.3**	**-0.4**
JOW				*eS*	**Sn**	**19 14 38.3**	**-1.4**
APYP	**Conner**	**6.89**	**184**	*eP*	**Pn**	**19 13 37.8**	**-0.5**
JTK	**Tokunoshima**	**7.15**	**64**	P	**Pn**	**19 13 41.2**	**-0.7**
NJ2	**Nanjing**	**7.68**	**341**	*eP*	**Pn**	**19 13 53.3**	**+4.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
GZH	**Guangzhou**	**7.84**	**259**	P	**Pn**	**19 13 46.8**	**-4.5**
GZH				Smax			
	comp=N,28nm,1.0s						
GZH				Smax			
	comp=E,36nm,0.8s						
JAM	**Amami Oshima**	**7.93**	**61**	P	**Pn**	**19 13 52.0**	**-0.6**

IDC 27 19:12:54.2±2.2, 143N×12706E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/15, mbtmp3.2/3, Error ellipse: s-maj=178.3km s-min=26.0km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.40**	**162**	P	P	19 17 54.7	+0.5
	0.5nm,0.4s,baz=341,slow=11,SNR=4.3						
ASAR	**Alice Springs**	**25.81**	**165**	P	P	19 18 27.2	+0.2
	0.2nm,0.6s,baz=343,slow=8.1,SNR=7.7						
MKAR	**Makanchi Array**	**59.63**	**326**	P	P	19 23 00.2	+0.2
	0.1nm,0.4s,baz=138,slow=7.6,SNR=5.4						

*NEIC **27** 19:21:15.6, 40.10N×197.6E, h13km, MD3.4(ATH), After ATH.*
*ATH **27** 19:21:15.5, 40.11N×197.6E, h12km±6km, MD3.4/4*
*ISCJB **27** 19:21:17.4±1.0, 4000N±003×1978E±007, h10km, Error ellipse: s-maj=8.5km s-min=4.4km az=30.2*
*THE **27** 19:21:18.6, 4000N×1978E, h6km, ML3.0*
*SKO **27** 19:21:19.2, 3997N×1991E, h6km*

ISC 27 19:21:17.3±1.3, 4002N±004×1975E±008, h0km±7km, n15, σ1900/23, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.30**	**172**	*e*PB	**Pg**	**19 21 23.5**	**+0.4**
KEK				*e*SB	**Sg**	**19 21 29.1**	**+2.0**
IGT	**Igoumenitsa**	**0.66**	**137**	*e*Pg	**Pg**	**19 21 28.7**	**-1.2**
IGT				*e*Sg	**Sg**	**19 21 39.5**	**+1.0**
JAN	**Janina**	**0.92**	**113**	*e*PG	**Pg**	**19 21 33.0**	**-1.9**
JAN				*e*SB	**Sg**	**19 21 46.4**	**-0.5**
MEV	**Metsovon**	**1.16**	**101**	*e*Sg	**Sg**	**19 21 56.3**	**+1.7**
	comp=Z,10.0nm,0.5s						
MEV				*e*Sg	**Sg**	**19 22 02.3**	**+7.6**
OHR	**Ohrid**	**1.36**	**36**	*e*Sg	**Sg**	**19 22 02.2**	**+1.4**
OHR				*e*Sg	**Sg**	**19 22 04.5**	**+3.7**
OHR	**Ohrid**	**1.36**	**36**	*e*Pg	**Pg**	**19 21 42.9**	**-0.4**
OHR				*e*Sg	**Sg**	**19 22 01.9**	**+1.1**
FNA	**Florina**	**1.46**	**58**	*e*Sg	**Sg**	**19 22 04.7**	**+0.5**
	comp=Z,2.6nm,0.5s						
EVR	**Evrytania**	**1.94**	**124**	*e*PG	**Pg**	**19 21 51.9**	**-2.5**
VLS	**Valsamata**	**1.95**	**160**	*e*PN	**Pn**	**19 21 51.4**	**-0.2**
AGG	**Agios Georgios**	**2.23**	**116**	*e*Pn	**Pn**	**19 21 55.7**	**+0.2**
GRG	**Griva**	**2.23**	**64**	*e*Pn	**Pn**	**19 21 55.5**	**0.0**
GRG				*e*Sn	**Sn**	**19 22 24.3**	**+0.6**
VAY	**Valandovo**	**2.51**	**58**	*i* Pn	**Pn**	**19 21 59.9**	**+0.6**
HORT	**Hortiatis**	**2.63**	**76**	*e*Pn	**Pn**	**19 22 00.7**	**-0.2**
HORT				*e*Sn	**Sn**	**19 22 33.2**	**-0.3**
KNT	**Kendrikon**	**2.66**	**63**	*e*Pn	**Pn**	**19 22 01.0**	**-0.3**
XOR	**Xorichti**	**2.74**	**103**	*e*Pn	**Pn**	**19 22 01.8**	**-0.6**

*MOS **27** 19:30:45.0±1.2, 5534N×11126E, h10km, mb4.3/1, Error ellipse: s-maj=37.5km s-min=18.0km az=79.7*

BYKL 27 19:30:44.9±0.2, 5536N×11130E, h9km±21km, 5C, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.49**	**189**	⇑*i*Pg	Pg	19 30 54.4	-0.1
YLYR				*e*Sg	Sg	19 31 01.6	+0.7
YLYR				Pmax			
	133nm,0.2s						
YLYR				Smax			
	2μm,0.1s						
YLYR	**Ulyunkhan**	**0.49**	**189**	⇑*i*PG	Pg	19 30 54.4	-0.1
YLYR				*e*		19 31 01.2	
YLYR				pmax	pmax		
	comp=Z,108nm,0.1s						
YLYR				smax			
	comp=E,1μm,0.2s						
KMO	**Kumora**	**0.53**	**354**	⇑*i*Pg	Pg	19 30 54.7	-0.5
KMO				*e*		19 30 57.9	
KMO				*e*Sg	Sg	19 31 01.8	-0.4
KMO				max			
	comp=E,420nm,0.3s						
KMO				Smax			
	comp=E,886nm,0.7s						
KMO	**Kumora**	**0.53**	**354**	*e*PG	Pg	19 30 54.7	-0.5
KMO				*e*		19 31 01.8	
KMO				pmax	pmax		
	comp=Z,418nm,0.4s						
KMO				smax			
	comp=N,893nm,0.7s						
YOA	**Uoyan**	**0.81**	**17**	*e*Sg	Sg	19 31 11.3	+0.2
YOA				Smax			
	comp=N,786nm,0.5s						
YOA	**Uoyan**	**0.81**	**17**	*i* PG	Pg	19 31 11.4	+11
YOA				pmax	pmax		
	comp=N,792nm,0.4s						
NIZ	**Nizh Angarsk**	**1.08**	**293**	*e*Pg	Pg	19 31 04.8	-0.9
NIZ				*e*Sg	Sg	19 31 20.2	+0.4
NIZ				*e*Sb	Sb	19 31 24.0	+4.0
NIZ				Pmax			
	comp=N,76nm,0.5s						
NIZ				max			
	comp=N,360nm,0.5s						
NIZ	**Nizh Angarsk**	**1.08**	**293**	*e*PG	Pg	19 31 05.0	-0.7
UKT	**Uakit**	**1.33**	**83**	⇑*i*Pg	Pg	19 31 08.8	-1.7
UKT				*e*Sg		19 31 26.6	-1.2
UKT				Pmax			
	comp=N,63nm,0.3s						
UKT				Smax			
	comp=N,344nm,0.5s						
UKT	**Uakit**	**1.33**	**83**	*e*PG	Pg	19 31 08.7	-1.8
UKT				*e*		19 31 26.8	
UKT				pmax	pmax		
	comp=Z,63nm,0.3s						
UKT				smax			
	comp=N,341nm,0.4s						
SVKR	**Severomuysk**	**1.49**	**58**	⇑*i*Pg	Pg	19 31 12.2	-1.2
SVKR				*e*		19 31 15.6	
SVKR				*e*Sg	Sg	19 31 32.8	+0.1
SVKR				max			
	comp=N,99nm,0.6s						
SVKR				Smax			
	comp=N,1μm,0.5s						
SVKR	**Severomuysk**	**1.49**	**58**	*e*PG	Pg	19 31 12.1	-1.3
SVKR				*e*		19 31 32.8	
SVKR				pmax	pmax		
	comp=Z,95nm,0.3s						
SVKR				smax			
	comp=N,1μm,0.5s						
SYVR	**Suvo**	**1.87**	**205**	*e*Pg	Pg	19 31 17.8	-2.9
SYVR				*e*Sg	Sg	19 31 43.2	-1.7
SYVR				Pmax			
	comp=N,31nm,0.3s						
SYVR				Smax			
	comp=N,187nm,0.5s						
MXMB	**Maximikha**	**2.58**	**217**	*e*Pg	Pg	19 31 31.8	-2.5
MXMB				*e*Sg	Sg	19 32 06.0	-1.8
MXMB				Pmax			
	comp=N,27nm,1.1s						
MXMB				Smax			
	comp=N,210nm,0.6s						
NLYR	**Nelyaty**	**2.73**	**64**	*e*Pn	Pn	19 31 29.1	+0.3
NLYR				*e*Pg	Pg	19 31 33.0	-4.1
NLYR				*e*Sn	Sn	19 32 01.3	-0.6
NLYR				*e*Sg	Sg	19 32 08.3	-4.1
OGRR	**Ongureny**	**2.76**	**233**	*e*Pn	Pn	19 31 30.5	+1.2
OGRR				*e*Pg	Pg	19 31 34.4	-3.4
OGRR				*e*Sn	Sn	19 32 04.9	+2.1
OGRR				*e*Sg	Sg	19 32 10.2	-3.4
OGRR				Pmax			
	comp=N,11nm,0.4s						
OGRR				Smax			
	comp=N,80nm,1.0s						
BOD	**Bodaibo**	**2.88**	**30**	*e*Pn	Pn	19 31 30.8	-0.2
BOD				*e*Pg	Pg	19 31 35.5	-4.7
BOD				*e*Sn	Sn	19 32 05.2	-0.6
BOD				*e*Sg	Sg	19 32 12.1	-5.4
BOD				Pmax			
	comp=N,10.0nm,0.5s						
BOD				Smax			
	comp=N,43nm,0.4s						
KELR	**Kotokel**	**3.22**	**217**	*e*Pn	Pn	19 31 36.9	+1.2
KELR				*e*Pg	Pg	19 31 43.0	-3.7
KELR				*e*Sg	Sg	19 32 25.1	-3.3
KELR				Pmax			
	comp=N,15nm,0.4s						
KELR				Smax			
	comp=N,172nm,0.7s						
CIT	**Chita**	**3.60**	**157**	*e*Pg	Pg	19 31 48.8	-5.1
CIT				*e*Sg	Sg	19 32 35.6	-5.0
CIT				Pmax			
	comp=N,29nm,1.3s						
CIT				Smax			
	comp=N,103nm,1.3s						
TRTB	**Turuntaevo**	**3.82**	**216**	*e*Pg	Pg	19 31 52.9	-5.1
TRTB				*e*Sg	Sg	19 32 42.8	-4.7
TRTB				Pmax			
	comp=N,4.0nm,0.4s						
TRTB				Smax			
	comp=N,33nm,1.2s						
TRG	**Tyrgan**	**3.91**	**230**	*e*Pg	Pg	19 31 54.5	-5.3
TRG				*e*Sg	Sg	19 32 44.2	-6.3
TRG				Pmax			
	comp=N,3.0nm,0.2s						
TRG				Smax			
	comp=N,39nm,0.4s						
CRS	**Chara**	**4.19**	**66**	*e*Pg	Pg	19 32 00.8	-4.4
CRS				*e*Sg	Sg	19 32 54.9	-4.7
CRS				Pmax			
	comp=N,25nm,0.8s						
CRS				Smax			
	comp=N,77nm,2.0s						
TUP	**Tupik**	**5.08**	**97**	*e*Pn	Pn	19 32 01.4	+0.2
TUP				*e*Pg	Pg	19 32 16.1	-6.2
TUP				*e*		19 32 56.8	
TUP				*e*Sg	Sg	19 33 22.8	-5.3
TUP				Pmax			
	comp=N,6.0nm,0.5s						
TUP				Smax			
	comp=N,44nm,1.1s						
KPC	**Khapcheranga**	**5.70**	**173**	*e*Pn	Pn	19 32 11.9	+2.1
KPC				*e*Pg	Pg	19 32 27.2	-6.9
KPC				*e*Sg	Sg	19 33 40.8	-7.2
KPC				Pmax			
	comp=N,1.0nm,0.6s						
KPC				Smax			
	comp=N,31nm,1.4s						
TLY	**Talaya**	**5.87**	**234**	*e*PN	Pn	19 32 29.1	+17
TLY				*e*		19 33 43.5	
TLY				pmax	pmax		
	comp=Z,11nm,0.7s						
TLY				smax			
	comp=E,41nm,1.1s						
ARS	**Arshan**	**6.30**	**241**	*e*	Pb	19 33 29.0	+54
ARS				*e*Sg	Sg	19 33 59.7	-7.5
ARS				Smax			
	comp=E,99nm,0.8s						
ZAK	**Zakamensk**	**6.96**	**228**	*e*Sg	Sg	19 34 21.7	-6.5
ZAK				Smax			
	comp=E,14nm,0.8s						
ORL	**Orlik**	**7.34**	**252**	*e*Pn	Pn	19 32 31.4	-0.9
ORL				*e*		19 32 46.2	
ORL				*e*Sn	Sn	19 33 53.8	-2.0
ORL				*e*Sg	Sg	19 34 31.2	-9.4
ORL				max			
	comp=E,2.0nm,0.8s						
ORL				Smax			
	comp=E,20nm,0.7s						

*NEIC **27** 19:32:17.4, 32.18S×68.66W, h150km, MG3.5(GUC), After GUC.*

GUC 27 19:32:17.4±0.8, 3218S×6866W, h150km, MD3.2, ML3.5, 6C-1D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**1.71**	**252**	*e*P	Pn	19 32 50.2	+1.0
JACH				*i* S	Sn	19 33 14.7	+1.1
PTCH	**Petorca**	**1.93**	**267**	*e*P	Pn	19 32 52.3	+0.6
PTCH				*i* S	Sn	19 33 18.7	+0.8
PTCH				AML	AML	19 33 22.4	
	comp=N,278nm,0.3s						
PTCH	**Petorca**	**1.93**	**267**	*e*P	Pn	19 32 52.3	+0.6

Msz4.2

IDC ***27*** *19:40:41.9±2.1,567S×14624E,h49km±19km,mb4.1/11, mb1 4.3/13,mb1mx4.3/15,mbtmp4.4/13,ML4.3/2,MS3.7/11, Ms1 3.7/11,ms1mx3.4/19,Error ellipse: s-maj=16.0km s-min=11.2km az=111.0*

NEIC ***27*** *19:40:43.2±1.4,565S×14636E,h66km±12km,mb4.5/15, Error ellipse: s-maj=9.3km s-min=8.4km az=125.0*

ISC 27 19:40:43.4±1.2,572S±005×14635E±006,h62km±12km, h68km±3.9km:pP-P,n94,σ0:97/88,mb4.6/35,4C-2D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.75**	**168**	P	**Pn**	**19 41 38.7**	**0.0**
	96nm,0.3s,baz=44,slow=5.2,SNR=385						
PMG				S	**Sn**	**19 42 22.2**	**+0.6**
	76nm,0.3s,baz=175,slow=19,SNR=7.3						
PMG				LR	LR	19 43 30.4	
	comp=Z,2μm,18.8s,baz=174,slow=44						
PMG	**Port Moresby**	**3.75**	**168**	*e*P	**Pn**	**19 41 38.5**	**-0.2**
HNR	**Honiara**	**13.97**	**106**	P	**Pn**	**19 44 04.9**	**+6.7**
	17nm,0.3s,baz=85,slow=3.6,SNR=7.1						
HNR				LR	LR	19 48 32.2	
	comp=Z,111nm,21.5s,baz=358,slow=33						
HNR	**Honiara**	**13.97**	**106**	*e*P	**Pn**	**19 43 56.8**	**-1.4**
HNR				LR	LR	19 48 32.2	
CTA	**Charters Tower**	**14.29**	**180**	*e*P	**Pn**	**19 44 04.9**	**+2.6**
	13nm,0.4s						
CTA	**Charters Tower**	**14.29**	**180**	P	**Pn**	**19 44 04.6**	**+2.3**
	5.3nm,0.3s,baz=1.6,slow=14,SNR=59						
CTA				S	**Sn**	**19 46 38.7**	**-0.6**
	0.6nm,0.3s,baz=300,slow=12,SNR=3.1						
CTA				LR	LR	19 49 29.9	
	comp=Z,419nm,20.0s,baz=6.5,slow=37						
CTA	**Charters Tower**	**14.29**	**180**	*e*P	**Pn**	**19 44 04.9**	**+2.6**
CTA				pmax	pmax		
	comp=Z,13nm,0.4s						
CTAO	**Charters Tower**	**14.29**	**180**	*e*P	**Pn**	**19 44 04.7**	**+2.4**
CTAO				pmax	pmax		
	comp=Z,14nm,0.4s						
CTAO	**Charters Tower**	**14.29**	**180**	*e*P	**Pn**	**19 44 04.7**	**+2.4**
	comp=Z,14nm,0.4s						
KAKA	**Kakadu**	**15.39**	**242**	*e*P	**Pn**	**19 44 16.7**	**+0.1**
	comp=Z,25nm,0.4s						
WRAB	**Tennant Creek**	**18.33**	**218**	*e*P	**Pn**	**19 44 52.2**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,11nm,2.2s						
WRAB	**Tennant Creek**	**18.33**	**218**	*e*P	**Pn**	**19 44 52.2**	**-1.0**
	comp=Z,11nm,2.2s						
WB2	**Warramunga Arr**	**18.34**	**218**	*e*P	**Pn**	**19 44 51.9**	**-1.3**
WRA	**Warramunga Arr**	**18.34**	**218**	P	**Pn**	**19 44 52.5**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=43,slow=12,SNR=28						
WRA				S	**S**	**19 48 16.7**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=43,slow=25,SNR=6.3						
WRA				PcP	PcP	19 49 23.1	+1.2
	comp=Z,0.8nm,0.3s,baz=22,slow=1.8,SNR=16						
WRA				LR	LR	19 52 23.0	
	comp=Z,82nm,21.6s,baz=45,slow=38						
WRA	**Warramunga Arr**	**18.34**	**218**	P	**Pn**	**19 44 52.5**	**-0.8**
WRA				S	**S**	**19 48 16.7**	**-1.7**
AS31	**Alice Springs**	**21.50**	**213**	*e*P	**P**	**19 45 27.8**	**+0.9**
ASAR	**Alice Springs**	**21.50**	**213**	P	**P**	**19 45 27.4**	**+0.5**
	comp=Z,7.1nm,0.8s,mb4.1,baz=48,slow=7.8,SNR=63						
ASAR				S	**S**	**19 49 22.2**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=30,slow=21,SNR=3.0						
ASAR				PcP	PcP	19 49 28.9	+1.2
	comp=Z,3.7nm,0.8s,baz=43,slow=2.1,SNR=8.8						
ASAR				LR	LR	19 54 51.6	
	comp=Z,243nm,18.4s,baz=21,slow=40						
ASAR	**Alice Springs**	**21.50**	**213**	P	**P**	**19 45 27.5**	**+0.5**
ASAR				S	**S**	**19 49 22.3**	**+0.5**
ASAR						19 49 28.9	
ASPA	**Alice Springs**	**21.50**	**213**	*e*P	**P**	**19 45 27.8**	**+0.8**
FITZ	**Fitzroy Crossi**	**23.68**	**237**	*e*P	**P**	**19 45 48.9**	**-0.4**
	comp=Z,24nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**23.68**	**237**	P	**P**	**19 45 49.0**	**-0.2**
	comp=Z,13nm,0.5s,mb4.6,baz=67,slow=8.9,SNR=122						
FITZ				LR	LR	19 56 04.4	
	comp=Z,214nm,20.7s,baz=62,slow=39						
DZM	**Mont Dzumac**	**25.33**	**132**	P	**P**	**19 46 04.8**	**+0.5**
	comp=Z,3.7nm,0.5s,mb4.2,baz=22,slow=10.0,SNR=7.5						
STKA	**Stephens Creek**	**26.40**	**189**	*e*P	**P**	**19 46 14.1**	**+0.1**
	comp=Z,5.9nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**26.40**	**189**	P	**P**	**19 46 14.3**	**+0.3**
	comp=Z,7.5nm,0.7s,mb4.3,baz=352,slow=8.4,SNR=17						
STKA				LR	LR	19 58 16.2	
	comp=Z,228nm,19.9s,baz=23,slow=40						
TSM	**Tawau**	**30.13**	**289**	P	**P**	**19 46 47.4**	**+0.2**
KSM	**Kuching**	**36.70**	**280**	*e*P	**P**	**19 47 44.7**	**+0.4**
KLBR	**Kellerberrin**	**37.14**	**223**	*e*P	**P**	**19 47 47.5**	**-0.5**
	comp=Z,23nm,1.3s,mb4.8						
NWAO	**Narrogin (SRO)**	**38.31**	**221**	LR	LR	20 05 21.3	
	comp=Z,206nm,20.9s,baz=248,slow=39						
MUN	**Mundaring**	**38.42**	**223**	*e*P	**P**	**19 47 59.1**	**+0.2**
MJAR	**Matsushiro Arr**	**42.72**	**350**	P	**P**	**19 48 33.1**	**-1.2**
	comp=Z,1.4nm,0.6s,mb3.9,baz=173,slow=8.0,SNR=7.1						
MJAR				LR	LR	20 03 19.2	
	comp=Z,59nm,21.6s,baz=235,slow=32						
KGM	**Kluang**	**43.66**	**279**	P	**P**	**19 48 43.0**	**+1.2**
SSE	**Sheshan**	**43.80**	**328**	*e*P	**P**	**19 48 41.5**	**-1.5**
SSE				AMB	AMB		
	comp=Z,21nm,0.9s,mb4.9						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
NJ2	**Nanjing**	**45.79**	**327**	*e*P	**P**	**19 48 59.3**	**+0.5**
NJ2				AP	pP	19 49 18.0	+3.4
NJ2				XP	sP	19 49 26.8	+5.1
NJ2				PP	PP	19 50 48.8	+1.8
NJ2				S	**S**	**19 55 35.0**	**-3.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,180nm,3.7s						
NJ2				LR	LR		
	comp=N,110nm,17.3s						
NJ2				LR	LR		
	comp=E,190nm,15.4s						
NJ2				LR	LR		
	comp=Z,100nm,19.4s						
IPM	**Ipoh**	**46.38**	**282**	P	**P**	**19 49 04.0**	**+0.5**
KULM	**Kulim**	**46.92**	**283**	*e*P	**P**	**19 49 07.9**	**+0.2**
KMI	**Kunming**	**52.31**	**308**	P	**P**	**19 49 50.5**	**+1.8**
KMI				AP	pP	19 50 07.3	+2.5
KMI				PP	PP	19 51 52.5	+4.8
KMI				S	**S**	**19 57 12.8**	**+3.3**
KMI				XS	sS	19 57 45.0	+8.3
KMI				SS	SS	20 00 47.5	-0.3
KMI				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.4						
KMI				AMB	AMB		
	comp=Z,77nm,4.3s						
KMI				LR	LR		
	comp=N,62nm,18.6s						
KMI				LR	LR		
	comp=E,89nm,17.9s						
KMI				LR	LR		
	comp=Z,70nm,21.8s						
CHTO	**Chiang Mai**	**52.69**	**299**	*e*P	**P**	**19 49 51.7**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.3						
CHTO	**Chiang Mai**	**52.69**	**299**	*e*P	**P**	**19 49 51.7**	**+0.3**
	comp=Z,1.5nm,0.5s,mb4.2						
XAN	**Xi'an**	**53.06**	**321**	P	**P**	**19 49 54.0**	**-0.2**
XAN				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.5						
BJI	**Beijing**	**53.34**	**331**	*e*P	**P**	**19 49 55.8**	**-0.5**
BJI				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.8						
CD2	**Chengdu**	**54.62**	**314**	*e*P	**P**	**19 50 06.0**	**+0.4**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
HABR	**Khabarovsk**	**54.86**	**351**	*e*P	**P**	**19 50 06.6**	**-0.8**
HHC	**Hu-ho-hao-te**	**56.26**	**329**	*e*P	**P**	**19 50 19.0**	**+1.7**
HHC				AP	pP	19 50 35.0	+1.4
HHC				PCP	PcP	19 51 15.3	+1.1
HHC				PP	PP	19 52 26.5	+3.4
HHC				PCS	PcS	19 55 14.3	-0.5
HHC				S	**S**	**19 58 03.0**	**+0.4**
HHC				SS	SS	20 01 51.0	+1.1
HHC				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,57nm,5.0s						
HHC				LR	LR		
	comp=N,68nm,23.7s						
HHC				LR	LR		
	comp=E,98nm,22.8s						
HHC				LR	LR		
	comp=Z,51nm,21.8s						
LZH	**Lanzhou**	**57.58**	**320**	*e*P	**P**	**19 50 27.5**	**+0.8**
LZH				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
GTA	**Gaotai**	**62.11**	**320**	*e*P	**P**	**19 50 58.8**	**+1.0**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.7						
ULN	**Ulaanbaatar**	**63.55**	**332**	*e*P	**P**	**19 51 07.3**	**-0.1**
ULN				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
ULN	**Ulaanbaatar**	**63.55**	**332**	*e*P	**P**	**19 51 07.3**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.2						
LSA	**Lhasa**	**63.56**	**307**	P	**P**	**19 51 08.5**	**+1.1**
SONM	**Songino Array**	**63.84**	**331**	P	**P**	**19 51 09.4**	**+0.1**
	comp=Z,2.4nm,0.9s,mb4.2,baz=157,slow=5.7,SNR=13						
SONM				LR	LR	20 18 22.8	
	comp=Z,37nm,18.1s,baz=238,slow=36						
CASY	**Casey**	**65.36**	**195**	*e*P	**P**	**19 51 18.9**	**-0.3**
ZAK	**Zakamensk**	**67.08**	**332**	*e*P	**P**	**19 51 30.1**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
GUN	**Gumba**	**67.17**	**303**	*e*P	**P**	**19 51 31.0**	**+0.2**
KKN	**Kakani**	**67.63**	**303**	*e*P	**P**	**19 51 33.5**	**-0.2**
	comp=Z,13nm,0.9s,mb5.0						
KKN	**Kakani**	**67.63**	**303**	*e*P	**P**	**19 51 33.5**	**-0.2**
KKN				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
DMN	**Daman**	**67.72**	**303**	*e*P	**P**	**19 51 34.8**	**+0.6**
	comp=Z,20nm,0.9s,mb5.1						
GKN	**Gorkha**	**68.24**	**303**	*e*P	**P**	**19 51 37.8**	**+0.3**
	comp=Z,9.5nm,0.6s,mb5.0						
BOD	**Bodaibo**	**68.51**	**342**	*i*P	**P**	**19 51 38.4**	**-0.8**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KOLN	**Koldanda**	**69.03**	**302**	*e*P	**P**	**19 51 43.7**	**+1.3**
MIR	**Mirnyy**	**70.83**	**200**	*d*iP	**P**	**19 51 55.0**	**+1.6**
MIR				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
VNDA	**Vanda**	**72.23**	**176**	P	**P**	**19 52 01.9**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.3,baz=324,slow=6.6,SNR=17						
VNDA	**Vanda**	**72.23**	**176**	*e*P	**P**	**19 52 01.6**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**72.23**	**176**	*e*P	**P**	**19 52 01.6**	**-0.2**
	comp=Z,3.0nm,0.8s,mb4.3						
BILL	**Bilibino**	**74.92**	**8**	*e*P	**P**	**19 52 18.1**	**+0.5**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s						
MKAR	**Makanchi Array**	**76.87**	**321**	P	**P**	**19 52 28.2**	**-0.6**
	comp=Z,1.3nm,0.5s,mb4.2,baz=93,slow=7.8,SNR=20						
ZAL	**Zalesovo**	**78.44**	**328**	P	**P**	**19 52 35.6**	**-1.9**
	comp=Z,1.5nm,0.5s,mb4.2,baz=354,slow=8.6,SNR=7.4						
ZAL				LR	LR	20 27 03.8	
	comp=Z,38nm,21.3s,baz=134,slow=36						
SVW2	**Sparrevohn**	**80.26**	**25**	*e*P	**P**	**19 52 48.2**	**+0.8**
AAK	**Ala-Archa**	**80.68**	**315**	*e*P	**P**	**19 52 48.8**	**-0.9**
AAK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
MAW	**Mawson**	**82.26**	**203**	*e*P	**P**	**19 52 57.8**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.3						
MAW	**Mawson**	**82.26**	**203**	P	**P**	**19 52 58.0**	**0.0**
	comp=Z,4.5nm,0.8s,mb4.4,baz=54,slow=5.8,SNR=13						
MAW	**Mawson**	**82.26**	**203**	*e*P	**P**	**19 52 57.8**	**-0.2**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SLKM	**Skilak Lake**	**82.28**	**27**	*e*P	**P**	**19 52 57.1**	**-1.0**
QSPA	**South Pole Qui**	**84.25**	**180**	*e*P	**P**	**19 53 07.8**	**-0.4**
	comp=Z,7.2nm,1.0s,mb4.8						
COLA	**College**	**85.14**	**23**	*e*P	**P**	**19 53 13.1**	**+0.4**
COLA	**College**	**85.14**	**23**	*e*P	**P**	**19 53 10.7**	**-2.0**
	comp=Z,4.8nm,0.6s,mb4.8						
CHKZ	**Chkalovo**	**86.20**	**325**	*e*P	**P**	**19 53 15.7**	**-2.3**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5						
CHKZ	**Chkalovo**	**86.20**	**325**	*e*P	**P**	**19 53 15.7**	**-2.3**
	comp=Z,1.9nm,0.6s,mb4.5						
BRVK	**Borovoye**	**86.23**	**324**	*e*P	**P**	**19 53 16.0**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb4.0						
BRVK	**Borovoye**	**86.23**	**324**	*e*P	**P**	**19 53 16.0**	**-2.2**
	comp=Z,1.4nm,0.9s,mb4.2						
SYO	**Syowa Base**	**90.64**	**200**	*i*P	**P**	**19 53 38.4**	**-0.6**
NVAR	**Mina Array Bea**	**97.70**	**52**	P	**P**	**19 54 12.9**	**+1.5**
	comp=Z,0.8nm,0.8s,mb4.3,baz=244,slow=5.6,SNR=6.7						
KIV	**Kislovodsk**	**103.78**	**314**	*i*eP	Pdif	19 54 37.0	-1.5
KIV				*e*		19 58 53.8	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.2s						
PDAR	**Pinedale Array**	**104.20**	**47**	Pdiff	Pdif	19 54 41.1	+0.7
	comp=Z,0.3nm,0.6s,baz=298,slow=3.8,SNR=3.9						
ARCES	**ARCESS Array B**	**105.79**	**342**	Pdiff	Pdif	19 54 45.7	-1.7
	comp=Z,0.6nm,0.7s,baz=72,slow=8.6,SNR=3.9						
ARCES	**ARCESS Array B**	**105.79**	**342**	Pdif	Pdif	19 54 45.7	-1.7
OBN	**Obninsk**	**105.93**	**326**	*i*eP	Pdif	19 54 46.3	-1.8
OBN				*e*		19 59 10.7	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PLCA	**Paso Flores**	**122.71**	**147**	PKP	PKPdf	19 59 32.9	+0.8
	comp=Z,2.6nm,0.6s,baz=227,slow=5.0,SNR=7.5						
LPAZ	**La Paz**	**139.48**	**123**	PKhKP		19 59 56.7	
	comp=Z,0.9nm,0.6s,baz=34,slow=2.1,SNR=5.6						
LPAZ	**La Paz**	**139.48**	**123**	PKP	PKPdf	19 59 56.7	-7.0
CPUP	**Villa Florida**	**140.73**	**145**	PKhKP		19 59 58.4	
	comp=Z,0.5nm,0.4s,baz=198,slow=4.5,SNR=3.1						
TOA0	**Torodi Ar. Sit**	**144.40**	**285**	*e*PKP	PKPdf	20 00 11.1	-1.4
TORD	**Torodi Ar. Bea**	**144.40**	**285**	PKP	PKPdf	20 00 11.4	-1.1
	comp=Z,3.5nm,0.4s,baz=63,slow=3.7,SNR=78						
SAML	**Samuel**	**147.15**	**116**	*e*PKPbc	PKPbc	20 00 19.5	+0.1
DBIC	**Dimbokro**	**151.36**	**273**	PKPbc	PKPbc	20 00 30.7	+0.7
	comp=Z,6.9nm,0.5s,baz=54,slow=2.7,SNR=40						
BDFB	**Brasilia**	**154.45**	**146**	PKPbc	PKPbc	20 00 38.1	+1.2
	comp=Z,8.3nm,0.5s,baz=218,slow=1.4,SNR=11						

CSEM ***27*** *19:54:39.8±0.3,3595N×2083E,h2km,MD3.4,Error ellipse: s-maj=10.3km s-min=3.3km az=74.0*

ISCJB ***27*** *19:54:41.5±1.1,3598N±005×210E±02,h10km,Error ellipse: s-maj=18.3km s-min=6.1km az=147.3*

HLW ***27*** *19:54:45.9,3610N×2123E,h33km,Mb2.7*

ATH ***27*** *19:54:54.0,3653N×2180E,h30km,MD3.4/3*

ISC 27 19:54:43.7±3.5,3605N±007×211E±02,h7km±28km,n14, σ0:62/18,1C,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**1.31**	**30**	*i*PN	**Pn**	**19 55 07.3**	**-1.2**
KYTH	**Kithira**	**1.58**	**81**	*e*PN	**Pn**	**19 55 13.5**	**+1.3**
VLI	**Veliai**	**1.62**	**65**	*e*PN	**Pn**	**19 55 12.8**	**0.0**
VLI				*e*SN	**Sn**	**19 55 25.6**	**-8.3**
KARN	**Karanos**	**2.38**	**105**	*e*P	**Pn**	**19 55 23.1**	**-0.1**
LKD	**Levkas**	**2.68**	**352**	*e*P	**Pn**	**19 55 27.6**	**+0.3**
LKD				*e*S	**Sn**	**19 56 00.7**	**+0.6**
AGG	**Agios Georgios**	**3.13**	**18**	*e*P	**Pn**	**19 55 34.2**	**+0.7**
AGG				*e*S	**Sn**	**19 56 10.4**	**-0.6**
MEV	**Metsovon**	**3.73**	**1**	*e*P	**Pn**	**19 55 41.3**	**-0.5**
LIT	**Litokhoron**	**4.19**	**15**	*e*P	**Pn**	**19 55 49.0**	**+0.9**
FNA	**Florina**	**4.74**	**2**	*e*P	**Pn**	**19 55 55.3**	**-0.3**
GRG	**Griva**	**5.01**	**11**	*e*P	**Pn**	**19 55 58.9**	**-0.4**
KNT	**Kendrikon**	**5.30**	**15**	*e*P	**Pn**	**19 56 03.0**	**-0.3**
HMAT	**Matruh**	**7.03**	**133**	P	**Pn**	**19 56 26.5**	**-0.5**
HMAT				S	**Sn**	**19 57 40.1**	**-7.0**
SWA2		**7.71**	**150**	P	**Pn**	**19 56 36.6**	**+0.2**
SWA1		**7.80**	**149**	P	**Pn**	**19 56 37.4**	**-0.2**

WEL 27 20:14:03.4±0.4,3513S×17823E,h33km,ML3.6/3,Error ellipse: s-maj=6.4km s-min=2.6km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.43**	**179**	*e*P*	Pb	20 14 41.0	-5.4
MXZ				S*	Sb	20 15 09.1	-6.9
PUZ	**Puketiti**	**2.94**	**180**	PN	Pn	20 14 47.0	-0.8
PUZ				*e*SN	Sn	20 15 18.8	-3.0
MWZ	**Matawai**	**3.25**	**190**	P*	Pb	20 14 52.6	-7.8
MWZ				*e*S*	Sb	20 15 29.4	-10
URZ	**Urewera**	**3.25**	**196**	*e*P*	Pb	20 14 52.3	-8.1
URZ				S*	Sb	20 15 30.3	-9.3

MAN 27 20:16:22.7,899N×12525E,h11km,mb1.7,ML3.5,MS0.1, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.37**	**93**	*e*P	Pg	20 16 30.8	+0.8
BUTP				*e*S	Sg	20 16 41.8	+6.8
SCPH	**Surigao**	**0.82**	**17**	*i*eP	Pg	20 16 38.3	-0.3
BUKP	**Musuan**	**1.12**	**190**	*e*P	Pb	20 16 43.0	-1.0
GUIM	**Jordan**	**3.09**	**302**	*e*P	Sb	20 17 59.5	+4.2

NIED ***27*** *20:25:00,4400N×14790E,h44km,Mw3.3 Best double couple: M0:9.36000×10^13 NP1:φs187.00000°,δ90.00000°, λ-59.00000°. NP2:φs278.00000°,δ31.00000°, λ-179.00000°.*

JMA 27 20:25:19.5±0.2,4395N×14785E,h0km,M4.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.64**	**250**	P	Pn	20 25 49.8	+0.3
NEM2				*e*S	Sn	20 26 12.0	+0.7
JRA	**Rausu**	**1.97**	**271**	P	Pn	20 25 54.6	+0.5
JRA				*e*S	Sn	20 26 20.5	+1.0
JNK	**Nakash**	**2.30**	**262**	P	Pn	20 25 59.3	+0.7
JNK				*e*S	Sn	20 26 28.8	+1.2
JAK	**Akkeshi**	**2.49**	**249**	P	Pn	20 26 02.0	+0.8
JAK				*e*S	Sn	20 26 33.6	+1.4
JTKR	**Abashiri--Toko**	**2.85**	**272**	P	Pn	20 26 07.9	+1.7
JAR	**Ashorobuto**	**3.03**	**259**	P	Pn	20 26 10.1	+1.4
JAR				*e*S	Sn	20 26 47.7	+1.9
JOB	**Onbets**	**3.11**	**252**	P	Pn	20 26 11.1	+1.4
JMP	**Maruseppu**	**3.24**	**273**	P	Pn	20 26 13.1	+1.5
JCH	**Churui**	**3.54**	**249**	*e*S	Sn	20 26 59.7	+1.5
JNBK	**Urakawa-nobuka**	**4.09**	**248**	P	Pn	20 26 25.2	+2.0

NEIC ***27*** *20:39:37.1±0.6,605N×9387E,h30km,mb4.2/5,Error ellipse: s-maj=25.2km s-min=6.9km az=49.0*

IDC ***27*** *20:39:41.6±7.3,621N×9407E,h67km±53km,mb3.6/8, mb1 3.8/9,mb1mx3.4/24,mbtmp3.9/9,ML3.7/1,MS2.7/1, Ms1 2.7/1,ms1mx2.1/29,Error ellipse: s-maj=143.2km s-min=15.5km az=54.0*

ISCJB ***27*** *20:39:45.0±2.4,66N±01×946E±02,h103km±20km, mb3.9/11,Error ellipse: s-maj=31.7km s-min=11.6km az=108.7*

ISC 27 20:39:46.0±2.2,66N±01×945E±02,h94km±18km,n19, σ0:62/21,mb3.9/11,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**5.76**	**130**	P	**Pn**	**20 41 08.2**	**-0.7**
	2.1nm,0.3s,baz=314,slow=9.9,SNR=14						
PSI				S	**Sn**	**20 42 14.8**	**+1.2**
	2.1nm,0.3s,baz=130,slow=13,SNR=4.2						
PSI				LR	LR	20 43 42.4	
	comp=Z,70nm,19.9s,baz=301,slow=40						
KULM	**Kulim**	**6.21**	**102**	*e*Pn	**Pn**	**20 41 14.8**	**-0.3**
KULM				*e*Sn	**Sn**	**20 42 24.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**39.29**	**129**	*e*P	**P**	**20 47 04.8**	**-0.7**
	5.9nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**39.29**	**129**	P	**P**	**20 47 04.8**	**-0.7**
	3.4nm,0.7s,mb4.3,baz=316,slow=7.0,SNR=24						
MKAR	**Makanchi Array**	**41.43**	**347**	P	**P**	**20 47 23.8**	**+0.6**
	0.4nm,0.5s,mb3.5,baz=184,slow=9.1,SNR=6.0						
WRA	**Warramunga Arr**	**47.20**	**125**	P	**P**	**20 48 09.2**	**+0.1**
	2.8nm,0.6s,mb4.2,baz=305,slow=9.1,SNR=20						
WRAB	**Tennant Creek**	**47.20**	**125**	*e*P	**P**	**20 48 09.4**	**+0.2**
	4.8nm,0.6s,mb4.4						
WRAB				*e*	pP	20 48 27.0	-4.6
WB2	**Warramunga Arr**	**47.21**	**125**	*e*P	**P**	**20 48 09.2**	**0.0**
ASPA	**Alice Springs**	**48.79**	**129**	*e*P	**P**	**20 48 21.4**	**0.0**
AS31	**Alice Springs**	**48.79**	**129**	*e*P	**P**	**20 48 21.4**	**0.0**
ASAR	**Alice Springs**	**48.79**	**129**	P	**P**	**20 48 21.4**	**0.0**
	1.7nm,0.6s,mb4.2,baz=300,slow=7.9,SNR=43						
BVAR	**Borovoye Array**	**50.33**	**341**	P	**P**	**20 48 32.4**	**-0.7**
	0.4nm,0.6s,mb3.5,baz=134,slow=8.0,SNR=3.2						
BRVK	**Borovoye**	**50.40**	**341**	P	**P**	**20 48 34.6**	**+1.0**
ZRNK	**Zerenda**	**50.72**	**340**	*e*P	**P**	**20 48 36.2**	**+0.1**
	0.5nm,0.4s,mb3.9						
CHKZ	**Chkalovo**	**50.82**	**342**	*e*P	**P**	**20 48 37.2**	**+0.5**
	0.8nm,0.3s,mb4.2						
STKA	**Stephens Creek**	**58.93**	**133**	*e*P	**P**	**20 49 35.3**	**0.0**
	1.6nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**58.93**	**133**	P	**P**	**20 49 34.9**	**-0.4**
	1.5nm,0.9s,mb4.0,baz=319,slow=7.7,SNR=4.2						
FINES	**FINESS Array B**	**74.03**	**332**	P	**P**	**20 51 09.9**	**-1.5**
	1.0nm,0.8s,mb3.6,baz=116,slow=4.4,SNR=6.1						
ARCES	**ARCESS Array B**	**76.61**	**340**	P	**P**	**20 51 26.8**	**+0.6**
	0.5nm,0.6s,mb3.4,baz=93,slow=7.5,SNR=4.2						

IDC ***27*** *20:47:12.8±0.7,962S×10728E,h0km,mb4.2/12, mb1 4.3/13,mb1mx4.2/21,mbtmp4.3/13,ML4.0/1,MS3.5/8, Ms1 3.5/8,ms1mx3.2/

KMI					AMB	AMB			
	comp=Z,6.0nm,1.4s,mb4.3								
KMI					LR	LR			
	comp=N,121nm,12.2s,MS3.9								
KMI					LR	LR			
	comp=E,116nm,15.5s,MS3.9								
KMI					LR	LR			
	comp=Z,111nm,15.5s,MS3.7								
STKA	**Stephens Creek**	**38.72**	**130**	*e*P	**P**		**20 54 38.9**	**-0.1**	
	comp=Z,6.9nm,0.8s,mb4.4								
STKA	**Stephens Creek**	**38.72**	**130**	P	**P**		**20 54 38.5**	**-0.5**	
	comp=Z,7.9nm,0.7s,mb4.5,baz=300,slow=8.9,SNR=22								
STKA					LR	LR	21 10 15.3		
	comp=Z,91nm,18.9s,MS3.6,baz=23,slow=36								
CTA	**Charters Tower**	**38.98**	**110**	*e*P	**P**		**20 54 43.0**	**+1.8**	
	comp=Z,3.0nm,0.8s,mb4.1								
CTA	**Charters Tower**	**38.98**	**110**	P	**P**		**20 54 42.8**	**+1.6**	
	comp=Z,3.1nm,0.7s,mb4.2,baz=274,slow=13,SNR=5.1								
CTA					LR	LR	21 10 55.9		
	comp=Z,80nm,20.3s,MS3.5,baz=116,slow=36								
CTAO	**Charters Tower**	**38.98**	**110**	*e*P	**P**		**20 54 43.0**	**+1.9**	
	comp=Z,3.4nm,0.6s,mb4.2								
CD2	**Chengdu**	**40.43**	**355**	*e*P	**P**		**20 54 54.8**	**+1.6**	
CD2					AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.7								
LSA	**Lhasa**	**42.06**	**339**	P	**P**		**20 55 08.5**	**+1.9**	
PKI	**Pulchoki**	**42.61**	**331**	*e*P	**P**		**20 55 10.3**	**-0.8**	
GUN	**Gumba**	**42.67**	**332**	*e*P	**P**		**20 55 12.8**	**+1.2**	
DMN	**Daman**	**42.79**	**330**	*e*P	**P**		**20 55 11.2**	**-1.3**	
	comp=Z,17nm,0.8s,mb4.8								
KKN	**Kakani**	**42.86**	**331**	*e*P	**P**		**20 55 13.0**	**-0.1**	
	comp=Z,16nm,0.8s,mb4.8								
NJ2	**Nanjing**	**42.88**	**14**	*e*P	**P**		**20 55 11.3**	**-1.9**	
NJ2					AMB	AMB			
	comp=Z,10.0nm,0.5s,mb4.8								
GKN	**Gorkha**	**43.34**	**330**	*e*P	**P**		**20 55 17.9**	**+0.9**	
	comp=Z,4.7nm,0.4s,mb4.6								
XAN	**Xi'an**	**43.44**	**2**	P	**P**		**20 55 17.8**	**0.0**	
XAN					AP	pP	20 55 23.3	-4.0	
XAN					AMB	AMB			
	comp=Z,10.0nm,1.1s,mb4.5								
KOLN	**Koldanda**	**43.67**	**329**	*e*P	**P**		**20 55 20.6**	**+0.9**	
	comp=Z,23nm,0.7s,mb5.0								
GTA	**Gaotai**	**49.26**	**352**	*e*P	**P**		**20 56 05.0**	**+1.5**	
GTA					AP	pP	20 56 12.3	-0.9	
GTA					XP	sP	20 56 16.0	-1.0	
GTA					AMB	AMB			
	comp=Z,5.0nm,1.4s,mb4.3								
HHC	**Hu-ho-hao-te**	**50.36**	**4**	*e*P	**P**		**20 56 13.5**	**+1.6**	
HHC					AP	pP	20 56 18.0	-3.6	
HHC					XP	sP	20 56 20.5	-4.9	
HHC					PCP	PcP	20 57 33.0	+2.9	
HHC					PP	PP	20 58 08.8	+1.3	
HHC					SCP	ScP	21 01 28.8	+5.2	
HHC					PCS	PcS	21 01 29.5	+2.2	
HHC					S	**S**	**21 03 21.3**	**-1.5**	
HHC					SCS	ScS	21 06 02.0	+1.5	
HHC					AMB	AMB			
	comp=Z,11nm,1.0s,mb4.8								
HHC					AMB	AMB			
	comp=Z,72nm,5.2s								
HHC					LR	LR			
	comp=N,134nm,19.0s,MS4.1								
HHC					LR	LR			
	comp=E,123nm,21.8s,MS4.1								
HHC					LR	LR			
	comp=Z,61nm,22.8s,MS3.5								
HNR	**Honiara**	**51.89**	**94**	*e*P	**P**		**20 56 22.2**	**-1.1**	
MJAR	**Matsushiro Arr**	**54.34**	**31**	P	**P**		**20 56 39.7**	**-1.7**	
	comp=Z,1.1nm,0.6s,mb4.0,baz=213,slow=7.3,SNR=5.9								
SONM	**Songino Array**	**57.20**	**359**	P	**P**		**20 57 02.8**	**+1.0**	
	comp=Z,1.6nm,0.7s,mb4.2,baz=175,slow=7.8,SNR=18								
ULN	**Ulaanbaatar**	**57.22**	**360**	*e*P	**P**		**20 57 02.9**	**+0.9**	
	comp=Z,2.1nm,0.6s,mb4.3								
MDJ	**Mudanjiang**	**57.62**	**19**	P	**P**		**20 57 04.3**	**-0.6**	
MDJ					AMB	AMB			
	comp=Z,10.0nm,1.4s,mb4.7								
MDJ					AMB	AMB			
	comp=Z,79nm,3.4s								
MKAR	**Makanchi Array**	**60.43**	**340**	P	**P**		**20 57 24.6**	**+0.3**	
	comp=Z,4.6nm,0.6s,mb4.7,baz=134,slow=6.9,SNR=26								
ASAJ	**Asahikawa**	**62.32**	**28**	LR	LR		21 26 02.8		
	comp=Z,22nm,18.9s,MS3.4,baz=7.8,slow=37								
MAW	**Mawson**	**64.97**	**197**	P	**P**		**20 57 53.9**	**-0.7**	
	comp=Z,3.1nm,0.7s,mb4.5,baz=32,slow=6.1,SNR=11								
ZAL	**Zalesovo**	**66.11**	**346**	P	**P**		**20 58 00.8**	**-1.2**	
	comp=Z,0.8nm,0.4s,mb4.2,baz=324,slow=4.7,SNR=2.6								
BVAR	**Borovoye Array**	**69.87**	**337**	P	**P**		**20 58 25.6**	**+0.1**	
	comp=Z,4.4nm,0.7s,mb4.5,baz=128,slow=9.6,SNR=14								
BRVK	**Borovoye**	**69.94**	**337**	*e*P	**P**		**20 58 26.2**	**+0.2**	
	comp=Z,2.0nm,0.6s,mb4.2								
CHKZ	**Chkalovo**	**70.29**	**338**	*e*P	**P**		**20 58 28.2**	**0.0**	
	comp=Z,6.7nm,0.7s,mb4.7								
CHKZ				*e*			20 58 32.9		
ZRNK	**Zerenda**	**70.35**	**337**	*e*P	**P**		**20 58 28.2**	**-0.3**	
	comp=Z,5.1nm,0.9s,mb4.5								
VNDA	**Vanda**	**73.36**	**169**	*e*P	**P**		**20 58 54.0**	**+7.4**	
BOSA	**Boshof**	**78.51**	**243**	LR	LR		21 29 02.2		
	comp=Z,110nm,18.3s,MS4.2,baz=274,slow=32								
BRTR	**Keskin Array B**	**83.77**	**312**	P	**P**		**20 59 44.3**	**+0.4**	
	comp=Z,0.5nm,0.6s,mb3.8,baz=133,slow=7.4,SNR=3.8								
WMOK	**Wichita Mounta**	**145.45**	**40**	*e*PKPdf	PKPdf		21 06 54.5	+1.8	
MIAR	**Mount Ida**	**148.68**	**34**	*e*PKPdf	PKPdf		21 07 01.5	+3.5	
WVT	**Waverly**	**150.24**	**25**	*e*PKPdf	PKPdf		21 07 05.3	+4.8	
PLAL	**Pickwick Lake**	**151.10**	**27**	*e*PKPdf	PKPdf		21 07 07.2	+5.3	

MOS 27 20:52:10.7±0.4, 4310N×4387E, h13km, mb3.5/1, 4C-2D, Error ellipse: s-maj=23.0km s-min=18.2km az=60.6, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KORR	**Kora**	**0.14**	**96**	↑	*i*PG	Pg	20 52 15.5	+1.2
DIGR	**Digorskoe uzhe**	**0.29**	**227**	↑	*i*PG	Pg	20 52 18.3	+1.5
DIGR					*e*S	Sg	20 52 22.6	+1.8
ARNR	**Ardon**	**0.31**	**74**	↓	*i*PG	Pg	20 52 18.6	+1.5
ARNR					*i* S	Sg	20 52 23.1	+1.7
ZEI	**Tsey**	**0.33**	**177**	↓	*i*PG	Pg	20 52 18.7	+1.2
ZEI					*e*S	Sg	20 52 23.2	+1.2
KMSR	**Komsomolskaya**	**0.41**	**49**	↑	*i*PG	Pg	20 52 20.5	+1.7
KMSR					*e*S	Sg	20 52 26.3	+2.0
LACR	**Lac**	**0.42**	**131**	↑	*i*PG	Pg	20 52 20.7	+1.7
LACR					*i* S	Sg	20 52 26.6	+2.0

*IDC **27** 20:56:11.0±0.7, 5160N×17776W, h0km, mb3.9/14, mb1 4.1/15, mb1mx3.9/27, mbtmp3.9/15, MS3.2/1, Ms1 3.2/1, ms1mx2.3/25, Error ellipse: s-maj=25.4km s-min=13.7km az=154.0*

*NEIC **27** 20:56:17.3, 5136N×17761W, h39km, ML3.7(AEIC), After AEIC.*

*ISCJB **27** 20:56:18.1±0.8, 518N±0.1×17767W±0.09, h66km±9km, mb3.7/14, Error ellipse: s-maj=22.4km s-min=6.3km az=143.6*

ISC 27 20:56:18.7±0.8, 518N±0.1×17767W±0.09, h58km±8km, n21, σ1§14/23, mb3.8/14, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AMKA	**Amchitka**	**1.93**	**260**	P		**Pn**	**20 56 48.2**	**-0.9**
AMKA				S		**Sn**	**20 57 13.2**	**+0.9**
ATKA	**Atka Island**	**2.19**	**77**	P		**Pn**	**20 56 53.1**	**+0.4**
ATKA				S		**Sn**	**20 57 19.6**	**+0.8**
KDAK	**Kodiak Island**	**15.63**	**57**	Pn		**Pn**	**20 59 53.5**	**-1.7**
	1.4nm,0.3s,baz=295,slow=12,SNR=12							
KDAK				Sn		**Sn**	**21 02 44.4**	**-2.9**
	0.3nm,0.3s,baz=126,slow=9.7,SNR=1.9							
TTA	**Tatalina**	**16.08**	**38**	*e*Pn		**Pn**	**20 59 59.3**	**-1.7**
SLKM	**Skilak Lake**	**17.51**	**49**	Pn		**Pn**	**21 00 20.4**	**+1.7**
INK	**Inuvik**	**26.75**	**35**	P		**P**	**21 01 53.8**	**+1.0**
	0.6nm,0.4s,mb3.4,baz=246,slow=10.0,SNR=2.3							
ASAJ	**Asahikawa**	**27.42**	**270**	P		**P**	**21 01 59.1**	**+0.4**
	5.1nm,0.9s,mb4.1,baz=100,slow=11,SNR=3.5							
YKA	**Yellowknife Ar**	**34.46**	**47**	P		**P**	**21 03 00.0**	**-0.8**
	0.3nm,0.5s,mb3.5,baz=288,slow=9.3,SNR=4.2							
YKA	**Yellowknife Ar**	**34.46**	**47**	P		**P**	**21 03 00.0**	**-0.8**
MJAR	**Matsushiro Arr**	**34.54**	**261**	P		**P**	**21 03 00.3**	**-1.2**
	0.3nm,0.4s,mb3.6,baz=44,slow=7.5,SNR=5.0							
NEW	**Newport**	**38.09**	**71**	P		**P**	**21 03 32.9**	**+1.1**
	4.3nm,0.5s,mb4.5,baz=301,slow=7.2,SNR=11							
PDAR	**Pinedale Array**	**45.52**	**73**	P		**P**	**21 04 33.4**	**+1.0**
	3.7nm,0.6s,mb4.5,baz=317,slow=4.0,SNR=34							
SONM	**Songino Array**	**47.11**	**297**	P		**P**	**21 04 46.4**	**+1.6**
	0.2nm,0.5s,mb3.3,baz=71,slow=9.0,SNR=2.7							
SONM				PcP		PcP	21 06 16.1	+0.3
	1.0nm,0.6s,baz=65,slow=2.4,SNR=10							
ARCES	**ARCESS Array B**	**57.84**	**351**	P		**P**	**21 06 05.1**	**+0.9**
	1.4nm,0.8s,mb4.0,baz=24,slow=7.0,SNR=4.9							
BVAR	**Borovoye Array**	**61.06**	**320**	P		**P**	**21 06 25.1**	**-1.3**
	0.3nm,0.3s,mb3.9,baz=45,slow=8.4,SNR=4.7							
FINES	**FINESS Array B**	**65.57**	**348**	P		**P**	**21 06 57.0**	**+0.8**
	0.4nm,0.7s,mb3.6,baz=46,slow=6.0,SNR=3.7							
NOA	**NORSAR Array B**	**67.33**	**355**	P		**P**	**21 07 07.4**	**-0.1**
	0.4nm,0.7s,mb3.5,baz=9.1,slow=5.0,SNR=2.7							
WRA	**Warramunga Arr**	**82.78**	**225**	P		**P**	**21 08 35.0**	**-1.4**
	0.5nm,0.7s,mb3.6,baz=34,slow=5.9,SNR=4.6							
FITZ	**Fitzroy Crossi**	**85.25**	**233**	P		**P**	**21 08 49.1**	**+0.1**
	1.4nm,0.6s,mb4.2,baz=3.1,slow=9.8,SNR=11							
ASAR	**Alice Springs**	**86.24**	**223**	P		**P**	**21 08 53.4**	**-0.5**
	0.8nm,0.7s,mb4.0,baz=26,slow=5.4,SNR=12							
BOSA	**Boshof**	**151.23**	**315**	PKPbc		PKPbc	21 16 05.2	-0.3
	2.5nm,0.5s,baz=20,slow=2.0,SNR=12							

*NEIC **27** 21:17:25.9, 5089N×17803W, h10km, mb3.6/1, ML3.4(AEIC), After AEIC.*

*IDC **27** 21:17:27.0±3.1, 5196N×17779W, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/21, mbtmp3.8/6, ML3.7/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/36, Error ellipse: s-maj=90.6km s-min=26.4km az=0.0*

*ISCJB **27** 21:17:29.4±2.0, 513N±0.3×1780W±0.1, h49km±13km, mb3.8/5, MS3.5/3, Error ellipse: s-maj=56.0km s-min=11.1km az=164.5*

ISC 27 21:17:30.3±2.0, 512N±0.3×1780W±0.1, h46km±13km, n14, σ1§16/12, mb3.8/5, MS3.5/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AMKA	**Amchitka**	**1.71**	**276**	P		**Pn**	**21 17 55.1**	**-2.5**
AMKA				S		**Sn**	**21 18 19.8**	**+1.6**
ATKA	**Atka Island**	**2.55**	**66**	P		**Pn**	**21 18 09.1**	**+0.1**
KDAK	**Kodiak Island**	**16.07**	**56**	Pn		**Pn**	**21 21 05.8**	**-7.2**
	0.3nm,0.3s,baz=262,slow=13,SNR=2.1							
TTA	**Tatalina**	**16.61**	**37**	Pn		**Pn**	**21 21 20.4**	**+0.6**
	4.5nm,0.8s							
ASAJ	**Asahikawa**	**27.22**	**270**	LR		LR	21 35 13.5	
	comp=Z,26nm,18.6s,MS2.8,baz=355,slow=39							
PDAR	**Pinedale Array**	**45.86**	**73**	P		**P**	**21 25 48.9**	**+0.9**
	0.6nm,0.8s,mb3.5,baz=320,slow=4.4,SNR=5.1							
JOW	**Kunigami**	**47.05**	**260**	LR		LR	21 42 16.0	
	comp=Z,210nm,20.6s,MS4.1,baz=274,slow=32							
SONM	**Songino Array**	**47.16**	**297**	P		**P**	**21 25 59.1**	**+1.0**
	1.4nm,0.8s,mb3.9,baz=56,slow=8.9,SNR=12							
ARCES	**ARCESS Array B**	**58.31**	**351**	P		**P**	**21 27 19.3**	**-1.1**
	1.1nm,0.8s,mb3.9,baz=26,slow=9.0,SNR=3.8							
ARCES	**ARCESS Array B**	**58.31**	**351**	P		**P**	**21 27 19.3**	**-1.1**
BVAR	**Borovoye Array**	**61.32**	**320**	LR		LR	21 57 59.5	
	comp=Z,28nm,18.8s,MS3.4,baz=119,slow=40							
AKASG	**Malin Array Be**	**75.83**	**343**	P		**P**	**21 29 10.5**	**-1.0**
	0.3nm,0.3s,mb3.6,baz=19,slow=5.8,SNR=5.5							
AKASG	**Malin Array Be**	**75.83**	**343**	P		**P**	**21 29 10.5**	**-1.0**
BRTR	**Keskin Array B**	**85.28**	**336**	P		**P**	**21 30 02.3**	**+0.2**
	0.6nm,1.0s,mb3.7,baz=29,slow=3.3,SNR=3.4							

TEH 27 21:27:10.7, 3584N×6019E, h2km, Mn3.6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
IMYA	**Miamay**	**0.51**	**352**	*e*Pg		Pg	21 27 19.3	-1.1
IMYA	**Miamay**	**0.51**	**352**	*e*Pg		Pg	21 27 19.5	-0.9
IMYA	**Miamay**	**0.51**	**352**	*e*Pg		Pg	21 27 20.0	-0.4
IMYA				*e*Sg		Sg	21 27 26.8	-0.2
IMOG	**Moghan**	**0.74**	**292**	*e*Pg		Pg	21 27 23.9	-1.0
IMOG	**Moghan**	**0.74**	**292**	*e*Pg		Pg	21 27 23.9	-1.0
IMOG	**Moghan**	**0.74**	**292**	*e*Pg		Pg	21 27 24.1	-0.8
IMOG				*e*Sg		Sg	21 27 34.0	-0.4
IPAY	**Payeh**	**1.14**	**303**	*e*Pg		Pg	21 27 30.5	-2.1
IPAY	**Payeh**	**1.14**	**303**	*e*Pg		Pg	21 27 30.7	-1.9
IPAY	**Payeh**	**1.14**	**303**	*e*Pg		Pg	21 27 30.8	-1.8
IPAY				*e*Sg		Sg	21 27 46.1	-1.3
IQHU	**Quchan**	**1.81**	**313**	*e*Pn		Pn	21 27 42.7	-0.1
IEMG	**Emamqoli**	**2.00**	**322**	*e*Pn		Pn	21 27 45.4	0.0
IEMG	**Emamqoli**	**2.00**	**322**	*e*Pn		Pn	21 27 45.7	+0.3
IEMG	**Emamqoli**	**2.00**	**322**	*e*Pn		Pn	21 27 46.2	+0.8
IEMG				*e*Sn		Sn	21 28 10.7	-0.3
ISHV	**Shirvan**	**2.62**	**311**	*e*Pn		Pn	21 27 54.6	+0.6
ISHV	**Shirvan**	**2.62**	**311**	*e*Pn		Pn	21 27 57.3	+3.3
ISHV	**Shirvan**	**2.62**	**311**	*e*Pn		Pn	21 27 58.0	+4.0
ISHV				*e*Sn		Sn	21 28 25.3	-1.1

*HLW **27** 21:28:33.7, 3474N×2386E, h33km, Mb3.5*

*ISCJB **27** 21:28:36.0±1.7, 3430N±0.04×238E±0.1, h23km±16km, Error ellipse: s-maj=15.2km s-min=7.2km az=161.8*

*CSEM **27** 21:28:36.6±0.3, 3433N×2380E, h30km, MD3.5, Error ellipse: s-maj=9.4km s-min=4.5km az=86.0*

*ATH **27** 21:28:37.7, 3449N×2382E, h29km±2km, MD3.5/8*

*NEIC **27** 21:28:37.7, 3449N×2382E, h29km, MD3.5(ATH), After ATH.*

ISC 27 21:28:37.3±1.6, 3437N±0.04×238E±0.1, h19km±10km, n13, σ0§98/15, 1C, Crete

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GVD	**Gavdhos**	**0.51**	**25**	*e*PB		**Pn**	**21 28 47.0**	**-0.7**
VAM	**Vamos**	**1.08**	**17**	↑	*i*PN	**Pn**	**21 28 56.3**	**-1.1**
VAM				*e*SN		**Sn**	**21 29 10.5**	**-1.3**
XRY	**Khrisi**	**1.62**	**72**	*e*PB		**Pn**	**21 29 05.5**	**+0.6**
NPS	**Neapolis**	**1.72**	**58**	*e*PB		**Pn**	**21 29 07.3**	**+1.0**
KYTH	**Kithira**	**2.01**	**342**	*e*PN		**Pn**	**21 29 10.0**	**-0.2**
VLI	**Veliai**	**2.45**	**343**	*e*PB		**Pn**	**21 29 17.3**	**+1.1**
KARP	**Karpathos**	**2.98**	**66**	*e*Pn		**Pn**	**21 29 24.9**	**+1.3**
KAP	**Karpathos**	**3.00**	**66**	*e*PN		**Pn**	**21 29 24.9**	**+1.1**
ITM	**Ithomi**	**3.19**	**332**	*e*PN		**Pn**	**21 29 26.8**	**+0.3**
SWA1		**5.34**	**162**	P		**Pn**	**21 29 56.2**	**+0.2**
SWA1				S		**Sn**	**21 30 56.4**	**-0.7**
HFRF	**Wahat Farafira**	**8.17**	**151**	P		**Pn**	**21 30 34.5**	**-0.4**
AMAG	**Maghara**	**8.76**	**113**	P		**Pn**	**21 30 40.6**	**-2.4**
HDK1	**Dakhla**	**10.04**	**150**	P		**Pn**	**21 31 01.2**	**+0.7**

*NIED **27** 21:39:00, 2360N×12590E, h8km, Mw4.3 Best double couple: M0 2.67000×10^15 NP1:φs263.00000°, δ70.00000°, λ-78.00000°. NP2:φs52.00000°, δ23.00000°, λ-119.00000°.*

*IDC **27** 21:39:21.8±0.7, 2351N×12607E, h0km, mb4.0/10, mb1 4.1/13, mb1mx4.0/21, mbtmp4.1/13, ML4.2/3, MS3.5/6, Ms1 3.5/6, ms1mx3.0/25, Error ellipse: s-maj=26.3km s-min=14.9km az=77.0*

*BJI **27** 21:39:23.8, 2340N×12580E, h35km, mb3.7, Ms3.6*

*ISCJB **27** 21:39:23.7±0.4, 2362N±0.003×12607E±0.03, h33km, mb4.0/14, MS3.5/6, Error ellipse: s-maj=5.1km s-min=3.7km az=153.3*

*JMA **27** 21:39:25.4±0.3, 2363N×12591E, h86km, M3.9*

*NEIC **27** 21:39:26.9±0.5, 2342N×12581E, h35km, mb4.3/3, Error ellipse: s-maj=17.6km s-min=8.1km az=53.0*

ISC 27 21:39:25.9±0.4, 2365N±0.04×12601E±0.03, h35km, n52, σ1§23/67, mb4.0/14, MS3.5/6, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JOGS	**Gusukube**	**1.23**	**334**	P		**Pn**	**21 39 47.7**	**+1.1**
JOGS				S		**Sn**	**21 40 04.7**	**+2.7**
JMJ	**Miyako jima 2**	**1.33**	**331**	P		**Pn**	**21 39 48.7**	**+0.8**
JMJ				*e*S		**Sn**	**21 40 07.2**	**+2.9**
JTJ	**Tarama**	**1.54**	**310**	P		**Pn**	**21 39 50.9**	**0.0**
JTJ				S		**Sn**	**21 40 09.9**	**+0.2**
JIJ	**Ishigaki jima**	**1.85**	**293**	P		**Pn**	**21 39 54.9**	**-0.1**
JIJ				*e*S		**Sn**	**21 40 16.8**	**-0.3**
JKRS	**Kuro-shima**	**1.92**	**288**	P		**Pn**	**21 39 56.1**	**+0.1**
JKRS				S		**Sn**	**21 40 18.8**	**-0.1**
HATJ	**Hateruma jima**	**2.06**	**282**	P		**Pn**	**21 39 57.9**	**0.0**
HATJ				*e*S		**Sn**	**21 40 20.8**	**-1.5**
IRIF	**Iriomote-Funau**	**2.19**	**289**	P		**Pn**	**21 39 59.7**	**-0.1**
IRIF				*e*S		**Sn**	**21 40 25.1**	**-0.5**
JKE	**Kume jima 2**	**2.75**	**15**	P		**Pn**	**21 40 07.0**	**-0.5**
JKE				*e*S		**Sn**	**21 40 39.2**	**-0.3**
YOJ	**Yonaguni jima**	**2.85**	**287**	P		**Pn**	**21 40 09.0**	**+0.1**
YOJ				*e*S		**Sn**	**21 40 40.2**	**-1.8**
JJT2	**Tamagusuku 2**	**2.94**	**32**	P		**Pn**	**21 40 09.8**	**-0.2**
JAGN	**Aguni-jima**	**3.13**	**21**	P		**Pn**	**21 40 12.2**	**-0.5**
JOW	**Kunigami**	**3.77**	**32**	Pn		**Pn**	**21 40 21.1**	**-0.5**
	47nm,0.3s,baz=188,slow=13,SNR=250							
JOW					Sn	**Sn**	**21 41 01.8**	**-2.9**
	18nm,0.3s,baz=101,slow=28,SNR=7.7							
JOW	**Kunigami**	**3.77**	**32**	P		**Pn**	**21 40 21.0**	**-0.5**
JOW				*e*S		**Sn**	**21 41 03.1**	**-1.6**
JIH	**Iheya**	**3.81**	**27**	P		**Pn**	**21 40 21.4**	**-0.6**
JIH				*e*S		**Sn**	**21 41 03.1**	**-2.4**
NACB	**Ninganchiao**	**4.07**	**278**	*e*Pn		**Pn**	**21 40 24.6**	**-1.1**
NACB				*e*Sn		**Sn**	**21 41 07.0**	**-5.1**
TATO	**Taipei**	**4.33**	**289**	*e*Pn		**Pn**	**21 40 27.7**	**-1.4**
TATO				*e*Sn		**Sn**	**21 41 13.8**	**-4.6**
YHNB	**Yeheng**	**4.35**	**284**	*e*Pn		**Pn**	**21 40 30.0**	**+0.6**
YHNB				*e*Sn		**Sn**	**21 41 16.1**	**-2.8**
JTK	**Tokunoshima**	**4.90**	**32**	P		**Pn**	**21 40 35.7**	**-1.3**
JTK				*e*S		**Sn**	**21 41 27.2**	**-5.2**
JMZ	**Minamidaito 2**	**5.21**	**64**	P		**Pn**	**21 40 38.0**	**-3.2**
JMZ				*e*S		**Sn**	**21 41 32.8**	**-7.3**
JAM	**Amami Oshima**	**5.74**	**34**	P		**Pn**	**21 40 47.4**	**-1.1**
JAM				*e*S		**Sn**	**21 41 47.1**	**-6.0**
JZK	**Kikaishima**	**5.85**	**37**	P		**Pn**	**21 40 49.8**	**-0.3**
JHJ	**Hachijo jima 2**	**15.35**	**49**	Pn		**Pn**	**21 43 01.9**	**+2.1**
	7.0nm,0.3s,baz=213,slow=15,SNR=3.0							
MJAR	**Matsushiro Arr**	**16.61**	**37**	Pn		**Pn**	**21 43 16.4**	**+0.5**
	0.2nm,0.3s,baz=206,slow=16,SNR=3.3							
XAN	**Xi'an**	**18.17**	**309**	P		**Pn**	**21 43 36.3**	**+1.0**
XAN					AMB	AMB		
	comp=Z,4.0nm,0.7s							
ASAJ	**Asahikawa**	**24.53**	**30**	P		**P**	**21 44 44.5**	**+2.4**
	comp=Z,4.6nm,0.5s,mb4.3,baz=182,slow=14,SNR=5.8							
ULN	**Ulaanbaatar**	**28.49**	**333**	P		**P**	**21 45 12.3**	**-5.4**
SONM	**Songino Array**	**28.75**	**332**	P		**P**	**21 45 20.8**	**+0.8**
	comp=Z,0.5nm,0.3s,mb3.7,baz=148,slow=9.8,SNR=5.4							
SONM					LR	LR	21 58 41.5	
	comp=Z,119nm,18.1s,MS3.5,baz=140,slow=40							
TLY	**Talaya**	**32.84**	**334**	*e*P		**P**	**21 45 50.1**	**-6.1**
PMG	**Port Moresby**	**38.82**	**145**	LR		LR	22 00 00.6	
	comp=Z,62nm,21.4s,MS3.4,baz=299,slow=32							
FITZ	**Fitzroy Crossi**	**41.50**	**181**	*e*P		**P**	**21 47 07.9**	**-1.7**
	comp=Z,4.2nm,0.6s,mb4.2							
MKAR	**Makanchi Array**	**41.82**	**315**	P		**P**	**21 47 14.3**	**+2.1**
	comp=Z,1.5nm,0.4s,mb4.0,baz=96,slow=9.4,SNR=28							
MKAR	**Makanchi Array**	**41.82**	**315**	P		**P**	**21 47 14.3**	**+2.1**
WRA	**Warramunga Arr**	**44.09**	**169**	P		**P**	**21 47 30.4**	**-0.1**
	comp=Z,1.1nm,0.6s,mb4.8,baz=350,slow=8.8,SNR=37							
WB2	**Warramunga Arr**	**44.09**	**169**	*e*P		**P**	**21 47 30.3**	**-0.2**
AS31	**Alice Springs**	**47.66**	**170**	P		**P**	**21 47 57.7**	**-1.0**
AS31				*e*			21 48 11.0	
ASAR	**Alice Springs**	**47.66**	**170**	P		**P**	**21 47 58.9**	**+0.2**
	comp=Z,2.0nm,0.5s,mb4.4,baz=354,slow=12,SNR=45							
ASAR					PcP	PcP	21 49 28.9	+1.0
	comp=Z,0.9nm,0.6s,baz=350,slow=2.9,SNR=5.5							
ASPA	**Alice Springs**	**47.66**	**170**	*e*P		**P**	**21 47 59.2**	**+0.5**
CTA	**Charters Tower**	**47.75**	**154**	LR		LR	22 07 01.1	
	comp=Z,54nm,18.8s,MS3.5,baz=46,slow=35							
BVAR	**Borovoye Array**	**50.90**	**320**	P		**P**	**21 48 25.0**	**+1.5**
	comp=Z,0.9nm,0.5s,mb4.0,baz=89,slow=12,SNR=3.6							
CHKZ	**Chkalovo**	**50.91**	**321**	*e*P		**P**	**21 48 24.1**	**+0.6**
	comp=Z,1.4nm,0.5s,mb4.2							
ZRNK	**Zerenda**	**51

IDC ***27*** *22:49:42.0±4.6, 37.15N×138.76E, h15km±26km, mb3.5/5, mb1 3.7/5, mb1mx3.5/18, mbtmp3.6/5, MS3.7/1, Ms1 3.7/1, ms1mx2.5/23 Error ellipse: s-maj=36.8km s-min=18.6km az=97.0*

ISC 27 22:49:41.4±0.4, 3718N±002×13880E±004, h16km±3km, n23, σ0§73/34, mb3.7/7, MS3.7/1, 3C-4D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.18**	**69**	⇓P	**Pg**	**22 49 45.6**	**-0.3**
JHK				S	**Sg**	**22 49 48.5**	**-0.4**
JIZZ	**Izumozaki**	**0.35**	**348**	⇑P	**Pg**	**22 49 49.4**	**+0.7**
JIZZ				S	**Sg**	**22 49 55.9**	**+2.2**
JKT	**Katashina**	**0.55**	**139**	⇓P	**Pg**	**22 49 52.4**	**+0.1**
JKT				S	**Sg**	**22 50 00.1**	**+0.5**
JGK	**Kuni**	**0.63**	**192**	P	**Pg**	**22 49 54.0**	**+0.1**
JGK				S	**Sg**	**22 50 03.3**	**+1.0**
JFY	**Yanaizu**	**0.75**	**73**	⇓P	**Pg**	**22 49 55.7**	**-0.4**
JFY				S	**Sg**	**22 50 05.8**	**-0.3**
JNS	**Sasagawa**	**0.76**	**33**	P	**Pg**	**22 49 55.6**	**-0.5**
JNS				S	**Sg**	**22 50 05.8**	**-0.3**
MAJO	**Matsushiro**	**0.80**	**217**	⇑*e*P	**Pg**	**22 49 56.6**	**-0.3**
MAJO				*e*S	**Sg**	**22 50 06.9**	**-0.6**
MAT	**Matsushiro**	**0.80**	**217**	P	**Pg**	**22 49 56.7**	**-0.3**
MAT				S	**Sg**	**22 50 07.2**	**-0.3**
MAT	**Matsushiro**	**0.80**	**217**	P	**Pg**	**22 49 56.6**	**-0.4**
MAT				S	**Sg**	**22 50 07.1**	**-0.4**
MJAR	**Matsushiro Arr**	**0.80**	**217**	Pg	**Pg**	**22 49 56.7**	**-0.2**
	103nm,0.3s,baz=31,slow=19,SNR=243						
MJAR				Lg		22 50 06.9	
	375nm,0.3s,baz=274,slow=20,SNR=74						
JAG	**Ashikaga**	**0.92**	**145**	⇓P	**Pb**	**22 49 59.3**	**+0.3**
JAG				S	**Sb**	**22 50 11.5**	**+0.5**
JSD	**Sado**	**0.95**	**333**	⇑P	**Pb**	**22 49 58.6**	**-1.0**
JSD				S	**Sb**	**22 50 11.3**	**-0.7**
TATO	**Taipei**	**19.15**	**235**	P	**Pn**	**22 54 03.9**	**-0.9**
SONM	**Songino Array**	**25.97**	**304**	P	**P**	**22 55 14.0**	**+0.7**
	0.2nm,0.3s,mb3.1,baz=97,slow=9.4,SNR=4.4						
CHKZ	**Chkalovo**	**48.68**	**313**	*e*P	**P**	**22 58 24.8**	**-0.1**
	0.6nm,0.6s,mb3.8						
ZRNK	**Zerenda**	**49.76**	**312**	*e*P	**P**	**22 58 33.5**	**+0.4**
	0.7nm,0.4s,mb4.0						
INK	**Inuvik**	**55.20**	**27**	P	**P**	**22 59 13.5**	**0.0**
WB2	**Warramunga Arr**	**56.97**	**185**	P	**P**	**22 59 24.2**	**-1.9**
WRA	**Warramunga Arr**	**56.97**	**185**	P	**P**	**22 59 25.8**	**-0.3**
	1.3nm,0.7s,mb4.1,baz=2.8,slow=7.6,SNR=6.4						
WRA				LR	LR	23 22 07.9	
	comp=Z,56nm,18.6s,MS3.7,baz=265,slow=34						
ASAR	**Alice Springs**	**60.70**	**185**	P	**P**	**22 59 53.2**	**+1.2**
	0.2nm,0.4s,mb3.6,baz=13,slow=8.7,SNR=3.9						
NWAO	**Narrogin (SRO)**	**72.60**	**199**	P	**P**	**23 01 08.0**	**+0.1**
AKASG	**Malin Array Be**	**72.89**	**321**	P	**P**	**23 01 09.9**	**+0.2**
	0.2nm,0.3s,mb3.5,baz=50,slow=5.1,SNR=4.5						
BRTR	**Keskin Array B**	**77.17**	**310**	P	**P**	**23 01 35.8**	**+1.4**
	0.4nm,0.7s,mb3.5,baz=90,slow=6.7,SNR=3.9						

ISCJB ***27*** *22:52:05.4±0.5, 5282S±008×467W±02, h10km, mb3.9/12, MS3.6/9, Error ellipse: s-maj=16.2km s-min=9.2km az=109.6*

IDC ***27*** *22:52:05.5±1.1, 5284S×4657W, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.9/18, mbtmp3.9/11, MS3.6/9, Ms1 3.6/9, ms1mx3.5/18, Error ellipse: s-maj=37.4km s-min=15.8km az=41.0*

NEIC ***27*** *22:52:07.0±0.4, 5286S×4674W, h10km, mb4.5/5, Error ellipse: s-maj=13.5km s-min=7.9km az=53.0*

ISC 27 22:52:07.1±0.5, 5287S±008×468W±02, h10km, n33, σ1§04/30, mb3.9/12, MS3.6/9, South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**12.94**	**253**	Pn	**Pn**	**22 55 00.1**	**-11**
	0.6nm,0.3s,baz=7.8,slow=4.1,SNR=3.6						
USHA				Sn	**Sn**	**22 57 20.6**	**-14**
	2.0nm,0.3s,baz=0.3,slow=18,SNR=6.2						
TRQA	**Tornquist**	**18.20**	**318**	*e*Pn	**Pn**	**22 56 18.9**	**-0.8**
	26nm,0.6s						
TRQA				*e*Sn	**Sn**	**22 59 23.8**	**-19**
PLCA	**Paso Flores**	**20.20**	**297**	P	**P**	**22 56 42.5**	**+0.5**
	6.0nm,1.0s,baz=142,slow=11,SNR=8.2						
PLCA				LR	LR	23 04 59.8	
	comp=Z,293nm,20.7s,MS3.6,baz=138,slow=38						
PLCA	**Paso Flores**	**20.20**	**297**	P	**P**	**22 56 42.5**	**+0.5**
PLCA				LR	LR	23 04 59.9	
VNA1	**Neumayer--Stat**	**24.77**	**150**	*e*	**P**	**22 57 31.0**	**+2.1**
VNA1				*e*		22 57 35.0	
VNA1				*e*		22 57 44.1	
VNA1				*e*		22 57 50.4	
CFAA	**Coronel Fontan**	**26.35**	**315**	P	**P**	**22 57 41.8**	**-1.4**
	0.2nm,0.4s,mb3.0,baz=148,slow=8.0,SNR=4.1						
CFAA				LR	LR	23 07 21.1	
	comp=Z,16nm,19.2s,MS2.6,baz=144,slow=35						
SNAA	**Sanae**	**26.80**	**151**	P	**P**	**22 57 47.4**	**+0.1**
	0.3nm,0.9s,mb2.8,baz=275,slow=14,SNR=4.2						
SNAA				LR	LR	23 05 36.7	
	comp=Z,36nm,19.1s,MS3.0,baz=238,slow=30						
SNAA	**Sanae**	**26.80**	**151**	*e*	**P**	**22 57 49.5**	**+2.2**
SNAA				*e*		22 57 54.4	
SNAA	**Sanae**	**26.80**	**151**	*e*P	**P**	**22 57 47.6**	**+0.4**
	4.1nm,1.0s,mb3.9						
CPUP	**Villa Florida**	**27.67**	**339**	P	**P**	**22 57 56.0**	**+0.9**
	2.3nm,0.9s,mb3.8,baz=162,slow=9.6,SNR=2.6						
BDFB	**Brasilia**	**37.16**	**355**	P	**P**	**22 59 17.8**	**-0.3**
	1.2nm,0.4s,mb4.0,baz=172,slow=7.1,SNR=2.2						
QSPA	**South Pole Qui**	**37.39**	**180**	*e*P	**P**	**22 59 18.6**	**-1.4**
	7.1nm,1.0s,mb4.5						
SIV	**San Ignacio**	**38.49**	**338**	P	**P**	**22 59 29.5**	**+0.2**
	0.9nm,0.6s,mb3.6,baz=147,slow=13,SNR=4.4						
LPAZ	**La Paz**	**40.20**	**327**	P	**P**	**22 59 45.0**	**+1.4**
	1.6nm,0.8s,mb3.8,baz=167,slow=5.0,SNR=11						
LPAZ				LR	LR	23 14 03.1	
	comp=Z,64nm,20.7s,MS3.5,baz=80,slow=33						
LPAZ	**La Paz**	**40.20**	**327**	P	**P**	**22 59 45.0**	**+1.4**
LPAZ				LR	LR	23 14 03.1	
VNDA	**Vanda**	**48.66**	**188**	LR	LR	23 22 18.6	
	comp=Z,48nm,18.1s,MS3.5,baz=67,slow=37						
VNDA	**Vanda**	**48.66**	**188**	P	**P**	**23 00 50.7**	**-0.6**
MAW	**Mawson**	**48.96**	**151**	LR	LR	23 18 13.9	
	comp=Z,56nm,18.0s,MS3.6,baz=59,slow=32						
MAW	**Mawson**	**48.96**	**151**	P	**P**	**23 00 52.8**	**-0.8**
BOSA	**Boshof**	**57.08**	**95**	P	**P**	**23 01 51.5**	**-2.0**
	1.3nm,0.7s,mb4.1,baz=215,slow=9.7,SNR=2.7						
BOSA				LR	LR	23 21 44.5	
	comp=Z,135nm,18.2s,MS4.1,baz=229,slow=31						
BOSA	**Boshof**	**57.08**	**95**	*e*P	**P**	**23 01 51.8**	**-1.6**
TSUM	**Tsumeb**	**59.47**	**82**	P	**P**	**23 02 09.1**	**-1.1**
	3.0nm,1.0s,mb4.3,baz=183,slow=20,SNR=3.1						
TSUM	**Tsumeb**	**59.47**	**82**	P	**P**	**23 02 10.4**	**+0.3**
LBTB	**Lobatse**	**59.93**	**92**	P	**P**	**23 02 12.8**	**-0.5**
	3.1nm,0.6s,mb4.5,baz=254,slow=9.1,SNR=7.2						
LBTB	**Lobatse**	**59.93**	**92**	*e*P	**P**	**23 02 13.2**	**-0.1**
	2.9nm,0.6s,mb4.5						
LSZ	**Lusaka**	**68.89**	**88**	*e*P	**P**	**23 03 13.1**	**+1.1**
	6.7nm,0.8s,mb4.6						
DBIC	**Dimbokro**	**69.12**	**45**	P	**P**	**23 03 13.5**	**+0.1**
TORD	**Torodi Ar. Bea**	**77.77**	**48**	P	**P**	**23 04 04.3**	**-0.1**
	0.9nm,1.0s,mb3.6,baz=222,slow=5.8,SNR=2.9						
KMBO	**Kilima Mbogo**	**85.48**	**86**	LR	LR	23 40 44.4	
	comp=Z,51nm,18.1s,MS4.0,baz=69,slow=34						
STKA	**Stephens Creek**	**95.30**	**187**	LR	LR	23 44 05.7	
	comp=Z,97nm,19.7s,MS4.3,baz=206,slow=33						
STKA	**Stephens Creek**	**95.30**	**187**	P	**P**	**23 05 32.4**	**+1.1**
CART	**Cartagena**	**98.46**	**35**	*e*P	**P**	**23 05 40.7**	**-4.8**
MKAR	**Makanchi Array**	**147.17**	**80**	PKPbc	PKPbc	23 11 48.8	-1.6
	0.5nm,0.7s,baz=258,slow=1.0,SNR=2.8						

ISCJB ***27*** *23:02:21.8±0.4, 4038N±003×2598E±004, h18km±5km, Error ellipse: s-maj=5.4km s-min=4.0km az=45.1*

CSEM ***27*** *23:02:21.4±0.1, 4038N×2603E, h20km, MD3.1, Error ellipse: s-maj=1.9km s-min=1.6km az=132.0*

ISK ***27*** *23:02:21.2, 4037N×2601E, h16km, MD3.1*

ATH ***27*** *23:02:21.2, 4039N×2595E, h31km±2km, MD3.4/4*

NEIC ***27*** *23:02:22.0, 4038N×2573E, h13km, MD2.7(SOF), MD3.4(ATH), After SOF.*

SOF ***27*** *23:02:22.0, 4038N×2573E, h13km, MD2.7*

THE ***27*** *23:02:22.2, 4040N×2591E, h8km, ML2.8*

ISC 27 23:02:21.6±0.4, 4038N±002×2598E±004, h15km±3km, n27, σ0§59/33, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.20**	**199**	*i* PG	**Pg**	**23 02 26.4**	**+0.2**
GADA				*i* SG	**Sg**	**23 02 29.8**	**+0.5**
ENEZ	**Enez**	**0.38**	**20**	*i* PG	**Pg**	**23 02 29.3**	**-0.1**
ENEZ				*i* SG	**Sg**	**23 02 35.4**	**+0.8**
ALN	**Alexandroupoli**	**0.52**	**5**	*e*Pg	**Pg**	**23 02 31.7**	**-0.2**
	comp=Z,5.5nm,0.3s						
ALN				*e*Sg	**Sg**	**23 02 38.9**	**0.0**
EZN	**Ezine**	**0.61**	**154**	PG	**Pg**	**23 02 33.5**	**-0.1**
LIA	**Limnos Island**	**0.78**	**232**	*e*PN	**Pg**	**23 02 36.7**	**-0.1**
LIA				*e*SN	**Sg**	**23 02 47.6**	**+0.6**
LOS	**Limnos**	**0.82**	**238**	*e*Pg	**Pg**	**23 02 37.2**	**-0.4**
LOS				*e*Sg	**Sg**	**23 02 48.3**	**-0.1**
RDO	**Rodhopi**	**0.84**	**336**	*e*PN	**Pn**	**23 02 37.3**	**-1.6**
CANB	**Canakkale**	**0.90**	**113**	PG	**Pg**	**23 02 38.7**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.96**	**71**	PG	**Pg**	**23 02 39.7**	**-0.5**
MFT	**Murefte**	**1.07**	**67**	PG	**Pg**	**23 02 41.7**	**-0.6**
PRK	**Paraskevi**	**1.15**	**169**	*e*PN	**Pn**	**23 02 43.3**	**+0.1**
PRK				*e*SN	**Sn**	**23 02 59.0**	**+0.3**
MRMT	**Marmara Adasi**	**1.25**	**79**	PN	**Pn**	**23 02 43.9**	**-0.7**
KDZ	**Kurdzhali**	**1.34**	**342**	*i* P	**Pn**	**23 02 46.3**	**+0.4**
BNT	**Bandirma**	**1.48**	**90**	*e*PN	**Pn**	**23 02 47.7**	**0.0**
OUR	**Ouranopolis**	**1.53**	**269**	*e*Pg	**Pn**	**23 02 47.5**	**-0.9**
	comp=Z,3.0nm,0.5s						
EDRB	**Edirne**	**1.58**	**21**	*e*PN	**Pn**	**23 02 49.4**	**+0.3**
RZN	**Rozhen**	**1.62**	**324**	*i* P	**Pn**	**23 02 50.9**	**+1.2**
NVR	**Nevrokopi**	**1.88**	**302**	*e*PB	**Pn**	**23 02 53.0**	**-0.3**
SRS	**Serrai**	**1.96**	**293**	*e*Pb	**Pn**	**23 02 53.9**	**-0.4**
CHOS	**Chios Island**	**1.99**	**178**	*e*Pn	**Pn**	**23 02 55.6**	**+0.9**
SOH	**Sokhos**	**2.05**	**283**	*e*Pn	**Pn**	**23 02 55.4**	**-0.2**
AKS	**Akhisar**	**2.06**	**136**	*e*PN	**Pn**	**23 02 55.8**	**+0.1**
MMB	**Musomiste**	**2.09**	**306**	*e*Pn	**Pn**	**23 02 56.1**	**-0.1**
MMB	**Musomiste**	**2.09**	**306**	*e*P	**Pn**	**23 02 55.5**	**-0.7**
MMB	**Musomiste**	**2.09**	**306**	*e*Pn	**Pn**	**23 02 56.1**	**-0.1**
JMB	**Yambol**	**2.14**	**12**	*e*Sn	**Sn**	**23 03 24.4**	**+1.3**
DST	**Dursunbey**	**2.17**	**110**	*e*PN	**Pn**	**23 02 57.5**	**+0.2**

CASC 27 23:07:18.4±3.4, 1225N×8941W, h14km±44km, MD4.2, ML2.6, 3C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**1.40**	**14**	⇑*e*P	x	23 07 56.8	
LFRS				*e*S	x	23 08 16.9	
BOQS	**Boqueron**	**1.48**	**5**	⇑*e*P	x	23 07 58.5	
BOQS				*e*S	x	23 08 19.1	
LBRS	**Las Brisas**	**1.52**	**14**	*e*P	x	23 07 58.9	
LBRS				*e*S	x	23 08 18.0	
SBLS	**San Blas**	**1.59**	**352**	⇑*e*P	x	23 08 00.1	
SBLS				*e*S	x	23 08 22.3	
SNJE	**San Jose**	**1.62**	**353**	⇓*e*P	x	23 08 00.4	
SNJE				*e*S	x	23 08 21.6	
CNCH	**Conchagua**	**1.84**	**56**	*e*P	x	23 08 03.9	
CNCH				*e*S	x	23 08 27.4	
MTO2	**Montecristo 2**	**2.13**	**1**	*e*P	x	23 08 07.7	
MTO2				*e*S	x	23 08 36.7	
LEON	**Leon**	**2.46**	**86**	*e*P	Pn	23 07 57.5	-0.6
CNGN	**Cerro Negro**	**2.66**	**84**	*e*P	Pn	23 08 00.2	-0.6
CNGN				*e*S	Sn	23 08 34.5	+1.6
CNGN				*i*		23 08 40.1	
	comp=N,155nm,0.3s						
COPN	**Copaltepe**	**2.75**	**91**	*e*P	Pn	23 08 04.0	+1.9
MOMJ	**Momotombo**	**2.81**	**87**	*e*P	Pn	23 08 02.0	-0.8
BOA	**Boaco**	**3.61**	**86**	*e*P	Pn	23 08 13.7	-0.3
BOA				*i*		23 08 57.5	
	comp=E,3.9nm,0.3s						

ISCJB ***27*** *23:09:04.3±1.5, 579S±007×15150E±007, h54km±14km, mb4.5/21, MS3.7/8, Error ellipse: s-maj=12.5km s-min=10.1km az=100.8*

BJI ***27*** *23:09:05.9, 600S×15140E, h71km, mB5.0, mb4.9, Ms4.8, Msz4.3*

NEIC ***27*** *23:09:06.8±1.1, 573S×15147E, h64km±10km, mb4.6/10, Error ellipse: s-maj=8.8km s-min=7.6km az=144.0*

IDC ***27*** *23:09:08.4±4.3, 580S×15140E, h75km±37km, mb4.1/9, mb1 4.2/11, mb1mx4.1/14, mbtmp4.3/11, ML3.6/1, MS3.5/5, Ms1 3.5/5, ms1mx3.2/16, Error ellipse: s-maj=25.4km s-min=21.8km az=55.0*

ISC 27 23:09:07.3±1.3, 582S±007×15153E±007, h65km±12km, h50km±4.0km:pP-P, n48, σ1§00/48, mb4.4/21, 2C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.61**	**230**	P	**Pn**	**23 10 29.0**	**+0.9**
	12nm,0.3s,baz=38,slow=11,SNR=26						
PMG				S	**Sn**	**23 11 30.6**	**-0.6**
	27nm,0.3s,baz=332,slow=23,SNR=6.0						
PMG	**Port Moresby**	**5.61**	**230**	*e*Pn	**Pn**	**23 10 29.1**	**+1.0**
	243nm,0.8s						
PMG				*e*Sn	**Sn**	**23 11 16.1**	**-15**
HNR	**Honiara**	**9.08**	**114**	LR	LR	23 14 22.3	
	comp=Z,211nm,21.9s,baz=359,slow=34						
HNR	**Honiara**	**9.08**	**114**	Pn	**Pn**	**23 11 15.0**	**-0.6**
CTA	**Charters Tower**	**15.09**	**199**	P	**Pn**	**23 12 38.1**	**+1.6**
	baz=44,slow=13,SNR=3.0						
CTAO	**Charters Tower**	**15.09**	**199**	Pn	**Pn**	**23 12 38.2**	**+1.6**
KAKA	**Kakadu**	**20.04**	**249**	*e*P	**P**	**23 13 34.6**	**-0.3**
	48nm,0.4s						
DZM	**Mont Dzumac**	**21.66**	**140**	P	**P**	**23 13 53.6**	**+1.2**
	9.3nm,1.1s,mb4.0,baz=119,slow=20,SNR=4.4						
DZM				LR	LR	23 20 48.3	
	comp=Z,284nm,20.6s,baz=245,slow=32						
WRAB	**Tennant Creek**	**21.82**	**228**	*e*P	**P**	**23 13 47.3**	**-6.7**
	60nm,0.6s,mb5.1						
WRAB				*e*		23 13 53.4	
WB2	**Warramunga Arr**	**21.82**	**228**	⇑*i*P	**P**	**23 13 53.3**	**-0.8**
WB2				*e*P		23 13 53.5	
WRA	**Warramunga Arr**	**21.83**	**228**	P	**P**	**23 13 53.6**	**-0.6**
	46nm,0.8s,mb4.9,baz=52,slow=10.0,SNR=71						
AS31	**Alice Springs**	**24.55**	**222**	*e*P	**P**	**23 14 21.2**	**+0.4**
ASAR	**Alice Springs**	**24.55**	**222**	P	**P**	**23 14 21.1**	**+0.2**
	23nm,0.8s,mb4.7,baz=56,slow=9.2,SNR=150						
ASAR				LR	LR	23 23 11.3	
	comp=Z,89nm,20.6s,baz=180,slow=34						
ASPA	**Alice Springs**	**24.55**	**222**	*e*P	**P**	**23 14 21.2**	**+0.3**
STKA	**Stephens Creek**	**27.54**	**199**	*e*P	**P**	**23 14 48.5**	**+0.6**
	2.3nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**27.54**	**199**	P	**P**	**23 14 48.1**	**+0.2**
	1.4nm,0.7s,mb3.6,baz=4.5,slow=15,SNR=2.9						
STKA	**Stephens Creek**	**27.54**	**199**	*e*P	**P**	**23 14 48.3**	**+0.5**
STKA				*e*	pP	23 15 00.7	-2.9
FITZ	**Fitzroy Crossi**	**28.07**	**242**	⇑*i*P	**P**	**23 14 52.2**	**-0.3**
	49nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**28.07**	**242**	P	**P**	**23 14 52.3**	**-0.3**
	27nm,0.6s,mb5.0,baz=67,slow=8.0,SNR=196						
FITZ				LR	LR	23 26 48.9	
	comp=Z,72nm,20.3s,baz=209,slow=38						
MBWA	**Marble Bar**	**34.37**	**241**	*e*P	**P**	**23 15 47.6**	**-0.4**
	21nm,1.0s,mb4.9						
MBWA				*e*		23 15 52.4	
KLBR	**Kellerberrin**	**40.69**	**227**	*e*P	**P**	**23 16 40.1**	**-1.2**
	22nm,1.2s,mb4.9						
NACB	**Ninganchiao**	**41.71**	**317**	P	**P**	**23 16 48.5**	**-1.2**
KSM	**Kuching**	**41.80**	**279**	*e*P	**P**	**23 16 50.2**	**-0.1**
YHNB	**Yeheng**	**42.19**	**317**	P	**P**	**23 16 52.7**	**-0.9**
MAJO	**Matsushiro**	**43.94**	**344**	*e*P	**P**	**23 17 07.2**	**-0.5**
	1.3nm,0.3s,mb4.1						
NJ2	**Nanjing**	**48.85**	**322**	*e*P	**P**	**23 17 47.5**	**+1.3**
NJ2				AP	pP	23 18 00.0	-2.8
NJ2				PP	PP	23 19 41.0	+1.1
NJ2				S	**S**	**23 24 45.0**	**+0.2**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,150nm,5.8s						
NJ2				LR	LR		
	comp=N,70nm,22.0s						
NJ2				LR	LR		
	comp=E,120nm,30.0s						
NJ2				LR	LR		
	comp=Z,200nm,26.4s						
KULM	**Kulim**	**51.98**	**281**	*e*P	**P**	**23 18 08.8**	**-1.0**
MDJ	**Mudanjiang**	**53.94**	**341**	P	**P**	**23 18 26.0**	**+1.8**
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,57nm,3.6s						
KMI	**Kunming**	**56.52**	**305**	P	**P**	**23 18 44.3**	**+1.5**
KMI				AP	pP	23 18 57.0	-2.7
KMI				PP	PP	23 20 51.0	+2.0
KMI				S	**S**	**23 26 31.0**	**+1.7**
KMI				SS	SS	23 30 20.3	+2.9
KMI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.7						
KMI				AMB	AMB		
	comp=Z,48nm,4.9s						
KMI				LR	LR		
	comp=N,81nm,19.5s						
KMI				LR	LR		
	comp=E,52nm,20.3s						
KMI				LR	LR		
	comp=Z,73nm,31.5s						
CD2	**Chengdu**	**58.45**	**312**	*e*P	**P**	**23 18 57.0**	**+0.7**
CD2				AP	pP	23 19 15.0	+1.6
CD2				PCP	PcP	23 19 47.3	+0.9
CD2				PP	PP	23 21 08.3	+2.1
CD2				S	**S**	**23 26 54.5**	**-0.1**
CD2				SCS	ScS	23 28 39.3	-0.9
CD2				SS	SS	23 30 49.0	+1.3
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
CD2				LR	LR		
	comp=E,90nm,16.2s						
CD2				LR	LR		
	comp=Z,80nm,15.4s						
HHC	**Hu-ho-hao-te**	**59.14**	**325**	*e*P	**P**	**23 19 04.0**	**+2.8**
HHC				AP	pP	23 19 16.3	-2.0
HHC				PCP	PcP	23 19 50.3	+1.2
HHC				PP	PP	23 21 14.3	+1.9
HHC				PCS	PcS	23 23 52.5	+1.4
HHC				S	**S**	**23 27 06.3**	**+2.7**
HHC				SCS	ScS	23 28 46.5	+1.2
HHC				SS	SS	23 31 03.8	+5.2
HHC				AMB	AMB		
	comp=Z,14nm,1.0s,mb5.0						
HHC				AMB	AMB		
	comp=Z,58nm,4.9s						
HHC				LR	LR		
	comp=N,104nm,20.9s						
HHC				LR	LR		
	comp=E,66nm,19.9s						
HHC				LR	LR		
	comp=Z,63nm,21.8s						
ULN	**Ulaanbaatar**	**66.19**	**329**	*e*P	**P**	**23 19 48.5**	**+0.4**
	comp=Z,0.9nm,0.5s,mb3.9						
SONM	**Songino Array**	**66.52**	**329**	P	**P**	**23 19 50.2**	**0.0**
	comp=Z,1.1nm,0.7s,mb3.8,baz=144,slow=4.1,SNR=10						
CASY	**Casey**	**66.68**	**197**	*e*P	**P**	**23 19 50.9**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.1						
VNDA	**Vanda**	**71.87**	**178**	P	**P**	**23 20 23.0**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.7,baz=312,slow=6.5,SNR=5.2						
VNDA	**Vanda**	**71.87**	**178**	*e*P	**P**	**23 20 23.4**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.7						
MKAR	**Makanchi Array**	**80.26**	**319**	P	**P**	**23 21 09.8**	**-1.1**
	comp=Z,0.5nm,0.6s,mb3.5,baz=98,slow=5.7,SNR=7.3						
MKAR	**Makanchi Array**	**80.26**	**319**	P	**P**	**23 21 09.8**	**-1.1**
MCK	**McKinley**	**82.28**	**23**	*e*P	**P**	**23 21 21.6**	**-0.1**
COLA	**College**	**83.26**	**22**	P	**P**	**23 21 26.0**	**-0.7**
CHKZ	**Chkalovo**	**89.28**	**324**	*e*P	**P**	**23 21 54.0**	**-2.3**
	comp=Z,0.9nm,0.5s,mb4.1						
ZRNK	**Zerenda**	**90.10**	**323**	P	**P**	**23 21 58.5**	**-1.6**
YKA	**Yellowknife Ar**	**96.91**	**28**	P	**P**	**23 22 31.5**	**+0.1**
	comp=Z,0.5nm,0.6s,mb4.1,baz=267,slow=4.7,SNR=6.8						
YKA				LR	LR	00 02 30.5	
	comp=Z,33nm,18.6s,baz=270,slow=33						
MALT	**Malatya**	**111.67**	**309**	*e*PKiKP	PKiKP	23 27 35.9	+1.4
BOSA	**Boshof**	**118.01**	**233**	*e*PKPdf	PKPdf	23 27 48.7	+2.2
LPAZ	**La Paz**	**135.03**	**120**	*e*PKPdf	PKPdf	23 28 21.1	+2.1
TOA0	**Torodi Ar. Sit**	**149.39**	**286**	*e*PKP	PKPdf	23 28 49.3	+4.9
TOA0				*e*		23 28 54.6	
TORD	**Torodi Ar. Bea**	**149.39**	**286**	PKPbc	PKPbc	23 28 49.2	+0.4
	comp=Z,7.6nm,0.7s,baz=95,slow=2.9,SNR=53						

IDC ***27*** *23:25:16.6±6.8, 770S×11896E, h258km±75km, mb3.2/4, mb1 3.3/6, mb1mx3.2/16, mbtmp3.9/6, Error ellipse: s-maj=101.4km s-min=25.3km az=58.0*

ISCJB ***27*** *23:25:18.6±1.8, 74S±0.1×1194E±0.1, h284km±20km, mb3.5/4, Error ellipse: s-maj=25.3km s-min=10.3km az=86.7*

NEIC ***27*** *23:25:19.6±2.5, 765S×11922E, h283km±29km, mb4.1/3, Error ellipse: s-maj=23.8km s-min=12.0km az=47.0*

ISC 27 23:25:21.9±1.9, 77S±01×1193E±01, h307km±22km, n17, σ1§00/22, mb3.5/4, 1D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.07**	**150**	*e*P	**Pn**	**23 28 03.9**	**-1.1**
	7.0nm,0.7s						
FITZ				*e*S	**S**	**23 30 19.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**12.07**	**150**	P	**Pn**	**23 28 04.1**	**-1.0**
	0.4nm,0.3s,baz=341,slow=

SPA0	**Spitsbergen Ar**	**0.63**	**90**	Pg	**Pg**	**00 09 34.3**	**+0.7**
	baz=265,slow=16						
SPA0				Lg		00 09 43.2	
	baz=268,slow=28						
KBS	**Kingsbay**	**0.79**	**340**	Pg	**Pg**	**00 09 36.3**	**-0.2**
KBS				Lg		00 09 46.8	
KBS	**Kingsbay**	**0.79**	**340**	*e*P	**Pg**	**00 09 36.8**	**+0.2**
KBS				*e*S	**Sg**	**00 09 46.7**	**-0.1**
KBS				AML	AML	00 09 50.2	
	comp=Z,224nm,0.4s						
KBS	**Kingsbay**	**0.79**	**340**	*e*P	**Pg**	**00 09 36.8**	**+0.3**
	SNR=90						
KBS				*e*S	**Sg**	**00 09 46.7**	**-0.1**
	comp=Z,224nm,0.4s,SNR=90						
HSP	**Hornsund**	**1.29**	**157**	Pn	**Pn**	**00 09 45.5**	**+0.1**
HSP				Sn	**Sn**	**00 10 03.5**	**+0.8**
HOPEN	**Hopen**	**3.08**	**117**	*e*P	**Pn**	**00 10 10.5**	**+0.5**
HOPEN				*e*S	**Sn**	**00 10 46.0**	**-0.9**
ARA0	**ARCESS Array S**	**9.31**	**153**	Pn	**Pn**	**00 11 34.5**	**-1.0**
	baz=338,slow=11						
ARA0				Sn	**Sn**	**00 13 12.9**	**-7.4**
	baz=349,slow=18						
ARA0	**ARCESS Array S**	**9.31**	**153**	Pn	**Pn**	**00 11 34.5**	**-1.1**
	SNR=50						
ARA0				Sn	**Sn**	**00 13 12.9**	**-7.4**
	SNR=50						

ATH ***28*** *00:10:54.1,34.37N×26.61E,h24km,MD3.4/3*
ISCJB ***28*** *00:10:55.5±2.4,34.38N±0.07×26.6E±0.1,h20km±28km, Error ellipse: s-maj=20.2km s-min=11.6km az=3.9*
CSEM ***28*** *00:10:55.6±0.2,34.36N×26.60E,h15km,MD3.4, Error ellipse: s-maj=6.7km s-min=3.8km az=66.0*
HLW ***28*** *00:10:55.2,34.72N×26.72E,h30km,Mb2.8*

ISC 28 00:10:56.9±2.6,3446N±007×266E±01,h21km±29km,n8, σ0§69/10,2C,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.84**	**300**	*e*PN	**Pb**	**00 11 11.5**	**-1.3**
XRY				*e*SN	**Sb**	**00 11 24.5**	**+0.8**
NPS	**Neapolis**	**1.13**	**315**	*e*PN	**Pn**	**00 11 17.5**	**0.0**
KARP	**Karpathos**	**1.18**	**23**	*e*PN	**Pn**	**00 11 18.0**	**-0.2**
SWA1		**5.24**	**188**⇑	*e*P	**Pn**	**00 12 14.6**	**+0.7**
SWA2		**5.29**	**191**⇑	*i*P	**Pn**	**00 12 15.3**	**+0.6**
SWA2				S	**Sn**	**00 13 14.0**	**-1.0**
AWBH		**6.43**	**161**	P	**Pn**	**00 12 30.6**	**+0.2**
HFRF	**Wahat Farafira**	**7.44**	**168**	P	**Pn**	**00 12 44.2**	**+0.1**
HFRF	**Wahat Farafira**	**7.44**	**168**	P	**Pn**	**00 12 44.2**	**0.0**

ISCJB ***28*** *00:38:33.6±0.8,1900N±007×6468W±003,h35km, Error ellipse: s-maj=10.1km s-min=4.2km az=178.3*
NEIC ***28*** *00:38:34.6, 1899N×6462W,h36km,MD3.7(RSPR),After RSPR.*
RSPR ***28*** *00:38:34.6, 1899N×6462W,h35km±5km,MD3.7/15, MD3.7/15*

ISC 28 00:38:34.7±0.8,1897N±007×6468W±003,h35km,n23, σ0§67/39,12C-2D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.40**	**126**⇑	*i*P	**Pn**	**00 38 42.5**	**-1.5**
TBVI	**Tortola**	**0.56**	**174**⇑	*i*P	**Pn**	**00 38 44.9**	**-1.2**
STVI	**Saint Thomas**	**0.67**	**204**⇑	*i*P	**Pn**	**00 38 46.9**	**-0.8**
STVI				*e*S	**Sn**	**00 38 57.0**	**+0.1**
CULB	**Culebra**	**0.90**	**224**⇑	*i*P	**Pn**	**00 38 49.9**	**-0.9**
CULB	**Culebra**	**0.90**	**224**	*e*S	**Sn**	**00 39 01.9**	**-0.7**
MTP	**Monte Pirata**	**1.21**	**224**⇑	*e*P	**Pn**	**00 38 54.7**	**-0.4**
MTP				*e*S	**Sn**	**00 39 10.1**	**0.0**
CBYP	**Canovanas**	**1.32**	**238**⇑	*e*P	**Pn**	**00 38 55.9**	**-0.7**
CBYP				*e*S	**Sn**	**00 39 12.4**	**-0.4**
HUMP	**Col San Antoni**	**1.38**	**234**⇑	*e*P	**Pn**	**00 38 57.4**	**-0.1**
HUMP				*e*S	**Sn**	**00 39 14.1**	**-0.5**
CPD	**Cerro la Pandu**	**1.50**	**232**⇑	*e*P	**Pn**	**00 38 59.0**	**-0.1**
CPD				*e*S	**Sn**	**00 39 17.6**	**+0.3**
SJG	**San Juan**	**1.64**	**239**	*e*Pn	**Pn**	**00 39 00.0**	**-0.9**
SJG				*e*S	**Sn**	**00 39 21.8**	**+1.0**
SABT	**Saba**	**1.91**	**134**	*e*P	**Pn**	**00 39 05.4**	**+0.6**
SABT				*e*S	**Sn**	**00 39 33.9**	**+6.4**
CELP	**Cerrillos**	**2.01**	**244**⇑	*e*P	**Pn**	**00 39 06.1**	**-0.1**
CELP				*e*S	**Sn**	**00 39 30.8**	**+0.8**
OBIP	**Obispado Ponce**	**2.05**	**244**⇑	*e*P	**Pn**	**00 39 06.6**	**-0.1**
OBIP				*e*S	**Sn**	**00 39 31.2**	**+0.2**
ICM	**Isla Caja Muer**	**2.05**	**239**⇑	*e*P	**Pn**	**00 39 07.3**	**+0.6**
ICM				*e*S	**Sn**	**00 39 31.6**	**+0.5**
AOPR	**Arecibo Observ**	**2.06**	**253**⇑	*e*P	**Pn**	**00 39 06.1**	**-0.7**
AOPR				*e*S	**Sn**	**00 39 31.6**	**+0.3**
LRS	**Lares**	**2.16**	**252**⇑	*e*P	**Pn**	**00 39 07.7**	**-0.5**
LRS				*e*S	**Sn**	**00 39 33.9**	**+0.1**
AGPR	**Aguadilla, PR**	**2.36**	**258**⇓	*e*P	**Pn**	**00 39 12.6**	**-0.4**
AGPR				*e*S	**Sn**	**00 39 38.6**	**-0.1**
LSP	**Las Mesas**	**2.42**	**251**⇑	*e*P	**Pn**	**00 39 11.9**	**+0.2**
LSP				*e*S	**Sn**	**00 39 40.9**	**+0.9**
MGP	**Maguayo**	**2.48**	**248**⇑	*e*P	**Pn**	**00 39 13.0**	**+0.4**
MGP				*e*S	**Sn**	**00 39 41.3**	**-0.3**
CRPR	**Cabo Rojo, PR**	**2.50**	**248**⇓	*e*P	**Pn**	**00 39 13.0**	**+0.1**
CRPR				*e*S	**Sn**	**00 39 42.9**	**+0.8**
LZG	**Guadaloupe-1**	**3.94**	**135**	*e*P	**Pn**	**00 39 34.0**	**+1.3**
SEG	**Port Louis**	**3.96**	**130**	*e*P	**Pn**	**00 39 33.9**	**+1.0**
SCG	**Saint Claude**	**4.09**	**135**	*e*P	**Pn**	**00 39 35.9**	**+1.2**

ISCJB ***28*** *00:43:39.9±0.7,2408S±005×668W±0.1,h210km±11km, mb3.2/2,Error ellipse: s-maj=18.2km s-min=7.8km az=163.8*
IDC ***28*** *00:43:40.6±1.0,2408S×6678W,h192km±14km,mb3.2/2, mb1 3.3/6,mb1mx3.2/17,mbtmp3.7/6,Error ellipse: s-maj=22.4km s-min=13.2km az=73.0*
NEIC ***28*** *00:43:41.1±0.6,2402S×6676W,h200km±9km,mb3.5/2, Error ellipse: s-maj=13.7km s-min=8.4km az=73.0*

ISC 28 00:43:41.2±0.7,2403S±006×668W±01,h204km±11km,n12, σ0§57/14,mb3.2/2,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.40**	**306**	P	**Pn**	**00 44 24.9**	**+0.8**
	28nm,0.3s,SNR=513						
LVC				S	**Sn**	**00 44 57.4**	**-0.2**
	21nm,0.3s,SNR=9.1						
CFAA	**Coronel Fontan**	**7.65**	**189**	P	**Pn**	**00 45 29.9**	**0.0**
	0.1nm,0.3s,baz=11,slow=11,SNR=20						
CFAA				S	**Sn**	**00 46 51.9**	**-4.5**
	0.3nm,0.3s,baz=180,slow=16,SNR=20						
LPAZ	**La Paz**	**7.80**	**351**	P	**Pn**	**00 45 32.6**	**+0.7**
	0.2nm,0.3s,baz=175,slow=7.7,SNR=7.7						
LPAZ				S	**Sn**	**00 46 59.5**	**-0.5**
	0.2nm,0.3s,baz=334,slow=18,SNR=4.6						
CPUP	**Villa Florida**	**8.88**	**107**	P	**Pn**	**00 45 45.3**	**-0.5**
	0.2nm,0.3s,baz=266,slow=13,SNR=5.3						
TRQA	**Tornquist**	**14.57**	**165**	*e*Pn	**Pn**	**00 46 57.8**	**-0.1**
	1.8nm,0.7s						
SAML	**Samuel**	**15.39**	**14**	*e*Pn	**Pn**	**00 47 07.4**	**-0.5**
	0.8nm,0.5s						
BDFB	**Brasilia**	**19.53**	**68**	P	**P**	**00 47 53.9**	**+0.7**
	0.2nm,0.3s,baz=225,slow=11,SNR=4.2						
SDV	**Santo Domingo**	**32.93**	**353**	P	**P**	**00 49 56.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**76.41**	**69**	P	**P**	**00 55 08.7**	**+0.5**
	0.5nm,1.0s,mb3.1,baz=263,slow=5.4,SNR=5.7						
YKA	**Yellowknife Ar**	**94.22**	**340**	P	**P**	**00 56 36.5**	**-0.5**
	0.2nm,0.5s,mb3.4,baz=135,slow=4.7,SNR=6.7						
YKA	**Yellowknife Ar**	**94.22**	**340**	P	**P**	**00 56 36.5**	**-0.5**
MKAR	**Makanchi Array**	**146.43**	**40**	PKPbc	PKPbc	01 02 59.8	+1.7
	0.5nm,0.5s,baz=279,slow=2.1,SNR=5.3						

CASC 28 00:46:00.2±3.9,1428N×8864W,h30km,MD3.6,ML3.2, 4C-5D,Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBRS	**Las Brisas**	**0.66**	**216**⇓	*e*P	x	00 46 14.9	
LBRS				*e*S	x	00 46 25.6	
LFU	**La Fuente**	**0.69**	**221**⇓	*e*P	x	00 46 15.0	
LFU				*e*S	x	00 46 26.9	
LCBS	**La Ceiba**	**0.70**	**208**⇑	*e*P	x	00 46 13.6	
LCBS				*e*S	x	00 46 23.4	
LFRS	**El Faro**	**0.77**	**212**⇑	*e*P	x	00 46 13.0	
LFRS				*e*S	x	00 46 23.3	
BOQS	**Boqueron**	**0.82**	**229**⇑	*e*P	x	00 46 15.1	
BOQS				*e*S	x	00 46 26.6	
VSM	**San Miguel**	**0.92**	**157**⇓	*e*P	x	00 46 17.7	
VSM				*e*S	x	00 46 30.9	
BLLM	**Bellamira**	**0.92**	**155**⇓	*e*P	x	00 46 17.9	
BLLM				*e*S	x	00 46 31.4	
SNJE	**San Jose**	**1.02**	**247**	*e*P	x	00 46 18.1	
SNJE				*e*S	x	00 46 32.3	
RBDL	**Robledal**	**1.02**	**261**	*e*P	x	00 46 21.9	
RTR	**El Retiro**	**1.04**	**249**⇑	*e*P	x	00 46 19.0	
RTR				*e*S	x	00 46 33.6	
SBLS	**San Blas**	**1.04**	**246**	*e*P	x	00 46 17.9	
SBLS				*e*S	x	00 46 32.4	
CNCH	**Conchagua**	**1.27**	**142**⇓	*e*P	x	00 46 21.9	
CNCH				*e*S	x	00 46 38.8	
LEON	**Leon**	**2.51**	**137**	*e*P	Pn	00 46 36.2	-2.8
CNGN	**Cerro Negro**	**2.59**	**133**	*e*P	Pn	00 46 41.4	+1.4
CNGN				*i*		00 47 18.5	
	comp=N,260nm,0.6s						
MIRN	**Miramar**	**2.62**	**134**	*e*P	Pn	00 46 38.5	-1.9
COPN	**Copaltepe**	**2.89**	**136**	*e*P	Pn	00 46 42.6	-1.5
COPN				*i*		00 47 13.9	
	comp=Z,160nm,0.6s						
APYN	**Apoyeque**	**3.02**	**132**	*e*P	Pn	00 46 44.4	-1.5

MAN 28 01:06:53.1,904N×12550E,h1km,mb2.7,ML4.2,2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.14**	**121**	*e*P	Pg	01 06 55.1	-0.6
SCPH	**Surigao**	**0.74**	**359**⇑	*e*P	Pg	01 07 07.0	-0.2
CGP	**Cagayan de Oro**	**0.99**	**234**⇑	*i*P	Pg	01 07 12.6	+0.6
CGP				*i* S	Sg	01 07 28.6	+3.8
BUKP	**Musuan**	**1.23**	**201**	*e*P	Pg	01 07 17.3	+0.6

NEIC ***28*** *01:09:12.9,3644N×460W,h76km,MG2.5(MDD),After MDD.*
MDD ***28*** *01:09:13.0±0.7,3644N×460W,h75km±4km,mb2.5/7, Error ellipse: s-maj=7.1km s-min=3.7km az=168.0, PRXIMO*
CSEM ***28*** *01:09:12.5±0.3,3662N×465W,h77km±3km,mb2.5/7, Error ellipse: s-maj=7.2km s-min=3.3km az=169.0*
SFS ***28*** *01:09:12.0,3640N×460W,h76km,ML2.5*
ISCJB ***28*** *01:09:12.5±0.7,3666N±004×466W±003,h90km±5km, Error ellipse: s-maj=6.8km s-min=3.5km az=166.3*
INMG ***28*** *01:09:12.1±1.4,3640N×460W,h82km±5km,ML2.1,Error ellipse: s-maj=7.6km s-min=3.7km az=162.0*
IGIL ***28*** *01:09:15.0,3660N×470W,h65km,ML2.4*

ISC 28 01:09:13.3±0.7,3662N±004×465W±003,h81km±6km,n57, σ1§09/103,5C-2D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIJ	**Mijas**	**0.12**	**241**	⇑P	**Pn**	**01 09 23.6**	**-1.4**
	3.4nm,0.1s,SNR=18						
EMIJ				S	**Sn**	**01 09 32.4**	**-1.2**
	44nm,0.2s,SNR=27						
MAL	**Malaga**	**0.22**	**60**	*i* P	**Pn**	**01 09 24.8**	**-0.5**
MAL				*e*S	**Sn**	**01 09 33.3**	**-0.9**
ELOJ	**Sierra Loja**	**0.66**	**37**	P	**Pn**	**01 09 30.3**	**+1.6**
	0.5nm,0.2s,SNR=9.6						
ELOJ				S	**Sn**	**01 09 41.9**	**+1.8**
	2.2nm,0.2s,SNR=6.1						
LIJA	**Lijar**	**0.67**	**295**	P	**Pn**	**01 09 30.0**	**+1.2**
LIJA				S	**Sn**	**01 09 43.2**	**+2.9**
LIJA	**Lijar**	**0.67**	**295**	*i* P	**Pn**	**01 09 30.0**	**+1.2**
LIJA				*e*S	**Sn**	**01 09 43.2**	**+2.9**
EJIF	**Jimena Fronter**	**0.68**	**256**	P	**Pn**	**01 09 28.9**	**0.0**
	1.4nm,0.1s,SNR=16						
EJIF				S	**Sn**	**01 09 37.5**	**-3.0**
	2.8nm,0.4s,SNR=7.6						
EGUA	**Guajares**	**0.89**	**76**	P	**Pn**	**01 09 30.4**	**-0.8**
	0.2nm,0.1s,SNR=7.9						
EGUA				S	**Sn**	**01 09 41.9**	**-2.7**
	0.8nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**0.99**	**18**	P	**Pn**	**01 09 33.3**	**+1.0**
	2.4nm,0.2s,SNR=7.9						
ELUQ				S	**Sn**	**01 09 47.4**	**+0.9**
	19nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**0.99**	**18**	P	**Pn**	**01 09 33.3**	**+1.0**
ELUQ				S	**Sn**	**01 09 47.4**	**+0.9**
ESPR	**Espera**	**1.00**	**285**	⇑P	**Pn**	**01 09 33.3**	**+0.8**
	0.9nm,0.1s,SNR=18						
ESPR				S	**Sn**	**01 09 48.2**	**+1.3**
	9.0nm,0.2s,SNR=6.9						
ESPR	**Espera**	**1.00**	**285**	P	**Pn**	**01 09 33.3**	**+0.8**
	0.9nm,0.1s,SNR=18						
ESPR				S	**Sn**	**01 09 48.2**	**+1.4**
	9.0nm,0.2s,SNR=6.9						
ECOG	**Cogollos-Vega**	**1.08**	**53**	P	**Pn**	**01 09 35.0**	**+1.6**
	0.6nm,0.2s,SNR=4.0						
ECOG				S	**Sn**	**01 09 49.8**	**+1.3**
	6.7nm,0.4s,SNR=6.3						
EQUE	**Quentar**	**1.13**	**59**	P	**Pn**	**01 09 35.2**	**+1.2**
	0.1nm,0.1s,SNR=7.0						
EQUE				S	**Sn**	**01 09 50.2**	**+0.7**
	0.2nm,0.2s,SNR=9.8						
EBER	**Berja**	**1.44**	**78**	P	**Pn**	**01 09 37.3**	**-0.6**
	0.2nm,0.2s,SNR=6.4						
EBER				S	**Sn**	**01 09 54.7**	**-1.7**
	3.7nm,0.3s,SNR=8.7						
EBER	**Berja**	**1.44**	**78**	P	**Pn**	**01 09 37.3**	**-0.6**
	0.2nm,0.2s,SNR=6.4						
EBER				S	**Sn**	**01 09 54.7**	**-1.7**
	3.7nm,0.3s,SNR=8.7						
EALB	**Alboran**	**1.47**	**117**	S	**Sn**	**01 09 51.3**	**-5.8**
	2.5nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**1.54**	**2**	P	**Pn**	**01 09 40.4**	**+1.1**
	2.1nm,0.1s,SNR=34						
EADA				S	**Sn**	**01 10 00.0**	**+1.1**
	13nm,0.1s,SNR=21						
EADA	**Adamuz**	**1.54**	**2**	P	**Pn**	**01 09 40.4**	**+1.1**
	2.1nm,0.1s,SNR=34						
EADA				S	**Sn**	**01 10 00.0**	**+1.1**
	13nm,0.1s,SNR=21						
EBAN	**Banos Encina**	**1.69**	**24**	⇓P	**Pn**	**01 09 41.7**	**+0.6**
	0.8nm,0.1s,SNR=18						
EBAN				S	**Sn**	**01 10 02.2**	**0.0**
	4.7nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**1.69**	**24**	⇓P	**Pn**	**01 09 41.7**	**+0.6**
EBAN				S	**Sn**	**01 10 02.0**	**-0.1**
EBAN	**Banos Encina**	**1.69**	**24**	P	**Pn**	**01 09 41.7**	**+0.6**
	0.8nm,0.1s,SNR=18						
EBAN				S	**Sn**	**01 10 02.0**	**-0.2**
	4.7nm,0.1s,SNR=7.9						
EQES	**Quesada**	**1.72**	**46**	P	**Pn**	**01 09 42.0**	**+0.4**
	0.3nm,0.1s,SNR=8.1						
EQES				S	**Sn**	**01 10 03.1**	**+0.1**
	4.4nm,0.1s,SNR=21						
EQES	**Quesada**	**1.72**	**46**	P	**Pn**	**01 09 42.0**	**+0.4**
	0.3nm,0.1s,SNR=8.1						
EQES				S	**Sn**	**01 10 03.1**	**+0.1**
	4.4nm,0.1s,SNR=21						
EMIN	**Mina Concepcio**	**1.98**	**306**	⇑P	**Pn**	**01 09 45.3**	**+0.3**
	0.8nm,0.0s,SNR=18						
EMIN				S	**Sn**	**01 10 09.0**	**-0.1**
	3.3nm,0.0s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.98**	**306**	⇑P	**Pn**	**01 09 45.3**	**+0.3**
EMIN				S	**Sn**	**01 10 08.4**	**-0.7**
EMIN	**Mina Concepcio**	**1.98**	**306**	P	**Pn**	**01 09 45.3**	**+0.3**
	0.8nm,0.0s,SNR=18						
EMIN				S	**Sn**	**01 10 08.5**	**-0.6**
	3.3nm,0.0s,SNR=7.9						
EHUE	**Huescar**	**2.03**	**53**	P	**Pn**	**01 09 45.9**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**01 10 10.3**	**+0.1**
	0.7nm,0.1s,SNR=5.6						
EHUE	**Huescar**	**2.03**	**53**	P	**Pn**	**01 09 45.9**	**+0.3**
EHUE				S	**Sn**	**01 10 10.3**	**+0.1**
EGRO	**El Granado**	**2.44**	**293**	⇑P	**Pn**	**01 09 51.2**	**0.0**
	1.3nm,0.0s,SNR=18						
EGRO				S	**Sn**	**01 10 19.1**	**-1.2**
	4.6nm,0.1s,SNR=15						
EGRO	**El Granado**	**2.44**	**293**	P	**Pn**	**01 09 51.2**	**0.0**
	1.3nm,0.0s,SNR=18						
EGRO				S	**Sn**	**01 10 19.1**	**-1.1**
	4.6nm,0.1s,SNR=15						
EVIA	**Vianos**	**2.64**	**40**	P	**Pn**	**01 09 54.1**	**+0.4**
	SNR=7.9						
EVIA				S	**Sn**	**01 10 23.3**	**-1.5**
	2.2nm,0.1s,SNR=7.0						
EVIA	**Vianos**	**2.64**	**40**	P	**Pn**	**01 09 54.1**	**+0.4**
EVIA				S	**Sn**	**01 10 23.1**	**-1.7**
EVIA	**Vianos**	**2.64**	**40**	P	**Pn**	**01 09 54.1**	**+0.3**
	SNR=7.9						
EVIA				S	**Sn**	**01 10 23.1**	**-1.7**
	2.2nm,0.1s,SNR=7.0						
EBAD	**Badajoz**	**2.84**	**319**	P	**Pn**	**01 09 57.5**	**+0.9**
	1.1nm,0.1s,SNR=15						
EBAD				S	**Sn**	**01 10 30.3**	**+0.5**
	7.9nm,0.1s,SNR=32						
EBAD	**Badajoz**	**2.84**	**319**	P	**Pn**	**01 09 57.5**	**+1.0**
	1.1nm,0.1s,SNR=15						
EBAD				S	**Sn**	**01 10 30.3**	**+0.6**
	7.9nm,0.1s,SNR=32						
PBEJ	**Beja**	**2.93**	**300**	*e*P	**Pn**	**01 09 58.0**	**+0.3**
PBEJ				*e*S	**Sn**	**01 10 30.6**	**-1.2**
PBEJ							
	3.4nm,0.1s						
PBEJ	**Beja**	**2.93**	**300**	*e*P	**Pn**	**01 09 58.0**	**+0.3**
PBEJ				*e*S	**Sn**	**01 10 30.6**	**-1.2**
	3.4nm,0.1s						
ESDC	**Sonseca Array**	**3.10**	**10**	P	**Pn**	**01 10 00.8**	**+0.9**
	0.6nm,0.1s,baz=181,slow=13,SNR=5.4						
ESDC				S	**Sn**	**01 10 35.4**	**-0.5**
	3.4nm,0.1s,baz=188,slow=23,SNR=22						
ESDC	**Sonseca Array**	**3.10**	**10**	P	**Pn**	**01 10 00.8**	**+0.8**
	0.6nm,0.1s,SNR=5.4						
ESDC				S	**Sn**	**01 10 35.4**	**-0.5**
	3.4nm,0.1s,SNR=22						
ETOB	**Tobarra**	**3.18**	**50**	P	**Pn**	**01 10 00.9**	**-0.3**
	1.4nm,0.2s,SNR=12						
ETOB				S	**Sn**	**01 10 35.5**	**-2.6**
	1.7nm,0.2s,SNR=6.8						
ETOB	**Tobarra**	**3.18**	**50**	P	**Pn**	**01 10 00.9**	**-0.2**
	1.4nm,0.2s,SNR=12						
PESTR	**Estremoz**	**3.24**	**315**	*e*P	**Pn**	**01 10 03.0**	**+1.1**
PESTR				*e*S	**Sn**	**01 10 39.1**	**-0.2**
MORF	**Marmelete**	**3.28**	**283**	*e*P	**Pn**	**01 10 02.3**	**-0.2**
MORF				*e*S	**Sn**	**01 10 36.5**	**-3.9**
MORF				*e*S	**Sn**	**01 10 36.5**	**-3.9**
MORF				AML	AML	01 10 41.3	
	comp=E,11nm,0.1s						
MORF	**Marmelete**	**3.28**	**283**	*e*P	**Pn**	**01 10 02.3**	**-0.2**
MORF				*e*S	**Sn**	**01 10 36.5**	**-3.9**
PTEO	**Sao Teotonio**	**3.39**	**287**	*e*P	**Pn**	**01 10 04.7**	**+0.8**
PTEO				*e*S	**Sn**	**01 10 42.1**	**-1.0**
PCBR	**Castelo Branco**	**3.91**	**326**	*e*P	**Pn**	**01 10 12.2**	**+1.2**
PCBR				*e*S	**Sn**	**01 10 55.2**	**-0.6**
GUD	**Guadarrama**	**4.04**	**5**	S	**Sn**	**01 10 58.4**	**-0.4**
	comp=E,0.6nm,0.2s,SNR=6.1						
PTOM	**Tomar**	**4.21**	**316**	*e*P	**Pn**	**01 10 16.4**	**+1.2**
PTOM				*e*S	**Sn**	**01 11 02.3**	**-0.9**
PVIS	**Viseu**	**4.81**	**329**	*e*S	**Sn**	**01 11 16.8**	**-1.0**
EMOS	**Mosqueruela**	**4.97**	**40**	S	**Sn**	**01 11 19.0**	**-2.5**
	comp=E,0.3nm,0.1s,SNR=7.9						
PVRL	**Vila Real**	**5.23**	**334**	*e*S	**Sn**	**01 11 27.4**	**-0.5**
PVRL							
	comp=E,6.5nm,0.1s						
PVRL	**Vila Real**	**5.23**	**334**	*e*S	**Sn**	**01 11 27.4**	**-0.5**
	comp=E,6.5nm,0.1s						
PBRG	**Braganca**	**5.43**	**343**	S	**Sn**	**01 11 33.0**	**+0.3**
ECAL	**Calabor**	**5.55**	**344**	S	**Sn**	**01 11 36.1**	**+0.2**
	comp=E,1.0nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**5.55**	**344**	S	**Sn**	**01 11 36.1**	**+0.2**
	comp=E,1.0nm,0.3s,SNR=7.9						
PCAB	**Cabril**	**5.72**	**334**	*e*S	**Sn**	**01 11 38.5**	**-1.4**
ELOB	**Lobios**	**5.87**	**334**	S	**Sn**	**01 11 42.6**	**-1.0**
	comp=E,0.8nm,0.2s,SNR=7.9						

MOS ***28*** *01:33:29.5±2.9,5280N×10740E,h10km,mb4.3/1,Error ellipse: s-maj=47.4km s-min=24.1km az=143.6*

BYKL 28 01:33:29.7±0.2,5280N×10738E,h8km±14km,5C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRTB	**Turuntaevo**	**0.59**	**165**⇓	*i*Pg	Pg	01 33 40.1	-1.0
	414nm,0.4s						
TRTB				⇑*i*Pg	Pg	01 33 40.1	-1.0
	73nm,0.4s						
TRTB				⇑*i*Pg	Pg	01 33 40.1	-1.0
	370nm,0.4s						
TRTB				*e*Sg	Sg	01 33 47.7	-1.1
TRTB				Pmax			
	346nm,0.3s						
TRTB				Smax			
	1μm,0.4s						
TRG	**Tyrgan**	**0.63**	**267**	*e*Pg	Pg	01 33 41.4	-0.4
TRG				*e*Pb	Pb	01 33 44.2	+1.3
TRG				*e*Sg	Sg	01 33 50.2	+0.2
TRG				max			
	111nm,0.2s						
TRG				Smax			
	999nm,0.2s						
TRG	**Tyrgan**	**0.63**	**267**	*e*PG	Pg	01 33 40.9	-0.9
TRG				*e*		01 33 50.6	
TRG				pmax	pmax		
	comp=Z,120nm,0.1s						
TRG				smax			
	comp=E,1μm,0.1s						
FFNB	**Fofonovo**	**0.84**	**207**	*e*Pg	Pg	01 33 44.7	-1.2
FFNB				*e*Pb	Pb	01 33 46.9	+0.3
FFNB				*e*Sg	Sg	01 33 55.3	-1.6
FFNB				*e*Sb	Sb	01 34 00.5	+2.4
OGRR	**Ongureny**	**0.85**	**9**⇑	*i*Pg	Pg	01 33 45.0	-1.1
OGRR				*e*Sg	Sg	01 33 56.1	-1.2
OGRR				Pmax			
	comp=E,36nm,0.2s						
OGRR				Smax			
	comp=E,281nm,0.3s						
KAB	**Kabansk**	**0.87**	**211**	*e*PG	Pg	01 33 45.0	-1.5
KAB				*e*		01 33 57.3	
KAB				pm

ARS				Pmax				
	comp=N,42nm,0.6s							
ARS				Smax				
	comp=N,259nm,0.2s							
ARS	**Arshan**	**3.16**	**256**	*e*PN	Pn	01 34 27.0	+7.2	
ARS				*e*		01 35 06.7		
ARS				pmax	pmax			
	comp=Z,37nm,0.3s							
ARS				smax				
	comp=E,248nm,0.3s							
NIZ	**Nizh Angarsk**	**3.24**	**22**	*e*Pn	Pn	01 34 20.7	-0.1	
NIZ				*e*Pg	Pg	01 34 27.4	-4.4	
NIZ				*e*Sg	Sg	01 35 08.8	-4.9	
NIZ				*e*		01 35 14.5		
NIZ				Pmax				
	comp=E,16nm,0.6s							
NIZ				max				
	comp=E,81nm,1.0s							
ZAK	**Zakamensk**	**3.52**	**228**	*e*Pg	Pg	01 34 33.4	-3.8	
ZAK				*e*Sg	Sg	01 35 18.8	-4.0	
ZAK				*e*		01 35 24.9		
ZAK				Pmax				
	comp=E,5.0nm,0.4s							
ZAK				max				
	comp=E,29nm,0.4s							
KMO	**Kumora**	**3.82**	**34**	*e*	Pn	01 34 32.9	+4.2	
KMO				*e*Pg	Pg	01 34 38.1	-4.7	
KMO				*e*Sg	Sg	01 35 27.1	-5.2	
KMO				Pmax				
	comp=E,10.0nm,0.5s							
KMO				Smax				
	comp=E,65nm,1.2s							
CIT	**Chita**	**3.86**	**99**	*e*Pg	Pg	01 34 38.3	-5.3	
CIT				*e*Sg	Sg	01 35 28.5	-5.1	
CIT				Pmax				
	comp=E,22nm,0.8s							
CIT				Smax				
	comp=E,78nm,1.1s							
KPC	**Khapcheranga**	**4.41**	**133**	*e*Pg	Pg	01 34 48.7	-5.5	
KPC				*e*Sn	Sn	01 35 27.5	-1.0	
KPC				*e*Sg	Sg	01 35 46.3	-5.1	
KPC				Pmax				
	comp=E,16nm,0.4s							
KPC				Smax				
	comp=E,48nm,1.1s							
UKT	**Uakit**	**4.55**	**51**	*e*Pn	Pn	01 34 40.3	+1.4	
UKT				*e*Pg	Pg	01 34 51.8	-5.1	
UKT				*e*Sg	Sg	01 35 50.9	-5.1	
UKT				Pmax				
	comp=E,4.0nm,0.7s							
UKT				Smax				
	comp=E,19nm,1.4s							
ORL	**Orlik**	**4.62**	**270**	*e*Pn	Pn	01 34 40.1	+0.4	
ORL				*e*Pg	Pg	01 34 52.1	-6.0	
ORL				*e*		01 35 37.2		
ORL				*e*Sg	Sg	01 35 51.5	-6.4	
ORL				Pmax				
	comp=E,5.0nm,0.5s							
ORL				Smax				
	comp=E,71nm,0.7s							
NLYR	**Nelyaty**	**6.08**	**49**	*e*Sg	Sg	01 36 40.8	-4.2	
NLYR				*e*		01 36 51.9		
BOD	**Bodaibo**	**6.29**	**34**	*e*Sg	Sg	01 36 44.8	-6.9	
TUP	**Tupik**	**7.66**	**73**	*e*	Pg	01 36 59.9	+64	
TUP				*e*Sg	Sg	01 37 26.7	-8.7	
TUP				Smax				
	comp=E,26nm,1.0s							

CSEM ***28*** *01:57:12.4±0.6, 4281N×2537W, h10km, ML3.7, Error ellipse: s-maj=5.5km s-min=2.7km az=106.0, After PDA*
PDA ***28*** *01:57:12.4±0.6, 4281N×2537W, h10km, ML3.7, Error ellipse: s-maj=5.5km s-min=2.7km az=106.0*
SVSA 28 01:57:12.4±0.6, 4281N×2537W, h10km, ML3.7, Error ellipse: s-maj=5.5km s-min=2.7km az=106.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STGR	**Santa Cruz**	**4.23**	**209**	*e*P	Pn	01 58 12.5	-4.4
STGR				*e*S	Sn	01 58 57.6	-8.7
PVIA	**Vitoria**	**4.26**	**209**	*e*S	Sn	01 58 58.8	-8.2
PVNV	**Vila Nova**	**4.27**	**199**	*e*P	Pn	01 58 13.2	-4.2
PVNV				*e*S	Sn	01 58 58.4	-8.9
PBIS	**Biscoitos**	**4.29**	**200**	*e*P	Pn	01 58 13.8	-4.0
PBIS				*e*S	Sn	01 58 59.5	-8.4
PBIS							
	14nm,0.1s						
PBIS	**Biscoitos**	**4.29**	**200**	*e*P	Pn	01 58 13.8	-4.0
PBIS				*e*S	Sn	01 58 59.5	-8.4
PFAV	**Pico das Favas**	**4.30**	**198**	*e*P	Pn	01 58 13.9	-3.9
PFAV				*e*S	Sn	01 58 59.4	-8.6
PFAV							
	19nm,0.2s						
PFAV	**Pico das Favas**	**4.30**	**198**	*e*P	Pn	01 58 13.9	-3.9
PFAV				*e*S	Sn	01 58 59.4	-8.6
ASBA	**Santa Barbara**	**4.35**	**201**	*e*P	Pn	01 58 14.3	-4.2
ASBA				*e*S	Sn	01 59 01.1	-8.2
ASBA							
	27nm,0.1s						
ASBA	**Santa Barbara**	**4.35**	**201**	*e*P	Pn	01 58 14.3	-4.2
ASBA				*e*S	Sn	01 59 01.1	-8.2
RIB2	**Ribeirinha**	**4.36**	**199**	*e*P	Pn	01 58 14.5	-4.2
RIB2				*e*S	Sn	01 59 01.0	-8.5
PPAD	**Pico dos Padre**	**4.36**	**200**	*e*P	Pn	01 58 14.5	-4.2
PPAD				*e*S	Sn	01 59 01.2	-8.3
ROSA	**Rosais**	**4.63**	**209**	*e*P	Pn	01 58 18.3	-4.2
ROSA				*e*S	Sn	01 59 07.9	-8.4
PLUZ	**Luz**	**4.67**	**217**	*e*P	Pn	01 58 13.2	-10
PID	**Ribeirinha**	**4.84**	**207**	*e*S	Sn	01 59 12.6	-8.8
PICO	**Pico**	**4.89**	**209**	*e*P	Pn	01 58 21.9	-4.1
PICO				*e*S	Sn	01 59 14.0	-8.7
CALA	**Caldeira**	**4.93**	**212**	*e*rx		01 58 19.1	
SET4	**Mosteiros**	**4.94**	**184**	*e*P	Pn	01 58 22.4	-4.3
SET4				*e*S	Sn	01 59 14.9	-9.0
PSAN	**Santo Antonio**	**4.96**	**183**	*e*P	Pn	01 58 23.0	-4.0
PSAN				*e*S	Sn	01 59 16.0	-8.4
SET2	**Ginetes**	**4.97**	**184**	*e*P	Pn	01 58 22.8	-4.3
PFET	**Feteiras**	**5.00**	**184**	*e*P	Pn	01 58 23.1	-4.4
PFET				*e*S	Sn	01 59 16.6	-8.7

CASC ***28*** *02:35:14.1±2.1, 1335N×9097W, h23km±7km, MD4.3, mb4.3(NEIC)*
BJI ***28*** *02:35:16.1, 1350N×9070W, h35km, mB4.5, Ms4.7, Msz4.3*
NEIC ***28*** *02:35:16.2±0.5, 1351N×9067W, h35km, mb4.3/15, Error ellipse: s-maj=13.9km s-min=7.1km az=49.0*
ISCJB ***28*** *02:35:18.1±0.7, 1358N±007°×9058W±006, h68km±6km, mb4.1/28, Error ellipse: s-maj=14.4km s-min=4.9km az=80.5*
IDC ***28*** *02:35:19.5±4.6, 1378N×9045W, h65km±41km, mb3.8/17, mb1 3.9/17, mb1mx3.8/25, mbtmp4.1/17, MS3.6/15, Ms1 3.6/15, ms1mx3.4/30, Error ellipse: s-maj=28.2km s-min=11.8km az=58.0*
ISC 28 02:35:20.0±0.7, 1369N±007°×9052W±006, h64km±6km, n225, ₙ0ᵩ71/195, mb4.1/28, 75C-55D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TER	**Terranova**	**0.63**	**346**	⇑*i*P	**Pn**	**02 35 32.0**	**-1.6**
PCG	**Pacaya**	**0.71**	**353**	⇓*i*P	**Pn**	**02 35 34.3**	**-0.3**
FUG	**Fuego 3**	**0.82**	**338**	⇓*i*P	**Pn**	**02 35 34.0**	**-1.8**
RTR	**El Retiro**	**0.88**	**76**	⇓*e*P	x	02 35 37.5	
SBLS	**San Blas**	**0.89**	**80**	*e*P	x	02 35 37.4	
SBLS				*i* P	x	02 35 37.5	
GCG	**Guatemala City**	**0.90**	**359**	*e*P	**Pn**	**02 35 37.8**	**+1.0**
GCG				*e*S	**Sn**	**02 35 54.4**	**+5.2**
SNJE	**San Jose**	**0.91**	**78**	*e*P	x	02 35 37.8	
RBDL	**Robledal**	**0.92**	**62**	*e*P	x	02 35 38.1	
BOQS	**Boqueron**	**1.21**	**88**	⇑*e*P	x	02 35 42.1	
BOQS				*e*S	x	02 36 05.7	
JAT	**Jato**	**1.25**	**300**	*e*P	**Pn**	**02 35 35.7**	**-5.7**
MTO2	**Montecristo 2**	**1.33**	**58**	⇓*e*P	x	02 35 45.1	
MTO2				*e*S	x	02 36 10.0	
LFU	**La Fuente**	**1.37**	**87**	⇓*e*P	x	02 35 44.9	
LFU				*e*S	x	02 36 07.7	
LFRS	**El Faro**	**1.42**	**92**	⇑*e*P	x	02 35 44.8	
LBRS	**Las Brisas**	**1.44**	**88**	⇑*e*P	x	02 35 45.7	
LBRS				*e*S	x	02 36 09.7	
LCBS	**La Ceiba**	**1.50**	**91**	⇑*e*P	x	02 35 46.0	
SNVI	**San Vicente**	**1.64**	**92**	⇑*e*P	x	02 35 48.3	
SNVI				*e*S	x	02 36 13.7	
VSM	**San Miguel**	**2.20**	**96**	*e*P	x	02 35 56.2	
VSM				*e*S	x	02 36 27.8	
BLLM	**Bellamira**	**2.23**	**96**	⇑*e*P	x	02 35 56.6	
BLLM				*e*S	x	02 36 30.8	
CNCH	**Conchagua**	**2.65**	**99**	*e*P	x	02 36 01.6	
CNCH				*e*S	x	02 36 38.7	
LEON	**Leon**	**3.75**	**109**	*e*P	**Pn**	**02 36 15.1**	**-0.3**
CNGN	**Cerro Negro**	**3.91**	**107**	*e*P	**Pn**	**02 36 17.7**	**+0.2**
MIRN	**Miramar**	**3.91**	**108**	*e*P	**Pn**	**02 36 17.8**	**+0.2**
COPN	**Copaltepe**	**4.11**	**111**	*e*P	**Pn**	**02 36 21.2**	**+0.9**
APYN	**Apoyeque**	**4.32**	**109**	*e*P	**Pn**	**02 36 22.5**	**-0.6**
XAVN	**Gruta Xavier**	**4.37**	**110**	*e*P	**Pn**	**02 36 24.1**	**+0.3**
TISN	**Laguna Tiscapa**	**4.42**	**110**	*e*P	**Pn**	**02 36 24.7**	**+0.2**
BOA	**Boaco**	**4.83**	**104**	*e*P	**Pn**	**02 36 30.9**	**+0.8**
BOA				*e*P		02 36 30.8	
CMIG	**Matias Romero**	**5.40**	**309**	P	**Pn**	**02 36 32.1**	**-5.8**
	4.4nm,0.3s,baz=134,slow=11,SNR=50						
CMIG				S	**Sn**	**02 37 31.1**	**-7.7**
	11nm,0.3s,baz=43,slow=12,SNR=4.1						
CMIG				LR	LR	02 38 58.6	
	comp=Z,722nm,21.5s,baz=115,slow=41						
ROSC	**El Rosal**	**18.22**	**117**	P	**Pn**	**02 39 32.4**	**+4.1**
	0.3nm,0.3s,baz=205,slow=1.5,SNR=13						
ROSC	**El Rosal**	**18.22**	**117**	*e*P	**Pn**	**02 39 32.5**	**+4.2**
JCT	**Junction City**	**18.78**	**334**	*e*P	**Pn**	**02 39 33.9**	**-1.2**
	5.1nm,0.4s						
LRAL	**Lakeview Retre**	**19.53**	**9**	*e*P	**Pn**	**02 39 44.8**	**+0.8**
	19nm,1.0s						
SDV	**Santo Domingo**	**20.07**	**102**	P	**P**	**02 39 48.1**	**0.0**
	6.8nm,0.4s,baz=325,slow=6.3,SNR=4.5						
SDV	**Santo Domingo**	**20.07**	**102**	*e*P	**P**	**02 39 48.5**	**+0.4**
	11nm,0.7s						
MIAR	**Mount Ida**	**20.95**	**353**	*e*P	**P**	**02 39 57.1**	**-0.4**
SWET	**Sewanee**	**21.83**	**10**	*e*P	**P**	**02 40 08.6**	**+1.6**
MYNC	**Murphy**	**22.06**	**14**	*e*P	**P**	**02 40 12.3**	**+2.9**
WMOK	**Wichita Mounta**	**22.25**	**342**	*e*P	**P**	**02 40 10.9**	**-0.6**
CPCT	**Cooper Cave**	**22.33**	**13**	*e*P	**P**	**02 40 14.2**	**+1.9**
GDL2	**Guadalupe Moun**	**22.36**	**328**	*e*P	**P**	**02 40 12.4**	**-0.2**
WVT	**Waverly**	**22.48**	**6**	*e*P	**P**	**02 40 14.0**	**+0.1**
	7.0nm,0.8s,mb4.1						
MNTX	**Cornudas Mount**	**22.52**	**325**	*e*P	**P**	**02 40 13.0**	**-1.3**
ATAH	**Atahualpa**	**23.82**	**149**	P	**P**	**02 40 29.6**	**+2.5**
	2.8nm,0.3s,mb4.2,baz=341,slow=10,SNR=5.7						
ATAH				LR	LR	02 48 46.9	
	comp=Z,198nm,18.9s,baz=174,slow=34						
WCI	**Wyandotte Cave**	**24.73**	**8**	*e*P	**P**	**02 40 35.8**	**+0.5**
	24nm,0.9s,mb4.7						
Y22C	**IRIS PASSCAL I**	**25.17**	**327**	⇑P	**P**	**02 40 40.3**	**+1.1**
	baz=25						
LPM	**Los Pinos Moun**	**25.20**	**327**	*e*P	**P**	**02 40 40.2**	**+0.7**
LENM	**Lemitar**	**25.26**	**327**	*e*P	**P**	**02 40 41.0**	**+0.9**
ANMO	**Albuquerque**	**25.60**	**329**	P	**P**	**02 40 43.4**	**+0.1**
	3.1nm,0.9s,mb3.8,baz=156,slow=12,SNR=12						
ANMO				PcP	PcP	02 44 12.8	+0.2
	1.2nm,0.8s,baz=124,slow=3.2,SNR=5.2						
ANMO	**Albuquerque**	**25.60**	**329**	P	**P**	**02 40 43.4**	**+0.1**
ANMO				PcP	PcP	02 44 12.8	+0.2
TUC	**Tucson**	**26.21**	**318**	*e*P	**P**	**02 40 48.3**	**-0.4**
	4.9nm,0.9s,mb4.0						
116A	**Eloy**	**26.97**	**318**	⇑P	**P**	**02 40 56.0**	**+0.5**
	baz=27						
115A	**Sonoran Desert**	**27.40**	**317**	⇓P	**P**	**02 40 59.8**	**+0.4**
	baz=28						
Z14A	**Wintersburg**	**28.28**	**318**	⇓P	**P**	**02 41 07.6**	**+0.3**
	baz=28						
X15A	**Humboldt**	**28.55**	**320**	⇑P	**P**	**02 41 10.2**	**+0.6**
	baz=29						
Y14A	**Wickenburg**	**28.68**	**319**	⇑P	**P**	**02 41 11.3**	**+0.5**
	baz=29						
WUAZ	**Wupatki**	**28.72**	**323**	*e*P	**P**	**02 41 11.8**	**+0.6**
	11nm,0.8s,mb4.7						
X14A	**Yava**	**28.95**	**319**	⇓P	**P**	**02 41 13.7**	**+0.5**
	baz=29,SNR=5.5						
W15A	**Williams**	**29.03**	**321**	⇑P	**P**	**02 41 14.7**	**+0.8**
	baz=29						
GLA	**Glamis**	**29.36**	**315**	*e*P	**P**	**02 41 16.7**	**-0.1**
GLA	**Glamis**	**29.36**	**315**	⇓P	**P**	**02 41 16.6**	**-0.3**
	baz=29						
W14A	**Seligman**	**29.55**	**320**	⇓P	**P**	**02 41 19.0**	**+0.5**
	baz=30						
Y12C	**Blythe**	**29.56**	**317**	⇓P	**P**	**02 41 18.8**	**+0.2**
	baz=30						
X13A	**Yucca**	**29.62**	**319**	⇑P	**P**	**02 41 19.5**	**+0.3**
	baz=30						
PDMCI	**Parker Dam,Lak**	**29.64**	**318**	⇑P	**P**	**02 41 20.0**	**+0.6**
	baz=30,SNR=5.6						
W13A	**Hualapai Mount**	**29.98**	**319**	⇑P	**P**	**02 41 22.9**	**+0.6**
	baz=30						
BELC	**Belle Mtn.**	**30.70**	**316**	⇑P	**P**	**02 41 29.1**	**+0.4**
	baz=31						
W12A	**Cal Nev Ari**	**30.73**	**319**	⇓P	**P**	**02 41 29.8**	**+0.8**
	baz=31						
GMRC	**Granite Mounta**	**30.93**	**317**	⇓P	**P**	**02 41 31.5**	**+0.8**
	baz=31						
V12A	**Nelson**	**30.98**	**319**	⇑P	**P**	**02 41 32.1**	**+0.9**
	baz=31,SNR=13						
U12A	**Valley of Fire**	**31.24**	**321**	⇓P	**P**	**02 41 33.9**	**+0.5**
	baz=31						
CCUT	**Cedar City**	**31.28**	**324**	*e*P	**P**	**02 41 35.0**	**+1.2**
MSU	**Marysvale**	**31.30**	**326**	*e*P	**P**	**02 41 35.0**	**+1.0**
HEC	**Hector,Ludlow**	**31.41**	**317**	⇑P	**P**	**02 41 35.1**	**+0.2**
	baz=32						
TUQ	**Turquoise Mtn.**	**31.50**	**318**	⇑P	**P**	**02 41 36.0**	**+0.3**
	baz=32						
GSC	**Goldstone**	**32.00**	**317**	⇓P	**P**	**02 41 40.4**	**+0.3**
	baz=32						
U10A	**Ash Meadows, A**	**32.35**	**319**	⇑P	**P**	**02 41 42.9**	**-0.4**
	baz=32						
SADO	**Sadowa**	**32.46**	**15**	P	**P**	**02 41 42.5**	**-1.7**
	2.0nm,0.4s,mb4.3,baz=219,slow=7.3,SNR=3.5						
LRMC	**Laurel Mountai**	**32.69**	**316**	⇑P	**P**	**02 41 45.9**	**-0.2**
	baz=33						
FURC	**Furnace Creek,**	**32.72**	**319**	⇓P	**P**	**02 41 46.9**	**+0.4**
	baz=33						
DUG	**Dugway**	**32.86**	**328**	*e*P	**P**	**02 41 47.1**	**-0.5**
	2.1nm,0.9s,mb4.1						
DUG				*e*pP	pP	02 41 55.0	-8.2
MPMC	**Manual Prospec**	**32.89**	**317**	⇑P	**P**	**02 41 48.1**	**+0.2**
	baz=33						
DAC	**Darwin (Calif)**	**33.09**	**318**	*e*P	**P**	**02 41 49.6**	**0.0**
	3.6nm,1.1s,mb4.2						
DAC				*e*PcP	PcP	02 44 32.2	+0.5
Q12A	**Willow Creek R**	**33.14**	**324**	⇑P	**P**	**02 41 50.8**	**+0.7**
	baz=33						
HWUT	**Hardware Ranch**	**33.30**	**331**	*e*P	**P**	**02 41 51.3**	**-0.2**
	6.2nm,0.9s,mb4.5						
PDAR	**Pinedale Array**	**33.31**	**334**	P	**P**	**02 41 50.7**	**-0.9**
	0.5nm,0.5s,mb3.7,baz=122,slow=5.6,SNR=4.0						
PDAR				PcP	PcP	02 44 32.0	-0.3
	0.4nm,0.4s,baz=217,slow=1.5,SNR=6.7						
GRAC	**Grapevine Rang**	**33.37**	**319**	⇑P	**P**	**02 41 52.5**	**+0.4**
	baz=33,SNR=5.9						
P12A	**McGill**	**33.48**	**325**	⇓P	**P**	**02 41 53.9**	**+0.9**
	baz=34						
BGU	**Big Grassy Mou**	**33.51**	**328**	*e*P	**P**	**02 41 53.6**	**+0.3**
R10A	**Warm Springs**	**33.51**	**322**	⇓P	**P**	**02 41 54.0**	**+0.7**
	baz=34						
S09A	**Goldfield**	**33.72**	**320**	⇑P	**P**	**02 41 55.0**	**-0.1**
	baz=34						
VES	**Vestal, Richgr**	**33.83**	**316**	⇓P	**P**	**02 41 56.0**	**-0.1**
	baz=34						
O12A	**Currie**	**33.94**	**326**	⇓P	**P**	**02 41 57.5**	**+0.5**
	baz=34,SNR=6.5						
R09A	**Tonopah**	**33.95**	**321**	⇑P	**P**	**02 41 57.5**	**+0.5**
	baz=34,SNR=6.4						
P11A	**Circle Ranch,**	**34.02**	**324**	⇓P	**P**	**02 41 58.7**	**+1.0**
	baz=34						
N13A	**Wendover, West**	**34.07**	**327**	⇑P	**P**	**02 41 58.7**	**+0.6**
	baz=34						
SMMC	**Simmler**	**34.18**	**314**	⇑P	**P**	**02 41 59.2**	**+0.1**
	baz=34						
RCTC	**Rector, Farmer**	**34.20**	**316**	⇑P	**P**	**02 41 59.3**	**+0.1**
	baz=34						
HELL	**Mitchell Peak,**	**34.26**	**317**	⇓P	**P**	**02 41 59.9**	**+0.1**
	baz=34,SNR=6.4						
O11A	**Cowboy Ranch,**	**34.35**	**325**	⇓P	**P**	**02 42 01.3**	**+0.7**
	baz=34						
P10A	**Eureka**	**34.47**	**323**	⇓P	**P**	**02 42 02.3**	**+0.7**
	baz=35						
N12A	**Clover Valley,**	**34.51**	**326**	⇑P	**P**	**02 42 02.3**	**+0.3**
	baz=35						
KCC	**Kaiser Creek**	**34.82**	**318**	⇓P	**P**	**02 42 04.6**	**-0.1**
	baz=35						
M12A	**Wells**	**34.84**	**327**	⇓P	**P**	**02 42 05.0**	**+0.2**
	baz=35,SNR=6.3						
Q08A	**Gabbs**	**34.86**	**321**	⇓P	**P**	**02 42 05.4**	**+0.4**
	baz=35,SNR=5.6						
N11A	**Elko Archery C**	**34.87**	**326**	⇓P	**P**	**02 42 05.5**	**+0.5**
	baz=35						
T06C	**Millerton Lake**	**34.90**	**317**	⇑P	**P**	**02 42 05.1**	**-0.2**
	baz=35						
O10A	**Cortez Mining,**	**34.94**	**324**	⇑P	**P**	**02 42 06.1**	**+0.5**
	baz=35						
R07C	**Lee Vining**	**35.09**	**319**	⇑P	**P**	**02 42 07.1**	**+0.1**
	baz=35						
N10A	**Dunphy**	**35.23**	**325**	⇓P	**P**	**02 42 08.7**	**+0.5**
	baz=35						
SAML	**Samuel**	**35.24**	**128**	*e*P	**P**	**02 42 06.8**	**-1.5**
	6.9nm,1.1s,mb4.5						
O09A	**Fish Creek Ran**	**35.25**	**323**	⇑P	**P**	**02 42 09.1**	**+0.8**
	baz=35,SNR=6.7						
U04C	**Hernandez Rese**	**35.27**	**315**	P	**P**	**02 42 08.0**	**-0.6**
	baz=35,SNR=5.8						
M11A	**Holland Ranch,**	**35.32**	**326**	⇑P	**P**	**02 42 09.5**	**+0.6**
	baz=35,SNR=7.5						
V03C	**Hunter Liggett**	**35.41**	**314**	⇑P	**P**	**02 42 09.6**	**-0.1**
	baz=36						
P08A	**Dixie Valley**	**35.47**	**322**	⇓P	**P**	**02 42 10.3**	**+0.1**
	baz=36						
S06C	**San Francisco**	**35.48**	**318**	⇑P	**P**	**02 42 10.5**	**+0.1**
	baz=36,SNR=6.0						
S05C	**Merced**	**35.50**	**317**	⇓P	**P**	**02 42 10.1**	**-0.4**
	baz=36						
R06C	**Coleville**	**35.60**	**319**	⇓P	**P**	**02 42 12.0**	**+0.6**
	baz=36						
M10A	**I.L. Ranch, Tu**	**35.79**	**326**	⇑P	**P**	**02 42 13.2**	**+0.3**
	baz=36,SNR=5.2						
HAST	**UC Hastings Re**	**35.81**	**315**	⇑P	**P**	**02 42 12.5**	**-0.7**
	baz=36						
N09A	**Rock Creek Ran**	**35.89**	**324**	⇑P	**P**	**02 42 14.1**	**+0.3**
	baz=36						
CMB	**Columbia Colle**	**35.92**	**318**	*e*P	**P**	**02 42 14.0**	**-0.1**
	2.9nm,0.8s,mb4.3						
CMB	**Columbia Colle**	**35.92**	**318**	⇑P	**P**	**02 42 13.6**	**-0.5**
	baz=36						
PACP	**Pacheco Peak**	**35.96**	**316**	⇑P	**P**	**02 42 13.9**	**-0.5**
	baz=36						
R05C	**Kirkwood Meado**	**36.10**	**319**	⇓P	**P**	**02 42 15.4**	**-0.2**
	baz=36						
HLID	**Hailey**	**36.15**	**330**	*e*P	**P**	**02 42 15.2**	**-0.8**
	2.8nm,0.9s,mb4.2						
N08A	**GE Springer Mi**	**36.20**	**323**	⇓P	**P**	**02 42 16.6**	**+0.1**
	baz=36						
M09A	**Marrel Ranch,**	**36.23**	**325**	⇓P	**P**	**02 42 17.1**	**+0.3**
	baz=36						
O07A	**Toulon**	**36.24**	**322**	⇑P	**P**	**02 42 16.7**	**-0.1**
	baz=36						
S04C	**Ingram Canyon,**	**36.25**	**316**	⇑P	**P**	**02 42 16.5**	**-0.4**
	baz=36						
BOZ	**Bozeman (W)**	**36.52**	**335**	*e*P	**P**	**02 42 19.4**	**+0.2**
	1.3nm,0.8s,mb3.8						
LAVA	**Lava Cap Winer**	**36.56**	**319**	⇑P	**P**	**02 42 19.2**	**-0.3**
	baz=37						
ULM	**Lac du Bonnet**	**36.72**	**354**	P	**P**	**02 42 18.7**	**-2.2**
	2.8nm,0.7s,mb4.2,baz=179,slow=9.1,SNR=4.5						
ULM				LR	LR	02 59 55.4	
	comp=Z,64nm,18.5s,baz=211,slow=40						
L09A	**Wilkinson Ranc**	**36.75**	**325**	P	**P**	**02 42 21.7**	**+0.6**
	baz=37,SNR=5.3						
P05C	**Yuba Gap, Truc**	**36.79**	**319**	⇑P	**P**	**02 42 21.8**	**+0.3**
	baz=37						
O06A	**Flanigan**	**36.82**	**321**	⇓P	**P**	**02 42 22.1**	**+0.4**
	baz=37						
BEKR	**Beckwourth**	**36.96**	**320**	⇑P	**P**	**02 42 23.3**	**+0.3**
	baz=37,SNR=9.7						
LPAZ	**La Paz**	**37.10**	**143**	P	**P**	**02 42 24.1**	**-0.1**
	0.6nm,0.7s,mb3.5,baz=332,slow=13,SNR=3.8						
LPAZ				LR	LR	02 56 25.1	
	comp=Z,65nm,20.4s,baz=306,slow=34						
N06A	**Buffalo Meadow**	**37.18**	**322**	P	**P**	**02 42 25.0**	**+0.2**
	baz=37,SNR=11						
M07A	**Soldier Meadow**	**37.19**	**323**	⇑P	**P**	**02 42 25.1**	**+0.2**
	baz=37						
L08A	**Fields**	**37.24**	**325**	P	**P**	**02 42 25.6**	**+0.3**
	baz=37,SNR=11						
K09A	**Rome**	**37.24**	**326**	P	**P**	**02 42 25.8**	**+0.5**
	baz=37,SNR=21						
O05C	**Quincy**	**37.37**	**320**	⇑P	**P**	**02 42 26.6**	**+0.2**
	baz=37						
CVS	**Carmenet Viney**	**37.45**	**317**	⇑P	**P**	**02 42 27.2**	**0.0**
	baz=38						
SUTB	**Sutter Butte**	**37.50**	**319**	⇑P	**P**	**02 42 27.9**	**+0.4**
	baz=38						
ORV	**Oroville**	**37.50**	**319**	⇑P	**P**	**02 42 27.7**	**+0.2**
	baz=38						
WVOR	**Wild Horse Val**	**37.56**	**325**	*e*P	**P**	**02 42 27.9**	**-0.1**
	8.4nm,0.8s,mb4.5						
ELFS	**Eagle Lake Fie**	**37.64**	**321**	⇓P	**P**	**02 42 29.3**	**+0.6**
	baz=38,SNR=9.4						
K08A	**Mann Creek Ran**	**37.67**	**326**	P	**P**	**02 42 29.2**	**+0.2**
	baz=38,SNR=23						
O04C	**Chester**	**37.68**	**321**	⇓P	**P**	**02 42 29.1**	**+0.1**
	baz=38						
L07A	**Adell**	**37.69**	**324**	P	**P**	**02 42 29.4**	**+0.3**
	baz=38,SNR=11						
J09A	**Fry Pan Ranch,**	**37.70**	**327**	P	**P**	**02 42 29.7**	**+0.5**
	baz=38,SNR=11						
MNRC	**McLaughlin Nat**	**37.73**	**318**	⇓P	**P**	**02 42 29.5**	**0.0**
	baz=38						
M06C	**Likely Place

NEW	**Newport**	**40.92**	**333**	LR	LR	03 04 44.8		
	comp=Z,102nm,18.1s,baz=356,slow=43							
H04A	**Detroit Lake**	**40.98**	**325**	⇓P	**P**	**02 42 56.0**	**-0.5**	
	baz=41,SNR=7.8							
I03A	**Eugene**	**41.16**	**324**	⇓P	**P**	**02 42 57.7**	**-0.3**	
	baz=41							
F05A	**White Salmon**	**41.36**	**327**	⇓P	**P**	**02 42 58.6**	**-1.0**	
	baz=42							
SIV	**San Ignacio**	**41.44**	**134**	P	**P**	**02 42 59.9**	**-0.4**	
	4.6nm,0.7s,mb4.2,baz=308,slow=8.9,SNR=31							
SIV				PcP	PcP	02 44 57.4	+0.3	
	1.4nm,0.8s,baz=270,slow=4.0,SNR=4.4							
G04A	**Mulino**	**41.47**	**326**	⇓P	**P**	**02 43 00.2**	**-0.4**	
	baz=42							
I02A	**Mapleton**	**41.50**	**323**	⇑P	**P**	**02 43 00.5**	**-0.3**	
	baz=42							
E05A	**Randle**	**41.96**	**328**	⇑P	**P**	**02 43 04.1**	**-0.5**	
	baz=42							
G03A	**Yamhill**	**41.98**	**325**	⇑P	**P**	**02 43 03.9**	**-0.9**	
	baz=42							
H02A	**Toledo**	**42.00**	**324**	⇓P	**P**	**02 43 04.0**	**-0.8**	
	baz=42							
E04A	**Onalaska**	**42.48**	**327**	⇑P	**P**	**02 43 08.2**	**-0.6**	
	baz=43							
D05A	**Enumclaw**	**42.49**	**328**	⇓P	**P**	**02 43 07.4**	**-1.5**	
	baz=43							
F03A	**Seaside**	**42.52**	**326**	⇑P	**P**	**02 43 07.3**	**-1.8**	
	baz=43							
C05A	**Tolt Reservoir**	**42.68**	**329**	⇑P	**P**	**02 43 09.6**	**-0.8**	
	baz=43							
C04A	**Brinnon**	**43.34**	**328**	⇑P	**P**	**02 43 15.9**	**+0.1**	
	baz=44							
SCHQ	**Schefferville**	**45.03**	**19**	P	**P**	**02 43 28.4**	**-0.8**	
	1.7nm,0.3s,mb4.3,baz=225,slow=6.5,SNR=9.5							
SCHQ				LR	LR	03 03 10.7		
	comp=Z,77nm,19.6s,baz=48,slow=37							
CFAA	**Coronel Fontan**	**49.85**	**155**	P	**P**	**02 44 05.9**	**-0.8**	
	0.2nm,0.3s,mb3.6,baz=7.1,slow=8.1,SNR=3.6							
BDFB	**Brasilia**	**51.15**	**123**	P	**P**	**02 44 16.4**	**0.0**	
	3.2nm,0.8s,mb4.3,baz=308,slow=5.6,SNR=3.6							
CPUP	**Villa Florida**	**51.23**	**141**	PcP	PcP	02 45 30.4	-1.0	
	1.6nm,0.8s,baz=270,slow=2.0,SNR=3.1							
CPUP				LR	LR	03 07 08.4		
	comp=Z,92nm,18.1s,baz=96,slow=37							
YKA	**Yellowknife Ar**	**51.67**	**346**	P	**P**	**02 44 17.9**	**-2.4**	
	0.9nm,0.7s,mb3.8,baz=151,slow=7.5,SNR=6.7							
YKA				PcP	PcP	02 45 31.9	-1.2	
	0.3nm,0.6s,baz=151,slow=4.3,SNR=4.7							
YKA				LR	LR	03 07 17.5		
	comp=Z,61nm,21.0s,baz=120,slow=37							
YKA	**Yellowknife Ar**	**51.67**	**346**	P	**P**	**02 44 17.9**	**-2.4**	
YKA				PcP	PcP	02 45 31.9	-1.2	
YKA				LR	LR	03 07 17.5		
PLCA	**Paso Flores**	**57.22**	**162**	LR	LR	03 07 19.0		
	comp=Z,140nm,18.3s,baz=102,slow=34							
PMOR	**Pomariorio Ree**	**63.52**	**245**	*e*T		03 53 55.1		
	4.3nm,0.2s							
PPT	**Papeete**	**66.03**	**244**	*e*LR	LR	03 05 28.3		
	108nm,25.8s							
PPT	**Papeete**	**66.03**	**244**	LR	LR	03 07 03.7		
	comp=Z,67nm,19.1s,baz=44,slow=29							
TBI	**Tubuai**	**68.39**	**238**	*e*T		03 59 54.9		
	5.1nm,0.3s							
ESDC	**Sonseca Array**	**78.78**	**52**	P	**P**	**02 47 13.8**	**-2.0**	
	0.2nm,0.3s,mb3.5,baz=278,slow=4.4,SNR=4.3							
NOA	**NORSAR Array B**	**83.73**	**29**	LR	LR	03 24 08.9		
	comp=Z,13nm,19.4s,baz=0.0,slow=35							
DBIC	**Dimbokro**	**84.25**	**85**	P	**P**	**02 47 45.1**	**+0.5**	
	5.3nm,0.4s,mb5.0,baz=267,slow=3.9,SNR=25							
ARCES	**ARCESS Array B**	**85.98**	**18**	LR	LR	03 25 21.9		
	comp=Z,24nm,18.6s,baz=95,slow=35							
GERES	**GERESS Array B**	**88.93**	**40**	P	**P**	**02 48 06.6**	**-0.8**	
	0.4nm,0.8s,mb3.8,baz=246,slow=5.7,SNR=4.2							
GERES				LR	LR	03 23 45.1		
	comp=Z,40nm,21.7s,baz=294,slow=33							
TORD	**Torodi Ar. Bea**	**89.05**	**77**	P	**P**	**02 48 07.2**	**-0.8**	
	0.5nm,0.5s,mb4.1,baz=299,slow=4.7,SNR=11							
FINES	**FINESS Array B**	**90.17**	**25**	LR	LR	03 28 42.5		
	comp=Z,19nm,21.0s,baz=351,slow=36							
BOSA	**Boshof**	**118.92**	**115**	PKP	PKPdf	02 54 01.8	+0.6	
	2.9nm,1.0s,baz=223,slow=8.5,SNR=4.4							
MKAR	**Makanchi Array**	**119.45**	**6**	PKP	PKPdf	02 54 00.9	-1.3	
	0.4nm,0.4s,baz=336,slow=2.7,SNR=3.6							
HHC	**Hu-ho-hao-te**	**122.01**	**340**	*e*PKP	PKPdf	02 54 06.3	-0.8	
HHC				XPKP		02 54 20.5		
HHC				PP	PP	02 55 45.0	+3.0	
HHC				PKS		02 57 41.5		
HHC				SKS	SKSdf	03 01 13.0	-0.6	
HHC				SKKS	SKKSac	03 02 33.0	-2.5	
HHC				SS	SS	03 12 24.3	+9.1	
HHC				PP	PP			
	comp=Z,30nm,8.3s							
HHC				LR	LR			
	comp=N,90nm,33.3s							
HHC				LR	LR			
	comp=E,78nm,34.5s							
HHC				LR	LR			
	comp=Z,82nm,34.5s							
WMQ	**Urumqi**	**122.75**	**2**	*e*PKP	PKPdf	02 54 09.0	+0.4	
SSE	**Sheshan**	**126.05**	**326**	*e*PKP	PKPdf	02 54 15.0	+0.1	
NJ2	**Nanjing**	**126.52**	**329**	*e*PKP	PKPdf	02 54 16.3	+0.5	
WRA	**Warramunga Arr**	**136.71**	**255**	PKP	PKPdf	02 54 34.0	-1.0	
	comp=Z,1.0nm,0.7s,baz=90,slow=1.8,SNR=5.9							
ASAR	**Alice Springs**	**136.91**	**250**	PKP	PKPdf	02 54 34.8	-0.6	
	comp=Z,0.5nm,0.7s,baz=108,slow=2.5,SNR=4.9							

ISCJB ***28*** *02:44:12.4±0.4, 44.35N±0.02×732E±0.03, h15km±3km, Error ellipse: s-maj=4.3km s-min=2.6km az=115.7*
ROM ***28*** *02:44:13.0±0.3, 44.37N×7.38E, h8km±3km, Md2.1/5, Ml1.3/2, Error ellipse: s-maj=9.1km s-min=3.8km az=25.0*
LDG ***28*** *02:44:13.3±0.1, 44.36N×7.39E, h2km, Md2.3/3, Ml2.2/8, Error ellipse: s-maj=1.8km s-min=0.8km az=62.0*
STR ***28*** *02:44:14.0±0.6, 44.31N×7.35E, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 28 02:44:13.0±0.3, 4436N±002×735E±003, h14km±3km, n31, σ0.6/56/51, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.17**	**333**	Pg	**Pg**	**02 44 17.1**	**+0.1**
DOI				Sg	**Sg**	**02 44 19.8**	**0.0**
TOUF	**Mont Tournerai**	**0.35**	**192**	Pg	**Pg**	**02 44 20.2**	**+0.1**
TOUF				Sg	**Sg**	**02 44 23.5**	**-1.4**
AUTN	**L'Aution**	**0.36**	**171**	Pg	**Pg**	**02 44 20.4**	**0.0**
AUTN				Sg	**Sg**	**02 44 25.1**	**-0.2**
SAOF	**Saorge**	**0.40**	**158**	Pg	**Pg**	**02 44 20.9**	**-0.1**
SAOF				Sg	**Sg**	**02 44 26.4**	**+0.1**
LUCF	**Luceram**	**0.46**	**181**	Pg	**Pg**	**02 44 22.4**	**+0.2**
LUCF				Sg	**Sg**	**02 44 28.8**	**+0.4**
MVIF	**Mont Vial**	**0.48**	**198**	Pg	**Pg**	**02 44 22.4**	**-0.1**
MVIF				Sg	**Sg**	**02 44 29.5**	**+0.6**
SBF	**Sospel**	**0.49**	**173**	*e*Pg	**Pg**	**02 44 22.7**	**-0.1**
SBF				*e*Sg	**Sg**	**02 44 29.0**	**-0.4**
	25nm,0.2s						
MBDF	**Montbardon**	**0.56**	**312**	*e*Pg	**Pg**	**02 44 24.1**	**+0.1**
MBDF				*e*Sg	**Sg**	**02 44 31.9**	**+0.5**
	26nm,0.2s						
IMI	**Imperia**	**0.59**	**139**	Pg	**Pg**	**02 44 24.8**	**+0.3**
IMI				Sg	**Sg**	**02 44 32.9**	**+0.5**
	12nm,0.2s						
REVF	**Revere**	**0.61**	**179**	Pg	**Pg**	**02 44 25.1**	**+0.1**
FIN	**Finale Ligure**	**0.63**	**103**	Pg	**Pg**	**02 44 25.7**	**+0.4**
FIN				Sg	**Sg**	**02 44 34.5**	**+0.8**
	7.0nm,0.2s						
RSP	**Reno Superiore**	**0.80**	**355**	Pg	**Pg**	**02 44 27.7**	**-0.8**
	9.0nm,0.2s						
BNI	**Bardonecchia**	**0.85**	**326**	Pg	**Pg**	**02 44 30.2**	**+0.8**
BNI				Sg	**Sg**	**02 44 41.1**	**+0.6**
	8.0nm,0.5s						
FRF	**La Foret Royal**	**0.94**	**213**	*e*Pg	**Pg**	**02 44 31.0**	**-0.3**
FRF	**La Foret Royal**	**0.94**	**213**	*e*Pn	**Pn**	**02 44 32.0**	**+0.1**
FRF				*e*Sg	**Sg**	**02 44 43.5**	**-0.1**
	9.0nm,0.1s						
LMR	**La Mourre**	**1.19**	**211**	*e*Pg	**Pg**	**02 44 35.9**	**0.0**
LMR				*e*Sg	**Sg**	**02 44 50.8**	**-0.6**
	28nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.19**	**299**	*e*Pn	**Pn**	**02 44 35.6**	**+0.3**
ORIF	**Oris-en-Rattie**	**1.19**	**299**	*e*Pg	**Pg**	**02 44 36.2**	**+0.2**
ORIF				*e*Sg	**Sg**	**02 44 51.5**	**0.0**
	4.8nm,0.2s						
SMRF	**Simiane la Rot**	**1.33**	**254**	*e*Pg	**Pg**	**02 44 39.4**	**+0.7**
SMRF				*e*Sg	**Sg**	**02 44 56.3**	**+0.3**
	9.1nm,0.4s						
VIVF	**Saint-Julien-l**	**1.98**	**286**	*e*Pn	**Pn**	**02 44 46.6**	**+0.5**
VIVF	**Saint-Julien-l**	**1.98**	**286**	*e*Pg	**Pg**	**02 44 50.9**	**-0.1**
VIVF				*e*Sn	**Sn**	**02 45 10.9**	**+0.2**
VIVF				*e*Sg	**Sg**	**02 45 16.7**	**0.0**
	1.1nm,0.2s						
PGF	**Pioggiola**	**2.17**	**146**	*e*Pn	**Pn**	**02 44 48.6**	**-0.1**
PGF				*e*Sn	**Sn**	**02 45 14.3**	**-1.1**
	1.6nm,0.2s						
CABF	**La Chapelle**	**2.42**	**339**	*e*Pg	**Pg**	**02 44 57.6**	**-1.9**
CABF				*e*Sg	**Sg**	**02 45 29.5**	**-1.5**
	0.5nm,0.2s						
LASF	**Ste Croix**	**2.53**	**265**	*e*Pn	**Pn**	**02 44 54.5**	**+0.8**
LASF	**Ste Croix**	**2.53**	**265**	*e*Pg	**Pg**	**02 45 00.9**	**-0.6**
LASF				*e*Sn	**Sn**	**02 45 24.1**	**-0.2**
	1.4nm,0.4s						
SMF	**Signal de Mont**	**3.37**	**314**	*e*Pn	**Pn**	**02 45 04.9**	**-0.3**
AVF	**Avril sur Loir**	**3.72**	**312**	*e*Pn	**Pn**	**02 45 09.8**	**-0.2**
CAF	**Calviac**	**3.82**	**280**	*e*Pn	**Pn**	**02 45 12.3**	**+0.9**
MTLF	**Montolieu**	**3.85**	**257**	*e*Pn	**Pn**	**02 45 11.9**	**0.0**
BGF	**Bois d'Agland**	**3.86**	**306**	*e*Pn	**Pn**	**02 45 12.3**	**+0.3**
LFF	**La Frestale**	**4.75**	**279**	*e*Pn	**Pn**	**02 45 24.2**	**-0.1**

ISCJB ***28*** *02:46:06.3±2.2, 118N±02×8924W±0.10, h109km±12km, mb3.8/6, Error ellipse: s-maj=39.6km s-min=9.6km az=37.0*
CASC ***28*** *02:46:06.8±1.9, 1230N×8920W, h136km±76km, MD3.7, mb3.9(NEIC)*
NEIC ***28*** *02:46:09.9±1.3, 1294N×8856W, h35km, mb3.9/2, Error ellipse: s-maj=36.9km s-min=18.8km az=45.0*
IDC ***28*** *02:46:13.9±5.0, 1287N×8872W, h79km±54km, mb3.5/5, mb1 3.6/6, mb1mx3.4/21, mbtmp3.8/6, ML3.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/20, Error ellipse: s-maj=58.9km s-min=23.6km az=54.0*

ISC 28 02:46:07.5±2.1, 117N±02×8922W±009, h108km±10km, n26, σ0.6/60/18, mb3.8/6, 4C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**1.89**	**5**	⇑*e*P	x	02 46 27.4	
LFRS				*e*S	x	02 46 48.9	
SNVI	**San Vicente**	**1.91**	**11**	*e*P	x	02 46 29.0	
SNVI				*e*S	x	02 46 50.8	
VSM	**San Miguel**	**1.92**	**29**	*e*P	x	02 46 31.2	
VSM				*e*S	x	02 46 53.3	
LCBS	**La Ceiba**	**1.93**	**7**	⇑*e*P	x	02 46 28.1	
LCBS				*e*S	x	02 46 50.5	
BLLM	**Bellamira**	**1.95**	**29**	*e*P	x	02 46 31.5	
BLLM				*e*S	x	02 46 52.9	
BOQS	**Boqueron**	**1.99**	**358**	⇓*e*P	x	02 46 29.0	
BOQS				*e*S	x	02 46 51.1	
LBRS	**Las Brisas**	**2.00**	**5**	*e*P	x	02 46 29.7	
LBRS				*e*S	x	02 46 51.1	
CNCH	**Conchagua**	**2.05**	**41**	⇑*e*P	x	02 46 34.6	
CNCH				*e*S	x	02 46 59.0	
SBLS	**San Blas**	**2.13**	**349**	⇑*e*P	x	02 46 30.5	
SBLS				*e*S	x	02 46 53.2	
SNJE	**San Jose**	**2.16**	**350**	⇓*e*P	x	02 46 31.0	
SNJE				*e*S	x	02 46 54.1	
RTR	**El Retiro**	**2.19**	**349**	*e*P	x	02 46 31.5	
RTR				*e*S	x	02 46 55.4	
LEON	**Leon**	**2.38**	**73**	*e*P	**Pn**	**02 46 44.6**	**-0.6**
LEON				*e*S	**Sn**	**02 47 15.0**	**+0.8**
MIRN	**Miramar**	**2.55**	**74**	⇓*e*P	**Pn**	**02 46 47.4**	**-0.2**
MIRN				*e*S	**Sn**	**02 47 17.5**	**-0.8**
COPN	**Copaltepe**	**2.61**	**80**	⇓*e*P	**Pn**	**02 46 48.4**	**+0.1**
APYN	**Apoyeque**	**2.85**	**80**	⇓*e*P	**Pn**	**02 46 51.7**	**+0.2**
MGAN	**Managua**	**2.94**	**82**	*e*S	**Sn**	**02 47 27.9**	**+0.5**
BOA	**Boaco**	**3.51**	**77**	*e*P	**Pn**	**02 46 59.9**	**-0.2**
CMIG	**Matias Romero**	**7.65**	**315**	P	**Pn**	**02 47 56.2**	**+0.1**
	0.6nm,0.3s,baz=114,slow=11,SNR=6.1						
CMIG				S	**Sn**	**02 49 21.3**	**+0.2**
	0.3nm,0.3s,baz=296,slow=15,SNR=2.6						
CMIG	**Matias Romero**	**7.65**	**315**	P	**Pn**	**02 47 56.2**	**+0.1**
CMIG				S	**Sn**	**02 49 21.3**	**+0.2**
MIAR	**Mount Ida**	**23.05**	**351**	*e*P	**P**	**02 51 02.8**	**-0.6**
	5.8nm,0.9s,mb3.9						
LPIG	**La Paz**	**23.49**	**304**	LR	LR	03 00 51.6	
	comp=Z,30nm,20.2s,baz=182,slow=38						
WMOK	**Wichita Mounta**	**24.50**	**341**	*e*P	**P**	**02 51 15.9**	**-0.7**
	3.0nm,0.8s,mb3.7						
NVAR	**Mina Array Bea**	**37.13**	**321**	P	**P**	**02 53 12.7**	**+5.2**
	0.5nm,0.7s,mb3.6,baz=132,slow=9.9,SNR=5.4						
ULM	**Lac du Bonnet**	**38.79**	**353**	P	**P**	**02 53 20.9**	**-0.6**
	1.7nm,0.7s,mb4.0,baz=174,slow=10,SNR=3.5						
SCHQ	**Schefferville**	**46.47**	**18**	P	**P**	**02 54 23.9**	**+0.3**
	1.3nm,0.4s,mb4.0,baz=223,slow=12,SNR=7.0						
YKA	**Yellowknife Ar**	**53.86**	**346**	P	**P**	**02 55 20.8**	**+1.5**
	0.9nm,0.7s,mb3.9,baz=148,slow=6.3,SNR=8.3						

MAN 28 03:09:23.6, 1754N×12036E, h33km, mb2.0, ML3.7, MS3.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.35**	**72**	*e*P	Pb	03 09 33.6	+1.5
ABRA				*e*S	Sb	03 09 42.0	+4.2
APYP	**Conner**	**0.90**	**69**	*e*P	Pn	03 09 40.1	+0.2
APYP				*e*S	Sn	03 09 53.3	+1.5
BOLP	**Bolinao**	**1.23**	**200**	*e*P	Pn	03 09 44.2	-0.2
CVP	**Callao Caves**	**1.40**	**83**	⇑*i*P	Pn	03 09 46.3	-0.6
CVP				*i* S	Sn	03 10 02.5	-1.7
CAUP	**Cauayan**	**1.52**	**113**	*e*P	Pn	03 09 49.5	+1.0
BALP	**Baler**	**2.13**	**147**	*e*P	Pn	03 09 57.8	+0.9

NEIC ***28*** *03:20:20.8, 1041S×7543W, h31km, mb4.7/52, ML4.5(LIM), After LIM.*
NEIC Felt [III] at Oxapampa.
ISCJB ***28*** *03:20:24.0±2.2, 1032S±005×7537W±005, h18km±15km, mb4.6/62, MS3.7/12, Error ellipse: s-maj=9.4km s-min=5.4km az=84.5*
MOS ***28*** *03:20:25.8±1.1, 1033S×7545W, h33km, mb5.5/23, Error ellipse: s-maj=15.0km s-min=9.5km az=105.9*
IDC ***28*** *03:20:28.1±2.2, 1037S×7535W, h39km±19km, mb4.4/14, mb1 4.5/20, mb1mx4.4/25, mbtmp4.6/20, ML4.4/3, MS3.5/18, Ms1 3.6/18, ms1mx3.4/29, Error ellipse: s-maj=18.4km s-min=12.1km az=76.0*

ISC 28 03:20:28.5±0.8, 1035S±004×7530W±004, h35km±8km, h39km±2.5km: pP-P, n282, σ0.8/88/266, mb4.6/62, MS3.7/12, 62C-66D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.23**	**223**	Pn	**Pn**	**03 21 00.4**	**-2.4**
	246nm,0.3s,baz=37,slow=19,SNR=41						
NNA				Sn	**Sn**	**03 21 32.3**	**+3.2**
	466nm,0.3s,baz=197,slow=17,SNR=39						
NNA				LR	LR	03 22 06.8	
	comp=Z,2μm,20.1s,baz=296,slow=46						
NNA	**Nana**	**2.23**	**223**	*e*Pn	**Pn**	**03 21 00.5**	**-2.4**
ATAH	**Atahualpa**	**4.52**	**317**	Pn	**Pn**	**03 21 34.2**	**-0.1**
	31nm,0.3s,baz=133,slow=4.8,SNR=49						
ATAH				Sn	**Sn**	**03 22 31.9**	**+6.2**
	baz=110,slow=15,SNR=2.6						
ATAH				LR	LR	03 22 53.1	
	comp=Z,88nm,20.3s,baz=323,slow=33						
ARE	**Arequipa**	**7.12**	**149**	*e*P	**Pn**	**03 22 11.0**	**+0.9**
LPAZ	**La Paz**	**9.14**	**131**	Pn	**Pn**	**03 22 40.0**	**+2.2**
	0.7nm,0.3s,baz=322,slow=13,SNR=18						
LPAZ				Lg		03 25 06.6	
	1.0nm,0.3s,baz=157,slow=10,SNR=2.2						
LPAZ				LR	LR	03 25 56.3	
	comp=Z,44nm,19.0s,baz=322,slow=36						
LPAZ	**La Paz**	**9.14**	**131**	*e*Pn	**Pn**	**03 22 40.0**	**+2.1**
	0.1nm,0.6s						
SAML	**Samuel**	**12.03**	**84**	*e*Pn	**Pn**	**03 23 14.2**	**-3.1**
	59nm,0.7s						
LVC	**Limon Verde**	**13.64**	**154**	Pn		03 23 49.3	
	0.7nm,0.3s,baz=140,slow=0.0,SNR=4.2						
LVC				LR	LR	03 29 15.0	
	comp=Z,66nm,18.1s,baz=135,slow=39						
LVC	**Limon Verde**	**13.64**	**154**	*e*Pn		03 23 49.7	
SIV	**San Ignacio**	**14.94**	**114**	Pn	**Pn**	**03 23 55.3**	**-1.7**
	1.6nm,0.3s,baz=308,slow=12,SNR=23						
SIV				Lg		03 28 12.5	
	3.1nm,0.3s,baz=39,slow=22,SNR=4.7						
ROSC	**El Rosal**	**15.13**	**4**	Pn	**Pn**	**03 24 01.8**	**+2.3**
	0.6nm,0.3s,baz=98,slow=19,SNR=3.4						
ROSC				Lg		03 28 33.8	
	0.6nm,0.3s,baz=241,slow=23,SNR=3.9						
ROSC				LR	LR	03 30 30.1	
	comp=Z,182nm,19.1s,baz=200,slow=40						
ROSC	**El Rosal**	**15.13**	**4**	*e*Pn	**Pn**	**03 24 02.3**	**+2.7**
SDV	**Santo Domingo**	**19.66**	**14**	P	**Pn**	**03 24 54.5**	**-1.4**
	1.2nm,0.3s,baz=330,slow=8.4,SNR=7.3						
SDV				Lg		03 31 02.0	
	0.4nm,0.3s,baz=271,slow=20,SNR=4.4						
SDV				LR	LR	03 33 16.1	
	comp=Z,204nm,21.3s,baz=8.1,slow=39						
SDV	**Santo Domingo**	**19.66**	**14**	*e*P	**Pn**	**03 24 54.5**	**-1.3**
	19nm,0.9s						
CFAA	**Coronel Fontan**	**22.14**	**164**	P	**P**	**03 25 21.5**	**+0.5**
	1.2nm,0.7s,mb3.5,baz=332,slow=11,SNR=14						
PCRV	**Puerto La Cruz**	**22.98**	**28**	P	**P**	**03 25 30.4**	**+0.5**
	9.5nm,0.8s,mb4.3,baz=53,slow=7.0,SNR=4.3						
PCRV				LR	LR	03 35 08.6	
	comp=Z,470nm,20.9s,MS3.9,baz=207,slow=38						
CPUP	**Villa Florida**	**23.27**	**136**	P	**P**	**03 25 31.7**	**-1.3**
	12nm,0.6s,mb4.5,baz=304,slow=10.0,SNR=36						
CPUP				LR	LR	03 34 47.8	
	comp=Z,151nm,18.2s,MS3.5,baz=307,slow=37						
CPUP	**Villa Florida**	**23.27**	**136**	*e*P	**P**	**03 25 31.7**	**-1.2**
CPUP				pmax	pmax		
	comp=Z,62nm,0.7s						
CPUP	**Villa Florida**	**23.27**	**136**	*e*P	**P**	**03 25 31.7**	**-1.3**
	comp=Z,62nm,0.7s,mb5.2						
BDFB	**Brasilia**	**27.09**	**104**	P	**P**	**03 26 07.1**	**-0.7**
	comp=Z,6.3nm,0.7s,mb4.2,baz=287,slow=13,SNR=7.1						
BDFB				Lg		03 34 49.4	
	comp=Z,14nm,0.9s,baz=1.8,slow=11,SNR=4.2						
BDFB				LR	LR	03 38 00.5	
	comp=Z,128nm,20.8s,MS3.5,baz=16,slow=39						
BDFB	**Brasilia**	**27.09**	**104**	P	**P**	**03 26 07.1**	**-0.7**
BDFB				Lg		03 34 49.4	
BDFB				LR	LR	03 38 00.5	
SJG	**San Juan**	**29.68**	**18**	P	**P**	**03 26 31.2**	**+0.3**
	comp=Z,18nm,0.8s,mb4.9,baz=307,slow=4.3,SNR=6.1						
SJG				LR	LR	03 40 16.8	
	comp=Z,68nm,19.5s,MS3.3,baz=270,slow=40						
SJG	**San Juan**	**29.68**	**18**	*e*P	**P**	**03 26 30.9**	**0.0**
SJG				pmax	pmax		
	comp=Z,25nm,1.0s						
SJG	**San Juan**	**29.68**	**18**	*e*P	**P**	**03 26 30.9**	**0.0**
	comp=Z,25nm,1.0s,mb4.9						
TRQA	**Tornquist**	**30.07**	**159**	*e*P	**P**	**03 26 34.0**	**-0.3**
	comp=Z,1.7nm,0.7s,mb3.9						
PLCA	**Paso Flores**	**30.55**	**173**	P	**P**	**03 26 37.5**	**-1.1**
	comp=Z,3.2nm,0.8s,mb4.2,baz=340,slow=10,SNR=7.0						
PLCA	**Paso Flores**	**30.55**	**173**	*e*P	**P**	**03 26 37.3**	**-1.3**
PLCA				pmax	pmax		
	comp=Z,40nm,0.9s						
PLCA	**Paso Flores**	**30.55**	**173**	*e*P	**P**	**03 26 37.2**	**-1.4**
	comp=Z,4.4nm,0.9s,mb4.3						
EFI	**East Falkland**	**43.55**	**164**	*e*P	**P**	**03 28 29.9**	**+1.1**
LRAL	**Lakeview Retre**	**44.56**	**346**	*e*P	**P**	**03 28 35.8**	**-1.1**
	comp=Z,9.8nm,0.9s,mb4.6						
MYNC	**Murphy**	**45.94**	**350**	*e*P	**P**	**03 28 46.5**	**-1.3**
MYNC				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
MYNC	**Murphy**	**45.94**	**350**	*e*P	**P**	**03 28 46.5**	**-1.3**
	comp=Z,5.5nm,0.9s,mb4.5						
SWET	**Sewanee**	**46.42**	**348**	*e*P	**P**	**03 28 49.7**	**-1.8**
PLAL	**Pickwick Lake**	**46.68**	**346**	*e*P	**P**	**03 28 51.3**	**-2.3**
	comp=Z,8.4nm,0.9s,mb4.7						
PLAL				*e*		03 29 07.9	
ELN	**Prospectdale**	**47.60**	**354**	*e*P	**P**	**03 29 00.6**	**-0.2**
MIAR	**Mount Ida**	**47.89**	**340**	*e*P	**P**	**03 29 02.2**	**-0.9**
MIAR				*e*PP	pP	03 29 12.8	-0.7
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
MIAR	**Mount Ida**	**47.89**	**340**	*e*P	**P**	**03 29 02.1**	**-0.9**
	comp=Z,5.9nm,0.8s,mb4.7						
MIAR				pP	pP	03 29 12.8	-0.7
FWV	**Forest Hill**	**47.95**	**354**	*e*P	**P**	**03 29 03.3**	**-0.3**
WMOK	**Wichita Mounta**	**50.06**	**335**	*e*P	**P**	**03 29 18.4**	**-1.3**
WMOK				*e*		03 30 38.4	
WMOK				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
WMOK	**Wichita Mounta**	**50.06**	**335**	*e*P	**P**	**03 29 18.4**	**-1.3**
	comp=Z,4.4nm,1.1s,mb4.4						
WMOK				*e*PcP	PcP	03 30 38.4	-0.6
ACSO	**Alum Creek Sta**	**50.82**	**352**	*e*P	**P**	**03 29 23.6**	**-1.8**
	comp=Z,10.0nm,1.0s,mb4.7						
KSU1	**Kansas State U**	**53.04**	**339**	*e*P	**P**	**03 29 40.0**	**-2.0**
KSU1				pP	pP	03 29 50.3	-2.3

baz=61
EDW2 **Edwards Air Fo** 60.46 320 ⇓P P 03 30 35.4 +0.7
baz=61
LRMC **Laurel Mountai** 60.66 321 ⇑P P 03 30 36.6 +0.6
baz=61
FURC **Furnace Creek,** 60.80 322 ⇓P P 03 30 37.2 +0.3
baz=61
MPMC **Manual Prospec** 60.91 321 ⇑P P 03 30 37.4 -0.3
baz=61
DUG **Dugway** 61.11 328 eP P 03 30 38.2 -0.8
DUG pmax pmax
comp=Z,12nm,1.2s,mb4.9
DUG **Dugway** 61.11 328 eP P 03 30 38.2 -0.9
comp=Z,12nm,1.2s,mb4.9
ARVC **Arvin** 61.15 320 ⇑P P 03 30 39.5 +0.2
baz=61
ISA **Isabella** 61.27 321 ⇑P P 03 30 40.5 +0.4
baz=61
Q12A **Willow Creek R** 61.37 326 ⇑P P 03 30 41.1 +0.3
baz=62
PDAR **Pinedale Array** 61.44 332 P P 03 30 40.3 -0.9
comp=Z,3.1nm,1.1s,mb4.3,baz=149,slow=6.6,SNR=12
GRAC **Grapevine Rang** 61.46 322 ⇑P P 03 30 41.7 +0.3
baz=62
HWUT **Hardware Ranch** 61.52 330 eP P 03 30 41.0 -0.8
comp=Z,8.2nm,0.9s,mb4.9
CWC **Cottonwood Cre** 61.52 321 ⇓P P 03 30 42.3 +0.5
baz=62
PKM **Peak Mountain** 61.64 319 ⇓P P 03 30 43.3 +0.7
baz=62
R10A **Warm Springs** 61.69 324 ⇑P P 03 30 44.1 +1.1
baz=62
P12A **McGill** 61.72 326 P P 03 30 43.8 +0.7
baz=62,SNR=9.3
VES **Vestal, Richgr** 61.76 320 ⇓P P 03 30 44.1 +0.7
baz=62
S09A **Goldfield** 61.85 323 ⇓P P 03 30 44.7 +0.7
baz=62
SMMC **Simmler** 62.01 319 ⇓P P 03 30 45.9 +0.8
baz=62
TIN **Tinemaha** 62.01 322 ⇑P P 03 30 45.8 +0.7
baz=62
R09A **Tonopah** 62.10 324 P P 03 30 46.2 +0.5
baz=62,SNR=5.3
O12A **Currie** 62.19 327 P P 03 30 46.8 +0.5
baz=62,SNR=9.5
P11A **Circle Ranch,** 62.24 325 ⇓P P 03 30 47.0 +0.3
baz=62
HELL **Mitchell Peak,** 62.26 321 P P 03 30 46.8 +0.1
baz=62,SNR=8.4
N13A **Wendover, West** 62.32 327 ⇓P P 03 30 47.0 -0.2
baz=62
Q09A **Carvers** 62.57 324 ⇓P P 03 30 48.8 0.0
baz=63
O11A **Cowboy Ranch,** 62.59 326 ⇓P P 03 30 49.0 0.0
baz=63
P10A **Eureka** 62.69 325 ⇓P P 03 30 50.1 +0.5
baz=63
PKD **Parkfield** 62.75 320 ⇑P P 03 30 50.2 +0.2
baz=63
MLAC **Mammoth Lakes** 62.75 322 ⇓P P 03 30 51.2 +1.1
baz=63
N12A **Clover Valley,** 62.76 327 ⇓P P 03 30 50.2 0.0
baz=63
T06C **Millerton Lake** 62.89 321 ⇑P P 03 30 49.9 -1.0
baz=63
ULM **Lac du Bonnet** 62.96 345 P P 03 30 49.8 -1.7
comp=Z,8.4nm,0.7s,mb5.0,baz=156,slow=7.1,SNR=14
ULM **Lac du Bonnet** 62.96 345 eP P 03 30 49.4 -2.1
comp=Z,17nm,1.0s,mb5.1
Q08A **Gabbs** 63.02 324 ⇑P P 03 30 52.0 +0.2
baz=63
P09A **Austin** 63.02 325 ⇑P P 03 30 51.0 -0.9
baz=63
M12A **Wells** 63.09 327 ⇓P P 03 30 51.8 -0.5
baz=63
U04C **Hernandez Rese** 63.16 320 ⇑P P 03 30 53.6 +0.9
baz=63
O10A **Cortez Mining,** 63.17 326 ⇓P P 03 30 53.0 +0.1
baz=63
R07C **Lee Vining** 63.17 322 ⇓P P 03 30 53.5 +0.6
baz=63
V03C **Hunter Liggett** 63.24 319 ⇑P P 03 30 54.5 +1.2
baz=63
O09A **Fish Creek Ran** 63.47 325 ⇑P P 03 30 55.4 +0.5
baz=64
S05C **Merced** 63.49 321 ⇓P P 03 30 55.2 +0.2
baz=64
S06C **San Francisco** 63.53 322 P P 03 30 55.5 +0.3
baz=64,SNR=8.5
M11A **Holland Ranch,** 63.57 327 ⇑P P 03 30 55.2 -0.3
baz=64
P08A **Dixie Valley** 63.66 324 ⇓P P 03 30 55.9 -0.1
baz=64
HAST **UC Hastings Re** 63.66 319 ⇓P P 03 30 57.1 +1.0
baz=64
R06C **Coleville** 63.70 322 ⇓P P 03 30 56.6 +0.3
baz=64
PACP **Pacheco Peak** 63.88 320 ⇓P P 03 30 58.1 +0.6
baz=64
CMB **Columbia Colle** 63.95 322 ⇑P P 03 30 58.0 0.0
baz=64
N09A **Rock Creek Ran** 64.12 325 ⇓P P 03 30 58.6 -0.5
baz=64
R05C **Kirkwood Meado** 64.19 322 ⇓P P 03 31 00.0 +0.5
baz=64
S04C **Ingram Canyon,** 64.21 321 ⇑P P 03 30 59.5 -0.2
baz=64
HLID **Hailey** 64.38 329 eP P 03 31 00.3 -0.5
comp=Z,1.6nm,0.8s,mb4.1
WCN **Washoe City** 64.38 323 ⇑P P 03 31 01.0 +0.2
baz=64
N08A **GE Springer Mi** 64.42 325 ⇓P P 03 31 00.3 -0.7
baz=65
PAHR **Pah Rah Range** 64.42 323 eP P 03 31 01.0 -0.1
comp=Z,9.8nm,1.2s,mb4.7
O07A **Toulon** 64.43 324 ⇓P P 03 31 01.2 0.0
baz=65
R04C **Big Horse Ranc** 64.43 321 ⇓P P 03 31 01.3 +0.1
baz=65
M09A **Marrel Ranch,** 64.47 326 ⇑P P 03 31 01.8 +0.4
baz=65
BOZ **Bozeman (W)** 64.60 333 eP P 03 31 01.5 -0.8
BOZ pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
BOZ **Bozeman (W)** 64.60 333 eP P 03 31 01.5 -0.8
comp=Z,9.5nm,1.3s,mb4.7
LAVA **Lava Cap Winer** 64.62 322 ⇓P P 03 31 02.9 +0.5
baz=65
BDM **Black Diamond** 64.82 321 ⇑P P 03 31 03.1 -0.5
baz=65
N07B **Gerlach** 64.89 325 ⇓P P 03 31 03.8 -0.3
baz=65
P05C **Yuba Gap, Truc** 64.89 322 ⇑P P 03 31 04.7 +0.6
baz=65
O06A **Flanigan** 64.98 324 ⇑P P 03 31 05.1 +0.3
baz=65
L09A **Wilkinson Ranc** 64.99 326 ⇓P P 03 31 05.1 +0.3
baz=65
Q04C **Lincoln** 65.06 322 ⇑P P 03 31 06.7 +1.4
baz=65
SCHQ **Schefferville** 65.32 5 P P 03 31 05.9 -1.1
comp=Z,2.6nm,0.8s,mb4.3,baz=200,slow=2.9,SNR=3.7
SCHQ LR LR 04 00 21.3
comp=Z,25nm,20.2s,MS3.4,baz=53,slow=37
Q03C **Winters** 65.33 321 ⇑P P 03 31 07.9 +0.9
baz=66
N06A **Buffalo Meadow** 65.36 324 P P 03 31 07.2 0.0
baz=66,SNR=9.5
M07A **Soldier Meadow** 65.40 325 ⇓P P 03 31 07.5 0.0
baz=66
CVS **Carmenet Viney** 65.43 321 ⇓P P 03 31 08.2 +0.6
baz=66
OHCM **Honcut** 65.44 322 eP P 03 31 06.5 -1.2
L08A **Fields** 65.48 326 P P 03 31 08.0 0.0
baz=66,SNR=5.2
K09A **Rome** 65.49 327 ⇓P P 03 31 07.8 -0.2
baz=66,SNR=14
O05C **Quincy** 65.49 323 ⇑P P 03 31 08.4 +0.4
baz=66
SUTB **Sutter Butte** 65.56 322 ⇑P P 03 31 08.9 +0.4
baz=66
ORV **Oroville** 65.58 322 P P 03 31 09.3 +0.6
baz=66,SNR=10
NSHM **Saint Helena R** 65.63 321 eP P 03 31 08.3 -0.6
EGMT **Eagleton** 65.64 335 eP P 03 31 08.3 -0.7
comp=Z,9.3nm,1.2s,mb4.7
MNRC **McLaughlin Nat** 65.74 321 ⇑P P 03 31 10.8 +1.2
baz=66
ELFS **Eagle Lake Fie** 65.80 324 ⇓P P 03 31 10.1 +0.1
baz=66
O04C **Chester** 65.82 323 ⇑P P 03 31 10.5 +0.4
baz=66
L07A **Adell** 65.92 325 ⇓P P 03 31 11.0 +0.2
baz=66
K08A **Mann Creek Ran** 65.92 326 ⇓P P 03 31 10.9 0.0
baz=66
J09A **Fry Pan Ranch,** 65.95 327 ⇓P P 03 31 10.9 -0.1
baz=66
M06C **Likely Place G** 66.03 324 ⇓P P 03 31 12.2 +0.7
baz=66
K07A **Rock Creek Ran** 66.31 326 ⇑P P 03 31 14.4 +1.1
baz=66
J08A **Circle Bar Ran** 66.34 327 ⇓P P 03 31 13.4 -0.1
baz=66
HATC **Hat Creek Radi** 66.35 323 ⇑P P 03 31 13.8 +0.2
baz=66
I09A **Lost Marbles R** 66.37 328 ⇓P P 03 31 13.5 -0.2
baz=66
GASB **Alder Springs** 66.38 322 ⇓P P 03 31 14.0 +0.2
baz=66
M05C **Lookout** 66.52 324 P P 03 31 14.8 +0.2
baz=67,SNR=8.5
P01C **Double 8 Ranch** 66.65 321 ⇑P P 03 31 15.9 +0.4
baz=67
O02C **Red Bluff** 66.75 322 ⇓P P 03 31 17.3 +1.2
baz=67
BMO **Blue Mountains** 66.76 329 eP P 03 31 14.6 -1.6
comp=Z,3.0nm,1.2s,mb4.2
L05A **Lakeview** 66.78 325 ⇓P P 03 31 16.5 +0.2
baz=67
H09A **Durkee** 66.81 328 ⇑P P 03 31 15.7 -0.8
baz=67
WDC **Whiskeytown Da** 66.85 323 ⇑P P 03 31 15.8 -1.0
baz=67
K06A **Valley Falls** 66.94 326 ⇑P P 03 31 17.0 -0.3
baz=67
M03C **McCloud** 67.03 323 ⇑P P 03 31 17.1 -0.8
baz=67
J06A **Christmas Vall** 67.18 326 P P 03 31 18.9 0.0
baz=67,SNR=7.4
M04C **Macdoel** 67.19 324 ⇓P P 03 31 18.9 0.0
baz=67
H08A **Prairie City** 67.23 328 P P 03 31 19.4 +0.2
baz=67,SNR=8.6
K05A **Summer Lake** 67.25 325 ⇓P P 03 31 19.4 +0.1
baz=67
I07A **Izee** 67.38 327 ⇓P P 03 31 20.4 +0.3
baz=68
N02C **Big Bar** 67.45 322 ⇑P P 03 31 20.7 +0.1
baz=68
L04A **Klamath Falls** 67.46 324 ⇑P P 03 31 20.8 +0.2
baz=68
F09A **S2 Ranch, Elgi** 67.66 329 P P 03 31 22.1 +0.2
baz=68,SNR=8.2
YBH **Yreka Blue Hor** 67.66 323 ⇓P P 03 31 20.9 -1.0
baz=68
I06A **Prineville** 67.67 327 ⇓P P 03 31 21.5 -0.4
baz=68
J05A **Fort Rock** 67.80 325 ⇓P P 03 31 23.0 +0.2
baz=68
G08A **Pilot Rock** 67.91 328 ⇑P P 03 31 22.8 -0.6
baz=68
F08A **Pendleton** 68.16 329 ⇓P P 03 31 24.4 -0.7
baz=68
WALA **Waterton Lakes** 68.20 334 eP P 03 31 24.3 -1.0
comp=Z,9.1nm,0.9s,mb4.8
H06A **Lindquist Farm** 68.26 327 ⇑P P 03 31 26.2 +0.5
baz=68
I05A **Bend** 68.39 326 ⇑P P 03 31 26.4 0.0
baz=69
L02A **Cave Junction** 68.45 323 ⇑P P 03 31 27.7 +0.8
baz=69
G06A **Carlson Farm,** 68.75 327 ⇓P P 03 31 28.2 -0.5
baz=69
NEW **Newport** 69.07 332 eP P 03 31 29.6 -1.1
NEW pmax pmax
comp=Z,30nm,0.9s
NEW **Newport** 69.07 332 eP P 03 31 29.6 -1.1
comp=Z,2.9nm,0.9s,mb4.2
G05A **Wamic** 69.12 327 ⇓P P 03 31 31.7 +0.7
baz=69
F04A **Amboy** 70.15 327 ⇑P P 03 31 37.5 +0.1
baz=70
D05A **Enumclaw** 70.74 328 ⇓P P 03 31 40.0 -1.0
baz=71
EDM **Edmonton** 71.14 337 eP P 03 31 41.5 -1.9
B05A **Bryant** 71.50 329 ⇑P P 03 31 44.6 -1.0
baz=72
A05A **Maple Falls** 71.97 330 ⇓P P 03 31 47.2 -1.2
baz=72
DBIC **Dimbokro** 72.15 80 P P 03 31 48.9 -0.6
comp=Z,9.6nm,0.9s,mb4.7,baz=227,slow=1.2,SNR=6.2
DBIC LR LR 04 01 40.4
comp=Z,127nm,18.7s,MS4.2,baz=242,slow=34
VNA1 **Neumayer--Stat** 72.77 161 eP P 03 31 53.4 +0.2
VNA1 e pP 03 32 06.5 +2.4
VNA1 e 03 32 17.2
SNAA **Sanae** 74.75 162 LR LR 04 01 36.9
comp=Z,19nm,19.4s,MS3.4,baz=54,slow=33
SNAA **Sanae** 74.75 162 eP P 03 32 03.4 -1.4
SNAA e 03 32 28.3
SNAA **Sanae** 74.75 162 eP P 03 32 03.6 -1.2
SNAA pmax pmax
comp=Z,20nm,1.4s
SNAA **Sanae** 74.75 162 eP P 03 32 03.6 -1.2
comp=Z,20nm,1.4s,mb4.9
YKA **Yellowknife Ar** 78.73 343 P P 03 32 25.7 -1.5
comp=Z,3.6nm,0.9s,mb4.3,baz=137,slow=5.8,SNR=23
YKA LR LR 04 09 09.7
comp=Z,55nm,18.9s,MS3.9,baz=250,slow=37
PESTR **Estremoz** 79.64 47 eP P 03 32 32.9 +0.7
comp=Z,25nm,1.3s,mb5.0
QSPA **South Pole Qui** 79.78 180 eP P 03 32 31.5 -1.4
comp=Z,12nm,1.3s,mb4.7
TOA0 **Torodi Ar. Sit** 79.90 75 eP P 03 32 33.1 -0.5
TORD **Torodi Ar. Bea** 79.90 75 P P 03 32 33.5 -0.2
comp=Z,13nm,0.8s,mb4.9,baz=271,slow=5.7,SNR=51
TORD LR LR 04 07 28.2
comp=Z,71nm,19.6s,MS4.0,baz=185,slow=35
EMIN **Mina Concepcio** 79.90 49 P P 03 32 34.8 +1.2
comp=Z,14nm,1.5s,mb4.7
PCAB **Cabril** 80.42 44 eP P 03 32 36.9 +0.5
EMIJ **Mijas** 80.89 50 P P 03 32 39.8 +0.8
comp=Z,6.3nm,0.8s,mb4.6
PBRG **Braganca** 81.35 45 eP P 03 32 42.1 +0.7
ELOJ **Sierra Loja** 81.56 50 P P 03 32 44.5 +2.0
ELOJ pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ELOJ **Sierra Loja** 81.56 50 P P 03 32 44.5 +2.0
comp=Z,2.9nm,0.8s,mb4.3
EADA **Adamuz** 81.59 49 P P 03 32 43.7 +1.1
comp=Z,9.9nm,1.2s,mb4.6
ELUQ **Luque** 81.61 49 P P 03 32 44.6 +1.8
ELUQ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ELUQ **Luque** 81.61 49 P P 03 32 44.6 +1.8
comp=Z,3.9nm,0.9s,mb4.3
EPON **Pontenova** 81.65 43 P P 03 32 46.8 +3.8
comp=Z,23nm,1.3s,mb4.9
ERON **Agron** 81.78 50 P P 03 32 45.1 +1.5
comp=Z,0.3nm,0.3s,mb3.7
ECOG **Cogollos-Vega** 82.04 50 P P 03 32 46.9 +1.9
ECOG pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
ECOG **Cogollos-Vega** 82.04 50 P P 03 32 46.9 +1.9
comp=Z,2.2nm,0.4s,mb4.4
EBAN **Banos Encina** 82.17 49 P P 03 32 46.9 +1.2
comp=Z,1.8nm,0.8s,mb4.0
EBER **Berja** 82.43 50 P P 03 32 47.9 +0.9
comp=Z,12nm,1.0s,mb4.8
ESDC **Sonseca Array** 82.56 48 P P 03 32 48.8 +1.1
comp=Z,6.7nm,1.1s,mb4.6,baz=252,slow=4.9,SNR=17
ESDC LR LR 04 04 01.3
comp=Z,80nm,21.0s,MS4.1,baz=155,slow=32
ESDC **Sonseca Array** 82.56 48 P P 03 32 48.5 +0.8
comp=Z,6.9nm,1.3s,mb4.5
ESLA **Sonseca Array** 82.56 48 eP P 03 32 48.4 +0.7
comp=Z,12nm,1.6s,mb4.7
EQES **Quesada** 82.59 50 P P 03 32 48.3 +0.5
comp=Z,8.1nm,1.2s,mb4.6
GUD **Guadarrama** 82.75 47 P P 03 32 49.8 +1.1
GUD pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
GUD **Guadarrama** 82.75 47 P P 03 32 49.8 +1.1
comp=Z,7.7nm,1.2s,mb4.6
EHUE **Huescar** 82.95 50 P P 03 32 50.3 +0.5
EHUE pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
EHUE **Huescar** 82.95 50 P P 03 32 50.3 +0.5
comp=Z,8.7nm,1.0s,mb4.7
ENIJ **Nijar** 82.97 51 P P 03 32 49.9 0.0
ENIJ pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
ENIJ **Nijar** 82.97 51 P P 03 32 49.9 +0.1
comp=Z,7.4nm,0.8s,mb4.8
EVIA **Vianos** 83.28 49 P P 03 32 52.9 +1.4
EVIA pmax pmax
comp=Z,22nm,0.8s,mb5.2
EVIA **Vianos** 83.28 49 P P 03 32 52.9 +1.4
comp=Z,22nm,0.8s,mb5.2
EMUR **La Murta** 83.97 50 P P 03 32 57.4 +2.3
comp=Z,5.7nm,0.8s,mb4.8
ETOB **Tobarra** 83.99 49 P P 03 32 56.5 +1.4
comp=Z,11nm,1.1s,mb4.9
SJPF **Ste Jean** 85.63 45 eP P 03 32 59.6 -3.8
SUMG **Summit** 86.15 10 eP P 03 33 05.2 -0.7
comp=Z,30nm,1.1s,mb5.4
VNDA **Vanda** 86.67 191 P P 03 33 07.8 -0.7
comp=Z,2.1nm,0.8s,mb4.4,baz=127,slow=5.3,SNR=9.2
VNDA LR LR 04 05 22.5
comp=Z,52nm,20.1s,MS3.9,baz=158,slow=31
EPF **Esparros** 86.70 45 eP P 03 33 06.4 -2.2
RJF **Les Rejaudoux** 88.17 43 eP P 03 33 13.6 -2.1
comp=Z,5.5nm,0.7s,mb4.6
RJF **Les Rejaudoux** 88.17 43 eP P 03 33 13.6 -2.1
RJF pmax pmax
comp=Z,30nm,0.7s,mb5.6
RJF **Les Rejaudoux** 88.17 43 eP P 03 33 13.6 -2.1
comp=Z,2.8nm,0.7s,mb4.6
DAWY **Dawson** 88.35 337 eP P 03 33 15.5 -1.0
INK **Inuvik** 88.45 342 eP P 03 33 15.5 -1.5
INK pmax pmax
comp=Z,19nm,1.0s
INK **Inuvik** 88.45 342 eP P 03 33 15.5 -1.5
comp=Z,19nm,1.0s,mb5.3
SYO **Syowa Base** 89.01 161⇑eP P 03 33 18.6 -1.1
EGAK **Eagle** 89.36 337 eP P 03 33 19.8 -1.5
BGF **Bois d'Agland** 89.41 42 eP P 03 33 19.6 -1.9
comp=Z,8.0nm,0.7s,mb4.9
BGF **Bois d'Agland** 89.41 42 eP P 03 33 19.6 -1.9
BGF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
BGF **Bois d'Agland** 89.41 42 eP P 03 33 19.6 -1.9
comp=Z,4.0nm,0.7s,mb4.9
KEST **Kesra** 91.66 54 LR LR 04 10 06.3
comp=Z,22nm,22.0s,MS3.5,baz=272,slow=32
COLA **College** 92.03 336 eP P 03 33 31.2 -2.5
COLA **College** 92.03 336 eP P 03 33 31.7 -2.0
comp=Z,5.3nm,1.0s,mb4.8
MAW **Mawson** 96.67 165 P P 03 33 54.6 -0.4
comp=Z,2.4nm,0.8s,mb4.7,baz=254,slow=5.0,SNR=5.6
AKTK **Aktyubinsk** 124.67 34 PKP PKPdf 03 39 24.1 -0.2
AKTO **Aktyubinsk** 124.67 34 PKP PKPdf 03 39 24.1 -0.2
comp=Z,0.5nm,0.4s,baz=120,slow=1.0,SNR=3.8
STKA **Stephens Creek** 125.15 219 PKP PKPdf 03 39 25.3 +0.1
comp=Z,1.6nm,0.4s,baz=42,slow=3.1,SNR=8.3
BVAR **Borovoye Array** 129.28 26 PKP PKPdf 03 39 32.8 -0.2
comp=Z,1.3nm,0.7s,baz=298,slow=3.2,SNR=8.4
AS31 **Alice Springs** 135.75 220 PKPdf PKPdf 03 39 44.8 -0.5
ASAR **Alice Springs** 135.75 220 PKP PKPdf 03 39 43.6 -1.6
comp=Z,2.1nm,0.7s,baz=129,slow=1.8,SNR=18
WB2 **Warramunga Arr** 138.07 224 eP PKPdf 03 39 49.4 -0.1
WB2 **Warramunga Arr** 138.07 224 ePKPdf PKPdf 03 39 49.1 -0.4
WRAB **Tennant Creek** 138.08 224 ePKIKP PKPdf 03 39 50.0 +0.5
WRA **Warramunga Arr** 138.08 224 PKP PKPdf 03 39 48.9 -0.6
comp=Z,2.3nm,0.5s,baz=136,slow=1.6,SNR=11
MKAR **Makanchi Array** 138.99 24 PKP PKPdf 03 39 50.1 -1.1
comp=Z,1.3nm,0.8s,baz=324,slow=3.1,SNR=8.4
SONM **Songino Array** 142.61 358 PKP PKPdf 03 39 54.3 -3.4
comp=Z,1.3nm,0.6s,baz=350,slow=1.9,SNR=7.0
FITZ **Fitzroy Crossi** 144.98 216 eP PKPdf 03 40 01.1 -0.8
comp=Z,16nm,0.8s
MBWA **Marble Bar** 145.38 205 ePKPdf PKPdf 03 40 02.0 -0.6

*IDC **28** 03:27:39.2±1.6, 3939N×7285E, h0km, mb3.7/6, mb1 3.7/9, mb1mx3.5/23, mbtmp3.6/9, ML3.4/2, Error ellipse: s-maj=26.2km s-min=17.9km az=161.0*
*ISCJB **28** 03:27:40.6±1.0, 3953N±008×7250E±008, h10km, mb3.5/6, Error ellipse: s-maj=12.5km s-min=8.0km az=133.1*
*NEIC **28** 03:27:45.2±1.4, 3960N×7277E, h35km, Error ellipse: s-maj=24.8km s-min=15.3km az=161.0*
*NNC **28** 03:27:51.5±6.6, 4020N×7277E, h31km±41km, mb3.6, mpv3.0, Error ellipse: s-maj=44.1km s-min=22.7km az=11.0*

ISC 28 03:27:42.6±2.9, 3950N±009×7259E±009, h15km±20km, n23, σ1°12/28, mb3.5/6, 2C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	2.76	17	P		Pn	03 28 27.3	+1.1
	SNR=75							
KZA	**Kyzart**	3.27	37	P		Pn	03 28 33.1	-0.2
	SNR=11							
EKS2	**Erkin-Say**	3.28	15	P		Pn	03 28 34.8	+1.4
	SNR=16							
AAK	**Ala-Archa**	3.44	24	P		Pn	03 28 36.6	+0.9
	SNR=21							
AAK	**Ala-Archa**	3.44	24	⇓eP		Pn	03 28 35.5	-0.2
AAK				e		Sn	03 29 16.9	+0.7
KBK	**Karagaybulak**	3.62	29	P		Pn	03 28 38.7	+0.6
	SNR=16							
CHMS	**Chumysh**	3.86	24	P		Pn	03 28 41.8	+0.5
	SNR=24							
ULHL	**Ulahol**	3.90	44	P		Pn	03 28 41.2	-0.7
	SNR=24							
KK31	**Karatay Array**	3.93	337	⇓P		Pn	03 28 45.0	+2.7
	3.4nm,0.3s,baz=316,slow=20,SNR=119							
KK31				⇑P		Sn	03 29 27.2	-0.9
	24nm,0.4s,baz=192,slow=58,SNR=3.7							
KK31				⇓Lg			03 29 41.5	
	27nm,0.5s,baz=155,slow=15,SNR=8.1							
USP	**Ospenovka**	4.03	20	P		Pn	03 28 44.3	+0.6
	SNR=18							
TKM2	**Tokmak 2**	4.10	33	P		Pn	03 28 44.7	0.0
	SNR=31							
TKM2	**Tokmak 2**	4.10	33	⇑P		Pn	03 28 44.2	-0.5
	1.6nm,0.6s							
TKM2				⇓Lg			03 29 39.8	
	3.1nm,0.5s							
MKAR	**Makanchi Array**	10.16	41	P		Pn	03 30 06.7	-1.2
	baz=212,slow=14,SNR=2.6							
MKAR				Lg			03 32 58.1	
	0.2nm,0.3s,baz=218,slow=26,SNR=3.4							
AB31	**Akbulak array**	13.29	321	P		Pn	03 30 49.8	-0.8
	1.0nm,0.5s,baz=126,slow=12,SNR=17							
AB31				Sn		Sn	03 33 10.0	-8.0
	3.6nm,0.9s,baz=138,slow=20,SNR=5.0							
BVAR	**Borovoye Array**	13.61	354	P		Pn	03 30 52.9	-2.2
	0.2nm,0.3s,baz=150,slow=12,SNR=5.1							
BVAR				Lg			03 34 49.5	
	0.2nm,0.3s,baz=169,slow=25,SNR=3.6							
AKTK	**Aktyubinsk**	15.00	322	P		Pn	03 31 13.2	-0.8
AKTK				Sn		Sn	03 33 54.8	-5.1
AKTO	**Aktyubinsk**	15.00	322	P		Pn	03 31 13.2	-0.8
	0.2nm,0.3s,baz=136,slow=14,SNR=3.2							
AKTO				Sn		Sn	03 33 54.8	-5.1
	0.2nm,0.3s,baz=162,slow=20,SNR=3.1							
SONM	**Songino Array**	25.67	60	P		P	03 33 09.9	-1.9
	0.5nm,0.3s,mb3.5,baz=272,slow=9.7,SNR=3.1							
BRTR	**Keskin Array B**	29.85	283	P		P	03 33 51.5	+2.3
	0.3nm,0.7s,mb3.1,baz=68,slow=8.6,SNR=3.7							
FINES	**FINESS Array B**	35.76	323	P		P	03 34 40.9	+0.1
	1.0nm,0.7s,mb3.9,baz=98,slow=10.0,SNR=4.6							
ARCES	**ARCESS Array B**	38.89	336	P		P	03 35 07.3	-0.1
	0.9nm,0.8s,mb3.5,baz=117,slow=9.2,SNR=3.6							
GERES	**GERESS Array B**	42.30	303	P		P	03 35 37.0	+1.5
	0.7nm,0.5s,mb3.5,baz=69,slow=7.6,SNR=7.6							
TORD	**Torodi Ar. Bea**	67.06	268	P		P	03 38 34.4	-0.7
	0.5nm,0.7s,mb3.7,baz=58,slow=5.0,SNR=4.7							

*NEIC **28** 03:36:06.5, 3227S×7135W, h48km±4km, MG2.5(GUC), After GUC.*

GUC 28 03:36:06.5±0.7, 3227S×7135W, h48km±4km, MD3.5, ML2.5, 9C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PACH	**Papudo**	0.28	196	⇑*i*P		Pn	03 36 15.5	+0.3

PACH				*i* S	Sn	03 36 22.2	+0.9
PTCH	**Petorca**	**0.35**	**89**	⇓*i* P	Pn	03 36 17.5	+1.5
PTCH				*i* S	Sn	03 36 25.3	+2.6
PTCH				AML	AML	03 36 26.4	
	comp=N,1μm,0.2s						
PTCH	**Petorca**	**0.35**	**89**	⇓*i* P	Pn	03 36 17.5	+1.5
PTCH				*i* S	Sn	03 36 25.3	+2.6
JACH	**Jahuel**	**0.76**	**123**	*i* S	Sn	03 36 33.1	+1.8
PEL	**Peldehue**	**1.03**	**147**	⇑*i* P	Pn	03 36 25.2	+0.6
PEL				*i* S	Sn	03 36 39.2	+1.3
PEL				AML	AML	03 36 39.6	
	comp=E,226nm,0.4s						
PEL	**Peldehue**	**1.03**	**147**	⇑*i* P	Pn	03 36 25.2	+0.6
PEL				*i* S	Sn	03 36 39.2	+1.3
CMCH	**Combarbala**	**1.13**	**15**	⇑*i* P	Pn	03 36 26.6	+0.7
CMCH				*i* S	Sn	03 36 41.9	+1.6
CMCH				AML	AML	03 36 45.8	
	comp=E,235nm,0.5s						
CMCH	**Combarbala**	**1.13**	**15**	⇑*i* P	Pn	03 36 26.6	+0.7
CMCH				*i* S	Sn	03 36 41.9	+1.6
RCDM	**Rinconada Maip**	**1.30**	**160**	⇑*i* P	Pn	03 36 28.8	+0.6
RCDM				*i* S	Sn	03 36 46.0	+1.6
CLCH	**Cerro Calan**	**1.31**	**149**	⇓*i* P	Pn	03 36 29.2	+0.8
CLCH				AML	AML	03 36 47.5	
	comp=N,99nm,0.5s						
FCH	**Farellones**	**1.38**	**140**	*e*P	Pn	03 36 30.2	+0.9
FCH				*i* S	Sn	03 36 48.5	+2.2
FCH				AML	AML	03 36 49.1	
	comp=E,78nm,0.2s						
TACH	**Talagante**	**1.42**	**166**	*i* S	Sn	03 36 49.0	+1.6
ANTU	**Antumapu**	**1.43**	**155**	⇑*i* P	Pn	03 36 31.0	+1.0
ANTU				*i* S	Sn	03 36 48.9	+1.3
ANTU				AML	AML	03 36 50.6	
	comp=E,71nm,0.2s						
ANTU	**Antumapu**	**1.43**	**155**	⇑*i* P	Pn	03 36 31.0	+1.0
ANTU				*i* S	Sn	03 36 48.9	+1.3
PCH	**Pirque**	**1.52**	**153**	*i* S	Sn	03 36 51.6	+1.8
CACH	**El Canelo**	**1.94**	**161**	*i* S	Sn	03 37 02.7	+2.4
SFDO	**San Fernando**	**2.35**	**173**	*i* S	Sn	03 37 11.2	+0.9

ISCJB ***28*** *03:37:57.4±0.3, 4269N×003×145.11E±004, h39km, mb4.2/44, MS3.7/7, Error ellipse: s-maj=5.0km s-min=3.9km az=86.8*

MOS ***28*** *03:37:58.1±0.9, 4276N×145.01E, h46km, mb4.5/29, Error ellipse: s-maj=11.6km s-min=6.7km az=108.2*

BJI ***28*** *03:37:59.8, 4305N×145.35E, h75km, mB5.0, mb4.6, Ms3.8, Msz3.7*

NEIC ***28*** *03:38:00.3, 4282N×145.01E, h48km, mb4.4/17, After JMA.*

NEIC Recorded [2 JMA] in eastern Hokkaido and [1 JMA] in the Obihiro area.

JMA ***28*** *03:38:00.3, 4282N×145.01E, h48km±1km, M4.3 Broadband fault plane solution: P waves. NP1: φs211.00000°, δ12.00000°, λ81.00000°. NP2: φs40.00000°, δ78.00000°, λ92.00000°. Principal axes: T Plg57.0000°, Azm312.0000°; N Plg2.0000°, Azm219.0000°; P Plg33.0000°, Azm128.0000°;*

JMA Felt II J1.

IDC ***28*** *03:38:00.3±0.7, 4292N×144.88E, h40km±4km, mb3.9/17, mb1 4.0/18, mb1mx3.9/23, mbtmp4.1/18, ML4.0/1, MS3.6/8, Ms1 3.6/8, ms1mx3.2/26 Error ellipse: s-maj=16.8km s-min=15.3km az=150.0*

SKHL ***28*** *03:38:00.7±0.7, 4280N×145.10E, h37km±1km, mb5.1/2, ms3.3/1*

NIED ***28*** *03:38:00, 42.80N×145.00E, h41km, Mw4.3 Best double couple: M0 3.72000×10^15 NP1: φs 18.00000°, δ 79.00000°, λ 75.00000°. NP2: φs 253.00000°, δ 19.00000°, λ 143.00000°.*

ISC 28 03:37:59.6±0.3, 4278N±003×14507E±004, h41km, h41km±1.3km: pP-P, n124, σ0: 96/121, mb4.2/44, MS3.7/7, 7C-12D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.35**	**308**	⇓P	**Pn**	**03 38 09.1**	**+0.6**
JAK				S	**Sn**	**03 38 15.6**	**+0.9**
NEM2	**Nemuro 2**	**0.76**	**40**	⇑P	**Pn**	**03 38 14.4**	**+0.5**
NEM2				*e*S	**Sn**	**03 38 24.5**	**+0.3**
JNK	**Nakash**	**0.84**	**342**	⇓P	**Pn**	**03 38 15.1**	**+0.1**
JNK				*e*S	**Sn**	**03 38 25.6**	**-0.5**
JOB	**Onbets**	**0.92**	**278**	⇓P	**Pn**	**03 38 16.1**	**+0.1**
JOB				*e*S	**Sn**	**03 38 27.1**	**-0.9**
JAR	**Ashorobuto**	**1.08**	**299**	⇓P	**Pn**	**03 38 18.3**	**0.0**
JAR				*e*S	**Sn**	**03 38 31.5**	**-0.6**
JRA	**Rausu**	**1.15**	**2**	⇓P	**Pn**	**03 38 19.7**	**+0.5**
JRA				*e*S	**Sn**	**03 38 34.0**	**+0.2**
JCH	**Churui**	**1.27**	**263**	⇓P	**Pn**	**03 38 20.7**	**-0.1**
JCH				*e*S	**Sn**	**03 38 36.3**	**-0.4**
YUK	**Yuzh-Kuril'sk**	**1.38**	**24**	*i* P	**Pn**	**03 38 23.0**	**+0.7**
YUK				AMB	AMB	03 38 23.8	
	330nm,0.3s						
YUK				AMB	AMB	03 38 23.8	
	880nm,0.3s						
YUK				*i* S	**Sn**	**03 38 39.2**	**-0.1**
YUK				A		03 38 39.9	
	10μm,0.8s						
YUK				A		03 38 39.9	
	23μm,0.8s						
YUK				A		03 38 42.1	
	13μm,0.4s						
YUK				A		03 38 42.1	
	2μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.38**	**24**	⇑*i* PN	**Pn**	**03 38 23.0**	**+0.7**
YUK				*i* S	**Sn**	**03 38 39.2**	**-0.1**
YUK				pmax	pmax		
	comp=N,350nm,0.4s						
YUK				pmax	pmax		
	comp=Z,880nm,0.4s						
YUK				pmax	pmax		
	comp=E,330nm,0.3s						
YUK				smax			
	comp=N,10μm,0.8s						
YUK				smax			
	comp=E,23μm,0.8s						
YUK				smax			
	comp=N,13μm,0.4s						
YUK				smax			
	comp=E,2μm,0.4s						
JTKR	**Abashiri--Toko**	**1.46**	**325**	⇓P	**Pn**	**03 38 24.3**	**+0.9**
JTKR				*e*S	**Sn**	**03 38 42.2**	**+0.9**
ASAJ	**Asahikawa**	**2.24**	**307**	Pn	**Pn**	**03 38 35.5**	**+1.3**
	comp=E,174nm,0.3s,baz=129,slow=13,SNR=224						
ASAJ				Lg		03 39 04.2	
	comp=E,88nm,0.3s,baz=9.9,slow=27,SNR=16						
ASAJ				LR	LR	03 39 36.6	
	comp=E,876nm,21.1s,baz=172,slow=47						
KUR	**Kuril'sk**	**3.17**	**39**	⇓*i* P	**Pn**	**03 38 46.2**	**-0.8**
KUR				AMB	AMB	03 38 48.5	
	comp=E,90nm,0.7s						
KUR				AMB	AMB	03 38 48.5	
	comp=E,260nm,0.7s						
KUR				*e*S	**Sn**	**03 39 21.0**	**-2.5**
KUR				A		03 39 33.0	
	comp=E,950nm,0.7s						
KUR				A		03 39 33.0	
	comp=E,600nm,0.7s						
KUR	**Kuril'sk**	**3.17**	**39**	⇓*i* PN	**Pn**	**03 38 46.2**	**-0.8**
KUR				pmax	pmax		
	comp=N,90nm,0.7s						
KUR				pmax	pmax		
	comp=E,90nm,0.7s						
KUR				pmax	pmax		
	comp=Z,260nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.48**	**339**	*e*P	**Pn**	**03 39 07.3**	**+2.3**
YSS				*e*S	**Sn**	**03 39 59.4**	**+3.6**
YSS				AMS	AMS	03 41 06.0	
	comp=Z,300nm,16.0s						
YSS				AMS	AMS	03 41 06.0	
	comp=Z,200nm,16.0s						
YSS	**Yuzh-Sakhalins**	**4.48**	**339**	⇑*e*PN	**Pn**	**03 39 05.1**	**+0.1**
YSS	**Yuzh-Sakhalins**	**4.48**	**339**	*e*Pn	**Pn**	**03 39 04.7**	**-0.2**
MJAR	**Matsushiro Arr**	**8.17**	**223**	Pn	**Pn**	**03 39 56.1**	**+0.5**
	comp=Z,1.8nm,0.3s,baz=31,slow=13,SNR=22						
MJAR				LR	LR	03 43 55.7	
	comp=Z,120nm,18.0s,baz=55,slow=44						
MAJO	**Matsushiro**	**8.18**	**223**	*e*PN	**Pn**	**03 39 55.5**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,23nm,0.8s						
MAJO	**Matsushiro**	**8.18**	**223**	*e*Pn	**Pn**	**03 39 55.5**	**-0.2**
	comp=Z,22nm,0.8s						
MAT	**Matsushiro**	**8.18**	**223**	P	**Pn**	**03 39 55.7**	**+0.1**
JHJ	**Hachijo jima 2**	**10.51**	**205**	Sn	**Sn**	**03 42 14.0**	**-10**
	comp=Z,13nm,0.3s,baz=255,slow=23,SNR=7.9						
KLR	**Kul'dur**	**11.28**	**309**	*e*PN	**Pn**	**03 40 39.7**	**+1.6**
MDJ	**Mudanjiang**	**11.36**	**285**	P	**Pn**	**03 40 42.3**	**+3.1**
MDJ				AMB	AMB		
	comp=Z,13nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,59nm,4.3s						
INCN	**Inchon**	**15.06**	**256**	*e*Pn	**Pn**	**03 41 28.2**	**-1.2**
	comp=Z,20nm,0.2s						
CBIJ	**Chichi jima**	**15.83**	**189**	Sn	**Sn**	**03 44 18.4**	**-15**
	comp=Z,3.8nm,0.3s,baz=277,slow=22,SNR=5.7						
SNY	**Shenyang**	**15.93**	**274**	⇑P	**Pn**	**03 41 43.5**	**+2.8**
SNY				AMB	AMB		
	comp=Z,4.0nm,0.6s						
JOW	**Kunigami**	**21.00**	**226**	LR	LR	03 51 16.4	
	comp=Z,135nm,21.8s,MS3.3,baz=268,slow=38						
SSE	**Sheshan**	**22.29**	**246**	*e*P	**P**	**03 42 59.0**	**+5.8**
SSE				AMB	AMB		
	comp=Z,27nm,0.7s,mb4.8						
NJ2	**Nanjing**	**23.33**	**251**	*e*P	**P**	**03 43 08.3**	**+4.1**
NJ2				XP	sP	03 43 34.0	+14
NJ2				PP		03 43 44.8	
NJ2				S	**S**	**03 47 04.0**	**-10**
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
NJ2				LR	LR		
	comp=N,320nm,18.0s,MS3.9						
NJ2				LR	LR		
	comp=E,290nm,20.8s,MS3.9						
NJ2				LR	LR		
	comp=Z,350nm,23.9s,MS3.7						
ULN	**Ulaanbaatar**	**27.02**	**294**	⇑*e*P	**P**	**03 43 37.3**	**-0.4**
SONM	**Songino Array**	**27.46**	**294**	P	**P**	**03 43 41.2**	**-0.5**
	comp=Z,6.7nm,0.8s,mb4.2,baz=82,slow=8.6,SNR=19						
SONM				LR	LR	03 55 34.2	
	comp=Z,126nm,19.0s,MS3.5,baz=216,slow=39						
SONM	**Songino Array**	**27.46**	**294**	P	**P**	**03 43 41.2**	**-0.4**
SONM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,126nm,19.0s						
ZAK	**Zakamensk**	**29.39**	**300**	*e*P	**P**	**03 43 58.6**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
TIXI	**Tiksi**	**30.02**	**350**	*e*P	**P**	**03 44 02.9**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.2						
LZH	**Lanzhou**	**32.29**	**272**	*e*P	**P**	**03 44 25.0**	**+0.6**
LZH				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.8						
KMI	**Kunming**	**38.82**	**257**	P	**P**	**03 45 21.3**	**+0.9**
KMI				AMB	AMB		
	comp=Z,14nm,0.6s,mb4.9						
KDAK	**Kodiak Island**	**41.02**	**46**	P	**P**	**03 45 39.0**	**+0.3**
	comp=Z,3.3nm,0.7s,mb4.1,baz=113,slow=9.9,SNR=4.4						
COLA	**College**	**42.74**	**35**	*e*P	**P**	**03 45 53.7**	**+0.9**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
COLA	**College**	**42.74**	**35**	*e*P	**P**	**03 45 53.7**	**+0.9**
	comp=Z,2.8nm,0.6s,mb4.2						
MK31	**Makanchi Array**	**43.69**	**298**	P	**P**	**03 46 00.0**	**-0.4**
MK31				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
MKAR	**Makanchi Array**	**43.69**	**298**	P	**P**	**03 46 00.2**	**-0.2**
	comp=Z,7.1nm,0.7s,mb4.5,baz=72,slow=9.2,SNR=32						
MKAR	**Makanchi Array**	**43.69**	**298**	P	**P**	**03 46 00.2**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MKAR	**Makanchi Array**	**43.69**	**298**	P	**P**	**03 46 00.2**	**-0.2**
INK	**Inuvik**	**48.00**	**30**	P	**P**	**03 46 34.5**	**+0.1**
	comp=Z,1.4nm,0.4s,mb4.4,baz=308,slow=3.9,SNR=26						
INK	**Inuvik**	**48.00**	**30**	P	**P**	**03 46 34.5**	**+0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**48.00**	**30**	*e*P	**P**	**03 46 34.1**	**-0.3**
	comp=Z,1.5nm,0.4s,mb4.4						
CHKZ	**Chkalovo**	**48.60**	**310**	*e*P	**P**	**03 46 38.1**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
CHKZ	**Chkalovo**	**48.60**	**310**	*e*P	**P**	**03 46 38.1**	**-0.9**
	comp=Z,4.7nm,0.8s,mb4.6						
VOSK	**Vostochnaya**	**48.71**	**309**	P	**P**	**03 46 39.0**	**-0.8**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
BVAR	**Borovoye Array**	**48.94**	**309**	P	**P**	**03 46 41.4**	**-0.2**
	comp=Z,1.4nm,0.3s,mb4.4,baz=83,slow=9.8,SNR=12						
BVAR				PcP	PcP	03 48 05.6	+0.2
	comp=Z,1.5nm,0.7s,baz=90,slow=1.5,SNR=5.0						
BVAR	**Borovoye Array**	**48.94**	**309**	P	**P**	**03 46 41.4**	**-0.2**
BVAR						03 48 05.6	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**48.99**	**309**	P	**P**	**03 46 41.3**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
BRVK	**Borovoye**	**48.99**	**309**	*e*P	**P**	**03 46 41.3**	**-0.7**
	comp=Z,1.7nm,0.8s,mb4.1						
JIRN	**Jiri**	**49.46**	**272**	*e*P	pP	03 46 53.2	-4.1
GUN	**Gumba**	**49.55**	**273**	*e*P	pP	03 46 54.1	-3.9
	comp=Z,28nm,0.5s						
ZRNK	**Zerenda**	**49.75**	**310**	*e*P	**P**	**03 46 47.1**	**-0.7**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ZRNK	**Zerenda**	**49.75**	**310**	*e*P	**P**	**03 46 47.1**	**-0.8**
	comp=Z,5.1nm,0.7s,mb4.7						
KKN	**Kakani**	**50.06**	**273**	*e*P	pP	03 46 57.2	-4.7
PKI	**Pulchoki**	**50.08**	**273**	*e*P	pP	03 46 57.6	-4.5
DMN	**Daman**	**50.28**	**273**	*e*P	pP	03 46 59.5	-4.1
	comp=Z,9.2nm,0.5s						
AAK	**Ala-Archa**	**50.40**	**295**	⇑*e*P	**P**	**03 46 50.9**	**-1.9**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.1						
GKN	**Gorkha**	**50.41**	**274**	*e*P	pP	03 47 00.1	-4.5
	comp=Z,15nm,0.6s						
KOLN	**Koldanda**	**51.30**	**274**	*e*P	pP	03 47 06.5	-4.8
KKAR	**Karatay Array**	**52.82**	**298**	*i* P	**P**	**03 47 10.3**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ARU	**Arti**	**54.01**	**317**	⇑*i* P	**P**	**03 47 18.1**	**-1.4**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
AB31	**Akbulak array**	**56.48**	**308**	*i* P	**P**	**03 47 37.0**	**-0.3**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
AKTK	**Aktyubinsk**	**57.01**	**310**	P	**P**	**03 47 40.1**	**-1.0**
AKTO	**Aktyubinsk**	**57.01**	**310**	P	**P**	**03 47 40.1**	**-1.0**
	comp=Z,2.7nm,0.8s,mb4.3,baz=56,slow=13,SNR=8.7						
AKTO	**Aktyubinsk**	**57.01**	**310**	P	**P**	**03 47 40.1**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
YKA	**Yellowknife Ar**	**57.44**	**33**	P	**P**	**03 47 43.9**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.6,baz=304,slow=7.0,SNR=4.3						
YKA				pP	pP	03 47 56.8	+0.7
	comp=Z,1.0nm,0.9s,baz=310,slow=8.6,SNR=4.3						
YKA	**Yellowknife Ar**	**57.44**	**33**	P	**P**	**03 47 43.9**	**-0.2**
YKA				*PP	pP	03 47 56.8	+0.7
YKA				pmax	pmax		
	comp=N,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**57.44**	**33**	P	**P**	**03 47 43.9**	**-0.2**
YKA				pP	pP	03 47 56.9	+0.7
KEV	**Kevo**	**59.08**	**339**	*e*p	**P**	**03 47 55.0**	**-0.6**
	comp=N,0.2nm,0.3s,mb3.6						
ARCES	**ARCESS Array B**	**59.62**	**339**	P	**P**	**03 47 58.2**	**-1.1**
	comp=N,1.9nm,0.9s,mb4.1,baz=41,slow=8.2,SNR=4.7						
ARCES				LR	LR	04 18 37.6	
	comp=N,24nm,20.0s,MS3.3,baz=216,slow=41						
ARCES	**ARCESS Array B**	**59.62**	**339**	P	**P**	**03 47 58.2**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,24nm,20.0s						
ARCES	**ARCESS Array B**	**59.62**	**339**	P	**P**	**03 47 58.2**	**-1.1**
ARCES				LR	LR	04 18 37.6	
JOF	**Joensuu**	**62.23**	**332**	*e*p	**P**	**03 48 15.0**	**-2.0**
	comp=Z,0.8nm,0.3s,mb4.3						
JOF	**Joensuu**	**62.23**	**332**	*e*P	**P**	**03 48 15.0**	**-2.0**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
WRA	**Warramunga Arr**	**63.19**	**191**	P	**P**	**03 48 23.9**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.8,baz=11,slow=6.8,SNR=3.3						
KAF	**Kangasniemi**	**64.49**	**333**	*e*p	**P**	**03 48 25.3**	**-6.6**
	comp=Z,0.5nm,0.3s,mb4.0						
KAF	**Kangasniemi**	**64.49**	**333**	*e*P	**P**	**03 48 25.3**	**-6.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**65.04**	**332**	P	**P**	**03 48 34.5**	**-1.0**
	comp=Z,2.1nm,0.5s,mb4.5,baz=48,slow=7.4,SNR=28						
FINES				pP	pP	03 48 46.1	-1.6
	comp=Z,2.8nm,0.5s,baz=50,slow=7.7,SNR=7.4						
FINES				LR	LR	04 20 03.7	
	comp=Z,53nm,18.8s,MS3.8,baz=167,slow=39						
FINES	**FINESS Array B**	**65.04**	**332**	P	**P**	**03 48 34.5**	**-1.0**
FINES				*PP	pP	03 48 46.1	-1.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,53nm,18.8s						
OBN	**Obninsk**	**65.19**	**323**	*e*P	**P**	**03 48 35.7**	**-0.8**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ASAR	**Alice Springs**	**66.91**	**191**	P	**P**	**03 48 48.1**	**+0.6**
	comp=Z,0.3nm,0.6s,mb3.5,baz=4.4,slow=4.9,SNR=5.8						
KIV	**Kislovodsk**	**69.26**	**311**	*e*P	**P**	**03 49 02.2**	**-0.1**
KIV				*e*PP	pP	03 49 14.6	0.0
KIV				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
KIV	**Kislovodsk**	**69.26**	**311**	*e*P	**P**	**03 49 02.1**	**-0.2**
	comp=Z,10nm,0.7s,mb4.9						
KIV				*e*pP	pP	03 49 14.6	0.0
NVAR	**Mina Array Bea**	**69.38**	**56**	P	**P**	**03 49 05.0**	**+1.9**
	comp=Z,0.4nm,0.6s,mb3.5,baz=294,slow=6.6,SNR=2.7						
NB2	**NORSAR Subarra**	**69.94**	**338**	P	**P**	**03 49 05.6**	**-0.9**
	comp=Z,1.2nm,0.5s,mb4.1,baz=33,slow=6.5						
NOA	**NORSAR Array B**	**69.94**	**338**	P	**P**	**03 49 05.7**	**-0.8**
	comp=Z,2.9nm,0.8s,mb4.2,baz=35,slow=6.1,SNR=7.8						
NOA				pP	pP	03 49 17.6	-1.2
	comp=Z,3.1nm,1.0s,baz=34,slow=6.3,SNR=4.8						
NOA	**NORSAR Array B**	**69.94**	**338**	P	**P**	**03 49 05.7**	**-0.8**
NOA				*PP	pP	03 49 17.6	-1.2
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA				pmax	pmax		
	comp=N,3.0nm,1.0s						
AKASG	**Malin Array Be**	**71.45**	**323**	P	**P**	**03 49 14.8**	**-0.8**
	comp=N,1.9nm,0.5s,mb4.3,baz=41,slow=6.0,SNR=20						
AKASG				pP	pP	03 49 26.6	-1.3
	comp=N,1.3nm,0.5s,baz=40,slow=6.2,SNR=5.8						
AKASG	**Malin Array Be**	**71.45**	**323**	P	**P**	**03 49 14.9**	**-0.8**
AKASG				*PP	pP	03 49 26.6	-1.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG				pmax	pmax		
	comp=N,1.0nm,0.5s						
ANN	**Anapa**	**71.55**	**314**	*e*P	**P**	**03 49 18.3**	**+2.0**
ANN				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
PDAR	**Pinedale Array**	**71.69**	**48**	P	**P**	**03 49 17.9**	**+0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=318,slow=1.3,SNR=5.1						
PDAR				pP	pP	03 49 30.4	+1.0
	comp=Z,1.1nm,0.6s,baz=276,slow=1.2,SNR=6.2						
ULM	**Lac du Bonnet**	**73.18**	**36**	pP	pP	03 49 38.8	+0.4
	comp=Z,1.8nm,0.9s,baz=339,slow=8.6,SNR=3.0						
KIS	**Kishinev**	**74.31**	**320**	*e*P	**P**	**03 49 32.0**	**-0.6**
KWP	**Kalwaria**	**75.05**	**325**	*e*P	**P**	**03 49 37.1**	**+0.2**
KWP				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KWP	**Kalwaria**	**75.05**	**325**	*e*P	**P**	**03 49 37.1**	**+0.2**
	comp=Z,10nm,1.0s,mb4.7						
KOLS	**Kolonicke sedl**	**75.77**	**325**	*e*P	**P**	**03 49 41.8**	**+0.7**
OJC	**Ojcow**	**75.79**	**327**	*e*P	**P**	**03 49 41.4**	**+0.3**
STHS	**Stebnicka Huta**	**75.83**	**326**	*e*P	**P**	**03 49 42.5**	**+1.1**
STHS				*e*	pP	03 49 54.3	+0.6
STHS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
STHS	**Stebnicka Huta**	**75.83**	**326**	*e*P	**P**	**03 49 42.5**	**+1.1**
	comp=Z,1.8nm,0.9s,mb4.0						
STHS				*e*	pP	03 49 54.3	+0.6
NIE	**Niedzica**	**76.21**	**326**	*e*P	**P**	**03 49 44.2**	**+0.7**
KECS	**Kecovo**	**76.87**	**326**	*e*P	**P**	**03 49 49.9**	**+2.6**
	comp=Z,0.7nm,0.8s,mb3.6						
DPC	**Dobruska-Polom**	**77.03**	**329**	*e*P	**P**	**03 49 51.3**	**+3.1**
DPC				*ex*	x	03 50 00.7	
BR131	**Keskin Array S**	**77.09**	**313**	*e*P	**P**	**03 49 47.5**	**-1.0**
	comp=Z,0.5nm,0.4s,mb3.8						
BRTR	**Keskin Array B**	**77.09**	**313**	P	**P**	**03 49 49.0**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=79,slow=3.0,SNR=7.1						
BRTR				pP	pP	03 50 00.1	-0.9
	comp=Z,0.6nm,0.7s,baz=77,slow=3.5,SNR=3.5						
CLL	**Collm**	**77.45**	**331**	⇓P	**P**	**03 49 50.5**	**-0.1**
	comp=Z,logA/T=0.7,mb4.4						
CLL				*i* PCP	PcP	03 50 01.0	+0.2
CLL	**Collm**	**77.45**	**331**	⇓*i* P	**P**	**03 49 50.5**	**-0.1**
	comp=Z,5.0nm,0.9s,mb4.4						
CLL				*i* PcP	PcP	03 50 01.0	+0.2
CLL	**Collm**	**77.45**	**331**	⇓*i* P	**P**	**03 49 50.5**	**-0.1**
CLL				*i*	pP	03 50 01.0	-2.0
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
VYHS	**Vyhne**	**77.53**	**327**	*e*P	**P**	**03 49 51.2**	**+0.2**
VYHS				*e*	pP	03 50 02.9	-0.5
VYHS				pmax	pmax		
	comp=Z,12nm,2.5s,mb4.4						
VYHS	**Vyhne**	**77.53**	**327**	*e*P	**P**	**03 49 51.2**	**+0.2**
	comp=Z,12nm,2.5s,mb4.4						
VYHS				*e*	pP	03 50 02.9	-0.5
PRU	**Pruhonice**	**77.99**	**330**	*e*P	**P**	**03 49 53.8**	**+0.3**
PRU				*ex*	x	03 50 05.2	
KHC	**Kasperske Hory**	**79.05**	**330**	*e*P	**P**	**03 49 59.4**	**0.0**
KHC				*ex*	x	03 50 08.7	
GERES	**GERESS Array B**	**79.24**	**330**	P	**P**	**03 50 00.2**	**-0.3**
	comp=Z,0.7nm,0.7s,mb3.7,baz=38,slow=6.8,SNR=5.1						

JACH	**Jahuel**	**6.46**	**36**	⇓*i*P	Pn	03 47 35.2	+1.6		

MOS 28 03:55:46.4±0.8, 4321N×4410E, h18km, mb4.0/1, 8C-3D, Error ellipse: s-maj=11.8km s-min=8.7km az=110.7, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KORR	**Kora**	**0.12**	**192**	⇑*i*PG	Pg	03 55 51.8	+1.5
KORR				*i* S	Sg	03 55 56.2	+3.3
ARNR	**Ardon**	**0.13**	**98**	⇑*e*PG	Pg	03 55 52.1	+1.7
ARNR				*e*S	Sg	03 55 56.8	+3.8
KMSR	**Komsomolskaya**	**0.21**	**40**	⇓*i*PG	Pg	03 55 52.1	+0.6
KMSR				*i* S	Sg	03 55 56.8	+1.8
LACR	**Lac**	**0.41**	**160**	⇓*i*PG	Pg	03 55 56.6	+1.8
LACR				*i* S	Sg	03 56 04.4	+4.0
VLKR	**Vladikavkaz**	**0.45**	**111**	⇑*e*PG	Pg	03 55 57.4	+1.8
VLKR				*e*S	Sg	03 56 05.7	+4.0
ZEI	**Tsey**	**0.46**	**199**	⇑*e*PG	Pg	03 55 56.4	+0.6
ZEI				*i* S	Sg	03 56 04.1	+2.0
DIGR	**Digorskoe uzhe**	**0.49**	**231**	⇑*e*PG	Pg	03 55 56.1	-0.2
DIGR				*i* S	Sg	03 56 03.7	+0.7
SNJR	**Sundja**	**0.54**	**105**	⇑*e*PG	Pg	03 55 58.7	+1.6
SNJR				*e*S	Sg	03 56 08.2	+3.8
TRKR	**Terskaya**	**0.69**	**41**	⇓*e*PG	Pg	03 55 59.7	-0.3
TRKR				*e*S	Sb	03 56 09.7	+0.6
KUBR	**Kubataba**	**0.78**	**320**	⇑*e*PG	Pg	03 56 01.1	-0.5
KUBR				*e*S	Sb	03 56 11.6	0.0
SHAR	**Shatzhatmas**	**1.17**	**298**	⇑*e*PG	Pg	03 56 07.5	-1.6
SHAR				*e*S	Sb	03 56 22.0	-1.0
BEYR	**Belyy Ugol+**	**1.23**	**311**	*e*PG	Pg	03 56 09.5	-0.7
BEYR				*i* S	Sb	03 56 23.2	-1.5
KIV0	**Kislovodsk Arr**	**1.27**	**307**	*e*PG	Pg	03 56 10.2	-0.7
KIV0				*e*S	Sb	03 56 25.1	-0.6
KIV	**Kislovodsk**	**1.27**	**306**	*e*PG	Pg	03 56 10.0	-1.0
KIV				*e*S	Sb	03 56 25.1	-0.8

*ISCJB **28** 04:13:13.6±0.8, 144S±02×663E±0.1, h10km, mb3.9/13, MS3.9/8, Error ellipse: s-maj=26.3km s-min=18.8km az=38.1*

*IDC **28** 04:13:13.8±0.9, 1446S×6622E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.9/21, mbtmp3.9/11, MS3.8/8, Ms1 3.8/8, ms1mx3.4/23, Error ellipse: s-maj=33.4km s-min=20.7km az=27.0*

*NEIC **28** 04:13:15.5±0.5, 1445S×6620E, h10km, mb4.4/2, Error ellipse: s-maj=18.3km s-min=13.2km az=199.0*

ISC 28 04:13:15.9±0.8, 144S±02×662E±01, h10km, n26, σ0♦66/14, mb3.9/13, MS3.9/8, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**36.74**	**264**	P	**P**	**04 20 23.5**	**+0.2**
	1.1nm,0.6s,mb3.9,baz=92,slow=7.1,SNR=4.5						
LSZ	**Lusaka**	**36.74**	**264**	P	**P**	**04 20 23.5**	**+0.2**
BOSA	**Boshof**	**40.45**	**243**	LR	LR	04 34 37.8	
	comp=Z,120nm,19.6s,MS3.8,baz=259,slow=32						
MAW	**Mawson**	**53.24**	**182**	LR	LR	04 39 15.8	
	comp=Z,82nm,20.2s,MS3.8,baz=251,slow=29						
BRTR	**Keskin Array B**	**61.78**	**332**	P	**P**	**04 23 34.1**	**-0.6**
	0.2nm,0.4s,mb3.6,baz=126,slow=7.3,SNR=3.8						
MKAR	**Makanchi Array**	**62.57**	**12**	P	**P**	**04 23 39.3**	**-0.8**
	2.0nm,1.0s,mb4.2,baz=203,slow=8.9,SNR=8.2						
ASAR	**Alice Springs**	**64.17**	**110**	P	**P**	**04 23 49.6**	**-1.0**
	1.1nm,0.8s,mb3.9,baz=274,slow=6.0,SNR=11						
ASAR				LR	LR	04 46 48.1	
	comp=Z,123nm,20.1s,MS4.1,baz=184,slow=31						
WRA	**Warramunga Arr**	**64.96**	**106**	P	**P**	**04 23 55.9**	**+0.1**
	1.5nm,0.8s,mb4.1,baz=270,slow=5.9,SNR=10						
ZRNK	**Zerenda**	**67.08**	**2**	*e*P	**P**	**04 24 09.7**	**+0.2**
	1.9nm,1.0s,mb4.1						
CHKZ	**Chkalovo**	**67.87**	**3**	*e*P	**P**	**04 24 14.1**	**-0.4**
	4.5nm,1.2s,mb4.4						
TORD	**Torodi Ar. Bea**	**69.48**	**290**	LR	LR	04 54 22.6	
	comp=Z,49nm,19.2s,MS3.8,baz=75,slow=36						
ZAL	**Zalesovo**	**69.86**	**12**	P	**P**	**04 24 26.8**	**-0.1**
	1.3nm,0.3s,mb4.4,baz=277,slow=5.0,SNR=5.1						
SONM	**Songino Array**	**71.54**	**27**	P	**P**	**04 24 37.9**	**+0.8**
	0.5nm,0.4s,mb3.8,baz=241,slow=6.1,SNR=4.7						
SONM				LR	LR	04 54 05.4	
	comp=Z,54nm,21.9s,MS3.8,baz=98,slow=34						
AKASG	**Malin Array Be**	**72.42**	**336**	P	**P**	**04 24 41.9**	**-0.5**
	0.1nm,0.3s,mb3.3,baz=142,slow=4.5,SNR=4.2						
DBIC	**Dimbokro**	**73.51**	**282**	LR	LR	04 55 23.7	
	comp=Z,59nm,20.0s,MS3.9,baz=256,slow=34						
VNDA	**Vanda**	**77.29**	**167**	LR	LR	04 55 53.1	
	comp=Z,53nm,18.1s,MS3.9,baz=288,slow=33						
GERES	**GERESS Array B**	**78.20**	**328**	P	**P**	**04 25 15.7**	**+0.1**
	0.2nm,0.3s,mb3.5,baz=114,slow=2.5,SNR=3.5						
ESDC	**Sonseca Array**	**84.44**	**313**	P	**P**	**04 25 49.3**	**+0.6**
	0.7nm,0.8s,mb3.9,baz=86,slow=6.1,SNR=4.5						
MJAR	**Matsushiro Arr**	**84.55**	**50**	P	**P**	**04 25 50.7**	**+1.5**
	0.6nm,0.4s,mb4.1,baz=256,slow=5.0,SNR=5.1						
ARCES	**ARCESS Array B**	**88.42**	**347**	LR	LR	05 04 51.8	
	comp=Z,42nm,18.5s,MS3.9,baz=291,slow=35						
NEW	**Newport**	**146.09**	**4**	*e*PKPab	PKPab	04 32 57.2	+0.4
MSO	**Missoula**	**147.64**	**0**	*e*PKPbc	PKPbc	04 33 00.8	+0.3
RSSD	**Black Hills**	**149.20**	**346**	*e*PKPbc	PKPbc	04 33 05.1	+0.5
PDAR	**Pinedale Array**	**151.47**	**353**	PKPbc	PKPbc	04 33 10.7	+0.6
	2.2nm,0.7s,baz=73,slow=3.1,SNR=18						
NVAR	**Mina Array Bea**	**155.70**	**9**	PKPbc	PKPdf	04 33 20.6	+11
	0.4nm,0.7s,baz=302,slow=1.7,SNR=3.5						
NVAR				PKPab	PKPab	04 33 37.5	+1.1
	0.1nm,0.4s,baz=303,slow=1.9,SNR=3.5						
NVAR	**Mina Array Bea**	**155.70**	**9**	PKPbc	PKPdf	04 33 20.6	+11
NVAR				PKPab	PKPab	04 33 37.5	+1.1

IGQ 28 05:00:54.8, 232S×7701W, h131km±13km, Mb4.1, Ms3.9, 4C-10D, Error ellipse: s-maj=9.4km s-min=5.8km az=19.7, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PATA	**Patacocha**	**1.64**	**300**	⇑P	Pn	05 01 25.2	+0.8
ULBA	**Ulba**	**1.64**	**302**	⇓P	Pn	05 01 25.4	+0.9
ULBA				S	Sn	05 01 46.7	-0.6
ARRY	**Arrayan**	**1.66**	**299**	⇑P	Pn	05 01 25.4	+0.7
RUN5	**Runtun**	**1.68**	**302**	⇓P	Pn	05 01 25.6	+0.7
RUN5				S	Sn	05 01 47.9	-0.1
JUIV	**Juive**	**1.71**	**301**	P	Pn	05 01 25.7	+0.5
JUIV				S	Sn	05 01 48.0	-0.5
TAMB	**Tambo**	**2.11**	**320**	⇓P	Pn	05 01 32.0	+1.9
VC1	**Cotopaxi 1**	**2.17**	**320**	⇓P	Pn	05 01 33.0	+2.2
ANTI	**Antisana**	**2.19**	**328**	⇓P	Pn	05 01 32.5	+1.4
CAMI	**Rancho Maria**	**2.21**	**318**	⇓P	Pn	05 01 33.2	+1.8
NAS1	**Nasa**	**2.23**	**319**	P	Pn	05 01 33.6	+2.0
CONE	**Cono NE Rev Vo**	**2.32**	**344**	⇓P	Pn	05 01 33.1	+0.3
CAYR	**Refugio Cayamb**	**2.52**	**337**	⇑P	Pn	05 01 37.4	+2.1
CAYA	**Cayambe**	**2.57**	**338**	⇓P	Pn	05 01 38.1	+2.3
JUA2	**San Juan 2**	**2.63**	**323**	P	Pn	05 01 37.4	+0.8
GGP	**Refugio Guagua**	**2.66**	**323**	⇓P	Pn	05 01 38.0	+1.0
TERV	**Terraza Guagua**	**2.66**	**323**	P	Pn	05 01 38.4	+1.4
PINO	**Pino**	**2.68**	**323**	⇑P	Pn	05 01 38.6	+1.4
YANA	**Yana**	**2.69**	**324**	⇓P	Pn	05 01 38.3	+0.9

*LDG **28** 05:13:26.2±0.1, 4275N×100E, h2km, Md2.0/2, Ml1.9/2, Error ellipse: s-maj=3.3km s-min=1.6km az=176.0*

*STR **28** 05:13:26.3±0.1, 4283N×129E, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

MDD 28 05:13:26.4±0.2, 4275N×099E, h0km, mbLg1.0/10, Error ellipse: s-maj=2.1km s-min=1.7km az=29.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALF	**Salau**	**0.15**	**85**	Pg	Pg	05 13 29.0	-0.2
SALF				Sg	Sg	05 13 31.0	-0.1
SALF	**Salau**	**0.15**	**85**	Pg	Pg	05 13 28.9	-0.3
SALF				Lg		05 13 30.9	
MELF	**Melles**	**0.21**	**306**	Pg	Pg	05 13 30.4	-0.1
MELF				Lg		05 13 33.4	
MLS	**Moulis**	**0.22**	**20**	Pg	Pg	05 13 30.6	-0.1
MLS				Sg	Sg	05 13 33.7	+0.1
MLS	**Moulis**	**0.22**	**20**	Pg	Pg	05 13 30.6	-0.1
MLS				Lg		05 13 33.6	
CSOR	**Sort**	**0.39**	**164**	Pg	Pg	05 13 33.7	-0.2
CSOR				Lg		05 13 39.0	
	4.4nm,0.2s						
GRBF	**Gourbit**	**0.41**	**77**	Pg	Pg	05 13 33.8	-0.5
GRBF				Lg		05 13 39.9	
EPF	**Esparros**	**0.56**	**301**	*e*Pg	Pg	05 13 36.5	-0.6
EPF				*e*Sg	Sg	05 13 43.9	-0.4
	7.5nm,0.3s						
EPF	**Esparros**	**0.56**	**301**	Pg	Pg	05 13 36.5	-0.6
EPF				Lg		05 13 43.9	
	3.8nm,0.3s						
CORG	**Organya**	**0.57**	**155**	Pg	Pg	05 13 37.2	-0.2
CORG				Lg		05 13 44.6	
	0.9nm,0.2s						
EBIE	**Bielsa**	**0.63**	**265**	Pg	Pg	05 13 38.2	-0.3
	1.1nm,0.5s,SNR=8.1						
EBIE				Lg		05 13 45.8	
	1.5nm,0.2s,SNR=8.4						
CLLI	**Llivia**	**0.77**	**110**	Pg	Pg	05 13 40.4	-0.9
CLLI				Lg		05 13 50.4	
	0.9nm,0.2s						
CAVN	**Les Avellanes**	**0.88**	**192**	Pg	Pg	05 13 42.6	-0.8
CAVN				Lg		05 13 55.5	
	2.2nm,0.1s						
ETSF	**Etsaut**	**1.15**	**278**	*e*Pg	Pg	05 13 48.1	-0.4
ETSF				*e*Sg	Sg	05 14 03.0	-0.4
	1.4nm,0.2s						
ETSF	**Etsaut**	**1.15**	**278**	Pg	Pg	05 13 48.1	-0.4
ETSF				Lg		05 14 03.0	
	0.7nm,0.2s						
EPOB	**Poblet**	**1.40**	**177**	Pg	Pg	05 13 52.6	-0.6
	0.3nm,0.1s,SNR=7.9						
EPOB				Lg		05 14 11.0	
	0.7nm,0.1s,SNR=7.9						
CFON	**Fontmartina**	**1.46**	**132**	Lg		05 14 11.6	
	3.1nm,0.2s						
CAF	**Calviac**	**2.31**	**19**	*e*Sg	Sg	05 14 38.8	-1.9
	1.4nm,0.2s						
CAF	**Calviac**	**2.31**	**19**	Lg		05 14 38.8	
	0.7nm,0.2s						

*IDC **28** 05:22:45.1±0.5, 909S×1080E, h0km, mb4.7/15, mb1 4.7/17, mb1mx4.6/22, mbtmp4.6/17, ML3.8/2, MS4.3/9, Ms1 4.4/9, ms1mx4.0/22, Error ellipse: s-maj=19.4km s-min=12.6km az=61.0*

*BJI **28** 05:22:46.7, 920S×10790E, h10km, mB5.0, mb4.9, Ms5.0, Msz4.7*

*NEIC **28** 05:22:46.7±0.2, 9.17S×10794E, h10km, mb5.0/22, Error ellipse: s-maj=11.4km s-min=5.7km az=54.0*

*HRVD **28** 05:22:46.7±0.6, 961S×10764E, h22km±1km, MW4.9/48, Centroid moment Tensor Solution. LP body waves: s29,c37;Mantle waves: s48,c62; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.03±.15; $M_{\theta\theta}$-1.69±.10; $M_{\phi\phi}$-0.33±.12; $M_{r\theta}$1.34±.16; $M_{\theta\phi}$0.83±.08; $M_{\phi r}$-1.19±.18; Best double couple: M_o2.73000×10^{16} NP1:♦285.00000°, δ26.00000°, λ71.00000°. NP2: ♦126.00000°, δ66.00000°, λ99.00000°. Principal axes: T 2.7370, Plg68.0000°, Azm53.0000°; N -0.0120, Plg8.0000°, Azm302.0000°; P -2.7240, Plg20.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **28** 05:22:47.8±0.3, 9.19S±004×10787E±005, h32km, mb4.9/70, MS4.5/25 Error ellipse: s-maj=7.1km s-min=4.9km az=114.6*

*MOS **28** 05:22:48.0±0.8, 909S×10799E, h33km, mb5.1/29, Error ellipse: s-maj=14.4km s-min=6.5km az=111.7*

ISC 28 05:22:50.1±0.3, 921S±004×10787E±005, h34km, h34km±.7km: pP-P, n227, σ1♦11/150, mb4.9/70, MS4.5/25, 39C-37D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNG	**Tangerang**	**3.25**	**338**	P	**Pb**	**05 23 54.0**	**+6.9**
	2μm,1.3s						
KRKI	**Karangkates**	**4.65**	**77**	P	**Pn**	**05 23 58.7**	**+0.8**
	624nm,1.3s						
NBBI	**Negara**	**6.73**	**83**	P	**Pn**	**05 24 27.9**	**+1.5**
	612nm,1.0s						
DNP	**Denpasar**	**7.27**	**86**	P	**Pn**	**05 24 37.8**	**+3.9**
	609nm,1.0s						
PCI	**Palu**	**14.49**	**56**	P	**Pn**	**05 26 14.5**	**+1.9**
	168nm,1.3s						
PSI	**Prapat**	**14.89**	**323**	Pn	**Pn**	**05 26 17.2**	**-0.8**
	0.6nm,0.3s,baz=156,slow=9.3,SNR=2.8						
MBWA	**Marble Bar**	**16.48**	**137**	*e*Pn	**Pn**	**05 26 33.5**	**-5.2**
	40nm,1.2s						
MBWA				*e*Sn	**Sn**	**05 29 22.8**	**-18**
KKM	**Kota Kinabalu**	**17.29**	**29**	*e*Pn	**Pn**	**05 26 48.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.38**	**119**	*e*P	**Pn**	**05 27 13.4**	**-0.8**
	39nm,1.1s						
FITZ				*e*S	**Sn**	**05 30 34.2**	**-16**
FITZ	**Fitzroy Crossi**	**19.38**	**119**	P	**Pn**	**05 27 12.6**	**-1.6**
	0.2nm,0.3s,baz=278,slow=7.8,SNR=18						
FITZ				S	**Sn**	**05 30 31.6**	**-19**
	0.1nm,0.3s,baz=37,slow=20,SNR=2.8						
AAI	**Ambon**	**20.92**	**76**	P	**P**	**05 27 33.3**	**+3.7**
	153nm,1.2s						
DAV	**Davao City (W)**	**23.94**	**48**	P	**P**	**05 28 02.6**	**+1.7**
	SNR=9.1						
KLBR	**Kellerberrin**	**24.09**	**159**	*e*P	**P**	**05 28 01.1**	**-1.2**
	48nm,1.4s,mb4.7						
BUKP	**Musuan**	**24.12**	**46**	*e*P	**P**	**05 28 03.4**	**+0.8**
NWAO	**Narrogin (SRO)**	**25.14**	**161**	P	**P**	**05 28 13.2**	**+1.4**
	12nm,1.1s,mb4.3,baz=351,slow=14,SNR=5.0						
NWAO				LR	LR	05 37 17.0	
	comp=Z,573nm,18.4s,MS4.1,baz=332,slow=35						
NST	**Nakhon Sawan**	**25.88**	**343**	P	**P**	**05 28 14.4**	**-4.2**
WRA	**Warramunga Arr**	**27.71**	**116**	P	**P**	**05 28 34.4**	**-0.7**
	12nm,0.8s,mb4.5,baz=286,slow=11,SNR=30						
WRAB	**Tennant Creek**	**27.71**	**116**	P	**P**	**05 28 34.9**	**-0.2**
	100nm,0.9s,mb5.4,SNR=9.0						
WRAB	**Tennant Creek**	**27.71**	**116**	*e*P	**P**	**05 28 34.7**	**-0.4**
WRAB				*e*		05 29 42.2	
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**27.71**	**116**	*e*P	**P**	**05 28 34.7**	**-0.4**
	comp=Z,21nm,0.8s,mb4.8						
WRAB				*e*		05 29 42.2	
WB2	**Warramunga Arr**	**27.72**	**116**	*e*P	**P**	**05 28 34.8**	**-0.3**
QIZ	**Qiongzhong**	**28.13**	**4**	P	**P**	**05 28 40.3**	**+1.5**
QIZ				AP	pP	05 28 49.0	+0.4
QIZ				XP	sP	05 28 53.3	+0.5
QIZ				S	**S**	**05 33 24.5**	**+2.9**
QIZ				XS	sS	05 33 36.8	-1.1
QIZ				LR	LR		
	comp=N,1μm,14.7s						
QIZ				LR	LR		
	comp=Z,1μm,14.8s,MS4.7						
NANT	**Nan**	**28.72**	**346**	P	**P**	**05 28 41.5**	**-2.5**
AS31	**Alice Springs**	**28.74**	**123**	*e*P	**P**	**05 28 43.4**	**-0.8**
ASAR	**Alice Springs**	**28.74**	**123**	P	**P**	**05 28 43.9**	**-0.3**
	comp=Z,10nm,1.0s,mb4.5,baz=294,slow=7.9,SNR=56						
ASAR				PcP	PcP	05 31 55.5	+1.7
	comp=Z,3.9nm,1.0s,baz=304,slow=2.1,SNR=8.0						
ASAR				Sn	S	05 34 19.3	+48
	comp=Z,1.6nm,0.8s,baz=302,slow=23,SNR=4.2						
ASAR				LR	LR	05 40 16.1	
	comp=Z,582nm,19.8s,MS4.2,baz=305,slow=37						
ASAR	**Alice Springs**	**28.74**	**123**	P	**P**	**05 28 43.9**	**-0.3**
ASAR						05 31 55.6	
CHTO	**Chiang Mai**	**29.20**	**342**	*e*P	**P**	**05 28 48.7**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
CHTO	**Chiang Mai**	**29.20**	**342**	*e*P	**P**	**05 28 48.7**	**+0.3**
	comp=Z,16nm,1.2s,mb4.6						
KMI	**Kunming**	**34.49**	**352**	P	**P**	**05 29 37.5**	**+2.8**
KMI				AP	pP	05 29 47.5	+2.8
KMI				XP	sP	05 29 51.8	+3.0
KMI				PP	PP	05 30 55.3	+2.1
KMI				PPP		05 31 13.5	
KMI				S	**S**	**05 35 04.5**	**+3.5**
KMI				PCS	PcS	05 35 56.3	+0.5
KMI				SS	SS	05 37 18.0	-13
KMI				SSS		05 37 45.0	
KMI				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.8						
KMI				AMB	AMB		
	comp=Z,155nm,7.1s						
KMI				LR	LR		
	comp=N,2μm,13.5s,MS5.2						
KMI				LR	LR		
	comp=E,1μm,14.8s,MS5.2						
KMI				LR	LR		
	comp=Z,3μm,13.7s,MS5.2						
STKA	**Stephens Creek**	**38.54**	**131**	*e*P	**P**	**05 30 09.5**	**+0.2**
	comp=Z,19nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**38.54**	**131**	P	**P**	**05 30 09.6**	**+0.2**
	comp=Z,20nm,0.8s,mb4.9,baz=298,slow=8.4,SNR=26						
CTA	**Charters Tower**	**38.59**	**111**	*e*P	**P**	**05 30 11.0**	**+1.3**
	comp=Z,12nm,1.1s,mb4.5						
CTA	**Charters Tower**	**38.59**	**111**	P	**P**	**05 30 09.8**	**+0.1**
	comp=Z,18nm,1.1s,mb4.7,baz=272,slow=11,SNR=10						
CTA	**Charters Tower**	**38.59**	**111**	*e*P	**P**	**05 30 11.0**	**+1.3**
CTA				pmax	pmax		
	comp=Z,12nm,1.1s						
CTAO	**Charters Tower**	**38.59**	**111**	*e*P	**P**	**05 30 10.5**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,36nm,1.3s,mb4.9						
CTAO	**Charters Tower**	**38.59**	**111**	*e*P	**P**	**05 30 10.5**	**+0.9**
	comp=Z,36nm,1.3s,mb4.9						
CD2	**Chengdu**	**40.08**	**355**	*e*P	**P**	**05 30 22.5**	**+0.3**
CD2				AP	pP	05 30 32.3	+0.1
CD2				XP	sP	05 30 36.3	0.0
CD2				PP	PP	05 31 59.5	+4.8
CD2				PCP	PcP	05 32 27.0	+0.6
CD2				SCP	ScP	05 36 12.3	-0.5
CD2				PCS	PcS	05 36 16.3	-0.4
CD2				S	**S**	**05 36 27.0**	**+1.0**
CD2				XS	sS	05 36 43.3	+0.8
CD2				SS	SS	05 39 20.0	-4.1
CD2				SCS	ScS	05 40 24.5	-1.7
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
CD2				AMB	AMB		
	comp=Z,40nm,5.0s						
CD2				LR	LR		
	comp=E,810nm,13.2s						
CD2				LR	LR		
	comp=Z,410nm,15.6s,MS4.4						
JOW	**Kunigami**	**40.94**	**28**	P	**P**	**05 30 28.8**	**-0.4**
	comp=Z,21nm,1.0s,mb4.7,baz=211,slow=8.6,SNR=5.1						
LSA	**Lhasa**	**41.90**	**338**	P	**P**	**05 30 38.3**	**+1.2**
SSE	**Sheshan**	**42.06**	**17**	*e*P	**P**	**05 30 40.5**	**+2.1**
SSE				AP	pP	05 30 51.3	+2.8
SSE				PP	PP	05 32 20.0	+3.9
SSE				PCP	PcP	05 32 34.5	+1.7
SSE				S	**S**	**05 36 57.0**	**+1.7**
SSE				SCS	ScS	05 40 38.5	+0.3
SSE				AMB	AMB		
	comp=Z,23nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,52nm,3.6s						
SSE				LR	LR		
	comp=N,305nm,16.2s,MS4.3						
SSE				LR	LR		
	comp=E,171nm,16.1s,MS4.3						
SSE				LR	LR		
	comp=Z,301nm,16.5s,MS4.3						
JIRN	**Jiri**	**42.24**	**331**	*e*P	**P**	**05 30 40.8**	**+0.9**
	comp=Z,121nm,1.2s,mb5.4						
NJ2	**Nanjing**	**42.35**	**14**	*e*P	**P**	**05 30 42.3**	**+1.5**
NJ2				AP	pP	05 30 52.3	+1.4
NJ2				XP	sP	05 30 56.0	+1.0
NJ2				S	**S**	**05 36 59.0**	**-0.6**
NJ2				AMB	AMB		
	comp=Z,420nm,9.1s						
NJ2				LR	LR		
	comp=N,800nm,15.6s,MS4.9						
NJ2				LR	LR		
	comp=E,910nm,17.8s,MS4.9						
NJ2				LR	LR		
	comp=Z,730nm,16.7s,MS4.6						
PKI	**Pulchoki**	**42.55**	**330**	*e*P	**P**	**05 30 42.7**	**+0.3**
GUN	**Gumba**	**42.60**	**331**	*e*P	**P**	**05 30 43.7**	**+0.9**
	comp=Z,271nm,1.5s,mb5.8						
DMN	**Daman**	**42.73**	**330**	*e*P	**P**	**05 30 44.4**	**+0.6**
	comp=Z,95nm,1.2s,mb5.4						
KKN	**Kakani**	**42.79**	**330**	*e*P	**P**	**05 30 44.6**	**+0.2**
	comp=Z,160nm,1.4s,mb5.5						
KKN	**Kakani**	**42.79**	**330**	*e*P	**P**	**05 30 44.6**	**+0.2**
KKN				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.6						
XAN	**Xi'an**	**43.02**	**1**	P	**P**	**05 30 45.5**	**-0.7**
XAN				AP	pP	05 30 54.5	-1.8
XAN				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.6						
GKN	**Gorkha**	**43.29**	**329**	*e*P	**P**	**05 30 48.6**	**+0.2**
KOLN	**Koldanda**	**43.63**	**328**	*e*P	**P**	**05 30 51.8**	**+0.7**
	comp=Z,197nm,1.4s,mb5.6						
LZH	**Lanzhou**	**45.21**	**355**	⇓P	**P**	**05 31 04.8**	**+1.0**
LZH				AP	pP	05 31 15.3	+1.4
LZH				XP	sP	05 31 19.3	+1.3
LZH				PP	PP	05 32 51.5	+1.7
LZH				*e*S	**S**	**05 37 42.8**	**+1.4**
LZH				XS	sS	05 37 59.5	+1.4
LZH				SS	SS	05 40 57.5	-7.3
LZH				AMB	AMB		
	comp=Z,35nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,146nm,7.2s						
LZH				LR	LR		
	comp=E,852nm,14.7s						
LZH				LR	LR		
	comp=Z,1μm,27.5s						
GTA	**Gaotai**	**48.95**	**352**	P	**P**	**05 31 33.0**	**+0.1**
GTA				AP	pP	05 31 42.3	-0.8
GTA				XP	sP	05 31 47.0	-0.2
GTA				PCP	PcP	05 32 57.5	+0.8
GTA				PP	PP	05 33 28.0	+1.6
GTA				PPP		05 34 20.5	
GTA				SCP	ScP	05 36 48.8	-0.3
GTA				S	**S**	**05 38 33.8**	**-0.8**
GTA				XS	sS	05 38 50.5	-1.0
GTA				SCS	ScS	05 41 21.5	-1.0
GTA				SS	SS	05 42 00.5	-5.1
GTA				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
GTA				AMB	AMB		
	comp=Z,172nm,5.7s						
GTA				LR	LR		
	comp=N,597nm,16.7s,MS4.8						
GTA				LR	LR		
	comp=E,687nm,17.1s,MS4.8

SNY					AMB	AMB			
	comp=Z,12nm,1.2s,mb4.7								
SNY					AMB	AMB			
	comp=Z,119nm,5.8s								
SNY					LR	LR			
	comp=N,209nm,14.8s,MS4.7								
SNY					LR	LR			
	comp=E,423nm,15.4s,MS4.7								
SNY					LR	LR			
	comp=Z,331nm,16.7s,MS4.5								
MAT	**Matsushiro**	**53.71**	**30**		P	**P**	**05 32 06.2**	**-2.4**	
MJAR	**Matsushiro Arr**	**53.71**	**30**		P	**P**	**05 32 06.4**	**-2.2**	
	comp=Z,6.7nm,1.0s,mb4.5,baz=210,slow=7.7,SNR=6.4								
MJAR					LR	LR	05 56 00.5		
	comp=Z,313nm,19.5s,MS4.4,baz=215,slow=37								
CN2	**Changchun**	**55.12**	**15**	*e*	P	**P**	**05 32 17.5**	**-1.4**	
CN2				*e*	S	**S**	**05 39 53.5**	**-5.9**	
CN2					AMB	AMB			
	comp=Z,30nm,1.3s,mb5.2								
CN2					AMB	AMB			
	comp=Z,90nm,3.0s								
CN2					LR	LR			
	comp=N,420nm,18.0s,MS4.7								
CN2					LR	LR			
	comp=E,430nm,18.0s,MS4.7								
CN2					LR	LR			
	comp=Z,320nm,18.0s,MS4.4								
WMQ	**Urumqi**	**55.87**	**342**		P	**P**	**05 32 25.0**	**+0.8**	
WMQ					AP	pP	05 32 35.0	+0.4	
WMQ					XP	sP	05 32 39.0	+0.4	
WMQ					PP	PP	05 34 31.0	+2.0	
WMQ					S	**S**	**05 40 09.0**	**-0.3**	
WMQ					SCS	ScS	05 42 08.0	-2.8	
WMQ					SS	SS	05 43 54.0	-1.3	
WMQ					AMB	AMB			
	comp=Z,46nm,1.0s,mb5.5								
WMQ					AMB	AMB			
	comp=Z,324nm,5.0s								
WMQ					LR	LR			
	comp=N,302nm,15.0s,MS4.8								
WMQ					LR	LR			
	comp=E,453nm,15.0s,MS4.8								
WMQ					LR	LR			
	comp=Z,287nm,15.0s,MS4.5								
KSH	**Kashi**	**56.80**	**331**	*e*	P	**P**	**05 32 32.3**	**+1.5**	
KSH				*e*	AP	pP	05 32 42.0	+0.8	
KSH				*e*	XP	sP	05 32 45.8	+0.5	
KSH				*e*	PCP	PcP	05 33 27.3	+1.0	
KSH				*e*	PP	PP	05 34 39.0	+1.8	
KSH				*e*	PPP		05 35 56.5		
KSH				*e*	SCP	ScP	05 37 23.0	-0.2	
KSH				*e*	PCS	PcS	05 37 27.3	+0.2	
KSH				*e*	S	**S**	**05 40 18.3**	**-3.3**	
KSH				*e*	XS	sS	05 40 35.5	-3.2	
KSH				*e*	SCS	ScS	05 42 14.3	-3.2	
KSH					AMB	AMB			
	comp=Z,23nm,0.9s,mb5.2								
KSH					LR	LR			
	comp=N,175nm,7.6s								
KSH					LR	LR			
	comp=E,173nm,6.3s								
KSH					LR	LR			
	comp=Z,352nm,12.0s,MS4.7								
SONM	**Songino Array**	**56.81**	**359**		P	**P**	**05 32 31.4**	**+0.5**	
	comp=Z,32nm,1.2s,mb5.2,baz=176,slow=6.2,SNR=41								
ULN	**Ulaanbaatar**	**56.83**	**359**		P	**P**	**05 32 31.2**	**+0.1**	
	SNR=11								
ULN	**Ulaanbaatar**	**56.83**	**359**	*c*	*i*P	**P**	**05 32 30.7**	**-0.3**	
MDJ	**Mudanjiang**	**57.06**	**18**		P	**P**	**05 32 34.8**	**+2.1**	
MDJ					AP	pP	05 32 44.0	+0.9	
MDJ					XP	sP	05 32 47.8	+0.6	
MDJ					PP	PP	05 34 41.8	+2.2	
MDJ					SCP	ScP	05 37 26.3	+1.9	
MDJ					PCS	PcS	05 37 29.8	+1.5	
MDJ					S	**S**	**05 40 28.8**	**+3.7**	
MDJ					XS	sS	05 40 44.5	+2.2	
MDJ					SCS	ScS	05 42 21.8	+2.4	
MDJ					AMB	AMB			
	comp=Z,7.0nm,1.1s,mb4.6								
MDJ					AMB	AMB			
	comp=Z,51nm,3.4s								
MDJ					LR	LR			
	comp=N,86nm,15.3s,MS4.3								
MDJ					LR	LR			
	comp=E,151nm,15.3s,MS4.3								
MDJ					LR	LR			
	comp=Z,195nm,17.8s,MS4.3								
MIR	**Mirnyy**	**58.16**	**187**	*c*	*i*P	**P**	**05 32 42.0**	**+1.6**	
MIR				*i*			05 33 29.0		
MIR					pmax	pmax			
	comp=Z,20nm,1.7s,mb4.9								
OPO	**Ambohidratompo**	**59.41**	**254**		P	**P**	**05 32 51.8**	**+2.7**	
	comp=Z,4.7nm,0.9s,mb4.5,baz=360,slow=1.1,SNR=3.3								
ZAK	**Zakamensk**	**59.48**	**357**	⇑	*i*P	**P**	**05 32 49.4**	**-0.2**	
ZAK					pmax	pmax			
	comp=Z,8.0nm,1.4s,mb4.6								
AAK	**Ala-Archa**	**59.92**	**332**		P	**P**	**05 32 52.5**	**-0.1**	
	SNR=7.2								
AAK	**Ala-Archa**	**59.92**	**332**	*d*	*i*P	**P**	**05 32 52.6**	**-0.1**	
AAK					pmax	pmax			
	comp=Z,13nm,1.3s,mb4.8								
FRU	**Bishkek**	**60.02**	**332**		*e*P	**P**	**05 32 53.0**	**-0.3**	
FRU					*e*	pP	05 33 05.0	+1.2	
FRU					pmax	pmax			
	comp=Z,20nm,2.0s,mb4.8								
MK31	**Makanchi Array**	**60.24**	**340**		P	**P**	**05 32 54.4**	**-0.4**	
MK31					pmax	pmax			
	comp=Z,13nm,0.8s,mb5.0								
MKAR	**Makanchi Array**	**60.24**	**340**		P	**P**	**05 32 54.7**	**-0.1**	
	comp=Z,6.0nm,0.5s,mb4.9,baz=134,slow=6.9,SNR=45								
MKAR	**Makanchi Array**	**60.24**	**340**		P	**P**	**05 32 54.7**	**-0.1**	
TLY	**Talaya**	**60.75**	**357**		P	**P**	**05 32 58.7**	**+0.4**	
	SNR=6.3								
TLY	**Talaya**	**60.75**	**357**	⇑	*i*P	**P**	**05 32 57.9**	**-0.4**	
TLY					*e*S	**S**	**05 41 09.4**	**-3.6**	
TLY					*e*		05 42 49.4		
TLY					*e*SS	SS	05 45 05.7	-6.3	
TLY					pmax	pmax			
	comp=Z,21nm,1.5s,mb5.0								
TLY					MLR	MLR			
	comp=Z,379nm,15.0s,MS4.7								
TLY	**Talaya**	**60.75**	**357**	*e*	P	**P**	**05 32 59.4**	**+1.1**	
	comp=Z,15nm,1.4s,mb4.9								
MOY	**Mondy**	**60.92**	**355**	*e*	P	**P**	**05 33 00.2**	**+0.8**	
CIT	**Chita**	**61.18**	**4**	*e*	P	**P**	**05 33 01.6**	**+0.4**	
CIT					pmax	pmax			
	comp=Z,54nm,1.9s,mb5.3								
IRK	**Irkutsk**	**61.28**	**357**	*e*	P	**P**	**05 33 00.2**	**-1.7**	
IRK				*e*			05 41 10.7		
IRK					pmax	pmax			
	comp=Z,50nm,1.7s,mb5.4								
KLR	**Kul'dur**	**61.85**	**18**	*e*	P	**P**	**05 33 00.0**	**-5.8**	
KLR					pmax	pmax			
	comp=Z,50nm,1.6s,mb5.4								
KK31	**Karatay Array**	**62.19**	**330**	*i*	P	**P**	**05 33 08.1**	**+0.1**	
KK31					pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.6								
KKAR	**Karatay Array**	**62.19**	**330**		P	**P**	**05 33 08.1**	**+0.1**	
KKAR					pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.7								
HABR	**Khabarovsk**	**62.24**	**20**	*e*	P	**P**	**05 33 05.2**	**-3.2**	
YSS	**Yuzh-Sakhalins**	**63.96**	**26**	*e*	P	**P**	**05 33 19.2**	**-0.6**	
YSS				*e*		pP	05 33 28.0	-2.3	
YSS					pmax	pmax			
	comp=Z,40nm,1.2s,mb5.3								
YSS					MLR	MLR			
	comp=Z,200nm,15.0s,MS4.4								
YSS					MLR	MLR			
	comp=N,200nm,16.0s,MS4.5								
YSS					MLR	MLR			
	comp=E,200nm,16.0s,MS4.5								
YSS	**Yuzh-Sakhalins**	**63.96**	**26**	*e*	P	**P**	**05 33 19.6**	**-0.3**	
	comp=E,20nm,0.8s,mb5.2								
KURK	**Kurchatov**	**64.86**	**340**		P	**P**	**05 33 25.4**	**-0.2**	
	comp=E,123nm,1.1s,mb5.8,SNR=12								
MAW	**Mawson**	**65.52**	**197**	*e*	P	**P**	**05 33 29.8**	**-0.1**	
	comp=E,11nm,1.2s,mb4.8								
MAW	**Mawson**	**65.52**	**197**		P	**P**	**05 33 30.0**	**+0.1**	
	comp=E,8.8nm,0.8s,mb4.8,baz=40,slow=7.7,SNR=24								
MAW	**Mawson**	**65.52**	**197**	*e*	P	**P**	**05 33 30.1**	**+0.2**	
ZAL	**Zalesovo**	**65.87**	**345**		P	**P**	**05 33 31.1**	**-1.1**	
	comp=E,2.6nm,0.7s,mb4.4,baz=325,slow=6.8,SNR=14								
KRAR	**Krasnoyarsk**	**66.17**	**351**	⇑	*e*P	**P**	**05 33 35.1**	**+1.0**	
KRAR					pmax	pmax			
	comp=Z,87nm,1.3s,mb5.6								
BOD	**Bodaibo**	**66.98**	**4**	*e*	P	**P**	**05 33 38.3**	**-1.0**	
BOD					pmax	pmax			
	comp=Z,16nm,1.5s,mb4.8								
CLNS	**Chul'man**	**67.29**	**10**	*e*	P	**P**	**05 33 40.4**	**-0.9**	
CLNS					pmax	pmax			
	comp=N,29nm,1.6s								
CLNS					pmax	pmax			
	comp=Z,37nm,1.6s,mb5.2								
CLNS					pmax	pmax			
	comp=E,11nm,1.1s								
VOSK	**Vostochnaya**	**69.26**	**337**		P	**P**	**05 33 53.2**	**-0.4**	
VOSK					pmax	pmax			
	comp=Z,24nm,1.4s,mb4.9								
BVA0	**Borovoye Array**	**69.72**	**337**		P	**P**	**05 33 56.1**	**-0.4**	
BRVK	**Borovoye**	**69.79**	**337**		P	**P**	**05 33 56.8**	**-0.1**	
	comp=Z,94nm,1.1s,mb5.6,SNR=8.7								
BRVK	**Borovoye**	**69.79**	**337**		P	**P**	**05 33 56.7**	**-0.2**	
	SNR=14								
BRVK	**Borovoye**	**69.79**	**337**		P	**P**	**05 33 56.5**	**-0.4**	
CHKZ	**Chkalovo**	**70.14**	**337**	*i*	P	**P**	**05 33 58.9**	**-0.1**	
CHKZ					pmax	pmax			
	comp=Z,25nm,1.2s,mb5.0								
CHKZ	**Chkalovo**	**70.14**	**337**	*e*	P	**P**	**05 33 59.0**	**0.0**	
	comp=Z,22nm,1.0s,mb5.0								
ZRNK	**Zerenda**	**70.21**	**336**	*i*	P	**P**	**05 33 58.2**	**-1.3**	
ZRNK					pmax	pmax			
	comp=Z,14nm,1.0s,mb4.8								
ZRNK	**Zerenda**	**70.21**	**336**	*e*	P	**P**	**05 33 59.3**	**-0.2**	
	comp=Z,21nm,1.0s,mb5.0								
AB31	**Akbulak array**	**71.74**	**329**	*i*	P	**P**	**05 34 08.0**	**-0.7**	
AB31					pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.6								
YAK	**Yakutsk**	**73.03**	**11**	*c*	*i*P	**P**	**05 34 14.7**	**-1.7**	
YAK					pmax	pmax			
	comp=Z,50nm,1.7s,mb5.2								
AKTO	**Aktyubinsk**	**73.45**	**329**	*i*	P	**P**	**05 34 18.1**	**-0.8**	
AKTO					pmax	pmax			
	comp=Z,30nm,1.6s,mb5.0								
VNDA	**Vanda**	**73.65**	**169**		P	**P**	**05 34 19.6**	**-0.5**	
	comp=Z,4.7nm,0.9s,mb4.4,baz=308,slow=5.8,SNR=21								
VNDA	**Vanda**	**73.65**	**169**	*e*	P	**P**	**05 34 19.2**	**-0.9**	
VNDA					pmax	pmax			
	comp=Z,7.0nm,1.1s								
VNDA	**Vanda**	**73.65**	**169**	*e*	P	**P**	**05 34 19.2**	**-0.9**	
	comp=Z,6.9nm,1.1s,mb4.5								
SYO	**Syowa Base**	**73.74**	**200**	⇑	*e*X		05 34 19.8		
SYO	**Syowa Base**	**73.74**	**200**	⇓	*e*PcP	PcP	05 34 37.3	+1.1	
MAK	**Makhachkala**	**75.50**	**319**		*e*P	**P**	**05 34 28.1**	**-2.7**	
MAK					*e*S	S	05 44 07.7	-1.1	
MAK					*e*		05 44 35.4		
MAK					pmax	pmax			
	comp=Z,20nm,1.3s,mb4.9								
PET	**Petropavlovsk**	**75.50**	**29**		*e*P	**P**	**05 34 29.1**	**-1.7**	
PET					*e*S	S	05 44 05.8	-3.1	
PET					pmax	pmax			
	comp=Z,100nm,16.7s								
PET					smax				
	comp=E,200nm,19.7s								
GNI	**Garni**	**76.12**	**315**	*de*	P	**P**	**05 34 35.4**	**+1.1**	
GNI					pmax	pmax			
	comp=Z,22nm,2.5s								
MA2	**Magadan**	**76.63**	**21**	*d*	*i*P	**P**	**05 34 36.3**	**-0.9**	
MA2					pmax	pmax			
	comp=Z,16nm,1.0s,mb4.9								
ARU	**Arti**	**76.97**	**334**	⇓	*i*P	**P**	**05 34 38.5**	**-0.7**	
ARU					*e*	pP	05 34 49.4	-0.5	
ARU					*e*		05 37 32.4		
ARU					*e*S	S	05 44 24.0	-1.0	
ARU					*e*SS	SS	05 49 24.4	+2.3	
ARU					pmax	pmax			
	comp=Z,14nm,1.4s,mb4.7								
ARU	**Arti**	**76.97**	**334**		*e*P	**P**	**05 34 39.2**	**0.0**	
	comp=Z,20nm,1.1s,mb5.0								
LSZ	**Lusaka**	**77.74**	**256**		LR	LR	06 06 18.6		
	comp=Z,349nm,18.3s,MS4.7,baz=131,slow=34								
ZEI	**Tsey**	**77.79**	**317**		*e*P	**P**	**05 34 44.8**	**+1.0**	
ZEI					*e**PP	pP	05 34 52.8	-1.7	
ZEI					pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.9								
KIV	**Kislovodsk**	**79.09**	**318**	⇓	*e*P	**P**	**05 34 49.8**	**-1.1**	
KIV					pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.6								
SEY	**Seymchan**	**79.59**	**19**	⇑	*e*P	**P**	**05 34 53.9**	**+0.2**	
QSPA	**South Pole Qui**	**80.79**	**180**		*e*P	**P**	**05 35 00.0**	**-0.1**	
	comp=Z,28nm,1.4s,mb5.0								
TIXI	**Tiksi**	**81.89**	**7**		*e*P	**P**	**05 35 04.4**	**-1.5**	
TIXI					*e*S	S	05 45 06.7	-10	
TIXI					*e*SS	SS	05 50 29.6	-6.2	
TIXI					pmax	pmax			
	comp=Z,14nm,1.1s,mb4.8								
BR131	**Keskin Array S**	**83.93**	**312**		*e*P	**P**	**05 35 17.6**	**+1.1**	
	comp=Z,9.0nm,1.2s,mb4.8								
BRTR	**Keskin Array B**	**83.93**	**312**		P	**P**	**05 35 17.4**	**+0.8**	
	comp=Z,5.3nm,1.1s,mb4.6,baz=130,slow=5.0,SNR=23								
BRTR					LR	LR	06 14 33.9		
	comp=Z,179nm,21.6s,MS4.4,baz=98,slow=37								
VRSR	**Storozhevoye**	**84.14**	**324**		*e*P	**P**	**05 35 18.1**	**+0.5**	
VRSR					pmax	pmax			
	comp=E,7.0nm,1.1s								
VRSR					pmax	pmax			
	comp=Z,9.0nm,1.1s,mb4.8								
VRSR					pmax	pmax			
	comp=N,9.0nm,1.3s								
MOS	**Moscow**	**86.70**	**328**		*e*P	**P**	**05 35 30.3**	**0.0**	
OBN	**Obninsk**	**87.03**	**327**	*de*	P	**P**	**05 35 32.6**	**+0.6**	
OBN				*i*			05 35 46.4		
OBN				*e*	S	S	05 46 11.5	+3.1	
OBN					pmax	pmax			
	comp=Z,64nm,1.6s,mb5.6								
SNAA	**Sanae**	**87.69**	**197**		LR	LR	06 13 04.6		
	comp=Z,71nm,18.2s,MS4.1,baz=96,slow=34								
SNAA	**Sanae**	**87.69**	**197**		*e*P	**P**	**05 35 35.6**	**+0.5**	
SNAA					*e*		05 35 37.5		
SNAA					*e*	pP	05 35 46.4	+0.4	
SNAA					*e*		05 35 51.1		
SNAA	**Sanae**	**87.69**	**197**	⇑	*e*P	**P**	**05 35 33.6**	**-1.5**	
SNAA	**Sanae**	**87.69**	**197**		*e*P	**P**	**05 35 35.3**	**+0.2**	
	comp=Z,20nm,1.4s,mb5.2								
KIS	**Kishinev**	**89.29**	**318**		*e*P	**P**	**05 35 42.0**	**-0.7**	
KIS					*e*		05 46 08.0		
KIS					*e*		05 46 32.0		
KIS					MLR	MLR			
	comp=Z,400nm,17.0s,MS4.9								
VNA1	**Neumayer--Stat**	**89.72**	**197**		*e*P	**P**	**05 35 46.4**	**+1.7**	
VNA1					*e*		05 35 47.8		
VNA1					*e*	pP	05 35 57.4	+1.8	
AKASG	**Malin Array Be**	**89.95**	**321**		P	**P**	**05 35 45.5**	**-0.3**	
	comp=Z,0.5nm,0.5s,mb4.1,baz=93,slow=5.1,SNR=6.5								
AKASG					PP	PP	05 39 18.9	+0.1	
	comp=Z,0.2nm,0.2s,baz=96,slow=5.7,SNR=9.3								
AKASG					LR	LR	06 25 51.3		
	comp=Z,73nm,18.3s,MS4.1,baz=85,slow=42								
AKASG	**Malin Array Be**	**89.95**	**321**		P	**P**	**05 35 45.5**	**-0.3**	
AKASG					PP	PP	05 39 18.9	+0.1	
AKASG					LR	LR	06 25 51.3		
FINES	**FINESS Array B**	**94.11**	**332**		LR	LR	06 27 59.1		
	comp=Z,160nm,18.9s,MS4.5,baz=155,slow=42								
ARCES	**ARCESS Array B**	**95.89**	**339**		LR	LR	06 25 30.1		
	comp=Z,391nm,19.3s,MS4.9,baz=111,slow=39								
TBI	**Tubuai**	**97.84**	**115**	*e*	LR	LR	06 08 11.4		
	comp=Z,339nm,36.5s								
PPT	**Papeete**	**99.04**	**109**	*e*	LR	LR	06 08 38.3		
	comp=Z,180nm,22.2s								
RKT	**Rikitea**	**110.66**	**119**	*e*	LR	LR	06 14 05.3		
	comp=Z,195nm,23.2s								
F03A	**Seaside**	**122.92**	**41**	⇓	P	PKPdf	05 41 43.9	+1.3	
	baz=123								
G03A	**Yamhill**	**123.34**	**41**	⇑	P	PKPdf	05 41 44.0	+0.6	
	baz=123								
E05A	**Randle**	**123.81**	**39**	⇓	P	PKPdf	05 41 46.0	+1.7	
	baz=124								
H04A	**Detroit Lake**	**124.31**	**41**	⇑	P	PKPdf	05 41 46.6	+1.4	
	baz=124								
EDM	**Edmonton**	**125.00**	**29**	*e*	PKPdf	PKPdf	05 41 46.9	+0.3	
H06A	**Lindquist Farm**	**125.49**	**41**	⇑	P	PKPdf	05 41 49.3	+1.8	
	baz=125								
O02C	**Red Bluff**	**125.57**	**47**	⇓	P	PKPdf	05 41 49.2	+1.5	
	baz=126								
WDC	**Whiskeytown Da**	**125.61**	**46**	⇓	P	PKPdf	05 41 50.3	+2.6	
	baz=126								
GASB	**Alder Springs**	**125.80**	**47**	⇑	P	PKPdf	05 41 51.9	+3.8	
	baz=126								
K05A	**Summer Lake**	**125.95**	**43**	⇑	P	PKPdf	05 41 52.1	+3.7	
	baz=126								
H07A	**Lands Inn, Kim**	**126.05**	**41**	⇑	P	PKPdf	05 41 51.7	+3.2	
	baz=126								
J06A	**Christmas Vall**	**126.23**	**42**	⇑	P	PKPdf	05 41 50.2	+1.3	
	baz=126								
M05C	**Lookout**	**126.31**	**45**	⇓	P	PKPdf	05 41 52.0	+3.0	
	baz=126								
K06A	**Valley Falls**	**126.35**	**43**	⇑	P	PKPdf	05 41 52.0	+2.8	
	baz=126								
H08A	**Prairie City**	**126.65**	**40**	⇑	P	PKPdf	05 41 51.5	+1.8	
	baz=126								
O04C	**Chester**	**126.74**	**46**	⇓	P	PKPdf	05 41 52.0	+2.1	
	baz=127								
I08A	**Drewsey**	**126.99**	**41**	⇑	P	PKPdf	05 41 53.4	+3.0	
	baz=127								
K07A	**Rock Creek Ran**	**127.07**	**43**	⇓	P	PKPdf	05 41 53.8	+3.3	
	baz=127								
L07A	**Adell**	**127.29**	**43**	⇓	P	PKPdf	05 41 52.9	+2.0	
	baz=127								
J08A	**Circle Bar Ran**	**127.29**	**42**	⇑	P	PKPdf	05 41 53.4	+2.4	
	baz=127								
BEKR	**Beckwourth**	**127.43**	**46**	⇑	P	PKPdf	05 41 53.7	+2.5	
	baz=127								
P05C	**Yuba Gap, Truc**	**127.45**	**47**	⇓	P	PKPdf	05 41 54.0	+2.7	
	baz=127								
N06A	**Buffalo Meadow**	**127.46**	**45**	⇑	P	PKPdf	05 41 53.8	+2.5	
	baz=127								
I09A	**Lost Marbles R**	**127.49**	**41**	⇓	P	PKPdf	05 41 53.7	+2.4	
	baz=127								
S04C	**Ingram Canyon,**	**127.55**	**49**	⇑	P	PKPdf	05 41 54.1	+2.6	
	baz=127								
LAVA	**Lava Cap Winer**	**127.56**	**48**	⇑	P	PKPdf	05 41 54.2	+2.7	
	baz=127								
K08A	**Mann Creek Ran**	**127.56**	**42**	⇓	P	PKPdf	05 41 54.1	+2.6	
	baz=127								
M07A	**Soldier Meadow**	**127.66**	**44**	⇓	P	PKPdf	05 41 54.0	+2.3	
	baz=128								
PACP	**Pacheco Peak**	**127.75**	**50**	⇓	P	PKPdf	05 41 55.0	+3.2	
	baz=128								
J09A	**Fry Pan Ranch,**	**127.77**	**41**	⇓	P	PKPdf	05 41 55.0	+3.1	
	baz=128								
L08A	**Fields**	**127.89**	**43**	⇓	P	PKPdf	05 41 55.6	+3.5	
	baz=128								
R05C	**Kirkwood Meado**	**128.06**	**48**	⇓	P	PKPdf	05 41 56.2	+3.8	
	baz=128								
WCN	**Washoe City**	**128.07**	**47**	⇓	P	PKPdf	05 41 55.4	+2.9	
	baz=128								
K09A	**Rome**	**128.08**	**42**	⇓	P	PKPdf	05 41 54.0	+1.5	
	baz=128								
V03C	**Hunter Liggett**	**128.10**	**51**	⇓	P	PKPdf	05 41 55.8	+3.3	
	baz=128								
O07A	**Toulon**	**128.36**	**45**	⇓	P	PKPdf	05 41 54.8	+1.8	
	baz=128								
S06C	**San Francisco**	**128.52**	**48**	⇑	P	PKPdf	05 41 55.6	+2.3	
	baz=128								
N08A	**Elk Springer Mi**	**128.63**	**44**	⇓	P	PKPdf	05 41 56.5	+3.0	
	baz=128								
T06C	**Millerton Lake**	**128.94**	**49**	⇑	P	PKPdf	05 41 57.4	+3.3	
	baz=129								
N09A	**Rock Creek Ran**	**129.02**	**44**	⇑	P	PKPdf	05 41 57.3	+3.0	
	baz=129								
R07C	**Lee Vining**	**129.04**	**48**	⇑	P	PKPdf	05 41 57.8	+3.5	
	baz=129								
PKM	**Peak Mountain**	**129.56**	**52**	⇓	P	PKPdf	05 41 58.9	+3.6	
	baz=130								
S09A	**Goldfield**	**130.51**	**48**	⇓	P	PKPdf	05 42 00.9	+3.9	
	baz=130								
O11A	**Cowboy Ranch,**	**130.61**	**44**	⇑	P	PKPdf	05 41 59.9	+2.6	
	baz=130								
N12A	**Clover Valley,**	**130.71**	**43**	⇓	P	PKPdf	05 42 00.7	+3.2	
	baz=131								
MPMC	**Manual Prospec**	**130.94**	**50**	⇑	P	PKPdf	05 42 01.4	+3.4	
	baz=131								
R10A	**Warm Springs**	**130.95**	**47**	⇓	P	PKPdf	05 42 01.3	+3.4	
	baz=131								
EDW2	**Edwards Air Fo**	**130.98**	**51**	⇓	P	PKPdf	05 42 01.2	+3.2	
	baz=131								
LRMC	**Laurel Mountai**	**131.00**	**51**	⇑	P	PKPdf	05 42 01.2	+3.2	
	baz=131								
O12A	**Currie**	**131.17**	**43**	⇑	P	PKPdf	05 42 01.4	+3.1	
	baz=131								
FURC	**Furnace Creek,**	**131.26**	**49**	⇑	P	PKPdf	05 42 02.2	+3.7	
	baz=131								
BELC	**Belle Mtn.**	**132.83**	**52**	⇑	P	PKPdf	05 42 05.2	+3.8	
	baz=133								
MONP	**Monument Peak**	**132.89**	**53**	⇑	P	PKPdf	05 42 05.7	+4.1	
	baz=133								
U12A	**Valley of Fire**	**132.99**	**48**	⇓	P	PKPdf	05 42 06.2	+4.4	
	baz=133								
V12A	**Nelson**	**133.05**	**49**	⇑	P	PKPdf	05 42 07.1	+5.3	
	baz=133								
PDAR	**Pinedale Array**	**133.23**	**38**		PKP	PKPdf	05 42 01.1	-1.1	
	comp=Z,0.2nm,0.7s,baz=145,slow=2.2,SNR=3.0								
X13A	**Yucca**	**134.27**	**50**	⇓	P	PKPdf	05 42 07.4	+3.2	
	baz=134								
X15A	**Humboldt**	**135.51**	**49**	⇓	P	PKPdf	05 42 10.9	+4.4	
	baz=135								
115A	**Sonoran Desert**	**136.24**	**52**	⇑	P	PKPdf	05 42 10.6	+2.8	
	baz=136								
ANMO	**Albuquerque**	**139.50**	**46**	⇑	*i*PKIKP	PKPdf

PACH			*i* S		**Sb**	**05 40 05.7**	**-0.8**
IHA	**Instituto Hidr**	**1.06**	**128**⇑	*i*P	**Pn**	**05 39 53.0**	**-0.6**
IHA				*i* S	**Sb**	**05 40 06.6**	**-0.8**
LCCH	**Las Cruces**	**1.42**	**141**⇓	*i*P	**Pn**	**05 39 57.7**	**-0.8**
LCCH				*i* S	**Sn**	**05 40 14.4**	**-1.9**
PTCH	**Petorca**	**1.45**	**86**⇓	*i*P	**Pn**	**05 39 59.0**	**0.0**
PTCH				*i* S	**Sn**	**05 40 16.9**	**-0.3**
PTCH				AML	AML	05 40 19.6	
	comp=E,8μm,0.5s						
PTCH	**Petorca**	**1.45**	**86**⇓	*i*P	**Pn**	**05 39 59.0**	**0.0**
PTCH				*i* S	**Sn**	**05 40 16.9**	**-0.3**
ROCH	**El Roble**	**1.50**	**114**⇓	*i*P	**Pn**	**05 39 59.6**	**0.0**
ROCH				*i* S	**Sn**	**05 40 18.3**	**0.0**
JACH	**Jahuel**	**1.75**	**101**⇓	*i*P	**Pn**	**05 40 03.1**	**0.0**
JACH				*i* S	**Sn**	**05 40 24.3**	**-0.3**
PEL	**Peldehue**	**1.81**	**115**⇓	*i*P	**Pn**	**05 40 04.6**	**+0.6**
PEL				*i* S	**Sn**	**05 40 26.3**	**+0.2**
PEL				AML	AML	05 40 27.8	
	comp=E,8μm,0.5s						
PEL	**Peldehue**	**1.81**	**115**⇓	*i*P	**Pn**	**05 40 04.6**	**+0.6**
PEL				*i* S	**Sn**	**05 40 26.3**	**+0.2**
CMCH	**Combarbala**	**1.84**	**50**⇑	*i*P	**Pn**	**05 40 03.3**	**-1.0**
CMCH				*i* S	**Sn**	**05 40 25.6**	**-1.2**
CMCH				AML	AML	05 40 30.8	
	comp=E,2μm,0.5s						
CMCH	**Combarbala**	**1.84**	**50**⇑	*i*P	**Pn**	**05 40 03.3**	**-1.0**
CMCH				*i* S	**Sn**	**05 40 25.6**	**-1.2**
LNV	**Longovilo**	**1.88**	**147**⇑	*i*P	**Pn**	**05 40 04.1**	**-0.8**
LNV				*i* S	**Sn**	**05 40 25.4**	**-2.4**
RCDM	**Rinconada Maip**	**1.90**	**126**⇑	*i*P	**Pn**	**05 40 05.4**	**+0.3**
RCDM				*i* S	**Sn**	**05 40 28.2**	**0.0**
RCDM				AML	AML	05 40 31.2	
	comp=N,1μm,0.4s						
RCDM	**Rinconada Maip**	**1.90**	**126**⇑	*i*P	**Pn**	**05 40 05.4**	**+0.3**
RCDM				*i* S	**Sn**	**05 40 28.2**	**0.0**
TACH	**Talagante**	**1.91**	**132**⇓	*i*P	**Pn**	**05 40 05.5**	**+0.2**
STL	**Santa Lucia**	**1.98**	**123**⇓	*i*P	**Pn**	**05 40 06.6**	**+0.3**
STL				*i* S	**Sn**	**05 40 30.4**	**0.0**
STL				AML	AML	05 40 31.4	
	comp=N,354nm,0.3s						
CLCH	**Cerro Calan**	**2.04**	**120**⇑	*i*P	**Pn**	**05 40 08.0**	**+1.0**
CLCH				*i* S	**Sn**	**05 40 32.3**	**+0.6**
CLCH				AML	AML	05 40 35.6	
	comp=E,2μm,0.3s						
CLCH				AML	AML	05 40 36.2	
	comp=E,2μm,0.4s						
ANTU	**Antumapu**	**2.06**	**126**	AML	AML	05 40 35.7	
	comp=N,2μm,0.7s						
LACH	**Colegio Las Am**	**2.07**	**122**⇓	*i*P	**Pn**	**05 40 08.1**	**+0.6**
LACH				*i* S	**Sn**	**05 40 32.7**	**+0.3**
LACH				AML	AML	05 40 34.8	
	comp=N,646nm,0.6s						
OVCH	**Ovalle**	**2.15**	**35**	*e*P	**Pn**	**05 40 08.1**	**-0.4**
OVCH				*i* S	**Sn**	**05 40 33.3**	**-1.1**
OVCH				AML	AML	05 40 35.2	
	comp=N,846nm,0.7s						
OVCH	**Ovalle**	**2.15**	**35**	*e*P	**Pn**	**05 40 08.1**	**-0.4**
OVCH				*i* S	**Sn**	**05 40 33.3**	**-1.1**
PCH	**Pirque**	**2.17**	**125**⇓	*i*P	**Pn**	**05 40 09.8**	**+1.0**
PCH				*i* S	**Sn**	**05 40 36.2**	**+1.2**
FCH	**Farellones**	**2.19**	**116**⇑	*i*P	**Pn**	**05 40 10.1**	**+0.9**
FCH				*i* S	**Sn**	**05 40 36.0**	**+0.6**
FCH				AML	AML	05 40 37.8	
	comp=E,2μm,0.4s						
CHCH	**Chadas Angostu**	**2.28**	**134**	*e*P	**Pn**	**05 40 10.5**	**+0.2**
CHCH				*i* S	**Sn**	**05 40 37.1**	**-0.5**
SJCH	**San Jose de Ma**	**2.30**	**124**⇑	*i*P	**Pn**	**05 40 11.3**	**+0.7**
SJCH				*i* S	**Sn**	**05 40 38.1**	**+0.1**
SJCH				AML	AML	05 40 39.0	
	comp=E,916nm,0.5s						
SJCH	**San Jose de Ma**	**2.30**	**124**⇑	*i*P	**Pn**	**05 40 11.3**	**+0.7**
SJCH				*i* S	**Sn**	**05 40 38.1**	**+0.1**
CACH	**El Canelo**	**2.44**	**136**⇑	*i*P	**Pn**	**05 40 13.5**	**+1.1**
CACH				*i* S	**Sn**	**05 40 42.6**	**+1.1**
SFDO	**San Fernando**	**2.61**	**149**⇓	*i*P	**Pn**	**05 40 15.0**	**+0.1**
TLL	**Tololo Astrono**	**2.70**	**36**	AML	AML	05 40 49.8	
	comp=E,500nm,0.4s						
LSCH	**La Serena**	**2.73**	**26**⇑	*i*P	**Pn**	**05 40 16.1**	**-0.5**
LSCH				*i* S	**Sn**	**05 40 47.4**	**-1.4**
LSCH				AML	AML	05 40 47.9	
	comp=E,22nm,0.3s						
LSCH	**La Serena**	**2.73**	**26**⇑	*i*P	**Pn**	**05 40 16.1**	**-0.5**
LSCH				*i* S	**Sn**	**05 40 47.4**	**-1.4**
NICH	**Los Niches**	**2.87**	**156**	*e*P	**Pn**	**05 40 18.6**	**+0.1**
NICH				*i* S	**Sn**	**05 40 51.7**	**-0.5**
CTCH	**Constitucion**	**2.95**	**176**	AML	AML	05 40 53.7	
	comp=E,5μm,0.6s						
TALC	**Talca**	**3.13**	**165**⇓	*i*P	**Pn**	**05 40 21.5**	**-0.5**
TALC				*i* S	**Sn**	**05 40 55.6**	**-2.9**
TALC				AML	AML	05 40 58.7	
	comp=E,1μm,0.2s						
TALC	**Talca**	**3.13**	**165**⇓	*i*P	**Pn**	**05 40 21.5**	**-0.5**
TALC				S	**Sn**	**05 40 55.6**	**-2.9**
LNCH	**Linares**	**3.57**	**166**	*e*P	**Pn**	**05 40 28.3**	**+0.2**
LNCH				*i* S	**Sn**	**05 41 08.2**	**-1.2**
LNCH				AML	AML	05 41 10.4	
	comp=N,705nm,0.4s						
LNCH	**Linares**	**3.57**	**166**	*e*P	**Pn**	**05 40 28.3**	**+0.2**
LNCH				*i* S	**Sn**	**05 41 08.2**	**-1.2**
CFAA	**Coronel Fontan**	**3.82**	**80**	Pn	**Pn**	**05 40 34.1**	**+2.6**
	comp=N,2.4nm,0.3s,baz=248,slow=13,SNR=477						
CFAA				Sn	**Sn**	**05 41 18.5**	**+2.9**
	comp=N,2.4nm,0.3s,baz=138,slow=21,SNR=33						
VACH	**Vallenar**	**4.12**	**24**	*i*P	**Pn**	**05 40 37.1**	**+1.5**
VACH				*i* S	**Sn**	**05 41 22.8**	**-0.3**
PLCA	**Paso Flores**	**8.51**	**169**	Pn	**Pn**	**05 41 36.6**	**+0.7**
	comp=N,5.2nm,0.3s,baz=333,slow=11,SNR=58						
PLCA				Sn	**Sn**	**05 43 19.8**	**+8.8**
	comp=N,0.3nm,0.3s,baz=244,slow=21,SNR=5.1						
LVC	**Limon Verde**	**10.27**	**20**	Pn	**Pn**	**05 41 56.8**	**-3.2**
	comp=N,0.5nm,0.3s,baz=309,slow=0.0,SNR=5.4						
LPAZ	**La Paz**	**16.53**	**15**	Pn	**Pn**	**05 43 24.9**	**+0.5**
	comp=N,0.4nm,0.3s,baz=186,slow=9.5,SNR=19						
LPAZ	**La Paz**	**16.53**	**15**	*e*P	**Pn**	**05 43 26.2**	**+1.8**
	comp=N,4.8nm,0.6s						
SIV	**San Ignacio**	**19.40**	**35**	P	**Pn**	**05 43 59.1**	**-0.6**
	comp=N,0.3nm,0.3s,baz=219,slow=12,SNR=7.6						
BDFB	**Brasilia**	**27.89**	**59**	P	**P**	**05 45 24.5**	**+2.3**
	comp=N,5.2nm,0.9s,mb4.1,baz=228,slow=7.4,SNR=5.3						
BDFB				LR	LR	05 58 48.0	
	comp=N,65nm,19.5s,MS3.2,baz=199,slow=41						
TORD	**Torodi Ar. Bea**	**84.14**	**71**	P	**P**	**05 52 03.6**	**+0.5**
	comp=N,0.4nm,0.8s,mb3.6,baz=280,slow=7.0,SNR=5.5						

*ISCJB **28** 06:01:24.3±0.5, 41 97S×008×849E±01, h10km, mb4.5/20, MS4.1/14, Error ellipse: s-maj=16.3km s-min=10.8km az=54.7*
*IDC **28** 06:01:24.2±0.8, 41 88S×84 83E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.2/15, mbtmp4.2/10, MS4.1/13, Ms1 4.0/13, ms1mx4.0/16, Error ellipse: s-maj=27.4km s-min=19.5km az=116.0*
*BJI **28** 06:01:25.6, 41 90S×84 80E, h10km, mB5.1, mb4.9, Ms4.7, Msz4.3*
*NEIC **28** 06:01:25.7±0.7, 41 88S×84 82E, h10km, mb4.5/8, Error ellipse: s-maj=19.3km s-min=9.6km az=125.0*
*HRVD **28** 06:01:25.7±0.4, 41 80S×84 95E, h15km±1km, MW4.9/56, Centroid moment Tensor Solution. LP body waves: s25,c26;Mantle waves: s56,c71; Half duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.37±.10; Mθθ 0.42±.13; Mφφ -2.05±.11; Mrθ 0.72±.34; Mθφ 0.01±.10; Mφr 0.43±.30; Best double couple: M0 2.38100×10^16 NP1:φs 135.00000°, δ 70.00000°, λ 0.00000°. NP2: φs 226.00000°, δ 90.00000°, λ -160.00000°. Principal axes: T 2.6000, Plg 14.0000°, Azm 359.0000°; N -0.4360, Plg 70.0000°, Azm 227.0000°; P -2.1620, Plg 14.0000°, Azm 92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 06:01:25.6±0.5, 4196S±008×848E±01, h10km, (h14km±1.2km: pP-P), n36, σ0§94/27, mb4.5/20, MS4.1/14, 1C, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**27.17**	**81**	LR	LR	06 15 43.0	
	comp=Z,197nm,20.9s,MS3.7,baz=335,slow=32						
MAW	**Mawson**	**28.31**	**198**	P	**P**	**06 07 20.7**	**+1.4**
	2.6nm,1.0s,mb3.8,baz=358,slow=12,SNR=4.0						
MAW				LR	LR	06 16 12.9	
	comp=Z,154nm,18.7s,MS3.6,baz=55,slow=31						
MAW	**Mawson**	**28.31**	**198**	*e*P	**P**	**06 07 21.3**	**+2.0**
	4.6nm,1.0s,mb4.1						
SYO	**Syowa Base**	**35.83**	**206**⇑	*e*P	**P**	**06 08 23.6**	**-1.6**
MBWA	**Marble Bar**	**35.94**	**66**	*e*P	**P**	**06 08 26.2**	**0.0**
	4.6nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**44.49**	**82**	P	**P**	**06 09 37.1**	**+0.1**
	4.8nm,0.8s,mb4.3,baz=229,slow=7.9,SNR=26						
ASAR				PcP	PcP	06 11 19.4	-1.0
	1.7nm,0.7s,baz=227,slow=2.6,SNR=11						
ASAR				LR	LR	06 25 57.8	
	comp=Z,342nm,20.6s,MS4.3,baz=236,slow=33						
AS31	**Alice Springs**	**44.49**	**82**	*e*P	**P**	**06 09 36.8**	**-0.2**
STKA	**Stephens Creek**	**45.78**	**97**	P	**P**	**06 09 47.5**	**+0.1**
	3.6nm,0.7s,mb4.4,baz=225,slow=6.0,SNR=7.5						
STKA				PcP	PcP	06 11 25.5	+0.6
	3.9nm,0.9s,baz=282,slow=1.6,SNR=4.1						
STKA				LR	LR	06 25 13.3	
	comp=Z,217nm,21.6s,MS4.1,baz=207,slow=31						
STKA	**Stephens Creek**	**45.78**	**97**	*e*P	**P**	**06 09 47.3**	**-0.1**
PSI	**Prapat**	**46.36**	**20**	P	**P**	**06 09 51.6**	**-0.3**
	1.6nm,0.3s,mb4.4,baz=173,slow=15,SNR=4.0						
VNDA	**Vanda**	**46.65**	**163**	P	**P**	**06 09 53.9**	**-0.3**
	1.2nm,0.6s,mb4.0,baz=274,slow=5.4,SNR=20						
VNDA				LR	LR	06 27 25.3	
	comp=Z,169nm,21.0s,MS4.0,baz=274,slow=33						
VNDA	**Vanda**	**46.65**	**163**	*e*P	**P**	**06 09 53.6**	**-0.6**
	1.2nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**47.08**	**78**	P	**P**	**06 09 57.3**	**-0.3**
	8.9nm,1.0s,mb4.7,baz=232,slow=7.5,SNR=25						
WRA				LR	LR	06 26 12.6	
	comp=Z,119nm,18.9s,MS3.9,baz=300,slow=32						
WB2	**Warramunga Arr**	**47.09**	**78**	*e*P	**P**	**06 09 56.9**	**-0.7**
WRAB	**Tennant Creek**	**47.09**	**78**	*e*P	**P**	**06 09 57.6**	**0.0**
	14nm,1.0s,mb4.8						
SBA	**Scott Base**	**47.70**	**164**	*e*P	**P**	**06 10 03.0**	**+0.6**
	3.2nm,0.9s,mb4.3						
QSPA	**South Pole Qui**	**48.20**	**180**	*e*P	**P**	**06 10 06.3**	**+0.1**
	15nm,1.2s,mb4.9						
BOSA	**Boshof**	**49.46**	**266**	LR	LR	06 27 23.5	
	comp=Z,266nm,18.3s,MS4.3,baz=142,slow=32						
SNAA	**Sanae**	**50.08**	**204**	P	**P**	**06 10 20.7**	**+0.1**
	0.8nm,0.9s,mb3.8,baz=150,slow=10,SNR=9.7						
SNAA	**Sanae**	**50.08**	**204**	*e*P	**P**	**06 10 19.9**	**-0.8**
	12nm,1.6s,mb4.7						
MDRS	**Chennai**	**54.91**	**355**	*ex*	x	06 10 44.9	
CTAO	**Charters Tower**	**55.79**	**87**	*e*P	**P**	**06 11 03.1**	**+0.3**
	7.3nm,0.8s,mb4.8						
CD2	**Chengdu**	**74.59**	**17**	*e*P	**P**	**06 13 06.0**	**+1.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
USHA	**Ushuaia**	**80.91**	**195**	LR	LR	06 46 19.7	
	comp=Z,261nm,18.8s,MS4.6,baz=90,slow=33						
GTA	**Gaotai**	**82.13**	**12**	*e*P	**P**	**06 13 45.5**	**-1.0**
GTA				AP	pP	06 13 49.8	0.0
GTA				XP	sP	06 13 52.5	+1.5
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
HHC	**Hu-ho-hao-te**	**85.92**	**20**	*e*P	**P**	**06 14 08.0**	**+2.2**
HHC				AP	pP	06 14 13.0	+3.9
HHC				XP	sP	06 14 15.0	+4.7
HHC				PP	PP	06 17 30.0	+4.5
HHC				SKS		06 24 30.5	
HHC				S	S	06 24 41.0	+1.6
HHC				XS	sS	06 24 48.0	+3.1
HHC				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,92nm,5.8s						
HHC				LR	LR		
	comp=N,185nm,19.6s,MS4.5						
HHC				LR	LR		
	comp=E,72nm,18.0s,MS4.5						
HHC				LR	LR		
	comp=Z,130nm,23.5s						
MKAR	**Makanchi Array**	**88.39**	**358**	P	**P**	**06 14 16.2**	**-1.6**
	comp=Z,1.2nm,0.8s,mb4.2,baz=142,slow=4.6,SNR=7.2						
SONM	**Songino Array**	**91.43**	**14**	P	**P**	**06 14 30.7**	**-1.3**
	comp=Z,0.6nm,0.7s,mb4.1,baz=198,slow=8.8,SNR=2.9						
SONM				LR	LR	06 54 03.8	
	comp=Z,56nm,18.5s,MS4.0,baz=193,slow=35						
TORD	**Torodi Ar. Bea**	**93.61**	**284**	P	**P**	**06 14 46.7**	**+4.6**
	comp=Z,0.7nm,0.8s,mb4.2,baz=113,slow=4.2,SNR=3.6						
TORD				LR	LR	06 52 15.3	
	comp=Z,76nm,18.8s,MS4.2,baz=105,slow=33						
BRTR	**Keskin Array B**	**93.61**	**323**	P	**P**	**06 14 42.6**	**+0.6**
	comp=Z,0.6nm,0.7s,mb4.1,baz=156,slow=3.9,SNR=2.8						
DBIC	**Dimbokro**	**94.14**	**275**	LR	LR	06 51 15.6	
	comp=Z,82nm,20.5s,MS4.2,baz=98,slow=32						
PLCA	**Paso Flores**	**94.71**	**199**	LR	LR	06 57 35.4	
	comp=Z,113nm,18.3s,MS4.4,baz=174,slow=36						
MDJ	**Mudanjiang**	**95.07**	**30**	P	**P**	**06 14 50.0**	**+1.3**
MDJ				AP	pP	06 14 53.5	+1.4
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,77nm,6.5s						
ZAL	**Zalesovo**	**95.52**	**0**	LR	LR	06 54 07.0	
	comp=Z,80nm,21.7s,MS4.2,baz=265,slow=33						
INK	**Inuvik**	**146.72**	**25**	PKPbc	PKPbc	06 21 06.2	-1.4
	comp=Z,4.4nm,0.8s,baz=191,slow=0.8,SNR=9.9						
PDAR	**Pinedale Array**	**169.36**	**81**	PKPab	PKPab	06 22 45.4	-0.3
	comp=Z,0.7nm,0.8s,baz=222,slow=0.7,SNR=5.2						

*NEIC **28** 06:09:34.2, 1975N×6869W, h25km±23km, MD3.5(RSPR), After RSPR.*

RSPR 28 06:09:34.2, 1975N×6869W, h25km±23km, MD3.5/6, MD3.5/6, 8C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.96**	**130**⇑	*e*P	Pn	06 10 04.0	-1.9
AGPR				*e*S	Sn	06 10 27.1	-2.6
LSP	**Las Mesas**	**2.18**	**136**⇑	*e*P	Pn	06 10 07.4	-1.4
LSP				*e*S	Sn	06 10 32.1	-3.0
LRS	**Lares**	**2.27**	**129**⇑	*e*P	Pn	06 10 08.4	-1.6
LRS				*e*S	Sn	06 10 35.2	-2.0
AOPR	**Arecibo Observ**	**2.30**	**127**⇑	*e*P	Pn	06 10 08.6	-2.0
AOPR				*e*S	Sn	06 10 36.1	-2.0
CELP	**Cerrillos**	**2.60**	**129**⇑	*e*P	Pn	06 10 13.0	-1.6
CELP				*e*S	Sn	06 10 42.8	-2.6
CBYP	**Canovanas**	**3.06**	**118**⇑	*e*P	Pn	06 10 19.3	-1.6
CBYP				*e*S	Sn	06 10 54.5	-2.2
HUMP	**Col San Antoni**	**3.13**	**120**⇑	*e*P	Pn	06 10 20.1	-1.7
HUMP				*e*S	Sn	06 10 56.8	-1.6
MTP	**Monte Pirata**	**3.39**	**119**⇑	*e*P	Pn	06 10 24.1	-1.5
MTP				*e*S	Sn	06 11 03.0	-1.9

*ISCJB **28** 06:35:58.7±0.6, 21 62S×005×683W±0.1, h122km±8km, mb4.3/4, Error ellipse: s-maj=19.8km s-min=7.8km az=18.7*
*IDC **28** 06:35:59.5±0.7, 21 60S×68 31W, h111km±10km, mb4.3/3, mb1 4.0/7, mb1mx3.7/18, mbtmp4.4/7, Error ellipse: s-maj=26.3km s-min=11.4km az=106.0*
*NEIC **28** 06:36:00.1±0.6, 21 63S×68 28W, h117km±6km, mb4.2/5, Error ellipse: s-maj=12.0km s-min=6.8km az=110.0*

ISC 28 06:36:00.1±0.6, 2163S±005×683W±01, h111km±8km, n21, σ0§86/25, mb4.3/4, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.15**	**212**	P	**Pn**	**06 36 23.4**	**+0.5**
	baz=135,slow=20						
LVC				S	**Sn**	**06 36 40.1**	**-0.1**
	425nm,0.3s,baz=135,slow=20,SNR=15						
LPAZ	**La Paz**	**5.32**	**1**	P	**Pn**	**06 37 18.6**	**+1.4**
	4.4nm,0.3s,baz=185,slow=8.2,SNR=176						
LPAZ				S	**Sn**	**06 38 16.3**	**-0.9**
	1.2nm,0.3s,baz=193,slow=12,SNR=5.2						
LPAZ	**La Paz**	**5.32**	**1**	*e*Pn	**Pn**	**06 37 18.3**	**+1.1**
LPAZ				S	**Sn**	**06 38 16.3**	**-0.9**
ARE	**Arequipa**	**5.99**	**329**	P	**Pn**	**06 37 21.0**	**-5.2**
ARE				*e*S	**Sn**	**06 38 27.0**	**-6.4**
SIV	**San Ignacio**	**8.81**	**52**	P	**Pn**	**06 38 04.0**	**-0.5**
	4.4nm,0.3s,baz=244,slow=13,SNR=132						
SIV				S	**Sn**	**06 39 39.2**	**-2.8**
	0.4nm,0.3s,baz=129,slow=22,SNR=12						
CFAA	**Coronel Fontan**	**9.93**	**180**	P	**Pn**	**06 38 16.3**	**-3.4**
	0.5nm,0.3s,baz=358,slow=13,SNR=14						
CFAA				S	**Sn**	**06 40 01.6**	**-7.6**
	0.2nm,0.3s,baz=238,slow=20,SNR=6.4						
CPUP	**Villa Florida**	**11.02**	**117**	P	**Pn**	**06 38 35.5**	**+1.1**
	0.8nm,0.3s,baz=274,slow=11,SNR=7.4						
CPUP	**Villa Florida**	**11.02**	**117**	*e*Pn	**Pn**	**06 38 35.2**	**+0.8**
SAML	**Samuel**	**13.52**	**22**	*e*Pn	**Pn**	**06 39 07.9**	**+0.6**
	1.8nm,0.7s						
TRQA	**Tornquist**	**17.24**	**163**	*e*P	**Pn**	**06 39 53.2**	**-0.7**
	5.0nm,0.7s						
PLCA	**Paso Flores**	**19.14**	**185**	P	**P**	**06 40 14.1**	**-0.4**
	0.5nm,0.3s,baz=3.1,slow=11,SNR=9.8						
BDFB	**Brasilia**	**20.07**	**76**	P	**P**	**06 40 25.1**	**+0.6**
	13nm,0.4s,baz=250,slow=8.3,SNR=42						
BDFB	**Brasilia**	**20.07**	**76**	*e*P	**P**	**06 40 24.8**	**+0.2**
	24nm,0.3s						
BAO	**Brasilia Array**	**20.09**	**76**	P	**P**	**06 40 26.0**	**+1.2**
SNAA	**Sanae**	**61.95**	**161**	*e*P	**P**	**06 46 07.6**	**-0.5**
	2.2nm,0.6s,mb4.4						
DBIC	**Dimbokro**	**68.18**	**73**	P	**P**	**06 46 48.6**	**+0.2**
	3.1nm,0.5s,mb4.4,baz=205,slow=6.4,SNR=12						
QSPA	**South Pole Qui**	**68.56**	**180**	*e*P	**P**	**06 46 51.1**	**+0.3**
	4.3nm,1.0s,mb4.2						
TOA0	**Torodi Ar. Sit**	**76.82**	**70**	*e*P	**P**	**06 47 39.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**76.82**	**70**	P	**P**	**06 47 39.4**	**-0.3**
	1.9nm,0.3s,mb4.3,baz=255,slow=5.6,SNR=47						
ASAR	**Alice Springs**	**130.08**	**207**	PKP	PKPdf	06 54 56.4	-0.5
	0.4nm,0.6s,baz=119,slow=2.0,SNR=4.1						
MKAR	**Makanchi Array**	**145.38**	**36**	PKPbc	PKPbc	06 55 24.6	-0.3
	1.4nm,0.6s,baz=320,slow=4.5,SNR=18						

*ISCJB **28** 06:46:33.1±0.6, 3532N±003×5337E±005, h10km, Error ellipse: s-maj=5.5km s-min=4.8km az=147.6*
*CSEM **28** 06:46:33.1±0.1, 3534N×5334E, h18km, ML3.7, Error ellipse: s-maj=2.1km s-min=1.9km az=153.0*
*TEH **28** 06:46:34.2, 3534N×5330E, h10km, Mn3.7*
*THR **28** 06:46:36.2±0.4, 3534N×5311E, h14km±3km, ML3.7*

ISC 28 06:46:33.5±0.8, 3533N±004×5334E±005, h1§km±7km, n23, σ1§09/28, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAS	**Lasjerd**	**0.32**	**280**	*e*Pg	**Pg**	**06 46 39.3**	**-0.3**
ILAS				*e*Sg	**Sg**	**06 46 44.9**	**+1.2**
ISHM	**Shahmirzad**	**0.48**	**355**	*e*Pg	**Pg**	**06 46 42.9**	**+0.2**
IANJ	**Anjiloo**	**0.49**	**74**	*e*Pg	**Pg**	**06 46 42.7**	**-0.2**
IFIR	**Firoozkooh**	**0.57**	**303**	*e*Pg	**Pg**	**06 46 43.6**	**-0.8**
IKIA	**Kiasar**	**0.92**	**18**	*e*Pg	**Pg**	**06 46 50.7**	**-0.4**
IDMV	**Damavand**	**1.10**	**283**	*e*Pg	**Pg**	**06 46 53.4**	**-1.1**
DAMV	**Damavand**	**1.16**	**285**	*e*PG	**Pn**	**06 46 54.8**	**-2.0**
DAMV				AML	AML	06 47 22.3	
	comp=E,1μm,0.1s						
ISFB	**Sefidab**	**1.33**	**223**	*e*Pg	**Pn**	**06 46 57.5**	**-1.7**
IVRN	**Varamin**	**1.36**	**256**	*e*Pg	**Pn**	**06 46 57.7**	**-1.9**
IAFJ	**Afjeh**	**1.43**	**292**	*e*Pn	**Pn**	**06 46 59.5**	**-1.0**
CHTH	**Charan**	**1.89**	**288**	*e*PG	**Pn**	**06 47 07.8**	**+0.9**
THKV	**Tehran--Karaj**	**2.09**	**287**	*e*PG	**Pn**	**06 47 10.8**	**+1.3**
THKV				AML	AML	06 47 48.1	
	comp=E,1μm,0.5s						
IMHD	**Mahdasht**	**2.21**	**280**	*e*Pn	**Pn**	**06 47 11.4**	**+0.2**
IKLH	**Kalahroud**	**2.48**	**217**	*e*Pn	**Pn**	**06 47 15.0**	**+0.1**
NASN	**Na'in**	**2.56**	**190**	*e*PN	**Pn**	**06 47 19.4**	**+3.3**
NASN				*e*SG	**Sg**	**06 47 56.3**	**+0.4**
NASN				AML	AML	06 47 58.0	
	comp=N,235nm,0.2s						
NASN				AML	AML	06 48 04.2	
	comp=E,289nm,0.6s						
IZEF	**Zefreh**	**2.57**	**199**	*e*Pn	**Pn**	**06 47 16.7**	**+0.5**
IZEF				*e*Sn	**Sn**	**06 47 46.5**	**-1.5**
ASAO	**Ashtian**	**2.83**	**255**	*e*PN	**Pn**	**06 47 20.8**	**+1.0**
ASAO				*e*SG	**Sb**	**06 47 59.5**	**-0.5**
ASAO				AML	AML	06 48 05.1	
	comp=E,532nm,0.6s						
ASAO	**Ashtian**	**2.83**	**255**	*e*Pn	**Pn**	**06 47 20.8**	**+1.0**
	SNR=52						
ASAO				*e*Sg	**Sb**	**06 47 59.5**	**-0.5**
	SNR=90						
IPIR	**Pirpir**	**3.33**	**218**	*e*Pn	**Pn**	**06 47 28.7**	**+2.0**
IMEH	**Mehriz**	**4.07**	**164**	*e*Pn	**Pn**	**06 47 36.8**	**0.0**
IBAF	**Bafgh**	**4.17**	**153**	*e*Pn	**Pn**	**06 47 38.2**	**0.0**
SNGE	**Sanandaj**	**4.91**	**269**	*e*PN	**Pn**	**06 47 49.2**	**+0.8**
GRMI	**Germi**	**5.57**	**310**	*e*Pn	**Pn**	**06 47 58.9**	**+1.5**

*CSEM **28** 06:50:11.2, 3579N×6096E, h2km, ML3.8, After TEH*

TEH 28 06:51:09.1, 3579N×6096E, h2km, Mn3.8, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res

0.0nm,0.3s,baz=356,slow=20,SNR=12
BDFB Brasilia 18.58 75 P P 07 33 00.4 +1.3
1.2nm,0.3s,baz=271,slow=11,SNR=13
DBIC Dimbokro 66.70 72 P P 07 39 25.8 +0.4
1.5nm,0.4s,baz=323,slow=5.9,SNR=6.2
TORD Torodi Ar. Bea 75.35 69 P P 07 40 17.6 +0.4
4.6nm,0.5s,baz=257,slow=5.5,SNR=88
TORD pP pP 07 41 13.6 +2.5
1.2nm,0.7s,baz=249,slow=5.4,SNR=4.0
BOSA Boshof 81.65 117 P P 07 40 52.0 +0.3
1.6nm,0.9s,baz=264,slow=4.2,SNR=4.0
MKAR Makanchi Array 144.28 37 PKP PKPdf 07 48 07.8 +0.2
0.7nm,0.6s,baz=316,slow=3.3,SNR=5.7

IDC 28 07:33:47.3±2.9, 1257S×16762E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/12, mbtmp4.0/3, Error ellipse: s-maj=120.3km s-min=47.3km az=137.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.68**	**227**	P	P	07 40 04.3	+0.7
	2.0nm,0.6s,baz=47,slow=11,SNR=7.1						
WRA	**Warramunga Arr**	**32.74**	**253**	P	P	07 40 21.8	+0.2
	0.6nm,0.5s,baz=86,slow=9.0,SNR=3.3						
ASAR	**Alice Springs**	**33.81**	**246**	P	P	07 40 31.2	+0.2
	1.1nm,0.5s,baz=76,slow=8.9,SNR=33						
ARCES	**ARCESS Array B**	**118.26**	**346**	PKP	PKPdf	07 52 35.8	-0.7
	1.7nm,0.9s,baz=72,slow=4.0,SNR=4.8						

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*IDC **28** 07:45:00.3±0.6, 3605N×14122E, h0km, mb4.3/16, mb1 4.4/19, mb1mx4.3/25, mbtmp4.3/19, ML4.4/3, MS3.7/6, Ms1 3.7/6, ms1mx3.3/24, Error ellipse: s-maj=19.8km s-min=14.2km az=90.0*

*NIED **28** 07:45:00, 36.10N×141.20E, h29km, Mw4.3 Best double couple: M0 2.96000×10^15 NP1:φs 32.00000°, δ86.00000°, λ-96.00000°. NP2:φs 272.00000°, δ7.00000°, λ-31.00000°.*

*BJI **28** 07:45:02.9, 36.18N×141.13E, h25km, mB4.6, mb4.6, Ms4.0, Msz3.8*

*ISCJB **28** 07:45:03.7±0.3, 3611N±003×14125E±003, h32km, mb4.5/53, MS3.8/15, Error ellipse: s-maj=4.1km s-min=3.6km az=12.8*

*JMA **28** 07:45:04.6±0.1, 3608N×141.18E, h44km±2km, M4.4 Broadband fault plane solution: P waves. NP1: φs 239.00000°, δ36.00000°, λ-42.00000°. NP2:φs 4.00000°, δ67.00000°, λ-118.00000°. Principal axes: T Plg17.0000°, Azm115.0000°; N Plg26.0000°, Azm16.0000°; P Plg58.0000°, Azm235.0000°;*

JMA Felt II J1.

*MOS **28** 07:45:04.1±1.3, 3621N×14124E, h33km, mb4.7/33 Error ellipse: s-maj=11.4km s-min=6.8km az=118.5*

*NEIC **28** 07:45:05.6±0.3, 3611N×14121E, mb4.5/12, MW4.3(NIED), Error ellipse: s-maj=8.9km s-min=7.1km az=164.0*

NEIC Recorded [2 JMA] in Ibaraki and Tochigi; [1 JMA] in Chiba and Fukushima Prefectures.

*SZGRF **28** 07:45:18.4, 3773N×14253E, h12km, mb4.8, Off east coast of Honshu, Japan*

ISC 28 07:45:05.7±0.3, 3612N±003×14124E±004, h34km, h34km±7km: pP-P, n126, σ1°04/138, mb4.5/53, MS3.8/15, 16C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.52**	**217**	⇑P	**Pb**	**07 45 14.9**	**-1.7**
CHOJ				S	**Sb**	**07 45 22.6**	**-1.5**
JHO	**Hitachi**	**0.73**	**312**	⇑P	**Pn**	**07 45 18.4**	**-1.1**
JYT	**Yasato**	**0.85**	**277**	⇑P	**Pn**	**07 45 19.9**	**-1.3**
JYT				S	**Sn**	**07 45 29.1**	**-3.4**
ONAJ	**Iwakimizuishiy**	**1.04**	**340**	⇑P	**Pn**	**07 45 22.6**	**-1.2**
ONAJ				*e*S	**Sn**	**07 45 35.8**	**-1.4**
JFK	**Kawauchi**	**1.28**	**347**	⇑P	**Pn**	**07 45 25.8**	**-1.3**
JFK				*e*S	**Sn**	**07 45 41.3**	**-1.7**
BSO3	**Boso 3**	**1.44**	**205**	P	**Pn**	**07 45 29.2**	**-0.2**
JAG	**Ashikaga**	**1.47**	**282**	⇑P	**Pn**	**07 45 28.9**	**-0.9**
JAG				S	**Sn**	**07 45 46.4**	**-1.5**
BSO1	**Boso 1**	**1.48**	**188**	P	**Pn**	**07 45 29.0**	**-0.9**
JFT	**Otama**	**1.57**	**333**	⇑P	**Pn**	**07 45 31.5**	**+0.4**
JFT				*e*S	**Sn**	**07 45 51.0**	**+0.7**
MJAR	**Matsushiro Arr**	**2.48**	**281**	Pn	**Pn**	**07 45 44.3**	**+0.6**
	28nm,0.3s,baz=92,slow=8.9,SNR=140						
MJAR				Sn	**Sn**	**07 46 14.0**	**+1.2**
	32nm,0.3s,baz=93,slow=17,SNR=5.7						
MJAR	**Matsushiro Arr**	**2.48**	**281**	P	**Pn**	**07 45 44.3**	**+0.6**
MJAR						07 46 14.0	
MJAR				pmax	pmax		
	comp=Z,28nm,0.3s						
MJAR				smax			
	comp=N,32nm,0.3s						
MAJO	**Matsushiro**	**2.48**	**281**	*e*P	**Pn**	**07 45 44.3**	**+0.6**
MAT	**Matsushiro**	**2.48**	**281**	P	**Pn**	**07 45 43.7**	**0.0**
MAT				*e*S	**Sn**	**07 46 12.4**	**-0.4**
JHJ	**Hachijo jima 2**	**3.23**	**202**	Pn	**Pn**	**07 45 53.1**	**-0.8**
	comp=N,48nm,0.3s,baz=64,slow=19,SNR=20						
JHJ				Sn	**Sn**	**07 46 30.9**	**-0.3**
	comp=N,124nm,0.3s,baz=71,slow=22,SNR=11						
ASAJ	**Asahikawa**	**8.05**	**7**	Pn	**Pn**	**07 46 58.8**	**-1.4**
	comp=N,5.8nm,0.3s,baz=211,slow=12,SNR=14						
ASAJ				Sn	**Sn**	**07 48 27.2**	**-2.8**
	comp=N,1.5nm,0.3s,baz=239,slow=32,SNR=2.4						
ASAJ				LR	LR	07 50 50.2	
	comp=N,212nm,19.0s,baz=334,slow=43						
ASAJ	**Asahikawa**	**8.05**	**7**	P	**Pn**	**07 46 58.8**	**-1.4**
ASAJ						07 48 27.3	
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**8.66**	**23**	*e*S	**Sn**	**07 48 38.0**	**-6.9**
YUK				smax			
	comp=N,350nm,0.5s						
YUK				smax			
	comp=E,190nm,0.5s						
CBIJ	**Chichi jima**	**9.03**	**175**	Pn	**Pn**	**07 47 09.5**	**-4.1**
	comp=E,16nm,0.3s,baz=255,slow=23,SNR=9.7						
CBIJ				Sn	**Sn**	**07 48 44.0**	**-10**
	comp=E,10nm,0.3s,baz=98,slow=23,SNR=5.4						
YSS	**Yuzh-Sakhalins**	**10.88**	**6**	*e*P	**Pn**	**07 47 37.0**	**-2.0**
YSS				*e*S	**Sn**	**07 49 33.0**	**-6.5**
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS	**Yuzh-Sakhalins**	**10.88**	**6**	*e*Pn	**Pn**	**07 47 37.7**	**-1.3**
MDJ	**Mudanjiang**	**12.27**	**317**	P	**Pn**	**07 47 58.0**	**0.0**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,27nm,3.7s						
MDJ				LR	LR		
	comp=N,127nm,21.4s						
MDJ				LR	LR		
	comp=E,134nm,21.4s						
MDJ				LR	LR		
	comp=Z,278nm,19.4s						
CN2	**Changchun**	**14.32**	**307**	*e*P	**Pn**	**07 48 27.0**	**+1.1**
CN2				*e*S	**Sn**	**07 51 05.0**	**+1.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				AMB	AMB		
	comp=Z,100nm,6.0s						
CN2				LR	LR		
	comp=N,190nm,16.0s						
CN2				LR	LR		
	comp=E,270nm,16.0s						
CN2				LR	LR		
	comp=Z,280nm,16.0s						
KLR	**Kul'dur**	**14.83**	**335**	*e*P	**Pn**	**07 48 37.0**	**+4.2**
SNY	**Shenyang**	**14.86**	**298**	⇑P	**Pn**	**07 48 34.3**	**+1.0**
SNY				AP	pP	07 48 41.8	-5.7
SNY				XP	sP	07 48 46.5	-5.4
SNY				S	**Sn**	**07 51 18.5**	**+1.8**
SNY				XS	sS	07 51 30.3	-18
SNY				SS		07 51 35.5	
SNY				AMB	AMB		
	comp=Z,13nm,0.5s						
SNY				AMB	AMB		
	comp=Z,106nm,5.5s						
SNY				LR	LR		
	comp=N,247nm,14.3s						
SNY				LR	LR		
	comp=E,265nm,17.4s						
SNY				LR	LR		
	comp=Z,294nm,15.1s						
SSE	**Sheshan**	**17.43**	**259**	*e*P	**Pn**	**07 49 04.5**	**-1.6**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s						
SSE				AMB	AMB		
	comp=Z,14nm,3.5s						
SSE				LR	LR		
	comp=N,94nm,17.7s						
SSE				LR	LR		
	comp=E,145nm,17.7s						
SSE				LR	LR		
	comp=Z,181nm,19.4s						
NJ2	**Nanjing**	**18.97**	**264**	*e*P	**Pn**	**07 49 26.3**	**+1.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
BJI	**Beijing**	**20.09**	**289**	P	**P**	**07 49 36.3**	**0.0**
BJI				AMB	AMB		
	comp=Z,17nm,0.7s						
BJI				AMB	AMB		
	comp=Z,86nm,6.1s						
BJI				LR	LR		
	comp=N,105nm,16.0s,MS3.4						
BJI				LR	LR		
	comp=E,93nm,17.0s,MS3.4						
BJI				LR	LR		
	comp=Z,80nm,17.5s,MS3.1						
PET	**Petropavlovsk**	**20.87**	**30⇓**	*e*P	**P**	**07 49 44.2**	**-0.5**
PET				pmax	pmax		
	comp=Z,33nm,1.7s						
HHC	**Hu-ho-hao-te**	**23.64**	**291**	*e*P	**P**	**07 50 12.8**	**-1.1**
HHC				AP		07 50 22.0	
HHC				XP	sP	07 50 26.0	-1.7
HHC				PP		07 50 45.5	
HHC				PCP	PcP	07 54 00.3	+2.6
HHC				S	**S**	**07 54 20.0**	**-6.0**
HHC				XS	sS	07 54 35.8	-6.2
HHC				SS		07 55 10.5	
HHC				SCP	ScP	07 57 33.0	-0.3
HHC				PCS	PcS	07 57 37.5	+0.4
HHC				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.3						
HHC				AMB	AMB		
	comp=Z,57nm,5.1s						
HHC				LR	LR		
	comp=N,106nm,16.7s,MS3.6						
HHC				LR	LR		
	comp=E,178nm,19.1s,MS3.6						
HHC				LR	LR		
	comp=Z,158nm,17.2s,MS3.5						
YAK	**Yakutsk**	**26.93**	**348**	*de*P	**P**	**07 50 44.0**	**+0.3**
YAK				pmax	pmax		
	comp=Z,44nm,1.3s,mb4.8						
SEY	**Seymchan**	**27.71**	**11⇑**	*e*P	**P**	**07 50 51.6**	**+0.9**
ULN	**Ulaanbaatar**	**27.76**	**306⇓**	*e*P	**P**	**07 50 50.4**	**-0.7**
ULN	**Ulaanbaatar**	**27.76**	**306**	*e*P	**P**	**07 50 49.4**	**-1.7**
	comp=Z,4.2nm,0.6s,mb4.2						
SONM	**Songino Array**	**28.19**	**305**	P	**P**	**07 50 53.4**	**-1.6**
	comp=Z,3.4nm,0.6s,mb4.2,baz=106,slow=9.0,SNR=7.7						
SONM				LR	LR	08 02 46.8	
	comp=Z,181nm,19.1s,MS3.7,baz=84,slow=38						
SONM	**Songino Array**	**28.19**	**305**	P	**P**	**07 50 53.4**	**-1.6**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,181nm,19.1s						
BOD	**Bodaibo**	**28.23**	**329**	*e*P	**P**	**07 50 55.0**	**-0.3**
BOD				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
LZH	**Lanzhou**	**30.09**	**281**	*e*P	**P**	**07 51 12.3**	**+0.4**
LZH				AP	pP	07 51 21.8	+0.1
LZH				XP	sP	07 51 25.8	0.0
LZH				PP	PP	07 52 10.5	-10
LZH				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,47nm,5.4s						
LZH				LR	LR		
	comp=E,256nm,13.2s						
LZH				LR	LR		
	comp=Z,393nm,17.5s,MS4.1						
ZAK	**Zakamensk**	**30.73**	**310**	*e*P	**P**	**07 51 17.5**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9						
TLY	**Talaya**	**30.83**	**312**	*e*P	**P**	**07 51 18.0**	**-0.4**
TLY				*e*		07 58 17.3	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
TLY				MLR	MLR		
	comp=Z,163nm,16.0s,MS3.8						
GYA	**Guiyang**	**30.94**	**262**	P	**P**	**07 51 18.5**	**-0.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2	**Chengdu**	**31.55**	**271**	*e*P	**P**	**07 51 23.0**	**-1.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
QIZ	**Qiongzhong**	**32.43**	**247**	P	**P**	**07 51 32.8**	**+0.3**
QIZ				S	**S**	**07 56 45.8**	**+1.1**
QIZ				AMB	AMB		
	comp=Z,11nm,1.9s,mb4.4						
QIZ				LR	LR		
	comp=E,110nm,19.1s						
QIZ				LR	LR		
	comp=Z,158nm,17.0s,MS3.8						
GTA	**Gaotai**	**32.71**	**288**	*e*P	**P**	**07 51 35.8**	**+0.9**
GTA				AP	pP	07 51 45.3	+0.6
GTA				XP	sP	07 51 49.0	+0.2
GTA				PP	PP	07 52 46.0	-3.1
GTA				S	**S**	**07 56 49.8**	**+0.8**
GTA				XS	sS	07 57 05.5	+0.2
GTA				SCP	ScP	07 58 03.8	+2.5
GTA				PCS	PcS	07 58 09.5	+4.3
GTA				SS	SS	07 58 48.5	-22
GTA				SCS	ScS	08 01 58.5	-2.5
GTA				AMB	AMB		
	comp=Z,5.0nm,1.6s,mb4.2						
GTA				AMB	AMB		
	comp=Z,56nm,4.6s						
GTA				LR	LR		
	comp=N,69nm,14.8s,MS3.9						
GTA				LR	LR		
	comp=E,170nm,16.7s,MS3.9						
GTA				LR	LR		
	comp=Z,141nm,16.7s,MS3.7						
KMI	**Kunming**	**34.69**	**262**	P	**P**	**07 51 53.8**	**+1.7**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
KMI				LR	LR		
	comp=Z,81nm,23.1s,MS3.4						
BILL	**Bilibino**	**34.94**	**16**	*i* P	**P**	**07 51 57.9**	**+3.6**
TIXI	**Tiksi**	**36.18**	**353⇑**	*i*P	**P**	**07 52 02.7**	**-2.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
KRAR	**Krasnoyarsk**	**38.03**	**317⇑**	*e*P	**P**	**07 52 13.3**	**-7.3**
WMQ	**Urumqi**	**41.13**	**298**	P	**P**	**07 52 48.0**	**+1.6**
WMQ				AP	pP	07 52 58.0	+1.5
WMQ				XP	sP	07 53 02.0	+1.5
WMQ				PP	PP	07 54 27.0	+5.3
WMQ				S	**S**	**07 58 58.0**	**+0.8**
WMQ				SS	SS	08 01 57.0	-3.6
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,105nm,5.0s						
WMQ				LR	LR		
	comp=N,134nm,13.0s,MS4.3						
WMQ				LR	LR		
	comp=E,201nm,12.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,89nm,12.0s,MS3.9						
ZAL	**Zalesovo**	**42.44**	**313**	P	**P**	**07 52 57.5**	**+0.3**
	comp=Z,8.8nm,0.5s,mb4.6,baz=22,slow=7.9,SNR=18						
ZAL				LR	LR	08 12 10.3	
	comp=Z,114nm,18.2s,MS3.8,baz=351,slow=38						
ZAL	**Zalesovo**	**42.44**	**313**	P	**P**	**07 52 57.5**	**+0.3**
ZAL				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ZAL				MLR	MLR		
	comp=Z,114nm,18.2s						
ZAL	**Zalesovo**	**42.44**	**313**	P	**P**	**07 52 57.5**	**+0.3**
ZAL				LR	LR	08 12 10.3	
NVS	**Novosibirsk**	**43.37**	**314**	*i* P	**P**	**07 53 04.3**	**-0.4**
NVS				*i*	pP	07 53 13.5	-1.3
NVS				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
MK31	**Makanchi Array**	**44.49**	**303**	P	**P**	**07 53 14.1**	**+0.4**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
MKAR	**Makanchi Array**	**44.49**	**303**	P	**P**	**07 53 14.4**	**+0.7**
	comp=Z,6.5nm,0.6s,mb4.5,baz=83,slow=9.9,SNR=44						
MKAR	**Makanchi Array**	**44.49**	**303**	P	**P**	**07 53 14.4**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
JIRN	**Jiri**	**46.97**	**276**	*e*P	**P**	**07 53 34.7**	**+1.5**
	comp=Z,4.1nm,0.8s,mb5.4						
GUN	**Gumba**	**47.11**	**276**	*e*P	**P**	**07 53 35.2**	**+0.9**
PKI	**Pulchoki**	**47.63**	**276**	*e*P	**P**	**07 53 39.3**	**+0.9**
KKN	**Kakani**	**47.64**	**277**	*e*P	**P**	**07 53 39.0**	**+0.5**
DMN	**Daman**	**47.86**	**276**	*e*P	**P**	**07 53 41.1**	**+0.9**
KDAK	**Kodiak Island**	**47.87**	**41**	P	**P**	**07 53 39.8**	**-0.5**
	comp=Z,4.4nm,0.6s,mb4.6,baz=284,slow=12,SNR=4.4						
GKN	**Gorkha**	**48.07**	**277**	*e*P	**P**	**07 53 42.0**	**+0.2**
	comp=Z,7.4nm,1.0s,mb5.7						
KOLN	**Koldanda**	**49.00**	**277**	*e*P	**P**	**07 53 49.6**	**+0.6**
	comp=Z,21nm,0.9s,mb5.2						
VOSK	**Vostochnaya**	**50.79**	**312**	P	**P**	**07 54 02.5**	**0.0**
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
AAK	**Ala-Archa**	**50.80**	**299**	*c* P	**P**	**07 54 02.4**	**-0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**50.84**	**314**	*i* P	**P**	**07 54 02.5**	**-0.4**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
BVA0	**Borovoye Array**	**51.09**	**313**	P	**P**	**07 54 04.8**	**0.0**
BVAR	**Borovoye Array**	**51.09**	**313**	P	**P**	**07 54 04.9**	**+0.1**
	comp=Z,3.2nm,0.6s,mb4.4,baz=69,slow=8.1,SNR=20						
BVAR	**Borovoye Array**	**51.09**	**313**	P	**P**	**07 54 04.9**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**51.14**	**313**	*e*P	**P**	**07 54 05.5**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BRVK	**Borovoye**	**51.14**	**313**	*e*P	**P**	**07 54 05.5**	**+0.3**
	comp=Z,4.2nm,0.6s,mb4.5						
KK31	**Karatay Array**	**53.46**	**301**	*i* P	**P**	**07 54 22.7**	**+0.3**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KKAR	**Karatay Array**	**53.46**	**301**	*i* P	**P**	**07 54 22.7**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
INK	**Inuvik**	**55.26**	**27**	P	**P**	**07 54 36.9**	**+1.4**
	comp=Z,1.4nm,0.8s,mb4.1,baz=270,slow=3.0,SNR=7.4						
INK	**Inuvik**	**55.26**	**27**	*e*P	**P**	**07 54 37.1**	**+1.6**
INK				*e**PP	pP	07 54 46.6	+0.8
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	**Inuvik**	**55.26**	**27**	*e*P	**P**	**07 54 37.1**	**+1.6**
	comp=Z,3.4nm,0.9s,mb4.4						
INK				*e*pP	pP	07 54 46.6	+0.8
FITZ	**Fitzroy Crossi**	**55.91**	**198**	*e*P	**P**	**07 54 40.5**	**+0.3**
	comp=Z,2.2nm,0.5s,mb4.4						
WRAB	**Tennant Creek**	**56.13**	**188⇑**	*e*P	**P**	**07 54 51.5**	**+10**
WB2	**Warramunga Arr**	**56.14**	**188**	*e*P	**P**	**07 54 41.0**	**-0.8**
WRA	**Warramunga Arr**	**56.14**	**188**	P	**P**	**07 54 40.7**	**-1.1**
	comp=Z,3.3nm,0.8s,mb4.4,baz=5.6,slow=7.6,SNR=13						
WRA	**Warramunga Arr**	**56.14**	**188**	P	**P**	**07 54 40.7**	**-1.1**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	**Arti**	**56.95**	**319⇓**	*i* P	**P**	**07 54 47.3**	**-0.3**
ARU				*e*	pP	07 54 56.4	-1.5
ARU				*e*S	**S**	**08 02 36.1**	**-3.2**
ARU				*e*SS	SS	08 06 27.3	-0.7
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
ARU	**Arti**	**56.95**	**319**	*e*P	**P**	**07 54 47.9**	**+0.3**
	comp=Z,14nm,0.8s,mb5.0						
ARU				*e*pP	pP	07 54 57.2	-0.7
AB31	**Akbulak array**	**58.42**	**311**	*i* P	**P**	**07 54 57.8**	**-0.1**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
AKTK	**Aktyubinsk**	**59.18**	**312**	P	**P**	**07 55 02.8**	**-0.4**
AKTO	**Aktyubinsk**	**59.18**	**312**	P	**P**	**07 55 02.8**	**-0.4**
	comp=Z,2.3nm,0.5s,mb4.5,baz=70,slow=8.2,SNR=8.5						
AKTO	**Aktyubinsk**	**59.18**	**312**	P	**P**	**07 55 02.8**	**-0.4**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
AS31	**Alice Springs**	**59.86**	**188**	*e*P	**P**	**07 55 08.2**	**+0.3**
AS31				*e*pP	pP	07 55 17.4	-0.8
ASAR	**Alice Springs**	**59.87**	**188**	P	**P**	**07 55 07.1**	**-0.8**
	comp=Z,0.8nm,0.7s,mb3.9,baz=11,slow=8.0,SNR=7.0						
ASAR	**Alice Springs**	**59.87**	**188**	P	**P**	**07 55 07.1**	**-0.8**
ASAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TMCR	**Tamitsa**	**63.48**	**332**	*e*P	**P**	**07 55 32.0**	**-0.2**
TMCR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
YKA	**Yellowknife Ar**	**64.67**	**30**	P	**P**	**07 55 40.1**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.7,baz=307,slow=4.9,SNR=4.8						
ARCES	**ARCESS Array B**	**64.80**	**340**	P	**P**	**07 55 40.3**	**-0.6**
	comp=Z,2.0nm,0.7s,mb4.2,baz=51,slow=8.4,SNR=6.5						
ARCES				LR	LR	08 29 34.2	
	comp=Z,44nm,18.7s,MS3.7,baz=94,slow=41						
OBN	**Obninsk**	**68.74**	**323⇑**	*e*P	**P**	**07 56 06.1**	**+0.1**
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						
KIV	**Kislovodsk**	**71.40**	**311⇑**	*e*P	**P**	**07 56 24.0**	**+1.7**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
KIV				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
GNI	**Garni**	**72.14**	**307⇑**	*e*P	**P**	**07 56 29.9**	**+3.1**
GNI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BMO	**Blue Mountains**	**72.65**	**47**	*e*P	**P**	**07 56 30.6**	**+0.8**
	comp=Z,2.0nm,0.9s,mb4.0						
BMO				*e*pP	pP	07 56 40.8	+0.3
HRY	**Holter Researc**	**74.72**	**43**	*e*P	**P**	**07 56 43.5**	**+1.6**
HRY				*e*pP	pP	07 56 52.5	0.0
LRM	**Limekiln Ridge**	**74.90**	**44**	*e*P	**P**	**07 56 44.5**	**+1.5**
LRM				*e*pP	pP	07 56 54.3	+0.7
AKASG	**Malin Array Be**	**74.93**	**322**	P	**P**	**07 56 43.0**	**-0.1**
	comp=Z,1.6nm,0.4s,mb4.3,baz=47,slow=6.0,SNR=22						
AKASG	**Malin Array Be**	**74.93**	**322**	P	**P**	**07 56 43.1**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	**Malin Array Si**	**74.93**	**322**	*e*P	**P**	**07 56 41.1**	**-2.1**
AKBB				*e**PP	pP	07 56 52.2	-1.6
NB2	**NORSAR Subarra**	**74.97**	**337**	P	**P**	**07 56 43.6**	**+0.2**
	comp=Z,3.5nm,0.7s,mb4.4,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**74.97**	**337**	P	**P**	**07 56 42.9**	**-0.5**
	comp=Z,3.0nm,0.7s,mb4.3,baz=39,slow=5.8,SNR=9.8						
NOA				LR	LR	08 33 01.6	
	comp=Z,65nm,18.1s,MS4.0,baz=85,slow=38						
NOA	**NORSAR Array B**	**74.97**	**337**	P	**P**	**07 56 42.9**	**-0.5**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,65nm,18.1s						
EGMT	**Eagleton**	**75.05**	**41**	*e*P	**P**	**07 56 42.9**	**-1.0**
EGMT				*e*pP	pP	07 56 53.2	-1.3
BOZ	**Bozeman (W)**	**75.47**	**44**	*e*P	**P**	**07 56 47.2**	**+1.0**
BOZ				*e**PP	pP	07 56 57.5	+0.6
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BOZ	**

comp=Z,5.0nm,0.9s,mb4.4
SRU San Rafael 80.12 49 *e*P P **07 57 12.9 +0.8**
comp=Z,4.9nm,0.9s,mb4.4
SRU *e*pP pP 07 57 23.8 +0.9
DPC Dobruska-Polom 81.16 328 *e*P **P 07 57 24.2 +6.5**
DPC *ex* x 07 57 28.8
CLL Collm 81.82 330 *i* *e*PP pP 07 57 31.2 -0.7
CLL Collm 81.82 330 *i* pP pP 07 57 31.2 -0.7
comp=Z,10.0nm,0.9s
KHC Kasperske Hory 83.25 328 *e*P **P 07 57 32.4 +3.8**
KHC *ex* x 07 57 38.8
GERES GERESS Array B 83.41 328 P **P 07 57 29.8 +0.3**
comp=Z,0.4nm,0.4s,mb3.8,baz=28,slow=4.4,SNR=3.5
GRF Grafenberg Arr 83.79 330 *e*P **P 07 57 38.6 +7.2**
comp=Z,6.0nm,0.9s,mb4.7
GRF *e*pP pP 07 57 42.3 +0.1
comp=Z,6.0nm,0.9s
SCHQ Schefferville 86.25 16 LR LR 08 36 28.1
comp=Z,29nm,21.8s,MS3.6,baz=43,slow=36
MIR Mirnyy 108.78 198 *e*P Pdif 07 59 24.5 -1.8
MIR pmax pmax
comp=Z,320nm,0.9s
LPAZ La Paz 147.27 61 PKPbc PKPbc 08 04 46.0 +0.5
comp=Z,1.8nm,0.8s,baz=3.6,slow=8.2,SNR=10
LPAZ La Paz 147.27 61 *e*PKPdf PKPdf 08 04 45.4 +2.2

GII ***28*** *07:55:56.7±0.9, 3088N×35.15E, h0km, ML2.7/6*
ISCJB ***28*** *07:55:57.5±0.5, 3086N±002×35.14E±005, h6km±4km, Error ellipse: s-maj=6.6km s-min=3.5km az=28.2*
HLW ***28*** *07:56:00.4, 3085N×3505E, h15km, Mb2.1*
ISC 28 07:55:58.1±0.5, 3087N±002×3513E±004, h8km±4km, n25, σ0§81/35, 2C-1D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFRI	**Zfri**	**0.32**	**172**	T		07 57 40.9	
ZFRI	**Zfri**	**0.32**	**172**	Pg	**Pg**	**07 56 04.3**	**0.0**
MASH	**Mash'abbe Sade**	**0.32**	**294**	Pg	**Pg**	**07 56 04.3**	**-0.1**
RTMM	**Retamin**	**0.42**	**296**	Pg	**Pg**	**07 56 05.5**	**-0.8**
SVTA	**Shivta**	**0.44**	**278**	Pg	**Pg**	**07 56 07.1**	**+0.4**
MZDA	**Masada**	**0.48**	**24**	Pg	**Pg**	**07 56 06.6**	**-0.9**
MZDA				Sg	**Sg**	**07 56 14.3**	**+0.4**
PRNI	**Paran**	**0.53**	**192**	Pg	**Pg**	**07 56 08.4**	**+0.1**
PRNI				Sg	**Sg**	**07 56 17.4**	**+2.3**
KZIT	**Kziot**	**0.63**	**274**	Pg	**Pg**	**07 56 10.1**	**-0.2**
KZIT				Sg	**Sg**	**07 56 19.8**	**+1.3**
DRGI	**Dragot**	**0.76**	**17**	Pg	**Pg**	**07 56 12.7**	**0.0**
HRFI	**Mount Harif**	**0.83**	**185**	Pg	**Pg**	**07 56 13.6**	**-0.5**
HRFI				Sg	**Sg**	**07 56 26.3**	**+1.4**
KMTI	**Karmit**	**0.84**	**205**	Pg	**Pg**	**07 56 14.4**	**+0.2**
MBH	**Mount Berech**	**1.09**	**190**	Pg	**Pg**	**07 56 18.2**	**-0.8**
AQBJ	**Aqaba**	**1.14**	**183**	Pg	**Pg**	**07 56 18.8**	**-1.1**
EIL	**Elat**	**1.20**	**187**	Pg	**Pg**	**07 56 20.8**	**-0.5**
EIL				Sg	**Sg**	**07 56 37.3**	**+0.4**
EIL	**Elat**	**1.20**	**187**	Pg	**Pg**	**07 56 20.7**	**-0.5**
EIL				Sg	**Sg**	**07 56 37.3**	**+0.5**
HNKL	**Nakhl**	**1.36**	**227**	⇓P	**Pn**	**07 56 23.0**	**-0.4**
HNKL				S	**Sb**	**07 56 40.0**	**-1.5**
SLTI	**Sal'it**	**1.37**	**357**	Pn	**Pn**	**07 56 22.2**	**-1.3**
SLTI				Sn	**Sn**	**07 56 43.1**	**+1.3**
SLTI	**Sal'it**	**1.37**	**357**	Pn	**Pn**	**07 56 22.2**	**-1.3**
SLTI				Sn	**Sn**	**07 56 43.1**	**+1.3**
HMDT	**Nahal Hemdat**	**1.42**	**14**	Pn	**Pn**	**07 56 23.7**	**-0.6**
HMDT				Sn	**Sn**	**07 56 44.0**	**+0.9**
MMLI	**Mount Malkishu**	**1.58**	**9**	Pn	**Pn**	**07 56 26.2**	**-0.3**
MMLI				Sn	**Sn**	**07 56 48.3**	**+1.1**
AMAG	**Maghara**	**1.67**	**263**	P	**Pn**	**07 56 27.4**	**-0.2**
OFRI	**'Ofer**	**1.75**	**356**	Pn	**Pn**	**07 56 28.3**	**-0.4**
SUZ		**2.23**	**243**	⇑P	**Pn**	**07 56 35.2**	**-0.2**
HKAT	**Jabal Katrina**	**2.54**	**203**	P	**Pn**	**07 56 40.0**	**+0.4**
ZAF		**2.74**	**235**	⇑P	**Pn**	**07 56 42.6**	**+0.3**

BJI ***28*** *08:24:04.5, 704S×13050E, h91km, mB4.9, mb4.8*
MOS ***28*** *08:24:12.2±1.1, 623S×13003E, h102km, mb4.5/10, Error ellipse: s-maj=16.4km s-min=7.3km az=109.2*
NEIC ***28*** *08:24:13.1±1.7, 627S×13004E, h91km±19km, mb4.4/14, Error ellipse: s-maj=14.8km s-min=10.1km az=75.0*
ISCJB ***28*** *08:24:14.1±0.7, 637S±003×130.17E±005, h124km±7km, mb4.6/38, Error ellipse: s-maj=8.4km s-min=4.3km az=160.2*
IDC ***28*** *08:24:16.4±4.2, 622S×13020E, h124km±39km, mb4.0/9, mb1 4.1/11, mb1mx4.1/14, mbtmp4.5/11, MS3.2/2, Ms1 3.2/2, ms1mx2.6/21, Error ellipse: s-maj=23.6km s-min=11.9km az=76.0*
ISC 28 08:24:15.7±0.6, 635S±003×13020E±006, h121km±6km, n87, σ1§10/99, mb4.6/38, 5C-9D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.32**	**323**	P	**Pn**	**08 25 06.3**	**+0.2**
	236nm,1.1s						
SWI	**Sorong**	**5.55**	**11**	P	**Pn**	**08 25 36.5**	**+0.5**
	220nm,0.4s						
KAKA	**Kakadu**	**6.70**	**161**	⇓*i*P	**Pn**	**08 25 52.0**	**+0.5**
	189nm,0.2s						
KAKA				*e*S	**Sn**	**08 27 04.7**	**-1.6**
BAKI	**Biak**	**7.80**	**49**	P	**Pn**	**08 26 07.2**	**+0.7**
	1μm,0.8s						
JAY	**Jayapura**	**11.14**	**70**	P	**Pn**	**08 26 55.2**	**+3.9**
	47nm,0.8s						
FITZ	**Fitzroy Crossi**	**12.50**	**200**	*e*P	**Pn**	**08 27 06.7**	**-2.6**
	24nm,0.3s						
FITZ				*e*S	**Sn**	**08 29 15.8**	**-11**
FITZ	**Fitzroy Crossi**	**12.50**	**200**	P	**Pn**	**08 27 06.9**	**-2.4**
	2.1nm,0.3s,baz=30,slow=11,SNR=74						
FITZ				S	**Sn**	**08 29 16.4**	**-11**
	12nm,0.3s,baz=199,slow=12,SNR=12						
FITZ				LR	LR	08 32 05.0	
	comp=Z,98nm,20.5s,baz=189,slow=37						
WRAB	**Tennant Creek**	**14.09**	**164**	⇓*e*P	**Pn**	**08 27 29.1**	**-0.7**
WRAB	**Tennant Creek**	**14.09**	**164**	*e*Pn	**Pn**	**08 27 27.6**	**-2.2**
	76nm,0.5s						
WRAB				*e*Sn	**Sn**	**08 29 55.5**	**-10**
WRA	**Warramunga Arr**	**14.10**	**164**	P	**Pn**	**08 27 28.6**	**-1.2**
	13nm,0.3s,baz=345,slow=13,SNR=89						
WRA				S	**Sn**	**08 29 56.2**	**-9.3**
	12nm,0.3s,baz=337,slow=23,SNR=15						
WB2	**Warramunga Arr**	**14.10**	**164**	*e*P	**Pn**	**08 27 27.3**	**-2.6**
WB2				*e*S	**Sn**	**08 29 56.0**	**-10**
BUKP	**Musuan**	**15.03**	**340**	*e*P	**Pn**	**08 27 42.2**	**+0.5**
BUTP	**Butuan**	**15.89**	**343**	*e*P	**Pn**	**08 27 46.6**	**-5.7**
PMG	**Port Moresby**	**17.07**	**101**	P	**Pn**	**08 28 06.8**	**0.0**
	1.8nm,0.3s,baz=123,slow=14,SNR=4.0						
PMG	**Port Moresby**	**17.07**	**101**	*e*P	**Pn**	**08 28 10.3**	**+3.5**
PMG				*e*S	**S**	**08 31 11.0**	**-6.0**
PMG				pmax	pmax		
	comp=Z,18nm,0.6s						
PMG	**Port Moresby**	**17.07**	**101**	*e*P	**Pn**	**08 28 10.3**	**+3.5**
	comp=Z,18nm,0.6s						
PMG				*e*S	**S**	**08 31 11.0**	**-5.9**
AS31	**Alice Springs**	**17.58**	**169**	*e*P	**Pn**	**08 28 13.8**	**+0.8**
AS31				*e*S	**S**	**08 31 21.5**	**-7.1**
ASAR	**Alice Springs**	**17.58**	**169**	P	**Pn**	**08 28 14.4**	**+1.4**
	comp=Z,4.1nm,0.3s,baz=345,slow=11,SNR=146						
ASAR				S	**S**	**08 31 21.8**	**-6.8**
	comp=Z,4.1nm,0.3s,baz=345,slow=25,SNR=9.3						
ASPA	**Alice Springs**	**17.58**	**169**	*e*P	**Pn**	**08 28 13.8**	**+0.8**
ASPA				*e*S	**S**	**08 31 21.5**	**-7.1**
MBWA	**Marble Bar**	**17.88**	**214**	*e*P	**Pn**	**08 28 16.1**	**-0.4**
	comp=Z,17nm,0.7s						
MBWA				*e*S	**S**	**08 31 26.0**	**-8.6**
KKM	**Kota Kinabalu**	**18.61**	**311**	*e*P	**P**	**08 28 22.8**	**-0.8**
CTA	**Charters Tower**	**20.72**	**133**	*e*P	**P**	**08 28 49.9**	**+3.5**
	comp=Z,3.6nm,0.7s						
CTA	**Charters Tower**	**20.72**	**133**	P	**P**	**08 28 49.7**	**+3.3**
	comp=Z,2.2nm,0.5s,baz=334,slow=17,SNR=7.0						
CTA	**Charters Tower**	**20.72**	**133**	*e*P	**P**	**08 28 49.9**	**+3.5**
CTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CTAO	**Charters Tower**	**20.72**	**133**	*e*P	**P**	**08 28 49.6**	**+3.2**
CTAO				*e*S	**S**	**08 32 32.1**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CTAO	**Charters Tower**	**20.72**	**133**	*e*P	**P**	**08 28 49.6**	**+3.2**
	comp=Z,3.8nm,0.6s						
CTAO				*e*S	**S**	**08 32 32.1**	**+1.1**
TGY	**Tagaytay City**	**22.30**	**336**	P	**P**	**08 29 02.5**	**-0.6**
	comp=Z,169nm,0.4s,baz=138,slow=11,SNR=4.0						
LEM	**Lembang**	**22.44**	**267**	P	**P**	**08 29 07.2**	**+2.6**
	comp=Z,132nm,0.9s,mb5.3						
CBJI	**Citeko**	**23.21**	**269**	P	**P**	**08 29 11.3**	**-0.5**
	comp=Z,162nm,0.9s,mb5.3						
FORT	**Forrest**	**24.39**	**184**	*e*P	**P**	**08 29 23.7**	**+1.2**
	comp=Z,15nm,0.5s,mb4.6						
FORT				*e*S	S	08 33 57.1	+24
STKA	**Stephens Creek**	**27.54**	**159**	LR	LR	08 42 14.5	
	comp=Z,73nm,21.1s,baz=214,slow=39						
KLBR	**Kellerberrin**	**27.68**	**203**	*e*P	**P**	**08 29 53.1**	**+0.9**
	comp=Z,16nm,0.7s,mb4.7						
NWAO	**Narrogin (SRO)**	**29.07**	**203**	P	**P**	**08 30 05.6**	**+1.1**
	comp=Z,5.3nm,0.4s,mb4.6,baz=30,slow=6.3,SNR=17						
PSI	**Prapat**	**32.53**	**285**	P	**P**	**08 30 35.9**	**+1.0**
	comp=Z,3.3nm,0.8s,mb4.2,baz=98,slow=7.8,SNR=5.9						
PSI	**Prapat**	**32.53**	**285**	P	**P**	**08 30 35.9**	**+1.0**
SSE	**Sheshan**	**38.22**	**347**	*e*P	**P**	**08 31 23.5**	**-0.1**
SSE				AMB	AMB		
	comp=Z,17nm,0.8s,mb4.9						
SSE				AMB	AMB		
	comp=Z,31nm,6.8s						
NJ2	**Nanjing**	**39.69**	**345**	*e*P	**P**	**08 31 36.8**	**+1.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
GYA	**Guiyang**	**39.81**	**326**	P	**P**	**08 31 36.5**	**-0.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
KMI	**Kunming**	**41.14**	**321**	P	**P**	**08 31 49.0**	**+1.2**
KMI				AP	pP	08 32 10.3	-4.9
KMI				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.6						
MJAR	**Matsushiro Arr**	**43.32**	**9**	P	**P**	**08 32 04.1**	**-1.3**
	comp=Z,5.8nm,0.6s,mb4.5,baz=187,slow=9.0,SNR=22						
MAJO	**Matsushiro**	**43.32**	**9**	*e*P	**P**	**08 32 03.8**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
MAJO	**Matsushiro**	**43.32**	**9**	*e*P	**P**	**08 32 03.8**	**-1.7**
	comp=Z,8.4nm,0.8s,mb4.5						
MAT	**Matsushiro**	**43.32**	**9**	P	**P**	**08 32 03.9**	**-1.5**
XAN	**Xi'an**	**44.94**	**335**	P	**P**	**08 32 17.0**	**-1.3**
XAN				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.6						
BJI	**Beijing**	**47.94**	**345**	P	**P**	**08 32 40.5**	**-1.3**
BJI				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.0						
SNY	**Shenyang**	**48.32**	**353**	⇓P	**P**	**08 32 44.3**	**-0.4**
SNY				AMB	AMB		
	comp=Z,13nm,0.5s,mb5.0						
LZH	**Lanzhou**	**48.93**	**332**	*e*P	**P**	**08 32 49.5**	**+0.1**
LZH				PP	PP	08 34 44.5	+0.7
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,49nm,7.6s						
LZH				LR	LR		
	comp=N,263nm,14.8s						
LZH				LR	LR		
	comp=Z,412nm,17.9s						
HHC	**Hu-ho-hao-te**	**49.99**	**342**	*e*P	**P**	**08 33 00.3**	**+2.9**
HHC				PP	PP	08 34 55.5	+2.1
HHC				SCP	ScP	08 37 58.5	-1.5
HHC				S	**S**	**08 39 59.0**	**+0.2**
HHC				SCS	ScS	08 42 34.5	-2.0
HHC				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,62nm,5.6s						
HHC				LR	LR		
	comp=N,95nm,18.0s						
HHC				LR	LR		
	comp=E,57nm,19.9s						
HHC				LR	LR		
	comp=Z,52nm,20.9s						
CN2	**Changchun**	**50.10**	**356**	*e*P	**P**	**08 33 00.5**	**+2.3**
MDJ	**Mudanjiang**	**50.73**	**359**	P	**P**	**08 33 04.3**	**+1.3**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,62nm,3.9s						
GTA	**Gaotai**	**53.50**	**331**	*e*P	**P**	**08 33 23.8**	**+0.3**
GTA				XP	sP	08 33 56.8	-8.8
GTA				PP	PP	08 35 29.5	+4.3
GTA				PPP		08 36 41.8	
GTA				SCP	ScP	08 38 11.5	-3.7
GTA				PCS	PcS	08 38 25.8	-2.2
GTA				S	**S**	**08 40 46.0**	**-0.9**
GTA				SCS	ScS	08 42 56.8	-4.1
GTA				SS	SS	08 44 28.5	-0.2
GTA				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
GTA				AMB	AMB		
	comp=Z,44nm,7.2s						
GTA				LR	LR		
	comp=N,70nm,13.3s						
GTA				LR	LR		
	comp=E,128nm,14.8s						
GTA				LR	LR		
	comp=Z,53nm,11.0s						
YSS	**Yuzh-Sakhalins**	**54.23**	**11**	⇑*e*P	**P**	**08 33 28.4**	**-0.3**
YSS				pmax	pmax		
	comp=Z,27nm,2.5s,mb4.8						
ULN	**Ulaanbaatar**	**57.71**	**342**	*d* iP	**P**	**08 33 54.0**	**+0.4**
ULN	**Ulaanbaatar**	**57.71**	**342**	*e*P	**P**	**08 33 53.8**	**+0.2**
	comp=Z,6.4nm,0.8s,mb4.7						
ULN				*e*pP	pP	08 34 23.6	+1.1
SONM	**Songino Array**	**57.89**	**341**	P	**P**	**08 33 55.5**	**+0.6**
	comp=Z,1.5nm,0.4s,mb4.4,baz=162,slow=5.0,SNR=22						
ZAK	**Zakamensk**	**61.12**	**341**	*e*P	**P**	**08 34 17.0**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
TLY	**Talaya**	**62.12**	**342**	⇓*e*P	**P**	**08 34 23.9**	**+0.2**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WMQ	**Urumqi**	**62.96**	**327**	*e*P	**P**	**08 34 30.5**	**+1.2**
WMQ				XP	sP	08 35 00.5	-11
WMQ				PP	PP	08 36 51.5	+2.4
WMQ				S	**S**	**08 42 47.5**	**-2.3**
WMQ				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.8						
WMQ				LR	LR		
	comp=N,152nm,15.0s						
WMQ				LR	LR		
	comp=E,246nm,15.0s						
WMQ				LR	LR		
	comp=Z,78nm,14.0s						
MIR	**Mirnyy**	**65.32**	**195**	*d* iP	**P**	**08 34 48.0**	**+3.3**
MIR				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
MKAR	**Makanchi Array**	**67.80**	**327**	P	**P**	**08 35 00.6**	**+0.2**
	comp=Z,7.9nm,0.7s,mb4.7,baz=120,slow=7.3,SNR=46						
YAK	**Yakutsk**	**68.18**	**360**	*d* iP	**P**	**08 35 02.2**	**-0.6**
YAK				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.3						
AAK	**Ala-Archa**	**70.18**	**320**	*d* iP	**P**	**08 35 15.5**	**+0.4**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.3						
ZAL	**Zalesovo**	**71.09**	**334**	P	**P**	**08 35 19.7**	**-1.0**
	comp=Z,1.7nm,0.7s,mb4.0,baz=357,slow=5.7,SNR=11						
ZAL	**Zalesovo**	**71.09**	**334**	P	**P**	**08 35 19.7**	**-1.0**
SEY	**Seymchan**	**71.13**	**11**	*c iP*	**P**	**08 35 21.2**	**+0.3**
VNDA	**Vanda**	**73.07**	**173**	P	**P**	**08 35 33.0**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.0,baz=313,slow=6.5,SNR=25						
VNDA	**Vanda**	**73.07**	**173**	*e*P	**P**	**08 35 32.7**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VNDA	**Vanda**	**73.07**	**173**	*e*P	**P**	**08 35 32.7**	**+0.3**
	comp=Z,2.2nm,1.0s,mb3.9						
MAW	**Mawson**	**75.63**	**201**	P	**P**	**08 35 48.2**	**+1.0**
	comp=Z,4.1nm,0.7s,mb4.3,baz=77,slow=6.9,SNR=26						
MAW	**Mawson**	**75.63**	**201**	*e*P	**P**	**08 35 48.0**	**+0.7**
MAW				*e*		08 35 57.7	
MAW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAW	**Mawson**	**75.63**	**201**	*e*P	**P**	**08 35 48.0**	**+0.8**
	comp=Z,3.0nm,0.6s,mb4.2						
MAW				*e*PcP	PcP	08 35 57.7	-1.9
BRVK	**Borovoye**	**77.69**	**328**	*e*P	**P**	**08 35 58.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
BRVK	**Borovoye**	**77.69**	**328**	*e*P	**P**	**08 35 58.4**	**-0.5**
	comp=Z,1.0nm,0.5s,mb3.8						
CHKZ	**Chkalovo**	**77.81**	**328**	*e*P	**P**	**08 35 58.7**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
CHKZ	**Chkalovo**	**77.81**	**328**	*e*P	**P**	**08 35 58.7**	**-0.9**
	comp=Z,3.5nm,1.1s,mb4.0						
TIXI	**Tiksi**	**77.84**	**360**	⇑*e*P	**P**	**08 35 58.8**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ZRNK	**Zerenda**	**78.33**	**327**	*e*P	**P**	**08 36 01.5**	**-0.9**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
ZRNK	**Zerenda**	**78.33**	**327**	*e*P	**P**	**08 36 01.5**	**-0.9**
	comp=Z,5.7nm,0.9s,mb4.3						
BILL	**Bilibino**	**78.44**	**13**	*i* P	**P**	**08 36 03.2**	**+0.2**
SYO	**Syowa Base**	**84.34**	**201**	⇑*i*P	**P**	**08 36 34.3**	**+0.2**
SYO	**Syowa Base**	**84.34**	**201**	⇑*e*PcP	PcP	08 36 37.0	-0.6
ARU	**Arti**	**85.26**	**328**	⇓*i*P	**P**	**08 36 37.8**	**-0.9**
ARU				*e*		08 39 58.1	
ARU				*e*S	S	08 46 50.4	-8.5
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ARU	**Arti**	**85.26**	**328**	*e*P	**P**	**08 36 38.1**	**-0.6**
	comp=Z,5.1nm,1.0s,mb4.4						
ARU				*e*		08 37 14.3	
OBN	**Obninsk**	**97.24**	**325**	*e*P	**P**	**08 37 33.6**	**-1.0**
OBN				pmax	pmax		
	comp=Z,18nm,1.8s,mb5.2						
TORD	**Torodi Ar. Bea**	**128.88**	**282**	PKP	PKPdf	08 43 09.8	+1.0
	comp=Z,0.3nm,0.6s,baz=168,slow=2.0,SNR=4.3						
TORD				SKPbc		08 46 16.4	
	comp=Z,1.1nm,0.7s,baz=47,slow=2.5,SNR=5.7						
CPUP	**Villa Florida**	**146.71**	**168**	PKPbc	PKPbc	08 43 43.5	+0.3
	comp=Z,1.8nm,0.8s,baz=345,slow=3.4,SNR=3.9						
CPUP				PP	PP	08 47 10.8	+3.1
	comp=Z,3.1nm,1.0s,baz=118,slow=5.8,SNR=4.2						
LPAZ	**La Paz**	**151.10**	**141**	PKPbc	PKPbc	08 43 57.4	+3.0
	comp=Z,0.4nm,0.4s,baz=180,slow=1.0,SNR=5.5						

MAN 28 08:33:59.6, 974N×12200E, h32km, mb2.0, ML3.7, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.05**	**33**	*e*P	Pn	08 34 17.8	-0.4
GUIM				*e*S	Sn	08 34 31.4	-0.3
CUYO	**Cuyo Island**	**1.47**	**319**	*e*P	Pn	08 34 24.4	+0.6
IPIL	**Ipil**	**2.02**	**164**	*e*P	Pn	08 34 30.7	-0.7
IPIL				*e*S	Sn	08 34 52.0	-3.5
PAGZ	**Pagadian**	**2.32**	**144**	*e*P	Pn	08 34 37.0	+1.4
OTRP	**Odiongan**	**2.61**	**0**	*e*P	Pn	08 34 40.2	+0.7
MSLP	**Maasin**	**2.84**	**82**	*e*P	Pn	08 34 44.2	+1.5
BUSP	**Coron**	**2.86**	**322**	*e*P	Pn	08 34 43.8	+0.8
ENPP	**El Nido**	**2.92**	**300**	*e*P	Pn	08 34 44.8	+0.9

IDC 28 08:50:51.8±1.3, 1884S×17345W, h0km, mb4.1/4, mb1 4.4/4, mb1mx4.0/14, mbtmp4.1/4, Error ellipse: s-maj=57.8km s-min=27.6km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.16**	**18**	Sn	Sn	08 53 05.5	-4.9
	3.0nm,0.3s,baz=16,slow=20,SNR=3.5						
URZ	**Urewera**	**21.03**	**201**	P	P	08 55 37.1	+0.1
	7.1nm,0.7s,baz=70,slow=12,SNR=5.1						
RPZ	**Rata Peaks**	**28.02**	**204**	P	P	08 56 50.5	+6.1
	6.4nm,0.6s,baz=6.0,slow=16,SNR=6.1						
ASAR	**Alice Springs**	**49.08**	**255**	P	P	08 59 41.1	+0.4
	2.1nm,0.7s,baz=91,slow=8.2,SNR=18						
ASPA	**Alice Springs**	**49.09**	**255**	*e*P	P	08 59 41.2	+0.4
WB2	**Warramunga Arr**	**49.09**	**260**	*e*P	P	08 59 40.9	+0.1
WRA	**Warramunga Arr**	**49.10**	**260**	P	P	08 59 40.9	0.0
	1.0nm,0.3s,baz=97,slow=7.4,SNR=17						
KAKA	**Kakadu**	**52.27**	**268**	*e*P	P	09 00 05.5	+0.7
	11nm,1.2s						
PDAR	**Pinedale Array**	**84.85**	**42**	P	P	09 03 28.0	-0.3
	0.9nm,0.8s,baz=246,slow=3.8,SNR=8.8						
BRTR	**Keskin Array B**	**148.72**	**317**	PKPbc	PKPbc	09 10 41.0	0.0
	0.4nm,0.6s,baz=347,slow=5.9,SNR=2.9						
GERES	**GERESS Array B**	**149.51**	**351**	PKPbc	PKPbc	09 10 44.0	+1.1
	0.4nm,0.2s,baz=347,slow=4.0,SNR=3.6						

LDG ***28*** *08:57:09.7±0.1, 4306N×005W, h10km, Md1.7/2, Ml1.7/1, Error ellipse: s-maj=2.1km s-min=0.8km az=3.0*
STR ***28*** *08:57:10.3±0.1, 4301N±0.11W, h11km±1km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
MDD 28 08:57:10.2±0.6, 4307N×006W, h0km, mbLg0.7/4, Error ellipse: s-maj=5.4km s-min=2.5km az=2.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.10**	**105**	Pg	Pg	08 57 12.3	+0.1
LABF				Sg	Sg	08 57 14.0	+0.4
VIEF	**Viey**	**0.20**	**161**	Pg	Pg	08 57 13.8	-0.3
VIEF				Sg	Sg	08 57 16.8	+0.1
REYF	**Montagne du Re**	**0.24**	**269**	Pg	Pg	08 57 14.8	-0.1
REYF				Sg	Sg	08 57 18.5	+0.5
EPF	**Esparros**	**0.30**	**98**	*e*Pg	Pg	08 57 15.7	-0.3
EPF				*e*Sg	Sg	08 57 19.8	0.0
	7.3nm,0.2s						
EPF	**Esparros**	**0.30**	**98**	Pg	Pg	08 57 15.7	-0.3
EPF				Lg		08 57 19.8	
	3.7nm,0.2s						
ETSF	**Etsaut**	**0.40**	**245**	*e*Pg	Pg	08 57 18.0	0.0
ETSF				*e*Sg	Sg	08 57 23.2	0.0
	4.6nm,0.2s						
ETSF	**Etsaut**	**0.40**	**245**	Pg	Pg	08 57 18.0	0.0
ETSF				Lg		08 57 23.2	
	2.3nm,0.2s						
EBIE	**Bielsa**	**0.42**	**159**	Pg	Pg	08 57 18.1	-0.1
	2.0nm,0.8s,SNR=8.8						
EBIE				Lg		08 57 23.5	
	0.8nm,0.1s,SNR=8.4						
SJPF	**Ste Jean**	**0.85**	**273**	*e*Pg

VRZ	**Vera Road**	**1.52**	**232**	⇑PN	Pn	09 02 54.9	+0.1
VRZ				SN	Sn	09 03 19.4	+2.0
KUZ	**Kuaotunu**	**1.53**	**342**	P	Pn	09 02 54.7	-0.2
KUZ	**Kuaotunu**	**1.53**	**342**	⇓PN	Pn	09 02 54.7	-0.2
PUZ	**Puketiti**	**1.55**	**85**	P	Pn	09 02 54.9	-0.2
PUZ				S	Sn	09 03 16.7	-1.3
PUZ	**Puketiti**	**1.55**	**85**	PN	Pn	09 02 54.8	-0.3
PUZ				SN	Sn	09 03 16.7	-1.3
MXZ	**Matakaoa Point**	**1.71**	**68**	PN	Pn	09 02 56.8	0.0
WAZ	**Wanganui**	**1.85**	**213**	P	Pn	09 02 58.0	-0.4
WAZ	**Wanganui**	**1.85**	**213**	⇑PN	Pn	09 02 58.0	-0.5
TSZ	**Takapari Road**	**1.86**	**188**	P	Pn	09 02 57.8	-0.8
TSZ	**Takapari Road**	**1.86**	**188**	⇑PN	Pn	09 02 57.8	-0.8
PXZ	**Pawanui**	**1.87**	**167**	⇑PN	Pn	09 02 58.3	-0.4
BFZ	**Birch Farm**	**2.47**	**181**	P	Pn	09 03 04.3	-1.5
BFZ	**Birch Farm**	**2.47**	**181**	PN	Pn	09 03 04.3	-1.4
MRZ	**Mangatainoka R**	**2.51**	**193**	P	Pn	09 03 04.5	-1.8
MRZ	**Mangatainoka R**	**2.51**	**193**	⇑PN	Pn	09 03 04.5	-1.8
MRZ				SN	Sn	09 03 34.7	-3.3
KIW	**Kapiti Island**	**2.86**	**202**	P	Pn	09 03 08.1	-2.5
KIW	**Kapiti Island**	**2.86**	**202**	PN	Pn	09 03 08.1	-2.5
MTW	**Mount Morrison**	**3.01**	**192**	P	Pn	09 03 09.8	-2.7
MTW	**Mount Morrison**	**3.01**	**192**	PN	Pn	09 03 09.8	-2.7
CAW	**Cannon Point**	**3.05**	**198**	PN	Pn	09 03 10.4	-2.6
DUWZ	**D'Urville Isla**	**3.18**	**215**	PN	Pn	09 03 12.0	-2.6
MRW	**Makara Radio**	**3.26**	**202**	P	Pn	09 03 12.8	-2.9
MRW	**Makara Radio**	**3.26**	**202**	PN	Pn	09 03 12.7	-3.0
WEL	**Wellington**	**3.29**	**201**	P	Pn	09 03 13.3	-2.8
WEL	**Wellington**	**3.29**	**201**	PN	Pn	09 03 13.3	-2.9
SNZO	**South Karori**	**3.33**	**201**	P	Pn	09 03 13.5	-3.1
SNZO	**South Karori**	**3.33**	**201**	PN	Pn	09 03 13.2	-3.4
TCW	**Tory Channel**	**3.38**	**207**	P	Pn	09 03 14.2	-3.1
NNZ	**Nelson**	**3.75**	**216**	P	Pn	09 03 18.8	-3.3
QRZ	**Quartz Range**	**3.92**	**227**	*e*P	Pn	09 03 20.4	-3.8
BSWZ	**Blackbirch Sta**	**3.96**	**207**	P	Pn	09 03 21.6	-3.2
THZ	**Tophouse**	**4.40**	**215**	P	Pn	09 03 27.2	-3.4
KHZ	**Kahutara**	**4.70**	**206**	P	Pn	09 03 30.7	-3.8
LTZ	**Lake Taylor**	**5.50**	**213**	*e*P	Pn	09 03 41.4	-3.8
MQZ	**McQueen's Val**	**6.15**	**206**	*e*P	Pn	09 03 48.0	-5.7
ODZ	**Otahua Downs**	**8.03**	**210**	*e*P	Pn	09 04 13.9	-5.0

MAN 28 10:07:48.5, 794N×12416E, h30km, mb2.5, ML4.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.72**	**173**	⇓*i*P	Pb	10 08 02.9	+0.3
CTBH				*i* S	Sb	10 08 13.2	+1.0
CGP	**Cagayan de Oro**	**0.74**	**46**	*e*P	Pb	10 08 01.9	-0.9
CGP				*e*S	Sb	10 08 12.5	-0.1
BUKP	**Musuan**	**0.90**	**94**	*e*P	Pn	10 08 06.8	+1.7
DCPH	**Dipolog City**	**1.02**	**309**	*e*P	Pn	10 08 06.2	-0.5
DCPH				*e*S	Sn	10 08 20.6	+0.5

MAN 28 10:23:17.3, 1156N×12538E, h9km, mb2.0, ML3.7, MS1.4, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.07**	**52**	*e*P	Pg	10 23 20.1	+0.8
PLP	**Palo**	**0.56**	**225**	*e*P	Pg	10 23 28.8	+0.8
PLP				*e*S	Sg	10 23 39.1	+3.8
MSLP	**Maasin**	**1.51**	**200**	*e*P	Pn	10 23 44.2	-0.2
MSLP				*e*S	Sn	10 24 08.4	+4.3
PVCP	**Virac**	**2.35**	**329**	*e*P	Pn	10 23 56.6	+0.6

*ISCJB **28** 10:52:04.7±0.3, 6137N±003×13989W±005, h10km, Error ellipse: s-maj=4.6km s-min=3.1km az=52.7*
*NEIC **28** 10:52:04.9, 6125N×140.17W, h1km, ML3.4(AEIC), ML3.6(PGC), After PGC.*
*PGC **28** 10:52:04.9, 6125N×140.17W, h1km, ML3.6/3, 152km northwest of Haines Jct., Yt North of St. Elias Mountains, Yukon Territory - Alaska border.*

ISC 28 10:52:06.0±0.3, 6131N±003×13991W±005, h10km, n34, σ1§26/58, 1C-2D, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYT	**Haines Junctio**	**1.27**	**111**	⇑P	**Pn**	**10 52 29.0**	**-0.7**
HYT				Pg	**Pg**	**10 52 30.7**	**+0.4**
HYT				Sg	**Sg**	**10 52 48.4**	**+1.7**
HYT				Trac		10 52 49.4	
	comp=Z,506nm,0.5s						
HYT	**Haines Junctio**	**1.27**	**111**	⇑*i*P	**Pn**	**10 52 29.0**	**-0.7**
HYT				Sg	**Sg**	**10 52 48.4**	**+1.7**
PNL	**Peninsula**	**1.66**	**171**	P	**Pn**	**10 52 34.8**	**-0.4**
YKU2	**Yakutat**	**1.80**	**176**	P	**Pn**	**10 52 38.0**	**+0.9**
BMRM	**Bremner River**	**2.30**	**264**	P	**Pn**	**10 52 42.4**	**-1.5**
BMRM				S	**Sn**	**10 53 10.9**	**-1.5**
MENT	**Mentasta**	**2.43**	**314**	P	**Pn**	**10 52 45.2**	**-0.5**
RAGM	**Ragged Mountai**	**2.51**	**251**	P	**Pn**	**10 52 47.1**	**+0.3**
WHY	**Whitehorse**	**2.54**	**103**	Pn	**Pn**	**10 52 48.0**	**+0.8**
WHY				Pg	**Pg**	**10 52 52.9**	**-1.8**
WHY				Sg	**Sg**	**10 53 26.5**	**-0.9**
WHY				Trac		10 53 30.7	
	comp=Z,177nm,0.5s						
WHY	**Whitehorse**	**2.54**	**103**	P	**Pn**	**10 52 48.0**	**+0.9**
PLBC	**Pleasant Camp**	**2.56**	**135**	Pn	**Pn**	**10 52 47.9**	**+0.4**
PLBC				*e*Pg	**Pg**	**10 52 51.4**	**-3.6**
PLBC				*e*Sg	**Sg**	**10 53 26.1**	**-2.0**
DAWY	**Dawson**	**2.78**	**5**	⇓Pn	**Pn**	**10 52 51.5**	**+0.9**
DAWY				Pg	**Pg**	**10 52 57.8**	**-1.5**
DAWY				Sn	**Sn**	**10 53 28.8**	**+4.6**
DAWY				Sg	**Sg**	**10 53 33.7**	**-1.7**
DAWY				Trac		10 53 43.6	
	comp=Z,122nm,0.4s						
DAWY	**Dawson**	**2.78**	**5**	⇓*i*Pn	**Pn**	**10 52 51.5**	**+0.9**
DAWY				*e*Pg	**Pg**	**10 52 57.8**	**-1.5**
DAWY				*e*Sn	**Sn**	**10 53 28.8**	**+4.6**
DAWY				*e*Sg	**Sg**	**10 53 33.7**	**-1.7**
DIV	**Divide**	**2.84**	**269**	P	**Pn**	**10 52 51.5**	**+0.1**
SKAG	**Skagway**	**2.93**	**127**	P	**Pn**	**10 52 54.0**	**+1.3**
EYAK	**Cordova Ski Ar**	**2.95**	**258**	P	**Pn**	**10 52 53.1**	**+0.2**
EGAK	**Eagle**	**3.53**	**351**	*e*Pn	**Pn**	**10 51 2.5**	**+0.6**
EGAK				*e*Sn	**Sg**	**10 53 58.0**	**-1.5**
PMR	**Palmer**	**4.44**	**278**	P	**Pn**	**10 53 13.6**	**+0.2**
RC01	**Rabbit Creek A**	**4.76**	**272**	P	**Pn**	**10 53 16.9**	**-0.8**
MCK	**McKinley**	**4.84**	**304**	*e*Pn	**Pn**	**10 53 21.8**	**+2.9**
MCK				*e*Sn	**Sn**	**10 54 17.4**	**+2.5**
SEW	**Seward**	**4.84**	**260**	P	**Pn**	**10 53 17.8**	**-1.1**
SIT	**Sitka**	**4.87**	**149**	P	**Pn**	**10 53 22.4**	**+3.2**
SLKM	**Skilak Lake**	**5.10**	**266**	P	**Pn**	**10 53 21.9**	**-0.5**
TRF	**Thorofare Moun**	**5.29**	**299**	P	**Pn**	**10 53 26.3**	**+1.3**
KTH	**Kantishna Hill**	**5.59**	**299**	P	**Pn**	**10 53 30.8**	**+1.6**
DLBC	**Dease Lake**	**5.75**	**116**	Pn	**Pn**	**10 53 32.5**	**+1.2**
DLBC				Pg	**Pg**	**10 53 49.1**	**-7.0**
DLBC				Sg	**Sg**	**10 55 09.6**	**-0.9**
DLBC				Trac		10 55 11.8	
	comp=Z,26nm,0.6s						
DLBC	**Dease Lake**	**5.75**	**116**	*e*Pn	**Pn**	**10 53 32.5**	**+1.2**
DLBC				*e*Pg	**Pg**	**10 53 49.1**	**-7.0**
DLBC				*e*Sg	**Sg**	**10 55 09.6**	**-0.9**
WRAK	**Wrangell Islan**	**6.27**	**138**	*e*Pn	**Pn**	**10 53 38.7**	**+0.1**
	22nm,0.8s						
WRAK				*e*Sn	**Sn**	**10 54 57.9**	**+7.6**
KDAK	**Kodiak Island**	**7.34**	**247**	P	**Pn**	**10 53 52.4**	**-0.9**
COLD	**Coldfoot**	**7.43**	**327**	P	**Pn**	**10 53 55.0**	**+0.5**
INK	**Inuvik**	**7.54**	**18**	Pn	**Pn**	**10 53 57.6**	**+1.7**
INK				Sn	**Sn**	**10 55 17.9**	**-3.5**
INK				Trac		10 55 20.4	
	comp=Z,6.0nm,0.6s						
INK	**Inuvik**	**7.54**	**18**	*e*Pn	**Pn**	**10 53 57.6**	**+1.7**
INK				*e*Sn	**Sn**	**10 55 17.9**	**-3.5**
SVW2	**Sparrevohn**	**7.57**	**275**	*e*Pn	**Pn**	**10 53 55.0**	**-1.5**
SVW2				*e*Sn	**Sn**	**10 55 26.4**	**+4.1**
FNBB	**Fort Nelson**	**8.78**	**99**	Pn	**Pn**	**10 54 14.4**	**+1.4**
FNBB				Sg	Sn	10 56 40.6	+49
FNBB				Trac		10 56 54.0	
	comp=Z,7.0nm,0.9s						
FNBB	**Fort Nelson**	**8.78**	**99**	*e*Pn	**Pn**	**10 54 14.4**	**+1.4**
FNBB				*e*Sg	Sn	10 56 40.6	+49

*ISCJB **28** 11:10:37.0±1.8, 4055±006×14216E±008, h84km±17km, mb4.3/22, Error ellipse: s-maj=14.1km s-min=9.6km az=156.6*
*BJI **28** 11:10:39.0, 3885×14237E, h100km, mb4.4*

*NEIC **28** 11:10:41.0±1.6, 4095×14209E, h106km±15km, mb4.7/11, Error ellipse: s-maj=12.6km s-min=9.5km az=78.0*
*IDC **28** 11:10:41.3±2.5, 4135×14215E, h111km±24km, mb3.9/12, mb1 4.1/15, mb1mx4.1/17, mbtmp4.4/15, MS3.2/2, Ms1 3.2/2, ms1mx2.4/23, Error ellipse: s-maj=18.2km s-min=9.9km az=98.0*

ISC 28 11:10:40.5±1.4, 4125±005×14217E±007, h98km±14km, n44, σ1§06/43, mb4.3/22, 1C, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.22**	**137**	P	**Pn**	**11 12 25.2**	**+1.9**
	4.7nm,0.3s,baz=296,slow=9.3,SNR=16						
PMG				S	**Sn**	**11 13 41.4**	**-2.3**
	0.8nm,0.3s,baz=289,slow=18,SNR=3.3						
KAKA	**Kakadu**	**12.86**	**228**	⇑*i*P	**Pn**	**11 13 38.7**	**-0.7**
	30nm,0.4s						
CTA	**Charters Tower**	**16.36**	**166**	P	**Pn**	**11 14 25.2**	**+1.0**
	0.2nm,0.3s,baz=5.4,slow=12,SNR=3.3						
CTA				LR	LR	11 20 30.3	
	comp=Z,46nm,20.5s,baz=157,slow=36						
WRAB	**Tennant Creek**	**17.47**	**205**	*e*P	**Pn**	**11 14 37.2**	**-0.5**
	83nm,0.6s						
WB2	**Warramunga Arr**	**17.48**	**205**	*e*P	**Pn**	**11 14 36.5**	**-1.3**
WB2				*es*P	pP	11 14 51.9	-4.1
WRA	**Warramunga Arr**	**17.48**	**205**	P	**Pn**	**11 14 37.3**	**-0.6**
	8.4nm,0.3s,baz=24,slow=12,SNR=110						
WRA				S	**S**	**11 17 53.0**	**+0.1**
	baz=22,slow=21,SNR=5.2						
AS31	**Alice Springs**	**21.00**	**202**	*e*P	**P**	**11 15 16.2**	**+0.2**
ASAR	**Alice Springs**	**21.01**	**202**	P	**P**	**11 15 16.2**	**+0.2**
	21nm,0.8s,mb4.5,baz=27,slow=9.8,SNR=113						
ASAR				S	**S**	**11 19 02.3**	**-2.1**
	0.8nm,0.9s,baz=12,slow=29,SNR=3.2						
ASPA	**Alice Springs**	**21.01**	**202**	*e*P	**P**	**11 15 16.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**21.32**	**228**	*e*P	**P**	**11 15 19.0**	**-0.4**
	20nm,0.5s,mb4.7						
FITZ				*e*S	**S**	**11 19 12.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**21.32**	**228**	P	**P**	**11 15 19.7**	**+0.3**
	12nm,0.6s,mb4.4,baz=52,slow=11,SNR=31						
FITZ				S	**S**	**11 19 12.0**	**+1.4**
	7.7nm,0.8s,baz=76,slow=22,SNR=3.2						
STKA	**Stephens Creek**	**27.62**	**181**	*e*P	**P**	**11 16 18.6**	**0.0**
	3.0nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**27.62**	**181**	P	**P**	**11 16 18.7**	**+0.1**
	3.9nm,0.7s,mb4.1,baz=359,slow=10.0,SNR=9.9						
FORT	**Forrest**	**29.67**	**205**	*e*P	**P**	**11 16 37.4**	**+0.6**
	14nm,0.8s,mb4.6						
CNB	**Canberra Magne**	**31.75**	**169**	*e*P	**P**	**11 16 56.6**	**+1.5**
	15nm,1.0s,mb4.7						
KLBR	**Kellerberrin**	**35.68**	**217**	*e*P	**P**	**11 17 29.6**	**+0.4**
	26nm,1.6s,mb4.9						
MUN	**Mundaring**	**36.89**	**218**	*e*P	**P**	**11 17 40.7**	**+1.2**
NWAO	**Narrogin (SRO)**	**36.94**	**216**	P	**P**	**11 17 40.6**	**+0.7**
	2.6nm,0.6s,mb4.3,baz=66,slow=7.1,SNR=7.7						
MJAR	**Matsushiro Arr**	**40.62**	**355**	P	**P**	**11 18 11.8**	**+1.2**
	2.3nm,0.8s,mb4.0,baz=176,slow=6.2,SNR=3.4						
PSI	**Prapat**	**43.76**	**278**	P	**P**	**11 18 34.6**	**-1.5**
	3.4nm,0.7s,mb4.2,baz=58,slow=12,SNR=5.0						
RPZ	**Rata Peaks**	**46.97**	**151**	P	**P**	**11 19 01.8**	**+0.3**
	3.5nm,0.4s,mb4.5,baz=258,slow=4.5,SNR=7.6						
XAN	**Xi'an**	**49.23**	**323**	P	**P**	**11 19 18.5**	**-0.4**
XAN				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.4						
LZH	**Lanzhou**	**53.70**	**321**	*e*P	**P**	**11 19 53.5**	**+1.3**
LZH				AMB	AMB		
	comp=Z,18nm,1.2s,mb5.0						
GTA	**Gaotai**	**58.27**	**322**	*e*P	**P**	**11 20 25.3**	**+0.6**
GTA				AMB	AMB		
	comp=Z,4.0nm,1.4s,mb4.3						
RAR	**Rarotonga**	**58.80**	**112**	LR	LR	11 41 35.1	
	comp=Z,3.6nm,18.8s,baz=88,slow=32						
SONM	**Songino Array**	**60.49**	**333**	P	**P**	**11 20 38.4**	**-1.6**
	comp=Z,0.7nm,0.8s,mb3.7,baz=134,slow=6.2,SNR=3.4						
JIRN	**Jiri**	**62.48**	**304**	*e*P	**P**	**11 20 55.0**	**+1.6**
GUN	**Gumba**	**62.82**	**304**	*e*P	**P**	**11 20 56.9**	**+1.2**
KKN	**Kakani**	**63.28**	**304**	*e*P	**P**	**11 20 59.4**	**+0.7**
DMN	**Daman**	**63.36**	**304**	*e*P	**P**	**11 21 00.2**	**+1.0**
GKN	**Gorkha**	**63.88**	**304**	*e*P	**P**	**11 21 02.5**	**-0.2**
	comp=Z,11nm,0.4s,mb5.0						
KOLN	**Koldanda**	**64.67**	**303**	*e*P	**P**	**11 21 05.9**	**-1.9**
MKAR	**Makanchi Array**	**73.02**	**322**	P	**P**	**11 21 59.2**	**-0.3**
	comp=Z,1.0nm,0.5s,mb3.9,baz=95,slow=7.4,SNR=9.0						
VNDA	**Vanda**	**74.10**	**176**	P	**P**	**11 22 05.2**	**-0.6**
	comp=Z,1.4nm,0.6s,mb3.9,baz=326,slow=7.0,SNR=21						
ZAL	**Zalesovo**	**74.90**	**329**	P	**P**	**11 22 08.2**	**-2.3**
	comp=Z,0.9nm,0.4s,mb3.9,baz=347,slow=7.3,SNR=3.2						
MAW	**Mawson**	**82.13**	**202**	P	**P**	**11 22 50.3**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.9,baz=126,slow=5.2,SNR=8.5						
CHKZ	**Chkalovo**	**82.50**	**325**	P	**P**	**11 22 51.0**	**-1.1**
	comp=Z,1.3nm,0.7s,mb3.9						
ZRNK	**Zerenda**	**83.22**	**324**	*e*P	**P**	**11 22 54.8**	**-1.1**
	comp=Z,8.7nm,1.4s,mb4.4						
QSPA	**South Pole Qui**	**85.83**	**180**	*e*P	**P**	**11 23 08.4**	**-0.6**
	comp=Z,3.5nm,0.8s,mb4.3						
SRU	**San Rafael**	**106.01**	**51**	*e*PKPdf	PKiKP	11 28 52.3	-0.6
ESLA	**Sonseca Array**	**133.20**	**324**	*e*PKPdf	PKPdf	11 29 47.0	+2.3
LPAZ	**La Paz**	**143.82**	**125**	PKP	PKPdf	11 30 02.9	-1.2
	comp=Z,1.3nm,0.7s,baz=26,slow=1.6,SNR=6.1						
LPAZ	**La Paz**	**143.82**	**125**	PKP	PKPdf	11 30 02.9	-1.2
DBIC	**Dimbokro**	**147.07**	**276**	PKPbc	PKPbc	11 30 11.2	-0.7
	comp=Z,2.6nm,0.8s,baz=58,slow=4.0,SNR=3.8						

*ISCJB **28** 11:12:30.6±6.8, 1312N±007×14411E±02, h60km±63km, mb4.4/7, Error ellipse: s-maj=34.8km s-min=11.5km az=170.9*
*IDC **28** 11:12:38.0±7.6, 1315N×14404E, h118km±71km, mb4.0/12, mb1 4.1/12, mb1mx4.0/22, mbtmp4.3/12, Error ellipse: s-maj=39.3km s-min=13.3km az=81.0*
*NEIC **28** 11:12:38.7±4.1, 1315N×14398E, h125km±39km, mb4.5/6, Error ellipse: s-maj=22.7km s-min=8.6km az=83.0*

ISC 28 11:12:32.4±6.6, 1319N±007×1440E±02, h61km±63km, n152, σ0§65/150, mb4.4/17, 59C-53D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**20.06**	**315**	P	**P**	**11 17 03.8**	**+3.3**
	24nm,0.7s,baz=152,slow=7.6,SNR=13						
MJAR	**Matsushiro Arr**	**23.84**	**348**	P	**P**	**11 17 39.6**	**-0.2**
	5.9nm,0.7s,mb4.2,baz=167,slow=8.6,SNR=14						
MAJO	**Matsushiro**	**23.84**	**348**	*e*P	**P**	**11 17 39.2**	**-0.6**
	20nm,0.6s,mb4.7						
MAT	**Matsushiro**	**23.84**	**348**	P	**P**	**11 17 39.4**	**-0.4**
CTA	**Charters Tower**	**33.14**	**176**	P	**P**	**11 19 02.6**	**-0.1**
	3.3nm,0.7s,mb4.4,baz=300,slow=8.9,SNR=3.9						
WRA	**Warramunga Arr**	**34.28**	**196**	P	**P**	**11 19 12.3**	**-0.4**
	8.9nm,0.8s,mb4.8,baz=17,slow=9.4,SNR=7.9						
ASAR	**Alice Springs**	**37.95**	**195**	P	**P**	**11 19 44.7**	**+0.8**
	2.8nm,0.8s,mb4.1,baz=22,slow=15,SNR=6.1						
DZM	**Mont Dzumac**	**41.36**	**148**	P	**P**	**11 20 13.1**	**+0.7**
	6.0nm,0.8s,mb4.3,baz=7.1,slow=16,SNR=3.1						
STKA	**Stephens Creek**	**44.87**	**183**	P	**P**	**11 20 39.2**	**-1.4**
	1.0nm,0.4s,mb4.0,baz=1.4,slow=10,SNR=5.7						
STKA	**Stephens Creek**	**44.87**	**183**	P	**P**	**11 20 39.2**	**-1.4**
SONM	**Songino Array**	**46.60**	**326**	P	**P**	**11 20 54.8**	**+0.5**
	1.4nm,0.6s,mb4.1,baz=143,slow=7.7,SNR=8.3						
A04A	**Legoe Bay, Lum**	**82.34**	**42**	⇑P	**P**	**11 24 48.4**	**+0.9**
	baz=82						
C04A	**Brinnon**	**82.36**	**43**	⇑P	**P**	**11 24 48.5**	**+0.8**
	baz=82						
F04A	**Amboy**	**83.09**	**45**	⇓P	**P**	**11 24 51.3**	**-0.1**
	baz=83						
C05A	**Tolt Reservoir**	**83.22**	**43**	⇓P	**P**	**11 24 52.7**	**+0.6**
	baz=83						
N02C	**Big Bar**	**83.49**	**50**	⇓P	**P**	**11 24 53.1**	**-0.4**
	baz=84						
H04A	**Detroit Lake**	**83.50**	**46**	⇑P	**P**	**11 24 53.1**	**-0.4**
	baz=84						
YKA	**Yellowknife Ar**	**83.58**	**27**	P	**P**	**11 24 53.0**	**-0.9**
	1.0nm,0.5s,mb4.2,baz=285,slow=5.2,SNR=6.7						
YKA	**Yellowknife Ar**	**83.58**	**27**	P	**P**	**11 24 53.0**	**-0.9**
M02C	**Callahan**	**83.71**	**49**	⇑P	**P**	**11 24 54.6**	**0.0**
	baz=84						
P01C	**Double 8 Ranch**	**83.74**	**51**	⇑P	**P**	**11 24 54.3**	**-0.5**
	baz=84						
YBH	**Yreka Blue Hor**	**83.74**	**49**	⇓P	**P**	**11 24 54.8**	**+0.1**
	baz=84						
O02C	**Red Bluff**	**84.01**	**50**	⇑P	**P**	**11 24 56.0**	**-0.1**
	baz=84						
WDC	**Whiskeytown Da**	**84.11**	**50**	⇓P	**P**	**11 24 55.5**	**-1.1**
	baz=84						
GASB	**Alder Springs**	**84.17**	**51**	⇑P	**P**	**11 24 56.8**	**-0.1**
	baz=84						
L04A	**Klamath Falls**	**84.25**	**48**	⇓P	**P**	**11 24 57.0**	**-0.3**
	baz=84						
M03C	**McCloud**	**84.27**	**49**	⇑P	**P**	**11 24 57.5**	**0.0**
	baz=84						
FARB	**Farallon Islan**	**84.37**	**53**	⇓P	**P**	**11 24 57.2**	**-0.8**
	baz=84						
M04C	**Macdoel**	**84.37**	**49**	⇑P	**P**	**11 24 58.5**	**+0.5**
	baz=84						
J05A	**Fort Rock**	**84.47**	**47**	P	**P**	**11 24 59.0**	**+0.5**
	baz=84,SNR=6.8						
MNRC	**McLaughlin Nat**	**84.55**	**52**	⇑P	**P**	**11 24 59.1**	**+0.2**
	baz=84						
CVS	**Carmenet Viney**	**84.65**	**52**	⇓P	**P**	**11 24 58.4**	**-0.9**
	baz=85						
H06A	**Lindquist Farm**	**84.78**	**45**	⇓P	**P**	**11 25 00.1**	**+0.1**
	baz=85						
K05A	**Summer Lake**	**84.84**	**47**	⇑P	**P**	**11 25 00.7**	**+0.4**
	baz=85						
HATC	**Hat Creek Radi**	**84.86**	**49**	⇑P	**P**	**11 24 59.9**	**-0.5**
	baz=85						
M05C	**Lookout**	**84.97**	**49**	⇓P	**P**	**11 25 00.8**	**-0.1**
	baz=85						
L05A	**Lakeview**	**85.04**	**48**	⇑P	**P**	**11 25 01.6**	**+0.3**
	baz=85						
I06A	**Prineville**	**85.05**	**46**	⇑P	**P**	**11 25 01.3**	**-0.1**
	baz=85						
ORV	**Oroville**	**85.11**	**51**	⇓P	**P**	**11 25 00.9**	**-0.8**
	baz=85						
O04C	**Chester**	**85.25**	**50**	⇑P	**P**	**11 25 02.5**	**+0.1**
	baz=85						
J06A	**Christmas Vall**	**85.25**	**47**	⇓P	**P**	**11 25 01.9**	**-0.5**
	baz=85						
K06A	**Valley Falls**	**85.29**	**47**	⇑P	**P**	**11 25 02.3**	**-0.2**
	baz=85						
ELFS	**Eagle Lake Fie**	**85.45**	**50**	⇑P	**P**	**11 25 03.0**	**-0.4**
	baz=85						
O05C	**Quincy**	**85.46**	**50**	⇑P	**P**	**11 25 02.6**	**-0.8**
	baz=85						
M06C	**Likely Place G**	**85.50**	**49**	⇓P	**P**	**11 25 03.1**	**-0.5**
	baz=86						
I07A	**Izee**	**85.51**	**46**	⇓P	**P**	**11 25 03.5**	**-0.2**
	baz=86						
F08A	**Pendleton**	**85.60**	**44**	P	**P**	**11 25 04.5**	**+0.4**
	baz=86,SNR=7.3						
G08A	**Pilot Rock**	**85.60**	**45**	⇓P	**P**	**11 25 04.2**	**+0.1**
	baz=86						
S04C	**Ingram Canyon,**	**85.71**	**53**	⇓P	**P**	**11 25 04.0**	**-0.6**
	baz=86						
HAST	**UC Hastings Re**	**85.79**	**54**	⇑P	**P**	**11 25 04.3**	**-0.8**
	baz=86						
J07A	**Hines**	**85.82**	**47**	P	**P**	**11 25 05.6**	**+0.4**
	baz=86,SNR=5.9						
R04C	**Big Horse Ranc**	**85.83**	**52**	⇓P	**P**	**11 25 04.0**	**-1.3**
	baz=86						
P05C	**Yuba Gap, Truc**	**85.84**	**51**	⇑P	**P**	**11 25 04.7**	**-0.6**
	baz=86						
PACP	**Pacheco Peak**	**85.85**	**53**	⇑P	**P**	**11 25 04.8**	**-0.6**
	baz=86						
LAVA	**Lava Cap Winer**	**85.87**	**51**	⇑P	**P**	**11 25 04.6**	**-0.9**
	baz=86						
BEKR	**Beckwourth**	**85.90**	**50**	⇑P	**P**	**11 25 05.3**	**-0.3**
	baz=86,SNR=11						
H08A	**Prairie City**	**85.99**	**45**	⇑P	**P**	**11 25 06.4**	**+0.4**
	baz=86						
K07A	**Rock Creek Ran**	**86.03**	**47**	P	**P**	**11 25 06.1**	**-0.2**
	baz=86,SNR=5.2						
N06A	**Buffalo Meadow**	**86.08**	**49**	⇑P	**P**	**11 25 06.1**	**-0.3**
	baz=86						
V03C	**Hunter Liggett**	**86.12**	**54**	⇓P	**P**	**11 25 04.9**	**-1.8**
	baz=86						
L07A	**Adell**	**86.13**	**48**	⇓P	**P**	**11 25 07.1**	**+0.4**
	baz=86						
F09A	**S2 Ranch, Elgi**	**86.21**	**44**	⇑P	**P**	**11 25 07.4**	**+0.3**
	baz=86						
I08A	**Drewsey**	**86.21**	**46**	⇓P	**P**	**11 25 07.3**	**+0.2**
	baz=86						
O06A	**Flanigan**	**86.22**	**50**	P	**P**	**11 25 07.5**	**+0.3**
	baz=86,SNR=9.8						
CMB	**Columbia Colle**	**86.31**	**52**	⇓P	**P**	**11 25 07.8**	**+0.2**
	baz=86

O11A	Cowboy Ranch, baz=89	89.31	49	⇓P		P	11 25 22.6	+0.6
R10A	Warm Springs baz=89	89.35	51	⇑P		P	11 25 22.4	+0.2
P11A	Circle Ranch, baz=89	89.41	50	⇑P		P	11 25 23.1	+0.7
FURC	Furnace Creek, baz=89,SNR=6.5	89.43	53	P		P	11 25 23.1	+0.6
M12A	Wells baz=89	89.48	48	⇓P		P	11 25 23.0	+0.3
N12A	Clover Valley, baz=90	89.56	48	⇓P		P	11 25 23.0	-0.1
GSC	Goldstone baz=90,SNR=5.2	89.79	54	P		P	11 25 24.8	+0.6
U10A	Ash Meadows, A baz=90	89.85	53	⇓P		P	11 25 24.7	+0.2
O12A	Currie baz=90	89.94	49	⇑P		P	11 25 24.9	0.0
M13A	Montello baz=90	90.04	47	⇓P		P	11 25 25.8	+0.5
P12A	McGill baz=90	90.06	49	⇓P		P	11 25 25.7	+0.3
109C	Camp Elliot, M baz=90	90.21	56	⇑P		P	11 25 25.1	-1.0
Q12A	Willow Creek R baz=90	90.24	50	⇑P		P	11 25 26.8	+0.5
TUQ	Turquoise Mtn. baz=90,SNR=5.1	90.44	54	⇓P		P	11 25 26.7	-0.5
PFO	Pinyon Flat Ob baz=90	90.54	55	⇑P		P	11 25 26.8	-0.9
MONP	Monument Peak baz=91	90.76	56	⇓P		P	11 25 27.9	-0.8
BELC	Belle Mtn. baz=91	90.79	55	⇑P		P	11 25 29.1	+0.3
GMRC	Granite Mounta baz=91	90.84	54	⇑P		P	11 25 29.2	+0.2
DVTC	Desert V Tower baz=91	91.09	56	⇑P		P	11 25 30.8	+0.6
V12A	Nelson baz=91,SNR=5.5	91.20	53	P		P	11 25 31.4	+0.6
DUG	Dugway 1.7nm,1.0s,mb4.3	91.37	48	*e*P		P	11 25 31.3	-0.2
ARUT	Antelope Range	91.66	51	*e*P		P	11 25 33.9	+1.0
HWUT	Hardware Ranch 2.3nm,0.9s,mb4.5	91.81	47	*e*P		P	11 25 33.5	-0.1
GLA	Glamis baz=92	92.00	56	⇓P		P	11 25 34.5	+0.1
Y12C	Blythe baz=92	92.04	55	⇑P		P	11 25 34.9	+0.2
W13A	Hualapai Mount baz=92	92.14	53	⇑P		P	11 25 35.8	+0.7
PDMCI	Parker Dam,Lak baz=92	92.18	54	⇓P		P	11 25 35.6	+0.3
X13A	Yucca baz=92	92.33	54	⇑P		P	11 25 36.2	+0.2
Y13A	Salome baz=92	92.57	55	⇓P		P	11 25 37.3	+0.2
W14A	Seligman baz=93	92.73	53	⇑P		P	11 25 38.3	+0.5
PDAR	Pinedale Array 0.6nm,0.6s,mb4.2,baz=256,slow=2.5,SNR=8.0	92.82	45	P		P	11 25 37.5	-0.7
X14A	Yava baz=93	93.11	54	⇓P		P	11 25 40.1	+0.5
Y14A	Wickenburg baz=93	93.19	54	⇑P		P	11 25 40.1	+0.2
W15A	Williams baz=93	93.38	53	⇓P		P	11 25 41.5	+0.7
Z14A	Wintersburg baz=93	93.41	55	⇑P		P	11 25 41.3	+0.4
LAO	LASA Array 10nm,1.0s,mb5.2	93.56	40	*e*P		P	11 25 41.1	-0.5
X15A	Humboldt baz=94	93.62	54	⇑P		P	11 25 42.6	+0.7
115A	Sonoran Desert baz=94	94.19	55	⇓P		P	11 25 45.0	+0.5
116A	Eloy baz=95	94.65	55	⇑P		P	11 25 47.5	+0.8
Y22C	IRIS PASSCAL I baz=98	97.89	52	⇑P		P	11 26 03.8	+2.4
TORD	Torodi Ar. Bea 0.7nm,0.5s,baz=88,slow=1.8,SNR=5.1	134.42	304	PKP		PKPdf	11 31 43.6	+0.1
LPAZ	La Paz 0.9nm,0.9s,baz=322,slow=4.3,SNR=3.6	148.75	100	PKPbc		PKPbc	11 32 13.4	+0.6

*NEIC **28** 11:26:12.3, 3135S×7173W, h46km, MG3.1(GUC), After GUC.*

GUC 28 11:26:12.3±1.0, 3135S×7173W, h46km±4km, MD3.7, ML3.1, 6C-11D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	0.65	74⇑	*i*P	Pn	11 26 25.5	+0.3
CMCH				*i* S	Sn	11 26 35.9	+1.4
CMCH				AML	AML	11 26 37.0	
	comp=E,5μm,0.8s						
CMCH	Combarbala	0.65	74⇑	*i*P	Pn	11 26 25.5	+0.3
CMCH				*i* S	Sn	11 26 35.9	+1.4
OVCH	Ovalle	0.87	32⇓	*i*P	Pn	11 26 29.1	+1.0
OVCH				*i* S	Sn	11 26 41.2	+1.5
OVCH				AML	AML	11 26 42.3	
	comp=E,1μm,0.2s						
OVCH	Ovalle	0.87	32⇓	*i*P	Pn	11 26 29.1	+1.0
OVCH				*i* S	Sn	11 26 41.2	+1.5
PTCH	Petorca	1.14	143⇓	*i*P	Pn	11 26 32.8	+1.0
PTCH				*i* S	Sn	11 26 47.5	+1.3
PTCH				AML	AML	11 26 49.1	
	comp=N,1μm,0.5s						
PTCH	Petorca	1.14	143⇓	*i*P	Pn	11 26 32.8	+1.0
PTCH				*i* S	Sn	11 26 47.5	+1.3
PACH	Papudo	1.21	168	*i* S	Sn	11 26 48.3	+0.4
TLL	Tololo Astrono	1.42	34⇓	*i*P	Pn	11 26 36.7	+1.0
TLL				*i* S	Sn	11 26 55.1	+1.8
TLL				AML	AML	11 26 57.6	
	comp=N,628nm,0.3s						
TLL	Tololo Astrono	1.42	34⇓	*i*P	Pn	11 26 36.7	+1.0
TLL				*i* S	Sn	11 26 55.1	+1.8
JACH	Jahuel	1.64	144⇑	*i*P	Pn	11 26 40.0	+1.4
JACH				*i* S	Sn	11 27 00.3	+1.7
ROCH	El Roble	1.73	160	*i*P	Pn	11 26 40.5	+0.6
PEL	Peldehue	1.99	154⇓	*i*P	Pn	11 26 44.3	+0.8
PEL				*e*S	Sn	11 27 08.3	+1.1
PEL				AML	AML	11 27 13.7	
	comp=E,268nm,0.2s						
PEL	Peldehue	1.99	154⇓	*i*P	Pn	11 26 44.3	+0.8
PEL				*e*S	Sn	11 27 08.3	+1.1
LCCH	Las Cruces	2.12	176⇓	*i*P	Pn	11 26 45.3	0.0
LCCH				*i* S	Sn	11 27 09.7	-0.7
RCDM	Rinconada Maip	2.27	160⇑	*i*P	Pn	11 26 48.1	+0.8
RCDM				*i* S	Sn	11 27 14.4	+0.4
RCDM				AML	AML	11 27 16.9	
	comp=E,103nm,0.2s						
RCDM	Rinconada Maip	2.27	160⇑	*i*P	Pn	11 26 48.1	+0.8
RCDM				*i* S	Sn	11 27 14.4	+0.4
FCH	Farellones	2.32	149⇑	*i*P	Pn	11 26 49.3	+1.4
FCH				*i* S	Sn	11 27 17.2	+2.0
FCH				AML	AML	11 27 28.8	
	comp=E,48nm,0.2s						
TACH	Talagante	2.39	164	*i* P	Pn	11 26 49.2	+0.2
CHCH	Chadas Angostu	2.73	161⇓	*i*P	Pn	11 26 55.0	+1.4
CHCH				*i* S	Sn	11 27 27.1	+1.8
CACH	El Canelo	2.92	161⇓	*i*P	Pn	11 26 57.7	+1.6
CICH	Cipreses	3.16	160	*i* P	Pn	11 27 00.9	+1.5

*PGC **28** 11:33:22.1, 6625N×14209W, h5km, ML3.1/2, 274km northwest of Dawson, Yt Eastern Alaska.*

NEIC 28 11:33:23.4, 6619N×14229W, h31km, ML3.0(AEIC)**, After AEIC., Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	Eagle	1.50	161	*e*Pn	Pn	11 33 48.2	+0.1
EGAK				*e*Sn	Sn	11 34 07.6	+1.0
DAWY	Dawson	2.46	149	Pn	Pn	11 34 01.8	+0.4
DAWY				Sn	Sn	11 34 32.8	+2.3
DAWY				Sg	Sn	11 34 36.9	+6.5
DAWY				Trac		11 34 41.6	
	comp=Z,31nm,0.2s						
DAWY	Dawson	2.46	149	P	Pn	11 34 01.9	+0.5
DAWY				S	Sn	11 34 32.8	+2.4
COLA	College	2.67	243	P	Pn	11 34 04.9	+0.7
COLD	Coldfoot	3.31	292	P	Pn	11 34 14.3	+1.3
COLD				S	Sn	11 34 52.8	+1.5
MENT	Mentasta	3.33	191	P	Pn	11 34 15.1	+1.8
INK	Inuvik	4.01	54	Pn	Pn	11 34 22.0	-0.7
INK				Sn	Sn	11 35 06.3	-2.3
INK				Sg	Sn	11 35 24.5	+16
INK				Trac		11 35 27.7	
	comp=Z,21nm,0.4s						
INK	Inuvik	4.01	54	*e*Pn	Pn	11 34 23.0	+0.3
INK				*e*Sn	Sn	11 35 07.3	-1.4
TRF	Thorofare Moun	4.39	235	P	Pn	11 34 29.8	+2.0
KTH	Kantishna Hill	4.53	238	P	Pn	11 34 30.2	+0.4
HYT	Haines Junctio	5.80	156	Pn	Pn	11 34 48.2	+1.0
HYT				Sg	Sn	11 36 23.2	+31
HYT				Trac		11 36 31.5	
	comp=Z,7.0nm,0.6s						
WHY	Whitehorse	6.47	146	Pn	Pn	11 34 56.8	+0.4
WHY				Sg	Sn	11 36 42.2	+33
WHY				Trac		11 36 49.6	
	comp=Z,3.0nm,0.6s						
DLBC	Dease Lake	9.63	138	Pn	Pn	11 35 39.9	+0.1
DLBC				Sg	Sn	11 38 23.1	+56
DLBC				Trac		11 38 31.5	
	comp=Z,2.0nm,0.7s						
YKW3	Yellowknife Ar	12.46	94	Pn	Pn	11 36 15.2	-3.3

IDC 28 11:41:03.7±60.0, 1621S×17429W, h0km, mb4.5/3, mb1 4.7/3, mb1mx4.0/13, mbtmp4.5/3, Error ellipse: s-maj=1143.0km s-min=171.2km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek 2.4nm,0.8s	42.90	240	*e*P	P	11 49 04.6	+0.7
STKA	Stephens Creek 3.8nm,0.9s,baz=85,slow=9.1,SNR=6.9	42.90	240	P	P	11 49 04.5	+0.6
WB2	Warramunga Arr	48.82	258	*e*P	P	11 49 51.0	+0.3
WRA	Warramunga Arr 2.3nm,0.5s,baz=96,slow=7.1,SNR=34	48.83	258	P	P	11 49 51.2	+0.4
ASAR	Alice Springs 10nm,0.6s,baz=87,slow=8.7,SNR=267	49.05	253	P	P	11 49 52.6	+0.1
ASPA	Alice Springs	49.05	253	*e*P	P	11 49 52.5	0.0
FORT	Forrest 3.9nm,0.4s	54.29	244	*e*P	P	11 50 30.7	-1.0
FITZ	Fitzroy Crossi 3.1nm,1.0s	57.21	259	*e*P	P	11 50 53.3	+0.7

*ISCJB **28** 12:10:17.0±0.4, 968S×006×10729E±0.07, h10km, mb4.5/25, Error ellipse: s-maj=11.8km s-min=6.3km az=115.9*
*IDC **28** 12:10:17.3±0.7, 966S×10728E, h0km, mb4.3/10, mb1 4.3/12, mb1mx4.2/19, mbtmp4.2/12, ML3.7/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/20, Error ellipse: s-maj=28.3km s-min=14.7km az=66.0*
*BJI **28** 12:10:17.0, 970S×10730E, h10km, mB4.9, mb4.4*
*NEIC **28** 12:10:19.1±0.3, 967S×10731E, h10km, mb4.6/11, Error ellipse: s-maj=11.9km s-min=4.9km az=53.0*
*MOS **28** 12:10:19.3±1.2, 900S×10923E, h33km, mb5.0/11, Error ellipse: s-maj=33.5km s-min=10.6km az=106.7*

ISC 28 12:10:18.9±4.2, 967S±007×10730E±009, h9km±26km, n52, σ1§02/51, mb4.5/25, 1C-2D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang 2μm,0.8s	2.84	6	P	Pn	12 11 04.7	+0.2
CBJI	Citeko 917nm,0.4s	3.26	352	P	Pn	12 11 06.2	-4.0
JCJI	Jatiwangi 491nm,0.5s	3.30	17	P	Pn	12 11 09.9	-0.9
BJII	Banjamegara 118nm,0.8s	3.33	46	P	Pn	12 11 10.5	-0.6
SBJI	Serang 367nm,0.9s	3.71	342	P	Pn	12 11 18.1	+1.7
KRKI	Karangkates 330nm,0.5s	5.31	74	P	Pn	12 11 43.3	+4.9
KSI	Kapahiang 94nm,0.8s	7.59	322	P	Pn	12 12 07.6	-2.1
PSI	Prapat 0.1nm,0.3s,baz=131,slow=9.3,SNR=3.0	14.94	326	Pn	Pn	12 13 50.3	+0.1
PSI				LR	LR	12 20 28.2	
	comp=Z,98nm,19.4s,baz=151,slow=41						
MBWA	Marble Bar 16nm,0.8s	16.54	135	*e*P	Pn	12 14 06.5	-4.6
KKM	Kota Kinabalu	17.96	30	*e*P	Pn	12 14 29.5	+0.6
FITZ	Fitzroy Crossi 14nm,0.8s	19.66	117	*e*P	Pn	12 14 49.6	+0.1
FITZ	Fitzroy Crossi 0.4nm,0.3s,baz=270,slow=7.2,SNR=21	19.66	117	P	Pn	12 14 49.4	-0.1
FITZ				LR	LR	12 20 40.1	
	comp=Z,82nm,21.3s,baz=258,slow=32						
NWAO	Narrogin (SRO) 4.9nm,0.6s,mb4.2,baz=326,slow=11,SNR=7.2	24.90	160	P	P	12 15 41.6	-0.4
WRA	Warramunga Arr 2.4nm,0.7s,mb3.9,baz=284,slow=11,SNR=12	28.02	114	P	P	12 16 10.1	-0.2
WRAB	Tennant Creek	28.03	114	*e*P	P	12 16 10.8	+0.4
WB2	Warramunga Arr	28.03	114	*e*P	P	12 16 10.4	0.0
WB2	Warramunga Arr	28.03	114	*e*P	P	12 16 10.5	+0.1
AS31	Alice Springs	28.96	122	*e*P	P	12 16 19.2	+0.6
ASAR	Alice Springs 1.3nm,0.7s,mb3.8,baz=297,slow=8.6,SNR=11	28.96	122	P	P	12 16 19.7	+1.0
ASAR				PcP	PcP	12 19 27.8	+0.4
	0.4nm,0.7s,baz=280,slow=1.5,SNR=5.8						
CHTO	Chiang Mai	29.48	344	P	P	12 16 22.8	-0.4
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
CHTO	Chiang Mai	29.48	344	P	P	12 16 22.8	-0.4
	comp=Z,5.9nm,1.0s,mb4.3						
GYA	Guiyang	35.91	359	⇓*i*P	P	12 17 21.0	+1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
STKA	Stephens Creek	38.67	130	*e*P	P	12 17 43.4	+0.5
	comp=Z,5.6nm,0.8s,mb4.3						
STKA	Stephens Creek	38.67	130	P	P	12 17 43.7	+0.8
	comp=Z,7.4nm,0.8s,mb4.5,baz=307,slow=8.4,SNR=17						
JIRN	Jiri	42.37	332	*e*P	P	12 18 14.3	+0.8
	comp=Z,55nm,1.0s,mb5.1						
GUN	Gumba	42.73	332	*e*P	P	12 18 17.4	+1.0
DMN	Daman	42.84	330	*e*P	P	12 18 18.5	+1.2
	comp=Z,39nm,1.0s,mb5.1						
GKN	Gorkha	43.40	330	*e*P	P	12 18 22.3	+0.5
XAN	Xi'an	43.49	2	P	P	12 18 22.0	-0.6
XAN				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
KOLN	Koldanda	43.73	329	*e*P	P	12 18 24.7	+0.2
	comp=Z,24nm,0.9s,mb4.9						
JHJ	Hachijo jima 2	52.61	35	LR	LR	12 40 17.2	
	comp=Z,36nm,20.0s,baz=312,slow=34						
MJAR	Matsushiro Arr	54.38	31	P	P	12 19 44.4	-1.7
	comp=Z,2.3nm,0.9s,mb4.1,baz=205,slow=7.2,SNR=4.9						
SONM	Songino Array	57.25	359	P	P	12 20 07.3	+0.6
	comp=Z,2.4nm,0.6s,mb4.4,baz=177,slow=8.2,SNR=14						
ULN	Ulaanbaatar	57.28	360	*e*P	P	12 20 06.5	-0.4
ULN				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
ULN	Ulaanbaatar	57.28	360	*e*P	P	12 20 06.5	-0.4
	comp=Z,2.3nm,0.4s,mb4.6						
AAK	Ala-Archa	60.07	333	⇑*i*P	P	12 20 28.3	+2.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
MK31	Makanchi Array	60.48	340	P	P	12 20 28.8	-0.4
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
MKAR	Makanchi Array	60.48	340	P	P	12 20 28.9	-0.2
	comp=Z,4.9nm,0.5s,mb4.8,baz=134,slow=7.0,SNR=16						
KK31	Karatay Array	62.31	330	*i* P	P	12 20 44.7	+3.2
KK31				pmax	pmax		
	comp=Z,10.0nm,0.2s,mb5.6						
KKAR	Karatay Array	62.31	330	P	P	12 20 44.7	+3.2
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb5.4						
MAW	Mawson	64.92	197	P	P	12 20 58.4	-0.3
	comp=Z,3.0nm,0.6s,mb4.5,baz=50,slow=6.8,SNR=30						
ZAL	Zalesovo	66.17	346	P	P	12 21 06.3	-0.6
	comp=Z,1.1nm,0.4s,mb4.2,baz=152,slow=8.3,SNR=4.3						
KRAR	Krasnoyarsk	66.53	351	⇓*e*P	P	12 21 07.1	-2.1
BRVK	Borovoye	69.99	337	*e*P	P	12 21 31.3	+0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BRVK	Borovoye	69.99	337	*e*P	P	12 21 31.3	+0.4
	comp=Z,2.9nm,0.9s,mb4.2						
CHKZ	Chkalovo	70.35	338	*e*P	P	12 21 32.4	-0.6
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
CHKZ	Chkalovo	70.35	338	*e*P	P	12 21 32.4	-0.6
	comp=Z,6.8nm,0.7s,mb4.7						
ZRNK	Zerenda	70.40	337	*e*P	P	12 21 32.8	-0.6
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
ZRNK	Zerenda	70.40	337	*e*P	P	12 21 32.8	-0.5
	comp=Z,7.2nm,0.8s,mb4.7						
AB31	Akbulak array	71.85	330	*i* P	P	12 21 41.4	-0.7
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
VNDA	Vanda	73.31	169	P	P	12 21 49.8	-1.1
	comp=Z,0.3nm,0.5s,mb3.5,baz=314,slow=8.0,SNR=6.3						
ARU	Arti	77.14	335	*e*P	P	12 22 11.1	-1.8
ARU				*e*		12 25 04.8	
ARU				*e*PPP		12 26 50.3	
ARU				*e*S	S	12 31 53.1	-9.1

*MOS **28** 12:16:46.2±0.6, 5003N×15674E, h45km, mb4.5/2, Error ellipse: s-maj=29.9km s-min=9.1km az=73.4*
*ISCJB **28** 12:16:50.1±0.9, 5036N±0.10×1565E±0.1, h95km±9km, mb3.8/8, Error ellipse: s-maj=20.4km s-min=6.6km az=97.2*
*KRSC **28** 12:16:50, 5039N×15701E, h49km, ML4.5*
*NEIC **28** 12:16:51.3±0.5, 5061N×156.16E, mb4.2/4, Error ellipse: s-maj=14.7km s-min=9.4km az=130.0*
*IDC **28** 12:16:56.1±4.3, 5078N×15596E, h141km±41km, mb3.4/9, mb1 3.7/11, mb1mx3.5/25, mbtmp3.9/11, Error ellipse: s-maj=30.9km s-min=13.4km az=133.0*

ISC 28 12:16:52.8±0.7, 5055N±008×1562E±01, h107km±6km, n59, σ1§43/71, mb3.8/8, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.14	339	⇓*i*PN	Pn	12 17 01.4	-6.3
SKR				*i* S	Sn	12 17 10.4	-8.4
SKR				pmax	pmax		
	comp=Z,5μm,0.5s						
SKR				pmax	pmax		
	comp=N,4μm,0.2s						
SKR				pmax	pmax		
	comp=E,2μm,0.2s						
SKR				smax			
	comp=N,31μm,2.0s						
SKR				smax			
	comp=E,35μm,2.0s						
ALID	Alaid	0.52	308	*e*P	Pn	12 17 08.4	-1.1
ALID				*i* S	Sn	12 17 20.7	-1.3
MIPR	Malaya Ipel'ka	1.77	11	*i* P	Pn	12 17 21.5	-1.1
MIPR				*i* S	Sn	12 17 44.3	-1.1
GRL	Gorelyy	2.32	30	*e*P	Pn	12 17 29.6	-0.2
GRL				*i* S	Sn	12 17 58.3	+0.2
RUS	Russkaya	2.38	37	P	Pn	12 17 28.1	-2.4
RUS				S	Sn	12 17 55.0	-4.4
RUS	Russkaya	2.38	37	*e*P	Pn	12 17 28.1	-2.4
RUS				*i* S	Sn	12 17 55.0	-4.4
PET	Petropavlovsk	2.91	31	P	Pn	12 17 36.9	-0.6
PET				S	Sn	12 18 10.5	-1.4
PET	Petropavlovsk	2.91	31	*e*Pn	Pn	12 17 36.1	-1.4
PET	Petropavlovsk	2.91	31	*e*P	Pn	12 17 36.9	-0.6
PET				*i* S	Sn	12 18 10.5	-1.4
AVH	Avacha	3.14	29	*e*P	Pn	12 17 41.0	+0.5
NLC	Nalytchevo	3.27	35	P	Pn	12 17 39.4	-2.9
NLC				S	Sn	12 18 14.5	-6.0
NLC	Nalytchevo	3.27	35	*e*P	Pn	12 17 39.4	-2.9
NLC				*i* S	Sn	12 18 14.5	-6.0
GNL	Ganaly	3.33	18	*e*P	Pn	12 17 43.2	+0.2
SPN	Mys Shipunski	3.48	41	P	Pn	12 17 42.7	-2.4
SPN				S	Sn	12 18 20.5	-5.1
SPN	Mys Shipunski	3.48	41	*e*P	Pn	12 17 42.7	-2.4
SPN				*i* S	Sn	12 18 20.5	-5.1
MKZ	Mys Kozlova	5.24	38	P	Pn	12 18 05.5	-3.3
MKZ				S	Sn	12 19 00.5	-7.5
MKZ	Mys Kozlova	5.24	38	*e*P	Pn	12 18 05.5	-3.3
MKZ				*i* S	Sn	12 19 00.5	-7.5
TUMR	Tumrok	5.31	25	*i* P	Pn	12 18 11.5	+1.8
KMNR	Kamenistaya	5.75	23	*e*P	Pn	12 18 17.8	+2.1
KPT	Kopyto	5.94	22	*e*P	Pn	12 18 19.5	+1.3
KOZ	Kozyrevsk	5.94	20	P	Pn	12 18 19.9	+1.6
KOZ	Kozyrevsk	5.94	20	*e*P	Pn	12 18 19.9	+1.6
KOZR	Kozyr	5.95	20	PN	Pn	12 18 19.9	+1.5
ZLN	Zelenaya	6.13	25	*e*P	Pn	12 18 21.5	+0.6
SRDR	Sredinnyy	6.15	19	*e*P	Pn	12 18 23.2	+2.1
CIRR	Tsirk	6.21	24	*e*P	Pn	12 18 23.9	+2.1
KRSR	Krestovskiy	6.25	23	*e*P	Pn	12 18 23.6	+1.2
KLY	Klyuchi	6.36	23	P	Pn	12 18 25.8	+1.9
KLY	Klyuchi	6.36	23	*e*P	Pn	12 18 25.8	+1.9
BDR	Baidarnaya	6.73	24	*e*P	Pn	12 18 30.3	+1.4
SRKR	Sorokina	6.79	24	*e*P	Pn	12 18 30.8	+1.0
SMKR	Semkarok	6.81	25	*e*P	Pn	12 18 30.6	+0.6
MA2	Magadan	9.56	343	*e*PN	Pn	12 19 07.5	+0.1
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	Magadan	9.56	343	*e*P	Pn	12 19 07.0	-0.4
	comp=Z,6.8nm,0.6s						
ASAJ	Asahikawa	11.24	240	P	Pn	12 19 33.4	+3.3
	comp=Z,1.5nm,0.3s,baz=76,slow=11,SNR=14						
ASAJ	Asahikawa	11.24	240	PN	Pn	12 19 33.4	+3.3
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KLR	Kul'dur	15.80	275	*e*P	Pn	12 20 31.6	+2.6
YAK	Yakutsk	18.52	318	*e*P	P	12 20 59.8	-0.8
YAK				pmax	pmax		
	comp=Z,25nm,1.2s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK	Yakutsk	18.52	318	*e*P	P	12 20 59.5	-1.2
	comp=E,32nm,0.8s						
MAJO	Matsushiro	19.06	230	*e*P	P	12 21 06.7	+0.1
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MAJO	Matsushiro	19.06	230	*e*P	P	12 21 06.7	+0.1
	comp=Z,8.9nm,0.9s						
MJAR	Matsushiro Arr	19.06	230	P	P	12 21 07.3	+0.7
	comp=Z,0.4nm,0.3s,baz=17,slow=11,SNR=7.4						
SONM	Songino Array	32.17	285	PcP	PcP	12 25 55.7	-1.0
	comp=Z,0.3nm,0.3s,baz=106,slow=1.7,SNR=3.8						
EGAK	Eagle	34.77	42	*e*P	P	12 23 30.8	-2.0
INK	Inuvik	37.36	35	P	P	12 23 53.1	-1.7
	comp=Z,2.0nm,0.6s,mb4.2,baz=286,slow=7.6,SNR=7.1						
INK	Inuvik	37.36	35	*e*P	P	12 23 53.8	-1.0
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	37.36	35	*e*P	P	12 23 53.8	-1.0
	comp=Z,2.0nm,0.6s,mb4.2						
DLBC	Dease Lake	41.52	50	P	P	12 24 27.9	-1.6
	comp=Z,1.6nm,0.8s,mb3.8,baz=284,slow=8.3,SNR=4.4						
ZAL	Zalesovo	42.15	303	PcP	PcP	12 26 25.9	-1.1
	comp=Z,1.0nm,0.5s,baz=82,slow=3.3,SNR=3.2						
MKAR	Makanchi Array	47.08	296	P	P	12 25 11.5	-2.1
	comp=Z,0.5nm,0.5s,mb3.5,baz=72,slow=7.8,SNR=4.3						
MKAR	Makanchi Array	47.08	296	P	P	12 25 11.5	-2.1
CHKZ	Chkalovo	49.59	309	*e*P	P	12 25 30.2	-2.8
NVAR	Mina Array Bea 2.0nm,0.4s,mb3.7,baz=297,slow=7.6,SNR=4.0	58.94	66	P	P	12 26 41.1	+0.5

ellipse: s-maj=31.5km s-min=24.9km az=150.0

ISC 28 12:22:15.3±6.2, 205S±01×1693E±02, h27km±46km, n14, σ1§07/15, mb4.0/4, 1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKM	**Butte a Klehm**	**2.99**	**340**	⇓*iP*	**Pn**	**12 23 00.6**	**-0.3**
DZM	**Mont Dzumac**	**3.11**	**239**	*eP*	**Pn**	**12 23 02.2**	**-0.3**
DZM				*eS*	**Sn**	**12 23 35.9**	**-2.8**
DZM	**Mont Dzumac**	**3.11**	**239**	Pn	**Pn**	**12 23 02.2**	**-0.3**
	3.9nm,0.3s,baz=54,slow=18,SNR=139						
DZM				Sn	**Sn**	**12 23 39.3**	**+0.6**
	23nm,0.3s,baz=36,slow=22,SNR=8.8						
CTA	**Charters Tower**	**21.64**	**267**	*eP*	**P**	**12 27 06.1**	**+2.7**
	2.2nm,0.5s,mb3.8						
CTAO	**Charters Tower**	**21.64**	**267**	*eP*	**P**	**12 27 06.0**	**+2.6**
STKA	**Stephens Creek**	**27.26**	**240**	*eP*	**P**	**12 27 58.8**	**+1.6**
	2.2nm,0.7s,mb3.8						
STKA	**Stephens Creek**	**27.26**	**240**	P	**P**	**12 27 58.2**	**+1.0**
	1.5nm,0.7s,mb3.6,baz=85,slow=9.8,SNR=6.9						
STKA	**Stephens Creek**	**27.26**	**240**	*eP*	**P**	**12 27 58.1**	**+0.9**
WRA	**Warramunga Arr**	**32.79**	**265**	P	**P**	**12 28 45.6**	**-0.6**
	0.6nm,0.5s,mb3.8,baz=92,slow=8.6,SNR=7.0						
AS31	**Alice Springs**	**32.92**	**258**	*eP*	**P**	**12 28 45.7**	**-1.6**
ASAR	**Alice Springs**	**32.92**	**258**	P	**P**	**12 28 47.5**	**+0.2**
	4.1nm,0.7s,mb4.5,baz=82,slow=9.3,SNR=88						
ASPA	**Alice Springs**	**32.92**	**258**	*eP*	**P**	**12 28 47.4**	**+0.1**
SBA	**Scott Base**	**57.42**	**181**	*eP*	**P**	**12 32 01.3**	**-0.2**
GERES	**GERESS Array B**	**145.62**	**331**	PKPbc	PKPbc	12 41 48.6	-2.7
	0.3nm,0.3s,baz=35,slow=5.3,SNR=4.8						

WEL 28 12:27:01.9±0.3, 3740S×17651E, h266km±4km, ML3.5/9, 2C, Error ellipse: s-maj=7.7km s-min=6.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.99**	**151**	⇑*P*	Pn	12 27 38.6	+0.1
URZ				*S*	S	12 28 06.9	-0.5
MWZ	**Matawai**	**1.24**	**140**	PN	Pn	12 27 40.1	+0.2
MWZ				*S*	S	12 28 10.2	+0.3
MXZ	**Matakaoa Point**	**1.44**	**97**	PN	Pn	12 27 41.5	+0.2
MXZ				*S*	S	12 28 11.6	-0.7
PUZ	**Puketiti**	**1.54**	**117**	PN	Pn	12 27 42.0	0.0
PUZ				*S*	S	12 28 12.4	-1.3
BKZ	**Black Stump Fm**	**1.77**	**180**	⇑PN	Pn	12 27 43.7	0.0
KNZ	**Kokohu**	**1.86**	**151**	PN	Pn	12 27 44.7	+0.2
MRZ	**Mangatainoka R**	**3.34**	**192**	*S*	S	12 28 41.8	-2.5
KIW	**Kapiti Island**	**3.68**	**199**	PN	Pn	12 28 00.7	-2.0
TCW	**Tory Channel**	**4.19**	**204**	PN	Pn	12 28 06.6	-1.9
TUWZ	**Tuamarina**	**4.49**	**205**	PN	Pn	12 28 10.1	-2.0
NNZ	**Nelson**	**4.52**	**211**	*e*PN	Pn	12 28 10.2	-2.3
KHZ	**Kahutara**	**5.51**	**204**	PN	Pn	12 28 22.1	-2.2

*BEO **28** 12:43:19.7±0.2, 4425N×1776E, h11km*
*ISCJB **28** 12:43:20.7±0.6, 4430N±002×1795E±004, h4km±4km, Error ellipse: s-maj=4.6km s-min=2.4km az=129.5*
*CSEM **28** 12:43:22.7±0.0, 4438N×1775E, h10km, ML2.5/3, Error ellipse: s-maj=2.0km s-min=0.9km az=65.0*
*VIE **28** 12:43:22.4±0.5, 4432N×1800E, h10km, mb2.7/3, ML2.5/3, Error ellipse: s-maj=3.9km s-min=2.5km az=138.0 64 km NNW of Sarajewo*
*PDG **28** 12:43:25.0±0.2, 4404N×1798E, h9km*
*NEIC **28** 12:43:25.0, 4404N×1798E, h9km, MD3.0(PDG), After PDG.*

ISC 28 12:43:21.9±0.6, 4426N±002×1792E±004, h5km±4km, n32, σ1§15/58, 11C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.72**	**313**	P	**Pg**	**12 43 34.5**	**-1.1**
BLY				S	**Sg**	**12 43 46.4**	**+1.4**
UPM	**Unac-Piva**	**1.28**	**145**	⇓*i*Pg	**Pn**	**12 43 44.6**	**-1.8**
UPM				*e*Sg	**Sn**	**12 44 01.4**	**-2.5**
PLE	**Pljevlja**	**1.42**	**130**	⇓*i*Pg	**Pg**	**12 43 47.8**	**-1.2**
PLE				*i* Sg	**Sg**	**12 44 07.7**	**+0.4**
BRY	**Bratogost**	**1.43**	**161**	⇓*i*Pg	**Pg**	**12 43 47.2**	**-2.0**
BRY				*e*Sg	**Sg**	**12 44 06.8**	**-1.1**
BRY	**Bratogost**	**1.43**	**161**	⇓*i*Pg	**Pn**	**12 43 47.2**	**-1.3**
BRY				*e*Sg	**Sn**	**12 44 06.8**	**-0.9**
DIVS	**Divcibare**	**1.50**	**95**	*i* Pn	**Pn**	**12 43 50.0**	**+0.5**
DIVS				Sg	**Sg**	**12 44 12.0**	**+1.8**
TREB	**Trebinje**	**1.57**	**168**	P	**Pn**	**12 43 49.7**	**-0.7**
TREB				S	**Sn**	**12 44 12.6**	**+1.4**
FGSL	**Fruska Gora**	**1.62**	**56**	Pn	**Pn**	**12 43 51.3**	**+0.1**
NKY	**Niksic**	**1.64**	**151**	⇑*i*Pg	**Pn**	**12 43 51.5**	**0.0**
NKY				*i* Sg	**Sn**	**12 44 13.9**	**+0.9**
RHK3	**Tenkes**	**1.65**	**8**	⇑*i*P	**Pn**	**12 43 50.6**	**-0.9**
RHK3				*e*S	**Sn**	**12 44 14.7**	**+1.6**
HCY	**Herceg Novi**	**1.86**	**167**	⇓*i*Pn	**Pn**	**12 43 54.8**	**+0.4**
HCY				*i* Sn	**Sn**	**12 44 18.8**	**+0.6**
IVA	**Berane**	**2.00**	**133**	⇓*i*Pn	**Pn**	**12 43 57.9**	**+1.6**
IVA				*e*Sn	**Sn**	**12 44 22.7**	**+1.0**
PKSM	**Moragy**	**2.02**	**14**	⇑*i*P	**Pn**	**12 43 55.5**	**-1.1**
PKSM	**Moragy**	**2.02**	**14**	⇑*e*Pn	**Pn**	**12 43 55.5**	**-1.1**
TTG	**Podgorica**	**2.07**	**151**	⇑*i*Pn	**Pn**	**12 43 57.9**	**+0.6**
TTG				*i* Sn	**Sn**	**12 44 24.1**	**+0.5**
BUM	**Brajici-Budva**	**2.08**	**159**	⇓*i*Pn	**Pn**	**12 43 58.0**	**+0.6**
BUM				*i* Sn	**Sn**	**12 44 24.2**	**+0.4**
NVLJ	**Novalja**	**2.20**	**279**	*i* Pn	**Pn**	**12 43 59.4**	**+0.3**
NVLJ				*i* Sn	**Sn**	**12 44 27.2**	**+0.4**
NVLJ				*i* Sg	**Sg**	**12 44 32.1**	**-0.5**
PVY	**Plav**	**2.24**	**137**	⇑*i*Pn	**Pn**	**12 44 00.7**	**+1.1**
PVY				*e*Sn	**Sn**	**12 44 28.4**	**+0.8**
PKS9	**Tamasi**	**2.34**	**6**	⇑*i*P	**Pn**	**12 44 00.4**	**-0.7**
ULC	**Ulcinj**	**2.49**	**156**	⇑*i*Pn	**Pn**	**12 44 03.7**	**+0.6**
ULC				*e*Sn	**Sn**	**12 44 34.4**	**+0.5**
BZS	**Buzias**	**2.96**	**61**	⇑*iP*	**Sn**	**12 44 43.5**	**-1.9**
BUD	**Budapest**	**3.32**	**13**	*e*SB	**Sg**	**12 45 09.5**	**+1.0**
VOY	**Vojsko**	**3.35**	**303**	*e*	**Sn**	**12 44 57.6**	**+2.4**
VOY				*e*		12 45 07.1	
ARSA	**Arzberg**	**3.43**	**332**	⇓*i*Pn	**Pn**	**12 44 15.5**	**-0.5**
ARSA				⇑*i*Sn	**Sn**	**12 44 57.1**	**0.0**
PSZ	**Piszkesteto**	**3.91**	**20**	*e*PB	**Pg**	**12 44 39.1**	**+2.3**
PSZ				*e*SB	**Sg**	**12 45 29.1**	**+1.6**
CONA	**Conrad Observa**	**3.94**	**339**	⇑*i*Pn	**Pn**	**12 44 22.9**	**-0.1**
CONA				⇓*i*Sn	**Sn**	**12 45 09.4**	**-0.3**
ZST	**Bratislava**	**3.98**	**352**	*e*PN	**Pn**	**12 44 23.4**	**-0.2**
ZST				*e*SN	**Sn**	**12 45 09.5**	**-1.1**
ZST	**Bratislava**	**3.98**	**352**	*e*Pn	**Pn**	**12 44 23.4**	**-0.2**
ZST				*e*Sn	**Sn**	**12 45 09.6**	**-1.0**
VYHS	**Vyhne**	**4.29**	**8**	*e*PN	**Pn**	**12 44 27.1**	**-0.7**
VYHS				*e*SN	**Sn**	**12 45 18.2**	**0.0**
MOA	**Molln**	**4.40**	**326**	⇓*i*Pn	**Pn**	**12 44 29.1**	**-0.2**
MOA				⇓*i*Sn	**Sn**	**12 45 21.6**	**+0.6**
KECS	**Kecovo**	**4.59**	**22**	*e*PN	**Pn**	**12 44 29.4**	**-2.5**
KECS				*e*SN	**Sn**	**12 45 22.3**	**-3.3**
KECS				*e*		12 46 03.1	
CRVS	**Cervenica-Dubn**	**5.25**	**26**	*e*PN	**Pn**	**12 44 38.6**	**-2.4**
CRVS				*e*SN	**Sn**	**12 45 35.5**	**-6.4**

*IDC **28** 12:57:46.6±2.5, 662N×12537E, h0km, mb4.3/5, mb1 4.5/5, mb1mx3.9/18, mbtmp4.4/5, Error ellipse: s-maj=78.9km s-min=49.4km az=84.0*
*ISCJB **28** 12:58:02.6±0.5, 6.1N±0.1×12584E±008, h119km±11km, mb4.4/8, Error ellipse: s-maj=18.4km s-min=11.7km az=54.9*
*MAN **28** 12:58:02.3, 6.12N×12592E, h118km, mb3.5, ML4.7, MS2.3*
*NEIC **28** 12:58:03.9±0.9, 635N×12585E, h134km±31km, mb4.5/6, Error ellipse: s-maj=62.3km s-min=27.3km az=198.0*

ISC 28 12:58:04.0±0.5, 61N±01×12582E±008, h112km±11km, n26, σ0§66/32, mb4.4/8, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.93**	**28**	*eP*	**Pn**	**12 58 24.2**	**-0.4**
MATI				*e*S	**Sn**	**12 58 40.0**	**-0.2**
DAV	**Davao City (W)**	**0.97**	**346**	*eP*	**Pn**	**12 58 25.0**	**0.0**
DAV	**Davao City (W)**	**0.97**	**346**	*e*Pg	**Pn**	**12 58 25.2**	**+0.1**
DAV				*e*Sg	**Sn**	**12 58 40.2**	**-0.7**
KCP	**Kidapawan**	**1.14**	**321**	⇓*iP*	**Pn**	**12 58 27.6**	**+0.8**
KCP				*i* S	**Sn**	**12 58 45.7**	**+1.6**
BUKP	**Musuan**	**1.90**	**337**	*eP*	**Pn**	**12 58 36.0**	**+0.2**
BUKP				*e*S	**Sn**	**12 59 00.5**	**+0.4**
CTBH	**Cotabato--PC H**	**1.91**	**305**	⇑*iP*	**Pn**	**12 58 35.8**	**-0.1**
CTBH				*i* S	**Sn**	**12 58 58.2**	**-2.0**
CGP	**Cagayan de Oro**	**2.57**	**334**	⇓*eP*	**Pn**	**12 58 44.0**	**-0.4**
CGP				*e*S	**Sn**	**12 59 16.6**	**+1.1**
BUTP	**Butuan**	**2.84**	**356**	*eP*	**Pn**	**12 58 47.9**	**+0.1**
PAGZ	**Pagadian**	**2.96**	**306**	*eP*	**Pn**	**12 58 49.4**	**-0.1**
MSLP	**Maasin**	**4.10**	**347**	*eP*	**Pn**	**12 59 03.7**	**-1.0**
KAKA	**Kakadu**	**19.83**	**161**	*eP*	**P**	**13 02 26.7**	**+0.9**
	12nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.07**	**180**	*eP*	**P**	**13 03 09.0**	**+0.2**
	5.4nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	**24.07**	**180**	P	**P**	**13 03 09.2**	**+0.4**
	3.9nm,0.5s,mb4.0,baz=14,slow=7.7,SNR=55						
WRAB	**Tennant Creek**	**27.22**	**162**	*eP*	**P**	**13 03 36.7**	**-0.5**
	4.2nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**27.22**	**162**	P	**P**	**13 03 36.8**	**-0.5**
	0.9nm,0.3s,mb3.8,baz=334,slow=11,SNR=19						
WRA				PcP	PcP	13 06 54.0	-0.5
	0.3nm,0.5s,baz=337,slow=2.6,SNR=3.6						
WB2	**Warramunga Arr**	**27.23**	**162**	*eP*	**P**	**13 03 36.8**	**-0.5**
AS31	**Alice Springs**	**30.64**	**165**	*eP*	**P**	**13 04 07.5**	**-0.1**
ASAR	**Alice Springs**	**30.64**	**165**	P	**P**	**13 04 07.7**	**+0.2**
	2.6nm,0.4s,mb4.3,baz=337,slow=7.4,SNR=94						
ASAR				PcP	PcP	13 07 02.2	-0.9
	0.4nm,0.4s,baz=337,slow=2.5,SNR=6.5						
ASPA	**Alice Springs**	**30.64**	**165**	*eP*	**P**	**13 04 07.7**	**+0.2**
FORT	**Forrest**	**36.75**	**177**	⇑*iP*	**P**	**13 05 00.7**	**+0.2**
	4.0nm,0.2s,mb5.0						
KLBR	**Kellerberrin**	**38.28**	**191**	*eP*	**P**	**13 05 13.2**	**-0.1**
	38nm,1.6s,mb5.0						
MUN	**Mundaring**	**38.98**	**193**	*eP*	**P**	**13 05 19.0**	**-0.2**
NWAO	**Narrogin (SRO)**	**39.68**	**191**	P	**P**	**13 05 24.9**	**-0.1**
	2.9nm,0.4s,mb4.4,baz=6.2,slow=9.1,SNR=9.3						
NWAO	**Narrogin (SRO)**	**39.68**	**191**	P	**P**	**13 05 24.9**	**-0.1**
STKA	**Stephens Creek**	**40.67**	**159**	*eP*	**P**	**13 05 33.7**	**+0.5**
	3.0nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**40.67**	**159**	P	**P**	**13 05 33.9**	**+0.7**
	3.7nm,0.6s,mb4.4,baz=344,slow=9.3,SNR=13						

*CSEM **28** 13:27:01.3, 3442N×2674E, h10km, MD3.5/3, After ATH*

ATH 28 13:27:01.3, 3442N×2674E, h10km, MD3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	**0.97**	**298**	*e*PG	Pg	13 27 19.5	-0.5
KARP	**Karpathos**	**1.18**	**17**	*e*PB	Pb	13 27 23.5	-0.2
NPS	**Neapolis**	**1.25**	**313**	*e*PG	Pg	13 27 25.0	-0.3

MAN 28 13:33:33.6, 1871N×12076E, h13km, mb2.2, ML3.8, MS5.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**1.05**	**183**	*eP*	Pb	13 33 52.3	-1.3
SGCP	**Mt. Cagua**	**1.30**	**110**	*eP*	Pn	13 33 56.8	-0.7
CVP	**Callao Caves**	**1.42**	**134**	*eP*	Pn	13 33 57.8	-1.3
CAUP	**Cauayan**	**2.02**	**150**	*eP*	Pn	13 34 08.6	+1.2

*NIED **28** 13:37:00, 2870N×13020E, h35km, Mw4.5 Best double couple: M0 6.82000×10^15 NP1:φs 37.00000°, δ 81.00000°, λ 79.00000°. NP2:φs 268.00000°, δ 15.00000°, λ 141.00000°.*
*IDC **28** 13:37:53.3±0.7, 2878N×13007E, h0km, mb4.4/15, mb1 4.4/19, mb1mx4.4/25, mbtmp4.4/19, ML3.7/4, MS3.7/7, Ms1 3.7/7, ms1mx3.4/24, Error ellipse: s-maj=18.7km s-min=15.0km az=94.0*
*BJI **28** 13:37:53.6, 2840N×13058E, h42km, mB4.5, mb4.5, Ms4.2, Msz4.0*
*JMA **28** 13:37:57.1±0.2, 2869N×13024E, h57km±4km, M4.3*
JMA Felt I J1.
*ISCJB **28** 13:37:57.6±0.5, 2866N±003×13027E±004, h48km±4km, mb4.6/49, MS3.9/13, Error ellipse: s-maj=6.3km s-min=4.5km az=86.5*
*MOS **28** 13:37:58.0±1.0, 2889N×13010E, h41km, mb4.8/31, Error ellipse: s-maj=11.2km s-min=7.0km az=105.5*
*NEIC **28** 13:37:59.4±0.9, 2874N×13011E, h43km±8km, mb4.7/19, MW4.5(NIED), Error ellipse: s-maj=8.7km s-min=6.4km az=125.0*
NEIC Recorded [1 JMA] on Kikaiga-shima.

ISC 28 13:37:59.0±0.5, 2873N±004×13018E±004, h41km±4km, h57km±2.1km; pP-P, n130, σ1§02/147, mb4.6/48, MS3.9/13, 11C-8D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.45**	**204**	P	**Pn**	**13 38 08.3**	**-0.9**
JAM	**Amami Oshima**	**0.60**	**238**	P	**Pn**	**13 38 10.1**	**-1.0**
JAM				*e*S	**Sn**	**13 38 20.6**	**+1.0**
JNN	**Nakanoshima**	**1.14**	**347**	P	**Pn**	**13 38 18.0**	**-0.5**
JTK	**Tokunoshima**	**1.44**	**229**	P	**Pn**	**13 38 22.6**	**+0.1**
JKC	**Kuchinoerabu**	**1.73**	**0**	P	**Pn**	**13 38 26.1**	**-0.4**
JTN	**Tanegashima 3**	**2.04**	**20**	P	**Pn**	**13 38 29.8**	**-1.0**
JOW	**Kunigami**	**2.53**	**222**	Pn	**Pn**	**13 38 37.1**	**-0.5**
	22nm,0.3s,baz=96,slow=20,SNR=129						
JOW				Sn	**Sn**	**13 39 05.8**	**-1.4**
	48nm,0.3s,baz=70,slow=27,SNR=11						
JOW	**Kunigami**	**2.53**	**222**	P	**Pn**	**13 38 37.1**	**-0.5**
JOW				*e*S	**Sn**	**13 39 08.1**	**+0.9**
JIH	**Iheya**	**2.59**	**230**	P	**Pn**	**13 38 38.0**	**-0.3**
JIH				*e*S	**Sn**	**13 39 09.0**	**+0.5**
JJT2	**Tamagusuku 2**	**3.37**	**221**	P	**Pn**	**13 38 48.7**	**-0.4**
JAGN	**Aguni-jima**	**3.37**	**231**	P	**Pn**	**13 38 48.9**	**-0.2**
JKE	**Kume jima 2**	**3.85**	**232**	P	**Pn**	**13 38 55.3**	**-0.4**
JHJ	**Hachijo jima 2**	**9.34**	**60**	LR	LR	13 43 15.4	
	comp=Z,268nm,19.9s,baz=117,slow=34						
MAJO	**Matsushiro**	**10.31**	**39**	P	**Pn**	**13 40 27.3**	**+2.9**
MJAR	**Matsushiro Arr**	**10.31**	**39**	Pn	**Pn**	**13 40 23.9**	**-0.5**
	0.3nm,0.3s,baz=230,slow=47,SNR=4.0						
NJ2	**Nanjing**	**10.32**	**291**	*eP*	**Pn**	**13 40 28.5**	**+4.0**
NJ2				PP		13 40 38.5	
NJ2				XP		13 40 46.8	
NJ2				S	**Sn**	**13 42 24.0**	**+5.1**
NJ2				SS		13 42 39.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s						
NJ2				AMB	AMB		
	comp=Z,150nm,5.8s						
NJ2				LR	LR		
	comp=N,1μm,11.2s						
NJ2				LR	LR		
	comp=E,530nm,16.2s						
NJ2				LR	LR		
	comp=Z,1μm,11.0s						
CBIJ	**Chichi jima**	**10.74**	**96**	Pn	**Pn**	**13 40 29.1**	**-1.1**
	comp=Z,7.5nm,0.3s,baz=263,slow=19,SNR=7.4						
SNY	**Shenyang**	**14.13**	**339**	⇓*P*	**Pn**	**13 41 19.0**	**+2.5**
SNY				AP		13 41 29.3	
SNY				PP		13 41 31.8	
SNY				XP		13 41 35.0	
SNY				S	**Sn**	**13 43 57.3**	**+5.4**
SNY				XS		13 44 12.5	
SNY				SS		13 44 14.3	
SNY				AMB	AMB		
	comp=Z,8.0nm,0.5s						
SNY				AMB	AMB		
	comp=Z,134nm,4.3s						
SNY				LR	LR		
	comp=N,767nm,12.5s						
SNY				LR	LR		
	comp=E,438nm,10.6s						
SNY				LR	LR		
	comp=Z,766nm,12.4s						
CN2	**Changchun**	**15.51**	**347**	*eP*	**Pn**	**13 41 39.0**	**+4.2**
CN2				*eS*	**S**	**13 44 30.8**	**-9.0**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s						
CN2				AMB	AMB		
	comp=Z,110nm,6.0s						
CN2				LR	LR		
	comp=N,740nm,14.0s						
CN2				LR	LR		
	comp=E,320nm,14.0s						
CN2				LR	LR		
	comp=Z,810nm,15.0s						
MDJ	**Mudanjiang**	**15.86**	**358**	P	**Pn**	**13 41 41.8**	**+2.5**
MDJ				S	**S**	**13 44 39.0**	**-8.0**
MDJ				SCP	ScP	13 50 05.8	-1.4
MDJ				PCS	PcS	13 50 11.0	-0.7
MDJ				SCS	ScS	13 53 44.8	-1.0
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,85nm,5.3s						
MDJ				LR	LR		
	comp=N,114nm,16.7s						
MDJ				LR	LR		
	comp=E,14nm,14.8s						
MDJ				LR	LR		
	comp=Z,156nm,18.6s						
BJI	**Beijing**	**16.13**	**318**	P	**Pn**	**13 41 44.5**	**+1.8**
BJI				AMB	AMB		
	comp=Z,10.0nm,0.5s						
BJI				AMB	AMB		
	comp=Z,123nm,4.4s						
BJI				LR	LR		
	comp=N,301nm,13.2s						
BJI				LR	LR		
	comp=E,499nm,13.2s						
BJI				LR	LR		
	comp=Z,289nm,16.3s						
ASAJ	**Asahikawa**	**18.29**	**30**	P	**Pn**	**13 42 08.8**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=238,slow=18,SNR=2.6						
ASAJ				LR	LR	13 49 28.6	
	comp=Z,89nm,20.6s,baz=346,slow=38						
XAN	**Xi'an**	**18.90**	**292**	P	**Pn**	**13 42 16.3**	**-0.6**
XAN				AMB	AMB		
	comp=Z,16nm,1.2s						
HHC	**Hu-ho-hao-te**	**19.45**	**313**	*eP*	**Pn**	**13 42 26.5**	**+3.0**
HHC				AP	pP	13 42 39.0	+6.9
HHC				PP		13 42 47.0	
HHC				S	**S**	**13 45 59.0**	**-0.6**
HHC				XS	sS	13 46 18.3	+2.6
HHC				SS		13 46 28.5	
HHC				PCP	PcP	13 46 42.0	0.0
HHC				SCP	ScP	13 50 14.5	-0.2
HHC				PCS	PcS	13 50 21.0	+1.8
HHC				AMB	AMB		
	comp=Z,18nm,1.1s						
HHC				AMB	AMB		
	comp=Z,88nm,5.3s						
HHC				LR	LR		
	comp=N,227nm,16.3s						
HHC				LR	LR		
	comp=E,229nm,16.4s						
HHC				LR	LR		
	comp=Z,321nm,17.9s						
HABR	**Khabarovsk**	**20.07**	**9**	*eP*	**P**	**13 42 24.7**	**-4.1**
HABR				*eS*	**S**	**13 45 59.6**	**-12**
KLR	**Kul'dur**	**20.51**	**3**	*eP*	**P**	**13 42 28.2**	**-5.4**
YSS	**Yuzh-Sakhalins**	**20.68**	**25**	*eP*	**P**	**13 42 36.5**	**+1.1**
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS	**Yuzh-Sakhalins**	**20.68**	**25**	*eP*	**P**	**13 42 36.8**	**+1.3**
	comp=Z,30nm,1.3s						
QIZ	**Qiongzhong**	**20.93**	**247**	P	**P**	**13 42 37.5**	**-0.6**
QIZ				AP		13 42 49.8	
QIZ				S	**S**	**13 46 26.3**	**-2.8**
QIZ				XS	sS	13 46 44.5	-0.9
QIZ				LR	LR		
	comp=N,206nm,19.1s,MS3.6						
QIZ				LR	LR		
	comp=E,198nm,22.0s,MS3.6						
QIZ				LR	LR		
	comp=Z,237nm,24.4s,MS3.5						
GYA	**Guiyang**	**20.96**	**269**	⇑*iP*	**P**	**13 42 39.3**	**+0.8**
GYA				AP		13 42 53.0	
GYA				S	**S**	**13 46 24.8**	**-4.9**
GYA				XS	sS	13 46 44.3	-1.7
GYA				SS		13 46 57.8	
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
GYA				AMB	AMB		
	comp=Z,90nm,3.8s						
GYA				LR	LR		
	comp=N,340nm,16.4s,MS3.9						
GYA				LR	LR		
	comp=E,280nm,15.8s,MS3.9						
GYA				LR	LR		
	comp=Z,290nm,16.0s,MS3.8						
CD2	**Chengdu**	**23.01**	**282**	*eP*	**P**	**13 43 00.0**	**-0.3**
CD2				AP		13 43 14.0	
CD2				PP		13 43 32.0	
CD2				S	**S**	**13 47 02.0**	**-5.9**
CD2				XS	sS	13 47 25.8	-0.4
CD2				SS		13 47 50.0	
CD2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,230nm,16.3s						
CD2				LR	LR		
	comp=Z,160nm,19.2s,MS3.5						
LZH	**Lanzhou**	**23.37**	**295**	*eP*	**P**	**13 43 03.5**	**-0.5**
LZH				AP		13 43 17.3	
LZH				XP	sP	13 43 24.5	+5.0
LZH				PP		13 43 37.5	
LZH				*eS*	**S**	**13 47 09.3**	**-4.4**
LZH				XS	sS	13 47 33.5	+1.4
LZH				SS		13 47 59.5	
LZH				AMB	AMB		
	comp=Z,26nm,1.2s,mb4.5						
LZH				LR	LR		
	comp=E,708nm,10.2s						
LZH				LR	LR		
	comp=Z,1μm,13.7s,MS4.5						
KMI	**Kunming**	**24.71**	**268**	P	**P**	**13 43 18.0**	**+1.8**
KMI				AP		13 43 31.5	
KMI				PP		13 43 55.5	
KMI				PPP		13 44 06.8	
KMI				S	**S**	**13 47 32.5**	**-2.8**
KMI				XS	sS	13 47 55.5	+1.7
KMI				SS		13 48 30.8	
KMI				SSS		13 48 47.8	
KMI				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.6						
KMI				AMB	AMB		
	comp=Z,78nm,5.5s						
KMI				LR	LR		
	comp=N,183nm,13.7s,MS3.8						
KMI				LR	LR		
	comp=E,151nm,18.0s,MS3.8						
KMI				LR	LR		
	comp=Z,230nm,15.3s,MS3.8						
SONM	**Songino Array**	**26.51**	**323**	P	**P**	**13 43 31.8**	**-0.8**
	comp=Z,3.5nm,0.8s,mb4.0,baz=140,slow=10,SNR=17						
SONM				LR	LR	13 55 23.8	
	comp=Z,251nm,19.2s,MS3.8,baz=322,slow=40						
SONM	**Songino Array**	**26.51**	**323**	P	**P**	**13 43 31.8**	**-0.8**
SONM				pmax	pmax		
	comp=Z,40nm,0.8s						

comp=Z,103nm,4.0s
WMQ LR LR
comp=N,98nm,10.0s,MS4.1
WMQ LR LR
comp=E,105nm,10.0s,MS4.1
WMQ LR LR
comp=Z,126nm,10.0s,MS4.0
SEY Seymchan 37.14 17⇓ *eP* **P 13 45 05.8 +0.1**
GUN Gumba 38.84 280 *eP* **P 13 45 21.0 +0.9**
PKI Pulchoki 39.32 279 *eP* **P 13 45 24.5 +0.4**
KKN Kakani 39.38 280 *eP* **P 13 45 25.2 +0.6**
DMN Daman 39.57 280 *eP* **P 13 45 26.8 +0.6**
GKN Gorkha 39.89 280 *eP* **P 13 45 30.1 +1.2**
KOLN Koldanda 40.84 280 *eP* **P 13 45 36.9 +0.2**
MK31 Makanchi Array 41.23 309 P **P 13 45 39.4 -0.5**
MK31 pmax pmax
comp=Z,30nm,0.8s,mb5.0
MKAR Makanchi Array 41.23 309 P **P 13 45 39.7 -0.2**
comp=Z,3.0nm,0.7s,mb4.0,baz=90,slow=10,SNR=20
MKAR PcP PcP 13 47 38.5 +0.3
comp=Z,1.1nm,0.7s,baz=66,slow=3.7,SNR=4.4
MKAR Makanchi Array 41.23 309 P **P 13 45 39.7 -0.2**
MKAR 13 47 38.5
MKAR pmax pmax
comp=Z,3.0nm,0.7s
ZAL Zalesovo 41.38 320 P **P 13 45 40.2 -0.9**
comp=Z,9.9nm,0.5s,mb4.7,baz=4.6,slow=6.4,SNR=25
ZAL Zalesovo 41.38 320 P **P 13 45 40.3 -0.8**
ZAL pmax pmax
comp=Z,10.0nm,0.5s
NVS Novosibirsk 42.53 321 *eP* **P 13 45 50.7 +0.2**
NVS pmax pmax
comp=N,4.0nm,1.1s
NVS pmax pmax
comp=E,11nm,1.1s
NVS pmax pmax
comp=Z,14nm,1.1s,mb4.6
TIXI Tiksi 42.97 359⇑ *eP* **P 13 45 51.9 -2.2**
TIXI pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
BILL Bilibino 44.76 18 *d iP* **P 13 46 08.4 -0.1**
BILL pmax pmax
comp=Z,9.0nm,1.3s,mb4.4
AAK Ala-Archa 46.52 303⇑ *iP* **P 13 46 21.4 -1.0**
AAK pmax pmax
comp=Z,4.0nm,1.5s,mb4.1
WRAB Tennant Creek 48.54 175⇓ *eP* **P 13 46 44.6 +6.5**
WRAB Tennant Creek 48.54 175 *eP* **P 13 46 34.2 -3.8**
comp=Z,3.6nm,0.5s,mb4.7
WRA Warramunga Arr 48.55 175 P **P 13 46 37.4 -0.7**
comp=Z,2.3nm,0.8s,mb4.3,baz=351,slow=8.2,SNR=10
WRA Warramunga Arr 48.55 175 P **P 13 46 37.4 -0.7**
WRA pmax pmax
comp=Z,2.0nm,0.8s
WB2 Warramunga Arr 48.55 175 *eP* **P 13 46 38.4 +0.3**
VOSK Vostochnaya 49.23 316 P **P 13 46 42.3 -1.0**
VOSK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CHKZ Chkalovo 49.53 318 *eP* **P 13 46 44.7 -0.9**
CHKZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
CHKZ Chkalovo 49.53 318 *eP* **P 13 46 44.7 -0.9**
comp=Z,3.9nm,0.6s,mb4.6
BRVK Borovoye 49.67 317 P **P 13 46 46.6 -0.1**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BRVK Borovoye 49.67 317 *eP* **P 13 46 46.6 -0.1**
comp=Z,14nm,0.6s,mb5.2
ZRNK Zerenda 50.44 317 *eP* **P 13 46 52.3 -0.2**
ZRNK *e* 13 48 09.7
ZRNK pmax pmax
comp=Z,17nm,0.8s,mb5.1
ZRNK Zerenda 50.44 317 *eP* **P 13 46 52.3 -0.2**
comp=Z,17nm,0.8s,mb5.1
ZRNK *e*PcP PcP 13 48 09.7 -0.6
AS31 Alice Springs 52.21 176 *eP* **P 13 47 06.0 +0.2**
ASAR Alice Springs 52.22 176 P **P 13 47 07.3 +1.5**
comp=Z,1.0nm,0.6s,mb3.9,baz=9.2,slow=13,SNR=21
ASPA Alice Springs 52.22 176 *eP* **P 13 47 06.0 +0.2**
AB31 Akbulak array 56.23 312 *eP* **P 13 47 34.7 -0.4**
AB31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ARU Arti 56.53 321⇑ *iP* **P 13 47 36.5 -0.7**
ARU *e* 13 49 40.4
ARU *eS* **S 13 55 17.1 -8.7**
ARU pmax pmax
comp=Z,16nm,0.8s,mb5.1
ARU Arti 56.53 321 *eP* **P 13 47 36.5 -0.7**
comp=Z,21nm,0.7s,mb5.3
SOKR Solikamsk 57.36 325 *eP* **P 13 47 43.3 +0.3**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KDAK Kodiak Island 59.49 37 P **P 13 47 57.7 -0.2**
comp=Z,4.8nm,0.8s,mb4.6,baz=217,slow=5.1,SNR=3.7
KDAK Kodiak Island 59.49 37 P **P 13 47 57.7 -0.2**
COLA College 61.00 29⇑ *iP* **P 13 48 07.5 -0.7**
INK Inuvik 65.92 24 P **P 13 48 41.1 +0.4**
comp=Z,2.3nm,0.5s,mb4.4,baz=281,slow=1.7,SNR=12
INK Inuvik 65.92 24 P **P 13 48 41.1 +0.4**
INK pmax pmax
comp=Z,2.0nm,0.5s
INK Inuvik 65.92 24 *eP* **P 13 48 40.8 +0.1**
comp=Z,2.5nm,0.6s,mb4.4
KEV Kevo 67.75 339 *ep* **P 13 48 50.9 -1.5**
comp=Z,0.9nm,0.4s,mb4.2
KEV Kevo 67.75 339 *eP* **P 13 48 50.9 -1.5**
KEV pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
ARCES ARCESS Array B 68.32 339 P **P 13 48 55.3 -0.7**
comp=Z,2.4nm,0.7s,mb4.3,baz=67,slow=6.7,SNR=25
ARCES LR LR 14 23 57.3
comp=Z,106nm,19.8s,MS4.1,baz=281,slow=40
ARCES ARCESS Array B 68.32 339 P **P 13 48 55.3 -0.7**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES MLR MLR
comp=Z,106nm,19.8s
JOF Joensuu 68.70 331 *ep* **P 13 48 57.4 -1.0**
comp=Z,5.9nm,0.3s,mb5.0
JOF Joensuu 68.70 331 *eP* **P 13 48 57.4 -1.0**
JOF pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
VRSR Storozhevoye 68.76 318 *eP* **P 13 48 58.3 -0.4**
VRSR pmax pmax
comp=E,10.0nm,1.0s
VRSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VRSR pmax pmax
comp=N,10.0nm,2.1s
OBN Obninsk 68.92 322 *eP* **P 13 48 59.7 0.0**
OBN *e* pP 13 49 15.4 +3.6
OBN *e**PP 13 49 30.6
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.2
KIV Kislovodsk 68.99 309 *eP* **P 13 49 00.9 +0.7**
KIV pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
KIV Kislovodsk 68.99 309 *eP* **P 13 49 00.9 +0.8**
comp=Z,4.6nm,0.4s,mb4.8
FINES FINESS Array B 71.55 331 P **P 13 49 14.7 -1.1**
comp=Z,5.4nm,0.6s,mb4.7,baz=70,slow=6.1,SNR=42
FINES LR LR 14 23 58.8
comp=Z,80nm,19.6s,MS4.0,baz=314,slow=39
FINES FINESS Array B 71.55 331 P **P 13 49 14.7 -1.1**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES MLR MLR
comp=Z,80nm,19.6s
ANN Anapa 72.19 312 *eP* **P 13 49 19.2 -0.4**
ANN pmax pmax
comp=Z,52nm,1.1s,mb5.4
MALT Malatya 74.09 305⇓ *iP* **P 13 49 32.5 +1.6**
MALT Malatya 74.09 305 *eP* **P 13 49 32.1 +1.2**
MALT pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MALT Malatya 74.09 305 *eP* **P 13 49 32.1 +1.2**
comp=Z,3.2nm,0.6s,mb4.4
AKASG Malin Array Be 74.76 320 P **P 13 49 33.8 -0.9**
comp=Z,6.0nm,0.4s,mb4.8,baz=58,slow=6.2,SNR=22
AKASG Malin Array Be 74.76 320 P **P 13 49 33.8 -0.9**
AKASG pmax pmax
comp=Z,6.0nm,0.4s
YKA Yellowknife Ar 75.53 26 P **P 13 49 39.8 +0.6**
comp=Z,2.8nm,0.8s,mb4.3,baz=306,slow=6.0,SNR=5.1
YKA LR LR 14 22 50.3
comp=Z,32nm,18.6s,MS3.6,baz=250,slow=36
BR131 Keskin Array S 76.87 308 *eP* **P 13 49 47.0 +0.2**
comp=Z,6.5nm,0.7s,mb4.7
BRTR Keskin Array B 76.87 308 P **P 13 49 47.2 +0.5**
comp=Z,7.9nm,0.8s,mb4.7,baz=101,slow=4.4,SNR=31
BRTR Keskin Array B 76.87 308 P **P 13 49 47.3 +0.5**
BRTR pmax pmax
comp=Z,8.0nm,0.8s
NB2 NORSAR Subarra 77.84 334 P **P 13 49 50.4 -1.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=49,slow=5.6
NOA NORSAR Array B 77.84 334 P **P 13 49 50.8 -1.4**
comp=Z,2.5nm,0.8s,mb4.2,baz=51,slow=5.5,SNR=6.5
NOA LR LR 14 27 36.9
comp=Z,40nm,18.2s,MS3.8,baz=115,slow=38
NOA NORSAR Array B 77.84 334 P **P 13 49 50.8 -1.4**
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA MLR MLR
comp=Z,40nm,18.2s
VRI Vrincioaia 78.50 316⇑ *iP* **P 13 49 58.3 +2.4**
BURAR Bucovina Array 78.54 318⇑ *iP* **P 13 49 56.7 +0.6**
SUMG Summit 78.67 357 *eP* **P 13 49 57.3 +0.5**
comp=Z,11nm,0.8s,mb4.8
KWP Kalwaria 78.94 321 *eP* **P 13 49 58.5 +0.2**
KWP pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
KWP Kalwaria 78.94 321 *eP* **P 13 49 58.5 +0.2**
comp=Z,10.0nm,0.6s,mb4.9
MLR Muntele Rosu 79.17 316⇑ *iP* **P 13 50 01.5 +2.0**
KOLS Kolonicke sedl 79.55 320 *eP* **P 13 50 03.0 +1.4**
CRVS Cervenica-Dubn 80.02 321 *eP* **P 13 50 03.7 -0.5**
OJC Ojcow 80.21 322 *eP* **P 13 50 04.0 -1.2**
NIE Niedzica 80.37 321 *eP* **P 13 50 06.8 +0.7**
KECS Kecovo 80.79 321 *eP* **P 13 50 07.2 -1.1**
KECS pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
KECS Kecovo 80.79 321 *eP* **P 13 50 07.2 -1.1**
comp=Z,1.0nm,0.4s,mb4.1
KECS *e* 13 50 11.6
VYHS Vyhne 81.70 321 *eP* **P 13 50 13.9 +0.8**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
VYHS Vyhne 81.70 321 *eP* **P 13 50 13.9 +0.8**
comp=Z,3.6nm,1.2s,mb4.2
VRAC Vranov 82.44 323⇑ *iP* **P 13 50 18.5 +1.5**
CLL Collm 83.08 326⇓ *P* **P 13 50 20.8 +0.5**
comp=Z,logA/T=1.3,mb5.1
CLL Collm 83.08 326⇓ *iP* **P 13 50 20.8 +0.5**
comp=Z,29nm,1.5s,mb5.1
CLL Collm 83.08 326⇓ *iP* **P 13 50 20.8 +0.5**
CLL pmax pmax
comp=Z,29nm,1.5s,mb5.1
PKSM Moragy 83.10 319⇑ *iP* **P 13 50 20.9 +0.5**
GERES GERESS Array B 84.24 324 P **P 13 50 26.8 +0.5**
comp=Z,0.3nm,0.3s,mb4.0,baz=36,slow=5.0,SNR=5.5
HLID Hailey 86.88 41 *eP* **P 13 50 40.4 +1.0**
comp=Z,2.5nm,1.1s,mb4.4
PDAR Pinedale Array 90.14 39 P **P 13 50 56.5 +1.6**
comp=Z,0.5nm,0.7s,mb4.0,baz=0.0,slow=3.3,SNR=5.1

IDC ***28*** *14:24:04.6±0.4, 1071S×16521E, h0km, mb5.3/15, mb1 5.4/18, mb1mx5.4/19, mbtmp5.3/18, ML3.9/2, MS5.4/16, Ms1 5.3/16, ms1mx5.1/21, Error ellipse: s-maj=14.2km s-min=12.8km az=128.0*
CSEM ***28*** *14:24:05.3, 1078S× 16498E, h10km, mb5.5*
NEIC ***28*** *14:24:07.6±3.2, 1076S×16506E, h17km±19km, mb5.4/71, MS5.4/112, Error ellipse: s-maj=5.9km s-min=5.3km az=148.0*
HRVD ***28*** *14:24:07.6±0.1, 1073S×16494E, h12km, MW5.7/97, Centroid moment Tensor Solution. LP body waves: s85,c157;Mantle waves: s97,c272; Half duration: 1s6 Moment tensor: Scale 10¹⁷Nm; Mrr 2.91±.03; Mθθ 0.87±.03; Mϕϕ -3.78±.03; Mrθ -0.23±.08; Mθϕ 0.83±.03; Mϕr -1.39±.08; Best double couple: M0 3.71400×10¹⁷ NP1:ϕ₀337.00000°, δ36.00000°, λ71.00000°. NP2:ϕ₀181.00000°, δ57.00000°, λ103.00000°. Principal axes: T 3.2530, Plg74.0000°, Azm128.0000°; N 0.9210, Plg11.0000°, Azm353.0000°; P -4.1750, Plg11.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
ISCJB ***28*** *14:24:07.6±0.1, 1082S±003×16506E±002, h28km, mb5.4/111, MS5.3/149 Error ellipse: s-maj=4.3km s-min=3.3km az=127.0*
MOS ***28*** *14:24:08.9±1.2, 1076S×16503E, h33km, mb5.5/50, MS5.3/35, Error ellipse: s-maj=7.6km s-min=6.8km az=64.1*
CRAAG ***28*** *14:24:08.2, 1081S×16497E, Mb5.4*
BJI ***28*** *14:24:09.1, 1020S×16496E, h16km, mB5.5, mb5.2, Ms5.5, Msz5.3*

ISC 28 14:24:09.7±0.1, 1081S±003×16512E±002, h29km, h29km±1.2km: pP-P, n615, σ0 81/447, mb5.4/111, MS5.3/149, 90C-106D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
HNR	**Honiara**	**5.27**	**285**	Pn	**Pn**	**14 25 26.1**	**-0.4**
	99nm,0.3s,baz=138,slow=0.6,SNR=50						
HNR				Sn	**Sn**	**14 26 28.8**	**+2.5**
	50nm,0.3s,baz=261,slow=21,SNR=2.6						
HNR	**Honiara**	**5.27**	**285**	*eP*	**Pn**	**14 25 25.9**	**-0.6**
HNR				*eS*	**Sn**	**14 26 25.3**	**-1.0**
HNR				pmax	pmax		
	comp=Z,2μm,0.7s						
HNR	**Honiara**	**5.27**	**285**	*eP*	**Pn**	**14 25 25.9**	**-0.7**
	comp=Z,2μm,0.7s						
HNR				*eS*	**Sn**	**14 26 25.3**	**-1.0**
BKM	**Butte a Klehm**	**7.46**	**156⇑**	*iP*	**Pn**	**14 25 56.3**	**-0.3**
DZM	**Mont Dzumac**	**11.27**	**174**	*eP*	**Pn**	**14 26 48.5**	**-0.3**
DZM				*eS*	**Sn**	**14 29 06.0**	**+12**
DZM	**Mont Dzumac**	**11.27**	**174**	Pn	**Pn**	**14 26 48.1**	**-0.7**
	comp=Z,3.7nm,0.3s,baz=21,slow=17,SNR=64						
DZM				Sn	**Sn**	**14 29 08.2**	**+14**
	comp=Z,0.9nm,0.3s,baz=336,slow=21,SNR=2.5						
PMG	**Port Moresby**	**17.74**	**273**	P	**Pn**	**14 28 13.6**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=196,slow=18,SNR=2.3						
PMG				S	**Sn**	**14 31 37.7**	**+6.5**
	comp=Z,0.3nm,0.3s,baz=119,slow=18,SNR=1.6						
PMG	**Port Moresby**	**17.74**	**273**	*eP*	**Pn**	**14 28 16.4**	**+1.9**
PMG				pmax	pmax		
	comp=Z,104nm,1.1s						
PMG	**Port Moresby**	**17.74**	**273**	*eP*	**Pn**	**14 28 16.4**	**+2.0**
	comp=Z,104nm,1.1s						
CTA	**Charters Tower**	**20.37**	**241**	*eP*	**P**	**14 28 43.9**	**-0.1**
	comp=Z,201nm,0.9s						
CTA				*eS*	**S**	**14 32 33.5**	**+2.8**
CTA	**Charters Tower**	**20.37**	**241**	P	**P**	**14 28 44.1**	**+0.2**
	comp=Z,282nm,1.2s,baz=67,slow=12,SNR=71						
CTA				S	**S**	**14 32 36.0**	**+5.4**
	comp=Z,2.4nm,0.8s,baz=330,slow=18,SNR=1.5						
CTA				LR	LR	14 35 06.4	
	comp=Z,17μm,21.8s,MS5.4,baz=64,slow=32						
CTA	**Charters Tower**	**20.37**	**241**	*eP*	**P**	**14 28 43.9**	**-0.1**
CTA				*eS*	**S**	**14 32 33.5**	**+2.8**
CTA				pmax	pmax		
	comp=Z,201nm,0.9s						
CTAO	**Charters Tower**	**20.37**	**241**	*eP*	**P**	**14 28 44.1**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,408nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,16μm,21.0s,MS5.3						
CTAO	**Charters Tower**	**20.37**	**241**	*eP*	**P**	**14 28 44.1**	**+0.1**
	comp=Z,408nm,1.1s						
CTAO				LR	LR		
	comp=Z,16μm,21.0s,MS5.3						
AFI	**Afiamalu**	**22.77**	**100**	P	**P**	**14 29 09.0**	**-0.7**
	comp=Z,177nm,1.0s,mb5.4,baz=62,slow=23,SNR=7.5						
AFI				LR	LR	14 36 09.0	
	comp=Z,16μm,20.7s,MS5.5,baz=262,slow=32						
AFI	**Afiamalu**	**22.77**	**100**	*eP*	**P**	**14 29 09.2**	**-0.5**
AFI				pmax	pmax		
	comp=Z,183nm,1.0s,mb5.5						
AFI				MLR	MLR		
	comp=Z,15μm,20.0s,MS5.4						
AFI	**Afiamalu**	**22.77**	**100**	*eP*	**P**	**14 29 09.2**	**-0.5**
	comp=Z,183nm,1.0s,mb5.5						
AFI				LR	LR		
	comp=Z,15μm,20.0s,MS5.4						
ARMA	**Armidale**	**23.20**	**211**	*eP*	**P**	**14 29 14.6**	**+0.4**
ARMA				*i* S	**S**	**14 33 27.2**	**+3.3**
RAO	**Raoul Island**	**24.25**	**142**	LR	LR	14 37 27.0	
	comp=Z,4μm,18.2s,MS4.9,baz=300,slow=33						
RAO	**Raoul Island**	**24.25**	**142**	PFAKE		**14 29 40.0**	**+16**
RAO				LR	LR		
	comp=Z,5μm,20.0s,MS5.0						
OUZ	**Omahuta**	**25.50**	**164**	*eP*	**P**	**14 29 36.7**	**+1.2**
OUZ	**Omahuta**	**25.50**	**164**	PN	**P**	**14 29 36.9**	**+1.4**
RIV	**Riverview**	**26.25**	**207**	*eP*	**P**	**14 29 42.3**	**+0.1**
WCZ	**Waipu Caves**	**26.39**	**163**	*eP*	**P**	**14 29 46.5**	**+3.0**
WCZ	**Waipu Caves**	**26.39**	**163**	*e*PN	**P**	**14 29 46.7**	**+3.2**
CNB	**Canberra Magne**	**28.30**	**208**	*eP*	**P**	**14 30 00.7**	**+0.1**
	comp=Z,52nm,1.2s,mb5.0						
URZ	**Urewera**	**29.37**	**161**	P	**P**	**14 30 10.5**	**+0.3**
	comp=Z,82nm,1.0s,mb5.4,baz=352,slow=5.7,SNR=13						
URZ				LR	LR	14 40 32.0	
	comp=Z,6μm,18.4s,MS5.2,baz=180,slow=34						
MWZ	**Matawai**	**29.58**	**160**	*e*PN	**P**	**14 30 12.0**	**0.0**
STKA	**Stephens Creek**	**30.20**	**222**	*eP*	**P**	**14 30 17.4**	**-0.1**
	comp=Z,50nm,0.9s,mb5.2						
STKA				*eS*	**S**	**14 35 12.4**	**-2.5**
STKA	**Stephens Creek**	**30.20**	**222**	P	**P**	**14 30 18.2**	**+0.8**
	comp=Z,63nm,0.9s,mb5.3,baz=37,slow=9.5,SNR=49						
STKA				LR	LR	14 41 44.4	
	comp=Z,15μm,18.1s,MS5.7,baz=41,slow=35						
WRAB	**Tennant Creek**	**30.98**	**249**	P	**P**	**14 30 22.9**	**-1.5**
	comp=Z,114nm,0.5s,mb6.0,SNR=5.3						
WRAB	**Tennant Creek**	**30.98**	**249⇓**	*iP*	**P**	**14 30 22.6**	**-1.8**
WRAB	**Tennant Creek**	**30.98**	**249**	*eP*	**P**	**14 30 22.0**	**-2.4**
	comp=Z,94nm,1.2s,mb5.5						
WRAB				LR	LR		
	comp=Z,4μm,19.0s,MS5.1						
WB2	**Warramunga Arr**	**30.98**	**249⇑**	*iP*	**P**	**14 30 22.3**	**-2.1**
WB2				*e*S	**S**	**14 35 23.8**	**-3.3**
WRA	**Warramunga Arr**	**30.99**	**249**	P	**P**	**14 30 22.6**	**-1.9**
	comp=Z,12nm,0.7s,mb4.8,baz=78,slow=8.9,SNR=43						
WRA				S	**S**	**14 35 29.5**	**+2.2**
	comp=Z,5.0nm,1.1s,baz=77,slow=9.7,SNR=3.6						
WRA				LR	LR	14 41 55.3	
	comp=Z,12μm,20.1s,MS5.5,baz=70,slow=34						
WRA	**Warramunga Arr**	**30.99**	**249**	P	**P**	**14 30 22.6**	**-1.9**
WRA				S	**S**	**14 35 29.5**	**+2.2**
MRZ	**Mangatainoka R**	**31.14**	**165**	*eP*	**P**	**14 30 25.8**	**0.0**
MRZ	**Mangatainoka R**	**31.14**	**165**	*e*PN	**P**	**14 30 26.3**	**+0.5**
NNZ	**Nelson**	**31.16**	**168**	*e*PN	**P**	**14 30 28.6**	**+2.7**
SNZO	**South Karori**	**31.54**	**166**	*eP*	**P**	**14 30 31.5**	**+2.3**
	comp=Z,145nm,1.0s,mb5.8						
SNZO				LR	LR		
	comp=Z,4μm,20.0s,MS5.1						
THZ	**Tophouse**	**31.59**	**169**	*eP*	**P**	**14 30 32.2**	**+2.5**
THZ	**Tophouse**	**31.59**	**169**	*e*PN	**P**	**14 30 32.2**	**+0.5**
TOO	**Toolangi**	**31.96**	**210⇑**	*iP*	**P**	**14 30 33.5**	**+0.5**
	comp=Z,21nm,0.6s,mb5.1						
TOO				*e*S	**S**	**14 35 43.3**	**+0.8**
TOO	**Toolangi**	**31.96**	**210⇑**	*iP*	**P**	**14 30 33.5**	**+0.5**
TOO				*e*S	**S**	**14 35 43.3**	**+0.8**
TOO				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.1						
KAKA	**Kakadu**	**32.04**	**263**	*eP*	**P**	**14 30 30.5**	**-3.2**
	comp=Z,33nm,0.5s,mb5.4						
AS31	**Alice Springs**	**32.35**	**243**	*eP*	**P**	**14 30 34.2**	**-2.2**
ASAR	**Alice Springs**	**32.35**	**243**	P	**P**	**14 30 34.3**	**-2.2**
	comp=Z,33nm,0.9s,mb5.2,baz=64,slow=10.0,SNR=103						
ASAR				LR	LR	14 42 08.9	
	comp=Z,10μm,19.8s,MS5.5,baz=71,slow=33						
ASPA	**Alice Springs**	**32.36**	**243**	*eP*	**P**	**14 30 34.2**	**-2.3**
LTZ	**Lake Taylor**	**32.46**	**170**	*eP*	**P**	**14 30 38.8**	**+1.4**
LTZ	**Lake Taylor**	**32.46**	**170**	*e*PN	**P**	**14 30 38.8**	**+1.4**
RPZ	**Rata Peaks**	**33.19**	**172**	P	**P**	**14 30 42.8**	**-1.0**
	comp=Z,36nm,0.8s,mb5.3,baz=42,slow=6.8,SNR=9.1						
RPZ				LR	LR	14 43 02.9	
	comp=Z,4μm,18.3s,MS5.2,baz=337,slow=34						
ADE	**Adelaide**	**34.01**	**221**	P	**P**	**14 30 52.0**	**+1.1**
RAR	**Rarotonga**	**35.22**	**111**	LR	LR	14 42 25.8	
	comp=Z,7μm,21.3s,MS5.3,baz=226,slow=31						
RAR	**Rarotonga**	**35.22**	**111**	PFAKE		14 31 10.0	+8.6
RAR				LR	LR		
	comp=Z,1.0nm,19.0s						
FITZ	**Fitzroy Crossi**	**38.85**	**255**	*eP*	**P**	**14 31 29.8**	**-2.4**
	comp=Z,33nm,0.9s,mb5.1						
FITZ				*e*S	**S**	**14 37 24.9**	**-3.3**
FORT	**Forrest**	**39.68**	**234**	*eP*	**P**	**14 31 38.5**	**-0.6**
	comp=Z,63nm,0.8s,mb5.4						
FORT				*e*S	**S**	**14 37 38.5**	**-2.2**
DAV	**Davao City (W)**	**43.18**	**293**	PFAKE		14 32 20.0	+12
DAV				LR	LR		
	comp=Z,3μm,22.0s,MS5.1						
PPT	**Papeete**	**44.35**	**104**	*e*S	**S**	**14 38 58.2**	**+8.6**
	comp=Z,989nm,25.8s						
PPT				*e*LR	LR	14 44 46.8	
	comp=Z,10μm,22.5s,baz=274						
PPT	**Papeete**	**44.35**	**104**	LR	LR	14 46 36.9	
	comp=Z,6μm,19.4s,MS5.5,baz=252,slow=30						
MBWA	**Marble Bar**	**44.69**	**251**	*eP*	**P**	**14 32 19.3**	**-0.7**
	comp=Z,19nm,1.0s,mb4.9						
MBWA				LR	LR		
	comp=Z,8μm,22.0s,MS5.6						
TBI	**Tubuai**	**44.99**	**112**	*e*S	**S**	**14 39 07.6**	**+8.7**
	comp=Z,3μm,27.0s						
TBI				*e*LQ		14 43 11.2	
	comp=Z,11μm,30.8s						
TBI				*e*LR	LR	14 45 05.8	
	comp=Z,18μm,27.8s,baz=283						
KLBR	**Kellerberrin**	**48.32**	**237**	*eP*	**P**	**14 32 48.1**	**-0.3**
	comp=Z,44nm,1.1s,mb5.4						
KIP	**Kipapa**	**48.34**	**48⇓**	*iP*	**P**	**14 32 48.4**	**-0.2**
KIP	**Kipapa**	**48.34**	**48**	PFAKE		14 33 00.0	+11
KIP				LR	LR		
	comp=Z,4μm,20.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**49.09**	**236**	*eP*	**P**	**14 32 55.0**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,52nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,12μm,19.0s						
NWAO	**Narrogin (SRO)**	**49.09**	**236**	*eP*	**P**	**14 32 55.0**	**+0.6**
	comp=Z,52nm,1.1s,mb5.5						
NWAO				LR	LR		
	comp=Z,12μm,19.0s,MS5.9						
POHA	**Pohakuloa**	**49.23**	**52**	*eP*	**P**	**14 32 55.5**	**+0.1**
	comp=Z,2μm,2.1s						
POHA				LR	LR		
	comp=Z,4μm,20.0s						
MUN	**Mundaring**	**49.69**	**237**	*eP*	**P**	**14 32 58.4**	**-0.5**
MUN				*e*S	**S**	**14 40 10.2**	**+4.4**
TGY	**Tagaytay City**	**50.32**	**299**	P	**P**	**14 33 03.8**	**+0.1**
	comp=Z,262nm,0.2s,baz=246,slow=0.8,SNR=5.3						
KKM	**Kota Kinabalu**	**51.48**	**287**	*eP*	**P**	**14 33 10.2**	**-2.2**
MJAR	**Matsushiro Arr**	**53.48**	**333**	P	**P**	**14 33 26.1**	**-1.2**
	comp=Z,8.1nm,0.9s,mb4.6,baz=158,slow=6.5,SNR=20						
MAJO	**Matsushiro**	**53.48**	**333**	*eP*	**P**	**14 33 25.1**	**-2.1**
MAJO				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.3						
MAJO				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.2						
MAJO	**Matsushiro**	**53.48**	**333**	*eP*	**P**	**14 33 25.1**	**-2.2**
	comp=Z,51nm,1.2s,mb5.3						
MAJO				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
MAT	**Matsushiro**	**53.48**	**333**	P	**P**	**14 33 25.9**	**-1.3**
MAT				S	**S**	**14 40 58.0**	**0.0**
YHNB	**Yeheng**	**55.36**	**310**	*eP*	**P**	**14 33 41.1**	**+0.2**
TATO	**Taipei**	**55.45**	**311**	*eP*	**P**	**14 33 42.4**	**+0.9**
	comp=Z,77nm,1.1s,mb5.7						
KSM	**Kuching**	**55.86**	**279**	*eP*	**P**	**14 33 43.8**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**57.32**	**344**	*eP*	**P**	**14 33 57.9**	**+3.0**
YUK				*e*		14 36 03.0	
YUK				pmax	pmax		
	comp=Z,2μm,6.0s						
YUK				MLR	MLR		
	comp=E,4μm,19.0s						
YUK				MLR	MLR		
	comp=E,3μm,18.0s						
QZH	**Quanzhou**	**57.62**	**309⇑**	*iP*	**P**	**14 33 56.0**	**-1.0**
QZH				S	**S**	**14 41 56.0**	**+2.7**
QZH				AMB	AMB		
	comp=Z,100nm,1.2s,mb5.7						
QZH				AMB	AMB		
	comp=Z,2μm,9.4s						
QZH				LR	LR		
	comp=N,1μm,10.0s,MS5.4						
QZH				LR	LR		
	comp=E,1μm,11.6s,MS5.4						
QZH				LR	LR		
	comp=Z,5μm,27.3s						
RKT	**Rikitea**	**58.25**	**110**	*e*S	**S**	**14 42 09.6**	**+8.2**
	comp=Z,2μm,28.2s						
RKT				*e*LQ		14 48 46.2	
	comp=Z,4μm,29.8s						

RKT eLR LR 14 51 07.4
comp=Z,12µm,27.0s,baz=274
DRV Dumont d'Urvil 58.32 191 P **P** **14 34 06.0 +4.1**
DRV S **S** **14 42 09.0 +6.7**
DRV SS SS 14 45 57.0 +2.5
DRV R 14 52 00.0
SSE Sheshan 59.25 316 ⇓P **P** **14 34 09.5 +1.1**
SSE AP pP 14 34 19.5 +2.0
SSE XP sP 14 34 23.5 +2.6
SSE PCP PcP 14 34 58.5 +2.1
SSE PP PP 14 36 21.0 +1.6
SSE S **S** **14 42 15.5 +1.0**
SSE SCS ScS 14 43 54.8 -1.6
SSE AMB AMB
comp=Z,25nm,1.1s,mb5.2
SSE AMB AMB
comp=Z,223nm,6.7s
SSE LR LR
comp=N,1µm,29.8s,MS5.1
SSE LR LR
comp=E,2µm,29.9s,MS5.1
SSE LR LR
comp=Z,2µm,20.6s
INCN Inchon 60.07 325 *e*P **P** **14 34 15.1 +1.1**
comp=Z,90nm,1.2s,mb5.7
INCN LR LR
comp=Z,2µm,21.0s,MS5.2
GZH Guangzhou 60.84 304 P **P** **14 34 21.0 +1.7**
GZH S **S** **14 42 40.5 +5.5**
GZH LR LR
comp=N,2µm,23.0s,MS5.2
GZH LR LR
comp=E,1µm,24.2s,MS5.2
GZH LR LR
comp=Z,3µm,13.1s
YSS Yuzh-Sakhalins 60.87 343 *e*P **P** **14 34 18.4 -1.1**
YSS *e* pP 14 34 27.0 -1.6
YSS *e**SP sP 14 34 31.0 -1.1
YSS *e*S **S** **14 42 35.0 -0.3**
YSS *e*PS 14 42 49.0
YSS *e*SSS 14 49 16.0
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.8
YSS MLR MLR
comp=Z,2µm,20.0s,MS5.2
YSS MLR MLR
comp=N,2µm,18.0s
YSS Yuzh-Sakhalins 60.87 343 *e*P **P** **14 34 19.7 +0.2**
comp=N,138nm,1.1s,mb6.0
NJ2 Nanjing 61.42 316 *e*P **P** **14 34 26.0 +2.8**
NJ2 AP pP 14 34 36.3 +4.0
NJ2 PP PP 14 36 43.5 +5.0
NJ2 AMB AMB
comp=Z,30nm,0.8s,mb5.5
NJ2 AMB AMB
comp=Z,60nm,4.6s
NJ2 LR LR
comp=N,3µm,12.1s
NJ2 LR LR
comp=E,3µm,19.2s
NJ2 LR LR
comp=Z,1µm,16.8s,MS5.1
VLA Vladivostok 61.65 333 *e*P **P** **14 34 24.4 -0.3**
VLA *e**PP pP 14 34 33.0 -0.8
VLA *e*S **S** **14 42 50.0 +4.9**
VLA pmax pmax
comp=Z,52nm,1.5s,mb5.4
SKR Severo-Kuril's 61.73 354 *e*P **P** **14 34 20.0 -5.3**
SKR *e*PPP 14 38 08.0
SKR *e*S **S** **14 42 50.0 +3.8**
SKR *e*SSS 14 49 21.0
SKR pmax pmax
comp=N,130nm,1.0s
SKR pmax pmax
comp=E,130nm,1.0s
SKR pmax pmax
comp=Z,180nm,1.0s,mb6.2
SKR pmax pmax
comp=N,1µm,6.0s
SKR pmax pmax
comp=E,800nm,6.0s
SKR pmax pmax
comp=Z,1µm,6.0s
SKR smax
comp=N,1µm,14.0s
SKR smax
comp=E,1µm,14.0s
SKR MLR MLR
comp=N,2µm,18.0s,MS5.4
SKR MLR MLR
comp=Z,2µm,18.0s,MS5.3
SKR MLR MLR
comp=E,2µm,20.0s,MS5.4
QIZ Qiongzhong 62.03 298 P **P** **14 34 27.3 0.0**
QIZ AP pP 14 34 40.3 +3.9
QIZ S **S** **14 42 49.3 -0.7**
QIZ AMB AMB
comp=Z,26nm,1.5s,mb5.1
QIZ LR LR
comp=E,3µm,23.3s
QIZ LR LR
comp=Z,5µm,24.5s,MS5.6
PTCN Pitcairn Islan 62.74 113 PFAKE 14 34 40.0 +8.0
PTCN LR LR
comp=Z,6µm,22.0s,MS5.7
SMY Shemya 63.75 6 *e*P **P** **14 34 38.8 +0.1**
SMY pmax pmax
comp=Z,210nm,1.3s,mb6.0
SMY MLR MLR
comp=Z,2µm,19.0s,MS5.4
SMY Shemya 63.75 6 *e*P **P** **14 34 38.8 0.0**
comp=Z,210nm,1.3s,mb6.0
SMY LR LR
comp=Z,2µm,19.0s,MS5.4
WHN Wuhan 63.77 312 P **P** **14 34 41.0 +2.1**
PET Petropavlovsk 63.81 356*d i*P **P** **14 34 39.6 +0.4**
PET pmax pmax
comp=Z,67nm,1.3s,mb5.5
PET MLR MLR
comp=Z,1µm,19.0s,MS5.1
PET Petropavlovsk 63.81 356 *e*P **P** **14 34 38.8 -0.4**
comp=Z,61nm,1.1s,mb5.5
PET LR LR
comp=Z,1µm,19.0s,MS5.1
MDJ Mudanjiang 63.85 332 P **P** **14 34 40.3 +0.9**
MDJ AP pP 14 34 52.0 +3.4
MDJ PP PP 14 37 01.0 +1.0
MDJ AMB AMB
comp=Z,28nm,1.0s,mb5.2
MDJ AMB AMB
comp=Z,491nm,8.0s
MDJ LR LR
comp=N,958nm,22.8s,MS5.0
MDJ LR LR
comp=E,354nm,21.9s,MS5.0
MDJ LR LR
comp=Z,1µm,20.9s,MS5.0
DL2 Dalian 63.92 323 PR **P** **14 34 41.5 +1.6**
DL2 S **S** **14 43 16.3 +2.6**
DL2 SS SS 14 47 19.0 -3.3
DL2 AMB AMB
comp=Z,40nm,0.9s,mb5.5
DL2 AMB AMB
comp=Z,270nm,7.5s
DL2 LR LR
comp=N,640nm,15.7s,MS5.0
DL2 LR LR
comp=E,670nm,17.0s,MS5.0
DL2 LR LR
comp=Z,910nm,17.3s,MS5.0
HABR Khabarovsk 64.73 338 ⇓*i*P **P** **14 34 46.9 +1.7**
HABR *e* pP 14 34 54.1 -0.3
HABR pmax pmax
comp=Z,70nm,1.3s,mb5.5
HABR MLR MLR
comp=Z,1µm,18.8s,MS5.0
SNY Shenyang 64.80 327 P **P** **14 34 48.0 +2.4**
SNY AP pP 14 34 57.0 +2.2
SNY XP sP 14 35 01.8 +3.6
SNY S **S** **14 43 29.5 +5.0**
SNY AMB AMB
comp=Z,20nm,0.9s,mb5.2
SNY AMB AMB
comp=Z,520nm,10.8s
SNY LR LR
comp=N,977nm,15.7s
SNY LR LR
comp=E,884nm,24.7s
SNY LR LR
comp=Z,2µm,18.0s,MS5.2
TIA Tai'an 65.03 318 P **P** **14 34 46.8 -0.3**
TIA PP PP 14 37 11.5 +1.2
TIA S S 14 43 28.3 +1.0
TIA LR LR
comp=E,630nm,20.8s,MS5.0
TIA LR LR
comp=N,707nm,16.0s,MS5.0
TIA LR LR
comp=E,413nm,15.0s
CN2 Changchun 65.22 329 *e*P **P** **14 34 48.3 -0.1**
CN2 PP PP 14 37 11.8 -0.2
CN2 AMB AMB
comp=Z,60nm,1.0s,mb5.6
CN2 AMB AMB
comp=Z,340nm,6.0s
CN2 LR LR
comp=N,1µm,17.0s,MS5.2
CN2 LR LR
comp=E,870nm,17.0s,MS5.2
CN2 LR LR
comp=Z,2µm,16.0s,MS5.3
KULM Kulim 66.13 281 *e*P **P** **14 34 54.2 -0.1**
CASY Casey 66.38 201 *e*P **P** **14 34 55.2 -0.6**
CASY *e*S S 14 43 45.0 +1.2
KLR Kul'dur 66.59 337 *e*P **P** **14 34 54.4 -2.8**
KLR *e* pP 14 35 02.8 -3.6
KLR *e*S S 14 43 41.5 -4.9
KLR pmax pmax
comp=E,38nm,1.4s
KLR pmax pmax
comp=Z,55nm,1.4s,mb5.4
VNDA Vanda 66.72 181 P **P** **14 34 57.7 -0.3**
comp=Z,58nm,1.0s,mb5.6,baz=344,slow=6.7,SNR=88
VNDA LR LR 15 01 58.8
comp=Z,2µm,18.2s,MS5.3,baz=356,slow=34
VNDA PKP2ab 15 03 39.3
comp=Z,2.7nm,1.3s,baz=252,slow=5.4,SNR=4.1
VNDA Vanda 66.72 181 *e*P **P** **14 34 57.5 -0.5**
VNDA pmax pmax
comp=Z,63nm,1.0s
VNDA MLR MLR
comp=Z,2µm,19.0s
VNDA Vanda 66.72 181 *e*P **P** **14 34 57.5 -0.5**
comp=Z,63nm,1.0s,mb5.6
VNDA LR LR
comp=Z,2µm,19.0s,MS5.3
COCO West Island 66.77 261 PFAKE 14 35 10.0 +12
COCO LR LR
comp=Z,680nm,20.0s,MS4.9
SBA Scott Base 67.04 180 *e*P **P** **14 35 00.4 +0.3**
SBA pmax pmax
comp=Z,95nm,1.0s,mb5.8
SBA MLR MLR
comp=Z,1µm,19.0s,MS5.1
SBA Scott Base 67.04 180 *e*P **P** **14 35 00.3 +0.3**
comp=Z,95nm,1.0s,mb5.8
SBA LR LR
comp=Z,1µm,19.0s,MS5.1
KKTK Khon Kaen 67.27 293 ⇓P **P** **14 35 04.0 +2.5**
NIKO Nikolski 67.32 17 *e*P **P** **14 35 01.5 -0.4**
GYA Guiyang 67.78 304 ⇑*i*P **P** **14 35 05.0 +0.3**
GYA AP pP 14 35 12.8 -1.1
GYA XP sP 14 35 16.0 -1.3
GYA PP PP 14 37 38.8 +4.5
GYA PPP 14 39 16.5
GYA SCP 14 39 30.8
GYA S S 14 44 04.5 +3.8
GYA XS sS 14 44 17.5 +1.7
GYA AMB AMB
comp=Z,60nm,0.8s,mb5.7
GYA AMB AMB
comp=Z,260nm,5.7s
GYA LR LR
comp=N,1µm,18.6s,MS5.3
GYA LR LR
comp=E,1µm,18.6s,MS5.3
GYA LR LR
comp=Z,930nm,20.0s,MS5.0
BJI Beijing 67.91 321 P **P** **14 35 06.0 +0.5**
BJI AP pP 14 35 14.5 -0.2
BJI S S 14 44 02.0 -0.3
BJI AMB AMB
comp=Z,22nm,1.4s,mb5.0
BJI AMB AMB
comp=Z,415nm,7.4s
BJI LR LR
comp=N,1µm,20.2s,MS5.4
BJI LR LR
comp=E,2µm,20.0s,MS5.4
BJI LR LR
comp=Z,2µm,25.9s
NST Nakhon Sawan 69.50 291 P **P** **14 35 16.0 +0.5**
comp=Z,41nm,0.6s,mb5.5
XAN Xi'an 69.51 313 P **P** **14 35 15.5 0.0**
XAN AP pP 14 35 21.0 -3.7
XAN S S 14 44 22.3 +1.1
XAN AMB AMB
comp=Z,33nm,0.9s,mb5.3
XAN AMB AMB
comp=Z,230nm,7.0s
XAN LR LR
comp=N,367nm,25.9s,MS5.0
XAN LR LR
comp=E,1µm,25.4s,MS5.0
XAN LR LR
comp=Z,2µm,22.5s,MS5.3
NANT Nan 69.99 295 ⇑P **P** **14 35 18.0 -0.5**
comp=Z,152nm,1.0s,mb5.9
KMI Kunming 70.47 302 P **P** **14 35 24.5 +3.1**
KMI XP sP 14 35 36.8 +2.7
KMI PCP PcP 14 35 46.3 +3.7
KMI PP PP 14 38 02.5 +4.9
KMI AMB AMB
comp=Z,55nm,1.1s,mb5.4
KMI AMB AMB
comp=Z,851nm,7.8s
KMI LR LR
comp=N,887nm,23.0s,MS5.2
KMI LR LR
comp=E,1µm,23.6s,MS5.2
KMI LR LR
comp=Z,2µm,22.4s,MS5.4
MA2 Magadan 71.09 352*ce*P **P** **14 35 23.3 -1.9**
MA2 pmax pmax
comp=Z,30nm,1.3s,mb5.1
MA2 Magadan 71.09 352 *e*P **P** **14 35 23.9 -1.3**
comp=Z,34nm,1.0s,mb5.2
MA2 LR LR
comp=Z,1µm,22.0s,MS5.1
HHC Hu-ho-hao-te 71.25 320 *e*P **P** **14 35 28.0 +1.8**
HHC AP pP 14 35 38.3 +2.9
HHC XP sP 14 35 42.3 +3.5
HHC PCP PcP 14 35 47.8 +1.8
HHC PP PP 14 38 08.0 +3.7
HHC AMB AMB
comp=Z,19nm,1.1s,mb4.9
HHC AMB AMB
comp=Z,292nm,8.2s
HHC LR LR
comp=N,1µm,18.4s,MS5.3
HHC LR LR
comp=E,909nm,17.2s,MS5.3
HHC LR LR
comp=Z,1µm,21.4s,MS5.2
CM31 Chiang Mai Arr 71.45 294 *e*P **P** **14 35 29.0 +1.6**
CM31 LR LR
comp=Z,1µm,22.0s,MS5.1
CHG Chiang Mai 71.57 294 ⇑P **P** **14 35 30.2 +2.1**
comp=Z,18nm,1.0s,mb5.0
CHTO Chiang Mai 71.57 294 *e*P **P** **14 35 28.8 +0.7**
CHTO pmax pmax
comp=Z,19nm,1.0s,mb5.0
CHTO MLR MLR
comp=Z,1µm,21.0s,MS5.2
CHTO Chiang Mai 71.57 294 *e*P **P** **14 35 28.8 +0.7**
comp=Z,19nm,1.0s,mb5.0
CHTO LR LR
comp=Z,1µm,21.0s,MS5.2
HIA Hailar 71.86 331*c i*P **P** **14 35 29.7 -0.1**
CD2 Chengdu 71.97 308 ⇓*i*P **P** **14 35 31.3 +0.8**
CD2 AP pP 14 35 39.0 -0.7
CD2 XP sP 14 35 42.3 -0.9
CD2 PCP PcP 14 35 50.0 +1.0
CD2 PP PP 14 38 13.0 +2.5
CD2 AMB AMB
comp=Z,60nm,1.1s,mb5.4
CD2 AMB AMB
comp=Z,420nm,8.4s
CD2 LR LR
comp=E,1µm,24.0s
CD2 LR LR
comp=Z,1µm,25.2s,MS5.1
BTO Baotou 72.11 319 *e*P **P** **14 35 32.8 +1.5**
MIR Mirnyy 73.05 203*d i*P **P** **14 35 39.0 +2.1**
MIR pmax pmax
comp=Z,40nm,1.5s,mb5.1
MIR pmax pmax
comp=Z,1µm,6.0s
LZH Lanzhou 74.14 312 ⇓P **P** **14 35 46.8 +3.5**
LZH AP pP 14 35 54.5 +1.9
LZH XP sP 14 35 57.5 +1.5
LZH PP PP 14 38 34.3 +5.3
LZH PPP 14 40 19.0
LZH AMB AMB
comp=Z,157nm,1.5s,mb5.7
LZH AMB AMB
comp=Z,528nm,7.3s
LZH LR LR
comp=E,1µm,14.8s
LZH LR LR
comp=Z,3µm,18.3s,MS5.6
SEY Seymchan 74.17 354*d i*P **P** **14 35 42.8 -0.7**
CLNS Chul'man 75.13 338 *e*P **P** **14 35 49.7 +0.7**
CLNS *e**PP pP 14 35 57.2 -1.1
CLNS *e* 14 36 02.8
CLNS *e* 14 38 32.9
CLNS *e*S S 14 45 23.7 -1.9
CLNS *e* 14 46 04.8
CLNS pmax pmax
comp=Z,61nm,1.0s,mb5.5
CLNS pmax pmax
comp=N,24nm,1.1s
CLNS pmax pmax
comp=E,26nm,1.2s
CLNS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CLNS pmax pmax
comp=N,14nm,1.0s
CLNS pmax pmax
comp=E,11nm,0.8s
CLNS smax
comp=E,727nm,13.5s
CLNS smax
comp=Z,269nm,11.4s
CLNS smax
comp=N,398nm,12.4s
CLNS MLR MLR
comp=Z,1µm,13.0s,MS5.3
CLNS MLR MLR
comp=N,200nm,11.0s,MS5.2
CLNS MLR MLR
comp=E,700nm,14.0s,MS5.2
KDAK Kodiak Island 76.58 22 P **P** **14 35 56.4 -1.0**
comp=E,24nm,1.0s,mb5.1,baz=150,slow=2.5,SNR=7.8
KDAK LR LR 15 04 46.3
comp=E,984nm,18.5s,MS5.2,baz=230,slow=32
KDAK Kodiak Island 76.58 22 *e*P **P** **14 35 56.1 -1.2**
comp=E,35nm,1.1s,mb5.2
KDAK LR LR
comp=Z,262nm,20.0s,MS4.5
CIT Chita 76.65 330 *e*P **P** **14 35 58.5 +0.8**
CIT pmax pmax
comp=Z,35nm,1.3s,mb5.1
YAK Yakutsk 77.69 344 *e*P **P** **14 36 03.3 -0.3**
YAK *e* pP 14 36 11.5 -1.4
YAK *e**PP pP 14 36 13.7 +0.8
YAK *e* 14 40 51.2
YAK *e*S S 14 45 53.2 -0.5
YAK *e**SS sS 14 46 06.3 -2.8
YAK *e* 14 46 16.0
YAK pmax pmax
comp=Z,53nm,0.9s,mb5.5
YAK pmax pmax
comp=N,23nm,1.3s
YAK pmax pmax
comp=E,15nm,1.5s
YAK smax
comp=N,2.0nm,1.2s
YAK smax
comp=Z,2.0nm,0.9s
YAK smax
comp=E,1.0nm,1.0s
YAK MLR MLR
comp=Z,756nm,16.0s,MS5.1
YAK MLR MLR
comp=N,558nm,17.0s,MS5.1
YAK MLR MLR
comp=E,465nm,17.0s,MS5.1
YAK Yakutsk 77.69 344 *e*P **P** **14 36 02.8 -0.8**
comp=E,177nm,0.9s,mb6.0
SVW2 Sparrevohn 78.08 18 *e*P **P** **14 36 06.0 +0.3**
SONM Songino Array 78.11 324 P **P** **14 36 06.4 +0.5**
comp=E,26nm,1.1s,mb5.1,baz=138,slow=5.0,SNR=57
SONM PKPPKP 15 03 19.0
comp=E,2.0nm,1.1s,baz=205,slow=3.1,SNR=5.3
SONM LR LR 15 07 49.5
comp=E,1µm,20.9s,MS5.3,baz=114,slow=34
GTA Gaotai 78.45 314 P **P** **14 36 08.5 +0.7**
GTA AP pP 14 36 17.0 -0.1
GTA XP sP 14 36 20.0 -0.5
GTA PP PP 14 39 06.8 +1.5
GTA AMB AMB
comp=Z,36nm,1.2s,mb5.2
GTA AMB AMB
comp=Z,389nm,9.5s
GTA LR LR
comp=N,923nm,18.3s,MS5.3
GTA LR LR
comp=E,1µm,22.9s,MS5.3
GTA LR LR
comp=Z,2µm,25.2s,MS5.3
BILL Bilibino 78.64 0 *e*P **P** **14 36 08.2 -0.6**
BILL *e* pP 14 36 16.8 -1.4
BILL pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
BILL MLR MLR
comp=Z,994nm,19.0s,MS5.2
BILL Bilibino 78.64 0 *e*P **P** **14 36 08.2 -0.6**
comp=Z,4.5nm,0.4s,mb4.8
BILL *e* pP 14 36 16.8 -1.4
BILL LR LR
comp=Z,994nm,19.0s,MS5.2
QSPA South Pole Qui 79.20 180 *e*P **P** **14 36 11.7 -0.2**
comp=Z,141nm,1.0s,mb5.8
TTA Tatalina 79.38 17 *e*P **P** **14 36 13.3 +0.4**
SLKM Skilak Lake 79.40 21 *e*P **P** **14 36 13.7 +0.7**
BOD Bodaibo 80.05 335 ⇑*i*P **P** **14 36 15.6 -0.9**
BOD pmax pmax
comp=Z,27nm,1.4s,mb5.0
PMR Palmer 80.54 20 *e*P **P** **14 36 20.0 +0.8**
PMR pmax pmax
comp=Z,30nm,1.8s,mb4.9
PMR MLR MLR
comp=Z,500nm,19.0s,MS4.9
PMR Palmer 80.54 20 *e*P **P** **14 36 20.0 +0.8**
comp=Z,30nm,1.8s,mb4.9
PMR LR LR
comp=Z,500nm,19.0s,MS4.9
ZAK Zakamensk 81.15 325 *e*P **P** **14 36 22.0 -0.4**
ZAK pmax pmax
comp=Z,32nm,1.2s,mb5.1
RPN Rapa Nui 81.23 116 PFAKE 14 36 30.0 +7.2
RPN LR LR
comp=Z,683nm,20.0s,MS5.0
DIV Divide 81.41 22 *e*P **P** **14 36 23.5 -0.3**
comp=Z,114nm,1.0s,mb5.8
DIV LR LR
comp=Z,2µm,21.0s,MS5.5
IRK Irkutsk 81.52 327 *e*P **P** **14 36 22.9 -1.5**
IRK pmax pmax
comp=Z,48nm,1.2s,mb5.3
TLY Talaya 81.58 326 P **P** **14 36 24.9 +0.2**
comp=Z,240nm,1.1s,mb6.0,SNR=7.1
TLY Talaya 81.58 326*c i*P **P** **14 36 23.8 -0.9**
TLY pmax pmax
comp=Z,21nm,1.3s,mb4.9
TLY Talaya 81.58 326 *e*P **P** **14 36 23.8 -0.9**
comp=Z,54nm,1.1s,mb5.4

TLY LR LR
comp=Z,259nm,20.0s,MS4.6
LSA Lhasa 81.71 302 P P 14 36 29.3 +3.9
LSA AP pP 14 36 36.0 +1.3
LSA XP sP 14 36 38.5 +0.4
LSA S S 14 46 41.0 +4.9
LSA SS SS 14 51 54.8 +0.9
LSA LR LR
comp=E,1µm,22.7s
LSA LR LR
comp=Z,2µm,24.3s,MS5.4
MCK McKinley 82.11 19 *e*P **P 14 36 26.7 -0.8**
MCK pmax pmax
comp=Z,26nm,1.3s,mb5.0
MCK MLR MLR
comp=Z,501nm,22.0s,MS4.8
MCK McKinley 82.11 19 *e*P **P 14 36 26.7 -0.8**
comp=Z,26nm,1.3s,mb5.0
MCK LR LR
comp=Z,501nm,22.0s,MS4.8
CAL Calcutta 82.15 295 *i* x x 14 36 49.7
FARB Farallon Islan 82.59 49 ⇑P **P 14 36 29.3 -0.7**
baz=83
MCCM Marconi Confer 82.83 49 ⇓P **P 14 36 30.4 -0.9**
baz=83
JCC Jacoby Creek 82.92 46 ⇓P **P 14 36 31.4 -0.3**
baz=83
P01C Double 8 Ranch 82.94 48 ⇓P **P 14 36 31.4 -0.4**
baz=83,SNR=7.2
KIPM Iron Peak 82.96 47 *e*P **P 14 36 31.9 0.0**
HOPS Hopland 82.97 48 *e*P **P 14 36 30.9 -1.1**
comp=Z,44nm,1.3s,mb5.3
HOPS LR LR
comp=Z,2µm,20.0s,MS5.4
HOPS Hopland 82.97 48 ⇓P **P 14 36 31.9 0.0**
baz=83,SNR=7.3
BNLO Ben Lomond (Sa 83.02 50 ⇑P **P 14 36 32.0 -0.3**
baz=83
MOY Mondy 83.03 326 *e*P **P 14 36 34.7 +2.4**
JRSC Jasper Ridge 83.06 50 ⇓P **P 14 36 32.5 0.0**
baz=83
KHMM Horse Mountain 83.15 46 *e*P **P 14 36 33.1 +0.2**
NSHM Saint Helena R 83.16 49 *e*P **P 14 36 32.9 0.0**
CVS Carmenet Viney 83.21 49 ⇑P **P 14 36 33.4 +0.2**
baz=83
M01C Crescent City 83.22 45 ⇓P **P 14 36 34.0 +0.8**
baz=83
COLA College 83.25 18*c*e**P P 14 36 31.9 -1.5**
COLA College 83.25 18 *e*P **P 14 36 32.0 -1.4**
comp=Z,18nm,0.9s,mb5.1
COLA LR LR
comp=Z,614nm,20.0s,MS5.0
HAST UC Hastings Re 83.26 51 ⇓P **P 14 36 33.6 +0.2**
baz=83,SNR=5.7
MENT Mentasta 83.33 21 *e*P **P 14 36 34.1 +0.3**
SIT Sitka 83.34 28 PFAKE 14 36 40.0 +6.1
SIT LR LR
comp=Z,2µm,19.0s,MS5.6
V03C Hunter Liggett 83.38 52 ⇑P **P 14 36 34.0 -0.1**
baz=84
MNRC McLaughlin Nat 83.40 49 ⇑P **P 14 36 34.2 0.0**
baz=84,SNR=10
N02C Big Bar 83.43 46 ⇑P **P 14 36 34.3 0.0**
baz=84,SNR=8.9
GASB Alder Springs 83.45 48 ⇑P **P 14 36 34.8 +0.3**
baz=84,SNR=5.5
SAO San Andreas Ge 83.45 51 *e*P **P 14 36 34.3 -0.2**
SAO pmax pmax
comp=Z,22nm,1.0s,mb5.1
SAO MLR MLR
comp=Z,3µm,20.0s,MS5.7
SAO San Andreas Ge 83.45 51 *e*P **P 14 36 34.3 -0.2**
comp=Z,22nm,1.0s,mb5.1
SAO LR LR
comp=Z,3µm,20.0s,MS5.7
V04C Ramage Ranch, 83.54 52 ⇑P **P 14 36 35.3 +0.4**
baz=84
O02C Red Bluff 83.58 47 ⇑P **P 14 36 35.4 +0.3**
baz=84,SNR=16
PACP Pacheco Peak 83.66 51 ⇑P **P 14 36 35.7 +0.2**
baz=84,SNR=16
L02A Cave Junction 83.69 45 ⇓P **P 14 36 36.2 +0.5**
baz=84
S04C Ingram Canyon, 83.78 50 P **P 14 36 36.5 +0.4**
baz=84,SNR=12
U04C Hernandez Rese 83.84 51 ⇑P **P 14 36 36.8 +0.4**
baz=84,SNR=11
SNCC San Nicolas Is 83.89 55 PFAKE 14 36 50.0 +13
SNCC LR LR
comp=Z,2µm,19.0s,MS5.6
PKD Parkfield 83.89 52 ⇑P **P 14 36 36.8 +0.1**
baz=84,SNR=15
WDC Whiskeytown Da 83.89 47 P **P 14 36 36.5 -0.2**
WDC pmax pmax
comp=Z,36nm,1.4s,mb5.3
WDC Whiskeytown Da 83.89 47 P **P 14 36 36.5 -0.2**
comp=Z,36nm,1.4s,mb5.3
WDC Whiskeytown Da 83.89 47 ⇓P **P 14 36 36.8 +0.1**
baz=84,SNR=9.9
M02C Callahan 83.95 46 ⇑P **P 14 36 37.3 +0.3**
baz=84,SNR=14
SUTB Sutter Butte 84.00 48 ⇑P **P 14 36 36.8 -0.4**
baz=84
O03C Acorn Hollow, 84.07 48 ⇑P **P 14 36 37.6 0.0**
baz=84
SBC Santa Barbara 84.08 53 ⇑P **P 14 36 37.9 +0.2**
baz=84
SMMC Simmler 84.12 53 ⇑P **P 14 36 37.8 0.0**
baz=84
J02A Umpqua 84.13 44 P **P 14 36 38.8 +0.8**
baz=84,SNR=6.2
PKM Peak Mountain 84.14 53 ⇓P **P 14 36 38.5 +0.6**
baz=84,SNR=6.0
YBH Yreka Blue Hor 84.17 46 P **P 14 36 37.4 -0.7**
comp=Z,25nm,1.0s,mb5.3,baz=232,slow=3.2,SNR=30
YBH Yreka Blue Hor 84.17 46 *e*P **P 14 36 38.3 +0.2**
YBH pmax pmax
comp=Z,31nm,1.1s
YBH Yreka Blue Hor 84.17 46 *e*P **P 14 36 38.3 +0.2**
comp=Z,31nm,1.1s,mb5.4
YBH Yreka Blue Hor 84.17 46 ⇓P **P 14 36 38.4 +0.3**
baz=84,SNR=28
I02A Mapleton 84.19 43 ⇓P **P 14 36 38.3 +0.1**
baz=84
RNO Roman Nose 84.21 43 P **P 14 36 39.8 +1.5**
OHCM Honcut 84.25 48 *e*P **P 14 36 38.1 -0.4**
ORV Oroville 84.31 48 P **P 14 36 38.7 -0.1**
baz=84,SNR=9.6
M03C McCloud 84.43 46 ⇓P **P 14 36 39.4 -0.1**
baz=84,SNR=19
S05C Merced 84.49 51 ⇑P **P 14 36 39.8 +0.1**
baz=85,SNR=11
BLG Laguna Peak 84.50 54 ⇓P **P 14 36 39.7 -0.1**
baz=85
J03A Ideyld Park 84.55 44 ⇓P **P 14 36 39.9 -0.1**
baz=85
SKAG Skagway 84.60 26 *e*P **P 14 36 41.0 +0.7**
LAVA Lava Cap Winer 84.62 49 ⇓P **P 14 36 39.6 -0.8**
baz=85
CMB Columbia Colle 84.66 50 *e*P **P 14 36 39.1 -1.5**
CMB pmax pmax
comp=Z,20nm,1.0s,mb5.2
CMB MLR MLR
comp=Z,3µm,21.0s,MS5.6
CMB Columbia Colle 84.66 50 *e*P **P 14 36 39.1 -1.5**
comp=Z,20nm,1.0s,mb5.2
CMB LR LR
comp=Z,3µm,21.0s,MS5.6
CMB Columbia Colle 84.66 50 ⇓P **P 14 36 40.2 -0.4**
baz=85,SNR=12
MAW Mawson 84.71 202 P **P 14 36 41.1 +0.3**
comp=Z,96nm,0.9s,mb5.9,baz=108,slow=6.4,SNR=90
MAW LR LR 15 10 27.4
comp=Z,968nm,18.2s,MS5.2,baz=93,slow=33
MAW Mawson 84.71 202 *e*P **P 14 36 40.3 -0.6**
MAW *e*S S 14 47 10.2 +3.6
MAW pmax pmax
comp=Z,72nm,0.9s
MAW Mawson 84.71 202 *e*P **P 14 36 40.3 -0.6**
comp=Z,72nm,0.9s,mb5.8
MAW *e*S S 14 47 10.2 +3.6
COR Corvallis 84.75 43 PFAKE 14 36 50.0 +9.0
COR LR LR
comp=Z,2µm,20.0s,MS5.4
HATC Hat Creek Radi 84.75 47 ⇓P **P 14 36 41.0 0.0**
baz=85,SNR=8.3
M04C Macdoel 84.80 46 ⇑P **P 14 36 41.0 -0.3**
baz=85,SNR=16
T06C Millerton Lake 84.86 51 ⇓P **P 14 36 41.0 -0.6**
baz=85,SNR=7.5
O04C Chester 84.86 47 ⇓P **P 14 36 41.1 -0.5**
baz=85
O05C Quincy 84.87 48 ⇓P **P 14 36 41.6 0.0**
baz=85
P05C Yuba Gap, Truc 84.89 49 ⇓P **P 14 36 41.8 +0.1**
baz=85,SNR=14
L04A Klamath Falls 84.89 46 ⇑P **P 14 36 41.5 -0.3**
baz=85
ARVC Arvin 84.98 53 ⇓P **P 14 36 42.1 -0.1**
baz=85
VES Vestal, Richgr 84.99 52 ⇑P **P 14 36 42.5 +0.3**
baz=85
S06C San Francisco 85.01 50 ⇓P **P 14 36 42.0 -0.4**
baz=85,SNR=20
F03A Seaside 85.05 42 ⇑P **P 14 36 42.6 0.0**
baz=85
R05C Kirkwood Meado 85.09 49 ⇓P **P 14 36 42.5 -0.3**
baz=85,SNR=10.0
C03A Quillayute Air 85.14 39 ⇑P **P 14 36 43.2 +0.1**
baz=85
K04A Chilquin 85.15 45 ⇓P **P 14 36 42.8 -0.3**
baz=85
M05C Lookout 85.15 46 ⇓P **P 14 36 42.5 -0.6**
baz=85
HBO Huckleberry Mo 85.15 44 P **P 14 36 44.2 +1.1**
ELFS Eagle Lake Fie 85.21 47 ⇑P **P 14 36 43.5 +0.2**
baz=85
BEKR Beckwourth 85.25 48 P **P 14 36 43.8 +0.3**
baz=85,SNR=17
KCC Kaiser Creek 85.25 51 P **P 14 36 43.8 +0.2**
baz=85,SNR=8.8
E03A Lebam 85.27 41 ⇓P **P 14 36 43.4 -0.2**
baz=85,SNR=9.7
HELL Mitchell Peak, 85.28 51 P **P 14 36 43.5 -0.2**
baz=85,SNR=28
EGAK Eagle 85.36 20 *e*P **P 14 36 43.5 -0.7**
ISA Isabella 85.42 53 PFAKE 14 37 00.0 +16
ISA LR LR
comp=Z,690nm,22.0s,MS5.0
ISA Isabella 85.42 53 ⇓P **P 14 36 44.2 -0.2**
baz=86,SNR=13
R06C Coleville 85.51 50 ⇑P **P 14 36 44.8 -0.1**
baz=86,SNR=18
G04A Mulino 85.51 43 ⇓P **P 14 36 44.8 -0.1**
baz=86
WCN Washoe City 85.51 49 ⇓P **P 14 36 44.8 -0.1**
baz=86
P06A Stead Airport, 85.52 48 ⇓P **P 14 36 44.6 -0.3**
baz=86
H04A Detroit Lake 85.53 43 ⇓P **P 14 36 44.3 -0.6**
baz=86,SNR=8.7
DAWY Dawson 85.56 21 *e*P **P 14 36 44.7 -0.4**
EDW2 Edwards Air Fo 85.57 53 ⇓P **P 14 36 45.2 +0.1**
baz=86,SNR=23
M06C Likely Place G 85.58 47 ⇓P **P 14 36 45.1 -0.1**
baz=86
L05A Lakeview 85.59 46 ⇑P **P 14 36 45.4 +0.2**
baz=86,SNR=8.2
BFSC Mount Baldy St 85.66 54 ⇑P **P 14 36 45.4 -0.2**
baz=86,SNR=8.4
GUN Gumba 85.67 299 *e*P **P 14 36 46.9 +1.3**
comp=Z,94nm,1.0s,mb6.0
R07C Lee Vining 85.68 50 ⇓P **P 14 36 45.8 +0.1**
baz=86,SNR=11
MLAC Mammoth Lakes 85.70 51 ⇓P **P 14 36 46.2 +0.4**
baz=86
J05A Fort Rock 85.71 45 ⇓P **P 14 36 45.9 +0.1**
baz=86,SNR=32
O06A Flanigan 85.72 48 ⇓P **P 14 36 45.8 -0.1**
baz=86,SNR=16
TIXI Tiksi 85.74 349 *e*P **P 14 36 44.5 -1.5**
TIXI *e*S S 14 47 04.9 -12
TIXI pmax pmax
comp=Z,48nm,1.3s,mb5.6
TIXI Tiksi 85.74 349 PFAKE 14 37 00.0 +14
TIXI LR LR
comp=Z,818nm,20.0s,MS5.1
K05A Summer Lake 85.77 45 ⇓P **P 14 36 46.2 +0.1**
baz=86,SNR=22
F04A Amboy 85.80 42 ⇓P **P 14 36 46.3 0.0**
baz=86
MTUM Tungsten Hills 85.83 51 *e*P **P 14 36 46.1 -0.3**
B04A Port Angeles 85.85 40 ⇓P **P 14 36 46.3 -0.2**
baz=86
N06A Buffalo Meadow 85.90 47 ⇑P **P 14 36 46.7 -0.1**
baz=86,SNR=12
PALK Pallekele 85.91 278 PFAKE 14 37 00.0 +13
PALK LR LR
comp=Z,236nm,21.0s,MS4.6
PAHR Pah Rah Range 85.91 48 *e*P **P 14 36 46.4 -0.4**
comp=Z,30nm,1.2s,mb5.4
CWC Cottonwood Cre 85.94 52 ⇓P **P 14 36 46.6 -0.4**
baz=86
I05A Bend 85.97 44 ⇓P **P 14 36 47.1 -0.1**
baz=86
LRMC Laurel Mountai 85.98 53 ⇑P **P 14 36 46.9 -0.3**
baz=86,SNR=14
PKI Pulchoki 85.98 299 *e*P **P 14 36 47.1 -0.1**
comp=Z,91nm,1.1s,mb5.9
PKI Pulchoki 85.98 299 *e*P **P 14 36 47.1 -0.1**
PKI pmax pmax
comp=Z,91nm,1.1s,mb5.9
TIN Tinemaha 86.00 51 ⇑P **P 14 36 46.9 -0.4**
baz=86
C04A Brinnon 86.06 40 ⇓P **P 14 36 47.6 0.0**
baz=86,SNR=5.3
KKN Kakani 86.15 299 *e*P **P 14 36 48.5 +0.5**
comp=Z,103nm,1.2s,mb5.9
KKN Kakani 86.15 299 *e*P **P 14 36 48.5 +0.5**
KKN pmax pmax
comp=Z,103nm,1.2s,mb5.9
H05A Madras 86.16 43 ⇑P **P 14 36 48.1 0.0**
baz=86
K06A Valley Falls 86.24 45 ⇑P **P 14 36 48.7 +0.2**
baz=86,SNR=8.6
DMN Daman 86.25 299 *e*P **P 14 36 48.9 +0.4**
comp=Z,142nm,1.1s,mb6.1
DAC Darwin (Calif) 86.27 52 *e*P **P 14 36 47.8 -0.8**
DAC pmax pmax
comp=Z,16nm,1.1s,mb5.2
DAC MLR MLR
comp=Z,3µm,21.0s,MS5.7
DAC Darwin (Calif) 86.27 52 *e*P **P 14 36 47.8 -0.8**
comp=Z,16nm,1.1s,mb5.2
DAC LR LR
comp=Z,3µm,21.0s,MS5.7
MONP Monument Peak 86.29 56 ⇓P **P 14 36 48.7 0.0**
baz=86,SNR=11
MPMC Manual Prospec 86.29 52 ⇓P **P 14 36 48.8 +0.1**
baz=86,SNR=16
G05A Wamic 86.30 43 ⇓P **P 14 36 48.6 -0.1**
baz=86
F05A White Salmon 86.41 42 ⇓P **P 14 36 48.9 -0.5**
baz=86
O07A Toulon 86.42 48 ⇓P **P 14 36 48.8 -0.5**
baz=86,SNR=17
E05A Randle 86.44 41 ⇑P **P 14 36 48.8 -0.6**
baz=87,SNR=6.6
J06A Christmas Vall 86.45 45 ⇑P **P 14 36 48.8 -0.8**
baz=87,SNR=17
PFO Pinyon Flat Ob 86.45 55 *e*P **P 14 36 49.2 -0.3**
PFO pmax pmax
comp=Z,17nm,1.1s,mb5.2
PFO MLR MLR
comp=Z,734nm,19.0s,MS5.1
PFO Pinyon Flat Ob 86.45 55 *e*P **P 14 36 49.2 -0.3**
comp=Z,18nm,1.1s,mb5.2
PFO LR LR
comp=Z,734nm,19.0s,MS5.1
PFO Pinyon Flat Ob 86.45 55 ⇓P **P 14 36 49.1 -0.4**
baz=87
R08A Mina 86.46 50 ⇓P **P 14 36 49.8 +0.2**
baz=87
MCW Mount Constitu 86.49 39 P **P 14 36 49.8 +0.1**
D05A Enumclaw 86.51 41 ⇑P **P 14 36 49.5 -0.3**
baz=87
N07B Gerlach 86.53 48 ⇓P **P 14 36 49.3 -0.6**
baz=87
A04A Legoe Bay, Lum 86.58 39 ⇓P **P 14 36 49.7 -0.4**
baz=87,SNR=38
GSC Goldstone 86.62 53 ⇓P **P 14 36 50.1 -0.2**
baz=87
I06A Prineville 86.63 44 ⇑P **P 14 36 50.0 -0.4**
baz=87,SNR=16
L07A Adell 86.64 46 ⇓P **P 14 36 49.9 -0.5**
baz=87,SNR=26
GRAC Grapevine Rang 86.65 52 ⇓P **P 14 36 50.2 -0.3**
baz=87,SNR=18
Q08A Gabbs 86.74 50 ⇑P **P 14 36 50.8 -0.1**
baz=87,SNR=8.1
G06A Carlson Farm, 86.75 43 ⇑P **P 14 36 50.5 -0.5**
baz=87
GKN Gorkha 86.75 299 *e*P **P 14 36 51.8 +0.8**
comp=Z,71nm,1.0s,mb5.8
H06A Lindquist Farm 86.79 43 P **P 14 36 51.1 -0.1**
baz=87,SNR=11
B05A Bryant 86.81 40 ⇑P **P 14 36 50.7 -0.5**
baz=87,SNR=9.7
SWSC Sam W. Stewart 86.81 56 ⇑P **P 14 36 51.2 -0.1**
baz=87,SNR=8.0
C05A Tolt Reservoir 86.87 40 P **P 14 36 51.4 -0.1**
baz=87,SNR=8.6
HEC Hector,Ludlow 86.87 54 ⇓P **P 14 36 50.8 -0.8**
baz=87
FURC Furnace Creek, 86.89 52 ⇑P **P 14 36 51.2 -0.5**
baz=87,SNR=8.3
K07A Rock Creek Ran 86.91 46 ⇑P **P 14 36 51.9 +0.1**
baz=87,SNR=24
BELC Belle Mtn. 86.92 55 ⇓P **P 14 36 51.5 -0.3**
baz=87,SNR=22
S09A Goldfield 86.96 51 ⇑P **P 14 36 52.0 0.0**
baz=87,SNR=17
TPH Tonopah 87.06 51 PFAKE 14 37 00.0 +7.5
TPH LR LR
comp=Z,3µm,20.0s,MS5.7
J07A Hines 87.07 45 ⇓P **P 14 36 52.1 -0.4**
baz=87,SNR=11
N08A GE Springer Mi 87.14 48 ⇑P **P 14 36 53.1 +0.2**
baz=87,SNR=15
I07A Izee 87.15 44 ⇓P **P 14 36 52.8 -0.2**
baz=87,SNR=24
M08A Happy Creek Ra 87.16 47 ⇓P **P 14 36 52.9 -0.1**
baz=87
SHOC Shoshone 87.19 53 ⇓P **P 14 36 52.7 -0.4**
baz=87
R09A Tonopah 87.22 50 ⇓P **P 14 36 53.1 -0.1**
baz=87,SNR=8.9
WVOR Wild Horse Val 87.26 46 *e*P **P 14 36 53.2 -0.3**
WVOR pmax pmax
comp=Z,39nm,1.1s,mb5.5
WVOR Wild Horse Val 87.26 46 *e*P **P 14 36 53.2 -0.3**
comp=Z,39nm,1.1s,mb5.5
U10A Ash Meadows, A 87.29 52 ⇓P **P 14 36 53.4 -0.2**
baz=87
Q09A Carvers 87.30 50 ⇓P **P 14 36 53.2 -0.4**
baz=87
EBG Ellensburg 87.33 41 P **P 14 36 54.1 +0.3**
TUQ Turquoise Mtn. 87.35 53 ⇓P **P 14 36 54.0 +0.1**
baz=88,SNR=7.8
L08A Fields 87.40 46 ⇑P **P 14 36 53.7 -0.5**
baz=88,SNR=41
K08A Mann Creek Ran 87.46 46 ⇓P **P 14 36 53.9 -0.5**
baz=88,SNR=14
P09A Austin 87.53 49 ⇓P **P 14 36 54.8 0.0**
baz=88
KOLN Koldanda 87.59 299 *e*P **P 14 36 55.5 +0.5**
comp=Z,59nm,1.4s,mb5.6
N09A Rock Creek Ran 87.61 48 ⇑P **P 14 36 55.4 +0.2**
baz=88,SNR=7.2
GLA Glamis 87.62 56 ⇑P **P 14 36 55.5 +0.2**
baz=88,SNR=10.0
J08A Circle Bar Ran 87.65 45 ⇑P **P 14 36 54.8 -0.6**
baz=88,SNR=14
O09A Fish Creek Ran 87.66 49 ⇓P **P 14 36 55.5 +0.1**
baz=88,SNR=9.5
BMN Battle Mountai 87.71 48 *e*P **P 14 36 56.1 +0.5**
BMN pmax pmax
comp=Z,11nm,1.1s,mb5.0
BMN MLR MLR
comp=Z,906nm,22.0s,MS5.1
BMN Battle Mountai 87.71 48 *e*P **P 14 36 56.1 +0.5**
comp=Z,11nm,1.1s,mb5.0
BMN LR LR
comp=Z,906nm,22.0s,MS5.1
I08A Drewsey 87.75 45 ⇑P **P 14 36 56.5 +0.7**
baz=88,SNR=7.4
R10A Warm Springs 87.81 51 ⇓P **P 14 36 56.5 +0.4**
baz=88
M09A Marrel Ranch, 87.82 47 ⇓P **P 14 36 56.7 +0.6**
baz=88
L09A Wilkinson Ranc 87.83 47 ⇑P **P 14 36 56.3 +0.1**
baz=88
HAWA Hanford 87.85 42 *e*P **P 14 36 56.5 +0.2**
comp=Z,2.2nm,1.1s,mb4.3
HAWA LR LR
comp=Z,98nm,19.0s,MS4.2
H08A Prairie City 87.86 44 ⇓P **P 14 36 56.5 +0.2**
baz=88,SNR=6.8
G08A Pilot Rock 87.89 43 ⇓P **P 14 36 56.0 -0.5**
baz=88,SNR=38
WTV Waterville 87.98 41 P **P 14 36 56.8 -0.2**
K09A Rome 87.98 46 ⇑P **P 14 36 56.6 -0.3**
baz=88,SNR=32
Y12C Blythe 88.04 55 ⇓P **P 14 36 57.4 +0.1**
baz=88,SNR=7.9
P10A Eureka 88.05 49 ⇑P **P 14 36 57.2 -0.1**
baz=88
J09A Fry Pan Ranch, 88.15 45 ⇑P **P 14 36 57.6 -0.1**
baz=88,SNR=36
W12A Cal Nev Ari 88.15 54 ⇑P **P 14 36 58.2 +0.5**
baz=88
F08A Pendleton 88.17 43 ⇓P **P 14 36 58.3 +0.5**
baz=88,SNR=8.5
O10A Cortez Mining, 88.20 49 ⇓P **P 14 36 58.2 +0.2**
baz=88
NEE2 Needles Airpor 88.22 54 ⇓P **P 14 36 58.2 +0.1**
baz=88
V12A Nelson 88.27 53 ⇑P **P 14 36 58.6 +0.3**
baz=88,SNR=5.9
I09A Lost Marbles R 88.34 45 ⇓P **P 14 36 58.6 0.0**
baz=88
TRCR Troy Canyon 88.37 51 *e*P **P 14 36 59.3 +0.5**
PDMCI Parker Dam,Lak 88.49 55 ⇓P **P 14 36 59.6 +0.3**
baz=89,SNR=10.0
WMQ Urumqi 88.49 315 *e*P **P 14 37 00.0 +0.7**
WMQ AP pP 14 37 10.0 +1.2
WMQ PP PP 14 40 30.0 +2.5
WMQ SKS 14 47 24.0
WMQ S S 14 47 42.0 -1.2
WMQ SS SS 14 53 35.0 +1.2
WMQ AMB AMB
comp=Z,23nm,1.2s,mb5.3
WMQ AMB AMB
comp=Z,122nm,6.0s
WMQ LR LR
comp=N,1µm,15.0s,MS5.5
WMQ LR LR
comp=E,754nm,15.0s,MS5.5
WMQ LR LR
comp=Z,895nm,15.0s,MS5.3
M10A I.L. Ranch, Tu 88.50 47 ⇑P **P 14 36 58.9 -0.5**
baz=89
P11A Circle Ranch, 88.56 49 ⇑P **P 14 36 59.6 -0.1**
baz=89
H09A Durkee 88.59 44 ⇑P **P 14 36 59.6 -0.2**
baz=89
Y13A Salome 88.62 55 ⇑P **P 14 37 00.3 +0.4**
baz=89
U12A Valley of Fire 88.69 53 ⇓P **P 14 37 00.5 +0.2**
baz=89,SNR=7.1
F09A S2 Ranch, Elgi 88.72 43 ⇑P **P 14 37 00.6 +0.1**
baz=89
O11A Cowboy Ranch, 88.78 49 ⇓P **P 14 37 01.0 +0.3**
baz=89,SNR=12
X13A Yucca 88.81 55 ⇓P **P 14 37 00.9 0.0**
baz=89,SNR=6.4
W13A Hualapai Mount 88.88 54 ⇑P **P 14 37 01.2 0.0**
baz=89,SNR=12
BMO Blue Mountains 88.89 44 *e*P **P 14 37 00.9 -0.3**
BMO pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
BMO MLR MLR
comp=Z,2µm,20.0s,MS5.5
BMO Blue Mountains 88.89 44 *e*P **P 14 37 00.9 -0.3**
comp=Z,9.5nm,1.1s,mb5.0
BMO LR LR
comp=Z,2µm,20.0s,MS5.5
M11A Holland Ranch, 89.02 48 ⇓P **P 14 37 01.8 -0.1**
baz=89,SNR=6.3
Q12A Willow Creek R 89.12 50 ⇑P **P 14 37 02.2 -0.1**
baz=89
P12A McGill 89.17 50 ⇑P **P 14 37 02.7 +0.2**
baz=89,SNR=13

Z14A Wintersburg 89.23 56 ⇑P P **14 37 02.9 +0.1**
baz=89,SNR=6.5
ELK Elko 89.25 48 PFAKE 14 37 10.0 +7.1
ELK LR LR
comp=Z,2μm,22.0s,MS5.4
Y14A Wickenburg 89.32 55 ⇑P P **14 37 03.3 +0.1**
baz=89,SNR=6.2
N12A Clover Valley, 89.42 48 ⇓P P **14 37 03.3 -0.5**
baz=90,SNR=22
O12A Currie 89.49 49 ⇑P P **14 37 04.1 +0.1**
baz=90,SNR=35
X14A Yava 89.53 55 ⇓P P **14 37 04.7 +0.5**
baz=90,SNR=9.0
W14A Seligman 89.55 54 ⇑P P **14 37 04.6 +0.3**
baz=90,SNR=12
115A Sonoran Desert 89.67 57 ⇑P P **14 37 04.9 +0.1**
baz=90
TRD Trivandrum 89.78 279⇑*ex* x 14 37 10.1
ARUT Antelope Range 89.87 52 *e*P P **14 37 06.5 +0.7**
CCUT Cedar City 89.88 52 *e*P P **14 37 06.2 +0.4**
NEW Newport 89.96 41 *e*P P **14 37 05.8 -0.4**
NEW pmax pmax
comp=Z,12nm,1.1s
NEW Newport 89.96 41 *e*P P **14 37 05.8 -0.4**
comp=Z,12nm,1.1s,mb5.2
N13A Wendover, West 90.03 48 ⇓P P **14 37 06.8 +0.2**
baz=90,SNR=8.6
X15A Humboldt 90.06 55 ⇑P P **14 37 07.2 +0.5**
baz=90,SNR=12
116A Eloy 90.07 57 ⇑P P **14 37 06.9 +0.2**
baz=90
M13A Montello 90.19 48 ⇑P P **14 37 07.3 +0.1**
baz=90,SNR=21
W15A Williams 90.19 54 ⇑P P **14 37 07.6 +0.3**
baz=90
HLID Hailey 90.55 46 *e*P P **14 37 09.5 +0.6**
comp=Z,20nm,1.0s,mb5.4
HLID LR LR
comp=Z,2μm,20.0s,MS5.5
TUC Tucson 90.77 57 *e*P P **14 37 11.0 +1.0**
TUC pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
TUC Tucson 90.77 57 *e*P P **14 37 11.0 +1.0**
comp=Z,7.7nm,1.1s,mb5.0
DUG Dugway 90.91 49 *e*P P **14 37 10.6 0.0**
DUG pmax pmax
comp=Z,17nm,1.3s,mb5.2
DUG MLR MLR
comp=Z,1μm,19.0s,MS5.4
DUG Dugway 90.91 49 *e*P P **14 37 10.6 -0.1**
comp=Z,17nm,1.3s,mb5.2
DUG LR LR
comp=Z,1μm,19.0s,MS5.4
BGU Big Grassy Mou 90.92 49 *e*P P **14 37 10.8 +0.1**
WUAZ Wupatki 90.98 54 *e*P P **14 37 11.6 +0.7**
comp=Z,22nm,1.0s,mb5.4
MSU Marysvale 91.01 51 *e*P P **14 37 12.0 +0.9**
DGAR Diego Garcia 91.23 262 PFAKE 14 37 20.0 +7.9
DGAR LR LR
comp=Z,842nm,19.0s,MS5.2
HVU Hansel Valley 91.30 48 *e*P P **14 37 12.8 +0.3**
HVU pmax pmax
comp=Z,35nm,1.0s,mb5.6
HVU Hansel Valley 91.30 48 *e*P P **14 37 12.8 +0.4**
comp=Z,35nm,1.0s,mb5.6
BSMT Bassoo Peak 91.36 42 P P **14 37 12.5 -0.3**
NLU North Lily Min 91.41 50 P P **14 37 13.4 +0.5**
MSO Missoula 91.67 43 *e*P P **14 37 13.6 -0.6**
comp=Z,4.5nm,1.1s,mb4.7
MSO LR LR
comp=Z,701nm,20.0s,MS5.1
MPU Maple Canyon 91.75 50 PFAKE 14 37 30.0 +15
MPU LR LR
comp=Z,3μm,20.0s,MS5.7
CTU Camp Tracy 91.81 49 *e*P P **14 37 15.2 +0.4**
comp=Z,22nm,1.0s,mb5.4
SYO Syowa Base 91.83 197⇓*e*P P **14 37 13.8 -1.1**
TMUT Trail Mountain 91.92 51 *e*P P **14 37 16.5 +1.2**
MCMT McKenzie Canyo 91.94 45 P P **14 37 15.9 +0.5**
HWUT Hardware Ranch 92.14 48 *e*P P **14 37 16.5 +0.1**
comp=Z,14nm,1.0s,mb5.2
HWUT LR LR
comp=Z,1μm,20.0s,MS5.3
TCUT Toone Canyon 92.16 49 *e*P P **14 37 16.9 +0.5**
WALA Waterton Lakes 92.22 41 *e*P P **14 37 16.6 -0.1**
comp=Z,26nm,1.1s,mb5.5
AHID Auburn Hatcher 92.73 47 PFAKE 14 37 30.0 +11
AHID LR LR
comp=Z,1μm,20.0s,MS5.3
LCCM Lewis and Clar 92.84 44 P P **14 37 19.7 +0.1**
MK31 Makanchi Array 92.93 317 P P **14 37 19.3 -0.7**
MK31 pmax pmax
comp=Z,64nm,1.1s,mb6.0
MKAR Makanchi Array 92.93 317 P P **14 37 19.3 -0.7**
comp=Z,14nm,0.9s,mb5.4,baz=95,slow=6.1,SNR=60
MKAR PKKPbc PKKPbc 14 54 29.4 -0.4
comp=Z,6.7nm,1.0s,baz=300,slow=2.4,SNR=25
MKAR Makanchi Array 92.93 317 P P **14 37 19.3 -0.6**
MKAR PKKPbc PKKPbc 14 54 29.4 -0.4
BOZ Bozeman (W) 92.97 44 *e*P P **14 37 19.9 -0.3**
BOZ pmax pmax
comp=Z,22nm,1.1s,mb5.5
BOZ MLR MLR
comp=Z,2μm,20.0s,MS5.6
BOZ Bozeman (W) 92.97 44 *e*P P **14 37 19.9 -0.2**
comp=Z,22nm,1.1s,mb5.5
BOZ LR LR
comp=Z,2μm,20.0s,MS5.6
ZAL Zalesovo 93.01 324 P P **14 37 18.7 -1.6**
comp=Z,11nm,1.1s,mb5.2,baz=3.3,slow=6.1,SNR=34
ZAL PKKPbc PKKPbc 14 54 22.6 -7.0
comp=Z,1.1nm,0.3s,baz=125,slow=16,SNR=3.7
YMR Madison River 93.22 45 *e*P P **14 37 22.3 +1.0**
comp=Z,44nm,0.3s,mb6.4
YMR LR LR
comp=Z,3μm,20.0s,MS5.7
BW06 Boulder Array 93.84 47 PFAKE 14 37 40.0 +16
BW06 LR LR
comp=Z,1μm,21.0s,MS5.3
PDAR Pinedale Array 93.84 47 P P **14 37 23.7 -0.5**
comp=Z,7.4nm,1.0s,mb5.1,baz=270,slow=2.8,SNR=37
PDAR PP PP 14 40 59.5 -10
comp=Z,0.4nm,0.9s,baz=236,slow=1.1,SNR=4.4
PDAR Pinedale Array 93.84 47 P P **14 37 23.7 -0.5**
PDAR PP PP 14 40 59.5 -10
NVS Novosibirsk 94.11 325 *e*P P **14 37 25.3 -0.1**
NVS pmax pmax
comp=Z,38nm,1.3s,mb5.7
NVS pmax pmax
comp=N,11nm,1.2s
NVS pmax pmax
comp=E,24nm,1.4s
EGMT Eagleton 94.70 42 *e*P P **14 37 27.3 -0.9**
comp=E,16nm,1.0s,mb5.4
EGMT LR LR
comp=Z,743nm,20.0s,MS5.2
ANMO Albuquerque 94.82 55*d i*P P **14 37 27.8 -0.9**
ANMO Albuquerque 94.82 55 *e*P P **14 37 29.7 +1.0**
comp=Z,5.0nm,1.0s,mb4.9
ANMO LR LR
comp=Z,1μm,20.0s,MS5.4
YKA Yellowknife Ar 95.04 27 P P **14 37 27.5 -2.1**
comp=Z,6.4nm,0.9s,mb5.0,baz=252,slow=4.5,SNR=6.6
YKA LR LR 15 12 34.0
comp=Z,1μm,21.4s,MS5.3,baz=245,slow=31
MNTX Cornudas Mount 95.17 59 *e*P P **14 37 30.1 -0.1**
comp=Z,3.4nm,1.0s,mb4.7
MNTX LR LR
comp=Z,2μm,20.0s,MS5.6
SDCO Great Sand Dun 96.03 53 PFAKE 14 37 50.0 +16
SDCO LR LR
comp=Z,2μm,20.0s,MS5.5
KURK Kurchatov 96.06 320 P P **14 37 34.5 +0.1**
comp=Z,75nm,1.1s,mb6.0,SNR=5.9
NVL N'lazarevskaya 96.61 189⇓*i*P P **14 37 36.8 0.0**
NVL *e*S SKSac 14 48 08.1 -3.5
NVL *e* 14 48 58.9
NVL pmax pmax
comp=Z,17nm,1.0s,mb5.4
MAIT Maitri 96.62 189 *e*P P **14 37 36.6 -0.3**
LAO LASA Array 96.85 44 PFAKE 14 37 50.0 +12
LAO LR LR
comp=Z,2μm,20.0s,MS5.5
SNAA Sanae 97.31 184 *e*P P **14 37 38.4 -1.6**
SNAA *e* 14 37 39.7
SNAA *e* pP 14 37 47.1 -2.4
SNAA *e* 14 37 56.5
SNAA Sanae 97.31 184 *e*P P **14 37 38.3 -1.7**
SNAA pmax pmax
comp=Z,22nm,1.0s
SNAA Sanae 97.31 184 *e*P P **14 37 38.3 -1.7**
comp=Z,22nm,1.0s,mb5.5
AAK Ala-Archa 97.68 312⇑*e*P P **14 37 40.1 -1.6**
AAK pmax pmax
comp=Z,11nm,2.5s,mb4.9
AAK MLR MLR
comp=Z,700nm,20.0s,MS5.2
AAK Ala-Archa 97.68 312 PFAKE 14 37 50.0 +8.3
AAK LR LR
comp=Z,187nm,19.0s,MS4.6
RSSD Black Hills 98.03 47 PFAKE 14 37 50.0 +6.8
RSSD LR LR
comp=Z,1μm,22.0s,MS5.4
VNA1 Neumayer--Stat 98.61 182 *e*P P **14 37 45.6 -0.2**
VNA1 *e* 14 37 46.4
VNA1 *e* 14 37 50.9
VNA1 *e* 14 38 02.0
JCT Junction City 99.73 61 PFAKE 14 38 00.0 +9.1
JCT LR LR
comp=Z,2μm,19.0s,MS5.7
FFC Flin Flon 100.40 36 PFAKE 14 38 00.0 +6.2
FFC LR LR
comp=Z,402nm,19.0s,MS5.0
VOSK Vostochnaya 101.01 322 P Pdif 14 37 55.3 -1.2
VOSK pmax pmax
comp=Z,10.0nm,1.1s
CHKZ Chkalovo 101.28 323 P Pdif 14 37 56.8 -0.9
CHKZ pmax pmax
comp=Z,11nm,1.2s
CHKZ Chkalovo 101.28 323 Pdif Pdif 14 37 56.8 -0.9
comp=Z,11nm,1.2s
BRVK Borovoye 101.45 322 *e*Pdif Pdif 14 37 58.1 -0.3
comp=Z,6.8nm,1.0s
BRVK LR LR
comp=Z,197nm,22.0s,MS4.6
ZRNK Zerenda 102.22 322 *e*P Pdif 14 38 00.6 -1.3
ZRNK pmax pmax
comp=Z,8.0nm,1.0s
ZRNK Zerenda 102.22 322 *e*Pdif Pdif 14 38 00.6 -1.3
comp=Z,7.8nm,1.0s
HKT Hockley 103.10 62 PFAKE 14 38 20.0 +14
HKT LR LR
comp=Z,2μm,22.0s,MS5.6
PAYG Puerto Ayora 104.20 93 PFAKE 14 38 20.0 +9.3
PAYG LR LR
comp=Z,2μm,19.0s,MS5.6
NATX Nacogdoches 104.24 60 PFAKE 14 38 20.0 +9.1
NATX LR LR
comp=Z,2μm,19.0s,MS5.6
MIAR Mount Ida 105.32 57 PFAKE 14 42 40.0 +10
MIAR LR LR
comp=Z,2μm,20.0s,MS5.7
EYMN Ely 106.91 43 PFAKE 14 42 40.0 +7.5
EYMN LR LR
comp=Z,1μm,20.0s,MS5.5
PLCA Paso Flores 107.46 139 PFAKE 14 42 50.0 +16
PLCA LR LR
comp=Z,579nm,20.0s,MS5.1
JFWS Jewell Farm 107.98 48 PFAKE 14 42 50.0 +16
JFWS LR LR
comp=Z,840nm,19.0s,MS5.3
ARU Arti 108.08 326 PFAKE 14 42 50.0 +15
ARU LR LR
comp=Z,258nm,21.0s,MS4.8
OXF Oxford 108.75 57 PFAKE 14 42 50.0 +14
OXF LR LR
comp=Z,1μm,21.0s,MS5.5
PLAL Pickwick Lake 109.85 57 PFAKE 14 42 50.0 +12
PLAL LR LR
comp=Z,2μm,21.0s,MS5.6
KBS Kingsbay 110.63 355 PFAKE 14 42 50.0 +11
KBS LR LR
comp=Z,462nm,19.0s,MS5.1
LRAL Lakeview Retre 110.76 59 PFAKE 14 42 50.0 +10
LRAL LR LR
comp=Z,2μm,20.0s,MS5.8
AAM Ann Arbor 112.88 49 PFAKE 14 43 00.0 +16
AAM LR LR
comp=Z,2μm,19.0s,MS5.7
MYNC Murphy 113.08 56 PFAKE 14 43 00.0 +16
MYNC LR LR
comp=Z,2μm,20.0s,MS5.6
ACSO Alum Creek Sta 113.60 51 PFAKE 14 43 00.0 +15
ACSO LR LR
comp=Z,797nm,19.0s,MS5.3
NNA Nana 114.42 108 PFAKE 14 43 00.0 +13
NNA LR LR
comp=Z,398nm,21.0s,MS5.0
APA Apatity 115.02 342⇑*i*PKIKP PKiKP 14 42 47.6 -0.2
APA *i* 14 42 54.7
APA *e* 14 53 27.0
APA pmax pmax
comp=Z,8.0nm,1.0s
APA MLR MLR
comp=Z,500nm,16.0s,MS5.2
KEV Kevo 115.42 345 *ep* PKPdf 14 42 46.8 -1.8
comp=Z,2.5nm,0.9s
KEV Kevo 115.42 345 *e*P PKPdf 14 42 46.8 -1.8
KEV LR LR
comp=Z,1μm,21.0s,MS5.5
ERPA Erie 115.60 48 PFAKE 14 43 00.0 +11
ERPA LR LR
comp=Z,1μm,20.0s,MS5.6
DWPF Disney 115.64 64 PFAKE 14 43 00.0 +11
DWPF LR LR
comp=Z,661nm,20.0s,MS5.2
BLA Blacksburg 115.91 54 PFAKE 14 43 00.0 +10
BLA LR LR
comp=Z,97nm,20.0s,MS4.4
ARCES ARCESS Array B 115.95 345 PKP PKPdf 14 42 47.2 -2.4
comp=Z,2.8nm,0.8s,baz=94,slow=1.1,SNR=14
ARCES PKKPbc PKKPbc 14 53 19.4 -0.9
comp=Z,3.5nm,0.9s,baz=222,slow=1.6,SNR=9.3
ARCES ARCESS Array B 115.95 345 PKP PKPdf 14 42 47.2 -2.4
ARCES PKKPbc PKKPbc 14 53 19.4 -0.9
SSPA Standing Stone 117.40 50 PFAKE 14 43 00.0 +7.6
SSPA LR LR
comp=Z,2μm,22.0s,MS5.6
LVC Limon Verde 117.52 123 PFAKE 14 43 10.0 +17
LVC LR LR
comp=Z,741nm,20.0s,MS5.3
CBN Corbin 118.18 52 PFAKE 14 43 10.0 +16
CBN LR LR
comp=Z,4μm,21.0s,MS6.0
JOF Joensuu 118.48 338 *ep* PKPdf 14 42 52.0 -2.5
comp=Z,0.4nm,0.4s
JOF Joensuu 118.48 338 *e*PKIKP PKPdf 14 42 52.0 -2.5
JOF pmax pmax
comp=Z,10.0nm,0.4s
BINY Binghamton 118.52 48 PFAKE 14 43 10.0 +15
BINY LR LR
comp=Z,3μm,22.0s,MS5.9
NCB Newcomb 119.38 45 PFAKE 14 43 10.0 +14
NCB LR LR
comp=Z,2μm,20.0s,MS5.6
GNI Garni 120.03 310 PFAKE 14 43 10.0 +13
GNI LR LR
comp=Z,516nm,21.0s,MS5.1
SCHQ Schefferville 120.15 32 PFAKE 14 43 10.0 +12
SCHQ LR LR
comp=Z,1μm,21.0s,MS5.6
OBN Obninsk 120.28 329⇑*i*PKIKP PKPdf 14 42 57.0 -0.9
OBN *e* 14 44 33.6
OBN *e*PS PS 14 54 19.1 +4.9
OBN *e*SS SS 15 00 54.1 +4.4
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN Obninsk 120.28 329 PFAKE 14 43 10.0 +12
OBN LR LR
comp=Z,251nm,20.0s,MS4.8
KIV Kislovodsk 120.62 315 *i* PKIKP PKPdf 14 42 57.8 -0.8
KIV *e* 14 44 25.9
KIV *i* 14 54 08.8
KIV *i* SS SS 15 01 13.2 +19
KIV pmax pmax
comp=Z,6.0nm,1.4s
KIV Kislovodsk 120.62 315 PFAKE 14 43 10.0 +11
KIV LR LR
comp=Z,157nm,19.0s,MS4.7
LPAZ La Paz 120.84 116 PKP PKPdf 14 42 46.8 -1.4
comp=Z,2.8nm,0.8s,baz=38,slow=1.7,SNR=11
LPAZ La Paz 120.84 116 *e*PKPdf PKPdf 14 43 00.4 +1.4
LPAZ LR LR
comp=Z,931nm,22.0s,MS5.4
LBNH Lisbon 120.91 45 PFAKE 14 43 10.0 +11
LBNH LR LR
comp=Z,2μm,20.0s,MS5.7
FINES FINESS Array B 121.32 338 PKP PKPdf 14 42 58.0 -1.9
comp=Z,3.6nm,0.9s,baz=337,slow=4.4,SNR=8.1
HRV Harvard--Oak R 121.63 47 PFAKE 14 43 10.0 +9.5
HRV LR LR
comp=Z,1μm,21.0s,MS5.5
SOC Sochi 122.79 315 *i* PKIKP PKPdf 14 43 10.6 +7.8
SOC *e* 14 44 48.1
SOC *e*PPP 14 47 19.6
SOC *e*PS PS 14 54 33.8 -2.7
SOC MLR MLR
comp=Z,587nm,21.0s,MS5.2
CPUP Villa Florida 124.64 133 PKP PKPdf 14 43 06.6 +0.3
comp=Z,9.2nm,1.0s,baz=188,slow=1.9,SNR=8.3
CPUP Villa Florida 124.64 133 *e*PKPdf PKPdf 14 43 07.0 +0.7
BOSA Boshof 124.87 224 PKP PKPdf 14 43 07.8 +1.0
comp=Z,3.8nm,0.9s,baz=170,slow=6.6,SNR=3.7
BOSA Boshof 124.87 224 PKP PKPdf 14 43 07.8 +1.0
BOSA LR LR
comp=Z,3μm,20.0s,MS6.0
SDV Santo Domingo 125.10 87 *e*PKPdf PKPdf 14 43 07.9 +0.7
SDV LR LR
comp=Z,374nm,19.0s,MS5.1
MALT Malatya 125.23 309⇓*i*P PKPdf 14 43 09.9 +2.5
MALT Malatya 125.23 309 *e*PKPdf PKPdf 14 43 08.2 +0.8
NB2 NORSAR Subarra126.31 345 PKPd PKPdf 14 43 08.4 -1.1
comp=Z,5.5nm,0.9s,baz=32,slow=2.0
NB2 NORSAR Subarra126.31 345 PKPd PKPdf 14 43 08.4 -1.1
baz=32,slow=2.0
NOA NORSAR Array B126.31 345 PKP PKPdf 14 43 07.7 -1.8
comp=Z,4.7nm,0.9s,baz=37,slow=1.9,SNR=7.6
AKASG Malin Array Be 126.33 327 PKP PKPdf 14 43 09.1 -0.5
comp=Z,3.3nm,0.8s,baz=61,slow=2.1,SNR=16
AKASG PP PP 14 45 09.7 +5.1
comp=Z,2.9nm,0.9s,baz=54,slow=7.1,SNR=6.4
AKASG Malin Array Be 126.33 327 PKP PKPdf 14 43 09.1 -0.5
AKASG PP PP 14 45 09.7 +5.1
LBTB Lobatse 126.85 227 PFAKE 14 43 20.0 +9.5
LBTB LR LR
comp=Z,3μm,19.0s,MS6.0
KONO Kongsberg 127.92 345 PFAKE 14 43 20.0 +7.4
KONO LR LR
comp=Z,696nm,20.0s,MS5.3
SAML Samuel 128.09 110 *e*PKPdf PKPdf 14 43 12.3 -0.6
SAML LR LR
comp=Z,799nm,20.0s,MS5.4
BR131 Keskin Array S 128.35 313 PKPdf PKPdf 14 43 14.1 +0.7
BR131 LR LR
comp=Z,491nm,19.0s,MS5.2
BRTR Keskin Array B 128.35 313 PKP PKPdf 14 43 14.5 +1.1
comp=Z,3.0nm,1.0s,baz=112,slow=1.3,SNR=9.7
ANTO Ankara 128.91 313 PFAKE 14 43 30.0 +16
ANTO LR LR
comp=Z,546nm,20.0s,MS5.2
BBSR BB Station 129.47 57 PFAKE 14 43 30.0 +14
BBSR LR LR
comp=Z,1μm,22.0s,MS5.6
SJG San Juan 129.95 75 PKIKP PKPdf 14 43 16.2 -0.3
SJG MLR MLR
comp=Z,897nm,21.0s
BSD Bornholm Skovb 129.97 338 *i* P PKPdf 14 43 21.6 +5.1
BSD *e* 14 45 43.4
BSD *i* 14 46 44.3
BSD Bornholm Skovb 129.97 338 *e*P PKPdf 14 43 21.6 +5.1
BSD *e* 14 45 43.4
BSD *i* 14 46 44.3
LSZ Lusaka 130.09 239 PFAKE 14 43 30.0 +13
LSZ LR LR
comp=Z,2μm,21.0s,MS5.8
KOLS Kolonicke sedl 131.03 328 *e*PKP PKPdf 14 43 21.1 +2.6
KOLS *e* 14 43 28.5
STHS Stebnicka Huta 131.25 329 *e*PKP PKPdf 14 43 21.7 +2.8
STHS *e* 14 43 28.7
OJC Ojcow 131.44 331 *e*PKIKP PKPdf 14 43 21.5 +2.2
OJC *e* 14 45 47.5
CRVS Cervenica-Dubn 131.47 329 *e*PKP PKPdf 14 43 21.5 +2.2
CRVS *e* 14 43 29.0
CRVS *e* 14 43 30.4
NIE Niedzica 131.71 330 *e*PKP PKPdf 14 43 22.9 +3.1
KECS Kecovo 132.23 329 *e*PKP PKPdf 14 43 29.1 +8.3
OKC Ostrava-Krasne 132.48 331 *ex* PP 14 45 55.0 +10
OKC AMS AMS 15 45 50.0
comp=Z,800nm,18.8s
KSP Ksiaz 132.61 334 *e*PKP PKPdf 14 43 29.5 +8.0
KSP *e*PP PP 14 45 45.5 -0.1
KSP LR LR
comp=Z,2μm,23.5s,MS5.8
MORC Moravsky Berou 132.80 332 PKIKP PKPdf 14 43 21.3 -0.5
DPC Dobruska-Polom 132.95 333 *e*PKPdf PKPdf 14 43 24.8 +2.7
DPC *ep*PKP pPKPdf 14 43 29.8 -2.1
DPC AMS AMS 15 44 30.0
comp=Z,1μm,22.4s
UPC Upice 132.98 333 *e*PKPdf PKPdf 14 43 21.8 -0.4
UPC *ep*PKP pPKPdf 14 43 31.8 -0.1
VYHS Vyhne 133.06 330 *e*PKP PKPdf 14 43 24.2 +1.9
VYHS *e* 14 43 32.3
VYHS *e* 14 45 42.2
VYHS Vyhne 133.06 330 *e*PKIKP PKPdf 14 43 24.3 +2.0
VYHS *e* 14 43 32.3
VYHS Vyhne 133.06 330 *e*PKP PKPdf 14 43 24.3 +2.0
VYHS *e* 14 43 32.3
VYHS *e* 14 45 42.2
BRG Berggiesshubel 133.59 335 *e*PKP PKPdf 14 43 23.7 +0.4
comp=Z,3.6nm,1.0s
BRG *e* 14 43 33.4
comp=Z,7.7nm,1.3s
BRG *e* 14 45 58.0
BRG *e* 14 45 59.2
comp=Z,2.3nm,1.0s
BRG *e* 15 03 35.0
BRG
comp=N,455nm,17.2s
BRG
comp=E,473nm,20.3s
BRG
comp=Z,856nm,20.1s
BRG Berggiesshubel 133.59 335 *e*PKIKP PKPdf 14 43 23.7 +0.4
BRG *e* 14 43 33.4
BRG *e* 14 45 58.0
BRG *e* 15 03 35.0
BRG pmax pmax
comp=Z,8.0nm,1.3s
BRG MLR MLR
comp=N,455nm,17.2s,MS5.4
BRG MLR MLR
comp=E,473nm,20.3s,MS5.4
BRG MLR MLR
comp=Z,856nm,20.1s,MS5.5
BRG Berggiesshubel 133.59 335 *e*PKP PKPdf 14 43 23.7 +0.4
BRG *e* 14 43 33.4
BRG *e* 14 45 58.0
BRG *e* 14 45 59.2
BRG *e* 15 03 35.0
BRG LR LR
comp=Z,860nm,20.1s,MS5.5
CLL Collm 133.64 336 *e*PKPdf PKPdf 14 43 22.7 -0.7
comp=Z,13nm,1.1s
CLL *e*PP PP 14 45 53.4 +1.3
CLL *e*PKS 14 46 52.6
CLL *e*L 15 48 48.9
comp=Z,1μm,20.0s
CLL Collm 133.64 336⇓*i*PKIKP PKPdf 14 43 22.7 -0.7
comp=Z,logA/T=0.9
CLL *i* 14 43 32.4
CLL *e* 14 43 54.0
CLL *e* 14 44 18.0
CLL *e*PP PP 14 45 55.0 +2.9
CLL *e* 14 46 52.0
CLL *e* 14 48 22.0
CLL Collm 133.64 336⇓*i*PKPdf PKPdf 14 43 22.7 -0.7
comp=Z,9.0nm,1.1s
CLL *i* sPKPdf 14 43 32.4
comp=Z,13nm,1.1s
CLL *ex* x 14 43 54.0
CLL *ex* x 14 44 18.0
CLL *e*PP PP 14 45 55.0 +2.9
CLL *e*SKPbc SKPbc 14 46 52.0 +2.0
CLL *ex* x 14 48 22.0
CLL Collm 133.64 336⇓*i*PKIKP PKPdf 14 43 22.7 -0.7

CLL *i* 14 43 32.4
CLL *e* 14 45 55.0
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL MLR MLR
comp=Z,1μm,20.2s,MS5.6
CLL Collm 133.64 336 ⇓*i* PKP PKPdf 14 43 22.7 -0.7
CLL *i* 14 43 32.4
CLL *e* PP PP 14 45 55.0 +2.9
CLL *e* SKP 14 46 52.0
CLL LR LR
comp=Z,1μm,20.2s,MS5.6
PRU Pruhonice 134.00 334 *e* PKPdf PKPdf 14 43 25.4 +1.3
PRU *ex* x 14 46 02.0
PRU AMS AMS 15 39 30.0
comp=Z,900nm,23.5s
TREC Trest 134.09 333 *e* PKPdf PKPdf 14 43 25.0 +0.7
TREC *ep* PKP pPKPdf 14 43 32.4 -1.6
TREC AMS AMS 15 45 40.0
comp=Z,700nm,18.0s
WERD Werda 134.59 336 *e* PKPdf PKPdf 14 43 24.9 -0.3
GUNZ Gunzen 134.64 336 *e* PKPdf PKPdf 14 43 25.7 +0.4
PKSM Moragy 134.65 327 ⇓*i* P PKPdf 14 43 26.3 +1.0
ESK Eskdalemuir 134.66 351 PFAKE 14 43 40.0 +15
ESK LR LR
comp=Z,156nm,19.0s,MS4.8
CONA Conrad Observa 134.89 331 ⇑*i* PKiKP PKiKP 14 43 26.4 -0.8
comp=Z,4.6nm,1.1s
GRUS Gruza 134.94 324 *i* P PKPdf 14 43 26.2 +0.3
KHC Kasperske Hory 135.06 334 *e* PKPdf PKPdf 14 43 26.6 +0.5
KHC *ep* PKP pPKPdf 14 43 34.7 -1.1
KHC *e* PP PP 14 46 03.4 +2.3
KHC AMS AMS 15 42 50.0
comp=Z,1μm,22.2s
UBBA Unterbreizbach 135.18 338 *e* PKPdf PKPdf 14 43 26.2 -0.1
GEC2 GERESS Array S 135.22 333 *e* PKPdf PKPdf 14 43 25.8 -0.6
GERES GERESS Array B 135.22 333 PKP PKPdf 14 43 27.9 +1.5
comp=Z,3.8nm,0.9s,baz=80,slow=1.5,SNR=16
DIVS Divcibare 135.23 324 *i* P PKPdf 14 43 26.6 +0.2
WET Wettzell 135.35 334 *e* PKPdf PKPdf 14 43 27.4 +0.8
GRFO Grafenberg 135.61 336 *e*L 15 47 51.0
comp=Z,721nm,20.8s
GRB1 Grafenberg Arr 135.67 335 *e* PKPdf PKPdf 14 43 26.3 -0.9
BBLS Bajina Basta - 135.70 324 *i* P PKPdf 14 43 29.0 +1.7
TNS Taunus Mts 136.24 338 *e* PKPdf PKPdf 14 43 30.0 +1.7
TSUM Tsumeb 136.26 227 PFAKE 14 43 40.0 +12
TSUM LR LR
comp=Z,4μm,22.0s,MS6.1
MEM Membach 136.75 341 APKP 14 43 39.4
BCLA Clavier 137.15 341 APKP 14 43 40.4
WTTA Wattenberg 137.32 333 ⇑*i* P PKPdf 14 43 30.4 +0.1
comp=Z,30nm,1.5s
DOU APKP 14 43 41.1
DOU Dourbes 137.65 341 PKP PKPdf 14 43 33.4 +2.5
BFO Black Forest 137.84 337 *e* PKPdf PKPdf 14 43 34.5 +3.3
BDFB Brasilia 137.97 128 PKhKP 14 43 24.2
comp=Z,5.9nm,0.8s,baz=118,slow=2.3,SNR=6.3
BDFB Brasilia 137.97 128 PKP 14 43 24.2
BDFB LR LR
comp=Z,2μm,21.0s,MS5.8
WLS Welschbruch 138.14 338 PKP PKPdf 14 43 34.1 +2.3
MOF Molkenrain 138.69 338 PKP PKPdf 14 43 35.2 +2.4
HINF Hinteralfeld 138.83 338 *e* PKP1 PKPdf 14 43 33.9 +0.9
comp=Z,28nm,1.2s
LOR Lormes 140.36 340 *e* PKP1 PKPdf 14 43 35.1 -0.7
comp=Z,31nm,1.3s
SSF Saint Saulge 140.66 340 *e* PKP1 PKPdf 14 43 36.9 +0.5
comp=Z,30nm,1.1s
BNI Bardonecchia 141.18 335 *e* PKIKP PKPdf 14 43 37.9 +0.6
VIVF Saint-Julien-l 142.13 337 *e* PKP1 PKPdf 14 43 37.9 -1.1
comp=Z,70nm,1.5s
LBL Lubilhac 142.34 339 PKP PKPdf 14 43 36.8 -2.6
SMRF Simiane la Rot 142.51 336 *e* PKP1 PKPdf 14 43 37.4 -2.3
comp=Z,35nm,1.1s
VSL Villasalto 144.20 327 *e* PKPdf PKPdf 14 43 41.4 -1.3
MTLF Montolieu 144.34 338 *e* PKP1 PKPdf 14 43 41.7 -1.2
comp=Z,294nm,1.1s
LRDF Laroque-de-Fa 144.57 338 PKP PKPdf 14 43 41.9 -1.4
FILF Fillols 144.89 337 PKP PKPdf 14 43 43.1 -0.8
CARF Carcanieres 144.93 338 PKP PKPdf 14 43 43.9 0.0
MLS Moulis 145.08 339 PKP PKPdf 14 43 44.1 -0.1
SALF Salau 145.22 339 PKP PKPdf 14 43 45.7 +1.3
VALF Valcebollere 145.23 338 PKP PKPdf 14 43 43.5 -1.0
RESF Ens 145.47 340 PKP PKPdf 14 43 46.2 +1.3
VIEF Viey 145.50 341 PKP PKPdf 14 43 45.2 +0.3
ETSF Etsaut 145.68 341 *e* PKP1 PKPbc 14 43 46.2 +0.6
comp=Z,130nm,1.0s
LARF Larrau 145.69 342 PKP PKPdf 14 43 46.6 +1.4
SJPF Ste Jean 145.69 342 *e* PKP1 PKPbc 14 43 45.7 +0.1
comp=Z,44nm,1.1s
KEST Kesra 146.85 322 PKPbc PKPbc 14 43 49.5 +0.4
comp=Z,14nm,0.9s,baz=290,slow=4.1,SNR=23
CMAH Djebel Manchou 147.34 326 P PKPbc 14 43 51.5 +1.0
ABSA Djebel Ababsia 147.56 325 P PKPbc 14 43 52.0 +0.9
CKFL Kef-Lekhel 147.89 326 P PKPbc 14 43 53.0 +1.1
CASM Ain Smara 148.12 326 P PKPbc 14 43 53.5 +0.9
DFRA Djebel Bou Aff 148.24 327 P PKPbc 14 43 55.0 +2.1
PBRG Braganca 148.31 348 *e* PKP PKPbc 14 43 52.4 -0.6
SET Setif 148.75 327 P PKPbc 14 43 55.0 +0.8
PVRL Vila Real 149.00 349 *e* PKP PKPbc 14 43 55.0 +0.2
ABA Alger-Bouzarea 149.48 331 P PKPbc 14 43 56.0 0.0
PVIS Viseu 149.58 349 *e* PKP PKPbc 14 43 57.3 +1.0
ESDC Sonseca Array 149.66 343 PKP PKPdf 14 43 52.3 +0.5
comp=Z,0.5nm,0.3s,baz=333,slow=0.6,SNR=4.3
ESDC PKPbc PKPbc 14 43 56.8 +0.4
comp=Z,7.2nm,1.0s,baz=10,slow=2.5,SNR=17
ESDC PP PP 14 47 35.6 +6.1
comp=Z,0.3nm,0.4s,baz=21,slow=6.0,SNR=6.0
ESLA Sonseca Array 149.66 343 *e* PKPbc PKPbc 14 43 56.7 +0.2
ESLA LR LR
comp=Z,5μm,21.0s,MS6.2
PCBR Castelo Branco 150.35 348 *e* PKP PKPbc 14 43 58.1 0.0
CART Cartagena 150.56 337 *e* PKPbc PKPbc 14 43 59.0 +0.4
EBNR Beni Rached 150.60 332 P PKPdf 14 43 56.0 +2.7
PTOM Tomar 150.74 350 *e* PKP PKPbc 14 43 59.3 +0.3
ECHA Ech Chlef 150.79 332 P PKPbc 14 44 00.0 +0.8
EANR 'Ain N'Sour 151.08 332 P PKPbc 14 44 01.0 +1.2
ETRT Tiaret 151.44 332 P PKPbc 14 44 02.0 +1.3
PBEJ Beja 152.17 348 *e* PKP PKPbc 14 44 03.8 +1.4
TOA0 Torodi Ar. Sit 163.62 280 *e* PKPdf PKPdf 14 44 11.1 +1.4
TORD Torodi Ar. Bea 163.62 280 PKP PKPdf 14 44 10.4 +0.7
comp=Z,3.4nm,1.0s,baz=51,slow=1.5,SNR=8.9
TORD PKPab PKPab 14 45 03.2 +1.7
comp=Z,2.6nm,1.0s,baz=76,slow=4.8,SNR=2.7
TORD Torodi Ar. Bea 163.62 280 PKP PKPdf 14 44 10.4 +0.7
TORD PKPab PKPab 14 45 03.2 +1.7
DBIC Dimbokro 169.28 248 PKP PKPdf 14 44 16.0 +1.9
comp=Z,5.0nm,1.1s,baz=145,slow=12,SNR=2.1
DBIC Dimbokro 169.28 248 PKP PKPdf 14 44 16.0 +1.9
DBIC LR LR
comp=Z,2μm,22.0s

*NEIC **28** 14:28:50.1±0.3, 1074S×165.10E, h10km, mb4.8/6, Error ellipse: s-maj=9.6km s-min=8.0km az=109.0*
*BJI **28** 14:28:50.0, 1070S×165.10E, h10km, mB5.2, mb4.9, Ms5.1, Msz4.9*
*ISCJB **28** 14:28:51.5±0.4, 1086S±005×165.06E±007, h28km, mb4.7/28, MS5.0/6, Error ellipse: s-maj=9.4km s-min=7.7km az=152.4*
*MOS **28** 14:28:52.2±0.7, 1079S×165.00E, h33km, mb5.0/6, Error ellipse: s-maj=15.4km s-min=12.8km az=165.6*
*IDC **28** 14:28:53.8±6.6, 1073S×165.10E, h33km±48km, mb4.4/13, mb1 4.5/15, mb1mx4.5/18, mbtmp4.7/15, ML4.8/2, Error ellipse: s-maj=26.5km s-min=17.2km az=65.0*
ISC 28 14:28:53.6±0.4,**1083S**±005×**16511E**±007, **h30**km, σ**h30**km±1.7km**:pP-P, n58**, σ1°**06/58, mb4.7/28, MS5.0/6, 3C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.27**	**285**			**Pn**		**14 30 10.8**	**+0.5**
	57nm,0.3s,baz=82,slow=1.5,SNR=10								
HNR						Sn		**14 31 11.4**	**+1.4**
	13nm,0.3s,baz=270,slow=20,SNR=2.0								
HNR	**Honiara**	**5.27**	**285**	*e*	P	**Pn**		**14 30 10.4**	**0.0**
HNR				*e*	S	**Sn**		**14 31 17.6**	**+7.6**
DZM	**Mont Dzumac**	**11.25**	**174**	Pn		**Pn**		**14 31 32.3**	**0.0**
	3.7nm,0.3s,baz=5.8,slow=20,SNR=14								
CTA	**Charters Tower**	**20.36**	**241**	*e*	P			**14 33 28.4**	**+0.8**
	28nm,1.0s								
CTA	**Charters Tower**	**20.36**	**241**	P		**P**		**14 33 28.9**	**+1.3**
	31nm,0.9s,baz=61,slow=12,SNR=11								
CTAO	**Charters Tower**	**20.36**	**241**	*e*	P	**P**		**14 33 28.3**	**+0.7**
ARMA	**Armidale**	**23.18**	**211**	*e*	P	**P**		**14 33 59.1**	**+1.3**
URZ	**Urewera**	**29.35**	**160**	P		**P**		**14 34 55.2**	**+1.4**
	9.3nm,0.6s,mb4.7,baz=285,slow=4.3,SNR=3.8								
STKA	**Stephens Creek**	**30.18**	**222**	*e*	P			**14 35 01.5**	**+0.4**
	7.9nm,0.9s,mb4.4								
STKA	**Stephens Creek**	**30.18**	**222**	P		**P**		**14 35 03.4**	**+2.3**
	9.4nm,0.8s,mb4.5,baz=40,slow=10,SNR=5.9								
WRAB	**Tennant Creek**	**30.96**	**249**	*e*	P	**P**		**14 35 07.0**	**-1.1**
WB2	**Warramunga Arr**	**30.96**	**249**	*e*	P	**P**		**14 35 07.0**	**-1.1**
WRA	**Warramunga Arr**	**30.98**	**249**	P		**P**		**14 35 07.1**	**-1.0**
	2.4nm,0.6s,mb4.2,baz=76,slow=8.7,SNR=5.9								
AS31	**Alice Springs**	**32.34**	**243**	*e*	P			**14 35 18.2**	**-1.9**
ASAR	**Alice Springs**	**32.34**	**243**	P		**P**		**14 35 18.8**	**-1.4**
	2.3nm,0.7s,mb4.1,baz=66,slow=10.0,SNR=9.6								
RPZ	**Rata Peaks**	**33.17**	**172**	P		**P**		**14 35 27.6**	**+0.2**
	19nm,1.0s,mb5.0,baz=165,slow=5.1,SNR=3.1								
FITZ	**Fitzroy Crossi**	**38.84**	**255**	*e*	P	**P**		**14 36 15.0**	**-0.9**
	9.6nm,0.6s,mb4.7								
MJAR	**Matsushiro Arr**	**53.49**	**333**	P		**P**		**14 38 10.7**	**-0.5**
	3.8nm,1.1s,mb4.2,baz=148,slow=5.2,SNR=5.0								
YSS	**Yuzh-Sakhalins**	**60.89**	**343**	*e*	P			**14 39 04.0**	**+0.6**
NJ2	**Nanjing**	**61.43**	**316**	*e*	P	**P**		**14 39 07.3**	**+0.2**
NJ2					AP	pP		14 39 17.5	+1.2
NJ2					XP	sP		14 39 21.5	+1.7
NJ2					PP	PP		14 41 24.8	+2.4
NJ2					S	**S**		**14 47 24.0**	**-2.2**
NJ2					XS	sS		14 47 40.0	-1.4
NJ2					AMB	AMB			
	comp=Z,80nm,1.0s,mb5.8								
NJ2					AMB	AMB			
	comp=Z,1μm,9.0s								
NJ2					LR	LR			
	comp=N,2μm,11.7s								
NJ2					LR	LR			
	comp=E,3μm,19.2s								
NJ2					LR	LR			
	comp=Z,3μm,14.8s,MS5.5								
MDJ	**Mudanjiang**	**63.87**	**332**	P		**P**		**14 39 24.8**	**+1.4**
MDJ					AP	pP		14 39 34.0	+1.4
MDJ					XP	sP		14 39 37.8	+1.7
MDJ					PCP	PcP		14 39 59.8	+0.9
MDJ					PP	PP		14 41 45.5	+1.6
MDJ					S	**S**		**14 47 59.8**	**+3.0**
MDJ					SCS	ScS		14 49 16.0	+1.1
MDJ					AMB	AMB			
	comp=Z,5.0nm,0.6s,mb4.7								
MDJ					AMB	AMB			
	comp=Z,174nm,5.5s								
MDJ					LR	LR			
	comp=N,794nm,23.8s,MS4.9								
MDJ					LR	LR			
	comp=E,469nm,22.1s,MS4.9								
MDJ					LR	LR			
	comp=Z,1μm,25.5s,MS4.9								
CN2	**Changchun**	**65.24**	**329**	*e*	P	**P**		**14 39 32.3**	**0.0**
CN2					AMB	AMB			
	comp=Z,10.0nm,0.6s,mb5.0								
CASY	**Casey**	**66.36**	**201**	P		**P**		**14 39 38.6**	**-0.9**
	comp=Z,9.5nm,1.1s,mb4.7								
VNDA	**Vanda**	**66.70**	**181**	P		**P**		**14 39 41.8**	**+0.1**
	comp=Z,12nm,1.1s,mb4.8,baz=349,slow=7.1,SNR=8.4								
VNDA	**Vanda**	**66.70**	**181**	*e*	P			**14 39 41.5**	**-0.2**
SBA	**Scott Base**	**67.02**	**180**	*e*	P			**14 39 44.4**	**+0.7**
KMI	**Kunming**	**70.48**	**302**	P		**P**		**14 40 06.8**	**+1.5**
KMI					AP	pP		14 40 14.5	-0.1
KMI					XP	sP		14 40 19.5	+1.4
KMI					PP	PP		14 42 42.3	+0.8
KMI					S	S		14 49 13.5	-2.9
KMI					SS	SS		14 53 45.5	-2.2
KMI					SSS			14 56 55.5	
KMI					AMB	AMB			
	comp=Z,9.0nm,1.5s,mb4.5								
KMI					AMB	AMB			
	comp=Z,343nm,7.6s								
KMI					LR	LR			
	comp=N,339nm,20.3s,MS4.9								
KMI					LR	LR			
	comp=E,703nm,21.5s,MS4.9								
KMI					LR	LR			
	comp=Z,657nm,18.1s,MS4.9								
HHC	**Hu-ho-hao-te**	**71.27**	**320**	*e*	P	**P**		**14 40 12.5**	**+2.5**
HHC					AP	pP		14 40 22.3	+2.9
HHC					PCP	PcP		14 40 32.5	+2.7
HHC					PP	PP		14 42 53.0	+4.8
HHC					S	S		14 49 30.5	+5.0
HHC					XS	sS		14 49 44.0	+3.1
HHC					PS			14 50 00.5	
HHC					SKS			14 50 09.0	
HHC					SCS	ScS		14 50 12.0	-0.5
HHC					SS	SS		14 54 04.0	+4.2
HHC					AMB	AMB			
	comp=Z,24nm,0.8s,mb5.2								
HHC					AMB	AMB			
	comp=Z,169nm,6.4s								
HHC					LR	LR			
	comp=N,849nm,15.9s,MS5.2								
HHC					LR	LR			
	comp=E,642nm,18.1s,MS5.2								
HHC					LR	LR			
	comp=Z,900nm,15.9s,MS5.1								
CD2	**Chengdu**	**71.98**	**308**	*e*	P	**P**		**14 40 14.5**	**+0.2**
CD2					AP	pP		14 40 25.0	+1.3
CD2					XP	sP		14 40 28.8	+1.6
CD2					PP	PP		14 42 56.3	+2.0
CD2					S	S		14 49 32.5	-1.2
CD2					XS	sS		14 49 49.5	+0.3
CD2					SS	SS		14 54 11.3	+0.6
CD2					AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8								
CD2					AMB	AMB			
	comp=Z,40nm,5.9s								
CD2					LR	LR			
	comp=N,60nm,17.8s								
CD2					LR	LR			
	comp=Z,70nm,14.6s,MS4.1								
MIR	**Mirnyy**	**73.03**	**203**	*e*	P	**P**		**14 40 12.5**	**-8.1**
MIR					pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0								
LZH	**Lanzhou**	**74.15**	**312**	*e*	P	**P**		**14 40 29.8**	**+2.6**
LZH					AP	pP		14 40 36.8	+0.2
LZH					XP	sP		14 40 41.0	+0.9
LZH					AMB	AMB			
	comp=Z,23nm,1.4s,mb4.9								
CIT	**Chita**	**76.66**	**330**	*e*	P	**P**		**14 40 39.9**	**-1.7**
CIT					*e*	pP		14 40 48.9	-2.1
ULN	**Ulaanbaatar**	**77.76**	**324**	*e*	P	**P**		**14 40 47.9**	**+0.1**
ULN					pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.6								
ULN	**Ulaanbaatar**	**77.76**	**324**	*e*	P	**P**		**14 40 47.9**	**+0.1**
	comp=Z,102nm,1.2s,mb5.6								
SVW2	**Sparrevohn**	**78.10**	**18**	*e*	P	**P**		**14 40 49.3**	**-0.4**
SONM	**Songino Array**	**78.12**	**324**	P		**P**		**14 40 49.4**	**-0.4**
	comp=Z,5.1nm,1.1s,mb4.4,baz=147,slow=5.8,SNR=7.0								
SONM	**Songino Array**	**78.12**	**324**	P		**P**		**14 40 49.4**	**-0.4**
SONM					pmax	pmax			
	comp=Z,5.0nm,1.1s								
GTA	**Gaotai**	**78.46**	**314**	*e*	P	**P**		**14 40 52.8**	**+1.1**
GTA					AP	pP		14 40 59.8	-1.3
GTA					XP	sP		14 41 03.5	-1.1
GTA					AMB	AMB			
	comp=Z,7.0nm,1.3s,mb4.4								
BILL	**Bilibino**	**78.67**	**0**	⇓*i*	P	**P**		**14 40 52.5**	**-0.3**
BILL				*i*				14 40 59.0	
BILL					pmax	pmax			
	comp=Z,23nm,1.5s,mb4.9								
QSPA	**South Pole Qui**	**79.17**	**180**	*e*	P	**P**		**14 40 55.4**	**-0.2**
	comp=Z,24nm,1.1s,mb5.0								
ZAK	**Zakamensk**	**81.17**	**325**	⇑*e*	P	**P**		**14 41 05.8**	**-0.5**
ZAK					pmax	pmax			
	comp=Z,7.0nm,1.1s,mb4.5								
YBH	**Yreka Blue Hor**	**84.19**	**46**	P		**P**		**14 41 21.9**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.3,baz=213,slow=2.6,SNR=5.3								
YBH	**Yreka Blue Hor**	**84.19**	**46**	P		**P**		**14 41 21.9**	**-0.1**
YBH					pmax	pmax			
	comp=Z,2.0nm,0.8s								
MAW	**Mawson**	**84.69**	**202**	⇑*i*	P	**P**		**14 41 24.7**	**+0.1**
	comp=Z,13nm,1.2s,mb4.9								
MAW	**Mawson**	**84.69**	**202**	P		**P**		**14 41 25.0**	**+0.4**
	comp=Z,16nm,1.0s,mb5.1,baz=100,slow=6.4,SNR=14								
MAW	**Mawson**	**84.69**	**202**	⇑*i*	P	**P**		**14 41 24.7**	**+0.1**
MAW					pmax	pmax			
	comp=Z,13nm,1.2s								
EGAK	**Eagle**	**85.39**	**20**	*e*	P	**P**		**14 41 27.0**	**-1.1**
MSU	**Marysvale**	**91.03**	**51**	*e*	P	**P**		**14 41 55.7**	**+0.7**
MKAR	**Makanchi Array**	**92.94**	**317**	P		**P**		**14 42 03.3**	**-0.6**
	comp=Z,3.0nm,1.0s,mb4.7,baz=100,slow=6.3,SNR=5.0								
MKAR	**Makanchi Array**	**92.94**	**317**	P		**P**		**14 42 03.3**	**-0.5**
MKAR					pmax	pmax			
	comp=Z,3.0nm,1.0s								
ZAL	**Zalesovo**	**93.03**	**324**	P		**P**		**14 42 03.4**	**-0.8**
	comp=Z,1.0nm,0.4s,mb4.6,baz=8.9,slow=7.6,SNR=4.3								
ZAL	**Zalesovo**	**93.03**	**324**	P		**P**		**14 42 03.4**	**-0.8**
ZAL					pmax	pmax			
	comp=Z,1.0nm,0.4s								
PDAR	**Pinedale Array**	**93.86**	**47**	PKPdf		**P**		**14 42 06.8**	**-1.2**
PDAR					LR	LR		15 12 29.2	
PDAR					LR	LR		15 12 29.2	
	comp=Z,954nm,20.7s,MS5.2,baz=251,slow=31								
PDAR	**Pinedale Array**	**93.86**	**47**	PKiKP		**P**		**14 42 06.8**	**-1.2**
	comp=Z,1.2nm,0.9s,mb4.3,baz=270,slow=0.9,SNR=4.9								
ARCES	**ARCESS Array B 115.97 345**			PKP		PKPdf		14 47 30.6	-2.8
	comp=Z,0.7nm,0.7s,baz=132,slow=2.6,SNR=5.2								
ARCES	**ARCESS Array B 115.97 345**			PKiKP		PKPdf		14 47 30.6	-2.9
ARCES					pmax	pmax			
	comp=Z,1.0nm,0.7s								
ESDC	**Sonseca Array**	**149.68**	**343**	PKPbc		PKPbc		14 48 40.1	-0.2
	comp=Z,0.4nm,0.4s,baz=355,slow=5.5,SNR=2.8								
TORD	**Torodi Ar. Bea**	**163.62**	**280**	PKP		PKPdf		14 48 54.0	+0.5
	comp=Z,1.8nm,1.1s,baz=109,slow=5.2,SNR=3.6								

*ISCJB **28** 14:32:25.1±5.2, 107S±0.1×16524E±009, h7km±32km, mb4.0/8, Error ellipse: s-maj=23.1km s-min=12.9km az=44.1*
*IDC **28** 14:32:25.6±1.2, 1051S×165.15E, h0km, mb3.9/8, mb1 4.1/9, mb1mx4.0/15, mbtmp3.9/9, ML4.2/1, Error ellipse: s-maj=33.7km s-min=27.7km az=105.0*
*NEIC **28** 14:32:28.4±7.8, 1061S×16527E, h18km±46km, mb4.5/3, Error ellipse: s-maj=24.0km s-min=15.6km az=48.0*
ISC 28 14:32:27.4±5.9,**106S**±01×**16531E**±009,**h12**km±36km,**n17,** σ0°**86**/19,**mb4.0**/8,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.41**	**282**			**Pn**		**14 33 48.7**	**+0.9**
	13nm,0.3s,baz=12,slow=1.7,SNR=5.6								
HNR						Sn		**14 34 50.3**	**+0.2**
	9.9nm,0.3s,baz=262,slow=19,SNR=2.5								
HNR	**Honiara**	**5.41**	**282**	*e*	P	**Pn**		**14 33 49.2**	**+1.3**
HNR						Sn		**14 34 50.3**	**+0.2**
DZM	**Mont Dzumac**	**11.45**	**175**	Pn		**Pn**		**14 35 10.4**	**-0.3**
	1.4nm,0.3s,baz=0.7,slow=23,SNR=12								
CTA	**Charters Tower**	**20.63**	**241**	P		**P**		**14 37 06.5**	**-0.1**
	4.8nm,0.8s,baz=70,slow=14,SNR=9.7								
CTAO	**Charters Tower**	**20.63**	**241**	*e*	P	**P**		**14 37 06.5**	**-0.2**
WB2	**Warramunga Arr**	**31.22**	**249**	P		**P**		**14 38 47.0**	**+0.4**
WRA	**Warramunga Arr**	**31.23**	**249**	P		**P**		**14 38 45.2**	**-1.6**
	0.4nm,0.4s,mb3.6,baz=76,slow=9.0,SNR=5.0								
AS31	**Alice Springs**	**32.61**	**242**	*e*	P	**P**		**14 38 58.3**	**-0.5**
ASAR	**Alice Springs**	**32.61**	**242**	P		**P**		**14 38 57.5**	**-1.3**
	0.9nm,0.8s,mb3.8,baz=70,slow=9.6,SNR=7.1								
VNDA	**Vanda**	**66.92**	**181**	P		**P**		**14 43 20.6**	**+1.0**
	1.4nm,0.8s,mb4.0,baz=354,slow=6.8,SNR=6.3								
VNDA	**Vanda**	**66.92**	**181**	*e*	P	**P**		**14 43 20.5**	**+0.9**
	2.4nm,1.0s,mb4.2								
SBA	**Scott Base**	**67.24**	**180**	*e*	P	**P**		**14 43 22.7**	**+1.0**
	3.3nm,0.8s,mb4.4								
SONM	**Songino Array**	**78.06**	**324**	P		**P**		**14 44 26.6**	**+0.6**
	0.9nm,0.7s,mb3.8,baz=122,slow=5.4,SNR=3.2								
MAW	**Mawson**	**84.96**	**202**	P		**P**		**14 45 03.6**	**+1.1**
	2.8nm,0.8s,mb4.5,baz=99,slow=6.8,SNR=7.1								
MAW	**Mawson**	**84.96**	**202**	*e*	P	**P**		**14 45 03.5**	**+1.0**
	3.8nm,0.8s,mb4.6								
MKAR	**Makanchi Array**	**92.91**	**317**	P		**P**		**14 45 39.6**	**-0.7**
	0.9nm,1.1s,mb4.1,baz=134,slow=4.2,SNR=2.5								
PDAR	**Pinedale Array**	**93.57**	**47**	P		**P**		**14 45 42.5**	**-0.8**
	0.2nm,0.7s,mb3.7,baz=212,slow=5.0,SNR=2.5								

*IDC **28** 14:48:50.9±1.7, 1073S×16483E, h0km, mb3.9/7, mb1 4.1/8, mb1mx4.0/13, mbtmp4.0/8, Error ellipse: s-maj=43.4km s-min=28.5km az=80.0*
*NEIC **28** 14:48:51.9±1.1, 1072S×16505E, h10km, mb4.3/4, Error ellipse: s-maj=24.4km s-min=17.6km az=76.0*
*ISCJB **28** 14:48:54.3±1.0, 109S±0.1×1649E±02, h33km, mb4.0/9, Error ellipse: s-maj=25.2km s-min=16.5km az=151.9*
ISC 28 14:48:56.0±1.0,**108S**±01×**1650E**±02,**h35**km,**n16,** σ0°**89**/16,**mb4.0**/9,**Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.28**	**173**	Pn		**Pn**		**14 51 33.8**	**-0.9**
	1.1nm,0.3s,baz=13,slow=17,SNR=14								
CTA	**Charters Tower**	**20.24**	**241**	*e*	P			**14 53 31.3**	**+3.2**
	5.3nm,0.8s								
CTA	**Charters Tower**	**20.24**	**241**	P		**P**		**14 53 29.7**	**+1.6**
	4.7nm,0.8s,baz=68,slow=14,SNR=3.9								
CTAO	**Charters Tower**	**20.24**	**241**	*e*	P	**P**		**14 53 30.1**	**+1.9**
	15nm,1.2s								
STKA	**Stephens Creek**	**30.09**	**222**	*e*	P	**P**		**14 55 03.2**	**+1.1**
	2.4nm,0.8s,mb4.0								
STKA	**Stephens Creek**	**30.09**	**222**	P		**P**		**14 55 03.5**	**+1.4**
	2.6nm,0.8s,mb4.0,baz=22,slow=9.6,SNR=6.0								
STKA	**Stephens Creek**	**30.09**	**222**	*e*	P	**P**		**14 55 03.3**	**+1.2**
WRA	**Warramunga Arr**	**30.85**	**249**	P		**P**		**14 55 07.4**	**-1.4**
	0.6nm,0.6s,mb3.6,baz=80,slow=8.6,SNR=9.7								
AS31	**Alice Springs**	**32.22**	**243**	*e*	P			**14 55 20.2**	**-0.6**
ASAR	**Alice Springs**	**32.22**	**243**	P		**P**		**14 55 20.0**	**-0.8**
	0.7nm,0.7s,mb3.6,baz=65,slow=10,SNR=8.0								
VNDA	**Vanda**	**66.71**	**181**	P		**P**		**14 59 43.8**	**+0.3**
	1.8nm,1.0s,mb4.0,baz=353,slow=7.8,SNR=4.9								
SBA	**Scott Base**	**67.03**	**180**	*e*	P	**P**		**14 59 46.1**	**+0.6**
	5.9nm,1.1s,mb4.5								
ULN	**Ulaanbaatar**	**77.67**	**324**	*e*	P

JOF	**Joensuu**	**82.68**	**335**	*ep*	**P**	**15 14 33.0**	**-1.0**	
	0.5nm,0.3s,mb4.0							
FINES	**FINESS Array B**	**85.55**	**335**	P	**P**	**15 14 47.2**	**-1.3**	
	1.2nm,0.5s,mb4.4,baz=69,slow=5.8,SNR=14							
FINES	**FINESS Array B**	**85.55**	**335**	P	**P**	**15 14 47.2**	**-1.3**	
LPAZ	**La Paz**	**147.40**	**89**	PKPbc	PKPbc	15 21 55.5	+1.4	
	0.8nm,0.5s,baz=335,slow=2.6,SNR=5.0							
LPAZ	**La Paz**	**147.40**	**89**	*e*PKPbc	PKPbc	15 21 55.1	+1.1	

IDC ***28*** *15:08:54.0±0.6, 1078S×16507E, h0km, mb4.6/13, mb1 4.7/15, mb1mx4.7/17, mbtmp4.6/15, ML4.7/2, MS4.2/9, Ms1 4.2/9, ms1mx4.0/22, Error ellipse: s-maj=19.3km s-min=16.1km az=93.0*
NEIC ***28*** *15:08:55.3±0.4, 1073S×16505E, h10km, mb4.8/16, Error ellipse: s-maj=11.3km s-min=9.4km az=114.0*
BJI ***28*** *15:08:55.2, 1070S×16500E, h10km, mB5.1, mb4.7, Ms4.9, Msz4.7*
ISCJB ***28*** *15:08:56.5±0.4, 1086S±005×16498E±006, h27km, mb4.7/38, MS4.3/10, Error ellipse: s-maj=8.3km s-min=7.0km az=139.9*
MOS ***28*** *15:08:57.9±1.3, 1076S×16491E, h33km, mb5.1/18, Error ellipse: s-maj=12.9km s-min=10.8km az=179.1*

ISC 28 15:08:58.7±0.4, 1084S±005×16504E±006, h28km, h28km±1.7km:pP-P,n89,σ1§15/77, mb4.7/38, MS4.3/10, 3C-2D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.20**	**285**	Pn	**Pn**	**15 10 15.3**	**+0.7**
	46nm,0.3s,baz=141,slow=0.6,SNR=30						
HNR				Sn	**Sn**	**15 11 13.4**	**-0.3**
	baz=103,slow=14,SNR=1.2						
HNR				LR	LR	15 11 36.0	
	comp=Z,784nm,20.6s,baz=181,slow=31						
HNR	**Honiara**	**5.20**	**285**	*e*P	**Pn**	**15 10 15.5**	**+0.9**
	2um,1.2s						
DZM	**Mont Dzumac**	**11.25**	**173**	*e*P	**Pn**	**15 11 37.6**	**+0.1**
DZM	**Mont Dzumac**	**11.25**	**173**	Pn	**Pn**	**15 11 38.2**	**+0.7**
	2.7nm,0.3s,baz=20,slow=22,SNR=37						
DZM				LR	LR	15 15 10.2	
	comp=Z,836nm,18.4s,baz=349,slow=33						
PMG	**Port Moresby**	**17.66**	**273**	LR	LR	15 18 56.5	
	comp=Z,1μm,21.2s,baz=116,slow=34						
CTA	**Charters Tower**	**20.29**	**241**	*e*P	**P**	**15 13 33.5**	**+1.4**
	27nm,0.8s						
CTA	**Charters Tower**	**20.29**	**241**	P	**P**	**15 13 33.5**	**+1.5**
	29nm,0.8s,baz=70,slow=12,SNR=28						
CTA				LR	LR	15 20 03.8	
	comp=Z,647nm,18.1s,MS4.0,baz=147,slow=33						
CTA	**Charters Tower**	**20.29**	**241**	*e*P	**P**	**15 13 33.5**	**+1.4**
CTA				pmax	pmax		
	comp=Z,27nm,0.8s						
CTAO	**Charters Tower**	**20.29**	**241**	*e*P	**P**	**15 13 33.4**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,47nm,0.9s						
CTAO	**Charters Tower**	**20.29**	**241**	*e*P	**P**	**15 13 33.4**	**+1.4**
	comp=Z,47nm,0.9s						
AFI	**Afiamalu**	**22.85**	**100**	LR	LR	15 20 57.1	
	comp=Z,608nm,21.2s,MS4.0,baz=270,slow=32						
ARMA	**Armidale**	**23.13**	**211**	*e*P	**P**	**15 14 03.1**	**+0.6**
CNB	**Canberra Magne**	**28.23**	**208**	*e*P	**P**	**15 14 50.4**	**+1.3**
	comp=Z,13nm,1.0s,mb4.5						
URZ	**Urewera**	**29.37**	**160**	P	**P**	**15 14 58.0**	**-1.2**
	comp=Z,21nm,1.0s,mb4.8,baz=357,slow=10,SNR=6.0						
STKA	**Stephens Creek**	**30.12**	**222**	*j*P	**P**	**15 15 07.0**	**+1.2**
	comp=Z,9.4nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**30.12**	**222**	P	**P**	**15 15 07.0**	**+1.1**
	comp=Z,10nm,0.8s,mb4.6,baz=36,slow=10,SNR=23						
STKA				LR	LR	15 25 39.4	
	comp=Z,279nm,21.4s,MS3.9,baz=28,slow=33						
WRAB	**Tennant Creek**	**30.89**	**249**	*e*P	**P**	**15 15 11.3**	**-1.4**
WB2	**Warramunga Arr**	**30.89**	**249**	*e*P	**P**	**15 15 11.4**	**-1.3**
WRA	**Warramunga Arr**	**30.90**	**249**	P	**P**	**15 15 11.3**	**-1.5**
	comp=Z,4.2nm,1.0s,mb4.2,baz=72,slow=9.1,SNR=20						
WRA				LR	LR	15 26 34.0	
	comp=Z,582nm,18.2s,MS4.3,baz=45,slow=34						
WRA	**Warramunga Arr**	**30.90**	**249**	P	**P**	**15 15 11.3**	**-1.5**
WRA				pmax	pmax		
	comp=Z,40nm,1.0s						
WRA				MLR	MLR		
	comp=Z,582nm,18.2s						
TOO	**Toolangi**	**31.89**	**210**	*e*P	**P**	**15 15 23.0**	**+1.5**
	comp=Z,5.2nm,0.7s,mb4.5						
TOO				*e*	pP	15 15 30.1	+0.3
TOO	**Toolangi**	**31.89**	**210**	*e*P	**P**	**15 15 23.0**	**+1.5**
TOO				*e*	pP	15 15 30.1	+0.3
TOO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
KAKA	**Kakadu**	**31.95**	**263**	*e*P	**P**	**15 15 19.9**	**-2.2**
	comp=Z,7.2nm,0.5s,mb4.8						
AS31	**Alice Springs**	**32.26**	**243**	*e*P	**P**	**15 15 23.3**	**-1.5**
ASAR	**Alice Springs**	**32.27**	**243**	P	**P**	**15 15 23.7**	**-1.1**
	comp=Z,3.7nm,0.8s,mb4.3,baz=74,slow=9.4,SNR=7.2						
ASAR	**Alice Springs**	**32.27**	**243**	P	**P**	**15 15 23.7**	**-1.1**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASPA	**Alice Springs**	**32.27**	**243**	*e*P	**P**	**15 15 23.3**	**-1.5**
FITZ	**Fitzroy Crossi**	**38.76**	**255**	*e*P	**P**	**15 16 19.0**	**-1.6**
	comp=Z,7.8nm,1.0s,mb4.4						
FORT	**Forrest**	**39.59**	**234**	*e*P	**P**	**15 16 27.8**	**+0.3**
	comp=Z,15nm,0.8s,mb4.8						
PPT	**Papeete**	**44.42**	**104**	*e*LR	LR	15 29 30.7	
	comp=Z,739nm,26.0s						
PPT	**Papeete**	**44.42**	**104**	LR	LR	15 31 01.1	
	comp=Z,608nm,18.9s,MS4.5,baz=289,slow=30						
TBI	**Tubuai**	**45.05**	**112**	*e*LR	LR	15 29 49.6	
	comp=Z,1μm,28.5s						
NWAO	**Narrogin (SRO)**	**49.00**	**236**	LR	LR	15 37 32.1	
	comp=Z,546nm,18.9s,MS4.6,baz=51,slow=35						
MJAR	**Matsushiro Arr**	**53.47**	**333**	P	**P**	**15 18 14.2**	**-2.1**
	comp=Z,1.1nm,0.6s,mb4.0,baz=167,slow=8.4,SNR=4.4						
MJAR	**Matsushiro Arr**	**53.47**	**333**	P	**P**	**15 18 14.2**	**-2.1**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RKT	**Rikitea**	**58.31**	**110**	*e*LR	LR	15 35 50.5	
	comp=Z,680nm,27.2s						
ASAJ	**Asahikawa**	**58.38**	**341**	P	**P**	**15 18 51.2**	**-0.1**
	comp=Z,12nm,1.2s,mb4.8,baz=230,slow=14,SNR=5.4						
ASAJ	**Asahikawa**	**58.38**	**341**	P	**P**	**15 18 51.3**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,12nm,1.2s						
NJ2	**Nanjing**	**61.39**	**316**	*e*P	**P**	**15 19 13.8**	**+1.7**
NJ2				AP	pP	15 19 24.0	+3.2
NJ2				XP	sP	15 19 28.0	+3.8
NJ2				PP	PP	15 21 31.3	+3.9
NJ2				S	**S**	**15 27 31.0**	**-0.1**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,200nm,3.7s						
NJ2				LR	LR		
	comp=N,430nm,32.4s						
NJ2				LR	LR		
	comp=E,490nm,17.6s						
NJ2				LR	LR		
	comp=Z,490nm,20.6s						
QIZ	**Qiongzhong**	**61.97**	**298**	P	**P**	**15 19 16.5**	**+0.5**
QIZ				S	**S**	**15 27 38.5**	**0.0**
QIZ				AMB	AMB		
	comp=Z,17nm,1.6s,mb4.9						
QIZ				LR	LR		
	comp=N,252nm,15.8s						
MDJ	**Mudanjiang**	**63.85**	**333**	P	**P**	**15 19 29.5**	**+1.0**
MDJ				AP	pP	15 19 38.8	+1.5
MDJ				XP	sP	15 19 42.5	+1.9
MDJ				PCP	PcP	15 20 04.5	+0.4
MDJ				PP	PP	15 21 50.3	+1.3
MDJ				S	**S**	**15 28 04.3**	**+2.3**
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,192nm,7.6s						
MDJ				LR	LR		
	comp=N,130nm,19.2s,MS4.1						
MDJ				LR	LR		
	comp=E,37nm,19.2s,MS4.1						
MDJ				LR	LR		
	comp=Z,127nm,16.9s,MS4.2						
CASY	**Casey**	**66.32**	**201**	*e*P	**P**	**15 19 43.7**	**-0.8**
	comp=Z,9.2nm,1.2s,mb4.7						
KLR	**Kul'dur**	**66.60**	**337**	*e*P	**P**	**15 19 43.9**	**-2.4**
VNDA	**Vanda**	**66.69**	**181**	P	**P**	**15 19 47.0**	**+0.1**
	comp=Z,13nm,1.1s,mb4.8,baz=346,slow=6.9,SNR=35						
VNDA	**Vanda**	**66.69**	**181**	*e*P	**P**	**15 19 46.9**	**0.0**
VNDA				pmax	pmax		
	comp=Z,25nm,1.3s						
VNDA	**Vanda**	**66.69**	**181**	*e*P	**P**	**15 19 46.9**	**0.0**
	comp=Z,25nm,1.3s,mb5.1						
SBA	**Scott Base**	**67.01**	**180**	*e*P	**P**	**15 19 49.8**	**+0.9**
SBA				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
SBA	**Scott Base**	**67.01**	**180**	*e*P	**P**	**15 19 49.8**	**+0.9**
	comp=Z,22nm,1.1s,mb5.1						
PSI	**Prapat**	**67.16**	**278**	P	**P**	**15 19 49.4**	**-0.5**
	comp=Z,2.2nm,0.4s,mb4.6,baz=149,slow=12,SNR=4.1						
PSI	**Prapat**	**67.16**	**278**	P	**P**	**15 19 49.4**	**-0.5**
PSI				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
PSI	**Prapat**	**67.16**	**278**	P	**P**	**15 19 49.4**	**-0.5**
GYA	**Guiyang**	**67.73**	**304**	*i*P	**P**	**15 19 54.5**	**+1.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
BJI	**Beijing**	**67.89**	**321**	P	**P**	**15 19 54.5**	**0.0**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.7						
XAN	**Xi'an**	**69.47**	**313**	P	**P**	**15 20 04.8**	**+0.4**
XAN				AP	pP	15 20 12.0	-1.2
XAN				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
KMI	**Kunming**	**70.42**	**302**	P	**P**	**15 20 11.8**	**+1.6**
KMI				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.6						
HHC	**Hu-ho-hao-te**	**71.23**	**320**	*e*P	**P**	**15 20 17.5**	**+2.4**
HHC				AP	pP	15 20 27.8	+3.8
HHC				PCP	PcP	15 20 38.0	+3.0
HHC				PP	PP	15 22 58.3	+5.1
HHC				S	S	15 29 25.0	-5.5
HHC				XS	sS	15 29 48.0	+2.8
HHC				PS		15 30 04.0	
HHC				SKS		15 30 13.0	
HHC				SCS	ScS	15 30 16.0	-1.7
HHC				SS	SS	15 34 08.3	+3.7
HHC				AMB	AMB		
	comp=Z,21nm,0.9s,mb5.1						
HHC				AMB	AMB		
	comp=Z,122nm,6.4s						
HHC				LR	LR		
	comp=N,129nm,19.0s,MS4.4						
HHC				LR	LR		
	comp=E,129nm,17.8s,MS4.4						
HHC				LR	LR		
	comp=Z,170nm,15.7s,MS4.4						
CD2	**Chengdu**	**71.93**	**308**	*e*P	**P**	**15 20 19.5**	**+0.2**
CD2				XP	sP	15 20 33.8	+2.3
CD2				PP	PP	15 23 01.3	+2.1
CD2				S	S	15 29 37.5	-1.1
CD2				XS	sS	15 29 54.5	+1.2
CD2				SS	SS	15 34 16.3	+1.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
CD2				LR	LR		
	comp=N,80nm,16.2s						
CD2				LR	LR		
	comp=Z,90nm,14.2s,MS4.2						
MIR	**Mirnyy**	**72.99**	**203**	*e*P	**P**	**15 20 27.0**	**+1.4**
MIR				*e*		15 20 50.0	
MIR				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
LZH	**Lanzhou**	**74.11**	**312**	*e*P	**P**	**15 20 33.8**	**+1.6**
LZH				AP	pP	15 20 41.0	-0.2
LZH				XP	sP	15 20 44.3	-0.1
LZH				PP	PP	15 23 22.0	+4.2
LZH				AMB	AMB		
	comp=Z,27nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,53nm,6.8s						
LZH				LR	LR		
	comp=E,272nm,15.2s						
LZH				LR	LR		
	comp=Z,401nm,18.1s,MS4.8						
YAK	**Yakutsk**	**77.71**	**344**	*e*P	**P**	**15 20 51.3**	**-1.5**
YAK				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
YAK	**Yakutsk**	**77.71**	**344**	*e*P	**P**	**15 20 51.3**	**-1.5**
	comp=Z,14nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	**77.73**	**324**	*e*P	**P**	**15 20 53.5**	**+0.6**
ULN				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	**77.73**	**324**	*e*P	**P**	**15 20 53.5**	**+0.6**
	comp=Z,16nm,1.0s,mb4.9						
SONM	**Songino Array**	**78.09**	**324**	P	**P**	**15 20 55.9**	**+1.0**
	comp=Z,3.1nm,0.9s,mb4.2,baz=133,slow=5.8,SNR=10						
SONM	**Songino Array**	**78.09**	**324**	P	**P**	**15 20 55.9**	**+1.0**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA	**Gaotai**	**78.42**	**314**	*e*P	**P**	**15 20 58.0**	**+1.3**
GTA				AP	pP	15 21 05.3	-0.4
GTA				XP	sP	15 21 09.0	0.0
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.4						
BILL	**Bilibino**	**78.68**	**0**	*e*P	**P**	**15 20 59.3**	**+1.1**
BILL				*i*		15 21 04.6	
BILL				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
QSPA	**South Pole Qui**	**79.16**	**180**	*e*P	**P**	**15 21 00.9**	**+0.1**
	comp=Z,25nm,1.1s,mb5.1						
BOD	**Bodaibo**	**80.05**	**335**	*e*P	**P**	**15 21 04.2**	**-1.4**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
ZAK	**Zakamensk**	**81.14**	**325**	*e*P	**P**	**15 21 11.1**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
MAW	**Mawson**	**84.65**	**202**	*e*P	**P**	**15 21 30.0**	**+0.3**
	comp=Z,11nm,1.0s,mb5.0						
MAW				*e*	pP	15 21 37.8	-0.9
MAW	**Mawson**	**84.65**	**202**	P	**P**	**15 21 30.3**	**+0.6**
	comp=Z,13nm,1.0s,mb5.0,baz=96,slow=5.8,SNR=25						
MAW	**Mawson**	**84.65**	**202**	*e*P	**P**	**15 21 30.0**	**+0.3**
MAW				*e*	pP	15 21 37.8	-0.9
MAW				pmax	pmax		
	comp=Z,11nm,1.0s						
EGAK	**Eagle**	**85.43**	**20**	*e*P	**P**	**15 21 32.2**	**-1.4**
NVAR	**Mina Array Bea**	**86.42**	**50**	P	**P**	**15 21 38.0**	**-0.5**
	baz=237,slow=8.4						
NVAR	**Mina Array Bea**	**86.42**	**50**	P	**P**	**15 21 38.0**	**-0.5**
HLID	**Hailey**	**90.63**	**46**	P	**P**	**15 21 58.0**	**-0.5**
	comp=Z,2.4nm,1.0s,mb4.5						
SYO	**Syowa Base**	**91.78**	**197**	*j*eX	pP	15 22 10.6	-2.3
SYO	**Syowa Base**	**91.78**	**197**	*i*eSP	sP	15 22 17.4	+1.3
MKAR	**Makanchi Array**	**92.90**	**317**	P	**P**	**15 22 08.9**	**0.0**
	comp=Z,3.7nm,0.9s,mb4.8,baz=98,slow=6.2,SNR=22						
MKAR	**Makanchi Array**	**92.90**	**317**	P	**P**	**15 22 08.9**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PDAR	**Pinedale Array**	**93.93**	**47**	P	**P**	**15 22 12.6**	**-1.1**
	comp=Z,0.9nm,0.8s,mb4.2,baz=232,slow=1.7,SNR=7.9						
LPAZ	**La Paz**	**120.90**	**116**	PKP	PKPdf	15 27 50.3	+2.1
	comp=Z,0.9nm,0.9s,baz=252,slow=6.4,SNR=2.9						
BSD	**Bornholm Skovb**	**129.97**	**338**	*e*PKIKP	PKPdf	15 28 02.8	-2.8
BSD				*i*		15 28 10.3	
GERES	**GERESS Array B**	**135.21**	**333**	PKP	PKPdf	15 28 16.0	+0.5
	comp=Z,0.2nm,0.3s,baz=260,slow=5.2,SNR=4.0						
KEST	**Kesra**	**146.83**	**322**	PKPbc	PKPbc	15 28 39.5	+1.4
	comp=Z,3.5nm,1.0s,baz=22,slow=1.6,SNR=5.7						
ESDC	**Sonseca Array**	**149.67**	**343**	PKPbc	PKPbc	15 28 46.0	+0.4
	comp=Z,0.4nm,0.3s,baz=110,slow=2.5,SNR=4.9						
TORD	**Torodi Ar. Bea**	**163.55**	**280**	PKP	PKPdf	15 29 00.5	+1.8
	comp=Z,0.6nm,1.0s,baz=318,slow=1.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**163.55**	**280**	PKP	PKPdf	15 29 00.5	+1.8

IDC ***28*** *15:32:46.2±0.6, 1074S×16510E, h0km, mb4.7/15, mb1 4.8/17, mb1mx4.8/19, mbtmp4.7/17, ML4.8/2, MS4.3/11, Ms1 4.3/11, ms1mx4.2/19, Error ellipse: s-maj=19.2km s-min=15.8km az=84.0*
HRVD ***28*** *15:32:47.6±0.4, 1060S×16491E, h16km±1km, MW5.0/58, Centroid moment Tensor Solution. LP body waves: s19,c22;Mantle waves: s58,c80; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.71±.27; Mθθ0.13±.15; Mφφ-2.84±.17; Mrθ-2.32±.54; Mrφ1.32±.10; Mθφ-2.67±.46; Best double couple: M₀4.56600×10¹⁶ NP1:ϕ₀316.00000°, δ36.00000°, λ36.00000°. NP2:ϕ₀195.00000°, δ70.00000°, λ120.00000°. Principal axes: T 5.1770, Plg54.0000°, Azm143.0000°; N -1.2200, Plg28.0000°, Azm4.0000°; P -3.9560, Plg20.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***28*** *15:32:47.6±0.3, 1077S×16510E, h10km, mb4.9/21 Error ellipse: s-maj=8.4km s-min=6.7km az=135.0*
BJI ***28*** *15:32:47.7, 1054S×16494E, h10km, mB5.1, mb4.9, Ms4.9, Msz4.7*
ISCJB ***28*** *15:32:49.3±0.3, 1086S±005×16508E±005, h31km, mb4.8/49, MS4.5/19, Error ellipse: s-maj=6.5km s-min=6.4km az=29.6*
MOS ***28*** *15:32:49.9±1.0, 1076S×16503E, h33km, mb5.0/25, Error ellipse: s-maj=10.7km s-min=8.9km az=170.0*

ISC 28 15:32:51.1±0.3, 1084S±004×16513E±005, h31km, h31km±1.5km:pP-P,n116,σ1§02/102, mb4.8/49, MS4.5/19, 11C-5D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.29**	**285**	Pn	**Pn**	**15 34 07.8**	**-0.2**
	54nm,0.3s,baz=106,slow=1.1,SNR=34						
HNR				Sn	**Sn**	**15 35 09.0**	**+1.1**
	29nm,0.3s,baz=82,slow=23,SNR=7.4						
HNR	**Honiara**	**5.29**	**285**	P	**Pn**	**15 34 07.8**	**-0.2**
HNR						15 35 09.0	
HNR				pmax	pmax		
	comp=Z,55nm,0.3s						
HNR				smax			
	comp=N,29nm,0.3s						
HNR	**Honiara**	**5.29**	**285**	*e*P	**Pn**	**15 34 07.9**	**-0.1**
	comp=N,806nm,0.8s						
DZM	**Mont Dzumac**	**11.24**	**174**	*e*P	**Pn**	**15 35 29.5**	**-0.1**
DZM	**Mont Dzumac**	**11.24**	**174**	Pn	**Pn**	**15 35 29.7**	**+0.1**
	comp=N,3.9nm,0.3s,baz=4.4,slow=24,SNR=23						
DZM				LR	LR	15 39 01.4	
	comp=N,714nm,19.8s,baz=346,slow=33						
PMG	**Port Moresby**	**17.75**	**273**	LR	LR	15 43 00.6	
	comp=N,1μm,18.0s,baz=280,slow=35						
PMG	**Port Moresby**	**17.75**	**273**	*i*eP	**Pn**	**15 36 56.9**	**+1.1**
PMG	**Port Moresby**	**17.75**	**273**	P	**Pn**	**15 36 55.8**	**0.0**
CTA	**Charters Tower**	**20.37**	**241**	*j*P	**P**	**15 37 26.9**	**+1.8**
	comp=N,33nm,0.8s						
CTA	**Charters Tower**	**20.37**	**241**	P	**P**	**15 37 26.0**	**+1.0**
	comp=N,44nm,0.8s,baz=68,slow=13,SNR=39						
CTA				LR	LR	15 43 10.7	
	comp=N,1μm,21.0s,MS4.2,baz=58,slow=31						
CTAO	**Charters Tower**	**20.37**	**241**	*e*P	**P**	**15 37 25.8**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,42nm,0.8s						
CTAO	**Charters Tower**	**20.37**	**241**	*e*P	**P**	**15 37 25.8**	**+0.8**
	comp=Z,42nm,0.8s						
AFI	**Afiamalu**	**22.76**	**100**	LR	LR	15 44 48.8	
	comp=Z,548nm,18.6s,MS4.0,baz=246,slow=32						
AFI	**Afiamalu**	**22.76**	**100**	P	**P**	**15 37 51.3**	**+0.6**
ARMA	**Armidale**	**23.18**	**211**	*e*P	**P**	**15 37 55.3**	**+0.2**
URZ	**Urewera**	**29.34**	**161**	P	**P**	**15 38 52.7**	**+1.7**
	comp=Z,13nm,0.9s,mb4.7,baz=3.7,slow=6.7,SNR=7.2						
URZ				LR	LR	15 49 31.9	
	comp=Z,826nm,18.9s,MS4.4,baz=327,slow=34						
STKA	**Stephens Creek**	**30.18**	**223**	*e*P	**P**	**15 38 59.2**	**+0.7**
	comp=Z,13nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**30.18**	**223**	P	**P**	**15 38 59.4**	**+0.9**
	comp=Z,16nm,0.8s,mb4.8,baz=36,slow=10,SNR=15						
STKA				LR	LR	15 50 27.4	
	comp=Z,636nm,19.1s,MS4.3,baz=29,slow=35						
WRAB	**Tennant Creek**	**30.98**	**249**	*e*P	**P**	**15 39 03.4**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**30.98**	**249**	*e*P	**P**	**15 39 03.4**	**-2.1**
	comp=Z,13nm,0.9s,mb4.8						
WB2	**Warramunga Arr**	**30.98**	**249**	*e*P	**P**	**15 39 04.9**	**-0.6**
WRA	**Warramunga Arr**	**30.99**	**249**	P	**P**	**15 39 04.3**	**-1.4**
	comp=Z,4.0nm,0.6s,mb4.2,baz=77,slow=8.6,SNR=20						
WRA	**Warramunga Arr**	**30.99**	**249**	P	**P**	**15 39 04.3**	**-1.3**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SNZO	**South Karori**	**31.50**	**166**	P	**P**	**15 39 07.3**	**-2.8**
TOO	**Toolangi**	**31.94**	**210**	*e*P	**P**	**15 39 14.9**	**+0.9**
	comp=Z,4.8nm,0.7s,mb4.4						
TOO	**Toolangi**	**31.94**	**210**	*e*P	**P**	**15 39 14.9**	**+0.9**
TOO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
KAKA	**Kakadu**	**32.05**	**263**	*e*P	**P**	**15 39 12.4**	**-2.5**
	comp=Z,14nm,0.6s,mb5.0						
AS31	**Alice Springs**	**32.35**	**243**	*i*P	**P**	**15 39 16.4**	**-1.2**
ASAR	**Alice Springs**	**32.35**	**243**	P	**P**	**15 39 16.6**	**-1.0**
	comp=Z,5.5nm,0.7s,mb4.5,baz=68,slow=9.7,SNR=7.0						
ASAR				LR	LR	15 50 00.1	
	comp=Z,692nm,21.3s,MS4.3,baz=62,slow=32						
ASPA	**Alice Springs**	**32.35**	**243**	*i*P	**P**	**15 39 16.4**	**-1.2**
RPZ	**Rata Peaks**	**33.16**	**172**	P	**P**	**15 39 25.2**	**+0.5**
	comp=Z,15nm,0.8s,mb5.0,baz=31,slow=6.1,SNR=4.5						
FITZ	**Fitzroy Crossi**	**38.85**	**255**	*e*P	**P**	**15 40 12.3**	**-1.1**
	comp=Z,7.5nm,0.7s,mb4.5						
FITZ	**Fitzroy Crossi**	**38.85**	**255**	P	**P**	**15 40 12.7**	**-0.7**
	comp=Z,3.6nm,0.6s,mb4.3,baz=89,slow=7.4,SNR=14						
FORT	**Forrest**	**39.67**	**234**	*e*P	**P**	**15 40 20.4**	**+0.2**
	comp=Z,14nm,0.7s,mb4.8						
PPT	**Papeete**	**44.33**	**104**	*e*S	**S**	**15 47 40.8**	**+10**
	comp=Z,313nm,30.2s						
PPT				*e*LR	LR	15 53 24.2	
	comp=Z,347nm,22.8s						
PPT	**Papeete**	**44.33**	**104**	LR	LR	15 55 07.7	
	comp=Z,375nm,18.1s,MS4.3,baz=306,slow=30						
TBI	**Tubuai**	**44.97**	**112**	*e*LQ		15 51 52.3	
	comp=Z,762nm,32.0s						
TBI				*e*LR	LR	15 53 40.3	
	comp=Z,532nm,28.2s						
NWAO	**Narrogin (SRO)**	**49.08**	**236**	P	**P**	**15 41 36.0**	**+0.6**
	comp=Z,8.6nm,0.8s,mb4.8,baz=78,slow=11,SNR=4.5						

comp=N,130nm,16.0s,MS4.4
CN2 LR LR
comp=E,140nm,16.0s,MS4.4
CN2 LR LR
comp=Z,200nm,18.0s,MS4.4
KLR Kul'dur 66.63 337 *eP* **P 15 43 36.5 -2.1**
VNDA Vanda 66.69 181 P **P 15 43 39.6 +0.7**
comp=Z,6.9nm,0.9s,mb4.7,baz=355,slow=7.0,SNR=29
VNDA LR LR 16 07 53.1
comp=Z,137nm,18.5s,MS4.2,baz=93,slow=32
VNDA Vanda 66.69 181 *eP* **P 15 43 39.3 +0.3**
VNDA pmax pmax
comp=Z,14nm,1.2s
VNDA Vanda 66.69 181 *eP* **P 15 43 39.3 +0.4**
comp=Z,14nm,1.2s,mb4.9
SBA Scott Base 67.01 180 *eP* **P 15 43 42.3 +1.3**
SBA pmax pmax
comp=Z,12nm,0.9s,mb4.9
SBA Scott Base 67.01 180 *eP* **P 15 43 42.2 +1.3**
comp=Z,12nm,0.9s,mb4.9
GYA Guiyang 67.80 304⇑ *iP* **P 15 43 46.5 +0.5**
GYA AP pP 15 43 56.8 +1.1
GYA XP sP 15 44 00.8 +1.5
GYA PP PP 15 46 17.5 +1.8
GYA PPP 15 47 54.8
GYA SCP 15 48 13.3
GYA S S 15 52 39.5 -2.5
GYA XS sS 15 52 56.8 -1.1
GYA SS SS 15 57 02.0 -1.7
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,90nm,4.6s
GYA LR LR
comp=N,420nm,18.7s,MS4.8
GYA LR LR
comp=E,270nm,18.9s,MS4.8
GYA LR LR
comp=Z,310nm,20.0s,MS4.5
BJI Beijing 67.94 321 P **P 15 43 47.3 +0.4**
BJI AMB AMB
comp=Z,9.0nm,0.9s,mb4.8
BJI LR LR
comp=N,179nm,19.9s,MS4.4
BJI LR LR
comp=E,101nm,19.0s,MS4.4
BJI LR LR
comp=Z,195nm,25.7s
XAN Xi'an 69.54 313 P **P 15 43 57.3 +0.5**
XAN AMB AMB
comp=Z,13nm,0.8s,mb4.9
KMI Kunming 70.50 302 P **P 15 44 04.5 +1.8**
KMI AP pP 15 44 12.3 -0.1
KMI AMB AMB
comp=Z,12nm,1.3s,mb4.7
HHC Hu-ho-hao-te 71.28 320 *eP* **P 15 44 08.8 +1.3**
HHC AP pP 15 44 19.3 +2.1
HHC PCP PcP 15 44 28.5 +1.3
HHC PP PP 15 46 49.3 +3.6
HHC S S 15 53 24.8 +1.8
HHC SKS 15 54 05.5
HHC SCS ScS 15 54 07.8 -2.0
HHC SS SS 15 57 59.8 +2.5
HHC AMB AMB
comp=Z,19nm,1.1s,mb4.9
HHC AMB AMB
comp=Z,111nm,5.1s
HHC LR LR
comp=N,147nm,16.1s,MS4.4
HHC LR LR
comp=E,113nm,17.1s,MS4.4
HHC LR LR
comp=Z,160nm,17.1s,MS4.3
HIA Hailar 71.89 331*c iP* **P 15 44 11.0 -0.2**
CD2 Chengdu 72.00 308 *eP* **P 15 44 12.0 +0.2**
CD2 XP sP 15 44 26.3 +1.2
CD2 PP PP 15 46 53.8 +1.9
CD2 S S 15 53 30.0 -1.2
CD2 XS sS 15 53 47.0 -0.2
CD2 SS SS 15 58 08.8 +0.6
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,50nm,5.8s
CD2 LR LR
comp=N,110nm,18.0s
CD2 LR LR
comp=Z,100nm,14.4s,MS4.2
LZH Lanzhou 74.17 312 *eP* **P 15 44 28.5 +3.9**
LZH AP pP 15 44 36.3 +1.9
LZH XP sP 15 44 39.8 +1.8
LZH *eS* S 15 53 59.5 +3.6
LZH SKS 15 54 29.8
LZH AMB AMB
comp=Z,33nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,108nm,7.3s
LZH LR LR
comp=E,375nm,14.9s
LZH LR LR
comp=Z,832nm,18.3s,MS5.1
SEY Seymchan 74.20 354*de* **P 15 44 24.1 -0.7**
CIT Chita 76.68 330 *eP* **P 15 44 39.4 +0.4**
CIT pmax pmax
comp=Z,47nm,1.8s,mb5.1
YAK Yakutsk 77.73 344 *eP* **P 15 44 44.0 -0.9**
YAK *e* pP 15 44 51.7 -3.0
YAK pmax pmax
comp=Z,14nm,1.1s,mb4.8
YAK pmax pmax
comp=N,4.0nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK Yakutsk 77.73 344 *eP* **P 15 44 43.9 -1.1**
comp=E,21nm,0.8s,mb5.1
SVW2 Sparrevohn 78.11 18 *eP* **P 15 44 46.4 -0.6**
SONM Songino Array 78.14 324 P **P 15 44 47.9 +0.7**
comp=E,5.7nm,1.0s,mb4.5,baz=141,slow=6.2,SNR=19
SONM Songino Array 78.14 324 P **P 15 44 47.9 +0.7**
SONM pmax pmax
comp=Z,6.0nm,1.0s
GTA Gaotai 78.48 314 *eP* **P 15 44 50.0 +0.9**
GTA AP pP 15 44 59.3 +0.4
GTA XP sP 15 45 03.5 +1.0
GTA PP PP 15 47 49.3 +2.6
GTA PPP 15 49 38.8
GTA S S 15 54 43.3 +0.2
GTA SKS 15 54 58.0
GTA XS sS 15 54 59.3 -0.1
GTA SCS ScS 15 55 04.5 -3.1
GTA SS SS 15 59 48.5 +1.9
GTA AMB AMB
comp=Z,9.0nm,1.4s,mb4.5
GTA AMB AMB
comp=Z,130nm,5.7s
GTA LR LR
comp=N,98nm,15.2s,MS4.5
GTA LR LR
comp=E,112nm,13.7s,MS4.5
GTA LR LR
comp=Z,136nm,16.3s,MS4.4
BILL Bilibino 78.68 0*d iP* **P 15 44 49.8 -0.4**
BILL pmax pmax
comp=Z,22nm,1.2s,mb5.0
QSPA South Pole Qui 79.17 180 *eP* **P 15 44 53.0 +0.2**
comp=Z,21nm,1.1s,mb5.0
TTA Tatalina 79.40 17 *eP* **P 15 44 54.2 +0.1**
TTA pmax pmax
comp=Z,10.0nm,0.3s,mb5.2
TTA Tatalina 79.40 17 *eP* **P 15 44 54.2 0.0**
comp=Z,1.0nm,0.3s,mb4.2
BOD Bodaibo 80.09 335 *eP* **P 15 44 57.2 -0.7**
BOD pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
ZAK Zakamensk 81.19 325⇑ *eP* **P 15 45 03.4 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
TLY Talaya 81.62 326 *eP* **P 15 45 04.5 -1.5**
TLY pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
COLA College 83.28 18*c iP* **P 15 45 13.8 -0.9**
COLA College 83.28 18 *eP* **P 15 45 13.8 -0.9**
comp=Z,5.3nm,0.8s,mb4.6
YBH Yreka Blue Hor 84.18 46 *eP* **P 15 45 19.4 +0.1**
YBH pmax pmax
comp=Z,6.0nm,1.0s
YBH Yreka Blue Hor 84.18 46 *eP* **P 15 45 19.4 0.0**
comp=Z,5.9nm,1.0s,mb4.7
MAW Mawson 84.69 202 *eP* **P 15 45 22.4 +0.5**
comp=Z,14nm,0.9s,mb5.1
MAW Mawson 84.69 202 P **P 15 45 22.4 +0.5**
comp=Z,18nm,0.8s,mb5.2,baz=105,slow=6.3,SNR=37
MAW Mawson 84.69 202 P **P 15 45 22.4 +0.5**
MAW pmax pmax
comp=Z,18nm,0.9s
EGAK Eagle 85.39 20 *eP* **P 15 45 25.1 -0.3**
DAWY Dawson 85.58 21 *eP* **P 15 45 25.8 -0.6**
WVOR Wild Horse Val 87.28 46 *eP* **P 15 45 34.7 0.0**
WVOR pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
WVOR Wild Horse Val 87.28 46 *eP* **P 15 45 34.7 0.0**
comp=Z,10nm,1.1s,mb5.0
WMQ Urumqi 88.52 315 *eP* **P 15 45 40.0 -0.6**
WMQ AP pP 15 45 51.0 +0.4
WMQ PP PP 15 49 11.0 +2.1
WMQ SKS 15 56 04.0
WMQ S S 15 56 22.0 -2.5
WMQ SS SS 16 02 15.0 -0.2
WMQ AMB AMB
comp=Z,18nm,1.2s,mb5.3
WMQ AMB AMB
comp=Z,103nm,6.0s
WMQ LR LR
comp=N,624nm,15.0s,MS5.2
WMQ LR LR
comp=E,459nm,15.0s,MS5.2
WMQ LR LR
comp=Z,576nm,15.0s,MS5.1
KRAR Krasnoyarsk 89.22 328⇓ *eP* **P 15 45 42.6 -1.3**
HLID Hailey 90.56 46 *eP* **P 15 45 50.0 -0.2**
comp=Z,3.0nm,0.8s,mb4.7
MSU Marysvale 91.02 51 *eP* **P 15 45 53.3 +1.0**
SYO Syowa Base 91.81 197⇑ *eP* **P 15 45 55.5 -0.4**
HWUT Hardware Ranch 92.16 48 *eP* **P 15 45 57.8 +0.3**
comp=Z,4.6nm,1.0s,mb4.8
MKAR Makanchi Array 92.96 317 P **P 15 46 01.1 -0.1**
comp=Z,6.0nm,1.0s,mb5.0,baz=101,slow=6.3,SNR=17
MKAR PKKPbc PKKPbc 16 03 11.2 +0.3
comp=Z,1.0nm,0.7s,baz=292,slow=3.3,SNR=10
BOZ Bozeman (W) 92.98 44 *eP* **P 15 46 01.3 -0.1**
BOZ pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
BOZ Bozeman (W) 92.98 44 *eP* **P 15 46 01.3 0.0**
comp=Z,6.0nm,1.0s,mb5.0
PDAR Pinedale Array 93.86 47 P **P 15 46 05.2 -0.1**
comp=Z,17nm,0.9s,mb4.5,baz=318,slow=2.0,SNR=15
NVS Novosibirsk 94.15 325 *eP* **P 15 46 01.7 -5.0**
ANMO Albuquerque 94.83 55⇑ *iP* **P 15 46 10.4 +0.6**
SNAA Sanae 97.28 184 P **P 15 46 20.0 -1.0**
comp=Z,1.3nm,0.9s,mb4.3,baz=222,slow=6.5,SNR=9.1
SNAA Sanae 97.28 184 *eP* **P 15 46 20.2 -0.8**
SNAA *e* 15 46 21.2
SNAA *e* 15 46 31.7
SNAA *e* 15 46 35.8
SNAA Sanae 97.28 184⇑ *eP* **P 15 46 20.4 -0.6**
SNAA Sanae 97.28 184 *eP* **P 15 46 20.1 -0.9**
comp=Z,4.0nm,1.0s,mb4.8
ZRNK Zerenda 102.25 322 *eP* Pdif 15 46 42.1 -1.1
ARCES ARCESS Array B 115.98 345 PKP PKPdf 15 51 29.3 -1.5
comp=Z,1.6nm,0.9s,baz=113,slow=2.8,SNR=5.8
ARCES PKKPbc PKKPbc 16 02 01.7 +0.3
comp=Z,1.5nm,0.8s,baz=222,slow=3.3,SNR=5.0
FINES FINESS Array B 121.36 338 PKP PKPdf 15 51 38.5 -2.7
comp=Z,1.5nm,0.8s,baz=159,slow=27,SNR=4.0
FINES FINESS Array B 121.36 338 PKIKP PKPdf 15 51 38.5 -2.6
FINES pmax pmax
comp=Z,2.0nm,0.9s
AKASG Malin Array Be 126.36 327 PKP PKPdf 15 51 49.9 -0.9
comp=Z,0.3nm,0.3s,baz=58,slow=1.3,SNR=4.0
GERES GERESS Array B 135.25 333 PKP PKPdf 15 52 08.7 +1.1
comp=Z,0.4nm,0.3s,baz=90,slow=1.3,SNR=6.7
MTLF Montolieu 144.38 338 *e*PKP1 PKPdf 15 52 23.1 -1.0
comp=Z,35nm,0.8s
ETSF Etsaut 145.71 341 *e*PKP1 PKPbc 15 52 27.5 +0.7
comp=Z,33nm,1.0s
KEST Kesra 146.89 322 PKPbc PKPbc 15 52 30.8 +0.5
comp=Z,5.3nm,0.8s,baz=286,slow=4.0,SNR=9.5
ESDC Sonseca Array 149.69 343 PKPbc PKPbc 15 52 38.0 +0.4
comp=Z,0.2nm,0.3s,baz=22,slow=1.8,SNR=5.7
TORD Torodi Ar. Bea 163.64 280 PKP PKPdf 15 52 52.5 +1.6
comp=Z,0.7nm,0.9s,baz=90,slow=1.5,SNR=4.2

MOS 28 15:33:13.6±0.8, 4299N×4265E, h15km, mb4.0/1, 8C-2D, Error ellipse: s-maj=11.1km s-min=8.6km az=66.9, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DIGR	**Digorskoe uzhe**	**0.69**	**98**	⇓ *i*PG	Pg	15 33 26.5	-0.5
DIGR				*i* S	Sg	15 33 33.6	-2.5
SHAR	**Shatzhatmas**	**0.75**	**1**	*e*PG	Pg	15 33 28.8	+0.6
SHAR				*e*S	Sg	15 33 36.4	-1.7
ZEI	**Tsey**	**0.94**	**103**	⇑ *i*PG	Pg	15 33 31.3	-0.5
ZEI				*i* S	Sb	15 33 41.9	-2.0
KIV	**Kislovodsk**	**0.96**	**1**	*i* PG	Pg	15 33 32.1	-0.1
KIV				*e*S	Sb	15 33 42.9	-1.6
KIV0	**Kislovodsk Arr**	**0.96**	**2**	*i* PG	Pg	15 33 32.1	-0.1
KUBR	**Kubataba**	**0.98**	**34**⇓	*e*PG	Pg	15 33 30.8	-1.7
BEYR	**Belyy Ugol+**	**1.03**	**7**⇓	*e*PG	Pg	15 33 32.8	-0.6
KORR	**Kora**	**1.04**	**84**⇑	*i*PG	Pg	15 33 32.7	-1.0
KORR				*i* S	Sb	15 33 44.2	-2.5
PYA	**Pyatigorsk**	**1.08**	**16**	*e*PG	Pg	15 33 34.4	-0.1
PYA				*e*S	Sb	15 33 45.5	-2.4
ARNR	**Ardon**	**1.21**	**80**⇓	*i*PG	Pg	15 33 35.7	-1.2
ARNR				*i* S	Sb	15 33 49.5	-2.0
LACR	**Lac**	**1.22**	**97**⇑	*i*PG	Pg	15 33 36.3	-0.8
LACR				*i* S	Sb	15 33 50.6	-1.2
PRTR	**Priterechnaya**	**1.41**	**57**⇑	*i*PG	Pg	15 33 39.7	-1.0
PRTR				*i* S	Sn	15 33 56.4	-0.6
VLKR	**Vladikavkaz**	**1.48**	**87**⇑	*i*PG	Pg	15 33 41.0	-1.2
VLKR				*i* S	Sn	15 33 58.6	-0.3
SNJR	**Sundja**	**1.58**	**87**⇑	*i*PG	Pg	15 33 42.5	-1.5

IDC ***28*** *15:54:27.0±4.6, 859S×15734E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.6/12, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=110.7km s-min=24.7km az=1.0*

NEIC 28 15:54:30.1±3.2, 835S×15746E, h35km, mb3.5/1, Error ellipse: s-maj=85.4km s-min=12.8km az=182.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.69**	**114**	Pn	Pn	15 55 12.3	+1.5
	13nm,0.3s,baz=258,slow=6.8,SNR=4.5						
HNR				Sn	Sn	15 55 45.4	+3.3
	55nm,0.3s,baz=87,slow=22,SNR=11						
HNR	**Honiara**	**2.69**	**114**	P	Pn	15 55 10.9	0.0
HNR				S	Sn	15 55 42.8	+0.7
WRAB	**Tennant Creek**	**25.15**	**240**	*eP*	P	15 59 52.7	+0.7
	0.9nm,0.6s						
WB2	**Warramunga Arr**	**25.16**	**240**	*eP*	P	15 59 52.4	+0.5
WRA	**Warramunga Arr**	**25.16**	**240**	P	P	15 59 52.4	+0.3
	0.9nm,0.7s,baz=67,slow=9.3,SNR=11						
ASAR	**Alice Springs**	**27.21**	**233**	P	P	16 00 10.4	-0.2
	0.4nm,1.0s,baz=62,slow=10,SNR=2.9						
STKA	**Stephens Creek**	**27.67**	**210**	P	P	16 00 14.4	-0.3
	1.7nm,0.7s,baz=38,slow=12,SNR=4.4						
STKA	**Stephens Creek**	**27.67**	**210**	*eP*	P	16 00 15.0	+0.4

IDC ***28*** *16:02:11.9±2.9, 1081S×16496E, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.8/14, mbtmp3.9/7, ML3.4/2, MS3.5/2, Ms1 3.5/2, ms1mx3.2/13, Error ellipse: s-maj=54.1km s-min=39.3km az=79.0*

NEIC ***28*** *16:02:13.6±1.8, 1081S×16489E, h10km, mb4.0/1, Error ellipse: s-maj=33.2km s-min=16.2km az=47.0*

ISCJB ***28*** *16:02:15.8±1.8, 11.1S±02×1649E±02, h33km, mb3.7/4, MS3.4/2, Error ellipse: s-maj=32.7km s-min=17.5km az=94.9*

ISC 28 16:02:17.5±1.7, 109S±02×1650E±02, h35km, n12, σ0°65/11, mb3.7/4, MS3.4/2, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.16**	**286**	*eP*	**Pn**	**16 03 27.0**	**-5.3**
DZM	**Mont Dzumac**	**11.16**	**173**	Pn	**Pn**	**16 04 54.3**	**-0.3**
	0.5nm,0.3s,baz=163,slow=20,SNR=5.6						
PMG	**Port Moresby**	**17.60**	**273**	P	**Pn**	**16 06 19.9**	**0.0**
	0.3nm,0.3s,baz=276,slow=5.4,SNR=3.5						
CTA	**Charters Tower**	**20.18**	**241**	P	**P**	**16 06 48.1**	**-0.9**
	1.9nm,0.6s,baz=35,slow=12,SNR=3.9						
CTAO	**Charters Tower**	**20.18**	**241**	*eP*	**P**	**16 06 47.9**	**-1.1**
	8.4nm,1.0s						
AFI	**Afiamalu**	**22.90**	**100**	LR	LR	16 14 16.6	
	comp=Z,86nm,20.1s,MS3.2,baz=244,slow=32						
STKA	**Stephens Creek**	**30.00**	**222**	P	**P**	**16 08 23.4**	**+0.6**
	1.6nm,0.7s,mb3.9,baz=37,slow=6.6,SNR=4.3						
STKA				LR	LR	16 18 14.2	
	comp=Z,124nm,19.4s,MS3.6,baz=22,slow=32						
STKA	**Stephens Creek**	**30.00**	**222**	P	**P**	**16 08 24.1**	**+1.3**
STKA				LR	LR	16 18 14.2	
WRA	**Warramunga Arr**	**30.81**	**249**	P	**P**	**16 08 30.8**	**+0.9**
	0.2nm,0.4s,mb3.3,baz=76,slow=8.7,SNR=4.3						
ASAR	**Alice Springs**	**32.16**	**243**	P	**P**	**16 08 41.4**	**-0.5**
	0.7nm,0.8s,mb3.5,baz=65,slow=9.9,SNR=10						
VNDA	**Vanda**	**66.59**	**181**	P	**P**	**16 13 04.4**	**+0.2**
MKAR	**Makanchi Array**	**92.92**	**317**	P	**P**	**16 15 26.6**	**-0.3**
	0.5nm,0.8s,mb4.0,baz=107,slow=4.2,SNR=4.6						

MAN 28 16:08:22.3, 1369N×12063E, h116km, mb2.9, ML4.3, MS3.0, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.36**	**121**	*eP*	**Pn**	16 08 40.5	+1.5
LUBP	**Lubang**	**0.38**	**277**	*eP*	**Pn**	16 08 40.4	+1.3
LUBP				*eS*	**Sn**	16 08 54.4	+2.7
TGY	**Tagaytay City**	**0.51**	**36**⇓	*eP*	**Pn**	16 08 42.8	+3.0
BOAC	**Boac**	**1.20**	**101**	*eP*	**Pn**	16 08 46.4	+0.3
POLP	**Polilio Island**	**1.64**	**51**	*eP*	**Pn**	16 08 52.9	+1.9
BUSP	**Coron**	**1.73**	**194**	*eP*	**Pn**	16 08 53.3	+1.2
BUSP				*eS*	**Sn**	16 09 16.3	+1.4
OTRP	**Odiongan**	**1.89**	**134**	*eP*	**Pn**	16 08 54.6	+0.4
PCPH	**Palayan**	**1.92**	**14**⇓	*eP*	**Pn**	16 08 54.6	+0.2
PCPH				*eS*	**Sn**	16 09 25.2	+6.2
SCZP	**Santa Cruz**	**2.19**	**342**	*eP*	**Pn**	16 08 58.4	+0.5
BALP	**Baler**	**2.23**	**24**	*eP*	**Pn**	16 09 00.1	+1.6
ENPP	**El Nido**	**2.73**	**206**	*eP*	**Pn**	16 09 06.6	+1.7
BOLP	**Bolinao**	**2.76**	**346**	*eP*	**Pn**	16 09 06.0	+0.6
CUYO	**Cuyo Island**	**2.85**	**172**	*eP*	**Pn**	16 09 07.3	+0.9
PVCP	**Virac**	**3.43**	**91**⇑	*eP*	**Pn**	16 09 15.0	+0.9
PVCP	**Virac**	**3.43**	**91**	*eP*	**Pn**	16 09 15.0	+0.9

ISC 28 16:37:32.3±0.8, 3611N±006×706E±02, h156km±27km, n9, σ0°67/12, 1C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.52**	**154**	⇑P	**Pn**	**16 38 14.6**	**+0.6**
CEP				S	**Sn**	**16 38 46.0**	**-0.2**
CHCP	**Chirah Chowk**	**3.29**	**137**	P	**Pn**	**16 38 25.3**	**+1.8**
THW	**Thamme Wali**	**3.44**	**164**	⇓P	**Pn**	**16 38 25.6**	**+0.1**
SBDP	**Sheikh Budin**	**3.80**	**177**	P	**Pn**	**16 38 29.3**	**-0.9**
DRP	**Derazinda**	**4.37**	**184**	P	**Pn**	**16 38 37.3**	**-0.2**
SARP	**Sargodha**	**4.52**	**157**	P	**Pn**	**16 38 39.2**	**-0.3**
DLH	**Dalhousie**	**5.69**	**127**	*eP*	**Sn**	**16 39 59.0**	**-0.6**
KK31	**Karatay Array**	**6.99**	**360**	P	**Pn**	**16 39 11.8**	**-0.4**
	1.3nm,0.3s,baz=336,slow=13,SNR=28						
KK31				⇓S	**Sn**	**16 40 30.4**	**-0.2**
	1.9nm,0.3s,baz=187,slow=21,SNR=8.7						
AB31	**Akbulak array**	**15.27**	**333**	P	**Pn**	**16 41 00.1**	**+0.4**
	2.5nm,0.6s,baz=156,slow=13,SNR=26						
AB31				⇓S	**S**	**16 43 38.1**	**-12**
	0.8nm,0.7s,baz=156,slow=24						

ISCJB ***28*** *17:31:46.4±5.1, 109S±0.1×165.1E±0.1, h4km±32km, mb3.9/8, MS3.4/1, Error ellipse: s-maj=27.5km s-min=13.9km az=65.9*

IDC ***28*** *17:31:47.3±1.4, 1077S×165.15E, h0km, mb3.9/8, mb1 4.1/10, mb1mx4.0/14, mbtmp4.0/10, ML4.2/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/21, Error ellipse: s-maj=31.8km s-min=24.3km az=67.0*

NEIC ***28*** *17:31:48.9±1.3, 1075S×165.16E, h10km, mb4.2/2, Error ellipse: s-maj=24.5km s-min=16.2km az=55.0*

ISC 28 17:31:49.2±6.0, 108S±01×1652E±01, h13km±36km, n15, σ1°02/17, mb3.9/8, MS3.4/1, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.37**	**284**	Pn	**Pn**	**17 33 08.9**	**0.0**
	10nm,0.3s,baz=36,slow=2.4,SNR=8.9						
HNR				Sn	**Sn**	**17 34 11.5**	**+0.8**
	4.3nm,0.3s,baz=270,slow=20,SNR=3.0						
HNR				LR	LR	17 34 45.6	
	comp=Z,81nm,18.4s,baz=360,slow=34						
HNR	**Honiara**	**5.37**	**284**	*eP*	**Pn**	**17 33 08.8**	**-0.2**
HNR				Sn	**Sn**	**17 34 11.5**	**+0.8**
HNR				LR	LR	17 34 45.6	
DZM	**Mont Dzumac**	**11.29**	**174**	Pn	**Pn**	**17 34 31.0**	**+0.9**
	1.1nm,0.3s,baz=8.4,slow=20,SNR=16						
CTA	**Charters Tower**	**20.48**	**241**	P	**P**	**17 36 27.8**	**+1.1**
	5.4nm,0.7s,baz=64,slow=12,SNR=9.3						
CTA				LR	LR	17 43 02.6	
	comp=Z,171nm,21.5s,MS3.4,baz=47,slow=33						
CTAO	**Charters Tower**	**20.48**	**241**	*eP*	**P**	**17 36 27.1**	**+0.4**
	11nm,0.9s						
STKA	**Stephens Creek**	**30.29**	**223**	P	**P**	**17 38 01.5**	**+1.5**
	2.4nm,0.8s,mb4.0,baz=43,slow=13,SNR=6.2						
STKA	**Stephens Creek**	**30.29**	**223**	*eP*	**P**	**17 38 02.6**	**+2.6**
WRAB	**Tennant Creek**	**31.09**	**249**	*eP*	**P**	**17 38 07.0**	**-0.1**
	1.2nm,0.4s,mb4.1						
WRA	**Warramunga Arr**	**31.10**	**249**	P	**P**	**17 38 05.6**	**-1.5**
	0.3nm,0.7s,mb3.2,baz=78,slow=8.6,SNR=4.1						
AS31	**Alice Springs**	**32.46**	**243**	*eP*	**P**	**17 38 17.6**	**-1.5**
ASAR	**Alice Springs**	**32.46**	**243**	P	**P**	**17 38 17.4**	**-1.7**
	1.3nm,0.9s,mb3.8,baz=65,slow=10,SNR=12						
VNDA	**Vanda**	**66.75**	**181**	P	**P**	**17 42 39.8**	**-0.3**
	0.8nm,0.8s,mb3.8,baz=24,slow=5.6,SNR=4.9						
SONM	**Songino Array**	**78.15**	**324**	P	**P**	**17 43 48.2**	**+0.2**
	0.9nm,0.9s,mb3.7,baz=150,slow=6.7,SNR=3.1						
MAW	**Mawson**	**84.78**	**202**	P	**P**	**17 44 23.1**	**0.0**
	3.5nm,1.0s,mb4.4,baz=72,slow=3.9,SNR=6.0						
MKAR	**Makanchi Array**	**92.98**	**317**	P	**P**	**17 45 02.9**	**+0.8**
	0.8nm,0.9s,mb4.1,baz=87,slow=5.9,SNR=4.5						

MAN 28 17:47:44.4, 787N×12410E, h22km, mb3.1, ML4.4, MS2.9, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.66**	**167**⇑	*iP*	Pb	17 47 57.9	+0.7
CTBH				*i* S	Sb	17 48 08.7	+2.7
PAGZ	**Pagadian**	**0.71**	**269**	*eP*	Pb	17 47 58.4	+0.2
PAGZ				*eS*	Sb	17 48 09.4	+1.9
CGP	**Cagayan de Oro**	**0.83**	**45**⇑	*eP*	Pb	17 47 58.2	-1.9
CGP				*eS*	Sb	17 48 07.6	-3.2
BUKP	**Musuan**	**0.95**	**89**	*eP*	Pb	17 48 02.1	-0.1
DCPH	**Dipolog City**	**1.03**	**314**	*eP*	Pn	17 48 00.6	-2.9
DCPH				*eS*	Sb	17 48 17.2	+0.7
IPIL	**Ipil**	**1.52**	**267**⇑	*eP*	Pn	17 48 11.8	+1.5
IPIL	**Ipil**	**1.52**	**267**	*eP*	Pn	17 48 11.8	+1.5
IPIL				*eS*	Sn	17 48 32.7	+3.4
MSLP	**Maasin**	**2.37**	**18**	*eP*	Pn	17 48 22.6	+0.6

IDC ***28*** *17:56:57.0±1.2, 2396N×12272E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, ML3.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.1/28, Error ellipse: s-maj=42.3km s-min=24.6km az=66.0*

ISCJB ***28*** *17:56:58.7±1.0, 2381N±006×12271E±004, h17km±8km, mb3.8/4, Error ellipse: s-maj=10.1km s-min=5.8km az=171.9*

NEIC ***28*** *17:56:58.9±0.6, 2385N×12273E, h10km, mb4.4/1, Error ellipse: s-maj=13.8km s-min=8.2km az=47.0*

NIED ***28*** *17:57:00, 2390N×12280E, h20km, Mw4.0 Best double couple: M0 9.73000×10^14 NP1:φ=218.00000°, δ60.00000°, λ-47.00000°. NP2:φ=336.00000°, δ51.00000°, λ-139.00000°.*

JMA ***28*** *17:57:00.3±0.2, 2389N×12278E, h12km±4km, M4.2*

ISC 28 17:56:58.5±0.9, 2384N±005×12273E±003, h4km±6km, n23, σ0°76/29, mb3.8/4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.67**	**22**	P	**Pg**	**17 57 12.1**	**+0.7**

YOJ				S		**Sg**	**17 57 20.2**	**0.0**
HATJ	**Hateruma jima**	**1.01**	**77**	P		**Pg**	**17 57 18.2**	**+0.3**
HATJ				S		**Sg**	**17 57 30.9**	**-0.1**
IRIF	**Iriomote-Funau**	**1.04**	**61**	P		**Pg**	**17 57 18.4**	**-0.1**
IRIF				S		**Sg**	**17 57 31.7**	**-0.3**
NACB	**Ninganchiao**	**1.09**	**288**	*e*P		**Pg**	**17 57 19.1**	**-0.3**
JKRS	**Kuro-shima**	**1.24**	**71**	P		**Pg**	**17 57 22.1**	**-0.1**
JKRS				S		**Sg**	**17 57 38.4**	**+0.1**
JIJ	**Ishigaki jima**	**1.40**	**68**	P		**Pn**	**17 57 24.2**	**-0.5**
JIJ				S		**Sb**	**17 57 41.4**	**-1.8**
YHNB	**Yeheng**	**1.49**	**304**	*e*P		**Pn**	**17 57 25.7**	**-0.3**
TATO	**Taipei**	**1.60**	**315**	*e*P		**Pn**	**17 57 27.4**	**-0.1**
JTJ	**Tarama**	**1.97**	**66**	P		**Pn**	**17 57 32.7**	**+0.1**
JTJ				*e*S		**Sn**	**17 57 58.1**	**+0.3**
JMJ	**Miyako jima 2**	**2.53**	**67**	*e*S		**Sn**	**17 58 12.2**	**+0.6**
JOGS	**Gusukube**	**2.61**	**69**	P		**Pn**	**17 57 42.8**	**+1.4**
JKE	**Kume jima 2**	**4.44**	**55**	P		**Pn**	**17 58 06.1**	**-0.4**
JAGN	**Aguni-jima**	**4.92**	**55**	P		**Pn**	**17 58 14.7**	**+1.5**
JOW	**Kunigami**	**5.84**	**58**	Pn		**Pn**	**17 58 24.4**	**-1.4**
	1.2nm,0.3s,baz=190,slow=14,SNR=10							
BJT	**Baijiatuau**	**17.06**	**343**	*e*P		**Pn**	**18 00 59.2**	**+1.4**
MKAR	**Makanchi Array**	**39.57**	**316**	P		**P**	**18 04 29.1**	**-1.6**
	0.2nm,0.3s,mb3.3,baz=99,slow=12,SNR=3.2							
WRAB	**Tennant Creek**	**44.95**	**164**	*e*P		**P**	**18 05 14.4**	**-0.2**
WRA	**Warramunga Arr**	**44.96**	**164**	P		**P**	**18 05 14.1**	**-0.5**
	1.5nm,0.9s,mb3.8,baz=348,slow=8.6,SNR=6.4							
AS31	**Alice Springs**	**48.45**	**166**	*e*P		**P**	**18 05 42.2**	**+0.3**
ASAR	**Alice Springs**	**48.45**	**166**	P		**P**	**18 05 42.6**	**+0.6**
	0.6nm,0.7s,mb3.8,baz=347,slow=7.3,SNR=17							
ASPA	**Alice Springs**	**48.45**	**166**	*e*P		**P**	**18 05 42.2**	**+0.2**
STKA	**Stephens Creek**	**58.26**	**161**	*e*P		**P**	**18 06 54.1**	**0.0**
	2.4nm,0.6s,mb4.4							
STKA	**Stephens Creek**	**58.26**	**161**	P		**P**	**18 06 54.4**	**+0.3**
	2.9nm,0.6s,mb4.5,baz=339,slow=7.7,SNR=9.8							

CSEM ***28*** *18:26:28.1±0.1, 4791N×520W, h2km, ML3.4/23, Error ellipse: s-maj=3.7km s-min=1.8km az=147.0*
NEIC ***28*** *18:26:29.9, 4803N×505W, h2km, ML3.4(LDG), After LDG.*

LDG 28 18:26:29.9±0.1, 4803N×505W, h2km, Md3.2/3, Ml3.4/25, Error ellipse: s-maj=2.3km s-min=1.9km az=134.0, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSF	**Rostrenen**	**1.23**	**75**	*e*Pg	Pg	18 26 52.9	-0.5
ROSF				*e*Sg	Sg	18 27 08.6	-0.7
	94nm,0.2s						
ROSF	**Rostrenen**	**1.23**	**75**	*e*Pn	Pn	18 26 52.2	-1.8
ROSF				*e*Pg	Pg	18 26 52.9	-0.5
ROSF				*e*Sg	Sg	18 27 08.6	-0.7
ROSF	**Rostrenen**	**1.23**	**75**	*e*Pg	Pg	18 26 52.9	-0.5
ROSF				*e*Sg	Sg	18 27 08.6	-0.7
	47nm,0.2s						
QUIF	**Quistinic**	**1.27**	**94**	*e*Pg	Pg	18 26 53.7	-0.5
QUIF				*e*Sg	Sg	18 27 09.4	-1.3
	154nm,0.2s						
QUIF	**Quistinic**	**1.27**	**94**	*e*Pn	Pn	18 26 52.7	-1.9
QUIF				*e*Pg	Pg	18 26 53.7	-0.5
QUIF				*e*Sg	Sg	18 27 09.4	-1.3
QUIF	**Quistinic**	**1.27**	**94**	*e*Pg	Pg	18 26 53.7	-0.5
QUIF				*e*Sg	Sg	18 27 09.4	-1.3
	77nm,0.2s						
SGMF	**Saint Gilles**	**1.68**	**81**	*e*Pg	Pg	18 27 01.5	-0.7
SGMF				*e*Sn	Sn	18 27 20.0	-2.5
	68nm,0.2s						
SGMF				*e*Sg	Sg	18 27 23.1	-0.9
SGMF	**Saint Gilles**	**1.68**	**81**	*e*Pn	Pn	18 26 58.4	-1.9
SGMF				*e*Pg	Pg	18 27 01.5	-0.7
SGMF				*e*Sn	Sn	18 27 20.0	-2.5
SGMF				*e*Sg	Sg	18 27 23.1	-0.9
SGMF	**Saint Gilles**	**1.68**	**81**	*e*Pg	Pg	18 27 01.5	-0.7
SGMF				*e*Sn	Sn	18 27 20.0	-2.5
	34nm,0.2s						
SGMF				*e*Sg	Sg	18 27 23.1	-0.9
GRR	**Gorron**	**2.83**	**81**	*e*Pg	Pg	18 27 22.2	-1.8
GRR				*e*Sn	Sn	18 27 47.0	-3.6
GRR				*e*Sg	Sg	18 27 58.5	-2.2
	44nm,0.2s						
GRR	**Gorron**	**2.83**	**81**	*e*Pn	Pn	18 27 14.3	-1.7
GRR				*e*Pg	Pg	18 27 22.2	-1.8
GRR				*e*Sn	Sn	18 27 47.0	-3.6
GRR				*e*Sg	Sg	18 27 58.5	-2.2
GRR	**Gorron**	**2.83**	**81**	*e*Pg	Pg	18 27 22.2	-1.8
GRR				*e*Sn	Sn	18 27 47.0	-3.6
GRR				*e*Sg	Sg	18 27 58.5	-2.2
	22nm,0.2s						
FLN	**La Foliniere**	**3.13**	**75**	*e*Pg	Pg	18 27 27.5	-2.4
FLN				*e*Sg	Sg	18 28 07.2	-3.2
	63nm,0.3s						
FLN	**La Foliniere**	**3.13**	**75**	*e*Pn	Pn	18 27 18.7	-1.5
FLN				*e*Pg	Pg	18 27 27.5	-2.4
FLN				*e*Sg	Sg	18 28 07.2	-3.2
FLN	**La Foliniere**	**3.13**	**75**	*e*Pg	Pg	18 27 27.5	-2.4
LDF	**La Druitiere**	**3.33**	**78**	*e*Pg	Pg	18 27 31.4	-2.4
LDF				*e*Sg	Sg	18 28 14.8	-2.3
	23nm,0.2s						
LDF	**La Druitiere**	**3.33**	**78**	*e*Pn	Pn	18 27 21.9	-1.1
LDF				*e*Pg	Pg	18 27 31.4	-2.4
LDF				*e*Sg	Sg	18 28 14.8	-2.3
LDF	**La Druitiere**	**3.33**	**78**	*e*Pg	Pg	18 27 31.4	-2.4
LDF				*e*Sg	Sg	18 28 14.8	-2.3
	12nm,0.2s						
MFF	**Saint Martin d**	**3.63**	**111**	*e*Pg	Pg	18 27 37.0	-2.4
MFF				*e*Sg	Sg	18 28 24.7	-1.7
	19nm,0.3s						
MFF	**Saint Martin d**	**3.63**	**111**	*e*Pg	Pg	18 27 37.0	-2.4
MFF				*e*Sg	Sg	18 28 24.7	-1.7
	9.4nm,0.3s						
EARI	**Arriondas**	**4.73**	**181**	P	Pn	18 27 39.6	-2.6
EARI				S	Sn	18 28 27.7	-10
EARI	**Arriondas**	**4.73**	**181**	P	Pn	18 27 39.6	-2.6
EPON	**Pontenova**	**4.93**	**198**	P	Pn	18 27 43.0	-1.9
EPON				S	Sn	18 28 33.7	-8.8
EPON	**Pontenova**	**4.93**	**198**	P	Pn	18 27 43.0	-2.0
ELAN	**Lanestosa**	**4.93**	**166**	P	Pn	18 27 42.6	-2.4
ELAN				S	Sn	18 28 32.8	-10
LFF	**La Frestale**	**5.05**	**126**	*e*Pn	Pn	18 27 44.8	-1.9
LFF				*e*Sg	Sg	18 29 07.7	-4.5
	12nm,0.3s						
LFF	**La Frestale**	**5.05**	**126**	*e*Pn	Pn	18 27 44.8	-1.9
LFF				*e*Sg	Sg	18 29 07.7	-4.5
	6.2nm,0.3s						
TCF	**Toulx Ste Croi**	**5.25**	**107**	*e*Pn	Pn	18 27 47.5	-1.8
HYF	**Humbligny**	**5.25**	**95**	*e*Pn	Pn	18 27 47.7	-1.7
HYF				*e*Sn	Sn	18 28 43.9	-6.6
HYF				*e*Sg	Sg	18 29 14.0	-4.6
RJF	**Les Rejaudoux**	**5.28**	**119**	*e*Pn	Pn	18 27 47.3	-2.4
RJF				*e*Sn	Sn	18 28 45.0	-6.1
RJF				*e*Sg	Sg	18 29 15.6	-3.8
	8.4nm,0.3s						
RJF	**Les Rejaudoux**	**5.28**	**119**	*e*Pn	Pn	18 27 47.3	-2.4
RJF				*e*Sn	Sn	18 28 45.0	-6.1
RJF				*e*Sg	Sg	18 29 15.6	-3.8
	4.2nm,0.3s						
EALK	**Alkurruntz**	**5.41**	**151**	P	Pn	18 27 51.4	-0.3
EALK				S	Sn	18 28 45.2	-9.2
EALK	**Alkurruntz**	**5.41**	**151**	P	Pn	18 27 51.3	-0.3
ELIZ	**Elizondo**	**5.46**	**152**	P	Pn	18 27 50.3	-1.9
ELIZ				S	Sn	18 28 45.4	-10
ELIZ	**Elizondo**	**5.46**	**152**	P	Pn	18 27 50.3	-1.9
BGF	**Bois d'Agland**	**5.57**	**102**	*e*Pn	Pn	18 27 51.3	-2.4
BGF				*e*Sn	Sn	18 28 52.5	-5.8
	14nm,0.2s						
BGF				*e*Sg	Sg	18 29 24.0	-4.8
	21nm,0.4s						
BGF	**Bois d'Agland**	**5.57**	**102**	*e*Pn	Pn	18 27 51.3	-2.4
BGF				*e*Sn	Sn	18 28 52.5	-5.8
	7.2nm,0.2s						
BGF				*e*Sg	Sg	18 29 24.0	-4.8
	11nm,0.4s						
SJPF	**Ste Jean**	**5.60**	**150**	*e*Pn	Pn	18 27 51.8	-2.4
SJPF				*e*Sn	Sn	18 28 52.5	-6.6
	3.1nm,0.2s						
SJPF	**Ste Jean**	**5.60**	**150**	*e*Pn	Pn	18 27 51.8	-2.4
SJPF				*e*Sn	Sn	18 28 52.5	-6.6
	1.5nm,0.2s						
STS	**Santiago**	**5.70**	**207**	P	Pn	18 27 54.8	-0.8
STS	**Santiago**	**5.70**	**207**	P	Pn	18 27 54.8	-0.8
EMAZ	**Mazaricos**	**5.78**	**210**	P	Pn	18 27 55.2	-1.5
EMAZ				S	Sn	18 28 55.1	-8.5
EMAZ	**Mazaricos**	**5.78**	**210**	P	Pn	18 27 55.2	-1.5
CAF	**Calviac**	**5.81**	**120**	*e*Pn	Pn	18 27 54.5	-2.6
CAF				*e*Sn	Sn	18 28 58.5	-5.8
	3.3nm,0.2s						
CAF	**Calviac**	**5.81**	**120**	*e*Pn	Pn	18 27 54.5	-2.6
CAF				*e*Sn	Sn	18 28 58.5	-5.8
	1.6nm,0.2s						
AVF	**Avril sur Loir**	**5.83**	**99**	*e*Pn	Pn	18 27 55.3	-2.1
AVF				*e*Sn	Sn	18 28 58.7	-6.2
	3.6nm,0.3s						
AVF	**Avril sur Loir**	**5.83**	**99**	*e*Pn	Pn	18 27 55.3	-2.1
AVF				*e*Sn	Sn	18 28 58.7	-6.2
	1.8nm,0.3s						
SSF	**Saint Saulge**	**5.87**	**96**	*e*Pn	Pn	18 27 55.4	-2.5
SSF				*e*Sn	Sn	18 28 59.7	-6.1
	1.7nm,0.2s						
SSF				*e*Sg	Sg	18 29 33.9	-4.6
	12nm,0.7s						
SSF	**Saint Saulge**	**5.87**	**96**	*e*Pn	Pn	18 27 55.4	-2.5
SSF				*e*Sn	Sn	18 28 59.7	-6.1
	0.9nm,0.2s						
SSF				*e*Sg	Sg	18 29 33.9	-4.6
	6.0nm,0.7s						
ETSF	**Etsaut**	**6.02**	**147**	*e*Pn	Pn	18 27 58.5	-1.5
ETSF				*e*Sn	Sn	18 29 03.8	-5.7
	1.2nm,0.2s						
ETSF	**Etsaut**	**6.02**	**147**	*e*Pn	Pn	18 27 58.5	-1.5
ETSF				*e*Sn	Sn	18 29 03.8	-5.7
	0.6nm,0.2s						
LOR	**Lormes**	**6.07**	**94**	*e*Pn	Pn	18 27 58.7	-1.9
LOR				*e*Sn	Sn	18 29 04.3	-6.3
	3.5nm,0.2s						
LOR				*e*Sg	Sg	18 29 40.3	-4.4
	7.7nm,0.4s						
LOR	**Lormes**	**6.07**	**94**	*e*Pn	Pn	18 27 58.7	-1.9
LOR				*e*Sn	Sn	18 29 04.3	-6.3
	1.8nm,0.2s						
LOR				*e*Sg	Sg	18 29 40.3	-4.4
	3.8nm,0.4s						
SMF	**Signal de Mont**	**6.20**	**100**	*e*Pn	Pn	18 28 00.1	-2.3
SMF				*e*Sn	Sn	18 29 07.7	-6.1
	2.5nm,0.2s						
SMF	**Signal de Mont**	**6.20**	**100**	*e*Pn	Pn	18 28 00.1	-2.3
SMF				*e*Sn	Sn	18 29 07.7	-6.1
	1.2nm,0.2s						
ECAL	**Calabor**	**6.21**	**192**	P	Pn	18 28 01.1	-1.4
ECAL				S	Sn	18 29 03.0	-11
ECAL	**Calabor**	**6.21**	**192**	P	Pn	18 28 01.1	-1.4
EPF	**Esparros**	**6.27**	**141**	*e*Pn	Pn	18 28 00.4	-3.0
EPF				*e*Sn	Sn	18 29 08.5	-7.1
	2.2nm,0.2s						
EPF	**Esparros**	**6.27**	**141**	*e*Pn	Pn	18 28 00.4	-3.0
EPF				*e*Sn	Sn	18 29 08.5	-7.1
	1.1nm,0.2s						
EZAM	**Zamans**	**6.42**	**205**	P	Pn	18 28 04.0	-1.4
EZAM	**Zamans**	**6.42**	**205**	P	Pn	18 28 04.0	-1.5
EBIE	**Bielsa**	**6.47**	**144**	P	Pn	18 28 06.3	+0.1
EBIE				S	Sn	18 29 10.9	-10
ELOB	**Lobios**	**6.52**	**200**	P	Pn	18 28 05.2	-1.6
ELOB				S	Sn	18 29 12.6	-9.2
ELOB	**Lobios**	**6.52**	**200**	P	Pn	18 28 05.2	-1.6
MEZF	**Maizieres J'vi**	**6.76**	**82**	*e*Pn	Pn	18 28 07.8	-2.3
MEZF				*e*Sn	Sn	18 29 20.9	-6.8
	4.1nm,0.3s						
MEZF	**Maizieres J'vi**	**6.76**	**82**	*e*Pn	Pn	18 28 07.8	-2.3
MEZF				*e*Sn	Sn	18 29 20.9	-6.8
	2.0nm,0.3s						
MTLF	**Montolieu**	**6.92**	**130**	*e*Pn	Pn	18 28 10.1	-2.2
MTLF				*e*Sn	Sn	18 29 25.0	-6.5
	1.5nm,0.3s						
MTLF	**Montolieu**	**6.92**	**130**	*e*Pn	Pn	18 28 10.1	-2.2
MTLF				*e*Sn	Sn	18 29 25.0	-6.5
	0.8nm,0.3s						
CABF	**La Chapelle**	**7.70**	**96**	*e*Pn	Pn	18 28 21.3	-1.7
CABF				*e*Sn	Sn	18 29 43.9	-6.9
	1.9nm,0.4s						
CABF	**La Chapelle**	**7.70**	**96**	*e*Pn	Pn	18 28 21.3	-1.7
CABF				*e*Sn	Sn	18 29 43.9	-6.9
	0.9nm,0.4s						
HINF	**Hinteralfeld**	**8.00**	**87**	*e*Pn	Pn	18 28 24.8	-2.3
CDF	**Champ du Feu**	**8.24**	**83**	*e*Pn	Pn	18 28 28.3	-2.1
EBAD	**Badajoz**	**9.38**	**189**	P	Pn	18 28 43.8	-2.3

NEIC 28 18:45:16.1, 5311N×16226W, h57km, ML3.5(AEIC), After AEIC., South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKUT	**Akutan**	**2.33**	**298**	P	Pn	18 45 51.2	-0.8
AKUT				S	Sn	18 46 18.6	-0.8
AKLV	**Akutan Long Va**	**2.44**	**297**	P	Pn	18 45 52.6	-0.9
SDPT	**Sand Point**	**2.48**	**24**	P	Pn	18 45 51.3	-2.7
SDPT				S	Sn	18 46 20.5	-2.5
OKCD	**Okmok Cone D**	**3.53**	**278**	P	Pn	18 46 07.5	-0.9
OKCD				S	Sn	18 46 48.2	-0.7
OKCE	**Okmok Cone E**	**3.56**	**277**	P	Pn	18 46 08.1	-0.7
NIKO	**Nikolski**	**3.98**	**271**	P	Pn	18 46 13.1	-1.5
NIKO				S	Sn	18 46 58.4	-1.6
KDAK	**Kodiak Island**	**7.22**	**46**	P	Pn	18 46 54.8	-4.3
ATKA	**Atka Island**	**7.32**	**268**	P	Pn	18 46 59.8	-0.5
EGAK	**Eagle**	**15.87**	**34**	P	Pn	18 48 56.4	+0.6
DAWY	**Dawson**	**16.09**	**38**	*e*P	Pn	18 49 02.6	+4.1

ISCJB ***28*** *18:56:44.4±0.5, 3052S×005×1798W±02, h435km±9km, mb4.1/12, Error ellipse: s-maj=21.3km s-min=7.6km az=24.1*
NEIC ***28*** *18:56:46.0±0.6, 3032S×17991W, h430km±8km, mb4.4/8, Error ellipse: s-maj=13.5km s-min=9.1km az=103.0*
IDC ***28*** *18:56:46.3±1.1, 3028S×17989W, h431km±11km, mb3.6/5, mb1 3.7/6, mb1mx3.6/11, mbtmp4.5/6, Error ellipse: s-maj=20.1km s-min=18.0km az=132.0*

ISC 28 18:56:45.6±0.5, 3050S±005×1800W±01, h416km±9km, n53, σ1§06/52, mb4.1/12, 2C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.17**	**56**	P	**P**	**18 57 45.4**	**+1.4**
	46nm,0.3s,baz=141,slow=23,SNR=4.8						
RAO				S	**S**	**18 58 30.7**	**-0.7**
	116nm,0.3s,baz=97,slow=22,SNR=9						
MXZ	**Matakaoa Point**	**7.19**	**191**	*e*P	**P**	**18 58 33.7**	**+2.0**
MXZ	**Matakaoa Point**	**7.19**	**191**	*e*PN	**P**	**18 58 31.8**	**+0.1**
PUZ	**Puketiti**	**7.70**	**191**	*e*P	**P**	**18 58 39.1**	**+1.8**
PUZ				S	**S**	**19 00 06.4**	**-2.4**
PUZ	**Puketiti**	**7.70**	**191**	*e*PN	**P**	**18 58 38.7**	**+1.4**
PUZ				SN	**S**	**19 00 06.4**	**-2.4**
MWZ	**Matawai**	**8.09**	**194**	*e*P	**P**	**18 58 43.3**	**+1.7**
MWZ				S	**S**	**19 00 16.3**	**-0.4**
MWZ	**Matawai**	**8.09**	**194**	PN	**P**	**18 58 42.5**	**+0.9**
MWZ				SN	**S**	**19 00 16.3**	**-0.5**
URZ	**Urewera**	**8.11**	**197**	P	**P**	**18 58 45.1**	**+3.3**
	115nm,0.3s,baz=342,slow=1.7,SNR=227						
URZ				S	**S**	**19 00 17.2**	**0.0**
	8.8nm,0.3s,baz=132,slow=23,SNR=6.8						
URZ	**Urewera**	**8.11**	**197**	*e*P	**P**	**18 58 44.1**	**+2.3**
URZ	**Urewera**	**8.11**	**197**	PN	**P**	**18 58 43.4**	**+1.6**
KNZ	**Kokohu**	**8.72**	**192**	P	**P**	**18 58 51.0**	**+2.4**
KNZ	**Kokohu**	**8.72**	**192**	*e*PN	**P**	**18 58 50.7**	**+2.1**
BKZ	**Black Stump Fm**	**9.12**	**198**	P	**P**	**18 58 53.0**	**-0.1**
BKZ	**Black Stump Fm**	**9.12**	**198**	PN	**P**	**18 58 52.9**	**-0.1**
PXZ	**Pawanui**	**9.86**	**194**	PN	**P**	**18 59 00.3**	**-0.9**
TSZ	**Takapari Road**	**10.10**	**198**	P	**P**	**18 59 03.5**	**-0.4**
TSZ	**Takapari Road**	**10.10**	**198**	*e*PN	**P**	**18 59 02.2**	**-1.7**
MRZ	**Mangatainoka R**	**10.77**	**198**	PN	**P**	**18 59 11.5**	**+0.2**
KIW	**Kapiti Island**	**11.14**	**201**	*e*PN	**P**	**18 59 14.9**	**-0.5**
SNZO	**South Karori**	**11.62**	**200**	*e*PN	**P**	**18 59 20.3**	**-0.3**
TCW	**Tory Channel**	**11.66**	**202**	*e*PN	**P**	**18 59 20.1**	**-1.0**
QRZ	**Quartz Range**	**11.97**	**209**	*e*PN	**P**	**18 59 25.0**	**+0.5**
NNZ	**Nelson**	**11.97**	**205**	*e*PN	**P**	**18 59 23.9**	**-0.6**
THZ	**Tophouse**	**12.62**	**205**	PN	**P**	**18 59 31.3**	**-0.4**
KHZ	**Kahutara**	**12.99**	**202**	*e*PN	**P**	**18 59 35.3**	**-0.3**
LTZ	**Lake Taylor**	**13.74**	**205**	*e*PN	**P**	**18 59 43.0**	**-0.8**
WVZ	**Waitaha Valley**	**14.58**	**208**	*e*PN	**P**	**18 59 53.3**	**+0.3**
RPZ	**Rata Peaks**	**15.00**	**206**	P	**P**	**18 59 56.4**	**-1.0**
	2.0nm,0.3s,baz=97,slow=3.6,SNR=11						
AFI	**Afiamalu**	**18.16**	**26**	P	**P**	**19 00 29.2**	**-1.8**
	4.0nm,0.3s,baz=68,slow=16,SNR=4.9						
TOO	**Toolangi**	**29.36**	**247**	*e*P	**P**	**19 02 14.9**	**+2.3**
	6.9nm,1.2s,mb3.9						
CTA	**Charters Tower**	**32.14**	**281**	*e*P	**P**	**19 02 37.7**	**+1.0**
	6.8nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**32.80**	**258**	*e*P	**P**	**19 02 43.6**	**+1.3**
	12nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**32.80**	**258**	P	**P**	**19 02 43.8**	**+1.5**
	9.6nm,0.4s,mb4.4,baz=94,slow=8.8,SNR=63						
AS31	**Alice Springs**	**41.41**	**268**	*e*P	**P**	**19 03 53.2**	**-0.3**
ASAR	**Alice Springs**	**41.41**	**268**	P	**P**	**19 03 53.5**	**-0.1**
	5.5nm,0.8s,mb3.9,baz=108,slow=7.7,SNR=10						
ASAR				ScP	ScP	19 08 49.9	-2.0
	1.0nm,0.8s,baz=119,slow=3.8,SNR=8.2						
WB2	**Warramunga Arr**	**42.40**	**273**	*e*P	**P**	**19 04 00.5**	**-1.0**
WB2	**Warramunga Arr**	**42.40**	**273**	*e*P	**P**	**19 04 00.9**	**-0.6**
WRAB	**Tennant Creek**	**42.40**	**273**	*e*P	**P**	**19 04 01.2**	**-0.3**
	21nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**42.41**	**273**	P	**P**	**19 04 01.4**	**-0.2**
	14nm,0.8s,mb4.3,baz=111,slow=7.8,SNR=41						
WRA				ScP	ScP	19 08 55.6	-0.4
	0.7nm,1.0s,baz=117,slow=3.8,SNR=4.5						
FORT	**Forrest**	**44.38**	**256**	⇑*i*P	**P**	**19 04 16.6**	**-0.4**
	17nm,0.5s,mb4.6						
VNDA	**Vanda**	**47.83**	**185**	P	**P**	**19 04 44.8**	**+1.2**
	0.6nm,0.7s,mb3.0,baz=358,slow=4.7,SNR=6.2						
VNDA				ScP	ScP	19 09 16.8	-1.7
	0.4nm,0.4s,baz=349,slow=5.1,SNR=6.7						
FITZ	**Fitzroy Crossi**	**50.66**	**271**	⇑*i*P	**P**	**19 05 04.8**	**+0.2**
	6.7nm,0.9s,mb3.9						
KLBR	**Kellerberrin**	**52.71**	**252**	*e*P	**P**	**19 05 18.3**	**-1.2**
	94nm,2.0s,mb4.7						
CASY	**Casey**	**54.26**	**208**	*e*P	**P**	**19 05 29.8**	**-0.8**
QSPA	**South Pole Qui**	**59.61**	**180**	*e*P	**P**	**19 06 09.3**	**+1.7**
	10nm,0.9s,mb4.3						
MAW	**Mawson**	**71.61**	**201**	P	**P**	**19 07 22.8**	**-0.6**
	0.9nm,0.6s,mb3.5,baz=120,slow=8.1,SNR=5.1						
KEV	**Kevo**	**137.83**	**346**	*e*p	PKPdf	19 15 22.5	+1.1
	0.1nm,0.3s						
JOF	**Joensuu**	**141.87**	**337**	*e*p	PKPdf	19 15 22.5	-6.2
	0.2nm,0.3s						
KAF	**Kangasniemi**	**144.06**	**339**	*e*p	PKPdf	19 15 22.3	-10
	0.5nm,0.3s						
FINES	**FINESS Array B**	**144.64**	**339**	PKP	PKPdf	19 15 30.7	-2.8
	2.8nm,0.6s,baz=66,slow=4.5,SNR=22						
NB2	**NORSAR Subarra**	**148.57**	**350**	PKPa	PKPbc	19 15 41.8	-2.5
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**148.57**	**350**	PKPbc	PKPbc	19 15 41.5	-2.8
	comp=Z,1.2nm,0.7s,baz=14,slow=4.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**162.66**	**185**	PKPab	PKPab	19 16 49.2	-0.5
	comp=Z,0.6nm,0.6s,baz=161,slow=3.5,SNR=6.2						

ISCJB ***28*** *19:08:07.0±1.6, 198S±02×1776W±02, h501km±24km, mb3.6/7, Error ellipse: s-maj=35.8km s-min=17.9km az=117.1*
IDC ***28*** *19:08:08.0±1.9, 1968S×17758W, h500km±25km, mb3.1/6, mb1 3.4/7, mb1mx3.3/13, mbtmp4.0/7, Error ellipse: s-maj=27.3km s-min=16.6km az=141.0*
NEIC ***28*** *19:08:07.9±1.1, 1967S×17759W, h502km±14km, mb4.1/1, Error ellipse: s-maj=22.4km s-min=11.1km az=150.0*

ISC 28 19:08:07.9±1.5, 197S±02×1776W±02, h498km±24km, n14, σ0§31/14, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.02**	**45**	P	**P**	**19 10 04.3**	**-0.1**
	3.2nm,0.3s,baz=210,slow=8.1,SNR=3.9						
AFI				S	**S**	**19 11 40.1**	**+0.1**
	7.2nm,0.3s,baz=202,slow=22,SNR=5.9						
CTA	**Charters Tower**	**33.98**	**263**	*e*P	**P**	**19 14 09.9**	**+0.7**
	2.8nm,0.4s,mb4.0						
CTAO	**Charters Tower**	**33.98**	**263**	*e*P	**P**	**19 14 09.9**	**+0.6**
STKA	**Stephens Creek**	**38.49**	**243**	P	**P**	**19 14 46.9**	**+0.3**
	0.7nm,0.4s,mb3.4,baz=22,slow=10.0,SNR=5.1						
AS31	**Alice Springs**	**45.09**	**256**	*e*P	**P**	**19 15 38.9**	**+0.1**
ASAR	**Alice Springs**	**45.09**	**256**	P	**P**	**19 15 39.0**	**+0.2**
	1.7nm,0.5s,mb3.7,baz=89,slow=7.8,SNR=14						
ASAR				PcP	PcP	19 17 08.6	-0.5
	0.5nm,0.5s,baz=101,slow=4.3,SNR=5.8

DAV	**Davao City (W)**	**6.23**	**25**	*e*P		**Pn**	**19 28 30.0**	**+2.4**
DAV	**Davao City (W)**	**6.23**	**25**	*e*P		**Pn**	**19 28 30.4**	**+2.7**
	368nm,0.8s							
IPIL	**Ipil**	**6.38**	**357**	*e*P		**Pn**	**19 28 28.7**	**-0.9**
IPIL	**Ipil**	**6.38**	**357**	*e*P		**Pn**	**19 28 28.7**	**-1.0**
MATI	**Mati**	**6.44**	**31**	*e*P		**Pn**	**19 28 30.4**	**-0.1**
PAGZ	**Pagadian**	**6.45**	**4**	*e*P		**Pn**	**19 28 29.4**	**-1.1**
BUKP	**Musuan**	**6.79**	**18**	*e*P		**Pn**	**19 28 35.3**	**0.0**
CGP	**Cagayan de Oro**	**7.24**	**14**	*e*P		**Pn**	**19 28 42.9**	**+1.4**
AAI	**Ambon**	**7.26**	**134**	P		**Pn**	**19 28 49.6**	**+7.9**
	0.0nm,0.0s							
BUTP	**Butuan**	**8.00**	**19**	*e*P		**Pn**	**19 28 56.5**	**+4.6**
KKM	**Kota Kinabalu**	**8.17**	**305**	*e*P		**Pn**	**19 28 54.0**	**-0.2**
MSLP	**Maasin**	**8.91**	**12**	*e*P		**Pn**	**19 29 10.8**	**+6.5**
BATP	**Bataraza**	**8.98**	**325**	*e*P		**Pn**	**19 29 03.6**	**-1.7**
GUIM	**Jordan**	**9.20**	**358**	*e*P		**Pn**	**19 29 08.3**	**-0.1**
CUYO	**Cuyo Island**	**9.61**	**349**	*e*P		**Pn**	**19 29 13.8**	**-0.1**
ENPP	**El Nido**	**10.38**	**340**	*e*P		**Pn**	**19 29 23.1**	**-1.3**
KSM	**Kuching**	**12.64**	**271**	P		**Pn**	**19 29 50.8**	**-4.7**
BALP	**Baler**	**14.34**	**355**	*e*P		**Pn**	**19 30 27.1**	**+8.5**
SCZP	**Santa Cruz**	**14.62**	**348**	*e*P		**Pn**	**19 30 23.5**	**+1.0**
CAUP	**Cauayan**	**15.51**	**356**	*e*P		**Pn**	**19 30 40.0**	**+5.7**
PALP	**Palanan**	**15.60**	**358**	*e*P		**Pn**	**19 30 33.6**	**-1.8**
CVP	**Callao Caves**	**16.26**	**356**	*e*P		**Pn**	**19 30 49.0**	**+5.0**
	8µm,1.0s							
ABRA	**Dolores**	**16.32**	**352**	*e*P		**Pn**	**19 30 45.4**	**+0.7**
KAKA	**Kakadu**	**16.87**	**146**	*e*P		**Pn**	**19 30 51.2**	**-0.4**
	17nm,0.6s							
KAKA				*i*			19 31 01.8	
FITZ	**Fitzroy Crossi**	**19.53**	**172**	*e*P		**Pn**	**19 31 23.2**	**-1.1**
	44nm,0.7s							
FITZ	**Fitzroy Crossi**	**19.53**	**172**	P		**Pn**	**19 31 23.0**	**-1.3**
	1.6nm,0.3s,baz=3.4,slow=9.1,SNR=79							
KSI	**Kapahiang**	**20.95**	**256**	P		**P**	**19 31 40.1**	**+1.8**
	83nm,0.7s							
QIZ	**Qiongzhong**	**21.75**	**325**	P		**P**	**19 31 51.5**	**+4.6**
QIZ				LR		LR		
	comp=N,535nm,15.8s							
QIZ				LR		LR		
	comp=Z,772nm,16.4s,MS4.2							
MBWA	**Marble Bar**	**22.61**	**188**	*e*P		**P**	**19 31 55.5**	**-0.6**
	comp=Z,16nm,0.8s,mb4.5							
SNG	**Songkhla**	**23.00**	**285**	P		**P**	**19 32 03.0**	**+2.8**
YHNB	**Yeheng**	**23.21**	**356**	*e*P		**P**	**19 32 01.1**	**-1.3**
GZH	**Guangzhou**	**23.51**	**337**	P		**P**	**19 32 10.3**	**+4.8**
GZH				LR		LR		
	comp=N,788nm,15.1s,MS4.5							
GZH				LR		LR		
	comp=E,823nm,15.7s,MS4.5							
GZH				LR		LR		
	comp=Z,2µm,16.4s,MS4.6							
QZH	**Quanzhou**	**23.81**	**350**	P		**P**	**19 32 08.3**	**+0.1**
QZH				S		**S**	**19 36 24.3**	**+1.8**
QZH				LR		LR		
	comp=N,1µm,17.0s,MS4.6							
QZH				LR		LR		
	comp=E,760nm,14.2s,MS4.6							
QZH				LR		LR		
	comp=Z,1µm,19.2s,MS4.4							
WRAB	**Tennant Creek**	**23.95**	**153**	*d* *i*P		**P**	**19 32 10.3**	**+0.8**
WRAB	**Tennant Creek**	**23.95**	**153**	*e*P		**P**	**19 32 08.9**	**-0.5**
	comp=Z,36nm,0.8s,mb4.8							
WRA	**Warramunga Arr**	**23.95**	**153**	P		**P**	**19 32 09.4**	**-0.1**
	comp=Z,13nm,0.8s,mb4.4,baz=332,slow=9.9,SNR=82							
WRA	**Warramunga Arr**	**23.95**	**153**	P		**P**	**19 32 09.4**	**-0.1**
WRA				pmax		pmax		
	comp=Z,13nm,0.8s							
WB2	**Warramunga Arr**	**23.95**	**153**	*e*P		**P**	**19 32 08.7**	**-0.9**
WB2	**Warramunga Arr**	**23.95**	**153**	*e*P		**P**	**19 32 09.2**	**-0.4**
JOW	**Kunigami**	**25.82**	**11**	P		**P**	**19 32 27.4**	**+0.8**
	comp=Z,11nm,0.8s,mb4.4,baz=197,slow=11,SNR=5.3							
PMG	**Port Moresby**	**26.38**	**114**	P		**P**	**19 32 33.2**	**+1.6**
	comp=Z,17nm,0.8s,mb4.7,baz=337,slow=5.9,SNR=5.3							
PMG	**Port Moresby**	**26.38**	**114**	P		**P**	**19 32 33.2**	**+1.6**
PMG				pmax		pmax		
	comp=Z,17nm,0.8s							
AS31	**Alice Springs**	**27.07**	**157**	*e*P		**P**	**19 32 37.9**	**+0.1**
ASPA	**Alice Springs**	**27.07**	**158**	*e*P		**P**	**19 32 37.9**	**+0.1**
ASAR	**Alice Springs**	**27.07**	**157**	P		**P**	**19 32 38.0**	**+0.1**
	comp=Z,2.3nm,0.6s,mb3.9,baz=340,slow=7.3,SNR=26							
ASAR				PcP		PcP	19 35 58.9	+0.4
	comp=Z,1.8nm,0.7s,baz=358,slow=2.2,SNR=4.5							
ASAR				LR		LR	19 44 18.3	
	comp=Z,557nm,19.7s,MS4.1,baz=261,slow=38							
ASAR	**Alice Springs**	**27.07**	**157**	P		**P**	**19 32 38.0**	**+0.2**
ASAR							19 35 58.9	
ASAR				pmax		pmax		
	comp=Z,20nm,0.6s							
ASAR				MLR		MLR		
	comp=Z,557nm,19.7s							
NANT	**Nan**	**27.86**	**310**	P		**P**	**19 32 45.0**	**+0.1**
GYA	**Guiyang**	**29.45**	**329**	P		**P**	**19 33 01.0**	**+2.0**
GYA				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.7							
SSE	**Sheshan**	**29.61**	**357**	*e*P		**P**	**19 33 00.5**	**+0.1**
SSE				AMB		AMB		
	comp=Z,31nm,0.7s,mb5.2							
SSE				AMB		AMB		
	comp=Z,63nm,3.5s							
SSE				LR		LR		
	comp=N,382nm,14.4s,MS4.2							
SSE				LR		LR		
	comp=E,196nm,14.3s,MS4.2							
SSE				LR		LR		
	comp=Z,521nm,15.4s,MS4.3							
NJ2	**Nanjing**	**30.76**	**353**	*e*P		**P**	**19 33 13.5**	**+2.9**
NJ2				PP		PP	19 34 19.0	-1.2
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.5s,mb4.9							
NJ2				AMB		AMB		
	comp=Z,190nm,3.5s							
NJ2				LR		LR		
	comp=N,620nm,16.2s,MS4.6							
NJ2				LR		LR		
	comp=E,810nm,14.6s,MS4.6							
NJ2				LR		LR		
	comp=Z,810nm,13.9s,MS4.5							
CTA	**Charters Tower**	**31.25**	**134**	*e*P		**P**	**19 33 17.4**	**+2.4**
	comp=Z,3.5nm,0.9s,mb4.2							
CTA	**Charters Tower**	**31.25**	**134**	P		**P**	**19 33 17.4**	**+2.4**
	comp=Z,3.8nm,1.0s,mb4.2,baz=293,slow=7.5,SNR=4.3							
CTA	**Charters Tower**	**31.25**	**134**	P		**P**	**19 33 17.4**	**+2.4**
CTA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
CBIJ	**Chichi jima**	**31.54**	**34**	P		**P**	**19 33 16.9**	**-0.5**
	comp=Z,28nm,0.5s,mb5.4,baz=303,slow=23,SNR=5.1							
CBIJ				LR		LR	19 44 32.0	
	comp=Z,218nm,19.0s,MS3.9,baz=189,slow=34							
FORT	**Forrest**	**32.34**	**172**	*e*P		**P**	**19 33 24.3**	**-0.2**
	comp=Z,29nm,0.6s,mb5.3							
KLBR	**Kellerberrin**	**33.15**	**188**	*e*P		**P**	**19 33 30.2**	**-1.4**
	comp=Z,4.7nm,0.4s,mb4.8							
NWAO	**Narrogin (SRO)**	**34.54**	**188**	P		**P**	**19 33 43.1**	**-0.6**
	comp=Z,8.7nm,0.9s,mb4.7,baz=16,slow=11,SNR=4.9							
NWAO				LR		LR	19 50 29.9	
	comp=Z,414nm,18.8s,MS4.2,baz=123,slow=41							
NWAO	**Narrogin (SRO)**	**34.54**	**188**	P		**P**	**19 33 43.1**	**-0.6**
NWAO				pmax		pmax		
	comp=Z,9.0nm,0.9s							
NWAO				MLR		MLR		
	comp=Z,414nm,18.8s							
XAN	**Xi'an**	**35.05**	**339**	P		**P**	**19 33 48.0**	**-0.1**
XAN				AP		pP	19 33 54.8	-0.3
XAN				AMB		AMB		
	comp=Z,5.0nm,1.0s,mb4.4							
STKA	**Stephens Creek**	**37.50**	**153**	⇑ *i*P		**P**	**19 34 09.2**	**+0.2**
	comp=Z,7.6nm,0.8s,mb4.6							
STKA	**Stephens Creek**	**37.50**	**153**	P		**P**	**19 34 09.7**	**+0.6**
	comp=Z,9.0nm,0.7s,mb4.7,baz=328,slow=8.7,SNR=21							
STKA				LR		LR	19 49 27.0	
	comp=Z,292nm,21.4s,MS4.0,baz=0.8,slow=36							
STKA	**Stephens Creek**	**37.50**	**153**	*e*P		**P**	**19 34 09.2**	**+0.2**
MAT	**Matsushiro**	**37.73**	**20**	P		**P**	**19 34 08.8**	**-2.2**
MAT				S		**S**	**19 40 12.0**	**+12**
MJAR	**Matsushiro Arr**	**37.73**	**20**	P		**P**	**19 34 10.2**	**-0.8**
	comp=Z,2.6nm,1.1s,mb3.9,baz=199,slow=8.2,SNR=7.3							
MJAR	**Matsushiro Arr**	**37.73**	**20**	P		**P**	**19 34 10.2**	**-0.8**
MJAR				pmax		pmax		
	comp=Z,30nm,1.1s							
LZH	**Lanzhou**	**38.82**	**335**	*e*P		**P**	**19 34 21.5**	**+1.4**
LZH				AP		pP	19 34 28.8	+1.6
LZH				XP		sP	19 34 32.5	+2.5
LZH				AMB		AMB		
	comp=Z,25nm,1.3s,mb4.8							
LZH				AMB		AMB		
	comp=Z,97nm,5.6s							
LZH				LR		LR		
	comp=E,469nm,12.7s							
LZH				LR		LR		
	comp=Z,812nm,14.8s,MS4.7							
BJI	**Beijing**	**38.98**	**352**	P		**P**	**19 34 22.5**	**+1.0**
BJI				S		**S**	**19 40 19.3**	**+0.4**
BJI				AMB		AMB		
	comp=Z,15nm,1.0s,mb4.7							
BJI				AMB		AMB		
	comp=Z,123nm,5.3s							
BJI				LR		LR		
	comp=N,276nm,18.6s,MS4.2							
BJI				LR		LR		
	comp=E,217nm,18.7s,MS4.2							
BJI				LR		LR		
	comp=Z,286nm,16.9s,MS4.2							
SNY	**Shenyang**	**40.27**	**1**	⇑P		**P**	**19 34 31.5**	**-0.8**
SNY				AMB		AMB		
	comp=Z,13nm,1.7s,mb4.4							
LSA	**Lhasa**	**41.33**	**316**	P		**P**	**19 34 42.8**	**+1.9**
ARMA	**Armidale**	**41.78**	**142**	*e*P		**P**	**19 34 46.8**	**+2.1**
GTA	**Gaotai**	**43.34**	**334**	*e*P		**P**	**19 34 58.5**	**+1.1**
GTA				AP		pP	19 35 07.5	+3.0
GTA				XP		sP	19 35 12.0	+4.7
GTA				AMB		AMB		
	comp=Z,8.0nm,1.4s,mb4.3							
GTA				AMB		AMB		
	comp=Z,185nm,4.6s							
GTA				LR		LR		
	comp=N,290nm,18.2s,MS4.4							
GTA				LR		LR		
	comp=E,322nm,15.2s,MS4.4							
GTA				LR		LR		
	comp=Z,388nm,16.7s,MS4.4							
GUN	**Gumba**	**44.19**	**310**	*e*P		**P**	**19 35 05.3**	**+1.1**
	comp=Z,28nm,0.7s,mb5.1							
PKI	**Pulchoki**	**44.39**	**309**	*e*P		**P**	**19 35 06.8**	**+1.0**
KKN	**Kakani**	**44.59**	**310**	*e*P		**P**	**19 35 07.9**	**+0.5**
	comp=Z,22nm,0.9s,mb5.0							
KKN	**Kakani**	**44.59**	**310**	*e*P		**P**	**19 35 07.9**	**+0.5**
KKN				pmax		pmax		
	comp=Z,23nm,0.9s,mb5.0							
DMN	**Daman**	**44.64**	**309**	*e*P		**P**	**19 35 08.3**	**+0.5**
	comp=Z,40nm,1.0s,mb5.2							
GKN	**Gorkha**	**45.20**	**309**	*e*P		**P**	**19 35 12.3**	**+0.1**
	comp=Z,49nm,1.1s,mb5.3							
KOLN	**Koldanda**	**45.89**	**309**	*e*P		**P**	**19 35 17.9**	**+0.2**
	comp=Z,22nm,0.6s,mb5.3							
ASAJ	**Asahikawa**	**46.00**	**20**	P		**P**	**19 35 19.4**	**+0.8**
	comp=Z,6.3nm,0.7s,mb4.7,baz=225,slow=11,SNR=5.3							
ASAJ	**Asahikawa**	**46.00**	**20**	P		**P**	**19 35 19.4**	**+0.8**
ASAJ				pmax		pmax		
	comp=Z,6.0nm,0.7s							
HYB	**Hyderabad**	**46.45**	**293**	*i* P		**P**	**19 35 23.0**	**+0.9**
HABR	**Khabarovsk**	**48.06**	**11**	*e*P		**P**	**19 35 37.5**	**+2.8**
KLR	**Kul'dur**	**48.27**	**8**	*e*P		**P**	**19 35 34.2**	**-2.1**
ULN	**Ulaanbaatar**	**48.31**	**346**	*e*P		**P**	**19 35 36.5**	**-0.1**
ULN				pmax		pmax		
	comp=Z,14nm,1.1s,mb4.9							
ULN	**Ulaanbaatar**	**48.31**	**346**	*e*P		**P**	**19 35 36.5**	**-0.2**
	comp=Z,14nm,1.1s,mb4.9							
SONM	**Songino Array**	**48.45**	**345**	P		**P**	**19 35 37.8**	**+0.1**
	comp=Z,6.2nm,0.5s,mb4.9,baz=161,slow=8.3,SNR=40							
SONM				LR		LR	19 57 40.8	
	comp=Z,409nm,18.2s,MS4.5,baz=338,slow=38							
SONM	**Songino Array**	**48.45**	**345**	P		**P**	**19 35 37.8**	**+0.1**
SONM				pmax		pmax		
	comp=Z,6.0nm,0.5s							
SONM				MLR		MLR		
	comp=Z,409nm,18.3s							
CIT	**Chita**	**51.08**	**353**	*e*P		**P**	**19 35 58.6**	**+0.9**
ZAK	**Zakamensk**	**51.61**	**344**	*e*P		**P**	**19 36 01.7**	**0.0**
ZAK				pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.4							
WMQ	**Urumqi**	**52.60**	**328**	*e*P		**P**	**19 36 09.5**	**+0.5**
WMQ				AMB		AMB		
	comp=Z,15nm,1.0s,mb4.9							
TLY	**Talaya**	**52.69**	**345**	*e*P		**P**	**19 36 10.1**	**+0.4**
TLY				*e*S		**S**	**19 43 35.4**	**-0.7**
TLY				pmax		pmax		
	comp=Z,13nm,0.8s,mb4.9							
TLY				MLR		MLR		
	comp=Z,149nm,15.0s,MS4.2							
TLY	**Talaya**	**52.69**	**345**	*e*P		**P**	**19 36 11.0**	**+1.3**
	comp=Z,13nm,0.8s,mb4.9							
IRK	**Irkutsk**	**53.05**	**346**	*e*P		**P**	**19 36 12.5**	**+0.2**
IRK				pmax		pmax		
	comp=Z,32nm,2.2s,mb4.9							
MOY	**Mondy**	**53.41**	**343**	*e*P		**P**	**19 36 15.5**	**+0.5**
MOY				pmax		pmax		
	comp=Z,42nm,2.4s,mb4.9							
BOD	**Bodaibo**	**56.73**	**354**	⇑ *i*P		**P**	**19 36 38.6**	**-0.3**
BOD				pmax		pmax		
	comp=Z,9.0nm,1.1s,mb4.7							
MK31	**Makanchi Array**	**57.43**	**328**	P		**P**	**19 36 43.8**	**-0.1**
MK31				pmax		pmax		
	comp=Z,20nm,0.6s,mb5.3							
MKAR	**Makanchi Array**	**57.43**	**328**	P		**P**	**19 36 44.1**	**+0.2**
	comp=Z,2.4nm,0.7s,mb4.3,baz=116,slow=8.2,SNR=12							
MKAR	**Makanchi Array**	**57.43**	**328**	P		**P**	**19 36 44.1**	**+0.2**
MKAR				pmax		pmax		
	comp=Z,20nm,0.7s							
PET	**Petropavlovsk**	**59.38**	**24**	⇓ *i*P		**P**	**19 36 58.2**	**+0.7**
PET				*e*S		**S**	**19 44 57.6**	**-7.3**
PET				pmax		pmax		
	comp=Z,15nm,0.5s,mb5.3							
PET				pmax		pmax		
	comp=Z,100nm,15.9s							
PET				MLR		MLR		
	comp=Z,200nm,17.0s,MS4.3							
AAK	**Ala-Archa**	**59.65**	**320**	⇓ *e*P		**P**	**19 36 59.9**	**+0.5**
AAK				pmax		pmax		
	comp=Z,40nm,0.8s,mb5.5							
YAK	**Yakutsk**	**60.72**	**4**	*de*P		**P**	**19 37 06.9**	**+0.2**
YAK				pmax		pmax		
	comp=Z,15nm,0.8s,mb5.2							
MA2	**Magadan**	**61.93**	**16**	⇓ *e*P		**P**	**19 37 14.2**	**-0.7**
MA2				pmax		pmax		
	comp=Z,30nm,1.7s,mb5.2							
RPZ	**Rata Peaks**	**62.12**	**142**	P		**P**	**19 37 17.2**	**+1.0**
	comp=Z,27nm,1.0s,mb5.3,baz=281,slow=5.2,SNR=5.4							
NVS	**Novosibirsk**	**62.34**	**335**	*e*P		**P**	**19 37 17.7**	**+0.1**
NVS				pmax		pmax		
	comp=Z,22nm,1.8s,mb5.0							
NVS				pmax		pmax		
	comp=N,17nm,1.9s							
NVS				pmax		pmax		
	comp=E,11nm,1.7s							
KK31	**Karatay Array**	**62.45**	**319**	*i* P		**P**	**19 37 18.3**	**-0.1**
KK31				pmax		pmax		
	comp=Z,10.0nm,0.4s,mb5.3							
KKAR	**Karatay Array**	**62.45**	**319**	P		**P**	**19 37 18.3**	**-0.1**
SEY	**Seymchan**	**65.20**	**14**	⇑ *e*P		**P**	**19 37 37.6**	**+1.1**
VOSK	**Vostochnaya**	**66.83**	**329**	P		**P**	**19 37 45.7**	**-1.3**
VOSK				pmax		pmax		
	comp=Z,20nm,1.2s,mb5.0							
BVAR	**Borovoye Array**	**67.29**	**329**	P		**P**	**19 37 49.8**	**-0.1**
	comp=Z,2.1nm,0.9s,mb4.2,baz=123,slow=11,SNR=10							
BVAR	**Borovoye Array**	**67.29**	**329**	P		**P**	**19 37 49.8**	**-0.1**
BVAR				pmax		pmax		
	comp=Z,20nm,0.9s							
BRVK	**Borovoye**	**67.36**	**329**	*e*P		**P**	**19 37 49.8**	**-0.5**
BRVK				pmax		pmax		
	comp=Z,9.0nm,1.4s,mb4.6							
BRVK	**Borovoye**	**67.36**	**329**	*e*P		**P**	**19 37 49.8**	**-0.6**
	comp=Z,9.1nm,1.4s,mb4.6							
CHKZ	**Chkalovo**	**67.51**	**329**	*e*P		**P**	**19 37 50.7**	**-0.6**
CHKZ				pmax		pmax		
	comp=Z,6.0nm,1.1s,mb4.5							
CHKZ	**Chkalovo**	**67.51**	**329**	*e*P		**P**	**19 37 50.7**	**-0.6**
	comp=Z,6.3nm,1.1s,mb4.6							
ZRNK	**Zerenda**	**67.98**	**328**	*e*P		**P**	**19 37 53.0**	**-1.2**
ZRNK				pmax		pmax		
	comp=Z,9.0nm,0.9s,mb4.8							
ZRNK	**Zerenda**	**67.98**	**328**	*e*P		**P**	**19 37 53.0**	**-1.2**
	comp=Z,8.7nm,0.9s,mb4.8							
CASY	**Casey**	**68.09**	**185**	*e*P		**P**	**19 37 55.3**	**+0.4**
TIXI	**Tiksi**	**70.27**	**2**	⇑ *e*P		**P**	**19 38 08.7**	**+0.2**
TIXI				pmax		pmax		
	comp=Z,12nm,1.2s,mb4.7							
MIR	**Mirnyy**	**71.04**	**192**	P		**P**	**19 38 11.0**	**-2.2**
MIR				pmax		pmax		
	comp=Z,16nm,1.0s,mb4.9							
AB31	**Akbulak array**	**71.62**	**322**	*i* P		**P**	**19 38 16.4**	**-0.3**
AB31				pmax		pmax		
	comp=Z,20nm,0.8s,mb5.1							
BILL	**Bilibino**	**72.80**	**16**	⇑ *e*P		**P**	**19 38 23.5**	**-0.2**
BILL				pmax		pmax		
	comp=Z,20nm,0.4s,mb5.4							
AKTO	**Aktyubinsk**	**73.19**	**323**	LR		LR	20 14 55.7	
	comp=Z,154nm,19.4s,MS4.3,baz=305,slow=40							
ARU	**Arti**	**74.94**	**329**	⇑ *i*P		**P**	**19 38 34.6**	**-1.6**
ARU				*e*			19 38 47.9	
ARU				*e*			19 41 22.7	
ARU				*e*PPP			19 43 07.6	
ARU				*e*S		S	19 48 03.4	-8.9
ARU				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
ARU	**Arti**	**74.94**	**329**	*e*P		**P**	**19 38 34.1**	**-2.1**
	comp=Z,3.4nm,0.9s,mb4.3							
GNI	**Garni**	**80.11**	**310**	⇑ *e*P		**P**	**19 39 06.6**	**+1.5**
GNI				pmax		pmax		
	comp=Z,11nm,1.7s							
MAW	**Mawson**	**80.27**	**200**	*e*P		**P**	**19 39 05.5**	**-0.5**
	comp=Z,4.0nm,0.9s,mb4.3							
MAW	**Mawson**	**80.27**	**200**	P		**P**	**19 39 05.6**	**-0.4**
	comp=Z,5.0nm,0.9s,mb4.5,baz=44,slow=6.9,SNR=12							
MAW				LR		LR	20 10 15.4	
	comp=Z,180nm,18.5s,MS4.5,baz=184,slow=32							
MAW	**Mawson**	**80.27**	**200**	P		**P**	**19 39 05.6**	**-0.4**
MAW				pmax		pmax		
	comp=Z,5.0nm,0.9s							
MAW				MLR		MLR		
	comp=Z,180nm,18.5s							
VNDA	**Vanda**	**81.61**	**172**	P		**P**	**19 39 13.1**	**0.0**
	comp=Z,8.0nm,0.8s,mb4.7,baz=313,slow=6.2,SNR=27							
VNDA				LR		LR	20 13 39.7	
	comp=Z,311nm,19.8s,MS4.7,baz=317,slow=34							
VNDA	**Vanda**	**81.61**	**172**	P		**P**	**19 39 13.1**	**0.0**
VNDA				pmax		pmax		
	comp=Z,8.0nm,0.8s							
VNDA				MLR		MLR		
	comp=Z,311nm,19.8s							
KIV	**Kislovodsk**	**82.04**	**314**	⇑ *e*P		**P**	**19 39 14.1**	**-1.3**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
SBA	**Scott Base**	**82.56**	**171**	*e*P		**P**	**19 39 18.3**	**+0.2**
SBA				pmax		pmax		
	comp=Z,15nm,1.4s,mb4.8							
SBA	**Scott Base**	**82.56**	**171**	*e*P		**P**	**19 39 18.2**	**+0.2**
	comp=Z,15nm,1.4s,mb4.8							
SOC	**Sochi**	**84.15**	**313**	*e*P		**P**	**19 39 22.0**	**-4.3**
SOC				*e**SS			19 50 35.0	
SOC				*e*SS		SS	19 55 23.9	+5.0
ANN	**Anapa**	**85.85**	**315**	*e*P		**P**	**19 39 33.9**	**-0.9**
ANN				*e*S		SKSac	19 49 49.8	-9.3
ANN				pmax		pmax		
	comp=Z,40nm,1.0s,mb5.6							
OBN	**Obninsk**	**86.81**	**325**	*e*P		**P**	**19 39 37.4**	**-2.1**
OBN				*e*			19 39 53.7	
OBN				pmax		pmax		
	comp=Z,10.0nm,1.1s,mb5.0							
MCK	**McKinley**	**87.94**	**26**	*e*P		**P**	**19 39 44.5**	**-0.5**
MCK				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.7							
MCK	**McKinley**	**87.94**	**26**	*e*P		**P**	**19 39 44.5**	**-0.5**
	comp=Z,4.0nm,0.9s,mb4.7							
COLA	**College**	**88.42**	**25**	⇑ *e*P		**P**	**19 39 45.5**	**-1.8**
BRTR	**Keskin Array B**	**88.60**	**310**	P		**P**	**19 39 46.9**	**-1.3**
	comp=Z,0.6nm,0.6s,mb4.1,baz=143,slow=3.1,SNR=3.4							
SYO	**Syowa Base**	**88.89**	**201**	⇑ *e*P		**P**	**19 39 49.3**	**-0.2**
QSPA	**South Pole Qui**	**91.30**	**180**	*e*P		**P**	**19 40 02.6**	**+1.9**
	comp=Z,22nm,1.6s,mb5.2							
AKASG	**Malin Array Be**	**91.32**	**321**	P		**P**	**19 39 59.2**	**-1.6**
	comp=Z,0.3nm,0.3s,mb4.1,baz=75,slow=4.6,SNR=4.7							
AKASG				LR		LR	20 26 49.2	
	comp=Z,61nm,18.5s,MS4.1,baz=75,slow=39							
ARCES	**ARCESS Array B**	**91.33**	**340**	P		**P**	**19 39 58.5**	**-2.4**
	comp=Z,2.6nm,0.9s,mb4.6,baz=16,slow=9.3,SNR=5.3							
ARCES				LR		LR	20 25 52.5	
	comp=Z,138nm,18.1s,MS4.4,baz=324,slow=39							
ARCES	**ARCESS Array B**	**91.33**	**340**	P		**P**	**19 39 58.5**	**-2.4**
ARCES				pmax		pmax		
	comp=Z,3.0nm,0.9s							
ARCES				MLR		MLR		
	comp=Z,138nm,18.1s							
ARCES	**ARCESS Array B**	**91.33**	**340**	P		**P**	**19 39 58.5**	**-2.4**
ARCES				LR		LR	20 25 52.5	
FINES	**FINESS Array B**	**92.10**	**331**	P		**P**	**19 40 02.0**	**-2.4**
	comp=Z,1.5nm,0.8s,mb4.4,baz=96,slow=3.8,SNR=4.8							
FINES	**FINESS Array B**	**92.10**	**331**	P		**P**	**19 40 02.0**	**-2.4**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.8s							
NOA	**NORSAR Array B**	**99.17**	**333**	LR		LR	20 30 01.5	
	comp=Z,110nm,18.6s,MS4.4,baz=55,slow=38							
TORD	**Torodi Ar. Bea**	**120.00**	**286**	PKP		PKPdf	19 45

APYN	Apoyeque	4.92	195	eP	Pn	19 38 53.5	+1.3
SNVI	San Vicente	4.97	227	eP	x	19 38 52.0	
COPN	Copaltepe	5.04	197	eP	Pn	19 38 53.0	-0.8
BOQS	Boqueron	5.21	232	eP	x	19 38 55.3	
SBLS	San Blas	5.41	235	eP	x	19 38 57.8	
CONN	Concepcion	5.46	186⇑	eP	Pn	19 38 59.7	+0.1
MADN	Villa Maderas	5.60	185	eP	Pn	19 39 01.6	0.0
MGV	Manicaragua	6.97	43	eP	Pn	19 39 21.1	+0.6
	baz=212						
MGV				eS	Sn	19 40 36.3	-3.3
	comp=N,2μm,0.3s						
MGV				e			
	comp=E,2μm,0.3s						
LMGC	Las Mercedes	8.23	67	eP	Pn	19 39 41.8	+4.1
CMIG	Matias Romero	9.38	272	Pn	Pn	19 39 49.4	-4.0
	comp=E,2.1nm,0.3s,baz=66,slow=12,SNR=24						
CMIG				Sn	Sn	19 41 24.1	-15
	comp=E,12nm,0.3s,baz=231,slow=22,SNR=8.6						
CMIG				LR	LR	19 43 46.2	
	comp=E,1μm,19.7s,baz=85,slow=40						
CMIG	Matias Romero	9.38	272	Pn	Pn	19 39 49.4	-4.0
CMIG				Sn	Sn	19 41 24.1	-15
CMIG				LR	LR	19 43 46.2	
DWPF	Disney	11.53	16	eP	Pn	19 40 21.2	-1.7
	comp=E,42nm,0.6s						
ROSC	El Rosal	16.04	138	Pn	Pn	19 41 24.7	+0.8
	comp=E,1.7nm,0.3s,baz=98,slow=21,SNR=3.9						
ROSC				LR	LR	19 48 20.1	
	comp=E,278nm,18.3s,baz=198,slow=40						
HKT	Hockley	16.20	324	eP	Pn	19 41 25.9	+0.1
	comp=E,40nm,0.7s						
SDV	Santo Domingo	16.23	118	Pn	Pn	19 41 27.1	+0.8
	comp=E,8.4nm,0.3s,baz=240,slow=2.5,SNR=8.8						
SDV	Santo Domingo	16.23	118	P	Pn	19 41 25.1	-1.2
	comp=E,42nm,0.8s						
MYNC	Murphy	17.99	3	eP	Pn	19 41 47.8	-0.6
	comp=E,17nm,0.5s						
SJG	San Juan	18.08	84	LR	LR	19 48 17.6	
	comp=E,484nm,21.4s,baz=270,slow=35						
PLAL	Pickwick Lake	18.08	352	eP	Pn	19 41 51.3	+1.8
	comp=E,12nm,0.6s						
SWET	Sewanee	18.13	358	eP	Pn	19 41 51.7	+1.6
SWET				eS	Sn	19 44 56.7	-15
JCT	Junction City	18.97	318	eP	Pn	19 41 56.5	-3.8
	comp=E,27nm,0.4s						
MIAR	Mount Ida	19.03	338	eP	Pn	19 42 00.8	-0.2
	comp=E,6.4nm,0.4s						
WVT	Waverly	19.18	353	eP	Pn	19 42 01.9	-0.9
	comp=E,6.9nm,0.4s						
FWV	Forest Hill	20.82	10	eP	P	19 42 21.4	+1.7
PCRV	Puerto La Cruz	20.99	106	LR	LR	19 50 30.8	
	comp=E,238nm,18.4s,MS3.6,baz=291,slow=37						
WCI	Wyandotte Cave	21.15	357	eP	P	19 42 24.0	+0.7
	comp=E,22nm,0.8s,mb4.5						
WMOK	Wichita Mounta	21.48	328	eP	P	19 42 26.4	-0.5
	comp=E,19nm,0.7s,mb4.5						
MNTX	Cornudas Mount	23.51	312	eP	P	19 42 46.3	-2.1
	comp=E,15nm,1.1s,mb4.3						
LPIG	La Paz	24.62	291	LR	LR	19 53 37.2	
	comp=E,256nm,18.7s,MS3.8,baz=290,slow=39						
ATAH	Atahualpa	24.77	164	LR	LR	19 52 28.7	
	comp=E,272nm,19.7s,MS3.8,baz=153,slow=36						
ANMO	Albuquerque	26.13	317	P	P	19 43 11.7	-0.6
	comp=E,1.1nm,0.4s,mb3.7,baz=138,slow=9.7,SNR=7.0						
ANMO				LR	LR	19 56 54.3	
	comp=E,85nm,20.6s,MS3.3,baz=346,slow=44						
TUC	Tucson	27.78	308	eP	P	19 43 27.6	+0.4
	comp=E,6.7nm,1.0s,mb4.2						
SADO	Sadowa	28.11	9	P	P	19 43 30.4	+0.4
	comp=E,4.7nm,0.5s,mb4.4,baz=203,slow=9.0,SNR=6.3						
116A	Eloy	28.59	308	⇑P	P	19 43 34.4	0.0
	baz=29						
115A	Sonoran Desert	29.04	308	⇑P	P	19 43 38.3	-0.1
	baz=29						
X15A	Humboldt	29.87	311	⇓P	P	19 43 46.2	+0.5
	baz=30						
Z14A	Wintersburg	29.88	308	⇑P	P	19 43 46.1	+0.3
	baz=30						
Y14A	Wickenburg	30.18	309	⇑P	P	19 43 48.1	-0.3
	baz=30						
W15A	Williams	30.23	312	⇓P	P	19 43 48.8	-0.1
	baz=30						
X14A	Yava	30.34	310	⇓P	P	19 43 50.2	+0.4
	baz=30						
Y13A	Salome	30.74	308	⇓P	P	19 43 53.8	+0.4
	baz=31						
W14A	Seligman	30.83	311	⇓P	P	19 43 54.9	+0.7
	baz=31						
X13A	Yucca	31.08	310	⇓P	P	19 43 56.4	0.0
	baz=31						
GLA	Glamis	31.18	306	⇑P	P	19 43 57.6	+0.4
	baz=31,SNR=7.4						
PDMCI	Parker Dam,Lak	31.18	309	⇓P	P	19 43 57.2	-0.1
	baz=31						
Y12C	Blythe	31.23	308	⇓P	P	19 43 57.7	-0.1
	baz=31						
W13A	Hualapai Mount	31.35	311	⇑P	P	19 43 59.5	+0.7
	baz=31						
SWSC	Sam W. Stewart	31.88	306	⇑P	P	19 44 03.7	+0.2
	baz=32						
DVTC	Desert V Tower	32.02	305	⇑P	P	19 44 05.5	+0.8
	baz=32						
W12A	Cal Nev Ari	32.16	310	⇑P	P	19 44 06.5	+0.5
	baz=32						
V12A	Nelson	32.34	311	⇓P	P	19 44 07.9	+0.4
	baz=32						
MONP	Monument Peak	32.35	305	⇑P	P	19 44 08.0	+0.5
	baz=32						
BELC	Belle Mtn.	32.45	307	⇓P	P	19 44 08.9	+0.4
	baz=32,SNR=8.5						
GMRC	Granite Mounta	32.52	309	P	P	19 44 09.8	+0.8
	baz=32,SNR=5.6						
PFO	Pinyon Flat Ob	32.65	306	⇓P	P	19 44 10.8	+0.6
	baz=33						
109C	Camp Elliot, M	32.89	305	⇑P	P	19 44 12.4	+0.1
	baz=33						
TUQ	Turquoise Mtn.	32.99	310	⇓P	P	19 44 13.8	+0.5
	baz=33						
HEC	Hector,Ludlow	33.04	308	⇑P	P	19 44 14.6	+1.0
	baz=33,SNR=5.5						
PDAR	Pinedale Array	33.06	326	P	P	19 44 13.8	0.0
	comp=E,1.9nm,0.5s,mb4.3,baz=124,slow=12,SNR=26						
MURC	Murrieta	33.22	306	⇑P	P	19 44 15.8	+0.6
	baz=33						
GSC	Goldstone	33.59	309	⇓P	P	19 44 18.9	+0.5
	baz=34						
U10A	Ash Meadows, A	33.72	311	⇑P	P	19 44 20.7	+1.1
	baz=34						
FURC	Furnace Creek,	34.13	311	⇑P	P	19 44 23.8	+0.7
	baz=34						
P12A	McGill	34.24	317	⇓P	P	19 44 24.7	+0.6
	baz=34						
EDW2	Edwards Air Fo	34.31	308	⇓P	P	19 44 25.1	+0.5
	baz=34,SNR=6.5						
LRMC	Laurel Mountai	34.32	309	P	P	19 44 25.5	+0.7
	baz=34,SNR=8.6						
MPMC	Manual Prospec	34.41	310	⇑P	P	19 44 25.8	+0.2
	baz=34,SNR=5.2						
N13A	Wendover, West	34.56	319	⇓P	P	19 44 27.0	+0.1
	baz=35						
O12A	Currie	34.57	318	⇑P	P	19 44 27.0	+0.1
	baz=35						
OSI	Osito Adit	34.77	307	⇑P	P	19 44 28.6	-0.1
	baz=35						
M13A	Montello	34.82	320	⇓P	P	19 44 29.1	0.0
	baz=35						
S09A	Goldfield	34.95	313	⇑P	P	19 44 30.4	+0.2
	baz=35						
ISA	Isabella	34.98	309	eP	P	19 44 31.1	+0.6
ISA	Isabella	34.98	309	⇑P	P	19 44 31.0	+0.6
	baz=35,SNR=7.1						
ARVC	Arvin	35.04	308	⇓P	P	19 44 31.8	+0.8
	baz=35						
N12A	Clover Valley,	35.08	319	⇓P	P	19 44 31.6	+0.2
	baz=35						
O11A	Cowboy Ranch,	35.08	317	⇓P	P	19 44 31.8	+0.5
	baz=35						
R09A	Tonopah	35.08	313	⇑P	P	19 44 32.0	+0.6
	baz=35,SNR=5.2						
TIN	Tinemaha	35.37	311	⇓P	P	19 44 34.8	+0.9
	baz=35						
VES	Vestal, Richgr	35.50	309	⇓P	P	19 44 35.8	+0.8
	baz=36						
PKM	Peak Mountain	35.71	307	⇑P	P	19 44 37.3	+0.5
	baz=36						
HELL	Mitchell Peak,	35.80	310	⇑P	P	19 44 38.1	+0.6
	baz=36						
R08A	Mina	35.86	313	⇑P	P	19 44 38.6	+0.6
	baz=36						
Q08A	Gabbs	35.97	314	⇑P	P	19 44 39.4	+0.4
	baz=36						
SMMC	Simmler	36.00	307	⇓P	P	19 44 40.1	+0.9
	baz=36						
O09A	Fish Creek Ran	36.11	316	⇓P	P	19 44 40.7	+0.5
	baz=36						
BOZ	Bozeman (W)	36.12	328	eP	P	19 44 40.5	+0.2
	comp=E,2.3nm,0.6s,mb4.3						
KCC	Kaiser Creek	36.27	311	⇓P	P	19 44 42.1	+0.5
	baz=36						
R07C	Lee Vining	36.40	312	⇑P	P	19 44 43.5	+0.8
	baz=36						
PKD	Parkfield	36.64	308	⇑P	P	19 44 44.4	-0.3
	baz=37						
N09A	Rock Creek Ran	36.67	317	⇑P	P	19 44 45.0	0.0
	baz=37						
R06C	Coleville	36.88	312	⇓P	P	19 44 47.4	+0.7
	baz=37						
S06C	San Francisco	36.89	311	⇑P	P	19 44 47.1	+0.3
	baz=37						
U04C	Hernandez Rese	36.98	308	⇓P	P	19 44 47.6	0.0
	baz=37						
N08A	GE Springer Mi	37.03	317	⇑P	P	19 44 48.7	+0.6
	baz=37						
LPAZ	La Paz	37.08	152	LR	LR	20 01 27.2	
	comp=E,134nm,20.9s,MS3.7,baz=314,slow=39						
CMB	Columbia Colle	37.34	311	⇑P	P	19 44 50.4	-0.3
	baz=37						
L09A	Wilkinson Ranc	37.37	319	⇑P	P	19 44 51.9	+1.0
	baz=37						
R05C	Kirkwood Meado	37.40	312	⇓P	P	19 44 51.7	+0.6
	baz=37						
HAST	UC Hastings Re	37.56	308	⇑P	P	19 44 52.2	-0.3
	baz=38						
N07B	Gerlach	37.59	316	⇑P	P	19 44 54.2	+1.4
	baz=38						
PACP	Pacheco Peak	37.59	309	⇓P	P	19 44 52.6	-0.2
	baz=38						
K09A	Rome	37.77	320	⇓P	P	19 44 54.4	+0.1
	baz=38,SNR=8.3						
S04C	Ingram Canyon,	37.81	310	⇓P	P	19 44 54.9	+0.3
	baz=38						
L08A	Fields	37.89	318	⇓P	P	19 44 56.4	+1.1
	baz=38,SNR=11						
LAVA	Lava Cap Winer	37.89	312	⇓P	P	19 44 55.1	-0.2
	baz=38						
P05C	Yuba Gap, Truc	38.03	313	⇑P	P	19 44 56.8	+0.4
	baz=38						
BEKR	Beckwourth	38.10	314	⇓P	P	19 44 57.4	+0.3
	baz=38						
MSO	Missoula	38.11	328	eP	P	19 44 56.0	-1.1
	comp=E,3.2nm,1.0s,mb4.0						
J09A	Fry Pan Ranch,	38.14	320	⇓P	P	19 44 57.4	0.0
	baz=38						
WVOR	Wild Horse Val	38.20	319	eP	P	19 44 57.6	-0.3
	comp=E,24nm,1.6s,mb4.7						
K08A	Mann Creek Ran	38.26	319	P	P	19 44 58.6	+0.2
	baz=38,SNR=22						
L07A	Adell	38.44	318	⇑P	P	19 44 59.4	-0.6
	baz=38						
I09A	Lost Marbles R	38.48	321	⇓P	P	19 44 59.5	-0.7
	baz=38						
J08A	Circle Bar Ran	38.59	320	⇑P	P	19 45 00.7	-0.5
	baz=39						
K07A	Rock Creek Ran	38.72	319	⇓P	P	19 45 02.2	-0.1
	baz=39,SNR=7.3						
ORV	Oroville	38.76	313	⇓P	P	19 45 02.7	0.0
	baz=39						
O04C	Chester	38.80	314	⇑P	P	19 45 02.9	-0.1
	baz=39						
H09A	Durkee	38.82	322	⇓P	P	19 45 01.9	-1.2
	baz=39						
I08A	Drewsey	38.94	321	⇓P	P	19 45 03.2	-0.9
	baz=39						
MNRC	McLaughlin Nat	39.16	311	⇑P	P	19 45 05.6	-0.3
	baz=39						
MCCM	Marconi Confer	39.19	310	⇑P	P	19 45 06.2	-0.1
	baz=39						
M05C	Lookout	39.31	316	⇑P	P	19 45 06.4	-0.9
	baz=39						
H08A	Prairie City	39.34	321	⇑P	P	19 45 06.5	-0.9
	baz=39						
K06A	Valley Falls	39.41	318	⇑P	P	19 45 07.1	-0.9
	baz=39						
L05A	Lakeview	39.42	317	⇑P	P	19 45 07.2	-1.0
	baz=39						
F09A	S2 Ranch, Elgi	39.56	323	⇓P	P	19 45 08.3	-1.0
	baz=40						
J06A	Christmas Vall	39.58	319	⇑P	P	19 45 08.1	-1.4
	baz=40						
O02C	Red Bluff	39.92	313	⇑P	P	19 45 10.5	-1.8
	baz=40						
M03C	McCloud	39.93	315	⇓P	P	19 45 11.1	-1.3
	baz=40						
G08A	Pilot Rock	39.93	322	⇑P	P	19 45 11.5	-1.0
	baz=40						
I06A	Prineville	39.97	320	⇓P	P	19 45 11.7	-1.0
	baz=40						
P01C	Double 8 Ranch	40.03	312	⇓P	P	19 45 12.2	-1.0
	baz=40						
SCHQ	Schefferville	40.26	16	P	P	19 45 14.9	-0.2
	comp=E,3.2nm,0.6s,mb4.2,baz=248,slow=4.2,SNR=7.1						
SCHQ				LR	LR	20 03 20.6	
	comp=E,127nm,18.1s,MS3.8,baz=174,slow=38						
J05A	Fort Rock	40.28	318	⇓P	P	19 45 14.3	-1.0
	baz=40						
SIV	San Ignacio	40.46	143	P	P	19 45 16.5	-0.3
	comp=E,1.5nm,0.8s,mb3.8,baz=350,slow=11,SNR=7.0						
YBH	Yreka Blue Hor	40.53	315	⇑P	P	19 45 16.1	-1.3
	baz=40						
H04A	Detroit Lake	41.56	320	⇓P	P	19 45 24.9	-1.0
	baz=42						
J02A	Umpqua	41.83	317	⇑P	P	19 45 27.0	-1.0
	baz=42						
I03A	Eugene	41.91	318	⇓P	P	19 45 27.4	-1.3
	baz=42						
E05A	Randle	42.26	322	⇑P	P	19 45 31.3	-0.3
	baz=42						
I02A	Mapleton	42.28	318	⇑P	P	19 45 30.5	-1.2
	baz=42						
F03A	Seaside	43.02	320	⇓P	P	19 45 37.5	-0.3
	baz=43						
C04A	Brinnon	43.58	323	⇓P	P	19 45 41.3	-0.9
	baz=44						
FRB	Frobisher Bay	48.04	10	LR	LR	20 08 03.1	
	comp=E,267nm,19.5s,MS4.2,baz=153,slow=38						
BDFB	Brasilia	48.89	130	LR	LR	20 09 01.2	
	comp=E,214nm,18.9s,MS4.2,baz=108,slow=38						
CPUP	Villa Florida	50.84	147	LR	LR	20 12 32.6	
	comp=E,104nm,19.2s,MS3.9,baz=129,slow=41						
ESDC	Sonseca Array	72.60	53	P	P	19 49 06.9	+1.3
	comp=E,1.4nm,0.6s,mb4.1,baz=282,slow=5.8,SNR=10						
ARCES	ARCESS Array B	81.13	19	P	P	19 49 52.5	-1.2
	comp=E,0.5nm,0.5s,mb3.7,baz=295,slow=3.5,SNR=5.6						
ARCES	ARCESS Array B	81.13	19	P	P	19 49 52.5	-1.2
TORD	Torodi Ar. Bea	83.21	78	P	P	19 50 04.8	+0.2
	comp=E,0.2nm,0.4s,mb3.5,baz=287,slow=4.8,SNR=5.6						
TORD				LR	LR	20 22 14.1	
	comp=E,128nm,19.1s,MS4.3,baz=275,slow=32						
FINES	FINESS Array B	84.88	27	P	P	19 50 12.4	-0.7
	comp=E,1.0nm,0.6s,mb4.1,baz=273,slow=3.6,SNR=7.0						
WMQ	Urumqi	119.09	6	ePKP	PKPdf	19 56 28.0	+0.9
HHC	Hu-ho-hao-te	120.38	345	ePKP	PKPdf	19 56 29.0	-0.6
HHC				PKS		20 00 04.5	
HHC				SKS	SKSdf	20 03 40.0	-1.2
HHC				SKKS	SKKSac	20 04 51.5	-3.8
HHC				SS	SS	20 14 25.0	+1.3
HHC				PP	PP		
	comp=Z,122nm,9.9s						
HHC				LR	LR		
	comp=N,74nm,29.4s,MS4.4						
HHC				LR	LR		
	comp=E,99nm,28.5s,MS4.4						
HHC				LR	LR		
	comp=Z,76nm,25.6s,MS4.2						
SSE	Sheshan	125.90	332	ePKP	PKPdf	19 56 40.0	-0.2
NJ2	Nanjing	126.08	335	ePKP	PKPdf	19 56 36.3	-4.2
LZH	Lanzhou	126.51	351	ePKP	PKPdf	19 56 39.8	-1.5
LZH				XPKP		19 56 44.3	
LZH				LR	LR		
	comp=N,147nm,18.5s						
LZH				LR	LR		
	comp=Z,235nm,20.2s,MS4.9						
CD2	Chengdu	131.59	350	ePKP	PKPdf	19 56 47.0	-4.0
ASAR	Alice Springs	142.94	253	PKhKP		19 57 07.0	
	comp=Z,0.8nm,0.7s,baz=102,slow=3.7,SNR=16						

IDC ***28*** *19:59:11.2±1.3, 140N×123.10E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.9/17, mbtmp4.0/8, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/21, Error ellipse: s-maj=50.3km s-min=21.4km az=59.0*

ISCJB ***28*** *19:59:13.9±6.3, 13N±01×123.1E±02, h26km±50km, mb3.9/8, MS3.2/1, Error ellipse: s-maj=29.9km s-min=15.1km az=139.9*

NEIC ***28*** *19:59:13.2±0.6, 125N×123.01E, h10km, mb4.1/2, Error ellipse: s-maj=18.8km s-min=10.3km az=80.0*

ISC 28 19:59:16.4±6.5, 13N±01×1230E±02, h32km±51km, n14, σ0°78/13, mb3.9/8, MS3.2/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	6.30	24	eP		P	Pn	20 00 47.5	+0.4
FITZ	Fitzroy Crossi	19.41	173	eP		P	Pn	20 03 39.9	-1.2
	5.2nm,0.7s								
FITZ	Fitzroy Crossi	19.41	173	P		P	Pn	20 03 40.1	-1.0
	0.2nm,0.3s,baz=4.3,slow=13,SNR=15								
WRAB	Tennant Creek	23.80	153	eP		P	P	20 04 26.0	-0.3
	7.2nm,0.8s,mb4.2								
WRA	Warramunga Arr	23.81	153	P		P	P	20 04 26.1	-0.3
	3.1nm,0.7s,mb3.8,baz=334,slow=9.1,SNR=17								
WB2	Warramunga Arr	23.81	153	eP		P	P	20 04 26.0	-0.4
PSI	Prapat	24.15	274	P		P	P	20 04 30.1	+0.7
	1.9nm,0.4s,mb3.9,baz=124,slow=1.3,SNR=3.7								
JOW	Kunigami	25.92	11	LR		LR	20 15 54.2		
	comp=Z,68nm,19.4s,MS3.2,baz=91,slow=39								
ASAR	Alice Springs	26.93	158	P		P	P	20 04 56.5	+1.7
	1.6nm,1.0s,mb3.5,baz=342,slow=11,SNR=11								
STKA	Stephens Creek	37.36	153	P		P	P	20 06 26.5	+0.6
	2.2nm,0.7s,mb4.1,baz=334,slow=8.9,SNR=4.8								
STKA	Stephens Creek	37.36	153	P		P	P	20 06 26.5	+0.6
SONM	Songino Array	48.59	345	P		P	P	20 07 55.6	-1.2
	0.3nm,0.5s,mb3.6,baz=169,slow=8.3,SNR=4.9								
MAW	Mawson	80.19	200	P		P	P	20 11 23.7	+0.1
	0.9nm,0.8s,mb3.8,baz=43,slow=14,SNR=3.7								
VNDA	Vanda	81.48	172	P		P	P	20 11 30.2	-0.2
	1.7nm,0.8s,mb4.0,baz=306,slow=6.4,SNR=12								

NEIC ***28*** *20:05:03.0±0.6, 143N×12299E, h10km, mb4.1/2, Error ellipse: s-maj=30.3km s-min=9.0km az=60.0*

ISCJB ***28*** *20:05:03.1±3.9, 145N±009×1230E±02, h22km±30km, mb3.8/8, Error ellipse: s-maj=32.1km s-min=8.6km az=135.7*

IDC ***28*** *20:05:07.8±7.3, 135N×12296E, h43km±69km, mb3.7/8, mb1 3.8/9, mb1mx3.7/18, mbtmp3.9/9, ML4.1/1, Error ellipse: s-maj=52.4km s-min=17.0km az=60.0*

ISC 28 20:05:05.5±4.0, 140N±009×1230E±02, h25km±31km, n23, σ0°58/22, mb3.8/8, 1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IPIL	Ipil	6.36	356⇓	eP		P	Pn	20 06 37.4	-0.2
IPIL	Ipil	6.36	356	eP		P	Pn	20 06 37.1	-0.5
PAGZ	Pagadian	6.42	4	eP		P	Pn	20 06 38.1	-0.3
MSLP	Maasin	8.88	12	eP		P	Pn	20 07 23.0	+11
CUYO	Cuyo Island	9.59	348	eP		P	Pn	20 07 22.2	+0.3
KAKA	Kakadu	16.87	146	eP		P	Pn	20 09 00.8	+0.9
	8.2nm,0.6s								
FITZ	Fitzroy Crossi	19.55	172	eP		P	Pn	20 09 31.3	-1.4
	7.9nm,0.6s								
FITZ	Fitzroy Crossi	19.55	172	P		P	Pn	20 09 31.5	-1.2
	0.5nm,0.3s,baz=5.3,slow=7.9,SNR=29								
WRAB	Tennant Creek	23.95	153	eP		P	P	20 10 17.9	+0.2
WRA	Warramunga Arr	23.96	153	P		P	P	20 10 17.7	0.0
	2.6nm,0.5s,mb3.9,baz=335,slow=9.3,SNR=19								
WB2	Warramunga Arr	23.96	153	eP		P	P	20 10 17.6	-0.2
PSI	Prapat	24.08	274	P		P	P	20 10 19.6	+0.7
	2.2nm,0.6s,mb3.8,baz=76,slow=12,SNR=2.6								
AS31	Alice Springs	27.09	158	eP		P	P	20 10 46.7	+0.6
ASAR	Alice Springs	27.09	158	P		P	P	20 10 46.1	0.0
	0.9nm,0.6s,mb3.5,baz=342,slow=14,SNR=14								
ASAR				PcP		PcP	20 14 07.2	+0.5	
	0.4nm,0.6s,baz=352,slow=2.8,SNR=4.5								
ASPA	Alice Springs	27.09	158	eP		P	P	20 10 46.7	+0.6
STKA	Stephens Creek	37.51	154	P		P	P	20 12 17.1	-0.2
	1.5nm,0.6s,mb3.9,baz=331,slow=9.4,SNR=5.9								
SONM	Songino Array	48.44	345	P		P	P	20 13 46.7	+1.0
	0.7nm,0.6s,mb3.9,baz=159,slow=8.1,SNR=6.0								
MKAR	Makanchi Array	57.42	328	P		P	P	20 14 52.4	+0.4
	0.3nm,0.6s,mb3.5,baz=110,slow=7.0,SNR=3.5								
MKAR				PcP		PcP	20 15 44.9	-0.8	
	1.2nm,0.9s,baz=144,slow=5.2,SNR=4.4								
ZRNK	Zerenda	67.97	328	eP		P	P	20 16 01.5	-0.8
AKTK	Aktyubinsk	73.19	323	P		P	P	20 16 33.9	-0.3
AKTO	Aktyubinsk	73.19	323	P		P	P	20 16 33.9	-0.3
	1.0nm,0.7s,mb3.9,baz=143,slow=7.7,SNR=4.1								
VNDA	Vanda	81.63	172	P		P	P	20 17 20.7	-0.7
	1.7nm,0.8s,mb4.0,baz=312,slow=7.4,SNR=13								
LVC	Limon Verde	155.96	152	eP		PKPdf		20 24 56.2	-1.3

IDC ***28*** *20:48:24.5±0.9, 129N×12299E, h0km, mb3.9/8, mb1 4.1/9, mb1mx4.0/17, mbtmp3.9/9, ML4.1/1, MS3.4/3, Ms1 3.4/3, ms1mx2.8/25, Error ellipse: s-maj=78.8km s-min=16.1km az=67.0*

NEIC ***28*** *20:48:25.9±0.4, 129N×12306E, h10km, mb4.1/2, Error ellipse: s-maj=19.4km s-min=7.2km az=81.0*

ISCJB ***28*** *20:48:27.5±0.5, 133N±007×123.1E±02, h33km, mb3.9/9, MS3.5/3, Error ellipse: s-maj=24.7km s-min=9.1km az=157.1*

ISC 28 20:48:29.6±0.5, 128N±007×1231E±02, h35km, n19, σ0°83/17, mb3.9/9, MS3.5/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	6.24	23	P		P	Pn	20 49 58.1	-1.1
	438nm,0.4s								
FITZ	Fitzroy Crossi	19.42	173	eP		P	Pn	20 52 52.9	-1.3
	7.2nm,0.7s								
FITZ	Fitzroy Crossi	19.42	173	P		P	Pn	20 52 53.7	-0.5
	0.4nm,0.3s,baz=10,slow=11,SNR=23								
MBWA	Marble

JMJ			S	Sn	20 55 44.0	+0.3
JTJ	**Tarama**	**1.39 311**	P	Pn	20 55 30.9	0.0
JTJ			S	Sn	20 55 48.2	-0.3
JIJ	**Ishigaki jima**	**1.68 292**	P	Pn	20 55 35.7	+0.7
JIJ			S	Sn	20 55 55.5	-0.3
JKRS	**Kuro-shima**	**1.76 287**	P	Pn	20 55 37.3	+1.3
JKRS			S	Sn	20 55 58.0	+0.3
HATJ	**Hateruma jima**	**1.90 280**	P	Pn	20 55 39.3	+1.3
HATJ			S	Sn	20 56 00.8	-0.4
IRIF	**Iriomote-Funau**	**2.03 288**	P	Pn	20 55 41.0	+1.2
IRIF			S	Sn	20 56 05.2	+0.8
YOJ	**Yonaguni jima**	**2.69 286**	P	Pn	20 55 50.5	+1.6
JKE	**Kume jima 2**	**2.72 18**	P	Pn	20 55 49.8	+0.5
JAGN	**Aguni-jima**	**3.11 24**	P	Pn	20 56 56.1	+1.4
JOW	**Kunigami**	**3.79 35**	P	Pn	20 56 04.8	+0.8
JIH	**Iheya**	**3.81 30**	P	Pn	20 56 04.4	+0.2
JMZ	**Minamidaito 2**	**5.31 66**	P	Pn	20 56 24.6	-0.2

MAN 28 21:12:15.9, 1006N×12572E, h27km, mb3.1, ML4.4, MS2.8, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.35**	**220**⇓	*eP*	Pb	21 12 24.8	+0.8
SCPH				*eS*	Sb	21 12 33.6	+4.3
MSLP	**Maasin**	**0.85**	**275**	*eP*	Pb	21 12 32.1	0.0
PLP	**Palo**	**1.32**	**327**	*eP*	Pn	21 12 35.5	-3.1
PLP				*eS*	Sn	21 12 53.6	-1.7
BUKP	**Musuan**	**2.26**	**197**	*eP*	Pn	21 12 52.1	+0.7
BUKP				*eS*	Sn	21 13 24.6	+6.1
GUIM	**Jordan**	**3.13**	**281**	*eP*	Pn	21 13 03.9	+0.4
PVCP	**Virac**	**3.84**	**337**	*eP*	Pn	21 13 15.0	+1.7

*BJI **28** 21:33:11.6, 101N×12338E, h28km, mB4.8, mb4.7, Ms4.0, Msz4.0*
*ISCJB **28** 21:33:12.5±0.3, 135N±005×12290E±008, h10km, mb4.6/34, MS3.6/7, Error ellipse: s-maj=13.0km s-min=5.3km az=131.8*
*IDC **28** 21:33:12.5±0.5, 136N×12290E, h0km, mb4.4/12, mb1 4.5/13, mb1mx4.4/19, mbtmp4.4/13, ML4.7/1, MS3.6/6, Ms1 3.6/6, ms1mx3.2/33, Error ellipse: s-maj=27.0km s-min=12.7km az=73.0*
*NEIC **28** 21:33:14.1±3.5, 134N×12287E, h11km±22km, mb4.8/19, Error ellipse: s-maj=12.5km s-min=4.8km az=59.0*
NEIC Felt [II] at Gorontalo.
*MOS **28** 21:33:15.7±0.8, 140N×12298E, h33km, mb4.8/17, Error ellipse: s-maj=20.2km s-min=9.0km az=111.2*

ISC 28 21:33:15.2±4.7, 132N±005×12291E±009, h16km±29km, n81, σ0°95/75, mb4.6/34, MS3.6/7, 5C-1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**8.16**	**305**	*eP*	**Pn**	**21 35 12.5**	**-0.5**
KSM	**Kuching**	**12.60**	**271**	P	**Pn**	**21 36 11.3**	**-2.4**
KAKA	**Kakadu**	**16.85**	**146**	*eP*	**Pn**	**21 37 10.5**	**+0.2**
	29nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.48**	**172**⇑	*iP*	**Pn**	**21 37 42.2**	**-0.5**
	26nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.48**	**172**	P	**Pn**	**21 37 42.3**	**-0.4**
	1.5nm,0.3s,baz=12,slow=11,SNR=84						
MBWA	**Marble Bar**	**22.55**	**188**	*eP*	**P**	**21 38 14.2**	**-0.3**
	17nm,1.2s,mb4.3						
WRAB	**Tennant Creek**	**23.92**	**153**	*eP*	**P**	**21 38 28.3**	**0.0**
WRAB				pmax	pmax		
	comp=Z,32nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**23.92**	**153**	*eP*	**P**	**21 38 28.3**	**0.0**
	comp=Z,32nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**23.92**	**153**	P	**P**	**21 38 28.5**	**+0.2**
	comp=Z,12nm,0.6s,mb4.5,baz=335,slow=9.6,SNR=102						
WRA	**Warramunga Arr**	**23.92**	**153**	P	**P**	**21 38 28.5**	**+0.1**
WRA				pmax	pmax		
	comp=Z,12nm,0.6s						
WB2	**Warramunga Arr**	**23.93**	**153**	*eP*	**P**	**21 38 28.4**	**0.0**
WB2	**Warramunga Arr**	**23.93**	**153**	*eP*	**P**	**21 38 27.9**	**-0.6**
PSI	**Prapat**	**24.01**	**274**	P	**P**	**21 38 30.4**	**+1.2**
	comp=Z,8.4nm,0.6s,mb4.3,baz=103,slow=4.7,SNR=14						
PSI	**Prapat**	**24.01**	**274**	P	**P**	**21 38 30.5**	**+1.3**
PSI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.3						
JOW	**Kunigami**	**25.89**	**11**	LR	LR	21 47 48.2	
	comp=Z,66nm,19.5s,MS3.2,baz=299,slow=34						
AS31	**Alice Springs**	**27.04**	**157**	*eP*	**P**	**21 38 58.8**	**+2.1**
ASPA	**Alice Springs**	**27.04**	**157**	*eP*	**P**	**21 38 59.0**	**+2.3**
ASAR	**Alice Springs**	**27.04**	**157**	P	**P**	**21 38 57.2**	**+0.5**
	comp=Z,2.3nm,0.8s,mb3.8,baz=341,slow=7.7,SNR=27						
ASAR				PcP	PcP	21 42 17.9	+0.2
	comp=Z,1.5nm,0.7s,baz=338,slow=2.4,SNR=7.8						
ASAR				LR	LR	21 50 40.3	
	comp=Z,85nm,21.6s,MS3.3,baz=84,slow=39						
ASAR	**Alice Springs**	**27.04**	**157**	P	**P**	**21 38 57.2**	**+0.5**
ASAR						21 42 18.0	
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR				MLR	MLR		
	comp=Z,85nm,21.6s						
FORT	**Forrest**	**32.29**	**172**	*eP*	**P**	**21 39 43.1**	**-0.2**
	comp=Z,26nm,0.6s,mb5.2						
KLBR	**Kellerberrin**	**33.09**	**188**	*eP*	**P**	**21 39 49.7**	**-0.6**
	comp=Z,5.7nm,0.6s,mb4.7						
NWAO	**Narrogin (SRO)**	**34.48**	**188**	P	**P**	**21 40 01.4**	**-0.9**
	comp=Z,6.0nm,0.7s,mb4.6,baz=6.3,slow=9.2,SNR=4.5						
NWAO				LR	LR	21 54 17.5	
	comp=Z,86nm,18.8s,MS3.5,baz=206,slow=37						
NWAO	**Narrogin (SRO)**	**34.48**	**188**	P	**P**	**21 40 01.5**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NWAO				MLR	MLR		
	comp=Z,86nm,18.8s						
STKA	**Stephens Creek**	**37.47**	**153**⇑	*iP*	**P**	**21 40 28.5**	**+0.6**
	comp=Z,5.7nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**37.47**	**153**	P	**P**	**21 40 27.2**	**-0.7**
	comp=Z,7.9nm,0.8s,mb4.6,baz=323,slow=8.8,SNR=16						
MJAR	**Matsushiro Arr**	**37.80**	**20**	P	**P**	**21 40 29.4**	**-1.3**
	comp=Z,1.2nm,0.7s,mb3.7,baz=182,slow=8.5,SNR=5.9						
MJAR				LR	LR	21 54 08.6	
	comp=Z,96nm,20.4s,MS3.6,baz=210,slow=33						
MJAR	**Matsushiro Arr**	**37.80**	**20**	P	**P**	**21 40 29.4**	**-1.3**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,96nm,20.4s						
LZH	**Lanzhou**	**38.85**	**335**	*eP*	**P**	**21 40 42.3**	**+2.7**
LZH				AP	pP	21 40 47.5	+3.1
LZH				XP	sP	21 40 50.5	+4.2
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.7						
BJI	**Beijing**	**39.02**	**352**	P	**P**	**21 40 41.0**	**0.0**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.4						
LSA	**Lhasa**	**41.33**	**316**	P	**P**	**21 41 02.3**	**+2.1**
GTA	**Gaotai**	**43.37**	**334**	*eP*	**P**	**21 41 17.8**	**+1.0**
GTA				AP	pP	21 41 22.0	+0.3
GTA				XP	sP	21 41 25.5	+1.9
GTA				SCS	ScS	21 51 12.0	-4.3
GTA				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb4.2						
GTA				AMB	AMB		
	comp=Z,65nm,4.6s						
GTA				LR	LR		
	comp=N,107nm,14.1s,MS4.0						
GTA				LR	LR		
	comp=E,111nm,16.0s,MS4.0						
GTA				LR	LR		
	comp=Z,102nm,11.8s,MS4.0						
GUN	**Gumba**	**44.20**	**310**	*eP*	**P**	**21 41 24.7**	**+1.3**
PKI	**Pulchoki**	**44.39**	**309**	*eP*	**P**	**21 41 25.8**	**+0.9**
	comp=Z,39nm,1.2s,mb5.0						
PKI	**Pulchoki**	**44.39**	**309**	*eP*	**P**	**21 41 25.8**	**+0.9**
PKI				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.0						
KKN	**Kakani**	**44.60**	**310**	*eP*	**P**	**21 41 27.5**	**+0.9**
	comp=Z,20nm,0.9s,mb4.9						
KKN	**Kakani**	**44.60**	**310**	*eP*	**P**	**21 41 27.5**	**+0.9**
KKN				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
DMN	**Daman**	**44.64**	**309**	*eP*	**P**	**21 41 28.0**	**+1.0**
	comp=Z,48nm,1.0s,mb5.3						
GKN	**Gorkha**	**45.20**	**309**	*eP*	**P**	**21 41 31.8**	**+0.4**
	comp=Z,54nm,1.1s,mb5.3						
KOLN	**Koldanda**	**45.89**	**309**	*eP*	**P**	**21 41 37.0**	**+0.1**
	comp=Z,35nm,0.7s,mb5.4						
ASAJ	**Asahikawa**	**46.06**	**20**	P	**P**	**21 41 38.0**	**-0.3**
	comp=Z,6.4nm,1.0s,mb4.5,baz=180,slow=5.1,SNR=4.4						
ASAJ	**Asahikawa**	**46.06**	**20**	P	**P**	**21 41 38.0**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HYB	**Hyderabad**	**46.43**	**293**	*iP*	**P**	**21 41 41.5**	**+0.4**
ULN	**Ulaanbaatar**	**48.36**	**346**	*eP*	**P**	**21 41 56.5**	**+0.4**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	**48.36**	**346**	*eP*	**P**	**21 41 56.5**	**+0.3**
	comp=Z,8.2nm,1.1s,mb4.7						
SONM	**Songino Array**	**48.49**	**345**	P	**P**	**21 41 57.6**	**+0.5**
	comp=Z,4.5nm,0.8s,mb4.5,baz=163,slow=8.2,SNR=23						
SONM	**Songino Array**	**48.49**	**345**	P	**P**	**21 41 57.6**	**+0.4**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAK	**Zakamensk**	**51.65**	**344**	*eP*	**P**	**21 42 21.3**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TLY	**Talaya**	**52.74**	**345**	*eP*	**P**	**21 42 29.4**	**+0.2**
TLY				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
MOY	**Mondy**	**53.45**	**343**	*eP*	**P**	**21 42 35.0**	**+0.5**
BOD	**Bodaibo**	**56.78**	**354**	*eP*	**P**	**21 42 57.7**	**-0.8**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
MKAR	**Makanchi Array**	**57.45**	**328**	P	**P**	**21 43 03.5**	**+0.2**
	comp=Z,0.8nm,0.4s,mb4.1,baz=116,slow=8.2,SNR=9.0						
MKAR				PcP	PcP	21 43 55.9	-1.0
	comp=Z,2.5nm,0.7s,baz=128,slow=5.7,SNR=5.4						
MKAR	**Makanchi Array**	**57.45**	**328**	P	**P**	**21 43 03.5**	**+0.2**
MKAR						21 43 55.9	
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
NVS	**Novosibirsk**	**62.37**	**335**	*eP*	**P**	**21 43 33.7**	**-3.4**
BRVK	**Borovoye**	**67.39**	**329**	P	**P**	**21 44 08.1**	**-1.6**
CHKZ	**Chkalovo**	**67.53**	**329**	*eP*	**P**	**21 44 09.7**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.5						
CHKZ	**Chkalovo**	**67.53**	**329**	*eP*	**P**	**21 44 09.7**	**-0.9**
	comp=Z,8.0nm,1.5s,mb4.5						
ZRNK	**Zerenda**	**68.00**	**328**	*eP*	**P**	**21 44 12.8**	**-0.8**
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ZRNK	**Zerenda**	**68.00**	**328**	*eP*	**P**	**21 44 12.8**	**-0.8**
	comp=Z,3.0nm,0.6s,mb4.5						
MIR	**Mirnyy**	**70.98**	**192**	*d iP*	**P**	**21 44 23.5**	**-8.5**
MIR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
AKTK	**Aktyubinsk**	**73.21**	**323**	P	**P**	**21 44 44.8**	**-0.6**
AKTO	**Aktyubinsk**	**73.21**	**323**	P	**P**	**21 44 44.8**	**-0.6**
	baz=96,slow=10						
ARU	**Arti**	**74.96**	**329**	*eP*	**P**	**21 44 54.0**	**-1.6**
MAW	**Mawson**	**80.20**	**200**⇑	*iP*	**P**	**21 45 24.4**	**-0.5**
	comp=Z,4.2nm,0.8s,mb4.4						
MAW	**Mawson**	**80.20**	**200**	P	**P**	**21 45 24.2**	**-0.7**
	comp=Z,6.9nm,1.0s,mb4.5,baz=52,slow=6.7,SNR=13						
MAW	**Mawson**	**80.20**	**200**⇑	*iP*	**P**	**21 45 24.4**	**-0.5**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VNDA	**Vanda**	**81.56**	**172**	P	**P**	**21 45 32.2**	**+0.1**
	comp=Z,7.0nm,0.8s,mb4.7,baz=312,slow=6.1,SNR=47						
VNDA				LR	LR	22 19 38.8	
	comp=Z,87nm,20.8s,MS4.1,baz=308,slow=34						
VNDA	**Vanda**	**81.56**	**172**	P	**P**	**21 45 32.2**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VNDA				MLR	MLR		
	comp=Z,87nm,20.8s						
SBA	**Scott Base**	**82.51**	**171**	*eP*	**P**	**21 45 37.3**	**+0.2**
SBA				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
SBA	**Scott Base**	**82.51**	**171**	*eP*	**P**	**21 45 37.3**	**+0.2**
	comp=Z,13nm,1.3s,mb4.8						
MALT	**Malatya**	**84.85**	**308**	*eP*	**P**	**21 45 49.2**	**+0.1**
MALT				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.7						
MALT	**Malatya**	**84.85**	**308**	*eP*	**P**	**21 45 49.2**	**+0.1**
	comp=Z,7.7nm,1.4s,mb4.6						
BRTR	**Keskin Array B**	**88.60**	**310**	P	**P**	**21 46 06.7**	**-0.7**
	comp=Z,0.6nm,0.7s,mb4.1,baz=148,slow=6.2,SNR=4.3						
BRTR	**Keskin Array B**	**88.60**	**310**	P	**P**	**21 46 06.7**	**-0.7**
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SYO	**Syowa Base**	**88.82**	**201**⇑	*eP*	**P**	**21 46 07.6**	**-0.8**
QSPA	**South Pole Qui**	**91.24**	**180**	*eP*	**P**	**21 46 19.6**	**-0.1**
	comp=Z,14nm,1.4s,mb5.1						
ARCES	**ARCESS Array B**	**91.37**	**340**	LR	LR	22 31 27.0	
	comp=Z,31nm,18.8s,MS3.8,baz=69,slow=38						
INK	**Inuvik**	**93.78**	**21**	P	**P**	**21 46 30.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**119.97**	**286**	PKP	PKPdf	21 52 04.0	-1.0
	comp=Z,0.7nm,0.7s,baz=55,slow=2.2,SNR=6.3						
CFAA	**Coronel Fontan**	**148.09**	**162**	PKPbc	PKPbc	21 53 00.9	+0.8
	comp=Z,1.0nm,0.6s,baz=202,slow=5.0,SNR=6.7						
LPAZ	**La Paz**	**161.57**	**144**	PKP	PKPdf	21 53 17.4	+2.1
	comp=Z,0.5nm,0.7s,baz=111,slow=0.9,SNR=3.6						
LPAZ				PKPab	PKPab	21 54 03.8	+3.7
	comp=Z,1.5nm,0.7s,baz=192,slow=3.6,SNR=6.4						
SIV	**San Ignacio**	**164.90**	**165**	PKP	PKPdf	21 53 19.6	+1.2
	comp=Z,0.3nm,0.3s						
SIV				PKPab	PKPab	21 54 16.2	+1.5
	comp=Z,0.7nm,0.5s,baz=166,slow=6.0,SNR=4.8						

KRSC 28 21:36:21, 5100N×15808E, h37km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.46**	**10**	*eP*	Pn	21 36 45.1	+0.3
RUS				*iS*	Sn	21 37 02.9	+0.2
MIPR	**Malaya Ipel'ka**	**1.52**	**328**	*eP*	Pn	21 36 46.8	+1.1
MIPR				*iS*	Sn	21 37 05.3	+1.1
GRL	**Gorelyy**	**1.55**	**360**	*eP*	Pn	21 36 47.2	+1.1
GRL				*iS*	Sn	21 37 06.3	+1.2
ALID	**Alaid**	**1.61**	**266**	*eP*	Pn	21 36 45.9	-0.9
ALID				*iS*	Sn	21 37 04.4	-1.9
AVH	**Avacha**	**2.31**	**10**	*eP*	Pn	21 36 59.2	+2.7
AVH				*iS*	Sn	21 37 26.8	+3.2
NLC	**Nalytchevo**	**2.31**	**19**	P	Pn	21 36 55.8	-0.7
NLC				*iS*	Sn	21 37 21.4	-2.3
SPN	**Mys Shipunski**	**2.42**	**29**	*eP*	Pn	21 37 00.1	+2.1
SPN				*iS*	Sn	21 37 28.2	+1.8
GNL	**Ganaly**	**2.70**	**358**	*eP*	Pn	21 37 04.2	+2.3
GNL				*iS*	Sn	21 37 35.6	+2.3
MKZ	**Mys Kozlova**	**4.20**	**30**	*eP*	Pn	21 37 24.8	+2.4
MKZ				*iS*	Sn	21 38 11.0	+0.8
KBTR	**Krutoberegovo**	**5.93**	**27**	*eP*	Pn	21 37 48.4	+2.1

*IDC **28** 21:40:30.8±1.1, 134N×12299E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/16, mbtmp3.8/7, Error ellipse: s-maj=117.9km s-min=18.6km az=68.0*
*NEIC **28** 21:40:32.3±0.6, 133N×12299E, h10km, mb4.0/2, Error ellipse: s-maj=32.5km s-min=9.6km az=71.0*
*ISCJB **28** 21:40:33.9±0.8, 13N±01×122E±03, h33km, mb3.8/7, Error ellipse: s-maj=49.1km s-min=13.9km az=139.2*

ISC 28 21:40:36.1±0.8, 13N±01×129E±03, h35km, n11, σ0°28/11, mb3.8/7, 1C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.43**	**172**⇑	*iP*	**Pn**	**21 45 00.2**	**-0.5**
	13nm,2.0s						
FITZ	**Fitzroy Crossi**	**19.43**	**172**	P	**Pn**	**21 44 59.9**	**-0.8**
	0.6nm,0.3s,baz=1.5,slow=11,SNR=25						
MBWA	**Marble Bar**	**22.49**	**188**	*eP*	**P**	**21 45 32.6**	**+0.3**
WRAB	**Tennant Creek**	**23.88**	**152**	*eP*	**P**	**21 45 46.2**	**-0.1**
	4.0nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**23.88**	**152**	P	**P**	**21 45 46.6**	**+0.3**
	2.2nm,0.4s,mb3.9,baz=334,slow=10.0,SNR=23						
WB2	**Warramunga Arr**	**23.89**	**152**	*eP*	**P**	**21 45 46.4**	**0.0**
ASAR	**Alice Springs**	**27.00**	**157**	P	**P**	**21 46 14.6**	**0.0**
	0.3nm,0.4s,mb3.1,baz=333,slow=7.9,SNR=4.9						
STKA	**Stephens Creek**	**37.43**	**153**	P	**P**	**21 47 45.8**	**-0.1**
	1.0nm,0.5s,mb3.9,baz=338,slow=16,SNR=3.0						
SONM	**Songino Array**	**48.55**	**345**	P	**P**	**21 49 15.7**	**0.0**
	0.6nm,0.5s,mb3.9,baz=164,slow=9.0,SNR=4.5						
MKAR	**Makanchi Array**	**57.48**	**328**	P	**P**	**21 50 21.4**	**-0.2**
	0.5nm,0.7s,mb3.7,baz=111,slow=7.1,SNR=3.5						
VNDA	**Vanda**	**81.50**	**172**	P	**P**	**21 52 50.1**	**+0.3**
	1.1nm,0.7s,mb3.9,baz=310,slow=6.9,SNR=7.6						

*NEIC **28** 21:45:57.9±1.9, 1497S×16701E, h10km, mb4.1/1, Error ellipse: s-maj=38.5km s-min=25.5km az=62.0*

IDC 28 21:45:45.2±83.0, 1420S×16812E, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.9/12, mbtmp4.2/4, ML4.2/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/20, 1C, Error ellipse: s-maj=1404.0km s-min=55.2km az=63.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.99**	**191**	*eP*	Pn	21 47 41.0	-1.5
DZM	**Mont Dzumac**	**7.99**	**191**	Pn	Pn	21 47 41.5	-1.0
	3.1nm,0.3s,baz=318,slow=21,SNR=23						
RAO	**Raoul Island**	**19.79**	**141**	LR	LR	21 54 50.6	
	comp=Z,147nm,21.3s,baz=178,slow=28						
STKA	**Stephens Creek**	**29.96**	**230**⇑	*iP*	P	21 51 56.5	+1.4
	2.9nm,0.8s						
STKA	**Stephens Creek**	**29.96**	**230**	P	P	21 51 56.4	+1.3
	3.0nm,0.7s,baz=40,slow=8.5,SNR=7.4						
WRA	**Warramunga Arr**	**32.75**	**255**	P	P	21 52 19.5	-0.2
	0.6nm,0.6s,baz=85,slow=9.4,SNR=4.5						
ASAR	**Alice Springs**	**33.63**	**249**	P	P	21 52 27.6	+0.2
	3.1nm,0.8s,baz=80,slow=9.0,SNR=21						
PDAR	**Pinedale Array**	**93.99**	**47**	LR	LR	22 35 58.3	
	comp=Z,22nm,18.4s,baz=252,slow=32						

*IDC **28** 21:46:02.9±1.1, 135N×12297E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.8/16, mbtmp3.8/8, ML3.8/1, Error ellipse: s-maj=82.2km s-min=18.7km az=68.0*
*NEIC **28** 21:46:04.5±0.6, 129N×12284E, h10km, mb3.8/1, Error ellipse: s-maj=33.8km s-min=10.7km az=71.0*

ISC 28 21:46:08.3±0.8, 12N±01×128E±03, h35km, n12, σ0°54/12, mb3.7/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.42**	**172**	*eP*	**Pn**	**21 50 32.1**	**-0.7**
	5.3nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.42**	**172**	P	**Pn**	**21 50 32.5**	**-0.3**
	0.2nm,0.3s,baz=0.2,slow=11,SNR=10						
MBWA	**Marble Bar**	**22.45**	**187**	P	**P**	**21 51 03.7**	**-0.4**
WRA	**Warramunga Arr**	**23.91**	**152**	P	**P**	**21 51 18.7**	**-0.1**
	1.4nm,0.5s,mb3.7,baz=332,slow=10.0,SNR=14						
WB2	**Warramunga Arr**	**23.92**	**152**	*eP*	**P**	**21 51 18.9**	**0.0**
ASAR	**Alice Springs**	**27.02**	**157**	P	**P**	**21 51 48.0**	**+1.1**
	0.6nm,0.7s,mb3.3,baz=342,slow=14,SNR=5.1						
STKA	**Stephens Creek**	**37.46**	**153**	P	**P**	**21 53 17.9**	**-0.4**
	1.2nm,0.6s,mb3.9,baz=318,slow=14,SNR=2.8						
SONM	**Songino Array**	**48.54**	**345**	P	**P**	**21 54 47.1**	**-0.8**
	0.7nm,0.6s,mb3.9,baz=159,slow=8.4,SNR=4.3						
MKAR	**Makanchi Array**	**57.45**	**328**	P	**P**	**21 55 54.1**	**+0.6**
	0.2nm,0.4s,mb3.5,baz=133,slow=8.1,SNR=3.6						
MAW	**Mawson**	**80.07**	**200**	P	**P**	**21 58 14.8**	**+0.5**
	0.5nm,0.9s,mb4.0,baz=67,slow=8.9,SNR=4.5						
MAW	**Mawson**	**80.07**	**200**	P	**P**	**21 58 14.8**	**+0.5**
VNDA	**Vanda**	**81.49**	**172**	P	**P**	**21 58 21.9**	**0.0**
	1.5nm,0.8s,mb4.0,baz=299,slow=8.2,SNR=8.7						

*ISCJB **28** 21:55:31.0±0.5, 2164S±005×67.15W±006, h189km±6km, mb4.2/12, Error ellipse: s-maj=9.8km s-min=7.4km az=4.0*
*NEIC **28** 21:55:32.2±0.5, 21655×67.10W, h183km±5km, mb4.2/4, Error ellipse: s-maj=8.7km s-min=6.7km az=91.0*
*IDC **28** 21:55:32.2±0.8, 2164S×67.10W, h182km±8km, mb4.0/9, mb1 3.9/16, mb1mx3.8/21, mbtmp4.3/16, Error ellipse: s-maj=13.6km s-min=12.0km az=102.0*

ISC 28 21:55:31.8±0.5, 2164S±004×6718W±006, h181km±7km, n39, σ1°26/45, mb4.2/12, 1C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.88**	**238**	P	**Pn**	**21 56 09.8**	**+2.2**
	52nm,0.3s,SNR=859						
LVC				S	**Sn**	**21 56 37.7**	**+2.4**
	142nm,0.3s,SNR=20						
LVC	**Limon Verde**	**1.88**	**238**	P	**Pn**	**21 56 09.8**	**+2.2**
LVC				*eS*	**Sn**	**21 56 37.5**	**+2.2**
LVC				S	**Sn**	**21 56 37.7**	**+2.4**
CEN1	**Los Morros**	**3.29**	**237**⇑	*iP*	**Pn**	**21 56 27.5**	**+3.5**
CEN1				*iS*	**Sn**	**21 57 08.3**	**+3.6**
CEN1				AML	AML	21 57 09.6	
	comp=N,589nm,0.5s						
ANCH	**Antofagasta**	**3.61**	**235**	*eP*	**Pn**	**21 56 29.1**	**+1.1**
ANCH				*iS*	**Sn**	**21 57 10.2**	**-1.6**
ANCH				AML	AML	21 57 12.6	
	comp=N,1μm,0.1s						
ANCH	**Antofagasta**	**3.61**	**235**	*eP*	**Pn**	**21 56 29.1**	**+1.1**
ANCH				*iS*	**Sn**	**21 57 10.2**	**-1.6**
CPN1	**Cerro Paranal**	**4.20**	**224**	*eP*	**Pn**	**21 56 36.3**	**+0.8**
CPN1				*iS*	**Sn**	**21 57 23.4**	**-1.8**
LPAZ	**La Paz**	**5.40**	**350**	P	**Pn**	**21 56 53.9**	**+3.0**
	comp=N,10.0nm,0.3s,baz=161,slow=7.8,SNR=253						
LPAZ	**La Paz**	**5.40**	**350**	P	**Pn**	**21 56 53.9**	**+3.0**
**

mb1mx3.5/16, **mbtmp3.6**/4, **ML3.7**/1, **Error ellipse: s-maj=154.3km s-min=88.1km az=60.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.86**	**172**	P	Pn	22 01 34.4	-2.4
	0.2nm,0.3s,baz=350,slow=10,SNR=8.1						
WRA	**Warramunga Arr**	**24.33**	**153**	P	P	22 02 20.7	-1.3
	0.9nm,0.7s,baz=334,slow=9.5,SNR=5.5						
ASAR	**Alice Springs**	**27.45**	**157**	P	P	22 02 52.5	+2.2
	0.3nm,0.5s,baz=342,slow=15,SNR=3.9						
VNDA	**Vanda**	**81.93**	**172**	P	P	22 09 23.9	-0.3
	0.3nm,0.6s,baz=323,slow=5.6,SNR=3.5						

ISCJB ***28*** *22:19:39.1±2.7, 533S±009×1405E±02, h7km±20km, mb3.6/1, Error ellipse: s-maj=29.2km s-min=13.3km az=29.8*

IDC ***28*** *22:19:41.3±5.1, 535S×14021E, h0km, mb3.5/1, mb1 4.0/3, mb1mx3.7/9, mbtmp3.8/3, ML4.1/2, Error ellipse: s-maj=183.8km s-min=32.6km az=92.0*

NEIC ***28*** *22:19:49.8±4.1, 550S×140.19E, h72km±30km, mb3.9/2, Error ellipse: s-maj=46.5km s-min=17.5km az=78.0*

ISC 28 22:19:49.3±1.9, 560S±010×1406E±01, h85km±16km, n10, σ0§98/15, mb3.5/1, 1C, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**10.73**	**228**	*e*P	**Pn**	**22 22 17.7**	**-2.3**
	15nm,0.4s						
KAKA				*e*S	**Sn**	**22 24 19.1**	**+0.9**
WRAB	**Tennant Creek**	**15.50**	**203**	*e*Pn	**Pn**	**22 23 23.6**	**+0.7**
	8.6nm,0.6s						
WRAB				*e*Sn	**Sn**	**22 26 14.6**	**+0.6**
WB2	**Warramunga Arr**	**15.51**	**203**	⇑*i*P	**Pn**	**22 23 23.9**	**+0.8**
WB2				*e*S	**S**	**22 26 23.6**	**-0.9**
WRA	**Warramunga Arr**	**15.52**	**203**	Pn	**Pn**	**22 23 23.2**	**+0.1**
	1.0nm,0.3s,baz=20,slow=12,SNR=7.8						
WRA				Sn	**Sn**	**22 26 18.7**	**+4.4**
	0.2nm,0.3s,baz=22,slow=23,SNR=3.9						
AS31	**Alice Springs**	**19.09**	**199**	P	**Pn**	**22 24 06.1**	**-0.7**
ASAR	**Alice Springs**	**19.10**	**199**	P	**Pn**	**22 24 06.5**	**-0.4**
	0.5nm,0.3s,baz=20,slow=9.8,SNR=20						
FITZ	**Fitzroy Crossi**	**19.20**	**228**	*e*P	**Pn**	**22 24 04.8**	**-3.3**
	2.7nm,0.6s						
FITZ				*e*S	**S**	**22 27 39.1**	**-0.1**
NWAO	**Narrogin (SRO)**	**34.84**	**216**	P	**P**	**22 26 33.2**	**+1.2**
MKAR	**Makanchi Array**	**73.22**	**322**	P	**P**	**22 31 11.8**	**+0.8**
	0.2nm,0.3s,mb3.5,baz=101,slow=5.1,SNR=2.8						
ZRNK	**Zerenda**	**83.52**	**325**	P	**P**	**22 32 07.4**	**-0.4**

ISCJB ***28*** *22:22:41.7±1.7, 4081N±007×4395E±008, h9km, Error ellipse: s-maj=11.0km s-min=8.2km az=34.1*

TIF ***28*** *22:22:45.6, 4094N×4421E, h9km±1km*

MOS ***28*** *22:23:01.6±0.6, 4172N×4417E, h32km, mb3.7/1, Error ellipse: s-maj=69.5km s-min=11.8km az=89.0*

ISC 28 22:22:42.7±1.7, 4085N±008×4400E±008, h1km±5km, n13, σ0§87/26, 6C-1D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZR	**Kazreti**	**0.62**	**30**	P	**Pg**	**22 22 55.2**	**+0.7**
KZR				S	**Sg**	**22 23 02.1**	**-0.5**
MTA	**Mtatsminda**	**1.03**	**35**	P	**Pg**	**22 23 02.4**	**-0.1**
MTA				S	**Sg**	**22 23 14.8**	**-1.2**
TBLG	**Delisi**	**1.04**	**32**	P	**Pg**	**22 23 02.8**	**+0.1**
TBLG				S	**Sg**	**22 23 15.6**	**-0.6**
GOR	**Gori**	**1.14**	**4**	P	**Pg**	**22 23 05.1**	**+0.5**
GOR				S	**Sg**	**22 23 20.9**	**+1.5**
DGRG	**David-gareji**	**1.20**	**59**	P	**Pg**	**22 23 06.2**	**+0.4**
DGRG				S	**Sg**	**22 23 22.3**	**+1.1**
DUS	**Dusheti**	**1.35**	**23**	P	**Pn**	**22 23 09.5**	**+0.9**
DUS				S	**Sg**	**22 23 27.4**	**+1.3**
ZEI	**Tsey**	**1.92**	**358**	⇑*i*PG	**Pg**	**22 23 20.0**	**+0.4**
ZEI				*i* S	**Sn**	**22 23 40.9**	**-0.4**
LACR	**Lac**	**1.99**	**6**	⇑*i*PG	**Pg**	**22 23 20.3**	**-0.5**
LACR				*i* S	**Sn**	**22 23 41.3**	**-1.7**
DIGR	**Digorskoe uzhe**	**2.07**	**351**	⇑*i*PG	**Pg**	**22 23 23.2**	**+0.7**
DIGR				*i* S	**Sn**	**22 23 46.3**	**+1.2**
KORR	**Kora**	**2.24**	**1**	⇓*i*PG	**Pg**	**22 23 25.0**	**-0.6**
KORR				*i* S	**Sn**	**22 23 49.5**	**+0.4**
VLKR	**Vladikavkaz**	**2.25**	**13**	⇑*i*PG	**Pg**	**22 23 24.7**	**-1.2**
VLKR				*i* S	**Sn**	**22 23 49.1**	**-0.4**
SNJR	**Sundja**	**2.30**	**15**	⇑*i*PG	**Pg**	**22 23 25.5**	**-1.3**
SNJR				*i* S	**Sn**	**22 23 50.4**	**-0.2**
ARNR	**Ardon**	**2.35**	**5**	⇑*i*PG	**Pg**	**22 23 26.7**	**-1.1**
ARNR				*i* S	**Sn**	**22 23 52.4**	**+0.5**

IDC ***28*** *22:35:10.4±2.3, 1908N×14785E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.9/17, mbtmp4.0/7, ML3.7/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/29, Error ellipse: s-maj=94.3km s-min=22.7km az=82.0*

NEIC ***28*** *22:35:13.5±8.4, 1920N×14843E, h35km±55km, mb4.1/5, Error ellipse: s-maj=58.9km s-min=7.9km az=83.0*

ISCJB ***28*** *22:35:14.9±4.2, 1912N±009×1474E±04, h38km±31km, mb4.0/13, MS2.6/1, Error ellipse: s-maj=61.8km s-min=11.7km az=160.7*

ISC 28 22:35:16.1±3.5, 1919N±009×1478E±04, h41km±25km, n22, σ1§17/20, mb4.0/13, MS2.6/1, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**9.41**	**328**	Pn	**Pn**	**22 37 29.9**	**+0.9**
	2.5nm,0.3s,baz=272,slow=24,SNR=4.2						
CBIJ				Sn	**Sn**	**22 39 12.4**	**-1.1**
	5.2nm,0.3s,baz=298,slow=24,SNR=3.7						
MAJO	**Matsushiro**	**19.24**	**336**	P	**Pn**	**22 39 37.6**	**-0.4**
JOW	**Kunigami**	**19.50**	**297**	LR	LR	22 46 02.0	
	comp=Z,26nm,21.0s,baz=339,slow=33						
ASAJ	**Asahikawa**	**25.24**	**351**	LR	LR	22 48 54.2	
	comp=Z,11nm,20.6s,MS2.6,baz=114,slow=32						
WRAB	**Tennant Creek**	**41.05**	**199**	*e*P	**P**	**22 42 55.2**	**-0.3**
	2.1nm,0.6s,mb3.9						
WB2	**Warramunga Arr**	**41.06**	**199**	*e*P	**P**	**22 42 55.3**	**-0.2**
WRA	**Warramunga Arr**	**41.06**	**199**	P	**P**	**22 42 54.9**	**-0.6**
	0.7nm,0.5s,mb3.5,baz=24,slow=8.3,SNR=2.9						
ULN	**Ulaanbaatar**	**43.64**	**320**	*e*P	**P**	**22 43 17.7**	**+1.2**
	1.3nm,0.5s,mb3.9						
SONM	**Songino Array**	**44.02**	**320**	P	**P**	**22 43 20.9**	**+1.3**
	2.2nm,0.6s,mb4.1,baz=134,slow=7.5,SNR=13						
ASAR	**Alice Springs**	**44.70**	**198**	P	**P**	**22 43 24.9**	**0.0**
	0.4nm,0.5s,mb3.5,baz=22,slow=7.9,SNR=6.2						
STKA	**Stephens Creek**	**51.12**	**187**	P	**P**	**22 44 13.8**	**-0.8**
NWAO	**Narrogin (SRO)**	**59.48**	**210**	P	**P**	**22 45 16.6**	**+1.7**
MKAR	**Makanchi Array**	**59.56**	**314**	P	**P**	**22 45 16.4**	**+0.9**
	1.7nm,0.6s,mb4.3,baz=82,slow=9.1,SNR=16						
CHKZ	**Chkalovo**	**67.21**	**321**	*e*P	**P**	**22 46 05.8**	**-0.2**
	1.0nm,0.7s,mb4.0						
BRVK	**Borovoye**	**67.43**	**320**	*e*P	**P**	**22 46 07.9**	**+0.5**
	1.1nm,0.6s,mb4.1						
ZRNK	**Zerenda**	**68.21**	**320**	*e*P	**P**	**22 46 13.0**	**+0.7**
	1.5nm,0.7s,mb4.1						
AKTK	**Aktyubinsk**	**75.32**	**319**	P	**P**	**22 46 52.3**	**-2.7**
AKTO	**Aktyubinsk**	**75.32**	**319**	P	**P**	**22 46 52.3**	**-2.7**
	0.7nm,0.5s,mb3.9,baz=65,slow=8.1,SNR=3.2						
ARCES	**ARCESS Array B**	**82.63**	**343**	P	**P**	**22 47 37.3**	**+2.3**
	2.0nm,0.8s,mb4.2,baz=46,slow=6.5,SNR=4.0						
JOF	**Joensuu**	**84.40**	**336**	*ep*	**P**	**22 47 42.7**	**-1.4**
	1.6nm,0.6s,mb4.3						
FINES	**FINESS Array B**	**87.27**	**336**	P	**P**	**22 47 57.8**	**-0.5**
	1.9nm,1.1s,mb4.2,baz=68,slow=4.8,SNR=5.5						
EBAD	**Badajoz**	**117.71**	**338**	P	PKPdf	22 53 50.1	-7.7

ORF ***28*** *22:48:18.7, 3493N×2124E, h30km, mb4.4, ML5.8*

PRU ***28*** *22:48:55.1, 3786N×1977E, h0km, M4.2*

LDG ***28*** *22:48:56.8±0.5, 3827N×2029E, h10km, Mb4.8/24, Ms3.2/6, Error ellipse: s-maj=20.1km s-min=5.4km az=10.0*

BJI ***28*** *22:48:56.7, 3870N×2024E, h4km, mB4.9, mb4.6, Ms4.6, Msz4.3*

ROM ***28*** *22:48:57.7±0.6, 3789N×2052E, h10km, Ml4.8/30, Error ellipse: s-maj=10.2km s-min=4.0km az=55.0*

IDC ***28*** *22:48:58.2±0.5, 3814N×2041E, h0km, mb4.4/20, mb1 4.4/30, mb1mx4.3/36, mbtmp4.3/30, ML4.0/10, MS3.8/20, Ms1 3.8/20, ms1mx3.6/37, Error ellipse: s-maj=11.7km s-min=10.5km az=89.0*

THE ***28*** *22:48:59.2, 3802N×2027E, h1km, ML4.2*

ATH ***28*** *22:48:59.8, 3806N×2034E, h18km±2km, MD4.4/21, ML4.3*

NEIC ***28*** *22:48:59.8, 3806N×2034E, h18km, mb4.2/37, ML4.3(ATH), ML4.6(THE), ML4.6(CSEM), ML5.0(PDG), After ATH.*

MOS ***28*** *22:49:00.0±1.5, 3814N×2026E, h23km, mb4.6/28, Error ellipse: s-maj=3.5km s-min=2.2km az=96.1*

CSEM ***28*** *22:49:00.3, 3823N×2035E, h10km, ML4.6*

PDG ***28*** *22:49:01.2±0.6, 3822N×2041E, h14km±2km*

ISCJB ***28*** *22:49:02.0±0.2, 3816N±001×2033E±001, h44km±2km, mb4.5/62, MS4.0/24, Error ellipse: s-maj=2.4km s-min=1.8km az=17.9*

SKO ***28*** *22:49:06.0, 3862N×2007E, h0km*

SZGRF ***28*** *22:49:08.8, 3840N×1986E, h10km, mb4.1, Ionian Sea*

HLW ***28*** *22:49:12.7, 3742N×2119E, h24km, Mb4.7*

ISC 28 22:49:03.7±0.2, 3814N±001×2034E±001, h42km±2km, h13km±2.8km: pP-P, n578, σ1§33/689, mb4.5/62, MS4.0/24, 33C-35D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**80**	*e*PB	**Pn**	**22 49 05.5**	**-5.7**
VLS				*e*SB	**Sn**	**22 49 09.1**	**-7.4**
LKD	**Levkas**	**0.61**	**23**	*e*Pg	**Pn**	**22 49 13.2**	**-2.9**
LKD				*e*Sg	**Sn**	**22 49 23.9**	**-0.9**
LKD	**Levkas**	**0.61**	**23**	P	**Pn**	**22 49 13.4**	**-2.6**
LKD				P		22 49 14.0	
LKD				S	**Sn**	**22 49 26.6**	**+1.7**
LKD	**Levkas**	**0.61**	**23**	P	**Pn**	**22 49 14.0**	**-2.1**
RLS	**Riolos of Patr**	**0.89**	**95**	*e*PN	**Pn**	**22 49 16.7**	**-3.1**
EVR	**Evrytania**	**1.39**	**56**	*e*PN	**Pn**	**22 49 27.5**	**+0.9**
IGT	**Igoumenitsa**	**1.39**	**360**	*e*Pg	**Pn**	**22 49 26.8**	**+0.2**
IGT				*e*Sg	**Sn**	**22 49 47.9**	**+4.2**
IGT	**Igoumenitsa**	**1.39**	**360**	P	**Pn**	**22 49 27.4**	**+0.8**
IGT				S	**Sn**	**22 49 49.5**	**+5.8**
IGT	**Igoumenitsa**	**1.39**	**360**	P	**Pn**	**22 49 27.4**	**+0.8**
IGT				*e*Sg	**Sn**	**22 49 47.9**	**+4.2**
IGT				S	**Sn**	**22 49 49.5**	**+5.8**
JAN	**Janina**	**1.56**	**15**	*e*PN	**Pn**	**22 49 30.1**	**+1.1**
ITM	**Ithomi**	**1.58**	**127**	*e*PN	**Pn**	**22 49 28.8**	**-0.5**
KEK	**Kerkira**	**1.62**	**345**	*e*PN	**Pn**	**22 49 30.3**	**+0.5**
MEV	**Metsovon**	**1.78**	**23**	*e*Pb	**Pn**	**22 49 33.1**	**+1.2**
MEV	**Metsovon**	**1.78**	**23**	P	**Pn**	**22 49 33.0**	**+1.0**
MEV				P		22 49 34.1	
MEV	**Metsovon**	**1.78**	**23**	P	**Pn**	**22 49 33.0**	**+1.0**
MEV	**Metsovon**	**1.78**	**23**	*e*Pb	**Pn**	**22 49 33.2**	**+1.2**
AGG	**Agios Georgios**	**1.79**	**60**	*e*Pb	**Pn**	**22 49 33.4**	**+1.3**
AGG				*e*Sb	**Sn**	**22 49 57.7**	**+4.1**
AGG	**Agios Georgios**	**1.79**	**60**	P	**Pn**	**22 49 31.9**	**-0.2**
AGG				P		22 49 33.6	
AGG				S	**Sn**	**22 49 59.4**	**+5.7**
AGG	**Agios Georgios**	**1.79**	**60**	*e*Pb	**Pn**	**22 49 33.4**	**+1.3**
LKR	**Lokris**	**2.15**	**76**	*e*PN	**Pn**	**22 49 37.2**	**+0.1**
TPE	**Tepelena**	**2.17**	**353**	*e*Pn	**Pn**	**22 49 47.8**	**+11**
TPE				*i* Sn	**Sn**	**22 50 15.3**	**+12**
SCTE	**Santa Cesarea**	**2.42**	**324**	Pn	**Pn**	**22 49 40.9**	**+0.2**
	6µm,0.6s						
KZN	**Kozani**	**2.43**	**27**	*e*PB	**Pn**	**22 49 42.4**	**+1.5**
KBN	**Korca**	**2.50**	**8**	*i* Pn	**Pn**	**22 49 44.6**	**+2.7**
KBN	**Korca**	**2.50**	**8**	*e*Pn	**Pn**	**22 49 44.6**	**+2.7**
VLI	**Veliai**	**2.51**	**124**	*e*PB	**Pn**	**22 49 42.1**	**+0.1**
NAIG	**Nisos Aigina**	**2.52**	**98**	*e*PN	**Pn**	**22 49 42.0**	**-0.1**
NEO	**Neokhori**	**2.54**	**62**	*e*PN	**Pn**	**22 49 42.7**	**+0.3**
XOR	**Xorichti**	**2.54**	**60**	*e*Pn	**Pn**	**22 49 43.2**	**+0.8**
XOR				*e*Sn	**Sn**	**22 50 17.0**	**+4.8**
XOR	**Xorichti**	**2.54**	**60**	P	**Pn**	**22 49 43.2**	**+0.8**
XOR				P		22 49 44.0	
XOR				S	**Sn**	**22 50 18.6**	**+6.4**
XOR				S	**Sn**	**22 50 29.9**	**+18**
XOR	**Xorichti**	**2.54**	**60**	P	**Pn**	**22 49 44.0**	**+1.6**
LIT	**Litokhoron**	**2.57**	**40**	*e*Pn	**Pn**	**22 49 43.5**	**+0.7**
LIT				*e*Sn	**Sn**	**22 50 17.4**	**+4.5**
LIT	**Litokhoron**	**2.57**	**40**	P	**Pn**	**22 49 43.2**	**+0.3**
LIT				S	**Sn**	**22 50 19.9**	**+7.0**
LIT	**Litokhoron**	**2.57**	**40**	P	**Pn**	**22 49 43.2**	**+0.3**
LIT				P		22 49 44.8	
LIT				S	**Sn**	**22 50 19.9**	**+7.0**
LIT				S	**Sn**	**22 50 28.5**	**+16**
LIT	**Litokhoron**	**2.57**	**40**	*e*Pn	**Pn**	**22 49 43.5**	**+0.6**
LIT				*e*Sn	**Sn**	**22 50 17.4**	**+4.5**
ATH	**Athens Observa**	**2.67**	**93**	*e*PN	**Pn**	**22 49 43.8**	**-0.4**
KVR	**Kavouri**	**2.73**	**96**	*e*PN	**Pn**	**22 49 44.0**	**-1.0**
FNA	**Florina**	**2.76**	**17**	*e*Pn	**Pn**	**22 49 46.7**	**+1.3**
FNA				*e*Sn	**Sn**	**22 50 21.4**	**+3.9**
FNA	**Florina**	**2.76**	**17**	P	**Pn**	**22 49 46.6**	**+1.2**
FNA				P		22 49 47.1	
PTL	**Penteli**	**2.78**	**91**	*e*PN	**Pn**	**22 49 45.0**	**-0.7**
LCI	**Lecce**	**2.79**	**322**	Pn	**Pn**	**22 49 45.9**	**+0.1**
	2µm,0.8s						
LCI	**Lecce**	**2.79**	**322**	P	**Pn**	**22 49 46.0**	**+0.2**
KYTH	**Kithira**	**2.84**	**130**	*e*PB	**Pn**	**22 49 47.5**	**+0.9**
AOS	**Alonnisos**	**2.96**	**69**	*e*Pn	**Pn**	**22 49 48.3**	**+0.2**
BIA	**Bitola**	**2.97**	**15**	*e*Pn	**Pn**	**22 49 48.9**	**+0.6**
BIA				*e*Sn	**Sn**	**22 50 27.3**	**+4.6**
BIA	**Bitola**	**2.97**	**15**	*e*Pn	**Pn**	**22 49 49.0**	**+0.6**
BIA				*e*Sn	**Sn**	**22 50 19.9**	**-2.9**
BIA	**Bitola**	**2.97**	**15**	P	**Pn**	**22 49 49.1**	**+0.8**
OHR	**Ohrid**	**2.99**	**7**	*e*Pn	**Pn**	**22 49 49.7**	**+1.1**
OHR	**Ohrid**	**2.99**	**7**	*e*Pn	**Pn**	**22 49 49.7**	**+1.2**
OHR				*e*Sn	**Sn**	**22 50 20.4**	**-2.7**
TIP	**Timpagrande**	**2.99**	**291**	*e*Pn	**Pn**	**22 49 46.6**	**-2.0**
TIP				P		22 49 50.1	
TIP				*e*Sn	**Sn**	**22 50 18.6**	**-4.6**
TIP	**Timpagrande**	**2.99**	**291**	P	**Pn**	**22 49 50.1**	**+1.5**
SERS	**Sersale**	**3.00**	**288**	Pn	**Pn**	**22 49 49.2**	**+0.5**
	2µm,0.9s						
PLAC	**Placanica**	**3.08**	**277**	Pn	**Pn**	**22 49 50.0**	**+0.1**
	395nm,0.6s						
GRI	**Girifalco**	**3.15**	**284**	Pn	**Pn**	**22 49 51.3**	**+0.5**
GRI				Sn	**Sn**	**22 50 28.7**	**+1.6**
	2µm,0.7s						
GRI	**Girifalco**	**3.15**	**284**	P	**Pn**	**22 49 50.6**	**-0.2**
GRI				Pn	**Pn**	**22 49 51.3**	**+0.5**
GRI				Sn	**Sn**	**22 50 28.7**	**+1.6**
PAIG	**Paliouri**	**3.15**	**55**	*e*Pn	**Pn**	**22 49 50.5**	**-0.3**
PAIG				*e*Sn	**Sn**	**22 50 32.3**	**+5.1**
PAIG	**Paliouri**	**3.15**	**55**	P	**Pn**	**22 49 50.9**	**0.0**
PAIG	**Paliouri**	**3.15**	**55**	*e*Pn	**Pn**	**22 49 50.5**	**-0.3**
THE	**Thessaloniki**	**3.21**	**38**	*e*Pn	**Pn**	**22 49 51.9**	**+0.2**
TIR	**Tirane**	**3.22**	**354**	*e*Pn	**Pn**	**22 49 52.6**	**+0.8**
TIR				*e*Sn	**Sn**	**22 50 33.7**	**+4.8**
TIR	**Tirane**	**3.22**	**354**	P	**Pn**	**22 49 52.6**	**+0.8**
TIR				S	**Sn**	**22 50 33.0**	**+4.1**
GRG	**Griva**	**3.23**	**29**	*e*Pn	**Pn**	**22 49 52.1**	**+0.2**
GRG	**Griva**	**3.23**	**29**	P	**Pn**	**22 49 52.4**	**+0.5**
HORT	**Hortiatis**	**3.25**	**40**	*e*Pn	**Pn**	**22 49 53.1**	**+0.9**
HORT				*e*Sn	**Sn**	**22 50 35.0**	**+5.4**
PLG	**Polygyros**	**3.28**	**46**	*e*PN	**Pn**	**22 49 53.7**	**+1.1**
SOI	**Samo**	**3.38**	**270**	Pn	**Pn**	**22 49 53.6**	**-0.3**
	557nm,0.7s						
PE1	**Pezze di Greco**	**3.49**	**321**	*e*Pn	**Pn**	**22 49 55.3**	**-0.1**
CEL	**Celeste**	**3.50**	**273**	Pn	**Pn**	**22 49 55.6**	**0.0**
CEL				Sn	**Sn**	**22 50 35.7**	**-0.1**
	2µm,0.7s						
CEL	**Celeste**	**3.50**	**273**	Pn	**Pn**	**22 49 55.6**	**0.0**
CEL				P		22 49 55.7	
CEL				Sn	**Sn**	**22 50 35.7**	**-0.1**
SOH	**Sokhos**	**3.55**	**40**	*e*Pn	**Pn**	**22 49 57.1**	**+0.8**
SOH				*e*Sn	**Sn**	**22 50 42.8**	**+5.8**
SOH	**Sokhos**	**3.55**	**40**	P	**Pn**	**22 49 57.4**	**+1.1**
ORI	**Oriolo Calabro**	**3.58**	**304**	Pn	**Pn**	**22 49 58.1**	**+1.4**
	2µm,0.6s						
KNT	**Kendrikon**	**3.60**	**32**	*e*Pn	**Pn**	**22 49 57.5**	**+0.5**
KNT				*e*Sn	**Sn**	**22 50 44.6**	**+6.3**
KNT	**Kendrikon**	**3.60**	**32**	P	**Pn**	**22 49 57.8**	**+0.8**
VAY	**Valandovo**	**3.61**	**28**	*e*Pn	**Pn**	**22 49 57.0**	**-0.1**
VAY	**Valandovo**	**3.61**	**28**	*e*Pn	**Pn**	**22 49 57.2**	**+0.1**
VAY				*e*Sn	**Sn**	**22 50 40.1**	**+1.6**
VAY	**Valandovo**	**3.61**	**28**	P	**Pn**	**22 49 57.1**	**0.0**
VAY	**Valandovo**	**3.61**	**28**	*e*Pn	**Pn**	**22 49 57.1**	**0.0**
VAY				*e*Sn	**Sn**	**22 50 40.0**	**+1.5**
SCLL	**Scilla**	**3.65**	**273**	Pn	**Pn**	**22 49 57.3**	**-0.3**
	172nm,0.4s						
SCLL	**Scilla**	**3.65**	**273**	Pn	**Pn**	**22 49 57.3**	**-0.3**
SCLL				P		22 49 57.4	
NOCI	**Noci**	**3.66**	**317**	Pn	**Pn**	**22 49 58.2**	**+0.4**
	5µm,0.9s						
MTTG	**Motta San Giov**	**3.67**	**269**	Pn	**Pn**	**22 49 57.5**	**-0.4**
MTTG				Sn	**Sn**	**22 50 40.1**	**+0.2**
	1µm,0.7s						
MSI	**Messina ING**	**3.77**	**272**	P	**Pn**	**22 50 00.9**	**+1.6**
MSRU	**Castanea**	**3.81**	**273**	Pn	**Pn**	**22 49 59.8**	**0.0**
	1µm,0.6s						
SRS	**Serrai**	**3.89**	**39**	*e*Pn	**Pn**	**22 50 01.3**	**+0.3**
SRS	**Serrai**	**3.89**	**39**	P	**Pn**	**22 50 01.4**	**+0.5**
MIGL	**Miglionico**	**3.90**	**310**	Pn	**Pn**	**22 50 02.5**	**+1.5**
	12µm,1.0s						
ULC	**Ulcinj**	**3.91**	**348**	⇑*i*Pn	**Pn**	**22 50 00.6**	**-0.5**
ULC				*e*Sn	**Sn**	**22 50 46.8**	**+1.0**
SG1	**Sgolgore (BA)**	**3.91**	**315**	*e*Pn	**Pn**	**22 50 01.4**	**+0.2**
SKO	**Skopje**	**3.92**	**12**	*e*Pn	**Pn**	**22 50 02.5**	**+1.2**
SKO	**Skopje**	**3.92**	**12**	*e*Pn	**Pn**	**22 50 02.3**	**+1.0**
SKO	**Skopje**	**3.92**	**12**	P	**Pn**	**22 50 02.6**	**+1.3**
SDA	**Shkodra**	**3.96**	**351**	*i* Sg	**Sn**	**22 50 50.7**	**+3.7**
KARN	**Karanos**	**3.97**	**133**	*e*Pn	**Pn**	**22 50 00.3**	**-1.7**
KARN				*e*Sn	**Sn**	**22 50 48.2**	**+1.0**
CUC	**Castrocucco**	**3.98**	**299**	Pn	**Pn**	**22 50 04.4**	**+2.3**
	2µm,1.1s						
CUC	**Castrocucco**	**3.98**	**299**	P	**Pn**	**22 50 03.1**	**+1.0**
CUC				Pn	**Pn**	**22 50 04.4**	**+2.3**
CUC	**Castrocucco**	**3.98**	**299**	Pn	**Pn**	**22 50 04.4**	**+2.3**
	2µm,1.1s						
BAI	**Bari**	**3.99**	**319**	*e*Pn	**Pn**	**22 50 02.4**	**+0.1**
AMUR	**Altamura**	**4.00**	**315**	Pn	**Pn**	**22 50 02.8**	**+0.4**
	3µm,0.8s						
MMME	**Mongiuffi-Meli**	**4.02**	**269**	Pn	**Pn**	**22 50 02.2**	**-0.5**
	1µm,1.1s						
SIRI	**Monte Sirino -**	**4.03**	**302**	Pn	**Pn**	**22 50 04.4**	**+1.5**
	1µm,0.9s						
LOS	**Limnos**	**4.10**	**63**	*e*Pn	**Pn**	**22 50 03.7**	**-0.2**
VAM	**Vamos**	**4.13**	**130**	*e*PN	**Pn**	**22 50 04.3**	**+0.1**
MTSN	**Montesano sull**	**4.15**	**302**	Pn	**Pn**	**22 50 05.8**	**+1.3**
	755nm,0.5s						
AGST	**Augusta-Monte**	**4.15**	**259**	Pn	**Pn**	**22 50 02.1**	**-2.4**
	114nm,0.2s						
HAGA	**Augusta**	**4.20**	**260**	Pn	**Pn**	**22 50 02.7**	**-2.5**
	853nm,0.8s						
NVR	**Nevrokopi**	**4.20**	**39**	*e*PN	**Pn**	**22 50 06.9**	**+1.7**
VPL	**Vulcano Piano**	**4.22**	**275**	Pn	**Pn**	**22 50 04.6**	**-0.9**
	982nm,0.5s						
BCI	**Bajram Curri**	**4.22**	**357**	*i* Pn	**Pn**	**22 50 06.7**	**+1.2**
BCI				*i* Sn	**Sn**	**22 50 58.5**	**+4.9**
BCI	**Bajram Curri**	**4.22**	**357**	*e*Pn	**Pn**	**22 50 06.7**	**+1.2**
APE	**Apeiranthos**	**4.26**	**103**	*e*Pn	**Pn**	**22 50 05.7**	**-0.3**
APE				*e*Sn	**Sn**	**22 50 57.4**	**+2.9**
APE	**Apeiranthos**	**4.26**	**103**	*e*PN	**Pn**	**22 50 08.6**	**+2.6**
APE	**Apeiranthos**	**4.26**	**103**	⇓*i*P	**Pn**	**22 50 10.2**	**+4.2**
KKB	**Krupnik**	**4.28**	**29**	P	**Pn**	**22 50 06.0**	**-0.2**
SLCN	**Sala Consilina**	**4.29**	**303**	Pn	**Pn**	**22 50 08.4**	**+2.0**
	941nm,0.5s						
SLCN	**Sala Consilina**	**4.29**	**303**	P	**Pn**	**22 50 06.0**	**-0.4**
SLCN				Pn	**Pn**	**22 50 08.4**	**+2.0**
SLCN	**Sala Consilina**	**4.29**	**303**	Pn	**Pn**	**22 50 08.4**	**+2.0**
	941nm,0.5s						
SSY	**Sortino**	**4.29**	**258**	Pn	**Pn**	**22 50 04.2**	**-2.3**
	1µm,0.8s						
BUM	**Brajici-Budva**	**4.30**	**346**	⇑*i*Pn	**Pn**	**22 50 05.9**	**-0.7**
BUM				*e*Sn	**Sn**	**22 50 55.7**	**+0.3**
CDT	**Castel del Mon**	**4.30**	**314**	*e*Pn	**Pn**	**22 50 06.9**	**+0.3**
HAVL	**Avola**	**4.31**	**256**	Pn	**Pn**	**22 50 04.5**	**-2.2**
	1µm,0.3s						
MMB	**Musomiste**	**4.32**	**36**	*e*Pn	**Pn**	**22 50 07.0**	**+0.1**
MMB	**Musomiste**	**4.32**	**36**	P	**Pn**	**22 50 07.1**	**+0.3**
MMB	**Musomiste**	**4.32**	**36**	*e*Pn	**Pn**	**22 50 06.9**	**+0.1**
SLNA	**Sal

CANB	**Canakkale**	**5.56**	**68**	*e*P	**Pn**	**22 50 27.0**	**+3.2**
DIM	**Dimitrovgrad**	**5.58**	**44**	P	**Pn**	**22 50 25.4**	**+1.3**
BODT	**Bodrum**	**5.64**	**99**	*e*P	**Pn**	**22 50 24.7**	**-0.3**
USI	**Ustica**	**5.65**	**278**	P	**Pn**	**22 50 24.6**	**-0.5**
GRUS	**Gruza**	**5.75**	**3**	*i* Pn	**Pn**	**22 50 25.6**	**-0.8**
GRUS				Sg	**Sn**	**22 51 29.4**	**-1.7**
GRUS	**Gruza**	**5.75**	**3**	Pn	**Pn**	**22 50 25.6**	**-0.9**
RFI	**Roccamonfina**	**5.83**	**305**	P	**Pn**	**22 50 29.2**	**+1.7**
MIDA	**Miranda**	**5.84**	**309**	P	**Pn**	**22 50 30.0**	**+2.3**
DAT	**Datca**	**5.93**	**102**	*e*P	**Pn**	**22 50 34.0**	**+5.1**
RNI2	**Rionero Sannit**	**5.94**	**309**	P	**Pn**	**22 50 31.7**	**+2.6**
DIVS	**Divcibare**	**5.96**	**358**	⇑*i*Pn	**Pn**	**22 50 27.4**	**-1.9**
DIVS				Sg	**Sn**	**22 51 33.4**	**-2.9**
MLSB	**Milas**	**5.96**	**96**	*e*P	**Pn**	**22 50 38.4**	**+9.0**
MFT	**Murefte**	**5.99**	**62**	*e*P	**Pn**	**22 50 29.6**	**-0.1**
EDRB	**Edirne**	**6.15**	**51**	*e*P	**Pn**	**22 50 31.9**	**-0.1**
SDI	**San Donato**	**6.15**	**307**	P	**Pn**	**22 50 33.0**	**+1.0**
SVIS	**Svilajnac**	**6.18**	**6**	*i* Pn	**Pn**	**22 50 30.6**	**-1.9**
SVIS				Sg	**Sn**	**22 51 39.3**	**-2.5**
INTR	**Introdacqua**	**6.27**	**310**	P	**Pn**	**22 50 34.6**	**+1.0**
VVLD	**Villa Vallelon**	**6.36**	**308**	P	**Pn**	**22 50 36.2**	**+1.3**
YER	**Yerkesik**	**6.38**	**97**	*e*P	**Pn**	**22 50 34.4**	**-0.8**
JMB	**Yambol**	**6.44**	**46**	P	**Pn**	**22 50 37.9**	**+2.0**
DST	**Dursunbey**	**6.63**	**75**	*e*P	**Pn**	**22 50 39.3**	**+0.7**
BEO	**Belgrade**	**6.67**	**1**	*i* Pn	**Pn**	**22 50 34.4**	**-4.8**
BEO				Sg	**Sn**	**22 51 46.2**	**-7.7**
DJES	**Djerdap**	**6.69**	**14**	*i* Pn	**Pn**	**22 50 45.1**	**+5.7**
AQU	**L'Aquila**	**6.77**	**311**	⇓*i*P	**Pn**	**22 50 43.3**	**+2.8**
AQU	**L'Aquila**	**6.77**	**311**	*e*P	**Pn**	**22 50 41.2**	**+0.7**
AQU				pmax	pmax		
	comp=Z,225nm,1.0s						
AQU	**L'Aquila**	**6.77**	**311**	*e*Pn	**Pn**	**22 50 41.2**	**+0.7**
	comp=Z,225nm,1.0s						
AQU	**L'Aquila**	**6.77**	**311**	*e*P	**Pn**	**22 50 41.2**	**+0.7**
	comp=Z,225nm,1.0s						
CERT	**Cerreto**	**6.80**	**306**	P	**Pn**	**22 50 42.5**	**+1.5**
TERO	**Teramo**	**6.81**	**313**	P	**Pn**	**22 50 42.7**	**+1.6**
FIAM	**Fiamignano**	**6.89**	**309**	P	**Pn**	**22 50 43.8**	**+1.6**
BLY	**Banja Luka**	**7.01**	**341**	P	**Pn**	**22 50 44.0**	**+0.2**
FETY	**Fethiye**	**7.12**	**100**	*e*P	**Pn**	**22 50 42.6**	**-2.7**
MNS	**Montasola**	**7.23**	**308**	P	**Pn**	**22 50 48.3**	**+1.5**
AOI	**Ancona**	**7.43**	**319**	P	**Pn**	**22 50 50.6**	**+1.0**
GZR	**Gura Zlata**	**7.47**	**13**	⇓*i*P	**Pn**	**22 50 50.2**	**+0.1**
GZR	**Gura Zlata**	**7.47**	**13**	P	**Pn**	**22 50 49.9**	**-0.2**
GZR	**Gura Zlata**	**7.47**	**13**	P	**Pn**	**22 50 49.9**	**-0.2**
BZS	**Buzias**	**7.53**	**7**	⇓*i*P	**Pn**	**22 50 49.8**	**-1.1**
BZS	**Buzias**	**7.53**	**7**	P	**Pn**	**22 50 49.5**	**-1.4**
CING	**Cingoli**	**7.53**	**316**	P	**Pn**	**22 50 51.8**	**+0.9**
NVLJ	**Novalja**	**7.62**	**329**	*i* Pn	**Pn**	**22 50 51.8**	**-0.3**
NVLJ				*i* Sn	**Sn**	**22 52 14.2**	**-3.0**
ASS	**Assisi**	**7.64**	**312**	P	**Pn**	**22 50 55.1**	**+2.7**
ELL	**Elmali**	**7.74**	**97**	*e*P	**Pn**	**22 50 56.0**	**+2.3**
RHK3	**Tenkes**	**7.89**	**349**	⇑*e*P	**Pn**	**22 50 53.8**	**-2.1**
	comp=Z,1.3nm,0.5s						
RHK3				*e*S	**Sn**	**22 52 19.0**	**-4.9**
ISP	**Isparta**	**8.04**	**89**	⇑*e*P	**Pn**	**22 51 00.3**	**+2.4**
VOIR		**8.09**	**24**	⇑*i*P	**Pn**	**22 50 59.9**	**+1.3**
VOIR		**8.09**	**24**	⇑P	**Pn**	**22 50 59.9**	**+1.3**
BADI	**Badiali**	**8.15**	**314**	P	**Pn**	**22 51 01.6**	**+2.2**
PKSM	**Moragy**	**8.16**	**352**	⇓*i*P	**Pn**	**22 50 58.1**	**-1.5**
PKSM	**Moragy**	**8.16**	**352**	⇑*e*Pn	**Pn**	**22 50 57.5**	**-2.1**
PKSM				*e*Sn	**Sn**	**22 52 26.6**	**-3.9**
PKSM	**Moragy**	**8.16**	**352**	*e*Sn	**Sn**	**22 52 26.6**	**-3.9**
BOJS	**Bojanci**	**8.28**	**334**	*i* Pn	**Pn**	**22 51 00.7**	**-0.4**
BOJS				*e*Sn	**Sn**	**22 52 33.2**	**-0.1**
CRE	**Caprese Michel**	**8.38**	**313**	P	**Pn**	**22 51 05.3**	**+2.7**
MLR	**Muntele Rosu**	**8.45**	**28**	Pn	**Pn**	**22 51 04.9**	**+1.4**
	comp=Z,1.3nm,0.3s,baz=225,slow=3.8,SNR=26						
MLR	**Muntele Rosu**	**8.45**	**28**	⇓*i*P	**Pn**	**22 51 05.6**	**+2.1**
MLR	**Muntele Rosu**	**8.45**	**28**	P	**Pn**	**22 51 05.5**	**+1.9**
MLR	**Muntele Rosu**	**8.45**	**28**	P	**Pn**	**22 51 05.4**	**+1.9**
PKS6	**Bocsa**	**8.47**	**356**	*e*P	**Pn**	**22 51 02.4**	**-1.4**
	comp=Z,1.7nm,0.4s						
PKS6				*e*S	**Sn**	**22 52 35.0**	**-3.1**
SFI	**Santa Sofia**	**8.62**	**315**	P	**Pn**	**22 51 08.1**	**+2.3**
VSL	**Villasalto**	**8.66**	**282**	*e*Pn	**Pn**	**22 51 05.0**	**-1.4**
CSNT	**Castellina Chi**	**8.68**	**311**	P	**Pn**	**22 51 08.8**	**+2.1**
CEY	**Cerknica**	**8.77**	**332**	P	**Pn**	**22 51 07.9**	**-0.1**
DRGR		**8.82**	**11**	⇑*i*P	**Pn**	**22 51 09.3**	**+0.7**
DRGR		**8.82**	**11**	P	**Pn**	**22 51 09.2**	**+0.6**
LJU	**Ljubljana**	**9.00**	**333**	*i* Pn	**Pn**	**22 51 10.9**	**-0.1**
LJU				*e*Sn	**Sn**	**22 52 48.7**	**-2.3**
KEST	**Kesra**	**9.12**	**258**	Pn	**Pn**	**22 51 12.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=306,slow=0.2,SNR=14						
KEST				Sn	**Sn**	**22 52 50.5**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=222,slow=20,SNR=2.3						
KEST				LR	LR	22 55 37.7	
	comp=Z,217nm,20.1s,baz=13,slow=44						
VOY	**Vojsko**	**9.22**	**331**	*e*Pn	**Pn**	**22 51 13.5**	**-0.6**
VOY				*e*Sn	**Sn**	**22 52 54.0**	**-2.5**
PERS	**Pernice**	**9.32**	**337**	*i* Pn	**Pn**	**22 51 14.1**	**-1.3**
PERS				*i* Sn	**Sn**	**22 52 54.4**	**-4.6**
PKSG		**9.36**	**352**	⇓*e*P	**Pn**	**22 51 15.5**	**-0.4**
	comp=Z,1.0nm,0.5s						
PKSG				*e*S	**Sn**	**22 52 54.9**	**-4.9**
BUD	**Budapest**	**9.39**	**355**	*e*Pn	**Pn**	**22 51 15.3**	**-1.0**
BUD				*e*Sn	**Sn**	**22 52 57.3**	**-3.2**
OBKA	**Obir**	**9.39**	**335**	⇓*i*Pn	**Pn**	**22 51 15.4**	**-1.1**
	SNR=29						
OBKA				⇓*i*Sn	**Sn**	**22 52 57.4**	**-3.4**
ROBS	**Robic**	**9.55**	**330**	*i* Pn	**Pn**	**22 51 17.8**	**-0.7**
ROBS				*e*Sn	**Sn**	**22 53 01.3**	**-3.2**
PENC	**Penc**	**9.68**	**356**	*e*S	**Sn**	**22 53 07.6**	**0.0**
	comp=Z,4.2nm,0.3s						
GMNA	**Gemona**	**9.68**	**329**	P	**Pn**	**22 51 22.5**	**+2.1**
PGF	**Pioggiola**	**9.71**	**301**	*e*P	**Pn**	**22 51 17.8**	**-3.0**
	comp=Z,245nm,1.4s						
ARSA	**Arzberg**	**9.77**	**340**	⇓*i*Pn	**Pn**	**22 51 20.0**	**-1.6**
	SNR=8.2						
ARSA				⇑*i*Sn	**Sn**	**22 53 05.9**	**-4.0**
PSZ	**Piszkesteto**	**9.78**	**358**	⇓*e*	**Pn**	**22 51 20.5**	**-1.2**
PSZ				*e*Sn	**Sn**	**22 53 06.0**	**-4.1**
PSZ	**Piszkesteto**	**9.78**	**358**	⇓*i*P	**Pn**	**22 51 21.4**	**-0.3**
PSZ	**Piszkesteto**	**9.78**	**358**	P	**Pn**	**22 51 21.4**	**-0.3**
PSZ				*e*Sn	**Sn**	**22 53 06.0**	**-4.1**
SWA2		**9.84**	**153**	P	**Pn**	**22 51 18.4**	**-4.2**
SWA2				S	**Sn**	**22 52 52.2**	**-20**
SWA1		**9.92**	**152**	P	**Pn**	**22 51 19.6**	**-4.0**
BURAR	**Bucovina Array**	**10.12**	**19**	⇓*i*P	**Pn**	**22 51 27.8**	**+1.4**
FVI	**Forni Avoltri**	**10.13**	**329**	P	**Pn**	**22 51 26.4**	**-0.1**
KBA	**Koelnbreinsper**	**10.31**	**332**	⇑*i*Pn	**Pn**	**22 51 28.2**	**-0.7**
KBA				⇑*i*Sn	**Sn**	**22 53 19.7**	**-3.4**
CONA	**Conrad Observa**	**10.31**	**343**	⇓*i*Pn	**Pn**	**22 51 27.5**	**-1.5**
CONA				⇑*i*Sn	**Sn**	**22 53 18.7**	**-4.6**
ZST	**Bratislava**	**10.32**	**348**	*e*SN	**Sn**	**22 53 19.2**	**-4.3**
KECS	**Kecovo**	**10.34**	**1**	*e*PN	**Pn**	**22 51 29.2**	**-0.2**
KECS				*e*SN	**Sn**	**22 53 21.1**	**-2.8**
VYHS	**Vyhne**	**10.40**	**354**	*e*PN	**Pn**	**22 51 29.6**	**-0.7**
VYHS				*e*SN	**Sn**	**22 53 20.3**	**-5.2**
BR131	**Keskin Array S**	**10.48**	**77**	*e*Pn	**Pn**	**22 51 33.0**	**+1.6**
	comp=Z,1.8nm,0.4s						
BRTR	**Keskin Array B**	**10.48**	**77**	Pn	**Pn**	**22 51 34.0**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=258,slow=13,SNR=6.1						
BRTR				LR	LR	22 55 54.0	
	comp=Z,393nm,19.3s,baz=39,slow=40						
BOB	**Bobbio (Coli)**	**10.51**	**312**	P	**Pn**	**22 51 34.7**	**+2.9**
SMOL	**Smolenice**	**10.58**	**349**	*e*Pn	**Pn**	**22 51 32.5**	**-0.2**
SMOL				*e*Sn	**Sn**	**22 53 24.7**	**-5.1**
MOA	**Molln**	**10.67**	**337**	⇑*i*Pn	**Pn**	**22 51 32.8**	**-1.1**
	SNR=35						
MOA				⇓*i*Sn	**Sn**	**22 53 26.2**	**-5.8**
MABI	**Malga Bissina**	**10.75**	**320**	P	**Pn**	**22 51 36.3**	**+1.2**
CRVS	**Cervenica-Dubn**	**10.79**	**4**	*e*PN	**Pn**	**22 51 35.5**	**0.0**
KIS	**Kishinev**	**10.83**	**32**	*e*P	**Pn**	**22 51 32.0**	**-4.1**
KIS				MLR	MLR		
	comp=N,1µm,13.0s						
KIS				MLR	MLR		
	comp=E,1µm,13.0s						
KIS				MLR	MLR		
	comp=Z,2µm,13.0s						
KIS				MLR	MLR		
	comp=Z,2µm,15.0s						
KOLS	**Kolonicke sedl**	**10.88**	**7**	*e*PN	**Pn**	**22 51 36.9**	**+0.1**
KOLS				*e*		22 53 50.0	
KOLS				*e*		22 55 08.8	
KOLS	**Kolonicke sedl**	**10.88**	**7**	*e*Pn	**Pn**	**22 51 36.9**	**+0.1**
KOLS				*e*		22 53 50.1	
KOLS				*e*Sg		22 55 08.8	
HBRG	**Burj al 'Arab**	**10.89**	**131**	P	**Pn**	**22 51 32.1**	**-4.8**
CSS	**Prodhromos**	**10.92**	**103**	*e*Pn	**Pn**	**22 51 33.9**	**-3.4**
CSS				*e*Sn	**Sn**	**22 53 31.9**	**-6.3**
BRMO	**Bormio**	**11.12**	**322**	P	**Pn**	**22 51 41.2**	**+1.1**

WTTA	**Wattenberg**	**11.13**	**328**	⇓*i*Pn	**Pn**	**22 51 39.9**	**-0.3**
WTTA				⇑*i*Sn	**Sn**	**22 53 40.1**	**-3.2**
WATA	**Walderalm**	**11.21**	**328**	⇓*i*Pn	**Pn**	**22 51 40.6**	**-0.8**
WATA				⇑*i*Sn	**Sn**	**22 53 43.6**	**-1.7**
NIE	**Niedzica**	**11.27**	**360**	*e*P	**Pn**	**22 51 42.5**	**+0.3**
NIE				*e*S	**Sn**	**22 53 48.2**	**+1.4**
SQTA	**Sankt Quirin**	**11.28**	**326**	⇑*i*Pn	**Pn**	**22 51 42.1**	**-0.1**
	SNR=12						
SQTA				⇑*i*Sn	**Sn**	**22 53 45.4**	**-1.5**
STHS	**Stebnicka Huta**	**11.29**	**3**	*e*PN	**Pn**	**22 51 43.2**	**+0.8**
STHS				*e*		22 53 48.7	
SBF	**Sospel**	**11.30**	**304**	*e*P	**Pn**	**22 51 40.8**	**-1.7**
	comp=Z,88nm,1.0s						
SBF	**Sospel**	**11.30**	**304**	*e*P	**Pn**	**22 51 40.8**	**-1.7**
SBF				pmax	pmax		
	comp=Z,44nm,1.0s						
SBF	**Sospel**	**11.30**	**304**	*e*P	**Pn**	**22 51 40.8**	**-1.7**
	comp=Z,44nm,1.0s						
MOTA	**Moosalm**	**11.42**	**327**	⇓*i*Pn	**Pn**	**22 51 43.9**	**-0.3**
	SNR=12						
MOTA				⇓*i*Sn	**Sn**	**22 53 48.5**	**-2.0**
VRAC	**Vranov**	**11.48**	**348**	Pn	**Pn**	**22 51 43.7**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=177,slow=14,SNR=7.1						
VRAC				Sn	**Sn**	**22 53 47.6**	**-4.3**
	comp=Z,0.6nm,0.3s,baz=168,slow=8.9,SNR=2.8						
VRAC	**Vranov**	**11.48**	**348**	⇓*i*P	**Pn**	**22 51 44.3**	**-0.8**
VRAC	**Vranov**	**11.48**	**348**	P	**Pn**	**22 51 44.5**	**-0.5**
VRAC	**Vranov**	**11.48**	**348**	P	**Pn**	**22 51 44.5**	**-0.6**
KWP	**Kalwaria**	**11.61**	**8**	*e*P	**Pn**	**22 51 48.0**	**+1.2**
KWP				pmax	pmax		
	comp=Z,322nm,1.1s						
KWP	**Kalwaria**	**11.61**	**8**	*e*Pn	**Pn**	**22 51 48.0**	**+1.2**
	comp=Z,322nm,1.1s						
KWP	**Kalwaria**	**11.61**	**8**	*e*P	**Pn**	**22 51 48.0**	**+1.2**
	comp=Z,322nm,1.1s						
TUE	**Stuetta**	**11.63**	**319**	P	**Pn**	**22 51 47.6**	**+0.5**
TREC	**Trest**	**11.69**	**344**	AMS	AMS	22 57 00.0	
	comp=Z,700nm,9.9s						
FRF	**La Foret Royal**	**11.69**	**302**	*e*P	**Pn**	**22 51 45.9**	**-2.0**
	comp=Z,36nm,1.0s						
FRF	**La Foret Royal**	**11.69**	**302**	*e*P	**Pn**	**22 51 45.9**	**-2.0**
FRF				pmax	pmax		
	comp=Z,18nm,1.0s						
FRF	**La Foret Royal**	**11.69**	**302**	*e*P	**Pn**	**22 51 45.9**	**-2.0**
	comp=Z,18nm,1.0s						
GEC2	**GERESS Array S**	**11.73**	**338**	*e*Pn	**Pn**	**22 51 47.2**	**-1.2**
GEC2				*e*Sn	**Sn**	**22 53 52.4**	**-5.5**
GERES	**GERESS Array B**	**11.73**	**338**	Pn	**Pn**	**22 51 47.2**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=160,slow=14,SNR=22						
GERES				Sn	**Sn**	**22 53 51.1**	**-6.8**
	comp=Z,1.8nm,0.3s,baz=169,slow=14,SNR=4.9						
GERES	**GERESS Array B**	**11.73**	**338**	P	**Pn**	**22 51 47.2**	**-1.2**
GERES						22 53 51.1	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES				smax			
	comp=N,2.0nm,0.3s						
OKC	**Ostrava-Krasne**	**11.80**	**353**	*e*P	**Pn**	**22 51 49.0**	**-0.3**
OKC				AMS	AMS	22 57 10.0	
	comp=N,900nm,11.7s						
MORC	**Moravsky Berou**	**11.80**	**351**	⇓*i*P	**Pn**	**22 51 44.3**	**-5.1**
MORC	**Moravsky Berou**	**11.80**	**351**	⇓P	**Pn**	**22 51 44.3**	**-5.1**
MORC	**Moravsky Berou**	**11.80**	**351**	*e*P	**Pn**	**22 51 47.6**	**-1.8**
DAVA	**Damuels**	**11.93**	**323**	⇓*i*Pn	**Pn**	**22 51 52.7**	**+1.5**
DAVA				⇓*i*Sn	**Sn**	**22 54 00.1**	**-2.8**
FUR	**Furstenfeldbru**	**12.00**	**330**	*e*Pn	**Pn**	**22 51 51.1**	**-1.0**
KHC	**Kasperske Hory**	**12.02**	**338**	*e*P	**Pn**	**22 51 50.5**	**-1.9**
KHC				AMS	AMS	22 57 30.0	
	comp=N,900nm,12.0s						
HMYD	**Mayadein**	**12.02**	**131**	⇑P	**Pn**	**22 51 47.5**	**-4.9**
OJC	**Ojcow**	**12.08**	**358**	*e*P	**Pn**	**22 51 55.3**	**+2.1**
OJC				*e*S	**Sn**	**22 54 13.0**	**+6.5**
MBDF	**Montbardon**	**12.12**	**307**	*e*P	**Pn**	**22 51 49.7**	**-4.0**
	comp=N,50nm,0.9s						
MBDF	**Montbardon**	**12.12**	**307**	*e*P	**Pn**	**22 51 49.7**	**-4.0**
MBDF				pmax	pmax		
	comp=Z,25nm,0.9s						
MBDF	**Montbardon**	**12.12**	**307**	*e*P	**Pn**	**22 51 49.7**	**-4.0**
	comp=Z,25nm,0.9s						
WET	**Wettzell**	**12.24**	**336**	*e*Pn	**Pn**	**22 51 54.0**	**-1.4**
WET				*e*Sn	**Sn**	**22 54 04.0**	**-6.5**
BNI	**Bardonecchia**	**12.33**	**308**	*e*P	**Pn**	**22 52 00.5**	**+3.9**
SIM	**Simferopol'**	**12.35**	**52**	*e*P	**Pn**	**22 51 59.8**	**+2.9**
SIM				S	**Sn**	**22 54 11.6**	**-1.5**
DPC	**Dobruska-Polom**	**12.54**	**348**	*e*P	**Pn**	**22 51 58.8**	**-0.6**
DPC				AMS	AMS	22 57 50.0	
	comp=Z,2µm,13.5s						
PRU	**Pruhonice**	**12.55**	**343**	*e*P	**Pn**	**22 51 58.5**	**-1.1**
PRU				AMS	AMS	22 57 40.0	
	comp=Z,600nm,9.9s						
KOT	**Kottamia**	**12.56**	**127**	P	**Pn**	**22 51 54.9**	**-4.8**
SMRF	**Simiane la Rot**	**12.57**	**302**	*e*P	**Pn**	**22 51 57.2**	**-2.7**
	comp=Z,39nm,1.2s						
SMRF	**Simiane la Rot**	**12.57**	**302**	*e*P	**Pn**	**22 51 57.2**	**-2.7**
	comp=Z,39nm,1.2s						
HSAF	**As Saff**	**12.60**	**129**	⇑P	**Pn**	**22 51 56.0**	**-4.4**
HHAG	**Hagoal**	**12.71**	**126**	⇑P	**Pn**	**22 51 57.3**	**-4.5**
GLL	**Jalalah**	**12.73**	**129**	P	**Pn**	**22 51 57.2**	**-4.9**
ORIF	**Oris-en-Rattie**	**12.77**	**307**	*e*P	**Pn**	**22 51 59.7**	**-2.9**
	comp=Z,37nm,1.0s						
ORIF				*e*R			
	comp=Z,347nm,18.5s						
ORIF	**Oris-en-Rattie**	**12.77**	**307**	*e*P	**Pn**	**22 51 59.7**	**-2.9**
ORIF				pmax	pmax		
	comp=Z,18nm,1.0s						
ORIF	**Oris-en-Rattie**	**12.77**	**307**	*e*P	**Pn**	**22 51 59.7**	**-2.9**
	comp=Z,18nm,1.0s						
AMAG	**Maghara**	**12.99**	**121**	⇑P	**Pn**	**22 52 01.0**	**-4.6**
MANZ	**Manzenberg**	**13.23**	**336**	*e*Pn	**Pn**	**22 52 07.8**	**-1.0**
BBS	**Basel-Blauen**	**13.23**	**319**	P	**Pn**	**22 52 05.6**	**-3.3**
FELD	**Feldberg im Sc**	**13.25**	**321**	P	**Pn**	**22 52 04.9**	**-4.3**
SUZ		**13.26**	**125**	P	**Pn**	**22 52 05.0**	**-4.3**
GRA1	**Grafenberg Arr**	**13.27**	**333**	*e*Pn	**Pn**	**22 52 11.2**	**+1.7**
GRA1				*e*Sn	**Sn**	**22 54 25.3**	**-10**
GRA1	**Grafenberg Arr**	**13.27**	**333**	*e*P	**Pn**	**22 52 11.2**	**+1.7**
	comp=Z,800nm,9.8s						
GRF	**Grafenberg Arr**	**13.27**	**333**	*e*Pn	**Pn**	**22 52 11.2**	**+1.7**
GRF				*e*Sn	**Sn**	**22 54 25.3**	**-10**
GRF				*e*L		22 58 16.4	
	comp=Z,813nm,9.8s						
GRF	**Grafenberg Arr**	**13.27**	**333**	*e*Pn	**Pn**	**22 52 11.2**	**+1.7**
GRF				*e*Sn	**Sn**	**22 54 25.3**	**-10**
MMAI	**Mount Meron Ar**	**13.28**	**108**	Pn	**Pn**	**22 52 08.0**	**-1.6**
	comp=Z,1.7nm,0.3s,baz=306,slow=11,SNR=13						
MMAI				LR	LR	22 57 49.2	
	comp=Z,74nm,20.4s,baz=20,slow=40						
STU	**Stuttgart**	**13.34**	**326**	*e*Pn	**Pn**	**22 52 11.2**	**+0.8**
STU				*e*Sn	**Sn**	**22 54 27.0**	**-10**
STU	**Stuttgart**	**13.34**	**326**	*e*Pn	**Pn**	**22 52 11.2**	**+0.8**
STU				*e*Sn	**Sn**	**22 54 27.0**	**-10**
STU				*e*Sn	**Sn**	**22 54 33.8**	**-3.5**
BFO	**Black Forest**	**13.41**	**323**	*e*Pn	**Pn**	**22 52 14.1**	**+2.7**
BFO				*e*Sn	**Sn**	**22 54 27.8**	**-11**
GUNZ	**Gunzen**	**13.49**	**338**	*e*Pn	**Pn**	**22 52 13.3**	**+0.9**
CABF	**La Chapelle**	**13.50**	**313**	*e*P	**Pn**	**22 52 09.3**	**-3.2**
	comp=Z,18nm,0.8s						
CABF	**La Chapelle**	**13.50**	**313**	*e*P	**Pn**	**22 52 09.3**	**-3.2**
CABF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CABF	**La Chapelle**	**13.50**	**313**	*e*P	**Pn**	**22 52 09.3**	**-3.2**
	comp=Z,9.2nm,0.8s						
VIVF	**Saint-Julien-l**	**13.51**	**305**	*e*P	**Pn**	**22 52 09.5**	**-3.2**
	comp=Z,56nm,1.4s						
VIVF	**Saint-Julien-l**	**13.51**	**305**	*e*P	**Pn**	**22 52 09.5**	**-3.2**
VIVF				pmax	pmax		
	comp=Z,28nm,1.4s						
VIVF	**Saint-Julien-l**	**13.51**	**305**	*e*P	**Pn**	**22 52 09.5**	**-3.2**
	comp=Z,28nm,1.4s						
BRG	**Berggiesshubel**	**13.52**	**342**	*e*P	**Pn**	**22 52 10.1**	**-2.7**
	comp=Z,6.1nm,1.5s						
BRG							
	comp=N,181nm,11.1s						
BRG							
	comp=E,221nm,11.3s						
BRG							
	comp=Z,392nm,11.3s						
BRG	**Berggiesshubel**	**13.52**	**342**	*e*P	**Pn**	**22 52 10.1**	**-2.7**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BRG				MLR	MLR		
	comp=N,181nm,11.1s						
BRG				MLR	MLR		
	comp=E,221nm,11.3s						
BRG				MLR	MLR		
	comp=Z,392nm,11.3s						

LOMF	**Lomont**	**13.52**	**317**	*e*P	**Pn**	**22 52 10.0**	**-2.9**
WERD	**Werda**	**13.57**	**338**	*e*Pn	**Pn**	**22 52 14.9**	**+1.4**
MOF	**Molkenrain**	**13.68**	**319**	*e*P	**Pn**	**22 52 13.6**	**-1.4**
HINF	**Hinteralfeld**	**13.80**	**319**	*e*P	**Pn**	**22 52 14.0**	**-2.7**
	comp=Z,12nm,0.4s						
HINF	**Hinteralfeld**	**13.80**	**319**	*e*P	**Pn**	**22 52 14.0**	**-2.7**
HINF				pmax	pmax		
	comp=Z,6.0nm,0.4s						
HINF	**Hinteralfeld**	**13.80**	**319**	*e*P	**Pn**	**22 52 14.0**	**-2.7**
	comp=Z,5.8nm,0.4s						
ECH	**Echery**	**13.90**	**321**	*e*P	**Pn**	**22 52 16.6**	**-1.5**
HNKL	**Nakhl**	**13.95**	**122**	P	**Pn**	**22 52 14.2**	**-4.5**
HNKL	**Nakhl**	**13.95**	**122**	P	**Pn**	**22 52 14.2**	**-4.6**
MOX	**Moxa**	**13.96**	**336**	*e*PN	**Pn**	**22 52 18.0**	**-0.8**
MOX							
	comp=Z,600nm,14.0s						
CDF	**Champ du Feu**	**13.98**	**321**	*e*P	**Pn**	**22 52 13.5**	**-5.6**
	comp=Z,17nm,0.6s						
CDF	**Champ du Feu**	**13.98**	**321**	*e*P	**Pn**	**22 52 13.5**	**-5.6**
CDF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CDF	**Champ du Feu**	**13.98**	**321**	*e*P	**Pn**	**22 52 13.5**	**-5.6**
	comp=Z,8.4nm,0.6s						
AKASG	**Malin Array Be**	**14.05**	**24**	Pn	**Pn**	**22 52 18.6**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=214,slow=12,SNR=27						
AKASG	**Malin Array Be**	**14.05**	**24**	P	**Pn**	**22 52 18.7**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	**Malin Array Si**	**14.05**	**24**	*e*P	**Pn**	**22 52 17.8**	**-2.3**
LANF	**Langenberg**	**14.12**	**324**	*e*P	**Pn**	**22 52 19.4**	**-1.6**
CLL	**Collm**	**14.15**	**341**	P	**Pn**	**22 52 21.9**	**+0.5**
	comp=Z,logA/T=0.8						
CLL				*i* PP		22 52 29.9	
CLL				*e*PPP		22 52 45.0	
CLL				*e*SS		22 55 19.0	
CLL				*e*L		22 56 11.0	
CLL	**Collm**	**14.15**	**341**	*i* P	**Pn**	**22 52 21.9**	**+0.5**
	comp=Z,9.0nm,1.3s						
CLL				*i* PP		22 52 29.9	
	comp=Z,36nm,1.6s						
CLL				*e*(PPP)		22 52 45.0	
CLL				*e*SS		22 55 19.0	
CLL	**Collm**	**14.15**	**341**	*i* P	**Pn**	**22 52 21.9**	**+0.5**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CLL				MLR	MLR		
	comp=Z,700nm,9.7s						
CLL	**Collm**	**14.15**	**341**	*i* P	**Pn**	**22 52 21.9**	**+0.5**
	comp=Z,9.0nm,1.3s						
CLL				*i*		22 52 29.9	
CLL				*e*S	Sn	22 55 19.0	+22
HAU	**Haudompre**	**14.18**	**318**	*e*P	**Pn**	**22 52 18.6**	**-3.3**
HAU				*e*R			
	comp=Z,175nm,21.5s						
MALT	**Malatya**	**14.22**	**84**	⇓*i*P	**Pn**	**22 52 29.7**	**+7.3**
ANN	**Anapa**	**14.43**	**57**	*e*P	**Pn**	**22 52 30.5**	**+5.3**
ANN				*e*S	**Sn**	**22 55 14.0**	**+10**
ANN				pmax	pmax		
	comp=Z,27nm,1.0s						
ANN				MLR	MLR		
	comp=Z,235nm,12.0s						
ANN				MLR	MLR		
	comp=N,133nm,12.0s						
ANN				MLR	MLR		
	comp=E,195nm,12.0s						
THEF	**They Montfort**	**14.51**	**319**	*e*P	**Pn**	**22 52 23.7**	**-2.6**
MTLF	**Montolieu**	**14.68**	**296**	*e*P	**Pn**	**22 52 25.7**	**-2.9**
	comp=E,30nm,1.3s						
MTLF	**Montolieu**	**14.68**	**296**	*e*P	**Pn**	**22 52 25.7**	**-2.9**
MTLF				pmax	pmax		
	comp=Z,15nm,1.3s						
MTLF	**Montolieu**	**14.68**	**296**	*e*P	**Pn**	**22 52 25.7**	**-2.9**
	comp=Z,15nm,1.3s						
TNS	**Taunus Mts**	**14.76**	**329**	*e*Pn	**Pn**	**22 52 31.6**	**+2.0**
TNS				*e*Sn	**Sn**	**22 55 01.6**	**-10**
EIL	**Elat**	**14.77**	**121**	*e*Pn	**Pn**	**22 52 26.8**	**-2.9**
	comp=Z,136nm,0.5s						
EIL				*e*Sn	**Sn**	**22 55 03.7**	**-8.4**
ASF	**Jabal al Asfar**	**14.79**	**109**	Pn	**Pn**	**22 52 28.3**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=265,slow=7.1,SNR=2.3						
TR2		**14.82**	**127**	P	**Pn**	**22 52 24.7**	**-5.6**
SMF	**Signal de Mont**	**14.84**	**310**	*e*P	**Pn**	**22 52 26.7**	**-3.9**
	comp=Z,18nm,0.8s						
SMF	**Signal de Mont**	**14.84**	**310**	*e*P	**Pn**	**22 52 26.7**	**-3.9**
SMF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SMF	**Signal de Mont**	**14.84**	**310**	*e*P	**Pn**	**22 52 26.7**	**-3.9**
	comp=Z,8.9nm,0.8s						
RUE	**Ruedersdorf**	**15.05**	**344**	*e*Pn	**Pn**	**22 52 39.3**	**+5.9**
	comp=Z,15nm,0.6s						
LOR	**Lormes**	**15.14**	**312**	*e*P	**Pn**	**22 52 31.2**	**-3.4**
	comp=Z,8.4nm,0.7s						
LOR				*e*R			
	comp=Z,93nm,21.0s						
LOR	**Lormes**	**15.14**	**312**	*e*P	**Pn**	**22 52 31.2**	**-3.4**
LOR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LOR	**Lormes**	**15.14**	**312**	*e*P	**Pn**	**22 52 31.2**	**-3.4**
	comp=Z,4.2nm,0.7s						
MEZF	**Maizieres J'vi**	**15.17**	**318**	*e*P	**Pn**	**22 52 30.7**	**-4.3**
	comp=Z,25nm,0.8s						
MEZF	**Maizieres J'vi**	**15.17**	**318**	*e*P	**Pn**	**22 52 30.7**	**-4.3**
	comp=Z,25nm,0.8s						
AVF	**Avril sur Loir**	**15.20**	**310**	*e*P	**Pn**	**22 52 31.8**	**-3.6**
TR1		**15.23**	**128**	P	**Pn**	**22 52 31.3**	**-4.4**
SSF	**Saint Saulge**	**15.24**	**311**	*e*P	**Pn**	**22 52 32.2**	**-3.7**
	comp=Z,20nm,0.9s						
SSF	**Saint Saulge**	**15.24**	**311**	*e*P	**Pn**	**22 52 32.2**	**-3.7**
SSF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SSF	**Saint Saulge**	**15.24**	**311**	*e*P	**Pn**	**22 52 32.2**	**-3.7**
	comp=Z,10nm,0.9s						
CAF	**Calviac**	**15.26**	**302**	*e*P	**Pn**	**22 52 32.6**	**-3.5**
	comp=Z,18nm,1.1s						
CAF	**Calviac**	**15.26**	**302**	*e*P	**Pn**	**22 52 32.6**	**-3.5**
CAF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CAF	**Calviac**	**15.26**	**302**	*e*P	**Pn**	**22 52 32.6**	**-3.5**
	comp=Z,9.2nm,1.1s						
WLF	**Walferdange**	**15.37**	**323**	AP	pP	22 52 45.0	-6.8
WLF	**Walferdange**	**15.37**	**323**	*e*P	**Pn**	**22 52 44.9**	**+7.3**
WLF				pmax	pmax		
	comp=Z,42nm,0.9s						
WLF	**Walferdange**	**15.37**	**323**	*e*Pn	**Pn**	**22 52 44.9**	**+7.3**
	comp=Z,42nm,0.9s						
SOC	**Sochi**	**15.62**	**64**	*e*P	**Pn**	**22 52 43.4**	**+2.5**
SOC				*e*		22 55 33.3	
SOC				pmax	pmax		
	comp=Z,31nm,1.1s						
SOC				MLR	MLR		
	comp=Z,99nm,10.0s						
TCF	**Toulx Ste Croi**	**15.68**	**307**	*e*P	**Pn**	**22 52 38.9**	**-2.7**
	comp=Z,36nm,1.4s						
TCF	**Toulx Ste Croi**	**15.68**	**307**	*e*P	**Pn**	**22 52 38.9**	**-2.7**
TCF				pmax	pmax		
	comp=Z,18nm,1.4s						
TCF	**Toulx Ste Croi**	**15.68**	**307**	*e*P	**Pn**	**22 52 38.9**	**-2.7**
	comp=Z,18nm,1.4s						
SUW	**Suwalki**	**15.99**	**6**	*e*P	**Pn**	**22 52 44.5**	**-1.1**
SUW				*e*		22 55 41.1	
SUW				pmax	pmax		
	comp=Z,110nm,0.9s						
SUW	**Suwalki**	**15.99**	**6**	*e*Pn	**Pn**	**22 52 44.5**	**-1.1**
	comp=Z,110nm,0.9s						
SUW				*e*		22 52 52.6	
SUW				*e*Sn	**Sn**	**22 55 41.1**	**-0.7**
SUW	**Suwalki**	**15.99**	**6**	*e*P	**Pn**	**22 52 44.5**	**-1.1**
	comp=Z,110nm,0.9s						
EBIE	**Bielsa**	**16.03**	**293**	P	**Pn**	**22 52 52.5**	**+6.4**
	comp=Z,1.6nm,0.7s						
MEM	**Membach**	**16.10**	**325**	AP	pP	22 52 52.7	-7.2
HGN	**Heimansgroeve**	**16.24**	**326**	*e*P	**Pn**	**22 52 56.9**	**+8.2**
	comp=Z,15nm,1.1s						
HGN				*e*S	**S**	**22 56 02.7**	**+3.5**
GIVF	**Givet**	**16.30**	**322**	*e*P	**Pn**	**22 52 46.1**	**-3.4**
	comp=Z,56nm,1.0s						
GIVF	**Givet**	**16.30**	**322**	*e*P	**Pn**	**22 52 46.1**	**-3.4**
GIVF				pmax	pmax		
	comp=Z,28nm,1.0s						
GIVF	**Givet**	**16.30**	**322**	*e*P	**Pn**	**22 52 46.1**	**-3.4**
	comp=Z,28nm,1.0s						
DOU	**Dourbes**	**16.41**	**322**	AP	pP	22 52 56.1	-7.2
BAIF	**Baives**	**16.57**	**321**	*e*P	**Pn**	**22 52 49.6**	**-3.4**
	comp=Z,54nm,1.1s						
BAIF	**Baives**	**16.57**	**321**	*e*P	**Pn**	**22 52 49.6**	**-3.4**

BAIF pmax pmax
comp=Z,27nm,1.1s
BAIF Baives 16.57 321 *e*P **Pn 22 52 49.6 -3.4**
comp=Z,27nm,1.1s
WTSB Winterswijk 16.77 330 *e*P **Pn 22 52 59.8 +4.4**
comp=Z,13nm,0.6s
MFF Saint Martin d 17.30 306 *e*P **Pn 22 52 58.6 -3.4**
BSD Bornholm Skovb 17.37 350 *i* P **Pn 22 53 06.5 +3.6**
BSD *i* 22 56 25.8
BSD
comp=Z,330nm,17.0s
BSD Bornholm Skovb 17.37 350 *i* P **Pn 22 53 06.5 +3.6**
BSD *i* 22 56 25.8
KIV Kislovodsk 17.81 64 *de*P **Pn 22 53 07.3 -1.0**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV Kislovodsk 17.81 64 P **Pn 22 53 07.4 -0.9**
KIV Kislovodsk 17.81 64 *e*P **Pn 22 53 07.3 -1.0**
comp=Z,17nm,1.0s
EVIA Vianos 17.91 279 P **Pn 22 53 14.1 +4.6**
EVIA pmax pmax
comp=Z,8.0nm,1.0s
EVIA Vianos 17.91 279 P **Pn 22 53 14.1 +4.6**
comp=Z,7.6nm,1.0s
ENIJ Nijar 17.91 273 P **Pn 22 53 18.7 +9.1**
EQES Quesada 18.46 276 P **Pn 22 53 18.4 +2.2**
comp=Z,6.2nm,0.7s
EBER Berja 18.46 273 P **Pn 22 53 18.1 +1.8**
comp=Z,1.9nm,0.8s
ZEI Tsey 18.50 68 *e*P **Pn 22 53 16.9 +0.2**
VRSR Storozhevoye 18.65 39 *e*P **Pn 22 53 17.1 -1.4**
VRSR pmax pmax
comp=N,20nm,1.0s
VRSR pmax pmax
comp=Z,10.0nm,1.0s
VRSR pmax pmax
comp=E,20nm,1.1s
VRSR MLR MLR
comp=E,360nm,14.0s
VRSR MLR MLR
comp=Z,540nm,14.0s
VRSR MLR MLR
comp=N,110nm,13.0s
VRSR Storozhevoye 18.65 39 *e*P **Pn 22 53 17.1 -1.4**
comp=N,110nm,13.0s
ESDC Sonseca Array 18.96 282 P **Pn 22 53 22.5 +0.2**
comp=N,0.3nm,0.3s,baz=83,slow=11,SNR=8.2
ESDC Sonseca Array 18.96 282 P **Pn 22 53 22.5 +0.2**
ESDC P 22 53 28.6
ESLA Sonseca Array 18.96 282 *e*P **Pn 22 53 21.1 -1.2**
comp=N,7.7nm,1.3s
ESLA Sonseca Array 18.96 282 *e*P **Pn 22 53 21.1 -1.2**
comp=N,7.7nm,1.3s
EBAN Banos Encina 18.97 278 P **Pn 22 53 23.1 +0.8**
EBAN pmax pmax
comp=Z,2.0nm,0.8s
EBAN Banos Encina 18.97 278 P **Pn 22 53 23.1 +0.7**
comp=Z,2.1nm,0.8s
GNI Garni 19.02 76 P **Pn 22 53 22.5 -0.5**
comp=Z,0.6nm,0.3s,baz=315,slow=1.3,SNR=18
GNI LR LR 23 01 33.3
comp=Z,331nm,19.6s,baz=273,slow=40
GNI Garni 19.02 76 P **Pn 22 53 22.5 -0.5**
GNI pmax pmax
comp=Z,1.0nm,0.3s
GNI MLR MLR
comp=Z,331nm,19.6s
GUD Guadarrama 19.08 285 P **Pn 22 53 25.7 +2.0**
GUD pmax pmax
comp=Z,7.0nm,0.7s
GUD Guadarrama 19.08 285 P **Pn 22 53 25.7 +2.0**
comp=Z,6.7nm,0.7s
ELUQ Luque 19.43 276 P **Pn 22 53 26.8 -1.1**
ELUQ pmax pmax
comp=Z,3.0nm,0.4s
ELUQ Luque 19.43 276 P **Pn 22 53 26.8 -1.0**
comp=Z,2.7nm,0.4s
EADA Adamuz 19.58 278 P **Pn 22 53 29.2 -0.5**
comp=Z,4.1nm,0.7s
MUD Monsted U'grnd 19.78 341 *i* P **Pn 22 53 37.4 +5.4**
MUD *i* 22 57 19.7
MUD
comp=Z,180nm,15.0s
MUD Monsted U'grnd 19.78 341 *e*P **Pn 22 53 37.4 +5.4**
MUD *i* 22 57 19.7
MUD MLR MLR
comp=Z,180nm,15.0s
MUD Monsted U'grnd 19.78 341 *e*P **Pn 22 53 37.4 +5.4**
MUD *i* 22 57 19.7
VRHR Novokhopersk 19.84 42 *e*P **Pn 22 53 31.4 -1.4**
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,40nm,0.6s
EMIJ Mijas 20.01 273 P **P 22 53 34.2 +1.4**
comp=E,7.0nm,0.9s
OBN Obninsk 20.22 28⇑ *i*P **P 22 53 33.6 -1.4**
OBN *i* 22 53 43.3
OBN *e*S **S 22 57 25.8 +6.2**
OBN pmax pmax
comp=Z,47nm,1.0s
OBN MLR MLR
comp=Z,600nm,14.0s,MS4.1
OBN Obninsk 20.22 28 *e*P **P 22 53 34.4 -0.6**
comp=Z,38nm,0.9s
OBN Obninsk 20.22 28 *i* P **P 22 53 33.6 -1.4**
comp=Z,47nm,1.0s
VSU Vasula 20.76 10 *c i*P **P 22 53 39.9 -0.9**
VSU Vasula 20.76 10 *i* P **P 22 53 39.9 -0.9**
ESPR Espera 20.80 275 P **P 22 53 43.8 +2.5**
comp=Z,3.4nm,0.7s
MDT Midelt 20.98 263 P **P 22 53 46.4 +3.1**
comp=Z,5.3nm,0.8s,baz=71,slow=9.2,SNR=7.4
MDT LR LR 23 02 52.4
comp=Z,125nm,19.7s,MS3.3,baz=151,slow=40
MOS Moscow 21.09 28 *e*P **P 22 53 43.7 -0.7**
MOS *e* 22 53 56.1
MOS *e* 22 54 03.5
MOS pmax pmax
comp=Z,300nm,1.9s,mb5.3
MOS pmax pmax
comp=Z,70nm,0.9s,mb5.0
MOS MLR MLR
comp=Z,800nm,12.4s,MS4.3
MOS MLR MLR
comp=N,700nm,13.0s,MS4.3
MOS MLR MLR
comp=E,300nm,13.0s,MS4.3
MAK Makhachkala 21.15 68 *e*P **P 22 53 43.7 -1.4**
MAK *e*S **S 22 57 33.0 -5.0**
MAK *e*SS 22 57 56.8
MAK *e*SSS 22 58 09.1
MAK pmax pmax
comp=Z,377nm,1.5s,mb5.5
MAK MLR MLR
comp=Z,261nm,11.0s,MS3.9
EMIN Mina Concepcio 21.28 277 P **P 22 53 48.6 +2.1**
comp=Z,5.0nm,0.7s,mb4.0
PCBR Castelo Branco 21.66 283 *e*P **P 22 53 51.8 +1.3**
PESTR Estremoz 21.84 281 *e*P **P 22 53 53.1 +0.6**
PVIS Viseu 21.92 286 *e*P **P 22 53 54.5 +1.1**
MEF Metsahovi 22.25 5 P **P 22 53 57.9 +1.1**
PTOM Tomar 22.39 283 *e*P **P 22 53 57.0 -1.4**
HFS Hagfors 22.41 351 P **P 22 53 58.1 -0.5**
comp=Z,13nm,0.5s,mb4.6,baz=156,slow=11,SNR=63
HFS Hagfors 22.41 351 P **P 22 53 58.1 -0.5**
HFS pmax pmax
comp=Z,13nm,0.5s
HFA0 Hagfors New Ar 22.42 351 P **P 22 53 58.7 0.0**
KONO Kongsberg 22.60 346 *e*P **P 22 54 02.1 +1.6**
EKA Eskdalemuir Ar 23.38 325 P **P 22 54 09.0 +0.3**
comp=Z,22nm,0.9s,mb4.6,baz=131,slow=9.9,SNR=25
EKA Eskdalemuir Ar 23.38 325 P **P 22 54 09.0 +0.3**
EKA pmax pmax
comp=Z,22nm,0.9s
ESK Eskdalemuir 23.39 325 *e*P **P 22 54 09.2 +0.5**
NAO01 NORSAR Array S 23.49 348 *e*P **P 22 54 09.0 -0.7**
comp=Z,29nm,0.9s,mb4.7
FINES FINES Array B 23.60 7 P **P 22 54 09.2 -1.5**
comp=Z,13nm,0.7s,mb4.4,baz=176,slow=9.4,SNR=36
FINES LR LR 23 04 26.2
comp=Z,537nm,18.4s,MS4.0,baz=14,slow=39
FINES FINES Array B 23.60 7 P **P 22 54 09.2 -1.5**
FINES pmax pmax
comp=Z,13nm,0.7s
FINES MLR MLR
comp=Z,537nm,18.4s
FIA1 FINESS Array S 23.60 7 *e*P **P 22 54 09.7 -1.0**
NB2 NORSAR Subarra 23.63 349 P **P 22 54 10.6 -0.3**
comp=Z,20nm,1.0s,mb4.5,baz=153,slow=10
NOA NORSAR Array B 23.63 349 P **P 22 54 10.9 0.0**
comp=Z,19nm,1.0s,mb4.5,baz=159,slow=9.6,SNR=22
NOA LR LR 23 04 44.1
comp=Z,96nm,21.4s,MS3.2,baz=165,slow=40
NOA NORSAR Array B 23.63 349 P **P 22 54 10.9 0.0**
NOA pmax pmax
comp=Z,19nm,1.0s
NOA MLR MLR
comp=Z,96nm,21.5s
RST Umm Al-Ruwaisa 23.70 103 *e*P **P 22 54 10.1 -1.5**
RST AMb AMB 22 54 12.1
comp=Z,51nm,0.8s,mb5.0
DSB Dublin 23.81 318 *e*P **P 22 54 13.9 +1.3**
MIB Mutribah 23.82 102 *e*P **P 22 54 11.3 -1.4**
MIB AMb AMB 22 54 13.3
comp=Z,54nm,0.6s,mb5.1
NAY Al-Naaiem 24.01 104 *e*P **P 22 54 13.9 -0.6**
NAY AMb AMB 22 54 15.4
comp=Z,31nm,0.6s,mb4.9
UMR Umm Al-Rimmam 24.23 103 *e*P **P 22 54 14.8 -1.6**
UMR AMb AMB 22 54 19.1
comp=Z,41nm,0.8s,mb4.9
KAF Kangasniemi 24.28 7 *e*p **P 22 54 14.5 -2.4**
comp=Z,2.6nm,0.4s,mb4.0
KAF Kangasniemi 24.28 7 *e*P **P 22 54 14.5 -2.4**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.1
RDF Al-Radifah 24.40 104 *e*P **P 22 54 17.4 -0.7**
RDF AMb AMB 22 54 19.6
comp=Z,20nm,0.7s,mb4.6
QRN Al-Qurain 24.77 104 *e*P **P 22 54 21.2 -0.2**
QRN AMb AMB 22 54 23.1
comp=Z,27nm,0.6s,mb5.0
JOF Joensuu 25.69 12 *e*p **P 22 54 27.8 -2.0**
comp=Z,1.5nm,0.4s,mb3.9
TMCR Tamitsa 28.11 16 *e*P **P 22 54 54.6 +3.1**
TMCR pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
AKTK Aktyubinsk 29.32 53 P **P 22 55 01.1 -1.1**
AKTK LR LR 23 09 02.6
AKTO Aktyubinsk 29.32 53 P **P 22 55 01.1 -1.1**
comp=Z,2.4nm,0.8s,mb4.0,baz=254,slow=11,SNR=6.3
AKTO LR LR 23 09 02.6
comp=Z,208nm,19.0s,MS3.8,baz=91,slow=41
AKTO Aktyubinsk 29.32 53 P **P 22 55 01.1 -1.1**
AKTO pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
AKTO MLR MLR
comp=Z,208nm,19.0s,MS3.8
TOA0 Torodi Ar. Sit 29.91 219 *e*P **P 22 55 07.9 +0.5**
TOA0 *e*PcP PcP 22 58 07.8 -1.7
TORD Torodi Ar. Bea 29.91 219 P **P 22 55 07.5 0.0**
comp=Z,4.6nm,0.9s,mb4.2,baz=34,slow=8.7,SNR=37
TORD LR LR 23 08 37.3
comp=Z,220nm,18.5s,MS3.8,baz=35,slow=39
APA Apatity 30.38 10⇑ *i*P **P 22 55 16.5 +4.9**
APA pmax pmax
comp=Z,26nm,1.5s,mb4.7
APA MLR MLR
comp=Z,600nm,10.0s,MS4.5
AB31 Akbulak array 30.38 56 *i* P **P 22 55 10.0 -1.6**
AB31 pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
ARU Arti 31.18 42 *e*P **P 22 55 17.7 -1.0**
ARU *e**PP pP 22 55 23.0 -7.2
ARU pmax pmax
comp=Z,15nm,1.1s,mb4.7
ARU Arti 31.18 42 *e*P **P 22 55 17.7 -1.0**
comp=Z,15nm,1.1s,mb4.8
ARU *e*pP pP 22 55 23.0 -7.2
ARCES ARCESS Array B 31.58 3 P **P 22 55 21.5 -0.6**
comp=Z,7.8nm,1.0s,mb4.5,baz=190,slow=10,SNR=18
ARCES PcP PcP 22 58 12.9 -0.9
comp=Z,0.7nm,0.4s,baz=190,slow=1.6,SNR=6.1
ARCES LR LR 23 09 24.5
comp=Z,481nm,18.1s,MS4.2,baz=166,slow=39
ARCES ARCESS Array B 31.58 3 P **P 22 55 21.5 -0.7**
ARCES 22 58 12.9
ARCES pmax pmax
comp=Z,8.0nm,1.0s
ARCES MLR MLR
comp=Z,481nm,18.1s
ARCES ARCESS Array B 31.58 3 P **P 22 55 21.5 -0.6**
ARCES PcP PcP 22 58 12.9 -0.9
ARCES LR LR 23 09 24.5
KEV Kevo 31.88 4 *e*p **P 22 55 25.2 +0.4**
comp=Z,0.6nm,0.3s,mb3.9
KEV Kevo 31.88 4 *e*P **P 22 55 25.2 +0.4**
KEV pmax pmax
comp=Z,10.0nm,0.3s,mb5.1
WSAR Wadi Sarin 35.85 103 P **P 22 55 58.5 -0.7**
comp=Z,5.1nm,0.8s,mb4.5,baz=163,slow=2.7,SNR=2.3
ZRNK Zerenda 36.41 50 *e*P **P 22 56 03.7 -0.4**
ZRNK *e**PP pP 22 56 09.0 -6.7
ZRNK *e* 22 57 26.8
ZRNK pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ZRNK Zerenda 36.41 50 *e*P **P 22 56 03.7 -0.4**
comp=Z,6.1nm,0.9s,mb4.5
ZRNK *e*pP pP 22 56 09.0 -6.7
ZRNK *e*PP PP 22 57 26.8 -0.7
BRVK Borovoye 37.19 50 *e*P **P 22 56 10.1 -0.6**
comp=Z,4.4nm,0.9s,mb4.3
BRVK *e*pP pP 22 56 16.5 -5.9
BRVK *e*PP PP 22 57 29.2 -6.8
BVAR Borovoye Array 37.25 50 P **P 22 56 11.0 -0.2**
comp=Z,1.3nm,0.5s,mb4.0,baz=258,slow=5.9,SNR=13
CHKZ Chkalovo 37.42 49 *e*P **P 22 56 12.1 -0.6**
CHKZ *e**PP pP 22 56 17.4 -6.9
CHKZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
CHKZ Chkalovo 37.42 49 *e*P **P 22 56 12.1 -0.6**
comp=Z,8.2nm,0.8s,mb4.6
CHKZ *e*pP pP 22 56 17.4 -7.0
VOSK Vostochnaya 37.60 50 P **P 22 56 12.7 -1.4**
KK31 Karatay Array 37.94 66 *i* P **P 22 56 17.5 +0.4**
KK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
KKAR Karatay Array 37.94 66 P **P 22 56 17.5 +0.4**
KKAR pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
DBIC Dimbokro 38.77 222 P **P 22 56 24.4 +0.4**
comp=Z,5.4nm,0.7s,mb4.4,baz=7.2,slow=8.6,SNR=8.3
DBIC LR LR 23 13 31.0
comp=Z,243nm,18.6s,MS4.0,baz=18,slow=38
DBIC Dimbokro 38.77 222 P **P 22 56 24.4 +0.4**
DBIC pmax pmax
comp=Z,5.0nm,0.7s
DBIC MLR MLR
comp=Z,243nm,18.6s
LIC Lamto 39.23 222 *e*P **P 22 56 28.3 +0.4**
comp=Z,10.0nm,0.6s,mb4.4
LIC *e*R
comp=Z,373nm,23.0s
LIC Lamto 39.23 222 *e*P **P 22 56 28.3 +0.4**
comp=Z,5.0nm,0.6s,mb4.4
LIC LR LR
comp=Z,190nm,23.0s,MS3.9
AAK Ala-Archa 40.91 66⇑ *e*P **P 22 56 42.9 +1.1**
AAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
AAK Ala-Archa 40.91 66 *e*P **P 22 56 42.2 +0.4**
comp=Z,4.0nm,0.7s,mb4.2
AAK *e*PP PP 22 58 15.0 -1.6
FRU Bishkek 40.95 66 *e*P **P 22 56 43.0 +0.9**
NVS Novosibirsk 44.81 47 *e*P **P 22 57 13.2 -0.1**
NVS *e* 22 59 01.8
NVS *e*S **S 23 03 47.1 -0.5**
NVS pmax pmax
comp=E,14nm,1.5s
NVS pmax pmax
comp=Z,34nm,1.5s,mb5.0
NVS pmax pmax
comp=N,6.0nm,1.3s
MK31 Makanchi Array 45.44 58 P **P 22 57 17.5 -0.9**
MK31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
MKAR Makanchi Array 45.44 58 P **P 22 57 17.4 -1.0**
comp=Z,3.6nm,0.5s,mb4.5,baz=276,slow=7.5,SNR=36
MKAR Makanchi Array 45.44 58 P **P 22 57 17.5 -0.9**
MKAR pmax pmax
comp=Z,4.0nm,0.5s
WMQ Urumqi 49.90 61 P **P 22 57 51.8 -1.2**
LSZ Lusaka 53.64 171 P **P 22 58 22.4 +1.5**
comp=Z,1.2nm,0.5s,mb4.0,baz=327,slow=6.8,SNR=3.5
LSZ Lusaka 53.64 171 P **P 22 58 22.4 +1.5**
LSZ pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
TLY Talaya 57.42 47 *ce*P **P 22 58 48.6 +0.6**
TLY pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
ZAK Zakamensk 57.69 49 *e*P **P 22 58 50.2 +0.3**
LSA Lhasa 58.09 75 P **P 22 58 54.0 +1.3**
SCHQ Schefferville 58.39 317 P **P 22 58 55.5 +0.7**
comp=Z,1.6nm,0.5s,mb4.3,baz=91,slow=8.9,SNR=7.1
SCHQ LR LR 23 23 11.4
comp=Z,20nm,18.4s,MS3.3,baz=37,slow=35
GTA Gaotai 59.97 62 *e*P **P 22 59 05.5 -0.2**
GTA AP pP 22 59 10.0 -8.0
GTA XP sP 22 59 13.0 -10
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb4.3
BOD Bodaibo 60.49 38 *e*P **P 22 59 08.5 -0.8**
BOD pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
SONM Songino Array 60.59 50 P **P 22 59 09.8 -0.2**
comp=Z,2.5nm,0.5s,mb4.6,baz=284,slow=8.0,SNR=21
SONM LR LR 23 27 58.9
comp=Z,153nm,18.2s,MS4.2,baz=265,slow=39
SONM Songino Array 60.59 50 P **P 22 59 09.8 -0.2**
SONM pmax pmax
comp=Z,3.0nm,0.5s
SONM MLR MLR
comp=Z,153nm,18.2s
ULN Ulaanbaatar 60.98 50⇓ *e*P **P 22 59 12.8 +0.2**
ULN Ulaanbaatar 60.98 50 *e*P **P 22 59 12.7 +0.1**
comp=Z,4.3nm,0.9s,mb4.6
ULN *e*pP pP 22 59 18.1 -6.7
LZH Lanzhou 64.35 63 *e*P **P 22 59 35.5 +0.4**
LZH AP pP 22 59 41.0 -6.4
LZH XP sP 22 59 44.3 -8.0
LZH AMB AMB
comp=Z,22nm,1.2s,mb5.1
YAK Yakutsk 65.21 29 *de*P **P 22 59 40.5 -0.2**
YAK pmax pmax
comp=Z,21nm,0.7s,mb5.3
BOSA Boshof 66.56 175 P **P 22 59 49.9 +0.5**
comp=Z,2.5nm,0.8s,mb4.3,baz=15,slow=9.5,SNR=8.4
BOSA LR LR 23 30 33.3
comp=Z,332nm,19.1s,MS4.6,baz=358,slow=38
BOSA Boshof 66.56 175 P **P 22 59 49.9 +0.5**
BOSA pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BOSA MLR MLR
comp=Z,332nm,19.1s,MS4.6
BOSA Boshof 66.56 175 P **P 22 59 49.9 +0.5**
BOSA LR LR 23 30 33.3
HHC Hu-ho-hao-te 67.17 55 *e*P **P 22 59 53.0 -0.3**
HHC AP pP 22 59 57.8 -7.9
HHC XP sP 23 00 00.0 -11
HHC PCP PcP 23 00 21.8 +0.8
HHC PP PP 23 02 18.0 -3.6
HHC SCP 23 04 23.8
HHC S S 23 08 40.5 -4.2
HHC XS sS 23 08 52.3 -13
HHC PS 23 09 11.0
HHC SCS ScS 23 09 47.0 -0.6
HHC SS SS 23 13 03.5 -0.9
HHC AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,58nm,4.7s
HHC LR LR
comp=N,91nm,19.0s,MS4.1
HHC LR LR
comp=E,69nm,21.4s,MS4.1
HHC LR LR
comp=Z,95nm,23.8s,MS3.9
HIA Hailar 67.65 44⇑ *i*P **P 22 59 57.7 +1.5**
KMI Kunming 69.25 74 P **P 23 00 07.5 +1.2**
KMI AP pP 23 00 13.8 -5.0
KMI XP sP 23 00 16.5 -7.1
KMI PP PP 23 02 43.5 +3.9
KMI S S 23 09 10.3 +0.8
KMI XS sS 23 09 22.3 -7.9
KMI SS SS 23 13 36.0 -0.5
KMI SSS 23 16 40.0
KMI AMB AMB
comp=Z,4.0nm,1.1s,mb4.3
KMI AMB AMB
comp=Z,70nm,5.0s
KMI LR LR
comp=N,66nm,17.7s,MS4.1
KMI LR LR
comp=E,73nm,19.0s,MS4.1
KMI LR LR
comp=Z,56nm,22.8s,MS3.8
BILL Bilibino 71.08 13⇓ *e*P **P 23 00 16.7 -0.8**
BILL pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
INK Inuvik 72.08 350 P **P 23 00 24.2 +0.7**
comp=Z,1.6nm,0.8s,mb4.0,baz=46,slow=10.0,SNR=4.9
INK Inuvik 72.08 350 *e*P **P 23 00 24.4 +0.9**
INK pmax pmax
comp=Z,1.0nm,0.5s
INK Inuvik 72.08 350 *e*P **P 23 00 24.4 +0.9**
comp=Z,1.0nm,0.5s,mb4.0
YKA Yellowknife Ar 73.38 340 LR LR 23 36 21.1
comp=Z,41nm,18.7s,MS3.7,baz=0.0,slow=39
KLR Kul'dur 73.99 39 *e*P **P 23 00 32.5 -2.3**
CN2 Changchun 74.02 47 *e*P **P 23 00 35.0 +0.1**
MA2 Magadan 74.39 24 *ce*P **P 23 00 37.9 +0.8**
MA2 pmax pmax
comp=Z,23nm,1.3s,mb5.0
ULM Lac du Bonnet 75.64 324 P **P 23 00 45.9 +1.6**
comp=Z,4.0nm,0.6s,mb4.5,baz=73,slow=4.6,SNR=7.0
ULM Lac du Bonnet 75.64 324 P **P 23 00 45.9 +1.6**
MDJ Mudanjiang 75.83 44 P **P 23 00 45.3 -0.1**
MDJ AP pP 23 00 48.5 -9.5
MDJ XP sP 23 00 49.8 -13
MDJ PP PP 23 03 34.3 -1.5
MDJ S S 23 10 27.0 +2.5
MDJ XS sS 23 10 30.5 -15
MDJ SCS ScS 23 10 58.8 +2.6
MDJ AMB AMB
comp=Z,5.0nm,1.0s,mb4.4
MDJ AMB AMB
comp=Z,34nm,4.1s
MDJ LR LR
comp=N,64nm,11.7s,MS4.2
MDJ LR LR
comp=E,50nm,14.6s,MS4.2
MDJ LR LR
comp=Z,111nm,15.6s,MS4.3
DAWY Dawson 76.87 351 *e*P **P 23 00 52.8 +1.5**
NJ2 Nanjing 76.96 60 *e*P **P 23 00 53.3 +1.5**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
YSS Yuzh-Sakhalins 80.88 36⇓ *e*P **P 23 01 14.0 +0.7**
YSS *e* 23 01 19.8
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,200nm,16.0s,MS4.6
BDFB Brasilia 83.37 244 LR LR 23 40 08.7
comp=Z,177nm,18.1s,MS4.5,baz=22,slow=37
WALA Waterton Lakes 84.19 332 *e*P **P 23 01 32.0 +1.5**
comp=Z,3.1nm,0.8s,mb4.5
NEW Newport 86.02 333 P **P 23 01 41.5 +1.8**
comp=Z,2.0nm,0.5s,mb4.6,baz=66,slow=14
NEW Newport 86.02 333 P **P 23 01 41.5 +1.8**
NEW pmax pmax
comp=Z,2.0nm,0.5s
BOZ Bozeman (W) 86.08 328 *e*P **P 23 01 42.4 +2.4**
BOZ pmax pmax
comp=Z,4.0nm,1.2s,mb4.5
BOZ Bozeman (W) 86.08 328 *e*P **P 23 01 42.4 +2.4**
comp=Z,4.0nm,1.2s,mb4.5
MJAR Matsushiro Arr 86.11 46 P **P 23 01 41.6 +1.5**
comp=Z,1.9nm,0.7s,mb4.5,baz=314,slow=5.4,SNR=4.8
MJAR LR LR 23 46 36.5
comp=Z,82nm,19.3s,MS4.1,baz=235,slow=40
MJAR Matsushiro Arr 86.11 46 P **P 23 01 41.6 +1.4**
MJAR pmax pmax
comp=Z,2.0nm,0.7s

MJAR					MLR	MLR			
	comp=Z,82nm,19.3s								
PDAR	**Pinedale Array**	**87.50**	**326**	P	**P**	**23 01 48.4**	**+1.5**		
	comp=Z,0.7nm,0.8s,mb4.0,baz=55,slow=5.6,SNR=6.5								
PDAR					LR	LR	23 39 41.7		
	comp=Z,48nm,18.2s,MS4.0,baz=247,slow=35								
HWUT	**Hardware Ranch**	**89.32**	**326**	*e*P	**P**	**23 01 57.1**	**+1.7**		
	comp=Z,2.1nm,0.7s,mb4.6								
HWUT				*e*pP	pP	23 02 01.9	-6.4		
PV10	**Paradox Valley**	**90.74**	**323**	P	**P**	**23 02 03.4**	**+1.3**		
CPUP	**Villa Florida**	**96.90**	**242**	LR	LR	23 48 02.4			
	comp=Z,184nm,19.0s,MS4.6,baz=19,slow=37								

CSEM ***28*** *23:02:27.4±0.5, 3868N×2908W, h0km±5km, MD2.8, Error ellipse: s-maj=7.1km s-min=4.5km az=77.0, After PDA*
PDA ***28*** *23:02:27.4±0.5, 3868N×2908W, h0km±5km, MD2.8, Error ellipse: s-maj=7.1km s-min=4.5km az=77.0*

SVSA 28 23:02:27.4±0.5, 3868N×2908W, h0km±5km, MD2.8, Error ellipse: s-maj=7.1km s-min=4.5km az=77.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.31**	**109**	*e*P	Pg	23 02 33.3	-0.1
CALA				*e*S	Sg	23 02 37.6	+0.2
PICO	**Pico**	**0.54**	**109**	*e*P	Pg	23 02 37.3	-0.5
PICO				*e*S	Sg	23 02 44.9	+0.1
ROSA	**Rosais**	**0.66**	**86**	*e*P	Pg	23 02 38.8	-1.2
ROSA				*e*S	Sg	23 02 47.6	-0.9
PID	**Ribeirinha**	**0.79**	**107**	*e*S	Sg	23 02 51.0	-1.8

IDC ***28*** *23:05:17.3±3.6, 3051S×6989W, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.8/16, mbtmp3.7/4, ML4.4/1, Error ellipse: s-maj=149.5km s-min=36.7km az=11.0*
ISCJB ***28*** *23:05:32.9±0.5, 2950S±003×6939W±007, h109km±8km, mb3.4/3, Error ellipse: s-maj=10.2km s-min=4.8km az=18.3*
NEIC ***28*** *23:05:33.5, 2948S×6951W, h116km, MG4.1(GUC), After GUC.*
GUC ***28*** *23:05:33.5±1.1, 2948S×6951W, h116km±25km, MD3.7, ML4.1*

ISC 28 23:05:34.1±0.5, 2950S±003×6941W±006, h105km±8km, n30, σ0983/45, mb3.4/3, 9C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**1.23**	**293**	⇑*i*P	**Pn**	**23 05 57.4**	**+0.1**
LCO				*i* S	**Sn**	**23 06 15.2**	**+0.2**
LCO				AML	AML	23 06 16.5	
	comp=E,5μm,0.2s						
LCO	**Las Campanas**	**1.23**	**293**	⇑*i*P	**Pn**	**23 05 57.4**	**+0.1**
LCO				*i* S	**Sn**	**23 06 15.2**	**+0.2**
TLL	**Tololo Astrono**	**1.38**	**241**	⇑*i*P	**Pn**	**23 06 00.0**	**+0.9**
TLL				*i* S	**Sn**	**23 06 19.6**	**+1.5**
TLL				AML	AML	23 06 22.3	
	comp=N,4μm,0.7s						
TLL	**Tololo Astrono**	**1.38**	**241**	⇑*i*P	**Pn**	**23 06 00.0**	**+0.9**
TLL				*i* S	**Sn**	**23 06 19.6**	**+1.5**
VACH	**Vallenar**	**1.50**	**308**	⇑*i*P	**Pn**	**23 06 02.2**	**+1.7**
VACH				*i* S	**Sn**	**23 06 21.7**	**+1.1**
VACH				AML	AML	23 06 25.8	
	comp=N,8μm,0.1s						
VACH	**Vallenar**	**1.50**	**308**	⇑*i*P	**Pn**	**23 06 02.2**	**+1.7**
VACH				*i* S	**Sn**	**23 06 21.7**	**+1.1**
LSCH	**La Serena**	**1.64**	**255**	⇑*i*P	**Pn**	**23 06 01.8**	**-0.6**
LSCH				*i* S	**Sn**	**23 06 22.8**	**-1.0**
LSCH				AML	AML	23 06 25.1	
	comp=N,65nm,0.2s						
LSCH	**La Serena**	**1.64**	**255**	⇑*i*P	**Pn**	**23 06 01.8**	**-0.6**
LSCH				*i* S	**Sn**	**23 06 22.8**	**-1.0**
OVCH	**Ovalle**	**1.90**	**234**	⇓*i*P	**Pn**	**23 06 05.5**	**-0.1**
OVCH				*i* S	**Sn**	**23 06 29.0**	**-0.6**
OVCH				AML	AML	23 06 31.8	
	comp=N,1μm,0.3s						
OVCH	**Ovalle**	**1.90**	**234**	⇓*i*P	**Pn**	**23 06 05.5**	**-0.1**
OVCH				*i* S	**Sn**	**23 06 29.0**	**-0.6**
CMCH	**Combarbala**	**2.16**	**219**	⇓*i*P	**Pn**	**23 06 08.7**	**-0.2**
CMCH				*i* S	**Sn**	**23 06 35.4**	**-0.1**
CMCH				AML	AML	23 06 36.7	
	comp=N,9μm,0.7s						
CMCH	**Combarbala**	**2.16**	**219**	⇓*i*P	**Pn**	**23 06 08.7**	**-0.2**
CMCH				*i* S	**Sn**	**23 06 35.4**	**-0.1**
CPCH	**Copiapo**	**2.29**	**339**	*e*P	**Pn**	**23 06 10.2**	**-0.4**
CPCH				*i* S	**Sn**	**23 06 37.7**	**-0.8**
CPCH				AML	AML	23 06 41.0	
	comp=E,5μm,0.1s						
CPCH	**Copiapo**	**2.29**	**339**	P	**Pn**	**23 06 10.2**	**-0.4**
CPCH				S	**Sn**	**23 06 37.7**	**-0.8**
CDCH	**Caldera**	**2.72**	**332**	⇑*i*P	**Pn**	**23 06 15.4**	**-0.8**
CDCH				AML	AML	23 06 50.3	
	comp=E,352nm,0.2s						
CHNG	**Los Chungos**	**2.98**	**217**	*e*P	**Pn**	**23 06 19.6**	**0.0**
CHNG				*i* S	**Sn**	**23 06 54.1**	**-0.6**
CHNG				AML	AML	23 06 58.4	
	comp=E,609nm,0.8s						
PTCH	**Petorca**	**3.05**	**205**	AML	AML	23 07 05.1	
	comp=N,514nm,0.2s						
MDZ	**Mendoza**	**3.41**	**172**	*e*P	**Pn**	**23 06 19.4**	**-5.9**
PACH	**Papudo**	**3.49**	**209**	*i* S	**Sn**	**23 07 06.9**	**0.0**
RCDM	**Rinconada Maip**	**4.15**	**196**	*e*S	**Sn**	**23 07 22.6**	**-0.2**
PCH	**Pirque**	**4.21**	**193**	*e*P	**Pn**	**23 06 36.6**	**+0.5**
LVC	**Limon Verde**	**6.88**	**4**	*e*Pn	**Pn**	**23 07 10.8**	**-1.5**
LVC				Sn	**Sn**	**23 08 29.4**	**+0.4**
TRQA	**Tornquist**	**10.53**	**146**	*e*Pn	**Pn**	**23 08 02.3**	**+0.3**
CPUP	**Villa Florida**	**11.14**	**76**	Pn	**Pn**	**23 08 07.7**	**-2.5**
	comp=N,0.6nm,0.3s,baz=236,slow=15,SNR=5.4						
CPUP	**Villa Florida**	**11.14**	**76**	Pn	**Pn**	**23 08 07.7**	**-2.5**
CPUP				*e*Sn	**Sn**	**23 10 13.7**	**+1.0**
TORD	**Torodi Ar. Bea**	**80.55**	**69**	P	**P**	**23 17 35.5**	**+0.8**
	comp=N,0.3nm,0.6s,mb3.3,baz=224,slow=6.5,SNR=10						
TORD				pP	PcP	23 17 47.2	+5.9
	comp=N,0.4nm,0.7s,baz=266,slow=5.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	**80.55**	**69**	P	**P**	**23 17 35.5**	**+0.8**
TORD				pP	PcP	23 17 47.2	+5.9
PDAR	**Pinedale Array**	**80.83**	**331**	P	**P**	**23 17 36.5**	**+0.2**
	comp=N,0.3nm,0.3s,mb3.6,baz=139,slow=7.0,SNR=7.1						
NVAR	**Mina Array Bea**	**81.55**	**323**	P	**P**	**23 17 40.3**	**+0.2**
	comp=N,0.4nm,0.7s,mb3.4,baz=129,slow=8.3,SNR=3.4						
MKAR	**Makanchi Array**	**152.05**	**44**	PKPbc	PKPbc	23 25 17.0	0.0
	comp=N,0.3nm,0.3s,baz=345,slow=3.9,SNR=4.0						
MKAR				pPKPbc	pPKPbc	23 25 27.6	-18
	comp=N,0.3nm,0.4s,baz=267,slow=2.9,SNR=2.7						

ISCJB ***28*** *23:11:41.8±1.1, 3807N±004×2033E±008, h0km±6km, Error ellipse: s-maj=10.6km s-min=6.1km az=139.9*
ATH ***28*** *23:11:41.8, 3805N×2038E, h11km±5km, MD3.6/5*
CSEM ***28*** *23:11:43.9±0.4, 3810N×2028E, h2km, MD3.6, Error ellipse: s-maj=10.6km s-min=3.5km az=68.0*
THE ***28*** *23:11:45.7, 3820N×2042E, h0km, ML2.9*
NEIC ***28*** *23:11:46.6, 3818N×2059E, h5km, MD3.6(ATH), After ATH.*

ISC 28 23:11:43.0±1.2, 3808N±004×2039E±008, h2km±6km, n18, σ097/25, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.19**	**58**	*e*PG	**Pg**	**23 11 46.7**	**+0.1**
VLS				*e*SG	**Sg**	**23 11 49.7**	**+0.6**
VLS	**Valsamata**	**0.19**	**58**	*e*Pg	**Pg**	**23 11 46.5**	**-0.1**
LKD	**Levkas**	**0.66**	**18**	*e*Pg	**Pg**	**23 11 54.6**	**-1.0**
LKD				*e*Sg	**Sg**	**23 12 04.5**	**+0.2**
RLS	**Riolos of Patr**	**0.85**	**91**	*e*PB	**Pg**	**23 11 58.2**	**-1.1**
EVR	**Evrytania**	**1.40**	**53**	*e*PB	**Pb**	**23 12 08.8**	**-0.9**
EVR	**Evrytania**	**1.40**	**53**	*e*Pb	**Pb**	**23 12 10.0**	**+0.3**
IGT	**Igoumenitsa**	**1.45**	**358**	*e*Pg	**Pg**	**23 12 10.6**	**-0.3**
IGT				*e*Sg	**Sg**	**23 12 30.5**	**+0.8**
ITM	**Ithomi**	**1.52**	**126**	*e*PB	**Pb**	**23 12 10.1**	**-1.7**
ITM	**Ithomi**	**1.52**	**126**	*e*Pg	**Pg**	**23 12 14.0**	**+2.0**
JAN	**Janina**	**1.62**	**13**	*e*PB	**Pb**	**23 12 12.6**	**-0.9**
JAN	**Janina**	**1.62**	**13**	*e*Pn	**Pn**	**23 12 13.5**	**+1.0**
KEK	**Kerkira**	**1.70**	**344**	*e*PB	**Pb**	**23 12 12.0**	**-2.9**
KEK	**Kerkira**	**1.70**	**344**	*e*Pb	**Pb**	**23 12 18.5**	**+3.6**
AGG	**Agios Georgios**	**1.79**	**58**	*e*Pb	**Pb**	**23 12 15.8**	**-0.7**
AGG				*e*Sb	**Sb**	**23 12 39.6**	**+0.2**
MEV	**Metsovon**	**1.83**	**21**	*e*Pb	**Pb**	**23 12 16.6**	**-0.5**
MEV				*e*Sb	**Sb**	**23 12 39.8**	**-0.6**
VLI	**Veliai**	**2.44**	**123**	*e*Pg	**Pg**	**23 12 30.5**	**+0.7**
FNA	**Florina**	**2.81**	**16**	*e*Pn	**Pn**	**23 12 29.0**	**+0.1**
FNA				*e*Sn	**Sn**	**23 13 03.8**	**+0.5**
BIA	**Bitola**	**3.03**	**14**	*e*Pn	**Pn**	**23 12 33.8**	**+2.0**
BIA				*e*Sn	**Sn**	**23 13 08.4**	**-0.2**

NEIC ***28*** *23:37:56.0, 1814N×6794W, h104km, MD3.5(RSPR), After RSPR.*

RSPR 28 23:37:56.0, 1814N×6794W, h104km±1km, MD3.5/13, MD3.5/13, 9C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**0.80**	**99**	⇓*e*P	Pn	23 38 14.2	-0.5
CRPR				*e*S	Sn	23 38 28.6	-0.2
LSP	**Las Mesas**	**0.81**	**87**	⇑*e*P	Pn	23 38 14.1	-0.7
LSP				*e*S	Sn	23 38 29.1	+0.1
MGP	**Maguayo**	**0.82**	**99**	⇑*e*P	Pn	23 38 14.5	-0.4
MGP				*e*S	Sn	23 38 28.9	-0.2
AGPR	**Aguadilla, PR**	**0.85**	**67**	⇑*e*P	Pn	23 38 15.0	-0.2
AGPR				*e*S	Sn	23 38 30.3	+0.6
LRS	**Lares**	**1.05**	**82**	⇑*e*P	Pn	23 38 16.9	-0.4
LRS				*e*S	Sn	23 38 33.8	+0.4
AOPR	**Arecibo Observ**	**1.15**	**80**	⇓*e*P	Pn	23 38 17.7	-0.6
AOPR				*e*S	Sn	23 38 35.0	-0.3
OBIP	**Obispado Ponce**	**1.27**	**94**	⇑*e*P	Pn	23 38 19.6	-0.2
OBIP				*e*S	Sn	23 38 37.4	-0.3
CELP	**Cerrillos**	**1.30**	**93**	⇑*e*P	Pn	23 38 19.8	-0.2
CELP				*e*S	Sn	23 38 37.9	-0.3
ICM	**Isla Caja Muer**	**1.38**	**100**	⇑*e*P	Pn	23 38 20.6	-0.3
ICM				*e*S	Sn	23 38 39.5	-0.3
CPD	**Cerro la Pandu**	**1.93**	**93**	⇑*e*P	Pn	23 38 27.7	-0.1
CPD				*e*S	Sn	23 38 52.5	+0.4
CBYP	**Canovanas**	**1.99**	**86**	⇓*e*P	Pn	23 38 27.6	-0.9
CBYP				*e*S	Sn	23 38 53.0	-0.4
HUMP	**Col San Antoni**	**1.99**	**90**	⇓*e*P	Pn	23 38 28.2	-0.3
HUMP				*e*S	Sn	23 38 53.9	+0.4
MTP	**Monte Pirata**	**2.27**	**91**	⇑*e*P	Pn	23 38 32.4	+0.2
MTP				*e*S	Sn	23 38 59.8	-0.1

NEIC ***28*** *23:49:38.3, 3129S×6896W, h150km, MD3.3(GUC), After GUC.*

GUC 28 23:49:38.3±0.4, 3129S×6896W, h150km, MD3.3, ML3.5, 9C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**1.75**	**273**	⇑*i*P	Pn	23 50 10.7	+0.1
CMCH				*i* S	Sn	23 50 35.9	+0.5
CMCH				AML	AML	23 50 37.8	
	comp=N,1μm,0.4s						
CMCH	**Combarbala**	**1.75**	**273**	⇑*i*P	Pn	23 50 10.7	+0.1
CMCH				*i* S	Sn	23 50 35.9	+0.5
PTCH	**Petorca**	**1.94**	**239**	⇑*i*P	Pn	23 50 13.1	+0.4
PTCH				*i* S	Sn	23 50 39.7	+0.6
PTCH				AML	AML	23 50 42.3	
	comp=N,299nm,0.4s						
PTCH	**Petorca**	**1.94**	**239**	⇑*i*P	Pn	23 50 13.1	+0.4
PTCH				*i* S	Sn	23 50 39.7	+0.6
TLL	**Tololo Astrono**	**1.94**	**305**	*i* P	Pn	23 50 13.9	+1.2
TLL				*i* S	Sn	23 50 40.7	+1.5
TLL				AML	AML	23 50 44.5	
	comp=N,340nm,0.4s						
TLL	**Tololo Astrono**	**1.94**	**305**	*i* P	Pn	23 50 13.9	+1.2
TLL				*i* S	Sn	23 50 40.7	+1.5
CHNG	**Los Chungos**	**2.25**	**254**	⇑*i*P	Pn	23 50 16.6	+0.3
CHNG				*i* S	Sn	23 50 45.7	+0.1
FCH	**Farellones**	**2.33**	**209**	⇑*i*P	Pn	23 50 18.6	+1.4
FCH				*i* S	Sn	23 50 49.2	+1.9
FCH				AML	AML	23 50 53.5	
	comp=E,81nm,0.3s						
PEL	**Peldehue**	**2.36**	**218**	AML	AML	23 50 49.8	
	comp=E,184nm,0.4s						
PACH	**Papudo**	**2.45**	**239**	*i* S	Sn	23 50 50.5	+0.5
RCDM	**Rinconada Maip**	**2.69**	**215**	⇑*i*P	Pn	23 50 22.1	+0.3
RCDM				*i* S	Sn	23 50 55.8	+0.5
RCDM				AML	AML	23 50 56.6	
	comp=N,143nm,0.5s						
RCDM	**Rinconada Maip**	**2.69**	**215**	⇑*i*P	Pn	23 50 22.1	+0.3
RCDM				*i* S	Sn	23 50 55.8	+0.5
LCO	**Las Campanas**	**2.73**	**326**	⇑*i*P	Pn	23 50 23.5	+1.3
LCO				*i* S	Sn	23 50 57.7	+1.7

MEX 28 23:56:29.7±1.0, 1599N×9772W, h16km±10km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.56**	**316**	*i* P	Pg	23 56 39.2	-1.6
PNIG				*i* S	Sg	23 56 45.3	-3.0
VHO	**Vista Hermosa**	**1.44**	**41**	*i* P	Pn	23 56 52.7	-2.4
VHO				*i* S	Sn	23 57 08.1	-5.6
HUIG	**Huatulco**	**1.57**	**98**	*e*P	Pn	23 56 53.3	-3.7
HUIG				*i* S	Sn	23 57 11.2	-5.7
UTMO	**Huajuapan**	**1.83**	**358**	*i* P	Pn	23 56 58.1	-2.5
UTMO				*i* S	Sn	23 57 19.5	-4.0
ACX	**Acapulco**	**2.28**	**293**	*e*P	Pn	23 57 04.0	-2.7
ACX				*i* S	Sn	23 57 32.0	-2.5
TPIG	**Tehuac#an**	**2.44**	**8**	*e*P	Pn	23 57 05.5	-3.5
TPIG				*i* S	Sn	23 57 34.8	-3.7
MEIG	**Mezcala**	**2.65**	**317**	*e*P	Pn	23 57 10.3	-1.5
MEIG				*i* S	Sn	23 57 40.9	-2.7
PLIG	**Platanillo**	**2.94**	**325**	*e*P	Pn	23 57 13.2	-2.6
PLIG				*i* S	Sn	23 57 48.0	-2.7
PPM	**Popocatepetl**	**3.18**	**344**	*e*P	Pn	23 57 17.5	-1.6
PPM				*e*P		23 57 20.0	
PPM				*i* S	Sn	23 57 54.2	-2.5
PPM				*i* S	Sn	23 57 55.0	-1.7
IIZ	**Mezontepec**	**3.50**	**336**	*e*P	Pn	23 57 20.5	-2.9
IIZ				*i* S	Sn	23 57 59.2	-5.3

IGQ 29 00:18:35.7, 281S×7908W, h33km±1km, Mb4.0, Ms3.8, 2C-1D, Error ellipse: s-maj=15.1km s-min=2.4km az=28.1, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGUA	**Igualata**	**1.38**	**19**	P	Pn	00 19 02.2	+3.5
ARRY	**Arrayan**	**1.44**	**26**	⇑P	Pn	00 19 02.1	+2.7
ARRY				S	Sn	00 19 20.8	+3.7
PATA	**Patacocha**	**1.45**	**26**	⇓P	Pn	00 19 02.6	+3.0
PATA				S	Sn	00 19 21.8	+4.4
RETU	**Refugio**	**1.49**	**25**	P	Pn	00 19 03.5	+3.3
RETU				S	Sn	00 19 23.2	+4.7
JUIV	**Juive**	**1.51**	**24**	P	Pn	00 19 03.3	+2.9
JUIV				S	Sn	00 19 22.6	+3.8
ULBA	**Ulba**	**1.51**	**26**	⇑P	Pn	00 19 03.6	+3.2
ULBA				S	Sn	00 19 22.7	+3.8
RUN5	**Runtun**	**1.53**	**25**	P	Pn	00 19 03.7	+3.0
RUN5				S	Sn	00 19 23.3	+3.8
VC1	**Cotopaxi 1**	**2.26**	**17**	P	Pn	00 19 13.7	+3.0
ANTI	**Antisana**	**2.52**	**21**	P	Pn	00 19 17.0	+2.7
GGP	**Refugio Guagua**	**2.66**	**11**	P	Pn	00 19 23.1	+6.9

MEX 29 00:22:51.8±1.0, 1558N×9599W, h8km±6km, MD4.2, 1C, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.22**	**328**	⇑*i*P	Pg	00 22 55.3	-0.9
HUIG				*i* S	Sg	00 22 59.7	+0.5
VHO	**Vista Hermosa**	**1.64**	**334**	*i* P	Pn	00 23 18.6	-2.3
VHO				*i* S	Sn	00 23 36.4	-5.8
PNIG	**Pinotepa**	**2.21**	**292**	*e*P	Pn	00 23 25.4	-3.2
PNIG				*i* S	Sn	00 23 52.1	-4.0
UTMO	**Huajuapan**	**2.83**	**322**	*i* P	Pn	00 23 37.2	0.0
UTMO				*i* S	Sn	00 24 07.0	-4.4
TPIG	**Tehuac#an**	**3.11**	**335**	*i* P	Pn	00 23 39.1	-2.0
TPIG				*i* S	Sn	00 24 15.6	-2.8
MEIG	**Mezcala**	**4.18**	**304**	*i* S	Sn	00 24 41.5	-3.4
PPM	**Popocatepetl**	**4.28**	**324**	*e*P	Pn	00 23 55.8	-1.4
PPM				*i* S	Sn	00 24 43.7	-3.6
PLIG	**Platanillo**	**4.37**	**310**	*i* S	Sn	00 24 46.4	-3.1
IIZ	**Mezontepec**	**4.74**	**320**	*i* P	Pn	00 23 59.1	-4.4
IIZ				*i* S	Sn	00 24 51.5	-7.1

SZGRF ***29*** *01:06:24.8, 2225N×4647W, h22km, mb4.8, MS3.7, Northern Mid-Atlantic Ridge*
BJI ***29*** *01:06:27.5, 2258N×4546W, h9km, mB4.9, Ms4.8, Msz4.4*
ISCJB ***29*** *01:06:28.7±0.3, 2243N±006×4499W±004, h10km, mb4.6/60, MS4.0/27, Error ellipse: s-maj=8.9km s-min=5.1km az=140.3*
IDC ***29*** *01:06:28.7±0.5, 2238N×4502W, h0km, mb4.2/22, mb1 4.4/22, mb1mx4.3/27, mbtmp4.2/22, MS3.9/17, Ms1 3.9/17, ms1mx3.7/29, Error ellipse: s-maj=19.9km s-min=11.8km az=130.0*
MOS ***29*** *01:06:28.7±0.8, 2240N×4495W, h10km, mb5.0/30, Error ellipse: s-maj=14.2km s-min=5.9km az=47.6*
HRVD ***29*** *01:06:30.4±0.5, 2256N×4499W, h14km±1km, MW4.8/59, Centroid moment Tensor Solution. LP body waves: s12,c12;Mantle waves: s59,c78; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.97±.18; Mθθ0.24±.10; Mφφ1.73±.12; Mrθ-0.20±.31; Mφθ0.12±.06; Mφr0.06±.21; Best double couple: M0 1.86500×10^16 NP1:φs10.00000°, δ45.00000°, λ-82.00000°. NP2: φs179.00000°, δ46.00000°, λ-98.00000°. Principal axes: T 1.7400, Plg1.0000°, Azm275.0000°; N 0.2470, Plg5.0000°, Azm184.0000°; P -1.9900, Plg85.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***29*** *01:06:30.4±0.2, 2241N×4496W, h10km, mb4.8/32, MS3.9/6 Error ellipse: s-maj=7.4km s-min=4.0km az=160.0*

ISC 29 01:06:30.7±0.3, 2244N±006×4497W±004, h10km, (h22km±1.1km: pP-P), n152, σ082/144, mb4.6/60, MS4.0/27, 3C-4D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTP	**Monte Pirata**	**19.79**	**261**	*e*P	**Pn**	**01 11 01.9**	**-0.7**
MTP				*e*		01 11 09.4	
BBSR	**BB Station**	**20.09**	**304**	P	**P**	**01 11 08.9**	**+4.6**
SJG	**San Juan**	**20.33**	**262**	P	**P**	**01 11 09.6**	**+2.6**
	4.4nm,0.4s,baz=63,slow=11,SNR=3.6						
SJG				LR	LR	01 17 13.0	
	comp=Z,488nm,21.6s,MS3.8,baz=90,slow=32						
SJG	**San Juan**	**20.33**	**262**	*e*P	**P**	**01 11 09.6**	**+2.6**
SJG				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SJG	**San Juan**	**20.33**	**262**	*e*P	**P**	**01 11 09.6**	**+2.6**
	comp=Z,8.3nm,0.5s						
PCRV	**Puerto La Cruz**	**22.44**	**240**	LR	LR	01 18 52.7	
	comp=Z,236nm,20.5s,MS3.6,baz=56,slow=33						
SDV	**Santo Domingo**	**28.08**	**245**	P	**P**	**01 12 23.7**	**+1.3**
	comp=Z,2.8nm,0.3s,mb4.3,baz=47,slow=20,SNR=6.6						
SDV				LR	LR	01 22 09.4	
	comp=Z,165nm,19.7s,MS3.6,baz=45,slow=34						
SDV	**Santo Domingo**	**28.08**	**245**	*e*P	**P**	**01 12 23.8**	**+1.3**
	comp=Z,14nm,1.2s,mb4.5						
SAML	**Samuel**	**35.94**	**212**	*e*P	**P**	**01 13 30.2**	**-1.1**
	comp=Z,2.1nm,0.7s,mb4.2						
SCHQ	**Schefferville**	**36.27**	**339**	LR	LR	01 25 55.5	
	comp=Z,107nm,21.9s,MS3.6,baz=43,slow=32						
BDFB	**Brasilia**	**37.96**	**185**	P	**P**	**01 13 48.5**	**0.0**
	comp=Z,13nm,1.0s,mb4.6,baz=8.5,slow=9.2,SNR=11						
BDFB				LR	LR	01 27 41.2	
	comp=Z,123nm,18.9s,MS3.7,baz=2.5,slow=34						
ESDC	**Sonseca Array**	**38.72**	**54**	P	**P**	**01 13 55.3**	**+0.4**
	comp=Z,1.4nm,0.9s,mb3.7,baz=253,slow=6.4,SNR=4.4						
ESDC				LR	LR	01 27 17.2	
	comp=Z,154nm,18.7s,MS3.9,baz=275,slow=32						
PLAL	**Pickwick Lake**	**39.54**	**298**	*e*P	**P**	**01 14 02.5**	**+0.7**
	comp=Z,4.0nm,0.8s,mb4.2						
SIV	**San Ignacio**	**41.32**	**204**	P	**P**	**01 14 15.7**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=49,slow=21,SNR=4.8						
SJPF	**Ste Jean**	**41.59**	**50**	*e*P	**P**	**01 14 18.8**	**+0.1**
	comp=Z,32nm,1.2s,mb4.5						
SJPF	**Ste Jean**	**41.59**	**50**	*e*P	**P**	**01 14 18.8**	**+0.1**
SJPF				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.5						
SJPF	**Ste Jean**	**41.59**	**50**	*e*P	**P**	**01 14 18.8**	**+0.1**
	comp=Z,16nm,1.2s,mb4.5						
DBIC	**Dimbokro**	**41.70**	**106**	P	**P**	**01 14 19.2**	**-0.4**
	comp=Z,6.1nm,1.1s,mb4.1,baz=309,slow=13,SNR=2.9						
DBIC				LR	LR	01 28 04.3	
	comp=Z,234nm,21.5s,MS4.0,baz=267,slow=31						
ROSF	**Rostrenen**	**41.96**	**42**	*e*P	**P**	**01 14 21.4**	**-0.3**
	comp=Z,46nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**41.96**	**42**	*e*P	**P**	**01 14 21.4**	**-0.3**
ROSF				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**41.96**	**42**	*e*P	**P**	**01 14 21.4**	**-0.3**
	comp=Z,23nm,1.2s,mb4.7						
ETSF	**Etsaut**	**42.01**	**50**	*e*P	**P**	**01 14 22.5**	**+0.4**
	comp=Z,64nm,1.5s,mb4.7						
ETSF	**Etsaut**	**42.01**	**50**	*e*P	**P**	**01 14 22.5**	**+0.4**
ETSF				pmax	pmax		
	comp=Z,32nm,1.5s,mb4.7						
ETSF	**Etsaut**	**42.01**	**50**	*e*P	**P**	**01 14 22.5**	**+0.4**
	comp=Z,32nm,1.5s,mb4.7						
SGMF	**Saint Gilles**	**42.37**	**42**	*e*P	**P**	**01 14 24.5**	**-0.6**
	comp=Z,161nm,1.5s,mb5.1						
SGMF	**Saint Gilles**	**42.37**	**42**	*e*P	**P**	**01 14 24.5**	**-0.6**
SGMF				pmax	pmax		
	comp=Z,81nm,1.5s,mb5.1						
SGMF

SSF Saint Saulge 45.87 45 *e*P **P** **01 14 52.5 -0.6**
comp=Z,54nm,1.6s,mb4.9
SSF Saint Saulge 45.87 45 *e*P **P** **01 14 52.5 -0.6**
SSF pmax pmax
comp=Z,27nm,1.6s,mb4.9
SSF Saint Saulge 45.87 45 *e*P **P** **01 14 52.5 -0.6**
comp=Z,27nm,1.6s,mb4.9
SMF Signal de Mont 45.98 46 *e*P **P** **01 14 53.9 -0.1**
comp=Z,30nm,1.3s,mb4.8
SMF Signal de Mont 45.98 46 *e*P **P** **01 14 53.9 -0.1**
SMF pmax pmax
comp=Z,15nm,1.3s,mb4.8
SMF Signal de Mont 45.98 46 *e*P **P** **01 14 53.9 -0.1**
comp=Z,15nm,1.3s,mb4.8
LOR Lormes 46.16 45 *e*P **P** **01 14 55.0 -0.4**
comp=Z,44nm,1.5s,mb4.9
LOR *e*R
comp=Z,145nm,22.0s
LOR Lormes 46.16 45 *e*P **P** **01 14 55.0 -0.4**
LOR pmax pmax
comp=Z,22nm,1.5s,mb4.9
LOR MLR MLR
comp=Z,150nm,22.0s,MS3.9
LOR Lormes 46.16 45 *e*P **P** **01 14 55.0 -0.4**
comp=Z,22nm,1.5s,mb4.9
LOR LR LR
comp=Z,150nm,22.0s,MS3.9
MEZF Maizieres J'vi 47.25 44 *e*P **P** **01 15 03.5 -0.5**
comp=Z,146nm,1.7s,mb5.3
MEZF Maizieres J'vi 47.25 44 *e*P **P** **01 15 03.5 -0.5**
comp=Z,146nm,1.7s,mb5.6
CABF La Chapelle 47.48 47 *e*P **P** **01 15 05.6 -0.2**
comp=Z,123nm,1.8s,mb5.2
CABF La Chapelle 47.48 47 *e*P **P** **01 15 05.6 -0.2**
CABF pmax pmax
comp=Z,61nm,1.8s,mb5.2
CABF La Chapelle 47.48 47 *e*P **P** **01 15 05.6 -0.2**
comp=Z,61nm,1.8s,mb5.2
HAU Haudompre 47.97 45 *e*P **P** **01 15 08.7 -0.9**
HAU *e*R
comp=Z,134nm,21.0s
HAU Haudompre 47.97 45 *e*P **P** **01 15 08.7 -0.9**
HAU LR LR
comp=Z,130nm,21.0s,MS3.9
HINF Hinteralfeld 48.26 45 *e*P **P** **01 15 10.8 -1.0**
ULM Lac du Bonnet 48.28 318 P **P** **01 15 15.7 +3.8**
comp=Z,4.7nm,1.1s,mb4.4,baz=65,slow=5.8,SNR=3.5
ULM LR LR 01 32 48.1
comp=Z,153nm,20.5s,MS4.0,baz=96,slow=33
WMOK Wichita Mounta 48.31 297 *e*P **P** **01 15 11.8 -0.4**
WMOK pmax pmax
comp=Z,11nm,1.1s,mb4.8
WMOK Wichita Mounta 48.31 297 *e*P **P** **01 15 11.8 -0.3**
comp=Z,11nm,1.1s,mb4.8
CDF Champ du Feu 48.67 45 *e*P **P** **01 15 14.2 -0.7**
KEST Kesra 48.72 62 P **P** **01 15 16.8 +1.5**
comp=Z,3.0nm,1.1s,mb4.2,baz=16,slow=8.9,SNR=4.6
KEST LR LR 01 32 58.6
comp=Z,61nm,18.3s,MS3.6,baz=213,slow=33
CPUP Villa Florida 49.94 195 P **P** **01 15 23.3 -1.4**
comp=Z,5.7nm,0.8s,mb4.6,baz=6.0,slow=8.5,SNR=11
CPUP LR LR 01 33 45.2
comp=Z,84nm,20.5s,MS3.7,baz=4.6,slow=33
CPUP Villa Florida 49.94 195 P **P** **01 15 23.3 -1.4**
CPUP LR LR 01 33 45.2
GRA1 Grafenberg Arr 51.47 44 *e*P **P** **01 15 36.5 +0.3**
comp=Z,21nm,1.7s,mb4.8
GRA1 *e*pP pP 01 15 42.5 +3.1
GRA1 LR LR
comp=Z,100nm,20.2s,MS3.8
GRF Grafenberg Arr 51.47 44 *e*P **P** **01 15 36.5 +0.3**
comp=Z,21nm,1.7s,mb4.8
GRF *e*pP pP 01 15 42.5 +3.1
GRF *e*L 01 32 27.0
comp=Z,76nm,20.2s
GRF Grafenberg Arr 51.47 44 *e*P **P** **01 15 36.5 +0.3**
GRF *e**PP pP 01 15 42.5 +3.1
GRF pmax pmax
comp=Z,21nm,1.7s,mb4.8
GRF MLR MLR
comp=Z,100nm,20.2s,MS3.8
GRF Grafenberg Arr 51.47 44 *e*P **P** **01 15 36.5 +0.3**
GRF *e**PP pP 01 15 42.5 +3.1
GRF pmax pmax
comp=Z,21nm,1.7s,mb4.8
GRF MLR MLR
comp=Z,100nm,20.2s,MS3.8
CLL Collm 52.88 42 P **P** **01 15 46.7 0.0**
comp=Z,logA/T=0.8,mb4.5
CLL *e*PPP 01 18 51.0
CLL *e*SS SS 01 27 08.0 +14
CLL Collm 52.88 42 *i* P **P** **01 15 46.7 0.0**
comp=Z,7.0nm,1.0s,mb4.5
CLL *e*PPP 01 18 51.0
CLL *e*SS SS 01 27 08.0 +14
CLL Collm 52.88 42 *i* P **P** **01 15 46.7 0.0**
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CLL MLR MLR
comp=Z,200nm,14.6s,MS4.3
CLL Collm 52.88 42 *i* P **P** **01 15 46.7 0.0**
comp=Z,7.0nm,1.0s,mb4.5
CLL LR LR
comp=Z,200nm,14.6s,MS4.3
GERES GERESS Array B 52.94 45 P **P** **01 15 46.7 -0.4**
comp=Z,0.8nm,0.9s,mb3.7,baz=213,slow=6.4,SNR=4.6
NOA NORSAR Array B 54.40 30 P **P** **01 15 57.6 -0.2**
comp=Z,0.9nm,0.8s,mb3.7,baz=251,slow=7.3,SNR=3.5
NOA LR LR 01 35 05.6
comp=Z,155nm,20.0s,MS4.1,baz=255,slow=32
ANMO Albuquerque 54.61 298⇓ *e*P **P** **01 16 00.5 +1.1**
ANMO Albuquerque 54.61 298 *e*P **P** **01 16 00.1 +0.7**
comp=Z,4.6nm,1.1s,mb4.4
LAZ Ladron 55.21 297 P **P** **01 16 03.0 -0.7**
PV01 Paradox Valley 56.10 302 *e*P **P** **01 16 11.0 +0.9**
VYHS Vyhne 56.29 46 *e*P **P** **01 16 11.4 0.0**
PDAR Pinedale Array 56.70 307 P **P** **01 16 13.8 -0.6**
comp=Z,1.5nm,0.8s,mb4.1,baz=88,slow=6.2,SNR=15
PDAR LR LR 01 38 28.6
comp=Z,74nm,19.5s,MS3.8,baz=92,slow=34
GCMT Greycliff 56.79 311 P **P** **01 16 15.0 0.0**
OJC Ojcow 57.03 44 *e*P **P** **01 16 17.7 +1.0**
NIE Niedzica 57.31 45 *e*P **P** **01 16 20.2 +1.5**
KECS Kecovo 57.38 46 *e*pP pP 01 16 24.6 +2.2
STHS Stebnicka Huta 57.92 45 *e*P **P** **01 16 24.7 +1.7**
CRVS Cervenica-Dubn 58.04 45 *e*P **P** **01 16 25.1 +1.2**
HWUT Hardware Ranch 58.22 306 *e*P **P** **01 16 24.7 -0.5**
comp=Z,7.4nm,1.2s,mb4.6
TUC Tucson 58.48 295 *e*P **P** **01 16 27.5 +0.6**
TUC pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
TUC Tucson 58.48 295 *e*P **P** **01 16 27.5 +0.6**
comp=Z,7.7nm,1.3s,mb4.6
WUAZ Wupatki 58.56 299 *e*P **P** **01 16 28.0 +0.5**
comp=Z,13nm,1.2s,mb4.8
KOLS Kolonicke sedl 58.58 45 *e*P **P** **01 16 26.7 -0.9**
SPUT South Promonto 58.90 306 *e*P **P** **01 16 29.0 -0.8**
MCMT McKenzie Canyo 59.04 310 *e*P **P** **01 16 31.3 +0.5**
DUG Dugway 59.26 304 *e*P **P** **01 16 32.1 -0.2**
DUG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
DUG Dugway 59.26 304 *e*P **P** **01 16 32.1 -0.2**
comp=Z,3.6nm,0.8s,mb4.5
BGU Big Grassy Mou 59.37 305 *e*P **P** **01 16 31.7 -1.4**
CCUT Cedar City 59.93 301 *e*P **P** **01 16 37.8 +0.9**
HLID Hailey 60.22 308 *e*P **P** **01 16 38.5 -0.4**
comp=Z,1.3nm,0.7s,mb4.1
HLID *e*PcP PcP 01 17 22.5 -1.8
YKA Yellowknife Ar 60.95 330 LR LR 01 41 37.9
comp=Z,74nm,19.3s,MS3.9,baz=90,slow=35
MLR Muntele Rosu 61.15 49 P **P** **01 16 46.2 +0.9**
comp=Z,7.2nm,0.9s,mb4.8,baz=139,slow=4.2,SNR=7.8
FINES FINESS Array B 61.50 31 P **P** **01 16 47.8 +0.1**
comp=Z,1.6nm,0.9s,mb4.2,baz=242,slow=3.7,SNR=3.5
VSU Vasula 61.61 35⇑ *e*P **P** **01 16 53.3 +4.9**
ARCES ARCESS Array B 62.35 22 P **P** **01 16 53.0 -0.4**
comp=Z,2.0nm,1.0s,mb4.2,baz=275,slow=6.0,SNR=5.4
AKASG Malin Array Be 63.05 43 P **P** **01 16 57.1 -0.9**
comp=Z,2.4nm,0.8s,mb4.4,baz=272,slow=5.7,SNR=11
DAC Darwin (Calif) 63.46 300 *e*P **P** **01 17 01.3 +0.5**
DAC pmax pmax
comp=Z,11nm,1.4s,mb4.8
DAC Darwin (Calif) 63.46 300 *e*P **P** **01 17 01.3 +0.5**
comp=Z,11nm,1.4s,mb4.8
NVAR Mina Array Bea 63.69 303 P **P** **01 17 01.6 -0.7**
comp=Z,1.0nm,1.0s,mb3.8,baz=102,slow=7.5,SNR=3.8

OBN Obninsk 67.12 38⇓ *e*P **P** **01 17 25.6 +1.1**
OBN *e* 01 17 31.5
OBN pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.5
PLCA Paso Flores 67.20 201 P **P** **01 17 23.9 -1.1**
comp=Z,1.8nm,0.9s,mb4.1,baz=49,slow=4.4,SNR=5.3
PLCA LR LR 01 48 14.3
comp=Z,129nm,19.9s,MS4.2,baz=8.4,slow=37
BRTR Keskin Array B 67.51 55 P **P** **01 17 27.9 +1.0**
comp=Z,1.7nm,1.0s,mb4.0,baz=263,slow=4.9,SNR=6.2
INK Inuvik 68.84 337 P **P** **01 17 34.3 -1.0**
INK pmax pmax
comp=Z,6.0nm,1.1s
INK Inuvik 68.84 337 P **P** **01 17 34.3 -1.0**
comp=Z,5.9nm,1.1s,mb4.4
ANN Anapa 69.29 49 *e*P **P** **01 17 47.7 +10**
ANN pmax pmax
comp=Z,37nm,1.2s,mb5.2
ANN MLR MLR
comp=Z,151nm,17.0s,MS4.3
SOC Sochi 71.16 50 *e*P **P** **01 17 50.4 +0.9**
SOC *e*PP pP 01 17 57.5 +4.7
SOC *e*S S 01 27 14.2 +7.8
SOC *e**SS sS 01 27 32.0 +20
SOC *e* 01 27 57.0
SOC *e*SS SS 01 31 39.2 -0.7
SOC pmax pmax
comp=Z,12nm,0.9s,mb4.8
SOC MLR MLR
comp=Z,246nm,18.0s,MS4.5
MALT Malatya 71.46 56 *e*P **P** **01 17 52.6 +1.2**
MALT pmax pmax
comp=Z,18nm,1.4s,mb4.8
MALT Malatya 71.46 56 *e*P **P** **01 17 52.6 +1.3**
comp=Z,18nm,1.4s,mb4.8
DAWY Dawson 71.97 333 *e*P **P** **01 17 53.7 -0.8**
KIV Kislovodsk 73.15 49 *d* iP **P** **01 18 02.4 +0.9**
KIV *e* 01 18 08.4
KIV pmax pmax
comp=Z,26nm,1.4s,mb5.0
KIV Kislovodsk 73.15 49 *e*P **P** **01 18 02.4 +1.0**
comp=Z,9.7nm,0.9s,mb4.7
COLA College 75.22 335 *c* iP **P** **01 18 19.4 +5.8**
GNI Garni 75.68 52 P **P** **01 18 17.9 +1.7**
comp=Z,2.4nm,0.4s,mb4.5,baz=252,slow=3.2,SNR=4.9
MCK McKinley 76.09 334 P **P** **01 18 18.2 -0.3**
ARU Arti 78.74 33 *ce*P **P** **01 18 34.3 +0.9**
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.5
AKTK Aktyubinsk 80.86 39 P **P** **01 18 45.5 +0.6**
AKTO Aktyubinsk 80.86 39 P **P** **01 18 45.5 +0.6**
comp=Z,7.1nm,1.0s,mb4.6,baz=298,slow=6.5,SNR=16
LBTB Lobatse 83.12 120 *e*P **P** **01 18 57.6 +0.8**
SUR Sutherland 83.17 129 P **P** **01 18 58.5 +1.5**
ZRNK Zerenda 85.72 34 *i* P **P** **01 19 10.0 +0.1**
ZRNK pmax pmax
comp=Z,6.0nm,1.3s,mb4.7
TIXI Tiksi 86.07 2⇓ *e*P **P** **01 19 11.9 +0.2**
TIXI pmax pmax
comp=Z,14nm,1.3s,mb5.0
CHKZ Chkalovo 86.14 33 *i* P **P** **01 19 12.1 +0.1**
CHKZ pmax pmax
comp=Z,9.0nm,1.6s,mb4.8
BRVK Borovoye 86.31 33 *e*P **P** **01 19 13.3 +0.5**
BRVK pmax pmax
comp=Z,19nm,1.9s,mb5.0
BRVK Borovoye 86.31 33 *e*P **P** **01 19 13.3 +0.5**
comp=Z,19nm,1.9s,mb5.0
BVAR Borovoye Array 86.38 33 P **P** **01 19 13.9 +0.7**
comp=Z,2.5nm,0.9s,mb4.5,baz=316,slow=4.1,SNR=17
BVAR LR LR 01 55 39.9
comp=Z,90nm,18.2s,MS4.2,baz=139,slow=34
VOSK Vostochnaya 86.85 33 P **P** **01 19 13.8 -1.7**
VOSK pmax pmax
comp=Z,4.0nm,0.1s,mb5.6
WMQ Urumqi 101.07 33 *e*P Pdif 01 20 21.0 +0.2
HHC Hu-ho-hao-te 113.36 19 *e*PKP PKiKP 01 25 05.3 -3.5
HHC PP PP 01 26 00.3 +0.9
HHC PKS 01 28 40.8
HHC SKS SKSdf 01 32 16.5 -4.5
HHC SKKS SKKSac 01 32 53.5 -8.2
HHC SS SS 01 41 41.8 -3.4
HHC LR LR
comp=N,131nm,24.7s,MS4.5
HHC LR LR
comp=E,83nm,23.7s,MS4.5
HHC LR LR
comp=Z,106nm,23.7s,MS4.4
KMI Kunming 123.28 35 PKP PKPdf 01 25 24.5 -3.3
KMI XPKP 01 25 33.3
VNDA Vanda 123.37 187 PKP PKPdf 01 25 25.2 -2.8
comp=Z,0.7nm,0.8s,baz=314,slow=4.4,SNR=6.0

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*ISCJB **29** 01:14:16.8±0.1, 2797N±002×104.11E±002, h10km, mb4.7/116, MS4.2/31, Error ellipse: s-maj=3.1km s-min=3.0km az=168.6*
*BJI **29** 01:14:18.7, 28.10N×104.18E, h16km, mB4.8, mb4.7, ML5.0, Ms4.8, Msz4.6*
*IDC **29** 01:14:19.2±2.7, 2796N×104.15E, h18km±16km, mb4.4/21, mb1 4.5/22, mb1mx4.5/24, mbtmp4.5/22, ML4.4/1, MS4.1/17, Ms1 4.1/17, ms1mx3.8/35, Error ellipse: s-maj=21.3km s-min=11.2km az=55.0*
*MOS **29** 01:14:20.5±0.9, 2790N×104.07E, h38km, mb4.9/66, MS4.3/26, Error ellipse: s-maj=7.9km s-min=4.2km az=122.3*
*SZGRF **29** 01:14:20.4, 2805N×104.38E, h33km, mb4.7, MS4.2, Sichuan, China*
*NEIC **29** 01:14:23.1±1.2, 2784N×103.96E, h43km±10km, mb4.8/65, MS4.4/7, Error ellipse: s-maj=6.8km s-min=4.3km az=46.0*
*CRAAG **29** 01:14:31.7, 2765N×103.83E, Mb4.8*

ISC 29 01:14:18.8±0.1, 2798N±002×10408E±002, h10km, n347, σ1§10/358, mb4.7/116, MS4.2/31, 24C-13D, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**2.76**	**123**⇑	*i*P	**Pn**	**01 15 04.8**	**+1.7**
GYA				PG	**Pg**	**01 15 10.0**	**-1.7**
GYA				S	**Sn**	**01 15 41.0**	**+4.5**
GYA				SG	**Sg**	**01 15 46.5**	**-1.0**
GYA				Smax			
	comp=N,8μm,0.8s						
GYA				Smax			
	comp=E,3μm,0.8s						
GYA				LR	LR		
	comp=N,9μm,6.3s						
GYA				LR	LR		
	comp=E,5μm,5.7s						
GYA				LR	LR		
	comp=Z,15μm,7.5s						
CD2	**Chengdu**	**2.93**	**355**⇓	*i*P	**Pn**	**01 15 06.8**	**+1.4**
CD2				PG	**Pg**	**01 15 10.8**	**-4.1**
CD2				S	**Sn**	**01 15 37.0**	**-3.6**
CD2				SG	**Sg**	**01 15 48.0**	**-4.9**
CD2				Smax			
	comp=N,5μm,1.3s						
CD2				Smax			
	comp=E,20μm,1.1s						
CD2				LR	LR		
	comp=N,16μm,7.8s						
CD2				LR	LR		
	comp=Z,9μm,8.4s						
KMI	**Kunming**	**3.09**	**203**	P	**Pn**	**01 15 10.5**	**+2.9**
KMI				PG	**Pg**	**01 15 17.5**	**-0.5**
KMI				S	**Sn**	**01 15 49.3**	**+4.7**
KMI				SG	**Sg**	**01 16 00.5**	**+2.4**
KMI				Smax			
	comp=N,416nm,1.3s						
KMI				Smax			
	comp=E,513nm,1.2s						
KMI				LR	LR		
	comp=N,13μm,6.7s						
KMI				LR	LR		
	comp=E,9μm,5.3s						
KMI				LR	LR		
	comp=Z,12μm,8.1s						
ENH	**Enshi**	**5.25**	**63**	*e*Pb	**Pb**	**01 15 58.8**	**+8.0**
XAN	**Xi'an**	**7.33**	**33**	P	**Pn**	**01 16 05.5**	**-0.4**
XAN				S	**Sn**	**01 17 23.8**	**-5.3**
XAN				SG	**Sg**	**01 18 05.5**	**-8.5**
XAN				Smax			
	comp=N,2μm,1.2s						
XAN				Smax			
	comp=E,2μm,0.9s						
XAN				LR	LR		
	comp=N,4μm,6.2s						
XAN				LR	LR		
	comp=E,2μm,6.3s						
XAN				LR	LR		
	comp=Z,6μm,7.7s						
LZH	**Lanzhou**	**8.08**	**359**	*e*P	**Pn**	**01 16 17.0**	**+0.8**
LZH				AP		01 16 20.3	
LZH				XP		01 16 23.0	
LZH				S	**Sn**	**01 17 49.8**	**+2.2**
LZH				XS		01 17 54.3	
LZH				AMB	AMB		
	comp=Z,65nm,1.0s						
LZH				AMB	AMB		
	comp=Z,189nm,4.3s						
LZH				Smax			
	comp=N,965nm,1.2s						
LZH				Smax			
	comp=E,932nm,1.1s						
LZH				LR	LR		
	comp=E,8μm,6.8s						
LZH				LR	LR		
	comp=Z,8μm,8.5s						
WHN	**Wuhan**	**9.33**	**72**	P	**Pn**	**01 16 34.5**	**+1.2**
WHN				S	**Sn**	**01 18 11.0**	**-7.2**
WHN				LR	LR		
	comp=Z,8μm,9.3s						
GZH	**Guangzhou**	**9.68**	**118**	P	**Pn**	**01 16 35.5**	**-2.7**
GZH				S	**Sn**	**01 18 21.3**	**-5.7**
GZH				Smax			
	comp=N,448nm,1.7s						
GZH				Smax			
	comp=E,352nm,1.5s						
CHG	**Chiang Mai**	**10.27**	**208**	⇑P	**Pn**	**01 16 50.6**	**+4.4**
	comp=E,34nm,1.3s						
CHTO	**Chiang Mai**	**10.27**	**208**	P	**Pn**	**01 16 51.6**	**+5.4**
	SNR=17						
CHTO	**Chiang Mai**	**10.27**	**208**	*e*Pn	**Pn**	**01 16 50.8**	**+4.6**
	comp=E,65nm,1.4s						
QIZ	**Qiongzhong**	**10.36**	**148**	P	**Pn**	**01 16 51.5**	**+4.0**
QIZ				LR	LR		
	comp=N,5μm,11.7s						
QIZ				LR	LR		
	comp=E,6μm,11.2s						
QIZ				LR	LR		
	comp=Z,6μm,9.9s						
LSA	**Lhasa**	**11.46**	**282**	*e*P	**Pn**	**01 17 10.3**	**+7.8**
KKTK	**Khon Kaen**	**11.65**	**186**	P	**Pn**	**01 17 07.0**	**+1.9**
GTA	**Gaotai**	**11.93**	**344**	*e*P	**Pn**	**01 17 11.0**	**+2.0**
GTA				S	**Sn**	**01 19 15.0**	**-7.2**
GTA				SCS	ScS	01 30 01.8	-2.4
GTA				AMB	AMB		
	comp=Z,6.0nm,1.6s						
GTA				AMB	AMB		
	comp=Z,89nm,4.6s						
GTA				LR	LR		
	comp=N,3μm,11.8s						
GTA				LR	LR		
	comp=E,5μm,14.1s						
GTA				LR	LR		
	comp=Z,2μm,16.7s						
NST	**Nakhon Sawan**	**12.79**	**197**	P	**Pn**	**01 17 22.7**	**+2.1**
QZH	**Quanzhou**	**13.35**	**100**	*e*P	**Pn**	**01 17 29.5**	**+1.2**
QZH				S	**Sn**	**01 19 59.3**	**+2.5**
QZH				LR	LR		
	comp=N,13μm,8.0s						
QZH				LR	LR		
	comp=E,5μm,6.8s						
QZH				LR	LR		
	comp=Z,6μm,8.2s						
NJ2	**Nanjing**	**13.43**	**69**	*e*P	**Pn**	**01 17 28.5**	**-0.9**
NJ2				AP		01 17 31.8	
NJ2				PP		01 17 35.0	
NJ2				XP		01 17 39.3	
NJ2				S	**Sn**	**01 19 56.0**	**-2.7**
NJ2				XS		01 20 02.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,20nm,3.5s						
NJ2				LR	LR		
	comp=N,6μm,5.0s						
NJ2				LR	LR		
	comp=E,5μm,8.0s						
NJ2				LR	LR		
	comp=Z,4μm,8.5s						
BTO	**Baotou**	**13.51**	**20**	*e*P	**Pn**	**01 17 28.3**	**-2.2**
BTO				AMB	AMB		
	comp=Z,5.0nm,1.4s						
TIA	**Tai'an**	**13.76**	**50**	P	**Pn**	**01 17 32.5**	**-1.4**
TIA				S	**Sn**	**01 20 06.5**	**-0.3**
TIA				LR	LR		
	comp=N,1μm,11.0s						
TIA				LR	LR		
	comp=E,1μm,11.0s						
HHC	**Hu-ho-hao-te**	**14.23**	**24**	*e*P	**Pn**	**01 17 40.5**	**+0.1**
HHC				S	**Sn**	**01 20 17.5**	**-0.9**
HHC				AMB	AMB		
	comp=Z,22nm,1.0s						
HHC				AMB	AMB		
	comp=Z,135nm,5.3s						
HHC				LR	LR		
	comp=N,1μm,6.9s						
HHC				LR	LR		
	comp=E,1μm,6.5s						
HHC				LR	LR		
	comp=Z,690nm,7.5s						
BJT	**Baijiatuau**	**15.62**	**37**	*e*P	**Pn**	**01 17 59.8**	**+0.8**
BJT				pmax	pmax		
	comp=Z,52nm,1.1s						
BJT	**Baijiatuau**	**15.62**	**37**	*e*Pn	**Pn**	**01 17 59.8**	**+0.8**
	comp=Z,52nm,1.1s						
BJI	**Beijing**	**15.64**	**37**	P	**Pn**	**01 17 59.8**	**+0.6**
BJI				AMB	AMB		
	comp=Z,28nm,1.8s						
BJI				AMB	AMB		
	comp=Z,197μm,3.0s						
BJI				LR	LR		
	comp=N,2μm,12.3s						
BJI				LR	LR		
	comp=E,2μm,11.0s						
BJI				LR	LR		
	comp=Z,1μm,15.5s						
JIRN	**Jiri**	**15.83**	**273**	*e*P	**Pn**	**01 18 01.6**	**-0.1**
	comp=Z,45nm,0.7s						
YHNB	**Yeheng**	**15.86**	**98**	*e*Pn	**Pn**	**01 18 07.0**	**+5.0**
GUN	**Gumba**	**16.08**	**274**	*e*P	**Pn**	**01 18 03.3**	**-1.7**
	comp=Z,60nm,0.5s						
NACB	**Ninganchiao**	**16.19**	**100**	*e*Pn	**Pn**	**01 18 12.9**	**+6.5**
PKI	**Pulchoki**	**16.53**	**273**	*e*P	**Pn**	**01 18 09.8**	**-0.9**
KKN	**Kakani**	**16.62**	**274**	*e*P	**Pn**	**01 18 11.5**	**-0.4**
	comp=Z,90nm,0.6s						
KKN	**Kakani**	**16.62**	**274**	*e*P	**Pn**	**01 18 11.5**	**-0.4**
KKN				pmax	pmax		
	comp=Z,91nm,0.6s						
DMN	**Daman**	**16.79**	**273**	*e*P	**Pn**	**01 18 11.6**	**-2.4**
BOK	**Bokaro**	**16.89**	**260**	*ex*	x	01 18 06.8	
BOK				AMb	AMB	01 18 19.9	
	comp=Z,43nm,1.0s						
KOLN	**Koldanda**	**18.11**	**274**	*e*P	**Pn**	**01 18 28.8**	**-1.6**
	comp=Z,28nm,0.6s						
DL2	**Dalian**	**18.22**	**49**	P	**Pn**	**01 18 32.3**	**+0.5**
DL2				S	**Sn**	**01 21 57.0**	**+1.8**
DL2				AMB	AMB		
	comp=Z,40nm,1.0s						
DL2				LR	LR		
	comp=N,360nm,11.8s						
DL2				LR	LR		
	comp=E,320nm,11.5s						
DL2				LR	LR		
	comp=Z,450nm,11.8s						
SONM	**Songino Array**	**19.90**	**5**	P	**Pn**	**01 18 49.9**	**-2.1**
	comp=Z,1.2nm,0.3s,baz=190,slow=10,SNR=60						
SONM				LR	LR	01 27 32.5	
	comp=Z,756nm,21.2s,baz=178,slow=40						
SONM	**Songino Array**	**19.90**	**5**	P	**Pn**	**01 18 49.9**	**-2.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,756nm,21.3s						
ULN	**Ulaanbaatar**	**19.98**	**6**	*c* iP	**Pn**	**01 18 51.6**	**-1.4**
ULN				*i* *PP	pP	01 19 18.9	+25
ULN	**Ulaanbaatar**	**19.98**	**6**	*e*P	**Pn**	**01 18 51.6**	**-1.4**

comp=Z,49nm,1.1s
WMQ Urumqi 20.57 324 P **P** **01 18 57.0 -0.7**
WMQ AMB AMB
comp=Z,20nm,0.8s
WMQ AMB AMB
comp=Z,121nm,3.0s
WMQ LR LR
comp=N,1μm,5.0s
WMQ LR LR
comp=E,754nm,5.0s
WMQ LR LR
comp=Z,561nm,5.0s
SNY Shenyang 21.07 44 ⇑P **P** **01 19 04.3 +1.3**
SNY S **S** **01 22 52.8 -4.7**
SNY SS 01 23 25.0
SNY AMB AMB
comp=Z,20nm,1.1s,mb4.4
SNY AMB AMB
comp=Z,121nm,2.8s,mb4.7
SNY LR LR
comp=E,1μm,14.9s
SNY LR LR
comp=Z,848nm,16.4s,MS4.2
INCN Inchon 21.16 58 P **P** **01 19 06.3 +2.1**
SNR=5.2
JOW Kunigami 21.51 87 P **P** **01 19 06.8 -1.0**
comp=Z,12nm,0.4s,mb4.6,baz=171,slow=6.7,SNR=10.0
VIS Vishakhapatnam 21.65 246 *e*P **P** **01 19 08.3 -1.0**
VIS AMb AMB 01 19 18.2
comp=Z,70nm,1.3s,mb4.9
ZAK Zakamensk 22.38 359 *e*P **P** **01 19 16.9 -0.2**
ZAK pmax pmax
comp=Z,40nm,1.3s,mb4.7
KULM Kulim 22.80 189 *e*P **P** **01 19 22.0 +0.4**
CN2 Changchun 23.33 42 *e*P **P** **01 19 26.3 -0.9**
CN2 *e*S **S** **01 23 27.8 -12**
CN2 AMB AMB
comp=Z,40nm,1.2s,mb4.7
CN2 AMB AMB
comp=Z,250nm,3.0s
CN2 LR LR
comp=N,800nm,11.0s,MS4.5
CN2 LR LR
comp=E,690nm,11.0s,MS4.5
CN2 LR LR
comp=Z,1μm,12.0s,MS4.5
SMLA Simla 23.60 284 *e*P **P** **01 19 30.1 +0.2**
SMLA AMb AMB 01 19 42.3
comp=Z,113nm,1.6s,mb5.0
NDI New Delhi 23.64 278 *e*P **P** **01 19 29.6 -0.7**
NDI AMb AMB 01 19 35.2
comp=Z,53nm,1.1s,mb4.9
NDI *e*S **S** **01 23 43.5 -1.1**
TLY Talaya 23.67 359 *e*P **P** **01 19 31.1 +0.5**
TLY *e* 01 20 07.2
TLY *e*SS 01 24 31.9
TLY pmax pmax
comp=Z,23nm,1.5s,mb4.4
TLY MLR MLR
comp=Z,1μm,11.0s,MS4.6
TLY Talaya 23.67 359 *e*P **P** **01 19 32.0 +1.4**
IRK Irkutsk 24.23 0 *e*P **P** **01 19 36.9 +1.2**
IRK *e* 01 19 55.1
IRK pmax pmax
comp=Z,245nm,1.7s,mb5.4
BHK Bhakra 24.24 285 *ex* x 01 19 41.2
HIA Hailar 24.43 25 *e*P **P** **01 19 39.1 +1.6**
HIA pmax pmax
comp=Z,43nm,0.9s
HIA Hailar 24.43 25 *e*P **P** **01 19 39.1 +1.6**
comp=Z,43nm,0.9s,mb4.9
BHPL Bhopal 24.47 265 *e*P **P** **01 19 37.7 -0.2**
BHPL AMb AMB 01 19 39.5
comp=Z,34nm,1.8s,mb4.5
DLH Dalhousie 24.67 288 *e*P **P** **01 19 41.0 +1.3**
KKM Kota Kinabalu 24.68 150 *e*P **P** **01 19 39.3 -0.5**
THN Thein Dam 24.87 287 *e*P **P** **01 19 40.2 -1.4**
CIT Chita 25.04 14 *e*P **P** **01 19 43.8 +0.7**
CIT pmax pmax
comp=Z,97nm,1.3s,mb5.2
MK31 Makanchi Array 25.39 324 P **P** **01 19 46.3 0.0**
MK31 pmax pmax
comp=Z,18nm,0.9s,mb4.6
MKAR Makanchi Array 25.39 324 P **P** **01 19 45.7 -0.6**
comp=Z,14nm,0.7s,mb4.6,baz=128,slow=11,SNR=38
MKAR PcP PcP 01 23 19.0 +0.4
comp=Z,2.2nm,0.7s,baz=114,slow=7.0,SNR=4.7
MKAR ScP ScP 01 26 55.7 -2.1
comp=Z,8.4nm,0.8s,baz=104,slow=5.1,SNR=29
PSI Prapat 25.52 192 P **P** **01 19 47.9 +0.4**
comp=Z,16nm,0.8s,mb4.6,baz=348,slow=9.1,SNR=18
PSI ScP ScP 01 26 58.3 +0.2
comp=Z,14nm,1.2s,baz=128,slow=3.3,SNR=5.0
PSI LR LR 01 29 40.5
comp=Z,580nm,19.0s,MS4.1,baz=351,slow=36
PSI Prapat 25.52 192 P **P** **01 19 47.9 +0.5**
PSI pmax pmax
comp=Z,16nm,0.8s,mb4.6
PSI pmax pmax
comp=N,14nm,1.2s
PSI MLR MLR
comp=Z,580nm,19.0s,MS4.1
HYB Hyderabad 25.74 251 *i*P **P** **01 19 50.0 +0.6**
HYB Hyderabad 25.74 251 *e*P **P** **01 19 50.0 +0.6**
KSH Kashi 25.94 304 *e*P **P** **01 19 54.5 +3.3**
KSH *e*PCP PcP 01 23 20.8 +1.0
KSH *e*S **S** **01 24 11.5 -10**
KSH *e*SS 01 25 29.5
KSH *e*PCS PcS 01 27 00.3 -0.3
KSH AMB AMB
comp=Z,14nm,0.7s,mb4.6
KSH AMB AMB
comp=Z,254nm,3.0s
KSH LR LR
comp=N,807nm,11.2s
KSH LR LR
comp=E,2μm,8.8s
KSH LR LR
comp=Z,938nm,7.7s
AJM Ajmer 26.19 274 *e*P **P** **01 19 53.0 -0.5**
AJM AMb AMB 01 19 57.5
comp=Z,24nm,0.5s,mb5.0
MDJ Mudanjiang 26.27 44 P **P** **01 19 55.5 +1.3**
MDJ PCS PcS 01 26 59.3 -2.2
MDJ AMB AMB
comp=Z,15nm,1.1s,mb4.4
MDJ AMB AMB
comp=Z,51nm,4.3s
MDJ LR LR
comp=N,361nm,20.6s,MS4.0
MDJ LR LR
comp=E,226nm,17.8s,MS4.0
MDJ LR LR
comp=Z,338nm,16.9s,MS4.0
VLA Vladivostok 27.05 49 *e*P **P** **01 20 01.0 -0.2**
VLA pmax pmax
comp=Z,86nm,1.8s,mb5.0
VLA MLR MLR
comp=Z,800nm,13.0s,MS4.5
AAK Ala-Archa 28.05 309 *e*P **P** **01 20 12.9 +2.7**
AAK pmax pmax
comp=Z,11nm,1.0s,mb4.4
AAK Ala-Archa 28.05 309 *e*P **P** **01 20 12.9 +2.7**
comp=Z,11nm,1.0s,mb4.4
MJAR Matsushiro Arr 29.98 65 LR LR 01 33 46.3
comp=Z,389nm,19.4s,MS4.0,baz=250,slow=39
KLR Kul'dur 30.01 37 *e*P **P** **01 20 24.9 -2.8**
BOD Bodaibo 30.63 10 *e*P **P** **01 20 32.4 -0.7**
BOD pmax pmax
comp=Z,7.0nm,1.5s,mb4.3
NVS Novosibirsk 30.81 336 *e*P **P** **01 20 32.7 -2.0**
NVS pmax pmax
comp=Z,22nm,1.6s,mb4.7
NVS pmax pmax
comp=N,38nm,2.0s
NVS pmax pmax
comp=E,13nm,1.7s
KK31 Karatay Array 30.96 308 *i*P **P** **01 20 36.3 +0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
KKAR Karatay Array 30.96 308 P **P** **01 20 36.3 +0.3**
KKAR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
HABR Khabarovsk 31.46 41 *e*P **P** **01 20 41.6 +1.2**
HABR *e*S **S** **01 25 40.5 -7.8**
HABR pmax pmax
comp=Z,29nm,0.6s,mb5.3
BVAR Borovoye Array 35.27 325 P **P** **01 21 12.8 -0.8**
comp=Z,1.1nm,0.6s,mb4.0,baz=122,slow=8.3,SNR=6.3
BVAR PcP PcP 01 23 43.0 -1.2
comp=Z,2.0nm,0.6s,baz=134,slow=4.3,SNR=5.2
BVAR ScP ScP 01 27 26.9 -3.1
comp=Z,5.7nm,0.8s,baz=143,slow=3.7,SNR=21
BRVK Borovoye 35.34 325 *e*P **P** **01 21 14.9 +0.6**
comp=Z,1.7nm,0.5s,mb4.2
CHKZ Chkalovo 35.50 326 *e*P **P** **01 21 15.2 -0.4**
CHKZ *e* 01 23 42.4
CHKZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
CHKZ Chkalovo 35.50 326 *e*P **P** **01 21 15.2 -0.5**
comp=Z,4.2nm,0.6s,mb4.5
CHKZ *e*PcP PcP 01 23 42.4 -2.5
YSS Yuzh-Sakhalins 35.61 47⇓*e*P **P** **01 21 15.5 -1.1**
YSS pmax pmax
comp=Z,33nm,1.7s,mb5.0
ZRNK Zerenda 35.95 324 *e*P **P** **01 21 18.8 -0.7**
ZRNK *e* 01 23 45.1
ZRNK pmax pmax
comp=Z,30nm,0.7s,mb5.3
ZRNK Zerenda 35.95 324 *e*P **P** **01 21 18.8 -0.7**
comp=Z,3.3nm,0.7s,mb4.4
ZRNK *e*pP pP 01 21 41.6 +19
ZRNK *e*sP sP 01 21 53.7 +30
ZRNK *e*PcP PcP 01 23 45.0 -1.2
YAK Yakutsk 38.03 19⇑*e*P **P** **01 21 38.6 +1.4**
YAK pmax pmax
comp=Z,34nm,0.7s,mb5.2
AB31 Akbulak array 39.78 315 *i*P **P** **01 21 51.8 -0.1**
AB31 pmax pmax
comp=Z,20nm,0.7s,mb5.0
WSAR Wadi Sarin 41.08 274 P **P** **01 22 04.2 +1.6**
comp=Z,8.4nm,0.8s,mb4.4,baz=150,slow=2.1,SNR=7.9
AKTK Aktyubinsk 41.30 316 P **P** **01 22 05.0 +0.7**
AKTO Aktyubinsk 41.30 316 P **P** **01 22 05.0 +0.7**
comp=Z,1.7nm,0.6s,mb3.9,baz=89,slow=11,SNR=4.8
SMDO Samad 41.64 274 P **P** **01 22 08.8 +1.6**
SNR=5.5
BSY Bisya 42.48 274 P **P** **01 22 15.8 +1.8**
SNR=5.2
ARU Arti 42.91 324 *e*P **P** **01 22 16.5 -1.1**
ARU *e* 01 23 55.6
ARU *e*PPP 01 24 39.9
ARU *e*S **S** **01 28 32.2 -10**
ARU *e*SS SS 01 31 50.5 -3.3
ARU MLR MLR
comp=Z,200nm,19.0s,MS4.0
ARU MLR MLR
comp=N,90nm,20.0s,MS3.9
ARU MLR MLR
comp=E,100nm,18.0s,MS3.9
ARU Arti 42.91 324 *e*P **P** **01 22 16.7 -0.9**
MA2 Magadan 44.72 32*ce*P **P** **01 22 33.1 +1.0**
MA2 pmax pmax
comp=Z,22nm,1.7s,mb4.7
SOKR Solikamsk 45.00 328 *e*P **P** **01 22 34.5 +0.2**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
SOKR MLR MLR
comp=Z,310nm,18.0s,MS4.3
TIXI Tiksi 45.81 11*d i*P **P** **01 22 40.0 -0.8**
TIXI pmax pmax
comp=Z,19nm,1.0s,mb5.0
PET Petropavlovsk 47.03 42 P **P** **01 22 51.4 +1.1**
KAKA Kakadu 48.90 142 *e*P **P** **01 23 03.3 -1.5**
comp=Z,9.5nm,0.8s,mb4.9
MIB Mutribah 49.28 286 *e*P **P** **01 23 07.7 0.0**
MIB AMb AMB 01 23 12.2
comp=Z,63nm,0.9s,mb5.6
RDF Al-Radifah 49.29 285 *e*P **P** **01 23 06.9 -1.0**
RDF AMb AMB 01 23 12.3
comp=Z,90nm,0.9s,mb5.8
NAY Al-Naaiem 49.48 286 *e*P **P** **01 23 08.8 -0.4**
NAY AMb AMB 01 23 13.6
comp=Z,70nm,0.7s,mb5.8
RST Umm Al-Ruwaisa 49.63 286 *e*P **P** **01 23 09.7 -0.8**
RST AMb AMB 01 23 14.2
comp=Z,33nm,0.8s,mb5.4
GNI Garni 49.80 300 P **P** **01 23 12.5 +0.8**
comp=Z,12nm,0.8s,mb5.0,baz=80,slow=6.1,SNR=8.1
GNI Garni 49.80 300 *e*P **P** **01 23 13.5 +1.8**
GNI pmax pmax
comp=Z,24nm,1.1s
GNI Garni 49.80 300 *e*P **P** **01 23 13.5 +1.9**
comp=Z,24nm,1.1s,mb5.1
ZEI Tsey 50.23 304 *e*P **P** **01 23 15.5 +0.5**
FITZ Fitzroy Crossi 50.35 153 *e*P **P** **01 23 14.6 -1.2**
comp=Z,6.7nm,0.6s,mb4.8
KIV Kislovodsk 51.05 305 P **P** **01 23 22.3 +1.1**
SNR=9.9
KIV Kislovodsk 51.05 305 *e*P **P** **01 23 22.3 +1.2**
KIV pmax pmax
comp=Z,56nm,1.3s,mb5.3
KIV Kislovodsk 51.05 305 *e*P **P** **01 23 22.3 +1.2**
comp=Z,56nm,1.3s,mb5.3
MBWA Marble Bar 51.14 161 *e*P **P** **01 23 21.5 -0.3**
comp=Z,26nm,0.8s,mb5.2
VOR Voronezh 53.20 315 *e*P **P** **01 23 37.0 -0.2**
VOR pmax pmax
comp=Z,50nm,1.4s,mb5.2
VRSR Storozhevoye 53.20 315 *e*P **P** **01 23 36.6 -0.6**
VRSR pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
VRSR pmax pmax
comp=N,5.0nm,0.8s
VRSR pmax pmax
comp=E,10.0nm,0.9s
SOC Sochi 53.22 305*c i*P **P** **01 23 37.7 +0.4**
SOC *e* 01 25 42.1
SOC *e*S **S** **01 31 00.3 -8.0**
SOC *e*SSS 01 36 33.3
SOC pmax pmax
comp=Z,13nm,0.8s,mb4.9
BILL Bilibino 54.01 24⇓*e*P **P** **01 23 41.7 -1.4**
ANN Anapa 54.73 307 *e*P **P** **01 23 47.6 -0.8**
ANN *e* 01 24 05.7
ANN *e*S **S** **01 31 18.9 -10**
ANN pmax pmax
comp=Z,45nm,1.5s,mb5.3
TMCR Tamitsa 54.77 331 *e*P **P** **01 23 47.0 -1.6**
TMCR pmax pmax
comp=Z,30nm,1.5s,mb5.1
OBN Obninsk 54.80 319 P **P** **01 23 48.0 -0.9**
OBN *e* 01 23 56.5
OBN *e* 01 24 08.5
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.4
MALT Malatya 54.90 299⇓*i*P **P** **01 23 51.3 +1.7**
MALT Malatya 54.90 299 *e*P **P** **01 23 51.6 +2.0**
MALT pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
MALT Malatya 54.90 299 *e*P **P** **01 23 51.6 +2.0**
comp=Z,8.0nm,1.0s,mb4.7
PMG Port Moresby 55.84 125*c i*P **P** **01 23 55.5 -0.8**
PMG Port Moresby 55.84 125 P **P** **01 23 55.2 -1.1**
WRAB Tennant Creek 55.92 145*c i*P **P** **01 23 56.1 -0.8**
WRAB Tennant Creek 55.92 145 *e*P **P** **01 23 55.8 -1.1**
WRA Warramunga Arr 55.92 145 P **P** **01 23 55.2 -1.7**
comp=Z,40nm,0.6s,mb5.6,baz=334,slow=8.1,SNR=135
WRA Warramunga Arr 55.92 145 P **P** **01 23 55.2 -1.7**
WRA pmax pmax
comp=Z,41nm,0.6s
WRA Warramunga Arr 55.92 145 P **P** **01 23 55.2 -1.7**
WB2 Warramunga Arr 55.92 145⇑*i*P **P** **01 23 56.0 -0.9**
WB2 Warramunga Arr 55.92 145 *e*P **P** **01 23 56.0 -1.0**
SMY Shemya 56.34 43 *e*P **P** **01 24 00.9 +1.0**
SMY pmax pmax
comp=Z,45nm,1.1s,mb5.4
SMY Shemya 56.34 43 *e*P **P** **01 24 00.9 +1.0**
comp=Z,45nm,1.1s,mb5.4
BR131 Keskin Array S 58.30 301 *e*P **P** **01 24 14.6 +0.8**
BRTR Keskin Array B 58.30 301 P **P** **01 24 13.8 +0.1**
comp=Z,2.7nm,0.7s,mb4.4,baz=104,slow=7.2,SNR=15
BRTR PcP PcP 01 25 05.9 +1.1
comp=Z,1.7nm,0.8s,baz=149,slow=5.8,SNR=3.7
BRTR Keskin Array B 58.30 301 P **P** **01 24 13.8 +0.1**
BRTR 01 25 05.9
BRTR pmax pmax
comp=Z,30nm,0.7s
AS31 Alice Springs 58.86 148 *e*P **P** **01 24 17.2 -0.4**
ASPA Alice Springs 58.86 148 *e*P **P** **01 24 17.3 -0.3**
ASAR Alice Springs 58.86 148 P **P** **01 24 17.2 -0.4**
comp=Z,15nm,0.7s,mb5.1,baz=329,slow=6.6,SNR=139
ASAR Alice Springs 58.86 148 P **P** **01 24 17.3 -0.3**
ASAR pmax pmax
comp=Z,15nm,0.7s
AKASG Malin Array Be 59.52 315 P **P** **01 24 21.3 -0.9**
comp=Z,2.2nm,0.4s,mb4.5,baz=73,slow=6.1,SNR=13
AKASG LR LR 01 50 32.3
comp=Z,88nm,21.6s,MS3.9,baz=310,slow=36
AKASG Malin Array Be 59.52 315 P **P** **01 24 21.3 -1.0**
AKASG pmax pmax
comp=Z,20nm,0.4s
AKASG MLR MLR
comp=Z,88nm,21.6s
KEV Kevo 59.57 337 *e*P **P** **01 24 24.3 +1.7**
KEV pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KEV Kevo 59.57 337 *e*P **P** **01 24 24.3 +1.7**
comp=Z,6.0nm,0.5s,mb4.9
EIL Elat 59.73 290 *e*P **P** **01 24 22.8 -0.9**
EIL *e* 01 24 45.9
KAF Kangasniemi 60.00 328 *e*p **P** **01 24 26.2 +0.7**
comp=Z,5.2nm,0.8s,mb4.6
KAF Kangasniemi 60.00 328 *e*P **P** **01 24 26.2 +0.7**
KAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ARCES ARCESS Array B 60.09 337 P **P** **01 24 25.5 -0.7**
comp=Z,3.0nm,0.7s,mb4.5,baz=89,slow=7.5,SNR=14
ARCES LR LR 01 52 35.9
comp=Z,236nm,19.1s,MS4.3,baz=96,slow=38
ARCES ARCESS Array B 60.09 337 P **P** **01 24 25.5 -0.7**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES MLR MLR
comp=Z,236nm,19.1s
FINES FINESS Array B 60.15 327 P **P** **01 24 25.8 -0.8**
comp=Z,1.6nm,0.5s,mb4.3,baz=96,slow=8.3,SNR=14
FINES LR LR 01 52 15.4
comp=Z,235nm,19.8s,MS4.3,baz=269,slow=38
FINES FINESS Array B 60.15 327 P **P** **01 24 25.8 -0.8**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES MLR MLR
comp=Z,235nm,19.8s
KLBR Kellerberrin 60.66 167 *e*P **P** **01 24 29.4 -0.7**
comp=Z,6.1nm,0.5s,mb5.0
ISP Isparta 61.10 300*d i*P **P** **01 24 32.4 -0.7**
ISP Isparta 61.10 300 *e*P **P** **01 24 32.5 -0.6**
NWAO Narrogin (SRO) 61.85 167 *e*P **P** **01 24 37.9 -0.2**
VRI Vrincioaia 62.02 309⇓*i*P **P** **01 24 40.1 +0.9**
VRI Vrincioaia 62.02 309⇓P **P** **01 24 40.1 +0.9**
PLOR Plostina 62.07 309⇓*i*P **P** **01 24 40.5 +0.9**
MLR Muntele Rosu 62.63 309 P **P** **01 24 43.2 -0.2**
comp=Z,16nm,1.1s,mb5.0,baz=8.4,slow=4.5,SNR=12
MLR LR LR 01 56 14.5
comp=Z,108nm,18.2s,MS4.1,baz=297,slow=40
MLR Muntele Rosu 62.63 309⇑*i*P **P** **01 24 43.0 -0.4**
MLR Muntele Rosu 62.63 309 P **P** **01 24 43.2 -0.2**
MLR pmax pmax
comp=Z,16nm,1.2s
MLR MLR MLR
comp=Z,108nm,18.2s
MLR Muntele Rosu 62.63 309⇑P **P** **01 24 43.0 -0.3**
SUW Suwalki 62.65 319 *e*P **P** **01 24 42.6 -0.9**
BURAR Bucovina Array 62.66 312⇑*i*P **P** **01 24 44.1 +0.6**
BURAR Bucovina Array 62.66 312⇑P **P** **01 24 44.1 +0.6**
CTA Charters Tower 62.83 135 *e*P **P** **01 24 44.2 -0.5**
comp=Z,6.8nm,1.0s,mb4.7
CTA Charters Tower 62.83 135 *e*P **P** **01 24 44.2 -0.5**
CTA pmax pmax
comp=Z,7.0nm,1.0s
CTAO Charters Tower 62.83 135 *e*P **P** **01 24 44.5 -0.2**
CTAO pmax pmax
comp=Z,14nm,1.0s,mb5.0
CTAO Charters Tower 62.83 135 *e*P **P** **01 24 44.5 -0.1**
comp=Z,14nm,1.0s,mb5.0
LVV L'vov 62.96 314 *e*P **P** **01 24 45.9 +0.4**
LVV MLR MLR
comp=Z,100nm,15.0s,MS4.1
KWP Kalwaria 63.84 314 *e*P **P** **01 24 51.6 +0.2**
KOLS Kolonicke sedl 64.28 314 *e*P **P** **01 24 56.0 +1.8**
DRGR 64.51 311⇑*i*P **P** **01 24 55.9 +0.1**
DRGR 64.51 311⇑P **P** **01 24 55.9 +0.1**
CRVS Cervenica-Dubn 64.80 314 *e*P **P** **01 24 59.1 +1.4**
STHS Stebnicka Huta 64.82 314 *e*P **P** **01 24 58.0 +0.2**
STHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
STHS Stebnicka Huta 64.82 314 *e*P **P** **01 24 58.0 +0.2**
comp=Z,2.0nm,0.9s,mb4.2
VTS Vitosha 65.27 307⇓*i*P **P** **01 25 00.7 0.0**
VTS Vitosha 65.27 307⇓P **P** **01 25 00.7 0.0**
NIE Niedzica 65.40 314 *e*P **P** **01 25 01.5 -0.1**
OJC Ojcow 65.52 315 *e*P **P** **01 25 00.2 -2.1**
KECS Kecovo 65.53 313 *e*P **P** **01 25 03.2 +0.8**
comp=Z,1.6nm,1.2s,mb3.9
PSZ Piszkesteto 66.07 313 *e*P **P** **01 25 06.9 +1.0**
PSZ pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
PSZ Piszkesteto 66.07 313 *e*P **P** **01 25 06.9 +1.1**
comp=Z,5.4nm,1.2s,mb4.5
HFS Hagfors 66.35 327 LR LR 01 53 10.8
comp=Z,84nm,19.7s,MS4.0,baz=76,slow=35
VYHS Vyhne 66.59 314 *e*P **P** **01 25 09.2 0.0**
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
VYHS Vyhne 66.59 314 *e*P **P** **01 25 09.2 0.0**
comp=Z,2.2nm,0.9s,mb4.2
OKC Ostrava-Krasne 66.65 315 *e*P **P** **01 25 09.3 -0.3**
OKC AMS AMS 01 55 50.0
comp=Z,300nm,18.2s
GVD Gavdhos 66.93 298 *e*P **P** **01 25 13.4 +2.0**
MORC Moravsky Berou 67.04 315 *e*P **P** **01 25 12.2 +0.1**
NB2 NORSAR Subarra 67.28 328 P **P** **01 25 11.8 -1.8**
comp=Z,6.0nm,0.8s,mb4.7,baz=74,slow=6.5
NOA NORSAR Array B 67.28 328 P **P** **01 25 11.9 -1.7**
comp=Z,4.0nm,0.7s,mb4.5,baz=75,slow=6.1,SNR=13
NOA LR LR 01 56 34.5
comp=Z,181nm,18.8s,MS4.3,baz=45,slow=38
NOA NORSAR Array B 67.28 328 P **P** **01 25 11.9 -1.7**
NOA pmax pmax
comp=Z,4.0nm,0.7s
NOA MLR MLR
comp=Z,181nm,18.8s
PKSM Moragy 67.37 311⇑*i*P **P** **01 25 13.9 -0.3**
PKSM Moragy 67.37 311⇑P **P** **01 25 13.9 -0.3**
DPC Dobruska-Polom 67.63 316 *e*P **P** **01 25 16.2 +0.4**
DPC AMS AMS 01 56 10.0
comp=Z,400nm,14.3s
VRAC Vranov 67.77 315 LR LR 01 56 56.7
comp=Z,206nm,19.5s,MS4.4,baz=69,slow=38
UPC Upice 67.77 316 *e*P **P** **01 25 17.0 +0.3**
ZST Bratislava 67.78 314 *e*P **P** **01 25 11.1 -5.7**
ZST pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
ZST Bratislava 67.78 314 *e*P **P** **01 25 11.1 -5.7**
comp=Z,2.9nm,1.1s,mb4.2
TREC Trest 68.47 315 *e*P **P** **01 25 21.8 +0.7**
TREC AMS AMS 01 56 50.0
comp=Z,200nm,21.2s
CONA Conrad Observa 68.66 314⇑*i*P **P** **01 25 18.8 -3.5**
PRU Pruhonice 68.83 316 *e*P **P** **01 25 25.0 +1.7**
PRU AMS AMS 01 57 00.0
comp=Z,400nm,17.5s
BRG Berggiesshubel 68.91 317 *e*P **P** **01 25 22.1 -1.8**
comp=Z,4.0nm,0.7s,mb4.5
BRG Berggiesshubel 68.91 317 *e*P **P** **01 25 23.6 -0.2**
comp=Z,3.0nm,1.1s,mb4.2
BRG *e* 01 30 21.5
comp=Z,3.9nm,1.2s
BRG
comp=N,83nm,11.6s
BRG
comp=E,108nm,13.6s
BRG
comp=Z,184nm,17.9s
BRG Berggiesshubel 68.91 317 *e*P **P** **01 25 23.6 -0.2**
comp=Z,3.0nm,1.0s,mb4.2
BRG *e* 01 30 21.5
BRG LR LR
comp=Z,180nm,17.9s,MS4.3
CLL Collm 69.33 318 *e*P **P** **01 25 25.6 -0.9**
comp=Z,6.0nm,1.1s,mb4.4
CLL Collm 69.33 318 P **P** **01 25 26.9 +0.4**
comp=Z,logA/T=1.1,mb4.8
CLL *e*SP sP 01 25 46.0 +15
CLL *e* 01 26 38.0
CLL Collm 69.33 318 *i*P **P** **01 25 26.9 +0.4**

comp=Z,21nm,1.7s,mb4.8
CLL esP sP 01 25 46.0 +15
CLL ex x 01 26 38.0
CLL LmV 01 57 00.0
comp=Z,300nm,19.2s
CLL Collm 69.33 318 *i* P **P 01 25 26.9 +0.4**
CLL pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
CLL MLR MLR
comp=Z,300nm,19.2s,MS4.5
CLL Collm 69.33 318 *i* P **P 01 25 26.9 +0.4**
comp=Z,21nm,1.7s,mb4.8
CLL e 01 26 22.0
CLL LR LR
comp=Z,300nm,19.2s,MS4.5
STKA Stephens Creek 69.42 146 *e*P **P 01 25 25.8 -1.2**
comp=Z,5.7nm,0.6s,mb4.7
STKA Stephens Creek 69.42 146 P **P 01 25 26.1 -1.0**
comp=Z,7.0nm,0.6s,mb4.8,baz=328,slow=5.8,SNR=22
KHC Kasperske Hory 69.70 316 *e*P **P 01 25 30.7 +1.9**
KHC AMS AMS 01 57 40.0
comp=Z,300nm,17.0s
GEC2 GERESS Array S 69.72 315 *e*P **P 01 25 28.3 -0.6**
comp=Z,2.0nm,0.6s,mb4.2
GEC2 GERESS Array S 69.72 315 *e*P **P 01 25 28.3 -0.6**
GEC2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
GERES GERESS Array B 69.72 315 P **P 01 25 28.7 -0.1**
comp=Z,2.7nm,0.6s,mb4.3,baz=65,slow=5.2,SNR=14
GERES LR LR 01 58 07.1
comp=Z,200nm,20.2s,MS4.4,baz=46,slow=38
GERES GERESS Array B 69.72 315 P **P 01 25 28.7 -0.2**
GERES pmax pmax
comp=Z,3.0nm,0.6s
GERES MLR MLR
comp=Z,200nm,20.2s
TANN Tannenbergstha 69.95 317 *e*P **P 01 25 30.0 -0.3**
comp=Z,2.0nm,0.6s,mb4.2
BSEG Bad Segeberg 69.99 321 *e*P **P 01 25 30.4 -0.1**
comp=Z,10.0nm,0.9s,mb4.8
WERD Werda 70.04 317 *e*P **P 01 25 30.3 -0.5**
comp=Z,3.0nm,0.7s,mb4.3
GUNZ Gunzen 70.05 317 *e*P **P 01 25 30.6 -0.3**
comp=Z,7.0nm,1.0s,mb4.5
WET Wettzell 70.13 316 *e*P **P 01 25 31.2 -0.2**
comp=Z,6.0nm,1.3s,mb4.4
WET Wettzell 70.13 316 *e*P **P 01 25 31.2 -0.2**
WET pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
ROTZ Rotzenmuhle 70.33 317 *e*P **P 01 25 32.5 -0.1**
comp=Z,4.0nm,0.8s,mb4.4
MOX Moxa 70.38 318 *e*P **P 01 25 31.7 -1.2**
comp=Z,3.0nm,1.0s,mb4.2
MOX Moxa 70.38 318 *e*P **P 01 25 31.6 -1.3**
MOX
comp=Z,200nm,19.0s
GRA1 Grafenberg Arr 70.95 317 *e*P **P 01 25 34.8 -1.6**
comp=Z,7.0nm,0.6s,mb4.8
GRA1 LR LR
comp=Z,200nm,21.9s,MS4.3
GRF Grafenberg Arr 70.95 317 *e*P **P 01 25 34.8 -1.6**
comp=Z,7.0nm,0.6s,mb4.8
GRF eL 01 57 38.8
comp=Z,152nm,21.9s
GRF Grafenberg Arr 70.95 317 *e*P **P 01 25 34.8 -1.6**
GRF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
GRF MLR MLR
comp=Z,200nm,21.9s,MS4.3
GRF Grafenberg Arr 70.95 317 *e*P **P 01 25 34.8 -1.6**
GRF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
GRF MLR MLR
comp=Z,200nm,21.9s,MS4.3
FUR Furstenfeldbru 71.47 315 *e*P **P 01 25 40.4 +0.9**
comp=Z,21nm,0.9s,mb5.1
FUR Furstenfeldbru 71.47 315 *e*P **P 01 25 40.4 +0.9**
FUR pmax pmax
comp=Z,21nm,0.9s,mb5.1
WTTA Wattenberg 71.57 314⇑ *i*P **P 01 25 39.6 -0.6**
comp=Z,8.4nm,1.0s,mb4.6
WTTA Wattenberg 71.57 314⇑ *i*P **P 01 25 39.6 -0.5**
WTTA pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
SQTA Sankt Quirin 71.86 314⇑ *i*P **P 01 25 41.2 -0.7**
comp=Z,4.1nm,0.8s,mb4.4
SQTA Sankt Quirin 71.86 314⇑ *i*P **P 01 25 41.2 -0.7**
SQTA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MOTA Moosalm 71.88 314⇓ *i*P **P 01 25 41.5 -0.5**
comp=Z,5.8nm,0.9s,mb4.5
MOTA Moosalm 71.88 314⇓ *i*P **P 01 25 41.5 -0.5**
MOTA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
AQU L'Aquila 72.21 309 P **P 01 25 44.4 +0.4**
COLA College 72.25 25 *e*P **P 01 25 44.7 +0.5**
COLA *e* 01 26 02.5
COLA pmax pmax
comp=Z,19nm,0.9s,mb5.0
COLA College 72.25 25 *e*P **P 01 25 44.7 +0.5**
comp=Z,19nm,0.9s,mb5.0
COLA *e*PcP PcP 01 26 02.5 +0.2
MCK McKinley 72.36 27 *e*P **P 01 25 47.1 +2.2**
STU Stuttgart 72.53 316 *e*P **P 01 25 47.9 +2.0**
STU Stuttgart 72.53 316 *e*P **P 01 25 44.5 -1.4**
DAVA Damuels 72.67 315⇑ *i*P **P 01 25 48.0 +1.3**
comp=Z,8.8nm,1.1s,mb4.6
BFO Black Forest 73.23 316 *e*P **P 01 25 49.5 -0.5**
comp=Z,6.0nm,1.1s,mb4.4
BFO Black Forest 73.23 316 *e*P **P 01 25 49.5 -0.5**
BFO pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
PMR Palmer 73.28 29 *e*P **P 01 25 51.7 +1.4**
PMR pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
PMR Palmer 73.28 29 *e*P **P 01 25 51.7 +1.3**
comp=Z,7.6nm,0.5s,mb4.9
KDAK Kodiak Island 73.45 33 LR LR 01 59 46.7
comp=Z,85nm,19.7s,MS4.0,baz=199,slow=37
CDF Champ du Feu 73.84 316 *e*P **P 01 25 53.1 -0.5**
comp=Z,24nm,1.1s,mb4.7
CDF Champ du Feu 73.84 316 *e*P **P 01 25 53.1 -0.5**
CDF pmax pmax
comp=Z,12nm,1.1s,mb4.7
CDF Champ du Feu 73.84 316 *e*P **P 01 25 53.1 -0.5**
comp=Z,12nm,1.1s,mb4.7
WLF Walferdange 74.00 318 *e*P **P 01 25 54.9 +0.3**
comp=Z,18nm,0.9s,mb5.0
WLF Walferdange 74.00 318 *e*P **P 01 25 54.8 +0.2**
WLF pmax pmax
comp=Z,39nm,1.4s,mb5.1
WLF Walferdange 74.00 318 *e*P **P 01 25 54.8 +0.2**
comp=Z,39nm,1.4s,mb5.2
HINF Hinteralfeld 74.34 316 *e*P **P 01 25 55.8 -0.8**
comp=Z,12nm,1.0s,mb4.5
HINF Hinteralfeld 74.34 316 *e*P **P 01 25 55.8 -0.8**
HINF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
HINF Hinteralfeld 74.34 316 *e*P **P 01 25 55.8 -0.8**
comp=Z,6.1nm,1.0s,mb4.5
HAU Haudompre 74.58 316 *e*P **P 01 25 57.3 -0.6**
HAU *e*R
comp=Z,284nm,18.2s
HAU Haudompre 74.58 316 *e*P **P 01 25 57.3 -0.6**
HAU LR LR
comp=Z,280nm,18.3s,MS4.6
GIVF Givet 74.60 319 *e*P **P 01 25 57.7 -0.4**
EGAK Eagle 74.75 24 *e*P **P 01 25 58.9 -0.1**
DIV Divide 74.92 28 *e*P **P 01 26 02.1 +2.2**
BAIF Baives 74.98 319 *e*P **P 01 25 59.1 -1.2**
INK Inuvik 75.10 19 *e*P **P 01 26 00.0 -1.0**
INK pmax pmax
comp=Z,20nm,1.1s
INK Inuvik 75.10 19 *e*P **P 01 26 00.0 -0.9**
comp=Z,20nm,1.1s,mb5.0
PGF Pioggiola 75.13 310 *e*P **P 01 26 01.3 +0.2**
comp=Z,89nm,1.1s,mb5.3
PGF Pioggiola 75.13 310 *e*P **P 01 26 01.3 +0.2**
PGF pmax pmax
comp=Z,45nm,1.1s,mb5.3
PGF Pioggiola 75.13 310 *e*P **P 01 26 01.3 +0.2**
comp=Z,44nm,1.1s,mb5.3
MEZF Maizieres J'vi 75.15 317 *e*P **P 01 26 00.9 -0.3**
comp=Z,20nm,0.9s,mb4.7
MEZF Maizieres J'vi 75.15 317 *e*P **P 01 26 00.9 -0.3**
comp=Z,20nm,0.9s,mb5.0
EYAK Cordova Ski Ar 75.22 29 *e*P **P 01 26 03.4 +1.7**
CABF La Chapelle 75.32 315 *e*P **P 01 26 01.6 -0.6**
comp=Z,40nm,1.3s,mb4.9
CABF La Chapelle 75.32 315 *e*P **P 01 26 01.6 -0.6**
CABF pmax pmax
comp=Z,20nm,1.3s,mb4.9
CABF La Chapelle 75.32 315 *e*P **P 01 26 01.6 -0.6**
comp=Z,20nm,1.3s,mb4.9
MBDF Montbardon 75.69 313 *e*P **P 01 26 03.9 -0.4**
comp=Z,19nm,0.9s,mb4.7
MBDF Montbardon 75.69 313 *e*P **P 01 26 03.9 -0.4**
MBDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MBDF Montbardon 75.69 313 *e*P **P 01 26 03.9 -0.4**
comp=Z,9.3nm,0.9s,mb4.7
DAWY Dawson 75.79 24 *e*P **P 01 26 06.1 +1.2**
CNB Canberra Magne 76.10 143 *e*P **P 01 26 06.6 -0.1**
comp=Z,13nm,0.7s,mb5.0
VSL Villasalto 76.14 307 P **P 01 26 05.8 -1.0**
ORIF Oris-en-Rattie 76.18 314 *e*P **P 01 26 07.0 -0.1**
comp=Z,49nm,1.4s,mb5.0
ORIF *e*R
comp=Z,306nm,18.8s
ORIF Oris-en-Rattie 76.18 314 *e*P **P 01 26 07.0 -0.1**
ORIF pmax pmax
comp=Z,25nm,1.4s,mb5.0
ORIF Oris-en-Rattie 76.18 314 *e*P **P 01 26 07.0 -0.1**
comp=Z,25nm,1.4s,mb5.0
LOR Lormes 76.41 316 *e*P **P 01 26 08.1 -0.4**
comp=Z,13nm,0.9s,mb4.5
LOR *e*R
comp=Z,232nm,19.2s
LOR Lormes 76.41 316 *e*P **P 01 26 08.1 -0.4**
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LOR MLR MLR
comp=Z,230nm,19.3s,MS4.5
LOR Lormes 76.41 316 *e*P **P 01 26 08.1 -0.4**
comp=Z,6.4nm,0.9s,mb4.5
LOR LR LR
comp=Z,230nm,19.3s,MS4.5
SMF Signal de Mont 76.70 316 *e*P **P 01 26 09.6 -0.5**
SSF Saint Saulge 76.72 316 *e*P **P 01 26 09.5 -0.7**
comp=Z,18nm,1.0s,mb4.7
SSF Saint Saulge 76.72 316 *e*P **P 01 26 09.5 -0.7**
SSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
SSF Saint Saulge 76.72 316 *e*P **P 01 26 09.5 -0.7**
comp=Z,8.6nm,1.0s,mb4.6
AVF Avril sur Loir 76.94 316 *e*P **P 01 26 10.8 -0.6**
comp=Z,16nm,0.9s,mb4.6
AVF Avril sur Loir 76.94 316 *e*P **P 01 26 10.8 -0.6**
AVF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
AVF Avril sur Loir 76.94 316 *e*P **P 01 26 10.8 -0.6**
comp=Z,8.1nm,0.9s,mb4.7
VIVF Saint-Julien-l 76.98 314 *e*P **P 01 26 11.3 -0.4**
comp=Z,25nm,1.3s,mb4.7
VIVF Saint-Julien-l 76.98 314 *e*P **P 01 26 11.3 -0.4**
VIVF pmax pmax
comp=Z,13nm,1.3s,mb4.7
VIVF Saint-Julien-l 76.98 314 *e*P **P 01 26 11.3 -0.4**
comp=Z,13nm,1.3s,mb4.7
HYF Humbligny 77.15 317 *e*P **P 01 26 12.5 -0.1**
BGF Bois d'Agland 77.35 316 *e*P **P 01 26 13.1 -0.7**
KEST Kesra 77.76 304 P **P 01 26 15.6 -0.5**
comp=Z,1.2nm,0.6s,mb4.0,baz=212,slow=1.5,SNR=7.4
TCF Toulx Ste Croi 77.87 316 *e*P **P 01 26 16.4 -0.2**
comp=Z,20nm,0.9s,mb4.7
TCF Toulx Ste Croi 77.87 316 *e*P **P 01 26 16.4 -0.2**
TCF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TCF Toulx Ste Croi 77.87 316 *e*P **P 01 26 16.4 -0.2**
comp=Z,10nm,0.9s,mb4.8
CAF Calviac 78.59 315 *e*P **P 01 26 20.7 0.0**
comp=Z,29nm,1.2s,mb4.8
CAF Calviac 78.59 315 *e*P **P 01 26 20.7 0.0**
CAF pmax pmax
comp=Z,15nm,1.2s,mb4.8
CAF Calviac 78.59 315 *e*P **P 01 26 20.7 0.0**
comp=Z,15nm,1.2s,mb4.8
RJF Les Rejaudoux 78.76 315 *e*P **P 01 26 20.9 -0.7**
comp=Z,54nm,1.4s,mb5.0
RJF *e*R
comp=Z,145nm,20.0s
RJF Les Rejaudoux 78.76 315 *e*P **P 01 26 20.9 -0.7**
RJF pmax pmax
comp=Z,27nm,1.4s,mb5.0
RJF MLR MLR
comp=Z,140nm,20.0s,MS4.3
RJF Les Rejaudoux 78.76 315 *e*P **P 01 26 20.9 -0.7**
comp=Z,27nm,1.4s,mb5.0
RJF LR LR
comp=Z,140nm,20.0s,MS4.3
MTLF Montolieu 79.25 313 *e*P **P 01 26 24.1 -0.1**
comp=Z,7.3nm,0.9s,mb4.3
MTLF Montolieu 79.25 313 *e*P **P 01 26 24.1 -0.1**
MTLF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MTLF Montolieu 79.25 313 *e*P **P 01 26 24.1 -0.1**
comp=Z,3.7nm,0.9s,mb4.3
ETSF Etsaut 81.24 314 *e*P **P 01 26 35.2 +0.2**
comp=Z,26nm,1.0s,mb4.8
ETSF Etsaut 81.24 314 *e*P **P 01 26 35.2 +0.2**
ETSF pmax pmax
comp=Z,13nm,1.0s,mb4.8
ETSF Etsaut 81.24 314 *e*P **P 01 26 35.2 +0.2**
comp=Z,13nm,1.0s,mb4.8
SJPF Ste Jean 81.55 314 *e*P **P 01 26 35.9 -0.7**
comp=Z,13nm,0.7s,mb4.7
SJPF Ste Jean 81.55 314 *e*P **P 01 26 35.9 -0.7**
SJPF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SJPF Ste Jean 81.55 314 *e*P **P 01 26 35.9 -0.7**
comp=Z,6.6nm,0.7s,mb4.7
EMHD Djebel Mahouad 82.16 307 P **P 01 26 42.0 +2.2**
DLBC Dease Lake 82.86 25 LR LR 02 07 52.8
comp=Z,159nm,18.0s,MS4.4,baz=306,slow=39
EBNR Beni Rached 83.12 307 P **P 01 26 47.0 +2.2**
EANR 'Ain N'Sour 83.59 307 P **P 01 26 49.0 +1.7**
ETRT Tiaret 83.72 307 P **P 01 26 49.8 +1.8**
CART Cartagena 84.22 310 P **P 01 26 50.0 -0.5**
YKA Yellowknife Ar 84.67 17 P **P 01 26 52.4 -0.3**
comp=Z,2.8nm,0.7s,mb4.5,baz=330,slow=5.1,SNR=3.9
YKA LR LR 02 06 23.6
comp=Z,99nm,21.2s,MS4.2,baz=270,slow=37
YKA Yellowknife Ar 84.67 17 P **P 01 26 52.4 -0.4**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA MLR MLR
comp=Z,99nm,21.2s
YKA Yellowknife Ar 84.67 17 P **P 01 26 52.4 -0.3**
YKA LR LR 02 06 23.6
LSZ Lusaka 85.07 250 *e*P **P 01 26 55.6 +0.8**
LSZ pmax pmax
comp=Z,25nm,0.9s,mb5.3
LSZ Lusaka 85.07 250 *e*P **P 01 26 55.6 +0.8**
comp=Z,25nm,0.9s,mb5.3
ESDC Sonseca Array 85.10 313 P **P 01 26 54.8 -0.1**
comp=Z,0.5nm,0.7s,mb3.8,baz=38,slow=3.9,SNR=4.3
BBB Bella Bella 88.05 29 LR LR 02 10 16.3
comp=Z,58nm,18.8s,MS4.0,baz=353,slow=38
BOSA Boshof 94.11 240 P **P 01 27 36.2 -1.3**
comp=Z,3.6nm,0.9s,mb4.8,baz=84,slow=6.0,SNR=8.5
BOSA Boshof 94.11 240 *e*P **P 01 27 36.3 -1.2**
BOSA pmax pmax
comp=Z,10.0nm,0.4s,mb5.6
BOSA Boshof 94.11 240 *e*P **P 01 27 36.2 -1.3**
comp=Z,1.0nm,0.4s,mb4.6
TORD Torodi Ar. Bea 94.55 287 P **P 01 27 39.0 -0.5**
comp=Z,0.8nm,0.7s,mb4.2,baz=64,slow=3.3,SNR=5.3
TORD PP PP 01 31 28.8 +1.5
comp=Z,1.3nm,1.0s,baz=55,slow=7.7,SNR=3.8
TORD LR LR 02 11 16.0
comp=Z,56nm,20.8s,MS4.0,baz=60,slow=36
NEW Newport 95.59 26 LR LR 02 13 08.6
comp=Z,89nm,19.4s,MS4.2,baz=358,slow=37
QSPA South Pole Qui 117.77 180 *e*P PKPdf 01 33 02.1 -3.2
SDV Santo Domingo 142.99 351 PKhKP 01 33 48.7
comp=Z,3.9nm,0.4s,baz=58,slow=4.8,SNR=4.7
ROSC El Rosal 147.32 357 PKPbc PKPbc 01 34 03.1 +0.5
comp=Z,23nm,0.8s,baz=131,slow=5.7,SNR=16
BDFB Brasilia 151.40 290 PKPbc PKPbc 01 34 12.1 -0.7
comp=Z,2.9nm,0.5s,baz=51,slow=0.7,SNR=6.8
BDFB PKPab PKPab 01 34 19.5 -1.5
comp=Z,2.0nm,0.5s,baz=138,slow=1.0,SNR=5.6
LPAZ La Paz 166.31 327 PKP PKPdf 01 34 24.4 +0.2
comp=Z,1.4nm,1.0s,baz=79,slow=3.4,SNR=4.6
LPAZ La Paz 166.31 327 PKIKP PKPdf 01 34 24.4 +0.2
LPAZ pmax pmax
comp=Z,1.0nm,1.0s
PLCA Paso Flores 166.54 198 PKPab PKPab 01 35 24.2 -2.3
comp=Z,1.2nm,0.8s,baz=168,slow=6.3,SNR=4.2
PLCA Paso Flores 166.54 198 PKP2 PKPab 01 35 24.2 -2.3
PLCA pmax pmax
comp=Z,1.0nm,0.8s

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*IDC **29** 01:54:12.8±0.5, 871S×12150E, h0km, mb4.6/16, mb1 4.6/17, mb1mx4.6/19, mbtmp4.6/17, ML4.6/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/21, Error ellipse: s-maj=19.9km s-min=12.9km az=59.0*
*ISCJB **29** 01:54:13.3±0.2, 887S±004×12156E±006, h16km, mb4.7/48, MS3.8/6, Error ellipse: s-maj=9.3km s-min=4.7km az=126.6*
*NEIC **29** 01:54:15.0±0.2, 886S×12147E, h15km, mb5.0/20, Error ellipse: s-maj=9.9km s-min=5.4km az=62.0*
NEIC Felt [III] at Ende. Felt [II] at Waingapu, Sumba.
*BJI **29** 01:54:15.0, 890S×12150E, h15km, mB5.0, mb4.8, Ms4.7, Msz4.2*
*MOS **29** 01:54:16.1±1.3, 867S×12158E, h33km, mb5.1/21, Error ellipse: s-maj=15.1km s-min=7.8km az=118.4*

ISC 29 01:54:15.6±0.2, 892S±004×12151E±006, h17km, h17km±1.6km:pP-P, n137, σ1§40/123, mb4.7/48, MS3.8/6, 4C-2D, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.97**	**157**	*e*P	**Pn**	**01 56 36.8**	**-1.2**
	22nm,0.4s						
FITZ				*e*S	**Sn**	**01 58 22.5**	**-7.0**
FITZ	**Fitzroy Crossi**	**9.97**	**157**	Pn	**Pn**	**01 56 36.9**	**-1.1**
	1.3nm,0.3s,baz=326,slow=9.3,SNR=18						
FITZ				Sn	**Sn**	**01 58 22.0**	**-7.5**
	2.9nm,0.3s,baz=329,slow=21,SNR=4.2						
FITZ				LR	LR	02 00 37.9	
	comp=Z,180nm,22.0s,baz=333,slow=38						
KAKA	**Kakadu**	**11.38**	**110**	*e*P	**Pn**	**01 56 57.6**	**+0.4**
	43nm,0.6s						
MBWA	**Marble Bar**	**12.29**	**188**	*e*Pn	**Pn**	**01 57 08.5**	**-1.2**
	11nm,0.4s						
MBWA				*e*Sn	**Sn**	**01 59 17.3**	**-9.0**
CBJI	**Citeko**	**14.74**	**279**	P	**Pn**	**01 57 47.7**	**+4.5**
	231nm,0.6s						
KSM	**Kuching**	**15.21**	**312**	*e*Pn	**Pn**	**01 57 53.8**	**+4.4**
KKM	**Kota Kinabalu**	**15.77**	**340**	*e*Pn	**Pn**	**01 58 05.3**	**+8.5**
WRA	**Warramunga Arr**	**16.55**	**133**	Pn	**Pn**	**01 58 03.4**	**-3.4**
	1.4nm,0.3s,baz=304,slow=14,SNR=15						
WRA				Sn	**Sn**	**02 00 57.8**	**-12**
	1.1nm,0.3s,baz=304,slow=23,SNR=5.3						
WRAB	**Tennant Creek**	**16.55**	**133**⇑	*e*P	**Pn**	**01 58 10.5**	**+3.7**
WRAB	**Tennant Creek**	**16.55**	**133**	*e*Pn	**Pn**	**01 58 03.7**	**-3.1**
	28nm,0.8s						
WRAB				*e*Sn	**Sn**	**02 00 56.5**	**-14**
WB2	**Warramunga Arr**	**16.56**	**133**	*e*P	**Pn**	**01 58 02.5**	**-4.4**
WB2				*e*S	**Sn**	**02 00 58.3**	**-12**
ASPA	**Alice Springs**	**18.86**	**143**	*e*P	**Pn**	**01 58 36.3**	**+1.0**
AS31	**Alice Springs**	**18.86**	**143**	*e*P	**Pn**	**01 58 36.3**	**+0.9**
ASAR	**Alice Springs**	**18.86**	**143**	P	**Pn**	**01 58 35.2**	**-0.2**
	1.8nm,0.3s,baz=329,slow=14,SNR=52						
ASAR				S	**Sn**	**02 01 54.7**	**-11**
	0.4nm,0.3s,baz=318,slow=25,SNR=4.3						
FORT	**Forrest**	**22.59**	**165**	*e*P	**P**	**01 59 15.3**	**+0.2**
	24nm,0.6s,mb4.8						
KLBR	**Kellerberrin**	**22.83**	**188**	*e*P	**P**	**01 59 17.1**	**-0.6**
	49nm,1.4s,mb4.7						
TGY	**Tagaytay City**	**22.88**	**359**	P	**P**	**01 59 21.6**	**+3.5**
	235nm,0.5s,baz=120,slow=4.0,SNR=11						
TGY	**Tagaytay City**	**22.88**	**359**	P	**P**	**01 59 21.6**	**+3.5**
TGY				pmax	pmax		
	comp=Z,24nm,0.5s						
MUN	**Mundaring**	**23.47**	**191**	*e*P	**P**	**01 59 24.0**	**-0.4**
NWAO	**Narrogin (SRO)**	**24.22**	**189**	P	**P**	**01 59 31.8**	**+0.5**
	comp=Z,10nm,0.6s,mb4.5,baz=358,slow=8.4,SNR=11						
NWAO	**Narrogin (SRO)**	**24.22**	**189**	*e*P	**P**	**01 59 31.7**	**+0.4**
NWAO				*e*		01 59 38.7	
COCO	**West Island**	**24.47**	**260**	*e*P	**P**	**01 59 32.5**	**-1.1**
KULM	**Kulim**	**25.14**	**303**	*e*P	**P**	**01 59 39.7**	**+0.1**
PMG	**Port Moresby**	**25.32**	**93**	P	**P**	**01 59 42.7**	**+1.4**
	comp=Z,10.0nm,0.6s,mb4.5,baz=188,slow=16,SNR=3.3						
PSI	**Prapat**	**25.35**	**296**	P	**P**	**01 59 42.2**	**+0.7**
	comp=Z,9.6nm,0.9s,mb4.3,baz=150,slow=12,SNR=9.3						
PSI	**Prapat**	**25.35**	**296**	P	**P**	**01 59 42.3**	**+0.8**
PSI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
CTA	**Charters Tower**	**26.36**	**118**	P	**P**	**01 59 51.7**	**+1.0**
	comp=Z,1.2nm,0.3s,mb3.9,baz=293,slow=16,SNR=3.6						
CTA	**Charters Tower**	**26.36**	**118**	P	**P**	**01 59 51.7**	**+1.0**
CTA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
CTA	**Charters Tower**	**26.36**	**118**	P	**P**	**01 59 51.7**	**+1.0**
STKA	**Stephens Creek**	**29.49**	**144**	P	**P**	**02 00 19.7**	**+1.0**
	comp=Z,6.6nm,0.5s,mb4.7,baz=320,slow=8.7,SNR=22						
STKA	**Stephens Creek**	**29.49**	**144**	P	**P**	**02 00 19.7**	**+1.0**
QIZ	**Qiongzhong**	**30.06**	**338**	P	**P**	**02 00 25.2**	**+1.5**
GUMO	**Guam**	**32.21**	**46**	LR	LR	02 11 27.0	
	comp=Z,38nm,20.8s,MS3.1,baz=95,slow=32						
YHNB	**Yeheng**	**33.38**	**360**	*e*P	**P**	**02 00 53.6**	**+0.6**
CHG	**Chiang Mai**	**35.42**	**321**	P	**P**	**02 01 13.0**	**+2.4**
CHTO	**Chiang Mai**	**35.42**	**321**	*e*P	**P**	**02 01 11.5**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
CHTO	**Chiang Mai**	**35.42**	**321**	*e*P	**P**	**02 01 11.5**	**+0.9**
	comp=Z,5.0nm,0.6s,mb4.6						
CHRT	**Chiangrai**	**35.72**	**323**	P	**P**	**02 01 12.6**	**-0.6**
KMI	**Kunming**	**38.46**	**332**	P	**P**	**02 01 40.3**	**+3.8**
KMI				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.6						
SSE	**Sheshan**	**39.78**	**360**	P	**P**	**02 01 50.0**	**+2.5**
SSE				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,25nm,4.2s						
NJ2	**Nanjing**	**40.81**	**357**	*e*P	**P**	**02 01 57.5**	**+1.5**
NJ2				AP	pP	02 02 03.3	+1.8
NJ2				S	**S**	**02 08 06.0**	**-0.2**
NJ2				XS	sS	02 08 16.0	+0.8
NJ2				AMB	AMB		
	comp=Z,110nm,0.8s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,120nm,3.5s						
NJ2				LR	LR		
	comp=N,560nm,22.9s,MS4.4						
NJ2				LR	LR		
	comp=E,170nm,18.0s,MS4.4						
NJ2				LR	LR		
	comp=Z,250nm,18.7s,MS4.1						
CD2	**Chengdu**	**43.11**	**337**	*e*P	**P**	**02 02 16.0**	**+1.2**
CD2				AP	pP	02 02 22.0	+1.8
CD2				XP	sP	02 02 26.0	+3.6
CD2				PP	PP	02 03 59.0	+4.1
CD2				S	**S**	**02 08 42.8**	**+2.7**
CD2				XS	sS	02 08 52.5	+3.4
CD2				SS	SS	02 11 49.8	-2.9
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
CD2				AMB	AMB		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=E,60nm,12.0s						
CD2				LR	LR		
	comp=Z,50nm,12.0s,MS3.6						
LZH	**Lanzhou**	**47.76**	**341**	*e*P	**P**	**02 02 54.0**	**+2.4**
LZH				AP	pP	02 03 00.3	+3.2
LZH				XP	sP	02 03 03.0	+3.7
LZH				PP	PP	02 04 45.3	+2.0
LZH				*e*S	**S**	**02 09 49.8**	**+2.6**
LZH				XS	sS	02 10 00.3	+4.1
LZH				*e*SS	SS	02 13 13.5	-2.1
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,85nm,7.2s						
LZH				LR	LR		
	comp=E,532nm,15.1s						
LZH				LR	LR		
	comp=Z,745nm,18.0s,MS4.7						
MAT	**Matsushiro**	**47.86**	**18**	P	**P**	**02 02 51.5**	**-0.9**
MJAR	**Matsushiro Arr**	**47.86**	**18**	P	**P**	**02 02 50.9**	**-1.6**
	comp=Z,4.4nm,0.7s,mb4.6,baz=187,slow=7.5,SNR=10.0						

MJAR	**Matsushiro Arr**	**47.86**	**18**	P	**P**	**02 02 50.9**	**-1.5**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LSA	**Lhasa**	**48.25**	**324**	*e*P	**P**	**02 02 56.2**	**+0.8**
LSA				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.3						
LSA	**Lhasa**	**48.25**	**324**	*e*P	**P**	**02 02 56.2**	**+0.7**
	comp=Z,21nm,0.6s,mb5.3						
JIRN	**Jiri**	**49.91**	**318**	*e*P	**P**	**02 03 08.0**	**-0.2**
	comp=Z,50nm,0.6s,mb5.7						
GUN	**Gumba**	**50.28**	**318**	*e*P	**P**	**02 03 10.9**	**-0.1**
	comp=Z,76nm,0.6s						
HHC	**Hu-ho-hao-te**	**50.36**	**350**	*e*P	**P**	**02 03 15.5**	**+3.9**
HHC				AP	pP	02 03 21.5	+4.4
HHC				XP	sP	02 03 24.3	+5.1
HHC				PCP	PcP	02 04 32.8	+2.8
HHC				PP	PP	02 05 12.5	+5.4
HHC				SCP	ScP	02 08 27.0	+1.9
HHC				S	**S**	**02 10 28.3**	**+4.5**
HHC				XS	sS	02 10 37.5	+4.6
HHC				SCS	ScS	02 13 02.3	+0.4
HHC				SS	SS	02 13 59.3	+1.8
HHC				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,47nm,3.4s						
HHC				LR	LR		
	comp=N,100nm,19.0s,MS3.9						
HHC				LR	LR		
	comp=E,73nm,19.0s,MS3.9						
HHC				LR	LR		
	comp=Z,105nm,19.9s,MS3.9						
PKI	**Pulchoki**	**50.37**	**317**	*e*P	**P**	**02 03 11.4**	**-0.3**
	comp=Z,35nm,0.5s,mb5.6						
PKI	**Pulchoki**	**50.37**	**317**	*e*P	**P**	**02 03 11.4**	**-0.3**
PKI				pmax	pmax		
	comp=Z,35nm,0.5s,mb5.7						
DMN	**Daman**	**50.60**	**317**	*e*P	**P**	**02 03 13.2**	**-0.2**
	comp=Z,35nm,0.7s,mb5.4						
KKN	**Kakani**	**50.60**	**317**	*e*P	**P**	**02 03 13.3**	**-0.1**
	comp=Z,28nm,0.8s,mb5.2						
KKN	**Kakani**	**50.60**	**317**	*e*P	**P**	**02 03 13.3**	**-0.1**
KKN				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.2						
GKN	**Gorkha**	**51.17**	**317**	*e*P	**P**	**02 03 17.6**	**-0.1**
	comp=Z,38nm,0.5s,mb5.6						
KOLN	**Koldanda**	**51.73**	**316**	*e*P	**P**	**02 03 21.5**	**-0.3**
	comp=Z,26nm,0.5s,mb5.4						
GTA	**Gaotai**	**52.13**	**339**	*e*P	**P**	**02 03 27.3**	**+2.5**
GTA				AP	pP	02 03 31.5	+1.1
GTA				XP	sP	02 03 34.3	+1.8
GTA				PCP	PcP	02 04 37.8	+1.2
GTA				PP	PP	02 05 28.0	+4.9
GTA				PPP		02 06 33.8	
GTA				SCP	ScP	02 08 31.5	-1.2
GTA				PCS	PcS	02 08 33.8	-1.0
GTA				S	**S**	**02 10 53.5**	**+5.2**
GTA				XS	sS	02 11 01.5	+4.1
GTA				SCS	ScS	02 13 14.0	-0.1
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.5						
GTA				AMB	AMB		
	comp=Z,58nm,4.6s						
GTA				LR	LR		
	comp=N,41nm,9.5s						
GTA				LR	LR		
	comp=E,54nm,8.4s						
GTA				LR	LR		
	comp=Z,84nm,9.1s						
CN2	**Changchun**	**52.59**	**4**	*e*P	**P**	**02 03 33.0**	**+4.8**
MDJ	**Mudanjiang**	**53.78**	**7**	P	**P**	**02 03 40.3**	**+3.3**
MDJ				AP	pP	02 03 43.5	+0.9
MDJ				PP	PP	02 05 41.5	+3.5
MDJ				SCP	ScP	02 08 43.3	+3.4
MDJ				S	**S**	**02 11 17.3**	**+6.6**
MDJ				XS	sS	02 11 22.5	+2.6
MDJ				SCS	ScS	02 13 29.5	+3.8
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,57nm,4.0s						
MDJ				LR	LR		
	comp=Z,44nm,24.4s,MS3.4						
CASY	**Casey**	**57.78**	**185**	P	**P**	**02 04 05.4**	**-0.3**
HIA	**Hailar**	**57.95**	**359**	*i* P	**P**	**02 04 03.2**	**-3.7**
ULN	**Ulaanbaatar**	**57.97**	**349**	*e*P	**P**	**02 04 06.2**	**-0.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**57.97**	**349**	*e*P	**P**	**02 04 06.2**	**-0.8**
	comp=Z,3.9nm,0.8s,mb4.5						
SONM	**Songino Array**	**58.07**	**348**	P	**P**	**02 04 06.2**	**-1.5**
	comp=Z,2.4nm,0.5s,mb4.5,baz=163,slow=8.6,SNR=22						
SONM	**Songino Array**	**58.07**	**348**	P	**P**	**02 04 06.2**	**-1.5**
SONM				pmax	pmax		
	comp=Z,20nm,0.5s						
WMQ	**Urumqi**	**60.79**	**333**	*e*P	**P**	**02 04 29.0**	**+2.4**
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.2						
ZAK	**Zakamensk**	**61.15**	**347**	*e*P	**P**	**02 04 27.5**	**-1.5**
TLY	**Talaya**	**62.29**	**348**	*e*P	**P**	**02 04 45.4**	**+8.8**
TLY				*e*		02 04 53.5	
TLY				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
MK31	**Makanchi Array**	**65.54**	**331**	P	**P**	**02 04 56.7**	**-1.3**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
MKAR	**Makanchi Array**	**65.54**	**331**	P	**P**	**02 04 56.9**	**-1.2**
	comp=Z,13nm,0.5s,mb5.2,baz=142,slow=6.9,SNR=101						
MKAR	**Makanchi Array**	**65.54**	**331**	P	**P**	**02 04 56.9**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,13nm,0.5s						
AAK	**Ala-Archa**	**66.84**	**324**	*c* iP	**P**	**02 05 05.5**	**-0.9**
AAK				*i* *PP	pP	02 05 34.1	+22
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
WSAR	**Wadi Sarin**	**69.28**	**299**	P	**P**	**02 05 20.7**	**-1.0**
	comp=Z,19nm,0.7s,mb5.1,baz=106,slow=5.7,SNR=26						
KURK	**Kurchatov**	**70.04**	**333**	P	**P**	**02 05 25.8**	**-0.6**
	comp=Z,89nm,0.5s,SNR=14						
MAW	**Mawson**	**70.17**	**200**	P	**P**	**02 05 27.9**	**+0.7**
	comp=Z,16nm,0.6s,mb4.1,baz=68,slow=7.5,SNR=8.1						
MAW	**Mawson**	**70.17**	**200**	*e*P	**P**	**02 05 28.0**	**+0.8**
MAW				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAW	**Mawson**	**70.17**	**200**	*e*P	**P**	**02 05 28.0**	**+0.8**
	comp=Z,1.4nm,0.6s,mb4.1						
VNDA	**Vanda**	**71.69**	**171**	P	**P**	**02 05 37.0**	**+0.6**
	comp=Z,16nm,0.6s,mb4.2,baz=319,slow=7.0,SNR=28						
VNDA	**Vanda**	**71.69**	**171**	P	**P**	**02 05 37.1**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,20nm,0.6s						
MA2	**Magadan**	**72.17**	**15**	*e*P	**P**	**02 05 37.1**	**-2.2**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
OPO	**Ambohidratompo**	**72.42**	**253**	P	**P**	**02 05 42.8**	**+2.0**
	comp=Z,7.6nm,0.8s,mb4.7,baz=66,slow=5.2,SNR=11						
SBA	**Scott Base**	**72.67**	**171**	*e*P	**P**	**02 05 44.5**	**+2.2**
	comp=Z,1.0nm,0.5s,mb4.0						
VOSK	**Vostochnaya**	**74.94**	**331**	P	**P**	**02 05 53.7**	**-1.9**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**75.41**	**331**	P	**P**	**02 05 56.7**	**-1.6**
	comp=Z,1.4nm,0.3s,mb4.3,baz=114,slow=6.8,SNR=16						
BVAR	**Borovoye Array**	**75.41**	**331**	P	**P**	**02 05 56.7**	**-1.6**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**75.48**	**331**	*e*P	**P**	**02 05 57.6**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BRVK	**Borovoye**	**75.48**	**331**	*e*P	**P**	**02 05 57.6**	**-1.1**
	comp=Z,2.5nm,0.8s,mb4.2						
CHKZ	**Chkalovo**	**75.70**	**332**	*i* P	**P**	**02 05 58.3**	**-1.7**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
CHKZ	**Chkalovo**	**75.70**	**332**	*e*P	**P**	**02 05 58.1**	**-1.9**
	comp=Z,5.6nm,0.7s,mb4.6						
ZRNK	**Zerenda**	**76.04**	**330**	*e*P	**P**	**02 06 00.2**	**-1.7**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
ZRNK	**Zerenda**	**76.04**	**330**	*e*P	**P**	**02 06 00.2**	**-1.7**
	comp=Z,5.6nm,0.6s,mb4.7						
SYO	**Syowa Base**	**78.83**	**201**	⇓*e*P	**P**	**02 06 18.6**	**+1.1**
AB31	**Akbulak array**	**78.94**	**324**	*i* P	**P**	**02 06 16.6**	**-1.5**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**80.58**	**325**	P	**P**	**02 06 25.3**	**-1.7**
AKTO	**Aktyubinsk**	**80.58**	**325**	P	**P**	**02 06 25.3**	**-1.7**
	comp=Z,5.5nm,0.8s,mb4.5,baz=106,slow=8.1,SNR=11						
AKTO	**Aktyubinsk**	**80.58**	**325**	P	**P**	**02 06 25.3**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ARU	**Arti**	**83.02**	**330**	*e*P	**P**	**02 06 37.6**	**-2.3**
GNI	**Garni**	**85.73**	**312**	*e*P	**P**	**02 06 53.9**	**+0.3**
GNI				pmax	pmax		
	comp=Z,20nm,1.7s						
LSZ	**Lusaka**	**90.86**	**254**	*e*P	**P**	**02 07 20.5**	**+2.4**
LSZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.1						
LSZ	**Lusaka**	**90.86**	**254**	*e*P	**P**	**02 07 20.5**	**+2.4**
	comp=Z,6.2nm,0.6s,mb5.1						
BOSA	**Boshof**	**91.22**	**241**	P	**P**	**02 07 22.0**	**+2.2**
	comp=Z,2.6nm,0.4s,mb4.9,baz=204,slow=3.0,SNR=25						
BOSA	**Boshof**	**91.22**	**241**	P	**P**	**02 07 22.0**	**+2.2**
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb5.0						
SNAA	**Sanae**	**91.74**	**195**	*e*P	**P**	**02 07 22.6**	**+0.4**
SNAA				*e*		02 07 24.4	
SNAA				*e*	pP	02 07 26.8	-1.2
SNAA				*e*		02 07 30.6	
SNAA	**Sanae**	**91.74**	**195**	⇑*i*P	**P**	**02 07 23.8**	**+1.6**
SNAA	**Sanae**	**91.74**	**195**	*e*P	**P**	**02 07 23.7**	**+1.5**
	comp=Z,5.8nm,1.1s,mb4.8						
VNA1	**Neumayer--Stat**	**93.76**	**195**	*e*P	**P**	**02 07 31.4**	**-0.1**
VNA1				*e*		02 07 32.2	
VNA1				*e*	pP	02 07 35.1	-2.2
VNA1				*e*	pP	02 07 37.6	+0.3
VNA1				*e*		02 07 39.6	
BRTR	**Keskin Array B**	**94.00**	**309**	P	**P**	**02 07 31.6**	**-1.0**
	comp=Z,17nm,1.0s,mb4.4,baz=131,slow=5.1,SNR=5.3						
BRTR	**Keskin Array B**	**94.00**	**309**	P	**P**	**02 07 31.6**	**-1.0**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TAOE	**Nuku Hiva Isla**	**96.78**	**100**	*e*LR	LR	02 07 41.9	
	comp=Z,720nm,29.0s						
COLA	**College**	**98.27**	**26**	P	**P**	**02 07 52.0**	**0.0**
KHC	**Kasperske Hory**	**108.42**	**319**	*e*PKP	PKiKP	02 12 49.4	+6.4
HLID	**Hailey**	**120.54**	**44**	*e*PKPdf	PKPdf	02 13 07.1	+0.9
TORD	**Torodi Ar. Bea**	**120.89**	**280**	PKP	PKPdf	02 13 07.5	+0.7
	comp=Z,3.7nm,0.7s,baz=48,slow=2.1,SNR=53						
AHID	**Auburn Hatcher**	**123.09**	**44**	PKPdf	PKPdf	02 13 11.2	+0.1
PDAR	**Pinedale Array**	**124.15**	**44**	PKP	PKPdf	02 13 14.0	+0.9
	comp=Z,0.3nm,0.7s,baz=169,slow=1.4,SNR=3.6						
DBIC	**Dimbokro**	**126.85**	**272**	PKP	PKPdf	02 13 19.7	+1.4
	comp=Z,5.8nm,0.7s,baz=195,slow=3.7,SNR=13						
DBIC	**Dimbokro**	**126.85**	**272**	PKIKP	PKPdf	02 13 19.7	+1.4
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ANMO	**Albuquerque**	**129.14**	**52**	⇑*i*PKIKP	PKPdf	02 13 20.8	-1.8
MNTX	**Cornudas Mount**	**131.00**	**56**	*e*PKPdf	PKPdf	02 13 28.1	+2.0
SCHQ	**Schefferville**	**133.72**	**7**	PKP	PKPdf	02 13 31.6	+0.3
	comp=Z,1.6nm,0.8s,baz=238,slow=18,SNR=5.1						
PLAL	**Pickwick Lake**	**142.51**	**42**	*e*PKPdf	PKPdf	02 13 48.7	+1.3
SWET	**Sewanee**	**143.74**	**40**	*e*PKPdf	PKPdf	02 13 47.0	-2.6
MCWV	**Mont Chateau**	**143.93**	**29**	*e*PKPdf	PKPdf	02 13 47.0	-2.9
SSPA	**Standing Stone**	**144.01**	**25**	*e*PKPdf	PKPdf	02 13 47.2	-2.9
LRAL	**Lakeview Retre**	**144.38**	**44**	*e*PKPdf	PKPdf	02 13 49.3	-1.4
CPUP	**Villa Florida**	**144.95**	**182**	PKPbc	PKPdf	02 13 53.1	+1.4
	comp=Z,7.7nm,0.9s,baz=176,slow=4.0,SNR=15						
CPUP	**Villa Florida**	**144.95**	**182**	PKIKP	PKPdf	02 13 53.1	+1.4
CPUP				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FWV	**Forest Hill**	**145.05**	**32**	*e*PKPdf	PKPdf	02 13 50.2	-1.6
MVL	**Millersville**	**145.19**	**24**	*e*PKPdf	PKPdf	02 13 51.3	-0.8
ELN	**Prospectdale**	**145.35**	**32**	*e*PKP	PKPdf	02 13 51.8	-0.6
BLA	**Blacksburg**	**145.53**	**32**	*e*PKIKP	PKPdf	02 13 52.7	0.0
JSC	**Jenkinsville**	**147.22**	**36**	*e*PKP2	PKPab	02 13 57.9	-1.6
LPAZ	**La Paz**	**153.20**	**159**	PKP	PKPdf	02 14 08.2	+3.2
	comp=Z,1.2nm,0.9s,baz=49,slow=1.7,SNR=4.0						
LPAZ				PKPbc	PKPbc	02 14 16.8	+4.5
	comp=Z,1.0nm,0.5s,baz=225,slow=2.9,SNR=8.0						
BDFB	**Brasilia**	**153.49**	**203**	PKPbc	PKPbc	02 14 14.5	+1.5
	comp=Z,1.2nm,0.5s,baz=142,slow=2.6,SNR=3.7						
BDFB	**Brasilia**	**153.49**	**203**	PKIKP	PKPbc	02 14 14.5	+1.5
BDFB				pmax	pmax		
	comp=Z,1.0nm,0.5s						

MDD ***29*** *01:59:37.7±0.6, 3730N×855W, h12km±2km, mbLg1.3/5, Error ellipse: s-maj=7.3km s-min=5.5km az=45.0, PRXIMO*

IGIL ***29*** *01:59:38.8, 3733N×854W, h2km, ML0.7*

INMG 29 01:59:37.9±0.5, 3730N×857W, h11km±5km, ML1.0, Error ellipse: s-maj=3.5km s-min=3.0km az=38.0, Portugal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORF	**Marmelete**	**0.07**	**278**	*e*P	Pg	01 59 40.3	+0.1
MORF				*e*S	Sg	01 59 41.8	-0.2
MORF				*e*S	Sg	01 59 41.8	-0.2
MORF				AML	AML	01 59 43.0	
	comp=E,53nm,0.1s						
MORF	**Marmelete**	**0.07**	**278**	*e*P	Pg	01 59 40.3	+0.1
MORF				*e*S	Sg	01 59 41.8	-0.1
PTEO	**Sao Teotonio**	**0.28**	**333**	*i* Pg	Pg	01 59 43.4	-0.2
PTEO				*e*Sg	Sg	01 59 47.4	0.0
PTEO							
	comp=E,4.4nm,0.1s						
PTEO							
	comp=E,4.6nm,0.1s						
EGRO	**El Granado**	**0.89**	**74**	Pg	Pg	01 59 53.7	-1.5
	comp=E,0.7nm,0.1s,SNR=7.9						
EGRO				Lg		02 00 05.2	
	comp=E,4.5nm,0.2s,SNR=5.6						
PBEJ	**Beja**	**0.92**	**37**	*e*P	Pg	01 59 54.5	-1.0
PBEJ				*e*S	Sg	02 00 06.8	-0.7
PBEJ							
	comp=E,3.3nm,0.1s						
EMIN	**Mina Concepcio**	**1.58**	**72**	Pg	Pg	02 00 06.0	-2.1
	comp=E,0.2nm,0.1s,SNR=7.9						
EMIN				Lg		02 00 26.0	
	comp=E,0.7nm,0.1s,SNR=8.5						
PESTR	**Estremoz**	**1.75**	**26**	*e*Sg	Sg	02 00 31.6	-2.5
EBAD	**Badajoz**	**1.90**	**40**	Pg	Pg	02 00 12.0	-2.4
	comp=E,0.2nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	02 00 30.4	-3.8
	comp=E,0.5nm,0.2s,SNR=7.9						
EBAD				Lg		02 00 35.4	
	comp=E,0.6nm,0.2s,SNR=8.3						
PCBR	**Castelo Branco**	**2.68**	**18**	*e*Sg	Sg	02 01 00.3	-3.7

IDC ***29*** *02:14:30.1±4.3, 3203N×7075E, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.6/24, mbtmp3.9/7, ML3.6/2, Error ellipse: s-maj=96.0km s-min=28.7km az=122.0*

ISCJB ***29*** *02:14:33.4±0.7, 3203N±007×7054E±007, h33km, mb3.9/3, Error ellipse: s-maj=10.2km s-min=8.3km az=49.8*

NEIC ***29*** *02:14:35.6±1.7, 3210N×7071E, h35km, mb3.5/1, Error ellipse: s-maj=38.9km s-min=11.5km az=125.0*

NNC ***29*** *02:14:42.1±11.0, 3259N×7045E, h47km±88km, mb3.5, Error ellipse: s-maj=150.8km s-min=95.1km az=102.0*

NDI ***29*** *02:15:53.7±1.6, 3099N×7466E, h30km±26km, ML2.6*

ISC 29 02:14:35.8±0.6, 3208N±006×7062E±007, h35km, n25, σ0§79/27, mb3.9/3, 6C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBDP	**Sheikh Budin**	**0.27**	**36**	⇑P	**Pn**	**02 14 44.0**	**+0.7**
DRP	**Derazinda**	**0.49**	**227**	P	**Pn**	**02 14 51.5**	**+5.2**
THW	**Thamme Wali**	**1.18**	**53**	⇓P	**Pn**	**02 14 56.0**	**+0.1**
SARP	**Sargodha**	**1.75**	**95**	P	**Pn**	**02 15 04.4**	**+0.8**
CEP	**Cherat**	**2.05**	**32**	⇑P	**Pn**	**02 15 09.1**	**+1.4**
CHCP	**Chirah Chowk**	**2.72**	**54**	P	**Pn**	**02 15 17.6**	**+0.6**
CHCP				S	**Sn**	**02 16 00.0**	**+11**
DLH	**Dalhousie**	**4.55**	**83**	*e*P	Px	02 16 24.0	
DLH				*e*S	**Sn**	**02 16 47.0**	**+13**
KUDL	**Kundal**	**6.42**	**126**	*e*x	x	02 17 12.5	
KUDL				*e*S	**Sn**	**02 17 18.6**	**-1.2**
KUDL				AML	AML	02 18 01.5	
	comp=N,13nm,0.4s						
KUDL				AML	AML	02 18 02.1	
	comp=E,12nm,0.5s						
KLP	**Kalpa**	**6.52**	**93**	*e*P	Px	02 16 41.9	
KLP				*e*S	**Sn**	**02 17 16.1**	**-6.1**
KLP				AML	AML	02 17 47.8	
	comp=E,45nm,0.7s						
KLP				AML	AML	02 17 50.8	
	comp=N,39nm,0.7s						
NDI	**New Delhi**	**6.63**	**119**	*e*S	**Sn**	**02 17 18.0**	**-7.0**
SONA	**Sohna**	**6.77**	**123**	*e*S	**Sn**	**02 17 22.5**	**-6.1**
SONA				AML	AML	02 17 43.6	
	comp=N,39nm,0.1s						
SONA				AML	AML	02 17 44.5	
	comp=E,28nm,0.2s						
KK31	**Karatay Array**	**11.00**	**360**	P	**Pn**	**02 17 09.9**	**-0.7**
	comp=E,0.9nm,0.3s,baz=179,slow=13,SNR=42						
KK31				⇑S	**Sn**	**02 19 06.9**	**-5.5**
	comp=E,2.4nm,0.5s,baz=90,slow=46,SNR=4.7						
WSAR	**Wadi Sarin**	**13.79**	**233**	Pn	**Pn**	**02 17 49.5**	**+0.8**
	comp=E,0.3nm,0.3s,baz=55,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**17.21**	**28**	P	**Pn**	**02 18 32.8**	**-0.6**
	comp=E,0.2nm,0.3s,baz=211,slow=14,SNR=8.5						
AB31	**Akbulak array**	**18.94**	**338**	⇑P	**Pn**	**02 18 53.4**	**-1.1**
	comp=E,0.6nm,0.4s,baz=146,slow=13,SNR=22						
AKTK	**Aktyubinsk**	**20.59**	**337**	P	**P**	**02 19 11.8**	**+0.2**
AKTO	**Aktyubinsk**	**20.59**	**337**	P	**P**	**02 19 11.8**	**+0.2**
	comp=E,4.5nm,0.6s,baz=152,slow=10,SNR=21						
VOSK	**Vostochnaya**	**20.63**	**1**	⇑P	**P**	**02 19 13.0**	**+0.9**
	comp=E,2.4nm,0.5s						
ZRNK	**Zerenda**	**20.89**	**357**	⇑P	**P**	**02 19 13.6**	**-1.3**
	comp=E,1.6nm,0.6s						
ZRNK	**Zerenda**	**20.89**	**357**	*e*P	**P**	**02 19 14.2**	**-0.8**
	comp=E,0.9nm,0.4s						
BVAR	**Borovoye Array**	**20.93**	**360**	P	**P**	**02 19 14.2**	**-1.2**
	comp=E,1.9nm,0.6s,baz=162,slow=12,SNR=12						
ARCES	**ARCESS Array B**	**45.13**	**339**	P	**P**	**02 22 49.0**	**+0.3**
	comp=E,2.2nm,0.7s,mb4.1,baz=114,slow=8.1,SNR=15						
ARCES				pP	pP	02 23 02.8	+3.7
	comp=E,1.3nm,0.6s,baz=120,slow=7.1,SNR=2.4						
NB2	**NORSAR Subarra**	**47.78**	**326**	P	**P**	**02 23 09.2**	**-0.3**
	comp=Z,0.8nm,0.5s,mb4.0,baz=103,slow=7.9						
NOA	**NORSAR Array B**	**47.78**	**326**	P	**P**	**02 23 09.4**	**-0.2**
	comp=Z,0.7nm,0.5s,mb4.0,baz=104,slow=7.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**65.37**	**270**	P	**P**	**02 25 14.8**	**+0.3**
	comp=Z,0.8nm,0.9s,mb3.8,baz=51,slow=5.6,SNR=4.9						

CASC 29 02:20:36.3±1.4, 1135N×8570W, h176km±5km, MD3.6, 4C-8D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MADN	**Villa Maderas**	**0.17**	**71**	⇓*e*P	Pn	02 21 00.5	+0.8
CONN	**Concepcion**	**0.22**	**18**	⇓*e*P	Pn	02 21 00.5	+0.7
MGAN	**Managua**	**0.96**	**326**	⇓*e*P	Pn	02 21 04.0	+0.7
TISN	**Laguna Tiscapa**	**0.96**	**325**	⇓*e*P	Pn	02 21 04.3	+1.0
BOA	**Boaco**	**1.12**	**359**	⇓*e*P	Pn	02 21 04.7	+0.1
BOA				*e*P		02 21 04.7	
BOA				*e*P		02 21 04.8	
COPN	**Copaltepe**	**1.20**	**313**	⇓*e*P	Pn	02 21 05.3	+0.1
VCR	**Vista de Mar**	**1.22**	**177**	⇑*e*P	Pn	02 21 06.0	+0.6
VCR				*e*S	Sn	02 21 28.5	+0.7
MOMJ	**Momotombo**	**1.33**	**322**	⇓*e*P	Pn	02 21 06.8	+0.4
MIRN	**Miramar**	**1.47**	**318**	⇓*e*P	Pn	02 21 08.1	+0.4
MIRN				*e*S	Sn	02 21 31.7	-0.1
CNGN	**Cerro Negro**	**1.50**	**319**	⇑*e*P	Pn	02 21 08.2	+0.2
LEON	**Leon**	**1.58**	**312**	⇑*e*P	Pn	02 21 08.6	-0.1
JCR	**Jicaral**	**1.60**	**159**	*e*P	Pn	02 21 09.6	+0.7
JCR				*e*S	Sn	02 21 34.7	+0.6
CGA2	**Cerro Gallo 2**	**1.80**	**138**	*e*P	Pn	02 21 12.3	+1.4
CGA2				*e*S	Sn	02 21 38.2	+0.6
PRS1	**Puriscal**	**1.93**	**135**	*e*P	Pn	02 21 13.8	+1.6
LCR2	**La Lucha 2**	**2.31**	**134**	*e*P	Pn	02 21 17.1	+0.6
LCR2				*e*S	Sn	02 21 48.8	+1.1
BUS	**Buena Vista**	**2.61**	**133**	⇓*e*P	Pn	02 21 22.3	+2.3
BUS				*e*S	Sn	02 21 56.5	+2.4

MOS ***29*** *02:43:15.7±0.9, 3864N×2119E, h12km, mb4.0/6, Error ellipse: s-maj=8.3km s-min=4.3km az=98.2*

NEIC ***29*** *02:43:16.3, 3867N×2128E, h20km, ML3.8(ATH), After ATH,*

ATH ***29*** *02:43:16.3, 3867N×2128E, h20km±2km, MD4.0/18, ML3.8*

THE ***29*** *02:43:16.8, 3855N×2133E, h13km, ML3.6*

PDG ***29*** *02:43:16.6±0.6, 3867N×2123E, h11km±1km*

ISCJB ***29*** *02:43:16.1±0.4, 3865N±002×2123E±002, h13km±3km, mb3.7/8, Error ellipse: s-maj=3.1km s-min=2.5km az=36.2*

CSEM ***29*** *02:43:17.0±0.1, 3870N×2128E, h10km, mb3.5/2, Error ellipse: s-maj=1.4km s-min=1.2km az=22.0*

SKO ***29*** *02:43:17.9, 3873N×2140E, h0km*

IDC ***29*** *02:43:21.6±1.6, 3870N×2135E, h69km±19km, mb3.4/8, mb1 3.6/16, mb1mx3.5/29, mbtmp3.7/16, Error ellipse: s-maj=17.4km s-min=13.0km az=153.0*

ISC 29 02:43:17.0±0.4, 3864N±002×2127E±002, h10km±3km, n166, σ1§24/217, mb3.7/8, 24C-15D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.50**	**57**	*e*PB	**Pg**	**02 43 25.4**	**-1.4**
EVR				*e*SB	**Sg**	**02

APE	Apeiranthos	3.72	114	ePN		Pn	02 44 16.7	+2.2		
APE	Apeiranthos	3.72	114	⇑iP		Pn	02 44 16.1	+1.6		
CHOS	Chios island	3.76	92	ePn		Pn	02 44 14.8	-0.2		
CHOS				eSn		Sn	02 44 57.5	-1.9		
GRI	Girifalco	3.79	274	Pn		Pn	02 44 15.5	0.0		
BCI	Bajram Curri	3.83	347	ePg		Pn	02 44 17.1	+1.1		
PRK	Paraskevi	3.95	80	ePN		Pn	02 44 18.0	+0.4		
PVY	Plav	4.07	346	⇑iPn		Pn	02 44 20.4	+1.1		
PVY				eSn		Sn	02 45 07.8	+0.8		
BUM	Brajici-Budva	4.08	334	⇑iPn		Pn	02 44 18.7	-0.7		
BUM				eSn		Sn	02 45 06.7	-0.4		
TTG	Podgorica	4.08	339	⇓iPn		Pn	02 44 19.4	0.0		
TTG				eSn		Sn	02 45 07.5	+0.3		
RDO	Rodhopi	4.13	51	ePN		Pn	02 44 20.6	+0.5		
SG1	Sgolgore (BA)	4.16	303	ePn		Pn	02 44 19.8	-0.8		
BAI	Bari	4.18	307	ePn		Pn	02 44 19.5	-1.3		
BARS	Barje	4.19	6	iPn		Pn	02 44 21.2	+0.2		
VTS	Vitosha	4.21	20	⇓iP		Pn	02 44 22.4	+1.2		
VTS	Vitosha	4.21	20	⇓P		Pn	02 44 22.4	+1.2		
CEL	Celeste	4.24	266	Pn		Pn	02 44 21.5	-0.1		
HCY	Herceg Novi	4.35	332	⇑iPn		Pn	02 44 22.7	-0.4		
HCY				eSn		Sn	02 45 13.5	-0.3		
IVA	Berane	4.35	347	⇓iPn		Pn	02 44 23.3	+0.2		
IVA				eSn		Sn	02 45 14.8	+0.9		
IDI	Anoyia	4.43	138	P		Pn	02 44 25.6	+1.3		
	1.5nm,0.3s,baz=308,slow=17,SNR=14									
IDI				S		Sn	02 45 22.8	+6.9		
	7.0nm,0.3s,baz=275,slow=16,SNR=5.5									
MTTG	Motta San Giov	4.43	263	Pn		Pn	02 44 24.1	-0.1		
CUC	Castrocucco	4.44	289	Pn		Pn	02 44 25.7	+1.4		
SMG	Samos	4.49	100	ePN		Pn	02 44 26.0	+1.0		
NKY	Niksic	4.51	338	⇑iPn		Pn	02 44 25.4	+0.1		
NKY				eSn		Sn	02 45 17.8	0.0		
CDT	Castel del Mon	4.55	304	ePn		Pn	02 44 24.8	-1.1		
TREB	Trebinje	4.63	332	P		Pn	02 44 27.1	+0.1		
TREB				S		Sn	02 45 20.3	-0.6		
SLCN	Sala Consilina	4.69	294	Pn		Pn	02 44 29.0	+1.1		
BRY	Bratogost	4.73	335	⇓iPn		Pn	02 44 28.0	-0.4		
BRY				eSn		Sn	02 45 22.8	-0.4		
PLE	Pljevlja	4.89	344	⇑iPn		Pn	02 44 31.7	+1.1		
PLE				eSn		Sn	02 45 27.0	-0.2		
UPM	Unac-Piva	4.89	339	⇓iPn		Pn	02 44 32.0	+1.4		
UPM				eSn		Sn	02 45 27.2	-0.1		
MRLC	Muro Lucano	4.93	297	Pn		Pn	02 44 31.2	+0.1		
SLNA	Salina	5.04	271	Pn		Pn	02 44 32.6	0.0		
	98nm,0.3s									
FG4	Candela	5.07	301	P		Pn	02 44 33.1	0.0		
FG4				pmax	pmax					
	comp=Z,87nm,0.5s									
FG4	Candela	5.07	301	Pn		Pn	02 44 33.1	0.0		
	comp=Z,86nm,0.5s									
FGMS	Monte Sant'Ang	5.09	309	Pn		Pn	02 44 32.1	-1.2		
FGMS				Sn		Sn	02 45 27.0	-5.2		
RGNG	Rignano Grg	5.30	307	Pn		Pn	02 44 35.2	-1.0		
BBLS	Bajina Basta -	5.40	346	ePn		Pn	02 44 38.1	+0.5		
DIVS	Divcibare	5.53	350	⇑iPn		Pn	02 44 38.1	-1.3		
DIVS	Divcibare	5.53	350	iPn		Pn	02 44 38.1	-1.3		
VAE	Valguarnera	5.53	260	P		Pn	02 44 41.1	+1.7		
	comp=Z,3.2nm,0.3s,baz=246,slow=3.6,SNR=4.1									
VAE				S		Sn	02 45 48.4	+5.3		
	comp=Z,2.9nm,0.3s,baz=238,slow=6.9,SNR=4.3									
VAE	Valguarnera	5.53	260	P		Pn	02 44 41.1	+1.7		
VAE				S		Sn	02 45 48.4	+5.4		
FG2	Serracapriola	5.64	306	Pn		Pn	02 44 40.2	-0.7		
	comp=Z,79nm,0.2s									
DJES	Djerdap	6.06	9	iPn		Pn	02 44 45.1	-1.5		
SDI	San Donato	6.48	301	P		Pn	02 44 52.7	+0.3		
SDI				pmax	pmax					
	comp=Z,9.0nm,0.2s									
SDI	San Donato	6.48	301	Pn		Pn	02 44 52.7	+0.3		
	comp=Z,9.2nm,0.2s									
INTR	Introdacqua	6.55	303	Pn		Pn	02 44 52.8	-0.6		
	comp=Z,73nm,0.6s									
BZS	Buzias	6.97	2	⇓iP		Pn	02 45 00.7	+1.5		
BZS	Buzias	6.97	2	⇓P		Pn	02 45 00.7	+1.6		
TERO	Teramo	7.05	307	Pn		Pn	02 45 00.0	-0.3		
	comp=Z,22nm,0.5s									
VOIR		7.35	21	⇑iP		Pn	02 45 05.1	+0.8		
VOIR		7.35	21	⇑P		Pn	02 45 05.1	+0.8		
NVLJ	Novalja	7.61	323	i (Pn)		Pn	02 45 04.5	-3.4		
NVLJ				iSn		Sn	02 46 36.9	-7.4		
MLR	Muntele Rosu	7.67	25	P		Pn	02 45 10.7	+1.9		
	comp=Z,2.6nm,0.3s,baz=239,slow=4.0,SNR=25									
MLR	Muntele Rosu	7.67	25	⇑iP		Pn	02 45 10.9	+2.1		
MLR	Muntele Rosu	7.67	25	P		Pn	02 45 10.7	+1.9		
MLR				pmax	pmax					
	comp=Z,3.0nm,0.3s									
MLR	Muntele Rosu	7.67	25	⇑P		Pn	02 45 10.9	+2.1		
PKSM	Moragy	7.81	346	eP		Pn	02 45 11.6	+1.0		
BOJS	Bojanci	8.18	329	iPn		Pn	02 45 14.0	-1.8		
BOJS				iSn		Sn	02 46 42.1	-6.2		
PLOR	Plostina	8.23	27	⇓iP		Pn	02 45 18.8	+2.3		
VRI	Vrincioaia	8.27	28	⇑iP		Pn	02 45 19.3	+2.3		
VOY	Vojsko	9.18	326	ePn		Pn	02 45 29.2	-0.2		
VOY				eSn		Sn	02 47 08.1	-4.7		
PERS	Pernice	9.18	332	iPn		Pn	02 45 27.5	-2.0		
PERS				eSn		Sn	02 47 03.9	-8.9		
OBKA	Obir	9.29	330	⇓iSn		Sn	02 47 05.7	-10		
OBKA	Obir	9.29	330	⇓iPn		Pn	02 45 29.7	-1.2		
OBKA				⇑iSn		Sn	02 47 11.6	-3.9		
OBKA	Obir	9.29	330	⇓iPn		Pn	02 45 29.7	-1.2		
OBKA				iSn		Sn	02 47 05.7	-10		
PSZ	Piszkesteto	9.32	354	⇑e		Pn	02 45 34.3	+2.9		
SOP	Sopron	9.66	341	e		Pn	02 45 36.1	0.0		
BRTR	Keskin Array B	9.67	80	P		Pn	02 45 38.0	+1.9		
	comp=Z,0.3nm,0.3s,baz=255,slow=12,SNR=13									
BRTR	Keskin Array B	9.67	80	P		Pn	02 45 38.0	+1.9		
BR131	Keskin Array S	9.67	80	ePn		Pn	02 45 38.3	+2.2		
	comp=Z,1.2nm,0.5s									
KECS	Kecovo	9.85	357	eP		Pn	02 45 40.8	+2.1		
KECS				eSn		Sn	02 47 26.2	-3.1		
KEST	Kesra	9.95	257	P		Pn	02 45 42.5	+2.6		
	comp=Z,0.1nm,0.3s,baz=353,slow=6.9,SNR=7.0									
VYHS	Vyhne	10.00	351	e		Pn	02 45 44.8	+4.1		
VYHS				e			02 45 52.9			
VYHS	Vyhne	10.00	351	eSN		Sn	02 47 30.2	-2.8		
VYHS	Vyhne	10.00	351	eP		Pn	02 45 44.8	+4.1		
VYHS				e			02 47 30.2			
CRVS	Cervenica-Dubn	10.26	1	e		Pn	02 45 49.1	+4.9		
CRVS				e			02 45 56.1			
KOLS	Kolonicke sedl	10.31	4	e		Pn	02 45 51.2	+6.2		
KOLS				e			02 47 43.4			
KOLS	Kolonicke sedl	10.31	4	eP		Pn	02 45 51.3	+6.3		
KOLS				e			02 47 43.4			
KOLS	Kolonicke sedl	10.31	4	eS		Sn	02 47 43.4	+2.8		
MOA	Molln	10.52	333	⇑iSn		Sn	02 47 37.1	-8.5		
MOA	Molln	10.52	333	⇑iPn		Pn	02 45 46.0	-1.8		
MOA				⇑iSn		Sn	02 47 42.2	-3.4		
MOA	Molln	10.52	333	⇑iPn		Pn	02 45 46.0	-1.8		
MOA				iSn		Sn	02 47 37.1	-8.5		
STHS	Stebnicka Huta	10.77	360	eSN		Sn	02 47 48.2	-3.6		
STHS	Stebnicka Huta	10.77	360	eP		Pn	02 45 59.3	+8.1		
STHS				e			02 47 48.2			
NIE	Niedzica	10.79	357	eP		Pn	02 45 55.7	+4.1		
VRAC	Vranov	11.18	344	P		Pn	02 45 58.2	+1.4		
	comp=Z,0.3nm,0.3s,baz=164,slow=16,SNR=2.9									
SQTA	Sankt Quirin	11.30	323	⇑iSn		Sn	02 47 56.4	-8.4		
SQTA	Sankt Quirin	11.30	323	⇑iPn		Pn	02 45 57.4	-1.1		
SQTA				⇓iSn		Sn	02 48 02.4	-2.3		
SQTA	Sankt Quirin	11.30	323	⇑iPn		Pn	02 45 57.9	-0.5		
SQTA				iSn		Sn	02 47 56.4	-8.4		
SQTA	Sankt Quirin	11.30	323	iP		Pn	02 45 57.9	-0.6		
MOTA	Moosalm	11.44	323	⇑iSn		Sn	02 47 59.3	-8.9		
MOTA	Moosalm	11.44	323	⇑iPn		Pn	02 45 59.7	-0.6		
MOTA				⇓iSn		Sn	02 48 03.6	-4.6		
MOTA	Moosalm	11.44	323	⇑iPn		Pn	02 45 59.7	-0.6		
MOTA				iSn		Sn	02 47 59.3	-8.9		
GERES	GERESS Array B	11.56	334	P		Pn	02 46 04.9	+2.8		
	comp=Z,0.3nm,0.3s,baz=153,slow=13,SNR=5.1									
SBF	Sospel	11.64	301	eP		Pn	02 46 14.0	+11		
MBDF	Montbardon	12.42	304	eP		Pn	02 46 22.8	+9.0		
	comp=Z,15nm,1.1s									
CABF	La Chapelle	13.71	310	eP		Pn	02 46 42.3	+11		
HINF	Hinteralfeld	13.93	316	eP		Pn	02 46 46.8	+12		
CDF	Champ du Feu	14.06	318	eP		Pn	02 46 46.3	+10		
SMF	Signal de Mont	15.09	308	eP		Pn	02 46 59.3	+9.1		
LOR	Lormes	15.36	310	eP		Pn	02 47 04.4	+11		
	comp=Z,7.9nm,0.8s									
SSF	Saint Saulge	15.48	309	eP		Pn	02 47 05.3	+10		
	comp=Z,5.6nm,0.9s									
ESDC	Sonseca Array	19.58	281	P		Pn	02 47 44.2	-2.2		
	comp=Z,0.1nm,0.3s,baz=74,slow=12,SNR=5.8									
HFS	Hagfors	22.04	350	P		P	02 48 10.0	-1.7		
	comp=Z,1.5nm,0.4s,mb3.8,baz=163,slow=11,SNR=12									
HFS	Hagfors	22.04	350	P		P	02 48 10.0	-1.7		
HFS				pmax	pmax					
	comp=Z,2.0nm,0.4s									
FINES	FINESS Array B	23.02	6	P		P	02 48 18.1	-4.0		
	comp=Z,2.6nm,0.7s,mb3.8,baz=168,slow=14,SNR=6.2									
FINES	FINESS Array B	23.02	6	P		P	02 48 18.1	-4.0		
FINES				pmax	pmax					
	comp=Z,3.0nm,0.7s									
NB2	NORSAR Subarra	23.28	348	P		P	02 48 22.6	-2.3		
	comp=Z,0.7nm,0.7s,mb3.2,baz=163,slow=11									
NOA	NORSAR Array B	23.28	348	P		P	02 48 22.3	-2.6		
	comp=Z,0.4nm,0.5s,mb3.1,baz=156,slow=8.8,SNR=3.0									
EKA	Eskdalemuir Ar	23.39	323	P		P	02 48 24.7	-1.4		
	comp=Z,2.6nm,0.9s,mb3.6,baz=115,slow=29,SNR=3.6									
EKA	Eskdalemuir Ar	23.39	323	P		P	02 48 24.7	-1.4		
EKA				pmax	pmax					
	comp=Z,3.0nm,1.0s									
TORD	Torodi Ar. Bea	30.76	220	P		P	02 49 31.6	-0.9		
	comp=Z,0.8nm,0.8s,mb3.6,baz=25,slow=8.8,SNR=9.1									
ARCES	ARCESS Array B	31.04	3	P		P	02 49 32.2	-2.7		
	comp=Z,0.6nm,0.6s,mb3.6,baz=191,slow=9.7,SNR=8.8									
ARCES	ARCESS Array B	31.04	3	P		P	02 49 32.3	-2.6		
ARCES				pmax	pmax					
	comp=Z,1.0nm,0.6s									
MKAR	Makanchi Array	44.56	59	P		P	02 51 26.1	-3.0		
	comp=Z,0.7nm,0.6s,mb3.7,baz=280,slow=7.3,SNR=6.1									
MKAR	Makanchi Array	44.56	59	P		P	02 51 26.1	-2.9		
MKAR				pmax	pmax					
	comp=Z,1.0nm,0.6s									
ZAL	Zalesovo	44.93	49	P		P	02 51 28.9	-3.1		
	comp=Z,1.5nm,0.5s,mb4.1,baz=198,slow=9.7,SNR=3.3									
ZAL	Zalesovo	44.93	49	P		P	02 51 28.9	-3.1		
ZAL				pmax	pmax					
	comp=Z,2.0nm,0.5s									

*CSEM **29** 02:47:43.9, 3867N×2127E, h17km, MD3.5/8, After ATH*
*NEIC **29** 02:47:43.9, 3867N×2127E, h17km, MD3.5(ATH), After ATH.*

ATH 29 02:47:43.9, 3867N×2127E, h17km±2km, MD3.5/8, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EVR	Evrytania	0.49	59	ePB		Pb	02 47 52.9	-1.1
EVR				eSB		Sb	02 48 01.1	+0.2
RLS	Riolos of Patr	0.63	166	ePN		Pn	02 47 56.5	-1.6
VLS	Valsamata	0.73	228	ePB		Pb	02 47 57.5	-0.6
VLS				eSN		Sn	02 48 09.2	-0.9
JAN	Janina	1.04	342	ePN		Pn	02 48 03.8	+0.1
LKR	Lokris	1.35	90	ePN		Pn	02 48 08.6	+0.6
KEK	Kerkira	1.55	313	ePN		Pn	02 48 12.4	+1.7
ITM	Ithomi	1.58	161	ePN		Pn	02 48 13.8	+2.7
NEO	Neokhori	1.65	67	ePN		Pn	02 48 14.0	+1.9
VLI	Veliai	2.35	145	ePN		Pn	02 48 26.0	+4.2
PLG	Polygyros	2.39	44	ePN		Pn	02 48 23.4	+1.1
NVR	Nevrokopi	3.34	36	ePN		Pn	02 48 38.4	+3.1

*ISCJB **29** 03:17:01.0±1.3, 3615N×009×710E×02, h33km, Error ellipse: s-maj=22.0km s-min=5.5km az=114.2*
*NNC **29** 03:17:08.7±13.0, 3655N×7094E, h76km×284km, mb2.9, mpv3.1, Error ellipse: s-maj=173.8km s-min=91.9km az=66.0*

ISC 29 03:17:03.1±1.3, 3613N×009×708E×02, h35km, n13, σ0°92/16, 1C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
THN	Thein Dam	5.47	131	eP		Pn	03 18 25.8	+3.7
THN				eS		Sn	03 19 23.7	-0.1
DLH	Dalhousie	5.55	129	eP		Pn	03 18 25.0	+1.8
DLH				eS		Sn	03 19 25.0	-0.8
AML	Almayashu	6.39	19	P		Pn	03 18 35.0	+0.3
	SNR=37							
EKS2	Erkin-Say	6.91	18	P		Pn	03 18 42.5	+0.7
	SNR=6.9							
KK31	Karatay Array	6.97	358	P		Pn	03 18 43.1	+0.5
	1.5nm,0.3s,baz=180,slow=14,SNR=47							
KK31				⇓S		Sn	03 19 56.1	-4.5
	2.1nm,0.5s,baz=105,slow=32,SNR=3.6							
AAK	Ala-Archa	7.08	22	P		Pn	03 18 44.3	+0.1
	SNR=6.6							
USP	Ospenovka	7.66	20	P		Pn	03 18 52.0	-0.2
	SNR=5.2							
KLP	Kalpa	7.69	125	eS		Sn	03 20 17.8	-0.5
KLP				AML	AML		03 20 24.7	
	comp=E,57nm,0.4s							
KLP				AML	AML		03 20 26.6	
	comp=N,44nm,0.8s							
TKM2	Tokmak 2	7.71	27	P		Pn	03 18 52.5	-0.4
	SNR=5.9							
TKM2	Tokmak 2	7.71	27	⇓P		Pn	03 18 52.0	-0.9
	comp=N,0.2nm,0.5s							
KUDL	Kundal	9.29	147	eS		Sn	03 20 51.9	-6.0
AB31	Akbulak array	15.34	332	⇑P		Pn	03 20 35.0	-1.9
	comp=N,0.4nm,0.3s,baz=156,slow=11,SNR=25							
AKTO	Aktyubinsk	17.03	331	⇓P		Pn	03 20 58.9	+0.4
	comp=N,0.1nm,1.0s							

*IDC **29** 03:36:47.4±1.5, 4445N×12971W, h0km, mb3.9/7, mb1 4.2/10, mb1mx4.0/25, mbtmp4.0/10, ML4.0/3, MS3.6/12, Ms1 3.6/12, ms1mx3.2/37, Error ellipse: s-maj=31.2km s-min=18.1km az=39.0*
*ISCJB **29** 03:36:48.4±0.8, 4448N±002×12959W±004, h5km±6km, mb4.6/19, MS3.9/11, Error ellipse: s-maj=4.4km s-min=3.5km az=163.3*
*BJI **29** 03:36:49.4, 4478N×12964W, h11km, mB4.9, mb4.8, Ms4.7, Msz4.3*
*NEIC **29** 03:36:50.1±0.7, 4453N×12977W, h10km, mb4.4/12, Error ellipse: s-maj=8.8km s-min=5.6km az=74.0*

ISC 29 03:36:50.8±1.0, 4449N±002×12968W±004, h13km±7km, h14km±1.7km: pP-P, n248, σ1s27/256, mb4.6/19, MS3.9/11, 74C-57D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
H02A	Toledo	4.06	85	⇓P		Pn	03 37 50.7	-2.0
	baz=4.1,SNR=76							
H02A				⇑S		Sn	03 38 39.5	-0.7
	baz=4.1							
KEBM	Edson Butte	4.20	111	ePn		Pn	03 37 51.8	-2.8
KEBM				eSn		Sn	03 38 40.0	-3.6
I02A	Mapleton	4.23	95	P		Pn	03 37 53.0	-2.1
	baz=4.3,SNR=106							
I02A				⇓S		Sn	03 38 43.1	-1.2
	baz=4.3							
RNO	Roman Nose	4.31	96	P		Pn	03 37 54.6	-1.5
MPOR	Mary's Peak	4.39	88	P		Pn	03 37 55.4	-1.7
KMOR	Kings Mountain	4.53	73	P		Pn	03 37 56.8	-2.3
J02A	Umpqua	4.55	102	⇑P		Pn	03 37 57.6	-1.8
	baz=4.6,SNR=20							
J02A				⇓S		Sn	03 38 50.3	-1.9
	baz=4.6							
F03A	Seaside	4.56	69	⇓P		Pn	03 37 58.0	-1.5
	baz=4.6,SNR=101							
COR	Corvallis	4.56	87	ePn		Pn	03 37 58.6	-1.0
G03A	Yamhill	4.62	77	⇑P		Pn	03 37 58.5	-1.9
	baz=4.7,SNR=98							
I03A	Eugene	4.63	94	⇑P		Pn	03 37 58.6	-1.9
	baz=4.7,SNR=128							
I03A				⇓S		Sn	03 38 52.8	-1.4
	baz=4.7							
NLO	Nicolai Mounta	4.68	68	P		Pn	03 38 00.6	-0.6
E03A	Lebam	4.76	62	⇓P		Pn	03 38 01.0	-1.4
	baz=4.8							
ON2	Olympics--Nort	4.77	58	P		Pn	03 38 02.0	-0.4
D03A	Wishkah Elem.	4.89	56	⇓P		Pn	03 38 03.4	-0.7
	baz=4.9,SNR=245							
BMW	Boistfort Moun	4.95	64	P		Pn	03 38 03.9	-1.0
C03A	Quillayute Air	4.95	44	⇓P		Pn	03 38 05.0	0.0
	baz=5.0,SNR=612							
C03A				⇑S		Sn	03 39 03.1	+1.0
	baz=5.0							
J03A	Ideyld Park	4.98	101	⇑P		Pn	03 38 03.2	-2.1
	baz=5.0,SNR=102							
J03A				⇑S		Sn	03 39 01.3	-1.4
	baz=5.0							
OSR	Olympics--Salm	5.00	51	P		Pn	03 38 05.3	-0.2
L02A	Cave Junction	5.01	116	⇑P		Pn	03 38 04.5	-1.3
	baz=5.1,SNR=11							
OTR	Olympics--Tyee	5.16	44	P		Pn	03 38 07.7	0.0
SSOR	Sweet Springs	5.16	83	P		Pn	03 38 07.2	-0.6
RVW	Rose Valley	5.17	69	P		Pn	03 38 07.2	-0.7
KRMB	Red Mountain	5.17	123	ePn		Pn	03 38 07.6	-0.3
G04A	Mulino	5.17	80	⇓P		Pn	03 38 06.9	-1.1
	baz=5.2,SNR=107							
BROR	Big Rock Looko	5.19	90	P		Pn	03 38 07.6	-0.6
CPW	Capitol Peak	5.21	59	P		Pn	03 38 08.2	-0.2
OBC	Olympics--Boni	5.26	46	P		Pn	03 38 09.1	-0.1
E04A	Onalaska	5.32	64	⇑P		Pn	03 38 09.6	-0.4
	baz=5.3,SNR=18							
F04A	Amboy	5.33	72	⇑P		Pn	03 38 09.5	-0.6
	baz=5.4,SNR=130							
F04A				⇓S		Sn	03 39 11.7	+0.3
	baz=5.4							
H04A	Detroit Lake	5.36	85	⇑P		Pn	03 38 09.3	-1.2
	baz=5.4,SNR=237							
LVP	Lakeview Peak	5.37	70	P		Pn	03 38 10.1	-0.5
FL2	Flat Top 2	5.44	69	P		Pn	03 38 11.2	-0.5
D04A	Dobbs Creek Ra	5.47	59	⇓P		Pn	03 38 12.0	-0.1
	baz=5.5,SNR=243							
MTMW	Mount Mitchell	5.49	71	P		Pn	03 38 12.2	-0.1
B04A	Port Angeles	5.57	48	P		Pn	03 38 13.1	-0.4
	baz=5.6,SNR=100							
B04A				⇓S		Sn	03 39 18.4	+1.1
	baz=5.6							
TDL	Tradedollar La	5.57	68	P		Pn	03 38 13.1	-0.4
HDW	Hoodsport	5.59	53	P		Pn	03 38 13.5	-0.1
MEW	McNeil Island	5.61	59	P		Pn	03 38 14.6	+0.6
CDFW	Cedar Flats	5.62	71	P		Pn	03 38 14.1	0.0
C04A	Brinnon	5.67	53	⇓P		Pn	03 38 14.6	-0.2
	baz=5.7,SNR=41							
C04A				⇑S		Sn	03 39 21.6	+1.8
	baz=5.7							
GMW	Gold Mountain	5.69	55	P		Pn	03 38 14.9	-0.2
HOOD	Mount Hood Mea	5.76	79	ePn		Pn	03 38 15.8	-0.2
GHW	Garrison Hill	5.78	61	P		Pn	03 38 16.5	+0.2
YBH	Yreka Blue Hor	5.80	116	Pn		Pn	03 38 18.4	+1.8
	1.5nm,0.3s,baz=295,slow=11,SNR=26							
YBH						Sn		
	0.1nm,0.3s,baz=196,slow=15,SNR=1.8					Sn	03 39 35.5	+13
YBH	Yreka Blue Hor	5.80	116	ePn		Pn	03 38 18.4	+1.8
	9.9nm,0.7s							
YBH	Yreka Blue Hor	5.80	116	⇑P		Pn	03 38 15.1	-1.4
	baz=5.9							
YBH				⇑S		Sn	03 39 24.1	+1.1
	baz=5.9							
M02C	Callahan	5.89	119	⇓P		Pn	03 38 16.4	-1.4
	baz=5.9							
E05A	Randle	5.94	67	⇓P		Pn	03 38 18.1	-0.3
	baz=6.0,SNR=258							
E05A				⇑S		Sn	03 39 27.0	+0.7
	baz=6.0							
N02C	Big Bar	5.96	126	⇓P		Pn	03 38 18.2	-0.6
	baz=6.0							
LON	Longmire	5.96	65	ePn		Pn	03 38 18.4	-0.4
F05A	White Salmon	5.97	74	⇓P		Pn	03 38 18.5	-0.5
	baz=6.0							
F05A				⇑S		Sn	03 39 28.7	+1.4
	baz=6.0							
G05A	Wamic	5.99	80	⇑P		Pn	03 38 18.5	-0.7
	baz=6.0							
D05A	Enumclaw	6.01	61	⇑P		Pn	03 38 19.9	+0.4
	baz=6.0,SNR=790							
H05A	Madras	6.04	86	⇑P		Pn	03 38 19.2	-0.7
	baz=6.1,SNR=12							
J05A	Fort Rock	6.22	98	⇓P		Pn	03 38 21.5	-0.8
	baz=6.3							
M04C	Macdoel	6.34	113	⇑P		Pn	03 38 23.4	-0.6
	baz=6.4							
A04A	Legoe Bay, Lum	6.40	46	P		Pn	03 38 24.9	+0.2
	baz=6.4,SNR=103							
C05A	Tolt Reservoir	6.41	57	P		Pn	03 38 25.3	+0.3
	baz=6.4,SNR=48							
M03C	McCloud	6.42	117	⇑P		Pn	03 38 26.8	+1.8
	baz=6.5							
B05A	Bryant

BMO	Blue Mountains	8.83	83	ePn	Pn	03 38 57.4	-0.7		
	28nm,0.3s								
K09A	Rome	8.86	97	⇑P	Pn	03 39 01.0	+2.4		
	baz=8.9								
PAHR	Pah Rah Range	9.02	118	ePn	Pn	03 39 04.0	+3.2		
WCN	Washoe City	9.03	122	⇑P	Pn	03 39 03.7	+2.8		
	baz=9.1								
R04C	Big Horse Ranc	9.05	130	⇓P	Pn	03 38 59.7	-1.5		
	baz=9.1								
O07A	Toulon	9.10	115	⇑P	Pn	03 39 04.7	+2.9		
	baz=9.1,SNR=9.6								
L09A	Wilkinson Ranc	9.11	102	⇓P	Pn	03 39 04.3	+2.3		
	baz=9.1,SNR=8.3								
R05C	Kirkwood Meado	9.23	126	⇑P	Pn	03 39 03.8	+0.1		
	baz=9.3								
S04C	Ingram Canyon,	9.41	135	⇑P	Pn	03 39 04.5	-1.5		
	baz=9.5								
NEW	Newport	9.46	62	Pn	Pn	03 39 06.1	-0.7		
	3.6nm,0.3s,baz=246,slow=11,SNR=37								
NEW				LR	LR	03 42 39.3			
	comp=Z,635nm,20.5s,baz=180,slow=37								
M09A	Marrel Ranch,	9.48	105	⇑P	Pn	03 39 10.2	+3.2		
	baz=9.5								
CMB	Columbia Colle	9.51	130	ePn	Pn	03 39 08.6	+1.0		
CMB	Columbia Colle	9.51	130	⇑P	Pn	03 39 07.1	-0.5		
	baz=9.6								
N09A	Rock Creek Ran	9.66	108	⇑P	Pn	03 39 11.6	+2.0		
	baz=9.7								
R06C	Coleville	9.71	124	⇑P	Pn	03 39 09.4	-0.9		
	baz=9.8								
WAKR	Walker	9.73	124	ePn	Pn	03 39 13.8	+3.3		
S06C	San Francisco	9.92	128	⇑P	Pn	03 39 14.0	+0.9		
	baz=10.0								
S05C	Merced	10.05	132	⇑P	Pn	03 39 13.9	-0.9		
	baz=10								
BMN	Battle Mountai	10.06	109	ePn	Pn	03 39 16.1	+1.1		
	26nm,1.5s								
M10A	I.L. Ranch, Tu	10.07	103	⇓P	Pn	03 39 17.8	+2.6		
	baz=10,SNR=5.8								
O09A	Fish Creek Ran	10.21	111	⇑P	Pn	03 39 20.1	+3.0		
	baz=10,SNR=16								
NVAR	Mina Array Bea	10.46	121	Pn	Pn	03 39 21.6	+1.0		
	0.2nm,0.3s,baz=294,slow=12,SNR=26								
KCC	Kaiser Creek	10.61	129	⇑P	Pn	03 39 22.3	-0.3		
	baz=11								
T06C	Millerton Lake	10.63	131	⇓P	Pn	03 39 24.1	+1.3		
	baz=11								
M11A	Holland Ranch,	10.63	102	⇑P	Pn	03 39 25.1	+2.2		
	baz=11,SNR=15								
BSMT	Bassoo Peak	10.86	67	ePn	Pn	03 39 26.1	+0.2		
N11A	Elko Archery C	10.91	105	⇓P	Pn	03 39 29.3	+2.6		
	baz=11								
P10A	Eureka	10.96	112	⇑P	Pn	03 39 31.1	+3.7		
	baz=11								
HLID	Hailey	11.04	89	ePn	Pn	03 39 30.4	+2.0		
HELL	Mitchell Peak,	11.24	130	⇑P	Pn	03 39 30.7	-0.5		
	baz=11								
M12A	Wells	11.25	101	⇓P	Pn	03 39 33.5	+2.1		
	baz=11								
O11A	Cowboy Ranch,	11.26	108	⇓P	Pn	03 39 34.2	+2.8		
	baz=11,SNR=8.9								
MSO	Missoula	11.26	72	ePn	Pn	03 39 31.0	-0.5		
ELK	Elko	11.28	104	ePn	Pn	03 39 35.4	+3.6		
R09A	Tonopah	11.34	119	⇑P	Pn	03 39 35.0	+2.4		
	baz=11,SNR=6.3								
N12A	Clover Valley,	11.38	104	⇓P	Pn	03 39 35.7	+2.6		
	baz=11								
S09A	Goldfield	11.57	121	⇑P	Pn	03 39 36.1	+0.4		
	baz=12								
WALA	Waterton Lakes	11.73	62	ePn	Pn	03 39 38.3	+0.4		
CHMT	Chamberlain Mo	11.74	72	ePn	Pn	03 39 37.5	-0.5		
M13A	Montello	11.80	100	⇑P	Pn	03 39 40.4	+1.6		
	baz=12								
R10A	Warm Springs	11.80	117	⇓P	Pn	03 39 41.5	+2.7		
	baz=12								
O12A	Currie	11.82	106	⇑P	Pn	03 39 41.1	+1.9		
	baz=12								
VES	Vestal, Richgr	11.84	133	⇓P	Pn	03 39 38.1	-1.3		
	baz=12								
MCMT	McKenzie Canyo	11.99	82	ePn	Pn	03 39 42.4	+0.9		
P12A	McGill	12.08	109	⇓P	Pn	03 39 40.7	-1.9		
	baz=12								
ISA	Isabella	12.29	132	ePn	Pn	03 39 46.3	+0.7		
ISA	Isabella	12.29	132	⇑P	Pn	03 39 43.8	-1.8		
	baz=12								
DAC	Darwin (Calif)	12.33	128	ePn	Pn	03 39 51.5	+5.4		
Q12A	Willow Creek R	12.35	111	⇑P	Pn	03 39 44.1	-2.3		
	baz=12								
MPMC	Manual Prospec	12.54	128	⇓P	Pn	03 39 48.3	-0.6		
	baz=13								
HRY	Holter Researc	12.70	74	ePn	Pn	03 39 51.8	+0.7		
BGU	Big Grassy Mou	12.75	100	ePn	Pn	03 39 53.1	+1.2		
BOZ	Bozeman (W)	12.82	78	ePn	Pn	03 39 51.2	-1.5		
	9.2nm,0.8s								
U10A	Ash Meadows, A	12.96	124	⇓P	Pn	03 39 53.0	-1.8		
	baz=13								
QLMT	Earthquake Lak	13.00	82	ePn	Pn	03 39 56.7	+1.4		
SPUT	South Promonto	13.03	98	ePn	Pn	03 39 55.6	0.0		
EDW2	Edwards Air Fo	13.15	133	⇑P	Pn	03 39 55.8	-1.4		
	baz=13								
DUG	Dugway	13.19	103	ePn	Pn	03 39 58.8	+1.0		
YMR	Madison River	13.35	83	ePn	Pn	03 40 02.4	+2.5		
	22nm,1.3s								
YFT	Old Faithful	13.46	84	ePn	Pn	03 40 03.5	+1.9		
GSC	Goldstone	13.47	129	ePn	Pn	03 40 03.7	+2.0		
GSC	Goldstone	13.47	129	⇑P	Pn	03 40 00.5	-1.2		
	baz=14								
HWUT	Hardware Ranch	13.56	96	ePn	Pn	03 40 05.1	+2.3		
SHPR	Sheep Range	13.61	121	ePn	Pn	03 40 06.7	+3.1		
EDM	Edmonton	13.82	45	ePn	Pn	03 40 08.2	+1.7		
TCUT	Toone Canyon	13.83	98	Pn	Pn	03 40 08.2	+1.6		
TUQ	Turquoise Mtn.	13.88	126	⇑P	Pn	03 40 08.6	+1.3		
	baz=14								
ARUT	Antelope Range	13.94	113	ePn	Pn	03 40 10.1	+2.0		
DLBC	Dease Lake	13.97	359	Pn	Pn	03 40 12.7	+4.2		
	0.1nm,0.3s,baz=162,slow=18,SNR=2.7								
DLBC				LR	LR	03 45 03.9			
	comp=Z,229nm,18.3s,baz=354,slow=35								
CCUT	Cedar City	14.12	114	ePn	Pn	03 40 12.4	+1.8		
GCMT	Greycliff	14.19	78	ePn	Pn	03 40 12.8	+1.4		
EGMT	Eagleton	14.22	69	ePn	Pn	03 40 13.2	+1.2		
V12A	Nelson	14.31	123	⇑P	Pn	03 40 14.7	+1.5		
	baz=14								
MSU	Marysvale	14.40	108	ePn	Pn	03 40 16.1	+1.8		
GMRC	Granite Mounta	14.50	127	⇑P	Pn	03 40 16.7	+1.0		
	baz=15								
W12A	Cal Nev Ari	14.59	124	⇓P	Pn	03 40 17.9	+0.9		
	baz=15								
PDAR	Pinedale Array	14.68	90	Pn	Pn	03 40 20.3	+2.2		
	0.1nm,0.3s,baz=293,slow=13,SNR=14								
PDAR				LR	LR	03 46 01.9			
	comp=Z,425nm,18.9s,baz=319,slow=38								
TMUT	Trail Mountain	14.70	104	ePn	Pn	03 40 20.1	+1.7		
PFO	Pinyon Flat Ob	14.93	132	⇑P	Pn	03 40 20.0	-1.6		
	baz=15								
SRU	San Rafael	15.26	104	ePn	Pn	03 40 27.3	+1.4		
	47nm,1.1s								
MONP	Monument Peak	15.51	134	⇑P	Pn	03 40 27.5	-1.7		
	baz=16								
BAR	Barrett	15.55	135	eP	Pn	03 40 37.0	+7.3		
X13A	Yucca	15.70	124	⇓P	Pn	03 40 29.9	-1.8		
	baz=16								
PDMCI	Parker Dam,Lak	15.72	125	⇓P	Pn	03 40 31.2	-0.8		
	baz=16								
W14A	Seligman	15.73	120	⇑P	Pn	03 40 32.9	+0.7		
	baz=16								
SWSC	Sam W. Stewart	15.80	132	⇑P	Pn	03 40 34.0	+1.0		
	baz=16								
Y12C	Blythe	15.89	127	⇑P	Pn	03 40 33.5	-0.7		
	baz=16								
GLA	Glamis	16.24	130	ePn	Pn	03 40 39.0	+0.4		
GLA	Glamis	16.24	130	⇑P	Pn	03 40 38.4	-0.2		
	baz=16								
Y13A	Salome	16.25	126	⇑P	Pn	03 40 38.3	-0.5		
	baz=16								
W15A	Williams	16.26	119	⇓P	Pn	03 40 38.9	-0.1		
	baz=16								
LAO	LASA Array	16.55	74	eP	Pn	03 40 45.6	+2.9		
	14nm,0.9s								
WUAZ	Wupatki	16.62	116	ePn	Pn	03 40 44.8	+1.3		
	18nm,1.1s								
PV10	Paradox Valley	16.62	104	ePn	Pn	03 40 43.8	+0.3		
Y14A	Wickenburg	16.64	124	⇑P	Pn	03 40 43.1	-0.7		
	baz=17								
X15A	Humboldt	16.74	121	⇑P	Pn	03 40 45.1	+0.1		
	baz=17								
PV01	Paradox Valley	17.06	105	ePn	Pn	03 40 49.4	+0.3		
115A	Sonoran Desert	17.98	125	⇑P	Pn	03 41 00.4	0.0		
	baz=18								
RSSD	Black Hills	18.34	82	ePn	Pn	03 41 04.4	-0.5		
	18nm,1.3s								
116A	Eloy	18.38	124	⇑P	Pn	03 41 05.1	-0.4		
	baz=18								
TUC	Tucson	19.11	123	ePn	Pn	03 41 13.9	-0.3		
	5.1nm,0.9s								
YKA	Yellowknife Ar	20.04	21	P	P	03 41 23.3	-0.3		
	2.0nm,0.7s,baz=209,slow=8.9,SNR=3.7								
LAZ	Ladron	20.05	112	eP	P	03 41 25.6	+1.8		
ANMO	Albuquerque	20.19	110	P	P	03 41 25.2	+0.1		
	3.6nm,1.0s,baz=305,slow=11,SNR=12								
SLKM	Skilak Lake	20.19	330	eP	P	03 41 23.9	-1.3		
LENM	Lemitar	20.31	113	ePn	P	03 41 29.0	+2.5		
LPM	Los Pinos Moun	20.45	112	eP	P	03 41 29.7	+1.7		
FFC	Flin Flon	20.53	50	eP	P	03 41 28.8	-0.1		
	40nm,1.0s								
ULM	Lac du Bonnet	23.47	64	P	P	03 41 59.0	-1.3		
	7.9nm,0.6s,mb4.3,baz=272,slow=11,SNR=14								
ULM				LR	LR	03 50 45.2			
	comp=Z,189nm,20.1s,MS3.5,baz=219,slow=36								
ULM	Lac du Bonnet	23.47	64	P	P	03 41 59.0	-1.3		
ULM				LR	LR	03 50 45.2			
INK	Inuvik	23.96	356	P	P	03 42 04.2	-0.7		
	3.4nm,1.0s,mb3.8,baz=179,slow=8.9,SNR=7.2								
INK				LR	LR	03 50 49.6			
	comp=Z,152nm,20.8s,MS3.5,baz=154,slow=35								
KSU1	Kansas State U	25.13	91	eP	P	03 42 15.0	-0.5		
WMOK	Wichita Mounta	25.59	102	eP	P	03 42 19.7	0.0		
	13nm,0.8s,mb4.5								
LPIG	La Paz	25.76	136	LR	LR	03 51 15.9			
	comp=Z,95nm,18.9s,MS3.3,baz=185,slow=34								
JFWS	Jewell Farm	28.36	79	eP	P	03 42 44.3	-0.4		
	19nm,0.8s,mb4.8								
MIAR	Mount Ida	29.36	97	eP	P	03 42 54.9	+1.3		
	5.7nm,1.3s,mb4.1								
OXF	Oxford	32.35	94	eP	P	03 43 19.5	-0.4		
	39nm,1.0s,mb5.2								
PLAL	Pickwick Lake	33.07	92	eP	P	03 43 24.4	-1.7		
	4.4nm,0.8s,mb4.4								
SCHQ	Schefferville	40.66	52	LR	LR	04 01 37.5			
	comp=Z,157nm,18.3s,MS3.9,baz=34,slow=37								
MDJ	Mudanjiang	66.81	310	P	P	03 47 42.0	-0.2		
MDJ				AP	pP	03 47 45.3	-1.0		
MDJ				AMB	AMB				
	comp=Z,4.0nm,0.6s,mb4.6								
MDJ				AMB	AMB				
	comp=Z,59nm,4.1s								
MDJ				LR	LR				
	comp=N,43nm,37.6s								
MDJ				LR	LR				
	comp=E,24nm,29.7s								
ATAH	Atahualpa	68.91	124	LR	LR	04 18 04.9			
	comp=E,44nm,19.5s,MS3.7,baz=195,slow=36								
CN2	Changchun	69.59	312	eP	P	03 48 01.0	+1.3		
NB2	NORSAR Subarra	70.14	19	P	P	03 48 01.4	-1.6		
	comp=Z,6.8nm,1.4s,mb4.4,baz=333,slow=6.2								
NOA	NORSAR Array B	70.14	19	P	P	03 48 00.7	-2.3		
	comp=Z,0.8nm,0.8s,mb3.7,baz=321,slow=2.9,SNR=2.8								
NOA				LR	LR	04 17 00.4			
	comp=Z,16nm,18.1s,MS3.3,baz=335,slow=34								
NOA	NORSAR Array B	70.14	19	P	P	03 48 00.7	-2.3		
NOA				LR	LR	04 17 00.4			
SONM	Songino Array	75.70	325	P	P	03 48 35.1	-0.9		
	comp=Z,1.3nm,1.0s,mb3.8,baz=36,slow=5.5,SNR=5.9								
HHC	Hu-ho-hao-te	78.82	317	eP	P	03 48 53.3	-0.2		
HHC				AP	pP	03 48 59.0	+1.3		
HHC				XP	sP	03 49 01.0	+1.8		
HHC				PCP	PcP	03 49 03.0	+0.8		
HHC				PP	PP	03 51 53.0	+1.1		
HHC				S	S	03 58 49.5	-1.7		
HHC				XS	sS	03 58 56.5	-1.5		
HHC				SKS		03 59 02.8			
HHC				SCS	ScS	03 59 11.3	-3.6		
HHC				PS		03 59 31.8			
HHC				SS	SS	04 03 55.5	-0.3		
HHC				AMB	AMB				
	comp=Z,13nm,0.8s,mb4.9								
HHC				AMB	AMB				
	comp=Z,51nm,4.8s								
HHC				LR	LR				
	comp=N,84nm,24.7s,MS4.2								
HHC				LR	LR				
	comp=E,126nm,24.7s,MS4.2								
HHC				LR	LR				
	comp=Z,48nm,24.7s,MS3.7								
SSE	Sheshan	80.93	305	P	P	03 49 04.3	-0.6		
SSE				AMB	AMB				
	comp=Z,13nm,0.7s,mb5.0								
SSE				AMB	AMB				
	comp=Z,60nm,6.7s								
NJ2	Nanjing	81.58	307	eP	P	03 49 10.8	+2.4		
NJ2				AMB	AMB				
	comp=Z,10.0nm,0.5s,mb5.0								
ZRNK	Zerenda	81.62	349	eP	P	03 49 08.6	0.0		
	comp=Z,1.7nm,0.6s,mb4.2								
LPAZ	La Paz	82.37	122	P	P	03 49 10.8	-1.7		
	comp=Z,1.0nm,0.9s,mb3.8,baz=3.8,slow=12,SNR=4.8								
LPAZ	La Paz	82.37	122	P	P	03 49 10.8	-1.7		
GTA	Gaotai	85.33	324	eP	P	03 49 27.3	-0.3		
GTA				AP	pP	03 49 31.3	-0.5		
GTA				XP	sP	03 49 34.5	+1.2		
GTA				PP	PP	03 52 46.3	+0.8		
GTA				PPP		03 54 42.0			
GTA				SKS		03 59 47.5			
GTA				S	S	03 59 55.5	-2.5		
GTA				SS	SS	04 05 30.8	-1.7		
GTA				AMB	AMB				
	comp=Z,4.0nm,0.5s,mb4.8								
GTA				AMB	AMB				
	comp=Z,54nm,4.6s								
GTA				LR	LR				
	comp=N,87nm,11.4s,MS4.4								
GTA				LR	LR				
	comp=E,45nm,11.4s,MS4.4								
GTA				LR	LR				
	comp=Z,70nm,12.5s,MS4.2								
WMQ	Urumqi	85.97	334	eP	P	03 49 32.0	+1.1		
LZH	Lanzhou	86.28	319	eP	P	03 49 33.3	+0.9		
LZH				AP	pP	03 49 36.5	-0.1		
LZH				XP	sP	03 49 38.0	-0.1		
LZH				PP	PP	03 52 54.8	+1.6		
LZH				AMB	AMB				
	comp=Z,19nm,1.5s,mb5.1								
LZH				AMB	AMB				
	comp=Z,51nm,8.9s								
LZH				LR	LR				
	comp=N,307nm,15.6s								
LZH				LR	LR				
	comp=Z,754nm,18.1s,MS5.1								
CD2	Chengdu	90.54	316	eP	P	03 49 51.5	-1.1		
CD2				AMB	AMB				
	comp=Z,10.0nm,0.8s,mb5.2								
BRTR	Keskin Array B	94.83	13	LR	LR	04 35 56.7			
	comp=Z,20nm,18.7s,MS3.6,baz=166,slow=37								
BDFB	Brasilia	95.00	107	LR	LR	04 32 26.3			
	comp=Z,65nm,20.7s,MS4.1,baz=199,slow=35								
KMI	Kunming	95.78	314	P	P	03 50 18.5	+1.7		
KMI				AP	pP	03 50 24.0	+3.0		
KMI				XP	sP	03 50 26.0	+3.5		
KMI				AMB	AMB				
	comp=Z,7.0nm,0.7s,mb5.2								
MAW	Mawson	155.90	192	ePKPdf	PKPdf	03 56 42.2	-2.5		

GUC 29 03:47:10.5±0.7, 3633S×7299W, h25km±14km, ML3.5, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCO	Chanco	0.70	32	eP		03 49 36.1	
CNCO				*i* S		03 49 45.9	
CNCO				AML	AML	03 49 47.5	
	comp=E,3μm,0.3s						
CCHI	Chillan	0.78	110	⇓*i*P		03 47 24.8	-0.6
CCHI				*i* S		03 47 35.4	-0.2
CCHI				AML	AML	03 47 36.5	
	comp=E,3μm,0.2s						
CCHI				AML	AML	03 47 36.6	
	comp=E,5μm,0.2s						
LNCH	Linares	1.22	67	eP		03 47 31.8	-0.2
LNCH				*i* S		03 47 48.0	+0.4
LNCH				AML	AML	03 47 54.1	
	comp=N,1μm,0.4s						
TALC	Talca	1.44	50	eP		03 47 32.1	-2.8
TALC				*i* S		Sn 03 47 53.5	+0.4
TALC				AML	AML	03 47 59.9	
	comp=N,2μm,0.4s						
NICH	Los Niches	1.95	48	*i* P		Pn 03 47 44.8	+2.8
NICH				*i* S		Sn 03 48 10.1	+4.5
CLCH	Cerro Calan	3.56	35	eP		Pn 03 48 05.6	+1.5
FCH	Farellones	3.73	37	eP		Pn 03 48 08.4	+2.0

*ISCJB **29** 03:57:58.8±0.3, 4606N±002×676E±002, h2km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=162.0*
*CSEM **29** 03:58:00.0±0.1, 4601N×690E, h2km, ML2.4/15, Error ellipse: s-maj=1.3km s-min=0.9km az=138.0*
*STR **29** 03:58:00.0±0.4, 4603N×690E, h5km±1km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **29** 03:58:00.0, 4603N×690E, h5km, ML2.4(LDG), ML2.5(STR), After STR.*
*GEN **29** 03:58:00.2, 4604N×690E, h5km, ML2.0*
*ZUR **29** 03:58:00.5, 4606N×690E, h5km±1km, ML1.7/8*
*LDG **29** 03:58:01.0±0.1, 4606N×685E, h2km, Ml2.4/16, Error ellipse: s-maj=1.1km s-min=0.8km az=105.0*

ISC 29 03:57:59.7±0.2, 4604N±002×684E±002, h7km±3km, n62, σ0.68/114, 6C-3D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMV	Vieux Emosson	0.05	66	⇓*i*Pg		Pg 03 58 01.8	+0.5
EMV				*i* Sg		Sg 03 58 02.7	+0.3
SALAN	Lac Salanfe	0.14	43	⇑*i*Pg		Pg 03 58 03.0	+0.3
	375nm,0.1s						
SALAN				*i* Sg		Sg 03 58 04.7	0.0
	375nm,0.1s						
GRYON	Gryon	0.28	43	*i* Sg		Pg 03 58 05.5	+0.2
	62nm,0.2s						
GRYON	Gryon	0.28	43	⇑*i*Pg		Sg 03 58 08.9	-0.1
	62nm,0.2s						
AIGLE	Aigle	0.31	15	*i* Sg		Pg 03 58 06.2	+0.4
	312nm,0.2s						
AIGLE	Aigle	0.31	15	⇑*i*Pg		Sg 03 58 10.5	+0.6
	312nm,0.2s						
RSL	Roselend	0.38	203	Pg		Pg 03 58 07.9	+0.7
RSL				Sg		Sg 03 58 12.9	+0.7
DIX	Grande Dixence	0.40	84	⇓*i*Pg		Pg 03 58 07.8	+0.3
	437nm,0.2s						
DIX				*i* Sg		Sg 03 58 12.6	-0.2
	437nm,0.2s						
SENIN	Lac Senin	0.45	45	⇑*i*Pg		Pg 03 58 08.6	+0.1
	192nm,0.2s						
SENIN				*i* Sg		Sg 03 58 14.5	0.0
	192nm,0.2s						
LSD	Ceresole Reale	0.63	159	P		Pg 03 58 11.9	+0.1
LKBD	Leukerbad	0.65	58	⇓*i*Pg		Pg 03 58 12.3	+0.1
	27nm,0.2s						
CABF	La Chapelle	0.77	318	ePn		Pn 03 58 17.2	+0.3
CABF				eSn		Sg 03 58 29.1	+4.6
	15nm,0.3s						
CABF	La Chapelle	0.77	318	ePg		Pg 03 58 15.5	+1.0
CABF				ePn		Pn 03 58 17.2	+0.3
CABF				eSn		Sg 03 58 29.1	+4.6
CABF	La Chapelle	0.77	318	ePn		Pn 03 58 17.2	+0.3
CABF				eSn		Sg 03 58 29.1	+4.6
	7.3nm,0.3s						
MMK	Mattmark	0.79	89	⇑*i*Pg		Pg 03 58 14.3	-0.5
	49nm,0.1s						
WIMIS	Wimmis	0.83	41	⇑*i*Pg		Pg 03 58 15.6	0.0
	45nm,0.5s						
ORX	Oropa	0.90	117	P		Pg 03 58 16.2	-0.8
ORX				S		Sg 03 58 27.3	-1.4
RSP	Reno Superiore	0.94	161	P		Pg 03 58 17.4	-0.4
RSP				S		Sg 03 58 29.2	-0.8
OG05	Jujurieux	0.96	270	Pg		Pg 03 58 19.5	+1.4
OG05				Sg		Sg 03 58 32.5	+1.9
RRL	Cesana Torines	1.12	182	P		Pg 03 58 21.2	-0.1
LOMF	Lomont	1.31	360	Pg		Pg 03 58 25.8	+1.0
LOMF				Sg		Sg 03 58 42.9	+1.1
ORIF	Oris-en-Rattie	1.31	211	ePn		Pn 03 58 25.0	+0.6
ORIF				eSn		Sn 03 58 42.2	+0.1
	5.9nm,0.3s						
ORIF	Oris-en-Rattie	1.31	211	ePn		Pn 03 58 25.0	+0.6
ORIF				eSn		Sn 03 58 42.2	+0.1
	3.0nm,0.3s						
MBDF	Montbardon	1.32	182	ePn		Pn 03 58 25.0	+0.5
MBDF				eSn		Sn 03 58 42.1	-0.1
	3.7nm,0.3s						
MBDF	Montbardon	1.32	182	ePn		Pn 03 58 25.0	+0.5
MBDF				eSn		Sn 03 58 42.1	-0.1
	1.9nm,0.3s						
BBS	Basel-Blauen	1.50	18	Pg		Pg 03 58 26.6	-1.8
BBS				Sg		Sg 03 58 49.5	+1.7
PZZ	Prazzo	1.55	173	P		Pn 03 58 26.9	-0.8
HINF	Hinteralfeld	1.77	0	ePg		Pg 03 58 33.7	0.0
HINF				eSg		Sg 03 58 56.1	-0.6
	8.2nm,0.2s						
HINF	Hinteralfeld	1.77	0	ePg		Pg 03 58 33.7	0.0
HINF				eSg		Sg 03 58 56.1	-0.6
	4.1nm,0.2s						
MOF	Molkenrain	1.82	6	Pg		Pg 03 58 34.7	+0.1
VIVF	Saint-Julien-l	1.93	233	ePg		Pg 03 58 37.2	+0.5
VIVF				eSg		Sg 03 59 01.8	+0.1
	12nm,0.2s						
VIVF	Saint-Julien-l	1.93	233	ePn		Pn 03 58 33.4	+0.5
VIVF				ePg		Pg 03 58 37.2	+0.5
VIVF				eSg		Sg 03 59 01.8	+0.1
VIVF	Saint-Julien-l	1.93	233	ePg		Pg 03 58 37.2	+0.5
VIVF				eSg		Sg 03 59 01.8	+0.1
	5.8nm,0.2s						
HAU	Haudompre	1.99	351	ePg		Pg 03 58 37.7	-0.2
HAU				eSg		Sg 03 59 03.2	-0.5
	7.1nm,0.3s						
HAU	Haudompre	1.99	351	ePn		Pn 03 58 33.8	+0.1
H

MEZF	**Maizieres J'vi**	**2.74**	**334**	*e*Sg		**Sg**	**03 59 26.9**	**-0.9**
	2.0nm,0.3s							
BGF	**Bois d'Agland**	**2.81**	**282**	*e*Pg		**Pg**	**03 58 53.3**	**-0.3**
BGF				*e*Sg		**Sg**	**03 59 29.4**	**-0.7**
	10nm,0.3s							
BGF	**Bois d'Agland**	**2.81**	**282**	*e*Pn		**Pn**	**03 58 45.1**	**+0.1**
BGF				*e*Pg		**Pg**	**03 58 53.3**	**-0.3**
BGF				*e*Sg		**Sg**	**03 59 29.4**	**-0.7**
BGF	**Bois d'Agland**	**2.81**	**282**	*e*Pg		**Pg**	**03 58 53.3**	**-0.3**
BGF				*e*Sg		**Sg**	**03 59 29.4**	**-0.7**
	5.2nm,0.3s							
TCF	**Toulx Ste Croi**	**3.22**	**276**	*e*Pg		**Pg**	**03 59 00.7**	**-0.8**
TCF				*e*Sg		**Sg**	**03 59 42.3**	**-0.9**
	1.7nm,0.3s							
TCF	**Toulx Ste Croi**	**3.22**	**276**	*e*Pg		**Pg**	**03 59 00.7**	**-0.8**
TCF				*e*Sg		**Sg**	**03 59 42.3**	**-0.9**
	0.9nm,0.3s							
CAF	**Calviac**	**3.54**	**253**	*e*Sg		**Sg**	**03 59 52.1**	**-1.2**
	3.0nm,0.4s							
CAF	**Calviac**	**3.54**	**253**	*e*Sg		**Sg**	**03 59 52.1**	**-1.2**
	1.5nm,0.4s							

IDC ***29*** *04:00:29.6±1.3, 24.31S×66.96W, h166km±20km, mb3.1/1, mb1 3.3/6, mb1mx3.2/19, mbtmp3.8/6, Error ellipse: s-maj=27.5km s-min=12.9km az=91.0*
ISCJB ***29*** *04:00:30.2±0.7, 24.33S±004×673W±0.1, h204km±16km, mb3.2/1, Error ellipse: s-maj=18.0km s-min=6.0km az=14.6*
NEIC ***29*** *04:00:30.9±0.8, 24.24S×67.19W, h188km±16km, mb4.0/2, Error ellipse: s-maj=19.1km s-min=12.3km az=105.0*
GUC ***29*** *04:00:32.6±1.3, 24.29S×67.42W, h180km, ML4.4*

ISC 29 04:00:30.9±0.6, 2434S±004×672W±01, h188km±16km, n19, σ1§20/28, mb3.2/1, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.32**	**317**	P	**Pn**	**04 01 12.5**	**+0.5**
	baz=135,slow=19						
LVC				S	**Sn**	**04 01 44.2**	**+0.2**
	69nm,0.3s,baz=135,slow=20,SNR=14						
CEN1	**Los Morros**	**2.90**	**288**	⇓*i*P	**Pn**	**04 01 20.2**	**+1.6**
CEN1				*i* S	**Sn**	**04 01 55.9**	**0.0**
CEN1				AML	AML	04 01 59.4	
	comp=E,689nm,0.6s						
CPN1	**Cerro Paranal**	**2.92**	**264**	*e*P	**Pn**	**04 01 19.9**	**+1.0**
CPN1				*i* S	**Sn**	**04 01 56.3**	**-0.2**
CPN1				AML	AML	04 02 02.6	
	comp=E,617nm,0.5s						
ANCH	**Antofagasta**	**3.00**	**282**	⇑*i*P	**Pn**	**04 01 22.6**	**+2.7**
ANCH				*i* S	**Sn**	**04 01 58.0**	**-0.1**
ANCH				AML	AML	04 02 01.7	
	comp=N,1μm,0.7s						
ANCH	**Antofagasta**	**3.00**	**282**	⇑*i*P	**Pn**	**04 01 22.6**	**+2.7**
ANCH				*i* S	**Sn**	**04 01 58.0**	**-0.1**
CPCH	**Copiapo**	**4.13**	**223**	⇑*i*P	**Pn**	**04 01 33.3**	**-0.6**
CPCH				*i* S	**Sn**	**04 02 22.7**	**-0.5**
CDCH	**Caldera**	**4.25**	**229**	*e*P	**Pn**	**04 01 34.6**	**-0.8**
CDCH				*i* S	**Sn**	**04 02 23.6**	**-2.3**
VACH	**Vallenar**	**5.28**	**216**	*i* S	**Sn**	**04 02 50.7**	**+0.9**
CFAA	**Coronel Fontan**	**7.29**	**187**	P	**Pn**	**04 02 15.3**	**+0.4**
	comp=N,0.0nm,0.3s,baz=9.9,slow=11,SNR=11						
CFAA				S	**Sn**	**04 03 35.3**	**-1.9**
	comp=N,0.1nm,0.3s,baz=295,slow=19,SNR=4.6						
CFAA	**Coronel Fontan**	**7.29**	**187**	P	**Pn**	**04 02 15.3**	**+0.4**
CFAA				S	**Sn**	**04 03 35.3**	**-1.9**
LPAZ	**La Paz**	**8.06**	**354**	P	**Pn**	**04 02 24.7**	**-0.1**
	comp=N,1.1nm,0.3s,baz=162,slow=8.6,SNR=45						
LPAZ				S	**Sn**	**04 03 53.6**	**-1.8**
	comp=N,0.1nm,0.3s,baz=212,slow=19,SNR=3.8						
CPUP	**Villa Florida**	**9.16**	**105**	P	**Pn**	**04 02 46.3**	**+7.1**
	comp=N,0.6nm,0.3s,baz=265,slow=14,SNR=9.1						
CPUP	**Villa Florida**	**9.16**	**105**	*e*Pn	**Pn**	**04 02 41.2**	**+1.9**
	comp=N,7.8nm,0.9s						
SIV	**San Ignacio**	**10.11**	**36**	P	**Pn**	**04 02 48.0**	**-3.7**
	comp=N,0.3nm,0.3s,baz=224,slow=14,SNR=5.9						
TRQA	**Tornquist**	**14.38**	**163**	*e*P	**Pn**	**04 03 49.1**	**+3.1**
	comp=N,2.5nm,0.6s						
PLCA	**Paso Flores**	**16.58**	**189**	P	**Pn**	**04 04 13.3**	**+0.5**
	comp=N,0.1nm,0.3s,baz=359,slow=12,SNR=2.5						
BDFB	**Brasilia**	**19.99**	**68**	P	**P**	**04 04 48.0**	**-1.0**
	comp=N,0.3nm,0.3s,baz=241,slow=13,SNR=7.4						
TORD	**Torodi Ar. Bea**	**76.87**	**69**	P	**P**	**04 12 02.1**	**-0.1**
	comp=N,0.6nm,1.0s,mb3.2,baz=256,slow=5.8,SNR=8.8						
MKAR	**Makanchi Array**	**146.91**	**40**	PKPbc	PKPbc	04 19 51.5	+0.5
	comp=N,0.4nm,0.3s,baz=308,slow=4.5,SNR=4.6						

ISCJB ***29*** *04:05:48.4±0.6, 4760N±003×773E±004, h10km, Error ellipse: s-maj=4.5km s-min=3.7km az=136.8*
ZUR ***29*** *04:05:48.6, 4756N×777E, h17km±5km, ML1.4/6*
STR ***29*** *04:05:48.9±0.2, 4760N×773E, h10km±1km, Ml1.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG ***29*** *04:05:49.3±0.2, 4759N×773E, h10km, Md2.0/4, Ml1.9/6, Error ellipse: s-maj=3.0km s-min=1.5km az=135.0*

ISC 29 04:05:48.8±0.6, 4758N±003×773E±004, h10km, n15, σ0§91/21, 2C-1D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALST	**Balsthal**	**0.25**	**186**	⇑*i*Pg	**Pg**	**04 05 54.1**	**+0.2**
	170nm,0.2s						
SULZ	**Sulz-Cheisache**	**0.27**	**102**	⇓*i*Pg	**Pg**	**04 05 54.0**	**-0.2**
	61nm,0.4s						
BOURR	**Bourrignon**	**0.39**	**241**	*e*Sg	**Pg**	**04 05 57.5**	**+1.0**
	36nm,1.1s						
BOURR	**Bourrignon**	**0.39**	**241**	*e*Pg	**Sg**	**04 06 03.0**	**+1.4**
	36nm,1.1s						
SLE	**Schleitheim**	**0.55**	**70**	*i* Sg	**Pg**	**04 05 59.6**	**+0.2**
	107nm,0.2s						
SLE	**Schleitheim**	**0.55**	**70**	⇑*i*Pg	**Sg**	**04 06 06.2**	**-0.4**
	107nm,0.2s						
HINF	**Hinteralfeld**	**0.64**	**292**	*e*Pg	**Pg**	**04 06 01.5**	**+0.3**
HINF				*e*Sg	**Sg**	**04 06 10.1**	**+0.6**
	2.4nm,0.2s						
LOMF	**Lomont**	**0.66**	**250**	Pg	**Pg**	**04 06 01.8**	**+0.3**
LOMF				Sg	**Sg**	**04 06 11.3**	**+1.2**
WLS	**Welschbruch**	**0.87**	**343**	Pg	**Pg**	**04 06 05.3**	**-0.3**
WLS				Sg	**Sg**	**04 06 17.0**	**+0.1**
CDF	**Champ du Feu**	**0.89**	**340**	*e*Pg	**Pg**	**04 06 06.1**	**+0.2**
CDF				*e*Sg	**Sg**	**04 06 17.8**	**+0.4**
	1.5nm,0.2s						
HAU	**Haudompre**	**1.02**	**295**	*e*Pg	**Pg**	**04 06 08.4**	**-0.1**
HAU				*e*Sg	**Sg**	**04 06 22.2**	**+0.3**
	3.3nm,0.3s						
CABF	**La Chapelle**	**1.48**	**230**	*e*Pg	**Pg**	**04 06 14.2**	**-3.1**
CABF				*e*Sg	**Sg**	**04 06 36.4**	**-0.2**
	1.5nm,0.3s						
SFTF	**Sexfontaines**	**1.92**	**290**	*e*Sg	**Sg**	**04 06 50.0**	**-0.4**
	4.1nm,0.5s						
LOR	**Lormes**	**2.65**	**265**	*e*Sg	**Sg**	**04 07 12.0**	**-1.9**
	2.7nm,0.4s						
SSF	**Saint Saulge**	**2.92**	**261**	*e*Sg	**Sg**	**04 07 20.2**	**-2.5**
	0.9nm,0.3s						

RSPR 29 04:18:42.2, 1921N×6284W, h81km±7km, MD3.7/4, MD3.7/4, 4C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.86**	**245**	⇑*e*P	Pn	04 19 11.9	-0.3
TBVI	**Tortola**	**1.86**	**245**	*e*S	Sn	04 19 34.6	-0.3
MTP	**Monte Pirata**	**2.81**	**247**	⇑*e*P	Sn	04 19 24.6	-0.3
MTP	**Monte Pirata**	**2.81**	**247**	*e*S	Sn	04 19 57.6	-0.1
CBYP	**Canovanas**	**3.01**	**252**	⇑*e*P	Pn	04 19 27.2	-0.4
CBYP	**Canovanas**	**3.01**	**252**	*e*S	Sn	04 20 03.0	+0.3
HUMP	**Col San Antoni**	**3.04**	**250**	⇑*e*P	Pn	04 19 27.8	-0.3
HUMP	**Col San Antoni**	**3.04**	**250**	*e*S	Sn	04 20 03.3	-0.3

ISCJB ***29*** *04:22:44.6±2.6, 60S±01×1474E±02, h51km±23km, mb4.1/9, MS3.6/4, Error ellipse: s-maj=27.4km s-min=17.3km az=10.6*
NEIC ***29*** *04:22:44.6±0.5, 602S×14755E, h35km, mb4.5/5, Error ellipse: s-maj=14.7km s-min=7.0km az=97.0*
IDC ***29*** *04:22:47.3±2.4, 606S×14747E, h58km±21km, mb3.8/7, mb1 4.0/10, mb1mx4.0/15, mbtmp4.1/10, ML3.7/3, MS3.6/7, Ms1 3.6/7, ms1mx3.4/18, Error ellipse: s-maj=27.1km s-min=13.5km az=102.0*

ISC 29 04:02:45.9±1.9, 603S±009×1475E±02, h47km±17km, n26, σ0§79/21, mb4.1/9, MS3.6/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.37**	**186**	P	**Pn**	**04 23 35.4**	**-0.5**
	16nm,0.3s,baz=8.3,slow=6.4,SNR=28						
PMG				S	**Sn**	**04 24 17.4**	**+2.7**
	41nm,0.3s,baz=1.9,slow=23,SNR=6.5						
PMG				LR	LR	04 25 12.5	
	comp=Z,771nm,19.9s,baz=234,slow=43						
CTA	**Charters Tower**	**14.03**	**185**	P	**Pn**	**04 26 01.7**	**-0.2**
	0.2nm,0.3s,baz=353,slow=17,SNR=3.1						
CTA				LR	LR	04 30 54.0	
	comp=Z,276nm,21.8s,baz=42,slow=35						
CTA	**Charters Tower**	**14.03**	**185**	P	**Pn**	**04 26 01.7**	**-0.2**
CTA				LR	LR	04 30 54.0	
WRAB	**Tennant Creek**	**18.82**	**222**	*e*P	**Pn**	**04 27 01.9**	**-0.6**
	14nm,0.8s						
WB2	**Warramunga Arr**	**18.83**	**222**	*e*P	**Pn**	**04 27 02.2**	**-0.4**
WB2	**Warramunga Arr**	**18.83**	**222**	*e*P	**Pn**	**04 27 02.2**	**-0.5**
WRA	**Warramunga Arr**	**18.84**	**222**	P	**Pn**	**04 27 01.6**	**-1.1**
	0.6nm,0.3s,baz=48,slow=11,SNR=19						
GUMO	**Guam**	**19.67**	**352**	LR	LR	04 32 58.6	
	comp=Z,147nm,21.5s,baz=174,slow=31						
AS31	**Alice Springs**	**21.88**	**215**	*e*P	**P**	**04 27 34.7**	**0.0**
ASAR	**Alice Springs**	**21.88**	**215**	P	**P**	**04 27 34.7**	**0.0**
	5.0nm,0.7s,mb4.0,baz=55,slow=8.5,SNR=25						
ASAR				S	**S**	**04 31 34.5**	**+0.8**
	1.3nm,0.9s,baz=33,slow=21,SNR=5.8						
ASAR				LR	LR	04 36 32.7	
	comp=Z,209nm,19.8s,MS3.5,baz=4.5,slow=38						
FITZ	**Fitzroy Crossi**	**24.48**	**239**	*e*P	**P**	**04 28 00.9**	**+0.4**
	23nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**24.48**	**239**	P	**P**	**04 28 00.2**	**-0.3**
	14nm,0.8s,mb4.4,baz=76,slow=11,SNR=23						
FITZ				LR	LR	04 38 41.8	
	comp=Z,122nm,18.4s,MS3.4,baz=69,slow=39						
STKA	**Stephens Creek**	**26.30**	**191**	*e*P	**P**	**04 28 17.6**	**+0.6**
	3.9nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**26.30**	**191**	P	**P**	**04 28 17.1**	**+0.1**
	5.8nm,0.8s,mb4.2,baz=0.7,slow=10,SNR=10						
STKA				LR	LR	04 38 07.4	
	comp=Z,140nm,19.8s,MS3.5,baz=26,slow=35						
MBWA	**Marble Bar**	**30.82**	**238**	*e*P	**P**	**04 28 58.1**	**+0.9**
	7.5nm,0.8s,mb4.6						
MJAR	**Matsushiro Arr**	**43.23**	**349**	P	**P**	**04 30 43.7**	**+1.2**
	0.6nm,0.4s,mb3.7,baz=173,slow=7.3,SNR=4.9						
SONM	**Songino Array**	**64.67**	**331**	P	**P**	**04 33 19.1**	**+0.2**
	1.9nm,1.0s,mb4.1,baz=144,slow=6.5,SNR=6.2						
VNDA	**Vanda**	**71.85**	**177**	P	**P**	**04 34 03.0**	**-0.8**
	1.1nm,0.8s,mb3.8,baz=329,slow=7.1,SNR=6.6						
MKAR	**Makanchi Array**	**77.84**	**320**	P	**P**	**04 34 38.3**	**-0.1**
	0.3nm,0.4s,mb3.5,baz=116,slow=6.6,SNR=3.4						
MKAR				pP	pP	04 34 51.1	-1.0
	0.3nm,0.4s,baz=87,slow=7.4,SNR=2.9						
QSPA	**South Pole Qui**	**83.94**	**180**	*e*P	**P**	**04 35 10.1**	**-0.8**
	8.3nm,1.0s,mb4.8						
DLBC	**Dease Lake**	**91.16**	**31**	LR	LR	05 09 59.7	
	comp=Z,47nm,20.8s,MS3.9,baz=162,slow=31						
TORD	**Torodi Ar. Bea**	**145.58**	**284**	PKPbc	PKPbc	04 42 20.6	+1.4
	5.1nm,1.0s,baz=78,slow=4.1,SNR=18						
TORD				pPKPbc	pPKPbc	04 42 32.2	-1.1
	3.2nm,0.6s,baz=77,slow=4.0,SNR=12						
TORD	**Torodi Ar. Bea**	**145.58**	**284**	PKPbc	PKPbc	04 42 20.6	+1.4
TORD				pPKPbc	pPKPbc	04 42 32.2	-1.1
DBIC	**Dimbokro**	**152.52**	**273**	PKPbc	PKPbc	04 42 38.7	+1.7
	6.1nm,1.1s,baz=124,slow=3.6,SNR=3.2						
DBIC				PKPab	PKPab	04 42 48.6	+1.1
	2.4nm,0.7s,baz=39,slow=3.0,SNR=5.1						
DBIC	**Dimbokro**	**152.52**	**273**	PKPbc	PKPbc	04 42 38.7	+1.7
DBIC				PKPab	PKPab	04 42 48.6	+1.1
BDFB	**Brasilia**	**153.54**	**145**	PKPbc	PKPbc	04 42 40.4	+1.2
	3.1nm,0.7s,baz=217,slow=5.1,SNR=6.1						
BDFB				PKPab	PKPab	04 42 52.2	+0.4
	5.3nm,0.7s,baz=198,slow=4.2,SNR=8.7						

BJI 29 04:24:23.9, 3812N×10220E, h15km, ML3.6, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**2.27**	**305**	PG	Pg	04 25 03.8	-3.6
GTA				SG	Sg	04 25 33.8	-3.0
GTA				Smax			
	comp=N,502nm,0.5s						
GTA				Smax			
	comp=E,692nm,0.6s						
LZH	**Lanzhou**	**2.42**	**147**	PG	Pg	04 25 07.8	-2.5
LZH				SG	Sg	04 25 36.0	-5.6
LZH				Smax			
	comp=N,315nm,0.7s						
LZH				Smax			
	comp=E,381nm,0.6s						
LZH				LR	LR		
	comp=N,399nm,4.5s						
LZH				LR	LR		
	comp=Z,482nm,5.4s						
NJ2	**Nanjing**	**14.91**	**109**	*e*P	Pn	04 27 55.0	+0.9

MAN 29 04:26:49.0, 1796N×12065E, h24km, mb3.0, ML4.4, MS1.4, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.32**	**170**	*e*P	Pb	04 27 00.1	+3.9
ABRA				*e*S	Sb	04 27 10.3	+9.2
APYP	**Conner**	**0.57**	**100**	*e*P	Pb	04 27 00.7	+0.3
APYP				*e*S	Sb	04 27 10.8	+2.6
CVP	**Callao Caves**	**1.14**	**103**	⇓*i*P	Pn	04 27 08.0	-1.5
CVP				*i* S	Sn	04 27 24.0	-0.4
SGCP	**Mt. Cagua**	**1.35**	**78**	*e*P	Pn	04 27 09.8	-2.6
SGCP				*e*S	Sn	04 27 28.6	-1.0
BCPH	**Baguio City Da**	**1.57**	**182**	⇑*i*P	Pn	04 27 15.5	+0.1
BCPH				*i* S	Sn	04 27 37.3	+2.3
BOLP	**Bolinao**	**1.72**	**204**	*e*P	Pn	04 27 17.6	+0.1
BOLP				*e*S	Sn	04 27 42.6	+3.9
SCZP	**Santa Cruz**	**2.29**	**198**	*e*P	Pn	04 27 25.4	+0.2
BALP	**Baler**	**2.38**	**158**	*e*P	Pn	04 27 27.2	+0.7

MAN 29 04:32:00.4, 815N×12407E, h36km, mb2.8, ML4.3, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**0.69**	**64**	*e*P	Pn	04 32 14.9	+1.2
CGP				*i* S	Sn	04 32 24.7	+1.6
PAGZ	**Pagadian**	**0.74**	**246**	*e*P	Pn	04 32 14.8	+0.5
PAGZ				*e*S	Sn	04 32 25.8	+1.5
BUKP	**Musuan**	**1.02**	**105**	*e*P	Pn	04 32 18.5	+0.3

IDC ***29*** *04:48:56.8±0.8, 2399N×12270E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.9/20, mbtmp3.9/10, ML3.4/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/25, Error ellipse: s-maj=32.5km s-min=15.6km az=71.0*
ISCJB ***29*** *04:48:58.9±0.5, 2378N±004×12273E±003, h20km, mb3.9/10, MS3.8/1, Error ellipse: s-maj=6.5km s-min=3.7km az=161.1*
JMA ***29*** *04:49:00.9±0.2, 2390N×12276E, h20km±4km, M4.2*
NIED ***29*** *04:49:00, 2390N×12280E, h20km, Mw4.0 Best double couple: M₀1.31000×10¹⁵ NP1:φ₀224.00000°, δ61.00000°, λ-44.00000°. NP2:φ₀339.00000°, δ53.00000°, λ-142.00000°.*
NEIC ***29*** *04:49:01.8±0.5, 2393N×12278E, h35km, mb4.5/1, Error ellipse: s-maj=13.9km s-min=8.7km az=48.0*
BJI ***29*** *04:49:03.1, 2378N×12247E, h33km, mb4.0, ML3.7*

ISC 29 04:49:00.4±0.5, 2385N±005×12274E±003, h20km, n28, σ1§08/37, mb3.9/10, MS3.8/1, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.66**	**22**	P	**Pb**	**04 49 12.7**	**-0.5**
YOJ				*e*S	**Sb**	**04 49 20.9**	**-1.1**
HATJ	**Hateruma jima**	**1.00**	**78**	P	**Pb**	**04 49 18.7**	**-0.2**
HATJ				*e*S	**Sb**	**04 49 31.8**	**+0.2**
IRIF	**Iriomote-Funau**	**1.03**	**61**	P	**Pb**	**04 49 18.9**	**-0.6**
IRIF				*e*S	**Sb**	**04 49 32.0**	**-0.5**
NACB	**Ninganchiao**	**1.10**	**288**	⇑*i*Pn	**Pn**	**04 49 19.8**	**-0.7**
JKRS	**Kuro-shima**	**1.22**	**71**	P	**Pn**	**04 49 22.3**	**0.0**
JKRS				*e*S	**Sb**	**04 49 38.8**	**+0.6**
JIJ	**Ishigaki jima**	**1.38**	**68**	P	**Pn**	**04 49 24.7**	**+0.2**
JIJ				*e*S	**Sn**	**04 49 42.1**	**-0.1**
YHNB	**Yeheng**	**1.49**	**304**	*e*Pn	**Pn**	**04 49 26.3**	**+0.3**
YHNB				*e*Sn	**Sn**	**04 49 46.5**	**+1.6**

TATO	**Taipei**	**1.60**	**315**	*e*Pn		**Pn**	**04 49 28.9**	**+1.4**
TATO				*e*Sn		**Sn**	**04 49 49.8**	**+2.2**
JTJ	**Tarama**	**1.96**	**66**	P		**Pn**	**04 49 33.1**	**+0.7**
JMJ	**Miyako jima 2**	**2.52**	**67**	*e*S		**Sn**	**04 50 13.3**	**+3.0**
QZH	**Quanzhou**	**3.94**	**287**	⇑*i*P		**Pn**	**04 49 59.8**	**+0.2**
QZH				S		**Sn**	**04 50 38.8**	**-6.4**
QZH				Smax				
	comp=N,170nm,1.1s							
QZH				Smax				
	comp=E,110nm,0.6s							
JKE	**Kume jima 2**	**4.42**	**55**	P		**Pn**	**04 50 07.3**	**+1.0**
JKE				*e*S		**Sn**	**04 50 58.7**	**+1.5**
JOW	**Kunigami**	**5.82**	**58**	Pn		**Pn**	**04 50 24.7**	**-0.8**
	comp=E,2.6nm,0.3s,baz=221,slow=9.3,SNR=6.8							
JOW				Sn		**Sn**	**04 51 31.9**	**+0.2**
	comp=E,0.7nm,0.3s,baz=285,slow=20,SNR=2.4							
JOW	**Kunigami**	**5.82**	**58**	P		**Pn**	**04 50 24.9**	**-0.6**
JTK	**Tokunoshima**	**6.83**	**54**	P		**Pn**	**04 50 38.1**	**-1.3**
JHJ	**Hachijo jima 2**	**17.58**	**55**	LR		LR	04 58 44.4	
	comp=E,127nm,19.9s,baz=106,slow=34							
SONM	**Songino Array**	**27.25**	**336**	P		**P**	**04 54 40.9**	**-2.2**
	comp=E,0.2nm,0.3s,mb3.1,baz=153,slow=9.7,SNR=3.3							
SONM	**Songino Array**	**27.25**	**336**	P		**P**	**04 54 40.9**	**-2.2**
MKAR	**Makanchi Array**	**39.57**	**316**	P		**P**	**04 56 29.8**	**-0.3**
	comp=E,0.8nm,0.6s,mb3.7,baz=101,slow=11,SNR=4.9							
FITZ	**Fitzroy Crossi**	**41.79**	**176**	P		**P**	**04 56 48.3**	**-0.1**
	comp=E,1.2nm,0.6s,mb3.7,baz=303,slow=5.0,SNR=6.9							
WRAB	**Tennant Creek**	**44.96**	**164**	*e*P		**P**	**04 57 12.7**	**-1.3**
	comp=E,3.6nm,0.5s,mb4.5							
WRA	**Warramunga Arr**	**44.97**	**164**	P		**P**	**04 57 14.9**	**+0.8**
	comp=E,2.0nm,0.8s,mb4.0,baz=348,slow=8.5,SNR=5.9							
ASAR	**Alice Springs**	**48.45**	**166**	P		**P**	**04 57 42.7**	**+1.3**
	comp=E,0.9nm,0.6s,mb4.0,baz=351,slow=14,SNR=11							
STKA	**Stephens Creek**	**58.27**	**161**	P		**P**	**04 58 54.4**	**+0.9**
	comp=E,4.2nm,0.7s,mb4.6,baz=346,slow=7.5,SNR=8.5							
STKA	**Stephens Creek**	**58.27**	**161**	P		**P**	**04 58 54.4**	**+0.9**
ARCES	**ARCESS Array B**	**70.38**	**338**	P		**P**	**05 00 11.0**	**-1.9**
	comp=E,0.6nm,0.8s,mb3.6,baz=59,slow=7.8,SNR=2.5							
FINES	**FINESS Array B**	**72.45**	**330**	P		**P**	**05 00 24.0**	**-1.4**
	comp=E,1.3nm,0.9s,mb3.9,baz=48,slow=2.8,SNR=3.4							
NOA	**NORSAR Array B**	**79.19**	**333**	P		**P**	**05 01 02.4**	**-1.4**
	comp=E,0.5nm,0.6s,mb3.6,baz=50,slow=5.6,SNR=3.3							
NOA				LR		LR	05 39 57.5	
	comp=E,40nm,18.4s,MS3.8,baz=95,slow=39							

MEX 29 04:49:16.9±0.8, 1723N×9972W, h46km±22km, MD3.7, 1C, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.55**	**251**	⇑*i*P	Pn	04 49 26.8	-1.7
CAIG				*i* S	Sn	04 49 35.5	-1.4
MEIG	**Mezcala**	**0.70**	**8**	*i* P	Pn	04 49 28.5	-2.0
MEIG				*i* S	Sn	04 49 38.4	-1.9
PLIG	**Platanillo**	**1.18**	**10**	*i* P	Pn	04 49 35.7	-1.3
PLIG				*i* S	Sn	04 49 50.9	-0.9
UTMO	**Huajuapan**	**1.92**	**72**	*e*P	Pn	04 49 46.5	-0.6
UTMO				*i* S	Sn	04 50 09.1	-1.0
IIZ	**Mezontepec**	**2.00**	**13**	*i* P	Pn	04 49 46.6	-1.6
IIZ				*i* S	Sn	04 50 10.9	-1.2
PPM	**Popocatepetl**	**2.10**	**29**	*e*P	Pn	04 49 48.2	-1.4
PPM				*i* S	Sn	04 50 14.0	-0.5

BJI 29 05:35:46.4, 2797N×10425E, h18km, mb4.7, ML3.5, Ms3.6, Msz3.5, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**2.62**	**124**	P	Pn	05 36 31.8	+3.9
GYA				PG	Pg	05 36 36.8	+0.1
GYA				S	Sn	05 37 06.8	+7.6
GYA				SG	Sg	05 37 12.0	+1.2
GYA				Smax			
	comp=N,130nm,0.5s						
GYA				Smax			
	comp=E,140nm,0.7s						
CD2	**Chengdu**	**2.96**	**352**	*e*P	Pn	05 36 32.5	0.0
CD2				PG	Pg	05 36 42.0	-1.2
CD2				S	Sn	05 37 08.5	+1.0
CD2				SG	Sg	05 37 20.0	-1.6
CD2				Smax			
	comp=N,200nm,1.0s						
CD2				Smax			
	comp=E,430nm,1.1s						
CD2				LR	LR		
	comp=E,300nm,7.8s						
CD2				LR	LR		
	comp=Z,110nm,6.6s						
XAN	**Xi'an**	**7.26**	**32**	P	Pn	05 37 29.5	-2.0
XAN				S	Sn	05 38 52.3	-1.1
XAN				SG	Sn	05 39 34.0	+41
XAN				Smax			
	comp=N,30nm,0.7s						
XAN				Smax			
	comp=E,34nm,0.9s						
LZH	**Lanzhou**	**8.10**	**358**	*e*P	Pn	05 37 51.3	+8.2
LZH				AP		05 37 54.3	
LZH				XP		05 37 57.3	
LZH				AMB	AMB		
	comp=Z,16nm,1.1s						
LZ

s-maj=592.6km s-min=156.6km az=87.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.48**	**242**	P	P	06 22 28.1	+0.4
	0.9nm,0.5s,baz=98,slow=4.6,SNR=3.8						
WRA	**Warramunga Arr**	**47.78**	**259**	P	P	06 23 18.6	+0.6
	0.8nm,0.3s,baz=97,slow=7.5,SNR=10						
ASAR	**Alice Springs**	**47.88**	**254**	P	P	06 23 19.2	+0.4
	1.4nm,0.3s,baz=67,slow=8.6,SNR=24						
FITZ	**Fitzroy Crossi**	**56.18**	**260**	P	P	06 24 20.7	0.0
	0.8nm,0.4s,baz=90,slow=6.1,SNR=8.2						

NEIC ***29*** *06:22:36.9, 1039N×6241W, h5km, MD3.1(TRN), After TRN.*

TRN ***29*** *06:22:36.9, 1039N×6241W, h5km, MD3.1*

ISCJB ***29*** *06:22:37.7±0.6, 1035N±005×6241W±003, h24km±8km, Error ellipse: s-maj=9.3km s-min=4.4km az=155.8*

FUNV ***29*** *06:22:38.5, 1041N×6239W, h5km, MW2.8*

ISC 29 06:22:37.8±0.7, 1038N±005×6241W±003, h16km±5km, n12, σ0§91/21, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.32**	**34**	*eP*	**Pg**	**06 22 44.3**	**-0.4**
GUIV				*eS*	**Sg**	**06 22 48.7**	**-0.5**
GUNV	**Guanoco**	**0.57**	**248**	*eP*	**Pg**	**06 22 49.2**	**+0.2**
GUNV				*eS*	**Sg**	**06 22 58.0**	**+1.4**
TCE	**Chacachacare**	**0.72**	**64↓**	*eP*	**Pg**	**06 22 51.1**	**-0.8**
TCE				*eS*	**Sg**	**06 23 01.2**	**-0.2**
CRUV	**Carupano**	**0.86**	**290**	*eP*	**Pb**	**06 22 53.9**	**-0.6**
CRUV				*eS*	**Sb**	**06 23 05.4**	**-0.4**
TPP	**Pointe-a-Pierr**	**0.94**	**94**	*eP*	**Pb**	**06 22 54.8**	**-1.0**
TPP				*eS*	**Sb**	**06 23 12.4**	**+4.3**
TRN	**Trinidad (W)**	**1.02**	**75**	*eP*	**Pb**	**06 22 56.5**	**-0.7**
TRN				*eS*	**Sb**	**06 23 11.2**	**+0.8**
ITEV	**Isla Los Testi**	**1.20**	**324**	*eP*	**Pn**	**06 22 59.6**	**-0.3**
ITEV				*eS*	**Sb**	**06 23 16.5**	**+1.0**
TBH	**Brigand Hill**	**1.32**	**85**	*eP*	**Pn**	**06 23 02.6**	**+0.9**
TPR	**Prospect**	**1.79**	**63**	*eP*	**Pn**	**06 23 09.7**	**+1.6**
GRW	**Mount Saint Ca**	**1.92**	**22**	*eP*	**Pn**	**06 23 09.7**	**-0.1**
CAOV	**Caicara del Or**	**4.91**	**232**	*eP*	**Pn**	**06 23 51.6**	**+0.6**
CAOV				*eS*	**Sn**	**06 24 46.1**	**-1.4**
BAUV	**El Baul**	**5.73**	**256**	*eP*	**Pn**	**06 24 03.5**	**+1.2**
BAUV				*eS*	**Sn**	**06 25 06.2**	**-1.5**

WEL 29 06:27:29.9±0.4, 4024S×17743E, h30km±2km, ML3.5/9, 4C, Error ellipse: s-maj=2.5km s-min=1.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.48**	**296**	⇑P*	Pb	06 27 39.4	-0.6
PXZ				S*	Sb	06 27 47.7	+0.7
BFZ	**Birch Farm**	**1.00**	**244**	PN	Pn	06 27 47.7	-0.2
BFZ				SN	Sn	06 27 59.7	-1.3
TSZ	**Takapari Road**	**1.14**	**279**	PN	Pn	06 27 49.2	-0.5
KNZ	**Kokohu**	**1.23**	**9**	PN	Pn	06 27 50.6	-0.5
KNZ				SN	Sn	06 28 05.1	-1.6
BKZ	**Black Stump Fm**	**1.29**	**326**	⇑PN	Pn	06 27 51.4	-0.4
MRZ	**Mangatainoka R**	**1.47**	**253**	PN	Pn	06 27 53.9	-0.4
MOVZ	**Moawhango**	**1.54**	**302**	PN	Pn	06 27 55.4	+0.1
TUVZ	**Tukino**	**1.68**	**305**	*e*PN	Pn	06 27 58.2	+1.1
WNVZ	**Wahianoa**	**1.68**	**302**	PN	Pn	06 27 58.2	+1.0
FWVZ	**Far West T-bar**	**1.75**	**304**	*e*PN	Pn	06 27 58.8	+0.7
NGZ	**Ngauruhoe**	**1.77**	**306**	PN	Pn	06 27 59.3	+0.9
MWZ	**Matawai**	**1.91**	**2**	⇑PN	Pn	06 27 59.5	-0.8
MWZ				SN	Sn	06 28 22.2	-1.1
URZ	**Urewera**	**2.00**	**353**	⇑PN	Pn	06 28 01.0	-0.5
URZ				*e*SN	Sn	06 28 23.1	-2.3
PUZ	**Puketiti**	**2.26**	**17**	PN	Pn	06 28 02.7	-2.4
PUZ				SN	Sn	06 28 30.7	-1.3
MRW	**Makara Radio**	**2.30**	**244**	PN	Pn	06 28 04.7	-0.9
SNZO	**South Karori**	**2.33**	**242**	PN	Pn	06 28 05.1	-1.0
SNZO				SN	Sn	06 28 32.3	-1.4
TCW	**Tory Channel**	**2.58**	**247**	PN	Pn	06 28 08.5	-1.1
MXZ	**Matakaoa Point**	**2.76**	**15**	PN	Pn	06 28 10.9	-1.1
KHZ	**Kahutara**	**3.65**	**232**	PN	Pn	06 28 22.1	-2.2

ISCJB ***29*** *06:41:11.2±1.7, 497S±008×1513E±0.1, h154km±15km, mb4.0/12, Error ellipse: s-maj=18.8km s-min=11.7km az=48.1*

NEIC ***29*** *06:41:12.3±2.1, 500S×15129E, h153km±19km, mb4.3/5, Error ellipse: s-maj=18.4km s-min=11.7km az=96.0*

IDC ***29*** *06:41:12.6±1.5, 504S×15128E, h153km±12km, mb3.8/10, mb1 4.0/13, mb1mx4.0/17, mbtmp4.3/13, Error ellipse: s-maj=16.9km s-min=10.2km az=117.0*

ISC 29 06:41:12.5±1.4, 501S±008×1513E±01, h154km±12km, n32, σ0§82/27, mb4.0/12, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.00**	**223**	P	Pn	**06 42 39.2**	**+0.1**
	9.0nm,0.3s,baz=55,slow=5.4,SNR=15						
PMG				S	Sn	**06 43 46.6**	**-0.5**
	56nm,0.3s,baz=181,slow=14,SNR=11						
PMG	**Port Moresby**	**6.00**	**223**	*e*Pn	Pn	**06 42 38.4**	**-0.8**
	47nm,0.4s						
PMG				*e*Sn	Sn	**06 43 46.6**	**-0.4**
CTA	**Charters Tower**	**15.77**	**198**	*eP*	Pn	**06 44 48.3**	**+2.1**
	5.4nm,0.6s						
CTA	**Charters Tower**	**15.77**	**198**	P	Pn	**06 44 47.1**	**+1.0**
	1.0nm,0.3s,baz=33,slow=11,SNR=13						
GUMO	**Guam**	**19.55**	**341**	P	P	**06 45 29.2**	**+1.0**
	2.0nm,0.3s,baz=151,slow=11,SNR=6.8						
KAKA	**Kakadu**	**20.14**	**246**	*eP*	P	**06 45 34.8**	**+0.2**
	8.6nm,0.4s						
WRAB	**Tennant Creek**	**22.19**	**227**	*eP*	P	**06 45 55.4**	**-0.9**
	24nm,0.8s,mb4.7						
WB2	**Warramunga Arr**	**22.19**	**227**	⇑*i*P	P	**06 45 55.9**	**-0.5**
WRA	**Warramunga Arr**	**22.20**	**227**	P	P	**06 45 56.0**	**-0.5**
	6.5nm,0.4s,mb4.4,baz=51,slow=10,SNR=84						
WRA				S	S	**06 49 50.5**	**+0.9**
	2.9nm,0.9s,baz=47,slow=16,SNR=5.9						
WRA				ScP	ScP	06 53 11.5	+1.7
	0.7nm,0.5s,baz=50,slow=2.8,SNR=4.5						
DZM	**Mont Dzumac**	**22.41**	**141**	P	P	**06 45 58.1**	**-0.3**
	4.4nm,0.7s,mb4.0,baz=256,slow=4.2,SNR=4.8						
AS31	**Alice Springs**	**25.00**	**220**	*eP*	P	**06 46 22.3**	**+0.3**
ASAR	**Alice Springs**	**25.01**	**220**	P	P	**06 46 22.4**	**+0.4**
	14nm,0.4s,mb4.8,baz=51,slow=8.9,SNR=158						
ASAR				PcP	PcP	06 49 54.2	+1.4
	0.5nm,0.8s,baz=97,slow=2.1,SNR=4.0						
ASAR				S	S	**06 50 33.3**	**-1.2**
	0.7nm,0.7s,baz=47,slow=13,SNR=4.2						
ASAR				ScP	ScP	06 53 20.1	+2.7
	1.5nm,0.7s,baz=49,slow=2.9,SNR=13						
ASPA	**Alice Springs**	**25.01**	**220**	*eP*	P	**06 46 22.3**	**+0.2**
STKA	**Stephens Creek**	**28.23**	**198**	P	P	**06 46 51.2**	**+0.3**
	0.7nm,0.4s,mb3.8,baz=331,slow=11,SNR=3.2						
FITZ	**Fitzroy Crossi**	**28.26**	**240**	*eP*	P	**06 46 51.0**	**-0.2**
	1.6nm,0.4s,mb4.1						
FITZ	**Fitzroy Crossi**	**28.26**	**240**	P	P	**06 46 51.2**	**0.0**
	1.4nm,0.7s,mb3.8,baz=75,slow=6.9,SNR=9.3						
SONM	**Songino Array**	**65.72**	**329**	P	P	**06 51 42.0**	**+1.4**
	1.6nm,0.5s,mb4.1,baz=146,slow=5.2,SNR=16						
VNDA	**Vanda**	**72.68**	**178**	P	P	**06 52 25.0**	**+1.6**
	0.5nm,0.8s,mb3.3,baz=350,slow=8.8,SNR=3.3						
MKAR	**Makanchi Array**	**79.51**	**319**	P	P	**06 53 02.4**	**+0.3**
	0.5nm,0.4s,mb3.5,baz=90,slow=7.6,SNR=5.8						
ZAL	**Zalesovo**	**80.51**	**327**	P	P	**06 53 06.5**	**-1.0**
	1.8nm,0.4s,mb4.0,baz=2.7,slow=9.1,SNR=4.3						
DAWY	**Dawson**	**85.59**	**24**	*eP*	P	**06 53 32.9**	**-0.6**
INK	**Inuvik**	**89.19**	**21**	*eP*	P	**06 53 49.1**	**-1.6**
	0.9nm,0.5s,mb4.0						
NVAR	**Mina Array Bea**	**93.39**	**52**	P	P	**06 54 09.7**	**-0.5**
	0.9nm,0.6s,mb4.1,baz=251,slow=5.1,SNR=9.1						
PDAR	**Pinedale Array**	**100.09**	**48**	P	Pdif	06 54 39.5	-0.9
	0.5nm,0.5s,baz=200,slow=1.9,SNR=6.7						
ARCES	**ARCESS Array B**	**106.63**	**343**	PKiKP	PKiKP	06 59 18.2	-1.1
	1.2nm,0.7s,baz=80,slow=1.4,SNR=8.4						
GERES	**GERESS Array B**	**123.45**	**328**	PKP	PKPdf	06 59 51.5	+0.2
	1.0nm,0.4s,baz=107,slow=1.4,SNR=4.8						
ROSC	**El Rosal**	**134.54**	**88**	PKP	PKPdf	07 00 13.2	+0.8
	2.0nm,0.4s,baz=96,slow=9.2,SNR=4.0						
SIV	**San Ignacio**	**141.76**	**124**	PKhKP		07 00 20.6	
	0.3nm,0.5s,baz=273,slow=11,SNR=3.7						
SIV				PKP	PKPdf	07 00 24.9	-0.8
	0.5nm,0.6s,baz=234,slow=8.7,SNR=3.1						
PCRV	**Puerto La Cruz**	**144.03**	**80**	PKhKP		07 00 27.5	
	6.0nm,0.4s,baz=286,slow=2.8,SNR=8.5						
MDT	**Midelt**	**144.36**	**324**	PKP	PKPdf	07 00 29.2	-1.0
	1.0nm,0.7s,baz=11,slow=3.4,SNR=5.3						
TORD	**Torodi Ar. Bea**	**148.95**	**287**	PKPbc	PKPbc	07 00 42.6	+0.5
	2.2nm,0.4s,baz=108,slow=2.5,SNR=43						
TORD				PKPab	PKPab	07 00 47.8	+1.2
	0.5nm,0.3s,baz=85,slow=2.4,SNR=6.6						
BDFB	**Brasilia**	**151.95**	**137**	PKPbc	PKPbc	07 00 50.2	+1.0
	1.6nm,0.4s,baz=115,slow=2.0,SNR=4.2						
BDFB				PKPab	PKPab	07 01 00.2	+1.1
	1.6nm,0.5s,baz=6.3,slow=9.0,SNR=4.2						

IDC 29 06:54:01.8±1.3, 921S×15872E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.7/13, mbtmp3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.4/19, Error ellipse: s-maj=38.0km s-min=21.5km az=173.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.23**	**100**	Pn	Pn	06 54 26.1	-0.1
	301nm,0.3s,baz=270,slow=5.8,SNR=66						
HNR				Sn	Sn	06 54 39.8	-3.8
	1µm,0.3s,baz=263,slow=19,SNR=47						
PMG	**Port Moresby**	**11.41**	**268**	LR	LR	06 59 53.8	
	comp=Z,39nm,21.6s,baz=36,slow=31						
WRA	**Warramunga Arr**	**25.86**	**243**	P	P	06 59 33.8	-1.2
	0.9nm,0.5s,baz=70,slow=9.5,SNR=3.8						
STKA	**Stephens Creek**	**27.59**	**213**	P	P	06 59 50.4	-0.2
	0.9nm,0.6s,baz=20,slow=15,SNR=2.9						
ASAR	**Alice Springs**	**27.73**	**236**	P	P	06 59 54.0	+2.1
	0.3nm,0.7s,baz=66,slow=9.2,SNR=3.5						
SONM	**Songino Array**	**73.20**	**326**	P	P	07 05 35.1	+0.6
	0.2nm,0.5s,baz=122,slow=7.2,SNR=3.9						

ISCJB ***29*** *06:57:33.4±0.6, 1079N±009×4350W±0.10, h10km, mb4.2/14, MS3.7/20, Error ellipse: s-maj=14.5km s-min=12.2km az=75.1*

IDC ***29*** *06:57:34.2±0.7, 1076N×4345W, h0km, mb4.1/12, mb1 4.2/12, mb1mx3.9/23, mbtmp4.1/12, MS3.7/20, Ms1 3.7/20, ms1mx3.6/27, Error ellipse: s-maj=21.4km s-min=15.9km az=141.0*

NEIC ***29*** *06:57:35.1±0.6, 1076N×4347W, h10km, mb4.7/3, Error ellipse: s-maj=15.1km s-min=12.6km az=135.0*

ISC 29 06:57:35.6±0.6, 1079N±009×4347W±010, h10km, n31, σ0§99/20, mb4.2/14, MS3.7/20, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz**	**20.82**	**270**	P	P	**07 02 18.4**	**+1.1**
	4.9nm,0.7s,baz=68,slow=11,SNR=3.1						
SJG	**San Juan**	**23.12**	**291**	LR	LR	07 09 47.1	
	comp=Z,148nm,20.3s,MS3.4,baz=90,slow=32						
BDFB	**Brasilia**	**26.65**	**190**	P	P	**07 03 14.6**	**+0.2**
	1.6nm,0.7s,mb3.7,baz=5.0,slow=12,SNR=2.6						
BDFB				LR	LR	07 13 13.8	
	comp=Z,216nm,18.1s,MS3.7,baz=17,slow=35						
SAML	**Samuel**	**27.74**	**226**	*eP*	P	**07 03 23.9**	**-0.3**
	17nm,0.9s,mb4.7						
ROSC	**El Rosal**	**31.12**	**261**	P	P	**07 03 55.0**	**+0.7**
	2.5nm,0.6s,mb4.2,baz=110,slow=23,SNR=3.4						
ROSC				LR	LR	07 17 11.8	
	comp=Z,276nm,18.7s,MS4.0,baz=198,slow=38						
SIV	**San Ignacio**	**31.81**	**213**	P	P	**07 04 01.0**	**+0.6**
	4.2nm,0.9s,mb4.3,baz=42,slow=9.5,SNR=13						
LPAZ	**La Paz**	**36.32**	**223**	P	P	**07 04 40.4**	**+0.9**
	6.9nm,0.9s,mb4.6,baz=30,slow=8.6,SNR=22						
LPAZ				LR	LR	07 20 16.8	
	comp=Z,93nm,18.2s,MS3.6,baz=72,slow=38						
LPAZ	**La Paz**	**36.32**	**223**	P	P	**07 04 40.4**	**+0.9**
DBIC	**Dimbokro**	**38.37**	**93**	P	P	**07 04 56.9**	**0.0**
	10nm,0.9s,mb4.6,baz=260,slow=8.6,SNR=8.1						
DBIC				LR	LR	07 17 05.6	
	comp=Z,66nm,18.8s,MS3.5,baz=259,slow=30						
DBIC	**Dimbokro**	**38.37**	**93**	*eP*	P	**07 04 56.7**	**-0.2**
	16nm,0.9s,mb4.7						
CPUP	**Villa Florida**	**39.28**	**200**	P	P	**07 05 04.9**	**+0.4**
	1.9nm,0.9s,mb3.8,baz=340,slow=12,SNR=2.5						
CPUP				LR	LR	07 22 04.9	
	comp=Z,100nm,18.7s,MS3.7,baz=126,slow=38						
TORD	**Torodi Ar. Bea**	**44.20**	**82**	P	P	**07 05 44.7**	**-0.1**
	3.4nm,0.8s,mb4.1,baz=278,slow=9.0,SNR=19						
TORD				LR	LR	07 21 22.3	
	comp=Z,75nm,19.7s,MS3.6,baz=225,slow=32						
TORD	**Torodi Ar. Bea**	**44.20**	**82**	P	P	**07 05 44.7**	**-0.1**
ESDC	**Sonseca Array**	**45.30**	**44**	LR	LR	07 20 06.2	
	comp=Z,71nm,19.5s,MS3.6,baz=160,slow=30						
SCHQ	**Schefferville**	**47.65**	**342**	P	P	**07 06 12.6**	**+0.6**
	2.6nm,0.8s,mb4.3,baz=135,slow=6.5,SNR=4.0						
SCHQ				LR	LR	07 21 46.4	
	comp=Z,84nm,18.4s,MS3.7,baz=64,slow=30						
CFAA	**Coronel Fontan**	**48.38**	**209**	P	P	**07 06 16.9**	**-0.7**
	0.3nm,0.9s,mb3.3,baz=24,slow=5.0,SNR=3.4						
KEST	**Kesra**	**53.75**	**53**	LR	LR	07 30 30.6	
	comp=Z,25nm,18.3s,MS3.3,baz=189,slow=37						
PLCA	**Paso Flores**	**57.05**	**204**	P	P	**07 07 19.6**	**-2.3**
	1.7nm,0.9s,mb4.1,baz=21,slow=5.0,SNR=3.4						
PLCA				LR	LR	07 30 57.6	
	comp=Z,126nm,19.6s,MS4.0,baz=191,slow=35						
ULM	**Lac du Bonnet**	**58.16**	**323**	P	P	**07 07 28.6**	**-1.0**
	2.1nm,0.9s,mb4.1,baz=57,slow=2.2,SNR=3.5						
ULM				LR	LR	07 27 53.0	
	comp=Z,66nm,20.1s,MS3.8,baz=16,slow=31						
GERES	**GERESS Array B**	**60.56**	**40**	LR	LR	07 32 42.2	
	comp=Z,57nm,18.5s,MS3.8,baz=294,slow=35						
NOA	**NORSAR Array B**	**63.96**	**26**	LR	LR	07 30 16.9	
	comp=Z,33nm,18.8s,MS3.5,baz=240,slow=31						
PDAR	**Pinedale Array**	**65.22**	**312**	LR	LR	07 32 26.1	
	comp=Z,80nm,20.4s,MS3.9,baz=104,slow=32						
HWUT	**Hardware Ranch**	**66.55**	**311**	*eP*	P	**07 08 25.2**	**-0.6**
	2.8nm,0.9s,mb4.3						
BGU	**Big Grassy Mou**	**67.58**	**310**	*eP*	P	**07 08 30.6**	**-1.7**
AKASG	**Malin Array Be**	**70.77**	**40**	P	P	**07 08 54.0**	**+1.9**
	0.3nm,0.2s,mb3.8,baz=263,slow=5.9,SNR=4.4						
AKASG				LR	LR	07 38 27.3	
	comp=Z,24nm,18.3s,MS3.5,baz=260,slow=35						
AKASG	**Malin Array Be**	**70.77**	**40**	P	P	**07 08 54.0**	**+1.9**
FINES	**FINESS Array B**	**70.84**	**28**	LR	LR	07 36 24.1	
	comp=Z,37nm,18.7s,MS3.7,baz=278,slow=33						
YKA	**Yellowknife Ar**	**71.80**	**332**	LR	LR	07 37 33.6	
	comp=Z,71nm,18.6s,MS4.0,baz=90,slow=33						
ARCES	**ARCESS Array B**	**72.65**	**20**	LR	LR	07 35 08.0	
	comp=Z,40nm,18.4s,MS3.7,baz=307,slow=31						
BRTR	**Keskin Array B**	**73.29**	**52**	LR	LR	07 39 03.5	
	comp=Z,19nm,19.1s,MS3.4,baz=90,slow=34						
ASAR	**Alice Springs**	**166.96**	**169**	PKPab	PKPab	07 18 46.5	+1.4
	0.5nm,0.8s,baz=191,slow=3.1,SNR=4.4						

ISCJB ***29*** *07:31:21.1±0.5, 3052S±004×1794W±0.1, h320km±6km, mb3.7/12, Error ellipse: s-maj=15.7km s-min=5.5km az=36.0*

NEIC ***29*** *07:31:22.0±0.8, 3060S×17902W, h335km±9km, mb3.9/8, Error ellipse: s-maj=19.2km s-min=9.7km az=109.0*

IDC ***29*** *07:31:23.7±1.2, 3012S×17920W, h340km±11km, mb3.5/7, mb1 3.7/8, mb1mx3.6/13, mbtmp4.3/8, Error ellipse: s-maj=18.3km s-min=13.3km az=146.0*

ISC 29 07:31:23.7±0.7, 3069S±005×1793W±01, h328km±8km, n65, σ1§42/76, mb3.7/12, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.89**	**41**	P	Pn	**07 32 10.0**	**-2.3**
	86nm,0.3s,baz=70,slow=21,SNR=11						
RAO				S	S	**07 32 42.6**	**-8.5**
	386nm,0.3s,baz=69,slow=21,SNR=18						
RAO	**Raoul Island**	**1.89**	**41**	P	Pn	**07 32 10.0**	**-2.3**
RAO				S	S	**07 32 42.6**	**-8.5**
MXZ	**Matakaoa Point**	**7.13**	**195**	*eP*	Pn	**07 33 08.7**	**+1.6**
MXZ				S	S	**07 34 31.3**	**+0.3**
MXZ	**Matakaoa Point**	**7.13**	**195**	PN	Pn	**07 33 07.3**	**+0.2**
MXZ				SN	S	**07 34 31.3**	**+0.3**
PUZ	**Puketiti**	**7.63**	**194**	*eP*	Pn	**07 33 17.4**	**+4.3**
PUZ	**Puketiti**	**7.63**	**194**	PN	Pn	**07 33 14.1**	**+1.0**
PUZ				SN	S	**07 34 41.7**	**-0.2**
MWZ	**Matawai**	**8.05**	**198**	*eP*	Pn	**07 33 18.8**	**+0.6**
MWZ	**Matawai**	**8.05**	**198**	PN	Pn	**07 33 18.8**	**+0.6**
MWZ				SN	S	**07 34 53.3**	**+2.0**
URZ	**Urewera**	**8.10**	**200**	P	Pn	**07 33 21.6**	**+2.8**
	1.7nm,0.3s,baz=301,slow=2.8,SNR=31						
URZ				S	S	**07 34 55.4**	**+3.0**
	5.1nm,0.3s,baz=104,slow=19,SNR=8.9						
URZ	**Urewera**	**8.10**	**200**	P	Pn	**07 33 19.7**	**+1.0**
URZ	**Urewera**	**8.10**	**200**	PN	Pn	**07 33 19.7**	**+1.0**
URZ				SN	S	**07 34 54.0**	**+1.7**
BKZ	**Black Stump Fm**	**9.12**	**201**	P	Pn	**07 33 33.4**	**+2.3**
BKZ	**Black Stump Fm**	**9.12**	**201**	PN	Pn	**07 33 33.4**	**+2.4**
BKZ				SN	S	**07 35 16.7**	**+1.7**
WNVZ	**Wahianoa**	**9.56**	**204**	P	Pn	**07 33 38.4**	**+2.0**
WNVZ	**Wahianoa**	**9.56**	**204**	PN	Pn	**07 33 38.4**	**+2.0**
MOVZ	**Moawhango**	**9.58**	**203**	P	Pn	**07 33 37.5**	**+0.9**
MOVZ	**Moawhango**	**9.58**	**203**	PN	Pn	**07 33 37.5**	**+0.9**
PXZ	**Pawanui**	**9.82**	**197**	PN	Pn	**07 33 40.9**	**+1.4**
PXZ				SN	S	**07 35 29.7**	**-0.9**
TSZ	**Takapari Road**	**10.10**	**201**	PN	Pn	**07 33 42.4**	**-0.5**
BFZ	**Birch Farm**	**10.59**	**199**	SN	S	**07 35 46.8**	**-1.0**
MRZ	**Mangatainoka R**	**10.77**	**201**	PN	Pn	**07 33 50.7**	**-0.3**
MRZ				SN	S	**07 35 48.0**	**-3.7**
KIW	**Kapiti Island**	**11.17**	**203**	P	Pn	**07 33 55.3**	**-0.5**
KIW	**Kapiti Island**	**11.17**	**203**	PN	Pn	**07 33 55.0**	**-0.7**
KIW				SN	S	**07 35 57.7**	**-2.9**
CAW	**Cannon Point**	**11.34**	**202**	P	Pn	**07 33 56.9**	**-0.9**
CAW	**Cannon Point**	**11.34**	**202**	PN	Pn	**07 33 56.9**	**-0.8**
MSWZ	**Moikau Station**	**11.56**	**201**	P	Pn	**07 33 59.2**	**-1.3**
MRW	**Makara Radio**	**11.57**	**203**	P	Pn	**07 34 00.3**	**-0.2**
TCW	**Tory Channel**	**11.70**	**204**	P	Pn	**07 34 02.3**	**+0.2**
TUWZ	**Tuamarina**	**12.01**	**205**	PN	Pn	**07 34 05.4**	**-0.4**
TUWZ				SN	S	**07 36 17.1**	**-2.2**
NNZ	**Nelson**	**12.04**	**207**	*eP*	Pn	**07 34 04.8**	**-1.4**
NNZ	**Nelson**	**12.04**	**207**	*e*PN	Pn	**07 34 07.2**	**+1.0**
NNZ				SN	S	**07 36 17.3**	**-2.7**
THZ	**Tophouse**	**12.69**	**207**	*eP*	Pn	**07 34 12.0**	**-2.0**
THZ	**Tophouse**	**12.69**	**207**	PN	Pn	**07 34 11.5**	**-2.5**
THZ				SN	S	**07 36 31.5**	**-3.0**
KHZ	**Kahutara**	**13.02**	**204**	*eP*	Pn	**07 34 16.1**	**-1.8**
KHZ	**Kahutara**	**13.02**	**204**	PN	Pn	**07 34 16.0**	**-1.9**
KHZ				SN	S	**07 36 37.2**	**-4.4**
DSZ	**Denniston Nort**	**13.14**	**210**	PN	Pn	**07 34 18.2**	**-1.1**
DSZ				SN	S	**07 36 40.3**	**-3.7**
RPZ	**Rata Peaks**	**15.07**	**208**	P	P	**07 34 42.1**	**+2.0**
	0.4nm,0.3s,baz=220,slow=7.3,SNR=2.8						
RPZ				S	S	**07 37 20.0**	**-3.0**
	0.7nm,0.3s,baz=131,slow=20,SNR=6.3						
DZM	**Mont Dzumac**	**15.35**	**301**	P	P	**07 34 44.3**	**+1.2**
	1.5nm,0.3s,baz=83,slow=16,SNR=12						
AFI	**Afiamalu**	**18.10**	**24**	P	P	**07 35 07.1**	**-5.7**
	4.2nm,0.3s,baz=217,slow=24,SNR=6.4						
AFI				S	S	**07 38 11.1**	**-12**
	1.6nm,0.3s,baz=231,slow=19,SNR=3.5						
AFI	**Afiamalu**	**18.10**	**24**	*eP*	P	**07 35 08.0**	**-4.8**
	32nm,0.8s						
AFI				*e*S	S	**07 38 11.6**	**-11**
CTA	**Charters Tower**	**32.71**	**281**	*eP*	P	**07 37 27.7**	**+1.3**
	6.4nm,0.5s,mb4.1						
CTA	**Charters Tower**	**32.71**	**281**	P	P	**07 37 27.1**	**+0.8**
	9.3nm,0.6s,mb4.2,baz=99,slow=10,SNR=19						
STKA	**Stephens Creek**	**33.28**	**258**	*eP*	P	**07 37 33.1**	**+1.8**
	3.5nm,0.8s,mb3.6						
STKA	**Stephens Creek**	**33.28**	**258**	P	P	**07 37 33.1**	**+1.8**
	3.0nm,0.6s,mb3.7,baz=94,slow=10,SNR=11						
ASAR	**Alice Springs**	**41.94**	**268**	P	P	**07 38 42.8**	**-0.4**
	1.8nm,0.8s,mb3.3,baz=106,slow=7.3,SNR=17						
ASAR				ScP	ScP	07 43 49.1	-1.0
	0.5nm,0.6s,baz=113,slow=4.2,SNR=6.1						
WB2	**Warramunga Arr**	**42.94**	**273**	*eP*	P	**07 38 50.4**	**-0.8**
WRAB	**Tennant Creek**	**42.95**	**273**	*eP*	P	**07 38 51.1**	**-0.1**
	9.6nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**42.95**	**273**	P	P	**07 38 50.7**	**-0.6**
	8.5nm,0.7s,mb4.0,baz=111,slow=7.8,SNR=34						
SBA	**Scott Base**	**47.66**	**184**	*eP*	P	**07 39 32.4**	**+4.5**
	5.1nm,0.8s,mb3.8						
VNDA	**Vanda**	**47.69**	**185**	P	P	**07 39 31.4**	**+3.2**
	0.4nm,0.7s,mb2.8,ba

1.0nm,0.7s,baz=200,slow=7.1,SNR=6.6
GERES LR LR 08 26 28.6
comp=Z,53nm,19.5s,baz=282,slow=36
ATAH Atahualpa 65.04 267 LR LR 08 24 42.4
comp=Z,136nm,21.0s,baz=92,slow=34
MLR Muntele Rosu 66.02 29 P P 07 59 15.1 +1.6
2.3nm,0.5s,baz=171,slow=10,SNR=3.5
BRTR Keskin Array B 66.16 37 P P 07 59 15.4 +1.0
0.7nm,0.7s,baz=234,slow=6.8,SNR=3.0
BRTR LR LR 08 29 59.0
comp=Z,27nm,18.6s,baz=201,slow=38
AKASG Malin Array Be 71.33 27 P P 07 59 45.4 -1.3
2.4nm,0.8s,baz=227,slow=6.7,SNR=15
GNI Garni 73.41 42 LR LR 08 32 34.0
comp=Z,35nm,18.1s,baz=294,slow=36
NOA NORSAR Array B 74.18 12 LR LR 08 30 38.9
comp=Z,17nm,19.9s,baz=215,slow=34
MAW Mawson 74.41 157 P P 08 00 05.6 +0.7
2.1nm,0.8s,baz=296,slow=8.3,SNR=5.2
MAW LR LR 08 25 50.5
comp=Z,67nm,18.8s,baz=73,slow=30
VNDA Vanda 91.64 179 LR LR 08 34 33.3
comp=Z,54nm,21.7s,baz=43,slow=30
ULM Lac du Bonnet 94.08 320 LR LR 08 36 35.0
comp=Z,42nm,18.1s,baz=261,slow=31

*ISCJB **29** 07:48:57.5±1.8,5.15S±0.10×1467E±0.1,h144km±16km, mb3.9/7,Error ellipse: s-maj=24.1km s-min=15.0km az=29.1*
*NEIC **29** 07:49:01.2±2.1,5.19S×14662E,h165km±18km,mb4.5/3, Error ellipse: s-maj=23.5km s-min=17.9km az=114.0*
*IDC **29** 07:49:02.5±2.0,5.41S×14651E,h161km±16km,mb3.7/6, mb1 3.8/8,mb1mx3.7/13,mbtmp4.1/8,Error ellipse: s-maj=24.3km s-min=13.5km az=114.0*
ISC 29 07:49:02.7±1.6,54S±01×1466E±01,h166km±14km,n17, σ0§78/18,mb3.9/7,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.03**	**172**	P		**Pn**	**07 50 04.4**	**+0.7**
	1.8nm,0.3s,baz=126,slow=15,SNR=4.0							
PMG				S		**Sn**	**07 50 50.2**	**-1.1**
	7.9nm,0.3s,baz=206,slow=22,SNR=17							
KAKA	**Kakadu**	**15.77**	**242**	*e*P		**Pn**	**07 52 34.9**	**-0.9**
	5.2nm,0.4s							
WRAB	**Tennant Creek**	**18.75**	**218**	*e*P		**P**	**07 53 09.4**	**+0.5**
	11nm,0.5s							
WB2	**Warramunga Arr**	**18.76**	**218**	*e*P		**P**	**07 53 09.8**	**+0.8**
WRA	**Warramunga Arr**	**18.77**	**218**	P		**P**	**07 53 10.0**	**+1.0**
	1.5nm,0.3s,baz=43,slow=10,SNR=42							
WRA				S		**S**	**07 56 33.2**	**-0.6**
	0.1nm,0.3s,baz=42,slow=22,SNR=3.6							
AS31	**Alice Springs**	**21.92**	**213**	*e*P		**P**	**07 53 43.1**	**+0.4**
ASAR	**Alice Springs**	**21.92**	**213**	P		**P**	**07 53 43.5**	**+0.8**
	2.3nm,0.4s,mb3.9,baz=43,slow=7.8,SNR=50							
ASAR				S		**S**	**07 57 33.4**	**+0.2**
	0.4nm,0.7s,baz=32,slow=20,SNR=4.1							
FITZ	**Fitzroy Crossi**	**24.08**	**237**	*e*P		**P**	**07 54 02.0**	**-0.7**
	14nm,0.6s,mb4.7							
FITZ	**Fitzroy Crossi**	**24.08**	**237**	P		**P**	**07 54 02.4**	**-0.4**
	7.4nm,0.5s,mb4.5,baz=69,slow=10,SNR=39							
STKA	**Stephens Creek**	**26.77**	**190**	P		**P**	**07 54 27.1**	**+0.1**
	1.0nm,0.4s,mb3.8,baz=3.9,slow=9.6,SNR=6.2							
SONM	**Songino Array**	**63.68**	**331**	P		**P**	**07 59 16.0**	**-0.3**
	0.4nm,0.4s,mb3.6,baz=140,slow=6.6,SNR=4.9							
VNDA	**Vanda**	**72.55**	**177**	P		**P**	**08 00 12.2**	**+0.7**
	1.5nm,0.5s,mb4.0,baz=337,slow=6.8,SNR=16							
VNDA	**Vanda**	**72.55**	**177**	*e*P		**P**	**08 00 11.6**	**+0.1**
	1.2nm,0.5s,mb3.9							
ZAL	**Zalesovo**	**78.30**	**328**	P		**P**	**08 00 40.3**	**-4.0**
	1.4nm,0.5s,mb3.8,baz=6.5,slow=15,SNR=3.7							
MAW	**Mawson**	**82.67**	**203**	P		**P**	**08 01 06.3**	**-1.3**
	0.4nm,0.3s,mb3.6,baz=74,slow=5.2,SNR=4.1							
TORD	**Torodi Ar. Bea**	**144.57**	**285**	PKP		PKPdf	08 08 17.9	-1.5
	0.9nm,0.7s,baz=104,slow=2.8,SNR=5.3							
SIV	**San Ignacio**	**145.33**	**128**	PKPbc		PKPbc	08 08 21.7	+0.9
	2.0nm,0.6s,baz=230,slow=3.6,SNR=19							

*NNC **29** 07:54:14.6±1.5,4133N×7264E,h0km,mb4.0,mpv4.0, Error ellipse: s-maj=16.0km s-min=5.6km az=0.0*
*ISCJB **29** 07:54:15.8±0.9,4164N±008×7265E±005,h4km,mb3.2/2, Error ellipse: s-maj=11.5km s-min=5.4km az=168.2*
*IDC **29** 07:54:15.0±2.3,4155N×7286E,h0km,mb3.3/2,mb1 3.6/5, mb1mx3.4/24,mbtmp3.6/5,ML3.7/3,Error ellipse: s-maj=29.6km s-min=15.5km az=15.0*
*KNET **29** 07:54:17.8±0.3,4170N×7297E,h4km±1km,ml3.5,Error ellipse: s-maj=2.2km s-min=1.8km az=134.0*
*MOS **29** 07:54:24.1±1.8,4237N×7272E,h33km,mb4.3/2,Error ellipse: s-maj=17.7km s-min=15.7km az=102.1*
ISC 29 07:54:17.9±0.9,4174N±007×7269E±004,h4km,n30, σ1§47/44,mb3.2/2,18C-7D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.85**	**62**	P		**Pg**	**07 54 31.9**	**-2.2**
	159nm,0.1s,SNR=142							
AML				⇑S		**Sg**	**07 54 42.0**	**-3.0**
	563nm,0.3s							
EKS2	**Erkin-Say**	**1.23**	**41**	⇑P		**Pg**	**07 54 39.4**	**-1.9**
	38nm,0.1s,SNR=105							
EKS2				⇑S		**Sg**	**07 54 56.8**	**-0.4**
	235nm,0.3s							
AAK	**Ala-Archa**	**1.61**	**56**	⇑P		**Pn**	**07 54 45.8**	**-1.3**
	262nm,0.3s,SNR=117							
AAK				⇑S		**Sn**	**07 55 08.3**	**-0.1**
	127nm,0.2s							
KBK	**Karagaybulak**	**1.91**	**61**	⇑P		**Pn**	**07 54 51.1**	**-0.1**
	315nm,0.4s,SNR=130							
KBK				⇓S		**Sn**	**07 55 17.0**	**+1.2**
	477nm,0.3s							
KZA	**Kyzart**	**1.94**	**79**	P		**Pn**	**07 54 50.9**	**-0.7**
	241nm,0.2s,SNR=199							
KZA				⇓S		**Sn**	**07 55 16.4**	**-0.1**
	306nm,0.3s							
CHMS	**Chumysh**	**1.98**	**50**	⇑P		**Pn**	**07 54 52.7**	**+0.5**
	218nm,0.3s,SNR=131							
CHMS				⇑S		**Sn**	**07 55 19.4**	**+2.0**
	215nm,0.3s							
USP	**Ospenovka**	**2.03**	**41**	P		**Pn**	**07 54 53.8**	**+0.9**
	333nm,0.2s,SNR=449							
USP				⇑S		**Sn**	**07 55 21.5**	**+2.8**
	384nm,0.3s							
KK31	**Karatay Array**	**2.11**	**311**	⇑Pn		**Pn**	**07 54 55.1**	**+1.1**
	26nm,0.3s,baz=141,slow=16,SNR=1255							
KK31				Sn		**Sn**	**07 55 26.2**	**+5.5**
	126nm,0.4s,baz=136,slow=25,SNR=12							
KKAR	**Karatay Array**	**2.11**	**311**	PN		**Pn**	**07 54 55.2**	**+1.2**
KKAR				S		**Sn**	**07 55 26.2**	**+5.5**
KKAR				pmax	pmax			
	comp=Z,12nm,0.2s							
KKAR				smax				
	comp=Z,24nm,0.2s							
TKM2	**Tokmak 2**	**2.46**	**60**	⇓P		**Pn**	**07 54 59.8**	**+1.0**
	comp=Z,544nm,0.5s,SNR=384							
TKM2	**Tokmak 2**	**2.46**	**60**	⇑Pn		**Pn**	**07 54 59.7**	**+0.9**
	comp=Z,22nm,0.5s							
TKM2				⇓Sn		**Sn**	**07 55 34.3**	**+5.1**
	comp=Z,25nm,0.6s							
TKM2	**Tokmak 2**	**2.46**	**60**	PN		**Pn**	**07 55 00.5**	**+1.7**
TKM2				S		**Sn**	**07 55 34.8**	**+5.5**
TKM2				pmax	pmax			
	comp=Z,138nm,0.5s							
TKM2				smax				
	comp=Z,134nm,0.6s							
ULHL	**Ulahol**	**2.70**	**78**	⇑P		**Pn**	**07 55 02.3**	**+0.3**
	comp=Z,132nm,0.4s,SNR=206							
KNDC	**Almaty**	**3.49**	**64**	⇑Pn		**Pn**	**07 55 14.6**	**+1.6**
	comp=Z,87nm,0.7s							
MK02	**Makanchi Array**	**8.54**	**51**	⇓Pn		**Pn**	**07 56 22.6**	**+0.3**
	comp=Z,1.6nm,0.6s							
MK02				⇑Sn		**Sn**	**07 58 04.2**	**+5.1**
	comp=Z,4.0nm,0.8s							
MK02				⇑Lg			07 58 54.5	
	comp=Z,9.7nm,0.8s							
MK31	**Makanchi Array**	**8.54**	**51**	P		**Pn**	**07 56 22.5**	**+0.2**
MK31				pmax	pmax			
	comp=Z,1.0nm,0.4s							
MK31				pmax	pmax			
	comp=Z,11nm,0.9s							
MKAR	**Makanchi Array**	**8.54**	**51**	Pn		**Pn**	**07 56 20.6**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=235,slow=13,SNR=7.0							
MKAR				Lg			07 58 49.5	
	comp=Z,0.8nm,0.3s,baz=236,slow=28,SNR=6.0							
VOSK	**Vostochnaya**	**11.05**	**355**	⇓Pn		**Pn**	**07 56 58.7**	**+2.0**
	comp=Z,1.6nm,0.8s							
BVAR	**Borovoye Array**	**11.40**	**353**	Pn		**Pn**	**07 56 59.8**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=164,slow=12,SNR=10							
BVAR				Sn		**Sn**	**07 59 07.3**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=160,slow=22,SNR=5.1							
BVAR	**Borovoye Array**	**11.40**	**353**	P		**Pn**	**07 56 59.8**	**-1.7**
BVAR							07 59 07.3	
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BVAR				smax				
	comp=N,1.0nm,0.3s							
ZRNK	**Zerenda**	**11.49**	**349**	⇑Pn		**Pn**	**07 57 04.9**	**+2.2**
	comp=N,2.5nm,0.7s							
AB31	**Akbulak array**	**11.67**	**314**	⇓P		**Pn**	**07 57 04.0**	**-1.3**
	comp=N,3.8nm,0.4s							
AB31	**Akbulak array**	**11.67**	**314**	P		**Pn**	**07 57 03.4**	**-1.8**
AB31				pmax	pmax			
	comp=Z,2.0nm,0.4s							
CHKZ	**Chkalovo**	**12.02**	**354**	⇑Pn		**Pn**	**07 57 11.7**	**+1.6**
	comp=Z,0.7nm,0.5s							
AKTO	**Aktyubinsk**	**13.37**	**316**	⇑P		**Pn**	**07 57 26.9**	**-1.5**
	comp=Z,0.1nm,0.8s							
AKTO	**Aktyubinsk**	**13.37**	**316**	Pn		**Pn**	**07 57 26.9**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=128,slow=14,SNR=20							
AKTO				Sn		**Sn**	**07 59 55.9**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=127,slow=23,SNR=3.6							
AKTO	**Aktyubinsk**	**13.37**	**316**	P		**Pn**	**07 57 26.9**	**-1.5**
AKTO							07 59 55.9	
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.3s							
SONM	**Songino Array**	**24.55**	**64**	P		**P**	**07 59 36.1**	**-2.6**
	comp=Z,0.1nm,0.4s,mb2.7,baz=272,slow=10.0,SNR=3.1							
ARCES	**ARCESS Array B**	**36.89**	**335**	P		**P**	**08 01 28.2**	**+0.6**
	comp=Z,1.1nm,0.7s,mb3.8,baz=106,slow=7.7,SNR=5.9							
ARCES	**ARCESS Array B**	**36.89**	**335**	P		**P**	**08 01 28.2**	**+0.6**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.7s							

IDC 29 08:05:05.3±2.5,1179S×1242W,h0km,mb3.7/7, mb1 3.7/7,mb1mx3.6/22,mbtmp3.7/7,MS3.4/6,Ms1 3.4/6, ms1mx3.1/23,Error ellipse: s-maj=127.0km s-min=20.0km az=141.0,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**19.82**	**23**	LR	LR		08 15 49.4	
	comp=Z,32nm,18.4s,baz=312,slow=32							
TORD	**Torodi Ar. Bea**	**28.45**	**30**	P	P		08 11 01.2	-0.7
	1.5nm,0.9s,baz=215,slow=8.7,SNR=4.7							
TORD				LR	LR		08 20 36.5	
	comp=Z,38nm,19.8s,baz=145,slow=33							
BDFB	**Brasilia**	**34.77**	**260**	LR	LR		08 23 22.6	
	comp=Z,107nm,19.3s,baz=200,slow=32							
BOSA	**Boshof**	**38.91**	**121**	LR	LR		08 26 18.0	
	comp=Z,100nm,19.4s,baz=106,slow=33							
CPUP	**Villa Florida**	**44.61**	**244**	LR	LR		08 29 16.9	
	comp=Z,82nm,20.3s,baz=3.5,slow=32							
SIV	**San Ignacio**	**47.34**	**259**	P	P		08 13 40.8	0.0
	0.7nm,0.8s,baz=145,slow=13,SNR=3.3							
KEST	**Kesra**	**51.54**	**23**	P	P		08 14 14.9	+2.0
	1.0nm,0.9s,baz=180,slow=7.1,SNR=2.6							
LPAZ	**La Paz**	**54.10**	**258**	P	P		08 14 32.6	+0.7
	0.5nm,0.7s,baz=84,slow=10,SNR=2.9							
LPAZ				LR	LR		08 35 10.4	
	comp=Z,22nm,18.7s,baz=180,slow=33							
CFAA	**Coronel Fontan**	**54.89**	**240**	P	P		08 14 39.1	+1.6
	0.1nm,0.4s,baz=72,slow=6.4,SNR=3.5							
AKASG	**Malin Array Be**	**72.02**	**26**	P	P		08 16 30.6	-0.4
	1.5nm,0.8s,baz=225,slow=6.6,SNR=4.9							
AKTO	**Aktyubinsk**	**86.92**	**37**	P	P		08 17 51.4	-0.7
	0.4nm,0.4s,baz=248,slow=5.4,SNR=2.4							

*NIED **29** 08:10:00,4330N×14760E,h11km,Mw4.0 Best double couple: M09.85000×10^14 NP1:φs69.00000°,δ82.00000°, λ144.00000°. NP2:φs164.00000°,δ54.00000°,λ9.00000°.*
*SKHL **29** 08:10:44.9±4.3,4300N×14900E,h50km±10km,mb5.0/2*
*ISCJB **29** 08:10:54.3±1.5,4337N±008×1480E±01,h33km±10km, mb4.2/15,Error ellipse: s-maj=19.3km s-min=8.0km az=81.4*
*MOS **29** 08:10:56.7±1.2,4352N×14784E,h40km,mb4.5/11,Error ellipse: s-maj=18.6km s-min=13.0km az=129.8*
*JMA **29** 08:10:56.1±0.5,4327N×14760E,h8km,M3.9*
*NEIC **29** 08:11:00.3±2.1,4360N×14834E,h68km±20km,mb4.3/6, Error ellipse: s-maj=24.1km s-min=16.4km az=145.0*
*IDC **29** 08:11:05.6±2.9,4413N×14733E,h60km±23km,mb3.8/11, mb1 3.9/13,mb1mx3.7/24,mbtmp4.1/13,ML3.3/2,Error ellipse: s-maj=27.1km s-min=21.7km az=120.0*
ISC 29 08:10:56.2±2.4,4343N±008×1479E±01,h30km±16km,n55, σ1§06/59,mb4.2/15,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.59**	**268**	P		**Pn**	**08 11 21.2**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**1.62**	**293**	*e*P		**Pn**	**08 11 22.0**	**-0.7**
YUK				AMB	AMB		08 11 26.3	
	2μm,1.0s							
YUK				AMB	AMB		08 11 28.0	
	230nm,0.5s							
YUK				AMB	AMB		08 11 28.0	
	390nm,0.5s							
YUK				AMB	AMB		08 11 28.0	
	580nm,0.5s							
YUK				*e*S		**Sn**	**08 11 49.8**	**+7.3**
YUK				A			08 11 57.0	
	3μm,1.0s							
YUK				A			08 11 57.0	
	3μm,1.0s							
YUK				A			08 11 58.5	
	2μm,0.5s							
YUK				A			08 11 58.5	
	930nm,0.5s							
YUK				AMS	AMS		08 12 44.0	
	2μm,9.0s							
KUR	**Kuril'sk**	**1.80**	**359**	*e*P		**Pn**	**08 11 22.5**	**-2.7**
KUR				AMB	AMB		08 11 36.5	
	190nm,0.7s							
KUR				AMB	AMB		08 11 36.5	
	130nm,0.7s							
KUR				AMB	AMB		08 11 36.5	
	260nm,0.7s							
KUR				*e*S		**Sn**	**08 11 47.0**	**-0.1**
KUR				A			08 11 56.0	
	340nm,0.7s							
KUR				A			08 11 56.0	
	430nm,0.7s							
JRA	**Rausu**	**2.10**	**285**	P		**Pn**	**08 11 29.3**	**0.0**
JAK	**Akkeshi**	**2.40**	**261**	P		**Pn**	**08 11 32.5**	**-1.0**
JAK				*e*S		**Sn**	**08 12 00.4**	**-1.5**
JTKR	**Abashiri--Toko**	**2.96**	**282**	P		**Pn**	**08 11 42.0**	**+0.8**
JAR	**Ashorobuto**	**3.04**	**269**	P		**Pn**	**08 11 42.4**	**+0.2**
JOB	**Onbets**	**3.04**	**261**	P		**Pn**	**08 11 42.4**	**+0.1**
JMP	**Maruseppu**	**3.36**	**281**	P		**Pn**	**08 11 47.6**	**+0.9**
JCH	**Churui**	**3.45**	**258**	P		**Pn**	**08 11 48.0**	**+0.2**
JCH				*e*S		**Sn**	**08 12 26.7**	**-0.9**
JEM	**Erimo**	**3.79**	**250**	P		**Pn**	**08 11 52.7**	**+0.2**
ERM	**Erimo**	**3.79**	**250**	*e*Pn		**Pn**	**08 11 52.8**	**+0.2**
JFR	**Furan**	**3.90**	**268**	P		**Pn**	**08 11 55.2**	**+1.1**
ASAJ	**Asahikawa**	**3.92**	**282**	P		**Pn**	**08 11 56.5**	**+2.2**
	1.5nm,0.3s,baz=70,slow=8.9,SNR=7.7							
ASAJ	**Asahikawa**	**3.92**	**282**	PN		**Pn**	**08 11 56.6**	**+2.2**
ASAJ				pmax	pmax			
	comp=Z,2.0nm,0.3s							
JNBK	**Urakawa-nobuka**	**3.98**	**255**	P		**Pn**	**08 11 54.4**	**-0.7**
YSS	**Yuzh-Sakhalins**	**5.08**	**316**	⇓PN		**Pn**	**08 12 19.5**	**+9.2**
YSS				pmax	pmax			
	comp=Z,20nm,0.9s							
YSS				MLR	MLR			
	comp=Z,300nm,16.0s							
YSS				MLR	MLR			
	comp=N,400nm,15.0s							
YSS	**Yuzh-Sakhalins**	**5.08**	**316**	*e*Pn		**Pn**	**08 12 19.3**	**+9.0**
	comp=N,29nm,0.8s							
MJAR	**Matsushiro Arr**	**10.14**	**231**	P		**Pn**	**08 13 28.4**	**+8.6**
	comp=N,0.8nm,0.3s,baz=31,slow=13,SNR=6.1							
MJAR	**Matsushiro Arr**	**10.14**	**231**	PN		**Pn**	**08 13 28.4**	**+8.7**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
KLR	**Kul'dur**	**12.59**	**303**	*e*PN		**Pn**	**08 14 04.2**	**+11**
MA2	**Magadan**	**16.26**	**5**	*e*P		**Pn**	**08 14 41.6**	**-0.8**
MA2				pmax	pmax			
	comp=Z,8.0nm,0.8s							
MA2	**Magadan**	**16.26**	**5**	*e*P		**Pn**	**08 14 41.6**	**-0.8**
	comp=Z,8.2nm,0.8s							
ULN	**Ulaanbaatar**	**28.67**	**293**	*e*P		**P**	**08 16 51.4**	**+1.0**
ULN				*e**PP		pP	08 17 03.1	+4.0
ULN				*e*			08 20 07.0	
ULN				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.2							
ULN	**Ulaanbaatar**	**28.67**	**293**	*e*P		**P**	**08 16 51.4**	**+1.1**
	comp=Z,5.2nm,0.9s,mb4.3							
ULN				*e*pP		pP	08 17 03.0	+4.0
ULN				*e*PcP		PcP	08 20 07.0	+6.5
SONM	**Songino Array**	**29.12**	**293**	P		**P**	**08 16 55.5**	**+1.2**
	comp=Z,4.7nm,0.9s,mb4.2,baz=90,slow=8.4,SNR=24							
SONM				ScP	ScP		08 23 39.7	-1.3
	comp=Z,0.6nm,0.7s,baz=96,slow=8.8,SNR=3.6							
SONM	**Songino Array**	**29.12**	**293**	P		**P**	**08 16 55.5**	**+1.2**
SONM							08 23 39.7	
SONM				pmax	pmax			
	comp=Z,5.0nm,0.9s							
MKAR	**Makanchi Array**	**45.23**	**298**	P		**P**	**08 19 11.3**	**+0.6**
	comp=Z,7.1nm,1.1s,mb4.4,baz=74,slow=11,SNR=5.3							
MKAR	**Makanchi Array**	**45.23**	**298**	P		**P**	**08 19 11.3**	**+0.6**
MKAR				pmax	pmax			
	comp=Z,7.0nm,1.1s							
MKAR	**Makanchi Array**	**45.23**	**298**	P		**P**	**08 19 11.3**	**+0.6**
INK	**Inuvik**	**46.40**	**30**	P		**P**	**08 19 21.6**	**+1.7**
	comp=Z,1.1nm,0.5s,mb4.0,baz=325,slow=5.1,SNR=12							
INK	**Inuvik**	**46.40**	**30**	P		**P**	**08 19 21.6**	**+1.7**
INK				pmax	pmax			
	comp=Z,1.0nm,0.5s							
INK	**Inuvik**	**46.40**	**30**	*e*P		**P**	**08 19 22.9**	**+3.1**
	comp=Z,1.2nm,0.6s,mb4.0							
CHKZ	**Chkalovo**	**49.77**	**311**	*e*P		**P**	**08 19 45.7**	**-0.3**
CHKZ				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.5							
CHKZ	**Chkalovo**	**49.77**	**311**	*e*P		**P**	**08 19 45.7**	**-0.3**
	comp=Z,4.7nm,0.9s,mb4.5							
ARU	**Arti**	**54.97**	**317**	*e*P		**P**	**08 20 24.4**	**-0.1**
ARU				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6							
ARU	**Arti**	**54.97**	**317**	*e*P		**P**	**08 20 24.4**	**0.0**
	comp=Z,5.3nm,0.8s,mb4.6							
AKTK	**Aktyubinsk**	**58.17**	**311**	P		**P**	**08 20 47.5**	**+0.2**
AKTO	**Aktyubinsk**	**58.17**	**311**	P		**P**	**08 20 47.5**	**+0.2**
	comp=Z,2.1nm,0.6s,mb4.3,baz=84,slow=7.8,SNR=12							
AKTO	**Aktyubinsk**	**58.17**	**311**	P		**P**	**08 20 47.5**	**+0.2**
AKTO				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.3							
ARCES	**ARCESS Array B**	**59.74**	**340**	P		**P**	**08 20 57.9**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.2,baz=39,slow=7.8,SNR=4.8							
ARCES	**ARCESS Array B**	**59.74**	**340**	P		**P**	**08 20 57.9**	**-0.3**
ARCES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
WRA	**Warramunga Arr**	**64.28**	**194**	P		**P**	**08 21 38.5**	**+10**
	comp=Z,0.5nm,0.4s,mb3.9,baz=15,slow=6.6,SNR=5.7							
FINES	**FINESS Array B**	**65.42**	**333**	P		**P**	**08 21 35.6**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.3,baz=43,slow=7.1,SNR=20							
FINES	**FINESS Array B**	**65.42**	**333**	P		**P**	**08 21 35.7**	**-0.3**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.6s							
NB2	**NORSAR Subarra**	**70.10**	**339**	P		**P**	**08 22 05.2**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.9,baz=32,slow=6.2							
NOA	**NORSAR Array B**	**70.10**	**339**	P		**P**	**08 22 05.5**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.1,baz=32,slow=6.3,SNR=5.2							
NOA	**NORSAR Array B**	**70.10**	**339**	P		**P**	**08 22 05.5**	**-0.1**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
CCUT	**Cedar City**	**70.85**	**56**	*e*P		**P**	**08 22 07.3**	**-2.8**
AKASG	**Malin Array Be**	**72.17**	**324**	P		**P**	**08 22 17.9**	**-0.2**
	comp=Z,0.5nm,0.3s,mb3.9,baz=37,slow=6.0,SNR=7.5							
AKASG	**Malin Array Be**	**72.17**	**324**	P		**P**	**08 22 17.9**	**-0.2**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
WUAZ	**Wupatki**	**73.39**	**57**	*e*P		**P**	**08 22 22.0**	**-3.3**
	comp=Z,8.4nm,0.8s,mb4.7							
WUAZ				*e*		pP	08 22 31.6	-3.1
SCHQ	**Schefferville**	**77.73**	**20**	P		**P**	**08 22 54.4**	**+4.2**
	comp=Z,1.7nm,0.6s,mb4.1,baz=346,slow=8.3,SNR=3.0							
SCHQ	**Schefferville**	**77.73**	**20**	P		**P**	**08 22 54.4**	**+4.2**
GERES	**GERESS Array B**	**79.71**	**331**	P		**P**	**08 23 03.3**	**+2.2**
	comp=Z,0.3nm,0.2s,mb3.8,baz=33,slow=5.8,SNR=2.4							

*NIED **29** 08:20:00,4320N×14770E,h8km,Mw3.9 Best double couple: M08.04000×10^14 NP1:φs40.00000°,δ63.00000°, λ97.00000°. NP2:φs205.00000°,δ28.00000°,λ77.00000°.*
*MOS **29** 08:20:01.0±2.6,4250N×14870E,h43km,mb4.3/8,Error ellipse: s-maj=20.8km s-min=13.9km az=116.5*
*SKHL **29** 08:20:03.7±2.3,4310N×14870E,h50km±10km,mb4.9/2*
*JMA **29** 08:20:10.6±0.4,4317N×14765E,h10km,M3.6*
*ISCJB **29** 08:20:12.3±1.9,434N±0.1×1478E±02,h46km±11km, mb4.0/8,Error ellipse: s-maj=26.3km s-min=9.0km az=83.1*
*IDC **29** 08:20:19.1±4.0,4404N×14756E,h59km±44km,mb3.8/8, mb1 3.8/10,mb1mx3.6/24,mbtmp4.0/10,ML3.0/2,Error ellipse: s-maj=70.5km s-min=30.1km az=164.0*
ISC 29 08:20:13.0±2.0,434N±01×1478E±02,h38km±12km,n36, σ1§14/41,mb4.0/8,1C-1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.50**	**268**	P		**Pn**	**08 20 36.3**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**1.53**	**294**	*e*P		**Pn**	**08 20 40.0**	**+2.2**
YUK				AMB	AMB		08 20 42.0	
	2μm,1.0s							
YUK				AMB	AMB		08 20 42.0	
	350nm,0.4s							
YUK

comp=N,0.2nm,0.3s,baz=26,slow=14,SNR=4.6
PET Petropavlovsk 12.01 33 *e*PN **Pn 08 23 07.3 +5.8**
PET MLR MLR
comp=Z,100nm,13.0s
SONM Songino Array 29.03 293 P **P 08 26 10.7 +1.4**
comp=Z,3.5nm,0.9s,mb4.1,baz=89,slow=9.6,SNR=13
SONM Songino Array 29.03 293 P **P 08 26 10.7 +1.4**
SONM pmax pmax
comp=Z,4.0nm,0.9s
MKAR Makanchi Array 45.15 298 P **P 08 28 26.0 +0.2**
comp=Z,2.6nm,0.8s,mb4.1,baz=67,slow=9.3,SNR=16
MKAR Makanchi Array 45.15 298 P **P 08 28 26.0 +0.2**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 46.44 30 P **P 08 28 36.2 +0.2**
comp=Z,0.7nm,0.4s,mb3.9,baz=311,slow=8.8,SNR=9.5
INK Inuvik 46.44 30 P **P 08 28 36.2 +0.2**
INK pmax pmax
comp=Z,1.0nm,0.4s
AKTO Aktyubinsk 58.10 311 P **P 08 30 02.3 -0.2**
comp=Z,1.9nm,0.7s,mb4.2,baz=45,slow=7.9,SNR=7.6
AKTO Aktyubinsk 58.10 311 P **P 08 30 02.3 -0.2**
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
ARCES ARCESS Array B 59.71 340 P **P 08 30 12.2 -1.4**
comp=Z,1.5nm,0.8s,mb4.1,baz=44,slow=5.6,SNR=5.5
ARCES ARCESS Array B 59.71 340 P **P 08 30 12.2 -1.4**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 65.37 333 P **P 08 30 50.3 -1.1**
comp=Z,1.2nm,0.6s,mb4.1,baz=43,slow=7.6,SNR=11
FINES FINESS Array B 65.37 333 P **P 08 30 50.3 -1.1**
FINES pmax pmax
comp=Z,1.0nm,0.6s
NB2 NORSAR Subarra 70.07 339 P **P 08 31 20.7 -0.3**
comp=Z,0.8nm,0.6s,mb3.8,baz=32,slow=6.2
NOA NORSAR Array B 70.07 339 P **P 08 31 20.8 -0.2**
comp=Z,1.7nm,0.7s,mb4.1,baz=31,slow=6.5,SNR=4.7
NOA NORSAR Array B 70.07 339 P **P 08 31 20.8 -0.2**
NOA pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 72.11 324 P **P 08 31 33.0 -0.4**
comp=Z,1.0nm,0.6s,mb3.9,baz=38,slow=5.9,SNR=5.6
AKASG Malin Array Be 72.11 324 P **P 08 31 33.0 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
BURAR Bucovina Array 76.17 324⇑ *i*P **P 08 31 58.9 +1.8**

MOS ***29*** *08:30:39.0± 1.0, 1077N× 126.08E, h33km, mb5.0/10, Error ellipse: s-maj=22.9km s-min=9.7km az=111.1*
MAN ***29*** *08:30:40.1, 1082N× 126.32E, h43km, mb3.7, ML4.8, MS4.4*
BJI ***29*** *08:30:41.6, 1070N× 126.10E, h41km, mB5.0, mb4.6, Ms4.0, Msz4.4*
NEIC ***29*** *08:30:41.6± 0.3, 1074N× 126.13E, mb4.9/14, Error ellipse: s-maj=17.4km s-min=5.3km az=75.0*
ISCJB ***29*** *08:30:42.7± 0.7, 1074N± 003× 126.15E± 006, h67km± 6km, mb4.6/30, Error ellipse: s-maj=9.9km s-min=4.7km az=158.6*
IDC ***29*** *08:30:44.3± 4.9, 1071N× 126.10E, h63km± 44km, mb4.3/14, mb1 4.4/15, mb1mx4.3/20, mbtmp4.6/15, ML3.8/1, MS3.6/7, Ms1 3.6/7, ms1mx3.2/39, Error ellipse: s-maj=33.9km s-min=11.9km az=73.0*

ISC 29 08:30:43.8± 0.8, 1074N± 003× 12615E± 006, h60km± 6km, h43km± 1.6km: pP-P, n80, σ0§98/85, mb4.7/30, MS3.6/6, 5C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BESP	**Borongan**	**1.10**	**321**	*e*P		**Pn**	**08 31 01.3**	**-1.9**
BESP				*e*S		**Sn**	**08 31 18.8**	**+1.3**
SCPH	**Surigao**	**1.15**	**214**⇑	*e*P		**Pn**	**08 31 02.1**	**-1.7**
SCPH				*e*S		**Sn**	**08 31 19.0**	**+0.2**
PLP	**Palo**	**1.22**	**290**	*i* P		**Pn**	**08 31 03.5**	**-1.2**
PLP				*e*S		**Sn**	**08 31 19.9**	**-0.5**
MSLP	**Maasin**	**1.40**	**245**	*e*P		**Pn**	**08 31 06.6**	**-0.6**
MSLP				*e*S		**Sn**	**08 31 23.6**	**-1.2**
OCLP	**Ormoc**	**1.54**	**282**	*e*P		**Pn**	**08 31 09.5**	**+0.5**
OCLP				*e*S		**Sn**	**08 31 31.9**	**+3.9**
BUTP	**Butuan**	**1.84**	**196**	*e*P		**Pn**	**08 31 12.1**	**-0.9**
BUTP				*e*S		**Sn**	**08 31 36.7**	**+1.5**
LLP	**Lapu-Lapu**	**2.19**	**259**⇑	*e*P		**Pn**	**08 31 17.9**	**+0.1**
LLP				*e*S		**Sn**	**08 31 42.4**	**-1.3**
TBP	**Tagbilaran**	**2.48**	**245**	*e*P		**Pn**	**08 31 22.6**	**+0.8**
TBP				*e*S		**Sn**	**08 31 50.2**	**-0.7**
CGP	**Cagayan de Oro**	**2.69**	**212**⇓	*i*P		**Pn**	**08 31 24.4**	**-0.3**
CGP				*i* S		**Sn**	**08 31 57.7**	**+1.7**
MMPH	**Masbate**	**2.95**	**303**	*e*P		**Pn**	**08 31 30.0**	**+1.8**
BUKP	**Musuan**	**3.04**	**201**	*e*P		**Pn**	**08 31 29.6**	**+0.1**
BUKP				*e*S		**Sn**	**08 31 59.6**	**-5.0**
SNPH	**Sibulan**	**3.19**	**244**⇓	*e*P		**Pn**	**08 31 31.5**	**+0.1**
RCP	**Roxas**	**3.44**	**284**⇓	*e*P		**Pn**	**08 31 35.6**	**+0.8**
PVCP	**Virac**	**3.44**	**326**⇑	*e*P		**Pn**	**08 31 32.5**	**-2.4**
PVCP	**Virac**	**3.44**	**326**	*e*P		**Pn**	**08 31 32.7**	**-2.2**
DCPH	**Dipolog City**	**3.49**	**232**⇑	*e*P		**Pn**	**08 31 35.5**	**-0.2**
GUIM	**Jordan**	**3.50**	**268**	*e*P		**Pn**	**08 31 36.3**	**+0.6**
GUIM				*e*S		**Sn**	**08 32 18.6**	**+2.7**
PAGZ	**Pagadian**	**3.96**	**224**	*e*P		**Pn**	**08 31 41.6**	**-0.5**
OTRP	**Odiongan**	**4.35**	**292**	*e*P		**Pn**	**08 31 47.7**	**+0.3**
LUBP	**Lubang**	**6.49**	**298**	*e*P		**Pn**	**08 32 16.9**	**+0.2**
JOW	**Kunigami**	**16.13**	**7**	P		**Pn**	**08 34 28.9**	**+2.3**
	0.6nm,0.3s,baz=105,slow=25,SNR=3.3							
KSM	**Kuching**	**18.23**	**241**	*e*P		**Pn**	**08 34 57.6**	**+5.1**
GUMO	**Guam**	**18.52**	**79**	LR		LR	08 40 41.3	
	comp=Z,119nm,18.2s,baz=256,slow=32							
WHN	**Wuhan**	**22.55**	**333**	*e*P		**P**	**08 35 41.3**	**+2.6**
KAKA	**Kakadu**	**24.12**	**165**	*e*P		**P**	**08 35 53.5**	**-0.5**
	49nm,0.5s,mb5.2							
JHJ	**Hachijo jima 2**	**25.56**	**27**	LR		LR	08 45 38.4	
	comp=Z,117nm,20.3s,MS3.4,baz=272,slow=35							
MJAR	**Matsushiro Arr**	**27.91**	**21**	LR		LR	08 46 55.6	
	comp=Z,201nm,20.0s,MS3.7,baz=210,slow=35							
PSI	**Prapat**	**28.14**	**256**	P		**P**	**08 36 30.9**	**+0.7**
	3.3nm,0.7s,mb4.1,baz=115,slow=11,SNR=7.3							
FITZ	**Fitzroy Crossi**	**28.66**	**181**	*e*P		**P**	**08 36 34.3**	**-0.6**
	24nm,0.5s,mb5.2							
FITZ	**Fitzroy Crossi**	**28.66**	**181**	P		**P**	**08 36 34.8**	**-0.1**
	21nm,0.8s,mb4.9,baz=9.9,slow=7.7,SNR=50							
WRAB	**Tennant Creek**	**31.54**	**165**	*e*P		**P**	**08 37 01.0**	**+0.8**
WRAB				*e**PP		pP	08 37 12.6	-2.5
WRAB				pmax		pmax		
	comp=Z,8.0nm,0.6s,mb4.7							
WRAB	**Tennant Creek**	**31.54**	**165**	*e*P		**P**	**08 37 01.0**	**+0.7**
	comp=Z,8.0nm,0.6s,mb4.7							
WRAB				*e*pP		pP	08 37 12.6	-2.5
WRA	**Warramunga Arr**	**31.54**	**165**	P		**P**	**08 36 59.1**	**-1.2**
	comp=Z,6.7nm,0.6s,mb4.7,baz=343,slow=9.4,SNR=59							
WRA				PcP		PcP	08 39 52.5	+0.7
	comp=Z,1.3nm,0.6s,baz=340,slow=3.0,SNR=5.4							
WB2	**Warramunga Ar**	**31.54**	**165**	*e*P		**P**	**08 36 58.5**	**-1.8**
MBWA	**Marble Bar**	**32.32**	**191**	*e*P		**P**	**08 37 06.5**	**-0.7**
	comp=Z,15nm,0.5s,mb5.1							
AS31	**Alice Springs**	**35.03**	**168**	*e*P		**P**	**08 37 32.1**	**+1.5**
ASAR	**Alice Springs**	**35.03**	**168**	P		**P**	**08 37 30.4**	**-0.3**
	comp=Z,10nm,0.5s,mb5.0,baz=342,slow=7.0,SNR=11							
ASPA	**Alice Springs**	**35.03**	**168**	*e*P		**P**	**08 37 32.1**	**+1.4**
ULN	**Ulaanbaatar**	**40.34**	**340**	*e*P		**P**	**08 38 15.4**	**-0.1**
ULN				pmax		pmax		
	comp=Z,7.0nm,1.1s,mb4.3							
ULN	**Ulaanbaatar**	**40.34**	**340**	*e*P		**P**	**08 38 15.4**	**-0.1**
	comp=Z,6.8nm,1.1s,mb4.3							
SONM	**Songino Array**	**40.54**	**339**	P		**P**	**08 38 17.7**	**+0.6**
	comp=Z,1.4nm,0.6s,mb3.8,baz=154,slow=9.2,SNR=12							
SONM				PcP		PcP	08 40 18.5	0.0
	comp=Z,1.5nm,0.7s,baz=154,slow=3.2,SNR=5.2							
SONM				ScP		ScP	08 44 04.8	+2.1
	comp=Z,0.3nm,0.8s,baz=128,slow=2.4,SNR=3.5							
SONM				LR		LR	08 56 54.7	
	comp=Z,69nm,19.5s,MS3.5,baz=330,slow=39							
SONM	**Songino Array**	**40.54**	**339**	P		**P**	**08 38 17.7**	**+0.6**
SONM							08 40 18.5	
FORT	**Forrest**	**41.32**	**178**	*e*P		**P**	**08 38 23.6**	**0.0**
	comp=Z,70nm,0.6s,mb5.5							
KLBR	**Kellerberrin**	**42.85**	**191**	*e*P		**P**	**08 38 36.1**	**+0.1**
	comp=Z,67nm,0.5s,mb5.6							
MUN	**Mundaring**	**43.53**	**192**	*e*P		**P**	**08 38 41.6**	**+0.1**
NWAO	**Narrogin (SRO)**	**44.25**	**191**	P		**P**	**08 38 48.0**	**+0.8**
	comp=Z,102nm,0.7s,mb5.6,baz=16,slow=7.3,SNR=86							
NWAO	**Narrogin (SRO)**	**44.25**	**191**	*e*P		**P**	**08 38 48.1**	**+0.9**
NWAO				pmax		pmax		
	comp=Z,7.0nm,0.6s							
NWAO	**Narrogin (SRO)**	**44.25**	**191**	*e*P		**P**	**08 38 48.0**	**+0.8**
	comp=Z,66nm,0.6s,mb5.5							

STKA Stephens Creek 44.88 161 *e*P **P 08 38 52.5 +0.2**
comp=Z,11nm,0.6s,mb4.9
STKA Stephens Creek 44.88 161 P **P 08 38 52.6 +0.3**
comp=Z,15nm,0.6s,mb5.0,baz=336,slow=8.2,SNR=26
MK31 Makanchi Array 51.58 323 P **P 08 39 43.6 -0.3**
MK31 pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
MKAR Makanchi Array 51.58 323 P **P 08 39 44.4 +0.5**
comp=Z,7.1nm,0.6s,mb4.8,baz=116,slow=7.9,SNR=70
MKAR Makanchi Array 51.58 323 P **P 08 39 44.4 +0.5**
NVS Novosibirsk 55.43 331 *e*P **P 08 40 10.7 -1.4**
NVS pmax pmax
comp=Z,12nm,1.0s,mb4.9
NVS pmax pmax
comp=N,6.0nm,1.1s
NVS pmax pmax
comp=E,9.0nm,1.2s
KKAR Karatay Array 57.84 314 *i* P **P 08 40 29.0 -0.1**
BRVK Borovoye 61.28 325 *e*P **P 08 40 52.8 -0.1**
BRVK *e**PP pP 08 41 04.1 -4.8
BRVK pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
BRVK Borovoye 61.28 325 *e*P **P 08 40 52.8 -0.1**
comp=Z,1.3nm,0.5s,mb4.3
BRVK *e*pP pP 08 41 04.1 -4.8
CHKZ Chkalovo 61.33 326 *e*P **P 08 40 52.8 -0.4**
CHKZ *e**PP pP 08 41 04.8 -4.5
CHKZ pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
CHKZ Chkalovo 61.33 326 *e*P **P 08 40 52.8 -0.4**
comp=Z,4.0nm,1.0s,mb4.5
CHKZ *e*pP pP 08 41 04.8 -4.5
ZRNK Zerenda 61.96 325 *e*P **P 08 40 57.1 -0.4**
ZRNK pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
ZRNK Zerenda 61.96 325 *e*P **P 08 40 57.1 -0.3**
comp=Z,4.0nm,0.6s,mb4.7
AB31 Akbulak array 66.44 319 *i* P **P 08 41 26.4 -0.4**
AB31 pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
AKTO Aktyubinsk 67.88 320 LR LR 09 14 39.4
comp=Z,46nm,19.4s,MS3.7,baz=296,slow=39
ARU Arti 68.77 327 *e*P **P 08 41 40.9 -0.5**
ARU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ARU Arti 68.77 327 *e*P **P 08 41 40.9 -0.5**
comp=Z,5.4nm,0.8s,mb4.5
GNI Garni 76.61 309 LR LR 09 19 58.9
comp=Z,38nm,19.5s,MS3.7,baz=118,slow=39
CASY Casey 77.67 186 *e*P **P 08 42 33.6 -0.3**
MIR Mirnyy 80.81 193 *e*P **P 08 42 52.5 +1.5**
MIR pmax pmax
comp=Z,11nm,1.0s,mb4.7
ARCES ARCESS Array B 83.71 340 P **P 08 43 06.4 +0.2**
comp=Z,5.7nm,0.6s,mb4.9,baz=82,slow=6.4,SNR=49
ARE0 ARCESS Array S 83.71 340 *e*P **P 08 43 06.0 -0.2**
ARE0 *e* 08 43 14.1
INK Inuvik 83.89 22 *e*P **P 08 43 07.8 +0.7**
INK pmax pmax
comp=Z,5.0nm,1.2s
INK Inuvik 83.89 22 *e*P **P 08 43 07.8 +0.7**
comp=Z,5.3nm,1.2s,mb4.5
BRTR Keskin Array B 85.14 309 P **P 08 43 13.0 -0.4**
comp=Z,1.7nm,0.7s,mb4.3,baz=112,slow=3.3,SNR=5.2
FINES FINESS Array B 85.42 332 P **P 08 43 14.6 -0.2**
comp=Z,1.2nm,0.5s,mb4.3,baz=70,slow=4.0,SNR=16
FINES FINESS Array B 85.42 332 P **P 08 43 14.6 -0.2**
AKASG Malin Array Be 86.12 321 P **P 08 43 17.4 -0.8**
comp=Z,1.5nm,0.5s,mb4.4,baz=65,slow=4.2,SNR=6.2
MAW Mawson 90.10 200 P **P 08 43 36.7 -0.5**
comp=Z,1.7nm,0.7s,mb4.5,baz=26,slow=4.1,SNR=8.4
VNDA Vanda 90.41 173 P **P 08 43 38.9 +0.2**
comp=Z,1.1nm,0.7s,mb4.3,baz=321,slow=5.1,SNR=8.0
NOA NORSAR Array B 92.28 334 P **P 08 43 46.0 -1.4**
comp=Z,1.3nm,0.9s,mb4.3,baz=68,slow=4.7,SNR=3.0
NOA LR LR 09 31 03.6
comp=Z,34nm,20.2s,MS3.8,baz=95,slow=39
PLCA Paso Flores 146.69 157 PKPbc PKPbc 08 50 19.4 +0.5
comp=Z,4.0nm,0.7s,baz=193,slow=3.8,SNR=18

CSEM ***29*** *08:34:32.4, 3771N× 2089E, h11km, MD3.5/3, After ATH*
NEIC ***29*** *08:34:32.4, 3771N× 2089E, h11km, MD3.5(ATH), After ATH.*

ATH 29 08:34:32.4, 3771N× 2089E, h11km, MD3.5/3, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.52**	**333**	*e*PB		Pb	08 34 41.8	-1.8
VLS				*e*SB		Sg	08 34 51.0	+1.5
RLS	**Riolos of Patr**	**0.57**	**53**	*e*PB		Pb	08 34 42.5	-1.9
RLS				*e*SB		Sb	08 34 51.7	-0.9
ITM	**Ithomi**	**0.98**	**122**	*e*PN		Pn	08 34 51.5	-0.6
EVR	**Evrytania**	**1.41**	**31**	*e*PB		Pb	08 34 59.5	+0.9

KRSC 29 09:07:02, 5494N× 16369E, h42km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MKZ	**Mys Kozlova**	**1.20**	**252**	*i* P		Pn	09 07 24.0	+1.7
MKZ				*i* S		Sn	09 07 40.1	+2.7
KBTR	**Krutoberegovo**	**1.36**	**339**	*i* P		Pn	09 07 24.1	-0.4
KBTR				*i* S		Sn	09 07 40.1	-1.3
ZLN	**Zelenaya**	**1.97**	**304**	*e*P		Pn	09 07 35.7	+2.9
ZLN				*i* S		Sn	09 08 00.4	+4.2
TUMR	**Tumrok**	**2.06**	**281**	*e*P		Pn	09 07 37.5	+3.3
TUMR				*i* S		Sn	09 08 03.4	+4.7
KMNR	**Kamenistaya**	**2.13**	**294**	*i* P		Pn	09 07 38.4	+3.3
KMNR				*i* S		Sn	09 08 04.6	+4.2
BDR	**Baidarnaya**	**2.15**	**320**	*e*P		Pn	09 07 38.1	+2.7
BDR				*i* S		Sn	09 08 04.5	+3.7
KRSR	**Krestovskiy**	**2.19**	**307**	*e*P		Pn	09 07 38.2	+2.4
KRSR				*i* S		Sn	09 08 04.9	+3.2
KLY	**Klyuchi**	**2.21**	**310**	*e*P		Pn	09 07 37.2	+1.1
KLY				*i* S		Sn	09 08 03.1	+1.0
KPT	**Kopyto**	**2.23**	**299**	*e*P		Pn	09 07 39.5	+3.1
KPT				*i* S		Sn	09 08 06.5	+3.8
SRKR	**Sorokina**	**2.23**	**321**	*e*P		Pn	09 07 38.6	+2.2
SRKR				*i* S		Sn	09 08 05.7	+2.9
KOZ	**Kozyrevsk**	**2.44**	**299**	*e*P		Pn	09 07 43.1	+3.7
KOZ				*i* S		Sn	09 08 13.0	+5.0
SRDR	**Sredinnyy**	**2.64**	**303**	*e*P		Pn	09 07 45.2	+3.1
SRDR				*i* S		Sn	09 08 16.8	+3.9
SPN	**Mys Shipunski**	**2.84**	**231**	*e*P		Pn	09 07 46.3	+1.4
SPN				*i* S		Sn	09 08 18.3	+0.4
NLC	**Nalytchevo**	**3.11**	**237**	P		Pn	09 07 51.6	+3.0
NLC				*i* S		Sn	09 08 26.6	+2.1
AVH	**Avacha**	**3.36**	**242**	*e*P		Pn	09 07 55.8	+3.8
AVH				*i* S		Sn	09 08 33.6	+2.9
PET	**Petropavlovsk**	**3.54**	**239**	P		Pn	09 07 58.0	+3.6
PET				*i* S		Sn	09 08 37.2	+2.2
GNL	**Ganaly**	**3.59**	**252**	*e*P		Pn	09 07 59.2	+4.1
RUS	**Russkaya**	**3.97**	**233**	*e*P		Pn	09 08 02.8	+2.4
RUS				*i* S		Sn	09 08 46.4	+0.7
GRL	**Gorelyy**	**4.10**	**237**	*e*P		Pn	09 08 05.9	+3.7

IDC ***29*** *09:20:09.8± 1.8, 5376N× 16386W, h0km, mb4.1/14, mb1 4.2/16, mb1mx4.1/25, mbtmp4.1/16, ML3.6/2, MS3.5/7, Ms1 3.5/7, ms1mx3.2/43, Error ellipse: s-maj=46.0km s-min=17.5km az=172.0*
ISCJB ***29*** *09:20:12.9± 1.1, 536N± 01× 16375W± 007, h44km± 7km, mb4.2/19, MS3.5/6, Error ellipse: s-maj=17.9km s-min=6.2km az=151.9*
NEIC ***29*** *09:20:14.4± 0.8, 5359N× 16379W, h37km± 5km, mb4.5/7, ML3.8(AEIC), ML3.9(PMR), Error ellipse: s-maj=14.5km s-min=4.2km az=163.0*

ISC 29 09:20:14.0± 1.0, 536N± 01× 16375W± 007, h37km± 7km, n44, σ0§90/47, mb4.2/19, MS3.5/6, 1C, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AKA	**Akutan**	**1.32**	**296**	P		**Pn**	**09 20 36.4**	**+0.4**
AKA				S		**Sn**	**09 20 52.8**	**+0.4**
AKUT	**Akutan**	**1.33**	**296**	P		**Pn**	**09 20 36.0**	**0.0**
AKUT				S		**Sn**	**09 20 52.4**	**0.0**
AKLV	**Akutan Long Va**	**1.44**	**295**	P		**Pn**	**09 20 37.2**	**-0.3**
SDPT	**Sand Point**	**2.61**	**46**	P		**Pn**	**09 20 53.6**	**+0.1**
OKCD	**Okmok Cone D**	**2.61**	**269**	P		**Pn**	**09 20 54.3**	**+0.7**
OKCE	**Okmok Cone E**	**2.64**	**269**	P		**Pn**	**09 20 54.4**	**+0.3**
NIKO	**Nikolski**	**3.13**	**261**	*e*Pn		**Pn**	**09 20 60.0**	**-0.7**

NIKO *e*Pg **Pn 09 21 09.3 +8.6**
NIKO *e*Sn **Sn 09 21 35.8 -0.9**
CHGN Chignik 4.11 46 *e*P **Pn 09 21 14.5 +0.2**
KDAK Kodiak Island 7.59 52 Pn **Pn 09 21 59.5 -2.4**
2.0nm,0.3s,baz=222,slow=7.5,SNR=20
KDAK Sn **Sn 09 23 21.7 -5.0**
baz=155,slow=20,SNR=4.5
KDAK Kodiak Island 7.59 52 P **Pn 09 22 01.5 -0.4**
SVW2 Sparrevohn 8.73 27 *e*P **Pn 09 22 18.9 +1.2**
TTA Tatalina 10.22 20 *e*Pn **Pn 09 22 42.5 +4.4**
8.3nm,0.8s
EYAK Cordova Ski Ar 12.00 47 *e*Pn **Pn 09 22 59.8 -2.6**
EGAK Eagle 16.01 37 *e*P **Pn 09 23 58.5 +2.2**
DAWY Dawson 16.29 40 *e*P **Pn 09 24 03.9 +4.0**
SKAG Skagway 16.66 58 *e*P **Pn 09 24 05.0 +0.4**
DLBC Dease Lake 19.33 62 P **Pn 09 24 36.0 -1.3**
0.1nm,0.3s,baz=243,slow=11,SNR=2.7
DLBC LR LR 09 31 56.9
comp=Z,113nm,18.7s,baz=317,slow=37
DLBC Dease Lake 19.33 62 P **Pn 09 24 36.0 -1.3**
INK Inuvik 20.49 32 P **P 09 24 47.4 -1.2**
2.2nm,0.6s,baz=228,slow=13,SNR=18
INK Inuvik 20.49 32 *e*P **P 09 24 47.1 -1.4**
6.2nm,0.5s
YKA Yellowknife Ar 26.86 51 P **P 09 25 52.0 +1.0**
1.1nm,0.6s,mb3.5,baz=270,slow=8.9,SNR=5.4
YKA LR LR 09 37 29.0
comp=Z,110nm,18.5s,MS3.5,baz=270,slow=39
YKA Yellowknife Ar 26.86 51 P **P 09 25 52.0 +1.0**
YBH Yreka Blue Hor 29.66 97 LR LR 09 34 53.5
comp=Z,96nm,21.8s,MS3.4,baz=6.6,slow=30
PDAR Pinedale Array 36.87 84 P **P 09 27 19.9 +1.2**
0.4nm,0.8s,mb3.3,baz=339,slow=3.8,SNR=3.5
ULM Lac du Bonnet 40.56 66 LR LR 09 44 20.0
comp=Z,40nm,21.6s,MS3.2,baz=267,slow=36
MAJO Matsushiro 43.11 271 *e*P **P 09 28 11.2 +0.7**
5.4nm,0.8s,mb4.3
MJAR Matsushiro Arr 43.11 271 P **P 09 28 10.5 0.0**
2.1nm,0.9s,mb3.9,baz=39,slow=6.6,SNR=5.3
DAG Danmarks Havn 48.05 10⇓ *i*P **P 09 28 49.4 -0.1**
2.7nm,0.6s,mb4.5
ULN Ulaanbaatar 53.20 303 *e*P **P 09 29 28.4 +0.1**
9.1nm,0.9s,mb4.7
SONM Songino Array 53.55 303 P **P 09 29 31.4 +0.5**
3.0nm,0.6s,mb4.4,baz=39,slow=6.6,SNR=12
ARCES ARCESS Array B 57.02 356 P **P 09 29 55.1 -0.9**
1.8nm,0.9s,mb4.1,baz=354,slow=7.5,SNR=5.6
ZAL Zalesovo 58.78 320 P **P 09 30 07.2 -1.1**
1.5nm,0.4s,mb4.4,baz=193,slow=18,SNR=4.0
ZAL LR LR 09 58 53.0
comp=Z,86nm,18.6s,MS3.9,baz=272,slow=40
CHKZ Chkalovo 64.00 327 *e*P **P 09 30 43.5 -0.1**
3.1nm,0.8s,mb4.4
CHKZ *e* pP 09 30 53.7 -1.1
KAF Kangasniemi 64.39 355 *e*p **P 09 30 45.0 -1.1**
BVAR Borovoye Array 64.62 327 P **P 09 30 47.7 +0.1**
4.5nm,0.7s,mb4.6,baz=44,slow=6.4,SNR=20
BVAR LR LR 10 03 14.7
comp=Z,43nm,18.0s,MS3.7,baz=325,slow=40
ARU Arti 65.01 336 *e*P **P 09 30 49.6 -0.6**
8.5nm,1.2s,mb4.7
FINES FINESS Array B 65.06 355 P **P 09 30 49.8 -0.7**
1.8nm,0.6s,mb4.3,baz=35,slow=7.0,SNR=9.8
FINES LR LR 10 01 44.9
comp=Z,27nm,19.3s,MS3.5,baz=334,slow=38
ZRNK Zerenda 65.12 328 *e*P **P 09 30 51.2 +0.3**
3.2nm,0.5s,mb4.6
MKAR Makanchi Array 65.37 316 P **P 09 30 51.9 -0.6**
1.4nm,0.7s,mb4.1,baz=43,slow=7.3,SNR=15
NB2 NORSAR Subarra 65.67 3 P **P 09 30 54.5 +0.1**
comp=Z,3.7nm,0.9s,mb4.4,baz=357,slow=6.5
NOA NORSAR Array B 65.67 3 P **P 09 30 54.3 -0.1**
comp=Z,1.7nm,0.9s,mb4.1,baz=357,slow=7.0,SNR=3.6
AKASG Malin Array Be 75.53 352 P **P 09 31 54.1 -0.3**
comp=Z,2.7nm,0.6s,mb4.4,baz=11,slow=5.7,SNR=11
GERES GERESS Array B 77.94 2 P **P 09 32 09.1 +1.1**
comp=Z,1.0nm,0.7s,mb3.8,baz=290,slow=13,SNR=4.0
BRTR Keskin Array B 85.87 347 P **P 09 32 51.5 +1.7**
comp=Z,2.0nm,0.8s,mb4.4,baz=16,slow=2.4,SNR=4.7

ISCJB ***29*** *09:23:10.6± 0.5, 4341N± 004× 47.12E± 004, h10km, Error ellipse: s-maj=5.9km s-min=3.4km az=64.1*
MOS ***29*** *09:23:12.0± 2.4, 4310N× 4705E, h19km, mb4.7/1, Error ellipse: s-maj=8.7km s-min=6.8km az=2.6*
MOS Felt (II-III) at Kizilyurt.
CSEM ***29*** *09:23:13.2± 0.2, 4335N× 4732E, h30km, mb4.7, Error ellipse: s-maj=6.6km s-min=4.3km az=169.0*

ISC 29 09:23:11.6± 0.4, 4338N± 003× 4710E± 003, h10km, n36, σ1§22/63, 3C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MAK	**Makhachkala**	**0.52**	**145**	*i* PG		**Pg**	**09 23 22.1**	**+0.5**
MAK				*i*			09 23 29.4	
MAK				pmax		pmax		
	comp=Z,131nm,0.2s							
MAK				smax				
	comp=E,5μm,0.6s							
MAK				smax				
	comp=N,4μm,0.5s							
MAK	**Makhachkala**	**0.52**	**145**	*i* Pg		**Pg**	**09 23 22.1**	**+0.5**
	comp=N,131nm,0.2s							
MAK				*i* Sg		**Sg**	**09 23 29.4**	**+1.0**
	comp=N,4μm,0.5s							
BUJR	**Buynaksk**	**0.56**	**179**	*e*Pg		**Pg**	**09 23 13.0**	**-9.4**
MNSR	**Manas**	**0.82**	**146**	*e*PG		**Pg**	**09 23 24.0**	**-3.4**
MNSR				*e*S		**Sg**	**09 23 35.0**	**-3.0**
MNSR				pmax		pmax		
	comp=Z,352nm,0.2s							
MNSR	**Manas**	**0.82**	**146**	*e*Pg		**Pg**	**09 23 24.0**	**-3.4**
	comp=Z,352nm,0.2s							
MNSR				*e*Sg		**Sg**	**09 23 35.0**	**-3.0**
XNZR	**Khunzakh**	**0.89**	**199**	*i* PG		**Pg**	**09 23 22.5**	**-6.2**
XNZR				*i* S		**Sg**	**09 23 32.5**	**-7.8**
XNZR				pmax		pmax		
	comp=Z,181nm,0.2s							
XNZR	**Khunzakh**	**0.89**	**199**	*i* Pg		**Pg**	**09 23 22.5**	**-6.2**
	comp=Z,181nm,0.2s							
XNZR				*i* Sg		**Sg**	**09 23 32.5**	**-7.8**
BTLR	**Botlikh**	**0.96**	**222**	*i* PG		**Pg**	**09 23 22.5**	**-7.6**
BTLR				*e*S		**Sg**	**09 23 33.0**	**-10**
BTLR				pmax		pmax		
	comp=

KIV0	**Kislovodsk Arr**	**3.25**	**282**	*e*Pn	**Pn**	**09**	**24**	**03.3 +0.8**
KIV0				*e*Sn	**Sn**	**09**	**24**	**40.2 -1.0**
KIV	**Kislovodsk**	**3.25**	**282**	*e*PN	**Pn**	**09**	**24**	**03.1 +0.5**
GNI	**Garni**	**3.68**	**209**	*e*Pn	**Pn**	**09**	**24**	**08.2 -0.3**
AKTO	**Aktyubinsk**	**10.27**	**43**	⇑P	**Pn**	**09**	**25**	**41.4 +2.5**
AKTO				⇑S	**Sn**	**09**	**27**	**32.9 -1.1**
AB31	**Akbulak array**	**10.64**	**52**	P	**Pn**	**09**	**25**	**46.2 +2.2**
	comp=Z,0.8nm,0.2s,baz=241,slow=12,SNR=110							
AB31				⇑S	**Sn**	**09**	**27**	**41.4 -2.0**
	comp=Z,1.6nm,0.5s,baz=239,slow=22,SNR=5.0							
AB31	**Akbulak array**	**10.64**	**52**	P	**Pn**	**09**	**25**	**46.2 +2.1**
	comp=Z,0.8nm,0.2s,SNR=110							
AB31				S	**Sn**	**09**	**27**	**41.4 -1.9**
	comp=Z,1.6nm,0.5s,SNR=5.0							

IDC ***29*** *09:41:40.4±3.1, 2.54N×12856E, h186km±28km, mb3.7/9, mb1 3.8/9, mb1mx3.7/16, mbtmp4.2/9, Error ellipse: s-maj=42.5km s-min=11.6km az=78.0*

ISCJB ***29*** *09:41:41.9±4.7, 26N±0.1×1287E±0.2, h218km±48km, mb4.0/9, Error ellipse: s-maj=31.3km s-min=15.1km az=134.3*

NEIC ***29*** *09:41:44.3±2.9, 2.53N×12869E, h228km±28km, mb4.4/3, Error ellipse: s-maj=19.8km s-min=9.4km az=67.0*

ISC 29 09:41:45.5±4.5, 25N±0.1×1287E±0.2, h238km±46km, n18, σ0≤60/18, mb4.0/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSM	**Kuching**	**18.39**	**267**	*e*P		**P**		**09 45 43.3**	**+0.4**
FITZ	**Fitzroy Crossi**	**20.71**	**188**	*e*P		**P**		**09 46 06.5**	**-1.2**
	2.9nm,0.5s								
FITZ	**Fitzroy Crossi**	**20.71**	**188**	P		**P**		**09 46 06.5**	**-1.2**
	1.6nm,0.6s,baz=4.7,slow=12,SNR=15								
WRAB	**Tennant Creek**	**23.00**	**166**	*e*P		**P**		**09 46 29.8**	**+0.3**
	12nm,0.4s,mb4.8								
WRA	**Warramunga Arr**	**23.01**	**166**	P		**P**		**09 46 29.2**	**-0.3**
	5.9nm,0.4s,mb4.5,baz=344,slow=10,SNR=98								
WRA				S		**S**		**09 50 28.0**	**+6.2**
	0.7nm,0.9s,baz=346,slow=18,SNR=4.6								
WB2	**Warramunga Arr**	**23.01**	**166**	*e*P		**P**		**09 46 29.5**	**0.0**
AS31	**Alice Springs**	**26.52**	**169**	*e*P		**P**		**09 47 01.4**	**+0.2**
ASAR	**Alice Springs**	**26.52**	**169**	P		**P**		**09 47 01.5**	**+0.3**
	2.7nm,0.5s,mb4.1,baz=355,slow=7.8,SNR=22								
ASAR				PcP		PcP		09 50 20.6	+1.4
	1.1nm,0.4s,baz=355,slow=2.1,SNR=15								
ASPA	**Alice Springs**	**26.52**	**169**	*e*P		**P**		**09 47 01.4**	**+0.2**
MJAR	**Matsushiro Arr**	**34.98**	**13**	P		**P**		**09 48 15.3**	**+0.2**
	1.6nm,0.7s,mb3.7,baz=192,slow=7.9,SNR=5.5								
STKA	**Stephens Creek**	**36.34**	**161**	*e*P		**P**		**09 48 27.1**	**+0.4**
	3.1nm,0.3s,mb4.3								
STKA	**Stephens Creek**	**36.34**	**161**	P		**P**		**09 48 26.9**	**+0.2**
	3.6nm,0.4s,mb4.2,baz=342,slow=7.8,SNR=37								
STKA				PcP		PcP		09 50 46.8	+1.0
	1.2nm,0.8s,baz=27,slow=4.5,SNR=4.9								
MKAR	**Makanchi Array**	**59.65**	**325**	P		**P**		**09 51 25.1**	**+0.5**
	0.6nm,0.4s,mb3.5,baz=117,slow=8.4,SNR=8.0								
VNDA	**Vanda**	**82.00**	**173**	P		**P**		**09 53 39.0**	**+0.1**
	3.8nm,1.0s,mb4.0,baz=313,slow=6.5,SNR=13								
VNDA	**Vanda**	**82.00**	**173**	P		**P**		**09 53 39.0**	**+0.1**
MAW	**Mawson**	**83.31**	**201**	P		**P**		**09 53 45.7**	**+0.2**
	0.7nm,0.4s,mb3.8,baz=112,slow=4.6,SNR=4.2								
ARCES	**ARCESS Array B**	**92.24**	**340**	P		**P**		**09 54 26.9**	**-1.4**
	1.5nm,1.0s,mb3.9,baz=69,slow=6.6,SNR=6.1								
TORD	**Torodi Ar. Bea**	**125.14**	**288**	PKP		PKPdf		10 00 18.6	+1.2
	0.2nm,0.4s,baz=105,slow=1.7,SNR=4.5								

NEIC ***29*** *09:54:27.1, 32.04S×72.69W, h43km, MG3.1(GUC), After GUC.*

GUC 29 09:54:27.1±0.8, 32.04S×72.69W, h43km±3km, MD3.8, ML3.1, 4C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**1.03**	**82**	⇓*i*P			Pn	09 54 45.6	+0.6
CHNG				*i* S			Sn	09 54 59.8	+1.5
CHNG				AML			AML	09 55 00.7	
	comp=N,212nm,0.8s								
PACH	**Papudo**	**1.18**	**116**	⇑*i*P			Pn	09 54 47.6	+0.5
PACH				*i* S			Sn	09 55 02.6	+0.8
PTCH	**Petorca**	**1.51**	**99**	⇑*i*P			Pn	09 54 52.8	+1.1
PTCH				*i* S			Sn	09 55 11.9	+1.7
PTCH				AML			AML	09 55 13.1	
	comp=E,400nm,0.4s								
PTCH	**Petorca**	**1.51**	**99**	⇑*i*P			Pn	09 54 52.8	+1.1
PTCH				*i* S			Sn	09 55 11.9	+1.7
CMCH	**Combarbala**	**1.68**	**60**	*e*P			Pn	09 54 54.2	+0.2
CMCH				*i* S			Sn	09 55 15.8	+1.5
CMCH				AML			AML	09 55 18.9	
	comp=E,1μm,0.5s								
CMCH	**Combarbala**	**1.68**	**60**	*e*P			Pn	09 54 54.2	+0.2
CMCH				*i* S			Sn	09 55 15.8	+1.5
ROCH	**El Roble**	**1.70**	**124**	⇑*i*P			Pn	09 54 55.4	+1.1
JACH	**Jahuel**	**1.89**	**110**	*e*P			Pn	09 54 58.2	+1.4
JACH				*i* S			Sn	09 55 21.8	+2.3
PEL	**Peldehue**	**2.02**	**124**	*e*P			Pn	09 54 59.7	+1.0
PEL				*i* S			Sn	09 55 24.1	+1.4
PEL				AML			AML	09 55 31.4	
	comp=N,223nm,0.6s								
PEL	**Peldehue**	**2.02**	**124**	*e*P			Pn	09 54 59.7	+1.0
PEL				*i* S			Sn	09 55 24.1	+1.4
RCDM	**Rinconada Maip**	**2.15**	**133**	*e*P			Pn	09 55 02.0	+1.5
RCDM				*i* S			Sn	09 55 27.3	+1.4
RCDM				AML			AML	09 55 30.6	
	comp=N,141nm,0.3s								
RCDM	**Rinconada Maip**	**2.15**	**133**	*e*P			Pn	09 55 02.0	+1.5
RCDM				*i* S			Sn	09 55 27.3	+1.4
TACH	**Talagante**	**2.19**	**138**	*e*P			Pn	09 55 01.8	+0.9
TACH				*i* S			Sn	09 55 28.4	+1.5
CLCH	**Cerro Calan**	**2.27**	**127**	*e*P			Pn	09 55 03.4	+1.4
CLCH				*i* S			Sn	09 55 30.4	+1.6
CLCH				AML			AML	09 55 37.5	
	comp=E,138nm,0.8s								
FCH	**Farellones**	**2.40**	**123**	*e*P			Pn	09 55 05.6	+1.7
FCH				*i* S			Sn	09 55 34.9	+2.8
FCH				AML			AML	09 55 37.5	
	comp=N,46nm,0.3s								
TLL	**Tololo Astrono**	**2.47**	**42**	*e*P			Pn	09 55 06.5	+1.7
TLL				*i* S			Sn	09 55 36.0	+2.3
TLL				AML			AML	09 55 44.6	
	comp=N,165nm,0.6s								
TLL	**Tololo Astrono**	**2.47**	**42**	*e*P			Pn	09 55 06.5	+1.7
TLL				*i* S			Sn	09 55 36.0	+2.3
CHCH	**Chadas Angostu**	**2.56**	**138**	*e*P			Pn	09 55 07.1	+1.1
LCO	**Las Campanas**	**3.47**	**30**	*e*P			Pn	09 55 19.5	+0.9
LCO				*i* S			Sn	09 56 00.3	+1.9
LCO				AML			AML	09 56 02.2	
	comp=E,62nm,0.2s								
LCO	**Las Campanas**	**3.47**	**30**	*e*P			Pn	09 55 19.5	+0.9
LCO				*i* S			Sn	09 56 00.3	+1.9
LPAZ	**La Paz**	**16.22**	**16**	*e*P			Pn	09 58 15.9	+4.1

IDC ***29*** *10:01:07.1±0.8, 1073N×126.16E, h0km, mb4.4/11, mb1 4.5/11, mb1mx4.3/20, mbtmp4.4/11, MS3.2/4, Ms1 3.2/4, ms1mx2.8/39, Error ellipse: s-maj=71.8km s-min=13.5km az=73.0*

NEIC ***29*** *10:01:09.2±10.0, 1074N×126.13E, h13km±67km, mb4.8/7, Error ellipse: s-maj=35.8km s-min=8.4km az=72.0*

ISCJB ***29*** *10:01:11.8±1.1, 1080N±004×12631E±008, h50km±9km, mb4.5/16, MS3.2/3, Error ellipse: s-maj=12.7km s-min=6.1km az=162.8*

MAN ***29*** *10:01:11.8, 1077N×12631E, h46km, mb3.5, ML4.7, MS4.9*

ISC 29 10:01:12.8±1.1, 1082N±004×12632E±008, h41km±10km, n43, σ0≤87/48, mb4.5/16, MS3.2/3, 3C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.17**	**312**	*e*P			**Pn**	**10 01 32.7**	**+0.1**
SCPH	**Surigao**	**1.32**	**219**	⇑*e*P			**Pn**	**10 01 33.1**	**-1.5**
SCPH				*e*S			**Sn**	**10 01 49.8**	**-1.2**
PLP	**Palo**	**1.36**	**285**	*e*P			**Pn**	**10 01 34.9**	**-0.5**
PLP				*e*S			**Sn**	**10 01 50.8**	**-1.4**
MSLP	**Maasin**	**1.59**	**245**	*e*P			**Pn**	**10 01 37.7**	**-0.8**
OCLP	**Ormoc**	**1.70**	**278**	*e*P			**Pn**	**10 01 40.2**	**+0.3**
OCLP				*e*S			**Sn**	**10 02 03.0**	**+2.5**
BUTP	**Butuan**	**1.96**	**201**	*e*P			**Pn**	**10 01 43.2**	**-0.3**
BUTP				*e*S			**Sn**	**10 02 09.0**	**+2.1**
LLP	**Lapu-Lapu**	**2.37**	**258**	*e*P			**Pn**	**10 01 50.2**	**+1.1**
LLP				*e*S			**Sn**	**10 02 11.2**	**-5.8**
TBP	**Tagbilaran**	**2.67**	**245**	*e*P			**Pn**	**10 01 53.7**	**+0.5**
TBP				*e*S			**Sn**	**10 02 24.4**	**+0.1**
CGP	**Cagayan de Oro**	**2.84**	**215**	⇑*e*P			**Pn**	**10 01 55.4**	**-0.2**
CGP				*e*S			**Sn**	**10 02 28.9**	**+0.2**
BUKP	**Musuan**	**3.17**	**203**	*e*P			**Pn**	**10 02 00.5**	**+0.3**
BUKP				*e*S			**Sn**	**10 02 40.3**	**+3.5**
SNPH	**Sibulan**	**3.38**	**245**	*e*P			**Pn**	**10 02 03.5**	**+0.6**
PVCP	**Virac**	**3.48**	**323**	⇑*e*P			**Pn**	**10 02 03.9**	**-0.5**
PVCP	**Virac**	**3.48**	**323**	*e*P			**Pn**	**10 02 04.0**	**-0.4**
DCPH	**Dipolog City**	**3.68**	**233**	*e*P			**Pn**	**10 02 06.1**	**-0.9**
DCPH				*e*S			**Sn**	**10 02 48.7**	**-0.4**
GUIM	**Jordan**	**3.68**	**267**	*e*P			**Pn**	**10 02 07.4**	**+0.3**
PAGZ	**Pagadian**	**4.14**	**225**	*e*P			**Pn**	**10 02 13.1**	**-0.4**
OTRP	**Odiongan**	**4.49**	**290**	*e*P			**Pn**	**10 02 18.7**	**+0.5**
GUMO	**Guam**	**18.33**	**79**	LR			LR	10 10 49.9	
	comp=Z,92nm,19.9s,baz=249,slow=32								
KAKA	**Kakadu**	**24.15**	**165**	*e*P		**P**		**10 06 24.5**	**-0.4**
	26nm,0.6s,mb4.8								
FITZ	**Fitzroy Crossi**	**28.74**	**181**	*e*P		**P**		**10 07 05.6**	**-0.7**
	13nm,0.6s,mb4.8								
FITZ	**Fitzroy Crossi**	**28.74**	**181**	P		**P**		**10 07 05.5**	**-0.8**
	5.9nm,0.5s,mb4.6,baz=8.5,slow=7.3,SNR=24								
WRA	**Warramunga Arr**	**31.57**	**165**	P		**P**		**10 07 30.1**	**-1.1**
	2.5nm,0.6s,mb4.2,baz=344,slow=9.3,SNR=27								
WB2	**Warramunga Arr**	**31.57**	**165**	*e*P		**P**		**10 07 32.2**	**+0.9**
WB2				*e*P				10 07 32.3	
AS31	**Alice Springs**	**35.06**	**168**	*e*P		**P**		**10 08 03.4**	**+1.7**
ASAR	**Alice Springs**	**35.06**	**168**	P		**P**		**10 08 00.9**	**-0.8**
	4.4nm,0.5s,mb4.6,baz=349,slow=7.0,SNR=42								
ASAR				PcP		PcP		10 10 33.4	+0.6
	0.6nm,0.5s,baz=348,slow=2.9,SNR=4.1								
ASPA	**Alice Springs**	**35.06**	**168**	*e*P		**P**		**10 08 03.4**	**+1.7**
ASAJ	**Asahikawa**	**36.04**	**20**	LR		LR		10 22 56.1	
	comp=Z,28nm,19.4s,MS3.0,baz=5.3,slow=36								
SONM	**Songino Array**	**40.53**	**339**	P		**P**		**10 08 49.1**	**+1.3**
	1.1nm,0.6s,mb3.7,baz=155,slow=9.6,SNR=9.0								
SONM				PcP		PcP		10 10 51.0	+1.4
	0.6nm,0.7s,baz=132,slow=2.1,SNR=4.6								
SONM				LR		LR		10 28 03.4	
	comp=Z,27nm,18.2s,MS3.1,baz=265,slow=40								
FORT	**Forrest**	**41.39**	**178**	*e*P		**P**		**10 08 54.5**	**-0.4**
	18nm,0.5s,mb5.0								
KLBR	**Kellerberrin**	**42.96**	**191**	*e*P		**P**		**10 09 07.3**	**-0.4**
	20nm,0.4s,mb5.2								
MUN	**Mundaring**	**43.64**	**192**	*e*P		**P**		**10 09 12.5**	**-0.7**
NWAO	**Narrogin (SRO)**	**44.35**	**191**	P		**P**		**10 09 19.2**	**+0.3**
	33nm,0.7s,mb5.2,baz=13,slow=7.6,SNR=36								
STKA	**Stephens Creek**	**44.90**	**161**	*e*P		**P**		**10 09 23.4**	**+0.1**
	3.2nm,0.5s,mb4.4								
STKA	**Stephens Creek**	**44.90**	**161**	P		**P**		**10 09 23.8**	**+0.6**
	4.6nm,0.5s,mb4.5,baz=337,slow=7.6,SNR=16								
MKAR	**Makanchi Array**	**51.63**	**322**	P		**P**		**10 10 15.0**	**-0.2**
	3.4nm,0.6s,mb4.4,baz=118,slow=8.0,SNR=34								
ZAL	**Zalesovo**	**54.18**	**331**	LR		LR		10 35 21.1	
	comp=Z,27nm,19.2s,MS3.3,baz=78,slow=38								
BVAR	**Borovoye Array**	**61.25**	**325**	P		**P**		**10 11 23.8**	**+0.2**
	0.9nm,0.5s,mb4.2,baz=115,slow=9.7,SNR=5.2								
ZRNK	**Zerenda**	**62.00**	**325**	*e*P		**P**		**10 11 28.5**	**-0.2**
	2.3nm,0.6s,mb4.5								
CASY	**Casey**	**77.76**	**186**	*e*P		**P**		**10 13 05.1**	**-0.4**
	5.9nm,0.9s,mb4.5								
ARCES	**ARCESS Array B**	**83.70**	**340**	P		**P**		**10 13 37.5**	**+0.2**
	3.1nm,0.6s,mb4.6,baz=79,slow=6.2,SNR=23								
FINES	**FINESS Array B**	**85.44**	**332**	P		**P**		**10 13 45.4**	**-0.6**
	1.1nm,0.7s,mb4.1,baz=91,slow=5.1,SNR=7.5								
VNDA	**Vanda**	**90.46**	**173**	P		**P**		**10 14 09.6**	**-0.5**
	1.1nm,0.9s,mb4.2,baz=306,slow=3.9,SNR=6.2								
PLCA	**Paso Flores**	**146.68**	**156**	PKPbc		PKPbc		10 20 52.1	+2.1
	1.3nm,0.6s,baz=195,slow=17,SNR=8.6								

IDC 29 10:08:15.5±2.3, 5369N×9141E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.5/24, mbtmp3.7/6, ML3.3/3, Error ellipse: s-maj=28.1km s-min=23.8km az=76.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZAL	**Zalesovo**	**3.93**	**276**	Pn			Pn	10 09 18.0	+1.0
	4.3nm,0.3s,baz=11,slow=11,SNR=12								
ZAL				Lg				10 10 18.0	
	12nm,0.3s,baz=316,slow=7.7,SNR=5.8								
MKAR	**Makanchi Array**	**9.04**	**224**	Pn			Pn	10 10 27.6	+0.4
	0.5nm,0.3s,baz=42,slow=9.7,SNR=8.4								
MKAR				Lg				10 13 03.8	
	0.3nm,0.3s,baz=38,slow=32,SNR=7.7								
SONM	**Songino Array**	**11.14**	**116**	Lg				10 14 08.3	
	baz=304,slow=31,SNR=9.1								
BVAR	**Borovoye Array**	**12.57**	**275**	Pn			Pn	10 11 15.3	-0.3
	0.2nm,0.3s,baz=72,slow=17,SNR=3.0								
AKTO	**Aktyubinsk**	**20.68**	**275**	P			P	10 12 57.8	+0.8
	1.1nm,0.5s,baz=82,slow=14,SNR=3.1								
AKASG	**Malin Array Be**	**37.17**	**291**	P			P	10 15 27.4	-0.7
	1.4nm,0.5s,baz=55,slow=8.8,SNR=4.6								
TORD	**Torodi Ar. Bea**	**79.36**	**278**	P			P	10 20 23.0	-0.3
	0.4nm,0.5s,baz=20,slow=4.9,SNR=7.9								

IDC 29 10:31:45.5±64.0, 1603S×17575W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/12, mbtmp3.7/3, Error ellipse: s-maj=1196.0km s-min=177.8km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.77**	**240**	P			P	10 39 37.0	+0.6
	0.4nm,0.3s,baz=90,slow=11,SNR=4.3								
WRA	**Warramunga Arr**	**47.50**	**257**	P			P	10 40 22.4	+0.2
	0.2nm,0.5s,baz=95,slow=7.3,SNR=9.5								
ASAR	**Alice Springs**	**47.77**	**252**	P			P	10 40 24.6	+0.3
	2.2nm,0.6s,baz=88,slow=8.3,SNR=54								

WEL 29 10:38:34.6±0.3, 3500S×17812E, h33km, ML3.5/3, Error ellipse: s-maj=4.7km s-min=1.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.56**	**177**	P*			Pb	10 39 13.7	-6.1
MXZ				S*			Sb	10 39 43.0	-7.9
PUZ	**Puketiti**	**3.07**	**178**	PN			Pn	10 39 19.6	-1.1
PUZ				SN			Sn	10 39 53.5	-2.8
URZ	**Urewera**	**3.35**	**194**	P*			Pb	10 39 24.6	-8.7
MWZ	**Matawai**	**3.36**	**188**	P*			Pb	10 39 24.8	-8.7
MWZ				S*			Sb	10 40 03.0	-11

NEIC ***29*** *10:47:19.8±1.5, 1087S×16251E, h137km±12km, mb4.2/4, Error ellipse: s-maj=17.8km s-min=13.4km az=61.0*

ISCJB ***29*** *10:47:20.0±1.4, 1094S±0.1×1624E±0.1, h151km±11km, mb4.1/10, Error ellipse: s-maj=21.2km s-min=13.5km az=119.2*

IDC ***29*** *10:47:20.4±2.2, 1093S×16246E, h140km±17km, mb3.9/9, mb1 4.0/11, mb1mx3.9/17, mbtmp4.4/11, Error ellipse: s-maj=23.6km s-min=16.1km az=80.0*

ISC 29 10:47:20.2±1.5, 1088S±010×1625E±01, h141km±11km, n23, σ0≤83/24, mb4.1/10, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.91**	**300**	P			**Pn**	**10 48 05.0**	**-1.0**
	148nm,0.3s,baz=109,slow=1.8,SNR=22								
HNR				S			**Sn**	**10 48 41.9**	**+0.6**
	85nm,0.3s,baz=85,slow=23,SNR=3.4								
DZM	**Mont Dzumac**	**11.74**	**162**	P			**Pn**	**10 50 03.3**	**+0.1**
	0.4nm,0.3s,baz=332,slow=15,SNR=8.9								
DZM				S			**Sn**	**10 52 06.3**	**-6.6**
	0.1nm,0.3s,baz=182,slow=19,SNR=2.1								
CTA	**Charters Tower**	**18.13**	**238**	⇑*i*P			**P**	**10 51 24.5**	**+3.2**
	7.6nm,0.4s								
CTA	**Charters Tower**	**18.13**	**238**	P			**P**	**10 51 24.6**	**+3.2**
	1.7nm,0.3s,baz=60,slow=12,SNR=25								
STKA	**Stephens Creek**	**28.45**	**220**	*e*P			**P**	**10 53 02.1**	**+0.4**
	5.7nm,2.0s,mb4.0								
STKA	**Stephens Creek**	**28.45**	**220**	P			**P**	**10 53 01.9**	**+0.2**
	2.7nm,0.8s,mb4.0,baz=68,slow=12,SNR=6.6								
WB2	**Warramunga Arr**	**28.56**	**248**	*e*P			**P**	**10 53 02.8**	**+0.2**
WB2	**Warramunga Arr**	**28.56**	**248**	*e*P			**P**	**10 53 02.8**	**+0.1**
WRA	**Warramunga Arr**	**28.57**	**248**	P			**P**	**10 53 03.0**	**+0.3**
	3.1nm,0.3s,mb4.5,baz=81,slow=8.9,SNR=31								
AS31	**Alice Springs**	**30.05**	**241**	*e*P			**P**	**10 53 15.7**	**-0.1**
ASAR	**Alice Springs**	**30.05**	**241**	P			**P**	**10 53 15.8**	**0.0**
	2.2nm,0.3s,mb4.3,baz=64,slow=10,SNR=70								
ASPA	**Alice Springs**	**30.06**	**241**	*e*P			**P**	**10 53 15.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**36.36**	**254**	*e*P			**P**	**10 54 10.3**	**-0.2**
	2.3nm,0.4s,mb4.2								
FITZ	**Fitzroy Crossi**	**36.36**	**254**	P			**P**	**10 54 11.2**	**+0.7**
	1.6nm,0.5s,mb4.0,baz=48,slow=10.0,SNR=8.2								
PAGZ	**Pagadian**	**43.16**	**294**	*e*P			**P**	**10 55 06.8**	**+0.1**
IPIL	**Ipil**	**43.86**	**293**	*e*P			**P**	**10 55 10.0**	**-2.3**
VNDA	**Vanda**	**66.62**	**180**	P			**P**	**10 57 55.0**	**-0.3**
	1.0nm,0.7s,mb3.8,baz=343,slow=6.2,SNR=9.6								
SONM	**Songino Array**	**76.68**	**325**	P			**P**	**10 58 56.3**	**+0.8**
	1.3nm,0.6s,mb3.8,baz=144,slow=5.5,SNR=12								
QSPA	**South Pole Qui**	**79.12**	**180**	*e*P			**P**	**10 59 08.2**	**-0.8**
	2.6nm,0.8s,mb3.9								
MAW	**Mawson**	**83.67**	**202**	P			**P**	**10 59 32.7**	**-0.2**
	2.4nm,0.7s,mb4.0,baz=88,slow=6.7,SNR=5.8								
DLBC	**Dease Lake**	**87.79**	**29**	P			**P**	**10 59 54.6**	**+1.4**
	1.0nm,0.5s,mb3.9,baz=284,slow=4.2,SNR=2.9								
MKAR	**Makanchi Array**	**91.24**	**317**	P			**P**	**11 00 08.8**	**-0.6**
	3.0nm,0.6s,mb4.5,baz=87,slow=6.3,SNR=31								
ARCES	**ARCESS Array B**	**115.36**	**345**	PKP			PKPdf	11 05 41.6	-3.3
	1.4nm,0.9s,baz=350,slow=1.3,SNR=6.5								

BJI ***29*** *10:53:03.8, 052S×125.38E, h55km, mB5.6, mb5.7, Ms5.3, Msz5.2*

IDC ***29*** *10:53:04.2±1.4, 031S×125.19E, h22km±8km, mb5.4/37, mb1 5.4/38, mb1mx5.4/39, mbtmp5.5/38, ML4.6/1, MS5.1/13, Ms1 5.1/13, ms1mx4.9/25, Error ellipse: s-maj=10.9km s-min=6.8km az=69.0*

MOS ***29*** *10:53:05.9±1.1, 0.12S×125.04E, h38km, mb6.0/70, MS5.2/43, Error ellipse: s-maj=9.4km s-min=4.8km az=115.3*

ISCJB ***29*** *10:53:06.6±0.1, 0.37S±002×125.15E±003, h58km, mb5.8/150, MS5.2/179, Error ellipse: s-maj=3.9km s-min=2.8km az=143.3*

NEIC ***29*** *10:53:06.2±0.1, 0.35S×125.12E, h36km, mb5.8/55, ME5.4, MS5.3/133, MW5.6, Error ellipse: s-maj=5.7km s-min=3.5km az=67.0, Moment Tensor Solution. s27 Moment tensor: Scale 10^17 Nm; Mrr 2.72; Mθθ 0.28; Mφφ -3.00; Mrθ 1.46; Mrφ -1.05; Mθφ 0.36; Best double couple: Ms 3.40000×10^17 NP1: φs 39.00000°, δ57.00000°, λ119.00000°. NP2: φs 173.00000°, δ43.00000°, λ53.00000°. Principal axes: T 3.4100, Plg65.0000°, Azm3.0000°; N 0.0000, Plg24.0000°, Azm202.0000°; P -3.4100, Plg8.0000°, Azm109.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

HRVD ***29*** *10:53:06.2±0.1, 038S×125.23E, h27km, MW5.8/95, Centroid moment Tensor Solution. LP body waves: s92, c192; Mantle waves: s95, c274; Half duration: 1s9 Moment tensor: Scale 10^17 Nm; Mrr 4.01±.05; Mθθ -3.88±.04; Mφφ -0.13±.05; Mrθ 3.10±.09; Mθφ -2.52±.04; Mrφ -0.13±.11; Best double couple: Mo 5.58900×10^17 NP1: φs 223.00000°, δ33.00000°, λ.56.00000°. NP2: φs 81.00000°, δ63.00000°, λ110.00000°. Principal axes: T 5.2660, Plg66.0000°, Azm28.0000°; N 0.6440, Plg18.0000°, Azm252.0000°; P -5.9130, Plg16.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 29 10:53:08.6±0.1, 038S±002×12518E±003, h60km, h60km±1.6km: pP-P, n663, σ1≤16/472, mb5.8/149, MS5.2/179, 56C-29D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAI	**Ambon**	**4.46**	**138**	P			**Pn**	**10 54 11.9**	**-1.7**
	0.0nm,0.0s								
PCI	**Palu**	**5.37**	**264**	P			**Pn**	**10 54 29.1**	**+3.1**
	0.0nm,0.0s								
SWI	**Sorong**	**6.10**	**95**	P			**Pn**	**10 54 35.0**	**-1.1**
	0.0nm,0.0s								
DAV	**Davao City (W)**	**7.41**	**3**	*e*P			**Pn**	**10 54 57.0**	**+3.0**
DAV	**Davao City (W)**	**7.41**	**3**	P			**Pn**	**10 54 56.9**	**+2.9**
	SNR=26								
DAV	**Davao City (W)**	**7.41**	**3**	*e*Pn

comp=Z,148nm,1.0s,mb5.3,baz=335,slow=11,SNR=74
WRA S **S** **11 01 44.9 -0.7**
comp=Z,36nm,1.1s,baz=337,slow=16,SNR=8.6
WRA Warramunga Arr 21.41 156 P **P**
WRA S **S** **11 01 44.9 -0.7**
WRA pmax pmax
comp=Z,148nm,1.0s
WRA smax
comp=N,36nm,1.1s
WB2 Warramunga Arr 21.42 156⇓ *i*P **P** **10 57 49.8 -1.7**
WB2 *e*S **S** **11 01 41.0 -4.7**
WB2 *e*SCS ScS 11 09 10.2 +1.4
WB2 Warramunga Arr 21.42 156 *e*P **P** **10 57 49.8 -1.7**
KGM Kluang 21.98 276 P **P** **10 57 58.9 +1.3**
KSI Kapahiang 22.80 262 P **P** **10 58 06.6 +0.4**
comp=N,177nm,1.2s,mb5.4
PMG Port Moresby 23.64 113 P **P** **10 58 13.4 -0.9**
comp=N,58nm,0.7s,mb5.1,baz=326,slow=7.1,SNR=24
PMG S **S** **11 02 26.3 +1.8**
comp=N,7.6nm,0.7s,baz=133,slow=22,SNR=2.5
PMG Port Moresby 23.64 113 *e*P **P** **10 58 14.5 +0.1**
PMG Port Moresby 23.64 113 *e*P **P** **10 58 13.5 -0.8**
comp=N,367nm,1.5s,mb5.6
PMG LR LR
comp=Z,4μm,20.0s,MS4.9
GUMO Guam 23.94 54 P **P** **10 58 15.1 -1.9**
comp=Z,148nm,0.9s,mb5.4,baz=186,slow=6.1,SNR=16
GUMO Guam 23.94 54 P **P** **10 58 15.1 -2.0**
GUMO pmax pmax
comp=Z,148nm,0.9s,mb5.4
QIZ Qiongzhong 24.47 323 P **P** **10 58 21.5 -0.4**
QIZ AP 10 58 36.0
QIZ XP sP 10 58 40.8 -2.7
QIZ S **S** **11 02 33.3 -4.6**
QIZ XS sS 11 02 56.0 -6.6
QIZ AMB AMB
comp=Z,141nm,1.6s,mb5.2
QIZ AMB AMB
comp=Z,1μm,10.1s
QIZ LR LR
comp=N,2μm,19.1s,MS4.9
QIZ LR LR
comp=E,3μm,19.7s,MS4.9
QIZ LR LR
comp=Z,5μm,25.5s
QIZ Qiongzhong 24.47 323 *e*P **P** **10 58 20.8 -1.1**
comp=Z,184nm,1.3s,mb5.3
QIZ LR LR
comp=Z,5μm,22.0s,MS5.0
IPM Ipoh 24.61 282 P **P** **10 58 23.9 +0.7**
AS31 Alice Springs 24.65 161 *e*P **P** **10 58 23.5 0.0**
AS31 *e*S **S** **11 02 43.2 +2.4**
ASAR Alice Springs 24.65 161 P **P** **10 58 23.9 +0.4**
comp=Z,140nm,1.1s,mb5.4,baz=340,slow=9.1,SNR=273
ASAR PcP PcP 11 02 01.6 +2.0
comp=Z,6.7nm,0.4s,baz=349,slow=2.1,SNR=6.2
ASAR S **S** **11 02 45.7 +4.9**
comp=Z,30nm,1.2s,baz=352,slow=25,SNR=4.9
ASAR ScP ScP 11 05 37.9 +4.6
comp=Z,11nm,1.0s,baz=344,slow=5.7,SNR=10.0
ASAR Alice Springs 24.65 161 P **P** **10 58 23.9 +0.4**
ASAR 11 02 01.6
ASAR S **S** **11 02 45.7 +4.9**
ASAR pmax pmax
comp=Z,140nm,1.1s
ASAR smax
comp=N,30nm,1.2s
ASAR Alice Springs 24.65 161 P **P** **10 58 23.9 +0.4**
ASAR PcP PcP 11 02 01.6 +2.0
ASAR S **S** **11 02 45.7 +4.9**
ASAR ScP ScP 11 05 37.9 +4.6
ASPA Alice Springs 24.65 161 *e*P **P** **10 58 23.5 0.0**
ASPA *e*S **S** **11 02 43.2 +2.4**
NACB Ninganchiao 24.65 352 *e*P **P** **10 58 23.6 +0.1**
PPI Padang Panjang 24.78 270 P **P** **10 58 23.9 -0.8**
comp=N,299nm,1.4s,mb5.6
HKC Hong Kong 24.97 335⇑ *i*P **P** **10 58 26.0 -0.4**
KULM Kulim 25.14 283 *e*P **P** **10 58 27.2 -0.7**
YHNB Yeheng 25.17 352 *e*P **P** **10 58 26.3 -1.9**
TATO Taipei 25.46 352 P **P** **10 58 31.5 +0.7**
SNR=6.2
TATO Taipei 25.46 352 *e*P **P** **10 58 31.4 +0.6**
TATO LR LR
comp=Z,9μm,22.0s,MS5.3
SNG Songkhla 25.62 287 P **P** **10 58 33.0 +0.6**
comp=Z,210nm,0.9s,mb5.7
QZH Quanzhou 25.97 346⇑ *i*P **P** **10 58 34.3 -1.2**
QZH S **S** **11 03 04.0 +2.3**
QZH AMB AMB
comp=Z,180nm,0.7s,mb5.7
QZH AMB AMB
comp=Z,170nm,5.6s
QZH LR LR
comp=N,4μm,19.0s,MS5.4
QZH LR LR
comp=E,10μm,23.0s,MS5.4
QZH LR LR
comp=Z,10μm,22.8s,MS5.3
GZH Guangzhou 26.01 334 P **P** **10 58 37.5 +1.6**
GZH LR LR
comp=N,4μm,18.0s
GZH LR LR
comp=E,4μm,25.5s
GZH LR LR
comp=Z,10μm,19.6s,MS5.3
PSI Prapat 26.43 277 P **P** **10 58 39.5 -0.2**
comp=Z,40nm,0.9s,mb5.0,baz=109,slow=6.0,SNR=27
PSI ScP ScP 11 05 43.0 +4.7
comp=Z,22nm,1.0s,baz=166,slow=4.2,SNR=8.5
JOW Kunigami 27.22 6 P **P** **10 58 47.2 +0.5**
comp=Z,385nm,0.8s,mb6.0,baz=196,slow=7.8,SNR=66
JOW ScP ScP 11 05 45.5 +4.8
comp=Z,12nm,0.9s,baz=263,slow=8.6,SNR=4.3
KKTK Khon Kaen 27.61 308⇑ P **P** **10 58 50.5 +0.2**
comp=Z,2μm,0.4s
NNT Nongplab 28.34 298 P **P** **10 58 56.5 -0.3**
CTA Charters Tower 28.45 135 *e*P **P** **10 58 59.1 +1.4**
comp=Z,34nm,1.4s,mb4.8
CTA *e*S **S** **11 03 45.7 +4.9**
CTA *e* 11 05 50.4
CTA Charters Tower 28.45 135 P **P** **10 58 59.0 +1.3**
comp=Z,19nm,1.0s,mb4.7,baz=308,slow=9.1,SNR=8.9
CTA ScP ScP 11 05 51.1 +6.7
comp=Z,15nm,0.9s,baz=280,slow=9.8,SNR=4.2
CTA Charters Tower 28.45 135 *e*P **P** **10 58 59.1 +1.4**
CTA *e*S **S** **11 03 45.7 +4.9**
CTA pmax pmax
comp=Z,34nm,1.4s
NST Nakhon Sawan 29.43 304 P **P** **10 59 06.6 +0.2**
comp=Z,88nm,1.0s,mb5.5
FORT Forrest 30.36 175 *e*P **P** **10 59 14.8 +0.2**
comp=Z,163nm,0.7s,mb5.9
FORT *e* 11 05 56.2
COCO West Island 30.47 246 *e*P **P** **10 59 10.9 -4.8**
comp=Z,161nm,0.6s,mb5.9
COCO LR LR
comp=Z,1μm,20.0s,MS4.6
SSE Sheshan 31.53 353 P **P** **10 59 26.0 +1.1**
SSE AP pP 10 59 41.0 +1.3
SSE XP sP 10 59 48.0 +1.3
SSE S **S** **11 04 30.3 +1.2**
SSE XS sS 11 04 55.0 +0.8
SSE AMB AMB
comp=Z,50nm,1.3s,mb5.2
SSE AMB AMB
comp=Z,504nm,7.8s
SSE LR LR
comp=N,3μm,16.8s,MS5.1
SSE LR LR
comp=E,1μm,16.8s,MS5.1
SSE LR LR
comp=Z,5μm,17.8s,MS5.2
KLBR Kellerberrin 31.83 192 *e*P **P** **10 59 27.6 0.0**
comp=Z,293nm,1.8s,mb5.8
CBIJ Chichi jima 31.84 30 P **P** **10 59 26.3 -1.4**
comp=Z,433nm,1.2s,mb6.1,baz=214,slow=5.4,SNR=33
CM31 Chiang Mai Arr 31.86 307 *e*P **P** **10 59 28.7 +0.8**
CM31 LR LR
comp=Z,4μm,22.0s,MS5.1
CHRT Chiangrai 32.01 310⇑ P **P** **10 59 29.0 -0.1**
comp=Z,363nm,1.3s,mb6.0
CHG Chiang Mai 32.06 308⇓ P **P** **10 59 29.8 +0.2**
comp=Z,150nm,1.0s,mb5.8
CHTO Chiang Mai 32.06 308 P **P** **10 59 30.1 +0.5**
SNR=53
CHTO Chiang Mai 32.06 308 P **P** **10 59 29.8 +0.2**
CHTO pmax pmax
comp=Z,210nm,1.1s,mb5.9
CHTO Chiang Mai 32.06 308 *e*P **P** **10 59 29.6 +0.1**
comp=Z,208nm,1.1s,mb5.9
CHTO LR LR
comp=Z,3μm,21.0s,MS4.9
GYA Guiyang 32.10 328⇑ *i*P **P** **10 59 30.0 0.0**
GYA AP pP 10 59 44.8 +0.1
GYA XP sP 10 59 52.0 +0.2
GYA PP PP 11 00 34.5 -8.8
GYA PCP PcP 11 02 20.3 +2.3
GYA S **S** **11 04 31.5 -6.5**
GYA AMB AMB
comp=Z,90nm,0.7s,mb5.7
GYA AMB AMB
comp=Z,640nm,8.4s
GYA LR LR
comp=N,3μm,22.2s,MS5.1
GYA LR LR
comp=E,3μm,19.5s,MS5.1
GYA LR LR
comp=Z,4μm,20.8s,MS5.1
WHN Wuhan 32.43 342⇑ P **P** **10 59 32.0 -0.9**
WHN S **S** **11 04 45.0 +1.9**
WHN LR LR
comp=Z,8μm,19.1s,MS5.5
MUN Mundaring 32.55 194 *e*P **P** **10 59 34.1 +0.2**
NJ2 Nanjing 32.80 350 *e*P **P** **10 59 35.8 -0.3**
NJ2 AP pP 10 59 50.8 -0.1
NJ2 S **S** **11 04 47.0 -1.9**
NJ2 XS sS 11 05 13.0 -1.1
NJ2 AMB AMB
comp=Z,40nm,0.5s,mb5.6
NJ2 AMB AMB
comp=Z,680nm,11.3s
NJ2 LR LR
comp=N,6μm,19.4s
NJ2 LR LR
comp=E,12μm,25.1s
NJ2 LR LR
comp=Z,12μm,25.0s
NWAO Narrogin (SRO) 33.23 192 P **P** **10 59 39.1 -0.7**
comp=Z,30nm,0.8s,mb5.2,baz=17,slow=8.6,SNR=15
NWAO LR LR 11 14 20.9
comp=Z,2μm,21.4s,MS4.8,baz=15,slow=38
NWAO Narrogin (SRO) 33.23 192 P **P** **10 59 39.1 -0.7**
NWAO pmax pmax
comp=Z,300nm,0.8s
NWAO MLR MLR
comp=Z,2μm,21.4s
KMI Kunming 33.38 321 P **P** **10 59 42.0 +0.9**
KMI AP pP 10 59 57.5 +1.6
KMI XP sP 11 00 04.8 +1.8
KMI PP PP 11 00 56.0 -1.5
KMI PPP 11 01 14.0
KMI PCP PcP 11 02 21.5 -0.1
KMI S **S** **11 04 59.0 +1.2**
KMI XS sS 11 05 25.5 +2.5
KMI SCP ScP 11 05 59.8 -1.0
KMI PCS PcS 11 06 06.5 -0.8
KMI SS SS 11 07 06.0 -18
KMI SSS 11 07 32.3
KMI AMB AMB
comp=Z,40nm,1.1s,mb5.3
KMI AMB AMB
comp=Z,445nm,6.2s
KMI LR LR
comp=N,3μm,19.8s,MS5.0
KMI LR LR
comp=E,2μm,20.8s,MS5.0
KMI LR LR
comp=Z,4μm,23.6s,MS5.1
ENH Enshi 33.95 335 PFAKE 11 00 00.0 +14
ENH LR LR
comp=Z,44nm,19.0s,MS3.2
STKA Stephens Creek 34.96 155 *e*P **P** **10 59 55.5 +0.7**
comp=Z,85nm,0.9s,mb5.7
STKA *i*S **S** **11 05 23.5 +1.2**
STKA Stephens Creek 34.96 155 P **P** **10 59 55.4 +0.5**
comp=Z,100nm,0.8s,mb5.8,baz=326,slow=8.1,SNR=185
STKA S **S** **11 05 24.1 +1.8**
comp=Z,28nm,1.3s,baz=235,slow=23,SNR=6.1
STKA ScP ScP 11 06 11.4 +5.0
comp=Z,10nm,0.8s,baz=333,slow=7.7,SNR=3.4
STKA Stephens Creek 34.96 155 *e*P **P** **10 59 55.6 +0.7**
HNR Honiara 35.75 106 P **P** **11 00 01.4 -0.2**
comp=Z,105nm,0.8s,mb5.8,baz=257,slow=3.9,SNR=5.6
HNR Honiara 35.75 106 P **P** **11 00 04.1 +2.5**
HNR pmax pmax
comp=Z,62nm,0.8s,mb5.6
HNR Honiara 35.75 106 P **P** **11 00 01.4 -0.2**
HNR LR LR
comp=Z,3μm,22.0s,MS5.1
ADE Adelaide 36.66 161⇑ *i*P **P** **11 00 11.2 +1.9**
TIA Tai'an 37.17 349 P **P** **11 00 11.0 -2.7**
TIA S **S** **11 05 49.0 -7.0**
TIA LR LR
comp=N,2μm,27.0s
TIA LR LR
comp=E,1μm,21.4s
CD2 Chengdu 37.18 329⇓ *i*P **P** **11 00 13.3 -0.5**
CD2 AP pP 11 00 28.5 -0.3
CD2 XP sP 11 00 35.5 -0.2
CD2 PP PP 11 01 42.0 +2.6
CD2 PCP PcP 11 02 32.3 -0.4
CD2 S **S** **11 05 56.3 +0.1**
CD2 PCS PcS 11 06 19.3 -1.8
CD2 XS sS 11 06 21.8 +0.2
CD2 SS SS 11 08 29.3 -12
CD2 SCS ScS 11 10 19.3 -3.1
CD2 AMB AMB
comp=Z,90nm,1.1s,mb5.5
CD2 AMB AMB
comp=Z,370nm,8.8s
CD2 LR LR
comp=N,3μm,21.6s
CD2 LR LR
comp=Z,2μm,24.0s,MS4.9
XAN Xi'an 37.48 338 P **P** **11 00 14.5 -1.9**
XAN PP PP 11 01 45.5 +2.7
XAN AMB AMB
comp=Z,108nm,1.3s,mb5.5
XAN AMB AMB
comp=Z,461nm,13.4s
XAN LR LR
comp=N,2μm,19.2s,MS5.1
XAN LR LR
comp=E,2μm,19.5s,MS5.1
XAN LR LR
comp=Z,5μm,20.9s,MS5.3
INCN Inchon 37.70 2 P **P** **11 00 19.2 +1.1**
SNR=14
INCN Inchon 37.70 2 *e*P **P** **11 00 19.1 +1.0**
comp=Z,160nm,1.3s,mb5.6
INCN LR LR
comp=Z,4μm,22.0s,MS5.2
MJAR Matsushiro Arr 38.67 17 P **P** **11 00 25.1 -1.3**
comp=Z,57nm,0.7s,mb5.4,baz=193,slow=7.9,SNR=99
MJAR PcP PcP 11 02 38.0 +0.7
comp=Z,13nm,1.0s,baz=203,slow=3.9,SNR=5.0
MJAR S **S** **11 06 23.2 +4.4**
comp=Z,7.3nm,1.1s,baz=212,slow=5.1,SNR=7.2
MJAR Matsushiro Arr 38.67 17 P **P** **11 00 25.1 -1.3**
MJAR 11 02 38.0
MJAR S **S** **11 06 23.2 +4.4**
MJAR pmax pmax
comp=Z,57nm,0.7s
MJAR smax
comp=N,7.0nm,1.1s
MAJO Matsushiro 38.68 17 *e*P **P** **11 00 25.2 -1.2**
comp=N,91nm,0.8s,mb5.5
MAJO LR LR
comp=Z,3μm,19.0s,MS5.1
MAT Matsushiro 38.68 17 P **P** **11 00 24.9 -1.5**
MAT S **S** **11 06 16.4 -2.4**
ARMA Armidale 39.04 142 *e*P **P** **11 00 31.0 +1.6**
DL2 Dalian 39.23 356⇑ *i*P **P** **11 00 30.0 -1.0**
DL2 AP pP 11 00 47.3 +1.2
DL2 PP PP 11 02 01.5 -0.4
DL2 S **S** **11 06 26.5 -0.6**
DL2 SS SS 11 09 12.8 -9.4
DL2 AMB AMB
comp=Z,100nm,0.8s,mb5.6
DL2 AMB AMB
comp=Z,150nm,4.0s
DL2 LR LR
comp=N,2μm,22.3s,MS4.9
DL2 LR LR
comp=E,1μm,20.6s,MS4.9
DL2 LR LR
comp=Z,3μm,24.4s,MS5.0
BJT Baijiatuau 41.04 349 *e*P **P** **11 00 46.1 +0.1**
BJT pmax pmax
comp=Z,288nm,1.4s
BJT MLR MLR
comp=Z,2μm,22.0s
BJT Baijiatuau 41.04 349 *e*P **P** **11 00 46.1 +0.1**
comp=Z,288nm,1.4s,mb5.7
BJT LR LR
comp=Z,2μm,22.0s,MS5.0
BJI Beijing 41.06 349 P **P** **11 00 44.8 -1.3**
BJI AP pP 11 01 00.3 -1.0
BJI PCP PcP 11 02 46.8 +1.9
BJI AMB AMB
comp=Z,117nm,1.4s,mb5.3
BJI AMB AMB
comp=Z,837nm,7.1s
BJI LR LR
comp=N,3μm,23.7s,MS5.1
BJI LR LR
comp=E,2μm,23.7s,MS5.1
BJI LR LR
comp=Z,5μm,28.0s,MS5.2
LZH Lanzhou 41.35 334⇑ P **P** **11 00 48.5 -0.1**
LZH AP pP 11 00 58.3 -5.5
LZH PP PP 11 02 27.5 +2.5
LZH PCP PcP 11 02 45.5 -0.4
LZH PPP 11 02 57.8
LZH SCP ScP 11 06 33.0 +2.3
LZH PCS PcS 11 06 37.5 +0.3
LZH S **S** **11 07 01.5 +2.7**
LZH SS SS 11 10 00.8 -3.7
LZH SCS ScS 11 10 47.5 +0.7
LZH AMB AMB
comp=Z,267nm,1.3s,mb5.7
LZH AMB AMB
comp=Z,813nm,6.2s
LZH LR LR
comp=N,3μm,14.2s
LZH LR LR
comp=Z,6μm,17.8s,MS5.5
CNB Canberra Magne 41.43 150 *e*P **P** **11 00 50.9 +1.7**
comp=Z,54nm,0.8s,mb5.2
TOO Toolangi 41.48 155 *e*P **P** **11 00 52.0 +2.4**
comp=Z,82nm,0.8s,mb5.4
TOO Toolangi 41.48 155 *e*P **P** **11 00 52.0 +2.4**
TOO pmax pmax
comp=Z,83nm,0.8s,mb5.4
SNY Shenyang 42.04 358⇑ P **P** **11 00 53.3 -0.9**
SNY AP pP 11 01 07.0 -2.4
SNY XP sP 11 01 15.5 -0.8
SNY PP PP 11 02 30.3 -2.0
SNY SCP ScP 11 06 30.0 -3.4
SNY PCS PcS 11 06 32.5 -7.4
SNY S **S** **11 07 11.3 +2.4**
SNY XS sS 11 07 36.8 +2.1
SNY SS SS 11 10 14.5 -3.4
SNY AMB AMB
comp=Z,145nm,1.3s,mb5.5
SNY AMB AMB
comp=Z,1μm,7.8s
SNY LR LR
comp=E,2μm,19.4s
SNY LR LR
comp=Z,3μm,22.1s,MS5.2
HHC Hu-ho-hao-te 42.86 345 *e*P **P** **11 01 01.3 +0.5**
HHC AP pP 11 01 15.0 -1.1
HHC XP sP 11 01 23.8 +0.8
HHC PP PP 11 02 42.5 +1.3
HHC PCP PcP 11 02 50.5 -0.4
HHC SCP ScP 11 06 34.0 -2.7
HHC PCS PcS 11 06 42.3 -0.9
HHC S **S** **11 07 18.3 -2.7**
HHC XS sS 11 07 47.8 +1.0
HHC SS SS 11 10 30.0 -4.1
HHC SCS ScS 11 10 54.0 -2.1
HHC AMB AMB
comp=Z,50nm,1.0s,mb5.2
HHC AMB AMB
comp=Z,655nm,7.2s
HHC LR LR
comp=N,2μm,19.4s,MS5.2
HHC LR LR
comp=E,1μm,20.8s,MS5.2
HHC LR LR
comp=Z,3μm,21.8s,MS5.2
BTO Baotou 43.06 343 *e*P **P** **11 01 02.0 -0.5**
VLA Vladivostok 43.72 7 *de*P **P** **11 01 07.0 -0.8**
VLA *e**PP pP 11 01 20.6 -2.5
VLA *e*S **S** **11 07 33.0 -0.6**
VLA *e**SS sS 11 07 54.0 -5.5
VLA *e*SS SS 11 10 33.0 -18
VLA pmax pmax
comp=Z,83nm,0.7s,mb5.6
VLA MLR MLR
comp=Z,2μm,21.6s,MS5.0
VLA Vladivostok 43.72 7 *e*P **P** **11 01 07.2 -0.6**
CN2 Changchun 43.98 0⇑ P **P** **11 01 09.0 -0.9**
CN2 *e*AP pP 11 01 24.8 -0.4
CN2 PCP PcP 11 02 54.5 -0.2
CN2 *e*S **S** **11 07 36.5 -1.0**
CN2 AMB AMB
comp=Z,60nm,1.3s,mb5.2
CN2 LR LR
comp=N,2μm,22.0s,MS5.1
CN2 LR LR
comp=E,2μm,22.0s,MS5.1
CN2 LR LR
comp=Z,2μm,24.0s,MS5.0
LSA Lhasa 44.12 316 P **P** **11 01 12.0 +1.0**
LSA AP pP 11 01 20.0 -6.3
LSA AMB AMB
comp=Z,90nm,0.7s,mb5.6
LSA LR LR
comp=N,1μm,30.8s,MS4.9
LSA LR LR
comp=E,2μm,28.2s,MS4.9
LSA LR LR
comp=Z,3μm,30.3s,MS5.1
LSA Lhasa 44.12 316 *e*P **P** **11 01 12.3 +1.3**
LSA pmax pmax
comp=Z,68nm,0.6s,mb5.5
LSA MLR MLR
comp=Z,2μm,21.0s,MS5.0
LSA Lhasa 44.12 316 *e*P **P** **11 01 12.2 +1.2**
comp=Z,68nm,0.6s,mb5.5
LSA LR LR
comp=Z,2μm,21.0s,MS5.0
VIS Vishakhapatnam 44.93 296 *e*P **P** **11 01 17.8 +0.3**
VIS *i* x x 11 08 23.5
MDJ Mudanjiang 44.97 4 P **P** **11 01 17.8 0.0**
MDJ AP pP 11 01 33.0 -0.1
MDJ XP sP 11 01 40.5 +0.5
MDJ PP PP 11 03 03.8 +0.1
MDJ SCP ScP 11 06 44.8 -0.5
MDJ PCS PcS 11 06 52.0 +0.2
MDJ S **S** **11 07 53.3 +1.5**
MDJ XS sS 11 08 18.0 +0.3
MDJ SCS ScS 11 11 09.3 -0.1
MDJ AMB AMB
comp=Z,99nm,0.9s,mb5.6
MDJ AMB AMB
comp=Z,447nm,5.8s
MDJ LR LR
comp=N,2μm,20.7s,MS5.1
MDJ LR LR
comp=E,898nm,16.6s,MS5.1
MDJ LR LR
comp=Z,3μm,24.8s
MDJ Mudanjiang 44.97 4 *e*P **P** **11 01 17.9 +0.2**
comp=Z,58nm,0.6s,mb5.6
MDJ LR LR
comp=Z,2μm,21.0s,MS5.0
PALK Pallekele 45.01 281 PFAKE 11 01 30.0 +12
PALK LR LR
comp=Z,947nm,21.0s,MS4.7
BOK Bokaro 45.07 305 *e*P **P** **11 01 18.2 -0.3**
ERM Erimo 45.22 19 PFAKE 11 01 30.0 +10
ERM LR LR
comp=Z,32μm,20.0s,MS6.3

DZM **Mont Dzumac** 45.60 121 P **P** 11 01 24.2 +1.5
comp=Z,13nm,0.7s,mb5.0,baz=288,slow=11,SNR=14
GTA **Gaotai** 45.90 332 P **P** **11 01 24.8 -0.3**
GTA AP pP 11 01 40.3 -0.2
GTA XP sP 11 01 47.5 +0.1
GTA PCP PcP 11 03 01.0 -0.3
GTA PP PP 11 03 13.0 -0.6
GTA PPP 11 03 58.8
GTA PCS PcS 11 06 54.5 -1.2
GTA S **S** **11 08 05.8 +0.6**
GTA XS sS 11 08 31.0 -0.2
GTA SCS ScS 11 11 12.0 -3.4
GTA SS SS 11 11 22.5 -8.0
GTA AMB AMB
comp=Z,40nm,1.2s,mb5.2
GTA AMB AMB
comp=Z,630nm,5.3s
GTA LR LR
comp=N,3μm,22.4s,MS5.3
GTA LR LR
comp=E,3μm,20.9s,MS5.3
GTA LR LR
comp=Z,5μm,20.5s,MS5.5
MDRS **Chennai** 46.50 288 *ex* x 11 01 21.9
MDRS *ex* x 11 08 49.9
ASAJ **Asahikawa** 46.95 17 P **P** **11 01 33.8 +0.5**
comp=Z,70nm,0.7s,mb5.7,baz=232,slow=13,SNR=39
ASAJ **Asahikawa** 46.95 17 P **P** **11 01 33.8 +0.5**
ASAJ pmax pmax
comp=Z,70nm,0.7s
YUK **Yuzh-Kuril'sk** 47.92 20 *eP* **P** **11 01 41.0 +0.2**
YUK *e* pP 11 01 55.0 -1.3
YUK *e* 11 11 55.0
YUK pmax pmax
comp=Z,2μm,2.0s,mb6.9
TRD **Trivandrum** 48.85 282 *eP* **P** **11 01 47.9 -0.1**
TRD AMb AMB 11 01 52.1
comp=Z,37nm,0.6s,mb5.6
ALBI **Allahabad** 49.07 305 *eP* **P** **11 01 48.5 -1.2**
HYB **Hyderabad** 49.18 294 *i* P **P** **11 01 49.0 -1.5**
comp=Z,100nm,1.0s,mb5.8
HYB *e*PP PP 11 03 46.0 +1.3
HYB *e*S **S** **11 08 50.0 -1.7**
HYB *e* 11 09 06.0
HYB **Hyderabad** 49.18 294 *eP* **P** **11 01 49.0 -1.5**
HYB *e*S **S** **11 09 06.0 +14**
HYB pmax pmax
comp=Z,100nm,1.0s,mb5.8
HYB **Hyderabad** 49.18 294 *eP* **P** **11 01 49.0 -1.5**
comp=Z,100nm,1.0s,mb5.8
HYB *e*S **S** **11 09 06.0 +14**
HABR **Khabarovsk** 49.41 9⇑ *i*P **P** **11 01 52.4 +0.1**
HABR *e*S **S** **11 08 57.2 +2.4**
HABR pmax pmax
comp=Z,232nm,1.5s,mb6.0
YSS **Yuzh-Sakhalins** 49.59 16α *i*P **P** **11 01 53.0 -0.7**
YSS *e* 11 02 02.5
YSS *e* 11 03 15.0
YSS *e* 11 03 54.0
YSS *e*PPP 11 04 40.0
YSS *e*S **S** **11 08 56.0 -1.4**
YSS pmax pmax
comp=N,60nm,1.2s
YSS pmax pmax
comp=Z,100nm,1.2s,mb5.7
YSS MLR MLR
comp=N,1μm,19.0s,MS5.0
YSS MLR MLR
comp=E,1μm,19.0s,MS5.0
YSS MLR MLR
comp=Z,2μm,19.0s,MS5.0
YSS **Yuzh-Sakhalins** 49.59 16 *eP* **P** **11 01 53.9 +0.2**
comp=Z,124nm,1.3s,mb5.8
YSS LR LR
comp=Z,2μm,21.0s,MS5.0
HIA **Hailar** 49.67 355 *eP* **P** **11 01 54.7 +0.4**
HIA pmax pmax
comp=Z,155nm,0.9s
HIA MLR MLR
comp=Z,4μm,22.0s
HIA **Hailar** 49.67 355 *eP* **P** **11 01 54.7 +0.4**
comp=Z,155nm,0.9s,mb6.0
HIA LR LR
comp=Z,4μm,22.0s,MS5.3
KLR **Kul'dur** 49.74 6⇓ *i*P **P** **11 01 51.1 -3.7**
KLR *e*S **S** **11 08 50.0 -10**
KLR pmax pmax
comp=E,34nm,1.6s
KLR pmax pmax
comp=Z,170nm,1.6s,mb5.8
KLR MLR MLR
comp=E,2μm,20.0s
NGP **Nagpur** 49.87 298 *eP* **P** **11 01 53.7 -2.1**
NGP *ex* x 11 01 54.4
comp=Z,332nm,0.6s
NGP *ex* x 11 08 59.5
ULN **Ulaanbaatar** 50.57 344 P **P** **11 02 00.8 -0.3**
SNR=65
ULN **Ulaanbaatar** 50.57 344 *eP* **P** **11 02 01.0 -0.1**
comp=Z,108nm,0.9s,mb5.8
ULN LR LR
comp=Z,3μm,21.0s,MS5.3
SONM **Songino Array** 50.73 344 P **P** **11 02 01.6 -0.6**
comp=Z,70nm,0.8s,mb5.7,baz=158,slow=8.0,SNR=109
SONM ScP ScP 11 07 13.2 +3.5
comp=Z,3.6nm,0.8s,baz=154,slow=3.3,SNR=4.5
SONM LR LR 11 24 13.1
comp=Z,3μm,21.1s,MS5.3,baz=155,slow=37
SONM **Songino Array** 50.73 344 P **P** **11 02 01.6 -0.7**
SONM pmax pmax
comp=Z,70nm,0.8s
SONM pmax pmax
comp=N,4.0nm,0.9s
SONM MLR MLR
comp=Z,3μm,21.1s
BHPL **Bhopal** 51.99 300 *eP* **P** **11 02 11.4 -0.3**
BHPL AMb AMB 11 02 14.5
comp=Z,107nm,0.6s,mb6.0
LGTI **Lohaghat** 52.10 309 *i* P **P** **11 02 13.0 +0.4**
AGRA **Agra** 53.02 305 *eP* **P** **11 02 17.9 -1.4**
AGRA AMb AMB 11 02 20.4
comp=Z,129nm,0.7s,mb6.0
DGAR **Diego Garcia** 53.03 261 PFAKE 11 02 30.0 +11
DGAR LR LR
comp=Z,870nm,20.0s,MS4.8
CIT **Chita** 53.12 351 *eP* **P** **11 02 20.3 +0.2**
CIT *e* 11 02 28.9
CIT pmax pmax
comp=Z,362nm,1.8s,mb6.0
JOSI **Joshimath** 53.13 310 *ex* x 11 02 01.2
KAD **Karad** 53.18 292 *eP* **P** **11 02 19.3 -1.2**
POO **Poona** 53.79 293 *eP* **P** **11 02 22.0 -3.0**
ZAK **Zakamensk** 53.92 343 *eP* **P** **11 02 25.7 -0.2**
ZAK pmax pmax
comp=Z,43nm,1.1s,mb5.3
SONA **Sohna** 54.12 306 *eP* **P** **11 02 26.2 -1.1**
SONA AMb AMB 11 02 28.1
comp=Z,125nm,0.6s,mb6.0
AYAN **Aya Nagar** 54.17 306 *ex* x 11 02 19.1
AYAN AMb AMB 11 02 22.1
comp=Z,135nm,1.2s,mb5.8
NDI **New Delhi** 54.18 306 *eP* **P** **11 02 26.3 -1.5**
NDI AMb AMB 11 02 27.8
comp=Z,106nm,1.0s,mb5.7
BHGR **Bahadurgarh** 54.41 306 *eP* **P** **11 02 28.2 -1.3**
BHGR AMb AMB 11 02 30.4
comp=Z,274nm,0.9s,mb6.2
KUDL **Kundal** 54.56 305 *eP* **P** **11 02 28.7 -1.9**
KUDL AMb AMB 11 02 31.6
comp=Z,130nm,0.7s,mb6.1
KLP **Kalpa** 54.57 310 *eP* **P** **11 02 31.1 +0.5**
KLP AMb AMB 11 02 37.9
comp=Z,294nm,1.3s,mb6.2
RTK **Rohtak** 54.97 306 *eP* **P** **11 02 32.6 -0.9**
RTK AMb AMB 11 02 35.0
comp=Z,323nm,1.0s,mb6.3
TLY **Talaya** 54.97 344 P **P** **11 02 34.2 +0.7**
SNR=39
TLY **Talaya** 54.97 344 *c* *i*P **P** **11 02 32.7 -0.8**
TLY *e*S **S** **11 10 11.4 +0.4**
TLY pmax pmax
comp=Z,121nm,1.0s,mb5.9
TLY MLR MLR
comp=Z,2μm,22.0s,MS5.2
TLY **Talaya** 54.97 344 *eP* **P** **11 02 33.7 +0.2**
TLY LR LR
comp=Z,448nm,21.0s,MS4.5
SMLA **Simla** 55.23 309 *eP* **P** **11 02 35.5 +0.1**
SMLA AMb AMB 11 02 38.1
comp=Z,807nm,1.1s,mb6.7
WMQ **Urumqi** 55.26 328 P **P** **11 02 35.0 -0.6**
WMQ AP pP 11 02 51.0 -0.4
WMQ XP sP 11 02 58.0 -0.2
WMQ PP PP 11 04 41.0 +1.4
WMQ S **S** **11 10 12.0 -2.9**
WMQ SS SS 11 13 57.0 -2.8
WMQ AMB AMB
comp=Z,76nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,358nm,5.0s
WMQ LR LR
comp=N,4μm,13.0s,MS5.8
WMQ LR LR
comp=E,3μm,13.0s,MS5.8
WMQ LR LR
comp=Z,4μm,14.0s,MS5.6
IRK **Irkutsk** 55.30 345⇓ *i*P **P** **11 02 35.8 -0.1**
IRK pmax pmax
comp=Z,159nm,2.2s,mb5.7
AJM **Ajmer** 55.48 303 *i* P **P** **11 02 36.0 -1.2**
AJM *e*P 11 02 36.4
SDNR **Sundarnagar** 55.54 309 *eP* **P** **11 02 36.6 -1.0**
MOY **Mondy** 55.74 342 *eP* **P** **11 02 39.4 +0.3**
MOY pmax pmax
comp=Z,250nm,1.8s,mb5.9
BHK **Bhakra** 55.93 309 *ex* x 11 02 44.3
PONG **Pong** 56.52 309 *eP* **P** **11 02 43.0 -1.6**
DLH **Dalhousie** 56.75 310 *eP* **P** **11 02 47.0 +0.7**
THN **Thein Dam** 56.90 310 *eP* **P** **11 02 45.6 -1.7**
CLNS **Chul'man** 57.04 360 *eP* **P** **11 02 48.4 +0.1**
CLNS *e* 11 03 42.6
CLNS *e* 11 04 49.6
CLNS *e*S **S** **11 10 38.7 +0.2**
CLNS pmax pmax
comp=Z,97nm,0.8s,mb5.9
CLNS pmax pmax
comp=N,70nm,0.9s
CLNS pmax pmax
comp=E,41nm,0.9s
CLNS smax
comp=Z,304nm,11.2s
CLNS smax
comp=N,87nm,11.3s
CLNS smax
comp=E,372nm,13.6s
CLNS MLR MLR
comp=Z,549nm,17.0s,MS4.7
CLNS MLR MLR
comp=N,167nm,16.0s,MS4.7
CLNS MLR MLR
comp=E,410nm,15.0s,MS4.7
SKR **Severo-Kuril's** 57.28 23 *eP* **P** **11 02 45.0 -5.0**
SKR *e* 11 05 02.0
SKR *e* 11 06 24.0
SKR *e*S **S** **11 10 43.0 +1.4**
SKR *e* 11 14 37.0
SKR pmax pmax
comp=N,1μm,4.0s
SKR pmax pmax
comp=E,1μm,4.0s
SKR pmax pmax
comp=Z,1μm,4.0s
SKR pmax pmax
comp=E,180nm,1.0s
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.1
SKR smax
comp=E,1μm,14.0s
SKR smax
comp=N,1μm,20.0s
SKR smax
comp=Z,1μm,20.0s
SKR MLR MLR
comp=N,1μm,18.0s,MS5.2
SKR MLR MLR
comp=E,1μm,18.0s,MS5.2
SKR MLR MLR
comp=Z,1μm,18.0s,MS5.0
BOD **Bodaibo** 58.70 353⇓ *i*P **P** **11 02 59.5 -0.5**
BOD pmax pmax
comp=Z,514nm,1.7s,mb6.3
RPZ **Rata Peaks** 59.38 143 P **P** **11 03 05.7 +1.1**
comp=Z,39nm,0.7s,mb5.5,baz=71,slow=3.1,SNR=19
KSH **Kashi** 59.92 317 P **P** **11 03 11.3 +2.9**
KSH *e*AP pP 11 03 27.3 +3.0
KSH *e*PCP PcP 11 03 56.8 +2.6
KSH *e*PP PP 11 05 26.5 +5.5
KSH *e*PPP 11 05 53.5
KSH *e*SCP ScP 11 07 51.8 +1.8
KSH *e*PCS PcS 11 07 57.5 +1.0
KSH *e*S **S** **11 11 17.5 +1.6**
KSH *e*XS sS 11 11 46.0 +3.1
KSH *e*SCS ScS 11 12 52.8 -0.7
KSH *e*SS SS 11 15 16.3 +3.3
KSH AMB AMB
comp=Z,578nm,1.3s,mb6.5
KSH LR LR
comp=N,3μm,19.4s,MS5.7
KSH LR LR
comp=E,4μm,21.1s,MS5.7
KSH LR LR
comp=Z,2μm,19.4s,MS5.3
PET **Petropavlovsk** 60.09 23α *i*P **P** **11 03 10.4 +0.9**
PET *e**PP pP 11 03 25.0 -0.5
PET *e* 11 03 54.7
PET *e*S **S** **11 11 18.2 +0.1**
PET *e*PS 11 11 43.6
PET *e*SS SS 11 15 15.0 -0.7
PET pmax pmax
comp=N,500nm,2.3s
PET pmax pmax
comp=Z,1μm,2.6s,mb6.4
PET pmax pmax
comp=E,200nm,2.4s
PET pmax pmax
comp=N,77nm,1.1s
PET pmax pmax
comp=E,42nm,1.0s
PET pmax pmax
comp=Z,184nm,1.0s,mb6.1
PET smax
comp=E,16nm,2.9s
PET smax
comp=N,500nm,8.1s
PET MLR MLR
comp=Z,900nm,18.0s,MS5.0
PET MLR MLR
comp=Z,900nm,20.0s
PET **Petropavlovsk** 60.09 23 *eP* **P** **11 03 10.5 +0.9**
PET LR LR
comp=Z,806nm,20.0s,MS4.9
MK31 **Makanchi Array** 60.09 327 P **P** **11 03 07.7 -1.8**
MK31 pmax pmax
comp=Z,41nm,0.6s,mb5.6
MKAR **Makanchi Array** 60.09 327 P **P** **11 03 08.5 -1.1**
comp=Z,101nm,0.6s,mb6.0,baz=120,slow=7.3,SNR=143
MKAR ScP ScP 11 07 54.4 +3.6
comp=Z,6.8nm,0.8s,baz=110,slow=5.3,SNR=4.9
MKAR PKP2bc 11 32 44.6
comp=Z,0.8nm,0.7s,baz=319,slow=3.5,SNR=4.8
MKAR **Makanchi Array** 60.09 327 P **P** **11 03 08.5 -1.1**
MKAR ScP ScP 11 07 54.4 +3.6
MKAR ⇑*e* 11 32 44.6
SNZO **South Karori** 60.44 139 *eP* **P** **11 03 12.5 +0.6**
comp=Z,58nm,0.8s,mb5.7
SNZO LR LR
comp=Z,2μm,20.0s,MS5.3
ULHL **Ulahol** 61.10 320 P **P** **11 03 16.8 +0.4**
SNR=42
KZA **Kyzart** 61.65 320 P **P** **11 03 20.6 +0.5**
SNR=102
TKM2 **Tokmak 2** 61.85 321 P **P** **11 03 21.6 +0.1**
SNR=55
TKM2 **Tokmak 2** 61.85 321 *i* P **P** **11 03 20.3 -1.2**
KRAR **Krasnoyarsk** 62.01 340 *eP* **P** **11 03 22.1 -0.5**
KRAR pmax pmax
comp=Z,185nm,1.5s,mb6.0
KBK **Karagaybulak** 62.13 320 P **P** **11 03 25.5 +2.2**
SNR=27
YAK **Yakutsk** 62.34 2*c* *i*P **P** **11 03 24.2 -0.6**
YAK *i* *PP pP 11 03 38.3 -2.5
YAK *i* 11 03 57.5
YAK *e*S **S** **11 11 47.4 +0.7**
YAK *i* *SS sS 11 12 16.1 +2.3
YAK *i* 11 13 11.1
YAK pmax pmax
comp=Z,147nm,0.8s,mb6.2
YAK pmax pmax
comp=N,80nm,1.4s
YAK pmax pmax
comp=E,27nm,1.5s
YAK smax
comp=N,52nm,1.3s
YAK smax
comp=Z,20nm,1.3s
YAK smax
comp=E,41nm,1.6s
YAK MLR MLR
comp=E,403nm,19.0s,MS4.9
YAK MLR MLR
comp=Z,849nm,19.0s,MS4.9
YAK MLR MLR
comp=N,720nm,20.0s,MS4.9
YAK **Yakutsk** 62.34 2 *eP* **P** **11 03 24.6 -0.1**
comp=N,274nm,0.8s,mb6.4
YAK LR LR
comp=Z,2μm,21.0s,MS5.2
AAK **Ala-Archa** 62.41 320 P **P** **11 03 25.3 +0.1**
SNR=34
AAK **Ala-Archa** 62.41 320 ⇑P **P** **11 03 25.1 -0.2**
SNR=37
AAK **Ala-Archa** 62.41 320 *c* *i*P **P** **11 03 24.2 -1.0**
AAK pmax pmax
comp=Z,190nm,2.0s,mb5.9
AAK **Ala-Archa** 62.41 320 *eP* **P** **11 03 24.1 -1.1**
comp=Z,94nm,1.1s,mb5.8
AAK LR LR
comp=Z,666nm,22.0s,MS4.8
CHMS **Chumysh** 62.42 320 P **P** **11 03 26.4 +1.1**
SNR=23
FRU **Bishkek** 62.43 320 *eP* **P** **11 03 26.0 +0.7**
FRU *e* pP 11 03 44.0 +2.6
FRU pmax pmax
comp=Z,120nm,1.8s,mb5.7
FRU MLR MLR
comp=Z,2μm,20.0s,MS5.2
AML **Almayashu** 62.69 319 P **P** **11 03 27.4 +0.3**
SNR=52
USP **Ospenovka** 62.72 321 P **P** **11 03 26.7 -0.6**
SNR=89
EKS2 **Erkin-Say** 62.89 320 P **P** **11 03 28.8 +0.4**
SNR=103
MA2 **Magadan** 63.04 14 *eP* **P** **11 03 30.3 +0.9**
comp=Z,113nm,0.8s,mb6.0
MA2 LR LR
comp=Z,772nm,21.0s,MS4.8
ZAL **Zalesovo** 63.57 335 P **P** **11 03 31.7 -1.2**
comp=Z,37nm,0.9s,mb5.4,baz=351,slow=6.5,SNR=75
ZAL S **S** **11 12 01.5 -0.6**
comp=Z,3.0nm,0.7s,baz=91,slow=23,SNR=9.8
ZAL LR LR 11 32 32.5
comp=Z,2μm,18.1s,MS5.3,baz=337,slow=37
ZAL PKP2bc 11 32 35.8
comp=Z,1.3nm,0.4s,baz=189,slow=2.5,SNR=6.3
ZAL **Zalesovo** 63.57 335 P **P** **11 03 31.7 -1.2**
ZAL S **S** **11 12 01.5 -0.6**
ZAL pmax pmax
comp=Z,37nm,0.9s
ZAL smax
comp=N,3.0nm,0.7s
ZAL MLR MLR
comp=Z,2μm,18.1s
ZAL **Zalesovo** 63.57 335 P **P** **11 03 31.7 -1.2**
ZAL S **S** **11 12 01.5 -0.6**
ZAL LR LR 11 32 32.5
ZAL ⇑*e* 11 32 35.8
AFI **Afiamalu** 63.78 105 PFAKE 11 03 50.0 +16
AFI LR LR
comp=Z,1μm,22.0s,MS5.1
KURK **Kurchatov** 64.40 329 P **P** **11 03 37.8 -0.6**
comp=Z,2μm,0.7s
NVS **Novosibirsk** 64.86 335 *eP* **P** **11 03 38.4 -2.9**
NVS *e*S **S** **11 12 12.0 -6.0**
NVS pmax pmax
comp=N,81nm,1.2s
NVS pmax pmax
comp=E,87nm,1.2s
NVS pmax pmax
comp=Z,124nm,1.2s,mb5.8
NVS smax
comp=N,47nm,2.0s
NVS smax
comp=E,63nm,2.0s
KK31 **Karatay Array** 65.22 319 *i* P **P** **11 03 43.1 -0.6**
KK31 pmax pmax
comp=Z,96nm,0.8s,mb5.9
KKAR **Karatay Array** 65.22 319 *i* P **P** **11 03 43.1 -0.6**
KKAR pmax pmax
comp=Z,76nm,0.8s,mb5.8
CASY **Casey** 66.58 186 *eP* **P** **11 03 53.0 +0.6**
CASY LR LR
comp=Z,3μm,22.0s,MS5.4
SMY **Shemya** 66.77 30 *eP* **P** **11 03 55.4 +1.8**
SMY pmax pmax
comp=Z,420nm,1.8s,mb6.2
SMY MLR MLR
comp=Z,800nm,23.0s,MS4.9
SMY **Shemya** 66.77 30 *eP* **P** **11 03 55.4 +1.8**
comp=Z,420nm,1.8s,mb6.2
SMY LR LR
comp=Z,800nm,23.0s,MS4.9
DRV **Dumont d'Urvil** 66.98 174 P pP 11 04 08.0 -3.2
DRV S S 11 12 54.0 +10
WSAR **Wadi Sarin** 68.69 295 P **P** **11 04 04.7 -1.0**
comp=Z,17nm,0.9s,mb5.0,baz=95,slow=6.1,SNR=8.1
AMKA **Amchitka** 68.77 33 *eP* **P** **11 04 08.2 +2.0**
BIDO **Bidbid** 69.19 295 P **P** **11 04 08.9 +0.1**
SNR=6.0
VOSK **Vostochnaya** 69.48 328 P **P** **11 04 08.6 -2.0**
VOSK pmax pmax
comp=Z,50nm,0.9s,mb5.4
MIR **Mirnyy** 69.83 193*d* *i*P **P** **11 04 15.0 +2.2**
MIR pmax pmax
comp=Z,50nm,1.0s,mb5.4
MIR pmax pmax
comp=Z,600nm,5.0s
BVAR **Borovoye Array** 69.94 328 P **P** **11 04 12.1 -1.4**
comp=Z,42nm,0.8s,mb5.4,baz=132,slow=8.5,SNR=119
BVAR **Borovoye Array** 69.94 328 P **P** **11 04 12.1 -1.3**
BVAR pmax pmax
comp=Z,43nm,0.8s
BRVK **Borovoye** 70.01 328 P **P** **11 04 13.2 -0.6**
SNR=70
BRVK **Borovoye** 70.01 328 *eP* **P** **11 04 12.5 -1.4**
comp=Z,117nm,1.3s,mb5.7
BRVK LR LR
comp=Z,231nm,20.0s,MS4.4
CHKZ **Chkalovo** 70.14 329 *eP* **P** **11 04 13.6 -1.1**
CHKZ pmax pmax
comp=Z,79nm,1.0s,mb5.6
CHKZ **Chkalovo** 70.14 329 *eP* **P** **11 04 13.4 -1.2**
comp=Z,79nm,0.9s,mb5.6
ARQ **Araqi** 70.61 295 P **P** **11 04 17.9 +0.3**
SNR=6.7
ZRNK **Zerenda** 70.63 328 *eP* **P** **11 04 16.5 -1.2**
ZRNK pmax pmax
comp=Z,100nm,0.8s,mb5.8
ZRNK **Zerenda** 70.63 328 *eP* **P** **11 04 16.5 -1.2**
comp=Z,100nm,0.8s,mb5.8
ASHO **Ashiyiah** 71.25 296 P **P** **11 04 22.5 +1.1**
SNR=13
TIXI **Tiksi** 71.95 1 *eP* **P** **11 04 24.9 -0.7**
TIXI **Tiksi** 71.95 1⇑ *i*P **P** **11 04 24.4 -1.2**
TIXI LR LR
comp=Z,2μm,22.0s,MS5.3
WHFO **Wadi Hawf** 72.45 289 P **P** **11 04 29.3 +0.7**
SNR=6.3
BILL **Bilibino** 73.89 15*c* *i*P **P** **11 04 36.9 -0.2**
BILL pmax pmax
comp=Z,98nm,1.8s,mb5.4
BILL **Bilibino** 73.89 15⇑ *i*P **P** **11 04 36.0 -1.1**
BILL LR LR
comp=Z,893nm,22.0s,MS5.0
AB31 **Akbulak array** 74.37 322 *i* P **P** **11 04 39.4 -0.5**
AKTK **Aktyubinsk** 75.93 323 P **P** **11 04 48.3 -0.6**
AKTO **Aktyubinsk** 75.93 323 P **P** **11 04 48.3 -0.6**

comp=Z,147nm,0.7s,mb6.0,baz=106,slow=7.4,SNR=352
AKTO Aktyubinsk 75.93 323 P P 11 04 48.3 -0.5
AKTO pmax pmax
comp=Z,147nm,0.7s,mb6.0
ARU Arti 77.58 329*c* *i*P **P 11 04 57.0 -1.2**
ARU pmax pmax
comp=Z,152nm,1.0s,mb5.9
ARU Arti 77.58 329⇑ *i*P **P 11 04 57.1 -1.1**
ARU LR LR
comp=Z,374nm,22.0s,MS4.7
UNV Unalaska Valle 77.67 34 PFAKE 11 05 10.0 +11
UNV LR LR
comp=Z,2µm,22.0s,MS5.5
KIP Kipapa 77.86 68 PFAKE 11 05 10.0 +10
KIP LR LR
comp=Z,2µm,19.0s,MS5.4
OPO Ambohidratompo 78.50 251 P P **11 05 04.9 +1.6**
comp=Z,28nm,0.9s,mb5.2,baz=74,slow=4.4,SNR=18
KBD Kabd 79.26 300 *e*P **P 11 05 07.1 -0.3**
KBD AMb AMB 11 05 09.9
comp=Z,333nm,1.1s,mb6.2
UMR Umm Al-Rimmam 79.29 300 *e*P **P 11 05 06.3 -1.3**
UMR AMb AMB 11 05 10.4
comp=Z,157nm,0.9s,mb5.9
MAW Mawson 79.39 200 *e*P **P 11 05 09.4 +1.3**
comp=Z,19nm,0.9s,mb5.0
MAW *i* S S 11 15 07.3 +3.0
MAW Mawson 79.39 200 P **P 11 05 08.9 +0.8**
comp=Z,45nm,1.2s,mb5.3,baz=68,slow=6.1,SNR=32
MAW LR LR 11 37 14.0
comp=Z,611nm,21.1s,MS4.9,baz=54,slow=33
MAW Mawson 79.39 200 *e*P **P 11 05 09.4 +1.3**
MAW *i* S S 11 15 07.3 +3.0
MAW pmax pmax
comp=Z,19nm,0.9s
MAW MLR MLR
comp=Z,2µm,22.0s
MAW Mawson 79.39 200 *e*P **P 11 05 09.4 +1.3**
comp=Z,19nm,0.9s,mb5.0
MAW *i* S S 11 15 07.3 +3.0
MAW LR LR
comp=Z,2µm,22.0s,MS5.5
SOKR Solikamsk 79.52 331*c* *i*P **P 11 05 07.9 -1.0**
SOKR S S 11 15 15.8 +10
SOKR pmax pmax
comp=Z,120nm,1.2s,mb5.7
SOKR MLR MLR
comp=Z,2µm,22.0s,MS5.4
VNDA Vanda 79.58 172 P **P 11 05 09.9 +0.8**
comp=Z,8.6nm,0.7s,mb4.8,baz=317,slow=5.9,SNR=45
VNDA LR LR 11 42 14.1
comp=Z,1µm,19.5s,MS5.3,baz=333,slow=37
VNDA Vanda 79.58 172 P **P 11 05 09.9 +0.7**
VNDA pmax pmax
comp=Z,9.0nm,0.7s
VNDA MLR MLR
comp=Z,1µm,19.5s
MIB Mutribah 79.64 300 *e*P **P 11 05 08.8 -0.7**
MIB AMb AMB 11 05 11.8
comp=Z,204nm,0.8s,mb6.1
NAY Al-Naaiem 79.66 300 *e*P **P 11 05 08.9 -0.7**
NAY AMb AMB 11 05 11.8
comp=Z,109nm,1.0s,mb5.7
POHA Pohakuloa 80.05 70 PFAKE 11 05 20.0 +8.3
POHA LR LR
comp=Z,2µm,19.0s,MS5.4
SBA Scott Base 80.51 172 *e*P **P 11 05 14.9 +0.7**
SBA Scott Base 80.51 172 *e*P **P 11 05 14.8 +0.6**
SBA LR LR
comp=Z,1µm,20.0s,MS5.3
MAK Makhachkala 81.24 313 *i*P **P 11 05 14.6 -3.5**
MAK *i* 11 05 24.4
MAK *i**PP pP 11 05 31.3 -3.4
MAK *e*S S 11 15 27.9 +4.1
MAK pmax pmax
comp=Z,496nm,1.6s,mb6.2
MAK MLR MLR
comp=Z,1µm,28.0s,MS5.1
SDPT Sand Point 81.45 34 *e*P **P 11 05 19.5 +0.3**
comp=Z,417nm,1.2s,mb6.2
SDPT LR LR
comp=Z,700nm,23.0s,MS5.0
BHD Baghdad 82.51 303 *i* x x 11 05 21.0
BHD Baghdad 82.51 303 *ex* x 11 15 36.0
BHD *ex* x 11 15 38.0
ATD Arta Tunnel 82.56 282 P **P 11 05 27.2 +2.2**
comp=Z,22nm,0.9s,mb5.2,baz=80,slow=2.5,SNR=15
DGRG David-gareji 82.61 312 P **P 11 05 26.6 +1.4**
CHGN Chignik 82.79 33 *e*P **P 11 05 25.2 -1.0**
GNI Garni 82.93 310 *e*P **P 11 05 26.9 0.0**
GNI Garni 82.93 310 P **P 11 05 27.9 +1.0**
comp=Z,26nm,0.7s,mb5.4,baz=342,slow=8.3,SNR=24
GNI Garni 82.93 310 P **P 11 05 29.1 +2.2**
SNR=14
GNI Garni 82.93 310 *e*P **P 11 05 28.9 +2.0**
comp=Z,85nm,0.8s,mb5.8
GNI LR LR
comp=Z,655nm,22.0s,MS5.0
MTA Mtatsminda 83.07 312 P **P 11 05 28.2 +0.6**
TBLG Delisi 83.11 312 P **P 11 05 29.6 +1.8**
HKR Hakkari 83.44 308 *e*P **P 11 05 29.0 -0.5**
CUKT Cukurca 83.51 307 *e*P **P 11 05 29.9 0.0**
VANB Van 83.81 309 *e*P **P 11 05 32.1 +0.7**
MSL Mosul 83.84 306 *i* x x 11 05 36.0
MSL *i* x x 11 05 42.0
MSL Mosul 83.84 306 *ex* x 11 15 47.0
MSL *ex* x 11 15 57.0
MSL *ex* x 11 16 01.0
ZEI Tsey 83.85 313 *e*P **P 11 05 33.6 +2.0**
ZEI *e**PP pP 11 05 44.1 -4.3
ZEI pmax pmax
comp=Z,207nm,1.0s,mb6.2
ONI Oni 84.16 313 P **P 11 05 39.1 +5.9**
KARS Kars 84.23 311 *e*P **P 11 05 32.2 -1.4**
KIV Kislovodsk 84.85 314 P **P 11 05 37.5 +0.8**
SNR=27
KIV Kislovodsk 84.85 314 *e*P **P 11 05 37.8 +1.1**
KIV pmax pmax
comp=Z,62nm,0.8s,mb5.8
KIV Kislovodsk 84.85 314 *e*P **P 11 05 37.8 +1.1**
comp=Z,62nm,0.8s,mb5.8
KIV LR LR
comp=Z,190nm,20.0s,MS4.5
SVW2 Sparrevohn 85.13 29 *e*P **P 11 05 38.8 +0.7**
TTA Tatalina 85.24 27 *e*P **P 11 05 39.8 +1.1**
PPT Papeete 85.35 107 *e*PP PP 11 08 58.1 +0.3
comp=Z,267nm,23.8s
PPT Papeete 85.35 107 *e*S S 11 16 07.3 +2.0
comp=Z,971nm,26.8s
PPT *e*SS SS 11 21 43.9 +2.9
comp=Z,819nm,28.5s
PPT *e*LR LR 11 32 53.7
comp=Z,2µm,28.2s
PPT Papeete 85.35 107 LR LR 11 43 03.6
comp=Z,536nm,18.9s,MS5.0,baz=271,slow=35
PECR Pechory 85.37 326 *i* P **P 11 05 38.4 -0.9**
PECR *e*S S 11 16 00.0 -5.4
PECR pmax pmax
comp=Z,570nm,2.4s,mb6.3
PECR pmax pmax
comp=Z,2µm,2.0s,mb6.8
PECR smax
comp=N,500nm,3.0s
PECR smax
comp=E,500nm,4.0s
PECR MLR MLR
comp=E,600nm,23.0s
PECR MLR MLR
comp=Z,2µm,23.0s,MS5.4
BCA Borcka 85.41 311 *e*P **P 11 05 39.9 +0.4**
EZM Erzurum 85.49 310 *e*P **P 11 05 39.1 -0.8**
TBI Tubuai 85.59 113 *e*S S 11 16 09.7 +2.1
comp=Z,1µm,29.0s
TBI *e*LR LR 11 32 57.0
comp=Z,1µm,26.2s
BINT Bingol 86.09 309 *e*P **P 11 05 44.1 +1.2**
KDAK Kodiak Island 86.17 32 P **P 11 05 43.7 +0.5**
comp=Z,23nm,0.8s,mb5.5,baz=287,slow=1.4,SNR=16
KDAK Kodiak Island 86.17 32 P **P 11 05 43.7 +0.5**
KDAK LR LR
comp=Z,317nm,22.0s,MS4.7
VRHR Novokhopersk 86.23 321 *e*P **P 11 05 43.3 -0.3**
VRHR *e**PP pP 11 05 52.7 -7.7
VRHR pmax pmax
comp=E,130nm,0.7s
VRHR pmax pmax
comp=Z,380nm,0.7s,mb6.7
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR MLR MLR
comp=Z,2µm,23.0s,MS5.4
VRHR MLR MLR
comp=N,510nm,17.0s
VRHR MLR MLR
comp=E,1µm,22.0s
DIY Diyarbakir 86.24 308 *e*P **P 11 05 35.7 -7.9**
EZC Erzincan 86.67 310 *e*P **P 11 05 42.1 -3.6**
PTK Pertek 86.95 309 *e*P **P 11 05 46.4 -0.6**
SOC Sochi 86.96 313*c* *i*P **P 11 05 46.9 -0.2**
SOC *e**PP pP 11 05 56.4 -7.6
SOC *e* 11 09 08.7
SOC *e*S S 11 16 10.3 -11
SOC *e*SS SS 11 22 07.2 +2.6
SOC MLR MLR
comp=Z,836nm,20.0s,MS5.1
URFA Urfa 87.33 307 *e*P **P 11 05 49.9 +0.9**
SLKM Sklak Lake 87.66 30 P **P 11 05 50.6 +0.1**
SLKM Sklak Lake 87.66 30 *e*P **P 11 05 50.1 -0.4**
MALT Malatya 87.68 308 *e*P **P 11 05 52.2 +1.6**
MALT pmax pmax
comp=Z,234nm,1.2s,mb6.3
MALT Malatya 87.68 308 *e*P **P 11 05 52.2 +1.6**
comp=Z,234nm,1.2s,mb6.3
MYA Malataya 87.68 308 *e*P **P 11 05 51.1 +0.5**
VRSR Storozhevoye 87.77 321*c* *i*P **P 11 05 50.4 -0.6**
VRSR *e* 11 16 12.5
VRSR *e*S S 11 16 30.0 +1.2
VRSR pmax pmax
comp=N,30nm,1.1s
VRSR pmax pmax
comp=E,190nm,1.1s
VRSR pmax pmax
comp=Z,200nm,1.1s,mb6.3
VRSR smax
comp=N,150nm,3.7s
VRSR smax
comp=Z,120nm,5.9s
VRSR MLR MLR
comp=Z,2µm,24.0s,MS5.3
VRSR MLR MLR
comp=N,1µm,22.0s,MS5.4
VRSR MLR MLR
comp=E,1µm,23.0s,MS5.4
VOR Voronezh 87.80 322 *e*P **P 11 05 50.0 -1.1**
VOR *e*S S 11 16 28.0 -1.0
VOR pmax pmax
comp=E,300nm,1.6s
VOR pmax pmax
comp=Z,530nm,1.6s,mb6.5
VOR smax
comp=N,150nm,1.7s
PMR Palmer 88.27 28 *e*P **P 11 05 54.0 +0.6**
PMR pmax pmax
comp=Z,52nm,1.6s,mb5.5
PMR MLR MLR
comp=Z,700nm,22.0s,MS5.0
PMR Palmer 88.27 28 *e*P **P 11 05 54.0 +0.6**
comp=Z,52nm,1.6s,mb5.5
PMR LR LR
comp=Z,700nm,22.0s,MS5.0
MCK McKinley 88.51 26 *e*P **P 11 05 54.0 -0.5**
MCK LR LR
comp=Z,291nm,22.0s,MS4.7
GAZ Gaziantep 88.60 307 *e*P **P 11 05 53.0 -1.9**
ANN Anapa 88.66 315 *e*P **P 11 05 54.1 -1.1**
ANN *e**PP pP 11 06 06.9 -5.2
ANN *e* 11 16 19.6
ANN *e* 11 16 30.3
ANN pmax pmax
comp=Z,448nm,0.9s,mb6.8
ASF Jabal al Asfar 88.74 302 P **P 11 05 57.3 +1.7**
comp=Z,96nm,1.0s,mb6.1,baz=323,slow=1.4,SNR=88
ASF Jabal al Asfar 88.74 302 P **P 11 05 57.3 +1.7**
ASF pmax pmax
comp=Z,96nm,1.0s
SVSK Karacayir 88.84 310 *e*P **P 11 05 56.5 +0.4**
MOS Moscow 88.93 326 *e*P **P 11 05 54.9 -1.6**
MOS *e* 11 09 23.8
MOS *i* S S 11 16 37.4 -2.3
MOS pmax pmax
comp=Z,400nm,1.6s,mb6.5
MOS pmax pmax
comp=Z,250nm,1.3s,mb6.4
COLA College 89.05 25 PFAKE 11 06 10.0 +13
COLA LR LR
comp=Z,636nm,22.0s,MS5.0
TMCR Tamitsa 89.09 334 *e*P **P 11 05 56.3 -0.9**
TMCR pmax pmax
comp=Z,80nm,1.5s,mb5.8
TOKT Tokat 89.20 310 *e*P **P 11 05 57.5 -0.3**
HTY Hatay 89.44 306 *e*P **P 11 05 52.1 -6.8**
OBN Obninsk 89.51 325*d* *i*P **P 11 05 58.6 -0.6**
OBN *e* pP 11 06 18.3 +2.2
OBN 11 16 31.0
OBN *i* 11 16 42.9
OBN PS PS 11 17 58.0 +0.3
OBN pmax pmax
comp=Z,400nm,1.5s,mb6.5
QSPA South Pole Qui 89.56 180 *e*P **P 11 06 00.4 +1.0**
comp=Z,18nm,0.9s,mb5.4
QSPA LR LR
comp=Z,1.0nm,20.0s,MS2.2
KVT Kavak 89.59 311 *e*P **P 11 05 53.7 -5.9**
RCY Rachaya 89.67 303 *e*P **P 11 06 02.1 +2.1**
KOZT Kozan 89.71 307 *e*P **P 11 05 57.9 -2.3**
BNN Bunyan 89.71 309 *e*P **P 11 05 59.7 -0.5**
CEYT Ceyhan 89.77 307 *e*P **P 11 05 57.2 -3.2**
BHL Bhannes 89.81 304 *e*P **P 11 06 02.0 +1.4**
DIV Divide 89.87 29 *e*P **P 11 06 01.3 +0.4**
DIV LR LR
comp=Z,3µm,22.0s,MS5.7
EYAK Cordova Ski Ar 89.87 30 *e*P **P 11 06 01.6 +0.7**
MMAI Mount Meron Ar 90.02 303 P **P 11 06 03.0 +1.5**
comp=Z,131nm,1.1s,mb6.2,baz=81,slow=7.2,SNR=56
KARA Karaisali 90.33 307 *e*P **P 11 06 00.6 -2.4**
EIL Elat 90.38 300 *e*P **P 11 06 03.9 +0.6**
comp=Z,3µm,1.5s
LVZ Lovozero 90.55 338*c* *i*P **P 11 06 02.1 -2.0**
LVZ *e* 11 09 35.8
LVZ *e*SS SS 11 22 55.3 -1.4
LVZ pmax pmax
comp=Z,33nm,1.1s,mb5.6
LVZ pmax pmax
comp=N,6.0nm,1.4s
LVZ pmax pmax
comp=E,7.0nm,1.1s
LVZ MLR MLR
comp=Z,2µm,20.0s,MS5.5
LVZ MLR MLR
comp=N,769nm,23.0s,MS5.3
LVZ MLR MLR
comp=E,1µm,21.0s,MS5.3
MENT Mentasta 90.84 27 *e*P **P 11 06 06.0 +0.6**
SIM Simferopol' **91.02 315***d* *i*P **P 11 06 06.9 +0.6**
SIM *e*S S 11 16 59.0 0.0
SIM pmax pmax
comp=Z,143nm,0.9s,mb6.3
SIM MLR MLR
comp=Z,2µm,22.8s,MS5.5
APA Apatity 91.03 337⇑ *i*P **P 11 06 05.0 -1.3**
APA *i* 11 06 15.0
APA *e* 11 09 41.0
APA *e* 11 16 29.0
APA *e*S S 11 16 58.0 -1.1
APA *e*PS PS 11 18 20.0 +5.4
APA *e*SS SS 11 23 10.0 +6.4
APA pmax pmax
comp=Z,27nm,1.1s,mb5.5
BR131 Keskin Array S 91.43 310 *e*P **P 11 06 07.9 -0.2**
comp=Z,11nm,0.6s,mb5.4
BR131 LR LR
comp=Z,698nm,20.0s,MS5.1
BRTR Keskin Array B 91.43 310 P **P 11 06 07.8 -0.3**
comp=Z,25nm,1.0s,mb5.5,baz=126,slow=4.2,SNR=38
BRTR PP PP 11 09 46.2 -0.2
comp=Z,3.9nm,1.0s,baz=67,slow=9.5,SNR=3.9
BRTR LR LR 11 54 48.1
comp=Z,699nm,22.0s,MS5.1,baz=295,slow=40
CSS Prodhromos 91.73 305 *e*P **P 11 06 09.9 +0.4**
comp=Z,132nm,0.9s,mb6.3
EGAK Eagle 91.91 25 *e*P **P 11 06 10.5 +0.1**
EGAK *e* 11 06 35.9
ANTO Ankara 92.08 310⇑ *i*P **P 11 06 12.2 +1.1**
ANTO Ankara 92.08 310⇑ P **P 11 06 12.2 +1.0**
ANTO LR LR
comp=Z,925nm,22.0s,MS5.2
JOF Joensuu 92.10 333 *e*p **P 11 06 09.7 -1.6**
DAWY Dawson 92.72 26 *e*P **P 11 06 14.8 +0.6**
KEV Kevo 93.19 340 P **P 11 06 14.9 -1.4**
KEV pmax pmax
comp=Z,13nm,1.0s,mb5.3
KEV Kevo 93.19 340 *e*P **P 11 06 14.8 -1.5**
comp=Z,13nm,0.9s,mb5.3
KEV LR LR
comp=Z,1µm,22.0s,MS5.2
ARCES ARCESS Array B 93.74 340 P **P 11 06 17.3 -1.5**
comp=Z,13nm,0.7s,mb5.5,baz=83,slow=3.9,SNR=32
ARCES LR LR 11 54 08.6
comp=Z,916nm,20.2s,MS5.2,baz=94,slow=39
ARE0 ARCESS Array S 93.74 340 *e*P **P 11 06 17.5 -1.3**
ISP Isparta 93.93 308 *e*P **P 11 06 19.1 -0.6**
ISP Isparta 93.93 308⇓ *i*P **P 11 06 19.4 -0.3**
ISP Isparta 93.93 308 ⇓ P **P 11 06 19.4 -0.3**
AKASG Malin Array Be 94.07 321 P **P 11 06 19.3 -1.1**
comp=Z,14nm,0.7s,mb5.5,baz=73,slow=4.2,SNR=76
AKASG LR LR 11 50 30.7
comp=Z,1µm,21.5s,MS5.3,baz=65,slow=37
AKASG Malin Array Be 94.07 321 P **P 11 06 19.3 -1.1**
AKASG pmax pmax
comp=Z,15nm,0.7s
AKASG MLR MLR
comp=Z,1µm,21.5s
AKASG Malin Array Be 94.07 321 P **P 11 06 19.3 -1.1**
AKASG LR LR 11 50 30.7
AKBB Malin Array Si 94.07 321 P **P 11 06 19.5 -0.9**
AKBB Malin Array Si 94.07 321 *e*P **P 11 06 19.4 -0.9**
SPB4 Spitsbergen Ar 94.19 349 *e*P **P 11 06 20.1 -0.7**
KAF Kangasniemi 94.49 332 *e*p **P 11 06 20.6 -1.7**
comp=Z,8.1nm,0.5s,mb5.4
KAF Kangasniemi 94.49 332 *e*P **P 11 06 20.6 -1.7**
KAF pmax pmax
comp=Z,8.0nm,0.5s,mb5.4
INK Inuvik 94.53 21 P **P 11 06 21.0 -1.5**
comp=Z,42nm,1.1s,mb5.8,baz=280,slow=5.8,SNR=44
INK Inuvik 94.53 21 *e*P **P 11 06 22.1 -0.3**
INK pmax pmax
comp=Z,92nm,1.2s
INK Inuvik 94.53 21 *e*P **P 11 06 22.1 -0.3**
comp=Z,92nm,1.2s,mb6.1
TAOE Nuku Hiva Isla 94.56 99 *e*LR LR 11 37 04.0
comp=Z,3µm,21.9s
MNK Minsk 94.58 325 *e*P **P 11 06 16.0 -6.7**
MNK pmax pmax
comp=Z,340nm,1.0s,mb6.7
MNK pmax pmax
comp=E,270nm,1.5s
BJO Bjornoya 94.61 345 AMS AMS 11 53 34.4
comp=Z,1µm,20.3s,MS5.3
KIS Kishinev 94.62 317 *e*P **P 11 06 22.0 -0.9**
KIS *e* 11 10 10.0
KIS *e*PS PS 11 19 22.0 +28
KIS MLR MLR
comp=Z,1µm,22.0s,MS5.4
KIS MLR MLR
comp=Z,2µm,22.0s
BJO1 Bjornoya 94.66 345 PFAKE 11 06 30.0 +7.0
BJO1 LR LR
comp=Z,1µm,20.3s,MS5.3
FIA1 FINESS Array S 94.69 332 *e*P **P 11 06 23.7 +0.5**
FINES FINESS Array B 94.69 332 P **P 11 06 21.7 -1.5**
comp=Z,6.0nm,0.7s,mb5.1,baz=101,slow=9.9,SNR=19
FINES LR LR 11 52 28.1
comp=Z,987nm,21.9s,MS5.2,baz=79,slow=38
FINES FINESS Array B 94.69 332 P **P 11 06 21.7 -1.5**
FINES pmax pmax
comp=Z,6.0nm,0.7s
FINES MLR MLR
comp=Z,987nm,22.0s
FINES FINESS Array B 94.69 332 P **P 11 06 21.7 -1.5**
FINES LR LR 11 52 28.1
KBS Kingsbay 94.75 350 *e*P **P 11 06 22.6 -0.8**
KBS Kingsbay 94.75 350 *e*P **P 11 06 22.0 -1.4**
KBS LR LR
comp=Z,1µm,19.0s,MS5.4
VSU Vasula 94.75 329 *e*P **P 11 06 22.5 -0.9**
TIRR Tirgusor 95.10 314⇑ *i*P **P 11 06 24.0 -1.1**
TIRR Tirgusor 95.10 314 P **P 11 06 25.3 +0.2**
SKAG Skagway 95.16 30 *e*P **P 11 06 26.1 +0.8**
comp=Z,72nm,1.8s,mb5.8
SKAG LR LR
comp=Z,700nm,22.0s,MS5.1
CFR Carcaliu 95.24 315⇓ *i*P **P 11 06 26.8 +1.1**
CFR Carcaliu 95.24 315 P **P 11 06 26.8 +1.1**
HARR Harsova 95.43 315 P **P 11 06 28.0 +1.4**
SIT Sitka 95.49 33 PFAKE 11 06 40.0 +13
SIT LR LR
comp=Z,941nm,22.0s,MS5.2
TRO Tromso 95.98 340 *e*P **P 11 06 26.8 -2.2**
TRO AMS AMS 11 52 25.8
comp=Z,812nm,22.1s,MS5.2
TRO Tromso 95.98 340 PFAKE 11 06 40.0 +11
TRO LR LR
comp=Z,810nm,22.1s,MS5.2
VRI Vrincioaia 96.17 316⇓ *i*P **P 11 06 30.2 +0.3**
VRI Vrincioaia 96.17 316 ⇓ P **P 11 06 30.2 +0.3**
PLOR Plostina 96.22 316⇑ *i*P **P 11 06 30.5 +0.3**
JMB Yambol 96.60 313 *e*P **P 11 06 32.2 +0.3**
LSZ Lusaka 96.65 255 P **P 11 06 34.0 +1.9**
LSZ pmax pmax
comp=Z,37nm,1.2s,mb5.7
LSZ Lusaka 96.65 255 *e*P **P 11 06 33.6 +1.5**
comp=Z,37nm,1.2s,mb5.7
LSZ LR LR
comp=Z,5µm,22.0s,MS6.0
MLR Muntele Rosu 96.75 316 P **P 11 06 32.6 +0.1**
comp=Z,32nm,0.9s,mb5.8,baz=22,slow=2.4,SNR=35
MLR Muntele Rosu 96.75 316⇑ *i*P **P 11 06 32.4 -0.2**
MLR Muntele Rosu 96.75 316 P **P 11 06 33.0 +0.4**
BURAR Bucovina Array 97.00 318⇓ *i*P **P 11 06 34.7 +1.0**
BURAR Bucovina Array 97.00 318 ⇓ P **P 11 06 34.6 +1.0**
SUW Suwalki 97.35 324 *e*P **P 11 06 35.5 +0.2**
SUW L 11 51 06.5
comp=Z,2.2nm,25.1s
SUW Suwalki 97.35 324 *e*P **P 11 06 35.3 0.0**
VOIR 97.38 316⇓ *i*P **P 11 06 35.7 +0.3**
VOIR 97.38 316 ⇓ P **P 11 06 35.7 +0.2**
CHOS Chios island 97.39 309 *e*P **P 11 06 35.0 -0.5**
LVV L'vov 97.48 320⇑ *i*P **P 11 06 35.9 0.0**
LVV *e* pP 11 06 52.7 -0.1
LVV *e* 11 10 34.5
LVV *e* 11 12 42.9
LVV MLR MLR
comp=Z,500nm,20.0s,MS5.0
LVV MLR MLR
comp=N,400nm,21.0s,MS5.0
LVV MLR MLR
comp=E,400nm,19.0s,MS5.0
DLBC Dease Lake 98.04 31 P **P 11 06 39.5 +1.2**
comp=E,5.4nm,1.1s,mb5.0,baz=336,slow=1.2,SNR=5.2
KWP Kalwaria 98.36 320 *e*P **P 11 06 40.2 +0.4**
KWP L 11 52 06.9
comp=Z,1.4nm,25.4s
KWP Kalwaria 98.36 320 *e*P **P 11 06 40.5 +0.7**
KWP pmax pmax
comp=Z,13nm,1.2s,mb5.3
KWP Kalwaria 98.36 320 *e*P **P 11 06 40.5 +0.7**
comp=Z,128nm,1.2s,mb6.3
LBTB Lobatse 98.53 245 LR LR 11 45 44.2
comp=Z,1µm,21.6s,MS5.3,baz=167,slow=32
BOSA Boshof 98.53 241 P **P 11 06 41.1 +0.5**
comp=Z,12nm,1.1s,mb5.3,baz=112,slow=11,SNR=3.7
BOSA LR LR 11 44 30.4
comp=Z,2µm,21.7s,MS5.5,baz=89,slow=31
KOLS Kolonicke sedl 98.76 319 *e*P **P 11 06 42.1 +0.5**
DRGR 98.81 317⇑ *i*P **P 11 06 42.1 +0.3**
DRGR 98.81 317 ⇑ P **P 11 06 42.1 +0.2**
RKT Rikitea 98.91 113 *e*LR LR 11 39 06.7
comp=Z,1µm,22.2s
VTS Vitosha 99.07 313⇑ *i*P **P 11 06 42.7 -0.3**
VTS Vitosha 99.07 313 ⇑ P **P 11 06 42.7 -0.3**
CRVS Cervenica-Dubn 99.29 319 *e*P **P 11 06 44.8 +0.8**
STHS Stebnicka Huta 99.34 320 *e*P **P 11 06 45.4 +1.2**
STHS pmax pmax
comp=Z,18nm,0.8s,mb5.7
STHS Stebnicka Huta 99.34 320 *e*P **P 11 06 45.4 +1.2**

comp=Z,18nm,0.8s,mb5.7
VAY Valandovo 99.72 312 *e*P Pdif 11 06 43.3 -2.6
BZS Buzias 99.75 316 ⇓*i*P Pdif 11 06 45.7 -0.3
BZS Buzias 99.75 316 P Pdif 11 06 46.2 +0.2
KECS Kecovo 100.00 319 *e*P Pdif 11 06 47.9 +0.8
KECS pmax pmax
comp=Z,15nm,1.0s
KECS Kecovo 100.00 319 *e*P Pdif 11 06 47.9 +0.8
comp=Z,15nm,1.0s
BARS Barje 100.04 313 *e*P Pdif 11 06 47.1 -0.2
NSS Namsos 100.16 336 AMS AMS 12 00 40.6
comp=Z,2μm,19.2s,MS5.5
NSS Namsos 100.16 336 PFAKE 11 07 00.0 +12
NSS LR LR
comp=Z,2μm,19.2s,MS5.5
PSZ Piszkesteto 100.50 319⇑*e*P Pdif 11 06 49.4 +0.1
PSZ Piszkesteto 100.50 319 P Pdif 11 06 50.1 +0.8
GRUS Gruza 100.67 315 *i*P Pdif 11 06 49.7 -0.4
SNAA Sanae 100.87 195 *e*Pdiff Pdif 11 06 51.1 +0.1
SNAA *e* 11 06 53.7
SNAA *e* 11 06 57.4
SNAA *e* 11 07 05.8
SNAA *e* 11 07 16.2
SNAA Sanae 100.87 195 P Pdif 11 06 53.2 +2.2
SNAA pmax pmax
comp=Z,8.0nm,1.2s
SNAA Sanae 100.87 195 *e*P Pdif 11 06 53.0 +2.0
comp=Z,7.7nm,1.2s
HFS Hagfors 100.89 332 P Pdif 11 06 49.6 -1.5
comp=Z,2.5nm,0.5s,baz=97,slow=6.2,SNR=7.3
HFS Hagfors 100.89 332 P Pdif 11 06 49.6 -1.5
HFS pmax pmax
comp=Z,3.0nm,0.5s
VYHS Vyhne 101.07 319 *e*P Pdif 11 06 51.9 0.0
VYHS pmax pmax
comp=Z,13nm,1.4s
VYHS Vyhne 101.07 319 *e*P Pdif 11 06 51.9 0.0
comp=Z,13nm,1.4s
DAG Danmarks Havn 101.09 352⇑*i*P Pdif 11 06 51.2 -0.8
comp=Z,13nm,1.0s
DAG Danmarks Havn 101.09 352⇑*i*P Pdif 11 06 51.2 -0.8
DAG pmax pmax
comp=Z,13nm,1.0s
DIVS Divcibare 101.14 315⇑*i*P Pdif 11 06 52.6 +0.4
OKC Ostrava-Krasne 101.22 321 *e*PDIF Pdif 11 06 53.5 +0.9
OKC AMS AMS 11 54 20.0
comp=Z,800nm,20.9s
BBLS Bajina Basta - 101.60 315 *i*P Pdif 11 06 54.9 +0.7
MORC Moravsky Berou 101.62 321 P Pdif 11 06 55.3 +1.0
MORC pmax pmax
comp=Z,42nm,1.5s
MORC Moravsky Berou 101.62 321 *e*P Pdif 11 06 54.9 +0.6
comp=Z,42nm,1.5s
PKSM Moragy 101.68 317⇓*i*P Pdif 11 06 54.8 +0.2
PKSM Moragy 101.68 317⇑*e*P Pdif 11 06 54.6 0.0
NB2 NORSAR Subarra 101.74 333 Pdif Pdif 11 06 53.1 -1.7
comp=Z,10nm,1.1s,baz=69,slow=4.4
NOA NORSAR Array B 101.74 333 P Pdif 11 06 52.8 -2.0
comp=Z,4.6nm,1.0s,baz=69,slow=4.6,SNR=6.9
NOA PP PP 11 11 05.8 -0.1
comp=Z,2.7nm,0.9s,baz=74,slow=7.3,SNR=3.3
NOA NORSAR Array B 101.74 333 P Pdif 11 06 52.8 -2.0
NOA 11 11 05.8
NOA pmax pmax
comp=Z,5.0nm,1.0s
NOA pmax pmax
comp=Z,3.0nm,0.9s
BSD Bornholm Skovb 101.79 327 *i*P PKiKP 11 11 09.9 -8.1
BSD *i*S SKSac 11 17 35.1 +5.7
BSD *e* 11 18 45.0
BSD *i* 11 21 03.7
BSD
comp=Z,2μm,20.0s
NAO01 NORSAR Array S 101.96 333 PFAKE 11 07 10.0 +14
NAO01 LR LR
comp=Z,2μm,20.0s,MS5.6
KSP Ksiaz 102.14 322 *e*P Pdif 11 06 57.3 +0.7
KSP L 11 55 01.3
comp=Z,2.3nm,22.5s
KSP Ksiaz 102.14 322 *e*P Pdif 11 06 57.1 +0.5
KSP *e* 11 11 10.0
KSP MLR MLR
comp=Z,3μm,22.5s,MS5.7
KSP Ksiaz 102.14 322 *e*Pdif Pdif 11 06 57.1 +0.5
KSP *e*PP PP 11 11 10.0 +1.1
KSP LR LR
comp=Z,3μm,22.5s,MS5.7
DPC Dobruska-Polom 102.25 322 *e*PDIF Pdif 11 06 58.2 +1.1
DPC *e*pP 11 07 14.2
DPC AMS AMS 11 54 40.0
comp=Z,2μm,21.9s
ZST Bratislava 102.27 319 *e*P Pdif 11 06 58.2 +1.0
VRAC Vranov 102.33 321 P Pdif 11 06 58.2 +0.7
comp=Z,3.4nm,0.3s,baz=76,slow=6.1,SNR=14
VRAC Vranov 102.33 321⇑*i*P Pdif 11 06 58.3 +0.8
VRAC Vranov 102.33 321⇑P Pdif 11 06 58.3 +0.9
UPC Upice 102.40 322 *e*PDIF Pdif 11 06 58.7 +0.9
VNA1 Neumayer--Stat 102.89 194 *e*Pdiff Pdif 11 07 01.1 +1.1
VNA1 *e* 11 07 03.5
VNA1 *e* 11 07 07.6
VNA1 *e* 11 07 16.2
VNA1 *e* 11 07 26.7
KONO Kongsberg 103.00 332 *e*P Pdif 11 07 04.2 +3.8
KONO Kongsberg 103.00 332 PFAKE 11 07 10.0 +10
KONO LR LR
comp=Z,1μm,21.0s,MS5.4
TREC Trest 103.04 321 AMS AMS 11 55 30.0
comp=Z,1μm,22.2s
PRU Pruhonice 103.44 322 *e*PDIF Pdif 11 07 03.4 +1.0
PRU *e*pP 11 07 17.5
PRU AMS AMS 11 55 30.0
comp=Z,1μm,21.9s
JMIC Jan Mayen 103.45 346 AMS AMS 11 53 30.5
comp=Z,503nm,23.5s,MS5.0
JMIC Jan Mayen 103.45 346 PFAKE 11 07 10.0 +7.5
JMIC LR LR
comp=Z,500nm,23.5s,MS5.0
BRG Berggiesshubel 103.57 323 *e*Pdiff Pdif 11 07 03.5 +0.5
BRG *e*PP PP 11 11 20.1 +0.5
BRG Berggiesshubel 103.57 323 *i*P Pdif 11 07 03.8 +0.8
comp=Z,21nm,1.4s
BRG *e*PP PP 11 11 23.4 +3.8
comp=Z,22nm,2.0s
BRG S Sdif 11 18 27.0 -20
BRG *e* 11 26 38.0
BRG
comp=N,869nm,26.6s
BRG
comp=E,533nm,21.4s
BRG
comp=Z,533nm,21.4s
BRG Berggiesshubel 103.57 323 *i*P Pdif 11 07 03.8 +0.8
BRG *e* 11 11 23.5
BRG S Sdif 11 18 27.0 -20
BRG pmax pmax
comp=Z,21nm,1.4s
BRG MLR MLR
comp=N,869nm,26.6s
BRG MLR MLR
comp=E,533nm,21.4s
BRG MLR MLR
comp=Z,533nm,21.4s
BRG Berggiesshubel 103.57 323 *i*P Pdif 11 07 03.8 +0.8
comp=Z,21nm,1.4s
BRG *e*PP PP 11 11 23.4 +3.8
BRG S Sdif 11 18 27.0 -20
BRG *e* 11 26 38.0
BRG LR LR
comp=Z,530nm,21.4s,MS5.0
YKA Yellowknife Ar 103.86 24 PKiKP PKiKP 11 11 20.5 -1.2
comp=Z,1.7nm,1.0s,baz=297,slow=6.9,SNR=3.8
FBE Freiberg 103.91 323 *e*Pdiff Pdif 11 07 04.7 +0.2
FBE *e*PP PP 11 11 24.3 +2.1
CRES Cresnjev 103.92 317 *e*PKiKP Pdif 11 07 04.9 +0.3
CLL Collm 104.01 323 *e*Pdiff Pdif 11 07 05.5 +0.6
comp=Z,40nm,1.7s
CLL *e*PP PP 11 11 24.4 +1.5
CLL *e*PPP 11 13 33.3
CLL *e*PS PS 11 20 40.1 +5.0
CLL *e*PPS 11 21 31.4
CLL *e*SS SS 11 26 10.3 +4.0
CLL *e*SSS 11 30 05.1
CLL *e*SSSS 11 33 41.6
CLL *e*L 11 56 20.4
comp=Z,1μm,22.0s
CLL Collm 104.01 323⇓*i*PDIF Pdif 11 07 05.6 +0.7
CLL *e*PP PP 11 11 25.0 +2.1
CLL *e*PPP 11 13 31.0
CLL *e* 11 15 42.0
CLL *e*PS PS 11 20 41.0 +5.9
CLL *e*PPS 11 21 37.0
CLL *e*SS SS 11 26 05.0 -1.3
CLL *e*SSS 11 30 13.0
CLL *e* 11 31 25.0
CLL *e* 11 33 51.0
CLL Collm 104.01 323⇓*i*Pdif Pdif 11 07 05.6 +0.7
comp=Z,38nm,1.7s
CLL *e*PP PP 11 11 25.0 +2.1
CLL *e*PPP 11 13 31.0
CLL *e*PPPP 11 15 42.0
CLL *e*PS PS 11 20 41.0 +5.9
CLL *e*PPS 11 21 37.0
CLL *e*SS SS 11 26 05.0 -1.3
CLL *e*SSS 11 30 13.0
CLL *e*x x 11 31 25.0
CLL *e*SSSS 11 33 51.0
CLL LmH 11 55 00.0
comp=N,900nm,22.0s
CLL LmH 11 55 00.0
comp=E,1μm,21.4s
CLL LmV 11 56 00.0
comp=Z,1μm,20.9s
CLL Collm 104.01 323 *i*P Pdif 11 07 05.6 +0.7
CLL *e* 11 11 25.0
CLL pmax pmax
comp=Z,21nm,1.7s
CLL MLR MLR
comp=Z,1μm,20.9s,MS5.4
CLL Collm 104.01 323 *i*Pdif Pdif 11 07 05.6 +0.7
comp=Z,38nm,1.7s
CLL *e*PP PP 11 11 25.0 +2.1
CLL LR LR
comp=Z,1μm,20.9s,MS5.4
MOA Molln 104.20 320⇓*i*Pdiff Pdif 11 07 06.1 +0.3
comp=Z,21nm,1.3s
KHC Kasperske Hory 104.29 321 *e*PDIF Pdif 11 07 06.7 +0.5
KHC AMS AMS 11 56 20.0
comp=Z,2μm,22.4s
GEC2 GERESS Array S 104.29 321 *e*Pdiff Pdif 11 07 06.4 +0.2
GEC2 *e*PP PP 11 11 24.1 -0.9
GERES GERESS Array B 104.29 321 *e*Pdiff Pdif 11 07 06.9 +0.8
comp=Z,3.1nm,0.9s,baz=71,slow=5.8,SNR=6.0
GERES PP PP 11 11 23.7 -1.2
comp=Z,1.4nm,0.7s,baz=113,slow=7.6,SNR=3.5
GERES GERESS Array B 104.29 321 P Pdif 11 07 06.9 +0.7
GERES 11 11 23.7
GERES pmax pmax
comp=Z,3.0nm,0.9s
MUD Monsted U'grnd 104.41 329 *i*P Pdif 11 07 06.7 0.0
MUD *i* 11 11 28.9
MUD
comp=Z,920nm,19.0s
MUD Monsted U'grnd 104.41 329 *e*P Pdif 11 07 06.7 0.0
MUD *i* 11 11 28.9
MUD MLR MLR
comp=Z,930nm,19.0s,MS5.3
MUD Monsted U'grnd 104.41 329 *e*P Pdif 11 07 06.7 0.0
MUD *i* 11 11 28.9
TANN Tannenbergstha 104.60 322 *e*Pdiff Pdif 11 07 08.2 +0.6
TANN *e*PP PP 11 11 29.5 +2.2
BER Bergen 104.65 334 AMS AMS 11 58 23.8
comp=Z,2μm,19.5s,MS5.6
BER Bergen 104.65 334 PFAKE 11 07 20.0 +12
BER LR LR
comp=Z,2μm,19.5s,MS5.6
NKC Novy Kostel 104.67 322 *e*PDIF Pdif 11 07 08.1 +0.2
WERD Werda 104.69 322 *e*Pdiff Pdif 11 07 09.2 +1.2
WERN Wernitzgruen 104.69 322 *e*Pdiff Pdif 11 07 08.1 +0.1
WERN *e*PP PP 11 11 29.0 +1.0
GUNZ Gunzen 104.70 322 *e*Pdiff Pdif 11 07 08.5 +0.5
GUNZ *e*PP PP 11 11 30.0 +2.0
BSEG Bad Segeberg 104.71 326 *e*Pdiff Pdif 11 07 08.3 +0.2
WET Wettzell 104.72 321 *e*Pdiff Pdif 11 07 08.8 +0.7
WET *e*PP PP 11 11 30.8 +2.6
MANZ Manzenberg 104.95 322 *e*Pdiff Pdif 11 07 09.6 +0.5
MANZ *e*PP PP 11 11 33.3 +3.4
ROTZ Rotzenmuhle 104.95 322 *e*Pdiff Pdif 11 07 10.2 +1.0
ROTZ *e*PP PP 11 11 31.6 +1.7
MOX Moxa 105.05 323 *e*Pdiff Pdif 11 07 09.4 -0.2
MOX *e*PP PP 11 11 30.9 +0.3
MOX Moxa 105.05 323 *e*PDIFF Pdif 11 07 11.1 +1.5
MOX
comp=Z,700nm,22.0s
NRDL Niedersach Rie 105.32 325 *e*Pdiff Pdif 11 07 11.5 +0.7
NRDL *e*PP PP 11 11 36.7 +4.0
COR Corvallis 105.47 44 PFAKE 11 11 40.0 +15
COR LR LR
comp=Z,859nm,20.0s,MS5.3
GRA1 Grafenberg Arr 105.59 322 *e*Pdif Pdif 11 07 12.6 +0.6
GRA1 *e*PP PP 11 11 38.3 +3.7
GRA1 LR LR
comp=Z,1μm,21.7s,MS5.3
GRF Grafenberg Arr 105.59 322 *e*Pdiff Pdif 11 07 12.6 +0.6
GRF *e*PP PP 11 11 38.3 +3.7
GRF *e*L 11 58 52.0
comp=Z,984nm,21.7s
UBBA Unterbreizbach 105.96 323 *e*Pdiff Pdif 11 07 13.7 +0.1
WTTA Wattenberg 106.07 319⇓*i*P Pdif 11 07 14.2 +0.1
comp=Z,23nm,1.2s
WTTA Wattenberg 106.07 319⇓*i*P Pdif 11 07 14.3 +0.2
WTTA pmax pmax
comp=Z,23nm,1.2s
TSUM Tsumeb 106.47 250 PFAKE 11 11 40.0 +13
TSUM LR LR
comp=Z,2μm,20.0s,MS5.7
YBH Yreka Blue Hor 106.62 46 PFAKE 11 11 40.0 +13
YBH LR LR
comp=Z,720nm,21.0s,MS5.2
HOPS Hopland 107.03 49 PFAKE 11 11 40.0 +12
HOPS LR LR
comp=Z,821nm,20.0s,MS5.3
WDC Whiskeytown Da 107.04 47 PFAKE 11 11 40.0 +12
WDC LR LR
comp=Z,1μm,22.0s,MS5.3
TNS Taunus Mts 107.09 323 *e*Pdiff Pdif 11 07 19.8 +1.1
DAVA Damuels 107.20 320⇑*i*P Pdif 11 07 20.9 +1.7
comp=Z,19nm,1.5s
BUG Bochum--Univer 107.34 325 *e*Pdiff Pdif 11 07 21.5 +1.7
HAWA Hanford 107.48 41 PFAKE 11 11 40.0 +12
HAWA LR LR
comp=Z,60nm,21.0s,MS4.1
BFO Black Forest 107.83 321 *e*PP PP 11 11 54.3 +3.2
NEW Newport 108.39 39 PP PP 11 11 52.8 -2.4
comp=Z,1.0nm,0.5s,baz=309,slow=8.0,SNR=3.6
SAO San Andreas Ge 108.81 51 PFAKE 11 11 40.0 +9.0
SAO LR LR
comp=Z,883nm,19.0s,MS5.3
CMB Columbia Colle 109.31 50 PFAKE 11 11 40.0 +8.1
CMB LR LR
comp=Z,949nm,20.0s,MS5.4
WVOR Wild Horse Val 109.33 45 PFAKE 11 11 40.0 +8.1
WVOR LR LR
comp=Z,603nm,20.0s,MS5.2
BMO Blue Mountains 109.46 42 PFAKE 11 11 50.0 +18
BMO LR LR
comp=Z,707nm,21.0s,MS5.2
NVAR Mina Array Bea 110.78 49 PKiKP PKiKP 11 11 37.1 +2.4
comp=Z,1.8nm,1.1s,baz=235,slow=3.0,SNR=6.1
NVAR PP PP 11 12 12.1 -0.3
comp=Z,1.1nm,0.8s,baz=257,slow=6.9,SNR=4.2
NVAR PKKPbc PKKPbc 11 22 34.7 +1.9
comp=Z,1.0nm,1.1s,baz=108,slow=3.3,SNR=4.6
MSO Missoula 110.93 39 *e*P PKiKP 11 11 36.3 +1.4
MSO LR LR
comp=Z,538nm,21.0s,MS5.1
BMN Battle Mountai 110.97 46 PFAKE 11 11 50.0 +15
BMN LR LR
comp=Z,645nm,22.0s,MS5.2
ESK Eskdalemuir 111.12 331 PFAKE 11 11 50.0 +15
ESK LR LR
comp=Z,277nm,20.0s,MS4.8
SNCC San Nicolas Is 111.20 54 PFAKE 11 11 50.0 +15
SNCC LR LR
comp=Z,1μm,20.0s,MS5.5
BORG Borgarnes 111.33 345 PFAKE 11 11 50.0 +14
BORG LR LR
comp=Z,346nm,19.0s,MS5.0
ISA Isabella 111.42 52 PFAKE 11 11 50.0 +14
ISA LR LR
comp=Z,206nm,19.0s,MS4.7
TPH Tonopah 111.69 49 PFAKE 11 11 50.0 +14
TPH LR LR
comp=Z,866nm,20.0s,MS5.3
HLID Hailey 111.87 42 *e*P PKiKP 11 11 39.5 +2.8
HLID LR LR
comp=Z,739nm,21.0s,MS5.2
DAC Darwin (Calif) 111.94 51 PFAKE 11 11 50.0 +13
DAC LR LR
comp=Z,878nm,20.0s,MS5.3
ELK Elko 112.29 46 PFAKE 11 11 50.0 +12
ELK LR LR
comp=Z,871nm,22.0s,MS5.3
MCMT McKenzie Canyo 112.42 41 *e*P PKiKP 11 11 40.8 +3.0
BOZ Bozeman (W) 112.87 40 *e*PKiKP PKiKP 11 11 40.3 +1.7
BOZ MLR MLR
comp=Z,760nm,21.0s,MS5.3
EGMT Eagleton 112.99 37 *e*P PKiKP 11 11 40.4 +1.5
EGMT LR LR
comp=Z,590nm,21.0s,MS5.2
FFC Flin Flon 113.56 28 PFAKE 11 11 50.0 +10
FFC LR LR
comp=Z,182nm,22.0s,MS4.6
PFO Pinyon Flat Ob 113.58 53 PFAKE 11 11 50.0 +10
PFO LR LR
comp=Z,243nm,21.0s,MS4.8
YMR Madison River 113.71 40 PFAKE 11 11 50.0 +10
YMR LR LR
comp=Z,2μm,22.0s,MS5.7
GCMT Greycliff 114.05 39 *e*P PKiKP 11 11 43.0 +2.1
DUG Dugway 114.22 45 *e*PKiKP PKiKP 11 11 43.8 +2.6
DUG MLR MLR
comp=Z,729nm,22.0s,MS5.2
AHID Auburn Hatcher 114.41 42 PFAKE 11 11 50.0 +8.4
AHID LR LR
comp=Z,677nm,21.0s,MS5.2
HWUT Hardware Ranch 114.56 44 PFAKE 11 11 50.0 +8.1
HWUT LR LR
comp=Z,856nm,22.0s,MS5.3
PMSA Palmer Station 114.65 176 PFAKE 11 11 50.0 +8.0
PMSA LR LR
comp=Z,2μm,20.0s,MS5.6
MPU Maple Canyon 115.12 45 PFAKE 11 12 00.0 +17
MPU LR LR
comp=Z,1μm,21.0s,MS5.4
MSU Marysvale 115.29 47 *e*PKiKP PKPdf 11 11 46.2 +2.9
BW06 Boulder Array 115.44 42 PFAKE 11 12 00.0 +16
BW06 LR LR
comp=Z,713nm,21.0s,MS5.2
PDAR Pinedale Array 115.44 42 PKP PKPdf 11 11 45.2 +1.7
comp=Z,2.8nm,1.1s,baz=236,slow=1.6,SNR=13
PDAR PKKPbc PKKPbc 11 22 20.5 +3.4
comp=Z,2.6nm,1.1s,baz=111,slow=6.5,SNR=4.2
LAO LASA Array 115.73 37 *e*PKPdf PKPdf 11 11 45.0 +0.9
LAO LR LR
comp=Z,1μm,22.0s,MS5.4
SRU San Rafael 116.26 46 *e*PKiKP PKPdf 11 11 47.4 +2.3
WUAZ Wupatki 116.96 50 *e*PKPdf PKPdf 11 11 49.3 +2.8
WUAZ LR LR
comp=Z,1μm,20.0s,MS5.5
PV10 Paradox Valley 117.62 46 *e*PKPdf PKPdf 11 11 50.2 +2.5
PV01 Paradox Valley 118.06 46 *e*PKPdf PKPdf 11 11 51.3 +2.7
RSSD Black Hills 118.36 38 *e*PKiKP PKPdf 11 11 50.4 +1.2
RSSD MLR MLR
comp=Z,759nm,21.0s,MS5.3
TUC Tucson 118.52 53 PFAKE 11 12 00.0 +11
TUC LR LR
comp=Z,666nm,20.0s,MS5.3
ULM Lac du Bonnet 119.28 29 PKP PKPdf 11 11 51.6 +0.6
comp=Z,4.0nm,0.9s,baz=309,slow=3.9,SNR=5.2
ULM Lac du Bonnet 119.28 29 PFAKE 11 12 00.0 +9.0
ULM LR LR
comp=Z,1μm,21.0s,MS5.4
ISCO Idaho Springs 119.42 43 *e*PKiKP PKPdf 11 11 53.4 +2.2
ISCO MLR MLR
comp=Z,627nm,20.0s,MS5.2
ESDC Sonseca Array 119.43 317 PKP PKPdf 11 11 52.3 +1.0
comp=Z,0.3nm,0.3s,baz=38,slow=2.6,SNR=7.7
ESDC PP PP 11 13 14.0 +0.7
comp=Z,4.1nm,0.9s,baz=68,slow=6.7,SNR=4.5
ESLA Sonseca Array 119.43 317 PFAKE 11 12 00.0 +8.8
ESLA LR LR
comp=Z,3μm,20.0s,MS6.0
SDCO Great Sand Dun 120.42 45 PFAKE 11 12 10.0 +17
SDCO LR LR
comp=Z,916nm,21.0s,MS5.4
LAZ Ladron 120.61 49 *e*PKPdf PKPdf 11 11 56.2 +2.7
LENM Lemitar 120.82 50 *e*PKPdf PKPdf 11 11 55.9 +1.9
ANMO Albuquerque 120.90 49 PKiKP PKPdf 11 11 56.4 +2.3
ANMO Albuquerque 120.90 49 *e*PKPdf PKPdf 11 11 56.3 +2.2
ANMO LR LR
comp=Z,706nm,20.0s,MS5.3
PVRL Vila Real 121.15 320 *e*PKP PKPdf 11 11 57.3 +2.7
PCBR Castelo Branco 121.73 318 *e*PKP PKPdf 11 11 56.8 +1.1
PESTR Estremoz 122.29 317 *e*LR LR 11 53 07.2
TOA0 Torodi Ar. Sit 122.61 285 *e*PKPdf PKPdf 11 11 58.8 +1.5
TORD Torodi Ar. Bea 122.61 285 PKP PKPdf 11 11 59.0 +1.7
comp=Z,18nm,0.8s,baz=58,slow=1.5,SNR=60
TORD SKiKP 11 15 32.5
comp=Z,7.3nm,1.0s,baz=55,slow=1.0,SNR=6.6
TORD PKKPbc PKKPbc 11 21 54.0 +3.0
comp=Z,4.1nm,0.8s,baz=271,slow=3.0,SNR=12
MNTX Cornudas Mount 123.02 52 *e*PKPdf PKPdf 11 11 59.8 +1.6
MNTX LR LR
comp=Z,807nm,20.0s,MS5.4
PTEO Sao Teotonio 123.72 316 *e*PKP PKPdf 11 12 01.5 +2.0
SCHQ Schefferville 124.84 8 PKP PKPdf 11 12 02.6 +1.0
comp=Z,6.7nm,0.7s,baz=347,slow=4.6,SNR=16
SCHQ Schefferville 124.84 8 PKP PKPdf 11 12 02.6 +1.0
SCHQ LR LR
comp=Z,1μm,22.0s,MS5.5
SCIA State Center 126.11 35 *e*PKPdf PKPdf 11 12 05.4 +1.4
WMOK Wichita Mounta 126.62 45 PKiKP PKPdf 11 12 06.9 +1.9
WMOK Wichita Mounta 126.62 45 *e*PKPdf PKPdf 11 12 06.7 +1.7
WMOK LR LR
comp=Z,607nm,20.0s,MS5.3
JFWS Jewell Farm 127.09 32 *e*PKiKP PKPdf 11 12 06.7 +0.8
JFWS MLR MLR
comp=Z,755nm,21.0s,MS5.3
JCT Junction City 127.88 51 *e*PKPdf PKPdf 11 12 09.7 +2.3
JCT LR LR
comp=Z,680nm,21.0s,MS5.3
DBIC Dimbokro 129.77 278 PKP PKPdf 11 12 13.8 +2.8
comp=Z,13nm,0.9s,baz=58,slow=2.1,SNR=11
DBIC SKPbc 11 15 33.0
comp=Z,11nm,0.9s,baz=104,slow=5.5,SNR=7.1
DBIC Dimbokro 129.77 278 PKP PKPdf 11 12 13.8 +2.8
DBIC SKPbc 11 15 33.0
DBIC LR LR
comp=Z,758nm,22.0s,MS5.3
FVM French Village 130.28 37 *e*PKiKP PKPdf 11 12 14.0 +2.0
MIAR Mount Ida 130.35 43 *e*PKPdf PKPdf 11 12 14.8 +2.7
MIAR LR LR
comp=Z,951nm,21.0s,MS5.5
AAM Ann Arbor 130.86 28 PFAKE 11 12 30.0 +17
AAM LR LR
comp=Z,859nm,22.0s,MS5.4
NATX Nacogdoches 131.11 46 PFAKE 11 12 30.0 +16
NATX LR LR
comp=Z,579nm,20.0s,MS5.3
HKT Hockley 131.16 49 *e*PKPdf PKPdf 11 12 17.4 +3.7
HKT LR LR
comp=Z,772nm,20.0s,MS5.4
WCI Wyandotte Cave 132.51 34 *e*PKPdf PKPdf 11 12 18.8 +2.6
WCI LR LR
comp=Z,928nm,22.0s,MS5.5
ERPA Erie 132.67 25 PFAKE 11 12 30.0 +13
ERPA LR LR
comp=Z,793nm,20.0s,MS5.4
ACSO Alum Creek Sta 132.78 29 *e*PKPdf PKPdf 11 12 18.1 +1.3
ACSO LR LR
comp=Z,409nm,21.0s,MS5.1
WVT Waverly 133.06 37 *e*PKiKP PKPdf 11 12 18.1 +0.9
WVT MLR MLR
comp=Z,870nm,22.0s,MS5.4
OXF Oxford 133.12 40 PFAKE 11 12 30.0 +13
OXF LR LR
comp=Z,651nm,20.0s,MS5.3
NCB Newcomb 133.28 19 PFAKE 11 12 30.0 +12
NCB LR LR
comp=Z,861nm,20.0s,MS5.5
PLAL Pickwick Lake 133.66 38 *e*PKPdf PKPdf 11 12 19.4 +1.0
PLAL LR LR
comp=Z,926nm,22.0s,MS5.5

LBNH	**Lisbon**	**133.75**	**17**	PFAKE		11 12 30.0	+11
LBNH				LR	LR		
	comp=Z,812nm,20.0s,MS5.4						
CMLA	**Cha da Macela**	**134.04**	**327**	PFAKE		11 12 30.0	+11
CMLA				LR	LR		
	comp=Z,266nm,21.0s,MS4.9						
BINY	**Binghamton**	**134.21**	**22**	PFAKE		11 12 30.0	+11
BINY				LR	LR		
	comp=Z,1μm,22.0s,MS5.5						
MCWV	**Mont Chateau**	**134.72**	**27**	PFAKE		11 12 30.0	+10
MCWV				LR	LR		
	comp=Z,701nm,20.0s,MS5.4						
SSPA	**Standing Stone**	**134.78**	**25**	PFAKE		11 12 30.0	+10
SSPA				LR	LR		
	comp=Z,932nm,22.0s,MS5.5						
HRV	**Harvard--Oak R**	**135.44**	**18**	PFAKE		11 12 30.0	+8.3
HRV				LR	LR		
	comp=Z,1μm,22.0s,MS5.5						
LRAL	**Lakeview Retre**	**135.60**	**40**	*e*PKPdf	PKPdf	11 12 23.4	+1.4
LRAL				LR	LR		
	comp=Z,857nm,20.0s,MS5.5						
MYNC	**Murphy**	**135.97**	**35**	*e*PKIKP	PKPdf	11 12 24.8	+2.1
MYNC				MLR	MLR		
	comp=Z,794nm,21.0s,MS5.4						
ELN	**Prospectdale**	**136.20**	**30**	*e*PKPdf	PKPdf	11 12 23.9	+0.8
BLA	**Blacksburg**	**136.38**	**30**	PFAKE		11 12 40.0	+17
BLA				LR	LR		
	comp=Z,65nm,22.0s,MS4.3						
PLCA	**Paso Flores**	**136.65**	**163**	PKP	PKPdf	11 12 26.1	+2.1
	comp=Z,13nm,1.1s,baz=203,slow=5.6,SNR=9.7						
PLCA				SKPbc	SKPbc	11 15 57.5	+6.1
	comp=Z,11nm,1.1s,baz=243,slow=4.6,SNR=9.2						
PLCA	**Paso Flores**	**136.65**	**163**	PKP	PKPdf	11 12 26.1	+2.1
PLCA				SKPbc	SKPbc	11 15 57.5	+6.1
PLCA				LR	LR		
	comp=Z,807nm,20.0s,MS5.5						
CBN	**Corbin**	**137.02**	**26**	PFAKE		11 12 40.0	+15
CBN				LR	LR		
	comp=Z,1μm,21.0s,MS5.6						
TRQA	**Tornquist**	**141.19**	**171**	PFAKE		11 12 50.0	+18
TRQA				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
DWPF	**Disney**	**142.45**	**40**	PFAKE		11 12 50.0	+15
DWPF				LR	LR		
	comp=Z,737nm,22.0s,MS5.4						
CFAA	**Coronel Fontan**	**145.74**	**159**	PKPbc	PKPbc	11 12 42.6	+1.8
	comp=Z,3.3nm,0.8s,baz=217,slow=2.8,SNR=47						
TLL	**Tololo Astrono**	**146.02**	**155**	*e*P	PKPdf	11 12 34.0	-6.7
CNGN	**Cerro Negro**	**146.17**	**68**	*e*P	PKPdf	11 12 43.0	+2.0
CNGN				*i*		11 13 04.7	
	comp=E,27nm,0.7s						
BBSR	**BB Station**	**146.84**	**15**	*e*PKPdf	PKPdf	11 12 42.0	-0.1
BBSR				*e*PKPbc	PKPbc	11 12 45.0	+1.0
BOA	**Boaco**	**147.08**	**67**	*e*P	PKPbc	11 12 46.9	+2.2
MGV	**Manicaragua**	**147.33**	**47**	*e*P	PKPbc	11 12 46.4	+1.0
LMGC	**Las Mercedes**	**150.77**	**47**	*e*P	PKiKP	11 12 57.9	+3.2
CTCR	**Cotoan**	**150.92**	**72**	*e*P	PKPbc	11 12 52.7	-1.7
CNI	**Changuinola**	**151.01**	**71**	*e*P	PKPbc	11 12 53.5	-1.1
BRU2	**Volcan**	**151.01**	**72**	*e*P	PKPdf	11 12 51.5	+2.6
DVD	**David**	**151.34**	**73**	*e*P	PKPbc	11 12 53.4	-2.0
CPUP	**Villa Florida**	**153.34**	**175**	PKPbc	PKPbc	11 13 02.2	+2.4
CPUP	**Villa Florida**	**153.34**	**175**	PKP	PKPdf	11 12 54.3	+2.0
	comp=E,8.8nm,1.1s,baz=340,slow=2.8,SNR=6.1						
CPUP				PKPbc	PKPbc	11 13 02.6	+2.8
	comp=E,31nm,1.0s,baz=188,slow=1.2,SNR=29						
CPUP	**Villa Florida**	**153.34**	**175**	*e*PKPdf	PKPdf	11 12 55.4	+3.1
CPUP				*e*PKPbc	PKPbc	11 13 02.7	+2.8
LVC	**Limon Verde**	**153.34**	**150**	PKP	PKPdf	11 12 54.3	+2.0
	comp=E,2.0nm,0.7s,baz=24,slow=0.0,SNR=4.0						
LVC				PKPbc	PKPbc	11 13 03.6	+3.7
	comp=E,13nm,0.8s,baz=313,slow=0.0,SNR=19						
ACH	**Altos**	**153.67**	**71**	*e*P	PKPdf	11 12 56.4	+3.6
CAM3	**Guarapari**	**154.79**	**213**	⇓*i*P	PKPab	11 13 20.0	+1.8
CAM3				*i*		11 13 21.3	
CAM3				*i*		11 13 24.4	
CAM3				*i*		11 13 30.6	
CAM3				*i*		11 13 39.2	
NNA	**Nana**	**154.92**	**120**	PKP	PKPdf	11 12 57.3	+2.8
	comp=E,13nm,1.0s,baz=8.4,slow=2.9,SNR=6.1						
NNA				PKPbc	PKPbc	11 13 03.7	+0.4
	comp=E,8.3nm,0.8s,baz=270,slow=2.8,SNR=4.5						
NNA	**Nana**	**154.92**	**120**	*e*PKPdf	PKPdf	11 12 57.0	+2.4
ATAH	**Atahualpa**	**155.37**	**108**	PKP	PKPdf	11 13 00.0	+4.9
	comp=E,13nm,1.1s,baz=316,slow=2.8,SNR=14						
ATAH				PKPab	PKPab	11 13 22.6	+1.9
	comp=E,18nm,1.0s,baz=290,slow=4.6,SNR=8.9						
LPAZ	**La Paz**	**158.86**	**142**	PKP	PKPdf	11 13 03.6	+4.0
	comp=E,21nm,1.3s,baz=60,slow=1.1,SNR=20						
LPAZ				PKPab	PKPab	11 13 39.0	+3.2
	comp=E,15nm,0.7s,baz=172,slow=4.9,SNR=14						
PTP	**Ponta Puerca**	**159.32**	**30**	*e*P	PKPdf	11 12 53.3	-6.8
CPD	**Cerro la Pandu**	**159.34**	**31**	*e*PKIKP	PKPdf	11 13 01.6	+1.5
ROSC	**El Rosal**	**160.01**	**77**	PKP	PKPdf	11 13 04.4	+3.5
	comp=E,4.3nm,0.4s,baz=97,slow=21,SNR=12						
ROSC				PKPab	PKPab	11 13 41.6	+0.8
	comp=E,19nm,0.9s,baz=91,slow=22,SNR=3.8						
SDV	**Santo Domingo**	**162.13**	**61**	*e*PKPdf	PKPdf	11 13 05.7	+2.6
SIV	**San Ignacio**	**162.60**	**159**	PKP	PKPdf	11 13 06.9	+3.3
	comp=E,9.3nm,1.1s,baz=204,slow=1.0,SNR=18						
SIV				PKPab	PKPab	11 13 52.0	-0.1
	comp=E,5.5nm,0.9s,baz=203,slow=3.2,SNR=4.7						
BDFB	**Brasilia**	**162.72**	**203**	PKP	PKPdf	11 13 06.8	+3.0
	comp=E,12nm,1.1s,baz=138,slow=2.3,SNR=6.3						
BDFB				PKPab	PKPab	11 13 54.0	+1.4
	comp=E,4.9nm,0.7s,baz=58,slow=2.0,SNR=4.1						
BDFB	**Brasilia**	**162.72**	**203**	PKP2	PKPab	11 13 54.0	+1.4
BDFB				pmax	pmax		
	comp=E,5.0nm,0.7s						
SAML	**Samuel**	**167.54**	**138**	*e*PKPdf	PKPdf	11 13 10.2	+2.4

NIED ***29*** *10:55:00, 40.30N×14.250E, h41km, Mw3.8 Best double couple: M0 5.54000×10^14 NP1:φs35.00000°, δ76.00000°, λ105.00000°. NP2:φs168.00000°, δ20.00000°, λ46.00000°.*

ISCJB ***29*** *10:55:22.7±1.1, 40.30N±0.05×14.250E±0.10, h46km±11km, mb4.0/5, Error ellipse: s-maj=12.7km s-min=8.6km az=176.1*

JMA ***29*** *10:55:22.8±0.1, 40.26N×14.250E, h34km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs188.00000°, δ23.00000°, λ87.00000°. NP2:φs11.00000°, δ67.00000°, λ91.00000°. Principal axes: T Plg68.0000°, Azm283.0000°; N Plg1.0000°, Azm190.0000°; P Plg22.0000°, Azm100.0000°;*

JMA Felt I J1.

NEIC ***29*** *10:55:22.8, 40.26N×14.250E, h34km, MG4.0(JMA), After JMA.*

NEIC Recorded [1 JMA] in Iwate Prefecture.

IDC ***29*** *10:55:25.9±3.3, 40.41N×14.238E, h53km±28km, mb3.8/5, mb1 3.8/7, mb1mx3.6/25, mbtmp4.0/7, ML3.2/2, MS2.7/1, Ms1 2.7/1, ms1mx2.4/38, Error ellipse: s-maj=51.1km s-min=27.5km az=130.0*

ISC 29 10:55:23.7±1.0, 4031N±0.05×1425E±0.1, h39km±11km, n20, σ1$00/28, mb4.0/5, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.60**	**232**	⇓P	**Pn**	**10 55 34.4**	**-1.3**
JTH				S	**Sn**	**10 55 42.8**	**-1.4**
JANG	**Nango**	**0.74**	**276**	⇓P	**Pn**	**10 55 37.0**	**-0.6**
JANG				S	**Sn**	**10 55 47.1**	**-0.6**
MIYJ	**Miyakonagasawa**	**0.89**	**215**	⇓P	**Pn**	**10 55 38.2**	**-1.5**
JKZ	**Kuzumaki**	**0.94**	**250**	⇓P	**Pn**	**10 55 39.8**	**-0.6**
JKZ				*e*S	**Sn**	**10 55 51.9**	**-0.7**
JTM	**Tenmabayashi**	**1.18**	**295**	⇓P	**Pn**	**10 55 43.7**	**0.0**
JTM				*e*S	**Sn**	**10 55 58.8**	**+0.3**
JOM	**Ohasama**	**1.23**	**228**	⇓P	**Pn**	**10 55 44.2**	**-0.2**
JOM				*e*S	**Sn**	**10 55 59.9**	**0.0**
JAH	**Hinai**	**1.42**	**266**	⇓P	**Pn**	**10 55 47.4**	**+0.5**
JAH				*e*S	**Sn**	**10 56 05.6**	**+1.3**
JOT	**Ohata**	**1.53**	**315**	⇓P	**Pn**	**10 55 48.6**	**+0.1**
JMK	**Ichinoseki**	**1.67**	**216**	P	**Pn**	**10 55 50.5**	**+0.1**
ASAJ	**Asahikawa**	**3.81**	**1**	P	**Pn**	**10 56 20.6**	**+0.7**
	1.3nm,0.3s,baz=208,slow=14,SNR=27						
ASAJ				S	**Sn**	**10 57 10.8**	**+7.4**
	3.1nm,0.3s,baz=112,slow=30,SNR=8.3						
MAJO	**Matsushiro**	**5.04**	**223**	*e*Pn	**Pn**	**10 56 39.1**	**+2.5**
	8.7nm,0.5s						
MAT	**Matsushiro**	**5.04**	**223**	P	**Pn**	**10 56 38.7**	**+2.0**
MAT				*e*S	**Sn**	**10 57 46.9**	**+13**
MJAR	**Matsushiro Arr**	**5.04**	**223**	P	**Pn**	**10 56 38.9**	**+2.2**
	1.2nm,0.3s,baz=30,slow=14,SNR=10						
MJAR				LR	LR	10 58 49.7	
	comp=Z,80nm,21.3s,baz=125,slow=40						
SONM	**Songino Array**	**26.81**	**298**	P	**P**	**11 01 00.4**	**+0.3**
	0.7nm,0.6s,mb3.4,baz=94,slow=7.6,SNR=4.8						
KSM	**Kuching**	**48.43**	**225**	*e*P	**P**	**11 03 56.6**	**-5.4**
BVAR	**Borovoye Array**	**49.04**	**310**	P	**P**	**11 04 06.5**	**-0.2**
	1.5nm,0.3s,mb4.5,baz=78,slow=9.4,SNR=7.1						
BVAR	**Borovoye Array**	**49.04**	**310**	P	**P**	**11 04 06.5**	**-0.2**
INK	**Inuvik**	**51.11**	**28**	P	**P**	**11 04 22.3**	**-0.1**
	1.3nm,0.9s,mb3.8,baz=274,slow=7.3,SNR=4.2						
FINES	**FINESS Array B**	**66.32**	**332**	P	**P**	**11 06 07.0**	**-1.2**
	1.5nm,0.7s,mb4.1,baz=48,slow=5.7,SNR=4.4						
HFS	**Hagfors**	**71.45**	**336**	P	**P**	**11 06 39.3**	**-0.7**
	5.0nm,1.1s,mb4.4,baz=39,slow=7.4,SNR=6.5						

IDC ***29*** *11:00:15.1±1.0, 0.31S×125.11E, h0km, mb4.4/6, mb1 4.5/6, mb1mx4.2/15, mbtmp4.4/6, Error ellipse: s-maj=59.1km s-min=20.4km az=68.0*

ISCJB ***29*** *11:00:17.8±0.7, 0.03S±0.1×125.4E±0.03, h33km, mb4.4/7, Error ellipse: s-maj=37.0km s-min=13.1km az=156.0*

NEIC ***29*** *11:00:20.0±0.6, 0.26S×125.38E, h35km, mb4.5/1, Error ellipse: s-maj=30.0km s-min=10.7km az=80.0*

ISC 29 11:00:20.2±0.7, 03S±0.1×125.4E±0.2, h35km, n11, σ0$44/10, mb4.4/7, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.45**	**156**	P	**P**	**11 05 04.4**	**-0.9**
	7.4nm,0.6s,mb4.2,baz=331,slow=12,SNR=7.4						
WRA				PcP	PcP	11 09 10.9	+3.3
	4.2nm,1.1s,baz=280,slow=3.9,SNR=4.6						
MBWA	**Marble Bar**	**21.48**	**194**	*e*P	**P**	**11 05 05.7**	**0.0**
ASAR	**Alice Springs**	**24.70**	**161**	PcP	PcP	11 09 19.4	+5.0
	1.8nm,0.9s,baz=335,slow=4.1,SNR=5.0						
STKA	**Stephens Creek**	**35.00**	**155**	P	**P**	**11 07 09.8**	**+0.6**
	11nm,1.0s,mb4.8,baz=332,slow=11,SNR=3.5						
STKA	**Stephens Creek**	**35.00**	**155**	P	**P**	**11 07 09.8**	**+0.6**
MJAR	**Matsushiro Arr**	**38.52**	**17**	P	**P**	**11 07 39.2**	**+0.1**
	2.3nm,0.7s,mb4.0,baz=193,slow=7.8,SNR=4.8						
SONM	**Songino Array**	**50.66**	**344**	P	**P**	**11 09 16.2**	**+0.3**
	2.3nm,0.8s,mb4.2,baz=161,slow=12,SNR=5.6						
MKAR	**Makanchi Array**	**60.08**	**327**	P	**P**	**11 10 23.5**	**-0.3**
	3.6nm,0.6s,mb4.6,baz=123,slow=7.4,SNR=13						
CASY	**Casey**	**66.72**	**186**	*e*P	**P**	**11 11 08.2**	**+0.5**
	2.2nm,0.5s,mb4.4						
AKTK	**Aktyubinsk**	**75.94**	**323**	P	**P**	**11 12 03.1**	**-0.2**
AKTO	**Aktyubinsk**	**75.94**	**323**	P	**P**	**11 12 03.1**	**-0.2**
	4.2nm,0.6s,mb4.5,baz=94,slow=8.5,SNR=8.2						

LDG ***29*** *11:05:30.1±0.8, 4257N×180W, h2km, Md2.4/3, Ml2.5/2, Error ellipse: s-maj=13.2km s-min=10.8km az=43.0*

NEIC ***29*** *11:05:30.1, 4257N×180W, h2km, ML2.5(LDG), ML2.6(STR), After LDG.*

CSEM ***29*** *11:05:31.6±0.2, 4274N×178W, h10km, mb2.2/2, Error ellipse: s-maj=3.5km s-min=2.8km az=66.0*

STR ***29*** *11:05:31.7±3.5, 4262N×169W, h2km±1km, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

MDD 29 11:05:32.6±0.8, 4267N×171W, h0km, mbLg1.6/8, Error ellipse: s-maj=5.6km s-min=4.0km az=67.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EARA	**Aranguren**	**0.14**	**44**	Pg	Pg	11 05 34.2	-1.1
	42nm,0.1s,SNR=7.9						
EARA				Lg		11 05 36.4	
	67nm,0.1s,SNR=7.9						
EARA	**Aranguren**	**0.14**	**44**	Pg	Pg	11 05 34.3	-1.0
	SNR=7.9						
EARA				Lg		11 05 37.3	
	SNR=7.9						
ELIZ	**Elizondo**	**0.51**	**15**	Pg	Pg	11 05 41.7	-0.7
	2.8nm,0.2s,SNR=11						
ELIZ				Lg		11 05 49.5	
	4.7nm,0.4s,SNR=7.9						
EALK	**Alkurruntz**	**0.57**	**15**	Pg	Pg	11 05 43.4	-0.1
	16nm,0.5s,SNR=9.8						
EALK				Lg		11 05 50.3	
	25nm,0.4s,SNR=5.2						
SJPF	**Ste Jean**	**0.57**	**39**	*e*Pg	Pg	11 05 43.5	0.0
SJPF				*e*Sg	Sg	11 05 51.6	+0.7
	49nm,0.4s						
SJPF	**Ste Jean**	**0.57**	**39**	*e*Pg	Pg	11 05 43.5	0.0
SJPF				*e*Sg	Sg	11 05 51.6	+0.7
	25nm,0.4s						
LARF	**Larrau**	**0.65**	**55**	Pg	Pg	11 05 43.8	-1.2
LARF				Sg	Sg	11 05 52.7	-0.7
LARF	**Larrau**	**0.65**	**55**	Pg	Pg	11 05 43.8	-1.2
LARF				Lg		11 05 54.0	
OSSF	**Osses**	**0.67**	**29**	Pg	Pg	11 05 45.4	-0.1
ATE	**Arette**	**0.85**	**61**	Sg	Sg	11 06 00.9	+0.9
ATE	**Arette**	**0.85**	**61**	Lg		11 05 59.6	
ETSF	**Etsaut**	**0.88**	**75**	*e*Pg	Pg	11 05 48.4	-1.0
ETSF				*e*Sg	Sg	11 06 01.3	+0.5
	16nm,0.5s						
ETSF	**Etsaut**	**0.88**	**75**	Pg	Pg	11 05 48.4	-1.0
ETSF				Lg		11 06 01.3	
	8.1nm,0.5s						
VIEF	**Viey**	**1.30**	**80**	Lg		11 06 15.0	
ESAC	**San Caprasio**	**1.32**	**135**	Pg	Pg	11 05 57.4	-0.6
	9.1nm,0.1s,SNR=7.9						
ESAC				Lg		11 06 15.3	
	18nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**1.32**	**135**	Pg	Pg	11 05 57.4	-0.6
	SNR=7.9						
EBIE	**Bielsa**	**1.37**	**89**	Pg	Pg	11 05 57.8	-1.0
	0.5nm,0.2s,SNR=7.9						
EBIE				Lg		11 06 16.9	
	1.0nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**1.37**	**89**	Pn	Pn	11 05 57.8	-1.1
	SNR=7.9						
EPF	**Esparros**	**1.55**	**76**	*e*Pg	Pg	11 06 00.6	-1.7
EPF				*e*Sg	Sg	11 06 22.6	+0.1
	16nm,0.5s						
EPF	**Esparros**	**1.55**	**76**	Pg	Pg	11 06 00.6	-1.7
EPF				Lg		11 06 22.6	
	7.9nm,0.5s						
SALF	**Salau**	**2.14**	**87**	Lg		11 06 39.8	

NEIC ***29*** *11:06:57.2, 1120N×62.10W, h5km, MD3.2(TRN), After TRN.*

TRN 29 11:06:57.2, 1120N×6210W, h5km, MD3.2, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.61**	**146**	⇑*i*P	Pg	11 07 09.6	+0.7
TCE				*e*S	Sg	11 07 17.8	+0.9
TRN	**Trinidad (W)**	**0.88**	**129**	*e*P	Pg	11 07 14.2	+0.1
TRN				*e*S	Sg	11 07 27.2	+1.6
TPP	**Pointe-a-Pierr**	**1.09**	**144**	*e*P	Pg	11 07 18.2	+0.1
TBH	**Brigand Hill**	**1.25**	**125**	*e*P	Pg	11 07 21.5	+0.4
TBH				*e*S	Sg	11 07 41.9	+4.7
TPR	**Prospect**	**1.30**	**91**	*e*P	Pn	11 07 28.4	+6.5
ANMO	**Albuquerque**	**46.66**	**308**	*e*P	P	11 15 30.1	+3.6

IDC 29 11:10:29.1±14.0, 2015S×6630E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/20, mbtmp4.0/5, Error ellipse: s-maj=485.4km s-min=31.0km az=57.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**62.29**	**107**	P	P	11 20 53.7	+0.7
	1.8nm,0.9s,baz=263,slow=6.4,SNR=15						
WRA	**Warramunga Arr**	**63.47**	**103**	P	P	11 21 01.3	+0.4
	2.6nm,0.9s,baz=260,slow=5.9,SNR=12						
MKAR	**Makanchi Array**	**68.17**	**12**	P	P	11 21 30.9	-0.3
	0.9nm,0.9s,baz=190,slow=6.2,SNR=5.0						
ZAL	**Zalesovo**	**75.48**	**11**	P	P	11 22 14.9	-0.1
	1.2nm,0.3s,baz=147,slow=3.9,SNR=3.8						
SONM	**Songino Array**	**76.63**	**26**	P	P	11 22 22.0	+0.4
	0.8nm,0.9s,baz=201,slow=5.7,SNR=5.3						

IDC ***29*** *11:17:32.8±0.4, 52.50S×27.78E, h0km, mb4.7/23, mb1 4.8/23, mb1mx4.8/25, mbtmp4.7/23, Error ellipse: s-maj=13.7km s-min=11.5km az=85.0*

ISCJB ***29*** *11:17:33.0±0.3, 52.49S±0.05×27.8E±0.1, h10km, mb4.8/29, Error ellipse: s-maj=10.4km s-min=7.4km az=146.9*

MOS ***29*** *11:17:33.4±1.3, 52.50S×27.83E, h10km, mb5.5/16, Error ellipse: s-maj=27.1km s-min=11.8km az=92.9*

NEIC ***29*** *11:17:34.4±0.2, 52.52S×27.86E, h10km, mb5.2/10, Error ellipse: s-maj=8.4km s-min=6.1km az=63.0*

ISC 29 11:17:34.5±0.3, 5251S±0.05×279E±0.1, h10km, n150, σ0$70/66, mb4.8/29, 31C-25D, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVL	**N'lazarevskaya**	**19.71**	**196**	*c*P	**Pn**	**11 22 04.5**	**-0.9**
NVL				*e*PPP		11 25 37.6	
NVL				pmax	pmax		
	comp=Z,59nm,1.5s						
NVL				pmax	pmax		
	comp=Z,1μm,20.3s						
SUR	**Sutherland**	**20.76**	**343**	P	**P**	**11 22 16.1**	**+0.7**
	comp=Z,21nm,0.7s,baz=128,slow=7.9,SNR=9.3						
MAW	**Mawson**	**22.64**	**145**	*e*P	**P**	**11 22 35.6**	**0.0**
	comp=Z,14nm,1.1s,mb4.3						
MAW	**Mawson**	**22.64**	**145**	P	**P**	**11 22 35.9**	**+0.4**
	comp=Z,20nm,1.0s,mb4.5,baz=289,slow=11,SNR=29						
MAW				S	**S**	**11 26 37.0**	**-6.9**
	comp=Z,2.6nm,0.5s,baz=120,slow=17,SNR=5.4						
MAW	**Mawson**	**22.64**	**145**	*e*P	**P**	**11 22 35.6**	**0.0**
MAW				pmax	pmax		
	comp=Z,14nm,1.1s						
SNAA	**Sanae**	**23.50**	**204**	P	**P**	**11 22 45.5**	**+0.8**
	comp=Z,13nm,0.8s,mb4.4,baz=58,slow=8.4,SNR=85						
SNAA				S	**S**	**11 26 59.9**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=296,slow=16,SNR=2.0						
SNAA	**Sanae**	**23.50**	**204**	⇓*i*	**P**	**11 22 44.2**	**-0.4**
SNAA				*e*		11 22 46.1	
SNAA				*e*		11 22 48.2	
SNAA				*e*		11 22 54.6	
SNAA				*e*		11 23 00.6	
SNAA				*e*		11 23 03.7	
SNAA	**Sanae**	**23.50**	**204**	P	**P**	**11 22 45.5**	**+0.9**
SNAA				S	**S**	**11 26 59.9**	**+1.9**
SNAA				pmax	pmax		
	comp=Z,13nm,0.8s						
BOSA	**Boshof**	**23.95**	**354**	P	**P**	**11 22 48.5**	**-0.4**
	comp=Z,16nm,0.9s,mb4.5,baz=170,slow=9.6,SNR=17						
BOSA				PcP	PcP	11 26 31.4	+0.4
	comp=Z,3.1nm,0.9s,baz=181,slow=4.8,SNR=4.1						
BOSA	**Boshof**	**23.95**	**354**	P	**P**	**11 22 48.5**	**-0.3**
BOSA						11 26 31.5	
BOSA				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
VNA1	**Neumayer--Stat**	**24.39**	**208**	⇑*i*	**P**	**11 22 54.1**	**+1.2**
VNA1				*e*		11 22 56.0	
VNA1				*e*		11 22 57.9	
VNA1				*e*		11 23 05.3	
VNA1				*e*		11 23 08.0	
VNA3	**Neumayer Olymp**	**25.09**	**208**	⇑*i*	**P**	**11 23 00.0**	**+0.8**
VNA3				*e*	pP	11 23 01.6	-0.6
VNA3				*e*	pP	11 23 03.9	+1.7
VNA3				*e*		11 23 11.8	
VNA3				*e*		11 23 14.3	
VNA3				*e*		11 23 18.8	
LBTB	**Lobatse**	**27.51**	**356**	P	**P**	**11 23 20.8**	**-0.3**
	comp=Z,4.5nm,0.7s,mb4.2,baz=182,slow=12,SNR=5.7						
LBTB	**Lobatse**	**27.51**	**356**	P	**P**	**11 23 20.8**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
LBTB	**Lobatse**	**27.51**	**356**	P	**P**	**11 23 20.8**	**-0.3**
TSUM	**Tsumeb**	**34.20**	**343**	*e*P	**P**	**11 24 20.8**	**+0.7**
	comp=Z,8.7nm,0.6s,mb4.9						
QSPA	**South Pole Qui**	**37.71**	**180**	*e*P	**P**	**11 24 49.4**	**-0.7**
	comp=Z,34nm,1.0s,mb5.0						
CASY	**Casey**	**40.94**	**142**	*e*P	**P**	**11 25 13.5**	**-3.6**
VNDA	**Vanda**	**47.14**	**168**	P	**P**	**11 26 06.2**	**-0.7**
	comp=Z,4.6nm,0.8s,mb4.5,baz=238,slow=7.9,SNR=31						
VNDA	**Vanda**	**47.14**	**168**	P	**P**	**11 26 06.2**	**-0.7**
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SBA	**Scott Base**	**47.47**	**169**	*e*P	**P**	**11 26 10.1**	**+0.7**
SBA				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
SBA	**Scott Base**	**47.47**	**169**	*e*P	**P**	**11 26 10.1**	**+0.6**
	comp=Z,16nm,0.9s,mb5.0						
TRQA	**Tornquist**	**60.85**	**245**	*e*P	**P**	**11 27 46.4**	**-0.6**
	comp=Z,17nm,0.9s,mb5.2						
PLCA	**Paso Flores**	**63.49**	**237**	P	**P**	**11 28 04.0**	**-0.7**
	comp=Z,9.4nm,0.9s,mb4.9,baz=129,slow=7.1,SNR=19						
PLCA	**Paso Flores**	**63.49**	**237**	P	**P**	**11 28 04.0**	**-0.7**
PLCA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NWAO	**Narrogin (SRO)**	**64.28**	**111**	P	**P**	**11 28 09.2**	**-0.7**
	comp=Z,6.0nm,0.6s,mb4.8,baz=224,slow=9.0,SNR=7.4						
NWAO	**Narrogin (SRO)**	**64.28**	**111**	P	**P**	**11 28 09.2**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DBIC	**Dimbokro**	**65.21**	**324**	P	**P**	**11 28 15.3**	**-0.7**
	comp=Z,8.8nm,0.9s,mb4.8,baz=144,slow=11,SNR=5.2						
DBIC	**Dimbokro**	**65.21**	**324**	P	**P**	**11 28 15.3**	**-0.7**
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CPUP	**Villa Florida**	**66.74**	**257**	P	**P**	**11 28 25.1**	**-0.7**
	comp=Z,4.6nm,0.6s,mb4.7,baz=108,slow=

CTA pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 92.00 4 P **P** **11 30 42.4 -1.1**
comp=Z,1.4nm,0.7s,mb4.4,baz=171,slow=8.8,SNR=4.6
BRTR Keskin Array B 92.00 4 P **P** **11 30 42.4 -1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
CHKZ Chkalovo 111.66 26 *e*P Pdif 11 32 16.4 +4.7
SONM Songino Array 120.19 50 PKP PKPdf 11 36 24.4 -1.2
comp=Z,0.5nm,0.6s,baz=201,slow=1.6,SNR=5.3
SONM Songino Array 120.19 50 PKIKP PKPdf 11 36 24.4 -1.2
SONM pmax pmax
comp=Z,10.0nm,0.6s
ARCES ARCESS Array B 121.74 359 PKP PKPdf 11 36 26.0 -2.6
comp=Z,3.2nm,0.7s,baz=197,slow=3.8,SNR=19
ARCES ARCESS Array B 121.74 359 PKIKP PKPdf 11 36 26.0 -2.6
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES ARCESS Array B 121.74 359 PKP PKPdf 11 36 26.0 -2.6
SCHQ Schefferville 132.42 309 PKP PKPdf 11 36 47.4 -1.6
comp=Z,2.8nm,0.7s,baz=51,slow=3.6,SNR=3.7
ANMO Albuquerque 143.35 260 *e*PKIKP PKPdf 11 37 05.4 -3.7
TUC Tucson 144.06 252 *e*PKIKP PKPdf 11 37 08.5 -1.8
116A Eloy 144.78 252 ⇓P PKPdf 11 37 09.9 -1.6
baz=145
115A Sonoran Desert 145.18 251 ⇑P PKPbc 11 37 11.5 -0.3
baz=145
ULM Lac du Bonnet 145.57 289 PKPbc PKPbc 11 37 10.1 -3.0
comp=Z,32nm,1.0s,baz=73,slow=2.2,SNR=21
ULM Lac du Bonnet 145.57 289 PKPbc PKPbc 11 37 10.1 -3.0
ULM *e*PKPdf PKPdf 11 37 11.4 -1.5
ISCO Idaho Springs 145.97 267 *e*PKP2 PKPab 11 37 14.0 -0.8
Z14A Wintersburg 146.07 251 ⇓P PKPdf 11 37 14.1 +0.4
baz=146
X15A Humboldt 146.46 253 ⇓P PKPdf 11 37 15.1 +0.6
baz=146
Y14A Wickenburg 146.52 252 ⇓P PKPdf 11 37 15.4 +0.9
baz=147
WUAZ Wupatki 146.67 256 *e*PKPbc PKPbc 11 37 16.1 -0.3
PV01 Paradox Valley 146.72 262 *e*PKPdf PKPdf 11 37 12.8 -2.1
PV01 *e*PKPbc PKPbc 11 37 16.2 -0.4
X14A Yava 146.83 253 ⇓P PKPdf 11 37 16.1 +1.1
baz=147
Y13A Salome 146.91 251 ⇑P PKPdf 11 37 14.9 -0.3
baz=147
PV10 Paradox Valley 147.16 262 *e*PKPbc PKPbc 11 37 17.3 -0.5
Y12C Blythe 147.26 250 ⇓P PKPdf 11 37 16.0 +0.3
baz=147
X13A Yucca 147.47 252 ⇑P PKPdf 11 37 16.5 +0.3
baz=148
RSSD Black Hills 147.47 275 *e*PKIKP PKPdf 11 37 15.2 -0.9
RSSD *e* 11 37 17.9
MA2 Magadan 148.23 54 *e*PKIKP PKPdf 11 37 18.7 -1.6
MA2 *e* 11 37 18.7
MA2 *e* 11 37 22.4
SRU San Rafael 148.53 262 *e*PKIKP PKPdf 11 37 18.0 +0.1
SRU *e* 11 37 20.3
SRU *e* 11 37 23.6
GMRC Granite Mounta 148.66 250 ⇑P PKPdf 11 37 17.8 -0.2
baz=149
TMUT Trail Mountain 149.06 261 *e*PKPdf PKPdf 11 37 18.6 -0.1
TMUT *e*PKPbc PKPbc 11 37 22.0 -0.8
TMUT *e*PKPab PKPab 11 37 26.9 -0.1
MSU Marysvale 149.14 259 *e*PKIKP PKPdf 11 37 19.3 +0.4
MSU *e* 11 37 22.8
MSU *e* 11 37 25.8
GSC Goldstone 149.69 250 ⇑P PKPdf 11 37 19.5 -0.2
baz=150
SHOC Shoshone 149.81 251 ⇓P PKPdf 11 37 19.9 0.0
baz=150
NLU North Lily Min 149.99 261 *e*PKPdf PKPdf 11 37 20.4 +0.2
NLU *e*PKPbc PKPbc 11 37 24.9 -0.2
NLU *e*PKPab PKPab 11 37 30.2 -0.6
EDW2 Edwards Air Fo 150.06 248 ⇑P PKPdf 11 37 20.1 -0.2
baz=150
LAO LASA Array 150.10 277 *e*PKPdf PKPdf 11 37 19.9 -0.4
LAO *e*PKPbc PKPbc 11 37 24.4 -1.0
LAO *e*PKPab PKPab 11 37 30.9 -0.4
PDAR Pinedale Array 150.11 268 PKP PKPdf 11 37 18.4 -2.1
comp=Z,1.3nm,0.9s,baz=116,slow=2.1,SNR=7.6
PDAR PKPbc PKPbc 11 37 23.6 -1.8
comp=Z,6.5nm,1.0s,baz=118,slow=4.2,SNR=14
PDAR PKPab PKPab 11 37 29.7 -1.6
comp=Z,18nm,1.0s,baz=124,slow=4.9,SNR=35
TCUT Toone Canyon 150.29 264 *e*PKPdf PKPdf 11 37 20.4 -0.2
TCUT *e*PKPbc PKPbc 11 37 25.5 -0.4
TCUT *e*PKPab PKPab 11 37 31.9 -0.1
FURC Furnace Creek, 150.54 251 ⇑P PKPdf 11 37 21.4 +0.4
baz=151
DUG Dugway 150.58 261 *e*PKIKP PKPdf 11 37 21.3 +0.2
DUG *e* 11 37 25.8
DUG *e* 11 37 32.6
MPMC Manual Prospec 150.62 250 ⇓P PKPdf 11 37 21.7 +0.5
baz=151
HWUT Hardware Ranch 150.67 265 *e*PKPdf PKPdf 11 37 20.4 -0.8
HWUT *e*PKPbc PKPbc 11 37 25.5 -1.3
HWUT *e*PKPab PKPab 11 37 31.1 -2.5
DAC Darwin (Calif) 150.83 250 *e*PKIKP PKPdf 11 37 21.9 +0.4
DAC *e* 11 37 26.9
DAC Darwin (Calif) 150.83 250 *e*PKPdf PKPdf 11 37 21.9 +0.3
DAC *e*PKPbc PKPbc 11 37 26.9 -0.2
DAC *e*PKPab PKPab 11 37 35.0 +0.7
ISA Isabella 150.90 248 ⇓P PKPdf 11 37 22.4 +0.8
baz=151
BGU Big Grassy Mou 151.16 262 *e*PKPdf PKPdf 11 37 22.0 0.0
BGU *e*PKPbc PKPbc 11 37 26.9 -1.0
BGU *e*PKPab PKPab 11 37 35.1 -0.6
R10A Warm Springs 151.45 254 ⇓P PKPdf 11 37 22.7 +0.2
baz=152
S09A Goldfield 151.61 253 ⇓P PKPdf 11 37 23.3 +0.6
baz=152
GCMT Greycliff 151.76 273 *e*PKPdf PKPdf 11 37 22.9 -0.1
GCMT *e*PKPbc PKPbc 11 37 27.6 -1.7
GCMT *e*PKPab PKPab 11 37 37.5 -0.7
O12A Currie 151.79 259 ⇑P PKPdf 11 37 23.2 +0.2
baz=152
N13A Wendover, West 151.82 261 ⇓P PKPdf 11 37 22.8 -0.3
baz=152
R09A Tonopah 151.87 254 ⇑P PKPdf 11 37 23.5 +0.4
baz=152
R08A Mina 152.55 253 ⇑P PKPdf 11 37 24.9 +0.7
baz=153
T06C Millerton Lake 152.55 249 ⇑P PKPdf 11 37 24.2 +0.1
baz=153
NVAR Mina Array Bea 152.72 252 PKP PKPdf 11 37 24.6 +0.2
comp=Z,1.0nm,0.7s,baz=144,slow=3.2,SNR=14
NVAR PKPbc PKPbc 11 37 31.3 -0.1
comp=Z,3.9nm,0.5s,baz=136,slow=3.4,SNR=48
NVAR PKPab PKPab 11 37 39.4 -2.8
comp=Z,3.0nm,0.7s,baz=136,slow=3.0,SNR=8.8
Q08A Gabbs 152.78 254 ⇓P PKPdf 11 37 24.7 +0.3
baz=153
EGMT Eagleton 152.85 278 *e*PKPbc PKPbc 11 37 31.0 -0.7
EGMT *e*PKPab PKPab 11 37 42.5 -0.2
BOZ Bozeman (W) 152.89 272 *e*PKIKP PKPdf 11 37 23.6 -1.0
BOZ *e* 11 37 31.1
BOZ *e* 11 37 42.6
O09A Fish Creek Ran 153.19 257 ⇓P PKPdf 11 37 25.0 0.0
baz=153
MCMT McKenzie Canyo 153.23 269 *e*PKPab PKPab 11 37 44.0 -0.4
HRY Holter Researc 153.52 274 *e*PKPbc PKPbc 11 37 32.7 -0.5
HRY *e*PKPab PKPab 11 37 45.4 -0.2
O06A Flanigan 154.75 254 ⇑P PKPdf 11 37 27.0 -0.3
baz=155
L08A Fields 155.11 259 ⇑PKP PKPab 11 37 51.6 -0.7
baz=155
M07A Soldier Meadow 155.13 257 ⇑PKP PKPab 11 37 51.3 -1.1
baz=155
J09A Fry Pan Ranch, 155.42 262 ⇓PKP PKPab 11 37 53.0 -0.7
baz=156
K08A Mann Creek Ran 155.51 260 ⇓PKP PKPab 11 37 53.3 -0.8
baz=156
L07A Adell 155.61 258 ⇑PKP PKPab 11 37 54.3 -0.1
baz=156
J08A Circle Bar Ran 155.86 261 ⇓PKP PKPab 11 37 55.6 0.0
baz=156
K07A Rock Creek Ran 155.95 259 ⇓PKP PKPab 11 37 55.5 -0.4
baz=156
H09A Durkee 156.08 265 ⇓PKP PKPab 11 37 55.6 -0.9
baz=156
I08A Drewsey 156.23 262 ⇑PKP PKPab 11 37 56.1 -1.0
baz=156
H08A Prairie City 156.62 263 ⇑PKP PKPab 11 37 58.2 -0.6
baz=157
J06A Christmas Vall 156.81 259 ⇑PKP PKPab 11 37 58.0 -1.6
baz=157
I07A Izee 156.89 262 ⇓PKP PKPab 11 37 58.5 -1.5
baz=157
M04C Macdoel 156.95 254 ⇑PKP PKPab 11 37 58.6 -1.6
baz=157
K05A Summer Lake 156.95 257 ⇑PKP PKPab 11 37 59.4 -0.9
baz=157
H07A Lands Inn, Kim 157.20 263 ⇑PKP PKPab 11 38 00.6 -0.7
baz=157
I06A Prineville 157.24 261 ⇑PKP PKPab 11 38 01.1 -0.4
baz=157
J05A Fort Rock 157.48 258 ⇑PKP PKPab 11 38 01.9 -0.7
baz=158
G07A Ruggs Ranch, H 157.61 264 ⇑PKP PKPab 11 38 02.3 -0.8
baz=158
H06A Lindquist Farm 157.74 262 ⇓PKP PKPab 11 38 03.0 -0.6
baz=158
YKA Yellowknife Ar 157.83 311 PKPab PKPab 11 38 02.5 -1.5
comp=Z,1.5nm,0.7s,baz=83,slow=5.5,SNR=4.8
YKA Yellowknife Ar 157.83 311 PKP2 PKPab 11 38 02.5 -1.5
YKA pmax pmax
comp=Z,2.0nm,0.7s
I05A Bend 157.99 260 ⇑PKP PKPab 11 38 04.0 -0.7
baz=158
G06A Carlson Farm, 158.18 263 ⇑PKP PKPab 11 38 04.7 -0.8
baz=158
L02A Cave Junction 158.21 253 ⇓PKP PKPab 11 38 04.9 -0.8
baz=158
G05A Wamic 158.60 262 ⇑PKP PKPab 11 38 07.2 -0.2
baz=159
D05A Enumclaw 159.94 267 ⇑PKP PKPab 11 38 12.4 -0.8
baz=160

*ISCJB **29** 11:30:12.1±0.7, 136N±0.1×1448E±02, h125km±6km, mb3.9/8, Error ellipse: s-maj=32.7km s-min=16.7km az=147.9*
*NEIC **29** 11:30:12.2±0.8, 1366N×1448E, Error ellipse: s-maj=30.4km s-min=15.5km az=74.0*
NEIC Felt at Tamuning and Yigo.
*IDC **29** 11:30:12.8±0.5, 1362N×144.76E, h116km±4km, mb3.6/9, mb1 3.6/9, mb1mx3.5/22, mbtmp3.9/9, Error ellipse: s-maj=19.8km s-min=14.4km az=74.0*

ISC 29 11:30:13.3±0.7, 136N±0.1×1448E±02, h120km±6km, n12, σ0 66/12, mb3.9/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.07**	**137**	P	**Pn**	**11 30 29.6**	**0.0**
	448nm,0.3s,baz=134,slow=3.5,SNR=1266						
GUMO				S	**Sn**	**11 30 41.8**	**-0.1**
	1μm,0.3s,baz=290,slow=23,SNR=136						
JOW	**Kunigami**	**20.29**	**313**	P	**P**	**11 34 40.7**	**+1.1**
	5.0nm,0.5s,baz=121,slow=8.1,SNR=8.4						
WRA	**Warramunga Arr**	**34.93**	**197**	P	**P**	**11 36 53.7**	**+0.2**
	1.2nm,0.5s,mb4.0,baz=22,slow=9.3,SNR=9.4						
WRA				pP	pP	11 37 17.7	-2.2
	0.6nm,0.8s,baz=21,slow=10,SNR=2.4						
WRA				sP	sP	11 37 30.8	-2.9
	0.9nm,0.7s,baz=21,slow=9.6,SNR=3.6						
WRA				PcP	PcP	11 39 24.1	+0.6
	0.3nm,0.6s,baz=12,slow=3.0,SNR=4.8						
FITZ	**Fitzroy Crossi**	**36.78**	**211**	P	**P**	**11 37 08.6**	**-0.7**
	0.8nm,0.6s,mb3.8,baz=101,slow=18,SNR=6.6						
ASAR	**Alice Springs**	**38.58**	**196**	P	**P**	**11 37 25.1**	**+0.6**
	0.3nm,0.3s,mb3.6,baz=17,slow=12,SNR=4.9						
DZM	**Mont Dzumac**	**41.34**	**149**	P	**P**	**11 37 48.4**	**+1.1**
	8.0nm,0.7s,mb4.7,baz=319,slow=11,SNR=7.2						
STKA	**Stephens Creek**	**45.36**	**184**	P	**P**	**11 38 18.7**	**-0.9**
	1.3nm,0.5s,mb3.9,baz=350,slow=8.6,SNR=3.4						
STKA	**Stephens Creek**	**45.36**	**184**	P	**P**	**11 38 18.7**	**-0.9**
SONM	**Songino Array**	**46.66**	**325**	P	**P**	**11 38 29.4**	**-0.3**
	0.2nm,0.5s,mb3.1,baz=134,slow=6.2,SNR=2.3						
MKAR	**Makanchi Array**	**61.42**	**316**	P	**P**	**11 40 16.2**	**-0.6**
	1.0nm,0.6s,mb4.0,baz=103,slow=5.5,SNR=7.1						
MKAR				pP	pP	11 40 45.6	-0.1
	1.2nm,0.7s,baz=90,slow=8.6,SNR=3.3						
NVAR	**Mina Array Bea**	**86.93**	**51**	P	**P**	**11 42 44.4**	**-0.4**
	0.9nm,0.7s,mb3.8,baz=260,slow=6.0,SNR=9.7						
DBIC	**Dimbokro**	**143.75**	**302**	PKP	PKPdf	11 49 32.2	-1.9
	1.8nm,0.7s,baz=9.5,slow=6.1,SNR=4.5						

*IDC **29** 11:41:50.5±0.9, 039S×124.97E, h0km, mb4.1/7, mb1 4.1/8, mb1mx4.0/17, mbtmp4.1/8, ML3.1/1, Error ellipse: s-maj=58.0km s-min=15.9km az=76.0*
*ISCJB **29** 11:41:55.0±6.4, 04S±0.1×125.1E±03, h49km±64km, mb4.0/8, Error ellipse: s-maj=50.6km s-min=18.2km az=150.0*
*NEIC **29** 11:41:55.7±5.0, 041S×125.08E, h36km±53km, mb4.2/1, Error ellipse: s-maj=37.5km s-min=14.7km az=77.0*

ISC 29 11:41:55.8±5.9, 04S±01×1251E±03, h36km±62km, n10, σ0 79/10, mb4.0/8, Southern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**17.60**	**178**	P	**Pn**	**11 45 58.4**	**+0.2**
	0.1nm,0.3s,baz=37,slow=7.6,SNR=4.6						
WRA	**Warramunga Arr**	**21.44**	**155**	P	**P**	**11 46 39.9**	**-1.0**
	2.4nm,0.6s,mb3.7,baz=334,slow=12,SNR=16						
WB2	**Warramunga Arr**	**21.44**	**155**	*e*P	**P**	**11 46 40.7**	**-0.2**
ASAR	**Alice Springs**	**24.67**	**160**	P	**P**	**11 47 13.3**	**+0.2**
	1.6nm,1.0s,mb3.5,baz=335,slow=9.1,SNR=11						
ASAR				PcP	PcP	11 50 51.4	+1.5
	0.4nm,0.5s,baz=351,slow=2.4,SNR=4.8						
JOW	**Kunigami**	**27.25**	**6**	P	**P**	**11 47 38.2**	**+1.7**
	29nm,1.4s,mb4.6,baz=211,slow=8.7,SNR=5.0						
STKA	**Stephens Creek**	**34.99**	**155**	P	**P**	**11 48 45.6**	**+0.9**
	2.0nm,0.7s,mb4.2,baz=342,slow=10,SNR=4.0						
MJAR	**Matsushiro Arr**	**38.73**	**17**	P	**P**	**11 49 15.5**	**-1.0**
	0.7nm,0.7s,mb3.5,baz=198,slow=8.5,SNR=5.0						
SONM	**Songino Array**	**50.72**	**344**	P	**P**	**11 50 51.4**	**-0.6**
	1.3nm,0.7s,mb4.0,baz=155,slow=8.3,SNR=10						
MKAR	**Makanchi Array**	**60.05**	**327**	P	**P**	**11 51 58.6**	**-0.5**
	2.5nm,0.6s,mb4.4,baz=117,slow=8.2,SNR=26						
ZRNK	**Zerenda**	**70.59**	**328**	*e*P	**P**	**11 53 07.7**	**+0.4**
	1.5nm,0.6s,mb4.1						

IDC 29 11:56:52.9±1.2, 026S×12557E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.7/15, mbtmp3.7/5, Error ellipse: s-maj=144.5km s-min=20.0km az=67.0, Southern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.36**	**157**	P	P	12 01 41.4	-0.3
	1.2nm,0.8s,baz=336,slow=10,SNR=11						
ASAR	**Alice Springs**	**24.63**	**161**	P	P	12 02 16.4	+1.5
	0.6nm,0.5s,baz=344,slow=11,SNR=6.0						
STKA	**Stephens Creek**	**34.90**	**156**	P	P	12 03 45.6	-0.5
	1.4nm,0.9s,baz=344,slow=7.4,SNR=3.2						
SONM	**Songino Array**	**50.73**	**343**	P	P	12 05 55.1	+0.7
	0.3nm,0.3s,baz=160,slow=8.1,SNR=3.2						
MKAR	**Makanchi Array**	**60.21**	**327**	P	P	12 07 02.2	-0.4
	0.9nm,0.6s,baz=116,slow=8.4,SNR=5.7						

CASC 29 12:04:54.8±2.5, 880N×8249W, h5km±5km, MD3.6, 8C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRU	**Baru**	**0.07**	**277**	⇑*e*P	Pg	12 04 56.8	+0.4
BRU2	**Volcan**	**0.20**	**269**	⇑*e*P	Pg	12 04 59.0	+0.3
CTCR	**Cotoan**	**0.28**	**290**	⇓*i*P	Pg	12 05 01.0	+0.7
DVD	**David**	**0.36**	**174**	⇑*i*P	Pg	12 05 02.4	+0.6
CNI	**Changuinola**	**0.61**	**358**	⇑*i*P	Pg	12 05 06.7	+0.1
CNI				*e*S	Sg	12 05 14.7	+0.1
BUS	**Buena Vista**	**1.46**	**301**	*e*P	Pn	12 05 21.8	0.0
BUS				⇑*i*P		12 05 22.3	
BUS				*e*S	Sn	12 05 41.6	+0.3
BUS				*e*S	Sn	12 05 43.0	+1.7
LCR2	**La Lucha 2**	**1.76**	**302**	⇑*e*P	Pn	12 05 26.9	+0.9
LCR2				*e*P		12 05 26.8	
LCR2				*e*S	Sn	12 05 50.8	+2.1
LAJ	**Bijagual**	**1.93**	**303**	*e*P	Pn	12 05 33.5	+5.3
LAJ				*e*P		12 05 34.6	
LAJ				*e*S	Sn	12 06 01.4	+8.6
PRS1	**Puriscal**	**2.15**	**303**	*e*P	Pn	12 05 32.3	+1.1
PRS1				*e*P		12 05 32.7	
PRS1				*e*S	Sn	12 05 59.1	+0.9
CGA2	**Cerro Gallo 2**	**2.29**	**302**	*e*P	Pn	12 05 34.7	+1.5
CGA2				*e*P		12 05 34.8	
CGA2				*e*S	Sn	12 06 03.3	+1.4
AZU	**Azuero**	**2.41**	**114**	*e*P	Pn	12 05 35.0	+0.2
AZU				*e*S	Sn	12 06 04.8	0.0
ACH	**Altos**	**2.54**	**93**	⇑*e*P	Pn	12 05 36.9	+0.3
ACH				*e*S	Sn	12 06 09.4	+1.5
PTP	**Ponta Puerca**	**18.88**	**58**	⇑*e*P		12 05 08.1	
PTP				*e*S		12 05 18.4	

*IDC **29** 12:18:08.8±0.4, 025S×125.13E, h0km, mb4.9/27, mb1 4.9/29, mb1mx4.9/31, mbtmp4.9/29, ML4.9/2, MS4.2/9, Ms1 4.2/9, ms1mx3.8/23, Error ellipse: s-maj=16.3km s-min=9.9km az=72.0*
*BJI **29** 12:18:12.1, 073S×125.43E, h67km, mB5.1, mb5.0, Ms4.4, Msz4.3*
*MOS **29** 12:18:12.3±1.0, 031S×125.07E, h37km, mb5.2/46, Error ellipse: s-maj=12.1km s-min=5.9km az=108.3*
*NEIC **29** 12:18:14.0±0.2, 031S×125.09E, h35km, mb5.1/24, Error ellipse: s-maj=8.5km s-min=4.6km az=70.0*
*HRVD **29** 12:18:14.0±0.4, 053S×125.24E, h36km±1km, MW5.1/50, Centroid moment Tensor Solution. LP body waves: s29,c36;Mantle waves: s50,c64; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.31±.38; Mθθ-4.07±.22; Mφφ0.75±.26; Mrθ2.92±.22; Mθφ-1.14±.18; Mφr0.53±.29; Best double couple: Mo4.83600×10^16 NP1:φs255.00000°, δ26.00000°, λ86.00000°. NP2: φs79.00000°, δ64.00000°, λ92.00000°. Principal axes: T 4.3300, Plg71.0000°, Azm353.0000°; N 1.0110, Plg2.0000°, Azm258.0000°; P -5.3420, Plg19.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **29** 12:18:15.1±0.6, 037S±003×12522E±004, h59km±6km, mb5.0/86, MS4.2/25 Error ellipse: s-maj=7.2km s-min=4.2km az=143.5*

ISC 29 12:18:18.0±0.5, 037S±003×12523E±004, h70km±5km, h71km±2.3km:pP-P,n219,σ1s28/221, mb5.0/86, 8C-7D, Southern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**4.43**	**138**	P	**Pn**	**12 19 20.8**	**-2.0**
	439nm,0.6s						
PCI	**Palu**	**5.42**	**264**	P	**Pn**	**12 19 37.8**	**+1.5**
	636nm,0.9s						
SWI	**Sorong**	**6.05**	**95**	P	**Pn**	**12 19 46.7**	**+1.9**
	90nm,0.7s						
BUKP	**Musuan**	**8.19**	**359**	*e*P	**Pn**	**12 20 14.6**	**+0.4**
PAGZ	**Pagadian**	**8.37**	**347**	*e*P	**Pn**	**12 20 15.4**	**-1.1**
TSM	**Tawau**	**8.69**	**302**	P	**Pn**	**12 20 20.0**	**-1.0**
BAKI	**Biak**	**10.90**	**94**	P	**Pn**	**12 20 57.8**	**+6.6**
	84nm,1.3s						
KKM	**Kota Kinabalu**	**11.03**	**305**	P	**Pn**	**12 20 55.2**	**+2.3**
KKM	**Kota Kinabalu**	**11.03**	**305**	*e*Pn	**Pn**	**12 20 43.9**	**-8.9**
GUIM	**Jordan**	**11.23**	**347**	*e*P	**Pn**	**12 20 59.2**	**+3.6**
BATP	**Bataraza**	**11.73**	**321**	*e*P	**Pn**	**12 21 04.8**	**+2.3**
CUYO	**Cuyo Island**	**11.90**	**340**	*e*P	**Pn**	**12 21 06.7**	**+1.9**
OTRP	**Odiongan**	**13.04**	**346**	*e*P	**Pn**	**12 21 22.5**	**+2.2**
PVCP	**Virac**	**13.91**	**356**	*e*P	**Pn**	**12 21 30.9**	**-0.9**
KAKA	**Kakadu**	**14.20**	**150**	*e*P	**Pn**	**12 21 32.0**	**-3.5**
	57nm,0.8s						
LUBP	**Lubang**	**14.85**	**341**	*e*P	**Pn**	**12 21 47.6**	**+3.6**
TGY	**Tagaytay City**	**14.99**	**344**	Pn	**Pn**	**12 21 39.6**	**-6.3**
	32nm,0.3s,baz=188,slow=7.1,SNR=2.2						
TGY	**Tagaytay City**	**14.99**	**344**	P	**Pn**	**12 21 39.6**	**-6.3**
TGY				pmax	pmax		
	comp=Z,32nm,0.3s						
KSM	**Kuching**	**15.03**	**277**	*e*Pn	**Pn**	**12 21 41.9**	**-4.5**
JAY	**Jayapura**	**15.61**	**98**	P	**Pn**	**12 21 58.5**	**+4.7**
	comp=Z,30nm,1.1s						
BALP	**Baler**	**16.41**	**347**	*e*P	**Pn**	**12 22 03.4**	**-0.4**
BJII	**Banjamegara**	**16.95**	**246**	P	**Pn**	**12 22 11.6**	**+1.0**
	comp=Z,133nm,1.5s						
BOLP	**Bolinao**	**17.45**	**343**	*e*P	**Pn**	**12 22 16.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**17.63**	**179**	*e*P	**Pn**	**12 22 16.6**	**-2.3**
	comp=Z,82nm,1.0s						
FITZ	**Fitzroy Crossi**	**17.63**	**179**	P	**Pn**	**12 22 16.5**	**-2.4**
	comp=Z,0.7nm,0.3s,baz=11,slow=14,SNR=38						
FITZ				LR	LR	12 29 24.9	
	comp=Z,420nm,21.0s,baz=10,slow=38						
CVP	**Callao Caves**	**18.27**	**350**	*e*P	**Pn**	**12 22 25.0**	**-1.6**
	comp=Z,22μm,0.5s						
LEM	**Lembang**	**18.71**	**250**	P	**Pn**	**12 22 30.8**	**-1.1**
	comp=Z,123nm,0.9s						
CBJI	**Citeko**	**19.30**	**251**	P	**Pn**	**12 22 38.9**	**-0.1**
	comp=Z,304nm,0.9s						
MBWA	**Marble Bar**	**21.35**	**194**	P	**P**	**12 22 59.8**	**+0.3**
	SNR=26						
MBWA	**Marble Bar**	**21.35**	**194**	*e*P	**P**	**12 22 59.2**	**-0.3**
WRAB	**Tennant Creek**	**21.40**	**156**	P	**P**	**12 22 58.6**	**-1.3**
	comp=Z,410nm,1.0s,mb5.7,SNR=24						
WRAB	**Tennant Creek**	**21.40**	**156**	*e*P	**P**	**12 22 58.5**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,136nm,1.0s,mb5.2						
WRAB	**Tennant Creek**	**21.40**	**156**	*e*P	**P**	**12 22 58.5**	**-1.5**
	comp=Z,136nm,1.0s,mb5.2						
WRA	**Warramunga Arr**	**21.40**	**156**	P	**P**	**12 22 58.2**	**-1.8**
	comp=Z,47nm,1.1s,mb4.7,baz=337,slow=9.7,SNR=121						
WRA	**Warramunga Arr**	**21.40**	**156**	P	**P**	**12 22 58.2**	**-1.8**
WRA				pmax	pmax		
	comp=Z,47nm,1.1s						
WB2	**Warramunga Arr**	**21.41**	**156**	*e*P	**P**	**12 22 57.9**	**-2.1**
WB2				*e*S	S	12 27 20.7	+27
KGM	**Kluang**	**22.04**	**276**	P	**P**	**12 23 12.7**	**+6.0**
PMG	**Port Moresby**	**23.60**	**113**	P	**P**	**12 23 21.7**	**-0.7**
	comp=Z,15nm,0.7s,mb4.5,baz=294,slow=10.0,SNR=4.8						
PMG	**Port Moresby**	**23.60**	**113**	*e*P	**P**	**12 23 23.7**	**+1.2**
GUMO	**Guam**	**23.89**	**54**	P	**P**	**12 23 24.0**	**-1.2**
	comp=Z,22nm,0.4s,mb4.8,baz=199,slow=7.6,SNR=8.9						
GUMO	**Guam**	**23.89**	**54**	P	**P**	**12 23 24.0**	**-1.1**
GUMO				pmax	pmax		
	comp=Z,22nm,0.4s,mb4.8						
QIZ	**Qiongzhong**	**24.49**	**323**	P	**P**	**12 23 31.3**	**+0.7**
QIZ				AP		12 23 48.0	
QIZ				XP	sP	12 23 59.5	+4.2
QIZ				S	**S**	**12 27 46.8**	**+0.8**
QIZ				LR	LR		
	comp=N,228nm,24.4s						
QIZ				LR	LR		
	comp=E,280nm,21.3s						
QIZ				LR	LR		
	comp=Z,581nm,23.6s						
AS31	**Alice Springs**	**24.64**	**161**	*e*P	**P**	**12 23 31.9**	**-0.1**
AS31				*e*PcP	PcP	12 27 09.8	+2.0
AS31				*e*S	S	12 28 09.3	+21
ASPA	**Alice Springs**	**24.64**	**161**	*e*P	**P**	**12 23 31.9**	**-0.1**
ASPA				*e*PCP	PcP	12 27 09.8	+2.0
ASPA				*e*S	S	12 28 09.3	+21
ASAR	**Alice Springs**	**24.64**	**161**	P	**P**	**12 23 31.9**	**-0.1**
	comp=Z,85nm,1.2s,mb5.1,baz=341,slow=10,SNR=134						
ASAR				LR	LR	12 34 15.9	
	comp=Z,195nm,18.9s,baz=327,slow=39						
ASAR	**Alice Springs**	**24.64**	**161**	P	**P**	**12 23 31.9**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,85nm,1.2s						
ASAR				MLR	MLR		
	comp=Z,195nm,19.0s						
YHNB	**Yeheng**	**25.17**	**352**	*e*P	**P**	**12 23 36.6**	**-0.2**
GZH	**Guangzhou**	**26.02**	**334**	P	**P**	**12 23 45.8**	**+1.3**
GZH				LR	LR		
	comp=N,415nm,20.2s						
GZH				LR	LR		
	comp=E,432nm,19.6s						
GZH				LR	LR		
	comp=Z,809nm,17.7s						
PSI	**Prapat**	**26.49**	**277**	P	**P**	**12 23 47.3**	**-1.4**
	comp=Z,3.1nm,0.4s,mb4.1,baz=120,slow=14,SNR=2.7						
PSI	**Prapat**	**26.49**	**277**	P	**P**	**12 23 47.3**	**-1.4**
PSI				pmax	pmax		
	comp=Z,30nm,0.4s,mb5.1						
JOW	**Kunigami**	**27.20**	**

SSE Sheshan 31.52 353 P **P** **12 24 36.5 +3.1**
SSE AP pP 12 24 55.3 +5.2
SSE S **S** **12 29 39.8 +3.1**
SSE AMB AMB
comp=Z,23nm,0.8s,mb5.0
SSE AMB AMB
comp=Z,22nm,3.2s
SSE LR LR
comp=N,335nm,18.3s
SSE LR LR
comp=E,156nm,18.3s
SSE LR LR
comp=Z,495nm,20.3s
CBIJ Chichi jima 31.80 30 P **P** **12 24 34.9 -0.9**
comp=Z,40nm,0.4s,mb5.5,baz=192,slow=4.5,SNR=24
KLBR Kellerberrin 31.85 192 *e*P **P** **12 24 36.4 +0.1**
comp=Z,110nm,1.7s,mb5.3
KLBR *e*PCP PcP 12 27 27.9 +2.3
CHG Chiang Mai 32.09 308 ⇑P **P** **12 24 37.7 -0.7**
comp=Z,22nm,1.5s,mb4.7
CHTO Chiang Mai 32.09 308 P **P** **12 24 38.2 -0.1**
SNR=7.3
CHTO Chiang Mai 32.09 308 *e*P **P** **12 24 37.8 -0.6**
CHTO pmax pmax
comp=Z,33nm,1.3s,mb4.9
CHTO Chiang Mai 32.09 308 *e*P **P** **12 24 37.8 -0.6**
comp=Z,33nm,1.3s,mb4.9
GYA Guiyang 32.12 328⇑ *i*P **P** **12 24 37.8 -0.8**
GYA AP pP 12 24 55.5 +0.1
GYA XP sP 12 25 04.5 +0.9
GYA PP PP 12 25 45.5 -6.7
GYA PCP PcP 12 27 27.3 +1.0
GYA S **S** **12 29 41.3 -4.6**
GYA XS sS 12 30 12.3 -2.4
GYA SCP ScP 12 31 02.8 -0.9
GYA SCS ScS 12 34 59.8 -2.7
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
GYA AMB AMB
comp=Z,120nm,4.9s
GYA LR LR
comp=N,420nm,18.7s
GYA LR LR
comp=E,480nm,18.6s
GYA LR LR
comp=Z,380nm,17.9s
MUN Mundaring 32.58 194 *e*P **P** **12 24 42.5 -0.1**
NJ2 Nanjing 32.80 350 *e*P **P** **12 24 46.5 +1.9**
NJ2 AP pP 12 25 04.3 +2.9
NJ2 S **S** **12 29 57.0 +0.4**
NJ2 XS sS 12 30 27.0 +1.6
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.2
NJ2 AMB AMB
comp=Z,190nm,3.9s
NJ2 LR LR
comp=N,780nm,29.6s
NJ2 LR LR
comp=E,4μm,27.6s
NJ2 LR LR
comp=Z,4μm,28.5s
NWAO Narrogin (SRO) 33.25 192 P **P** **12 24 48.2 -0.3**
comp=Z,4.9nm,0.5s,mb4.6,baz=37,slow=9.6,SNR=7.7
NWAO LR LR 12 38 42.2
comp=Z,455nm,20.6s,baz=95,slow=37
NWAO Narrogin (SRO) 33.25 192 P **P** **12 24 48.2 -0.3**
NWAO pmax pmax
comp=Z,5.0nm,0.5s
NWAO MLR MLR
comp=Z,455nm,20.6s
NWAO Narrogin (SRO) 33.25 192 P **P** **12 24 48.2 -0.3**
NWAO LR LR 12 38 42.2
KMI Kunming 33.40 321 P **P** **12 24 52.8 +3.0**
KMI AP pP 12 25 08.8 +2.2
KMI XP sP 12 25 16.0 +1.2
KMI PP PP 12 26 06.0 -0.5
KMI PPP 12 26 23.5
KMI S **S** **12 30 07.5 +1.6**
KMI XS sS 12 30 35.3 +0.6
KMI SS SS 12 32 13.3 -19
KMI SSS 12 32 39.5
KMI AMB AMB
comp=Z,6.0nm,0.5s,mb4.7
KMI LR LR
comp=N,191nm,18.1s
KMI LR LR
comp=E,341nm,18.7s
KMI LR LR
comp=Z,410nm,18.1s
STKA Stephens Creek 34.95 155 *e*P **P** **12 25 03.9 +0.7**
comp=Z,33nm,1.1s,mb5.1
STKA Stephens Creek 34.95 155 P **P** **12 25 03.8 +0.6**
comp=Z,61nm,1.1s,mb5.3,baz=330,slow=8.2,SNR=34
CD2 Chengdu 37.20 329⇑ *i*P **P** **12 25 22.5 +0.1**
CD2 AP pP 12 25 40.5 +1.1
CD2 XP sP 12 25 49.5 +2.0
CD2 PP PP 12 26 51.5 +3.2
CD2 PCP PcP 12 27 41.3 +0.3
CD2 S **S** **12 31 03.3 -0.8**
CD2 XS sS 12 31 34.5 +1.3
CD2 AMB AMB
comp=Z,20nm,1.2s,mb4.9
CD2 AMB AMB
comp=Z,60nm,6.4s
CD2 LR LR
comp=E,210nm,21.6s
CD2 LR LR
comp=Z,210nm,19.2s
XAN Xi'an 37.49 337 P **P** **12 25 22.8 -2.1**
XAN AP pP 12 25 40.0 -1.9
XAN AMB AMB
comp=Z,23nm,1.1s,mb5.0
MAJO Matsushiro 38.65 17 *e*P **P** **12 25 33.3 -1.3**
MAJO pmax pmax
comp=Z,27nm,0.6s,mb5.2
MAJO Matsushiro 38.65 17 *e*P **P** **12 25 33.3 -1.3**
comp=Z,27nm,0.6s,mb5.2
MAT Matsushiro 38.65 17 P **P** **12 25 33.3 -1.3**
MJAR Matsushiro Arr 38.65 17 P **P** **12 25 33.3 -1.3**
comp=Z,21nm,0.6s,mb5.1,baz=193,slow=7.8,SNR=71
MJAR Matsushiro Arr 38.65 17 P **P** **12 25 33.3 -1.3**
MJAR pmax pmax
comp=Z,21nm,0.6s
ARMA Armidale 39.02 142 *e*P **P** **12 25 39.9 +2.2**
BJI Beijing 41.05 349 P **P** **12 25 53.5 -1.1**
BJI AMB AMB
comp=Z,13nm,1.6s,mb4.5
BJI AMB AMB
comp=Z,108nm,4.0s
BJI LR LR
comp=N,247nm,26.2s
BJI LR LR
comp=E,253nm,26.2s
BJI LR LR
comp=Z,504nm,26.2s
LZH Lanzhou 41.37 333 ⇑P **P** **12 25 57.3 +0.2**
LZH AP pP 12 26 11.0 -3.4
LZH PP PP 12 27 36.8 +3.0
LZH PCP PcP 12 27 55.5 +1.3
LZH PCS PcS 12 31 45.8 +0.3
LZH *e*S **S** **12 32 10.5 +3.9**
LZH SS SS 12 35 09.8 -3.0
LZH AMB AMB
comp=Z,37nm,1.3s,mb5.0
LZH AMB AMB
comp=Z,165nm,6.2s
LZH LR LR
comp=N,1μm,14.5s
LZH LR LR
comp=Z,2μm,17.7s
CNB Canberra Magne 41.41 150 *e*P **P** **12 25 59.8 +2.3**
comp=Z,47nm,1.3s,mb5.2
TOO Toolangi 41.47 155⇓ *i*P **P** **12 26 00.2 +2.2**
comp=Z,42nm,1.2s,mb5.1
TOO Toolangi 41.47 155⇓ *i*P **P** **12 26 00.2 +2.2**
TOO pmax pmax
comp=Z,42nm,1.2s,mb5.1
SNY Shenyang 42.03 358 ⇓P **P** **12 26 02.3 -0.2**
SNY AP pP 12 26 20.5 +0.7
SNY XP sP 12 26 29.8 +1.9
SNY S **S** **12 32 20.0 +3.6**
SNY XS sS 12 32 51.3 +5.5
SNY AMB AMB
comp=Z,31nm,1.0s,mb5.0
SNY AMB AMB
comp=Z,140nm,6.7s
SNY LR LR
comp=N,251nm,22.2s
SNY LR LR
comp=Z,322nm,25.0s
HHC Hu-ho-hao-te 42.86 345 *e*P **P** **12 26 10.0 +0.7**
HHC AP pP 12 26 28.3 +1.7
HHC XP sP 12 26 36.5 +1.8
HHC PP PP 12 27 55.8 +5.9
HHC PCP PcP 12 27 59.8 +0.7
HHC SCP ScP 12 31 42.5 -1.4
HHC PCS PcS 12 31 50.8 -0.7
HHC S **S** **12 32 29.5 +0.8**
HHC XS sS 12 33 01.3 +3.1
HHC SS SS 12 35 36.3 -5.9
HHC SCS ScS 12 36 00.5 -2.8
HHC AMB AMB
comp=Z,18nm,1.1s,mb4.7
HHC AMB AMB
comp=Z,53nm,5.2s
HHC LR LR
comp=N,208nm,22.8s
HHC LR LR
comp=E,173nm,24.7s
HHC LR LR
comp=Z,347nm,21.0s
CN2 Changchun 43.97 0 *e*P **P** **12 26 17.0 -1.2**
CN2 *e*S **S** **12 32 47.8 +2.9**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
CN2 AMB AMB
comp=Z,120nm,4.0s
CN2 LR LR
comp=N,220nm,22.0s
CN2 LR LR
comp=E,200nm,22.0s
CN2 LR LR
comp=Z,260nm,24.0s
LSA Lhasa 44.15 316 *e*P **P** **12 26 21.5 +1.8**
LSA pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
LSA Lhasa 44.15 316 *e*P **P** **12 26 21.5 +1.9**
comp=Z,9.8nm,0.6s,mb4.7
MDJ Mudanjiang 44.95 4 P **P** **12 26 26.0 -0.1**
MDJ AP pP 12 26 43.5 0.0
MDJ XP sP 12 26 51.8 +0.3
MDJ PP PP 12 28 12.5 +0.3
MDJ SCP ScP 12 31 52.0 -0.5
MDJ PCS PcS 12 32 00.0 0.0
MDJ S **S** **12 33 02.0 +2.9**
MDJ XS sS 12 33 30.3 +1.5
MDJ SCS ScS 12 36 16.5 0.0
MDJ AMB AMB
comp=Z,25nm,0.8s,mb5.0
MDJ AMB AMB
comp=Z,69nm,5.6s
MDJ LR LR
comp=N,177nm,23.3s
MDJ LR LR
comp=E,45nm,24.8s
MDJ LR LR
comp=Z,239nm,26.4s
MDJ Mudanjiang 44.95 4 *e*P **P** **12 26 25.9 -0.2**
comp=Z,26nm,0.9s,mb5.0
DZM Mont Dzumac 45.56 121 P **P** **12 26 33.3 +2.4**
comp=Z,8.4nm,0.8s,mb4.5,baz=270,slow=14,SNR=3.5
GTA Gaotai 45.92 332 *e*P **P** **12 26 33.5 -0.2**
GTA AP pP 12 26 46.8 -4.4
GTA PCP PcP 12 28 08.8 -0.8
GTA PP PP 12 28 19.5 -2.9
GTA PCS PcS 12 32 03.8 -0.2
GTA S **S** **12 33 11.0 -2.0**
GTA SCS ScS 12 36 23.5 +0.8
GTA AMB AMB
comp=Z,7.0nm,1.0s,mb4.3
GTA AMB AMB
comp=Z,111nm,6.1s
GTA LR LR
comp=N,313nm,19.8s
GTA LR LR
comp=E,228nm,19.8s
GTA LR LR
comp=Z,410nm,18.2s
JIRN Jiri 46.69 310 *e*P **P** **12 26 39.9 +0.2**
comp=Z,22nm,0.4s,mb5.2
ASAJ Asahikawa 46.92 17 P **P** **12 26 42.1 +0.6**
comp=Z,18nm,0.5s,mb5.1,baz=230,slow=11,SNR=34
ASAJ Asahikawa 46.92 17 P **P** **12 26 42.1 +0.6**
ASAJ pmax pmax
comp=Z,18nm,0.5s
GUN Gumba 47.05 310 *e*P **P** **12 26 42.6 +0.1**
comp=Z,28nm,0.4s,mb5.4
PKI Pulchoki 47.25 309 *e*P **P** **12 26 43.5 -0.5**
comp=Z,17nm,0.7s,mb4.9
PKI Pulchoki 47.25 309 *e*P **P** **12 26 43.5 -0.5**
PKI pmax pmax
comp=Z,17nm,0.7s,mb4.9
KOLN Koldanda 48.75 308 *e*P **P** **12 26 54.0 -1.7**
comp=Z,63nm,0.8s,mb5.6
HYB Hyderabad 49.22 293 *i*P **P** **12 27 02.5 +3.2**
HABR Khabarovsk 49.38 9 *e*P **P** **12 27 00.5 0.0**
HABR *e*S **S** **12 34 07.7 +5.6**
YSS Yuzh-Sakhalins 49.56 16 *e*P **P** **12 27 01.3 -0.6**
YSS *e* pP 12 27 15.1 -4.5
YSS pmax pmax
comp=Z,20nm,1.0s,mb5.0
YSS MLR MLR
comp=Z,200nm,19.0s
YSS Yuzh-Sakhalins 49.56 16 *e*P **P** **12 27 01.8 -0.1**
comp=Z,9.3nm,0.5s,mb5.0
HIA Hailar 49.66 355 *e*P **P** **12 27 01.9 -0.7**
HIA Hailar 49.66 355 *e*P **P** **12 27 01.0 -1.6**
KLR Kul'dur 49.72 6 *e*P **P** **12 26 59.2 -3.9**
ULN Ulaanbaatar 50.58 344 P **P** **12 27 10.2 +0.7**
SNR=9.2
ULN Ulaanbaatar 50.58 344⇑ *e*P **P** **12 27 08.9 -0.6**
ULN Ulaanbaatar 50.58 344 *e*P **P** **12 27 08.7 -0.8**
comp=Z,25nm,1.0s,mb5.2
SONM Songino Array 50.73 344 P **P** **12 27 09.6 -1.0**
comp=Z,12nm,0.8s,mb5.0,baz=157,slow=8.6,SNR=36
SONM LR LR 12 49 33.4
comp=Z,197nm,19.2s,baz=147,slow=37
SONM Songino Array 50.73 344 P **P** **12 27 09.6 -1.1**
SONM pmax pmax
comp=Z,12nm,0.8s
SONM MLR MLR
comp=Z,197nm,19.2s
CIT Chita 53.12 351 *e*P **P** **12 27 28.6 +0.2**
CIT pmax pmax
comp=Z,48nm,1.6s,mb5.3
ZAK Zakamensk 53.92 343 *e*P **P** **12 27 33.9 -0.4**
ZAK pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
TLY Talaya 54.97 344 P **P** **12 27 43.2 +1.2**
SNR=9.6
TLY Talaya 54.97 344 *e*P **P** **12 27 41.2 -0.7**
TLY pmax pmax
comp=Z,17nm,0.9s,mb5.1
TLY MLR MLR
comp=Z,290nm,25.0s
TLY Talaya 54.97 344 *e*P **P** **12 27 40.5 -1.4**
WMQ Urumqi 55.28 328 P **P** **12 27 45.5 +1.4**
WMQ AP pP 12 28 04.5 +2.4
WMQ XP sP 12 28 13.5 +3.5
WMQ PP PP 12 29 52.0 +3.7
WMQ S **S** **12 35 22.0 -0.7**
WMQ SS SS 12 39 07.0 -0.8
WMQ AMB AMB
comp=Z,31nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,175nm,5.0s
WMQ LR LR
comp=N,354nm,14.0s
WMQ LR LR
comp=E,312nm,14.0s
WMQ LR LR
comp=Z,357nm,14.0s
MOY Mondy 55.74 342 *e*P **P** **12 27 48.0 +0.5**
MOY pmax pmax
comp=Z,37nm,1.6s,mb5.2
BOD Bodaibo 58.70 353⇓ *i*P **P** **12 28 07.6 -0.7**
BOD pmax pmax
comp=Z,39nm,1.0s,mb5.4
RPZ Rata Peaks 59.36 143 P **P** **12 28 14.2 +1.4**
comp=Z,7.8nm,0.7s,mb4.9,baz=9.2,slow=4.8,SNR=5.5
KSH Kashi 59.95 317 *e*P **P** **12 28 19.8 +2.9**
KSH *e*AP pP 12 28 38.8 +3.7
KSH *e*XP sP 12 28 47.5 +4.5
KSH *e*PCP PcP 12 29 04.5 +2.0
KSH *e*PP PP 12 30 34.5 +4.7
KSH *e*PPP 12 32 01.5
KSH *e*SCP ScP 12 32 57.3 0.0
KSH *e*PCS PcS 12 33 05.3 +0.5
KSH *e*S **S** **12 36 24.3 +0.5**
KSH *e*XS sS 12 36 57.8 +3.1
KSH *e*SCS ScS 12 37 59.0 -2.0
KSH *e*SS SS 12 40 23.5 +2.4
KSH AMB AMB
comp=Z,40nm,0.4s,mb5.8
KSH LR LR
comp=N,254nm,7.2s
KSH LR LR
comp=E,432nm,6.2s
KSH LR LR
comp=Z,275nm,7.4s
PET Petropavlovsk 60.06 23 *e*P **P** **12 28 18.6 +0.9**
PET *e* 12 28 31.5
PET pmax pmax
comp=Z,35nm,1.5s,mb5.2
PET Petropavlovsk 60.06 23 *e*P **P** **12 28 18.6 +1.0**
comp=Z,14nm,0.6s,mb5.2
MK31 Makanchi Array 60.11 327 P **P** **12 28 15.8 -2.2**
MK31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
MKAR Makanchi Array 60.11 327 P **P** **12 28 16.6 -1.5**
comp=Z,12nm,0.5s,mb5.2,baz=118,slow=8.1,SNR=46
MKAR Makanchi Array 60.11 327 P **P** **12 28 16.6 -1.4**
MKAR pmax pmax
comp=Z,12nm,0.5s
KZA Kyzart 61.67 320 P **P** **12 28 31.2 +2.5**
SNR=24
TKM2 Tokmak 2 61.87 321 P **P** **12 28 32.0 +2.1**
SNR=19
TKM2 Tokmak 2 61.87 321 *i*P **P** **12 28 28.4 -1.6**
KBK Karagaybulak 62.16 320 P **P** **12 28 33.9 +2.0**
SNR=6.9
YAK Yakutsk 62.33 2 *e*P **P** **12 28 33.3 +0.3**
YAK pmax pmax
comp=Z,33nm,0.9s,mb5.4
YAK pmax pmax
comp=N,16nm,1.1s
YAK pmax pmax
comp=E,16nm,1.2s
YAK Yakutsk 62.33 2 *e*P **P** **12 28 32.7 -0.3**
AAK Ala-Archa 62.44 320 P **P** **12 28 34.3 +0.6**
SNR=10
AAK Ala-Archa 62.44 320 *e*P **P** **12 28 32.9 -0.8**
AAK pmax pmax
comp=Z,27nm,1.6s,mb5.0
AAK Ala-Archa 62.44 320 *e*P **P** **12 28 32.6 -1.1**
AML Almayashu 62.71 319 P **P** **12 28 38.2 +2.6**
SNR=10
USP Ospenovka 62.74 320 P **P** **12 28 37.5 +1.8**
SNR=18
EKS2 Erkin-Say 62.91 320 P **P** **12 28 39.3 +2.4**
SNR=17
MA2 Magadan 63.01 14*c* *i*P **P** **12 28 38.4 +0.8**
MA2 pmax pmax
comp=Z,35nm,1.1s,mb5.2
ZAL Zalesovo 63.58 335 P **P** **12 28 39.5 -1.8**
comp=Z,4.1nm,0.7s,mb4.4,baz=349,slow=6.0,SNR=16
ZAL Zalesovo 63.58 335 P **P** **12 28 39.5 -1.8**
ZAL pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 64.42 329 P **P** **12 28 44.4 -2.4**
comp=Z,271nm,0.6s,SNR=22
NVS Novosibirsk 64.87 335 *e*P **P** **12 28 46.3 -3.4**
NVS *e* 12 38 32.8
NVS pmax pmax
comp=N,12nm,1.0s
NVS pmax pmax
comp=E,15nm,1.0s
NVS pmax pmax
comp=Z,20nm,1.0s,mb4.9
CASY Casey 66.60 186 *e*P **P** **12 29 01.4 +0.5**
VOSK Vostochnaya 69.49 328 P **P** **12 29 13.4 -5.6**
VOSK pmax pmax
comp=Z,7.0nm,1.3s,mb4.3
MIR Mirnyy 69.86 193 P **P** **12 29 19.0 -2.2**
MIR *e* 12 29 45.0
MIR pmax pmax
comp=Z,15nm,1.5s,mb4.6
BVAR Borovoye Array 69.95 328 P **P** **12 29 20.7 -1.1**
comp=Z,3.8nm,0.6s,mb4.4,baz=130,slow=8.3,SNR=17
BVAR LR LR 13 03 54.8
comp=Z,134nm,20.6s,baz=138,slow=39
BVAR Borovoye Array 69.95 328 P **P** **12 29 20.7 -1.2**
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BVAR MLR MLR
comp=Z,134nm,20.6s
BRVK Borovoye 70.03 328 P **P** **12 29 21.4 -0.9**
comp=Z,107nm,1.2s,mb5.5,SNR=6.5
BRVK Borovoye 70.03 328 P **P** **12 29 22.6 +0.3**
SNR=13
BRVK Borovoye 70.03 328 *e*P **P** **12 29 21.5 -0.8**
CHKZ Chkalovo 70.16 329 *e*P **P** **12 29 21.9 -1.2**
ZRNK Zerenda 70.65 328 *e*P **P** **12 29 24.9 -1.2**
ZRNK pmax pmax
comp=Z,23nm,1.0s,mb5.0
ZRNK Zerenda 70.65 328 *e*P **P** **12 29 24.9 -1.2**
comp=Z,23nm,1.0s,mb5.0
TIXI Tiksi 71.94 1 *e*P **P** **12 29 32.9 -0.9**
BILL Bilibino 73.87 15 *e*P **P** **12 29 44.9 -0.4**
BILL pmax pmax
comp=Z,16nm,2.4s,mb4.3
AB31 Akbulak array 74.39 322 P **P** **12 29 47.7 -0.6**
AB31 pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
AB31 Akbulak array 74.39 322 *i*P **P** **12 29 47.7 -0.6**
AKTK Aktyubinsk 75.95 323 P **P** **12 29 56.9 -0.4**
AKTO Aktyubinsk 75.95 323 P **P** **12 29 56.9 -0.4**
comp=Z,20nm,0.7s,mb5.0,baz=108,slow=7.3,SNR=93
AKTO Aktyubinsk 75.95 323 P **P** **12 29 56.9 -0.4**
AKTO pmax pmax
comp=Z,20nm,0.7s,mb5.0
ARU Arti 77.60 329 P **P** **12 30 05.1 -1.5**
comp=Z,96nm,1.2s,mb5.4,SNR=5.1
ARU Arti 77.60 329⇑ *i*P **P** **12 30 04.9 -1.7**
ARU *e* 12 30 15.5
ARU *e* 12 33 00.0
ARU *e*PPP 12 34 43.6
ARU *e*S S 12 39 54.9 +2.3
ARU *e*SS SS 12 44 56.2 +3.0
ARU pmax pmax
comp=Z,14nm,0.9s,mb4.7
ARU Arti 77.60 329⇑ *i*P **P** **12 30 05.5 -1.1**
OPO Ambohidratompo 78.55 251 P **P** **12 30 14.1 +2.3**
comp=Z,1.3nm,0.3s,mb4.2,baz=215,slow=0.4,SNR=7.8
MAW Mawson 79.42 200 *e*P **P** **12 30 18.1 +1.5**
comp=Z,5.8nm,1.1s,mb4.3
MAW Mawson 79.42 200 P **P** **12 30 18.1 +1.6**
comp=Z,5.8nm,1.1s,mb4.3,baz=72,slow=8.4,SNR=8.0
MAW Mawson 79.42 200 P **P** **12 30 18.1 +1.5**
MAW pmax pmax
comp=Z,6.0nm,1.1s
SOKR Solikamsk 79.54 331 *e*P **P** **12 30 16.8 -0.4**
SOKR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VNDA Vanda 79.58 172 P **P** **12 30 17.9 +0.4**
comp=Z,2.5nm,1.1s,mb4.0,baz=305,slow=4.2,SNR=7.7
VNDA LR LR 13 06 51.2
comp=Z,176nm,19.7s,baz=52,slow=37
VNDA Vanda 79.58 172 P **P** **12 30 17.9 +0.4**
VNDA pmax pmax
comp=Z,30nm,1.1s
VNDA MLR MLR
comp=Z,176nm,19.7s
SDPT Sand Point 81.41 34 *e*P **P** **12 30 27.8 +0.6**
comp=Z,59nm,0.5s,mb5.7
CHGN Chignik 82.75 33 *e*P **P** **12 30 36.1 +1.8**
GNI Garni 82.96 310 *e*P **P** **12 30 34.5 -0.9**
GNI pmax pmax
comp=Z,15nm,0.8s
GNI Garni 82.96 310 *e*P **P** **12 30 34.5 -0.8**
comp=Z,15nm,0.8s,mb4.9
GNI *e*P 12 30 34.8
ZEI Tsey 83.88 313 *e*P **P** **12 30 40.0 -0.1**
ZEI *e**PP pP 12 30 49.9 -9.3
ZEI *e* 12 33 51.9

ZEI pmax pmax
comp=Z,25nm,0.8s,mb5.1
KIV Kislovodsk 84.88 314 P **P** **12 30 47.0 +1.9**
KIV 12 33 55.0
SVW2 Sparrevohn 85.09 29 *e*P **P** **12 30 47.1 +0.9**
TTA Tatalina 85.21 27 *e*P **P** **12 30 48.1 +1.3**
VRHR Novokhopersk 86.26 321 *e*P **P** **12 30 51.6 -0.4**
VRHR pmax pmax
comp=Z,30nm,0.5s,mb5.5
VRHR pmax pmax
comp=N,10.0nm,0.3s
VRHR pmax pmax
comp=E,10.0nm,0.7s
MALT Malatya 87.71 308 *e*P **P** **12 31 00.3 +1.3**
MALT pmax pmax
comp=Z,31nm,1.4s,mb5.2
MALT Malatya 87.71 308 *e*P **P** **12 31 00.3 +1.3**
comp=Z,31nm,1.4s,mb5.2
VRSR Storozhevoye 87.79 321 *e*P **P** **12 30 58.6 -0.8**
VRSR pmax pmax
comp=E,20nm,1.0s
VRSR pmax pmax
comp=Z,20nm,1.0s,mb5.1
VRSR pmax pmax
comp=N,10.0nm,0.9s
VOR Voronezh 87.82 322 *e*P **P** **12 30 59.0 -0.5**
VOR pmax pmax
comp=Z,80nm,1.6s,mb5.5
SYO Syowa Base 88.09 201⇓ *e*P **P** **12 31 01.6 +0.8**
ANN Anapa 88.69 315 *e*P **P** **12 31 02.9 -0.7**
ANN pmax pmax
comp=Z,81nm,1.3s,mb5.6
MOS Moscow 88.95 326 *e*P **P** **12 31 03.2 -1.6**
OBN Obninsk 89.53 325⇓ *e*P **P** **12 31 07.3 -0.3**
OBN *e* pP 12 31 26.5 -0.4
OBN pmax pmax
comp=Z,55nm,1.6s,mb5.4
QSPA South Pole Qui 89.57 180 *e*P **P** **12 31 08.4 +0.6**
comp=Z,7.4nm,1.1s,mb4.7
MENT Mentasta 90.80 27 *e*P **P** **12 31 14.2 +0.7**
BRTR Keskin Array B 91.46 310 P **P** **12 31 16.0 -0.6**
comp=Z,2.9nm,1.0s,mb4.4,baz=120,slow=4.5,SNR=6.5
BRTR LR LR 13 21 05.0
comp=Z,54nm,18.9s,baz=179,slow=41
DAWY Dawson 92.69 26 *e*P **P** **12 31 22.9 +0.6**
ARCES ARCESS Array B 93.75 340 P **P** **12 31 24.6 -2.5**
comp=Z,2.5nm,0.7s,mb4.7,baz=80,slow=5.9,SNR=4.3
ARCES LR LR 13 16 13.1
comp=Z,156nm,21.5s,baz=327,slow=37
ARCES ARCESS Array B 93.75 340 P **P** **12 31 24.6 -2.5**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES MLR MLR
comp=Z,156nm,21.5s
AKASG Malin Array Be 94.10 321 P **P** **12 31 27.9 -0.8**
comp=Z,0.6nm,0.4s,mb4.3,baz=81,slow=3.1,SNR=11
AKASG Malin Array Be 94.10 321 P **P** **12 31 27.9 -0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 94.10 321 P **P** **12 31 27.9 -0.8**
INK Inuvik 94.50 21 *e*P **P** **12 31 30.5 -0.1**
INK pmax pmax
comp=Z,10.0nm,1.1s
INK Inuvik 94.50 21 *e*P **P** **12 31 30.5 -0.1**
comp=Z,10nm,1.1s,mb5.1
FINES FINESS Array B 94.70 332 P **P** **12 31 30.2 -1.3**
comp=Z,1.2nm,0.6s,mb4.5,baz=56,slow=4.8,SNR=5.5
FINES FINESS Array B 94.70 332 P **P** **12 31 30.2 -1.3**
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 94.70 332 P **P** **12 31 30.2 -1.3**
MLR Muntele Rosu 96.78 316 P **P** **12 31 41.4 +0.4**
comp=Z,2.8nm,0.6s,mb4.9,baz=356,slow=4.9,SNR=4.8
MLR Muntele Rosu 96.78 316 P **P** **12 31 41.4 +0.5**
MLR pmax pmax
comp=Z,3.0nm,0.6s
BOSA Boshof 98.59 241 LR LR 13 10 19.3
comp=Z,298nm,18.5s,baz=13,slow=32
TOA0 Torodi Ar. Sit 122.66 285 *e*PKPdf PKPdf 12 37 07.4 +1.8
TORD Torodi Ar. Bea 122.66 285 PKP PKPdf 12 37 07.2 +1.6
comp=Z,2.6nm,0.8s,baz=65,slow=1.7,SNR=12
TORD Torodi Ar. Bea 122.66 285 PKP PKPdf 12 37 07.2 +1.6
JCT Junction City 127.83 51 *e*PKIKP PKPdf 12 37 15.9 +0.4
DBIC Dimbokro 129.82 278 PKP PKPdf 12 37 22.1 +2.8
comp=Z,4.5nm,1.1s,baz=338,slow=8.9,SNR=3.6
DBIC Dimbokro 129.82 278 PKIKP PKPdf 12 37 22.1 +2.8
DBIC pmax pmax
comp=Z,5.0nm,1.1s
PLCA Paso Flores 136.65 162 PKP PKPdf 12 37 35.2 +3.1
comp=Z,1.8nm,0.7s,baz=150,slow=2.2,SNR=7.8
PLCA Paso Flores 136.65 162 PKIKP PKPdf 12 37 35.2 +3.0
PLCA pmax pmax
comp=Z,2.0nm,0.7s
PLCA Paso Flores 136.65 162 PKP PKPdf 12 37 35.2 +3.1
MGV Managua 147.28 47 *e*P PKPdf 12 37 54.8 +3.7
CPUP Villa Florida 153.34 175 PKPbc PKPbc 12 38 10.2 +2.1
comp=Z,3.1nm,0.6s,baz=246,slow=1.8,SNR=7.2
CPUP Villa Florida 153.34 175 PKIKP PKPbc 12 38 10.2 +2.1
CPUP pmax pmax
comp=Z,3.0nm,0.6s

BJI ***29*** *12:38:16.3, 1.13S×125 45E, h35km, mB5.0, mb5.0, Ms4.4, Msz4.3*
IDC ***29*** *12:38:18.9±0.5, 0.24S×125 20E, h0km, mb4.8/19, mb1 4.8/20, mb1mx4.8/22, mbtmp4.8/20, ML4.2/1, MS3.6/3, Ms1 3.6/3, ms1mx3.3/22, Error ellipse: s-maj=21.2km s-min=12.0km az=78.0*
ISCJB ***29*** *12:38:21.4±1.6, 0.35S±0.04×125 23E±0.06, h26km±11km, mb4.9/69, MS3.9/12, Error ellipse: s-maj=10.1km s-min=5.6km az=143.6*
MOS ***29*** *12:38:22.6±1.1, 0.31S×125.17E, h36km, mb5.1/24, Error ellipse: s-maj=14.6km s-min=6.7km az=109.4*
NEIC ***29*** *12:38:24.3±0.2, 0.32S×125.16E, h35km, mb5.0/26, Error ellipse: s-maj=9.5km s-min=4.9km az=70.0*
ISC 29 12:38:24.2±1.5, 0.35S±0.04×125 25E±0.06, h32km±11km, h35km±1.3km; pP-P, n140, σ1§26/141, mb4.9/69, MS3.9/12, 5C-4D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
AAI	**Ambon**	**4.43**	**138**	P		**Pn**	**12 39 33.0**	**+3.8**
	299nm,0.5s							
PCI	**Palu**	**5.44**	**264**	P		**Pn**	**12 39 49.3**	**+6.2**
	397nm,1.1s							
SWI	**Sorong**	**6.03**	**95**	P		**Pn**	**12 40 00.9**	**+10**
	58nm,0.8s							
PVCP	**Virac**	**13.90**	**356**⇓	*e*P		**Pn**	**12 41 41.2**	**+2.4**
PVCP	**Virac**	**13.90**	**356**	*e*P		**Pn**	**12 41 41.3**	**+2.4**
KAKA	**Kakadu**	**14.20**	**150**	*e*P		**Pn**	**12 41 42.7**	**-0.3**
	28nm,0.6s							
LUBP	**Lubang**	**14.84**	**341**	*e*P		**Pn**	**12 41 58.0**	**+6.2**
KSM	**Kuching**	**15.05**	**277**	*e*Pn		**Pn**	**12 41 54.0**	**-0.6**
BALP	**Baler**	**16.39**	**347**	*e*P		**Pn**	**12 42 13.6**	**+1.7**
FITZ	**Fitzroy Crossi**	**17.65**	**179**⇑	*i*P		**Pn**	**12 42 27.4**	**-0.1**
	22nm,0.8s							
FITZ	**Fitzroy Crossi**	**17.65**	**179**	P		**Pn**	**12 42 27.2**	**-0.3**
	0.6nm,0.3s,baz=14,slow=8.9,SNR=23							
FITZ				LR		LR	12 48 24.7	
	comp=Z,146nm,20.0s,baz=333,slow=34							
CBJI	**Citeko**	**19.33**	**251**	P		**Pn**	**12 42 50.4**	**+2.4**
	202nm,1.0s							
MBWA	**Marble Bar**	**21.38**	**194**	⇓P		**P**	**12 43 09.5**	**+0.5**
	SNR=7.5							
MBWA	**Marble Bar**	**21.38**	**194**	*e*P		**P**	**12 43 09.4**	**+0.4**
	80nm,1.0s,mb5.0							
WRAB	**Tennant Creek**	**21.41**	**156**	P		**P**	**12 43 08.0**	**-1.3**
	186nm,1.1s,mb5.3,SNR=16							
WRAB	**Tennant Creek**	**21.41**	**156**	*e*P		**P**	**12 43 08.6**	**-0.7**
WRA	**Warramunga Arr**	**21.41**	**156**	P		**P**	**12 43 08.3**	**-1.0**
	12nm,0.5s,mb4.5,baz=336,slow=9.8,SNR=78							
WB2	**Warramunga Arr**	**21.42**	**156**	*e*P		**P**	**12 43 08.3**	**-1.1**
WB2	**Warramunga Arr**	**21.42**	**156**	*e*P		**P**	**12 43 08.4**	**-1.0**
GUMO	**Guam**	**23.86**	**54**	P		**P**	**12 43 33.2**	**-1.5**
	22nm,0.6s,mb4.8,baz=194,slow=12,SNR=6.2							
QIZ	**Qiongzhong**	**24.49**	**323**	P		**P**	**12 43 41.0**	**+0.6**
QIZ				S		**S**	**12 48 01.0**	**+2.3**
QIZ				AMB		AMB		
	comp=Z,22nm,1.6s,mb4.3							
QIZ				LR		LR		
	comp=N,208nm,18.9s							
QIZ				LR		LR		
	comp=Z,234nm,21.3s,MS3.6							
AS31	**Alice Springs**	**24.65**	**161**	*e*P		**P**	**12 43 41.9**	**0.0**
AS31				*e*P			12 43 42.2	
ASPA	**Alice Springs**	**24.65**	**161**	*e*P		**P**	**12 43 42.2**	**+0.3**
ASAR	**Alice Springs**	**24.65**	**161**	P		**P**	**12 43 42.1**	**+0.2**
	comp=Z,7.4nm,0.5s,mb4.5,baz=354,slow=17,SNR=69							
ASAR				LR		LR	12 53 24.7	
	comp=Z,114nm,21.1s,MS3.3,baz=335,slow=37							
JOW	**Kunigami**	**27.18**	**6**	P		**P**	**12 44 05.2**	**+0.4**
	comp=Z,40nm,0.5s,mb5.2,baz=184,slow=9.8,SNR=47							
FORT	**Forrest**	**30.38**	**175**	*e*P		**P**	**12 44 33.2**	**0.0**
	comp=Z,29nm,0.5s,mb5.3							
SSE	**Sheshan**	**31.51**	**353**	P		**P**	**12 44 45.0**	**+1.8**
SSE				AMB		AMB		
	comp=Z,18nm,0.7s,mb5.0							
SSE				AMB		AMB		
	comp=Z,57nm,10.1s							
CBIJ	**Chichi jima**	**31.78**	**30**	P		**P**	**12 44 45.0**	**-0.6**
	comp=Z,42nm,0.6s,mb5.5,baz=276,slow=20,SNR=13							
KLBR	**Kellerberrin**	**31.87**	**192**	*e*P		**P**	**12 44 46.0**	**-0.4**
	comp=Z,61nm,1.7s,mb5.2							
CHTO	**Chiang Mai**	**32.09**	**308**	P		**P**	**12 44 49.2**	**+0.9**
	SNR=5.3							
CHTO	**Chiang Mai**	**32.09**	**308**	*e*P		**P**	**12 44 48.5**	**+0.2**
CHTO				pmax		pmax		
	comp=Z,22nm,1.1s,mb4.9							
CHTO	**Chiang Mai**	**32.09**	**308**	*e*P		**P**	**12 44 48.5**	**+0.1**
	comp=Z,22nm,1.1s,mb4.9							
GYA	**Guiyang**	**32.11**	**327**⇓	*i*P		**P**	**12 44 48.8**	**+0.3**
GYA				AP		pP	12 44 58.3	+0.5
GYA				XP		sP	12 45 02.5	+0.9
GYA				PCP		PcP	12 47 38.5	+1.3
GYA				S		**S**	**12 49 57.0**	**-1.8**
GYA				SCP		ScP	12 51 18.0	-0.4
GYA				SCS		ScS	12 55 15.0	-2.1
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.7							
GYA				AMB		AMB		
	comp=Z,110nm,5.0s							
GYA				LR		LR		
	comp=N,370nm,18.7s,MS4.2							
GYA				LR		LR		
	comp=E,320nm,19.0s,MS4.2							
GYA				LR		LR		
	comp=Z,360nm,18.6s,MS4.1							
MUN	**Mundaring**	**32.60**	**194**	*e*P		**P**	**12 44 52.3**	**-0.5**
NJ2	**Nanjing**	**32.79**	**350**	*e*P		**P**	**12 44 57.0**	**+2.6**
NJ2				AP		pP	12 45 06.8	+3.1
NJ2				S		**S**	**12 50 10.0**	**+0.7**
NJ2				AMB		AMB		
	comp=Z,20nm,0.9s,mb5.0							
NJ2				AMB		AMB		
	comp=Z,280nm,7.2s							
NJ2				LR		LR		
	comp=N,3μm,20.2s							
NJ2				LR		LR		
	comp=E,2μm,27.8s							
NJ2				LR		LR		
	comp=Z,990nm,21.1s,MS4.5							
NWAO	**Narrogin (SRO)**	**33.27**	**192**	LR		LR	12 58 30.1	
	comp=Z,239nm,21.0s,MS3.9,baz=167,slow=36							
KMI	**Kunming**	**33.40**	**321**	P		**P**	**12 45 01.3**	**+1.6**
KMI				AP		pP	12 45 14.0	+5.0
KMI				XP		sP	12 45 17.5	+4.6
KMI				PP		PP	12 46 17.8	+2.2
KMI				S		**S**	**12 50 23.5**	**+4.7**
KMI				SS		SS	12 52 27.3	-16
KMI				AMB		AMB		
	comp=Z,6.0nm,1.3s,mb4.4							
KMI				AMB		AMB		
	comp=Z,91nm,7.6s							
KMI				LR		LR		
	comp=Z,110nm,16.3s,MS3.7							
STKA	**Stephens Creek**	**34.96**	**155**⇑	*i*P		**P**	**12 45 13.7**	**+0.4**
	comp=Z,5.6nm,0.6s,mb4.7							
STKA	**Stephens Creek**	**34.96**	**155**	P		**P**	**12 45 14.1**	**+0.8**
	comp=Z,7.7nm,0.5s,mb4.9,baz=333,slow=8.7,SNR=23							
CD2	**Chengdu**	**37.19**	**329**	*e*P		**P**	**12 45 33.0**	**+0.6**
CD2				AP		pP	12 45 42.5	+0.8
CD2				XP		sP	12 45 46.5	+1.0
CD2				PP		PP	12 47 01.0	+3.6
CD2				S		**S**	**12 51 18.5**	**+1.5**
CD2				XS		sS	12 51 34.5	+2.1
CD2				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.6							
CD2				AMB		AMB		
	comp=Z,30nm,5.2s							
CD2				LR		LR		
	comp=E,110nm,16.8s							
CD2				LR		LR		
	comp=Z,120nm,18.0s,MS3.7							
XAN	**Xi'an**	**37.48**	**337**	P		**P**	**12 45 33.0**	**-1.8**
XAN				AMB		AMB		
	comp=Z,17nm,1.0s,mb4.8							
MJAR	**Matsushiro Arr**	**38.62**	**17**	P		**P**	**12 45 43.0**	**-1.4**
	comp=Z,12nm,0.6s,mb4.8,baz=190,slow=8.2,SNR=42							
MAJO	**Matsushiro**	**38.63**	**17**	*e*P		**P**	**12 45 43.9**	**-0.6**
MAJO				pmax		pmax		
	comp=Z,19nm,0.6s,mb5.0							
MAJO	**Matsushiro**	**38.63**	**17**	*e*P		**P**	**12 45 43.9**	**-0.6**
	comp=Z,18nm,0.6s,mb5.0							
MAT	**Matsushiro**	**38.63**	**17**	P		**P**	**12 45 43.6**	**-0.9**
ARMA	**Armidale**	**39.02**	**142**	*e*P		**P**	**12 45 48.9**	**+1.1**
LZH	**Lanzhou**	**41.36**	**333**	⇑P		**P**	**12 46 08.5**	**+1.3**
LZH				AP		pP	12 46 18.5	+1.9
LZH				XP		sP	12 46 22.5	+2.1
LZH				PP		PP	12 47 47.5	+4.6
LZH				*e*S		**S**	**12 52 22.3**	**+2.6**
LZH				XS		sS	12 52 37.5	+2.3
LZH				*e*SS		SS	12 55 23.0	-1.1
LZH				AMB		AMB		
	comp=Z,36nm,1.5s,mb4.8							
LZH				AMB		AMB		
	comp=Z,162nm,6.1s							
LZH				LR		LR		
	comp=N,892nm,14.5s							
LZH				LR		LR		
	comp=Z,1μm,17.9s,MS4.9							
CNB	**Canberra Magne**	**41.42**	**150**	*e*P		**P**	**12 46 10.1**	**+2.5**
	comp=Z,6.9nm,0.6s,mb4.5							
TOO	**Toolangi**	**41.48**	**155**	*e*P		**P**	**12 46 10.3**	**+2.1**
	comp=Z,4.5nm,0.5s,mb4.3							
TOO	**Toolangi**	**41.48**	**155**	*e*P		**P**	**12 46 10.3**	**+2.1**
TOO				pmax		pmax		
	comp=Z,5.0nm,0.5s,mb4.4							
HHC	**Hu-ho-hao-te**	**42.85**	**345**	*e*P		**P**	**12 46 23.0**	**+3.7**
HHC				AP		pP	12 46 32.8	+4.0
HHC				XP		sP	12 46 36.8	+4.2
HHC				PP		PP	12 48 05.3	+6.3
HHC				PCP		PcP	12 48 12.0	+2.0
HHC				S		**S**	**12 52 45.5**	**+3.8**
HHC				XS		sS	12 53 02.3	+5.1
HHC				SS		SS	12 55 52.0	-1.5
HHC				SCS		ScS	12 56 18.8	+1.0
HHC				AMB		AMB		
	comp=Z,7.0nm,0.9s,mb4.4							
HHC				AMB		AMB		
	comp=Z,158nm,4.5s							
HHC				LR		LR		
	comp=N,124nm,19.9s,MS4.0							
HHC				LR		LR		
	comp=E,145nm,19.9s,MS4.0							
HHC				LR		LR		
	comp=Z,84nm,19.0s,MS3.6							
CN2	**Changchun**	**43.95**	**0**	*e*P		**P**	**12 46 32.5**	**+4.3**
MDJ	**Mudanjiang**	**44.94**	**4**	P		**P**	**12 46 36.8**	**+0.7**
MDJ				AP		pP	12 46 45.8	+0.3
MDJ				XP		sP	12 46 49.5	+0.1
MDJ				PP		PP	12 48 22.0	+0.7
MDJ				SCP		ScP	12 52 07.8	+0.7
MDJ				PCS		PcS	12 52 11.5	+0.8
MDJ				S		**S**	**12 53 16.0**	**+3.9**
MDJ				AMB		AMB		
	comp=Z,15nm,0.9s,mb4.8							
MDJ				AMB		AMB		
	comp=Z,104nm,7.9s							
MDJ				LR		LR		
	comp=N,71nm,26.9s,MS3.5							
MDJ				LR		LR		
	comp=E,24nm,26.9s,MS3.5							
MDJ				LR		LR		
	comp=Z,62nm,19.2s							
MDJ	**Mudanjiang**	**44.94**	**4**	*e*P		**P**	**12 46 36.3**	**+0.2**
	comp=Z,10nm,0.6s,mb4.8							
GTA	**Gaotai**	**45.91**	**332**	*e*P		**P**	**12 46 43.0**	**-0.8**
GTA				AP		pP	12 46 52.0	-1.3
GTA				XP		sP	12 46 56.0	-1.1
GTA				PCP		PcP	12 48 20.3	-0.1
GTA				PP		PP	12 48 31.0	-0.6
GTA				SCP		ScP	12 52 09.3	-1.8
GTA				PCS		PcS	12 52 13.3	-1.5
GTA				S		**S**	**12 53 24.0**	**-2.1**
GTA				SCS		ScS	12 56 34.8	-2.4
GTA				AMB		AMB		
	comp=Z,3.0nm,1.0s,mb4.2							
GTA				AMB		AMB		
	comp=Z,116nm,4.6s							
GTA				LR		LR		
	comp=N,82nm,17.9s,MS3.9							
GTA				LR		LR		
	comp=E,110nm,19.4s,MS3.9							
GTA				LR		LR		
	comp=Z,120nm,19.8s,MS3.8							
JIRN	**Jiri**	**46.69**	**310**	*e*P		**P**	**12 46 49.0**	**-0.9**
	comp=Z,33nm,0.5s,mb5.5							
GUN	**Gumba**	**47.05**	**310**	*e*P		**P**	**12 46 51.1**	**-1.7**
	comp=Z,44nm,0.5s,mb5.7							
PKI	**Pulchoki**	**47.25**	**309**	*e*P		**P**	**12 46 52.8**	**-1.5**
	comp=Z,9.3nm,0.4s,mb5.0							
PKI	**Pulchoki**	**47.25**	**309**	*e*P		**P**	**12 46 52.8**	**-1.5**
PKI				pmax		pmax		
	comp=Z,9.0nm,0.4s,mb5.0							
KKN	**Kakani**	**47.46**	**309**	*e*P		**P**	**12 46 54.5**	**-1.4**
	comp=Z,17nm,0.6s,mb5.1							
KKN	**Kakani**	**47.46**	**309**	*e*P		**P**	**12 46 54.5**	**-1.4**
KKN				pmax		pmax		
	comp=Z,17nm,0.6s,mb5.2							
GKN	**Gorkha**	**48.06**	**309**	*e*P		**P**	**12 46 59.7**	**-0.8**
KOLN	**Koldanda**	**48.75**	**308**	*e*P		**P**	**12 47 04.7**	**-1.2**
	comp=Z,49nm,0.8s,mb5.6							
YSS	**Yuzh-Sakhalins**	**49.54**	**16**	*e*P		**P**	**12 47 11.9**	**0.0**
YSS				pmax		pmax		
	comp=Z,35nm,2.4s,mb5.0							
HIA	**Hailar**	**49.65**	**355**	*e*P		**P**	**12 47 12.8**	**+0.1**
HIA				pmax		pmax		
	comp=Z,15nm,0.6s							
HIA	**Hailar**	**49.65**	**355**	*e*P		**P**	**12 47 12.8**	**0.0**
	comp=Z,15nm,0.6s,mb5.2							
KLR	**Kul'dur**	**49.70**	**6**	*e*P		**P**	**12 47 09.7**	**-3.4**
ULN	**Ulaanbaatar**	**50.56**	**344**	*e*P		**P**	**12 47 20.3**	**+0.6**
ULN	**Ulaanbaatar**	**50.56**	**344**	*e*P		**P**	**12 47 18.8**	**-0.9**
SONM	**Songino Array**	**50.72**	**344**	P		**P**	**12 47 19.9**	**-0.9**
	comp=Z,6.9nm,0.6s,mb4.8,baz=159,slow=8.6,SNR=29							
CIT	**Chita**	**53.10**	**351**	*e*P		**P**	**12 47 39.1**	**+0.5**
ZAK	**Zakamensk**	**53.91**	**343**	*e*P		**P**	**12 47 43.5**	**-1.0**
TLY	**Talaya**	**54.96**	**344**	P		**P**	**12 47 54.0**	**+1.9**
	SNR=6.5							
TLY	**Talaya**	**54.96**	**344**	*e*P		**P**	**12 47 53.8**	**+1.6**
TLY				pmax		pmax		
	comp=Z,18nm,1.2s,mb5.0							
TLY	**Talaya**	**54.96**	**344**	*e*P		**P**	**12 47 53.8**	**+1.6**
	comp=Z,18nm,1.2s,mb5.0							
WMQ	**Urumqi**	**55.27**	**328**	P		**P**	**12 47 56.0**	**+1.6**
WMQ				AP		pP	12 48 06.0	+1.9
WMQ				XP		sP	12 48 10.0	+2.1
WMQ				PP		PP	12 50 01.0	+2.9
WMQ				S		**S**	**12 55 36.0**	**-0.1**
WMQ				SS		SS	12 59 21.0	+0.4
WMQ				AMB		AMB		
	comp=Z,22nm,1.0s,mb5.1							
WMQ				AMB		AMB		
	comp=Z,102nm,5.0s							
WMQ				LR		LR		
	comp=N,89nm,14.0s,MS4.2							
WMQ				LR		LR		
	comp=E,108nm,14.0s,MS4.2							
WMQ				LR		LR		
	comp=Z,86nm,14.0s,MS4.0							
MOY	**Mondy**	**55.73**	**342**	*e*P		**P**	**12 47 59.2**	**+1.5**
MOY				pmax		pmax		
	comp=Z,26nm,1.8s,mb5.0							
BOD	**Bodaibo**	**58.68**	**353**	*e*P		**P**	**12 48 18.0**	**-0.6**
BOD				pmax		pmax		
	comp=Z,22nm,0.8s,mb5.2							
PET	**Petropavlovsk**	**60.03**	**23**	*e*P		**P**	**12 48 28.7**	**+0.8**
PET				pmax		pmax		
	comp=Z,36nm,2.0s,mb5.1							
MKAR	**Makanchi Array**	**60.10**	**327**	P		**P**	**12 48 26.8**	**-1.6**
	comp=Z,16nm,0.5s,mb5.3,baz=117,slow=8.5,SNR=93							
KZA	**Kyzart**	**61.67**	**320**	P		**P**	**12 48 41.6**	**+2.5**
	SNR=16							
TKM2	**Tokmak 2**	**61.87**	**321**	P		**P**	**12 48 42.0**	**+1.6**
	SNR=16							
TKM2	**Tokmak 2**	**61.87**	**321**	P		**P**	**12 48 40.6**	**+0.2**
TKM2				pmax		pmax		
	comp=Z,7.0nm,0.5s,mb5.0							
KBK	**Karagaybulak**	**62.15**	**320**	P		**P**	**12 48 44.0**	**+1.8**
	SNR=6.6							
YAK	**Yakutsk**	**62.31**	**2**	*e*P		**P**	**12 48 42.7**	**-0.6**
YAK				pmax		pmax		
	comp=Z,47nm,0.8s,mb5.7							
YAK	**Yakutsk**	**62.31**	**2**	*e*P		**P**	**12 48 42.5**	**-0.8**
	comp=Z,34nm,0.6s,mb5.7							
AAK	**Ala-Archa**	**62.43**	**320**	*e*P		**P**	**12 48 44.7**	**+0.6**
AAK				pmax		pmax		
	comp=Z,11nm,1.0s,mb4.9							
AAK	**Ala-Archa**	**62.43**	**320**	*e*P		**P**	**12 48 44.7**	**+0.6**
	comp=Z,10nm,1.0s,mb4.9							
AML	**Almayashu**	**62.71**	**319**	P		**P**	**12 48 48.5**	**+2.5**
	SNR=7.3							
USP	**Ospenovka**	**62.74**	**320**	P		**P**	**12 48 47.8**	**+1.6**
	SNR=15							
EKS2	**Erkin-Say**	**62.91**	**320**	P		**P**	**12 48 49.6**	**+2.2**
	SNR=19							
MA2	**Magadan**	**62.99**	**14**	*c i*P		**P**	**12 48 48.9**	**+1.0**
MA2				pmax		pmax		
	comp=Z,32nm,1.7s,mb5.2							
MA2	**Magadan**	**62.99**	**14**	*e*P		**P**	**12 48 48.2**	**+0.3**
	comp=Z,9.2nm,0.6s,mb5.1							
ZAL	**Zalesovo**	**63.57**	**335**	P		**P**	**12 48 50.6**	**-1.1**
	comp=Z,4.8nm,0.3s,mb5.0,baz=346,slow=7.0,SNR=19							
AFI	**Afiamalu**	**63.72**	**105**	P		**P**	**12 48 53.7**	**+1.0**
	comp=Z,23nm,0.9s,mb5.2,baz=122,slow=18,SNR=6.2							
NVS	**Novosibirsk**	**64.86**	**335**	*e*P		**P**	**12 48 56.7**	**-3.5**
NVS				pmax		pmax		
	comp=N,5.0nm,0.8s							
NVS				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb4.8							
NVS				pmax		pmax		
	comp=E,10.0nm,1.3s							
KKAR	**Karatay Array**	**65.25**	**319**	P		**P**	**12 49 01.5**	**-1.2**
KKAR				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.5							
BVAR	**Borovoye Array**	**69.95**	**328**	P		**P**	**12 49 31.5**	**-0.8**
	comp=Z,4.4nm,0.5s,mb4.6,baz=134,slow=8.5,SNR=25							
BRVK	**Borovoye**	**70.02**	**328**	P		**P**	**12 49 31.5**	**-1.3**
	comp=Z,65nm,0.4s,mb5.9,SNR=5.4							
BRVK	**Borovoye**	**70.02**	**328**	P		**P**	**12 49 32.4**	**-0.4**
	SNR=6.8							
BRVK	**Borovoye**	**70.02**	**328**	*e*P		**P**	**12 49 31.7**	**-1.1**
BRVK				pmax		pmax		
	comp=Z,13nm,1.2s,mb4.7							
BRVK	**Borovoye**	**70.02**	**328**	*e*P		**P**	**12 49 31.7**	**-1.1**
	comp=Z,13nm,1.2s,mb4.7							
CHKZ	**Chkalovo**	**70.16**	**329**	*e*P		**P**	**12 49 32.6**	**-1.0**
CHKZ				pmax		pmax		
	comp=Z,16nm,1.3s,mb4.8							
CHKZ	**Chkalovo**	**70.16**	**329**	*e*P		**P**	**12 49 32.6**	**-1.0**
	comp=Z,16nm,1.3s,mb

MAW	**Mawson**	**79.44**	**200**	P		**P**	**12 50 28.5**	**+1.1**
	comp=Z,0.7nm,0.2s,mb4.2,baz=51,slow=4.0,SNR=3.7							
VNDA	**Vanda**	**79.60**	**172**	P		**P**	**12 50 28.9**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.9,baz=312,slow=5.6,SNR=8.6							
SDPT	**Sand Point**	**81.38**	**34**	*eP*		**P**	**12 50 38.1**	**+0.4**
KIV	**Kislovodsk**	**84.88**	**314**	P		**P**	**12 50 56.6**	**+0.8**
KIV				*e*			12 51 10.6	
TTA	**Tatalina**	**85.18**	**27**	*eP*		**P**	**12 50 58.4**	**+1.1**
VRHR	**Novokhopersk**	**86.25**	**321**	*eP*		**P**	**12 51 02.0**	**-0.7**
VRHR				pmax	pmax			
	comp=Z,40nm,0.8s,mb5.7							
VRHR				pmax	pmax			
	comp=N,10.0nm,0.4s							
VRHR				pmax	pmax			
	comp=E,10.0nm,0.5s							
SOC	**Sochi**	**87.00**	**313**	*eP*		**P**	**12 51 13.4**	**+7.1**
SOC				*e*PPP			12 56 31.0	
SOC				*e*S	S		13 01 36.7	-6.1
MALT	**Malatya**	**87.72**	**308**	*eP*		**P**	**12 51 10.6**	**+0.8**
MALT				pmax	pmax			
	comp=Z,20nm,1.4s,mb5.2							
MALT	**Malatya**	**87.72**	**308**	*eP*		**P**	**12 51 10.6**	**+0.9**
	comp=Z,20nm,1.4s,mb5.1							
VRSR	**Storozhevoye**	**87.79**	**321**	*eP*		**P**	**12 51 08.9**	**-1.2**
VRSR				pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.9							
VRSR				pmax	pmax			
	comp=N,20nm,2.4s							
VRSR				pmax	pmax			
	comp=E,20nm,0.9s							
ANN	**Anapa**	**88.69**	**315**	*eP*		**P**	**12 51 13.5**	**-0.9**
ANN				pmax	pmax			
	comp=Z,14nm,1.5s,mb5.1							
OBN	**Obninsk**	**89.53**	**325**⇑	*eP*		**P**	**12 51 17.7**	**-0.6**
OBN				pmax	pmax			
	comp=Z,27nm,1.0s,mb5.5							
BRTR	**Keskin Array B**	**91.46**	**310**	P		**P**	**12 51 26.1**	**-1.2**
	comp=Z,1.9nm,0.8s,mb4.5,baz=129,slow=5.8,SNR=7.1							
DAWY	**Dawson**	**92.66**	**26**	*eP*		**P**	**12 51 33.5**	**+0.6**
ARCES	**ARCESS Array B**	**93.74**	**340**	P		**P**	**12 51 35.6**	**-2.2**
	comp=Z,1.9nm,0.6s,mb4.7,baz=78,slow=5.6,SNR=9.0							
AKASG	**Malin Array Be**	**94.10**	**321**	P		**P**	**12 51 38.2**	**-1.3**
	comp=Z,1.3nm,0.4s,mb4.7,baz=76,slow=4.2,SNR=7.2							
AKASG	**Malin Array Be**	**94.10**	**321**	P		**P**	**12 51 38.2**	**-1.3**
INK	**Inuvik**	**94.47**	**21**	*eP*		**P**	**12 51 40.7**	**-0.5**
INK				pmax	pmax			
	comp=Z,6.0nm,1.1s							
INK	**Inuvik**	**94.47**	**21**	*eP*		**P**	**12 51 40.7**	**-0.5**
	comp=Z,5.9nm,1.1s,mb4.9							
FINES	**FINESS Array B**	**94.70**	**332**	P		**P**	**12 51 39.9**	**-2.4**
	comp=Z,0.8nm,0.5s,mb4.4,baz=48,slow=2.8,SNR=6.3							
ARUT	**Antelope Range**	**114.54**	**48**	*e*PKIKP	PKiKP		12 57 05.5	+4.5
TORD	**Torodi Ar. Bea**	**122.67**	**285**	PKP	PKPdf		12 57 17.5	+0.9
	comp=Z,1.9nm,0.6s,baz=43,slow=1.9,SNR=20							
MNTX	**Cornudas Mount**	**122.94**	**52**	*e*PKPdf	PKPdf		12 57 19.3	+2.1
SCHQ	**Schefferville**	**124.80**	**8**	PKP	PKPdf		12 57 20.4	-0.3
	comp=Z,1.3nm,0.6s,baz=248,slow=5.4,SNR=4.4							
SCHQ	**Schefferville**	**124.80**	**8**	PKP	PKPdf		12 57 20.4	-0.3
DBIC	**Dimbokro**	**129.84**	**278**	PKP	PKPdf		12 57 31.4	+1.1
	comp=Z,1.6nm,0.6s,baz=236,slow=16,SNR=5.2							
PLCA	**Paso Flores**	**136.66**	**162**	PKP	PKPdf		12 57 45.5	+2.3
	comp=Z,1.7nm,0.9s,baz=186,slow=8.1,SNR=3.7							
CPUP	**Villa Florida**	**153.36**	**175**	PKPbc	PKPbc		12 58 20.5	+1.4
	comp=Z,0.7nm,0.3s,baz=275,slow=1.1,SNR=3.7							

*IDC **29** 12:57:28.9±0.7, 035.5°×124.95E, h0km, mb4.4/11, mb1 4.5/12, mb1mx4.4/17, mbtmp4.4/12, ML3.8/1, MS3.6/1, Ms1 3.5/1, ms1mx2.5/26, Error ellipse: s-maj=45.7km s-min=13.7km az=75.0*

*NEIC **29** 12:57:33.9±5.4, 033.5°×125.20E, h33km±39km, mb4.6/8, Error ellipse: s-maj=26.4km s-min=9.7km az=81.0*

*BJI **29** 12:57:33.8, 030.5°×125.20E, h33km, mB4.8, mb4.8*

*ISCJB **29** 12:57:36.3±2.2, 035.5°±007.5°×125.5E±0.1, h72km±22km, mb4.4/19, Error ellipse: s-maj=22.1km s-min=8.7km az=135.9*

ISC 29 12:57:38.3±1.8, 036.5°S±007.5°×125.5°E±0.1, h74km±19km, n31, σ1§19/29, mb4.4/19, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PCI	**Palu**	**5.64**	**264**	P		**Pn**	**12 59 00.6**	**+1.0**
	166nm,1.1s							
KAKA	**Kakadu**	**14.10**	**151**	*eP*		**Pn**	**13 00 52.9**	**-1.5**
	11nm,0.6s							
FITZ	**Fitzroy Crossi**	**17.64**	**179**	*eP*		**Pn**	**13 01 37.6**	**-1.4**
	12nm,0.9s							
FITZ	**Fitzroy Crossi**	**17.64**	**179**	P		**Pn**	**13 01 37.2**	**-1.8**
	0.2nm,0.3s,baz=9.2,slow=9.0,SNR=12							
WRAB	**Tennant Creek**	**21.32**	**156**	*eP*		**P**	**13 02 18.1**	**-0.9**
	44nm,1.4s,mb4.6							
WRA	**Warramunga Arr**	**21.32**	**156**	P		**P**	**13 02 18.3**	**-0.8**
	5.9nm,0.7s,mb4.0,baz=335,slow=11,SNR=21							
WB2	**Warramunga Arr**	**21.33**	**156**	*eP*		**P**	**13 02 19.0**	**-0.1**
MBWA	**Marble Bar**	**21.42**	**195**	*eP*		**P**	**13 02 19.8**	**-0.3**
	70nm,1.4s,mb4.8							
AS31	**Alice Springs**	**24.58**	**161**	*eP*		**P**	**13 02 52.5**	**+1.2**
ASPA	**Alice Springs**	**24.58**	**161**	*eP*		**P**	**13 02 52.5**	**+1.2**
ASAR	**Alice Springs**	**24.58**	**161**	P		**P**	**13 02 52.8**	**+1.4**
	4.5nm,0.8s,mb3.9,baz=349,slow=15,SNR=46							
JOW	**Kunigami**	**27.17**	**6**	P		**P**	**13 03 16.0**	**+1.3**
	24nm,0.7s,mb4.8,baz=187,slow=9.1,SNR=15							
FORT	**Forrest**	**30.36**	**176**	*eP*		**P**	**13 03 43.6**	**+0.6**
	10nm,0.5s,mb4.7							
STKA	**Stephens Creek**	**34.87**	**156**	*eP*		**P**	**13 04 24.2**	**+1.8**
	4.4nm,0.9s,mb4.3							
STKA	**Stephens Creek**	**34.87**	**156**	P		**P**	**13 04 24.3**	**+1.9**
	5.7nm,0.9s,mb4.4,baz=327,slow=7.5,SNR=11							
STKA				LR		LR	13 19 47.8	
	comp=Z,101nm,19.7s,baz=27,slow=38							
MJAR	**Matsushiro Arr**	**38.58**	**17**	P		**P**	**13 04 53.9**	**0.0**
	5.9nm,0.7s,mb4.5,baz=193,slow=7.5,SNR=20							
MAT	**Matsushiro**	**38.58**	**17**	P		**P**	**13 04 53.6**	**-0.3**
LZH	**Lanzhou**	**41.46**	**333**	*eP*		**P**	**13 05 19.5**	**+1.7**
LZH				AP		pP	13 05 24.0	-12
LZH				XP		sP	13 05 27.3	-17
LZH				AMB		AMB		
	comp=Z,20nm,1.2s,mb4.8							
MDJ	**Mudanjiang**	**44.93**	**4**	P		**P**	**13 05 46.3**	**+0.6**
MDJ				AMB		AMB		
	comp=Z,8.0nm,0.9s,mb4.5							
MDJ				AMB		AMB		
	comp=Z,56nm,5.3s							
GTA	**Gaotai**	**46.01**	**332**	*eP*		**P**	**13 05 55.0**	**+0.7**
GTA				AP		pP	13 06 02.3	-10
GTA				AMB		AMB		
	comp=Z,11nm,1.0s,mb4.5							
ULN	**Ulaanbaatar**	**50.63**	**344**	*eP*		**P**	**13 06 31.5**	**+1.7**
	comp=Z,3.1nm,0.7s,mb4.5							
SONM	**Songino Array**	**50.78**	**344**	P		**P**	**13 06 29.3**	**-1.6**
	comp=Z,3.2nm,0.7s,mb4.4,baz=154,slow=8.5,SNR=17							
POO	**Poona**	**54.03**	**293**	*ex*		x	13 06 25.0	
MKAR	**Makanchi Array**	**60.22**	**327**	P		**P**	**13 07 36.8**	**-1.8**
	comp=Z,5.6nm,0.6s,mb4.8,baz=117,slow=8.1,SNR=28							
ZAL	**Zalesovo**	**63.67**	**335**	P		**P**	**13 07 59.8**	**-2.0**
	comp=Z,1.5nm,0.6s,mb4.0,baz=330,slow=9.5,SNR=8.2							
CHKZ	**Chkalovo**	**70.27**	**329**	*eP*		**P**	**13 08 42.1**	**-1.5**
	comp=Z,5.1nm,1.1s,mb4.3							
ZRNK	**Zerenda**	**70.76**	**328**	*eP*		**P**	**13 08 45.6**	**-1.0**
	comp=Z,6.6nm,1.0s,mb4.4							
VNDA	**Vanda**	**79.56**	**172**	P		**P**	**13 09 37.5**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=300,slow=8.1,SNR=3.8							
ARCES	**ARCESS Array B**	**93.81**	**340**	P		**P**	**13 10 47.8**	**+0.5**
	comp=Z,1.2nm,0.8s,mb4.3,baz=113,slow=11,SNR=3.9							
AKASG	**Malin Array Be**	**94.23**	**321**	P		**P**	**13 10 48.1**	**-1.0**
	comp=Z,0.3nm,0.3s,mb4.2,baz=77,slow=4.3,SNR=4.4							
TORD	**Torodi Ar. Bea**	**122.87**	**285**	PKP	PKPdf		13 16 27.7	+1.9
	comp=Z,1.0nm,0.8s,baz=90,slow=0.9,SNR=4.7							

*IDC **29** 12:59:56.1±0.9, 032.5°×125.15E, h0km, mb4.5/8, mb1 4.5/9, mb1mx4.3/17, mbtmp4.5/9, ML3.7/1, Error ellipse: s-maj=54.6km s-min=15.1km az=76.0*

*NEIC **29** 13:00:01.2±0.5, 029.5°×125.44E, h35km, mb4.5/8, Error ellipse: s-maj=20.0km s-min=8.6km az=73.0*

*BJI **29** 13:00:01.2, 030.5°×125.40E, h35km, mB4.8, mb4.6*

*ISCJB **29** 13:00:03.8±4.1, 035.5°±009.5°×125.3E±0.2, h80km±41km, mb4.4/16, Error ellipse: s-maj=28.1km s-min=9.9km az=131.9*

ISC 29 13:00:03.5±3.3, 033.5°S±009.5°×125.4°E±0.2, h55km±34km, n25, σ1§14/25, mb4.4/16, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**14.16**	**151**	*eP*		**Pn**	**13 03 14.7**	**-6.3**
	12nm,0.6s							
KSM	**Kuching**	**15.17**	**277**	*e*Pn		**Pn**	**13 03 35.5**	**+1.2**
FITZ	**Fitzroy Crossi**	**17.66**	**179**	*eP*		**Pn**	**13 04 04.4**	**-1.2**
	9.5nm,0.8s							
FITZ	**Fitzroy Crossi**	**17.66**	**179**	P		**Pn**	**13 04 04.3**	**-1.3**
	0.2nm,0.3s,baz=27,slow=10,SNR=6.8							
WRAB	**Tennant Creek**	**21.38**	**156**	*eP*		**P**	**13 04 45.9**	**-0.4**
	14nm,0.8s,mb4.3							
WRA	**Warramunga Arr**	**21.38**	**156**	P		**P**	**13 04 45.2**	**-1.2**
	6.7nm,0.6s,mb4.1,baz=336,slow=11,SNR=11							
WB2	**Warramunga Arr**	**21.39**	**156**	*eP*		**P**	**13 04 45.3**	**-1.1**
MBWA	**Marble Bar**	**21.43**	**195**	*eP*		**P**	**13 04 46.3**	**-0.6**
	13nm,0.9s,mb4.3							
AS31	**Alice Springs**	**24.63**	**161**	*eP*		**P**	**13 05 20.3**	**+1.6**
ASAR	**Alice Springs**	**24.63**	**161**	P		**P**	**13 05 19.8**	**+1.0**
	4.9nm,0.8s,mb4.1,baz=351,slow=16,SNR=11							
ASPA	**Alice Springs**	**24.63**	**161**	*eP*		**P**	**13 05 20.3**	**+1.6**
JOW	**Kunigami**	**27.15**	**6**	P		**P**	**13 05 42.7**	**+1.2**
	15nm,0.8s,mb4.6,baz=194,slow=8.8,SNR=8.2							
FORT	**Forrest**	**30.39**	**175**	*eP*		**P**	**13 06 10.3**	**0.0**
	9.0nm,0.5s,mb4.8							
STKA	**Stephens Creek**	**34.93**	**155**	*eP*		**P**	**13 06 50.9**	**+1.0**
	6.7nm,0.9s,mb4.6							
STKA	**Stephens Creek**	**34.93**	**155**	P		**P**	**13 06 51.0**	**+1.1**
	6.8nm,0.7s,mb4.7,baz=327,slow=8.8,SNR=11							
MJAR	**Matsushiro Arr**	**38.57**	**17**	P		**P**	**13 07 20.6**	**-0.3**
	2.8nm,0.6s,mb4.2,baz=189,slow=8.3,SNR=9.4							
MDJ	**Mudanjiang**	**44.91**	**4**	P		**P**	**13 08 13.0**	**+0.4**
MDJ				AMB		AMB		
	comp=Z,5.0nm,0.9s,mb4.3							
MDJ				AMB		AMB		
	comp=Z,8μm,4.9s							
MDJ				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.8							
MDJ				AMB		AMB		
	comp=Z,37nm,3.8s							
GTA	**Gaotai**	**45.95**	**332**	*eP*		**P**	**13 08 21.8**	**+0.9**
GTA				AP		pP	13 08 28.8	-6.5
GTA				AMB		AMB		
	comp=Z,9.0nm,0.8s,mb4.8							
ULN	**Ulaanbaatar**	**50.58**	**344**	*eP*		**P**	**13 08 56.7**	**+0.1**
	comp=Z,2.6nm,0.6s,mb4.3							
SONM	**Songino Array**	**50.73**	**344**	P		**P**	**13 08 55.8**	**-1.9**
	comp=Z,2.8nm,0.8s,mb4.3,baz=157,slow=9.4,SNR=12							
MKAR	**Makanchi Array**	**60.15**	**327**	P		**P**	**13 10 04.7**	**-0.7**
	comp=Z,4.5nm,0.5s,mb4.7,baz=113,slow=9.3,SNR=19							
CHKZ	**Chkalovo**	**70.20**	**329**	*eP*		**P**	**13 11 08.9**	**-1.6**
	comp=Z,2.4nm,0.8s,mb4.2							
ZRNK	**Zerenda**	**70.69**	**328**	*eP*		**P**	**13 11 11.9**	**-1.6**
	comp=Z,3.7nm,0.6s,mb4.5							
ARCES	**ARCESS Array B**	**93.76**	**340**	P		**P**	**13 13 16.0**	**+1.6**
	comp=Z,0.8nm,0.6s,mb4.3,baz=54,slow=6.2,SNR=4.0							
ARCES	**ARCESS Array B**	**93.76**	**340**	P		**P**	**13 13 16.0**	**+1.6**

IDC 29 13:30:15.3±6.8, 007.N°×9925E, h64km±42km, mb3.2/4, mb1 3.4/5, mb1mx3.2/19, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=158.3km s-min=22.0km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PSI	**Prapat**	**2.74**	**353**	P		Pn	13 30 55.7	-1.2
	4.4nm,0.3s,baz=161,slow=11,SNR=17							
WRA	**Warramunga Arr**	**39.70**	**122**	P		P	13 37 41.6	+0.3
	0.3nm,0.7s,baz=305,slow=8.8,SNR=4.5							
ASAR	**Alice Springs**	**41.08**	**127**	P		P	13 37 53.0	+0.2
	0.4nm,0.8s,baz=303,slow=8.0,SNR=5.2							
SONM	**Songino Array**	**47.98**	**6**	P		P	13 38 48.9	+1.2
	0.3nm,0.3s,baz=199,slow=7.0,SNR=4.3							
MKAR	**Makanchi Array**	**48.85**	**345**	P		P	13 38 53.6	-0.7
	0.6nm,0.6s,baz=144,slow=8.2,SNR=6.2							

*IDC **29** 13:38:03.6±0.4, 658.5°×131.95E, h0km, mb5.1/18, mb1 5.1/20, mb1mx5.1/21, mbtmp5.2/20, ML5.5/3, MS4.2/6, Ms1 4.2/6, ms1mx3.7/27, Error ellipse: s-maj=17.2km s-min=10.9km az=69.0*

*ISCJB **29** 13:38:03.6±0.2, 666.5°±003.4°×131.99E±0.04, h15km, mb5.2/73, MS4.3/14, Error ellipse: s-maj=5.4km s-min=3.3km az=133.5*

*BJI **29** 13:38:03.3, 665.5°×132.03E, h16km, mB5.0, mb5.1, Ms4.5, Mst4.3*

*HRVD **29** 13:38:05.0±0.2, 658.5°×131.90E, h40km±1km, MW5.3/78, Centroid moment Tensor Solution. LP body waves: s55,c78;Mantle waves: s78,c136; Half duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr=0.00±.03; Mθθ=-0.90±.02; Mφφ=0.90±.03; Mrθ=0.25±.03; Mφφ=0.67±.02; Mφr=0.19±.03; Best double couple: M0=1.16700×10^17 NP1:φs=333.00000°, δ75.00000°, λ178.00000°. NP2: φs=63.00000°, δ88.00000°, λ15.00000°. Principal axes: T 1.1840, Plg13.0000°, Azm289.0000°; N -0.0330, Plg74.0000°, Azm72.0000°; P -1.1510, Plg9.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **29** 13:38:05.0±0.2, 659.5°×131.90E, h10km, mb5.2/21 Error ellipse: s-maj=5.8km s-min=3.8km az=68.0*

NEIC Felt [III] at Tual.

*MOS **29** 13:38:06.7±1.0, 655.5°×131.94E, h33km, mb5.2/28, Error ellipse: s-maj=11.9km s-min=7.0km az=114.7*

ISC 29 13:38:05.7±0.2, 668.5°S±002.4°×132.0°E±0.4, h15km±1.7km, pP-P, n231, σ1§17/225, mb5.2/73, MS4.3/14, 10C-10D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AAI	**Ambon**	**4.83**	**308**	P		**Pn**	**13 39 19.4**	**+1.6**
	2μm,0.6s							
SWI	**Sorong**	**5.83**	**353**	P		**Pn**	**13 39 29.7**	**-1.8**
	4μm,0.6s							
KAKA	**Kakadu**	**6.00**	**176**	*eP*		**Pn**	**13 39 36.0**	**+2.1**
KAKA				*eS*		**Sn**	**13 40 40.4**	**-1.9**
BAKI	**Biak**	**6.81**	**37**	P		**Pn**	**13 39 45.9**	**+0.9**
	3μm,0.7s							
MMPI	**Merauke**	**8.48**	**103**	P		**Pn**	**13 40 08.7**	**+0.8**
	11μm,0.6s							
JAY	**Jayapura**	**9.60**	**65**	P		**Pn**	**13 40 23.6**	**+0.4**
	410nm,0.8s							
FITZ	**Fitzroy Crossi**	**12.94**	**208**⇓	*iP*		**Pn**	**13 41 07.1**	**-1.9**
	386nm,0.4s							
FITZ				*eS*		**Sn**	**13 43 22.2**	**-10**
FITZ	**Fitzroy Crossi**	**12.94**	**208**	Pn		**Pn**	**13 41 08.1**	**-0.9**
	45nm,0.3s,baz=37,slow=11,SNR=520							
FITZ				Sn		**Sn**	**13 43 22.5**	**-10**
	38nm,0.3s,baz=197,slow=14,SNR=8.0							
FITZ				LR		LR	13 46 41.6	
	comp=Z,884nm,21.3s,baz=31,slow=40							
WRAB	**Tennant Creek**	**13.36**	**170**	Pn		**Pn**	**13 41 12.0**	**-2.7**
	4μm,0.7s							
WRAB	**Tennant Creek**	**13.36**	**170**	*e*Pn		**Pn**	**13 41 12.7**	**-2.0**
WRAB				*e*Sn		Sn	13 43 16.6	-26
WRA	**Warramunga Arr**	**13.37**	**171**	Pn		**Pn**	**13 41 12.2**	**-2.6**
	2.0nm,0.3s,baz=344,slow=13,SNR=322							
WRA				Sn		**Sn**	**13 43 35.0**	**-8.2**
	66nm,0.3s,baz=356,slow=23,SNR=12							
WB2	**Warramunga Arr**	**13.37**	**170**⇓	*iP*		**Pn**	**13 41 12.1**	**-2.8**
WB2				*eS*		**Sn**	**13 43 34.1**	**-9.1**
PCI	**Palu**	**13.44**	**295**	P		**Pn**	**13 41 17.8**	**+2.1**
	342nm,1.0s							
PMG	**Port Moresby**	**15.23**	**101**	Pn		**Pn**	**13 41 41.3**	**+1.2**
	38nm,0.3s,baz=299,slow=8.1,SNR=106							
PMG	**Port Moresby**	**15.23**	**101**	*d*iP		**Pn**	**13 41 41.2**	**+1.1**
PMG	**Port Moresby**	**15.23**	**101**	*e*Pn		**Pn**	**13 41 41.4**	**+1.3**
AS31	**Alice Springs**	**16.98**	**174**	*eP*		**Pn**	**13 42 00.3**	**-2.3**
AS31				*eP*			13 42 00.6	
AS31				*eS*		**Sn**	**13 44 58.7**	**-12**
ASAR	**Alice Springs**	**16.98**	**174**	P		**Pn**	**13 42 00.0**	**-2.6**
	26nm,0.3s,baz=13,slow=13,SNR=789							
ASAR				S		**Sn**	**13 45 01.2**	**-10**
	20nm,0.3s,baz=355,slow=28,SNR=12							
ASAR				LR		LR	13 48 30.3	
	comp=Z,951nm,20.5s,baz=356,slow=37							
ASPA	**Alice Springs**	**16.98**	**174**	*eP*		**Pn**	**13 42 00.3**	**-2.3**
ASPA				*eS*		**Sn**	**13 44 58.7**	**-12**
TSM	**Tawau**	**17.84**	**307**	P		**Pn**	**13 42 13.2**	**0.0**
MSLP	**Maasin**	**18.16**	**337**	*eP*		**Pn**	**13 42 18.6**	**+1.4**
MBWA	**Marble Bar**	**18.67**	**218**	P		**Pn**	**13 42 22.8**	**-0.6**
	SNR=14							
MBWA	**Marble Bar**	**18.67**	**218**	*eP*		**Pn**	**13 42 22.3**	**-1.1**
	102nm,0.6s							
MBWA				*eS*		**Sn**	**13 45 35.9**	**-16**

CTA	**Charters Tower**	**19.20**	**135**⇑	*iP*		**Pn**	**13 42 31.3**	**+1.6**
	119nm,0.6s							
CTA				*eS*		**Sn**	**13 45 55.9**	**-8.6**
CTA	**Charters Tower**	**19.20**	**135**	P		**Pn**	**13 42 31.7**	**+1.9**
	9.8nm,0.3s,baz=309,slow=13,SNR=198							
CTA				S		**Sn**	**13 46 02.6**	**-1.9**
	3.4nm,0.3s,baz=101,slow=7.9,SNR=3.5							
CTA				LR		LR	13 50 08.3	
	comp=Z,903nm,21.8s,baz=316,slow=38							
CTA	**Charters Tower**	**19.20**	**135**⇑	*iP*		**Pn**	**13 42 31.3**	**+1.6**
CTA				*eS*		**Sn**	**13 45 55.9**	**-8.6**
CTA				pmax	pmax			
	comp=Z,119nm,0.6s							
KRKI	**Karangkates**	**19.46**	**264**	P		**Pn**	**13 42 34.0**	**+1.1**
	comp=Z,196nm,0.8s							
GUIM	**Jordan**	**19.59**	**331**	*eP*		**Pn**	**13 42 34.5**	**0.0**
KKM	**Kota Kinabalu**	**20.21**	**308**	P		**P**	**13 42 41.2**	**+1.3**
KKM	**Kota Kinabalu**	**20.21**	**308**	*eP*		**P**	**13 42 40.2**	**+0.3**
CUYO	**Cuyo Island**	**20.57**	**328**	*eP*		**P**	**13 42 44.1**	**+0.3**
BATP	**Bataraza**	**20.91**	**317**	*eP*		**P**	**13 42 47.8**	**+0.3**
PPR	**Puerto Princes**	**21.04**	**321**⇓	*iP*		**P**	**13 42 50.2**	**+1.4**
OTRP	**Odiongan**	**21.37**	**332**	*eP*		**P**	**13 42 53.9**	**+1.5**
PVCP	**Virac**	**21.61**	**339**⇓	*eP*		**P**	**13 42 55.6**	**+0.6**
PVCP	**Virac**	**21.61**	**339**	*eP*		**P**	**13 42 55.6**	**+0.7**
ENPP	**El Nido**	**21.75**	**325**	*eP*		**P**	**13 42 57.3**	**+0.8**
BJI	**Banjamegara**	**22.15**	**267**	P		**P**	**13 43 04.1**	**+3.3**
	comp=Z,65nm,1.7s,mb4.8							
BOAC	**Boac**	**22.42**	**333**	*eP*		**P**	**13 43 04.1**	**+0.5**
KSM	**Kuching**	**23.13**	**290**	*eP*		**P**	**13 43 09.7**	**-1.5**
LUBP	**Lubang**	**23.41**	**330**	*eP*		**P**	**13 43 12.5**	**-1.6**
POLP	**Polilio Island**	**23.50**	**335**	*eP*		**P**	**13 43 14.6**	**-0.5**
GUMO	**Guam**	**23.84**	**32**	P		**P**	**13 43 18.8**	**+0.6**
	comp=Z,37nm,0.9s,mb4.8,baz=206,slow=9.0,SNR=6.1							
GUMO	**Guam**	**23.84**	**32**	P		**P**	**13 43 18.8**	**+0.6**
GUMO				pmax	pmax			
	comp=Z,37nm,0.9s,mb4.8							
FORT	**Forrest**	**24.26**	**188**	*eP*		**P**	**13 43 22.9**	**+0.9**
	comp=Z,568nm,0.6s,mb6.2							
FORT				*eS*		**S**	**13 47 48.7**	**+8.6**
BALP	**Baler**	**24.56**	**335**	*eP*		**P**	**13 43 23.5**	**-1.3**
CBJI	**Citeko**	**25.00**	**269**	P		**P**	**13 43 31.7**	**+2.9**
	comp=Z,186nm,0.9s,mb5.6							
SCZP	**Santa Cruz**	**25.33**	**332**	*eP*		**P**	**13 43 29.9**	**-1.9**
CAUP	**Cauayan**	**25.55**	**337**	*eP*		**P**	**13 43 34.5**	**+0.8**
BOLP	**Bolinao**	**25.86**	**333**	*eP*		**P**	**13 43 35.4**	**-1.1**
STKA	**Stephens Creek**	**26.61**	**162**	*eP*		**P**	**13 43 44.3**	**+0.9**
	comp=Z,37nm,0.6s,mb5.1							
STKA				*e*S		S	13 48 37.0	+19
STKA	**Stephens Creek**	**26.61**	**162**	P		**P**	**13 43 44.3**	**+0.9**
	comp=Z,16nm,0.4s,mb4.9,baz=335,slow=8.4,SNR=45							
STKA				LR		LR	13 53 38.2	
	comp=Z,528nm,21.9s,MS4.0,baz=331,slow=35							
HNR	**Honiara**	**27.78**	**98**	P		**P**	**13 43 53.7**	**-0.1**
	comp=Z,93nm,0.7s,mb5.5,baz=259,slow=1.0,SNR=9.9							
KLBR	**Kellerberrin**	**28.14**	**206**⇓	*iP*		**P**	**13 43 58.1**	**+1.0**
	comp=Z,32nm,0.6s,mb5.1							
KLBR				*e*S		S	13 49 20.4	+39
ADE	**Adelaide**	**28.82**	**169**	*eP*		**P**	**13 44 05.0**	**+1.9**
MUN	**Mundaring**	**29.17**	**208**⇓	*iP*		**P**	**13 44 07.3**	**+1.0**
MUN				*e*S		S	13 49 41.9	+44
NWAO	**Narrogin (SRO)**	**29.51**	**206**	P		**P**	**13 44 10.5**	**+1.3**
	comp=Z,29nm,0.7s,mb5.1,baz=38,slow=7.4,SNR=32							
NWAO	**Narrogin (SRO)**	**29.51**	**206**	P		**P**	**13 44 10.5**	**+1.3**
NWAO				pmax	pmax			
	comp=Z,29nm,0.7s							
NWAO	**Narrogin (SRO)**	**29.51**	**206**	P		**P**	**13 44 10.5**	**+1.3**
KGM	**Kluang**	**

comp=Z,40nm,0.7s,mb5.3
KMI LR LR
comp=N,181nm,14.3s,MS4.2
KMI LR LR
comp=E,188nm,17.4s,MS4.2
KMI LR LR
comp=Z,179nm,28.5s
MJAR Matsushiro Arr 43.39 7 P **P 13 46 06.4 -1.1**
comp=Z,14nm,0.9s,mb4.7,baz=186,slow=8.9,SNR=30
MJAR Matsushiro Arr 43.39 7 P **P 13 46 06.4 -1.0**
MJAR pmax pmax
comp=Z,14nm,0.9s
MAJO Matsushiro 43.39 7 *e*P **P 13 46 06.0 -1.4**
MAJO pmax pmax
comp=Z,24nm,0.7s,mb5.0
MAJO Matsushiro 43.39 7 *e*P **P 13 46 06.0 -1.5**
comp=Z,24nm,0.7s,mb5.0
MAT Matsushiro 43.39 7 P **P 13 46 05.6 -1.8**
MAT S **S 13 52 33.0 -1.8**
XAN Xi'an 46.03 333 P **P 13 46 27.0 -1.5**
XAN AP pP 13 46 35.3 +2.0
XAN AMB AMB
comp=Z,37nm,1.1s,mb5.2
CD2 Chengdu 46.14 326 *e*P **P 13 46 28.5 -0.9**
CD2 AP pP 13 46 33.0 -1.2
CD2 XP sP 13 46 35.5 -0.6
CD2 PCP PcP 13 48 04.5 -0.8
CD2 PP PP 13 48 17.0 -0.6
CD2 PCS PcS 13 51 57.5 -2.2
CD2 S **S 13 53 13.5 -1.3**
CD2 XS sS 13 53 21.0 -1.7
CD2 SCS ScS 13 56 21.0 -3.4
CD2 SS SS 13 56 31.0 -8.9
CD2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
CD2 AMB AMB
comp=Z,50nm,6.2s
CD2 LR LR
comp=N,250nm,28.8s
CD2 LR LR
comp=Z,150nm,20.4s
BJT Baijiatuau 48.72 344 *e*P **P 13 46 48.9 -0.5**
BJT pmax pmax
comp=Z,15nm,0.6s
BJT Baijiatuau 48.72 344 *e*P **P 13 46 48.9 -0.5**
comp=Z,15nm,0.6s,mb5.2
BJI Beijing 48.74 344 P **P 13 46 49.0 -0.6**
BJI S **S 13 53 44.0 -7.7**
BJI AMB AMB
comp=Z,16nm,0.9s,mb5.0
BJI AMB AMB
comp=Z,166nm,4.1s
BJI LR LR
comp=N,142nm,21.0s,MS4.0
BJI LR LR
comp=E,127nm,22.8s,MS4.0
BJI LR LR
comp=Z,255nm,25.0s,MS4.1
LZH Lanzhou 50.10 330 *e*P **P 13 46 59.5 -0.5**
LZH AP pP 13 47 09.5 +4.6
LZH XP sP 13 47 13.5 +6.8
LZH PP PP 13 48 56.0 +0.9
LZH *e*S **S 13 54 08.3 -2.5**
LZH PS 13 54 20.5
LZH XS sS 13 54 24.5 +5.7
LZH *e*SS SS 13 57 38.8 -5.1
LZH AMB AMB
comp=Z,53nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,157nm,7.2s
LZH LR LR
comp=N,702nm,15.2s
LZH LR LR
comp=Z,986nm,18.3s,MS4.8
RPZ Rata Peaks 50.28 144 P **P 13 47 01.9 +0.6**
comp=Z,25nm,0.8s,mb5.3,baz=260,slow=3.2,SNR=10
CN2 Changchun 50.60 354 *e*P **P 13 47 02.5 -1.3**
CN2 *e*S **S 13 54 10.3 -7.4**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CN2 AMB AMB
comp=Z,120nm,4.0s
CN2 LR LR
comp=N,170nm,19.0s,MS4.2
CN2 LR LR
comp=E,130nm,19.0s,MS4.2
CN2 LR LR
comp=Z,210nm,20.0s,MS4.2
HHC Hu-ho-hao-te 50.90 340 *e*P **P 13 47 07.3 +1.3**
HHC AP pP 13 47 11.5 +0.6
HHC XP sP 13 47 14.0 +1.2
HHC PCP PcP 13 48 23.5 +1.1
HHC PP PP 13 49 04.8 +2.4
HHC SCP ScP 13 52 18.0 -0.1
HHC PCS PcS 13 52 19.5 -0.4
HHC S **S 13 54 18.0 -3.9**
HHC XS sS 13 54 31.0 +1.1
HHC SCS ScS 13 56 55.0 -1.2
HHC SS SS 13 57 55.5 -1.1
HHC AMB AMB
comp=Z,30nm,1.0s,mb5.2
HHC AMB AMB
comp=Z,94nm,5.9s
HHC LR LR
comp=N,175nm,17.1s,MS4.3
HHC LR LR
comp=E,168nm,18.0s,MS4.3
HHC LR LR
comp=Z,174nm,24.0s
MDJ Mudanjiang 51.11 358 *e*P **P 13 47 12.2 +4.6**
comp=Z,9.3nm,0.6s,mb4.9
MDJ PP PP 13 49 05.3 +1.0
MDJ SCP ScP 13 52 20.0 +1.0
MDJ PCS PcS 13 52 21.5 +0.7
MDJ S **S 13 54 29.0 +4.2**
MDJ XS sS 13 54 33.3 +0.5
MDJ LR LR
comp=N,85nm,25.0s
MDJ LR LR
comp=E,237nm,33.3s
MDJ LR LR
comp=Z,232nm,27.1s,MS4.1
MDJ Mudanjiang 51.11 358 AP pP 13 47 11.8 -0.7
URZ Urewera 51.44 135 P **P 13 47 10.6 +0.5**
comp=Z,8.2nm,0.6s,mb4.9,baz=334,slow=3.5,SNR=10
LSA Lhasa 53.38 315 P **P 13 47 25.0 +0.6**
LSA AMB AMB
comp=Z,90nm,0.8s,mb5.8
LSA Lhasa 53.38 315 *e*P **P 13 47 25.6 +1.1**
LSA pmax pmax
comp=Z,69nm,0.7s,mb5.7
LSA Lhasa 53.38 315 *e*P **P 13 47 25.6 +1.2**
comp=Z,69nm,0.7s,mb5.7
VIS Vishakhapatnam 53.84 298 *e*P **P 13 47 27.8 0.0**
VIS AMb AMB 13 47 31.9
comp=Z,55nm,1.7s,mb5.2
YSS Yuzh-Sakhalins 54.25 9 *e*P **P 13 47 30.5 -0.3**
YSS pmax pmax
comp=Z,11nm,0.7s,mb4.9
YSS Yuzh-Sakhalins 54.25 9 *e*P **P 13 47 29.9 -0.9**
comp=Z,11nm,0.6s,mb5.0
BOK Bokaro 54.26 306 *e*P **P 13 47 30.9 0.0**
BOK AMb AMB 13 47 33.6
comp=Z,38nm,0.8s,mb5.4
GTA Gaotai 54.69 330 P **P 13 47 34.3 +0.3**
GTA AP pP 13 47 38.5 -0.4
GTA XP sP 13 47 41.5 +0.7
GTA PCP PcP 13 48 34.8 -1.9
GTA PP PP 13 49 38.3 +1.7
GTA PPP 13 50 51.8
GTA PCS PcS 13 52 35.8 -0.6
GTA S **S 13 55 14.3 +0.7**
GTA XS sS 13 55 22.0 +0.3
GTA SCS ScS 13 57 19.5 -3.3
GTA SS SS 13 58 56.5 0.0
GTA AMB AMB
comp=Z,45nm,0.9s,mb5.5
GTA AMB AMB
comp=Z,122nm,5.7s
GTA LR LR
comp=N,83nm,17.5s,MS4.0
GTA LR LR
comp=E,112nm,20.2s,MS4.0
GTA LR LR
comp=Z,213nm,18.6s,MS4.2

MDRS Chennai 55.04 291 *ex* x 13 49 31.6
AFI Afiamalu 55.66 102 LR LR 14 10 38.2
comp=Z,236nm,18.1s,MS4.3,baz=279,slow=35
KLR Kul'dur 55.68 360 *e*P **P 13 47 39.2 -2.0**
GUN Gumba 56.27 310 *e*P **P 13 47 45.7 +0.3**
comp=Z,464nm,0.6s
PKI Pulchoki 56.46 309 *e*P **P 13 47 46.5 -0.3**
comp=Z,128nm,0.7s,mb6.1
PKI Pulchoki 56.46 309 *e*P **P 13 47 46.5 -0.3**
PKI pmax pmax
comp=Z,128nm,0.7s,mb6.1
KKN Kakani 56.67 309 *e*P **P 13 47 48.2 0.0**
comp=Z,166nm,0.6s,mb6.2
KKN Kakani 56.67 309 *e*P **P 13 47 48.2 0.0**
KKN pmax pmax
comp=Z,166nm,0.6s,mb6.2
DMN Daman 56.71 309 *e*P **P 13 47 48.8 +0.2**
comp=Z,227nm,0.9s,mb6.2
GKN Gorkha 57.27 309 *e*P **P 13 47 52.3 -0.2**
comp=Z,313nm,0.6s
KOLN Koldanda 57.95 309 *e*P **P 13 47 57.4 +0.1**
comp=Z,303nm,0.9s,mb6.3
HYB Hyderabad 57.98 295 *i* P **P 13 47 57.0 -0.5**
HYB Hyderabad 57.98 295 *e*P **P 13 47 57.0 -0.5**
ULN Ulaanbaatar 58.61 341 P **P 13 48 02.3 +0.4**
SNR=12
ULN Ulaanbaatar 58.61 341 *e*P **P 13 48 01.7 -0.2**
ULN pmax pmax
comp=Z,16nm,0.7s,mb5.2
ULN Ulaanbaatar 58.61 341 *e*P **P 13 48 01.7 -0.2**
comp=Z,16nm,0.7s,mb5.2
SONM Songino Array 58.80 340 P **P 13 48 03.7 +0.5**
comp=Z,6.6nm,1.0s,mb4.6,baz=154,slow=7.4,SNR=24
SONM Songino Array 58.80 340 P **P 13 48 03.7 +0.4**
SONM pmax pmax
comp=Z,7.0nm,1.0s
NGP Nagpur 58.87 299 *ex* x 13 47 59.3
NGP AMb AMB 13 48 00.6
comp=Z,75nm,1.8s,mb5.4
BHPL Bhopal 61.05 301 *e*P **P 13 48 18.2 -0.5**
BHPL AMb AMB 13 48 21.1
comp=Z,56nm,1.3s,mb5.5
CASY Casey 61.34 190 *e*P **P 13 48 21.3 +0.7**
KAD Karad 61.90 294 *e*P **P 13 48 24.1 -0.3**
KAD *e*P 13 48 24.2
KAD AMb AMB 13 48 27.5
comp=Z,30nm,1.1s,mb5.3
ZAK Zakamensk 62.04 340 *e*P **P 13 48 25.7 +0.3**
TLY Talaya 63.02 341 *e*P **P 13 48 32.7 +0.8**
TLY *e* 13 50 44.5
TLY *e*S **S 13 56 51.2 -11**
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
TLY Talaya 63.02 341 *e*P **P 13 48 32.4 +0.5**
NDI New Delhi 63.39 307 *e*P **P 13 48 33.2 -1.2**
PET Petropavlovsk 63.63 18 *e*P **P 13 48 36.5 +0.5**
PET pmax pmax
comp=Z,27nm,1.3s,mb5.1
MOY Mondy 63.92 339 *e*P **P 13 48 39.2 +1.3**
MOY pmax pmax
comp=Z,31nm,3.6s
WMQ Urumqi 64.24 326 P **P 13 48 41.0 +1.0**
WMQ XP sP 13 48 48.0 +1.2
WMQ PP PP 13 51 04.0 +2.8
WMQ S **S 13 57 17.0 0.0**
WMQ SS SS 14 01 27.0 +0.6
WMQ AMB AMB
comp=Z,62nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,382nm,6.0s
WMQ LR LR
comp=N,573nm,15.0s,MS4.9
WMQ LR LR
comp=E,275nm,15.0s,MS4.9
WMQ LR LR
comp=Z,206nm,14.0s,MS4.5
SMLA Simla 64.47 309 *e*P **P 13 48 41.9 +0.4**
BOD Bodaibo 65.93 350 *e*P **P 13 48 46.5 -4.5**
BOD pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
YAK Yakutsk 68.53 359 *e*P **P 13 49 06.2 -1.3**
MK31 Makanchi Array 69.07 326 P **P 13 49 10.3 -0.5**
MK31 pmax pmax
comp=Z,13nm,0.6s,mb5.0
MKAR Makanchi Array 69.07 326 P **P 13 49 10.9 +0.1**
comp=Z,19nm,0.5s,mb5.3,baz=119,slow=7.5,SNR=178
MKAR Makanchi Array 69.07 326 P **P 13 49 10.9 +0.1**
MKAR pmax pmax
comp=Z,19nm,0.5s
KSH Kashi 69.15 317 P **P 13 49 13.3 +2.0**
KSH AP pP 13 49 17.5 +1.2
KSH XP sP 13 49 20.3 +2.1
KSH PCP PcP 13 49 36.8 +1.6
KSH PP PP 13 51 48.0 +3.9
KSH PPP 13 53 26.8
KSH SCP 13 53 38.5
KSH PCS 13 53 41.0
KSH S S 13 58 17.3 +0.9
KSH SCS ScS 13 59 09.8 -1.8
KSH SS SS 14 02 45.0 +2.4
KSH AMB AMB
comp=Z,368nm,1.8s,mb6.0
KSH LR LR
comp=N,332nm,7.3s
KSH LR LR
comp=E,293nm,4.6s
KSH LR LR
comp=Z,237nm,7.4s
KZA Kyzart 70.85 319 P **P 13 49 23.5 +1.7**
SNR=15
TKM2 Tokmak 2 71.03 320 P **P 13 49 23.6 +0.8**
SNR=13
TKM2 Tokmak 2 71.03 320 *i* P **P 13 49 23.2 +0.4**
TKM2 pmax pmax
comp=Z,28nm,0.9s,mb5.2
AAK Ala-Archa 71.60 319 P **P 13 49 27.6 +1.3**
SNR=8.7
AAK Ala-Archa 71.60 319 P **P 13 49 27.4 +1.1**
comp=Z,122nm,0.8s,mb5.9,SNR=6.0
AAK Ala-Archa 71.60 319 P **P 13 49 26.4 +0.1**
SNR=9.3
AAK Ala-Archa 71.60 319 *e*P **P 13 49 25.9 -0.4**
AAK pmax pmax
comp=Z,27nm,1.1s,mb5.1
AAK Ala-Archa 71.60 319 *e*P **P 13 49 26.5 +0.2**
AML Almayashu 71.90 318 P **P 13 49 29.7 +1.6**
SNR=11
USP Ospenovka 71.90 320 P **P 13 49 28.7 +0.6**
SNR=35
EKS2 Erkin-Say 72.08 319 P **P 13 49 30.7 +1.5**
SNR=16
ZAL Zalesovo 72.20 333 P **P 13 49 29.0 -0.9**
comp=Z,6.8nm,0.7s,mb4.7,baz=355,slow=4.5,SNR=30
ZAL Zalesovo 72.20 333 P **P 13 49 29.0 -0.9**
ZAL pmax pmax
comp=Z,7.0nm,0.7s
VNDA Vanda 72.53 173 P **P 13 49 32.2 +0.4**
comp=Z,8.2nm,0.9s,mb4.7,baz=318,slow=6.4,SNR=48
VNDA Vanda 72.53 173 *e*P **P 13 49 32.3 +0.5**
KURK Kurchatov 73.31 328 P **P 13 49 36.2 -0.3**
comp=Z,160nm,1.0s,mb5.9,SNR=17
SBA Scott Base 73.39 173 *e*P **P 13 49 38.4 +1.5**
NVS Novosibirsk 73.48 333 *e*P **P 13 49 35.1 -2.4**
NVS pmax pmax
comp=E,18nm,1.3s
NVS pmax pmax
comp=Z,29nm,1.3s,mb5.0
NVS pmax pmax
comp=N,17nm,1.5s
KK31 Karatay Array 74.43 318 *i* P **P 13 49 43.2 +0.1**
KK31 pmax pmax
comp=Z,17nm,0.6s,mb5.2
KKAR Karatay Array 74.43 318 *i* P **P 13 49 43.2 +0.1**
KKAR pmax pmax
comp=Z,11nm,0.7s,mb4.9
MAW Mawson 75.98 202 ⇓*i* P **P 13 49 53.2 +1.2**
comp=Z,7.2nm,0.6s,mb4.8
MAW Mawson 75.98 202 P **P 13 49 53.4 +1.4**
comp=Z,7.9nm,0.6s,mb4.8,baz=81,slow=5.4,SNR=25
MAW LR LR 14 21 29.9
comp=Z,145nm,19.0s,MS4.3,baz=157,slow=34
MAW Mawson 75.98 202 ⇓*i* P **P 13 49 53.2 +1.2**
MAW ⇓*i* P 13 49 53.3
TBI Tubuai 76.87 112 *e*LR LR 14 13 45.2
comp=Z,254nm,30.8s

PPT Papeete 76.99 106 *e*LR LR 14 13 48.4
comp=Z,213nm,25.2s
SMDO Samad 78.02 295 P **P 13 50 04.5 +1.0**
SNR=15
BIDO Bidbid 78.05 296 P **P 13 50 04.7 +1.1**
SNR=11
VOSK Vostochnaya 78.42 327 P **P 13 50 04.2 -1.5**
VOSK pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
BSY Bisya 78.71 295 P **P 13 50 08.1 +0.8**
SNR=6.1
BVAR Borovoye Array 78.87 327 P **P 13 50 07.4 -0.8**
comp=Z,9.1nm,0.7s,mb4.8,baz=132,slow=8.0,SNR=3.8
BVAR Borovoye Array 78.87 327 P **P 13 50 07.4 -0.8**
BVAR pmax pmax
comp=Z,9.0nm,0.7s
BRVK Borovoye 78.94 327 P **P 13 50 08.6 0.0**
comp=Z,121nm,0.8s,mb5.9,SNR=9.1
BRVK Borovoye 78.94 327 P **P 13 50 08.4 -0.2**
SNR=9.4
BRVK Borovoye 78.94 327 P **P 13 50 07.7 -0.9**
BRVK Borovoye 78.94 327 ⇑*i* P **P 13 50 08.0 -0.6**
comp=Z,9.8nm,0.8s,mb4.8
CHKZ Chkalovo 79.05 328 *i* P **P 13 50 07.6 -1.5**
CHKZ pmax pmax
comp=Z,14nm,1.2s,mb4.8
CHKZ Chkalovo 79.05 328 ⇑*i* P **P 13 50 08.2 -0.9**
ZRNK Zerenda 79.59 327 *i* P **P 13 50 09.7 -2.4**
ZRNK pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ZRNK Zerenda 79.59 327 ⇑*i* P **P 13 50 11.2 -0.9**
comp=Z,17nm,0.9s,mb5.0
WHFO Wadi Hawf 80.95 289 P **P 13 50 19.6 +0.2**
SNR=12
ABTO Aybut 81.30 289 P **P 13 50 22.4 +1.1**
SNR=7.1
SDPT Sand Point 82.98 32 *e*P **P 13 50 29.9 -0.2**
QSPA South Pole Qui 83.29 180 *e*P **P 13 50 32.1 +0.4**
comp=Z,8.3nm,0.7s,mb4.9
AB31 Akbulak array 83.51 321 P **P 13 50 31.4 -1.4**
AB31 pmax pmax
comp=Z,20nm,0.6s,mb5.4
SYO Syowa Base 84.68 201 ⇑*e*P **P 13 50 39.2 +0.4**
AKTK Aktyubinsk 85.06 322 P **P 13 50 40.7 +0.1**
AKTO Aktyubinsk 85.06 322 P **P 13 50 40.7 +0.1**
comp=Z,6.4nm,0.8s,mb4.8,baz=104,slow=6.9
AKTO Aktyubinsk 85.06 322 *i* P **P 13 50 39.1 -1.6**
AKTO pmax pmax
comp=Z,30nm,1.2s,mb5.3
ARU Arti 86.50 328 *e*P **P 13 50 46.0 -1.8**
ARU *e* 13 54 07.9
ARU *e*PPP 13 55 59.9
ARU *e*S S 14 01 09.3 -14
ARU *e*SS SS 14 06 59.7 -4.2
ARU Arti 86.50 328 *e*P **P 13 50 47.1 -0.7**
comp=Z,5.8nm,0.6s,mb5.0
TTA Tatalina 87.83 26 *e*P **P 13 50 54.7 +0.4**
KDAK Kodiak Island 87.91 31 *e*P **P 13 50 54.5 -0.1**
KDAK *e* 13 51 07.9
SLKM Skilak Lake 89.79 29 *e*P **P 13 51 03.2 -0.3**
DIV Divide 92.05 29 *e*P **P 13 51 14.1 0.0**
DAWY Dawson 95.34 26 *e*P **P 13 51 28.9 -0.3**
DAWY *e* 13 51 50.3
SNAA Sanae 96.43 193 *e*P **P 13 51 34.0 -0.1**
SNAA *e* pP 13 51 37.7 -1.6
VNA3 Neumayer Olymp 98.21 192 *e*P **P 13 51 41.9 -0.2**
VNA3 *e* pP 13 51 45.6 -1.7
VNA3 *e* pP 13 51 47.1 -0.2
ARCES ARCESS Array B 101.98 340 P Pdif 13 51 58.8 -0.1
comp=Z,0.8nm,0.7s,baz=73,slow=7.8,SNR=3.9
ARCES ARCESS Array B 101.98 340 P Pdif 13 51 58.8 -0.1
ARCES pmax pmax
comp=Z,1.0nm,0.7s
FINES FINESS Array B 103.44 332 Pdiff Pdif 13 52 03.6 -1.8
comp=Z,0.7nm,0.7s,baz=5.2,slow=4.6,SNR=3.0
FINES FINESS Array B 103.44 332 P Pdif 13 52 03.6 -1.8
FINES pmax pmax
comp=Z,1.0nm,0.7s
CLL Collm 113.11 323 *e*PDIF Pdif 13 52 48.0 -0.4
CLL *e*PP PP 13 57 33.0 +1.3
GERES GERESS Array B 113.46 321 PKiKP PKiKP 13 56 43.2 +0.2
comp=Z,0.4nm,0.2s,baz=178,slow=6.9,SNR=2.7
GERES GERESS Array B 113.46 321 *i* PKiKP PKiKP 13 56 43.2 +0.2
PDAR Pinedale Array 115.24 46 PKP PKiKP 13 56 47.9 +1.5
comp=Z,0.4nm,0.7s,baz=197,slow=2.8,SNR=3.4
EKA Eskdalemuir Ar 119.83 332 PKP PKPdf 13 56 56.8 +1.6
comp=Z,1.3nm,0.8s,baz=274,slow=3.3,SNR=2.7
EKA Eskdalemuir Ar 119.83 332 PKIKP PKPdf 13 56 56.8 +1.6
EKA pmax pmax
comp=Z,1.0nm,0.8s
MNTX Cornudas Mount 121.11 57 *e*PKPdf PKPdf 13 56 59.3 +1.6
JCT Junction City 126.04 57 *e*PKIKP PKPdf 13 57 08.7 +1.5
PLCA Paso Flores 128.45 158 PKP PKPdf 13 57 14.5 +2.8
comp=Z,2.6nm,1.1s,baz=180,slow=4.0,SNR=2.6
PLCA Paso Flores 128.45 158 PKIKP PKPdf 13 57 14.5 +2.7
PLCA pmax pmax
comp=Z,3.0nm,1.1s
PLCA Paso Flores 128.45 158 PKP PKPdf 13 57 14.5 +2.8
TORD Torodi Ar. Bea 130.71 282 PKP PKPdf 13 57 16.6 +0.5
comp=Z,1.4nm,0.8s,baz=65,slow=2.0,SNR=6.7
MYNC Murphy 136.39 45 *e*PKIKP PKPdf 13 57 29.2 +2.5
DBIC Dimbokro 137.18 273 PKP PKPdf 13 57 29.0 +0.8
comp=Z,3.5nm,1.0s,baz=323,slow=17,SNR=2.5
DBIC Dimbokro 137.18 273 PKIKP PKPdf 13 57 29.0 +0.8
DBIC pmax pmax
comp=Z,4.0nm,1.0s
LVC Limon Verde 144.40 145 *e*PKPdf PKPdf 13 57 43.6 +2.4
NNA Nana 145.83 123 *e*PKPbc PKPbc 13 57 45.3 +1.1
CPUP Villa Florida 145.95 165 PKPbc PKPbc 13 57 46.8 +2.2
comp=Z,2.2nm,0.6s,baz=156,slow=0.9,SNR=6.6
CPUP Villa Florida 145.95 165 *e*PKPdf PKPdf 13 57 44.5 +0.7
ARE Arequipa 147.29 135 *e*PKP2 PKPab 13 57 53.0 +2.8
LPAZ La Paz 149.69 139 PKPbc PKPbc 13 57 58.1 +3.4
comp=Z,2.7nm,0.7s,baz=94,slow=1.6,SNR=11
LPAZ La Paz 149.69 139 PKP2 PKPab 13 57 58.1 -1.8
LPAZ pmax pmax
comp=Z,3.0nm,0.7s
LPAZ La Paz 149.69 139 *e*PKPdf PKPdf 13 57 52.3 +2.3
LPAZ *e*PKPbc PKPbc 13 57 57.6 +2.9
LPAZ *e*PKPab PKPab 13 58 02.2 +2.2
SAML Samuel 158.31 136 *e*PKPab PKPab 13 58 37.3 +0.9

NEIC ***29*** *13:40:58.3, 3566S×72.12W, h18km, ML3.9(GUC), After GUC.*
NEIC Felt [III] at Cauquenes and San Javier; [II] at Constitucion and Talca.

GUC 29 13:40:58.3±0.9, 3566S×7212W, h18km±4km, MD3.9, ML3.9, 6C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCO	**Chanco**	**0.35**	**258**	⇓*i* P		13 43 20.9	
CNCO				*i* S		13 43 25.7	
CNCO				AML	AML	13 43 26.1	
	comp=E,12μm,0.2s						
CTCH	**Constitucion**	**0.41**	**324**	⇑*i* P	Pg	13 41 06.6	-0.1
CTCH				*i* S	Sg	13 41 12.8	+0.4
CTCH				AML	AML	13 41 13.5	
	comp=E,52μm,0.3s						
CTCH	**Constitucion**	**0.41**	**324**	⇑*i* P	Pg	13 41 06.6	-0.1
CTCH				*i* S	Sg	13 41 12.8	+0.4
LNCH	**Linares**	**0.46**	**114**	⇓*i* P	Pg	13 41 07.1	-0.4
LNCH				*i* S	Sg	13 41 14.3	+0.5
LNCH				AML	AML	13 41 14.7	
	comp=N,8μm,0.3s						
LNCH	**Linares**	**0.46**	**114**	⇓*i* P	Pg	13 41 07.1	-0.4
LNCH				*i* S	Sg	13 41 14.3	+0.5
TALC	**Talca**	**0.47**	**56**	⇓*i* P	Pg	13 41 07.0	-0.9
TALC				*i* S	Sg	13 41 14.1	-0.2
TALC				AML	AML	13 41 14.4	
	comp=E,48μm,0.1s						
TALC	**Talca**	**0.47**	**56**	⇓*i* P	Pg	13 41 07.0	-0.9
TALC				*i* S	Sg	13 41 14.1	-0.2
CCHI	**Chillan**	**0.94**	**178**	⇑*i* P	Pb	13 41 14.8	-1.3
CCHI				*i* S	Sb	13 41 27.7	-0.5
CCHI				AML	AML	13 41 29.4	
	comp=E,2μm,0.3s						
CCHI				AML	AML	13 41 31.3	
	comp=E,3μm,0.2s						
CCHI	**Chillan**	**0.94**	**178**	⇑*i* P	Pb	13 41 14.8	-1.3
CCHI				*i* S	Sb	13 41 27.7	-0.5
NICH	**Los Niches**	**0.98**	**48**	⇓*i* P	Pb	13 41 16.0	-0.8
NICH				*i* S	Sb	13 41 29.1	-0.2

SFDO	**San Fernando**	**1.38**	**41**	⇓*iP*	Pn	13 41 21.9	-0.8
SFDO				*i*S	Sn	13 41 40.0	-0.5
LNV	**Longovilo**	**1.80**	**19**	*eP*	Pn	13 41 28.4	0.0
LNV				*i*S	Sn	13 41 51.7	+0.9
CICH	**Cipreses**	**1.93**	**47**	⇑*iP*	Pn	13 41 31.2	+0.9
CICH				*i*S	Sn	13 41 56.2	+2.1
CACH	**El Canelo**	**1.98**	**39**	⇑*iP*	Pn	13 41 31.7	+0.7
CACH				*i*S	Sn	13 41 57.7	+2.3
CHCH	**Chadas Angostu**	**2.10**	**35**	*eP*	Pn	13 41 33.3	+0.6
CHCH				*e*S	Sn	13 42 00.8	+2.5
TACH	**Talagante**	**2.23**	**26**	*eP*	Pn	13 41 35.6	+1.3
TACH				*i*S	Sn	13 42 03.5	+2.1
RCDM	**Rinconada Maip**	**2.42**	**27**	*eP*	Pn	13 41 38.2	+1.2
RCDM				AML	AML	13 42 15.3	
	comp=E,429nm,0.4s						
PCH	**Pirque**	**2.43**	**33**	*eP*	Pn	13 41 39.0	+1.9
CLCH	**Cerro Calan**	**2.61**	**30**	*eP*	Pn	13 41 41.6	+2.0
CLCH				*i*S	Sn	13 42 14.2	+3.4
CLCH				AML	AML	13 42 21.9	
	comp=N,794nm,0.7s						
CLCH				AML	AML	13 42 22.7	
	comp=N,874nm,0.7s						
FCH	**Farellones**	**2.77**	**33**	*eP*	Pn	13 41 43.5	+1.7
FCH				*i*S	Sn	13 42 17.8	+2.9
FCH				AML	AML	13 42 25.2	
	comp=N,410nm,0.4s						
PEL	**Peldehue**	**2.77**	**26**	*eP*	Pn	13 41 43.7	+1.8
PEL				*e*S	Sn	13 42 17.6	+2.6
PEL				AML	AML	13 42 28.4	
	comp=E,717nm,0.5s						
PEL	**Peldehue**	**2.77**	**26**	*eP*	Pn	13 41 43.7	+1.8
PEL				*e*S	Sn	13 42 17.6	+2.6

*ISCJB **29** 14:04:36.7±1.5, 185S±0.1×1718E±0.1, h33km, mb4.2/6, Error ellipse: s-maj=18.7km s-min=16.0km az=173.2*
*IDC **29** 14:04:55.3±9.1, 1782S×17020E, h89km±62km, mb3.8/5, mb1 4.0/6, mb1mx3.7/15, mbtmp4.1/6, ML3.7/1, Error ellipse: s-maj=99.4km s-min=61.4km az=111.0*
ISC 29 14:04:38.9±1.5, 184S±01×1718E±01, h35km, n13, σ0§95/15, mb4.2/6, 1D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BKM	**Butte a Klehm**	**3.42**	**282**	⇓*iP*		**Pn**	**14 05 45.9**	**+16**
BKM					S	**Sn**	**14 06 09.4**	**+0.3**
DZM	**Mont Dzumac**	**6.19**	**233**	P		**Pn**	**14 06 15.5**	**+7.7**
	2.4nm,0.3s,baz=48,slow=16,SNR=75							
DZM					S	**Sn**	**14 07 17.1**	**-0.2**
	6.8nm,0.3s,baz=259,slow=20,SNR=5.0							
CTA	**Charters Tower**	**24.14**	**262**	*eP*		**P**	**14 09 51.6**	**+0.1**
	4.2nm,1.1s,mb3.8							
CTA	**Charters Tower**	**24.14**	**262**	P		**P**	**14 09 51.0**	**-0.4**
	2.8nm,0.7s,mb3.8,baz=84,slow=15,SNR=5.1							
STKA	**Stephens Creek**	**30.32**	**238**	*eP*		**P**	**14 10 48.4**	**+1.5**
	1.7nm,0.6s,mb4.0							
STKA	**Stephens Creek**	**30.32**	**238**	P		**P**	**14 10 49.3**	**+2.4**
	1.8nm,0.5s,mb4.0,baz=69,slow=10,SNR=9.7							
WB2	**Warramunga Arr**	**35.33**	**261**	*eP*		**P**	**14 11 29.5**	**-1.2**
WRA	**Warramunga Arr**	**35.34**	**261**	P		**P**	**14 11 29.7**	**-1.1**
	0.4nm,0.4s,mb3.7,baz=88,slow=8.3,SNR=19							
ASAR	**Alice Springs**	**35.65**	**255**	P		**P**	**14 11 33.2**	**-0.3**
	4.6nm,0.5s,mb4.7,baz=82,slow=8.7,SNR=150							
ASPA	**Alice Springs**	**35.66**	**255**	*eP*		**P**	**14 11 33.1**	**-0.4**
KAKA	**Kakadu**	**38.25**	**273**	*eP*		**P**	**14 11 44.6**	**-11**
	25nm,1.6s,mb4.7							
FITZ	**Fitzroy Crossi**	**43.71**	**263**	*eP*		**P**	**14 12 41.9**	**+1.4**
	4.0nm,0.6s,mb4.3							
FITZ	**Fitzroy Crossi**	**43.71**	**263**	P		**P**	**14 12 42.0**	**+1.5**
	2.5nm,0.7s,mb4.1,baz=112,slow=6.6,SNR=18							

*CSEM **29** 14:16:01.4±0.7, 3952N×2974W, h5km, ML2.9, Error ellipse: s-maj=10.5km s-min=3.9km az=51.0, After PDA*
*PDA **29** 14:16:01.4±0.7, 3952N×2974W, h5km, MD3.5, ML2.9, Error ellipse: s-maj=10.5km s-min=3.9km az=51.0*
SVSA 29 14:16:01.4±0.7, 3952N×2974W, h5km, MD3.5, ML2.9, Error ellipse: s-maj=10.5km s-min=3.9km az=51.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.23**	**139**	*eP*		Pg	14 16 20.4	-4.6
CALA				*e*S		Sg	14 16 34.3	-6.7
HOR	**Horta**	**1.31**	**139**	*eP*		Pn	14 16 21.5	-4.8
HOR				*e*S		Sg	14 16 36.5	-7.0
ROSA	**Rosais**	**1.41**	**124**	*eP*		Pn	14 16 23.1	-4.6
ROSA				*e*S		Sb	14 16 38.7	-7.7
PICO	**Pico**	**1.44**	**134**	*eP*		Pn	14 16 23.5	-4.6
PICO				*e*S		Sb	14 16 40.2	-7.1
PCND	**Candelaria**	**1.44**	**136**	*eP*		Pn	14 16 23.3	-4.8
PCND				*e*S		Sb	14 16 40.1	-7.3
PCND								
	133nm,0.2s							
PAMA	**Santo Amaro**	**1.47**	**124**	*e*S		Sn	14 16 40.6	-7.6
PAMA								
	27nm,0.3s							
PTEI	**Pico do Teixo**	**1.48**	**133**	*eP*		Pn	14 16 23.7	-5.0
PTEI				*e*S		Sn	14 16 40.9	-7.5
PTEI								
	84nm,0.2s							
PBOI	**Pico dos Bois**	**1.51**	**135**	*eP*		Pn	14 16 24.4	-4.7
PBOI				*e*S		Sn	14 16 41.4	-7.8
PBOI								
	86nm,0.3s							
PMAN	**Manadas**	**1.56**	**124**	*eP*		Pn	14 16 24.8	-4.9
PMAN				*e*S		Sn	14 16 42.4	-7.9
PMAN								
	65nm,0.3s							
PMAN	**Manadas**	**1.56**	**124**	*eP*		Pn	14 16 24.8	-4.9
PMAN				*e*S		Sn	14 16 42.4	-7.9
PID	**Ribeirinha**	**1.66**	**130**	*eP*		Pn	14 16 26.3	-4.8
PID				*e*S		Sn	14 16 45.0	-7.7
PIED	**Piedade**	**1.71**	**129**	*eP*		Pn	14 16 26.9	-4.9

*ISCJB **29** 14:21:44.8±0.4, 5308N±006×17482W±004, h221km±3km, mb4.2/47, Error ellipse: s-maj=9.1km s-min=3.9km az=10.6*
*NEIC **29** 14:21:45.7±0.4, 5294N×17474W, h224km±4km, mb4.5/23, Error ellipse: s-maj=7.9km s-min=4.5km az=172.0*
*BJI **29** 14:21:45.7, 5290N×17470W, h223km, mB4.6, mb4.4*
*MOS **29** 14:21:45.6±1.1, 5300N×17474W, h236km, mb4.4/15, Error ellipse: s-maj=11.6km s-min=9.2km az=75.4*
*IDC **29** 14:21:47.7±3.1, 5298N×17476W, h241km±29km, mb3.8/18, mb1 3.9/18, mb1mx3.8/28, mbtmp4.4/18, Error ellipse: s-maj=16.2km s-min=10.7km az=5.0*
ISC 29 14:21:45.8±0.4, 5305N±005×17481W±004, h218km±3km, h224km±2.3km; pP-P, n252, σ0§78/253, mb4.2/47, 56C-45D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.93**	**156**	P		**Pn**	**14 22 16.7**	**-0.2**
ATKA				S		**S**	**14 22 40.4**	**-0.8**
NIKO	**Nikolski**	**3.60**	**89**	P		**Pn**	**14 22 42.4**	**-1.0**
AMKA	**Amchitka**	**3.99**	**248**	P		**Pn**	**14 22 48.3**	**+0.3**
OKCE	**Okmok Cone E**	**4.01**	**82**	P		**Pn**	**14 22 48.5**	**+0.2**
OKCD	**Okmok Cone D**	**4.04**	**82**	P		**Pn**	**14 22 49.4**	**+0.7**
SPIA	**Saint Paul Isl**	**4.90**	**31**	*eP*		**Pn**	**14 23 01.6**	**+2.3**
AKUT	**Akutan**	**5.49**	**75**	*eP*		**Pn**	**14 23 07.0**	**+0.2**
SDPT	**Sand Point**	**8.71**	**69**	P		**Pn**	**14 23 46.2**	**-1.9**
CHGN	**Chignik**	**10.04**	**65**	*eP*		**Pn**	**14 24 03.1**	**-2.1**
SVW2	**Sparrevohn**	**13.16**	**45**	*eP*		**Pn**	**14 24 46.0**	**+1.4**
KDAK	**Kodiak Island**	**13.46**	**61**	P		**Pn**	**14 24 45.9**	**-2.4**
	38nm,0.3s,baz=267,slow=5.1,SNR=163							
KDAK	**Kodiak Island**	**13.46**	**61**	*eP*		**Pn**	**14 24 45.6**	**-2.7**
	113nm,0.4s							
TTA	**Tatalina**	**13.99**	**38**	*eP*		**Pn**	**14 24 56.6**	**+1.8**
SLKM	**Skilak Lake**	**15.33**	**51**	*eP*		**Pn**	**14 25 09.2**	**-2.0**
PET	**Petropavlovsk**	**15.93**	**281**	⇑*iP*		**Pn**	**14 25 19.4**	**+1.0**
PET					pmax	pmax		
	comp=Z,19nm,1.2s							
PMR	**Palmer**	**16.19**	**48**	*eP*		**P**	**14 25 22.0**	**+1.4**
PMR					pmax	pmax		
	comp=Z,8.0nm,0.3s							
PMR	**Palmer**	**16.19**	**48**	*eP*		**P**	**14 25 22.0**	**+1.4**
	comp=Z,8.0nm,0.3s							
MCK	**McKinley**	**17.13**	**41**	*eP*		**P**	**14 25 30.8**	**-0.1**
MCK					pmax	pmax		
	comp=Z,17nm,0.5s							
MCK	**McKinley**	**17.13**	**41**	*eP*		**P**	**14 25 30.8**	**-0.1**
	comp=Z,17nm,0.5s							
EYAK	**Cordova Ski Ar**	**17.48**	**53**	*eP*		**P**	**14 25 33.8**	**-0.9**
BILL	**Bilibino**	**17.55**	**336**	*di*P		**P**	**14 25 38.0**	**+2.6**
BILL					pmax	pmax		
	comp=Z,49nm,0.9s							
BILL	**Bilibino**	**17.55**	**336**	*eP*		**P**	**14 25 37.9**	**+2.4**
	comp=Z,51nm,0.8s							
SKR	**Severo-Kuril's**	**18.05**	**274**	*eP*		**P**	**14 25 40.1**	**-0.8**
COLA	**College**	**18.08**	**39**	⇑*iP*		**P**	**14 25 40.6**	**-0.6**
COLA	**College**	**18.08**	**39**	*eP*		**P**	**14 25 40.2**	**-0.9**
	comp=Z,24nm,0.8s							
MA2	**Magadan**	**20.00**	**303**	*eP*		**P**	**14 26 03.9**	**+2.1**
MA2					pmax	pmax		
	comp=E,20nm,1.0s							
MA2					pmax	pmax		
	comp=Z,20nm,1.0s							
EGAK	**Eagle**	**20.67**	**42**	*eP*		**P**	**14 26 08.5**	**-0.4**
INK	**Inuvik**	**24.67**	**36**	P		**P**	**14 26 45.7**	**-1.0**
	comp=Z,3.3nm,0.3s,mb4.4,baz=239,slow=6.3,SNR=35							
INK	**Inuvik**	**24.67**	**36**	*eP*		**P**	**14 26 46.2**	**-0.5**
INK					pmax	pmax		
	comp=Z,4.0nm,0.5s							
INK	**Inuvik**	**24.67**	**36**	*eP*		**P**	**14 26 46.2**	**-0.5**
	comp=Z,4.0nm,0.5s,mb4.3							
YAK	**Yakutsk**	**30.20**	**309**	*ce*P		**P**	**14 27 35.4**	**-0.5**
YAK					pmax	pmax		
	comp=Z,13nm,0.7s,mb4.7							
HABR	**Khabarovsk**	**31.51**	**282**	*eP*		**P**	**14 27 50.1**	**+2.8**
HABR				*e*S		**S**	**14 32 41.3**	**+2.1**
YKA	**Yellowknife Ar**	**32.29**	**49**	P		**P**	**14 27 53.1**	**-1.0**
	comp=Z,5.3nm,0.5s,mb4.3,baz=280,slow=8.9,SNR=30							
C04A	**Brinnon**	**32.87**	**78**	⇑P		**P**	**14 27 59.9**	**+0.7**
	baz=33							
E03A	**Lebam**	**33.10**	**80**	⇓P		**P**	**14 28 01.5**	**+0.3**
	baz=33							
B05A	**Bryant**	**33.13**	**77**	⇓P		**P**	**14 28 01.7**	**+0.3**
	baz=33							
C05A	**Tolt Reservoir**	**33.64**	**77**	⇓P		**P**	**14 28 05.6**	**-0.2**
	baz=34							
F04A	**Amboy**	**34.10**	**80**	P		**P**	**14 28 10.2**	**+0.5**
	baz=34,SNR=5.3							
E05A	**Randle**	**34.17**	**79**	⇓P		**P**	**14 28 10.2**	**-0.1**
	baz=34							
I03A	**Eugene**	**34.64**	**84**	⇓P		**P**	**14 28 14.8**	**+0.3**
	baz=34							
F05A	**White Salmon**	**34.70**	**80**	⇑P		**P**	**14 28 14.8**	**-0.1**
	baz=34							
J02A	**Umpqua**	**34.80**	**85**	⇑P		**P**	**14 28 15.9**	**+0.1**
	baz=35							
H04A	**Detroit Lake**	**34.91**	**82**	P		**P**	**14 28 16.8**	**+0.1**
	baz=35,SNR=8.2							
J03A	**Ideyld Park**	**35.17**	**85**	⇓P		**P**	**14 28 19.2**	**+0.3**
	baz=35							
L02A	**Cave Junction**	**35.48**	**87**	⇑P		**P**	**14 28 22.2**	**+0.6**
	baz=35							
H05A	**Madras**	**35.50**	**82**	⇓P		**P**	**14 28 21.6**	**-0.1**
	baz=35							
G06A	**Cason Farm,**	**35.53**	**80**	⇑P		**P**	**14 28 21.9**	**-0.1**
	baz=35							
HAWA	**Hanford**	**35.57**	**78**	*eP*		**P**	**14 28 22.0**	**-0.4**
	comp=Z,1.3nm,1.0s,mb3.4							
H06A	**Lindquist Farm**	**35.98**	**81**	P		**P**	**14 28 25.8**	**-0.1**
	baz=36,SNR=5.7							
NEW	**Newport**	**36.03**	**74**	P		**P**	**14 28 25.1**	**-1.2**
	comp=Z,4.4nm,0.4s,mb4.3,baz=314,slow=5.9,SNR=5.8							
NEW	**Newport**	**36.03**	**74**	P		**P**	**14 28 25.1**	**-1.1**
NEW					pmax	pmax		
	comp=Z,4.0nm,0.4s							
G07A	**Ruggs Ranch, H**	**36.09**	**80**	⇑P		**P**	**14 28 25.9**	**-0.8**
	baz=36							
KHMM	**Horse Mountain**	**36.17**	**89**	*eP*		**P**	**14 28 28.6**	**+1.2**
J05A	**Fort Rock**	**36.26**	**84**	⇑P		**P**	**14 28 29.1**	**+1.0**
	baz=36							
YBH	**Yreka Blue Hor**	**36.27**	**87**	P		**P**	**14 28 28.6**	**+0.3**
	comp=Z,6.6nm,0.8s,mb4.2,baz=321,slow=3.6,SNR=15							
YBH	**Yreka Blue Hor**	**36.27**	**87**	*eP*		**P**	**14 28 29.2**	**+0.9**
YBH					pmax	pmax		
	comp=Z,6.0nm,0.8s							
YBH	**Yreka Blue Hor**	**36.27**	**87**	*eP*		**P**	**14 28 29.2**	**+0.9**
	comp=Z,6.2nm,0.8s,mb4.2							
YBH	**Yreka Blue Hor**	**36.27**	**87**	⇑P		**P**	**14 28 29.1**	**+0.9**
	baz=36,SNR=7.6							
F08A	**Pendleton**	**36.33**	**78**	⇑P		**P**	**14 28 28.6**	**-0.2**
	baz=36							
K04A	**Chilquin**	**36.34**	**85**	⇑P		**P**	**14 28 29.6**	**+0.7**
	baz=36							
M02C	**Callahan**	**36.39**	**87**	⇓P		**P**	**14 28 30.4**	**+1.1**
	baz=36							
MJAR	**Matsushiro Arr**	**36.46**	**262**	P		**P**	**14 28 29.4**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.5,baz=27,slow=5.9,SNR=4.8							
MJAR	**Matsushiro Arr**	**36.46**	**262**	P		**P**	**14 28 29.4**	**-0.4**
MJAR					pmax	pmax		
	comp=Z,10.0nm,0.6s							
MJAR	**Matsushiro Arr**	**36.46**	**262**	P		**P**	**14 28 29.4**	**-0.4**
N02C	**Big Bar**	**36.46**	**88**	P		**P**	**14 28 30.8**	**+1.0**
	baz=36,SNR=6.4							
I06A	**Prineville**	**36.50**	**82**	P		**P**	**14 28 30.6**	**+0.5**
	baz=36,SNR=5.2							
G08A	**Pilot Rock**	**36.50**	**79**	⇑P		**P**	**14 28 29.8**	**-0.4**
	baz=36							
L04A	**Klamath Falls**	**36.50**	**86**	⇓P		**P**	**14 28 31.1**	**+0.9**
	baz=36							
H07A	**Lands Inn, Kim**	**36.52**	**81**	⇑P		**P**	**14 28 30.3**	**-0.1**
	baz=36							
MDJ	**Mudanjiang**	**36.71**	**280**	P		**P**	**14 28 33.0**	**+1.0**
MDJ					AP	pP	14 29 18.3	+1.4
MDJ					XP	sP	14 29 43.8	+2.0
MDJ					AMB	AMB		
	comp=Z,3.0nm,0.8s,mb3.9							
MDJ					AMB	AMB		
	comp=Z,42nm,6.3s							
M04C	**Macdoel**	**36.77**	**86**	P		**P**	**14 28 33.4**	**+1.0**
	baz=37,SNR=6.3							
K05A	**Summer Lake**	**36.78**	**84**	⇓P		**P**	**14 28 33.2**	**+0.7**
	baz=37,SNR=8.3							
I07A	**Izee**	**36.84**	**81**	P		**P**	**14 28 33.2**	**+0.1**
	baz=37,SNR=17							
F09A	**S2 Ranch, Elgi**	**36.89**	**78**	⇑P		**P**	**14 28 33.3**	**-0.2**
	baz=37							
M03C	**McCloud**	**36.90**	**87**	⇑P		**P**	**14 28 34.3**	**+0.7**
	baz=37							
J06A	**Christmas Vall**	**36.92**	**83**	P		**P**	**14 28 34.1**	**+0.3**
	baz=37,SNR=12							
WDC	**Whiskeytown Da**	**37.07**	**88**	⇓P		**P**	**14 28 35.2**	**+0.2**
	baz=37							
H08A	**Prairie City**	**37.09**	**80**	⇓P		**P**	**14 28 34.5**	**-0.7**
	baz=37							
K06A	**Valley Falls**	**37.12**	**83**	⇓P		**P**	**14 28 35.9**	**+0.4**
	baz=37,SNR=5.5							
O02C	**Red Bluff**	**37.16**	**89**	⇑P		**P**	**14 28 36.3**	**+0.6**
	baz=37							
L05A	**Lakeview**	**37.22**	**85**	⇓P		**P**	**14 28 37.2**	**+1.0**
	baz=37							
P01C	**Double 8 Ranch**	**37.27**	**90**	⇓P		**P**	**14 28 37.4**	**+0.7**
	baz=37							
J07A	**Hines**	**37.36**	**82**	⇑P		**P**	**14 28 37.9**	**+0.5**
	baz=37							
M05C	**Lookout**	**37.44**	**86**	⇓P		**P**	**14 28 38.8**	**+0.7**
	baz=37							
I08A	**Drewsey**	**37.49**	**81**	P		**P**	**14 28 38.7**	**+0.1**
	baz=37,SNR=5.8							
GASB	**Alder Springs**	**37.53**	**89**	⇑P		**P**	**14 28 39.7**	**+0.8**
	baz=37							
HATC	**Hat Creek Radi**	**37.57**	**87**	⇑P		**P**	**14 28 39.6**	**+0.4**
	baz=37							
H09A	**Durkee**	**37.61**	**79**	⇑P		**P**	**14 28 39.4**	**-0.1**
	baz=37							
K07A	**Rock Creek Ran**	**37.79**	**83**	P		**P**	**14 28 41.4**	**+0.3**
	baz=38,SNR=21							
J08A	**Circle Bar Ran**	**37.87**	**82**	⇑P		**P**	**14 28 41.4**	**-0.2**
	baz=38							
M06C	**Likely Place G**	**37.93**	**86**	⇑P		**P**	**14 28 42.7**	**+0.5**
	baz=38							
I09A	**Lost Marbles R**	**37.95**	**80**	⇑P		**P**	**14 28 42.2**	**-0.1**
	baz=38							
O04C	**Chester**	**38.10**	**87**	⇑P		**P**	**14 28 43.9**	**+0.2**
	baz=38							
L07A	**Adell**	**38.13**	**84**	P		**P**	**14 28 44.5**	**+0.6**
	baz=38,SNR=7.7							
ELFS	**Eagle Lake Fie**	**38.14**	**87**	⇑P		**P**	**14 28 44.6**	**+0.7**
	baz=38							
K08A	**Mann Creek Ran**	**38.22**	**82**	P		**P**	**14 28 44.9**	**+0.2**
	baz=38,SNR=8.5							
J09A	**Fry Pan Ranch,**	**38.30**	**81**	⇑P		**P**	**14 28 45.4**	**+0.1**
	baz=38							
WVOR	**Wild Horse Val**	**38.31**	**83**	*eP*		**P**	**14 28 45.1**	**-0.2**
WVOR					pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.4							
WVOR	**Wild Horse Val**	**38.31**	**83**	*eP*		**P**	**14 28 45.1**	**-0.2**
	comp=Z,8.3nm,0.6s,mb4.4							
WVOR				*e*			14 29 18.6	
ORV	**Oroville**	**38.33**	**89**	⇑P		**P**	**14 28 45.2**	**-0.3**
	baz=38							
O05C	**Quincy**	**38.42**	**88**	⇓P		**P**	**14 28 46.9**	**+0.6**
	baz=38							
CVS	**Carmenet Viney**	**38.51**	**91**	⇑P		**P**	**14 28 47.3**	**+0.2**
	baz=38							
N06A	**Buffalo Meadow**	**38.59**	**86**	P		**P**	**14 28 48.2**	**+0.5**
	baz=38,SNR=17							
FARB	**Farallon Islan**	**38.60**	**92**	⇓P		**P**	**14 28 48.2**	**+0.4**
	baz=38							
M07A	**Soldier Meadow**	**38.61**	**85**	P		**P**	**14 28 48.5**	**+0.7**
	baz=38,SNR=22							
L08A	**Fields**	**38.62**	**83**	P		**P**	**14 28 48.1**	**+0.2**
	baz=38,SNR=7.2							
K09A	**Rome**	**38.70**	**82**	⇓P		**P**	**14 28 48.2**	**-0.4**
	baz=38							
BEKR	**Beckwourth**	**38.82**	**87**	P		**P**	**14 28 49.8**	**+0.2**
	baz=39,SNR=7.3							
BOD	**Bodaibo**	**38.95**	**306**	*eP*		**P**	**14 28 47.8**	**-2.9**
BOD					pmax	pmax		
	comp=Z,3.0nm,1.8s,mb3.5							
O06A	**Flanigan**	**38.96**	**87**	P		**P**	**14 28 51.2**	**+0.5**
	baz=39,SNR=7.3							
M08A	**Happy Creek Ra**	**39.05**	**84**	⇑P		**P**	**14 28 52.1**	**+0.6**
	baz=39							
L09A	**Wilkinson Ranc**	**39.13**	**83**	⇑P		**P**	**14 28 52.6**	**+0.4**
	baz=39							
PAHR	**Pah Rah Range**	**39.51**	**87**	*eP*		**P**	**14 28 55.5**	**+0.2**
	comp=Z,6.8nm,0.4s,mb4.4							
O07A	**Toulon**	**39.53**	**86**	P		**P**	**14 28 56.0**	**+0.5**
	baz=39,SNR=8.9							
M09A	**Marrel Ranch,**	**39.62**	**83**	⇑P		**P**	**14 28 56.3**	**+0.1**
	baz=40							
CN2	**Changchun**	**39.63**	**281**	*eP*		**P**	**14 28 59.3**	**+3.0**
N09A	**Rock Creek Ran**	**39.92**	**84**	P		**P**	**14 28 58.9**	**+0.2**
	baz=40,SNR=9.3							
M10A	**I.L. Ranch, Tu**	**40.10**	**83**	⇑P		**P**	**14 29 00.6**	**+0.4**
	baz=40							
MCMT	**McKenzie Canyo**	**40.36**	**76**	*eP*		**P**	**14 29 00.6**	**-1.6**
EGMT	**Eagleton**	**40.38**	**70**	*eP*		**P**	**14 29 00.4**	**-2.1**
	comp=Z,2.2nm,0.6s,mb3.8							
O09A	**Fish Creek Ran**	**40.54**	**85**	P		**P**	**14 29 04.2**	**+0.4**
	baz=40,SNR=7.4							
BOZ	**Bozeman (W)**	**40.60**	**74**	*eP*		**P**	**14 29 03.0**	**-1.3**
	comp=Z,1.6nm,0.6s,mb3.6							
M11A	**Holland Ranch,**	**40.61**	**82**	⇓P		**P**	**14 29 04.7**	**+0.4**
	baz=40							
U04C	**Hernandez Rese**	**40.82**	**92**	⇑P		**P**	**14 29 07.3**	**+1.2**
	baz=41							
O10A	**Cortez Mining,**	**40.88**	**84**	⇓P		**P**	**14 29 07.1**	**+0.6**
	baz=41							
Q08A	**Gabbs**	**40.92**	**87**	⇑P		**P**	**14 29 07.1**	**+0.3**
	baz=41							
NVAR	**Mina Array Bea**	**40.97**	**88**	P		**P**	**14 29 07.4**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.0,baz=301,slow=7.3,SNR=38							
T06C	**Millerton Lake**	**41.04**	**90**	⇑P		**P**	**14 29 07.7**	**-0.1**
	baz=41							
KCC	**Kaiser Creek**	**41.07**	**90**	⇑P		**P**	**14 29 08.4**	**+0.3**
	baz=41							
P10A	**Eureka**	**41.32**	**85**	⇑P		**P**	**14 29 10.6**	**+0.5**
	baz=41							
Q09A	**Carvers**	**41.38**	**86**	⇑P		**P**	**14 29 11.2**	**+0.6**
	baz=41							
N12A	**Clover Valley,**	**41.41**	**82**	P		**P**	**14 29 11.1**	**+0.2**
	baz=41,SNR=7.6							
O11A	**Cowboy Ranch,**	**41.49**	**84**	P		**P**	**14 29 11.7**	**+0.2**
	baz=41,SNR=6.0							
MTUM	**Tungsten Hills**	**41.50**	**89**	*eP*		**P**	**14 29 12.1**	**+0.5**
M13A	**Montello**	**41.62**	**81**	⇑P		**P**	**14 29 12.4**	**-0.2**
	baz=42							
HELL	**Mitchell Peak,**	**41.67**	**90**	⇓P		**P**	**14 29 12.9**	**0.0**
	baz=42							
P11A	**Circle Ranch,**	**41.79**	**84**	⇓P		**P**	**14 29 14.0**	**0.0**
	baz=42							
R09A	**Tonopah**	**41.83**	**87**	P		**P**	**14 29 14.3**	**0.0**
	baz=42,SNR=40							
TIN	**Tinemaha**	**41.90**	**89**	⇓P		**P**	**14 29 15.3**	**+0.4**
	baz=42							
N13A	**Wendover, West**	**41.91**	**82**	⇑P		**P**	**14 29 14.9**	**0.0**
	baz=42							
O12A	**Currie**	**41.95**	**83**	P		**P**	**14 29 15.1**	**-0.1**
	baz=42,SNR=8.8							
SMMC	**Simmler**	**41.99**	**92**	⇓P		**P**	**14 29 16.4**	**+0.8**
	baz=42							
S09A	**Goldfield**	**42.07**	**88**	P		**P**	**14 29 16.3**	**+0.1**
	baz=42,SNR=6.7							
VES	**Vestal, Richgr**	**42.19**	**91**	⇑P		**P**	**14 29 16.8**	**-0.4**
	baz=42							
HVU	**Hansel Valley**	**42.19**	**80**	*eP*		**P**	**14 29 16.5**	**-0.7**
HVU					pmax	pmax		

baz=46,SNR=5.3
Y12C Blythe 46.36 90 ⇓P P 14 29 49.4 -0.7
baz=46
GLA Glamis 46.66 91 ⇓P P 14 29 51.9 -0.6
baz=46
Y13A Salome 46.73 89 ⇓P P 14 29 52.9 -0.1
baz=47
W15A Williams 46.75 86 ⇓P P 14 29 52.9 -0.3
baz=47
X14A Yava 46.85 88 ⇓P P 14 29 53.9 0.0
baz=47
PV01 Paradox Valley 47.00 81 *eP* **P 14 29 54.0 -1.1**
WUAZ Wupatki 47.06 85 *eP* **P 14 29 55.3 -0.3**
comp=Z,12nm,1.0s,mb4.2
Y14A Wickenburg 47.15 88 ⇑P P 14 29 56.0 -0.2
baz=47
X15A Humboldt 47.23 87 ⇓P P 14 29 56.8 -0.1
baz=47
Z14A Wintersburg 47.58 89 ⇓P P 14 29 59.8 +0.2
baz=47
SONM Songino Array 48.08 297 P **P 14 30 03.4 0.0**
comp=Z,0.8nm,0.5s,mb3.3,baz=52,slow=6.3,SNR=11
SONM PcP PcP 14 31 26.0 -1.5
comp=Z,0.5nm,0.5s,baz=91,slow=1.9,SNR=4.3
SONM ScP ScP 14 34 56.7 -4.3
comp=Z,0.8nm,0.9s,baz=54,slow=1.6,SNR=4.6
KBS Kingsbay 48.22 358 *i* P **P 14 30 00.6 -3.9**
115A Sonoran Desert 48.47 89 ⇓P P 14 30 06.8 +0.5
baz=48
HHC Hu-ho-hao-te 49.57 287 *eP* **P 14 30 13.8 -0.9**
HHC AP pP 14 31 02.8 +0.7
HHC XP sP 14 31 27.5 +1.2
HHC PCP PcP 14 31 33.3 +0.3
HHC PP PP 14 32 11.8 +0.6
HHC SCP ScP 14 35 05.3 -2.1
HHC PCS PcS 14 35 28.0 -2.0
HHC S **S 14 37 03.0 -2.7**
HHC XS sS 14 38 29.3 +0.2
HHC SCS ScS 14 39 39.0 -4.3
HHC SS SS 14 40 35.5 -5.1
HHC AMB AMB
comp=Z,14nm,1.0s,mb4.2
HHC AMB AMB
comp=Z,120nm,5.4s
HHC LR LR
comp=N,94nm,22.8s
HHC LR LR
comp=E,70nm,23.7s
HHC LR LR
comp=Z,52nm,22.8s
TUC Tucson 49.62 88 *eP* **P 14 30 14.2 -0.9**
TUC pmax pmax
comp=Z,10.0nm,0.5s,mb4.4
TUC Tucson 49.62 88 *eP* **P 14 30 14.2 -0.9**
comp=Z,0.8nm,0.5s,mb3.3
LAZ Ladron 50.36 83 *eP* **P 14 30 20.6 -0.1**
ANMO Albuquerque 50.39 82⇑ *eP* **P 14 30 19.7 -1.2**
NJ2 Nanjing 51.19 273 *eP* **P 14 30 30.3 +3.5**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.5
WMOK Wichita Mounta 55.09 77 *eP* **P 14 30 53.4 -1.9**
WMOK pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
WMOK Wichita Mounta 55.09 77 *eP* **P 14 30 53.4 -1.9**
comp=Z,1.8nm,0.8s,mb3.6
ARCES ARCESS Array B 56.83 352 P **P 14 31 07.0 -0.5**
comp=Z,1.0nm,0.5s,mb3.7,baz=28,slow=7.2,SNR=10
GTA Gaotai 57.19 293 *eP* **P 14 31 09.3 -0.8**
GTA AMB AMB
comp=Z,4.0nm,0.9s,mb4.0
LZH Lanzhou 57.24 288 ⇓P **P 14 31 11.0 +0.6**
LZH AP pP 14 32 01.5 +2.2
LZH XP sP 14 32 25.8 +2.7
LZH PP PP 14 33 22.5 +2.5
LZH AMB AMB
comp=Z,21nm,1.2s,mb4.6
LZH AMB AMB
comp=Z,63nm,6.5s
WMQ Urumqi 60.46 304 *eP* **P 14 31 35.0 +2.5**
MKAR Makanchi Array 60.88 310 P **P 14 31 34.6 -0.8**
comp=Z,0.8nm,0.3s,mb3.9,baz=47,slow=6.7,SNR=26
MKAR Makanchi Array 60.88 310 P **P 14 31 34.6 -0.8**
MKAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR Borovoye Array 61.16 321 P **P 14 31 37.5 +0.3**
comp=Z,5.2nm,0.4s,mb4.5,baz=53,slow=6.2,SNR=38
BVAR Borovoye Array 61.16 321 P **P 14 31 37.5 +0.3**
BVAR pmax pmax
comp=Z,5.0nm,0.4s
ZRNK Zerenda 61.74 322 *eP* **P 14 31 41.0 -0.1**
ZRNK pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
ZRNK Zerenda 61.74 322 *eP* **P 14 31 41.0 -0.1**
comp=Z,6.1nm,0.5s,mb4.5
GYA Guiyang 62.55 278 ⇓*i* P **P 14 31 46.0 -0.5**
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
FINES FINESS Array B 64.65 349 P **P 14 31 59.5 -0.7**
comp=Z,0.4nm,0.3s,mb3.5,baz=355,slow=6.5,SNR=8.8
KMI Kunming 65.89 280 P **P 14 32 14.0 +5.8**
KMI AMB AMB
comp=Z,10.0nm,1.2s,mb4.3
NOA NORSAR Array B 66.16 357 P **P 14 32 10.2 +0.3**
comp=Z,0.5nm,0.5s,mb3.4,baz=7.2,slow=6.6,SNR=2.8
AAK Ala-Archa 67.63 312 ⇓*i* P **P 14 32 18.5 -0.7**
AAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
AKTK Aktyubinsk 67.69 327 P **P 14 32 19.4 -0.1**
AKTO Aktyubinsk 67.69 327 P **P 14 32 19.4 -0.1**
comp=Z,4.2nm,0.4s,mb4.5,baz=53,slow=6.9,SNR=24
AKTO Aktyubinsk 67.69 327 P **P 14 32 19.4 -0.1**
AKTO pmax pmax
comp=Z,4.0nm,0.4s,mb4.4
OBN Obninsk 69.12 341 P **P 14 32 29.0 +0.6**
OBN 14 32 49.0
LSA Lhasa 69.15 292 P **P 14 32 29.3 +0.8**
GUN Gumba 73.45 294 *eP* **P 14 32 53.8 -0.5**
comp=Z,16nm,0.3s,mb5.1
GUN Gumba 73.45 294 *eP* **P 14 32 54.2 -0.1**
comp=Z,16nm,0.3s,mb5.1
GUN Gumba 73.45 294 *eP* **P 14 32 54.2 -0.1**
comp=Z,16nm,0.3s,mb5.1
KKN Kakani 73.88 295 *eP* **P 14 32 55.6 -1.1**
comp=Z,11nm,0.5s,mb4.8
KKN Kakani 73.88 295 *eP* **P 14 32 56.5 -0.2**
comp=Z,11nm,0.5s,mb4.8
KKN Kakani 73.88 295 *eP* **P 14 32 56.5 -0.2**
KKN pmax pmax
comp=Z,11nm,0.5s,mb4.7
KKN Kakani 73.88 295 *eP* **P 14 32 56.5 -0.2**
comp=Z,11nm,0.5s,mb4.8
PKI Pulchoki 73.98 294 *eP* **P 14 32 57.2 -0.1**
GKN Gorkha 74.06 295 *eP* **P 14 32 57.3 -0.5**
comp=Z,26nm,0.5s,mb5.1
GKN Gorkha 74.06 295 *eP* **P 14 32 57.4 -0.4**
comp=Z,26nm,0.5s,mb5.1
GKN Gorkha 74.06 295 *eP* **P 14 32 57.4 -0.4**
comp=Z,26nm,0.5s,mb5.1
DMN Daman 74.11 295 *eP* **P 14 32 57.2 -0.9**
comp=Z,9.8nm,0.5s,mb4.7
DMN Daman 74.11 295 *eP* **P 14 32 58.1 0.0**
comp=Z,9.8nm,0.5s,mb4.7
DMN Daman 74.11 295 *eP* **P 14 32 58.1 0.0**
comp=Z,9.8nm,0.5s,mb4.7
AKASG Malin Array Be 74.66 344 P **P 14 33 00.2 -1.1**
comp=Z,1.9nm,0.3s,mb4.2,baz=17,slow=5.9,SNR=8.5
AKASG Malin Array Be 74.66 344 P **P 14 33 00.2 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 74.66 344 P **P 14 33 00.2 -1.1**
KOLN Koldanda 74.81 296 *eP* **P 14 33 01.7 -0.4**
comp=Z,5.7nm,0.4s,mb4.5
KOLN Koldanda 74.81 296 *eP* **P 14 33 01.7 -0.4**
comp=Z,5.7nm,0.4s,mb4.5
KIV Kislovodsk 78.14 333 P **P 14 33 21.0 +0.2**
KIV *PP pP 14 34 22.0 +9.3
WRA Warramunga Arr 84.93 227 P **P 14 33 54.5 -1.8**
comp=Z,0.6nm,0.4s,mb3.7,baz=32,slow=5.7,SNR=24
WRA Warramunga Arr 84.93 227 P **P 14 33 54.5 -1.8**
WRA pmax pmax
comp=Z,1.0nm,0.4s
PSI Prapat 85.53 269 P **P 14 33 59.0 -0.3**
comp=Z,9.9nm,0.6s,mb4.7,baz=61,slow=6.3,SNR=5.6
PSI Prapat 85.53 269 P **P 14 33 59.0 -0.3**
PSI pmax pmax
comp=Z,10.0nm,0.6s,mb4.7

AS31 Alice Springs 88.39 226 *eP* **P 14 34 12.0 -1.0**
ASAR Alice Springs 88.39 226 P **P 14 34 11.9 -1.1**
comp=Z,1.7nm,0.7s,mb4.0,baz=21,slow=4.8,SNR=35
ASAR Alice Springs 88.39 226 P **P 14 34 11.9 -1.1**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
MAW Mawson 149.32 219 PKPbc PKPbc 14 41 06.5 -2.2
comp=Z,1.2nm,0.6s,baz=221,slow=1.5,SNR=4.9
MAW Mawson 149.32 219 PKP2 PKPbc 14 41 06.5 -2.2
MAW pmax pmax
comp=Z,1.0nm,0.6s

*MAN **29** 14:31:39.4, 1878N×120.12E, h2km, mb3.2, ML4.5*
IDC 29 14:31:32.4±3.5, 1929N×12068E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/18, mbtmp3.4/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/21, 1C, Error ellipse: s-maj=303.6km s-min=28.2km az=61.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**2.77**	**143**⇑	*eP*	Pn	14 32 34.1	+16
PALP				*eS*	Sn	14 33 05.8	+14
JOW	**Kunigami**	**10.26**	**42**	LR	LR	14 37 48.8	
	comp=Z,42nm,21.2s,baz=268,slow=37						
ASAJ	**Asahikawa**	**30.80**	**32**	LR	LR	14 49 43.7	
	comp=Z,38nm,18.2s,baz=167,slow=35						
PMG	**Port Moresby**	**38.65**	**135**	LR	LR	14 54 18.6	
	comp=Z,58nm,20.5s,baz=68,slow=35						
WRA	**Warramunga Arr**	**41.22**	**160**	P	P	14 39 18.8	-0.1
	0.3nm,0.5s,baz=341,slow=8.9,SNR=6.2						
MKAR	**Makanchi Array**	**41.65**	**320**	P	P	14 39 22.4	0.0
	0.3nm,0.7s,baz=128,slow=9.3,SNR=3.7						
ASAR	**Alice Springs**	**44.60**	**163**	P	P	14 39 46.7	+0.4
	0.4nm,0.5s,baz=341,slow=7.0,SNR=13						

IDC 29 14:47:47.8±1.8, 516N×12730E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/17, mbtmp3.5/5, Error ellipse: s-maj=109.3km s-min=22.6km az=69.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.17**	**184**	P	P	14 52 57.5	+1.5
	0.9nm,0.7s,baz=17,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**25.89**	**165**	P	P	14 53 20.9	-0.4
	0.6nm,0.5s,baz=341,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**29.37**	**168**	P	P	14 53 52.9	+0.5
	0.1nm,0.3s,baz=341,slow=6.9,SNR=3.7						
STKA	**Stephens Creek**	**39.27**	**161**	P	P	14 55 17.8	-0.4
	0.6nm,0.4s,baz=338,slow=13,SNR=3.2						
MKAR	**Makanchi Array**	**56.72**	**324**	P	P	14 57 33.4	+0.2
	0.5nm,0.4s,baz=109,slow=8.7,SNR=10						

*ISCJB **29** 14:56:24.4±1.1, 3940N×005×2026E×009, h6km±8km, Error ellipse: s-maj=12.0km s-min=8.8km az=34.9*
*THE **29** 14:56:24.7, 3944N×2020E, h0km*
*ATH **29** 14:56:24.8, 3935N×2032E, h10km, MD3.1/3*
*CSEM **29** 14:56:25.6±0.2, 3942N×2029E, h2km, MD3.1, Error ellipse: s-maj=6.2km s-min=4.7km az=78.0*
ISC 29 14:56:24.9±0.9, 3939N±006×2028E±009, h8km±9km, n8, σ0868/10, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.14**	**15**	*eP*g	**Pg**	**14 56 27.4**	**-0.5**
IGT				*eS*g	**Sg**	**14 56 29.8**	**-0.2**
KEK	**Kerkira**	**0.49**	**311**	*eP*B	**Pg**	**14 56 35.2**	**+0.8**
JAN	**Janina**	**0.51**	**59**	*eP*B	**Pg**	**14 56 34.5**	**-0.3**
LKD	**Levkas**	**0.74**	**157**	*eP*g	**Pg**	**14 56 40.0**	**+0.9**
MEV	**Metsovon**	**0.83**	**62**	*eP*g	**Pg**	**14 56 41.2**	**+0.4**
VLS	**Valsamata**	**1.24**	**169**	*eP*B	**Pb**	**14 56 47.5**	**-1.0**
FNA	**Florina**	**1.62**	**31**	*eP*g	**Pn**	**14 56 53.6**	**-0.1**
LIT	**Litokhoron**	**1.84**	**67**	*eP*b	**Pb**	**14 56 57.9**	**-0.9**
LIT				*eS*b	**Sb**	**14 57 22.9**	**+1.0**

IDC 29 14:57:02.9±2.0, 050N×12684E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/14, mbtmp3.3/3, Error ellipse: s-maj=174.8km s-min=25.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.60**	**161**	P	P	15 01 54.7	+0.4
	0.3nm,0.4s,baz=339,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**24.98**	**165**	P	P	15 02 28.4	+0.3
	0.1nm,0.4s,baz=346,slow=11,SNR=13						
MKAR	**Makanchi Array**	**60.28**	**326**	P	P	15 07 13.3	+0.2
	0.5nm,0.4s,baz=113,slow=7.0,SNR=7.0						

*IDC **29** 15:15:05.1±1.2, 0.18S×125.42E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.6/17, mbtmp3.6/6, ML3.0/1, Error ellipse: s-maj=102.4km s-min=18.8km az=69.0*
*NEIC **29** 15:15:09.6±0.8, 0.12S×125.74E, h35km, mb4.0/2, Error ellipse: s-maj=26.6km s-min=11.3km az=67.0*
*ISCJB **29** 15:15:11.8±7.0, 02S×02×1256E±03, h75km±65km, mb3.7/7, Error ellipse: s-maj=59.3km s-min=14.6km az=110.1*
ISC 29 15:15:14.1±6.2, 03S±02×1256E±03, h77km±60km, n13, σ1905/13, mb3.7/7, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSM	**Kuching**	**15.37**	**276**	*eP*	**Pn**	**15 18 47.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**17.74**	**180**	P	**Pn**	**15 19 14.8**	**-1.1**
	0.0nm,0.3s,baz=6.9,slow=16,SNR=2.5						
WRAB	**Tennant Creek**	**21.36**	**157**	P	**P**	**15 19 56.1**	**+1.1**
WRA	**Warramunga Arr**	**21.37**	**157**	P	**P**	**15 19 54.3**	**-0.7**
	1.0nm,0.6s,mb3.3,baz=333,slow=12,SNR=10						
MBWA	**Marble Bar**	**21.55**	**195**	*eP*	**P**	**15 19 56.1**	**-1.0**
ASAR	**Alice Springs**	**24.64**	**161**	P	**P**	**15 20 29.6**	**+2.3**
	0.4nm,0.5s,mb3.1,baz=345,slow=11,SNR=15						
SONM	**Songino Array**	**50.72**	**343**	P	**P**	**15 24 04.8**	**-1.1**
	0.4nm,0.5s,mb3.7,baz=143,slow=4.4,SNR=4.7						
MKAR	**Makanchi Array**	**60.20**	**327**	P	**P**	**15 25 15.3**	**+1.3**
	1.3nm,0.5s,mb4.2,baz=116,slow=7.9,SNR=7.2						
MKAR	**Makanchi Array**	**60.20**	**327**	P	**P**	**15 25 15.3**	**+1.3**
BRVK	**Borovoye**	**70.11**	**328**	*eP*	**P**	**15 26 18.1**	**0.0**
	1.5nm,0.9s,mb3.8						
ZRNK	**Zerenda**	**70.74**	**328**	*eP*	**P**	**15 26 20.6**	**-1.3**
	0.9nm,0.5s,mb3.9						
AKTK	**Aktyubinsk**	**76.07**	**322**	P	**P**	**15 26 53.3**	**+0.1**
AKTO	**Aktyubinsk**	**76.07**	**322**	P	**P**	**15 26 53.3**	**+0.1**
	1.5nm,0.6s,mb3.9,baz=91,slow=9.8,SNR=9.5						

*CSEM **29** 15:28:43.9±0.2, 3663N×831W, h20km, ML3.6/22, Error ellipse: s-maj=3.6km s-min=2.6km az=63.0*
*ISCJB **29** 15:28:43.4±0.4, 3679N±002×810W±003, h10km, Error ellipse: s-maj=3.9km s-min=2.5km az=82.5*
*SFS **29** 15:28:44.0, 3680N×824W, h0km, ML3.3*
*NEIC **29** 15:28:45.4, 3682N×825W, h8km, MN3.2(MDD), After MDD.*
NEIC Felt at Albufeira, Portugal.
*LDG **29** 15:28:46.9±0.2, 3682N×820W, h10km, Ml3.4/3, Error ellipse: s-maj=4.6km s-min=2.2km az=40.0*
*MDD **29** 15:28:47.4±0.8, 3681N±8.18W, h22km±10km, mb4.1/35, Error ellipse: s-maj=14.4km s-min=4.0km az=44.0, PRXIMO*
*INMG **29** 15:28:47.7±1.2, 3683N×8.14W, h14km±3km, ML3.2, Error ellipse: s-maj=3.2km s-min=2.0km az=42.0*
*IGIL **29** 15:28:47.1, 3680N×8.10W, h9km, ML3.7*
*CNRM **29** 15:28:47.5, 3667N×820W, h30km, MD3.6*
ISC 29 15:28:45.1±0.4, 3683N±002×810W±003, h10km, n141, σ1924/242, 12C-1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MORF	**Marmelete**	**0.65**	**318**	*eP*	**Pg**	**15 28 59.2**	**+1.4**
MORF				*eS*	**Sg**	**15 29 08.1**	**+1.8**
MORF				*eS*	**Sg**	**15 29 08.1**	**+1.8**
MORF				AML	AML	15 29 09.0	
	comp=E,2μm,0.4s						
EGRO	**El Granado**	**0.86**	**35**	⇑P	**Pg**	**15 29 04.1**	**+2.4**
	comp=E,124nm,0.3s,SNR=18						
EGRO				S	**Sg**	**15 29 16.4**	**+3.3**
	comp=E,145nm,0.1s,SNR=9.8						

EGRO El Granado 0.86 35 ⇑Pg Pg 15 29 04.1 +2.4
EGRO Lg 15 29 15.9
EGRO El Granado 0.86 35 Pg Pg 15 29 04.1 +2.3
comp=E,124nm,0.3s,SNR=18
EGRO Lg 15 29 15.9
comp=E,145nm,0.1s,SNR=9.8
PTEO Sao Teotonio 0.88 325 *eP* **Pg 15 29 02.7 +0.7**
PTEO *eS* **Sg 15 29 14.1 +0.7**
PTEO
comp=E,278nm,0.2s
PTEO Sao Teotonio 0.88 325 *eP* **Pg 15 29 02.7 +0.7**
PTEO *eS* **Sg 15 29 14.1 +0.7**
comp=E,278nm,0.2s
PBEJ Beja 1.21 9 *eP* **Pn 15 29 08.3 +0.1**
PBEJ *eS* **Sb 15 29 24.1 +0.2**
PBEJ
comp=E,215nm,0.1s
PBEJ Beja 1.21 9 *eP* **Pn 15 29 08.3 +0.1**
PBEJ *eS* **Sb 15 29 24.1 +0.2**
comp=E,215nm,0.1s
EMIN Mina Concepcio 1.48 50 ⇑P Pn 15 29 12.1 +0.4
comp=E,8.5nm,0.3s,SNR=18
EMIN S **Sn 15 29 31.0 -0.1**
comp=E,41nm,0.1s,SNR=8.1
EMIN Mina Concepcio 1.48 50 ⇑Pg Pg 15 29 12.1 -1.4
EMIN Lg 15 29 35.8
EMIN Mina Concepcio 1.48 50 Pg Pg 15 29 12.1 -1.4
comp=E,8.5nm,0.3s,SNR=18
EMIN Lg 15 29 35.8
comp=E,41nm,0.1s,SNR=8.1
CNIL Conil 1.71 105 P **Pn 15 29 20.3 +5.3**
CNIL Conil 1.71 105 *eP* **Pn 15 29 20.3 +5.3**
GIBL Gibalbin 1.71 89 P **Pn 15 29 19.3 +4.3**
GIBL S **Sn 15 29 39.4 +2.5**
GIBL Gibalbin 1.71 89 *eP* **Pn 15 29 19.3 +4.3**
GIBL *eS* **Sn 15 29 39.4 +2.5**
ESPR Espera 1.80 88 P **Pn 15 29 16.8 +0.6**
comp=E,10.0nm,0.2s,SNR=14
ESPR S **Sn 15 29 38.7 -0.4**
comp=E,33nm,0.3s,SNR=6.0
ESPR Espera 1.80 88 Pn **Pn 15 29 16.8 +0.6**
ESPR Pg **Pg 15 29 19.7 0.0**
ESPR Sn **Sn 15 29 38.7 -0.4**
ESPR Espera 1.80 88 Pn **Pn 15 29 16.8 +0.6**
comp=E,10.0nm,0.2s,SNR=14
ESPR Espera 1.80 88 Pg **Pg 15 29 19.7 0.0**
comp=E,12nm,0.3s,SNR=27
ESPR Sn **Sn 15 29 38.7 -0.4**
comp=E,33nm,0.3s,SNR=6.0
PLML Palmela 1.84 340 *ePn* **Pn 15 29 17.3 +0.5**
PESTR Estremoz 2.08 11 *ePn* **Pn 15 29 20.6 +0.5**
PESTR *eSn* **Sn 15 29 45.4 -0.6**
PESTR
comp=E,107nm,0.4s
PESTR Estremoz 2.08 11 *ePn* **Pn 15 29 20.6 +0.5**
PESTR *eSn* **Sn 15 29 45.4 -0.6**
comp=E,107nm,0.4s
EBAD Badajoz 2.11 24 P **Pn 15 29 20.6 +0.1**
comp=E,21nm,0.3s,SNR=60
EBAD S **Sn 15 29 46.7 -0.1**
comp=E,59nm,0.4s,SNR=5.4
EBAD Badajoz 2.11 24 Pn **Pn 15 29 20.6 +0.1**
EBAD Pg **Pg 15 29 21.9 -3.8**
EBAD Sn **Sn 15 29 46.7 -0.1**
EBAD Lg 15 29 54.8
EBAD Badajoz 2.11 24 Pn **Pn 15 29 20.6 +0.1**
comp=E,21nm,0.3s,SNR=60
EBAD Badajoz 2.11 24 Pg **Pg 15 29 21.9 -3.7**
SNR=7.9
EBAD Sn **Sn 15 29 46.7 -0.1**
comp=E,59nm,0.4s,SNR=5.4
EBAD Lg 15 29 54.8
comp=E,119nm,0.2s,SNR=6.2
EJIF Jimena Fronter 2.15 99 P **Pn 15 29 22.2 +1.2**
comp=E,3.7nm,0.2s,SNR=6.1
EJIF S **Sn 15 29 48.2 +0.4**
comp=E,12nm,0.2s,SNR=7.9
EJIF Jimena Fronter 2.15 99 Pn **Pn 15 29 22.2 +1.2**
EJIF Sn **Sn 15 29 49.4 +1.7**
EJIF Jimena Fronter 2.15 99 Pn **Pn 15 29 22.2 +1.2**
comp=E,3.7nm,0.2s,SNR=6.1
EJIF Sn **Sn 15 29 49.4 +1.7**
comp=E,12nm,0.2s,SNR=7.9
LIJA Lijar 2.16 87 P **Pn 15 29 22.4 +1.1**
LIJA S **Sn 15 29 46.9 -1.2**
LIJA Lijar 2.16 87 *eP* **Pn 15 29 22.4 +1.2**
LIJA *eS* **Sn 15 29 46.9 -1.2**
PLOU Loures 2.22 338 *ePn* **Pn 15 29 22.0 0.0**
PLOU *eSn* **Sn 15 29 48.0 -1.4**
PLOU
comp=E,84nm,0.3s
PLOU Loures 2.22 338 *ePn* **Pn 15 29 22.0 0.0**
PLOU *eSn* **Sn 15 29 48.0 -1.4**
comp=E,84nm,0.3s
PMAFR Mafra 2.32 337 *ePn* **Pn 15 29 23.4 0.0**
PMAFR *eSn* **Sn 15 29 50.4 -1.6**
REAL Reales 2.35 97 P **Pn 15 29 25.2 +1.4**
REAL Reales 2.35 97 *eP* **Pn 15 29 25.2 +1.4**
EMIJ Mijas 2.69 95 P **Pn 15 29 29.5 +1.1**
comp=E,0.3nm,0.1s,SNR=7.9
EMIJ S **Sn 15 30 01.2 +0.2**
comp=E,16nm,0.3s,SNR=6.5
PTOM Tomar 2.80 355 *ePn* **Pn 15 29 30.1 +0.1**
PTOM *eSn* **Sn 15 30 00.7 -3.1**
PTOM
comp=E,126nm,0.3s
PTOM Tomar 2.80 355 *ePn* **Pn 15 29 30.1 +0.1**
PTOM *eSn* **Sn 15 30 00.7 -3.1**
comp=E,126nm,0.3s
PCBR Castelo Branco 3.05 9 *ePn* **Pn 15 29 33.5 +0.1**
PCBR *eSn* **Sn 15 30 08.1 -1.9**
PCBR
comp=E,67nm,0.8s
PCBR Castelo Branco 3.05 9 *ePn* **Pn 15 29 33.5 +0.1**
PCBR *eSn* **Sn 15 30 08.1 -1.9**
comp=E,67nm,0.8s
EADA Adamuz 3.11 63 ⇑P Pn 15 29 34.9 +0.7
comp=E,14nm,0.3s,SNR=18
EADA S **Sn 15 30 11.0 -0.3**
comp=E,16nm,0.3s,SNR=7.5
EADA Adamuz 3.11 63 ⇑Pn Pn 15 29 34.9 +0.8
EADA Sn **Sn 15 30 11.0 -0.3**
EADA Lg 15 30 27.1
EADA Adamuz 3.11 63 Pn Pn 15 29 34.9 +0.7
comp=E,14nm,0.3s,SNR=18
EADA Sn **Sn 15 30 11.0 -0.3**
comp=E,16nm,0.3s,SNR=7.5
EADA Lg 15 30 27.1
comp=E,12nm,0.1s,SNR=4.6
ELUQ Luque 3.15 75 P **Pn 15 29 36.1 +1.3**
comp=E,3.0nm,0.2s,SNR=7.9
ELUQ S **Sn 15 30 12.0 -0.4**
comp=E,20nm,0.2s,SNR=7.9
ELUQ Luque 3.15 75 Sn **Sn 15 30 12.0 -0.4**
SNR=7.9
ELOJ Sierra Loja 3.18 83 P **Pn 15 29 35.2 +0.1**
comp=E,4.0nm,0.4s,SNR=5.4
ELOJ S **Sn 15 30 12.0 -1.1**
comp=E,13nm,0.3s,SNR=8.2
ELOJ Sierra Loja 3.18 83 Pn **Pn 15 29 34.8 -0.3**
ELOJ Sn **Sn 15 30 14.4 +1.3**
ELOJ Sierra Loja 3.18 83 Pn **Pn 15 29 34.8 -0.4**
comp=E,4.0nm,0.4s,SNR=5.4
ELOJ Sn **Sn 15 30 14.4 +1.3**
comp=E,13nm,0.3s,SNR=8.2
ERON Agron 3.45 86 S **Sn 15 30 18.4 -1.3**
comp=E,15nm,0.3s,SNR=8.3
ERON Agron 3.45 86 Sn **Sn 15 30 21.6 +1.9**
comp=E,15nm,0.3s,SNR=8.3
EGUA Guajares 3.64 89 P **Pn 15 29 42.6 +1.1**
comp=E,0.1nm,0.3s,SNR=7.9
EGUA S **Sn 15 30 22.8 -1.7**
comp=E,2.7nm,0.4s,SNR=7.9
EGUA Guajares 3.64 89 Pn **Pn 15 29 42.6 +1.1**
EGUA Sn **Sn 15 30 25.3 +0.9**
EGUA Guajares 3.64 89 Pn **Pn 15 29 42.6 +1.1**
comp=E,0.1nm,0.3s,SNR=7.9
EGUA Sn **Sn 15 30 25.3 +0.8**
comp=E,2.7nm,0.4s,SNR=7.9
ECOG Cogollos-Vega 3.66 82 P **Pn 15 29 43.1 +1.4**
comp=E,8.7nm,0.3s
ECOG S **Sn 15 30 23.4 -1.5**
comp=E,9.7nm,0.3s,SNR=6.2
ECOG Cogollos-Vega 3.66 82 Pn **Pn 15 29 43.1 +1.4**
ECOG Sn **Sn 15 30 25.7 +0.8**

ECOG	**Cogollos-Vega**		**3.66**	**82**	Pn		**Pn**	**15 29 43.1**	**+1.4**
	comp=E,8.7nm,0.3s								
ECOG					Sn		**Sn**	**15 30 25.7**	**+0.8**
	comp=E,9.7nm,0.3s,SNR=6.2								
EBAN	**Banos Encina**		**3.68**	**67**	⇑P		**Pn**	**15 29 42.4**	**+0.3**
	comp=E,11nm,0.2s,SNR=18								
EBAN					S		**Sn**	**15 30 23.9**	**-1.6**
	comp=E,7.0nm,0.2s,SNR=6.0								
EQUE	**Quentar**		**3.75**	**83**	P		**Pn**	**15 29 44.6**	**+1.5**
	comp=E,3.3nm,0.4s,SNR=6.0								
EQUE					S		**Sn**	**15 30 26.3**	**-0.9**
	comp=E,14nm,0.3s,SNR=4.6								
EQUE	**Quentar**		**3.75**	**83**	Pn		**Pn**	**15 29 44.6**	**+1.6**
	comp=E,3.3nm,0.4s,SNR=6.0								
EQUE					Sn		**Sn**	**15 30 27.5**	**+0.3**
	comp=E,14nm,0.3s,SNR=4.6								
PVIS	**Viseu**		**3.89**	**2**	*e*Sn		**Sn**	**15 30 27.9**	**-2.7**
PVIS									
	comp=E,39nm,0.4s								
PVIS	**Viseu**		**3.89**	**2**	*e*Sn		**Sn**	**15 30 27.9**	**-2.7**
	comp=E,39nm,0.4s								
EQES	**Quesada**		**4.13**	**75**	P		**Pn**	**15 29 48.5**	**+0.3**
	comp=E,4.6nm,0.6s,SNR=9.6								
EQES					S		**Sn**	**15 30 35.3**	**-1.2**
	comp=E,14nm,0.3s,SNR=6.7								
EQES	**Quesada**		**4.13**	**75**	Pn		**Pn**	**15 29 48.5**	**+0.3**
EQES					Sn		**Sn**	**15 30 36.2**	**-0.3**
EQES	**Quesada**		**4.13**	**75**	Pn		**Pn**	**15 29 48.5**	**+0.3**
	comp=E,4.6nm,0.6s,SNR=9.6								
EQES					Sn		**Sn**	**15 30 36.2**	**-0.3**
	comp=E,14nm,0.3s,SNR=6.7								
MIF	**Mishlifen**		**4.14**	**145**	*i* P		**Pn**	**15 29 47.0**	**-1.4**
MIF					*i* S		**Sn**	**15 30 31.0**	**-5.9**
EBER	**Berja**		**4.18**	**87**	P		**Pn**	**15 29 51.1**	**+2.2**
	comp=E,3.0nm,0.3s,SNR=4.7								
EBER					S		**Sn**	**15 30 36.2**	**-1.7**
	comp=E,11nm,0.4s,SNR=4.8								
EBER	**Berja**		**4.18**	**87**	Sn		**Sn**	**15 29 51.3**	**+2.3**
EBER					Sn		**Sn**	**15 30 38.5**	**+0.6**
EBER	**Berja**		**4.18**	**87**	Pn		**Pn**	**15 29 51.3**	**+2.4**
	comp=E,3.0nm,0.3s,SNR=4.7								
EBER					Sn		**Sn**	**15 30 38.5**	**+0.7**
	comp=E,11nm,0.4s,SNR=4.8								
EALB	**Alboran**		**4.18**	**101**	P		**Pn**	**15 29 49.6**	**+0.6**
	comp=E,1.0nm,0.1s,SNR=7.9								
EALB					S		**Sn**	**15 30 35.2**	**-2.7**
	comp=E,5.4nm,0.3s,SNR=7.9								
EALB	**Alboran**		**4.18**	**101**	Pn		**Pn**	**15 29 49.6**	**+0.6**
EALB					Sn		**Sn**	**15 30 34.1**	**-3.7**
EALB	**Alboran**		**4.18**	**101**	Pn		**Pn**	**15 29 49.6**	**+0.6**
	comp=E,1.0nm,0.1s,SNR=7.9								
EALB					Sn		**Sn**	**15 30 34.2**	**-3.7**
	SNR=7.9								
TZK	**Tazeka**		**4.20**	**129**	*e*P		**Pn**	**15 29 48.0**	**-1.3**
TZK					*e*S		**Sn**	**15 30 33.0**	**-5.4**
ESDC	**Sonseca Array**		**4.32**	**48**	⇑P		**Pn**	**15 29 51.5**	**+0.6**
	comp=E,4.4nm,0.2s,baz=232,slow=13,SNR=18								
ESDC					S		**Sn**	**15 30 40.1**	**-1.3**
	comp=E,8.4nm,0.2s,baz=231,slow=24,SNR=15								
ESDC	**Sonseca Array**		**4.32**	**48**	⇑Pn		**Pn**	**15 29 51.5**	**+0.6**
ESDC					Sn		**Sn**	**15 30 40.1**	**-1.3**
ESDC					Lg			15 31 04.7	
ESDC	**Sonseca Array**		**4.32**	**48**	Pn		**Pn**	**15 29 51.5**	**+0.6**
	comp=E,4.4nm,0.2s,SNR=18								
ESDC					Sn		**Sn**	**15 30 40.1**	**-1.3**
	comp=E,8.4nm,0.2s,SNR=15								
ESDC					Lg			15 31 04.7	
	comp=E,9.2nm,0.3s,SNR=7.9								
ESLA	**Sonseca Array**		**4.32**	**48**	*e*Pn		**Pn**	**15 29 51.2**	**+0.3**
ESLA	**Sonseca Array**		**4.32**	**48**	*e*Pn		**Pn**	**15 29 51.2**	**+0.3**
PTO	**Porto**		**4.33**	**355**	*e*Sn		**Sn**	**15 30 37.6**	**-3.8**
PVRL	**Vila Real**		**4.46**	**4**	*e*Pn		**Pn**	**15 29 52.5**	**-0.2**
PVRL					*e*Sn		**Sn**	**15 30 41.9**	**-2.7**
PVRL									
	comp=E,31nm,0.4s								
EHUE	**Huescar**		**4.50**	**76**	P		**Pn**	**15 29 54.5**	**+1.2**
	comp=E,7.3nm,0.2s,SNR=7.9								
EHUE					S		**Sn**	**15 30 43.7**	**-2.0**
	comp=E,10nm,0.2s,SNR=8.0								
CZD	**Col de Zad**		**4.54**	**146**	*i* P		**Pn**	**15 29 52.5**	**-1.4**
CZD					*i* S		**Sn**	**15 30 41.0**	**-5.7**
KIB	**El Ksiba**		**4.57**	**158**	*i* P		**Pn**	**15 29 52.0**	**-2.3**
KIB					*i* S		**Sn**	**15 30 41.0**	**-6.4**
EVIA	**Vianos**		**4.79**	**66**	P		**Pn**	**15 29 57.2**	**-0.2**
	comp=E,4.5nm,0.4s,SNR=21								
EVIA					S		**Sn**	**15 30 50.4**	**-2.5**
	comp=E,23nm,0.6s								
EVIA	**Vianos**		**4.79**	**66**	Pn		**Pn**	**15 29 57.2**	**-0.2**
EVIA					Sn		**Sn**	**15 30 48.5**	**-4.4**
EVIA					Lg			15 31 24.3	
	comp=E,23nm,0.6s								
EVIA	**Vianos**		**4.79**	**66**	Pn		**Pn**	**15 29 57.2**	**-0.2**
	comp=E,4.5nm,0.4s,SNR=21								
EVIA					Sn		**Sn**	**15 30 48.5**	**-4.4**
	comp=E,23nm,0.6s								
EVIA					Lg			15 31 24.3	
	comp=E,25nm,0.6s,SNR=7.9								
TZC	**Tazercounte**		**4.85**	**164**	*i* P		**Pn**	**15 29 56.0**	**-2.2**
TZC					*e*S		**Sn**	**15 30 46.5**	**-7.9**
PCAB	**Cabril**		**4.88**	**1**	*e*Pn		**Pn**	**15 29 59.0**	**+0.4**
PCAB					*e*Sn		**Sn**	**15 30 51.0**	**-4.1**
PCAB									
	comp=E,21nm,0.5s								
GUD	**Guadarrama**		**4.90**	**38**	⇑P		**Pn**	**15 29 59.4**	**+0.5**
	comp=E,5.9nm,0.2s,SNR=18								
GUD					S		**Sn**	**15 30 52.5**	**-3.2**
	comp=E,21nm,0.5s,SNR=7.9								
GUD	**Guadarrama**		**4.90**	**38**	⇑Pn		**Pn**	**15 29 59.4**	**+0.5**
GUD					Lg			15 31 28.0	
GUD	**Guadarrama**		**4.90**	**38**	Pn		**Pn**	**15 29 59.4**	**+0.5**
	comp=E,5.9nm,0.2s,SNR=18								
GUD					Lg			15 31 28.0	
	comp=E,21nm,0.5s,SNR=7.9								
ELOB	**Lobios**		**5.04**	**0**	P		**Pn**	**15 30 00.8**	**+0.1**
	comp=E,3.4nm,0.6s,SNR=10								
ELOB					S		**Sn**	**15 30 54.9**	**-4.1**
	comp=E,23nm,0.3s,SNR=18								
ELOB	**Lobios**		**5.04**	**0**	Pn		**Pn**	**15 30 00.8**	**+0.1**
	comp=E,3.4nm,0.6s,SNR=10								
ELOB					Sn		**Sn**	**15 30 54.9**	**-4.0**
	comp=E,23nm,0.3s,SNR=18								
PBRG	**Braganca**		**5.08**	**12**	*e*Pn		**Pn**	**15 30 01.2**	**-0.2**
PBRG					*e*Sn		**Sn**	**15 30 56.1**	**-4.0**
PBRG									
	comp=E,24nm,0.3s								
ECAL	**Calabor**		**5.22**	**11**	P		**Pn**	**15 30 03.3**	**+0.1**
	comp=E,4.2nm,0.3s,SNR=5.5								
ECAL					S		**Sn**	**15 31 00.5**	**-2.9**
	comp=E,36nm,0.5s,SNR=11								
ECAL	**Calabor**		**5.22**	**11**	Pn		**Pn**	**15 30 03.4**	**+0.1**
ECAL					Sn		**Sn**	**15 31 01.1**	**-2.3**
ECAL					Lg			15 31 34.8	
ECAL	**Calabor**		**5.22**	**11**	Pn		**Pn**	**15 30 03.3**	**+0.1**
	comp=E,4.2nm,0.3s,SNR=5.5								
ECAL					Sn		**Sn**	**15 31 01.1**	**-2.3**
	comp=E,36nm,0.5s,SNR=11								
ECAL					Lg			15 31 34.8	
	comp=E,31nm,0.5s,SNR=5.9								
CIA	**Chichaoua**		**5.28**	**186**	*i* P		**Pn**	**15 30 03.0**	**-1.0**
CIA					*i* S		**Sn**	**15 30 55.5**	**-9.3**
EZAM	**Zamans**		**5.34**	**355**	S		**Sn**	**15 31 02.2**	**-4.2**
	SNR=7.9								
EZAM	**Zamans**		**5.34**	**355**	Sn		**Sn**	**15 31 03.8**	**-2.6**
	SNR=7.9								
ETOB	**Tobarra**		**5.50**	**69**	P		**Pn**	**15 30 06.8**	**-0.3**
	comp=E,3.6nm,0.3s,SNR=15								
ETOB					S		**Sn**	**15 31 06.5**	**-3.9**
	comp=E,5.2nm,0.3s,SNR=8.1								
ETOB	**Tobarra**		**5.50**	**69**	Pn		**Pn**	**15 30 06.8**	**-0.3**
ETOB					Sn		**Sn**	**15 31 08.3**	**-2.1**
ETOB	**Tobarra**		**5.50**	**69**	Pn		**Pn**	**15 30 06.8**	**-0.3**
	comp=E,3.6nm,0.3s,SNR=15								
ETOB					Sn		**Sn**	**15 31 08.3**	**-2.1**
	comp=E,5.2nm,0.3s,SNR=8.1								
EMUR	**La Murta**		**5.56**	**77**	P		**Pn**	**15 30 08.6**	**+0.7**
	comp=E,0.8nm,0.2s,SNR=7.9								
EMUR					S		**Sn**	**15 31 09.4**	**-2.4**
	SNR=7.9								
EMUR	**La Murta**		**5.56**	**77**	Sn		**Sn**	**15 31 09.4**	**-2.5**
	SNR=7.9								
OUK	**Oukaimeden**		**5.61**	**178**	P		**Pn**	**15 30 06.0**	**-2.5**
OUK					S		**Sn**	**15 31 04.0**	**-9.0**
OUK	**Oukaimeden**		**5.61**	**178**	*i* P		**Pn**	**15 30 06.0**	**-2.5**
ZFT	**Errachidia**		**5.69**	**146**	P		**Pn**	**15 30 08.0**	**-1.8**
ZFT					S		**Sn**	**15 31 09.0**	**-6.2**
ZFT	**Errachidia**		**5.69**	**146**	*i* P		**Pn**	**15 30 08.0**	**-1.8**
EMAZ	**Mazaricos**		**6.15**	**354**	P		**Pn**	**15 30 15.7**	**-0.4**
	comp=E,2.1nm,0.4s,SNR=5.9								
EMAZ					S		**Sn**	**15 31 20.3**	**-6.2**
	comp=E,4.8nm,0.3s,SNR=4.6								
EMAZ	**Mazaricos**		**6.15**	**354**	Pn		**Pn**	**15 30 15.7**	**-0.4**
	comp=E,2.1nm,0.4s,SNR=5.9								
ECHE	**Chera**		**6.26**	**62**	P		**Pn**	**15 30 18.0**	**+0.5**
	comp=E,2.3nm,0.3s,SNR=7.9								
EBEN	**Beniarda**		**6.51**	**71**	P		**Pn**	**15 30 22.0**	**+1.0**
	comp=E,0.8nm,0.2s,SNR=4.0								
EBEN					S		**Sn**	**15 31 30.4**	**-4.9**
	comp=E,1.1nm,0.1s,SNR=7.9								
EBEN	**Beniarda**		**6.51**	**71**	Pn		**Pn**	**15 30 22.0**	**+1.0**
EBEN					Sn		**Sn**	**15 31 32.0**	**-3.3**
EBEN	**Beniarda**		**6.51**	**71**	Pn		**Pn**	**15 30 22.0**	**+1.0**
	comp=E,0.8nm,0.2s,SNR=4.0								
EBEN					Sn		**Sn**	**15 31 32.0**	**-3.4**
	SNR=7.9								
EARI	**Arriondas**		**6.84**	**18**	P		**Pn**	**15 30 26.2**	**+0.7**
	comp=E,0.2nm,0.1s,SNR=7.9								
EARI					S		**Sn**	**15 31 39.4**	**-3.9**
	comp=E,0.7nm,0.2s,SNR=7.9								
EARI	**Arriondas**		**6.84**	**18**	Pn		**Pn**	**15 30 26.2**	**+0.7**
EARI					Sn		**Sn**	**15 31 40.0**	**-3.3**
EARI	**Arriondas**		**6.84**	**18**	Pn		**Pn**	**15 30 26.2**	**+0.7**
	SNR=7.9								
EARI					Sn		**Sn**	**15 31 40.0**	**-3.3**
	SNR=7.9								
EMOS	**Mosqueruela**		**6.94**	**57**	P		**Pn**	**15 30 28.1**	**+1.2**
	comp=E,1.7nm,0.2s,SNR=7.9								
EMOS	**Mosqueruela**		**6.94**	**57**	Pn		**Pn**	**15 30 28.1**	**+1.2**
	comp=E,1.7nm,0.2s,SNR=7.9								
ELAN	**Lanestosa**		**7.33**	**28**	P		**Pn**	**15 30 33.9**	**+1.6**
	comp=E,0.2nm,0.1s,SNR=6.6								
ELAN					S		**Sn**	**15 31 51.2**	**-4.3**
	comp=E,5.0nm,0.4s,SNR=7.9								
ELAN	**Lanestosa**		**7.33**	**28**	Pn		**Pn**	**15 30 33.9**	**+1.7**
	comp=E,2.0nm,0.1s,SNR=6.6								
ESAC	**San Caprasio**		**7.68**	**48**	P		**Pn**	**15 30 38.0**	**+1.0**
	comp=E,3.5nm,0.3s,SNR=7.9								
ESAC	**San Caprasio**		**7.68**	**48**	Pn		**Pn**	**15 30 38.0**	**+1.0**
	comp=E,3.5nm,0.3s,SNR=7.9								
ERTA	**Horta de San J**		**7.76**	**55**	Pn		**Pn**	**15 30 39.1**	**+1.0**
ERTA	**Horta de San J**		**7.76**	**55**	Pn		**Pn**	**15 30 39.1**	**+0.9**
ELIZ	**Elizondo**		**8.09**	**37**	P		**Pn**	**15 30 44.0**	**+1.3**
	comp=E,4.2nm,0.2s,SNR=8.5								
EALK	**Alkurruntz**		**8.14**	**36**	P		**Pn**	**15 30 44.2**	**+0.8**
	comp=E,2.0nm,0.1s,SNR=7.9								
SJPF	**Ste Jean**		**8.20**	**38**	*e*Pn		**Pn**	**15 30 44.4**	**+0.2**
SJPF					*e*Sn		**Sn**	**15 32 12.3**	**-4.6**
	comp=E,2.3nm,0.3s								
SJPF	**Ste Jean**		**8.20**	**38**	*e*Pn		**Pn**	**15 30 44.4**	**+0.2**
SJPF					*e*Sn		**Sn**	**15 32 12.3**	**-4.6**
	comp=E,1.1nm,0.3s								
ETSF	**Etsaut**		**8.39**	**41**	*e*Pn		**Pn**	**15 30 46.9**	**+0.1**
ETSF					*e*Sn		**Sn**	**15 32 16.7**	**-4.8**
	comp=E,1.7nm,0.3s								
ETSF	**Etsaut**		**8.39**	**41**	*e*Pn		**Pn**	**15 30 46.9**	**+0.1**
ETSF					*e*Sn		**Sn**	**15 32 16.7**	**-4.8**
	comp=E,0.9nm,0.3s								
EPOB	**Poblet**		**8.45**	**55**	P		**Pn**	**15 30 48.4**	**+0.9**
	comp=E,1.4nm,0.1s,SNR=7.9								
EBIE	**Bielsa**		**8.63**	**45**	P		**Pn**	**15 30 51.5**	**+1.5**
	comp=E,2.2nm,0.1s,SNR=18								
EBIE					S		**Sn**	**15 32 22.6**	**-4.9**
	comp=E,1.2nm,0.3s,SNR=7.9								
EBIE	**Bielsa**		**8.63**	**45**	Pn		**Pn**	**15 30 51.5**	**+1.4**
EPF	**Esparros**		**8.97**	**44**	*e*Pn		**Pn**	**15 30 55.2**	**+0.5**
EPF					*e*Sn		**Sn**	**15 32 30.6**	**-5.1**
	comp=E,3.4nm,0.3s								
EPF	**Esparros**		**8.97**	**44**	*e*Pn		**Pn**	**15 30 55.2**	**+0.5**
EPF					*e*Sn		**Sn**	**15 32 30.6**	**-5.1**
	comp=E,1.7nm,0.3s								
RJF	**Les Rejaudoux**		**11.15**	**38**	*e*Pn		**Pn**	**15 31 23.9**	**-0.7**
CAF	**Calviac**		**11.16**	**40**	*e*Pn		**Pn**	**15 31 24.5**	**-0.2**
PLOR	**Plostina**		**27.43**	**60**	⇓*i* P		**P**	**15 34 36.3**	**+5.3**
VRI	**Vrincioaia**		**27.48**	**60**	⇑*i* P		**P**	**15 34 37.3**	**+5.8**

*IDC **29** 15:50:05.9±24.0, 4009S×177.35E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.7/10, mbtmp3.6/3, Error ellipse: s-maj=639.8km s-min=31.4km az=55.0*
*ISCJB **29** 15:50:33.4±0.4, 3937S×003×175.14E×004, h128km±3km, mb3.6/3, Error ellipse: s-maj=6.0km s-min=4.6km az=63.8*
*WEL **29** 15:50:34.9±0.1, 39.34S×175.16E, h123km±1km, ML4.0/22, Error ellipse: s-maj=1.1km s-min=0.9km az=90.0*
*NEIC **29** 15:50:34.8, 39.34S×175.14E, h125km, mb4.1/1, After WEL.*

ISC 29 15:50:34.2±0.4, 3937S×003×17515E×004, h125km±3km, n100, σ0.6 73/124, mb3.8/3, 13C-6D, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PKVZ	**Pokaka**	**0.17**	**62**	⇑PN		**Pn**	**15 50 51.6**	**+0.3**
PKVZ				SN		**Sn**	**15 51 04.3**	**0.0**
MTVZ	**Mangateitei**	**0.25**	**93**	PN		**Pn**	**15 50 52.0**	**+0.4**
MTVZ				SN		**Sn**	**15 51 04.6**	**0.0**
TRVZ	**Turoa**	**0.32**	**77**	PN		**Pn**	**15 50 52.4**	**+0.6**
TRVZ				SN		**Sn**	**15 51 04.7**	**-0.4**
TRVZ				SN		**Sn**	**15 51 05.0**	**-0.1**
FWVZ	**Far West T-bar**	**0.33**	**70**	P		**Pn**	**15 50 52.4**	**+0.6**
FWVZ	**Far West T-bar**	**0.33**	**70**	⇑PN		**Pn**	**15 50 52.4**	**+0.5**
FWVZ				SN		**Sn**	**15 51 04.9**	**-0.3**
DRZ	**Dome Shelter**	**0.34**	**73**	P		**Pn**	**15 50 52.7**	**+0.8**
DRZ	**Dome Shelter**	**0.34**	**73**	PN		**Pn**	**15 50 52.4**	**+0.5**
DRZ				SN		**Sn**	**15 51 05.1**	**-0.1**
WNVZ	**Wahianoa**	**0.35**	**83**	P		**Pn**	**15 50 52.5**	**+0.6**
WNVZ	**Wahianoa**	**0.35**	**83**	PN		**Pn**	**15 50 52.5**	**+0.6**
WNVZ				SN		**Sn**	**15 51 05.4**	**+0.1**
WPVZ	**Whakapapa**	**0.35**	**62**	PN		**Pn**	**15 50 52.3**	**+0.4**
WPVZ				SN		**Sn**	**15 51 05.0**	**-0.4**
TWVZ	**Taurewa**	**0.37**	**37**	P		**Pn**	**15 50 52.1**	**+0.1**
TWVZ	**Taurewa**	**0.37**	**37**	PN		**Pn**	**15 50 52.1**	**+0.1**
TWVZ				SN		**Sn**	**15 51 05.0**	**-0.5**
VRZ	**Vera Road**	**0.39**	**309**	P		**Pn**	**15 50 52.1**	**0.0**
VRZ	**Vera Road**	**0.39**	**309**	⇑PN		**Pn**	**15 50 52.1**	**0.0**
VRZ				SN		**Sn**	**15 51 05.0**	**-0.7**
NGZ	**Ngauruhoe**	**0.40**	**61**	P		**Pn**	**15 50 52.5**	**+0.3**
NGZ	**Ngauruhoe**	**0.40**	**61**	⇓PN		**Pn**	**15 50 52.5**	**+0.4**
NGZ				SN		**Sn**	**15 51 05.1**	**-0.6**
WAZ	**Wanganui**	**0.40**	**198**	P		**Pn**	**15 50 53.2**	**+1.0**
WAZ	**Wanganui**	**0.40**	**198**	⇑PN		**Pn**	**15 50 53.2**	**+1.0**
WAZ				SN		**Sn**	**15 51 06.9**	**-1.2**
TUVZ	**Tukino**	**0.40**	**75**	P		**Pn**	**15 50 52.8**	**+0.6**
TUVZ	**Tukino**	**0.40**	**75**	PN		**Pn**	**15 50 52.8**	**+0.7**
TUVZ				SN		**Sn**	**15 51 06.1**	**+0.3**
WTVZ	**West Tongariro**	**0.43**	**53**	P		**Pn**	**15 50 52.6**	**+0.3**
WTVZ	**West Tongariro**	**0.43**	**53**	⇓PN		**Pn**	**15 50 52.6**	**+0.3**
WTVZ				SN		**Sn**	**15 51 05.5**	**-0.5**
OTVZ	**Oturere**	**0.45**	**63**	PN		**Pn**	**15 50 53.0**	**+0.6**
OTVZ				SN		**Sn**	**15 51 06.6**	**+0.5**
MOVZ	**Moawhango**	**0.47**	**94**	P		**Pn**	**15 50 52.8**	**+0.3**
MOVZ	**Moawhango**	**0.47**	**94**	PN		**Pn**	**15 50 52.8**	**+0.3**
MOVZ				SN		**Sn**	**15 51 05.5**	**-0.8**
KATZ	**Kakaramea**	**0.58**	**47**	P		**Pn**	**15 50 53.5**	**+0.3**
KATZ				S		**Sn**	**15 51 06.9**	**-0.7**
KATZ	**Kakaramea**	**0.58**	**47**	PN		**Pn**	**15 50 53.5**	**+0.3**
KATZ				SN		**Sn**	**15 51 06.9**	**-0.7**
RAEZ	**Rainy Point**	**0.59**	**278**	P		**Pn**	**15 50 53.8**	**+0.5**
RAEZ	**Rainy Point**	**0.59**	**278**	PN		**Pn**	**15 50 53.8**	**+0.5**
RITZ	**Rihia Road**	**0.68**	**55**	P		**Pn**	**15 50 54.1**	**+0.2**
RITZ	**Rihia Road**	**0.68**	**55**	PN		**Pn**	**15 50 54.1**	**+0.3**
RATZ	**Rangitukua**	**0.70**	**44**	P		**Pn**	**15 50 54.0**	**0.0**
RATZ	**Rangitukua**	**0.70**	**44**	⇓PN		**Pn**	**15 50 54.0**	**+0.3**
WATZ	**Wairara**	**0.80**	**35**	⇓PN		**Pn**	**15 50 55.0**	**+0.1**
WATZ				SN		**Sn**	**15 51 10.0**	**-0.6**
NEZ	**North Egmont**	**0.82**	**277**	P		**Pn**	**15 50 55.7**	**+0.7**
NEZ	**North Egmont**	**0.82**	**277**	⇓PN		**Pn**	**15 50 55.7**	**+0.6**
NEZ				SN		**Sn**	**15 51 10.7**	**-0.1**
HATZ	**Hinemaiaia**	**0.88**	**57**	P		**Pn**	**15 50 55.2**	**-0.3**
HATZ	**Hinemaiaia**	**0.88**	**57**	PN		**Pn**	**15 50 55.2**	**-0.3**
HATZ				SN		**Sn**	**15 51 10.5**	**-1.1**
PKE	**Pukeiti**	**0.92**	**281**	P		**Pn**	**15 50 56.2**	**+0.3**
PKE	**Pukeiti**	**0.92**	**281**	PN		**Pn**	**15 50 56.0**	**+0.2**
PKE				SN		**Sn**	**15 51 12.1**	**-0.3**
TSZ	**Takapari Road**	**0.93**	**138**	P		**Pn**	**15 50 57.3**	**+1.3**
TSZ	**Takapari Road**	**0.93**	**138**	PN		**Pn**	**15 50 57.3**	**+1.3**
TSZ				SN		**Sn**	**15 51 12.9**	**+0.4**
NRZ	**Ngariki Road**	**0.94**	**272**	PN		**Pn**	**15 50 56.4**	**+0.3**
WHTZ	**Whakaora**	**0.94**	**42**	P		**Pn**	**15 50 56.5**	**+0.4**
WHTZ	**Whakaora**	**0.94**	**42**	PN		**Pn**	**15 50 56.5**	**+0.4**
NWEZ	**Newall Road**	**1.00**	**275**	P		**Pn**	**15 50 57.0**	**+0.4**
NWEZ	**Newall Road**	**1.00**	**275**	PN		**Pn**	**15 50 57.0**	**+0.4**
BKZ	**Black Stump Fm**	**1.06**	**79**	P		**Pn**	**15 50 57.3**	**+0.1**
BKZ	**Black Stump Fm**	**1.06**	**79**	⇓PN		**Pn**	**15 50 57.3**	**+0.1**
MRZ	**Mangatainoka R**	**1.33**	**166**	P		**Pn**	**15 51 00.9**	**+0.9**
MRZ	**Mangatainoka R**	**1.33**	**166**	⇑PN		**Pn**	**15 51 00.9**	**+0.9**
MRZ				SN		**Sn**	**15 51 18.9**	**-0.7**
KIW	**Kapiti Island**	**1.50**	**187**	P		**Pn**	**15 51 02.5**	**+0.6**
KIW	**Kapiti Island**	**1.50**	**187**	PN		**Pn**	**15 51 02.5**	**+0.6**
TIWZ	**Tintock**	**1.51**	**158**	SN		**Sn**	**15 51 22.8**	**-0.5**
BFZ	**Birch Farm**	**1.55**	**148**	*e*P		**Pn**	**15 51 03.8**	**+1.3**
BFZ	**Birch Farm**	**1.55**	**148**	PN		**Pn**	**15 51 03.8**	**+1.2**
DUWZ	**D'Urville Isla**	**1.71**	**213**	PN		**Pn**	**15 51 04.8**	**+0.4**
CAW	**Cannon Point**	**1.73**	**182**	P		**Pn**	**15 51 05.3**	**+0.6**
CAW	**Cannon Point**	**1.73**	**182**	⇑PN		**Pn**	**15 51 05.3**	**+0.7**
MTW	**Mount Morrison**	**1.80**	**172**	P		**Pn**	**15 51 05.9**	**+0.4**
MTW	**Mount Morrison**	**1.80**	**172**	⇑PN		**Pn**	**15 51 05.9**	**+0.4**
MRW	**Makara Radio**	**1.89**	**190**	P		**Pn**	**15 51 07.0**	**+0.5**
MRW	**Makara Radio**	**1.89**	**190**	⇑PN		**Pn**	**15 51 07.0**	**+0.5**
URZ	**Urewera**	**1.89**	**55**	P		**Pn**	**15 51 05.5**	**-1.0**
URZ	**Urewera**	**1.89**	**55**	PN		**Pn**	**15 51 05.4**	**-1.2**
WEL	**Wellington**	**1.93**	**189**	P		**Pn**	**15 51 07.4**	**+0.4**
WEL	**Wellington**	**1.93**	**189**	PN		**Pn**	**15 51 07.4**	**+0.3**
TCW	**Tory Channel**	**1.96**	**200**	P		**Pn**	**15 51 07.7**	**+0.4**
TCW	**Tory Channel**	**1.96**	**200**	⇑PN		**Pn**	**15 51 07.7**	**+0.4**
SNZO	**South Karori**	**1.96**	**190**	P		**Pn**	**15 51 07.7**	**+0.3**
SNZO	**South Karori**	**1.96**	**190**	⇑PN		**Pn**	**15 51 07.7**	**+0.3**
KNZ	**Kokohu**	**1.99**	**81**	P		**Pn**	**15 51 07.8**	**0.0**
KNZ	**Kokohu**	**1.99**	**81**	PN		**Pn**	**15 51 07.8**	**+0.1**
PAWZ	**Paruwai Farm**	**2.02**	**174**	P		**Pn**	**15 51 08.4**	**+0.3**
PAWZ	**Paruwai Farm**	**2.02**	**174**	⇑PN		**Pn**	**15 51 08.4**	**+0.3**
MSWZ	**Moikau Station**	**2.04**	**178**	P		**Pn**	**15 51 08.7**	**+0.3**
MSWZ	**Moikau Station**	**2.04**	**178**	⇑PN		**Pn**	**15 51 08.7**	**+0.4**
BHW	**Baring Head**	**2.04**	**186**	P		**Pn**	**15 51 08.7**	**+0.3**
BHW	**Baring Head**	**2.04**	**186**	⇑PN		**Pn**	**15 51 08.7**	**+0.2**
TRWZ	**Traveller**	**2.06**	**169**	PN		**Pn**	**15 51 08.9**	**+0.2**

IDC 29 16:43:34.5±3.9, 540S×10278E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, Error ellipse: s-maj=154.1km s-min=24.5km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.92**	**118**	P	P	16 50 19.0	-0.2
	0.3nm,0.8s,baz=289,slow=10,SNR=5.2						
ASAR	**Alice Springs**	**35.04**	**124**	P	P	16 50 29.9	+1.0
	0.1nm,0.4s,baz=302,slow=8.0,SNR=6.3						
SONM	**Songino Array**	**53.10**	**3**	P	P	16 52 53.5	-0.2
	0.3nm,0.5s,baz=181,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**55.05**	**343**	P	P	16 53 08.2	+0.3
	1.0nm,0.6s,baz=152,slow=8.8,SNR=6.1						

*ISCJB **29** 17:11:00.9±14.0, 23S±2×176W±, h10km, mb4.0/2, Error ellipse: s-maj=455.6km s-min=16.4km az=91.6*
*NEIC **29** 17:11:05.1±1.9, 2257S×17671W, h10km, mb4.3/1, Error ellipse: s-maj=71.2km s-min=11.6km az=141.0*
*IDC **29** 17:11:24.3±8.4, 1999S×17824W, h117km±66km, mb3.5/2, mb1 3.8/3, mb1mx3.4/13, mbtmp4.1/3, Error ellipse: s-maj=238.9km s-min=37.9km az=154.0*

ISC 29 17:11:03.3±14.0, 23S±2×176W±, h10km, n11, σ0§34/7, mb3.9/2, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.97**	**27**	P	**Pn**	**17 13 26.7**	**+0.2**
	2.8nm,0.3s,baz=234,slow=23,SNR=5.2						
AFI	**Afiamalu**	**9.97**	**27**	*e*P	**Pn**	**17 13 26.4**	**-0.2**
AS31	**Alice Springs**	**45.49**	**259**	*e*P	**P**	**17 19 22.7**	**0.0**
ASAR	**Alice Springs**	**45.49**	**259**	P	**P**	**17 19 22.8**	**+0.1**
	0.9nm,0.7s,mb3.7,baz=88,slow=6.7,SNR=22						
ASPA	**Alice Springs**	**45.50**	**259**	*e*P	**P**	**17 19 22.7**	**0.0**
WRAB	**Tennant Creek**	**45.81**	**264**	*e*P	**P**	**17 19 25.8**	**+0.6**
WRA	**Warramunga Arr**	**45.82**	**264**	P	**P**	**17 19 24.7**	**-0.6**
	1.3nm,0.5s,mb4.1,baz=97,slow=8.4,SNR=19						
AKASG	**Malin Array Be**	**145.86**	**331**	PKP	PKPdf	17 30 42.7	+0.5
	1.4nm,0.6s,baz=39,slow=3.9,SNR=9.1						
AKASG	**Malin Array Be**	**145.86**	**331**	PKP	PKPdf	17 30 42.7	+0.4
EKA	**Eskdalemuir Ar**	**147.24**	**7**	PKP	PKPdf	17 30 45.9	+1.3
	2.0nm,0.9s,baz=42,slow=2.6,SNR=3.9						
CLL	**Collm**	**150.75**	**348**	*e*PKP1	PKPbc	17 30 57.0	+1.2

WEL 29 17:15:07.3±0.9, 3501S×17830E, h33km, ML3.5/5, Error ellipse: s-maj=15.4km s-min=6.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.55**	**180**	P*	Pb	17 15 46.9	-5.5
MXZ				S*	Sb	17 16 15.3	-8.0
PUZ	**Puketiti**	**3.06**	**181**	PN	Pn	17 15 52.9	-0.4
PUZ				SN	Sn	17 16 28.5	-0.3
MWZ	**Matawai**	**3.38**	**190**	P*	Pb	17 15 57.6	-8.9
MWZ				S*	Sb	17 16 36.9	-10
URZ	**Urewera**	**3.39**	**196**	P*	Pb	17 15 58.2	-8.4
BKZ	**Black Stump Fm**	**4.40**	**199**	P*	Pb	17 16 10.6	-13
BKZ				S*	Sb	17 17 03.7	-13
PXZ	**Pawanui**	**5.15**	**192**	PN	Pn	17 16 17.7	-4.3
MRZ	**Mangatainoka R**	**6.04**	**200**	PN	Pn	17 16 29.3	-5.0
MRZ				SN	Sn	17 17 35.7	-6.7

PRE 29 17:17:08.1±0.8, 2642S×2749E, h2km, ML3.5, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERPM	**east rand prop**	**0.70**	**75**	*e*P	Pg	17 17 21.7	+0.2
ERPM				*e*S	Sg	17 17 30.6	0.0
ERPM				AML	AML	17 17 32.4	
	comp=Z,861nm,0.7s						
KSR	**Koster**	**0.78**	**317**	*e*P	Pg	17 17 23.6	+0.5
KSR				*e*S	Sg	17 17 33.6	+0.5
KSR				AML	AML	17 17 42.8	
	comp=Z,332nm,0.3s						
SLR	**Silverton**	**0.99**	**46**	*e*P	Pg	17 17 27.1	+0.1
SLR				*e*S	Sg	17 17 41.0	+1.1
SLR				AML	AML	17 17 46.5	
	comp=Z,608nm,0.4s						
SEK	**Senekal**	**1.90**	**176**	*e*P	Pn	17 17 42.0	+0.5
SEK				*e*S	Sn	17 18 07.0	+1.1
SEK				AML	AML	17 18 11.3	
	comp=Z,462nm,0.5s						
BOSA	**Boshof**	**2.95**	**222**	*e*P	Pn	17 17 57.0	+1.0
BOSA				*e*S	Sn	17 18 32.1	+0.2
BOSA				AML	AML	17 18 43.1	
	comp=Z,97nm,0.6s						
KSD	**Kokstad**	**4.44**	**158**	*e*P	Pn	17 18 17.1	+0.6
KSD				*e*S	Sn	17 19 07.4	-1.3
KSD				AML	AML	17 19 30.9	
	comp=Z,62nm,0.5s						
MSNA	**Messina**	**4.67**	**30**	*e*P	Pn	17 18 19.2	-0.4
MSNA				*e*S	Sn	17 19 11.1	-3.3
MSNA				AML	AML	17 19 37.0	
	comp=Z,56nm,0.4s						
UPI	**Upington**	**5.87**	**249**	*e*P	Pn	17 18 36.6	+0.5
UPI				*e*S	Sn	17 19 41.7	-2.3
UPI				AML	AML	17 20 18.7	
	comp=Z,42nm,0.4s						
SUR	**Sutherland**	**8.31**	**223**	*e*P	Pn	17 19 10.8	+1.2
SUR				*e*S	Sn	17 20 40.6	-3.5
CVNA	**Calvinia**	**8.44**	**232**	*e*P	Pn	17 19 12.3	+0.9
CVNA				*e*S	Sn	17 20 43.2	-4.0
CVNA				AML	AML	17 21 43.7	
	comp=Z,60nm,0.7s						

IDC 29 17:39:40.5±1.9, 014S×12572E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/15, mbtmp3.2/3, Error ellipse: s-maj=186.1km s-min=26.7km az=64.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.42**	**157**	P	P	17 44 29.6	-0.4
	0.5nm,0.5s,baz=336,slow=12,SNR=6.9						
ASAR	**Alice Springs**	**24.70**	**162**	P	P	17 45 04.2	+0.9
	0.2nm,0.5s,baz=339,slow=11,SNR=6.7						
MKAR	**Makanchi Array**	**60.18**	**327**	P	P	17 49 50.2	+0.1
	0.4nm,0.5s,baz=122,slow=8.1,SNR=5.3						

IDC 29 17:42:41.2±1.8, 077S×12444E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=179.9km s-min=27.0km az=63.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.38**	**154**	P	P	17 47 29.7	-0.5
	0.6nm,0.6s,baz=332,slow=12,SNR=6.3						
ASAR	**Alice Springs**	**24.54**	**159**	P	P	17 48 03.4	+1.0
	0.2nm,0.4s,baz=342,slow=9.9,SNR=8.1						
MKAR	**Makanchi Array**	**60.02**	**328**	P	P	17 52 49.7	0.0
	0.3nm,0.4s,baz=114,slow=8.5,SNR=4.6						

*BJI **29** 18:04:28.7, 105S×125.45E, h35km, mB5.0, mb4.7, Ms4.3, Msz4.1*
*IDC **29** 18:04:30.2±0.6, 036S×124.97E, h0km, mb4.3/12, mb1 4.3/13, mb1mx4.2/19, mbtmp4.3/13, ML3.6/1, MS3.7/6, Ms1 3.7/6, ms1mx3.3/21, Error ellipse: s-maj=42.0km s-min=12.9km az=72.0*
*MOS **29** 18:04:34.1±1.1, 031S×125.19E, h41km, mb4.8/12, Error ellipse: s-maj=25.5km s-min=8.8km az=111.8*
*NEIC **29** 18:04:35.4±0.3, 035S×125.12E, h35km, mb4.6/20, Error ellipse: s-maj=13.3km s-min=5.0km az=71.0*
*ISCJB **29** 18:04:36.9±1.3, 033S±005×12536E±007, h68km±13km, mb4.5/39, Error ellipse: s-maj=12.9km s-min=7.0km az=126.4*

ISC 29 18:04:39.1±1.1, 035S±005×12535E±007, h71km±11km, h52km±10.9km; pP-P, n81, σ1§23/82, mb4.5/39, 1D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**5.54**	**264**	P	**Pn**	**18 06 00.6**	**+1.7**
	0.0nm,0.0s						
SWI	**Sorong**	**5.94**	**95**	P	**Pn**	**18 06 09.3**	**+5.0**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**11.11**	**305**	*e*Pn	**Pn**	**18 07 15.2**	**+0.2**
KAKA	**Kakadu**	**14.16**	**150**	*e*P	**Pn**	**18 07 54.0**	**-2.0**
	9.4nm,0.6s						
BJII	**Banjamegara**	**17.07**	**246**	P	**Pn**	**18 08 34.8**	**+1.9**
	93nm,1.7s						
FITZ	**Fitzroy Crossi**	**17.65**	**179**	*e*P	**Pn**	**18 08 38.3**	**-1.7**
	11nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.65**	**179**	P	**Pn**	**18 08 37.0**	**-3.0**
	0.1nm,0.3s,baz=360,slow=12,SNR=12						
CBJI	**Citeko**	**19.42**	**252**	P	**Pn**	**18 09 00.2**	**-1.1**
	133nm,1.3s						
WRAB	**Tennant Creek**	**21.37**	**156**	*e*P	**P**	**18 09 20.3**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**21.37**	**156**	*e*P	**P**	**18 09 20.3**	**-0.2**
	comp=Z,26nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**21.37**	**156**	P	**P**	**18 09 19.6**	**-1.0**
	comp=Z,5.6nm,0.7s,mb4.0,baz=336,slow=11,SNR=21						
WRA				LR	LR	18 18 07.6	
	comp=Z,178nm,20.8s,baz=340,slow=38						
WB2	**Warramunga Arr**	**21.38**	**156**	*e*P	**P**	**18 09 20.7**	**0.0**
MBWA	**Marble Bar**	**21.40**	**194**	*e*P	**P**	**18 09 21.0**	**+0.1**
	comp=Z,25nm,1.1s,mb4.5						
AS31	**Alice Springs**	**24.62**	**161**	*e*P	**P**	**18 09 53.7**	**+1.0**
ASPA	**Alice Springs**	**24.62**	**161**	*e*P	**P**	**18 09 53.7**	**+1.0**
ASAR	**Alice Springs**	**24.62**	**161**	P	**P**	**18 09 54.0**	**+1.3**
	comp=Z,2.9nm,0.8s,mb3.7,baz=344,slow=12,SNR=21						
ASAR				PcP	PcP	18 13 30.6	+1.9
	comp=Z,1.2nm,0.5s,baz=350,slow=2.1,SNR=14						
ASAR				LR	LR	18 18 54.5	
	comp=Z,141nm,20.0s,baz=115,slow=35						
ASAR	**Alice Springs**	**24.62**	**161**	P	**P**	**18 09 54.0**	**+1.3**
ASAR						18 13 30.6	
ASAR	**Alice Springs**	**24.62**	**161**	P	**P**	**18 09 54.0**	**+1.3**
ASAR				PcP	PcP	18 13 30.6	+1.9
ASAR				LR	LR	18 18 54.5	
YHNB	**Yeheng**	**25.16**	**351**	P	**P**	**18 09 57.2**	**-0.4**
JOW	**Kunigami**	**27.17**	**6**	P	**P**	**18 10 17.4**	**+1.8**
	comp=Z,9.3nm,0.6s,mb4.5,baz=179,slow=7.8,SNR=14						
JOW				LR	LR	18 20 13.5	
	comp=Z,113nm,21.6s,baz=311,slow=35						
NJ2	**Nanjing**	**32.80**	**350**	*e*P	**P**	**18 11 08.8**	**+3.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
KMI	**Kunming**	**33.46**	**321**	P	**P**	**18 11 15.5**	**+4.3**
KMI				PP	PP	18 12 28.5	+0.5
KMI				S	**S**	**18 16 30.5**	**+2.9**
KMI				XS	sS	18 16 57.5	+0.8
KMI				AMB	AMB		
	comp=Z,4.0nm,1.7s,mb4.0						
KMI				AMB	AMB		
	comp=Z,139nm,5.4s						
KMI				LR	LR		
	comp=N,111nm,14.8s						
KMI				LR	LR		
	comp=E,116nm,16.0s						
KMI				LR	LR		
	comp=Z,119nm,20.1s						
STKA	**Stephens Creek**	**34.92**	**155**	*e*P	**P**	**18 11 25.4**	**+1.5**
	comp=Z,6.2nm,1.4s,mb4.2						
STKA	**Stephens Creek**	**34.92**	**155**	P	**P**	**18 11 24.9**	**+1.0**
	comp=Z,3.0nm,0.8s,mb4.2,baz=348,slow=5.0,SNR=7.8						
CD2	**Chengdu**	**37.24**	**328**	*e*P	**P**	**18 11 43.0**	**-0.7**
CD2				AP	pP	18 11 59.3	-1.6
CD2				PP	PP	18 13 12.5	+2.8
CD2				S	**S**	**18 17 26.0**	**+0.4**
CD2				XS	sS	18 17 54.5	-0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				LR	LR		
	comp=E,110nm,15.6s						
CD2				LR	LR		
	comp=Z,110nm,14.4s						
MAJO	**Matsushiro**	**38.60**	**17**	*e*P	**P**	**18 11 54.9**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
MAJO	**Matsushiro**	**38.60**	**17**	*e*P	**P**	**18 11 54.9**	**-0.2**
	comp=Z,3.1nm,0.5s,mb4.4						
MAT	**Matsushiro**	**38.60**	**17**	P	**P**	**18 11 54.9**	**-0.2**
MAT				*e*S	S	18 18 16.6	+30
MJAR	**Matsushiro Arr**	**38.60**	**17**	P	**P**	**18 11 55.0**	**-0.1**
	comp=Z,3.1nm,0.7s,mb4.3,baz=188,slow=7.9,SNR=11						
LZH	**Lanzhou**	**41.40**	**333**	*e*P	**P**	**18 12 19.5**	**+1.2**
LZH				AP	pP	18 12 29.3	-6.5
LZH				XP	sP	18 12 33.5	-10
LZH				PP	PP	18 13 58.3	+3.2
LZH				AMB	AMB		
	comp=Z,17nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,52nm,5.7s						
LZH				LR	LR		
	comp=E,421nm,13.8s						
LZH				LR	LR		
	comp=Z,637nm,17.6s						
HHC	**Hu-ho-hao-te**	**42.87**	**345**	*e*P	**P**	**18 12 29.0**	**-1.3**
HHC				AP	pP	18 12 45.0	-2.8
HHC				PP	PP	18 14 11.5	+0.5
HHC				PCP	PcP	18 14 18.8	-1.3
HHC				SCP	ScP	18 18 03.8	-1.0
HHC				PCS	PcS	18 18 09.5	-2.9
HHC				S	**S**	**18 18 48.3**	**-1.4**
HHC				XS	sS	18 19 20.5	+0.9
HHC				SCS	ScS	18 22 20.5	-3.7
HHC				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.4						
HHC				AMB	AMB		
	comp=Z,65nm,5.3s						
HHC				LR	LR		
	comp=N,91nm,19.0s						
HHC				LR	LR		
	comp=E,92nm,17.1s						
HHC				LR	LR		
	comp=Z,93nm,19.9s						
LSA	**Lhasa**	**44.22**	**315**	P	**P**	**18 12 39.8**	**-1.3**
LSA				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.4						
LSA	**Lhasa**	**44.22**	**315**	P	**P**	**18 12 39.8**	**-1.3**
	comp=Z,14nm,1.6s,mb4.4						
MDJ	**Mudanjiang**	**44.93**	**4**	P	**P**	**18 12 49.3**	**+2.6**
MDJ				PP	PP	18 14 35.5	+2.7
MDJ				SCP	ScP	18 18 15.8	+2.6
MDJ				PCS	PcS	18 18 22.5	+1.7
MDJ				S	**S**	**18 19 24.8**	**+5.2**
MDJ				SCS	ScS	18 22 40.3	+3.2
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,22nm,3.5s						
MDJ				LR	LR		
	comp=N,38nm,29.1s						
MDJ				LR	LR		
	comp=E,15nm,29.1s						
MDJ				LR	LR		
	comp=Z,51nm,27.1s						
MDJ	**Mudanjiang**	**44.93**	**4**	P	**P**	**18 12 47.7**	**+1.0**
	comp=Z,11nm,1.2s,mb4.5						
GTA	**Gaotai**	**45.95**	**332**	*e*P	**P**	**18 12 56.5**	**+1.7**
GTA				AP	pP	18 13 04.0	-8.6
GTA				XP	sP	18 13 08.5	-12
GTA				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.6						
GUN	**Gumba**	**47.13**	**310**	*e*P	**P**	**18 13 04.3**	**+0.3**
	comp=Z,17nm,0.5s,mb5.1						
PKI	**Pulchoki**	**47.32**	**309**	*e*P	**P**	**18 13 03.7**	**-1.8**
KKN	**Kakani**	**47.53**	**309**	*e*P	**P**	**18 13 06.8**	**-0.3**
DMN	**Daman**	**47.58**	**309**	*e*P	**P**	**18 13 06.4**	**-1.1**
	comp=Z,12nm,0.8s,mb4.8						
GKN	**Gorkha**	**48.13**	**309**	*e*P	**P**	**18 13 11.6**	**-0.2**
KOLN	**Koldanda**	**48.83**	**308**	*e*P	**P**	**18 13 15.6**	**-1.6**
	comp=Z,18nm,0.7s,mb5.1						
HIA	**Hailar**	**49.66**	**355**	P	**P**	**18 13 24.1**	**+0.6**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HIA	**Hailar**	**49.66**	**355**	P	**P**	**18 13 24.1**	**+0.7**
	comp=Z,4.7nm,0.6s,mb4.6						
ULN	**Ulaanbaatar**	**50.59**	**344**	*i* P	**P**	**18 13 29.6**	**-0.9**
ULN	**Ulaanbaatar**	**50.59**	**344**	*e*P	**P**	**18 13 29.0**	**-1.6**
	comp=Z,2.9nm,0.7s,mb4.4						
SONM	**Songino Array**	**50.74**	**344**	P	**P**	**18 13 30.6**	**-1.1**
	comp=Z,2.7nm,0.6s,mb4.4,baz=160,slow=9.0,SNR=23						
SONM				LR	LR	18 35 31.0	
	comp=Z,102nm,21.4s,baz=167,slow=37						
ZAK	**Zakamensk**	**53.93**	**343**	*e*P	**P**	**18 13 52.2**	**-3.1**
TLY	**Talaya**	**54.98**	**344**	*e*P	**P**	**18 14 05.4**	**+2.5**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TLY	**Talaya**	**54.98**	**344**	*e*P	**P**	**18 14 05.4**	**+2.5**
	comp=Z,5.8nm,0.8s,mb4.7						
WMQ	**Urumqi**	**55.32**	**327**	*e*P	**P**	**18 14 08.0**	**+2.6**
WMQ				XP	sP	18 14 24.0	-7.6
WMQ				PP	PP	18 16 14.0	+4.4
WMQ				S	**S**	**18 21 45.0**	**+0.9**
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,198nm,5.0s						
WMQ				LR	LR		
	comp=N,98nm,14.0s						
WMQ				LR	LR		
	comp=E,61nm,14.0s						
WMQ				LR	LR		
	comp=Z,75nm,14.0s						
BOD	**Bodaibo**	**58.69**	**353**	*e*P	**P**	**18 14 27.6**	**-1.6**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
MKAR	**Makanchi Array**	**60.15**	**327**	P	**P**	**18 14 39.0**	**-0.2**
	comp=Z,4.9nm,0.5s,mb4.8,baz=118,slow=8.9,SNR=58						
YAK	**Yakutsk**	**62.30**	**2**	*e*P	**P**	**18 14 54.2**	**+0.5**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
YAK	**Yakutsk**	**62.30**	**2**	*e*P	**P**	**18 14 54.1**	**+0.4**
	comp=Z,15nm,0.9s,mb5.0						
AAK	**Ala-Archa**	**62.49**	**320**	*e*P	**P**	**18 14 56.5**	**+1.5**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
AAK	**Ala-Archa**	**62.49**	**320**	*e*P	**P**	**18 14 56.5**	**+1.4**
	comp=Z,2.8nm,0.6s,mb4.5						
MA2	**Magadan**	**62.97**	**14**	*e*P	**P**	**18 15 00.7**	**+2.5**
MA2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
MA2	**Magadan**	**62.97**	**14**	P	**P**	**18 15 00.2**	**+2.0**
	comp=Z,10nm,1.0s,mb4.7						
ZAL	**Zalesovo**	**63.61**	**335**	P	**P**	**18 15 01.2**	**-1.2**
	comp=Z,1.3nm,0.7s,mb3.9,baz=13,slow=8.7,SNR=8.7						
ZAL				LR	LR	18 44 12.5	
	comp=Z,78nm,19.4s,baz=104,slow=38						
BVAR	**Borovoye Array**	**70.00**	**328**	P	**P**	**18 15 42.4**	**-0.6**
	comp=Z,1.8nm,0.6s,mb4.1,baz=133,slow=8.7,SNR=11						
CHKZ	**Chkalovo**	**70.20**	**329**	*e*P	**P**	**18 15 43.3**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
CHKZ	**Chkalovo**	**70.20**	**329**	*e*P	**P**	**18 15 43.3**	**-0.9**
	comp=Z,5.2nm,1.0s,mb4.3						
ZRNK	**Zerenda**	**70.70**	**328**	*e*P	**P**	**18 15 46.9**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
ZRNK	**Zerenda**	**70.70**	**328**	*e*P	**P**	**18 15 46.9**	**-0.4**
	comp=Z,3.9nm,0.6s,mb4.4						
AKTK	**Aktyubinsk**	**76.00**	**323**	P	**P**	**18 16 17.9**	**-0.5**
AKTO	**Aktyubinsk**	**76.00**	**323**	P	**P**	**18 16 17.9**	**-0.5**
	comp=Z,7.7nm,0.6s,mb4.6,baz=100,slow=6.6,SNR=36						
ARU	**Arti**	**77.64**	**328**	*e*P	**P**	**18 16 27.6**	**-0.1**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ARU	**Arti**	**77.64**	**328**	*e*P	**P**	**18 16 27.6**	**-0.1**
	comp=Z,5.2nm,0.8s,mb4.3						
VNDA	**Vanda**	**79.59**	**172**	P	**P**	**18 16 39.0**	**+0.6**
	comp=Z,0.4nm,0.8s,mb3.3,baz=292,slow=7.9,SNR=3.5						
VNDA	**Vanda**	**79.59**	**172**	*e*P	**P**	**18 16 39.7**	**+1.3**
KIV	**Kislovodsk**	**84.94**	**314**	P	**P**	**18 17 07.0**	**+0.7**
MALT	**Malatya**	**87.79**	**308**	*e*P	**P**	**18 17 21.5**	**+1.2**
MALT				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
MALT	**Malatya**	**87.79**	**308**	*e*P	**P**	**18 17 21.5**	**+1.2**
	comp=Z,14nm,1.3s,mb4.8						
OBN	**Obninsk**	**89.58**	**325**	*e*P	**P**	**18 17 27.2**	**-1.5**
OBN				pmax	pmax		
	comp=Z,31nm,2.4s,mb5.0						
ARCES	**ARCESS Array B**	**93.77**	**340**	LR	LR	19 01 26.1	
	comp=Z,32nm,20.9s,baz=265,slow=36						
FINES	**FINESS Array B**	**94.74**	**332**	P	**P**	**18 17 51.8**	**-0.8**
	comp=Z,0.5nm,0.7s,mb4.1,baz=52,slow=9.0,SNR=2.4						
FINES	**FINESS Array B**	**94.74**	**332**	P	**P**	**18 17 51.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**122.76**	**285**	PKP	PKPdf	18 23 28.4	+1.7
	comp=Z,1.2nm,0.7s,baz=80,slow=1.7,SNR=5.3						
CPUP	**Villa Florida**	**153.35**	**175**	PKPbc	PKPbc	18 24 32.2	+3.2
	comp=Z,0.6nm,0.4s,baz=64,slow=0.5,SNR=3.2						
LPAZ	**La Paz**	**158.79**	**142**	PKPab	PKPab	18 25 08.6	+4.0
	comp=Z,1.2nm,0.8s,baz=243,slow=3.1,SNR=6.8						

*ISCJB **29** 18:26:22.4±0.6, 1291N±004×124.13E±005, h33km, mb3.6/4, MS2.8/1, Error ellipse: s-maj=7.2km s-min=5.4km az=140.1*
*NEIC **29** 18:26:24.5±1.0, 1290N×124.47E, h35km, Error ellipse: s-maj=38.5km s-min=13.8km az=55.0*
NEIC Felt [III PIVS] at Juban.
*MAN **29** 18:26:29.0, 1268N×123.47E, h61km, mb3.3, ML4.6*
*IDC **29** 18:26:30.4±7.6, 1265N×123.87E, h90km±69km, mb3.2/4, mb1 3.4/4, mb1mx3.3/17, mbtmp3.6/4, ML4.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.1/26, Error ellipse: s-maj=137.5km s-min=18.4km az=67.0*

ISC 29 18:26:23.6±0.6, 1293N±004×12412E±005, h35km, n27, σ1§52/34, mb3.6/4, MS2.8/1, 3C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.66**	**3**	*e*P	**Pn**	**18 26 35.3**	**-1.1**
PVCP	**Virac**	**0.66**	**3**	*e*P	**Pn**	**18 26 35.3**	**-1.2**
MMPH	**Masbate**	**0.75**	**220**	*e*P	**Pn**	**18 26 33.5**	**-4.1**
MMPH				*e*S	**Sn**	**18 26 41.0**	**-6.7**
AUQP	**San Andres**	**1.46**	**286**	*e*P	**Pn**	**18 26 48.1**	**+0.7**
GQP	**Guinayangan**	**1.89**	**301**	*e*P	**Pn**	**18 26 53.6**	**+0.3**
GQP				*i* S	**Sn**	**18 27 20.6**	**+4.6**
RCP	**Roxas**	**1.91**	**225**	*e*P	**Pn**	**18 26 52.1**	**-1.6**
RCP				*e*S	**Sn**	**18 27 16.7**	**+0.2**
PLP	**Palo**	**1.95**	**154**	*e*P	**Pn**	**18 26 54.3**	**+0.1**
PLP				*e*S	**Sn**	**18 27 15.5**	**-1.9**
OTRP	**Odiongan**	**2.12**	**255**	*e*P	**Pn**	**18 26 54.7**	**-1.8**
OTRP				*e*S	**Sn**	**18 27 23.0**	**+1.3**
KALP	**Kalibo**	**2.14**	**235**	*e*P	**Pn**	**18 26 58.1**	**+1.3**
KALP				*e*S	**Sn**	**18 27 13.5**	**-8.5**
BOAC	**Boac**	**2.27**	**284**	*e*P	**Pn**	**18 26 56.5**	**-2.2**
LLP	**Lapu-Lapu**	**2.60**	**183**	*e*P	**Pn**	**18 27 06.0**	**+2.9**
LLP				*e*S	**Sn**	**18 27 35.4**	**+1.9**
GUIM	**Jordan**	**2.74**	**213**	*e*P	**Pn**	**18 27 04.4**	**-0.6**
GUIM				*e*S	**

SZAC					S		**Sg**	**18 46 35.7**	**+4.0**
ALFC	**Alevga**	**0.81**	**17**	⇑	P		**Pg**	**18 46 26.6**	**-0.9**
ALFC					S		**Sg**	**18 46 39.2**	**+1.1**
ALFC	**Alevga**	**0.81**	**17**	⇑*i*	P		**Pg**	**18 46 26.6**	**-0.9**
ALFC					S		**Sg**	**18 46 39.2**	**+1.1**
CSS	**Prodhromos**	**1.02**	**55**		P		**Pb**	**18 46 30.3**	**-0.9**
	7.1nm,0.3s								
CSS					S		**Sb**	**18 46 46.2**	**+1.8**
CSS	**Prodhromos**	**1.02**	**55**		*e*Pg		**Pg**	**18 46 29.6**	**-2.0**
CSS	**Prodhromos**	**1.02**	**55**		P		**Pb**	**18 46 30.3**	**-0.9**
	7.1nm,0.3s								
CSS					S		**Sb**	**18 46 46.2**	**+1.8**
MAMC	**Mammari**	**1.08**	**43**		P		**Pb**	**18 46 32.1**	**-0.2**
PHNC	**Paralimni**	**1.55**	**66**		P		**Pn**	**18 46 40.0**	**+1.2**
IKL	**Isikli**	**2.17**	**31**		*e*PN		**Pn**	**18 46 45.1**	**-2.2**
IKL					*e*SN		**Sn**	**18 47 12.8**	**-1.1**
OFRI	**'Ofer**	**2.84**	**127**		Pn		**Pn**	**18 46 55.6**	**-1.1**
MMC7	**Mount Meron ar**	**2.91**	**117**		Pn		**Pn**	**18 46 56.9**	**-0.6**
MMA0B	**Mount Meron ar**	**2.92**	**117**		Pn		**Pn**	**18 46 57.7**	**0.0**
KSDI	**Kefar Szold**	**3.03**	**112**		Pn		**Pn**	**18 46 58.8**	**-0.4**
SLTI	**Sal'it**	**3.13**	**132**		Pn		**Pn**	**18 47 01.1**	**+0.5**
SLTI					Sn		**Sn**	**18 47 37.2**	**-0.5**
SLTI	**Sal'it**	**3.13**	**132**		Pn		**Pn**	**18 47 01.1**	**+0.5**
SLTI					Sn		**Sn**	**18 47 37.2**	**-0.5**
MMLI	**Mount Malkishu**	**3.25**	**126**		Pn		**Pn**	**18 47 01.9**	**-0.3**
HMDT	**Nahal Hemdat**	**3.43**	**127**		Pn		**Pn**	**18 47 05.4**	**+0.7**
KONT	**Konya--Tatoy**	**3.55**	**1**		*e*PN		**Pn**	**18 47 07.8**	**+1.4**
DRGI	**Dragot**	**3.80**	**136**		Pn		**Pn**	**18 47 10.4**	**+0.5**
DSI	**Dead Sea**	**3.81**	**137**		Pn		**Pn**	**18 47 10.2**	**+0.2**
KZIT	**Kziot**	**3.89**	**152**		Pn		**Pn**	**18 47 11.1**	**+0.1**
MZDA	**Masada**	**4.00**	**139**		Pn		**Pn**	**18 47 12.8**	**+0.2**
PRNI	**Paran**	**4.62**	**150**		Pn		**Pn**	**18 47 21.0**	**-0.1**
KMTI	**Karmit**	**4.73**	**154**		Pn		**Pn**	**18 47 23.6**	**+1.0**
HRFI	**Mount Harif**	**4.91**	**151**		Pn		**Pn**	**18 47 25.1**	**0.0**
EIL	**Elat**	**5.21**	**154**		Pn		**Pn**	**18 47 29.4**	**+0.2**
EIL	**Elat**	**5.21**	**154**		Pn		**Pn**	**18 47 29.3**	**+0.1**

*IDC **29** 18:47:28.8±8.3,5.15×152 40E,h75km±59km,mb3.5/6, mb1 3.7/7,mb1mx3.6/15,mbtmp3.9/7,ML2.6/1,MS3.2/4, Ms1 3.2/4,ms1mx2.8/18,Error ellipse: s-maj=83.5km s-min=29.9km az=105.0*

*ISCJB **29** 18:47:29.8±5.4,50S×03.×152.1E±0.5,h83km±39km, mb3.6/6,Error ellipse: s-maj=82.2km s-min=28.2km az=52.4*

ISC 29 18:47:30.7±5.0,**51S**±03.×**1522E**±04,**h82**km±34km**,n13,** σ1§**11/8,mb3.6/6,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.62**	**229**		P	**Pn**	**18 49 05.3**	**0.0**
	0.7nm,0.3s,baz=40,slow=13,SNR=5.7							
PMG					S	**Sn**	**18 50 19.5**	**+0.2**
	0.7nm,0.3s,baz=133,slow=18,SNR=4.2							
HNR	**Honiara**	**8.79**	**120**		LR	LR	18 51 42.9	
	comp=Z,50nm,21.5s,baz=1.3,slow=30							
CTA	**Charters Tower**	**16.02**	**201**		LR	LR	18 56 37.9	
	comp=Z,93nm,21.8s,baz=56,slow=34							
GUMO	**Guam**	**19.93**	**339**		LR		18 57 57.6	
	comp=Z,83nm,20.7s,baz=108,slow=31							
WRA	**Warramunga Arr**	**22.84**	**228**		P	**P**	**18 52 26.1**	**-0.8**
	1.4nm,0.7s,mb3.4,baz=48,slow=9.6,SNR=19							
ASAR	**Alice Springs**	**25.57**	**222**		P	**P**	**18 52 52.8**	**+0.9**
	0.9nm,0.7s,mb3.3,baz=60,slow=8.6,SNR=15							
STKA	**Stephens Creek**	**28.47**	**199**		LR	LR	19 04 58.6	
	comp=Z,124nm,18.6s,baz=206,slow=37							
FITZ	**Fitzroy Crossi**	**29.03**	**241**		P	**P**	**18 53 22.6**	**-0.4**
	1.5nm,0.5s,mb3.9,baz=76,slow=11,SNR=15							
SONM	**Songino Array**	**66.26**	**328**		P	**P**	**18 58 10.3**	**+0.3**
	0.3nm,0.5s,mb3.4,baz=128,slow=5.7,SNR=4.2							
MKAR	**Makanchi Array**	**80.16**	**319**		P	**P**	**18 59 33.1**	**+1.3**
	0.2nm,0.3s,mb3.5,baz=94,slow=8.4,SNR=2.7							
ZAL	**Zalesovo**	**81.08**	**326**		P	**P**	**18 59 35.5**	**-1.3**
	0.7nm,0.3s,mb4.0,baz=332,slow=7.6,SNR=3.7							
GERES	**GERESS Array B**	**123.99**	**328**		PKP	PKPdf	19 06 17.2	-2.2
	0.2nm,0.4s,baz=0.0,slow=3.2,SNR=4.6							
TORD	**Torodi Ar. Bea**	**149.85**	**287**		PKPbc	PKPbc	19 07 11.8	+0.5
	1.1nm,0.7s,baz=75,slow=1.9,SNR=11							

*THR **29** 18:54:04.9±0.5,3264N×4965E,h30km±3km,ML3.2*
*CSEM **29** 18:54:04.9,3264N×4965E,h30km,ML3.2,After THR*
*KISR **29** 18:54:04.5±1.2,3243N×4989E,h44km±993km,ML3.1*
*ISCJB **29** 18:54:05.2±1.4,3252N±005×497E±0.1,h25km±14km, Error ellipse: s-maj=16.0km s-min=4.9km az=49.7*

ISC 29 18:54:03.9±1.3,**3262N**±006×**496E**±01,**h9**km±10km**,n14,** σ0§**98/21,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.85**	**233**		*e*PG	**Pg**	**18 54 21.6**	**+1.2**
SHGR					AML	AML	18 54 37.6	
	comp=E,1μm,0.6s							
SHGR					AML	AML	18 54 40.2	
	comp=N,696nm,0.3s							
ASAO	**Ashtian**	**1.95**	**10**		*e*PG	**Pg**	**18 54 39.6**	**-1.7**
ASAO					*e*SG	**Sg**	**18 55 04.8**	**-1.8**
ASAO					AML	AML	18 55 13.5	
	comp=E,163nm,0.5s							
ASAO					AML	AML	18 55 13.9	
	comp=N,169nm,0.6s							
ASAO	**Ashtian**	**1.95**	**10**		*e*Pg	**Pg**	**18 54 39.6**	**-1.7**
	SNR=94							
ASAO					*e*Sg	**Sg**	**18 55 04.8**	**-1.8**
	comp=N,169nm,0.6s,SNR=94							
NASN	**Na'in**	**2.70**	**85**		*e*PN	**Pn**	**18 54 48.2**	**+0.7**
NASN					AML	AML	18 55 26.6	
	comp=N,60nm,0.4s							
SNGE	**Sanandaj**	**3.10**	**323**		*e*PN	**Pn**	**18 54 54.2**	**+1.2**
MIB	**Mutribah**	**3.42**	**215**		*e*P	**Pn**	**18 54 57.9**	**+0.5**
MIB					*e*S	**Sn**	**18 55 37.7**	**-0.3**
MIB					AML	AML	18 55 40.7	
	comp=Z,57nm,0.5s							
THKV	**Tehran--Karaj**	**3.45**	**17**		*e*PN	**Pn**	**18 54 58.4**	**+0.6**
THKV					AML	AML	18 56 02.8	
	comp=N,42nm,0.6s							
THKV					AML	AML	18 56 09.0	
	comp=E,45nm,0.6s							
UMR	**Umm Al-Rimmam**	**3.46**	**208**		*e*P	**Pn**	**18 54 58.0**	**0.0**
DAMV	**Damavand**	**3.58**	**32**		*e*Pn	**Pn**	**18 55 00.7**	**+1.0**
DAMV	**Damavand**	**3.58**	**32**		*e*Pn	**Pn**	**18 55 00.6**	**+1.0**
	SNR=54							
KBD	**Kabd**	**3.81**	**206**		*e*P	**Pn**	**18 55 02.9**	**+0.2**
KBD					*e*S	**Sn**	**18 55 46.5**	**-1.1**
KBD					AML	AML	18 55 48.1	
	comp=Z,54nm,0.2s							
NAY	**Al-Naaiem**	**3.93**	**212**		*e*P	**Pn**	**18 55 04.8**	**+0.5**
NAY					*e*S	**Sn**	**18 55 50.8**	**+0.2**
NAY					AML	AML	18 55 52.8	
	comp=Z,20nm,0.5s							
RDF	**Al-Radifah**	**4.09**	**206**		*e*P	**Pn**	**18 55 07.0**	**+0.4**
RDF					*e*S	**Sn**	**18 55 54.3**	**-0.3**
RDF					AML	AML	18 55 57.7	
	comp=Z,20nm,0.3s							
QRN	**Al-Qurain**	**4.13**	**201**		*e*P	**Pn**	**18 55 07.1**	**-0.1**
QRN					*e*S	**Sn**	**18 55 53.2**	**-2.3**
QRN					AMb	AMB	18 55 53.9	
	comp=Z,31nm,0.5s							

*IDC **29** 19:08:18.6±1.4,3526N×2698E,h0km,mb3.6/3,mb1 3.6/4, mb1mx3.4/19,mbtmp3.5/4,ML3.8/1,Error ellipse: s-maj=50.5km s-min=25.8km az=146.0*
*ATH **29** 19:08:23.3,3525N×2702E,h26km±2km,MD3.7/9*
*CSEM **29** 19:08:23.9±0.2,3524N×2704E,h20km,MD3.7,Error ellipse: s-maj=5.4km s-min=2.1km az=152.0*
*ISCJB **29** 19:08:23.2±1.6,3530N±009×2696E±006,h7km±14km, mb3.5/3,Error ellipse: s-maj=16.0km s-min=5.3km az=130.3*
*ISK **29** 19:08:23.6,3522N×2687E,h52km,MD3.5*
*NEIC **29** 19:08:23.3,3525N×2702E,h26km,MD3.7(ATH),After ATH.*

ISC 29 19:08:23.3±1.2,**3520N**±007×**2699E**±005,**h16**km±6km**,n23,** σ1§**09/29,mb3.5/3,1C-1D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.37**	**21**	⇓*i*	PB	**Pg**	**19 08 30.9**	**-0.1**
KARP					*e*SB	**Sg**	**19 08 36.2**	**0.0**
XRY	**Khrisi**	**1.11**	**254**		*e*PB	**Pb**	**19 08 44.2**	**0.0**
NPS	**Neapolis**	**1.13**	**274**	⇑*i*	PN	**Pn**	**19 08 45.3**	**+0.8**
NPS					*e*SN	**Sn**	**19 09 01.0**	**+1.3**
ARG	**Arkhangelos**	**1.37**	**42**		*e*PN	**Pn**	**19 08 48.5**	**+0.7**
ARG					*e*SN	**Sn**	**19 09 06.3**	**+0.7**
NISR	**Nisiros**	**1.42**	**4**		*e*PB	**Pb**	**19 08 47.5**	**-1.8**
DAT	**Datca**	**1.60**	**17**		PN	**Pn**	**19 08 50.6**	**-0.3**
DAT					SN	**Sn**	**19 09 10.4**	**-0.8**
SANT	**Santorini**	**1.71**	**314**		*e*Pn	**Pn**	**19 08 53.3**	**+0.8**
SANT					*e*Sn	**Sn**	**19 09 13.4**	**-0.6**
SANT	**Santorini**	**1.71**	**314**		*e*Pn	**Pn**	**19 08 53.3**	**+0.9**
SANT					*e*Sn	**Sn**	**19 09 13.4**	**-0.6**
BODT	**Bodrum**	**1.88**	**8**		PN	**Pn**	**19 08 54.4**	**-0.3**
DALT	**Dalyan (Mudla)**	**2.06**	**40**		*e*PN	**Pn**	**19 08 57.8**	**+0.6**
MLSB	**Milas**	**2.19**	**17**		*e*PN	**Pn**	**19 08 59.0**	**0.0**
YER	**Yerkesik**	**2.20**	**28**		*e*PN	**Pn**	**19 08 59.3**	**+0.2**
APE	**Apeiranthos**	**2.21**	**328**		*e*PN	**Pn**	**19 08 59.7**	**+0.4**
FETY	**Fethiye**	**2.22**	**49**		*e*PN	**Pn**	**19 09 00.2**	**+0.7**
VAM	**Vamos**	**2.29**	**276**		*e*PB	**Pb**	**19 09 03.5**	**-0.8**
SMG	**Samos**	**2.51**	**357**		*e*PN	**Pn**	**19 09 04.1**	**+0.7**
DENT	**Denizli**	**3.04**	**32**		*e*PN	**Pn**	**19 09 11.3**	**+0.6**
VLI	**Veliai**	**3.62**	**296**		*e*PN	**Pn**	**19 09 20.4**	**+1.6**
KIZT	**Kizilcal**	**5.37**	**45**		*e*PN	**Pn**	**19 09 44.6**	**+1.9**
GERES	**GERESS Array B**	**16.80**	**328**		Pn	**Pn**	**19 12 15.3**	**-2.5**
	0.1nm,0.3s,baz=129,slow=12,SNR=4.4							
TORD	**Torodi Ar. Bea**	**31.68**	**232**		P	**P**	**19 14 44.1**	**-1.9**
	0.3nm,0.5s,mb3.4,baz=33,slow=8.3,SNR=7.8							
MKAR	**Makanchi Array**	**42.50**	**57**		P	**P**	**19 16 14.7**	**-3.1**
	0.9nm,0.5s,mb3.6,baz=266,slow=8.2,SNR=20							
SONM	**Songino Array**	**58.30**	**51**		P	**P**	**19 18 15.5**	**-1.8**
	0.2nm,0.3s,mb3.6,baz=280,slow=8.0,SNR=5.3							

IDC 29 19:08:34.3±13.0,**3003S×7666E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.7/17,mbtmp3.8/5,MS3.7/6,Ms1 3.7/6, ms1mx3.3/23,Error ellipse: s-maj=429.5km s-min=34.1km az=42.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**38.49**	**188**		LR	LR	19 27 56.1	
	comp=Z,47nm,21.7s,baz=243,slow=30							
BOSA	**Boshof**	**44.53**	**258**		LR	LR	19 29 43.0	
	comp=Z,185nm,21.8s,baz=177,slow=28							
ASAR	**Alice Springs**	**51.03**	**97**		P	P	19 17 38.5	+0.5
	0.6nm,0.8s,baz=255,slow=6.4,SNR=8.1							
ASAR					LR	LR	19 37 07.2	
	comp=Z,89nm,20.0s,baz=210,slow=34							
WRA	**Warramunga Arr**	**52.77**	**93**		P	P	19 17 51.0	-0.1
	1.0nm,0.9s,baz=249,slow=7.3,SNR=5.1							
VNDA	**Vanda**	**59.88**	**165**		LR	LR	19 40 51.9	
	comp=Z,84nm,21.7s,baz=74,slow=32							
MKAR	**Makanchi Array**	**76.63**	**4**		P	P	19 20 26.7	-0.1
	0.8nm,0.9s,baz=197,slow=7.5,SNR=4.8							
SONM	**Songino Array**	**81.99**	**20**		P	P	19 20 56.7	+0.6
	0.2nm,0.7s,baz=199,slow=3.1,SNR=2.9							
TORD	**Torodi Ar. Bea**	**83.88**	**289**		LR	LR	19 55 29.6	
	comp=Z,62nm,19.5s,baz=170,slow=34							
ZAL	**Zalesovo**	**83.91**	**5**		P	P	19 21 04.7	-1.4
	1.2nm,0.4s,baz=10.0,slow=7.4,SNR=3.3							
ZAL					LR	LR	19 56 21.4	
	comp=Z,32nm,21.2s,baz=169,slow=34							

NNC 29 19:20:25.2±32.0,**3673N×7116E,h182**km±483km**,mb2.5, mpv3.2,2C-2D,Error ellipse: s-maj=455.6km s-min=162.7km az=44.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.38**	**356**	⇑	P	Pn	19 21 57.6	+0.4
	2.0nm,0.5s,baz=178,slow=13,SNR=6.5							
KK31				⇑	S	Sn	19 23 10.4	+0.7
	1.7nm,0.6s,baz=198,slow=50,SNR=7.9							
TKM2	**Tokmak 2**	**7.06**	**28**	⇓	P	Pn	19 22 05.5	-0.6
	1.5nm,1.4s							
AB31	**Akbulak array**	**14.95**	**330**	⇓	P	Pn	19 23 48.5	+1.0
	0.5nm,0.3s,baz=155,slow=12,SNR=25							
AB31					S	Sn	19 26 32.0	-2.2
	0.8nm,0.5s,baz=151,slow=24,SNR=4.1							

*CRAAG **29** 19:36:18.5,3507N×338E,Ml3.9*
*NEIC **29** 19:36:20.8±1.1,3488N×377E,h10km,MG4.1(MDD), Error ellipse: s-maj=15.1km s-min=10.6km az=156.0*
*IDC **29** 19:36:21.9±1.4,3489N×344E,h0km,mb3.3/2,mb1 3.4/6, mb1mx3.2/25,mbtmp3.2/6,ML3.4/4,MS3.2/1,Ms1 3.1/1, ms1mx2.1/25,Error ellipse: s-maj=31.6km s-min=18.7km az=158.0*
*ISCJB **29** 19:36:22.9±0.6,3503N±005×336E±004,h10km,mb3.4/2, MS3.1/1,Error ellipse: s-maj=7.7km s-min=4.3km az=13.8*
*MDD **29** 19:36:26.0±2.0,3477N×334E,h32km±71km,mb4.1/10, Error ellipse: s-maj=38.6km s-min=12.8km az=159.0, PRXIMO*
*CSEM **29** 19:36:28.0±0.2,3497N×290E,h2km,ML3.3/3,Error ellipse: s-maj=7.1km s-min=2.5km az=17.0*

ISC 29 19:36:24.8±0.6,**3501N**±005×**333E**±003,**h10**km**,n43,** σ1§**31/61,mb3.4/2,MS3.1/1,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EMHD	**Djebel Mahouad**	**1.23**	**346**		P	**Pn**	**19 36 43.5**	**-4.5**
ETRT	**Tiaret**	**1.71**	**283**		P	**Pn**	**19 36 53.0**	**-1.6**
ABA	**Alger-Bouzarea**	**1.80**	**352**		P	**Pn**	**19 36 57.5**	**+1.6**
EBNR	**Beni Rached**	**1.94**	**312**		P	**Pg**	**19 37 02.0**	**-0.1**
ECHA	**Ech Chlef**	**1.96**	**306**		P	**Pg**	**19 37 03.5**	**+1.0**
ECHF	**Ech Chlef**	**1.98**	**306**		P	**Pg**	**19 37 03.5**	**+0.6**
EANR	**'Ain N'Sour**	**2.05**	**298**		P	**Pn**	**19 37 00.0**	**+0.7**
CMER	**Merouana**	**2.19**	**73**		P	**Pg**	**19 37 07.0**	**+0.3**
OKGL	**Djebel Kef Gue**	**2.42**	**296**		P	**Pg**	**19 37 15.0**	**+3.8**
DFRA	**Djebel Bou Aff**	**2.58**	**53**		P	**Pn**	**19 37 07.0**	**+0.5**
ODJA	**Bouhanifia**	**2.87**	**277**		P	**Pg**	**19 37 20.0**	**+0.2**
CKFL	**Kef-Lekhel**	**3.09**	**62**		P	**Pg**	**19 37 24.0**	**0.0**
CMAH	**Djebel Manchou**	**3.69**	**63**		P	**Pb**	**19 37 32.0**	**+1.9**
EIBI	**Ibiza**	**4.31**	**339**		P	**Pn**	**19 37 31.4**	**+0.9**
	5.5nm,0.2s,SNR=14							
EIBI					S	**Sn**	**19 38 20.8**	**0.0**
	42nm,1.3s							
EIBI	**Ibiza**	**4.31**	**339**		Pn	**Pn**	**19 37 31.4**	**+0.9**
EIBI					Sn	**Sn**	**19 38 21.1**	**+0.3**
EIBI	**Ibiza**	**4.31**	**339**		Pn	**Pn**	**19 37 31.4**	**+1.0**
	5.5nm,0.2s,SNR=14							
EIBI					Sn	**Sn**	**19 38 21.1**	**+0.3**
	42nm,1.3s							
EMUR	**La Murta**	**4.64**	**309**		P	**Pn**	**19 37 36.2**	**+1.2**
	2.7nm,0.3s,SNR=7.9							
EMUR					S	**Sn**	**19 38 26.0**	**-3.0**
	0.3nm,0.4s,SNR=7.9							
EMUR	**La Murta**	**4.64**	**309**		Pn	**Pn**	**19 37 36.2**	**+1.2**
	2.7nm,0.3s,SNR=7.9							
EMUR					Sn	**Sn**	**19 38 26.0**	**-3.0**
	0.3nm,0.4s,SNR=7.9							
EBEN	**Beniarda**	**4.66**	**323**		P	**Pn**	**19 37 36.6**	**+1.4**
	2.1nm,0.3s,SNR=8.3							
EBEN					S	**Sn**	**19 38 27.3**	**-2.0**
	6.5nm,0.6s							
EBEN	**Beniarda**	**4.66**	**323**		Pn	**Pn**	**19 37 36.6**	**+1.4**
	2.1nm,0.3s,SNR=8.3							
EBEN					Sn	**Sn**	**19 38 27.3**	**-2.0**
	6.5nm,0.6s							
ETOS	**Mallorca**	**4.77**	**355**		P	**Pn**	**19 37 37.4**	**+0.7**
	2.5nm,0.3s,SNR=4.6							
ETOS					S	**Sn**	**19 38 30.3**	**-1.7**
	133nm,1.6s							
ETOS	**Mallorca**	**4.77**	**355**		Pn	**Pn**	**19 37 37.4**	**+0.7**
	2.5nm,0.3s,SNR=4.6							
ETOS					Sn	**Sn**	**19 38 30.3**	**-1.7**
	133nm,1.6s							
KEST	**Kesra**	**4.97**	**80**		Pn	**Pn**	**19 37 38.6**	**-0.9**
	0.2nm,0.3s,baz=177,slow=6.4,SNR=12							
KEST					Sn	**Sn**	**19 38 35.6**	**-1.3**
	0.1nm,0.3s,baz=318,slow=1.4,SNR=3.7							
ETOB	**Tobarra**	**5.34**	**314**		P	**Pn**	**19 37 45.2**	**+0.7**
	2.6nm,0.3s,SNR=7.9							
ETOB					S	**Sn**	**19 38 43.8**	**-2.2**
	5.7nm,0.5s							
ETOB	**Tobarra**	**5.34**	**314**		Pn	**Pn**	**19 37 45.9**	**+1.4**
ETOB					Sn	**Sn**	**19 38 42.9**	**-3.1**
ETOB	**Tobarra**	**5.34**	**314**		Pn	**Pn**	**19 37 45.9**	**+1.4**
	2.6nm,0.3s,SNR=7.9							
ETOB					Sn	**Sn**	**19 38 42.9**	**-3.1**
	5.7nm,0.5s							
EBER	**Berja**	**5.39**	**292**		P	**Pn**	**19 37 44.0**	**-1.1**
	1.2nm,0.2s,SNR=7.9							
EBER	**Berja**	**5.39**	**292**		Pn	**Pn**	**19 37 44.0**	**-1.2**
	1.2nm,0.2s,SNR=7.9							
EQES	**Quesada**	**5.87**	**300**		P	**Pn**	**19 37 52.9**	**+1.1**
	2.0nm,0.2s,SNR=6.0							
EQES					S	**Sn**	**19 38 55.9**	**-3.2**
	5.5nm,0.5s							
EQES	**Quesada**	**5.87**	**300**		Pn	**Pn**	**19 37 52.9**	**+1.1**
EQES					Sn	**Sn**	**19 39 00.5**	**+1.4**
EQES	**Quesada**	**5.87**	**300**		Pn	**Pn**	**19 37 52.9**	**+1.1**
	2.0nm,0.2s,SNR=6.0							
EQUE	**Quentar**	**5.90**	**294**		P	**Pn**	**19 37 53.3**	**+1.0**
	4.4nm,0.3s,SNR=7.9							
EVIA	**Vianos**	**5.92**	**309**		P	**Pn**	**19 37 52.5**	**0.0**
	1.0nm,0.3s,SNR=7.9							
EVIA					S	**Sn**	**19 38 56.3**	**-4.0**
	7.1nm,0.5s,SNR=4.0							
EVIA	**Vianos**	**5.92**	**309**		Pn	**Pn**	**19 37 52.5**	**0.0**
	1.0nm,0.3s,SNR=7.9							
EVIA					Sn	**Sn**	**19 38 56.2**	**-4.1**
EMOS	**Mosqueruela**	**6.14**	**332**		P	**Pn**	**19 37 57.3**	**+1.9**
	1.3nm,0.2s,SNR=7.3							
EMOS					S	**Sn**	**19 39 03.7**	**-2.0**
	18nm,1.1s							
EMOS	**Mosqueruela**	**6.14**	**332**		Pn	**Pn**	**19 37 57.3**	**+1.8**
	1.3nm,0.2s,SNR=7.3							
EMOS					Sn	**Sn**	**19 39 03.7**	**-2.0**
MDT	**Midelt**	**6.96**	**254**		Pn	**Pn**	**19 38 06.2**	**-0.6**
	0.6nm,0.3s,baz=66,slow=5.1,SNR=29							
MDT					Lg		19 40 05.4	
	0.3nm,0.3s,baz=236,slow=13,SNR=3.3							
ESDC	**Sonseca Array**	**7.44**	**311**		Pn	**Pn**	**19 38 13.9**	**+0.5**
	0.3nm,0.3s,baz=127,slow=14,SNR=3.8							
GERES	**GERESS Array B**	**15.81**	**26**		Pn	**Pn**	**19 40 07.5**	**0.0**
	0.1nm,0.3s,baz=225,slow=24,SNR=3.1							
TORD	**Torodi Ar. Bea**	**21.82**	**184**		P	**P**	**19 41 14.3**	**-2.8**
	0.5nm,0.6s,mb3.1,baz=0.0,slow=9.8,SNR=4.4							
TORD	**Torodi Ar. Bea**	**21.82**	**184**		P	**P**	**19 41 14.3**	**-2.8**
DBIC	**Dimbokro**	**29.19**	**197**		LR	LR	19 54 46.7	
	comp=Z,43nm,20.3s,MS3.1,baz=137,slow=38							
MKAR	**Makanchi Array**	**58.47**	**52**		P	**P**	**19 46 18.9**	**-2.0**
	0.4nm,0.6s,mb3.6,baz=277,slow=6.0,SNR=5.2							

*IDC **29** 19:56:59.8±1.1,542N×9445E,h0km,mb4.1/10, mb1 4.2/10,mb1mx3.9/22,mbtmp4.1/10,MS3.6/6, Ms1 3.6/6,ms1mx3.3/37,Error ellipse: s-maj=40.7km s-min=16.2km az=53.0*
*MOS **29** 19:57:02.8±1.3,542N×9446E,h33km,mb4.6/6,Error ellipse: s-maj=27.1km s-min=12.0km az=102.8*
*ISCJB **29** 19:57:03.8±0.5,525N±006×9426E±006,h47km,mb4.3/28, MS3.6/12,Error ellipse: s-maj=9.8km s-min=7.6km az=101.7*
*BJI **29** 19:57:04.8,538N×9437E,h40km,mB4.8,mb4.5,Ms4.2, Msz4.0*
*NEIC **29** 19:57:06.1±0.6,526N×9433E,mb4.5/7,Error ellipse: s-maj=15.9km s-min=9.0km az=46.0*

ISC 29 19:57:06.1±0.6,**527N**±006×**9424E**±007,**h49**km**,** **h49**km±1.3km**:pP-P,n49,**σ1§**31/51,mb4.3/28,MS3.6/12,1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PKT	**Phuket**	**4.81**	**54**		P	**Pn**	**19 58 17.5**	**+1.5**
PSI	**Prapat**	**5.28**	**118**		Pn	**Pn**	**19 58 23.7**	**+1.4**
	5.6nm,0.3s,baz=288,slow=13,SNR=26							
PSI					LR	LR	20 00 44.2	
	comp=Z,518nm,19.4s,baz=293,slow=43							
KULM	**Kulim**	**6.38**	**90**		*e*Pn	**Pn**	**19 58 36.4**	**-1.1**
SNG	**Songkhla**	**6.62**	**73**		P	**Pn**	**19 58 41.0**	**+0.3**
PALK	**Pallekele**	**13.60**	**279**		*e*Pn	**Pn**	**20 00 18.8**	**+2.6**
PALK					*e*Sn	**Sn**	**20 02 35.7**	**-10**
CHTO	**Chiang Mai**	**14.22**	**18**		*e*P	**Pn**	**20 00 27.5**	**+2.8**
CHTO					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CHTO	**Chiang Mai**	**14.22**	**18**		*e*Pn	**Pn**	**20 00 27.5**	**+2.8**
	comp=Z,10nm,0.6s							
QIZ	**Qiongzhong**	**20.46**	**47**		P	**P**	**20 01 40.5**	**+1.0**
QIZ					AP		20 01 51.3	
QIZ					XP	sP	20 01 57.8	+0.8
QIZ					S	**S**	**20 05 20.5**	**-5.3**
QIZ					AMB	AMB		
	comp=Z,14nm,2.0s							
QIZ					LR	LR		
	comp=N,223nm,16.7s							
QIZ					LR	LR		
	comp=Z,197nm,20.4s,MS3.5			

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HHC				LR	LR		
	comp=Z,92nm,18.0s,MS3.6						
FITZ	**Fitzroy Crossi**	**38.71**	**128**	P	**P**	**20 04 24.8**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.7,baz=250,slow=4.0,SNR=8.1						
WMQ	**Urumqi**	**38.83**	**352**	*e*P	**P**	**20 04 28.0**	**+1.8**
WMQ				AP	pP	20 04 40.0	+0.8
WMQ				XP	sP	20 04 46.0	+1.1
WMQ				PP	PP	20 06 02.0	+6.2
WMQ				S	**S**	**20 10 24.0**	**+3.5**
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.7						
WMQ				LR	LR		
	comp=N,38nm,12.0s,MS3.7						
WMQ				LR	LR		
	comp=E,51nm,12.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,25nm,12.0s,MS3.3						
JOW	**Kunigami**	**38.89**	**53**	P	**P**	**20 04 25.9**	**-0.8**
	comp=Z,2.3nm,0.3s,mb4.4,baz=216,slow=8.7,SNR=10						
BJT	**Baijiatuau**	**39.84**	**27**	P	**P**	**20 04 34.8**	**+0.2**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BJT	**Baijiatuau**	**39.84**	**27**	P	**P**	**20 04 34.8**	**+0.1**
	comp=Z,5.4nm,0.6s,mb4.5						
MKAR	**Makanchi Array**	**42.64**	**348**	P	**P**	**20 04 57.8**	**+0.2**
	comp=Z,3.5nm,0.6s,mb4.3,baz=164,slow=7.0,SNR=31						
SONM	**Songino Array**	**43.67**	**12**	P	**P**	**20 05 03.9**	**-2.1**
	comp=Z,1.8nm,0.9s,mb3.8,baz=190,slow=7.5,SNR=11						
ULN	**Ulaanbaatar**	**43.84**	**12**	*e*P	**P**	**20 05 05.9**	**-1.4**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
ULN	**Ulaanbaatar**	**43.84**	**12**	*e*P	**P**	**20 05 05.9**	**-1.4**
	comp=Z,0.7nm,0.5s,mb3.6						
WRA	**Warramunga Arr**	**46.71**	**124**	P	**P**	**20 05 30.1**	**0.0**
	comp=Z,1.9nm,0.5s,mb4.3,baz=301,slow=9.8,SNR=36						
WRA	**Warramunga Arr**	**46.71**	**124**	P	**P**	**20 05 30.1**	**0.0**
WRAB	**Tennant Creek**	**46.71**	**124**	*e*P	**P**	**20 05 30.0**	**-0.1**
WRAB				*e**PP	pP	20 05 43.3	0.0
WRAB				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
WRAB	**Tennant Creek**	**46.71**	**124**	*e*P	**P**	**20 05 30.0**	**-0.1**
	comp=Z,25nm,1.1s,mb5.1						
WRAB				*e*pP	pP	20 05 43.3	0.0
AS31	**Alice Springs**	**48.20**	**128**	*e*Pn	**P**	**20 05 42.3**	**+0.6**
AS31				*e*pP	pP	20 05 55.8	+0.9
ASAR	**Alice Springs**	**48.20**	**128**	P	**P**	**20 05 42.0**	**+0.4**
	comp=Z,1.1nm,0.5s,mb4.2,baz=300,slow=8.0,SNR=46						
ASAR				LR	LR	20 24 59.6	
	comp=Z,123nm,21.5s,MS3.9,baz=192,slow=35						
ZAL	**Zalesovo**	**49.13**	**353**	P	**P**	**20 05 47.8**	**-0.9**
	comp=Z,2.6nm,0.8s,mb4.3,baz=289,slow=6.3,SNR=17						
MDJ	**Mudanjiang**	**49.91**	**33**	P	**P**	**20 05 56.5**	**+1.7**
MDJ				AP	pP	20 06 08.0	-0.1
MDJ				XP	sP	20 06 13.0	-0.7
MDJ				PP	PP	20 07 52.0	+2.1
MDJ				SCP	ScP	20 11 08.0	+2.0
MDJ				PCS	PcS	20 11 12.8	+1.4
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,37nm,5.3s						
MDJ				LR	LR		
	comp=N,17nm,23.6s,MS3.2						
MDJ				LR	LR		
	comp=E,22nm,19.4s,MS3.2						
MDJ				LR	LR		
	comp=Z,23nm,20.8s,MS3.2						
NVS	**Novosibirsk**	**50.22**	**352**	*e*P	**P**	**20 05 54.9**	**-2.2**
NVS				pmax	pmax		
	comp=N,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
GUMO	**Guam**	**50.54**	**77**	LR	LR	20 27 21.7	
	comp=Z,50nm,18.2s,MS3.6,baz=267,slow=36						
ATD	**Arta Tunnel**	**51.16**	**281**	LR	LR	20 22 38.1	
	comp=Z,56nm,21.2s,MS3.6,baz=162,slow=30						
ZRNK	**Zerenda**	**51.85**	**341**	*e*P	**P**	**20 06 08.1**	**-1.2**
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
ZRNK	**Zerenda**	**51.85**	**341**	*e*P	**P**	**20 06 08.1**	**-1.3**
	comp=Z,3.2nm,0.9s,mb4.2						
CHKZ	**Chkalovo**	**51.97**	**342**	*e*P	**P**	**20 06 10.2**	**0.0**
CHKZ				*e**PP	pP	20 06 23.7	+0.1
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
CHKZ	**Chkalovo**	**51.97**	**342**	*e*P	**P**	**20 06 10.2**	**0.0**
	comp=Z,6.4nm,0.8s,mb4.6						
CHKZ				*e*pP	pP	20 06 23.7	+0.1
BOD	**Bodaibo**	**54.65**	**13**	*e*P	**P**	**20 06 27.2**	**-2.7**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
CTA	**Charters Tower**	**56.98**	**118**	LR	LR	20 33 29.7	
	comp=Z,105nm,19.0s,MS4.0,baz=192,slow=38						
ASF	**Jabal al Asfar**	**59.73**	**304**	LR	LR	20 34 53.3	
	comp=Z,37nm,19.4s,MS3.5,baz=303,slow=38						
FINES	**FINESS Array B**	**75.05**	**333**	P	**P**	**20 08 43.5**	**+1.0**
	comp=Z,1.2nm,0.8s,mb3.9,baz=114,slow=9.3,SNR=4.7						
ARCES	**ARCESS Array B**	**77.74**	**340**	P	**P**	**20 08 57.0**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.8,baz=80,slow=6.7,SNR=4.2						
GERES	**GERESS Array B**	**79.83**	**319**	P	**P**	**20 09 10.8**	**+1.6**
	comp=Z,1.4nm,0.8s,mb3.9,baz=91,slow=5.7,SNR=11						

CASC 29 20:00:45.2±3.4**, 1335N**×**9035W, h20**km±23km**, MD3.5,**
Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.85**	**55**	*e*P	x	20 01 17.1	
SBLS				*e*S	x	20 01 28.8	
RTR	**El Retiro**	**0.87**	**51**	*e*P	x	20 01 17.4	
RTR				*e*S	x	20 01 28.7	
SNJE	**San Jose**	**0.88**	**54**	*e*P	x	20 01 17.5	
SNJE				*e*S	x	20 01 29.4	
RBDL	**Robledal**	**0.99**	**40**	*e*P	x	20 01 19.6	
RBDL				*e*S	x	20 01 32.7	
BOQS	**Boqueron**	**1.10**	**70**	*e*P	x	20 01 20.3	
BOQS				*e*S	x	20 01 35.1	
FUG	**Fuego 3**	**1.19**	**336**	*e*P	Pn	20 01 06.4	-0.3
LFRS	**El Faro**	**1.28**	**78**	*e*P	x	20 01 22.2	
LCBS	**La Ceiba**	**1.36**	**77**	*e*P	x	20 01 24.2	
MTO2	**Montecristo 2**	**1.41**	**42**	*e*P	x	20 01 26.0	
SNVI	**San Vicente**	**1.49**	**80**	*e*P	x	20 01 26.2	
SNVI				*e*S	x	20 01 44.2	
JAT	**Jato**	**1.58**	**308**	*e*P	Pn	20 01 11.7	-0.3

*MAN **29** 20:04:06.4, 549N×127.18E, h105km, mb3.7, ML4.8, MS3.0*
*MOS **29** 20:04:06.5±1.0, 576N×127.16E, h130km, mb4.7/19, Error ellipse: s-maj=15.1km s-min=7.0km az=108.7*
*BJI **29** 20:04:08.8, 548N×127.11E, h168km, mB4.7, mb4.6*
*ISCJB **29** 20:04:08.1±0.6, 566N±004×127.11E±006, h145km±4km, mb4.6/70, Error ellipse: s-maj=10.0km s-min=5.5km az=154.6*
*IDC **29** 20:04:09.6±3.7, 572N×12705E, h138km±35km, mb4.2/28, mb1 4.2/28, mb1mx4.2/31, mbtmp4.6/28, Error ellipse: s-maj=18.4km s-min=8.5km az=83.0*
*NEIC **29** 20:04:10.0±0.9, 567N×12702E, h147km±8km, mb4.7/25, Error ellipse: s-maj=8.5km s-min=4.8km az=77.0*
ISC 29 20:04:09.5±0.6**, 567N**±003×**12710E**±006**, h141**km±4km**, h141**km±1.1km**: pP-P, n124,** σ**1.02**/132**, mb4.6**/70**, 6C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.52**	**327**	*e*P	**Pn**	**20 04 36.4**	**-2.2**
MATI				*e*S	**Sn**	**20 04 56.3**	**-4.4**
DAV	**Davao City (W)**	**2.05**	**313**	*e*P	**Pn**	**20 04 46.0**	**+1.3**
DAV	**Davao City (W)**	**2.05**	**313**	*e*Pn	**Pn**	**20 04 44.3**	**-0.4**
BUKP	**Musuan**	**2.98**	**317**	*e*P	**Pn**	**20 04 55.2**	**-1.0**
BUKP				*e*S	**Sn**	**20 05 32.0**	**-0.4**
BUTP	**Butuan**	**3.59**	**336**	*e*P	**Pn**	**20 05 03.9**	**-0.2**
BUTP				*e*S	**Sn**	**20 05 47.3**	**+0.9**
CGP	**Cagayan de Oro**	**3.65**	**319**	*e*P	**Pn**	**20 05 04.9**	**0.0**
CGP				*i* S	**Sn**	**20 05 49.4**	**+1.5**
PAGZ	**Pagadian**	**4.28**	**301**	*e*P	**Pn**	**20 05 13.0**	**-0.2**
SCPH	**Surigao**	**4.38**	**339**⇓	*e*P	**Pn**	**20 05 14.7**	**+0.2**
MSLP	**Maasin**	**4.96**	**334**	*e*P	**Pn**	**20 05 22.8**	**+0.6**
PVCP	**Virac**	**8.39**	**340**⇑	*e*P	**Pn**	**20 06 07.1**	**-1.0**
PVCP	**Virac**	**8.39**	**340**	*e*P	**Pn**	**20 06 07.0**	**-1.2**
PVCP				*e*S	**Sn**	**20 07 30.5**	**-11**
KKM	**Kota Kinabalu**	**10.83**	**273**	*e*Pn	**Pn**	**20 06 40.4**	**-0.2**
KSM	**Kuching**	**17.26**	**257**	*e*Pn	**Pn**	**20 08 02.0**	**0.0**
YHNB	**Yeheng**	**19.67**	**344**	*e*P	**P**	**20 08 29.1**	**+1.6**
QZH	**Quanzhou**	**20.83**	**338**	P	**P**	**20 08 41.5**	**+1.6**
QZH				S	**S**	**20 12 26.5**	**+2.2**
JOW	**Kunigami**	**21.07**	**3**	P	**P**	**20 08 43.5**	**+1.0**
	22nm,0.7s,mb4.6,baz=197,slow=7.9,SNR=24						
QIZ	**Qiongzhong**	**21.42**	**310**	P	**P**	**20 08 46.3**	**+0.1**
QIZ				S	**S**	**20 12 34.0**	**-1.8**
QIZ				AMB	AMB		
	comp=Z,41nm,1.3s,mb4.6						
QIZ	**Qiongzhong**	**21.42**	**310**	*e*P	**P**	**20 08 46.3**	**+0.1**
	comp=Z,25nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**23.67**	**183**	P	**P**	**20 09 09.5**	**+1.5**
	comp=Z,3.8nm,0.5s,mb4.2,baz=19,slow=4.4,SNR=22						
CBIJ	**Chichi jima**	**25.70**	**32**	P	**P**	**20 09 25.9**	**-0.6**
	comp=Z,44nm,0.4s,mb5.4,baz=280,slow=6.3,SNR=16						
SSE	**Sheshan**	**25.89**	**348**	P	**P**	**20 09 27.8**	**-0.4**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
SSE				AMB	AMB		
	comp=Z,26nm,3.1s						
KULM	**Kulim**	**26.33**	**270**	P	**P**	**20 09 30.2**	**-1.9**
WRAB	**Tennant Creek**	**26.43**	**165**	*e*P	**P**	**20 09 32.3**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**26.43**	**165**	*e*P	**P**	**20 09 32.2**	**-0.8**
	comp=Z,18nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**26.43**	**165**	P	**P**	**20 09 33.0**	**-0.1**
	comp=Z,4.9nm,0.5s,mb4.4,baz=346,slow=10,SNR=30						
WB2	**Warramunga Arr**	**26.43**	**165**	*e*P	**P**	**20 09 32.8**	**-0.3**
NJ2	**Nanjing**	**27.35**	**345**	*e*P	**P**	**20 09 43.3**	**+2.0**
NJ2				AP	pP	20 10 12.8	+1.7
NJ2				XP	sP	20 10 37.8	+10
NJ2				S	**S**	**20 14 11.0**	**+0.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,20nm,5.1s						
NJ2				LR	LR		
	comp=N,510nm,21.2s						
NJ2				LR	LR		
	comp=E,4µm,23.1s						
NJ2				LR	LR		
	comp=Z,1µm,23.1s						
MBWA	**Marble Bar**	**27.63**	**195**	*e*P	**P**	**20 09 42.4**	**-1.3**
	comp=Z,4.1nm,0.6s,mb4.3						
PSI	**Prapat**	**28.24**	**265**	P	**P**	**20 09 49.0**	**-0.2**
	comp=Z,3.4nm,0.6s,mb4.3,baz=82,slow=7.1,SNR=4.5						
GYA	**Guiyang**	**28.42**	**319**⇑	*i*P	**P**	**20 09 51.0**	**+0.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,70nm,4.8s						
AS31	**Alice Springs**	**29.91**	**167**	*e*P	**P**	**20 10 03.6**	**-0.3**
ASAR	**Alice Springs**	**29.91**	**167**	P	**P**	**20 10 04.3**	**+0.4**
	comp=Z,1.9nm,0.8s,mb3.9,baz=341,slow=7.0,SNR=24						
ASAR				PcP	PcP	20 13 05.2	+1.9
	comp=Z,1.3nm,0.6s,baz=341,slow=2.6,SNR=6.0						
KMI	**Kunming**	**30.31**	**312**	P	**P**	**20 10 08.5**	**+1.0**
KMI				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.5						
KMI				LR	LR		
	comp=Z,54nm,29.2s						
CTA	**Charters Tower**	**31.78**	**144**	P	**P**	**20 10 22.6**	**+2.1**
	comp=Z,3.6nm,0.8s,mb4.2,baz=314,slow=10.0,SNR=5.1						
MAJO	**Matsushiro**	**32.37**	**17**	P	**P**	**20 10 25.0**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
MAJO	**Matsushiro**	**32.37**	**17**	P	**P**	**20 10 25.0**	**-0.6**
	comp=Z,3.3nm,0.6s,mb4.2						
MJAR	**Matsushiro Arr**	**32.37**	**17**	P	**P**	**20 10 24.9**	**-0.7**
	comp=Z,1.9nm,0.7s,mb3.9,baz=190,slow=8.5,SNR=7.6						
MJAR				PcP	PcP	20 13 11.2	+1.4
	comp=Z,1.4nm,0.6s,baz=181,slow=3.3,SNR=5.7						
XAN	**Xi'an**	**32.88**	**331**	P	**P**	**20 10 30.0**	**0.0**
XAN				AMB	AMB		
	comp=Z,36nm,0.8s,mb5.2						
CD2	**Chengdu**	**33.33**	**322**⇑	*i*P	**P**	**20 10 34.0**	**+0.1**
CD2				PP	PP	20 11 51.0	-1.0
CD2				S	**S**	**20 15 43.8**	**-0.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
BJT	**Baijiatuau**	**35.58**	**346**	*e*P	**P**	**20 10 53.1**	**-0.2**
BJT				pmax	pmax		
	comp=Z,21nm,0.7s						
BJT	**Baijiatuau**	**35.58**	**346**	*e*P	**P**	**20 10 53.1**	**-0.2**
	comp=Z,22nm,0.7s,mb4.9						
BJI	**Beijing**	**35.60**	**346**	P	**P**	**20 10 53.3**	**-0.2**
BJI				AMB	AMB		
	comp=Z,29nm,0.8s,mb5.0						
FORT	**Forrest**	**36.26**	**179**	*e*P	**P**	**20 10 59.8**	**+0.8**
	comp=Z,20nm,0.6s,mb4.9						
LZH	**Lanzhou**	**37.04**	**328**	⇑P	**P**	**20 11 06.8**	**+1.1**
LZH				AP	pP	20 11 37.5	+1.1
LZH				PP	PP	20 12 38.8	+5.9
LZH				AMB	AMB		
	comp=Z,36nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,83nm,5.4s						
LZH				LR	LR		
	comp=N,287nm,13.7s						
LZH				LR	LR		
	comp=Z,442nm,17.6s						
HHC	**Hu-ho-hao-te**	**37.69**	**341**	*e*P	**P**	**20 11 12.3**	**+1.2**
HHC				AP	pP	20 11 43.5	+1.5
HHC				PP	PP	20 12 47.5	+7.5
HHC				PCP	PcP	20 13 27.0	+1.6
HHC				S	**S**	**20 16 52.3**	**+1.6**
HHC				PCS	PcS	20 17 14.5	+0.3
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,71nm,5.2s						
HHC				LR	LR		
	comp=N,73nm,19.9s						
HHC				LR	LR		
	comp=E,69nm,21.8s						
HHC				LR	LR		
	comp=Z,123nm,17.1s						
MDJ	**Mudanjiang**	**38.85**	**3**	P	**P**	**20 11 22.0**	**+1.1**
MDJ				AP	pP	20 11 52.5	+0.7
MDJ				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,56nm,5.5s						
MDJ				LR	LR		
	comp=N,22nm,24.8s						
MDJ				LR	LR		
	comp=E,31nm,18.9s						
MDJ				LR	LR		
	comp=Z,28nm,16.5s						
MDJ	**Mudanjiang**	**38.85**	**3**	*e*P	**P**	**20 11 21.8**	**+0.9**
	comp=Z,10nm,0.8s,mb4.5						
MUN	**Mundaring**	**38.85**	**195**	*e*P	**P**	**20 11 21.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**39.51**	**193**	P	**P**	**20 11 27.6**	**+1.3**
	comp=Z,9.6nm,0.5s,mb4.7,baz=25,slow=7.8,SNR=22						
NWAO	**Narrogin (SRO)**	**39.51**	**193**	*e*P	**P**	**20 11 26.9**	**+0.6**
NWAO				pmax	pmax		
	comp=Z,27nm,1.0s						
NWAO	**Narrogin (SRO)**	**39.51**	**193**	*e*P	**P**	**20 11 26.9**	**+0.6**
	comp=Z,27nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**39.82**	**161**	P	**P**	**20 11 29.9**	**+1.1**
	comp=Z,11nm,0.7s,mb4.6,baz=332,slow=8.8,SNR=27						
STKA	**Stephens Creek**	**39.82**	**161**	*e*P	**P**	**20 11 29.2**	**+0.4**
STKA				*e*pP	pP	20 12 01.2	+1.2
ASAJ	**Asahikawa**	**40.64**	**17**	P	**P**	**20 11 37.0**	**+1.3**
	comp=Z,11nm,0.7s,mb4.6,baz=196,slow=4.9,SNR=11						
LSA	**Lhasa**	**41.46**	**310**	P	**P**	**20 11 43.5**	**+1.1**
LSA	**Lhasa**	**41.46**	**310**	*e*P	**P**	**20 11 43.4**	**+1.0**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
LSA	**Lhasa**	**41.46**	**310**	*e*P	**P**	**20 11 43.4**	**+1.0**
	comp=Z,5.3nm,0.7s,mb4.3						
GTA	**Gaotai**	**41.64**	**328**	*e*P	**P**	**20 11 44.5**	**+0.7**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.8s,mb3.9						
YSS	**Yuzh-Sakhalins**	**43.28**	**16**⇑	*e*P	**P**	**20 11 57.7**	**+0.6**
YSS				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.6						
YSS	**Yuzh-Sakhalins**	**43.28**	**16**	P	**P**	**20 11 57.4**	**+0.3**
	comp=Z,14nm,0.8s,mb4.7						
KLR	**Kul'dur**	**43.58**	**4**	*e*P	**P**	**20 11 56.7**	**-2.8**
GUN	**Gumba**	**44.91**	**304**	*e*P	**P**	**20 12 10.3**	**+0.2**
	comp=Z,38nm,0.6s,mb5.2						
PKI	**Pulchoki**	**45.18**	**304**	*e*P	**P**	**20 12 11.9**	**-0.2**
	comp=Z,15nm,0.7s,mb4.7						
PKI	**Pulchoki**	**45.18**	**304**	*e*P	**P**	**20 12 11.9**	**-0.2**
PKI				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.7						
KKN	**Kakani**	**45.36**	**304**	*e*P	**P**	**20 12 13.2**	**-0.4**
	comp=Z,12nm,0.6s,mb4.7						
KKN	**Kakani**	**45.36**	**304**	*e*P	**P**	**20 12 13.2**	**-0.4**
KKN				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
ULN	**Ulaanbaatar**	**45.40**	**341**	*e*P	**P**	**20 12 14.7**	**+0.8**
ULN				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**45.40**	**341**	*e*P	**P**	**20 12 14.7**	**+0.7**
	comp=Z,14nm,0.7s,mb4.7						
DMN	**Daman**	**45.44**	**304**	*e*P	**P**	**20 12 12.5**	**-1.7**
	comp=Z,45nm,1.2s,mb5.0						
SONM	**Songino Array**	**45.59**	**341**	P	**P**	**20 12 16.2**	**+0.8**
	comp=Z,5.7nm,0.7s,mb4.3,baz=157,slow=8.6,SNR=33						
GKN	**Gorkha**	**45.97**	**304**	*e*P	**P**	**20 12 15.9**	**-2.5**
	comp=Z,13nm,0.7s,mb4.7						
KOLN	**Koldanda**	**46.75**	**303**	*e*P	**P**	**20 12 19.7**	**-4.8**
ZAK	**Zakamensk**	**48.83**	**340**	*e*P	**P**	**20 12 39.8**	**-0.7**
WMQ	**Urumqi**	**51.37**	**324**	*e*P	**P**	**20 13 02.0**	**+2.4**
WMQ				AP	pP	20 13 34.0	+1.9
WMQ				PP	PP	20 15 02.0	+4.0
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.6						
WMQ				LR	LR		
	comp=N,41nm,14.0s						
WMQ				LR	LR		
	comp=E,54nm,14.0s						
WMQ				LR	LR		
	comp=Z,49nm,14.0s						
BOD	**Bodaibo**	**53.01**	**351**	*e*P	**P**	**20 13 09.9**	**-1.8**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
PET	**Petropavlovsk**	**53.81**	**23**	P	**P**	**20 13 16.6**	**-0.9**
MKAR	**Makanchi Array**	**56.19**	**324**	P	**P**	**20 13 34.9**	**+0.2**
	comp=Z,7.9nm,0.4s,mb4.8,baz=118,slow=7.4,SNR=82						
YAK	**Yakutsk**	**56.27**	**1**	*e*P	**P**	**20 13 35.0**	**-0.2**
YAK				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.2						
YAK	**Yakutsk**	**56.27**	**1**	*e*P	**P**	**20 13 35.0**	**-0.2**
	comp=Z,38nm,0.9s,mb5.2						
ZAL	**Zalesovo**	**59.04**	**332**	P	**P**	**20 13 54.1**	**-0.4**
	comp=Z,3.8nm,0.5s,mb4.5,baz=344,slow=6.7,SNR=18						
AAK	**Ala-Archa**	**59.18**	**317**	*e*P	**P**	**20 13 55.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
AAK	**Ala-Archa**	**59.18**	**317**	*e*P	**P**	**20 13 55.3**	**-0.2**
	comp=Z,4.2nm,0.7s,mb4.4						
NVS	**Novosibirsk**	**60.32**	**333**	*e*P	**P**	**20 14 01.3**	**-2.0**
NVS				pmax	pmax		
	comp=N,5.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
BVAR	**Borovoye Array**	**65.91**	**326**	P	**P**	**20 14 40.2**	**+0.1**
	comp=Z,9.9nm,0.7s,mb4.8,baz=127,slow=8.1,SNR=54						
BRVK	**Borovoye**	**65.98**	**326**	*e*P	**P**	**20 14 40.5**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
BRVK	**Borovoye**	**65.98**	**326**	*e*P	**P**	**20 14 40.5**	**-0.1**
	comp=Z,11nm,0.8s,mb4.7						
CHKZ	**Chkalovo**	**66.06**	**327**	*e*P	**P**	**20 14 40.9**	**-0.2**
CHKZ				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.7						
CHKZ	**Chkalovo**	**66.06**	**327**	*e*P	**P**	**20 14 40.9**	**-0.2**
	comp=Z,14nm,1.2s,mb4.7						
ZRNK	**Zerenda**	**66.64**	**326**	*e*P	**P**	**20 14 44.5**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
ZRNK	**Zerenda**	**66.64**	**326**	*e*P	**P**	**20 14 44.5**	**-0.4**
	comp=Z,20nm,0.7s,mb5.1						
AKTK	**Aktyubinsk**	**72.38**	**321**	P	**P**	**20 15 20.4**	**+0.4**
AKTO	**Aktyubinsk**	**72.38**	**321**	P	**P**	**20 15 20.4**	**+0.4**
	comp=Z,12nm,0.6s,mb4.8,baz=102,slow=7.6,SNR=67						
ARU	**Arti**	**73.50**	**327**	*e*P	**P**	**20 15 25.8**	**-0.9**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
ARU	**Arti**	**73.50**	**327**	*e*P	**P**	**20 15 25.8**	**-0.9**
	comp=Z,10nm,0.8s,mb4.6						
MIR	**Mirnyy**	**76.12**	**193***d*	*i*P	**P**	**20 15 44.0**	**+2.3**
MIR				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
UMR	**Umm Al-Rimmam**	**78.00**	**299**	*e*P	**P**	**20 15 51.9**	**-0.3**
UMR				AMb	AMB	20 15 52.7	
	comp=Z,30nm,0.7s,mb5.1						
RDF	**Al-Radifah**	**78.14**	**298**	*e*P	**P**	**20 15 52.7**	**-0.3**
RDF				AMb	AMB	20 15 53.4	
	comp=Z,32nm,0.8s,mb5.0						
NAY	**Al-Naaiem**	**78.41**	**299**	*e*P	**P**	**20 15 54.2**	**-0.2**
NAY				AMb	AMB	20 15 55.5	
	comp=Z,20nm,0.6s,mb4.9						
GNI	**Garni**	**80.53**	**310**	P	**P**	**20 16 07.3**	**+1.3**
	comp=Z,4.2nm,0.6s,mb4.2,baz=168,slow=12,SNR=4.0						
KIV	**Kislovodsk**	**82.07**	**313**	P	**P**	**20 16 15.0**	**+0.9**
OPO	**Ambohidratompo**	**82.28**	**250**	P	**P**	**20 16 16.2**	**+1.0**
	comp=Z,4.8nm,0.9s,mb4.1,baz=62,slow=5.4,SNR=7.1						
COLA	**College**	**82.80**	**25**	*e*P	**P**	**20 16 16.8**	**-1.0**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
COLA	**College**	**82.80**	**25**	*e*Pn	**P**	**20 16 16.8**	**-1.1**
	comp=Z,5.3nm,0.7s,mb4.4						
VNDA	**Vanda**	**85.29**	**173**	P	**P**	**20 16 30.8**	**+0.3**
	comp=Z,2.4nm,0.9s,mb3.9,baz=320,slow=5.7,SNR=13						
MALT	**Malatya**	**85.48**	**308**	*e*P	**P**	**20 16 32.7**	**+1.3**
MALT				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
MALT	**Malatya**	**85.48**	**308**	*e*P	**P**	**20 16 32.6**	**+1.2**
	comp=Z,13nm,1.1s,mb4.6						
OBN	**Obninsk**	**85.69**	**325***d*	*e*P	**P**	**20 16 32.0**	**-0.5**
OBN				*e*	pP	20 17 06.5	-1.6
OBN				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
ASF	**Jabal al Asfar**	**87.19**	**302**	P	**P**	**20 16 41.7**	**+2.0**
	comp=Z,5.1nm,0.7s,mb4.5,baz=349,slow=3.0,SNR=12						
INK	**Inuvik**	**88.23**	**22**	P	**P**	**20 16 43.6**	**-1.1**
	comp=Z,2.7nm,0.8s,mb4.1,baz=282,slow=1.7,SNR=5.7						
INK	**Inuvik**	**88.23**	**22**	*e*P	**P**	**20 16 43.1**	**-1.6**
INK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
INK	**Inuvik**	**88.23**	**22**	*e*P	**P**	**20 16 43.1**	**-1.6**
	comp=Z,6.8nm,1.1s,mb4.4						
ARCES	**ARCESS Array B**	**88.76**	**340**	P	**P**	**20 16 46.2**	**-1.0**
	comp=Z,3.3nm,0.6s,mb4.4,baz=83,slow=6.0,SNR=21						
ARCES	**ARCESS Array B**	**88.76**	**340**	P	**P**	**20 16 46.2**	**-1.0**
ARE0	**ARCESS Array S**	**88.76**	**340**	*e*P	**P**	**20 16 45.8**	**-1.4**
BRTR	**Keskin Array B**	**89.07**	**310**	P	**P**	**20 16 48.5**	**-0.2**
	comp=Z,1.5nm,0.8s,mb4.0,baz=106,slow=4.4,SNR=6.1						
EIL	**Elat**	**89.09**	**300**	*e*P	**P**	**20 16 48.7**	**-0.1**
	comp=Z,82nm,0.8s,mb5.7						
FINES	**FINESS Array B**	**90.30**	**332**	P	**P**	**20 16 53.9**	**-0.5**
	comp=Z,1.3nm,0.8s,mb3.9,baz=62,slow=4.7,SNR=11						
AKASG	**Malin Array Be**	**90.62**	**321**	P	**P**	**20 16 55.0**	**-0.9**
	comp=Z,0.8nm,0.5s,mb4.0,baz=66,slow=3.8,SNR=7.4						
MLR	**Muntele Rosu**	**93.76**	**316**	P	**P**	**20 17 08.8**	**-1.6**
	comp=Z,2.5nm,0.5s,mb4.6,baz=130,slow=18,SNR=2.7						
SYO	**Syowa Base**	**94.36**	**201**⇑	*e*P	**P**	**20 17 12.6**	**-0.5**
HFS	**Hagfors**	**96.48**	**332**	P	**P**	**20 17 21.2**	**-1.6**
	comp=Z,1.2nm,0.7s,mb4.3,baz=92,slow=8.7,SNR=5.9						
NOA	**NORSAR Array B**	**97.22**	**334**	P	**P**	**20 17 25.3**	**-0.8**
	comp=Z,1.6nm,1.1s,mb4.2,baz=336,slow=8.8,SNR=2.7						
TORD	**Torodi Ar. Bea**	**122.64**	**289**	PKP	PKPdf	20 22 49.5	+1.1
	comp=Z,1.5nm,0.7s,baz=42,slow=2.2,SNR=9.3						
TORD	**Torodi Ar. Bea**	**122.64**	**289**	PKP	PKPdf	20 22 49.5	+1.1

*IDC **29** 20:06:25.7±2.4, 1589N×9196W, h154km±27km, mb3.7/6, mb1 4.1/7, mb1mx3.6/22, mbtmp4.3/7, Error ellipse: s-maj=41.6km s-min=15.1km az=52.0*
*ISCJB **29** 20:06:26.9±0.6, 1571N±005×9239W±004, h195km±5km, mb4.0/8, Error ellipse: s-maj=8.3km s-min=5.9km az=13.0*
*NEIC **29** 20:06:27.3, 1558N×9235W, h193km, mb4.5/10, MD4.7(MEX), After MEX.*
*MEX **29** 20:06:28.7±1.0, 1570N×9242W, h193km±11km, MD4.7*
ISC 29 20:06:27.8±0.6**, 1570N**±006×**9240W**±004**, h188**km±5km**, n40,** σ**1.34**/61**, mb4.1**/8**, 1C, Mexico-Guatemala border region**

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

SCX	**San Cristobal**	**1.06**	**348**	*i* P		**Pn**	**20 06 58.0**	**+1.4**
SCX				*i* S		**Sn**	**20 07 20.0**	**+1.1**
CMIG	**Matias Romero**	**2.76**	**301**	P		**Pn**	**20 07 13.4**	**-0.5**
	227nm,0.3s,baz=96,slow=8.4,SNR=1737							
CMIG				S		**Sn**	**20 07 46.4**	**-3.4**
	201nm,0.3s,baz=306,slow=20,SNR=44							
SCIG		**3.45**	**19**	*i* P		**Pn**	**20 07 21.6**	**-0.7**
SCIG				*i* S		**Sn**	**20 08 03.1**	**-1.7**
HUIG	**Huatulco**	**3.57**	**272**	⇑*i* P		**Pn**	**20 07 22.3**	**-1.5**
HUIG				*i* S		**Sn**	**20 08 05.6**	**-1.9**
HUIG	**Huatulco**	**3.57**	**272**	*i* P		**Pn**	**20 07 22.0**	**-1.7**
HUIG				*i* S		**Sn**	**20 08 04.2**	**-3.3**
OXX	**Oaxaca**	**4.37**	**289**	*i* P		**Pn**	**20 07 34.0**	**+0.2**
OXX				*i* S		**Sn**	**20 08 25.0**	**-0.6**
OXX	**Oaxaca**	**4.37**	**289**	*i* P		**Pn**	**20 07 34.0**	**+0.2**
OXX				*i* S		**Sn**	**20 08 27.0**	**+1.4**
VHO	**Vista Hermosa**	**4.38**	**289**	*i* P		**Pn**	**20 07 34.8**	**+0.9**
VHO				*i* S		**Sn**	**20 08 25.2**	**-0.6**
VHO	**Vista Hermosa**	**4.38**	**289**	*i* P		**Pn**	**20 07 34.8**	**+0.9**
VHO				*i* S		**Sn**	**20 08 26.4**	**+0.7**
TPIG	**Tehuac#an**	**5.46**	**300**	*i* P		**Pn**	**20 07 48.4**	**+0.6**
TPIG				*i* S		**Sn**	**20 08 49.5**	**-1.4**
UTMO	**Huajuapan**	**5.59**	**293**	*i* P		**Pn**	**20 07 50.7**	**+1.2**
UTMO				*i* S		**Sn**	**20 08 51.5**	**-2.4**
PPM	**Popocatepetl**	**6.83**	**300**	*i* P		**Pn**	**20 08 08.0**	**+2.4**
PPM				*i* P			20 08 09.0	
PPM				*i* S		**Sn**	**20 09 23.4**	**+0.4**
PPM	**Popocatepetl**	**6.83**	**300**	*i* P		**Pn**	**20 08 08.0**	**+2.4**
PPM				*i* P			20 08 09.0	
PPM				*i* S		**Sn**	**20 09 28.2**	**+5.3**
YAIG	**Yautepec**	**7.10**	**297**	*i* P		**Pn**	**20 08 10.9**	**+1.6**
YAIG				*i* S		**Sn**	**20 09 29.4**	**-0.1**
MEIG	**Mezcala**	**7.26**	**289**	*i* P		**Pn**	**20 08 13.2**	**+1.9**
MEIG				*i* S		**Sn**	**20 09 33.9**	**+0.6**
PLIG	**Platanillo**	**7.30**	**293**	*i* P		**Pn**	**20 08 13.8**	**+2.0**
PLIG				*i* S		**Sn**	**20 09 34.4**	**+0.1**
ACX	**Acapulco**	**7.31**	**280**	*i* P		**Pn**	**20 08 12.0**	**0.0**
ACX				*i* S		**Sn**	**20 09 32.5**	**-2.0**
ACX	**Acapulco**	**7.31**	**280**	*i* P		**Pn**	**20 08 12.0**	**0.0**
ACX				*i* S		**Sn**	**20 09 26.0**	**-8.5**
IIZ	**Mezontepec**	**7.39**	**299**	*i* P		**Pn**	**20 08 11.8**	**-1.2**
IIZ				*i* S		**Sn**	**20 09 32.8**	**-3.7**
CAIG	**El Cayaco**	**7.67**	**281**	*i* P		**Pn**	**20 08 17.4**	**+0.8**
CAIG				*i* S		**Sn**	**20 09 40.2**	**-2.8**
MOIG	**Morelia**	**9.27**	**297**	*i* P		**Pn**	**20 08 41.2**	**+3.7**
JCT	**Junction City**	**16.20**	**337**	*e*P		**Pn**	**20 10 05.8**	**+0.7**
	10nm,0.5s							
JCT				*e*S		**S**	**20 12 57.3**	**-7.4**
PAYG	**Puerto Ayora**	**16.40**	**172**	*e*Pn		**Pn**	**20 10 06.8**	**-0.6**
	86nm,1.3s							
MIAR	**Mount Ida**	**18.80**	**357**	*e*P		**P**	**20 10 34.0**	**+1.0**
	17nm,0.8s							
WMOK	**Wichita Mounta**	**19.81**	**344**	*e*P		**P**	**20 10 43.6**	**-0.3**
	17nm,1.0s							
WMOK				*e*			20 11 01.5	
WMOK				*e*			20 11 21.2	
MNTX	**Cornudas Mount**	**19.85**	**326**	*e*P		**P**	**20 10 45.5**	**+1.2**
	14nm,1.0s							
WVT	**Waverly**	**20.75**	**10**	P		**P**	**20 10 54.3**	**+0.3**
SDV	**Santo Domingo**	**22.31**	**105**	P		**P**	**20 11 08.5**	**-1.3**
	2.3nm,0.3s,mb4.1,baz=47,slow=5.5,SNR=2.8							
NVAR	**Mina Array Bea**	**32.12**	**320**	P		**P**	**20 12 40.8**	**+3.4**
	1.7nm,0.6s,mb4.0,baz=134,slow=9.1,SNR=13							
SAML	**Samuel**	**37.91**	**128**	*e*P		**P**	**20 13 24.0**	**-2.8**
	3.1nm,0.7s,mb4.0							
LPAZ	**La Paz**	**39.80**	**142**	P		**P**	**20 13 44.1**	**+1.6**
	4.3nm,0.7s,mb4.2,baz=338,slow=6.8,SNR=30							
LPAZ	**La Paz**	**39.80**	**142**	*e*P		**P**	**20 13 43.4**	**+0.9**
	3.9nm,0.6s,mb4.2							
EDM	**Edmonton**	**40.91**	**341**	P		**P**	**20 13 51.2**	**-0.4**
FCC	**Fort Churchill**	**43.01**	**359**	P		**P**	**20 14 06.7**	**-1.9**
	16nm,1.1s,mb4.6							
YKA	**Yellowknife Ar**	**49.30**	**347**	P		**P**	**20 14 56.9**	**-0.7**
	0.9nm,0.4s,mb3.8,baz=151,slow=7.3,SNR=5.3							
YKA	**Yellowknife Ar**	**49.30**	**347**	P		**P**	**20 14 56.9**	**-0.7**
CPUP	**Villa Florida**	**53.92**	**140**	P		**P**	**20 15 31.0**	**-0.9**
	2.9nm,0.7s,mb4.1,baz=322,slow=8.8,SNR=8.1							
CPUP	**Villa Florida**	**53.92**	**140**	*e*P		**P**	**20 15 30.5**	**-1.4**
	13nm,0.7s,mb4.8							
PLCA	**Paso Flores**	**59.69**	**161**	P		**P**	**20 16 14.8**	**+2.4**
	1.8nm,0.9s,mb3.9,baz=322,slow=6.4,SNR=4.8							
PLCA	**Paso Flores**	**59.69**	**161**	P		**P**	**20 16 14.2**	**+1.7**
	3.6nm,1.0s,mb4.2							

*BJI **29** 20:09:54.6, 125S×125 62E, h35km, mB5.0, mb4.8, Ms4.3, Msz4.0*
*IDC **29** 20:09:59.0±0.5, 030S×125.10E, h0km, mb4.6/19, mb1 4.6/20, mb1mx4.5/24, mbtmp4.6/20, ML3.9/1, MS3.7/4, Ms1 3.7/4, ms1mx3.0/32, Error ellipse: s-maj=27.0km s-min=11.6km az=79.0*
*NEIC **29** 20:10:03.6±0.3, 029S×125 43E, h35km, mb4.7/21, Error ellipse: s-maj=16.3km s-min=6.2km az=76.0*
*MOS **29** 20:10:03.5±1.3, 028S×125 32E, h49km, mb5.0/14, Error ellipse: s-maj=22.5km s-min=7.6km az=106.1*
*ISCJB **29** 20:10:04.7±1.2, 033S±004×125 45E±006, h60km±10km, mb4.6/49, MS3.9/10, Error ellipse: s-maj=10.6km s-min=6.6km az=140.3*

ISC 29 20:10:07.4±1.0, 035S±004×12542E±006, h68km±10km, n87, σ1§21/91, mb4.6/49, 2C-3D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
AAI	**Ambon**	**4.32**	**140**	P		**Pn**	**20 11 15.8**		**+5.2**
	177nm,0.8s								
PCI	**Palu**	**5.61**	**264**	P		**Pn**	**20 11 28.5**		**+0.3**
	206nm,1.0s								
KKM	**Kota Kinabalu**	**11.17**	**305**	*e*Pn		**Pn**	**20 12 43.9**		**-0.3**
KSM	**Kuching**	**15.22**	**277**	*e*Pn		**Pn**	**20 13 40.5**		**+2.2**
BJII	**Banjamegara**	**17.13**	**246**	P		**Pn**	**20 14 04.1**		**+1.9**
	66nm,1.8s								
FITZ	**Fitzroy Crossi**	**17.64**	**179**	P		**Pn**	**20 14 07.3**		**-1.2**
	0.3nm,0.3s,baz=20,slow=8.8,SNR=18								
FITZ				LR		LR	20 20 59.9		
	comp=Z,110nm,19.1s,baz=180,slow=37								
LEM	**Lembang**	**18.88**	**250**	P		**Pn**	**20 14 22.2**		**-1.3**
	59nm,0.9s								
CBJI	**Citeko**	**19.48**	**252**	P		**Pn**	**20 14 28.3**		**-2.3**
	228nm,0.9s								
WRAB	**Tennant Creek**	**21.34**	**156**	*i* P		**P**	**20 14 48.2**		**-0.6**
WRAB	**Tennant Creek**	**21.34**	**156**	*e*P		**P**	**20 14 48.1**		**-0.7**
	39nm,0.9s,mb4.7								
WRA	**Warramunga Arr**	**21.34**	**156**	P		**P**	**20 14 48.1**		**-0.7**
	12nm,0.6s,mb4.4,baz=338,slow=11,SNR=24								
WB2	**Warramunga Arr**	**21.34**	**156**	*e*P		**P**	**20 14 48.1**		**-0.8**
MBWA	**Marble Bar**	**21.41**	**195**	*e*P		**P**	**20 14 49.1**		**-0.5**
	84nm,1.0s,mb5.0								
AS31	**Alice Springs**	**24.59**	**161**	*e*P		**P**	**20 15 21.8**		**+0.7**
ASAR	**Alice Springs**	**24.59**	**161**	P		**P**	**20 15 21.9**		**+0.9**
	18nm,1.0s,mb4.5,baz=342,slow=11,SNR=50								
ASAR				PcP		PcP	20 18 59.5		+2.3
	1.1nm,0.5s,baz=350,slow=2.1,SNR=8.6								
JOW	**Kunigami**	**27.17**	**6**	P		**P**	**20 15 45.5**		**+1.2**
	34nm,0.7s,mb5.0,baz=188,slow=7.8,SNR=31								
FORT	**Forrest**	**30.36**	**176**	*e*P		**P**	**20 16 13.0**		**+0.3**
	26nm,0.9s,mb4.9								
CBIJ	**Chichi jima**	**31.70**	**29**	P		**P**	**20 16 24.9**		**+0.4**
	33nm,0.7s,mb5.2,baz=205,slow=14,SNR=7.2								
GYA	**Guiyang**	**32.21**	**327**	P		**P**	**20 16 30.0**		**+1.1**
GYA				XP		sP	20 16 48.8		-4.6
GYA				PP		PP	20 17 40.3		-2.5
GYA				PCP		PcP	20 19 16.0		-0.1
GYA				S		**S**	**20 21 35.0**		**-2.0**
GYA				SCS		ScS	20 26 51.5		-1.3
GYA				AMB		AMB			
	comp=Z,10.0nm,0.6s,mb4.7								
GYA				AMB		AMB			
	comp=Z,90nm,4.2s								
GYA				LR		LR			
	comp=N,210nm,18.7s								
GYA				LR		LR			
	comp=E,190nm,18.6s								
GYA				LR		LR			
	comp=Z,240nm,18.9s								
NJ2	**Nanjing**	**32.82**	**350**	*e*P		**P**	**20 16 35.0**		**+0.7**
NJ2				XS		sS	20 22 10.0		-4.8
NJ2				AMB		AMB			
	comp=Z,10.0nm,0.6s,mb4.8								
NJ2				AMB		AMB			
	comp=Z,150nm,6.1s								
NJ2				LR		LR			
	comp=N,170nm,17.0s								
NJ2				LR		LR			
	comp=E,220nm,21.6s								
NJ2				LR		LR			
	comp=Z,150nm,13.4s								
NWAO	**Narrogin (SRO)**	**33.30**	**193**	P		**P**	**20 16 38.2**		**-0.3**
	comp=Z,15nm,1.0s,mb4.7,baz=21,slow=14,SNR=4.8								
NWAO				LR		LR	20 31 15.0		
	comp=Z,118nm,18.8s,baz=264,slow=38								
NWAO	**Narrogin (SRO)**	**33.30**	**193**	P		**P**	**20 16 38.2**		**-0.4**
	comp=Z,41nm,1.4s,mb5.1								
KMI	**Kunming**	**33.51**	**321**	P		**P**	**20 16 41.5**		**+1.2**
KMI				XP		sP	20 16 58.5		-6.3
KMI				PP		PP	20 17 58.8		+1.6
KMI				S		**S**	**20 21 58.0**		**+0.8**
KMI				AMB		AMB			
	comp=Z,6.0nm,1.3s,mb4.3								
KMI				AMB		AMB			
	comp=Z,79nm,5.4s								
KMI				LR		LR			
	comp=N,67nm,18.5s								
KMI				LR		LR			
	comp=E,99nm,16.2s								
KMI				LR		LR			
	comp=Z,86nm,18.5s								
STKA	**Stephens Creek**	**34.89**	**156**	P		**P**	**20 16 53.7**		**+1.5**
	comp=Z,15nm,0.8s,mb4.9,baz=330,slow=7.9,SNR=23								
STKA				LR		LR	20 30 17.1		
	comp=Z,148nm,20.0s,baz=27,slow=35								
STKA	**Stephens Creek**	**34.89**	**156**	*e*P		**P**	**20 16 53.6**		**+1.3**
CD2	**Chengdu**	**37.28**	**328**	*e*P		**P**	**20 17 12.3**		**-0.4**
CD2				XP		sP	20 17 30.5		-6.8
CD2				PP		PP	20 18 42.3		+3.5
CD2				S		**S**	**20 22 54.5**		**-0.6**
CD2				XS		sS	20 23 25.8		+2.2
CD2				AMB		AMB			
	comp=Z,10.0nm,1.1s,mb4.7								
CD2				AMB		AMB			
	comp=Z,30nm,5.2s								
CD2				LR		LR			
	comp=E,40nm,16.8s								
CD2				LR		LR			
	comp=Z,90nm,13.2s								
MAJO	**Matsushiro**	**38.58**	**17**	*e*P		**P**	**20 17 23.6**		**0.0**
MAJO				pmax		pmax			
	comp=Z,10.0nm,0.6s,mb4.8								
MAJO	**Matsushiro**	**38.58**	**17**	*e*P		**P**	**20 17 23.6**		**-0.1**
	comp=Z,9.9nm,0.6s,mb4.8								
MAT	**Matsushiro**	**38.58**	**17**	P		**P**	**20 17 23.2**		**-0.4**
MAT				*e*S		S	20 23 38.2		+23
MJAR	**Matsushiro Arr**	**38.58**	**17**	P		**P**	**20 17 23.5**		**-0.1**
	comp=Z,6.9nm,0.6s,mb4.6,baz=191,slow=7.9,SNR=25								
BJT	**Baijiatuau**	**41.06**	**349**	P		**P**	**20 17 43.1**		**-1.1**
BJT				pmax		pmax			
	comp=Z,16nm,1.2s								
BJT	**Baijiatuau**	**41.06**	**349**	P		**P**	**20 17 43.1**		**-1.1**
	comp=Z,16nm,1.2s,mb4.7								
TOO	**Toolangi**	**41.41**	**156**	*e*P		**P**	**20 17 50.3**		**+3.3**
	comp=Z,18nm,1.3s,mb4.8								
TOO	**Toolangi**	**41.41**	**156**	*e*P		**P**	**20 17 50.3**		**+3.3**
TOO				pmax		pmax			
	comp=Z,18nm,1.3s,mb4.7								
LZH	**Lanzhou**	**41.44**	**333**	⇑P		**P**	**20 17 49.0**		**+1.7**
LZH				PP		PP	20 19 28.8		+4.7
LZH				*e*S		**S**	**20 23 59.3**		**+1.9**
LZH				AMB		AMB			
	comp=Z,23nm,1.3s,mb4.8								
LZH				AMB		AMB			
	comp=Z,93nm,6.1s								
LZH				LR		LR			
	comp=N,603nm,14.5s								
LZH				LR		LR			
	comp=Z,837nm,17.8s								
HHC	**Hu-ho-hao-te**	**42.90**	**345**	*e*P		**P**	**20 18 00.3**		**+1.1**
HHC				XP		sP	20 18 18.8		-5.2
HHC				PP		PP	20 19 43.5		+3.7
HHC				PCP		PcP	20 19 49.3		+0.4
HHC				SCP		ScP	20 23 32.8		-1.1
HHC				PCS		PcS	20 23 41.0		-0.2
HHC				S		**S**	**20 24 20.0**		**+1.0**
HHC				SCS		ScS	20 27 51.0		-2.3
HHC				AMB		AMB			
	comp=Z,9.0nm,1.1s,mb4.4								
HHC				AMB		AMB			
	comp=Z,85nm,4.8s								
HHC				LR		LR			
	comp=N,117nm,20.9s								
HHC				LR		LR			
	comp=E,98nm,22.8s								
HHC				LR		LR			
	comp=Z,72nm,21.8s								
LSA	**Lhasa**	**44.27**	**315**	*e*P		**P**	**20 18 11.5**		**+1.3**
LSA				pmax		pmax			
	comp=Z,3.0nm,0.5s,mb4.3								
LSA	**Lhasa**	**44.27**	**315**	*e*P		**P**	**20 18 11.5**		**+1.3**
	comp=Z,2.8nm,0.5s,mb4.2								
MDJ	**Mudanjiang**	**44.93**	**4**	P		**P**	**20 18 16.0**		**+0.6**
MDJ				XP		sP	20 18 33.3		-7.1
MDJ				AMB		AMB			
	comp=Z,10.0nm,0.9s,mb4.5								
MDJ				AMB		AMB			
	comp=Z,73nm,5.5s								
MDJ	**Mudanjiang**	**44.93**	**4**	*e*P		**P**	**20 18 15.7**		**+0.3**
	comp=Z,11nm,0.8s,mb4.7								
GTA	**Gaotai**	**45.99**	**332**	*e*P		**P**	**20 18 24.8**		**+1.0**
GTA				AP		pP	20 18 29.5		-11
GTA				AMB		AMB			
	comp=Z,14nm,1.4s,mb4.5								
ASAJ	**Asahikawa**	**46.85**	**17**	P		**P**	**20 18 32.0**		**+1.5**
	comp=Z,5.0nm,0.4s,mb4.6,baz=196,slow=19,SNR=14								
YSS	**Yuzh-Sakhalins**	**49.50**	**16**	*e*P		**P**	**20 18 49.7**		**-1.3**
HIA	**Hailar**	**49.67**	**355**	*e*P		**P**	**20 18 52.3**		**+0.1**
HIA				pmax		pmax			
	comp=Z,12nm,0.7s								
HIA	**Hailar**	**49.67**	**355**	*e*P		**P**	**20 18 52.3**		**+0.1**
	comp=Z,12nm,0.7s,mb4.9								
KLR	**Kul'dur**	**49.69**	**5**	*e*P		**P**	**20 18 50.8**		**-1.6**
ULN	**Ulaanbaatar**	**50.62**	**344**	*d i*P		**P**	**20 19 01.0**		**+1.6**
ULN	**Ulaanbaatar**	**50.62**	**344**	*e*P		**P**	**20 18 58.3**		**-1.1**
	comp=Z,7.7nm,0.9s,mb4.7								
SONM	**Songino Array**	**50.77**	**344**	P		**P**	**20 19 00.1**		**-0.5**
	comp=Z,4.3nm,0.8s,mb4.5,baz=158,slow=8.4,SNR=19								
ZAK	**Zakamensk**	**53.96**	**343**	*e*P		**P**	**20 19 24.4**		**+0.2**
WMQ	**Urumqi**	**55.37**	**327**	*e*P		**P**	**20 19 36.0**		**+1.6**
WMQ				PP		PP	20 21 42.0		+3.4
WMQ				S		**S**	**20 27 13.0**		**-0.6**
WMQ				AMB		AMB			
	comp=Z,17nm,1.0s,mb5.0								
WMQ				AMB		AMB			
	comp=Z,120nm,5.0s								
WMQ				LR		LR			
	comp=N,42nm,14.0s								
WMQ				LR		LR			
	comp=E,52nm,14.0s								
WMQ				LR		LR			
	comp=Z,49nm,14.0s								
MOY	**Mondy**	**55.79**	**342**	*e*P		**P**	**20 19 36.7**		**-0.7**
BOD	**Bodaibo**	**58.71**	**353**	*e*P		**P**	**20 19 57.5**		**-0.5**
BOD				pmax		pmax			
	comp=Z,12nm,0.8s,mb5.0								
MKAR	**Makanchi Array**	**60.20**	**327**	P		**P**	**20 20 06.8**		**-1.5**
	comp=Z,6.5nm,0.5s,mb4.9,baz=120,slow=8.2,SNR=41								
YAK	**Yakutsk**	**62.31**	**2**	⇑*e*P		**P**	**20 20 23.0**		**+0.5**
YAK				pmax		pmax			
	comp=Z,22nm,0.8s,mb5.2								
YAK	**Yakutsk**	**62.31**	**2**	*e*P		**P**	**20 20 20.3**		**-2.2**
	comp=Z,25nm,0.8s,mb5.3								
AAK	**Ala-Archa**	**62.55**	**320**	*d i*P		**P**	**20 20 24.2**		**+0.1**
AAK				pmax		pmax			
	comp=Z,10.0nm,1.2s,mb4.6								
AAK	**Ala-Archa**	**62.55**	**320**	*e*P		**P**	**20 20 23.4**		**-0.7**
	comp=Z,8.4nm,1.0s,mb4.6								
MA2	**Magadan**	**62.96**	**14**	*e*P		**P**	**20 20 28.2**		**+1.4**
MA2				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.6								
MA2	**Magadan**	**62.96**	**14**	*e*P		**P**	**20 20 28.2**		**+1.4**
	comp=Z,5.4nm,0.6s,mb4.7								
ZAL	**Zalesovo**	**63.65**	**335**	P		**P**	**20 20 29.3**		**-2.0**
	comp=Z,17nm,0.3s,mb4.3,baz=343,slow=6.9,SNR=11								
NVS	**Novosibirsk**	**64.94**	**335**	*e*P		**P**	**20 20 36.7**		**-3.1**
NVS				pmax		pmax			
	comp=N,5.0nm,1.2s								
NVS				pmax		pmax			
	comp=E,6.0nm,1.2s								
NVS				pmax		pmax			
	comp=Z,8.0nm,1.2s,mb4.4								
BVAR	**Borovoye Array**	**70.04**	**328**	P		**P**	**20 21 10.3**		**-1.7**
	comp=Z,2.0nm,0.6s,mb4.2,baz=134,slow=8.5,SNR=11								
BRVK	**Borovoye**	**70.11**	**328**	*e*P		**P**	**20 21 10.9**		**-1.5**
BRVK				pmax		pmax			
	comp=Z,2.0nm,0.6s,mb4.1								
BRVK	**Borovoye**	**70.11**	**328**	*e*P		**P**	**20 21 10.9**		**-1.5**
	comp=Z,1.9nm,0.6s,mb4.1								
CHKZ	**Chkalovo**	**70.25**	**329**	*e*P		**P**	**20 21 11.6**		**-1.6**
CHKZ				pmax		pmax			
	comp=Z,7.0nm,1.1s,mb4.4								
CHKZ	**Chkalovo**	**70.25**	**329**	*e*P		**P**	**20 21 11.6**		**-1.6**
	comp=Z,6.7nm,1.1s,mb4.4								
ZRNK	**Zerenda**	**70.74**	**328**	*e*P		**P**	**20 21 14.2**		**-2.0**
ZRNK				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.5								
ZRNK	**Zerenda**	**70.74**	**328**	*e*P		**P**	**20 21 14.2**		**-2.0**
	comp=Z,4.9nm,0.6s,mb4.5								
ARU	**Arti**	**77.69**	**328**	⇓*i*P		**P**	**20 21 56.0**		**-0.6**
ARU				*e*			20 24 52.6		
ARU				*e*PPP			20 26 41.9		
ARU				*e*S		S	20 31 41.2		-2.1
ARU				*e*SS		SS	20 36 42.8		-1.4
ARU				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.3								
ARU	**Arti**	**77.69**	**328**	*e*P		**P**	**20 21 53.9**		**-2.7**
	comp=Z,4.4nm,0.7s,mb4.3								
VNDA	**Vanda**	**79.57**	**172**	P		**P**	**20 22 08.0**		**+0.9**
	comp=Z,0.7nm,0.6s,mb3.6,baz=324,slow=6.2,SNR=6.9								
VNDA				LR		LR	20 57 57.3		
	comp=Z,70nm,20.2s,baz=331,slow=36								
VNDA	**Vanda**	**79.57**	**172**	*e*P		**P**	**20 22 07.2**		**+0.2**
VNDA				pmax		pmax			
	comp=Z,10.0nm,0.9s								
VNDA	**Vanda**	**79.57**	**172**	*e*P		**P**	**20 22 07.2**		**+0.2**
	comp=Z,1.4nm,0.9s,mb3.8								
MALT	**Malatya**	**87.85**	**308**	*e*P		**P**	**20 22 50.5**		**+1.2**
MALT				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.5								
MALT	**Malatya**	**87.85**	**308**	*e*P		**P**	**20 22 50.5**		**+1.2**
	comp=Z,3.7nm,0.9s,mb4.4								
ASF	**Jabal al Asfar**	**88.93**	**302**	P		**P**	**20 22 56.4**		**+2.0**
	comp=Z,1.1nm,0.5s,mb4.2,baz=242,slow=3.4,SNR=6.7								
QSPA	**South Pole Qui**	**89.58**	**180**	*e*P		**P**	**20 22 58.6**		**+1.2**
	comp=Z,1.4nm,0.7s,mb4.2								
OBN	**Obninsk**	**89.63**	**325**	P		**P**	**20 22 57.0**		**-0.6**
OBN				pmax		pmax			
	comp=Z,8.0nm,1.0s,mb4.8								
MMAI	**Mount Meron Ar**	**90.20**	**303**	P		**P**	**20 23 02.2**		**+1.9**
	comp=Z,0.2nm,0.3s,mb3.8,baz=65,slow=8.4,SNR=2.5								
BRTR	**Keskin Array B**	**91.59**	**310**	P		**P**	**20 23 07.0**		**+0.2**
	comp=Z,1.1nm,0.8s,mb4.2,baz=125,slow=6.2,SNR=5.3								
ARCES	**ARCESS Array B**	**93.80**	**340**	P		**P**	**20 23 15.5**		**-1.5**
	comp=Z,0.8nm,0.6s,mb4.2,baz=97,slow=3.0,SNR=3.6								
INK	**Inuvik**	**94.42**	**21**	P		**P**	**20 23 20.3**		**+0.5**
	comp=Z,2.4nm,0.9s,mb4.5,baz=250,slow=5.4,SNR=3.9								
FINES	**FINESS Array B**	**94.78**	**332**	P		**P**	**20 23 20.9**		**-0.5**
	comp=Z,0.6nm,0.7s,mb4.2,baz=64,slow=6.3,SNR=3.0								
FINES	**FINESS Array B**	**94.78**	**332**	P		**P**	**20 23 20.9**		**-0.5**
TORD	**Torodi Ar. Bea**	**122.83**	**285**	PKP		PKPdf	20 28 58.1		+2.5
	comp=Z,0.7nm,0.6s,baz=74,slow=1.4,SNR=8.6								
LPAZ	**La Paz**	**158.74**	**142**	PKPab		PKPab	20 30 38.5		+5.4
	comp=Z,1.6nm,0.7s,baz=186,slow=4.4,SNR=11								

*NIC **29** 20:15:44.0±0.0, 3427N×3202E, h25km, ML3.3, MW3.3*
*NEIC **29** 20:15:44.0, 3427N×3202E, h25km, ML3.3(NIC), After NIC.*
*CSEM **29** 20:15:44.9±0.1, 3446N×3202E, h40km, Mw3.3, Error ellipse: s-maj=2.2km s-min=1.3km az=127.0*
*ISK **29** 20:15:44.8, 3431N×3215E, h32km, MD3.6*
*ISCJB **29** 20:15:45.7±0.4, 3436N±002×3212E±004, h33km, Error ellipse: s-maj=4.4km s-min=2.9km az=43.3*
*HLW **29** 20:15:47.7, 3436N×3200E, h42km, Mb3.4*
*GII **29** 20:15:48.1±0.0, 3424N×3250E, h0km, ML3.0/10, Mw3.3/9*

ISC 29 20:15:47.2±0.4, 3442N±002×3215E±004, h35km, n59, σ0§82/79, 14C-4D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
PPCY	**Paphos**	**0.49**	**20**	⇑*i*P		**Pn**	**20 15 55.9**		**-1.8**
SZAC	**Souni-Zanaja**	**0.69**	**61**	P		**Pn**	**20 15 58.7**		**-1.8**
SZAC				S		**Sn**	**20 16 10.8**		**+0.7**
ALFC	**Alevga**	**0.82**	**27**	⇑*i*P		**Pn**	**20 16 00.8**		**-1.5**
	41nm,0.2s								
ALFC				S		**Sn**	**20 16 13.8**		**+0.5**
**CS

mb1mx3.6/14,**mbtmp3.6**/4,**Error ellipse: s-maj=167.5km s-min=24.2km az=64.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.44**	**158**	P	P	20 30 58.2	-0.7
	1.1nm,0.7s,baz=337,slow=11,SNR=11						
ASAR	**Alice Springs**	**24.75**	**163**	P	P	20 31 33.0	+0.6
	0.4nm,0.5s,baz=342,slow=9.7,SNR=7.2						
STKA	**Stephens Creek**	**34.97**	**157**	P	P	20 33 03.9	+0.9
	1.1nm,0.8s,baz=333,slow=14,SNR=2.8						
MKAR	**Makanchi Array**	**60.24**	**327**	P	P	20 36 19.3	+0.1
	0.5nm,0.4s,baz=121,slow=8.5,SNR=6.8						

ISCJB ***29*** *20:42:19.0±5.4,54S±03×1487E±04,h55km±37km, mb4.1/4, Error ellipse: s-maj=64.9km s-min=43.3km az=17.0*

IDC ***29*** *20:42:20.6±8.8,550S×14881E,h51km±63km, mb3.8/4, mb1 4.1/5,mb1mx3.7/13,mbtmp4.1/5,ML3.0/1, Error ellipse: s-maj=66.1km s-min=52.4km az=82.0*

NEIC ***29*** *20:42:53.9±5.3,809S×14787E,h140km±12km, mb4.7/2, Error ellipse: s-maj=75.6km s-min=38.1km az=205.0*

ISC 29 20:42:20.1±5.5,54S±03×1487E±04,h45km±38km,n10, σ0§79/13,mb4.1/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.26**	**202**	P	**Pn**	**20 43 22.5**	**+0.1**
	6.4nm,0.3s,baz=355,slow=3.1,SNR=22						
PMG				S	**Sn**	**20 44 11.2**	**+0.4**
	9.7nm,0.3s,baz=171,slow=19,SNR=6.2						
PMG	**Port Moresby**	**4.26**	**202**	P	**Pn**	**20 43 22.5**	**+0.1**
PMG				*e*Sn	**Sn**	**20 43 54.3**	**-17**
PMG				S	**Sn**	**20 44 11.2**	**+0.4**
WRAB	**Tennant Creek**	**20.10**	**223**	*e*P	**P**	**20 46 49.4**	**-0.5**
	9.8nm,0.7s						
WRAB				*e*		20 47 44.2	
WB2	**Warramunga Arr**	**20.11**	**223**	*e*P	**P**	**20 46 49.4**	**-0.6**
WRA	**Warramunga Arr**	**20.12**	**223**	P	**P**	**20 46 49.9**	**-0.1**
	5.7nm,0.5s,baz=49,slow=11,SNR=64						
ASAR	**Alice Springs**	**23.10**	**217**	P	**P**	**20 47 21.1**	**-0.8**
	1.5nm,0.6s,mb3.6,baz=51,slow=8.8,SNR=24						
FITZ	**Fitzroy Crossi**	**25.85**	**239**	P	**P**	**20 47 48.1**	**+0.9**
	5.8nm,0.5s,mb4.3,baz=61,slow=7.3,SNR=37						
STKA	**Stephens Creek**	**27.16**	**193**	P	**P**	**20 47 59.0**	**0.0**
	1.5nm,0.9s,mb3.5,baz=0.3,slow=14,SNR=4.1						
MBWA	**Marble Bar**	**32.18**	**238**	*e*P	**P**	**20 48 50.6**	**+7.0**
NWAO	**Narrogin (SRO)**	**40.13**	**223**	P	**P**	**20 49 54.8**	**+3.3**
	64nm,1.6s,mb5.1						

IDC 29 20:44:41.8±9.1,1349S×16681E,h187km±101km,mb3.5/4, mb1 3.6/5,mb1mx3.3/13,mbtmp3.9/5,Error ellipse: s-maj=94.9km s-min=53.6km az=142.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.54**	**182**	P	Pn	20 46 42.3	+0.1
	0.4nm,0.3s,baz=75,slow=19,SNR=3.6						
STKA	**Stephens Creek**	**29.48**	**227**	P	P	20 50 28.4	+0.2
	1.3nm,0.6s,baz=62,slow=13,SNR=6.0						
WRA	**Warramunga Arr**	**31.72**	**254**	P	P	20 50 48.5	+0.6
	0.6nm,0.7s,baz=86,slow=9.5,SNR=6.4						
ASAR	**Alice Springs**	**32.72**	**247**	P	P	20 50 56.9	+0.2
	1.1nm,0.5s,baz=74,slow=9.5,SNR=27						
MKAR	**Makanchi Array**	**96.00**	**317**	P	P	20 57 47.5	-0.2
	0.3nm,0.2s,baz=97,slow=6.0,SNR=3.7						

IDC 29 20:52:57.1±5.7,5248N×15251E,h515km±73km,mb3.0/5, mb1 3.1/6,mb1mx2.7/22,mbtmp3.9/6,Error ellipse: s-maj=30.8km s-min=18.4km az=103.0,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**18.87**	**218**	P	P	20 56 44.3	-0.2
	0.5nm,0.3s,baz=18,slow=10.0,SNR=6.0						
INK	**Inuvik**	**37.13**	**36**	P	P	20 59 23.0	-0.5
	0.9nm,0.3s,baz=299,slow=9.2,SNR=5.5						
BVAR	**Borovoye Array**	**47.07**	**305**	P	P	21 00 41.9	+0.1
	0.8nm,0.5s,baz=59,slow=7.1,SNR=6.5						
ARCES	**ARCESS Array B**	**52.33**	**339**	P	P	21 01 19.2	-1.3
	2.2nm,1.0s,baz=40,slow=9.6,SNR=3.7						
FINES	**FINESS Array B**	**58.71**	**333**	P	P	21 02 04.2	-0.7
	0.6nm,0.5s,baz=40,slow=8.1,SNR=11						
ASAR	**Alice Springs**	**77.55**	**197**	P	P	21 03 59.5	0.0
	0.4nm,0.5s,baz=8.9,slow=4.8,SNR=6.9						

CASC 29 20:54:58.6±1.7,1204N×8774W,h18km±7km,MD3.8, 3C-6D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	**0.91**	**66**	*e*P	Pb	20 55 15.3	-0.4
LEON				*e*S	Sb	20 55 27.9	+0.5
CRIN	**San Cristobal**	**0.94**	**46**	*e*P	Pb	20 55 14.7	-1.6
TELN	**Telica**	**1.05**	**58**	*e*P	Pb	20 55 17.3	-0.8
MIRN	**Miramar**	**1.08**	**68**	*e*P	Pb	20 55 17.8	-0.9
CNGN	**Cerro Negro**	**1.11**	**66**	*e*P	Pn	20 55 18.0	-1.2
CNGN				*e*P		20 55 19.6	
COPN	**Copaltepe**	**1.13**	**83**	*e*P	Pn	20 55 18.8	-0.6
MOMJ	**Momotombo**	**1.23**	**73**	*e*P	Pn	20 55 19.9	-0.8
CNCH	**Conchagua**	**1.23**	**356**	*e*P	x	20 55 20.2	
APYN	**Apoyeque**	**1.37**	**82**	*e*P	Pn	20 55 22.3	-0.4
TISN	**Laguna Tiscapa**	**1.44**	**86**	*e*P	Pn	20 55 24.1	+0.4
MGAN	**Managua**	**1.46**	**86**	*e*P	Pn	20 55 23.9	-0.1
TICN	**Ticuantepe**	**1.47**	**90**	*e*P	Pn	20 55 24.8	+0.6
BLLM	**Bellamira**	**1.48**	**341**	*e*P	x	20 55 41.7	
BLLM				*e*S	x	20 56 01.0	
BOA	**Boaco**	**2.02**	**77**	*e*P	Pn	20 55 31.4	-0.3
LIM1	**Limonal**	**2.78**	**118**	*e*P	Pn	20 55 42.7	+0.6

ISCJB ***29*** *20:58:01.1±1.2,591S±02×251W±06,h10km,mb3.9/4, MS3.4/1,Error ellipse: s-maj=45.9km s-min=24.2km az=155.6*

IDC ***29*** *20:58:15.3±13.0,5914S×2534W,h118km±118km,mb3.6/4, mb1 3.7/4,mb1mx3.5/15,mbtmp4.0/4,MS3.5/1,Ms1 3.4/1, ms1mx2.6/20,Error ellipse: s-maj=44.5km s-min=25.0km az=75.0*

ISC 29 20:58:01.9±1.0,592S±02×248W±06,h10km,n9,σ1§88/6, mb3.9/4,MS3.4/1,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.38**	**156**	*e*	**Pn**	**21 01 20.9**	**+9.1**
VNA1				*e*		21 01 24.3	
VNA1				*e*		21 01 38.6	
SNAA	**Sanae**	**15.33**	**153**	*e*	**Pn**	**21 01 36.8**	**-1.5**
SNAA				*e*		21 01 47.1	
PLCA	**Paso Flores**	**33.88**	**282**	LR	LR	21 18 41.6	
	comp=Z,69nm,19.2s,MS3.4,baz=253,slow=36						
VNDA	**Vanda**	**43.46**	**182**	P	**P**	**21 06 06.4**	**+1.3**
	0.7nm,0.9s,mb3.4,baz=191,slow=5.2,SNR=4.3						
BDFB	**Brasilia**	**46.74**	**329**	P	**P**	**21 06 32.2**	**+1.0**
	3.3nm,0.7s,mb4.4,baz=153,slow=9.0,SNR=3.0						
LPAZ	**La Paz**	**53.24**	**305**	P	**P**	**21 07 18.9**	**-1.6**
	0.8nm,0.7s,mb3.8,baz=180,slow=8.1,SNR=5.7						
TORD	**Torodi Ar. Bea**	**75.25**	**27**	P	**P**	**21 09 45.0**	**+0.1**
	2.4nm,0.7s,mb4.2,baz=201,slow=6.3,SNR=27						
INK	**Inuvik**	**149.03**	**317**	PKPbc	PKPbc	21 17 46.9	-3.3
	2.0nm,0.6s,baz=135,slow=4.3,SNR=4.8						
SONM	**Songino Array**	**149.54**	**90**	PKPbc	PKPbc	21 17 50.2	-1.3
	0.6nm,0.7s,baz=194,slow=3.8,SNR=3.0						

NEIC ***29*** *20:59:17.1±0.2,946S×10828E,h10km,mb5.0/36,Error ellipse: s-maj=8.8km s-min=5.3km az=52.0*

BJI ***29*** *20:59:17.0,950S×10830E,h10km,mB4.9,mb4.8,Ms4.6, Msz4.4*

ISCJB ***29*** *20:59:18.9±0.3,948S±004×10827E±004,h33km, mb4.9/71,MS4.0/24,Error ellipse: s-maj=6.6km s-min=4.8km az=93.2*

MOS ***29*** *20:59:19.0±0.9,942S×10838E,h33km,mb5.2/28,Error ellipse: s-maj=13.6km s-min=7.3km az=113.5*

IDC ***29*** *20:59:21.1±0.4,941S×10827E,h34km±2km,mb4.4/21, mb1 4.4/22,mb1mx4.4/24,mbtmp4.6/22,ML4.2/1,MS3.9/12, Ms1 3.9/12,ms1mx3.6/26,Error ellipse: s-maj=14.7km s-min=8.5km az=60.0*

ISC 29 20:59:21.0±0.3,950S±004×10823E±004,h35km, h35km±.8km:pP-P,n172,σ1§00/162,mb4.9/71,MS4.0/24, 3C-5D,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJI	**Banjamegara**	**2.60**	**34**	P	**Pn**	**21 00 00.5**	**-0.1**
	466nm,1.0s						
LEM	**Lembang**	**2.72**	**347**	P	**Pn**	**21 00 01.6**	**-0.7**
	1µm,0.8s						
JCJI	**Jatiwangi**	**2.99**	**1**	P	**Pn**	**21 00 03.7**	**-2.2**
	2µm,0.7s						
CBJI	**Citeko**	**3.35**	**336**	P	**Pn**	**21 00 07.0**	**-3.9**
	2µm,0.7s						
SBJI	**Serang**	**3.95**	**328**	P	**Pn**	**21 00 19.7**	**+0.6**
	354nm,1.0s						
KRKI	**Karangkates**	**4.38**	**73**	P	**Pn**	**21 00 25.2**	**+0.2**
	2µm,0.6s						
NBBI	**Negara**	**6.41**	**80**	P	**Pn**	**21 00 55.0**	**+2.1**
	1µm,1.1s						
DNP	**Denpasar**	**6.94**	**84**	P	**Pn**	**21 01 00.4**	**+0.2**
	1µm,0.5s						
KSI	**Kapahiang**	**8.07**	**316**	P	**Pn**	**21 01 14.3**	**-1.4**
	186nm,0.7s						
KSM	**Kuching**	**11.09**	**11**	*e*Pn	**Pn**	**21 01 50.8**	**-6.3**
COCO	**West Island**	**11.51**	**256**	*e*Pn	**Pn**	**21 02 06.5**	**+3.6**
PCI	**Palu**	**14.36**	**54**	P	**Pn**	**21 02 43.6**	**+1.9**
	83nm,1.7s						
MBWA	**Marble Bar**	**16.03**	**138**	*e*Pn	**Pn**	**21 02 57.9**	**-5.8**
	18nm,0.8s						
KKM	**Kota Kinabalu**	**17.37**	**28**	*e*Pn	**Pn**	**21 03 19.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**18.93**	**119**	*e*P	**Pn**	**21 03 39.7**	**0.0**
	36nm,0.9s						
FITZ				*e*S	**Sn**	**21 06 51.9**	**-19**
FITZ	**Fitzroy Crossi**	**18.93**	**119**	P	**Pn**	**21 03 39.4**	**-0.2**
	0.6nm,0.3s,baz=296,slow=8.6,SNR=22						
KAKA	**Kakadu**	**23.96**	**100**	*e*P	**P**	**21 04 32.2**	**+0.2**
	33nm,1.0s,mb4.7						
SWI	**Sorong**	**24.46**	**71**	P	**P**	**21 04 37.6**	**+1.0**
	50nm,1.2s,mb4.8						
NWAO	**Narrogin (SRO)**	**24.75**	**162**	P	**P**	**21 04 39.9**	**+0.6**
	12nm,1.0s,mb4.4,baz=351,slow=12,SNR=4.4						
NWAO				pP		21 04 51.0	
	22nm,0.8s,baz=331,slow=8.7,SNR=7.0						
NWAO				LR	LR	21 12 52.7	
	comp=Z,304nm,21.8s,MS3.8,baz=144,slow=33						
NWAO	**Narrogin (SRO)**	**24.75**	**162**	*e*P	**P**	**21 04 38.3**	**-0.9**
NWAO				*e*		21 04 51.4	
NWAO				pmax	pmax		
	comp=Z,28nm,0.9s						
NWAO	**Narrogin (SRO)**	**24.75**	**162**	*e*P	**P**	**21 04 38.3**	**-0.9**
	comp=Z,28nm,0.9s,mb4.8						
NWAO				*e*		21 04 51.4	
WRA	**Warramunga Arr**	**27.26**	**115**	P	**P**	**21 05 01.5**	**-0.4**
	comp=Z,6.1nm,0.5s,mb4.4,baz=286,slow=12,SNR=35						
WRA				pP	pP	21 05 12.5	+0.7
	comp=Z,16nm,1.0s,baz=288,slow=12,SNR=17						
WRA				PcP	PcP	21 08 22.5	+1.4
	comp=Z,1.3nm,0.5s,baz=301,slow=1.9,SNR=7.2						
WRA				pPcP		21 08 33.0	
	comp=Z,0.9nm,0.5s,baz=301,slow=1.8,SNR=4.7						
WRA	**Warramunga Arr**	**27.26**	**115**	P	**P**	**21 05 01.5**	**-0.4**
WRA				*PP	pP	21 05 12.5	+0.7
WRA						21 08 22.5	
WRAB	**Tennant Creek**	**27.27**	**115**	P	**P**	**21 05 02.0**	**0.0**
	comp=Z,88nm,0.7s,mb5.4,SNR=11						
WRAB	**Tennant Creek**	**27.27**	**115**	*e*P	**P**	**21 05 01.9**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
WRAB	**Tennant Creek**	**27.27**	**115**	*e*P	**P**	**21 05 01.9**	**-0.1**
	comp=Z,30nm,1.0s,mb4.8						
WB2	**Warramunga Arr**	**27.27**	**115**	*e*P	**P**	**21 05 02.0**	**0.0**
WB2				*e*	pP	21 05 12.7	+0.8
ASAR	**Alice Springs**	**28.28**	**123**	P	**P**	**21 05 11.0**	**0.0**
	comp=Z,5.6nm,0.6s,mb4.3,baz=300,slow=8.6,SNR=28						
ASAR				PcP	PcP	21 08 25.1	+1.5
	comp=Z,2.5nm,0.6s,baz=305,slow=2.1,SNR=14						
ASAR				pPcP		21 08 35.6	
	comp=Z,2.4nm,0.8s,baz=318,slow=1.7,SNR=6.7						
ASAR				LR	LR	21 16 09.0	
	comp=Z,144nm,21.5s,MS3.5,baz=137,slow=36						
ASAR	**Alice Springs**	**28.28**	**123**	P	**P**	**21 05 11.0**	**0.0**
ASAR						21 08 25.1	
QIZ	**Qiongzhong**	**28.39**	**3**	P	**P**	**21 05 12.3**	**+0.3**
QIZ				AP	pP	21 05 16.3	-5.7
QIZ				XP	sP	21 05 19.5	-6.7
QIZ				S	**S**	**21 09 59.0**	**+2.4**
QIZ				AMB	AMB		
	comp=Z,19nm,1.5s,mb4.5						
QIZ				LR	LR		
	comp=E,391nm,19.1s						
QIZ				LR	LR		
	comp=Z,346nm,15.7s,MS4.1						
CHTO	**Chiang Mai**	**29.59**	**342**	P	**P**	**21 05 23.6**	**+1.0**
	SNR=6.5						
CHTO	**Chiang Mai**	**29.59**	**342**	*e*P	**P**	**21 05 22.5**	**-0.1**
CHTO				*e*	pP	21 05 33.0	+0.4
CHTO				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
CHTO	**Chiang Mai**	**29.59**	**342**	*e*P	**P**	**21 05 22.5**	**-0.2**
	comp=Z,23nm,0.9s,mb4.9						
CHTO				*e*	pP	21 05 33.0	+0.4
KMI	**Kunming**	**34.83**	**351**	P	**P**	**21 06 11.0**	**+2.5**
KMI				AP	pP	21 06 20.8	+2.2
KMI				PP	PP	21 07 29.0	+1.2
KMI				S	**S**	**21 11 41.3**	**+4.3**
KMI				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.6						
KMI				AMB	AMB		
	comp=Z,84nm,4.9s						
KMI				LR	LR		
	comp=N,288nm,21.1s,MS4.5						
KMI				LR	LR		
	comp=E,808nm,19.4s,MS4.5						
KMI				LR	LR		
	comp=Z,574nm,14.7s,MS4.5						
GYA	**Guiyang**	**35.77**	**358**	*i*P	**P**	**21 06 17.3**	**+0.6**
GYA				AP	pP	21 06 21.8	-4.9
GYA				XP	sP	21 06 24.8	-6.1
GYA				PP	PP	21 07 38.5	+0.2
GYA				S	**S**	**21 11 53.5**	**+1.9**
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,420nm,17.9s,MS4.3						
GYA				LR	LR		
	comp=E,310nm,18.4s,MS4.3						
GYA				LR	LR		
	comp=Z,370nm,18.0s,MS4.2						
YHNB	**Yeheng**	**36.30**	**20**	*e*P	**P**	**21 06 20.6**	**-0.6**
STKA	**Stephens Creek**	**38.08**	**131**	*e*P	**P**	**21 06 36.5**	**+0.2**
	comp=Z,9.7nm,0.6s,mb4.7						
STKA				*e*	pP	21 06 47.3	+0.9
STKA	**Stephens Creek**	**38.08**	**131**	P	**P**	**21 06 36.5**	**+0.2**
	comp=Z,17nm,0.8s,mb4.8,baz=308,slow=8.8,SNR=43						
STKA				pP	pP	21 06 47.3	+0.9
	comp=Z,44nm,0.8s,baz=313,slow=8.8,SNR=22						
STKA				PcP	PcP	21 08 51.9	+1.0
	comp=Z,1.8nm,0.5s,baz=329,slow=4.9,SNR=3.9						
CTA	**Charters Tower**	**38.15**	**110**	*e*P	**P**	**21 06 38.2**	**+1.3**
	comp=Z,12nm,1.3s,mb4.5						
CTA				*e*	pP	21 06 49.0	+2.0
CTA	**Charters Tower**	**38.15**	**110**	P	**P**	**21 06 38.2**	**+1.4**
	comp=Z,8.6nm,0.7s,mb4.6,baz=281,slow=9.2,SNR=6.5						
CTA				pP	pP	21 06 49.0	+2.1
	comp=Z,13nm,0.8s,baz=267,slow=13,SNR=6.2						
CTA	**Charters Tower**	**38.15**	**110**	*e*P	**P**	**21 06 38.2**	**+1.3**
CTA				*e*	pP	21 06 49.0	+2.0
CTA				pmax	pmax		
	comp=Z,13nm,1.3s						
PMG	**Port Moresby**	**38.38**	**93**	P	**P**	**21 06 40.2**	**+1.3**
	comp=Z,5.2nm,0.5s,mb4.5,baz=324,slow=17,SNR=4.5						
PMG	**Port Moresby**	**38.38**	**93**	P	**P**	**21 06 36.3**	**-2.6**
CD2	**Chengdu**	**40.41**	**354**	*e*P	**P**	**21 06 55.8**	**+0.1**
CD2				AP	pP	21 07 00.3	-5.6
CD2				XP	sP	21 07 03.0	-7.0
CD2				PP	PP	21 08 33.0	+4.0
CD2				PCP	PcP	21 08 58.3	0.0
CD2				PCS	PcS	21 12 47.8	-1.1
CD2				S	**S**	**21 13 04.5**	**+2.9**
CD2				SCS	ScS	21 16 59.0	0.0
CD2				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
CD2				AMB	AMB		
	comp=Z,50nm,5.6s						
CD2				LR	LR		
	comp=E,320nm,19.2s						
CD2				LR	LR		
	comp=Z,110nm,15.6s,MS3.8						
JOW	**Kunigami**	**41.02**	**28**	P	**P**	**21 07 00.8**	**0.0**
	comp=Z,28nm,1.0s,mb4.9,baz=229,slow=8.2,SNR=20						
JOW				pP	pP	21 07 10.8	-0.1
	comp=Z,49nm,0.9s,baz=213,slow=4.7,SNR=17						
JOW				LR	LR	21 22 45.2	
	comp=Z,89nm,21.0s,MS3.6,baz=183,slow=34						
SSE	**Sheshan**	**42.23**	**17**	P	**P**	**21 07 10.5**	**-0.2**
SSE				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.9						
SSE				AMB	AMB		
	comp=Z,31nm,4.3s						
LSA	**Lhasa**	**42.30**	**338**	P	**P**	**21 07 12.3**	**+1.0**
LSA	**Lhasa**	**42.30**	**338**	*e*P	**P**	**21 07 12.5**	**+1.2**
LSA				*e*	pP	21 07 22.6	+1.1
LSA				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.2						
LSA	**Lhasa**	**42.30**	**338**	*e*P	**P**	**21 07 12.5**	**+1.2**
	comp=Z,46nm,0.8s,mb5.2						
LSA				*e*	pP	21 07 22.6	+1.1
NJ2	**Nanjing**	**42.55**	**13**	*e*P	**P**	**21 07 13.3**	**+0.1**
NJ2				AP	pP	21 07 17.8	-5.6
NJ2				XP	sP	21 07 20.3	-7.3
NJ2				PP	PP	21 08 57.0	+4.8
NJ2				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,140nm,3.8s						
NJ2				LR	LR		
	comp=N,1µm,10.3s						
NJ2				LR	LR		
	comp=E,330nm,16.2s						
NJ2				LR	LR		
	comp=Z,290nm,16.1s						
PKI	**Pulchoki**	**42.98**	**330**	*e*P	**P**	**21 07 17.0**	**+0.3**
	comp=Z,104nm,1.2s,mb5.5						
PKI	**Pulchoki**	**42.98**	**330**	*e*P	**P**	**21 07 17.0**	**+0.3**
PKI				pmax	pmax		
	comp=Z,105nm,1.2s,mb5.4						
GUN	**Gumba**	**43.02**	**330**	*e*P	**P**	**21 07 17.9**	**+0.8**
	comp=Z,298nm,1.2s,mb5.9						
DMN	**Daman**	**43.16**	**329**	*e*P	**P**	**21 07 18.4**	**+0.2**
	comp=Z,158nm,1.0s,mb5.7						
KKN	**Kakani**	**43.22**	**330**	*e*P	**P**	**21 07 19.0**	**+0.3**
	comp=Z,156nm,1.0s,mb5.7						
KKN	**Kakani**	**43.22**	**330**	*e*P	**P**	**21 07 19.0**	**+0.3**
KKN				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
XAN	**Xi'an**	**43.30**	**1**	P	**P**	**21 07 19.0**	**-0.4**
XAN				AP	pP	21 07 29.5	-0.1
XAN				AMB	AMB		
	comp=Z,25nm,1.1s,mb4.9						
XAN				AMB	AMB		
	comp=Z,104nm,7.4s						
XAN				LR	LR		
	comp=N,192nm,16.5s,MS4.1						
XAN				LR	LR		
	comp=E,107nm,20.7s,MS4.1						
XAN				LR	LR		
	comp=Z,376nm,16.5s,MS4.4						
GKN	**Gorkha**	**43.72**	**329**	*e*P	**P**	**21 07 23.1**	**+0.4**
	comp=Z,126nm,1.0s,mb5.6						
KOLN	**Koldanda**	**44.06**	**328**	*e*P	**P**	**21 07 25.7**	**+0.2**
LZH	**Lanzhou**	**45.53**	**355**	*e*P	**P**	**21 07 37.0**	**-0.2**
LZH				AP	pP	21 07 46.5	-0.9
LZH				XP	sP	21 07 50.8	-0.7
LZH				PP	PP	21 09 24.3	+0.2
LZH				*e*S	**S**	**21 14 17.0**	**+0.2**
LZH				XS	sS	21 14 34.5	+0.8
LZH				AMB	AMB		
	comp=Z,25nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,176nm,6.6s						
LZH				LR	LR		
	comp=N,998nm,14.6s						
LZH				LR	LR		
	comp=Z,1µm,18.1s,MS4.9						
GTA	**Gaotai**	**49.28**	**351**	*e*P	**P**	**21 08 07.5**	**+1.1**
GTA				AP	pP	21 08 14.3	-2.4
GTA				XP	sP	21 08 18.3	-2.5
GTA				PCP	PcP	21 09 31.3	+2.5
GTA				SCP	ScP	21 13 24.0	+2.6
GTA				PCS	PcS	21 13 25.3	-0.1
GTA				S	**S**	**21 15 13.0**	**+2.8**
GTA				SCS	ScS	21 17 56.0	+0.4
GTA				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.8						
GTA				AMB	AMB		
	comp=Z,113nm,5.7s						
GTA				LR	LR		
	comp=N,158nm,20.5s,MS4.5						
GTA				LR	LR		
	comp=E,418nm,19.8s,MS4.5						
GTA				LR	LR		
	comp=Z,226nm,17.1s,MS4.2						
BJT	**Baijiatuau**	**49.81**	**8**	*e*P	**P**	**21 08 10.1**	**-0.3**
BJT				*e*	pP	21 08 19.8	-0.9
BJT				pmax	pmax		
	comp=Z,45nm,1.0s						
BJT	**Baijiatuau**	**49.81**	**8**	*e*P	**P**	**21 08 10.1**	**-0.3**
	comp=Z,45nm,1.0s,mb5.5						
BJT				*e*	pP	21 08 19.8	-0.9
BJI	**Beijing**	**49.83**	**8**	P	**P**	**21 08 08.5**	**-2.1**
BJI				PP	PP	21 10 05.3	-0.1
BJI				S	**S**	**21 15 22.3**	**+4.4**
BJI				AMB	AMB		
	comp=Z,23nm,1.1s,mb5.1						
BJI				LR	LR		
	comp=N,255nm,16.2s,MS4.4						
BJI				LR	LR		
	comp=E,127nm,16.2s,MS4.4						
BJI				LR	LR		
	comp=Z,137nm,16.2s,MS4.0						
HHC	**Hu-ho-hao-te**	**50.19**	**3**	*e*P	**P**	**21 08 14.0**	**+0.7**
HHC				AP	pP	21 08 18.8	-4.8
HHC				XP	sP	21 08 21.0	-6.7
HHC				PCP	PcP	21 09 32.5	+0.3
HHC				PP	PP	21 10 10.5	+1.9
HHC				SCP	ScP	21 13 26.5	+1.2
HHC				PCS	PcS	21 13 28.5	-0.7
HHC				S	**S**	**21 15 28.5**	**+5.7**
HHC				SCS	ScS	21 18 01.3	-0.4
HHC				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
HHC				AMB	AMB		
	comp=Z,86nm,4.4s						
HHC				LR	LR		
	comp=N,95nm,19.6s,MS4.1						
HHC				LR	LR		
	comp=E,144nm,17.8s,MS4.1						
HHC				LR	LR		
	comp=Z,138nm,20.9s,MS3.9					

comp=Z,20nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,142nm,5.0s
WMQ LR LR
comp=N,125nm,14.0s,MS4.2
WMQ LR LR
comp=E,87nm,15.0s,MS4.2
WMQ LR LR
comp=Z,95nm,14.0s,MS4.0
SONM Songino Array 57.10 359 P **P** **21 09 04.3 +0.4**
comp=Z,4.1nm,0.6s,mb4.6,baz=176,slow=7.5,SNR=32
SONM pP pP 21 09 14.4 +0.1
comp=Z,11nm,0.9s,baz=185,slow=8.5,SNR=14
SONM PcP PcP 21 09 59.1 +0.7
comp=Z,1.7nm,0.5s,baz=187,slow=4.4,SNR=5.4
SONM LR LR 21 36 35.3
comp=Z,115nm,18.0s,MS4.0,baz=74,slow=39
SONM Songino Array 57.10 359 P **P** **21 09 04.3 +0.4**
SONM *PP pP 21 09 14.4 0.0
SONM 21 09 59.1
ULN Ulaanbaatar 57.12 359 P **P** **21 09 04.7 +0.7**
SNR=6.3
ULN Ulaanbaatar 57.12 359 *eP* **P** **21 09 03.2 -0.8**
ULN *e* pP 21 09 14.7 +0.2
ULN pmax pmax
comp=Z,12nm,0.8s,mb5.0
ULN Ulaanbaatar 57.12 359 *eP* **P** **21 09 03.2 -0.8**
comp=Z,12nm,0.8s,mb5.0
ULN *e* pP 21 09 14.7 +0.2
MDJ Mudanjiang 57.22 18 P **P** **21 09 05.0 +0.3**
MDJ AP pP 21 09 08.3 -6.9
MDJ PP PP 21 11 12.3 +0.4
MDJ S **S** **21 17 02.3 +4.2**
MDJ XS sS 21 17 07.5 -7.9
MDJ SCS ScS 21 18 54.3 +2.9
MDJ AMB AMB
comp=Z,5.0nm,0.8s,mb4.6
MDJ AMB AMB
comp=Z,52nm,5.1s
MDJ LR LR
comp=N,49nm,23.2s,MS3.6
MDJ LR LR
comp=E,17nm,20.1s,MS3.6
MDJ LR LR
comp=Z,44nm,18.6s,MS3.6
MDJ Mudanjiang 57.22 18 *eP* **P** **21 09 03.6 -1.1**
comp=Z,18nm,1.4s,mb4.9
ZAK Zakamensk 59.78 356 *eP* **P** **21 09 22.5 -0.1**
AAK Ala-Archa 60.35 332 *iP* **P** **21 09 23.4 -3.0**
AAK pmax pmax
comp=Z,8.0nm,1.5s,mb4.5
AAK Ala-Archa 60.35 332 *ep*P pP 21 09 37.7 +0.7
MKAR Makanchi Array 60.64 340 P **P** **21 09 28.3 -0.1**
comp=Z,18nm,0.7s,mb5.3,baz=139,slow=7.2,SNR=123
MKAR pP pP 21 09 38.5 -0.5
comp=Z,18nm,0.8s,baz=134,slow=6.9,SNR=13
MKAR Makanchi Array 60.64 340 P **P** **21 09 28.3 -0.1**
MKAR pP pP 21 09 38.5 -0.5
TLY Talaya 61.06 357 *eP* **P** **21 09 29.3 -2.0**
TLY *e* 21 09 42.8
TLY pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
TLY Talaya 61.06 357 *eP* **P** **21 09 29.3 -2.0**
comp=Z,5.0nm,1.0s,mb4.6
TLY *e* 21 09 42.8
MOY Mondy 61.24 355 *eP* **P** **21 09 33.1 +0.6**
CIT Chita 61.44 4 *eP* **P** **21 09 34.6 +0.7**
ASAJ Asahikawa 61.78 27 P **P** **21 09 35.0 -1.2**
comp=Z,5.6nm,0.8s,mb4.8,baz=252,slow=17,SNR=4.2
KLR Kul'dur 62.02 17 *eP* **P** **21 09 32.8 -5.0**
YSS Yuzh-Sakhalins 64.07 26⇑ *eP* **P** **21 09 50.8 -0.6**
YSS *i* pP 21 10 00.0 -2.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 64.07 26 *eP* **P** **21 09 50.5 -0.8**
comp=Z,53nm,1.0s,mb5.5
YSS *e* pP 21 10 01.1 -0.9
KURK Kurchatov 65.25 340 P **P** **21 09 59.5 +0.4**
comp=Z,166nm,0.9s,SNR=11
MAW Mawson 65.35 197 P **P** **21 09 59.7 0.0**
comp=Z,3.9nm,0.7s,mb4.6,baz=40,slow=6.3,SNR=10.0
MAW pP pP 21 10 10.3 0.0
comp=Z,3.1nm,0.5s,baz=350,slow=4.7,SNR=4.8
MAW LR LR 21 33 44.1
comp=Z,65nm,19.2s,MS3.8,baz=251,slow=32
MAW Mawson 65.35 197 *eP* **P** **21 09 58.9 -0.8**
MAW pmax pmax
comp=Z,12nm,1.0s
MAW Mawson 65.35 197 *eP* **P** **21 09 58.9 -0.9**
comp=Z,12nm,1.0s,mb4.9
KRAR Krasnoyarsk 66.51 351⇑ *iP* **P** **21 10 07.4 +0.2**
BOD Bodaibo 67.25 3 *eP* **P** **21 10 09.9 -2.0**
BOD *e* pP 21 10 20.1 -2.5
BOD pmax pmax
comp=Z,11nm,1.3s,mb4.7
BOD pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
NVS Novosibirsk 67.45 345 *eP* **P** **21 10 09.7 -3.5**
NVS pmax pmax
comp=N,8.0nm,1.7s
NVS pmax pmax
comp=E,6.0nm,1.7s
NVS pmax pmax
comp=Z,11nm,1.7s,mb4.6
URZ Urewera 67.61 127 P **P** **21 10 14.0 -0.1**
comp=Z,3.3nm,0.4s,mb4.7,baz=292,slow=5.4,SNR=3.1
BVAR Borovoye Array 70.13 337 P **P** **21 10 29.5 -0.4**
comp=Z,2.7nm,0.5s,mb4.4,baz=146,slow=8.4,SNR=29
BVAR pP pP 21 10 39.7 -0.9
comp=Z,6.5nm,0.7s,baz=141,slow=7.6,SNR=16
BVAR LR LR 21 46 10.3
comp=Z,98nm,19.9s,MS4.0,baz=319,slow=40
BVAR Borovoye Array 70.13 337 P **P** **21 10 29.5 -0.3**
BVAR *PP pP 21 10 39.7 -0.9
BRVK Borovoye 70.20 337 P **P** **21 10 30.6 +0.4**
comp=Z,64nm,1.0s,mb5.5,SNR=5.7
BRVK Borovoye 70.20 337 P **P** **21 10 30.1 -0.1**
SNR=7.7
BRVK Borovoye 70.20 337 *eP* **P** **21 10 30.1 -0.1**
BRVK *e* pP 21 10 40.2 -0.8
BRVK pmax pmax
comp=Z,13nm,1.3s,mb4.7
BRVK Borovoye 70.20 337 *eP* **P** **21 10 30.1 -0.1**
comp=Z,13nm,1.3s,mb4.7
BRVK *e* pP 21 10 40.2 -0.8
CHKZ Chkalovo 70.54 337 *eP* **P** **21 10 32.3 -0.1**
CHKZ *e* pP 21 10 42.4 -0.7
CHKZ pmax pmax
comp=Z,20nm,0.9s,mb5.0
CHKZ Chkalovo 70.54 337 *eP* **P** **21 10 32.3 -0.1**
comp=Z,20nm,0.9s,mb5.0
CHKZ *e* pP 21 10 42.4 -0.7
ZRNK Zerenda 70.62 336 *eP* **P** **21 10 32.3 -0.5**
ZRNK *e* pP 21 10 42.6 -1.0
ZRNK pmax pmax
comp=Z,12nm,0.9s,mb4.8
ZRNK Zerenda 70.62 336 *eP* **P** **21 10 32.3 -0.5**
comp=Z,12nm,0.9s,mb4.8
ZRNK *e* pP 21 10 42.6 -0.9
YAK Yakutsk 73.24 10 *eP* **P** **21 10 47.0 -1.6**
YAK *e* pP 21 10 57.8 -1.5
YAK pmax pmax
comp=Z,72nm,1.0s,mb5.6
YAK Yakutsk 73.24 10 *eP* **P** **21 10 47.0 -1.6**
comp=Z,72nm,1.0s,mb5.5
YAK *e* pP 21 10 57.8 -1.5
VNDA Vanda 73.30 169 P **P** **21 10 48.6 -0.3**
comp=Z,1.7nm,0.8s,mb4.0,baz=308,slow=6.5,SNR=14
VNDA pP pP 21 10 59.5 -0.1
comp=Z,4.2nm,0.8s,baz=301,slow=6.2,SNR=13
VNDA Vanda 73.30 169 *eP* **P** **21 10 48.7 -0.2**
VNDA *e* pP 21 10 59.5 -0.2
VNDA pmax pmax
comp=Z,7.0nm,1.0s
VNDA Vanda 73.30 169 *eP* **P** **21 10 48.7 -0.2**
comp=Z,7.5nm,1.0s,mb4.6
VNDA *e* pP 21 10 59.5 -0.2
SYO Syowa Base 73.60 200⇑ *eP* **P** **21 10 50.4 -0.2**
AKTK Aktyubinsk 73.88 329 P **P** **21 10 52.0 -0.3**
AKTK LR LR 21 47 13.9
AKTO Aktyubinsk 73.88 329 P **P** **21 10 52.0 -0.3**
comp=Z,1.2nm,0.5s,mb4.1,baz=108,slow=7.5,SNR=7.3
AKTO LR LR 21 47 13.9
comp=Z,61nm,19.0s,MS3.9,baz=327,slow=39
SBA Scott Base 74.38 169 *eP* **P** **21 10 55.0 -0.2**
SBA *e* pP 21 11 05.6 -0.4
SBA pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
SBA Scott Base 74.38 169 *eP* **P** **21 10 55.0 -0.2**
comp=Z,7.7nm,1.0s,mb4.6
SBA *e* pP 21 11 05.6 -0.4
PET Petropavlovsk 75.58 29‖ *eP* **P** **21 11 02.5 +0.4**
GNI Garni 76.58 315 LR LR 21 49 03.6
comp=Z,38nm,18.2s,MS3.8,baz=253,slow=39
GNI Garni 76.58 315 P **P** **21 11 09.4 +1.6**
GNI pmax pmax
comp=Z,8.0nm,0.8s
GNI Garni 76.58 315 P **P** **21 11 09.4 +1.6**
comp=Z,7.6nm,0.8s,mb4.7
MA2 Magadan 76.77 21 *eP* **P** **21 11 08.7 -0.2**
MA2 *e* pP 21 11 18.9 -0.9
MA2 pmax pmax
comp=Z,26nm,0.9s,mb5.2
MA2 Magadan 76.77 21 *eP* **P** **21 11 08.7 -0.2**
comp=Z,26nm,0.9s,mb5.2
MA2 *e* pP 21 11 18.9 -0.9
ARU Arti 77.39 334 P **P** **21 11 12.1 -0.3**
comp=Z,58nm,1.0s,mb5.5,SNR=5.0
ARU Arti 77.39 334 *eP* **P** **21 11 11.5 -0.9**
ARU *e* pP 21 11 22.1 -1.1
ARU pmax pmax
comp=Z,19nm,1.2s,mb4.9
ARU Arti 77.39 334 *eP* **P** **21 11 11.5 -0.9**
comp=Z,19nm,1.2s,mb4.9
ARU *e* pP 21 11 22.1 -1.2
LSZ Lusaka 78.02 256 *eP* **P** **21 11 17.3 +1.4**
LSZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LSZ Lusaka 78.02 256 *eP* **P** **21 11 17.3 +1.4**
comp=Z,6.3nm,0.9s,mb4.5
ZEI Tsey 78.25 317 *eP* **P** **21 11 16.9 -0.3**
ZEI pmax pmax
comp=Z,12nm,0.5s,mb5.1
BOSA Boshof 79.39 243 LR LR 21 43 13.3
comp=Z,223nm,18.7s,MS4.5,baz=171,slow=33
KIV Kislovodsk 79.54 318 *deP* **P** **21 11 24.6 +0.3**
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.8
ASF Jabal al Asfar 79.58 305 P **P** **21 11 26.5 +2.0**
comp=Z,3.3nm,0.9s,mb4.3,baz=300,slow=0.7,SNR=7.1
ASF pP pP 21 11 37.2 +1.9
comp=Z,5.2nm,0.7s,baz=292,slow=0.8,SNR=5.5
GOF Gofitskoye 79.77 319 *eP* **P** **21 11 16.7 -8.8**
MALT Malatya 80.41 312 *eP* **P** **21 11 29.7 +0.8**
MALT *e* pP 21 11 40.4 +0.6
MALT pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MALT Malatya 80.41 312 *eP* **P** **21 11 29.7 +0.7**
comp=Z,9.4nm,1.1s,mb4.6
MALT *e* pP 21 11 40.4 +0.6
EIL Elat 80.43 302 *eP* **P** **21 11 30.6 +1.5**
EIL *e* pP 21 11 40.7 +0.7
QSPA South Pole Qui 80.50 180 *eP* **P** **21 11 28.6 -0.9**
comp=Z,7.2nm,1.1s,mb4.5
VRHR Novokhopersk 83.12 324 *eP* **P** **21 11 43.1 -0.2**
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.4
VRHR pmax pmax
comp=N,4.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.6s
BR131 Keskin Array S 84.39 312 *eP* **P** **21 11 49.8 +0.1**
comp=E,15nm,1.1s,mb5.0
BR131 *e* pP 21 12 00.5 -0.2
BRTR Keskin Array B 84.39 312 P **P** **21 11 50.3 +0.6**
comp=E,3.1nm,0.9s,mb4.4,baz=131,slow=6.7,SNR=14
BRTR pP pP 21 12 00.1 -0.6
comp=E,17nm,1.2s,baz=123,slow=6.0,SNR=12
BRTR LR LR 21 51 26.7
comp=E,63nm,19.8s,MS4.0,baz=283,slow=37
BRTR Keskin Array B 84.39 312 P **P** **21 11 50.3 +0.6**
BRTR *PP pP 21 12 00.1 -0.6
VRSR Storozhevoye 84.58 324 *eP* **P** **21 11 50.3 -0.4**
VRSR *e*PP pP 21 12 01.0 -0.6
VRSR pmax pmax
comp=Z,20nm,1.2s,mb5.1
VRSR pmax pmax
comp=N,4.0nm,1.3s
VRSR pmax pmax
comp=E,20nm,1.0s
MOS Moscow 87.13 328 *eP* **P** **21 12 03.7 +0.4**
MOS *e* pP 21 12 13.2 -1.1
MOS pmax pmax
comp=Z,37nm,1.2s,mb5.5
OBN Obninsk 87.47 327κ *iP* **P** **21 12 04.9 -0.1**
OBN *i* pP 21 12 15.7 -0.3
OBN pmax pmax
comp=Z,44nm,1.4s,mb5.5
OBN MLR MLR
comp=Z,100nm,21.0s,MS4.2
OBN Obninsk 87.47 327 *eP* **P** **21 12 04.7 -0.3**
comp=Z,37nm,0.8s,mb5.7
OBN *e* pP 21 12 15.2 -0.7
TMCR Tamitsa 90.05 336 *eP* **P** **21 12 16.9 -0.2**
TMCR pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
AKASG Malin Array Be 90.40 321 P **P** **21 12 18.1 -0.6**
comp=Z,0.3nm,0.3s,mb4.0,baz=95,slow=3.9,SNR=6.1
AKASG pP pP 21 12 27.9 -1.9
comp=Z,2.4nm,0.8s,baz=86,slow=4.7,SNR=3.5
FINES FINESS Array B 94.54 331 P **P** **21 12 37.5 -0.4**
comp=Z,0.5nm,0.5s,mb4.2,baz=104,slow=5.9,SNR=9.6
ARCES ARCESS Array B 96.29 339 P **P** **21 12 45.0 -0.9**
comp=Z,1.4nm,0.8s,mb4.5,baz=90,slow=6.1,SNR=11
ARCES LR LR 22 01 49.7
comp=Z,75nm,19.6s,MS4.2,baz=276,slow=39
TORD Torodi Ar. Bea 108.10 281 PKiKP PKiKP 21 17 46.0 +0.9
comp=Z,0.3nm,0.6s,baz=58,slow=1.7,SNR=7.1
YKA Yellowknife Ar 118.75 21 PKP PKPdf 21 18 05.4 -0.1
comp=Z,0.7nm,0.5s,baz=319,slow=2.1,SNR=3.8
YKA Yellowknife Ar 118.75 21 PKP PKPdf 21 18 05.4 -0.1
BOZ Bozeman (W) 130.39 36 *e*PKIKP PKPdf 21 18 26.5 -1.2
WMOK Wichita Mounta 144.76 40 *e*PKIKP PKPdf 21 18 54.6 +0.5
WMOK *e* 21 19 04.9
LONY Lake Ozonia 144.93 4 *e*PKPdf PKPdf 21 18 54.2 -0.2
LONY *e* 21 19 04.8
LBNH Lisbon 145.39 0 *e*PKIKP PKPdf 21 18 56.8 +1.6
NCB Newcomb 145.59 3 *e*PKPdf PKPdf 21 18 56.4 +0.9
NCB *e* 21 19 07.0
BDFB Brasilia 145.69 224 *e*PKIKP PKPdf 21 18 54.6 -1.1
JCT Junction City 146.56 47 *e*PKPbc PKPbc 21 19 00.5 +1.8
JCT *e* 21 19 10.7
BINY Binghamton 147.22 6 *e*PKPab PKPab 21 19 01.6 -0.7
LVC Limon Verde 147.97 185 *e*PKPbc PKPbc 21 19 05.1 +2.5
MIAR Mount Ida 148.06 35 *e*PKP2 PKPab 21 19 04.0 -1.7
SSPA Standing Stone 148.52 9 *e*PKPdf PKPdf 21 18 59.8 -0.6
MVL Millersville 149.35 7 *e*PKPbc PKPbc 21 19 07.0 +0.8
HKT Hockley 149.68 45 *e*PKHKP 21 19 04.3
HKT *e* 21 19 09.0
PLAL Pickwick Lake 150.58 28 *e*PKPbc PKPbc 21 19 09.7 +0.5
LPAZ La Paz 154.13 188 PKPbc PKPbc 21 19 19.6 +2.5
comp=Z,0.3nm,0.4s,baz=243,slow=6.8,SNR=2.8

*ISCJB **29** 21:12:14.4±1.1,49**N**±0.1×942**E**±02,h33km,mb3.8/9, Error ellipse: s-maj=29.0km s-min=11.4km az=101.9*
*NEIC **29** 21:12:15.5±0.8,4.90N×94.15E,h30km,mb4.1/3, Error ellipse: s-maj=22.7km s-min=8.7km az=51.0*
*IDC **29** 21:12:18.8±7.0,4.96N×94.35E,h53km±56km,mb3.5/6, mb1 3.6/7,mb1mx3.4/21,mbtmp3.7/7,ML3.2/1, Error ellipse: s-maj=90.1km s-min=19.0km az=59.0*
ISC 29 21:12:16.6±1.1,49N±0.1×942E±02,h35km,n13,σ0s59/13, mb3.8/9, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.20**	**114**	P		**Pn**		**21 13 32.8**	**+0.9**
	1.0nm,0.3s,baz=315,slow=14,SNR=5.4								
KULM	**Kulim**	**6.47**	**86**	*eP*		**Pn**		**21 13 49.3**	**0.0**
LSA	**Lhasa**	**24.81**	**354**	*eP*		**P**		**21 17 36.0**	**+0.7**
	2.6nm,0.6s,mb3.9								
FITZ	**Fitzroy Crossi**	**38.57**	**127**	P		**P**		**21 19 35.2**	**-0.7**
	2.1nm,1.1s,mb3.8,baz=328,slow=18,SNR=3.7								
MKAR	**Makanchi Array**	**42.96**	**348**	P		**P**		**21 20 12.5**	**+0.4**
	0.6nm,0.4s,mb3.7,baz=165,slow=6.3,SNR=5.7								
MKAR	**Makanchi Array**	**42.96**	**348**	P		**P**		**21 20 12.5**	**+0.4**
SONM	**Songino Array**	**44.02**	**12**	P		**P**		**21 20 20.6**	**-0.2**
	0.4nm,0.6s,mb3.3,baz=191,slow=9.5,SNR=3.2								
ULN	**Ulaanbaatar**	**44.19**	**12**	P		**P**		**21 20 20.7**	**-1.3**
	0.9nm,0.8s,mb3.5								
WRA	**Warramunga Arr**	**46.58**	**123**	P		**P**		**21 20 41.1**	**+0.1**
	1.6nm,0.6s,mb4.2,baz=301,slow=9.2,SNR=9.2								
WRAB	**Tennant Creek**	**46.59**	**123**	*eP*		**P**		**21 20 40.7**	**-0.3**
	5.1nm,0.7s,mb4.6								
WB2	**Warramunga Arr**	**46.59**	**123**	*eP*		**P**		**21 20 41.4**	**+0.3**
ASAR	**Alice Springs**	**48.05**	**128**	P		**P**		**21 20 52.2**	**-0.3**
	0.4nm,0.5s,mb3.7,baz=302,slow=8.1,SNR=6.0								
FINES	**FINESS Array B**	**75.32**	**333**	P		**P**		**21 23 56.6**	**+0.4**
	0.3nm,0.4s,mb3.6,baz=97,slow=6.5,SNR=6.8								

*IDC **29** 21:12:50.1±1.1,1076S×16489E,h0km,mb4.2/10, mb1 4.3/11,mb1mx4.3/15,mbtmp4.2/11,ML4.3/1,MS3.7/7, Ms1 3.7/7,ms1mx3.4/21, Error ellipse: s-maj=29.6km s-min=23.5km az=115.0*
*ISCJB **29** 21:12:54.3±2.1,110S±0.1×16491E±009,h36km±18km, mb4.2/13,MS3.7/6, Error ellipse: s-maj=19.6km s-min=12.1km az=66.0*
*NEIC **29** 21:12:55.9±1.8,1090S×16493E,h35km±16km,mb4.5/8, Error ellipse: s-maj=21.0km s-min=13.0km az=205.0*
ISC 29 21:12:56.4±1.6,109S±01×16497E±008,h41km±14km,n25, σ0s91/25,mb4.2/13,MS3.7/6,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.16**	**286**	Pn		**Pn**		**21 14 11.1**	**0.0**
	31nm,0.3s,baz=126,slow=2.3,SNR=12								
HNR				Sn		**Sn**		**21 15 10.9**	**+1.5**
	12nm,0.3s,baz=270,slow=20,SNR=2.8								
HNR	**Honiara**	**5.16**	**286**	*e*Pn		**Pn**		**21 14 11.1**	**-0.1**
	325nm,0.8s								
HNR				*e*Sn		**Sn**		**21 15 09.6**	**+0.2**
DZM	**Mont Dzumac**	**11.17**	**173**	Pn		**Pn**		**21 15 32.5**	**-1.0**
	2.1nm,0.3s,baz=45,slow=10,SNR=12								
DZM				LR		LR		21 18 58.5	
	comp=Z,171nm,21.3s,baz=65,slow=32								
CTA	**Charters Tower**	**20.19**	**241**	*eP*		**P**		**21 17 29.2**	**+1.7**
	27nm,0.8s								
CTA	**Charters Tower**	**20.19**	**241**	P		**P**		**21 17 28.1**	**+0.6**
	44nm,0.9s,baz=70,slow=12,SNR=21								
CTA				LR		LR		21 23 53.7	
	comp=Z,263nm,20.1s,MS3.6,baz=206,slow=33								
AFI	**Afiamalu**	**22.90**	**100**	P		**P**		**21 17 57.4**	**+0.9**
	56nm,1.0s,mb5.0								
STKA	**Stephens Creek**	**30.01**	**222**	P		**P**		**21 19 00.8**	**-0.4**
	4.6nm,0.8s,mb4.2,baz=61,slow=8.5,SNR=8.3								
STKA				LR		LR		21 30 31.1	
	comp=Z,343nm,18.0s,MS4.0,baz=22,slow=35								
STKA	**Stephens Creek**	**30.01**	**222**	*eP*		**P**		**21 19 01.4**	**+0.2**
WRAB	**Tennant Creek**	**30.80**	**249**	*eP*		**P**		**21 19 07.9**	**-0.2**
	4.4nm,0.8s,mb4.3								
WB2	**Warramunga Arr**	**30.80**	**249**	P		**P**		**21 19 04.1**	**-4.1**
WRA	**Warramunga Arr**	**30.81**	**249**	P		**P**		**21 19 07.1**	**-1.2**
	0.7nm,0.5s,mb3.7,baz=78,slow=8.8,SNR=14								
GUMO	**Guam**	**31.48**	**320**	LR		LR		21 29 30.3	
	comp=Z,48nm,19.4s,MS3.2,baz=188,slow=32								
ASAR	**Alice Springs**	**32.17**	**243**	P		**P**		**21 19 19.4**	**-0.8**
	1.7nm,0.7s,mb4.0,baz=68,slow=9.5,SNR=21								
ASAR				LR		LR		21 30 02.4	
	comp=Z,208nm,21.3s,MS3.8,baz=275,slow=32								
FITZ	**Fitzroy Crossi**	**38.68**	**255**	*eP*		**P**		**21 20 15.5**	**-0.6**
	5.0nm,1.0s,mb4.2								
FITZ	**Fitzroy Crossi**	**38.68**	**255**	P		**P**		**21 20 15.6**	**-0.5**
	2.7nm,0.9s,mb4.0,baz=75,slow=12,SNR=9.4								
FITZ				LR		LR		21 35 24.4	
	comp=Z,109nm,18.7s,MS3.7,baz=73,slow=35								
PPT	**Papeete**	**44.46**	**104**	LR		LR		21 36 48.7	
	comp=Z,92nm,19.3s,MS3.7,baz=149,slow=32								
VNDA	**Vanda**	**66.60**	**181**	P		**P**		**21 23 43.7**	**+1.3**
	1.9nm,0.9s,mb4.1,baz=320,slow=7.1,SNR=6.4								
VNDA	**Vanda**	**66.60**	**181**	P		**P**		**21 23 42.2**	**-0.3**
	3.5nm,1.0s,mb4.3								
SBA	**Scott Base**	**66.92**	**180**	P		**P**		**21 23 46.3**	**+1.8**
	4.0nm,0.9s,mb4.5								
SONM	**Songino Array**	**78.12**	**324**	P		**P**		**21 24 50.3**	**-0.8**
	0.6nm,0.8s,mb3.6,baz=124,slow=2.6,SNR=3.1								
QSPA	**South Pole Qui**	**79.08**	**180**	*eP*		**P**		**21 24 56.0**	**-0.4**
	9.4nm,1.3s,mb4.6								
MAW	**Mawson**	**84.55**	**202**	P		**P**		**21 25 26.0**	**+0.8**
	2.3nm,0.8s,mb4.4,baz=104,slow=4.2,SNR=4.2								
MAW	**Mawson**	**84.55**	**202**	*eP*		**P**		**21 25 26.6**	**+1.4**
	6.2nm,1.0s,mb4.7								
MKAR	**Makanchi Array**	**92.91**	**317**	P		**P**		**21 26 05.2**	**+0.1**
	0.6nm,0.6s,mb4.2,baz=112,slow=5.4,SNR=6.5								
PDAR	**Pinedale Array**	**94.03**	**47**	P		**P**		**21 26 09.4**	**-0.8**
	0.2nm,0.3s,mb4.0,baz=186,slow=1.5,SNR=5.5								

*ISCJB **29** 21:13:13.0±0.6,4261N±002×4247E±004,h10km, Error ellipse: s-maj=3.9km s-min=3.1km az=156.0*
*CSEM **29** 21:13:13.6±0.1,4260N×4240E,h2km,mb4.2, Error ellipse: s-maj=2.5km s-min=1.9km az=117.0*
*TIF **29** 21:13:14.8,4265N×4245E,h22km±3km*
*MOS **29** 21:13:18.7±1.0,4282N×4266E,h14km,mb4.2/1, Error ellipse: s-maj=11.4km s-min=8.6km az=60.5*
ISC 29 21:13:14.4±0.6,4263N±002×4245E±004,h10km,n23, σ1s11/41,4D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.74**	**94**	P		**Pg**		**21 13 29.5**	**+0.8**
ONI				S		**Sg**		**21 13 40.3**	**+2.0**
DIGR	**Digorskoe uzhe**	**0.87**	**72**	*i* Pg		**Pg**		**21 13 31.5**	**+0.2**
DIGR				*i* Sg		**Sg**		**21 13 42.6**	**0.0**
ZEI	**Tsey**	**1.07**	**82**	*e*Pg		**Pg**		**21 13 35.3**	**+0.2**
ZEI				*e*Sg		**Sg**		**21 13 48.8**	**-0.3**
SHAR	**Shatzhatmas**	**1.12**	**8**‖	*e*PG		**Pg**		**21 13 35.5**	**-0.5**
KORR	**Kora**	**1.27**	**68**	*e*Pg		**Pg**		**21 13 39.1**	**+0.2**
KORR				*i* Sg		**Sg**		**21 13 55.5**	**+0.1**
BCA	**Borcka**	**1.34**	**208**	*i* PG		**Pg**		**21 13 39.1**	**-1.0**
BCA				*i* SG		**Sg**		**21 13 57.5**	**0.0**
KIV	**Kislovodsk**	**1.34**	**7**κ	*e*PG		**Pg**		**21 13 39.2**	**-0.9**
KIV								21 13 59.0	
KIV				pmax	pmax				
	comp=Z,24nm,0.4s								
KIV				smax					
	comp=E,91nm,0.7s								
KIV	**Kislovodsk**	**1.34**	**7**	*e*Pg		**Pg**		**21 13 39.2**	**-0.9**
	comp=E,24nm,0.4s								
KIV				Sg		**Sg**		**21 13 59.0**	**+1.6**
KIV0	**Kislovodsk Arr**	**1.34**	**8**	*e*Pg		**Pg**		**21 13 39.3**	**-0.8**
KIV0				*e*Sg		**Sg**		**21 13 57.1**	**-0.4**
KUBR	**Kubataba**	**1.36**	**31**	*e*Pg		**Pg**		**21 13 41.5**	**+0.9**
KUBR				*e*Sg		**Sg**		**21 14 00.7**	**+2.4**
LACR	**Lac**	**1.37**	**81**	*e*Pg		**Pg**		**21 13 40.5**	**-0.3**
LACR				*i* Sg		**Sg**		**21 13 57.7**	**-0.9**
GOR	**Gori**	**1.39**	**117**	P		**Pn**		**21 13 41.4**	**+1.6**
GOR				S		**Sb**		**21 14 01.1**	**+2.9**
BEYR	**Belyy Ugol+**	**1.41**	**11**	*e*Pg		**Pg**		**21 13 41.6**	**+0.2**
BEYR				*e*Sg		**Sg**		**21 13 59.8**	**+0.1**
ARNR	**Ardon**	**1.45**	**67**	*e*Pg		**Pg**		**21 13 42.0**	**-0.3**
ARNR				*i* Sg		**Sg**		**21 14 00.4**	**-0.8**
KMSR	**Komsomolskaya**	**1.54**	**61**	*e*Pg		**Pg**		**21 13 43.6**	**-0.4**
KMSR				*e*Sg		**Sg**		**21 14 03.0**	**-0.9**
VLKR	**Vladikavkaz**	**1.69**	**75**	*e*Pg		**Pg**		**21 13 45.5**	**-1.3**
VLKR				*e*Sg		**Sg**		**21 14 06.6**	**-2.1**
SNJR	**Sundja**	**1.79**	**75**‖	*e*PG		**Pg**		**21 13 46.8**	**-1.9**
SNJR				*e*S		**Sn**		**21 14 08.9**	**+0.8**
TBLG	**Delisi**	**1.92**	**117**	P		**Pn**		**21 13 50.6**	**+3.4**
TBLG				S		**Sg**		**21 14 16.7**	**+0.5**
KZR	**Kazreti**	**1.92**	**130**	S		**Sg**		**21 14 16.5**	**+0.3**
MTA	**Mtatsminda**	**1.98**	**117**	P		**Pn**		**21 13 50.7**	**+2.8**
MTA				S		**Sg**		**21 14 17.6**	**-0.3**
DGRG	**David-gareji**	**2.47**	**117**	P		**Pn**		**21 13 59.3**	**+4.5**
DGRG				S		**Sg**		**21 14 33.5**	**-0.5**
EZM	**Erzurum**	**2.84**	**197**	*e*PG		**Pg**		**21 14 02.2**	**-6.7**
GNI	**Garni**	**3.02**	**144**	*e*PN		**Pg**		**21 14 10.4**	**-1.9**

*NEIC **29** 21:18:51.6,2779S×7127W,h31km,ML3.7(GUC), After GUC.*
GUC 29 21:18:51.6±0.9,2779S×7127W,h31km±9km,ML3.7,5C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CDCH	**Caldera**	**0.82**	**29**⇑	*i* P		Pn		21 19 06.5	-0.5
CDCH				*i* S		Sb		21 19 17.5	-0.6
VACH	**Vallenar**	**0.90**	**150**⇑	*i* P		Pn		21 19 11.1	+2.9
VACH				*i* S		Sn		21 19 23.2	+3.1
VACH				AML	AML			21 19 23.5	
	comp=N,5μm,0.2s								

VACH	**Vallenar**	**0.90**	**150**	⇑*iP*	Pn	21 19 11.1	+2.9
VACH				*i* S	Sn	21 19 23.2	+3.1
CPCH	**Copiapo**	**0.92**	**62**	⇑*iP*	Pn	21 19 08.8	+0.3
CPCH				*i* S	Sn	21 19 20.9	+0.3
CPCH				AML	AML	21 19 23.3	
	comp=E,13µm,0.1s						
CPCH	**Copiapo**	**0.92**	**62**	⇑*iP*	Pn	21 19 08.8	+0.3
CPCH				*i* S	Sn	21 19 20.9	+0.3
LCO	**Las Campanas**	**1.31**	**158**	*eP*	Pn	21 19 15.3	+1.5
LCO				*i* S	Sn	21 19 32.3	+2.0
LCO				AML	AML	21 19 34.3	
	comp=E,974nm,0.4s						
LCO	**Las Campanas**	**1.31**	**158**	*eP*	Pn	21 19 15.3	+1.5
LCO				*i* S	Sn	21 19 32.3	+2.0
TLL	**Tololo Astrono**	**2.40**	**170**	*eP*	Pn	21 19 30.6	+1.9
TLL				*i* S	Sn	21 20 00.5	+3.4
TLL				AML	AML	21 20 11.2	
	comp=N,446nm,0.5s						
TLL	**Tololo Astrono**	**2.40**	**170**	*eP*	Pn	21 19 30.6	+1.9
TLL				*i* S	Sn	21 20 00.5	+3.4

*ATH **29** 21:33:48.0, 3876N×2780E, h14km±5km, MD3.5/5*
*ISCJB **29** 21:33:50.3±0.8, 3871N±003×2762E±004, h5km±7km, Error ellipse: s-maj=5.9km s-min=4.6km az=31.0*
*CSEM **29** 21:33:50.2±0.1, 3871N×2759E, h10km, MD3.2, Error ellipse: s-maj=1.9km s-min=1.2km az=99.0*
*ISK **29** 21:33:50.7, 3870N×2756E, h16km, MD3.2*
*NEIC **29** 21:33:50.0, 3871N×2755E, h14km, MD3.1(ISK), MD3.5(ATH), After ISK.*

ISC 29 21:33:51.0±0.8, 3871N±003×2760E±005, h8km±7km, n31, σ0§64/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.24**	**45**	*i* PG	**Pg**	**21 33 57.0**	**+1.2**
IZM	**Izmir**	**0.41**	**220**	*i* PG	**Pg**	**21 33 58.7**	**-0.2**
IZM				SG	**Sg**	**21 34 04.6**	**+0.3**
PRK	**Paraskevi**	**1.16**	**298**	*e*PB	**Pb**	**21 34 12.6**	**-0.8**
PRK				*e*SB	**Sb**	**21 34 29.8**	**+1.2**
SMG	**Samos**	**1.17**	**211**	*e*PG	**Pg**	**21 34 11.9**	**-1.5**
SMG				*e*SB	**Sb**	**21 34 30.4**	**+1.7**
DST	**Dursunbey**	**1.20**	**42**	PN	**Pn**	**21 34 13.9**	**-0.2**
CANB	**Canakkale**	**1.37**	**343**	PN	**Pn**	**21 34 15.9**	**-0.5**
MLSB	**Milas**	**1.42**	**174**	PN	**Pn**	**21 34 16.4**	**-0.7**
DENT	**Denizli**	**1.48**	**130**	PN	**Pn**	**21 34 17.9**	**-0.1**
EZN	**Ezine**	**1.49**	**319**	PN	**Pn**	**21 34 17.5**	**-0.6**
BODT	**Bodrum**	**1.66**	**188**	PN	**Pn**	**21 34 19.4**	**-1.0**
YER	**Yerkesik**	**1.66**	**161**	*e*PN	**Pn**	**21 34 20.4**	**-0.1**
MRMT	**Marmara Adasi**	**1.89**	**0**	*e*PN	**Pn**	**21 34 23.8**	**+0.2**
DAT	**Datca**	**1.98**	**180**	*e*PN	**Pn**	**21 34 25.2**	**+0.4**
GADA	**Gvkgeada**	**1.98**	**319**	*e*PN	**Pn**	**21 34 24.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**2.00**	**351**	*e*PN	**Pn**	**21 34 24.7**	**-0.4**
MFT	**Murefte**	**2.09**	**353**	*e*PN	**Pn**	**21 34 26.5**	**+0.2**
DALT	**Dalyan (Mudla)**	**2.11**	**157**	*e*PN	**Pn**	**21 34 26.0**	**-0.6**
GEMT	**Gemlik**	**2.12**	**35**	*e*PN	**Pn**	**21 34 26.5**	**-0.2**
LIA	**Limnos Island**	**2.22**	**303**	*e*PB	**Pn**	**21 34 27.5**	**-0.6**
YLV	**Yalova**	**2.31**	**36**	*e*PN	**Pn**	**21 34 29.1**	**-0.2**
ENEZ	**Enez**	**2.31**	**332**	*e*PN	**Pn**	**21 34 29.3**	**-0.1**
APE	**Apeiranthos**	**2.31**	**226**	*e*PN	**Pn**	**21 34 30.4**	**+1.0**
FETY	**Fethiye**	**2.38**	**150**	*e*PN	**Pn**	**21 34 30.7**	**+0.3**
ADVT	**Abdulvahap**	**2.39**	**43**	*e*PN	**Pn**	**21 34 30.7**	**+0.2**
ISK	**Istanbul-Kandi**	**2.61**	**25**	*e*PN	**Pn**	**21 34 34.0**	**+0.5**
HRT	**Hereke**	**2.65**	**36**	*e*PN	**Pn**	**21 34 34.4**	**+0.4**
ESKT	**Eskisehir**	**2.66**	**71**	*e*PN	**Pn**	**21 34 34.4**	**+0.2**
KLYT	**Kilyos**	**2.77**	**23**	*e*PN	**Pn**	**21 34 35.3**	**-0.4**
RDO	**Rodhopi**	**2.90**	**328**	*e*PB	**Pn**	**21 34 37.4**	**-0.1**
EDRB	**Edirne**	**3.20**	**349**	*e*PN	**Pn**	**21 34 41.8**	**+0.2**
KIZT	**Kizilcal**	**3.35**	**86**	*e*PN	**Pn**	**21 34 44.2**	**+0.5**

*NEIC **29** 21:36:14.6, 4584N×0.13W, h5km, ML2.5(LDG), ML2.7(STR), After STR.*
*LDG **29** 21:36:14.1±0.0, 4581N×021W, h2km, Md2.6/3, Ml2.5/25, Error ellipse: s-maj=0.9km s-min=0.7km az=64.0*
*CSEM **29** 21:36:14.3±0.1, 4582N×0.19W, h8km, ML2.5/24, Error ellipse: s-maj=1.1km s-min=0.8km az=48.0*

STR 29 21:36:14.6±0.3, 4584N×013W, h5km±1km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATF	**Mathat**	**0.11**	**265**	Pg	Pg	21 36 17.5	+0.6
MATF				Sg	Sg	21 36 19.3	+0.9
CHIF	**Chize**	**0.35**	**327**	Pg	Pg	21 36 21.2	-0.2
CHIF				Sg	Sg	21 36 26.1	+0.1
LCHF	**La Chataignera**	**0.93**	**333**	Pg	Pg	21 36 33.3	+0.7
LCHF				Sg	Sg	21 36 45.6	+1.0
LFF	**La Frestale**	**1.09**	**145**	*e*Pn	Pn	21 36 35.2	-1.3
LFF				*e*Sg	Sg	21 36 48.6	-1.0
	23nm,0.2s						
LFF	**La Frestale**	**1.09**	**145**	*e*Pg	Pg	21 36 34.6	-0.9
LFF				*e*Pn	Pn	21 36 35.2	-1.3
LFF				*e*Sg	Sg	21 36 48.6	-1.0
LFF	**La Frestale**	**1.09**	**145**	*e*Pn	Pn	21 36 35.2	-1.3
LFF				*e*Sg	Sg	21 36 48.6	-1.0
	12nm,0.2s						
RJF	**Les Rejaudoux**	**1.27**	**114**	*e*Pg	Pg	21 36 38.6	-0.4
RJF				*e*Sg	Sg	21 36 55.1	-0.5
	22nm,0.2s						
RJF	**Les Rejaudoux**	**1.27**	**114**	*e*Pn	Pn	21 36 37.9	-1.1
RJF				*e*Pg	Pg	21 36 38.6	-0.4
RJF				*e*Sg	Sg	21 36 55.1	-0.5
RJF	**Les Rejaudoux**	**1.27**	**114**	*e*Pg	Pg	21 36 38.6	-0.4
RJF				*e*Sg	Sg	21 36 55.1	-0.5
	11nm,0.2s						
TCF	**Toulx Ste Croi**	**1.69**	**74**	*e*Pg	Pg	21 36 46.7	-0.3
TCF				*e*Sg	Sg	21 37 09.2	+0.3
	3.1nm,0.2s						
TCF	**Toulx Ste Croi**	**1.69**	**74**	*e*Pn	Pn	21 36 43.9	-0.9
TCF				*e*Pg	Pg	21 36 46.7	-0.3
TCF				*e*Sg	Sg	21 37 09.2	+0.3
TCF	**Toulx Ste Croi**	**1.69**	**74**	*e*Pg	Pg	21 36 46.7	-0.3
TCF				*e*Sg	Sg	21 37 09.2	+0.3
	1.5nm,0.2s						
CAF	**Calviac**	**1.80**	**120**	*e*Pg	Pg	21 36 48.1	-0.9
CAF				*e*Sg	Sg	21 37 10.3	-2.0
	7.4nm,0.2s						
CAF	**Calviac**	**1.80**	**120**	*e*Pn	Pn	21 36 45.2	-1.0
CAF				*e*Pg	Pg	21 36 48.1	-0.9
CAF				*e*Sg	Sg	21 37 10.3	-2.0
CAF	**Calviac**	**1.80**	**120**	*e*Pg	Pg	21 36 48.1	-0.9
CAF				*e*Sg	Sg	21 37 10.3	-2.0
	3.7nm,0.2s						
BGF	**Bois d'Agland**	**2.19**	**70**	*e*Pg	Pg	21 36 55.8	-0.7
BGF				*e*Sg	Sg	21 37 24.5	-0.4
	12nm,0.3s						
BGF	**Bois d'Agland**	**2.19**	**70**	*e*Pn	Pn	21 36 50.7	-0.9
BGF				*e*Pg	Pg	21 36 55.8	-0.7
BGF				*e*Sg	Sg	21 37 24.5	-0.4
BGF	**Bois d'Agland**	**2.19**	**70**	*e*Pg	Pg	21 36 55.8	-0.7
BGF				*e*Sg	Sg	21 37 24.5	-0.4
	5.8nm,0.3s						
PYM	**Petit Puy Mans**	**2.20**	**91**	Pn	Pn	21 36 51.4	-0.3
AGO	**Saint Agoulin**	**2.29**	**83**	Pn	Pn	21 36 51.6	-1.3
HYF	**Humbligny**	**2.39**	**52**	*e*Pg	Pg	21 36 59.4	-0.9
HYF				*e*Sg	Sg	21 37 30.8	-0.5
HYF	**Humbligny**	**2.39**	**52**	*e*Pn	Pn	21 36 53.3	-1.0
HYF				*e*Pg	Pg	21 36 59.4	-0.9
HYF				*e*Sg	Sg	21 37 30.8	-0.5
HYF	**Humbligny**	**2.39**	**52**	*e*Pg	Pg	21 36 59.4	-0.9
HYF				*e*Sg	Sg	21 37 30.8	-0.5
LBL	**Lubilhac**	**2.45**	**103**	Pn	Pn	21 36 54.3	-0.9
LBL				Sg	Sg	21 37 33.3	0.0
AVF	**Avril sur Loir**	**2.59**	**67**	*e*Pg	Pg	21 37 03.0	-1.3
AVF				*e*Sg	Sg	21 37 37.1	-0.8
	1.7nm,0.3s						
AVF	**Avril sur Loir**	**2.59**	**67**	*e*Pn	Pn	21 36 55.8	-1.4
AVF				*e*Pg	Pg	21 37 03.0	-1.3
AVF				*e*Sg	Sg	21 37 37.1	-0.8
AVF	**Avril sur Loir**	**2.59**	**67**	*e*Pg	Pg	21 37 03.0	-1.3
AVF				*e*Sg	Sg	21 37 37.1	-0.8
	0.9nm,0.3s						
GRR	**Gorron**	**2.60**	**349**	*e*Pg	Pg	21 37 02.8	-1.6
GRR				*e*Sg	Sg	21 37 36.5	-1.6
	4.7nm,0.2s						
GRR	**Gorron**	**2.60**	**349**	*e*Pn	Pn	21 36 55.8	-1.4
GRR				*e*Pg	Pg	21 37 02.8	-1.6
GRR				*e*Sg	Sg	21 37 36.5	-1.6
GRR	**Gorron**	**2.60**	**349**	*e*Pg	Pg	21 37 02.8	-1.6
GRR				*e*Sg	Sg	21 37 36.5	-1.6
	2.3nm,0.2s						
PLDF	**La Plantade**	**2.62**	**86**	Pn	Pn	21 36 56.4	-1.2
LDF	**La Druitiere**	**2.75**	**0**	*e*Pg	Pg	21 37 04.9	-2.5
LDF				*e*Sg	Sg	21 37 41.3	-1.8
	3.5nm,0.3s						
LDF	**La Druitiere**	**2.75**	**0**	*e*Pn	Pn	21 36 57.3	-2.1
LDF				*e*Pg	Pg	21 37 04.9	-2.5
LDF				*e*Sg	Sg	21 37 41.3	-1.8
LDF	**La Druitiere**	**2.75**	**0**	*e*Pg	Pg	21 37 04.9	-2.5
LDF				*e*Sg	Sg	21 37 41.3	-1.8
	1.8nm,0.3s						
SSF	**Saint Saulge**	**2.79**	**63**	*e*Pg	Pg	21 37 06.0	-2.2
SSF				*e*Sg	Sg	21 37 43.2	-1.2
	1.2nm,0.2s						
SSF	**Saint Saulge**	**2.79**	**63**	*e*Pn	Pn	21 36 58.5	-1.5
SSF				*e*Pg	Pg	21 37 06.0	-2.2
SSF				*e*Sg	Sg	21 37 43.2	-1.2
SSF	**Saint Saulge**	**2.79**	**63**	*e*Pg	Pg	21 37 06.0	-2.2
SSF				*e*Sg	Sg	21 37 43.2	-1.2
	0.6nm,0.2s						
EPF	**Esparros**	**2.83**	**173**	*e*Pg	Pg	21 37 06.8	-2.0
EPF				*e*Sg	Sg	21 37 41.9	-3.6
	3.3nm,0.2s						
EPF	**Esparros**	**2.83**	**173**	*e*Pn	Pn	21 36 58.0	-2.4
EPF				*e*Pg	Pg	21 37 06.8	-2.0
EPF				*e*Sg	Sg	21 37 41.9	-3.6
EPF	**Esparros**	**2.83**	**173**	*e*Pg	Pg	21 37 06.8	-2.0
EPF				*e*Sg	Sg	21 37 41.9	-3.6
	1.6nm,0.2s						
SJPF	**Ste Jean**	**2.84**	**196**	*e*Pg	Pg	21 37 05.9	-3.1
SJPF				*e*Sg	Sg	21 37 41.2	-4.5
	2.7nm,0.3s						
SJPF	**Ste Jean**	**2.84**	**196**	*e*Pn	Pn	21 36 57.5	-3.0
SJPF				*e*Pg	Pg	21 37 05.9	-3.1
SJPF				*e*Sg	Sg	21 37 41.2	-4.5
SJPF	**Ste Jean**	**2.84**	**196**	*e*Pg	Pg	21 37 05.9	-3.1
SJPF				*e*Sg	Sg	21 37 41.2	-4.5
	1.4nm,0.3s						
SMF	**Signal de Mont**	**2.87**	**72**	*e*Pg	Pg	21 37 08.6	-1.0
SMF				*e*Sg	Sg	21 37 46.4	-0.4
	1.7nm,0.2s						
SMF	**Signal de Mont**	**2.87**	**72**	*e*Pn	Pn	21 36 59.3	-1.7
SMF				*e*Pg	Pg	21 37 08.6	-1.0
SMF				*e*Sg	Sg	21 37 46.4	-0.4
SMF	**Signal de Mont**	**2.87**	**72**	*e*Pg	Pg	21 37 08.6	-1.0
SMF				*e*Sg	Sg	21 37 46.4	-0.4
	0.9nm,0.2s						
SGMF	**Saint Gilles**	**2.93**	**326**	*e*Pg	Pg	21 37 08.1	-2.7
SGMF				*e*Sg	Sg	21 37 46.2	-2.5
	2.8nm,0.3s						
SGMF	**Saint Gilles**	**2.93**	**326**	*e*Pn	Pn	21 37 00.2	-1.6
SGMF				*e*Pg	Pg	21 37 08.1	-2.7
SGMF				*e*Sg	Sg	21 37 46.2	-2.5
SGMF	**Saint Gilles**	**2.93**	**326**	*e*Pg	Pg	21 37 08.1	-2.7
SGMF				*e*Sg	Sg	21 37 46.2	-2.5
	1.4nm,0.3s						
FLN	**La Foliniere**	**2.93**	**355**	*e*Pg	Pg	21 37 08.7	-2.1
FLN				*e*Sg	Sg	21 37 47.3	-1.5
	5.5nm,0.3s						
FLN	**La Foliniere**	**2.93**	**355**	*e*Pn	Pn	21 37 00.4	-1.5
FLN				*e*Pg	Pg	21 37 08.7	-2.1
FLN				*e*Sg	Sg	21 37 47.3	-1.5
FLN	**La Foliniere**	**2.93**	**355**	*e*Pg	Pg	21 37 08.7	-2.1
FLN				*e*Sg	Sg	21 37 47.3	-1.5
	2.8nm,0.3s						
QUIF	**Quistinic**	**2.94**	**316**	*e*Pg	Pg	21 37 07.9	-3.1
QUIF				*e*Sg	Sg	21 37 46.0	-3.1
	2.5nm,0.2s						
QUIF	**Quistinic**	**2.94**	**316**	*e*Pn	Pn	21 37 00.5	-1.5
QUIF				*e*Pg	Pg	21 37 07.9	-3.1
QUIF				*e*Sg	Sg	21 37 46.0	-3.1
QUIF	**Quistinic**	**2.94**	**316**	*e*Pg	Pg	21 37 07.9	-3.1
QUIF				*e*Sg	Sg	21 37 46.0	-3.1
	1.2nm,0.2s						
ETSF	**Etsaut**	**2.96**	**186**	*e*Pg	Pg	21 37 08.2	-3.1
ETSF				*e*Sg	Sg	21 37 45.6	-4.0
	2.1nm,0.3s						
ETSF	**Etsaut**	**2.96**	**186**	*e*Pn	Pn	21 36 59.2	-3.0
ETSF				*e*Pg	Pg	21 37 08.2	-3.1
ETSF				*e*Sg	Sg	21 37 45.6	-4.0
ETSF	**Etsaut**	**2.96**	**186**	*e*Pg	Pg	21 37 08.2	-3.1
ETSF				*e*Sg	Sg	21 37 45.6	-4.0
	1.0nm,0.3s						
MTLF	**Montolieu**	**3.01**	**145**	*e*Pg	Pg	21 37 10.2	-2.1
MTLF				*e*Sg	Sg	21 37 48.4	-2.9
	2.9nm,0.3s						
MTLF	**Montolieu**	**3.01**	**145**	*e*Pn	Pn	21 37 01.2	-1.7
MTLF				*e*Pg	Pg	21 37 10.2	-2.1
MTLF				*e*Sg	Sg	21 37 48.4	-2.9
MTLF	**Montolieu**	**3.01**	**145**	*e*Pg	Pg	21 37 10.2	-2.1
MTLF				*e*Sg	Sg	21 37 48.4	-2.9
	1.5nm,0.3s						
LOR	**Lormes**	**3.10**	**61**	*e*Pg	Pg	21 37 12.6	-1.4
LOR				*e*Sg	Sg	21 37 52.7	-1.5
	1.3nm,0.2s						
LOR	**Lormes**	**3.10**	**61**	*e*Pn	Pn	21 37 02.6	-1.6
LOR				*e*Pg	Pg	21 37 12.6	-1.4
LOR				*e*Sg	Sg	21 37 52.7	-1.5
LOR	**Lormes**	**3.10**	**61**	*e*Pg	Pg	21 37 12.6	-1.4
LOR				*e*Sg	Sg	21 37 52.7	-1.5
	0.6nm,0.2s						
ROSF	**Rostrenen**	**3.29**	**320**	*e*Pg	Pg	21 37 14.9	-2.8
ROSF				*e*Sg	Sg	21 37 57.3	-3.1
	1.9nm,0.4s						
ROSF	**Rostrenen**	**3.29**	**320**	*e*Pn	Pn	21 37 04.4	-2.4
ROSF				*e*Pg	Pg	21 37 14.9	-2.8
ROSF				*e*Sg	Sg	21 37 57.3	-3.1
ROSF	**Rostrenen**	**3.29**	**320**	*e*Pg	Pg	21 37 14.9	-2.8
ROSF				*e*Sg	Sg	21 37 57.3	-3.1
	0.9nm,0.4s						
VIVF	**Saint-Julien-l**	**3.53**	**104**	*e*Pg	Pg	21 37 20.3	-1.9
VIVF				*e*Sg	Sg	21 38 06.0	-1.9
	2.5nm,0.3s						
VIVF	**Saint-Julien-l**	**3.53**	**104**	*e*Pn	Pn	21 37 08.9	-1.1
VIVF				*e*Pg	Pg	21 37 20.3	-1.9
VIVF				*e*Sg	Sg	21 38 06.0	-1.9
VIVF	**Saint-Julien-l**	**3.53**	**104**	*e*Pg	Pg	21 37 20.3	-1.9
VIVF				*e*Sg	Sg	21 38 06.0	-1.9
	1.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.33**	**100**	*e*Pn	Pn	21 37 19.8	-1.3
CABF	**La Chapelle**	**4.38**	**78**	*e*Pn	Pn	21 37 20.4	-1.4
CABF				*e*Pg	Pg	21 37 36.2	-2.0
MEZF	**Maizieres J'vi**	**4.42**	**51**	*e*Pn	Pn	21 37 20.9	-1.5
MEZF				*e*Pg	Pg	21 37 36.5	-2.9
SMRF	**Simiane la Rot**	**4.46**	**113**	*e*Pn	Pn	21 37 21.5	-1.4
SMRF				*e*Sg	Sg	21 38 35.4	-2.5
	0.7nm,0.2s						
SMRF	**Simiane la Rot**	**4.46**	**113**	*e*Pn	Pn	21 37 21.5	-1.4
SMRF				*e*Sg	Sg	21 38 35.4	-2.5
	0.3nm,0.2s						
MBDF	**Montbardon**	**5.00**	**100**	*e*Pn	Pn	21 37 28.8	-1.4
BAIF	**Baives**	**5.13**	**33**	*e*Pg	Pg	21 37 49.7	-3.2
BAIF				*e*Sg	Sg	21 38 55.8	-3.5
	0.6nm,0.3s						
BAIF	**Baives**	**5.13**	**33**	*e*Pn	Pn	21 37 30.9	-1.1
BAIF				*e*Pg	Pg	21 37 49.7	-3.2
BAIF				*e*Sg	Sg	21 38 55.8	-3.5
BAIF	**Baives**	**5.13**	**33**	*e*Pg	Pg	21 37 49.7	-3.2
BAIF				*e*Sg	Sg	21 38 55.8	-3.5
	0.3nm,0.3s						
GIVF	**Givet**	**5.41**	**36**	*e*Pg	Pg	21 37 54.0	-4.2
GIVF				*e*Sg	Sg	21 39 05.3	-3.0
	3.1nm,0.2s						
GIVF	**Givet**	**5.41**	**36**	*e*Pg	Pg	21 37 54.0	-4.2
GIVF				*e*Sg	Sg	21 39 05.3	-3.0
	1.5nm,0.2s						
CDF	**Champ du Feu**	**5.67**	**60**	*e*Pg	Pg	21 37 59.4	-3.8
CDF				*e*Sg	Sg	21 39 13.7	-3.0
	1.1nm,0.3s						
CDF	**Champ du Feu**	**5.67**	**60**	*e*Pg	Pg	21 37 59.4	-3.8
CDF				*e*Sg	Sg	21 39 13.7	-3.0
	0.6nm,0.3s						

NEIC 29 22:08:40.0, 5280N×16670W, h0km, ML3.1(AEIC), After AEIC., Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCD	**Okmok Cone D**	**1.06**	**307**	P	Pg	22 08 59.5	-0.7
OKCD				S	Sg	22 09 15.3	+1.3
OKCE	**Okmok Cone E**	**1.08**	**306**	P	Pg	22 09 00.2	-0.5
NIKO	**Nikolski**	**1.31**	**278**	P	Pg	22 09 03.9	-1.3
NIKO				S	Sg	22 09 21.0	-1.3
AKLV	**Akutan Long Va**	**1.43**	**18**	P	Pn	22 09 05.2	-2.0
AKUT	**Akutan**	**1.45**	**22**	P	Pn	22 09 05.4	-2.0
TCUT	**Toone Canyon**	**38.58**	**85**	*e*P	P	22 16 04.6	+0.1

MOS 29 22:15:31.6±0.4, 4268N×4434E, h13km, mb3.5/1, 3C-4D, Error ellipse: s-maj=26.7km s-min=11.9km az=90.8, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LACR	**Lac**	**0.15**	**348**	⇓*i*PG	Pg	22 15 36.3	+1.0
ZEI	**Tsey**	**0.34**	**286**	⇑*e*PG	Pg	22 15 40.1	+1.7
ZEI				*e*S	Sg	22 15 45.2	+2.2
VLKR	**Vladikavkaz**	**0.44**	**34**	⇑*e*PG	Pg	22 15 41.7	+1.3
VLKR				*e*S	Sg	22 15 47.7	+1.3
KORR	**Kora**	**0.45**	**334**	⇓*e*PG	Pg	22 15 42.0	+1.4
KORR				*e*S	Sg	22 15 48.6	+1.9
ARNR	**Ardon**	**0.51**	**355**	⇓*e*PG	Pg	22 15 43.0	+1.3
ARNR				*e*S	Sg	22 15 50.2	+1.7
SNJR	**Sundja**	**0.52**	**42**	⇓*e*PG	Pg	22 15 43.0	+1.1
SNJR				*e*S	Sg	22 15 50.3	+1.5
KMSR	**Komsomolskaya**	**0.69**	**357**	⇑*e*PG	Pg	22 15 46.3	+1.2
KMSR				*e*S	Sg	22 15 56.0	+1.8

*MAN **29** 22:53:20.5, 1337N×12024E, h4km, mb3.2, ML4.5, MS1.7*
*ISCJB **29** 22:53:23.2±0.5, 1336N±003×120.19E±005, h54km±7km, mb4.3/11, Error ellipse: s-maj=8.0km s-min=4.3km az=10.6*
*IDC **29** 22:53:23.1±7.9, 1340N×12032E, h33km±65km, mb4.0/6, mb1 4.2/6, mb1mx3.8/18, mbtmp4.2/6, Error ellipse: s-maj=89.8km s-min=16.5km az=69.0*
*NEIC **29** 22:53:26.9±1.7, 1360N×12082E, h74km±19km, mb4.0/4, Error ellipse: s-maj=81.5km s-min=8.1km az=65.0*

ISC 29 22:53:24.1±0.6, 1337N±003×12018E±005, h41km±7km, n30, σ0§91/41, mb4.3/11, 1C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.37**	**11**	*e*P	**Pn**	**22 53 27.3**	**-5.9**
LUBP				*e*S	**Sn**	**22 53 31.8**	**-7.8**
TGY	**Tagaytay City**	**1.04**	**45**	⇓*e*P	**Pn**	**22 53 41.8**	**-0.3**
TGY				*i* S	**Sn**	**22 53 56.0**	**+0.5**
TGY	**Tagaytay City**	**1.04**	**45**	Pg	**Pn**	**22 53 40.2**	**-2.0**
	1µm,0.3s,baz=237,slow=2.5,SNR=88						
TGY				Lg		22 53 54.1	
	2µm,0.3s,baz=143,slow=20,SNR=32						
BUSP	**Coron**	**1.36**	**179**	*e*P	**Pn**	**22 53 46.2**	**-0.4**
BUSP				*e*S	**Sn**	**22 54 04.3**	**+0.9**
LQP	**Lukban**	**1.52**	**61**	⇓*e*P	**Pn**	**22 53 48.6**	**-0.1**
BOAC	**Boac**	**1.63**	**87**	*e*P	**Pn**	**22 53 48.7**	**-1.5**
BOAC				*e*S	**Sn**	**22 54 13.0**	**+3.0**
OTRP	**Odiongan**	**2.06**	**119**	*e*P	**Pn**	**22 53 55.2**	**-1.0**
OTRP				*e*S	**Sn**	**22 54 27.5**	**+6.8**
POLP	**Polilio Island**	**2.18**	**52**	*e*P	**Pn**	**22 53 57.1**	**-0.7**
GQP	**Guinayangan**	**2.27**	**76**	⇓*i*P	**Pn**	**22 53 59.3**	**+0.2**
GQP				*i* S	**Sn**	**22 54 26.1**	**+0.3**
ENPP	**El Nido**	**2.27**	**199**	*e*P	**Pn**	**22 53 58.9**	**-0.2**
ENPP				*e*S	**Sn**	**22 54 26.2**	**+0.3**
PCPH	**Palayan**	**2.35**	**22**	⇑*e*P	**Pn**	**22 53 58.9**	**-1.3**
PCPH				*e*S	**Sn**	**22 54 27.3**	**-0.6**
SCZP	**Santa Cruz**	**2.40**	**354**	*e*P	**Pn**	**22 54 01.9**	**+1.0**
CUYO	**Cuyo Island**	**2.64**	**162**	*e*P	**Pn**	**22 54 03.6**	**-0.6**
CUYO				*e*S	**Sn**	**22 54 34.2**	**-0.7**
KALP	**Kalibo**	**2.70**	**128**	*e*P	**Sn**	**22 54 36.6**	**+0.2**
BALP	**Baler**	**2.72**	**30**	*e*P	**Pn**	**22 54 04.9**	**-0.4**
BALP				*e*S	**Sn**	**22 54 40.2**	**+3.4**
BOLP	**Bolinao**	**3.00**	**355**	*e*P	**Pn**	**22 54 10.5**	**+1.4**
GUIM	**Jordan**	**3.61**	**139**	*e*P	**Pn**	**22 54 17.9**	**+0.4**
GUIM				*e*S	**Sn**	**22 55 00.4**	**+1.6**
PVCP	**Virac**	**3.88**	**86**	*e*P	**Pn**	**22 54 20.9**	**-0.3**
WRAB	**Tennant Creek**	**35.91**	**157**	*e*P	**P**	**23 00 19.9**	**-0.5**
	21nm,0.7s,mb5.2						
WRA	**Warramunga Arr**	**35.92**	**157**	P	**P**	**23 00 20.0**	**-0.4**
	11nm,0.5s,mb5.1,baz=336,slow=9.6,SNR=64						
WB2	**Warramunga Arr**	**35.92**	**157**	*e*P	**P**	**23 00 20.0**	**-0.4**
SONM	**Songino Array**	**36.23**	**344**	P	**P**	**23

NVLJ	**Novalja**	**2.17**	**67**	*i* Pn	**Pn**	**22 54 39.5**	**-0.7**
NVLJ				*i* Sn	**Sn**	**22 55 06.1**	**-0.8**
VOY	**Vojsko**	**2.63**	**29**	*e*Pn	**Pn**	**22 54 51.2**	**+4.6**
VOY				*e*		22 54 56.0	
VOY				*e*Sn	**Sn**	**22 55 17.7**	**-0.6**
VISS	**Visnje**	**2.85**	**43**	*i* Pn	**Pn**	**22 54 48.8**	**-0.8**
VISS				*i* Sn	**Sn**	**22 55 24.1**	**+0.5**
BOJS	**Bojanci**	**2.87**	**51**	*i* Pn	**Pn**	**22 54 50.3**	**+0.5**
BOJS				*i* Sn	**Sn**	**22 55 25.9**	**+1.7**
BOJS				*i* Sg	**Sg**	**22 55 39.4**	**+2.7**
BOJS	**Bojanci**	**2.87**	**51**	*i* Pn	**Pn**	**22 54 50.3**	**+0.4**
BOJS				*i* Sn	**Sn**	**22 55 25.9**	**+1.7**
OBKA	**Obir**	**3.27**	**31⇑**	*i* Pn	**Pn**	**22 54 55.7**	**+0.3**
OBKA				⇓*i* Sn	**Sn**	**22 55 33.6**	**-0.6**
SBF	**Sospel**	**3.37**	**274**	*e*Pn	**Pn**	**22 54 56.3**	**-0.5**
SBF				*e*Sn	**Sn**	**22 55 36.3**	**-0.3**
	20nm,0.4s						
SBF	**Sospel**	**3.37**	**274**	*e*Pn	**Pn**	**22 54 56.3**	**-0.5**
SBF				*e*Sn	**Sn**	**22 55 36.3**	**-0.3**
	10nm,0.4s						
SQTA	**Sankt Quirin**	**3.54**	**350⇓**	*i* Pn	**Pn**	**22 55 00.5**	**+1.4**
SQTA				⇑*i* Sn	**Sn**	**22 55 43.7**	**+3.0**
WTTA	**Wattenberg**	**3.54**	**355⇑**	*i* Pn	**Pn**	**22 55 00.3**	**+1.2**
WTTA				⇓*i* Sn	**Sn**	**22 55 43.3**	**+2.6**
WATA	**Walderalm**	**3.62**	**354⇑**	*i* Pn	**Pn**	**22 55 01.5**	**+1.4**
WATA				⇓*i* Sn	**Sn**	**22 55 45.0**	**+2.4**
DAVA	**Damuels**	**3.87**	**337⇓**	*i* Pn	**Pn**	**22 55 05.5**	**+1.8**
DAVA				⇓*i* Sn	**Sn**	**22 55 53.7**	**+4.7**
MBDF	**Montbardon**	**3.95**	**286**	*e*Pn	**Pn**	**22 55 05.5**	**+0.8**
FRF	**La Foret Royal**	**3.95**	**269**	*e*Pn	**Pn**	**22 55 05.3**	**+0.5**
FRF				*e*Sn	**Sn**	**22 55 49.4**	**-1.6**
	4.7nm,0.4s						
FRF	**La Foret Royal**	**3.95**	**269**	*e*Pn	**Pn**	**22 55 05.3**	**+0.5**
FRF				*e*Sn	**Sn**	**22 55 49.4**	**-1.6**
	2.3nm,0.4s						
MOA	**Molln**	**4.38**	**20⇓**	*i* Pn	**Pn**	**22 55 11.1**	**+0.3**
MOA				⇑*i* Sn	**Sn**	**22 56 00.6**	**-1.0**
ORIF	**Oris-en-Rattie**	**4.61**	**287**	*e*Pn	**Pn**	**22 55 14.1**	**+0.3**
SMRF	**Simiane la Rot**	**4.72**	**275**	*e*Pn	**Pn**	**22 55 15.4**	**+0.1**
CABF	**La Chapelle**	**5.12**	**306**	*e*Pn	**Pn**	**22 55 23.2**	**+2.3**
CABF				*e*Sn	**Sn**	**22 56 17.1**	**-2.7**
	16nm,0.9s						
CABF	**La Chapelle**	**5.12**	**306**	*e*Pn	**Pn**	**22 55 23.2**	**+2.3**
CABF				*e*Sn	**Sn**	**22 56 17.1**	**-2.7**
	7.9nm,0.9s						
VIVF	**Saint-Julien-l**	**5.44**	**284**	*e*Pn	**Pn**	**22 55 25.7**	**+0.5**
HINF	**Hinteralfeld**	**5.48**	**320**	*e*Pn	**Pn**	**22 55 26.4**	**+0.6**
HINF				*e*Sn	**Sn**	**22 56 26.3**	**-2.3**
	9.6nm,0.5s						
KHC	**Kasperske Hory**	**5.49**	**10**	*e*PN	**Pn**	**22 55 25.2**	**-0.7**
KHC				*e*SN	**Sn**	**22 56 27.3**	**-1.6**
CDF	**Champ du Feu**	**5.75**	**326**	*e*Pn	**Pn**	**22 55 30.3**	**+0.8**
CDF				*e*Sn	**Sn**	**22 56 32.7**	**-2.5**
	3.1nm,0.3s						
HAU	**Haudompre**	**5.85**	**319**	*e*Pn	**Pn**	**22 55 31.5**	**+0.6**
HAU				*e*Sn	**Sn**	**22 56 34.8**	**-3.0**
	10nm,0.4s						
SMF	**Signal de Mont**	**6.51**	**299**	*e*Pn	**Pn**	**22 55 40.2**	**+0.3**
SMF				*e*Sn	**Sn**	**22 56 50.8**	**-3.2**
LOR	**Lormes**	**6.77**	**304**	*e*Pn	**Pn**	**22 55 44.2**	**+0.7**
LOR				*e*Sn	**Sn**	**22 56 56.9**	**-3.6**
	4.4nm,0.5s						
MEZF	**Maizieres J'vi**	**6.82**	**317**	*e*Pn	**Pn**	**22 55 44.3**	**+0.1**
AVF	**Avril sur Loir**	**6.88**	**299**	*e*Pn	**Pn**	**22 55 45.4**	**+0.4**
SSF	**Saint Saulge**	**6.89**	**302**	*e*Pn	**Pn**	**22 55 45.1**	**-0.1**
SSF				*e*Sn	**Sn**	**22 56 59.8**	**-3.6**
	1.7nm,0.4s						
BGF	**Bois d'Agland**	**7.12**	**297**	*e*Pn	**Pn**	**22 55 48.3**	**+0.1**
MTLF	**Montolieu**	**7.18**	**270**	*e*Pn	**Pn**	**22 55 49.6**	**+0.4**

NIED ***29*** *22:57:00,2500N×12360E,h56km,Mw4.1 Best double couple: M₀1.67000×10¹⁵ NP1:φ₀56.00000°,δ72.00000°, λ-159.00000°. NP2:φ₀319.00000°,δ70.00000°, λ-19.00000°.*

ISCJB ***29*** *22:57:51.5±1.2,2501N±006×12358E±004,h15km±11km, mb3.7/5,MS3.3/4,Error ellipse: s-maj=10.6km s-min=5.8km az=0.1*

IDC ***29*** *22:57:51.3±1.1,2512N×12353E,h0km,mb3.7/4, mb1 3.7/5,mb1mx3.6/20,mbtmp3.6/5,ML2.8/1,MS3.3/4, Ms1 3.4/4,ms1mx2.9/25,Error ellipse: s-maj=42.1km s-min=21.2km az=64.0*

JMA ***29*** *22:57:51.9±0.3,2498N×12357E,h31km±4km,M3.6*

NEIC ***29*** *22:57:55.8±0.7,2516N×12354E,h35km,mb3.9/1,Error ellipse: s-maj=15.5km s-min=11.2km az=160.0*

ISC 29 22:57:51.1±1.3,2500N±006×12359E±004,h5km±9km,n19, σ1§05/22,mb3.7/5,MS3.3/4,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.68**	**169**	P	**Pg**	**22 58 04.4**	**+0.2**
IRIF				*e*S	**Sg**	**22 58 13.4**	**+0.4**
YOJ	**Yonaguni jima**	**0.76**	**225**	P	**Pg**	**22 58 05.6**	**-0.1**
YOJ				*e*S	**Sg**	**22 58 15.1**	**-0.4**
JIJ	**Ishigaki jima**	**0.81**	**142**	P	**Pg**	**22 58 06.5**	**-0.2**
JIJ				*e*S	**Sg**	**22 58 16.6**	**-0.6**
JKRS	**Kuro-shima**	**0.85**	**154**	P	**Pg**	**22 58 07.5**	**0.0**
JKRS				*e*S	**Sg**	**22 58 19.2**	**+0.7**
HATJ	**Hateruma jima**	**0.96**	**168**	P	**Pg**	**22 58 09.4**	**-0.2**
HATJ				*e*S	**Sg**	**22 58 20.7**	**-1.4**
JTJ	**Tarama**	**1.07**	**110**	P	**Pg**	**22 58 11.6**	**-0.1**
JTJ				*e*S	**Sg**	**22 58 26.4**	**+0.9**
JMJ	**Miyako jima 2**	**1.56**	**97**	*e*S	**Sn**	**22 58 38.3**	**-1.7**
TATO	**Taipei**	**1.91**	**270**	*e*Pn	**Pn**	**22 58 24.6**	**+0.3**
NACB	**Ninganchiao**	**2.00**	**246**	*e*Pn	**Pn**	**22 58 27.1**	**+1.5**
YHNB	**Yeheng**	**2.04**	**261**	*e*Pn	**Pn**	**22 58 24.5**	**-1.7**
JOW	**Kunigami**	**4.59**	**66**	Pn	**Pn**	**22 59 02.3**	**+1.1**
	0.9nm,0.3s,baz=250,slow=12,SNR=5.7						
ASAJ	**Asahikawa**	**24.56**	**34**	LR	LR	23 12 35.9	
	comp=Z,38nm,18.2s,MS2.9,baz=279,slow=36						
SONM	**Songino Array**	**26.54**	**334**	P	**P**	**23 03 29.8**	**0.0**
	0.8nm,1.0s,mb3.2,baz=147,slow=8.6,SNR=3.2						
SONM				LR	LR	23 15 47.2	
	comp=Z,84nm,19.0s,MS3.3,baz=212,slow=41						
MKAR	**Makanchi Array**	**39.31**	**314**	P	**P**	**23 05 20.9**	**-0.2**
	1.4nm,0.9s,mb3.7,baz=97,slow=10,SNR=9.6						
WRA	**Warramunga Arr**	**45.88**	**166**	P	**P**	**23 06 17.3**	**+2.8**
	2.2nm,0.8s,mb4.1,baz=348,slow=8.8,SNR=3.6						
ASAR	**Alice Springs**	**49.40**	**168**	P	**P**	**23 06 43.2**	**+1.3**
	0.4nm,0.8s,mb3.5,baz=349,slow=7.6,SNR=3.8						
ARCES	**ARCESS Array B**	**69.60**	**338**	LR	LR	23 48 02.4	
	comp=Z,26nm,18.0s,MS3.5,baz=255,slow=43						
INK	**Inuvik**	**71.64**	**22**	P	**P**	**23 09 11.2**	**-2.6**
	0.5nm,0.4s,mb3.8						
NOA	**NORSAR Array B**	**78.52**	**333**	LR	LR	23 47 10.6	
	comp=Z,24nm,20.5s,MS3.5,baz=310,slow=38						

MOS ***29*** *23:21:44.9±0.8,4223N×4398E,h22km,mb3.6/1,Error ellipse: s-maj=43.4km s-min=10.5km az=81.8*

TIF ***29*** *23:21:46.7,4233N×4407E,h6km±2km*

ISCJB ***29*** *23:21:47.1±0.5,4234N±002×4410E±005,h5km±6km, Error ellipse: s-maj=6.9km s-min=3.1km az=160.4*

ISC 29 23:21:47.5±0.6,4233N±002×4408E±005,h12km±11km, n14,σ0§75/28,3C-5D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOR	**Gori**	**0.35**	**177**	P	**Pg**	**23 21 54.0**	**-0.6**
GOR				S	**Sg**	**23 22 00.1**	**+0.8**
ZEI	**Tsey**	**0.46**	**343⇓**	*e*PG	**Pg**	**23 21 56.3**	**-0.2**
ZEI				*e*S	**Sg**	**23 22 03.6**	**+1.0**
LACR	**Lac**	**0.52**	**18⇓**	*i*PG	**Pg**	**23 21 57.2**	**-0.5**
LACR				*i* S	**Sg**	**23 22 05.1**	**+0.6**
ONI	**Oni**	**0.53**	**298**	P	**Pg**	**23 21 57.6**	**-0.3**
ONI				S	**Sg**	**23 22 06.2**	**+1.3**
DIGR	**Digorskoe uzhe**	**0.68**	**327⇓**	*i*PG	**Pg**	**23 22 00.0**	**-0.7**
DIGR				*i* S	**Sg**	**23 22 09.8**	**+0.3**
KORR	**Kora**	**0.75**	**359⇓**	*i*PG	**Pg**	**23 22 01.5**	**-0.6**
KORR				*e*S	**Sg**	**23 22 12.3**	**+0.3**
TBLG	**Delisi**	**0.78**	**141**	P	**Pg**	**23 22 02.2**	**-0.3**
TBLG				S	**Sg**	**23 22 13.9**	**+1.2**
MTA	**Mtatsminda**	**0.83**	**140**	P	**Pg**	**23 22 03.1**	**-0.5**
MTA				S	**Sg**	**23 22 15.3**	**+0.8**
VLKR	**Vladikavkaz**	**0.84**	**31⇓**	*e*PG	**Pg**	**23 22 03.0**	**-0.7**
VLKR				*e*S	**Sg**	**23 22 15.1**	**+0.4**
ARNR	**Ardon**	**0.87**	**10⇑**	*e*PG	**Pg**	**23 22 03.5**	**-0.8**
ARNR				*e*S	**Sg**	**23 22 16.1**	**+0.5**
SNJR	**Sundja**	**0.91**	**36⇑**	*e*PG	**Pg**	**23 22 04.3**	**-0.8**
SNJR				*e*S	**Sg**	**23 22 17.4**	**+0.4**
KZR	**Kazreti**	**0.98**	**165**	P	**Pg**	**23 22 05.3**	**-1.2**
KZR				S	**Sg**	**23 22 18.7**	**-0.7**
KMSR	**Komsomolskaya**	**1.05**	**8⇑**	*e*PG	**Pg**	**23 22 06.7**	**-1.0**
KMSR				*e*S	**Sg**	**23 22 21.4**	**0.0**
DGRG	**David-gareji**	**1.31**	**132**	P	**Pn**	**23 22 12.4**	**+0.8**
DGRG				S	**Sb**	**23 22 32.6**	**+3.9**

ISCJB ***29*** *23:27:57.5±0.9,3908N±006×2346E±005,h22km±14km, Error ellipse: s-maj=10.2km s-min=6.7km az=160.3*

ATH ***29*** *23:27:57.6,3913N×2340E,h18km±2km,MD3.0/4,ML2.9*

NEIC ***29*** *23:27:57.6,3913N×2340E,h18km,MD3.0(ATH),After ATH.*

CSEM ***29*** *23:27:57.8±0.1,3914N×2346E,h16km±1km,ML2.9,Error ellipse: s-maj=2.5km s-min=2.3km az=136.0*

THE ***29*** *23:27:57.2,3900N×2348E,h9km,ML2.5*

ISC 29 23:27:57.7±0.7,3912N±004×2346E±005,h14km±8km,n9, σ0§58/13,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEO	**Neokhori**	**0.26**	**315**	*e*Pg	**Pg**	**23 28 03.1**	**-0.2**
NEO				*e*SB	**Sg**	**23 28 06.9**	**-0.1**
XOR	**Xorichti**	**0.32**	**320**	*e*Pg	**Pg**	**23 28 05.3**	**+1.0**
AOS	**Alonnisos**	**0.33**	**81**	*e*Pg	**Pg**	**23 28 04.4**	**-0.1**
AOS				*e*Sg	**Sg**	**23 28 09.3**	**+0.4**
LKR	**Lokris**	**0.59**	**218**	*e*PN	**Pg**	**23 28 08.6**	**-0.6**
LKR				*e*SN	**Sg**	**23 28 17.2**	**+0.1**
AGG	**Agios Georgios**	**0.89**	**264**	*e*Pg	**Pg**	**23 28 13.6**	**-1.2**
AGG				*e*Sg	**Sg**	**23 28 27.3**	**+0.9**
ATH	**Athens Observa**	**1.16**	**170**	*e*PN	**Pn**	**23 28 19.9**	**+0.4**
LIT	**Litokhoron**	**1.23**	**323**	*e*Pg	**Pg**	**23 28 21.5**	**+0.1**
PLG	**Polygyros**	**1.25**	**359**	*e*PN	**Pn**	**23 28 20.8**	**+0.1**
OUR	**Ouranopolis**	**1.28**	**18**	*e*Pg	**Pg**	**23 28 21.5**	**-0.8**

ROM ***29*** *23:30:31.7±0.2,4377N×1216E,h3km±3km,Md2.7/17, Ml2.4/7,Error ellipse: s-maj=2.4km s-min=2.0km az=140.0*

NEIC ***29*** *23:30:31.7,4377N×1216E,h3km,ML2.4(ROM), ML2.7(LDG),After ROM.*

ISCJB ***29*** *23:30:32.4±0.3,4376N±003×1209E±003,h21km±3km, Error ellipse: s-maj=5.1km s-min=3.4km az=167.0*

CSEM ***29*** *23:30:32.2±0.2,4372N×1220E,h12km,ML2.7/11,Error ellipse: s-maj=3.4km s-min=3.1km az=40.0*

LDG ***29*** *23:30:34.6±0.2,4374N×1208E,h2km,Ml2.7/11,Error ellipse: s-maj=4.5km s-min=3.4km az=106.0*

ISC 29 23:30:32.8±0.3,4375N±003×1212E±003,h14km±3km,n54, σ1§17/88,4C-3D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRE	**Caprese Michel**	**0.18**	**222⇑**	*i*Pg	**Pg**	**23 30 36.7**	**-0.3**
CRE				Sg	**Sg**	**23 30 39.8**	**-0.2**
	316nm,0.3s						
SFI	**Santa Sofia**	**0.25**	**308⇑**	*i*Pg	**Pg**	**23 30 37.2**	**-0.9**
SFI				Sg	**Sg**	**23 30 41.8**	**+0.1**
BADI	**Badiali**	**0.26**	**159⇑**	*i*Pg	**Pg**	**23 30 37.6**	**-0.7**
BADI				Sg	**Sg**	**23 30 42.5**	**+0.4**
	775nm,0.4s						
RSM	**Repubblica di**	**0.30**	**54**	Pg	**Pg**	**23 30 38.5**	**-0.5**
	630nm,1.0s						
CDCA	**Citt' di Caste**	**0.31**	**164**	Pg	**Pg**	**23 30 38.4**	**-0.7**
	253nm,0.2s						
PESA	**Pesaro**	**0.56**	**70**	Pg	**Pg**	**23 30 42.5**	**-1.2**
PESA				Sg	**Sg**	**23 30 51.8**	**+0.7**
	522nm,0.1s						
SEI	**Scarperia**	**0.63**	**299**	Pg	**Pg**	**23 30 44.0**	**-1.0**
SEI				Sg	**Sg**	**23 30 55.9**	**+2.6**
	483nm,0.3s						
CSNT	**Castellina Chi**	**0.66**	**245**	Pg	**Pg**	**23 30 45.7**	**0.0**
CSNT				Sg	**Sg**	**23 30 56.5**	**+2.1**
	184nm,0.7s						
ASS	**Assisi**	**0.79**	**150**	Pg	**Pg**	**23 30 46.9**	**-1.3**
	1.0nm,0.4s						
FNVD	**Fontana Vidola**	**0.83**	**300**	Pg	**Pg**	**23 30 48.0**	**-0.9**
	150nm,0.8s						
CING	**Cingoli**	**0.87**	**115**	Pg	**Pg**	**23 30 48.3**	**-1.3**
	141nm,0.9s						
ARCI	**Arcidosso**	**1.01**	**208**	Pg	**Pg**	**23 30 52.5**	**+0.1**
ZCCA	**Zocca**	**1.02**	**306**	Pg	**Pg**	**23 30 52.8**	**+0.4**
	91nm,1.2s						
GRFL	**Gerfalco**	**1.03**	**234**	Pg	**Pg**	**23 30 53.7**	**+1.1**
	19nm,0.8s						
PII	**Pisa**	**1.15**	**269**	Pg	**Pg**	**23 30 53.7**	**-1.3**
	73nm,0.2s						
GSCL	**Gusciola**	**1.25**	**299**	Pg	**Pg**	**23 30 56.3**	**-0.6**
	16nm,0.4s						
MNS	**Montasola**	**1.43**	**163**	Pg	**Pg**	**23 30 59.6**	**-0.7**
	29nm,0.4s						
AQU	**L'Aquila**	**1.69**	**146**	*e*Pn	**Pg**	**23 31 05.6**	**+0.4**
AQU				*e*Sn		23 31 36.1	
NVLJ	**Novalja**	**2.14**	**67**	*i* Pn	**Pn**	**23 31 07.0**	**-1.0**
NVLJ				*i* Sn	**Sn**	**23 31 33.3**	**-1.1**
CTI	**Castel Tesino**	**2.32**	**352**	Pg	**Pn**	**23 31 11.3**	**+0.8**
	12nm,0.4s						
VOY	**Vojsko**	**2.61**	**28**	*e*Pn	**Pb**	**23 31 19.9**	**+0.7**
VOY				*e*Sn	**Sn**	**23 31 46.4**	**+0.6**
VISS	**Visnje**	**2.82**	**42**	*i* Pn	**Pn**	**23 31 16.7**	**-0.7**
VISS				*i* Sn	**Sn**	**23 31 52.3**	**+1.1**
BOJS	**Bojanci**	**2.84**	**51**	*i* Pn	**Pn**	**23 31 17.1**	**-0.6**
BOJS				*i* Sn	**Sn**	**23 31 53.1**	**+1.4**
SBF	**Sospel**	**3.39**	**273**	*e*Pn	**Pn**	**23 31 25.3**	**+0.1**
SBF				*e*Sn	**Sn**	**23 32 05.3**	**+0.1**
	12nm,0.4s						
SBF	**Sospel**	**3.39**	**273**	*e*Pn	**Pn**	**23 31 25.3**	**+0.1**
SBF				*e*Sn	**Sn**	**23 32 05.3**	**+0.1**
	5.8nm,0.4s						
SQTA	**Sankt Quirin**	**3.53**	**350⇓**	*i* Pn	**Pn**	**23 31 29.3**	**+2.2**
SQTA				⇓*i* Sn	**Sn**	**23 32 14.4**	**+5.9**
DAVA	**Damuels**	**3.87**	**337⇑**	*i* Pn	**Pn**	**23 31 33.5**	**+1.7**
DAVA				⇓*i* Sn	**Sn**	**23 32 22.7**	**+5.7**
MBDF	**Montbardon**	**3.96**	**286**	*e*Pn	**Pn**	**23 31 34.2**	**+1.1**
FRF	**La Foret Royal**	**3.97**	**269**	*e*Pn	**Pn**	**23 31 34.1**	**+0.9**
FRF				*e*Sn	**Sn**	**23 32 17.8**	**-1.8**
	1.5nm,0.3s						
FRF	**La Foret Royal**	**3.97**	**269**	*e*Pn	**Pn**	**23 31 34.1**	**+0.9**
FRF				*e*Sn	**Sn**	**23 32 17.8**	**-1.8**
	0.8nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.62**	**287**	*e*Pn	**Pn**	**23 31 42.7**	**+0.5**
SMRF	**Simiane la Rot**	**4.74**	**275**	*e*Pn	**Pn**	**23 31 44.5**	**+0.8**
CABF	**La Chapelle**	**5.13**	**306**	*e*Pn	**Pn**	**23 31 51.3**	**+2.2**
CABF				*e*Sn	**Sn**	**23 32 46.2**	**-1.9**
	2.0nm,0.5s						
CABF	**La Chapelle**	**5.13**	**306**	*e*Pn	**Pn**	**23 31 51.3**	**+2.2**
CABF				*e*Sn	**Sn**	**23 32 46.2**	**-1.9**
	1.0nm,0.5s						
VIVF	**Saint-Julien-l**	**5.46**	**284**	*e*Pn	**Pn**	**23 31 54.8**	**+1.2**
HINF	**Hinteralfeld**	**5.48**	**320**	*e*Pn	**Pn**	**23 31 55.4**	**+1.4**
HINF				*e*Sn	**Sn**	**23 32 54.9**	**-1.9**
	2.0nm,0.4s						
HINF	**Hinteralfeld**	**5.48**	**320**	*e*Pn	**Pn**	**23 31 55.4**	**+1.4**
HINF				*e*Sn	**Sn**	**23 32 54.9**	**-1.9**
	1.0nm,0.4s						
CDF	**Champ du Feu**	**5.75**	**326**	*e*Pn	**Pn**	**23 31 58.4**	**+0.8**
CDF				*e*Sn	**Sn**	**23 33 01.7**	**-1.6**
	1.9nm,0.3s						
CDF	**Champ du Feu**	**5.75**	**326**	*e*Pn	**Pn**	**23 31 58.4**	**+0.8**
CDF				*e*Sn	**Sn**	**23 33 01.7**	**-1.6**
	0.9nm,0.3s						
HAU	**Haudompre**	**5.86**	**319**	*e*Pn	**Pn**	**23 31 59.3**	**+0.2**
HAU				*e*Sn	**Sn**	**23 33 03.9**	**-2.1**
	5.1nm,0.4s						
HAU	**Haudompre**	**5.86**	**319**	*e*Pn	**Pn**	**23 31 59.3**	**+0.2**
HAU				*e*Sn	**Sn**	**23 33 03.9**	**-2.1**
	2.5nm,0.4s						
SMF	**Signal de Mont**	**6.52**	**299**	*e*Pn	**Pn**	**23 32 09.2**	**+1.0**
SMF				*e*Sn	**Sn**	**23 33 19.7**	**-2.7**
	0.7nm,0.3s						
SMF	**Signal de Mont**	**6.52**	**299**	*e*Pn	**Pn**	**23 32 09.2**	**+1.0**
SMF				*e*Sn	**Sn**	**23 33 19.7**	**-2.7**
	0.3nm,0.3s						
LOR	**Lormes**	**6.78**	**304**	*e*Pn	**Pn**	**23 32 12.6**	**+0.8**
LOR				*e*Sn	**Sn**	**23 33 26.0**	**-2.8**
	2.0nm,0.4s						
LOR	**Lormes**	**6.78**	**304**	*e*Pn	**Pn**	**23 32 12.6**	**+0.8**
LOR				*e*Sn	**Sn**	**23 33 26.0**	**-2.8**
	1.0nm,0.4s						
AVF	**Avril sur Loir**	**6.89**	**299**	*e*Pn	**Pn**	**23 32 14.4**	**+1.1**
AVF				*e*Sn	**Sn**	**23 33 28.1**	**-3.3**
	0.3nm,0.2s						
AVF	**Avril sur Loir**	**6.89**	**299**	*e*Pn	**Pn**	**23 32 14.4**	**+1.1**
AVF				*e*Sn	**Sn**	**23 33 28.1**	**-3.3**
	0.2nm,0.2s						
SSF	**Saint Saulge**	**6.90**	**302**	*e*Pn	**Pn**	**23 32 14.1**	**+0.6**
SSF				*e*Sn	**Sn**	**23 33 28.8**	**-3.0**
	1.0nm,0.5s						
SSF	**Saint Saulge**	**6.90**	**302**	*e*Pn	**Pn**	**23 32 14.1**	**+0.6**
SSF				*e*Sn	**Sn**	**23 33 28.8**	**-3.0**
	0.5nm,0.5s						
BGF	**Bois d'Agland**	**7.13**	**296**	*e*Pn	**Pn**	**23 32 16.5**	**-0.1**
MTLF	**Montolieu**	**7.21**	**270**	*e*Pn	**Pn**	**23 32 18.5**	**+0.9**
TCF	**Toulx Ste Croi**	**7.46**	**293**	*e*Pn	**Pn**	**23 32 21.6**	**+0.4**
TCF				*e*Sn	**Sn**	**23 33 41.7**	**-3.9**
	0.4nm,0.3s						
TCF	**Toulx Ste Croi**	**7.46**	**293**	*e*Pn	**Pn**	**23 32 21.6**	**+0.4**
TCF				*e*Sn	**Sn**	**23 33 41.7**	**-3.9**
	0.2nm,0.3s						
ROSF	**Rostrenen**	**11.63**	**299**	*e*Pn	**Pn**	**23 33 18.4**	**+0.1**

IDC 29 23:35:02.5±1.8,055N×12715E,h0km,mb3.7/4,mb1 3.9/4, mb1mx3.7/12,mbtmp3.7/4,Error ellipse: s-maj=167.2km s-min=22.9km az=65.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.55**	**161**	P	P	23 39 52.3	-1.0
	1.2nm,0.6s,baz=341,slow=9.7,SNR=3.8						
ASAR	**Alice Springs**	**24.95**	**165**	P	P	23 40 27.6	+0.1
	0.4nm,0.5s,baz=352,slow=16,SNR=7.8						
STKA	**Stephens Creek**	**35.03**	**159**	P	P	23 41 58.2	+1.5
	0.8nm,0.4s,baz=321,slow=13,SNR=3.2						
MKAR	**Makanchi Array**	**60.40**	**326**	P	P	23 45 13.7	+0.1
	1.1nm,0.5s,baz=118,slow=8.5,SNR=12						

ISCJB ***29*** *23:37:17.8±0.5,3529N±005×3144E±007,h92km±28km, Error ellipse: s-maj=10.9km s-min=7.8km az=108.2*

CSEM ***29*** *23:37:17.0±0.1,3529N×3141E,h60km,MD3.5,Error ellipse: s-maj=3.0km s-min=2.0km az=84.0*

ISK ***29*** *23:37:19.0,3543N×3147E,h28km,MD3.5*

HLW ***29*** *23:37:31.4,3431N×3125E,h72km,Mb3.3*

ISC 29 23:37:19.3±0.7,3531N±005×3144E±007,h71km±44km, n26,σ0§78/30,14C-1D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSS	**Prodhromos**	**1.59**	**102**	*e*PN	**Pn**	**23 37 45.9**	**+0.5**
CSS				*e*SN	**Sn**	**23 38 06.0**	**+0.8**
ELL	**Elmali**	**1.90**	**320**	*e*PN	**Pn**	**23 37 49.6**	**+0.1**
IKL	**Isikli**	**2.05**	**62**	*e*PN	**Pn**	**23 37 51.8**	**+0.2**
IKL				*e*SN	**Sn**	**23 38 14.9**	**-1.3**
BCK	**Bucak**	**2.25**	**343**	*e*PN	**Pn**	**23 37 54.6**	**+0.3**
FETY	**Fethiye**	**2.32**	**305**	*e*PN	**Pn**	**23 37 55.2**	**-0.1**
KONT	**Konya--Tatoy**	**2.73**	**15**	*e*PN	**Pn**	**23 38 00.5**	**-0.3**
MERS	**Mersin**	**2.94**	**57**	*e*PN	**Pn**	**23 38 04.1**	**+0.4**
KARA	**Karaisali**	**3.51**	**55**	*e*PN	**Pn**	**23 38 11.3**	**-0.1**
AMAG	**Maghara**	**4.89**	**162**	⇑P	**Pn**	**23 38 30.8**	**+0.6**
HBRG	**Burj al 'Arab**	**4.91**	**196**	⇑P	**Pn**	**23 38 29.6**	**-0.9**
HHAG	**Hagoal**	**5.37**	**174**	⇑P	**Pn**	**23 38 36.3**	**-0.5**
KOT	**Kottamia**	**5.38**	**176**	⇑P	**Pn**	**23 38 36.6**	**-0.3**
HMYD	**Mayadein**	**5.53**	**186**	⇑P	**Pn**	**23 38 37.8**	**-1.1**
SUZ		**5.58**	**167**	P	**Pn**	**23 38 39.5**	**-0.1**
FYM	**Al Fayyum**	**5.61**	**184**	⇑P	**Pn**	**23 38 38.9**	**-1.2**
HSAF	**As Saff**	**5.68**	**179**	⇑P	**Pn**	**23 38 40.1**	**-0.9**
GLL	**Jalalah**	**5.72**	**178**	⇑P	**Pn**	**23 38 40.6**	**-1.0**
HNKL	**Nakhl**	**5.78**	**158**	⇑P	**Pn**	**23 38 43.6**	**+1.2**
HNKL				S	**Sn**	**23 39 36.5**	**-11**
ZNM		**6.04**	**168**	⇑P	**Pn**	**23 38 46.2**	**+0.2**
HKAT	**Jabal Katrina**	**7.11**	**162**	⇑P	**Pn**	**23 39 01.3**	**+0.8**
TR2		**7.17**	**164**	⇑P	**Pn**

MDJ	**Mudanjiang**	**13.95**	**322**	Pn	**Pn**	**23 41 17.6**	**+0.9**
KLR	**Kul'dur**	**16.75**	**337**	*e*P	**Pn**	**23 41 52.0**	**-1.2**
SSE	**Sheshan**	**17.39**	**266**	P	**Pn**	**23 42 02.8**	**+1.5**
SSE				AP	pP	23 42 12.3	+0.1
SSE				XP	sP	23 42 16.5	-0.9
SSE				S	**S**	**23 45 12.5**	**-8.4**
SSE				AMB	AMB		
	comp=Z,26nm,0.7s						
SSE				AMB	AMB		
	comp=Z,42nm,6.0s						
SSE				LR	LR		
	comp=N,474nm,14.5s						
SSE				LR	LR		
	comp=E,1μm,14.5s						
SSE				LR	LR		
	comp=Z,1μm,9.1s						
NJ2	**Nanjing**	**19.10**	**270**	*e*P	**Pn**	**23 42 23.8**	**+1.8**
NJ2				AP	pP	23 42 33.5	+2.5
NJ2				PP		23 42 41.8	
NJ2				S	**S**	**23 45 49.0**	**-6.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,50nm,8.2s						
NJ2				LR	LR		
	comp=N,2μm,14.2s						
NJ2				LR	LR		
	comp=E,2μm,18.1s						
NJ2				LR	LR		
	comp=Z,1μm,14.3s						
YHNB	**Yeheng**	**19.89**	**247**	P	**Pn**	**23 42 28.9**	**-2.6**
NACB	**Ninganchiao**	**19.99**	**246**	P	**Pn**	**23 42 30.6**	**-2.1**
BJI	**Beijing**	**21.03**	**294**	P	**P**	**23 42 42.5**	**+0.6**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.1						
BJI				AMB	AMB		
	comp=Z,90nm,4.4s						
BJI				LR	LR		
	comp=N,452nm,16.6s,MS4.0						
BJI				LR	LR		
	comp=E,221nm,16.6s,MS4.0						
BJI				LR	LR		
	comp=Z,244nm,26.2s						
BJT	**Baijiatuan**	**21.03**	**294**	*e*P	**P**	**23 42 42.8**	**+0.8**
QZH	**Quanzhou**	**21.91**	**251**	*e*P	**P**	**23 42 51.5**	**+0.2**
QZH				*e*S	**S**	**23 46 46.5**	**-4.4**
QZH				LR	LR		
	comp=N,2μm,8.3s						
QZH				LR	LR		
	comp=E,2μm,8.8s						
QZH				LR	LR		
	comp=Z,2μm,9.0s						
HIA	**Hailar**	**22.10**	**320**	*e*P	**P**	**23 42 51.7**	**-1.7**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HIA	**Hailar**	**22.10**	**320**	*e*P	**P**	**23 42 51.7**	**-1.7**
	comp=Z,7.7nm,0.5s,mb4.4						
WHN	**Wuhan**	**23.20**	**269**	*e*P	**P**	**23 43 04.0**	**-1.1**
HHC	**Hu-ho-hao-te**	**24.62**	**295**	*e*P	**P**	**23 43 18.5**	**+0.3**
HHC				AP		23 43 30.3	
HHC				XP	sP	23 43 35.5	+1.3
HHC				PP		23 43 56.8	
HHC				PCP	PcP	23 46 56.8	+1.8
HHC				S	**S**	**23 47 33.5**	**-3.2**
HHC				XS	sS	23 47 50.0	-5.2
HHC				SS		23 48 30.5	
HHC				SCP	ScP	23 50 30.5	0.0
HHC				PCS	PcS	23 50 35.8	+0.8
HHC				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.5						
HHC				AMB	AMB		
	comp=Z,69nm,5.5s						
HHC				LR	LR		
	comp=N,174nm,14.5s,MS3.8						
HHC				LR	LR		
	comp=E,126nm,12.8s,MS3.8						
HHC				LR	LR		
	comp=Z,162nm,17.2s,MS3.6						
MA2	**Magadan**	**26.19**	**11**	*e*P	**P**	**23 43 33.5**	**+1.1**
XAN	**Xi'an**	**26.94**	**279**	P	**P**	**23 43 38.0**	**-1.2**
XAN				AP	pP	23 43 45.3	-5.0
XAN				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.4						
YAK	**Yakutsk**	**28.93**	**348**	P	**P**	**23 43 57.3**	**+0.3**
ULN	**Ulaanbaatar**	**29.15**	**309**⇑	*e*P	**P**	**23 44 00.1**	**+1.2**
ULN	**Ulaanbaatar**	**29.15**	**309**	*e*P	**P**	**23 43 59.7**	**+0.8**
	comp=Z,9.7nm,0.9s,mb4.5						
SONM	**Songino Array**	**29.57**	**308**	P	**P**	**23 44 04.0**	**+1.4**
	comp=Z,6.6nm,0.6s,mb4.5,baz=107,slow=8.7,SNR=52						
BOD	**Bodaibo**	**30.07**	**330**	*e*P	**P**	**23 44 05.3**	**-1.7**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
LZH	**Lanzhou**	**30.76**	**285**	*e*P	**P**	**23 44 13.0**	**-0.1**
LZH				AP	pP	23 44 23.5	-0.8
LZH				XP	sP	23 44 28.3	-0.9
LZH				PP	PP	23 45 14.5	-8.5
LZH				*e*S	**S**	**23 49 12.8**	**-0.7**
LZH				XS	sS	23 49 30.5	-1.6
LZH				*e*SS	SS	23 50 57.3	-28
LZH				AMB	AMB		
	comp=Z,21nm,1.1s,mb4.9						
LZH				AMB	AMB		
	comp=Z,95nm,4.9s						
LZH				LR	LR		
	comp=N,592nm,12.6s						
LZH				LR	LR		
	comp=Z,986nm,17.1s,MS4.5						
GYA	**Guiyang**	**30.94**	**265**⇑	*i*P	**P**	**23 44 12.5**	**-2.2**
GYA				AP	pP	23 44 24.3	-1.6
GYA				XP	sP	23 44 29.8	-1.0
GYA				PP	PP	23 45 13.8	-11
GYA				PCP	PcP	23 47 10.8	+0.4
GYA				S	**S**	**23 49 10.3**	**-6.0**
GYA				XS	sS	23 49 30.3	-4.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,4.5s						
GYA				LR	LR		
	comp=N,240nm,17.8s,MS4.1						
GYA				LR	LR		
	comp=E,270nm,18.0s,MS4.1						
GYA				LR	LR		
	comp=Z,190nm,18.0s,MS3.8						
CD2	**Chengdu**	**31.88**	**275**	*e*P	**P**	**23 44 22.3**	**-0.7**
CD2				AP	pP	23 44 34.3	+0.1
CD2				XP	sP	23 44 39.5	+0.4
CD2				PP	PP	23 45 28.8	-6.7
CD2				S	**S**	**23 49 28.3**	**-2.7**
CD2				XS	sS	23 49 48.5	-1.2
CD2				SS	SS	23 51 21.0	-28
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,5.6s						
CD2				LR	LR		
	comp=N,570nm,12.0s						
CD2				LR	LR		
	comp=Z,450nm,12.0s,MS4.4						
QIZ	**Qiongzhong**	**31.91**	**250**	P	**P**	**23 44 20.5**	**-2.7**
QIZ				AP	pP	23 44 32.0	-2.4
QIZ				XP	sP	23 44 37.8	-1.5
QIZ				S	**S**	**23 49 31.0**	**-0.4**
QIZ				XS	sS	23 49 50.0	-0.1
QIZ				AMB	AMB		
	comp=Z,198nm,3.1s						
QIZ				LR	LR		
	comp=N,373nm,17.6s						
QIZ				LR	LR		
	comp=Z,227nm,14.1s,MS4.0						
ZAK	**Zakamensk**	**32.21**	**312**	*e*P	**P**	**23 44 26.7**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
TLY	**Talaya**	**32.37**	**314**	P	**P**	**23 44 27.3**	**0.0**
GTA	**Gaotai**	**33.60**	**291**	*e*P	**P**	**23 44 38.3**	**+0.2**
GTA				AP	pP	23 44 45.5	-3.8
GTA				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.7						
GTA				AMB	AMB		
	comp=Z,64nm,4.6s						
GTA				LR	LR		
	comp=N,276nm,16.7s,MS4.2						
GTA				LR	LR		
	comp=E,236nm,14.8s,MS4.2						
GTA				LR	LR		
	comp=Z,235nm,15.6s,MS4.0						
KMI	**Kunming**	**34.71**	**266**	P	**P**	**23 44 48.0**	**+0.3**
KMI				AP	pP	23 44 59.0	+0.1
KMI				XP	sP	23 45 03.5	-0.3
KMI				PP	PP	23 46 06.5	-0.3
KMI				PPP		23 46 25.0	
KMI				S	**S**	**23 50 14.8**	**-0.1**
KMI				XS	sS	23 50 34.3	+0.7
KMI				SS	SS	23 52 28.0	-18
KMI				SSS		23 52 55.3	
KMI				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
KMI				AMB	AMB		
	comp=Z,109nm,5.5s						
KMI				LR	LR		
	comp=N,375nm,12.7s,MS4.4						
KMI				LR	LR		
	comp=E,154nm,12.2s,MS4.4						
KMI				LR	LR		
	comp=Z,183nm,12.2s,MS4.0						
WMQ	**Urumqi**	**42.29**	**300**	*e*P	**P**	**23 45 53.0**	**+1.7**
WMQ				AP	pP	23 46 06.0	+3.2
WMQ				PP	PP	23 47 35.0	+5.3
WMQ				S	**S**	**23 52 10.0**	**+0.8**
WMQ				SS	SS	23 55 14.0	-4.7
WMQ				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,102nm,4.0s						
WMQ				LR	LR		
	comp=N,126nm,13.0s,MS4.1						
WMQ				LR	LR		
	comp=E,85nm,13.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,96nm,13.0s,MS3.9						
LSA	**Lhasa**	**42.64**	**278**	*e*P	**P**	**23 45 55.1**	**+1.0**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
LSA	**Lhasa**	**42.64**	**278**	*e*P	**P**	**23 45 55.1**	**+1.0**
	comp=Z,2.7nm,0.4s,mb4.3						
NVS	**Novosibirsk**	**44.95**	**316**	*e*P	**P**	**23 46 11.2**	**-1.5**
NVS				pmax	pmax		
	comp=N,4.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,11nm,1.2s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.5						
MKAR	**Makanchi Array**	**45.79**	**305**	P	**P**	**23 46 19.5**	**+0.2**
	comp=Z,5.5nm,0.7s,mb4.6,baz=82,slow=9.7,SNR=24						
GUN	**Gumba**	**47.59**	**278**	*e*P	**P**	**23 46 34.0**	**+0.6**
	comp=Z,44nm,0.8s,mb5.5						
PKI	**Pulchoki**	**48.11**	**278**	*e*P	**P**	**23 46 37.6**	**+0.2**
	comp=Z,36nm,1.0s,mb5.4						
PKI	**Pulchoki**	**48.11**	**278**	*e*P	**P**	**23 46 37.6**	**+0.2**
PKI				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
KKN	**Kakani**	**48.13**	**278**	*e*P	**P**	**23 46 38.0**	**+0.4**
	comp=Z,47nm,1.0s,mb5.5						
KKN	**Kakani**	**48.13**	**278**	*e*P	**P**	**23 46 38.0**	**+0.4**
KKN				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.5						
DMN	**Daman**	**48.34**	**278**	*e*P	**P**	**23 46 39.5**	**+0.3**
	comp=Z,28nm,1.0s,mb5.2						
GKN	**Gorkha**	**48.58**	**279**	*e*P	**P**	**23 46 41.2**	**+0.2**
	comp=Z,89nm,1.0s						
KOLN	**Koldanda**	**49.52**	**279**	*e*P	**P**	**23 46 48.8**	**+0.6**
TKM2	**Tokmak 2**	**51.14**	**301**	*i* P	**P**	**23 47 00.3**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
CHKZ	**Chkalovo**	**52.39**	**315**	*e*P	**P**	**23 47 09.6**	**-0.2**
CHKZ				*e*		23 47 15.8	
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
CHKZ	**Chkalovo**	**52.39**	**315**	*e*P	**P**	**23 47 09.6**	**-0.2**
	comp=Z,6.4nm,0.7s,mb4.7						
CHKZ				*e*		23 47 15.8	
BVAR	**Borovoye Array**	**52.62**	**314**	P	**P**	**23 47 11.6**	**+0.1**
	comp=Z,4.5nm,1.0s,mb4.4,baz=78,slow=6.8,SNR=16						
BRVK	**Borovoye**	**52.68**	**314**	*e*P	**P**	**23 47 12.0**	**0.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
BRVK	**Borovoye**	**52.68**	**314**	*e*P	**P**	**23 47 12.0**	**+0.1**
	comp=Z,2.1nm,0.4s,mb4.4						
ZRNK	**Zerenda**	**53.46**	**314**	*e*P	**P**	**23 47 17.7**	**0.0**
ZRNK				*e*		23 47 23.9	
ZRNK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
ZRNK	**Zerenda**	**53.46**	**314**	*e*P	**P**	**23 47 17.7**	**0.0**
	comp=Z,8.9nm,0.7s,mb4.8						
ZRNK				*e*		23 47 23.9	
FITZ	**Fitzroy Crossi**	**54.09**	**199**	*e*P	**P**	**23 47 22.9**	**+0.6**
	comp=Z,4.8nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**54.18**	**188**	*e*P	**P**	**23 47 22.3**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
WRAB	**Tennant Creek**	**54.18**	**188**	*e*P	**P**	**23 47 22.2**	**-0.7**
	comp=Z,3.7nm,0.5s,mb4.6						
WB2	**Warramunga Arr**	**54.19**	**188**	*e*P	**P**	**23 47 22.3**	**-0.7**
WRA	**Warramunga Arr**	**54.19**	**188**	P	**P**	**23 47 22.4**	**-0.7**
	comp=Z,2.6nm,0.5s,mb4.4,baz=5.1,slow=7.5,SNR=15						
KK31	**Karatay Array**	**54.70**	**302**	*i* P	**P**	**23 47 27.3**	**+0.6**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
INK	**Inuvik**	**56.95**	**26**	*e*P	**P**	**23 47 43.5**	**+0.6**
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	**56.95**	**26**	*e*P	**P**	**23 47 43.5**	**+0.6**
	comp=Z,2.2nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**57.92**	**188**	P	**P**	**23 47 50.1**	**+0.4**
	comp=Z,1.0nm,0.6s,mb4.0,baz=20,slow=11,SNR=17						
ARU	**Arti**	**58.62**	**320**	⇓ *i* P	**P**	**23 47 54.0**	**-0.6**
ARU				*e*		23 48 44.0	
ARU				*e*		23 50 01.0	
ARU				*e*PPP		23 51 24.0	
ARU				*e*S	**S**	**23 55 55.3**	**-0.6**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
ARU				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.5						
ARU	**Arti**	**58.62**	**320**	*e*P	**P**	**23 47 54.3**	**-0.3**
	comp=Z,6.0nm,0.7s,mb4.7						
ARU				*e*	pP	23 48 04.4	-2.1
MBWA	**Marble Bar**	**58.75**	**204**	*e*P	**P**	**23 47 56.1**	**+0.6**
MBWA				*e*	pP	23 48 08.6	+1.2
AKTO	**Aktyubinsk**	**60.71**	**313**	*i* P	**P**	**23 48 07.8**	**-1.1**
AKTO				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
DLBC	**Dease Lake**	**60.88**	**37**	P	**P**	**23 48 12.0**	**+1.9**
	comp=Z,1.9nm,1.0s,mb4.2,baz=288,slow=3.2,SNR=2.7						
DLBC	**Dease Lake**	**60.88**	**37**	P	**P**	**23 48 12.0**	**+1.9**
FORT	**Forrest**	**65.79**	**193**	*e*P	**P**	**23 48 43.2**	**+0.6**
	comp=Z,13nm,0.6s,mb5.1						
OBN	**Obninsk**	**70.49**	**324**	P	**P**	**23 49 13.0**	**+0.9**
OBN				*e*	pP	23 49 25.4	+1.2
OBN				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.5						
KIV	**Kislovodsk**	**72.89**	**312**	*de*P	**P**	**23 49 28.1**	**+1.6**
KIV				*e*		23 49 44.7	
KIV				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
AKASG	**Malin Array Be**	**76.66**	**323**	P	**P**	**23 49 47.8**	**-0.5**
	comp=Z,1.6nm,0.5s,mb4.2,baz=48,slow=5.9,SNR=11						
NVAR	**Mina Array Bea**	**76.68**	**53**	P	**P**	**23 49 50.4**	**+2.0**
	comp=Z,0.5nm,0.4s,mb3.8,baz=297,slow=5.3,SNR=3.6						
NB2	**NORSAR Subarra**	**76.91**	**338**	P	**P**	**23 49 49.3**	**-0.4**
	comp=Z,1.9nm,0.7s,mb4.1,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**76.91**	**338**	P	**P**	**23 49 49.9**	**+0.2**
	comp=Z,2.1nm,0.8s,mb4.2,baz=39,slow=5.7,SNR=7.0						
PDAR	**Pinedale Array**	**79.66**	**45**	P	**P**	**23 50 06.0**	**+1.1**
	comp=Z,0.7nm,0.8s,mb3.7,baz=325,slow=2.3,SNR=7.0						
BRTR	**Keskin Array B**	**80.85**	**312**	P	**P**	**23 50 12.2**	**+0.8**
	comp=Z,2.5nm,1.0s,mb4.1,baz=105,slow=3.1,SNR=7.5						
SRU	**San Rafael**	**81.27**	**48**	*e*P	**P**	**23 50 14.7**	**+1.1**
SRU				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
SRU	**San Rafael**	**81.27**	**48**	*e*P	**P**	**23 50 14.7**	**+1.1**
	comp=Z,2.5nm,0.7s,mb4.2						
KHC	**Kasperske Hory**	**85.07**	**329**	⇓ *e*P	**P**	**23 50 33.3**	**+0.1**
GERES	**GERESS Array B**	**85.23**	**328**	P	**P**	**23 50 34.0**	**0.0**
	comp=Z,1.2nm,0.8s,mb4.1,baz=60,slow=3.7,SNR=8.9						
ANMO	**Albuquerque**	**86.40**	**50**⇑	*e*P	**P**	**23 50 45.3**	**+5.6**
TORD	**Torodi Ar. Bea**	**119.43**	**314**	PKP	PKPdf	23 56 46.7	0.0
	comp=Z,0.5nm,0.9s,baz=221,slow=1.8,SNR=5.1						
LPAZ	**La Paz**	**148.00**	**64**	PKPbc	PKPbc	23 57 44.7	+2.1
	comp=Z,2.2nm,0.8s,baz=333,slow=2.3,SNR=6.2						
LPAZ	**La Paz**	**148.00**	**64**	PKPbc	PKPbc	23 57 44.7	+2.1

JMA ***29*** *23:47:46.4±0.3,2499N×12358E,h34km±5km, M3.4*
ISCJB ***29*** *23:47:48.6±0.7,2487N±005×12361E±004,h33km, mb3.9/4,MS3.7/7,Error ellipse: s-maj=7.8km s-min=5.1km az=55.2*
IDC ***29*** *23:47:49.3±1.5,2554N×12340E,h0km,mb3.7/3, mb1 3.8/4,mb1mx3.5/18,mbtmp3.7/4,ML2.8/1,MS3.7/8, Ms1 3.7/8,ms1mx3.3/30,Error ellipse: s-maj=43.6km s-min=28.2km az=59.0*
NEIC ***29*** *23:47:50.2±6.9,2556N×12337E,h11km±47km,mb4.4/1, Error ellipse: s-maj=19.6km s-min=15.3km az=166.0*
ISC 29 23:47:49.7±0.7,2482N±006×12364E±005,h35km,n24, σ1§41/24,mb3.9/4,MS3.7/7,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.49**	**170**	P		**Pn**	**23 47 58.7**	**-1.5**
IRIF				*e*S		**Sn**	**23 48 07.8**	**+0.3**
JJ	**Ishigaki jima**	**0.65**	**134**	P		**Pn**	**23 48 01.1**	**-1.2**
JJ				*e*S		**Sn**	**23 48 11.4**	**+0.1**
JKRS	**Kuro-shima**	**0.67**	**149**	P		**Pn**	**23 48 02.0**	**-0.7**
JKRS				*e*S		**Sn**	**23 48 13.7**	**+1.8**
YOJ	**Yonaguni jima**	**0.67**	**238**	P		**Pn**	**23 48 00.2**	**-2.5**
YOJ				*e*S		**Sn**	**23 48 10.7**	**-1.2**
HATJ	**Hateruma jima**	**0.77**	**168**	P		**Pn**	**23 48 03.6**	**-0.5**
HATJ				*e*S		**Sn**	**23 48 16.0**	**+1.5**
JTJ	**Tarama**	**0.99**	**100**	P		**Pn**	**23 48 05.7**	**-1.3**
TATO	**Taipei**	**1.96**	**275**	*e*Pn		**Pn**	**23 48 22.9**	**+2.6**
TATO				*e*Sn		**Sn**	**23 48 38.2**	**-5.4**
NACB	**Ninganchiao**	**1.97**	**251**	*e*Pn		**Pn**	**23 48 27.1**	**+6.6**
NACB				*e*Sn		**Sn**	**23 48 48.7**	**+4.7**
YHNB	**Yeheng**	**2.06**	**266**	*e*Pn		**Pn**	**23 48 21.1**	**-0.7**
YHNB				*e*Sn		**Sn**	**23 48 47.2**	**+0.9**
JOW	**Kunigami**	**4.64**	**63**	Pn		**Pn**	**23 48 59.8**	**+2.6**
	0.8nm,0.3s,baz=216,slow=8.7,SNR=4.5							
MJAR	**Matsushiro Arr**	**17.11**	**44**	LR		LR	23 58 24.5	
	comp=Z,212nm,20.3s,baz=250,slow=38							
GUMO	**Guam**	**22.92**	**115**	LR		LR	23 59 47.5	
	comp=Z,114nm,19.2s,MS3.3,baz=278,slow=31							
ASAJ	**Asahikawa**	**24.69**	**34**	LR		LR	00 02 21.7	
	comp=Z,101nm,18.8s,MS3.3,baz=2.2,slow=36							
ULN	**Ulaanbaatar**	**26.48**	**334**	P		**P**	**23 53 19.6**	**-4.0**
SONM	**Songino Array**	**26.72**	**334**	LR		LR	00 04 37.5	
	comp=Z,183nm,20.1s,MS3.6,baz=141,slow=39							
LSA	**Lhasa**	**29.23**	**287**	*e*P		**P**	**23 53 49.7**	**+1.6**
	2.2nm,0.3s,mb4.4							
MKAR	**Makanchi Array**	**39.46**	**314**	P		**P**	**23 55 15.7**	**-0.8**
	0.7nm,0.7s,mb3.5,baz=106,slow=9.1,SNR=4.8							
PMG	**Port Moresby**	**41.03**	**143**	LR		LR	00 10 20.0	
	comp=Z,104nm,19.8s,MS3.7,baz=48,slow=32							
WRAB	**Tennant Creek**	**45.69**	**166**	P		**P**	**23 56 16.3**	**+9.2**
WRA	**Warramunga Arr**	**45.69**	**166**	P		**P**	**23 56 18.7**	**+12**
	0.6nm,0.3s,mb4.0,baz=348,slow=8.7,SNR=3.7							
HNR	**Honiara**	**49.12**	**129**	LR		LR	00 14 39.0	
	comp=Z,65nm,18.1s,MS3.7,baz=176,slow=32							
ASAR	**Alice Springs**	**49.21**	**168**	P		**P**	**23 56 44.4**	**+10**
	0.5nm,0.5s,mb3.8,baz=346,slow=7.4,SNR=7.6							
CTA	**Charters Tower**	**49.77**	**152**	LR		LR	00 14 48.8	
	comp=Z,118nm,21.6s,MS3.9,baz=45,slow=32							
NOA	**NORSAR Array B**	**78.70**	**333**	LR		LR	00 38 02.9	
	comp=Z,82nm,18.6s,MS4.1,baz=5.0,slow=39							

IDC ***29*** *23:49:18.8±0.7,3039S×7785E,h0km,mb4.1/11, mb1 4.2/11,mb1mx4.1/17,mbtmp4.1/11,MS3.8/3, Ms1 3.8/3,ms1mx3.2/22,Error ellipse: s-maj=21.3km s-min=19.6km az=36.0*
ISCJB ***29*** *23:49:19.0±0.4,3056S±008×779E±0.1,h10km,mb4.4/21, MS3.9/7,Error ellipse: s-maj=13.4km s-min=11.1km az=9.1*
NEIC ***29*** *23:49:20.4±0.3,3043S×7784E,h10km,mb4.5/4,Error ellipse: s-maj=12.9km s-min=10.1km az=216.0*
BJI ***29*** *23:49:20.4,3040S×7780E,h10km,mB5.2,mb4.8,Ms4.6, Msz3.9*
ISC 29 23:49:20.8±0.4,3054S±008×778E±01,h10km, (h13km±1.2km:pP-P),n32,σ0§84/28,mb4.4/21,MS3.9/7,1C, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**38.14**	**189**	P		**P**	**23 56 40.5**	**+0.4**
	2.8nm,0.8s,mb4.0,baz=9.6,slow=13,SNR=4.9							
SYO	**Syowa Base**	**44.28**	**199**⇑	*e*P		**P**	**23 57 30.4**	**-0.2**
BOSA	**Boshof**	**45.40**	**259**	LR		LR	00 11 31.3	
	comp=Z,140nm,19.4s,MS3.9,baz=13,slow=29							
LSZ	**Lusaka**	**47.78**	**277**	P		**P**	**23 57 59.2**	**+0.9**
	3.3nm,0.6s,mb4.5,baz=125,slow=8.4,SNR=10							
LSZ	**Lusaka**	**47.78**	**277**	*e*P		**P**	**23 57 58.8**	**+0.5**
	2.4nm,0.5s,mb4.5							
LSZ				*e*			23 58 06.0	
ASAR	**Alice Springs**	**49.98**	**96**	P		**P**	**23 58 14.8**	**-0.4**
	7.1nm,0.9s,mb4.7,baz=248,slow=6.4,SNR=44							
WRA	**Warramunga Arr**	**51.76**	**92**	P		**P**	**23 58 28.4**	**-0.1**
	2.9nm,0.7s,mb4.3,baz=250,slow=6.9,SNR=8.6							
WB2	**Warramunga Arr**	**51.77**	**92**	P		**P**	**23 58 28.0**	**-0.5**
WRAB	**Tennant Creek**	**51.77**	**92**	*e*P		**P**	**23 58 28.7**	**+0.2**
	5.2nm,0.8s,mb4.5							
STKA	**Stephens Creek**	**53.85**	**109**	P		**P**	**23 58 43.6**	**-0.3**
	2.5nm,0.7s,mb4.2,baz=287,slow=3.8,SNR=5.4							
STKA	**Stephens Creek**	**53.85**	**109**	*e*P		**P**	**23 58 43.6**	**-0.3**
SNAA	**Sanae**	**58.40**	**202**	P		**P**	**23 59 16.9**	**+0.4**
	0.6nm,0.5s,mb3.9,baz=93,slow=7.0,SNR=11							
SNAA	**Sanae**	**58.40**	**202**	*e*P		**P**	**23 59 16.8**	**+0.4**
	1.9nm,0.5s,mb4.4							
VNDA	**Vanda**	**59.14**	**165**	P		**P**	**23 59 21.1**	**-0.5**
	0.7nm,0.9s,mb3.7,baz=290,slow=7.0,SNR=6.5							
VNDA				LR		LR	00 21 44.2	
	comp=Z,75nm,21.1s,MS3.8,baz=75,slow=33							
QSPA	**South Pole Qui**	**59.60**	**180**	*e*P		**P**	**23 59 24.8**	**0.0**
	7.3nm,0.9s,mb4.7							
SBA	**Scott Base**	**60.17**	**166**	P		**P**	**23 59 29.0**	**+0.3**
KMI	**Kunming**	**60.29**	**26**	P		**P**	**23 59 33.3**	**+3.8**
KMI				AP		pP	23 59 37.3	+4.6
KMI				XP		sP	23 59 39.0	+5.1
KMI				AMB		AMB		
	comp=Z,6.0nm,1.1s,mb4.5							
KMI				LR		LR		
	comp=Z,24nm,27.8s,MS3.2		

HHC			SKS		00 11 26.5		
HHC			SCS	ScS	00 11 34.5	-1.3	
HHC			PS		00 11 51.5		
HHC			SS	SS	00 16 13.3	+5.2	
HHC			AMB	AMB			
	comp=Z,10.0nm,0.9s,mb4.8						
HHC			AMB	AMB			
	comp=Z,181nm,6.7s						
HHC			LR	LR			
	comp=N,111nm,23.7s,MS4.2						
HHC			LR	LR			
	comp=E,90nm,21.8s,MS4.2						
HHC			LR	LR			
	comp=Z,65nm,22.8s,MS3.9						
MALT	**Malatya**	**77.73 329**	P	**P**	**00 01 17.3**	**-0.6**	
	comp=Z,41nm,1.1s,mb5.3						
BRTR	**Keskin Array B**	**81.06 327**	P	**P**	**00 01 34.5**	**-1.5**	
	comp=Z,1.1nm,0.8s,mb3.8,baz=167,slow=6.1,SNR=5.8						
BRTR			LR	LR	00 31 19.9		
	comp=Z,43nm,20.3s,MS3.8,baz=279,slow=31						
SONM	**Songino Array**	**82.14 19**	P	**P**	**00 01 41.1**	**-0.6**	
	comp=Z,0.6nm,0.6s,mb3.7,baz=207,slow=5.8,SNR=5.1						
TORD	**Torodi Ar. Bea**	**84.98 288**	P	**P**	**00 01 56.0**	**-0.3**	
	comp=Z,1.0nm,0.8s,mb4.0,baz=115,slow=4.0,SNR=5.0						
MDJ	**Mudanjiang**	**88.44 34**	P	**P**	**00 02 14.0**	**+0.8**	
MDJ			AP	pP	00 02 17.3	+0.7	
MDJ			AMB	AMB			
	comp=Z,5.0nm,1.0s,mb4.7						
MDJ			AMB	AMB			
	comp=Z,303nm,9.4s						
SCHQ	**Schefferville**	**145.03 324**	PKP	PKPdf	00 08 56.2	-2.1	
	comp=Z,4.0nm,0.8s,baz=56,slow=9.4,SNR=5.3						
YKA	**Yellowknife Ar**	**147.04 11**	PKPbc	PKPbc	00 09 03.4	-0.4	
	comp=Z,1.4nm,0.6s,baz=333,slow=3.2,SNR=6.7						
YKA	**Yellowknife Ar**	**147.04 11**	PKPbc	PKPbc	00 09 03.4	-0.4	

*IDC **30** 00:07:59.4±7.0, 525S×14556E, h0km, mb4.0/3, mb1 4.3/5, mb1mx3.9/13, mbtmp4.2/5, ML4.0/2, Error ellipse: s-maj=104.4km s-min=43.9km az=23.0*
*NEIC **30** 00:08:06.6±5.7, 546S×14554E, h35km, mb4.3/2, Error ellipse: s-maj=80.6km s-min=21.4km az=17.0*
*ISCJB **30** 00:08:07.9±3.8, 58S±03×1455E±02, h33km, mb4.0/2, Error ellipse: s-maj=49.5km s-min=13.1km az=69.2*

ISC 30 00:08:09.9±3.9, 58S±03×1455E±02, h35km, n10, σ1§16/11, mb4.0/2, 1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.94**	**155**	Pn	**Pn**	**00 09 07.9**	**+0.1**
	15nn,0.3s,baz=314,slow=5.8,SNR=25						
PMG				Sn	**Sn**	**00 09 52.3**	**-0.5**
	15nn,0.3s,baz=209,slow=19,SNR=9.1						
KAKA	**Kakadu**	**14.60**	**241**	*e*P	**Pn**	**00 11 44.4**	**+11**
	13nn,0.6s						
WRAB	**Tennant Creek**	**17.74**	**217**	*e*P	**Pn**	**00 12 14.7**	**+0.7**
	12nn,0.7s						
WB2	**Warramunga Arr**	**17.75**	**217**	⇓*i*P	**Pn**	**00 12 14.8**	**+0.7**
WB2	**Warramunga Arr**	**17.75**	**217**	*e*Pn	**Pn**	**00 12 14.8**	**+0.7**
WRA	**Warramunga Arr**	**17.75**	**217**	P	**Pn**	**00 12 15.0**	**+0.8**
	1.1nn,0.3s,baz=45,slow=12,SNR=24						
ASAR	**Alice Springs**	**20.98**	**211**	P	**P**	**00 12 47.8**	**-2.1**
	4.7nn,0.9s,baz=46,slow=8.4,SNR=31						
FITZ	**Fitzroy Crossi**	**22.92**	**236**	*e*P	**P**	**00 13 09.2**	**-1.5**
	9.6nn,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**22.92**	**236**	P	**P**	**00 13 08.4**	**-2.3**
	5.2nn,0.5s,mb4.2,baz=51,slow=12,SNR=32						
STKA	**Stephens Creek**	**26.19**	**188**	P	**P**	**00 13 42.5**	**+1.4**
	1.8nn,0.7s,mb3.7,baz=8.4,slow=13,SNR=4.1						

*ISCJB **30** 00:50:03.5±1.1, 1514N×007×9243W×007, h137km±18km, Error ellipse: s-maj=12.6km s-min=8.2km az=86.4*
*NEIC **30** 00:50:04.4, 1509N×9241W, h145km, MD4.4(MEX), After MEX.*
*MEX **30** 00:50:04.5±0.6, 1507N×9241W, h140km±20km, MD4.4*
*CASC **30** 00:50:04.1±2.4, 1502N×9268W, h73km±46km, MD4.0*

ISC 30 00:50:04.6±1.3, 1512N±007×9242W±006, h131km±20km, n17, σ1§07/16, 4C-1D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**1.11**	**136**	⇓*e*P	**Pn**	**00 50 26.2**	**-2.3**
SCX	**San Cristobal**	**1.61**	**353**	*i*P	**Pn**	**00 50 34.0**	**0.0**
SCX				*i*S	**Sn**	**00 50 57.5**	**+1.0**
FUG	**Fuego 3**	**1.67**	**114**	⇑*e*P	**Pn**	**00 50 34.7**	**+0.1**
TER	**Terranova**	**1.87**	**116**	⇑*e*P	**Pn**	**00 50 37.8**	**+0.7**
TER				*e*S	**Sn**	**00 51 02.3**	**+0.5**
RBDL	**Robledal**	**2.83**	**110**	*e*P	x	00 51 09.3	
RBDL				*e*S	x	00 51 45.2	
RTR	**El Retiro**	**2.95**	**114**	⇑*e*P	x	00 51 12.0	
RTR				*e*S	x	00 51 50.5	
SBLS	**San Blas**	**3.00**	**115**	⇑*e*P	x	00 51 12.4	
SBLS				*e*S	x	00 51 50.3	
SNJE	**San Jose**	**3.00**	**114**	*e*P	x	00 51 12.5	
SNJE				*e*S	x	00 51 51.9	
BOQS	**Boqueron**	**3.34**	**114**	*e*P	x	00 51 16.6	
BOQS				*e*S	x	00 51 56.1	
LFRS	**El Faro**	**3.58**	**114**	*e*P	x	00 51 20.0	
LFRS				*e*S	x	00 52 04.3	
SCIG		**4.00**	**17**	*i*P	**Pn**	**00 51 04.6**	**+0.3**
SCIG				*i*S	**Sn**	**00 51 49.4**	**-1.3**
OXX	**Oaxaca**	**4.57**	**296**	*e*P	**Pn**	**00 51 10.5**	**-1.4**
OXX	**Oaxaca**	**4.57**	**296**	*e*P	**Pn**	**00 51 13.5**	**+1.6**
VHO	**Vista Hermosa**	**4.57**	**296**	*i*P	**Pn**	**00 51 11.5**	**-0.4**
VHO				*i*S	**Sn**	**00 52 03.8**	**-0.6**
UTMO	**Huajuapan**	**5.82**	**298**	*i*P	**Pn**	**00 51 32.2**	**+3.5**
UTMO				*i*S	**Sn**	**00 52 34.0**	**-0.2**
PPM	**Popocatepetl**	**7.11**	**304**	*e*P	**Pn**	**00 51 48.0**	**+2.0**
PPM	**Popocatepetl**	**7.11**	**304**	*e*P	**Pn**	**00 51 56.5**	**+10**

*IDC **30** 00:54:03.2±1.7, 4988N×8828E, h0km, mb3.4/1, mb1 3.6/5, mb1mx3.4/23, mbtmp3.5/5, ML3.7/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/14, Error ellipse: s-maj=19.1km s-min=15.9km az=141.0*
*BJI **30** 00:54:04.0, 5000N×8806E, h33km, ML3.8*
*MOS **30** 00:54:05.8±1.6, 5001N×8763E, h10km, mb4.0/1, Error ellipse: s-maj=12.5km s-min=11.0km az=56.3*
*NEIC **30** 00:54:06.8±0.8, 5001N×8826E, h35km, mb3.8/1, Error ellipse: s-maj=16.0km s-min=10.3km az=189.0*
*ISCJB **30** 00:54:08.2±2.2, 5009N±004×877E±0.1, h23km±21km, mb3.5/3, Error ellipse: s-maj=14.3km s-min=6.8km az=151.6*
*NNC **30** 00:54:11.8±3.5, 4996N×8754E, h22km±16km, mb3.8, mpv4.0, Error ellipse: s-maj=23.1km s-min=14.0km az=106.0*

ISC 30 00:54:07.7±1.1, 5006N±006×8813E±010, h36km±15km, n30, σ1§23/41, mb3.5/3, 5C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**5.08**	**232**	PN	**Pn**	**00 55 21.8**	**+0.5**
MK31						00 56 17.6	
MK31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MK31				smax			
	comp=Z,5.0nm,0.3s						
MK31				smax			
	comp=Z,50nm,0.6s						
MKAR	**Makanchi Array**	**5.08**	**232**	Pn	**Pn**	**00 55 21.9**	**+0.6**
	comp=Z,4.8nm,0.3s,baz=50,slow=13,SNR=53						
MKAR				Sn	**Sn**	**00 56 19.1**	**+0.4**
	comp=Z,9.8nm,0.3s,baz=58,slow=22,SNR=14						
MKAR				Lg		00 56 42.0	
	comp=Z,12nm,0.3s,baz=50,slow=30,SNR=11						
MKAR	**Makanchi Array**	**5.08**	**232**	PN	**Pn**	**00 55 21.9**	**+0.6**
MKAR						00 56 19.1	
MK02	**Makanchi Array**	**5.08**	**232**	⇓Pn	**Pn**	**00 55 21.9**	**+0.5**
	comp=Z,8.3nm,0.3s						
MK02				⇓Sn	**Sn**	**00 56 18.9**	**0.0**
	comp=Z,67nm,0.8s						
MK02				⇓Lg		00 56 42.1	
	comp=Z,89nm,0.7s						
NVS	**Novosibirsk**	**5.65**	**330**	*e*PN	**Pn**	**00 55 32.4**	**+3.2**
NVS				*e*		00 55 49.9	
NVS				*e*		00 56 39.3	
WMQ	**Urumqi**	**6.24**	**183**	*e*PG	**Pn**	**00 55 54.0**	**+17**
WMQ				S	**Sn**	**00 56 54.5**	**+7.1**
WMQ				Smax			
	comp=N,54nm,0.9s						
WMQ				Smax			
	comp=E,48nm,0.8s						
VOSK	**Vostochnaya**	**11.05**	**291**	⇑Pn	**Pn**	**00 56 43.0**	**-0.1**
	comp=E,1.6nm,0.6s						
VOSK				⇑Sn	**Sn**	**00 58 42.9**	**-2.5**
	comp=E,3.8nm,0.8s						
CHKZ	**Chkalovo**	**11.42**	**295**	⇓Pn	**Pn**	**00 56 47.2**	**-1.0**
	comp=E,1.2nm,0.7s						
CHKZ				⇑Sn	**Sn**	**00 58 55.4**	**+0.9**
	comp=E,3.3nm,0.6s						
CHKZ	**Chkalovo**	**11.42**	**295**	*e*P	**Pn**	**00 56 47.7**	**-0.5**
CHKZ				*e*		00 58 57.1	
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHKZ	**Chkalovo**	**11.42**	**295**	*e*Pn	**Pn**	**00 56 47.6**	**-0.6**
	comp=Z,1.7nm,0.6s						
CHKZ				*e*Sn	**Sn**	**00 58 57.1**	**+2.6**
BVA0	**Borovoye Array**	**11.44**	**292**	Pn	**Pn**	**00 56 51.8**	**+3.2**
BVA0				Sn	**Sn**	**00 58 53.1**	**-1.9**
BVAR	**Borovoye Array**	**11.44**	**292**	Pn	**Pn**	**00 56 48.2**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=102,slow=14,SNR=7.2						
BVAR				Sn	**Sn**	**00 58 54.4**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=91,slow=19,SNR=4.7						
BRVK	**Borovoye**	**11.51**	**292**	P	**Pn**	**00 56 51.2**	**+1.7**
AAK	**Ala-Archa**	**11.98**	**237**	*e*P	**Pn**	**00 56 54.8**	**-1.2**
SONM	**Songino Array**	**12.21**	**93**	Pn	**Pn**	**00 56 56.9**	**-2.2**
	baz=311,slow=13,SNR=2.3						
SONM				Lg		01 00 27.7	
	comp=Z,0.1nm,0.3s,baz=270,slow=25,SNR=5.8						
SONM				LR	LR	01 02 09.5	
	comp=Z,26nm,19.0s,baz=55,slow=40						
ZRNK	**Zerenda**	**12.26**	**291**	⇑Pn	**Pn**	**00 57 01.5**	**+1.7**
	comp=Z,1.3nm,0.5s						
ZRNK				⇓Sn	**Sn**	**00 59 15.0**	**-0.1**
	comp=Z,4.3nm,0.8s						
ZRNK	**Zerenda**	**12.26**	**291**	*e*P	**Pn**	**00 56 59.4**	**-0.4**
ZRNK				*e*		00 59 16.8	
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZRNK	**Zerenda**	**12.26**	**291**	*e*Pn	**Pn**	**00 56 59.4**	**-0.4**
	comp=Z,2.5nm,0.4s						
ZRNK				*e*Sn	**Sn**	**00 59 16.8**	**+1.6**
KK31	**Karatay Array**	**13.95**	**247**	Pn	**Pn**	**00 57 19.2**	**-3.6**
	comp=Z,0.8nm,0.5s,baz=51,slow=14,SNR=13						
KK31				Sn	**Sn**	**00 59 52.0**	**-4.5**
	comp=Z,1.0nm,0.5s,baz=6.8,slow=75,SNR=7.7						
KK31				⇑Lg		01 01 22.8	
	comp=Z,3.6nm,0.7s,baz=358,slow=114,SNR=3.6						
KKAR	**Karatay Array**	**13.95**	**247**	P	**Pn**	**00 57 19.2**	**-3.7**
KKAR						00 59 51.9	
KKAR				smax			
	comp=Z,3.0nm,0.7s						
AB31	**Akbulak array**	**18.23**	**278**	Pn	**Pn**	**00 58 18.3**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=75,slow=9.1,SNR=6.4						
AB31	**Akbulak array**	**18.23**	**278**	P	**Pn**	**00 58 18.3**	**+0.5**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARU	**Arti**	**18.71**	**301**	*e*P	**Pn**	**00 58 14.4**	**-9.2**
AKTK	**Aktyubinsk**	**19.21**	**283**	Pn	**Pn**	**00 58 29.4**	**-0.2**
AKTO	**Aktyubinsk**	**19.21**	**283**	⇓Pn	**Pn**	**00 58 29.3**	**-0.3**
AKTO	**Aktyubinsk**	**19.21**	**283**	Pn	**Pn**	**00 58 29.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=99,slow=13,SNR=12						
MALT	**Malatya**	**36.88**	**271**	P	**P**	**01 01 13.1**	**+0.5**
MALT				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
MALT	**Malatya**	**36.88**	**271**	P	**P**	**01 01 13.1**	**+0.4**
	comp=Z,0.5nm,0.4s,mb3.7						
BRTR	**Keskin Array B**	**39.16**	**276**	P	**P**	**01 01 38.3**	**+6.4**
	comp=Z,0.7nm,0.8s,mb3.4,baz=76,slow=5.5,SNR=3.2						
NOA	**NORSAR Array B**	**42.36**	**315**	P	**P**	**01 01 58.6**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.2,baz=86,slow=7.5,SNR=2.7						

*NEIC **30** 00:56:33.0±4.4, 530S×14729E, h194km±46km, mb4.1/2, Error ellipse: s-maj=89.3km s-min=31.8km az=134.0*
*IDC **30** 00:56:35.6±4.9, 567S×14749E, h211km±45km, mb3.5/2, mb1 3.4/4, mb1mx3.1/13, mbtmp3.8/4, Error ellipse: s-maj=76.1km s-min=42.9km az=129.0*
*ISCJB **30** 00:56:40.2±2.1, 59S±01×1467E±02, h200km, mb4.0/3, Error ellipse: s-maj=37.1km s-min=14.4km az=133.4*

ISC 30 00:56:41.0±2.1, 59S±01×1469E±03, h200km, n8, σ0§55/8, mb4.0/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.50**	**175**	P	**Pn**	**00 57 35.6**	**-0.9**
	1.6nn,0.3s,baz=346,slow=19,SNR=3.3						
PMG				S	**Sn**	**00 58 20.7**	**+0.6**
	3.9nn,0.3s,baz=202,slow=19,SNR=8.6						
WRAB	**Tennant Creek**	**18.52**	**220**	*e*P	**P**	**01 00 42.5**	**+0.1**
	3.1nn,0.4s						
WB2	**Warramunga Arr**	**18.53**	**220**	*e*P	**P**	**01 00 42.8**	**+0.3**
WRA	**Warramunga Arr**	**18.54**	**220**	P	**P**	**01 00 42.9**	**+0.4**
	0.8nn,0.3s,baz=48,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**21.64**	**214**	P	**P**	**01 01 15.3**	**-0.2**
	1.0nn,0.6s,mb3.5,baz=55,slow=8.4,SNR=9.6						
FITZ	**Fitzroy Crossi**	**24.02**	**238**	P	**P**	**01 01 36.6**	**-0.8**
	4.2nn,0.4s,mb4.4,baz=49,slow=10,SNR=35						
AAK	**Ala-Archa**	**81.18**	**315**	*e*P	**P**	**01 08 34.8**	**+0.6**
	2.4nn,0.6s,mb4.0						
TORD	**Torodi Ar. Bea**	**144.95**	**284**	PKPbc	PKPdf	01 15 48.8	-5.3
	0.2nn,0.8s,baz=78,slow=3.5,SNR=5.2						

HLW 30 01:42:13.4, 3468N×2881E, h33km, Mb3.6, 2C-1D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FYM	**Al Fayyum**	**5.32**	**159**	P	Pn	01 43 31.3	+0.8
KOT	**Kottamia**	**5.38**	**151**	P	Pn	01 43 32.1	+0.7
AMAG	**Maghara**	**5.47**	**136**	P	Pn	01 43 33.0	+0.4
HHAG	**Hagoal**	**5.47**	**149**	P	Pn	01 43 33.0	+0.4
GLL	**Jalalah**	**5.65**	**153**	⇑P	Pn	01 43 34.9	-0.1
SUZ		**5.91**	**144**	⇓P	Pn	01 43 38.7	+0.2
SWA1		**6.01**	**207**	P	Pn	01 43 40.5	+0.5
SWA1				S	Sn	01 44 43.8	-3.8
SWA2		**6.12**	**209**	P	Pn	01 43 41.7	+0.2
AWBH		**6.34**	**179**	⇑P	Pn	01 43 44.8	+0.3
HFRF	**Wahat Farafira**	**7.52**	**183**	P	Pn	01 44 01.2	+0.5
HKAT	**Jabal Katrina**	**7.56**	**143**	P	Pn	01 44 02.1	+0.8

*IDC **30** 01:57:09.6±2.6, 206N×9580E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/19, mbtmp3.8/5, Error ellipse: s-maj=118.3km s-min=21.8km az=59.0*
*NEIC **30** 01:57:14.1±0.8, 206N×9582E, h30km, mb4.0/3, Error ellipse: s-maj=20.2km s-min=11.9km az=38.0*
*ISCJB **30** 01:57:15.1±7.3, 22N±03×959E±03, h51km±57km, mb3.9/8, Error ellipse: s-maj=68.2km s-min=16.8km az=104.4*

ISC 30 01:57:17.6±6.7, 23N±03×959E±03, h52km±53km, n14, σ1§07/14, mb3.9/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.60**	**57**	*e*Pn	**Pn**	**01 58 38.5**	**+0.2**
KKM	**Kota Kinabalu**	**20.59**	**79**	P	**P**	**02 01 51.9**	**-0.4**
LSA	**Lhasa**	**27.65**	**351**	*e*P	**P**	**02 02 57.8**	**-2.6**
WRA	**Warramunga Arr**	**43.69**	**122**	P	**P**	**02 05 17.3**	**-0.1**
	0.6nn,0.6s,mb3.5,baz=297,slow=9.5,SNR=3.3						
WRA	**Warramunga Arr**	**43.69**	**122**	P	**P**	**02 05 17.3**	**-0.1**
WRAB	**Tennant Creek**	**43.70**	**122**	P	**P**	**02 05 19.4**	**+2.0**
MKAR	**Makanchi Array**	**45.91**	**347**	P	**P**	**02 05 35.8**	**+0.7**
	1.1nn,0.5s,mb4.1,baz=153,slow=9.4,SNR=10						
SONM	**Songino Array**	**46.29**	**10**	P	**P**	**02 05 38.3**	**+0.3**
	0.9nn,0.6s,mb3.9,baz=193,slow=8.5,SNR=6.0						
BVAR	**Borovoye Array**	**54.83**	**341**	P	**P**	**02 06 42.5**	**+0.1**
	1.2nn,0.7s,mb4.0,baz=156,slow=7.6,SNR=4.9						
BRVK	**Borovoye**	**54.89**	**341**	*e*P	**P**	**02 06 43.9**	**+1.1**
	0.6nn,0.4s,mb4.0						
STKA	**Stephens Creek**	**55.02**	**132**	P	**P**	**02 06 42.2**	**-1.6**
	0.7nn,0.4s,mb4.0,baz=297,slow=4.5,SNR=2.8						
STKA	**Stephens Creek**	**55.02**	**132**	P	**P**	**02 06 42.2**	**-1.6**
ZRNK	**Zerenda**	**55.22**	**341**	*e*P	**P**	**02 06 44.3**	**-0.9**
	0.9nn,0.7s,mb3.9						
CHKZ	**Chkalovo**	**55.31**	**342**	*e*P	**P**	**02 06 46.4**	**+0.5**
	1.8nn,0.8s,mb4.2						

*ISCJB **30** 02:05:14.8±0.5, 3578N±004×105.11E±004, h10km, mb3.8/5, Error ellipse: s-maj=5.9km s-min=4.5km az=68.3*
*BJI **30** 02:05:18.5, 3561N×10479E, h14km, ML4.1, Ms3.5, Msz3.3*

*IDC **30** 02:05:18.3±1.3, 3584N×10459E, h0km, mb3.7/5, mb1 3.7/7, mb1mx3.6/21, mbtmp3.6/7, ML3.2/2, Error ellipse: s-maj=58.8km s-min=25.1km az=58.0*

ISC 30 02:05:18.0±0.5, 3575N±004×10496E±004, h10km, n15, σ1§39/26, mb3.8/5, 1C, Gansu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**0.97**	**291**	⇑PG	**Pg**	**02 05 35.5**	**-1.1**
LZH				SG	**Sg**	**02 05 48.3**	**-0.9**
LZH				Smax			
	comp=N,4μm,0.5s						
LZH				Smax			
	comp=E,6μm,0.5s						
XAN	**Xi'an**	**3.67**	**116**	P	**Pn**	**02 06 15.5**	**+0.7**
XAN				PG	**Pg**	**02 06 25.5**	**-2.8**
XAN				S	**Sn**	**02 07 00.0**	**+1.8**
XAN				SG	**Sg**	**02 07 13.3**	**-2.6**
XAN				Smax			
	comp=N,578nm,0.8s						
XAN				Smax			
	comp=E,441nm,0.6s						
CD2	**Chengdu**	**4.93**	**192**	*e*P	**Pn**	**02 06 31.5**	**-0.5**
CD2				S	**Sn**	**02 07 29.0**	**0.0**
CD2				SG	**Sg**	**02 07 50.3**	**-5.8**
CD2				Smax			
	comp=N,173nm,0.8s						
CD2				Smax			
	comp=E,104nm,0.6s						
CD2				LR	LR		
	comp=E,350nm,8.4s						
CD2				LR	LR		
	comp=Z,100nm,7.8s						
GTA	**Gaotai**	**5.49**	**313**	P	**Pn**	**02 06 41.3**	**+1.6**
GTA				PG	**Pg**	**02 06 58.3**	**-4.7**
GTA				S	**Sn**	**02 07 44.5**	**+1.7**
GTA				SG	**Sg**	**02 08 10.3**	**-3.8**
GTA				Smax			
	comp=N,77nm,0.8s						
GTA				Smax			
	comp=E,99nm,0.8s						
GTA				LR	LR		
	comp=N,270nm,9.1s						
GTA				LR	LR		
	comp=E,434nm,11.4s						
GTA				LR	LR		
	comp=Z,403nm,10.6s						
BTO	**Baotou**	**6.28**	**38**	*e*PG	**Pg**	**02 07 12.3**	**-5.9**
BTO				SG	**Sg**	**02 08 39.0**	**-0.5**
HHC	**Hu-ho-hao-te**	**7.27**	**44**	*e*PG	**Pg**	**02 07 31.5**	**-5.7**
HHC				SG	**Sg**	**02 09 06.0**	**-5.4**
HHC				Smax			
	comp=N,150nm,0.4s						
HHC				Smax			
	comp=E,122nm,0.5s						
GYA	**Guiyang**	**9.37**	**171**	P	**Pn**	**02 07 35.5**	**+2.5**
GYA				LR	LR		
	comp=N,170nm,5.4s						
GYA				LR	LR		
	comp=E,270nm,6.4s						
GYA				LR	LR		
	comp=Z,110nm,6.6s						
NJ2	**Nanjing**	**12.12**	**104**	*e*P	**Pn**	**02 08 15.0**	**+4.4**
SONM	**Songino Array**	**12.13**	**5**	Pn	**Pn**	**02 08 12.4**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=3.5						
MKAR	**Makanchi Array**	**20.23**	**310**	P	**P**	**02 09 53.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=122,slow=16,SNR=3.8						
ARCES	**ARCESS Array B**	**53.36**	**334**	P	**P**	**02 14 37.8**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.8,baz=82,slow=8.4,SNR=7.2						
FINES	**FINESS Array B**	**54.17**	**324**	P	**P**	**02 14 42.9**	**-0.5**
	comp=Z,1.0nm,0.9s,mb3.8,baz=98,slow=5.8,SNR=3.4						
BRTR	**Keskin Array B**	**55.17**	**297**	P	**P**	**02 14 50.6**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.6,baz=71,slow=6.2,SNR=4.1						
NOA	**NORSAR Array B**	**61.17**	**326**	P	**P**	**02 15 31.5**	**-1.2**
	comp=Z,0.8nm,0.9s,mb3.9,baz=68,slow=6.8,SNR=2.8						
WRA	**Warramunga Arr**	**61.98**	**148**	P	**P**	**02 15 42.0**	**+3.9**
	comp=Z,0.9nm,0.5s,mb4.1,baz=347,slow=7.0,SNR=5.1						

*ISCJB **30** 02:12:07.6±1.0, 2002S±009×691W±02, h134km±19km, mb3.2/1, Error ellipse: s-maj=34.3km s-min=12.0km az=153.9*
*NEIC **30** 02:12:07.8±0.9, 2007S×691W, h128km±16km, Error ellipse: s-maj=26.8km s-min=11.1km az=72.0*
*IDC **30** 02:12:11.2±2.7, 1989S×6866W, h132km±27km, mb3.3/2, mb1 3.4/4, mb1mx3.2/19, mbtmp3.6/4, Error ellipse: s-maj=56.9km s-min=25.7km az=96.0*

ISC 30 02:12:09.0±0.9, 1998S±007×689W±02, h115km±16km, n6, σ1§69/8, mb3.3/1, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.62**	**179**	*e*Pn	**Pn**	**02 12 48.6**	**-1.5**
LVC				*e*Sn	**Sn**	**02 13 22.4**	**+0.7**
LPAZ	**La Paz**	**3.75**	**12**	P	**Pn**	**02 13 06.6**	**+1.5**
	1.2nn,0.3s,baz=194,slow=9.9,SNR=54						
ARE	**Arequipa**	**4.26**	**325**	*e*P	**Pn**	**02 13 11.0**	**-0.8**
ARE				*e*S	**Sn**	**02 13 55.0**	**-5.6**
CPUP	**Villa Florida**	**12.41**	**123**	P	**Pn**	**02 15 00.9**	**-0.6**
	0.1nn,0.3s,baz=292,slow=15,SNR=4.9						
PLCA	**Paso Flores**	**20.73**	**183**	P	**P**	**02 16 42.5**	**+2.2**
	1.2nn,1.0s,baz=359,slow=12,SNR=4.1						
TORD	**Torodi Ar. Bea**	**76.88**	**71**	P	**P**	**02 23 47.8**	**-0.6**
	0.2nn,0.3s,mb3.3,baz=255,slow=5.8,SNR=11						

*IDC **30** 02:19:01.5±0.8, 1805N×12264E, h0km, mb4.0/10, mb1 4.1/11, mb1mx4.0/20, mbtmp4.0/11, ML4.3/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/35, Error ellipse: s-maj=43.2km s-min=15.7km az=74.0*
*MAN **30** 02:19:02.0, 1828N×12262E, h19km, mb3.6, ML4.7, MS2.9*
*ISCJB **30** 02:19:04.1±0.9, 1813N±003×12252E±004, h25km±6km, mb4.1/17, MS3.4/2, Error ellipse: s-maj=7.0km s-min=4.6km az=150.3*
*BJI **30** 02:19:05.4, 1772N×12230E, h20km, mb4.2*
*NEIC **30** 02:19:06.9±1.0, 1803N×12261E, h36km±10km, mb4.4/5, Error ellipse: s-maj=12.0km s-min=7.0km az=79.0*

**ISC 30 02:19:04.9±0.9, 1811N±003×12247E±004, h15km±5km, n41, σ1§19/53, mb4.1/17,

XAN				AMB	AMB		
	comp=Z,12nm,1.3s						
CD2	**Chengdu**	**21.22 310**		P	**P**	**02 23 52.5**	**+2.4**
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.4						
CHTO	**Chiang Mai**	**22.33 276**	*e*P		**P**	**02 24 02.3**	**+0.4**
	comp=Z,4.2nm,0.6s,mb4.0						
LZH	**Lanzhou**	**24.32 321**	*e*P		**P**	**02 24 24.5**	**+2.7**
LZH				AP		02 24 33.5	
LZH				AMB	AMB		
	comp=Z,17nm,1.2s,mb4.3						
PSI	**Prapat**	**27.64 239**		LR	LR	02 34 59.1	
	comp=Z,120nm,18.6s,MS3.5,baz=356,slow=34						
SONM	**Songino Array**	**32.43 340**		P	**P**	**02 25 34.7**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.6,baz=160,slow=9.0,SNR=4.0						
SONM				LR	LR	02 40 11.6	
	comp=Z,50nm,18.4s,MS3.2,baz=69,slow=39						
WRAB	**Tennant Creek**	**39.57 162**	*e*P		**P**	**02 26 32.9**	**-2.4**
	comp=Z,4.8nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**39.57 162**		P	**P**	**02 26 33.0**	**-2.4**
	comp=Z,2.1nm,0.6s,mb4.0,baz=342,slow=9.5,SNR=7.0						
ASAR	**Alice Springs**	**43.00 165**		P	**P**	**02 27 02.0**	**-1.5**
	comp=Z,2.5nm,0.6s,mb4.1,baz=348,slow=6.9,SNR=32						
MKAR	**Makanchi Array**	**43.63 320**		P	**P**	**02 27 09.6**	**+1.0**
	comp=Z,0.6nm,0.4s,mb3.7,baz=104,slow=8.4,SNR=9.0						
CTAO	**Charters Tower**	**44.56 147**	*e*P		**P**	**02 27 15.6**	**-0.5**
	comp=Z,12nm,1.1s,mb4.7						
STKA	**Stephens Creek**	**52.98 160**		P	**P**	**02 28 19.1**	**-1.6**
	comp=Z,1.0nm,0.7s,mb3.9,baz=328,slow=13,SNR=3.1						
ZRNK	**Zerenda**	**53.94 323**	*e*P		**P**	**02 28 27.2**	**-0.6**
	comp=Z,3.6nm,1.1s,mb4.2						
MALT	**Malatya**	**74.43 306**	*e*P		**P**	**02 30 43.5**	**+1.2**
	comp=Z,5.8nm,1.1s,mb4.4						
ARCES	**ARCESS Array B**	**75.60 339**		P	**P**	**02 30 48.5**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=86,slow=7.7,SNR=6.1						
FINES	**FINESS Array B**	**77.28 331**		P	**P**	**02 30 58.3**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=70,slow=9.0,SNR=4.2						
BRTR	**Keskin Array B**	**77.78 308**		P	**P**	**02 31 01.6**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.6,baz=138,slow=4.4,SNR=5.6						
HFS	**Hagfors**	**83.44 332**		P	**P**	**02 31 31.1**	**-0.6**
	comp=Z,1.5nm,0.7s,mb4.1,baz=69,slow=4.9,SNR=5.5						
NB2	**NORSAR Subarra**	**84.14 333**		P	**P**	**02 31 34.3**	**-1.0**
	comp=Z,2.4nm,0.8s,mb4.4,baz=65,slow=5.6						
NOA	**NORSAR Array B**	**84.14 333**		P	**P**	**02 31 34.5**	**-0.7**
	comp=Z,1.5nm,0.7s,mb4.2,baz=64,slow=5.2,SNR=5.4						

KRSC 30 02:21:13, 5550N×16607E, h50km, ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.97**	**293**	P	Pn	02 21 44.7	+0.9
KBTR				*e*S	Sn	02 22 07.6	+0.3
MKZ	**Mys Kozlova**	**2.67**	**251**	*e*P	Pn	02 22 56.5	+3.0
MKZ				*e*S	Sn	02 22 27.0	+2.4
SRKR	**Sorokina**	**2.98**	**295**	P	Pn	02 22 00.8	+3.0
SRKR				S	Sn	02 22 34.3	+2.0
ZLN	**Zelenaya**	**3.02**	**282**	*e*P	Pn	02 22 02.3	+4.0
ZLN				*e*S	Sn	02 22 37.2	+4.0
KRSR	**Krestovskiy**	**3.19**	**285**	P	Pn	02 22 04.3	+3.7
KRSR				S	Sn	02 22 41.5	+4.2
KMNR	**Kamenistaya**	**3.32**	**277**	P	Pn	02 22 06.7	+4.3
KMNR				S	Sn	02 22 45.0	+4.5
KPT	**Kopyto**	**3.34**	**280**	P	Pn	02 22 06.9	+4.2
KPT				S	Sn	02 22 45.3	+4.2
TUMR	**Tumrok**	**3.39**	**269**	P	Pn	02 22 07.0	+3.7
TUMR				S	Sn	02 22 46.0	+3.8
SRDR	**Sredinnyy**	**3.67**	**286**	P	Pn	02 22 11.2	+4.0
SRDR				S	Sn	02 22 52.4	+3.2
SPN	**Mys Shipunski**	**4.28**	**238**	*e*P	Pn	02 22 18.5	+2.9
SPN				*e*S	Sn	02 23 05.6	+1.3
NLC	**Nalytchevo**	**4.58**	**242**	S	Sn	02 23 14.7	+3.2
AVH	**Avacha**	**4.83**	**245**	*e*P	Pn	02 22 28.2	+5.0
AVH				S	Sn	02 23 22.1	+4.2
GNL	**Ganaly**	**5.06**	**252**	*e*P	Pn	02 22 30.9	+4.6
GNL				S	Sn	02 23 27.4	+4.0
RUS	**Russkaya**	**5.42**	**239**	*e*P	Pn	02 22 34.8	+3.6
GRL	**Gorelyy**	**5.56**	**241**	P	Pn	02 22 36.8	+3.6

*NEIC **30** 02:43:03.1, 1905N×6746W, h8km, MD3.5(RSPR), After RSPR.*

RSPR 30 02:43:03.1, 1905N×6746W, h8km±4km, MD3.5/16, MD3.5/16, 12C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.67**	**150**	*e*P	Pg	02 43 15.5	-0.5
AGPR				*e*S	Sg	02 43 24.8	+0.1
MPR	**Mayaguez**	**0.89**	**160**	*e*P	Pg	02 43 18.2	-2.0
MPR				*e*S	Sg	02 43 30.3	-1.4
LSP	**Las Mesas**	**0.94**	**158**	*e*P	Pg	02 43 19.2	-2.0
LSP				*e*S	Sg	02 43 31.3	-2.1
LRS	**Lares**	**0.95**	**142**	*i*P	Pg	02 43 19.3	-2.1
LRS				*e*S	Sg	02 43 32.2	-1.6
AOPR	**Arecibo Observ**	**0.97**	**136**	*e*P	Pg	02 43 19.4	-2.4
AOPR				*e*S	Sg	02 43 32.2	-2.2
CRPR	**Cabo Rojo, PR**	**1.09**	**162**	*e*P	Pg	02 43 21.1	-3.0
CRPR				*e*S	Sg	02 43 36.1	-2.1
MGP	**Maguayo**	**1.10**	**161**	*e*P	Pg	02 43 21.3	-2.9
MGP				*e*S	Sg	02 43 36.2	-2.2
CELP	**Cerrillos**	**1.28**	**139**	*e*P	Pg	02 43 24.2	-3.1
CELP				*e*S	Sb	02 43 40.5	-3.5
OBIP	**Obispado Ponce**	**1.29**	**141**	*e*P	Pn	02 43 24.3	-3.1
OBIP				*e*S	Sb	02 43 41.2	-3.1
ICM	**Isla Caja Muer**	**1.46**	**142**	*e*P	Pn	02 43 27.1	-2.6
ICM				*e*S	Sn	02 43 45.2	-3.7
SJG	**San Juan**	**1.56**	**127**	*e*P	Pn	02 43 28.2	-2.8
SJG				*e*S	Sn	02 43 47.3	-4.0
CBYP	**Canovanas**	**1.71**	**117**	*e*P	Pn	02 43 30.4	-2.7
CBYP				*e*S	Sn	02 43 50.8	-4.3
HUMP	**Col San Antoni**	**1.77**	**120**	*e*P	Pn	02 43 31.2	-2.8
HUMP				*e*S	Sn	02 43 52.4	-4.4
CPD	**Cerro la Pandu**	**1.78**	**124**	*e*P	Pn	02 43 31.2	-2.8
CPD				*e*S	Sn	02 43 52.6	-4.3
MTP	**Monte Pirata**	**2.04**	**117**	*e*P	Pn	02 43 35.1	-2.6
MTP				*e*S	Sn	02 43 60.0	-3.4
STVI	**Saint Thomas**	**2.47**	**106**	*e*P	Pn	02 43 41.1	-2.5
TBVI	**Tortola**	**2.78**	**103**	*e*P	Pn	02 43 46.0	-1.8

*NIED **30** 03:28:00, 43.30N×146.80E, h35km, Mw3.7 Best double couple: M0 3.38000×10^14 NP1:φs12.00000°, δ68.00000°, λ58.00000°. NP2:φs251.00000°, δ39.00000°, λ142.00000°.*
*MOS **30** 03:28:26.1±1.2, 42.91N×147.45E, h32km, mb4.0/4, Error ellipse: s-maj=36.2km s-min=17.3km az=118.3*
*ISCJB **30** 03:28:32.8±1.6, 43.4N±0.1×146.9E±0.1, h49km±11km, mb3.7/5, Error ellipse: s-maj=24.1km s-min=12.6km az=106.1*
*JMA **30** 03:28:33.9±0.4, 43.31N×146.79E, h41km±3km, M3.6*
*IDC **30** 03:28:44.0±5.2, 45.50N×145.31E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/21, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=113.1km s-min=31.7km az=128.0*

ISC 30 03:28:34.0±1.5, 43.4N±0.1×146.9E±0.1, h43km±11km, n25, σ1§14/27, mb3.7/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.86**	**267**	P	**Pn**	**03 28 48.4**	**-1.2**
NEM2				*e*S	**Sn**	**03 28 58.7**	**-2.3**
YUK	**Yuzh-Kuril'sk**	**0.98**	**309**	*e*PN	**Pn**	**03 28 52.0**	**+0.7**
YUK				pmax	pmax		
	comp=Z,1μm,0.4s						
YUK				pmax	pmax		
	comp=N,390nm,0.5s						
YUK				pmax	pmax		
	comp=E,420nm,0.5s						
YUK				pmax	pmax		
	comp=Z,4μm,1.0s						
JRA	**Rausu**	**1.40**	**292**	P	**Pn**	**03 28 57.2**	**+0.2**
JNK	**Nakash**	**1.61**	**277**	P	**Pn**	**03 28 59.2**	**-0.7**
JNK				*e*S	**Sn**	**03 29 18.9**	**-0.5**
JAK	**Akkeshi**	**1.68**	**256**	P	**Pn**	**03 28 59.4**	**-1.4**
KUR	**Kuril'sk**	**1.94**	**20**	*e*PN	**Pn**	**03 29 03.0**	**-1.4**
JTKR	**Abashiri--Toko**	**2.25**	**285**	P	**Pn**	**03 29 09.6**	**+0.9**
JAR	**Ashorobuto**	**2.30**	**268**	P	**Pn**	**03 29 09.0**	**-0.3**
JOB	**Onbets**	**2.31**	**258**	P	**Pn**	**03 29 09.3**	**-0.2**
JMP	**Maruseppu**	**2.65**	**284**	P	**Pn**	**03 29 15.8**	**+1.7**
JCH	**Churui**	**2.73**	**254**	P	**Pn**	**03 29 16.0**	**+0.8**
JKK2	**KamaKawa 2**	**3.06**	**280**	P	**Pn**	**03 29 21.3**	**+1.5**
JEM	**Erimo**	**3.10**	**244**	P	**Pn**	**03 29 21.6**	**+1.2**
ASAJ	**Asahikawa**	**3.21**	**284**	Pn	**Pn**	**03 29 24.5**	**+2.7**
	comp=Z,3.8nm,0.3s,baz=115,slow=9.4,SNR=16						
ASAJ	**Asahikawa**	**3.21**	**284**	PN	**Pn**	**03 29 24.5**	**+2.7**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SONM	**Songino Array**	**28.45**	**293**	P	**P**	**03 34 23.2**	**-1.4**
	comp=Z,0.4nm,0.5s,mb3.3,baz=81,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**44.59**	**298**	P	**P**	**03 36 42.5**	**+0.7**
	comp=Z,0.5nm,0.5s,mb3.6,baz=66,slow=7.1,SNR=3.2						
MKAR	**Makanchi Array**	**44.59**	**298**	P	**P**	**03 36 42.5**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**59.50**	**340**	P	**P**	**03 38 33.1**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.8,baz=54,slow=6.8,SNR=3.6						
ARCES	**ARCESS Array B**	**59.50**	**340**	P	**P**	**03 38 33.1**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**65.09**	**333**	P	**P**	**03 39 09.2**	**-0.9**
	comp=Z,0.7nm,0.6s,mb3.9,baz=33,slow=7.3,SNR=5.9						
FINES	**FINESS Array B**	**65.09**	**333**	P	**P**	**03 39 09.2**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**69.85**	**339**	P	**P**	**03 39 39.7**	**-0.5**
	comp=Z,0.7nm,0.7s,mb3.7,baz=32,slow=6.2						
NOA	**NORSAR Array B**	**69.85**	**339**	P	**P**	**03 39 40.9**	**+0.7**
	comp=Z,1.0nm,0.7s,mb3.8,baz=33,slow=6.2,SNR=5.0						
NOA	**NORSAR Array B**	**69.85**	**339**	P	**P**	**03 39 40.9**	**+0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*IDC **30** 03:29:57.1±7.3, 18.13S×178.89W, h528km±73km, mb3.4/7, mb1 3.5/8, mb1mx3.3/17, mbtmp4.3/8, Error ellipse: s-maj=55.5km s-min=22.2km az=42.0*
*NEIC **30** 03:29:59.5±3.5, 18.19S×178.94W, h559km±33km, mb4.4/4, Error ellipse: s-maj=36.7km s-min=17.0km az=46.0*
*ISCJB **30** 03:30:01.6±7.8, 184S±05×179.1W±06, h591km±57km, mb4.0/9, Error ellipse: s-maj=118.5km s-min=24.9km az=92.4*

ISC 30 03:30:01.9±7.6, 184S±05×179.1W±06, h566km±50km, n18, σ0§50/16, mb4.0/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.03**	**253**	P	**P**	**03 33 01.6**	**+0.4**
	0.7nm,0.3s,baz=128,slow=19,SNR=6.0						
URZ	**Urewera**	**20.03**	**189**	P	**P**	**03 33 56.3**	**-1.0**
	4.5nm,0.3s,baz=256,slow=3.6,SNR=8.7						
CTA	**Charters Tower**	**32.71**	**261**	P	**P**	**03 35 49.0**	**+0.6**
	11nm,0.9s,mb4.4,baz=92,slow=11,SNR=5.4						
CTA	**Charters Tower**	**32.71**	**261**	P	**P**	**03 35 49.0**	**+0.6**
CTAO	**Charters Tower**	**32.71**	**261**	*e*P	**P**	**03 35 48.4**	**0.0**
	13nm,1.0s,mb4.4						
PMG	**Port Moresby**	**33.90**	**281**	*e*P	**P**	**03 35 58.3**	**-0.1**
	5.5nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**37.80**	**242**	P	**P**	**03 36 30.7**	**+0.2**
	1.2nm,0.5s,mb3.6,baz=114,slow=10.0,SNR=2.8						
WB2	**Warramunga Arr**	**43.87**	**260**	*e*P	**P**	**03 37 18.1**	**-0.6**
WRAB	**Tennant Creek**	**43.88**	**260**	*e*P	**P**	**03 37 18.4**	**-0.3**
	4.6nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**43.88**	**260**	P	**P**	**03 37 18.2**	**-0.6**
	2.0nm,0.5s,mb3.9,baz=93,slow=6.9,SNR=14						
AS31	**Alice Springs**	**44.01**	**255**	*e*P	**P**	**03 37 19.9**	**+0.1**
ASAR	**Alice Springs**	**44.01**	**255**	P	**P**	**03 37 20.1**	**+0.4**
	13nm,0.5s,mb4.8,baz=89,slow=8.2,SNR=153						
ASPA	**Alice Springs**	**44.01**	**255**	*e*P	**P**	**03 37 19.9**	**+0.1**
KAKA	**Kakadu**	**46.91**	**270**	*e*P	**P**	**03 37 41.6**	**-0.3**
	10nm,0.4s,mb4.7						
FITZ	**Fitzroy Crossi**	**52.29**	**261**	P	**P**	**03 38 21.5**	**+0.2**
	1.3nm,0.4s,mb3.6,baz=127,slow=10,SNR=5.9						
VNDA	**Vanda**	**59.87**	**185**	P	**P**	**03 39 14.5**	**+1.0**
	0.4nm,0.6s,mb3.0,baz=44,slow=8.2,SNR=5.6						
BRTR	**Keskin Array B**	**144.67**	**314**	PKP	PKPdf	03 48 32.8	-1.7
	0.8nm,0.8s,baz=46,slow=6.2,SNR=3.7						
GERES	**GERESS Array B**	**147.94**	**344**	PKPbc	PKPbc	03 48 41.8	-2.1
	0.5nm,0.7s,baz=14,slow=4.4,SNR=3.0						

*ISCJB **30** 03:32:19.0±0.4, 43.13N±0.02×0.31W±0.03, h15km±4km, Error ellipse: s-maj=4.1km s-min=3.1km az=141.7*
*CSEM **30** 03:32:20.8±0.0, 4305N×0.33W, h5km, ML2.5/6, Error ellipse: s-maj=0.8km s-min=0.5km az=173.0*
*LDG **30** 03:32:20.5±0.1, 4304N×0.33W, h10km, Md2.4/3, Ml2.3/7, Error ellipse: s-maj=1.6km s-min=1.0km az=165.0*
*STR **30** 03:32:20.3±0.1, 4308N×0.32W, h5km±1km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*MDD **30** 03:32:21.1±0.3, 4306N×0.32W, h4km±4km, mbLg1.4/16, Error ellipse: s-maj=2.5km s-min=1.3km az=10.0, PRXIMO*

ISC 30 03:32:20.1±0.4, 4310N±002×032W±003, h12km±4km, n45, σ0§60/64, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
REYF	**Montagne du Re**	**0.06**	**245**	Pg	**Pg**	**03 32 22.3**	**-0.1**
REYF				Sg	**Sg**	**03 32 23.5**	**-0.6**
REYF	**Montagne du Re**	**0.06**	**245**	Pg	**Pg**	**03 32 22.3**	**-0.1**
REYF				Lg		03 32 23.5	
ETSF	**Etsaut**	**0.26**	**222**	*e*Pg	**Pg**	**03 32 25.4**	**-0.1**
ETSF				*e*Sg	**Sg**	**03 32 28.4**	**-0.8**
	47nm,0.2s						
ETSF	**Etsaut**	**0.26**	**222**	*e*Pg	**Pg**	**03 32 25.4**	**-0.1**
ETSF				*e*Sg	**Sg**	**03 32 28.4**	**-0.8**
	24nm,0.2s						
ATE	**Arette**	**0.28**	**268**	Pg	**Pg**	**03 32 25.9**	**+0.1**
ATE				Sg	**Sg**	**03 32 29.9**	**+0.2**
ATE	**Arette**	**0.28**	**268**	Pg	**Pg**	**03 32 25.9**	**+0.1**
ATE				Lg		03 32 30.0	
LABF	**Labassere**	**0.29**	**99**	Pg	**Pg**	**03 32 26.3**	**+0.3**
LABF				Sg	**Sg**	**03 32 30.6**	**+0.6**
LABF	**Labassere**	**0.29**	**99**	Pg	**Pg**	**03 32 26.3**	**+0.3**
LABF				Lg		03 32 30.5	
VIEF	**Viey**	**0.33**	**130**	Pg	**Pg**	**03 32 26.7**	**0.0**
VIEF				Lg		03 32 30.9	
FDAF	**Les Forges d'A**	**0.33**	**214**	Pg	**Pg**	**03 32 26.7**	**-0.1**
FDAF				Lg		03 32 31.3	
EPF	**Esparros**	**0.49**	**97**	*e*Pg	**Pg**	**03 32 29.9**	**+0.3**
EPF				*e*Sg	**Sg**	**03 32 36.4**	**+0.3**
	6.4nm,0.2s						
EPF	**Esparros**	**0.49**	**97**	*e*Pg	**Pg**	**03 32 29.9**	**+0.3**
EPF				*e*Sg	**Sg**	**03 32 36.4**	**+0.3**
	3.2nm,0.2s						
LARF	**Larrau**	**0.49**	**264**	Pg	**Pg**	**03 32 30.1**	**+0.3**
LARF				Lg		03 32 37.1	
EBIE	**Bielsa**	**0.53**	**140**	Pg	**Pg**	**03 32 30.3**	**-0.1**
	0.5nm,0.1s,SNR=23						
EBIE				Lg		03 32 37.3	
	4.1nm,0.1s,SNR=25						
EBIE	**Bielsa**	**0.53**	**140**	Pg	**Pg**	**03 32 30.3**	**-0.2**
	0.5nm,0.1s,SNR=23						
RESF	**Ens**	**0.56**	**121**	Pg	**Pg**	**03 32 31.3**	**+0.3**
RESF				Sg	**Sg**	**03 32 38.5**	**0.0**
RESF	**Ens**	**0.56**	**121**	Pg	**Pg**	**03 32 31.3**	**+0.2**
RESF				Lg		03 32 38.7	
SJPF	**Ste Jean**	**0.66**	**272**	*e*Pg	**Pg**	**03 32 33.5**	**+0.5**
SJPF				*e*Sg	**Sg**	**03 32 42.3**	**+0.6**
	6.9nm,0.2s						
SJPF	**Ste Jean**	**0.66**	**272**	*e*Pg	**Pg**	**03 32 33.5**	**+0.5**
SJPF				*e*Sg	**Sg**	**03 32 42.3**	**+0.6**
	3.5nm,0.2s						
EALK	**Alkurruntz**	**0.88**	**279**	Pg	**Pg**	**03 32 37.2**	**+0.2**
	0.4nm,0.1s,SNR=7.9						
EALK				Lg		03 32 48.8	
	1.0nm,0.1s,SNR=7.7						
ELIZ	**Elizondo**	**0.89**	**275**	Pg	**Pg**	**03 32 37.2**	**0.0**
	0.3nm,0.1s,SNR=7.9						
ELIZ				Lg		03 32 50.0	
	1.5nm,0.2s,SNR=7.9						
SALF	**Salau**	**1.16**	**106**	Pg	**Pg**	**03 32 44.2**	**+1.8**
SALF				Lg		03 32 57.3	
CSOR	**Sort**	**1.29**	**123**	Pg	**Pg**	**03 32 45.4**	**+0.5**
CSOR				Lg		03 33 01.8	
	3.5nm,0.2s						
ESAC	**San Caprasio**	**1.38**	**185**	Pg	**Pg**	**03 32 46.1**	**-0.4**
	4.7nm,0.2s,SNR=7.9						
ESAC				Lg		03 33 04.8	
	15nm,0.2s,SNR=8.3						
ESAC	**San Caprasio**	**1.38**	**185**	Pg	**Pg**	**03 32 46.1**	**-0.5**
	4.7nm,0.2s,SNR=7.9						
CAVN	**Les Avellanes**	**1.45**	**146**	Pg	**Pg**	**03 32 48.4**	**+0.5**
CORG	**Organya**	**1.48**	**125**	Pg	**Pg**	**03 32 49.3**	**+0.7**
CORG				Lg		03 33 09.4	
CLLI	**Llivia**	**1.80**	**109**	Lg		03 33 18.2	
	0.9nm,0.4s						
MTLF	**Montolieu**	**1.87**	**82**	*e*Pg	**Pg**	**03 32 55.8**	**-0.2**
MTLF				*e*Sg	**Sg**	**03 33 19.8**	**-0.4**
	2.6nm,0.2s						
MTLF	**Montolieu**	**1.87**	**82**	*e*Pg	**Pg**	**03 32 55.8**	**-0.2**
MTLF				*e*Sg	**Sg**	**03 33 19.8**	**-0.4**
	1.3nm,0.2s						
LFF	**La Frestale**	**2.00**	**22**	*e*Pg	**Pg**	**03 32 58.5**	**+0.1**
LFF				*e*Sg	**Sg**	**03 33 25.2**	**+0.9**
	5.6nm,0.4s						
LFF	**La Frestale**	**2.00**	**22**	*e*Pg	**Pg**	**03 32 58.5**	**+0.1**
LFF				*e*Sg	**Sg**	**03 33 25.2**	**+0.9**
	2.8nm,0.4s						
EPOB	**Poblet**	**2.03**	**149**	Pn	**Pn**	**03 32 54.0**	**-0.1**
	0.3nm,0.1s,SNR=7.9						
EPOB				Pg	**Pg**	**03 32 58.5**	**-0.5**
	0.4nm,0.2s,SNR=7.9						
EPOB				Lg		03 33 24.2	
	1.3nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**2.03**	**149**	Pn	**Pn**	**03 32 54.0**	**-0.1**
	SNR=7.9						
ERTA	**Horta de San J**	**2.19**	**167**	Pn	**Pn**	**03 32 55.6**	**-0.8**
	0.2nm,0.1s,SNR=7.9						
ERTA				Pg	**Pg**	**03 33 01.1**	**-1.0**
	0.2nm,0.1s,SNR=7.9						
ERTA				Sn	**Sn**	**03 33 23.8**	**+0.4**
	0.5nm,0.2s,SNR=7.9						
ERTA				Lg		03 33 30.3	
	1.7nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.19**	**167**	Pg	**Pg**	**03 33 01.1**	**-1.0**
	0.2nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**2.28**	**274**	Lg		03 33 34.5	
	1.6nm,0.3s,SNR=7.9						
CAF	**Calviac**	**2.51**	**42**	*e*Pg	**Pg**	**03 33 07.5**	**-0.7**
CAF				*e*Sg	**Sg**	**03 33 41.1**	**+0.3**
	2.4nm,0.3s						
CAF	**Calviac**	**2.51**	**42**	*e*Pg	**Pg**	**03 33 07.5**	**-0.7**
CAF				*e*Sg	**Sg**	**03 33 41.1**	**+0.3**
	1.2nm,0.3s						
RJF	**Les Rejaudoux**	**2.57**	**30**	*e*Pg	**Pg**	**03 33 09.3**	**-0.1**
RJF				*e*Sg	**Sg**	**03 33 42.9**	**+0.1**
	2.4nm,0.2s						
RJF	**Les Rejaudoux**	**2.57**	**30**	*e*Pg	**Pg**	**03 33 09.3**	**-0.1**
RJF				*e*Sg	**Sg**	**03 33 42.9**	**+0.1**
	1.2nm,0.2s						
VIVF	**Saint-Julien-l**	**4.01**	**62**	*e*Sg	**Sg**	**03 34 27.2**	**-1.7**
	0.9nm,0.2s						
VIVF	**Saint-Julien-l**	**4.01**	**62**	*e*Sg	**Sg**	**03 34 27.2**	**-1.7**
	0.4nm,0.2s						
BGF	**Bois d'Agland**	**4.13**	**32**	*e*Sg	**Sg**	**03 34 31.6**	**-1.1**
	7.2nm,0.5s						
BGF	**Bois d'Agland**	**4.13**	**32**	*e*Sg	**Sg**	**03 34 31.6**	**-1.1**
	3.6nm,0.5s						

*CSEM **30** 03:37:59.4±0.9, 3994N×2967W, h5km, ML2.6, Error ellipse: s-maj=10.3km s-min=5.5km az=63.0, After PDA*
*PDA **30** 03:37:59.4±0.9, 3994N×2967W, h5km, MD2.8, ML2.6, Error ellipse: s-maj=10.3km s-min=5.5km az=63.0*

SVSA 30 03:37:59.4±0.9, 3994N×2967W, h5km, MD2.8, ML2.6, Error ellipse: s-maj=10.3km s-min=5.5km az=63.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLUZ	**Luz**	**1.07**	**150**	*e*S	Sg	03 38 41.7	+8.0
PLUZ							
	12nm,0.1s						
PVIA	**Vitoria**	**1.53**	**124**	*e*S	Sn	03 38 40.2	-7.4
PVIA							
	12nm,0.2s						
SRBC	**Serra Branca**	**1.55**	**125**	*e*P	Pn	03 38 22.4	-5.3
SRBC				*e*S	Sn	03 38 40.1	-8.1
STGR	**Santa Cruz**	**1.55**	**123**	*e*P	Pn	03 38 23.1	-4.5
STGR				*e*S	Sn	03 38 40.1	-8.0
STGR							
	22nm,0.2s						
STGR	**Santa Cruz**	**1.55**	**123**	*e*P	Pn	03 38 23.1	-4.5
STGR				*e*S	Sn	03 38 40.1	-8.0
CALA	**Caldeira**	**1.55**	**151**	*erx*		03 38 37.5	
PICO	**Pico**	**1.73**	**146**	*e*S	Sn	03 38 45.1	-7.5
PCND	**Candelaria**	**1.74**	**147**	*e*S	Sn	03 38 45.2	-7.7
PCND							
	16nm,0.2s						
PTEI	**Pico do Teixo**	**1.77**	**144**	*erx*		03 38 45.9	
PBOI	**Pico dos Bois**	**1.81**	**146**	*erx*		03 38 48.3	
PID	**Ribeirinha**	**1.92**	**141**	*erx*		03 38 40.1	
ASBA	**Santa Barbara**	**2.19**	**123**	*e*P	Pn	03 38 31.9	-4.5
PBIS	**Biscoitos**	**2.21**	**121**	*e*P	Pn	03 38 32.1	-4.7
PBIS				*e*S	Sn	03 38 56.7	-7.8
PBIS							
	13nm,0.3s						
**PB

NEIC ***30*** *04:26:54.4±2.5, 222.7S×171.47E, h106km±17km, mb4.7/6, Error ellipse: s-maj=22.4km s-min=18.5km az=81.0*
ISCJB ***30*** *04:26:55.6±4.0, 224.5±02×171.3E±02, h118km±26km, mb4.5/12, Error ellipse: s-maj=37.8km s-min=30.3km az=115.0*
IDC ***30*** *04:26:56.4±6.8, 221.1S×171.26E, h111km±46km, mb4.1/7, mb1 4.2/8, mb1mx4.0/15, mbtmp4.5/8, MS2.9/1, Ms1 2.9/1, ms1mx2.3/33, Error ellipse: s-maj=58.0km s-min=38.4km az=131.0*

ISC 30 04:26:54.8±3.8, 224S±02×171.4E±02, h102km±25km, n24, σ0°70/22, mb4.5/12, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.61**	**273**	*eP*	**Pn**	**04 28 02.9**	**+0.7**
DZM				*eS*	**Sn**	**04 28 49.7**	**-4.9**
DZM	**Mont Dzumac**	**4.61**	**273**	P	**Pn**	**04 28 02.8**	**+0.7**
	23nm,0.3s,baz=69,slow=20,SNR=180						
DZM				S	**Sn**	**04 28 52.9**	**-1.6**
	22nm,0.3s,baz=93,slow=20,SNR=16						
HNR	**Honiara**	**16.91**	**318**	LR	LR	04 35 28.4	
	comp=Z,45nm,21.5s,baz=178,slow=31						
CTA	**Charters Tower**	**23.55**	**271**	P	**P**	**04 31 56.5**	**+0.6**
	3.5nm,0.6s,mb3.8,baz=102,slow=14,SNR=4.2						
STKA	**Stephens Creek**	**28.11**	**244**	P	**P**	**04 32 38.2**	**+1.3**
	2.7nm,0.7s,mb3.9,baz=89,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**28.11**	**244**	*eP*	**P**	**04 32 38.2**	**+1.2**
AS31	**Alice Springs**	**34.48**	**260**	*eP*	**P**	**04 33 32.5**	**-0.4**
ASAR	**Alice Springs**	**34.48**	**260**	P	**P**	**04 33 33.0**	**+0.1**
	6.5nm,0.7s,mb4.6,baz=79,slow=9.4,SNR=67						
ASPA	**Alice Springs**	**34.49**	**260**	*eP*	**P**	**04 33 32.5**	**-0.4**
WB2	**Warramunga Arr**	**34.59**	**267**	*eP*	**P**	**04 33 33.1**	**-0.7**
WRA	**Warramunga Arr**	**34.60**	**267**	P	**P**	**04 33 33.0**	**-0.9**
	0.8nm,0.3s,mb4.0,baz=95,slow=8.4,SNR=4.7						
FITZ	**Fitzroy Crossi**	**43.03**	**267**	*eP*	**P**	**04 34 45.0**	**+0.7**
	12nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**43.03**	**267**	P	**P**	**04 34 44.8**	**+0.6**
	6.4nm,0.7s,mb4.5,baz=126,slow=8.3,SNR=9.3						
MBWA	**Marble Bar**	**47.82**	**261**	*eP*	**P**	**04 35 22.0**	**0.0**
	9.4nm,0.7s,mb4.7						
KLBR	**Kellerberrin**	**48.29**	**247**	*eP*	**P**	**04 35 25.7**	**0.0**
	22nm,1.2s,mb4.9						
NWAO	**Narrogin (SRO)**	**48.68**	**245**	P	**P**	**04 35 29.3**	**+0.7**
	37nm,1.3s,mb5.2,baz=106,slow=12,SNR=4.3						
CASY	**Casey**	**58.12**	**205**	*eP*	**P**	**04 36 37.5**	**-0.2**
	2.8nm,0.8s,mb4.3						
KSM	**Kuching**	**64.05**	**283**	*eP*	**P**	**04 37 18.5**	**+0.8**
SNAA	**Sanae**	**86.14**	**182**	*eP*	**P**	**04 39 23.4**	**-1.1**
	1.5nm,0.7s,mb4.0						
SONM	**Songino Array**	**90.91**	**322**	P	**P**	**04 39 46.5**	**-0.6**
	1.3nm,0.8s,mb4.1,baz=131,slow=3.5,SNR=4.9						
LSA	**Lhasa**	**92.87**	**301**	*eP*	**P**	**04 39 56.4**	**+0.3**
	6.9nm,0.5s,mb5.2						
GERES	**GERESS Array B**	**148.18**	**332**	PKPbc	PKPbc	04 46 27.7	-1.1
	2.1nm,0.8s,baz=42,slow=2.2,SNR=9.8						
GERES	**GERESS Array B**	**148.18**	**332**	PKPbc	PKPbc	04 46 27.7	-1.1
TORD	**Torodi Ar. Bea**	**166.60**	**229**	PKPab	PKPab	04 47 51.3	+0.3
	0.9nm,1.0s,baz=119,slow=3.2,SNR=5.1						

IDC ***30*** *04:29:09.4±0.7, 047S×124.72E, h0km, mb4.3/10, mb1 4.4/11, mb1mx4.2/17, mbtmp4.2/11, ML3.7/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/27, Error ellipse: s-maj=48.3km s-min=14.4km az=68.0*
BJI ***30*** *04:29:11.3, 057S×125.46E, h45km, mB5.3, mb4.6*
ISCJB ***30*** *04:29:12.3±8.7, 04S±01×125.2E±02, h33km±64km, mb4.2/18, Error ellipse: s-maj=33.7km s-min=13.9km az=133.3*
NEIC ***30*** *04:29:15.0±3.3, 038S×125.22E, h40km±32km, mb4.4/11, Error ellipse: s-maj=22.4km s-min=10.2km az=66.0*

ISC 30 04:29:15.5±4.3, 04S±01×125.3E±02, h44km±42km, n25, σ0°85/24, mb4.2/18, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**17.62**	**179**	*eP*	**Pn**	**04 33 17.6**	**0.0**
	8.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.62**	**179**	P	**Pn**	**04 33 16.9**	**-0.7**
	0.2nm,0.3s,baz=15,slow=9.5,SNR=8.2						
FITZ				LR	LR	04 40 33.9	
	comp=Z,106nm,20.6s,baz=316,slow=39						
MBWA	**Marble Bar**	**21.35**	**194**	*eP*	**P**	**04 33 59.6**	**+0.7**
	26nm,1.2s,mb4.4						
WRAB	**Tennant Creek**	**21.38**	**156**	*eP*	**P**	**04 33 58.8**	**-0.4**
	14nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**21.39**	**156**	P	**P**	**04 33 58.6**	**-0.7**
	6.4nm,0.7s,mb4.1,baz=336,slow=11,SNR=14						
WB2	**Warramunga Arr**	**21.39**	**156**	*eP*	**P**	**04 33 58.1**	**-1.2**
ASAR	**Alice Springs**	**24.63**	**161**	P	**P**	**04 34 32.0**	**+0.3**
	16nm,1.2s,mb4.4,baz=340,slow=11,SNR=28						
ASAR				PcP	PcP	04 38 09.2	+0.7
	1.0nm,0.5s,baz=342,slow=2.3,SNR=8.9						
ASAR				LR	LR	04 43 29.1	
	comp=Z,87nm,18.9s,baz=178,slow=35						
CTA	**Charters Tower**	**28.40**	**135**	*eP*	**P**	**04 35 07.3**	**+1.6**
	10nm,0.6s,mb4.6						
CTA	**Charters Tower**	**28.40**	**135**	P	**P**	**04 35 10.3**	**+4.7**
	12nm,0.7s,mb4.6,baz=228,slow=23,SNR=10						
CTAO	**Charters Tower**	**28.40**	**135**	*eP*	**P**	**04 35 10.3**	**+4.6**
	13nm,0.6s,mb4.7						
FORT	**Forrest**	**30.35**	**175**	*eP*	**P**	**04 35 23.5**	**+0.5**
	13nm,0.6s,mb4.8						
CHTO	**Chiang Mai**	**32.11**	**308**	*eP*	**P**	**04 35 40.1**	**+1.6**
	3.4nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**34.94**	**155**	*eP*	**P**	**04 36 04.2**	**+1.1**
	6.9nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**34.94**	**155**	P	**P**	**04 36 04.0**	**+0.9**
	9.3nm,0.9s,mb4.7,baz=326,slow=8.8,SNR=10						
MJAR	**Matsushiro Arr**	**38.65**	**17**	P	**P**	**04 36 36.5**	**+1.8**
	0.6nm,0.3s,mb3.8,baz=190,slow=10,SNR=4.8						
GTA	**Gaotai**	**45.94**	**332**	*eP*	**P**	**04 37 34.0**	**+0.1**
GTA				AP	pP	04 37 42.0	-4.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
SONM	**Songino Array**	**50.74**	**344**	P	**P**	**04 38 09.7**	**-1.3**
	comp=Z,1.7nm,0.9s,mb4.0,baz=152,slow=7.3,SNR=3.5						
MKAR	**Makanchi Array**	**60.13**	**327**	P	**P**	**04 39 18.0**	**-0.4**
	comp=Z,2.1nm,0.5s,mb4.5,baz=119,slow=8.6,SNR=19						
BVAR	**Borovoye Array**	**69.97**	**328**	P	**P**	**04 40 21.6**	**-0.8**
	comp=Z,0.9nm,0.5s,mb3.9,baz=128,slow=9.6,SNR=5.2						
BRVK	**Borovoye**	**70.05**	**328**	*eP*	**P**	**04 40 22.4**	**-0.3**
	comp=Z,1.4nm,0.6s,mb4.1						
CHKZ	**Chkalovo**	**70.18**	**329**	*eP*	**P**	**04 40 23.7**	**+0.1**
	comp=Z,1.7nm,0.8s,mb4.0						
ZRNK	**Zerenda**	**70.67**	**328**	*eP*	**P**	**04 40 25.8**	**-0.8**
	comp=Z,2.6nm,0.5s,mb4.4						
VNDA	**Vanda**	**79.57**	**172**	P	**P**	**04 41 18.0**	**+0.1**
	comp=Z,0.4nm,0.7s,mb3.4,baz=304,slow=7.3,SNR=3.3						
ARCES	**ARCESS Array B**	**93.76**	**340**	P	**P**	**04 42 27.3**	**-0.4**
	comp=Z,2.1nm,0.9s,mb4.6,baz=79,slow=5.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	**122.68**	**285**	PKP	PKPdf	04 48 07.4	+1.1
	comp=Z,0.3nm,0.7s,baz=107,slow=1.8,SNR=4.5						

MEX ***30*** *04:31:50.8±0.5, 1434N×925.0W, h181km±23km, MD4.8*
IDC ***30*** *04:31:51.7±2.6, 1450N×919.0W, h51km±27km, mb3.8/11, mb1 3.9/13, mb1mx3.8/24, mbtmp4.0/13, ML3.2/2, MS3.3/6, Ms1 3.3/6, ms1mx2.8/38, Error ellipse: s-maj=43.0km s-min=11.7km az=52.0*
ISCJB ***30*** *04:31:52.9±0.6, 1440N±005×920.5W±005, h75km±6km, mb4.0/20, Error ellipse: s-maj=10.9km s-min=4.0km az=84.1*
NEIC ***30*** *04:31:52.4±0.4, 1431N×920.6W, mb4.2/13, MD4.7(MEX), Error ellipse: s-maj=12.0km s-min=6.5km az=50.0*
CASC ***30*** *04:31:53.5±2.1, 1432N×920.5W, h22km±20km, MD4.4, ML3.6, mb4.2(NEIC)*

ISC 30 04:31:54.3±0.6, 1445N±006×9205W±005, h65km±5km, n138, σ0°99/135, mb4.0/20, 29C-27D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.17**	**90**	⇓*iP*	**Pn**	**04 32 14.2**	**-0.6**
TER	**Terranova**	**1.33**	**96**	⇑*iP*	**Pn**	**04 32 15.9**	**-1.1**
PCG	**Pacaya**	**1.40**	**92**	*eP*	**Pn**	**04 32 17.6**	**-0.1**
GCG	**Guatemala City**	**1.48**	**85**	⇓*eP*	**Pn**	**04 32 19.8**	**+1.0**
RBDL	**Robledal**	**2.32**	**98**	⇑*eP*	x	04 32 30.5	
SCX	**San Cristobal**	**2.34**	**346**	*iP*	**Pn**	**04 32 31.5**	**+1.1**
SCX				*iS*	**Sn**	**04 33 02.5**	**+4.4**
RTR	**El Retiro**	**2.40**	**103**	⇑*eP*	x	04 32 31.3	
SBLS	**San Blas**	**2.43**	**104**	*eP*	x	04 32 31.6	
SBLS				*eS*	x	04 33 03.1	
SNJE	**San Jose**	**2.44**	**103**	*eP*	x	04 32 32.2	
BOQS	**Boqueron**	**2.78**	**104**	⇓*eP*	x	04 32 36.9	
BOQS				*eS*	x	04 33 11.2	
LBRS	**Las Brisas**	**3.00**	**103**	⇑*eP*	x	04 32 39.6	
LBRS				*eS*	x	04 33 15.3	
LFRS	**El Faro**	**3.02**	**105**	*eP*	x	04 32 39.8	
LFRS				*eS*	x	04 33 16.9	
LCBS	**La Ceiba**	**3.09**	**104**	*eP*	x	04 32 41.3	
LCBS				*eS*	x	04 33 19.1	
SNVI	**San Vicente**	**3.23**	**105**	*eP*	x	04 32 42.8	
CMIG	**Matias Romero**	**3.78**	**314**	P	**Pn**	**04 32 46.7**	**-3.4**
	13nm,0.3s,baz=141,slow=11,SNR=126						
CMIG				S	**Sn**	**04 33 32.9**	**-0.5**
	70nm,0.3s,baz=49,slow=23,SNR=6.4						
CMIG	**Matias Romero**	**3.78**	**314**	P	**Pn**	**04 32 46.7**	**-3.4**
CMIG				S	**Sn**	**04 33 32.9**	**-0.5**
VSM	**San Miguel**	**3.81**	**105**	*eP*	x	04 32 51.7	
HUIG	**Huatulco**	**4.13**	**289**	*iS*	**Sn**	**04 33 32.4**	**-9.4**
CNCH	**Conchagua**	**4.26**	**105**	⇑*eP*	x	04 32 56.6	
CNCH				*eS*	x	04 33 46.4	
SCIG		**4.57**	**10**	*iP*	**Pn**	**04 33 00.1**	**-0.7**
SCIG				*iS*	**Sn**	**04 33 56.6**	**+4.0**
OXX	**Oaxaca**	**5.20**	**301**	*eP*	**Pn**	**04 33 09.0**	**-0.5**
VHO	**Vista Hermosa**	**5.21**	**301**	*iP*	**Pn**	**04 33 02.3**	**-7.3**
VHO				*iS*	**Sn**	**04 33 59.0**	**-9.3**
VHO	**Vista Hermosa**	**5.21**	**301**	*iP*	**Pn**	**04 33 08.3**	**-1.3**
VHO				*iS*	**Sn**	**04 34 04.0**	**-4.3**
LEON	**Leon**	**5.41**	**111**	⇑*eP*	**Pn**	**04 33 13.3**	**+0.8**
LEON				*eS*	**Sn**	**04 34 14.2**	**+0.8**
	comp=Z,106nm,0.6s						
CNGN	**Cerro Negro**	**5.56**	**110**	*eP*	**Pn**	**04 33 14.2**	**-0.2**
MIRN	**Miramar**	**5.57**	**110**	*eP*	**Pn**	**04 33 14.4**	**-0.2**
MOMJ	**Momotombo**	**5.74**	**110**	*eP*	**Pn**	**04 33 16.6**	**-0.2**
MOMJ				*eS*	**Sn**	**04 34 20.8**	**-0.5**
COPN	**Copaltepe**	**5.78**	**112**	*eP*	**Pn**	**04 33 17.6**	**+0.2**
COPN				*eS*	**Sn**	**04 34 22.2**	**-0.1**
APYN	**Apoyeque**	**5.97**	**111**	*eP*	**Pn**	**04 33 21.2**	**+1.2**
XAVN	**Gruta Xavier**	**6.03**	**112**	⇑*eP*	**Pn**	**04 33 21.2**	**+0.4**
TPIG	**Tehuac#an**	**6.44**	**308**	*eP*	**Pn**	**04 33 19.2**	**-7.4**
TPIG				*iS*	**Sn**	**04 34 28.6**	**-10**
BOA	**Boaco**	**6.47**	**107**	*eP*	**Pn**	**04 33 26.7**	**-0.1**
UTMO	**Huajuapan**	**6.47**	**302**	*eP*	**Pn**	**04 33 20.3**	**-6.6**
UTMO				*iS*	**Sn**	**04 34 28.8**	**-10**
PPM	**Popocatepetl**	**7.79**	**307**	*eP*	**Pn**	**04 33 42.0**	**-3.0**
PPM				*iS*	**Sn**	**04 35 00.2**	**-11**
MEIG	**Mezcala**	**8.05**	**296**	*iS*	**Sn**	**04 35 05.3**	**-13**
JCR	**Jicaral**	**8.18**	**123**	*eP*	**Pn**	**04 33 51.3**	**+0.9**
IIZ	**Mezontepec**	**8.34**	**305**	*eP*	**Pn**	**04 33 45.9**	**-6.5**
IIZ				*iS*	**Sn**	**04 35 09.3**	**-16**
CGA2	**Cerro Gallo 2**	**8.63**	**120**	*eP*	**Pn**	**04 34 00.1**	**+3.8**
PRS1	**Puriscal**	**8.77**	**120**	*eP*	**Pn**	**04 34 00.3**	**+1.9**
LAJ	**Bijagual**	**8.99**	**120**	*eP*	**Pn**	**04 34 01.0**	**-0.4**
LCR2	**La Lucha 2**	**9.16**	**120**	*eP*	**Pn**	**04 34 07.9**	**+4.3**
BUS	**Buena Vista**	**9.46**	**120**	*eP*	**Pn**	**04 34 08.9**	**+1.1**
HKT	**Hockley**	**15.81**	**348**	*ePn*	**Pn**	**04 35 32.4**	**-0.5**
LRAL	**Lakeview Retre**	**19.06**	**13**	*eP*	**Pn**	**04 36 11.3**	**-1.4**
ROSC	**El Rosal**	**19.89**	**117**	P	**Pn**	**04 36 19.6**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=105,slow=20,SNR=3.5						
MIAR	**Mount Ida**	**20.05**	**356**	*eP*	**P**	**04 36 21.9**	**-0.2**
	comp=Z,1.1nm,1.0s						
UALR	**University of**	**20.24**	**359**	*eP*	**P**	**04 36 25.6**	**+1.5**
	comp=Z,11nm,0.7s						
GDL2	**Guadalupe Moun**	**20.94**	**330**	*eP*	**P**	**04 36 32.5**	**+0.8**
MNTX	**Cornudas Mount**	**21.06**	**327**	*eP*	**P**	**04 36 31.9**	**-1.1**
	comp=Z,6.6nm,0.7s,mb4.1						
WMOK	**Wichita Mounta**	**21.09**	**344**	*eP*	**P**	**04 36 32.2**	**-1.1**
	comp=Z,3.6nm,0.8s,mb3.8						
SWET	**Sewanee**	**21.40**	**14**	*eP*	**P**	**04 36 35.3**	**-1.3**
MYNC	**Murphy**	**21.74**	**18**	*eP*	**P**	**04 36 41.0**	**+0.8**
	comp=Z,7.5nm,0.6s,mb4.2						
MYNC				*epP*		04 36 56.2	
WVT	**Waverly**	**21.92**	**9**	*eP*	**P**	**04 36 40.8**	**-1.4**
	comp=Z,5.2nm,0.3s,mb4.3						
CPCT	**Cooper Cave**	**21.98**	**17**	*eP*	**P**	**04 36 42.7**	**-0.1**
CPCT				*epP*		04 36 57.8	
LAZ	**Ladron**	**24.09**	**328**	*eP*	**P**	**04 37 04.3**	**+0.6**
ANMO	**Albuquerque**	**24.19**	**330**	P	**P**	**04 37 04.9**	**+0.3**
	comp=Z,7.7nm,0.6s,mb4.2,baz=149,slow=11,SNR=41						
ANMO	**Albuquerque**	**24.19**	**330**	*eP*	**P**	**04 37 04.9**	**+0.3**
	comp=Z,7.7nm,0.6s,mb4.2						
WCI	**Wyandotte Cave**	**24.23**	**11**	*eP*	**P**	**04 37 03.1**	**-1.8**
WCI				*epP*		04 37 17.2	
ATAH	**Atahualpa**	**25.25**	**147**	P	**P**	**04 37 15.8**	**+1.6**
	comp=Z,2.6nm,0.9s,mb3.7,baz=61,slow=6.5,SNR=4.3						
ATAH				LR	LR	04 44 49.4	
	comp=Z,41nm,21.5s,baz=112,slow=31						
X15A	**Humboldt**	**27.02**	**321**	⇑P	**P**	**04 37 30.5**	**+0.3**
	baz=27						
PCRV	**Puerto La Cruz**	**27.11**	**96**	LR	LR	04 47 56.9	
	comp=Z,37nm,21.1s,baz=292,slow=36						
Y14A	**Wickenburg**	**27.13**	**319**	⇓P	**P**	**04 37 31.5**	**+0.3**
	baz=27						
X14A	**Yava**	**27.41**	**320**	⇓P	**P**	**04 37 33.6**	**-0.1**
	baz=28						
GLA	**Glamis**	**27.77**	**316**	⇑P	**P**	**04 37 37.0**	**+0.1**
	baz=28						
Y12C	**Blythe**	**27.99**	**317**	⇓P	**P**	**04 37 39.0**	**+0.1**
	baz=28						
W14A	**Seligman**	**28.02**	**321**	⇓P	**P**	**04 37 39.3**	**+0.1**
	baz=28						
X13A	**Yucca**	**28.08**	**319**	⇑P	**P**	**04 37 39.6**	**0.0**
	baz=28						
PDMCI	**Parker Dam,Lak**	**28.09**	**319**	⇑P	**P**	**04 37 39.5**	**-0.3**
	baz=28						
PV10	**Paradox Valley**	**28.17**	**331**	*eP*	**P**	**04 37 40.0**	**-0.5**
BELC	**Belle Mtn.**	**29.12**	**316**	⇓P	**P**	**04 37 49.5**	**+0.6**
	baz=29						
V12A	**Nelson**	**29.44**	**320**	⇓P	**P**	**04 37 52.0**	**+0.2**
	baz=30						
U12A	**Valley of Fire**	**29.71**	**322**	⇓P	**P**	**04 37 54.6**	**+0.4**
	baz=30						
CIS	**Catalina Islan**	**30.45**	**313**	⇑P	**P**	**04 38 00.8**	**+0.1**
	baz=31						
MPMC	**Manual Prospec**	**31.33**	**318**	⇓P	**P**	**04 38 08.6**	**+0.2**
	baz=32						
HWUT	**Hardware Ranch**	**31.91**	**332**	*eP*	**P**	**04 38 13.9**	**+0.3**
	comp=Z,2.6nm,0.7s,mb4.1						
PDAR	**Pinedale Array**	**31.99**	**335**	P	**P**	**04 38 14.6**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.4,baz=150,slow=11,SNR=4.7						
PDAR				PcP	PcP	04 41 02.2	-0.6
	comp=Z,0.6nm,0.5s,baz=129,slow=6.9,SNR=6.2						
PDAR	**Pinedale Array**	**31.99**	**335**	P	**P**	**04 38 14.6**	**+0.4**
PDAR				PcP	PcP	04 41 02.2	-0.6
P12A	**McGill**	**32.01**	**325**	⇑P	**P**	**04 38 15.3**	**+0.9**
	baz=32						
S09A	**Goldfield**	**32.19**	**321**	⇑P	**P**	**04 38 16.5**	**+0.5**
	baz=32						
VES	**Vestal, Richgr**	**32.25**	**316**	⇑P	**P**	**04 38 17.2**	**+0.7**
	baz=32						
O12A	**Currie**	**32.48**	**327**	⇓P	**P**	**04 38 19.6**	**+1.0**
	baz=33,SNR=6.4						
HVU	**Hansel Valley**	**32.62**	**331**	*eP*	**P**	**04 38 20.7**	**+1.0**
N13A	**Wendover, West**	**32.63**	**328**	⇓P	**P**	**04 38 20.5**	**+0.7**
	baz=33						
HELL	**Mitchell Peak,**	**32.69**	**318**	⇓P	**P**	**04 38 20.5**	**+0.1**
	baz=33						
O11A	**Cowboy Ranch,**	**32.88**	**326**	⇓P	**P**	**04 38 22.8**	**+0.7**
	baz=33						
P10A	**Eureka**	**32.98**	**324**	⇓P	**P**	**04 38 23.4**	**+0.5**
	baz=33						
M13A	**Montello**	**32.98**	**329**	P	**P**	**04 38 23.9**	**+1.0**
	baz=33,SNR=11						
NVAR	**Mina Array Bea**	**33.29**	**321**	P	**P**	**04 38 27.0**	**+1.4**
	comp=Z,3.1nm,0.6s,mb4.3,baz=132,slow=8.7,SNR=26						
Q08A	**Gabbs**	**33.34**	**322**	⇑P	**P**	**04 38 26.5**	**+0.5**
	baz=34						
M12A	**Wells**	**33.40**	**328**	⇓P	**P**	**04 38 27.1**	**+0.6**
	baz=34,SNR=6.8						
O09A	**Fish Creek Ran**	**33.76**	**324**	⇑P	**P**	**04 38 30.5**	**+0.8**
	baz=34						
M11A	**Holland Ranch,**	**33.87**	**327**	⇓P	**P**	**04 38 31.4**	**+0.7**
	baz=34						
S06C	**San Francisco**	**33.93**	**319**	⇑P	**P**	**04 38 31.9**	**+0.7**
	baz=34						
M10A	**I.L. Ranch, Tu**	**34.33**	**327**	⇓P	**P**	**04 38 35.2**	**+0.6**
	baz=34						
N09A	**Rock Creek Ran**	**34.41**	**325**	⇓P	**P**	**04 38 35.6**	**+0.3**
	baz=35						
HLID	**Hailey**	**34.76**	**331**	*eP*	**P**	**04 38 37.8**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.1						
MCMT	**McKenzie Canyo**	**35.05**	**334**	*eP*	**P**	**04 38 41.2**	**+0.4**
BOZ	**Bozeman (W)**	**35.21**	**336**	*eP*	**P**	**04 38 42.2**	**-0.1**
	comp=Z,1.0nm,0.8s,mb3.7						
O06A	**Flanigan**	**35.30**	**322**	⇓P	**P**	**04 38 43.3**	**+0.4**
	baz=35						
BEKR	**Beckwourth**	**35.43**	**321**	⇓P	**P**	**04 38 44.6**	**+0.4**
	baz=36						
N06A	**Buffalo Meadow**	**35.67**	**323**	⇑P	**P**	**04 38 46.1**	**-0.1**
	baz=36						
L08A	**Fields**	**35.77**	**326**	⇓P	**P**	**04 38 47.3**	**+0.3**
	baz=36						
K09A	**Rome**	**35.78**	**327**	⇓P	**P**	**04 38 47.6**	**+0.5**
	baz=36,SNR=12						
ULM	**Lac du Bonnet**	**35.84**	**356**	P	**P**	**04 38 46.3**	**-1.3**
	comp=Z,1.5nm,0.7s,mb4.0,baz=247,slow=7.7,SNR=2.4						
ULM				PcP	PcP	04 41 11.8	-2.0
	comp=Z,1.6nm,0.6s,baz=148,slow=5.3,SNR=4.5						
ULM	**Lac du Bonnet**	**35.84**	**356**	*eP*	**P**	**04 38 46.8**	**-0.8**
	comp=Z,2.6nm,0.8s,mb4.2						
L07A	**Adell**	**36.20**	**325**	⇑P	**P**	**04 38 51.2**	**+0.5**
	baz=36						
K08A	**Mann Creek Ran**	**36.21**	**326**	⇑P	**P**	**04 38 51.7**	**+1.0**
	baz=36,SNR=6.0						
J09A	**Fry Pan Ranch,**	**36.25**	**328**	P	**P**	**04 38 51.8**	**+0.7**
	baz=36,SNR=9.0						
M06C	**Likely Place G**	**36.33**	**323**	⇑P	**P**	**04 38 51.7**	**-0.1**
	baz=36						
K07A	**Rock Creek Ran**	**36.60**	**326**	⇓P	**P**	**04 38 54.4**	**+0.3**
	baz=37						
I09A	**Lost Marbles R**	**36.69**	**328**	P	**P**	**04 38 55.3**	**+0.4**
	baz=37,SNR=12						
M05C	**Lookout**	**36.82**	**322**	⇑P	**P**	**04 38 56.1**	**+0.1**
	baz=37						
SAML	**Samuel**	**36.88**	**127**	*eP*	**P**	**04 38 54.1**	**-2.4**
I08A	**Drewsey**	**37.07**	**328**	⇑P	**P**	**04 38 58.4**	**+0.3**
	baz=37						
J06A	**Christmas Vall**	**37.47**	**326**	⇓P	**P**	**04 39 02.0**	**+0.6**
	baz=38						
H08A	**Prairie City**	**37.55**	**328**	⇑P	**P**	**04 39 02.4**	**+0.3**
	baz=38,SNR=7.1						
I07A	**Izee**	**37.68**	**327**	⇑P	**P**	**04 39 03.3**	**+0.1**
	baz=38						
F09A	**S2 Ranch, Elgi**	**38.02**	**330**	⇑P	**P**	**04 39 05.8**	**-0.3**
	baz=38						
H07A	**Lands Inn, Kim**	**38.06**	**328**	P	**P**	**04 39 06.5**	**+0.1**
	baz=38,SNR=5.2						
BSMT	**Bassoo Peak**	**38.27**	**335**	*eP*	**P**	**04 39 07.8**	**-0.4**
LPAZ	**La Paz**	**38.62**	**141**	P	**P**	**04 39 09.6**	**-1.6**
	comp=Z,0.5nm,0.7s,mb3.5,baz=343,slow=13,SNR=3.3						
I03A	**Eugene**	**39.67**	**324**	⇑P	**P**	**04 39 19.8**	**-0.2**
	baz=40						
F05A	**White Salmon**	**39.92**	**328**	⇓P	**P**	**04 39 22.2**	**+0.2**
	baz=40						
LON	**Longmire**	**40.68**	**328**	*eP*	**P**	**04 39 29.1**	**+0.8**
SIV	**San Ignacio**	**43.03**	**133**	P	**P**	**04 39 45.7**	**-1.8**
	comp=Z,2.3nm,0.7s,mb4.0,baz=306,slow=8.6,SNR=19						
SCHQ	**Schefferville**	**44.82**	**20**	LR	LR	04 59 15.9	
	comp=Z,129nm,18.4s,baz=54,slow=37						
YKA	**Yellowknife Ar**	**50.58**	**347**	P	**P**	**04 40 44.1**	**-2.2**
	comp=Z,7.7nm,0.6s,mb4.5,baz=154,slow=7.2,SNR=10						
YKA				LR	LR	05 05 48.6	
	comp=Z,26nm,18.2s,baz=270,slow=40						
CFAA	**Coronel Fontan**	**51.18**	**154**	LR	LR	04 57 04.7	
	comp=Z,12nm,20.4s,baz=294,slow=30						
BDFB	**Brasilia**	**52.81**	**123**	P	**P**	**04 41 02.2**	**-0.7**
	comp=Z,2.9nm,0.8s,mb4.4,baz=291,slow=10,SNR=3.9						
DAWY	**Dawson**	**59.24**	**338**	*eP*	**P**	**04 41 47.5**	**-1.4**
INK	**Inuvik**	**59.99**	**343**	*eP*	**P**	**04 41 52.4**	**-1.6**
	comp=Z,4.0nm,0.5s,mb4.7

*GUC **30** 04:41:23.7±0.6,3180S×6752W,h150km,MD4.4,ML4.8*
ISC 30 04:41:22.6±1.3,3177S±004×6746W±004,h5km,9km,n38, σ0§89/46,mb4.0/6,MS4.1/2,4C-3D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**0.68**	**283**	Pg	**Pg**	**04 41 33.6**	**-2.2**
	12nm,0.3s,baz=120,slow=16,SNR=1144						
CFAA				Lg		04 41 41.4	
	110nm,0.3s,baz=227,slow=19,SNR=68						
JACH	**Jahuel**	**2.81**	**250**	*e*P	**Pn**	**04 42 08.9**	**+0.8**
JACH				*i* S	**Sn**	**04 42 43.0**	**+0.7**
FCH	**Farellones**	**2.85**	**236**	*e*P	**Pn**	**04 42 08.7**	**-0.1**
FCH				*i* S	**Sn**	**04 42 43.7**	**+0.2**
FCH				AML	AML	04 42 47.2	
	comp=N,1μm,0.4s						
PTCH	**Petorca**	**2.99**	**260⇓**	*i*P	**Pn**	**04 42 10.6**	**0.0**
PTCH				*i* S	**Sn**	**04 42 46.7**	**-0.1**
PTCH				AML	AML	04 42 51.4	
	comp=N,2μm,0.4s						
PTCH	**Petorca**	**2.99**	**260⇓**	*i*P	**Pn**	**04 42 10.6**	**0.0**
PTCH				*i* S	**Sn**	**04 42 46.7**	**-0.1**
PEL	**Peldehue**	**3.06**	**242⇑**	*i*P	**Pn**	**04 42 11.4**	**-0.1**
PEL				*i* S	**Sn**	**04 42 48.4**	**0.0**
PEL				AML	AML	04 42 53.7	
	comp=N,1μm,0.5s						
PEL	**Peldehue**	**3.06**	**242⇑**	*i*P	**Pn**	**04 42 11.4**	**-0.1**
PEL				*i* S	**Sn**	**04 42 48.4**	**0.0**
CLCH	**Cerro Calan**	**3.07**	**237**	*e*P	**Pn**	**04 42 12.2**	**+0.5**
CLCH				*i* S	**Sn**	**04 42 48.2**	**-0.4**
CLCH				AML	AML	04 42 54.8	
	comp=N,2μm,0.9s						
CLCH				AML	AML	04 42 55.4	
	comp=N,2μm,0.9s						
CMCH	**Combarbala**	**3.08**	**280⇑**	*i*P	**Pn**	**04 42 12.4**	**+0.4**
CMCH				*i* S	**Sn**	**04 42 49.5**	**+0.4**
CMCH				AML	AML	04 42 56.1	
	comp=N,5μm,0.7s						
CMCH	**Combarbala**	**3.08**	**280⇑**	*i*P	**Pn**	**04 42 12.4**	**+0.4**
CMCH				*i* S	**Sn**	**04 42 49.5**	**+0.4**
FSR	**Penalolen**	**3.10**	**236**	*e*P	**Pn**	**04 42 13.0**	**+0.8**
FSR				AML	AML	04 42 55.0	
	comp=N,2μm,0.7s						
ROCH	**El Roble**	**3.24**	**247**	*e*P	**Pn**	**04 42 14.3**	**+0.3**
ROCH				*i* S	**Sn**	**04 42 53.1**	**+0.2**
RCDM	**Rinconada Maip**	**3.31**	**238**	*e*P	**Pn**	**04 42 15.2**	**+0.3**
RCDM				*i* S	**Sn**	**04 42 55.6**	**+1.0**
OVCH	**Ovalle**	**3.41**	**289**	*i* S	**Sn**	**04 42 56.4**	**-0.8**
OVCH				AML	AML	04 43 06.9	
	comp=E,2μm,0.6s						
CHNG	**Los Chungos**	**3.44**	**267**	*e*P	**Pn**	**04 42 16.4**	**-0.4**
CHNG				AML	AML	04 43 06.5	
	comp=N,424nm,0.6s						
CHCH	**Chadas Angostu**	**3.45**	**230**	*e*P	**Pn**	**04 42 17.0**	**+0.1**
TACH	**Talagante**	**3.48**	**236⇓**	*i*P	**Pn**	**04 42 16.9**	**-0.5**
TACH				*i* S	**Sn**	**04 42 57.9**	**-1.2**
CICH	**Cipreses**	**3.56**	**224**	*e*P	**Pn**	**04 42 18.6**	**+0.2**
LCCH	**Las Cruces**	**3.87**	**243**	*e*P	**Pn**	**04 42 22.4**	**-0.2**
TRQA	**Tornquist**	**7.72**	**146**	*e*Pn	**Pn**	**04 43 15.3**	**-0.3**
	comp=N,9.7nm,0.5s						
TRQA				*e*Sn	**Sn**	**04 44 43.4**	**0.0**
LVC	**Limon Verde**	**9.21**	**352**	Pn	**Pn**	**04 43 37.8**	**+1.8**
	comp=N,0.5nm,0.3s,baz=135,slow=19,SNR=5.0						
LVC				LR	LR	04 47 43.5	
	comp=N,103nm,19.7s,baz=315,slow=41						
LVC	**Limon Verde**	**9.21**	**352**	*e*Pn	**Pn**	**04 43 37.2**	**+1.2**
PLCA	**Paso Flores**	**9.29**	**195**	Pn	**Pn**	**04 43 38.4**	**+1.3**
	comp=N,0.1nm,0.3s,baz=315,slow=7.1,SNR=2.2						
PLCA				Lg		04 46 05.8	
	comp=N,0.3nm,0.3s,baz=120,slow=20,SNR=3.8						
PLCA	**Paso Flores**	**9.29**	**195**	Pn	**Pn**	**04 43 38.4**	**+1.3**
PLCA				Lg		04 46 05.8	
CPUP	**Villa Florida**	**10.38**	**61**	Pn	**Pn**	**04 43 53.4**	**+1.2**
	comp=N,0.8nm,0.3s,baz=215,slow=11,SNR=9.1						
CPUP				Lg		04 46 59.0	
	comp=N,3.1nm,0.3s,baz=208,slow=12,SNR=4.1						
LPAZ	**La Paz**	**15.42**	**358**	Pn	**Pn**	**04 45 08.3**	**+7.6**
	comp=N,0.7nm,0.3s,baz=159,slow=5.5,SNR=29						
LPAZ				LR	LR	04 51 45.1	
	comp=N,30nm,19.4s,baz=74,slow=40						
SIV	**San Ignacio**	**16.75**	**22**	Pn	**Pn**	**04 45 19.1**	**+1.3**
	comp=N,0.3nm,0.3s,baz=218,slow=17,SNR=12						
SAML	**Samuel**	**23.05**	**11**	*e*P	**P**	**04 46 29.6**	**+0.9**
	comp=N,1.7nm,0.8s,mb3.5						
BDFB	**Brasilia**	**23.91**	**52**	P	**P**	**04 46 35.6**	**-1.6**
	comp=N,1.3nm,0.4s,mb3.8,baz=53,slow=1.5,SNR=3.4						
BDFB				LR	LR	04 57 24.8	
	comp=N,69nm,20.5s,MS3.1,baz=197,slow=40						
WVT	**Waverly**	**70.19**	**343**	*e*P	**P**	**04 52 34.4**	**-1.9**
	comp=N,3.0nm,0.6s,mb4.4						
DBIC	**Dimbokro**	**70.80**	**69**	P	**P**	**04 52 39.6**	**-0.4**
	comp=N,1.3nm,0.4s,mb4.2,baz=121,slow=15,SNR=6.8						
MAW	**Mawson**	**74.18**	**162**	P	**P**	**04 52 57.5**	**-2.6**
	comp=N,1.2nm,0.6s,mb4.0,baz=260,slow=8.3,SNR=4.6						
TORD	**Torodi Ar. Bea**	**79.81**	**68**	P	**P**	**04 53 30.9**	**-0.9**
	comp=N,1.7nm,0.8s,mb4.0,baz=282,slow=6.5,SNR=16						
RAR	**Rarotonga**	**81.01**	**251**	LR	LR	05 20 05.4	
	comp=N,947nm,18.8s,MS5.2,baz=241,slow=29						
KAKA	**Kakadu**	**131.84**	**206**	*e*P	Pdif	04 57 34.6	+4.3
	comp=N,17nm,1.1s						
ZAL	**Zalesovo**	**150.25**	**34**	PKPbc	PKPbc	05 01 12.1	-2.6
	comp=N,1.3nm,0.3s,baz=176,slow=7.3,SNR=5.3						
ZAL	**Zalesovo**	**150.25**	**34**	PKPbc	PKPbc	05 01 12.1	-2.6
MKAR	**Makanchi Array**	**152.40**	**48**	PKPbc	PKPbc	05 01 18.4	-1.3
	comp=N,0.9nm,0.8s,baz=258,slow=2.4,SNR=6.0						

*NIED **30** 04:47:00,39.90N×14.360E,h11km,Mw3.9 Best double couple: M0 9.18000×10^14 NP1:φs41.00000°,δ72.00000°, λ118.00000°. NP2:φs162.00000°,δ33.00000°,λ36.00000°.*
*IDC **30** 04:47:03.4±1.3,3975N×14358E,h0km,mb3.7/6, mb1 3.9/8,mb1mx3.7/23,mbtmp3.9/8,ML3.7/2,MS2.9/3, Ms1 3.0/3,ms1mx2.4/36,Error ellipse: s-maj=37.0km s-min=22.6km az=96.0*
*JMA **30** 04:47:05.3±0.2,3993N×14362E,h18km,M3.9*
*ISCJB **30** 04:47:06.0±0.7,3988N±003×14373E±006,h33km, mb3.8/6,Error ellipse: s-maj=7.7km s-min=3.7km az=50.9*
*NEIC **30** 04:47:11.2±2.6,3972N×14352E,h59km±24km, MG3.9(JMA),Error ellipse: s-maj=26.3km s-min=19.8km az=83.0*
ISC 30 04:47:07.7±0.6,3987N±003×14369E±007,h35km,n26, σ1§06/39,mb3.8/6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.41**	**273**	P	**Pn**	**04 47 29.5**	**-1.3**
MIYJ	**Miyakonagasawa**	**1.47**	**259**	P	**Pn**	**04 47 30.8**	**-0.9**
JANG	**Nango**	**1.74**	**288**	P	**Pn**	**04 47 34.1**	**-1.3**
JANG				*e*S	**Sn**	**04 47 55.0**	**-1.4**
JOM	**Ohasama**	**1.89**	**259**	P	**Pn**	**04 47 37.4**	**0.0**
JOM				*e*S	**Sn**	**04 48 00.9**	**+0.8**
JMK	**Ichinoseki**	**2.12**	**245**	P	**Pn**	**04 47 40.0**	**-0.6**
JNBK	**Urakawa-nobuka**	**2.51**	**344**	P	**Pn**	**04 47 46.4**	**+0.4**
JNBK				*e*S	**Sn**	**04 48 15.6**	**+0.3**
JOT	**Ohata**	**2.52**	**308**	P	**Pn**	**04 47 45.8**	**-0.2**
JYK	**Kaneyama**	**2.75**	**251**	P	**Pn**	**04 47 49.7**	**+0.5**
JYK				*e*S	**Sn**	**04 48 23.0**	**+1.8**
JCH	**Churui**	**2.75**	**355**	P	**Pn**	**04 47 49.2**	**-0.1**
JCH				*e*S	**Sn**	**04 48 20.5**	**-0.8**
JKB	**Kayabe**	**2.85**	**316**	P	**Pn**	**04 47 50.1**	**-0.5**
JKB				*e*S	**Sn**	**04 48 24.8**	**+1.1**
JMM	**Marumori**	**3.02**	**229**	P	**Pn**	**04 47 51.6**	**-1.3**
JMM				*e*S	**Sn**	**04 48 25.2**	**-2.6**
JAK	**Akkeshi**	**3.22**	**13**	P	**Pn**	**04 47 55.5**	**-0.1**
JAK				*e*S	**Sn**	**04 48 32.2**	**-0.5**
JEW	**Eniwo**	**3.41**	**331**	P	**Pn**	**04 47 59.5**	**+1.1**
JEW				*e*S	**Sn**	**04 48 37.9**	**+0.3**
JAR	**Ashorobuto**	**3.43**	**1**	P	**Pn**	**04 47 57.6**	**-0.9**
JAR				S	**Sn**	**04 48 35.7**	**-2.2**
ASAJ	**Asahikawa**	**4.32**	**349**	Pn	**Pn**	**04 48 11.8**	**+1.0**
	2.7nm,0.3s,baz=179,slow=6.3,SNR=7.7						
ASAJ				Sn	**Sn**	**04 49 00.1**	**+0.1**
	1.3nm,0.3s,baz=252,slow=20,SNR=3.3						
ASAJ				LR	LR	04 50 22.5	
	comp=Z,88nm,18.7s,baz=224,slow=45						
MJAR	**Matsushiro Arr**	**5.45**	**234**	Pn	**Pn**	**04 48 27.1**	**+0.8**
	2.1nm,0.3s,baz=41,slow=12,SNR=15						
MJAR				LR	LR	04 50 39.0	
	comp=Z,90nm,19.9s,baz=70,slow=41						
MAJO	**Matsushiro**	**5.45**	**234**	*e*Pn	**Pn**	**04 48 27.1**	**+0.9**
	17nm,0.5s						
MAT	**Matsushiro**	**5.45**	**234**	P	**Pn**	**04 48 27.1**	**+0.8**
MAT				*e*S	**Sn**	**04 49 31.7**	**+4.0**
JHJ	**Hachijo jima 2**	**7.43**	**206**	Pn	**Pn**	**04 48 51.7**	**-1.9**
	5.2nm,0.3s,baz=72,slow=20,SNR=3.0						
JHJ				Sn	**Sn**	**04 50 09.6**	**-7.0**
	8.3nm,0.3s,baz=270,slow=20,SNR=3.4						
SONM	**Songino Array**	**27.83**	**299**	P	**P**	**04 52 55.2**	**+1.5**
	1.0nm,0.6s,mb3.6,baz=92,slow=8.9,SNR=9.2						
MKAR	**Makanchi Array**	**44.19**	**300**	P	**P**	**04 55 13.2**	**0.0**
	0.6nm,0.7s,mb3.5,baz=64,slow=9.9,SNR=4.0						
INK	**Inuvik**	**51.05**	**28**	P	**P**	**04 56 08.3**	**+2.0**
	0.8nm,0.7s,mb3.8,baz=187,slow=1.2,SNR=3.8						
INK	**Inuvik**	**51.05**	**28**	P	**P**	**04 56 08.3**	**+2.0**
WRA	**Warramunga Arr**	**60.13**	**190**	P	**P**	**04 57 11.5**	**-0.1**
	1.3nm,1.0s,mb3.9,baz=6.4,slow=6.9,SNR=4.8						
FINES	**FINESS Array B**	**67.14**	**332**	P	**P**	**04 57 58.8**	**+1.0**
	0.6nm,0.5s,mb3.9,baz=46,slow=8.8,SNR=6.4						
NOA	**NORSAR Array B**	**72.25**	**338**	P	**P**	**04 58 30.3**	**+1.0**
	1.7nm,1.1s,mb3.9,baz=32,slow=9.7,SNR=2.7						
NOA				LR	LR	05 33 50.0	
	comp=Z,18nm,19.8s,baz=25,slow=39						

IDC 30 05:10:27.4±33.0,2334S×17682W,h0km,mb4.1/4, mb1 4.2/4,mb1mx3.9/14,mbtmp4.1/4,Error ellipse: s-maj=631.8km s-min=172.8km az=95.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.64**	**248**	P	P	05 17 44.4	+0.4
	0.8nm,0.4s,baz=113,slow=13,SNR=3.3						
ASAR	**Alice Springs**	**45.01**	**259**	P	P	05 18 44.2	-0.3
	0.6nm,0.4s,baz=97,slow=8.3,SNR=9.5						
WRA	**Warramunga Arr**	**45.36**	**265**	P	P	05 18 47.9	+0.5
	2.7nm,0.4s,baz=103,slow=8.1,SNR=8.5						
FITZ	**Fitzroy Crossi**	**53.79**	**264**	P	P	05 19 52.3	+0.7
	1.4nm,0.6s,baz=99,slow=12,SNR=5.1						

*ISCJB **30** 05:12:04.1±0.5,3929N±003×2183E±004,h10km±5km, Error ellipse: s-maj=5.2km s-min=4.2km az=115.5*
*NEIC **30** 05:12:04.1,3928N×2189E,h17km,MD3.1(ATH),After ATH.*
*ATH **30** 05:12:04.1,3928N×2189E,h17km±4km,MD3.1/3*
*CSEM **30** 05:12:04.7±0.1,3927N×2189E,h15km,MD3.1,Error ellipse: s-maj=2.3km s-min=2.0km az=40.0*
*THE **30** 05:12:05.0,3926N×2181E,h0km,ML2.7*
ISC 30 05:12:04.7±0.5,3929N±003×2187E±004,h14km±5km,n16, σ1§06/27,1C,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.38**	**187**	*i*PB	**Pg**	**05 12 11.1**	**-1.2**
EVR				*e*SB	**Sg**	**05 12 17.4**	**0.0**
EVR	**Evrytania**	**0.38**	**187**	*i* Pbu	**Pg**	**05 12 11.1**	**-1.2**
EVR				*e*Sb	**Sg**	**05 12 17.4**	**0.0**
AGG	**Agios Georgios**	**0.45**	**127**	*e*Pg	**Pg**	**05 12 13.2**	**-0.4**
AGG				*e*Sg	**Sg**	**05 12 21.7**	**+2.0**
AGG	**Agios Georgios**	**0.45**	**127**	*e*Pg	**Pg**	**05 12 13.2**	**-0.4**
AGG				*e*Sg	**Sg**	**05 12 21.7**	**+2.0**
MEV	**Metsovon**	**0.70**	**315**	*e*Pg	**Pg**	**05 12 17.8**	**-0.4**
MEV				*e*Sg	**Sg**	**05 12 29.1**	**+1.8**
LIT	**Litokhoron**	**0.94**	**31**	*e*Pg	**Pg**	**05 12 23.0**	**+0.2**
LIT				*e*Sg	**Sg**	**05 12 37.8**	**+2.7**
KZN	**Kozani**	**1.01**	**356**	*e*PB	**Pb**	**05 12 23.0**	**-1.0**
KZN				*e*SN	**Sn**	**05 12 39.0**	**+0.4**
XOR	**Xorichti**	**1.03**	**86**	*e*Pg	**Pg**	**05 12 24.6**	**+0.1**
XOR				*e*Sg	**Sg**	**05 12 42.1**	**+4.1**
NEO	**Neokhori**	**1.05**	**89**	*e*PN	**Pn**	**05 12 24.5**	**-0.5**
IGT	**Igoumenitsa**	**1.21**	**282**	*e*Pg	**Pg**	**05 12 28.0**	**0.0**
IGT				*e*Sg	**Sg**	**05 12 43.8**	**0.0**
RLS	**Riolos of Patr**	**1.27**	**194**	*e*PN	**Pn**	**05 12 27.6**	**-0.5**
VLS	**Valsamata**	**1.50**	**222**	*e*PN	**Pn**	**05 12 33.0**	**+1.9**
FNA	**Florina**	**1.54**	**346**	*e*Pg	**Pg**	**05 12 32.5**	**-1.6**
FNA				*e*Sg	**Sg**	**05 12 53.9**	**-0.2**
AOS	**Alonnisos**	**1.57**	**94**	*e*Pg	**Pg**	**05 12 33.5**	**-1.3**
PLG	**Polygyros**	**1.62**	**48**	*e*PB	**Pn**	**05 12 32.7**	**-0.2**
KNT	**Kendrikon**	**2.03**	**23**	*e*Pn	**Pb**	**05 12 41.9**	**+0.7**
KNT				*e*Sn	**Sg**	**05 13 08.7**	**-1.2**

MAN 30 05:14:52.8,1793N×12042E,h16km,mb2.8,ML4.2,MS3.7, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**0.79**	**95**	*e*P	Pb	05 15 06.8	-1.4
APYP				*e*S	Sb	05 15 19.1	+0.6
CVP	**Callao Caves**	**1.36**	**99**	*e*P	Pn	05 15 18.0	-1.1
CVP				*e*S	Sn	05 15 33.0	-1.7
SGCP	**Mt. Cagua**	**1.58**	**78**	*e*P	Pn	05 15 10.9	-9.2
BALP	**Baler**	**2.44**	**153**	*e*P	Pn	05 15 32.4	+0.4
BALP				*e*S	Sn	05 16 02.7	+1.1

IDC 30 05:32:12.4±2.5,880S×10830E,h0km,mb3.9/5,mb1 4.1/5, mb1mx3.9/16,mbtmp3.9/5,Error ellipse: s-maj=111.8km s-min=20.7km az=53.0,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.50**	**117**	P	P	05 38 01.3	+0.9
	1.2nm,0.5s,baz=289,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**28.61**	**124**	P	P	05 38 10.6	+0.2
	0.8nm,0.7s,baz=300,slow=7.4,SNR=3.1						
STKA	**Stephens Creek**	**38.49**	**131**	P	P	05 39 36.1	-0.1
	2.1nm,0.7s,baz=326,slow=10,SNR=4.4						
SONM	**Songino Array**	**56.41**	**358**	P	P	05 41 55.2	-0.5
	0.6nm,0.5s,baz=184,slow=8.1,SNR=6.3						
MKAR	**Makanchi Array**	**60.01**	**340**	P	P	05 42 21.2	+0.4
	1.3nm,0.6s,baz=149,slow=6.6,SNR=13						

*IDC **30** 05:39:46.0±1.4,244S×12771E,h0km,mb3.7/3,mb1 3.9/5, mb1mx3.7/16,mbtmp3.8/5,ML3.7/2,Error ellipse: s-maj=101.8km s-min=21.0km az=72.0*
*ISCJB **30** 05:39:49.2±0.9,25S±01×1277E±04,h33km,mb3.9/4, Error ellipse: s-maj=59.2km s-min=12.5km az=149.0*
*NEIC **30** 05:39:51.6±0.8,251S×12763E,h35km,mb3.9/2,Error ellipse: s-maj=53.5km s-min=11.5km az=75.0*
ISC 30 05:39:51.7±0.9,25S±01×1277E±04,h35km,n7,σ0§80/7, mb3.9/4,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.62**	**187**	Pn	**Pn**	**05 43 29.6**	**+0.4**
	0.2nm,0.3s,baz=15,slow=10,SNR=7.9						
WRAB	**Tennant Creek**	**18.51**	**160**	*e*P	**Pn**	**05 44 06.4**	**+1.1**
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**18.51**	**160**	P	**Pn**	**05 44 04.5**	**-0.8**
	0.3nm,0.3s,baz=340,slow=11,SNR=5.9						
ASAR	**Alice Springs**	**21.88**	**164**	P	**P**	**05 44 40.8**	**-0.7**
	0.8nm,0.5s,mb3.4,baz=343,slow=12,SNR=10						
ULN	**Ulaanbaatar**	**53.31**	**343**	*e*P	**P**	**05 49 07.8**	**+0.6**
	1.9nm,0.8s,mb4.1						
SONM	**Songino Array**	**53.48**	**342**	P	**P**	**05 49 08.9**	**+0.5**
	1.1nm,0.8s,mb3.8,baz=152,slow=8.7,SNR=6.9						
MKAR	**Makanchi Array**	**63.22**	**327**	P	**P**	**05 50 15.3**	**-1.1**
	1.5nm,0.7s,mb4.2,baz=120,slow=7.2,SNR=14						

KRSC 30 06:30:52,5583N×16281E,h29km,ML3.8,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.38**	**1**	*i* P	Pb	06 31 01.3	+0.8
KBTR				*e*S	Sb	06 31 07.5	+1.2
ZLN	**Zelenaya**	**1.15**	**280**	*i* P	Pn	06 31 13.6	+1.6
ZLN				*e*S	Sn	06 31 29.7	+3.0
SRKR	**Sorokina**	**1.23**	**313**	*e*P	Pn	06 31 15.1	+1.8
SRKR				*e*S	Sn	06 31 32.1	+3.2
KLY	**Klyuchi**	**1.30**	**293**	*e*P	Pn	06 31 14.4	+0.2
KLY				*e*S	Sn	06 31 30.3	-0.4
KRSR	**Krestovskiy**	**1.32**	**288**	*e*P	Pn	06 31 16.0	+1.6
KRSR				*e*S	Sn	06 31 33.2	+2.2
MKZ	**Mys Kozlova**	**1.42**	**206**	*e*P	Pn	06 31 17.3	+1.5
MKZ				S	Sn	06 31 35.7	+2.2
KMNR	**Kamenistaya**	**1.46**	**268**	*e*P	Pn	06 31 18.7	+2.4
KMNR				*e*S	Sn	06 31 37.8	+3.4
KPT	**Kopyto**	**1.46**	**276**	*e*P	Pn	06 31 18.5	+2.1
KPT				*e*S	Sn	06 31 37.4	+2.8
TUMR	**Tumrok**	**1.61**	**251**	*i* P	Pn	06 31 21.1	+2.7
TUMR				*e*S	Sn	06 31 42.1	+3.9
KOZ	**Kozyrevsk**	**1.67**	**279**	*e*P	Pn	06 31 22.1	+2.9
KOZ				*e*S	Sn	06 31 43.7	+4.0
SRDR	**Sredinnyy**	**1.80**	**287**	*e*P	Pn	06 31 23.9	+2.8
SRDR				*e*S	Sn	06 31 46.7	+3.7
SPN	**Mys Shipunski**	**3.18**	**212**	P	Pn	06 31 42.7	+2.6
SPN				*e*S	Sn	06 32 18.4	+1.3
NLC	**Nalytchevo**	**3.34**	**219**	P	Pn	06 31 44.9	+2.6
NLC				S	Sn	06 32 21.8	+0.8
AVH	**Avacha**	**3.50**	**224**	P	Pn	06 31 48.0	+3.6
GNL	**Ganaly**	**3.54**	**235**	P	Pn	06 31 48.8	+3.8
PET	**Petropavlovsk**	**3.71**	**223**	S	Sn	06 32 34.1	+3.9
RUS	**Russkaya**	**4.24**	**218**	*e*P	Pn	06 31 57.3	+2.7

MAN 30 06:40:20.1,1336N×12024E,h1km,mb2.2,ML3.8,MS3.2, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.37**	**2**	*e*P	Pg	06 40 27.1	-0.1
LUBP				*e*S	Sg	06 40 32.2	+0.1
PGP	**Puerto Galera**	**0.71**	**78**	*e*P	Pg	06 40 33.6	-0.1
BUSP	**Coron**	**1.35**	**181**	*e*P	Pg	06 40 45.6	-0.3
BUSP				*e*S	Sg	06 41 02.1	-1.3
BOAC	**Boac**	**1.57**	**86**	*e*P	Pn	06 40 49.2	+0.2
BOAC				*e*S	Sn	06 41 09.0	-1.0
BALP	**Baler**	**2.70**	**29**	*e*P	Pn	06 41 05.6	+1.0

*ISCJB **30** 06:40:54.7±0.4,3652N±003×7081E±007,h222km±6km, mb3.8/9,Error ellipse: s-maj=9.1km s-min=4.5km az=154.9*
*MOS **30** 06:40:55.7±1.0,3661N×7073E,h227km,mb4.5/3,Error ellipse: s-maj=16.6km s-min=7.3km az=90.4*
*NEIC **30** 06:40:56.5±1.9,3653N×7069E,h226km±21km,mb4.7/9, Error ellipse: s-maj=21.5km s-min=8.0km az=59.0*
*IDC **30** 06:40:57.4±3.2,3648N×7086E,h244km±31km,mb3.3/7, mb1 3.6/11,mb1mx3.3/24,mbtmp4.1/11,Error ellipse: s-maj=19.4km s-min=14.0km az=128.0*
*NNC **30** 06:40:59.2±1.9,3688N×7073E,h203km±15km,mb2.8, mpv3.7,Error ellipse: s-maj=16.2km s-min=11.7km az=21.0*
ISC 30 06:40:55.4±0.4,3655N±003×7073E±007,h216km±6km, n71,σ1§04/87,mb3.8/9,13C,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THW	**Thamme Wali**	**3.83**	**167**	P	**Pn**	**06 41 55.9**	**+0.2**
SBDP	**Sheikh Budin**	**4.24**	**179**	P	**Pn**	**06 42 00.5**	**-0.1**
DRP	**Derazinda**	**4.81**	**185**	P	**Pn**	**06 42 08.4**	**+0.7**
SARP	**Sargodha**	**4.89**	**160**	P	**Pn**	**06 42 08.3**	**-0.4**
THN	**Thein Dam**	**5.81**	**133**	*e*P	**Pn**	**06 42 20.5**	**0.0**
THN				*e*x	x	06 43 23.2	
DLH	**Dalhousie**	**5.89**	**131**	*e*P	**Pn**	**06 42 20.0**	**-1.4**
DLH				*e*x	x	06 43 26.0	
AML	**Almayashu**	**6.03**	**21**	P	**Pn**	**06 42 23.7**	**+0.5**
	SNR=213						
PONG	**Pong**	**6.30**	**135**	*e*x	x	06 43 35.0	
KZA	**Kyzart**	**6.54**	**31**	P	**Pn**	**06 42 30.0**	**+0.2**
	SNR=12						
EKS2	**Erkin-Say**	**6.55**	**20**	P	**Pn**	**06 42 30.3**	**+0.5**
	SNR=18						
KK31	**Karatay Array**	**6.55**	**359**	⇑P	**Pn**	**06 42 30.1**	**+0.2**
	6.3nm,0.4s,baz=252,slow=11,SNR=125						
KK31				⇑S	**S**	**06 43 41.0**	**-4.2**
	36nm,0.5s						
KKAR	**Karatay Array**	**6.55**	**359**	PN	**Pn**	**06 42 30.0**	**+0.1**
KKAR				S	**S**	**06 43 41.4**	**-3.7**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KKAR				smax			
	comp=Z,9.0nm,0.3s						
AAK	**Ala-Archa**	**6.74**	**24**	P	**Pn**	**06 42 33.0**	**+0.6**
	SNR=21						
AAK	**Ala-Archa**	**6.74**	**24**	*e*Pn	**Pn**	**06 42 31.8**	**-0.5**
AAK				*e*Sn	**S**	**06 43 28.8**	**-21**
KBK	**Karagaybulak**	**6.92**	**27**	P	**Pn**	**06 42 35.4**	**+0.7**
	SNR=15						
ULHL	**Ulahol**	**7.12**	**35**	P	**Pn**	**06 42 37.3**	**+0.1**
	SNR=14						
CHMS	**Chumysh**	**7.15**	**24**	P	**Pn**	**06 42 37.5**	**-0.1**
	SNR=10						
SDNR	**Sundarnagar**	**7.22**	**132**	*e*P	**Pn**	**06 42 37.8**	**-0.8**
SDNR				*e*S	**S**	**06 43 53.4**	**-7.4**
USP	**Ospenovka**	**7.31**	**22**	P	**Pn**	**06 42 39.2**	**-0.5**
	SNR=12						
TKM2	**Tokmak 2**	**7.39**	**29**	P	**Pn**	**06 42 41.0**	**+0.3**
	SNR=27						
TKM2	**Tokmak 2**	**7.39**	**29**	⇑P	**Pn**	**06 42 40.9**	**+0.2**
	comp=Z,1.5nm,0.6s						
TKM2				⇑S	**S**	**06 44 02.1**	**-2.6**
	comp=Z,6.

comp=Z,1.7nm,0.3s,baz=156,slow=11,SNR=23
BVAR S S 06 47 35.3 +0.6
comp=Z,0.1nm,0.3s,baz=166,slow=24,SNR=4.4
BRVK Borovoye 16.51 359 *eP* **P 06 44 35.1 +1.2**
BRVK pmax pmax
comp=E,5.0nm,0.8s
BRVK Borovoye 16.51 359 *eP* **P 06 44 35.0 +1.2**
comp=Z,4.6nm,0.8s
AKTK Aktyubinsk 16.63 331 P P **06 44 36.8 +1.6**
AKTK S S **06 47 36.3 -1.5**
AKTO Aktyubinsk 16.63 331 ⇑P P **06 44 36.5 +1.4**
comp=Z,0.1nm,0.4s
AKTO Aktyubinsk 16.63 331 P P **06 44 36.8 +1.6**
comp=Z,3.8nm,0.3s,baz=138,slow=9.8,SNR=44
AKTO S S **06 47 36.3 -1.5**
comp=Z,0.1nm,0.3s,baz=16,slow=18,SNR=3.8
AKTO Aktyubinsk 16.63 331 P P **06 44 36.8 +1.7**
AKTO S S **06 47 36.3 -1.5**
AKTO pmax pmax
comp=Z,4.0nm,0.3s
CHKZ Chkalovo 17.13 360 ⇑P P **06 44 41.7 +1.1**
comp=Z,2.0nm,0.7s
CHKZ Chkalovo 17.13 360 *eP* P **06 44 41.6 +1.0**
CHKZ pmax pmax
comp=Z,3.0nm,0.4s
CHKZ Chkalovo 17.13 360 *eP* P **06 44 41.6 +1.0**
comp=Z,2.5nm,0.4s
ZAL Zalesovo 19.95 25 P P **06 45 10.5 -0.5**
comp=Z,2.4nm,0.3s,baz=266,slow=6.4,SNR=10
ZAL S S **06 48 41.2 -2.2**
comp=Z,0.3nm,0.3s,baz=165,slow=12,SNR=3.0
NVS Novosibirsk 20.22 21 *eP* P **06 45 13.2 -0.7**
NVS *e* 06 48 45.7
NVS pmax pmax
comp=N,3.0nm,0.5s
NVS pmax pmax
comp=E,3.0nm,0.5s
NVS pmax pmax
comp=Z,4.0nm,0.5s
ARU Arti 21.52 341⇑*eP* P **06 45 28.8 +1.2**
ARU pmax pmax
comp=Z,13nm,1.5s,mb4.2
ARU Arti 21.52 341 *eP* P **06 45 28.4 +0.8**
comp=Z,9.0nm,0.3s,mb4.8
FINES FINESS Array B 37.32 326 P P **06 47 47.1 +0.2**
comp=Z,1.4nm,0.6s,mb3.6,baz=120,slow=7.7,SNR=6.7
ARCES ARCESS Array B 41.02 338 P P **06 48 18.1 +0.6**
comp=Z,1.9nm,0.5s,mb3.8,baz=108,slow=7.9,SNR=19
NB2 NORSAR Subarra 44.21 323 P P **06 48 42.9 -0.2**
comp=Z,1.0nm,0.5s,mb3.4,baz=95,slow=8.6
NOA NORSAR Array B 44.21 323 P P **06 48 43.1 0.0**
comp=Z,1.7nm,0.7s,mb3.5,baz=96,slow=7.7,SNR=7.4
BILL Bilibino 58.66 26⇑*eP* P **06 50 30.3 +0.2**
BILL *e* 06 52 44.1
BILL *eS* S **06 58 24.1 +6.8**
BILL pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
TOA0 Torodi Ar. Sit 65.50 268 *eP* P **06 51 14.7 -0.8**
TORD Torodi Ar. Bea 65.50 268 P P **06 51 14.4 -1.0**
comp=Z,1.0nm,0.5s,mb3.8,baz=50,slow=6.0,SNR=22
INK Inuvik 73.90 9 P P **06 52 06.8 +0.1**
comp=Z,0.6nm,0.6s,mb3.4,baz=0.0,slow=11,SNR=3.8
YKA Yellowknife Ar 81.21 3 P P **06 52 46.8 -0.2**
comp=Z,0.6nm,0.5s,mb3.5,baz=350,slow=5.6,SNR=5.0
WRA Warramunga Arr 82.20 122 P P **06 52 50.8 -1.4**
comp=Z,0.3nm,0.4s,mb3.3,baz=314,slow=4.4,SNR=4.0

*ISCJB **30** 06:50:08.9±0.6, 32.12N±006×9350E±009, h10km, mb4.1/6, Error ellipse: s-maj=12.5km s-min=6.2km az=77.2*
*IDC **30** 06:50:09.2±0.9, 3209N×9342E, h0km, mb4.0/5, mb1 4.0/7, mb1mx3.8/22, mbtmp3.9/7, ML3.2/2, Error ellipse: s-maj=43.0km s-min=20.2km az=49.0*
*NEIC **30** 06:50:12.7±3.8, 3222N×9350E, h24km±29km, mb4.2/2, Error ellipse: s-maj=14.5km s-min=8.9km az=93.0*
*BJI **30** 06:50:12.0, 32.15N×9352E, h21km, mb4.2, ML3.5*
ISC 30 06:50:11.3±0.6, 3218N±006×9350E±009, h10km, n17, σ0§88/19, mb4.1/6, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**3.19**	**220**	PG		**Pg**	**06 51 08.0**	**-4.5**
LSA				SG		**Sg**	**06 51 53.5**	**-0.3**
LSA				Smax				
	comp=N,80nm,0.8s							
LSA				Smax				
	comp=E,270nm,0.8s							
LSA	**Lhasa**	**3.19**	**220**	*e*Pn		**Pn**	**06 51 02.8**	**+1.2**
LSA				*e*Sn		**Sg**	**06 51 52.7**	**-1.2**
GUN	**Gumba**	**7.85**	**239**	*e*P		**Pn**	**06 52 06.3**	**+0.7**
	comp=E,22nm,0.4s							
KKN	**Kakani**	**8.36**	**241**	*e*P		**Pn**	**06 52 13.1**	**+0.5**
	comp=E,19nm,0.4s							
PKI	**Pulchoki**	**8.39**	**239**	*e*P		**Pn**	**06 52 13.3**	**+0.3**
	comp=E,65nm,0.5s							
DMN	**Daman**	**8.59**	**240**	*e*P		**Pn**	**06 52 16.3**	**+0.6**
	comp=E,19nm,0.5s							
GKN	**Gorkha**	**8.73**	**244**	*e*P		**Pn**	**06 52 17.1**	**-0.5**
	comp=E,8.7nm,0.3s							
GTA	**Gaotai**	**8.85**	**34**	*e*P		**Pn**	**06 52 21.0**	**+1.7**
GTA				AP			06 52 25.0	
GTA				XP			06 52 28.5	
GTA				AMB		AMB		
	comp=Z,2.0nm,1.4s							
MKAR	**Makanchi Array**	**16.94**	**333**	Pn		**Pn**	**06 54 06.1**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=141,slow=13,SNR=5.9							
AAK	**Ala-Archa**	**18.31**	**310**	*e*Pn		**Pn**	**06 54 25.9**	**+0.5**
	comp=Z,1.8nm,0.6s							
SONM	**Songino Array**	**18.45**	**28**	P		**Pn**	**06 54 26.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=210,slow=8.6,SNR=5.8							
BVAR	**Borovoye Array**	**26.68**	**328**	P		**P**	**06 55 51.0**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.2,baz=150,slow=6.7,SNR=2.6							
BRTR	**Keskin Array B**	**48.26**	**297**	P		**P**	**06 58 52.0**	**-0.4**
	comp=Z,0.7nm,0.8s,mb3.8,baz=95,slow=7.4,SNR=3.6							
WRAB	**Tennant Creek**	**64.92**	**137**	*e*P		**P**	**07 00 50.4**	**-0.6**
	comp=Z,4.4nm,0.4s,mb4.8							
WRA	**Warramunga Arr**	**64.92**	**137**	P		**P**	**07 00 51.0**	**0.0**
	comp=Z,1.8nm,0.9s,mb4.1,baz=329,slow=7.4,SNR=7.2							
ASAR	**Alice Springs**	**67.64**	**140**	P		**P**	**07 01 07.8**	**-0.6**
	comp=Z,3.7nm,0.7s,mb4.5,baz=324,slow=6.4,SNR=29							
TORD	**Torodi Ar. Bea**	**84.62**	**282**	P		**P**	**07 02 44.1**	**-0.9**
	comp=Z,2.6nm,1.0s,mb4.3,baz=46,slow=3.6,SNR=11							

IDC 30 07:07:25.9±3.0, 573N×12564E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.4/16, mbtmp3.3/3, Error ellipse: s-maj=294.4km s-min=27.7km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.91**	**162**	P		P	07 13 09.6	+1.0
	0.3nm,0.6s,baz=341,slow=10,SNR=2.7							
ASAR	**Alice Springs**	**30.31**	**165**	P		P	07 13 38.5	-0.5
	0.5nm,1.1s,baz=342,slow=7.6,SNR=4.2							
MKAR	**Makanchi Array**	**55.31**	**325**	P		P	07 17 01.3	+0.1
	0.2nm,0.3s,baz=104,slow=7.1,SNR=4.7							

*IDC **30** 07:14:47.4±0.9, 155N×9767E, h0km, mb4.1/10, mb1 4.2/10, mb1mx4.0/20, mbtmp4.1/10, MS3.6/1, Ms1 3.6/1, ms1mx2.6/26, Error ellipse: s-maj=33.6km s-min=16.0km az=49.0*
*ISCJB **30** 07:14:51.8±3.9, 17N±01×978E±02, h44km±32km, mb4.2/13, Error ellipse: s-maj=36.6km s-min=13.1km az=107.3*
*NEIC **30** 07:14:52.0±0.5, 159N×9774E, h30km, mb4.5/3, Error ellipse: s-maj=12.7km s-min=8.1km az=53.0*
ISC 30 07:14:53.9±3.9, 17N±01×978E±02, h42km±33km, n19, σ0§54/19, mb4.2/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSI	**Prapat**	**1.55**	**44**	Pn		**Pn**	**07 15 18.4**	**-0.6**
	59nm,0.3s,baz=247,slow=7.9,SNR=300							
PSI				Sn		**Sn**	**07 15 37.6**	**-0.2**
	123nm,0.3s,baz=147,slow=19,SNR=15							
KULM	**Kulim**	**4.55**	**38**	*e*Pn		**Pn**	**07 16 01.0**	**+0.8**
WRA	**Warramunga Arr**	**41.75**	**123**	P		**P**	**07 22 38.5**	**-0.4**
	3.9nm,0.6s,mb4.2,baz=301,slow=9.1,SNR=19							
WRAB	**Tennant Creek**	**41.76**	**123**	*e*P		**P**	**07 22 38.2**	**-0.8**
	7.5nm,0.6s,mb4.5							
WB2	**Warramunga Arr**	**41.76**	**123**	*e*P		**P**	**07 22 39.1**	**+0.1**
ASAR	**Alice Springs**	**43.18**	**128**	P		**P**	**07 22 50.8**	**+0.2**
	1.6nm,0.6s,mb3.9,baz=297,slow=7.6,SNR=33							
SONM	**Songino Array**	**46.56**	**8**	P		**P**	**07 23 17.7**	**+0.2**
	1.7nm,0.7s,mb4.1,baz=190,slow=8.7,SNR=4.8							
MKAR	**Makanchi Array**	**46.93**	**345**	P		**P**	**07 23 20.9**	**+0.5**
	5.3nm,0.6s,mb4.6,baz=154,slow=6.8,SNR=27							
PMG	**Port Moresby**	**50.34**	**104**	LR		LR	07 47 59.8	
	comp=Z,54nm,19.3s,baz=142,slow=40							
STKA	**Stephens Creek**	**53.21**	**133**	P		**P**	**07 24 08.7**	**+0.7**
	1.0nm,0.5s,mb4.0,baz=336,slow=12,SNR=4.6							
STKA	**Stephens Creek**	**53.21**	**133**	*e*P		**P**	**07 24 09.1**	**+1.2**
BVAR	**Borovoye Array**	**56.01**	**340**	P		**P**	**07 24 27.7**	**-0.5**
	2.1nm,0.5s,mb4.4,baz=139,slow=9.3,SNR=9.2							
ZRNK	**Zerenda**	**56.42**	**339**	*e*P		**P**	**07 24 30.9**	**-0.3**
	1.6nm,0.6s,mb4.2							
CHKZ	**Chkalovo**	**56.47**	**341**	*e*P		**P**	**07 24 30.9**	**-0.6**
	4.9nm,0.7s,mb4.7							
AKTK	**Aktyubinsk**	**59.11**	**331**	P		**P**	**07 24 50.5**	**+0.4**
AKTO	**Aktyubinsk**	**59.11**	**331**	P		**P**	**07 24 50.5**	**+0.4**
	1.0nm,0.4s,mb4.2,baz=80,slow=6.1,SNR=4.1							
BRTR	**Keskin Array B**	**69.26**	**312**	P		**P**	**07 25 55.7**	**-0.9**
	0.6nm,0.5s,mb3.8,baz=128,slow=9.9,SNR=3.3							
FINES	**FINESS Array B**	**79.86**	**332**	P		**P**	**07 26 58.3**	**+0.2**
	0.9nm,0.5s,mb4.0,baz=101,slow=6.3,SNR=7.9							
ARCES	**ARCESS Array B**	**82.30**	**340**	P		**P**	**07 27 11.3**	**+0.3**
	0.5nm,0.6s,mb3.6,baz=111,slow=5.8,SNR=6.5							

*IDC **30** 07:16:07.5±3.9, 3576N×7315E, h0km, mb3.8/3, mb1 3.8/6, mb1mx3.5/22, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=78.4km s-min=34.9km az=128.0*
*NEIC **30** 07:16:09.5±2.1, 3578N×7306E, h10km, mb3.6/1, Error ellipse: s-maj=36.0km s-min=17.4km az=135.0*
*ISCJB **30** 07:16:16.6±0.6, 3613N±005×7275E±0.1, h33km, mb3.6/3, Error ellipse: s-maj=15.6km s-min=3.9km az=135.0*
*NNC **30** 07:16:30.4±7.3, 3692N×7283E, h102km±109km, mb2.8, mpv3.2, Error ellipse: s-maj=58.9km s-min=43.5km az=16.0*
ISC 30 07:16:19.1±0.6, 3625N±005×729E±01, h35km, n37, σ1§64/45, mb3.6/3, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THW	**Thamme Wali**	**3.58**	**196**	⇑P		**Pn**	**07 17 18.1**	**+6.0**
SBDP	**Sheikh Budin**	**4.31**	**204**	P		**Pn**	**07 17 28.0**	**+5.9**
SARP	**Sargodha**	**4.32**	**183**	P		**Pn**	**07 17 26.5**	**+4.2**
THN	**Thein Dam**	**4.46**	**148**	*e*P		**Pn**	**07 17 26.7**	**+2.5**
THN				*e*S		**Sn**	**07 18 13.7**	**-1.2**
DLH	**Dalhousie**	**4.48**	**145**	*e*P		**Pn**	**07 17 25.0**	**+0.5**
DLH				*e*S		**Sn**	**07 18 14.0**	**-1.4**
PONG	**Pong**	**4.97**	**149**	*e*P		**Pn**	**07 17 33.0**	**+1.7**
PONG				*ex*		x	07 18 27.0	
BHK	**Bhakra**	**5.64**	**148**	*ex*		**Sn**	**07 18 43.0**	**-0.9**
SDNR	**Sundarnagar**	**5.82**	**143**	*e*P		**Pn**	**07 17 43.6**	**+0.7**
SDNR				*e*S		**Sn**	**07 18 42.6**	**-5.8**
AML	**Almayashu**	**5.90**	**6**	P		**Pn**	**07 17 46.9**	**+2.8**
	SNR=65							
KZA	**Kyzart**	**6.10**	**17**	P		**Pn**	**07 17 49.0**	**+2.3**
	SNR=9.2							
SMLA	**Simla**	**6.22**	**144**	*e*P		**Pn**	**07 17 47.3**	**-1.1**
SMLA				*e*S		**Sn**	**07 18 50.6**	**-7.7**
EKS2	**Erkin-Say**	**6.44**	**6**	P		**Pn**	**07 17 54.2**	**+2.8**
	SNR=30							
KLP	**Kalpa**	**6.47**	**135**	*e*P		**Pn**	**07 17 52.4**	**+0.5**
KLP				*e*S		**Sn**	**07 18 59.4**	**-5.1**
KLP				*e*S		**Sn**	**07 18 59.5**	**-4.9**
AAK	**Ala-Archa**	**6.49**	**10**	P		**Pn**	**07 17 56.2**	**+4.0**
	SNR=7.3							
AAK	**Ala-Archa**	**6.49**	**10**	*e*Pn		**Pn**	**07 17 50.8**	**-1.3**
	10nm,0.6s							
ULHL	**Ulahol**	**6.52**	**22**	P		**Pn**	**07 17 55.5**	**+3.0**
	SNR=10							
TKM2	**Tokmak 2**	**6.98**	**16**	P		**Pn**	**07 18 01.7**	**+2.9**
	SNR=5.3							
TKM2	**Tokmak 2**	**6.98**	**16**	⇑P		**Pn**	**07 18 00.8**	**+2.0**
	0.1nm,0.3s							
TKM2				⇓S		**Sn**	**07 19 12.8**	**-4.1**
	0.8nm,0.6s							
KK31	**Karatay Array**	**7.09**	**346**	P		**Pn**	**07 18 02.5**	**+2.2**
	4.3nm,0.4s,baz=22,slow=54,SNR=109							
KK31				⇓S		**Sn**	**07 19 16.7**	**-3.0**
	3.5nm,0.3s							
USP	**Ospenovka**	**7.11**	**9**	P		**Pn**	**07 18 03.3**	**+2.6**
	SNR=7.5							
JOSI	**Joshimath**	**7.95**	**134**	*ex*		x	07 17 45.6	
JOSI				*ex*		x	07 18 41.2	
JOSI				AML		AML	07 19 16.4	
	comp=N,86nm,0.8s							
JOSI				AML		AML	07 19 16.5	
	comp=E,84nm,0.9s							
NDI	**New Delhi**	**8.38**	**153**	*ex*		**Sn**	**07 19 42.0**	**-9.3**
KHET	**Khetri**	**8.51**	**162**	*e*S		**Sn**	**07 19 47.6**	**-7.1**
KHET				AML		AML	07 19 54.5	
	comp=E,19nm,0.3s							
KHET				AML		AML	07 19 54.9	
	comp=N,11nm,0.1s							
KUDL	**Kundal**	**8.63**	**158**	*e*P		**Pn**	**07 18 22.1**	**+0.5**
KUDL				*e*S		**Sn**	**07 19 49.9**	**-7.7**
KUDL				AML		AML	07 19 55.1	
	comp=N,15nm,0.2s							
KUDL				AML		AML	07 19 55.4	
	comp=E,14nm,0.2s							
SONA	**Sohna**	**8.72**	**155**	*e*S		**Sn**	**07 19 51.1**	**-8.8**
SONA				AML		AML	07 19 57.9	
	comp=N,38nm,0.2s							
SONA				AML		AML	07 19 58.0	
	comp=E,46nm,0.2s							
AJM	**Ajmer**	**9.85**	**171**	*e*S		**Sn**	**07 20 19.5**	**-8.1**
MK04	**Makanchi Array**	**12.64**	**31**	P		**Pn**	**07 19 22.1**	**+5.8**
MKAR	**Makanchi Array**	**12.65**	**31**	Pn		**Pn**	**07 19 14.9**	**-1.7**
	3.0nm,0.1nm,0.3s,baz=208,slow=11,SNR=2.6							
AB31	**Akbulak array**	**16.08**	**328**	P		**Pn**	**07 20 02.0**	**-0.5**
	comp=E,0.5nm,0.4s,baz=149,slow=12,SNR=16							
AB31				S		S	07 22 49.1	-23
	comp=E,0.7nm,0.4s,baz=156,slow=22,SNR=3.9							
BVAR	**Borovoye Array**	**16.87**	**355**	P		**Pn**	**07 20 12.1**	**-0.3**
	comp=E,0.6nm,0.3s,baz=158,slow=9.4,SNR=7.9							
ZRNK	**Zerenda**	**16.92**	**352**	*e*Pn		**Pn**	**07 20 11.4**	**-1.8**
	comp=E,3.5nm,0.7s							
AKTK	**Aktyubinsk**	**17.79**	**327**	P		**Pn**	**07 20 24.1**	**+0.2**
AKTO	**Aktyubinsk**	**17.79**	**327**	⇓P		**Pn**	**07 20 24.1**	**+0.3**
AKTO	**Aktyubinsk**	**17.79**	**327**	P		**Pn**	**07 20 24.1**	**+0.2**
	comp=E,0.3nm,0.3s,baz=136,slow=8.1,SNR=6.5							
FINES	**FINESS Array B**	**38.55**	**326**	P		**P**	**07 23 34.6**	**-3.8**
	comp=E,1.0nm,0.7s,mb3.6,baz=141,slow=9.0,SNR=3.1							
ARCES	**ARCESS Array B**	**41.97**	**337**	P		**P**	**07 24 04.0**	**-2.6**
	comp=E,5.2nm,1.2s,mb4.0,baz=108,slow=8.0,SNR=5.3							
TORD	**Torodi Ar. Bea**	**67.25**	**270**	P		**P**	**07 27 05.8**	**-4.1**
	comp=E,0.1nm,0.4s,mb3.2,baz=57,slow=5.3,SNR=4.4							

IDC 30 07:23:16.9±68.0, 1810S×17544E, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.9/11, mbtmp4.2/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/20, Error ellipse: s-maj=1192.0km s-min=137.9km az=76.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**12.66**	**153**	LR		LR	07 29 13.1	
	comp=Z,126nm,19.8s,baz=204,slow=28							
STKA	**Stephens Creek**	**33.45**	**239**	P		P	07 29 58.3	+0.7
	2.4nm,1.0s,baz=95,slow=11,SNR=4.4							
WB2	**Warramunga Arr**	**38.82**	**260**	*e*P		P	07 30 43.9	+0.4
WRA	**Warramunga Arr**	**38.83**	**260**	P		P	07 30 43.9	+0.3
	0.9nm,0.3s,baz=95,slow=7.8,SNR=20							
ASAR	**Alice Springs**	**39.10**	**255**	P		P	07 30 45.9	+0.1
	4.4nm,0.5s,baz=86,slow=8.7,SNR=81							
ASPA	**Alice Springs**	**39.10**	**255**	*e*P		P	07 30 46.0	+0.1

*ISCJB **30** 07:23:26.4±0.6, 4077S±003×17733E±005, h33km, mb4.0/3, Error ellipse: s-maj=6.6km s-min=3.0km az=70.9*
*NEIC **30** 07:23:27.1, 4071S×17741E, h38km, ML4.2(WEL), After WEL.*
*WEL **30** 07:23:27.4±0.2, 4070S×17735E, h33km, ML4.2/45, Error ellipse: s-maj=2.0km s-min=1.0km az=90.0*
*IDC **30** 07:23:30.6±1.4, 4008S×17649E, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.8/10, mbtmp3.8/2, Error ellipse: s-maj=37.9km s-min=14.7km az=112.0*
ISC 30 07:23:27.4±0.7, 4073S±004×17734E±006, h35km, n80, σ1§00/98, mb4.0/3, 12C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PXZ	**Pawanui**	**0.79**	**332**	P*		**Pn**	**07 23 40.9**	**-1.1**
PXZ				S*		**Sn**	**07 23 51.3**	**-1.2**
BFZ	**Birch Farm**	**0.83**	**273**	P		**Pn**	**07 23 42.5**	**-0.1**
BFZ				S		**Sn**	**07 23 54.1**	**+0.4**
BFZ	**Birch Farm**	**0.83**	**273**	⇑P*		**Pn**	**07 23 42.5**	**-0.1**
BFZ				S*		**Sn**	**07 23 54.1**	**+0.4**
TIWZ	**Tintock**	**1.11**	**267**	⇑P*		**Pn**	**07 23 46.5**	**+0.1**
TIWZ				S*		**Sn**	**07 24 00.8**	**+0.4**
TSZ	**Takapari Road**	**1.25**	**302**	P		**Pn**	**07 23 47.9**	**-0.4**
TSZ				S		**Sn**	**07 23 54.5**	**-9.4**
TSZ	**Takapari Road**	**1.25**	**302**	⇑P*		**Pn**	**07 23 47.9**	**-0.4**
TSZ				S*		**Sn**	**07 24 02.7**	**-1.3**
MRZ	**Mangatainoka R**	**1.34**	**272**	P		**Pn**	**07 23 49.5**	**-0.1**
MRZ	**Mangatainoka R**	**1.34**	**272**	⇑PN		**Pn**	**07 23 49.5**	**-0.1**
MRZ				S*		**Sn**	**07 24 05.2**	**-0.9**
TRWZ	**Traveller**	**1.42**	**241**	⇑PN		**Pn**	**07 23 50.6**	**0.0**
TRWZ				S*		**Sn**	**07 24 08.6**	**+0.6**
MTW	**Mount Morrison**	**1.46**	**252**	P		**Pn**	**07 23 51.0**	**-0.2**
MTW	**Mount Morrison**	**1.46**	**252**	⇑PN		**Pn**	**07 23 51.0**	**-0.1**
MTW				S*		**Sn**	**07 24 08.2**	**-0.8**
PAWZ	**Paruwai Farm**	**1.59**	**245**	P		**Pn**	**07 23 52.8**	**-0.1**
PAWZ	**Paruwai Farm**	**1.59**	**245**	⇑PN		**Pn**	**07 23 52.8**	**-0.1**
PAWZ				S*		**Sn**	**07 24 11.9**	**-0.4**
BKZ	**Black Stump Fm**	**1.70**	**337**	P		**Pn**	**07 23 54.1**	**-0.3**
BKZ	**Black Stump Fm**	**1.70**	**337**	⇑PN		**Pn**	**07 23 54.1**	**-0.3**
BKZ				SN		**Sn**	**07 24 12.8**	**-2.1**
MSWZ	**Moikau Station**	**1.72**	**246**	⇑PN		**Pn**	**07 23 54.4**	**-0.4**
MSWZ				S*		**Sn**	**07 24 15.6**	**0.0**
KNZ	**Kokohu**	**1.73**	**9**	P		**Pn**	**07 23 54.1**	**-0.8**
KNZ	**Kokohu**	**1.73**	**9**	⇑PN		**Pn**	**07 23 54.1**	**-0.8**
CAW	**Cannon Point**	**1.76**	**257**	P		**Pn**	**07 23 55.4**	**0.0**
CAW	**Cannon Point**	**1.76**	**257**	⇑PN		**Pn**	**07 23 55.4**	**+0.1**
CAW				S*		**Sn**	**07 24 16.2**	**-0.3**
MOVZ	**Moawhango**	**1.80**	**317**	P		**Pn**	**07 23 56.3**	**+0.4**
MOVZ	**Moawhango**	**1.80**	**317**	PN		**Pn**	**07 23 56.2**	**+0.3**
KIW	**Kapiti Island**	**1.85**	**265**	P		**Pn**	**07 23 56.9**	**+0.3**
KIW	**Kapiti Island**	**1.85**	**265**	PN		**Pn**	**07 23 56.9**	**+0.3**
KIW				S*		**Sn**	**07 24 17.9**	**-0.8**
WNVZ	**Wahianoa**	**1.94**	**316**	P		**Pn**	**07 23 59.0**	**+1.2**
WNVZ	**Wahianoa**	**1.94**	**316**	PN		**Pn**	**07 23 58.6**	**+0.8**
TUVZ	**Tukino**	**1.96**	**318**	P		**Pn**	**07 23 59.1**	**+1.1**
TUVZ	**Tukino**	**1.96**	**318**	PN		**Pn**	**07 23 59.1**	**+1.1**
MTVZ	**Mangateitei**	**1.97**	**313**	PN		**Pn**	**07 23 59.2**	**+1.0**
DRZ	**Dome Shelter**	**2.00**	**316**	P		**Pn**	**07 24 00.0**	**+1.4**
DRZ	**Dome Shelter**	**2.00**	**316**	PN		**Pn**	**07 23 59.7**	**+1.1**
FWVZ	**Far West T-bar**	**2.02**	**316**	*e*P		**Pn**	**07 23 59.7**	**+0.8**
FWVZ	**Far West T-bar**	**2.02**	**316**	PN		**Pn**	**07 23 59.9**	**+1.0**
WEL	**Wellington**	**2.02**	**253**	P		**Pn**	**07 23 58.9**	**-0.1**
WEL	**Wellington**	**2.02**	**253**	PN		**Pn**	**07 23 58.9**	**0.0**
OTVZ	**Oturere**	**2.03**	**320**	PN		**Pn**	**07 23 59.9**	**+0.8**
NGZ	**Ngauruhoe**	**2.05**	**319**	P		**Pn**	**07 24 00.3**	**+1.0**
NGZ	**Ngauruhoe**	**2.05**	**319**	PN		**Pn**	**07 24 00.2**	**+0.8**
WAZ	**Wanganui**	**2.05**	**298**	P		**Pn**	**07 24 00.8**	**+1.5**
WAZ	**Wanganui**	**2.05**	**298**	PN		**Pn**	**07 24 00.6**	**+1.2**
WPVZ	**Whakapapa**	**2.06**	**317**	P		**Pn**	**07 24 00.5**	**+1.1**
WPVZ	**Whakapapa**	**2.06**	**317**	PN		**Pn**	**07 24 00.5**	**+1.1**
MRW	**Makara Radio**	**2.06**	**255**	P		**Pn**	**07 23 59.4**	**-0.1**
MRW	**Makara Radio**	**2.06**	**255**	PN		**Pn**	**07 23 59.4**	**-0.1**
MRW				S*		**Sn**	**07 24 23.5**	**-0.4**
SNZO	**South Karori**	**2.08**	**253**	PN		**Pn**	**07 23 59.5**	**-0.2**
SNZO				S*		**Sn**	**07 24 23.1**	**-1.2**
KRVZ	**Karewarewa**	**2.10**	**321**	PN		**Pn**	**07 24 00.9**	**+1.0**
PKVZ	**Pokaka**	**2.10**	**313**	PN		**Pn**	**07 24 00.9**	**+0.8**
WTVZ	**West Tongariro**	**2.10**	**320**	P		**Pn**	**07 24 00.9**	**+0.9**
WTVZ	**West Tongariro**	**2.10**	**320**	PN		**Pn**	**07 24 00.8**	**+0.8**
KATZ	**Kakaramea**	**2.17**	**324**	P		**Pn**	**07 24 01.7**	**+0.8**
KATZ	**Kakaramea**	**2.17**	**324**	PN		**Pn**	**07 24 01.5**	**+0.6**
TWVZ	**Taurewa**	**2.21**	**318**	P		**Pn**	**07 24 02.3**	**+0.7**
TWVZ	**Taurewa**	**2.21**	**318**	PN		**Pn**	**07 24 02.3**	**+0.7**
TCW	**Tory Channel**	**2.37**	**257**	P		**Pn**	**07 24 03.6**	**-0.1**
TCW	**Tory Channel**	**2.37**	**257**	PN		**Pn**	**07 24 03.6**	**-0.2**
TCW				S*		**Sn**	**07 24 30.5**	**-1.0**
MWZ	**Matawai**	**2.40**	**3**	P		**Pn**	**07 24 03.1**	**-1.0**
MWZ	**Matawai**	**2.40**	**3**	⇑PN		**Pn**	**07 24 03.1**	**-1.0**
MWZ				SN		**Sn**	**07 24 29.3**	**-3.0**
URZ	**Urewera**	**2.48**	**356**	Pg		**Pn**	**07 24 04.4**	**-0.8**
	12nm,0.3s,baz=209,slow=6.0,SNR=100							
URZ				Lg			07 24 31.2	
	86nm,0.3s,baz=282,slow=14,SNR=14							
URZ	**Urewera**	**2.48**	**356**	P		**Pn**	**07 24 04.4**	**-0.8**
URZ	**Urewera**	**2.48**	**356**	PN		**Pn**	**07 24 04.4**	**-0.8**
URZ				SN		**Sn**	**07 24 31.6**	**-2.6**
**PATZ

STKA	**Stephens Creek**	**43.42**	**240**	P	P	07 49 17.8 -0.6
	2.2nm,0.8s,baz=91,slow=8.6,SNR=4.7					
WRA	**Warramunga Arr**	**49.27**	**257**	P	P	07 50 05.1 +1.1
	0.9nm,0.7s,baz=91,slow=7.0,SNR=4.3					
ASAR	**Alice Springs**	**49.52**	**252**	P	P	07 50 06.0 0.0
	2.1nm,0.5s,baz=88,slow=8.2,SNR=42					
VNDA	**Vanda**	**62.98**	**186**	P	P	07 51 41.5 +0.1
	1.1nm,0.8s,baz=15,slow=8.7,SNR=11					
MAW	**Mawson**	**87.30**	**199**	P	P	07 53 59.4 -1.3
	1.0nm,0.5s,baz=135,slow=5.7,SNR=4.0					
ARCES	**ARCESS Array B**	**124.89**	**352**	PKP	PKPdf	08 00 13.0 -0.3
	4.2nm,1.0s,baz=356,slow=3.9,SNR=5.0					
AKASG	**Malin Array Be**	**140.47**	**337**	PKP	PKPdf	08 00 43.4 +0.9
	0.1nm,0.3s,baz=41,slow=4.1,SNR=4.3					

*CSEM **30** 07:47:34.0±0.5, 3876N×2907W, h0km±12km, MD3.0, Error ellipse: s-maj=14.2km s-min=4.4km az=82.0, After PDA*

*PDA **30** 07:47:34.0±0.5, 3876N×2907W, h0km±12km, MD3.0, Error ellipse: s-maj=14.2km s-min=4.4km az=82.0*

SVSA 30 07:47:34.0±0.5, 3876N×2907W, h0km±12km, MD3.0, Error ellipse: s-maj=14.2km s-min=4.4km az=82.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.33**	**121**	*e*P	Pg	07 47 40.2	-0.2
CALA				*e*S	Sg	07 47 45.0	+0.3
PICO	**Pico**	**0.56**	**117**	*e*P	Pg	07 47 44.3	-0.5
PICO				*e*S	Sg	07 47 52.0	-0.1
ROSA	**Rosais**	**0.65**	**93**	*e*P	Pg	07 47 45.2	-1.2
ROSA				*e*S	Sg	07 47 53.8	-1.0

*IDC **30** 08:05:44.5±1.2, 3935N×7738E, h0km, mb4.3/12, mb1 4.4/16, mb1mx4.3/25, mbtmp4.2/16, ML3.6/4, MS4.1/22, Ms1 4.1/22, ms1mx4.0/33, Error ellipse: s-maj=26.9km s-min=15.7km az=164.0*

*ISCJB **30** 08:05:45.4±0.2, 3929N±002×7745E±003, h17km, mb4.6/55, MS4.3/40, Error ellipse: s-maj=3.7km s-min=2.8km az=116.0*

*NEIC **30** 08:05:45.8±0.2, 3935N×7746E, h10km, mb4.6/24, MS4.2/3, Error ellipse: s-maj=6.6km s-min=3.7km az=50.0*

*HRVD **30** 08:05:45.8±0.4, 3947N×7743E, h22km±2km, MW4.8/60, Centroid moment Tensor Solution. LP body waves: s15,c16;Mantle waves: s60,c81; Half duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.07±.14; Mθθ -1.78±.12; Mφφ 1.71±.10; Mrθ 0.29±.20; Mrφ -1.40±.12; Mθφ 0.38±.19; Best double couple: Mo 2.28700×10^16 NP1: φs 296.00000°, δ 78.00000°, λ -178.00000°. NP2: φs 205.00000°, δ 88.00000°, λ -12.00000°. Principal axes: T 2.2350, Plg7.0000°, Azm251.0000°; N 0.1000, Plg78.0000°, Azm17.0000°; P -2.3400, Plg10.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*SZGRF **30** 08:05:45.4, 3979N×7906E, h33km, mb4.9, MS4.1, Southern Xinjiang, China*

*BJI **30** 08:05:46.5, 3956N×7762E, h10km, mB4.8, mb4.6, ML4.9, Ms4.6, Msz4.4*

*NNC **30** 08:05:47.6±3.1, 3952N×77.16E, h0km, mb4.8, mpv4.9, Error ellipse: s-maj=19.9km s-min=15.7km az=173.0*

*MOS **30** 08:05:48.3±1.1, 3945N×7737E, h33km, mb5.1/27, Error ellipse: s-maj=8.5km s-min=4.5km az=116.8*

ISC 30 08:05:47.5±0.2, 3934N±002×7745E±003, h18km, h18km±3.1km; pP-P, n225, σ1§29/229, mb4.6/55, MS4.3/40, 19C-17D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.15**	**279**	⇑*i*PG	**Pg**	**08 06 08.8**	**-1.1**
KSH				SG	**Sg**	**08 06 25.3**	**+0.3**
KSH				Smax			
	comp=N,50μm,0.8s						
KSH				Smax			
	comp=E,75μm,1.2s						
ULHL	**Ulahol**	**3.04**	**343**	P	**Pn**	**08 06 36.7**	**+1.9**
	SNR=72						
KZA	**Kyzart**	**3.20**	**329**	P	**Pn**	**08 06 38.9**	**+1.9**
	SNR=672						
KBK	**Karagaybulak**	**3.81**	**331**	P	**Pn**	**08 06 48.1**	**+2.7**
	SNR=27						
TKM2	**Tokmak 2**	**3.84**	**339**	P	**Pn**	**08 06 47.9**	**+2.1**
	SNR=96						
TKM2	**Tokmak 2**	**3.84**	**339**	⇓Pn	**Pn**	**08 06 47.7**	**+2.0**
	comp=E,172nm,1.2s						
TKM2				⇑Lg		08 07 42.5	
	comp=E,542nm,1.3s						
TKM2	**Tokmak 2**	**3.84**	**339**	*i* PN	**Pn**	**08 06 47.7**	**+2.0**
TKM2				pmax	pmax		
	comp=Z,865nm,1.2s						
KNDC	**Almaty**	**3.89**	**355**	⇓Pn	**Pn**	**08 06 48.4**	**+2.0**
	comp=Z,1μm,1.0s						
KNDC				⇑Lg		08 07 45.7	
	comp=Z,7μm,1.2s						
AAA	**Alma-Ata**	**3.94**	**355**	*e*PN	**Pb**	**08 06 55.0**	**-1.5**
AAA				*e*S	**Sb**	**08 07 45.5**	**+1.6**
AAA				pmax	pmax		
	comp=Z,1μm,0.6s						
AAA				smax			
	comp=E,4μm,0.9s						
AAK	**Ala-Archa**	**3.98**	**327**	P	**Pn**	**08 06 49.3**	**+1.7**
	SNR=69						
AAK	**Ala-Archa**	**3.98**	**327**	⇓P	**Pn**	**08 06 48.7**	**+1.1**
	SNR=734						
AAK	**Ala-Archa**	**3.98**	**327**	*e*Pn	**Pn**	**08 06 48.6**	**+1.0**
AML	**Almayashu**	**3.99**	**316**	P	**Pn**	**08 06 49.5**	**+1.7**
	SNR=20						
FRU	**Bishkek**	**4.09**	**329**	⇓*i*PN	**Pn**	**08 06 51.0**	**+1.8**
FRU				*e*S	**Sb**	**08 07 51.0**	**+2.8**
FRU				pmax	pmax		
	comp=Z,1μm,1.4s						
FRU				smax			
	comp=E,500nm,2.4s						
CHMS	**Chumysh**	**4.18**	**332**	P	**Pn**	**08 06 52.3**	**+1.8**
	SNR=64						
EKS2	**Erkin-Say**	**4.32**	**321**	P	**Pn**	**08 06 54.4**	**+2.0**
	SNR=108						
USP	**Ospenovka**	**4.50**	**331**	P	**Pn**	**08 06 57.1**	**+2.2**
	SNR=19						
KK31	**Karatay Array**	**6.44**	**308**	⇑Pn	**Pn**	**08 07 21.3**	**-0.2**
	comp=E,153nm,0.8s,baz=135,slow=10,SNR=104						
KK31				⇑Lg		08 09 03.0	
	comp=E,298nm,0.6s,baz=137,slow=131,SNR=27						
KK31	**Karatay Array**	**6.44**	**308**	*i* PN	**Pn**	**08 07 21.2**	**-0.2**
KK31				pmax	pmax		
	comp=Z,153nm,0.8s						
KKAR	**Karatay Array**	**6.44**	**308**	PN	**Pn**	**08 07 21.2**	**-0.2**
KKAR						08 09 02.9	
KKAR				pmax	pmax		
	comp=Z,130nm,0.9s						
KKAR				smax			
	comp=Z,179nm,0.6s						
CHCP	**Chirah Chowk**	**6.60**	**212**	P	**Pn**	**08 07 28.4**	**+4.8**
DLH	**Dalhousie**	**6.89**	**190**	*e*P	**Pn**	**08 07 30.0**	**+2.3**
DLH				*ex*	x	08 08 48.0	
JMU	**Jammu**	**6.92**	**198**	*ex*	x	08 08 50.0	
THN	**Thein Dam**	**7.04**	**192**	*e*P	**Pn**	**08 07 32.9**	**+3.3**
THN				*ex*	x	08 08 57.2	
PONG	**Pong**	**7.47**	**190**	*e*P	**Pn**	**08 07 38.0**	**+2.4**
PONG				*ex*	x	08 09 05.0	
KLP	**Kalpa**	**7.82**	**175**	*ex*	x	08 07 43.8	
SDNR	**Sundarnagar**	**7.83**	**183**	*ex*	x	08 09 10.4	
THW	**Thamme Wali**	**8.00**	**217**	P	**Pn**	**08 07 45.6**	**+2.7**
MK02	**Makanchi Array**	**8.23**	**24**	⇑Pn	**Pn**	**08 07 45.7**	**-0.4**
	comp=Z,22nm,0.8s						
MK02				⇓Lg		08 10 06.6	
	comp=Z,155nm,0.9s						
MK31	**Makanchi Array**	**8.25**	**24**	P	**Pn**	**08 07 46.4**	**+0.1**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MKAR	**Makanchi Array**	**8.25**	**24**	Pn	**Pn**	**08 07 46.0**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=205,slow=12,SNR=28						
SBDP	**Sheikh Budin**	**8.85**	**220**	P	**Pn**	**08 07 57.0**	**+2.4**
WMQ	**Urumqi**	**8.89**	**56**	⇑*i*P	**Pn**	**08 07 55.0**	**-0.1**
WMQ				S	**Sn**	**08 09 30.0**	**-4.7**
WMQ				Smax			
	comp=N,675nm,1.2s						
WMQ				Smax			
	comp=E,569nm,1.2s						
DDI	**Dehra Dun**	**9.01**	**177**	*ex*	x	08 08 00.0	
KKR	**Kurukshetra**	**9.37**	**183**	*e*P	**Pn**	**08 08 02.4**	**+0.7**
DRP	**Derazinda**	**9.60**	**220**	P	**Pn**	**08 08 07.3**	**+2.4**
LGTI	**Lohaghat**	**10.13**	**166**	*ex*	x	08 08 15.0	
LGTI				*ex*	x	08 10 06.5	
ASOR	**Ausora**	**10.56**	**178**	*e*P	**Pn**	**08 08 18.6**	**+0.5**
NDI	**New Delhi**	**10.63**	**181**	*e*P	**Pn**	**08 08 18.5**	**-0.5**
NDI				*e*S	**Sn**	**08 10 09.5**	**-8.1**
AYAN	**Aya Nagar**	**10.84**	**181**	*ex*	x	08 08 15.4	
AYAN				*ex*	x	08 10 09.1	
SONA	**Sohna**	**11.07**	**182**	*e*P	**Pn**	**08 08 25.1**	**+0.2**
SONA				*e*S	**Sn**	**08 10 21.3**	**-6.9**
KUDL	**Kundal**	**11.20**	**184**	*e*P	**Pn**	**08 08 26.9**	**+0.2**
KUDL				*e*S	**Sn**	**08 10 25.2**	**-6.2**
KHET	**Khetri**	**11.32**	**187**	*e*P	**Pn**	**08 08 28.5**	**+0.1**
KHET				*e*S	**Sn**	**08 10 26.9**	**-7.5**
AGRA	**Agra**	**12.09**	**178**	*e*P	**Pn**	**08 08 38.8**	**-0.1**
AGRA				*e*S	**Sn**	**08 10 42.5**	**-11**
KOLN	**Koldanda**	**12.62**	**154**	*e*P	**Pn**	**08 08 42.2**	**-4.0**
	comp=E,95nm,0.7s						
GKN	**Gorkha**	**12.79**	**150**	*e*P	**Pn**	**08 08 46.8**	**-1.7**
	comp=E,70nm,0.4s						
AJM	**Ajmer**	**13.04**	**191**	*e*P	**Pn**	**08 08 50.9**	**-1.0**
AJM				*i* S	**Sn**	**08 11 09.0**	**-7.5**
KKN	**Kakani**	**13.23**	**148**	*e*P	**Pn**	**08 08 53.3**	**-1.3**
	comp=E,51nm,0.6s						
KKN				*e*S	**Sn**	**08 11 16.4**	**-4.9**
KKN	**Kakani**	**13.23**	**148**	*e*P	**Pn**	**08 08 53.3**	**-1.3**
KKN				pmax	pmax		
	comp=Z,51nm,0.6s						
DMN	**Daman**	**13.33**	**149**	*e*P	**Pn**	**08 08 53.9**	**-1.9**
	comp=Z,28nm,0.4s						
GUN	**Gumba**	**13.38**	**146**	*e*P	**Pn**	**08 08 55.6**	**-1.0**
	comp=Z,29nm,0.4s						
PKI	**Pulchoki**	**13.48**	**148**	*e*P	**Pn**	**08 08 56.4**	**-1.5**
	comp=E,66nm,0.6s						
PKI	**Pulchoki**	**13.48**	**148**	*e*P	**Pn**	**08 08 56.4**	**-1.5**
PKI				pmax	pmax		
	comp=Z,66nm,0.6s						
JIRN	**Jiri**	**13.74**	**145**	*e*P	**Pn**	**08 09 00.0**	**-1.4**
	comp=Z,58nm,0.5s						
VOSK	**Vostochnaya**	**14.11**	**344**	⇑Pn	**Pn**	**08 09 03.6**	**-2.9**
	comp=Z,16nm,1.1s						
VOSK				⇓Lg		08 13 05.7	
	comp=Z,316nm,1.7s						
VOSK	**Vostochnaya**	**14.11**	**344**	P	**Pn**	**08 09 02.9**	**-3.6**
VOSK				pmax	pmax		
	comp=Z,13nm,1.0s						
BVAR	**Borovoye Array**	**14.52**	**343**	Pn	**Pn**	**08 09 09.9**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=157,slow=13,SNR=44						
BVAR				Lg		08 13 11.4	
	comp=Z,0.5nm,0.3s,baz=146,slow=16,SNR=2.8						
BVAR				LR	LR	08 14 55.3	
	comp=Z,2μm,19.4s,baz=134,slow=38						
BRVK	**Borovoye**	**14.58**	**343**	⇑P	**Pn**	**08 09 10.0**	**-2.8**
	SNR=32						
BRVK	**Borovoye**	**14.58**	**343**	*e*P	**Pn**	**08 09 10.3**	**-2.6**
BRVK				pmax	pmax		
	comp=Z,20nm,0.9s						
BRVK	**Borovoye**	**14.58**	**343**	*e*Pn	**Pn**	**08 09 10.3**	**-2.5**
	comp=Z,20nm,0.9s						
ZRNK	**Zerenda**	**14.80**	**340**	⇓Pn	**Pn**	**08 09 13.0**	**-2.9**
	comp=Z,48nm,1.6s						
ZRNK				⇓Lg		08 13 30.4	
	comp=Z,540nm,3.1s						
ZRNK	**Zerenda**	**14.80**	**340**	*e*P	**Pn**	**08 09 13.3**	**-2.6**
ZRNK				pmax	pmax		
	comp=Z,62nm,1.3s						
ZRNK	**Zerenda**	**14.80**	**340**	*e*Pn	**Pn**	**08 09 13.3**	**-2.6**
	comp=Z,62nm,1.3s						
ZRNK				*e*PcP	PcP	08 14 26.8	+0.2
LSA	**Lhasa**	**14.82**	**126**	*e*P	**Pn**	**08 09 17.6**	**+1.4**
CHKZ	**Chkalovo**	**15.08**	**344**	⇓Pn	**Pn**	**08 09 16.5**	**-3.2**
	comp=Z,17nm,1.1s						
CHKZ				⇑Lg		08 13 31.9	
	comp=Z,223nm,1.4s						
CHKZ	**Chkalovo**	**15.08**	**344**	*e*P	**Pn**	**08 09 16.8**	**-2.8**
CHKZ				pmax	pmax		
	comp=Z,20nm,1.1s						
CHKZ	**Chkalovo**	**15.08**	**344**	*e*Pn	**Pn**	**08 09 16.8**	**-2.9**
	comp=Z,20nm,1.1s						
CHKZ				*e*PcP	PcP	08 14 25.4	-1.6
VAN	**Vannovskaya**	**15.18**	**271**	*e*P	**Pn**	**08 09 16.6**	**-4.4**
VAN				*e*S	**Sn**	**08 11 59.6**	**-9.0**
ZAL	**Zalesovo**	**15.43**	**17**	Pn	**Pn**	**08 09 21.7**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=280,slow=13,SNR=7.2						
ZAL				Lg		08 13 50.1	
	comp=Z,0.6nm,0.3s,baz=349,slow=18,SNR=2.7						
ZAL				LR	LR	08 16 12.1	
	comp=Z,455nm,20.8s,baz=263,slow=41						
AB31	**Akbulak array**	**15.94**	**314**	⇓Pn	**Pn**	**08 09 28.8**	**-2.1**
	comp=Z,8.2nm,0.7s						
AB31	**Akbulak array**	**15.94**	**314**	P	**Pn**	**08 09 33.3**	**+2.4**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NVS	**Novosibirsk**	**15.99**	**12**	*e*P	**Pn**	**08 09 33.3**	**+1.8**
NVS				pmax	pmax		
	comp=N,23nm,0.9s						
NVS				pmax	pmax		
	comp=Z,24nm,0.9s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.5s						
BHPL	**Bhopal**	**16.05**	**180**	*ex*	x	08 09 30.1	
BHPL				*ex*	x	08 12 22.4	
JBP	**Jabalpur**	**16.27**	**172**	⇓*i x*	x	08 09 32.3	
JBP				*i* x	x	08 12 23.9	
BOK	**Bokaro**	**17.07**	**153**	*e*P	**Pn**	**08 09 42.6**	**-2.6**
BOK				AMb	AMB	08 09 46.5	
	comp=Z,20nm,1.1s						
BOK				*ex*	x	08 12 45.5	
GTA	**Gaotai**	**17.29**	**83**	*e*P	**Pn**	**08 09 46.8**	**-1.2**
GTA				AP	pP	08 09 51.0	-3.4
GTA				XP	sP	08 09 54.3	-2.4
GTA				S	**Sn**	**08 12 58.3**	**-1.7**
GTA				XS	sS	08 13 04.5	-12
GTA				SS		08 13 20.0	
GTA				AMB	AMB		
	comp=Z,11nm,1.2s						
GTA				AMB	AMB		
	comp=Z,190nm,5.7s						
GTA				LR	LR		
	comp=N,1μm,20.5s						
GTA				LR	LR		
	comp=E,655nm,19.4s						
GTA				LR	LR		
	comp=Z,758nm,15.6s						
AKTK	**Aktyubinsk**	**17.62**	**315**	P	**Pn**	**08 09 49.8**	**-2.3**
AKTK				Lg		08 14 47.1	
AKTK				LR	LR	08 16 34.2	
AKTO	**Aktyubinsk**	**17.62**	**315**	⇓Pn	**Pn**	**08 09 50.0**	**-2.2**
	comp=Z,1.8nm,1.1s						
AKTO				⇓Lg		08 15 05.5	
	comp=Z,11nm,3.0s						
AKTO	**Aktyubinsk**	**17.62**	**315**	P	**Pn**	**08 09 49.8**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=111,slow=18,SNR=14						
AKTO				Lg		08 14 47.1	
	comp=Z,0.1nm,0.3s,baz=290,slow=8.7,SNR=2.7						
AKTO				LR	LR	08 16 34.2	
	comp=Z,435nm,18.1s,baz=297,slow=37						
NGP	**Nagpur**	**18.18**	**175**	⇑*ex*	x	08 09 54.7	
NGP				*ex*	x	08 10 01.3	
	comp=Z,40nm,1.1s						
NGP				*ex*	x	08 13 13.1	
IMP	**Imphal**	**20.10**	**131**	*e*P	**P**	**08 10 21.0**	**+0.8**
LATR	**Latur**	**20.87**	**182**	*ex*	x	08 10 38.4	
LATR				*ex*	x	08 14 06.3	
POO	**Poona**	**20.97**	**190**	*ex*	x	08 10 29.0	
POO				*e*PP		08 10 51.0	
POO				*i* x	x	08 14 16.0	
LZH	**Lanzhou**	**21.11**	**91**	⇑P	**P**	**08 10 32.5**	**+1.3**
LZH				AP		08 10 36.3	
LZH				XP	sP	08 10 39.5	+1.0
LZH				PP		08 10 55.5	
LZH				S	**S**	**08 14 21.3**	**-4.0**
LZH				XS	sS	08 14 27.5	-5.9
LZH				SS		08 14 53.3	
LZH				AMB	AMB		
	comp=Z,51nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,132nm,4.3s						
LZH				LR	LR		
	comp=N,1μm,12.5s						
LZH				LR	LR		
	comp=Z,2μm,13.7s,MS4.6						
ARU	**Arti**	**21.16**	**330**	*e*P	**P**	**08 10 29.9**	**-1.7**
ARU				*e*		08 10 43.6	
ARU				*e*S	**S**	**08 14 21.3**	**-4.9**
ARU				*e*SS		08 14 43.0	
ARU				*e*SSS		08 14 54.9	
ARU				MLR	MLR		
	comp=N,300nm,17.0s,MS4.0						
ARU				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.0						
ARU				MLR	MLR		
	comp=E,400nm,18.0s,MS4.0						
ARU	**Arti**	**21.16**	**330**	*e*P	**P**	**08 10 30.0**	**-1.6**
	comp=E,50nm,1.3s,mb4.7						
ZAK	**Zakamensk**	**21.27**	**50**	⇑*i*P	**P**	**08 10 33.6**	**+0.7**
HYB	**Hyderabad**	**21.87**	**177**	*i* P	**P**	**08 10 40.0**	**+0.7**
HYB				*e*PP		08 11 05.0	
HYB				*e*		08 14 31.0	
HYB				*e*S	**S**	**08 14 37.0**	**-3.2**
HYB	**Hyderabad**	**21.87**	**177**	*e*P	**P**	**08 10 40.0**	**+0.7**
HYB				*e*S	**S**	**08 14 31.0**	**-9.2**
TLY	**Talaya**	**21.98**	**47**	*e*P	**P**	**08 10 41.5**	**+1.0**
TLY				*e*S	**S**	**08 14 43.4**	**+1.0**
TLY				MLR	MLR		
	comp=Z,666nm,26.0s,MS3.9						
VIS	**Vishakhapatnam**	**22.14**	**165**	*e*P	**P**	**08 10 42.9**	**+0.6**
VIS				AMb	AMB	08 10 51.1	
	comp=Z,52nm,1.1s,mb4.9						
SONM	**Songino Array**	**22.52**	**58**	P	**P**	**08 10 47.3**	**+1.0**
	comp=Z,21nm,0.9s,mb4.6,baz=255,slow=10,SNR=97						
SONM				LR	LR	08 20 43.6	
	comp=Z,759nm,19.4s,MS4.1,baz=84,slow=40						
IRK	**Irkutsk**	**22.57**	**46**	*e*P	**P**	**08 10 47.7**	**+0.9**
IRK				*e*		08 11 00.2	
IRK				*e*		08 11 22.5	
IRK				pmax	pmax		
	comp=E,66nm,1.6s,mb4.8						
ULN	**Ulaanbaatar**	**22.96**	**59**	⇑P	**P**	**08 10 51.5**	**+0.6**
	SNR=17						
ULN	**Ulaanbaatar**	**22.96**	**59**	*c i* P	**P**	**08 10 51.4**	**+0.5**
ULN	**Ulaanbaatar**	**22.96**	**59**	*e*P	**P**	**08 10 51.7**	**+0.8**
	comp=Z,19nm,0.8s,mb4.6						
CD2	**Chengdu**	**23.05**	**103**	P	**P**	**08 10 55.5**	**+3.7**
CD2				AP		08 10 59.5	
CD2				XP	sP	08 11 02.8	+3.6
CD2				S	**S**	**08 15 04.3**	**+2.5**
CD2				XS	sS	08 15 10.5	-0.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
CD2				AMB	AMB		
	comp=Z,30nm,5.6s						
CD2				LR	LR		
	comp=N,390nm,14.4s						
CD2				LR	LR		
	comp=Z,450nm,9.9s						
SOKR	**Solikamsk**	**24.10**	**334**	*e*P	**P**	**08 11 00.4**	**-1.7**
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
SOKR				MLR	MLR		
	comp=Z,800nm,15.0s,MS4.3						
GNI	**Garni**	**25.09**	**282**	P	**P**	**08 11 11.2**	**+0.1**
	comp=Z,4.7nm,0.5s,mb4.3,baz=32,slow=4.0,SNR=3.0						
GNI				LR	LR	08 22 56.6	
	comp=Z,186nm,19.1s,MS3.6,baz=324,slow=41						
GNI	**Garni**	**25.09**	**282**	P	**P**	**08 11 11.2**	**+0.1**
GNI				pmax	pmax		
	comp=Z,50nm,0.5s						
GNI				MLR	MLR		
	comp=Z,186nm,19.1s						
GNI	**Garni**	**25.09**	**282**	*e*P	**P**	**08 11 11.8**	**+0.8**
	comp=Z,53nm,1.0s,mb5.0						
ZEI	**Tsey**	**25.43**	**289**	*e*P	**P**	**08 11 20.4**	**+6.2**
ZEI				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.6						
KMI	**Kunming**	**25.56**	**116**	P	**P**	**08 11 17.3**	**+1.9**
KMI				AP	pP	08 11 22.0	+1.3
KMI				XP	sP	08 11 24.5	+1.6
KMI				PP		08 11 55.0	
KMI				PPP		08 12 07.5	
KMI				S	**S**	**08 15 43.0**	**+0.8**
KMI				XS	sS	08 15 53.0	+1.9
KMI				SS		08 16 49.3	
KMI				SSS		08 17 06.0	
KMI				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.5						
KMI				AMB	AMB		
	comp=Z,55nm,3.1s						
KMI				LR	LR		
	comp=N,554nm,19.7s,MS4.2						
KMI				LR	LR		
	comp=E,567nm,18.6s,MS4.2						
KMI				LR	LR		
	comp=Z,565nm,16.6s,MS4.2						
XAN	**Xi'an**	**25.71**	**92**	P	**P**	**08 11 18.0**	**+1.3**
XAN				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.5						
HHC	**Hu-ho-hao-te**	**26.05**	**76**	*e*P	**P**	**08 11 19.8**	**0.0**
HHC				AP	pP	08 11 24.0	-1.2
HHC				XP	sP	08 11 26.3	-1.1
HHC				PP		08 12 00.3	
HHC				PCP	PcP	08 14 50.0	+2.6
HHC				S	**S**	**08 15 47.5**	**-2.5**
HHC				SS		08 16 50.8	
HHC				SCP	ScP	08 18 28.5	+2.3
HHC				PCS	PcS	08 18 30.5	+2.2
HHC				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.5						
HHC				AMB	AMB		
	comp=Z,104nm,3.9s						
HHC				LR	LR		
	comp=N,576nm,4.5s						
HHC				LR	LR		
	comp=E,466nm,4.7s						
HHC				LR	LR		
	comp=Z,603nm,12.5s,MS4.3						
KIV	**Kislovodsk**	**26.26**	**291**	*i* P	**P**	**08 11 23.6**	**+1.9**
KIV				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.2						
UMR	**Umm Al-Rimmam**	**26.29**	**257**	*e*P	**P**	**08 11 24.3**	**+2.3**
UMR				AMb	AMB	08 11 26.7	
	comp=Z,78nm,0.8s,mb5.3						
MNGI	**Mangalore**	**26.40**	**186**	*i* x	x	08 10 20.0	
MIB	**Mutribah**	**26.45**	**258**	*e*P	**P**	**08 11 24.9**	**+1.5**
MIB				AMb	AMB	08 11 29.9	
	comp=Z,60nm,1.0s,mb5.1						
NAY	**Al-Naaiem**	**26.80**	**257**	*e*P	**P**	**08 11 27.8**	**+1.2**
NAY				AMb	AMB	08 11 33.3	
	comp=Z,60nm,1.3s,mb5.0						
CHTO	**Chiang Mai**	**27.64**	**132**	*e*P	**P**	**08 11 37.9**	**+3.7**
CHTO				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.1						
CHTO	**Chiang Mai**	**27.64**	**132**	*e*P	**P**	**08 11 37.9**	**+3.7**
	comp=Z,4.5nm,0.8s,mb4.2						
BJI	**Beijing**	**29.66**	**76**	P	**P**	**08 11 54.5**	**+2.4**
BJI				S	**S**	**08 16 41.3**	**-5.5**
BJI				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.1						
BJI				AMB	AMB		
	comp=Z,81nm,5.3s						
BJI				LR	LR		
	comp=N,533nm,14.8s,MS4.4						
BJI				LR	LR		
	comp=E,378nm,14.8s,MS4.4						
BJI				LR	LR		
	comp=Z,388nm,23.6s						
OBN	**Obninsk**	**31.39**	**314**	*d i* P	**P**	**08 12 06.5**	**-0.9**
OBN				*e*S	**S**	**08 17 11.2**	**-2.8**
OBN				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.7						
OBN			

QIZ				XP	sP	08 12 43.5	+1.3		
QIZ				S	**S**	**08 18 06.0**	**+3.6**		
QIZ				XS	sS	08 18 12.0	+0.6		
QIZ				LR	LR				
	comp=N,415nm,19.6s								
QIZ				LR	LR				
	comp=Z,338nm,14.9s,MS4.2								
AKASG	**Malin Array Be**	**35.33**	**305**	P	**P**	**08 12 39.9**	**-1.8**		
	comp=Z,0.6nm,0.4s,mb3.8,baz=78,slow=7.6,SNR=6.8								
AKASG	**Malin Array Be**	**35.33**	**305**	P	**P**	**08 12 39.9**	**-1.8**		
CN2	**Changchun**	**35.79**	**67**	*eP*	**P**	**08 12 47.0**	**+1.3**		
CN2				*eXP*	sP	08 12 54.0	+0.7		
CN2				AMB	AMB				
	comp=Z,10.0nm,1.1s,mb4.7								
CN2				LR	LR				
	comp=N,1μm,15.0s,MS4.8								
CN2				LR	LR				
	comp=E,300nm,15.0s,MS4.8								
CN2				LR	LR				
	comp=Z,400nm,13.0s,MS4.4								
JOF	**Joensuu**	**36.16**	**326**	*ep*	**P**	**08 12 47.6**	**-1.3**		
	comp=Z,9.4nm,0.6s,mb4.9								
SSE	**Sheshan**	**36.38**	**89**	P	**P**	**08 12 51.0**	**+0.3**		
SSE				AP	pP	08 12 57.5	+1.3		
SSE				XP	sP	08 13 00.0	+1.6		
SSE				PP	PP	08 14 13.0	-0.6		
SSE				AMB	AMB				
	comp=Z,14nm,0.8s,mb4.9								
SSE				AMB	AMB				
	comp=Z,29nm,3.9s								
SSE				LR	LR				
	comp=N,363nm,15.5s,MS4.3								
SSE				LR	LR				
	comp=E,218nm,15.4s,MS4.3								
SSE				LR	LR				
	comp=Z,382nm,14.4s,MS4.3								
LVZ	**Lovozero**	**36.89**	**335**	*d iP*	**P**	**08 12 54.1**	**-1.0**		
LVZ				pmax	pmax				
	comp=N,4.0nm,0.9s								
LVZ				pmax	pmax				
	comp=Z,22nm,0.9s,mb5.0								
LVZ				pmax	pmax				
	comp=E,11nm,1.0s								
LVZ				MLR	MLR				
	comp=N,239nm,17.0s,MS4.5								
LVZ				MLR	MLR				
	comp=Z,906nm,17.0s,MS4.6								
LVZ				MLR	MLR				
	comp=E,724nm,18.0s,MS4.5								
APA	**Apatity**	**37.16**	**334**⇓	*eP*	**P**	**08 12 56.3**	**-1.0**		
APA				*e*		08 14 20.6			
APA				pmax	pmax				
	comp=Z,16nm,1.4s,mb4.7								
APA				MLR	MLR				
	comp=Z,1μm,16.0s,MS4.7								
QZH	**Quanzhou**	**37.35**	**100**	P	**P**	**08 13 03.0**	**+4.0**		
QZH				*eS*	**S**	**08 18 52.8**	**+6.8**		
QZH				LR	LR				
	comp=N,1μm,14.8s,MS4.9								
QZH				LR	LR				
	comp=E,860nm,16.5s,MS4.9								
QZH				LR	LR				
	comp=Z,790nm,17.2s,MS4.6								
MLR	**Muntele Rosu**	**37.97**	**297**⇑	*iP*	**P**	**08 13 05.7**	**+1.5**		
FINES	**FINESS Array B**	**38.15**	**323**	P	**P**	**08 13 04.8**	**-1.0**		
	comp=Z,4.4nm,0.5s,mb4.4,baz=107,slow=9.7,SNR=34								
FINES				LR	LR	08 29 36.4			
	comp=Z,441nm,19.7s,MS4.3,baz=319,slow=38								
FINES	**FINESS Array B**	**38.15**	**323**	P	**P**	**08 13 04.8**	**-1.0**		
FINES				LR	LR	08 29 36.4			
KAF	**Kangasniemi**	**38.19**	**324**	*ep*	**P**	**08 13 05.8**	**-0.2**		
	comp=Z,2.5nm,0.6s,mb4.1								
KAF	**Kangasniemi**	**38.19**	**324**	*eP*	**P**	**08 13 05.8**	**-0.2**		
KAF				pmax	pmax				
	comp=Z,30nm,0.6s,mb5.2								
MDJ	**Mudanjiang**	**38.58**	**65**	P	**P**	**08 13 08.3**	**-1.0**		
MDJ				AP	pP	08 13 11.3	-3.5		
MDJ				PP	PP	08 14 36.0	-1.7		
MDJ				AMB	AMB				
	comp=Z,6.0nm,0.8s,mb4.4								
MDJ				AMB	AMB				
	comp=Z,64nm,7.1s								
MDJ				LR	LR				
	comp=N,673nm,18.4s,MS4.5								
MDJ				LR	LR				
	comp=E,92nm,19.8s,MS4.5								
MDJ				LR	LR				
	comp=Z,599nm,19.8s,MS4.4								
KLR	**Kul'dur**	**39.34**	**57**	*eP*	**P**	**08 13 15.2**	**-0.5**		
ARCES	**ARCESS Array B**	**40.61**	**335**	P	**P**	**08 13 25.6**	**-0.6**		
	comp=Z,11nm,0.7s,mb4.6,baz=106,slow=8.9,SNR=36								
ARCES				LR	LR	08 30 49.3			
	comp=Z,568nm,18.1s,MS4.5,baz=108,slow=37								
OJC	**Ojcow**	**41.37**	**305**	*eP*	**P**	**08 13 32.5**	**0.0**		
GRUS	**Gruza**	**41.95**	**295**	*eP*	**P**	**08 13 36.1**	**-1.1**		
VYHS	**Vyhne**	**42.26**	**302**	*eP*	**P**	**08 13 39.8**	**0.0**		
DIVS	**Divcibare**	**42.40**	**296**	*eP*	**P**	**08 13 41.7**	**+0.8**		
OKC	**Ostrava-Krasne**	**42.48**	**304**	AMS	AMS	08 32 30.0			
	comp=Z,300nm,12.4s								
MORC	**Moravsky Berou**	**42.88**	**304**	*eP*	**P**	**08 13 44.8**	**0.0**		
MORC				pmax	pmax				
	comp=Z,30nm,0.7s,mb5.1								
MORC	**Moravsky Berou**	**42.88**	**304**	*eP*	**P**	**08 13 44.8**	**0.0**		
	comp=Z,3.2nm,0.7s,mb4.2								
DPC	**Dobruska-Polom**	**43.55**	**305**	*eP*	**P**	**08 13 50.6**	**+0.3**		
DPC				AMS	AMS	08 33 00.0			
	comp=Z,700nm,16.8s								
UPC	**Upice**	**43.72**	**306**	*eP*	**P**	**08 13 51.9**	**+0.2**		
TREC	**Trest**	**44.28**	**304**	AMS	AMS	08 33 30.0			
	comp=Z,500nm,16.4s								
CONA	**Conrad Observa**	**44.32**	**302**⇑	*iP*	**P**	**08 13 57.2**	**+0.8**		
	comp=Z,3.3nm,0.5s,mb4.3								
PRU	**Pruhonice**	**44.75**	**305**	*eP*	**P**	**08 13 59.7**	**-0.2**		
PRU				AMS	AMS	08 33 50.0			
	comp=Z,500nm,15.2s								
BRG	**Berggiesshubel**	**44.95**	**307**	*eP*	**P**	**08 14 01.7**	**+0.2**		
	comp=Z,6.0nm,1.2s,mb4.3								
BRG									
	comp=N,161nm,18.0s								
BRG									
	comp=E,301nm,14.4s								
BRG									
	comp=Z,469nm,13.0s								
NB2	**NORSAR Subarra**	**45.28**	**321**	P	**P**	**08 14 02.6**	**-1.5**		
	comp=Z,12nm,1.1s,mb4.6,baz=88,slow=7.9								
NOA	**NORSAR Array B**	**45.28**	**321**	P	**P**	**08 14 02.6**	**-1.4**		
	comp=Z,4.8nm,0.7s,mb4.5,baz=88,slow=7.9,SNR=16								
NOA				LR	LR	08 33 47.3			
	comp=Z,387nm,19.0s,MS4.4,baz=95,slow=37								
NOA	**NORSAR Array B**	**45.28**	**321**	P	**P**	**08 14 02.6**	**-1.4**		
NOA				LR	LR	08 33 47.3			
CLL	**Collm**	**45.45**	**307**	P	**P**	**08 14 05.0**	**-0.5**		
	comp=Z,logA/T=0.7,mb4.3								
CLL				*iP*	PP	08 15 52.7	+0.8		
CLL				*eS*	**S**	**08 21 01.0**	**+15**		
CLL	**Collm**	**45.45**	**307**	*iP*	**P**	**08 14 05.0**	**-0.5**		
	comp=Z,5.0nm,0.9s,mb4.3								
CLL				*i* PP	PP	08 15 52.7	+0.8		
CLL				*eS*	**S**	**08 21 01.0**	**+15**		
CLL				LmV		08 35 00.0			
	comp=Z,400nm,19.8s								
CLL	**Collm**	**45.45**	**307**	*iP*	**P**	**08 14 05.0**	**-0.5**		
CLL				*eS*	**S**	**08 21 01.0**	**+15**		
CLL				pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.3								
CLL				MLR	MLR				
	comp=Z,400nm,19.8s,MS4.4								
GEC2	**GERESS Array S**	**45.52**	**304**	*eP*	**P**	**08 14 06.3**	**+0.3**		
GERES	**GERESS Array B**	**45.52**	**304**	P	**P**	**08 14 06.0**	**0.0**		
	comp=Z,4.3nm,0.8s,mb4.5,baz=74,slow=7.3,SNR=23								
GERES				LR	LR	08 35 46.8			
	comp=Z,143nm,18.6s,MS3.9,baz=87,slow=40								
KHC	**Kasperske Hory**	**45.54**	**304**	*eP*	**P**	**08 14 06.0**	**-0.1**		
KHC				AMS	AMS	08 34 20.0			
	comp=Z,500nm,15.1s								
GRA1	**Grafenberg Arr**	**46.91**	**306**	*eP*	**P**	**08 14 17.7**	**+0.8**		
	comp=Z,8.0nm,0.9s,mb4.7								
GRA1				LR	LR				
	comp=Z,200nm,18.4s,MS4.1								
GRF	**Grafenberg Arr**	**46.91**	**306**	*eP*	**P**	**08 14 17.7**	**+0.8**		
	comp=Z,8.0nm,0.9s,mb4.7								
GRF				*eL*		08 37 38.9			
	comp=Z,184nm,18.4s								
GRF	**Grafenberg Arr**	**46.91**	**306**	*eP*	**P**	**08 14 17.7**	**+0.8**		
GRF				pmax	pmax				
	comp=Z,8.0nm,0.9s,mb4.7								
GRF				MLR	MLR				
	comp=Z,200nm,18.4s,MS4.1								
GRF	**Grafenberg Arr**	**46.91**	**306**	*eP*	**P**	**08 14 17.7**	**+0.8**		
GRF				pmax	pmax				
	comp=Z,8.0nm,0.9s,mb4.7								
GRF				MLR	MLR				
	comp=Z,200nm,18.4s,MS4.1								
MAJO	**Matsushiro**	**47.21**	**73**	*eP*	**P**	**08 14 19.3**	**0.0**		
MAJO				pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.5								
MAJO	**Matsushiro**	**47.21**	**73**	*eP*	**P**	**08 14 19.3**	**+0.1**		
	comp=Z,5.4nm,0.7s,mb4.6								
MAT	**Matsushiro**	**47.21**	**73**	P	**P**	**08 14 19.4**	**+0.1**		
MAT				*eS*	**S**	**08 21 17.0**	**+5.7**		
MJAR	**Matsushiro Arr**	**47.21**	**73**	P	**P**	**08 14 19.5**	**+0.2**		
	comp=Z,5.0nm,0.7s,mb4.5,baz=290,slow=9.1,SNR=11								
SEY	**Seymchan**	**49.18**	**36**	*i* P	**P**	**08 14 38.1**	**+3.6**		
CDF	**Champ du Feu**	**49.75**	**305**	*eP*	**P**	**08 14 38.1**	**-0.8**		
JHJ	**Hachijo jima 2**	**49.80**	**77**	LR	LR	08 38 07.7			
	comp=Z,300nm,19.6s,MS4.3,baz=30,slow=39								
HINF	**Hinteralfeld**	**50.20**	**304**	*eP*	**P**	**08 14 41.4**	**-0.9**		
HAU	**Haudompre**	**50.47**	**305**	*eP*	**P**	**08 14 43.3**	**-1.0**		
HAU				*eR*					
	comp=Z,429nm,17.8s								
HAU	**Haudompre**	**50.47**	**305**	*eP*	**P**	**08 14 43.3**	**-1.0**		
HAU				LR	LR				
	comp=Z,430nm,17.8s,MS4.5								
CABF	**La Chapelle**	**51.08**	**303**	*eP*	**P**	**08 14 48.8**	**-0.1**		
	comp=Z,9.8nm,0.8s,mb4.5								
CABF	**La Chapelle**	**51.08**	**303**	*eP*	**P**	**08 14 48.8**	**-0.1**		
CABF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.5								
CABF	**La Chapelle**	**51.08**	**303**	*eP*	**P**	**08 14 48.8**	**-0.1**		
	comp=Z,4.9nm,0.8s,mb4.5								
SBF	**Sospel**	**51.12**	**299**	*eP*	**P**	**08 14 48.7**	**-0.5**		
	comp=Z,189nm,1.2s,mb5.6								
SBF	**Sospel**	**51.12**	**299**	*eP*	**P**	**08 14 48.7**	**-0.5**		
SBF				pmax	pmax				
	comp=Z,94nm,1.2s,mb5.6								
SBF	**Sospel**	**51.12**	**299**	*eP*	**P**	**08 14 48.7**	**-0.5**		
	comp=Z,94nm,1.2s,mb5.6								
MBDF	**Montbardon**	**51.26**	**300**	*eP*	**P**	**08 14 49.4**	**-0.9**		
ORIF	**Oris-en-Rattie**	**51.79**	**301**	*eP*	**P**	**08 14 53.9**	**-0.3**		
ORIF				*eR*					
	comp=Z,447nm,20.5s								
SMF	**Signal de Mont**	**52.52**	**304**	*eP*	**P**	**08 14 59.3**	**-0.4**		
	comp=Z,16nm,1.0s,mb4.6								
SMF	**Signal de Mont**	**52.52**	**304**	*eP*	**P**	**08 14 59.3**	**-0.4**		
SMF				pmax	pmax				
	comp=Z,8.0nm,1.0s,mb4.6								
SMF	**Signal de Mont**	**52.52**	**304**	*eP*	**P**	**08 14 59.3**	**-0.4**		
	comp=Z,8.1nm,1.0s,mb4.6								
SSF	**Saint Saulge**	**52.59**	**304**	*eP*	**P**	**08 14 59.6**	**-0.6**		
VIVF	**Saint-Julien-l**	**52.62**	**301**	*eP*	**P**	**08 14 59.7**	**-0.6**		
	comp=Z,15nm,0.8s,mb4.6								
VIVF	**Saint-Julien-l**	**52.62**	**301**	*eP*	**P**	**08 14 59.7**	**-0.6**		
VIVF				pmax	pmax				
	comp=Z,7.0nm,0.8s,mb4.6								
VIVF	**Saint-Julien-l**	**52.62**	**301**	*eP*	**P**	**08 14 59.7**	**-0.6**		
	comp=Z,7.3nm,0.8s,mb4.7								
AVF	**Avril sur Loir**	**52.79**	**304**	*eP*	**P**	**08 15 00.6**	**-1.0**		
	comp=Z,22nm,0.8s,mb4.8								
AVF	**Avril sur Loir**	**52.79**	**304**	*eP*	**P**	**08 15 00.6**	**-1.0**		
AVF				pmax	pmax				
	comp=Z,11nm,0.8s,mb4.8								
AVF	**Avril sur Loir**	**52.79**	**304**	*eP*	**P**	**08 15 00.6**	**-1.0**		
	comp=Z,11nm,0.8s,mb4.8								
KEST	**Kesra**	**52.96**	**289**	LR	LR	08 41 18.8			
	comp=Z,45nm,20.0s,MS3.5,baz=341,slow=40								
DAG	**Danmarks Havn**	**53.46**	**343**⇑	*iP*	**P**	**08 15 05.5**	**-1.1**		
	comp=Z,4.8nm,0.7s,mb4.5								
DAG	**Danmarks Havn**	**53.46**	**343**⇑	*iP*	**P**	**08 15 05.5**	**-1.1**		
DAG				pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.5								
TCF	**Toulx Ste Croi**	**53.70**	**304**	*eP*	**P**	**08 15 07.6**	**-0.8**		
	comp=Z,9.6nm,0.9s,mb4.4								
TCF	**Toulx Ste Croi**	**53.70**	**304**	*eP*	**P**	**08 15 07.6**	**-0.8**		
TCF				pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.4								
TCF	**Toulx Ste Croi**	**53.70**	**304**	*eP*	**P**	**08 15 07.6**	**-0.8**		
	comp=Z,4.8nm,0.9s,mb4.4								
BILL	**Bilibino**	**53.77**	**28**⇓	*eP*	**P**	**08 15 09.0**	**+0.1**		
BILL				pmax	pmax				
	comp=Z,4.0nm,0.4s,mb4.7								
BILL				MLR	MLR				
	comp=Z,200nm,12.0s,MS4.4								
LDF	**La Druitiere**	**54.34**	**307**	*eP*	**P**	**08 15 11.7**	**-1.3**		
	comp=Z,13nm,0.7s,mb4.7								
LDF	**La Druitiere**	**54.34**	**307**	*eP*	**P**	**08 15 11.7**	**-1.3**		
LDF				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb4.6								
LDF	**La Druitiere**	**54.34**	**307**	*eP*	**P**	**08 15 11.7**	**-1.3**		
	comp=Z,6.3nm,0.7s,mb4.7								
CBIJ	**Chichi jima**	**54.48**	**82**	LR	LR	08 39 44.9			
	comp=Z,175nm,20.1s,MS4.1,baz=14,slow=37								
KMBO	**Kilima Mbogo**	**54.56**	**232**	LR	LR	08 39 41.6			
	comp=Z,77nm,20.2s,MS3.8,baz=284,slow=37								
MTLF	**Montolieu**	**54.83**	**300**	*eP*	**P**	**08 15 16.0**	**-0.5**		
	comp=Z,9.8nm,0.8s,mb4.6								
MTLF	**Montolieu**	**54.83**	**300**	*eP*	**P**	**08 15 16.0**	**-0.5**		
MTLF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.6								
MTLF	**Montolieu**	**54.83**	**300**	*eP*	**P**	**08 15 16.0**	**-0.5**		
	comp=Z,4.9nm,0.8s,mb4.6								
GRR	**Gorron**	**54.87**	**307**	*eP*	**P**	**08 15 16.2**	**-0.7**		
LFF	**La Frestale**	**55.17**	**303**	*eP*	**P**	**08 15 18.6**	**-0.4**		
SGMF	**Saint Gilles**	**55.97**	**307**	*eP*	**P**	**08 15 24.3**	**-0.5**		
ROSF	**Rostrenen**	**56.38**	**308**	*eP*	**P**	**08 15 27.1**	**-0.6**		
QUIF	**Quistinic**	**56.48**	**307**	*eP*	**P**	**08 15 27.8**	**-0.6**		
ETSF	**Etsaut**	**56.86**	**301**	*eP*	**P**	**08 15 30.5**	**-0.6**		
	comp=Z,22nm,1.1s,mb4.8								
ETSF	**Etsaut**	**56.86**	**301**	*eP*	**P**	**08 15 30.5**	**-0.6**		
ETSF				pmax	pmax				
	comp=Z,11nm,1.1s,mb4.8								
ETSF	**Etsaut**	**56.86**	**301**	*eP*	**P**	**08 15 30.5**	**-0.6**		
	comp=Z,11nm,1.1s,mb4.8								
ESDC	**Sonseca Array**	**60.60**	**299**	P	**P**	**08 15 56.9**	**-0.2**		
	comp=Z,1.1nm,0.5s,mb4.2,baz=57,slow=6.7,SNR=4.6								
ESDC				LR	LR	08 46 28.6			
	comp=Z,98nm,19.7s,MS4.0,baz=60,slow=40								
INK	**Inuvik**	**70.19**	**12**	*eP*	**P**	**08 16 57.3**	**-1.9**		
INK				*e*PP	pP	08 17 06.8	+1.8		
INK				*e*SP	sP	08 17 11.9	+4.8		
INK				pmax	pmax				
	comp=Z,9.0nm,1.1s								
INK	**Inuvik**	**70.19**	**12**	*eP*	**P**	**08 16 57.3**	**-2.0**		
	comp=Z,8.7nm,1.1s,mb4.6								
INK				*ep*P	pP	08 17 06.8	+1.8		
INK				*es*P	sP	08 17 11.9	+4.8		
TOA0	**Torodi Ar. Sit**	**70.81**	**271**	*eP*	**P**	**08 17 02.6**	**-0.5**		
TOA0				*ep*P	pP	08 17 15.3	+6.5		
TORD	**Torodi Ar. Bea**	**70.81**	**271**	P	**P**	**08 17 02.6**	**-0.4**		
	comp=Z,2.0nm,0.8s,mb4.1,baz=46,slow=5.5,SNR=19								
TORD				LR	LR	08 52 16.3			
	comp=Z,117nm,19.9s,MS4.1,baz=80,slow=40								
FITZ	**Fitzroy Crossi**	**72.74**	**132**	LR	LR	08 51 57.5			
	comp=Z,92nm,19.1s,MS4.1,baz=131,slow=38								
YKA	**Yellowknife Ar**	**78.05**	**6**	P	**P**	**08 17 44.6**	**-0.5**		
	comp=Z,0.6nm,0.6s,mb3.7,baz=347,slow=5.4,SNR=3.1								
YKA	**Yellowknife Ar**	**78.05**	**6**	P	**P**	**08 17 44.6**	**-0.5**		
DBIC	**Dimbokro**	**79.86**	**270**	LR	LR	08 57 16.3			
	comp=Z,167nm,19.3s,MS4.4,baz=305,slow=39								
SCHQ	**Schefferville**	**81.33**	**340**	LR	LR	08 54 24.0			
	comp=Z,95nm,18.6s,MS4.2,baz=26,slow=36								
ASAR	**Alice Springs**	**81.90**	**129**	LR	LR	08 56 49.1			
	comp=Z,66nm,20.0s,MS4.0,baz=178,slow=37								
ULM	**Lac du Bonnet**	**90.59**	**356**	LR	LR	09 03 09.3			
	comp=Z,182nm,18.8s,MS4.5,baz=335,slow=38								
STKA	**Stephens Creek**	**92.53**	**130**	LR	LR	09 06 57.6			
	comp=Z,134nm,20.4s,MS4.4,baz=23,slow=40								
PDAR	**Pinedale Array**	**98.03**	**5**	LR	LR	09 06 34.5			
	comp=Z,119nm,18.2s,MS4.4,baz=198,slow=37								

CSEM ***30*** *08:06:43.8±0.9, 3861N×2856W, h13km±3km, ML1.8, Error ellipse: s-maj=2.8km s-min=2.4km az=140.0, After PDA*
PDA ***30*** *08:06:43.8±0.9, 3861N×2856W, h13km±3km, MD2.6, ML1.8, Error ellipse: s-maj=2.8km s-min=2.4km az=140.0*

SVSA 30 08:06:43.8±0.9, 3861N×2856W, h13km±3km, MD2.6, ML1.8, Error ellipse: s-maj=2.8km s-min=2.4km az=140.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOR	**Horta**	**0.10**	**216**	*eP*	Pg	08 06 46.4	-0.4
HOR				*eS*	Sg	08 06 48.4	-0.5
CALA	**Caldeira**	**0.12**	**258**	*eP*	Pg	08 06 46.7	-0.3
CALA				*eS*	Sg	08 06 49.1	-0.2
PICO	**Pico**	**0.15**	**135**	*eP*	Pg	08 06 47.2	-0.2
PICO				*eS*	Sg	08 06 49.8	-0.2
PCND	**Candelaria**	**0.16**	**151**	*eP*	Pg	08 06 47.2	-0.4
PCND				*eS*	Sg	08 06 49.9	-0.3
PCND							
	77nm,0.1s						
PTEI	**Pico do Teixo**	**0.19**	**125**	*eS*	Sg	08 06 50.7	-0.5
PTEI							
	39nm,0.1s						
PBOI	**Pico dos Bois**	**0.22**	**140**	*eS*	Sg	08 06 51.3	-0.6
PBOI							
	29nm,0.2s						
ROSA	**Rosais**	**0.27**	**65**	*eP*	Pg	08 06 48.8	-0.7
ROSA				*eS*	Sg	08 06 52.1	-1.2
PAMA	**Santo Amaro**	**0.30**	**76**	*eP*	Pg	08 06 49.8	-0.3
PAMA				*eS*	Sg	08 06 54.0	-0.3
PAMA							
	64nm,0.2s						
PAMA	**Santo Amaro**	**0.30**	**76**	*eP*	Pg	08 06 49.8	-0.3
PAMA				*eS*	Sg	08 06 54.0	-0.3
PMAN	**Manadas**	**0.37**	**86**	*eP*	Pg	08 06 50.1	-1.1
PMAN				*eS*	Sg	08 06 55.0	-1.2
PMAN							
	93nm,0.1s						
PMAN	**Manadas**	**0.37**	**86**	*eP*	Pg	08 06 50.1	-1.1
PMAN				*eS*	Sg	08 06 55.0	-1.2
PID	**Ribeirinha**	**0.38**	**115**	*eP*	Pg	08 06 50.5	-1.0

ISCJB ***30*** *08:07:59.9±0.3, 675S×003×132.14E±008, h33km, mb5.1/40, MS4.2/14, Error ellipse: s-maj=11.0km s-min=4.3km az=155.1*
BJI ***30*** *08:08:00.7, 680S×132.17E, h52km, mB5.1, mb5.1, Ms4.8, Msz4.6*
MOS ***30*** *08:08:01.3±0.8, 654S×13198E, h33km, mb5.5/7, Error ellipse: s-maj=14.7km s-min=8.3km az=113.8*
IDC ***30*** *08:08:02.8±7.4, 653S×13209E, h30km±54km, mb4.7/14, mb1 4.7/15, mb1mx4.7/16, mbtmp4.9/15, ML4.7/1, MS4.1/10, Ms1 4.1/10, ms1mx3.8/22, Error ellipse: s-maj=20.3km s-min=9.4km az=61.0*
NEIC ***30*** *08:08:03.9±0.2, 658S×13201E, mb5.1/12, Error ellipse: s-maj=8.6km s-min=4.1km az=69.0*
HRVD ***30*** *08:08:03.9±0.3, 670S×13198E, h27km±1km, MW5.1/50, Centroid moment Tensor Solution. LP body waves: s17,c20;Mantle waves: s50,c63; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.64±.21; $M_{\theta\theta}$0.10±.12; $M_{\phi\phi}$0.54±.19; $M_{r\theta}$4.47±.49; $M_{\theta\phi}$1.54±.12; $M_{\phi r}$-0.79±.31; Best double couple: M○4.76700×10^{16} NP1:ϕ_s10.00000°,δ19.00000°,λ-173.00000°. NP2: ϕ_s274.00000°,δ88.00000°,λ-72.00000°. Principal axes: T 4.3170, Plg40.0000°, Azm347.0000°; N 0.8990, Plg18.0000°, Azm93.0000°; P -5.2160, Plg44.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 30 08:07:57.2±2.0, 670S±004×13222E±008, h1km±12km, n110,σ1^{s}02/114, mb5.2/40, MS4.2/14, 8C-7D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.98**	**178**	*eP*	**Pn**	**08 09 30.5**	**+3.7**
	604nm,0.5s						
KAKA				*eS*	**Sn**	**08 10 32.8**	**-3.1**
FITZ	**Fitzroy Crossi**	**13.02**	**209**	*eP*	**Pn**	**08 11 02.1**	**-1.3**
	253nm,0.6s						
FITZ				*es*P		08 11 24.3	
FITZ				*eS*	**Sn**	**08 13 15.9**	**-13**
FITZ	**Fitzroy Crossi**	**13.02**	**209**	Pn	**Pn**	**08 11 02.1**	**-1.2**
	22nm,0.3s,baz=35,slow=12,SNR=380						
FITZ				Sn	**Sn**	**08 13 16.5**	**-12**
	88nm,0.3s,baz=180,slow=16,SNR=22						
FITZ				LR	LR	08 17 16.7	
	comp=Z,488nm,18.1s,baz=31,slow=42						
WRAB	**Tennant Creek**	**13.31**	**171**	*d iP*	**Pn**	**08 11 06.9**	**-0.5**
WRAB	**Tennant Creek**	**13.31**	**171**	*e*Pn	**Pn**	**08 11 06.7**	**-0.7**
	104nm,0.3s						
WRAB				*e*Sn	**Sn**	**08 13 29.3**	**-6.8**
WRA	**Warramunga Arr**	**13.32**	**171**	Pn	**Pn**	**08 11 07.3**	**-0.1**
	4.0nm,0.3s,baz=344,slow=14,SNR=165						
WRA				Sn	**Sn**	**08 13 29.0**	**-7.2**
	32nm,0.3s,baz=347,slow=22,SNR=18						
WB2	**Warramunga Arr**	**13.32**	**171**⇓	*iP*	**Pn**	**08 11 06.4**	**-1.1**
WB2				*es*P		08 11 21.4	
WB2				*eS*	**Sn**	**08 13 26.8**	**-9.5**
PMG	**Port Moresby**	**15.04**	**101**	Sn	**Sn**	**08 14 12.8**	**-5.1**
	2.4nm,0.3s,baz=24,slow=15,SNR=4.2						
PMG	**Port Moresby**	**15.04**	**101**	*i* P	**Pn**	**08 11 37.1**	**+6.

comp=Z,3.6nm,0.5s,mb4.6,baz=104,slow=4.2,SNR=4.3
CBIJ Chichi jima 34.95 16 P **P** **08 14 50.5 -0.3**
comp=Z,27nm,0.6s,mb5.3,baz=256,slow=20,SNR=4.7
DZM Mont Dzumac 36.38 118 P **P** **08 15 06.3 +3.3**
comp=Z,4.5nm,0.7s,mb4.4,baz=39,slow=12,SNR=3.5
SSE Sheshan 39.04 345 P **P** **08 15 26.0 +0.5**
SSE AP 08 15 35.0
SSE PP PP 08 16 55.5 +0.7
SSE S **S** **08 21 24.8 -0.7**
SSE XS sS 08 21 40.0 +14
SSE AMB AMB
comp=Z,35nm,0.9s,mb5.0
SSE AMB AMB
comp=Z,31nm,6.5s
SSE LR LR
comp=N,363nm,15.5s,MS4.4
SSE LR LR
comp=E,228nm,15.5s,MS4.4
SSE LR LR
comp=Z,372nm,14.5s,MS4.3
NJ2 Nanjing 40.59 342 *e*P **P** **08 15 40.0 +1.6**
NJ2 AP 08 15 50.0
NJ2 S **S** **08 21 50.0 +1.2**
NJ2 AMB AMB
comp=Z,30nm,0.5s,mb5.3
NJ2 AMB AMB
comp=Z,200nm,11.1s
NJ2 LR LR
comp=N,990nm,13.8s,MS5.0
NJ2 LR LR
comp=E,920nm,14.2s,MS5.0
NJ2 LR LR
comp=Z,970nm,14.4s,MS4.8
WHN Wuhan 40.80 336 *e*P **P** **08 15 39.5 -0.7**
GYA Guiyang 41.24 324⇑*i*P **P** **08 15 43.3 -0.5**
GYA AMB AMB
comp=Z,40nm,0.6s,mb5.3
MAJO Matsushiro 43.38 7 *e*P **P** **08 16 00.8 -0.4**
MAJO pmax pmax
comp=Z,33nm,0.8s,mb5.1
MAJO Matsushiro 43.38 7 *e*P **P** **08 16 00.8 -0.5**
comp=Z,33nm,0.8s,mb5.1
MJAR Matsushiro Arr 43.38 7 P **P** **08 16 01.0 -0.2**
comp=Z,18nm,0.7s,mb4.9,baz=189,slow=9.2,SNR=35
MJAR LR LR 08 31 54.2
comp=Z,119nm,21.7s,MS3.8,baz=205,slow=33
XAN Xi'an 46.13 333 P **P** **08 16 22.3 -0.9**
XAN AMB AMB
comp=Z,34nm,1.3s,mb5.2
BJI Beijing 48.81 344 P **P** **08 16 43.8 -0.2**
BJI AMB AMB
comp=Z,17nm,1.3s,mb4.9
RPZ Rata Peaks 50.15 144 LR LR 08 37 26.3
comp=Z,384nm,21.2s,MS4.4,baz=184,slow=35
CN2 Changchun 50.64 354 *e*P **P** **08 16 57.5 -0.4**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
MDJ Mudanjiang 51.13 358 P **P** **08 17 01.8 +0.1**
MDJ AMB AMB
comp=Z,14nm,0.8s,mb4.9
MDJ AMB AMB
comp=Z,24nm,3.1s
MDJ LR LR
comp=N,113nm,18.5s,MS4.5
MDJ LR LR
comp=E,399nm,16.2s,MS4.5
MDJ LR LR
comp=Z,599nm,18.5s,MS4.7
MRZ Mangatainoka R 51.35 138 *e*P **P** **08 17 02.2 -1.1**
LSA Lhasa 53.53 315 P **P** **08 17 19.8 +0.3**
LSA AMB AMB
comp=Z,40nm,0.7s,mb5.6
LSA Lhasa 53.53 315 *e*P **P** **08 17 20.2 +0.7**
LSA pmax pmax
comp=Z,24nm,0.6s,mb5.4
LSA Lhasa 53.53 315 *e*P **P** **08 17 20.2 +0.8**
comp=Z,24nm,0.6s,mb5.4
YSS Yuzh-Sakhalins 54.23 9 *e*P **P** **08 17 24.9 +0.3**
YSS MLR MLR
comp=Z,400nm,13.0s,MS4.7
YSS Yuzh-Sakhalins 54.23 9 *i*P **P** **08 17 24.1 -0.5**
KLR Kul'dur 55.70 360 *e*P **P** **08 17 33.0 -2.2**
JIRN Jiri 56.07 310 *e*P **P** **08 17 37.8 -0.1**
GUN Gumba 56.44 310 *e*P **P** **08 17 40.2 -0.3**
comp=Z,191nm,0.6s,mb6.3
PKI Pulchoki 56.63 309 *e*P **P** **08 17 40.9 -0.9**
comp=Z,109nm,1.1s,mb5.8
PKI Pulchoki 56.63 309 *e*P **P** **08 17 40.9 -0.9**
PKI pmax pmax
comp=Z,11nm,1.1s,mb4.8
KKN Kakani 56.83 309 *e*P **P** **08 17 43.0 -0.3**
comp=Z,96nm,0.8s,mb5.5
KKN Kakani 56.83 309 *e*P **P** **08 17 43.0 -0.3**
KKN pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
DMN Daman 56.88 309 *e*P **P** **08 17 43.5 -0.1**
comp=Z,183nm,1.1s,mb6.0
GKN Gorkha 57.43 309 *e*P **P** **08 17 47.1 -0.5**
comp=Z,189nm,0.7s,mb6.2
KOLN Koldanda 58.12 308 *e*P **P** **08 17 52.4 0.0**
comp=Z,168nm,0.9s,mb6.1
ULN Ulaanbaatar 58.69 340⇑*i*P **P** **08 17 56.9 +0.5**
SONM Songino Array 58.89 340 P **P** **08 17 57.7 -0.1**
comp=Z,4.8nm,0.7s,mb4.6,baz=162,slow=9.1,SNR=8.6
SONM PcP PcP 08 18 46.3 -0.8
comp=Z,2.3nm,0.8s,baz=166,slow=5.9,SNR=3.4
DRV Dumont d'Urvil 60.11 176 S **S** **08 26 18.0 -2.3**
CASY Casey 61.35 190 *e*P **P** **08 18 15.3 +0.6**
CASY *ep*P 08 18 27.2
PET Petropavlovsk 63.58 17 *i*P **P** **08 18 30.9 +1.3**
PET pmax pmax
comp=Z,35nm,1.8s,mb5.3
PET MLR MLR
comp=Z,100nm,12.0s,MS4.2
PET Petropavlovsk 63.58 17 *i*P **P** **08 18 30.0 +0.4**
MIR Mirnyy 65.53 196*c i*P **P** **08 18 45.5 +3.2**
MIR *i* 08 19 13.0
MIR pmax pmax
comp=Z,20nm,1.5s,mb5.1
BOD Bodaibo 65.98 349 *e*P **P** **08 18 43.5 -1.7**
BOD pmax pmax
comp=Z,23nm,1.4s,mb5.2
YAK Yakutsk 68.56 359⇑*i*P **P** **08 19 01.5 -0.1**
MKAR Makanchi Array 69.20 326 P **P** **08 19 05.8 +0.3**
comp=Z,25nm,0.6s,mb5.6,baz=109,slow=8.2,SNR=136
MKAR Makanchi Array 69.20 326 P **P** **08 19 05.8 +0.3**
KZA Kyzart 70.99 319 P **P** **08 19 18.2 +1.6**
SNR=7.3
SEY Seymchan 71.13 10⇓*e*P **P** **08 19 18.4 +1.0**
TKM2 Tokmak 2 71.17 320 P **P** **08 19 17.6 0.0**
SNR=6.7
AAK Ala-Archa 71.75 319 P **P** **08 19 22.1 +0.9**
SNR=5.8
AAK Ala-Archa 71.75 319*d i*P **P** **08 19 20.4 -0.7**
AAK pmax pmax
comp=Z,38nm,1.9s,mb5.2
AAK MLR MLR
comp=Z,100nm,21.0s,MS4.1
AAK Ala-Archa 71.75 319 *i* Pr 08 19 20.5
USP Ospenovka 72.04 320 P **P** **08 19 23.5 +0.6**
SNR=14
AML Almayashu 72.04 318 P **P** **08 19 23.9 +1.0**
SNR=13
EKS2 Erkin-Say 72.23 319 P **P** **08 19 25.1 +1.1**
SNR=5.1
ZAL Zalesovo 72.31 333 P **P** **08 19 23.3 -1.2**
comp=Z,7.2nm,0.9s,mb4.8,baz=354,slow=7.4,SNR=7.1
VNDA Vanda 72.48 174 P **P** **08 19 26.9 +1.4**
comp=Z,5.3nm,0.8s,mb4.7,baz=320,slow=6.0,SNR=37
VNDA LR LR 08 51 52.6
comp=Z,142nm,19.2s,MS4.3,baz=328,slow=36
KURK Kurchatov 73.43 328 P **P** **08 19 30.2 -0.9**
comp=Z,148nm,1.1s,mb6.0,SNR=5.5
MAW Mawson 76.04 202⇓*i*P **P** **08 19 47.9 +1.6**
comp=Z,5.4nm,0.8s,mb4.7
MAW *ep*P 08 20 06.6
MAW Mawson 76.04 202 P **P** **08 19 48.1 +1.8**
comp=Z,6.5nm,0.7s,mb4.9,baz=78,slow=7.0,SNR=14
MAW LR LR 08 47 36.1
comp=Z,111nm,21.8s,MS4.1,baz=171,slow=31
MAW Mawson 76.04 202⇓*i*P **P** **08 19 47.9 +1.6**
MAW *e**PP 08 20 06.6
MAW pmax pmax
comp=Z,5.0nm,0.8s
BVAR Borovoye Array 79.00 327 P **P** **08 20 02.3 -0.5**
comp=Z,13nm,0.8s,mb5.0,baz=123,slow=5.3,SNR=20
BRVK Borovoye 79.07 327⇑*i*P **P** **08 20 02.8 -0.4**
ZRNK Zerenda 79.72 327 *e*P **P** **08 20 06.0 -0.7**
ZRNK pmax pmax
comp=Z,37nm,1.4s,mb5.1
ZRNK Zerenda 79.72 327 *e*P **P** **08 20 06.0 -0.7**
comp=Z,37nm,1.4s,mb5.1
QSPA South Pole Qui 83.27 180 *e*P **P** **08 20 26.4 +0.8**
comp=Z,11nm,0.8s,mb5.1
SYO Syowa Base 84.74 201⇑*e*P **P** **08 20 34.0 +1.0**
SYO Syowa Base 84.74 201⇑*e*P **P** **08 20 42.8 +10**
AKTK Aktyubinsk 85.19 322 P **P** **08 20 34.9 -0.4**
AKTO Aktyubinsk 85.19 322 P **P** **08 20 34.9 -0.4**
comp=Z,5.5nm,0.9s,mb4.8,baz=106,slow=7.3,SNR=7.9
AKTO Aktyubinsk 85.19 322 P **P** **08 20 34.9 -0.4**
AKTO pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
KMBO Kilima Mbogo 94.80 268 LR LR 09 01 38.6
comp=Z,95nm,18.4s,MS4.3,baz=90,slow=34
VNA1 Neumayer--Stat 98.40 192 *e*Pdiff **P** **08 21 33.2 -3.8**
VNA1 *e* 08 21 50.4
ARCES ARCESS Array B 102.06 340 P Pdif 08 21 52.0 -1.3
comp=Z,2.0nm,0.8s,baz=97,slow=6.2,SNR=5.2
KONO Kongsberg 111.83 333⇑*i*PKIKP PKiKP 08 26 31.9 -2.0
TORD Torodi Ar. Bea 130.91 282 PKP PKPdf 08 27 12.0 +1.6
comp=Z,0.4nm,0.7s,baz=107,slow=2.8,SNR=2.9
CPUP Villa Florida 145.88 165 PKPbc PKPbc 08 27 40.7 +2.3
comp=Z,1.9nm,0.6s,baz=157,slow=2.8,SNR=11
CPUP Villa Florida 145.88 165 PKP2 PKPab 08 27 40.7 +1.9
CPUP pmax pmax
comp=Z,2.0nm,0.6s
LPAZ La Paz 149.55 139 PKPbc PKPbc 08 27 51.5 +3.1
comp=Z,2.2nm,1.0s,baz=187,slow=1.5,SNR=5.9
LPAZ La Paz 149.55 139 PKP2 PKPbc 08 27 51.5 +3.1
LPAZ pmax pmax
comp=Z,2.0nm,1.0s

*NEIC **30** 08:16:14.3, 38.06S×178.39E, h34km, ML3.9(WEL), After WEL.*
WEL 30 08:16:14.5±0.1, 3805S×17834E, h35km±1km, ML3.9/4, 3C-1D, Error ellipse: s-maj=1.5km s-min=0.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**0.07**	**252**	P	Pb	08 16 20.3	-0.1
PUZ				S	Sb	08 16 24.5	+0.1
PUZ	**Puketiti**	**0.07**	**252**	⇑PN	Pb	08 16 20.3	-0.1
PUZ				SN	Sb	08 16 24.5	+0.1
MXZ	**Matakaoa Point**	**0.49**	**357**	P	Pb	08 16 24.8	-0.2
MXZ				S	Sb	08 16 32.2	-0.1
MXZ	**Matakaoa Point**	**0.49**	**357**	⇑PN	Pn	08 16 24.8	-0.3
MXZ				SN	Sn	08 16 32.2	-0.1
MWZ	**Matawai**	**0.70**	**246**	P	Pn	08 16 27.3	-0.6
MWZ	**Matawai**	**0.70**	**246**	⇓PN	Pn	08 16 27.3	-0.6
MWZ				SN	Sn	08 16 36.9	-0.6
URZ	**Urewera**	**0.99**	**258**	P	Pn	08 16 31.8	-0.1
URZ	**Urewera**	**0.99**	**258**	PN	Pn	08 16 31.6	-0.3
URZ				SN	Sn	08 16 44.8	+0.1
WIZ	**White Island**	**1.05**	**300**	P	Pn	08 16 32.3	-0.5
WIZ	**White Island**	**1.05**	**300**	PN	Pn	08 16 32.3	-0.4
KNZ	**Kokohu**	**1.10**	**208**	P	Pn	08 16 33.2	-0.2
KNZ	**Kokohu**	**1.10**	**208**	⇑PN	Pn	08 16 33.2	-0.3
TAZ	**Tarawera**	**1.45**	**262**	P	Pn	08 16 38.8	+0.5
TAZ	**Tarawera**	**1.45**	**262**	PN	Pn	08 16 38.3	0.0
PATZ	**Paeroa**	**1.67**	**258**	P	Pn	08 16 43.2	+1.9
BKZ	**Black Stump Fm**	**1.82**	**232**	P	Pn	08 16 43.8	+0.4
BKZ	**Black Stump Fm**	**1.82**	**232**	PN	Pn	08 16 43.6	+0.1
BKZ				SN	Sn	08 17 05.5	+0.2
PXZ	**Pawanui**	**2.29**	**210**	PN	Pn	08 16 48.0	-1.7
PXZ				SN	Sn	08 17 15.3	-1.4
KUZ	**Kuaotunu**	**2.46**	**301**	PN	Pn	08 16 50.4	-1.8
KUZ				SN	Sn	08 17 17.5	-3.5
TSZ	**Takapari Road**	**2.73**	**222**	*e*P	Pn	08 16 54.2	-1.6
BFZ	**Birch Farm**	**3.09**	**211**	P	Pn	08 16 58.6	-2.2

WEL 30 08:29:53.3±0.3, 3655S×17703E, h250km±4km, ML3.5/9, 1C, Error ellipse: s-maj=7.0km s-min=5.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.44**	**135**	PN	Pn	08 30 30.9	-0.2
MXZ				SN	S	08 31 00.2	-0.6
URZ	**Urewera**	**1.71**	**178**	PN	Pn	08 30 33.5	+0.3
URZ				SN	S	08 31 04.5	-0.2
PUZ	**Puketiti**	**1.81**	**148**	⇑PN	Pn	08 30 34.3	+0.2
PUZ				SN	S	08 31 05.0	-1.2
MWZ	**Matawai**	**1.83**	**168**	PN	Pn	08 30 34.7	+0.5
MWZ				SN	S	08 31 06.5	0.0
KNZ	**Kokohu**	**2.52**	**169**	PN	Pn	08 30 40.7	0.0
BKZ	**Black Stump Fm**	**2.65**	**189**	PN	Pn	08 30 42.1	+0.1
PXZ	**Pawanui**	**3.48**	**182**	PN	Pn	08 30 50.3	-0.8
PXZ				SN	S	08 31 35.0	-1.9
TSZ	**Takapari Road**	**3.61**	**193**	PN	Pn	08 30 51.7	-0.8

*IDC **30** 08:33:35.5±1.5, 9.96N×126.14E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/18, mbtmp3.6/6, Error ellipse: s-maj=201.7km s-min=20.2km az=71.0*
*ISCJB **30** 08:33:39.3±0.8, 9.99N±0.06×126.39E±0.06, h33km, mb3.6/6, Error ellipse: s-maj=8.4km s-min=8.1km az=13.1*
*MAN **30** 08:33:43.0, 10.04N±0.17E, h27km, mb3.2, ML4.5, MS3.2*
ISC 30 08:33:41.2±0.8, 1001N±0.06×12634E±0.06, h35km, n21, σ1821/25, mb3.6/6, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.87**	**255**	⇓*e*P	**Pn**	**08 33 55.2**	**-1.7**
SCPH				*e*S	**Sn**	**08 34 04.9**	**-3.5**
BUTP	**Butuan**	**1.26**	**215**	*e*P	**Pn**	**08 34 02.6**	**+0.3**
MSLP	**Maasin**	**1.47**	**275**	*e*P	**Pn**	**08 34 05.1**	**0.0**
PLP	**Palo**	**1.76**	**311**	*e*P	**Pn**	**08 34 09.8**	**+0.7**
PLP				*e*S	**Sn**	**08 34 29.7**	**-0.6**
PLP	**Palo**	**1.76**	**311**	*e*P	**Pn**	**08 34 09.8**	**+0.7**
PLP				*e*S	**Sn**	**08 34 29.7**	**-0.6**
BESP	**Borongan**	**1.81**	**331**	*e*P	**Sn**	**08 34 36.3**	**+4.7**
OCLP	**Ormoc**	**1.99**	**301**	*e*P	**Pn**	**08 34 16.6**	**+4.3**
CGP	**Cagayan de Oro**	**2.25**	**227**	*i* S	**Sn**	**08 34 40.8**	**-1.5**
LLP	**Lapu-Lapu**	**2.36**	**278**	*e*S	**Sn**	**08 34 41.1**	**-4.0**
TBP	**Tagbilaran**	**2.47**	**263**	*e*P	**Pn**	**08 34 19.7**	**+0.8**
TBP				*e*S	**Sn**	**08 34 47.7**	**0.0**
BUKP	**Musuan**	**2.47**	**211**	*e*P	**Pn**	**08 34 21.9**	**+3.0**
SNPH	**Sibulan**	**3.13**	**258**	*e*P	**Pn**	**08 34 33.0**	**+5.0**
PAGZ	**Pagadian**	**3.63**	**234**	*e*P	**Pn**	**08 34 37.1**	**+2.3**
GUIM	**Jordan**	**3.74**	**280**	*e*P	**Pn**	**08 34 37.8**	**+1.3**
RCP	**Roxas**	**3.85**	**294**	⇑*e*P	**Pn**	**08 34 39.6**	**+1.7**
WRA	**Warramunga Arr**	**30.79**	**165**	P	**P**	**08 39 52.7**	**-0.7**
	0.5nm,0.9s,mb3.4,baz=345,slow=9.0,SNR=2.1						
ASAR	**Alice Springs**	**34.28**	**168**	P	**P**	**08 40 24.1**	**+0.2**
	0.3nm,0.6s,mb3.4,baz=350,slow=7.3,SNR=3.3						
SONM	**Songino Array**	**41.28**	**340**	P	**P**	**08 41 23.0**	**0.0**
	0.3nm,0.6s,mb3.1,baz=154,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**52.27**	**323**	P	**P**	**08 42 48.0**	**-1.1**
	0.5nm,0.7s,mb3.5,baz=117,slow=7.4,SNR=4.5						
ARCES	**ARCESS Array B**	**84.46**	**340**	P	**P**	**08 46 09.2**	**-1.0**
	1.3nm,0.8s,mb4.1,baz=75,slow=7.6,SNR=3.9						
FINES	**FINESS Array B**	**86.15**	**332**	P	**P**	**08 46 18.1**	**-0.6**
	0.8nm,0.8s,mb4.0,baz=95,slow=5.9,SNR=3.6						

*NEIC **30** 08:35:55.3, 31.75S×67.46W, h140km, MG3.9(GUC), After GUC.*
GUC 30 08:35:55.3±0.8, 3175S×6746W, h140km, MD3.8, ML3.9, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**2.86**	**236**	*e*P	Pn	08 36 41.2	+0.7
FCH				*i* S	Sn	08 37 17.4	+2.0
FCH				AML	AML	08 37 19.1	
	comp=N,149nm,0.4s						
PTCH	**Petorca**	**2.99**	**259**	*e*P	Pn	08 36 44.1	+1.9
PTCH				*i* S	Sn	08 37 19.8	+1.5
PTCH				AML	AML	08 37 26.8	
	comp=N,240nm,0.4s						
PTCH	**Petorca**	**2.99**	**259**	*e*P	Pn	08 36 44.1	+1.9
PTCH				*i* S	Sn	08 37 19.8	+1.5
PEL	**Peldehue**	**3.06**	**242**	*e*P	Pn	08 36 43.7	+0.7
PEL				*i* S	Sn	08 37 20.6	+0.7
CLCH				*e*S	Sn	08 37 21.1	+0.8
CLCH				AML	AML	08 37 26.8	
	comp=E,139nm,0.8s						
PEL	**Peldehue**	**3.06**	**242**	*e*P	Pn	08 36 43.7	+0.7
PEL				*i* S	Sn	08 37 20.6	+0.7
CLCH	**Cerro Calan**	**3.08**	**237**	*e*P	Pn	08 36 44.5	+1.3
CLCH				*e*S	Sn	08 37 21.1	+0.8
CLCH				AML	AML	08 37 26.8	
	comp=N,230nm,0.8s						
CMCH	**Combarbala**	**3.08**	**280**	*e*P	Pn	08 36 44.1	+0.9
CMCH				*i* S	Sn	08 37 21.2	+0.8
CMCH				AML	AML	08 37 27.9	
	comp=N,613nm,0.6s						
CMCH	**Combarbala**	**3.08**	**280**	*e*P	Pn	08 36 44.1	+0.9
CMCH				*i* S	Sn	08 37 21.2	+0.8
TLL	**Tololo Astrono**	**3.28**	**298**	*e*P	Pn	08 36 50.3	+4.5
TLL				*i* S	Sn	08 37 29.5	+4.6
TLL				AML	AML	08 37 37.5	
	comp=E,228nm,0.6s						
TLL	**Tololo Astrono**	**3.28**	**298**	*e*P	Pn	08 36 50.3	+4.5
TLL				*i* S	Sn	08 37 29.5	+4.6

*IDC **30** 08:46:16.1±0.9, 0.25S×125.27E, h0km, mb4.1/6, mb1 4.3/7, mb1mx4.0/17, mbtmp4.1/7, ML3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/29, Error ellipse: s-maj=61.1km s-min=16.4km az=74.0*
*ISCJB **30** 08:46:18.9±0.7, 0.03S±0.1×125.2E±0.03, h33km, mb4.0/7, MS3.4/1, Error ellipse: s-maj=41.1km s-min=10.8km az=145.1*
*NEIC **30** 08:46:21.2±0.6, 0.26S×125.25E, h35km, mb4.0/2, Error ellipse: s-maj=36.9km s-min=9.6km az=72.0*
ISC 30 08:46:21.3±0.7, 03S±0.1×125.2E±0.3, h35km, n11, σ0890/11, mb4.0/7, MS3.4/1, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**14.27**	**150**	*e*P	**Pn**	**08 49 40.1**	**-0.7**
	6.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**17.72**	**179**	*e*P	**Pn**	**08 50 24.9**	**-0.3**
	3.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**17.72**	**179**	P	**Pn**	**08 50 24.2**	**-1.0**
	0.1nm,0.3s,baz=38,slow=8.9,SNR=3.6						
WRA	**Warramunga Arr**	**21.48**	**156**	P	**P**	**08 51 05.3**	**-1.5**
	2.9nm,0.6s,mb3.8,baz=331,slow=12,SNR=20						
WB2	**Warramunga Arr**	**21.49**	**156**	*e*P	**P**	**08 51 08.9**	**+2.0**
ASAR	**Alice Springs**	**24.73**	**161**	P	**P**	**08 51 40.1**	**+0.8**
	2.2nm,0.8s,mb3.7,baz=353,slow=17,SNR=19						
STKA	**Stephens Creek**	**35.03**	**155**	P	**P**	**08 53 11.2**	**+0.6**
	1.3nm,0.5s,mb4.1,baz=325,slow=11,SNR=6.2						
MJAR	**Matsushiro Arr**	**38.56**	**17**	P	**P**	**08 53 40.3**	**-0.3**
	1.7nm,0.6s,mb3.9,baz=190,slow=8.9,SNR=8.2						
SONM	**Songino Array**	**50.64**	**344**	P	**P**	**08 55 16.9**	**0.0**
	1.7nm,0.8s,mb4.1,baz=157,slow=8.9,SNR=12						
SONM				LR	LR	09 19 14.4	
	comp=Z,35nm,18.1s,MS3.4,baz=61,slow=39						
MKAR	**Makanchi Array**	**60.03**	**327**	P	**P**	**08 56 24.8**	**+0.3**
	2.1nm,0.6s,mb4.4,baz=120,slow=8.0,SNR=19						
ZRNK	**Zerenda**	**70.58**	**328**	*e*P	**P**	**08 57 32.6**	**-0.2**
	2.4nm,0.7s,mb4.2						

*NEIC **30** 08:47:29.0, 30.34S×69.48W, h2km, ML3.4(GUC), After GUC.*
GUC 30 08:47:29.0±0.9, 3034S×6948W, h2km±5km, MD3.9, ML3.4, 7C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**1.16**	**278**	*e*P	Pg	08 47 51.3	0.0
TLL				*i* S	Sg	08 48 08.0	+1.6
TLL				AML	AML	08 48 09.4	
	comp=E,457nm,0.3s						
TLL	**Tololo Astrono**	**1.16**	**278**	*e*P	Pg	08 47 51.3	0.0
TLL				*i* S	Sg	08 48 08.0	+1.6
OVCH	**Ovalle**	**1.51**	**259**	*e*P	Pn	08 47 56.6	-0.5
OVCH				*i* S	Sn	08 48 17.2	-0.1
OVCH				AML	AML	08 48 21.7	
	comp=E,1μm,0.5s						
OVCH	**Ovalle**	**1.51**	**259**	*e*P	Pn	08 47 56.6	-0.5
OVCH				*i* S	Sn	08 48 17.2	-0.1
CMCH	**Combarbala**	**1.55**	**237**⇑	*i*P	Pn	08 47 56.6	-1.0
CMCH				*i* S	Sn	08 48 18.3	0.0
CMCH				AML	AML	08 48 24.8	
	comp=N,1μm,0.7s						
CMCH	**Combarbala**	**1.55**	**237**⇑	*i*P	Pn	08 47 56.6	-1.0
CMCH				*i* S	Sn	08 48 18.3	0.0
LSCH	**La Serena**	**1.59**	**285**⇓	*i*P	Pn	08 47 57.8	-0.4
LSCH				*i* S	Sn	08 48 20.1	+0.8
LCO	**Las Campanas**	**1.70**	**321**⇓	*i*P	Pn	08 47 59.7	0.0
LCO				*i* S	Sn	08 48 23.1	+1.2
LCO				AML	AML	08 48 24.6	
	comp=N,317nm,0.7s						
LCO	**Las Campanas**	**1.70**	**321**⇓	*i*P	Pn	08 47 59.7	0.0
LCO				*i* S	Sn	08 48 23.1	+1.2
VACH	**Vallenar**	**2.08**	**327**⇑	*i*P	Pn	08 48 07.8	+2.9
VACH				*i* S	Sn	08 48 35.8	+4.4
VACH				AML	AML	08 48 38.5	
	comp=E,1μm,0.2s						
VACH	**Vallenar**	**2.08**	**327**⇑	*i*P	Pn	08 48 07.8	+2.9
VACH				*i* S	Sn	08 48 35.8	+4.4
PTCH	**Petorca**	**2.29**	**213**⇑	*i*P	Pn	08 48 08.9	+1.2
PTCH				*i* S	Sn	08 48 38.5	+2.1
PTCH				AML	AML	08 48 43.1	
	comp=E,989nm,0.3s						
PTCH	**Petorca**	**2.29**	**213**⇑	*i*P	Pn	08 48 08.9	+1.2
PTCH				*i* S	Sn	08 48 38.5	+2.1
CHNG	**Los Chungos**	**2.32**	**228**⇓	*i*P	Pn	08 48 08.7	+0.6
CHNG				*i* S	Sn	08 48 39.0	+1.8
CHNG				AML	AML	08 48 44.7	
	comp=E,149nm,0.4s						
JACH	**Jahuel**	**2.52**	**202**	*e*P	Pn	08 48 12.9	+2.0
ROCH	**El Roble**	**2.93**	**206**	*e*P	Pn	08 48 18.1	+1.6
PEL	**Peldehue**	**2.98**	**200**	*e*P	Pn	08 48 18.3	+1.1
PEL				*e*S	Sn	08 48 56.3	+2.8
PEL				AML	AML	08 49 03.7	
	comp=E,171nm,0.5s						
PEL	**Peldehue**	**2.98**	**200**	*e*P	Pn	08 48 18.3	+1.1
PEL				*e*S	Sn	08 48 56.3	+2.8
FCH	**Farellones**	**3.06**	**193**	*e*P	Pn	08 48 20.3	+2.0
FCH				*i* S	Sn	08 48 59.9	+4.4
FCH				AML	AML	08 49 06.5	
	comp=E,76nm,0.3s						
CLCH	**Cerro Calan**	**3.18**	**196**	*e*P	Pn	08 48 21.1	+1.2
CLCH				*i* S	Sn	08 49 00.9	+2.5
CLCH				AML	AML	08 49 23.0	
	comp=N,109nm,0.4s						
RCDM	**Rinconada Maip**	**3.34**	**199**	*e*P	Pn	08 48 23.3	+1.2
RCDM				*i* S	Sn	08 49 04.8	+2.5
RCDM				AML	AML	08 49 12.9	
	comp=E,54nm,0.3s						
RCDM	**Rinconada Maip**	**3.34**	**199**	*e*P	Pn	08 48 23.3	+1.2
RCDM				*i* S	Sn	08 49 04.8	+2.5
PCH	**Pirque**	**3.39**	**195**⇑	*i*P	Pn	08 48 24.0	+1.2
TACH	**Talagante**	**3.53**	**200**	*e*P	Pn	08 48 25.4	+0.7
LCCH	**Las Cruces**	**3.60**	**209**	*e*P	Pn	08 48 26.5	+0.8

*NEIC **30** 08:57:11.9, 26.90S×71.07W, h24km, ML3.1(GUC), After GUC.*
GUC 30 08:57:11.9±1.1, 2690S×7107W, h24km±8km, MD3.6, ML3.1, 4D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDCH	**Caldera**	**0.28**	**129**⇓	*i*P	Pb	08 57 18.2	-0.3
CDCH				*i* S	Sb	08 57 23.4	+0.4
CDCH				AML	AML	08 57 23.7	
	comp=N,2μm,0.2s						
CDCH	**Caldera**	**0.28**	**129**⇓	*i*P	Pb	08 57 18.2	-0.3
CDCH				*i* S	Sb	08 57 23.4	+0.4
CPCH	**Copiapo**	**0.79**	**126**⇓	*i*P	Pb	08 57 26.5	-0.5
CPCH				*i* S	Sb	08 57 37.3	+0.1
CPCH				AML	AML	08 57 41.0	
	comp=E,5μm,0.1s						
CPCH	**Copiapo**	**0.79**	**126**⇓	*i*P	Pb	08 57 26.5	-0.5
CPCH				*i* S	Sb	08 57 37.3	+0.1
VACH	**Vallenar**	**1.70**	**171**	*e*P	Pn	08 57 43.6	+3.7

LCO					AML	AML	08 58 25.3	
	comp=E,82nm,0.6s							
LCO	**Las Campanas**	**2.13**	**171**	*e*P		Pn	08 57 48.5	+2.6
LCO				*i* S		Sn	08 58 15.0	+3.4

IDC 30 09:15:50.4±1.6, 273S×13830E, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.8/12, mbtmp3.8/6, ML3.9/2, Error ellipse: s-maj=71.2km s-min=22.2km az=84.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**17.54**	**192**	*e*P	Pn	09 19 55.9	-0.3
WRA	**Warramunga Arr**	**17.54**	**192**	P	Pn	09 19 56.7	+0.4
	0.6nm,0.3s,baz=15,slow=12,SNR=36						
FITZ	**Fitzroy Crossi**	**19.68**	**218**	P	Pn	09 20 21.0	-1.4
	0.1nm,0.3s,baz=32,slow=16,SNR=3.0						
ASAR	**Alice Springs**	**21.24**	**191**	P	P	09 20 38.0	+0.1
	5.2nm,0.5s,baz=13,slow=12,SNR=79						
ASPA	**Alice Springs**	**21.24**	**191**	*e*P	P	09 20 38.1	+0.1
MKAR	**Makanchi Array**	**69.56**	**323**	P	P	09 27 03.1	+2.0
	0.3nm,0.7s,baz=118,slow=8.6,SNR=2.4						
VNDA	**Vanda**	**75.79**	**175**	P	P	09 27 38.1	-0.1
	0.6nm,0.6s,baz=342,slow=6.7,SNR=11						
BVAR	**Borovoye Array**	**79.10**	**325**	P	P	09 27 54.9	-1.8
	0.3nm,0.4s,baz=90,slow=4.5,SNR=4.6						

IDC 30 09:22:26.8±1.3, 023S×12531E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/16, mbtmp3.8/4, Error ellipse: s-maj=139.8km s-min=21.4km az=67.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.49**	**156**	P	P	09 27 16.9	-0.2
	1.4nm,0.6s,baz=334,slow=11,SNR=12						
ASAR	**Alice Springs**	**24.74**	**161**	P	P	09 27 50.5	+0.7
	1.0nm,0.6s,baz=352,slow=16,SNR=8.8						
SONM	**Songino Array**	**50.62**	**344**	P	P	09 31 27.2	-0.2
	0.6nm,0.8s,baz=157,slow=7.7,SNR=4.2						
MKAR	**Makanchi Array**	**60.04**	**327**	P	P	09 32 35.7	+0.4
	0.9nm,0.5s,baz=120,slow=7.7,SNR=13						

IDC 30 09:32:30.6±1.9, 142N×12659E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.4/16, mbtmp3.4/4, ML3.1/1, Error ellipse: s-maj=114.8km s-min=24.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.42**	**183**	P	Pn	09 36 59.2	-0.2
	0.0nm,0.3s,baz=3.6,slow=16,SNR=2.5						
WRA	**Warramunga Arr**	**22.55**	**161**	P	P	09 37 30.9	-1.2
	0.5nm,0.3s,baz=338,slow=11,SNR=23						
ASAR	**Alice Springs**	**25.93**	**165**	P	P	09 38 05.9	+1.4
	0.2nm,0.3s,baz=342,slow=11,SNR=6.7						
MKAR	**Makanchi Array**	**59.37**	**326**	P	P	09 42 34.6	+0.1
	0.3nm,0.3s,baz=142,slow=7.3,SNR=6.1						

*HLW **30** 09:48:58.8, 3142N×3526E, h33km, Mb3.1*
*GII **30** 09:48:59.4±1.0, 3111N×3513E, h0km, ML2.6/8*
*ISCJB **30** 09:49:00.2±0.5, 3111N±002×3513E±004, h5km±4km, Error ellipse: s-maj=6.4km s-min=2.9km az=30.8*

ISC 30 09:49:00.7±0.5, 3110N±002×3513E±004, h7km±4km, n27, σ0s97/40, 2C-3D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MZDA	**Masada**	**0.29**	**44**	T		09 50 25.2	
MZDA	**Masada**	**0.29**	**44**	Pg	**Pg**	**09 49 05.6**	**-0.8**
MZDA				Sg	**Sg**	**09 49 11.2**	**+1.1**
MZDA	**Masada**	**0.29**	**44**	Pg	**Pg**	**09 49 05.6**	**-0.8**
MZDA				Sg	**Sg**	**09 49 11.2**	**+1.0**
MASH	**Mash'abbe Sade**	**0.31**	**250**	Pg	**Pg**	**09 49 06.9**	**0.0**
AMAZ	**Amatzia**	**0.47**	**337**	Pg	**Pg**	**09 49 09.1**	**-0.6**
AMAZ				Sg	**Sg**	**09 49 16.8**	**+1.0**
SVTA	**Shivta**	**0.47**	**249**	Pg	**Pg**	**09 49 09.8**	**0.0**
DRGI	**Dragot**	**0.54**	**25**	Pg	**Pg**	**09 49 10.4**	**-0.7**
ZFRI	**Zfri**	**0.55**	**176**	Pg	**Pg**	**09 49 11.1**	**-0.2**
KZIT	**Kziot**	**0.66**	**253**	Pg	**Pg**	**09 49 13.3**	**-0.1**
KZIT				Sg	**Sg**	**09 49 23.2**	**+1.3**
KZIT	**Kziot**	**0.66**	**253**	Pg	**Pg**	**09 49 13.3**	**-0.1**
KZIT				Sg	**Sg**	**09 49 23.2**	**+1.3**
PRNI	**Paran**	**0.76**	**188**	Pg	**Pg**	**09 49 15.1**	**-0.1**
PRNI				Sg	**Sg**	**09 49 27.6**	**+2.5**
HRFI	**Mount Harif**	**1.07**	**184**	Pg	**Pg**	**09 49 20.2**	**-0.9**
HRFI				Sg	**Sg**	**09 49 37.2**	**+2.2**
HRFI	**Mount Harif**	**1.07**	**184**	Pg	**Pg**	**09 49 20.2**	**-1.0**
HRFI				Sg	**Sg**	**09 49 37.2**	**+2.2**
SLTI	**Sal'it**	**1.14**	**356**	Pg	**Pg**	**09 49 21.7**	**-0.8**
SLTI				Sg	**Sg**	**09 49 37.7**	**+0.4**
HMDT	**Nahal Hemdat**	**1.20**	**16**	Pg	**Pg**	**09 49 22.4**	**-1.3**
MBH	**Mount Berech**	**1.32**	**188**	Pn	**Pn**	**09 49 25.0**	**-0.6**
MMLI	**Mount Malkishu**	**1.35**	**11**	Pn	**Pn**	**09 49 24.9**	**-1.1**
MMLI				Sn	**Sn**	**09 49 45.0**	**+0.7**
AQBJ	**Aqaba**	**1.37**	**183**	Pn	**Pn**	**09 49 26.0**	**-0.2**
EIL	**Elat**	**1.44**	**186**	Pn	**Pn**	**09 49 27.0**	**-0.2**
EIL				Sn	**Sn**	**09 49 47.0**	**+0.7**
OFRI	**'Ofer**	**1.52**	**355**	Pn	**Pn**	**09 49 27.8**	**-0.5**
HNKL	**Nakhl**	**1.53**	**221**	⇓P	**Pn**	**09 49 27.9**	**-0.5**
HNKL				S	**Sn**	**09 49 49.0**	**+0.4**
AMAG	**Maghara**	**1.71**	**255**	⇑P	**Pn**	**09 49 28.5**	**-2.5**
MMA2	**Mount Meron ar**	**1.92**	**7**	Pn	**Pn**	**09 49 34.2**	**+0.4**
MMA2				Sn	**Sn**	**09 50 00.5**	**+2.3**
KSDI	**Kefar Szold**	**2.13**	**12**	Pn	**Pn**	**09 49 37.5**	**+0.8**
KSDI				Sn	**Sn**	**09 50 04.0**	**+0.6**
SUZ		**2.35**	**238**	⇓P	**Pn**	**09 49 38.5**	**-1.2**
HKAT	**Jabal Katrina**	**2.75**	**201**	⇓P	**Pn**	**09 49 44.7**	**-0.6**
TR2		**2.97**	**205**	⇑P	**Pn**	**09 49 47.8**	**-0.5**

IDC 30 09:56:07.4±2.1, 674S×12988E, h0km, mb3.5/1, mb1 3.5/4, mb1mx3.4/14, mbtmp3.4/4, ML3.6/3, Error ellipse: s-maj=86.9km s-min=27.8km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.03**	**200**	*e*P	Pn	09 59 01.7	+1.6
	5.3nm,1.2s						
FITZ	**Fitzroy Crossi**	**12.03**	**200**	Pn	Pn	09 59 00.6	+0.5
	0.3nm,0.3s,baz=26,slow=16,SNR=24						
FITZ				Sn	Sn	10 01 02.1	-13
	0.2nm,0.3s,baz=324,slow=18,SNR=2.8						
WRA	**Warramunga Arr**	**13.82**	**162**	Pn	Pn	09 59 24.0	-0.5
	0.3nm,0.3s,baz=344,slow=13,SNR=24						
WRA				Sn	Sn	10 01 43.4	-15
	0.2nm,0.3s,baz=335,slow=22,SNR=5.5						
WB2	**Warramunga Arr**	**13.82**	**162**	*e*P	Pn	09 59 24.6	0.0
ASAR	**Alice Springs**	**17.27**	**167**	P	Pn	10 00 10.5	+0.6
	0.1nm,0.3s,baz=340,slow=9.2,SNR=6.2						
ASAR				S	Sn	10 03 07.5	-15
	0.1nm,0.3s,baz=352,slow=27,SNR=3.0						
MKAR	**Makanchi Array**	**67.94**	**327**	P	P	10 07 08.2	+0.2
	0.2nm,0.4s,baz=111,slow=7.9,SNR=3.3						

*MOS **30** 10:01:50.8±0.8, 4377N×1207E, h10km, mb4.5/1, Error ellipse: s-maj=4.9km s-min=3.2km az=117.9*
*NEIC **30** 10:01:51.4, 4376N×1215E, h4km, MD3.9(PDG), ML3.7(LDG), ML3.9(SZGRF), ML3.7(ROM), After ROM. NEIC Felt [IV] at Pieve Santo Stefano and Sansepolcro.*
*CSEM **30** 10:01:51.1±0.1, 4375N×1213E, h12km, ML3.9/5, Error ellipse: s-maj=1.3km s-min=1.2km az=30.0*
*ROM **30** 10:01:51.4±0.2, 4376N×1215E, h4km±2km, Md3.4/42, Ml3.7/29, Error ellipse: s-maj=1.7km s-min=1.4km az=131.0*
*PDG **30** 10:01:52.1±0.7, 4377N×1212E, h17km±1km*
*ISCJB **30** 10:01:52.1±0.2, 4380N±001×1211E±001, h22km±2km, mb4.0/6, MS3.1/2, Error ellipse: s-maj=2.3km s-min=1.6km az=18.4*
*LDG **30** 10:01:54.4±0.1, 4372N×1207E, h10km, Ml3.7/23, Error ellipse: s-maj=3.7km s-min=2.7km az=30.0*
*PRU **30** 10:01:55.5, 4413N×1118E, h0km*
*SZGRF **30** 10:01:55.2, 4396N×1248E, h10km, mb3.9, Central Italy*
*STR **30** 10:01:59.0±0.6, 4405N×1156E, h10km±1km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*IDC **30** 10:02:00.2±2.5, 4382N×1187E, h73km±26km, mb3.7/6, mb1 3.7/12, mb1mx3.6/24, mbtmp3.9/12, MS3.0/7,*

Ms1 3.0/7, ms1mx2.7/35, Error ellipse: s-maj=25.5km s-min=16.5km az=101.0

ISC 30 10:01:52.6±0.2, 4378N±001×1210E±001, h13km±1km, n232, σ1s19/347, mb4.0/6, MS3.1/2, 23C-18D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRE	**Caprese Michel**	**0.19**	**215**	⇑*i*Pg	**Pg**	**10 01 56.3**	**-0.5**
CRE				Sg	**Sg**	**10 01 59.7**	**-0.1**
SFI	**Santa Sofia**	**0.22**	**305**	⇑*i*Pg	**Pg**	**10 01 56.9**	**-0.5**
SFI				Sg	**Sg**	**10 02 01.6**	**+0.9**
	11μm,0.5s						
BADI	**Badiali**	**0.28**	**158**	Pg	**Pg**	**10 01 57.2**	**-1.3**
BADI				Sg	**Sg**	**10 02 02.0**	**-0.5**
RSM	**Repubblica di**	**0.30**	**58**	Pg	**Pg**	**10 01 58.3**	**-0.4**
RSM				Sg	**Sg**	**10 02 01.0**	**-1.8**
CDCA	**Citt' di Caste**	**0.33**	**163**	Pg	**Pg**	**10 01 58.1**	**-1.2**
	6μm,0.2s						
BRSN	**Barisano**	**0.51**	**358**	Pg	**Pg**	**10 02 02.9**	**+0.3**
PESA	**Pesaro**	**0.56**	**73**	Pg	**Pg**	**10 02 02.3**	**-1.3**
PESA				Sg	**Sg**	**10 02 11.5**	**+0.5**
	5μm,0.5s						
SEI	**Scarperia**	**0.60**	**298**	Pg	**Pg**	**10 02 03.8**	**-0.6**
CSNT	**Castellina Chi**	**0.66**	**243**	Pg	**Pg**	**10 02 05.4**	**0.0**
CSNT				Sg	**Sg**	**10 02 15.2**	**+1.1**
	5μm,0.7s						
FNVD	**Fontana Vidola**	**0.81**	**299**	Pg	**Pg**	**10 02 07.7**	**-0.5**
	3μm,0.6s						
ASS	**Assisi**	**0.82**	**150**	Pg	**Pg**	**10 02 06.5**	**-1.9**
	70nm,0.5s						
CING	**Cingoli**	**0.89**	**116**	Pg	**Pg**	**10 02 07.8**	**-2.0**
	2μm,0.5s						
SACS	**San Casciano d**	**0.94**	**189**	Pg	**Pg**	**10 02 09.3**	**-1.3**
SACS				Sg	**Sg**	**10 02 24.7**	**+1.8**
	2μm,0.7s						
PZZT	**Monte Pizzetto**	**0.96**	**292**	Pg	**Pg**	**10 02 10.7**	**-0.4**
	1μm,0.6s						
ZCCA	**Zocca**	**0.99**	**306**	Pg	**Pg**	**10 02 12.5**	**+0.8**
ARCI	**Arcidosso**	**1.03**	**206**	Pg	**Pg**	**10 02 11.3**	**-1.1**
	2μm,0.8s						
GRFL	**Gerfalco**	**1.03**	**233**	Pg	**Pg**	**10 02 11.8**	**-0.6**
	337nm,0.7s						
AOI	**Ancona**	**1.11**	**101**	Pg	**Pg**	**10 02 12.2**	**-1.8**
	2μm,0.8s						
BDI	**Bagni Di Lucca**	**1.12**	**285**	Pg	**Pg**	**10 02 14.4**	**+0.2**
	2μm,1.0s						
PII	**Pisa**	**1.14**	**268**	Pg	**Pg**	**10 02 13.6**	**-1.0**
LATE	**Laterza**	**1.18**	**191**	Pg	**Pg**	**10 02 13.7**	**-1.6**
	215nm,1.0s						
GSCL	**Gusciola**	**1.23**	**298**	Pg	**Pg**	**10 02 16.1**	**-0.2**
SARO	**Sassorosso**	**1.29**	**289**	P	**Pn**	**10 02 15.5**	**-0.8**
SARO				S	**Sb**	**10 02 33.8**	**+0.6**
VLC	**Villacollemand**	**1.29**	**288**	*e*Pn	**Pn**	**10 02 15.5**	**-0.8**
VLC				*e*S	**Sb**	**10 02 33.4**	**+0.1**
VLC				*e*Sg	**Sg**	**10 02 42.3**	**+8.0**
VLC	**Villacollemand**	**1.29**	**288**	Pg	**Pg**	**10 02 15.5**	**-2.0**
	1μm,0.9s						
VLC				*e*S	**Sb**	**10 02 33.4**	**+0.1**
ERBM	**Eremo**	**1.38**	**299**	Pg	**Pg**	**10 02 19.6**	**+0.6**
VALM		**1.45**	**294**	P	**Pn**	**10 02 17.4**	**-1.1**
VALM				S	**Sn**	**10 02 37.3**	**-0.1**
VINC	**Vinca**	**1.45**	**285**	S	**Sn**	**10 02 37.6**	**+0.2**
MNS	**Montasola**	**1.45**	**163**	Pg	**Pn**	**10 02 17.3**	**-1.2**
	1μm,0.7s						
TERO	**Teramo**	**1.59**	**136**	Pg	**Pn**	**10 02 20.6**	**+0.2**
	2μm,0.7s						
FIAM	**Fiamignano**	**1.68**	**153**	Pg	**Pn**	**10 02 21.6**	**0.0**
	2μm,1.1s						
AQU	**L'Aquila**	**1.71**	**146**	Pg	**Pn**	**10 02 22.9**	**+0.8**
CODM		**1.73**	**292**	P	**Pn**	**10 02 21.4**	**-1.0**
MTCE	**Montecelio**	**1.81**	**165**	Pg	**Pn**	**10 02 22.5**	**-1.0**
	516nm,0.8s						
FAGN	**Fagnano**	**1.86**	**144**	Pg	**Pn**	**10 02 25.0**	**+0.9**
	2μm,0.6s						
VCEL	**Villa Celiera**	**1.88**	**137**	Pg	**Pn**	**10 02 26.1**	**+1.7**
	2μm,0.9s						
CERT	**Cerreto**	**1.94**	**160**	Pg	**Pn**	**10 02 24.8**	**-0.4**
	890nm,1.1s						
SC2M	**Scurtabr**	**1.95**	**290**	P	**Pn**	**10 02 24.4**	**-1.0**
NVLJ	**Novalja**	**2.15**	**67**	*i* Pn	**Pn**	**10 02 27.4**	**-0.6**
NVLJ				*i* Sn	**Sn**	**10 02 54.1**	**-0.4**
BOB	**Bobbio (Coli)**	**2.15**	**298**	Pg	**Pn**	**10 02 30.6**	**+2.6**
	371nm,0.7s						
SALO	**Salr**	**2.16**	**329**	Pg	**Pn**	**10 02 29.4**	**+1.2**
	7μm,0.9s						
GUAR	**Guarcino**	**2.17**	**155**	Pg	**Pn**	**10 02 29.1**	**+0.7**
	454nm,0.9s						
INTR	**Introdacqua**	**2.21**	**142**	Pg	**Pn**	**10 02 28.7**	**-0.2**
	1μm,1.0s						
VVLD	**Villa Vallelon**	**2.21**	**149**	Pg	**Pn**	**10 02 29.7**	**+0.8**
	673nm,0.8s						
MAGA	**Magasa**	**2.26**	**333**	Pg	**Pn**	**10 02 30.0**	**+0.4**
	2μm,0.6s						
CTI	**Castel Tesino**	**2.29**	**352**	Pg	**Pn**	**10 02 30.1**	**0.0**
	480nm,0.8s						
GIUL	**Giuliano Di Ro**	**2.37**	**159**	Pg	**Pn**	**10 02 31.3**	**+0.1**
	310nm,0.9s						
SDI	**San Donato**	**2.42**	**148**	Pg	**Pn**	**10 02 32.8**	**+1.0**
	113nm,0.4s						
JAVS	**Javornik**	**2.54**	**33**	*i* Pn	**Pn**	**10 02 31.8**	**-1.6**
JAVS				*e*Sn	**Sn**	**10 03 03.5**	**-0.6**
JAVS							
	comp=Z,549nm,0.7s						
JAVS	**Javornik**	**2.54**	**33**	Pn	**Pn**	**10 02 31.8**	**-1.6**
JAVS				*e*Sn	**Sn**	**10 03 03.5**	**-0.7**
	comp=Z,549nm,0.7s						
MABI	**Malga Bissina**	**2.54**	**334**	Pg	**Pn**	**10 02 34.3**	**+0.8**
	comp=Z,107nm,1.0s						
VOY	**Vojsko**	**2.59**	**29**	*e*Pn	**Pn**	**10 02 32.7**	**-1.5**
VOY				*e*		10 02 36.3	
VOY				*e*(Sn)	**Sn**	**10 03 05.0**	**-0.5**
VOY				*e*		10 03 17.7	
VOY	**Vojsko**	**2.59**	**29**	*e*Pn	**Pn**	**10 02 32.7**	**-1.5**
VOY				Sn	**Sn**	**10 03 05.0**	**-0.5**
GMNA	**Gemona**	**2.63**	**17**	Pg	**Pn**	**10 02 34.5**	**-0.1**
	comp=Z,1μm,0.6s						
PCP	**Pian Castagno**	**2.67**	**288**	P	**Pn**	**10 02 32.4**	**-2.8**
CADS	**Cadrg**	**2.71**	**25**	*i* Pn	**Pn**	**10 02 34.5**	**-1.3**
CADS				*e*Sn	**Sn**	**10 03 07.9**	**-0.6**
CADS							
	comp=Z,328nm,0.5s						
CADS	**Cadrg**	**2.71**	**25**	*i* Pn	**Pn**	**10 02 34.5**	**-1.3**
CADS				*e*Sn	**Sn**	**10 03 07.9**	**-0.6**
	comp=Z,328nm,0.5s						
APPI	**Appiano**	**2.77**	**347**	Pg	**Pn**	**10 02 38.1**	**+1.4**
	comp=Z,300nm,0.4s						
PTCC	**Patocco-Chiusa**	**2.78**	**18**	Pg	**Pn**	**10 02 36.3**	**-0.4**
	comp=Z,208nm,0.7s						
VISS	**Visnje**	**2.81**	**43**	*i* Pn	**Pn**	**10 02 36.3**	**-0.9**
BOJS	**Bojanci**	**2.84**	**51**	*i* Pn	**Pn**	**10 02 37.0**	**-0.6**
BOJS				*i* Pg	**Pg**	**10 02 47.0**	**0.0**
BOJS				*i* Sn	**Sn**	**10 03 13.3**	**+1.7**
FIN	**Finale Ligure**	**2.84**	**280**	Pg	**Pn**	**10 02 36.8**	**-0.8**
	comp=Z,58nm,0.4s						
FIN	**Finale Ligure**	**2.84**	**280**	P	**Pn**	**10 02 35.8**	**-1.8**
FIN	**Finale Ligure**	**2.84**	**280**	Pg	**Pn**	**10 02 36.8**	**-0.8**
	comp=Z,58nm,0.4s						
LJU	**Ljubljana**	**2.85**	**36**	*i* Pn	**Pn**	**10 02 36.9**	**-0.8**
LJU				*i* Sn	**Sn**	**10 03 12.1**	**+0.3**
LJU				*i* Sg	**Sg**	**10 03 26.7**	**+2.6**
LJU	**Ljubljana**	**2.85**	**36**	*i* Pn	**Pn**	**10 02 36.9**	**-0.8**
LJU				*i* Sn	**Sn**	**10 03 12.1**	**+0.2**
FVI	**Forni Avoltri**	**2.86**	**9**	Pg	**Pn**	**10 02 38.1**	**+0.2**
RORO		**2.93**	**278**	P	**Pn**	**10 02 37.0**	**-1.8**
BRMO	**Bormio**	**2.96**	**336**	Pg	**Pn**	**10 02 41.1**	**+1.8**
	comp=Z,205nm,0.8s						
MUGIO	**Muggio**	**3.06**	**316**	Pg	**Pn**	**10 02 41.4**	**+0.9**
ROB	**Roburent**	**3.09**	**281**	P	**Pn**	**10 02 39.8**	**-1.3**
NEGI	**Negi**	**3.18**	**273**	P	**Pn**	**10 02 40.5**	**-1.8**
OBKA	**Obir**	**3.24**	**32**	⇓*i*Pn	**Pn**	**10 02 41.8**	**-1.3**
OBKA				⇑*i* Sn	**Sn**	**10 03 20.8**	**-0.6**
OBKA				⇑*i*Sg	**Sg**	**10 03 36.8**	**+0.2**
	comp=Z,262nm,0.6s						
OBKA	**Obir**	**3.24**	**32**	Pn	**Pn**	**10 02 41.8**	**-1.2**
OBKA				Sn	**Sn**	**10 03 20.8**	**-0.6**
SCE	**Schlegeis**	**3.27**	**355**	*e*Pn	**Pn**	**10 02 44.8**	**+1.2**
SAOF	**Saorge**	**3.29**	**275**	P	**Pn**	**10 02 44.7**	**+0.9**
SAOF				S	**Sn**	**10 03 23.2**	**+0.4**
RGNG	**Rignano Grg**	**3.32**	**128**	Pg	**Pn**	**10 02 45.1**	**+1.0**
TUE	**Stuetta**	**3.33**	**325**	Pg	**Pn**	**10 02 46.0**	**+1.7**
	comp=Z,138nm,0.6s						
SBF	**Sospel**	**3.38**	**273**	*e*Pg	**Pg**	**10 02 56.1**	**-1.2**
SBF				*e*Sn	**Sn**	**10 03 23.5**	**-1.4**
	comp=Z,121nm,0.4s						
SBF	**Sospel**	**3.38**	**273**	*e*Pn	**Pn**	**10 02 45.0**	**0.0**
SBF				*e*Pg	**Pg**	**10 02 56.1**	**-1.2**
SBF				*e*Sn	**Sn**	**10 03 23.5**	**-1.4**
SBF	**Sospel**	**3.38**	**273**	*e*Pn	**Pn**	**10 02 45.0**	**0.0**
SBF				*e*Sn	**Sn**	**10 03 23.5**	**-1.4**
	comp=Z,61nm,0.4s						
AUTN	**L'Aution**	**3.38**	**275**	P	**Pn**	**10 02 45.8**	**+0.7**
AUTN				S	**Sn**	**10 03 26.3**	**+1.2**
ENR	**Entracque**	**3.41**	**279**	P	**Pn**	**10 02 44.2**	**-1.2**
KBA	**Koelnbreinsper**	**3.42**	**14**	⇑*i*Pn	**Pn**	**10 02 46.3**	**+0.8**
KBA				⇓*i*Sn	**Sn**	**10 03 27.3**	**+1.4**
KBA				⇑*i*Sg	**Sg**	**10 03 49.2**	**+6.9**
	comp=Z,176nm,0.8s						
KBA	**Koelnbreinsper**	**3.42**	**14**	⇑*i*P	**Pn**	**10 02 46.3**	**+0.8**
KBA				*i*		10 03 27.3	
KBA	**Koelnbreinsper**	**3.42**	**14**	⇑*i*Pn	**Pn**	**10 02 46.3**	**+0.8**
KBA				Sn	**Sn**	**10 03 27.3**	**+1.4**
ORX	**Oropa**	**3.47**	**304**	P	**Pn**	**10 02 45.0**	**-1.3**
STV	**Sta Anna Valdi**	**3.48**	**279**	P	**Pn**	**10 02 44.8**	**-1.5**
SQTA	**Sankt Quirin**	**3.50**	**350**	⇑*i*Pn	**Pn**	**10 02 48.8**	**+2.1**
	SNR=34						
SQTA				⇓*i*Sn	**Sn**	**10 03 34.0**	**+6.0**
WTTA	**Wattenberg**	**3.50**	**355**	⇑*i*Pn	**Pn**	**10 02 47.9**	**+1.2**
	SNR=12						
WTTA				⇑*i*Sn	**Sn**	**10 03 32.6**	**+4.6**
WTTA	**Wattenberg**	**3.50**	**355**	⇑*i*Pn	**Pn**	**10 02 47.9**	**+1.2**
WTTA				*i* Sn	**Sn**	**10 03 32.6**	**+4.6**
TOUF	**Mont Tournerai**	**3.52**	**276**	P	**Pn**	**10 02 46.0**	**-0.8**
TOUF				S	**Sn**	**10 03 28.9**	**+0.6**
WATA	**Walderalm**	**3.58**	**354**	⇓*i*Pn	**Pn**	**10 02 49.6**	**+1.8**
	SNR=20						
WATA				⇓*i*Sn	**Sn**	**10 03 35.8**	**+5.9**
MVIF	**Mont Vial**	**3.58**	**274**	P	**Pn**	**10 02 48.2**	**+0.4**
MOTA	**Moosalm**	**3.64**	**349**	⇑*i*Pn	**Pn**	**10 02 50.7**	**+2.1**
	SNR=32						
MOTA				⇓*i*Sn	**Sn**	**10 03 38.1**	**+6.8**
MOTA	**Moosalm**	**3.64**	**349**	⇑*i*Pn	**Pn**	**10 02 50.7**	**+2.1**
MOTA				*i* Sn	**Sn**	**10 03 38.1**	**+6.8**
PZZ	**Prazzo**	**3.67**	**283**	P	**Pn**	**10 02 47.7**	**-1.3**
RSP	**Reno Superiore**	**3.73**	**293**	P	**Pn**	**10 02 49.0**	**-0.8**
DAVA	**Damuels**	**3.84**	**337**	⇑*i*Pn	**Pn**	**10 02 53.7**	**+2.3**
	SNR=30						
DAVA				⇓*i*Sn	**Sn**	**10 03 42.2**	**+5.8**
OBER	**Oberstdorf**	**3.85**	**341**	*e*Pn	**Pn**	**10 02 53.5**	**+2.1**
SURF	**Saint Ours**	**3.87**	**282**	P	**Pn**	**10 02 52.4**	**+0.7**
LSD	**Ceresole Reale**	**3.91**	**297**	P	**Pn**	**10 02 53.1**	**+0.8**
MBDF	**Montbardon**	**3.94**	**286**	*e*Pn	**Pn**	**10 02 52.9**	**+0.1**
MBDF				*e*Sn	**Sn**	**10 03 37.1**	**-1.8**
	comp=Z,110nm,0.7s						
MBDF	**Montbardon**	**3.94**	**286**	*e*Pn	**Pn**	**10 02 52.9**	**+0.1**
MBDF				*e*Sn	**Sn**	**10 03 37.1**	**-1.8**
	comp=Z,55nm,0.7s						
FRF	**La Foret Royal**	**3.96**	**269**	*e*Pn	**Pn**	**10 02 53.0**	**0.0**
FRF				*e*Sn	**Sn**	**10 03 37.1**	**-2.2**
	comp=Z,27nm,0.3s						
FRF	**La Foret Royal**	**3.96**	**269**	*e*Pn	**Pn**	**10 02 53.0**	**0.0**
FRF				*e*Sn	**Sn**	**10 03 37.1**	**-2.2**
	comp=Z,13nm,0.3s						
KOGS	**Kog**	**3.97**	**46**	*e*Pn	**Pn**	**10 02 51.5**	**-1.6**
KOGS				*i* Sg	**Sg**	**10 04 06.1**	**+6.0**
RRL	**Cesana Torines**	**3.98**	**289**	P	**Pn**	**10 02 53.8**	**+0.5**
RJOB	**Jochberg**	**3.99**	**7**	⇑*i*Pn	**Pn**	**10 02 55.6**	**+2.2**
LMR	**La Mourre**	**4.09**	**266**	*e*Pn	**Pn**	**10 02 54.2**	**-0.5**
LMR				*e*Sn	**Sn**	**10 03 39.9**	**-2.5**
	comp=Z,14nm,0.3s						
LMR	**La Mourre**	**4.09**	**266**	*e*Pn	**Pn**	**10 02 54.2**	**-0.5**
LMR				*e*Sn	**Sn**	**10 03 39.9**	**-2.5**
	comp=Z,7.1nm,0.3s						
BNI	**Bardonecchia**	**4.09**	**290**	*e*Pn	**Pn**	**10 02 57.0**	**+2.2**
BNI				*e*Sn	**Sn**	**10 03 43.5**	**+1.0**
BNI	**Bardonecchia**	**4.09**	**290**	*e*Pn	**Pn**	**10 02 57.0**	**+2.3**
LPG	**La Plagne**	**4.19**	**296**	*e*Pn	**Pn**	**10 02 57.2**	**+1.1**
LPG				*e*Sn	**Sn**	**10 03 44.1**	**-0.8**
	comp=Z,35nm,0.4s						
LPG	**La Plagne**	**4.19**	**296**	*e*Pn	**Pn**	**10 02 57.2**	**+1.1**
LPG				*e*Sn	**Sn**	**10 03 44.1**	**-0.8**
	comp=Z,17nm,0.4s						
LPL

ULC				*e*Sn		**Sn**	10 04 17.7	-1.0
ECH	**Echery**	**5.62**	**324**	P		**Pn**	10 03 16.1	+0.3
ECH				S		**Sn**	10 04 20.5	+0.4
ZST	**Bratislava**	**5.63**	**36**	*e*		**Pb**	10 03 29.5	-1.1
ZST				*e*			10 04 14.3	
ZST				*e*			10 05 07.9	
ZST	**Bratislava**	**5.63**	**36**	*e*P		**Pb**	10 03 29.5	-1.1
ZST				*e*			10 04 14.3	
WLS	**Welschbruch**	**5.69**	**326**	P		**Pn**	10 03 17.6	+0.8
WLS				S		**Sn**	10 04 21.0	-1.0
DIVS	**Divcibare**	**5.71**	**84**	*i* Pn		**Pn**	10 03 20.2	+3.2
DIVS				Sn		**Sn**	10 04 21.2	-1.2
CDF	**Champ du Feu**	**5.72**	**326**	*e*Pn		**Pn**	10 03 17.7	+0.5
CDF				*e*Sn		**Sn**	10 04 20.8	-1.9
	comp=Z,28nm,0.4s							
IVA	**Berane**	**5.76**	**96⇑**	*i*Pn		**Pn**	10 03 18.2	+0.5
IVA				*e*Sn		**Sn**	10 04 23.2	-0.4
IVA	**Berane**	**5.76**	**96⇑**	*i*Pn		**Pn**	10 03 18.2	+0.5
HAU	**Haudompre**	**5.83**	**319**	*e*Pn		**Pn**	10 03 19.3	+0.6
HAU				*e*Sn		**Sn**	10 04 23.2	-2.2
	comp=Z,87nm,0.4s							
LANF	**Langenberg**	**5.99**	**332**	P		**Pn**	10 03 22.3	+1.4
ROTZ	**Rotzenmuhle**	**6.00**	**1**	*e*Pn		**Pn**	10 03 21.0	+0.1
ROTZ				*e*Sn		**Sn**	10 04 25.2	-4.2
TREC	**Trest**	**6.00**	**22**	AMS		AMS	10 06 00.0	
	comp=Z,400nm,13.4s							
SMOL	**Smolenice**	**6.01**	**36**	*e*PN		**Pn**	10 03 21.7	+0.5
THEF	**They Montfort**	**6.16**	**318**	P		**Pn**	10 03 24.3	+1.1
THEF				S		**Sn**	10 04 32.2	-1.3
MANZ	**Manzenberg**	**6.21**	**0**	*e*Pn		**Pn**	10 03 23.6	-0.3
MANZ				*e*Sn		**Sn**	10 04 30.0	-4.8
VRAC	**Vranov**	**6.34**	**28**	P		**Pn**	10 03 25.2	-0.5
	comp=Z,0.7nm,0.3s,baz=229,slow=13,SNR=3.6							
VRAC				LR		LR	10 06 09.4	
	comp=Z,89nm,21.8s,baz=215,slow=39							
PLDF	**La Plantade**	**6.41**	**293**	P		**Pn**	10 03 26.9	+0.2
PRU	**Pruhonice**	**6.44**	**14**	*e*PN		**Pn**	10 03 26.9	-0.1
PRU				*e*Sn		**Sn**	10 04 36.7	-3.6
PRU				AMS		AMS	10 06 20.0	
	comp=Z,500nm,10.0s							
PRU	**Pruhonice**	**6.44**	**14**	*e*Pn		**Pn**	10 03 26.9	-0.1
PRU				*e*Sn		**Sn**	10 04 36.7	-3.6
NKC	**Novy Kostel**	**6.46**	**2**	*e*PN		**Pn**	10 03 27.2	-0.2
NKC				*e*SN		**Sn**	10 04 37.4	-3.6
NKC				AMS		AMS	10 06 20.0	
	comp=Z,400nm,11.3s							
NKC	**Novy Kostel**	**6.46**	**2**	*e*Pn		**Pn**	10 03 27.2	-0.2
NKC				*e*Sn		**Sn**	10 04 37.4	-3.6
LBL	**Lubilhac**	**6.50**	**286**	P		**Pn**	10 03 28.4	+0.6
SMF	**Signal de Mont**	**6.50**	**299**	*e*Pn		**Pn**	10 03 29.3	+1.4
SMF				*e*Sn		**Sn**	10 04 40.6	-1.3
	comp=Z,22nm,0.3s							
WERN	**Wernitzgruen**	**6.52**	**2**	*e*Pn		**Pn**	10 03 29.1	+1.0
WERN				*e*Sn		**Sn**	10 04 39.7	-2.6
VAE	**Valguarnera**	**6.53**	**164**	P		**Pn**	10 03 35.0	+6.7
	comp=Z,4.0nm,0.3s,baz=67,slow=13,SNR=3.2							
VAE	**Valguarnera**	**6.53**	**164**	P		**Pn**	10 03 35.0	+6.7
GUNZ	**Gunzen**	**6.59**	**1**	*e*Pn		**Pn**	10 03 29.5	+0.3
VYHS	**Vyhne**	**6.64**	**42**	*e*Pn		**Pn**	10 03 33.9	+4.0
VYHS				*e*Pg		**Pg**	10 04 05.3	+5.5
VYHS				*e*Sn		**Sn**	10 04 40.6	-4.8
TANN	**Tannenbergstha**	**6.65**	**2**	*e*Pn		**Pn**	10 03 30.1	+0.2
TANN				*e*Sn		**Sn**	10 04 42.2	-3.3
WERD	**Werda**	**6.68**	**1**	*e*Pn		**Pn**	10 03 30.7	+0.4
LOR	**Lormes**	**6.76**	**304**	*e*Pn		**Pn**	10 03 32.5	+1.1
LOR				*e*Sn		**Sn**	10 04 45.0	-3.3
	comp=Z,25nm,0.3s							
MEZF	**Maizieres J'vi**	**6.80**	**316**	*e*Pn		**Pn**	10 03 33.8	+1.8
MEZF				*e*Sn		**Sn**	10 04 46.6	-2.8
	comp=Z,11nm,0.3s							
PSZ	**Piszkesteto**	**6.84**	**50**	*e*PB		**Pb**	10 03 47.5	-3.8
PSZ				*e*Sn		**Sn**	10 04 48.0	-2.2
ABH	**Alteburg**	**6.86**	**335**	P		**Pn**	10 03 33.8	+1.0
AVF	**Avril sur Loir**	**6.87**	**299**	*e*Pn		**Pn**	10 03 33.2	+0.3
AVF				*e*Sn		**Sn**	10 04 47.1	-3.8
	comp=Z,3.7nm,0.3s							
MOX	**Moxa**	**6.88**	**357**	*e*Pn		**Pn**	10 03 31.9	-1.2
MOX				*e*Sn		**Sn**	10 04 47.0	-4.2
SSF	**Saint Saulge**	**6.88**	**302**	*e*Pn		**Pn**	10 03 34.1	+1.0
SSF				*e*Sn		**Sn**	10 04 48.9	-2.4
	comp=Z,11nm,0.4s							
PVCC	**Panska Ves**	**6.96**	**13**	AMS		AMS	10 06 40.0	
	comp=Z,500nm,10.3s							
BGF	**Bois d'Agland**	**7.11**	**296**	*e*Pn		**Pn**	10 03 37.6	+1.4
BGF				*e*Sn		**Sn**	10 04 53.3	-3.5
	comp=Z,38nm,0.5s							
WLF	**Walferdange**	**7.17**	**327**	*e*P		**Pn**	10 03 40.1	+3.1
WLF				pmax		pmax		
	comp=Z,20nm,0.8s							
WLF	**Walferdange**	**7.17**	**327**	*e*Pn		**Pn**	10 03 40.1	+3.0
	comp=Z,20nm,0.8s							
WLF	**Walferdange**	**7.17**	**327**	*e*P		**Pn**	10 03 40.1	+3.1
	comp=Z,20nm,0.8s							
DPC	**Dobruska-Polom**	**7.18**	**22**	*e*PN		**Pn**	10 03 35.7	-1.5
DPC				*e*SN		**Sn**	10 04 53.6	-5.0
DPC				AMS		AMS	10 06 50.0	
	comp=Z,300nm,11.4s							
DPC	**Dobruska-Polom**	**7.18**	**22**	*e*Pn		**Pn**	10 03 35.7	-1.5
DPC				*e*Sn		**Sn**	10 04 53.6	-5.0
MTLF	**Montolieu**	**7.19**	**270**	*e*Pn		**Pn**	10 03 37.2	-0.2
MTLF				*e*Sn		**Sn**	10 04 54.2	-4.7
	comp=Z,4.5nm,0.3s							
BRG	**Berggiesshubel**	**7.21**	**9**	*i* P		**Pn**	10 03 38.1	+0.5
	comp=Z,3.2nm,0.6s							
BRG				*e*			10 04 57.0	
BRG				*e*			10 05 09.1	
BRG				*e*			10 05 49.0	
	comp=Z,32nm,1.2s							
BRG	**Berggiesshubel**	**7.21**	**9**	*i* P		**Pn**	10 03 38.1	+0.5
BRG				*e*			10 04 57.0	
BRG				pmax		pmax		
	comp=Z,30nm,0.6s							
UPC	**Upice**	**7.24**	**20**	*e*PN		**Pn**	10 03 36.4	-1.7
UPC				*e*SN		**Sn**	10 04 55.2	-5.0
CAF	**Calviac**	**7.29**	**283**	*e*Pn		**Pn**	10 03 38.4	-0.3
OKC	**Ostrava-Krasne**	**7.35**	**32**	AMS		AMS	10 07 10.0	
	comp=Z,300nm,9.7s							
TCF	**Toulx Ste Croi**	**7.44**	**293**	*e*Pn		**Pn**	10 03 40.9	+0.1
TCF				*e*Sn		**Sn**	10 05 01.2	-3.9
	comp=Z,4.3nm,0.4s							
HYF	**Humbligny**	**7.50**	**301**	*e*Pn		**Pn**	10 03 43.5	+1.8
CLL	**Collm**	**7.56**	**4**	*i* Pn		**Pn**	10 03 42.5	+0.1
CLL				*ex*		x	10 03 54.0	
CLL				*e*Sn		**Sn**	10 05 13.0	+5.0
CLL				*ex*		x	10 05 22.0	
CLL				*e*Sb		Sb	10 06 00.0	+26
CLL				*e*Sg		Sn	10 06 08.0	+60
	comp=Z,48nm,1.1s							
CLL	**Collm**	**7.56**	**4**	*i* Pn		**Pn**	10 03 42.5	+0.1
CLL				*e*Sn		**Sn**	10 05 13.0	+5.0
CLL				*e*			10 06 00.0	
CLL				*e*Sg		Sn	10 06 08.0	+60
CLL	**Collm**	**7.56**	**4**	*i* Pn		**Pn**	10 03 42.5	+0.1
CLL				*e*S		**Sn**	10 05 13.0	+5.0
RJF	**Les Rejaudoux**	**7.71**	**285**	*e*Pn		**Pn**	10 03 44.4	-0.2
GIVF	**Givet**	**8.05**	**324**	*e*Pn		**Pn**	10 03 49.2	+0.1
GIVF				*e*Sn		**Sn**	10 05 16.2	-3.8
	comp=Z,4.3nm,0.2s							
LFF	**La Frestale**	**8.22**	**282**	*e*Pn		**Pn**	10 03 51.3	-0.2
BAIF	**Baives**	**8.29**	**322**	*e*Pn		**Pn**	10 03 52.6	+0.2
KEST	**Kesra**	**8.31**	**196**	P		**Pn**	10 03 58.2	+5.5
	comp=Z,0.2nm,0.3s,baz=341,slow=6.8,SNR=6.9							
ETSF	**Etsaut**	**9.27**	**269**	*e*Pn		**Pn**	10 04 05.3	-0.6
FLN	**La Foliniere**	**10.04**	**304**	*e*Pn		**Pn**	10 04 18.7	+2.3
EKA	**Eskdalemuir Ar**	**15.18**	**325**	P		**Pn**	10 05 28.0	+1.4
	comp=Z,0.1nm,0.3s,baz=139,slow=14,SNR=2.6							
HFS	**Hagfors**	**16.41**	**3**	P		**Pn**	10 05 45.8	+3.3
	comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=5.1							
HFS				LR		LR	10 12 51.7	
	comp=Z,56nm,21.7s,baz=7.8,slow=40							
MDT	**Midelt**	**17.05**	**236**	LR		LR	10 11 07.3	
	comp=Z,47nm,19.1s,baz=153,slow=32							
NB2	**NORSAR Subarra**	**17.30**	**359**	P		**Pn**	10 05 56.2	+2.4
	comp=Z,8.1nm,1.2s,baz=176,slow=11							
NOA	**NORSAR Array B**	**17.30**	**359**	P		**Pn**	10 05 55.3	+1.6
	comp=Z,0.1nm,0.3s,baz=178,slow=11,SNR=4.4							
NOA				LR		LR	10 13 36.6	
	comp=Z,28nm,19.5s,baz=185,slow=40							
FINES	**FINESS Array B**	**19.55**	**20**	P		**Pn**	10 06 23.0	+1.8
	comp=Z,0.1nm,0.3s,baz=194,slow=10.0,SNR=5.1							
FINES				LR		LR	10 14 48.5	
	comp=Z,50nm,21.4s,baz=169,slow=39							
FINES	**FINESS Array B**	**19.55**	**20**	P		**Pn**	10 06 23.0	+1.8
FINES				LR		LR	10 14 48.5	
ARCES	**ARCESS Array B**	**26.73**	**10**	P		**P**	10 07 31.8	+0.1
	comp=Z,1.4nm,0.7s,mb3.6,baz=179,slow=8.1,SNR=5.2							
ARCES				LR		LR	10 18 30.6	
	comp=Z,44nm,20.4s,MS3.0,baz=203,slow=37							
TORD	**Torodi Ar. Bea**	**31.80**	**200**	P		**P**	10 08 17.6	+0.8
	comp=Z,1.4nm,0.7s,mb3.9,baz=13,slow=9.1,SNR=12							
TORD				LR		LR	10 20 43.2	
	comp=Z,50nm,19.3s,MS3.2,baz=65,slow=35							
MKAR	**Makanchi Array**	**47.97**	**60**	P		**P**	10 10 31.4	+0.5
	comp=Z,0.8nm,0.6s,mb3.9,baz=289,slow=7.4,SNR=8.8							
MKAR	**Makanchi Array**	**47.97**	**60**	P		**P**	10 10 31.4	+0.5
SONM	**Songino Array**	**61.78**	**50**	P		**P**	10 12 12.2	+1.3
	comp=Z,1.9nm,1.0s,mb4.2,baz=291,slow=8.6,SNR=9.4							
ULM	**Lac du Bonnet**	**67.35**	**319**	P		**P**	10 12 45.8	-1.5
	comp=Z,4.9nm,0.9s,mb4.5,baz=63,slow=2.3,SNR=2.7							
PDAR	**Pinedale Array**	**79.25**	**320**	P		**P**	10 13 57.8	+0.2
	comp=Z,0.6nm,0.8s,mb3.5,baz=75,slow=7.6,SNR=5.2							
ASAR	**Alice Springs**	**128.70**	**87**	PKP		PKPdf	10 20 59.6	+0.1
	comp=Z,0.3nm,0.7s,baz=312,slow=1.4,SNR=4.4							

MAN 30 10:20:17.9, 1795N×11982E, h4km, mb3.3, ML4.5, MS2.6, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.90**	**109**	*e*P	Pg	10 20 35.2	+0.1
ABRA				*e*S	Sg	10 20 47.8	+1.1
APYP	**Conner**	**1.36**	**93**	*e*P	Pn	10 20 41.4	-2.2
BOLP	**Bolinao**	**1.56**	**177**	*e*P	Pn	10 20 45.5	-0.9
BCPH	**Baguio City Da**	**1.72**	**155⇑**	*i*P	Pn	10 20 48.2	-0.3
BCPH				*i* S	Sn	10 21 10.6	-0.3
CVP	**Callao Caves**	**1.92**	**97⇓**	*i*P	Pn	10 20 51.2	-0.1
CVP				*i* S	Sn	10 21 18.0	+2.1
SGCP	**Mt. Cagua**	**2.14**	**82**	*e*P	Pn	10 20 54.6	+0.3
CAUP	**Cauayan**	**2.15**	**117**	*e*P	Pn	10 20 55.9	+1.3
SCZP	**Santa Cruz**	**2.16**	**178**	*e*P	Pn	10 20 54.1	-0.5
BALP	**Baler**	**2.76**	**142**	*e*P	Pn	10 21 04.4	+1.5
LUBP	**Lubang**	**4.21**	**174**	*e*P	Pn	10 21 25.5	+2.7
WB2	**Warramunga Arr**	**40.26**	**159**	*e*P	P	10 27 51.6	-4.2
ASPA	**Alice Springs**	**43.58**	**161**	*e*P	P	10 28 20.4	-2.6

CSEM 30 11:14:40.5±0.5, 4297N×642W, h0km, mb3.6/1, Error ellipse: s-maj=5.8km s-min=4.3km az=7.0, After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EPON	**Pontenova**	**0.64**	**304**	Pg	Pg	11 14 52.5	-0.3
	20nm,0.3s,SNR=17						
EPON				Lg		11 15 01.0	
	16nm,0.3s,SNR=5.0						
EARI	**Arriondas**	**0.94**	**69**	Pg	Pg	11 14 56.5	-2.1
	2.9nm,0.2s,SNR=25						
EARI				Lg		11 15 12.3	
	2.9nm,0.2s,SNR=5.0						
ECAL	**Calabor**	**1.05**	**193**	Pg	Pg	11 15 00.6	-0.1
	5.8nm,0.4s,SNR=7.2						
ECAL				Lg		11 15 15.6	
	91nm,0.4s,SNR=5.0						
ELOB	**Lobios**	**1.64**	**228**	Pg	Pg	11 15 08.5	-3.5
	0.2nm,0.3s,SNR=7.9						
ELOB				Lg		11 15 32.8	
	6.1nm,0.5s,SNR=7.9						
EMAZ	**Mazaricos**	**1.88**	**270**	Lg		11 15 39.8	
	5.9nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**2.20**	**82**	Pn	Pn	11 15 17.6	-0.7
	4.4nm,0.3s,SNR=7.9						
ELAN				Sn	Sn	11 15 45.7	-0.5
	12nm,0.6s,SNR=7.9						

IDC 30 11:27:46.9±73.0, 1882S×17187E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/12, mbtmp4.1/3, Error ellipse: s-maj=1240.0km s-min=125.6km az=75.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.18**	**239**	P	P	11 33 59.5	+0.8
	1.6nm,0.7s,baz=94,slow=11,SNR=5.3						
WB2	**Warramunga Arr**	**35.37**	**262**	*e*P	P	11 34 44.1	0.0
WRA	**Warramunga Arr**	**35.38**	**262**	P	P	11 34 44.3	+0.1
	0.4nm,0.4s,baz=96,slow=7.9,SNR=22						
ASAR	**Alice Springs**	**35.65**	**255**	P	P	11 34 46.6	+0.2
	5.6nm,0.5s,baz=89,slow=7.9,SNR=89						
ASPA	**Alice Springs**	**35.65**	**255**	*e*P	P	11 34 46.4	-0.1

*LDG **30** 11:40:55.0±0.4, 4263N×181W, h10km, Md2.4/3, Ml2.5/3, Error ellipse: s-maj=7.1km s-min=6.0km az=28.0*

MDD 30 11:40:56.7±0.6, 4266N×170W, h0km, mbLg1.9/13, Error ellipse: s-maj=4.3km s-min=3.0km az=84.0, ARTIFICIAL POSIBLE, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EARA	**Aranguren**	**0.15**	**38**	Pg	Pg	11 40 58.6	-0.9
	32nm,0.1s,SNR=7.9						
EARA				Lg		11 41 01.0	
	772nm,0.3s,SNR=7.9						
ELIZ	**Elizondo**	**0.52**	**14**	Pg	Pg	11 41 06.2	-0.5
	8.0nm,0.3s,SNR=7.9						
ELIZ				Lg		11 41 13.9	
	14nm,0.3s,SNR=7.9						
SJPF	**Ste Jean**	**0.58**	**37**	*e*Pg	Pg	11 41 07.4	-0.3
SJPF				*e*Sg	Sg	11 41 15.4	+0.2
	51nm,0.4s						
SJPF	**Ste Jean**	**0.58**	**37**	Pg	Pg	11 41 07.4	-0.3
SJPF				Lg		11 41 15.4	
	26nm,0.4s						
EALK	**Alkurruntz**	**0.58**	**14**	Pg	Pg	11 41 07.2	-0.6
	6.7nm,0.3s,SNR=10						
EALK				Lg		11 41 14.8	
	25nm,0.4s,SNR=9.1						
LARF	**Larrau**	**0.65**	**54**	Pg	Pg	11 41 08.7	-0.5
LARF				Lg		11 41 17.8	
OSSF	**Osses**	**0.68**	**28**	Lg		11 41 19.0	
ATE	**Arette**	**0.85**	**59**	Lg		11 41 24.3	
ETSF	**Etsaut**	**0.88**	**74**	*e*Pg	Pg	11 41 12.9	-0.6
ETSF				*e*Sg	Sg	11 41 25.7	+0.9
	14nm,0.4s						
ETSF	**Etsaut**	**0.88**	**74**	Pg	Pg	11 41 12.9	-0.6
ETSF				Lg		11 41 25.7	
	6.9nm,0.4s						
ESAC	**San Caprasio**	**1.31**	**135**	Pg	Pg	11 41 19.7	-2.1
	11nm,0.2s,SNR=5.5						
ESAC				Lg		11 41 37.9	
	61nm,0.3s,SNR=14						
EBIE	**Bielsa**	**1.36**	**88**	Pg	Pg	11 41 21.7	-1.1
	2.0nm,0.3s,SNR=21						
EBIE				Lg		11 41 40.6	
	18nm,0.7s,SNR=5.0						
ELAN	**Lanestosa**	**1.40**	**295**	Pg	Pg	11 41 23.2	-0.3
	2.8nm,0.2s,SNR=7.1						
ELAN				Lg		11 41 41.5	
	7.5nm,0.3s,SNR=5.0						
EPF	**Esparros**	**1.55**	**75**	*e*Pg	Pg	11 41 25.1	-1.3
EPF				*e*Sg	Sg	11 41 46.6	+0.2
	19nm,0.5s						
EPF	**Esparros**	**1.55**	**75**	Pg	Pg	11 41 25.1	-1.3
EPF				Lg		11 41 46.6	
	9.6nm,0.5s						
ERTA	**Horta de San J**	**2.28**	**137**	Pn	Pn	11 41 34.6	-1.0
	0.3nm,0.1s,SNR=7.9						
ERTA				Pg	Pg	11 41 39.2	-1.2
	0.4nm,0.2s,SNR=7.9						
ERTA				Lg		11 42 09.2	
	3.9nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**2.45**	**121**	Pg	Pg	11 41 41.5	-2.1
	0.3nm,0.2s,SNR=7.9						
EPOB				Lg		11 42 13.8	
	1.8nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.47**	**158**	Pg	Pg	11 41 41.3	-2.7
	0.4nm,0.1s,SNR=7.9						
EMOS				Lg		11 42 15.9	
	2.9nm,0.4s,SNR=7.9						
MTLF	**Montolieu**	**2.96**	**75**	*e*Pg	Pg	11 41 51.5	-1.9
MTLF				*e*Sg	Sg	11 42 30.3	-1.4
	8.2nm,0.6s						
MTLF	**Montolieu**	**2.96**	**75**	Pg	Pg	11 41 51.5	-1.9
MTLF				Lg		11 42 30.3	
	4.1nm,0.6s						

KRSC 30 12:04:52, 5101N×15767E, h95km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**1.35**	**265**	*i* P	Pn	12 05 15.2	-0.9
RUS	**Russkaya**	**1.52**	**20**	*e*P	Pn	12 05 21.8	+3.6
RUS				*i* S	Sn	12 05 43.6	+5.5
GRL	**Gorelyy**	**1.56**	**9**	*e*P	Pn	12 05 22.7	+3.9
GRL				*e*S	Sn	12 05 44.3	+5.2
PET	**Petropavlovsk**	**2.11**	**16**	*e*P	Pn	12 05 28.8	+3.1
PET				*i* S	Sn	12 05 55.4	+3.9
AVH	**Avacha**	**2.35**	**16**	*e*P	Pn	12 05 32.8	+3.8
AVH				*i* S	Sn	12 06 02.0	+4.7
SDLR	**Sedlovina**	**2.39**	**18**	*i* P	Pn	12 05 32.9	+3.4
SDLR				*i* S	Sn	12 06 02.1	+3.9
SPN	**Mys Shipunski**	**2.55**	**34**	*e*P	Pn	12 05 35.0	+3.5
SPN				*i* S	Sn	12 06 05.8	+3.9
GNL	**Ganaly**	**2.69**	**3**	*e*P	Pn	12 05 35.5	+2.0
GNL				*e*S	Sn	12 06 07.0	+1.6
MKZ	**Mys Kozlova**	**4.32**	**33**	*e*P	Pn	12 05 57.4	+2.0
MKZ				*i* S	Sn	12 06 46.3	+1.6
KMNR	**Kamenistaya**	**5.00**	**17**	P	Pn	12 06 08.0	+3.4
ZLN	**Zelenaya**	**5.35**	**19**	*e*P	Pn	12 06 12.5	+3.1
KBTR	**Krutoberegovo**	**6.04**	**28**	*e*P	Pn	12 06 21.5	+2.7

IDC 30 12:54:02.7±1.9, 049S×12494E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, Error ellipse: s-maj=185.2km s-min=27.0km az=63.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.41**	**155**	P	P	12 58 50.9	-1.2
	0.8nm,0.6s,baz=333,slow=12,SNR=10.0						
ASAR	**Alice Springs**	**24.63**	**160**	P	P	12 59 26.4	+1.7
	0.2nm,0.3s,baz=347,slow=11,SNR=6.1						
MKAR	**Makanchi Array**	**60.05**	**328**	P	P	13 04 11.4	0.0
	0.4nm,0.5s,baz=134,slow=6.9,SNR=4.5						

*ISCJB **30** 13:20:40.7±1.2, 6.15S±007×1286E±0.1, h308km±13km, mb4.0/11, Error ellipse: s-maj=23.5km s-min=5.9km az=126.3*

*NEIC **30** 13:20:44.5±1.1, 633S×12845E, h331km±14km, mb4.5/8, Error ellipse: s-maj=14.7km s-min=8.0km az=53.0*

*IDC **30** 13:20:47.6±2.9, 634S×12850E, h364km±32km, mb3.4/7, mb1 3.6/11, mb1mx3.5/18, mbtmp4.3/11, Error ellipse: s-maj=23.4km s-min=10.3km az=67.0*

ISC 30 13:20:45.1±1.1, 633S±006×1285E±01, h339km±11km, n28, σ0§93/37, mb4.0/11, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**7.42**	**149**	*e*P	**Pn**	13 22 31.2	-0.9
	25nm,0.4s						
KAKA				*e*S	**S**	13 23 46.0	-13
FITZ	**Fitzroy Crossi**	**12.03**	**193⇓**	*i*P	**Pn**	13 23 26.2	-1.1
	34nm,0.6s						
FITZ				*e*S	**S**	13 25 45.0	+4.0
FITZ	**Fitzroy Crossi**	**12.03**	**193**	P	**Pn**	13 23 26.5	-0.8
	1.8nm,0.3s,baz=26,slow=10,SNR=66						
FITZ				S	**S**	13 25 41.4	+0.4
	1.2nm,0.3s,baz=200,slow=20,SNR=3.3						
WRAB	**Tennant Creek**	**14.66**	**158**	*e*Pn	**Pn**	13 23 56.8	-1.4
	20nm,0.4s						
WRAB				*e*S	**S**	13 26 34.9	-0.1
WRA	**Warramunga Arr**	**14.66**	**158**	P	**P**	13 23 57.0	+0.6
	2.5nm,0.3s,baz=339,slow=12,SNR=170						
WRA				S	**S**	13 26 33.5	-1.6
	0.5nm,0.3s,baz=338,slow=21,SNR=8.8						
WB2	**Warramunga Arr**	**14.66**	**158**	*e*P	**P**	13 23 56.2	-0.3
WB2				*e*S	**S**	13 26 33.4	-1.8
MBWA	**Marble Bar**	**17.02**	**209**	*e*P	**P**	13 24 22.1	0.0
	6.0nm,0.5s						
KKM	**Kota Kinabalu**	**17.38**	**315**	*e*P	**P**	13 24 26.1	+0.1
AS31	**Alice Springs**	**17.99**	**164**	*e*P	**P**	13 24 33.8	+1.3
AS31				*e*S	**S**	13 27 41.4	+0.4
ASAR	**Alice Springs**	**17.99**	**164**	P	**P**	13 24 34.0	+1.5
	2.8nm,0.3s,baz=346,slow=12,SNR=296						
ASAR				S	**S**	13 27 42.4	+1.3
	0.8nm,0.3s,baz=343,slow=18,SNR=50						
ASPA	**Alice Springs**	**17.99**	**164**	*e*P	**P**	13 24 33.8	+1.3
ASPA				*e*S	**S**	13 27 41.4	+0.4
PMG	**Port Moresby**	**18.71**	**101**	P	**P**	13 24 42.4	+2.3
	0.8nm,0.3s,baz=243,slow=4.5,SNR=5.0						
KSM	**Kuching**	**19.77**	**292**	*e*P

JIO	**Ouri**	**1.40 232**	⇑P	**Pn**	**13 27 19.6**	**-0.5**
JIO			*e*S	**Sn**	**13 27 37.2**	**-0.7**
JANG	**Nango**	**1.42 318**	P	**Pn**	**13 27 20.3**	**-0.1**
MAT	**Matsushiro**	**4.54 234**	P	**Pn**	**13 28 05.8**	**+2.5**
MAT			S	**Sn**	**13 28 55.6**	**+0.2**

*ISCJB **30** 13:42:04.9±0.7,2975S±006×1792W±0.1, h188km±8km, mb4.0/9, Error ellipse: s-maj=22.1km s-min=6.1km az=41.9*
*IDC **30** 13:42:05.7±0.6, 2966S×17898W, h193km±12km, mb3.5/5, mb1 3.6/6, mb1mx3.5/12, mbtmp4.0/6, Error ellipse: s-maj=28.6km s-min=20.2km az=66.0*
*NEIC **30** 13:42:06.0±1.0, 2979S×17933W, h176km±12km, mb4.1/6, Error ellipse: s-maj=22.6km s-min=16.2km az=107.0*

ISC 30 13:42:06.1±0.7, 2982S±007×1792W±01, h175km±8km, n31, σ1§50/38, mb4.0/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.29**	**64**	P	**Pn**	**13 42 35.6**	**-0.1**
	526nm,0.3s,baz=272,slow=24,SNR=20						
RAO				S	**Sn**	**13 42 57.2**	**-1.2**
	309nm,0.3s,baz=46,slow=22,SNR=8.7						
RAO	**Raoul Island**	**1.29**	**64**	P	**Pn**	**13 42 35.6**	**-0.1**
RAO				S	**Sn**	**13 42 57.2**	**-1.2**
MXZ	**Matakaoa Point**	**7.99**	**194**	PN	**Pn**	**13 44 00.3**	**+1.1**
MXZ				SN	**Sn**	**13 45 31.1**	**+2.5**
PUZ	**Puketiti**	**8.49**	**193**	SN	**Sn**	**13 45 43.4**	**+2.8**
MWZ	**Matawai**	**8.91**	**197**	PN	**Pn**	**13 44 11.1**	**-0.1**
MWZ				SN	**Sn**	**13 45 52.6**	**+2.1**
URZ	**Urewera**	**8.95**	**199**	P	**Pn**	**13 44 12.6**	**+0.9**
	0.3nm,0.3s,baz=310,slow=11,SNR=3.1						
URZ				S	**Sn**	**13 45 57.0**	**+5.4**
	3.5nm,0.3s,baz=360,slow=23,SNR=18						
BKZ	**Black Stump Fm**	**9.97**	**200**	PN	**Pn**	**13 44 26.4**	**+1.3**
BKZ				SN	**Sn**	**13 46 19.7**	**+3.7**
PXZ	**Pawanui**	**10.68**	**196**	SN	**Sn**	**13 46 30.1**	**-3.0**
BFZ	**Birch Farm**	**11.45**	**198**	*e*SN	**Sn**	**13 46 48.9**	**-2.6**
MRZ	**Mangatainoka R**	**11.61**	**200**	SN	**Sn**	**13 46 50.5**	**-4.9**
TIWZ	**Tintock**	**11.63**	**199**	SN	**Sn**	**13 46 57.8**	**+1.9**
MRW	**Makara Radio**	**12.40**	**202**	SN	**Sn**	**13 47 11.9**	**-2.5**
TUWZ	**Tuamarina**	**12.84**	**204**	*e*SN	**Sn**	**13 47 22.6**	**-2.2**
NNZ	**Nelson**	**12.86**	**206**	SN	**Sn**	**13 47 24.4**	**-0.9**
THZ	**Tophouse**	**13.51**	**206**	PN	**Pn**	**13 45 11.8**	**+1.0**
THZ				SN	**Sn**	**13 47 40.3**	**-0.6**
KHZ	**Kahutara**	**13.85**	**203**	PN	**Pn**	**13 45 15.3**	**+0.3**
LTZ	**Lake Taylor**	**14.62**	**205**	SN	**Sn**	**13 48 02.0**	**-5.5**
MQZ	**McQueen's Vall**	**15.30**	**203**	SN	**Sn**	**13 48 16.0**	**-7.6**
STKA	**Stephens Creek**	**33.56**	**256**	P	**P**	**13 48 31.2**	**+1.9**
	0.8nm,0.4s,mb3.9,baz=115,slow=11,SNR=4.9						
STKA	**Stephens Creek**	**33.56**	**256**	*e*P	**P**	**13 48 31.5**	**+2.2**
ASAR	**Alice Springs**	**42.06**	**267**	P	**P**	**13 49 40.5**	**0.0**
	0.8nm,0.5s,mb3.6,baz=103,slow=6.8,SNR=22						
WRAB	**Tennant Creek**	**42.99**	**272**	*e*P	**P**	**13 49 47.4**	**-0.6**
	5.9nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**43.00**	**272**	P	**P**	**13 49 47.5**	**-0.5**
	1.2nm,0.4s,mb3.9,baz=109,slow=8.1,SNR=71						
SBA	**Scott Base**	**48.54**	**184**	*e*P	**P**	**13 50 32.4**	**+1.0**
	5.9nm,0.8s,mb4.3						
VNDA	**Vanda**	**48.57**	**185**	P	**P**	**13 50 31.6**	**0.0**
	0.8nm,0.7s,mb3.5,baz=6.5,slow=7.3,SNR=9.3						
VNDA	**Vanda**	**48.57**	**185**	*e*P	**P**	**13 50 31.8**	**+0.2**
	1.3nm,0.9s,mb3.6						
POHA	**Pohakuloa**	**54.33**	**28**	*e*P	**P**	**13 51 16.0**	**+1.7**
	183nm,1.0s						
CASY	**Casey**	**55.15**	**208**	*e*P	**P**	**13 51 18.5**	**-1.7**
	6.2nm,0.4s,mb4.7						
QSPA	**South Pole Qui**	**60.29**	**180**	*e*P	**P**	**13 51 54.7**	**-1.4**
	1.9nm,0.7s,mb4.0						
MAW	**Mawson**	**72.47**	**201**	*e*P	**P**	**13 53 11.2**	**-2.2**
	1.7nm,0.6s,mb4.0						
MAW	**Mawson**	**72.47**	**201**	P	**P**	**13 53 10.9**	**-2.5**
	2.1nm,0.6s,mb4.0,baz=116,slow=3.1,SNR=13						

MEX 30 13:48:53.7±0.5, 1650N×9586W, h26km±22km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.76**	**198**	*i* P	Pb	13 49 05.7	-2.7
HUIG				*i* S	Sb	13 49 15.7	-2.6
OXX	**Oaxaca**	**1.01**	**305**	*i* P	Pn	13 49 10.0	-2.1
OXX				*i* S	Sb	13 49 24.5	-0.9
VHO	**Vista Hermosa**	**1.01**	**305**	*i* P	Pn	13 49 09.8	-2.4
VHO				*i* S	Sb	13 49 21.9	-3.5
UTMO	**Huajuapan**	**2.28**	**306**	*i* P	Pn	13 49 27.8	-1.8
UTMO				*i* S	Sn	13 49 54.0	-2.8

*ISCJB **30** 13:54:58.1±3.5, 1115S±02×1649E±03, h38km±24km, mb3.7/6, Error ellipse: s-maj=50.9km s-min=19.9km az=104.2*
*IDC **30** 13:55:00.2±4.6, 1090S×16483E, h41km±35km, mb3.6/6, mb1 3.8/8, mb1mx3.7/16, mbtmp3.9/8, ML4.2/2, Error ellipse: s-maj=46.0km s-min=26.7km az=54.0*

ISC 30 13:55:00.0±3.0, 1105±02×1649E±02, h41km±20km, n8, σ1§05/8, mb3.7/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.13**	**287**	P	**Pn**	**13 56 15.0**	**+0.6**
	14nm,0.3s,baz=107,slow=4.8,SNR=5.9						
DZM	**Mont Dzumac**	**11.14**	**173**	P	**Pn**	**13 57 36.2**	**-0.5**
	0.9nm,0.3s,baz=187,slow=21,SNR=6.9						
WRA	**Warramunga Arr**	**30.76**	**249**	P	**P**	**14 01 11.9**	**+0.5**
	0.6nm,0.8s,mb3.5,baz=80,slow=9.0,SNR=4.4						
ASAR	**Alice Springs**	**32.11**	**243**	P	**P**	**14 01 22.9**	**-0.4**
	0.6nm,0.7s,mb3.5,baz=66,slow=9.4,SNR=8.2						
FITZ	**Fitzroy Crossi**	**38.63**	**255**	P	**P**	**14 02 18.0**	**-1.3**
	1.3nm,0.7s,mb3.8,baz=99,slow=23,SNR=4.4						
VNDA	**Vanda**	**66.56**	**181**	P	**P**	**14 05 46.6**	**+0.8**
	0.7nm,0.8s,mb3.8,baz=345,slow=8.2,SNR=4.3						
SONM	**Songino Array**	**78.13**	**324**	P	**P**	**14 06 54.1**	**-0.7**
	0.7nm,1.0s,mb3.5,baz=134,slow=4.3,SNR=4.4						
MAW	**Mawson**	**84.50**	**202**	P	**P**	**14 07 29.4**	**+0.8**
	1.8nm,0.8s,mb4.2,baz=79,slow=6.1,SNR=4.9						

*NEIC **30** 14:14:41.7±1.4, 1695S×16739E, h10km, mb4.5/1, Error ellipse: s-maj=30.3km s-min=17.8km az=58.0*
*ISCJB **30** 14:14:44.5±0.9, 1713S±009×16722E±007, h33km, mb4.0/6, MS3.2/3, Error ellipse: s-maj=13.3km s-min=9.0km az=45.5*
*IDC **30** 14:14:45.9±8.0, 1708S×16741E, h41km±74km, mb3.8/5, mb1 4.0/6, mb1mx3.8/15, mbtmp4.0/6, ML3.8/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/24, Error ellipse: s-maj=47.3km s-min=38.7km az=16.0*

ISC 30 14:14:46.2±0.9, 1709S±009×16732E±008, h35km, n12, σ0§98/13, mb4.0/6, MS3.2/3, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKM	**Butte a Klehm**	**1.05**	**123**	⇑*i* P	**Pn**	**14 15 03.4**	**-1.0**
BKM				S	**Sn**	**14 15 18.6**	**+0.8**
DZM	**Mont Dzumac**	**5.02**	**189**	*e*P	**Pn**	**14 15 59.5**	**+0.5**
DZM				*e*S	**Sn**	**14 16 53.6**	**-2.2**
DZM	**Mont Dzumac**	**5.02**	**189**	P	**Pn**	**14 16 00.0**	**+1.1**
	3.4nm,0.3s,baz=292,slow=20,SNR=78						
DZM				S	**Sn**	**14 16 56.2**	**+0.5**
	3.0nm,0.3s,baz=129,slow=21,SNR=6.0						
DZM				LR	LR	14 17 44.8	
	comp=Z,138nm,19.8s,baz=184,slow=36						
PMG	**Port Moresby**	**21.05**	**289**	LR	LR	14 25 46.3	
	comp=Z,46nm,21.4s,MS2.8,baz=109,slow=31						
URZ	**Urewera**	**22.77**	**160**	P	**P**	**14 19 44.0**	**-1.4**
	9.1nm,1.1s,mb4.1,baz=89,slow=20,SNR=3.1						
STKA	**Stephens Creek**	**27.56**	**233**	P	**P**	**14 20 30.8**	**+1.0**
	2.6nm,0.8s,mb3.9,baz=53,slow=8.0,SNR=6.8						
STKA	**Stephens Creek**	**27.56**	**233**	*e*P	**P**	**14 20 30.4**	**+0.7**
WRA	**Warramunga Arr**	**31.38**	**260**	P	**P**	**14 21 03.1**	**-0.5**
	0.9nm,0.7s,mb3.7,baz=90,slow=9.1,SNR=9.4						
ASAR	**Alice Springs**	**31.95**	**253**	P	**P**	**14 21 08.6**	**0.0**
	3.5nm,0.8s,mb4.2,baz=80,slow=8.8,SNR=28						
ASAR				LR	LR	14 33 47.0	
	comp=Z,64nm,21.4s,MS3.3,baz=182,slow=36						
GUMO	**Guam**	**37.70**	**323**	LR	LR	14 34 09.1	
	comp=Z,65nm,21.3s,MS3.4,baz=66,slow=31						
QSPA	**South Pole Qui**	**72.95**	**180**	*e*P	**P**	**14 26 13.4**	**+1.5**
	4.4nm,1.1s,mb4.3						
SONM	**Songino Array**	**84.42**	**324**	P	**P**	**14 27 14.5**	**-0.5**
	0.3nm,0.5s,mb3.7,baz=150,slow=6.2,SNR=3.7						

IDC 30 14:57:36.9±2.4, 1699S×17338W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.8/14, mbtmp3.7/5, MS3.5/2, Ms1 3.5/2, ms1mx2.9/27, Error ellipse: s-maj=190.1km s-min=23.6km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.43**	**27**	Pn	Pn	14 58 22.4	-9.2
	8.4nm,0.3s,baz=192,slow=2.0,SNR=38						
AFI				Sn	Sn	14 58 50.6	-22
	18nm,0.3s,baz=256,slow=23,SNR=5.7						
PPT	**Papeete**	**22.73**	**95**	LR	LR	15 08 59.3	
	comp=Z,75nm,18.8s,baz=350,slow=30						
STKA	**Stephens Creek**	**43.28**	**241**	P	P	15 05 41.0	+0.8
	1.1nm,0.7s,baz=96,slow=10,SNR=2.4						
WRA	**Warramunga Arr**	**49.52**	**258**	P	P	15 06 29.2	-0.1
	0.4nm,0.4s,baz=99,slow=6.8,SNR=22						
ASAR	**Alice Springs**	**49.66**	**253**	P	P	15 06 30.6	+0.3
	0.4nm,0.4s,baz=90,slow=8.1,SNR=20						
NVAR	**Mina Array Bea**	**75.49**	**42**	P	P	15 09 23.4	+0.4
	0.5nm,0.8s,baz=225,slow=8.7,SNR=4.0						
PDAR	**Pinedale Array**	**83.43**	**42**	P	P	15 10 06.8	+0.6
	0.7nm,0.8s,baz=251,slow=4.7,SNR=6.0						
PDAR				LR	LR	15 45 26.2	
	comp=Z,34nm,18.1s,baz=78,slow=34						

*SFS **30** 15:01:13.0, 3822N×436W, h0km, ML2.5*
*CSEM **30** 15:01:14.7±0.1, 3822N×438W, h12km, ML3.1/6, Error ellipse: s-maj=1.4km s-min=1.2km az=12.0*

MDD 30 15:01:13.7±0.2, 3823N×436W, h6km±4km, mbLg2.3/21, Error ellipse: s-maj=3.2km s-min=1.6km az=180.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EADA	**Adamuz**	**0.18**	**251**	Pg	Pg	15 01 17.2	-0.2
	118nm,0.0s,SNR=517						
EADA				Lg		15 01 19.9	
	640nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**0.18**	**251**	Pg	Pg	15 01 17.2	-0.2
	118nm,0.0s,SNR=517						
EADA				Lg		15 01 19.9	
	640nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**0.45**	**98**	Pg	Pg	15 01 21.9	-0.5
	6.6nm,0.1s,SNR=18						
EBAN				Lg		15 01 27.9	
	106nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**0.67**	**174**	Pg	Pg	15 01 26.0	-0.6
	3.8nm,0.1s,SNR=7.9						
ELUQ				Lg		15 01 34.6	
	16nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**0.67**	**174**	Pg	Pg	15 01 26.0	-0.6
	3.8nm,0.1s,SNR=7.9						
ELUQ				Lg		15 01 34.6	
	16nm,0.1s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.09**	**171**	Pg	Pg	15 01 34.4	-0.2
	3.0nm,0.2s,SNR=7.9						
ELOJ				Lg		15 01 48.4	
	11nm,0.1s,SNR=7.9						
EQES	**Quesada**	**1.10**	**112**	Pg	Pg	15 01 34.4	-0.4
	6.3nm,0.1s,SNR=22						
EQES				Lg		15 01 49.2	
	32nm,0.1s,SNR=26						
EQES	**Quesada**	**1.10**	**112**	Pg	Pg	15 01 34.4	-0.4
	6.3nm,0.1s,SNR=22						
EQES				Lg		15 01 49.2	
	32nm,0.1s,SNR=26						
EQUE	**Quentar**	**1.25**	**144**	Pg	Pg	15 01 36.8	-0.9
	1.3nm,0.1s,SNR=26						
EQUE				Lg		15 01 54.1	
	20nm,0.2s,SNR=7.9						
ERON	**Agron**	**1.28**	**160**	Pg	Pg	15 01 37.6	-0.8
	1.6nm,0.2s,SNR=7.9						
ERON				Lg		15 01 55.2	
	6.4nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**1.45**	**106**	Pg	Pg	15 01 40.1	-1.4
	3.4nm,0.1s,SNR=7.9						
EHUE				Lg		15 01 60.0	
	22nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**1.48**	**12**	Pg	Pg	15 01 41.8	-0.2
	9.9nm,0.2s,baz=192,slow=17,SNR=8.5						
ESDC				Lg		15 02 00.9	
	21nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**1.48**	**12**	Pg	Pg	15 01 41.6	-0.4
	9.9nm,0.2s,SNR=8.5						
ESDC				Lg		15 02 00.9	
	21nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**1.51**	**74**	Pn	Pn	15 01 39.6	-1.6
	1.2nm,0.1s,SNR=16						
EVIA				Pg	Pg	15 01 41.6	-1.1
	6.5nm,0.1s,SNR=7.9						
EVIA				Sn	Sn	15 01 58.3	-2.9
	4.4nm,0.1s,SNR=7.9						
EVIA				Lg		15 02 01.1	
	27nm,0.2s,SNR=6.1						
EGUA	**Guajares**	**1.53**	**155**	Pg	Pg	15 01 41.9	-1.1
	0.8nm,0.1s,SNR=7.9						
EGUA				Lg		15 02 02.5	
	1.2nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**1.53**	**155**	Pg	Pg	15 01 41.9	-1.1
	0.8nm,0.1s,SNR=7.9						
EGUA				Lg		15 02 01.7	
	1.2nm,0.2s,SNR=7.9						
LIJA	**Lijar**	**1.56**	**213**	*i* P	Pn	15 01 43.0	+1.1
LIJA				*e*S	Sn	15 02 03.5	+1.1
EMIJ	**Mijas**	**1.69**	**191**	Pg	Pg	15 01 44.5	-1.6
	0.4nm,0.2s,SNR=7.9						
EMIJ				Lg		15 02 07.6	
	14nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**1.69**	**191**	Pg	Pg	15 01 44.5	-1.7
	0.4nm,0.2s,SNR=7.9						
EMIJ				Lg		15 02 06.9	
	14nm,0.4s,SNR=7.9						
EBER	**Berja**	**1.77**	**138**	Pg	Pg	15 01 46.5	-1.1
	1.4nm,0.1s,SNR=7.9						
EBER				Sn	Sn	15 02 05.3	-2.2
	1.7nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.77**	**138**	Pg	Pg	15 01 46.5	-1.0
	1.4nm,0.1s,SNR=7.9						
EBER				Sn	Sn	15 02 08.1	+0.6
	1.7nm,0.2s,SNR=7.9						
ESPR	**Espera**	**1.81**	**222**	Pg	Pg	15 01 47.1	-1.2
	0.9nm,0.2s,SNR=7.9						
ESPR	**Espera**	**1.81**	**222**	Pg	Pg	15 01 47.1	-1.2
	0.9nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.89**	**257**	Pn	Pn	15 01 45.3	-1.1
	0.3nm,0.1s,SNR=12						
EMIN				Pg	Pg	15 01 47.8	-2.1
	1.0nm,0.1s,SNR=7.9						
EMIN				Lg		15 02 13.0	
	10.0nm,0.1s,SNR=18						
EMIN	**Mina Concepcio**	**1.89**	**257**	Pn	Pn	15 01 45.3	-1.1
	0.3nm,0.1s,SNR=12						
EMIN	**Mina Concepcio**	**1.89**	**257**	Pg	Pg	15 01 47.8	-2.1
	1.0nm,0.1s,SNR=7.9						
EMIN				Lg		15 02 13.0	
	10.0nm,0.1s,SNR=18						
EBAD	**Badajoz**	**2.15**	**285**	Pn	Pn	15 01 49.0	-1.1
	1.9nm,0.1s,SNR=10						
EBAD				Sn	Sn	15 02 14.5	-2.5
	4.3nm,0.1s,SNR=7.9						
EBAD				Lg		15 02 20.8	
	10nm,0.1s,SNR=12						
EBAD	**Badajoz**	**2.15**	**285**	Pn	Pn	15 01 49.0	-1.0
	1.9nm,0.1s,SNR=10						
EBAD				Sn	Sn	15 02 13.2	-3.8
	4.3nm,0.1s,SNR=7.9						
EBAD				Lg		15 02 20.8	
	10nm,0.1s,SNR=12						
ETOB	**Tobarra**	**2.24**	**78**	Pn	Pn	15 01 50.8	-0.5
	0.1nm,0.1s,SNR=7.9						
ETOB				Pg	Pg	15 01 55.3	-1.4
	1.3nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	15 02 17.8	-1.5
	1.8nm,0.1s,SNR=7.9						
ETOB				Lg		15 02 25.0	
	12nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**2.24**	**78**	Pn	Pn	15 01 50.8	-0.5
	0.1nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**2.24**	**78**	Pg	Pg	15 01 55.3	-1.4
	1.3nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	15 02 17.8	-1.5
	1.8nm,0.1s,SNR=7.9						
ETOB				Lg		15 02 25.0	
	12nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**2.42**	**4**	Pg	Pg	15 01 57.7	-2.4
	1.2nm,0.3s,SNR=7.9						
GUD				Lg		15 02 28.9	
	8.7nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.49**	**98**	Lg		15 02 32.2	
	14nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**2.57**	**255**	Pn	Pn	15 01 54.3	-1.4
	0.7nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	15 02 24.5	-2.9
	1.4nm,0.1s,SNR=7.9						
EGRO				Lg		15 02 33.7	
	9.0nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**2.57**	**255**	Pn	Pn	15 01 54.3	-1.5
	0.7nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	15 02 23.9	-3.4
	1.4nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**2.62**	**285**	*e*Sg	Sg	15 02 35.3	-2.4
PESTR							
	10nm,0.3s						
PESTR	**Estremoz**	**2.62**	**285**	*e*Sg	Sg	15 02 35.3	-2.4
	10nm,0.3s						
PBEJ	**Beja**	**2.78**	**267**	*e*Sg	Sg	15 02 38.6	-4.3
PBEJ							
	6.0nm,0.2s						
PBEJ	**Beja**	**2.78**	**267**	*e*Sg	Sg	15 02 38.6	-4.3
	6.0nm,0.2s						
PCBR	**Castelo Branco**	**2.92**	**304**	*e*Sn	Sn	15 02 34.0	-1.9
PCBR				*e*Sg	Sg	15 02 45.6	-1.8
PCBR							
	6.9nm,0.2s						
PCBR	**Castelo Branco**	**2.92**	**304**	*e*Sn	Sn	15 02 34.0	-1.9
PCBR				*e*Sg	Sg	15 02 45.6	-1.8
	6.9nm,0.2s						
ECHE	**Chera**	**2.97**	**62**	Pg	Pg	15 02 10.3	-0.4
	1.9nm,0.2s,SNR=7.9						
ECHE				Lg		15 02 50.9	
	4.6nm,0.7s,SNR=7.9						
EBEN	**Beniarda**	**3.28**	**80**	Lg		15 02 57.6	
	9.3nm,0.5s,SNR=7.9						
ECAL	**Calabor**	**4.13**	**335**	Lg		15 03 25.2	
	1.9nm,0.5s,SNR=7.9						
ELOB	**Lobios**	**4.62**	**323**	Sn	Sn	15 03 13.3	-4.5
	0.6nm,0.1s,SNR=7.9						
ELOB				Lg		15 03 40.9	
	1.0nm,0.2s,SNR=7.9						

*IDC **30** 15:02:17.6±1.7, 1688S×16738E, h0km, mb4.3/6, mb1 4.5/8, mb1mx4.3/16, mbtmp4.4/8, ML4.4/2, MS3.5/8, Ms1 3.5/8, ms1mx3.2/25, Error ellipse: s-maj=43.1km s-min=24.5km az=104.0*
*ISCJB **30** 15:02:18.2±3.7, 1688S±009×16727E±008, h13km±24km, mb4.3/9, MS3.4/6, Error ellipse: s-maj=18.0km s-min=8.1km az=71.6*
*NEIC **30** 15:02:20.7±5.7, 1689S×16737E, h20km±35km, mb4.5/4, Error ellipse: s-maj=23.3km s-min=11.7km az=77.0*

ISC 30 15:02:21.2±3.3, 1696S±007×16737E±007, h22km±25km, n39, σ0§82/26, mb4.3/9, MS3.4/6, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKM	**Butte a Klehm**	**1.09**	**130**	⇑*i* P	**Pn**	**15 02 40.8**	**-0.3**
BKM				S	**Sn**	**15 02 55.7**	**+0.2**
DZM	**Mont Dzumac**	**5.16**	**190**	*e*P	**Pn**	**15 03 37.4**	**+0.4**
DZM				*e*S	**Sn**	**15 04 33.6**	**-2.3**
DZM	**Mont Dzumac**	**5.16**	**190**	Pn	**Pn**	**15 03 37.3**	**+0.3**
	11nm,0.3s,baz=312,slow=16,SNR=186						
DZM				Sn	**Sn**	**15 04 35.0**	**-1.0**
	6.5nm,0.3s,baz=120,slow=22,SNR=8.9						
DZM				LR	LR	15 05 30.1	
	comp=Z,311nm,19.0s,baz=202,slow=37						
HNR	**Honiara**	**10.40**	**315**	Pn	**Pn**	**15 04 48.3**	**-0.6**
	3.3nm,0.3s,baz=90,slow=8.0,SNR=8.2						
RAO	**Raoul Island**	**18.22**	**135**	LR	LR	15 11 34.3	
	comp=Z,128nm,20.3s,baz=26,slow=30						
CTA	**Charters Tower**	**20.26**	**258**	P	**P**	**15 06 56.9**	**+1.9**
	6.2nm,1.0s,baz=74,slow=7.4,SNR=3.0						
CTA				LR	LR	15 13 26.4	
	comp=Z,91nm,18.2s,MS3.2,baz=236,slow=33						
CTA	**Charters Tower**	**20.26**	**258**	P	**P**	**15 06 56.9**	**+1.9**
CTA				LR	LR	15 13 26.4	
AFI	**Afiamalu**	**20.33**	**84**	LR	LR	15 11 58.9	
	comp=Z,68nm,19.0s,MS3.0,baz=265,slow=29						
PMG	**Port Moresby**	**21.05**	**288**	LR	LR	15 14 04.3	
	comp=Z,133nm,20.5s,MS3.3,baz=254,slow=34						
CNB	**Canberra Magne**	**24.33**	**218**	*e*P	**P**	**15 07 38.9**	**+1.7**
	16nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**27.68**	**233**	*e*P	**P**	**15 08 08.6**	**+1.1**
	6.8nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**27.68**	**233**	P	**P**	**15 08 08.4**	**+1.0**
	6.2nm,0.8s,mb4.3,baz=63,slow=8.4,SNR=14						
STKA				LR	LR	15 17 43.3	
	comp=Z,98nm,21.3s,MS3.4,baz=204,slow=33						
STKA	**Stephens Creek**	**27.68**	**233**	*e*P	**P**	**15 08 08.5**	**+1.0**
STKA				*e*P		15 08 08.6	
WB2	**Warramunga Arr**	**31.44**	**259**	*e*P	**P**	**15 08 39.7**	**-1.1**
WB2	**Warramunga Arr**	**31.44**	**259**	*e*P	**P**	**15 08 40.3**	**-0.5**
WRAB	**Tennant Creek**	**31.44**	**259**	*e*P	**P**	**15 08 40.5**	**-0.2**
	1.2nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**31.45**	**259**	P	**P**	**15 08 40.4**	**-0.5**
	2.1nm,0.8s,mb4.0,baz=90,slow=8.9,SNR=17						
WRA				PcP	PcP	15 11 34.8	+1.0
	1.4nm,1.1s,baz=86,slow=3.3,SNR=4.8						
AS31	**Alice Springs**	**32.03**	**252**	*e*P	**P**	**15 08 45.6**	**-0.4**
AS31				*e*		15 08 56.3	
ASAR	**Alice Springs**	**32.03**	**252**	P	**P**	**15 08 45.6**	**-

KMNR	**Kamenistaya**	**1.49**	**322**	*e*P	**Pn**	**15 04 11.4**	**-0.5**
KMNR				*i* S	**Sn**	**15 04 30.7**	**-0.2**
KII	**Karymskiy**	**1.52**	**249**	P	**Pn**	**15 04 11.8**	**-0.6**
KII				S	**Sn**	**15 04 30.9**	**-0.7**
KII	**Karymskiy**	**1.52**	**249**	*e*P	**Pn**	**15 04 11.8**	**-0.6**
KII				*i* S	**Sn**	**15 04 30.9**	**-0.7**
ZLN	**Zelenaya**	**1.55**	**337**	*i* P	**Pn**	**15 04 12.7**	**0.0**
ZLN				*i* S	**Sn**	**15 04 32.7**	**+0.4**
KPT	**Kopyto**	**1.67**	**326**	*i* P	**Pn**	**15 04 14.2**	**-0.1**
KPT				*i* S	**Sn**	**15 04 35.3**	**+0.2**
KBTR	**Krutoberegovo**	**1.71**	**18**	P	**Pn**	**15 04 14.5**	**-0.4**
KBTR				S	**Sn**	**15 04 36.1**	**-0.1**
KBTR	**Krutoberegovo**	**1.71**	**18**	*e*P	**Pn**	**15 04 14.5**	**-0.4**
KBTR				*i* S	**Sn**	**15 04 36.1**	**-0.1**
KRSR	**Krestovskiy**	**1.79**	**336**	*e*P	**Pn**	**15 04 15.8**	**-0.2**
KRSR				*i* S	**Sn**	**15 04 38.4**	**+0.2**
KOZR	**Kozyr**	**1.85**	**323**	PN	**Pn**	**15 04 17.2**	**+0.3**
KOZR				S	**Sn**	**15 04 40.3**	**+0.5**
SPN	**Mys Shipunski**	**1.85**	**217**	P	**Pn**	**15 04 16.4**	**-0.5**
SPN				S	**Sn**	**15 04 38.3**	**-1.5**
SPN	**Mys Shipunski**	**1.85**	**217**	*e*P	**Pn**	**15 04 16.4**	**-0.5**
SPN				*i* S	**Sn**	**15 04 38.3**	**-1.5**
KLY	**Klyuchi**	**1.86**	**339**	P	**Pn**	**15 04 16.2**	**-0.7**
KLY				S	**Sn**	**15 04 39.1**	**-0.8**
KLY	**Klyuchi**	**1.86**	**339**	*i* P	**Pn**	**15 04 16.2**	**-0.7**
KLY				*i* S	**Sn**	**15 04 39.1**	**-0.8**
KOZ	**Kozyrevsk**	**1.86**	**323**	P	**Pn**	**15 04 17.2**	**+0.2**
KOZ				S	**Sn**	**15 04 40.3**	**+0.4**
KOZ	**Kozyrevsk**	**1.86**	**323**	*i* P	**Pn**	**15 04 17.2**	**+0.2**
KOZ				*i* S	**Sn**	**15 04 40.3**	**+0.4**
NLC	**Nalytchevo**	**2.06**	**227**	P	**Pn**	**15 04 18.8**	**-1.0**
NLC				S	**Sn**	**15 04 43.8**	**-1.2**
NLC	**Nalytchevo**	**2.06**	**227**	P	**Pn**	**15 04 18.8**	**-1.0**
NLC				*i* S	**Sn**	**15 04 43.8**	**-1.2**
SRKR	**Sorokina**	**2.10**	**349**	*i* P	**Pn**	**15 04 21.1**	**+0.8**
SRKR				*i* S	**Sn**	**15 04 46.4**	**+0.5**
SRDR	**Sredinnyy**	**2.12**	**326**	*i* P	**Pn**	**15 04 21.2**	**+0.7**
SRDR				*i* S	**Sn**	**15 04 46.9**	**+0.6**
AVH	**Avacha**	**2.28**	**235**	*e*P	**Pn**	**15 04 23.9**	**+1.1**
AVH				*i* S	**Sn**	**15 04 51.7**	**+1.4**
PET	**Petropavlovsk**	**2.47**	**232**	P	**Pn**	**15 04 25.9**	**+0.5**
PET				S	**Sn**	**15 04 55.3**	**+0.3**
PET	**Petropavlovsk**	**2.47**	**232**	*e*P	**Pn**	**15 04 25.9**	**+0.5**
PET				*i* S	**Sn**	**15 04 55.3**	**+0.3**
GNL	**Ganaly**	**2.48**	**250**	*e*P	**Pn**	**15 04 26.1**	**+0.6**
GNL				*i* S	**Sn**	**15 04 55.7**	**+0.5**
RUS	**Russkaya**	**2.95**	**224**	P	**Pn**	**15 04 31.9**	**-0.1**
RUS				S	**Sn**	**15 05 06.2**	**-0.6**
RUS	**Russkaya**	**2.95**	**224**	*e*P	**Pn**	**15 04 31.9**	**-0.1**
RUS				*i* S	**Sn**	**15 05 06.2**	**-0.6**
GRL	**Gorelyy**	**3.05**	**229**	*e*P	**Pn**	**15 04 34.6**	**+1.2**
GRL				*i* S	**Sn**	**15 05 11.1**	**+1.8**

*ISCJB **30** 15:57:56.6±0.5, 4.12S×004×7654W±0.10, h131km±8km, mb3.6/5, Error ellipse: s-maj=16.2km s-min=6.2km az=151.1*
*NEIC **30** 15:57:56.8±1.5, 4.07S×7654W, h115km±14km, mb3.5/2, Error ellipse: s-maj=22.0km s-min=11.1km az=75.0*
*IDC **30** 15:57:56.2±3.2, 4.03S×7664W, h108km±31km, mb3.6/5, mb1 3.8/9, mb1mx3.6/25, mbtmp4.0/9, Error ellipse: s-maj=34.3km s-min=20.1km az=51.0*
*IGQ **30** 15:58:18.1, 2.45S×7727W, h12km±6km, Mb4.4, Ms4.2, Error ellipse: s-maj=10.3km s-min=4.0km az=110.1*

ISC 30 15:57:57.8±0.5, 4.12S±004×7654W±010, h125km±8km, n46, σ1§05/49, mb3.8/5, 13C-4D, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATA	**Patacocha**	**3.21**	**324**	⇑P	**Pn**	**15 58 46.0**	**-0.9**
ARRY	**Arrayan**	**3.22**	**324**	⇑P	**Pn**	**15 58 45.8**	**-1.2**
ULBA	**Ulba**	**3.24**	**325**	⇑P	**Pn**	**15 58 46.4**	**-0.9**
RETU	**Refugio**	**3.26**	**324**	⇓P	**Pn**	**15 58 46.8**	**-0.8**
RUN5	**Runtun**	**3.27**	**325**	⇑P	**Pn**	**15 58 46.8**	**-1.0**
RUN5				S	**Sn**	**15 59 13.7**	**-13**
JUIV	**Juive**	**3.29**	**324**	⇑P	**Pn**	**15 58 47.0**	**-1.0**
IGUA	**Igualata**	**3.34**	**321**	⇑P	**Pn**	**15 58 49.3**	**+0.6**
ATAH	**Atahualpa** 20nm,0.3s,baz=23,slow=11,SNR=170	**3.41**	**213**	P	**Pn**	**15 58 51.3**	**+1.8**
PISA	**Pisayambo**	**3.55**	**329**	⇑P	**Pn**	**15 58 50.9**	**-0.6**
TAMB	**Tambo**	**3.86**	**332**	⇑P	**Pn**	**15 58 55.3**	**-0.2**
VC1	**Cotopaxi 1**	**3.92**	**332**	⇑P	**Pn**	**15 58 56.5**	**+0.1**
CAMI	**Rancho Maria**	**3.94**	**330**	P	**Pn**	**15 58 57.8**	**+1.2**
NAS1	**Nasa**	**3.96**	**331**	⇑P	**Pn**	**15 58 58.1**	**+1.3**
ANTI	**Antisana**	**3.98**	**336**	⇑P	**Pn**	**15 58 56.5**	**-0.7**
ANTI				S	**Sn**	**15 59 25.0**	**-18**
LAV3	**Lava3-Reventad**	**4.14**	**345**	⇓P	**Pn**	**15 58 58.5**	**-0.8**
CONE	**Cono NE Rev Vo**	**4.17**	**345**	⇓P	**Pn**	**15 58 58.5**	**-1.1**
CAYR	**Refugio Cayamb**	**4.36**	**340**	P	**Pn**	**15 59 02.6**	**+0.5**
CAYR				S	**Sn**	**15 59 33.4**	**-19**
JUA2	**San Juan 2**	**4.39**	**332**	P	**Pn**	**15 59 03.4**	**+0.8**
CAYA	**Cayambe**	**4.40**	**341**	⇑P	**Pn**	**15 59 03.2**	**+0.4**
CAYA				S	**Sn**	**15 59 34.5**	**-19**
GGP	**Refugio Guagua**	**4.42**	**332**	⇑P	**Pn**	**15 59 03.5**	**+0.6**
TERV	**Terraza Guagua**	**4.42**	**332**	P	**Pn**	**15 59 04.5**	**+1.4**
PINO	**Pino**	**4.44**	**332**	P	**Pn**	**15 59 04.3**	**+1.0**
PINO				S	**Sn**	**15 59 37.3**	**-17**
YANA	**Yana**	**4.46**	**333**	⇓P	**Pn**	**15 59 04.2**	**+0.7**
YANA				S	**Sn**	**15 59 36.7**	**-18**
COTA	**Cotacachi**	**4.77**	**338**	P	**Pn**	**15 59 08.7**	**+1.0**
COTA				S	**Sn**	**15 59 52.5**	**-10**
NNA	**Nana**	**7.83**	**182**	P	**Pn**	**15 59 48.7**	**-0.2**
NNA	**Nana** 24nm,0.3s,baz=124,slow=17,SNR=6.9	**7.83**	**182**	P	**Pn**	**16 01 14.7**	**-1.2**
NNA	**Nana**	**7.83**	**182**	P	**Pn**	**15 59 48.7**	**-0.2**
NNA				S	**Sn**	**16 01 14.7**	**-1.2**
ROJC	**El Rosal**	**9.18**	**14**	P	**Pn**	**16 00 07.6**	**+0.4**
SAML	**Samuel** 1.5nm,0.8s	**14.11**	**111**	*e*P	**Pn**	**16 01 10.0**	**-2.0**
SAML				*e*S	**Sn**	**16 03 40.5**	**-7.3**
LPAZ	**La Paz** 0.1nm,0.3s,baz=335,slow=19,SNR=3.3	**14.65**	**146**	P	**Pn**	**16 01 18.6**	**-0.3**
LPAZ	**La Paz** 1.6nm,0.4s	**14.65**	**146**	*e*P	**Pn**	**16 01 17.8**	**-1.1**
SIV	**San Ignacio** 0.4nm,0.3s,baz=308,slow=12,SNR=9.6	**19.25**	**129**	P	**P**	**16 02 14.7**	**+2.4**
LVC	**Limon Verde**	**19.82**	**159**	P	**P**	**16 02 18.9**	**+0.4**
MDZ	**Mendoza**	**29.51**	**167**	*e*P	**P**	**16 03 53.6**	**+3.4**
ANMO	**Albuquerque** 0.6nm,0.4s,mb3.8,baz=146,slow=11,SNR=4.8	**47.97**	**327**	P	**P**	**16 06 23.4**	**-0.4**
PDAR	**Pinedale Array** 0.5nm,0.8s,mb3.6,baz=101,slow=7.7,SNR=4.8	**55.41**	**331**	P	**P**	**16 07 18.6**	**-0.5**
YKA	**Yellowknife Ar** 0.7nm,0.5s,mb3.8,baz=139,slow=6.7,SNR=4.1	**72.45**	**343**	P	**P**	**16 09 09.1**	**-1.5**
TORD	**Torodi Ar. Bea** 0.3nm,0.3s,mb3.6,baz=259,slow=4.5,SNR=7.2	**79.52**	**76**	P	**P**	**16 09 52.2**	**+1.6**
TORD				pP	pP	16 10 17.1	-5.0
TORD	**Torodi Ar. Bea** 0.5nm,0.4s,baz=278,slow=5.6,SNR=6.6	**79.52**	**76**	P	**P**	**16 09 52.2**	**+1.6**
TORD				pP	pP	16 10 17.1	-5.0
INK	**Inuvik** 4.3nm,1.1s,mb4.2,baz=156,slow=5.9,SNR=3.6	**82.19**	**342**	P	**P**	**16 10 04.2**	**-0.6**
ZAL	**Zalesovo** 0.7nm,0.5s,baz=173,slow=14,SNR=3.0	**128.04**	**14**	PKP	PKPdf	16 16 49.8	+0.8
STKA	**Stephens Creek** 0.6nm,0.6s,baz=295,slow=23,SNR=2.8	**129.05**	**223**	PKP	PKPdf	16 16 52.0	+1.1
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=324,slow=2.9,SNR=3.6	**133.70**	**20**	PKP	PKPdf	16 16 59.8	+0.1
MKAR				sPKP		16 17 39.4	
	0.4nm,0.4s,baz=298,slow=2.6,SNR=4.4						
MKAR	**Makanchi Array**	**133.70**	**20**	PKP	PKPdf	16 16 59.8	+0.1
MKAR				sPKP		16 17 39.4	
ASAR	**Alice Springs** 0.2nm,0.6s,baz=127,slow=3.1,SNR=4.9	**139.46**	**226**	PKhKP		16 17 01.0	
ASAR				PKP	PKPdf	16 17 11.4	+1.1
	0.2nm,0.6s,baz=116,slow=3.2,SNR=4.5						
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=121,slow=3.2,SNR=17	**141.37**	**231**	PKhKP		16 17 08.8	
WRA				PKP	PKPdf	16 17 17.1	+3.3
	0.7nm,0.5s,baz=123,slow=1.7,SNR=16						
FITZ	**Fitzroy Crossi** 2.8nm,0.8s,baz=164,slow=6.1,SNR=5.1	**148.92**	**224**	PKPbc	PKPbc	16 17 32.0	+1.2

*JMA **30** 16:00:07.8±0.2, 3025N×13772E, h538km, M3.4*
*IDC **30** 16:00:08.9±4.6, 2989N×13689E, h436km±108km, mb2.7/2, mb1 2.9/5, mb1mx2.7/23, mbtmp3.7/5, Error ellipse: s-maj=167.2km s-min=19.7km az=67.0*
*ISCJB **30** 16:00:09.4±0.7, 3032N±008×1378E±0.1, h517km±13km, mb3.1/2, Error ellipse: s-maj=20.1km s-min=10.1km az=134.5*

ISC 30 16:00:10.6±0.7, 3035N±008×1379E±01, h508km±13km, n15, σ1§01/21, mb3.0/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2** 4.2nm,0.3s,baz=71,slow=23,SNR=7.6	**3.20**	**30**	P	**P**	**16 01 25.0**	**+1.4**
JHJ				S	**S**	**16 02 25.4**	**+2.4**
	6.2nm,0.3s,baz=252,slow=23,SNR=4.4						
JHJ2	**Mitsune**	**3.21**	**30**	P	**P**	**16 01 24.8**	**+1.2**
JWZ	**Kozaga**	**3.66**	**330**	P	**P**	**16 01 26.9**	**0.0**
JIE	**Ise**	**4.15**	**346**	P	**P**	**16 01 31.5**	**+0.8**
JAI	**Aioi**	**4.50**	**321**	P	**P**	**16 01 33.3**	**-0.3**
CBIJ	**Chichi jima** 2.3nm,0.3s,baz=98,slow=22,SNR=9.8	**4.98**	**130**	P	**P**	**16 01 38.0**	**+0.1**
CBIJ				S	**S**	**16 02 47.8**	**-1.3**
	8.2nm,0.3s,baz=283,slow=22,SNR=12						
CBIJ	**Chichi jima**	**4.98**	**130**	P	**P**	**16 01 38.0**	**+0.2**
CBIJ				*e*S	**P**	**16 02 47.5**	**-1.5**
JTO	**Tosashimizu**	**5.00**	**301**	P	**P**	**16 01 36.9**	**-1.1**
JOD2	**Odawara 2**	**5.00**	**11**	P	**P**	**16 01 38.3**	**+0.3**
JOD2				*e*S	**S**	**16 02 49.5**	**+0.1**
BSO1	**Boso 1**	**5.03**	**31**	*e*S	**S**	**16 02 48.7**	**-1.0**
JRY	**Ryogami san**	**5.71**	**8**	P	**P**	**16 01 44.6**	**+0.1**
JRY				*e*S	**S**	**16 02 59.1**	**-2.2**
MJAR	**Matsushiro Arr** 1.4nm,0.3s,baz=179,slow=10.0,SNR=17	**6.18**	**2**	P	**P**	**16 01 48.3**	**-0.6**
MAT	**Matsushiro**	**6.18**	**2**	P	**P**	**16 01 48.3**	**-0.7**
MAT				*e*S	**S**	**16 03 10.0**	**+0.6**
WRA	**Warramunga Arr** 0.6nm,0.4s,mb3.3,baz=0.1,slow=7.7,SNR=29	**50.12**	**184**	P	**P**	**16 08 18.3**	**-0.3**
ASAR	**Alice Springs** 0.2nm,0.4s,mb2.8,baz=22,slow=11,SNR=10	**53.84**	**185**	P	**P**	**16 08 46.4**	**+1.0**

IDC 30 16:03:10.9±16.0, 2549S×17788W, h522km±134km, mb3.0/4, mb1 3.2/5, mb1mx3.0/13, mbtmp4.0/5, Error ellipse: s-maj=308.4km s-min=95.8km az=72.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera** 0.5nm,0.3s,baz=300,slow=9.5,SNR=4.6	**13.42**	**197**	P	P	16 06 04.4	+0.1
CTA	**Charters Tower** 3.0nm,0.4s,baz=106,slow=11,SNR=5.5	**33.43**	**272**	P	P	16 09 06.8	+0.6
STKA	**Stephens Creek** 0.8nm,0.4s,baz=85,slow=8.7,SNR=3.7	**35.96**	**250**	P	P	16 09 25.9	-1.4
ASAR	**Alice Springs** 0.5nm,0.5s,baz=93,slow=7.7,SNR=19	**43.70**	**262**	P	P	16 10 29.9	+0.5
ASPA	**Alice Springs**	**43.70**	**262**	*e*P	P	16 10 29.8	+0.4
WB2	**Warramunga Arr**	**44.23**	**267**	*e*P	P	16 10 34.3	+0.8
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=103,slow=7.5,SNR=6.6	**44.24**	**267**	P	P	16 10 33.9	+0.4

*ISCJB **30** 16:04:50.8±0.6, 5146N±003×16.12E±003, h0km, Error ellipse: s-maj=5.0km s-min=2.7km az=30.7*
*NEIC **30** 16:04:52.0±0.6, 5153N×16.14E, h5km, ML2.8(SZGRF), Error ellipse: s-maj=7.0km s-min=4.7km az=202.0*
*CSEM **30** 16:04:52.8±0.2, 5149N×16.10E, h0km, ML2.8, Error ellipse: s-maj=3.6km s-min=1.7km az=13.0, Suspected Mining induced.*
*WAR **30** 16:04:53.2, 5149N×1609E, ML2.5, Mining Induced*
*PRU **30** 16:04:53.0, 5148N×16.13E, h0km*
*VIE **30** 16:04:54.0±0.5, 5132N×16.19E, h0km, mb2.2/2, ML2.7/3, Error ellipse: s-maj=3.0km s-min=2.5km az=178.0 62 km WNW of Breslau Suspected Mining induced.*

ISC 30 16:04:51.8±0.6, 5152N±003×1612E±003, h0km, n27, σ0§67/54, 2C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**171**	⇓*i*Pg	**Pg**	**16 05 05.2**	**+0.3**
KSP				*e*Sg	**Sg**	**16 05 13.9**	**+0.1**
UPC	**Upice**	**1.01**	**184**	*e*PG	**Pg**	**16 05 11.2**	**0.0**
PVCC	**Panska Ves**	**1.39**	**225**	*e*PG	**Pg**	**16 05 18.7**	**+0.2**
BRG	**Berggiesshubel**	**1.51**	**246**	PN	**Pn**	**16 05 20.1**	**-0.1**
BRG				PG	**Pg**	**16 05 20.9**	**+0.1**
BRG	37nm,0.4s			SG	**Sg**	**16 05 41.0**	**+0.6**
BRG	**Berggiesshubel**	**1.51**	**246**	Pn	**Pn**	**16 05 20.0**	**-0.1**
BRG	**Berggiesshubel**	**1.51**	**246**	Pg	**Pg**	**16 05 20.9**	**+0.1**
PRU	**Pruhonice**	**1.83**	**214**	*e*PN	**Pn**	**16 05 24.7**	**+0.2**
PRU				*e*PG	**Pg**	**16 05 26.9**	**0.0**
PRU	23nm,0.6s			*e*SG	**Sg**	**16 05 50.3**	**-0.3**
CLL	**Collm**	**1.96**	**265**	*e*PN	**Pn**	**16 05 26.0**	**-0.3**
CLL				*i* PG	**Pg**	**16 05 28.8**	**-0.6**
CLL				*i*		16 05 32.6	
CLL				*i* SG	**Sg**	**16 05 54.5**	**-0.4**
CLL				*i*		16 06 04.0	
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**	**16 05 26.0**	**-0.3**
CLL				*i* Pg	**Pg**	**16 05 28.8**	**-0.6**
CLL				*i* Sg	**Sg**	**16 05 54.5**	**-0.4**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**16 05 25.9**	**-0.5**
MORC				*e*Sg	**Sg**	**16 05 53.5**	**-1.5**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**16 05 25.9**	**-0.4**
MORC				*e*Sg	**Sg**	**16 05 53.5**	**-1.4**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PG	**Pg**	**16 05 31.5**	**-0.9**
OKC	22nm,0.7s			*e*SG	**Sg**	**16 05 58.8**	**-1.1**
VRAC	**Vranov**	**2.23**	**172**	*e*Pn	**Pn**	**16 05 30.8**	**+0.8**
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**16 05 36.4**	**+0.6**
NKC				*e*PG	**Pg**	**16 05 42.3**	**-0.4**
NKC	33nm,0.3s			*e*SG	**Sg**	**16 06 17.8**	**+0.6**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**16 05 42.9**	**0.0**
OJC				*e*Sg	**Sg**	**16 06 18.4**	**+0.8**
OJC				*e*Sg	**Sg**	**16 06 18.4**	**+0.8**
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PN	**Pn**	**16 05 39.1**	**0.0**
KHC				*e*PG	**Pg**	**16 05 45.1**	**-2.1**
KHC				*e*SN	**Sn**	**16 06 14.1**	**-0.4**
KHC	16nm,0.8s			*e*SG	**Sg**	**16 06 25.2**	**+0.5**
MOX	**Moxa**	**2.97**	**255**	*e*Pg	**Pg**	**16 05 48.2**	**-0.5**
MOX				*e*Sg	**Sg**	**16 06 28.1**	**+0.8**
GEC2	**GERESS Array S**	**3.09**	**211**	*e*Pn	**Pn**	**16 05 42.4**	**+0.5**
WET	**Wettzell**	**3.16**	**222**	*e*Pn	**Pn**	**16 05 42.7**	**0.0**
VYHS	**Vyhne**	**3.50**	**149**	*e*Pn	**Pn**	**16 05 48.2**	**+0.8**
VYHS				*e*		16 05 59.3	
VYHS	**Vyhne**	**3.50**	**149**	*e*Pn	**Pn**	**16 05 48.2**	**+0.8**
VYHS				*e*		16 05 59.3	
VYHS				*e*Sg	**Sg**	**16 06 44.1**	**-0.1**
VYHS	**Vyhne**	**3.50**	**149**	*e*Pn	**Pn**	**16 05 48.2**	**+0.8**
VYHS				*e*Sg	**Sg**	**16 06 44.1**	**-0.1**
CONA	**Conrad Observa**	**3.60**	**183**	⇓*i*Pn	**Pn**	**16 05 49.6**	**+0.8**
CONA	6.8nm,0.4s			⇓*i*Sg	**Sg**	**16 06 47.1**	**-0.2**
BSD	**Bornholm Skovb**	**3.67**	**349**	*i* P	**Pn**	**16 05 49.1**	**-0.7**
BSD				*e*S	**Sn**	**16 06 18.9**	**-15**
MOA	**Molln**	**3.87**	**199**	⇑*i*Pn	**Pn**	**16 05 52.8**	**+0.3**
MOA	comp=Z,9.6nm,0.7s			⇑*i*Sg	**Sg**	**16 06 56.3**	**+0.3**
MOA	**Molln**	**3.87**	**199**	Pn	**Pn**	**16 05 52.8**	**+0.4**
MOA				*i* Sg	**Sg**	**16 06 56.2**	**+0.2**
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*P	**Pb**	**16 06 06.9**	**+5.6**
STHS				*e*Sg	**Sg**	**16 06 58.3**	**+1.5**

*BJI **30** 16:13:34.3, 1833S×6548E, h10km, mB5.1, mb4.7, Ms5.3, Msz5.0*
*ISCJB **30** 16:13:37.7±1.9, 1775S×007×6592E±0.05, h10km±11km, mb4.6/47, MS4.9/44, Error ellipse: s-maj=12.3km s-min=8.5km az=160.4*
*MOS **30** 16:13:38.1±2.2, 1770S×6594E, h10km, mb5.2/10, Error ellipse: s-maj=15.6km s-min=10.7km az=92.3*
*NEIC **30** 16:13:39.7±0.5, 1765S×6594E, h10km, mb4.8/11, MS4.6/8, MW5.6, Error ellipse: s-maj=14.7km s-min=12.5km az=17.0, Moment Tensor Solution. s7 Moment tensor: Scale 10^{17}Nm; M_{rr}0.65; $M_{\theta\theta}$-2.98; $M_{\phi\phi}$2.33; $M_{r\theta}$-1.32; $M_{\theta\phi}$2.20; $M_{r\phi}$0.13; Best double couple: $M_0$3.60000×10^{17} NP1:ϕ_s65.00000°, δ85.00000°, λ-17.00000°. NP2:ϕ_s156.00000°, δ73.00000°, λ-175.00000°. Principal axes: T 3.1700, Plg8.0000°, Azm111.0000°; N 0.9500, Plg73.0000°, Azm229.0000°; P -4.1200, Plg15.0000°, Azm19.0000°;*
*HRVD **30** 16:13:39.7±0.1, 1751S×6580E, h22km, MW5.7/98, Centroid moment Tensor Solution. LP body waves: s87,c160;Mantle waves: s98,c275; Half duration: 1§7 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.44±.04; $M_{\theta\theta}$-3.64±.04; $M_{\phi\phi}$4.09±.05; $M_{r\theta}$-0.39±.07; $M_{\theta\phi}$1.82±.04; $M_{r\phi}$-0.22±.08; Best double couple: $M_0$4.29600×10^{17} NP1:ϕ_s148.00000°, δ84.00000°, λ-179.00000°. NP2: ϕ_s58.00000°, δ89.00000°, λ-6.00000°. Principal axes: T 4.5150, Plg3.0000°, Azm103.0000°; N -0.4310, Plg84.0000°, Azm226.0000°; P -4.0770, Plg5.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **30** 16:13:40.2±0.6, 1751S×6651E, h0km, mb4.2/16, mb1 4.3/16, mb1mx4.3/21, mbtmp4.2/16, MS4.8/23, Ms1 4.8/23, ms1mx4.8/27 Error ellipse: s-maj=24.6km s-min=14.9km az=55.0*
*SZGRF **30** 16:13:43.7, 1695S×6778E, h33km, mb4.4, MS4.5, Mid-Indian Ridge*

ISC 30 16:13:39.8±2.4, 1765S±007×6597E±007, h8km±14km, h20km±2.4km:pP-P, n110, σ1§34/95, mb4.6/47, MS4.9/44, 1D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo** 1.0nm,0.3s,baz=91,slow=13,SNR=10	**17.88**	**264**	P	**Pn**	**16 17 50.2**	**+1.4**
OPO				S	**Sn**	**16 21 02.2**	**-6.0**
	0.6nm,0.3s,baz=70,slow=17,SNR=3.7						
KMBO	**Kilima Mbogo** 4.1nm,0.9s,mB4.4,baz=74,slow=7.7,SNR=9.6	**32.65**	**297**	P	**P**	**16 20 10.8**	**-1.4**
KMBO				LR	LR	16 31 52.6	
	comp=Z,2μm,18.0s,MS4.9,baz=100,slow=33						
KMBO	**Kilima Mbogo**	**32.65**	**297**	P	**P**	**16 20 10.8**	**-1.4**
KMBO				LR	LR	16 31 52.6	
LSZ	**Lusaka**	**36.27**	**268**	*e*P	**P**	**16 20 42.5**	**-1.0**
LSZ	comp=Z,14nm,1.2s,mb4.8			pmax	pmax		
LSZ	comp=Z,1μm,19.0s,MS4.8			MLR	MLR		
LSZ	**Lusaka**	**36.27**	**268**	*e*P	**P**	**16 20 42.5**	**-1.1**

PGC 30 15:45:40.5, 4876N×12903W, h10km, MLSn3.2/1, Mw3.8, 231km southwest of Tofino, Bc West of Vancouver Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.62**	**30**	Pn	Pn	15 46 06.9	-2.2
BPBC				Sn	Sn	15 46 26.3	-3.8
	comp=Z,31nm,0.1s						
BPBC				Trac		15 46 27.2	
	comp=Z,31nm,0.1s						
EDB	**Eliza Dome**	**1.68**	**48**	Pn	Pn	15 46 07.6	-2.3
EDB				Sn	Sn	15 46 26.8	-4.6
EDB				Trac		15 46 28.8	
	comp=Z,14nm,0.2s						
ETB	**Estevan Point**	**1.75**	**68**	Pn	Pn	15 46 09.3	-1.7
ETB				Sn	Sn	15 46 30.1	-3.2
	comp=Z,15nm,0.3s						
ETB				Trac		15 46 33.4	
	comp=Z,15nm,0.3s						
HOLB	**Holberg**	**1.97**	**17**	Pn	Pn	15 46 11.8	-2.1
HOLB				Sn	Sn	15 46 34.9	-3.9
	comp=Z,16nm,0.1s						
HOLB				Trac		15 46 38.9	
	comp=Z,16nm,0.1s						
MAYB	**Maynard**	**2.04**	**36**	Pn	Pn	15 46 13.3	-1.7
MAYB				Sn	Sn	15 46 37.4	-3.0
	comp=Z,8.0nm,0.2s						
MAYB				Trac		15 46 39.0	
	comp=Z,8.0nm,0.2s						
WOSB	**Woss**	**2.13**	**48**	Pn	Pn	15 46 14.8	-1.3
WOSB				Sn	Sn	15 46 38.5	-4.2
	comp=Z,13nm,0.2s						
WOSB				Trac		15 46 41.3	
	comp=Z,13nm,0.2s						
PHC	**Port Hardy**	**2.21**	**27**	Pn	Pn	15 46 15.6	-1.6
PHC				Sn	Sn	15 46 40.4	-4.1
PHC				Trac		15 46 42.1	
	comp=Z,13nm,0.2s						
GDR	**Gold River**	**2.21**	**61**	Pn	Pn	15 46 14.7	-2.6
GDR				Sn	Sn	15 46 41.0	-3.7
	comp=Z,11nm,0.3s						
GDR				Trac		15 46 42.4	
	comp=Z,11nm,0.3s						
OZB	**Mount Ozzard**	**2.35**	**84**	Pn	Pn	15 46 16.8	-2.3
OZB				Sn	Sn	15 46 43.5	-4.5
OZB				Trac		15 46 46.2	
	comp=Z,7.0nm,0.1s						
BTB	**Buttle Lake**	**2.41**	**72**	Pn	Pn	15 46 18.6	-1.4
BTB				Sn	Sn	15 46 46.7	-3.0
	comp=Z,39nm,0.3s						
BTB				Trac		15 46 49.0	
	comp=Z,39nm,0.3s						
NCRB	**Newcastle Ridg**	**2.54**	**49**	Pn	Pn	15 46 20.6	-1.2
NCRB				Sn	Sn	15 46 50.3	-2.5
	comp=Z,15nm,0.3s						
NCRB				Trac		15 46 53.5	
	comp=Z,15nm,0.3s						
CBB	**Campbell River**	**2.71**	**61**	Pn	Pn	15 46 20.7	-3.4
CBB				Sn	Sn	15 46 54.5	-2.

comp=Z,14nm,1.2s,mb4.8
LSZ LR LR

comp=Z,1μm,19.0s,MS4.8
HYB Hyderabad 36.98 20 *i* P **P 16 20 54.0 +4.4**
HYB *e*S **S 16 26 36.0 +0.9**
HYB Hyderabad 36.98 20 *e*P **P 16 20 54.0 +4.4**
HYB *e*S **S 16 26 36.0 +0.9**
HYB Hyderabad 36.98 20 *e*P **P 16 20 54.0 +4.4**
HYB *e*S **S 16 26 36.0 +0.9**
HYB *e*LR LR 16 34 52.0
LBTB Lobatse 38.20 252 *e*P **P 16 20 59.3 -0.6**
LBTB pmax pmax

comp=Z,8.0nm,0.7s,mb4.6
LBTB Lobatse 38.20 252 *e*P **P 16 20 59.3 -0.6**

comp=Z,8.5nm,0.7s,mb4.6
PSI Prapat 38.33 61 LR LR 16 33 32.9

comp=Z,2μm,19.0s,MS5.0,baz=234,slow=32
BOSA Boshof 38.83 246 LR LR 16 33 54.1

comp=Z,1μm,20.0s,MS4.7,baz=88,slow=31
KSM Kuching 47.62 71 *e*P **P 16 22 15.8 -0.5**
NWAO Narrogin (SRO) 48.33 119 LR LR 16 37 59.7

comp=Z,2μm,21.3s,MS5.0,baz=283,slow=30
MAW Mawson 49.97 182 *e*P **P 16 22 33.0 -1.3**

comp=Z,4.1nm,1.0s,mb4.4
MAW Mawson 49.97 182 P **P 16 22 36.7 +2.4**

comp=Z,3.1nm,0.7s,mb4.5,baz=24,slow=11,SNR=15
MAW LR LR 16 38 27.9

comp=Z,740nm,21.2s,MS4.7,baz=1.6,slow=30
MAW Mawson 49.97 182 *e*P **P 16 22 33.0 -1.3**
MAW pmax pmax

comp=Z,4.0nm,1.0s
MIR Mirnyy 51.97 167 P **P 16 22 52.0 +2.6**
MIR pmax pmax

comp=Z,12nm,1.5s,mb4.6
MIR MLR MLR

comp=Z,2μm,18.0s,MS5.1
LSA Lhasa 52.97 28 P **P 16 22 55.5 -1.3**
LSA Lhasa 52.97 28 P **P 16 22 56.3 -0.5**
LSA pmax pmax

comp=Z,20nm,1.2s,mb4.9
LSA MLR MLR

comp=Z,2μm,21.0s,MS5.1
LSA Lhasa 52.97 28 P **P 16 22 56.3 -0.5**

comp=Z,20nm,1.2s,mb4.9
LSA LR LR

comp=Z,2μm,21.0s,MS5.1
SYO Syowa Base 53.92 191 ⇓*e*sP sP 16 23 07.8 +0.5
KMI Kunming 55.59 41 P **P 16 23 20.5 +4.6**
KMI AP pP 16 23 27.3 +8.8
KMI XP sP 16 23 30.0 +11
KMI PP PP 16 25 23.5 +3.5
KMI PPP 16 26 34.0
KMI S **S 16 31 02.0 +0.2**
KMI SS SS 16 34 49.8 +3.1
KMI AMB AMB

comp=Z,11nm,1.1s,mb4.8
KMI AMB AMB

comp=Z,64nm,3.8s
KMI LR LR

comp=N,555nm,20.1s,MS5.0
KMI LR LR

comp=E,1μm,23.3s,MS5.0
KMI LR LR

comp=Z,1μm,24.4s,MS4.9
QIZ Qiongzhong 56.46 52 P **P 16 23 20.5 -1.6**
QIZ S **S 16 31 14.8 +1.5**
QIZ AMB AMB

comp=Z,17nm,1.5s,mb4.8
QIZ LR LR

comp=N,2μm,24.9s
QIZ LR LR

comp=Z,1μm,19.3s
FITZ Fitzroy Crossi 56.56 100 P **P 16 23 23.2 +0.4**

comp=Z,7.5nm,0.9s,mb4.7,baz=249,slow=8.0,SNR=12
FITZ LR LR 16 44 05.5

comp=Z,2μm,21.0s,MS5.1,baz=270,slow=32
MSL Mosul 57.85 338 *ex* x 16 23 43.0
FRU Bishkek 60.71 7 *e*P pP 16 24 04.5 +10
GNI Garni 60.81 341 P **P 16 23 57.5 +5.1**

comp=Z,4.1nm,0.5s,mb4.8,baz=4.6,slow=3.3,SNR=3.2
GNI Garni 60.81 341 P **P 16 23 50.6 -1.8**
GNI pmax pmax

comp=Z,27nm,1.2s
GNI MLR MLR

comp=Z,520nm,21.0s
GNI Garni 60.81 341 P **P 16 23 50.6 -1.8**

comp=Z,27nm,1.2s,mb5.3
GNI LR LR

comp=Z,520nm,21.0s,MS4.7
ASPA Alice Springs 63.34 108 *e*P **P 16 24 08.8 -0.6**
ASAR Alice Springs 63.34 108 P **P 16 24 08.9 -0.5**

comp=Z,5.2nm,0.9s,mb4.7,baz=271,slow=5.6,SNR=30
ASAR LR LR 16 47 51.6

comp=Z,4μm,20.3s,MS5.6,baz=280,slow=33
AS31 Alice Springs 63.34 108 *e*P **P 16 24 08.8 -0.6**
KAKA Kakadu 64.07 96 *e*P **P 16 24 15.8 +1.6**

comp=Z,14nm,0.6s,mb5.2
WMQ Urumqi 64.33 17 *e*P **P 16 24 16.0 +0.1**
WMQ PCP PcP 16 24 51.0 +0.5
WMQ PP PP 16 26 40.0 +2.7
WMQ S **S 16 32 52.0 -2.2**
WMQ SCS ScS 16 34 06.0 -4.4
WMQ AMB AMB

comp=Z,33nm,1.0s,mb5.3
WMQ AMB AMB

comp=Z,168nm,5.0s
WMQ LR LR

comp=N,1μm,15.0s,MS5.4
WMQ LR LR

comp=E,1μm,15.0s,MS5.4
WMQ LR LR

comp=Z,1μm,15.0s,MS5.2
LZH Lanzhou 64.35 33 *e*P **P 16 24 17.5 +1.5**
LZH AP pP 16 24 25.5 +6.8
LZH XP sP 16 24 28.8 +9.1
LZH PP PP 16 26 41.5 +4.0
LZH *e*S **S 16 32 54.0 -0.4**
LZH XS sS 16 33 07.3 +8.5
LZH AMB AMB

comp=Z,25nm,1.5s,mb5.0
LZH AMB AMB

comp=Z,136nm,6.7s
LZH LR LR

comp=E,1μm,16.2s
LZH LR LR

comp=Z,2μm,18.5s,MS5.3
WRA Warramunga Arr 64.35 104 P **P 16 24 15.1 -0.9**

comp=Z,11nm,1.0s,mb4.8,baz=266,slow=5.8,SNR=28
WRA LR LR 16 51 46.9

comp=Z,1μm,18.3s,MS5.2,baz=290,slow=36
WB2 Warramunga Arr 64.36 104 *e*P **P 16 24 16.4 +0.3**
WRAB Tennant Creek 64.37 104 *e*P **P 16 24 16.3 +0.1**
WRAB pmax pmax

comp=Z,27nm,0.9s,mb5.3
WRAB MLR MLR

comp=Z,299nm,19.9s,MS4.5
WRAB Tennant Creek 64.37 104 *e*P **P 16 24 16.3 +0.1**

comp=Z,26nm,0.9s,mb5.3
WRAB LR LR

comp=Z,299nm,19.9s,MS4.5
BRTR Keskin Array B 64.56 333 P **P 16 24 21.2 +3.8**

comp=Z,1.1nm,0.8s,mb3.9,baz=142,slow=6.3,SNR=5.9
BRTR LR LR 16 50 53.0

comp=Z,676nm,20.3s,MS4.8,baz=329,slow=34
GTA Gaotai 64.98 28 *e*P **P 16 24 23.5 +3.3**
GTA AP pP 16 24 28.0 +5.2
GTA PP PP 16 26 48.0 +5.0
GTA PPP 16 28 24.3
GTA SCP 16 28 58.5
GTA S S 16 33 03.0 +0.8
GTA SCS ScS 16 34 14.0 -1.4
GTA AMB AMB

comp=Z,6.0nm,1.4s,mb4.4
GTA AMB AMB

comp=Z,121nm,5.3s
GTA LR LR

comp=N,659nm,20.5s,MS4.9
GTA LR LR

comp=E,561nm,23.6s,MS4.9
GTA LR LR

comp=Z,827nm,23.2s,MS4.9
XAN Xi'an 65.70 38 P **P 16 24 28.0 +3.2**
XAN AP pP 16 24 32.0 +4.6
XAN AMB AMB

comp=Z,7.0nm,1.3s,mb4.5
MKAR Makanchi Array 65.81 12 P **P 16 24 24.4 -1.2**

comp=Z,0.3nm,0.3s,mb3.8,baz=210,slow=6.5,SNR=7.6
QZH Quanzhou 66.48 52 *e*P **P 16 24 30.5 +0.6**
QZH S S 16 33 23.5 +2.9
QZH LR LR

comp=N,6μm,25.6s
QZH LR LR

comp=E,2μm,17.9s
QZH LR LR

comp=Z,2μm,19.6s
SNAA Sanae 66.73 199 P **P 16 24 28.8 -2.7**
AKTK Aktyubinsk 68.15 355 P **P 16 24 41.6 +1.2**
AKTO Aktyubinsk 68.15 355 P **P 16 24 41.6 +1.2**

comp=Z,2.9nm,1.0s,mb4.3,baz=143,slow=5.6,SNR=4.2
STKA Stephens Creek 68.92 118 *e*P **P 16 24 45.8 +0.6**

comp=Z,5.9nm,1.6s,mb4.3
STKA Stephens Creek 68.92 118 P **P 16 24 43.8 -1.4**

comp=Z,3.5nm,0.9s,mb4.3,baz=302,slow=6.4,SNR=6.0
STKA LR LR 16 51 18.2

comp=Z,998nm,18.1s,MS5.1,baz=251,slow=33
ZRNK Zerenda 70.36 2 *e*P **P 16 24 51.3 -2.8**
ZRNK pmax pmax

comp=Z,5.0nm,0.9s,mb4.4
ZRNK Zerenda 70.36 2 *e*P **P 16 24 51.3 -2.8**

comp=Z,5.1nm,0.9s,mb4.5
TORD Torodi Ar. Bea 70.42 291 P **P 16 24 59.8 +5.3**

comp=Z,2.1nm,1.2s,mb4.0,baz=99,slow=4.5,SNR=4.2
TORD LR LR 16 54 25.2

comp=Z,626nm,19.7s,MS4.9,baz=115,slow=34
BVAR Borovoye Array 70.48 3 P **P 16 24 56.1 +1.3**

comp=Z,3.1nm,0.8s,mb4.3,baz=153,slow=7.8,SNR=11
NJ2 Nanjing 70.77 46 *e*P **P 16 24 56.5 -0.1**
NJ2 PP PP 16 27 35.5 +2.2
NJ2 S S 16 34 11.0 -0.5
NJ2 AMB AMB

comp=Z,20nm,0.5s,mb5.3
NJ2 AMB AMB

comp=Z,250nm,3.5s
NJ2 LR LR

comp=N,2μm,20.5s,MS5.4
NJ2 LR LR

comp=E,1μm,19.2s,MS5.4
NJ2 LR LR

comp=Z,1μm,20.2s,MS5.2
CHKZ Chkalovo 71.15 3 *e*P **P 16 24 55.4 -3.5**
CHKZ pmax pmax

comp=Z,8.0nm,1.1s,mb4.6
CHKZ Chkalovo 71.15 3 *e*P **P 16 24 55.4 -3.5**

comp=Z,8.0nm,1.1s,mb4.6
SSE Sheshan 71.84 48 P **P 16 25 02.0 -1.1**
SSE PP PP 16 27 42.8 +0.3
SSE S S 16 34 22.0 -1.9
SSE AMB AMB

comp=Z,21nm,0.7s,mb5.2
SSE AMB AMB

comp=Z,35nm,9.4s
SSE LR LR

comp=N,570nm,19.2s,MS4.9
SSE LR LR

comp=E,335nm,19.3s,MS4.9
SSE LR LR

comp=Z,515nm,18.3s,MS4.8
HHC Hu-ho-hao-te 71.96 35 *e*P **P 16 25 10.0 +6.2**
HHC AP pP 16 25 15.5 +9.0
HHC XP sP 16 25 17.3 +10
HHC PP PP 16 27 51.8 +8.3
HHC S S 16 34 23.8 -1.4
HHC XS sS 16 34 40.5 +11
HHC AMB AMB

comp=Z,11nm,0.9s,mb4.8
HHC AMB AMB

comp=Z,102nm,4.0s
HHC LR LR

comp=N,364nm,20.2s,MS4.9
HHC LR LR

comp=E,471nm,19.3s,MS4.9
HHC LR LR

comp=Z,331nm,18.4s,MS4.6
QSPA South Pole Qui 72.44 180 *e*P **P 16 25 07.2 +0.5**

comp=Z,9.9nm,1.0s,mb4.7
ZAL Zalesovo 73.11 12 P **P 16 25 10.2 -0.4**

comp=Z,1.1nm,0.5s,mb4.0,baz=301,slow=8.4,SNR=5.6
ZAL LR LR 16 55 57.9

comp=Z,790nm,20.7s,MS5.0,baz=266,slow=35
ZAL Zalesovo 73.11 12 P **P 16 25 10.2 -0.4**
ZAL LR LR 16 55 57.9
DBIC Dimbokro 73.96 283 LR LR 16 56 30.3

comp=Z,611nm,19.7s,MS4.9,baz=88,slow=34
BJI Beijing 74.02 38 P **P 16 25 21.0 +5.0**
BJI PP PP 16 28 05.5 +4.4
BJI S S 16 34 47.0 -1.7
BJI AMB AMB

comp=Z,8.0nm,0.9s,mb4.7
BJI LR LR

comp=N,761nm,20.8s,MS5.1
BJI LR LR

comp=E,635nm,20.8s,MS5.1
BJI LR LR

comp=Z,444nm,18.5s,MS4.8
ARU Arti 74.06 356 *e*P **P 16 25 15.0 -1.2**
ARU *e* 16 25 31.9
ARU *e*SSS 16 42 43.8
ARU Arti 74.06 356 P **P 16 25 12.1 -4.1**

comp=Z,15nm,1.3s,mb4.8
ARU LR LR

comp=Z,137nm,20.0s,MS4.2
VNDA Vanda 74.16 167 P **P 16 25 18.2 +1.4**

comp=Z,1.6nm,0.8s,mb4.0,baz=296,slow=4.3,SNR=5.9
VNDA LR LR 16 54 43.8

comp=Z,505nm,18.1s,MS4.8,baz=261,slow=33
SONM Songino Array 74.56 27 P **P 16 25 18.6 -0.5**

comp=Z,2.1nm,0.8s,mb4.1,baz=213,slow=6.0,SNR=10
SONM LR LR 16 56 46.2

comp=Z,1μm,20.3s,MS5.2,baz=307,slow=35
ULN Ulaanbaatar 74.86 27 *e*P **P 16 25 20.6 -0.3**
ULN MLR MLR

comp=Z,955nm,19.0s,MS5.1
CTA Charters Tower 75.28 107 LR LR 16 56 07.8

comp=Z,2μm,19.1s,MS5.4,baz=249,slow=34
ZAK Zakamensk 75.29 24 *e*P **P 16 25 33.3 +10**
AKASG Malin Array Be 75.33 337 P **P 16 25 22.9 -0.8**

comp=Z,2.7nm,0.7s,mb4.3,baz=139,slow=5.0,SNR=13
AKASG LR LR 16 59 19.2

comp=Z,84nm,19.5s,MS4.0,baz=110,slow=36
KEST Kesra 75.43 315 LR LR 16 57 59.3

comp=Z,348nm,19.7s,MS4.7,baz=78,slow=35
TLY Talaya 76.47 23 *e*P **P 16 25 31.5 +1.4**
DL2 Dalian 76.64 41 *e*P **P 16 25 30.0 -1.1**
DL2 S S 16 35 17.0 -0.8
DL2 AMB AMB

comp=Z,10.0nm,0.8s,mb4.8
DL2 LR LR

comp=N,200nm,19.3s,MS4.7
DL2 LR LR

comp=E,260nm,16.8s,MS4.7
DL2 LR LR

comp=Z,340nm,18.9s,MS4.7
MOS Moscow 76.94 344 *e*P **P 16 25 44.5 +12**
MOS pmax pmax

comp=Z,48nm,0.7s,mb5.5
PMG Port Moresby 78.87 96 LR LR 17 00 33.7

comp=Z,793nm,18.1s,MS5.1,baz=79,slow=36
OKC Ostrava-Krasne 79.35 331 *e*P **P 16 25 52.4 +6.3**
OKC *e*S S 16 35 46.3 -0.7
OKC AMS AMS 16 47 00.0

comp=Z,400nm,26.7s
TREC Trest 80.25 329 AMS AMS 16 53 30.0

comp=Z,300nm,26.5s
GERES GERESS Array B 80.84 328 P **P 16 25 55.9 +1.8**

comp=Z,0.3nm,0.3s,mb3.7,baz=179,slow=13,SNR=2.6
GERES LR LR 17 04 07.8

comp=Z,162nm,18.9s,MS4.4,baz=298,slow=37
KHC Kasperske Hory 81.08 328 *e*S S 16 36 02.6 -2.7
KHC AMS AMS 16 53 50.0

comp=Z,700nm,49.2s
KHC Kasperske Hory 81.08 328 PFAKE 16 26 10.0 +15
KHC LR LR

comp=Z,700nm,49.2s,MS4.6
PRU Pruhonice 81.17 329 PFAKE 16 26 10.0 +14
PRU LR LR

comp=Z,300nm,23.8s,MS4.6
PVCC Panska Ves 81.51 330 *e*P **P 16 26 03.5 +5.8**
PVCC *e*S S 16 36 08.2 -1.5
MBDF Montbardon 82.14 322 *e*P **P 16 25 53.1 -8.0**

comp=Z,35nm,1.4s,mb4.8
LPG La Plagne 82.59 322 *e*P **P 16 25 56.4 -7.0**
LPL La Plagne 82.61 322 *e*P **P 16 25 55.6 -7.9**

GRA1 Grafenberg Arr 82.63 328 *e*P **P 16 26 06.9 +3.3**

comp=Z,3.0nm,1.0s,mb4.3
GRF Grafenberg Arr 82.63 328 *e*P **P 16 26 06.9 +3.3**

comp=Z,3.0nm,1.0s,mb4.3
GRF *e*L 17 13 47.3

comp=Z,220nm,19.7s
GRF Grafenberg Arr 82.63 328 *e*P **P 16 26 06.9 +3.3**
GRF pmax pmax

comp=Z,30nm,1.0s,mb5.3
GRF MLR MLR

comp=Z,200nm,19.7s,MS4.5
CLL Collm 82.77 330 P **P 16 26 01.0 -3.4**
CLL *e*S S 16 36 24.0 +1.4
CLL *e*SS SS 16 41 43.0 -1.9
CLL *e*SSS 16 44 52.0
CLL *e* 16 47 48.0
CLL Collm 82.77 330 *e*P **P 16 26 01.0 -3.4**
CLL *e*S S 16 36 24.0 +1.4
CLL *e*SS SS 16 41 43.0 -1.9
CLL *e*(SSS) 16 44 52.0
CLL *e*SSSS 16 47 48.0
CLL LmV 16 57 00.0

comp=Z,300nm,21.5s
CLL Collm 82.77 330 *e*P **P 16 26 01.0 -3.4**
CLL *e*S S 16 36 24.0 +1.4
CLL LR LR

comp=Z,300nm,21.5s,MS4.6
MDJ Mudanjiang 84.75 40 P **P 16 26 14.3 -0.2**
MDJ S S 16 36 42.3 -0.2
MDJ AMB AMB

comp=Z,4.0nm,1.1s,mb4.5
MDJ AMB AMB

comp=Z,91nm,6.2s
MDJ LR LR

comp=N,941nm,31.7s,MS5.0
MDJ LR LR

comp=E,615nm,31.7s,MS5.0
MDJ LR LR

comp=Z,569nm,21.1s
BOD Bodaibo 85.03 24 *e*P **P 16 26 04.5 -11**
BOD pmax pmax

comp=Z,6.0nm,1.5s,mb4.5
LOR Lormes 85.23 323 *e*P **P 16 26 09.2 -7.7**

comp=Z,15nm,1.1s,mb4.8
ESDC Sonseca Array 86.51 313 P **P 16 26 26.5 +3.3**

comp=Z,0.9nm,0.5s,mb4.2,baz=120,slow=5.1,SNR=6.0
MAT Matsushiro 86.82 50 P **P 16 26 23.2 -1.6**
MAT S S 16 37 00.0 -2.9
MJAR Matsushiro Arr 86.82 50 P **P 16 26 26.8 +2.0**

comp=Z,4.8nm,0.9s,mb4.7,baz=238,slow=4.9,SNR=6.5
MJAR LR LR 17 05 08.3

comp=Z,477nm,19.5s,MS4.9,baz=200,slow=36
KLR Kul'dur 88.35 37 *e*P **P 16 26 31.2 -0.9**
NOA NORSAR Array B 89.74 337 LR LR 17 07 00.6

comp=Z,128nm,19.2s,MS4.4,baz=130,slow=36
HNR Honiara 90.93 100 LR LR 17 06 35.3

comp=Z,671nm,18.7s,MS5.1,baz=180,slow=35
ARCES ARCESS Array B 91.55 347 P **P 16 26 48.8 +1.7**

comp=Z,1.1nm,0.7s,mb4.3,baz=155,slow=4.0,SNR=5.0
TBI Tubuai 126.53 138 *e*SS SS 16 51 41.1 -3.2

comp=Z,685nm,36.0s
TBI *e*LQ 17 07 00.9

comp=Z,804nm,37.0s
TBI *e*LR LR 17 12 07.8

comp=Z,570nm,33.2s
PPT Papeete 130.52 133 *e*SS SS 16 52 38.0 +4.4

comp=Z,285nm,26.8s
PPT *e*LQ 17 08 42.3

comp=Z,1μm,43.5s
PPT *e*LR LR 17 13 59.8

comp=Z,1μm,29.8s
RKT Rikitea 134.60 152 *e*LQ 17 10 24.0
RKT *e*LR LR 17 15 51.7

comp=Z,478nm,29.0s
TAOE Nuku Hiva Isla 143.13 134 *e*LR LR 17 19 52.0

comp=Z,1μm,32.5s
MSO Missoula 150.91 360 PKPbc PKPbc 16 33 31.1 -1.9
PDAR Pinedale Array 154.68 352 PKPbc PKPbc 16 33 43.9 +2.5

comp=Z,0.9nm,0.6s,baz=74,slow=2.2,SNR=8.9
PDAR PKPab PKPab 16 33 56.0 -0.2

comp=Z,0.7nm,0.7s,baz=111,slow=3.7,SNR=5.1
NVAR Mina Array Bea 158.97 9 PKPab PKPab 16 34 16.7 +2.1

comp=Z,0.6nm,0.7s,baz=4.1,slow=3.8,SNR=3.9

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*IDC **30** 16:23:48.4±1.1,287N×12671E,h0km,mb3.8/8,mb1 4.0/8, mb1mx3.8/18,mbtmp3.8/8,Error ellipse: s-maj=107.6km s-min=16.1km az=71.0*
*NEIC **30** 16:23:49.8±0.5,289N×12679E,h10km,mb3.9/2,Error ellipse: s-maj=50.6km s-min=8.1km az=71.0*
*ISCJB **30** 16:23:51.7±0.8,28N±02×126.4E±0.5,h33km,mb3.8/8, Error ellipse: s-maj=75.5km s-min=11.2km az=141.0*
ISC 30 16:23:53.7±0.8,29N±02×127E±0.5,h35km,n13,σ0=37/13, mb3.8/8,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.86**	**183**	P		P		**16 28 32.7**	**+0.2**
	1.5nm,0.5s,baz=246,slow=18,SNR=4.8								
WRAB	**Tennant Creek**	**23.86**	**162**	*e*P		P		**16 29 03.3**	**-0.4**
	3.3nm,0.4s,mb4.1								
WRA	**Warramunga Arr**	**23.86**	**162**	P		P		**16 29 03.6**	**-0.1**
	1.4nm,0.4s,mb3.7,baz=337,slow=10,SNR=24								
WB2	**Warramunga Arr**	**23.86**	**162**	*e*P		P		**16 29 03.7**	**-0.1**
AS31	**Alice Springs**	**27.27**	**166**	*e*P		P		**16 29 34.9**	**+0.2**
ASAR	**Alice Springs**	**27.28**	**166**	P		P		**16 29 34.8**	**+0.1**
	0.5nm,0.6s,mb3.2,baz=342,slow=7.4,SNR=22								
ASPA	**Alice Springs**	**27.28**	**166**	*e*P		P		**16 29 34.9**	**+0.2**
STKA	**Stephens Creek**	**37.32**	**159**	*e*P		P		**16 31 02.4**	**-0.1**
	2.3nm,2.5s,mb3.6								
STKA	**Stephens Creek**	**37.32**	**159**	P		P		**16 31 02.5**	**0.0**
	1.0nm,0.6s,mb3.9,baz=303,slow=12,SNR=4.5								
SONM	**Songino Array**	**48.12**	**342**	P		P		**16 32 30.3**	**+0.3**
	0.5nm,0.6s,mb3.7,baz=158,slow=6.3,SNR=3.3								
MKAR	**Makanchi Array**	**58.27**	**326**	P		P		**16 33 45.0**	**+0.2**
	0.6nm,0.4s,mb4.0,baz=124,slow=8.4,SNR=6.8								
BVAR	**Borovoye Array**	**68.05**	**327**	P		P		**16 34 48.6**	**-1.0**
	0.3nm,0.6s,mb3.5,baz=142,slow=7.4,SNR=4.3								
ARCES	**ARCESS Array B**	**91.26**	**340**	P		P		**16 36 55.8**	**+0.4**
	1.9nm,0.9s,mb4.4,baz=80,slow=6.5,SNR=5.1								

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*KNET **30** 16:35:51.9±0.7,412.1N×76.13E,h3km±3km,ml2.8,Error ellipse: s-maj=3.9km s-min=3.4km az=123.0*
*NNC **30** 16:35:51.3±0.9,4088N×7589E,h20km±17km,mb3.2, mpv2.8,Error ellipse: s-maj=22.5km s-min=6.6km az=19.0*
*ISCJB **30** 16:35:52.2±1.6,41.10N±008×76.4E±0.1,h10km,Error ellipse: s-maj=12.0km s-min=10.5km az=100.0*
ISC 30 16:35:52.5±1.7,4109N±009×764E±0.1,h10km,n12, σ1$20/21,16C-6D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.16**	**355**	⇓P		**Pb**		**16 36 11.2**	**-3.5**
	32nm,0.3s,SNR=108								
ULHL				⇓S		**Sb**		**16 36 27.3**	**-2.5**
	191nm,0.3s								
KZA	**Kyzart**	**1.31**	**320**	⇑P		**Pn**		**16 36 12.8**	**-4.0**
	27nm,0.2s,SNR=6.3								
KZA				⇑S		**Sb**		**16 36 30.1**	**-3.8**
	199nm,0.2s								
KBK	**Karagaybulak**	**1.90**	**326**	⇑P		**Pn**		**16 36 24.3**	**-0.7**
	30nm,0.1s,SNR=20								
KBK				⇑S		**Sn**		**16 36 49.3**	**+0.3**
	384nm,0.3s								
TKM2	**Tokmak 2**	**1.92**	**342**	⇓P		**Pn**		**16 36 24.9**	**-0.4**
	34nm,0.2s,SNR=56								
TKM2				⇑S		**Sn**		**16 36 49.8**	**+0.2**
	64nm,0.2s								
TKM2	**Tokmak 2**	**1.92**	**342**	⇑P		**Pn**		**16 36 24.9**	**-0.4**
	0.2nm,0.2s								
TKM2				⇑S		**Sn**		**16 36 50.6**	**+1.1**
	7.4nm,0.6s								
AAK	**Ala-Archa**	**2.09**	**318**	⇓P		**Pn**		**16 36 27.3**	**-0.3**
	13nm,0.2s,SNR=12								
AAK				⇑S		**Sn**		**16 36 53.9**	**+0.2**
	60nm,0.2s								
KNDC	**Almaty**	**2.17**	**11**	⇑P		**Pn**		**16 36 30.3**	**+1.6**
	14nm,0.3s								
KNDC				⇑S		**Sn**		**16 37 00.8**	**+5.2**
	52nm,0.3s								
CHMS	**Chumysh**	**2.26**	**328**	⇑P		**Pn**		**16 36 30.4**	**+0.4**
	5.8nm,0.1s,SNR=8.9								
CHMS				⇑S		**Sn**		**16 37 00.0**	**+2.1**

	46nm,0.2s								
AML	**Almayashu**	**2.27**	**298**	⇑P		**Pn**	**16 36 29.7**	**-0.4**	
	18nm,0.2s,SNR=29								
AML				⇑S		**Sn**	**16 36 58.8**	**+0.7**	
	76nm,0.3s								
EKS2	**Erkin-Say**	**2.50**	**310**	⇓P		**Pn**	**16 36 33.7**	**+0.4**	
	3.9nm,0.1s,SNR=10								
USP	**Ospenovka**	**2.59**	**328**	⇑P		**Pn**	**16 36 35.2**	**+0.7**	
	9.1nm,0.2s,SNR=15								
KK31	**Karatay Array**	**4.81**	**297**	⇓Pg		**Pb**	**16 37 14.9**	**-2.0**	
	0.5nm,0.3s,baz=145,slow=69,SNR=16								
KK31				⇑Lg			16 38 16.9		
	2.1nm,0.3s,baz=250,slow=65,SNR=4.4								

*IDC **30** 17:37:12.4±2.0,688S×14759E,h0km,mb4.2/4,mb1 4.3/5, mb1mx3.9/13,mbtmp4.2/5,ML3.9/1,Error ellipse: s-maj=55.1km s-min=24.7km az=105.0*
*ISCJB **30** 17:37:20.7±2.5,70S±0.1×1476E±0.2,h91km±21km, mb4.2/6,Error ellipse: s-maj=30.9km s-min=21.2km az=2.5*
*NEIC **30** 17:37:21.8±1.9,697S×14770E,h87km±16km,mb3.9/2, Error ellipse: s-maj=25.7km s-min=15.9km az=108.0*
ISC 30 17:37:21.9±2.5,70S±.01×1477E±.02,h86km±21km,n18, σ0°78/20,mb4.2/6,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.47**	**192**	Pn		**Pn**		**17 38 00.3**	**+0.2**
	19nm,0.3s,baz=12,slow=9.3,SNR=73								
PMG				Sn		**Sn**		**17 38 41.9**	**+12**
	16nm,0.3s,baz=346,slow=19,SNR=4.3								
PMG	**Port Moresby**	**2.47**	**192**	*e*Pn		**Pn**		**17 38 00.1**	**-0.1**
PMG				Sn		**Sn**		**17 38 42.0**	**+12**
WRAB	**Tennant Creek**	**18.25**	**224**	*e*P		**Pn**		**17 41 28.1**	**-1.1**
WB2	**Warramunga Arr**	**18.25**	**224**	*e*P		**Pn**		**17 41 28.6**	**-0.7**
WB2	**Warramunga Arr**	**18.25**	**224**	*e*P		**Pn**		**17 41 28.7**	**-0.6**
WRA	**Warramunga Arr**	**18.26**	**224**	P		**Pn**		**17 41 29.0**	**-0.5**
	0.4nm,0.3s,baz=48,slow=11,SNR=21								
AS31	**Alice Springs**	**21.22**	**217**	*e*P		**P**		**17 42 01.7**	**+1.1**
ASAR	**Alice Springs**	**21.22**	**217**	P		**P**		**17 42 01.7**	**+1.1**
	6.2nm,0.7s,mb4.0,baz=53,slow=9.3,SNR=163								
ASPA	**Alice Springs**	**21.22**	**217**	*e*P		**P**		**17 42 01.7**	**+1.1**
FITZ	**Fitzroy Crossi**	**24.14**	**241**	*e*P		**P**		**17 42 29.6**	**-0.2**
	10nm,0.6s,mb4.3								
FITZ	**Fitzroy Crossi**	**24.14**	**241**	P		**P**		**17 42 29.1**	**-0.8**
	3.9nm,0.6s,mb3.9,baz=80,slow=8.5,SNR=20								
STKA	**Stephens Creek**	**25.42**	**192**	*e*P		**P**		**17 42 41.8**	**+0.4**
	6.8nm,0.9s,mb4.1								
STKA	**Stephens Creek**	**25.42**	**192**	P		**P**		**17 42 41.8**	**+0.4**
	8.9nm,0.9s,mb4.2,baz=11,slow=9.9,SNR=14								
STKA	**Stephens Creek**	**25.42**	**192**	*e*P		**P**		**17 42 41.9**	**+0.5**
PCI	**Palu**	**28.40**	**281**	P		**P**		**17 43 08.6**	**+0.5**
	207nm,1.6s,mb5.4								
SBJI	**Serang**	**41.26**	**269**	P		**P**		**17 44 58.1**	**-0.5**
	404nm,1.4s								
MJAR	**Matsushiro Arr**	**44.19**	**349**	P		**P**		**17 45 22.4**	**+0.2**
	2.4nm,1.0s,mb3.9,baz=171,slow=8.6,SNR=4.5								
VNDA	**Vanda**	**70.91**	**177**	*e*P		**P**		**17 48 28.5**	**-1.2**
	0.4nm,0.7s,mb3.4								

*IDC **30** 17:39:35.6±0.5,945S×10776E,h0km,mb4.5/16, mb1 4.6/17,mb1mx4.5/21,mbtmp4.5/17,ML4.4/1,MS3.6/1, Ms1 3.6/1,ms1mx2.9/33,Error ellipse: s-maj=18.9km s-min=12.7km az=61.0*
*ISCJB **30** 17:39:36.6±0.3,951S±004×10776E±005,h16km, mb4.9/65,MS4.2/15,Error ellipse: s-maj=7.4km s-min=4.8km az=100.9*
*BJI **30** 17:39:37.4,950S×10780E,h10km,mB4.9,mb5.0,Ms4.6, Msz4.3*
*NEIC **30** 17:39:37.4±0.2,948S×10777E,h10km,mb5.0/24,Error ellipse: s-maj=8.6km s-min=5.0km az=55.0*
*MOS **30** 17:39:39.2±0.9,935S×10794E,h33km,mb5.2/23,Error ellipse: s-maj=13.8km s-min=7.3km az=108.5*
ISC 30 17:39:38.7±0.3,953S±004×10776E±005,h17km, h17km±1.5km:pP-P,n147,σ1§10/134,mb4.9/65,MS4.2/15, 6C-6D,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**2.69**	**357**	P		**Pn**		**17 40 22.4**	**+1.2**
	7µm,0.8s								
BJII	**Banjamegara**	**2.92**	**42**	P		**Pn**		**17 40 25.3**	**+1.0**
	520nm,1.6s								
JCJI	**Jatiwangi**	**3.06**	**10**	P		**Pn**		**17 40 24.7**	**-1.6**
	3µm,0.9s								
CBJI	**Citeko**	**3.22**	**344**	P		**Pn**		**17 40 24.7**	**-3.8**
	2µm,0.6s								
SBJI	**Serang**	**3.75**	**334**	P		**Pn**		**17 40 36.6**	**+0.8**
	583nm,1.1s								
KRKI	**Karangkates**	**4.83**	**74**	P		**Pn**		**17 40 51.2**	**+0.6**
	1µm,0.7s								
KLI	**Kotabumi**	**5.46**	**328**	P		**Pn**		**17 41 01.6**	**+2.4**
	144nm,0.6s								
NBBI	**Negara**	**6.88**	**81**	P		**Pn**		**17 41 20.8**	**+2.1**
	588nm,0.7s								
DNP	**Denpasar**	**7.41**	**84**	P		**Pn**		**17 41 29.1**	**+3.1**
	407nm,1.0s								
KSM	**Kuching**	**11.22**	**13**	P		**Pn**		**17 42 19.8**	**+1.5**
PSI	**Prapat**	**15.09**	**324**	Pn		**Pn**		**17 43 13.5**	**+2.5**
	0.5nm,0.3s,baz=143,slow=7.6,SNR=8.7								
PSI	**Prapat**	**15.09**	**324**	Pn		**Pn**		**17 43 13.5**	**+2.5**
MBWA	**Marble Bar**	**16.32**	**136**	*e*P		**Pn**		**17 43 21.1**	**-5.9**
	11nm,0.6s								
KULM	**Kulim**	**16.34**	**334**	*e*P		**Pn**		**17 43 23.9**	**-3.4**
FITZ	**Fitzroy Crossi**	**19.32**	**118**	*e*P		**Pn**		**17 44 04.1**	**0.0**
	11nm,0.6s								
FITZ				*e*S		**Sn**		**17 47 22.7**	**-18**
FITZ	**Fitzroy Crossi**	**19.32**	**118**	P		**Pn**		**17 44 03.8**	**-0.3**
	0.8nm,0.3s,baz=288,slow=11,SNR=7.7								
FITZ				S		**Sn**		**17 47 24.2**	**-16**
	0.2nm,0.3s,baz=190,slow=23,SNR=3.7								
BSI	**Banda Aceh**	**19.42**	**320**	P		**Pn**		**17 44 06.0**	**+0.8**
	192nm,1.3s								
NNT	**Nonglab**	**23.38**	**340**	P		**P**		**17 44 48.0**	**+1.4**
KAKA	**Kakadu**	**24.42**	**100**	*e*P		**P**		**17 44 56.1**	**-0.1**
	18nm,0.6s,mb4.7								
KKTK	**Khon Kaen**	**26.16**	**349**	⇑P		**P**		**17 45 12.6**	**+0.5**
WRA	**Warramunga Arr**	**27.67**	**115**	P		**P**		**17 45 24.9**	**-0.8**
	5.6nm,0.7s,mb4.3,baz=285,slow=11,SNR=19								
WRAB	**Tennant Creek**	**27.67**	**115**	*e*P		**P**		**17 45 25.0**	**-0.7**
WRAB				pmax		pmax			
	comp=Z,16nm,1.0s,mb4.6								
WRAB	**Tennant Creek**	**27.67**	**115**	*e*P		**P**		**17 45 25.0**	**-0.7**
	comp=Z,16nm,1.0s,mb4.6								
WB2	**Warramunga Arr**	**27.68**	**115**	*e*P		**P**		**17 45 25.9**	**+0.2**
QIZ	**Qiongzhong**	**28.45**	**4**	P		**P**		**17 45 33.5**	**+0.9**
QIZ				AP		pP		17 45 38.3	+0.5
QIZ				XP		sP		17 45 40.3	+0.4
QIZ				AMB		AMB			
	comp=Z,25nm,1.9s,mb4.5								
QIZ				LR		LR			
	comp=E,422nm,20.8s								
QIZ				LR		LR			
	comp=Z,385nm,26.8s								
ASPA	**Alice Springs**	**28.65**	**123**	*e*P		**P**		**17 45 35.8**	**+1.4**
ASAR	**Alice Springs**	**28.65**	**123**	P		**P**		**17 45 35.4**	**+1.0**
	comp=Z,2.3nm,0.6s,mb4.1,baz=295,slow=9.4,SNR=20								
ASAR				PcP		PcP		17 48 44.8	-0.2
	comp=Z,1.1nm,0.7s,baz=307,slow=2.3,SNR=5.4								
AS31	**Alice Springs**	**28.66**	**123**	*e*P		**P**		**17 45 35.8**	**+1.4**
CHG	**Chiang Mai**	**29.48**	**343**	⇓P		**P**		**17 45 42.0**	**+0.3**
	comp=Z,32nm,1.0s,mb5.0								
CHTO	**Chiang Mai**	**29.48**	**343**	*e*P		**P**		**17 45 42.0**	**+0.3**
CHTO				pmax		pmax			
	comp=Z,34nm,1.1s,mb5.0								
CHTO	**Chiang Mai**	**29.48**	**343**	*e*P		**P**		**17 45 42.0**	**+0.3**
	comp=Z,34nm,1.1s,mb5.0								
GZH	**Guangzhou**	**32.88**	**10**	P		**P**		**17 46 17.5**	**+5.8**
GZH				LR		LR			
	comp=N,234nm,17.1s,MS4.0								
GZH				LR		LR			
	comp=E,119nm,16.2s,MS4.0								
GZH				LR		LR			
	comp=Z,487nm,18.3s,MS4.2								
KMI	**Kunming**	**34.79**	**352**	P		**P**		**17 46 31.0**	**+2.7**
KMI				AP		pP		17 46 37.3	+3.8
KMI				XP		sP		17 46 40.8	+5.2
KMI				PP		PP		17 47 52.3	+5.1
KMI				PPP				17 48 07.5	
KMI				AMB		AMB			
	comp=Z,36nm,1.4s,mb5.1								
KMI				AMB		AMB			
	comp=Z,116nm,3.1s								
KMI				LR		LR			
	comp=N,256nm,18.3s,MS4.3								
KMI				LR		LR			
	comp=E,475nm,16.8s,MS4.3								
KMI				LR		LR			
	comp=Z,552nm,13.4s,MS4.5								
GYA	**Guiyang**	**35.79**	**358**	⇓*i*P		**P**		**17 46 38.0**	**+1.1**
GYA				AP		pP		17 46 42.5	+0.4
GYA				XP		sP		17 46 45.3	+1.1
GYA				PP		PP		17 47 59.5	+1.2
GYA				AMB		AMB			
	comp=Z,40nm,1.1s,mb5.3								
GYA				AMB		AMB			
	comp=Z,70nm,2.6s,mb5.1								
GYA				LR		LR			
	comp=N,460nm,17.8s,MS4.4								
GYA				LR		LR			
	comp=E,430nm,17.5s,MS4.4								
GYA				LR		LR			
	comp=Z,420nm,17.8s,MS4.2								
YHNB	**Yeheng**	**36.50**	**21**	*e*P		**P**		**17 46 42.9**	**-0.1**
STKA	**Stephens Creek**	**38.42**	**130**	*e*P		**P**		**17 46 58.7**	**-0.5**
	comp=Z,8.3nm,0.8s,mb4.5								
STKA	**Stephens Creek**	**38.42**	**130**	P		**P**		**17 46 58.5**	**-0.7**
	comp=Z,5.7nm,0.7s,mb4.4,baz=306,slow=7.6,SNR=13								
CTA	**Charters Tower**	**38.58**	**110**	P		**P**		**17 47 01.2**	**+0.7**
	comp=Z,6.6nm,0.8s,mb4.4,baz=276,slow=8.4,SNR=5.2								
HYB	**Hyderabad**	**39.37**	**313**	*i*P		**P**		**17 47 08.0**	**+0.8**
HYB				*e*				17 47 18.0	
HYB	**Hyderabad**	**39.37**	**313**	*e*P		**P**		**17 47 08.0**	**+0.8**
WHN	**Wuhan**	**40.34**	**9**	P		**P**		**17 47 16.0**	**+0.7**
CD2	**Chengdu**	**40.39**	**355**	P		**P**		**17 47 15.8**	**+0.1**
CD2				AP		pP		17 47 20.3	-0.7
CD2				XP		sP		17 47 23.8	+0.8
CD2				PP		PP		17 48 53.0	+4.3
CD2				PCP		PcP		17 49 18.5	-0.2
CD2				AMB		AMB			
	comp=Z,30nm,1.1s,mb4.9								
CD2				AMB		AMB			
	comp=Z,70nm,5.2s								
CD2				LR		LR			
	comp=E,120nm,16.8s								
CD2				LR		LR			
	comp=Z,100nm,16.8s,MS3.7								
JOW	**Kunigami**	**41.27**	**28**	P		**P**		**17 47 23.2**	**+0.3**
	comp=Z,14nm,0.7s,mb4.7,baz=236,slow=5.8,SNR=7.6								
LSA	**Lhasa**	**42.16**	**338**	P		**P**		**17 47 31.5**	**+1.3**
LSA	**Lhasa**	**42.16**	**338**	*e*P		**P**		**17 47 31.4**	**+1.2**
LSA				pmax		pmax			
	comp=Z,41nm,0.8s,mb5.1								
LSA	**Lhasa**	**42.16**	**338**	*e*P		**P**		**17 47 31.4**	**+1.2**
	comp=Z,41nm,0.8s,mb5.1								
SSE	**Sheshan**	**42.40**	**17**	P		**P**		**17 47 33.5**	**+1.3**
SSE				AP		pP		17 47 37.0	-0.4
SSE				PP		PP		17 49 11.8	+1.3
SSE				AMB		AMB			
	comp=Z,40nm,0.9s,mb5.0								
SSE				AMB		AMB			
	comp=Z,36nm,3.3s								
SSE				LR		LR			
	comp=N,55nm,18.0s,MS3.6								
SSE				LR		LR			
	comp=E,56nm,17.9s,MS3.6								
SSE				LR		LR			
	comp=Z,119nm,19.2s,MS3.8								
NJ2	**Nanjing**	**42.69**	**14**	*e*P		**P**		**17 47 35.0**	**+0.5**
NJ2				AP		pP		17 47 39.5	-0.3
NJ2				AMB		AMB			
	comp=Z,30nm,0.7s,mb5.1								
NJ2				AMB		AMB			
	comp=Z,120nm,7.5s								
NJ2				LR		LR			
	comp=N,210nm,19.7s,MS4.2								
NJ2				LR		LR			
	comp=E,160nm,18.0s,MS4.2								
NJ2				LR		LR			
	comp=Z,310nm,14.8s,MS4.3								
PKI	**Pulchoki**	**42.77**	**330**	*e*P		**P**		**17 47 35.1**	**-0.1**
GUN	**Gumba**	**42.83**	**331**	*e*P		**P**		**17 47 36.4**	**+0.8**
	comp=Z,89nm,0.7s,mb5.6								
DMN	**Daman**	**42.95**	**330**	*e*P		**P**		**17 47 37.0**	**+0.3**
	comp=Z,54nm,0.8s,mb5.3								
KKN	**Kakani**	**43.02**	**330**	*e*P		**P**		**17 47 37.5**	**+0.3**
	comp=Z,80nm,1.0s,mb5.4								
KKN	**Kakani**	**43.02**	**330**	*e*P		**P**		**17 47 37.5**	**+0.3**
KKN				pmax		pmax			
	comp=Z,80nm,1.0s,mb5.4								
XAN	**Xi'an**	**43.34**	**1**	P		**P**		**17 47 39.5**	**-0.3**
XAN				AP		pP		17 47 50.8	+5.7
XAN				AMB		AMB			
	comp=Z,33nm,1.0s,mb5.0								
XAN				AMB		AMB			
	comp=Z,61nm,4.2s								
XAN				LR		LR			
	comp=N,196nm,18.1s,MS4.3								
XAN				LR		LR			
	comp=E,234nm,16.2s,MS4.3								
XAN				LR		LR			
	comp=Z,473nm,14.3s,MS4.5								
GUMO	**Guam**	**43.41**	**59**	LR		LR		18 03 39.5	
	comp=Z,79nm,21.2s,MS3.6,baz=118,slow=33								
GKN	**Gorkha**	**43.51**	**330**	*e*P		**P**		**17 47 41.3**	**+0.1**
LZH	**Lanzhou**	**45.52**	**356**	⇓P		**P**		**17 47 57.5**	**+0.2**
LZH				AP		pP		17 48 07.3	+4.7
LZH				XP		sP		17 48 11.3	+6.7
LZH				PP		PP		17 49 44.8	+0.9
LZH				PPP				17 50 28.5	
LZH				AMB		AMB			
	comp=Z,39nm,1.4s,mb5.1								
LZH				AMB		AMB			
	comp=Z,138nm,6.2s								
LZH				LR		LR			
	comp=E,1µm,14.7s								
LZH				LR		LR			
	comp=Z,1µm,17.8s,MS4.9								
LGTI	**Lohaghat**	**46.96**	**327**	*e*P		**P**		**17 48 09.5**	**+0.9**
GTA	**Gaotai**	**49.25**	**352**	*e*P		**P**		**17 48 26.5**	**+0.2**
GTA				AP		pP		17 48 30.5	-1.1
GTA				XP		sP		17 48 34.0	+0.4
GTA				PCP		PcP		17 49 46.0	-3.1
GTA				PP		PP		17 50 23.3	+3.2
GTA				PPP				17 51 17.3	
GTA				AMB		AMB			
	comp=Z,9.0nm,1.6s,mb4.5								
GTA				AMB		AMB			
	comp=Z,95nm,5.0s								
GTA				LR		LR			
	comp=N,255nm,16.0s								
GTA				LR		LR			
	comp=E,355nm,22.1s								
GTA				LR		LR			
	comp=Z,229nm,14.8s,MS4.3								
BJT	**Baijiatuau**	**49.91**	**8**	*e*P		**P**		**17 48 31.3**	**0.0**
BJT				pmax		pmax			
	comp=Z,25nm,0.8s								
BJT	**Baijiatuau**	**49.91**	**8**	*e*P		**P**		**17 48 31.3**	**0.0**
	comp=Z,25nm,0.8s,mb5.3								
BJI	**Beijing**	**49.93**	**8**	P		**P**		**17 48 31.5**	**0.0**
BJI				AMB		AMB			
	comp=Z,22nm,0.8s,mb5.2								
BJI				LR		LR			
	comp=N,190nm,18.7s,MS4.4								
BJI				LR		LR			
	comp=E,298nm,18.7s,MS4.4								
BJI				LR		LR			
	comp=Z,157nm,23.9s								
HHC	**Hu-ho-hao-te**	**50.25**	**4**	*e*P		**P**		**17 48 36.0**	**+2.1**
HHC				AP		pP		17 48 40.5	+1.3
HHC				XP		sP		17 48 43.0	+1.7
HHC				PCP		PcP		17 49 54.3	+1.5
HHC				PP		PP		17 50 32.5	+3.3
HHC				AMB		AMB			
	comp=Z,17nm,1.2s,mb5.0								
HHC				AMB		AMB			
	comp=Z,63nm,5.4s								
HHC				LR		LR			
	comp=N,198nm,20.1s,MS4.3								
HHC				LR		LR			
	comp=E,188nm,18.0s,MS4.3								
HHC				LR		LR			
	comp=Z,191nm,20.0s,MS4.1								
MAJO	**Matsushiro**	**54.04**	**30**	*e*P		**P**		**17 48 59.6**	**-2.5**
MAJO				pmax		pmax			
	comp=Z,19nm,1.1s,mb4.9								
MAJO	**Matsushiro**	**54.04**	**30**	*e*P		**P**		**17 48 59.6**	**-2.5**
	comp=Z,19nm,1.1s,mb4.9								
MAT	**Matsushiro**	**54.04**	**30**	P		**P**		**17 48 59.6**	**-2.5**
MAT				S		S		17 56 15.0	-22
MJAR	**Matsushiro Arr**	**54.04**	**30**	P		**P**		**17 48 59.8**	**-2.3**
	comp=Z,8.5nm,0.9s,mb4.7,baz=209,slow=7.6,SNR=21								
CN2	**Changchun**	**55.46**	**15**	*e*P		**P**		**17 49 11.5**	**-0.9**
CN2				PCP		PcP		17 50 11.8	-0.6
CN2				AMB		AMB			
	comp=Z,10.0nm,0.7s,mb5.0								
CN2				AMB		AMB			
	comp=Z,170nm,5.0s								
CN2				LR		LR			
	comp=N,100nm,12.0s,MS4.5								
CN2				LR		LR			
	comp=E,200nm,12.0s,MS4.5								
CN2				LR		LR			
	comp=Z,200nm,15.0s,MS4.3								
WMQ	**Urumqi**	**56.14**	**343**	P		**P**		**17 49 18.0**	**+0.7**
WMQ				XP		sP		17 49 25.0	+0.3
WMQ				PP		PP		17 51 25.0	+2.6
WMQ				AMB		AMB			
	comp=Z,36nm,1.2s,mb5.3								
WMQ				AMB		AMB			
	comp=Z,124nm,5.0s								
WMQ				LR		LR			
	comp=N,114nm,14.0s,MS4.3								
WMQ				LR		LR			
	comp=E,137nm,14.0s,MS4.3								
WMQ				LR		LR			
	comp=Z,106nm,14.0s,MS4.1								
KSH	**Kashi**	**57.02**	**331**	*e*P		**P**		**17 49 23.8**	**+0.3**
KSH				*e*AP		pP		17 49 28.3	-0.6
KSH				*e*XP		sP		17 49 31.0	0.0
KSH				*e*PCP		PcP		17 50 19.8	+1.3
KSH				*e*PP		PP		17 51 31.8	+1.6
KSH				*e*SCP		ScP		17 54 16.8	-0.6
KSH				*e*PCS		PcS		17 54 18.5	-0.9
KSH				*e*S		**S**		**17 57 14.0**	**-3.3**
KSH				*e*SCS		ScS		17 59 08.8	-3.4
KSH				*e*SS		SS		18 01 04.0	-1.9
KSH				LR		LR			
	comp=N,225nm,5.1s								
KSH				LR		LR			
	comp=E,286nm,6.0s								
KSH				LR		LR			
	comp=Z,347nm,5.5s								
SONM	**Songino Array**	**57.12**	**359**	P		**P**		**17 49 24.5**	**+0.3**
	comp=Z,7.5nm,0.6s,mb4.9,baz=174,slow=6.5,SNR=45								
MDJ	**Mudanjiang**	**57.40**	**18**	P		**P**		**17 49 26.0**	**-0.2**
MDJ				AP		pP		17 49 30.5	-1.1
MDJ				PP		PP		17 51 33.5	-0.1
MDJ				AMB		AMB			
	comp=Z,6.0nm,1.6s,mb4.4								
MDJ				AMB		AMB			
	comp=Z,73nm,6.7s								
MDJ				LR		LR			
	comp=N,60nm,20.7s,MS3.7								
MDJ				LR		LR			
	comp=E,12nm,17.3s,MS3.7								
MDJ				LR		LR			
	comp=Z,70nm,16.1s,MS3.9								
ZAK	**Zakamensk**	**59.79**	**357**	*e*P		**P**		**17 49 42.5**	**-0.3**
ZAK				pmax		pmax			
	comp=Z,5.0nm,1.1s,mb4.5								
AAK	**Ala-Archa**	**60.16**	**332**	*i*P		**P**		**17 49 44.7**	**-0.7**
FRU	**Bishkek**	**60.26**	**332**	*e*P		**P**		**17 49 45.5**	**-0.6**
MKAR	**Makanchi Array**	**60.51**	**340**	P		**P**		**17 49 47.3**	**-0.5**
	comp=Z,11nm,0.6s,mb5.2,baz=144,slow=6.8,SNR=72								
TLY	**Talaya**	**61.07**	**357**	*e*P		**P**		**17 49 51.8**	**+0.2**
TLY				pmax		pmax			
	comp=Z,12nm,1.3s,mb4.9								
TLY	**Talaya**	**61.07**	**357**	*e*P		**P**		**17 49 51.8**	**+0.2**
	comp=Z,12nm,1.3s,mb4.8								
MOY	**Mondy**	**61.23**	**355**	*e*P		**P**		**17 49 59.2**	**+6.5**
CIT	**Chita**	**61.51**	**4**	*e*P		**P**		**17 49 52.6**	**-1.9**
CIT				*e*				17 50 02.8	
CIT				pmax		pmax			
	comp=Z,41nm,1.7s,mb5.3								
IRK	**Irkutsk**	**61.60**	**358**	*e*P		**P**		**17 49 53.9**	**-1.3**
IRK				pmax		pmax			
	comp=Z,26nm,1.6s,mb5.1								
KLR	**Kul'dur**	**62.19**	**18**	*e*P		**P**		**17 49 56.3**	**-2.9**
KLR				*e*				17 50 05.0	
KLR				pmax		pmax			
	comp=Z,53nm,1.8s,mb5.4								
HABR	**Khabarovsk**	**62.58**	**20**	*e*P		**P**		**17 50 00.1**	**-1.6**
HABR				*e*S		**S**		**17 58 26.6**	**-2.3**
HABR				pmax		pmax			
	comp=Z,23nm,1.3s,mb5.2								
YSS	**Yuzh-Sakhalins**	**64.30**	**26**	⇑*e*P		**P**		**17 50 12.3**	**-0.8**
YSS				*e*				17 50 23.0	
YSS				*e*				17 50 30.6	
YSS	**Yuzh-Sakhalins**	**64.30**	**26**	*e*P		**P**		**17 50 12.6**	**-0.5**
	comp=Z,69nm,1.1s,mb5.6								
KURK	**Kurchatov**	**65.12**	**340**	P		**P**		**17 50 18.1**	**-0.4**
	comp=Z,97nm,0.8s,mb5.9,SNR=15								
MAW	**Mawson**	**65.18**	**197**	*e*P		**P**		**17 50 18.3**	**-0.6**
	comp=Z,6.1nm,0.8s,mb4.7								
MAW	**Mawson**	**65.18**	**197**	P		**P**		**17 50 18.3**	**-0.5**
	comp=Z,8.0nm,0.9s,mb4.8,baz=38,slow=7.8,SNR=16								
MAW	**Mawson**	**65.18**	**197**	*e*P		**P**		**17 50 18.3**	**-0.6**
MAW				pmax		pmax			
	comp=Z,6.0nm,0.8s								
ZAL	**Zalesovo**	**66.15**	**345**	P		**P**		**17 50 23.3**	**-1.9**
	comp=Z,2.1nm,0.4s,mb4.6,baz=338,slow=4.8,SNR=7.2								
ZAL	**Zalesovo**	**66.15**	**345**	P		**P**		**17 50 23.3**	**-1.9**
BOD	**Bodaibo**	**67.31**	**4**	*e*P		**P**		**17 50 31.0**	**-1.5**
BOD				*e*				17 50 40.4	
BOD				pmax		pmax			
	comp=Z,15nm,1.1s,mb4.9								
BOD				pmax		pmax			
	comp=Z,15nm,1.6s,mb4.8								
NVS	**Novosibirsk**	**67.36**	**345**	*i*P		**P**		**17 50 29.7**	**-3.2**
NVS				*i*				17 59 50.0	
NVS				pmax		pmax			
	comp=Z,10.0nm,1.4s,mb4.7								
NVS				pmax		pmax			
	comp=N,6.0nm

ARU eSS SS 18 06 12.7 -5.7
ARU pmax pmax
comp=Z,15nm,1.2s,mb4.8
ARU Arti 77.22 334 eP **P 17 51 31.0 -0.7**
comp=Z,47nm,1.7s,mb5.1
ZEI Tsey 77.96 317 eP **P 17 51 36.2 +0.4**
ZEI e*PP pP 17 51 46.7 +5.3
ZEI pmax pmax
comp=Z,14nm,0.5s,mb5.2
KIV Kislovodsk 79.25 318↓ eP **P 17 51 43.3 +0.3**
KIV e 17 54 42.5
KIV pmax pmax
comp=Z,11nm,1.6s,mb4.5
SEY Seymchan 79.93 19↑ eP **P 17 51 46.8 +0.1**
MALT Malatya 80.08 312 eP **P 17 51 47.6 +0.1**
MALT pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
MALT Malatya 80.08 312 eP **P 17 51 47.6 +0.2**
comp=Z,10nm,1.4s,mb4.6
MALT e 17 52 07.9
QSPA South Pole Qui 80.47 180 eP **P 17 51 51.3 +1.7**
comp=Z,3.2nm,0.9s,mb4.2
TIXI Tiksi 82.22 7 i P **P 17 51 57.0 -1.9**
ANN Anapa 83.06 318 eP **P 17 51 57.8 -5.4**
ANN e pP 17 52 03.2 -5.6
ANN eS S 18 02 12.1 -10
ANN pmax pmax
comp=Z,22nm,0.7s,mb5.3
BRTR Keskin Array B 84.06 312 P **P 17 52 07.9 -0.5**
comp=Z,2.5nm,0.9s,mb4.3,baz=121,slow=5.6,SNR=12
VRSR Storozhevoye 84.33 324 eP **P 17 52 09.3 -0.5**
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=Z,20nm,1.0s,mb5.2
VRSR pmax pmax
comp=E,10.0nm,0.8s
VOR Voronezh 84.53 324 eP **P 17 52 10.0 -0.7**
VOR pmax pmax
comp=Z,70nm,1.6s,mb5.5
OBN Obninsk 87.25 327 d i P **P 17 52 23.5 -0.7**
OBN pmax pmax
comp=Z,33nm,1.0s,mb5.5
OBN Obninsk 87.25 327 eP **P 17 52 23.8 -0.5**
comp=Z,13nm,0.6s,mb5.3
SNAA Sanae 87.35 197 eP **P 17 52 24.6 -0.1**
SNAA e 17 52 27.4
SNAA Sanae 87.35 197↑ eP **P 17 52 25.2 +0.5**
BILL Bilibino 87.63 19 i P **P 17 52 25.5 -0.6**
VNA1 Neumayer--Stat 89.38 197 eP **P 17 52 33.7 -0.6**
VNA1 e 17 52 35.8
VNA1 e pP 17 52 37.2 -2.8
VNA1 e pP 17 52 38.1 -1.9
TMCR Tamitsa 89.89 336 eP **P 17 52 32.5 -4.2**
TMCR pmax pmax
comp=Z,20nm,0.5s,mb5.7
AKASG Malin Array Be 90.13 321 P **P 17 52 36.4 -1.5**
comp=Z,0.3nm,0.4s,mb4.0,baz=83,slow=4.2,SNR=7.5
ARCES ARCESS Array B 96.16 339 P **P 17 53 04.5 -1.1**
comp=Z,5.3nm,1.0s,mb4.9,baz=90,slow=6.1,SNR=6.1
NVAR Mina Array Bea 129.75 47 PKP PKPdf 17 58 48.2 +1.2
comp=Z,0.5nm,0.7s,baz=328,slow=2.2,SNR=4.6
PDAR Pinedale Array 133.55 38 PKP PKPdf 17 58 55.3 +1.2
comp=Z,0.2nm,0.3s,baz=316,slow=43,SNR=2.3
ULM Lac du Bonnet 134.93 21 PKP PKPdf 17 58 56.0 -0.8
comp=Z,4.2nm,0.8s,baz=52,slow=4.1,SNR=3.3
ULM Lac du Bonnet 134.93 21 PKP PKPdf 17 58 56.0 -0.8
WMOK Wichita Mounta 145.09 40 ePKIKP PKPdf 17 59 15.4 +0.3
WMOK e 17 59 26.3
BDFB Brasilia 145.34 224 PKPbc PKPbc 17 59 16.0 +0.6
comp=Z,3.8nm,0.8s,baz=148,slow=0.9,SNR=4.3
JCT Junction City 146.92 47 ePKP2 PKPab 17 59 21.2 -0.3
LVC Limon Verde 147.89 186 ePKPbc PKPbc 17 59 24.3 +1.5
SSPA Standing Stone 148.62 8 ePKPbc PKPbc 17 59 24.8 +0.1
WVT Waverly 149.97 26 ePKP2 PKPab 17 59 28.4 -5.4
HKT Hockley 150.03 44 ePKP2 PKPab 17 59 29.7 -4.3
PLAL Pickwick Lake 150.82 27 ePKPbc PKPbc 17 59 30.0 -0.2
SWET Sewanee 151.54 24 ePKPbc PKPbc 17 59 32.3 +0.5
SIV San Ignacio 152.34 204 PKPbc PKPbc 17 59 33.7 0.0
baz=128,slow=3.9
SIV PKPab PKPab 17 59 44.7 +1.1
comp=Z,3.4nm,0.7s,baz=138,slow=4.2,SNR=4.8
LPAZ La Paz 154.03 189 PKPbc PKPbc 17 59 40.2 +2.9
comp=Z,0.8nm,0.8s,baz=87,slow=4.1,SNR=3.4
LPAZ PKPab PKPab 17 59 52.5 +1.8
comp=Z,1.4nm,0.7s,baz=285,slow=1.4,SNR=6.1

IDC ***30*** *17:43:56.5±0.4, 9.50S×10773E, h0km, mb4.6/19, mb1 4.6/20, mb1mx4.5/24, mbtmp4.6/20, ML4.5/1, MS4.1/13, Ms1 4.1/13, ms1mx3.8/33, Error ellipse: s-maj=17.8km s-min=11.8km az=57.0*

NEIC ***30*** *17:43:58.3±0.2, 9.55S×10773E, h10km, mb5.0/16, Error ellipse: s-maj=8.8km s-min=4.7km az=51.0*

BJI ***30*** *17:43:58.2, 9.50S×10770E, h10km, mB5.0, mb4.9, Ms4.6, Msz4.4*

ISCJB ***30*** *17:43:60.0±0.3, 9.59S±0.04×10776E±0.05, h33km, mb4.9/56, MS4.2/23, Error ellipse: s-maj=7.8km s-min=5.1km az=95.1*

MOS ***30*** *17:44:00.4±1.0, 9.45S×10786E, h33km, mb5.1/16, Error ellipse: s-maj=13.3km s-min=7.5km az=110.4*

ISC 30 17:44:02.2±0.3**, 9.59S**×0.05**×10776E**±0.05**, h35**km**, (h21**km**±4.7**km**; pP-P), n137,σ1.5**03/132**, mb4.9**/56**, MS4.2**/23**, 6C-6D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJII	**Banjamegara**	**2.96**	**41**	↓ i P	**Pn**	**17 44 45.8**	**-0.9**
NBBI	**Negara**	**6.89**	**80**	P	**Pn**	**17 45 41.7**	**+1.0**
	487nm,0.8s						
DNP	**Denpasar**	**7.42**	**84**	P	**Pn**	**17 45 50.5**	**+2.6**
	554nm,0.5s						
PCI	**Palu**	**14.80**	**55**	P	**Pn**	**17 47 27.6**	**-1.3**
	163nm,1.8s						
PSI	**Prapat**	**15.13**	**324**	LR	LR	17 53 27.8	
	comp=Z,552nm,19.5s,baz=149,slow=38						
MBWA	**Marble Bar**	**16.28**	**136**	eP	**Pn**	**17 47 42.6**	**-5.5**
	30nm,1.0s						
KULM	**Kulim**	**16.39**	**334**	eP	**Pn**	**17 47 46.4**	**-3.1**
KKM	**Kota Kinabalu**	**17.67**	**29**	eP	**Pn**	**17 48 04.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.30**	**118**	P	**Pn**	**17 48 24.4**	**-0.9**
	1.1nm,0.3s,baz=284,slow=10,SNR=12						
FITZ				S	**S**	**17 51 45.4**	**-15**
	0.3nm,0.3s,baz=301,slow=19,SNR=5.4						
FITZ				LR	LR	17 55 07.3	
	comp=Z,330nm,18.0s,baz=306,slow=35						
FITZ	**Fitzroy Crossi**	**19.30**	**118**	P	**Pn**	**17 48 24.4**	**-0.9**
FITZ				S	**S**	**17 51 45.4**	**-15**
FITZ				LR	LR	17 55 07.3	
BSI	**Banda Aceh**	**19.46**	**320**	P	**Pn**	**17 48 28.0**	**+0.8**
	147nm,1.2s						
KAKA	**Kakadu**	**24.41**	**100**	eP	**P**	**17 49 16.8**	**-0.5**
	23nm,0.6s,mb4.8						
NWAO	**Narrogin (SRO)**	**24.82**	**161**	P	**P**	**17 49 20.5**	**-0.5**
	16nm,0.9s,mb4.5,baz=3.6,slow=10,SNR=5.3						
NWAO				LR	LR	17 57 33.9	
	comp=Z,596nm,20.3s,MS4.1,baz=231,slow=33						
NWAO	**Narrogin (SRO)**	**24.82**	**161**	eP	**P**	**17 49 21.0**	**0.0**
WRA	**Warramunga Arr**	**27.65**	**115**	P	**P**	**17 49 46.0**	**-0.6**
	9.9nm,0.7s,mb4.6,baz=286,slow=11,SNR=17						
WRA				PcP	PcP	17 53 03.5	+0.3
	2.4nm,0.8s,baz=295,slow=2.1,SNR=7.5						
WRAB	**Tennant Creek**	**27.65**	**115**	i P	**P**	**17 49 46.4**	**-0.2**
WRAB	**Tennant Creek**	**27.65**	**115**	eP	**P**	**17 49 45.6**	**-1.0**
	12nm,0.6s,mb4.7						
WB2	**Warramunga Arr**	**27.66**	**115**	eP	**P**	**17 49 46.7**	**+0.1**
QIZ	**Qiongzhong**	**28.52**	**4**	P	**P**	**17 49 54.8**	**+0.5**
QIZ				S	**S**	**17 54 44.5**	**+4.8**
QIZ				AMB	AMB		
	comp=Z,146nm,3.5s						
QIZ				LR	LR		
	comp=E,391nm,18.9s						
QIZ				LR	LR		
	comp=Z,358nm,13.8s						
ASPA	**Alice Springs**	**28.62**	**122**	eP	**P**	**17 49 57.7**	**+2.5**
ASAR	**Alice Springs**	**28.62**	**122**	P	**P**	**17 49 57.0**	**+1.7**
	comp=Z,5.5nm,0.6s,mb4.5,baz=297,slow=8.3,SNR=32						
ASAR				PcP	PcP	17 53 06.7	+1.1
	comp=Z,1.6nm,0.7s,baz=318,slow=1.4,SNR=8.0						
AS31	**Alice Springs**	**28.63**	**122**	eP	**P**	**17 49 57.7**	**+2.5**
CHTO	**Chiang Mai**	**29.54**	**343**	eP	**P**	**17 50 03.0**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.9						
CHTO	**Chiang Mai**	**29.54**	**343**	eP	**P**	**17 50 03.0**	**-0.3**
	comp=Z,32nm,1.3s,mb4.9						
KMI	**Kunming**	**34.85**	**352**	P	**P**	**17 50 52.5**	**+2.6**
KMI				AP	pP	17 50 58.8	-1.2
KMI				XP	sP	17 51 02.0	-2.2
KMI				PP	PP	17 52 10.3	+1.1
KMI				S	**S**	**17 56 26.0**	**+7.5**
KMI				SS	SS	17 58 37.5	-13
KMI				SSS		17 59 06.3	
KMI				SCS	ScS	18 01 12.0	+3.4
KMI				AMB	AMB		
	comp=Z,27nm,1.3s,mb5.0						
KMI				AMB	AMB		
	comp=Z,74nm,3.1s						
KMI				LR	LR		
	comp=N,825nm,14.1s,MS4.7						
KMI				LR	LR		
	comp=E,426nm,15.0s,MS4.7						
KMI				LR	LR		
	comp=Z,829nm,13.1s,MS4.7						
GYA	**Guiyang**	**35.85**	**358**↓	i P	**P**	**17 51 00.0**	**+1.5**
GYA				AP	pP	17 51 04.8	-3.8
GYA				XP	sP	17 51 07.5	-5.4
GYA				PP	PP	17 52 22.0	+1.7
GYA				S	**S**	**17 56 37.8**	**+3.9**
GYA				SCP	ScP	17 57 11.3	+2.6
GYA				SS	SS	17 59 01.3	-10
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,340nm,17.6s,MS4.3						
GYA				LR	LR		
	comp=E,290nm,18.0s,MS4.3						
GYA				LR	LR		
	comp=Z,210nm,17.9s,MS4.0						
STKA	**Stephens Creek**	**38.38**	**130**	eP	**P**	**17 51 19.7**	**-0.3**
	comp=Z,12nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**38.38**	**130**	P	**P**	**17 51 19.8**	**-0.2**
	comp=Z,14nm,0.7s,mb4.8,baz=300,slow=8.1,SNR=26						
STKA				PcP	PcP	17 53 34.0	+1.0
	comp=Z,2.6nm,0.5s,baz=281,slow=5.4,SNR=5.0						
STKA				LR	LR	18 08 08.0	
	comp=Z,356nm,18.6s,MS4.2,baz=30,slow=38						
CTA	**Charters Tower**	**38.56**	**110**	eP	**P**	**17 51 22.6**	**+1.1**
	comp=Z,4.0nm,0.6s,mb4.3						
CTA	**Charters Tower**	**38.56**	**110**	P	**P**	**17 51 22.3**	**+0.9**
	comp=Z,4.2nm,0.6s,mb4.4,baz=273,slow=11,SNR=9.2						
CTA	**Charters Tower**	**38.56**	**110**	P	**P**	**17 51 22.3**	**+0.8**
CTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PMG	**Port Moresby**	**38.85**	**93**	P	**P**	**17 51 23.8**	**-0.1**
	comp=Z,8.6nm,0.7s,mb4.6,baz=257,slow=9.8,SNR=4.0						
PMG	**Port Moresby**	**38.85**	**93**	P	**P**	**17 51 23.8**	**-0.1**
PMG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PMG	**Port Moresby**	**38.85**	**93**	eP	**P**	**17 51 26.1**	**+2.2**
HYB	**Hyderabad**	**39.41**	**313**	i P	**P**	**17 51 29.0**	**+0.4**
HYB				e	pP	17 51 39.5	+0.7
HYB	**Hyderabad**	**39.41**	**313**	eP	**P**	**17 51 29.0**	**+0.4**
WHN	**Wuhan**	**40.41**	**9**	P	**P**	**17 51 38.0**	**+1.1**
CD2	**Chengdu**	**40.45**	**355**	eP	**P**	**17 51 38.5**	**+1.3**
CD2				AP	pP	17 51 43.0	-4.5
CD2				XP	sP	17 51 45.5	-6.2
CD2				PP	PP	17 53 15.8	+5.1
CD2				S	**S**	**17 57 41.0**	**-2.4**
CD2				XS	sS	17 57 54.8	-5.5
CD2				SS	SS	18 00 42.0	-1.4
CD2				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.6						
CD2				AMB	AMB		
	comp=Z,40nm,5.6s						
CD2				LR	LR		
	comp=E,180nm,13.2s						
CD2				LR	LR		
	comp=Z,200nm,13.2s,MS4.2						
JOW	**Kunigami**	**41.33**	**28**	P	**P**	**17 51 43.6**	**-0.8**
	comp=Z,4.5nm,0.4s,mb4.5,baz=198,slow=10,SNR=6.0						
JOW				LR	LR	18 09 08.4	
	comp=Z,153nm,18.8s,MS3.9,baz=229,slow=37						
LSA	**Lhasa**	**42.21**	**338**	P	**P**	**17 51 52.5**	**+0.8**
LSA				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.0						
LSA	**Lhasa**	**42.21**	**338**	eP	**P**	**17 51 52.5**	**+0.9**
SSE	**Sheshan**	**42.46**	**17**	P	**P**	**17 51 54.8**	**+1.1**
SSE				AMB	AMB		
	comp=Z,29nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,51nm,4.3s						
NJ2	**Nanjing**	**42.75**	**14**	eP	**P**	**17 51 56.5**	**+0.5**
NJ2				AP	pP	17 52 01.0	-5.3
NJ2				XP	sP	17 52 03.5	-7.0
NJ2				PP	PP	17 53 38.5	+3.0
NJ2				S	**S**	**17 58 20.0**	**+2.6**
NJ2				XS	sS	17 58 27.0	-7.4
NJ2				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,420nm,11.2s						
NJ2				LR	LR		
	comp=N,130nm,13.4s						
NJ2				LR	LR		
	comp=E,470nm,20.6s						
NJ2				LR	LR		
	comp=Z,430nm,18.8s						
PKI	**Pulchoki**	**42.82**	**330**	eP	**P**	**17 51 56.8**	**+0.2**
GUN	**Gumba**	**42.88**	**331**	eP	**P**	**17 51 57.8**	**+0.7**
	comp=Z,68nm,0.7s,mb5.5						
DMN	**Daman**	**43.00**	**330**	eP	**P**	**17 51 58.2**	**+0.1**
	comp=Z,75nm,0.8s,mb5.5						
KKN	**Kakani**	**43.07**	**330**	eP	**P**	**17 51 58.8**	**+0.2**
	comp=Z,62nm,0.9s,mb5.4						
KKN	**Kakani**	**43.07**	**330**	eP	**P**	**17 51 58.8**	**+0.2**
KKN				pmax	pmax		
	comp=Z,62nm,0.9s,mb5.3						
XAN	**Xi'an**	**43.41**	**1**	P	**P**	**17 52 01.5**	**+0.1**
XAN				AP	pP	17 52 12.0	+0.3
XAN				AMB	AMB		
	comp=Z,26nm,1.4s,mb4.8						
XAN				LR	LR		
	comp=N,196nm,18.5s,MS4.2						
XAN				LR	LR		
	comp=E,234nm,17.0s,MS4.2						
XAN				LR	LR		
	comp=Z,473nm,14.2s,MS4.5						
GKN	**Gorkha**	**43.56**	**330**	eP	**P**	**17 52 02.7**	**+0.1**
KOLN	**Koldanda**	**43.89**	**328**	eP	**P**	**17 52 05.7**	**+0.4**
	comp=Z,67nm,0.8s,mb5.4						
LZH	**Lanzhou**	**45.58**	**356**	↓ P	**P**	**17 52 19.8**	**+1.1**
LZH				AP	pP	17 52 30.0	+0.9
LZH				XP	sP	17 52 34.3	+1.0
LZH				PP	PP	17 54 07.5	+1.7
LZH				PPP		17 54 50.8	
LZH				eS	**S**	**17 59 00.3**	**+1.6**
LZH				XS	sS	17 59 17.3	+1.5
LZH				SS	SS	18 02 17.0	-6.0
LZH				AMB	AMB		
	comp=Z,32nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,115nm,6.3s						
LZH				LR	LR		
	comp=E,847nm,14.8s						
LZH				LR	LR		
	comp=Z,1μm,17.8s,MS4.8						
LGTI	**Lohaghat**	**47.01**	**327**	eP	**P**	**17 52 30.5**	**+0.6**
GTA	**Gaotai**	**49.31**	**352**	eP	**P**	**17 52 48.5**	**+0.8**
GTA				AP	pP	17 52 52.5	-5.6
GTA				XP	sP	17 52 56.0	-6.3
GTA				PCP	PcP	17 54 10.8	+0.7
GTA				PP	PP	17 54 43.8	+2.0
GTA				PPP		17 55 39.3	
GTA				SCP	ScP	17 58 05.0	+2.4
GTA				PCS	PcS	17 58 06.3	-0.3
GTA				S	**S**	**17 59 56.8**	**+5.2**
GTA				XS	sS	18 00 04.8	-4.0
GTA				SCS	ScS	18 02 35.8	-1.0
GTA				SS	SS	18 03 25.5	+2.1
GTA				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,196nm,5.7s						
GTA				LR	LR		
	comp=N,255nm,14.4s						
GTA				LR	LR		
	comp=E,356nm,21.3s						
GTA				LR	LR		
	comp=Z,230nm,16.7s,MS4.2						
BJI	**Beijing**	**49.99**	**8**	P	**P**	**17 52 52.3**	**-0.6**
BJI				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.8						
HHC	**Hu-ho-hao-te**	**50.31**	**4**	eP	**P**	**17 52 58.3**	**+3.0**
HHC				AP	pP	17 53 02.8	-3.0
HHC				XP	sP	17 53 05.3	-4.6
HHC				PCP	PcP	17 54 16.5	+2.8
HHC				PP	PP	17 54 56.0	+5.1
HHC				SCP	ScP	17 58 11.0	+4.1
HHC				PCS	PcS	17 58 13.5	+2.6
HHC				S	**S**	**18 00 10.5**	**+4.8**
HHC				XS	sS	18 00 17.8	-5.1
HHC				PS		18 00 22.8	
HHC				SCS	ScS	18 02 46.0	+2.3
HHC				SS	SS	18 03 42.0	+2.5
HHC				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
HHC				AMB	AMB		
	comp=Z,51nm,5.4s						
HHC				LR	LR		
	comp=N,251nm,14.4s,MS4.4						
HHC				LR	LR		
	comp=E,188nm,17.0s,MS4.4						
HHC				LR	LR		
	comp=Z,196nm,14.1s,MS4.3						
MAJO	**Matsushiro**	**54.09**	**30**	eP	**P**	**17 53 22.1**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
MAJO	**Matsushiro**	**54.09**	**30**	eP	**P**	**17 53 22.1**	**-1.3**
	comp=Z,18nm,1.3s,mb4.8						
MAT	**Matsushiro**	**54.09**	**30**	P	**P**	**17 53 21.2**	**-2.2**
MAT				eS	**S**	**18 01 07.0**	**+10**
MJAR	**Matsushiro Arr**	**54.09**	**30**	P	**P**	**17 53 21.0**	**-2.4**
	comp=Z,8.2nm,1.0s,mb4.6,baz=208,slow=7.6,SNR=16						
MJAR				PcP	PcP	17 54 29.2	+1.3
	comp=Z,3.1nm,0.8s,baz=199,slow=3.8,SNR=5.6						
MJAR				LR	LR	18 15 15.5	
	comp=Z,148nm,19.6s,MS4.1,baz=170,slow=35						
MJAR	**Matsushiro Arr**	**54.09**	**30**	P	**P**	**17 53 21.0**	**-2.4**
MJAR						17 54 29.2	
MJAR	**Matsushiro Arr**	**54.09**	**30**	P	**P**	**17 53 21.0**	**-2.4**
MJAR				PcP	PcP	17 54 29.2	+1.3
MJAR				LR	LR	18 15 15.5	
CN2	**Changchun**	**55.52**	**15**	eP	**P**	**17 53 32.5**	**-1.2**
CN2				PCP	PcP	17 54 32.3	-1.1
CN2				eS	**S**	**18 01 17.0**	**+0.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				AMB	AMB		
	comp=Z,110nm,5.0s						
CN2				LR	LR		
	comp=N,100nm,11.0s,MS4.5						
CN2				LR	LR		
	comp=E,200nm,11.0s,MS4.5						
CN2				LR	LR		
	comp=Z,200nm,15.0s,MS4.3						
WMQ	**Urumqi**	**56.20**	**343**	eP	**P**	**17 53 39.0**	**+0.4**
WMQ				XP	sP	17 53 46.0	-7.3
WMQ				PP	PP	17 55 46.0	+2.0
WMQ				S	**S**	**18 01 26.0**	**+0.3**
WMQ				SS	SS	18 05 13.0	+0.6
WMQ				AMB	AMB		
	comp=Z,35nm,1.0s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,102nm,5.0s						
WMQ				LR	LR		
	comp=N,94nm,14.0s,MS4.2						
WMQ				LR	LR		
	comp=E,102nm,14.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,98nm,14.0s,MS4.0						
SONM	**Songino Array**	**57.19**	**359**	P	**P**	**17 53 45.4**	**-0.2**
	comp=Z,5.6nm,0.7s,mb4.7,baz=181,slow=8.2,SNR=25						
SONM				LR	LR	18 20 21.1	
	comp=Z,209nm,18.9s,MS4.3,baz=174,slow=38						
ULN	**Ulaanbaatar**	**57.21**	**359**	i P	**P**	**17 53 46.2**	**+0.4**
ULN	**Ulaanbaatar**	**57.21**	**359**	eP	**P**	**17 53 46.0**	**+0.2**
	comp=Z,11nm,0.8s,mb4.9						
MDJ	**Mudanjiang**	**57.46**	**18**	P	**P**	**17 53 47.5**	**0.0**
MDJ				AP	pP	17 53 50.5	-7.7
MDJ				PP	PP	17 55 55.0	-0.2
MDJ				SCP	ScP	17 58 40.3	+2.2
MDJ				PCS	PcS	17 58 42.0	-0.1
MDJ				S	**S**	**18 01 47.8**	**+5.5**
MDJ				XS	sS	18 01 51.0	-8.8
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,72nm,4.7s						
MDJ				LR	LR		
	comp=N,44nm,21.6s,MS3.8						
MDJ				LR	LR		
	comp=E,58nm,21.6s,MS3.8						
MDJ				LR	LR		
	comp=Z,70nm,15.4s						
ZAK	**Zakamensk**	**59.85**	**357**	eP	**P**	**17 54 04.1**	**-0.1**
AAK	**Ala-Archa**	**60.21**	**332**↑	eP	**P**	**17 54 02.7**	**-3.9**
AAK				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
AAK				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.1						
AAK	**Ala-Archa**	**60.21**	**332**	P	**P**	**17 54 08.2**	**+1.5**
	comp=Z,11nm,1.1s,mb4.8						
MKAR	**Makanchi Array**	**60.56**	**340**	P	**P**	**17 54 08.3**	**-0.7**
	comp=Z,7.0nm,0.6s,mb5.0,baz=134,slow=6.9,SNR=28						
TLY	**Talaya**	**61.13**	**357**	eP	**P**	**17 54 14.5**	**+1.6**
CIT	**Chita**	**61.57**	**4**	eP	**P**	**17 54 14.8**	**-1.1**
IRK	**Irkutsk**	**61.66**	**358**	eP	**P**	**17 54 16.2**	**-0.3**
IRK				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.9						
KLR	**Kul'dur**	**62.25**	**18**	eP	**P**	**17 54 16.0**	**-4.5**
HABR	**Khabarovsk**	**62.64**	**20**	eP	**P**	**17 54 22.4**	**-0.6**
HABR				eS	**S**	**18 02 49.3**	**+0.5**
YSS	**Yuzh-Sakhalins**	**64.36**	**26**↑	eP	**P**	**17 54 33.5**	**-0.9**
MAW	**Mawson**	**65.12**	**197**	P	**P**	**17 54 39.0**	**-0.4**
	comp=Z,5.0nm,1.0s,mb4.5,baz=55,slow=6.0,SNR=9.5						
MAW	**Mawson**	**65.12**	**197**	eP	**P**	**17 54 39.2**	**-0.2**
MAW				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MAW	**Mawson**	**65.12**	**197**	eP	**P**	**17 54 39.1**	**-0.2**
	comp=Z,8.8nm,1.3s,mb4.6						
KURK	**Kurchatov**	**65.18**	**340**	P	**P**	**17 54 39.7**	**0.0**
	comp=Z,73nm,0.9s,mb5.7,SNR=8.4						
ZAL	**Zalesovo**	**66.21**	**345**	P	**P**	**17 54 44.5**	**-1.9**
	comp=Z,1.7nm,0.3s,mb4.5,baz=23,slow=5.4,SNR=4.8						
ZAL				LR	LR	18 26 48.5	
	comp=Z,158nm,19.2s,MS4.2,baz=303,slow=39						
BOD	**Bodaibo**	**67.37**	**4**	eP	**P**	**17 54 52.2**	**-1.6**
BOD				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.7						
URZ	**Urewera**	**67.92**	**127**	P	**P**	**17 54 57.6**	**+0.3**
	comp=Z,6.3nm,0.8s,mb4.7,baz=201,slow=8.6,SNR=3.6						
BVAR	**Borovoye Array**	**70.03**	**337**	P	**P**	**17 55 09.3**	**-1.1**
	comp=Z,4.9nm,0.5s,mb4.7,baz=148,slow=8.3,SNR=11						
BVAR				LR	LR	18 26 26.8	
	comp=Z,128nm,19.3s,MS4.2,baz=138,slow=36						
BVAR	**Borovoye Array**	**70.03**	**337**	P	**P**	**17 55 09.3**	**-1.1**
BVAR				LR	LR	18 26 26.8	
BRVK	**Borovoye**	**70.10**	**337**	eP	**P**	**17 55 10.6**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
BRVK	**Borovoye**	**70.10**	**337**	eP	**P**	**17 55 10.6**	**-0.2**
	comp=Z,6.1nm,1.1s,mb4.4						
CHKZ	**Chkalovo**	**70.45**	**338**	eP	**P**	**17 55 13.0**	**+0.1**
ZRNK	**Zerenda**	**70.52**	**336**	eP	**P**	**17 55 12.4**	**-0.9**
KMBO	**Kilima Mbogo**	**70.59**	**272**	P	**P**	**17 55 14.3**	**+0.6**
	comp=Z,1.9nm,0.7s,mb4.1,baz=75,slow=8.6,SNR=5.8						
VNDA	**Vanda**	**73.30**	**169**	P	**P**	**17 55 29.4**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=308,slow=7.5,SNR=3.7						
VNDA				LR	LR	18 27 38.0	
	comp=Z,111nm,18.

YAK				*e*	pP		17 55 39.7	-1.9
PET	**Petropavlovsk**	**75.89**	**29**	*i* P	**P**		**17 55 44.8**	**-0.3**
PET	**Petropavlovsk**	**75.89**	**29**	*i* Pr	**P**		**17 55 44.8**	**-0.3**
GNI	**Garni**	**76.31**	**315**	*i* P	**P**		**17 55 48.4**	**+1.0**
MA2	**Magadan**	**77.03**	**21**	*i* P	**P**		**17 55 51.7**	**+0.2**
MA2	**Magadan**	**77.03**	**21**	*i* Pr	**P**		**17 55 51.7**	**+0.2**
ARU	**Arti**	**77.27**	**334**	⇑*i* P	**P**		**17 55 52.5**	**-0.4**
ARU				*e*	pP		17 56 03.2	-0.6
ARU				*e*			17 58 47.0	
ARU				*e*PPP			18 00 32.8	
ARU				*e*S	S		18 05 41.5	+1.3
ARU				*e*SS	SS		18 10 34.4	-4.2
ARU				pmax	pmax			
	comp=Z,12nm,1.0s,mb4.8							
ARU	**Arti**	**77.27**	**334**	P	**P**		**17 55 52.1**	**-0.8**
ZEI	**Tsey**	**78.00**	**317**	*e*P	**P**		**17 55 57.8**	**+0.9**
ZEI				pmax	pmax			
	comp=Z,11nm,0.4s,mb5.1							
BOSA	**Boshof**	**78.93**	**243**	LR	LR		18 26 30.1	
	comp=Z,343nm,19.5s,MS4.7,baz=268,slow=32							
KIV	**Kislovodsk**	**79.30**	**318**⇑	*e*P	**P**		**17 56 04.3**	**+0.2**
KIV				*e*S	S		18 06 08.6	+6.6
KIV				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5							
SEY	**Seymchan**	**79.99**	**19**⇑	*i*P	**P**		**17 56 08.5**	**+0.7**
SOC	**Sochi**	**81.12**	**317**	*e*P	**P**		**17 56 14.6**	**+0.7**
SOC				*e*S	S		18 06 20.8	-0.4
SOC				*e*SS	SS		18 11 39.8	+3.4
SOC				pmax	pmax			
	comp=Z,11nm,0.7s,mb4.9							
TIXI	**Tiksi**	**82.28**	**7**	*i* P	**P**		**17 56 19.1**	**-0.9**
BRTR	**Keskin Array B**	**84.10**	**312**	P	**P**		**17 56 29.3**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.3,baz=150,slow=7.8,SNR=9.4							
BRTR				LR	LR		18 39 50.1	
	comp=Z,61nm,18.7s,MS4.0,baz=189,slow=40							
VRSR	**Storozhevoye**	**84.38**	**324**	*e*P	**P**		**17 56 30.2**	**-0.6**
VRSR				pmax	pmax			
	comp=N,9.0nm,1.0s							
VRSR				pmax	pmax			
	comp=Z,20nm,1.0s,mb5.2							
VRSR				pmax	pmax			
	comp=E,10.0nm,0.9s							
VOR	**Voronezh**	**84.57**	**324**	*e*P	**P**		**17 56 32.0**	**+0.2**
VOR				pmax	pmax			
	comp=Z,40nm,1.7s,mb5.3							
MOS	**Moscow**	**86.96**	**328**	*e*P	**P**		**17 56 41.3**	**-2.3**
MOS				pmax	pmax			
	comp=Z,43nm,1.2s,mb5.5							
OBN	**Obninsk**	**87.29**	**327**⇑	*e*P	**P**		**17 56 44.8**	**-0.4**
OBN				*e*S	S		18 07 08.6	-14
OBN				pmax	pmax			
	comp=Z,36nm,1.4s,mb5.4							
OBN	**Obninsk**	**87.29**	**327**	*i* P	**P**		**17 56 44.8**	**-0.4**
BILL	**Bilibino**	**87.69**	**19**⇓	*e*P	**P**		**17 56 46.5**	**-0.6**
BILL				*e*S	S		18 07 22.9	-3.8
BILL				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.9							
BILL				MLR	MLR			
	comp=Z,100nm,16.0s,MS4.3							
FINES	**FINESS Array B**	**94.39**	**332**	P	**P**		**17 57 17.6**	**-0.7**
	comp=Z,1.8nm,0.9s,mb4.5,baz=139,slow=9.9,SNR=3.6							
ARCES	**ARCESS Array B**	**96.21**	**339**	P	**P**		**17 57 25.9**	**-0.8**
	comp=Z,4.0nm,0.9s,mb4.8,baz=106,slow=4.4,SNR=5.0							
ARCES				LR	LR		18 46 42.2	
	comp=Z,73nm,18.9s,MS4.2,baz=111,slow=39							
TORD	**Torodi Ar. Bea**	**107.65**	**281**	PKiKP	PKiKP		18 02 25.9	+0.4
	comp=Z,0.8nm,0.8s,baz=88,slow=1.3,SNR=4.1							
YKA	**Yellowknife Ar**	**119.01**	**21**	PKP	PKPdf		18 02 47.0	-0.1
	comp=Z,1.5nm,0.7s,baz=340,slow=1.5,SNR=5.4							
YKA	**Yellowknife Ar**	**119.01**	**21**	PKP	PKPdf		18 02 47.0	-0.1
PLCA	**Paso Flores**	**129.90**	**182**	PKP	PKPdf		18 03 09.2	+1.2
	comp=Z,3.1nm,1.0s,baz=188,slow=1.6,SNR=3.1							
WMOK	**Wichita Mounta**	**145.14**	**40**	*e*PKiKP	PKPdf		18 03 36.3	+0.4
BDFB	**Brasilia**	**145.29**	**224**	PKPbc	PKPbc		18 03 37.6	+1.7
	comp=Z,3.5nm,0.5s,baz=216,slow=6.8,SNR=4.5							
JCT	**Junction City**	**146.97**	**47**	*e*PKP2	PKPab		18 03 42.2	-0.3
MIAR	**Mount Ida**	**148.41**	**35**	*e*PKP2	PKPab		18 03 45.7	-2.5
WCI	**Wyandotte Cave**	**148.81**	**22**	*e*PKP2	PKPbc		18 03 45.9	0.0
WVT	**Waverly**	**150.02**	**26**	*e*PKP2	PKPbc		18 03 49.4	+0.5
PLAL	**Pickwick Lake**	**150.88**	**27**	*e*PKPbc	PKPbc		18 03 50.8	-0.2
TZTN	**Tazewell**	**151.28**	**19**	*e*PKPbc	PKPbc		18 03 52.4	+0.4
BLA	**Blacksburg**	**151.53**	**14**	*e*PKIKP	PKPbc		18 03 53.3	+0.8
SWET	**Sewanee**	**151.60**	**24**	*e*PKPbc	PKPbc		18 03 52.5	-0.1
SIV	**San Ignacio**	**152.28**	**204**	PKPbc	PKPbc		18 03 55.2	+1.0
	comp=Z,3.0nm,0.8s,baz=110,slow=3.9,SNR=13							
SIV				PKPab	PKPab		18 04 05.5	+1.3
	comp=Z,3.3nm,0.8s,baz=159,slow=3.0,SNR=8.3							
LPAZ	**La Paz**	**153.97**	**189**	PKPbc	PKPbc		18 03 59.5	+1.6
	comp=Z,0.5nm,0.5s,baz=143,slow=1.8,SNR=4.5							
LPAZ				PKPab	PKPab		18 04 13.2	+2.0
	comp=Z,0.7nm,0.6s,baz=179,slow=6.6,SNR=4.0							
LPAZ	**La Paz**	**153.97**	**189**	PKP2	PKPab		18 04 13.2	+1.9
LPAZ				pmax	pmax			
	comp=Z,1.0nm,0.6s							

IDC 30 17:50:07.8±2.2,**1608S**×17853**W**,**h0**km,**mb4.3**/5,
mb1 4.5/5,**mb1mx4.1**/14,**mbtmp4.3**/5,**Error ellipse:**
s-maj=143.8km s-min=30.9km az=150.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.44**	**239**	P	P	17 57 39.3	-0.3
	2.3nm,0.5s,baz=84,slow=11,SNR=10.0						
WB2	**Warramunga Arr**	**44.87**	**258**	*e*P	P	17 58 25.1	+1.2
WRA	**Warramunga Arr**	**44.88**	**258**	P	P	17 58 25.1	+1.1
	1.9nm,0.4s,baz=91,slow=7.9,SNR=52						
ASAR	**Alice Springs**	**45.20**	**252**	P	P	17 58 27.1	+0.5
	17nm,0.6s,baz=88,slow=8.5,SNR=222						
ASPA	**Alice Springs**	**45.20**	**252**	*e*P	P	17 58 27.0	+0.4
KAKA	**Kakadu**	**47.53**	**267**	*e*P	P	17 58 48.1	+3.3
	6.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**53.23**	**259**	P	P	17 59 27.9	-0.1
	0.5nm,0.3s,baz=123,slow=4.6,SNR=7.3						
PDAR	**Pinedale Array**	**86.11**	**44**	P	P	18 02 51.1	+0.4
	0.5nm,0.5s,baz=199,slow=2.5,SNR=5.1						

IDC 30 17:50:10.0±1.8,**983S**×**10729E**,**h0**km,**mb3.9**/4,**mb1 3.9**/5,
mb1mx3.7/19,**mbtmp3.9**/5,**ML3.5**/1,**Error ellipse:**
s-maj=63.4km s-min=22.4km az=53.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.60**	**117**	P	Pn	17 54 40.7	-0.3
	0.1nm,0.3s,baz=338,slow=11,SNR=2.5						
TGY	**Tagaytay City**	**27.36**	**30**	P	P	17 55 56.6	-0.1
	158nm,0.4s,baz=211,slow=7.7,SNR=4.7						
STKA	**Stephens Creek**	**38.58**	**130**	P	P	17 57 34.5	-0.1
	2.1nm,0.4s,baz=298,slow=4.0,SNR=7.6						
SONM	**Songino Array**	**57.41**	**359**	P	P	18 00 00.9	+0.6
	0.9nm,0.7s,baz=172,slow=7.4,SNR=7.2						
MKAR	**Makanchi Array**	**60.63**	**341**	P	P	18 00 23.0	+0.3
	1.1nm,0.6s,baz=163,slow=7.7,SNR=7.6						
BVAR	**Borovoye Array**	**70.07**	**337**	P	P	18 01 23.3	-0.5
	0.4nm,0.6s,baz=148,slow=7.5,SNR=3.5						

*ISCJB **30** 17:57:17.5±0.6,225N±0.1×45.1W±0.1,h10km,mb4.0/11,*
MS3.7/11,Error ellipse: s-maj=17.0km s-min=14.2km
az=120.7
*IDC **30** 17:57:17.6±0.8,2251N×45.12W,h0km,mb3.9/10,*
mb1 4.1/10,mb1mx3.9/25,mbtmp3.9/10,MS3.7/11,
Ms1 3.8/11,ms1mx3.4/38,Error ellipse: s-maj=25.5km
s-min=18.5km az=132.0
*NEIC **30** 17:57:19.2±0.6,2248N×4507W,h10km,mb4.4/2,Error*
ellipse: s-maj=17.7km s-min=14.8km az=152.0
ISC 30 17:57:19.8±0.6,**225N**±0.1×**451W**±0.1,**h10**km,**n23,σ1§17**/15,
mb4.0/11,**MS3.7**/11,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**20.25**	**261**	LR	LR	18 08 24.7	
	comp=Z,88nm,18.6s,MS3.1,baz=270,slow=33						
PCRV	**Puerto La Cruz**	**22.39**	**240**	LR	LR	18 09 31.4	
	comp=Z,140nm,21.3s,MS3.4,baz=196,slow=33						
MDT	**Midelt**	**37.08**	**65**	P	**P**	**18 04 31.5**	**+1.4**
	0.6nm,0.4s,mb3.8,baz=255,slow=8.7,SNR=4.3						
BDFB	**Brasilia**	**39.01**	**185**	P	**P**	**18 04 38.4**	**+0.4**
	7.4nm,1.0s,mb4.4,baz=315,slow=6.6,SNR=3.4						
DBIC	**Dimbokro**	**41.80**	**106**	LR	LR	18 19 24.4	
	comp=Z,105nm,18.5s,MS3.8,baz=257,slow=32						
LPAZ	**La Paz**	**44.67**	**212**	P	**P**	**18 05 33.5**	**+0.8**
	2.9nm,0.9s,mb4.1,baz=15,slow=7.5,SNR=6.3						
LPAZ				LR	LR	18 23 24.7	
	comp=Z,86nm,18.8s,MS3.7,baz=225,slow=35						
LPAZ	**La Paz**	**44.67**	**212**	*e*P	**P**	**18 05 33.2**	**+0.5**
	2.8nm,0.8s,mb4.1						
LPAZ				LR	LR	18 23 24.7	
TOA0	**Torodi Ar. Sit**	**45.32**	**94**	*e*P	**P**	**18 05 38.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**45.32**	**94**	P	**P**	**18 05 37.3**	**-0.6**
	3.3nm,1.0s,mb4.1,baz=292,slow=5.5,SNR=13						
TORD				LR	LR	18 22 18.3	
	comp=Z,146nm,18.8s,MS3.9,baz=255,slow=33						
ULM	**Lac du Bonnet**	**48.17**	**318**	P	**P**	**18 05 57.7**	**-2.5**
	2.7nm,0.7s,mb4.4,baz=101,slow=10,SNR=3.2						
ULM	**Lac du Bonnet**	**48.17**	**318**	P	**P**	**18 05 57.7**	**-2.5**
WMOK	**Wichita Mounta**	**48.20**	**297**	*e*P	**P**	**18 06 01.7**	**+1.3**
	6.1nm,1.2s,mb4.5						
CPUP	**Villa Florida**	**49.97**	**194**	P	**P**	**18 06 12.2**	**-1.7**
	0.6nm,0.4s,mb4.0,baz=6.3,slow=4.1,SNR=5.6						
GERES	**GERESS Array B**	**52.96**	**45**	P	**P**	**18 06 35.0**	**-1.4**
	0.7nm,0.9s,mb3.6,baz=283,slow=8.9,SNR=5.8						
NOA	**NORSAR Array B**	**54.39**	**30**	LR	LR	18 25 34.3	
	comp=Z,73nm,20.5s,MS3.7,baz=280,slow=31						
PDAR	**Pinedale Array**	**56.59**	**307**	P	**P**	**18 07 03.2**	**+0.6**
	0.6nm,0.7s,mb3.7,baz=106,slow=5.7,SNR=5.6						
PDAR				LR	LR	18 28 37.7	
	comp=Z,44nm,18.6s,MS3.6,baz=147,slow=33						
PDAR	**Pinedale Array**	**56.59**	**307**	P	**P**	**18 07 03.2**	**+0.6**
PDAR				LR	LR	18 28 37.7	
LPIG	**La Paz**	**59.44**	**285**	LR	LR	18 31 52.4	
	comp=Z,43nm,22.0s,MS3.5,baz=204,slow=35						
FINES	**FINESS Array B**	**61.49**	**31**	LR	LR	18 30 40.3	
	comp=Z,54nm,18.8s,MS3.7,baz=12,slow=33						
AKASG	**Malin Array Be**	**63.07**	**43**	P	**P**	**18 07 46.5**	**-0.7**
	1.1nm,0.8s,mb4.0,baz=273,slow=5.9,SNR=6.3						
YBH	**Yreka Blue Hor**	**66.40**	**307**	LR	LR	18 35 41.1	
	comp=Z,70nm,18.4s,MS3.9,baz=246,slow=35						
BRTR	**Keskin Array B**	**67.55**	**55**	P	**P**	**18 08 17.6**	**+1.3**
	0.7nm,1.0s,mb3.6,baz=254,slow=4.5,SNR=4.7						
USHA	**Ushuaia**	**79.58**	**193**	LR	LR	18 45 05.9	
	comp=Z,336nm,19.0s,MS4.7,baz=36,slow=36						

*ISCJB **30** 18:07:55.2±1.2,2766S×006×179.1W±0.2,h312km±12km,*
mb3.8/7,Error ellipse: s-maj=24.9km s-min=9.0km az=0.9
*IDC **30** 18:07:57.5±2.7,2742S×17895W,h337km±15km,mb3.5/6,*
mb1 3.7/7,mb1mx3.5/12,mbtmp4.3/7,Error ellipse:
s-maj=60.5km s-min=16.7km az=42.0
*NEIC **30** 18:07:58.3±1.3,2758S×179.11W,h334km±9km,mb4.3/1,*
Error ellipse: s-maj=31.7km s-min=12.6km az=47.0
ISC 30 18:07:59.3±0.9,**2785S**×005×**1793W**±0.2,**h330**km±10km,
n31,σ1§28/43,mb3.7/7,1C,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.83**	**140**	P	**Pn**	**18 08 47.9**	**+0.4**
	204nm,0.3s,baz=72,slow=22,SNR=11						
RAO				S	**S**	**18 09 16.5**	**-10**
	232nm,0.3s,baz=99,slow=17,SNR=6.8						
RAO	**Raoul Island**	**1.83**	**140**	P	**Pn**	**18 08 47.9**	**+0.4**
RAO				S	**S**	**18 09 16.5**	**-10**
MXZ	**Matakaoa Point**	**9.90**	**191**	PN	**Pn**	**18 10 18.6**	**+2.5**
MXZ				SN	**S**	**18 12 07.1**	**-0.8**
PUZ	**Puketiti**	**10.40**	**191**	PN	**Pn**	**18 10 23.7**	**+1.6**
PUZ				SN	**S**	**18 12 15.2**	**-4.0**
MWZ	**Matawai**	**10.79**	**194**	*e*PN	**Pn**	**18 10 25.3**	**-1.5**
URZ	**Urewera**	**10.82**	**195**	P	**Pn**	**18 10 29.1**	**+2.0**
	9.3nm,0.3s,baz=344,slow=2.9,SNR=41						
URZ				S	**S**	**18 12 30.1**	**+1.7**
	4.0nm,0.3s,baz=309,slow=2.1,SNR=3.7						
URZ	**Urewera**	**10.82**	**195**	PN	**Pn**	**18 10 28.6**	**+1.5**
URZ				SN	**S**	**18 12 29.2**	**+0.9**
KNZ	**Kokohu**	**11.43**	**192**	PN	**Pn**	**18 10 36.9**	**+2.4**
BKZ	**Black Stump Fm**	**11.83**	**196**	*e*PN	**Pn**	**18 10 40.5**	**+1.3**
BKZ				SN	**S**	**18 12 50.9**	**+0.1**
PXZ	**Pawanui**	**12.57**	**194**	PN	**Pn**	**18 10 47.0**	**-1.1**
PXZ				SN	**S**	**18 13 01.9**	**-5.4**
TSZ	**Takapari Road**	**12.80**	**197**	PN	**Pn**	**18 10 49.6**	**-1.2**
BFZ	**Birch Farm**	**13.32**	**195**	PN	**Pn**	**18 10 57.0**	**-0.1**
BFZ				SN	**S**	**18 13 18.9**	**-4.2**
MRZ	**Mangatainoka R**	**13.47**	**197**	PN	**Pn**	**18 10 55.6**	**-3.1**
MRZ				SN	**S**	**18 13 23.1**	**-3.0**
TCW	**Tory Channel**	**14.35**	**200**	PN	**Pn**	**18 11 07.7**	**-1.4**
TCW				SN	**S**	**18 13 42.2**	**-1.6**
THZ	**Tophouse**	**15.29**	**203**	PN	**Pn**	**18 11 18.2**	**-1.8**
THZ				SN	**S**	**18 14 04.2**	**+1.5**
KHZ	**Kahutara**	**15.67**	**200**	PN	**Pn**	**18 11 23.0**	**-1.4**
KHZ				SN	**S**	**18 14 11.0**	**+0.6**
MQZ	**McQueen's Vall**	**17.11**	**200**	SN	**S**	**18 14 40.9**	**+1.9**
CTA	**Charters Tower**	**32.36**	**276**	P	**P**	**18 13 59.3**	**+0.5**
	2.4nm,0.5s,mb3.7,baz=88,slow=11,SNR=5.3						
CTAO	**Charters Tower**	**32.36**	**276**	*e*P	**P**	**18 13 58.8**	**0.0**
STKA	**Stephens Creek**	**34.06**	**254**	P	**P**	**18 14 14.9**	**+1.6**
	0.8nm,0.5s,mb3.2,baz=114,slow=10.0,SNR=3.6						
AS31	**Alice Springs**	**42.19**	**265**	*e*P	**P**	**18 15 20.7**	**+0.1**
ASAR	**Alice Springs**	**42.19**	**265**	P	**P**	**18 15 20.8**	**+0.2**
	1.5nm,0.5s,mb3.4,baz=96,slow=6.8,SNR=72						
ASPA	**Alice Springs**	**42.19**	**265**	*e*P	**P**	**18 15 20.7**	**+0.1**
WB2	**Warramunga Arr**	**42.93**	**270**⇑	*i*P	**P**	**18 15 26.2**	**-0.3**
WRAB	**Tennant Creek**	**42.94**	**270**	*e*P	**P**	**18 15 26.1**	**-0.5**
WRA	**Warramunga Arr**	**42.94**	**270**	P	**P**	**18 15 26.4**	**-0.2**
	3.0nm,0.4s,mb3.8,baz=108,slow=6.2,SNR=90						
VNDA	**Vanda**	**50.52**	**185**	P	**P**	**18 16 25.8**	**+1.0**
	1.3nm,0.5s,mb3.4,baz=5.8,slow=7.4,SNR=18						
FITZ	**Fitzroy Crossi**	**51.29**	**268**	P	**P**	**18 16 30.1**	**-0.3**
	baz=162,slow=6.4						
QSPA	**South Pole Qui**	**62.25**	**180**	*e*P	**P**	**18 17 46.7**	**-0.2**
	9.8nm,1.2s,mb4.2						
MAW	**Mawson**	**74.30**	**201**	P	**P**	**18 19 00.6**	**-0.4**
	2.3nm,0.6s,mb4.1,baz=115,slow=8.0,SNR=19						
TORD	**Torodi Ar. Bea**	**165.34**	**184**	PKPab	PKPab	18 28 22.9	-1.3
	0.9nm,0.7s,baz=172,slow=3.9,SNR=5.9						

IDC 30 18:22:31.9±1.4,**801S**×**15614E**,**h0**km,**mb3.9**/5,**mb1 4.0**/6,
mb1mx3.8/14,**mbtmp3.9**/6,**ML3.9**/1,**MS2.9**/1,**Ms1 2.9**/1,
ms1mx2.6/25,**Error ellipse: s-maj=33.6km**
s-min=26.6km az=116.0,Bougainville - Solomon
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.02**	**111**	Pn	Pn	18 23 34.7	0.0
	7.0nm,0.3s,baz=88,slow=5.6,SNR=3.3						
HNR				LR	LR	18 24 45.8	
	comp=Z,142nm,19.6s,baz=1.6,slow=33						
WB2	**Warramunga Arr**	**24.21**	**238**	*e*P	P	18 27 50.8	+0.7
WRA	**Warramunga Arr**	**24.22**	**238**	P	P	18 27 51.1	+0.9
	4.6nm,0.8s,baz=63,slow=9.3,SNR=37						
ASAR	**Alice Springs**	**26.39**	**231**	P	P	18 28 09.7	-0.3
	0.4nm,0.7s,baz=68,slow=9.4,SNR=6.0						
MJAR	**Matsushiro Arr**	**47.40**	**340**	P	P	18 31 07.5	-0.4
	1.1nm,0.7s,baz=157,slow=8.2,SNR=5.3						
SONM	**Songino Array**	**70.80**	**327**	P	P	18 33 50.9	+0.7
	1.0nm,0.7s,baz=145,slow=6.9,SNR=8.4						
MKAR	**Makanchi Array**	**84.91**	**319**	P	P	18 35 08.9	+0.1
	1.6nm,0.6s,baz=88,slow=6.2,SNR=9.1						

*IDC **30** 18:25:00.3±0.8,2906N×8357E,h0km,mb3.8/10,*
mb1 3.9/11,mb1mx3.8/23,mbtmp3.8/11,ML3.7/1,MS3.9/1,
Ms1 3.9/1,ms1mx2.9/38,Error ellipse: s-maj=29.4km
s-min=16.4km az=56.0
*NEIC **30** 18:25:00.6,2905N×8360E,h10km,mb3.8/4,ML4.5(DMN),*
After DMN.
*DMN **30** 18:25:00.6±0.6,2905N×8360E,h10km,Ml4.5/6,Error*
ellipse: s-maj=12.1km s-min=9.4km az=15.0
*ISCJB **30** 18:25:01.7±0.3,2924N±004×8348E±004,h10km,*
mb3.7/14,MS4.0/1,Error ellipse: s-maj=6.5km
s-min=3.5km az=90.4
*NDI **30** 18:25:09.3±4.8,2873N×8362E,h33km,ML3.6,*
mb3.8(NEIC)
ISC 30 18:25:03.2±0.3,**2922N**±003×**8352E**±004,**h10**km,**n45,**
σ1§25/57,mb3.7/14,MS4.0/1,1D,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOLN	**Koldanda**	**1.45**	**177**	*e*Pn	**Pn**	**18 25 28.7**	**-0.8**
KOLN				*e*Sn	**Sn**	**18 25 50.5**	**+2.0**
	535nm,0.3s						
KOLN	**Koldanda**	**1.45**	**177**	*e*Pn	**Pn**	**18 25 28.7**	**-0.8**
KOLN				*e*Sg	**Sg**	**18 25 50.0**	**+0.2**
KOLN				*e*Sn	**Sn**	**18 25 50.5**	**+2.0**
GKN	**Gorkha**	**1.56**	**141**	*e*Pg	**Pg**	**18 25 28.1**	**-5.1**
	3μm,0.3s						
GKN	**Gorkha**	**1.56**	**141**	*e*Sg	**Sg**	**18 25 50.0**	**-3.5**
KKN	**Kakani**	**2.11**	**132**	*e*Pn	**Pn**	**18 25 38.1**	**-0.4**
KKN				*e*Sn	**Sn**	**18 26 05.1**	**+0.4**
	653nm,0.3s						
DMN	**Daman**	**2.13**	**139**	*e*Pg	**Pg**	**18 25 40.1**	**-3.9**
DMN				*e*Sn	**Sn**	**18 26 05.8**	**+0.5**
	802nm,0.4s						
DMN	**Daman**	**2.13**	**139**	*e*Pn	**Pn**	**18 25 38.9**	**+0.1**
DMN				*e*Pg	**Pg**	**18 25 40.1**	**-3.9**
DMN				*e*Sn	**Sn**	**18 26 05.8**	**+0.5**
PKI	**Pulchoki**	**2.34**	**134**	*e*Pn	**Pn**	**18 25 41.6**	**-0.1**
PKI				*e*Sn	**Sn**	**18 26 11.3**	**+0.8**
	914nm,0.5s						
GUN	**Gumba**	**2.45**	**122**	*e*Pn	**Pn**	**18 25 43.1**	**-0.1**
GUN				*e*Sn	**Sn**	**18 26 14.3**	**+1.0**
	840nm,0.5s						
LGTI	**Lohaghat**	**2.87**	**275**	*e*P	**Pg**	**18 25 59.0**	**+0.9**
LGTI				*ex*	x	18 26 42.5	
PTH	**Pithoragarh**	**2.90**	**277**	*e*P	**Pg**	**18 25 58.2**	**-0.6**
PTH				*ex*	x	18 26 35.8	
JOSI	**Joshimath**	**3.69**	**292**	*e*P	**Pn**	**18 25 52.6**	**-7.6**
JOSI				*e*S	**Sn**	**18 26 35.8**	**-7.9**
JOSI				AML	AML	18 26 49.0	
	comp=E,1μm,0.8s						
JOSI				AML	AML	18 26 50.6	
	comp=N,956nm,0.5s						
ALBI	**Allahabad**	**4.19**	**202**	*ex*	**Pn**	**18 26 07.0**	**-0.1**
ALBI				*ex*	**Sb**	**18 27 10.0**	**+2.5**
KLP	**Kalpa**	**5.10**	**298**	*e*P	**Pn**	**18 26 27.2**	**+7.5**
KLP				*ex*	x	18 27 17.5	
KLP				AML	AML	18 27 26.2	
	comp=E,168nm,1.0s						
KLP				AML	AML	18 27 30.1	
	comp=N,98nm,0.8s						
NDI	**New Delhi**	**5.55**	**266**	*e*P	**Pn**	**18 26 30.0**	**+4.2**
SMLA	**Simla**	**5.82**	**291**	*e*P	**Pn**	**18 26 35.1**	**+5.6**
SMLA				*ex*	x	18 26 54.0	
	comp=N,159nm,0.3s						
KUDL	**Kundal**	**6.27**	**262**	*ex*	**Pg**	**18 26 59.7**	**-3.5**
KUDL				*ex*	**Sg**	**18 28 20.4**	**-4.0**
KUDL				AML	AML	18 28 38.4	
	comp=N,39nm,0.1s						
KUDL				AML	AML	18 28 40.9	
	comp=E,31nm,0.6s						
LSA	**Lhasa**	**6.67**	**84**	P	**Pn**	**18 26 40.0**	**-1.2**
	comp=E,6.5nm,0.5s						
JBP	**Jabalpur**	**6.82**	**209**⇓	*i*x	x	18 27 08.8	
JBP				*ex*	x	18 27 10.3	
	comp=Z,14nm,1.2s						
JBP				*i* x	x	18 28 00.9	
KHET	**Khetri**	**6.88**	**262**	*e*P	**Pn**	**18 26 47.2**	**+3.1**
KHET				*e*S	**Sn**	**18 27 59.5**	**-2.8**
KHET				AML	AML	18 28 44.5	
	comp=E,15nm,0.5s						
KHET				AML	AML	18 28 55.7	
	comp=N,27nm,0.8s						
AJM	**Ajmer**	**8.32**	**253**	*e*S	**Sn**	**18 28 32.0**	**-5.8**
CHCP	**Chirah Chowk**	**9.81**	**299**	P	**Pn**	**18 27 26.1**	**+1.8**
THW	**Thamme Wali**	**10.71**	**292**	P	**Pn**	**18 27 37.2**	**+0.6**
CEP	**Cherat**	**10.92**	**298**	P	**Pn**	**18 27 40.9**	**+1.5**
CEP				S	**Sn**	**18 29 37.0**	**-4.6**
DRP	**Derazinda**	**11.76**	**286**	P	**Pn**	**18 27 52.2**	**+1.2**
HYB	**Hyderabad**	**12.60**	**202**	*i* P	**Pn**	**18 27 59.0**	**-3.5**
HYB	**Hyderabad**	**12.60**	**202**	*e*P	**Pn**	**18 27 59.0**	**-3.5**
MKAR	**Makanchi Array**	**17.57**	**357**	P	**Pn**	**18 29 09.6**	**+1.5**
	comp=N,0.3nm,0.3s,baz=186,slow=9.8,SNR=12						
MKAR	**Makanchi Array**	**17.57**	**357**	P	**Pn**	**18 29 09.6**	**+1.5**
ZAL	**Zalesovo**	**24.71**	**2**	P	**P**	**18 30 23.4**	**-1.1**
	comp=N,0.9nm,0.5s,mb3.6,baz=266,slow=10,SNR=4.1						
SONM	**Songino Array**	**25.64**	**37**	P	**P**	**18 30 33.6**	**+0.7**
	comp=N,1.4nm,0.7s,mb3.6,baz=220,slow=10,SNR=12						
BVAR	**Borovoye Array**	**25.67**	**342**

YUK AMB AMB 18 38 28.4
14µm,0.5s
YUK S Sn 18 38 37.0 -0.4
21µm,0.5s
YUK A 18 38 41.0
YUK A 18 38 41.0
162µm,2.0s
YUK A 18 38 41.0
310µm,2.0s
YUK Yuzh-Kuril'sk 0.43 62 *a* *i* PN **Pn 18 38 26.3 +0.8**
YUK *i* S **Sn 18 38 37.0 -0.4**
YUK pmax pmax
comp=N,17µm,0.5s
YUK pmax pmax
comp=E,14µm,0.5s
YUK pmax pmax
comp=Z,21µm,0.5s
YUK smax
comp=N,162µm,1.0s
YUK smax
comp=E,310µm,3.0s
JNK Nakash 0.51 241 ⇑P **Pn 18 38 26.6 +0.5**
JNK *e*S **Sn 18 38 39.5 +1.1**
NEM2 Nemuro 2 0.55 148 ⇓P **Pn 18 38 25.0 -1.4**
NEM2 *e*S **Sn 18 38 36.4 -2.5**
JAK Akkeshi 0.96 209 ⇑P **Pn 18 38 29.7 -0.3**
JAK *e*S **Sn 18 38 44.8 -0.6**
JTKR Abashiri--Toko 1.04 278 ⇑P **Pn 18 38 32.6 +1.7**
JTKR *e*S **Sn 18 38 49.6 +2.6**
JAR Ashorobuto 1.26 245 ⇓P **Pn 18 38 34.7 +1.3**
JAR *e*S **Sn 18 38 53.4 +2.1**
JOB Onbets 1.44 230 ⇓P **Pn 18 38 36.2 +0.8**
JOB *e*S **Sn 18 38 55.9 +0.9**
JMP Maruseppu 1.44 278 ⇓P **Pn 18 38 37.3 +1.8**
JMP *e*S **Sn 18 38 58.6 +3.5**
JKK2 Kamakawa 2 1.88 272 ⇓P **Pn 18 38 43.0 +2.2**
JKK2 *e*S **Sn 18 39 08.4 +3.8**
JCH Churui 1.89 231 ⇓P **Pn 18 38 41.4 +0.4**
JCH *e*S **Sn 18 39 04.8 -0.1**
ASAJ Asahikawa 2.00 279 P **Pn 18 38 45.0 +2.6**
comp=E,1µm,0.3s,baz=96,slow=10.0,SNR=8316
ASAJ S **Sn 18 39 10.8 +3.3**
comp=E,98nm,0.3s,baz=338,slow=18,SNR=23
ASAJ Asahikawa 2.00 279 PN **Pn 18 38 45.0 +2.6**
ASAJ S **Sn 18 39 10.8 +3.3**
ASAJ smax
comp=N,98nm,0.3s
KUR Kuril'sk 2.29 51 ⇓ *i* P **Pn 18 38 42.7 -3.4**
KUR *i* P 18 38 42.7
KUR AMB AMB 18 38 43.7
comp=N,490nm,0.5s
KUR AMB AMB 18 38 43.7
comp=N,430nm,0.5s
KUR AMB AMB 18 38 43.7
comp=N,3µm,0.5s
KUR AMB AMB 18 38 44.0
comp=N,2µm,1.0s
KUR AMB AMB 18 38 44.0
comp=N,3µm,1.0s
KUR AMB AMB 18 38 44.0
comp=N,6µm,1.0s
KUR *i* S **Sn 18 39 11.0 -3.0**
KUR A 18 39 14.0
comp=N,20µm,3.2s
KUR A 18 39 14.0
comp=N,15µm,3.2s
KUR A 18 39 14.0
comp=N,28µm,3.0s
KUR A 18 39 14.0
comp=N,22µm,3.0s
KUR A 18 39 15.6
comp=N,3µm,0.5s
KUR A 18 39 15.6
comp=N,2µm,0.5s
KUR Kuril'sk 2.29 51 *j* *i* PN **Pn 18 38 42.7 -3.4**
KUR *i* S **Sn 18 39 11.0 -3.0**
KUR pmax pmax
comp=N,490nm,0.5s
KUR pmax pmax
comp=E,430nm,0.5s
KUR pmax pmax
comp=Z,3µm,0.5s
KUR pmax pmax
comp=N,2µm,1.0s
KUR pmax pmax
comp=E,3µm,1.0s
KUR pmax pmax
comp=Z,6µm,1.0s
KUR smax
comp=N,28µm,3.0s
KUR smax
comp=E,22µm,3.0s
KUR smax
comp=N,3µm,0.5s
ERM Érimo 2.42 222 *e*P **Pn 18 38 49.1 +1.2**
ERM *e*S **Sn 18 39 22.4 +5.2**
YSS Yuzh-Sakhalins 3.61 331 *e*P **Pn 18 39 05.8 +2.1**
YSS AMB AMB 18 39 07.9
comp=N,100nm,0.8s
YSS *e*S **Sn 18 39 44.0 -1.5**
YSS A 18 39 50.0
comp=N,2µm,2.0s
YSS A 18 39 50.0
comp=N,1µm,3.0s
YSS A 18 39 51.9
comp=N,590nm,1.0s
YSS A 18 39 51.9
comp=N,530nm,1.0s
YSS AMS AMS 18 41 18.0
comp=N,1µm,8.0s
YSS AMS AMS 18 41 18.0
comp=N,1µm,10.0s
YSS Yuzh-Sakhalins 3.61 331 *d* *i* PN **Pn 18 39 06.1 +2.4**
YSS Yuzh-Sakhalins 3.61 331 *e*P **Pn 18 39 05.9 +2.2**
UGL Uglegorsk 5.71 338 *e*P **Pn 18 39 35.0 +3.0**
UGL AMB AMB 18 39 36.0
comp=N,69nm,0.5s
UGL AMB AMB 18 39 36.0
comp=N,108nm,0.5s
UGL AMB AMB 18 39 36.0
comp=N,239nm,0.5s
UGL A 18 40 44.0
comp=N,180nm,1.0s
UGL A 18 40 44.0
comp=N,67nm,1.0s
UGL A 18 40 45.0
comp=N,1µm,4.0s
UGL Uglegorsk 5.71 338 *e*PN **Pn 18 39 35.0 +3.0**
UGL *e*S **Sn 18 40 42.0 +5.7**
UGL pmax pmax
comp=Z,239nm,0.5s
UGL smax
comp=N,180nm,1.0s
UGL smax
comp=E,67nm,1.0s
UGL smax
comp=E,1µm,4.0s
HABR Khabarovsk 8.52 307 ⇓ *i* PN **Pn 18 40 13.7 +3.6**
HABR *e* 18 41 50.6
MAJO Matsushiro 9.10 219 *e*PN **Pn 18 40 16.0 -2.0**
MAJO pmax pmax
comp=Z,94nm,0.8s
MAJO Matsushiro 9.10 219 *e*P **Pn 18 40 16.0 -2.0**
comp=Z,94nm,0.8s
MAT Matsushiro 9.10 219 P **Pn 18 40 15.9 -2.1**
MAT S **Sn 18 41 54.0 -4.5**
MJAR Matsushiro Arr 9.10 219 P **Pn 18 40 16.1 -1.9**
comp=Z,8.4nm,0.3s,baz=29,slow=13,SNR=102
MJAR LR LR 18 43 58.3
comp=Z,196nm,21.5s,baz=110,slow=38
VLA Vladivostok 9.80 270 *c* *i* PN **Pn 18 40 28.3 +0.7**
NKL Nikolayevsk 9.82 343 *i* P **Pn 18 40 26.7 -1.1**
NKL AMB AMB 18 40 28.3
comp=Z,40nm,1.2s
NKL AMB AMB 18 40 28.3
comp=Z,70nm,1.2s
SKR Severo-Kuril's 10.02 43 *e*P **Pn 18 40 25.0 -5.6**
SKR AMB AMB 18 40 28.9
comp=Z,60nm,0.5s
SKR AMB AMB 18 40 28.9
comp=Z,80nm,0.5s
SKR *e*S **Sn 18 42 11.2 -10**
SKR A 18 42 20.2
comp=Z,100nm,0.2s
SKR A 18 42 20.2
comp=Z,120nm,0.2s
SKR A 18 42 20.2
comp=Z,80nm,0.2s
SKR A 18 42 20.2
comp=Z,1µm,3.0s
SKR AMS AMS 18 44 08.0
comp=Z,800nm,8.0s
KLR Kul'dur 10.80 305 *e*PN **Pn 18 40 40.0 -1.1**
KLR pmax pmax
comp=E,100nm,1.6s
KLR pmax pmax
comp=Z,80nm,1.6s
KLR pmax pmax
comp=E,500nm,9.5s
KLR pmax pmax
comp=Z,600nm,9.5s
MDJ Mudanjiang 11.33 279 P **Pn 18 40 48.3 +0.1**
MDJ S **Sn 18 42 52.3 -0.5**
MDJ PCP PcP 18 46 32.8 -0.2
MDJ SCP ScP 18 49 56.0 0.0
MDJ PCS PcS 18 50 06.5 -0.4
MDJ SCS ScS 18 53 31.5 +0.1
MDJ AMB AMB
comp=Z,53nm,1.0s
MDJ AMB AMB
comp=Z,136nm,5.0s
MDJ LR LR
comp=N,101nm,26.6s
MDJ LR LR
comp=E,285nm,34.5s
MDJ LR LR
comp=Z,397nm,30.5s
MDJ Mudanjiang 11.33 279 *e*P **Pn 18 40 48.8 +0.5**
comp=Z,91nm,0.8s
JHJ Hachijo jima 2 11.54 204 P **Pn 18 40 48.4 -2.7**
comp=Z,8.4nm,0.3s,baz=66,slow=20,SNR=4.4
JHJ LR LR 18 46 09.0
comp=Z,128nm,18.1s,baz=79,slow=42
EKMR Ekimchan 12.36 323 *e*P **Pn 18 41 00.5 -1.3**
EKMR AMB AMB 18 41 02.5
comp=Z,34nm,0.9s
PET Petropavlovsk 12.74 39 *e*PN **Pn 18 41 07.4 +0.6**
PET MLR MLR
comp=Z,200nm,19.0s
PET Petropavlovsk 12.74 39 *e*P **Pn 18 41 03.8 -3.1**
comp=Z,25nm,0.9s
CN2 Changchun 14.37 277 *e*P **Pn 18 41 26.8 -1.2**
CN2 *e*XP 18 41 58.3
CN2 *e*S **Sn 18 43 58.0 -8.3**
CN2 AMB AMB
comp=Z,30nm,1.0s
CN2 LR LR
comp=N,400nm,12.0s
CN2 LR LR
comp=E,300nm,12.0s
CN2 LR LR
comp=Z,300nm,18.0s
YASR Yasnyy 14.85 316 *e*P **Pn 18 41 32.2 -2.0**
YASR AMB AMB 18 41 32.9
comp=Z,10.0nm,0.9s
YASR AMB AMB 18 41 32.9
comp=Z,21nm,0.9s
ZEA Zeya 15.46 316 *e*P **Pn 18 41 38.6 -3.2**
ZEA AMB AMB 18 41 40.5
comp=Z,46nm,1.4s
ZEA AMS AMS 18 49 00.0
comp=Z,200nm,12.0s
KROS Kirovskiy 15.98 318 *e*P **Pn 18 41 45.4 -2.9**
KROS AMB AMB 18 41 55.0
comp=Z,6.0nm,0.7s
SNY Shenyang 16.09 270 ⇓P **Pn 18 41 49.0 -0.6**
SNY S **S 18 44 39.8 -14**
SNY AMB AMB
comp=Z,16nm,0.9s
SNY LR LR
comp=N,222nm,14.1s
SNY LR LR
comp=E,220nm,15.3s
SNY LR LR
comp=Z,273nm,20.4s
MA2 Magadan 16.11 10 *e*P **Pn 18 41 49.9 0.0**
MA2 S **S 18 44 51.5 -3.2**
MA2 pmax pmax
comp=Z,30nm,0.9s
MA2 Magadan 16.11 10 *e*P **Pn 18 41 49.0 -1.0**
comp=Z,57nm,1.2s
CBIJ Chichi jima 16.89 190 P **Pn 18 41 59.4 -0.2**
comp=Z,4.7nm,0.3s,baz=278,slow=23,SNR=5.0
CBIJ S **S 18 44 53.2 -15**
comp=Z,5.6nm,0.3s,baz=290,slow=23,SNR=5.8
HIA Hailar 18.38 296 *e*P **P 18 42 14.9 -1.3**
HIA pmax pmax
comp=Z,15nm,0.7s
HIA Hailar 18.38 296 *e*P **P 18 42 14.9 -1.3**
comp=Z,15nm,0.7s
DL2 Dalian 18.44 263 *i* PR 18 42 16.8
DL2 S **S 18 45 41.3 -0.6**
DL2 AMB AMB
comp=Z,80nm,1.2s
DL2 AMB AMB
comp=Z,170nm,5.9s
DL2 LR LR
comp=N,80nm,16.4s
DL2 LR LR
comp=E,100nm,15.0s
DL2 LR LR
comp=Z,120nm,17.5s
SEY Seymchan 19.57 10 *d* *i* P **P 18 42 27.3 -1.8**
YAK Yakutsk 20.42 339 *i* P **P 18 42 37.3 -1.1**
YAK pmax pmax
comp=Z,10.0nm,0.6s
YAK Yakutsk 20.42 339 *e*P **P 18 42 36.5 -1.9**
comp=Z,42nm,0.8s
SMY Shemya 20.99 55 *e*P **P 18 42 44.3 -0.1**
SMY pmax pmax
comp=Z,116nm,1.2s
SMY Shemya 20.99 55 *e*P **P 18 42 44.3 -0.1**
comp=Z,116nm,1.2s
JOW Kunigami 21.87 225 P **P 18 42 53.9 0.0**
comp=Z,68nm,0.8s,mb5.0,baz=0.6,slow=9.8,SNR=20
JOW LR LR 18 51 26.2
comp=Z,133nm,21.5s,baz=122,slow=36
BJI Beijing 21.97 270 P **P 18 42 53.5 -1.4**
BJI XP sP 18 43 27.0 -1.2
BJI S **S 18 46 47.8 -3.1**
BJI AMB AMB
comp=Z,36nm,0.8s,mb4.8
BJI AMB AMB
comp=Z,182nm,4.3s
BJI LR LR
comp=N,215nm,20.5s
BJI LR LR
comp=E,120nm,20.5s
BJI LR LR
comp=Z,200nm,19.4s
BJT Baijiatuau 21.98 270 *e*P **P 18 42 53.4 -1.6**
BJT pmax pmax
comp=Z,35nm,0.7s
BJT Baijiatuau 21.98 270 *e*P **P 18 42 53.4 -1.6**
comp=Z,36nm,0.7s,mb4.8
CIT Chita 22.67 302 *e*P **P 18 42 58.8 -3.5**
TIA Tai'an 22.83 260 ⇓P **P 18 43 02.5 -1.3**
TIA AMB AMB
comp=Z,47nm,0.8s,mb4.9
SSE Sheshan 22.91 244 P **P 18 43 03.8 -0.7**
SSE XP sP 18 43 36.0 -2.2
SSE S **S 18 47 02.0 -4.1**
SSE AMB AMB
comp=Z,28nm,0.7s,mb4.7
SSE AMB AMB
comp=Z,172nm,6.4s
SSE LR LR
comp=N,33nm,16.1s
SSE LR LR
comp=E,104nm,16.0s
SSE LR LR
comp=Z,117nm,20.2s
NJ2 Nanjing 23.86 249 *e*P **P 18 43 13.5 +0.3**
NJ2 AP 18 43 34.5
NJ2 XP sP 18 43 46.5 -1.9
NJ2 PP 18 43 51.5
NJ2 S **S 18 47 19.0 -2.6**
NJ2 XS sS 18 47 55.0 -6.5
NJ2 AMB AMB
comp=Z,50nm,1.0s,mb4.8
NJ2 AMB AMB
comp=Z,200nm,4.9s
NJ2 LR LR
comp=N,350nm,15.8s
NJ2 LR LR
comp=E,560nm,28.0s
NJ2 LR LR
comp=Z,350nm,16.5s
AMKA Amchitka 23.94 60 *e*P **P 18 43 10.9 -3.1**
HHC Hu-ho-hao-te 25.04 275 *e*P **P 18 43 24.5 +0.5**
HHC AP pP 18 43 45.5 -1.5
HHC XP sP 18 43 57.5 -1.8
HHC PP 18 44 06.3
HHC PCP PcP 18 46 58.3 +2.3
HHC S **S 18 47 38.5 -1.9**
HHC XS sS 18 48 16.0 -4.7
HHC SS 18 48 44.5
HHC SCP ScP 18 50 26.8 +1.5
HHC PCS PcS 18 50 36.5 +0.2
HHC AMB AMB
comp=Z,18nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,224nm,4.0s
HHC LR LR
comp=N,175nm,14.5s
HHC LR LR
comp=E,223nm,12.9s
HHC LR LR
comp=Z,176nm,17.1s
BTO Baotou 26.23 275 *e*P **P 18 43 34.0 -0.7**
BTO AMB AMB
comp=Z,5.0nm,1.2s,mb3.8
ULN Ulaanbaatar 26.78 292 *d* *i* P **P 18 43 39.9 +0.2**
TATO Taipei 27.07 234 *e*P **P 18 43 49.7 +7.5**
comp=Z,115nm,0.8s,mb5.5
SONM Songino Array 27.23 292 P **P 18 43 44.0 +0.4**
comp=Z,20nm,0.9s,mb4.7,baz=85,slow=7.9,SNR=91
SONM pP pP 18 44 08.7 +1.9
comp=Z,27nm,0.9s,baz=83,slow=8.7,SNR=8.5
SONM ScP ScP 18 50 30.9 -0.8
comp=Z,1.0nm,0.9s,baz=127,slow=3.9,SNR=5.7
SONM LR LR 18 54 49.6
comp=Z,122nm,18.4s,baz=86,slow=37
SONM Songino Array 27.23 292 P **P 18 43 44.0 +0.4**
SONM *PP pP 18 44 08.7 +1.9
YHNB Yeheng 27.36 234 *e*P **P 18 43 51.2 +6.3**
WHN Wuhan 27.85 252 P **P 18 43 49.5 +0.3**
QZH Quanzhou 28.82 238 P **P 18 43 59.5 +1.7**
QZH S **S 18 48 43.3 +3.3**
ZAK Zakamensk 29.06 298 *e*P **P 18 43 59.8 -0.1**
XAN Xi'an 29.76 263 P **P 18 44 06.0 -0.1**
XAN AMB AMB
comp=Z,14nm,0.8s,mb4.6
GZH Guangzhou 33.46 242 P **P 18 44 41.5 +2.9**
GTA Gaotai 33.99 279 *e*P **P 18 44 43.8 +0.7**
GTA AP pP 18 45 07.8 +1.1
GTA XP sP 18 45 18.8 -0.1
GTA PP PP 18 45 59.8 -2.2
GTA PPP 18 46 21.5
GTA PCP PcP 18 47 19.8 +1.0
GTA S **S 18 50 01.5 +1.0**
GTA XS sS 18 50 39.3 -2.2
GTA SCP ScP 18 50 54.3 +0.3
GTA PCS PcS 18 51 05.5 +0.5
GTA SS SS 18 52 13.5 -18
GTA SCS ScS 18 54 55.0 -1.1
GTA AMB AMB
comp=Z,9.0nm,1.8s,mb4.3
GTA AMB AMB
comp=Z,82nm,4.2s
GTA LR LR
comp=N,74nm,11.8s
GTA LR LR
comp=E,114nm,13.7s
GTA LR LR
comp=Z,149nm,15.2s
CD2 Chengdu 35.11 263 ⇓ *i* P **P 18 44 52.8 0.0**
CD2 AP pP 18 45 15.3 -1.2
CD2 XP sP 18 45 26.8 -1.9
CD2 PP PP 18 46 13.8 -0.6
CD2 S **S 18 50 16.8 -1.0**
CD2 SS SS 18 52 37.5 -17
CD2 AMB AMB
comp=Z,50nm,0.5s,mb5.6
CD2 AMB AMB
comp=Z,180nm,5.2s
CD2 LR LR
comp=E,60nm,15.6s
CD2 LR LR
comp=Z,90nm,12.0s
GYA Guiyang 35.68 254 ⇓ *i* P **P 18 44 57.3 -0.4**
GYA AP pP 18 45 19.8 -1.6
GYA XP sP 18 45 31.5 -2.0
GYA S **S 18 50 24.0 -2.4**
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
GYA AMB AMB
comp=Z,110nm,4.0s
GYA LR LR
comp=N,370nm,17.2s
GYA LR LR
comp=E,380nm,17.6s
GYA LR LR
comp=Z,290nm,18.0s
TTA Tatalina 38.19 39 *e*P **P 18 45 18.5 -0.5**
TTA pmax pmax
comp=Z,157nm,1.8s,mb5.5
TTA Tatalina 38.19 39 *e*P **P 18 45 18.5 -0.4**
comp=Z,157nm,1.8s,mb5.5
SVW2 Sparrevohn 38.38 42 *e*P **P 18 45 19.6 -1.0**
KMI Kunming 39.26 256 P **P 18 45 27.5 -0.4**
KMI AP pP 18 45 50.5 -1.4
KMI XP sP 18 46 03.0 -1.0
KMI PP PP 18 47 04.3 +4.4
KMI PPP 18 47 30.5
KMI S **S 18 51 24.8 +4.1**
KMI XS sS 18 52 06.5 +4.2
KMI SS SS 18 54 13.0 -5.0
KMI SSS 18 54 48.5
KMI AMB AMB
comp=Z,31nm,1.1s,mb5.0
KMI AMB AMB
comp=Z,172nm,4.8s
KMI LR LR
comp=N,120nm,19.5s
KMI LR LR
comp=E,98nm,16.3s
KMI LR LR
comp=Z,124nm,15.5s
ZAL Zalesovo 39.91 307 P **P 18 45 32.4 -0.9**
comp=Z,1.5nm,0.4s,mb4.2,baz=26,slow=8.1,SNR=5.6
ZAL pP pP 18 45 58.2 +0.8
comp=Z,2.4nm,0.9s,baz=41,slow=8.9,SNR=4.9
ZAL PcP PcP 18 47 36.4 -0.4
comp=Z,2.7nm,0.6s,baz=16,slow=2.4,SNR=5.8
ZAL ScP ScP 18 51 15.1 -1.0
comp=Z,1.4nm,0.8s,baz=22,slow=4.9,SNR=5.6
ZAL LR LR 19 04 14.9
comp=Z,83nm,20.8s,baz=45,slow=39
ZAL Zalesovo 39.91 307 P **P 18 45 32.4 -0.9**
ZAL *PP pP 18 45 58.3 +0.9
ZAL 18 47 36.4
KDAK Kodiak Island 40.16 47 P **P 18 45 34.0 -1.2**
comp=Z,31nm,0.9s,mb5.1,baz=284,slow=4.7,SNR=13
KDAK Kodiak Island 40.16 47 *e*P **P 18 45 33.8 -1.5**
comp=Z,38nm,1.0s,mb5.2
NVS Novosibirsk 40.64 308 *i* P **P 18 45 38.4 -0.9**
WMQ Urumqi 40.84 291 P **P 18 45 42.0 +1.1**
WMQ AP pP 18 46 06.0 +0.8
WMQ XP sP 18 46 18.0 +0.9
WMQ PP PP 18 47 21.0 +3.9
WMQ S **S 18 51 45.0 +0.7**
WMQ SS SS 18 54 45.0 -4.5
WMQ AMB AMB
comp=Z,34nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,154nm,4.0s
WMQ LR LR
comp=N,134nm,12.0s
WMQ LR LR
comp=E,112nm,12.0s
WMQ LR LR
comp=Z,119nm,12.0s
MCK McKinley 41.37 38 *e*P **P 18 45 44.5 -0.8**
MCK pmax pmax
comp=Z,18nm,1.0s,mb4.9
MCK McKinley 41.37 38 *e*P **P 18 45 44.5 -0.8**
comp=Z,18nm,1.0s,mb4.8

COLA College 41.78 36*c* iP P 18 45 48.4 -0.2**
COLA College 41.78 36 *e*P P 18 45 48.0 -0.5
comp=Z,75nm,0.8s,mb5.5
MK31 Makanchi Array 43.38 297 P P 18 46 01.2 -0.4
MK31 pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
MKAR Makanchi Array 43.38 297 P P 18 46 01.4 -0.2
comp=Z,5.9nm,0.6s,mb4.5,baz=77,slow=9.0,SNR=48
MKAR pP pP 18 46 27.1 +1.1
comp=Z,11nm,0.7s,baz=74,slow=8.9,SNR=7.6
MKAR ScP ScP 18 51 28.9 -1.0
comp=Z,1.4nm,0.7s,baz=46,slow=5.2,SNR=7.7
MKAR Makanchi Array 43.38 297 P P 18 46 01.4 -0.2
MKAR *PP pP 18 46 27.1 +1.1
MKAR Makanchi Array 43.38 297 P P 18 46 01.4 -0.2
MKAR pP pP 18 46 27.1 +1.1
MKAR ScP ScP 18 51 28.9 -1.0
MENT Mentasta 43.80 39 *e*P P 18 46 04.3 -0.6
EGAK Eagle 44.63 36 *e*P P 18 46 10.5 -1.0
LSA Lhasa 44.88 270 P P 18 46 15.0 +1.5
LSA Lhasa 44.88 270 *e*P P 18 46 14.9 +1.4
LSA pmax pmax
comp=Z,17nm,0.8s,mb4.8
LSA Lhasa 44.88 270 *e*P P 18 46 14.9 +1.4
comp=Z,17nm,0.8s,mb4.8
CHTO Chiang Mai 46.05 252 *e*P P 18 46 23.1 +0.3
CHTO pmax pmax
comp=Z,12nm,0.8s,mb4.7
CHTO Chiang Mai 46.05 252 *e*P P 18 46 23.1 +0.4
comp=Z,12nm,0.8s,mb4.7
INK Inuvik 46.99 30 P P 18 46 29.2 -0.8
comp=Z,14nm,0.6s,mb4.9,baz=305,slow=6.7,SNR=47
INK Inuvik 46.99 30 P P 18 46 29.3 -0.8
INK pmax pmax
comp=Z,14nm,0.6s
INK Inuvik 46.99 30 *e*P P 18 46 28.9 -1.2
comp=Z,18nm,0.9s,mb4.8
CHKZ Chkalovo 48.08 310 *e*P P 18 46 37.1 -1.4
CHKZ pmax pmax
comp=Z,11nm,0.9s,mb4.7
CHKZ Chkalovo 48.08 310 *e*P P 18 46 37.1 -1.4
comp=Z,11nm,0.9s,mb4.7
VOSK Vostochnaya 48.21 308 P P 18 46 38.5 -1.0
VOSK pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
BVAR Borovoye Array 48.43 309 P P 18 46 40.9 -0.3
comp=Z,2.5nm,0.5s,mb4.3,baz=80,slow=9.9,SNR=17
BVAR ScP ScP 18 51 49.3 -1.6
comp=Z,1.3nm,0.6s,baz=57,slow=5.5,SNR=5.5
BVAR LR LR 19 08 51.5
comp=Z,41nm,20.4s,baz=322,slow=38
BRVK Borovoye 48.48 309 *e*P P 18 46 41.1 -0.5
comp=Z,2.3nm,0.6s,mb4.2
ULHL Ulahol 49.16 294 P P 18 46 47.9 +1.1
SNR=5.4
ZRNK Zerenda 49.24 309 *e*P P 18 46 47.1 -0.3
ZRNK pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ZRNK Zerenda 49.24 309 *e*P P 18 46 47.0 -0.3
comp=Z,5.0nm,0.6s,mb4.6
TKM2 Tokmak 2 49.28 295 P P 18 46 48.8 +1.1
SNR=26
GUN Gumba 49.70 272 *e*P P 18 46 51.8 +0.9
comp=Z,332nm,0.6s
KBK Karagaybulak 49.83 295 P P 18 46 52.7 +0.8
SNR=16
USP Ospenovka 49.85 295 P P 18 46 52.6 +0.6
SNR=20
KZA Kyzart 49.89 294 P P 18 46 54.2 +1.9
SNR=11
FRU Bishkek 49.97 295 *e*P P 18 46 52.5 -0.4
AAK Ala-Archa 50.14 295 P P 18 46 54.8 +0.7
SNR=6.6
AAK Ala-Archa 50.14 295*d* iP P 18 46 53.6 -0.6
AAK pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
AAK Ala-Archa 50.14 295 *e*P P 18 46 53.1 -1.1
comp=Z,5.4nm,0.6s,mb4.7
KKN Kakani 50.20 272 *e*P P 18 46 55.3 +0.6
comp=Z,130nm,0.9s
KKN Kakani 50.20 272 *e*P P 18 46 55.3 +0.6
KKN pmax pmax
comp=Z,13nm,0.9s,mb4.9
PKI Pulchoki 50.24 272 *e*P P 18 46 55.6 +0.7
comp=Z,76nm,0.7s,mb5.7
PKI Pulchoki 50.24 272 *e*P P 18 46 55.6 +0.7
PKI pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
DMN Daman 50.43 272 *e*P P 18 46 57.3 +0.9
comp=Z,186nm,0.8s
GKN Gorkha 50.55 273 *e*P P 18 46 57.7 +0.4
comp=Z,112nm,0.5s
EKS2 Erkin-Say 50.59 295 P P 18 46 58.2 +0.5
SNR=18
AML Almayashu 50.90 295 P P 18 47 01.2 +1.3
SNR=13
KOLN Koldanda 51.43 273 *e*P P 18 47 04.9 +1.0
comp=Z,156nm,0.8s
DLBC Dease Lake 51.50 42 P P 18 47 05.3 +0.9
comp=Z,7.3nm,0.5s,mb4.9,baz=272,slow=7.1,SNR=20
DLBC Dease Lake 51.50 42 P P 18 47 05.3 +0.9
BOK Bokaro 52.14 268 *e*P P 18 47 08.0 -1.1
BOK AMb AMB 18 47 11.2
comp=Z,29nm,0.6s,mb5.5
KK31 Karatay Array 52.51 297 *i* P P 18 47 11.7 -0.2
KK31 pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
KKAR Karatay Array 52.51 297 *i* P P 18 47 11.7 -0.2
KKAR pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
LGTI Lohaghat 52.89 277 *i* P P 18 47 16.5 +1.8
ARU Arti 53.38 316⇓*i* P P 18 47 17.2 -1.1
ARU *e* pP 18 47 45.0 +1.4
ARU *e*S S 18 54 40.5 -1.8
ARU pmax pmax
comp=Z,16nm,1.4s,mb4.9
ARU Arti 53.38 316 *e*P P 18 47 16.8 -1.5
comp=Z,9.1nm,0.7s,mb4.9
SMLA Simla 54.14 281 *e*P P 18 47 24.0 +0.1
BBB Bella Bella 55.20 48 P P 18 47 31.1 -0.4
comp=Z,10nm,0.8s,mb4.9,baz=307,slow=6.2,SNR=7.5
BBB LR LR 19 12 41.8
comp=Z,48nm,18.5s,baz=275,slow=38
NDI New Delhi 55.50 278 *e*P P 18 47 32.0 -1.6
NDI *e*P 18 47 33.5
NDI AMb AMB 18 47 34.0
comp=Z,76nm,1.1s,mb5.6
AB31 Akbulak array 55.98 308 *i* P P 18 47 36.8 -0.3
AB31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
YKA Yellowknife Ar 56.46 33 P P 18 47 39.6 -0.8
comp=Z,8.4nm,0.7s,mb4.9,baz=303,slow=6.9,SNR=22
YKA pP pP 18 48 06.9 +0.9
comp=Z,6.0nm,0.8s,baz=303,slow=6.9,SNR=6.3
YKA Yellowknife Ar 56.46 33 P P 18 47 39.6 -0.8
YKA pP pP 18 48 06.9 +0.9
AKTK Aktyubinsk 56.48 310 P P 18 47 40.5 -0.2
AKTK LR LR 19 13 10.3
AKTO Aktyubinsk 56.48 310 P P 18 47 40.5 -0.2
comp=Z,3.6nm,0.7s,mb4.5,baz=46,slow=7.5,SNR=19
AKTO LR LR 19 13 10.3
comp=Z,31nm,19.4s,baz=245,slow=37
AKTO Aktyubinsk 56.48 310 P P 18 47 40.5 -0.1
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
AKTO MLR MLR
comp=Z,31nm,19.4s
KAKA Kakadu 57.49 195⇑*i*P P 18 47 46.9 -0.8
comp=Z,24nm,0.5s,mb5.5
VIS Vishakhapatnam 57.83 264 *e*P P 18 47 49.5 -0.6
VIS AMb AMB 18 47 59.2
comp=Z,25nm,1.5s,mb5.0
KEV Kevo 58.17 339 *e*p P 18 47 49.7 -2.8
comp=Z,6.2nm,0.9s,mb4.6
KEV Kevo 58.17 339 *e*P P 18 47 49.7 -2.8
KEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
BHPL Bhopal 58.60 273 *e*P P 18 47 54.8 -0.6
BHPL AMb AMB 18 47 56.9
comp=Z,37nm,1.5s,mb5.2
AJM Ajmer 58.64 278 *e*P P 18 47 55.7 0.0
AJM AMb AMB 18 47 59.5
comp=Z,31nm,1.9s,mb5.0
ARCES ARCESS Array B 58.71 339 P P 18 47 56.9 +0.7
comp=Z,1.0nm,0.5s,mb4.1,baz=43,slow=7.1,SNR=7.6
ARCES LR LR 19 19 32.2
comp=Z,42nm,19.4s,baz=261,slow=42
NGP Nagpur 58.72 270 *ex* P 18 47 51.5 -4.8
NGP AMb AMB 18 47 53.7
comp=Z,43nm,1.2s,mb5.3
A05A Maple Falls 60.14 49⇑P P 18 48 05.4 -0.7
baz=60
D03A Wishkah Elem. 60.24 52⇓P P 18 48 07.0 +0.3
baz=60
B05A Bryant 60.54 50⇑P P 18 48 08.7 -0.1
baz=60
E03A Lebam 60.67 52⇓P P 18 48 09.9 +0.2
baz=60
RPW Rockport 60.76 50 P P 18 48 10.0 -0.3
F03A Seaside 61.02 53⇓P P 18 48 12.5 +0.5
baz=61
C05A Tolt Reservoir 61.09 50⇑P P 18 48 12.3 -0.2
baz=61
D05A Enumclaw 61.20 51⇑P P 18 48 13.4 +0.1
baz=61
JOF Joensuu 61.40 332 *ep* P 18 48 13.1 -1.5
comp=Z,6.3nm,0.8s,mb4.7
HYB Hyderabad 61.47 267 *i* P P 18 48 15.0 -0.1
HYB Hyderabad 61.47 267 *e*P P 18 48 15.0 -0.1
TDL Tradedollar La 61.55 52 P P 18 48 16.5 +0.9
F04A Amboy 61.67 52⇑P P 18 48 16.6 +0.1
baz=62,SNR=6.1
E05A Randle 61.69 52 P P 18 48 16.5 -0.1
baz=62,SNR=8.1
H03A Soap Creek Ran 61.88 54⇓P P 18 48 18.6 +0.8
baz=62
G04A Mulino 62.05 53⇓P P 18 48 19.0 0.0
baz=62
F05A White Salmon 62.25 52⇑P P 18 48 20.4 +0.1
baz=62
I03A Eugene 62.30 55⇑P P 18 48 21.1 +0.5
baz=62
TDH Tom, Dick, Har 62.40 53 P P 18 48 21.6 +0.3
J02A Umpqua 62.47 55⇓P P 18 48 22.3 +0.6
baz=62,SNR=7.2
H04A Detroit Lake 62.53 53⇑P P 18 48 22.3 +0.1
baz=62
G05A Wamic 62.70 53⇑P P 18 48 23.7 +0.4
baz=62
J03A Ideyld Park 62.83 55⇓P P 18 48 24.6 +0.5
baz=63
G06A Carlson Farm, 63.10 52 P P 18 48 26.3 +0.4
baz=63,SNR=6.5
H05A Madras 63.10 53⇑P P 18 48 26.0 0.0
baz=63
MDRS Chennai 63.13 262 *e*P P 18 48 25.0 -1.1
L02A Cave Junction 63.16 56⇓P P 18 48 26.7 +0.4
baz=63
I05A Bend 63.37 53⇓P P 18 48 27.6 -0.1
baz=63
H06A Lindquist Farm 63.57 53⇑P P 18 48 28.8 -0.2
baz=63,SNR=5.6
G07A Ruggs Ranch, H 63.63 52⇓P P 18 48 29.4 0.0
baz=63
KAF Kangasniemi 63.65 333 *ep* P 18 48 27.5 -2.0
comp=Z,9.1nm,0.7s,mb4.7,baz=43,slow=6.2
KAF Kangasniemi 63.65 333 *e*P P 18 48 27.5 -2.0
KAF pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
F08A Pendleton 63.82 51⇑P P 18 48 30.9 +0.2
baz=64
J05A Fort Rock 63.90 54⇑P P 18 48 31.9 +0.7
baz=64,SNR=11
YBH Yreka Blue Hor 63.95 56 *e*P P 18 48 31.4 -0.1
YBH pmax pmax
comp=Z,23nm,1.4s
YBH Yreka Blue Hor 63.95 56 *e*P P 18 48 31.4 -0.1
comp=Z,23nm,1.4s,mb4.8
YBH Yreka Blue Hor 63.95 56⇑P P 18 48 31.9 +0.4
baz=64,SNR=9.6
G08A Pilot Rock 64.02 51⇓P P 18 48 31.8 -0.2
baz=64
M02C Callahan 64.06 57⇓P P 18 48 32.8 +0.6
baz=64,SNR=7.3
H07A Lands Inn, Kim 64.09 52⇑P P 18 48 32.5 0.0
baz=64
I06A Prineville 64.11 53⇑P P 18 48 32.6 +0.1
baz=64
N02C Big Bar 64.12 57⇑P P 18 48 33.0 +0.3
baz=64
L04A Klamath Falls 64.17 56⇓P P 18 48 33.3 +0.3
baz=64
FINES FINESS Array B 64.20 332 P P 18 48 32.4 -0.8
comp=Z,9.6nm,0.6s,mb4.8,baz=52,slow=7.5,SNR=54
FINES pP pP 18 48 59.0 -0.3
comp=Z,5.7nm,0.6s,baz=49,slow=8.8,SNR=3.6
FITZ Fitzroy Crossi 64.22 201 *e*P P 18 48 33.0 -0.3
comp=Z,6.5nm,0.6s,mb4.6
WRAB Tennant Creek 64.25 191*c* iP P 18 48 32.4 -1.1
WRAB Tennant Creek 64.25 191 *e*P P 18 48 32.2 -1.3
comp=Z,57nm,0.9s,mb5.4
WB2 Warrnunga Arr 64.26 191⇑*i*P P 18 48 32.3 -1.2
WRA Warramunga Arr 64.26 191 P P 18 48 32.3 -1.2
comp=Z,30nm,0.9s,mb5.1,baz=9.9,slow=6.9,SNR=147
I07A Izee 64.43 53⇑P P 18 48 34.7 +0.1
baz=64,SNR=8.7
K05A Summer Lake 64.44 55⇓P P 18 48 35.5 +0.8
baz=64,SNR=18
M04C Macdoel 64.44 56⇑P P 18 48 35.1 +0.3
baz=64,SNR=6.9
OBN Obninsk 64.47 323⇓*e*P P 18 48 33.9 -1.0
OBN *e* 18 50 55.8
OBN pmax pmax
comp=Z,18nm,1.1s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s
WALA Waterton Lakes 64.47 46 *e*P P 18 48 34.3 -0.6
comp=Z,18nm,1.0s,mb4.9
WALA *e*pP pP 18 48 58.0 -3.0
J06A Christmas Vall 64.56 54 P P 18 48 35.9 +0.4
baz=64,SNR=8.1
M03C McCloud 64.57 56⇓P P 18 48 35.7 +0.1
baz=64
H08A Prairie City 64.65 52⇑P P 18 48 36.3 +0.2
baz=64,SNR=6.1
KAD Karad 64.70 270 *e*P P 18 48 36.0 -0.4
KAD AMb AMB 18 48 37.8
comp=Z,50nm,1.5s,mb5.1
WDC Whiskeytown Da 64.73 57 *e*P P 18 48 36.5 -0.1
WDC pmax pmax
comp=Z,20nm,1.1s,mb4.9
WDC Whiskeytown Da 64.73 57 *e*P P 18 48 36.5 -0.1
comp=Z,20nm,1.1s,mb4.8
WDC Whiskeytown Da 64.73 57⇓P P 18 48 36.6 0.0
baz=64,SNR=7.3
BSMT Bassoo Peak 64.75 47 P P 18 48 37.1 +0.3
K06A Valley Falls 64.77 54⇑P P 18 48 37.4 +0.5
baz=64,SNR=12
O02C Red Bluff 64.83 58⇓P P 18 48 37.7 +0.5
baz=65,SNR=6.1
L05A Lakeview 64.88 55⇑P P 18 48 38.0 +0.4
baz=65,SNR=11
P01C Double 8 Ranch 64.91 59⇓P P 18 48 37.7 -0.1
baz=65
J07A Hines 64.97 53⇑P P 18 48 38.6 +0.4
baz=65
I08A Drewsey 65.07 52⇑P P 18 48 39.2 +0.3
baz=65,SNR=14
M05C Lookout 65.11 56⇓P P 18 48 39.2 +0.2
baz=65
H09A Durkee 65.13 51⇑P P 18 48 39.4 +0.2
baz=65
GASB Alder Springs 65.19 58⇑P P 18 48 40.3 +0.7
baz=65,SNR=5.9
HATC Hat Creek Radi 65.25 57⇓P P 18 48 40.3 +0.4
baz=65,SNR=5.6
HOPS Hopland 65.36 59⇑P P 18 48 40.3 -0.4
baz=65
K07A Rock Creek Ran 65.42 54⇑P P 18 48 41.3 +0.2
baz=65,SNR=11
J08A Circle Bar Ran 65.47 53⇑P P 18 48 41.6 +0.3
baz=65
I09A Lost Marbles R 65.51 52⇑P P 18 48 41.8 +0.2
baz=65
M06C Likely Place G 65.60 56⇓P P 18 48 42.7 +0.4
baz=65
O04C Chester 65.78 57⇑P P 18 48 43.7 +0.3
baz=66
L07A Adell 65.78 54⇓P P 18 48 44.1 +0.7
baz=66,SNR=12
VRSR Storozhevoye 65.80 319 *e*P P 18 48 42.7 -0.8
VRSR pmax pmax
comp=N,10.0nm,0.9s
VRSR pmax pmax
comp=E,9.0nm,0.9s
VRSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
ELFS Eagle Lake Fie 65.81 56⇓P P 18 48 44.2 +0.6
baz=66
MNRC McLaughlin Nat 65.82 59⇑P P 18 48 44.3 +0.6
baz=66,SNR=5.3
MSO Missoula 65.84 48 *e*P P 18 48 43.6 -0.2
comp=Z,20nm,1.3s,mb4.8
K08A Mann Creek Ran 65.84 53⇓P P 18 48 44.1 +0.3
baz=66,SNR=11
J09A Fry Pan Ranch, 65.89 53⇓P P 18 48 44.4 +0.4
baz=66,SNR=9.6
WVOR Wild Horse Val 65.94 54 *e*P P 18 48 44.5 +0.1
WVOR pmax pmax
comp=Z,11nm,0.9s,mb4.7
WVOR Wild Horse Val 65.94 54 *e*P P 18 48 44.5 +0.1
comp=Z,11nm,0.9s,mb4.7
ORV Oroville 65.99 58⇓P P 18 48 44.0 -0.7
baz=66,SNR=7.2
MCCM Marconi Confer 66.00 60⇑P P 18 48 44.1 -0.7
baz=66
SUTB Sutter Butte 66.02 58⇑P P 18 48 43.9 -1.0
baz=66
O05C Quincy 66.10 57⇑P P 18 48 45.4 0.0
baz=66
VSU Vasula 66.11 330*c* iP P 18 48 45.3 -0.2
OHCM Honcut 66.14 58 *e*P P 18 48 45.0 -0.6
CVS Carmenet Viney 66.14 59⇓P P 18 48 44.9 -0.8
baz=66
Q03C Winters 66.24 59⇓P P 18 48 46.2 -0.1
baz=66
L08A Fields 66.26 54⇓P P 18 48 46.8 +0.3
baz=66,SNR=5.4
N06A Buffalo Meadow 66.27 56 P P 18 48 46.8 +0.3
baz=66,SNR=15
M07A Soldier Meadow 66.27 55⇑P P 18 48 47.0 +0.5
baz=66,SNR=29
K09A Rome 66.30 53⇓P P 18 48 46.7 -0.1
baz=66
BEKR Beckwourth 66.50 57⇓P P 18 48 47.9 0.0
baz=66,SNR=12
O06A Flanigan 66.63 56 P P 18 48 49.0 +0.1
baz=66,SNR=16
P05C Yuba Gap, Truc 66.69 57⇓P P 18 48 49.1 -0.1
baz=66
M08A Happy Creek Ra 66.70 54⇑P P 18 48 49.7 +0.4
baz=66,SNR=5.7
L09A Wilkinson Ranc 66.76 54⇑P P 18 48 50.0 +0.3
baz=66,SNR=7.3
N07B Gerlach 66.76 55⇓P P 18 48 50.0 +0.3
baz=66,SNR=7.2
JRSC Jasper Ridge 66.86 60⇓P P 18 48 50.1 -0.2
baz=67
P06A Stead Airport, 66.89 57⇑P P 18 48 50.7 +0.3
baz=67
LAVA Lava Cap Winer 66.95 58⇑P P 18 48 50.4 -0.5
baz=67,SNR=6.2
WENL Wente Brothers 67.02 59⇑P P 18 48 52.2 +0.9
baz=67
BNLO Ben Lomond (Sa 67.06 60⇑P P 18 48 51.0 -0.6
baz=67
O07A Toulon 67.20 56⇑P P 18 48 52.8 +0.4
baz=67,SNR=15
WCN Washoe City 67.21 57⇑P P 18 48 52.7 +0.2
baz=67
N08A GE Springer Mi 67.26 55⇑P P 18 48 53.0 +0.2
baz=67,SNR=13
M09A Marrel Ranch, 67.26 54⇑P P 18 48 53.2 +0.4
baz=67
R05C Kirkwood Meado 67.39 58⇓P P 18 48 53.7 +0.1
baz=67,SNR=7.1
N09A Rock Creek Ran 67.58 55⇓P P 18 48 55.0 +0.2
baz=67,SNR=7.0
CMB Columbia Colle 67.61 58 *e*P P 18 48 54.9 -0.1
CMB pmax pmax
comp=Z,37nm,1.3s,mb5.0
CMB Columbia Colle 67.61 58 *e*P P 18 48 54.9 -0.1
comp=Z,37nm,1.3s,mb5.1
CMB Columbia Colle 67.61 58⇑P P 18 48 54.9 -0.1
baz=67,SNR=8.9
PACP Pacheco Peak 67.69 60 P P 18 48 55.8 +0.3
baz=68,SNR=5.4
M10A I.L. Ranch, Tu 67.73 53⇓P P 18 48 56.2 +0.5
baz=68,SNR=7.0
R06C Coleville 67.88 57 P P 18 48 57.4 +0.7
baz=68,SNR=13
HAST UC Hastings Re 67.92 60⇑P P 18 48 57.0 +0.1
baz=68
P08A Dixie Valley 67.97 56⇑P P 18 48 58.0 +0.7
baz=68
AS31 Alice Springs 67.98 191 *e*P P 18 48 57.0 -0.3
ASAR Alice Springs 67.98 191 P P 18 48 57.0 -0.3
comp=Z,9.0nm,0.8s,mb4.7,baz=7.6,slow=5.1,SNR=120
ASAR pP pP 18 49 22.9 -0.7
comp=Z,3.6nm,0.8s,baz=11,slow=5.5,SNR=4.6
ASPA Alice Springs 67.98 191 *e*P P 18 48 57.0 -0.3
BMN Battle Mountai 68.02 55 *e*P P 18 48 57.9 +0.3
BMN *e*PP pP 18 49 23.3 -0.6
BMN pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
BMN Battle Mountai 68.02 55 *e*P P 18 48 57.9 +0.3
comp=Z,9.5nm,0.7s,mb4.7
BMN *e*pP pP 18 49 23.3 -0.6
S06C San Francisco 68.04 58⇑P P 18 48 57.6 -0.1
baz=68,SNR=9.6
S05C Merced 68.08 59⇑P P 18 48 57.8 -0.1
baz=68
O09A Fish Creek Ran 68.20 55 P P 18 48 59.4 +0.7
baz=68,SNR=11
M11A Holland Ranch, 68.22 53⇑P P 18 48 59.6 +0.7
baz=68
N10A Dunphy 68.26 54⇓P P 18 48 59.1 +0.1
baz=68
V03C Hunter Liggett 68.34 61⇑P P 18 48 59.9 +0.3
baz=68
R07C Lee Vining 68.40 58⇑P P 18 49 00.4 +0.5
baz=68
U04C Hernandez Rese 68.42 60⇑P P 18 49 00.3 +0.2
baz=68
O10A Cortez Mining, 68.53 54⇑P P 18 49 01.3 +0.5
baz=68
TRD Trivandrum 68.58 261 *e*P P 18 48 59.6 -1.5
TRD AMb AMB 18 49 01.8
comp=Z,33nm,2.0s,mb4.8
Q08A Gabbs 68.59 56⇑P P 18 49 01.3 +0.2
baz=68
P09A Austin 68.63 55⇓P P 18 49 01.7 +0.3
baz=68
NVAR Mina Array Bea 68.64 57 P P 18 49 01.9 +0.5
comp=Z,13nm,0.8s,mb4.8,baz=295,slow=4.9,SNR=94
NVAR pP pP 18 49 27.9 +0.1
comp=Z,5.8nm,0.7s,baz=304,slow=5.6,SNR=6.7
N11A Elko Archery C 68.64 54⇑P P 18 49 01.8 +0.3
baz=68
T06C Millerton Lake 68.68 59⇑P P 18 49 01.1 -0.5
baz=68
KCC Kaiser Creek 68.72 58⇑P P 18 49 01.7 -0.3
baz=68,SNR=6.9
KIV Kislovodsk 68.72 311 *i* P P 18 49 03.1 +1.1
KIV pmax pmax
comp=Z,32nm,1.0s,mb5.1
KIV Kislovodsk 68.72 311 *e*P P 18 49 01.6 -0.4
comp=Z,23nm,0.8s,mb5.1
M12A Wells 68.74 53⇑P P 18 49 02.8 +0.8
baz=68,SNR=5.5
R08A Mina 68.81 57⇑P P 18 49 02.8 +0.3
baz=69
ZEI Tsey 68.83 309 *e*P P 18 49 01.6 -1.0
ZEI *e*PP pP 18 49 29.8 +0.8
ZEI pmax pmax
comp=Z,13nm,0.5s,mb5.0
PKD Parkfield 68.83 60⇑P P 18 49 02.6 -0.1
baz=69
YNR Norris Junctio 68.95 48 *e*P P 18 49 04.5 +1.1
P10A Eureka 68.98 55⇑P P 18 49 04.0 +0.4
baz=69
N12A Clover Valley, 69.03 53⇓P P 18 49 04.4 +0.6
baz=69
YFT Old Faithful 69.04 48 *e*P P 18 49 05.3 +1.4
NB2 NORSAR Subarra 69.05 338 P P 18 49 02.9 -1.1
comp=Z,9.3nm,0.8s,mb4.7,baz=33,slow=6.5
NOA NORSAR Array B 69.05 338 P P 18 49 03.2 -0.8
comp=Z,9.0nm,0.8s,mb4.7,baz=34,slow=6.1,SNR=33
NOA NORSAR Array B 69.05 338 P P 18 49 03.2 -0.8
Q09A Carvers 69.06 56⇓P P 18 49 04.0 0.0
baz=69

HFS Hagfors 69.10 336 LR LR 19 22 53.4
comp=Z,36nm,20.8s,baz=164,slow=39
O11A Cowboy Ranch, 69.13 54 ⇑P **P 18 49 04.7 +0.2**
baz=69
MTUM Tungsten Hills 69.16 58 *eP* **P 18 49 05.1 +0.4**
M13A Montello 69.20 52 ⇓P **P 18 49 05.3 +0.4**
baz=69
HELL Mitchell Peak, 69.31 59 ⇓P **P 18 49 05.2 -0.4**
baz=69
P11A Circle Ranch, 69.45 55 ⇓P **P 18 49 06.8 +0.4**
baz=69
R09A Tonopah 69.50 56 ⇓P **P 18 49 06.8 0.0**
baz=69
N13A Wendover, West 69.51 53 ⇑P **P 18 49 07.2 +0.4**
baz=69
TIN Tinemaha 69.56 58 ⇑P **P 18 49 07.5 +0.4**
baz=69
SMMC Simmler 69.57 60 ⇓P **P 18 49 07.4 +0.2**
baz=69
O12A Currie 69.58 54 ⇑P **P 18 49 07.6 +0.3**
baz=69
S09A Goldfield 69.74 57 ⇑P **P 18 49 08.4 +0.1**
baz=70
VES Vestal, Richgr 69.81 59 ⇑P **P 18 49 07.7 -1.0**
baz=70
R10A Warm Springs 69.94 56 ⇓P **P 18 49 09.6 +0.1**
baz=70
PKM Peak Mountain 69.95 61 ⇑P **P 18 49 10.1 +0.6**
baz=70
P12A McGill 70.00 54 ⇑P **P 18 49 10.1 +0.3**
baz=70
CWC Cottonwood Cre 70.05 58 ⇓P **P 18 49 09.9 -0.2**
baz=70
GNI Garni 70.05 307 *i* P **P 18 49 11.5 +1.4**
GNI pmax pmax
comp=Z,21nm,2.1s
ISA Isabella 70.30 59 ⇑P **P 18 49 10.6 -1.1**
baz=70
SBC Santa Barbara 70.31 61 ⇓P **P 18 49 11.6 -0.1**
baz=70
Q12A Willow Creek R 70.33 55 ⇑P **P 18 49 12.0 +0.2**
baz=70
ARVC Arvin 70.42 60 ⇓P **P 18 49 11.7 -0.7**
baz=70
BSC Santa Cruz Isl 70.65 61 ⇑P **P 18 49 13.3 -0.5**
baz=70
MPMC Manual Prospec 70.66 58 ⇑P **P 18 49 13.8 0.0**
baz=70
AKASG Malin Array Be 70.73 323 P **P 18 49 13.2 -1.0**
comp=Z,3.4nm,0.4s,mb4.5,baz=40,slow=6.2,SNR=39
AKASG pP pP 18 49 39.8 -1.0
comp=Z,5.9nm,0.8s,baz=40,slow=6.2,SNR=3.8
FURC Furnace Creek, 70.78 58 ⇓P **P 18 49 14.6 0.0**
baz=71
PDAR Pinedale Array 70.85 49 P **P 18 49 14.9 0.0**
comp=Z,13nm,0.7s,mb4.9,baz=283,slow=1.8,SNR=19
PDAR pP pP 18 49 41.1 -0.4
comp=Z,5.1nm,0.8s,baz=291,slow=4.1,SNR=3.5
LRMC Laurel Mountai 70.91 59 ⇓P **P 18 49 14.9 -0.4**
baz=71
ANN Anapa 70.96 314 *eP* **P 18 49 15.2 -0.5**
ANN *i* *PP pP 18 49 30.0 -12
ANN *eS* S 18 58 23.5 +0.5
ANN pmax pmax
comp=Z,45nm,1.1s,mb5.2
EDW2 Edwards Air Fo 71.11 60 ⇑P **P 18 49 16.4 -0.2**
baz=71
U10A Ash Meadows, A 71.13 58 ⇓P **P 18 49 16.9 +0.2**
baz=71
DECC Green Verdugo 71.31 60 ⇑P **P 18 49 17.3 -0.5**
baz=71
SHOC Shoshone 71.50 58 ⇓P **P 18 49 18.9 -0.1**
baz=71
GSC Goldstone 71.57 59 ⇓P **P 18 49 19.3 0.0**
baz=71
U11A Corn Creek 71.71 57 ⇑P **P 18 49 20.4 +0.2**
baz=72
BFSC Mount Baldy St 71.73 60 ⇓P **P 18 49 20.0 -0.3**
baz=72
TUQ Turquoise Mtn. 72.03 58 ⇑P **P 18 49 22.1 +0.1**
baz=72
HEC Hector,Ludlow 72.17 59 ⇑P **P 18 49 23.0 0.0**
baz=72
U12A Valley of Fire 72.21 56 ⇓P **P 18 49 23.5 +0.3**
baz=72
ULM Lac du Bonnet 72.22 36 P **P 18 49 22.2 -1.0**
comp=Z,9.0nm,0.8s,mb4.7,baz=311,slow=5.7,SNR=8.2
MSU Marysvale 72.23 54 *eP* **P 18 49 24.0 +0.7**
MURC Murrieta 72.44 60 ⇑P **P 18 49 24.2 -0.3**
baz=72
V12A Nelson 72.49 57 ⇓P **P 18 49 25.1 +0.2**
baz=72
W12A Cal Nev Ari 72.76 58 ⇓P **P 18 49 26.5 +0.1**
baz=72
RSSD Black Hills 72.83 45 *eP* **P 18 49 25.9 -1.0**
RSSD *e*PP pP 18 49 53.3 -0.2
RSSD pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
RSSD Black Hills 72.83 45 *eP* **P 18 49 25.9 -0.9**
comp=Z,9.3nm,0.8s,mb4.7
RSSD epP pP 18 49 53.2 -0.2
PFO Pinyon Flat Ob 72.90 60 ⇑P **P 18 49 26.6 -0.6**
baz=73
BELC Belle Mtn. 72.93 59 ⇑P **P 18 49 26.8 -0.6**
baz=73
109C Camp Elliot, M 72.97 61 ⇓P **P 18 49 27.2 -0.4**
baz=73
W13A Hualapai Mount 73.50 57 ⇑P **P 18 49 30.8 +0.1**
baz=73
DVTC Desert V Tower 73.75 60 ⇑P **P 18 49 32.2 -0.1**
baz=74
SWSC Sam W. Stewart 73.76 60 ⇑P **P 18 49 31.7 -0.6**
baz=74
X13A Yucca 73.87 58 ⇑P **P 18 49 33.0 +0.1**
baz=74
PDMCI Parker Dam,Lak 73.88 58 ⇑P **P 18 49 32.9 -0.1**
baz=74
W14A Seligman 73.91 57 ⇓P **P 18 49 33.7 +0.5**
baz=74
Y12C Blythe 74.01 59 ⇓P **P 18 49 33.7 0.0**
baz=74
PV10 Paradox Valley 74.13 52 *eP* **P 18 49 34.9 +0.5**
GLA Glamis 74.29 59 ⇓P **P 18 49 35.4 0.0**
baz=74
Y13A Salome 74.39 58 ⇑P **P 18 49 36.0 +0.1**
baz=74
W15A Williams 74.42 56 ⇑P **P 18 49 37.0 +0.9**
baz=74
X14A Yava 74.52 57 ⇓P **P 18 49 37.4 +0.6**
baz=74
WUAZ Wupatki 74.72 55 *eP* **P 18 49 38.3 +0.4**
comp=Z,10.0nm,0.8s,mb4.6
SMCO Snowmass 74.73 50 *eP* **P 18 49 38.3 +0.3**
comp=Z,21nm,1.1s,mb4.8
BURAR Bucovina Array 74.78 323 ⇑*iP* **P 18 49 38.4 +0.2**
BURAR Bucovina Array 74.78 323 ⇑P **P 18 49 38.4 +0.1**
Y14A Wickenburg 74.81 58 ⇓P **P 18 49 38.6 +0.2**
baz=75
MALT Malatya 74.90 309 *eP* **P 18 49 40.4 +1.5**
MALT pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
MALT Malatya 74.90 309 *eP* **P 18 49 40.4 +1.5**
comp=Z,2.8nm,0.8s,mb4.0
X15A Humboldt 74.91 57 ⇓P **P 18 49 39.7 +0.8**
baz=75
OJC Ojcow 75.01 327 *eP* **P 18 49 39.7 +0.2**
KOLS Kolonicke sedl 75.02 325 *eP* **P 18 49 40.0 +0.4**
ISCO Idaho Springs 75.05 49 *eP* **P 18 49 40.3 +0.6**
ISCO pmax pmax
comp=Z,22nm,1.4s,mb4.7
ISCO Idaho Springs 75.05 49 *eP* **P 18 49 40.3 +0.6**
comp=Z,22nm,1.4s,mb4.7
STHS Stebnicka Huta 75.07 326 *eP* **P 18 49 41.0 +1.1**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
STHS Stebnicka Huta 75.07 326 *eP* **P 18 49 41.0 +1.1**
comp=Z,4.0nm,0.8s,mb4.2
UMR Umm Al-Rimmam 75.23 297 *eP* **P 18 49 39.8 -1.0**
UMR AMb AMB 18 49 41.4
comp=Z,19nm,0.4s,mb5.2
Z14A Wintersburg 75.24 58 ⇓P **P 18 49 40.8 0.0**
baz=75
MIB Mutribah 75.30 297 *eP* **P 18 49 40.2 -1.0**
MIB AMb AMB 18 49 41.9
comp=Z,16nm,0.7s,mb4.9
CRVS Cervenica-Dubn 75.38 326 *eP* **P 18 49 42.1 +0.4**
STKA Stephens Creek 75.42 183 ⇑*iP* **P 18 49 41.4 -0.5**
comp=Z,3.7nm,0.6s,mb4.3
STKA Stephens Creek 75.42 183 P **P 18 49 41.7 -0.2**
comp=Z,4.8nm,0.6s,mb4.4,baz=346,slow=6.8,SNR=18
QRN Al-Qurain 75.64 296 *eP* **P 18 49 41.9 -1.2**
QRN AMb AMB 18 49 44.0
comp=Z,46nm,0.6s,mb5.4
RST Umm Al-Ruwaisa 75.73 297 *eP* **P 18 49 41.6 -2.1**
RST AMb AMB 18 49 44.2
comp=Z,22nm,1.1s,mb4.8
NAY Al-Naaiem 75.74 297 *eP* **P 18 49 41.6 -2.1**
NAY AMb AMB 18 49 43.7
comp=Z,7.8nm,0.8s,mb4.5
MLR Muntele Rosu 76.07 321 ⇑*iP* **P 18 49 47.3 +1.7**
KECS Kecovo 76.11 326 *eP* **P 18 49 44.6 -1.2**
comp=Z,1.5nm,0.7s,mb3.8
115A Sonoran Desert 76.13 58 ⇓P **P 18 49 46.3 +0.3**
baz=76
MORC Moravsky Berou 76.24 328 ⇓*iP* **P 18 49 45.9 -0.6**
MORC Moravsky Berou 76.24 328 *eP* **P 18 49 46.7 +0.2**
MORC *e*PP pP 18 50 12.6 -0.8
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
MORC Moravsky Berou 76.24 328 *eP* **P 18 49 46.7 +0.1**
comp=Z,4.7nm,0.8s,mb4.3
MORC epP pP 18 50 12.6 -0.8
SNX Sinaia 76.37 321 ⇑*iP* **P 18 49 45.0 -2.3**
SNX Sinaia 76.37 321 ⇑P **P 18 49 45.0 -2.4**
VOIR 76.52 321 ⇑*iP* **P 18 49 49.7 +1.5**
VOIR 76.52 321 ⇑P **P 18 49 49.7 +1.6**
BRTR Keskin Array B 76.53 313 P **P 18 49 48.5 +0.3**
comp=Z,1.6nm,0.7s,mb3.9,baz=90,slow=3.3,SNR=9.9
116A Eloy 76.55 58 ⇑P **P 18 49 48.5 +0.3**
baz=76
CLL Collm 76.63 332 P **P 18 49 48.4 -0.3**
comp=Z,logA/T=0.9,mb4.4
CLL *i* *PP pP 18 50 15.3 -0.3
CLL Collm 76.63 332 *iP* **P 18 49 48.4 -0.3**
comp=Z,7.0nm,0.8s,mb4.4
CLL *i* pP pP 18 50 15.3 -0.3
comp=Z,14nm,0.8s
CLL Collm 76.63 332 *iP* **P 18 49 48.4 -0.3**
CLL *i* *PP pP 18 50 15.3 -0.3
CLL pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
CLL Collm 76.63 332 *iP* **P 18 49 48.4 -0.3**
comp=Z,7.0nm,0.8s,mb4.4
CLL *i* pP pP 18 50 15.3 -0.3
BRG Berggiesshubel 76.66 331 *eP* pP 18 50 15.9 +0.1
comp=Z,1.9nm,0.9s
BRG *e* 18 50 24.1
comp=Z,3.8nm,1.3s
PVCC Panska Ves 76.72 330 *eP* **P 18 49 50.1 +0.8**
PVCC epP pP 18 50 16.4 +0.2
VYHS Vyhne 76.77 327 *iP* **P 18 49 50.4 +0.9**
VYHS epP pP 18 50 17.2 +0.8
VYHS Vyhne 76.77 327 *iP* **P 18 49 50.4 +0.9**
VYHS *e* pP 18 50 17.3 +0.9
VYHS pmax pmax
comp=Z,13nm,1.7s,mb4.4
VYHS Vyhne 76.77 327 *iP* **P 18 49 50.4 +0.9**
comp=Z,13nm,1.7s,mb4.4
VYHS *e* pP 18 50 17.3 +0.9
VRAC Vranov 76.98 328 ⇑*iP* **P 18 49 46.6 -4.1**
VRAC Vranov 76.98 328 ⇑P **P 18 49 46.6 -4.1**
PRU Pruhonice 77.18 330 *eP* **P 18 49 52.5 +0.7**
PRU epP pP 18 50 19.4 +0.7
PRU Pruhonice 77.18 330 *eP* **P 18 49 52.5 +0.7**
PRU *e* pP 18 50 19.4 +0.7
TUC Tucson 77.28 57 *eP* **P 18 49 52.4 0.0**
TUC pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
TUC Tucson 77.28 57 *eP* **P 18 49 52.4 0.0**
comp=Z,6.6nm,0.9s,mb4.4
SCHQ Schefferville 77.97 18 P **P 18 49 55.5 -0.7**
comp=Z,8.5nm,0.7s,mb4.6,baz=352,slow=6.9,SNR=12
ANMO Albuquerque 78.00 53 *eP* **P 18 49 55.9 -0.5**
ANMO pmax pmax
comp=Z,5.0nm,1.0s
ANMO Albuquerque 78.00 53 *eP* **P 18 49 55.9 -0.5**
comp=Z,4.7nm,1.0s,mb4.2
KHC Kasperske Hory 78.24 330 *eP* **P 18 49 58.0 +0.3**
KHC epP pP 18 50 24.9 +0.2
GERES GERESS Array B 78.44 330 P **P 18 49 58.6 -0.2**
comp=Z,0.7nm,0.5s,mb3.7,baz=35,slow=4.9,SNR=6.8
GERES pP pP 18 50 25.4 -0.4
comp=Z,1.2nm,0.6s,baz=30,slow=6.3,SNR=4.8
GERES LR LR 19 26 40.7
comp=Z,44nm,21.6s,baz=305,slow=37
GERES GERESS Array B 78.44 330 P **P 18 49 58.6 -0.2**
GERES *PP pP 18 50 25.4 -0.4
GRA1 Grafenberg Arr 78.60 332 *eP* **P 18 50 00.1 +0.4**
comp=Z,6.0nm,0.9s,mb4.4
GRA1 epP pP 18 50 27.2 +0.5
GRF Grafenberg Arr 78.60 332 *eP* **P 18 50 00.1 +0.4**
comp=Z,6.0nm,0.9s,mb4.4
GRF epP pP 18 50 27.2 +0.5
GRF Grafenberg Arr 78.60 332 *eP* **P 18 50 00.1 +0.4**
GRF *e*PP pP 18 50 27.2 +0.5
GRF pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
GRF Grafenberg Arr 78.60 332 *eP* **P 18 50 00.1 +0.4**
GRF *e*PP pP 18 50 27.2 +0.5
GRF pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
SCIA State Center 79.78 40 *eP* **P 18 50 04.5 -1.6**
MNTX Cornudas Mount 80.96 55 *eP* **P 18 50 12.2 -0.3**
comp=Z,12nm,1.0s,mb4.7
MNTX epP pP 18 50 38.4 -1.2
CDF Champ du Feu 81.03 333 ⇑*iP* **P 18 50 14.2 +1.4**
CDF epP pP 18 50 41.3 +1.4
HINF Hinteralfeld 81.69 333 *eP* **P 18 50 17.8 +1.5**
WMOK Wichita Mounta 82.45 48 *eP* **P 18 50 19.5 -0.8**
WMOK pmax pmax
comp=Z,16nm,1.2s,mb4.7
WMOK Wichita Mounta 82.45 48 *eP* **P 18 50 19.5 -0.8**
comp=Z,16nm,1.2s,mb4.7
LOR Lormes 83.12 335 ⇑*iP* **P 18 50 23.9 +0.1**
comp=Z,4.0nm,0.6s,mb4.2
LOR epP pP 18 50 48.4 -2.6
LOR *e*R
comp=Z,53nm,20.2s
LOR Lormes 83.12 335 ⇑*iP* **P 18 50 23.9 +0.1**
LOR *e*PP pP 18 50 48.4 -2.6
LOR pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
LOR MLR MLR
comp=Z,50nm,20.3s
LOR Lormes 83.12 335 ⇑*iP* **P 18 50 23.9 +0.1**
comp=Z,2.0nm,0.6s,mb4.1
LOR epP pP 18 50 48.4 -2.6
LOR LR LR
comp=Z,50nm,20.3s
SMF Signal de Mont 83.68 334 ⇑*iP* **P 18 50 26.9 +0.3**
comp=Z,7.2nm,0.8s,mb4.3
SMF epP pP 18 50 53.9 0.0
SMF Signal de Mont 83.68 334 ⇑*iP* **P 18 50 26.9 +0.3**
SMF *e*PP pP 18 50 53.9 0.0
SMF pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
SMF Signal de Mont 83.68 334 ⇑*iP* **P 18 50 26.9 +0.3**
comp=Z,3.6nm,0.8s,mb4.2
SMF epP pP 18 50 53.9 0.0
AVF Avril sur Loir 83.71 335 ⇑*iP* **P 18 50 27.1 +0.4**
comp=Z,4.9nm,0.7s,mb4.1
AVF epP pP 18 50 54.0 0.0
AVF Avril sur Loir 83.71 335 ⇑*iP* **P 18 50 27.1 +0.4**
AVF *e*PP pP 18 50 54.0 0.0
AVF pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
AVF Avril sur Loir 83.71 335 ⇑*iP* **P 18 50 27.1 +0.4**
comp=Z,2.5nm,0.7s,mb4.2
AVF epP pP 18 50 54.0 0.0
LPL La Plagne 83.74 332 *eP* **P 18 50 27.8 +0.9**
LPG La Plagne 83.75 332 *eP* **P 18 50 28.0 +1.0**
comp=Z,8.9nm,0.9s,mb4.3
LPG La Plagne 83.75 332 *eP* **P 18 50 28.0 +1.0**
LPG pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
LPG La Plagne 83.75 332 *eP* **P 18 50 28.0 +1.0**
comp=Z,4.4nm,0.9s,mb4.3
BGF Bois d'Agland 84.07 335 *eP* **P 18 50 29.3 +0.7**
ROSF Rostrenen 84.16 340 ⇑*iP* **P 18 50 29.8 +0.8**
comp=Z,45nm,1.2s,mb4.9
ROSF Rostrenen 84.16 340 ⇑*iP* **P 18 50 29.8 +0.8**
ROSF pmax pmax
comp=Z,22nm,1.2s,mb4.9
ROSF Rostrenen 84.16 340 ⇑*iP* **P 18 50 29.8 +0.8**
comp=Z,22nm,1.2s,mb4.9
PMOR Pomariorio Ree 84.36 117 *eT* 20 22 37.9
comp=Z,24nm,0.2s
MBDF Montbardon 84.42 332 *eP* **P 18 50 33.2 +2.8**
comp=Z,5.3nm,0.6s,mb4.2
MBDF Montbardon 84.42 332 *eP* **P 18 50 33.2 +2.8**
MBDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
MBDF Montbardon 84.42 332 *eP* **P 18 50 33.2 +2.8**
comp=Z,2.7nm,0.6s,mb4.2
QUIF Quistinic 84.52 339 ⇑*iP* **P 18 50 31.4 +0.5**
comp=Z,9.6nm,0.7s,mb4.5
QUIF Quistinic 84.52 339 ⇑*iP* **P 18 50 31.4 +0.5**
QUIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
QUIF Quistinic 84.52 339 ⇑*iP* **P 18 50 31.4 +0.5**
comp=Z,4.8nm,0.7s,mb4.5
ORIF Oris-en-Rattie 84.56 332 ⇑*iP* **P 18 50 33.1 +2.1**
comp=Z,7.9nm,0.8s,mb4.4
ORIF *e*R
comp=Z,79nm,20.8s
ORIF Oris-en-Rattie 84.56 332 ⇑*iP* **P 18 50 33.1 +2.1**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ORIF Oris-en-Rattie 84.56 332 ⇑*iP* **P 18 50 33.1 +2.1**
comp=Z,4.0nm,0.8s,mb4.4
VIVF Saint-Julien-l 85.01 333 *eP* **P 18 50 34.2 +0.9**
comp=Z,15nm,1.1s,mb4.5
VIVF Saint-Julien-l 85.01 333 *eP* **P 18 50 34.2 +0.9**
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
VIVF Saint-Julien-l 85.01 333 *eP* **P 18 50 34.2 +0.9**
comp=Z,7.4nm,1.0s,mb4.6
JCT Junction City 85.09 52 *eP* **P 18 50 33.3 -0.4**
JCT pmax pmax
comp=Z,19nm,0.9s,mb5.0
JCT Junction City 85.09 52 *eP* **P 18 50 33.3 -0.4**
comp=Z,19nm,0.9s,mb5.0
PPT Papeete 85.19 120 *e*LR LR 19 16 34.2
comp=Z,239nm,33.0s
PPT Papeete 85.19 120 LR LR 19 22 48.2
comp=Z,100nm,22.0s,baz=292,slow=32
MIAR Mount Ida 85.35 45 *eP* **P 18 50 34.4 -0.6**
MIAR *e*PP pP 18 51 00.9 -1.5
MIAR pmax pmax
comp=Z,44nm,1.4s,mb5.2
MIAR Mount Ida 85.35 45 *eP* **P 18 50 34.4 -0.6**
comp=Z,44nm,1.4s,mb5.2
MIAR epP pP 18 51 00.9 -1.5
RJF Les Rejaudoux 85.60 335 *eP* **P 18 50 37.3 +1.0**
RJF *e*R
comp=Z,49nm,19.0s
RJF Les Rejaudoux 85.60 335 *eP* **P 18 50 37.3 +1.0**
RJF LR LR
comp=Z,50nm,19.0s
CAF Calviac 85.78 335 *eP* **P 18 50 38.5 +1.4**
CAF epP pP 18 51 05.5 +1.0
WVT Waverly 86.91 40 *eP* **P 18 50 41.8 -0.9**
WVT pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
WVT Waverly 86.91 40 *eP* **P 18 50 41.8 -0.8**
comp=Z,6.7nm,0.9s,mb4.6
PLAL Pickwick Lake 87.72 41 *eP* **P 18 50 45.6 -1.0**
comp=Z,5.3nm,0.8s,mb4.6
ETSF Etsaut 88.41 336 *eP* **P 18 50 50.2 +0.4**
comp=Z,3.9nm,0.7s,mb4.3
ETSF Etsaut 88.41 336 *eP* **P 18 50 50.2 +0.4**
ETSF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
ETSF Etsaut 88.41 336 *eP* **P 18 50 50.2 +0.4**
comp=Z,2.0nm,0.7s,mb4.3
ELN Prospectdale 89.13 35 *eP* **P 18 50 52.6 -0.6**
TBI Tubuai 89.60 123 *eT* 20 29 11.1
comp=Z,5.6nm,0.3s
ESDC Sonseca Array 92.38 337 P **P 18 51 08.1 -0.1**
comp=Z,0.5nm,0.5s,mb4.0,baz=17,slow=3.9,SNR=6.3
ESDC pP pP 18 51 36.0 +0.1
comp=Z,1.8nm,0.6s,baz=13,slow=3.8,SNR=5.4
TORD Torodi Ar. Bea 114.32 321 PKP PKiKP 18 56 35.9 -1.0
comp=Z,0.6nm,0.5s,baz=17,slow=1.7,SNR=13
TORD PP PP 18 57 28.6 -5.3
comp=Z,0.8nm,0.8s,baz=31,slow=5.7,SNR=4.4
TORD PKKPbc PKKPbc 19 07 16.8 +0.2
comp=Z,1.0nm,0.6s,baz=215,slow=3.0,SNR=12
VNDA Vanda 121.51 176 PKP PKPdf 18 56 49.1 -1.6
comp=Z,2.4nm,0.7s,baz=318,slow=4.8,SNR=34
DBIC Dimbokro 122.97 324 PKP PKPdf 18 56 52.6 -0.9
comp=Z,2.1nm,0.5s,baz=14,slow=0.7,SNR=6.6
MAW Mawson 126.95 208 PKP PKPdf 18 57 00.1 -1.0
comp=Z,2.2nm,0.6s,baz=56,slow=3.8,SNR=8.9
MAW pPKP pPKPdf 18 57 28.7 -1.2
comp=Z,2.1nm,0.8s,baz=311,slow=3.2,SNR=3.4
QSPA South Pole Qui 133.57 180 *eP* PKPdf 18 57 13.0 -0.7
LPAZ La Paz 140.54 56 PKP PKPdf 18 57 26.2 -0.3
comp=Z,2.7nm,0.9s,baz=26,slow=6.5,SNR=6.0
LPAZ La Paz 140.54 56 PKIKP PKPdf 18 57 26.3 -0.3
LPAZ pmax pmax
comp=Z,3.0nm,0.9s
NVL N'lazarevskaya 144.71 205 ⇓*i* PKIKP PKPdf 18 57 31.6 -2.3
NVL *i* 18 58 00.1
NVL pmax pmax
comp=Z,29nm,0.9s
LVC Limon Verde 144.74 64 *e*PKPdf PKPdf 18 57 33.5 -0.5
SNAA Sanae 148.13 198 *e*PKPdf PKPdf 18 57 41.0 +1.3
SNAA *e* 18 57 43.3
SNAA *e* 18 57 44.9
SNAA *e* 18 58 09.4
SNAA Sanae 148.13 198 *e*PKPdf PKPdf 18 57 37.5 -2.2
SNAA *e*PKPbc PKPbc 18 57 41.1 -1.9
BDFB Brasilia 149.69 26 PKPbc PKPbc 18 57 47.2 +0.2
comp=Z,9.2nm,0.6s,baz=230,slow=2.1,SNR=10
BDFB Brasilia 149.69 26 PKP2 PKPbc 18 57 47.2 +0.2
BDFB pmax pmax
comp=Z,9.0nm,0.6s
VNA1 Neumayer--Stat 150.08 197 *e*PKPdf PKPbc 18 57 46.8 -1.1
VNA1 *e* 18 57 47.8
VNA1 *e* 18 57 52.9
VNA1 *e* 18 57 58.4
VNA1 *e* 18 58 07.7
VNA1 *e* 18 58 14.1
PLCA Paso Flores 153.40 96 PKPbc PKPbc 18 57 55.1 -0.3
comp=Z,7.5nm,0.7s,baz=277,slow=2.1,SNR=20
PLCA PKPab PKPab 18 58 08.3 +0.3
comp=Z,9.5nm,1.0s,baz=300,slow=5.5,SNR=7.6
CPUP Villa Florida 154.65 54 PKPab PKPab 18 58 12.9 -0.5
comp=Z,1.3nm,0.5s,baz=280,slow=3.7,SNR=5.9
CPUP Villa Florida 154.65 54 PKP2 PKPab 18 58 12.9 -0.5
CPUP pmax pmax
comp=Z,1.0nm,0.5s

MOS ***30*** *18:59:40.9±1.2, 42.14N×1932E, h14km, mb4.2/1, Error ellipse: s-maj=5.3km s-min=3.9km az=100.8*
ISCJB ***30*** *18:59:41.3±0.1, 42.21N±001×1935E±002, h10km, mb3.9/7, Error ellipse: s-maj=1.8km s-min=1.4km az=112.6*
IDC ***30*** *18:59:42.0±4.6, 42.11N×1947E, h18km±31km, mb3.4/4, mb1 3.5/10, mb1mx3.5/25, mbtmp3.6/10, ML3.3/6, MS2.7/2, Ms1 2.7/2, ms1mx2.3/25, Error ellipse: s-maj=14.5km s-min=12.4km az=0.0*
PDG ***30*** *18:59:42.4±0.2, 42.17N×1945E, h19km±1km*
CSEM ***30*** *18:59:42.6±0.1, 42.18N×1952E, h16km, ML4.0, Error ellipse: s-maj=1.3km s-min=1.1km az=32.0*
NEIC ***30*** *18:59:42.4, 42.17N×1945E, h19km, ML3.6(PDG), After PDG.*
TIR ***30*** *18:59:42.0, 42.19N×1941E, h17km, Ml3.5*
THE ***30*** *18:59:43.6, 42.12N×1937E, h15km, ML4.0*
LDG ***30*** *18:59:44.8±0.1, 42.16N×1936E, h10km, Ml3.9/8, Error ellipse: s-maj=4.0km s-min=2.7km az=22.0*
PRU ***30*** *18:59:45.6, 42.19N×1917E, h0km*
ISC 30 18:59:43.1±0.2, 4216N±001×1941E±002, h15km±1km, n183, σ1§23/266, mb3.9/7, 24C-23D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SDA	**Shkodra**	**0.13**	**148**	*i* Pg		**Pg**	**18 59 46.4**	**-0.3**
SDA				*i* Sg		**Sg**	**18 59 49.5**	**+0.5**
ULC	**Ulcinj**	**0.23**	**212**	⇓*i* Pg		**Pg**	**18 59 48.0**	**-0.2**
ULC				*e*Sg		**Sg**	**18 59 52.8**	**+1.1**
TTG	**Podgorica**	**0.29**	**338**	⇑*i* Pg		**Pg**	**18 59 48.8**	**-0.5**
TTG				*e*Sg		**Sg**	**18 59 54.1**	**+0.7**

BUM	**Brajici-Budva**	**0.41**	**291**	⇓*i*	Pg	**Pg**	**18 59 51.3**	**0.0**	
BUM				*e*	Sg	**Sg**	**18 59 58.7**	**+1.9**	
PVY	**Plav**	**0.60**	**44**	⇓*i*	Pg	**Pg**	**18 59 53.4**	**-1.5**	
PVY				*e*	Sg	**Sg**	**19 00 02.7**	**-0.3**	
NKY	**Niksic**	**0.72**	**335**	⇑*i*	Pg	**Pg**	**18 59 56.0**	**-1.2**	
NKY				*e*	Sg	**Sg**	**19 00 08.1**	**+1.4**	
HCY	**Herceg Novi**	**0.73**	**293**	⇑*i*	Pg	**Pg**	**18 59 56.5**	**-1.0**	
HCY				*e*	Sg	**Sg**	**19 00 08.7**	**+1.6**	
KKS	**Kukesi**	**0.75**	**96**	*i*	Pg	**Pg**	**18 59 58.4**	**+0.7**	
KKS				*i*	Sg	**Sg**	**19 00 06.9**	**-0.7**	
IVA	**Berane**	**0.80**	**27**	⇑*i*	Pg	**Pg**	**18 59 57.4**	**-1.2**	
IVA				*e*	Sg	**Sg**	**19 00 09.2**	**0.0**	
TIR	**Tirane**	**0.88**	**157**	*e*	Pg	**Pg**	**18 59 58.9**	**-1.2**	
TIR				*e*	Sg	**Sg**	**19 00 12.3**	**+0.6**	
TIR	**Tirane**	**0.88**	**157**	*i*	Pg	**Pg**	**18 59 59.0**	**-1.2**	
TREB	**Trebinje**	**0.96**	**306**		P	**Pb**	**19 00 00.5**	**-1.0**	
TREB					S	**Sb**	**19 00 17.1**	**+3.0**	
BRY	**Bratogost**	**0.98**	**319**	⇑*i*	Pg	**Pg**	**19 00 00.6**	**-1.5**	
BRY				*e*	Sg	**Sg**	**19 00 16.6**	**+1.8**	
BRY	**Bratogost**	**0.98**	**319**	⇑*i*	Pg	**Pg**	**19 00 00.6**	**-1.5**	
BRY				*e*	Sg	**Sg**	**19 00 16.6**	**+1.7**	
UPM	**Unac-Piva**	**1.11**	**341**	⇓*i*	Pg	**Pg**	**19 00 02.9**	**-1.6**	
UPM				*e*	Sg	**Sg**	**19 00 20.6**	**+1.6**	
PLE	**Pljevlja**	**1.17**	**359**	⇓*i*	Pg	**Pg**	**19 00 04.6**	**-1.1**	
PLE				*e*	Sg	**Sg**	**19 00 22.7**	**+1.8**	
SJES	**Sjenica**	**1.18**	**19**		Pg	**Pg**	**19 00 06.1**	**+0.3**	
SJES					Sg	**Sg**	**19 00 21.8**	**+0.7**	
OHR	**Ohrid**	**1.48**	**135**	*e*	Pg	**Pg**	**19 00 08.7**	**-2.8**	
OHR				*e*	Sg	**Sg**	**19 00 28.9**	**-1.8**	
OHR	**Ohrid**	**1.48**	**135**	*e*	Pn	**Pn**	**19 00 09.0**	**-0.1**	
OHR				*e*	Sn	**Sn**	**19 00 29.6**	**+1.4**	
OHR	**Ohrid**	**1.48**	**135**	*e*	Pn	**Pn**	**19 00 09.0**	**-0.2**	
OHR				*e*	Sg	**Sg**	**19 00 28.9**	**-1.8**	
OHR				*e*	Sn	**Sn**	**19 00 29.6**	**+1.4**	
SKO	**Skopje**	**1.52**	**96**	*e*	Pb	**Pb**	**19 00 09.9**	**-1.1**	
SKO				*e*	Sb	**Sb**	**19 00 31.6**	**+1.5**	
SKO	**Skopje**	**1.52**	**96**	*e*	Pn	**Pn**	**19 00 10.1**	**+0.3**	
SKO				*e*	Sn	**Sn**	**19 00 30.7**	**+1.4**	
SKO	**Skopje**	**1.52**	**96**	*e*	Pn	**Pn**	**19 00 10.0**	**+0.2**	
BBLS	**Bajina Basta -**	**1.71**	**360**	*i*	Pn	**Pn**	**19 00 14.0**	**+1.7**	
BBLS					Sg	**Sg**	**19 00 37.3**	**-0.8**	
BIA	**Bitola**	**1.83**	**128**	*e*	Pb	**Pb**	**19 00 14.8**	**-1.5**	
BIA				*e*	Sb	**Sb**	**19 00 37.2**	**-1.9**	
BIA	**Bitola**	**1.83**	**128**	*e*	Pn	**Pn**	**19 00 14.8**	**+0.7**	
BIA				*e*	Sn	**Sn**	**19 00 39.7**	**+2.7**	
BIA	**Bitola**	**1.83**	**128**	*e*	Pn	**Pn**	**19 00 14.7**	**+0.6**	
KBN	**Korca**	**1.85**	**146**	*i*	Pn	**Pn**	**19 00 15.4**	**+1.1**	
KBN				*i*	Sn	**Sn**	**19 00 40.9**	**+3.4**	
BARS	**Barje**	**1.90**	**69**	*i*	Pg	**Pg**	**19 00 16.2**	**-3.4**	
BARS					Sg	**Sg**	**19 00 40.4**	**-4.0**	
BARS	**Barje**	**1.90**	**69**		Pg	**Pg**	**19 00 16.2**	**-3.5**	
BARS					Sg	**Sg**	**19 00 40.4**	**-4.0**	
GRUS	**Gruza**	**1.98**	**29**	*i*	Pn	**Pn**	**19 00 15.5**	**-0.5**	
GRUS					Sg	**Sg**	**19 00 46.4**	**-0.3**	
GRUS	**Gruza**	**1.98**	**29**		Pn	**Pn**	**19 00 15.5**	**-0.5**	
GRUS					Sg	**Sg**	**19 00 46.3**	**-0.4**	
DIVS	**Divcibare**	**1.98**	**12**	*i*	Pn	**Pn**	**19 00 15.9**	**-0.3**	
DIVS					Sg	**Sg**	**19 00 43.1**	**-3.8**	
DIVS	**Divcibare**	**1.98**	**12**	*e*	Pn	**Pn**	**19 00 16.3**	**+0.1**	
DIVS				*e*	Sn	**Sn**	**19 00 42.7**	**+1.9**	
DIVS	**Divcibare**	**1.98**	**12**	*e*	Pn	**Pn**	**19 00 16.3**	**+0.1**	
DIVS				*e*	Sn	**Sn**	**19 00 42.7**	**+1.9**	
DIVS					Sg	**Sg**	**19 00 43.2**	**-3.8**	
PE1	**Pezze di Greco**	**2.02**	**228**	*e*	Pn	**Pn**	**19 00 15.6**	**-1.0**	
FNA	**Florina**	**2.02**	**132**	*e*	Pn	**Pn**	**19 00 17.9**	**+1.3**	
FNA				*e*	Sn	**Sn**	**19 00 43.0**	**+1.4**	
LCI	**Lecce**	**2.07**	**209**		Pn	**Pn**	**19 00 17.7**	**-1.2**	
STIP	**Stip**	**2.12**	**102**	*e*	Pn	**Pn**	**19 00 17.7**	**-0.4**	
STIP				*e*	Sn	**Sn**	**19 00 45.1**	**+0.9**	
STIP	**Stip**	**2.12**	**102**	*e*	Pn	**Pn**	**19 00 17.6**	**-0.4**	
STIP				*e*	Sn	**Sn**	**19 00 45.1**	**+1.0**	
BAI	**Bari**	**2.17**	**242**	*e*	Pn	**Pn**	**19 00 17.9**	**-0.8**	
LSK	**Leskovik**	**2.20**	**155**	*i*	Pn	**Pn**	**19 00 21.2**	**+2.1**	
LSK				*i*	Sn	**Sn**	**19 00 50.1**	**+4.1**	
SRN	**Sarande**	**2.32**	**169**	*i*	Pn	**Pn**	**19 00 21.7**	**+0.9**	
SRN				*i*	Sn	**Sn**	**19 00 50.4**	**+1.4**	
SG1	**Sgolgore (BA)**	**2.44**	**238**	*e*	Pn	**Pn**	**19 00 21.6**	**-0.8**	
VAY	**Valandovo**	**2.51**	**108**	*e*	Pn	**Pn**	**19 00 23.2**	**-0.1**	
VAY	**Valandovo**	**2.51**	**108**	*e*	Pn	**Pn**	**19 00 23.2**	**-0.2**	
VAY				*e*	Sn	**Sn**	**19 00 59.6**	**+5.9**	
VAY	**Valandovo**	**2.51**	**108**	*e*	Pn	**Pn**	**19 00 23.1**	**-0.3**	
SVIS	**Svilajnac**	**2.51**	**31**	*i*	Pn	**Pn**	**19 00 25.9**	**+2.5**	
SVIS					Sg	**Sg**	**19 01 04.0**	**+0.1**	
SVIS	**Svilajnac**	**2.51**	**31**		Sg	**Sg**	**19 01 04.0**	**+0.1**	
GRS	**Griva**	**2.55**	**117**	*e*	Pn	**Pn**	**19 00 24.6**	**+0.7**	
CDT	**Castel del Mon**	**2.59**	**246**	*e*	Pn	**Pn**	**19 00 23.6**	**-0.8**	
FGMS	**Monte Sant'Ang**	**2.62**	**261**		Pn	**Pn**	**19 00 24.3**	**-0.6**	
MS1	**Monte Sant'Ang**	**2.63**	**261**	*e*	Pn	**Pn**	**19 00 24.4**	**-0.6**	
IGT	**Igoumenitsa**	**2.71**	**165**	*e*	Pn	**Pn**	**19 00 26.4**	**+0.1**	
IGT				*e*	Sn	**Sn**	**19 00 59.2**	**+0.4**	
VTS	**Vitosha**	**2.85**	**80**	*e*	Pn	**Pn**	**19 00 28.4**	**+0.3**	
VTS	**Vitosha**	**2.85**	**80**	⇑*i*	P	**Pn**	**19 00 28.3**	**+0.3**	
VTS	**Vitosha**	**2.85**	**80**		P	**Pn**	**19 00 28.5**	**+0.5**	
RGNG	**Rignano Grg**	**2.90**	**262**		Pn	**Pn**	**19 00 28.0**	**-0.7**	
FGSL	**Fruska Gora**	**3.01**	**5**		Pn	**Pn**	**19 00 30.3**	**0.0**	
FGSL					Sn	**Sn**	**19 01 05.4**	**-0.7**	
ORI	**Oriolo Calabro**	**3.06**	**228**		Pn	**Pn**	**19 00 31.6**	**+0.6**	
FG4	**Candela**	**3.09**	**252**		Pn	**Pn**	**19 00 31.2**	**-0.2**	
FG2	**Serracapriola**	**3.19**	**265**		Pn	**Pn**	**19 00 32.4**	**-0.3**	
FG5	**Orsara di Pugl**	**3.22**	**256**		Pn	**Pn**	**19 00 33.7**	**+0.5**	
SOH	**Sokhos**	**3.25**	**113**	*e*	Pn	**Pn**	**19 00 34.2**	**+0.6**	
MRLC	**Muro Lucano**	**3.26**	**246**		Pn	**Pn**	**19 00 33.7**	**0.0**	
SLCN	**Sala Consilina**	**3.35**	**236**		Pn	**Pn**	**19 00 34.8**	**-0.1**	
CUC	**Castrocucco**	**3.47**	**233**		Pn	**Pn**	**19 00 36.8**	**+0.2**	
LKD	**Levkas**	**3.58**	**164**	*e*	Pn	**Pn**	**19 00 37.4**	**-0.7**	
LKD				*e*	Sn	**Sn**	**19 01 19.0**	**-1.1**	
LKD	**Levkas**	**3.58**	**164**	*e*	Pn	**Pn**	**19 00 37.3**	**-0.7**	
LKD				*e*	Sn	**Sn**	**19 01 19.0**	**-1.0**	
BZS	**Buzias**	**3.81**	**24**	⇓*i*	P	**Pn**	**19 00 41.5**	**+0.3**	
BZS	**Buzias**	**3.81**	**24**		P	**Pn**	**19 00 41.7**	**+0.5**	
RHK3	**Tenkes**	**3.82**	**348**	⇓*e*	P	**Pn**	**19 00 41.9**	**+0.5**	
RHK3				*e*	S	**Sn**	**19 01 25.5**	**-0.6**	
	0.6nm,0.2s								
AGG	**Agios Georgios**	**3.84**	**144**	*e*	Pn	**Pn**	**19 00 42.3**	**+0.6**	
AGG				*e*	Sn	**Sn**	**19 01 27.3**	**+0.7**	
MIDA	**Miranda**	**3.88**	**264**		Pn	**Pn**	**19 00 42.7**	**+0.4**	
RNI2	**Rionero Sannit**	**3.95**	**265**		Pn	**Pn**	**19 00 44.2**	**+1.0**	
XOR	**Xorichti**	**4.00**	**133**	*e*	Pn	**Pn**	**19 00 44.3**	**+0.4**	
GZR	**Gura Zlata**	**4.00**	**36**	⇓*i*	P	**Pn**	**19 00 45.5**	**+1.0**	
GZR	**Gura Zlata**	**4.05**	**36**		P	**Pn**	**19 00 39.5**	**-5.1**	
GZR				⇓	P		19 00 45.5		
NVLJ	**Novalja**	**4.09**	**308**	*i*	Pn	**Pn**	**19 00 45.2**	**+0.1**	
NVLJ				*i*	Sn	**Sn**	**19 01 30.3**	**-2.4**	
NVLJ	**Novalja**	**4.09**	**308**	*i*	Pn	**Pn**	**19 00 45.2**	**+0.1**	
NVLJ				*i*	Sn	**Sn**	**19 01 32.1**	**-0.6**	
PKSM	**Moragy**	**4.09**	**352**	⇑*i*	P	**Pn**	**19 00 45.1**	**0.0**	
PKSM	**Moragy**	**4.09**	**352**	⇓*e*	Pn	**Pn**	**19 00 45.3**	**+0.2**	
PKSM				*e*	S	**Sn**	**19 01 31.5**	**-1.2**	
INTR	**Introdacqua**	**4.10**	**270**		Pn	**Pn**	**19 00 44.6**	**-0.7**	
SDI	**San Donato**	**4.20**	**266**		Pn	**Pn**	**19 00 47.4**	**+0.8**	
VVLD	**Villa Vallelon**	**4.32**	**268**		Pn	**Pn**	**19 00 48.7**	**+0.4**	
TERO	**Teramo**	**4.33**	**278**		Pn	**Pn**	**19 00 48.7**	**+0.4**	
PKS6	**Bocsa**	**4.44**	**1**	⇓*i*	P	**Pn**	**19 00 50.7**	**+0.8**	
PKS6				*e*	S	**Sn**	**19 01 41.8**	**+0.4**	
	3.3nm,0.4s								
BOJS	**Bojanci**	**4.50**	**319**	*i*	Pn	**Pn**	**19 00 52.0**	**+1.3**	
CRES	**Cresnjev**	**4.64**	**323**	*e*	Pn	**Pn**	**19 00 53.9**	**+1.2**	
FIAM	**Fiamignano**	**4.67**	**273**		Pn	**Pn**	**19 00 54.3**	**+1.1**	
CING	**Cingoli**	**4.73**	**287**		Pn	**Pn**	**19 00 54.0**	**0.0**	
CERT	**Cerreto**	**4.79**	**270**		Pn	**Pn**	**19 00 55.3**	**+0.6**	
SOI	**Samo**	**4.82**	**213**		Pn	**Pn**	**19 00 55.9**	**+0.7**	
MTCE	**Montecelio**	**4.96**	**271**		Pn	**Pn**	**19 00 57.7**	**+0.6**	
MNS	**Montasola**	**5.00**	**275**		P	**Pn**	**19 00 58.2**	**+0.6**	
MNS					pmax	pmax			
	comp=Z,89nm,0.9s								
MNS	**Montasola**	**5.00**	**275**		Pn	**Pn**	**19 00 58.2**	**+0.6**	
	comp=Z,89nm,0.9s								
ASS	**Assisi**	**5.07**	**283**		Pn	**Pn**	**19 00 59.4**	**+0.8**	
CEY	**Cerknica**	**5.07**	**317**	*e*	Pn	**Pn**	**19 00 59.8**	**+1.2**	
CEY				*e*	Sn	**Sn**	**19 01 58.5**	**+1.5**	
DRGR		**5.20**	**26**	⇓*i*	P	**Pn**	**19 01 00.3**	**0.0**	
DRGR		**5.20**	**26**	⇓P		**Pn**	**19 01 00.3**	**0.0**	
VOIR		**5.23**	**49**	⇑*i*	P	**Pn**	**19 01 02.1**	**+1.3**	
VOIR		**5.23**	**49**	⇑P		**Pn**	**19 01 02.1**	**+1.3**	
LJU	**Ljubljana**	**5.24**	**320**	*e*	(Pn)	**Pn**	**19 01 07.0**	**+6.1**	
LJU				*e*	Sg	**Sg**	**19 02 31.6**	**+0.3**	
PKSG		**5.28**	**352**	*e*	S	**Sn**	**19 02 01.3**	**-0.8**	
	comp=Z,0.6nm,0.4s								
BUD	**Budapest**	**5.33**	**357**	*e*	Pn	**Pn**	**19 01 02.0**	**-0.2**	
BUD				*e*	Sn	**Sn**	**19 02 02.0**	**-1.3**	

VOY	**Vojsko**	**5.55**	**316**	⇑*e*	Pn	**Pn**	**19 01 05.8**	**+0.7**	
VOY				*e*	Sn	**Sn**	**19 02 09.1**	**+0.5**	
OBKA	**Obir**	**5.57**	**323**	⇑*i*	Pn	**Pn**	**19 01 06.8**	**+1.3**	
OBKA				⇑*i*	Sn	**Sn**	**19 02 10.8**	**+1.5**	
CRE	**Caprese Michel**	**5.67**	**287**		P	**Pn**	**19 01 07.3**	**+0.5**	
CRE					pmax	pmax			
	comp=Z,8.0nm,0.4s								
CRE	**Caprese Michel**	**5.67**	**287**		Pn	**Pn**	**19 01 07.3**	**+0.5**	
	comp=Z,8.0nm,0.4s								
CADS	**Cadrg**	**5.76**	**317**	*e*	Pn	**Pn**	**19 01 08.6**	**+0.6**	
CADS				*i*	Sn	**Sn**	**19 02 15.2**	**+1.4**	
PSZ	**Piszkesteto**	**5.77**	**3**	⇓*e*	Pn	**Pn**	**19 01 08.3**	**+0.1**	
PSZ				*e*	Sn	**Sn**	**19 02 12.0**	**-2.1**	
PSZ	**Piszkesteto**	**5.77**	**3**	⇑*i*	P	**Pn**	**19 01 07.6**	**-0.6**	
MLR	**Muntele Rosu**	**5.78**	**53**		Pn	**Pn**	**19 01 08.4**	**+0.1**	
	comp=Z,0.4nm,0.3s,baz=163,slow=11,SNR=2.7								
MLR					Sn	**Sn**	**19 02 14.4**	**0.0**	
	comp=Z,0.6nm,0.3s,baz=270,slow=20,SNR=2.9								
MLR					LR	LR	19 03 38.8		
	comp=Z,94nm,20.2s,baz=304,slow=41								
MLR	**Muntele Rosu**	**5.78**	**53**	⇓*i*	P	**Pn**	**19 01 12.6**	**+4.2**	
MLR	**Muntele Rosu**	**5.78**	**53**		Pn	**Pn**	**19 01 08.4**	**+0.1**	
MLR				⇓	P		19 01 12.6		
MLR					Sn	**Sn**	**19 02 14.4**	**0.0**	
MLR					LR	LR	19 03 38.8		
MLR	**Muntele Rosu**	**5.78**	**53**		P	**Pn**	**19 01 08.4**	**0.0**	
MLR					S	**Sn**	**19 02 14.4**	**0.0**	
ARSA	**Arzberg**	**5.79**	**333**	⇑*i*	Pn	**Pn**	**19 01 09.6**	**+1.0**	
ARSA				⇑*i*	Sn	**Sn**	**19 02 14.3**	**-0.4**	
PTCC	**Patocco-Chiusa**	**6.08**	**316**		Pn	**Pn**	**19 01 12.8**	**+0.4**	
	comp=Z,8.2nm,0.8s								
CSNT	**Castellina Chi**	**6.11**	**285**		Pn	**Pn**	**19 01 12.7**	**-0.2**	
	comp=Z,6.8nm,0.6s								
ZST	**Bratislava**	**6.25**	**346**	*e*	PN	**Pn**	**19 01 16.9**	**+2.1**	
ZST				*e*	SN	**Sn**	**19 02 25.8**	**-0.2**	
VYHS	**Vyhne**	**6.35**	**357**	*e*	P	**Pn**	**19 01 17.1**	**+1.0**	
VYHS				*e*			19 02 26.2		
VYHS	**Vyhne**	**6.35**	**357**	*e*	Pn	**Pn**	**19 01 17.1**	**+1.0**	
VYHS				*e*	Sn	**Sn**	**19 02 26.0**	**-2.4**	
VYHS				*e*	Sn	**Sn**	**19 02 26.2**	**-2.2**	
KECS	**Kecovo**	**6.37**	**6**	*e*	PN	**Pn**	**19 01 17.6**	**+1.2**	
KECS				*e*	SN	**Sn**	**19 02 27.8**	**-1.1**	
KECS				*e*			19 11 05.0		
KECS				*e*			19 11 51.1		
KECS	**Kecovo**	**6.37**	**6**	*e*	P	**Pn**	**19 01 17.6**	**+1.2**	
KECS				*e*			19 02 27.8		
HARR	**Harsova**	**6.70**	**65**	⇓*i*	P	**Pn**	**19 01 22.6**	**+1.6**	
HARR	**Harsova**	**6.70**	**65**	⇓P		**Pn**	**19 01 22.6**	**+1.7**	
PII	**Pisa**	**6.71**	**286**		P	**Pn**	**19 01 20.9**	**-0.1**	
PII					pmax	pmax			
	comp=Z,13nm,0.4s								
PII	**Pisa**	**6.71**	**286**		Pn	**Pn**	**19 01 20.9**	**-0.1**	
	comp=Z,13nm,0.4s								
CTI	**Castel Tesino**	**6.80**	**307**		P	**Pn**	**19 01 22.0**	**-0.4**	
CTI					pmax	pmax			
	comp=Z,21nm,0.5s								
CTI	**Castel Tesino**	**6.80**	**307**		Pn	**Pn**	**19 01 22.0**	**-0.4**	
	comp=Z,21nm,0.5s								
BURAR	**Bucovina Array**	**6.84**	**35**	⇓*i*	P	**Pn**	**19 01 25.2**	**+2.3**	
BURAR	**Bucovina Array**	**6.84**	**35**	⇓P		**Pn**	**19 01 25.2**	**+2.3**	
CRVS	**Cervenica-Dubn**	**6.90**	**11**	*e*	PN	**Pn**	**19 01 24.8**	**+1.1**	
CRVS				*e*	SN	**Sn**	**19 02 40.9**	**-0.9**	
CFR	**Carcaliu**	**7.01**	**62**	⇓*i*	P	**Pn**	**19 01 25.0**	**-0.2**	
KOLS	**Kolonicke sedl**	**7.07**	**16**	*e*	PN	**Pn**	**19 01 27.9**	**+1.9**	
KOLS				*e*	SN	**Sn**	**19 02 44.7**	**-1.3**	
APPI	**Appiano**	**7.28**	**309**		Pn	**Pn**	**19 01 29.1**	**+0.1**	
	comp=Z,16nm,0.6s								
STHS	**Stebnicka Huta**	**7.37**	**9**	*e*	PN	**Pn**	**19 01 32.5**	**+2.3**	
STHS				*e*	SN	**Sn**	**19 02 52.7**	**-0.8**	
STHS	**Stebnicka Huta**	**7.37**	**9**	*e*	Pn	**Pn**	**19 01 32.6**	**+2.4**	
STHS				*e*	Sn	**Sn**	**19 02 52.7**	**-0.8**	
MABI	**Malga Bissina**	**7.49**	**304**		Pn	**Pn**	**19 01 31.6**	**-0.3**	
	comp=Z,2.7nm,0.8s								
WTTA	**Wattenberg**	**7.53**	**315**	⇑*i*	Pn	**Pn**	**19 01 33.5**	**+1.1**	
WTTA				⇑*i*	Sn	**Sn**	**19 02 58.6**	**+1.2**	
WATA	**Walderalm**	**7.61**	**316**	⇓*i*	Pn	**Pn**	**19 01 35.0**	**+1.6**	
	SNR=5.2								
WATA				⇑*i*	Sn	**Sn**	**19 03 00.8**	**+1.5**	
SQTA	**Sankt Quirin**	**7.73**	**314**	⇑*i*	Pn	**Pn**	**19 01 36.5**	**+1.4**	
	SNR=6.0								
SQTA				⇑*i*	Sn	**Sn**	**19 03 04.2**	**+1.8**	
GERES	**GERESS Array B**	**7.79**	**331**		Pn	**Pn**	**19 01 37.6**	**+1.6**	
	comp=Z,0.4nm,0.3s,baz=157,slow=14,SNR=11								
GERES					Sn	**Sn**	**19 03 03.1**	**-0.9**	
	comp=Z,0.3nm,0.3s,baz=144,slow=22,SNR=2.7								
MOTA	**Moosalm**	**7.86**	**314**	⇓*i*	Pn	**Pn**	**19 01 37.9**	**+1.0**	
	SNR=9.6								
MOTA				⇑*i*	Sn	**Sn**	**19 03 07.1**	**+1.5**	
KHC	**Kasperske Hory**	**8.08**	**332**	*e*	PN	**Pn**	**19 01 41.2**	**+1.3**	
KHC				*e*	SN	**Sn**	**19 03 09.5**	**-1.5**	
IDI	**Anoyia**	**8.09**	**146**		Sn	**Sn**	**19 03 03.9**	**-7.3**	
	comp=Z,1.5nm,0.3s,baz=331,slow=19,SNR=5.3								
DAVA	**Damuels**	**8.50**	**310**	⇑*i*	Pn	**Pn**	**19 01 47.6**	**+1.9**	
DAVA				⇑*i*	Sn	**Sn**	**19 03 21.4**	**+0.1**	
PRU	**Pruhonice**	**8.53**	**338**	*e*	SN	**Sn**	**19 03 20.1**	**-1.9**	
SBF	**Sospel**	**8.94**	**285**	*e*	Pn	**Pn**	**19 01 50.7**	**-1.0**	
SBF				*e*	Sn	**Sn**	**19 03 24.9**	**-7.2**	
	comp=Z,28nm,0.8s								
FRF	**La Foret Royal**	**9.48**	**283**	*e*	Pn	**Pn**	**19 01 57.8**	**-1.3**	
FRF				*e*	Sn	**Sn**	**19 03 37.5**	**-7.9**	
	comp=Z,44nm,1.3s								
MBDF	**Montbardon**	**9.55**	**290**	*e*	Pn	**Pn**	**19 01 58.6**	**-1.4**	
MBDF				*e*	Sn	**Sn**	**19 03 38.9**	**-8.1**	
	comp=Z,7.2nm,0.8s								
LMR	**La Mourre**	**9.57**	**281**	*e*	Pn	**Pn**	**19 01 59.2**	**-1.1**	
LPG	**La Plagne**	**9.74**	**294**	*e*	Pn	**Pn**	**19 02 01.2**	**-1.4**	
LPG				*e*	Sn	**Sn**	**19 03 44.0**	**-7.7**	
	comp=Z,12nm,0.7s								
LPL	**La Plagne**	**9.76**	**294**	*e*	Pn	**Pn**	**19 02 01.2**	**-1.7**	
LPL				*e*	Sn	**Sn**	**19 03 44.3**	**-7.9**	
	comp=Z,7.4nm,0.5s								
KEST	**Kesra**	**10.13**	**234**		LR	LR	19 06 49.2		
	comp=Z,35nm,19.7s,baz=224,slow=42								
ORIF	**Oris-en-Rattie**	**10.21**	**290**	*e*	Pn	**Pn**	**19 02 07.3**	**-1.7**	
ORIF				*e*	Sn	**Sn**	**19 03 54.8**	**-8.4**	
	comp=Z,7.8nm,0.7s								
SMRF	**Simiane la Rot**	**10.29**	**285**	*e*	Pn	**Pn**	**19 02 08.8**	**-1.4**	
SMRF				*e*	Sn	**Sn**	**19 03 57.5**	**-7.7**	
	comp=Z,17nm,1.0s								
CABF	**La Chapelle**	**10.52**	**300**	*e*	Pn	**Pn**	**19 02 11.4**	**-2.0**	
HINF	**Hinteralfeld**	**10.54**	**307**	*e*	Pn	**Pn**	**19 02 11.2**	**-2.4**	
CDF	**Champ du Feu**	**10.59**	**310**	*e*	Pn	**Pn**	**19 02 12.5**	**-1.8**	
BRTR	**Keskin Array B**	**11.04**	**98**		Pn	**Pn**	**19 02 21.6**	**+1.2**	
	comp=Z,0.2nm,0.3s,baz=283,slow=16,SNR=4.6								
VIVF	**Saint-Julien-l**	**11.04**	**289**	*e*	Pn	**Pn**	**19 02 18.0**	**-2.5**	
MEZF	**Maizieres J'vi**	**11.92**	**307**	*e*	Pn	**Pn**	**19 02 29.2**	**-3.3**	
SMF	**Signal de Mont**	**12.00**	**297**	*e*	Pn	**Pn**	**19 02 31.0**	**-2.6**	
LOR	**Lormes**	**12.18**	**300**	*e*	Pn	**Pn**	**19 02 34.1**	**-2.0**	
LOR				*e*	Sn	**Sn**	**19 04 42.0**	**-10**	
	comp=Z,3.6nm,0.5s								
SSF	**Saint Saulge**	**12.34**	**299**	*e*	Pn	**Pn**	**19 02 35.7**	**-2.6**	
AVF	**Avril sur Loir**	**12.37**	**297**	*e*	Pn	**Pn**	**19 02 34.6**	**-4.0**	
MTLF	**Montolieu**	**12.70**	**281**	*e*	Pn	**Pn**	**19 02 41.2**	**-1.9**	
EPF	**Esparros**	**14.08**	**280**	*e*	Pn	**Pn**	**19 03 00.3**	**-1.7**	
HFS	**Hagfors**	**16.34**	**351**		P	**Pn**	**19 03 54.6**	**-2.3**	
	comp=Z,0.3nm,0.3s,baz=177,slow=10,SNR=9.5								
GNI	**Garni**	**19.16**	**88**		P	**Pn**	**19 04 03.6**	**-3.3**	
	comp=Z,0.3nm,0.3s,baz=40,slow=7.9,SNR=4.7								
NB2	**NORSAR Subarra**	**19.55**	**348**		P	**Pn**	**19 04 08.2**	**-3.3**	
	comp=Z,0.7nm,0.5s,baz=154,slow=10								
NOA	**NORSAR Array B**	**19.55**	**348**		P	**Pn**	**19 04 08.2**	**-3.4**	
	comp=Z,0.2nm,0.3s,baz=155,slow=10,SNR=4.7								
FINES	**FINESS Array B**	**19.73**	**10**		P	**Pn**	**19 04 10.4**	**-3.3**	
	comp=Z,0.1nm,0.3s,baz=180,slow=11,SNR=5.4								
MDT	**Midelt**	**21.16**	**252**		P	**Pn**	**19 04 24.7**	**-3.1**	
	comp=Z,1.8nm,1.0s,mb3.3,baz=10,slow=11,SNR=2.5								
RST	**Umm Al-Ruwaisa**	**25.56**	**111**	*e*	P	**P**	**19 05 08.3**	**-3.1**	
RST					AMb	AMB	19 05 10.0		
	comp=Z,15nm,0.6s,mb4.7								
MIB	**Mutribah**	**25.62**	**110**	*e*	P	**P**	**19 05 09.5**	**-2.4**	
MIB					AMb	AMB	19 05 10.8		
	comp=Z,29nm,0.7s,mb4.9								
NAY	**Al-Naaiem**	**25.89**	**111**	*e*	P	**P**	**19 05 11.3**	**-3.1**	
NAY					AMb	AMB	19 05 14.3		
	comp=Z,7.0nm,1.0s,mb4.1								
TORD	**Torodi Ar. Bea**	**32.75**	**213**		P	**P**	**19 06 15.2**	**-0.1**	
	comp=Z,0.3nm,0.5s,mb3.5,baz=15,slow=10,SNR=3.2								
MKAR	**Makanchi Array**	**44.05**	**62**		P	**P**	**19 07 48.3**	**-2.0**	
	comp=Z,0.2nm,0.3s,mb3.3,baz=278,slow=7.0,SNR=6.5								
SONM	**Songino Array**	**58.63**	**52**		P	**P**	**19 09 38.5**	**-1.1**	
	comp=Z,0.7nm,1.0s,mb3.6,baz=282,slow=7.4,SNR=4.5								
SONM	**Songino Array**	**58.63**	**52**		P	**P**	**19 09 38.5**	**-1.1**	
SONM					pmax	pmax			
	comp=Z,1.0nm,1.0s								

ASAR	**Alice Springs**	**123.34**	**93**	PKP	PKPdf		19 18 36.7	-2.8	
	comp=Z,0.4nm,0.8s,baz=332,slow=1.4,SNR=4.1								

*CSEM **30** 19:

YUK smax
comp=N,230nm,0.5s
YSS Yuzh-Sakhalins 6.42 270 *e*PN **Pn** **19 30 14.0 +5.7**
YSS pmax pmax
comp=E,110nm,0.9s
YSS pmax pmax
comp=E,160nm,1.0s
YSS Yuzh-Sakhalins 6.42 270 *e*P **Pn** **19 30 14.1 +5.8**
comp=E,80nm,0.6s
PET Petropavlovsk 7.05 34 *e*PN **Pn** **19 30 19.0 +2.3**
PET *e*S **Sn** **19 31 34.7 -0.6**
PET pmax pmax
comp=Z,19nm,0.5s
PET smax
comp=E,124nm,0.7s
PET Petropavlovsk 7.05 34 *e*P **Pn** **19 30 16.3 -0.4**
comp=E,31nm,0.9s
ASAJ Asahikawa 7.43 248 P **Pn** **19 30 24.6 +2.7**
comp=E,2.7nm,0.3s,baz=72,slow=13,SNR=23
ASAJ LR LR 19 32 45.1
comp=E,98nm,20.6s,baz=2.3,slow=34
HABR Khabarovsk 11.54 282 *e*PN **Pn** **19 31 21.9 +4.4**
HABR *e* 19 33 30.4
KLR Kul'dur 13.71 285 *e*P **Pn** **19 31 47.8 +1.7**
MAJO Matsushiro 14.95 229 *e*P **Pn** **19 32 00.9 -1.0**
MAJO pmax pmax
comp=Z,6.0nm,0.6s
MAJO Matsushiro 14.95 229 *e*P **Pn** **19 32 00.9 -1.0**
comp=Z,6.1nm,0.6s
MAT Matsushiro 14.95 229 P **Pn** **19 32 00.0 -1.9**
MAT S Sn 19 35 08.0 +21
MJAR Matsushiro Arr 14.95 229 P **Pn** **19 32 00.6 -1.3**
comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=7.2
MJAR LR LR 19 37 37.0
comp=Z,100nm,20.6s,baz=70,slow=36
MJAR ScP ScP 19 40 22.8 -5.2
baz=88,slow=1.6,SNR=4.5
SEY Seymchan 15.62 0⇓ *e*P **Pn** **19 32 12.7 +2.4**
MDJ Mudanjiang 15.91 268 P **Pn** **19 32 16.5 +2.6**
MDJ S **S** **19 35 12.0 -5.0**
MDJ SCP ScP 19 40 29.3 -0.5
MDJ SCS ScS 19 44 08.0 -0.5
MDJ AMB AMB
comp=Z,8.0nm,1.0s
MDJ AMB AMB
comp=Z,41nm,6.2s
MDJ LR LR
comp=N,42nm,20.3s
MDJ LR LR
comp=E,26nm,28.1s
MDJ LR LR
comp=Z,42nm,31.2s
MDJ Mudanjiang 15.91 268 P **Pn** **19 32 14.1 +0.2**
comp=Z,9.5nm,0.8s
CN2 Changchun 18.99 269 *e*P **P** **19 32 53.3 +3.9**
CN2 AMB AMB
comp=Z,10.0nm,0.5s
CN2 AMB AMB
comp=Z,130nm,4.0s
CLNS Chul'man 19.13 310 *e*P **P** **19 32 52.3 +1.4**
CLNS pmax pmax
comp=E,22nm,0.6s
CLNS pmax pmax
comp=Z,36nm,0.6s
CLNS pmax pmax
comp=N,25nm,0.8s
YAK Yakutsk 19.46 327 *e*P **P** **19 32 55.5 +1.0**
YAK *e*S **S** **19 36 26.2 -2.4**
YAK pmax pmax
comp=Z,38nm,0.8s
YAK pmax pmax
comp=N,22nm,1.4s
YAK pmax pmax
comp=E,27nm,1.5s
YAK smax
comp=E,20nm,1.3s
YAK smax
comp=N,13nm,1.1s
YAK Yakutsk 19.46 327 *e*P **P** **19 32 54.7 +0.2**
comp=N,67nm,0.6s
HIA Hailar 21.56 287 *i* P **P** **19 33 16.4 -0.6**
HIA Hailar 21.56 287 *e*P **P** **19 33 16.0 -1.0**
comp=N,7.2nm,0.7s,mb4.1
HIA *e*pP 19 33 41.4
BILL Bilibino 21.96 14 *i* P **P** **19 33 21.7 +0.4**
BILL pmax pmax
comp=Z,7.0nm,0.6s,mb4.2
BILL Bilibino 21.96 14 *e*P **P** **19 33 21.0 -0.3**
comp=Z,19nm,0.4s,mb4.8
DL2 Dalian 23.70 260 P **P** **19 33 38.5 +0.3**
DL2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.3
BOD Bodaibo 25.10 309 *e*P **P** **19 33 48.3 -2.6**
BOD pmax pmax
comp=Z,6.0nm,0.9s,mb4.0
CIT Chita 25.20 295 *e*P **P** **19 33 50.2 -1.6**
CIT pmax pmax
comp=Z,80nm,1.6s,mb4.9
BJI Beijing 26.84 267 P **P** **19 34 09.5 +2.9**
BJI AMB AMB
comp=Z,16nm,0.8s,mb4.6
NJ2 Nanjing 29.56 251 *e*P **P** **19 34 35.5 +4.7**
NJ2 PP PP 19 35 37.3 -2.1
NJ2 S **S** **19 39 17.0 -0.8**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
NJ2 AMB AMB
comp=Z,200nm,4.9s
NJ2 LR LR
comp=N,850nm,18.1s
NJ2 LR LR
comp=E,390nm,24.8s
NJ2 LR LR
comp=Z,170nm,10.4s
HHC Hu-ho-hao-te 29.60 272 *e*P **P** **19 34 32.0 +0.8**
HHC PP PP 19 35 33.3 -6.6
HHC S **S** **19 39 14.3 -4.3**
HHC XS sS 19 40 07.5 +7.7
HHC SCP ScP 19 41 01.8 -3.6
HHC PCS PcS 19 41 16.8 +0.2
HHC SCS ScS 19 44 55.5 -4.9
HHC AMB AMB
comp=Z,34nm,0.8s,mb5.0
HHC AMB AMB
comp=Z,71nm,5.2s
HHC LR LR
comp=N,87nm,18.0s
HHC LR LR
comp=E,103nm,18.0s
HHC LR LR
comp=Z,43nm,19.0s
ULN Ulaanbaatar 30.09 288 *c i*P **P** **19 34 35.0 -0.4**
ULN Ulaanbaatar 30.09 288 *e*P **P** **19 34 34.9 -0.6**
comp=E,4nm,1.2s,mb4.2
SONM Songino Array 30.52 288 P **P** **19 34 39.2 0.0**
comp=Z,1.9nm,0.6s,baz=67,slow=8.1,SNR=23
SONM PcP PcP 19 37 35.0 -0.7
comp=Z,1.0nm,0.8s,baz=87,slow=1.6,SNR=3.1
TLY Talaya 31.32 296 *e*P **P** **19 34 46.4 +0.1**
TLY pmax pmax
comp=Z,12nm,0.8s,mb4.7
ZAK Zakamensk 31.83 294 *e*P **P** **19 34 50.9 +0.1**
ZAK *e* 19 35 20.0
TTA Tatalina 32.41 42 *e*P **P** **19 34 56.4 +0.5**
TTA pmax pmax
comp=Z,30nm,1.4s,mb4.8
TTA Tatalina 32.41 42 *e*P **P** **19 34 56.4 +0.5**
comp=Z,30nm,1.4s,mb4.8
XAN Xi'an 34.92 264 P **P** **19 35 17.3 -0.3**
XAN AMB AMB
comp=Z,27nm,0.8s,mb5.1
MCK McKinley 35.62 41 *e*P **P** **19 35 23.9 +0.3**
MCK pmax pmax
comp=Z,60nm,0.9s,mb5.5
MCK McKinley 35.62 41 *e*P **P** **19 35 23.9 +0.3**
comp=Z,6.0nm,0.9s,mb4.5
COLA College 36.08 39 *e*P **P** **19 35 28.3 +0.8**
COLA pmax pmax
comp=Z,31nm,0.8s,mb5.3
COLA College 36.08 39 *e*P **P** **19 35 28.3 +0.7**
comp=Z,31nm,0.8s,mb5.3
LZH Lanzhou 37.22 270 ⇓P **P** **19 35 38.5 +1.3**
LZH PP PP 19 37 09.5 +5.4
LZH S **S** **19 41 13.3 -2.9**
LZH XS sS 19 42 07.3 +9.2
LZH AMB AMB
comp=Z,42nm,1.4s,mb5.2
LZH AMB AMB
comp=Z,141nm,5.7s
LZH LR LR
comp=N,446nm,13.5s
LZH LR LR
comp=Z,737nm,17.7s
GTA Gaotai 38.23 278 *e*P **P** **19 35 46.3 +0.6**
GTA XP sP 19 36 17.8 -4.4
GTA PP PP 19 37 20.8 +5.6
GTA PCP PcP 19 37 59.0 +1.1
GTA S **S** **19 41 27.5 -4.0**
GTA SCP ScP 19 41 32.0 -3.9
GTA PCS PcS 19 41 47.0 -0.1
GTA XS sS 19 42 23.0 +9.4
GTA SCS ScS 19 45 40.5 -5.3
GTA AMB AMB
comp=Z,9.0nm,1.2s,mb4.5
GTA AMB AMB
comp=Z,116nm,7.2s
GTA LR LR
comp=N,57nm,12.9s
GTA LR LR
comp=E,64nm,14.4s
GTA LR LR
comp=Z,61nm,13.3s
EGAK Eagle 38.94 39 *e*P **P** **19 35 51.4 -0.2**
DAWY Dawson 39.80 40 *e*P **P** **19 35 59.1 +0.3**
CD2 Chengdu 40.28 264 *i*P **P** **19 36 03.5 +0.7**
CD2 PP PP 19 37 39.0 +1.5
CD2 S **S** **19 42 01.0 -1.3**
CD2 XS sS 19 42 53.8 +9.3
CD2 AMB AMB
comp=Z,40nm,1.0s,mb5.2
CD2 AMB AMB
comp=Z,70nm,5.4s
CD2 LR LR
comp=E,90nm,7.8s
CD2 LR LR
comp=Z,70nm,6.0s
INK Inuvik 41.50 33 P **P** **19 36 13.8 +1.0**
comp=Z,18nm,0.6s,mb5.0,baz=301,slow=7.1,SNR=68
INK Inuvik 41.50 33 P **P** **19 36 13.8 +1.0**
ZAL Zalesovo 41.74 305 P **P** **19 36 13.3 -1.4**
comp=Z,4.0nm,0.5s,mb4.4,baz=58,slow=7.3,SNR=17
ZAL PcP PcP 19 38 08.2 -1.0
comp=Z,3.7nm,0.8s,baz=66,slow=2.0,SNR=11
ZAL LR LR 19 53 40.7
comp=Z,36nm,20.4s,baz=45,slow=36
ZAL Zalesovo 41.74 305 P **P** **19 36 13.4 -1.3**
ZAL 19 38 08.2
NVS Novosibirsk 42.30 307 *e*P **P** **19 36 17.1 -2.2**
NVS pmax pmax
comp=Z,30nm,1.0s,mb5.0
WMQ Urumqi 44.10 290 P **P** **19 36 34.0 +0.3**
WMQ PP PP 19 38 20.0 +1.5
WMQ S **S** **19 42 54.0 -4.4**
WMQ XS sS 19 43 49.0 +7.9
WMQ AMB AMB
comp=Z,21nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,104nm,4.0s
WMQ LR LR
comp=N,45nm,13.0s
WMQ LR LR
comp=E,52nm,13.0s
WMQ LR LR
comp=Z,36nm,13.0s
KMI Kunming 44.71 258 P **P** **19 36 41.5 +2.9**
KMI PP PP 19 38 29.3 +4.3
KMI S **S** **19 43 04.8 -2.5**
KMI XS sS 19 43 56.8 +6.7
KMI AMB AMB
comp=Z,9.0nm,1.0s,mb4.5
KMI AMB AMB
comp=Z,34nm,3.5s
KMI LR LR
comp=N,57nm,16.9s
KMI LR LR
comp=E,78nm,18.9s
KMI LR LR
comp=Z,59nm,17.6s
DLBC Dease Lake 45.65 46 P **P** **19 36 47.2 +1.2**
comp=Z,2.3nm,0.6s,mb4.1,baz=307,slow=10,SNR=5.7
MK31 Makanchi Array 46.08 296 P **P** **19 36 48.6 -0.8**
MK31 pmax pmax
comp=Z,15nm,0.8s,mb4.8
MKAR Makanchi Array 46.08 296 P **P** **19 36 48.7 -0.8**
comp=Z,11nm,0.7s,mb4.7,baz=63,slow=8.0,SNR=89
MKAR PcP PcP 19 38 23.3 -0.7
comp=Z,3.1nm,0.6s,baz=65,slow=1.9,SNR=8.1
MKAR ScP ScP 19 42 03.7 -3.6
comp=Z,0.7nm,0.7s,baz=46,slow=7.4,SNR=3.5
MKAR Makanchi Array 46.08 296 P **P** **19 36 48.7 -0.7**
MKAR 19 38 23.3
MKAR Makanchi Array 46.08 296 P **P** **19 36 48.7 -0.8**
MKAR PcP PcP 19 38 23.3 -0.7
MKAR ScP ScP 19 42 03.7 -3.6
KURK Kurchatov 46.49 303 P **P** **19 36 51.7 -0.9**
comp=Z,190nm,0.9s,mb5.8,SNR=20
CHKZ Chkalovo 49.54 309 P **P** **19 37 14.9 -1.2**
CHKZ pmax pmax
comp=Z,14nm,0.7s,mb5.0
CHKZ Chkalovo 49.54 309 *e*P **P** **19 37 14.8 -1.3**
comp=Z,47nm,0.9s,mb5.4
LSA Lhasa 49.59 272 P **P** **19 37 18.5 +2.0**
LSA Lhasa 49.59 272 *e*P **P** **19 37 18.4 +1.9**
LSA pmax pmax
comp=Z,30nm,0.6s,mb5.4
LSA Lhasa 49.59 272 *e*P **P** **19 37 18.4 +1.9**
comp=Z,30nm,0.6s,mb5.4
VOSK Vostochnaya 49.80 308 P **P** **19 37 16.9 -1.2**
VOSK pmax pmax
comp=Z,20nm,1.0s,mb5.0
BVAR Borovoye Array 49.97 309 P **P** **19 37 18.9 -0.4**
comp=Z,5.9nm,0.4s,mb4.9,baz=51,slow=7.5,SNR=76
BVAR PcP PcP 19 38 37.2 -0.7
comp=Z,5.3nm,0.5s,baz=89,slow=2.9,SNR=11
BVAR ScP ScP 19 42 19.8 -3.9
comp=Z,0.9nm,0.7s,baz=48,slow=2.2,SNR=5.2
BVAR LR LR 19 58 54.0
comp=Z,37nm,20.6s,baz=50,slow=36
BVAR Borovoye Array 49.97 309 P **P** **19 37 18.9 -0.5**
BVAR 19 38 37.2
BRVK Borovoye 50.01 309 ⇑P **P** **19 37 18.9 -0.7**
SNR=8.5
BRVK Borovoye 50.01 309 *e*P **P** **19 37 18.7 -1.0**
BRVK pmax pmax
comp=Z,11nm,0.8s,mb4.8
BRVK Borovoye 50.01 309 *e*P **P** **19 37 18.7 -1.0**
comp=Z,11nm,0.8s,mb4.8
ZRNK Zerenda 50.74 309 P **P** **19 37 24.2 -0.9**
ZRNK pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
ZRNK Zerenda 50.74 309 *e*P **P** **19 37 24.1 -1.0**
comp=Z,16nm,0.8s,mb5.1
ZRNK *e*PcP PcP 19 38 39.7 -1.1
YKA Yellowknife Ar 50.84 37 P **P** **19 37 25.6 -0.2**
comp=Z,4.6nm,0.7s,mb4.6,baz=300,slow=6.9,SNR=10
CHTO Chiang Mai 51.63 255 *e*P **P** **19 37 32.3 +0.5**
CHTO pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CHTO Chiang Mai 51.63 255 *e*P **P** **19 37 32.3 +0.6**
comp=Z,8.2nm,0.9s,mb4.8
TKM2 Tokmak 2 52.15 295 P **P** **19 37 36.1 +0.5**
SNR=7.4
CHMS Chumysh 52.62 296 P **P** **19 37 39.4 +0.2**
SNR=6.2
USP Ospenovka 52.63 296 P **P** **19 37 39.3 +0.1**
SNR=10
KBK Karagaybulak 52.69 295 P **P** **19 37 39.9 +0.3**
SNR=7.5
KZA Kyzart 52.83 294 P **P** **19 37 41.8 +1.2**
SNR=5.8
AAK Ala-Archa 52.98 295 P **P** **19 37 41.9 +0.1**
SNR=5.6
AAK Ala-Archa 52.98 295 *e*P **P** **19 37 40.7 -1.1**
AAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
AAK Ala-Archa 52.98 295 *e*P **P** **19 37 40.6 -1.1**
comp=Z,10nm,0.9s,mb4.8
EKS2 Erkin-Say 53.41 296 P **P** **19 37 45.0 +0.1**
SNR=15
AML Almayashu 53.76 295 P **P** **19 37 48.5 +1.0**
SNR=6.5
B04A Port Angeles 53.94 56 ⇑P **P** **19 37 46.6 -2.1**
baz=54
A04A Legoe Bay, Lum 54.02 55 ⇓P **P** **19 37 47.8 -1.6**
baz=54
ARU Arti 54.12 317 P **P** **19 37 49.8 -0.3**
comp=Z,192nm,0.7s,SNR=18
ARU Arti 54.12 317 ⇑ *i*P **P** **19 37 48.7 -1.4**
ARU *e* 19 38 51.4
ARU *e* 19 39 48.8
ARU *e*PPP 19 41 02.1
ARU *e*S **S** **19 45 13.3 -5.3**
ARU *e* 19 47 22.8
ARU *e*SS SS 19 48 57.2 -4.3
ARU pmax pmax
comp=Z,17nm,0.7s,mb5.2
ARU Arti 54.12 317 *e*P **P** **19 37 48.9 -1.3**
comp=Z,19nm,0.6s,mb5.3
GUN Gumba 54.30 274 *e*P **P** **19 37 52.2 +0.8**
comp=Z,56nm,0.4s,mb5.9
KKN Kakani 54.78 274 *e*P **P** **19 37 55.7 +0.8**
comp=Z,71nm,0.6s,mb5.8
KKN Kakani 54.78 274 *e*P **P** **19 37 55.7 +0.8**
KKN pmax pmax
comp=Z,71nm,0.6s,mb5.9
PKI Pulchoki 54.84 274 *e*P **P** **19 37 55.7 +0.4**
comp=Z,41nm,0.5s,mb5.7
PKI Pulchoki 54.84 274 *e*P **P** **19 37 55.7 +0.4**
PKI pmax pmax
comp=Z,41nm,0.5s,mb5.7
DMN Daman 55.02 274 *e*P **P** **19 37 57.7 +1.1**
comp=Z,141nm,0.8s,mb6.0
GKN Gorkha 55.08 275 *e*P **P** **19 37 57.8 +0.8**
comp=Z,116nm,0.5s
KOLN Koldanda 55.93 275 *e*P **P** **19 38 04.1 +1.0**
comp=Z,87nm,0.8s,mb5.9
DAG Danmarks Havn 56.02 357 ⇑ *i*P **P** **19 38 03.4 -0.3**
comp=Z,5.6nm,0.5s,mb4.8
DAG Danmarks Havn 56.02 357 ⇑ *i*P **P** **19 38 03.4 -0.3**
DAG pmax pmax
comp=Z,60nm,0.5s,mb5.9
KEV Kevo 56.56 340 *ep* **P** **19 38 05.9 -1.7**
comp=Z,3.3nm,0.4s,mb4.7
KEV Kevo 56.56 340 *e*P **P** **19 38 05.9 -1.7**
KEV pmax pmax
comp=Z,30nm,0.4s,mb5.7
H04A Detroit Lake 56.60 58 ⇑P **P** **19 38 08.4 +0.5**
baz=56
BOK Bokaro 56.98 270 *e*P **P** **19 38 10.5 -0.1**
BOK AMb AMB 19 38 13.0
comp=Z,11nm,0.5s,mb5.1
ARCES ARCESS Array B 57.07 340 P **P** **19 38 10.6 -0.6**
comp=Z,2.1nm,0.4s,mb4.5,baz=35,slow=6.9,SNR=42
LGTI Lohaghat 57.12 279 *i* P **P** **19 38 13.5 +1.9**
AB31 Akbulak array 57.54 309 P **P** **19 38 13.5 -1.0**
H06A Lindquist Farm 57.63 57 ⇓P **P** **19 38 14.3 -0.8**
baz=58
AKTK Aktyubinsk 57.84 311 P **P** **19 38 15.4 -1.1**
AKTK PcP PcP 19 39 06.7 -1.3
AKTO Aktyubinsk 57.84 311 P **P** **19 38 15.4 -1.1**
comp=Z,3.1nm,0.5s,mb4.6,baz=66,slow=8.6,SNR=14
AKTO PcP PcP 19 39 06.7 -1.3
comp=Z,5.2nm,0.8s,baz=342,slow=4.7,SNR=6.6
KTK1 Kautokeino 57.99 341 *e*P **P** **19 38 17.3 -0.3**
KTK1 AMb AMB 19 38 20.2
comp=Z,13nm,0.7s,mb5.1
KTK1 Kautokeino 57.99 341 *e*P **P** **19 38 17.3 -0.3**
comp=Z,13nm,0.7s,mb5.1
SMLA Simla 58.11 283 *e*P **P** **19 38 18.2 -0.3**
SMLA AMb AMB 19 38 19.3
comp=Z,56nm,1.6s,mb5.4
M02C Callahan 58.16 62 ⇓P **P** **19 38 18.4 -0.4**
baz=58
I07A Izee 58.50 58 ⇓P **P** **19 38 21.1 -0.1**
baz=58
J06A Christmas Vall 58.63 59 ⇑P **P** **19 38 22.4 +0.3**
baz=58
L05A Lakeview 58.96 60 ⇓P **P** **19 38 25.3 +0.9**
baz=59
I08A Drewsey 59.14 57 ⇓P **P** **19 38 25.2 -0.4**
baz=59
K07A Rock Creek Ran 59.50 59 ⇓P **P** **19 38 28.2 +0.2**
baz=59
NDI New Delhi 59.64 280 *e*P **P** **19 38 28.1 -1.0**
NDI AMb AMB 19 38 29.4
comp=Z,40nm,0.0s
K08A Mann Creek Ran 59.91 58 ⇑P **P** **19 38 31.5 +0.5**
baz=60
SUMG Summit 60.15 4 *e*P **P** **19 38 33.0 +0.4**
comp=Z,66nm,0.9s,mb5.7
M07A Soldier Meadow 60.35 60 ⇓P **P** **19 38 34.5 +0.6**
baz=60
N06A Buffalo Meadow 60.35 61 ⇑P **P** **19 38 34.2 +0.3**
baz=60
JOF Joensuu 60.50 333 *ep* **P** **19 38 33.2 -1.8**
comp=Z,5.4nm,0.4s,mb4.9
O06A Flanigan 60.72 61 ⇑P **P** **19 38 35.7 -0.7**
baz=61
LOF Lofoten 60.75 344 *e*P **P** **19 38 38.1 +1.5**
LOF AMb AMB 19 38 38.8
comp=Z,31nm,0.7s,mb5.5
LOF Lofoten 60.75 344 *e*P **P** **19 38 38.1 +1.5**
comp=Z,31nm,0.7s,mb5.5
M08A Happy Creek Ra 60.77 59 ⇓P **P** **19 38 37.2 +0.4**
baz=61
O07A Toulon 61.29 61 ⇓P **P** **19 38 40.7 +0.4**
baz=61
MOR8 Moi Rana 62.25 342 *e*P **P** **19 38 44.3 -2.4**
MOR8 AMb AMB 19 38 46.2
comp=Z,26nm,0.7s,mb5.4
MOR8 Moi Rana 62.25 342 *e*P **P** **19 38 44.3 -2.4**
comp=Z,26nm,0.7s,mb5.4
O09A Fish Creek Ran 62.28 60 ⇑P **P** **19 38 47.1 +0.2**
baz=62
KAF Kangasniemi 62.62 335 *ep* **P** **19 38 47.1 -2.1**
comp=Z,19nm,0.6s,mb5.2,baz=38,slow=6.3
KAF Kangasniemi 62.62 335 *e*P **P** **19 38 47.1 -2.1**
KAF pmax pmax
comp=Z,19nm,0.6s,mb5.2
NVAR Mina Array Bea 62.74 62 P **P** **19 38 50.5 +0.6**
comp=Z,1.0nm,0.5s,mb4.0,baz=291,slow=7.9,SNR=11
AJM Ajmer 62.81 280 *e*P **P** **19 38 50.3 -0.1**
AJM AMb AMB 19 38 51.5
comp=Z,32nm,0.6s,mb5.4
VIS Vishakhapatnam 62.87 267 *e*P **P** **19 38 49.0 -1.9**
BHPL Bhopal 63.10 276 *e*P **P** **19 38 52.4 0.0**
BHPL AMb AMB 19 38 53.6
comp=Z,45nm,0.9s,mb5.4
FINES FINESS Array B 63.22 334 P **P** **19 38 52.0 -1.1**
comp=Z,19nm,0.5s,mb5.2,baz=38,slow=7.3,SNR=146
NGP Nagpur 63.42 273 *ex* **P** **19 38 50.3 -4.2**
RRI2 Red Ridge 63.57 54 *e*P **P** **19 38 56.5 +1.0**
comp=Z,4.1nm,0.7s,mb4.4
R09A Tonopah 63.60 62 ⇑P **P** **19 38 55.1 -0.5**
baz=63
OBN Obninsk 64.44 325 ⇓ *i*P **P** **19 39 00.2 -1.0**
OBN *e**PP pP 19 39 35.4 +7.8
OBN *e* 19 41 20.3
OBN *e*S **S** **19 47 23.0 -8.5**
OBN pmax pmax
comp=Z,24nm,1.0s,mb5.0
SFJD Kangerlussuaq 64.67 10 P **P** **19 39 01.9 -0.7**
comp=Z,24nm,0.6s,mb5.2,baz=328,slow=6.1,SNR=16
MPMC Manual Prospec 64.77 64 ⇑P **P** **19 39 03.2 -0.1**
baz=65
PDAR Pinedale Array 64.92 54 P **P** **19 39 04.3 0.0**
comp=Z,1.2nm,0.6s,baz=324,slow=2.0,SNR=9.5
ABKT Ailbek 65.73 300 P **P** **19 39 03.8 -5.7**
comp=Z,79nm,0.6s,mb5.7,SNR=6.0
VRSR Storozhevoye 66.22 321 *e*P **P** **19 39 11.4 -1.2**
VRSR pmax pmax
comp=Z,50nm,2.5s,mb4.9
VRSR pmax pmax
comp=N,30nm,0.8s
VRSR pmax pmax
comp=E,20nm,0.9s
NB2 NORSAR Subarra 67.45 341 P **P** **19 39 19.8 -0.6**
comp=Z,19nm,0.5s,mb5.2,baz=26,slow=6.5
NOA NORSAR Array B 67.45 341 P **P** **19 39 19.9 -0.5**
comp=Z,19nm,0.5s,mb5.2,baz=28,slow=6.4,SNR=104
NOA LR LR 20 12 40.1
comp=Z,11nm,19.2s,baz=0.0,slow=39
HFS Hagfors 67.66 339 P **P** **19 39 21.6 -0.1**
comp=Z,33nm,0.4s,mb5.5,baz=58,slow=5.4,SNR=325
X13A Yucca 67.97 63 ⇓P **P** **19 39 22.9 -0.8**
baz=68
W14A Seligman 68.00 62 ⇓P **P** **19 39 24.2 +0.3**
baz=68

BORG Borgarnes 68.13 357 P **P** 19 39 26.2 +1.5
comp=Z,19nm,0.6s,mb5.1,baz=7.0,slow=5.9,SNR=11
BORG Borgarnes 68.13 357 P **P** 19 39 26.2 +1.5
WRA Warramunga Arr 68.87 198 P **P** 19 39 27.5 -1.8
comp=Z,1.7nm,0.7s,mb4.0,baz=22,slow=6.8,SNR=16
KONO Kongsberg 69.06 341*c iP* **P** 19 39 30.4 0.0
KAD Karad 69.38 273 *eP* **P** 19 39 32.6 +0.2
KAD AMb AMB 19 39 43.6
comp=Z,31nm,1.5s,mb4.9
KIV Kislovodsk 69.91 314*c iP* **P** 19 39 35.7 0.0
KIV *e* 19 42 14.4
KIV *eS* S 19 48 32.3 -4.8
KIV pmax pmax
comp=Z,19nm,0.8s,mb5.0
KIV Kislovodsk 69.91 314 *eP* **P** 19 39 36.1 +0.4
comp=Z,19nm,0.8s,mb5.0
ZEI Tsey 70.17 312 *eP* **P** 19 39 35.7 -1.6
ZEI pmax pmax
comp=Z,15nm,0.6s,mb5.0
AKASG Malin Array Be 70.68 326 P **P** 19 39 39.3 -1.1
comp=Z,19nm,0.4s,mb5.3,baz=34,slow=6.1,SNR=105
LRW Lerwick 70.69 346 *eP* **P** 19 39 40.5 +0.1
LRW Lerwick 70.69 346 *eP* **P** 19 39 40.5 +0.1
SNART Snartemo 70.77 341 *eP* **P** 19 39 41.3 +0.3
SNART AMb AMB 19 39 42.1
comp=Z,60nm,0.7s,mb5.5
SOC Sochi 71.63 315 *eP* **P** 19 39 46.4 +0.3
SOC *e**PP pP 19 40 26.1 +13
SOC *e* 19 42 26.1
SOC *e*PPP 19 44 06.1
SOC *eS* S 19 48 52.8 -4.2
SOC pmax pmax
comp=Z,18nm,0.5s,mb5.2
GNI Garni 71.64 310 P **P** 19 39 47.6 +1.5
comp=Z,4.7nm,0.5s,mb4.5,baz=315,slow=1.4,SNR=5.4
ANN Anapa 71.79 317 *eP* **P** 19 39 48.1 +1.0
ANN *e* 19 40 05.2
ANN *e* 19 42 29.2
ANN *eS* S 19 48 57.5 -1.4
ANN pmax pmax
comp=Z,36nm,1.0s,mb5.2
OBR Brabster 72.46 347 *eP* **P** 19 39 50.8 -0.2
OBR Brabster 72.46 347 *eP* **P** 19 39 50.8 -0.2
AS31 Alice Springs 72.57 198 *eP* **P** 19 39 51.0 -0.7
ASAR Alice Springs 72.58 198 P **P** 19 39 51.0 -0.8
comp=Z,5.3nm,0.8s,mb4.5,baz=10,slow=5.1,SNR=56
ASPA Alice Springs 72.58 198 *eP* **P** 19 39 51.0 -0.8
ORE Reay 72.61 347⇓*eP* **P** 19 39 52.0 0.0
ORE Reay 72.61 347⇑*eP* **P** 19 39 52.0 0.0
MLA1 Latheron 72.78 347⇓*eP* **P** 19 39 53.0 0.0
MLA1 Latheron 72.78 347⇑*eP* **P** 19 39 53.0 0.0
SCHQ Schefferville 73.01 22 P **P** 19 39 54.1 -0.2
comp=Z,3.6nm,0.7s,mb4.3,baz=320,slow=6.1,SNR=7.1
MVH1 Achvaich 73.28 347⇓*eP* **P** 19 39 55.3 -0.5
MVH1 Achvaich 73.28 347⇑*eP* **P** 19 39 55.3 -0.5
MCD Coleburn Disti 73.46 346⇓*eP* **P** 19 39 56.8 -0.1
MCD Coleburn Disti 73.46 346⇑*eP* **P** 19 39 56.8 -0.1
KAC Achnashellach 73.85 348⇓*eP* **P** 19 39 59.3 0.0
KAC Achnashellach 73.85 348⇑*eP* **P** 19 39 59.3 0.0
SCIA State Center 73.96 45 *eP* **P** 19 39 59.4 -0.5
KWP Kalwaria 73.97 325 *eP* **P** 19 40 00.2 +0.3
BSEG Bad Segeberg 74.03 338 *eP* **P** 19 40 00.3 0.0
comp=Z,24nm,0.9s,mb4.9
KPL Plockton 74.06 348⇑*eP* **P** 19 40 00.4 -0.1
KPL Plockton 74.06 348⇓*eP* **P** 19 40 00.4 -0.1
KSB Sheil Bridge 74.15 348⇑*eP* **P** 19 40 01.0 0.0
KSB Sheil Bridge 74.15 348⇓*eP* **P** 19 40 01.0 0.0
RUE Ruedersdorf 74.38 335 *eP* **P** 19 40 02.2 -0.1
comp=Z,48nm,1.0s,mb5.2
OJC Ojcow 74.48 330 *eP* **P** 19 40 03.3 +0.4
KAR1 Arisaig 74.49 348⇓*eP* **P** 19 40 03.0 0.0
KAR1 Arisaig 74.49 348⇑*eP* **P** 19 40 03.0 0.0
STHS Stebnicka Huta 74.67 329 *eP* **P** 19 40 04.6 +0.6
STHS pmax pmax
comp=Z,18nm,0.9s,mb4.8
STHS Stebnicka Huta 74.67 329 *eP* **P** 19 40 04.6 +0.6
comp=Z,18nm,0.9s,mb4.8
KOLS Kolonicke sedl 74.71 328 *eP* **P** 19 40 04.0 -0.2
BURAR Bucovina Array 74.72 326⇑*iP* **P** 19 40 04.1 -0.2
BURAR Bucovina Array 74.72 326⇑P **P** 19 40 04.1 -0.2
ESY Stoneypath 74.95 346⇓*eP* **P** 19 40 05.4 -0.2
ESY Stoneypath 74.95 346⇑*eP* **P** 19 40 05.4 -0.2
EAB Aberfoyle 74.97 347⇓*eP* **P** 19 40 05.7 0.0
EAB Aberfoyle 74.97 347⇑*eP* **P** 19 40 05.7 0.0
NIE Niedzica 74.98 330 *eP* **P** 19 40 06.6 +0.8
CRVS Cervenica-Dubn 75.03 329 *eP* **P** 19 40 06.1 +0.1
KSP Ksiaz 75.07 333 *eP* **P** 19 40 06.3 0.0
KSP Ksiaz 75.07 333 *eP* **P** 19 40 06.2 -0.1
PCOU Corrie 75.12 346 *eP* **P** 19 40 06.9 +0.2
PCOU Corrie 75.12 346 *eP* **P** 19 40 06.9 +0.2
EAU Auchinoon 75.16 346⇓*eP* **P** 19 40 06.9 +0.1
EAU Auchinoon 75.16 346⇑*eP* **P** 19 40 06.9 +0.1
EBL Broad Law 75.16 346 *eP* **P** 19 40 06.7 -0.1
EBL Broad Law 75.16 346 *eP* **P** 19 40 06.7 -0.1
XSO Sourhope Farm 75.29 345⇓*eP* **P** 19 40 07.7 +0.1
XSO AMb AMB 19 40 08.7
comp=Z,72nm,1.2s,mb5.3
XSO Sourhope Farm 75.29 345⇑*eP* **P** 19 40 07.7 +0.1
XSO AMb AMB 19 40 08.7
comp=Z,72nm,1.2s,mb5.3
OKC Ostrava-Krasne 75.35 331 *eP* **P** 19 40 08.3 +0.4
PMSU Muirshiel 75.36 347⇓*eP* **P** 19 40 07.7 -0.2
PMSU Muirshiel 75.36 347⇑*eP* **P** 19 40 07.7 -0.2
NRDL Niedersach Rie 75.38 337 *eP* **P** 19 40 08.7 +0.6
comp=Z,28nm,0.9s,mb5.0
UPC Upice 75.45 333 *eP* **P** 19 40 08.4 -0.1
CFR Carcaliu 75.57 323 P **P** 19 40 09.2 +0.1
EKA Eskdalemuir Ar 75.60 346 P **P** 19 40 09.4 +0.1
comp=Z,9.3nm,0.5s,mb4.7,baz=21,slow=5.0,SNR=91
MORC Moravsky Berou 75.60 332⇑*iP* **P** 19 40 09.7 +0.4
MORC Moravsky Berou 75.60 332 *eP* **P** 19 40 09.2 -0.1
comp=Z,44nm,1.0s,mb5.2
ESK Eskdalemuir 75.62 346⇑*eP* **P** 19 40 09.4 -0.1
ESK Eskdalemuir 75.62 346⇓*eP* **P** 19 40 09.4 -0.1
CLL Collm 75.65 335 *eP* **P** 19 40 08.8 -0.8
comp=Z,60nm,0.7s,mb5.4
CLL Collm 75.65 335⇑P **P** 19 40 09.2 -0.4
comp=Z,logA/T=1.9,mb5.4
CLL Collm 75.65 335⇑*iP* **P** 19 40 09.2 -0.4
comp=Z,60nm,0.7s,mb5.4
CLL Collm 75.65 335⇑*iP* **P** 19 40 09.2 -0.4
CLL pmax pmax
comp=Z,60nm,0.7s,mb5.4
CLL Collm 75.65 335⇑*iP* **P** 19 40 09.2 -0.4
comp=Z,60nm,0.7s,mb5.4
KECS Kecovo 75.72 329 *eP* **P** 19 40 10.1 +0.1
KECS pmax pmax
comp=Z,12nm,0.9s,mb4.6
KECS Kecovo 75.72 329 *eP* **P** 19 40 10.1 +0.1
comp=Z,12nm,0.9s,mb4.6
ECK Cauldkaine Hil 75.74 346⇑*eP* **P** 19 40 10.0 -0.2
ECK AMb AMB 19 40 11.7
comp=Z,54nm,1.5s,mb5.1
ECK Cauldkaine Hil 75.74 346⇓*eP* **P** 19 40 10.0 -0.2
ECK AMb AMB 19 40 11.7
comp=Z,54nm,1.5s,mb5.1
BRG Berggiesshubel 75.76 334 *eP* **P** 19 40 09.8 -0.4
comp=Z,18nm,1.1s,mb4.7
BRG Berggiesshubel 75.76 334 *iP* **P** 19 40 09.1 -1.1
comp=Z,11nm,1.1s,mb4.5
BRG *e* 19 40 17.6
comp=Z,3.2nm,0.8s
BRG Berggiesshubel 75.76 334 *iP* **P** 19 40 09.1 -1.1
BRG *e* 19 40 17.6
BRG pmax pmax
comp=Z,11nm,1.1s,mb4.5
BHH Howats Hill 75.84 346 *eP* **P** 19 40 10.8 +0.1
BHH Howats Hill 75.84 346 *eP* **P** 19 40 10.8 +0.1
PVCC Panska Ves 75.88 334 *eP* **P** 19 40 11.0 +0.1
FBE Freiberg 75.89 335 *eP* **P** 19 40 10.6 -0.4
comp=Z,37nm,1.0s,mb5.1
XAL Allendale 75.89 345⇓*eP* **P** 19 40 11.0 +0.1
XAL AMb AMB 19 40 11.9
comp=Z,82nm,1.3s,mb5.3
XAL Allendale 75.89 345⇑*eP* **P** 19 40 11.0 +0.1
XAL AMb AMB 19 40 11.9
comp=Z,82nm,1.3s,mb5.3
GMK Mull of Kintyr 75.97 347 *eP* **P** 19 40 12.0 +0.5
GMK Mull of Kintyr 75.97 347 *eP* **P** 19 40 12.0 +0.5
HOQ Hoqain 76.17 290 ⇓P **P** 19 40 12.8 +0.3
SNR=7.0
GCD Castle Douglas 76.18 346⇑*eP* **P** 19 40 12.5 -0.1
GCD Castle Douglas 76.18 346⇑*eP* **P** 19 40 12.5 -0.1

BBO1 Bothel 76.19 346 *eP* **P** 19 40 13.0 +0.3
BBO1 Bothel 76.19 346 *eP* **P** 19 40 13.0 +0.3
MLR Muntele Rosu 76.20 324 P **P** 19 40 13.5 +0.7
comp=Z,18nm,0.6s,mb5.0,baz=186,slow=2.5,SNR=19
MLR Muntele Rosu 76.20 324⇓*iP* **P** 19 40 13.8 +1.1
MLR Muntele Rosu 76.20 324 P **P** 19 40 13.5 +0.8
MLR pmax pmax
comp=Z,18nm,0.6s
MLR Muntele Rosu 76.20 324 P **P** 19 40 14.0 +1.3
MALT Malatya 76.26 312⇓*iP* **P** 19 40 14.2 +1.1
MALT Malatya 76.26 312 *eP* **P** 19 40 14.4 +1.3
comp=Z,9.9nm,0.6s,mb4.7
GTTG Gvttingen 76.28 337 *eP* **P** 19 40 13.0 -0.2
comp=Z,23nm,0.7s,mb5.0
VYHS Vyhne 76.28 330 *iP* **P** 19 40 13.5 +0.3
VYHS pmax pmax
comp=Z,17nm,1.1s,mb4.7
VYHS Vyhne 76.28 330 *iP* **P** 19 40 13.5 +0.3
comp=Z,17nm,1.1s,mb4.7
GAL1 Galloway 76.30 346 *eP* **P** 19 40 13.2 -0.1
GAL1 Galloway 76.30 346 *eP* **P** 19 40 13.2 -0.1
VRAC Vranov 76.31 332 P **P** 19 40 13.8 +0.4
comp=Z,27nm,0.7s,mb5.1,baz=39,slow=5.7,SNR=24
VRAC Vranov 76.31 332⇓*iP* **P** 19 40 13.8 +0.4
VRAC Vranov 76.31 332 P **P** 19 40 13.9 +0.5
GCL Cushendall 76.32 347⇑*eP* **P** 19 40 13.4 0.0
GCL Cushendall 76.32 347⇑*eP* **P** 19 40 13.4 0.0
DRGR 76.36 327⇑*iP* **P** 19 40 13.5 -0.1
DRGR 76.36 327 P **P** 19 40 13.8 +0.1
PRU Pruhonice 76.36 333 *eP* **P** 19 40 13.7 +0.1
PSZ Piszkesteto 76.41 329⇓*iP* **P** 19 40 14.6 +0.7
PSZ Piszkesteto 76.41 329 *eP* **P** 19 40 13.9 0.0
comp=Z,23nm,0.9s,mb4.9
VOIR 76.59 325⇑*iP* **P** 19 40 15.6 +0.6
VOIR 76.59 325⇑P **P** 19 40 15.6 +0.6
TANN Tannenbergstha 76.60 335 *eP* **P** 19 40 14.7 -0.3
comp=Z,8.0nm,0.8s,mb4.5
WERD Werda 76.61 335 *eP* **P** 19 40 14.8 -0.3
comp=Z,20nm,1.1s,mb4.8
MOX Moxa 76.63 335 *eP* **P** 19 40 14.9 -0.3
comp=Z,34nm,1.1s,mb5.0
MOX Moxa 76.63 335 *eP* **P** 19 40 15.0 -0.2
comp=Z,33nm,1.0s,mb5.0
MOX
comp=Z,700nm,23.0s
TREC Trest 76.68 333 *eP* **P** 19 40 15.6 +0.2
GUNZ Gunzen 76.68 335 *eP* **P** 19 40 15.5 0.0
comp=Z,25nm,1.0s,mb4.9
WTSB Winterswijk 76.71 339⇑*iP* **P** 19 40 15.5 -0.1
comp=Z,73nm,0.7s,mb5.5
WTSB Winterswijk 76.71 339⇑*iP* **P** 19 40 15.5 -0.1
comp=Z,73nm,0.7s,mb5.5
SMOL Smolenice 76.73 331 *eP* **P** 19 40 16.7 +0.9
WERN Wernitzgruen 76.74 335 *eP* **P** 19 40 15.6 -0.2
comp=Z,30nm,0.9s,mb5.0
BSY Bisa 76.84 289 ⇑P **P** 19 40 16.7 +0.4
SNR=5.9
UBBA Unterbreizbach 76.92 336 *eP* **P** 19 40 16.5 -0.3
comp=Z,15nm,0.7s,mb4.8
WIM Isle of Man 76.99 346 *eP* **P** 19 40 17.3 +0.1
WIM AMb AMB 19 40 19.6
comp=Z,53nm,1.1s,mb5.2
WIM Isle of Man 76.99 346 *eP* **P** 19 40 17.3 +0.1
WIM AMb AMB 19 40 19.6
comp=Z,53nm,1.1s,mb5.2
BUG Bochum-Univer 77.07 338 *eP* **P** 19 40 17.4 -0.3
comp=Z,30nm,0.7s,mb5.1
LHO Holmfirth 77.08 344⇑*eP* **P** 19 40 17.9 +0.2
LHO AMb AMB 19 40 19.4
comp=Z,60nm,1.0s,mb5.3
LHO Holmfirth 77.08 344⇑*eP* **P** 19 40 17.9 +0.2
LHO AMb AMB 19 40 19.4
comp=Z,60nm,1.0s,mb5.3
MANZ Manzenberg 77.08 335 *eP* **P** 19 40 17.6 -0.1
comp=Z,20nm,1.1s,mb4.8
GMM Mts of Mourne 77.10 347 *eP* **P** 19 40 17.6 -0.2
GMM Mts of Mourne 77.10 347 *eP* **P** 19 40 17.6 -0.2
ZST Bratislava 77.12 331 *eP* **P** 19 40 18.5 +0.6
ZST pmax pmax
comp=Z,25nm,0.9s,mb4.9
ZST Bratislava 77.12 331 *eP* **P** 19 40 18.5 +0.6
comp=Z,25nm,0.9s,mb4.9
ROTZ Rotzenmuhle 77.25 335 *eP* **P** 19 40 18.9 +0.2
comp=Z,29nm,0.9s,mb5.0
KBI1 Birley Grange 77.30 344⇑*eP* **P** 19 40 19.3 +0.4
KBI1 Birley Grange 77.30 344⇑*eP* **P** 19 40 19.3 +0.4
KHC Kanyserske Hory 77.41 334 *eP* **P** 19 40 19.8 +0.3
BR131 Keskin Array S 77.50 316 *eP* **P** 19 40 20.6 +0.6
comp=Z,9.2nm,0.9s,mb4.5
BRTR Keskin Array B 77.50 316 P **P** 19 40 20.4 +0.3
comp=Z,8.2nm,0.9s,mb4.5,baz=69,slow=4.1,SNR=38
GZR Gura Zlata 77.51 326⇑*iP* **P** 19 40 19.7 -0.4
GZR Gura Zlata 77.51 326 P **P** 19 40 20.3 +0.2
KWE Weaver Farm 77.58 344 *eP* **P** 19 40 20.8 +0.3
KWE Weaver Farm 77.58 344 *eP* **P** 19 40 20.8 +0.3
GRA1 Grafenberg Arr 77.60 335 *eP* **P** 19 40 20.9 +0.3
comp=Z,57nm,0.6s,mb5.5
GRF Grafenberg Arr 77.60 335 *eP* **P** 19 40 20.9 +0.3
comp=Z,57nm,0.6s,mb5.5
GRF Grafenberg Arr 77.60 335 *eP* **P** 19 40 20.9 +0.3
GRF pmax pmax
comp=Z,57nm,0.6s,mb5.5
GRF Grafenberg Arr 77.60 335 *eP* **P** 19 40 20.9 +0.3
GRF pmax pmax
comp=Z,57nm,0.6s,mb5.5
WET Wettzell 77.61 334 *eP* **P** 19 40 20.8 +0.1
comp=Z,36nm,1.0s,mb5.1
WET Wettzell 77.61 334 *eP* **P** 19 40 20.8 +0.1
WET pmax pmax
comp=Z,36nm,1.0s,mb5.1
GEC2 GERESS Array S 77.63 333 *eP* **P** 19 40 20.4 -0.3
comp=Z,16nm,0.6s,mb4.9
GEC2 GERESS Array S 77.63 333 *eP* **P** 19 40 20.4 -0.3
GEC2 pmax pmax
comp=Z,16nm,0.6s,mb4.9
GERES GERESS Array B 77.63 333 P **P** 19 40 20.7 -0.1
comp=Z,13nm,0.6s,mb4.9,baz=35,slow=5.4,SNR=132
WPM1 Penmaenmawr 77.72 346 *eP* **P** 19 40 21.2 0.0
WPM1 Penmaenmawr 77.72 346 *eP* **P** 19 40 21.2 0.0
BZS Buzias 77.75 327⇓*iP* **P** 19 40 20.9 -0.6
BZS Buzias 77.75 327 P **P** 19 40 21.4 -0.1
UMR Umm Al-Rimmam 77.76 300 *eP* **P** 19 40 21.6 +0.1
UMR AMb AMB 19 40 22.3
comp=Z,130nm,0.7s,mb5.8
CONA Conrad Observa 77.76 332 *iP* **P** 19 40 22.1 +0.6
comp=Z,22nm,0.6s,mb5.1,SNR=40
ANTO Ankara 77.79 317 *eP* **P** 19 40 22.3 +0.7
ANTO pmax pmax
comp=Z,7.0nm,0.4s,mb4.7
ANTO Ankara 77.79 317 *eP* **P** 19 40 22.3 +0.7
comp=Z,6.5nm,0.4s,mb4.7
MIB Mutribah 77.79 301 *eP* **P** 19 40 21.8 +0.2
MIB AMb AMB 19 40 23.2
comp=Z,172nm,0.6s,mb5.9
TNS Taunus Mts 77.88 337 *eP* **P** 19 40 22.1 -0.1
comp=Z,45nm,0.6s,mb5.4
TNS Taunus Mts 77.88 337 *eP* **P** 19 40 22.1 -0.1
TNS pmax pmax
comp=Z,45nm,0.6s,mb5.4
SBD1 Bryn Du 77.94 345 *eP* **P** 19 40 22.4 -0.1
SBD1 Bryn Du 77.94 345 *eP* **P** 19 40 22.4 -0.1
HGN Kaisenskgroeve 78.03 339⇑*iP* **P** 19 40 22.9 -0.1
comp=Z,51nm,0.7s,mb5.4
HGN Heimansgroeve 78.03 339⇑*iP* **P** 19 40 22.9 -0.1
comp=Z,51nm,0.7s,mb5.4
KBD Kabd 78.05 300 *eP* **P** 19 40 23.2 +0.2
KBD AMb AMB 19 40 24.1
comp=Z,324nm,0.6s
BEBN Eben Emael 78.06 339 P **P** 19 40 23.0 -0.1
DLF Lyons Farm 78.10 347⇑*iP* **P** 19 40 23.6 +0.2
MEM Membach 78.15 339 P **P** 19 40 23.5 -0.1
DCN Croghan 78.17 348 *eP* **P** 19 40 23.5 -0.2
RST Umm Al-Ruwaisa 78.22 301 *eP* **P** 19 40 23.8 -0.2
RST AMb AMB 19 40 24.6
comp=Z,149nm,0.6s,mb5.9
QRN Al-Qurain 78.23 300 *eP* **P** 19 40 24.3 +0.2
QRN AMb AMB 19 40 25.7
comp=Z,92nm,0.5s,mb5.8
HLM1 Long Mynd 78.25 345⇑*eP* **P** 19 40 24.6 +0.4
HLM1 AMb AMB 19 40 29.5
comp=Z,28nm,1.2s,mb4.8
HLM1 Long Mynd 78.25 345⇑*eP* **P** 19 40 24.6 +0.4
HLM1 AMb AMB 19 40 29.5
comp=Z,28nm,1.2s,mb4.8
NAY Al-Naaiem 78.26 300 *eP* **P** 19 40 24.3 +0.1

NAY AMb AMB 19 40 25.0
comp=Z,53nm,0.9s,mb5.3
RDF Al-Radifah 78.31 300 *eP* **P** 19 40 24.9 +0.3
RDF AMb AMB 19 40 26.6
comp=Z,130nm,0.9s,mb5.7
PKSM Moragy 78.32 329⇑*iP* **P** 19 40 24.0 -0.6
PKSM Moragy 78.32 329 P **P** 19 40 23.9 -0.6
MOA Molln 78.34 333⇓*iP* **P** 19 40 24.7 0.0
comp=Z,8.6nm,0.8s,mb4.5,SNR=26
TOD Tromm 78.35 337 *eP* **P** 19 40 24.8 +0.1
UCC Uccle 78.37 340 P **P** 19 40 24.5 -0.4
ABH Alteburg 78.43 338 *eP* **P** 19 40 25.2 0.0
ARSA Arzberg 78.46 331 *iP* **P** 19 40 25.8 +0.4
comp=Z,13nm,1.0s,mb4.6,SNR=17
BCLA Clavier 78.50 339 P **P** 19 40 25.7 +0.1
SNF Seneffe 78.66 340 P **P** 19 40 26.6 +0.2
HTR Trewern Hill 78.74 345 *eP* **P** 19 40 26.6 -0.3
HTR AMb AMB 19 40 28.8
comp=Z,42nm,1.3s,mb5.1
HTR Trewern Hill 78.74 345 *eP* **P** 19 40 26.6 -0.3
HTR AMb AMB 19 40 28.8
comp=Z,42nm,1.3s,mb5.1
MCH1 Michaelchurch 78.77 345 *eP* **P** 19 40 26.7 -0.3
MCH1 *eP* 19 40 26.7
MCH1 Michaelchurch 78.77 345 *eP* **P** 19 40 26.7 -0.3
MCH1 *eP* 19 40 26.7
GIVF Givet 78.91 339 *eP* **P** 19 40 27.2 -0.6
comp=Z,68nm,1.1s,mb5.1
GIVF Givet 78.91 339 *eP* **P** 19 40 27.2 -0.6
GIVF pmax pmax
comp=Z,34nm,1.1s,mb5.1
GIVF Givet 78.91 339 *eP* **P** 19 40 27.2 -0.6
comp=Z,34nm,1.1s,mb5.1
FUR Furstenfeldbru 78.96 335 *eP* **P** 19 40 28.2 +0.1
comp=Z,56nm,0.9s,mb5.4
FUR Furstenfeldbru 78.96 335 *eP* **P** 19 40 28.2 +0.1
FUR pmax pmax
comp=Z,56nm,0.9s,mb5.4
DOU Dourbes 78.97 339 P **P** 19 40 28.3 +0.1
WLF Walferdange 78.99 338 *eP* **P** 19 40 29.0 +0.8
comp=Z,26nm,1.1s,mb5.0
WLF Walferdange 78.99 338 P **P** 19 40 30.1 +1.9
STU Stuttgart 79.00 336 *eP* **P** 19 40 28.5 +0.2
comp=Z,34nm,0.8s,mb5.2
SWN1 Swindon 79.01 344⇓*eP* **P** 19 40 28.6 +0.3
SWN1 Swindon 79.01 344⇑*eP* **P** 19 40 28.6 +0.3
HGH Gray Hill 79.08 344⇑*eP* **P** 19 40 28.4 -0.3
HGH AMb AMB 19 40 31.4
comp=Z,55nm,1.0s,mb5.3
HGH Gray Hill 79.08 344⇑*eP* **P** 19 40 28.4 -0.3
HGH AMb AMB 19 40 31.4
comp=Z,55nm,1.0s,mb5.3
BAIF Baives 79.10 340 *eP* **P** 19 40 28.4 -0.4
comp=Z,15nm,0.6s,mb4.7
BAIF Baives 79.10 340 *eP* **P** 19 40 28.4 -0.4
BAIF pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
BAIF Baives 79.10 340 *eP* **P** 19 40 28.4 -0.4
comp=Z,7.7nm,0.6s,mb4.7
PERS Pernice 79.14 331 *iP* **P** 19 40 29.1 0.0
LANF Langenberg 79.19 337 *eP* **P** 19 40 29.7 +0.4
DIM Dimitrovgrad 79.21 323 *iP* **P** 19 40 30.2 +0.7
KBA Koelnbreinsper 79.31 333⇓*iP* **P** 19 40 30.9 +0.9
comp=Z,50nm,0.9s,mb5.3
KBA Koelnbreinsper 79.31 333⇓*iP* **P** 19 40 30.9 +0.9
KBA pmax pmax
comp=Z,50nm,0.9s,mb5.3
KBA Koelnbreinsper 79.31 333⇓*iP* **P** 19 40 30.9 +0.9
comp=Z,50nm,0.9s,mb5.3
OBKA Obir 79.43 332⇓*iP* **P** 19 40 30.5 -0.2
comp=Z,16nm,0.7s,mb5.0,SNR=13
STKA Stephens Creek 79.43 189 P **P** 19 40 29.4 -1.3
comp=Z,0.6nm,0.6s,baz=140,slow=7.9,SNR=3.3
DOBS Dobrina 79.45 331 *eP* **P** 19 40 30.3 -0.5
GRUS Gruza 79.56 327⇓*iP* **P** 19 40 30.9 -0.5
WATA Walderalm 79.62 334⇑*iP* **P** 19 40 32.2 +0.5
comp=Z,37nm,1.0s,mb5.2
WATA Walderalm 79.62 334⇑*iP* **P** 19 40 32.2 +0.5
WATA pmax pmax
comp=Z,37nm,1.0s,mb5.2
BFO Black Forest 79.64 336 P **P** 19 40 32.0 +0.2
comp=Z,193nm,0.9s,mb5.9,SNR=12
BFO Black Forest 79.64 336 *eP* **P** 19 40 31.9 +0.1
comp=Z,38nm,1.0s,mb5.2
BFO Black Forest 79.64 336 *eP* **P** 19 40 31.9 +0.1
BFO pmax pmax
comp=Z,38nm,1.0s,mb5.2
DIVS Divcibare 79.65 327⇓*iP* **P** 19 40 31.8 0.0
WTTA Wattenberg 79.66 334 *iP* **P** 19 40 32.6 +0.7
comp=Z,58nm,0.9s,mb5.4,SNR=29
WTTA Wattenberg 79.66 334 *iP* **P** 19 40 32.6 +0.7
WTTA pmax pmax
comp=Z,58nm,0.9s,mb5.4
VTS Vitosha 79.70 324⇓*iP* **P** 19 40 32.3 +0.2
VTS Vitosha 79.70 324 P **P** 19 40 32.5 +0.4
MOTA Moosalm 79.75 334⇑*iP* **P** 19 40 32.8 +0.4
comp=Z,42nm,1.0s,mb5.2,SNR=30
MOTA Moosalm 79.75 334⇑*iP* **P** 19 40 32.8 +0.4
MOTA pmax pmax
comp=Z,42nm,1.0s,mb5.2
HEX Exmoor 79.81 345 *eP* **P** 19 40 32.3 -0.4
HEX Exmoor 79.81 345 *eP* **P** 19 40 32.3 -0.4
WLS Welschbruch 79.83 337 *eP* **P** 19 40 32.7 -0.1
SQTA Sankt Quirin 79.83 334⇑*iP* **P** 19 40 33.4 +0.6
comp=Z,36nm,1.0s,mb5.2,SNR=16
SQTA Sankt Quirin 79.83 334⇑*iP* **P** 19 40 33.5 +0.7
SQTA pmax pmax
comp=Z,36nm,1.0s,mb5.2
CDF Champ du Feu 79.85 337 *eP* **P** 19 40 32.5 -0.4
comp=Z,80nm,0.9s,mb5.2
CDF Champ du Feu 79.85 337 *eP* **P** 19 40 32.5 -0.4
CDF pmax pmax
comp=Z,40nm,0.9s,mb5.2
CDF Champ du Feu 79.85 337 *eP* **P** 19 40 32.5 -0.4
comp=Z,40nm,0.9s,mb5.2
PTCC Patocco-Chiusa 79.91 332 P **P** 19 40 32.6 -0.6
comp=Z,18nm,0.6s,mb5.1
FVI Forni Avoltri 79.91 333 P **P** 19 40 32.8 -0.5
FVI pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
FVI Forni Avoltri 79.91 333 P **P** 19 40 32.8 -0.5
comp=Z,10nm,0.5s,mb4.9
VISS Visnje 79.96 331 *iP* **P** 19 40 32.4 -1.1
HTL Hartland 79.99 345 *eP* **P** 19 40 33.0 -0.7
HTL Hartland 79.99 345 *eP* **P** 19 40 33.0 -0.7
ECH Echery 80.06 337 *eP* **P** 19 40 33.9 -0.2
BOJS Bojanci 80.09 331 *eP* **P** 19 40 33.9 -0.3
FELD Feldberg im Sc 80.15 336⇑*eP* **P** 19 40 34.4 -0.1
CEY Cerknica 80.15 331 *iP* **P** 19 40 33.7 -0.8
DAVA Damuels 80.16 335⇑*iP* **P** 19 40 34.9 +0.3
comp=Z,24nm,0.9s,mb5.0
MMB Musomiste 80.34 323 *iP* **P** 19 40 35.6 +0.1
MEZF Maizieres J'vi 80.34 339 *eP* **P** 19 40 35.5 -0.1
comp=Z,91nm,0.9s,mb5.3
MEZF Maizieres J'vi 80.34 339 *eP* **P** 19 40 35.5 -0.1
comp=Z,91nm,0.9s,mb5.6
THEF They Montfort 80.36 338 *eP* **P** 19 40 35.5 -0.1
KKB Krupnik 80.36 324 *iP* **P** 19 40 35.9 +0.2
MOF Molkenrain 80.40 337 *eP* **P** 19 40 35.8 -0.1
DYA Yadsworthy 80.43 345⇓*eP* **P** 19 40 36.2 +0.1
DYA Yadsworthy 80.43 345⇑*eP* **P** 19 40 36.2 +0.1
HAU Haudompre 80.47 337 *eP* **P** 19 40 35.7 -0.5
comp=Z,43nm,0.9s,mb5.0
HAU *eR*
comp=Z,34nm,20.2s
HAU Haudompre 80.47 337 *eP* **P** 19 40 35.7 -0.5
HAU pmax pmax
comp=Z,21nm,0.9s,mb5.0
HAU MLR MLR
comp=Z,30nm,20.3s
HAU Haudompre 80.47 337 *eP* **P** 19 40 35.7 -0.5
comp=Z,21nm,0.9s,mb5.0
HAU LR LR
comp=Z,30nm,20.3s
APPI Appiano 80.49 334 *iPr* 19 40 35.8
HINF Hinteralfeld 80.51 337 *eP* **P** 19 40 35.7 -0.8
comp=Z,29nm,0.8s,mb4.8
HINF Hinteralfeld 80.51 337 *eP* **P** 19 40 35.7 -0.8
HINF pmax pmax
comp=Z,14nm,0.8s,mb4.8
HINF Hinteralfeld 80.51 337 *eP* **P** 19 40 35.7 -0.8
comp=Z,14nm,0.8s,mb4.9
BBS Basel-Blauen 80.66 337 *eP* **P** 19 40 37.5 +0.2
BRMO Bormio 80.75 334 P **P** 19 40 38.6 +0.9
CTI Castel Tesino 80.75 333 P **P** 19 40 37.1 -0.7

CTI pmax pmax
comp=Z,17nm,0.7s,mb5.0
CTI Castel Tesino 80.75 333 P **P** **19 40 37.1 -0.7**
comp=Z,17nm,0.7s,mb5.0
CRQ2 Rosemanowes 2 80.91 345 *eP* **P** **19 40 38.8 +0.2**
CRQ2 AMb AMB 19 40 40.6
comp=Z,78nm,1.6s,mb5.3
CRQ2 Rosemanowes 2 80.91 345 *eP* **P** **19 40 38.8 +0.2**
CRQ2 AMb AMB 19 40 40.6
comp=Z,78nm,1.6s,mb5.3
SKO Skopje 80.92 325 *eP* **P** **19 40 40.0 +1.4**
LOMF Lomont 80.95 337 *eP* **P** **19 40 39.0 +0.2**
CMA1 Manaccan 80.98 345 *eP* **P** **19 40 39.3 +0.4**
CMA1 Manaccan 80.98 345 *eP* **P** **19 40 39.3 +0.4**
VAY Valandovo 81.03 324 *eP* **P** **19 40 38.8 -0.4**
TUE Stuetta 81.05 335 P **P** **19 40 40.4 +1.1**
MABI Malga Bissina 81.09 334 P **P** **19 40 39.6 +0.1**
JRS Jersey 81.28 343 *eP* **P** **19 40 40.8 +0.3**
JRS Jersey 81.28 343 *eP* **P** **19 40 40.8 +0.3**
FLN La Foliniere 81.36 342 *eP* **P** **19 40 40.7 -0.3**
comp=Z,28nm,0.8s,mb4.8
FLN *eR*
comp=Z,37nm,18.0s
FLN La Foliniere 81.36 342 *eP* **P** **19 40 40.7 -0.3**
FLN pmax pmax
comp=Z,14nm,0.8s,mb4.8
FLN MLR MLR
comp=Z,40nm,18.0s
FLN La Foliniere 81.36 342 *eP* **P** **19 40 40.7 -0.3**
comp=Z,14nm,0.8s,mb4.8
FLN LR LR
comp=Z,40nm,18.0s
CSS Prodhromos 81.43 313 *eP* **P** **19 40 41.1 -0.2**
comp=Z,20nm,0.6s,mb5.1
LDF La Druitiere 81.45 342 *eP* **P** **19 40 41.1 -0.3**
comp=Z,12nm,0.6s,mb4.6
LDF La Druitiere 81.45 342 *eP* **P** **19 40 41.1 -0.3**
LDF pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
LDF La Druitiere 81.45 342 *eP* **P** **19 40 41.1 -0.3**
comp=Z,5.8nm,0.6s,mb4.6
LOR Lormes 81.78 339⇑ *iP* **P** **19 40 42.9 -0.3**
comp=Z,46nm,0.7s,mb5.1
LOR *eR*
comp=Z,38nm,18.2s
LOR Lormes 81.78 339⇑ *iP* **P** **19 40 42.9 -0.3**
LOR pmax pmax
comp=Z,23nm,0.7s,mb5.1
LOR MLR MLR
comp=Z,40nm,18.3s
LOR Lormes 81.78 339⇑ *iP* **P** **19 40 42.9 -0.3**
comp=Z,23nm,0.7s,mb5.1
LOR LR LR
comp=Z,40nm,18.3s
GRR Gorron 81.80 342 *eP* **P** **19 40 43.1 -0.2**
comp=Z,41nm,0.8s,mb5.0
GRR Gorron 81.80 342 *eP* **P** **19 40 43.1 -0.2**
GRR pmax pmax
comp=Z,20nm,0.8s,mb5.0
GRR Gorron 81.80 342 *eP* **P** **19 40 43.1 -0.2**
comp=Z,20nm,0.8s,mb5.0
ASF Jabal al Asfar 81.81 309 P **P** **19 40 44.3 +0.9**
comp=Z,12nm,0.9s,mb4.7,baz=265,slow=4.0,SNR=20
CABF La Chapelle 81.82 337⇑ *iP* **P** **19 40 43.3 -0.1**
comp=Z,27nm,0.9s,mb4.8
CABF La Chapelle 81.82 337⇑ *iP* **P** **19 40 43.3 -0.1**
CABF pmax pmax
comp=Z,14nm,0.9s,mb4.8
CABF La Chapelle 81.82 337⇑ *iP* **P** **19 40 43.3 -0.1**
comp=Z,14nm,0.9s,mb4.8
MMAI Mount Meron Ar 81.92 311 P **P** **19 40 44.9 +1.0**
comp=Z,31nm,0.7s,mb5.3,baz=37,slow=7.3,SNR=59
SSF Saint Saulge 82.06 339 *eP* **P** **19 40 44.4 -0.3**
comp=Z,17nm,0.7s,mb4.7
SSF Saint Saulge 82.06 339 *eP* **P** **19 40 44.4 -0.3**
SSF pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
SSF Saint Saulge 82.06 339 *eP* **P** **19 40 44.4 -0.3**
comp=Z,8.6nm,0.7s,mb4.7
HYF Humbligny 82.08 340 *eP* **P** **19 40 45.0 +0.3**
SGMF Saint Gilles 82.27 343 *eP* **P** **19 40 45.9 +0.2**
comp=Z,38nm,0.5s,mb5.2
SGMF Saint Gilles 82.27 343 *eP* **P** **19 40 45.9 +0.2**
SGMF pmax pmax
comp=Z,19nm,0.5s,mb5.2
SGMF Saint Gilles 82.27 343 *eP* **P** **19 40 45.9 +0.2**
comp=Z,19nm,0.5s,mb5.2
ROSF Rostrenen 82.33 344 *eP* **P** **19 40 46.3 +0.2**
comp=Z,35nm,0.7s,mb5.0
ROSF Rostrenen 82.33 344 *eP* **P** **19 40 46.3 +0.2**
ROSF pmax pmax
comp=Z,17nm,0.7s,mb5.0
ROSF Rostrenen 82.33 344 *eP* **P** **19 40 46.3 +0.2**
comp=Z,18nm,0.7s,mb5.0
AVF Avril sur Loir 82.35 339⇑ *iP* **P** **19 40 46.2 0.0**
comp=Z,36nm,0.7s,mb5.0
AVF Avril sur Loir 82.35 339⇑ *iP* **P** **19 40 46.2 0.0**
AVF pmax pmax
comp=Z,18nm,0.7s,mb5.0
AVF Avril sur Loir 82.35 339⇑ *iP* **P** **19 40 46.2 0.0**
comp=Z,18nm,0.7s,mb5.0
SMF Signal de Mont 82.37 339⇑ *iP* **P** **19 40 46.2 -0.1**
comp=Z,85nm,0.9s,mb5.3
SMF Signal de Mont 82.37 339⇑ *iP* **P** **19 40 46.2 -0.1**
SMF pmax pmax
comp=Z,43nm,0.9s,mb5.3
SMF Signal de Mont 82.37 339⇑ *iP* **P** **19 40 46.2 -0.1**
comp=Z,42nm,0.9s,mb5.3
BOB Bobbio (Coli) 82.57 334 P **P** **19 40 48.2 +0.9**
BOB pmax pmax
comp=Z,21nm,0.5s,mb5.2
BOB Bobbio (Coli) 82.57 334 P **P** **19 40 48.2 +0.9**
comp=Z,21nm,0.5s,mb5.2
GSCL Gusciola 82.61 333 *i* Pr 19 40 48.8
comp=Z,12nm,0.6s
SFI Santa Sofia 82.62 332 *i* P **P** **19 40 48.8 +1.2**
SFI pmax pmax
comp=Z,30nm,0.9s,mb5.1
SFI Santa Sofia 82.62 332 *i* Pr 19 40 48.8
comp=Z,30nm,0.9s
LPL La Plagne 82.66 336⇑ *iP* **P** **19 40 48.4 +0.6**
comp=Z,52nm,1.0s,mb5.0
LPL La Plagne 82.66 336⇑ *iP* **P** **19 40 48.4 +0.6**
LPL pmax pmax
comp=Z,26nm,1.0s,mb5.0
LPL La Plagne 82.66 336⇑ *iP* **P** **19 40 48.4 +0.6**
comp=Z,26nm,1.0s,mb5.0
LPG La Plagne 82.67 336⇑ *iP* **P** **19 40 48.6 +0.8**
comp=Z,44nm,0.9s,mb5.0
LPG La Plagne 82.67 336⇑ *iP* **P** **19 40 48.6 +0.8**
LPG pmax pmax
comp=Z,22nm,0.9s,mb5.0
LPG La Plagne 82.67 336⇑ *iP* **P** **19 40 48.6 +0.8**
comp=Z,22nm,0.9s,mb5.0
BGF Bois d'Agland 82.69 339 *eP* **P** **19 40 48.0 +0.1**
comp=Z,17nm,0.5s,mb4.8
BGF Bois d'Agland 82.69 339 *eP* **P** **19 40 48.0 +0.1**
BGF pmax pmax
comp=Z,9.0nm,0.5s,mb4.9
BGF Bois d'Agland 82.69 339 *eP* **P** **19 40 48.0 +0.1**
comp=Z,8.6nm,0.5s,mb4.8
QUIF Quistinic 82.71 344 *eP* **P** **19 40 48.0 0.0**
PLDF La Plantade 83.05 338 *eP* **P** **19 40 50.3 +0.5**
AGO Saint Agoulin 83.10 339 *eP* **P** **19 40 51.2 +1.2**
TCF Toulx Ste Croi 83.10 340⇑ *iP* **P** **19 40 50.1 +0.1**
comp=Z,29nm,1.0s,mb4.8
TCF Toulx Ste Croi 83.10 340⇑ *iP* **P** **19 40 50.1 +0.1**
TCF pmax pmax
comp=Z,14nm,1.0s,mb4.8
TCF Toulx Ste Croi 83.10 340⇑ *iP* **P** **19 40 50.1 +0.1**
comp=Z,14nm,1.0s,mb4.8
BNI Bardonecchia 83.10 336 *eP* **P** **19 40 50.2 +0.1**
BNI pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
BNI Bardonecchia 83.10 336 *eP* **P** **19 40 50.2 +0.2**
comp=Z,9.0nm,0.8s,mb4.7
MBDF Montbardon 83.38 336 *eP* **P** **19 40 51.9 +0.4**
comp=Z,15nm,0.6s,mb4.7
MBDF Montbardon 83.38 336 *eP* **P** **19 40 51.9 +0.4**
MBDF pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
MBDF Montbardon 83.38 336 *eP* **P** **19 40 51.9 +0.4**
comp=Z,7.7nm,0.6s,mb4.7
PYM Petit Puy Mans 83.41 339 *eP* **P** **19 40 52.3 +0.7**
ORIF Oris-en-Rattie 83.44 337 *eP* **P** **19 40 52.3 +0.5**
comp=Z,22nm,0.7s,mb4.8
ORIF *eR*
comp=Z,43nm,19.8s
ORIF Oris-en-Rattie 83.44 337 *eP* **P** **19 40 52.3 +0.5**
ORIF pmax pmax
comp=Z,11nm,0.7s,mb4.8
ORIF Oris-en-Rattie 83.44 337 *eP* **P** **19 40 52.3 +0.5**
comp=Z,11nm,0.7s,mb4.8
BLA Blacksburg 83.59 40 *eP* **P** **19 40 52.0 -0.6**
BLA pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
BLA Blacksburg 83.59 40 *eP* **P** **19 40 52.0 -0.6**
comp=Z,1.4nm,0.7s
VIVF Saint-Julien-l 83.82 337 *eP* **P** **19 40 54.2 +0.5**
comp=Z,29nm,0.9s,mb4.8
VIVF Saint-Julien-l 83.82 337 *eP* **P** **19 40 54.2 +0.5**
VIVF pmax pmax
comp=Z,15nm,0.9s,mb4.8
VIVF Saint-Julien-l 83.82 337 *eP* **P** **19 40 54.2 +0.5**
comp=Z,15nm,0.9s,mb4.8
SBF Sospel 83.98 335⇑ *iP* **P** **19 40 55.0 +0.4**
comp=Z,32nm,0.7s,mb5.0
SBF Sospel 83.98 335⇑ *iP* **P** **19 40 55.0 +0.4**
SBF pmax pmax
comp=Z,16nm,0.7s,mb5.0
SBF Sospel 83.98 335⇑ *iP* **P** **19 40 55.0 +0.4**
comp=Z,16nm,0.7s,mb5.0
RJF Les Rejaudoux 84.19 340 *eP* **P** **19 40 55.6 0.0**
comp=Z,35nm,0.9s,mb4.9
RJF *eR*
comp=Z,43nm,19.2s
RJF Les Rejaudoux 84.19 340 *eP* **P** **19 40 55.6 0.0**
RJF pmax pmax
comp=Z,18nm,0.9s,mb4.9
RJF MLR MLR
comp=Z,40nm,19.3s
RJF Les Rejaudoux 84.19 340 *eP* **P** **19 40 55.6 0.0**
comp=Z,18nm,0.9s,mb4.9
RJF LR LR
comp=Z,40nm,19.3s
SMRF Simiane la Rot 84.40 336 *eP* **P** **19 40 56.9 +0.2**
CAF Calviac 84.42 339 *eP* **P** **19 40 57.6 +0.9**
comp=Z,34nm,0.7s,mb5.0
CAF Calviac 84.42 339 *eP* **P** **19 40 57.6 +0.9**
CAF pmax pmax
comp=Z,17nm,0.7s,mb5.0
CAF Calviac 84.42 339 *eP* **P** **19 40 57.6 +0.9**
comp=Z,17nm,0.7s,mb5.0
FRF La Foret Royal 84.49 336 *eP* **P** **19 40 56.6 -0.5**
LFF La Frestale 84.72 340 *eP* **P** **19 40 59.0 +0.7**
comp=Z,36nm,0.6s,mb5.2
LFF La Frestale 84.72 340 *eP* **P** **19 40 59.0 +0.7**
LFF pmax pmax
comp=Z,18nm,0.6s,mb5.2
LFF La Frestale 84.72 340 *eP* **P** **19 40 59.0 +0.7**
comp=Z,18nm,0.6s,mb5.2
LMR La Mourre 84.73 336 *eP* **P** **19 40 58.1 -0.3**
comp=Z,39nm,0.9s,mb5.0
LMR La Mourre 84.73 336 *eP* **P** **19 40 58.1 -0.3**
LMR pmax pmax
comp=Z,20nm,0.9s,mb5.0
LMR La Mourre 84.73 336 *eP* **P** **19 40 58.1 -0.3**
comp=Z,20nm,0.9s,mb5.0
EIL Elat 84.80 309 *eP* **P** **19 40 59.5 +0.8**
comp=Z,1μm,1.2s
IDI Anoyia 85.13 319 P **P** **19 40 59.3 -1.0**
comp=Z,21nm,0.6s,mb5.2,baz=47,slow=10,SNR=19
MTLF Montolieu 85.87 339 *eP* **P** **19 41 04.9 +0.9**
comp=Z,20nm,0.6s,mb4.9
MTLF Montolieu 85.87 339 *eP* **P** **19 41 04.9 +0.9**
MTLF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
MTLF Montolieu 85.87 339 *eP* **P** **19 41 04.9 +0.9**
comp=Z,9.8nm,0.6s,mb4.9
EPF Esparros 86.61 340 *eP* **P** **19 41 07.1 -0.6**
comp=Z,8.7nm,0.6s,mb4.5
EPF Esparros 86.61 340 *eP* **P** **19 41 07.1 -0.6**
comp=Z,4.3nm,0.6s,mb4.6
SJPF Ste Jean 86.90 341 *eP* **P** **19 41 09.9 +0.9**
ETSF Etsaut 86.95 340 *eP* **P** **19 41 09.1 -0.2**
comp=Z,11nm,0.6s,mb4.7
ETSF Etsaut 86.95 340 *eP* **P** **19 41 09.1 -0.2**
ETSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ETSF Etsaut 86.95 340 *eP* **P** **19 41 09.1 -0.2**
comp=Z,5.7nm,0.6s,mb4.7
ESDC Sonseca Array 90.78 342 P **P** **19 41 26.5 -0.8**
comp=Z,0.6nm,0.5s,mb4.0,baz=352,slow=3.9,SNR=5.5
KEST Kesra 90.83 331 P **P** **19 41 28.4 +0.9**
comp=Z,4.5nm,0.7s,mb4.7,baz=15,slow=3.3,SNR=20
MDT Midelt 97.51 340 P **P** **19 41 57.8 -0.3**
comp=Z,1.2nm,0.8s,mb4.5,baz=270,slow=3.0,SNR=3.6
MDT LR LR 20 28 32.1
comp=Z,42nm,20.3s,baz=357,slow=37
TORD Torodi Ar. Bea 114.24 328 PKP PKiKP 19 47 01.9 -1.3
comp=Z,0.6nm,0.5s,baz=15,slow=2.0,SNR=18
TORD PKKPbc PKKPbc 19 57 40.4 -2.8
comp=Z,0.3nm,1.1s,baz=206,slow=3.2,SNR=4.4
TORD Torodi Ar. Bea 114.24 328 PKP PKiKP 19 47 01.9 -1.3
TORD PKKPbc PKKPbc 19 57 40.4 -2.8
DBIC Dimbokro 122.49 333 PKP PKPdf 19 47 17.3 -1.7
comp=Z,3.7nm,0.8s,baz=225,slow=1.4,SNR=6.7
DBIC Dimbokro 122.49 333 PKP PKPdf 19 47 17.3 -1.7
LPAZ La Paz 134.63 61 PKP PKPdf 19 47 41.8 -0.3
comp=Z,0.6nm,0.6s,baz=307,slow=5.1,SNR=3.6
BDFB Brasilia 144.24 35 PKP PKPdf 19 47 57.5 -2.0
comp=Z,5.8nm,0.8s,baz=329,slow=5.9,SNR=5.2
CPUP Villa Florida 148.72 58 PKPbc PKPbc 19 48 09.6 -1.4
comp=Z,1.9nm,0.5s,baz=281,slow=1.6,SNR=10.0
CPUP Villa Florida 148.72 58 PKPbc PKPbc 19 48 09.6 -1.4
SNAA Sanae 152.94 197 PKPbc PKPbc 19 48 17.6 -3.3
comp=Z,0.7nm,0.6s,baz=201,slow=8.3,SNR=12
SNAA Sanae 152.94 197 *e*PKPdf PKPdf 19 48 17.9 +4.3
SNAA *e* 19 48 26.6

*ISCJB **30** 19:28:48.8±0.9, 132N±02×1443E±06, h150km±31km, mb4.1/6, Error ellipse: s-maj=102.3km s-min=18.3km az=154.2*
*IDC **30** 19:28:49.4±1.1, 1327N×144.08E, h137km±15km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp4.0/4, Error ellipse: s-maj=46.7km s-min=20.8km az=88.0*
*NEIC **30** 19:28:49.9±0.9, 1328N×144.20E, h149km±11km, mb4.5/1, Error ellipse: s-maj=32.8km s-min=14.6km az=93.0*

ISC 30 19:28:50.3±0.8, 132N±02×1443E±06, h147km±31km, n12, σ0s56/12, mb4.1/6, 1D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**0.67**	**56**	P		**Pn**	**19 29 12.4**	**+0.1**
	298nm,0.3s,baz=187,slow=6.5,SNR=145							
GUMO				S		**Sn**	**19 29 29.0**	**-0.1**
	442nm,0.3s,baz=12,slow=20,SNR=23							
SSE	**Sheshan**	**27.74**	**314**	P		**P**	**19 34 26.0**	**+1.1**
SSE				AMB		AMB		
	comp=Z,26nm,0.7s,mb5.1							
SSE				AMB		AMB		
	comp=Z,13nm,3.3s							
WB2	**Warramunga Arr**	**34.37**	**197**	⇓ *iP*		**P**	**19 35 23.1**	**0.0**
WRA	**Warramunga Arr**	**34.38**	**197**	P		**P**	**19 35 23.3**	**+0.1**
	comp=Z,6.2nm,0.8s,mb4.4,baz=15,slow=9.4,SNR=64							
WRA				PcP		PcP	19 37 56.6	+1.0
	comp=Z,0.9nm,1.0s,baz=10,slow=3.5,SNR=9.2							
FITZ	**Fitzroy Crossi**	**36.16**	**211**	*eP*		**P**	**19 35 37.3**	**-1.0**
	comp=Z,6.1nm,0.6s,mb4.4							
AS31	**Alice Springs**	**38.04**	**196**	*eP*		**P**	**19 35 54.4**	**+0.2**
ASAR	**Alice Springs**	**38.04**	**196**	P		**P**	**19 35 54.4**	**+0.1**
	comp=Z,0.9nm,0.5s,mb3.6,baz=16,slow=13,SNR=22							
ASAR				PcP		PcP	19 38 07.5	+1.0
	comp=Z,0.4nm,0.6s,baz=36,slow=2.5,SNR=5.6							
ASPA	**Alice Springs**	**38.04**	**196**	*eP*		**P**	**19 35 54.4**	**+0.2**
STKA	**Stephens Creek**	**44.91**	**183**	P		**P**	**19 36 50.5**	**+0.3**
	comp=Z,1.6nm,0.8s,mb3.7,baz=9.6,slow=13,SNR=6.8							
STKA	**Stephens Creek**	**44.91**	**183**	P		**P**	**19 36 50.5**	**+0.3**
SONM	**Songino Array**	**46.72**	**325**	P		**P**	**19 37 03.3**	**-1.0**
	comp=Z,1.0nm,0.6s,mb3.6,baz=142,slow=7.3,SNR=6.1							
LPAZ	**La Paz**	**148.51**	**100**	PKPbc	PKPbc		19 48 20.8	+1.2
	comp=Z,0.6nm,0.6s,baz=286,slow=7.4,SNR=3.6							

*NEIC **30** 20:11:15.8±2.6, 2839S×17682W, h45km±21km, mb4.7/3, Error ellipse: s-maj=21.5km s-min=17.0km az=215.0*
*ISCJB **30** 20:11:17.4±2.7, 283S±02×1769W±02, h71km±19km, mb4.1/11, Error ellipse: s-maj=30.4km s-min=22.1km az=59.2*

*IDC **30** 20:11:17.1±3.7, 2831S×17679W, h56km±30km, mb3.9/8, mb1 4.1/8, mb1mx4.1/11, mbtmp4.2/8, MS4.1/9, Ms1 4.1/9, ms1mx3.7/22, Error ellipse: s-maj=28.6km s-min=25.1km az=22.0*

ISC 30 20:11:17.0±2.9, 283S±02×1768W±02, h54km±22km, n32, σ1s08/19, mb4.2/11, MS4.1/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**1.35**	**227**	P		**Pn**	**20 11 39.0**	**-0.5**
	73nm,0.3s,baz=266,slow=21,SNR=6.8							
RAO				S		**Sn**	**20 11 57.2**	**+0.9**
	276nm,0.3s,baz=82,slow=22,SNR=6.1							
RAO	**Raoul Island**	**1.35**	**227**	*eP*		**Pn**	**20 11 37.2**	**-2.3**
RAO				S		**Sn**	**20 11 57.2**	**+0.9**
URZ	**Urewera**	**11.14**	**206**	P		**Pn**	**20 13 45.6**	**-7.9**
	0.3nm,0.3s,baz=221,slow=22,SNR=3.4							
DZM	**Mont Dzumac**	**16.39**	**289**	P		**Pn**	**20 15 14.4**	**+11**
	0.7nm,0.3s,baz=114,slow=16,SNR=5.9							
DZM				LR		LR	20 20 19.5	
	comp=Z,908nm,18.7s,baz=100,slow=33							
RAR	**Rarotonga**	**17.00**	**69**	LR		LR	20 19 42.1	
	comp=Z,301nm,20.8s,baz=224,slow=30							
TBI	**Tubuai**	**25.07**	**85**	*e*LR		LR	20 22 31.1	
	568nm,31.8s,baz=260							
PPT	**Papeete**	**27.20**	**73**	*e*LQ			20 22 06.6	
	388nm,22.8s							
PPT				*e*LR		LR	20 23 28.8	
	447nm,28.2s,baz=242							
PPT	**Papeete**	**27.20**	**73**	LR		LR	20 26 34.2	
	comp=Z,298nm,18.6s,MS3.9,baz=253,slow=34							
HNR	**Honiara**	**28.84**	**306**	LR		LR	20 27 28.9	
	comp=Z,243nm,18.5s,MS3.8,baz=180,slow=34							
CTA	**Charters Tower**	**34.58**	**275**	P		**P**	**20 18 02.0**	**+1.5**
	3.7nm,0.8s,mb4.3,baz=86,slow=16,SNR=3.6							
STKA	**Stephens Creek**	**36.01**	**254**	*eP*		**P**	**20 18 12.8**	**0.0**
	3.1nm,0.8s,mb4.3							
STKA	**Stephens Creek**	**36.01**	**254**	P		**P**	**20 18 13.6**	**+0.7**
	4.0nm,0.8s,mb4.4,baz=100,slow=9.0,SNR=8.8							
STKA				LR		LR	20 32 22.7	
	comp=Z,341nm,18.5s,MS4.2,baz=34,slow=35							
RKT	**Rikitea**	**37.90**	**92**	*e*LR		LR	20 28 13.7	
	209nm,32.5s							
PMG	**Port Moresby**	**38.74**	**292**	LR		LR	20 32 29.7	
	comp=Z,186nm,18.1s,MS4.0,baz=125,slow=33							
TAOE	**Nuku Hiva Isla**	**39.54**	**68**	*e*LR		LR	20 29 11.5	
	483nm,27.1s							
ASAR	**Alice Springs**	**44.31**	**264**	P		**P**	**20 19 21.4**	**-0.1**
	2.2nm,0.9s,mb3.9,baz=95,slow=6.7,SNR=23							
ASAR				LR		LR	20 37 26.6	
	comp=Z,504nm,18.2s,MS4.5,baz=177,slow=35							
WRAB	**Tennant Creek**	**45.11**	**269**	*eP*		**P**	**20 19 27.1**	**-0.7**
WRA	**Warramunga Arr**	**45.12**	**269**	P		**P**	**20 19 27.5**	**-0.5**
	3.2nm,0.8s,mb4.2,baz=106,slow=7.9,SNR=13							
VNDA	**Vanda**	**50.26**	**186**	P		**P**	**20 20 10.9**	**+3.1**
	0.6nm,0.9s,mb3.6,baz=18,slow=4.7,SNR=3.3							
CASY	**Casey**	**57.46**	**207**	*eP*		**P**	**20 20 57.3**	**-3.0**
	4.7nm,0.3s,mb5.0							
QSPA	**South Pole Qui**	**61.78**	**180**	*eP*		**P**	**20 21 30.6**	**+0.6**
	5.8nm,0.9s,mb4.7							
MAW	**Mawson**	**74.61**	**200**	P		**P**	**20 22 49.6**	**-0.8**
	0.9nm,0.5s,mb3.9,baz=140,slow=13,SNR=6.3							
MJAR	**Matsushiro Arr**	**77.16**	**324**	P		**P**	**20 23 04.6**	**-0.3**
	3.6nm,0.8s,mb4.3,baz=159,slow=5.4,SNR=11							
PLCA	**Paso Flores**	**83.14**	**133**	P		**P**	**20 23 37.4**	**+0.3**
	2.3nm,1.0s,mb4.2,baz=210,slow=7.1,SNR=3.1							
PLCA				LR		LR	20 54 23.1	
	comp=Z,106nm,19.3s,MS4.2,baz=184,slow=31							
NVAR	**Mina Array Bea**	**86.00**	**42**	P		**P**	**20 23 52.2**	**+0.6**
	0.3nm,0.5s,mb3.8,baz=232,slow=6.8,SNR=3.3							
LPAZ	**La Paz**	**98.02**	**113**	LR		LR	20 59 13.2	
	comp=Z,43nm,18.1s,MS4.0,baz=98,slow=29							
FINES	**FINESS Array B**	**143.54**	**342**	PKhKP			20 30 41.5	
	0.6nm,0.6s,baz=90,slow=1.9,SNR=4.2							
NB2	**NORSAR Subarra**	**146.85**	**353**	PKPd		PKPdf	20 30 50.2	-1.1
	comp=Z,0.7nm,0.8s,baz=13,slow=1.7							
NOA	**NORSAR Array B**	**146.85**	**353**	PKPbc	PKPbc		20 30 52.0	-1.1
	comp=Z,1.2nm,0.7s,baz=12,slow=4.5,SNR=4.2							
AKASG	**Malin Array Be**	**150.24**	**326**	PKPbc	PKPbc		20 31 01.0	-0.9
	comp=Z,1.8nm,0.7s,baz=40,slow=2.2,SNR=8.4							
BRTR	**Keskin Array B**	**152.46**	**302**	PKPbc	PKPbc		20 31 07.2	+0.1
	comp=Z,0.5nm,0.6s,baz=134,slow=5.3,SNR=3.9							
TORD	**Torodi Ar. Bea**	**164.83**	**174**	PKPab	PKPab		20 32 11.8	+0.8
	comp=Z,0.9nm,0.9s,baz=202,slow=1.9,SNR=2.9							

WEL 30 20:20:51.6±0.3, 4015S×17721E, h21km±1km, ML3.6/21, 4C-1D, Error ellipse: s-maj=2.2km s-min=1.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PXZ	**Pawanui**	**0.29**	**294**	P*		Pb	20 20 58.3	+0.1
PXZ				S*		Sb	20 21 01.9	-0.8
PXZ				S*		Sb	20 21 02.2	-0.5
BFZ	**Birch Farm**	**0.91**	**234**	⇑P*		Pb	20 21 08.7	+0.1
BFZ				S*		Sb	20 21 21.6	+1.4
TSZ	**Takapari Road**	**0.96**	**275**	P*		Pb	20 21 09.3	-0.3
TSZ				S*		Sb	20 21 22.4	+0.5
BKZ	**Black Stump Fm**	**1.13**	**330**	PN		Pn	20 21 11.5	-0.7
BKZ				SN		Sn	20 21 25.3	-1.7
KNZ	**Kokohu**	**1.18**	**18**	PN		Pn	20 21 12.5	-0.4
TIWZ	**Tintock**	**1.19**	**238**	⇓PN		Pn	20 21 12.7	-0.3
TIWZ				SN		Sn	20 21 28.4	-0.1
MOVZ	**Moawhango**	**1.34**	**303**	⇑PN		Pn	20 21 15.1	0.0
MRZ	**Mangatainoka R**	**1.35**	**247**	⇑PN		Pn	20 21 14.6	-0.5
MRZ				SN		Sn	20 21 31.6	-0.8
TUVZ	**Tukino**	**1.49**	**306**	PN		Pn	20 21 17.9	+0.8
WNVZ	**Wahianoa**	**1.49**	**303**	PN		Pn	20 21 18.1	+1.0
MTVZ	**Mangateitei**	**1.54**	**299**	PN		Pn	20 21 18.6	+0.8
OTVZ	**Oturere**	**1.54**	**309**	PN		Pn	20 21 18.8	+0.9
NGZ	**Ngauruhoe**	**1.58**	**308**	PN		Pn	20 21 19.2	+0.9
WPVZ	**Whakapapa**	**1.59**	**306**	PN		Pn	20 21 19.9	+1.4
KRVZ	**Karewarewa**	**1.60**	**310**	PN		Pn	20 21 19.7	+1.0
WTVZ	**West Tongariro**	**1.62**	**309**	PN		Pn	20 21 19.9	+1.0
MTW	**Mount Morrison**	**1.64**	**232**	PN		Pn	20 21 17.9	-1.3
MTW				SN		Sn	20 21 37.6	-2.1
PKVZ	**Pokaka**	**1.67**	**300**	PN		Pn	20 21 21.2	+1.6
TRWZ	**Traveller**	**1.70**	**222**	PN		Pn	20 21 18.7	-1.3
TWVZ	**Taurewa**	**1.74**	**308**	PN		Pn	20 21 21.5	+0.9
WAZ	**Wanganui**	**1.75**	**282**	PN		Pn	20 21 21.6	+0.9
MWZ	**Matawai**	**1.83**	**8**	PN		Pn	20 21 20.3	-1.4
PAWZ	**Paruwai Farm**	**1.83**	**227**	PN		Pn	20 21 20.4	-1.4
URZ	**Urewera**	**1.89**	**358**	PN		Pn	20 21 21.8	-0.8
CAW	**Cannon Point**	**1.89**	**239**	PN		Pn	20 21 21.3	-1.3
KIW	**Kapiti Island**	**1.89**	**247**	PN		Pn	20 21 22.0	-0.7
KIW				SN		Sn	20 21 44.2	-1.7
MSWZ	**Moikau Station**	**1.95**	**229**	⇑PN		Pn	20 21 21.9	-1.6
MSWZ				SN		Sn	20 21 45.5	-1.9
MRW	**Makara Radio**	**2.19**	**240**	PN		Pn	20 21 25.3	-1.4
MRW				SN		Sn	20 21 50.7	-2.5
TCW	**Tory Channel**	**2.47**	**244**	PN		Pn	20 21 29.1	-1.5
TCW				SN		Sn	20 21 58.5	-1.6

*NEIC **30** 20:25:29.2, 4053S×177.13E, h12km, ML3.8(WEL), After WEL.*

WEL 30 20:25:32.5±0.3, 4038S×17682E, h26km±2km, ML3.7/24, 2C, Error ellipse: s-maj=3.1km s-min=1.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PXZ	**Pawanui**	**0.35**	**5**	⇑P*		Pb	20 25 40.1	-0.2
PXZ				S*		Sb	20 25 46.2	+0.7
BFZ	**Birch Farm**	**0.53**	**235**	P		Pb	20 25 44.0	+0.7
BFZ				S		Sb	20 25 53.3	+2.7
BFZ	**Birch Farm**	**0.53**	**235**	P*		Pb	20 25 44.0	+0.7
BFZ				S*		Sb	20 25 52.5	+1.9
TSZ	**

MOVZ	**Moahwango**	**1.27**	**319**	PN	Pn	20 25 54.6	0.0		
MOVZ				SN	Sn	20 26 11.5	+0.7		
WNVZ	**Wahianoa**	**1.41**	**318**	P	Pn	20 25 57.7	+1.2		
WNVZ	**Wahianoa**	**1.41**	**318**	PN	Pn	20 25 57.7	+1.2		
TUVZ	**Tukino**	**1.43**	**321**	P	Pn	20 25 57.6	+0.8		
TUVZ	**Tukino**	**1.43**	**321**	PN	Pn	20 25 58.2	+1.5		
TUVZ				SN	Sn	20 26 17.8	+3.1		
MTVZ	**Mangateitei**	**1.44**	**313**	PN	Pn	20 25 58.0	+1.1		
DRZ	**Dome Shelter**	**1.47**	**318**	P	Pn	20 25 58.9	+1.6		
DRZ	**Dome Shelter**	**1.47**	**318**	PN	Pn	20 25 58.9	+1.6		
FWVZ	**Far West T-bar**	**1.49**	**319**	*eP*	Pn	20 25 58.9	+1.3		
FWVZ	**Far West T-bar**	**1.49**	**319**	PN	Pn	20 25 58.9	+1.4		
OTVZ	**Oturere**	**1.50**	**323**	PN	Pn	20 25 58.8	+1.0		
CAW	**Cannon Point**	**1.52**	**241**	PN	Pn	20 25 57.5	-0.5		
NGZ	**Ngauruhoe**	**1.52**	**322**	P	Pn	20 25 59.6	+1.5		
NGZ	**Ngauruhoe**	**1.52**	**322**	PN	Pn	20 25 59.6	+1.4		
NGZ				SN	Sn	20 26 20.2	+3.1		
WPVZ	**Whakapapa**	**1.53**	**320**	P	Pn	20 25 59.7	+1.5		
WPVZ	**Whakapapa**	**1.53**	**320**	PN	Pn	20 25 59.5	+1.3		
WPVZ				SN	Sn	20 26 21.0	+3.8		
KIW	**Kapiti Island**	**1.53**	**251**	P	Pn	20 25 57.8	-0.4		
KIW	**Kapiti Island**	**1.53**	**251**	PN	Pn	20 25 57.7	-0.5		
KIW				*S**	Sb	20 26 16.7	-2.5		
WAZ	**Wanganui**	**1.54**	**293**	*eP*	Pn	20 25 59.5	+1.2		
WAZ	**Wanganui**	**1.54**	**293**	PN	Pn	20 25 59.5	+1.1		
KRVZ	**Karewarewa**	**1.57**	**324**	PN	Pn	20 26 00.4	+1.6		
PKVZ	**Pokaka**	**1.57**	**313**	PN	Pn	20 26 00.3	+1.6		
MSWZ	**Moikau Station**	**1.58**	**228**	P	Pn	20 25 58.1	-0.7		
MSWZ	**Moikau Station**	**1.58**	**228**	PN	Pn	20 25 58.1	-0.8		
WTVZ	**West Tongariro**	**1.58**	**323**	P	Pn	20 26 00.4	+1.6		
WTVZ	**West Tongariro**	**1.58**	**323**	PN	Pn	20 26 00.4	+1.5		
TWVZ	**Taurewa**	**1.69**	**320**	PN	Pn	20 26 01.9	+1.5		
VRZ	**Vera Road**	**2.02**	**308**	P	Pn	20 26 07.2	+2.2		
VRZ	**Vera Road**	**2.02**	**308**	PN	Pn	20 26 06.9	+2.0		
TCW	**Tory Channel**	**2.10**	**246**	P	Pn	20 26 04.9	-1.2		
TCW	**Tory Channel**	**2.10**	**246**	PN	Pn	20 26 04.9	-1.2		
MWZ	**Matawai**	**2.11**	**15**	*eP*	Pn	20 26 05.1	-1.1		
MWZ	**Matawai**	**2.11**	**15**	PN	Pn	20 26 05.3	-0.9		
URZ	**Urewera**	**2.13**	**6**	P	Pn	20 26 05.6	-0.8		
URZ	**Urewera**	**2.13**	**6**	PN	Pn	20 26 05.0	-1.4		
RAEZ	**Rainy Point**	**2.16**	**299**	P	Pn	20 26 09.5	+2.6		
RAEZ	**Rainy Point**	**2.16**	**299**	PN	Pn	20 26 10.5	+3.6		
NEZ	**North Egmont**	**2.37**	**297**	P	Pn	20 26 12.4	+2.6		
PKE	**Pukeiti**	**2.48**	**298**	P	Pn	20 26 16.4	+5.1		

*ISCJB **30** 20:49:46.4±1.1,27.13N±003×10105E±003,h13km±7km, mb4.4/33, MS3.8/11, Error ellipse: s-maj=6.2km s-min=4.3km az=62.4*

*IDC **30** 20:49:46.4±0.7,2742N×10144E,h0km,mb4.1/13, mb1 4.3/13,mb1mx4.1/23,mbtmp4.1/13,MS3.7/7, Ms1 3.7/7,ms1mx3.2/39,Error ellipse: s-maj=44.0km s-min=12.8km az=53.0*

*NEIC **30** 20:49:47.9±0.5,27.14N×10108E,h10km,mb4.5/9,Error ellipse: s-maj=15.5km s-min=8.9km az=56.0*

*BJI **30** 20:49:47.6,2727N×10107E,h15km,mB4.5,mb4.4,ML4.2, Ms4.5,Msz4.0*

*MOS **30** 20:49:49.6±1.8,2700N×10096E,h33km,mb4.6/11,Error ellipse: s-maj=14.4km s-min=7.1km az=120.3*

ISC 30 20:49:47.6±1.2,**2717N**±003×**10101E**±003,**h4**km±8km,**n97,** σ1§**42**/107,**mb4.4**/33,**MS3.8**/11,**2C-4D**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.56**	**142**	P	**Pn**	**20 50 33.5**	**+3.6**
KMI				PG	**Pg**	**20 50 36.3**	**-0.4**
KMI				SG	**Sg**	**20 51 11.0**	**+1.1**
KMI				Smax			
	comp=N,1μm,0.8s						
KMI				Smax			
	comp=E,1μm,0.8s						
KMI				LR	LR		
	comp=N,6μm,8.4s						
KMI				LR	LR		
	comp=E,8μm,9.0s						
KMI				LR	LR		
	comp=Z,2μm,7.4s						
GYA	**Guiyang**	**5.10**	**97**	P	**Pn**	**20 51 07.8**	**+3.0**
GYA				PG	**Pg**	**20 51 20.0**	**-5.3**
GYA				Smax			
	comp=N,270nm,1.2s						
GYA				Smax			
	comp=E,160nm,1.1s						
GYA				LR	LR		
	comp=N,4μm,7.8s						
GYA				LR	LR		
	comp=E,1μm,6.6s						
GYA				LR	LR		
	comp=Z,3μm,7.2s						
CHTO	**Chiang Mai**	**8.53**	**193**	*eP*	**Pn**	**20 51 50.3**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,24nm,1.0s						
CHTO	**Chiang Mai**	**8.53**	**193**	*e*Pn	**Pn**	**20 51 50.3**	**-1.5**
	comp=Z,24nm,1.0s						
CHTO				*e*Pg	**Pg**	**20 52 33.9**	**+3.0**
CHTO				*e*Sg	**Sg**	**20 54 23.6**	**+2.2**
LSA	**Lhasa**	**9.04**	**288**	P	**Pn**	**20 51 57.5**	**-1.3**
LSA	**Lhasa**	**9.04**	**288**	*eP*	**Pn**	**20 51 58.0**	**-0.8**
LSA				pmax	pmax		
	comp=Z,13nm,0.6s						
LSA	**Lhasa**	**9.04**	**288**	*eP*	**Pn**	**20 51 58.0**	**-0.8**
	comp=Z,13nm,0.6s						
LZH	**Lanzhou**	**9.21**	**14**	*eP*	**Pn**	**20 52 02.5**	**+1.3**
LZH				AP		20 52 05.8	
LZH				XP		20 52 08.5	
LZH				PP		20 52 10.5	
LZH				*e*S	**Sn**	**20 53 47.0**	**+1.7**
LZH				XS		20 53 52.0	
LZH				AMB	AMB		
	comp=Z,25nm,1.0s						
LZH				AMB	AMB		
	comp=Z,89nm,4.5s						
LZH				LR	LR		
	comp=E,2μm,10.6s						
LZH				LR	LR		
	comp=Z,2μm,11.9s						
XAN	**Xi'an**	**9.66**	**43**	P	**Pn**	**20 52 06.0**	**-1.3**
XAN				AP		20 52 11.0	
XAN				S	**Sn**	**20 53 54.5**	**-1.8**
XAN				AMB	AMB		
	comp=Z,6.0nm,1.0s						
XAN				LR	LR		
	comp=N,1μm,12.7s						
XAN				LR	LR		
	comp=E,982nm,13.7s						
XAN				LR	LR		
	comp=Z,543nm,11.3s						
QIZ	**Qiongzhong**	**11.47**	**133**	P	**Pn**	**20 52 33.3**	**+1.1**
QIZ				S	**Sn**	**20 54 40.3**	**-0.5**
QIZ				LR	LR		
	comp=N,1μm,12.1s						
QIZ				LR	LR		
	comp=E,1μm,11.2s						
QIZ				LR	LR		
	comp=Z,470nm,7.8s						
GZH	**Guangzhou**	**11.89**	**107**	P	**Pn**	**20 52 38.5**	**+0.6**
GZH				S	**Sn**	**20 54 52.3**	**+1.3**
WHN	**Wuhan**	**12.17**	**71**	*eP*	**Pn**	**20 52 40.0**	**-1.7**
WHN				S	**Sn**	**20 54 55.8**	**-2.0**
WHN				LR	LR		
	comp=Z,2μm,8.1s						
GTA	**Gaotai**	**12.25**	**356**	*eP*	**Pn**	**20 52 46.5**	**+3.7**
GTA				AP		20 52 54.0	
GTA				XP		20 52 57.5	
GTA				S	**Sn**	**20 55 01.0**	**+1.2**
GTA				XS		20 55 07.3	
GTA				SS		20 55 16.8	
GTA				LG2		20 56 29.0	
GTA				AMB	AMB		
	comp=Z,3.0nm,2.0s						
GTA				AMB	AMB		
	comp=Z,50nm,4.2s						
GTA				LR	LR		
	comp=N,452nm,9.9s						
GTA				LR	LR		
	comp=E,1μm,13.3s						
GTA				LR	LR		
	comp=Z,604nm,10.7s						
GUN	**Gumba**	**13.45**	**277**	*eP*	**Pn**	**20 52 54.5**	**-4.6**
PKI	**Pulchoki**	**13.87**	**275**	*eP*	**Pn**	**20 52 59.6**	**-5.3**
	comp=Z,23nm,0.7s						
PKI	**Pulchoki**	**13.87**	**275**	*eP*	**Pn**	**20 52 59.6**	**-5.3**
					pmax	pmax	
	comp=Z,23nm,0.7s						
KKN	**Kakani**	**13.98**	**276**	*eP*	**Pn**	**20 53 01.9**	**-4.5**
	comp=Z,18nm,0.5s						
KKN	**Kakani**	**13.98**	**276**	*eP*	**Pn**	**20 53 01.9**	**-4.5**
KKN				pmax	pmax		
	comp=Z,18nm,0.5s						
BOK	**Bokaro**	**14.06**	**260**	*eP*	**Pn**	**20 53 06.5**	**-1.1**
BOK				AMb	AMB	20 53 17.9	
	comp=Z,13nm,1.1s						
DMN	**Daman**	**14.14**	**275**	*eP*	**Pn**	**20 53 03.9**	**-4.7**
	comp=Z,17nm,0.6s						
GKN	**Gorkha**	**14.54**	**277**	*eP*	**Pn**	**20 53 07.7**	**-6.4**
NJ2	**Nanjing**	**16.26**	**68**	*eP*	**Pn**	**20 53 36.0**	**-0.8**
NJ2				AP	pP	20 53 39.5	-1.5
NJ2				XP	sP	20 53 49.8	+8.3
NJ2				S	**Sn**	**20 56 36.0**	**-1.6**
NJ2				XS	sS	20 56 42.0	-10
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,20nm,3.5s						
NJ2				LR	LR		
	comp=N,650nm,9.1s						
NJ2				LR	LR		
	comp=E,1μm,11.2s						
NJ2				LR	LR		
	comp=Z,1μm,11.3s						
BJI	**Beijing**	**17.98**	**41**	P	**Pn**	**20 53 54.0**	**-4.4**
BJI				AMB	AMB		
	comp=Z,3.0nm,0.7s						
BJI				LR	LR		
	comp=N,333nm,9.4s						
BJI				LR	LR		
	comp=E,746nm,10.2s						
BJI				LR	LR		
	comp=Z,217nm,16.2s						
SSE	**Sheshan**	**18.05**	**73**	P	**Pn**	**20 53 58.3**	**-1.0**
SSE				AP	pP	20 54 07.5	+6.7
SSE				S	**Sn**	**20 57 14.5**	**-6.6**
SSE				AMB	AMB		
	comp=Z,27nm,0.7s						
SSE				AMB	AMB		
	comp=Z,69nm,5.8s						
SSE				LR	LR		
	comp=N,171nm,14.9s						
SSE				LR	LR		
	comp=E,69nm,14.9s						
SSE				LR	LR		
	comp=Z,168nm,12.9s						
VIS	**Vishakhapatnam**	**18.84**	**244**	*eP*	**Pn**	**20 54 07.1**	**-1.8**
VIS				AMb	AMB	20 54 16.7	
	comp=Z,26nm,0.3s						
WMQ	**Urumqi**	**19.79**	**331**	*eP*	**Pn**	**20 54 19.0**	**-1.4**
NGP	**Nagpur**	**20.90**	**258**	*ex*	x	20 54 22.1	
NGP				AMb	AMB	20 54 29.9	
	comp=Z,23nm,1.2s						
SONM	**Songino Array**	**21.06**	**10**	P	**P**	**20 54 30.0**	**-2.6**
	comp=Z,1.4nm,0.5s,mb3.6,baz=187,slow=11,SNR=9.8						
SMLA	**Simla**	**21.18**	**286**	*eP*	**P**	**20 54 31.5**	**-2.5**
SMLA				AMb	AMB	20 54 35.6	
	comp=Z,37nm,2.2s,mb4.3						
ULN	**Ulaanbaatar**	**21.20**	**11**	*i* P	**P**	**20 54 36.5**	**+2.4**
BHPL	**Bhopal**	**21.69**	**265**	*eP*	**P**	**20 54 37.4**	**-1.9**
BHPL				AMb	AMB	20 54 42.1	
	comp=Z,34nm,0.9s,mb4.8						
TGY	**Tagaytay City**	**22.69**	**121**	P	**P**	**20 54 46.2**	**-3.9**
	comp=Z,75nm,0.3s,baz=275,slow=11,SNR=2.8						
HYB	**Hyderabad**	**22.90**	**250**	*i* P	**P**	**20 54 50.0**	**-2.3**
HYB	**Hyderabad**	**22.90**	**250**	*eP*	**P**	**20 54 50.0**	**-2.3**
ZAK	**Zakamensk**	**23.24**	**4**	*eP*	**P**	**20 54 57.2**	**+1.3**
AJM	**Ajmer**	**23.53**	**274**	*eP*	**P**	**20 54 55.6**	**-3.4**
AJM				AMb	AMB	20 55 01.5	
	comp=Z,31nm,1.0s,mb4.7						
JOW	**Kunigami**	**24.28**	**85**	LR	LR	21 05 39.2	
	comp=Z,254nm,18.6s,MS3.7,baz=268,slow=40						
MKAR	**Makanchi Array**	**24.53**	**328**	P	**P**	**20 55 07.1**	**-1.1**
	comp=Z,5.3nm,0.8s,mb4.1,baz=132,slow=10,SNR=16						
MKAR	**Makanchi Array**	**24.53**	**328**	P	**P**	**20 55 07.1**	**-1.1**
HIA	**Hailar**	**26.38**	**28**	*eP*	**P**	**20 55 24.9**	**-0.1**
AAK	**Ala-Archa**	**26.52**	**312**	*e*P	**P**	**20 55 28.9**	**+2.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
AAK				MLR	MLR		
	comp=Z,300nm,24.0s,MS3.8						
AAK	**Ala-Archa**	**26.52**	**312**	*eP*	**P**	**20 55 27.4**	**+1.2**
	comp=Z,6.4nm,0.9s,mb4.2						
ZAL	**Zalesovo**	**29.30**	**340**	P	**P**	**20 55 50.1**	**-0.9**
	comp=Z,1.7nm,0.8s,mb3.8,baz=310,slow=10,SNR=10						
MJAR	**Matsushiro Arr**	**32.78**	**64**	LR	LR	21 09 11.6	
	comp=Z,156nm,20.0s,MS3.7,baz=220,slow=36						
JHJ	**Hachijo jima 2**	**33.91**	**70**	LR	LR	21 09 53.7	
	comp=Z,99nm,19.0s,MS3.6,baz=281,slow=36						
BVAR	**Borovoye Array**	**34.40**	**327**	P	**P**	**20 56 34.7**	**-1.2**
	comp=Z,2.9nm,0.9s,mb4.2,baz=144,slow=8.3,SNR=10						
BRVK	**Borovoye**	**34.48**	**327**	*eP*	**P**	**20 56 36.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
BRVK	**Borovoye**	**34.48**	**327**	*eP*	**P**	**20 56 36.7**	**+0.2**
	comp=Z,6.3nm,1.2s,mb4.4						
CHKZ	**Chkalovo**	**34.69**	**328**	*eP*	**P**	**20 56 36.4**	**-2.0**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
CHKZ	**Chkalovo**	**34.69**	**328**	*eP*	**P**	**20 56 36.4**	**-1.9**
	comp=Z,5.1nm,1.1s,mb4.4						
ZRNK	**Zerenda**	**35.04**	**326**	*eP*	**P**	**20 56 42.1**	**+0.7**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
ZRNK	**Zerenda**	**35.04**	**326**	*eP*	**P**	**20 56 42.1**	**+0.7**
	comp=Z,4.0nm,1.3s,mb4.2						
AKTK	**Aktyubinsk**	**40.01**	**317**	P	**P**	**20 57 24.5**	**+1.0**
AKTO	**Aktyubinsk**	**40.01**	**317**	P	**P**	**20 57 24.5**	**+1.0**
	comp=Z,2.3nm,0.8s,mb3.9,baz=94,slow=12,SNR=7.1						
AKTO	**Aktyubinsk**	**40.01**	**317**	P	**P**	**20 57 24.5**	**+1.0**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ARU	**Arti**	**42.02**	**326**	*i*P	**P**	**20 57 38.2**	**-1.9**
ARU				*e*PPP		20 59 42.4	
ARU				*e*S	**S**	**21 03 55.4**	**-4.2**
ARU				*e*SS	SS	21 06 58.4	-8.1
ARU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.5						
ARU	**Arti**	**42.02**	**326**	*eP*	**P**	**20 57 39.2**	**-0.9**
	comp=Z,13nm,1.0s,mb4.5						
GNI	**Garni**	**47.86**	**301**	P	**P**	**20 58 32.1**	**+5.5**
	comp=Z,5.7nm,0.8s,mb4.7,baz=76,slow=4.2,SNR=3.9						
KIV	**Kislovodsk**	**49.30**	**306**	*i* P	**P**	**20 58 40.1**	**+2.4**
KIV				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
ANN	**Anapa**	**53.04**	**307**	*eP*	**P**	**20 58 53.9**	**-12**
ANN				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
ANN				MLR	MLR		
	comp=Z,147nm,17.0s,MS4.1						
OBN	**Obninsk**	**53.66**	**320**	*eP*	**P**	**20 59 12.6**	**+2.3**
OBN				*e*		21 01 11.7	
OBN				*e*S	**S**	**21 06 40.4**	**-4.3**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.9						
BILL	**Bilibino**	**55.87**	**24**	*eP*	**P**	**20 59 30.3**	**+4.0**
BILL				*e*		21 01 32.4	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
BILL				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.5						
BR131	**Keskin Array S**	**56.39**	**301**	P	**P**	**20 59 31.2**	**+1.1**
BRTR	**Keskin Array B**	**56.39**	**301**	P	**P**	**20 59 31.7**	**+1.6**
	comp=Z,1.5nm,1.0s,mb4.0,baz=111,slow=6.8,SNR=5.0						
BRTR				LR	LR	21 26 38.7	
	comp=Z,35nm,19.9s,MS3.5,baz=248,slow=39						
WRAB	**Tennant Creek**	**56.89**	**142**	*d* P	**P**	**20 59 33.4**	**-0.2**
WRAB	**Tennant Creek**	**56.89**	**142**	*eP*	**P**	**20 59 32.9**	**-0.6**
	comp=Z,13nm,0.7s,mb5.1						
WRA	**Warramunga Arr**	**56.89**	**142**	P	**P**	**20 59 33.4**	**-0.2**
	comp=Z,6.3nm,0.6s,mb4.8,baz=330,slow=7.8,SNR=43						
WB2	**Warramunga Arr**	**56.89**	**142**	*i* P	**P**	**20 59 33.3**	**-0.3**
WB2	**Warramunga Arr**	**56.89**	**142**	*eP*	**P**	**20 59 33.2**	**-0.4**
AKASG	**Malin Array Be**	**58.16**	**315**	P	**P**	**20 59 42.8**	**+0.3**
	comp=Z,1.6nm,0.5s,mb4.3,baz=77,slow=6.5,SNR=8.1						
ASPA	**Alice Springs**	**59.69**	**145**	*eP*	**P**	**20 59 53.2**	**0.0**
AS31	**Alice Springs**	**59.70**	**145**	*eP*	**P**	**20 59 53.2**	**0.0**
ASAR	**Alice Springs**	**59.70**	**145**	P	**P**	**20 59 53.1**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.4,baz=327,slow=7.0,SNR=34						
ARCES	**ARCESS Array B**	**59.76**	**337**	P	**P**	**20 59 50.9**	**-2.7**
	comp=Z,2.0nm,0.8s,mb4.2,baz=79,slow=7.5,SNR=5.3						
ARCES	**ARCESS Array B**	**59.76**	**337**	P	**P**	**20 59 50.9**	**-2.7**
NB2	**NORSAR Subarra**	**66.53**	**328**	P	**P**	**21 00 38.0**	**-0.6**
	comp=Z,1.0nm,0.7s,mb4.0,baz=77,slow=6.5						
NOA	**NORSAR Array B**	**66.53**	**328**	P	**P**	**21 00 38.5**	**0.0**
	comp=Z,1.7nm,0.8s,mb4.1,baz=78,slow=6.4,SNR=6.3						
NOA				LR	LR	21 28 57.2	
	comp=Z,30nm,21.4s,MS3.5,baz=90,slow=35						
GERES	**GERESS Array B**	**68.37**	**315**	P	**P**	**21 00 49.0**	**-1.2**
	comp=Z,1.1nm,0.8s,mb3.9,baz=74,slow=8.3,SNR=5.9						
GERES				LR	LR	21 34 50.0	
	comp=Z,77nm,20.3s,MS3.9,baz=310,slow=40						
STKA	**Stephens Creek**	**70.31**	**144**	P	**P**	**21 01 02.0**	**-0.3**
	comp=Z,1.4nm,0.6s,mb4.1,baz=315,slow=11,SNR=7.7						
CDF	**Champ du Feu**	**72.54**	**316**	*eP*	**P**	**21 01 16.7**	**+1.0**
	comp=Z,6.8nm,0.9s,mb4.3						
LPG	**La Plagne**	**73.96**	**313**	*eP*	**P**	**21 01 25.8**	**+1.7**
	comp=Z,13nm,0.8s,mb4.6						
LPG	**La Plagne**	**73.96**	**313**	*eP*	**P**	**21 01 25.8**	**+1.7**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
LPG	**La Plagne**	**73.96**	**313**	*eP*	**P**	**21 01 25.8**	**+1.7**
	comp=Z,6.7nm,0.8s,mb4.6						
LPL	**La Plagne**	**73.96**	**313**	*eP*	**P**	**21 01 25.6**	**+1.5**
	comp=Z,8.4nm,0.6s,mb4.6						
LPL	**La Plagne**	**73.96**	**313**	*eP*	**P**	**21 01 25.6**	**+1.5**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LPL	**La Plagne**	**73.96**	**313**	*eP*	**P**	**21 01 25.6**	**+1.5**
	comp=Z,4.2nm,0.6s,mb4.5						
SBF	**Sospel**	**74.13**	**311**	*eP*	**P**	**21 01 26.2**	**+1.1**
	comp=Z,32nm,0.9s,mb4.9						
SBF	**Sospel**	**74.13**	**311**	*eP*	**P**	**21 01 26.2**	**+1.1**
SBF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
SBF	**Sospel**	**74.13**	**311**	*eP*	**P**	**21 01 26.2**	**+1.1**
	comp=Z,16nm,0.9s,mb5.0						
ORIF	**Oris-en-Rattie**	**74.75**	**313**	*eP*	**P**	**21 01 30.2**	**+1.5**
ORIF				*e*R			
	comp=Z,79nm,22.5s						
SMF	**Signal de Mont**	**75.37**	**315**	*eP*	**P**	**21 01 33.1**	**+0.8**
VIVF	**Saint-Julien-l**	**75.56**	**313**	*eP*	**P**	**21 01 35.4**	**+2.0**
AVF	**Avril sur Loir**	**75.61**	**315**	*eP*	**P**	**21 01 34.4**	**+0.7**
	comp=Z,9.3nm,1.1s,mb4.3						
BGF	**Bois d'Agland**	**76.03**	**315**	*eP*	**P**	**21 01 36.9**	**+0.8**
TCF	**Toulx Ste Croi**	**76.54**	**315**	*eP*	**P**	**21 01 40.2**	**+1.2**
	comp=Z,19nm,1.3s,mb4.6						
GRR	**Gorron**	**77.50**	**318**	*eP*	**P**	**21 01 45.4**	**+1.0**
YKA	**Yellowknife Ar**	**86.22**	**16**	LR	LR	21 42 04.2	
	comp=Z,41nm,20.4s,MS3.8,baz=270,slow=36						

*CSEM **30** 20:56:34.1±0.2,3521N×378W,h15km,MD3.1,Error ellipse: s-maj=7.2km s-min=4.5km az=99.0*

*ISCJB **30** 20:56:35.5±0.6,3520N±003×384W×005,h16km±7km, Error ellipse: s-maj=6.9km s-min=4.4km az=29.0*

*CNRM **30** 20:56:35.5,3525N×377W,h10km,MD3.1*

*MDD **30** 20:56:36.9±0.5,3516N×375W,h16km±5km,mb2.9/9, Error ellipse: s-maj=7.5km s-min=4.5km az=113.0, PRXIMO*

ISC 30 20:56:35.9±0.6,**3519N**±003×**381W**±005,**h16**km±4km,**n20,** σ1§**09**/34,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAL	**Palemas**	**0.11**	**290**	*i* P	**Pg**	**20 56 38.5**	**-0.9**
TOU	**Touzarine**	**0.23**	**168**	P	**Pg**	**20 56 41.5**	**+0.4**
TOU				S	**Sg**	**20 56 45.0**	**+0.4**
TOU	**Touzarine**	**0.23**	**168**	*i* P	**Pg**	**20 56 41.5**	**+0.4**
ZAI	**Zaio**	**0.90**	**104**	*eP*	**Pb**	**20 56 51.0**	**-2.1**
ZAI				*i* S	**Sb**	**20 57 04.0**	**-0.9**
TZK	**Tazeka**	**1.14**	**196**	*i* P	**Pn**	**20 56 57.0**	**-0.2**
TZK				*i* S	**Sb**	**20 57 12.0**	**+0.3**
EMIJ	**Mijas**	**1.58**	**331**	P	**Pn**	**20 57 03.9**	**+0.7**
	4.0nm,0.8s,SNR=6.2						
EMIJ				S	**Sn**	**20 57 23.3**	**-0.1**
	1.0nm,0.2s,SNR=5.8						
EMIJ	**Mijas**	**1.58**	**331**	P	**Pn**	**20 57 02.3**	**-0.9**
	4.0nm,0.8s,SNR=6.2						
EMIJ				S	**Sn**	**20 57 21.0**	**-2.4**
	1.0nm,0.2s,SNR=5.8						
EGUA	**Guajares**	**1.66**	**7**	P	**Pn**	**20 57 04.2**	**0.0**
	0.3nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**20 57 25.1**	**-0.1**
	0.2nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**1.66**	**7**	P	**Pn**	**20 57 03.0**	**-1.3**
	SNR=7.9						
EGUA				S	**Sn**	**20 57 22.0**	**-3.2**
	0.2nm,0.1s,SNR=7.9						
EBER	**Berja**	**1.86**	**23**	P	**Pn**	**20 57 08.1**	**+1.0**
	0.5nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**20 57 30.8**	**+0.5**
	2.0nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**2.04**	**8**	P	**Pn**	**20 57 09.9**	**+0.4**
	1.0nm,0.4s,SNR=5.7						
EQUE				S	**Sn**	**20 57 34.3**	**-0.3**
	0.5nm,0.2s,SNR=7.9						
MIF	**Mishlifen**	**2.13**	**214**	*eP*	**Pn**	**20 57 10.0**	**-0.8**
MIF				*i* S	**Sn**	**20 57 36.0**	**-0.8**
ESPR	**Espera**	**2.36**	**316**	S	**Sn**	**20 57 44.8**	**+2.2**
	1.9nm,0.2s,SNR=7.9						
CZD	**Col de Zad**	**2.38**	**206**	*eP*	**Pn**	**20 57 15.0**	**+0.8**
CZD				*i* S	**Sn**	**20 57 44.0**	**+0.9**
EQES	**Quesada**	**2.68**	**13**	P	**Pn**	**20 57 20.2**	**+1.9**
	0.6nm,0.3s,SNR=5.6						
EQES				S	**Sn**	**20 57 50.8**	**+0.4**
	3.0nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.68**	**13**	S	**Sn**	**20 57 54.1**	**

CUYO				eS		Sn	20 59 37.7	-1.5
PVCP	Virac	3.64	93	eP		Pn	20 59 12.0	+0.2
PALP	Palanan	3.74	31	eP		Pn	20 59 12.0	-1.2
ABRA	Dolores	3.80	4	eP		Pn	20 59 13.3	-0.6
GUIM	Jordan	3.83	146	eP		Pn	20 59 19.9	+5.5
BATP	Bataraza	5.63	207	eP		Pn	20 59 40.1	+1.3
SONM	Songino Array	35.85	344	P		P	21 05 08.2	+0.6
	1.0nm,0.5s,mb4.0,baz=164,slow=9.4,SNR=14							
WRA	Warramunga Arr	36.26	158	P		pP	21 05 34.3	+0.6
	0.3nm,0.6s,baz=337,slow=9.4,SNR=4.5							
ASAR	Alice Springs	39.54	160	P		pP	21 06 02.6	+1.1
	0.4nm,0.6s,baz=339,slow=7.3,SNR=7.9							

NNC ***30*** *21:14:24.8±7.1, 37.69N×69.06E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=62.0km s-min=53.9km az=72.0*

ISCJB ***30*** *21:14:25.0±2.5, 376N±02×691E±01, h33km, Error ellipse: s-maj=24.3km s-min=12.5km az=57.3*

ISC 30 21:14:27.4±2.5, 376N±02×691E±01, h35km, n10, σ0.95/12, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.63	11	⇑Pn	Pn	21 15 50.3	+1.7
	0.3nm,0.3s,baz=279,slow=47,SNR=16						
KK31				⇓Sn	Sn	21 16 52.8	+0.7
	1.3nm,0.3s,baz=197,slow=23,SNR=4.5						
KK31				⇑Lg		21 17 25.1	
	1.6nm,0.3s,baz=192,slow=30,SNR=6.5						
AML	Almayashu	5.78	37	P	Pn	21 15 50.1	-0.4
	SNR=13						
EKS2	Erkin-Say	6.23	34	P	Pn	21 15 57.3	+0.5
	SNR=7.5						
AAK	Ala-Archa	6.55	38	P	Pn	21 16 01.0	-0.1
	SNR=15						
KBK	Karagaybulak	6.79	40	P	Pn	21 16 05.1	+0.7
	SNR=8.5						
CHMS	Chumysh	6.95	37	P	Pn	21 16 05.9	-0.7
	SNR=20						
USP	Ospenovka	7.04	34	P	Pn	21 16 07.1	-0.8
	SNR=7.4						
TKM2	Tokmak 2	7.31	41	P	Pn	21 16 10.5	-1.1
	SNR=8.9						
TKM2	Tokmak 2	7.31	41	⇑Pn	Pn	21 16 10.4	-1.2
	0.2nm,0.4s						
AB31	Akbulak array	13.42	333	Pn	Pn	21 17 36.3	+1.1
	0.1nm,0.2s,baz=149,slow=13,SNR=9.7						
AB31				⇑Sn	Sn	21 20 01.5	-1.6
	0.2nm,0.5s,baz=158,slow=26,SNR=4.0						

IDC ***30*** *21:25:13.4±0.6, 4986S×16145E, h0km, mb4.6/9, mb1 4.7/11, mb1mx4.7/13, mbtmp4.6/11, ML4.2/2, MS4.2/12, Ms1 4.2/12, ms1mx4.1/13, Error ellipse: s-maj=23.8km s-min=16.1km az=64.0*

ISCJB ***30*** *21:25:15.1±0.3, 4986S±005×16168E±006, h26km, mb4.8/16, MS4.2/12, Error ellipse: s-maj=7.9km s-min=3.9km az=114.6*

NEIC ***30*** *21:25:15.8±3.2, 4991S×16149E, h16km±20km, mb4.9/11, Error ellipse: s-maj=9.1km s-min=7.3km az=205.0*

HRVD ***30*** *21:25:15.8±0.4, 5003S×16094E, h18km±1km, MW5.0/64, Centroid moment Tensor Solution. LP body waves: s17,c24;Mantle waves: s64,c100; Half duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.05±.24; Mθθ0.20±.14; Mφφ-3.25±.15; Mrθ0.48±.45; Mrφ-0.56±.09; Mθφ-0.66±.29; Best double couple: M0 3.30300×10^16 NP1:φs20.00000°, δ41.00000°, λ107.00000°. NP2:φs178.00000°, δ51.00000°, λ76.00000°. Principal axes: T 3.2160, Plg78.0000°, Azm33.0000°; N 0.1770, Plg11.0000°, Azm187.0000°; P -3.3900, Plg5.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***30*** *21:25:18.2±2.6, 4991S×16134E, h33km, mb5.5/5 Error ellipse: s-maj=23.6km s-min=11.6km az=99.7*

ISC 30 21:25:17.2±0.3, 4989S±005×16161E±006, h27km, h27km±.4km:pP-P, n155, σ1.915/77, mb4.8/16, MS4.2/12, 17C-3D, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APZ	The Paps	5.24	57	PN	Pn	21 26 34.1	+0.4
APZ				SN	Sn	21 27 30.8	-2.3
DCZ	Deep Cove	5.79	42	eP	Pn	21 26 41.4	+0.2
DCZ				S	Sn	21 27 48.2	+1.5
DCZ	Deep Cove	5.79	42	PN	Pn	21 26 41.4	+0.2
DCZ				SN	Sn	21 27 46.9	+0.3
WHZ	Wether Hill Ro	5.84	49	PN	Pn	21 26 42.8	+0.9
SYZ	Scrubby Hill	6.05	59	PN	Pn	21 26 45.4	+0.6
SYZ				SN	Sn	21 27 50.8	-2.2
MLZ	Mavora Lakes	6.35	47	eP	Pn	21 26 50.2	+1.3
MLZ	Mavora Lakes	6.35	47	PN	Pn	21 26 49.6	+0.7
MLZ				SN	Sn	21 27 59.9	-0.6
TUZ	Tuapeka	6.67	57	P	Pn	21 26 54.1	+0.7
TUZ				S	Sn	21 28 07.2	-1.3
TUZ	Tuapeka	6.67	57	PN	Pn	21 26 54.1	+0.7
TUZ				SN	Sn	21 28 07.0	-1.5
MSZ	Milford Sound	6.76	42	PN	Pn	21 26 56.8	+2.2
EAZ	Earnscleugh	6.99	51	eP	Pn	21 26 58.2	+0.5
EAZ	Earnscleugh	6.99	51	PN	Pn	21 26 59.3	+1.7
WKZ	Wanaka	7.14	48	eP	Pn	21 27 01.6	+1.9
WKZ	Wanaka	7.14	48	PN	Pn	21 27 01.4	+1.7
JCZ	Jackson Bay	7.60	43	eP	Pn	21 27 08.3	+2.3
JCZ	Jackson Bay	7.60	43	PN	Pn	21 27 08.0	+2.0
ODZ	Otahua Downs	7.81	55	eP	Pn	21 27 08.0	-0.9
ODZ	Otahua Downs	7.81	55	PN	Pn	21 27 08.0	-0.9
LBZ	Lake Benmore	8.03	50	eP	Pn	21 27 10.7	-1.2
LBZ	Lake Benmore	8.03	50	PN	Pn	21 27 10.8	-1.2
FOZ	Fox Glacier	8.41	44	eP	Pn	21 27 19.4	+2.2
FOZ	Fox Glacier	8.41	44	PN	Pn	21 27 19.1	+1.8
RPZ	Rata Peaks	8.95	50	Pn	Pn	21 27 23.6	-0.9
	3.0nm,0.3s,baz=221,slow=10,SNR=12						
RPZ				LR	LR	21 30 45.3	
	comp=Z,2μm,19.6s,baz=121,slow=37						
WVZ	Waitaha Valley	9.27	46	PN	Pn	21 27 28.7	-0.3
WVZ				SN	Sn	21 29 10.4	-2.0
DSZ	Denniston Nort	10.80	45	P	Pn	21 27 49.6	-0.4
DSZ	Denniston Nort	10.80	45	PN	Pn	21 27 48.9	-1.1
QRZ	Quartz Range	11.87	44	eP	Pn	21 28 03.9	-0.6
QRZ	Quartz Range	11.87	44	PN	Pn	21 28 05.9	+1.4
URZ	Urewera	16.06	49	Pn	Pn	21 29 01.3	+0.2
	0.6nm,0.3s,baz=177,slow=7.0,SNR=5.9						
TOO	Toolangi	16.91	311	eP	Pn	21 29 13.0	+1.2
	27nm,0.9s						
TOO	Toolangi	16.91	311	eP	Pn	21 29 13.0	+1.2
TOO				pmax	pmax		
	comp=Z,27nm,0.9s						
CNB	Canberra Magne	17.10	324	eP	Pn	21 29 14.5	+0.4
	comp=Z,21nm,1.0s						
STKA	Stephens Creek	23.39	313	eP	P	21 30 24.1	+0.3
	comp=Z,13nm,1.6s,mb4.1						
STKA	Stephens Creek	23.39	313	P	P	21 30 22.9	-0.9
	comp=Z,9.1nm,1.0s,mb4.2,baz=133,slow=9.6,SNR=12						
STKA				LR	LR	21 38 59.4	
	comp=Z,682nm,18.2s,MS4.2,baz=300,slow=36						
RAO	Raoul Island	25.81	45	LR	LR	21 40 12.3	
	comp=Z,335nm,21.6s,MS3.8,baz=140,slow=35						
VNDA	Vanda	27.73	180	P	P	21 31 03.4	+0.1
	comp=Z,3.8nm,0.9s,mb4.0,baz=347,slow=9.2,SNR=18						
VNDA				LR	LR	21 39 59.8	
	comp=Z,234nm,19.0s,MS3.8,baz=13,slow=32						
DZM	Mont Dzumac	28.03	10	LR	LR	21 40 22.7	
	comp=Z,242nm,18.4s,MS3.8,baz=104,slow=32						
CASY	Casey	30.47	218	eP	P	21 31 26.0	-1.6
CTA	Charters Tower	32.16	332	eP	P	21 31 43.2	+0.8
	comp=Z,11nm,1.0s,mb4.6						
CTA				e	pP	21 31 50.9	+0.4
CTA	Charters Tower	32.16	332	eP	P	21 31 43.2	+0.8
CTA				e	pP	21 31 50.9	+0.4
CTA				pmax	pmax		
	comp=Z,11nm,1.0s						
CTAO	Charters Tower	32.16	332	eP	P	21 31 43.8	+1.4
CTAO				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.0						
CTAO	Charters Tower	32.16	332	eP	P	21 31 43.8	+1.4
	comp=Z,29nm,1.1s,mb5.0						
ASAR	Alice Springs	33.96	310	P	P	21 31 57.9	-0.3
	comp=Z,16nm,0.8s,mb5.0,baz=146,slow=8.5,SNR=118						
ASAR				PcP	PcP	21 34 35.2	-0.7
	comp=Z,2.6nm,0.8s,baz=146,slow=3.0,SNR=5.9						
ASAR				LR	LR	21 45 38.6	
	comp=Z,606nm,19.4s,MS4.3,baz=167,slow=36						

ASAR	Alice Springs	33.96	310	P		P	21 31 57.9	-0.3
ASAR							21 34 35.3	
AS31	Alice Springs	33.96	310	⇑P		P	21 31 57.8	-0.4
AS31				ePP		pP	21 32 05.7	-0.6
ASPA	Alice Springs	33.96	310	⇑P		P	21 31 57.8	-0.4
ASPA				ePP		pP	21 32 05.7	-0.6
WB2	Warramunga Arr	36.92	314	⇑P		P	21 32 22.5	-1.1
WB2				P		pP	21 32 30.1	-1.7
WB2	Warramunga Arr	36.92	314	eP		P	21 32 22.4	-1.2
WRA	Warramunga Arr	36.93	314	P		P	21 32 22.6	-1.1
	comp=Z,21nm,0.9s,mb5.0,baz=146,slow=8.0,SNR=85							
WRA				PcP		PcP	21 34 45.0	+0.3
	comp=Z,6.0nm,0.9s,baz=150,slow=2.4,SNR=12							
WRA				LR		LR	21 47 55.0	
	comp=Z,804nm,18.6s,MS4.5,baz=165,slow=37							
WRA	Warramunga Arr	36.93	314	P		P	21 32 22.6	-1.1
WRA							21 34 45.0	
WRAB	Tennant Creek	36.93	314	d	iP	P	21 32 23.1	-0.6
WRAB	Tennant Creek	36.93	314	eP		P	21 32 22.3	-1.4
	comp=Z,66nm,1.0s,mb5.4							
MIR	Mirnyy	37.49	218	eP		P	21 32 29.0	+0.5
MIR				pmax		pmax		
	comp=Z,22nm,1.6s,mb4.7							
QSPA	South Pole Qui	40.23	180	eP		P	21 32 52.2	+0.8
	comp=Z,49nm,1.4s,mb5.0							
FITZ	Fitzroy Crossi	42.83	305	⇑P		P	21 33 12.4	-0.3
	comp=Z,19nm,0.8s,mb4.9							
FITZ				i	pP	pP	21 33 19.8	-1.1
FITZ	Fitzroy Crossi	42.83	305	P		P	21 33 12.6	-0.1
	comp=Z,9.0nm,0.7s,mb4.6,baz=159,slow=9.2,SNR=24							
FITZ				PcP		PcP	21 35 04.1	+0.6
	comp=Z,4.5nm,0.9s,baz=118,slow=7.8,SNR=3.3							
KAKA	Kakadu	44.13	317	eP		P	21 33 22.0	-1.2
	comp=Z,16nm,0.8s,mb4.8							
KAKA				i	pP	pP	21 33 30.0	-1.4
TBI	Tubuai	46.28	73	eLR		LR	21 46 26.7	
	comp=Z,572nm,33.0s,baz=228							
MAW	Mawson	48.18	211	P		P	21 33 54.2	-0.8
	comp=Z,2.0nm,0.9s,mb4.2,baz=122,slow=13,SNR=5.5							
MAW				PcP		PcP	21 35 22.1	0.0
	comp=Z,8.2nm,1.2s,baz=121,slow=5.3,SNR=6.3							
MAW				LR		LR	21 53 01.0	
	comp=Z,203nm,18.2s,MS4.1,baz=284,slow=35							
MAW	Mawson	48.18	211	P		P	21 33 54.2	-0.8
MAW							21 35 22.1	
PPT	Papeete	50.57	68	eS		S	21 41 28.8	+2.8
	comp=Z,144nm,30.8s							
PPT				eLR		LR	21 48 25.7	
	comp=Z,645nm,27.8s,baz=221							
PPT	Papeete	50.57	68	LR		LR	21 51 22.9	
	comp=Z,341nm,21.3s,MS4.3,baz=144,slow=31							
SYO	Syowa Base	53.99	202	eP		P	21 34 36.8	-1.9
RKT	Rikitea	55.65	86	eLR		LR	21 50 46.8	
	comp=Z,645nm,30.8s							
SNAA	Sanae	58.24	186	⇑i		P	21 35 08.0	-1.1
SNAA				e			21 35 11.2	
SNAA				e		pP	21 35 16.2	-1.3
SNAA	Sanae	58.24	186	eP		P	21 35 07.8	-1.3
SNAA				pmax		pmax		
	comp=Z,42nm,1.5s							
SNAA	Sanae	58.24	186	eP		P	21 35 07.8	-1.3
	comp=Z,42nm,1.5s,mb5.2							
VNA1	Neumayer--Stat	59.55	184	⇑i		P	21 35 18.2	+0.1
VNA1				e			21 35 21.3	
VNA1				e			21 35 29.2	
TAOE	Nuku Hiva Isla	63.06	70	eLR		LR	21 54 13.0	
	comp=Z,1μm,24.6s							
KSM	Kuching	67.37	302	eP		P	21 36 09.8	-0.1
KSM				e		pP	21 36 17.2	-1.2
PLCA	Paso Flores	78.80	142	P		P	21 37 19.0	+1.6
	comp=Z,6.5nm,1.2s,mb4.4,baz=216,slow=10,SNR=3.0							
PLCA				LR		LR	22 05 09.5	
	comp=Z,117nm,19.4s,MS4.2,baz=185,slow=30							
CHTO	Chiang Mai	87.89	303	eP		P	21 38 04.8	+0.6
CHTO				pmax		pmax		
	comp=Z,46nm,1.7s,mb5.4							
CHTO	Chiang Mai	87.89	303	eP		P	21 38 04.8	+0.6
	comp=Z,46nm,1.7s,mb5.4							
MJAR	Matsushiro Arr	88.52	341	P		P	21 38 08.1	+1.0
	comp=Z,2.3nm,0.7s,mb4.6,baz=178,slow=7.0,SNR=8.7							
BOSA	Boshof	92.76	217	LR		LR	22 12 41.5	
	comp=Z,121nm,19.1s,MS4.4,baz=1.3,slow=31							
CPUP	Villa Florida	96.60	145	P		P	21 38 45.9	+1.3
	comp=Z,0.6nm,0.3s,mb4.5,baz=162,slow=3.4,SNR=7.8							
CPUP				LR		LR	22 15 43.5	
	comp=Z,94nm,21.3s,MS4.2,baz=183,slow=31							
MKAR	Makanchi Array	118.15	310	PKP		PKPdf	21 44 00.4	-1.2
	comp=Z,2.3nm,0.9s,baz=120,slow=4.9,SNR=8.2							
RSSD	Black Hills	124.36	60	ePKIKP		PKPdf	21 44 14.0	+0.5
BVAR	Borovoye Array	128.04	310	PKP		PKPdf	21 44 19.7	-0.9
	comp=Z,1.3nm,0.7s,baz=141,slow=2.8,SNR=11							
PLAL	Pickwick Lake	128.29	79	eP		PKPdf	21 44 20.6	-0.4
CHKZ	Chkalovo	128.30	311	ePKIKP		PKPdf	21 44 20.0	-1.0
WVT	Waverly	129.17	78	ePKIKP		PKPdf	21 44 21.3	-1.4
ULM	Lac du Bonnet	132.43	58	PKP		PKPdf	21 44 28.6	-0.3
	comp=Z,1.6nm,0.7s,baz=108,slow=14,SNR=3.3							
AKTK	Aktyubinsk	133.12	302	PKP		PKPdf	21 44 29.9	-0.3
AKTO	Aktyubinsk	133.12	302	PKP		PKPdf	21 44 29.9	-0.3
	comp=Z,0.5nm,0.5s,baz=160,slow=3.4,SNR=4.2							
DBIC	Dimbokro	135.45	199	PKP		PKPdf	21 44 35.0	+0.4
	comp=Z,6.7nm,1.0s,baz=123,slow=3.4,SNR=5.0							
DBIC	Dimbokro	135.45	199	PKP		PKPdf	21 44 35.0	+0.4
GNI	Garni	135.55	282	i	PKIKP	PKPdf	21 44 35.2	+0.5
ARU	Arti	135.67	309	⇑i	PKIKP	PKPdf	21 44 32.3	-2.6
ASF	Jabal al Asfar	135.77	268	PKP		PKPdf	21 44 33.3	-1.9
	comp=Z,0.9nm,0.4s,baz=167,slow=4.0,SNR=3.4							
KIV	Kislovodsk	138.89	286	⇑i	PKIKP	PKPdf	21 44 40.8	-0.1
KIV				eSS		SS	22 05 52.1	+5.3
KIV				pmax		pmax		
	comp=Z,18nm,1.9s							
TORD	Torodi Ar. Bea	139.83	211	PKhKP			21 44 34.1	
	comp=Z,1.1nm,0.8s,baz=159,slow=2.4,SNR=3.7							
BRTR	Keskin Array B	142.41	275	PKhKP			21 44 42.6	
	comp=Z,2.2nm,1.0s,baz=153,slow=4.1,SNR=9.5							
IDI	Anoyia	145.47	262	PKPbc		PKPbc	21 44 52.3	-0.4
	comp=Z,45nm,0.8s,baz=139,slow=2.7,SNR=11							
MOS	Moscow	146.46	302	ePKHKP			21 44 49.0	
MOS				i			21 44 54.2	
MOS				pmax		pmax		
	comp=Z,30nm,0.8s							
OBN	Obninsk	146.89	301	i	PKP2	PKPab	21 44 56.0	-2.3
OBN				e			21 48 23.5	
OBN				e			21 51 52.1	
OBN				pmax		pmax		
	comp=Z,84nm,1.9s							
OBN				MLR		MLR		
	comp=Z,100nm,21.0s,MS4.6							
OBN	Obninsk	146.89	301	eP		PKPdf	21 44 55.9	+0.9
SPB4	Spitsbergen Ar	148.86	347	eP		PKPdf	21 44 59.8	+1.5
APA	Apatity	149.07	324	‖	ePKP2	PKPab	21 45 02.0	-5.0
APA				pmax		pmax		
	comp=Z,26nm,1.3s							
AKASG	Malin Array Be	149.98	290	PKPbc		PKPbc	21 45 03.7	-1.3
	comp=Z,10nm,0.9s,baz=80,slow=2.5,SNR=22							
AKASG	Malin Array Be	149.98	290	PKPbc		PKPbc	21 45 03.7	-1.3
AKBB	Malin Array Si	149.98	290	ePKHKP			21 45 03.6	
MLR	Muntele Rosu	150.17	279	PKPbc		PKPbc	21 45 05.1	-0.3
	comp=Z,7.3nm,0.8s,baz=64,slow=6.9,SNR=6.3							
MLR	Muntele Rosu	150.17	279	⇑i		PKPbc	21 45 05.3	-0.1
MLR	Muntele Rosu	150.17	279	⇑P		PKPbc	21 45 05.3	-0.1
JOF	Joensuu	150.41	315	epkp		PKPab	21 45 10.4	-2.1
SCHQ	Schefferville	150.49	62	PKPbc		PKPbc	21 45 06.3	+0.1
	comp=Z,4.4nm,0.9s,baz=248,slow=7.9,SNR=4.5							
VTS	Vitosha	150.63	272	⇑i		PKPbc	21 45 05.5	-1.0
VTS	Vitosha	150.63	272	⇑P		PKPbc	21 45 05.5	-1.0
KEV	Kevo	150.82	329	epkp		PKPbc	21 45 06.2	-0.8
ARCES	ARCESS Array B	151.39	329	PKPbc		PKPbc	21 45 07.6	-0.7
	comp=Z,17nm,0.8s,baz=54,slow=2.1,SNR=40							
ARCES	ARCESS Array B	151.39	329	PKPbc		PKPbc	21 45 07.6	-0.7
ARE0	ARCESS Array S	151.39	329	ePKPbc		PKPbc	21 45 07.4	-0.9
BURAR	Bucovina Array	151.46	282	⇑i		pPKPdf	21 45 14.8	+3.3
DRGR		152.75	279	⇑i		PKPbc	21 45 10.7	-0.7
KAF	Kangasniemi	152.79	314	epkp		PKPbc	21 45 10.0	-1.5
	baz=61,slow=0.8							
FINES	FINESS Array B	152.96	312	PKPbc		PKPbc	21 45 10.8	-1.0
	comp=Z,4.6nm,0.6s,baz=112,slow=4.9,SNR=22							
BZS	Buzias	153.00	276	⇑i		PKPbc	21 45 11.2	-0.7
DAG	Danmarks Havn	153.02	0	⇑i		PKPbc	21 45 10.9	-1.1
	comp=Z,3.3nm,0.6s							
KOLS	Kolonicke sedl	153.75	284	ePKP		PKPbc	21 45 14.3	+0.7
KOLS				e			21 45 26.8	
CRVS	Cervenica-Dubn	154.25	283	ePKP		PKPbc	21 45 14.6	-0.1
STHS	Stebnicka Huta	154.54	284	ePKP		PKPab	21 45 29.8	0.0
KEST	Kesra	155.39	245	PKPab		PKPab	21 45 34.6	+1.1
	comp=Z,4.6nm,0.9s,baz=146,slow=0.1,SNR=12							

VYHS	Vyhne	155.79	281	ePKP		PKPab	21 45 34.5	-0.7
DPC	Dobruska-Polom	157.85	285	ePKPab		PKPab	21 45 44.0	-0.1
UPC	Upice	158.08	285	ePKPab		PKPab	21 45 45.1	+0.1
PRU	Pruhonice	158.90	283	ePKPab		PKPab	21 45 47.7	-0.9
PVCC	Panska Ves	158.99	284	ePKPab		PKPab	21 45 48.6	-0.4
GEC2	GERESS Array S	159.16	279	eP		PKPab	21 45 48.6	-1.1
	comp=Z,12nm,1.1s							
GEC2	GERESS Array S	159.16	279	ePKP2		PKPab	21 45 48.6	-1.1
GEC2				pmax		pmax		
	comp=Z,16nm,1.1s							
GERES	GERESS Array B	159.16	279	PKPab		PKPab	21 45 48.7	-1.0
	comp=Z,3.6nm,0.8s,baz=123,slow=4.9,SNR=16							
HFS	Hagfors	159.16	312	PKPab		PKPab	21 45 47.6	-2.1
	comp=Z,3.5nm,0.8s,baz=98,slow=10,SNR=5.8							
KHC	Kasperske Hory	159.31	280	ePKPab		PKPab	21 45 49.4	-1.0
KHC				ex		x	21 45 56.5	
KHC	Kasperske Hory	159.31	280	d	iPKP2	PKPab	21 45 49.4	-1.0
BRG	Berggiesshubel	159.44	285	eP		PKPab	21 45 50.5	-0.4
	comp=Z,5.0nm,0.9s							
BRG	Berggiesshubel	159.44	285	eP		PKPab	21 45 50.4	-0.5
	comp=Z,7.4nm,1.6s							
BRG	Berggiesshubel	159.44	285	ePKP2		PKPab	21 45 50.4	-0.5
BRG				pmax		pmax		
	comp=Z,3.0nm,1.6s							
WET	Wettzell	159.76	280	eP		PKPab	21 45 51.5	-0.8
	comp=Z,11nm,1.1s							
WET	Wettzell	159.76	280	ePKP2		PKPab	21 45 51.5	-0.8
WET				pmax		pmax		
	comp=Z,36nm,1.1s							
FBE	Freiberg	159.82	285	eP		PKPab	21 45 51.5	-1.1
	comp=Z,7.0nm,1.0s							
NB2	NORSAR Subarra	160.04	315	PKPa		PKPab	21 45 52.0	-1.6
	comp=Z,7.1nm,1.0s,baz=70,slow=4.4							
NOA	NORSAR Array B	160.04	315	PKPab		PKPab	21 45 52.0	-1.5
	comp=Z,2.5nm,0.9s,baz=77,slow=4.4,SNR=7.5							
CLL	Collm	160.10	286	eP		PKPab	21 45 52.7	-1.1
	comp=Z,4.0nm,0.7s							
CLL	Collm	160.10	286	ePKPab		PKPab	21 45 53.0	-0.8
MDT	Midelt	160.11	216	PKPab		PKPab	21 45 51.9	-2.0
	comp=Z,2.0nm,0.8s,baz=198,slow=4.2,SNR=4.7							
GUNZ	Gunzen	160.36	283	eP		PKPab	21 45 54.5	-0.5
	comp=Z,7.0nm,1.2s							
MANZ	Manzenberg	160.43	282	eP		PKPab	21 45 55.2	-0.1
	comp=Z,8.0nm,1.1s							
GRF	Grafenberg Arr	160.93	281	eP		PKPab	21 45 57.2	-0.2
	comp=Z,6.0nm,1.1s							
GRF	Grafenberg Arr	160.93	281	ePKP2		PKPab	21 45 57.2	-0.2
GRF				pmax		pmax		
	comp=Z,57nm,1.1s							
BFO	Black Forest	162.47	275	eP		PKPab	21 46 02.9	-1.3
	comp=Z,25nm,1.6s							
BFO	Black Forest	162.47	275	ePKP2		PKPab	21 46 02.9	-1.3
BFO				pmax		pmax		
	comp=Z,38nm,1.6s							
TNS	Taunus Mts	162.79	281	eP		PKPab	21 46 04.8	-0.8
	comp=Z,8.0nm,1.1s							
TNS	Taunus Mts	162.79	281	ePKP2		PKPab	21 46 04.8	-0.8
TNS				pmax		pmax		
	comp=Z,45nm,1.1s							
ESDC	Sonseca Array	165.56	230	PKPab		PKPab	21 46 17.8	+0.1
	comp=Z,2.2nm,0.4s,baz=144,slow=5.3,SNR=5.2							
EKA	Eskdalemuir Ar	169.27	306	PKPab		PKPab	21 46 33.6	-0.5
	comp=Z,3.5nm,0.9s,baz=108,slow=5.4,SNR=5.3							

ISCJB ***30*** *21:26:46.0±0.5, 5972N±005×15365W±0.10, h130km±6km, mb3.8/6, Error ellipse: s-maj=8.4km s-min=7.8km az=58.5*

IDC ***30*** *21:26:45.8±2.2, 5978N×15368W, h105km±29km, mb3.6/6, mb1 3.8/10, mb1mx3.6/24, mbtmp4.1/10, Error ellipse: s-maj=26.0km s-min=17.5km az=162.0*

NEIC ***30*** *21:26:48.8, 5970N×15351W, h125km, MG3.7(AEIC), After AEIC.*

ISC 30 21:26:47.0±0.5, 5972N±005×1536W±01, h126km±6km, n33, σ0.98/36, mb3.9/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVW2	Sparrevohn	1.69	326	eP	Pn	21 27 17.3	+0.3
SVW2				P		21 27 17.7	
SLKM	Skilak Lake	1.88	63	P	Pn	21 27 19.7	+0.4
KDA

	comp=Z,26nm,0.1s							
CTLN	**Castor Lake**	**2.32**	**267**	PG	Pg	22 31 26.9	-5.1
CTLN				SG	Sg	22 31 56.5	-5.4
CTLN				Trac		22 32 00.2	
	comp=Z,9.9nm,0.1s						
YKW3	**Yellowknife Ar**	**2.75**	**222**	PN	Pn	22 31 30.9	-1.8
YKW3				SN	Sn	22 32 03.3	-3.2
YKW3				Trac		22 32 19.1	
	comp=Z,12nm,0.2s						
GALN	**Gameti Lake**	**2.93**	**262**	PN	Pn	22 31 34.5	-0.8
GALN				SN	Sn	22 32 07.8	-3.3
GALN				Trac		22 32 17.5	
	comp=Z,8.3nm,0.1s						
FNBB	**Fort Nelson**	**8.22**	**231**	PN	Pn	22 32 42.2	-5.6
SEDN	**First Sedna Si**	**8.68**	**91**	PN	Pn	22 32 50.1	-4.0
SEDN				SN	Sn	22 34 22.2	-10
FCC	**Fort Churchill**	**9.83**	**119**	PN	Pn	22 33 05.5	-4.4
FCC				SN	Sn	22 34 50.3	-11
FFC	**Flin Flon**	**10.88**	**152**	PN	Pn	22 33 24.1	-0.3

*MDD **30** 22:35:35.9±2.7,3684N×1115W,h0km,mb3.5/6,Error ellipse: s-maj=22.5km s-min=17.4km az=71.0,PRXIMO*
*NEIC **30** 22:35:35.8,3690N×1115W,h0km,MN2.5(MDD),After MDD.*
*CSEM **30** 22:35:38.4±1.5,3654N×1072W,h10km,ML2.1,Error ellipse: s-maj=27.7km s-min=17.7km az=79.0*

INMG 30 22:35:37.5±0.8,3670N×1134W,h31km,ML2.1,Error ellipse: s-maj=7.5km s-min=4.0km az=83.0, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**2.26**	**67**	*e*Sn	Sn	22 36 36.6	-2.8
PMAFR	**Mafra**	**2.78**	**35**	*e*Sn	Sn	22 36 48.6	-3.8
PBEJ	**Beja**	**3.07**	**63**	*e*Pn	Pn	22 36 22.7	-1.1
PBEJ				*e*Sn	Sn	22 36 55.7	-3.8
EGRO	**El Granado**	**3.19**	**74**	P	Pn	22 36 23.4	-2.1
	1.5nm,0.3s,SNR=7.9						
EGRO				S	Sn	22 36 57.8	-4.7
	2.4nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.19**	**74**	P	Pn	22 36 23.4	-2.2
	1.5nm,0.3s,SNR=7.9						
EGRO				S	Sn	22 36 57.8	-4.8
	2.4nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**3.68**	**53**	*e*Pn	Pn	22 36 31.0	-1.2
PESTR				*e*Sn	Sn	22 37 10.5	-4.0
PTOM	**Tomar**	**3.72**	**38**	*e*Sn	Sn	22 37 11.6	-3.9
EMIN	**Mina Concepcio**	**3.88**	**73**	P	Pn	22 36 32.7	-2.2
	0.3nm,0.1s,SNR=7.3						
EMIN				S	Sn	22 37 14.3	-5.1
	2.7nm,0.3s,SNR=9.0						
EMIN	**Mina Concepcio**	**3.88**	**73**	P	Pn	22 36 32.7	-2.2
	0.3nm,0.1s,SNR=7.3						
EMIN				S	Sn	22 37 14.3	-5.1
	2.7nm,0.3s,SNR=9.0						
EBAD	**Badajoz**	**4.00**	**58**	P	Pn	22 36 34.6	-2.0
	0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	22 37 17.4	-5.0
	3.1nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.00**	**58**	P	Pn	22 36 34.6	-2.0
	0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	22 37 17.4	-5.0
	3.1nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**4.37**	**43**	*e*Sn	Sn	22 37 26.9	-4.6
ESPR	**Espera**	**4.41**	**86**	P	Pn	22 36 40.3	-1.9
	0.7nm,0.1s,SNR=6.5						
ESPR				S	Sn	22 37 27.8	-4.6
	3.9nm,0.3s						
ESPR	**Espera**	**4.41**	**86**	P	Pn	22 36 40.3	-1.9
	0.7nm,0.1s,SNR=6.5						
ESPR				S	Sn	22 37 27.8	-4.7
	3.9nm,0.3s						
PVIS	**Viseu**	**4.83**	**33**	*e*Sn	Sn	22 37 37.3	-5.7
PVRL	**Vila Real**	**5.37**	**31**	*e*Sn	Sn	22 37 50.3	-6.0
EADA	**Adamuz**	**5.58**	**73**	P	Pn	22 36 56.4	-1.9
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	22 37 55.2	-6.2
	1.0nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.75**	**25**	P	Pn	22 36 57.6	-3.2
	0.7nm,0.3s,SNR=7.9						
ELOB				S	Sn	22 37 58.5	-7.2
	2.0nm,0.3s,SNR=7.9						
ELOB	**Lobios**	**5.75**	**25**	P	Pn	22 36 57.1	-3.6
ELOB				S	Sn	22 37 58.5	-7.2
PBRG	**Braganca**	**6.22**	**34**	*e*Sn	Sn	22 38 10.4	-6.9

*NEIC **30** 22:38:40.9,4615N×1448E,h10km,ML2.2(ROM), ML2.4(LJU),After ROM.*
NEIC Felt [III] at Smarna Gora.
*ROM **30** 22:38:40.9±0.7,4615N×1448E,h10km,Md2.7/3,Ml2.2/1, Error ellipse: s-maj=17.2km s-min=7.0km az=18.0*
*LJU **30** 22:38:41.9,4614N×1435E,h20km,ML2.4*
*ISCJB **30** 22:38:42.2±0.2,4616N±002×1437E±002,h10km,Error ellipse: s-maj=2.8km s-min=1.5km az=26.4*
*VIE **30** 22:38:42.8±0.2,4615N×1440E,h8km,mb1.8/4,ML2.2/4, Error ellipse: s-maj=1.3km s-min=1.0km az=38.0 10 km SSE of Kranj*
*CSEM **30** 22:38:42.1±0.1,4614N×1434E,h20km,ML3.2/7,Error ellipse: s-maj=1.2km s-min=0.7km az=12.0*
*PRU **30** 22:38:46.0,4630N×1437E,h0km*

ISC 30 22:38:42.8±0.2,4616N±002×1437E±002,h10km,n63, σ0§82/110,29C-11D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LJU	**Ljubljana**	**0.17**	**137**	⇑*i*Pg	**Pg**	**22 38 47.3**	**+0.9**
LJU				*i* Sg	**Sg**	**22 38 50.2**	**+1.3**
LJU							
	comp=Z,356nm,0.1s						
LJU	**Ljubljana**	**0.17**	**137**	⇑*i*Pg	**Pg**	**22 38 47.4**	**+1.0**
LJU				*i* Sg	**Sg**	**22 38 50.2**	**+1.3**
LJU	**Ljubljana**	**0.17**	**137**	⇑*i*Pg	**Pg**	**22 38 47.4**	**+1.0**
LJU				*i* Sg	**Sg**	**22 38 50.2**	**+1.3**
	comp=Z,356nm,0.1s						
GORS	**Gorjuse**	**0.30**	**301**	⇑*i*Pg	**Pg**	**22 38 49.2**	**+0.4**
GORS				*e*Sg	**Sg**	**22 38 53.2**	**+0.4**
GORS							
	comp=Z,355nm,0.1s						
GORS	**Gorjuse**	**0.30**	**301**	⇑*i*Pg	**Pg**	**22 38 49.2**	**+0.4**
GORS				*e*Sg	**Sg**	**22 38 53.2**	**+0.4**
	comp=Z,355nm,0.1s						
JAVS	**Javornik**	**0.34**	**218**	⇓*i*Pg	**Pg**	**22 38 49.2**	**-0.4**
JAVS				*i* Sg	**Sg**	**22 38 54.2**	**0.0**
JAVS							
	comp=Z,88nm,0.1s						
JAVS	**Javornik**	**0.34**	**218**	⇓*i*Pg	**Pg**	**22 38 49.2**	**-0.4**
JAVS				*i* Sg	**Sg**	**22 38 54.2**	**0.0**
	comp=Z,88nm,0.1s						
VOJS	**Vojsko**	**0.36**	**249**	⇑*i*Pg	**Pg**	**22 38 49.6**	**-0.4**
VOJS				*i* Sg	**Sg**	**22 38 55.0**	**+0.2**
OBKA	**Obir**	**0.37**	**20**	*e*Pg	**Pg**	**22 38 50.8**	**+0.7**
	SNR=78						
OBKA				⇓*i*Sg	**Sg**	**22 38 56.1**	**+1.1**
	comp=Z,76nm,0.1s						
CEY	**Cerknica**	**0.43**	**174**	⇓*i*Pg	**Pg**	**22 38 50.8**	**-0.4**
CEY				*i* Sg	**Sg**	**22 38 56.7**	**-0.1**
CEY							
	comp=Z,70nm,0.1s						
CEY	**Cerknica**	**0.43**	**174**	⇓*i*Pg	**Pg**	**22 38 50.8**	**-0.4**
CEY				*i* Sg	**Sg**	**22 38 56.7**	**-0.1**
CEY	**Cerknica**	**0.43**	**174**	⇓*i*Pg	**Pg**	**22 38 50.8**	**-0.4**
CEY				*i* Sg	**Sg**	**22 38 56.7**	**-0.2**
	comp=Z,70nm,0.1s						
CADS	**Cadrg**	**0.44**	**279**	⇑*i*Pg	**Pg**	**22 38 51.1**	**-0.4**
CADS				*i* Sg	**Sg**	**22 38 57.9**	**+0.6**
CADS							
	comp=Z,79nm,0.1s						
CADS	**Cadrg**	**0.44**	**279**	⇑*i*Pg	**Pg**	**22 38 51.1**	**-0.3**
CADS				*i* Sg	**Sg**	**22 38 57.9**	**+0.6**
	comp=Z,79nm,0.1s						
PDKS	**Podkum**	**0.45**	**103**	⇑*i*Pg	**Pg**	**22 38 52.2**	**+0.5**
VISS	**Visnje**	**0.49**	**137**	⇑*i*Pg	**Pg**	**22 38 52.4**	**0.0**
VISS				*i* Sg	**Sg**	**22 38 58.5**	**-0.3**
VISS							
	comp=Z,193nm,0.2s						
VISS	**Visnje**	**0.49**	**137**	⇑*i*Pg	**Pg**	**22 38 52.4**	**0.0**
VISS				*i* Sg	**Sg**	**22 38 58.5**	**-0.3**
	comp=Z,193nm,0.2s						
DRE	**Drenchia**	**0.50**	**271**	⇑*i*Pg	**Pg**	**22 38 51.6**	**-1.0**
DRE				*i* Sg	**Sg**	**22 38 59.2**	**0.0**
LSR	**Lussari**	**0.66**	**299**	⇓*e*Pg	**Pg**	**22 38 55.2**	**-0.3**
LSR				*e*Sg	**Sg**	**22 39 04.7**	**+0.5**
LSR	**Lussari**	**0.66**	**299**	*e*Pg	**Pg**	**22 38 55.2**	**-0.4**
LSR				*e*Sg	**Sg**	**22 39 04.7**	**+0.5**
COLI	**Coloredo**	**0.69**	**268**	⇑*i*Pg	**Pg**	**22 38 55.1**	**-1.0**
COLI				*i* Sg	**Sg**	**22 39 05.6**	**+0.5**
LEGS	**Legarje**	**0.70**	**108**	*i* Pg	**Pg**	**22 38 56.3**	**0.0**
LEGS				*e*Sg	**Sg**	**22 39 05.9**	**+0.5**
PERS	**Pernice**	**0.70**	**48**	*i* Pg	**Pg**	**22 38 56.4**	**0.0**
PERS							
	comp=Z,54nm,0.1s						
PERS	**Pernice**	**0.70**	**48**	*i* Pg	**Pg**	**22 38 56.3**	**-0.1**
	comp=Z,54nm,0.1s						
BISS	**Bistriski jare**	**0.72**	**47**	*i* Pg	**Pg**	**22 38 56.6**	**0.0**
BISS							
	comp=Z,194nm,0.1s						
BISS	**Bistriski jare**	**0.72**	**47**	*i* Pg	**Pg**	**22 38 56.6**	**0.0**
	comp=Z,194nm,0.1s						
PTCC	**Patocco-Chiusa**	**0.74**	**289**	Pg	**Pg**	**22 38 56.1**	**-1.0**
PTCC				Sg	**Sg**	**22 39 07.6**	**+0.8**
	comp=Z,60nm,0.4s						
DOBS	**Dobrina**	**0.77**	**91**	⇑*i*Pg	**Pg**	**22 38 57.5**	**-0.2**
DOBS				*i* Sg	**Sg**	**22 39 07.8**	**+0.1**
DOBS							
	comp=Z,41nm,0.1s						
DOBS	**Dobrina**	**0.77**	**91**	*i* Pg	**Pg**	**22 38 57.5**	**-0.2**
DOBS				*i* Sg	**Sg**	**22 39 07.8**	**+0.1**
DOBS	**Dobrina**	**0.77**	**91**	⇑*i*Pg	**Pg**	**22 38 57.5**	**-0.1**
DOBS				*i* Sg	**Sg**	**22 39 07.8**	**+0.2**
	comp=Z,41nm,0.1s						
BAD	**Bernadia**	**0.78**	**276**	⇑*i*Pg	**Pg**	**22 38 56.6**	**-1.4**
BAD				*i* Sg	**Sg**	**22 39 08.7**	**+0.6**
CESS	**Cesta pri Krsk**	**0.79**	**104**	⇑*i*Pg	**Pg**	**22 38 58.0**	**0.0**
CESS							
	comp=Z,32nm,0.1s						
CESS	**Cesta pri Krsk**	**0.79**	**104**	⇑*i*Pg	**Pg**	**22 38 58.0**	**0.0**
	comp=Z,32nm,0.1s						
GMNA	**Gemona**	**0.79**	**278**	Pg	**Pg**	**22 38 58.2**	**+0.1**
GMNA				Sg	**Sg**	**22 39 11.7**	**+3.3**
	comp=Z,59nm,0.2s						
CRES	**Cresnjev**	**0.83**	**114**	*i* Pg	**Pg**	**22 38 58.5**	**-0.3**
CRES				*i* Sg	**Sg**	**22 39 09.9**	**+0.2**
CRES							
	comp=Z,30nm,0.2s						
CRES	**Cresnjev**	**0.83**	**114**	*i* Pg	**Pg**	**22 38 58.5**	**-0.3**
CRES				*i* Sg	**Sg**	**22 39 09.9**	**+0.2**
CRES	**Cresnjev**	**0.83**	**114**	*i* Pg	**Pg**	**22 38 58.5**	**-0.4**
CRES				*i* Sg	**Sg**	**22 39 09.9**	**+0.2**
	comp=Z,30nm,0.2s						
GROS	**Grobnik**	**0.84**	**69**	⇑*i*Pg	**Pg**	**22 38 58.8**	**-0.2**
GROS							
	comp=Z,26nm,0.1s						
GROS	**Grobnik**	**0.84**	**69**	⇑*i*Pg	**Pg**	**22 38 58.8**	**-0.2**
	comp=Z,26nm,0.1s						
BUA	**Buia**	**0.86**	**274**	⇓*e*Pg	**Pg**	**22 38 58.3**	**-1.2**
BUA				*e*Sg	**Sg**	**22 39 11.5**	**+0.7**
GOLS	**Golise**	**0.89**	**99**	⇑*i*Pg	**Pg**	**22 38 59.9**	**-0.1**
GOLS				*i* Sg	**Sg**	**22 39 12.1**	**+0.6**
GOLS							
	comp=Z,19nm,0.1s						
GOLS	**Golise**	**0.89**	**99**	⇑*i*Pg	**Pg**	**22 38 59.9**	**-0.1**
GOLS				*i* Sg	**Sg**	**22 39 12.1**	**+0.6**
GOLS	**Golise**	**0.89**	**99**	⇑*i*Pg	**Pg**	**22 38 59.9**	**-0.1**
GOLS				*i* Sg	**Sg**	**22 39 12.1**	**+0.6**
	comp=Z,19nm,0.1s						
BOJS	**Bojanci**	**0.91**	**136**	*i* Pg	**Pg**	**22 38 59.8**	**-0.4**
BOJS				*i* Sg	**Sg**	**22 39 11.2**	**-0.8**
BOJS							
	comp=Z,17nm,0.1s						
BOJS	**Bojanci**	**0.91**	**136**	*i* Pg	**Pg**	**22 38 59.8**	**-0.5**
BOJS				*i* Sg	**Sg**	**22 39 11.2**	**-0.9**
	comp=Z,17nm,0.1s						
TLI	**Talmassons**	**0.91**	**255**	*e*Pg	**Pg**	**22 38 59.4**	**-1.0**
PLRO	**Paularo**	**0.93**	**295**	⇑*i*Pg	**Pg**	**22 39 00.1**	**-0.6**
PLRO				*i* Sg	**Sg**	**22 39 13.5**	**+0.8**
GCIS	**Gornji Cirnik**	**0.93**	**108**	*i* Pg	**Pg**	**22 39 00.4**	**-0.3**
GCIS				*i* Sg	**Sg**	**22 39 13.4**	**+0.7**
GCIS							
	comp=Z,27nm,0.2s						
GCIS	**Gornji Cirnik**	**0.93**	**108**	*i* Pg	**Pg**	**22 39 00.4**	**-0.3**
GCIS				*i* Sg	**Sg**	**22 39 13.4**	**+0.6**
	comp=Z,27nm,0.2s						
MPRI	**Monte Prat**	**0.96**	**275**	*e*Pg	**Pg**	**22 39 00.2**	**-1.1**
MPRI				*e*Sg	**Sg**	**22 39 15.5**	**+1.7**
ZOU	**Zoufplan**	**1.04**	**293**	⇑*i*Pg	**Pg**	**22 39 02.1**	**-0.7**
ZOU				*i* Sg	**Sg**	**22 39 17.3**	**+0.9**
FVI	**Forni Avoltri**	**1.18**	**292**	Pg	**Pg**	**22 39 04.4**	**-1.1**
	comp=Z,35nm,0.5s						
MLNI	**Malnisio**	**1.22**	**270**	⇓*i*Pg	**Pg**	**22 39 05.3**	**-0.9**
MLNI				*i* Sg	**Sg**	**22 39 23.1**	**+1.0**
MLNI	**Malnisio**	**1.22**	**270**	*i* Pg	**Pg**	**22 39 05.3**	**-1.0**
KOGS	**Kog**	**1.34**	**77**	*e*Pg	**Pg**	**22 39 07.9**	**-0.6**
ARSA	**Arzberg**	**1.35**	**36**	⇓*e*Pg	**Pg**	**22 39 08.3**	**-0.4**
	SNR=7.1						
ARSA				⇑*i*Sg	**Sg**	**22 39 25.5**	**-0.7**
	comp=Z,7.8nm,0.3s						
CAE	**Caneva**	**1.35**	**264**	⇑*i*Pg	**Pg**	**22 39 07.2**	**-1.6**
CAE				*i* Sg	**Sg**	**22 39 26.4**	**+0.1**
NVLJ	**Novalja**	**1.64**	**167**	*i* Pn	**Pn**	**22 39 11.6**	**-0.1**
NVLJ				*i* Sn	**Sn**	**22 39 34.6**	**+1.8**
MOA	**Molln**	**1.69**	**358**	⇑*i*Pn	**Pn**	**22 39 13.4**	**+1.0**
MOA				⇓*i*Sn	**Sn**	**22 39 35.5**	**+1.5**
CTI	**Castel Tesino**	**1.89**	**267**	Pg	**Pn**	**22 39 14.7**	**-0.5**
	comp=Z,27nm,0.6s						
WTTA	**Wattenberg**	**2.18**	**301**	⇑*i*Pn	**Pn**	**22 39 20.1**	**+1.1**
APPI	**Appiano**	**2.20**	**279**	Pg	**Pn**	**22 39 19.6**	**+0.3**
KHC	**Kasperske Hory**	**3.02**	**350**	*e*PG	**Pg**	**22 39 37.6**	**-3.0**
KHC				*e*SG	**Sg**	**22 40 18.1**	**-1.6**
	comp=Z,2.9nm,0.6s						

*ISCJB **30** 22:48:39.8±0.7,4810N±003×733E±006,h6km,Error ellipse: s-maj=6.2km s-min=3.7km az=59.3*
*STR **30** 22:48:39.6±0.2,4812N×728E,h10km±1km,Ml1.9,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **30** 22:48:40.0±0.1,4812N×729E,h12km,ML1.9,Error ellipse: s-maj=1.9km s-min=0.7km az=110.0*
*LDG **30** 22:48:40.3±0.1,4812N×728E,h6km,Md2.0/4,Ml2.2/1, Error ellipse: s-maj=2.4km s-min=1.2km az=110.0*

ISC 30 22:48:39.6±1.3,4812N±004×731E±007,h17km±12km,n10, σ0§25/19,France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECH	**Echery**	**0.14**	**315**	Pg	**Pg**	**22 48 43.7**	**+0.2**
ECH				Sg	**Sg**	**22 48 45.9**	**-0.3**
MOF	**Molkenrain**	**0.29**	**204**	Pg	**Pg**	**22 48 46.1**	**+0.2**
MOF				Sg	**Sg**	**22 48 50.3**	**+0.2**
CDF	**Champ du Feu**	**0.30**	**356**	*e*Pg	**Pg**	**22 48 46.1**	**+0.1**
CDF				*e*Sg	**Sg**	**22 48 50.2**	**-0.1**
	19nm,0.2s						
CDF	**Champ du Feu**	**0.30**	**356**	*e*Pg	**Pg**	**22 48 46.1**	**+0.1**
CDF				*e*Sg	**Sg**	**22 48 50.2**	**-0.1**
	9.4nm,0.2s						
WLS	**Welschbruch**	**0.30**	**6**	Pg	**Pg**	**22 48 46.4**	**+0.4**
WLS				Sg	**Sg**	**22 48 50.5**	**+0.2**
HINF	**Hinteralfeld**	**0.43**	**226**	*e*Pg	**Pg**	**22 48 48.3**	**0.0**
HINF				*e*Sg	**Sg**	**22 48 54.0**	**-0.1**
	22nm,0.2s						
HINF	**Hinteralfeld**	**0.43**	**226**	*e*Pg	**Pg**	**22 48 48.3**	**0.0**
HINF				*e*Sg	**Sg**	**22 48 54.0**	**-0.1**
	11nm,0.2s						
HAU	**Haudompre**	**0.65**	**261**	*e*Pg	**Pg**	**22 48 52.4**	**0.0**
HAU				*e*Sg	**Sg**	**22 49 00.8**	**-0.3**
	5.0nm,0.2s						
HAU	**Haudompre**	**0.65**	**261**	*e*Pg	**Pg**	**22 48 52.4**	**0.0**
HAU				*e*Sg	**Sg**	**22 49 00.8**	**-0.3**
	2.5nm,0.2s						
BFO	**Black Forest**	**0.72**	**72**	*e*Sg	**Sg**	**22 49 02.6**	**-0.5**

*ISCJB **30** 23:08:23.4±0.3,5148N±002×699E±003,h0km,Error ellipse: s-maj=2.8km s-min=2.4km az=48.3*
*CSEM **30** 23:08:24.9±0.1,5160N×699E,h1km,ML2.8/7,Error ellipse: s-maj=2.6km s-min=1.3km az=76.0*
*BNS **30** 23:08:25.4±0.5,5159N×689E,h1km,ML1.9*
*BUG **30** 23:08:25.3,5155N×691E,h1km,ML1.7*
*BGR **30** 23:08:25.3±0.5,5149N×694E,h1km,ML2.4/5,Error ellipse: s-maj=4.4km s-min=3.3km az=119.0*
*NEIC **30** 23:08:26.4,5152N×691E,h1km,ML2.8(LDG),After LDG.*
*LDG **30** 23:08:26.4±0.3,5152N×691E,h1km,Ml2.8/8,Error ellipse: s-maj=6.2km s-min=4.9km az=33.0,Suspected Mining induced.*
*STR **30** 23:08:28.7±0.4,5141N×706E,h5km±1km,Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 30 23:08:24.6±0.3,5153N±002×695E±003,h0km,n60, σ1§09/99,3D,Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZER	**Hlnxe**	**0.11**	**331**	Pg	**Pg**	**23 08 26.4**	**-0.2**
BZER				Sg	**Sg**	**23 08 27.8**	**-0.2**
LAUG	**Laupendahl**	**0.18**	**182**	*e*Pg	**Pg**	**23 08 30.0**	**+2.0**
BUG	**Bochum--Univer**	**0.22**	**114**	⇓*e*Pg	**Pg**	**23 08 31.0**	**+2.3**
BUG				Sg	**Sg**	**23 08 35.1**	**+3.6**
WTSB	**Winterswijk**	**0.45**	**348**	*e*Pg	**Pg**	**23 08 33.4**	**+0.2**
WTSB				*i* Sg	**Sg**	**23 08 39.1**	**+0.1**
BNS	**Bensberg**	**0.58**	**166**	*e*Pg	**Pg**	**23 08 38.1**	**+2.3**
HOBG	**Hohbusch**	**0.59**	**156**	*e*Pg	**Pg**	**23 08 37.9**	**+1.9**
HOBG				*e*Sg	**Sg**	**23 08 47.5**	**+3.8**
RODG	**Roetgen-Dahlhe**	**0.62**	**232**	*e*Pg	**Pg**	**23 08 37.5**	**+1.1**
IBBN	**Ibbenburen**	**0.93**	**32**	*e*Pg	**Pg**	**23 08 42.6**	**+0.3**
	SNR=5.1						
IBBN				*e*Sg	**Sg**	**23 08 56.0**	**+1.7**
	SNR=5.5						
STB	**Steinbach**	**0.94**	**184**	*e*Pg	**Pg**	**23 08 44.0**	**+1.4**
STB				*e*Sg	**Sg**	**23 08 58.3**	**+3.5**
	43nm,0.5s						
KLL	**Kalltalsperre**	**0.97**	**205**	*e*Pg	**Pg**	**23 08 44.4**	**+1.2**
KLL				*e*Sg	**Sg**	**23 08 58.4**	**+2.6**
HGN	**Heimansgroeve**	**1.00**	**220**	*e*Pn	**Pn**	**23 08 44.3**	**-1.6**
	13nm,0.3s						
HGN				⇓*i*Pg	**Pg**	**23 08 45.3**	**+1.6**
	37nm,0.3s						
HGN				*e*Sg	**Sg**	**23 08 58.5**	**+1.8**
HGN	**Heimansgroeve**	**1.00**	**220**	*e*Pn	**Pn**	**23 08 44.3**	**-1.6**
	13nm,0.3s						
HGN				⇓*i*Pg	**Pg**	**23 08 45.3**	**+1.6**
	37nm,0.3s						
HGN				*e*Sg	**Sg**	**23 08 58.5**	**+1.8**
BEBN	**Eben Emael**	**1.09**	**228**	P	**Pg**	**23 08 46.2**	**+0.8**
MEM	**Membach**	**1.10**	**213**	P	**Pg**	**23 08 46.4**	**+0.8**
BGG	**Burgeitz**	**1.35**	**169**	*e*Pg	**Pg**	**23 08 50.7**	**+0.3**
BCLA	**Clavier**	**1.52**	**224**	P	**Pn**	**23 08 52.6**	**-0.5**
BCLA	**Clavier**	**1.52**	**224**	P	**Pn**	**23 08 52.5**	**-0.6**
TNS	**Taunus Mts**	**1.61**	**143**	*e*Pg	**Pg**	**23 08 54.9**	**-0.6**
	SNR=5.3						
TNS				*e*Sg	**Sg**	**23 09 15.0**	**-1.5**
	SNR=4.8						
ABH	**Alteburg**	**1.69**	**167**	Pn	**Pn**	**23 08 55.7**	**+0.3**
ABH				Sg	**Sg**	**23 09 20.0**	**+1.1**
GTTG	**Gvttingen**	**1.88**	**88**	*e*Sg	**Sg**	**23 09 25.3**	**+0.3**
	SNR=2.5						
WLF	**Walferdange**	**1.93**	**196**	*e*Pg	**Pg**	**23 09 01.1**	**-0.6**
	SNR=4.0						
WLF				*e*Sg	**Sg**	**23 09 25.2**	**-1.6**
	SNR=3.7						
WLF	**Walferdange**	**1.93**	**196**	*e*Pn	**Pn**	**23 09 01.7**	**+3.0**
WLF				*e*Sn	**Sn**	**23 09 24.5**	**+0.8**
WLF	**Walferdange**	**1.93**	**196**	*e*Pn	**Pn**	**23 09 01.7**	**+3.0**
WLF				*e*Sn	**Sn**	**23 09 24.5**	**+0.8**
GIVF	**Givet**	**1.96**	**224**	*e*Pg	**Pg**	**23 09 01.4**	**-0.9**
GIVF				*e*Sg	**Sg**	**23 09 27.7**	**0.0**
	20nm,0.3s						
GIVF	**Givet**	**1.96**	**224**	*e*Pn	**Pn**	**23 08 58.6**	**-0.5**
GIVF				*e*Pg	**Pg**	**23 09 01.4**	**-0.9**
GIVF				*e*Sg	**Sg**	**23 09 27.7**	**0.0**
GIVF	**Givet**	**1.96**	**224**	*e*Pg	**Pg**	**23 09 01.4**	**-0.9**
GIVF				*e*Sg	**Sg**	**23 09 27.7**	**0.0**
	10nm,0.3s						
UBBA	**Unterbreizbach**	**2.05**	**109**	*e*Sg	**Sg**	**23 09 29.6**	**-0.7**
	SNR=2.7						
DOU	**Dourbes**	**2.07**	**227**	P	**Pn**	**23 09 00.5**	**-0.2**
DOU	**Dourbes**	**2.07**	**227**	P	**Pn**	**23 09 00.4**	**-0.2**
TOD	**Tromm**	**2.26**	**148**	Pn	**Pn**	**23 09 03.6**	**+0.4**
TOD				Sg	**Sg**	**23 09 38.0**	**+0.9**
BAIF	**Baives**	**2.28**	**231**	*e*Pg	**Pg**	**23 09 08.4**	**+0.1**
BAIF				*e*Sg	**Sg**	**23 09 37.0**	**-0.8**
	8.9nm,0.3s						
BAIF	**Baives**	**2.28**	**231**	*e*Pn	**Pn**	**23 09 02.9**	**-0.6**
BAIF				*e*Pg	**Pg**	**23 09 08.4**	**+0.1**
BAIF				*e*Sg	**Sg**	**23 09 37.0**	**-0.8**
BAIF	**Baives**	**2.28**	**231**	*e*Pg	**Pg**	**23 09 08.4**	**+0.1**
BAIF				*e*Sg	**Sg**	**23 09 37.0**	**-0.8**
	4.4nm,0.3s						
RFYF	**Reffroy**	**3.05**	**199**	*e*Pg	**Pg**	**23 09 22.6**	**-0.5**
	baz=14						
RFYF				*e*Sg	**Sg**	**23 10 02.6**	**-0.1**
	5.4nm,0.2s						
RFYF	**Reffroy**	**3.05**	**199**	*e*Pg	**Pg**	**23 09 22.6**	**-0.5**
RFYF				*e*Sg	**Sg**	**23 10 02.6**	**-0.1**
	2.7nm,0.2s						
MOX	**Moxa**	**3.07**	**105**	*e*Sg	**Sg**	**23 10 02.4**	**-0.9**
	SNR=2.4						
CDF	**Champ du Feu**	**3.13**	**176**	*e*Pn	**Pn**	**23 09 15.4**	**+0.3**
CDF				*e*Sg	**Sg**	**23 10 03.9**	**-1.1**
	3.9

ISC 30 23:12:46.5±0.4, 3997N±003×7722E±006, h10km, n61, σ1§28/74, mb3.6/5, MS3.0/2, 9C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.06**	**245**	⇓PG	**Pg**	**23 13 05.3**	**-1.6**
KSH				SG	**Sg**	**23 13 19.3**	**-1.4**
KSH				Smax			
	comp=N,2μm,0.5s						
KSH				Smax			
	comp=E,2μm,0.3s						
ULHL	**Ulahol**	**2.39**	**342**	P	**Pn**	**23 13 25.9**	**+0.1**
	SNR=190						
KZA	**Kyzart**	**2.58**	**325**	P	**Pn**	**23 13 28.1**	**-0.2**
	SNR=248						
KBK	**Karagaybulak**	**3.19**	**328**	P	**Pn**	**23 13 36.9**	**+0.3**
	SNR=115						
TKM2	**Tokmak 2**	**3.19**	**338**	P	**Pn**	**23 13 37.2**	**+0.5**
	SNR=240						
TKM2	**Tokmak 2**	**3.19**	**338**	⇑Pn	**Pn**	**23 13 37.3**	**+0.6**
	comp=E,9.3nm,0.5s						
TKM2				⇓Sn	**Sn**	**23 14 18.4**	**+3.5**
	comp=E,27nm,0.6s						
TKM2	**Tokmak 2**	**3.19**	**338**	PN	**Pn**	**23 13 37.3**	**+0.5**
TKM2				S	**Sn**	**23 14 19.5**	**+4.6**
TKM2				pmax	pmax		
	comp=Z,59nm,0.4s						
TKM2				smax			
	comp=Z,195nm,0.5s						
KNDC	**Almaty**	**3.25**	**357**	⇑Pn	**Pn**	**23 13 38.8**	**+1.2**
	comp=Z,164nm,0.7s						
KNDC				⇑Sn	**Sn**	**23 14 24.2**	**+7.8**
	comp=Z,2μm,0.6s						
AAA	**Alma-Ata**	**3.31**	**357**	*e*PN	**Pn**	**23 13 42.1**	**+3.8**
AAA				*e*S	**Sn**	**23 14 23.8**	**+6.1**
AAA				pmax	pmax		
	comp=Z,280nm,0.7s						
AAA				smax			
	comp=E,2μm,0.6s						
AAK	**Ala-Archa**	**3.36**	**323**	P	**Pn**	**23 13 39.1**	**0.0**
	SNR=38						
AAK	**Ala-Archa**	**3.36**	**323**	*e*Pn	**Pn**	**23 13 38.0**	**-1.1**
AAK				*e*Sn	**Sn**	**23 14 21.1**	**+2.1**
AML	**Almayashu**	**3.43**	**310**	P	**Pn**	**23 13 40.0**	**0.0**
	SNR=64						
FRU	**Bishkek**	**3.47**	**327**	⇑*i*PN	**Pn**	**23 13 40.5**	**0.0**
FRU				*e*S	**Sn**	**23 14 24.5**	**+2.8**
FRU				*i*		23 14 28.5	
FRU				pmax	pmax		
	comp=Z,210nm,1.2s						
CHMS	**Chumysh**	**3.55**	**329**	P	**Pn**	**23 13 41.8**	**+0.1**
	SNR=20						
EKS2	**Erkin-Say**	**3.74**	**317**	P	**Pn**	**23 13 44.3**	**+0.1**
	SNR=65						
USP	**Ospenovka**	**3.88**	**329**	P	**Pn**	**23 13 46.3**	**+0.2**
	SNR=23						
KK31	**Karatay Array**	**5.93**	**304**	⇑Pn	**Pn**	**23 14 12.2**	**-2.1**
	comp=Z,1.1nm,0.5s,baz=326,slow=32,SNR=35						
KK31				⇓Pg	**Pg**	**23 14 28.8**	**-11**
	comp=Z,3.9nm,0.4s,baz=137,slow=74,SNR=11						
KK31				Lg		23 15 43.3	
	comp=Z,16nm,0.6s,baz=119,slow=30,SNR=5.7						
KKAR	**Karatay Array**	**5.93**	**304**	PN	**Pn**	**23 14 12.2**	**-2.1**
KKAR						23 15 43.3	
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KKAR				smax			
	comp=Z,3.0nm,0.4s						
CHCP	**Chirah Chowk**	**7.05**	**208**	P	**Pn**	**23 14 32.4**	**+2.7**
CEP	**Cherat**	**7.46**	**216**	P	**Pn**	**23 14 36.4**	**+1.0**
CEP				S	**Sn**	**23 16 02.0**	**+2.0**
DLH	**Dalhousie**	**7.48**	**188**	*e*P	**Pn**	**23 14 35.0**	**-0.6**
THN	**Thein Dam**	**7.62**	**190**	*e*P	**Pn**	**23 14 38.4**	**+0.9**
MK09	**Makanchi Array**	**7.74**	**27**	⇓Pn	**Pn**	**23 14 39.3**	**+0.2**
	comp=Z,4.1nm,1.1s						
MKAR	**Makanchi Array**	**7.76**	**27**	Pn	**Pn**	**23 14 37.6**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=187,slow=8.6,SNR=4.3						
MKAR				Lg		23 16 48.1	
	comp=Z,0.8nm,0.3s,baz=216,slow=27,SNR=6.9						
MKAR	**Makanchi Array**	**7.76**	**27**	P	**Pn**	**23 14 37.6**	**-1.9**
THW	**Thamme Wali**	**8.41**	**213**	P	**Pn**	**23 14 49.1**	**+0.7**
THW				S	**Sn**	**23 16 21.0**	**-2.3**
SARP	**Sargodha**	**8.83**	**206**	P	**Pn**	**23 14 54.2**	**0.0**
SBDP	**Sheikh Budin**	**9.24**	**216**	P	**Pn**	**23 14 59.3**	**-0.5**
DRP	**Derazinda**	**9.98**	**217**	P	**Pn**	**23 15 10.4**	**+0.4**
VOSK	**Vostochnaya**	**13.46**	**344**	⇑Pn	**Pn**	**23 15 53.2**	**-4.3**
	comp=Z,6.5nm,1.1s						
VOSK	**Vostochnaya**	**13.46**	**344**	P	**Pn**	**23 15 53.1**	**-4.4**
VOSK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BVAR	**Borovoye Array**	**13.87**	**343**	Pn	**Pn**	**23 15 59.2**	**-4.0**
	comp=Z,0.4nm,0.3s,baz=158,slow=13,SNR=34						
BVAR				Lg		23 19 55.4	
	comp=Z,0.3nm,0.3s,baz=140,slow=28,SNR=12						
BVAR				LR	LR	23 21 43.6	
	comp=Z,70nm,18.2s,baz=139,slow=39						
BRVK	**Borovoye**	**13.93**	**342**	*e*Pn	**Pn**	**23 16 00.2**	**-3.8**
	comp=Z,5.2nm,1.0s						
BRVK				*e*Sn	**Sn**	**23 18 55.8**	**+17**
ZRNK	**Zerenda**	**14.15**	**339**	⇑Pn	**Pn**	**23 16 02.7**	**-4.3**
	comp=Z,4.3nm,1.1s						
ZRNK	**Zerenda**	**14.15**	**339**	P	**Pn**	**23 16 02.7**	**-4.3**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ZRNK	**Zerenda**	**14.15**	**339**	*e*Pn	**Pn**	**23 16 03.1**	**-3.9**
	comp=Z,3.0nm,0.7s						
ZRNK				*e*Sn	**Sn**	**23 18 50.5**	**+6.5**
CHKZ	**Chkalovo**	**14.43**	**344**	⇓Pn	**Pn**	**23 16 06.4**	**-4.3**
	comp=Z,4.3nm,1.6s						
CHKZ	**Chkalovo**	**14.43**	**344**	P	**Pn**	**23 16 06.4**	**-4.4**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.6s						
CHKZ	**Chkalovo**	**14.43**	**344**	*e*Pn	**Pn**	**23 16 06.9**	**-3.8**
	comp=Z,3.0nm,0.8s						
CHKZ				*e*Sn	**Sn**	**23 18 50.6**	**-0.2**
ZAL	**Zalesovo**	**14.89**	**18**	Pn	**Pn**	**23 16 13.3**	**-3.7**
	comp=Z,0.4nm,0.3s,baz=167,slow=8.4,SNR=2.8						
ZAL				Lg		23 20 33.4	
	comp=Z,0.0nm,0.3s,baz=160,slow=14,SNR=2.8						
ZAL	**Zalesovo**	**14.89**	**18**	Pn	**Pn**	**23 16 13.3**	**-3.7**
ZAL				Lg		23 20 33.4	
AB31	**Akbulak array**	**15.38**	**313**	Pn	**Pn**	**23 16 19.3**	**-4.3**
	comp=Z,1.8nm,0.8s,baz=111,slow=13,SNR=17						
AB31				⇑Lg		23 20 50.6	
	comp=Z,7.7nm,1.1s						
NVS	**Novosibirsk**	**15.42**	**13**	*e*P	**Pn**	**23 16 22.9**	**-1.2**
NVS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NVS				pmax	pmax		
	comp=N,3.0nm,1.0s						
AKTK	**Aktyubinsk**	**17.06**	**314**	Pn	**Pn**	**23 16 41.4**	**-3.7**
AKTK				Lg		23 21 51.8	
AKTO	**Aktyubinsk**	**17.06**	**314**	⇑Pn	**Pn**	**23 16 41.1**	**-4.0**
	comp=N,0.1nm,1.1s						
AKTO				⇓Lg		23 21 43.9	
	comp=N,0.6nm,1.9s						
AKTO	**Aktyubinsk**	**17.06**	**314**	Pn	**Pn**	**23 16 41.4**	**-3.7**
	comp=N,0.1nm,0.3s,baz=119,slow=14,SNR=12						
AKTO				Lg		23 21 51.8	
	comp=N,0.1nm,0.3s,baz=225,slow=17,SNR=3.7						
ARU	**Arti**	**20.53**	**330**	*e*P	**P**	**23 17 25.0**	**+0.1**
ARU				MLR	MLR		
	comp=Z,60nm,18.0s,MS3.0						
ARU				MLR	MLR		
	comp=N,20nm,15.0s,MS2.8						
ARU				MLR	MLR		
	comp=E,30nm,17.0s,MS2.8						
SONM	**Songino Array**	**22.35**	**60**	P	**P**	**23 17 44.9**	**+0.3**
	comp=E,0.3nm,0.4s,mb3.1,baz=249,slow=12,SNR=4.8						
ULN	**Ulaanbaatar**	**22.79**	**60**	P	**P**	**23 17 48.4**	**-0.8**
KIV	**Kislovodsk**	**25.87**	**290**	P	**P**	**23 18 19.8**	**+1.4**
MALT	**Malatya**	**29.98**	**279**	P	**P**	**23 18 56.9**	**+1.8**
FINES	**FINESS Array B**	**37.55**	**322**	P	**P**	**23 19 57.6**	**-3.3**
	comp=E,1.5nm,0.9s,mb3.7,baz=106,slow=12,SNR=5.9						
FINES				LR	LR	23 36 17.1	
	comp=E,36nm,19.3s,MS3.2,baz=69,slow=38						
FINES	**FINESS Array B**	**37.55**	**322**	P	**P**	**23 19 57.6**	**-3.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES				MLR	MLR		
	comp=Z,36nm,19.3s						
YHNB	**Yeheng**	**39.90**	**99**	P	**P**	**23 20 20.6**	**0.0**
NB2	**NORSAR Subarra**	**44.68**	**321**	P	**P**	**23 20 55.9**	**-3.6**
	comp=Z,1.4nm,0.7s,mb3.9,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**44.68**	**321**	P	**P**	**23 20 59.8**	**+0.3**
	comp=Z,1.0nm,0.6s,mb3.8,baz=88,slow=8.0,SNR=3.1						
NOA	**NORSAR Array B**	**44.68**	**321**	P	**P**	**23 20 59.8**	**+0.3**
	comp=Z,1.0nm,0.6s			pmax	pmax		
GERES	**GERESS Array B**	**45.03**	**303**	P	**P**	**23 21 04.0**	**+1.7**
	comp=Z,0.8nm,0.7s,mb3.7,baz=250,slow=41,SNR=3.4						
GERES	**GERESS Array B**	**45.03**	**303**	P	**P**	**23 21 04.0**	**+1.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TIP	**Timpagrande**	**45.81**	**289**	*e*P	**P**	**23 21 07.7**	**-0.8**
TORD	**Torodi Ar. Bea**	**70.62**	**271**	P	**P**	**23 24 02.8**	**+0.7**
	comp=Z,1.0nm,0.6s,mb3.9,baz=57,slow=5.2,SNR=5.3						

*INMG **30** 23:36:15.3±0.9, 4279N×722W, h0km, ML1.9, Error ellipse: s-maj=2.0km s-min=1.4km az=99.0*

MDD 30 23:36:15.4±0.3, 4280N×724W, h6km±7km, mbLg2.2/14, Error ellipse: s-maj=4.0km s-min=2.2km az=106.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EPON	**Pontenova**	**0.53**	**7**	Pg	Pg	23 36 25.5	-0.1
	8.2nm,0.8s,SNR=36						
EPON				Lg		23 36 32.2	
	17nm,0.1s,SNR=26						
ECAL	**Calabor**	**0.93**	**156**	Pg	Pg	23 36 32.8	-0.5
	3.6nm,0.3s,SNR=15						
ECAL				Lg		23 36 45.3	
	24nm,0.2s						
STS	**Santiago**	**0.97**	**276**	Pg	Pg	23 36 33.4	-0.5
	8.2nm,0.4s,SNR=21						
STS				Lg		23 36 46.6	
	26nm,0.1s,SNR=19						
PBRG	**Braganca**	**1.06**	**159**	*e*P	Pg	23 36 34.8	-0.9
PBRG				*e*S	Sg	23 36 48.7	-0.8
PBRG							
	12nm,0.1s						
ELOB	**Lobios**	**1.11**	**213**	Pg	Pg	23 36 35.3	-1.4
	12nm,0.3s,SNR=54						
ELOB				Lg		23 36 51.1	
	20nm,0.2s,SNR=13						
PCAB	**Cabril**	**1.23**	**208**	*e*P	Pg	23 36 38.5	-0.5
PCAB				*e*S	Sg	23 36 54.6	-0.4
PCAB							
	20nm,0.1s						
EZAM	**Zamans**	**1.25**	**239**	Pg	Pg	23 36 38.5	-1.0
	3.4nm,0.2s,SNR=7.9						
EZAM				Lg		23 36 53.9	
	13nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**1.28**	**277**	Pg	Pg	23 36 37.8	-2.2
	6.8nm,0.3s,SNR=97						
EMAZ				Lg		23 36 56.7	
	20nm,0.1s,SNR=12						
PVRL	**Vila Real**	**1.56**	**193**	*e*P	Pn	23 36 44.6	+0.9
PVRL				*e*S	Sn	23 37 03.0	-1.3
PVRL							
	20nm,0.2s						
EARI	**Arriondas**	**1.57**	**71**	Pn	Pn	23 36 42.6	-1.2
	3.7nm,0.6s,SNR=23						
EARI				Pg	Pg	23 36 44.0	-1.5
	0.5nm,0.1s,SNR=7.9						
EARI				Sn	Sn	23 37 02.6	-1.9
	1.0nm,0.1s,SNR=13						
EARI				Lg		23 37 04.5	
	2.3nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**2.14**	**193**	*e*Sg	Sg	23 37 22.0	-2.0
PVIS							
	9.8nm,0.1s						
PVIS	**Viseu**	**2.14**	**193**	Lg		23 37 22.0	
	4.9nm,0.1s						
ELAN	**Lanestosa**	**2.83**	**80**	Pn	Pn	23 37 00.3	-0.8
	0.3nm,0.2s,SNR=7.9						
ELAN				Pg	Pg	23 37 07.0	-2.6
	0.2nm,0.1s,SNR=7.9						
ELAN				Sn	Sn	23 37 32.4	-3.1
	0.9nm,0.3s,SNR=7.9						
ELAN				Lg		23 37 44.4	
	3.6nm,0.2s,SNR=6.0						
PCBR	**Castelo Branco**	**2.96**	**184**	*e*Pn	Pn	23 37 01.8	-1.1
PCBR				*e*Sg	Sg	23 37 49.3	-1.2
GUD	**Guadarrama**	**3.16**	**132**	Pg	Pg	23 37 12.4	-3.5
	0.2nm,0.1s,SNR=7.9						
GUD				Lg		23 37 52.0	
	1.3nm,0.2s,SNR=5.0						
EBAD	**Badajoz**	**4.04**	**177**	Sn	Sn	23 38 01.3	-4.2
	0.4nm,0.2s,SNR=4.0						
EBAD				Lg		23 38 23.1	
	1.0nm,0.2s,SNR=4.7						

*NEIC **30** 23:40:31.0, 3008S×72.10W, h44km, MG3.3(GUC), After GUC.*

GUC 30 23:40:31.0±0.8, 3008S×7210W, h44km±2km, MD4.0, ML3.3, 3C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSCH	**La Serena**	**0.76**	**77**	⇑*i*P	Pn	23 40 45.9	+0.5
LSCH				*i* S	Sn	23 40 56.8	+1.0
OVCH	**Ovalle**	**0.94**	**124**	⇓*i*P	Pn	23 40 48.3	+0.6
OVCH				*i* S	Sn	23 41 01.4	+1.4
OVCH				AML	AML	23 41 02.3	
	comp=E,3μm,0.4s						
OVCH	**Ovalle**	**0.94**	**124**	⇓*i*P	Pn	23 40 48.3	+0.6
OVCH				*i* S	Sn	23 41 01.4	+1.4
TLL	**Tololo Astrono**	**1.13**	**95**	*e*P	Pn	23 40 52.0	+1.7
TLL				*i* S	Sn	23 41 07.7	+3.1
TLL				AML	AML	23 41 15.1	
	comp=N,2μm,0.6s						
TLL	**Tololo Astrono**	**1.13**	**95**	*e*P	Pn	23 40 52.0	+1.7
TLL				*i* S	Sn	23 41 07.7	+3.1
CMCH	**Combarbala**	**1.44**	**139**	⇑*i*P	Pn	23 40 55.5	+0.9
CMCH				*i* S	Sn	23 41 14.3	+2.0
CMCH				AML	AML	23 41 24.0	
	comp=N,2μm,0.8s						
CMCH	**Combarbala**	**1.44**	**139**	⇑*i*P	Pn	23 40 55.5	+0.9
CMCH				*i* S	Sn	23 41 14.3	+2.0
LCO	**Las Campanas**	**1.62**	**49**	*e*P	Pn	23 40 58.5	+1.4
LCO				*i* S	Sn	23 41 19.2	+2.5
LCO				AML	AML	23 41 29.1	
	comp=E,213nm,0.4s						
LCO	**Las Campanas**	**1.62**	**49**	*e*P	Pn	23 40 58.5	+1.4
LCO				*i* S	Sn	23 41 19.2	+2.5
CHNG	**Los Chungos**	**1.87**	**164**	⇓*i*P	Pn	23 41 00.9	+0.4
CHNG				*i* S	Sn	23 41 24.5	+1.7
CHNG				AML	AML	23 41 35.8	
	comp=E,83nm,0.7s						
PEL	**Peldehue**	**3.28**	**159**	*e*P	Pn	23 41 22.0	+2.1
PEL				*i* S	Sn	23 41 59.4	+1.7
PEL				AML	AML	23 42 17.6	
	comp=E,112nm,0.4s						
PEL	**Peldehue**	**3.28**	**159**	*e*P	Pn	23 41 22.0	+2.1
PEL				*i* S	Sn	23 41 59.4	+1.7
FCH	**Farellones**	**3.58**	**155**	*e*P	Pn	23 41 26.8	+2.7
FCH				*i* S	Sn	23 42 08.0	+2.9
FCH				AML	AML	23 42 30.3	
	comp=N,31nm,0.8s						

IDC 31 00:15:24.9±13.0, 489S×14152E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.7/11, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=199.4km s-min=77.9km az=10.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.51**	**204**	Pn	Pn	00 19 19.4	+1.6
	0.4nm,0.3s,baz=28,slow=13,SNR=6.8						
ASAR	**Alice Springs**	**20.06**	**201**	P	P	00 19 59.0	-0.7
	0.4nm,0.5s,baz=35,slow=12,SNR=5.3						
FITZ	**Fitzroy Crossi**	**20.33**	**228**	P	P	00 20 02.8	+0.2
	3.4nm,1.0s,baz=57,slow=17,SNR=2.6						
STKA	**Stephens Creek**	**26.85**	**180**	P	P	00 21 07.5	+0.5
	1.6nm,0.9s,baz=338,slow=11,SNR=3.3						

*ISCJB **31** 00:23:43.2±6.2, 00N±01.1×1230E±03, h147km±61km, mb3.8/8, Error ellipse: s-maj=49.3km s-min=16.1km az=154.4*

*IDC **31** 00:23:49.0±7.6, 003N×12325E, h185km±76km, mb3.4/6, mb1 3.6/7, mb1mx3.4/17, mbtmp3.9/7, Error ellipse: s-maj=49.8km s-min=16.5km az=77.0*

*NEIC **31** 00:23:49.4±4.0, 002N×12323E, h193km±40km, mb4.0/2, Error ellipse: s-maj=30.8km s-min=10.0km az=77.0*

ISC 31 00:23:49.6±6.3, 00N±01×1232E±03, h194km±63km, n16, σ0§63/15, mb3.7/8, 1C-1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.16**	**172**	⇓*i*P	**P**	**00 27 46.9**	**-0.6**
	7.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**18.16**	**172**	P	**P**	**00 27 47.2**	**-0.2**
	0.7nm,0.3s,baz=351,slow=10,SNR=23						
WRAB	**Tennant Creek**	**22.64**	**152**	*e*P	**P**	**00 28 33.9**	**-0.2**
	5.5nm,0.4s,mb4.4						
WRA	**Warramunga Arr**	**22.64**	**152**	P	**P**	**00 28 33.7**	**-0.4**
	4.4nm,0.5s,mb4.2,baz=329,slow=10,SNR=30						
WB2	**Warramunga Arr**	**22.64**	**152**	⇑*i*P	**P**	**00 28 33.8**	**-0.3**
ASAR	**Alice Springs**	**25.73**	**157**	P	**P**	**00 29 03.1**	**+1.0**
	0.8nm,0.5s,mb3.6,baz=343,slow=15,SNR=9.9						
STKA	**Stephens Creek**	**36.18**	**153**	P	**P**	**00 30 34.2**	**+0.7**
	1.5nm,0.4s,mb3.8,baz=328,slow=12,SNR=6.1						
STKA	**Stephens Creek**	**36.18**	**153**	P	**P**	**00 30 34.2**	**+0.7**
MJAR	**Matsushiro Arr**	**38.93**	**19**	P	**P**	**00 30 56.1**	**-0.5**
	0.7nm,0.4s,mb3.5,baz=192,slow=9.4,SNR=5.4						
SONM	**Songino Array**	**49.82**	**345**	P	**P**	**00 32 24.1**	**+1.3**
	1.0nm,0.5s,mb3.4,baz=165,slow=7.0,SNR=3.7						
MKAR	**Makanchi Array**	**58.70**	**328**	P	**P**	**00 33 27.2**	**+0.4**
	0.3nm,0.3s,mb3.4,baz=127,slow=8.6,SNR=3.5						
BRVK	**Borovoye**	**68.64**	**329**	P	**P**	**00 34 30.9**	**-0.9**
ZRNK	**Zerenda**	**69.25**	**328**	*e*P	**P**	**00 34 35.2**	**-0.3**
	0.5nm,0.4s,mb3.5						
MAW	**Mawson**	**79.07**	**200**	P	**P**	**00 35 32.4**	**+0.1**
VNDA	**Vanda**	**80.23**	**172**	P	**P**	**00 35 38.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**120.58**	**285**	PKP	PKPdf	00 42 19.0	+0.9
	0.1nm,0.4s,baz=86,slow=1.7,SNR=9.2						

*IDC **31** 00:26:10.7±0.8, 2786N×10394E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.9/20, mbtmp3.9/10, Error ellipse: s-maj=59.8km s-min=16.8km az=59.0*

*BJI **31** 00:26:13.7, 2805N×10421E, h16km, mB4.7, mb4.5, ML3.8, Ms3.7, Msz3.3*

*ISCJB **31** 00:26:15.7±0.8, 2806N±004×10432E±005, h52km±10km, mb3.9/12, Error ellipse: s-maj=7.6km s-min=6.5km az=100.7*

*MOS **31** 00:26:15.6±1.3, 2794N×104.19E, h49km, mb4.5/4, Error ellipse: s-maj=17.9km s-min=9.8km az=118.2*

*NEIC **31** 00:26:20.5±2.2, 2795N×104.10E, h77km±21km, mb4.1/6, Error ellipse: s-maj=12.4km s-min=9.8km az=78.0*

ISC 31 00:26:17.6±0.7, 2804N±004×10427E±005, h49km±8km, n38, σ0§92/49, mb3.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**2.65**	**126**	P	**Pn**	**00 26 58.0**	**+0.1**
GYA				PG	**Pn**	**00 27 03.3**	**+5.4**
GYA				S	**Sn**	**00 27 30.5**	**+1.7**
GYA				SG	**Sn**	**00 27 38.0**	**+9.2**
GYA				Smax			
	comp=N,680nm,0.6s						
GYA				Smax			
	comp=E,400nm,0.7s						
CD2	**Chengdu**	**2.89**	**351**	P	**Pn**	**00 27 01.0**	**-0.1**
CD2				PG	**Pn**	**00 27 06.5**	**+5.4**
CD2				S	**Sn**	**00 27 32.0**	**-2.6**
CD2				SG	**Sn**	**00 27 41.5**	**+6.9**
CD2				Smax			
	comp=N,480nm,0.4s						
CD2				Smax			
	comp=E,970nm,0.8s						
KMI	**Kunming**	**3.21**	**206**	P	**Pn**	**00 27 05.0**	**-0.6**
KMI				PG	**Pn**	**00 27 11.8**	**+6.2**
KMI				SG	**Sn**	**00 27 53.5**	**+11**
KMI				Smax			
	comp=N,54nm,0.9s						
KMI				Smax			
	comp=E,57nm,0.9s						
KMI				LR	LR		
	comp=N,409nm,7.6s						
KMI				LR	LR		
	comp=E,443nm,7.1s						
KMI				LR	LR		
	comp=Z,455nm,8.3s						
XAN	**Xi'an**	**7.19**	**33**	P	**Pn**	**00 28 01.5**	**+1.5**
XAN				S	**Sn**	**00 29 19.0**	**-1.3**
XAN				SG	Sn	00 29 59.0	+39
XAN				Smax			
	comp=N,96nm,1.1s						
XAN				Smax			
	comp=E,105nm,1.1s						
XAN				LR	LR		
	comp=N,160nm,7.5s						
XAN				LR	LR		
	comp=E,185nm,7.2s						
XAN				LR	LR		
	comp=Z,192nm,9.9s						
LZH	**Lanzhou**	**8.03**	**358**	*e*P	**Pn**	**00 28 10.8**	**-0.8**
LZH				AP		00 28 13.5	
LZH				XP		00 28 16.5	
LZH				S	**Sn**	**00 29 42.0**	**+1.1**
LZH				AMB	AMB		
	comp=Z,13nm,1.0s						
LZH				AMB	AMB		
	comp=Z,104nm,6.4s						
LZH				Smax			
	comp=N,44nm,1.0s						
LZH				Smax			
	comp=E,59nm,1.0s						
LZH				LR	LR		
	comp=E,461nm,6.5s						
LZH				LR	LR		
	comp=Z,278nm,8.1s						
GZH	**Guangzhou**	**9.56**	**119**	P	**Pn**	**00 28 31.5**	**-1.1**
GZH				S	**Sn**	**00 30 18.0**	**-0.6**
NJ2	**Nanjing**	**13.25**	**69**	*e*P	**Pn**	**00 29 23.5**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
JIRN	**Jiri**	**16.00**	**273**	*e*P	**Pn**	**00 30 00.1**	**+0.9**
GUN	**Gumba**	**16.25**	**274**	*e*P	**Pn**	**00 30 02.8**	**+0.4**
PKI	**Pulchoki**	**16.70**	**273**	*e*P	**Pn**	**00 30 08.0**	**0.0**
KKN	**Kakani**	**16.79**	**274**	*e*P	**Pn**	**00 30 08.9**	**-0.3**
	comp=Z,15nm,0.6s						
KKN	**Kakani**	**16.79**	**274**	*e*P	**Pn**	**00 30 08.9**	**-0.3**
KKN				pmax	pmax		
	comp=Z,15nm,0.6s						
DMN	**Daman**	**16.96**	**273**	*e*P	**Pn**	**00 30 11.5**	**+0.2**
	comp=Z,5.1nm,0.4s						
GKN	**Gorkha**	**17.34**	**274**	*e*P	**Pn**	**00 30 15.6**	**-0.4**
	comp=Z,8.4nm,0.5s						
SONM	**Songino Array**	**19.83**	**4**	P	**Pn**	**00 30 46.4**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=184,slow=12,SNR=5.3						
ULN	**Ulaanbaatar**	**19.91**	**6**	*e*P	**Pn**	**00 30 46.1**	**-0.9**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ULN	**Ulaanbaatar**	**19.91**	**6**	*e*P	**Pn**	**00 30 46.0**	**-0.9**
	comp=Z,1.6nm,0.4s						
ZAK	**Zakamensk**	**22.32**	**

comp=Z,1.8nm,0.9s,mb4.1,baz=95,slow=6.1,SNR=3.5
NOA NORSAR Array B 67.32 328 P **P** **00 37 06.3 -1.0**
comp=Z,0.6nm,0.7s,mb3.8,baz=88,slow=4.5,SNR=3.7
NOA NORSAR Array B 67.32 328 P **P** **00 37 06.3 -1.0**
NOA pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 69.80 315 P **P** **00 37 23.0 +0.2**
comp=Z,0.3nm,0.6s,mb3.4,baz=73,slow=4.6,SNR=3.8

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*ISCJB **31** 00:56:02.3±0.7, 27.97N±0.05×103.7E±0.1, h10km, mb3.8/4, Error ellipse: s-maj=18.9km s-min=5.4km az=23.9*
*BJI **31** 00:56:06.5, 28.02N×103.91E, h18km, ML3.5, Ms3.6, Msz3.1*
*IDC **31** 00:56:06.3±1.2, 28.05N×104.21E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/20, mbtmp3.7/5, Error ellipse: s-maj=89.1km s-min=20.7km az=63.0*
ISC 31 00:56:04.9±0.7, 2801N±004×1036E±01, h10km, n9, σ1§32/13, mb3.8/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.89**	**2**	P	**Pn**	**00 56 53.0**	**+2.0**
CD2				PG	**Pg**	**00 56 59.5**	**-0.8**
CD2				S	**Sn**	**00 57 25.0**	**-0.8**
CD2				SG	**Sg**	**00 57 33.8**	**-3.9**
CD2				Smax			
	comp=N,260nm,0.6s						
CD2				Smax			
	comp=E,410nm,0.6s						
KMI	**Kunming**	**2.99**	**196**	PG	**Pg**	**00 56 59.5**	**-2.7**
KMI				SG	**Sg**	**00 57 40.8**	**-0.1**
KMI				Smax			
	comp=N,42nm,1.0s						
KMI				Smax			
	comp=E,68nm,0.9s						
KMI				LR	LR		
	comp=N,285nm,5.6s						
KMI				LR	LR		
	comp=E,210nm,5.2s						
KMI				LR	LR		
	comp=Z,197nm,7.1s						
XAN	**Xi'an**	**7.53**	**36**	P	**Pn**	**00 57 54.3**	**-0.5**
NJ2	**Nanjing**	**13.79**	**69**	*e*P	**Pn**	**00 59 19.8**	**-0.7**
SONM	**Songino Array**	**19.91**	**5**	P	**Pn**	**01 00 38.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=181,slow=13,SNR=3.9						
MKAR	**Makanchi Array**	**25.13**	**324**	P	**P**	**01 01 34.8**	**+4.7**
	comp=Z,0.8nm,0.5s,mb3.5,baz=124,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	**56.17**	**145**	P	**P**	**01 05 44.7**	**-0.1**
	comp=Z,0.6nm,0.3s,mb4.1,baz=334,slow=8.3,SNR=3.5						
ASAR	**Alice Springs**	**59.10**	**147**	P	**P**	**01 06 08.2**	**+2.8**
	comp=Z,0.2nm,0.3s,mb3.6,baz=326,slow=6.1,SNR=3.7						
ARCES	**ARCESS Array B**	**59.91**	**337**	P	**P**	**01 06 15.2**	**+4.1**
	comp=Z,2.6nm,1.1s,mb4.2,baz=93,slow=8.4,SNR=3.6						

CASC 31 01:09:34.0±2.6, 826N×8276W, h15km±7km, MD4.1, 8C-7D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVD	**David**	**0.35**	**59**	⇓*i*P	Pg	01 09 41.6	+0.4
BRU2	**Volcan**	**0.54**	**7**	⇑*i*P	Pg	01 09 44.7	0.0
BRU2				*e*S	Sg	01 09 54.0	+2.2
BRU	**Baru**	**0.58**	**19**	⇑*i*P	Pg	01 09 45.2	-0.2
CTCR	**Cotoan**	**0.64**	**360**	⇓*i*P	Pg	01 09 45.8	-0.7
CNI	**Changuinola**	**1.18**	**12**	⇓*i*P	Pn	01 09 54.1	-1.9
BUS	**Buena Vista**	**1.63**	**323**	⇓*e*P	Pn	01 10 00.6	-1.5
BUS				*e*S	Sn	01 10 22.5	-0.4
LCR2	**La Lucha 2**	**1.92**	**320**	⇑*e*P	Pn	01 10 04.9	-1.3
LCR2				*e*S	Sn	01 10 31.1	+0.9
VTU	**Volcan Turrial**	**2.02**	**331**	⇓*e*P	Pn	01 10 09.1	+1.6
OCM	**Ochomogo**	**2.02**	**324**	⇑*e*P	Pn	01 10 06.5	-1.0
OCM				*e*S	Sn	01 10 33.0	+0.6
IRZ2	**Volcan Irazu 2**	**2.04**	**327**	⇑*e*P	Pn	01 10 07.4	-0.4
IRZ2				*e*S	Sn	01 10 34.1	+1.0
LAJ	**Bijagual**	**2.09**	**320**	⇓*e*P	Pn	01 10 09.5	+1.0
LAJ				*e*S	Sn	01 10 40.8	+6.5
SJS	**Escuela Geolog**	**2.11**	**323**	*e*P	Pn	01 10 09.3	+0.6
SJS				*e*S	Sn	01 10 36.4	+1.7
PRS1	**Puriscal**	**2.30**	**318**	*e*S	Sn	01 10 39.3	-0.3
PRS1				*e*P		01 10 10.1	
POA2	**Poas 2**	**2.41**	**322**	⇓*e*P	Pn	01 10 13.6	+0.6
POA2				*e*S	Sn	01 10 45.7	+3.4
CGA2	**Cerro Gallo 2**	**2.43**	**316**	*e*P	Pn	01 10 12.9	-0.3
CGA2				*e*S	Sn	01 10 44.1	+1.4
AZU	**Azuero**	**2.50**	**100**	*e*P	Pn	01 10 14.3	+0.1
AZU				*e*S	Sn	01 10 45.3	+0.9
EPA	**Esparza**	**2.50**	**314**	⇑*e*P	Pn	01 10 15.4	+1.2
EPA				*e*S	Sn	01 10 45.7	+1.2
CAO	**Cobano**	**2.73**	**302**	*e*P	Pn	01 10 15.4	-1.9
JCR	**Jicaral**	**2.81**	**304**	*e*P	Pn	01 10 18.6	+0.1
ACH	**Altos**	**2.83**	**82**	*e*P	Pn	01 10 18.8	+0.1
ACH				*e*S	Sn	01 10 53.7	+1.2
FORC	**Fortuna**	**2.90**	**320**	*e*P	Pn	01 10 20.4	+0.7
FORC				*e*S	Sn	01 10 56.5	+2.2
VACR	**Volcan Arenal**	**2.91**	**319**	⇑*e*P	Pn	01 10 21.0	+1.2
PTP	**Ponta Puerca**	**19.39**	**58**	⇑*i*P		01 09 38.1	

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*NIED **31** 01:21:00, 28.40N×14.230E, h8km, Mw3.7 Best double couple: M0=4.24000×10^14 NP1:φs=347.00000°, δ80.00000°, λ118.00000°. NP2:φs=96.00000°, δ29.00000°, λ21.00000°.*
*ISCJB **31** 01:21:12.6±3.4, 28.48N±0.05×143.2E±0.2, h27km±26km, mb4.4/3, Error ellipse: s-maj=24.2km s-min=7.1km az=165.8*
*JMA **31** 01:21:13.5±0.1, 28.42N×142.29E, h30km±4km, M4.1*
*NEIC **31** 01:21:15.1±0.9, 28.56N×142.42E, h35km, mb4.3/2, Error ellipse: s-maj=22.0km s-min=9.6km az=65.0*
ISC 31 01:21:13.0±4.2, 2839N±005×1423E±02, h11km±27km, n13, σ0§99/16, mb4.4/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.29**	**182**	P	**Pn**	**01 21 36.5**	**-0.4**
CBIJ				S	**Sb**	**01 21 53.1**	**-0.7**
JHO	**Hitachi**	**8.32**	**351**	P	**Pn**	**01 23 14.3**	**+0.8**
JHO				*e*S	**Sn**	**01 24 43.2**	**-4.2**
JAG	**Ashikaga**	**8.35**	**344**	P	**Pn**	**01 23 15.2**	**+1.2**
JAG				S	**Sn**	**01 24 47.3**	**-1.0**
MAJO	**Matsushiro**	**8.81**	**338**	Pn	**Pn**	**01 23 18.2**	**-2.1**
INCN	**Inchon**	**15.92**	**309**	Pn	**Pn**	**01 24 56.2**	**-0.8**
TATO	**Taipei**	**18.86**	**264**	*e*P	**Pn**	**01 25 34.2**	**+0.7**
	27nm,0.4s						
YHNB	**Yeheng**	**19.04**	**264**	P	**Pn**	**01 25 36.0**	**+0.3**
PMG	**Port Moresby**	**37.87**	**172**	P	**P**	**01 28 30.3**	**+0.5**
CTAO	**Charters Tower**	**48.35**	**175**	P	**P**	**01 29 53.9**	**-0.7**
WRAB	**Tennant Creek**	**48.64**	**190**	*e*P	**P**	**01 29 57.8**	**+1.0**
	5.6nm,0.5s,mb4.8						
WB2	**Warramunga Arr**	**48.65**	**190**	*e*Pn	**P**	**01 29 56.8**	**-0.1**
CHKZ	**Chkalovo**	**56.95**	**318**	*e*P	**P**	**01 31 00.2**	**+2.0**
	2.4nm,0.8s,mb4.3						
ZRNK	**Zerenda**	**57.98**	**317**	*e*P	**P**	**01 31 04.9**	**-0.6**
	1.7nm,0.7s,mb4.2						

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*MOS **31** 01:34:39.5±1.1, 35.92N×20.92E, h27km, mb4.3/8, Error ellipse: s-maj=13.8km s-min=7.7km az=68.7*
*CSEM **31** 01:34:40.0±0.1, 35.95N×20.86E, h30km, mb4.1/4, Error ellipse: s-maj=2.9km s-min=1.8km az=62.0*
*ISCJB **31** 01:34:42.3±0.6, 36.05N±004×20.99E±005, h52km±7km, mb4.0/10, MS3.3/6, Error ellipse: s-maj=7.4km s-min=4.7km az=93.4*
*ATH **31** 01:34:42.0, 35.99N×21.04E, h34km, MD3.9/9, ML4.0*
*NEIC **31** 01:34:42.0, 35.99N×21.04E, h34km, MD3.9(ATH), After ATH.*
*IDC **31** 01:34:44.3±2.3, 36.10N×21.04E, h40km±23km, mb3.7/8, mb1 3.7/14, mb1mx3.6/28, mbtmp3.8/14, ML3.2/4, MS3.2/8, Ms1 3.2/8, ms1mx2.9/30, Error ellipse: s-maj=21.9km s-min=16.9km az=12.0*
*THE **31** 01:34:45.0, 36.17N×21.06E, h31km*
*HLW **31** 01:34:45.6, 36.08N×21.73E, h33km, Mb3.6*
ISC 31 01:34:44.0±0.5, 3604N±003×2104E±005, h46km±7km, n76, σ1§03/89, mb4.0/10, MS3.3/6, 8C-3D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**1.34**	**32**	*e*PN	**Pn**	**01 35 07.2**	**+1.0**
KYTH	**Kithira**	**1.63**	**81**	*e*PB	**Pn**	**01 35 10.8**	**+0.6**
VLI	**Veliai**	**1.67**	**66**	*e*PB	**Pn**	**01 35 11.7**	**+0.9**
RLS	**Riolos of Patr**	**2.04**	**9**	*e*PN	**Pn**	**01 35 17.0**	**+1.2**
VLS	**Valsamata**	**2.16**	**350**	*e*PN	**Pn**	**01 35 18.2**	**+0.7**
KARN	**Karanos**	**2.42**	**104**	*e*PN	**Pn**	**01 35 21.3**	**+0.2**
VAM	**Vamos**	**2.65**	**103**	*e*PN	**Pn**	**01 35 24.2**	**0.0**
ATH	**Athens Observa**	**2.88**	**47**	*e*PN	**Pn**	**01 35 27.4**	**0.0**
EVR	**Evrytania**	**2.93**	**12**	*e*PB	**Pn**	**01 35 31.0**	**+2.9**
PTL	**Penteli**	**3.02**	**48**	*e*PN	**Pn**	**01 35 29.0**	**-0.3**
LKR	**Lokris**	**3.03**	**30**	*e*PN	**Pn**	**01 35 30.0**	**+0.5**
AGG	**Agios Georgios**	**3.14**	**19**	*e*Pn	**Pn**	**01 35 31.5**	**+0.5**
AGG				*e*Sn	**Sn**	**01 36 06.5**	**-0.8**
IDI	**Anoyia**	**3.22**	**102**	Pn	**Pn**	**01 35 32.6**	**+0.5**
	1.0nm,0.3s,baz=301,slow=12,SNR=13						
IDI				Sn	**Sn**	**01 36 09.3**	**+0.1**
	7.9nm,0.3s,baz=323,slow=20,SNR=11						
IDI				LR	LR	01 37 15.0	
	comp=Z,582nm,18.9s,baz=307,slow=46						
IDI	**Anoyia**	**3.22**	**102**	Pn	**Pn**	**01 35 32.6**	**+0.5**
IDI				Sn	**Sn**	**01 36 09.3**	**+0.1**
IGT	**Igoumenitsa**	**3.53**	**351**	*e*Pn	**Pn**	**01 35 36.7**	**+0.4**
IGT				*e*Sn	**Sn**	**01 36 15.1**	**-1.7**
APE	**Apeiranthos**	**3.75**	**73**	*i* P	**Pn**	**01 35 38.8**	**-0.6**
LSK	**Leskovik**	**4.12**	**355**	*e*Pn	**Pn**	**01 35 45.8**	**+1.5**
LSK				*i* Sn	**Sn**	**01 36 28.0**	**-3.2**
KZN	**Kozani**	**4.29**	**7**	*e*PN	**Pn**	**01 35 48.5**	**+1.7**
BIA	**Bitola**	**4.97**	**2**	*e*Pn	**Pn**	**01 35 56.1**	**0.0**
BIA				*e*Sn	**Sn**	**01 36 49.9**	**-2.4**
VAY	**Valandovo**	**5.40**	**12**	*e*Pn	**Pn**	**01 36 04.2**	**+2.2**
VAE	**Valguarnera**	**5.51**	**287**	Pn	**Pn**	**01 36 04.0**	**+0.4**
	0.4nm,0.3s,baz=348,slow=16,SNR=3.7						
VAE				Sn	**Sn**	**01 37 05.3**	**-0.3**
	1.7nm,0.3s,baz=270,slow=12,SNR=2.4						
VAE	**Valguarnera**	**5.51**	**287**	Pn	**Pn**	**01 36 04.0**	**+0.4**
VAE				Sn	**Sn**	**01 37 05.3**	**-0.3**
STIP	**Stip**	**5.71**	**9**	*e*Pn	**Pn**	**01 36 07.0**	**+0.7**
STIP				*e*Sn	**Sn**	**01 37 09.6**	**-0.9**
SKO	**Skopje**	**5.93**	**3**	*e*Pn	**Pn**	**01 36 13.5**	**+4.3**
SWA2		**7.73**	**150**	⇑P	**Pn**	**01 36 33.4**	**-0.6**
SWA2				S	**Sn**	**01 37 52.2**	**-8.0**
SWA2		**7.73**	**150**	P	**Pn**	**01 36 33.3**	**-0.7**
SWA1		**7.82**	**149**	⇑P	**Pn**	**01 36 34.5**	**-0.7**
SWA1		**7.82**	**149**	P	**Pn**	**01 36 34.5**	**-0.7**
	598nm,0.2s						
DIVS	**Divcibare**	**8.09**	**355**	*e*Pn	**Pn**	**01 36 38.4**	**-0.4**
DIVS				Sn	**Sn**	**01 38 01.8**	**-7.1**
KEST	**Kesra**	**9.50**	**272**	LR	LR	01 40 59.5	
	comp=Z,33nm,21.6s,baz=226,slow=40						
NVLJ	**Novalja**	**9.72**	**333**	*i* (Pn)	**Pn**	**01 37 00.6**	**-0.6**
NVLJ				*i* Sn	**Sn**	**01 38 40.9**	**-8.2**
MLR	**Muntele Rosu**	**10.14**	**20**	Pn	**Pn**	**01 37 07.6**	**+0.6**
	0.3nm,0.3s,baz=120,slow=22,SNR=2.2						
AWBH		**10.18**	**137**	⇑P	**Pn**	**01 37 05.8**	**-1.7**
BOJS	**Bojanci**	**10.42**	**337**	*i* Pn	**Pn**	**01 37 11.2**	**+0.5**
BOJS				*i* Sn	**Sn**	**01 38 50.0**	**-6.1**
BOJS	**Bojanci**	**10.42**	**337**	*i* Pn	**Pn**	**01 37 11.2**	**+0.5**
BRTR	**Keskin Array B**	**10.61**	**66**	Pn	**Pn**	**01 37 14.8**	**+1.4**
	0.0nm,0.3s,baz=246,slow=15,SNR=5.4						
CRES	**Cresnjev**	**10.64**	**338**	*i* Pn	**Pn**	**01 37 14.8**	**+0.9**
CRES				*e*Sn	**Sn**	**01 39 04.2**	**-7.4**
HFRF	**Wahat Farafira**	**10.81**	**143**	⇑P	**Pn**	**01 37 15.1**	**-1.0**
VISS	**Visnje**	**10.82**	**336**	*e*Pn	**Pn**	**01 37 16.2**	**0.0**
VISS				*e*Sn	**Sn**	**01 39 08.4**	**-7.4**
GLL	**Jalalah**	**11.04**	**123**	⇑P	**Pn**	**01 37 16.6**	**-2.8**
OBKA	**Obir**	**11.54**	**337**	⇑*i*Sn	**Sn**	**01 39 22.8**	**-11**
OBKA	**Obir**	**11.54**	**337**	⇓*i*Pn	**Pn**	**01 37 26.1**	**+0.1**
OBKA				⇑*i*Sn	**Sn**	**01 39 28.5**	**-4.9**
OBKA	**Obir**	**11.54**	**337**	⇓*i*Pn	**Pn**	**01 37 26.1**	**+0.1**
OBKA				*i* Sn	**Sn**	**01 39 22.8**	**-11**
MMAI	**Mount Meron Ar**	**12.22**	**100**	Pn	**Pn**	**01 37 32.1**	**-3.3**
	0.4nm,0.3s,baz=300,slow=12,SNR=3.3						
MOA	**Molln**	**12.82**	**339**	⇑*i*Pn	**Pn**	**01 37 41.9**	**-1.7**
MOA				⇓*i*Sn	**Sn**	**01 39 51.5**	**-13**
ASF	**Jabal al Asfar**	**13.69**	**102**	Sn	**Sn**	**01 40 18.4**	**-7.6**
	0.1nm,0.3s,baz=149,slow=18,SNR=2.2						
GERES	**GERESS Array B**	**13.88**	**339**	Pn	**Pn**	**01 37 55.9**	**-2.2**
	0.2nm,0.3s,baz=155,slow=16,SNR=6.2						
KHC	**Kasperske Hory**	**14.18**	**340**	*i* P	**Pn**	**01 38 11.5**	**+9.4**
AKASG	**Malin Array Be**	**15.80**	**19**	Pn	**Pn**	**01 38 22.8**	**-0.4**
	1.1nm,0.3s,baz=212,slow=11,SNR=6.8						
AKASG	**Malin Array Be**	**15.80**	**19**	P	**Pn**	**01 38 22.8**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KIV	**Kislovodsk**	**18.33**	**58**	*i* P	**Pn**	**01 38 54.6**	**-0.2**
GNI	**Garni**	**19.08**	**70**	P	**Pn**	**01 39 03.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=281,slow=5.9,SNR=4.6						
GNI				LR	LR	01 47 29.5	
	comp=Z,70nm,20.0s,baz=354,slow=40						
GNI	**Garni**	**19.08**	**70**	*i* P	**Pn**	**01 39 04.0**	**+0.2**
GNI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GNI				MLR	MLR		
	comp=Z,100nm,21.0s						
GNI	**Garni**	**19.08**	**70**	*i* P	**Pn**	**01 39 04.0**	**+0.2**
	comp=Z,100nm,21.0s						
MDT	**Midelt**	**21.39**	**269**	LR	LR	01 49 36.8	
	comp=Z,85nm,20.6s,MS3.1,baz=147,slow=42						
OBN	**Obninsk**	**21.86**	**24**	*i* P	**P**	**01 39 32.7**	**0.0**
OBN				*e**PP		01 39 45.2	
OBN				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.3						
OBN	**Obninsk**	**21.86**	**24**	*i* P	**P**	**01 39 32.7**	**0.0**
	comp=Z,27nm,1.4s,mb4.5						
HFS	**Hagfors**	**24.57**	**351**	P	**P**	**01 40 00.3**	**+0.8**
	comp=Z,2.0nm,0.5s,mb3.9,baz=163,slow=10,SNR=13						
HFS	**Hagfors**	**24.57**	**351**	P	**P**	**01 40 00.3**	**+0.7**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**25.62**	**6**	P	**P**	**01 40 09.3**	**+0.1**
	comp=Z,1.2nm,0.7s,mb3.5,baz=163,slow=10,SNR=4.9						
NB2	**NORSAR Subarra**	**25.79**	**349**	P	**P**	**01 40 11.6**	**+1.0**
	comp=Z,8.7nm,1.4s,mb4.1,baz=157,slow=9.3						
NOA	**NORSAR Array B**	**25.79**	**349**	P	**P**	**01 40 10.6**	**0.0**
	comp=Z,3.2nm,1.0s,mb3.8,baz=160,slow=9.8,SNR=5.0						
NOA	**NORSAR Array B**	**25.79**	**349**	P	**P**	**01 40 10.6**	**0.0**
NOA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**28.68**	**222**	P	**P**	**01 40 38.4**	**+1.8**
	comp=Z,0.9nm,0.9s,mb3.5,baz=32,slow=9.2,SNR=4.6						
TORD				LR	LR	01 54 45.9	
	comp=Z,70nm,18.1s,MS3.3,baz=150,slow=42						
ARCES	**ARCESS Array B**	**33.64**	**3**	P	**P**	**01 41 20.2**	**0.0**
	comp=Z,1.9nm,0.8s,mb4.1,baz=172,slow=9.8,SNR=5.8						
ARCES	**ARCESS Array B**	**33.64**	**3**	P	**P**	**01 41 20.2**	**0.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DBIC	**Dimbokro**	**37.65**	**225**	LR	LR	01 57 49.5	
	comp=Z,29nm,20.7s,MS3.1,baz=234,slow=37						
KMBO	**Kilima Mbogo**	**39.95**	**154**	LR	LR	02 02 04.1	
	comp=Z,44nm,18.9s,MS3.3,baz=267,slow=41						
MKAR	**Makanchi Array**	**46.09**	**57**	P	**P**	**01 43 03.5**	**-0.1**
	comp=Z,0.7nm,0.3s,mb4.0,baz=270,slow=7.7,SNR=5.6						
MKAR	**Makanchi Array**	**46.09**	**57**	P	**P**	**01 43 03.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	**46.82**	**47**	P	**P**	**01 43 08.5**	**-0.7**
	comp=Z,1.4nm,0.3s,mb4.3,baz=180,slow=3.4,SNR=4.6						
ZAL	**Zalesovo**	**46.82**	**47**	P	**P**	**01 43 08.5**	**-0.7**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**61.50**	**50**	P	**P**	**01 44 56.3**	**+0.2**
	comp=Z,0.4nm,0.3s,mb4.0,baz=303,slow=8.4,SNR=3.6						
BOD	**Bodaibo**	**61.81**	**37**	*e*P	**P**	**01 44 57.8**	**-0.4**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BOD	**Bodaibo**	**61.81**	**37**	*e*P	**P**	**01 44 57.8**	**-0.4**
	comp=Z,4.0nm,0.9s,mb4.5						
PDAR	**Pinedale Array**	**89.55**	**326**	LR	LR	02 26 45.5	
	comp=Z,25nm,18.1s,MS3.7,baz=254,slow=35						

JMA 31 01:40:12.8±0.5, 4425N×14817E, h0km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.97**	**244**	P	Pn	01 40 47.8	+0.4
NEM2				*e*S	Sn	01 41 13.7	+1.0
JRA	**Rausu**	**2.22**	**263**	P	Pn	01 40 51.9	+1.1
JNK	**Nakash**	**2.58**	**256**	P	Pn	01 40 57.0	+1.2
JAK	**Akkeshi**	**2.82**	**245**	P	Pn	01 40 59.9	+0.8
JAR	**Ashorobuto**	**3.33**	**255**	P	Pn	01 41 07.9	+1.8
JCH	**Churui**	**3.86**	**247**	*e*S	Sn	01 42 01.0	+1.4
JNBK	**Urakawa-nobuka**	**4.42**	**245**	P	Pn	01 41 22.7	+1.6
JKB	**Kayabe**	**5.74**	**248**	P	Pn	01 41 40.7	+1.5
JOT	**Ohata**	**5.97**	**244**	P	Pn	01 41 43.3	+0.9
JANG	**Nango**	**6.27**	**234**	*e*S	Sn	01 42 57.1	-1.8

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*IDC **31** 02:00:06.1±2.1, 331N×96.54E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.7/22, mbtmp3.8/6, ML2.9/1, Error ellipse: s-maj=64.3km s-min=16.1km az=32.0*
*ISCJB **31** 02:00:08.1±1.4, 32N±0.02×964E±0.1, h33km, mb3.9/7, Error ellipse: s-maj=32.9km s-min=13.7km az=55.1*
*NEIC **31** 02:00:09.4±1.2, 3.09N×96.38E, h30km, mb4.1/2, Error ellipse: s-maj=30.5km s-min=12.7km az=209.0*
ISC 31 02:00:10.4±1.4, 31N±02×964E±01, h35km, n9, σ0§84/9, mb3.9/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.56**	**98**	Pn	**Pn**	**02 00 47.4**	**-1.9**
	2.9nm,0.3s,baz=275,slow=9.3,SNR=19						
PSI				Lg		02 01 24.2	
	5.5nm,0.3s,baz=73,slow=16,SNR=4.7						
KULM	**Kulim**	**4.75**	**63**	*e*Pn	**Pn**	**02 01 20.6**	**+1.1**
WRA	**Warramunga Arr**	**43.76**	**123**	P	**P**	**02 08 13.5**	**+1.1**
	1.3nm,0.7s,mb3.7,baz=301,slow=9.3,SNR=4.2						
MKAR	**Makanchi Array**	**45.17**	**346**	P	**P**	**02 08 23.6**	**-0.1**
	0.5nm,0.4s,mb3.7,baz=147,slow=6.8,SNR=4.2						
ZAL	**Zalesovo**	**51.52**	**351**	P	**P**	**02 09 12.7**	**+0.1**
	1.4nm,0.4s,mb4.3,baz=292,slow=1.5,SNR=3.5						
BVAR	**Borovoye Array**	**54.16**	**341**	P	**P**	**02 09 31.6**	**-0.5**
	0.6nm,0.7s,mb3.6,baz=126,slow=9.5,SNR=3.6						
ZRNK	**Zerenda**	**54.56**	**340**	*e*P	**P**	**02 09 34.6**	**-0.4**
	0.9nm,0.7s,mb3.9						
CHKZ	**Chkalovo**	**54.64**	**342**	*e*P	**P**	**02 09 35.3**	**-0.3**
	2.1nm,0.8s,mb4.2						
ARCES	**ARCESS Array B**	**80.44**	**340**	P	**P**	**02 12 19.1**	**+0.6**
	1.9nm,0.9s,mb4.0,baz=96,slow=5.6,SNR=3.8						

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*MOS **31** 02:12:17.9±1.9, 55.42N×110.42E, h22km, mb4.3/1, Error ellipse: s-maj=40.0km s-min=16.6km az=135.3*
BYKL 31 02:12:17.2±0.3, 5541N×11040E, h2km±17km, 3C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**0.61**	**307**	*e*Pg	Pg	02 12 29.1	+0.2
NIZ				*e*Sg	Sg	02 12 36.9	+0.1
NIZ				Pmax			
	17nm,0.1s						
NIZ				Smax			
	207nm,0.4s						
KMO	**Kumora**	**0.66**	**43**	⇑*i*Pg	Pg	02 12 28.7	-1.1
KMO				*e*Sg	Sg	02 12 38.3	-0.1
KMO				Pmax			
	239nm,0.5s						
KMO				Smax			
	424nm,2.0s						
KMO	**Kumora**	**0.66**	**43**	*e*PG	Pg	02 12 28.7	-1.1
KMO				*e*		02 12 37.9	
KMO				pmax	pmax		
	comp=Z,236nm,0.4s						
KMO				smax			
	comp=E,403nm,1.0s						
YLYR	**Ulyunkhan**	**0.69**	**140**	⇓*i*Pg	Pg	02 12 29.2	-1.3
YLYR				*e*Sg	Sg	02 12 38.4	-1.0
YLYR				Pmax			
	comp=E,56nm,0.2s						
YLYR				Smax			
	comp=E,223nm,0.2s						
YOA	**Uoyan**	**1.04**	**45**	*e*Sg	Sg	02 12 50.1	-0.6
YOA				*e*		02 13 04.6	
YOA				max			
	comp=E,1μm,1.8s						
YOA	**Uoyan**	**1.04**	**45**	⇑*i*PG	Pg	02 12 35.4	-1.8
YOA				*e*		02 12 50.0	
YOA				pmax	pmax		
	comp=Z,331nm,0.4s						
YOA				smax			
	comp=E,638nm,0.8s						
SYVR	**Suvo**	**1.77**	**188**	*e*Pn	Pn	02 12 48.8	0.0
SYVR				*e*Pg	Pg	02 12 49.4	-1.8
SYVR				*e*Sg	Sg	02 13 13.4	-0.7
SYVR				Pmax			
	comp=E,91nm,0.9s						
SYVR				Smax			
	comp=E,283nm,0.6s						
UKT	**Uakit**	**1.84**	**86**	⇑*i*Pg	Pg	02 12 49.6	-2.9
UKT				*e*Sg	Sg	02 13 14.3	-2.0
UKT				Pmax			
	comp=E,87nm,0.5s						
UKT				Smax			
	comp=E,170nm,0.8s						
UKT	**Uakit**	**1.84**	**86**	*e*PN	Pn	02 12 49.8	0.0
UKT				*e*		02 13 14.3	
UKT				pmax	p

comp=E,10.0nm,0.6s
CIT Smax
comp=E,48nm,0.9s
FFNB Fofonovo 4.00 214 *e* Pg Pg 02 13 31.5 -2.4
FFNB *e*Sg Sg 02 14 19.5 -6.3
FFNB Smax
comp=E,94nm,0.9s
CRS Chara 4.65 68 *e*Pg Pg 02 13 41.4 -4.8
CRS *e*Sg Sg 02 14 41.7 -4.8
CRS Pmax
comp=E,23nm,1.0s
CRS Smax
comp=E,43nm,1.7s
CRS Chara 4.65 68 *e*PN Pb 02 13 41.7 +2.3
CRS *e* 02 14 42.7
CRS pmax pmax
comp=Z,22nm,1.1s
CRS smax
comp=E,36nm,1.1s
TUP Tupik 5.60 96 *e*Pn Pn 02 13 42.2 +0.7
TUP *e*Sg Sg 02 15 11.0 -6.0
TUP Smax
comp=E,52nm,1.1s
TUP Tupik 5.60 96 *e*PN Pn 02 13 40.4 -1.1
TUP *e* 02 13 57.5
TUP *e*S Sn 02 14 45.1 -1.3
TUP *e* 02 15 12.0
TUP pmax pmax
comp=Z,7.0nm,0.5s
TUP smax
comp=N,52nm,1.1s
KPC Khapcheranga 5.84 167 *e*Pn Pn 02 13 45.2 +0.4
KPC *e* 02 14 03.5
KPC *e* 02 14 35.4
KPC *e*Sg Sg 02 15 17.4 -7.4
KPC max
comp=N,2.0nm,0.5s
KPC Smax
comp=N,22nm,0.9s
ORL Orlik 6.88 250 *e*Pn Pn 02 14 00.2 +1.2
ORL *e* 02 15 17.4
ORL *e*Sg Sg 02 15 50.6 -7.4
ORL Smax
comp=N,62nm,1.1s

IDC ***31*** *02:28:26.7±0.9, 3025N×5769E, h0km, mb4.0/11, mb1 4.1/14, mb1mx3.9/27, mbtmp4.0/14, ML4.0/1, MS3.4/8, Ms1 3.4/8, ms1mx3.0/33, Error ellipse: s-maj=21.3km s-min=17.6km az=115.0*
CSEM ***31*** *02:28:26.4±0.1, 3024N×5771E, h16km, mb4.0/10, Error ellipse: s-maj=2.3km s-min=1.7km az=139.0*
TEH ***31*** *02:28:27.8, 3023N×5767E, h2km, Mn4.4*
BJI ***31*** *02:28:28.3, 3044N×5734E, h17km, mB4.8, mb4.5, Ms4.4, Msz4.2*
ISCJB ***31*** *02:28:28.2±0.3, 3045N±002×5745E±002, h10km, mb4.2/19, MS3.4/9, Error ellipse: s-maj=3.2km s-min=2.7km az=102.8*
MOS ***31*** *02:28:29.6±2.1, 3011N×5766E, h33km, mb4.5/7, Error ellipse: s-maj=18.2km s-min=11.8km az=123.2*
NEIC ***31*** *02:28:30.7, 3029N×5742E, h18km, mb3.8/4, ML4.0(THR), MN4.4(TEH), After THR.*
THR ***31*** *02:28:30.2±1.2, 3027N×5744E, h15km, ML4.0*

ISC 31 02:28:29.9±0.3, 3040N±002×5748E±002, h10km, (h17km±1.7km; pP-P), n118, σ1s32/186, mb4.2/19, MS3.4/10, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRBR	**Kerman**	**0.75**	**236**	*e*PG		**Pg**	**02 28 43.2**	**-1.2**
KRBR				*e*Sg		**Sg**	**02 28 52.7**	**-1.6**
KRBR				AML		AML	02 29 02.4	
	comp=N,7μm,0.8s							
KRBR				AML		AML	02 29 02.8	
	comp=E,6μm,0.9s							
KRBR	**Kerman**	**0.75**	**236**	Pg		**Pg**	**02 28 43.0**	**-1.4**
KRBR				Sg		**Sg**	**02 28 52.0**	**-2.3**
KRBR	**Kerman**	**0.75**	**236**	*e*Pg		**Pg**	**02 28 43.2**	**-1.2**
	SNR=92							
KRBR				*e*Sg		**Sg**	**02 28 52.7**	**-1.6**
	SNR=92							
IBAF	**Bafgh**	**2.02**	**306**	*e*Pn		**Pn**	**02 29 05.6**	**+1.5**
IBAF				*e*Sg		**Sg**	**02 29 33.8**	**-1.2**
IBAF				*e*Sn		**Sn**	**02 29 34.0**	**+4.6**
IBAF	**Bafgh**	**2.02**	**306**	Pn		**Pn**	**02 29 05.6**	**+1.5**
IBAF				Sg		**Sg**	**02 29 33.8**	**-1.2**
IBAF	**Bafgh**	**2.02**	**306**	*e*Pn		**Pn**	**02 29 05.6**	**+1.5**
IBAF				*e*Sg		**Sg**	**02 29 33.8**	**-1.2**
IBAF				*e*Sn		**Sn**	**02 29 34.0**	**+4.6**
IKOO		**2.40**	**32**	*e*Pn		**Pn**	**02 29 07.5**	**-1.7**
IKOO				*e*Sn		**Sn**	**02 29 38.9**	**+0.3**
IMEH	**Mehriz**	**2.66**	**292**	*e*Pn		**Pn**	**02 29 13.9**	**+1.2**
IMEH				*e*Sg		**Sg**	**02 29 53.6**	**-1.6**
IMEH	**Mehriz**	**2.66**	**292**	Pn		**Pn**	**02 29 13.8**	**+1.1**
IMEH				*e*Sg		**Sg**	**02 29 53.6**	**-1.6**
ITEG		**2.71**	**23**	*e*Pn		**Pn**	**02 29 11.9**	**-1.6**
ITEG				*e*Sn		**Sn**	**02 29 47.6**	**+1.3**
ITEG				*e*Sg		**Sg**	**02 29 49.5**	**-7.4**
IDAH		**3.09**	**41**	*e*Pn		**Pn**	**02 29 17.8**	**-0.9**
IDAH				*e*Sn		**Sn**	**02 29 54.5**	**-1.3**
IDAH				*e*Sg		**Sg**	**02 30 04.7**	**-4.5**
BNDS	**Bandar-Abbas**	**3.21**	**201**	*e*PN		**Pn**	**02 29 20.9**	**+0.6**
BNDS				*e*Sg		**Sb**	**02 30 05.4**	**-0.7**
BNDS				AML		AML	02 30 14.2	
	comp=E,304nm,0.6s							
BNDS				AML		AML	02 30 18.7	
	comp=N,521nm,0.6s							
BNDS	**Bandar-Abbas**	**3.21**	**201**	Pn		**Pn**	**02 29 20.0**	**-0.3**
BNDS				Sg		**Sb**	**02 30 04.0**	**-2.1**
BNDS	**Bandar-Abbas**	**3.21**	**201**	*e*Pn		**Pn**	**02 29 20.9**	**+0.6**
	SNR=52							
BNDS				Sg		**Sb**	**02 30 04.0**	**-2.1**
ICHK	**Chekchek**	**3.21**	**306**	*e*Pn		**Pn**	**02 29 22.2**	**+1.9**
ICHK				*e*Sg		**Sg**	**02 30 12.5**	**-0.4**
ICHK				*e*Sg		**Sg**	**02 30 14.5**	**+1.6**
ICHK	**Chekchek**	**3.21**	**306**	Pn		**Pn**	**02 29 22.1**	**+1.8**
ICHK				Sg		**Sg**	**02 30 12.4**	**-0.5**
IMON		**3.34**	**33**	*e*Pn		**Pn**	**02 29 20.2**	**-2.0**
ISRV	**Sarvestan**	**3.93**	**256**	*e*Pn		**Pn**	**02 29 30.3**	**+0.1**
GHIR	**Ghir-Karzin**	**4.46**	**243**	*e*Pn		**Pn**	**02 29 38.4**	**+0.9**
GHIR	**Ghir-Karzin**	**4.46**	**243**	Pn		**Pn**	**02 29 38.0**	**+0.5**
NASN	**Na'in**	**4.65**	**302**	*e*PN		**Pn**	**02 29 42.3**	**+2.2**
NASN				AML		AML	02 31 06.7	
	comp=E,102nm,0.8s							
NASN				AML		AML	02 31 10.1	
	comp=N,144nm,0.6s							
NASN	**Na'in**	**4.65**	**302**	Pn		**Pn**	**02 29 42.0**	**+1.9**
NASN				Sg		**Sg**	**02 30 51.0**	**-8.1**
IGAR	**Garneh**	**4.88**	**293**	*e*Pn		**Pn**	**02 29 46.6**	**+3.3**
IGAR				*e*Sg		**Sg**	**02 31 12.0**	**+5.4**
IGAR				*e*Sg		**Sg**	**02 31 13.0**	**+6.4**
IZEF	**Zefreh**	**5.05**	**301**	*e*Pn		**Pn**	**02 29 46.8**	**+1.2**
IZEF				*e*Sg		**Sg**	**02 31 05.0**	**-6.9**
IZEF				*e*Sg		**Sg**	**02 31 09.7**	**-2.2**
IZEF	**Zefreh**	**5.05**	**301**	Pn		**Pn**	**02 29 46.7**	**+1.1**
IZEF				*e*Sg		**Sg**	**02 31 09.7**	**-2.2**
IKLH	**Kalahroud**	**5.80**	**302**	*e*Pn		**Pn**	**02 29 57.1**	**+1.1**
IKLH				*e*Sg		**Sg**	**02 31 34.9**	**-1.2**
IKLH				*e*Sg		**Sg**	**02 31 36.0**	**-0.1**
IKLH	**Kalahroud**	**5.80**	**302**	Pn		**Pn**	**02 29 57.1**	**+1.1**
IKLH				Sg		**Sg**	**02 31 35.9**	**-0.2**
IKLH	**Kalahroud**	**5.80**	**302**	*e*Pn		**Pn**	**02 29 57.1**	**+1.1**
IKLH				*e*Sg		**Sg**	**02 31 34.9**	**-1.2**
ISFB	**Sefidab**	**5.93**	**313**	*e*Pn		**Pn**	**02 29 58.4**	**+0.6**
ISFB				*e*Sg		**Sg**	**02 31 38.1**	**-2.2**
ISFB				*e*Sg		**Sg**	**02 31 38.1**	**-2.2**
ISFB	**Sefidab**	**5.93**	**313**	*e*Pn		**Pn**	**02 29 58.4**	**+0.6**
ISFB				Sg		**Sg**	**02 31 38.0**	**-2.3**
IPIR	**Pirpir**	**6.07**	**294**	*e*Pn		**Pn**	**02 30 00.6**	**+1.0**
IPIR				*e*Sg		**Sg**	**02 31 50.6**	**+6.0**
IPIR				*e*Sg		**Sg**	**02 31 51.6**	**+7.0**
IPAY	**Payeh**	**6.16**	**11**	*e*Pn		**Pn**	**02 30 01.0**	**+0.1**
IPAY				*e*Sg		**Sg**	**02 31 44.3**	**-3.4**
IPAY				*e*Sg		**Sg**	**02 31 44.3**	**-3.4**
IPAY	**Payeh**	**6.16**	**11**	Pn		**Pn**	**02 30 00.9**	**0.0**
IPAY				Sg		**Sg**	**02 31 44.3**	**-3.4**
IAKL	**Akhlamad**	**6.25**	**9**	*e*Pn		**Pn**	**02 30 02.2**	**+0.1**
IAKL				*e*Sn		**Sn**	**02 31 11.7**	**-1.8**
IAKL	**Akhlamad**	**6.25**	**9**	Pn		**Pn**	**02 30 02.1**	**0.0**
IAKL				*e*Sn		**Sn**	**02 31 11.7**	**-1.8**
ILAS	**Lasjerd**	**6.25**	**324**	*e*Pn		**Pn**	**02 30 03.2**	**+1.0**
ILAS				*e*Sg		**Sg**	**02 31 53.7**	**+3.1**
ILAS				*e*Sg		**Sg**	**02 31 54.8**	**+4.2**
ILAS	**Lasjerd**	**6.25**	**324**	Pn		**Pn**	**02 30 03.1**	**+0.9**
ILAS				Sg		**Sg**	**02 31 54.7**	**+4.1**
IMYA	**Miamay**	**6.31**	**20**	*e*Pn		**Pn**	**02 30 02.2**	**-0.8**
IMYA				*e*Sg		**Sg**	**02 31 54.8**	**+2.3**
IMYA				*e*Sg		**Sg**	**02 31 56.9**	**+4.4**
IMYA	**Miamay**	**6.31**	**20**	Pn		**Pn**	**02 30 02.2**	**-0.8**
IMYA				Sg		**Sg**	**02 31 56.8**	**+4.3**
IKRD	**Kardeh**	**6.41**	**7**	*e*Pn		**Pn**	**02 30 06.2**	**+1.9**
IKRD				*e*Sg		**Sg**	**02 31 54.8**	**-0.8**
IKRD				*e*Sg		**Sg**	**02 31 57.9**	**+2.3**
ISHM	**Shahmirzad**	**6.43**	**328**	*e*Pn		**Pn**	**02 30 05.8**	**+1.2**
ISHM				eLg			02 31 55.6	
ISHM				*e*Sg		**Sg**	**02 31 56.9**	**+0.5**
ISHM	**Shahmirzad**	**6.43**	**328**	Pn		**Pn**	**02 30 05.7**	**+1.1**
ISHM				Lg			02 31 55.5	
ISHM				Sg		**Sg**	**02 31 56.8**	**+0.4**
IFIR	**Firoozkooh**	**6.56**	**324**	*e*Pn		**Pn**	**02 30 07.3**	**+0.9**
IFIR				*e*Sg		**Sg**	**02 31 56.9**	**-3.5**
IFIR				*e*Sg		**Sg**	**02 31 59.0**	**-1.4**
IFIR	**Firoozkooh**	**6.56**	**324**	Pn		**Pn**	**02 30 07.2**	**+0.8**
IFIR				Sg		**Sg**	**02 31 58.9**	**-1.5**
IFIR	**Firoozkooh**	**6.56**	**324**	Pn		**Pn**	**02 30 07.2**	**+0.8**
IFIR				*e*Sg		**Sg**	**02 31 56.9**	**-3.5**
ISFR	**Esferayen**	**6.64**	**4**	*e*Pn		**Pn**	**02 30 07.0**	**-0.4**
ISFR				*e*Sg		**Sb**	**02 31 41.2**	**-3.5**
ISFR				*e*Sg		**Sb**	**02 31 41.3**	**-3.4**
ISFR	**Esferayen**	**6.64**	**4**	Pn		**Pn**	**02 30 06.9**	**-0.5**
IVRN	**Varamin**	**6.67**	**315**	*e*Pn		**Pn**	**02 30 08.9**	**+1.0**
IVRN				*e*Sg		**Sg**	**02 31 58.0**	**-5.9**
IVRN				*e*Sg		**Sg**	**02 32 05.4**	**+1.5**
IVRN	**Varamin**	**6.67**	**315**	Pn		**Pn**	**02 30 08.8**	**+0.9**
IVRN				Sg		**Sg**	**02 32 05.4**	**+1.5**
IVRN	**Varamin**	**6.67**	**315**	Pn		**Pn**	**02 30 08.8**	**+0.9**
IVRN				*e*Sg		**Sg**	**02 31 58.0**	**-5.9**
IDMV	**Damavand**	**6.90**	**320**	*e*Pn		**Pn**	**02 30 11.9**	**+0.9**
IDMV				*e*Sg		**Sg**	**02 32 13.6**	**+2.4**
IDMV				*e*Sg		**Sg**	**02 32 15.7**	**+4.5**
IDMV	**Damavand**	**6.90**	**320**	Pn		**Pn**	**02 30 11.9**	**+0.9**
IDMV				Sg		**Sg**	**02 32 15.6**	**+4.4**
ISHV	**Shirvan**	**7.11**	**1**	*e*Pn		**Pn**	**02 30 13.7**	**-0.3**
ISHV				*e*Sg		Sg	02 31 50.6	-28
ISHV				*e*Sg		Sg	02 31 50.9	-27
IAFJ	**Afjeh**	**7.28**	**320**	*e*Pn		**Pn**	**02 30 17.2**	**+1.0**
IAFJ				*e*Sg		**Sg**	**02 32 12.5**	**-11**
IAFJ				*e*Sg		**Sg**	**02 32 13.6**	**-10**
IAFJ	**Afjeh**	**7.28**	**320**	Pn		**Pn**	**02 30 17.2**	**+1.0**
IAFJ				Sg		**Sg**	**02 32 13.5**	**-10**
IPRN	**Paran-Amol**	**7.29**	**324**	*e*Pn		**Pn**	**02 30 17.3**	**+0.9**
IPRN				*e*Sg		**Sg**	**02 32 21.9**	**-1.9**
IPRN				*e*Sg		**Sg**	**02 32 21.9**	**-1.9**
KBD	**Kabd**	**8.59**	**264**	*e*P		**Pn**	**02 30 34.2**	**-0.1**
RDF	**Al-Radifah**	**8.77**	**263**	*e*P		**Pn**	**02 30 37.0**	**+0.3**
NAY	**Al-Naaiem**	**8.97**	**265**	*e*P		**Pn**	**02 30 39.7**	**+0.2**
RST	**Umm Al-Ruwaisa**	**9.14**	**267**	*e*P		**Pn**	**02 30 41.5**	**-0.3**
IKOM	**Komasi**	**9.24**	**297**	*e*Pn		**Pn**	**02 30 43.5**	**+0.4**
IKOM	**Komasi**	**9.24**	**297**	Pn		**Pn**	**02 30 43.4**	**+0.3**
GNI	**Garni**	**14.23**	**317**	Pn		**Pn**	**02 31 57.2**	**+5.8**
	baz=315,slow=19,SNR=2.4							
GNI				LR		LR	02 38 08.4	
	comp=N,78nm,18.4s,baz=203,slow=40							
GNI	**Garni**	**14.23**	**317**	Pn		**Pn**	**02 31 57.2**	**+5.8**
GNI				LR		LR	02 38 08.4	
ZEI	**Tsey**	**16.44**	**322**	*e*P		**Pn**	**02 32 26.6**	**+5.9**
MALT	**Malatya**	**17.58**	**302**	*e*P		**Pn**	**02 32 37.0**	**+2.0**
	comp=N,3.8nm,0.8s							
MALT	**Malatya**	**17.58**	**302**	*e*P		**Pn**	**02 32 37.0**	**+2.0**
	comp=N,3.8nm,0.8s							
ASF	**Jabal al Asfar**	**17.68**	**281**	P		**Pn**	**02 32 36.9**	**+0.6**
	baz=312,slow=7.8,SNR=5.0							
KIV	**Kislovodsk**	**17.90**	**323**	*i* P		**Pn**	**02 32 41.8**	**+2.8**
MMAI	**Mount Meron Ar**	**18.96**	**284**	P		**Pn**	**02 32 53.7**	**+1.8**
	comp=N,0.5nm,0.3s,baz=89,slow=11,SNR=5.1							
EIL	**Elat**	**19.52**	**274**	*e*P		**Pn**	**02 32 57.9**	**-0.7**
	comp=N,462nm,1.1s							
EIL	**Elat**	**19.52**	**274**	*e*P		**Pn**	**02 32 57.9**	**-0.7**
	comp=N,462nm,1.1s							
AKTK	**Aktyubinsk**	**20.01**	**1**	P		**P**	**02 33 02.1**	**-0.6**
AKTK				LR		LR	02 42 11.5	
AKTK	**Aktyubinsk**	**20.01**	**1**	P		**P**	**02 33 02.1**	**-0.6**
	comp=N,140nm,19.2s							
AKTO	**Aktyubinsk**	**20.01**	**1**	P		**P**	**02 33 02.1**	**-0.6**
	comp=N,1.9nm,0.7s,baz=190,slow=14,SNR=5.3							
AKTO				LR		LR	02 42 11.5	
	comp=N,140nm,19.2s,MS3.3,baz=191,slow=41							
AKTO	**Aktyubinsk**	**20.01**	**1**	P		**P**	**02 33 02.1**	**-0.6**
AKTO				pmax		pmax		
	comp=Z,2.0nm,0.7s							
AKTO				MLR		MLR		
	comp=Z,140nm,19.2s,MS3.3							
CSS	**Prodhromos**	**20.81**	**289**	*e*P		**P**	**02 33 11.4**	**0.0**
	comp=Z,9.5nm,0.7s							
CSS	**Prodhromos**	**20.81**	**289**	*e*P		**P**	**02 33 11.4**	**0.0**
	comp=Z,9.5nm,0.7s							
BRTR	**Keskin Array B**	**21.57**	**302**	P		**P**	**02 33 20.7**	**+1.2**
	comp=Z,2.7nm,0.8s,mb3.8,baz=118,slow=12,SNR=17							
BRTR	**Keskin Array B**	**21.57**	**302**	P		**P**	**02 33 20.7**	**+1.2**
BRTR				pmax		pmax		
	comp=Z,3.0nm,0.8s							
ATD	**Arta Tunnel**	**23.18**	**219**	LR		LR	02 44 03.8	
	comp=Z,46nm,19.8s,MS2.9,baz=17,slow=40							
ZRNK	**Zerenda**	**24.05**	**17**	*e*P		**P**	**02 33 43.8**	**-1.4**
	comp=Z,2.5nm,0.9s,mb3.6							
BVAR	**Borovoye Array**	**24.49**	**19**	P		**P**	**02 33 48.7**	**-0.5**
	comp=Z,3.4nm,0.8s,mb3.8,baz=191,slow=6.9,SNR=12							
BVAR				LR		LR	02 44 38.4	
	comp=Z,145nm,18.6s,MS3.5,baz=134,slow=40							
BVAR	**Borovoye Array**	**24.49**	**19**	P		**P**	**02 33 48.7**	**-0.5**
BVAR				pmax		pmax		
	comp=Z,3.0nm,0.8s							
BVAR				MLR		MLR		
	comp=Z,145nm,18.6s							
CHKZ	**Chkalovo**	**25.14**	**19**	*e*P		**P**	**02 33 53.2**	**-1.8**
	comp=Z,3.1nm,1.0s,mb3.8							
CHKZ	**Chkalovo**	**25.14**	**19**	*e*P		**P**	**02 33 53.2**	**-1.8**
	comp=Z,3.1nm,1.0s,mb3.8							
MKAR	**Makanchi Array**	**25.22**	**43**	P		**P**	**02 33 55.0**	**-0.8**
	comp=Z,1.3nm,0.7s,mb3.5,baz=237,slow=6.7,SNR=6.0							
MKAR	**Makanchi Array**	**25.22**	**43**	P		**P**	**02 33 55.0**	**-0.8**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
APE	**Apeiranthos**	**27.30**	**293**	*i* P		**P**	**02 34 11.6**	**-3.0**
WMQ	**Urumqi**	**27.39**	**52**	P		**P**	**02 34 18.0**	**+2.5**
WMQ				XP		sP	02 34 25.0	+5.2
WMQ				PP			02 35 06.0	
WMQ				S		**S**	**02 38 57.0**	**+1.5**
WMQ				SS			02 40 12.0	
WMQ				LR		LR		
	comp=N,124nm,8.0s							
WMQ				LR		LR		
	comp=E,247nm,8.0s							
WMQ				LR		LR		
	comp=Z,45nm,8.0s							
ZAL	**Zalesovo**	**30.69**	**32**	LR		LR	02 48 40.8	
	comp=Z,68nm,19.0s,MS3.3,baz=216,slow=40							
GTA	**Gaotai**	**35.59**	**64**	*e*P		**P**	**02 35 26.5**	**-1.0**
GTA				AP		pP	02 35 31.8	+1.2
GTA				XP		sP	02 35 35.0	+3.2
GTA				PP		PP	02 36 44.8	-3.5
GTA				PCP		PcP	02 37 58.0	+1.7
GTA				S		**S**	**02 40 58.0**	**-5.4**
GTA				SCP		ScP	02 41 41.0	-1.2
GTA				PCS		PcS	02 41 42.8	-0.6
GTA				SCS		ScS	02 45 44.0	-2.9
GTA				AMB		AMB		
	comp=Z,5.0nm,1.2s,mb4.3							
GTA				AMB		AMB		
	comp=Z,49nm,3.8s							
GTA				LR		LR		
	comp=N,63nm,14.1s,MS3.7							
GTA				LR		LR		
	comp=E,86nm,16.0s,MS3.7							
GTA				LR		LR		
	comp=Z,53nm,12.2s,MS3.5							
KMBO	**Kilima Mbogo**	**36.80**	**215**	P		**P**	**02 35 37.1**	**-0.8**
	comp=Z,1.1nm,0.8s,mb3.7,baz=51,slow=13,SNR=3.4							
KMBO				LR		LR	02 51 28.5	
	comp=Z,41nm,18.5s,MS3.2,baz=95,slow=38							
KMBO	**Kilima Mbogo**	**36.80**	**215**	P		**P**	**02 35 37.1**	**-0.8**
KMBO				pmax		pmax		
	comp=Z,1.0nm,0.8s							
KMBO				MLR		MLR		
	comp=Z,41nm,18.5s							
GERES	**GERESS Array B**	**37.80**	**312**	P		**P**	**02 35 46.6**	**+0.2**
	comp=Z,0.6nm,0.9s,mb3.3,baz=80,slow=8.3,SNR=3.7							
GERES	**GERESS Array B**	**37.80**	**312**	P		**P**	**02 35 46.6**	**+0.2**
GERES				pmax		pmax		
	comp=Z,1.0nm,0.9s							
LZH	**Lanzhou**	**38.90**	**69**	*e*P		**P**	**02 35 58.0**	**+2.4**
LZH				AP		pP	02 36 02.5	+3.8
LZH				XP		sP	02 36 04.5	+4.6
LZH				AMB		AMB		
	comp=Z,13nm,1.0s,mb4.6							
CD2	**Chengdu**	**39.59**	**77**	*e*P		**P**	**02 35 59.8**	**-1.5**
CD2				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.7							
KMI	**Kunming**	**40.19**	**86**	P		**P**	**02 36 08.0**	**+1.7**
KMI				AP		pP	02 36 13.3	+3.8
KMI				XP		sP	02 36 15.5	+4.8
KMI				AMB		AMB		
	comp=Z,7.0nm,0.8s,mb4.4							
SONM	**Songino Array**	**41.00**	**51**	LR		LR	02 54 46.3	
	comp=Z,69nm,20.7s,MS3.5,baz=283,slow=39							
HHC	**Hu-ho-hao-te**	**44.55**	**61**	*e*P		**P**	**02 36 42.8**	**+0.9**
HHC				AP		pP	02 36 48.8	+3.8
HHC				XP		sP	02 36 51.5	+5.2
HHC				PCP		PcP	02 38 26.0	+1.1
HHC				PP		PP	02 38 28.0	+2.2
HHC				SCP		ScP	02 42 16.0	-1.1
HHC				PCS		PcS	02 42 18.0	-0.3
HHC				S		**S**	**02 43 16.8**	**-0.7**
HHC				XS		sS	02 43 27.0	+4.4
HHC				SS		SS	02 46 28.5	-8.5
HHC				SCS		ScS	02 46 37.0	-3.0
HHC				AMB		AMB		
	comp=Z,13nm,1.1s,mb4.7							
HHC				AMB		AMB		
	comp=Z,86nm,5.2s							
HHC				LR		LR		
	comp=N,88nm,21.8s,MS3.8							
HHC				LR		LR		
	comp=E,97nm,21.8s,MS3.8							
HHC				LR		LR		
	comp=Z,59nm,19.9s,MS3.5							
OPO	**Ambohidratompo**	**49.69**	**193**	P		**P**	**02 37 21.7**	**-0.3**
	comp=Z,3.1nm,0.8s,mb4.4,baz=345,slow=5.8,SNR=6.9							
NJ2	**Nanjing**	**51.87**	**71**	*e*P		**P**	**02 37 41.3**	**+2.9**
SNY	**Shenyang**	**53.40**	**58**	*e*P		**P**	**02 37 50.8**	**+1.1**
SNY				AMB		AMB		
	comp=Z,9.0nm,2.5s,mb4.3							
SSE	**Sheshan**	**54.05**	**72**	P		**P**	**02 37 54.8**	**+0.3**
SSE				AMB		AMB		
	comp=Z,69nm,5.4s							
TOA0	**Torodi Ar. Sit**	**54.05**	**264**	*e*P		**P**	**02 37 53.2**	**-1.3**
TOA0	**Torodi Ar. Sit**	**54.05**	**264**	*e*P		**P**	**02 37 53.2**	**-1.3**
TORD	**Torodi Ar. Bea**	**54.05**	**264**	P		**P**	**02 37 53.5**	**-1.0**
	comp=Z,7.6nm,0.8s,mb4.7,baz=59,slow=5.4,SNR=36							
TORD	**Torodi Ar. Bea**	**54.05**	**264**	P		**P**	**02 37 53.5**	**-1.0**
MDJ	**Mudanjiang**	**57.18**	**54**	P		**P**	**02 38 17.8**	**+0.8**
MDJ				AP		pP	02 38 21.0	+0.8
MDJ				AMB		AMB		
	comp=Z,3.0nm,0.5s,mb4.6							
MDJ				AMB		AMB		
	comp=Z,33nm,5.5s							
MDJ				LR		LR		
	comp=N,24nm,16.2s							
MDJ				LR		LR		
	comp=E,15nm,24.2s							
MDJ				LR		LR		
	comp=Z,33nm,17.2s,MS3.5							
DBIC	**Dimbokro**	**62.84**	**261**	P		**P**	**02 38 54.5**	**-1.3**
	comp=Z,2.7nm,0.9s,mb4.4,baz=67,slow=6.5,SNR=3.7							
DBIC	**Dimbokro**	**62.84**	**261**	P		**P**	**02 38 54.6**	**-1.2**
DBIC				pmax		pmax		
	comp=Z,3.0nm,0.9s							
BOSA	**Boshof**	**66.25**	**211**	P		**P**	**02 39 16.4**	**-1.7**
	comp=Z,6.3nm,0.9s,mb4.6,baz=50,slow=9.2,SNR=5.4							
BOSA	**Boshof**	**66.25**	**211**	P		**P**	**02 39 16.4**	**-1.7**
BOSA				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.6							
YKA	**Yellowknife Ar**	**87.21**	**356**	LR		LR	03 30 13.8	
	comp=Z,24nm,18.1s,MS3.6,baz=90,slow=42							
ASAR	**Alice Springs**	**90.86**	**117**	P		**P**	**02 41 29.6**	**-4.0**
	comp=Z,0.7nm,0.8s,mb4.1,baz=302,slow=5.7,SNR=5.0							
ASAR	**Alice Springs**	**90.86**	**117**	P		**P**	**02 41 29.7**	**-3.9**
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**90.86**	**117**	P		**P**	**02 41 29.6**	**-4.0**

CASC 31 02:30:01.2±2.8, 1382N×9177W, h24km±11km, MD4.0, 3C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAT	**Jato**	**0.51**	**14**	↑*i*P		Pb	02 30 14.4	+2.8
JAT				*e*S		Sb	02 30 18.4	-0.2
FUG	**Fuego 3**	**1.09**	**55**	↓*e*P		Pn	02 30 21.2	+0.2
TER	**Terranova**	**1.16**	**65**	*e*P		Pn	02 30 21.9	+0.1
TER				*e*S		Sn	02 30 36.4	-0.4
PCG	**Pacaya**	**1.26**	**63**	↓*e*P		Pn	02 30 24.2	+1.0
PCG				*e*S		Sn	02 30 42.8	+3.4
SBLS	**San Blas**	**2.08**	**89**	↑*e*P		x	02 30 33.8	
SBLS				*e*S		x	02 31 01.8	
BOQS	**Boqueron**	**2.42**	**92**	*e*P		x	02 30 39.1	
BOQS				*e*S		x	02 31 11.7	
SNVI

HTY	**Hatay**	**1.95**	**301**	PN	**Pn**	**03 07 56.5**	**-1.3**
HTY				SN	**Sn**	**03 08 23.9**	**+1.7**
ARNB	**Al Arnab**	**1.96**	**293**	⇑*i*P	**Pn**	**03 07 57.6**	**-0.3**
ARNB				⇑*i*S	**Sn**	**03 08 20.6**	**-1.7**
SFNV	**Sufian**	**2.03**	**50**	⇑*i*P	**Pn**	**03 07 59.5**	**+0.7**
SFNV				⇑*i*S	**Sn**	**03 08 23.4**	**-0.5**
HWQ	**Hawqa**	**2.04**	**246**	*e*P	**Pn**	**03 07 59.4**	**+0.5**
HWQ				*e*S	**Sn**	**03 08 26.0**	**+1.9**
MZRK	**Al-Mazaregh**	**2.12**	**70**	⇑*i*P	**Pn**	**03 08 01.0**	**+0.9**
MZRK				⇑*i*S	**Sn**	**03 08 26.0**	**-0.4**
GAZ	**Gaziantep**	**2.20**	**339**	PN	**Pn**	**03 08 01.1**	**-0.1**
QASN	**Qassioun**	**2.24**	**226**	⇑*i*P	**Pn**	**03 08 02.1**	**+0.3**
QASN				⇑*i*S	**Sn**	**03 08 28.9**	**-0.4**
TOTH	**TOTAH**	**2.29**	**220**	⇓*i*P	**Pn**	**03 08 03.1**	**+0.8**
TOTH				⇓*i*S	**Sn**	**03 08 29.3**	**-1.0**
ZALF	**Zalf**	**2.31**	**198**	⇑*i*P	**Pn**	**03 08 02.0**	**-0.6**
URFA	**Urfa**	**2.37**	**12**	PN	**Pn**	**03 08 03.9**	**+0.4**
BHL	**Bhannes**	**2.43**	**241**	*e*P	**Pn**	**03 08 05.0**	**+0.7**
BHL				*e*S	**Sn**	**03 08 35.1**	**+1.4**
BRBR	**Barbar**	**2.52**	**228**	⇑*i*P	**Pn**	**03 08 06.0**	**+0.4**
BRBR				⇑*i*S	**Sn**	**03 08 35.1**	**-1.1**
RCY	**Rachaya**	**2.56**	**231**	*e*P	**Pn**	**03 08 07.4**	**+1.3**
RCY				*e*S	**Sn**	**03 08 39.1**	**+2.1**
KMRS	**Kahramanmaras**	**2.60**	**337**	PN	**Pn**	**03 08 06.6**	**-0.1**
SALA	**Sala**	**2.69**	**207**	⇑*i*P	**Pn**	**03 08 07.8**	**-0.1**
SALA				⇑*i*S	**Sn**	**03 08 40.0**	**-0.4**
CEYT	**Ceyhan**	**2.74**	**314**	PN	**Pn**	**03 08 08.4**	**-0.2**
MATL	**Matirih**	**2.88**	**236**	*e*P	**Pn**	**03 08 12.4**	**+1.9**
KOZT	**Kozan**	**3.04**	**322**	PN	**Pn**	**03 08 12.6**	**-0.1**
MYA	**Malataya**	**3.21**	**3**	PN	**Pn**	**03 08 15.3**	**+0.3**
DIY	**Diyarbakir**	**3.22**	**30**	PN	**Pn**	**03 08 14.6**	**-0.6**
KARA	**Karaisali**	**3.32**	**311**	PN	**Pn**	**03 08 16.1**	**-0.5**
MERS	**Mersin**	**3.45**	**301**	*e*PN	**Pn**	**03 08 18.1**	**-0.3**
IKL	**Isikli**	**3.84**	**288**	*e*PN	**Pn**	**03 08 22.4**	**-1.3**
PTK	**Pertek**	**3.89**	**14**	*e*PN	**Pn**	**03 08 25.6**	**+1.3**
BTMT	**Batman**	**4.05**	**40**	*e*PN	**Pn**	**03 08 25.0**	**-1.6**
MSL	**Mosul**	**4.15**	**72**	*ex*	x	03 08 52.0	
MSL				*ex*	x	03 09 36.0	
MSL				*ex*	x	03 09 45.0	
MSL				*i* x	x	03 09 53.0	
BINT	**Bingol**	**4.17**	**25**	*e*PN	**Pn**	**03 08 29.3**	**+1.0**
BNN	**Bunyan**	**4.17**	**334**	*e*PN	**Pn**	**03 08 30.2**	**+1.9**
EZC	**Erzincan**	**4.80**	**15**	*e*PN	**Pn**	**03 08 36.4**	**-0.5**
CUKT	**Cukurca**	**4.86**	**63**	*e*PN	**Pn**	**03 08 35.8**	**-2.0**
SVSK	**Karacayir**	**4.88**	**349**	*e*PN	**Pn**	**03 08 40.0**	**+1.9**
HKR	**Hakkari**	**5.10**	**60**	*e*PN	**Pn**	**03 08 40.0**	**-1.1**
EZM	**Erzurum**	**5.40**	**27**	*e*PN	**Pn**	**03 08 46.4**	**+1.2**
VANB	**Van**	**5.42**	**49**	*e*PN	**Pn**	**03 08 45.3**	**-0.1**
CORM	**Corum**	**5.79**	**332**	*e*PN	**Pn**	**03 08 52.0**	**+1.5**

*ISCJB **31** 03:10:52.4±0.2, 4595N±001×300E±002, h10km, Error ellipse: s-maj=2.2km s-min=2.0km az=65.4*
*NEIC **31** 03:10:53.9, 4595N×297E, h5km, ML2.4(LDG), ML2.6(STR), After STR.*
*STR **31** 03:10:53.9±0.2, 4595N×297E, h5km±1km, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **31** 03:10:54.5±0.1, 4595N×298E, h10km, ML2.4/25, Error ellipse: s-maj=0.9km s-min=0.8km az=111.0*
*LDG **31** 03:10:54.5±0.0, 4595N×298E, h2km, Md2.6/3, Ml2.4/27, Error ellipse: s-maj=0.6km s-min=0.6km az=141.0*

ISC 31 03:10:53.3±0.2, 4595N±001×295E±002, h13km±3km, n68, σ1§02/147, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGO	**Saint Agoulin**	**0.16**	**52**	Pg	**Pg**	**03 10 57.5**	**+0.4**
AGO				Sg	**Sg**	**03 10 59.7**	**-0.1**
PYM	**Petit Puy Mans**	**0.21**	**169**	Pg	**Pg**	**03 10 58.1**	**+0.2**
PYM				Sg	**Sg**	**03 11 00.9**	**-0.1**
PLDF	**La Plantade**	**0.47**	**88**	Pg	**Pg**	**03 11 02.9**	**+0.3**
PLDF				Sg	**Sg**	**03 11 09.0**	**+0.1**
BGF	**Bois d'Agland**	**0.61**	**353**	*e*Pg	**Pg**	**03 11 06.3**	**+1.1**
BGF				*e*Sg	**Sg**	**03 11 14.8**	**+1.5**
	25nm,0.2s						
BGF	**Bois d'Agland**	**0.61**	**353**	*e*Pg	**Pg**	**03 11 06.3**	**+1.1**
BGF				*e*Sg	**Sg**	**03 11 14.8**	**+1.5**
	12nm,0.2s						
TCF	**Toulx Ste Croi**	**0.61**	**303**	*e*Pg	**Pg**	**03 11 06.3**	**+1.0**
TCF				*e*Sg	**Sg**	**03 11 15.0**	**+1.6**
	9.7nm,0.1s						
TCF	**Toulx Ste Croi**	**0.61**	**303**	*e*Pg	**Pg**	**03 11 06.3**	**+1.0**
TCF				*e*Sg	**Sg**	**03 11 15.0**	**+1.6**
	4.8nm,0.1s						
FRNF	**Fournols**	**0.63**	**206**	Pg	**Pg**	**03 11 06.3**	**+0.7**
FRNF				Sg	**Sg**	**03 11 14.4**	**+0.5**
COLF	**Collangettes**	**0.68**	**130**	Pg	**Pg**	**03 11 06.8**	**+0.2**
COLF				Sg	**Sg**	**03 11 16.1**	**+0.6**
LBL	**Lubilhac**	**0.75**	**164**	Pg	**Pg**	**03 11 08.2**	**+0.3**
LBL				Sg	**Sg**	**03 11 18.2**	**+0.4**
AVF	**Avril sur Loir**	**0.88**	**18**	*e*Pg	**Pg**	**03 11 11.7**	**+1.3**
AVF				*e*Sg	**Sg**	**03 11 22.6**	**+0.7**
	17nm,0.2s						
AVF	**Avril sur Loir**	**0.88**	**18**	*e*Pg	**Pg**	**03 11 11.7**	**+1.3**
AVF				*e*Sg	**Sg**	**03 11 22.6**	**+0.7**
	8.6nm,0.2s						
SMF	**Signal de Mont**	**0.93**	**41**	*e*Pg	**Pg**	**03 11 11.7**	**+0.4**
SMF				*e*Sg	**Sg**	**03 11 24.4**	**+1.0**
	17nm,0.2s						
SMF	**Signal de Mont**	**0.93**	**41**	*e*Pg	**Pg**	**03 11 11.7**	**+0.4**
SMF				*e*Sg	**Sg**	**03 11 24.4**	**+1.0**
	8.4nm,0.2s						
RJF	**Les Rejaudoux**	**1.20**	**238**	*e*Pg	**Pg**	**03 11 17.5**	**+1.1**
RJF				*e*Sg	**Sg**	**03 11 32.9**	**+0.9**
	23nm,0.2s						
RJF	**Les Rejaudoux**	**1.20**	**238**	*e*Pn	**Pn**	**03 11 16.9**	**+1.2**
RJF				*e*Pg	**Pg**	**03 11 17.5**	**+1.1**
RJF				*e*Sg	**Sg**	**03 11 32.9**	**+0.9**
RJF	**Les Rejaudoux**	**1.20**	**238**	*e*Pg	**Pg**	**03 11 17.5**	**+1.1**
RJF				*e*Sg	**Sg**	**03 11 32.9**	**+0.9**
	12nm,0.2s						
CAF	**Calviac**	**1.20**	**212**	*e*Pg	**Pg**	**03 11 17.4**	**+0.9**
CAF				*e*Sg	**Sg**	**03 11 33.2**	**+1.1**
	10nm,0.2s						
CAF	**Calviac**	**1.20**	**212**	*e*Pn	**Pn**	**03 11 16.7**	**+0.9**
CAF				*e*Pg	**Pg**	**03 11 17.4**	**+0.9**
CAF				*e*Sg	**Sg**	**03 11 33.2**	**+1.1**
CAF	**Calviac**	**1.20**	**212**	*e*Pg	**Pg**	**03 11 17.4**	**+0.9**
CAF				*e*Sg	**Sg**	**03 11 33.2**	**+1.1**
	5.1nm,0.2s						
HYF	**Humbligny**	**1.33**	**351**	*e*Pg	**Pg**	**03 11 20.6**	**+1.6**
HYF				*e*Sg	**Sg**	**03 11 37.0**	**+0.7**
LOR	**Lormes**	**1.46**	**25**	*e*Pg	**Pg**	**03 11 21.6**	**+0.3**
LOR				*e*Sg	**Sg**	**03 11 41.1**	**+0.8**
	13nm,0.2s						
LOR	**Lormes**	**1.46**	**25**	*e*Pg	**Pg**	**03 11 21.6**	**+0.3**
LOR				*e*Sg	**Sg**	**03 11 41.1**	**+0.8**
	6.3nm,0.2s						
VIVF	**Saint-Julien-l**	**1.64**	**131**	*e*Pg	**Pg**	**03 11 24.7**	**0.0**
VIVF				*e*Sg	**Sg**	**03 11 45.4**	**-0.6**
	7.5nm,0.2s						
VIVF	**Saint-Julien-l**	**1.64**	**131**	*e*Pg	**Pg**	**03 11 24.7**	**0.0**
VIVF				*e*Sg	**Sg**	**03 11 45.4**	**-0.6**
	3.8nm,0.2s						
LFF	**La Frestale**	**1.86**	**238**	*e*Pg	**Pg**	**03 11 29.4**	**+0.4**
LFF				*e*Sg	**Sg**	**03 11 53.6**	**+0.5**
	14nm,0.3s						
LFF	**La Frestale**	**1.86**	**238**	*e*Pn	**Pn**	**03 11 25.8**	**+1.0**
LFF				*e*Pg	**Pg**	**03 11 29.4**	**+0.4**
LFF				*e*Sg	**Sg**	**03 11 53.6**	**+0.5**
LFF	**La Frestale**	**1.86**	**238**	*e*Pg	**Pg**	**03 11 29.4**	**+0.4**
LFF				*e*Sg	**Sg**	**03 11 53.6**	**+0.5**
	6.9nm,0.3s						
CABF	**La Chapelle**	**2.27**	**72**	*e*Pg	**Pg**	**03 11 36.6**	**-0.3**
CABF				*e*Sg	**Sg**	**03 12 05.7**	**-0.7**
	2.6nm,0.2s						
CABF	**La Chapelle**	**2.27**	**72**	*e*Pn	**Pn**	**03 11 31.5**	**+0.9**
CABF				*e*Pg	**Pg**	**03 11 36.6**	**-0.3**
CABF				*e*Sg	**Sg**	**03 12 05.7**	**-0.7**
CABF	**La Chapelle**	**2.27**	**72**	*e*Pg	**Pg**	**03 11 36.6**	**-0.3**
CABF				*e*Sg	**Sg**	**03 12 05.7**	**-0.7**
	1.3nm,0.2s						
ORIF	**Oris-en-Rattie**	**2.31**	**116**	*e*Pg	**Pg**	**03 11 37.0**	**-0.6**
ORIF				*e*Sg	**Sg**	**03 12 06.5**	**-1.0**
	1.3nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.31**	**116**	*e*Pg	**Pg**	**03 11 37.0**	**-0.6**
ORIF				*e*Sg	**Sg**	**03 12 06.5**	**-1.0**
	0.6nm,0.3s						
MTLF	**Montolieu**	**2.66**	**192**	*e*Pg	**Pg**	**03 11 44.1**	**-0.3**
MTLF				*e*Sg	**Sg**	**03 12 17.9**	**-1.0**
	1.8nm,0.2s						
MTLF	**Montolieu**	**2.66**	**192**	*e*Pn	**Pn**	**03 11 36.7**	**+0.8**
MTLF				*e*Pg	**Pg**	**03 11 44.1**	**-0.3**
MTLF				*e*Sg	**Sg**	**03 12 17.9**	**-1.0**
	0.9nm,0.2s						
LPL	**La Plagne**	**2.69**	**98**	*e*Pg	**Pg**	**03 11 44.5**	**-0.3**
LPL				*e*Sg	**Sg**	**03 12 18.5**	**-1.1**
	1.5nm,0.3s						
LPL	**La Plagne**	**2.69**	**98**	*e*Pn	**Pn**	**03 11 37.6**	**+1.4**
LPL				*e*Pg	**Pg**	**03 11 44.5**	**-0.3**
LPL				*e*Sg	**Sg**	**03 12 18.5**	**-1.1**
LPL	**La Plagne**	**2.69**	**98**	*e*Pg	**Pg**	**03 11 44.5**	**-0.3**
LPL				*e*Sg	**Sg**	**03 12 18.5**	**-1.1**
	0.8nm,0.3s						
LPG	**La Plagne**	**2.70**	**98**	*e*Pg	**Pg**	**03 11 44.6**	**-0.5**
LPG				*e*Sg	**Sg**	**03 12 19.3**	**-0.8**
	0.7nm,0.2s						
LPG	**La Plagne**	**2.70**	**98**	*e*Pn	**Pn**	**03 11 37.3**	**+0.9**
LPG				*e*Pg	**Pg**	**03 11 44.6**	**-0.5**
LPG				*e*Sg	**Sg**	**03 12 19.3**	**-0.8**
LPG	**La Plagne**	**2.70**	**98**	*e*Pg	**Pg**	**03 11 44.6**	**-0.5**
LPG				*e*Sg	**Sg**	**03 12 19.3**	**-0.8**
	0.3nm,0.2s						
SMRF	**Simiane la Rot**	**2.72**	**136**	*e*Pg	**Pg**	**03 11 44.7**	**-0.7**
SMRF				*e*Sg	**Sg**	**03 12 19.6**	**-1.0**
	0.7nm,0.2s						
SMRF	**Simiane la Rot**	**2.72**	**136**	*e*Pg	**Pg**	**03 11 44.7**	**-0.7**
SMRF				*e*Sg	**Sg**	**03 12 19.6**	**-1.0**
	0.3nm,0.2s						
MEZF	**Maizieres J'vi**	**2.92**	**29**	*e*Sg	**Sg**	**03 12 26.9**	**-0.4**
	4.4nm,0.3s						
MEZF	**Maizieres J'vi**	**2.92**	**29**	*e*Sg	**Sg**	**03 12 26.9**	**-0.4**
	2.2nm,0.3s						
HAU	**Haudompre**	**3.10**	**47**	*e*Pg	**Pg**	**03 11 51.7**	**-1.1**
HAU				*e*Sg	**Sg**	**03 12 32.2**	**-0.8**
	3.5nm,0.2s						
HAU	**Haudompre**	**3.10**	**47**	*e*Pg	**Pg**	**03 11 51.7**	**-1.1**
HAU				*e*Sg	**Sg**	**03 12 32.2**	**-0.8**
	1.8nm,0.2s						
HINF	**Hinteralfeld**	**3.26**	**54**	*e*Sg	**Sg**	**03 12 36.5**	**-1.6**
	2.7nm,0.2s						
HINF	**Hinteralfeld**	**3.26**	**54**	*e*Sg	**Sg**	**03 12 36.5**	**-1.6**
	1.4nm,0.2s						
LDF	**La Druitiere**	**3.37**	**323**	*e*Pg	**Pg**	**03 11 58.0**	**+0.1**
LDF				*e*Sn	**Sn**	**03 12 25.5**	**0.0**
LDF				*e*Sg	**Sg**	**03 12 40.7**	**-0.8**
	0.9nm,0.2s						
LDF	**La Druitiere**	**3.37**	**323**	*e*Pg	**Pg**	**03 11 58.0**	**+0.1**
LDF				*e*Sn	**Sn**	**03 12 25.5**	**0.0**
LDF				*e*Sg	**Sg**	**03 12 40.7**	**-0.8**
	0.4nm,0.2s						
EPF	**Esparros**	**3.47**	**214**	*e*Pn	**Pn**	**03 11 47.7**	**+0.7**
EPF				*e*Sn	**Sn**	**03 12 26.7**	**-1.2**
EPF				*e*Sg	**Sg**	**03 12 43.4**	**-1.3**
	1.4nm,0.3s						
EPF	**Esparros**	**3.47**	**214**	*e*Pn	**Pn**	**03 11 47.7**	**+0.7**
EPF				*e*Sn	**Sn**	**03 12 26.7**	**-1.2**
EPF				*e*Sg	**Sg**	**03 12 43.4**	**-1.3**
	0.7nm,0.3s						
GRR	**Gorron**	**3.56**	**315**	*e*Pg	**Pg**	**03 11 59.7**	**-1.9**
GRR				*e*Sg	**Sg**	**03 12 46.9**	**-0.8**
	1.6nm,0.2s						
GRR	**Gorron**	**3.56**	**315**	*e*Pg	**Pg**	**03 11 59.7**	**-1.9**
GRR				*e*Sg	**Sg**	**03 12 46.9**	**-0.8**
	0.8nm,0.2s						
FLN	**La Foliniere**	**3.65**	**322**	*e*Pg	**Pg**	**03 12 01.1**	**-2.2**
FLN				*e*Sg	**Sg**	**03 12 48.9**	**-1.7**
	1.2nm,0.3s						
FLN	**La Foliniere**	**3.65**	**322**	*e*Pg	**Pg**	**03 12 01.1**	**-2.2**
FLN				*e*Sg	**Sg**	**03 12 48.9**	**-1.7**
	0.6nm,0.3s						
ETSF	**Etsaut**	**3.96**	**221**	*e*Pn	**Pn**	**03 11 54.4**	**+0.7**
ETSF				*e*Sg	**Sg**	**03 12 58.7**	**-1.6**
	1.5nm,0.3s						
ETSF	**Etsaut**	**3.96**	**221**	*e*Pn	**Pn**	**03 11 54.4**	**+0.7**
ETSF				*e*Sg	**Sg**	**03 12 58.7**	**-1.6**
	0.8nm,0.3s						
SJPF	**Ste Jean**	**4.12**	**228**	*e*Pn	**Pn**	**03 11 56.7**	**+0.8**
SJPF				*e*Sg	**Sg**	**03 13 03.9**	**-1.7**
	1.4nm,0.3s						
SJPF	**Ste Jean**	**4.12**	**228**	*e*Pn	**Pn**	**03 11 56.7**	**+0.8**
SJPF				*e*Sg	**Sg**	**03 13 03.9**	**-1.7**
	0.7nm,0.3s						
SGMF	**Saint Gilles**	**4.41**	**303**	*e*Pn	**Pn**	**03 12 00.8**	**+0.9**
SGMF				*e*Sn	**Sn**	**03 12 49.0**	**-2.1**
SGMF				*e*Sg	**Sg**	**03 13 12.7**	**-2.2**
	0.5nm,0.3s						
SGMF	**Saint Gilles**	**4.41**	**303**	*e*Pn	**Pn**	**03 12 00.8**	**+0.9**
SGMF				*e*Sn	**Sn**	**03 12 49.0**	**-2.1**
SGMF				*e*Sg	**Sg**	**03 13 12.7**	**-2.2**
	0.2nm,0.3s						
QUIF	**Quistinic**	**4.63**	**297**	*e*Pn	**Pn**	**03 12 03.7**	**+0.8**
QUIF				*e*Sg	**Sg**	**03 13 19.9**	**-2.0**
	0.8nm,0.3s						
QUIF	**Quistinic**	**4.63**	**297**	*e*Pn	**Pn**	**03 12 03.7**	**+0.8**
QUIF				*e*Sg	**Sg**	**03 13 19.9**	**-2.0**
	0.4nm,0.3s						
ROSF	**Rostrenen**	**4.87**	**302**	*e*Pn	**Pn**	**03 12 06.7**	**+0.5**
ROSF				*e*Sn	**Sn**	**03 12 59.7**	**-2.8**
ROSF				*e*Sg	**Sg**	**03 13 26.0**	**-3.7**
	0.9nm,0.3s						
ROSF	**Rostrenen**	**4.87**	**302**	*e*Pn	**Pn**	**03 12 06.7**	**+0.5**
ROSF				*e*Sn	**Sn**	**03 12 59.7**	**-2.8**
ROSF				*e*Sg	**Sg**	**03 13 26.0**	**-3.7**
	0.4nm,0.3s						

CASC 31 03:14:50.7±2.8, 1334N×8969W, h69km±30km, MD3.9, 4C-7D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.50**	**7**	⇓*i*P	x	03 15 03.3	
BOQS	**Boqueron**	**0.56**	**45**	*e*P	x	03 15 03.6	
RTR	**El Retiro**	**0.56**	**4**	⇓*i*P	x	03 15 14.3	
RTR				*e*S	x	03 15 27.1	
LFU	**La Fuente**	**0.69**	**54**	⇓*i*P	x	03 15 15.8	
LFU				*e*S	x	03 15 28.1	
LBRS	**Las Brisas**	**0.74**	**57**	⇓*i*P	x	03 15 16.2	
LBRS				*e*S	x	03 15 30.7	
LCBS	**La Ceiba**	**0.76**	**65**	⇓*i*P	x	03 15 16.0	
LCBS				*e*S	x	03 15 30.5	
RBDL	**Robledal**	**0.77**	**360**	⇓*e*P	x	03 15 17.4	
RBDL				*e*S	x	03 15 29.7	
SNVI	**San Vicente**	**0.87**	**72**	*e*P	x	03 15 07.5	
MTO2	**Montecristo 2**	**1.10**	**17**	⇓*e*P	x	03 15 21.8	
MTO2				*e*S	x	03 15 38.7	
TER	**Terranova**	**1.36**	**315**	*e*P	Pn	03 15 15.2	+1.4
TER				*e*S	Sn	03 15 31.9	+0.7
VSM	**San Miguel**	**1.38**	**86**	⇑*e*P	x	03 15 14.4	
VSM				*e*S	x	03 15 32.9	
BLLM	**Bellamira**	**1.41**	**86**	⇑*e*P	x	03 15 24.8	
BLLM				*e*S	x	03 15 42.9	
FUG	**Fuego 3**	**1.57**	**315**	*e*P	Pn	03 15 17.0	+0.4
FUG				*i* S	Sn	03 15 37.3	+1.2
CNCH	**Conchagua**	**1.80**	**92**	⇑*e*P	x	03 15 19.8	
CNCH				*e*S	x	03 15 41.8	
JAT	**Jato**	**2.13**	**297**	*e*P	Pn	03 15 25.7	+1.6
LEON	**Leon**	**2.87**	**108**	*e*P	Pn	03 15 33.6	-0.5
CNGN	**Cerro Negro**	**3.03**	**106**	*e*P	Pn	03 15 36.3	+0.1
MIRN	**Miramar**	**3.03**	**107**	⇑*e*P	Pn	03 15 37.8	+1.5
COPN	**Copaltepe**	**3.23**	**111**	*e*P	Pn	03 15 39.0	0.0
APYN	**Apoyeque**	**3.43**	**108**	*e*P	Pn	03 15 42.3	+0.5
MGAN	**Managua**	**3.56**	**109**	*e*P	Pn	03 15 44.4	+1.0
BOA	**Boaco**	**3.96**	**102**	*e*P	Pn	03 15 48.7	-0.2
PRS1	**Puriscal**	**6.23**	**122**	*e*P	Pn	03 16 22.4	+2.4
LAJ	**Bijagual**	**6.45**	**122**	*e*P	Pn	03 16 20.8	-2.2
LCR2	**La Lucha 2**	**6.62**	**122**	*e*P	Pn	03 16 28.7	+3.5
BUS	**Buena Vista**	**6.92**	**122**	*e*P	Pn	03 16 32.5	+3.1

CASC 31 04:53:47.8±2.3, 1349N×9241W, h95km±89km, MD4.2, 1C-2D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**1.11**	**42**	⇓*e*P	Pn	04 54 09.8	+0.7
FUG	**Fuego 3**	**1.79**	**58**	⇑*e*P	Pn	04 54 18.3	+0.8
TER	**Terranova**	**1.86**	**64**	*e*S	Sn	04 54 41.7	+0.1
SNJE	**San Jose**	**2.75**	**82**	⇓*e*P	x	04 54 43.8	
SNJE				*e*S	x	04 55 17.2	
LFRS	**El Faro**	**3.26**	**87**	*e*P	x	04 54 50.3	

*ISCJB **31** 04:58:17.3±0.6, 2431S×004×67.11W±006, h158km±6km, mb4.0/16, Error ellipse: s-maj=8.8km s-min=5.9km az=17.0*
*IDC **31** 04:58:18.6±0.9, 2430S×6702W, h153km±9km, mb3.9/6, mb1 4.0/12, mb1mx3.9/20, mbtmp4.4/12, Error ellipse: s-maj=14.4km s-min=10.7km az=78.0*
*NEIC **31** 04:58:18.7±0.5, 2431S×6706W, h157km±5km, mb4.1/13, Error ellipse: s-maj=7.5km s-min=5.8km az=101.0*
*GUC **31** 04:58:19.0±0.6, 2429S×6743W, h195km, ML5.1*

ISC 31 04:58:18.5±0.5, 2434S±004×6711W±006, h154km±6km, n47, σ1§07/52, mb4.0/16, 6C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.39**	**316**	P	**Pn**	**04 59 00.7**	**+2.4**
LVC				S	**Sn**	**04 59 30.7**	**+1.6**
	481nm,0.3s,SNR=38						
LVC	**Limon Verde**	**2.39**	**316**	*e*Pn	**Pn**	**04 59 00.4**	**+2.0**
LVC				*e*Sn	**Sn**	**04 59 25.7**	**-3.5**
CPN1	**Cerro Paranal**	**3.02**	**264**	⇑*i*P	**Pn**	**04 59 07.0**	**+0.8**
CPN1				*i* S	**Sn**	**04 59 42.6**	**-0.4**
CPN1				AML	AML	04 59 44.2	
	comp=E,2μm,0.3s						
ANCH	**Antofagasta**	**3.09**	**282**	⇑*i*P	**Pn**	**04 59 08.2**	**+1.1**
ANCH				*i* S	**Sn**	**04 59 44.3**	**-0.4**
ANCH				AML	AML	04 59 46.9	
	comp=N,2μm,0.3s						
ANCH	**Antofagasta**	**3.09**	**282**	⇑*i*P	**Pn**	**04 59 08.2**	**+1.1**
ANCH				*i* S	**Sn**	**04 59 44.3**	**-0.4**
CPCH	**Copiapo**	**4.19**	**224**	⇑*i*P	**Pn**	**04 59 20.4**	**-0.8**
CPCH				*i* S	**Sn**	**05 00 08.8**	**-1.4**
CPCH				AML	AML	05 00 11.5	
	comp=E,2μm,0.1s						
CPCH	**Copiapo**	**4.19**	**224**	⇑*i*P	**Pn**	**04 59 20.4**	**-0.8**
CPCH				*i* S	**Sn**	**05 00 08.8**	**-1.4**
VACH	**Vallenar**	**5.34**	**217**	⇑*i*P	**Pn**	**04 59 37.3**	**+0.9**
VACH				*i* S	**Sn**	**05 00 37.1**	**-0.1**
CFAA	**Coronel Fontan**	**7.30**	**188**	P	**Pn**	**05 00 03.1**	**+0.5**
	comp=E,0.3nm,0.3s,baz=0.8,slow=13,SNR=18						
CFAA				S	**Sn**	**05 01 21.6**	**-2.6**
	comp=E,0.5nm,0.3s,baz=287,slow=23,SNR=8.5						
LPAZ	**La Paz**	**8.07**	**353**	P	**Pn**	**05 00 14.3**	**+1.6**
	comp=E,4.3nm,0.3s,baz=159,slow=6.7,SNR=99						
LPAZ				S	**Sn**	**05 01 39.0**	**-3.7**
	baz=6.4,slow=24,SNR=3.0						
LPAZ	**La Paz**	**8.07**	**353**	P	**Pn**	**05 00 14.3**	**+1.6**
LPAZ				S	**Sn**	**05 01 39.0**	**-3.7**
CPUP	**Villa Florida**	**9.06**	**105**	P	**Pn**	**05 00 27.2**	**+1.3**
	comp=E,1.2nm,0.3s,baz=269,slow=11,SNR=22						
SIV	**San Ignacio**	**10.05**	**35**	P	**Pn**	**05 00 37.8**	**-1.2**
	comp=E,2.5nm,0.3s,baz=223,slow=12,SNR=94						
SIV				S	**Sn**	**05 02 17.9**	**-12**
	comp=E,0.5nm,0.3s,baz=232,slow=14,SNR=6.9						
TRQA	**Tornquist**	**14.36**	**163**	*e*Pn	**Pn**	**05 01 33.9**	**-0.7**
	comp=E,28nm,0.6s						
TRQA				*e*P		05 01 37.9	
SAML	**Samuel**	**15.76**	**14**	*e*P	**Pn**	**05 01 51.0**	**-1.0**
	comp=E,6.3nm,0.6s						
PLCA	**Paso Flores**	**16.60**	**189**	P	**Pn**	**05 02 02.8**	**+0.6**
	comp=E,0.5nm,0.3s,baz=356,slow=11,SNR=9.5						
BDFB	**Brasilia**	**19.90**	**68**	P	**P**	**05 02 38.4**	**+0.3**
	comp=E,5.5nm,0.3s,baz=248,slow=10.0,SNR=42						
BAO	**Brasilia Array**	**19.93**	**68**	P	**P**	**05 02 39.0**	**+0.7**
RCBR	**Riachuelo**	**35.16**	**64**	*e*P	**P**	**05 04 55.6**	**-1.9**
	comp=E,19nm,1.1s,mb4.6						
VNA1	**Neumayer--Stat**	**57.06**	**160**	*e*	**P**	**05 07 49.5**	**+1.1**
VNA1				*e*		05 07 51.9	
VNA1				*e*		05 07 56.4	
SNAA	**Sanae**	**59.06**	**161**	*e*	**P**	**05 08 02.3**	**-0.1**
SNAA				*e*		05 08 05.6	
SNAA				*e*		05 08 08.8	
SNAA	**Sanae**	**59.06**	**161**	*e*P	**P**	**05 08 02.0**	**-0.4**
	comp=E,1.5nm,0.6s,mb4.0						

IMP	**Imphal**	**4.01 109**	*e*PN		**Pn**	**05 37 11.0**	**+2.2**
IMP			*e*PG		**Pn**	**05 37 26.0**	**+17**
IMP			*e*x		x	05 38 02.0	
IMP			*e*x		x	05 38 20.0	
PKI	**Pulchoki**	**4.14 290**	*e*Pn		**Pn**	**05 37 11.6**	**+0.9**
PKI			*e*Sn		**Sn**	**05 37 59.4**	**+1.6**
	339nm,0.3s						
BOK	**Bokaro**	**4.26 237**	*e*P		**Pn**	**05 37 14.4**	**+2.1**
BOK			*e*S		**Sn**	**05 38 02.2**	**+1.5**
BOK			AML		AML	05 38 30.2	
	comp=N,696nm,0.6s						
BOK			AML		AML	05 38 30.4	
	comp=E,494nm,0.6s						
KKN	**Kakani**	**4.32 293**	*e*Pn		**Pn**	**05 37 13.9**	**+0.7**
KKN			*e*Sn		**Sn**	**05 38 03.0**	**+0.7**
	comp=E,574nm,0.4s						
DMN	**Daman**	**4.41 290**	*e*Pn		**Pn**	**05 37 15.1**	**+0.7**
DMN			*e*Sn		**Sn**	**05 38 05.8**	**+1.4**
	comp=E,461nm,0.4s						
GKN	**Gorkha**	**4.93 293**	*e*Pn		**Pn**	**05 37 22.4**	**+0.9**
GKN			*e*Sn		**Sn**	**05 38 18.1**	**+0.8**
	comp=E,577nm,0.3s						
KOLN	**Koldanda**	**5.74 287**	*e*Pn		**Pn**	**05 37 33.0**	**+0.4**
KOLN			*e*Sn		**Sn**	**05 38 36.1**	**-1.1**
	comp=E,330nm,0.3s						
BWNR	**Bhubaneshwar**	**6.91 213**	*e*x		x	05 37 20.0	
ALBI	**Allahabad**	**7.24 265**	*e*P		**Pn**	**05 37 52.5**	**-0.8**
LGTI	**Lohaghat**	**9.04 293**	*e*P		**Pn**	**05 38 19.0**	**+1.0**
LGTI			*e*x		x	05 40 02.0	
JBP	**Jabalpur**	**9.40 253**	⇓ *i*P		**Pn**	**05 38 24.0**	**+1.1**
JBP			*i* S		**Sn**	**05 40 03.6**	**-3.7**
VIS	**Vishakhapatnam**	**10.33 217**	*e*P		**Pn**	**05 38 36.5**	**+0.9**
VIS			*e*x		x	05 40 40.8	
NGP	**Nagpur**	**11.03 245**	*e*P		**Pn**	**05 38 44.6**	**-0.6**
NGP			*e*S		**Sn**	**05 40 39.1**	**-8.3**
NGP			*e*x		x	05 40 40.2	
	comp=E,23nm,0.7s						
NGP			*e*x		x	05 40 42.7	
	comp=N,26nm,0.3s						
KLP	**Kalpa**	**11.42 300**	*e*P		**Pn**	**05 38 48.5**	**-2.1**
KLP			*e*S		**Sn**	**05 40 45.1**	**-12**
NDI	**New Delhi**	**11.43 285**	*e*P		**Pn**	**05 38 47.0**	**-3.7**
NDI			*e*S		**Sn**	**05 40 48.0**	**-9.2**
AYAN	**Aya Nagar**	**11.48 284**	*e*P		**Pn**	**05 38 39.1**	**-12**
AYAN			*e*S		**Sn**	**05 40 37.4**	**-21**
SONA	**Sohna**	**11.48 283**	*e*P		**Pn**	**05 38 49.2**	**-2.2**
SONA			*e*S		**Sn**	**05 40 49.5**	**-9.0**
BHPL	**Bhopal**	**11.61 258**	*e*P		**Pn**	**05 38 50.4**	**-2.7**
BHPL			*e*S		**Sn**	**05 40 52.0**	**-9.4**
KUDL	**Kundal**	**11.99 282**	*e*P		**Pn**	**05 38 55.5**	**-2.8**
KUDL			*e*S		**Sn**	**05 40 58.6**	**-12**
KHET	**Khetri**	**12.59 282**	*e*P		**Pn**	**05 39 04.1**	**-2.4**
KHET			*e*S		**Sn**	**05 41 15.2**	**-10**
AJM	**Ajmer**	**13.58 275**	*e*P		**Pn**	**05 39 17.3**	**-2.8**
HYB	**Hyderabad**	**13.59 232**	*i* P		**Pn**	**05 39 19.0**	**-1.1**
	comp=N,80nm,1.0s						
HYB			*e*S		**Sn**	**05 41 56.0**	**+6.2**
POO	**Poona**	**16.58 246**	*e*x		x	05 42 50.0	
POO			*e*PPP			05 43 05.0	
POO			*e*x		x	05 43 56.0	
POO			*i* x		x	05 44 07.0	
POO			*e*x		x	05 44 14.0	
POO			*e*SS			05 44 19.0	
POO			*e*SSS			05 44 30.0	
KAD	**Karad**	**16.95 242**	*e*x		x	05 42 00.3	
KAD			*e*x		x	05 43 49.5	
AAK	**Ala-Archa**	**20.64 327**	*e*P		**P**	**05 40 44.8**	**-1.6**
	comp=N,2.0nm,0.5s						
MKAR	**Makanchi Array**	**21.41 346**	P		**P**	**05 40 53.2**	**-1.6**
	comp=N,1.3nm,0.5s,mb3.5,baz=166,slow=11,SNR=5.7						
MKAR	**Makanchi Array**	**21.41 346**	P		**P**	**05 40 53.2**	**-1.6**
SONM	**Songino Array**	**25.25 27**	P		**P**	**05 41 31.9**	**-0.9**
	comp=N,1.0nm,0.6s,mb3.5,baz=208,slow=9.8,SNR=8.8						
SONM			pP		pP	05 41 40.7	-2.0
	comp=N,2.5nm,0.6s,baz=212,slow=10,SNR=15						
ULN	**Ulaanbaatar**	**25.55 28**	*e*P		**P**	**05 41 34.8**	**-0.7**
	comp=N,3.7nm,0.7s,mb4.0						
CHKZ	**Chkalovo**	**30.94 338**	*e*P		**P**	**05 42 23.1**	**-0.5**
	comp=N,0.9nm,0.6s,mb3.8						
MJAR	**Matsushiro Arr**	**42.24 64**	pP		pP	05 44 07.6	-2.4
	comp=N,0.7nm,0.4s,baz=269,slow=11,SNR=2.5						
WRA	**Warramunga Arr**	**63.03 132**	P		**P**	**05 46 34.4**	**+0.9**
	comp=N,1.1nm,0.6s,mb4.2,baz=320,slow=7.0,SNR=4.9						
WRA			pP		pP	05 46 43.5	-0.7
	comp=N,1.5nm,0.6s,baz=323,slow=6.9,SNR=4.9						
ASAR	**Alice Springs**	**65.40 135**	P		**P**	**05 46 50.8**	**+1.8**
	comp=N,0.5nm,0.6s,mb3.7,baz=316,slow=6.6,SNR=6.3						
ASAR			pP		pP	05 46 58.4	-1.4
	comp=N,1.1nm,0.6s,baz=318,slow=6.5,SNR=6.0						

CASC 31 05:37:12.1±4.4, 1441W×8895W, h9km±25km, MD3.8, ML4.3, 2C-4D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBRS	**Las Brisas**	**0.67**	**188**	*e*P	x	05 37 39.9	
LBRS				*e*S	x	05 37 50.6	
LFU	**La Fuente**	**0.67**	**194**	*e*P	x	05 37 39.5	
LFU				*e*S	x	05 37 51.7	
BOQS	**Boqueron**	**0.74**	**206**	⇑ *i*P	x	05 37 27.1	
BOQS				*e*S	x	05 37 37.1	
LCBS	**La Ceiba**	**0.75**	**182**	*e*P	x	05 37 39.2	
LCBS				*e*S	x	05 37 49.7	
SNVI	**San Vicente**	**0.80**	**172**	*e*P	x	05 37 28.9	
SNVI				*e*S	x	05 37 40.2	
SNJE	**San Jose**	**0.83**	**230**	*e*P	x	05 37 39.8	
SNJE				*e*S	x	05 37 50.7	
RTR	**El Retiro**	**0.84**	**233**	⇓ *i*P	x	05 37 40.4	
RTR				*e*S	x	05 37 54.5	
SBLS	**San Blas**	**0.86**	**229**	⇓ *i*P	x	05 37 28.2	
SBLS				*e*S	x	05 37 39.4	
VSM	**San Miguel**	**1.17**	**146**	⇓ *e*P	x	05 37 35.8	
VSM				*e*P	x	05 37 36.1	
VSM				*e*S	x	05 37 51.9	
BLLM	**Bellamira**	**1.18**	**144**	⇑ *e*P	x	05 37 47.2	
BLLM				*e*S	x	05 38 03.9	
CNCH	**Conchagua**	**1.56**	**136**	*e*P	x	05 37 41.2	
CNCH				*e*S	x	05 38 00.9	
FUG	**Fuego 3**	**1.83**	**272**	⇓ *e*P	Pn	05 37 44.5	+0.8
FUG				*e*S	Sn	05 38 11.1	+4.0
JAT	**Jato**	**2.60**	**268**	*e*P	Pn	05 37 52.9	-1.5
CNGN	**Cerro Negro**	**2.90**	**131**	*e*P	Pn	05 37 57.8	-0.6
CNGN				*i*		05 38 40.5	
	2μm,0.3s						
MIRN	**Miramar**	**2.93**	**132**	*e*P	Pn	05 37 56.4	-2.4
COPN	**Copaltepe**	**3.19**	**134**	*e*P	Pn	05 38 00.1	-2.4
BOA	**Boaco**	**3.68**	**121**	*e*P	Pn	05 38 09.9	+0.7

*ISCJB **31** 05:44:01.9±0.3, 17.18S×006.1534W±008, h10km, mb4.6/57, MS3.9/21, Error ellipse: s-maj=12.0km s-min=8.3km az=48.5*
*MOS **31** 05:44:01.9±0.7, 17.17S×1536W, h10km, mb5.0/28, Error ellipse: s-maj=15.9km s-min=7.1km az=70.5*
*BJI **31** 05:44:02.6, 17.20S×1530W, h10km, mB5.3, Ms4.8, Msz4.8*
*IDC **31** 05:44:02.1±0.6, 17.23S×1532W, h0km, mb4.4/17, mb1 4.5/17, mb1mx4.4/24, mbtmp4.4/17, MS3.8/17, Ms1 3.8/17, ms1mx3.7/28, Error ellipse: s-maj=19.7km s-min=14.5km az=109.0*
*NEIC **31** 05:44:03.6±0.2, 17.23S×1534W, h10km, mb4.8/32, Error ellipse: s-maj=6.8km s-min=4.7km az=113.0*
*SZGRF **31** 05:44:09.0, 16.50S×15.13W, h33km, mb4.8, Southern Mid-Atlantic Ridge*

ISC 31 05:44:03.8±0.3, 1721S±006×1533W±008, h10km, n139, σ0§67/124, mb4.6/57, MS3.9/21, 13C-1D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**25.89**	**24**	P	**P**	**05 49 37.3**	**+1.5**
	11nm,0.9s,mb4.4,baz=164,slow=8.0,SNR=5.9						
BDFB	**Brasilia**	**31.37**	**268**	LR	LR	06 00 37.0	
	comp=Z,203nm,21.6s,MS3.8,baz=131,slow=32						
TORD	**Torodi Ar. Bea**	**34.54**	**30**	P	**P**	**05 50 52.5**	**+0.2**
	8.6nm,0.6s,mb4.8,baz=211,slow=9.0,SNR=76						
TORD				LR	LR	06 02 52.1	
	comp=Z,87nm,18.5s,MS3.5,baz=180,slow=33						
LBTB	**Lobatse**	**38.84**	**109**	P	**P**	**05 51 29.1**	**0.0**
	8.6nm,0.9s,mb4.5,baz=272,slow=11,SNR=6.8						
BOSA	**Boshof**	**38.90**	**114**	P	**P**	**05 51 29.6**	**+0.1**
	12nm,1.0s,mb4.6,baz=290,slow=7.4,SNR=7.5						
BOSA				LR	LR	06 04 31.6	
	comp=Z,207nm,20.1s,MS4.0,baz=76,slow=32						
CPUP	**Villa Florida**	**39.90**	**249**	P	**P**	**05 51 37.8**	**0.0**
	4.7nm,0.9s,mb4.2,baz=98,slow=6.1,SNR=7.7						
CPUP				LR	LR	06 07 26.6	
	comp=Z,110nm,18.3s,MS3.7,baz=265,slow=35						
LSZ	**Lusaka**	**41.76**	**94**	P	**P**	**05 51 53.3**	**+0.1**
	4.7nm,0.7s,mb4.2,baz=255,slow=4.9,SNR=9.9						
LSZ	**Lusaka**	**41.76**	**94**	*e*P	**P**	**05 51 54.3**	**+1.1**
LSZ				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.6						
LSZ	**Lusaka**	**41.76**	**94**	*e*P	**P**	**05 51 54.3**	**+1.1**
	comp=Z,24nm,1.5s,mb4.6						
TRQA	**Tornquist**	**45.69**	**233**	*e*P	**P**	**05 52 25.5**	**+0.6**
	comp=Z,4.9nm,0.8s,mb4.5						
SAML	**Samuel**	**47.23**	**274**	*e*P	**P**	**05 52 37.6**	**+0.7**
	comp=Z,14nm,1.9s,mb4.5						
CFAA	**Coronel Fontan**	**49.82**	**243**	P	**P**	**05 52 57.9**	**+1.1**
	comp=Z,0.2nm,0.4s,mb3.5,baz=97,slow=7.4,SNR=7.7						
CFAA	**Coronel Fontan**	**49.82**	**243**	P	**P**	**05 52 57.9**	**+1.1**
LPAZ	**La Paz**	**50.44**	**263**	LR	LR	06 13 32.5	
	comp=Z,122nm,19.9s,MS3.9,baz=230,slow=35						
PLCA	**Paso Flores**	**52.74**	**232**	LR	LR	06 13 34.4	
	comp=Z,151nm,20.9s,MS4.0,baz=40,slow=34						
KMBO	**Kilima Mbogo**	**54.10**	**79**	P	**P**	**05 53 30.9**	**+2.1**
	comp=Z,2.1nm,0.9s,mb4.1,baz=226,slow=11,SNR=4.4						
KMBO				LR	LR	06 14 59.1	
	comp=Z,74nm,18.6s,MS3.8,baz=296,slow=34						
SNAA	**Sanae**	**54.95**	**175**	P	**P**	**05 53 34.3**	**-0.7**
	comp=Z,1.1nm,1.0s,mb3.8,baz=4.8,slow=7.4,SNR=5.7						
SNAA	**Sanae**	**54.95**	**175**	⇑ *i*P	**P**	**05 53 34.4**	**-0.5**
SNAA	**Sanae**	**54.95**	**175**	*e*P	**P**	**05 53 33.9**	**-1.0**
	comp=Z,6.1nm,1.2s,mb4.5						
ESDC	**Sonseca Array**	**57.58**	**10**	P	**P**	**05 53 54.5**	**+0.9**
	comp=Z,0.2nm,0.3s,mb3.6,baz=224,slow=8.9,SNR=4.1						
KEST	**Kesra**	**57.61**	**24**	P	**P**	**05 53 55.8**	**+1.8**
	comp=Z,5.7nm,1.0s,mb4.6,baz=195,slow=3.9,SNR=8.8						
KEST				LR	LR	06 18 27.4	
	comp=Z,21nm,18.3s,MS3.3,baz=225,slow=36						
NNA	**Nana**	**59.55**	**266**	LR	LR	06 17 54.0	
	comp=Z,102nm,20.0s,MS4.0,baz=135,slow=34						
ETSF	**Etsaut**	**61.34**	**12**	*e*P	**P**	**05 54 20.1**	**+0.4**
SJPF	**Ste Jean**	**61.41**	**12**	*e*P	**P**	**05 54 20.8**	**+0.6**
	comp=Z,61nm,1.4s,mb5.2						
SJPF	**Ste Jean**	**61.41**	**12**	*e*P	**P**	**05 54 20.8**	**+0.6**
SJPF				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
SJPF	**Ste Jean**	**61.41**	**12**	*e*P	**P**	**05 54 20.8**	**+0.6**
	comp=Z,31nm,1.4s,mb5.2						
ROSC	**El Rosal**	**62.24**	**285**	LR	LR	06 20 56.1	
	comp=Z,172nm,18.1s,MS4.2,baz=180,slow=36						
ATAH	**Atahualpa**	**62.27**	**271**	LR	LR	06 21 43.1	
	comp=Z,94nm,19.5s,MS4.0,baz=76,slow=36						
LFF	**La Frestale**	**63.56**	**13**	*e*P	**P**	**05 54 34.6**	**+0.1**
RJF	**Les Rejaudoux**	**64.08**	**13**	*e*P	**P**	**05 54 37.6**	**-0.3**
	comp=Z,12nm,0.9s,mb4.6						
RJF				*e*R			
	comp=Z,61nm,17.5s						
RJF	**Les Rejaudoux**	**64.08**	**13**	*e*P	**P**	**05 54 37.6**	**-0.3**
RJF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
RJF				MLR	MLR		
	comp=Z,60nm,17.5s,MS3.8						
RJF	**Les Rejaudoux**	**64.08**	**13**	*e*P	**P**	**05 54 37.6**	**-0.3**
	comp=Z,5.9nm,0.9s,mb4.6						
RJF				LR	LR		
	comp=Z,60nm,17.5s,MS3.8						
MBDF	**Montbardon**	**64.85**	**17**	*e*P	**P**	**05 54 43.7**	**+0.7**
	comp=Z,15nm,0.9s,mb4.7						
MBDF	**Montbardon**	**64.85**	**17**	*e*P	**P**	**05 54 43.7**	**+0.7**
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
MBDF	**Montbardon**	**64.85**	**17**	*e*P	**P**	**05 54 43.7**	**+0.7**
	comp=Z,7.5nm,0.9s,mb4.7						
BNI	**Bardonecchia**	**65.12**	**17**	*e*P	**P**	**05 54 45.3**	**+0.5**
BNI				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
BNI	**Bardonecchia**	**65.12**	**17**	*e*P	**P**	**05 54 45.3**	**+0.5**
	comp=Z,10nm,1.1s,mb4.8						
TCF	**Toulx Ste Croi**	**65.16**	**13**	*e*P	**P**	**05 54 45.1**	**+0.1**
	comp=Z,16nm,0.9s,mb4.7						
TCF	**Toulx Ste Croi**	**65.16**	**13**	*e*P	**P**	**05 54 45.1**	**+0.1**
TCF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**65.16**	**13**	*e*P	**P**	**05 54 45.1**	**+0.1**
	comp=Z,8.3nm,0.9s,mb4.8						
LPG	**La Plagne**	**65.55**	**17**	*e*P	**P**	**05 54 48.2**	**+0.7**
	comp=Z,25nm,1.0s,mb4.9						
LPG	**La Plagne**	**65.55**	**17**	*e*P	**P**	**05 54 48.2**	**+0.7**
LPG				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
LPG	**La Plagne**	**65.55**	**17**	*e*P	**P**	**05 54 48.2**	**+0.7**
	comp=Z,13nm,1.0s,mb4.9						
LPL	**La Plagne**	**65.56**	**17**	*e*P	**P**	**05 54 48.1**	**+0.5**
	comp=Z,13nm,0.8s,mb4.7						
LPL	**La Plagne**	**65.56**	**17**	*e*P	**P**	**05 54 48.1**	**+0.5**
LPL				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
LPL	**La Plagne**	**65.56**	**17**	*e*P	**P**	**05 54 48.1**	**+0.5**
	comp=Z,6.6nm,0.8s,mb4.7						
SMF	**Signal de Mont**	**65.87**	**14**	*e*P	**P**	**05 54 49.4**	**-0.2**
AVF	**Avril sur Loir**	**65.89**	**14**	*e*P	**P**	**05 54 49.6**	**-0.1**
	comp=Z,6.6nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**65.89**	**14**	*e*P	**P**	**05 54 49.6**	**-0.1**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**65.89**	**14**	*e*P	**P**	**05 54 49.6**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.4						
CABF	**La Chapelle**	**66.40**	**16**	*e*P	**P**	**05 54 52.6**	**-0.4**
	comp=Z,37nm,1.1s,mb5.0						
CABF	**La Chapelle**	**66.40**	**16**	*e*P	**P**	**05 54 52.6**	**-0.4**
CABF				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
CABF	**La Chapelle**	**66.40**	**16**	*e*P	**P**	**05 54 52.6**	**-0.4**
	comp=Z,18nm,1.1s,mb5.0						
LOR	**Lormes**	**66.46**	**14**	*e*P	**P**	**05 54 52.9**	**-0.5**
LOR				*e*R			
	comp=Z,60nm,19.0s						
LOR	**Lormes**	**66.46**	**14**	*e*P	**P**	**05 54 52.9**	**-0.5**
LOR				LR	LR		
	comp=Z,60nm,19.0s,MS3.8						
LDF	**La Druitiere**	**66.90**	**11**	*e*P	**P**	**05 54 55.7**	**-0.5**
	comp=Z,24nm,1.0s,mb4.9						
LDF	**La Druitiere**	**66.90**	**11**	*e*P	**P**	**05 54 55.7**	**-0.5**
LDF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
LDF	**La Druitiere**	**66.90**	**11**	*e*P	**P**	**05 54 55.7**	**-0.5**
	comp=Z,12nm,1.0s,mb4.9						
HAU	**Haudompre**	**67.76**	**16**	*e*P	**P**	**05 55 00.9**	**-0.7**
HAU				*e*R			
	comp=Z,46nm,20.0s						
HAU	**Haudompre**	**67.76**	**16**	*e*P	**P**	**05 55 00.9**	**-0.7**
HAU				LR	LR		
	comp=Z,50nm,20.0s,MS3.7						
DAVA	**Damuels**	**68.08**	**18**	⇑ *i*P	**P**	**05 55 03.3**	**-0.4**
	comp=Z,14nm,1.1s,mb4.9						
VISS	**Visnje**	**69.42**	**22**	*e*P	**P**	**05 55 05.9**	**+0.2**
BFO	**Black Forest**	**68.58**	**17**	*e*P	**P**	**05 55 06.2**	**-0.6**
	comp=Z,9.0nm,1.2s,mb4.6						
BFO	**Black Forest**	**68.58**	**17**	*e*P	**P**	**05 55 06.2**	**-0.6**
BFO				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
GOLS	**Golise**	**68.88**	**23**	*e*P	**P**	**05 55 09.3**	**+0.7**
KOGS	**Kog**	**69.48**	**23**	*e*P	**P**	**05 55 12.8**	**+0.4**
MAW	**Mawson**	**69.72**	**156**	P	**P**	**05 55 13.9**	**0.0**
	comp=Z,8.1nm,0.8s,mb4.7,baz=286,slow=5.4,SNR=22						
ARSA	**Arzberg**	**69.90**	**22**	⇑ *i*P	**P**	**05 55 14.5**	**+0.4**
	comp=Z,16nm,1.4s,mb4.8						
MOA	**Molln**	**69.98**	**21**	⇑ *i*P	**P**	**05 55 14.8**	**-0.6**
	comp=Z,9.4nm,1.1s,mb4.7						
CONA	**Conrad Observa**	**70.60**	**22**	⇑ *i*P	**P**	**05 55 19.7**	**+0.4**
	comp=Z,7.9nm,1.5s,mb4.4						
GRA1	**Grafenberg Arr**	**70.64**	**18**	*e*P	**P**	**05 55 18.8**	**-0.7**
	comp=Z,9.0nm,0.5s,mb5.0						
GRF	**Grafenberg Arr**	**70.64**	**18**	*e*P	**P**	**05 55 18.8**	**-0.7**
	comp=Z,9.0nm,0.5s,mb5.0						
GRF	**Grafenberg Arr**	**70.64**	**18**	*e*P	**P**	**05 55 18.8**	**-0.7**
GRF				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
WET	**Wettzell**	**70.65**	**19**	*e*P	**P**	**05 55 19.0**	**-0.6**
	comp=Z,8.0nm,1.0s,mb4.6						
WET	**Wettzell**	**70.65**	**19**	*e*P	**P**	**05 55 19.0**	**-0.6**
WET				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
GEC2	**GERESS Array S**	**70.66**	**20**	*e*P	**P**	**05 55 18.9**	**-0.7**
	comp=Z,4.0nm,0.8s,mb4.4						
GEC2	**GERESS Array S**	**70.66**	**20**	*e*P	**P**	**05 55 18.9**	**-0.7**
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GERES	**GERESS Array B**	**70.66**	**20**	P	**P**	**05 55 18.8**	**-0.8**
	comp=Z,2.1nm,0.7s,mb4.2,baz=200,slow=3.5,SNR=12						
GERES				LR	LR	06 28 12.1	
	comp=Z,53nm,18.5s,MS3.8,baz=275,slow=38						
KHC	**Kasperske Hory**	**70.86**	**20**	*e*P	**P**	**05 55 19.9**	**-1.0**
KHC	**Kasperske Hory**	**70.86**	**20**	⇑ *e*P	**P**	**05 55 20.2**	**-0.7**
ROTZ	**Rotzenmuhle**	**71.00**	**18**	*e*P	**P**	**05 55 21.0**	**-0.7**
	comp=Z,7.0nm,0.9s,mb4.6						
MANZ	**Manzenberg**	**71.16**	**18**	*e*P	**P**	**05 55 22.5**	**-0.2**
	comp=Z,15nm,1.6s,mb4.7						
WERN	**Wernitzgruen**	**71.51**	**18**	*e*P	**P**	**05 55 24.0**	**-0.8**
	comp=Z,6.0nm,1.0s,mb4.5						
GUNZ	**Gunzen**	**71.56**	**18**	*e*P	**P**	**05 55 24.8**	**-0.3**
	comp=Z,9.0nm,0.9s,mb4.7						
MOX	**Moxa**	**71.60**	**18**	*e*P	**P**	**05 55 24.9**	**-0.4**
	comp=Z,6.0nm,1.1s,mb4.4						
WERD	**Werda**	**71.63**	**18**	*e*P	**P**	**05 55 24.7**	**-0.8**
	comp=Z,9.0nm,1.3s,mb4.5						
TANN	**Tannenbergstha**	**71.65**	**18**	*e*P	**P**	**05 55 24.9**	**-0.7**
	comp=Z,7.0nm,1.1s,mb4.5						
PRU	**Pruhonice**	**71.92**	**20**	*e*P	**P**	**05 55 26.3**	**-0.9**
PSZ	**Piszkesteto**	**72.09**	**24**	*e*P	**P**	**05 55 28.2**	**0.0**
PSZ				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
PSZ	**Piszkesteto**	**72.09**	**24**	*e*P	**P**	**05 55 28.2**	**0.0**
	comp=Z,16nm,0.9s,mb4.9						
VYHS	**Vyhne**	**72.16**	**23**	*e*P	**P**	**05 55 28.6**	**0.0**
VYHS				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
VYHS	**Vyhne**	**72.16**	**23**	*e*P	**P**	**05 55 28.6**	**0.0**
	comp=Z,12nm,1.1s,mb4.7						
VOIR		**72.32**	**29**	⇑ *i*P	**P**	**05 55 29.5**	**-0.1**
BRTR	**Keskin Array B**	**72.74**	**38**	P	**P**	**05 55 32.5**	**+0.4**
	comp=Z,5.5nm,0.7s,mb4.6,baz=200,slow=7.5,SNR=21						
BRTR				LR	LR	06 25 49.3	
	comp=Z,34nm,21.6s,MS3.6,baz=104,slow=34						
BR131	**Keskin Array S**	**72.74**	**38**	*e*P	**P**	**05 55 32.6**	**+0.5**
	comp=Z,4.7nm,0.8s,mb4.5						
MORC	**Moravsky Berou**	**72.75**	**22**	*e*P	**P**	**05 55 32.0**	**-0.2**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
MORC	**Moravsky Berou**	**72.75**	**22**	*e*P	**P**	**05 55 32.0**	**-0.2**
	comp=Z,4.7nm,1.0s,mb4.4						
MLR	**Muntele Rosu**	**72.77**	**29**	⇑ *i*P	**P**	**05 55 32.4**	**+0.1**
KECS	**Kecovo**	**72.78**	**24**	*e*P	**P**	**05 55 32.6**	**+0.2**
KECS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
KECS	**Kecovo**	**72.78**	**24**	*e*P	**P**	**05 55 32.6**	**+0.2**
	comp=Z,8.3nm,0.9s,mb4.7						
DPC	**Dobruska-Polom**	**72.82**	**21**	*e*P	**P**	**05 55 32.1**	**-0.5**
NRDL	**Niedersach Rie**	**72.84**	**16**	*e*P	**P**	**05 55 34.6**	**+1.9**
UPC	**Upice**	**72.85**	**20**	*e*P	**P**	**05 55 32.5**	**-0.3**
QSPA	**South Pole Qui**	**72.96**	**180**	*e*P	**P**	**05 55 32.8**	**-0.7**
	comp=Z,4.5nm,0.7s,mb4.5						
TIRR	**Tirgusor**	**73.19**	**31**	⇑ *i*P	**P**	**05 55 34.4**	**-0.4**
CRVS	**Cervenica-Dubn**	**73.50**	**24**	*e*P	**P**	**05 55 36.8**	**+0.2**
STHS	**Stebnicka Huta**	**73.83**	**24**	*e*P	**P**	**05 55 38.7**	**+0.2**
STHS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
STHS	**Stebnicka Huta**	**73.83**	**24**	*e*P	**P**	**05 55 38.7**	**+0.2**
	comp=Z,3.1nm,0.9s,mb4.2						
KOLS	**Kolonicke sedl**	**73.84**	**25**	*e*P	**P**	**05 55 39.2**	**+0.5**
OJC	**Ojcow**	**73.93**	**23**	*e*P	**P**	**05 55 39.3**	**+0.1**
JTS	**JuntasAbangare**	**74.02**	**286**	LR	LR	06 28 24.2	
	comp=Z,100nm,18.1s,MS4.2,baz=135,slow=36						
BSEG	**Bad Segeberg**	**74.20**	**15**	*e*P	**P**	**05 55 40.8**	**+0.1**
	comp=Z,24nm,1.1s,mb5.0						
MALT	**Malatya**	**74.76**	**41**	*e*P	**P**	**05 55 44.1**	**+0.1**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MALT	**Malatya**	**74.76**

	9.3nm,0.5s,mb4.5						
PMG	**Port Moresby**	**35.11 284**	*e*P	**P**	**06 04 37.5**	**+0.7**
	15nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**37.17 245**	*e*P	**P**	**06 04 54.7**	**+0.7**
	1.8nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**37.17 245**	P	**P**	**06 04 54.4**	**+0.4**
	2.8nm,0.6s,mb3.9,baz=85,slow=12,SNR=9.6						
AS31	**Alice Springs**	**44.00 257**	⇓*i*P	**P**	**06 05 48.7**	**0.0**
ASAR	**Alice Springs**	**44.00 257**	P	**P**	**06 05 48.9**	**+0.2**
	6.1nm,0.5s,mb4.3,baz=92,slow=7.9,SNR=96						
ASPA	**Alice Springs**	**44.00 257**	⇓*i*P	**P**	**06 05 48.7**	**0.0**
WB2	**Warramunga Arr**	**44.12 263**	⇓*i*P	**P**	**06 05 49.2**	**-0.4**
WRAB	**Tennant Creek**	**44.12 263**	*e*P	**P**	**06 05 48.6**	**-1.0**
	4.1nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**44.13 263**	P	**P**	**06 05 49.5**	**-0.2**
	3.3nm,0.3s,mb4.2,baz=96,slow=8.6,SNR=31						
KAKA	**Kakadu**	**47.60 272**	⇓*i*P	**P**	**06 06 16.1**	**-0.1**
	5.0nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.56 263**	*e*P	**P**	**06 06 52.9**	**+0.2**
	4.0nm,0.4s,mb4.1						
VNDA	**Vanda**	**57.26 185**	P	**P**	**06 07 26.3**	**+0.7**
	0.4nm,0.5s,mb3.0,baz=329,slow=7.6,SNR=6.7						
MBWA	**Marble Bar**	**57.34 258**	*e*P	**P**	**06 07 25.2**	**-1.0**
	8.2nm,0.6s,mb4.2						
MJAR	**Matsushiro Arr**	**70.48 324**	P	**P**	**06 08 50.0**	**-0.2**
	0.4nm,0.4s,mb3.3,baz=150,slow=6.2,SNR=4.4						
KSM	**Kuching**	**73.11 278**	*e*P	**P**	**06 09 05.6**	**0.0**
ARCES	**ARCESS Array B**	**129.46 349**	PKP	PKPdf	06 16 36.3	-1.9
	2.8nm,1.1s,baz=37,slow=2.2,SNR=5.9						
AKASG	**Malin Array Be**	**143.37 330**	PKP	PKPdf	06 17 00.4	-3.4
	2.0nm,0.4s,baz=42,slow=4.1,SNR=17						
BRTR	**Keskin Array B**	**146.96 311**	PKPbc	PKPbc	06 17 11.8	-1.1
	0.9nm,0.8s,baz=130,slow=5.2,SNR=3.7						
GERES	**GERESS Array B**	**150.69 344**	PKPbc	PKPbc	06 17 21.0	-1.0
	0.3nm,0.2s,baz=37,slow=3.3,SNR=3.6						

*ISCJB **31** 06:07:44.6±0.6, 4595N±002×299E±005, h13km±7km, Error ellipse: s-maj=5.8km s-min=3.4km az=41.2*
*STR **31** 06:07:45.0±0.4, 4596N×291E, h5km±1km, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **31** 06:07:46.1±0.1, 4596N×298E, h3km±1km, Md1.8/3, Ml1.9/6, Error ellipse: s-maj=1.7km s-min=1.0km az=127.0*

ISC 31 06:07:45.4±0.6, 4595N±002×300E±004, h12km±9km, n13, σ0§52/23, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGO	**Saint Agoulin**	**0.14**	**41**	Pg	**Pg**	**06 07 48.9**	**+0.2**
AGO				Sg	**Sg**	**06 07 51.1**	**+0.1**
PYM	**Petit Puy Mans**	**0.20**	**179**	Pg	**Pg**	**06 07 49.5**	**-0.2**
PYM				Sg	**Sg**	**06 07 52.3**	**-0.4**
PLDF	**La Plantade**	**0.43**	**87**	Pg	**Pg**	**06 07 54.9**	**+1.0**
BGF	**Bois d'Agland**	**0.62**	**350**	*e*Pg	**Pg**	**06 07 57.5**	**+0.1**
BGF	**Bois d'Agland**	**0.62**	**350**	*e*Pn	**Pg**	**06 07 59.9**	**+2.5**
BGF				*e*Sg	**Sg**	**06 08 05.3**	**-0.2**
	3.2nm,0.2s						
TCF	**Toulx Ste Croi**	**0.65**	**302**	*e*Pg	**Pg**	**06 07 58.0**	**0.0**
TCF				*e*Sg	**Sg**	**06 08 06.2**	**-0.3**
	1.2nm,0.2s						
LBL	**Lubilhac**	**0.74**	**167**	Pg	**Pg**	**06 07 59.9**	**+0.2**
LBL				Sg	**Sg**	**06 08 09.6**	**+0.2**
AVF	**Avril sur Loir**	**0.88**	**16**	*e*Pg	**Pg**	**06 08 02.8**	**+0.5**
AVF				*e*Sg	**Sg**	**06 08 13.5**	**-0.2**
	2.3nm,0.2s						
SMF	**Signal de Mont**	**0.91**	**40**	*e*Pg	**Pg**	**06 08 03.3**	**+0.4**
SMF				*e*Sg	**Sg**	**06 08 14.2**	**-0.5**
	2.1nm,0.2s						
CAF	**Calviac**	**1.22**	**213**	*e*Pg	**Pg**	**06 08 09.1**	**+0.3**
CAF				*e*Sg	**Sg**	**06 08 24.7**	**0.0**
	2.0nm,0.2s						
RJF	**Les Rejaudoux**	**1.23**	**239**	*e*Pg	**Pg**	**06 08 09.0**	**0.0**
RJF				*e*Sg	**Sg**	**06 08 24.4**	**-0.5**
	2.7nm,0.2s						
LOR	**Lormes**	**1.44**	**24**	*e*Pg	**Pg**	**06 08 12.9**	**-0.2**
LOR				*e*Sg	**Sg**	**06 08 31.3**	**-0.6**
	1.9nm,0.3s						
LPL	**La Plagne**	**2.65**	**98**	*e*Sg	**Sg**	**06 09 09.5**	**-0.9**
	5.2nm,0.5s						

IDC 31 06:24:03.3±2.1, 362N×9583E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.7/21, mbtmp3.9/6, ML3.4/1, Error ellipse: s-maj=68.1km s-min=18.8km az=51.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.19**	**105**	Pn	Pn	06 24 54.4	-0.3
	4.6nm,0.3s,baz=276,slow=5.8,SNR=29						
PSI				Sn	Sn	06 25 35.0	+1.6
	1.6nm,0.3s,baz=52,slow=20,SNR=2.6						
WRA	**Warramunga Arr**	**44.48**	**123**	P	P	06 32 16.9	+0.6
	0.6nm,0.4s,baz=300,slow=9.3,SNR=3.2						
MKAR	**Makanchi Array**	**44.58**	**347**	P	P	06 32 16.6	-0.4
	2.7nm,0.6s,baz=160,slow=9.0,SNR=20						
SONM	**Songino Array**	**44.98**	**10**	P	P	06 32 21.4	+1.2
	1.0nm,0.6s,baz=189,slow=8.9,SNR=5.3						
ASAR	**Alice Springs**	**45.94**	**128**	P	P	06 32 28.4	+0.5
	0.2nm,0.5s,baz=301,slow=8.2,SNR=6.3						
ZAL	**Zalesovo**	**50.97**	**352**	P	P	06 33 06.0	-0.5
	2.9nm,0.5s,baz=294,slow=5.9,SNR=10						

*ISCJB **31** 06:33:09.0±0.9, 1108N±005×6222W±004, h121km±7km, Error ellipse: s-maj=8.5km s-min=5.9km az=137.4*
*FUNV **31** 06:33:09.2, 1121N×6213W, h118km, MW3.2*
*TRN **31** 06:33:11.2, 1109N×6210W, h116km, MD3.4*
*NEIC **31** 06:33:11.2, 1109N×6210W, h116km, MD3.4(TRN), After TRN.*

ISC 31 06:33:09.8±1.0, 1109N±005×6222W±004, h118km±8km, n14, σ0§97/27, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.44**	**181**	⇓*i*P	**Pn**	**06 33 27.4**	**+0.3**
GUIV				*e*S	**Sn**	**06 33 39.8**	**-0.4**
TCE	**Chacachacare**	**0.60**	**131**	*e*P	**Pn**	**06 33 29.1**	**+1.0**
TCE				*e*S	**Sn**	**06 33 41.9**	**-0.1**
TRN	**Trinidad (W)**	**0.91**	**119**	*e*P	**Pn**	**06 33 31.6**	**+0.9**
TRN				*e*S	**Sn**	**06 33 45.6**	**-1.0**
ITEV	**Isla Los Testi**	**0.94**	**286**	*e*P	**Pn**	**06 33 29.9**	**-1.1**
ITEV				*e*S	**Sn**	**06 33 45.8**	**-1.3**
TPP	**Pointe-a-Pierr**	**1.07**	**136**	*e*P	**Pn**	**06 33 35.9**	**+3.6**
TPP				*e*S	**Sn**	**06 33 51.0**	**+1.6**
CRUV	**Carupano**	**1.08**	**248**	*e*P	**Pn**	**06 33 33.0**	**+0.6**
CRUV				*e*S	**Sn**	**06 33 50.0**	**+0.4**
GUNV	**Guanoco**	**1.17**	**218**	*e*P	**Pn**	**06 33 34.4**	**+1.1**
GUNV				*e*S	**Sn**	**06 33 52.6**	**+1.5**
GRW	**Mount Saint Ca**	**1.20**	**27**	*e*P	**Pn**	**06 33 33.7**	**+0.1**
GRW				*e*S	**Sn**	**06 33 52.0**	**+0.3**
TBH	**Brigand Hill**	**1.28**	**118**	*e*P	**Pn**	**06 33 35.7**	**+1.2**
TBH				*e*S	**Sn**	**06 33 51.6**	**-1.7**
TPR	**Prospect**	**1.41**	**86**	*e*P	**Pn**	**06 33 36.1**	**+0.1**
TPR				*e*S	**Sn**	**06 33 55.0**	**-1.0**
BOT	**Bacolet**	**1.47**	**87**	*e*P	**Pn**	**06 33 36.4**	**-0.3**
PRGV	**PARIAGUAN**	**3.33**	**226**	*e*P	**Pn**	**06 34 01.0**	**+0.7**
PRGV				*e*S	**Sn**	**06 34 38.9**	**-0.5**
GURV	**El Guri**	**3.42**	**195**	*e*P	**Pn**	**06 34 01.1**	**-0.3**
GURV				*e*S	**Sn**	**06 34 39.7**	**-1.8**
CAOV	**Caicara del Or**	**5.51**	**228**	*e*P	**Pn**	**06 34 29.1**	**-0.6**
CAOV				*e*S	**Sn**	**06 35 27.8**	**-4.0**

*IDC **31** 06:46:44.5±11.0, 3667N×7902E, h0km, mb3.9/3, mb1 4.0/5, mb1mx3.6/22, mbtmp3.9/5, ML3.9/2, Error ellipse: s-maj=200.7km s-min=60.1km az=134.0*
*NEIC **31** 06:46:49.3±3.6, 3679N×7869E, mb3.1/1, Error ellipse: s-maj=57.5km s-min=26.7km az=135.0*
*ISCJB **31** 06:46:57.7±0.9, 3769N±005×784E±0.1, h33km, mb3.8/3, Error ellipse: s-maj=12.9km s-min=6.6km az=39.9*
*BJI **31** 06:46:58.3, 3760N×7799E, h15km, ML3.7*
*NNC **31** 06:47:01.7±7.4, 3791N×7783E, h24km±45km, mb3.3, mpv2.6, Error ellipse: s-maj=48.5km s-min=27.0km az=150.0*

ISC 31 06:47:01.6±0.9, 3777N±005×780E±01, h35km, n13, σ1§37/17, mb3.8/3, 4C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.37**	**318**	P	**Pn**	**06 47 39.3**	**+1.4**
KSH				S	**Sn**	**06 48 10.3**	**+4.6**
KSH				Smax			
	comp=N,345nm,0.5s						
KSH				Smax			
	comp=E,476nm,0.6s						
TKM2	**Tokmak 2**	**5.47**	**341**	⇑Pn	**Pn**	**06 48 22.0**	**+1.5**
	comp=E,0.1nm,0.5s						
TKM2				⇓Lg		06 49 50.0	
	comp=E,3.8nm,1.1s						
DLH	**Dalhousie**	**5.48**	**198**	*e*P	**Sn**	**06 49 23.0**	**+0.5**
KK31	**Karatay Array**	**7.82**	**315**	Pn	**Pn**	**06 48 50.6**	**-2.1**
	comp=E,0.6nm,0.5s,baz=126,slow=10,SNR=4.0						
KK31				⇑Sn	**Sn**	**06 50 19.8**	**-0.2**
	comp=E,2.4nm,0.7s						
MK02	**Makanchi Array**	**9.54**	**18**	⇑Pn	**Pn**	**06 49 16.5**	**+0.2**
	comp=E,1.1nm,0.3s,baz=202,slow=12						
MK02				⇑Sn	**Sn**	**06 51 02.0**	**-0.2**
	comp=E,6.6nm,0.8s,baz=207,slow=30						
MKAR	**Makanchi Array**	**9.55**	**18**	Pn	**Pn**	**06 49 16.8**	**+0.2**
	comp=E,0.9nm,0.3s,baz=204,slow=12,SNR=36						
MKAR				Sn	**Sn**	**06 51 02.5**	**-0.2**
	comp=E,0.9nm,0.3s,baz=195,slow=23,SNR=5.5						
BVAR	**Borovoye Array**	**16.15**	**343**	P	**Pn**	**06 50 49.1**	**+3.2**
	comp=E,0.4nm,0.3s,baz=153,slow=13,SNR=7.8						
ZRNK	**Zerenda**	**16.43**	**340**	*e*Pn	**Pn**	**06 50 52.4**	**+3.0**
	comp=E,0.8nm,0.5s						
ZRNK				*e*		06 50 58.4	
FINES	**FINESS Array B**	**39.68**	**324**	P	**P**	**06 54 29.1**	**-1.0**
	comp=E,1.2nm,0.6s,mb3.8,baz=126,slow=10,SNR=4.0						
FINES				pP	pP	06 54 34.9	-5.5
	comp=E,1.3nm,0.6s,baz=108,slow=12,SNR=1.6						
FINES	**FINESS Array B**	**39.68**	**324**	P	**P**	**06 54 29.1**	**-1.0**
FINES				pP	pP	06 54 34.9	-5.5
ARCES	**ARCESS Array B**	**42.22**	**335**	P	**P**	**06 54 49.0**	**-2.1**
	comp=E,1.9nm,1.0s,mb3.7,baz=102,slow=13,SNR=3.5						
NB2	**NORSAR Subarra**	**46.78**	**322**	P	**P**	**06 55 26.0**	**-1.6**
	comp=Z,1.1nm,0.5s,mb4.0,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**46.78**	**322**	P	**P**	**06 55 26.4**	**-1.2**
	comp=Z,1.0nm,0.5s,mb4.0,baz=90,slow=7.7,SNR=3.9						
NOA				pP	pP	06 55 31.9	-6.0
	comp=Z,1.6nm,0.6s,baz=90,slow=7.7,SNR=5.2						

*IDC **31** 07:20:38.0±1.7, 003S×97.11E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/20, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=46.0km s-min=22.0km az=66.0*
*ISCJB **31** 07:20:40.5±0.9, 003N±009×97.15E±0.10, h33km, mb3.8/5, Error ellipse: s-maj=14.9km s-min=11.9km az=77.4*
*NEIC **31** 07:20:42.3±0.9, 005N×97.17E, h30km, mb3.9/1, Error ellipse: s-maj=17.1km s-min=13.9km az=24.0*

ISC 31 07:20:42.9±0.9, 004N±009×9716E±010, h35km, n9, σ1§26/10, mb3.8/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.26**	**33**	Pn	**Pn**	**07 21 29.9**	**-1.6**
	6.6nm,0.3s,baz=143,slow=10.0,SNR=25						
PSI				Sn	**Sn**	**07 22 10.4**	**+1.4**
	2.5nm,0.3s,baz=256,slow=12,SNR=4.1						
KULM	**Kulim**	**6.27**	**34**	*e*Pn	**Pn**	**07 22 12.1**	**-0.7**
PALK	**Pallekele**	**17.92**	**294**	*e*Pn	**Pn**	**07 24 48.5**	**-0.7**
	12nm,1.0s						
KKM	**Kota Kinabalu**	**19.93**	**72**	*e*P	**Pn**	**07 25 11.2**	**-2.3**
WRA	**Warramunga Arr**	**41.47**	**121**	P	**P**	**07 28 26.7**	**+0.5**
	0.4nm,0.3s,mb3.5,baz=303,slow=9.0,SNR=3.8						
ASAR	**Alice Springs**	**42.74**	**126**	P	**P**	**07 28 37.6**	**+1.0**
	0.4nm,0.7s,mb3.3,baz=299,slow=8.2,SNR=4.3						
SONM	**Songino Array**	**48.28**	**8**	P	**P**	**07 29 23.0**	**+2.6**
	0.2nm,0.3s,mb3.6,baz=188,slow=8.7,SNR=2.0						
MKAR	**Makanchi Array**	**48.35**	**346**	P	**P**	**07 29 21.5**	**+0.5**
	1.9nm,0.5s,mb4.3,baz=156,slow=7.8,SNR=7.9						
ZAL	**Zalesovo**	**54.68**	**351**	P	**P**	**07 30 08.2**	**-0.2**
	1.7nm,0.5s,mb4.4,baz=303,slow=7.0,SNR=4.1						

*BJI **31** 08:08:24.2, 063S×12534E, h61km, mB5.8, mb5.9, Ms5.4, Msz5.3*
*MOS **31** 08:08:24.5±1.1, 030S×12508E, h33km, mb6.4/50, MS5.3/39, Error ellipse: s-maj=11.8km s-min=6.3km az=107.6*
*ISCJB **31** 08:08:26.9±0.1, 033S±002×125.16E±002, h51km, mb6.0/156, MS5.2/83, Error ellipse: s-maj=3.5km s-min=2.7km az=147.9*
*IDC **31** 08:08:26.2±1.5, 027S×12526E, h28km±9km, mb5.7/33, mb1 5.6/34, mb1mx5.6/35, mbtmp5.8/34, ML4.8/1, MS5.1/15, Ms1 5.1/15, ms1mx4.9/26, Error ellipse: s-maj=13.1km s-min=7.9km az=68.0*
*HRVD **31** 08:08:27.3±0.1, 040S×12531E, h26km, MW5.8/102, Centroid moment Tensor Solution. LP body waves: s101,c216;Mantle waves: s102,c271; Half duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}4.37±.06; $M_{\theta\theta}$-3.01±.04; $M_{\phi\phi}$-1.36±.05; $M_{r\theta}$4.90±.11; $M_{\theta\phi}$-2.88±.04; $M_{r\phi}$0.93±.11; Best double couple: M_o6.93800×10^{17} NP1:ϕs213.00000°, δ26.00000°, λ.54.00000°. NP2: ϕs72.00000°, δ69.00000°, λ.106.00000°. Principal axes: T 6.8420, Plg62.0000°, Azm8.0000°; N 0.1920, Plg15.0000°, Azm246.0000°; P -7.0340, Plg22.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **31** 08:08:27.4±0.1, 027S×12506E, h36km, mb6.1/77, ME5.8, MS5.2/28, MW5.8 Error ellipse: s-maj=4.9km s-min=3.5km az=62.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^{17}Nm; M_{rr}4.68; $M_{\theta\theta}$0.80; $M_{\phi\phi}$-5.47; $M_{r\theta}$1.86; $M_{\theta\phi}$0.26; $M_{r\phi}$0.38; Best double couple: M_o5.50000×10^{17} NP1:ϕs18.00000°, δ51.00000°, λ.119.00000°. NP2: ϕs157.00000°, δ47.00000°, λ.59.00000°. Principal axes: T 5.4500, Plg68.0000°, Azm354.0000°; N 0.0500, Plg22.0000°, Azm179.0000°; P -5.4900, Plg2.0000°, Azm88.0000°; Broadband fault plane solution: P waves. NP1:ϕs176.00000°, δ38.00000°, λ.43.00000°. NP2: ϕs50.00000°, δ65.00000°, λ.120.00000°. Principal axes: T Plg59.0000°, Azm3.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm119.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Bolaang Mongondow and [III] at Gorontalo, Indonesia.

ISC 31 08:08:28.9±0.1, 034S±002×12518E±002, h53km, h53km±1.4km: pP-P, n908, σ1§19/519, mb6.0/156, MS5.2/83, 161C-95D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**4.48**	**138**	P	**Pn**	**08 09 33.1**	**-1.2**
	0.0nm,0.0s						
PCI	**Palu**	**5.38**	**264**	P	**Pn**	**08 09 47.8**	**+1.3**
	0.0nm,0.0s						
SWI	**Sorong**	**6.10**	**95**	P	**Pn**	**08 09 55.0**	**-1.5**
	0.0nm,0.0s						
KAPI	**Kappang**	**7.14**	**229**	Pn	**Pn**	**08 10 12.2**	**+1.5**
	3µm,0.6s,SNR=46						
KCP	**Kidapawan**	**7.30**	**359**	⇓*e*P	**Pn**	**08 10 16.1**	**+3.2**
MATI	**Mati**	**7.32**	**8**	*e*P	**Pn**	**08 10 15.3**	**+2.2**
DAV	**Davao City (W)**	**7.37**	**3**	*e*P	**Pn**	**08 10 16.0**	**+2.1**
DAV	**Davao City (W)**	**7.37**	**3**	P	**Pn**	**08 10 17.5**	**+3.6**
	SNR=32						
DAV	**Davao City (W)**	**7.37**	**3**	*e*Pn	**Pn**	**08 10 14.0**	**+0.1**
DAV				*e*Sn	**Sn**	**08 11 42.3**	**+6.2**
CTBH	**Cotabato--PC H**	**7.57**	**353**	⇑*e*P	**Pn**	**08 10 18.4**	**+1.8**
BUKP	**Musuan**	**8.17**	**359**	*e*P	**Pn**	**08 10 26.8**	**+2.0**
PAGZ	**Pagadian**	**8.33**	**348**	*e*P	**Pn**	**08 10 28.4**	**+1.4**
TARAI	**Tarakan**	**8.44**	**296**	P	**Pn**	**08 10 29.2**	**+0.7**
	0.0nm,0.0s						
IPIL	**Ipil**	**8.48**	**342**	*e*P	**Pn**	**08 10 29.9**	**+0.8**
TSM	**Tawau**	**8.63**	**302**	P	**Pn**	**08 10 32.2**	**+1.1**
CGP	**Cagayan de Oro**	**8.75**	**357**	⇓*i*P	**Pn**	**08 10 39.3**	**+6.5**
CGP				*i* S	**Sn**	**08 12 19.8**	**+10**
BUTP	**Butuan**	**9.26**	**3**	*e*P	**Pn**	**08 10 41.8**	**+2.0**
SNPH	**Sibulan**	**9.81**	**349**	⇑*e*P	**Pn**	**08 10 51.5**	**+4.2**
TBP	**Tagbilaran**	**10.05**	**353**	*e*P	**Pn**	**08 10 52.3**	**+1.7**
SCPH	**Surigao**	**10.06**	**2**	⇓*e*P	**Pn**	**08 10 50.6**	**-0.1**
MSLP	**Maasin**	**10.41**	**358**	*e*P	**Pn**	**08 10 55.9**	**+0.4**
LLP	**Lapu-Lapu**	**10.66**	**354**	*e*P	**Pn**	**08 11 01.4**	**+2.5**
BAKI	**Biak**	**10.96**	**94**	P	**Pn**	**08 11 02.4**	**-0.5**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**10.97**	**305**	P	**Pn**	**08 11 07.3**	**+4.1**
KKM	**Kota Kinabalu**	**10.97**	**305**	*e*Pn	**Pn**	**08 11 02.8**	**-0.3**
GUIM	**Jordan**	**11.20**	**347**	*e*P	**Pn**	**08 11 10.0**	**+3.8**
PLP	**Palo**	**11.43**	**359**	*e*P	**Pn**	**08 11 10.4**	**+0.9**
BATP	**Bataraza**	**11.68**	**321**	*e*P	**Pn**	**08 11 16.1**	**+3.3**
CUYO	**Cuyo Island**	**11.86**	**340**	*e*P	**Pn**	**08 11 18.4**	**+3.0**
PPR	**Puerto Princes**	**11.93**	**328**	⇑*i*P	**Pn**	**08 11 19.8**	**+3.6**
RCP	**Roxas**	**12.07**	**348**	⇑*e*P	**Pn**	**08 11 21.5**	**+3.4**
KALP	**Kalibo**	**12.27**	**347**	*e*P	**Pn**	**08 11 30.2**	**+9.4**
BUSP	**Coron**	**13.22**	**338**	*e*P	**Pn**	**08 11 36.0**	**+2.1**
PVCP	**Virac**	**13.88**	**356**	⇑*e*P	**Pn**	**08 11 42.2**	**-0.7**
PVCP	**Virac**	**13.88**	**356**	*e*P	**Pn**	**08 11 42.2**	**-0.7**
BOAC	**Boac**	**14.10**	**347**	*e*P	**Pn**	**08 11 50.6**	**+4.7**
KAKA	**Kakadu**	**14.24**	**150**	⇓*i*P	**Pn**	**08 11 44.5**	**-3.2**
	420nm,0.6s						
LUBP	**Lubang**	**14.81**	**341**	*e*P	**Pn**	**08 11 56.7**	**+1.5**
KRKI	**Karangkates**	**14.87**	**238**	P	**Pn**	**08 12 02.7**	**+6.7**
	0.0nm,0.0s						
TGY	**Tagaytay City**	**14.95**	**344**	⇓*e*P	**Pn**	**08 12 00.3**	**+3.3**
TGY	**Tagaytay City**	**14.95**	**344**	Pn	**Pn**	**08 11 58.4**	**+1.4**
	30nm,0.3s,baz=204,slow=3.9,SNR=9.9						
TGY				LR	LR	08 19 00.2	
	comp=Z,51nm,18.3s,baz=138,slow=42						
KSM	**Kuching**	**14.98**	**277**	*e*Pn	**Pn**	**08 11 57.3**	**0.0**
KSM				*e*Sn	**Sn**	**08 14 41.8**	**-0.4**
POLP	**Polilio Island**	**15.31**	**348**	*e*P	**Pn**	**08 12 03.8**	**+2.1**
JAY	**Jayapura**	**15.67**	**98**	P	**Pn**	**08 12 05.5**	**-0.7**
	146nm,0.9s						
PCPH	**Palayan**	**16.31**	**346**	*e*P	**Pn**	**08 12 16.5**	**+2.1**
BALP	**Baler**	**16.37**	**348**	*e*P	**Pn**	**08 12 15.8**	**+0.7**
SCZP	**Santa Cruz**	**16.84**	**342**	*e*P	**Pn**	**08 12 20.2**	**-0.8**
BJII	**Banjamegara**	**16.92**	**245**	P	**Pn**	**08 12 25.3**	**+3.3**
	3µm,1.8s						
BJII	**Banjamegara**	**16.92**	**245**	⇓*e*P	**Pn**	**08 12 24.7**	**+2.7**
BJII				*e*S	**S**	**08 15 45.2**	**+8.2**
BJII	**Banjamegara**	**16.92**	**245**	⇑*e*P	sP	08 12 45.8	+4.1
MMPI	**Merauke**	**17.16**	**118**	P	**Pn**	**08 12 27.5**	**+2.5**
	2µm,1.6s						
BCPH	**Baguio City Da**	**17.23**	**345**	⇑*e*P	**Pn**	**08 12 28.5**	**+2.7**
	243µm,0.5s						
BOLP	**Bolinao**	**17.41**	**343**	*e*P	**Pn**	**08 12 27.9**	**-0.1**
CAUP	**Cauayan**	**17.49**	**349**	*e*P	**Pn**	**08 12 29.6**	**+0.5**
PALP	**Palanan**	**17.51**	**351**	*e*P	**Pn**	**08 12 29.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**17.66**	**179**	⇓*i*P	**Pn**	**08 12 29.2**	**-1.9**
	262nm,1.0s						
FITZ				*e*S	**S**	**08 15 49.3**	**-2.6**
FITZ				*e*SCP	ScP	08 20 42.3	+4.2
FITZ				*e*SCS	ScS	08 24 19.9	+1.6
FITZ	**Fitzroy Crossi**	**17.66**	**179**	P	**Pn**	**08 12 29.7**	**-1.3**
	2.4nm,0.3s,baz=15,slow=13,SNR=57						
FITZ				LR	LR	08 20 12.5	
	comp=Z,4µm,20.3s,baz=4.4,slow=40						
JCJI	**Jatiwangi**	**17.95**	**250**	P	**Pn**	**08 12 38.1**	**+3.5**
	3µm,1.5s						
CVP	**Callao Caves**	**18.23**	**350**	⇓*e*P	**Pn**	**08 12 37.0**	**-1.1**
ABRA	**Dolores**	**18.41**	**346**	*e*P	**Pn**	**08 12 39.1**	**-1.1**
LEM	**Lembang**	**18.67**	**249**	P	**Pn**	**08 12 44.8**	**+1.4**
	2µm,1.1s						
SGCP	**Mt. Cagua**	**18.72**	**351**	*e*P	**Pn**	**08 12 43.0**	**-1.0**
CBJI	**Citeko**	**19.26**	**251**	P	**Pn**	**08 12 50.8**	**+0.3**
	5µm,1.5s						
TNG	**Tangerang**	**19.38**	**252**	P	**Pn**	**08 12 54.3**	**+2.4**
	1µm,1.4s						
SBJI	**Serang**	**19.86**	**253**	P	**Pn**	**08 12 56.9**	**-0.7**
	2µm,1.5s						
KLI	**Kotabumi**	**20.79**	**257**	P	**P**	**08 13 07.9**	**+2.2**
	506nm,1.4s						
MBWA	**Marble Bar**	**21.36**	**194**	⇓P	**P**	**08 13 12.8**	**+0.9**
	SNR=83						
MBWA	**Marble Bar**	**21.36**	**194**	*e*P	**P**	**08 13 12.3**	**+0.5**
	1µm,1.4s,mb6.1						
MBWA				*e*S	**S**	**08 16 58.2**	**-7.8**
MBWA				LR	LR		
	comp=Z,5µm,22.0s,MS4.8						
WRAB	**Tennant Creek**	**21.44**	**156**	P	**P**	**08 13 11.0**	**-1.6**
	comp=Z,2µm,0.9s,mb6.5,SNR=57						
WRAB	**Tennant Creek**	**21.44**	**156**	*e*P	**P**	**08 13 11.3**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,330nm,0.8s,mb5.7						
WRAB	**Tennant Creek**	**21.44**	**156**	*e*P	**P**	**08 13 09.4**	**-3.2**
WRAB				*e*S	**S**	**08 17 06.4**	**-1.1**
WRA	**Warramunga Arr**	**21.45**	**156**	P	**P**	**08 13 11.1**	**-1.6**
	comp=Z,141nm,0.9s,mb5.3,baz=339,slow=11,SNR=80						
WRA				S	**S**	**08 17 07.3**	**-0.2**
	comp=Z,55nm,1.1s,baz=341,slow=16,SNR=8.7						
WRA				ScP	ScP	08 20 49.6	+2.8
	comp=Z,12nm,0.9s,baz=334,

PSI Prapat 26.43 277 P **P** **08 14 00.1 -0.6**
comp=Z,69nm,0.9s,mb5.2,baz=102,slow=5.2,SNR=43
PSI PcP PcP 08 17 26.9 +1.9
comp=Z,41nm,1.0s,baz=192,slow=5.7,SNR=4.8
PSI ScP ScP 08 21 02.0 +1.7
comp=Z,25nm,1.0s,baz=186,slow=5.9,SNR=9.3
PSI Prapat 26.43 277 P **P** **08 14 00.1 -0.6**
PSI 08 17 26.9
TSI Tuntungan 26.88 278 P **P** **08 14 05.2 +0.5**
comp=Z,265nm,1.1s,mb5.7
JOW Kunigami 27.18 6 P **P** **08 14 08.2 +0.8**
comp=Z,1μm,0.8s,mb6.4,baz=195,slow=7.8,SNR=64
KKTK Khon Kaen 27.59 308 P **P** **08 14 10.0 -1.1**
comp=Z,4μm,0.5s
NNT Nongplab 28.33 298 P **P** **08 14 18.5 +0.8**
CTA Charters Tower 28.47 135 *eP* **P** **08 14 19.5 +0.5**
comp=Z,28nm,0.9s
CTA *e*SCP ScP 08 21 11.9 +5.4
CTA Charters Tower 28.47 135 P **P** **08 14 19.2 +0.2**
comp=Z,28nm,0.8s,baz=315,slow=11,SNR=16
CTA ScP ScP 08 21 10.8 +4.2
comp=Z,16nm,0.9s,baz=296,slow=8.0,SNR=4.6
CTA Charters Tower 28.47 135 *eP* **P** **08 14 19.5 +0.5**
CTA pmax pmax
comp=Z,280nm,0.9s
CTAO Charters Tower 28.47 135 *eP* **P** **08 14 20.0 +1.0**
CTAO MLR MLR
comp=Z,6μm,21.0s,MS5.2
FORT Forrest 30.39 175⇑ *iP* **P** **08 14 36.0 0.0**
comp=Z,150nm,0.6s,mb5.9
FORT *e*SCP ScP 08 21 16.7 +4.0
BSI Banda Aceh 30.40 281 P **P** **08 14 34.7 -1.4**
comp=Z,96nm,1.4s,mb5.3
COCO West Island 30.49 246 PFAKE 08 14 50.0 +13
COCO LR LR
comp=Z,2μm,21.0s,MS4.6
SSE Sheshan 31.49 353 P **P** **08 14 47.0 +1.3**
SSE AP pP 08 14 59.8 +0.7
SSE XP sP 08 15 06.0 +0.7
SSE S **S** **08 19 52.0 +1.9**
SSE XS sS 08 20 14.5 +1.7
SSE AMB AMB
comp=Z,125nm,1.0s,mb5.7
SSE AMB AMB
comp=Z,653nm,7.3s
SSE LR LR
comp=N,4μm,23.4s,MS5.0
SSE LR LR
comp=E,2μm,23.4s,MS5.0
SSE LR LR
comp=Z,5μm,23.0s,MS5.2
CBIJ Chichi jima 31.81 30 P **P** **08 14 46.4 -2.1**
comp=Z,420nm,0.8s,mb6.3,baz=230,slow=2.5,SNR=27
KLBR Kellerberrin 31.87 192 *eP* **P** **08 14 48.7 -0.3**
comp=Z,252nm,1.6s,mb5.8
KLBR *e*PCP PcP 08 17 40.3 +1.7
KLBR *e*SCP ScP 08 21 20.7 +3.1
CHRT Chiangrai 31.98 310⇑⇑P **P** **08 14 51.0 +1.0**
comp=Z,553nm,1.1s,mb6.3
CHG Chiang Mai 32.04 308⇑P **P** **08 14 50.9 +0.4**
comp=Z,150nm,1.0s,mb5.8
CHTO Chiang Mai 32.04 308 P **P** **08 14 50.9 +0.4**
SNR=124
CHTO Chiang Mai 32.04 308 *eP* **P** **08 14 50.6 +0.1**
CHTO pmax pmax
comp=Z,490nm,1.1s,mb6.2
CHTO Chiang Mai 32.04 308 *eP* **P** **08 14 50.6 +0.1**
comp=Z,498nm,1.1s,mb6.3
GYA Guiyang 32.07 328⇑ *iP* **P** **08 14 51.0 +0.2**
GYA AP pP 08 15 05.8 +1.6
GYA XP sP 08 15 13.0 +2.6
GYA PP PP 08 15 57.3 -6.6
GYA PCP PcP 08 17 41.3 +2.1
GYA S **S** **08 19 54.3 -4.8**
GYA AMB AMB
comp=Z,160nm,0.9s,mb5.8
GYA AMB AMB
comp=Z,630nm,4.0s
GYA LR LR
comp=N,5μm,21.0s,MS5.3
GYA LR LR
comp=E,5μm,20.1s,MS5.3
GYA LR LR
comp=Z,5μm,22.8s,MS5.1
WHN Wuhan 32.40 342⇑P **P** **08 14 53.8 +0.2**
WHN PCP PcP 08 17 42.0 +1.9
WHN *e*S **S** **08 20 03.0 -1.2**
WHN LR LR
comp=Z,13μm,23.2s,MS5.5
MUN Mundaring 32.59 194 *eP* **P** **08 14 56.2 +0.9**
MUN *e*S **S** **08 20 09.0 +1.8**
NJ2 Nanjing 32.77 350 *eP* **P** **08 14 57.0 +0.1**
NJ2 AP pP 08 15 12.0 +1.7
NJ2 XP sP 08 15 19.3 +2.8
NJ2 PP PP 08 16 08.0 -3.6
NJ2 S **S** **08 20 07.0 -3.0**
NJ2 XS sS 08 20 40.0 +7.3
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.3
NJ2 AMB AMB
comp=Z,1μm,3.8s
NJ2 LR LR
comp=N,7μm,20.5s,MS5.7
NJ2 LR LR
comp=E,15μm,21.8s,MS5.7
NJ2 LR LR
comp=Z,14μm,20.9s,MS5.7
NWAO Narrogin (SRO) 33.27 192 LR LR 08 29 42.6
comp=Z,3μm,21.6s,MS5.0,baz=16,slow=38
NWAO Narrogin (SRO) 33.27 192 *eP* **P** **08 15 02.2 +1.0**
KMI Kunming 33.35 321 P **P** **08 15 03.0 +1.1**
KMI AP pP 08 15 12.5 -2.9
KMI PP PP 08 16 18.5 +0.4
KMI S **S** **08 20 20.3 +1.3**
KMI SS SS 08 22 25.8 -19
KMI SSS 08 22 48.5
KMI AMB AMB
comp=Z,80nm,1.7s,mb5.4
KMI AMB AMB
comp=Z,687nm,3.5s
KMI LR LR
comp=N,3μm,25.1s,MS5.0
KMI LR LR
comp=E,2μm,22.2s,MS5.0
KMI LR LR
comp=Z,5μm,22.2s,MS5.2
STKA Stephens Creek 34.99 155 *eP* **P** **08 15 16.2 0.0**
comp=Z,108nm,0.9s,mb5.8
STKA *e*PCP PcP 08 17 39.9 -7.5
STKA *e*S **S** **08 20 44.6 +0.2**
STKA *e*SCP ScP 08 21 31.5 +3.0
STKA *e*SCS ScS 08 25 31.2 -1.1
STKA Stephens Creek 34.99 155 P **P** **08 15 16.6 +0.4**
comp=Z,108nm,0.8s,mb5.8,baz=327,slow=8.4,SNR=140
STKA ScP ScP 08 21 31.1 +2.6
comp=Z,20nm,1.0s,baz=343,slow=9.0,SNR=4.2
JHJ Hachijo jima 2 36.01 21 P **P** **08 15 23.4 -1.6**
comp=Z,238nm,0.9s,mb6.1,baz=234,slow=8.7,SNR=4.2
ADE Adelaide 36.69 161 P **P** **08 15 31.9 +1.2**
TIA Tai'an 37.13 349⇑P **P** **08 15 33.5 -0.9**
TIA AMB AMB
comp=Z,511nm,6.0s
TIA LR LR
comp=N,2μm,18.0s,MS4.9
TIA LR LR
comp=E,550nm,18.0s,MS4.9
TIA LR LR
comp=N,1μm,29.1s
TIA LR LR
comp=E,780nm,21.4s
CD2 Chengdu 37.15 329 P **P** **08 15 33.8 -0.8**
CD2 AP pP 08 15 48.0 -0.2
CD2 XP sP 08 15 55.5 +1.1
CD2 PP PP 08 17 00.0 0.0
CD2 PCP PcP 08 17 53.3 -0.6
CD2 S **S** **08 21 13.5 -3.8**
CD2 XS sS 08 21 40.0 -0.3
CD2 PCS PcS 08 21 41.5 -0.7
CD2 AMB AMB
comp=Z,200nm,1.1s,mb5.9
CD2 AMB AMB
comp=Z,720nm,4.0s
CD2 LR LR
comp=N,3μm,21.6s
CD2 LR LR
comp=Z,3μm,21.0s,MS5.0
XAN Xi'an 37.45 338 P **P** **08 15 35.5 -1.7**
XAN AP pP 08 15 52.0 +1.2
XAN PP PP 08 17 03.8 +0.5
XAN AMB AMB
comp=Z,243nm,1.4s,mb5.8
XAN AMB AMB
comp=Z,572nm,13.4s
XAN LR LR
comp=N,1μm,22.0s,MS5.0
XAN LR LR
comp=E,2μm,24.9s,MS5.0
XAN LR LR
comp=Z,6μm,19.5s
INCN Inchon 37.66 2⇑P **P** **08 15 39.8 +0.9**
SNR=12
INCN Inchon 37.66 2 *eP* **P** **08 15 39.3 +0.4**
comp=Z,274nm,1.0s,mb5.9
MAJO Matsushiro 38.64 17 *eP* **P** **08 15 46.4 -0.8**
MAJO pmax pmax
comp=Z,286nm,0.6s,mb6.2
MAJO Matsushiro 38.64 17 *eP* **P** **08 15 46.4 -0.7**
comp=Z,295nm,0.6s,mb6.2
MAT Matsushiro 38.64 17 P **P** **08 15 45.8 -1.4**
MAT *e*S **S** **08 21 48.0 +8.1**
MJAR Matsushiro Arr 38.64 17 P **P** **08 15 46.0 -1.2**
comp=Z,222nm,0.7s,mb6.0,baz=194,slow=8.2,SNR=223
MJAR PcP PcP 08 17 59.5 +1.1
comp=Z,36nm,0.9s,baz=184,slow=3.0,SNR=7.3
ARMA Armidale 39.07 142⇓ *iP* **P** **08 15 52.2 +1.5**
ARMA *e*SCP ScP 08 21 49.7 +6.0
DL2 Dalian 39.19 356⇑ *iP* **P** **08 15 51.0 -0.8**
DL2 AP pP 08 16 06.0 +0.5
DL2 PP PP 08 17 22.0 -0.4
DL2 AMB AMB
comp=Z,220nm,0.8s,mb5.9
DL2 AMB AMB
comp=Z,390nm,7.0s
DL2 LR LR
comp=N,2μm,23.1s,MS5.0
DL2 LR LR
comp=E,1μm,20.0s,MS5.0
DL2 LR LR
comp=Z,3μm,25.2s
IMP Imphal 39.23 312 *eP* **P** **08 15 51.0 -1.1**
IMP *ex* x 08 18 01.0
AGT Agartala 40.79 309 *i* P **P** **08 16 06.0 +1.0**
AGT *i* x x 08 16 47.0
BJT Baijiatuau 41.00 349 *eP* **P** **08 16 03.6 -3.2**
BJT *e* 08 18 07.0
BJT pmax pmax
comp=Z,329nm,1.2s
BJT MLR MLR
comp=Z,3μm,22.0s
BJT Baijiatuau 41.00 349 *eP* **P** **08 16 03.6 -3.1**
comp=Z,329nm,1.2s,mb5.8
BJT *e*PcP PcP 08 18 07.0 +1.0
BJT *e*ScP ScP 08 21 54.5 +3.2
BJT LR LR
comp=Z,3μm,22.0s,MS5.1
BJI Beijing 41.02 349 P **P** **08 16 05.5 -1.4**
BJI AP pP 08 16 18.5 -2.2
BJI XP sP 08 16 24.8 -2.0
BJI PP PP 08 17 41.3 -1.0
BJI PCP PcP 08 18 06.8 +0.7
BJI AMB AMB
comp=Z,239nm,1.3s,mb5.7
BJI LR LR
comp=N,3μm,26.1s,MS5.2
BJI LR LR
comp=E,3μm,22.0s,MS5.2
BJI LR LR
comp=Z,7μm,27.5s
SHL Shillong 41.20 311 *ex* **P** **08 16 15.5 +7.1**
SHL AMb AMB 08 16 22.5
comp=Z,2μm,0.0s
RIV Riverview 41.27 146 *eP* **P** **08 16 10.9 +1.9**
LZH Lanzhou 41.32 333⇑⇑P **P** **08 16 09.5 +0.1**
LZH AP pP 08 16 23.0 -0.2
LZH XP sP 08 16 30.5 +1.2
LZH PP PP 08 17 48.0 +2.4
LZH PCP PcP 08 18 09.3 +2.2
LZH SCP ScP 08 21 50.0 -2.5
LZH PCS PcS 08 21 56.5 -1.8
LZH *e*S **S** **08 22 25.0 +5.0**
LZH XS sS 08 22 43.0 -0.2
LZH AMB AMB
comp=Z,52nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,417nm,4.6s
LZH LR LR
comp=E,2μm,14.6s
LZH LR LR
comp=Z,3μm,16.4s,MS5.3
CNB Canberra Magne 41.46 150 *eP* **P** **08 16 11.2 +0.7**
comp=Z,272nm,1.7s,mb5.6
TOO Toolangi 41.52 155 *eP* **P** **08 16 12.9 +1.9**
comp=Z,130nm,1.4s,mb5.4
TOO Toolangi 41.52 155 *eP* **P** **08 16 12.9 +1.9**
TOO pmax pmax
comp=Z,130nm,1.4s,mb5.4
SNY Shenyang 42.00 358⇑⇑P **P** **08 16 14.0 -0.9**
SNY AP pP 08 16 24.5 -4.2
SNY XP sP 08 16 32.0 -2.9
SNY AMB AMB
comp=Z,421nm,1.0s,mb6.0
SNY AMB AMB
comp=Z,2μm,7.8s
SNY LR LR
comp=N,3μm,24.0s
SNY LR LR
comp=Z,4μm,23.5s,MS5.3
CAL Calcutta 42.48 305 *ex* **P** **08 16 10.8 -8.1**
CAL *e*S **S** **08 22 37.5 +0.4**
HHC Hu-ho-hao-te 42.83 345 *eP* **P** **08 16 20.5 -1.2**
HHC AP pP 08 16 35.5 0.0
HHC XP sP 08 16 42.0 +0.4
HHC PP PP 08 18 00.3 -1.5
HHC PCP PcP 08 18 08.8 -3.2
HHC SCP ScP 08 21 52.3 -6.2
HHC PCS PcS 08 22 02.5 -1.8
HHC S **S** **08 22 41.0 -1.2**
HHC XS sS 08 23 08.0 +2.6
HHC AMB AMB
comp=Z,129nm,1.1s,mb5.6
HHC AMB AMB
comp=Z,815nm,6.0s
HHC LR LR
comp=N,3μm,20.6s,MS5.2
HHC LR LR
comp=E,2μm,19.6s,MS5.2
HHC LR LR
comp=Z,4μm,23.3s,MS5.2
BTO Baotou 43.03 343 *eP* **P** **08 16 21.8 -1.5**
VLA Vladivostok 43.68 7*d* *iP* **P** **08 16 28.2 -0.4**
VLA *i* *PP pP 08 16 41.0 -1.4
VLA *i* 08 18 15.3
VLA pmax pmax
comp=Z,330nm,0.9s,mb6.1
VLA MLR MLR
comp=Z,3μm,22.0s,MS5.1
VLA Vladivostok 43.68 7 *i* Pr 08 16 28.2
comp=Z,330nm,0.9s
VLA *i* pP pP 08 16 41.0 -1.4
VLA *i* 08 18 15.3
VLA LR LR
comp=Z,3μm,22.0s,MS5.1
CN2 Changchun 43.95 0⇑⇑P **P** **08 16 30.0 -0.7**
CN2 *e*AP pP 08 16 45.3 +0.7
CN2 *e*XP sP 08 16 52.5 +1.8
CN2 PP PP 08 18 15.5 +1.7
CN2 PPP 08 18 53.5
CN2 AMB AMB
comp=Z,150nm,1.1s,mb5.6
CN2 AMB AMB
comp=Z,1μm,9.0s
CN2 LR LR
comp=N,2μm,21.0s,MS5.2
CN2 LR LR
comp=E,2μm,21.0s,MS5.2
CN2 LR LR
comp=Z,4μm,23.0s,MS5.2
LSA Lhasa 44.10 316 P **P** **08 16 32.5 +0.6**
LSA AP pP 08 16 41.8 -4.0
LSA SCS ScS 08 26 23.3 -2.5
LSA AMB AMB
comp=Z,180nm,0.8s,mb5.8
LSA LR LR
comp=N,2μm,27.3s,MS5.0
LSA LR LR
comp=E,2μm,31.1s,MS5.0
LSA LR LR
comp=Z,4μm,30.1s,MS5.2
LSA Lhasa 44.10 316 *eP* **P** **08 16 30.1 -1.8**
LSA pmax pmax
comp=Z,251nm,1.0s,mb5.9
LSA Lhasa 44.10 316 *eP* **P** **08 16 30.1 -1.8**
comp=Z,251nm,1.0s,mb5.9
VIS Vishakhapatnam 44.92 296 *eP* **P** **08 16 37.2 -1.3**
MDJ Mudanjiang 44.93 4 P **P** **08 16 39.0 +0.4**
MDJ AP pP 08 16 52.3 -0.2
MDJ XP sP 08 16 58.3 -0.3
MDJ PCP PcP 08 18 19.3 +0.1
MDJ PP PP 08 18 24.8 +0.5
MDJ AMB AMB
comp=Z,305nm,0.9s,mb6.1
MDJ AMB AMB
comp=Z,702nm,4.3s
MDJ LR LR
comp=N,3μm,22.4s
MDJ LR LR
comp=E,506nm,28.0s
MDJ LR LR
comp=Z,3μm,25.2s,MS5.2
MDJ Mudanjiang 44.93 4 *eP* **P** **08 16 35.2 -3.4**
comp=Z,297nm,1.0s,mb6.1
PALK Pallekele 45.00 281 *eP* **P** **08 16 38.6 -0.5**
comp=Z,14nm,0.7s
BOK Bokaro 45.05 305 *eP* **P** **08 16 38.5 -1.0**
ERM Erimo 45.18 19⇑ *iP* **P** **08 16 42.0 +1.5**
ERM Erimo 45.18 19 *eP* **P** **08 16 41.4 +0.9**
comp=Z,183nm,1.0s,mb5.9
GTA Gaotai 45.87 332 P **P** **08 16 45.5 -0.5**
GTA AP pP 08 16 58.0 -1.9
GTA XP sP 08 17 03.5 -2.5
GTA PCP PcP 08 18 24.5 +2.0
GTA PP PP 08 18 32.8 -1.4
GTA PCS PcS 08 22 17.0 +0.2
GTA S **S** **08 23 24.5 -1.9**
GTA AMB AMB
comp=Z,66nm,1.7s,mb5.3
GTA AMB AMB
comp=Z,813nm,8.4s
GTA LR LR
comp=N,3μm,24.3s,MS5.3
GTA LR LR
comp=E,3μm,22.8s,MS5.3
GTA LR LR
comp=Z,3μm,22.1s,MS5.2
MDRS Chennai 46.49 288 *eP* **P** **08 16 48.4 -2.5**
JIRN Jiri 46.63 310 *eP* **P** **08 16 51.8 -0.2**
comp=Z,251nm,0.5s,mb6.4
ASAJ Asahikawa 46.91 17 P **P** **08 16 54.7 +0.6**
comp=Z,246nm,0.7s,mb6.2,baz=229,slow=11,SNR=130
ASAJ Asahikawa 46.91 17 P **P** **08 16 54.7 +0.6**
ASAJ pmax pmax
comp=Z,246nm,0.7s
GUN Gumba 47.00 310 *eP* **P** **08 16 54.4 -0.4**
comp=Z,886nm,0.8s,mb6.8
PKI Pulchoki 47.19 309 *eP* **P** **08 16 55.7 -0.6**
comp=Z,133nm,0.6s,mb6.0
PKI Pulchoki 47.19 309 *eP* **P** **08 16 55.7 -0.6**
PKI pmax pmax
comp=Z,133nm,0.6s,mb6.0
KKN Kakani 47.40 309 *eP* **P** **08 16 57.3 -0.6**
comp=Z,162nm,0.5s,mb6.2
KKN Kakani 47.40 309 *eP* **P** **08 16 57.3 -0.6**
KKN pmax pmax
comp=Z,163nm,0.5s,mb6.2
DMN Daman 47.45 309 *eP* **P** **08 16 57.8 -0.5**
comp=Z,612nm,1.1s,mb6.4
YUK Yuzh-Kuril'sk 47.88 20⇑ *iP* **P** **08 17 03.8 +2.1**
YUK pmax pmax
comp=Z,870nm,0.8s,mb6.8
YUK pmax pmax
comp=N,510nm,0.7s
GKN Gorkha 48.00 309 *eP* **P** **08 17 01.9 -0.7**
comp=N,323nm,0.7s,mb6.5
KOLN Koldanda 48.70 308 *eP* **P** **08 17 07.7 -0.2**
comp=N,638nm,0.7s,mb6.7
TRD Trivandrum 48.84 282 *eP* **P** **08 17 09.2 +0.1**
TRD *i* x x 08 24 31.1
HYB Hyderabad 49.17 293⇑ *iP* **P** **08 17 10.5 -1.1**
comp=N,240nm,1.0s,mb6.2
HYB *e*PcP PcP 08 18 35.5 +1.3
HYB *e*PP PP 08 19 06.0 +0.4
HYB *e*S **S** **08 24 12.0 -1.2**
HYB Hyderabad 49.17 293⇑ *eP* **P** **08 17 10.5 -1.1**
HYB pmax pmax
comp=Z,240nm,1.0s,mb6.2
HYB Hyderabad 49.17 293⇑ *eP* **P** **08 17 10.5 -1.1**
comp=Z,240nm,1.0s,mb6.2
HABR Khabarovsk 49.37 9⇑ *iP* **P** **08 17 13.2 +0.1**
HABR *e*S **S** **08 24 17.3 +1.3**
HABR pmax pmax
comp=Z,532nm,1.9s,mb6.2
HABR MLR MLR
comp=Z,1μm,16.7s,MS4.9
YSS Yuzh-Sakhalins 49.55 16α *iP* **P** **08 17 14.0 -0.5**
YSS *e* pP 08 17 22.8 -5.8
YSS *e* 08 18 36.2
YSS *e* 08 19 13.0
YSS *e*PPP 08 19 59.0
YSS *e*S **S** **08 24 20.0 +1.4**
YSS *e*SS SS 08 27 44.0 -7.1
YSS *e*SSS 08 29 06.0
YSS pmax pmax
comp=Z,250nm,1.1s,mb6.2
YSS MLR MLR
comp=N,1μm,20.0s,MS5.0
YSS MLR MLR
comp=Z,2μm,20.0s,MS5.0
YSS MLR MLR
comp=E,1μm,19.0s,MS5.0
YSS Yuzh-Sakhalins 49.55 16 *i* Pcu **P** **08 17 14.0 -0.5**
comp=E,250nm,1.1s,mb6.2
YSS *e* pP 08 17 22.8 -5.8
YSS *e* 08 18 36.2
YSS *e* 08 19 13.0
YSS *e*PPP 08 19 59.0
YSS *e*S **S** **08 24 20.0 +1.4**
YSS *e*SS SS 08 27 44.0 -7.1
YSS *e*SSS 08 29 06.0
YSS LR LR
comp=Z,2μm,20.0s,MS5.0
KLR Kul'dur 49.70 6⇓ *iP* **P** **08 17 12.0 -3.6**
KLR *e* 08 19 05.5
KLR *e*S **S** **08 24 14.0 -6.7**
KLR pmax pmax
comp=E,92nm,1.8s
KLR pmax pmax
comp=Z,450nm,1.8s,mb6.2
KLR pmax pmax
comp=N,600nm,9.0s
KLR pmax pmax
comp=Z,1μm,9.0s
KLR MLR MLR
comp=Z,2μm,20.0s,MS5.0
NGP Nagpur 49.85 298 *eP* **P** **08 17 12.1 -4.7**
NGP *ex* x 08 17 15.5
comp=Z,163nm,0.9s
NGP *e*S **S** **08 24 17.3 -5.5**
NGP AMP 08 39 40.8
comp=Z,3μm,21.5s
ULN Ulaanbaatar 50.54 344⇑ *eP* **P** **08 17 21.1 -0.9**
ULN MLR MLR
comp=Z,2μm,19.0s,MS5.2
SONM Songino Array 50.69 344 P **P** **08 17 22.4 -0.8**
comp=Z,184nm,0.8s,mb6.1,baz=157,slow=8.8,SNR=206
SONM PcP PcP 08 18 40.5 +0.7
comp=Z,32nm,0.7s,baz=163,slow=3.8,SNR=5.4
SONM ScP ScP 08 22 32.7 +1.3
comp=Z,4.8nm,0.9s,baz=134,slow=4.3,SNR=3.7
SONM LR LR 08 40 03.3
comp=Z,3μm,20.8s,MS5.3,baz=154,slow=38
SONM PKPPKP 08 48 04.6
comp=Z,0.2nm,0.3s,baz=180,slow=0.1,SNR=5.2
SONM P4KPbc 08 54 53.5
comp=Z,0.8nm,0.8s,baz=149,slow=3.7,SNR=3.8
SONM Songino Array 50.69 344 P **P** **08 17 22.4 -0.7**

SONM 08 18 40.5
SONM Songino Array 50.69 344 P **P** **08 17 22.4 -0.8**
SONM PcP PcP 08 18 40.5 +0.7
SONM ScP ScP 08 22 32.7 +1.3
SONM LR LR 08 40 03.3
SONM P'P' 08 48 04.6
LATR Latur 51.27 294 *eP* **P** **08 17 26.5 -0.9**
BHPL Bhopal 51.97 300 *eP* **P** **08 17 31.6 -1.1**
BHPL AMb AMB 08 17 35.0
comp=Z,208nm,1.0s,mb6.0
LGTI Lohaghat 52.08 309 *eP* **P** **08 17 33.0 -0.5**
AGRA Agra 53.00 305 *eP* **P** **08 17 38.5 -1.8**
AGRA AMb AMB 08 17 40.4
comp=Z,262nm,0.6s,mb6.3
CIT Chita 53.09 351 *eP* **P** **08 17 42.0 +1.1**
CIT pmax pmax
comp=Z,652nm,1.4s,mb6.4
JOSI Joshimath 53.11 310 *ex* x 08 17 21.6
JOSI AMb AMB 08 17 24.3
comp=Z,2µm,1.0s,mb6.9
KAD Karad 53.17 292 *eP* **P** **08 17 39.2 -2.3**
ZAK Zakamensk 53.88 343⇑ *iP* **P** **08 17 46.0 -0.8**
ZAK *e* 08 18 52.4
ZAK pmax pmax
comp=Z,92nm,1.1s,mb5.6
SONA Sohna 54.10 306 *eP* **P** **08 17 46.5 -1.9**
SONA AMb AMB 08 17 48.9
comp=Z,305nm,0.7s,mb6.4
AYAN Aya Nagar 54.16 306 *ex* x 08 17 39.8
AYAN AMb AMB 08 17 42.7
comp=Z,312nm,1.2s,mb6.1
NDI New Delhi 54.16 306 *eP* **P** **08 17 47.2 -1.6**
NDI AMb AMB 08 17 48.5
comp=Z,217nm,1.4s,mb5.9
NDI *ex* x 08 22 49.0
DDI Dehra Dun 54.17 309 *eP* **P** **08 17 46.5 -2.4**
FUNA Funafuti 54.41 100 *eP* **P** **08 17 51.5 +0.9**
comp=Z,1µm,2.1s,mb6.5
KUDL Kundal 54.54 305 *eP* **P** **08 17 49.5 -2.1**
KUDL AMb AMB 08 17 51.5
comp=Z,276nm,1.2s,mb6.2
KLP Kalpa 54.55 310 *eP* **P** **08 17 51.9 +0.3**
KLP AMb AMB 08 17 58.9
comp=Z,637nm,1.5s,mb6.4
TLY Talaya 54.94 344 P **P** **08 17 54.1 -0.3**
comp=Z,2µm,0.9s,mb7.0,SNR=12
TLY Talaya 54.94 344 P **P** **08 17 54.4 0.0**
SNR=22
TLY Talaya 54.94 344 *eP* **P** **08 17 53.9 -0.5**
TLY *e* 08 18 54.5
TLY *e* 08 19 56.7
TLY *eS* S 08 25 54.0 +22
TLY pmax pmax
comp=Z,247nm,0.9s,mb6.2
TLY Talaya 54.94 344 *eP* **P** **08 17 53.9 -0.5**
TLY *e* 08 18 54.5
TLY *e* 08 19 56.7
TLY *eS* S 08 25 54.0 +22
KHET Khetri 55.07 305 *eP* **P** **08 17 53.9 -1.5**
KHET AMb AMB 08 17 56.1
comp=Z,226nm,0.7s,mb6.3
WMQ Urumqi 55.23 328⇑ *iP* **P** **08 17 56.0 -0.6**
WMQ AP pP 08 18 12.0 +1.2
WMQ XP sP 08 18 19.0 +2.2
WMQ PP PP 08 20 02.0 +1.6
WMQ S **S** **08 25 34.0 -2.2**
WMQ AMB AMB
comp=Z,201nm,1.0s,mb6.1
WMQ AMB AMB
comp=Z,856nm,5.0s
WMQ LR LR
comp=N,4µm,14.0s,MS5.8
WMQ LR LR
comp=E,4µm,14.0s,MS5.8
WMQ LR LR
comp=Z,5µm,14.0s,MS5.7
IRK Irkutsk 55.27 345 *eP* **P** **08 17 55.5 -1.3**
IRK pmax pmax
comp=Z,232nm,1.0s,mb6.2
AJM Ajmer 55.46 303 *eP* **P** **08 17 56.2 -2.0**
AJM *iP* 08 17 57.0
SDNR Sundarnagar 55.52 309 *eP* **P** **08 17 58.4 -0.2**
MOY Mondy 55.70 342 *eP* **P** **08 18 00.3 +0.4**
MOY pmax pmax
comp=Z,506nm,1.7s,mb6.3
BHK Bhakra 55.91 309 *eP* **P** **08 18 02.4 +1.0**
PONG Pong 56.50 309 *eP* **P** **08 18 05.0 -0.6**
DLH Dalhousie 56.73 310 *eP* **P** **08 18 08.0 +0.7**
DLH *ex* x 08 18 14.0
THN Thein Dam 56.88 310 *eP* **P** **08 18 06.5 -1.8**
THN *ex* x 08 27 23.6
CLNS Chul'man 57.00 360⇓ *iP* **P** **08 18 08.9 -0.3**
CLNS *e* 08 19 03.7
CLNS *e* 08 20 12.7
CLNS *eS* **S** **08 26 01.3 +1.6**
CLNS pmax pmax
comp=N,123nm,1.0s
CLNS pmax pmax
comp=Z,231nm,1.0s,mb6.2
CLNS pmax pmax
comp=E,50nm,0.8s
CLNS smax
comp=N,81nm,13.3s
CLNS smax
comp=Z,346nm,12.2s
CLNS smax
comp=E,491nm,13.7s
CLNS MLR MLR
comp=Z,4µm,24.0s,MS5.4
CLNS MLR MLR
comp=N,600nm,15.0s
CLNS MLR MLR
comp=E,2µm,17.0s
CLNS Chul'man 57.00 360⇓ *iP* **P** **08 18 08.9 -0.3**
CLNS *e* 08 19 03.7
CLNS *e* 08 20 12.7
CLNS *eS* **S** **08 26 01.3 +1.6**
SKR Severo-Kuril's 57.24 23 *eP* **P** **08 18 06.0 -4.9**
SKR *e* 08 20 24.0
SKR *eS* **S** **08 26 02.0 -0.9**
SKR *e* 08 26 10.0
SKR pmax pmax
comp=Z,200nm,0.9s,mb6.2
SKR smax
comp=E,2µm,10.0s
BOD Bodaibo 58.67 353⇓ *iP* **P** **08 18 21.3 +0.4**
BOD pmax pmax
comp=Z,554nm,1.0s,mb6.5
RPZ Rata Peaks 59.41 143 LR LR 08 44 53.0
comp=Z,4µm,21.1s,MS5.5,baz=216,slow=37
KSH Kashi 59.90 317 P **P** **08 18 30.5 +1.2**
KSH AP pP 08 18 42.5 -1.3
KSH XP sP 08 18 48.3 -1.4
KSH PCP PcP 08 19 17.5 +2.2
KSH PP PP 08 20 43.0 +1.1
KSH PCS PcS 08 23 17.0 -0.6
KSH S **S** **08 26 33.8 -3.6**
KSH SCS ScS 08 28 12.5 -2.7
KSH SS SS 08 30 30.5 -3.7
KSH AMB AMB
comp=Z,1µm,1.3s,mb6.8
KSH AMB AMB
comp=Z,2µm,3.1s
KSH LR LR
comp=N,4µm,18.8s
KSH LR LR
comp=E,1µm,11.5s
KSH LR LR
comp=Z,3µm,21.7s,MS5.4
PET Petropavlovsk 60.05 23 *eP* **P** **08 18 31.3 +0.9**
PET *e**PP pP 08 18 44.5 -0.4
PET pmax pmax
comp=Z,153nm,0.8s,mb6.1
PET Petropavlovsk 60.05 23 *eP* **P** **08 18 31.3 +0.9**
comp=Z,153nm,0.8s,mb6.1
PET *ep*P pP 08 18 44.5 -0.4
MK31 Makanchi Array 60.06 327 P **P** **08 18 29.2 -1.3**
MK31 pmax pmax
comp=Z,116nm,0.6s,mb6.1
MKAR Makanchi Array 60.06 327 P **P** **08 18 29.6 -0.9**
comp=Z,190nm,0.6s,mb6.3,baz=120,slow=7.9,SNR=213
PcP PcP
MKAR 08 19 16.2 +0.2
comp=Z,32nm,0.7s,baz=111,slow=6.6,SNR=4.1
MKAR PKPPKP 08 47 57.8
comp=Z,1.7nm,0.8s,baz=230,slow=9.1,SNR=3.9
MKAR P4KPbc 08 55 36.4
comp=Z,2.5nm,0.8s,baz=131,slow=5.0,SNR=7.5
MKAR Makanchi Array 60.06 327 P **P** **08 18 29.6 -0.9**
MKAR *e* 08 19 16.2
URZ Urewera 60.72 135 P **P** **08 18 34.5 -0.5**
comp=Z,20nm,0.6s,mb5.4,baz=297,slow=2.8,SNR=16
ULHL Ulahol 61.07 320 P **P** **08 18 39.6 +2.2**
SNR=23
RAO Raoul Island 61.31 123 LR LR 08 40 46.7
comp=Z,1µm,20.2s,MS5.0,baz=81,slow=32
KZA Kyzart 61.62 320 P **P** **08 18 44.1 +3.1**
SNR=15
TKM2 Tokmak 2 61.82 321 P **P** **08 18 42.3 -0.2**
SNR=183
KRAR Krasnoyarsk 61.98 340⇓ *eP* **P** **08 18 43.4 -0.1**
KRAR pmax pmax
comp=Z,352nm,1.7s,mb6.2
KRAR MLR MLR
comp=Z,2µm,20.0s,MS5.4
KBK Karagaybulak 62.10 320 P **P** **08 18 46.9 +2.6**
SNR=40
YAK Yakutsk 62.30 2*c iP* **P** **08 18 45.4 -0.3**
YAK *e**PP pP 08 18 55.5 -4.7
YAK *e* 08 19 26.2
YAK *e* 08 21 01.1
YAK *eS* **S** **08 27 08.9 +0.9**
YAK *e* 08 28 35.3
YAK *eSSS* 08 33 54.5
YAK pmax pmax
comp=Z,395nm,0.8s,mb6.6
YAK pmax pmax
comp=N,169nm,1.2s
YAK pmax pmax
comp=E,170nm,1.3s
YAK pmax pmax
comp=N,21nm,1.2s
YAK pmax pmax
comp=E,18nm,1.2s
YAK pmax pmax
comp=Z,25nm,1.2s,mb5.2
YAK smax
comp=E,51nm,1.6s
YAK smax
comp=Z,13nm,1.2s
YAK smax
comp=N,43nm,1.3s
YAK MLR MLR
comp=Z,792nm,19.0s,MS4.9
YAK MLR MLR
comp=N,804nm,18.0s,MS5.0
YAK MLR MLR
comp=E,439nm,18.0s,MS5.0
YAK Yakutsk 62.30 2⇑ *iP* **P** **08 18 45.4 -0.3**
comp=E,395nm,0.8s,mb6.6
YAK *ep*P pP 08 18 55.5 -4.7
YAK *e* 08 19 26.2
YAK *e* 08 21 01.1
YAK *eS* **S** **08 27 08.9 +0.9**
YAK *e* 08 28 35.3
YAK *eSSS* 08 33 54.5
YAK LR LR
comp=Z,790nm,19.0s,MS4.9
AAK Ala-Archa 62.38 320 P **P** **08 18 46.7 +0.5**
SNR=94
AAK Ala-Archa 62.38 320 P **P** **08 18 45.4 -0.8**
comp=Z,1µm,1.0s,mb7.0,SNR=58
AAK Ala-Archa 62.38 320 P **P** **08 18 45.4 -0.8**
SNR=110
AAK Ala-Archa 62.38 320⇓ *eP* **P** **08 18 45.7 -0.5**
AAK pmax pmax
comp=Z,349nm,1.7s,mb6.2
AAK MLR MLR
comp=Z,4µm,22.0s,MS5.6
AAK Ala-Archa 62.38 320⇓ *eP* **P** **08 18 45.7 -0.5**
comp=Z,349nm,1.7s,mb6.2
AAK LR LR
comp=Z,4µm,22.0s,MS5.6
CHMS Chumysh 62.40 320 P **P** **08 18 45.4 -0.9**
SNR=54
FRU Bishkek 62.40 320 *eP* **P** **08 18 45.0 -1.3**
FRU *e* 08 27 08.6
FRU pmax pmax
comp=Z,210nm,2.0s,mb5.9
FRU MLR MLR
comp=Z,2µm,21.0s,MS5.2
AML Almayashu 62.66 319 P **P** **08 18 51.2 +3.1**
SNR=13
USP Ospenovka 62.69 321 P **P** **08 18 47.6 -0.7**
SNR=156
EKS2 Erkin-Say 62.86 320 P **P** **08 18 49.5 +0.1**
SNR=243
MA2 Magadan 63.00 14*c iP* **P** **08 18 51.3 +1.0**
MA2 *e* pP 08 19 04.5 -0.3
MA2 *e* 08 19 29.9
MA2 *e* 08 21 10.3
MA2 *eS* **S** **08 27 17.3 +0.5**
MA2 *ePS* 08 27 35.3
MA2 *e* 08 28 39.8
MA2 pmax pmax
comp=N,200nm,0.9s
MA2 pmax pmax
comp=E,90nm,0.9s
MA2 pmax pmax
comp=Z,500nm,0.9s,mb6.6
ZAL Zalesovo 63.54 335 P **P** **08 18 52.0 -1.8**
comp=Z,96nm,0.9s,mb5.8,baz=350,slow=6.0,SNR=80
ZAL PKPPKP 08 47 51.2
comp=Z,1.5nm,0.3s,baz=229,slow=3.1,SNR=6.9
ZAL LR LR 08 49 52.4
comp=Z,3µm,18.9s,MS5.4,baz=337,slow=39
ZAL Zalesovo 63.54 335 P **P** **08 18 52.1 -1.8**
AFI Afiamalu 63.79 105 P **P** **08 18 54.4 -1.1**
comp=Z,49nm,1.1s,mb5.5,baz=272,slow=23,SNR=4.3
AFI Afiamalu 63.79 105 *eP* **P** **08 18 56.9 +1.4**
AFI pmax pmax
comp=Z,79nm,1.3s,mb5.6
AFI Afiamalu 63.79 105 *eP* **P** **08 18 56.9 +1.4**
comp=Z,78nm,1.3s,mb5.6
KURK Kurchatov 64.37 329 P **P** **08 18 58.4 -0.9**
comp=Z,4µm,0.7s
KK31 Karatay Array 65.20 319 *iP* **P** **08 19 03.4 -1.3**
KKAR Karatay Array 65.20 319 *iP* **P** **08 19 03.3 -1.4**
KKAR pmax pmax
comp=Z,122nm,0.7s,mb6.0
SEY Seymchan 66.32 13⇑ *eP* **P** **08 19 13.2 +1.3**
CASY Casey 66.62 186⇑ *iP* **P** **08 19 14.4 +0.6**
SMY Shemya 66.74 30 *eP* **P** **08 19 15.8 +1.2**
SMY Shemya 66.74 30 *eP* **P** **08 19 15.7 +1.1**
comp=Z,761nm,1.6s,mb6.5
SMY LR LR
comp=Z,1µm,23.0s,MS5.0
DRV Dumont d'Urvil 67.01 174 P **P** **08 19 15.0 -1.3**
DRV S S 08 28 04.0 -2.0
DRV SS SS 08 32 35.0 +10
AMKA Amchitka 68.73 33 *eP* **P** **08 19 27.8 +0.6**
AMKA *ep*P pP 08 19 42.1 +0.2
JMDO Jabal Madar 69.01 294⇑ P **P** **08 19 27.7 -1.1**
SNR=8.5
BIDO Bidbid 69.18 295 P **P** **08 19 29.1 -0.9**
SNR=14
MIR Mirnyy 69.87 193*c iP* **P** **08 19 36.0 +1.8**
MIR *e* 08 22 12.0
MIR pmax pmax
comp=Z,100nm,2.0s,mb5.4
MIR pmax pmax
comp=Z,500nm,4.0s
BSY Bisya 69.89 294 P **P** **08 19 33.6 -0.7**
SNR=20
BVAR Borovoye Array 69.91 328 P **P** **08 19 33.4 -1.0**
comp=Z,88nm,0.6s,mb5.8,baz=132,slow=8.7,SNR=187
BVAR Borovoye Array 69.91 328 P **P** **08 19 33.4 -1.0**
HOQ Hoqain 69.93 295⇑ P **P** **08 19 33.6 -0.9**
SNR=8.2
BRVK Borovoye 69.98 328 P **P** **08 19 34.4 -0.5**
comp=Z,2µm,1.0s,mb6.9
BRVK Borovoye 69.98 328 P **P** **08 19 34.1 -0.8**
SNR=160
BRVK Borovoye 69.98 328 *eP* **P** **08 19 34.3 -0.6**
BRVK pmax pmax
comp=Z,228nm,1.1s,mb6.0
BRVK Borovoye 69.98 328 *eP* **P** **08 19 34.3 -0.6**
comp=Z,228nm,1.1s,mb6.0
CHKZ Chkalovo 70.11 329 *eP* **P** **08 19 34.7 -1.0**
CHKZ pmax pmax
comp=Z,240nm,1.0s,mb6.1
ARQ Araqi 70.60 295 P **P** **08 19 38.0 -0.6**
SNR=47
ZRNK Zerenda 70.61 328 *eP* **P** **08 19 37.7 -1.0**
ZRNK *e**PP pP 08 19 53.8 +0.4
ZRNK pmax pmax
comp=Z,487nm,1.1s,mb6.3
ZRNK Zerenda 70.61 328 *eP* **P** **08 19 37.7 -1.0**
ZRNK *ep*P pP 08 19 53.8 +0.4
ASHO Ashiyiah 71.23 296 P **P** **08 19 41.9 -0.6**
SNR=16
TIXI Tiksi 71.91 1⇓ *iP* **P** **08 19 45.5 -1.1**
TIXI pmax pmax
comp=Z,304nm,1.3s,mb6.1
TIXI MLR MLR
comp=Z,3µm,23.0s,MS5.5
TIXI Tiksi 71.91 1⇓ *iP* **P** **08 19 45.5 -1.1**
comp=Z,304nm,1.3s,mb6.1
TIXI LR LR
comp=Z,3µm,23.0s,MS5.5
RBK Rabkut 71.99 288 P **P** **08 19 46.8 -0.3**
SNR=7.4
ABKT Ailbek 72.27 310 P **P** **08 19 48.0 -0.7**
comp=Z,489nm,0.8s,mb6.5,SNR=16
ABKT Ailbek 72.27 310 P **P** **08 19 48.7 0.0**
VAN Vannovskaya 72.28 310 *eP* **P** **08 19 48.4 -0.4**
WHFO Wadi Hawf 72.44 289 P **P** **08 19 48.9 -0.9**
SNR=10
ABTO Aybut 72.83 288⇑ P **P** **08 19 51.2 -0.8**
SNR=9.7
BILL Bilibino 73.86 15⇑ *eP* **P** **08 19 57.4 -0.7**
BILL *i* *PP pP 08 20 13.8 +0.9
BILL pmax pmax
comp=Z,147nm,1.3s,mb5.8
BILL MLR MLR
comp=Z,700nm,16.0s,MS5.0
BILL Bilibino 73.86 15⇑ *eP* **P** **08 19 57.4 -0.7**
comp=Z,147nm,1.3s,mb5.8
BILL *i* pP pP 08 20 13.8 +0.9
BILL LR LR
comp=Z,700nm,16.0s,MS5.0
AB31 Akbulak array 74.34 322⇑ *eP* **P** **08 20 00.0 -0.9**
AKTK Aktyubinsk 75.90 323 P **P** **08 20 09.4 -0.5**
AKTO Aktyubinsk 75.90 323 P **P** **08 20 09.4 -0.5**
comp=Z,236nm,0.6s,mb6.3,baz=104,slow=7.3,SNR=473
AKTO Aktyubinsk 75.90 323 *iP* **P** **08 20 09.4 -0.5**
AKTO pmax pmax
comp=Z,54nm,0.7s,mb5.6
MUKL Al Mukalla 76.68 285⇑ *eP* **P** **08 20 14.7 +0.4**
ARU Arti 77.55 329 P **P** **08 20 18.7 -0.5**
comp=Z,2µm,0.8s,mb7.0,SNR=27
ARU Arti 77.55 329 *eP* **P** **08 20 18.0 -1.2**
ARU *e* pP 08 20 32.9 -1.2
ARU *e* 08 23 13.0
ARU *ePPP* 08 25 01.6
ARU *eS* S 08 30 04.7 -1.8
ARU *e* 08 30 26.6
ARU MLR MLR
comp=N,500nm,20.0s,MS5.2
ARU MLR MLR
comp=E,1µm,20.0s,MS5.2
ARU MLR MLR
comp=Z,1µm,20.0s,MS5.2
ARU Arti 77.55 329 *eP* **P** **08 20 18.0 -1.2**
ARU *e* pP 08 20 32.9 -1.2
ARU *e* 08 23 13.0
ARU *ePPP* 08 25 01.6
ARU *eS* S 08 30 04.7 -1.8
ARU *e* 08 30 26.6
ARU LR LR
comp=Z,1µm,20.0s,MS5.2
KIP Kipapa 77.84 68⇑ *eP* **P** **08 20 22.3 +1.5**
AKUT Akutan 78.13 34 *eP* **P** **08 20 22.8 +0.4**
comp=Z,804nm,1.2s,mb6.5
AKUT LR LR
comp=Z,1µm,20.0s,MS5.1
OPO Ambohidratompo 78.51 251 P **P** **08 20 26.9 +2.4**
comp=Z,62nm,0.9s,mb5.5,baz=89,slow=4.9,SNR=40
KBD Kabd 79.25 300 *eP* **P** **08 20 27.9 -0.6**
KBD AMb AMB 08 20 30.9
comp=Z,632nm,1.2s,mb6.4
UMR Umm Al-Rimmam 79.27 300 *eP* **P** **08 20 27.9 -0.7**
UMR AMb AMB 08 20 30.9
comp=Z,330nm,0.9s,mb6.3
RDF Al-Radifah 79.34 299 *eP* **P** **08 20 28.3 -0.8**
RDF AMb AMB 08 20 31.1
comp=Z,189nm,0.8s,mb6.1
MAW Mawson 79.42 200⇑ *iP* **P** **08 20 30.6 +1.1**
comp=Z,37nm,1.0s,mb5.3
MAW *i* S S 08 30 28.0 +1.5
MAW Mawson 79.42 200 P **P** **08 20 30.6 +1.1**
comp=Z,43nm,1.1s,mb5.3,baz=59,slow=6.9,SNR=74
MAW PKKPbc PKKPbc 08 39 17.7 -0.5
comp=Z,2.9nm,0.9s,baz=299,slow=5.1,SNR=5.5
MAW PKPPKP 08 47 22.7
comp=Z,2.3nm,1.0s,baz=247,slow=8.9,SNR=3.9
MAW LR LR 08 52 36.1
comp=Z,866nm,21.1s,MS5.1,baz=57,slow=33
SOKR Solikamsk 79.49 331*c iP* **P** **08 20 28.8 -1.1**
SOKR S S 08 30 36.0 +8.8
SOKR pmax pmax
comp=Z,190nm,0.9s,mb6.0
VNDA Vanda 79.62 172 P **P** **08 20 30.9 +0.3**
comp=Z,13nm,0.9s,baz=317,slow=5.9,SNR=56
VNDA PKKPbc PKKPbc 08 39 18.8 +1.0
comp=Z,1.7nm,0.8s,baz=341,slow=2.7,SNR=8.6
VNDA PKPPKP 08 47 17.0
comp=Z,1.3nm,1.0s,baz=268,slow=3.3,SNR=3.7
VNDA LR LR 08 57 34.5
comp=Z,2µm,19.1s,MS5.5,baz=333,slow=37
VNDA Vanda 79.62 172 P **P** **08 20 30.9 +0.3**
VNDA PKKPbc PKKPbc 08 39 18.8 +1.0
VNDA P'P' 08 47 17.0
VNDA LR LR 08 57 34.5
MIB Mutribah 79.62 300 *eP* **P** **08 20 30.0 -0.6**
MIB AMb AMB 08 20 32.6
comp=Z,487nm,0.8s,mb6.5
NAY Al-Naaiem 79.65 300 *eP* **P** **08 20 30.0 -0.8**
NAY AMb AMB 08 20 32.8
comp=Z,230nm,0.9s,mb6.1
SBA Scott Base 80.55 172 *eP* **P** **08 20 36.7 +1.1**
SBA Scott Base 80.55 172 *eP* **P** **08 20 36.6 +1.0**
comp=Z,100nm,1.5s,mb5.5
TNA Tin City 80.92 23 *eP* **P** **08 20 39.1 +1.5**
comp=Z,187nm,1.2s,mb5.9
MAK Makhachkala 81.22 313*c iP* **P** **08 20 39.7 +0.5**
MAK *i* pP 08 20 52.6 -1.6
MAK *i* 08 23 41.2
MAK *ePPP* 08 25 32.2
MAK *eS* S 08 30 48.5 +3.2
MAK pmax pmax
comp=Z,481nm,1.9s,mb6.1
TRBA At Turbah 81.38 283⇓ *eP* **P** **08 20 42.0 +2.0**
SDPT Sand Point 81.41 34 *eP* **P** **08 20 40.8 +0.6**
comp=Z,698nm,0.7s,mb6.7
SDPT LR LR
comp=Z,1µm,23.0s,MS5.2
BHD Baghdad 82.49 303 *ix* x 08 20 45.0
BHD Baghdad 82.49 303 *ex* x 08 30 58.0
ATD Arta Tunnel 82.56 282 P **P** **08 20 48.2 +2.0**
comp=Z,70nm,0.8s,mb5.7,baz=63,slow=1.4,SNR=21
CHGN Chignik 82.75 33 *eP* **P** **08 20 47.3 +0.1**
GNI Garni 82.91 310 P **P** **08 20 49.4 +1.4**
comp=Z,85nm,0.8s,mb5.8,baz=332,slow=2.6,SNR=43
GNI Garni 82.91 310 P **P** **08 20 49.5 +1.5**
SNR=54
GNI Garni 82.91 310 *eP* **P** **08 20 49.6 +1.6**
GNI pmax pmax
comp=Z,211nm,0.8s
GNI Garni 82.91 310 *eP* **P** **08 20 49.6 +1.6**
comp=Z,211nm,0.8s,mb6.2
MTA Mtatsminda 83.04 312 P **P** **08 20 49.0 +0.3**
MSL Mosul 83.82 306 *ix* x 08 20 56.0
MSL *ex* x 08 21 03.0
ZEI Tsey 83.82 313 *eP* **P** **08 20 54.5 +1.8**
ZEI pmax pmax
comp=Z,361nm,1.0s,mb6.5
ONI Oni 84.13 313 P **P** **08 20 54.4 +0.1**
KARS Kars 84.21 311 P **P** **08 20 56.9 +2.3**
KIV Kislovodsk 84.82 314 P **P** **08 20 58.3 +0.5**
comp=Z,935nm,1.2s,mb6.8,SNR=24
KIV Kislovodsk 84.82 314⇑ P **P** **08 20 59.3 +1.5**
SNR=38
KIV Kislovodsk 84.82 314 *eP* **P** **08 20 58.8 +1.0**
KIV *e**PP pP 08 21 13.2 +0.3
KIV pmax pmax

comp=Z,128nm,0.8s,mb6.1
KIV Kislovodsk 84.82 314 *e*P P **08 20 58.8 +1.0**
comp=Z,128nm,0.8s,mb6.1
KIV *e*pP pP 08 21 13.2 +0.3
SVW2 Sparrevohn 85.09 29 *e*P P **08 21 00.0 +0.9**
TTA Tatalina 85.21 27 *e*P P **08 21 01.0 +1.3**
PECR Pechory 85.34 326 *e*P P **08 21 00.0 -0.3**
PECR *e*S S 08 31 20.0 -7.0
PECR pmax pmax
comp=Z,3μm,3.4s
PECR smax
comp=N,2μm,12.0s
PECR smax
comp=E,2μm,12.0s
PECR MLR MLR
comp=Z,2μm,23.0s,MS5.4
PPT Papeete 85.36 107 *e*PP PP 08 24 17.4 -1.5
comp=Z,220nm,24.2s
PPT Papeete 85.36 107 *e*S S 08 31 30.2 +3.0
comp=Z,2μm,28.2s
PPT *e*SS SS 08 37 06.2 +3.5
comp=Z,871nm,27.6s
PPT *e*LR LR 08 48 02.3
comp=Z,3μm,29.0s
BCA Borcka 85.39 311 P P **08 21 01.2 +0.6**
EZM Erzurum 85.47 310 P P **08 21 02.9 +1.9**
TBI Tubuai 85.60 113 *e*PP PP 08 24 24.7 +3.8
comp=Z,107nm,34.0s
TBI Tubuai 85.60 113 *e*S S 08 31 33.4 +3.8
comp=Z,2μm,29.2s
TBI *e*LR LR 08 48 16.2
comp=Z,2μm,27.2s
DESE Dese 85.69 281 *i* P P **08 21 05.8 +3.7**
BINT Bingol 86.07 309 P P **08 21 06.1 +2.1**
KDAK Kodiak Island 86.14 32 P P **08 21 05.0 +0.7**
comp=Z,946nm,0.8s,mb7.1,SNR=16
KDAK Kodiak Island 86.14 32 P P **08 21 05.2 +0.9**
comp=Z,103nm,0.8s,mb6.1,baz=220,slow=9.1
KDAK Kodiak Island 86.14 32 *e*P P **08 21 04.7 +0.4**
comp=Z,108nm,0.8s,mb6.1
KDAK *e*pP pP 08 21 19.6 +0.1
VRHR Novokhopersk 86.21 321 *e*P P **08 21 04.4 -0.3**
VRHR pmax pmax
comp=E,300nm,0.7s
VRHR pmax pmax
comp=Z,740nm,0.7s,mb7.0
VRHR pmax pmax
comp=N,110nm,0.6s
VRHR MLR MLR
comp=Z,2μm,22.0s,MS5.4
VRHR MLR MLR
comp=E,2μm,20.0s
DIY Diyarbakir 86.22 308 P P **08 21 06.7 +2.0**
FURI Furi 86.60 279 *e*P P **08 21 10.7 +4.1**
FURI S S 08 31 42.1 +2.7
EZC Erzincan 86.65 310 P P **08 21 10.0 +3.2**
PTK Pertek 86.93 309 P P **08 21 09.7 +1.5**
SOC Sochi 86.94 313*c i*P P **08 21 08.4 +0.2**
SOC *e**PP pP 08 21 24.9 +1.5
SOC *i* S S 08 31 31.1 -12
SOC *e*SS SS 08 37 25.6 -0.3
SOC *e*SSS 08 40 52.3
SOC pmax pmax
comp=Z,320nm,0.8s,mb6.6
SOC MLR MLR
comp=Z,721nm,18.0s,MS5.1
SOC Sochi 86.94 313⇑*i*P P **08 21 08.4 +0.2**
comp=Z,320nm,0.8s,mb6.6
SOC *e*pP pP 08 21 24.9 +1.5
SOC *i* S S 08 31 31.1 -12
SOC *e*SS SS 08 37 25.6 -0.3
SOC *e*SSS 08 40 52.3
SOC LR LR
comp=Z,720nm,18.0s,MS5.1
SLKM Skilak Lake 87.62 30 *e*P P **08 21 11.2 -0.3**
SLKM *e**PP pP 08 21 25.2 -1.5
MALT Malatya 87.66 308⇑*i*P P **08 21 13.3 +1.6**
MALT Malatya 87.66 308 *e*P P **08 21 12.9 +1.2**
comp=Z,557nm,1.3s,mb6.6
VRSR Storozhevoye 87.74 321*c i*P P **08 21 11.3 -0.8**
VRSR *e* 08 31 31.3
VRSR *e*S S 08 31 47.0 -3.3
VRSR pmax pmax
comp=Z,430nm,1.2s,mb6.5
VRSR pmax pmax
comp=N,100nm,1.1s
VRSR pmax pmax
comp=E,390nm,1.1s
VRSR smax
comp=N,230nm,3.3s
VRSR smax
comp=Z,200nm,4.2s
VRSR smax
comp=E,520nm,5.1s
VRSR MLR MLR
comp=N,2μm,22.0s,MS5.6
VRSR MLR MLR
comp=E,2μm,22.0s,MS5.6
VRSR MLR MLR
comp=Z,2μm,22.0s,MS5.5
VOR Voronezh 87.77 322 *e*P P **08 21 11.0 -1.2**
VOR pmax pmax
comp=N,400nm,1.4s
VOR pmax pmax
comp=E,750nm,1.4s
VOR pmax pmax
comp=Z,100nm,1.4s,mb5.8
KMBO Kilima Mbogo 87.92 269 P P **08 21 15.9 +2.9**
comp=Z,95nm,0.8s,mb6.1,baz=66,slow=6.5,SNR=249
KMBO LR LR 08 59 19.4
comp=Z,2μm,21.4s,MS5.4,baz=89,slow=35
SYO Syowa Base 88.10 201⇓*e*P P **08 21 14.0 +0.2**
SYO Syowa Base 88.10 201⇓*e*PcP PcP 08 21 16.1 +0.6
SYO Syowa Base 88.10 201⇓*e*pP pP 08 21 29.8 +0.8
SYO Syowa Base 88.10 201⇑*e*PP PP 08 24 39.8 -1.2
PMR Palmer 88.24 28 *e*P P **08 21 14.3 -0.1**
PMR pmax pmax
comp=Z,71nm,1.1s,mb5.8
PMR Palmer 88.24 28 *e*P P **08 21 13.1 -1.3**
comp=Z,96nm,2.1s,mb5.7
PMR LR LR
comp=Z,500nm,21.0s,MS4.9
MCK McKinley 88.47 26 *e*P P **08 21 15.0 -0.6**
MCK *e**PP pP 08 21 28.9 -1.9
MCK pmax pmax
comp=Z,36nm,0.8s,mb5.7
MCK McKinley 88.47 26 *e*P P **08 21 15.0 -0.6**
comp=Z,73nm,0.8s,mb6.0
MCK *e*pP pP 08 21 28.9 -1.9
GAZ Gaziantep 88.58 307 P P **08 21 17.6 +1.5**
ANN Anapa 88.64 315 *i* P P **08 21 15.9 -0.4**
ASF Jabal al Asfar 88.73 302 P P **08 21 18.7 +1.9**
comp=Z,223nm,0.9s,mb6.5,baz=330,slow=2.1,SNR=200
SVSK Karacayir 88.82 310 P P **08 21 18.6 +1.4**
KMRS Kahramanmaras 88.84 307 P P **08 21 17.8 +0.5**
MOS Moscow 88.90 326*α i*P P **08 21 17.1 -0.5**
MOS *i* pP 08 21 31.1 -1.7
MOS *e* 08 24 49.9
MOS *i* S S 08 31 57.9 -3.4
MOS pmax pmax
comp=Z,800nm,1.5s,mb6.8
MOS pmax pmax
comp=Z,415nm,1.1s,mb6.7
MOS Moscow 88.90 326 *i* Pcu 08 21 17.1
comp=Z,415nm,1.1s
MOS *i* 08 21 31.1
MOS *e* 08 24 49.9
MOS *i* S S 08 31 57.9 -3.4
COLA College 89.01 25 *e*P P **08 21 17.0 -1.1**
comp=Z,21nm,0.8s,mb5.5
COLA *e*pP pP 08 21 31.8 -1.5
TMCR Tamitsa 89.06 334 *e*P P **08 21 16.5 -1.8**
TMCR pmax pmax
comp=Z,160nm,1.3s,mb6.2
TOKT Tokat 89.18 310 *e*P P **08 21 19.7 +0.8**
FKH Fakeheh 89.18 304 *e*P P **08 21 20.8 +1.9**
HTY Hatay 89.43 306 P P **08 21 21.4 +1.4**
OBN Obninsk 89.48 325 P P **08 21 19.0 -1.3**
comp=Z,2μm,1.1s,SNR=27
OBN Obninsk 89.48 325⇑*e*P P **08 21 19.6 -0.7**
OBN *e**PP pP 08 21 36.2 +0.7
OBN *e* 08 24 51.4
OBN *e*S S 08 31 45.4 -21
OBN *e*SS SS 08 38 03.3 +0.4
OBN pmax pmax
comp=Z,609nm,1.2s,mb6.8
OBN Obninsk 89.48 325⇑*e*P P **08 21 19.6 -0.7**
comp=Z,609nm,1.2s,mb6.8
OBN *e*pP pP 08 21 36.2 +0.7
OBN *e* 08 24 51.4
OBN *e*S S 08 31 45.4 -21
OBN *e*SS SS 08 38 03.3 +0.4
KVT Kavak 89.57 311 P P **08 21 20.1 -0.7**
QSPA South Pole Qui 89.59 180 *e*P P **08 21 21.7 +0.9**
comp=Z,66nm,1.3s,mb5.8
RCY Rachaya 89.65 303 *e*P P **08 21 22.6 +1.5**
KOZT Kozan 89.69 307 P P **08 21 21.9 +0.6**
BNN Bunyan 89.69 309 P P **08 21 21.8 +0.5**
CEYT Ceyhan 89.75 307 P P **08 21 22.4 +0.9**
BHL Bhannes 89.80 304 *e*P P **08 21 23.0 +1.2**
DIV Divide 89.83 29 *e*P P **08 21 22.6 +0.7**
DIV *e*pP pP 08 21 37.4 +0.2
KARA Karaisali 90.31 307 P P **08 21 24.9 +0.8**
EIL Elat 90.37 300 *e*P P **08 21 25.5 +1.1**
comp=Z,3μm,1.2s
LVZ Lovozero 90.52 338 P P **08 21 22.9 -2.2**
comp=Z,343nm,0.9s,mb6.7,SNR=8.0
LVZ Lovozero 90.52 338*c i*P P **08 21 22.2 -2.9**
LVZ pmax pmax
comp=Z,76nm,1.2s,mb5.9
LVZ pmax pmax
comp=N,8.0nm,1.0s
LVZ pmax pmax
comp=E,14nm,1.1s
LVZ MLR MLR
comp=E,1μm,20.0s,MS5.4
LVZ MLR MLR
comp=Z,2μm,20.0s,MS5.5
LVZ MLR MLR
comp=N,791nm,23.0s,MS5.4
CORM Corum 90.64 310 P P **08 21 25.7 -0.1**
MERS Mersin 90.73 307 P P **08 21 26.4 +0.2**
MENT Mentasta 90.80 27 *e*P P **08 21 26.9 +0.4**
APA Apatity 91.00 337*i*P P **08 21 26.0 -1.4**
APA *e* 08 31 54.0
APA *e*S S 08 32 20.0 -0.7
APA *e*PPS 08 34 04.0
APA *e*SS SS 08 38 19.0 -5.8
APA pmax pmax
comp=Z,65nm,1.2s,mb5.8
SIM Simferopol' 91.00 315 *i* P P **08 21 27.0 -0.4**
TOS Tosya 91.10 311 P P **08 21 28.5 +0.7**
KAMT Kaman 91.35 309 P P **08 21 28.9 -0.1**
BRTR Keskin Array B 91.41 310 P P **08 21 29.1 -0.2**
comp=Z,39nm,0.9s,mb5.7,baz=121,slow=4.6,SNR=104
BRTR PP PP 08 25 13.2 +5.9
comp=Z,4.6nm,1.1s,baz=76,slow=5.5,SNR=3.5
BRTR LR LR 09 11 25.2
comp=Z,235nm,19.1s,MS4.6,baz=286,slow=41
BRTR Keskin Array B 91.41 310 P P **08 21 29.1 -0.2**
BRTR 08 25 13.2
IKL Isikli 91.41 306 P P **08 21 29.0 -0.3**
CSS Prodhromos 91.71 305 P P **08 21 31.1 +0.4**
comp=Z,2.0nm,1.0s
MAMC Mammari 91.80 305 P P **08 21 31.9 +0.8**
ANTO Ankara 92.06 310 P P **08 21 31.3 -1.0**
ANTO Ankara 92.06 310⇓*i*P P **08 21 32.7 +0.4**
ANTO Ankara 92.06 310⇑P P **08 21 33.0 +0.7**
SNR=7.6
ANTO Ankara 92.06 310 P P **08 21 32.8 +0.5**
SAFT Safranbolu 92.10 311 P P **08 21 32.5 0.0**
ALFC Alevga 92.31 305⇑P P **08 21 33.5 +0.1**
comp=Z,5.3nm,0.7s,mb5.0
ALFC Alevga 92.31 305⇑*e*P P **08 21 33.5 +0.1**
KONT Konya--Tatoy 92.44 308 P P **08 21 32.7 -1.3**
PPCY Paphos 92.53 305 P P **08 21 34.1 -0.3**
DAWY Dawson 92.69 26 *e*P P **08 21 35.9 +0.7**
DAWY *e*pP pP 08 21 50.6 +0.1
PUL Pulkovo 92.75 330 *e*P P **08 21 35.9 +0.4**
PUL *e* 08 25 14.3
PUL pmax pmax
comp=N,72nm,0.6s
PUL pmax pmax
comp=Z,133nm,0.6s,mb6.5
PUL pmax pmax
comp=E,210nm,1.1s
PUL Pulkovo 92.75 330 *e*P P **08 21 35.9 +0.4**
comp=E,133nm,0.6s,mb6.5
PUL *e* 08 25 14.3
KEV Kevo 93.16 340 *e*P P **08 21 35.9 -1.4**
KEV pmax pmax
comp=Z,24nm,0.9s,mb5.6
KEV Kevo 93.16 340 *e*P P **08 21 35.9 -1.5**
comp=Z,24nm,0.9s,mb5.6
ESKT Eskisehir 93.56 309 P P **08 21 39.2 0.0**
ARCES ARCESS Array B 93.71 340 P P **08 21 38.3 -1.6**
comp=Z,25nm,0.7s,mb5.8,baz=79,slow=6.3,SNR=53
ARCES LR LR 09 07 28.6
comp=Z,1μm,21.1s,MS5.3,baz=97,slow=38
ISP Isparta 93.91 308 P P **08 21 39.5 -1.3**
ISP Isparta 93.91 308⇓*i*P P **08 21 40.6 -0.2**
AKASG Malin Array Be 94.05 321 P P **08 21 40.5 -1.0**
comp=Z,39nm,0.8s,mb5.9,baz=73,slow=4.1,SNR=142
AKASG PP PP 08 25 32.9 +4.8
comp=Z,0.5nm,0.3s,baz=70,slow=8.0,SNR=5.5
AKASG LR LR 09 05 52.2
comp=Z,1μm,22.0s,MS5.3,baz=60,slow=37
AKASG Malin Array Be 94.05 321 P P **08 21 40.5 -0.9**
AKASG 08 25 32.9
AKASG Malin Array Be 94.05 321 P P **08 21 40.5 -0.9**
AKASG 08 25 32.9
AKASG *e* 08 21 40.5 -0.9
AKBB Malin Array Si 94.05 321 *e*P P **08 21 40.2 -1.2**
ADVT Abdulvahap 94.37 310 P P **08 21 42.1 -0.8**
HRT Hereke 94.40 311 P P **08 21 41.8 -1.3**
ELL Elmali 94.44 307 P P **08 21 43.5 +0.2**
INK Inuvik 94.49 21 *e*P P **08 21 43.3 -0.2**
INK *e**PP pP 08 21 57.5 -1.2
INK pmax pmax
comp=Z,135nm,1.0s
INK Inuvik 94.49 21 *e*P P **08 21 43.3 -0.1**
comp=Z,4μm,1.0s
INK *e*pP pP 08 21 57.5 -1.2
MNK Minsk 94.56 325 *e*P P **08 21 40.0 -3.8**
MNK pmax pmax
comp=N,340nm,1.5s
MNK pmax pmax
comp=E,590nm,1.5s
MNK pmax pmax
comp=Z,490nm,1.5s,mb6.7
TAOE Nuku Hiva Isla 94.56 99 *e*LR LR 08 52 28.0
comp=Z,5μm,28.0s
BJO Bjornoya 94.58 345 AMS AMS 09 08 47.9
comp=Z,959nm,19.5s,MS5.3
KIS Kishinev 94.60 317*ce*P P **08 21 40.0 -4.0**
KIS *e* 08 25 30.0
KIS *e*S S 08 32 48.0 -4.7
KIS pmax pmax
comp=Z,800nm,1.4s,mb7.0
KIS MLR MLR
comp=Z,1μm,22.0s,MS5.3
KIS MLR MLR
comp=N,600nm,20.0s,MS5.3
KIS MLR MLR
comp=E,800nm,20.0s,MS5.3
KIS MLR MLR
comp=Z,2μm,20.0s
FINES FINESS Array B 94.66 332 P P **08 21 42.9 -1.4**
comp=Z,12nm,0.8s,mb5.4,baz=100,slow=6.4,SNR=26
FINES LR LR 09 07 38.3
comp=Z,1μm,20.8s,MS5.3,baz=288,slow=38
KBS Kingsbay 94.71 350 *e*P P **08 21 38.5 -5.9**
KBS *e*PP PP 08 25 32.6 -0.6
KBS AMS AMS 09 06 35.0
comp=Z,712nm,25.3s,MS5.0
KBS Kingsbay 94.71 350⇓*i*P P **08 21 43.6 -0.9**
VSU Vasula 94.72 329⇑*e*P P **08 21 42.8 -1.7**
TIRR Tirgusor 95.08 314⇓*i*P P **08 21 46.2 0.0**
TIRR Tirgusor 95.08 314 P P **08 21 46.3 +0.1**
TIRR Tirgusor 95.08 314 *e*P P **08 21 46.0 -0.2**
comp=Z,127nm,1.0s,mb6.3
TIRR *e*pP pP 08 22 01.5 +0.1
FETY Fethiye 95.11 307 P P **08 21 45.4 -0.9**
SKAG Skagway 95.12 30 *e*P P **08 21 47.9 +1.5**
comp=Z,84nm,0.8s,mb6.2
SKAG LR LR
comp=Z,900nm,22.0s,MS5.2
CFR Carcaliu 95.22 315 P P **08 21 46.8 0.0**
PSN Preselentsi 95.31 314 *i* P P **08 21 47.0 -0.2**
TRO Tromso 95.94 340 *e*P P **08 21 46.7 -3.4**
TRO AMS AMS 09 07 40.3
comp=Z,904nm,22.4s,MS5.2
AKS Akhisar 95.96 309 P P **08 21 49.9 -0.3**
DAT Datca 96.31 307 P P **08 21 50.2 -1.5**
IZM Izmir 96.43 308 P P **08 21 52.0 -0.4**
CANB Canakkale 96.45 310 P P **08 21 51.2 -1.2**
BODT Bodrum 96.50 307 P P **08 21 51.6 -1.0**
EDRB Edirne 96.52 312 P P **08 21 52.0 -0.8**
JMB Yambol 96.58 313 *i* P P **08 21 53.0 0.0**
BLCB Balcova 96.60 308 P P **08 21 52.6 -0.4**
LSZ Lusaka 96.66 255⇓P P **08 21 55.3 +1.9**
SNR=8.0
LSZ Lusaka 96.66 255 *e*P P **08 21 55.2 +1.8**
LSZ pmax pmax
comp=Z,60nm,1.1s,mb5.9
LSZ Lusaka 96.66 255 *e*P P **08 21 55.2 +1.8**
comp=Z,60nm,1.1s,mb5.9
MLR Muntele Rosu 96.73 316 P P **08 21 53.9 +0.2**
comp=Z,73nm,0.9s,mb6.1,baz=11,slow=1.2,SNR=55
MLR Muntele Rosu 96.73 316⇑*i*P P **08 21 53.6 -0.1**
MLR Muntele Rosu 96.73 316 P P **08 21 54.2 +0.5**
MLR Muntele Rosu 96.73 316⇑P P **08 21 53.6 -0.1**
BUC1 Bucharest 96.79 314 P P **08 21 54.9 +0.9**
BURAR Bucovina Array 96.97 318⇑*i*P P **08 21 55.8 +1.0**
WRAK Wrangell Islan 97.18 33 *e*P P **08 21 56.7 +1.0**
comp=Z,22nm,1.0s,mb5.5
NVL N'lazarevskaya 97.22 198⇑*i*P P **08 21 56.8 +0.9**
NVL *e*S SKSac 08 32 29.1 +0.4
NVL pmax pmax
comp=Z,29nm,1.5s,mb5.5
MAIT Maitri 97.25 198 *e*P P **08 21 56.9 +0.9**
SUW Suwalki 97.33 324 *e*Pc P **08 21 55.7 -0.7**
comp=Z,0.5nm,1.6s
SUW *e*pP pP 08 22 11.8 +0.2
SUW L 09 06 17.1
comp=Z,2.6nm,26.1s
SUW Suwalki 97.33 324⇑*e*P P **08 21 55.7 -0.7**
SUW *e*pP pP 08 22 11.8 +0.2
ZIMR 97.34 314 P P **08 21 56.8 +0.3**
PVL Pavlikeni 97.42 313 *i* P P **08 21 57.5 +0.7**
LVV L'vov 97.46 320⇑*i*P P **08 21 56.2 -0.8**
ALE Alert 97.82 1 P P **08 21 58.0 -0.6**
comp=Z,124nm,0.9s,mb6.4,SNR=7.9
DLBC Dease Lake 98.01 31 LR LR 09 07 00.4
comp=Z,390nm,18.9s,MS4.9,baz=321,slow=36
KWP Kalwaria 98.33 320 *e*Pc P **08 22 01.0 +0.1**
comp=Z,0.3nm,1.4s
KWP L 09 07 13.9
comp=Z,1.7nm,25.5s
BOSA Boshof 98.56 241 P P **08 22 02.2 +0.3**
comp=Z,19nm,1.1s,mb5.6,baz=126,slow=2.1,SNR=10
BOSA PP PP 08 26 04.5 +1.7
comp=Z,6.7nm,0.9s,baz=124,slow=8.0,SNR=4.5
BOSA LR LR 09 03 01.8
comp=Z,2μm,20.8s,MS5.5,baz=88,slow=33
BOSA Boshof 98.56 241 P P **08 22 02.2 +0.3**
BOSA 08 26 04.6
BOSA Boshof 98.56 241 P P **08 22 02.2 +0.3**
BOSA PP PP 08 26 04.5 +1.7
BOSA LR LR 09 03 01.8
IDI Anoyia 98.60 306 P P **08 22 02.0 -0.1**
comp=Z,31nm,0.7s,mb6.0,baz=59,slow=7.5,SNR=14
KOLS Kolonicke sedl 98.73 319 *e*P P **08 22 03.3 +0.6**
DRGR 98.78 317⇑*i*P P **08 22 03.2 +0.3**
DRGR 98.78 317⇑P P **08 22 03.1 +0.2**
MMB Musomiste 98.79 312 *i* P P **08 22 02.6 -0.4**
RKT Rikitea 98.92 113 *e*PP PP 08 26 09.3 +3.6
comp=Z,162nm,27.8s
RKT Rikitea 98.92 113 *e*SKSac SKSac 08 32 42.3 +5.0
comp=Z,741nm,28.2s
RKT *e*SP SP 08 35 02.0 +6.6
comp=Z,529nm,30.2s
RKT *e*LR LR 08 54 18.0
comp=Z,1μm,22.8s
GZR Gura Zlata 98.95 316⇑*i*P P **08 22 04.5 +0.8**
GZR Gura Zlata 98.95 316⇑P P **08 22 04.5 +0.8**
VTS Vitosha 99.04 313 *i* P P **08 22 04.0 -0.1**
VTS Vitosha 99.04 313⇑*i*P P **08 22 04.2 +0.1**
VTS Vitosha 99.04 313⇑P P **08 22 04.2 +0.1**
CRVS Cervenica-Dubn 99.26 319 *e*P P **08 22 05.8 +0.7**
STHS Stebnicka Huta 99.31 320 *e*P P **08 22 06.2 +0.9**
STHS pmax pmax
comp=Z,40nm,1.0s,mb5.9
STHS Stebnicka Huta 99.31 320 *e*P P **08 22 06.2 +0.9**
comp=Z,40nm,1.0s,mb5.9
VAY Valandovo 99.69 312 *e*P Pdif 08 22 05.1 -1.8
BZS Buzias 99.72 316⇑*i*P Pdif 08 22 06.8 -0.3
BZS Buzias 99.72 316 P Pdif 08 22 07.3 +0.2
NIE Niedzica 99.91 320 *e*P Pdif 08 22 08.7 +0.8
KECS Kecovo 99.97 319 *e*P Pdif 08 22 08.6 +0.4
KECS pmax pmax
comp=Z,33nm,1.3s,mb5.6
KECS Kecovo 99.97 319 *e*P Pdif 08 22 08.6 +0.4
comp=Z,33nm,1.3s
OJC Ojcow 100.08 321⇑*e*P Pdif 08 22 08.6 -0.1
OJC *e* 08 32 44.7
OJC MLR MLR
comp=Z,6μm,22.2s,MS6.1
NSS Namsos 100.12 336 *e*P Pdif 08 22 05.8 -3.1
NSS AMS AMS 09 10 26.2
comp=Z,1μm,21.2s,MS5.5
PSZ Piszkesteto 100.47 319⇑*i*P Pdif 08 22 10.5 +0.1
PSZ Piszkesteto 100.47 319⇑*i*P Pdif 08 22 10.2 -0.2
PSZ Piszkesteto 100.47 319 P Pdif 08 22 11.0 +0.6
PSZ pmax pmax
comp=Z,92nm,1.4s
GRUS Gruza 100.64 315⇑*i*P Pdif 08 22 10.8 -0.5
LIKS Likavka 100.76 320 *e*P Pdif 08 22 12.9 +1.2
LIKS pmax pmax
comp=Z,39nm,1.1s
LIKS Likavka 100.76 320 *e*P Pdif 08 22 12.9 +1.2
comp=Z,39nm,1.1s
HFS Hagfors 100.86 332 P Pdif 08 22 10.7 -1.5
comp=Z,7.7nm,0.7s,baz=110,slow=7.8,SNR=14
SNAA Sanae 100.91 195 *e*Pdiff Pdif 08 22 13.1 +0.7
SNAA *e* 08 22 14.8
SNAA *e* 08 22 33.8
SNAA *e* 08 22 43.3
SNAA *e* 08 26 20.0
SNAA *e* 08 26 33.3
SNAA *e* 08 26 50.9
SNAA *e* 08 26 58.3
SNAA *e* 08 38 24.6
SNAA *e* 08 38 30.0
SNAA *e* 08 38 47.9
SNAA *e* 08 38 49.9
SNAA *e* 08 39 01.4
SNAA Sanae 100.91 195⇓*i*P Pdif 08 22 13.7 +1.3
SNAA Sanae 100.91 195 *e*Pdif Pdif 08 22 13.1 +0.8
comp=Z,13nm,1.3s
VYHS Vyhne 101.05 319 *e*P Pdif 08 22 13.3 +0.3
VYHS *e* 08 26 16.5
VYHS pmax pmax
comp=Z,38nm,1.7s
VYHS Vyhne 101.05 319 *e*P Pdif 08 22 13.3 +0.3
comp=Z,38nm,1.7s
VYHS *e*PP PP 08 26 16.5 -5.3
DAG Danmarks Havn 101.05 352⇓*i*P Pdif 08 22 12.0 -1.0
comp=Z,17nm,0.7s
DAG Danmarks Havn 101.05 352⇓*i*P Pdif 08 22 12.0 -1.0
DAG pmax pmax
comp=Z,17nm,0.7s
DIVS Divcibare 101.12 315⇑*i*P Pdif 08 22 13.2 -0.1
BUD Budapest 101.13 318 *i* Pc Pdif 08 22 13.6 +0.2
OKC Ostrava-Krasne 101.20 321 *e*PDIF Pdif 08 22 14.5 +0.8
OKC *e*pP 08 22 29.0
OKC AMS AMS 09 09 50.0
comp=Z,900nm,19.7s
OKC Ostrava-Krasne 101.20 321 *e*Pdif Pdif 08 22 14.5 +0.8
OKC *e* 08 22 29.0
BBLS Bajina Basta - 101.58 315⇑*i*P Pdif 08 22 16.2 +0.8
MORC Moravsky Berou 101.59 321⇑*i*P Pdif 08 22 15.8 +0.4
MORC Moravsky Berou 101.59 321 P Pdif 08 22 15.9 +0.5
MORC pmax pmax
comp=Z,61nm,1.5s
MORC Moravsky Berou 101.59 321 *e*Pdif Pdif 08 22 15.8 +0.3
comp=Z,60nm,1.5s
PKSM Moragy 101.65 317⇑*i*P Pdif 08 22 15.4 -0.3
PKSM Moragy 101.65 317 P Pdif 08 22 15.8 +0.1
PKSM Moragy 101.65 317⇑*i*P Pdif 08 22 15.6 -0.1
NB2 NORSAR Subarra101.70 333 Pdif Pdif 08 22 13.8 -2.1
comp=Z,22nm,1.1s,baz=69,slow=4.4
NOA NORSAR Array B101.70 333 P Pdif 08 22 14.2 -1.7
comp=Z,8.7nm,0.8s,baz=69,slow=4.6,SNR=20

NOA PP PP 08 26 11.4 -15
comp=Z,11nm,1.1s,baz=72,slow=8.3,SNR=3.8
BSD Bornholm Skovb 101.76 327 *i* P Pdif 08 22 16.0 -0.2
comp=Z,102nm,1.4s
BSD *i* 08 26 28.8
BSD *e* 08 36 09.7
BSD
comp=Z,2µm,20.0s
BSD Bornholm Skovb 101.76 327 *i* P Pdif 08 22 16.0 -0.2
comp=Z,102nm,1.4s
BSD *i* 08 26 28.8
BSD *e* 08 36 09.7
KSP Ksiaz 102.11 322 *e*Pc Pdif 08 22 18.2 +0.5
comp=Z,0.2nm,1.6s
KSP L 09 10 20.9
comp=Z,2.8nm,22.6s
KSP Ksiaz 102.11 322 *e*Pdif Pdif 08 22 18.1 +0.4
KSP *e*PP PP 08 26 22.5 -7.3
KSP LR LR
comp=Z,3µm,22.6s,MS5.8
DPC Dobruska-Polom 102.22 322 *e*PDIF Pdif 08 22 18.3 +0.1
DPC *e*pP 08 22 33.8
DPC *e*SKS 08 32 53.9
DPC AMS AMS 09 10 00.0
comp=Z,2µm,21.0s
ZST Bratislava 102.24 319 *e*P Pdif 08 22 19.1 +0.8
ZST pmax pmax
comp=Z,16nm,1.3s
ZST Bratislava 102.24 319 *e*P Pdif 08 22 19.1 +0.8
comp=Z,16nm,1.3s
VRAC Vranov 102.31 321 P Pdif 08 22 18.7 +0.1
comp=Z,14nm,0.9s,baz=86,slow=6.5,SNR=28
VRAC Vranov 102.31 321 P Pdif 08 22 19.6 +1.0
UPC Upice 102.37 322 *e*PDIF Pdif 08 22 19.0 +0.1
VNA1 Neumayer--Stat 102.92 194 *e*Pdiff Pdif 08 22 23.2 +1.9
VNA1 *e* 08 22 24.5
VNA1 *e* 08 22 38.2
VNA1 *e* 08 22 42.3
VNA1 *e* 08 22 52.7
VNA1 *e* 08 26 37.1
VNA1 *e* 08 26 42.5
VNA1 *e* 08 26 48.4
VNA1 *e* 08 26 56.5
VNA1 *e* 08 38 19.1
VNA1 *e* 08 38 26.0
VNA1 *e* 08 38 40.0
VNA1 *e* 08 38 57.4
COP Copenhagen 102.94 328 *i* P 08 22 42.5
comp=Z,26nm,0.5s
COP *i* 08 26 37.8
COP *i* 08 41 41.4
COP *e* 08 46 50.4
COP
comp=Z,700nm,20.0s
KONO Kongsberg 102.97 332 *e*P Pdif 08 22 19.8 -1.7
KONO *e*PP PP 08 26 35.2 -1.1
TREC Trest 103.01 321 *e*PDIF Pdif 08 22 22.6 +0.9
TREC AMS AMS 09 08 20.0
comp=Z,2µm,31.8s
CONA Conrad Observa 103.11 319⇑ *i*Pdiff Pdif 08 22 21.4 -0.8
comp=Z,20nm,1.6s
KOGS Kog 103.22 318 *e*Pdiff Pdif 08 22 22.6 -0.1
PVCC Panska Ves 103.25 322 *e*PDIF Pdif 08 22 23.8 +1.0
PVCC AMS AMS 09 10 30.0
comp=Z,2µm,22.7s
JMIC Jan Mayen 103.42 346 AMS AMS 09 08 43.0
comp=Z,555nm,23.1s,MS5.0
PRU Pruhonice 103.42 322 *e*PDIF Pdif 08 22 23.5 0.0
PRU *e*pP 08 22 39.1
PRU *e*SKS 08 33 01.2
PRU AMS AMS 09 10 50.0
comp=Z,1µm,22.7s
ARSA Arzberg 103.50 319⇑ *i*P Pdif 08 22 24.1 +0.2
comp=Z,83nm,1.9s
BRG Berggiesshubel 103.54 323 *e*Pdiff Pdif 08 22 24.1 0.0
BRG Berggiesshubel 103.54 323 *e*P Pdif 08 22 24.6 +0.6
comp=Z,29nm,1.3s
BRG *i* 08 22 40.6
comp=Z,18nm,1.2s
BRG PP PP 08 26 37.0 -3.5
BRG SKS 08 33 03.0
BRG S Sdif 08 33 43.0 -25
BRG
comp=N,809nm,24.3s
BRG
comp=E,601nm,20.4s
BRG
comp=Z,781nm,20.1s
BRG Berggiesshubel 103.54 323 *e*P Pdif 08 22 24.7 +0.6
BRG 08 26 37.0
BRG 08 33 03.0
BRG S Sdif 08 33 43.0 -25
BRG pmax pmax
comp=Z,290nm,1.3s
BRG MLR MLR
comp=Z,780nm,20.1s,MS5.2
BRG Berggiesshubel 103.54 323 *e*P Pdif 08 22 24.6 +0.6
comp=Z,29nm,1.3s
BRG *i* 08 22 40.6
BRG PP PP 08 26 37.0 -3.5
BRG SKS 08 33 03.0
BRG S Sdif 08 33 43.0 -25
BRG LR LR
comp=Z,780nm,20.1s,MS5.2
YKA Yellowknife Ar 103.82 24 Pdiff Pdif 08 22 25.2 -0.1
comp=Z,3.7nm,0.7s,baz=296,slow=4.2,SNR=8.1
YKA PP PP 08 26 41.2 -1.4
comp=Z,2.8nm,0.9s,baz=299,slow=6.3,SNR=3.1
YKA Yellowknife Ar 103.82 24 Pdif Pdif 08 22 25.2 -0.1
YKA PP PP 08 26 41.2 -1.4
PERS Pernice 103.93 318 *e*Pdiff Pdif 08 22 25.7 -0.1
LEGS Legarje 103.96 317 *e*Pdiff Pdif 08 22 26.2 +0.3
LEGS *e*PP PP 08 26 42.9 -0.8
CLL Collm 103.98 323 *e*Pdiff Pdif 08 22 26.7 +0.7
comp=Z,46nm,1.5s
CLL *e*pPdiff 08 22 41.7
CLL *e*PP PP 08 26 39.6 -4.2
CLL *e*PPP 08 28 59.2
CLL *e*SKSac SKSac 08 33 00.3 -1.2
CLL *e*PS PS 08 35 57.4 +1.6
CLL *e*PPS 08 36 44.2
CLL *e*SS SS 08 41 11.3 -16
CLL *e*SSS 08 45 25.8
CLL *e*L 09 11 41.8
comp=Z,1µm,22.0s
CLL Collm 103.98 323⇓ *i*PDIF Pdif 08 22 26.8 +0.8
CLL *i* 08 22 30.9
CLL *i* 08 22 41.9
CLL *i* PP PP 08 26 46.6 +2.8
CLL *e**SPP 08 27 00.0
CLL *e* 08 32 59.0
CLL *e* 08 36 58.0
CLL *e* 08 37 28.0
CLL *e* 08 37 28.0
CLL *e*SS SS 08 41 06.0 -22
CLL *e*SSS 08 45 31.0
CLL Collm 103.98 323⇓ *i*Pdif Pdif 08 22 26.8 +0.8
comp=Z,45nm,1.5s
CLL *i* x x 08 22 30.9
CLL *i* sPdif 08 22 41.9
CLL *i* PP PP 08 26 46.6 +2.8
CLL *e*sPP 08 27 00.0
CLL *e*SKSac SKSac 08 32 59.0 -2.5
CLL *e*pPPS 08 36 58.0
CLL *e*(sPPS) 08 37 08.0
CLL *ex* x 08 37 28.0
CLL *e*(SS) 08 41 06.0
CLL *e*SSS 08 45 31.0
CLL *ex* x 08 46 48.0
CLL *e*(SSSS) 08 49 18.0
CLL Lm 09 10 00.0
comp=Z,1µm,21.8s
CLL Collm 103.98 323 *i* P Pdif 08 22 26.8 +0.8
CLL *e* 08 32 59.0
CLL pmax pmax
comp=Z,45nm,1.5s
CLL MLR MLR
comp=Z,1µm,21.8s,MS5.5
CLL Collm 103.98 323 *i* Pdif Pdif 08 22 26.8 +0.8
comp=Z,45nm,1.5s
CLL *i* pP 08 22 41.9
CLL *e*SKS 08 32 59.0
CLL LR LR
comp=Z,1µm,21.8s,MS5.5
MOA Molln 104.17 320⇑ *i*P Pdif 08 22 27.2 +0.3
comp=Z,87nm,1.6s,SNR=8.1
KHC Kasperske Hory 104.26 321 *e*PDIF Pdif 08 22 27.6 +0.3
KHC *e*pP 08 22 42.7
KHC *e*SKS 08 33 06.5
KHC AMS AMS 09 11 30.0
comp=Z,2µm,22.6s
GEC2 GERESS Array S 104.26 321 *e*Pdiff Pdif 08 22 27.3 0.0
GEC2 *e*pPdiff 08 22 43.1
GERES GERESS Array B 104.26 321 Pdiff Pdif 08 22 27.6 +0.4
comp=Z,5.6nm,1.0s,baz=73,slow=4.6,SNR=30
GERES PP PP 08 26 43.5 -2.4
comp=Z,3.9nm,0.9s,baz=100,slow=5.5,SNR=4.1
VISS Visnje 104.32 317 *i* Pdiff Pdif 08 22 27.9 +0.4
VISS *e*SKSac SKSac 08 33 04.8 +1.7
VISS *e* 08 34 15.2
OBKA Obir 104.34 318⇑ *i*P Pdif 08 22 27.6 0.0
comp=Z,88nm,2.0s
MUD Monsted U'grnd 104.38 329 *i* P PKiKP 08 26 48.9 +4.9
comp=Z,36nm,1.3s
MUD *e* 08 36 54.8
MUD
comp=Z,900nm,21.0s
LJU Ljubljana 104.47 318 *e*Pdiff Pdif 08 22 28.3 +0.1
TANN Tannenbergstha 104.58 322 *e*Pdiff Pdif 08 22 28.7 0.0
TANN *e*pPdiff 08 22 44.6
TANN *e*PP PP 08 26 51.1 +2.9
BER Bergen 104.62 334 AMS AMS 09 13 37.9
comp=Z,2µm,20.6s,MS5.6
CEY Cerknica 104.62 317 *e*Pdiff Pdif 08 22 29.1 +0.3
CEY *e*SKSac SKSac 08 33 06.0 +1.6
CEY *e* 08 34 18.2
NKC Novy Kostel 104.64 322 *e*PDIF Pdif 08 22 29.1 +0.1
NKC *e*SKS 08 33 07.3
NKC AMS AMS 09 11 20.0
comp=Z,2µm,22.9s
NKC Novy Kostel 104.64 322 *e*Pdif Pdif 08 22 29.1 +0.1
NKC *e* 08 33 07.3
BSEG Bad Segeberg 104.68 326 *e*Pdiff Pdif 08 22 29.9 +0.8
WET Wettzell 104.70 321 *e*Pdiff Pdif 08 22 29.4 +0.2
E03A Lebam 104.74 42 ⇓P Pdif 08 22 30.4 +1.0
baz=105
JAVS Javornik 104.83 318 *i* Pdiff Pdif 08 22 29.2 -0.6
JAVS *e*PP PP 08 26 45.2 -4.9
JAVS *e*SKSac SKSac 08 33 06.3 +0.9
F03A Seaside 104.91 42⇑P Pdif 08 22 31.9 +1.8
baz=105
MANZ Manzenberg 104.92 322 *e*Pdiff Pdif 08 22 30.8 +0.6
MANZ *e*pPdiff 08 22 46.8
MANZ *e*PP PP 08 26 52.7 +1.9
ROTZ Rotzenmuhle 104.93 322 *e*Pdiff Pdif 08 22 30.7 +0.5
ROTZ *e*PP PP 08 26 52.2 +1.4
MOX Moxa 105.02 323 *e*Pdiff Pdif 08 22 30.7 +0.1
MOX *e*pPdiff 08 22 46.7
MOX *e*PP PP 08 26 53.2 +1.7
MOX Moxa 105.02 323 *e*P Pdif 08 22 31.5 +0.9
MOX pmax pmax
comp=Z,48nm,1.6s
MOX MLR MLR
comp=Z,700nm,23.0s,MS5.1
MOX Moxa 105.02 323 *e*P Pdif 08 22 31.5 +0.9
comp=Z,48nm,1.6s
MOX *e*PP PP 08 26 50.0 -1.5
MOX *e*PS PS 08 36 05.0 -1.6
MOX LR LR
comp=Z,700nm,23.0s,MS5.1
B05A Bryant 105.22 40 ⇓P PKiKP 08 26 47.2 +1.7
baz=105
E04A Onalaska 105.29 41 ⇓P PKiKP 08 26 46.9 +1.2
baz=105
NRDL Niedersach Rie 105.30 325 *e*Pdiff Pdif 08 22 32.9 +1.0
NRDL *e*pPdiff 08 22 49.0
NRDL *e*PP PP 08 26 58.9 +5.3
GRA1 Grafenberg Arr 105.56 322 *e*Pdif Pdif 08 22 33.4 +0.3
GRA1 *e*PP PP 08 26 58.5 +3.0
GRA1 LR LR
comp=Z,1µm,21.5s,MS5.3
GRF Grafenberg Arr 105.56 322 *e*Pdiff Pdif 08 22 33.4 +0.3
GRF *e*PP PP 08 26 58.5 +3.0
GRF *e*L 09 14 13.2
comp=Z,1µm,21.5s
I03A Eugene 105.61 44 ⇑P PKiKP 08 26 50.4 +4.1
baz=106
C05A Tolt Reservoir 105.65 40 ⇓P PKiKP 08 26 48.6 +2.3
baz=106
UBBA Unterbreizbach 105.93 323 *e*Pdiff Pdif 08 22 34.7 0.0
UBBA *e*pPdiff 08 22 51.4
UBBA *e*PP PP 08 26 59.0 +0.7
J03A Ideyld Park 105.99 45 ⇑P PKiKP 08 26 48.4 +1.5
baz=106
WTTA Wattenberg 106.05 319⇑ *i*P Pdif 08 22 35.2 0.0
comp=Z,104nm,1.7s,SNR=7.7
WTTA Wattenberg 106.05 319⇑ *i*P Pdif 08 22 35.3 +0.1
WTTA pmax pmax
comp=Z,104nm,1.7s
SQTA Sankt Quirin 106.34 320⇓ *i*P Pdif 08 22 37.0 +0.5
comp=Z,37nm,1.4s
SQTA Sankt Quirin 106.34 320⇓ *i*P Pdif 08 22 37.0 +0.5
SQTA pmax pmax
comp=Z,37nm,1.4s
MOTA Moosalm 106.37 320⇓ *i*P Pdif 08 22 37.0 +0.3
comp=Z,26nm,1.3s
MOTA Moosalm 106.37 320⇓ *i*P Pdif 08 22 37.0 +0.4
MOTA pmax pmax
comp=Z,26nm,1.3s
N02C Big Bar 106.39 47 ⇑P PKiKP 08 26 47.7 0.0
baz=106
M02C Callahan 106.58 47 ⇑P PKiKP 08 26 48.3 +0.2
baz=107
YBH Yreka Blue Hor 106.59 46 PP PP 08 26 59.2 -4.0
comp=Z,8.4nm,1.2s,baz=237,slow=7.0,SNR=3.5
O02C Red Bluff 106.93 48⇑P PKiKP 08 26 50.2 +1.5
baz=107
TNS Taunus Mts 107.07 323 *e*Pdiff Pdif 08 22 40.2 +0.4
TNS *e*pPdiff 08 22 56.6
DAVA Damuels 107.17 320⇑ *i*P Pdif 08 22 40.3 0.0
comp=Z,67nm,2.1s
J05A Fort Rock 107.23 44 ⇓P PKiKP 08 26 51.7 +2.4
baz=107
HAWA Hanford 107.45 41 *e*PKPdf PKiKP 08 26 51.0 +1.3
K05A Summer Lake 107.63 45⇑P PKiKP 08 26 51.0 +0.9
baz=108
I06A Prineville 107.75 44 ⇑P PKiKP 08 26 52.9 +2.7
baz=108
BFO Black Forest 107.81 321 *e*Pdiff Pdif 08 22 42.6 -0.5
BFO *e*PP PP 08 27 14.1 +2.1
M05C Lookout 107.83 46⇑P PKiKP 08 26 52.0 +1.6
baz=108
L05A Lakeview 107.86 46⇑P PKiKP 08 26 51.1 +0.7
baz=108
J06A Christmas Vall 108.00 44⇑P PKiKP 08 26 52.5 +1.8
baz=108
ORV Oroville 108.05 48⇑P PKiKP 08 26 52.3 +1.5
baz=108
K06A Valley Falls 108.06 45⇑P PKiKP 08 26 53.8 +2.9
baz=108
F08A Pendleton 108.14 41⇑P PKiKP 08 26 51.6 +0.7
baz=108
O04C Chester 108.15 47⇑P PKiKP 08 26 52.3 +1.3
baz=108
G08A Pilot Rock 108.18 42⇑P PKiKP 08 26 52.6 +1.5
baz=108
I07A Izee 108.19 43 ⇓P PKiKP 08 26 52.8 +1.7
baz=108
M06C Likely Place G 108.35 46⇑P PKiKP 08 26 52.9 +1.6
baz=108
CDF Champ du Feu 108.44 322 *e*P Pdif 08 22 45.7 -0.1
comp=Z,73nm,1.7s
CDF Champ du Feu 108.44 322 *e*P Pdif 08 22 45.7 -0.1
CDF pmax pmax
comp=Z,36nm,1.7s
CDF Champ du Feu 108.44 322 *e*P Pdif 08 22 45.7 -0.1
comp=Z,36nm,1.7s
J07A Hines 108.55 44 ⇓P PKiKP 08 26 52.0 +0.3
baz=108
EDM Edmonton 108.58 33 *e*P Pdif 08 22 47.2 +0.7
H08A Prairie City 108.62 43 ⇓P PKiKP 08 26 52.8 +0.9
baz=109
S04C Ingram Canyon, 108.70 50⇑P PKiKP 08 26 53.9 +1.9
baz=109
P05C Yuba Gap, Truc 108.78 48⇑P PKiKP 08 26 54.3 +2.1
baz=109
LAVA Lava Cap Winer 108.82 49⇑P PKiKP 08 26 53.6 +1.4
baz=109
N06A Buffalo Meadow 108.95 47⇓P PKiKP 08 26 54.7 +2.2
baz=109
V03C Hunter Liggett 109.13 52⇓P PKiKP 08 26 55.0 +2.1
baz=109
M07A Soldier Meadow 109.24 46⇑P PKiKP 08 26 54.9 +1.8
baz=109
H09A Durkee 109.26 42⇓P PKiKP 08 26 54.1 +1.0
baz=109
CMB Columbia Colle 109.28 50 PFAKE 08 27 00.0 +6.9
CMB LR LR
comp=Z,1µm,20.0s,MS5.4
CMB Columbia Colle 109.28 50⇑P PKiKP 08 26 54.3 +1.2
baz=109
K08A Mann Creek Ran 109.32 44⇓P PKiKP 08 26 53.0 -0.2
baz=109
R05C Kirkwood Meado 109.34 49⇑P PKiKP 08 26 54.6 +1.4
baz=109
U04C Hernandez Rese 109.41 51⇓P PKiKP 08 26 56.7 +3.4
baz=109
WCN Washoe City 109.41 48⇑P PKiKP 08 26 55.5 +2.1
baz=109
I09A Lost Marbles R 109.43 43⇓P PKiKP 08 26 54.7 +1.3
baz=109
S05C Merced 109.51 50⇓P PKiKP 08 26 56.1 +2.6
baz=110
V04C Ramage Ranch, 109.52 52⇓P PKiKP 08 26 54.9 +1.4
baz=110
J09A Fry Pan Ranch, 109.63 44⇑P PKiKP 08 26 55.2 +1.4
baz=110
PKD Parkfield 109.70 52⇓P PKiKP 08 26 55.8 +1.9
baz=110
S06C San Francisco 109.73 50⇓P PKiKP 08 26 56.1 +2.1
baz=110
M08A Happy Creek Ra 109.79 46⇓P PKiKP 08 26 55.9 +1.8
baz=110
O07A Toulon 109.82 47⇑P PKiKP 08 26 55.4 +1.3
baz=110
LPG La Plagne 109.82 319 *e*P Pdif 08 22 52.6 +0.6
comp=Z,32nm,1.1s
LPL La Plagne 109.83 319 *e*P Pdif 08 22 52.4 +0.4
CABF La Chapelle 109.85 320 *e*P Pdif 08 22 52.4 +0.3
R06C Coleville 109.86 49⇑P PKiKP 08 26 56.0 +1.9
baz=110
K09A Rome 109.86 44⇓P PKiKP 08 26 56.4 +2.2
baz=110
WALA Waterton Lakes 110.02 37 *e*PKPdf PKiKP 08 26 57.4 +2.9
T06C Millerton Lake 110.07 51⇓P PKiKP 08 26 56.5 +1.9
baz=110
MBDF Montbardon 110.08 318 *e*P Pdif 08 22 53.1 0.0
L09A Wilkinson Ranc 110.12 45⇑P PKiKP 08 26 56.5 +1.8
baz=110
R07C Lee Vining 110.28 49⇓P PKiKP 08 26 57.9 +2.9
baz=110
KCC Kaiser Creek 110.29 50⇓P PKiKP 08 26 57.1 +2.1
baz=110
M09A Marrel Ranch, 110.46 45⇑P PKiKP 08 26 58.2 +2.8
baz=110
PKM Peak Mountain 110.53 53⇑P PKiKP 08 26 57.7 +2.3
baz=110
FRF La Foret Royal 110.57 317 *e*P Pdif 08 22 55.3 0.0
comp=Z,37nm,1.1s
N09A Rock Creek Ran 110.59 46⇓P PKiKP 08 26 57.8 +2.2
baz=111
ORIF Oris-en-Rattie 110.60 319 *e*P Pdif 08 22 55.5 0.0
comp=Z,68nm,1.6s
ORIF *e*R
comp=Z,2µm,21.8s
RCTC Rector, Farmer 110.62 51⇓P PKiKP 08 26 56.7 +1.1
baz=111
HELL Mitchell Peak, 110.69 51⇑P PKiKP 08 26 57.6 +1.9
baz=111
LMR La Mourre 110.74 317 *e*P Pdif 08 22 56.0 -0.1
comp=Z,26nm,1.1s
NVAR Mina Array Bea 110.75 49 Pdiff Pdif 08 22 58.2 +2.1
comp=Z,2.4nm,1.1s,baz=260,slow=3.8,SNR=6.5
NVAR PKiKP PKiKP 08 26 58.0 +2.1
comp=Z,2.8nm,0.8s,baz=226,slow=1.6,SNR=10
NVAR PKKPbc PKKPbc 08 37 56.3 +2.2
comp=Z,0.9nm,0.8s,baz=107,slow=2.3,SNR=3.8
NVAR Mina Array Bea 110.75 49 Pdif Pdif 08 22 58.2 +2.1
NVAR PKPdf PKiKP 08 26 58.0 +2.1
NVAR PKKPbc PKKPbc 08 37 56.3 +2.2
VES Vestal, Richgr 110.87 52⇓P PKiKP 08 26 57.6 +1.5
baz=111
MSO Missoula 110.89 39 *e*PKPdf PKiKP 08 26 57.2 +1.0
Q08A Gabbs 110.90 48⇑P PKiKP 08 26 59.1 +3.0
baz=111
BSC Santa Cruz Isl 110.91 54⇓P PKiKP 08 26 57.8 +1.6
baz=111
R08A Mina 110.92 49⇓P PKiKP 08 26 58.9 +2.7
baz=111
BMN Battle Mountai 110.94 46 PFAKE 08 27 10.0 +14
BMN LR LR
comp=Z,625nm,19.0s,MS5.2
KEST Kesra 110.98 308 Pdiff Pdif 08 22 58.9 +1.7
comp=Z,1.0nm,0.7s,baz=270,slow=6.8,SNR=4.1
LOR Lormes 111.00 321 *e*P Pdif 08 22 57.1 -0.1
LOR *e*R
comp=Z,1µm,21.8s
LOR Lormes 111.00 321 *e*P Pdif 08 22 57.1 -0.1
LOR LR LR
comp=Z,1µm,21.8s,MS5.4
SMF Signal de Mont 111.26 321 *e*P Pdif 08 22 58.2 -0.2
CHMT Chamberlain Mo 111.29 39 *e*PKPdf PKiKP 08 26 58.1 +1.2
ISA Isabella 111.39 52⇑P PKiKP 08 26 59.0 +1.9
baz=111
VIVF Saint-Julien-l 111.42 319 *e*P Pdif 08 22 59.1 0.0
comp=Z,27nm,1.2s
CWC Cottonwood Cre 111.49 51⇑P PKiKP 08 26 59.5 +2.2
baz=112
O10A Cortez Mining, 111.51 46⇓P PKiKP 08 26 59.4 +2.1
baz=112
AVF Avril sur Loir 111.51 321 *e*P Pdif 08 22 59.1 -0.4
M11A Holland Ranch, 111.64 45⇑P PKiKP 08 26 59.9 +2.3
baz=112
R09A Tonopah 111.73 49⇑P PKiKP 08 27 00.6 +2.9
baz=112
S09A Goldfield 111.77 49⇓P PKiKP 08 27 00.8 +3.0
baz=112
HLID Hailey 111.84 42 *e*PKPdf PKiKP 08 27 00.3 +2.4
GRAC Grapevine Rang 111.87 50⇓P PKiKP 08 27 00.5 +2.5
baz=112
N11A Elko Archery C 111.89 46⇓P PKiKP 08 27 00.7 +2.7
baz=112
DAC Darwin (Calif) 111.91 51 *e*PKIKP PKiKP 08 26 59.9 +1.8
EDW2 Edwards Air Fo 111.99 52⇑P PKiKP 08 27 01.0 +2.8
baz=112
MPMC Manual Prospec 112.05 51⇑P PKiKP 08 27 00.8 +2.5
baz=112
LRMC Laurel Mountai 112.06 52⇓P PKiKP 08 27 00.6 +2.3
baz=112
O11A Cowboy Ranch, 112.17 46⇓P PKiKP 08 27 00.6 +2.1
baz=112
M12A Wells 112.26 45⇑P PKiKP 08 27 00.9 +2.2
baz=112
DLMT Dillon 112.34 40 *e*PKPdf PKiKP 08 27 00.7 +1.8
N12A Clover Valley, 112.37 45⇑P PKiKP 08 27 01.3 +2.3
baz=112
MCMT McKenzie Canyo 112.39 41 *e*PKPdf PKiKP 08 27 00.3 +1.3
FURC Furnace Creek, 112.42 50⇑P PKiKP 08 27 01.6 +2.6
baz=112
BFSC Mount Baldy St 112.42 53⇑P PKiKP 08 27 01.6 +2.5
baz=112
TCF Toulx Ste Croi 112.44 321 *e*P Pdif 08 23 03.8 +0.2
O12A Currie 112.78 46⇑P PKiKP 08 27 02.6 +2.8
baz=113
GSC Goldstone 112.80 52⇑P PKiKP 08 27 02.1 +2.4
baz=113
M13A Montello 112.81 45⇓P PKiKP 08 27 02.1 +2.3
baz=113
BOZ Bozeman (W) 112.84 40 *e*PKIKP PKiKP 08 27 01.5 +1.7
BOZ *e* 08 27 47.7
U10A Ash Meadows, A 112.84 50⇓P PKiKP 08 27 02.5 +2.6
baz=113
P12A McGill 112.94 47⇓P PKiKP 08 27 02.7 +2.7
baz=113
EGMT Eagleton 112.96 37 *e*PKPdf PKiKP 08 27 01.3 +1.3
N13A Wendover, West 112.96 45⇑P PKiKP 08 27 02.4 +2.3
baz=113
MURC Murrieta 112.96 53⇑P PKiKP 08 27 02.1 +2.0
baz=113

BBRC	**Big Bear Sol-O**	**113.00**	**53**	⇑P		PKiKP	08 27 02.9 +2.8
	baz=113						
SHOC	**Shoshone**	**113.04**	**51**	⇓P		PKiKP	08 27 03.2 +3.0
	baz=113						
Q12A	**Willow Creek R**	**113.14**	**47**	⇑P		PKiKP	08 27 02.5 +2.1
	baz=113						
RJF	**Les Rejaudoux**	**113.29**	**320**	*e*P		Pdif	08 23 07.9 +0.5
RJF				*e*R			
	comp=Z,859nm,21.8s						
RJF	**Les Rejaudoux**	**113.29**	**320**	*e*P		Pdif	08 23 07.9 +0.5
RJF				LR		LR	
	comp=Z,860nm,21.8s,MS5.3						
HEC	**Hector,Ludlow**	**113.31**	**52**	⇑P		PKiKP	08 27 02.7 +2.0
	baz=113						
QLMT	**Earthquake Lak**	**113.31**	**40**	*e*PKPdf		PKiKP	08 27 02.7 +2.0
SFJD	**Kangerlussuaq**	**113.42**	**358**	*i* P		PKiKP	08 27 01.2 +0.3
	comp=Z,10nm,0.7s						
SFJD				*i*			08 27 49.3
SFJD				*i* S		PS	08 37 30.5 +1.7
SFJD				*i*			08 44 30.0
SFJD							
	comp=Z,700nm,22.0s						
SFJD	**Kangerlussuaq**	**113.42**	**358**	*e*PKiKP		PKiKP	08 27 01.2 +0.3
SFJD				*i*			08 27 49.3
SFJD				*i* S		PS	08 37 30.5 +1.7
SFJD				*i*			08 44 30.0
SFJD				LR		LR	
	comp=Z,710nm,22.0s,MS5.2						
TUQ	**Turquoise Mtn.**	**113.45**	**51**	⇓P		PKiKP	08 27 03.8 +2.7
	baz=113						
FFC	**Flin Flon**	**113.53**	**28**	*e*PKiKP		PKiKP	08 27 01.9 +0.7
PFO	**Pinyon Flat Ob**	**113.56**	**53**	*e*PKiKP		PKiKP	08 27 03.6 +2.4
PFO	**Pinyon Flat Ob**	**113.56**	**53**	⇑P		PKiKP	08 27 03.6 +2.4
	baz=114						
U11A	**Corn Creek**	**113.57**	**50**	⇑P		PKiKP	08 27 04.6 +3.4
	baz=114						
MTLF	**Montolieu**	**113.64**	**318**	*e*P		Pdif	08 23 09.1 +0.1
MONP	**Monument Peak**	**113.79**	**54**	⇑P		PKiKP	08 27 04.2 +2.5
	baz=114						
BELC	**Belle Mtn.**	**113.81**	**53**	⇓P		PKiKP	08 27 04.1 +2.4
	baz=114						
GMRC	**Granite Mounta**	**113.85**	**52**	⇓P		PKiKP	08 27 04.1 +2.4
	baz=114						
RRI2	**Red Ridge**	**113.99**	**42**	*e*PKPdf		PKiKP	08 27 04.0 +1.9
DVTC	**Desert V Tower**	**114.11**	**54**	⇓P		PKiKP	08 27 04.8 +2.5
	baz=114						
TPAW	**Teton Pass**	**114.18**	**41**	*e*PKPdf		PKiKP	08 27 03.9 +1.5
DUG	**Dugway**	**114.19**	**45**	*e*PKiKP		PKiKP	08 27 04.1 +1.7
V12A	**Nelson**	**114.19**	**51**	⇑P		PKiKP	08 27 05.0 +2.6
	baz=114						
U12A	**Valley of Fire**	**114.21**	**50**	⇓P		PKiKP	08 27 04.9 +2.5
	baz=114						
SWSC	**Sam W. Stewart**	**114.28**	**54**	⇓P		PKiKP	08 27 05.0 +2.4
	baz=114						
REDW	**Red Top Meadow**	**114.30**	**42**	*e*PKPdf		PKiKP	08 27 05.2 +2.5
SNOW	**Snow King Moun**	**114.32**	**41**	*e*PKPdf		PKiKP	08 27 05.2 +2.6
LOHW	**Long Hollow**	**114.36**	**41**	*e*PKPdf		PKiKP	08 27 04.2 +1.4
HWUT	**Hardware Ranch**	**114.53**	**44**	*e*PKPdf		PKiKP	08 27 04.8 +1.7
TCUT	**Toone Canyon**	**114.83**	**44**	*e*PKPdf		PKiKP	08 27 05.5 +1.9
GLA	**Glamis**	**115.02**	**53**	⇑P		PKiKP	08 27 06.7 +2.6
	baz=115						
Y12C	**Blythe**	**115.06**	**53**	⇓P		PKiKP	08 27 06.5 +2.4
	baz=115						
W13A	**Hualapai Mount**	**115.14**	**51**	⇓P		PKiKP	08 27 06.5 +2.2
	baz=115						
PDMCI	**Parker Dam,Lak**	**115.19**	**52**	⇓P		PKiKP	08 27 06.8 +2.5
	baz=115						
MSU	**Marysvale**	**115.26**	**47**	*e*PKiKP		PKPdf	08 27 07.7 +3.2
EBIE	**Bielsa**	**115.30**	**318**	PKP		PKPdf	08 27 04.6 0.0
X13A	**Yucca**	**115.34**	**51**	⇑P		PKiKP	08 27 06.7 +2.1
	baz=115						
PDAR	**Pinedale Array**	**115.41**	**42**	PKP		PKPdf	08 27 05.8 +1.1
	comp=Z,7.2nm,1.1s,baz=212,slow=1.4,SNR=24						
PDAR				PKKPbc		PKKPbc	08 37 38.9 +0.4
	comp=Z,1.7nm,1.0s,baz=122,slow=5.4,SNR=6.2						
Y13A	**Salome**	**115.59**	**52**	⇑P		PKPdf	08 27 07.5 +2.4
	baz=116						
TMUT	**Trail Mountain**	**115.67**	**46**	*e*PKPdf		PKPdf	08 27 07.3 +2.1
LAO	**LASA Array**	**115.70**	**37**	*e*PKPdf		PKPdf	08 27 07.6 +2.3
W14A	**Seligman**	**115.73**	**51**	⇓P		PKPdf	08 27 07.8 +2.5
	baz=116						
FRB	**Frobisher Bay**	**115.93**	**7**	PKP		PKPdf	08 27 04.9 -0.9
	comp=Z,12nm,0.8s,baz=330,slow=4.8,SNR=4.1						
X14A	**Yava**	**116.12**	**51**	⇑P		PKPdf	08 27 07.6 +1.5
	baz=116						
Y14A	**Wickenburg**	**116.20**	**52**	⇓P		PKPdf	08 27 08.5 +2.2
	baz=116						
SRU	**San Rafael**	**116.23**	**46**	*e*PKiKP		PKPdf	08 27 08.5 +2.2
W15A	**Williams**	**116.37**	**50**	⇓P		PKPdf	08 27 09.2 +2.6
	baz=116						
Z14A	**Wintersburg**	**116.43**	**53**	⇓P		PKPdf	08 27 09.1 +2.4
	baz=116						
X15A	**Humboldt**	**116.62**	**51**	⇑P		PKPdf	08 27 09.3 +2.2
	baz=117						
EMOS	**Mosqueruela**	**116.69**	**316**	PKP		PKPdf	08 27 07.0 -0.3
WUAZ	**Wupatki**	**116.94**	**50**	*e*PKPdf		PKPdf	08 27 10.1 +2.4
WUAZ				*e*PP		PP	08 28 17.2 0.0
115A	**Sonoran Desert**	**117.21**	**53**	⇑P		PKPdf	08 27 10.6 +2.4
	baz=117						
ECHE	**Chera**	**117.36**	**315**	PKiKP		PKPdf	08 27 09.9 +1.4
ELAN	**Lanestosa**	**117.40**	**320**	PKP		PKPdf	08 27 08.0 -0.5
RWWY	**Rawlins**	**117.45**	**42**	*e*PKPdf		PKPdf	08 27 10.4 +1.8
PV10	**Paradox Valley**	**117.59**	**46**	*e*PKPdf		PKPdf	08 27 11.3 +2.4
116A	**Eloy**	**117.68**	**53**	⇑P		PKPdf	08 27 11.3 +2.2
	baz=118						
PV01	**Paradox Valley**	**118.03**	**46**	*e*PKPdf		PKPdf	08 27 12.1 +2.3
ETOB	**Tobarra**	**118.16**	**315**	PKP		PKPdf	08 27 11.3 +1.3
RSSD	**Black Hills**	**118.33**	**38**	*e*PKiKP		PKPdf	08 27 11.3 +0.9
TUC	**Tucson**	**118.49**	**53**	*e*PKiKP		PKPdf	08 27 13.2 +2.5
TUC				*e*			08 28 28.1
SMCO	**Snowmass**	**118.72**	**44**	*e*PKPdf		PKPdf	08 27 13.4 +2.2
EVIA	**Vianos**	**118.84**	**315**	PKiKP		PKPdf	08 27 12.5 +1.1
GUD	**Guadarrama**	**119.09**	**318**	PKiKP		PKPdf	08 27 12.9 +1.1
ULM	**Lac du Bonnet**	**119.25**	**29**	PKP		PKPdf	08 27 11.6 -0.6
	comp=Z,17nm,1.1s,baz=318,slow=4.5,SNR=1.9						
ULM				PKKPbc		PKKPbc	08 37 25.3 +0.5
	comp=Z,3.6nm,0.9s,baz=85,slow=6.6,SNR=3.0						
ULM	**Lac du Bonnet**	**119.25**	**29**	*e*PKPdf		PKPdf	08 27 12.1 -0.1
EHUE	**Huescar**	**119.26**	**314**	PKiKP		PKPdf	08 27 12.3 +0.1
ENIJ	**Nijar**	**119.33**	**313**	PKiKP		PKPdf	08 27 12.5 +0.2
ISCO	**Idaho Springs**	**119.39**	**43**	*e*PKPdf		PKPdf	08 27 14.2 +1.8
ESDC	**Sonseca Array**	**119.41**	**317**	PKP		PKPdf	08 27 13.3 +0.8
	comp=Z,4.6nm,0.8s,baz=39,slow=2.5,SNR=14						
ESDC				PP		PP	08 28 34.1 -0.2
	comp=Z,6.4nm,0.9s,baz=59,slow=7.1,SNR=6.7						
EQES	**Quesada**	**119.61**	**314**	PKP		PKPdf	08 27 13.1 +0.3
EPON	**Pontenova**	**119.70**	**322**	PKP		PKPdf	08 27 11.2 -1.8
EBAN	**Banos Encina**	**119.96**	**315**	PKP		PKPdf	08 27 14.2 +0.7
ECAL	**Calabor**	**120.16**	**320**	PKP		PKPdf	08 27 14.2 +0.4
PBRG	**Braganca**	**120.23**	**320**	*e*PKP		PKPdf	08 27 15.9 +1.9
EGUA	**Guajares**	**120.38**	**314**	PKP		PKPdf	08 27 14.7 +0.4
ERON	**Agron**	**120.47**	**314**	PKP		PKPdf	08 27 15.1 +0.6
EADA	**Adamuz**	**120.52**	**315**	PKP		PKPdf	08 27 14.8 +0.2
ELUQ	**Luque**	**120.57**	**315**	PKP		PKPdf	08 27 14.6 -0.1
LAZ	**Ladron**	**120.58**	**49**	*e*PKPdf		PKPdf	08 27 17.1 +2.4
ELOJ	**Sierra Loja**	**120.67**	**314**	PKP		PKPdf	08 27 15.1 +0.3
LENM	**Lemitar**	**120.80**	**50**	*e*PKPdf		PKPdf	08 27 17.7 +2.6
STS	**Santiago**	**120.80**	**322**	PKP		PKPdf	08 27 15.9 +0.8
ANMO	**Albuquerque**	**120.87**	**49**	PKP		PKPdf	08 27 17.8 +2.5
	comp=Z,20nm,1.0s,baz=208,slow=2.0,SNR=63						
ANMO				PKKPbc		PKKPbc	08 37 20.7 +1.9
	comp=Z,0.4nm,0.3s,baz=144,slow=8.4,SNR=3.7						
ANMO	**Albuquerque**	**120.87**	**49**	⇓PKiKP		PKPdf	08 27 13.9 -1.4
ANMO	**Albuquerque**	**120.87**	**49**	*e*PKPdf		PKPdf	08 27 17.9 +2.6
ANMO				LR		LR	
	comp=Z,768nm,20.0s,MS5.3						
LPM	**Los Pinos Moun**	**121.00**	**49**	*e*PKPdf		PKPdf	08 27 17.3 +1.7
ELOB	**Lobios**	**121.04**	**321**	PKP		PKPdf	08 27 16.9 +1.3
PCAB	**Cabril**	**121.10**	**320**	*e*PKP		PKPdf	08 27 17.9 +2.2
PVRL	**Vila Real**	**121.13**	**320**	*e*PKP		PKPdf	08 27 17.9 +2.1
LPIG	**La Paz**	**121.34**	**62**	PKP		PKPdf	08 27 18.0 +1.8
	comp=Z,53nm,1.1s,baz=312,slow=3.3,SNR=5.4						
PVIS	**Viseu**	**121.53**	**319**	*e*PKP		PKPdf	08 27 18.9 +2.4
PCBR	**Castelo Branco**	**121.70**	**318**	*e*PKP		PKPdf	08 27 19.0 +2.1
EBAD	**Badajoz**	**121.93**	**317**	PKP		PKPdf	08 27 18.5 +1.2
ESPR	**Espera**	**122.01**	**314**	PKP		PKPdf	08 27 18.2 +0.8
EMIN	**Mina Concepcio**	**122.17**	**316**	PKP		PKPdf	08 27 19.3 +1.5
PESTR	**Estremoz**	**122.27**	**317**	*e*PKP		PKPdf	08 27 19.7 +1.8
PESTR	**Estremoz**	**122.27**	**317**	*e*PP		PP	08 28 55.6 +1.8
PESTR				*e*-			08 34 23.9
PESTR				*e*SP		SP	08 38 43.7 +1.3
PESTR	**Estremoz**	**122.27**	**317**	*e*LR		LR	09 08 36.0
PTOM	**Tomar**	**122.44**	**318**	*e*PKP		PKPdf	08 27 20.8 +2.5
TOA0	**Torodi Ar. Sit**	**122.60**	**285**	*e*PKPdf		PKPdf	08 27 20.3 +1.7
TORD	**Torodi Ar. Bea**	**122.60**	**285**	PKP		PKPdf	08 27 20.2 +1.6
	comp=Z,52nm,0.9s,baz=42,slow=0.9,SNR=12						
TORD				SKP			08 30 54.0
	comp=Z,7.4nm,1.0s,baz=57,slow=1.7,SNR=5.8						
TORD				PKKPbc		PKKPbc	08 37 14.4 +2.1
	comp=Z,14nm,1.0s,baz=260,slow=3.1,SNR=24						
EGRO	**El Granado**	**122.84**	**316**	PKP		PKPdf	08 27 19.4 +0.3
PBEJ	**Beja**	**122.87**	**317**	*e*PKP		PKPdf	08 27 21.6 +2.5
ECSD	**EROS,Sioux Fal**	**122.99**	**35**	*e*PKPdf		PKPdf	08 27 20.1 +0.8
MNTX	**Cornudas Mount**	**122.99**	**52**	*e*PKPdf		PKPdf	08 27 18.9 -0.5
PMAFR	**Mafra**	**123.36**	**318**	*e*PP		PP	08 29 07.2 +6.0
PMAFR				*e*SP		SP	08 38 52.3 +0.2
PMAFR	**Mafra**	**123.36**	**318**	*e*LR		LR	09 09 20.3
PTEO	**Sao Teotonio**	**123.70**	**317**	*e*PKP		PKPdf	08 27 23.2 +2.5
SCHQ	**Schefferville**	**124.80**	**8**	PKP		PKPdf	08 27 23.6 +0.8
	comp=Z,29nm,0.9s,baz=0.7,slow=2.1,SNR=24						
SCHQ				PP		PP	08 29 10.4 -0.5
	comp=Z,9.9nm,0.9s,baz=358,slow=7.9,SNR=3.9						
SCHQ	**Schefferville**	**124.80**	**8**	*e*PKPdf		PKPdf	08 27 23.6 +0.8
KSU1	**Kansas State U**	**125.72**	**40**	*e*PKPdf		PKPdf	08 27 26.1 +1.6
SCIA	**State Center**	**126.08**	**35**	*e*PKPdf		PKPdf	08 27 26.6 +1.4
WMOK	**Wichita Mounta**	**126.59**	**45**	*e*PKPdf		PKPdf	08 27 27.8 +1.5
JFWS	**Jewell Farm**	**127.06**	**32**	*e*PKPdf		PKPdf	08 27 27.8 +0.6
JCT	**Junction City**	**127.85**	**51**	*e*PKPdf		PKPdf	08 27 30.6 +2.0
GLMI	**Grayling**	**128.44**	**27**	*e*PKPdf		PKPdf	08 27 31.4 +1.6
DBIC	**Dimbokro**	**129.77**	**278**	PKP		PKPdf	08 27 35.4 +3.1
	comp=Z,44nm,1.0s,baz=51,slow=2.1,SNR=20						
DBIC				SKPbc			08 30 53.5
	comp=Z,14nm,1.0s,baz=40,slow=7.7,SNR=7.6						
FVM	**French Village**	**130.24**	**37**	*e*PKPdf		PKPdf	08 27 34.1 +1.0
MIAR	**Mount Ida**	**130.32**	**43**	*e*PKPdf		PKPdf	08 27 35.0 +1.6
KVTX	**Kingsville**	**130.64**	**53**	*e*PKPdf		PKPdf	08 27 37.2 +3.3
SADO	**Sadowa**	**130.78**	**23**	PKP		PKPdf	08 27 34.5 +0.2
	comp=Z,14nm,1.0s,baz=48,slow=1.2,SNR=6.7						
SADO				SKPbc		SKPbc	08 30 55.0 +1.3
	comp=Z,7.7nm,0.9s,baz=290,slow=4.1,SNR=3.1						
UALR	**University of**	**131.01**	**42**	*e*PKPdf		PKPdf	08 27 37.1 +2.5
NATX	**Nacogdoches**	**131.08**	**46**	*e*PKPdf		PKPdf	08 27 37.0 +2.2
HKT	**Hockley**	**131.13**	**49**	*e*PKPdf		PKPdf	08 27 37.3 +2.5
HKT				*e*PP		PP	08 29 50.3 -2.2
PARMO	**Parma**	**131.50**	**38**	*e*PKPdf		PKPdf	08 27 37.2 +1.6
BLO	**Bloomington**	**131.69**	**33**	*e*PKPdf		PKPdf	08 27 37.3 +1.4
USIN	**University of**	**131.88**	**35**	*e*PKPdf		PKPdf	08 27 37.9 +1.6
GLAT	**Glass**	**132.04**	**38**	*e*PKPdf		PKPdf	08 27 38.5 +1.9
CFTV	**Fuerteventura**	**132.09**	**309**	PKP		PKPdf	08 27 38.1 +1.4
HALT	**Halls**	**132.24**	**39**	*e*PKPdf		PKPdf	08 27 38.8 +1.9
WCI	**Wyandotte Cave**	**132.48**	**34**	*e*PKPdf		PKPdf	08 27 38.7 +1.3
LONY	**Lake Ozonia**	**132.55**	**19**	*e*PKPdf		PKPdf	08 27 38.2 +0.7
ACSO	**Alum Creek Sta**	**132.74**	**29**	*e*PKPdf		PKPdf	08 27 38.6 +0.7
WVT	**Waverly**	**133.03**	**37**	*e*PKPdf		PKPdf	08 27 39.6 +1.1
NCB	**Newcomb**	**133.24**	**19**	*e*PKPdf		PKPdf	08 27 40.3 +1.4
PLAL	**Pickwick Lake**	**133.63**	**38**	*e*PKPdf		PKPdf	08 27 39.8 +0.3
LBNH	**Lisbon**	**133.71**	**17**	*e*PKPdf		PKPdf	08 27 41.2 +1.4
HNH	**Hanover**	**134.09**	**18**	*e*PKPdf		PKPdf	08 27 42.1 +1.6
BINY	**Binghamton**	**134.18**	**22**	*e*PKPdf		PKPdf	08 27 42.0 +1.4
SWET	**Sewanee**	**134.78**	**37**	*e*PKPdf		PKPdf	08 27 42.6 +0.9
TZTN	**Tazewell**	**135.21**	**33**	*e*PKPdf		PKPdf	08 27 43.7 +1.2
LRAL	**Lakeview Retre**	**135.57**	**40**	*e*PKPdf		PKPdf	08 27 44.6 +1.4
FWV	**Forest Hill**	**135.86**	**30**	*e*PKPdf		PKPdf	08 27 44.8 +1.0
MVL	**Millersville**	**135.92**	**24**	*e*PKPdf		PKPdf	08 27 45.2 +1.4
MYNC	**Murphy**	**135.94**	**35**	*e*PKPdf		PKPdf	08 27 45.8 +1.9
ELN	**Prospectdale**	**136.17**	**30**	*e*P		PKPdf	08 27 42.8 -1.5
BLA	**Blacksburg**	**136.35**	**30**	*e*PKPdf		PKPdf	08 27 46.0 +1.4
PLCA	**Paso Flores**	**136.69**	**163**	PKP		PKPdf	08 27 46.2 +0.9
	comp=Z,23nm,1.1s,baz=209,slow=3.8,SNR=15						
PLCA				SKPbc		SKPbc	08 31 17.4 +4.0
	comp=Z,9.5nm,1.0s,baz=207,slow=3.8,SNR=7.9						
PLCA	**Paso Flores**	**136.69**	**163**	PKP		PKPdf	08 27 46.2 +0.9
PLCA				SKPbc		SKPbc	08 31 17.4 +4.0
CBN	**Corbin**	**136.99**	**26**	*e*PKPdf		PKPdf	08 27 47.0 +1.1
JSC	**Jenkinsville**	**138.13**	**34**	*e*PKPdf		PKPdf	08 27 50.4 +2.4
TRQA	**Tornquist**	**141.22**	**171**	*e*PKPdf		PKPdf	08 27 49.0 -4.6
CLCH	**Cerro Calan**	**143.33**	**158**	⇓*i* P		PKPdf	08 27 56.2 -1.1
FCH	**Farellones**	**143.48**	**158**	*e*P		PKPdf	08 27 57.5 0.0
CMCH	**Combarbala**	**145.10**	**155**	⇓*i* P		PKPdf	08 28 01.5 +1.6
CFAA	**Coronel Fontan**	**145.78**	**159**	PKPbc		PKPbc	08 28 03.8 +1.7
	comp=Z,12nm,1.1s,baz=222,slow=2.7,SNR=92						
TLL	**Tololo Astrono**	**146.05**	**155**	*i* P		PKPbc	08 28 05.5 +2.5
BBSR	**BB Station**	**146.81**	**15**	*e*PKPdf		PKPdf	08 28 04.7 +1.4
BBSR				LR		LR	
	comp=Z,628nm,19.0s,MS5.4						
LCO	**Las Campanas**	**147.10**	**154**	*i* P		PKPdf	08 28 06.7 +2.9
MCJ	**Malvern**	**151.52**	**51**	⇑*i* P		PKPbc	08 28 19.6 +2.5
STH	**Stony Hill**	**152.11**	**50**	⇑*i* P		PKPbc	08 28 20.9 +2.5
GWJ	**Greenwich**	**152.17**	**50**	⇑*i* P		PKPbc	08 28 21.1 +2.6
CMJ	**Castle Mountai**	**152.41**	**49**	⇑*i* P		PKPbc	08 28 21.4 +2.3
CPUP	**Villa Florida**	**153.37**	**175**	PKPdf		PKPdf	08 28 16.0 +2.3
CPUP				PKPbc		PKPbc	08 28 23.5 +2.2
CPUP	**Villa Florida**	**153.37**	**175**	PKP		PKPdf	08 28 16.0 +2.4
	comp=Z,25nm,1.1s,baz=148,slow=1.5,SNR=19						
CPUP				PKPbc		PKPbc	08 28 23.5 +2.3
	comp=Z,10nm,0.4s,baz=119,slow=0.8,SNR=34						
CPUP	**Villa Florida**	**153.37**	**175**	PKP		PKPdf	08 28 16.0 +2.4
CPUP				PKPbc		PKPbc	08 28 23.5 +2.3
LVC	**Limon Verde**	**153.37**	**150**	PKP		PKPdf	08 28 16.7 +3.1
	comp=Z,9.3nm,1.0s,baz=144,slow=0.1,SNR=4.8						
LVC				PKPbc		PKPbc	08 28 23.9 +2.7
	comp=Z,33nm,1.0s,baz=176,slow=0.0,SNR=16						
LVC	**Limon Verde**	**153.37**	**150**	*e*PKPdf		PKPdf	08 28 17.4 +3.8
LVC				*e*PKPbc		PKPbc	08 28 24.2 +2.9
CAM4	**Nova Friburgo**	**154.47**	**207**	(P)		PKPdf	08 28 19.1 +3.0
CAM4				*i*			08 28 24.1
CAM4				*i*			08 28 41.9
CAM3	**Guarapari**	**154.82**	**213**	(P)		PKPbc	08 28 26.4 +2.1
NNA	**Nana**	**154.94**	**120**	PKP		PKPdf	08 28 18.0 +2.2
	comp=Z,42nm,1.1s,baz=309,slow=5.5,SNR=5.1						
NNA	**Nana**	**154.94**	**120**	PKP		PKPdf	08 28 17.9 +2.1
ATAH	**Atahualpa**	**155.37**	**108**	PKP		PKPdf	08 28 19.9 +3.6
	comp=Z,36nm,1.1s,baz=257,slow=0.8,SNR=19						
LPAZ	**La Paz**	**158.89**	**142**	PKP		PKPdf	08 28 24.4 +3.6
	comp=Z,23nm,1.1s,baz=25,slow=1.7,SNR=45						
LPAZ				PKPab		PKPab	08 28 59.2 +2.1
	comp=Z,27nm,0.9s,baz=228,slow=4.3,SNR=11						
SJG	**San Juan**	**159.12**	**32**	PKPab		PKPab	08 28 58.7 +0.6
	comp=Z,31nm,0.7s,baz=65,slow=4.7,SNR=5.2						
SJG	**San Juan**	**159.12**	**32**	*e*PKPdf		PKPdf	08 28 22.3 +1.1
SJG				*e*PKPab		PKPab	08 28 59.6 +1.5
CPD	**Cerro la Pandu**	**159.31**	**31**	*e*PKPdf		PKPdf	08 28 22.9 +1.6
MTP	**Monte Pirata**	**159.44**	**30**	*e*PKPdf		PKPdf	08 28 23.0 +1.5
MTP				*e*PKPab		PKPab	08 29 01.1 +1.6
ROSC	**El Rosal**	**160.00**	**77**	PKP		PKPdf	08 28 25.3 +3.2
	comp=Z,33nm,1.0s,baz=131,slow=2.9,SNR=24						
ROSC				PKPab		PKPab	08 29 04.9 +3.0
	comp=Z,48nm,0.9s,baz=122,slow=2.4,SNR=12						
ROSC	**El Rosal**	**160.00**	**77**	*e*P		PKPdf	08 28 25.3 +3.2
SDV	**Santo Domingo**	**162.11**	**61**	PKP		PKPdf	08 28 25.9 +1.6
	comp=Z,39nm,0.9s,baz=356,slow=2.1,SNR=38						
SDV				PKPab		PKPab	08 29 08.9 -2.3
	comp=Z,10nm,0.7s,baz=352,slow=12,SNR=3.3						
SDV	**Santo Domingo**	**162.11**	**61**	*e*PKPdf		PKPdf	08 28 26.6 +2.2
SIV	**San Ignacio**	**162.64**	**159**	PKP		PKPdf	08 28 27.5 +2.6
	comp=Z,17nm,1.0s,baz=213,slow=2.3,SNR=37						
SIV				PKPab		PKPab	08 29 14.2 +0.7
	comp=Z,16nm,1.1s,baz=216,slow=4.9,SNR=4.6						
BDFB	**Brasilia**	**162.76**	**203**	PKP		PKPdf	08 28 27.2 +2.2
	comp=Z,19nm,1.0s,baz=91,slow=1.9,SNR=13						
BDFB				PKPab		PKPab	08 29 15.1 +1.1
	comp=Z,17nm,1.0s,baz=108,slow=1.6,SNR=5.9						
FDF	**Fort de France**	**164.39**	**23**	*e*P		PKPdf	08 28 27.5 +1.0

NIED ***31*** *08:18:00,3560N×140.00E,h77km,Mw4.8 Best double couple: M₀1.66000×10¹⁶ NP1:ϕs2.00000°,δ68.00000°, λ96.00000°. NP2:ϕs166.00000°,δ23.00000°,λ75.00000°.*

MOS ***31*** *08:18:14.7±3.0,3535N×140.22E,h80km,mb5.0/39,Error ellipse: s-maj=10.7km s-min=5.3km az=112.1*

ISCJB ***31*** *08:18:18.9±0.2,3551N±0.02°×13990E±0.03,h79km±2km, mb4.8/112,Error ellipse: s-maj=4.0km s-min=3.5km az=53.5*

SZGRF ***31*** *08:18:18.0,3458N×140.12E,h100km,mb5.1,Near east coast of eastern Honshu, Japan*

JMA ***31*** *08:18:18.6±0.2,3563N×14002E,h76km±2km,M4.8 Broadband fault plane solution: P waves. NP1: ϕs187.00000°,δ26.00000°,λ92.00000°. NP2:ϕs4.00000°, δ64.00000°,λ89.00000°. Principal axes: T Plg71.0000°, Azm272.0000°; N Plg1.0000°, Azm5.0000°; P Plg19.0000°, Azm95.0000°;*

JMA Felt IV J1.

IDC ***31*** *08:18:19.5±1.3,3550N×139.90E,h77km±12km,mb4.6/34, mb1 4.7/35,mb1mx4.6/38,mbtmp4.9/35 Error ellipse: s-maj=12.9km s-min=8.1km az=77.0*

BJI ***31*** *08:18:19.2,3564N×14008E,h103km,mB5.1,mb4.9*

NEIC ***31*** *08:18:21.5±0.1,3553N×13988E,mb5.1/52,MW4.8(NIED), Error ellipse: s-maj=4.7km s-min=4.0km az=105.0*

NEIC Felt [IV] at Chiba, Sagamihara and Tokyo; [III] at Yokohama and Yokosuka. Also felt at Atsugi, Fuchu, Kawasaki, Kodaira, Kumagaya, Matsudo, Musashimurayama, Nachikatsuura, Narashino, Narita, Ome, Tochigi, Zama and Zushi. Recorded [4 JMA] in Kanagawa; [3 JMA] in Chiba, Ibaraki, Saitama, Shizuoka and Tokyo; [2 JMA] in Fukushima, Gumma and Yamanashi; [1 JMA] in Miyagi, Nagano and Niigata Prefectures.

ISC 31 08:18:19.8±0.2,3554N±0.02°×13992E±0.03°,h73km±2km, h94km±3.5km:pP-P,n345,σ089/358,mb4.8/112,62C-51D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.20**	**318**	P		**Pn**	**08 18 30.7**	**0.0**
TOK				*e*S		**Sn**	**08 18 39.2**	**+0.5**
JCN	**Nagara**	**0.26**	**117**	⇑P		**Pn**	**08 18 30.8**	**-0.2**
JCN				S		**Sn**	**08 18 40.1**	**+0.9**
JOD2	**Odawara 2**	**0.73**	**248**	⇓P		**Pn**	**08 18 35.5**	**+0.3**
JOD2				S		**Sn**	**08 18 47.0**	**+0.3**
BSO3	**Boso 3**	**0.88**	**146**	⇑P		**Pn**	**08 18 36.1**	**-0.9**
JIM2	**Oshima 3**	**0.91**	**206**	⇓P		**Pn**	**08 18 37.0**	**-0.3**
JIM2				*e*S		**Sn**	**08 18 50.9**	**+0.5**
JRY	**Ryogami san**	**0.95**	**300**	⇓P		**Pn**	**08 18 38.1**	**+0.2**
JRY				*e*S		**Sn**	**08 18 52.3**	**+1.0**
JAG	**Ashikaga**	**0.96**	**337**	⇓P		**Pn**	**08 18 36.8**	**-1.1**
JAG				*e*S	

GUMO **Guam** 22.31 167 P **P** 08 23 09.9 -1.2
comp=Z,31nm,0.5s,mb4.9,baz=131,slow=20,SNR=3.2
HHC Hu-ho-hao-te 22.86 292 *e*P **P** 08 23 14.3 -2.6
HHC AP 08 23 35.3
HHC XP sP 08 23 44.8 +3.5
HHC PP 08 23 48.0
HHC PCP PcP 08 27 06.3 +0.9
HHC S **S** **08 27 12.0 -8.8**
HHC XS sS 08 27 47.5 -0.9
HHC SS 08 28 04.0
HHC PCS PcS 08 30 42.5 -1.9
HHC AMB AMB
comp=Z,22nm,1.0s,mb4.4
HHC AMB AMB
comp=Z,152nm,4.2s
HHC LR LR
comp=N,3µm,19.8s
HHC LR LR
comp=E,2µm,21.8s
HHC LR LR
comp=Z,5µm,26.5s
CLNS Chul'man 23.60 339 *e*P **P** **08 23 22.9 -1.1**
CLNS *e* 08 23 43.5
CLNS *e*PPP 08 23 48.0
CLNS *e* 08 27 09.5
CLNS *e*S **S** **08 27 28.1 -4.8**
CLNS pmax pmax
comp=Z,48nm,1.0s,mb4.8
CLNS pmax pmax
comp=N,32nm,0.9s
CLNS pmax pmax
comp=E,12nm,0.9s
CLNS smax
comp=E,17nm,0.8s
CLNS smax
comp=Z,6.0nm,0.8s
CLNS smax
comp=N,8.0nm,0.9s
CLNS MLR MLR
comp=Z,300nm,15.0s
CLNS MLR MLR
comp=N,200nm,14.0s
CLNS MLR MLR
comp=E,400nm,12.0s
ULN Ulaanbaatar 27.24 307⇑ *e*P **P** **08 23 57.2 +0.3**
ULN Ulaanbaatar 27.24 307 *e*P **P** **08 23 56.8 -0.2**
comp=E,7.1nm,0.5s,mb4.5
YAK Yakutsk 27.29 349 *e*P **P** **08 23 55.8 -1.6**
YAK pmax pmax
comp=Z,29nm,0.6s,mb5.0
YAK Yakutsk 27.29 349 *e*P **P** **08 23 55.8 -1.6**
comp=Z,29nm,0.6s,mb5.0
SONM Songino Array 27.66 307 P **P** **08 23 59.1 -1.6**
comp=Z,7.2nm,0.6s,mb4.4,baz=113,slow=9.1,SNR=11
BOD Bodaibo 28.19 330 *e*P **P** **08 24 04.5 -0.9**
BOD pmax pmax
comp=Z,32nm,1.0s,mb4.8
SEY Seymchan 28.49 12⇓ *i*P **P** **08 24 08.6 +0.5**
LZH Lanzhou 29.16 282 *e*P **P** **08 24 14.5 +0.5**
LZH AP pP 08 24 38.5 +7.3
LZH PCP PcP 08 27 21.8 +1.9
LZH *e*S **S** **08 28 53.0 -7.9**
LZH SS SS 08 30 33.0 -34
LZH AMB AMB
comp=Z,24nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,150nm,4.8s
LZH LR LR
comp=E,2µm,13.7s
LZH LR LR
comp=Z,4µm,14.6s
GYA Guiyang 29.79 262⇑ *i*P **P** **08 24 18.5 -1.1**
GYA S **S** **08 29 06.0 -4.9**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
GYA AMB AMB
comp=Z,90nm,4.5s
GYA LR LR
comp=N,240nm,16.8s
GYA LR LR
comp=E,370nm,17.0s
GYA LR LR
comp=Z,390nm,17.2s
CD2 Chengdu 30.49 272 *e*P **P** **08 24 25.0 -0.8**
CD2 AMB AMB
comp=Z,20nm,0.6s,mb4.9
CD2 AMB AMB
comp=Z,60nm,6.4s
GTA Gaotai 31.88 289 *e*P **P** **08 24 38.3 +0.3**
GTA AP pP 08 25 00.5 +5.2
GTA PP PP 08 25 47.3 -3.8
GTA PCP PcP 08 27 26.0 -1.0
GTA S **S** **08 29 45.5 +2.0**
GTA SCP ScP 08 31 03.3 -0.7
GTA PCS PcS 08 31 09.3 -2.4
GTA SS SS 08 31 43.0 -20
GTA AMB AMB
comp=Z,9.0nm,0.6s,mb4.7
GTA AMB AMB
comp=Z,429nm,6.5s
GTA LR LR
comp=N,2µm,19.4s
GTA LR LR
comp=E,2µm,20.9s
GTA LR LR
comp=Z,3µm,21.7s
KMI Kunming 33.55 262 P **P** **08 24 52.8 +0.2**
KMI AP pP 08 25 15.5 +5.5
KMI AMB AMB
comp=Z,17nm,1.0s,mb4.8
BILL Bilibino 35.80 17⇑ *e*P **P** **08 25 11.4 -0.6**
BILL pmax pmax
comp=Z,14nm,1.3s,mb4.7
TIXI Tiksi 36.64 354⇑ *e*P **P** **08 25 17.7 -1.4**
TIXI pmax pmax
comp=Z,16nm,0.7s,mb5.1
KRAR Krasnoyarsk 37.73 318 *i*P **P** **08 25 25.2 -3.2**
WMQ Urumqi 40.46 298 *e*P **P** **08 25 52.0 +0.9**
WMQ PP PP 08 27 30.0 +4.5
WMQ S **S** **08 31 56.0 +1.6**
WMQ AMB AMB
comp=Z,18nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,89nm,4.0s
WMQ LR LR
comp=N,1µm,12.0s
WMQ LR LR
comp=E,896nm,12.0s
WMQ LR LR
comp=Z,1µm,12.0s
LSA Lhasa 41.16 276 *e*P **P** **08 25 58.0 +1.2**
LSA pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
LSA Lhasa 41.16 276 *e*P **P** **08 25 58.0 +1.2**
comp=Z,9.7nm,0.6s,mb4.8
ZAL Zalesovo 42.06 314 P **P** **08 26 03.9 -0.4**
comp=Z,19nm,0.7s,mb4.9,baz=18,slow=6.7,SNR=13
MK31 Makanchi Array 43.91 303 P **P** **08 26 19.0 -0.2**
MK31 pmax pmax
comp=Z,41nm,0.9s,mb5.2
MKAR Makanchi Array 43.91 303 P **P** **08 26 19.2 0.0**
comp=Z,40nm,0.8s,mb5.2,baz=75,slow=9.3,SNR=44
MKAR Makanchi Array 43.91 303 P **P** **08 26 19.2 0.0**
PMG Port Moresby 45.22 170⇑ *e*P **P** **08 26 31.9 +2.3**
KURK Kurchatov 45.92 309 P **P** **08 26 34.5 -0.6**
comp=Z,660nm,0.7s,SNR=26
JIRN Jiri 45.96 276 *e*P **P** **08 26 36.2 +0.8**
comp=Z,82nm,0.8s,mb5.5
GUN Gumba 46.11 276 *e*P **P** **08 26 37.3 +0.7**
comp=Z,71nm,0.8s,mb5.5
PKI Pulchoki 46.63 276 *e*P **P** **08 26 40.9 +0.2**
comp=Z,48nm,0.9s,mb5.2
PKI Pulchoki 46.63 276 *e*P **P** **08 26 40.9 +0.2**
PKI pmax pmax
comp=Z,48nm,0.9s,mb5.2
KKN Kakani 46.64 276 *e*P **P** **08 26 41.1 +0.3**
comp=Z,54nm,0.8s,mb5.3
KKN Kakani 46.64 276 *e*P **P** **08 26 41.1 +0.3**
KKN pmax pmax
comp=Z,54nm,0.8s,mb5.3
DMN Daman 46.86 276 *e*P **P** **08 26 42.8 +0.3**
comp=Z,46nm,1.0s,mb5.2
GKN Gorkha 47.08 277 *e*P **P** **08 26 44.6 +0.4**
comp=Z,97nm,0.7s,mb5.6
KOLN Koldanda 48.01 277 *e*P **P** **08 26 51.9 +0.5**
comp=Z,35nm,0.8s,mb5.2

KAKA Kakadu 48.51 190 *e*P **P** **08 26 54.6 -0.6**
comp=Z,101nm,1.4s,mb5.6
KDAK Kodiak Island 49.02 41 P **P** **08 26 57.7 -1.5**
comp=Z,7.0nm,0.4s,mb4.9,baz=272,slow=5.7,SNR=9.5
KDAK Kodiak Island 49.02 41 P **P** **08 26 57.7 -1.5**
TKM2 Tokmak 2 49.29 299 P **P** **08 27 02.3 +1.1**
SNR=14
KZA Kyzart 49.75 298 P **P** **08 27 06.5 +1.7**
SNR=10
KBK Karagaybulak 49.82 299 P **P** **08 27 06.1 +0.8**
SNR=12
CHMS Chumysh 49.87 299 P **P** **08 27 06.1 +0.4**
SNR=6.8
USP Ospenovka 49.98 300 P **P** **08 27 06.9 +0.4**
SNR=10
PSI Prapat 49.99 239 P **P** **08 27 05.6 -1.0**
comp=Z,14nm,0.8s,mb4.9,baz=66,slow=1.9,SNR=9.7
PSI Prapat 49.99 239 P **P** **08 27 05.6 -1.0**
AAK Ala-Archa 50.15 299 P **P** **08 27 08.7 +0.9**
SNR=7.3
AAK Ala-Archa 50.15 299 *e*P **P** **08 27 07.1 -0.6**
AAK Ala-Archa 50.15 299 *e*P **P** **08 27 07.0 -0.8**
comp=Z,17nm,0.8s,mb5.0
VOSK Vostochnaya 50.39 313 P **P** **08 27 08.8 -0.8**
CHKZ Chkalovo 50.46 314 *e*P **P** **08 27 09.6 -0.5**
CHKZ Chkalovo 50.46 314 *e*P **P** **08 27 09.2 -0.9**
comp=Z,17nm,0.6s,mb5.2
EKS2 Erkin-Say 50.65 299 P **P** **08 27 11.9 +0.4**
SNR=6.0
BVAR Borovoye Array 50.70 313 P **P** **08 27 11.6 -0.3**
comp=Z,7.9nm,0.5s,mb5.0,baz=114,slow=8.9,SNR=16
BRVK Borovoye 50.75 313 P **P** **08 27 12.2 -0.1**
BRVK pmax pmax
comp=Z,11nm,0.9s,mb4.9
BRVK Borovoye 50.75 313 *e*P **P** **08 27 11.8 -0.5**
comp=Z,12nm,0.8s,mb5.0
AML Almayashu 50.85 299 P **P** **08 27 14.3 +1.2**
SNR=36
COLA College 50.98 32⇓ *e*P **P** **08 27 14.7 +0.7**
COLA College 50.98 32 *e*P **P** **08 27 13.5 -0.6**
comp=Z,5.6nm,0.7s,mb4.7
ZRNK Zerenda 51.53 313 *e*P **P** **08 27 17.8 -0.3**
ZRNK pmax pmax
comp=Z,12nm,0.5s,mb5.2
ZRNK Zerenda 51.53 313 *e*P **P** **08 27 17.8 -0.3**
comp=Z,12nm,0.5s,mb5.2
NDI New Delhi 52.78 281 *e*P **P** **08 27 26.0 -1.4**
KK31 Karatay Array 52.84 301 *i*P **P** **08 27 27.5 -0.3**
KK31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KKAR Karatay Array 52.84 301 P **P** **08 27 27.5 -0.3**
KKAR pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
FITZ Fitzroy Crossi 55.04 197⇑ *i*P **P** **08 27 43.8 -0.1**
comp=Z,34nm,0.8s,mb5.4
FITZ Fitzroy Crossi 55.04 197 P **P** **08 27 43.3 -0.6**
comp=Z,23nm,0.8s,mb5.2,baz=12,slow=8.1,SNR=37
WRAB Tennant Creek 55.42 186⇑ *e*P **P** **08 27 46.0 -0.6**
WRAB Tennant Creek 55.42 186 *e*P **P** **08 27 45.8 -0.8**
comp=Z,38nm,0.6s,mb5.6
WB2 Warramunga Arr 55.43 186⇑ *i*P **P** **08 27 45.8 -0.9**
WRA Warramunga Arr 55.43 186 P **P** **08 27 45.6 -1.0**
comp=Z,24nm,0.4s,mb5.5,baz=0.1,slow=7.6,SNR=36
AJM Ajmer 55.78 280 *i*P **P** **08 27 49.0 -0.2**
INK Inuvik 56.26 27 P **P** **08 27 51.7 -0.9**
comp=Z,2.8nm,0.6s,mb4.5,baz=303,slow=6.6,SNR=7.0
INK Inuvik 56.26 27 *e*P **P** **08 27 52.1 -0.5**
INK pmax pmax
comp=Z,3.0nm,0.5s
INK Inuvik 56.26 27 *e*P **P** **08 27 52.1 -0.5**
comp=Z,3.3nm,0.5s,mb4.6
ARU Arti 56.69 319 *e*P **P** **08 27 55.1 -0.5**
ARU pmax pmax
comp=Z,38nm,0.9s,mb5.4
ARU Arti 56.69 319 *e*P **P** **08 27 54.9 -0.7**
comp=Z,38nm,0.8s,mb5.5
HYB Hyderabad 56.96 268⇑ *i*P **P** **08 27 58.0 +0.5**
HYB Hyderabad 56.96 268⇑ *e*P **P** **08 27 58.0 +0.5**
AB31 Akbulak array 57.98 310 *i*P **P** **08 28 04.3 -0.5**
AB31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
AKTK Aktyubinsk 58.78 312 P **P** **08 28 09.1 -1.2**
AKTO Aktyubinsk 58.78 312 P **P** **08 28 09.1 -1.2**
comp=Z,13nm,0.9s,mb4.9,baz=74,slow=11,SNR=7.9
AKTO Aktyubinsk 58.78 312 *i*P **P** **08 28 09.2 -1.1**
AS31 Alice Springs 59.16 186 *e*P **P** **08 28 12.3 -0.6**
ASAR Alice Springs 59.16 186 P **P** **08 28 12.4 -0.5**
comp=Z,6.5nm,0.4s,mb5.0,baz=17,slow=10.0,SNR=54
ASPA Alice Springs 59.16 186 *e*P **P** **08 28 12.3 -0.6**
MBWA Marble Bar 59.55 202 *e*P **P** **08 28 15.2 -0.4**
comp=Z,31nm,0.6s,mb5.5
PALK Pallekele 60.87 257 *e*P **P** **08 28 25.1 +0.4**
comp=Z,13nm,0.8s,mb5.0
ALE Alert 61.67 3 P **P** **08 28 29.0 -1.1**
comp=Z,111nm,0.7s,SNR=7.0
KBS Kingsbay 61.92 350⇓ *i*P **P** **08 28 31.8 +0.1**
TMCR Tamitsa 63.48 331 *e*P **P** **08 28 40.1 -2.0**
TMCR pmax pmax
comp=Z,40nm,1.1s,mb5.3
APA Apatity 63.55 336⇓ *i*P **P** **08 28 41.0 -1.6**
APA *i* 08 29 05.6
APA pmax pmax
comp=Z,18nm,0.8s,mb5.0
RES Resolute Bay 64.34 14 *e*P **P** **08 28 47.1 -0.7**
RES pmax pmax
comp=Z,17nm,0.9s,mb4.9
RES Resolute Bay 64.34 14 *e*P **P** **08 28 47.1 -0.7**
comp=Z,17nm,0.9s,mb4.9
ARCES ARCESS Array B 64.97 339 P **P** **08 28 50.4 -1.4**
comp=Z,13nm,0.7s,mb4.9,baz=58,slow=7.3,SNR=41
YKA Yellowknife Ar 65.70 29 P **P** **08 28 55.0 -1.5**
comp=Z,2.3nm,0.8s,mb4.0,baz=307,slow=4.6,SNR=4.5
YKA Yellowknife Ar 65.70 29 P **P** **08 28 55.0 -1.5**
FORT Forrest 66.90 191⇑ *i*P **P** **08 29 03.9 -0.3**
comp=Z,56nm,0.5s,mb5.7
STKA Stephens Creek 67.08 178 *e*P **P** **08 29 04.8 -0.6**
comp=Z,5.4nm,0.6s,mb4.5
STKA Stephens Creek 67.08 178 P **P** **08 29 03.9 -1.5**
comp=Z,6.8nm,0.6s,mb4.6,baz=338,slow=7.0,SNR=12
OBN Obninsk 68.57 323⇓ *i*P **P** **08 29 14.1 -0.6**
OBN *i* *PP pP 08 29 32.7 -1.2
OBN *e* 08 29 38.1
OBN pmax pmax
comp=Z,23nm,1.0s,mb5.0
OBN Obninsk 68.57 323 *e*P **P** **08 29 14.2 -0.6**
comp=Z,14nm,0.6s,mb5.0
C04A Brinnon 68.98 46 ⇓P **P** **08 29 17.7 +0.4**
baz=69
B05A Bryant 69.22 45 ⇑P **P** **08 29 18.3 -0.4**
baz=69
VRSR Storozhevoye 69.25 319 *e*P **P** **08 29 18.1 -0.8**
VRSR pmax pmax
comp=Z,30nm,0.9s,mb5.1
VRSR pmax pmax
comp=N,30nm,0.8s
VRSR pmax pmax
comp=E,40nm,0.8s
FINES FINESS Array B 69.57 332 P **P** **08 29 19.9 -1.0**
comp=E,20nm,0.7s,mb5.1,baz=89,slow=6.3,SNR=46
C05A Tolt Reservoir 69.74 45 ⇑P **P** **08 29 21.2 -0.8**
baz=70
KLBR Kellerberrin 69.95 200 *e*P **P** **08 29 22.3 -0.9**
comp=E,94nm,1.8s,mb5.3
E05A Randle 70.28 46 ⇑P **P** **08 29 25.5 +0.2**
baz=70
J02A Umpqua 70.82 50 ⇑P **P** **08 29 28.2 -0.3**
baz=71
KIV Kislovodsk 70.97 311⇓ *e*P **P** **08 29 30.0 +0.5**
KIV pmax pmax
comp=Z,34nm,1.0s,mb5.1
KIV Kislovodsk 70.97 311 *e*P **P** **08 29 29.6 +0.1**
comp=Z,31nm,0.9s,mb5.1
NWAO Narrogin (SRO) 71.35 200 P **P** **08 29 30.7 -1.1**
comp=Z,21nm,0.8s,mb5.0,baz=3.3,slow=3.9,SNR=8.4
NWAO Narrogin (SRO) 71.35 200 *e*P **P** **08 29 31.0 -0.8**
NWAO pmax pmax
comp=Z,29nm,1.1s
NWAO Narrogin (SRO) 71.35 200 *e*P **P** **08 29 31.0 -0.8**
comp=Z,29nm,1.1s,mb5.0
H05A Madras 71.60 48 ⇓P **P** **08 29 33.5 +0.3**
baz=71
GNI Garni 71.63 306 P **P** **08 29 33.9 +0.4**
comp=Z,2.9nm,0.4s,mb4.5,baz=36,slow=17,SNR=3.3
GNI Garni 71.63 306⇑ *e*P **P** **08 29 35.3 +1.9**
G06A Carlson Farm, 71.64 47 ⇓P **P** **08 29 33.8 +0.2**
baz=71

NEW Newport 72.04 43 P **P** **08 29 35.6 -0.3**
comp=Z,6.9nm,1.0s,mb4.4,baz=309,slow=6.5,SNR=6.3
SUMG Summit 72.17 359 *e*P **P** **08 29 37.1 +0.4**
comp=Z,29nm,0.8s,mb5.2
G07A Ruggs Ranch, H 72.20 47 ⇑P **P** **08 29 37.1 +0.2**
baz=72
YBH Yreka Blue Hor 72.22 51 P **P** **08 29 37.6 +0.6**
comp=Z,8.2nm,1.1s,mb4.5,baz=160,slow=2.3,SNR=4.6
YBH Yreka Blue Hor 72.22 51 ⇓P **P** **08 29 37.5 +0.5**
baz=72
M02C Callahan 72.30 52 ⇑P **P** **08 29 38.2 +0.7**
baz=72
J05A Fort Rock 72.32 49 ⇑P **P** **08 29 37.8 +0.3**
baz=72
F08A Pendleton 72.44 46 ⇓P **P** **08 29 38.1 -0.2**
baz=72
I06A Prineville 72.59 48 ⇑P **P** **08 29 40.3 +1.1**
baz=72
G08A Pilot Rock 72.61 47 ⇓P **P** **08 29 40.3 +1.0**
baz=72
M04C Macdoel 72.74 51 ⇑P **P** **08 29 41.6 +1.5**
baz=73
K05A Summer Lake 72.83 50 ⇑P **P** **08 29 41.7 +1.1**
baz=73
H08A Prairie City 73.21 47 ⇑P **P** **08 29 42.6 -0.2**
baz=73
L05A Lakeview 73.23 50 ⇑P **P** **08 29 43.5 +0.5**
baz=73
J07A Hines 73.45 48 ⇑P **P** **08 29 45.1 +0.9**
baz=73
K07A Rock Creek Ran 73.86 49 ⇓P **P** **08 29 47.8 +1.1**
baz=74
L07A Adell 74.18 50 ⇓P **P** **08 29 49.4 +0.9**
baz=74
K08A Mann Creek Ran 74.31 49 ⇓P **P** **08 29 49.7 +0.5**
baz=74
J09A Fry Pan Ranch, 74.41 48 ⇓P **P** **08 29 50.8 +0.9**
baz=74
M07A Soldier Meadow 74.63 50 ⇓P **P** **08 29 52.1 +1.0**
baz=74
L08A Fields 74.70 49 ⇓P **P** **08 29 52.0 +0.4**
baz=74
AKASG Malin Array Be 74.73 322 P **P** **08 29 50.6 -1.1**
comp=Z,11nm,0.6s,mb4.8,baz=48,slow=5.8,SNR=39
AKBB Malin Array Si 74.73 322 *e*P **P** **08 29 50.9 -0.8**
AKBB Malin Array Si 74.73 322 *e*P **P** **08 29 50.7 -1.1**
HFS Hagfors 74.95 335 P **P** **08 29 51.6 -1.3**
comp=Z,8.4nm,0.7s,mb4.6,baz=90,slow=5.8,SNR=16
NB2 NORSAR Subarra 75.09 337 P **P** **08 29 52.7 -1.1**
comp=Z,22nm,0.8s,mb5.0,baz=41,slow=5.9
NOA NORSAR Array B 75.09 337 P **P** **08 29 52.6 -1.2**
comp=Z,17nm,0.8s,mb4.8,baz=40,slow=5.8,SNR=37
M08A Happy Creek Ra 75.09 50 ⇓P **P** **08 29 54.5 +0.7**
baz=75
MIB Mutribah 75.27 296 *e*P **P** **08 29 54.4 -0.4**
MIB AMb AMB 08 29 55.0
comp=Z,29nm,0.8s,mb5.0
O07A Toulon 75.50 51 ⇓P **P** **08 29 56.9 +0.7**
baz=75
RDF Al-Radifah 75.59 295 *e*P **P** **08 29 54.1 -2.6**
RDF AMb AMB 08 29 57.2
comp=Z,56nm,0.7s,mb5.4
NAY Al-Naaiem 75.64 296 *e*P **P** **08 29 55.2 -1.7**
NAY AMb AMB 08 29 57.6
comp=Z,25nm,0.9s,mb5.0
CMB Columbia Colle 75.72 53 *e*P **P** **08 29 57.2 -0.2**
comp=Z,3.5nm,0.6s,mb4.3
CMB Columbia Colle 75.72 53 ⇑P **P** **08 29 57.8 +0.4**
baz=76
HAST UC Hastings Re 75.87 55 ⇓P **P** **08 29 58.8 +0.6**
baz=76
N09A Rock Creek Ran 75.96 50 ⇑P **P** **08 30 00.3 +1.5**
baz=76
S05C Merced 76.15 54 ⇑P **P** **08 30 00.8 +1.0**
baz=76
M10A I.L. Ranch, Tu 76.19 49 ⇑P **P** **08 30 01.3 +1.3**
baz=76
HLID Hailey 76.28 46 *e*P **P** **08 30 00.5 0.0**
comp=Z,1.6nm,0.6s,mb3.9
U04C Hernandez Rese 76.39 55 ⇑P **P** **08 30 01.8 +0.6**
baz=76
O09A Fish Creek Ran 76.56 50 ⇑P **P** **08 30 02.7 +0.5**
baz=76
M11A Holland Ranch, 76.70 48 ⇓P **P** **08 30 04.0 +1.1**
baz=76
MALT Malatya 76.74 308 P **P** **08 30 04.8 +1.6**
MALT pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
MALT Malatya 76.74 308 *e*P **P** **08 30 04.3 +1.1**
comp=Z,10nm,1.1s,mb4.5
T06C Millerton Lake 76.75 54 ⇑P **P** **08 30 03.4 +0.2**
baz=77
KCC Kaiser Creek 76.82 54 ⇓P **P** **08 30 03.0 -0.6**
baz=77
Q08A Gabbs 76.85 52 ⇓P **P** **08 30 04.1 +0.3**
baz=77
NVAR Mina Array Bea 76.85 52 P **P** **08 30 04.2 +0.4**
comp=Z,2.8nm,0.6s,mb4.1,baz=312,slow=4.2,SNR=9.8
NVAR Mina Array Bea 76.85 52 P **P** **08 30 04.2 +0.4**
O10A Cortez Mining, 76.92 50 ⇓P **P** **08 30 05.3 +1.1**
baz=77
P09A Austin 76.95 51 ⇓P **P** **08 30 05.3 +0.9**
baz=77
MLAC Mammoth Lakes 76.97 53 ⇑P **P** **08 30 06.4 +2.0**
baz=77
N11A Elko Archery C 77.09 49 ⇓P **P** **08 30 06.2 +1.1**
baz=77
M12A Wells 77.24 48 ⇑P **P** **08 30 07.1 +1.1**
baz=77
SFJD Kangerlussuaq 77.47 4 P **P** **08 30 06.2 -1.0**
comp=Z,14nm,0.7s,mb4.8,baz=344,slow=5.3,SNR=4.8
N12A Clover Valley, 77.50 49 ⇑P **P** **08 30 07.1 -0.3**
baz=77
M13A Montello 77.73 48 ⇑P **P** **08 30 09.4 +0.7**
baz=78
R09A Tonopah 77.75 52 ⇓P **P** **08 30 09.2 +0.3**
baz=78
VES Vestal, Richgr 77.83 55 ⇓P **P** **08 30 08.8 -0.4**
baz=78
S09A Goldfield 77.96 52 ⇓P **P** **08 30 10.5 +0.6**
baz=78
O12A Currie 78.02 49 ⇑P **P** **08 30 10.2 -0.1**
baz=78
P12A McGill 78.39 50 ⇑P **P** **08 30 12.9 +0.5**
baz=78
FRB Frobisher Bay 78.50 12 P **P** **08 30 12.2 -0.8**
comp=Z,31nm,0.7s,mb5.1,baz=344,slow=6.0,SNR=13
MPMC Manual Prospec 78.75 54 ⇓P **P** **08 30 14.3 0.0**
baz=79
BRTR Keskin Array B 78.93 311 P **P** **08 30 14.8 -0.5**
comp=Z,4.1nm,0.9s,mb4.2,baz=99,slow=4.8,SNR=9.7
BORG Borgarnes 78.96 352 P **P** **08 30 15.2 -0.3**
comp=Z,16nm,0.8s,mb4.9,baz=2.6,slow=1.1,SNR=4.2
EDW2 Edwards Air Fo 79.11 55 ⇑P **P** **08 30 15.9 -0.4**
baz=79
DUG Dugway 79.25 48 *e*P **P** **08 30 11.7 -5.4**
DUG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
DUG Dugway 79.25 48 *e*P **P** **08 30 11.7 -5.4**
comp=Z,4.8nm,0.7s,mb4.4
KOLS Kolonicke sedl 79.31 324 *e*P **P** **08 30 17.4 0.0**
STHS Stebnicka Huta 79.48 324 *e*P **P** **08 30 19.0 +0.7**
STHS pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
STHS Stebnicka Huta 79.48 324 *e*P **P** **08 30 19.0 +0.7**
comp=Z,10nm,1.0s,mb4.6
STHS *e* 08 30 31.8
BW06 Boulder Array 79.58 45 *e*P **P** **08 30 19.1 +0.3**
comp=Z,1.7nm,0.6s,mb4.0
PDAR Pinedale Array 79.58 45 P **P** **08 30 18.9 +0.1**
comp=Z,2.9nm,0.5s,mb4.3,baz=297,slow=0.5,SNR=20
OJC Ojcow 79.60 326 *i*Pc 08 30 18.9
CRVS Cervenica-Dubn 79.73 324 *e*P **P** **08 30 19.7 0.0**
CRVS *e*pP pP 08 30 42.6 +3.3
TUQ Turquoise Mtn. 80.15 53 ⇑P **P** **08 30 22.7 +0.8**
baz=80
HEC Hector,Ludlow 80.24 54 ⇓P **P** **08 30 22.8 +0.4**
baz=80
MURC Murrieta 80.39 56 ⇑P **P** **08 30 23.3 0.0**
baz=80
KECS Kecovo 80.48 324 *e*P **P** **08 30 22.9 -0.8**
OKC Ostrava-Krasne 80.62 326 *e*P **P** **08 30 24.6 +0.1**
V12A Nelson 80.67 53 ⇑P **P** **08 30 25.5 +0.8**
baz=80
GMRC Granite Mounta 80.71 54 ⇓P **P** **08 30 25.7 +0.8**
baz=80
KSP Ksiaz 80.73 328⇑ *e*P **P** **08 30 25.0 0.0**

BSEG Bad Segeberg 80.84 333 *e*P P **08 30 25.3 -0.3**
comp=Z,20nm,1.1s,mb4.9
PFO Pinyon Flat Ob 80.88 55 *e*P P **08 30 26.6 +0.7**
PFO pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
PFO Pinyon Flat Ob 80.88 55 *e*P P **08 30 26.6 +0.7**
comp=Z,8.1nm,0.9s,mb4.5
PFO Pinyon Flat Ob 80.88 55 ⇑P P **08 30 26.3 +0.4**
baz=81
BELC Belle Mtn. 80.95 55 ⇓P P **08 30 26.7 +0.4**
baz=81
DPC Dobruska-Polom 81.07 327 *e*P P **08 30 27.0 +0.1**
DPC *e*pP pP 08 30 51.2 +4.6
UPC Upice 81.09 328 *e*P P **08 30 26.6 -0.4**
VYHS Vyhne 81.26 325 *e*P P **08 30 28.4 +0.5**
VYHS *e* pP 08 30 52.4 +4.8
VYHS *e* 08 33 31.9
VYHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
VYHS Vyhne 81.26 325 *e*P P **08 30 28.4 +0.5**
comp=Z,7.1nm,1.1s,mb4.4
VYHS *e* pP 08 30 52.4 +4.8
VYHS *e*PP PP 08 33 31.9 -2.3
SRU San Rafael 81.31 48 *e*P P **08 30 28.8 +0.7**
SRU pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
SRU San Rafael 81.31 48 *e*P P **08 30 28.8 +0.7**
comp=Z,7.1nm,0.6s,mb4.7
ASF Jabal al Asfar 81.33 303 P P **08 30 27.9 -0.3**
comp=Z,6.0nm,0.8s,mb4.5,baz=338,slow=3.5,SNR=7.7
MONP Monument Peak 81.33 56 ⇓P P **08 30 28.1 -0.2**
baz=81
ULM Lac du Bonnet 81.41 32 P P **08 30 28.1 -0.6**
comp=Z,4.2nm,0.7s,mb4.4,baz=355,slow=5.1,SNR=3.7
W13A Hualapai Mount 81.68 53 ⇑P P **08 30 30.7 +0.6**
baz=82
DVTC Desert V Tower 81.69 56 ⇓P P **08 30 30.4 +0.2**
baz=82
PVCC Panska Ves 81.70 328 *e*P P **08 30 30.5 +0.3**
VRAC Vranov 81.71 326 P P **08 30 29.9 -0.3**
comp=Z,13nm,0.9s,mb4.7,baz=37,slow=4.9,SNR=5.6
BRG Berggiesshubel 81.71 329 *e*P P **08 30 29.9 -0.4**
comp=Z,11nm,0.9s,mb4.7
CLL Collm 81.78 330 *e*P P **08 30 29.9 -0.7**
comp=Z,24nm,0.9s,mb5.0
CLL Collm 81.78 330 ⇑P P **08 30 29.9 -0.7**
comp=Z,logA/T=1.4,mb5.0
CLL *e**PP pP 08 30 55.0 +4.7
CLL Collm 81.78 330 ⇑*i*P P **08 30 29.9 -0.7**
comp=Z,24nm,0.9s,mb5.0
CLL *e*pP pP 08 30 55.0 +4.7
CLL Collm 81.78 330 *i*P P **08 30 29.9 -0.7**
CLL *i* *PP pP 08 30 48.3 -2.0
CLL pmax pmax
comp=Z,24nm,0.9s,mb5.0
CLL Collm 81.78 330 ⇑*i*P P **08 30 29.9 -0.7**
comp=Z,24nm,0.9s,mb5.0
CLL *i* pP pP 08 30 48.3 -2.0
FBE Freiberg 81.92 329 *e*P P **08 30 31.1 -0.3**
PDMCI Parker Dam,Lak 82.00 53 ⇑P P **08 30 31.5 -0.3**
baz=82
ISP Isparta 82.01 311 *i*P P **08 30 31.4 -0.4**
X13A Yucca 82.03 53 ⇑P P **08 30 31.9 0.0**
baz=82
NRDL Niedersach Rie 82.03 332 *e*P P **08 30 32.5 +0.6**
comp=Z,10.0nm,1.0s,mb4.6
PRU Pruhonice 82.12 328 *e*P P **08 30 32.1 -0.3**
W14A Seligman 82.13 52 ⇑P P **08 30 33.0 +0.5**
baz=82
GLA Glamis 82.31 55 ⇓P P **08 30 34.0 +0.6**
baz=82
PV10 Paradox Valley 82.67 48 *e*P P **08 30 36.3 +1.1**
X14A Yava 82.71 53 ⇓P P **08 30 35.8 +0.4**
baz=82
NKC Novy Kostel 82.82 329 *e*P P **08 30 36.1 0.0**
MOX Moxa 82.86 330 *e*P P **08 30 35.8 -0.4**
comp=Z,13nm,1.1s,mb4.7
MOX Moxa 82.86 330 *e*P P **08 30 35.7 -0.5**
Y14A Wickenburg 82.97 53 ⇓P P **08 30 36.8 0.0**
baz=83
WUAZ Wupatki 83.03 51 *e*P P **08 30 38.4 +1.2**
comp=Z,11nm,1.0s,mb4.7
CONA Conrad Observa 83.05 326 ⇑*i*P P **08 30 37.7 +0.5**
comp=Z,7.4nm,0.9s,mb4.5
PV01 Paradox Valley 83.11 48 *e*P P **08 30 38.7 +1.1**
X15A Humboldt 83.12 52 ⇓P P **08 30 38.6 +1.0**
baz=83
MANZ Manzenberg 83.15 329 *e*P P **08 30 37.5 -0.3**
comp=Z,8.0nm,0.9s,mb4.5
KHC Kasperske Hory 83.17 328 *e*P P **08 30 37.6 -0.3**
KHC *e*pP pP 08 30 59.7 +2.1
ROTZ Rotzenmuhle 83.28 329 *e*P P **08 30 38.4 0.0**
comp=Z,12nm,1.2s,mb4.6
GERES GERESS Array B 83.33 328 P P **08 30 38.1 -0.6**
comp=Z,2.8nm,0.6s,mb4.2,baz=40,slow=4.4,SNR=9.4
ARSA Arzberg 83.70 326 ⇓*i*P P **08 30 40.9 +0.3**
comp=Z,7.8nm,0.9s,mb4.5
GRA1 Grafenberg Arr 83.75 329 *e*P P **08 30 40.8 0.0**
comp=Z,29nm,1.1s,mb5.0
GRA1 *e*pP pP 08 31 06.7 +6.1
GRF Grafenberg Arr 83.75 329 *e*P P **08 30 40.8 0.0**
comp=Z,29nm,1.1s,mb5.0
GRF *e*pP pP 08 31 06.7 +6.1
GRF Grafenberg Arr 83.75 329 *e*P P **08 30 40.8 0.0**
GRF *e**PP pP 08 31 06.7 +6.1
GRF pmax pmax
comp=Z,29nm,1.1s,mb5.0
MOA Molln 83.83 327 ⇑*i*P P **08 30 42.1 +0.9**
comp=Z,8.4nm,0.9s,mb4.6
PERS Pernice 84.34 325 *e*P P **08 30 43.4 -0.4**
VAY Valandovo 84.35 318 *e*P P **08 30 43.7 -0.2**
TNS Taunus Mts 84.46 331 *e*P P **08 30 43.8 -0.6**
comp=Z,21nm,1.4s,mb4.8
TNS Taunus Mts 84.46 331 *e*P P **08 30 43.8 -0.6**
TNS pmax pmax
comp=Z,21nm,1.4s,mb4.8
116A Eloy 84.67 54 ⇓P P **08 30 45.5 0.0**
baz=84
LEGS Legarje 84.76 325 *e*P P **08 30 45.2 -0.8**
VISS Visnje 85.09 325 *e*P P **08 30 46.7 -0.9**
JAVS Javornik 85.38 325 *i*P P **08 30 47.8 -1.2**
BFO Black Forest 86.00 330 *e*P P **08 30 51.2 -0.9**
comp=Z,16nm,1.1s,mb4.9
BFO Black Forest 86.00 330 *e*P P **08 30 51.2 -0.9**
BFO pmax pmax
comp=Z,16nm,1.1s,mb4.9
DAVA Damuels 86.18 329 ⇑*i*P P **08 30 53.2 +0.3**
comp=Z,9.4nm,0.8s,mb4.8
BAIF Baives 86.21 333 *e*P P **08 30 52.3 -0.8**
CDF Champ du Feu 86.36 331 *e*P P **08 30 53.4 -0.5**
comp=Z,25nm,1.0s,mb4.8
CDF Champ du Feu 86.36 331 *e*P P **08 30 53.4 -0.5**
CDF pmax pmax
comp=Z,13nm,1.0s,mb4.8
CDF Champ du Feu 86.36 331 *e*P P **08 30 53.4 -0.5**
comp=Z,12nm,1.0s,mb4.8
ANMO Albuquerque 86.47 49 ⇓*e*P P **08 30 55.8 +1.4**
SCHQ Schefferville 87.10 15 P P **08 30 56.8 -0.7**
comp=Z,7.5nm,0.7s,mb4.7,baz=9.2,slow=6.4,SNR=6.1
SCHQ Schefferville 87.10 15 *e*P P **08 30 56.9 -0.6**
comp=Z,10nm,0.7s,mb4.9
LOR Lormes 88.64 332 *e*P P **08 31 04.6 -0.2**
LPL La Plagne 88.91 329 *e*P P **08 31 07.7 +1.6**
LPG La Plagne 88.92 329 *e*P P **08 31 07.9 +1.8**
FLN La Foliniere 88.97 335 *e*P P **08 31 06.3 -0.1**
AVF Avril sur Loir 89.23 332 *e*P P **08 31 08.2 +0.6**
GRR Gorron 89.42 335 *e*P P **08 31 07.9 -0.6**
comp=Z,25nm,0.9s,mb4.9
GRR Gorron 89.42 335 *e*P P **08 31 07.9 -0.6**
GRR pmax pmax
comp=Z,12nm,0.9s,mb4.9
GRR Gorron 89.42 335 *e*P P **08 31 07.9 -0.6**
comp=Z,12nm,0.9s,mb4.9
TCF Toulx Ste Croi 90.08 332 *e*P P **08 31 12.2 +0.6**
SGMF Saint Gilles 90.11 336 *e*P P **08 31 11.4 -0.3**
ROSF Rostrenen 90.27 336 *e*P P **08 31 12.2 -0.2**
QUIF Quistinic 90.60 336 *e*P P **08 31 13.5 -0.5**
comp=Z,29nm,1.1s,mb5.0
QUIF Quistinic 90.60 336 *e*P P **08 31 13.5 -0.5**
QUIF pmax pmax
comp=Z,15nm,1.1s,mb5.0
QUIF Quistinic 90.60 336 *e*P P **08 31 13.5 -0.5**
comp=Z,15nm,1.1s,mb5.0
RJF Les Rejaudoux 91.17 332 *e*P P **08 31 16.6 0.0**
comp=Z,20nm,0.8s,mb5.0
RJF Les Rejaudoux 91.17 332 *e*P P **08 31 16.6 0.0**
RJF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
RJF Les Rejaudoux 91.17 332 *e*P P **08 31 16.6 0.0**
comp=Z,10nm,0.8s,mb5.0
CAF Calviac 91.28 332 *e*P P **08 31 17.4 +0.3**
LFF La Frestale 91.78 332 *e*P P **08 31 19.6 +0.2**
comp=Z,34nm,0.8s,mb5.3
LFF La Frestale 91.78 332 *e*P P **08 31 19.6 +0.2**
LFF pmax pmax
comp=Z,17nm,0.8s,mb5.3
LFF La Frestale 91.78 332 *e*P P **08 31 19.6 +0.2**
comp=Z,17nm,0.8s,mb5.3
MTLF Montolieu 92.54 331 *e*P P **08 31 22.9 -0.1**
ETSF Etsaut 94.00 332 *e*P P **08 31 30.0 +0.3**
SJPF Ste Jean 94.07 333 *e*P P **08 31 30.2 +0.2**
comp=Z,33nm,1.3s,mb5.2
SJPF Ste Jean 94.07 333 *e*P P **08 31 30.2 +0.2**
SJPF pmax pmax
comp=Z,17nm,1.3s,mb5.2
SJPF Ste Jean 94.07 333 *e*P P **08 31 30.2 +0.2**
comp=Z,16nm,1.3s,mb5.2
TORD Torodi Ar. Bea 117.50 313 PKP PKPdf 08 36 56.8 -0.4
comp=Z,1.7nm,0.5s,baz=30,slow=1.1,SNR=36
MAW Mawson 117.67 205 PKP PKPdf 08 36 54.9 -2.5
comp=Z,1.7nm,0.7s,baz=350,slow=11,SNR=7.3
QSPA South Pole Qui 125.28 180 *e*P PKPdf 08 37 10.3 -1.8
SYO Syowa Base 126.33 206 ⇑*e*P PKPdf 08 37 12.8 -1.3
DBIC Dimbokro 126.51 315 PKP PKPdf 08 37 14.4 0.0
comp=Z,2.5nm,0.4s,baz=6.8,slow=3.1,SNR=13
SDV Santo Domingo 127.25 39 PKP PKPdf 08 37 15.0 -0.8
comp=Z,11nm,0.6s,baz=207,slow=19,SNR=5.8
LPAZ La Paz 148.49 60 PKPbc PKPbc 08 37 56.6 -1.5
comp=Z,4.5nm,0.6s,baz=336,slow=5.4,SNR=22
LPAZ La Paz 148.49 60 PKP2 PKPbc 08 37 56.6 -1.5
LPAZ pmax pmax
comp=Z,5.0nm,0.6s
LVC Limon Verde 151.81 71 PKPbc PKPbc 08 38 07.1 +1.1
comp=Z,8.9nm,0.8s,baz=136,slow=0.0,SNR=8.5
LVC Limon Verde 151.81 71 *e*PKPbc PKPbc 08 38 07.7 +1.6
SIV San Ignacio 152.97 49 PKP PKPdf 08 38 02.0 +0.7
comp=Z,1.7nm,0.8s,baz=348,slow=9.3,SNR=4.8
SIV PKPbc PKPbc 08 38 08.7 0.0
comp=Z,8.1nm,0.7s,baz=266,slow=1.7,SNR=35
CPUP Villa Florida 162.61 63 PKP PKPdf 08 38 12.7 -0.5
comp=Z,1.8nm,0.8s,baz=297,slow=2.7,SNR=3.9
CPUP PKPab PKPab 08 38 59.1 -2.7
comp=Z,1.3nm,0.6s,baz=296,slow=5.3,SNR=3.0
CPUP Villa Florida 162.61 63 PKP2 PKPab 08 38 59.1 -2.7
CPUP pmax pmax
comp=Z,1.0nm,0.6s

*ISCJB **31** 08:18:42.8±0.7, 1928S±008×1729W±0.1, h33km, mb4.5/6, Error ellipse: s-maj=15.1km s-min=9.3km az=60.6*
*IDC **31** 08:18:45.8±1.8, 1957S×17366W, h0km, mb4.5/7, mb1 4.6/8, mb1mx4.4/18, mbtmp4.5/8, ML4.3/1, Error ellipse: s-maj=50.3km s-min=27.9km az=127.0*
*NEIC **31** 08:18:57.8±7.4, 1966S×17380W, h92km±62km, mb4.6/3, Error ellipse: s-maj=42.1km s-min=26.0km az=60.0*

ISC 31 08:18:45.7±0.7, 1930S±008×1730W±01, h35km, n16, σ1°27/14, mb4.5/6, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.49**	**12**	Pn		**Pn**		**08 20 07.2**	**+2.3**
	5.4nm,0.3s,baz=65,slow=22,SNR=8.0								
AFI				Sn		**Sn**		**08 21 05.8**	**-1.0**
	12nm,0.3s,baz=203,slow=23,SNR=3.5								
RAR	**Rarotonga**	**12.54**	**101**	Pn		**Pn**		**08 21 40.7**	**-0.9**
	4.0nm,0.3s,baz=244,slow=8.7,SNR=4.8								
DZM	**Mont Dzumac**	**19.45**	**258**	P		**Pn**		**08 23 08.4**	**-2.2**
	0.9nm,0.3s,baz=146,slow=19,SNR=7.6								
URZ	**Urewera**	**20.76**	**202**	P		**P**		**08 23 24.6**	**+1.1**
	7.6nm,0.6s,baz=346,slow=9.4,SNR=5.9								
CTA	**Charters Tower**	**38.32**	**262**	*e*P		**P**		**08 26 02.8**	**-0.2**
	4.9nm,0.4s,mb4.6								
CTA	**Charters Tower**	**38.32**	**262**	P		**P**		**08 26 02.5**	**-0.5**
	5.0nm,0.4s,mb4.6,baz=92,slow=12,SNR=18								
CTAO	**Charters Tower**	**38.32**	**262**	*e*P		**P**		**08 26 02.9**	**-0.1**
	4.7nm,0.6s,mb4.4								
STKA	**Stephens Creek**	**42.55**	**244**	*e*P		**P**		**08 26 37.4**	**-0.6**
	2.2nm,0.6s,mb4.1								
STKA	**Stephens Creek**	**42.55**	**244**	P		**P**		**08 26 36.0**	**-2.0**
	2.6nm,0.6s,mb4.1,baz=76,slow=11,SNR=6.9								
ASAR	**Alice Springs**	**49.39**	**255**	P		**P**		**08 27 32.4**	**+0.5**
	8.2nm,0.7s,mb4.9,baz=98,slow=8.1,SNR=48								
WRA	**Warramunga Arr**	**49.45**	**260**	P		**P**		**08 27 32.7**	**+0.3**
	3.4nm,0.5s,mb4.7,baz=97,slow=7.8,SNR=35								
FITZ	**Fitzroy Crossi**	**57.88**	**260**	P		**P**		**08 28 35.3**	**+1.3**
	4.4nm,0.5s,mb4.8,baz=133,slow=4.7,SNR=6.4								
MJAR	**Matsushiro Arr**	**72.17**	**320**	P		**P**		**08 30 11.5**	**+4.6**
	1.4nm,0.8s,mb4.0,baz=162,slow=5.2,SNR=4.4								
CLL	**Collm**	**147.72**	**353**	*e*PKP1		PKPbc		08 38 33.0	+6.4
BRTR	**Keskin Array B**	**149.36**	**317**	PKPbc		PKPbc		08 38 35.9	+5.0
	1.8nm,0.9s,baz=85,slow=1.5,SNR=5.2								
BRTR				PKPab		PKPab		08 38 42.1	+6.5
	2.4nm,0.7s,baz=88,slow=3.7,SNR=8.9								
GERES	**GERESS Array B**	**150.04**	**351**	PKPbc		PKPbc		08 38 37.0	+4.5
	0.5nm,0.6s,baz=282,slow=6.2,SNR=4.0								

IDC 31 08:27:03.6±4.6, 2538S×17811W, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.0/13, mbtmp4.2/4, Error ellipse: s-maj=226.0km s-min=65.5km az=162.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.22**	**272**	P		P		08 33 44.1	+1.9
	3.8nm,0.4s,baz=88,slow=11,SNR=11								
ASAR	**Alice Springs**	**43.51**	**262**	P		P		08 35 09.6	+0.8
	0.7nm,0.5s,baz=95,slow=7.4,SNR=10								
WRA	**Warramunga Arr**	**44.03**	**267**	P		P		08 35 12.3	-0.6
	2.0nm,0.4s,baz=104,slow=8.1,SNR=18								
FITZ	**Fitzroy Crossi**	**52.44**	**266**	P		P		08 36 16.6	-1.2
	1.8nm,0.8s,baz=90,slow=11,SNR=5.0								
BRTR	**Keskin Array B**	**149.84**	**306**	PKPbc		PKPbc		08 46 56.0	+0.4
	0.9nm,0.7s,baz=103,slow=3.0,SNR=3.5								

*NEIC **31** 08:41:03.1, 1951N×6378W, h54km, MD3.7(RSPR), After RSPR.*

RSPR 31 08:41:03.1, 1951N×6378W, h54km±17km, MD3.7/5, MD3.7/5, 6C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.34**	**216**	⇑*e*P		Pn		08 41 24.3	-1.2
TBVI				*e*S		Sn		08 41 42.0	-0.3
STVI	**Saint Thomas**	**1.60**	**225**	⇓*e*P		Pn		08 41 27.9	-1.1
STVI				*e*S		Sn		08 41 47.4	-1.1
MTP	**Monte Pirata**	**2.19**	**230**	⇑*e*P		Pn		08 41 36.4	-0.7
MTP				*e*S		Sn		08 42 01.9	-1.1
CBYP	**Canovanas**	**2.32**	**238**	⇑*e*P		Pn		08 41 38.0	-0.8
CBYP				*e*S		Sn		08 42 05.5	-0.6
HUMP	**Col San Antoni**	**2.38**	**236**	⇑*e*P		Pn		08 41 39.1	-0.5
HUMP				*e*S		Sn		08 42 07.2	-0.5
CPD	**Cerro la Pandu**	**2.50**	**235**	⇑*e*P		Pn		08 41 41.1	-0.1
CRPR	**Cabo Rojo, PR**	**3.49**	**245**	⇑*e*P		Pn		08 41 54.6	-0.2
CRPR				*e*S		Sn		08 42 35.5	+0.6

*ISCJB **31** 08:53:12.6±4.0, 1948N±006×1472E±05, h58km±25km, mb4.2/9, Error ellipse: s-maj=74.8km s-min=10.4km az=177.9*
*NEIC **31** 08:53:12.6±4.4, 1948N×14794E, h64km±27km, mb4.1/1, Error ellipse: s-maj=80.6km s-min=10.7km az=85.0*
*IDC **31** 08:53:14.5±4.0, 1946N×14728E, h60km±31km, mb3.9/7, mb1 4.0/10, mb1mx3.8/22, mbtmp4.3/10, ML4.1/3, Error ellipse: s-maj=49.5km s-min=13.6km az=83.0*

ISC 31 08:53:13.5±3.5, 1950N±006×1474E±05, h57km±21km, n15, σ0°92/17, mb4.2/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.36**	**203**	P		**Pn**		**08 54 45.9**	**+1.3**
	22nm,0.3s,baz=19,slow=0.4,SNR=8.5								
GUMO				S		**Sn**		**08 55 54.8**	**-1.0**
	12nm,0.3s,baz=24,slow=20,SNR=4.0								
GUMO	**Guam**	**6.36**	**203**	P		**Pn**		**08 54 45.9**	**+1.3**
GUMO				S		**Sn**		**08 55 54.8**	**-1.0**
CBIJ	**Chichi jima**	**8.96**	**329**	P		**Pn**		**08 55 19.0**	**-1.2**
	5.1nm,0.3s,baz=275,slow=24,SNR=7.9								
CBIJ				S		**Sn**		**08 56 52.7**	**-6.9**
	6.3nm,0.3s,baz=112,slow=24,SNR=4.8								
MJAR	**Matsushiro Arr**	**18.81**	**336**	P		**Pn**		**08 57 30.4**	**+1.0**
	0.2nm,0.3s,baz=160,slow=9.5,SNR=4.6								
WRAB	**Tennant Creek**	**41.23**	**199**	*e*P		**P**		**09 00 53.0**	**+0.3**
	1.5nm,0.4s,mb4.0								
WRA	**Warramunga Arr**	**41.24**	**199**	P		**P**		**09 00 53.0**	**+0.2**
	1.7nm,0.7s,mb3.8,baz=26,slow=8.4,SNR=30								
WRA				PcP		PcP		09 02 51.7	+0.9
	0.8nm,0.6s,baz=15,slow=3.5,SNR=6.8								
SONM	**Songino Array**	**43.56**	**320**	P		**P**		**09 01 12.9**	**+1.3**
	2.8nm,0.7s,mb4.1,baz=141,slow=8.5,SNR=15								
ASAR	**Alice Springs**	**44.88**	**198**	P		**P**		**09 01 22.4**	**+0.1**
	0.9nm,0.6s,mb3.8,baz=24,slow=7.4,SNR=24								
MKAR	**Makanchi Array**	**59.09**	**313**	P		**P**		**09 03 08.6**	**+0.7**
	2.3nm,0.7s,mb4.3,baz=71,slow=9.1,SNR=12								
BVAR	**Borovoye Array**	**66.91**	**320**	P		**P**		**09 04 00.2**	**+0.4**
	4.5nm,0.6s,mb4.7,baz=88,slow=8.2,SNR=23								
AKTK	**Aktyubinsk**	**74.85**	**319**	P		**P**		**09 04 47.8**	**-0.2**
AKTO	**Aktyubinsk**	**74.85**	**319**	P		**P**		**09 04 47.8**	**-0.2**
	2.0nm,0.6s,mb4.2,baz=93,slow=9.3,SNR=11								
JOF	**Joensuu**	**83.98**	**336**	*e*p		**P**		**09 05 35.8**	**-1.7**
	4.8nm,0.5s,mb4.9								
FINES	**FINESS Array B**	**86.84**	**336**	P		**P**		**09 05 50.6**	**-1.2**
	1.0nm,0.5s,mb4.3,baz=86,slow=5.1,SNR=11								
LPAZ	**La Paz**	**146.06**	**90**	PKPbc		PKPbc		09 12 49.3	+2.3
	0.4nm,0.4s,baz=235,slow=5.3,SNR=3.8								

NNC 31 09:04:20.6±4.1, 5419N×8676E, h0km, mb3.9, mpv3.6, 3C-5D, Error ellipse: s-maj=40.6km s-min=21.7km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MK06	**Makanchi Array**	**7.95**	**203**	⇑Pn		Pn		09 06 16.9	-0.4
	0.7nm,0.2s,baz=25,slow=12								
MK06				⇓Sn		Sn		09 07 48.8	+1.0
	1.3nm,0.7s								
MK06				⇓Lg				09 08 34.7	
	7.1nm,1.0s,baz=19,slow=33								
VOSK	**Vostochnaya**	**9.53**	**268**	⇓Pn		Pn		09 06 41.4	+2.4
	0.4nm,0.2s								
VOSK				⇓Sn		Sn		09 08 25.9	-1.0
	17nm,1.2s								
CHKZ	**Chkalovo**	**9.54**	**273**	⇓Sn		Sn		09 08 25.3	-1.9
	6.2nm,1.1s								
BVA0	**Borovoye Array**	**9.81**	**270**	⇑Sn		Sn		09 08 34.9	+1.4
	1.7nm,1.1s								
ZRNK	**Zerenda**	**10.64**	**271**	⇑Sn		Sn		09 08 52.0	-2.0
	6.9nm,1.2s								

*NEIC **31** 09:08:12.7, 1986N×6532W, h97km, MD3.5(RSPR), After RSPR.*

RSPR 31 09:08:12.7, 1986N×6532W, h97km±26km, MD3.5/5, MD3.5/5, 4C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**1.66**	**198**	⇓*e*P		Pn		09 08 39.9	-0.9
CBYP				*e*S		Sn		09 09 02.1	0.0
MTP	**Monte Pirata**	**1.77**	**187**	⇑*e*P		Pn		09 08 41.6	-0.5
MTP				*e*S		Sn		09 09 04.2	-0.4
HUMP	**Col San Antoni**	**1.78**	**196**	⇑*e*P		Pn		09 08 41.9	-0.4
CPD	**Cerro la Pandu**	**1.90**	**197**	⇑*e*P		Pn		09 08 43.2	-0.6
CPD				*e*S		Sn		09 09 08.1	+0.6
CRPR	**Cabo Rojo, PR**	**2.50**	**223**	⇑*e*P		Pn		09 08 52.4	+0.7
CRPR				*e*S		Sn		09 09 21.2	-0.5

IDC 31 09:08:41.4±2.1, 021N×12640E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.5/16, mbtmp3.5/3, Error ellipse: s-maj=170.4km s-min=27.6km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OTRP	**Odiongan**	**12.83**	**340**	*e*P		Pn		09 11 35.8	-9.2
WRA	**Warramunga Arr**	**21.49**	**159**	P		P		09 13 30.8	-0.8
	1.0nm,0.7s,baz=338,slow=10.0,SNR=9.8								
ASAR	**Alice Springs**	**24.83**	**163**	P		P		09 14 06.4	+1.1
	0.8nm,0.9s,baz=350,slow=16,SNR=7.0								
MKAR	**Makanchi Array**	**60.26**	**327**	P		P		09 18 51.6	+0.1
	0.4nm,0.5s,baz=120,slow=8.5,SNR=3.8								

*NEIC **31** 09:11:40.4, 1708N×9920W, h2km, MD3.6(MEX), After MEX.*

MEX 31 09:11:40.6±0.7, 1702N×9909W, h20km±74km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.81**	**259**	*i*P		Pb		09 11 53.0	-2.9
ACX				*i*S		Sb		09 12 04.0	-2.4
MEIG	**Mezcala**	**1.03**	**331**	*i*P		Pb		09 11 56.9	-2.9
MEIG				*i*S		Sb		09 12 09.0	-4.0
PLIG	**Platanillo**	**1.42**	**344**	*i*P		Pn		09 12 02.5	-2.7
PLIG				*i*S		Sn		09 12 19.5	-3.9
UTMO	**Huajuapan**	**1.47**	**56**	*i*P		Pn		09 12 03.0	-2.9
UTMO				*i*S		Sn		09 12 20.9	-3.6
IIZ	**Mezontepec**	**2.16**	**356**	*i*P		Pn		09 12 12.7	-2.7
IIZ				*i*S		Sn		09 12 36.7	-4.9
SIUC	**Southern Illin**	**22.37**	**21**	*e*P		P		09 16 40.0	+2.5
	13nm,0.5s								
PMR	**Palmer**	**56.68**	**334**	*e*P		P		09 21 24.6	+2.1
	25nm,1.3s								
ESK	**Eskdalemuir**	**79.48**	**35**	*e*P		P		09 23 48.4	+2.7
	160nm,2.3s								
ESK				*e*PcP		PcP		09 23 56.5	+2.9

*ISCJB **31** 09:23:57.3±0.6, 4262N±004×14295E±005, h116km±4km, mb3.7/2, Error ellipse: s-maj=6.5km s-min=5.9km az=35.1*
*IDC **31** 09:23:58.9±2.1, 4264N×14286E, h117km±15km, mb3.5/2, mb1 3.5/3, mb1mx3.2/21, mbtmp3.7/3, Error ellipse: s-maj=79.3km s-min=19.1km az=93.0*
*NEIC **31** 09:23:59.3, 4265N×14299E, h101km, MG3.5(JMA), After JMA.*
*JMA **31** 09:23:59.3±0.1, 4265N×14299E, h101km±2km, M3.5*

ISC 31 09:23:58.3±0.6, 4262N±004×14296E±005, h111km±4km, n19, σ0°63/35, mb3.7/2, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCH	**Churui**	**0.30**	**91**	P		**Pn**		**09 24 13.8**	**-0.4**
JCH				*e*S		**Sn**		**09 24 24.8**	**-1.3**
JNBK	**Urakawa-nobuka**	**0.37**	**204**	P		**Pn**		**09 24 15.0**	**+0.5**
JNBK				S		**Sn**		**09 24 27.4**	**+0.7**
JBT2	**Biratori 2**	**0.46**	**290**	P		**Pn**		**09 24 15.1**	**+0.1**
JBT2				*e*S		**Sn**		**09 24 27.5**	**-0.1**
JFR	**Furan**	**0.60**	**334**	P		**Pn**		**09 24 15.8**	**-0.2**
JFR				*e*S		**Sn**		**09 24 28.5**	**-0.8**
JEM	**Erimo**	**0.62**	**166**	P		**Pn**		**09 24 16.6**	**+0.5**
JEM				*e*S		**Sn**		**09 24 29.8**	**+0.2**
ERM	**Erimo**	**0.62**	**166**	*e*Pn		**Pn**		**09 24 16.4**	**+0.2**
ERM				*e*Sn		**Sn**		**09 24 31.0**	**+1.4**
JOB	**Onbets**	**0.71**	**66**	P		**Pn**		**09 24 17.1**	**+0.3**
JOB				*e*S		**Sn**		**09 24 30.8**	**0.0**
JAR	**Ashorobuto**	**0.90**	**41**	P		**Pn**		**09 24 18.6**	**0.0**
JAR				*e*S		**Sn**		**09 24 33.2**	**-0.7**
JAB	**Ashibetsu**	**1.03**	**329**	P		**Pn**		**09 24 20.0**	**+0.1**
JAB

1.4nm,0.6s,mb4.0,baz=55,slow=7.3,SNR=7.5

IDC ***31*** *09:34:57.2±1.4, 0.39S×125.22E, h0km, mb4.3/5, mb1 4.5/5, mb1mx4.0/17, mbtmp4.3/5, MS3.9/1, Ms1 3.9/1, ms1mx2.7/26, Error ellipse: s-maj=170.9km s-min=19.4km az=63.0*

ISCJB ***31*** *09:35:00.0±0.8, 0.4S±0.2×1252E±0.3, h33km, mb4.3/8, Error ellipse: s-maj=53.3km s-min=10.4km az=129.5*

NEIC ***31*** *09:35:02.4±0.7, 0.46S×125.15E, h35km, mb4.4/5, Error ellipse: s-maj=43.8km s-min=9.3km az=64.0*

ISC 31 09:35:02.4±0.8, 04S±02×1252E±03, h35km, n16, σ0≥73/16, mb4.3/8, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**14.18**	**150**	*e*P	**Pn**	**09 38 20.3**	**-0.3**
	7.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**17.57**	**179**	*e*P	**Pn**	**09 39 03.8**	**-0.7**
	4.2nm,0.9s						
WRAB	**Tennant Creek**	**21.37**	**156**	*e*P	**P**	**09 39 46.1**	**-0.6**
	11nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**21.37**	**156**	P	**P**	**09 39 45.9**	**-0.9**
	6.5nm,0.6s,mb4.1,baz=335,slow=11,SNR=36						
WB2	**Warramunga Arr**	**21.38**	**156**	*e*P	**P**	**09 39 46.2**	**-0.6**
AS31	**Alice Springs**	**24.61**	**160**	*e*P	**P**	**09 40 20.2**	**+0.9**
ASPA	**Alice Springs**	**24.61**	**160**	*e*P	**P**	**09 40 20.2**	**+0.9**
ASAR	**Alice Springs**	**24.61**	**160**	P	**P**	**09 40 19.8**	**+0.4**
	33nm,1.4s,mb4.7,baz=341,slow=10,SNR=30						
FORT	**Forrest**	**30.31**	**175**	*e*P	**P**	**09 41 11.2**	**+0.8**
	12nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**34.92**	**155**	*e*P	**P**	**09 41 51.8**	**+1.0**
	6.3nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**34.92**	**155**	P	**P**	**09 41 51.4**	**+0.7**
	9.7nm,1.0s,mb4.7,baz=327,slow=10,SNR=12						
MKAR	**Makanchi Array**	**60.12**	**327**	P	**P**	**09 45 07.3**	**+1.0**
	1.4nm,0.6s,mb4.2,baz=116,slow=8.2,SNR=11						
MKAR	**Makanchi Array**	**60.12**	**327**	P	**P**	**09 45 07.3**	**+1.0**
ZRNK	**Zerenda**	**70.67**	**328**	*e*P	**P**	**09 46 14.4**	**-0.1**
	1.9nm,0.6s,mb4.2						
AKTK	**Aktyubinsk**	**75.96**	**323**	P	**P**	**09 46 45.0**	**-0.7**
AKTO	**Aktyubinsk**	**75.96**	**323**	P	**P**	**09 46 45.0**	**-0.7**
	1.3nm,0.7s,mb4.0,baz=107,slow=8.4,SNR=4.6						

HLW ***31*** *09:41:14.6, 38.54N×20.73E, h33km, Mb3.7*

IDC ***31*** *09:41:19.0±1.1, 38.52N×21.57E, h0km, mb4.1/7, mb1 4.1/9, mb1mx3.9/23, mbtmp4.0/9, ML3.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/45, Error ellipse: s-maj=25.8km s-min=20.5km az=96.0*

ATH ***31*** *09:41:20.5, 38.37N×21.82E, h17km±1km, MD3.7/15, ML3.7*

NEIC ***31*** *09:41:20.5, 38.37N×21.82E, h17km, ML3.7(ATH), After ATH.*

CSEM ***31*** *09:41:21.5±0.1, 38.37N×21.70E, h20km, ML3.7, Error ellipse: s-maj=2.2km s-min=2.2km az=78.0*

ISCJB ***31*** *09:41:21.4±0.6, 38.36N±0.002×21.79E±0.004, h20km±6km, mb4.1/7, Error ellipse: s-maj=5.3km s-min=3.7km az=142.8*

THE ***31*** *09:41:22.6, 38.48N×21.82E, h1km, ML3.7*

ISC 31 09:41:20.7±0.6, 3838N±002×2183E±004, h3km±5km, n60, σ1≥26/72, mb4.1/7, 3C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.43**	**221**	⇓*i*PB	**Pg**	**09 41 28.8**	**-0.2**
RLS				*e*SB	**Sg**	**09 41 35.4**	**+0.8**
EVR	**Evrytania**	**0.54**	**359**	*e*PN	**Pg**	**09 41 30.9**	**-0.1**
EVR				*e*SN	**Sg**	**09 41 38.9**	**+1.0**
AGG	**Agios Georgios**	**0.75**	**31**	*e*Pg	**Pg**	**09 41 34.8**	**-0.3**
LKR	**Lokris**	**0.96**	**73**	*e*PN	**Pn**	**09 41 38.7**	**-2.4**
LKD	**Levkas**	**0.98**	**290**	*e*Pg	**Pg**	**09 41 38.0**	**-1.4**
LKD				*e*Sg	**Sg**	**09 41 53.3**	**+1.2**
VLS	**Valsamata**	**0.99**	**259**	*e*PN	**Pn**	**09 41 39.0**	**-2.6**
MGER	**Gerania Oros**	**1.20**	**109**	*e*PN	**Pn**	**09 41 43.8**	**-0.5**
ITM	**Ithomi**	**1.20**	**176**	*e*PN	**Pn**	**09 41 43.2**	**-1.2**
XOR	**Xorichti**	**1.45**	**47**	*e*Pg	**Pg**	**09 41 47.7**	**-0.9**
NAIG	**Nisos Aigina**	**1.45**	**115**	*e*PN	**Pn**	**09 41 48.5**	**+0.6**
MEV	**Metsovon**	**1.48**	**342**	*e*Pg	**Pg**	**09 41 48.9**	**-0.1**
JAN	**Janina**	**1.48**	**329**	*e*PN	**Pn**	**09 41 49.1**	**+0.8**
JAN				*e*SN	**Sn**	**09 42 09.5**	**+1.3**
ATH	**Athens Observa**	**1.54**	**105**	*e*PN	**Pn**	**09 41 49.2**	**+0.1**
ATH				*e*SN	**Sn**	**09 42 10.5**	**+0.8**
KVR	**Kavouri**	**1.63**	**109**	*e*PN	**Pn**	**09 41 50.5**	**+0.2**
PTL	**Penteli**	**1.64**	**101**	*e*PN	**Pn**	**09 41 50.5**	**+0.1**
LIT	**Litokhoron**	**1.79**	**17**	*e*Pb	**Pb**	**09 41 52.6**	**-1.6**
LIT				tSb	**Sb**	**09 42 15.6**	**-1.5**
VLI	**Veliai**	**1.88**	**152**	*e*PN	**Pn**	**09 41 53.6**	**-0.1**
KZN	**Kozani**	**1.92**	**359**	*e*PN	**Pn**	**09 41 55.7**	**+1.4**
KEK	**Kerkira**	**2.06**	**311**	*e*PN	**Pn**	**09 41 57.0**	**+0.7**
PAIG	**Paliouri**	**2.11**	**42**	*e*PN	**Pn**	**09 41 56.5**	**-0.4**
PLG	**Polygyros**	**2.35**	**32**	*e*PN	**Pn**	**09 42 00.1**	**-0.1**
FNA	**Florina**	**2.42**	**352**	*e*PN	**Pn**	**09 42 02.9**	**+1.7**
OUR	**Ouranopolis**	**2.57**	**40**	*e*PN	**Pn**	**09 42 03.1**	**-0.1**
BIA	**Bitola**	**2.66**	**352**	*e*PN	**Pn**	**09 42 06.0**	**+1.5**
BIA				*e*Sn	**Sn**	**09 42 37.9**	**+0.6**
OHR	**Ohrid**	**2.84**	**344**	*e*PN	**Pn**	**09 42 08.9**	**+1.9**
OHR				*e*Sn	**Sg**	**09 42 57.1**	**+5.2**
OHR	**Ohrid**	**2.84**	**344**	*e*Pn	**Pn**	**09 42 08.4**	**+1.5**
OHR				*e*Sn	**Sg**	**09 42 50.1**	**-1.9**
KNT	**Kendrikon**	**2.90**	**16**	*e*Pn	**Pn**	**09 42 07.8**	**0.0**
VAY	**Valandovo**	**2.99**	**11**	*e*Sn	**Sn**	**09 42 43.5**	**-1.9**
VAY	**Valandovo**	**2.99**	**11**	*e*Pn	**Pn**	**09 42 09.9**	**+0.9**
VAY				*e*Sn	**Sn**	**09 42 44.2**	**-1.1**
VAY	**Valandovo**	**2.99**	**11**	*e*Pn	**Pn**	**09 42 09.9**	**+0.9**
VAY				*e*Sn	**Sn**	**09 42 44.2**	**-1.2**
APE	**Apeiranthos**	**3.22**	**113**	*e*PN	**Pn**	**09 42 12.3**	**+0.2**
STIP	**Stip**	**3.32**	**5**	*e*Pn	**Pn**	**09 42 15.2**	**+1.7**
NVR	**Nevrokopi**	**3.35**	**27**	*e*PN	**Pn**	**09 42 14.4**	**+0.4**
SKO	**Skopje**	**3.60**	**355**	*e*Pn	**Pn**	**09 42 16.7**	**-0.7**
SKO	**Skopje**	**3.60**	**355**	*e*Pn	**Pn**	**09 42 16.6**	**-0.8**
IDI	**Anoyia**	**3.95**	**141**	Pn	**Pn**	**09 42 23.3**	**+1.2**
	1.3nm,0.3s,baz=343,slow=12,SNR=4.6						
IDI				Sn	**Sn**	**09 43 10.5**	**+1.5**
	4.7nm,0.3s,baz=74,slow=20,SNR=3.8						
RDO	**Rodhopi**	**3.98**	**45**	*e*PN	**Pn**	**09 42 24.5**	**+1.9**
VTS	**Vitosha**	**4.34**	**14**	*i*P	**Pn**	**09 42 28.3**	**+0.8**
BBLS	**Bajina Basta -**	**5.78**	**342**	*e*P	**P**	**09 42 49.0**	**+1.6**
DIVS	**Divcibare**	**5.88**	**347**	*i*P	**Pn**	**09 42 48.9**	**+0.2**
MLR	**Muntele Rosu**	**7.74**	**22**	Pn	**Pn**	**09 43 19.3**	**+5.1**
	1.5nm,0.3s,baz=203,slow=14,SNR=3.8						
HMAT	**Matruh**	**8.46**	**148**	P	**Pn**	**09 43 24.3**	**+0.1**
BRTR	**Keskin Array B**	**9.29**	**78**	Pn	**Pn**	**09 43 37.7**	**+2.2**
	0.3nm,0.3s,baz=67,slow=18,SNR=6.2						
SWA2		**9.60**	**161**	⇑P	**Pn**	**09 43 38.1**	**-1.7**
VOY	**Vojsko**	**9.64**	**325**	*e*Pn	**Pn**	**09 43 39.7**	**-0.7**
SWA1		**9.65**	**159**	P	**Pn**	**09 43 38.7**	**-1.7**
SWA1				S	**Sn**	**09 45 24.5**	**-4.9**
KECS	**Kecovo**	**10.14**	**355**	*e*	**Pn**	**09 43 55.6**	**+8.4**
AWBH		**11.64**	**147**	⇑P	**Pn**	**09 44 08.6**	**+0.8**
GLL	**Jalalah**	**12.01**	**134**	⇑P	**Pn**	**09 44 15.3**	**+2.6**
GNI	**Garni**	**17.83**	**77**	LR	LR	09 53 56.5	
	comp=Z,62nm,19.1s,baz=98,slow=42						
HFS	**Hagfors**	**22.38**	**349**	P	**P**	**09 46 15.7**	**-4.3**
	2.2nm,0.4s,mb3.9,baz=148,slow=8.5,SNR=13						
FINES	**FINESS Array B**	**23.24**	**5**	P	**P**	**09 46 26.1**	**-3.1**
	5.8nm,1.1s,mb3.9,baz=176,slow=7.6,SNR=6.5						
NB2	**NORSAR Subarra**	**23.64**	**347**	P	**P**	**09 46 31.1**	**-2.1**
	comp=Z,1.9nm,0.6s,mb3.7,baz=153,slow=10						
NOA	**NORSAR Array B**	**23.64**	**347**	P	**P**	**09 46 30.5**	**-2.8**
	comp=Z,2.8nm,0.7s,mb3.8,baz=154,slow=9.3,SNR=9.6						
KAF	**Kangasniemi**	**23.92**	**5**	*e*p	**P**	**09 46 32.8**	**-3.0**
	baz=183,slow=9.8						
JOF	**Joensuu**	**25.24**	**10**	*e*p	**P**	**09 46 44.3**	**-3.6**
TORD	**Torodi Ar. Bea**	**30.84**	**221**	P	**P**	**09 47 36.8**	**-1.2**
	comp=Z,1.2nm,0.6s,mb3.9,baz=28,slow=9.2,SNR=14						
ARCES	**ARCESS Array B**	**31.28**	**2**	P	**P**	**09 47 39.2**	**-2.6**
	comp=Z,1.1nm,0.6s,mb3.9,baz=192,slow=9.9,SNR=12						
MKAR	**Makanchi Array**	**44.32**	**59**	P	**P**	**09 49 31.2**	**-0.7**
	comp=Z,7.4nm,0.4s,mb4.8,baz=274,slow=7.5,SNR=71						
ZAL	**Zalesovo**	**44.78**	**48**	P	**P**	**09 49 34.2**	**-1.4**
	comp=Z,3.5nm,0.5s,mb4.5,baz=292,slow=1.0,SNR=7.0						

NIED ***31*** *09:41:00, 45.40N×150.30E, h50km, Mw5.1 Best double couple: Mo4.52000×10¹⁶ NP1:φ=136.00000°, δ=84.00000°, λ=-44.00000°. NP2:φ=231.00000°, δ=46.00000°, λ=-172.00000°.*

SZGRF ***31*** *09:41:37.8, 44.83N×149.45E, h33km, mb5.3, Kuril Islands, Russia*

JMA ***31*** *09:41:37.7±0.7, 45.37N×150.28E, h30km, M5.5*

ISCJB ***31*** *09:41:38.1±0.1, 45.28N±0.002×150.02E±0.002, h45km, mb5.1/181, MS4.4/43, Error ellipse: s-maj=3.6km s-min=1.6km az=134.9*

HRVD ***31*** *09:41:39.6±0.3, 45.22N×150.38E, h53km±1km, MW5.1/80, Centroid moment Tensor Solution. LP body waves: s30,c35;Mantle waves: s80,c126; Half duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=4.17±.31; Mθθ=-1.60±.23; Mφφ=2.57±.22; Mre=-0.23±.15; Mθφ=-3.62±.14; Mθr=2.67±.13; Best double couple: Mo=5.76600×10¹⁶ NP1:φ=246.00000°, δ=41.00000°, λ=131.00000°. NP2: φ=18.00000°, δ=60.00000°, λ=61.00000°. Principal axes: T 5.4390, Plg62.0000°, Azm240.0000°; N 0.6520, Plg25.0000°, Azm33.0000°; P -6.0920, Plg11.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BJI ***31*** *09:41:39.0, 45.24N×150.15E, h65km, mB5.1, mb5.2, Ms4.5, Msz4.4*

SKHL ***31*** *09:41:39.7±0.4, 45.49N×150.14E, h39km±2km, mb5.7/2, Ms4.4/6, msh5.2/3*

NEIC ***31*** *09:41:39.6±0.1, 45.32N×149.94E, mb5.2/115, Error ellipse: s-maj=3.9km s-min=2.4km az=161.0*

MOS ***31*** *09:41:40.5±0.9, 45.35N×149.98E, h64km, mb5.4/77, MS4.6/16, Error ellipse: s-maj=6.7km s-min=4.2km az=104.3*

IDC ***31*** *09:41:41.5±1.8, 45.32N×150.05E, h65km±15km, mb4.5/34, mb1 4.6/36, mb1mx4.6/37, mbtmp4.8/36, MS4.3/22, Ms1 4.3/22, ms1mx4.1/36, Error ellipse: s-maj=11.1km s-min=9.0km az=118.0*

ISC 31 09:41:40.1±0.1, 4535N±002×14996E±002, h47km, h47km±.6km: pP-P, n758, σ0≥90/766, mb5.1/181, MS4.4/43, 177C-72D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.48**	**266**	*e*P	**Pn**	**09 42 02.6**	**-1.7**
KUR				*i*P		09 42 02.6	
KUR				AMB	AMB	09 42 03.5	
	2μm,0.5s						
KUR				AMB	AMB	09 42 03.5	
	2μm,0.5s						
KUR				AMB	AMB	09 42 03.5	
	13μm,0.5s						
KUR				AMB	AMB	09 42 06.0	
	8μm,1.0s						
KUR				AMB	AMB	09 42 06.0	
	15μm,1.0s						
KUR				AMB	AMB	09 42 06.0	
	25μm,1.0s						
KUR				*e*S	**Sn**	**09 42 19.5**	**-3.0**
KUR				A		09 42 26.0	
	74μm,2.0s						
KUR				A		09 42 26.0	
	50μm,2.0s						
KUR				A		09 42 26.0	
	45μm,2.0s						
KUR				A		09 42 26.0	
	25μm,2.0s						
KUR	**Kuril'sk**	**1.48**	**266**	⇓*i*PN	**Pn**	**09 42 02.6**	**-1.7**
KUR				*i* S	**Sn**	**09 42 19.5**	**-3.0**
KUR				pmax	pmax		
	comp=N,2μm,0.5s						
KUR				pmax	pmax		
	comp=E,2μm,0.5s						
KUR				pmax	pmax		
	comp=Z,1μm,0.5s						
KUR				pmax	pmax		
	comp=N,8μm,1.0s						
KUR				pmax	pmax		
	comp=E,15μm,1.0s						
KUR				pmax	pmax		
	comp=Z,25μm,1.0s						
KUR				smax			
	comp=N,74μm,2.0s						
KUR				smax			
	comp=E,50μm,2.0s						
YUK	**Yuzh-Kuril'sk**	**3.20**	**247**	*i* P	**Pn**	**09 42 32.0**	**+4.1**
YUK				AMB	AMB	09 42 33.6	
	comp=E,350nm,0.4s						
YUK				AMB	AMB	09 42 33.6	
	comp=E,210nm,0.4s						
YUK				AMB	AMB	09 42 33.6	
	comp=E,710nm,0.4s						
YUK				AMB	AMB	09 42 40.0	
	comp=E,3μm,1.1s						
YUK				AMB	AMB	09 42 40.0	
	comp=E,5μm,1.1s						
YUK				*i* S	**Sn**	**09 43 11.5**	**+6.7**
YUK				A		09 43 19.0	
	comp=E,35μm,1.0s						
YUK				A		09 43 19.0	
	comp=E,32μm,1.0s						
YUK				A		09 43 22.5	
	comp=E,46μm,0.8s						
YUK				A		09 43 22.5	
	comp=E,8μm,0.8s						
YUK	**Yuzh-Kuril'sk**	**3.20**	**247**	⇑*i*PN	**Pn**	**09 42 32.0**	**+4.1**
YUK				*i* S	**Sn**	**09 43 11.5**	**+6.7**
YUK				pmax	pmax		
	comp=Z,710μm,0.4s						
YUK				pmax	pmax		
	comp=N,350nm,0.4s						
YUK				pmax	pmax		
	comp=E,210nm,0.4s						
YUK				smax			
	comp=N,35μm,1.0s						
YUK				smax			
	comp=E,32μm,1.0s						
NEM2	**Nemuro 2**	**3.61**	**238**	P	**Pn**	**09 42 33.1**	**-0.5**
NEM2				*e*S	**Sn**	**09 43 13.8**	**-1.2**
JRA	**Rausu**	**3.73**	**249**	P	**Pn**	**09 42 36.6**	**+1.5**
JNK	**Nakash**	**4.14**	**247**	P	**Pn**	**09 42 42.7**	**+1.9**
JNK				*e*S	**Sn**	**09 43 30.9**	**+2.9**
JAK	**Akkeshi**	**4.46**	**240**	P	**Pn**	**09 42 45.3**	**+0.2**
JAK				*e*S	**Sn**	**09 43 35.2**	**-0.5**
JTKR	**Abashiri--Toko**	**4.53**	**254**	P	**Pn**	**09 42 48.9**	**+2.8**
JAR	**Ashorobuto**	**4.89**	**247**	P	**Pn**	**09 42 53.9**	**+2.8**
JMP	**Maruseppu**	**4.89**	**256**	⇓P	**Pn**	**09 42 54.4**	**+3.3**
JOB	**Onbets**	**5.04**	**243**	P	**Pn**	**09 42 54.7**	**+1.6**
JOB				*e*S	**Sn**	**09 43 51.7**	**+1.6**
JSE	**Soyaes**	**5.23**	**268**	P	**Pn**	**09 42 59.4**	**+3.7**
YSS	**Yuzh-Sakhalins**	**5.25**	**290**	⇓*i*P	**Pn**	**09 42 59.0**	**+2.9**
YSS				*es*P		09 43 14.0	
YSS				*e*S	**Sn**	**09 44 02.0**	**+6.6**
YSS				AMS	AMS	09 45 08.0	
	comp=E,1μm,15.0s						
YSS				AMS	AMS	09 45 08.0	
	comp=E,2μm,17.0s						
YSS				AMS	AMS	09 45 08.0	
	comp=E,4μm,17.0s						
JKK2	**Kamakawa 2**	**5.35**	**257**	P	**Pn**	**09 43 01.2**	**+3.7**
ASAJ	**Asahikawa**	**5.39**	**259**	P	**Pn**	**09 43 01.8**	**+3.9**
ASAJ	comp=E,12nm,0.3s,baz=90,slow=15,SNR=120			S	**Sn**	**09 44 03.6**	**+5.1**
	baz=334,slow=23,SNR=1.4						
ASAJ				LR	LR	09 45 15.4	
	comp=E,4μm,19.9s,baz=81,slow=39						
ASAJ	**Asahikawa**	**5.39**	**259**	PN	**Pn**	**09 43 01.8**	**+3.9**
ASAJ				S	**Sn**	**09 44 03.7**	**+5.1**
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,4μm,19.9s						
JCH	**Churui**	**5.49**	**242**	P	**Pn**	**09 43 00.2**	**+0.9**
JCH				*e*S	**Sn**	**09 44 01.8**	**+0.7**
JWK2	**Keihoku**	**5.68**	**273**	P	**Pn**	**09 43 08.3**	**+6.3**
JFR	**Furan**	**5.72**	**250**	P	**Pn**	**09 43 05.8**	**+3.3**
JAB	**Ashibetsu**	**5.84**	**254**	P	**Pn**	**09 43 08.8**	**+4.7**
JSS	**Shosan**	**5.84**	**264**	P	**Pn**	**09 43 09.5**	**+5.4**
JEM	**Erimo**	**5.95**	**238**	P	**Pn**	**09 43 07.8**	**+2.2**
ERM	**Erimo**	**5.95**	**238**	⇓*i*PN	**Pn**	**09 43 08.7**	**+3.1**
ERM	**Erimo**	**5.95**	**238**	*e*Pn	**Pn**	**09 43 07.3**	**+1.6**
	comp=Z,3μm,0.8s						
ERM				*e*Sn	**Sn**	**09 44 15.1**	**+2.6**
JBT2	**Biratori 2**	**6.04**	**248**	P	**Pn**	**09 43 09.0**	**+2.1**
JNBK	**Urakawa-nobuka**	**6.05**	**242**	P	**Pn**	**09 43 07.5**	**+0.5**
JHR	**Hokuryu**	**6.10**	**258**	P	**Pn**	**09 43 12.5**	**+4.8**
UGL	**Uglegorsk**	**6.54**	**308**	*e*PN	**Pn**	**09 43 18.0**	**+4.3**
UGL				S	**Sn**	**09 44 39.0**	**+12**
UGL				pmax	pmax		
	comp=Z,250nm,1.0s						
UGL				pmax	pmax		
	comp=Z,700nm,1.4s						
UGL				smax			
	comp=N,2μm,4.0s						
UGL				smax			
	comp=E,2μm,4.0s						
UGL				MLR	MLR		
	comp=N,1μm,15.0s						
UGL				MLR	MLR		
	comp=E,2μm,15.0s						
UGL				MLR	MLR		
	comp=Z,2μm,15.0s						
JEW	**Eniwo**	**6.62**	**251**	P	**Pn**	**09 43 18.1**	**+3.3**
SKR	**Severo-Kuril's**	**6.75**	**36**	*e*P	**Pn**	**09 43 13.0**	**-3.6**
SKR				AMB	AMB	09 43 17.5	
	comp=Z,310nm,0.5s						
SKR				AMB	AMB	09 43 17.5	
	comp=Z,230nm,0.5s						
SKR				AMB	AMB	09 43 17.5	
	comp=Z,390nm,0.5s						
SKR				AMB	AMB	09 43 17.5	
	comp=Z,1μm,2.0s						
SKR				*e*S	**Sn**	**09 44 27.0**	**-5.1**
SKR				A		09 44 56.0	
	comp=Z,2μm,8.0s						
SKR				A		09 44 56.0	
	comp=Z,4μm,8.0s						
SKR				A		09 44 56.0	
	comp=Z,4μm,8.0s						
SKR				A		09 45 04.5	
	comp=Z,510nm,0.6s						
SKR				A		09 45 04.5	
	comp=Z,380nm,0.6s						
SKR				A		09 45 04.5	
	comp=Z,240nm,0.6s						
SKR				AMS	AMS	09 45 44.0	
	comp=Z,3μm,16.0s						
SKR				AMS	AMS	09 45 44.0	
	comp=Z,3μm,16.0s						
SKR				AMS	AMS	09 45 44.0	
	comp=Z,2μm,16.0s						
SKR				AMS	AMS	09 45 44.0	
	comp=Z,3μm,16.0s						
JNB	**Noboribetsu**	**7.05**	**249**	P	**Pn**	**09 43 22.9**	**+2.1**
JNB				*e*S	**Sn**	**09 44 42.3**	**+2.7**
JKB	**Kayabe**	**7.34**	**245**	P	**Pn**	**09 43 25.0**	**+0.3**
JKB				*e*S	**Sn**	**09 44 44.7**	**-2.0**
JYM2	**Yakumo 2**	**7.66**	**248**	P	**Pn**	**09 43 30.7**	**+1.7**
JSR	**Shiriuchi**	**7.92**	**245**	P	**Pn**	**09 43 33.0**	**+0.3**
JTM	**Tenmabayashi**	**7.94**	**238**	P	**Pn**	**09 43 32.8**	**-0.2**
JANG	**Nango**	**7.95**	**234**	P	**Pn**	**09 43 31.1**	**-1.9**
JANG				*e*S	**Sn**	**09 44 54.5**	**-7.0**
JTH	**Tanohata**	**8.05**	**231**	P	**Pn**	**09 43 31.9**	**-2.5**
JTH				*e*S	**Sn**	**09 44 53.2**	**-11**
JOSM	**Okushiri--Mats**	**8.26**	**250**	P	**Pn**	**09 43 38.8**	**+1.4**
OFUJ	**Ofunato**	**8.77**	**227**	P	**Pn**	**09 43 41.9**	**-2.5**
JRG	**Rokugo**	**9.11**	**232**	P	**Pn**	**09 43 47.1**	**-1.8**
OKH	**Okha**	**9.39**	**333**	*e*P	**Pn**	**09 43 52.6**	**-0.2**
OKH				AMB	AMB	09 43 53.1	
	comp=Z,200nm,0.9s						
OKH				A		09 45 52.2	
	comp=Z,2μm,5.0s						
OKH				AMS	AMS	09 49 16.2	
	comp=Z,2μm,14.0s						
OKH				AMS	AMS	09 49 16.2	
	comp=Z,2μm,14.0s						
OKH	**Okha**	**9.39**	**333**	*e*PN	**Pn**	**09 43 52.6**	**-0.2**
OKH				*e*S	**Sn**	**09 45 50.0**	**+13**
OKH				smax			
	comp=N,2μm,5.0s						
JIO	**Ouri**	**9.41**	**226**	P	**Pn**	**09 43 49.6**	**-3.5**
JIO				*e*S	**Sn**	**09 45 28.9**	**-8.6**
TEY	**Ternei**	**9.44**	**273**	*e*P	**Pn**	**09 43 57.0**	**+3.6**
TEY				AMB	AMB	09 43 59.0	
	comp=N,410nm,1.0s						
TEY				AMB	AMB	09 43 59.0	
	comp=N,160nm,1.0s						
TEY				AMS	AMS	09 47 45.0	
	comp=N,1μm,16.0s						
TEY				AMS	AMS	09 47 45.0	
	comp=N,2μm,16.0s						
TEY				AMS	AMS	09 47 45.0	
	comp=N,2μm,16.0s						
PET	**Petropavlovsk**	**9.55**	**33**	*e*P	**Pn**	**09 43 55.7**	**+0.7**
PET				AMB	AMB	09 44 07.4	
	comp=N,60nm,0.6s						
PET				*e*S	**Sn**	**09 45 39.9**	**-1.1**
PET				A		09 45 49.9	
	comp=N,130nm,0.6s						
PET				A		09 45 51.5	
	comp=N,140nm,0.7s						
PET				AMS	AMS	09 47 34.9	
	comp=N,1μm,18.0s						
PET				AMS	AMS	09 47 40.5	
	comp=N,2μm,14.0s						
JYA	**Atsumi**	**10.18**	**232**	P	**Pn**	**09 44 02.5**	**-1.1**
JFK	**Kawauchi**	**10.49**	**224**	P	**Pn**	**09 44 05.4**	**-2.4**
JFK				*e*S	**Sn**	**09 45 54.9**	**-9.0**
GRNR	**Gornyy**	**10.55**	**306**	*e*P	**Pn**	**09 44 09.6**	**+0.9**
GRNR				AMB	AMB	09 44 10.6	
	comp=N,130nm,1.0s						
HABR	**Khabarovsk**	**10.67**	**292**	*i* PN	**Pn**	**09 44 17.4**	**+7.2**
HABR				*e*S	**Sn**	**09 46 20.4**	**+12**
HABR				pmax	pmax		
	comp=Z,334nm,1.2s						
JFY	**Yanaizu**	**11.05**	**228**	P	**Pn**	**09 44 13.7**	**-1.8**
JSD	**Sado**	**11.39**	**234**	P	**Pn**	**09 44 18.4**	**-1.7**
JAG	**Ashikaga**	**11.93**	**225**	P	**Pn**	**09 44 25.3**	**-2.3**
JAG				S	**Sn**	**09 46 30.0**	**-9.2**
MAJO	**Matsushiro**	**12.49**	**229**	*e*Pn	**Pn**	**09 44 33.4**	**-1.7**
MAJO				*ep*Pn		09 44 47.9	
MAT	**Matsushiro**	**12.49**	**229**	P	**Pn**	**09 44 33.2**	**-2.0**
MAT				*e*S	**Sn**	**09 46 58.5**	**+5.7**
MAT	**Matsushiro**	**12.49**	**229**	P	**Pn**	**09 44 33.4**	**-1.8**
MJAR	**Matsushiro Arr**	**12.49**	**229**	P	**Pn**	**09 44 33.4**	**-1.8**
	comp=Z,1.1nm,0.3s,baz=30,slow=13,SNR=94						
MJAR				LR	LR	09 50 19.2	
	comp=Z,682nm,18.1s,baz=55,slow=41						
JNG	**Nsakai**	**12.65**	**229**	P	**Pn**	**09 44 35.5**	**-1.8**
KLR	**Kul'dur**	**12.95**	**294**	*e*P	**Pn**	**09 44

comp=N,777nm,20.1s
MDJ LR LR
comp=E,860nm,27.3s
MDJ LR LR
comp=Z,1µm,21.5s
JHJ Hachijo jima 2 14.52 216 S **Sn 09 47 32.1 -10**
comp=Z,20nm,0.3s,baz=64,slow=23,SNR=5.6
JWT Wachi 14.96 233 P **Pn 09 45 07.1 -1.3**
JHS Saijyo 16.48 237 P **Pn 09 45 27.1 -0.8**
ZEA Zeya 16.90 308 *e*P **Pn 09 45 32.6 -0.6**
ZEA AMB AMB 09 45 34.9
comp=Z,70nm,1.0s
ZEA AMB AMB 09 45 34.9
comp=Z,100nm,1.0s
ZEA AMB AMB 09 45 54.0
comp=Z,700nm,10.0s
ZEA AMB AMB 09 45 54.0
comp=Z,600nm,7.0s
ZEA *e*S **S 09 48 34.0 -15**
ZEA A 09 48 48.0
comp=Z,200nm,8.0s
KROS Kirovskiy 17.31 310 *i* P **Pn 09 45 37.5 -0.8**
KROS AMB AMB 09 45 40.6
comp=Z,50nm,0.9s
KROS pP pP 09 45 49.5 -0.6
SMY Shemya 17.41 56 *e*P **Pn 09 45 39.5 -0.1**
SMY pmax pmax
comp=Z,202nm,1.1s
SMY Shemya 17.41 56 *e*Pn **Pn 09 45 39.5 -0.1**
comp=Z,202nm,1.1s
CN2 Changchun 17.52 274 *e*P **Pn 09 45 42.8 +1.9**
CN2 *e*S **S 09 48 56.5 -4.5**
CN2 AMB AMB
comp=Z,50nm,0.7s
CN2 AMB AMB
comp=Z,400nm,10.0s
CN2 LR LR
comp=N,1µm,17.0s
CN2 LR LR
comp=E,1µm,17.0s
CN2 LR LR
comp=Z,2µm,16.0s
SEY Seymchan 17.68 4⇑ *e*P **Pn 09 45 44.1 +1.3**
INCN Inchon 19.13 254 P **Pn 09 46 01.2 +0.7**
SNR=5.3
INCN Inchon 19.13 254 *e*P **Pn 09 46 00.7 +0.3**
CBIJ Chichi jima 19.25 201 P **Pn 09 45 59.1 -2.8**
comp=Z,3.8nm,0.3s,baz=256,slow=16,SNR=5.2
CBIJ S **S 09 49 17.9 -18**
comp=Z,7.6nm,0.3s,baz=257,slow=24,SNR=8.8
CLNS Chul'man 19.37 315 *e*P **Pn 09 46 03.5 +0.2**
CLNS pmax pmax
comp=Z,28nm,0.9s
CLNS pmax pmax
comp=N,16nm,1.2s
CLNS pmax pmax
comp=E,20nm,1.1s
CLNS MLR MLR
comp=Z,900nm,17.0s
CLNS MLR MLR
comp=N,200nm,13.0s
CLNS MLR MLR
comp=E,600nm,14.0s
SNY Shenyang 19.40 269 ⇑P **Pn 09 46 02.5 -1.1**
SNY AP pP 09 46 12.0 -1.1
SNY S **S 09 49 37.5 -1.5**
SNY XS sS 09 49 53.3 -3.3
SNY AMB AMB
comp=Z,33nm,0.9s
SNY AMB AMB
comp=Z,375nm,6.4s
SNY LR LR
comp=E,722nm,12.0s
SNY LR LR
comp=Z,830nm,19.2s
AMKA Amchitka 20.32 62 *e*P **P 09 46 12.0 -0.2**
YAK Yakutsk 20.42 332⇑ *e*P **P 09 46 14.9 +1.6**
YAK pmax pmax
comp=Z,69nm,0.6s
YAK Yakutsk 20.42 332 *e*P **P 09 46 12.9 -0.4**
comp=Z,520nm,0.9s
DL2 Dalian 21.91 263 ⇑P **P 09 46 29.3 0.0**
DL2 AP 09 46 44.8
DL2 S **S 09 50 27.0 -1.5**
DL2 AMB AMB
comp=Z,80nm,0.9s,mb5.2
DL2 AMB AMB
comp=Z,190nm,5.8s
DL2 LR LR
comp=N,120nm,22.4s,MS3.6
DL2 LR LR
comp=E,220nm,20.2s,MS3.6
DL2 LR LR
comp=Z,480nm,25.3s
BILL Bilibino 24.28 15⇓ *e*P **P 09 46 54.4 +1.4**
BILL pmax pmax
comp=Z,50nm,0.7s,mb5.0
BOD Bodaibo 25.25 313 *e*P **P 09 46 59.5 -2.3**
BOD *e* pP 09 47 15.0 +1.1
BOD pmax pmax
comp=Z,70nm,0.8s,mb5.2
BJI Beijing 25.27 270 *e*P **P 09 47 02.0 +0.1**
BJI AP pP 09 47 18.8 +4.7
BJI S **S 09 51 22.5 -1.9**
BJI XS sS 09 51 45.8 +0.8
BJI AMB AMB
comp=Z,45nm,0.8s,mb5.0
BJI AMB AMB
comp=Z,335nm,3.3s
BJI LR LR
comp=N,392nm,17.4s,MS4.3
BJI LR LR
comp=E,737nm,19.8s,MS4.3
BJI LR LR
comp=Z,929nm,26.5s
JOW Kunigami 25.33 230 P **P 09 47 02.0 -0.4**
comp=Z,60nm,0.9s,mb5.1,baz=22,slow=12,SNR=8.9
JOW LR LR 09 56 54.9
comp=Z,300nm,21.0s,MS3.8,baz=104,slow=36
TIA Tai'an 26.33 261 ⇑P **P 09 47 11.5 0.0**
TIA AMB AMB
comp=Z,87nm,1.0s,mb5.2
SSE Sheshan 26.54 248 P **P 09 47 14.0 +0.6**
SSE AP pP 09 47 26.8 +1.2
SSE S **S 09 51 45.0 +0.5**
SSE XS sS 09 52 07.5 +2.4
SSE AMB AMB
comp=Z,96nm,0.8s,mb5.4
SSE AMB AMB
comp=Z,235nm,12.0s
SSE LR LR
comp=N,239nm,28.6s,MS3.9
SSE LR LR
comp=E,401nm,28.6s,MS3.9
SSE LR LR
comp=Z,615nm,27.8s,MS4.0
NJ2 Nanjing 27.48 252 *e*P **P 09 47 23.5 +1.6**
NJ2 AP pP 09 47 35.0 +0.9
NJ2 PP 09 48 11.5
NJ2 S **S 09 51 59.0 -0.3**
NJ2 AMB AMB
comp=Z,70nm,1.0s,mb5.2
NJ2 AMB AMB
comp=Z,660nm,4.4s
NJ2 LR LR
comp=N,2µm,18.0s,MS4.8
NJ2 LR LR
comp=E,2µm,19.5s,MS4.8
NJ2 LR LR
comp=Z,2µm,17.1s,MS4.7
HHC Hu-ho-hao-te 28.21 275 *e*P **P 09 47 29.3 +1.0**
HHC AP pP 09 47 41.0 +0.4
HHC PP PP 09 48 21.0 -12
HHC PCP PcP 09 50 43.3 +2.2
HHC S **S 09 52 10.5 -0.3**
HHC SS SS 09 53 35.3 -36
HHC SCP ScP 09 54 18.5 +0.4
HHC PCS PcS 09 54 21.5 -1.8
HHC AMB AMB
comp=Z,75nm,0.9s,mb5.3
HHC AMB AMB
comp=Z,194nm,4.1s
HHC LR LR
comp=N,692nm,17.3s,MS4.5
HHC LR LR
comp=E,984nm,18.7s,MS4.5
HHC LR LR
comp=Z,1µm,17.3s,MS4.5
TIXI Tiksi 28.25 346⇑ *e*P **P 09 47 27.3 -1.4**
TIXI pmax pmax
comp=Z,70nm,0.7s,mb5.4
ULN Ulaanbaatar 29.31 291 P **P 09 47 39.5 +1.4**
SNR=7.8
ULN Ulaanbaatar 29.31 291⇑ *e*P **P 09 47 38.5 +0.4**
ULN Ulaanbaatar 29.31 291 *e*P **P 09 47 38.0 -0.1**
BTO Baotou 29.38 275 *e*P **P 09 47 37.0 -1.8**
SONM Songino Array 29.75 291 P **P 09 47 41.5 -0.5**
comp=Z,3.9nm,0.8s,mb4.2,baz=83,slow=7.7,SNR=18
SONM PcP PcP 09 50 44.4 -0.5
comp=Z,7.8nm,0.9s,baz=125,slow=2.7,SNR=7.2
SONM ScP ScP 09 54 21.5 -1.5
comp=Z,1.4nm,0.9s,baz=66,slow=3.6,SNR=4.2
SONM LR LR 10 00 40.3
comp=Z,741nm,18.9s,MS4.3,baz=75,slow=38
SONM Songino Array 29.75 291 P **P 09 47 41.5 -0.5**
SONM 09 50 44.4
TATO Taipei 30.65 238 *e*P **P 09 47 48.0 -2.0**
TATO *e* 09 48 08.8
ZAK Zakamensk 31.30 296 *e*P **P 09 47 56.3 +0.5**
ZAK pmax pmax
comp=Z,50nm,1.4s,mb5.2
WHN Wuhan 31.44 254⇑P **P 09 47 57.3 +0.3**
GUMO Guam 31.95 189 LR LR 09 58 41.0
comp=Z,228nm,21.7s,MS3.8,baz=31,slow=32
XAN Xi'an 33.20 265 P **P 09 48 12.5 +0.1**
XAN AP pP 09 48 25.0 +0.2
XAN AMB AMB
comp=Z,55nm,1.3s,mb5.3
TTA Tatalina 34.92 40 *e*P **P 09 48 26.6 -0.7**
TTA *e**PP pP 09 48 38.8 -0.9
TTA pmax pmax
comp=Z,44nm,1.1s,mb5.3
TTA Tatalina 34.92 40 *e*P **P 09 48 26.6 -0.7**
comp=Z,44nm,1.1s,mb5.3
TTA *e*pP pP 09 48 38.8 -1.0
SVW2 Sparrevohn 35.03 44 *e*P **P 09 48 26.2 -2.1**
LZH Lanzhou 35.73 272⇑P **P 09 48 35.5 +1.2**
LZH AP pP 09 48 48.0 +1.3
LZH PP PP 09 49 58.0 +2.0
LZH PCP PcP 09 51 02.5 +1.0
LZH *e*S **S 09 54 08.3 +0.4**
LZH AMB AMB
comp=Z,23nm,1.5s,mb4.9
LZH AMB AMB
comp=Z,74nm,4.7s
LZH LR LR
comp=E,683nm,14.9s
LZH LR LR
comp=Z,887nm,15.8s,MS4.6
KDAK Kodiak Island 36.69 49 P **P 09 48 41.1 -1.3**
comp=Z,10nm,0.6s,mb4.8,baz=12,slow=1.6,SNR=8.0
GTA Gaotai 37.02 279 P **P 09 48 46.3 +1.1**
GTA AP pP 09 48 58.8 +1.1
GTA PP PP 09 50 14.5 +4.3
GTA PPP 09 50 35.8
GTA PCP PcP 09 51 05.5 +0.1
GTA S **S 09 54 28.5 +1.0**
GTA SCP ScP 09 54 47.5 -0.9
GTA PCS PcS 09 54 53.8 +0.2
GTA SS SS 09 56 58.0 -13
GTA SCS ScS 09 58 54.3 -1.5
GTA AMB AMB
comp=Z,44nm,1.0s,mb5.2
GTA AMB AMB
comp=Z,198nm,5.3s
GTA LR LR
comp=N,347nm,19.0s,MS4.3
GTA LR LR
comp=E,302nm,17.9s,MS4.3
GTA LR LR
comp=Z,435nm,16.0s,MS4.3
GZH Guangzhou 37.09 246 P **P 09 48 41.0 -4.9**
GZH S **S 09 54 19.3 -9.3**
GZH LR LR
comp=N,358nm,19.0s,MS4.3
GZH LR LR
comp=E,353nm,17.1s,MS4.3
GZH LR LR
comp=Z,588nm,17.7s,MS4.4
MCK McKinley 38.13 39 *e*P **P 09 48 54.5 -0.2**
MCK *e**PP pP 09 49 06.2 -1.0
MCK *e* 09 51 07.2
MCK pmax pmax
comp=Z,12nm,1.3s,mb4.5
MCK McKinley 38.13 39 *e*P **P 09 48 54.5 -0.1**
comp=Z,12nm,1.3s,mb4.5
MCK *e*pP pP 09 49 06.2 -1.0
MCK *e*PcP PcP 09 51 07.2 -1.6
CD2 Chengdu 38.56 264 P **P 09 48 59.0 +0.7**
CD2 AP pP 09 49 11.0 +0.2
CD2 PP PP 09 50 32.0 +4.9
CD2 PCP PcP 09 51 11.0 +0.9
CD2 S **S 09 54 51.0 +0.1**
CD2 SS SS 09 57 33.0 -9.0
CD2 SCS ScS 09 59 03.5 -1.1
CD2 AMB AMB
comp=Z,100nm,0.8s,mb5.6
CD2 AMB AMB
comp=Z,40nm,6.4s
CD2 LR LR
comp=N,140nm,18.6s
CD2 LR LR
comp=Z,200nm,15.0s,MS4.1
COLA College 38.59 37 *e*P **P 09 48 58.6 +0.1**
COLA *e**PP pP 09 49 10.5 -0.6
COLA pmax pmax
comp=Z,32nm,0.9s,mb5.0
COLA College 38.59 37 *e*P **P 09 48 58.5 0.0**
comp=Z,32nm,0.9s,mb5.1
COLA *e*pP pP 09 49 10.5 -0.6
GYA Guiyang 39.26 256⇑ *i*P **P 09 49 04.5 +0.4**
GYA AP pP 09 49 16.5 -0.1
GYA PP PP 09 50 38.8 +4.1
GYA PCP PcP 09 51 13.5 +1.2
GYA S **S 09 55 00.0 -1.4**
GYA SCS ScS 09 59 07.8 -0.9
GYA AMB AMB
comp=Z,50nm,1.0s,mb5.2
GYA AMB AMB
comp=Z,440nm,9.3s
GYA LR LR
comp=N,490nm,17.6s,MS4.5
GYA LR LR
comp=E,460nm,18.0s,MS4.5
GYA LR LR
comp=Z,480nm,17.8s,MS4.4
TGY Tagaytay City 39.65 228 P **P 09 49 08.2 +0.9**
comp=Z,135nm,0.4s,baz=144,slow=5.9,SNR=4.6
DIV Divide 39.78 43 *e*P **P 09 49 08.4 0.0**
comp=Z,226nm,1.5s,mb5.7
DIV *e*pP pP 09 49 21.4 +0.3
EGAK Eagle 41.45 37 *e*P **P 09 49 21.2 -1.0**
EGAK *e*pP pP 09 49 33.5 -1.3
ZAL Zalesovo 41.67 306 P **P 09 49 23.0 -1.0**
comp=Z,1.7nm,0.6s,baz=28,slow=11,SNR=6.8
ZAL PcP PcP 09 51 19.0 -1.1
comp=Z,10nm,0.7s,baz=30,slow=3.6,SNR=19
ZAL ScP ScP 09 55 03.2 -3.1
comp=Z,1.8nm,0.3s,baz=207,slow=4.0,SNR=5.2
ZAL LR LR 10 08 30.5
comp=Z,804nm,19.4s,MS4.6,baz=22,slow=39
ZAL Zalesovo 41.67 306 P **P 09 49 23.0 -1.0**
ZAL 09 51 19.0
ZAL Zalesovo 41.67 306 P **P 09 49 23.0 -1.0**
ZAL PcP PcP 09 51 19.0 -1.1
ZAL ScP ScP 09 55 03.2 -3.1
ZAL LR LR 10 08 30.5
QIZ Qiongzhong 42.27 245 P **P 09 49 29.0 +0.1**
QIZ S **S 09 55 45.8 -0.4**
QIZ AMB AMB
comp=Z,15nm,1.5s,mb4.4
QIZ LR LR
comp=N,318nm,22.3s
QIZ LR LR
comp=Z,409nm,25.3s,MS4.2
NVS Novosibirsk 42.30 308 *e*P **P 09 49 27.1 -2.1**
NVS pmax pmax
comp=Z,11nm,1.5s,mb4.3
NVS pmax pmax
comp=N,4.0nm,0.9s
NVS pmax pmax
comp=E,6.0nm,0.9s
DAWY Dawson 42.31 38 *e*P **P 09 49 29.6 +0.3**
KMI Kunming 42.81 258 P **P 09 49 34.3 +1.0**
KMI AP pP 09 49 45.5 -0.5
KMI PP PP 09 51 11.8 -1.5
KMI PPP 09 51 43.5
KMI S **S 09 55 54.8 +0.6**
KMI AMB AMB
comp=Z,49nm,1.2s,mb5.1
KMI AMB AMB
comp=Z,197nm,3.8s
KMI LR LR
comp=N,316nm,21.4s,MS4.3
KMI LR LR
comp=E,261nm,18.8s,MS4.3
KMI LR LR
comp=Z,337nm,20.1s,MS4.2
WMQ Urumqi 43.38 291 *e*P **P 09 49 38.0 +0.1**
WMQ AP pP 09 49 50.0 -0.6
WMQ PP PP 09 51 21.0 +1.6
WMQ S **S 09 56 02.0 -0.6**
WMQ SS SS 09 59 10.0 -7.6
WMQ AMB AMB
comp=Z,21nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,112nm,4.0s
WMQ LR LR
comp=N,365nm,13.0s,MS4.6
WMQ LR LR
comp=E,356nm,13.0s,MS4.6
WMQ LR LR
comp=Z,438nm,13.0s,MS4.5
INK Inuvik 44.00 31 P **P 09 49 42.5 -0.4**
comp=Z,11nm,0.7s,mb4.7,baz=290,slow=6.5,SNR=26
INK Inuvik 44.00 31 P **P 09 49 42.5 -0.4**
INK pmax pmax
comp=Z,11nm,0.7s
INK Inuvik 44.00 31 *e*P **P 09 49 43.2 +0.2**
comp=Z,19nm,0.6s,mb5.0
INK *e*pP pP 09 49 54.7 -0.9
MKAR Makanchi Array 45.63 297 P **P 09 49 56.6 +0.7**
comp=Z,6.0nm,0.7s,mb4.6,baz=67,slow=9.3,SNR=20
MKAR PcP PcP 09 51 33.2 -0.3
comp=Z,13nm,0.7s,baz=56,slow=4.7,SNR=10
MKAR ScP ScP 09 55 18.5 -3.9
comp=Z,2.2nm,1.1s,baz=72,slow=4.7,SNR=2.3
MKAR Makanchi Array 45.63 297 P **P 09 49 56.6 +0.7**
MKAR 09 51 33.2
KURK Kurchatov 46.31 304 P **P 09 50 01.4 +0.2**
comp=Z,130nm,0.7s,mb6.0,SNR=8.1
LSA Lhasa 48.14 272 P **P 09 50 18.0 +2.5**
KKM Kota Kinabalu 48.90 227 P **P 09 50 23.2 +1.9**
TSM Tawau 49.57 224 P **P 09 50 25.8 -0.6**
CHTO Chiang Mai 49.64 255 P **P 09 50 28.2 +1.2**
SNR=11
CHTO Chiang Mai 49.64 255 *e*P **P 09 50 27.6 +0.6**
CHTO pmax pmax
comp=Z,29nm,0.8s,mb5.4
CHTO Chiang Mai 49.64 255 *e*P **P 09 50 27.6 +0.6**
comp=Z,29nm,0.8s,mb5.4
CHKZ Chkalovo 49.65 310 *i* P **P 09 50 26.3 -0.7**
CHKZ pmax pmax
comp=Z,20nm,0.8s,mb5.2
CHKZ Chkalovo 49.65 310 *e*P **P 09 50 26.0 -1.0**
CHKZ *e*PcP PcP 09 51 47.0 -0.9
BVAR Borovoye Array 50.05 309 P **P 09 50 29.5 -0.6**
comp=Z,4.4nm,0.6s,mb4.7,baz=59,slow=6.9,SNR=5.3
BVAR PcP PcP 09 51 48.7 -0.6
comp=Z,15nm,0.8s,baz=66,slow=3.7,SNR=13
BVAR LR LR 10 12 59.6
comp=Z,389nm,21.9s,MS4.4,baz=320,slow=38
BVAR Borovoye Array 50.05 309 P **P 09 50 29.5 -0.5**
BVAR 09 51 48.7
BVAR Borovoye Array 50.05 309 P **P 09 50 29.5 -0.6**
BVAR PcP PcP 09 51 48.7 -0.6
BVAR LR LR 10 12 59.6
BRVK Borovoye 50.09 309 P **P 09 50 30.1 -0.2**
SNR=6.9
BRVK Borovoye 50.09 309 *e*P **P 09 50 30.0 -0.3**
ZRNK Zerenda 50.83 310 *e*P **P 09 50 35.5 -0.5**
ZRNK *e* 09 51 51.8
ZRNK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ZRNK Zerenda 50.83 310 *e*P **P 09 50 35.5 -0.5**
comp=Z,7.1nm,0.7s,mb4.7
ZRNK *e*PcP PcP 09 51 51.8 -0.4
TKM2 Tokmak 2 51.63 296 P **P 09 50 44.0 +2.1**
SNR=6.0
USP Ospenovka 52.15 296 P **P 09 50 46.7 +0.9**
SNR=16
KBK Karagaybulak 52.17 296 P **P 09 50 48.0 +2.0**
SNR=7.6
KZA Kyzart 52.28 295 P **P 09 50 48.5 +1.7**
SNR=12
FRU Bishkek 52.30 296 *e*P **P 09 50 48.0 +1.1**
AAK Ala-Archa 52.48 296 P **P 09 50 50.1 +1.9**
SNR=7.5
AAK Ala-Archa 52.48 296 P **P 09 50 48.9 +0.7**
comp=Z,97nm,0.7s,mb5.8,SNR=5.5
AAK Ala-Archa 52.48 296⇑P **P 09 50 48.2 0.0**
SNR=6.3
AAK Ala-Archa 52.48 296⇓ *e*P **P 09 50 48.0 -0.2**
AAK pmax pmax
comp=Z,15nm,1.0s,mb4.9
AAK Ala-Archa 52.48 296 *e*P **P 09 50 47.8 -0.5**
comp=Z,11nm,0.7s,mb4.9
JIRN Jiri 52.85 273 *e*P **P 09 50 52.4 +1.4**
comp=Z,202nm,0.9s,mb6.0
RES Resolute Bay 52.85 18 *e*P **P 09 50 49.9 -1.1**
RES pmax pmax
comp=Z,16nm,0.8s,mb5.0
RES Resolute Bay 52.85 18 *e*P **P 09 50 49.9 -1.1**
comp=Z,16nm,0.8s,mb5.0
EKS2 Erkin-Say 52.91 296 P **P 09 50 52.1 +0.6**
SNR=18
GUN Gumba 52.92 274 *e*P **P 09 50 52.6 +1.1**
comp=Z,198nm,0.9s,mb6.0
AML Almayashu 53.24 296 P **P 09 50 56.0 +2.2**
SNR=12
YKW3 Yellowknife Ar 53.31 35 *e*P **P 09 50 54.3 -0.1**
YKW3 *e*pP pP 09 51 06.4 -1.0
YKA Yellowknife Ar 53.35 35 P **P 09 50 53.7 -1.0**
comp=Z,7.7nm,0.7s,mb4.8,baz=300,slow=7.2,SNR=11
YKA Yellowknife Ar 53.35 35 P **P 09 50 53.7 -1.0**
KKN Kakani 53.41 274 *e*P **P 09 50 56.1 +1.0**
comp=Z,169nm,0.9s,mb6.0
PKI Pulchoki 53.45 274 *e*P **P 09 50 56.4 +1.0**
comp=Z,149nm,1.1s,mb5.8
DMN Daman 53.64 274 *e*P **P 09 50 58.1 +1.3**
comp=Z,189nm,1.0s,mb6.0
GKN Gorkha 53.73 275 *e*P **P 09 50 58.4 +0.9**
comp=Z,258nm,1.1s,mb6.1
ARU Arti 54.55 317⇓ *i*P **P 09 51 01.3 -2.1**
ARU *e* pP 09 51 14.3 -2.2
ARU *e* 09 52 03.1
ARU *e* 09 53 02.8
ARU *e* 09 54 16.4
ARU *e*PPP
ARU *e*S **S 09 58 37.6 -1.7**
ARU *e*SS SS 10 02 17.7 -4.6
ARU pmax pmax
comp=Z,14nm,0.8s,mb5.0
ARU MLR MLR
comp=N,300nm,21.0s,MS4.4
ARU MLR MLR
comp=E,200nm,21.0s,MS4.4
ARU MLR MLR
comp=Z,500nm,21.0s,MS4.6
ARU Arti 54.55 317 *e*P **P 09 51 01.5 -2.0**
comp=Z,16nm,0.8s,mb5.1
ARU *e*PcP PcP 09 52 05.5 -0.7
KOLN Koldanda 54.60 275 *e*P **P 09 51 05.1 +1.3**
comp=Z,180nm,1.0s,mb6.1
KK31 Karatay Array 54.73 298 *i* P **P 09 51 04.7 -0.1**
KK31 pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
KKAR Karatay Array 54.73 298 P **P 09 51 04.7 -0.1**
KKAR pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
HNR Honiara 55.26 168 LR LR 10 11 00.9
comp=Z,232nm,19.9s,MS4.3,baz=360,slow=32
BOK Bokaro 55.47 270 *e*P **P 09 51 10.8 +0.7**
BOK AMb AMB 09 51 11.6
comp=Z,56nm,0.8s,mb5.6
KSM Kuching 55.88 230 *e*P **P 09 51 13.8 +0.8**
KSM *e*PcP PcP 09 52 11.8 +0.5
A05A Maple Falls 56.63 52⇓P **P 09 51 18.3 -0.1**

baz=56
HDW Hoodsport 56.81 54 P **P** 09 51 20.1 +0.4
CMW Cultus Mountai 56.92 53 P **P** 09 51 20.6 +0.2
GNW Green Mountain 56.99 54 *eP* **P** 09 51 21.6 +0.7
GNW *epP* pP 09 51 36.2 +2.2
B05A Bryant 57.02 53 ⇓P **P** 09 51 21.1 0.0
baz=57
SMLA Simla 57.07 283 *eP* **P** 09 51 21.6 +0.2
JCW Jim Creek 57.15 53 P **P** 09 51 22.1 +0.1
C05A Tolt Reservoir 57.56 53 ⇓P **P** 09 51 24.9 0.0
baz=57
E04A Onalaska 57.58 55 ⇓P **P** 09 51 25.3 +0.3
baz=57
AB31 Akbulak array 57.62 309 *i* P **P** 09 51 24.8 -0.6
AB31 pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
D05A Enumclaw 57.67 54 ⇑P **P** 09 51 25.9 +0.3
baz=58
KEV Kevo 57.91 340 *ep* **P** 09 51 23.8 -3.6
G03A Yamhill 57.96 56 ⇑P **P** 09 51 29.0 +1.2
baz=58
FMW Mount Fremont 57.99 54 P **P** 09 51 30.1 +2.2
AKTK Aktyubinsk 58.01 311 P **P** 09 51 27.6 -0.4
AKTK PcP PcP 09 52 18.1 -1.6
AKTK LR LR 10 18 26.0
AKTO Aktyubinsk 58.01 311 P **P** 09 51 27.6 -0.4
comp=Z,5.6nm,0.6s,mb4.8,baz=68,slow=7.6,SNR=26
AKTO PcP PcP 09 52 18.1 -1.6
comp=Z,7.0nm,0.8s,baz=80,slow=1.2,SNR=5.5
AKTO LR LR 10 18 26.0
comp=Z,776nm,20.3s,MS4.8,baz=236,slow=38
AKTO Aktyubinsk 58.01 311 P **P** 09 51 27.6 -0.5
AKTO 09 52 18.1
AKTO pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
AKTO MLR MLR
comp=Z,777nm,20.3s,MS4.8
LON Longmire 58.01 54 *eP* **P** 09 51 28.5 +0.4
LON *e**PP pP 09 51 42.5 +1.2
NLW Nelson Butte 58.10 52 P **P** 09 51 28.8 +0.1
F04A Amboy 58.12 55 ⇑P **P** 09 51 30.2 +1.3
baz=58
E05A Randle 58.15 54 ⇑P **P** 09 51 29.6 +0.6
baz=58
ARCES ARCESS Array B 58.44 340 P **P** 09 51 29.4 -1.7
comp=Z,2.5nm,0.8s,mb4.3,baz=35,slow=6.6,SNR=6.8
ARCES PcP PcP 09 52 18.7 -2.7
comp=Z,6.5nm,0.7s,baz=39,slow=4.7,SNR=10.0
ARCES LR LR 10 22 46.0
comp=Z,216nm,19.4s,MS4.3,baz=35,slow=42
ARCES ARCESS Array B 58.44 340 P **P** 09 51 29.4 -1.7
ARCES 09 52 18.7
ARCES ARCESS Array B 58.44 340 P **P** 09 51 29.4 -1.7
ARCES PcP PcP 09 52 18.7 -2.7
ARCES LR LR 10 22 46.0
KULM Kulim 58.48 242 *eP* **P** 09 51 32.1 +0.7
G04A Mulino 58.49 56 ⇑P **P** 09 51 31.9 +0.5
baz=58
NDI New Delhi 58.51 280 *eP* **P** 09 51 31.6 0.0
NDI AMb AMB 09 51 32.7
comp=Z,112nm,2.0s,mb5.6
EBG Ellensburg 58.63 53 P **P** 09 51 32.8 +0.4
F05A White Salmon 58.70 55 ⇑P **P** 09 51 33.6 +0.7
baz=58
EDM Edmonton 58.86 44 *eP* **P** 09 51 33.5 -0.5
EDM *e**PP pP 09 51 45.5 -1.7
HOOD Mount Hood Mea 58.91 55 *eP* **P** 09 51 35.1 +0.7
H04A Detroit Lake 58.96 56 P **P** 09 51 35.4 +0.7
baz=59,SNR=7.5
VFP Flag Point 59.02 55 P **P** 09 51 36.0 +0.9
G05A Wamic 59.15 55 ⇓P **P** 09 51 36.5 +0.5
baz=59
OD2 Odessa Site #2 59.40 52 P **P** 09 51 37.2 -0.5
KGM Kluang 59.42 238 P **P** 09 51 39.9 +2.0
HAWA Hanford 59.51 53 *eP* **P** 09 51 38.6 +0.1
comp=Z,0.6nm,1.1s
HAWA *e* pP 09 51 52.1 +0.4
H05A Madras 59.54 56 ⇑P **P** 09 51 39.1 +0.4
baz=59
G06A Carlson Farm, 59.54 55 ⇑P **P** 09 51 39.5 +0.8
baz=59
KAKA Kakadu 59.92 200 *eP* **P** 09 51 39.6 -1.7
comp=Z,23nm,0.6s,mb5.4
H06A Lindquist Farm 60.01 55 ⇑P **P** 09 51 42.0 +0.1
baz=60
G07A Ruggs Ranch, H 60.08 55 ⇑P **P** 09 51 42.7 +0.3
baz=60
F08A Pendleton 60.28 54 ⇑P **P** 09 51 43.4 -0.4
baz=60
J05A Fort Rock 60.32 57 ⇑P **P** 09 51 44.8 +0.7
baz=60
YBH Yreka Blue Hor 60.35 59 *eP* **P** 09 51 44.8 +0.5
YBH pmax pmax
comp=Z,7.0nm,1.2s
YBH Yreka Blue Hor 60.35 59 *eP* **P** 09 51 44.8 +0.5
comp=Z,7.3nm,1.2s,mb4.6
YBH Yreka Blue Hor 60.35 59 ⇓P **P** 09 51 45.9 +1.6
baz=60
G08A Pilot Rock 60.48 54 ⇓P **P** 09 51 45.2 +0.1
baz=60,SNR=5.7
H07A Lands Inn, Kim 60.54 55 ⇓P **P** 09 51 46.0 +0.4
baz=60
I06A Prineville 60.54 56 ⇓P **P** 09 51 45.7 +0.1
baz=60
F09A S2 Ranch, Elgi 60.83 53 ⇑P **P** 09 51 47.9 +0.4
baz=61
K05A Summer Lake 60.85 58 ⇑P **P** 09 51 48.0 +0.3
baz=61
I07A Izee 60.87 56 ⇑P **P** 09 51 48.0 +0.1
baz=61
M03C McCloud 60.97 59 ⇓P **P** 09 51 49.1 +0.6
baz=61
J06A Christmas Vall 60.98 57 ⇓P **P** 09 51 48.5 -0.1
baz=61,SNR=6.1
WALA Waterton Lakes 61.02 48 *eP* **P** 09 51 49.0 +0.2
comp=Z,20nm,0.8s,mb5.3
WALA *epP* pP 09 52 03.6 +1.6
H08A Prairie City 61.10 55 ⇑P **P** 09 51 49.4 0.0
baz=61
WDC Whiskeytown Da 61.13 60 *eP* **P** 09 51 49.8 +0.2
WDC *e**PP pP 09 52 02.8 0.0
WDC pmax pmax
comp=Z,16nm,1.0s,mb5.1
WDC Whiskeytown Da 61.13 60 *eP* **P** 09 51 49.8 +0.3
comp=Z,16nm,1.0s,mb5.1
WDC *epP* pP 09 52 02.8 0.0
WDC Whiskeytown Da 61.13 60 ⇓P **P** 09 51 49.9 +0.3
baz=61
K06A Valley Falls 61.19 57 ⇑P **P** 09 51 50.7 +0.7
baz=61
VIS Vishakhapatnam 61.24 266 *eP* **P** 09 51 50.8 +0.4
VIS AMb AMB 09 51 51.9
comp=Z,52nm,0.7s,mb5.8
BSMT Bassoo Peak 61.28 50 *eP* **P** 09 51 51.3 +0.7
BSMT *epP* pP 09 52 03.6 -0.2
L05A Lakeview 61.29 58 ⇑P **P** 09 51 51.3 +0.7
baz=61
P01C Double 8 Ranch 61.30 62 ⇓P **P** 09 51 51.5 +0.7
baz=61
J07A Hines 61.41 56 ⇑P **P** 09 51 51.7 +0.2
baz=61,SNR=6.2
PSI Prapat 61.49 242 P **P** 09 51 51.8 -0.2
comp=Z,21nm,0.9s,mb5.3,baz=1.9,slow=4.7,SNR=15
PSI PcP PcP 09 52 32.8 -0.7
comp=Z,12nm,0.9s,baz=326,slow=4.6,SNR=4.5
PSI LR LR 10 17 35.6
comp=Z,258nm,21.4s,MS4.3,baz=208,slow=35
PSI Prapat 61.49 242 P **P** 09 51 51.8 -0.2
PSI 09 52 32.8
M05C Lookout 61.52 59 ⇓P **P** 09 51 52.7 +0.5
baz=61
I08A Drewsey 61.52 55 ⇑P **P** 09 51 52.5 +0.3
baz=61,SNR=9.2
GASB Alder Springs 61.57 61 ⇓P **P** 09 51 53.3 +0.7
baz=61
H09A Durkee 61.59 54 ⇑P **P** 09 51 53.1 +0.4
baz=61
JOF Joensuu 61.60 333 *ep* **P** 09 51 50.0 -2.7
comp=Z,5.6nm,0.4s,mb5.0
AJM Ajmer 61.66 280 *eP* **P** 09 51 53.2 0.0
AJM AMb AMB 09 51 55.4
comp=Z,102nm,1.2s,mb5.8
BHPL Bhopal 61.78 275 *eP* **P** 09 51 53.7 -0.2
K07A Rock Creek Ran 61.85 57 ⇑P **P** 09 51 55.0 +0.5
baz=62
I09A Lost Marbles R 61.96 55 P **P** 09 51 55.8 +0.6
baz=62,SNR=7.9
NGP Nagpur 61.99 272 *ex* x 09 51 51.5
NGP AMb AMB 09 51 52.7
comp=Z,89nm,1.1s,mb5.8
L07A Adell 62.20 57 ⇑P **P** 09 51 57.2 +0.5
baz=62,SNR=7.2
SUMG Summit 62.23 3 *eP* **P** 09 51 56.5 -0.5
comp=Z,17nm,0.8s,mb5.2
K08A Mann Creek Ran 62.27 56 P **P** 09 51 58.1 +0.8
baz=62,SNR=9.4
J09A Fry Pan Ranch, 62.33 55 P **P** 09 51 58.4 +0.8
baz=62,SNR=6.0
MSO Missoula 62.35 50 *eP* **P** 09 51 58.1 +0.3
comp=Z,12nm,0.9s,mb5.0
MSO *epP* pP 09 52 11.1 0.0
WVOR Wild Horse Val 62.37 57 *eP* **P** 09 51 57.8 -0.1
WVOR pmax pmax
comp=Z,19nm,0.9s,mb5.2
WVOR Wild Horse Val 62.37 57 *eP* **P** 09 51 57.8 -0.1
comp=Z,20nm,0.9s,mb5.2
ORV Oroville 62.38 61 ⇑P **P** 09 51 57.7 -0.3
baz=62
O05C Quincy 62.49 60 ⇓P **P** 09 51 59.2 +0.4
baz=62
OHCM Honcut 62.52 61 *eP* **P** 09 51 59.3 +0.3
OHCM *epP* pP 09 52 11.5 -0.8
N06A Buffalo Meadow 62.67 59 ⇓P **P** 09 51 59.9 -0.1
baz=62
CHMT Chamberlain Mo 62.68 50 *eP* **P** 09 51 59.9 -0.1
M07A Soldier Meadow 62.68 58 P **P** 09 52 00.6 +0.6
baz=62,SNR=14
L08A Fields 62.69 57 ⇓P **P** 09 52 00.4 +0.4
baz=62,SNR=6.9
K09A Rome 62.74 56 ⇑P **P** 09 52 00.3 -0.1
baz=62
BEKR Beckwourth 62.89 60 ⇑P **P** 09 52 01.5 +0.1
baz=63
P05C Yuba Gap, Truc 63.08 60 ⇑P **P** 09 52 02.5 -0.2
baz=63
M08A Happy Creek Ra 63.12 57 ⇓P **P** 09 52 02.9 0.0
baz=63
L09A Wilkinson Ranc 63.19 57 ⇓P **P** 09 52 03.6 +0.3
baz=63
FFC Flin Flon 63.21 38 P **P** 09 52 03.2 -0.3
comp=Z,142nm,0.9s,mb6.1,SNR=6.3
FFC Flin Flon 63.21 38 *eP* **P** 09 52 03.1 -0.4
FFC *e**PP pP 09 52 15.5 -1.3
FFC pmax pmax
comp=Z,18nm,0.8s,mb5.2
FFC Flin Flon 63.21 38 *eP* **P** 09 52 03.1 -0.4
comp=Z,18nm,0.8s,mb5.2
FFC *epP* pP 09 52 15.5 -1.3
LAVA Lava Cap Winer 63.34 61 ⇓P **P** 09 52 04.4 0.0
baz=63,SNR=6.2
HRY Holter Researc 63.57 50 *eP* **P** 09 52 06.2 +0.4
PAHR Pah Rah Range 63.58 59 *eP* **P** 09 52 06.2 +0.3
comp=Z,26nm,1.1s,mb5.2
PAHR *epP* pP 09 52 19.0 -0.3
WCN Washoe City 63.61 60 ⇑P **P** 09 52 05.9 -0.2
baz=63,SNR=5.6
O07A Toulon 63.61 59 ⇑P **P** 09 52 06.2 0.0
baz=63,SNR=6.2
M09A Marrel Ranch, 63.68 57 ⇑P **P** 09 52 06.7 +0.1
baz=64
AKL Akola 63.71 273 *eP* **P** 09 52 07.4 +0.6
AKL AMb AMB 09 52 08.5
comp=Z,62nm,0.8s,mb5.7
KAF Kangasniemi 63.77 334 *ep* **P** 09 52 03.3 -3.9
R05C Kirkwood Meado 63.78 61 ⇓P **P** 09 52 07.6 +0.3
baz=64
LRM Limekiln Ridge 63.79 51 *eP* **P** 09 52 07.4 +0.1
EGMT Eagleton 63.84 47 *eP* **P** 09 52 07.3 -0.3
EGMT *e* pP 09 52 22.4 +1.5
P07A Fallon 63.99 59 ⇓P **P** 09 52 08.9 +0.3
baz=64
N09A Rock Creek Ran 63.99 57 ⇑P **P** 09 52 08.8 +0.1
baz=64
DLMT Dillon 64.00 51 *eP* **P** 09 52 08.8 +0.1
comp=Z,15nm,1.1s,mb4.9
DLMT *epP* pP 09 52 21.5 -0.6
CMB Columbia Colle 64.00 61 *eP* **P** 09 52 09.2 +0.4
comp=Z,4.9nm,1.0s,mb4.5
CMB *epP* pP 09 52 21.3 -0.8
CMB Columbia Colle 64.00 61 ⇑P **P** 09 52 09.1 +0.4
baz=64,SNR=7.8
PACP Pacheco Peak 64.08 63 ⇓P **P** 09 52 09.6 +0.3
baz=64,SNR=5.6
HLID Hailey 64.11 54 *eP* **P** 09 52 09.7 +0.2
M10A I.L. Ranch, Tu 64.16 56 ⇑P **P** 09 52 10.0 +0.3
baz=64,SNR=5.2
MCMT McKenzie Canyo 64.20 52 *eP* **P** 09 52 10.1 +0.1
R06C Coleville 64.28 61 ⇑P **P** 09 52 11.1 +0.6
baz=64,SNR=7.6
WAKR Walker 64.30 61 *eP* **P** 09 52 11.4 +0.8
BOZ Bozeman (W) 64.35 50 *eP* **P** 09 52 11.3 +0.3
BOZ pmax pmax
comp=Z,13nm,0.9s,mb5.0
BOZ Bozeman (W) 64.35 50 *eP* **P** 09 52 11.3 +0.3
comp=Z,13nm,0.9s,mb5.0
FINES FINESS Array B 64.35 334 P **P** 09 52 09.3 -1.7
comp=Z,9.5nm,0.8s,mb4.9,baz=43,slow=7.2,SNR=21
FINES LR LR 10 22 48.0
comp=Z,345nm,20.4s,MS4.5,baz=169,slow=38
FINES FINESS Array B 64.35 334 P **P** 09 52 09.3 -1.7
FINES LR LR 10 22 48.0
S06C San Francisco 64.43 61 ⇑P **P** 09 52 11.7 +0.2
baz=64
BMN Battle Mountai 64.44 58 *eP* **P** 09 52 12.1 +0.5
BMN *e**PP pP 09 52 24.8 -0.1
S05C Merced 64.46 62 ⇑P **P** 09 52 12.1 +0.3
baz=64,SNR=7.5
O09A Fish Creek Ran 64.62 58 P **P** 09 52 13.7 +0.9
baz=64,SNR=5.2
M11A Holland Ranch, 64.66 56 P **P** 09 52 14.1 +1.1
baz=64,SNR=7.6
R07C Lee Vining 64.79 61 ⇓P **P** 09 52 15.2 +1.3
baz=65,SNR=6.2
HYB Hyderabad 64.81 270 *i* P **P** 09 52 14.0 0.0
comp=Z,70nm,1.0s,mb5.7
HYB Hyderabad 64.81 270 *eP* **P** 09 52 14.0 0.0
HYB pmax pmax
comp=Z,60nm,1.0s,mb5.6
HYB Hyderabad 64.81 270 *eP* **P** 09 52 14.0 0.0
comp=Z,60nm,1.0s,mb5.6
QLMT Earthquake Lak 64.97 51 *eP* **P** 09 52 15.3 +0.3
QLMT *e* pP 09 52 30.9 +2.5
Q08A Gabbs 64.99 59 P **P** 09 52 15.6 +0.4
baz=65,SNR=5.2
NVAR Mina Array Bea 65.04 60 P **P** 09 52 15.5 0.0
comp=Z,2.5nm,0.6s,mb4.4,baz=300,slow=7.2,SNR=24
P09A Austin 65.04 58 ⇓P **P** 09 52 16.0 +0.5
baz=65
T06C Millerton Lake 65.06 62 ⇑P **P** 09 52 15.9 +0.2
baz=65
N11A Elko Archery C 65.07 57 ⇑P **P** 09 52 16.5 +0.8
baz=65
KCC Kaiser Creek 65.11 61 ⇓P **P** 09 52 16.0 0.0
baz=65,SNR=7.6
M12A Wells 65.18 56 ⇑P **P** 09 52 16.7 +0.3
baz=65,SNR=5.4
OBN Obninsk 65.20 324⇑ *eP* **P** 09 52 14.9 -1.6
OBN *e**PP pP 09 52 33.2 +3.3
OBN *e* 09 52 47.4
OBN pmax pmax
comp=Z,13nm,0.5s,mb5.2
OBN MLR MLR
comp=Z,300nm,19.0s,MS4.5
CTA Charters Tower 65.21 184 P **P** 09 52 13.8 -2.8
comp=Z,5.6nm,0.7s,mb4.7,baz=12,slow=8.5,SNR=8.0
ABKT Ailbek 65.41 300 P **P** 09 52 18.5 +0.6
comp=Z,297nm,0.7s,SNR=8.1
ABKT Ailbek 65.41 300 P **P** 09 52 18.9 +1.0
YNR Norris Junctio 65.46 51 *eP* **P** 09 52 20.6 +2.4
N12A Clover Valley, 65.46 56 ⇓P **P** 09 52 18.0 -0.3
baz=65
YFT Old Faithful 65.54 51 *eP* **P** 09 52 19.5 +0.7
MTUM Tungsten Hills 65.55 61 *eP* **P** 09 52 18.8 0.0
MTUM *epP* pP 09 52 31.4 -0.8
O11A Cowboy Ranch, 65.55 57 ⇓P **P** 09 52 18.3 -0.5
baz=65
M13A Montello 65.65 55 ⇑P **P** 09 52 19.0 -0.4
baz=65
HELL Mitchell Peak, 65.69 62 P **P** 09 52 19.7 -0.1
baz=66,SNR=7.2
IMW Indian Meadow 65.84 51 *eP* **P** 09 52 21.5 +0.8
comp=Z,26nm,1.1s,mb5.2
P11A Circle Ranch, 65.86 58 ⇓P **P** 09 52 20.6 -0.2
baz=66
DCID1 Drake Creek 65.90 52 *eP* **P** 09 52 22.2 +1.1
R09A Tonopah 65.91 59 P **P** 09 52 21.3 +0.2
baz=66,SNR=9.7
TPH Tonopah 65.92 60 *eP* **P** 09 52 21.4 +0.2
TPH *e**PP pP 09 52 34.1 -0.5
N13A Wendover, West 65.95 56 ⇑P **P** 09 52 21.9 +0.6
baz=66
TIN Tinemaha 65.95 61 ⇓P **P** 09 52 22.0 +0.6
baz=66
RRI2 Red Ridge 65.99 52 *eP* **P** 09 52 22.1 +0.5
comp=Z,9.7nm,0.7s,mb4.9
O12A Currie 66.00 57 ⇓P **P** 09 52 21.7 -0.1
baz=66,SNR=7.4
TPAW Teton Pass 66.10 52 *eP* **P** 09 52 22.9 +0.5
comp=Z,14nm,1.1s,mb4.9
S09A Goldfield 66.14 60 ⇓P **P** 09 52 22.3 -0.3
baz=66
VES Vestal, Richgr 66.19 63 ⇑P **P** 09 52 23.0 +0.1
baz=66
LOHW Long Hollow 66.21 52 *eP* **P** 09 52 23.4 +0.3
comp=Z,14nm,1.0s,mb5.0
LOHW *epP* pP 09 52 35.7 -0.7
SNOW Snow King Moun 66.23 52 *eP* **P** 09 52 23.6 +0.5
comp=Z,36nm,1.2s,mb5.3
REDW Red Top Meadow 66.24 52 *eP* **P** 09 52 24.3 +1.0
comp=Z,20nm,1.0s,mb5.1
R10A Warm Springs 66.34 59 ⇓P **P** 09 52 24.2 +0.3
baz=66
P12A McGill 66.42 57 ⇓P **P** 09 52 24.5 +0.1
baz=66
CWC Cottonwood Cre 66.43 62 ⇓P **P** 09 52 24.5 0.0
baz=66
WRAB Tennant Creek 66.50 196 P **P** 09 52 24.3 -0.6
comp=Z,106nm,0.8s,mb5.9,SNR=6.0
WRAB Tennant Creek 66.50 196 *eP* **P** 09 52 24.0 -0.9
WRAB *e**SP sP 09 52 43.0 -0.6
WRAB *e* 09 52 54.2
WRAB pmax pmax
comp=Z,20nm,0.8s,mb5.2
WRAB Tennant Creek 66.50 196 *eP* **P** 09 52 24.0 -0.9
comp=Z,20nm,0.8s,mb5.2
WRAB *epP* pP 09 52 38.0 -0.3
WRAB *esP* sP 09 52 43.0 -0.7
WRAB *ePcP* PcP 09 52 54.2 +0.1
WB2 Warramunga Arr 66.51 196 *eP* **P** 09 52 23.0 -2.0
GRAC Grapevine Rang 66.51 61 ⇓P **P** 09 52 25.2 +0.2
baz=66
WRA Warramunga Arr 66.51 196 P **P** 09 52 23.6 -1.4
comp=Z,9.5nm,0.6s,mb5.0,baz=16,slow=6.8,SNR=85
WRA PKPPKP 10 20 54.9
comp=Z,0.9nm,0.8s,baz=197,slow=2.6,SNR=4.7
WRA LR LR 10 21 45.6
comp=Z,137nm,18.6s,MS4.2,baz=250,slow=36
WRA Warramunga Arr 66.51 196 P **P** 09 52 23.6 -1.4
WRA P'P' 10 20 54.9
WRA LR LR 10 21 45.6
LAO LASA Array 66.53 47 *eP* **P** 09 52 25.7 +0.6
comp=Z,12nm,0.9s,mb4.9
LAO *e* pP 09 52 40.8 +2.3
ISA Isabella 66.68 62 *eP* **P** 09 52 26.1 0.0
ISA *epP* pP 09 52 37.9 -1.6
ISA Isabella 66.68 62 ⇑P **P** 09 52 26.0 -0.1
baz=66
Q12A Willow Creek R 66.74 58 ⇑P **P** 09 52 26.6 +0.2
baz=66
VRSR Storozhevoye 66.80 320 *eP* **P** 09 52 25.1 -1.7
VRSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VRSR pmax pmax
comp=N,20nm,0.9s
VRSR pmax pmax
comp=E,30nm,0.9s
DAC Darwin (Calif) 66.84 61 *eP* **P** 09 52 27.2 +0.1
DAC *e**PP pP 09 52 39.4 -1.1
FITZ Fitzroy Crossi 66.91 205 *eP* **P** 09 52 27.1 -0.4
comp=E,14nm,0.9s,mb5.0
FITZ Fitzroy Crossi 66.91 205 P **P** 09 52 26.7 -0.8
comp=E,8.1nm,0.9s,mb4.7,baz=26,slow=6.4,SNR=10
FITZ LR LR 10 20 09.5
comp=E,106nm,20.2s,MS4.0,baz=208,slow=34
HWUT Hardware Ranch 66.98 54 *eP* **P** 09 52 28.0 0.0
HWUT *epP* pP 09 52 40.4 -1.0
MPMC Manual Prospec 67.04 62 ⇓P **P** 09 52 28.4 0.0
baz=67
FURC Furnace Creek, 67.17 61 ⇓P **P** 09 52 28.9 -0.2
baz=67
DUG Dugway 67.18 56 *eP* **P** 09 52 29.8 +0.6
DUG *e**PP pP 09 52 42.0 -0.6
DUG pmax pmax
comp=Z,20nm,1.0s,mb5.1
DUG Dugway 67.18 56 *eP* **P** 09 52 29.8 +0.6
comp=Z,20nm,1.0s,mb5.1
DUG *epP* pP 09 52 42.0 -0.7
BW06 Boulder Array 67.34 52 *eP* **P** 09 52 30.4 +0.1
comp=Z,18nm,1.1s,mb5.0
PDAR Pinedale Array 67.34 52 P **P** 09 52 30.0 -0.3
comp=Z,4.6nm,0.7s,mb4.6,baz=294,slow=1.7,SNR=34
PDAR PKPPKP 10 20 53.5
comp=Z,0.5nm,0.9s,baz=100,slow=4.5,SNR=3.7
POO Poona 67.38 274⇑ *i* P **P** 09 52 28.0 -2.5
comp=Z,63nm,0.9s,mb5.7
TCUT Toone Canyon 67.39 54 *eP* **P** 09 52 30.9 +0.3
EDW2 Edwards Air Fo 67.49 63 ⇓P **P** 09 52 31.4 +0.2
baz=67
U10A Ash Meadows, A 67.53 61 ⇓P **P** 09 52 31.4 0.0
baz=67,SNR=8.1
NLU North Lily Min 67.77 55 *eP* **P** 09 52 33.0 +0.1
NLU *epP* pP 09 52 43.8 -2.5
MWC Mount Wilson 67.87 63 *eP* **P** 09 52 46.1 -0.9
MWC Mount Wilson 67.87 63 *epP* pP 09 52 46.1 -0.9
SHOC Shoshone 67.89 61 ⇓P **P** 09 52 33.6 -0.2
baz=68
GSC Goldstone 67.96 62 *eP* **P** 09 52 34.6 +0.5
GSC *epP* pP 09 52 46.8 -0.8
GSC Goldstone 67.96 62 ⇓P **P** 09 52 33.9 -0.3
baz=68
KAD Karad 67.96 273 *eP* **P** 09 52 34.2 0.0
U11A Corn Creek 68.10 60 ⇑P **P** 09 52 34.0 -1.1
baz=68
RRX Edison Barstow 68.11 62 ⇓P **P** 09 52 34.6 -0.5
baz=68
SHPR Sheep Range 68.19 60 *eP* **P** 09 52 36.1 +0.5
ARUT Antelope Range 68.39 58 *eP* **P** 09 52 37.1 +0.3
ARUT *e**PP pP 09 52 49.4 -0.8
TUQ Turquoise Mtn. 68.42 61 ⇑P **P** 09 52 37.0 0.0
baz=68,SNR=9.0
HEC Hector,Ludlow 68.56 62 ⇓P **P** 09 52 38.0 +0.1
baz=68,SNR=8.3
BBRC Big Bear Sol-O 68.56 63 ⇑P **P** 09 52 38.0 0.0
baz=68,SNR=7.1
CCUT Cedar City 68.59 58 *eP* **P** 09 52 38.5 +0.4
CCUT *epP* pP 09 52 51.0 -0.6
MSU Marysvale 68.66 57 *eP* **P** 09 52 38.7 +0.2
NB2 NORSAR Subarra 68.81 340 P **P** 09 52 38.0 -1.5
comp=Z,9.5nm,0.9s,mb4.7,baz=28,slow=6.5
NOA NORSAR Array B 68.81 340 P **P** 09 52 38.1 -1.3
comp=Z,7.5nm,0.7s,mb4.7,baz=30,slow=6.3,SNR=18
NOA LR LR 10 27 21.7
comp=Z,190nm,19.3s,MS4.3,baz=40,slow=40
NOA NORSAR Array B 68.81 340 P **P** 09 52 38.1 -1.3
NOA LR LR 10 27 21.7
MURC Murrieta 68.82 63 ⇑P **P** 09 52 39.6 +0.1
baz=69
V12A Nelson 68.89 60 ⇑P **P** 09 52 39.9 0.0
baz=69,SNR=6.4
HFS Hagfors 68.97 338 P **P** 09 52 38.6 -1.9
comp=Z,7.4nm,0.6s,mb4.8,baz=64,slow=6.6,SNR=16
HFS LR LR 10 26 06.0
comp=Z,295nm,20.7s,MS4.5,baz=12,slow=39
ULM Lac du Bonnet 69.01 39 P **P** 09 52 39.4 -1.3
comp=Z,5.7nm,0.5s,mb4.8,baz=307,slow=7.2,SNR=18
ULM Lac du Bonnet 69.01 39 P **P** 09 52 39.4 -1.3
GMRC Granite Mounta 69.01 62 ⇑P **P** 09 52 40.2 -0.5
baz=69
W12A Cal Nev Ari 69.15 61 ⇓P **P** 09 52 41.2 -0.4
baz=69
SRU San Rafael 69.22 55 *eP* **P** 09 52 41.4 -0.6
SRU pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SRU San Rafael 69.22 55 *eP* **P** 09 52 41.4 -0.6
comp=Z,6.3nm,0.8s,mb4.6
PFO Pinyon Flat Ob 69.28 63 *eP* **P** 09 52 42.3 -0.1
PFO *e**PP pP 09 52 54.8 -1.0
PFO pmax pmax

comp=Z,4.0nm,0.8s,mb4.4
PFO Pinyon Flat Ob 69.28 63 *e*P **P 09 52 42.3 -0.1**
comp=Z,4.1nm,0.8s,mb4.4
PFO *e*pP pP 09 52 54.8 -1.1
PFO Pinyon Flat Ob 69.28 63 ⇓P **P 09 52 41.9 -0.5**
baz=69
BELC Belle Mtn. 69.31 62 ⇑P **P 09 52 42.2 -0.4**
baz=69
109C Camp Elliot, M 69.34 64 ⇑P **P 09 52 42.7 0.0**
baz=69
RSSD Black Hills 69.40 48 *e*P **P 09 52 42.7 -0.4**
RSSD pmax pmax
comp=Z,18nm,0.9s,mb5.0
RSSD Black Hills 69.40 48 *e*P **P 09 52 42.7 -0.4**
comp=Z,18nm,0.9s,mb5.0
BAR Barrett 69.75 64 *e*pP pP 09 52 57.5 -1.3
W13A Hualapai Mount 69.89 60 ⇓P **P 09 52 46.0 -0.2**
baz=70
SWSC Sam W. Stewart 70.14 63 ⇓P **P 09 52 47.4 -0.2**
baz=70
KIV Kislovodsk 70.17 313 P **P 09 52 49.9 +2.0**
comp=Z,608nm,0.8s,SNR=6.0
KIV Kislovodsk 70.17 313 ⇑P **P 09 52 49.4 +1.6**
SNR=7.5
KIV Kislovodsk 70.17 313⇑ *e*P **P 09 52 49.1 +1.2**
KIV *i* *PP pP 09 53 07.3 +6.0
KIV pmax pmax
comp=Z,11nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,700nm,21.0s,MS4.9
KIV Kislovodsk 70.17 313 *e*P **P 09 52 48.9 +1.0**
comp=Z,57nm,0.6s,mb5.7
AS31 Alice Springs 70.22 196 *e*P **P 09 52 48.1 -0.1**
ASAR Alice Springs 70.22 196 P **P 09 52 48.2 0.0**
comp=Z,7.6nm,0.7s,mb4.7,baz=9.6,slow=5.1,SNR=126
ASAR LR LR 10 19 55.2
comp=Z,219nm,21.6s,MS4.4,baz=163,slow=33
ASAR PKPPKP 10 20 49.0
comp=Z,1.0nm,0.9s,baz=189,slow=5.5,SNR=5.7
ASPA Alice Springs 70.22 196 *e*P **P 09 52 48.1 -0.1**
X13A Yucca 70.26 61 ⇑P **P 09 52 48.2 -0.2**
baz=70
PDMCI Parker Dam,Lak 70.27 61 ⇓P **P 09 52 48.3 -0.2**
baz=70
W14A Seligman 70.31 60 ⇓P **P 09 52 48.8 +0.1**
baz=70
PALK Pallekele 70.31 260 *e*P **P 09 52 49.1 +0.4**
comp=Z,20nm,0.9s,mb5.0
ZEI Tsey 70.36 311 *e*P **P 09 52 48.5 -0.5**
ZEI pmax pmax
comp=Z,46nm,0.9s,mb5.4
Y12C Blythe 70.39 62 ⇑P **P 09 52 49.2 0.0**
baz=70,SNR=8.2
PV10 Paradox Valley 70.58 55 *e*P **P 09 52 50.9 +0.5**
GLA Glamis 70.67 62 *e*P **P 09 52 51.2 +0.3**
GLA *e*pP pP 09 53 03.6 -0.8
GLA Glamis 70.67 62 ⇑P **P 09 52 50.9 0.0**
baz=70,SNR=10
Y13A Salome 70.78 61 ⇑P **P 09 52 51.8 +0.2**
baz=71,SNR=7.6
W15A Williams 70.82 59 ⇓P **P 09 52 52.3 +0.5**
baz=71,SNR=7.1
X14A Yava 70.92 60 ⇑P **P 09 52 52.9 +0.4**
baz=71,SNR=9.6
PV01 Paradox Valley 71.01 55 *e*P **P 09 52 53.0 0.0**
PV01 *e*pP pP 09 53 06.4 0.0
WUAZ Wupatki 71.14 58 *e*P **P 09 52 53.8 0.0**
WUAZ *e*pP pP 09 53 06.8 -0.4
Y14A Wickenburg 71.21 61 ⇑P **P 09 52 54.3 +0.2**
baz=71,SNR=10
SMCO Snowmass 71.21 53 *e*P **P 09 52 54.5 +0.4**
comp=Z,4.5nm,0.8s,mb4.5
X15A Humboldt 71.31 60 ⇓P **P 09 52 55.2 +0.4**
baz=71
AKASG Malin Array Be 71.46 325 P **P 09 52 54.5 -1.2**
comp=Z,4.2nm,0.4s,mb4.7,baz=36,slow=5.9,SNR=36
AKASG LR LR 10 27 59.6
comp=Z,176nm,18.7s,MS4.3,baz=20,slow=39
AKBB Malin Array Si 71.46 325 *e*P **P 09 52 54.3 -1.4**
ISCO Idaho Springs 71.54 52 *e*P **P 09 52 56.3 +0.1**
ISCO pmax pmax
comp=Z,30nm,0.8s,mb5.3
ISCO Idaho Springs 71.54 52 *e*P **P 09 52 56.3 +0.1**
comp=Z,3.1nm,0.8s,mb4.3
Z14A Wintersburg 71.63 61 ⇑P **P 09 52 56.9 +0.2**
baz=71,SNR=6.1
MBWA Marble Bar 71.68 210 *e*P **P 09 52 56.3 -0.7**
comp=Z,19nm,1.0s,mb5.0
GNI Garni 71.73 309 P **P 09 52 58.7 +1.4**
comp=Z,20nm,0.8s,mb5.1,baz=229,slow=2.8,SNR=11
GNI LR LR 10 27 47.5
comp=Z,169nm,20.5s,MS4.3,baz=86,slow=38
GNI Garni 71.73 309 P **P 09 52 59.5 +2.2**
SNR=9.3
GNI Garni 71.73 309⇓ *e*P **P 09 52 57.5 +0.2**
GNI pmax pmax
comp=Z,53nm,1.3s
GNI Garni 71.73 309 *e*P **P 09 52 58.1 +0.8**
comp=Z,31nm,1.0s,mb5.2
SOC Sochi 71.95 314 *e*P **P 09 52 58.3 -0.4**
SOC *e* 09 53 22.0
SOC *e*S S 10 02 15.4 -1.0
SOC *e*SS SS 10 06 54.5 +0.9
SOC pmax pmax
comp=Z,27nm,0.7s,mb5.3
SOC MLR MLR
comp=Z,620nm,22.0s,MS4.8
TRD Trivandrum 72.05 264 *e*P **P 09 52 59.5 +0.2**
ANN Anapa 72.21 316 *e*P **P 09 52 59.3 -0.9**
ANN *e*PP pP 09 53 12.2 -1.5
ANN pmax pmax
comp=Z,35nm,0.6s,mb5.5
115A Sonoran Desert 72.52 61 ⇓P **P 09 53 02.4 +0.3**
baz=72,SNR=8.3
116A Eloy 72.94 61 ⇑P **P 09 53 04.6 0.0**
baz=73,SNR=7.5
ECSD EROS,Sioux Fal 73.43 44 *e*P **P 09 53 06.2 -1.2**
TUC Tucson 73.68 61 *e*P **P 09 53 08.8 -0.1**
comp=Z,1.3nm,0.7s
TUC *e*pP pP 09 53 21.2 -1.2
SIM Simferopol' 73.68 318 *e*P **P 09 53 09.0 +0.1**
SIM pmax pmax
comp=Z,29nm,0.8s,mb5.3
SIM MLR MLR
comp=Z,310nm,18.9s,MS4.6
LVV L'vov 74.21 327 *e*P **P 09 53 11.0 -1.0**
ANMO Albuquerque 74.44 56⇓ *e*P **P 09 53 13.7 +0.4**
ANMO Albuquerque 74.44 56 *e*pP pP 09 53 26.4 -0.5
comp=Z,7.6nm,1.1s
BANOM Banah 74.47 291 ⇑P **P 09 53 14.7 +1.3**
SNR=6.0
KWP Kalwaria 74.86 328 *e*P **P 09 53 16.4 +0.6**
BIDO Bidbid 74.89 288 ⇑P **P 09 53 18.5 +2.6**
SNR=7.8
WBK Wadi Bani Khal 74.94 287 P **P 09 53 18.1 +1.9**
SNR=5.9
SMDO Samad 75.25 288 ⇑P **P 09 53 19.2 +1.2**
SNR=7.2
HOQ Hoqain 75.39 289 P **P 09 53 20.1 +1.2**
SNR=8.7
SCHQ Schefferville 75.43 21 P **P 09 53 17.3 -1.7**
comp=Z,11nm,0.9s,mb4.8,baz=9.7,slow=4.9,SNR=7.9
OJC Ojcow 75.45 330 *e*P **P 09 53 18.8 -0.3**
ASHO Ashiyiah 75.47 290 P **P 09 53 20.4 +1.1**
SNR=12
BURAR Bucovina Array 75.51 325⇓ *i*P **P 09 53 18.8 -0.7**
BURAR Bucovina Array 75.51 325 ⇓P **P 09 53 18.8 -0.7**
STHS Stebnicka Huta 75.59 328 *e*P **P 09 53 20.8 +0.9**
STHS pmax pmax
comp=Z,15nm,0.9s,mb4.9
STHS Stebnicka Huta 75.59 328 *e*P **P 09 53 20.8 +0.9**
comp=Z,15nm,0.9s,mb4.9
KOLS Kolonicke sedl 75.60 327 *e*P **P 09 53 20.0 0.0**
JMDO Jabal Madar 75.69 287 P **P 09 53 21.8 +1.3**
SNR=11
NIE Niedzica 75.93 329 *e*P **P 09 53 22.5 +0.6**
CRVS Cervenica-Dubn 75.93 328 *e*P **P 09 53 21.8 -0.1**
BSY Bisya 76.04 288 P **P 09 53 23.6 +1.0**
SNR=12
ARQ Araqi 76.09 289 P **P 09 53 23.9 +1.1**
SNR=9.6
KSP Ksiaz 76.14 332 *e*P **P 09 53 22.5 -0.6**
KSP Ksiaz 76.14 332⇓ *e*P **P 09 53 22.4 -0.7**
CFR Carcaliu 76.22 322⇑ *i*P **P 09 53 23.8 +0.3**
CFR Carcaliu 76.22 322 ⇑P **P 09 53 23.8 +0.3**
OKC Ostrava-Krasne 76.35 330 *e*P **P 09 53 24.2 -0.1**
OKC AMS AMS 10 34 00.0
comp=Z,300nm,11.7s
SCIA State Center 76.45 43 *e*P **P 09 53 24.3 -0.5**
SCIA *e* pP 09 53 36.8 -1.6
MALT Malatya 76.46 311⇑ *i*P **P 09 53 26.6 +1.7**
MALT Malatya 76.46 311 ⇑P **P 09 53 26.7 +1.8**
MALT Malatya 76.46 311 *e*P **P 09 53 26.2 +1.3**
comp=Z,25nm,0.8s,mb5.2
UPC Upice 76.52 332 *e*P **P 09 53 24.8 -0.4**
DPC Dobruska-Polom 76.55 332 *e*P **P 09 53 24.9 -0.5**
MORC Moravsky Berou 76.61 331⇑ *i*P **P 09 53 25.6 -0.2**
MORC Moravsky Berou 76.61 331 *e*P **P 09 53 25.6 -0.2**
MORC pmax pmax
comp=Z,31nm,1.0s,mb5.2
MORC Moravsky Berou 76.61 331 *e*P **P 09 53 25.6 -0.2**
comp=Z,31nm,1.0s,mb5.2
KECS Kecovo 76.64 328 *e*P **P 09 53 25.8 -0.1**
KECS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KECS Kecovo 76.64 328 *e*P **P 09 53 25.8 -0.1**
comp=Z,8.6nm,0.8s,mb4.7
TIRR Tirgusor 76.66 321⇑ *i*P **P 09 53 25.8 -0.2**
TIRR Tirgusor 76.66 321 ⇑P **P 09 53 25.8 -0.2**
LIKS Likavka 76.67 329 *e*P **P 09 53 26.9 +0.8**
LIKS pmax pmax
comp=Z,37nm,1.3s,mb5.2
LIKS Likavka 76.67 329 *e*P **P 09 53 26.9 +0.8**
comp=Z,37nm,1.3s,mb5.2
HARR Harsova 76.69 322⇓ *i*P **P 09 53 26.6 +0.4**
HARR Harsova 76.69 322 ⇓P **P 09 53 26.6 +0.4**
CLL Collm 76.79 334 ⇑P **P 09 53 25.7 -1.1**
comp=Z,logA/T=1.6,mb5.3
CLL *i* *PP pP 09 53 39.0 -1.4
CLL Collm 76.79 334⇑ *i*P **P 09 53 25.7 -1.1**
comp=Z,41nm,1.1s,mb5.3
CLL *i* pP pP 09 53 39.0 -1.4
CLL LmV 10 30 00.0
comp=Z,400nm,20.7s
CLL Collm 76.79 334⇑ *i*P **P 09 53 25.7 -1.1**
CLL *i* *PP pP 09 53 39.0 -1.4
CLL pmax pmax
comp=Z,41nm,1.1s,mb5.3
CLL MLR MLR
comp=Z,400nm,20.7s,MS4.7
KSU1 Kansas State U 76.87 47 *e*P **P 09 53 25.5 -1.8**
KSU1 *e*PcP PcP 09 53 38.0 -0.2
BRG Berggiesshubel 76.88 333 *e*P **P 09 53 26.5 -0.8**
comp=Z,8.1nm,1.0s,mb4.6
BRG
comp=N,232nm,19.4s
BRG
comp=E,94nm,15.4s
BRG
comp=Z,213nm,17.9s
MLR Muntele Rosu 76.91 323 P **P 09 53 26.6 -0.9**
comp=Z,19nm,0.7s,mb5.1,baz=18,slow=20,SNR=17
MLR Muntele Rosu 76.91 323⇓ *i*P **P 09 53 27.9 +0.5**
MLR Muntele Rosu 76.91 323 ⇓P **P 09 53 27.9 +0.5**
ISR Istrita 76.95 323⇑ *i*P **P 09 53 28.6 +0.9**
ISR Istrita 76.95 323 ⇑P **P 09 53 28.6 +0.9**
PVCC Panska Ves 76.97 333 *e*P **P 09 53 27.6 -0.2**
EKA Eskdalemuir Ar 77.14 345 P **P 09 53 26.2 -2.5**
comp=Z,11nm,0.8s,mb4.8,baz=24,slow=5.4,SNR=21
DRGR 77.18 326⇑ *i*P **P 09 53 27.9 -1.1**
DRGR 77.18 326 ⇑P **P 09 53 27.9 -1.1**
STKA Stephens Creek 77.23 187 *e*P **P 09 53 29.2 -0.1**
comp=Z,6.7nm,0.9s,mb4.6
STKA Stephens Creek 77.23 187 P **P 09 53 28.6 -0.7**
comp=Z,4.8nm,0.8s,mb4.5,baz=335,slow=5.4,SNR=4.7
VYHS Vyhne 77.24 329 *e*P **P 09 53 29.4 +0.1**
VYHS pmax pmax
comp=Z,15nm,1.2s,mb4.8
VYHS Vyhne 77.24 329 *e*P **P 09 53 29.4 +0.1**
comp=Z,15nm,1.2s,mb4.8
VOIR 77.33 324⇑ *i*P **P 09 53 30.4 +0.6**
PSZ Piszkesteto 77.33 328⇑ *i*P **P 09 53 29.3 -0.5**
PSZ Piszkesteto 77.33 328 ⇑P **P 09 53 29.3 -0.5**
VRAC Vranov 77.34 331 P **P 09 53 29.5 -0.4**
comp=Z,33nm,0.9s,mb5.2,baz=39,slow=4.8,SNR=23
VRAC Vranov 77.34 331⇑ *i*P **P 09 53 30.2 +0.3**
MNTX Cornudas Mount 77.37 58 *e*P **P 09 53 30.1 +0.1**
comp=Z,3.1nm,0.8s,mb4.3
MNTX *e*pP pP 09 53 42.8 -0.9
UMR Umm Al-Rimmam 77.43 299 *e*P **P 09 53 30.4 +0.1**
UMR AMb AMB 09 53 31.5
comp=Z,229nm,0.8s,mb6.2
PRU Pruhonice 77.45 332 *e*P **P 09 53 30.0 -0.5**
PRU AMS AMS 10 31 30.0
comp=Z,200nm,16.8s
GDL2 Guadalupe Moun 77.62 57 *e*P **P 09 53 31.6 +0.2**
KBD Kabd 77.71 299 *e*P **P 09 53 31.7 -0.2**
KBD AMb AMB 09 53 34.0
comp=Z,646nm,0.8s
SMOL Smolenice 77.72 330 *e*P **P 09 53 33.1 +1.1**
TREC Trest 77.73 331 *e*P **P 09 53 32.0 0.0**
MOX Moxa 77.80 334 *e*P **P 09 53 31.6 -0.8**
comp=Z,24nm,1.3s,mb5.0
MOX Moxa 77.80 334 *e*P **P 09 53 31.6 -0.8**
MOX pmax pmax
comp=Z,24nm,1.3s,mb5.0
BRTR Keskin Array B 77.86 315 P **P 09 53 33.1 +0.4**
comp=Z,12nm,0.9s,mb4.8,baz=83,slow=5.1,SNR=37
BRTR LR LR 10 34 22.4
comp=Z,136nm,19.7s,MS4.3,baz=352,slow=41
QRN Al-Qurain 77.87 299 *e*P **P 09 53 33.0 +0.2**
QRN AMb AMB 09 53 34.8
comp=Z,282nm,0.7s
RDF Al-Radifah 77.97 299 *e*P **P 09 53 33.8 +0.4**
RDF AMb AMB 09 53 35.6
comp=Z,322nm,0.8s
ZST Bratislava 78.11 330 *e*P **P 09 53 34.5 +0.4**
ZST *e* 09 53 39.6
ZST pmax pmax
comp=Z,23nm,1.1s,mb5.0
ZST Bratislava 78.11 330 *e*P **P 09 53 34.5 +0.4**
comp=Z,22nm,1.1s,mb5.0
ZST *e* 09 53 39.6
ANTO Ankara 78.17 316⇓ *i*P **P 09 53 35.9 +1.4**
ANTO Ankara 78.17 316 *e*P **P 09 53 34.6 +0.1**
comp=Z,67nm,1.2s,mb5.4
GZR Gura Zlata 78.30 325⇑ *i*P **P 09 53 34.5 -0.7**
GZR Gura Zlata 78.30 325 ⇑P **P 09 53 35.0 -0.2**
GZR Gura Zlata 78.30 325 ⇑P **P 09 53 34.5 -0.7**
FORT Forrest 78.34 199 *e*P **P 09 53 35.1 -0.3**
comp=Z,30nm,0.7s,mb5.3
KHC Kasperske Hory 78.50 332 *e*P **P 09 53 35.9 -0.4**
KHC *e*pP pP 09 53 48.9 -1.1
KHC AMS AMS 10 30 10.0
comp=Z,400nm,22.5s
BZS Buzias 78.58 326⇑ *i*P **P 09 53 35.9 -0.8**
BZS Buzias 78.58 326 ⇑P **P 09 53 35.9 -0.8**
GEC2 GERESS Array S 78.71 332 *e*P **P 09 53 36.6 -0.9**
GERES GERESS Array B 78.71 332 P **P 09 53 37.2 -0.3**
comp=Z,9.4nm,0.6s,mb4.9,baz=33,slow=5.1,SNR=42
GERES LR LR 10 32 55.9
comp=Z,305nm,18.7s,MS4.7,baz=95,slow=39
GRA1 Grafenberg Arr 78.76 334 *e*P **P 09 53 37.3 -0.4**
comp=Z,28nm,0.9s,mb5.2
GRA1 *e*PP PP 09 56 34.8 -1.6
GRF Grafenberg Arr 78.76 334 *e*P **P 09 53 37.3 -0.4**
comp=Z,28nm,0.9s,mb5.2
GRF *e*PP PP 09 56 34.8 -1.6
GRF Grafenberg Arr 78.76 334 *e*P **P 09 53 37.3 -0.4**
GRF *e* 09 56 34.8
GRF pmax pmax
comp=Z,28nm,0.9s,mb5.2
CONA Conrad Observa 78.77 330⇑ *i*P **P 09 53 38.0 +0.2**
comp=Z,14nm,0.7s,mb5.0
WMOK Wichita Mounta 78.96 51 *e*pP pP 09 53 51.0 -1.5
PKSM Moragy 79.23 328⇑ *i*P **P 09 53 39.1 -1.2**
PKSM Moragy 79.23 328 P **P 09 53 39.6 -0.7**
PKSM Moragy 79.23 328 ⇑P **P 09 53 39.1 -1.2**
BEBN Eben Emael 79.36 338 P **P 09 53 40.7 -0.3**
MOA Molln 79.39 331⇑ *i*P **P 09 53 41.0 -0.2**
comp=Z,10nm,1.0s,mb4.7
MEM Membach 79.44 338 P **P 09 53 41.1 -0.4**
ARSA Arzberg 79.47 330⇑ *i*P **P 09 53 41.2 -0.4**
comp=Z,32nm,1.8s,mb5.0
TOD Tromm 79.56 335 *e*P **P 09 53 41.7 -0.4**
ABH Alteburg 79.68 336 *e*P **P 09 53 42.0 -0.7**
BCLA Clavier 79.80 338 P **P 09 53 43.0 -0.5**
SNF Seneffe 79.99 339 P **P 09 53 44.0 -0.4**
PERS Pernice 80.14 330 *e*P **P 09 53 44.8 -0.4**
GIVF Givet 80.22 338⇑ *i*P **P 09 53 44.8 -0.9**
comp=Z,25nm,0.9s,mb4.8
GIVF Givet 80.22 338⇑ *i*P **P 09 53 44.8 -0.9**
GIVF pmax pmax
comp=Z,13nm,0.9s,mb4.9
GIVF Givet 80.22 338⇑ *i*P **P 09 53 44.8 -0.9**
comp=Z,13nm,0.9s,mb4.8
DOU Dourbes 80.29 338 P **P 09 53 45.2 -0.8**
KBA Koelnbreinsper 80.37 332⇑ *i*P **P 09 53 46.4 0.0**
comp=Z,27nm,0.9s,mb5.2
KBA Koelnbreinsper 80.37 332⇑ *i*P **P 09 53 46.4 -0.1**
KBA pmax pmax
comp=Z,27nm,0.9s,mb5.2
GRUS Gruza 80.37 325⇑ *i*P **P 09 53 45.5 -1.0**
LANF Langenberg 80.41 336 *e*P **P 09 53 46.4 -0.3**
VTS Vitosha 80.41 323⇑ *i*P **P 09 53 47.0 +0.3**
VTS Vitosha 80.41 323 ⇑P **P 09 53 47.0 +0.3**
BAIF Baives 80.42 338⇑ *i*P **P 09 53 46.0 -0.7**
comp=Z,14nm,0.7s,mb4.7
BAIF Baives 80.42 338⇑ *i*P **P 09 53 46.0 -0.7**
BAIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
BAIF Baives 80.42 338⇑ *i*P **P 09 53 46.0 -0.7**
comp=Z,7.1nm,0.7s,mb4.7
OBKA Obir 80.45 331⇑ *i*P **P 09 53 46.4 -0.5**
comp=Z,55nm,2.1s,mb5.1
DIVS Divcibare 80.48 326⇑ *i*P **P 09 53 46.4 -0.7**
CRES Cresnjev 80.72 330 *i* P **P 09 53 47.5 -0.8**
WATA Walderalm 80.72 333⇑ *i*P **P 09 53 48.4 +0.1**
comp=Z,33nm,1.1s,mb5.2
WATA Walderalm 80.72 333⇑ *i*P **P 09 53 48.4 0.0**
WATA pmax pmax
comp=Z,33nm,1.1s,mb5.2
WTTA Wattenberg 80.77 333⇑ *i*P **P 09 53 48.4 -0.2**
comp=Z,46nm,1.1s,mb5.3
WTTA Wattenberg 80.77 333⇑ *i*P **P 09 53 48.4 -0.2**
WTTA pmax pmax
comp=Z,46nm,1.1s,mb5.3
FVM French Village 80.84 44 *e*P **P 09 53 48.4 -0.6**
FVM *e*PP pP 09 54 02.3 -0.4
FVM pmax pmax
comp=Z,14nm,0.8s,mb4.9
FVM French Village 80.84 44 *e*P **P 09 53 48.4 -0.7**
comp=Z,14nm,0.8s,mb4.9
FVM *e*pP pP 09 54 02.3 -0.4
BFO Black Forest 80.84 335 P **P 09 53 48.9 -0.1**
comp=Z,118nm,0.9s,mb5.8,SNR=5.9
BFO Black Forest 80.84 335 P **P 09 53 48.7 -0.3**
MOTA Moosalm 80.87 333⇑ *i*P **P 09 53 49.0 -0.2**
comp=Z,32nm,1.0s,mb5.2
MOTA Moosalm 80.87 333⇑ *i*P **P 09 53 49.0 -0.1**
MOTA pmax pmax
comp=Z,32nm,1.0s,mb5.2
BBLS Bajina Basta - 80.91 326⇑ *i*P **P 09 53 49.5 +0.2**
SQTA Sankt Quirin 80.94 333⇓ *i*P **P 09 53 49.6 0.0**
comp=Z,19nm,0.9s,mb5.0
SQTA Sankt Quirin 80.94 333⇓ *i*P **P 09 53 49.6 +0.1**
SQTA pmax pmax
comp=Z,19nm,0.9s,mb5.0
VISS Visnje 80.96 330 *i* P **P 09 53 48.6 -1.1**
WLS Welschbruch 81.06 336 *e*P **P 09 53 49.6 -0.5**
BOJS Bojanci 81.07 330 *i* P **P 09 53 49.4 -0.8**
CDF Champ du Feu 81.08 336 *e*P **P 09 53 49.6 -0.7**
comp=Z,37nm,0.9s,mb5.0
CDF Champ du Feu 81.08 336 *e*P **P 09 53 49.6 -0.7**
CDF pmax pmax
comp=Z,18nm,0.9s,mb5.0
CDF Champ du Feu 81.08 336 *e*P **P 09 53 49.6 -0.7**
comp=Z,18nm,0.9s,mb5.0
CEY Cerknica 81.16 330 *i* P **P 09 53 49.6 -1.1**
ECH Echery 81.29 336 *e*P **P 09 53 50.8 -0.6**
DAVA Damuels 81.31 334⇑ *i*P **P 09 53 51.3 -0.2**
comp=Z,34nm,1.2s,mb5.1
FELD Feldberg im Sc 81.35 335 *e*P **P 09 53 51.0 -0.7**
JCT Junction City 81.53 55 *e*P **P 09 53 52.4 -0.3**
JCT *e*PP pP 09 54 06.2 -0.2
JCT pmax pmax
comp=Z,31nm,1.2s,mb5.1
JCT Junction City 81.53 55 *e*P **P 09 53 52.4 -0.2**
comp=Z,31nm,1.2s,mb5.1
JCT *e*pP pP 09 54 06.2 -0.2
THEF They Montfort 81.61 337 *e*P **P 09 53 52.6 -0.5**
MEZF Maizieres J'vi 81.62 337⇑ *i*P **P 09 53 52.8 -0.3**
MOF Molkenrain 81.63 336 *e*P **P 09 53 52.5 -0.7**
SIUC Southern Illin 81.64 43 *e*P **P 09 53 52.7 -0.6**
SKO Skopje 81.67 324 *e*P **P 09 53 54.5 +1.1**
HAU Haudompre 81.71 336 *e*P **P 09 53 52.7 -0.9**
comp=Z,31nm,0.9s,mb5.0
HAU *e*R
comp=Z,390nm,20.2s
HAU Haudompre 81.71 336 *e*P **P 09 53 52.7 -0.9**
HAU pmax pmax
comp=Z,16nm,0.9s,mb5.0
HAU MLR MLR
comp=Z,390nm,20.3s,MS4.8
HAU Haudompre 81.71 336 *e*P **P 09 53 52.7 -0.9**
comp=Z,16nm,0.9s,mb4.9
HAU LR LR
comp=Z,390nm,20.3s,MS4.8
VAY Valandovo 81.73 323 *e*P **P 09 53 53.5 -0.2**
HINF Hinteralfeld 81.74 336 *e*P **P 09 53 52.7 -1.0**
comp=Z,21nm,0.9s,mb4.8
HINF Hinteralfeld 81.74 336 *e*P **P 09 53 52.7 -1.0**
HINF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
HINF Hinteralfeld 81.74 336 *e*P **P 09 53 52.7 -1.0**
comp=Z,10nm,0.9s,mb4.8
BBS Basel-Blauen 81.86 335 *e*P **P 09 53 53.9 -0.5**
ASF Jabal al Asfar 81.87 308 P **P 09 53 55.4 +1.0**
comp=Z,13nm,0.9s,mb4.9,baz=285,slow=2.9,SNR=20
MIAR Mount Ida 81.91 48 *e*P **P 09 53 54.1 -0.5**
MIAR pmax pmax
comp=Z,17nm,0.8s,mb5.0
MIAR Mount Ida 81.91 48 *e*P **P 09 53 54.1 -0.6**
comp=Z,17nm,0.8s,mb5.0
MIAR *e*pP pP 09 54 06.7 -1.6
KLBR Kellerberrin 81.97 207 *e*P **P 09 53 54.2 -0.8**
comp=Z,42nm,1.3s,mb5.2
LOMF Lomont 82.17 336 *e*P **P 09 53 55.7 -0.3**
PARMO Parma 82.21 44 *e*P **P 09 53 56.0 -0.2**
PARMO *e*pP pP 09 54 08.7 -1.2
TAOE Nuku Hiva Isla 82.47 111 *e*LR LR 10 19 05.5
comp=Z,1µm,26.8s
WCI Wyandotte Cave 82.62 41 *e*P **P 09 53 57.6 -0.8**
WCI *e*PP pP 09 54 10.3 -1.8
WCI pmax pmax
comp=Z,27nm,1.0s,mb5.2
WCI Wyandotte Cave 82.62 41 *e*P **P 09 53 57.6 -0.8**
comp=Z,27nm,1.0s,mb5.2
WCI *e*pP pP 09 54 10.3 -1.9
OHR Ohrid 82.65 324 *e*P **P 09 53 57.6 -0.9**
FLN La Foliniere 82.78 341⇑ *i*P **P 09 53 58.5 -0.7**
comp=Z,68nm,0.9s,mb5.4
FLN *e*R
comp=Z,258nm,19.5s
FLN La Foliniere 82.78 341⇑ *i*P **P 09 53 58.5 -0.7**
FLN pmax pmax
comp=Z,34nm,0.9s,mb5.4
FLN MLR MLR
comp=Z,260nm,19.5s,MS4.6
FLN La Foliniere 82.78 341⇑ *i*P **P 09 53 58.5 -0.7**
comp=Z,34nm,0.9s,mb5.4
FLN LR LR
comp=Z,260nm,19.5s,MS4.6
LDF La Druitiere 82.85 341⇑ *i*P **P 09 53 58.8 -0.8**
comp=Z,48nm,0.9s,mb5.2
LDF La Druitiere 82.85 341⇑ *i*P **P 09 53 58.8 -0.8**
LDF pmax pmax
comp=Z,24nm,0.9s,mb5.2
LDF La Druitiere 82.85 341⇑ *i*P **P 09 53 58.8 -0.8**
comp=Z,24nm,0.9s,mb5.2
CABF La Chapelle 83.05 336 *e*P **P 09 54 00.1 -0.5**
comp=Z,25nm,0.9s,mb4.9
CABF La Chapelle 83.05 336 *e*P **P 09 54 00.1 -0.5**
CABF pmax pmax
comp=Z,13nm,0.9s,mb5.0
CABF La Chapelle 83.05 336 *e*P **P 09 54 00.1 -0.5**
comp=Z,12nm,0.9s,mb4.9
LOR Lormes 83.07 338⇑ *i*P **P 09 54 00.0 -0.7**
comp=Z,53nm,0.9s,mb5.3
LOR *e*R
comp=Z,289nm,19.2s
LOR Lormes 83.07 338⇑ *i*P **P 09 54 00.0 -0.7**
LOR pmax pmax
comp=Z,26nm,0.9s,mb5.3
LOR MLR MLR
comp=Z,290nm,19.3s,MS4.7

LOR	**Lormes**	**83.07**	**338**	⇑*iP*		**P**	**09 54 00.0**	**-0.7**	
	comp=Z,26nm,0.9s,mb5.3								
LOR				LR		LR			
	comp=Z,290nm,19.3s,MS4.7								
PPT	**Papeete**	**83.17**	**123**	*e*LR		LR	10 19 26.5		
	comp=Z,434nm,25.2s,baz=332								
PPT	**Papeete**	**83.17**	**123**	LR		LR	10 28 51.6		
	comp=Z,300nm,18.4s,MS4.7,baz=157,slow=34								
GRR	**Gorron**	**83.22**	**341**	⇑*iP*		**P**	**09 54 01.0**	**-0.4**	
	comp=Z,94nm,0.7s,mb5.6								
GRR	**Gorron**	**83.22**	**341**	⇑*iP*		**P**	**09 54 01.0**	**-0.4**	
GRR				pmax		pmax			
	comp=Z,47nm,0.7s,mb5.6								
GRR	**Gorron**	**83.22**	**341**	⇑*iP*		**P**	**09 54 01.0**	**-0.4**	
	comp=Z,47nm,0.7s,mb5.6								
NWAO	**Narrogin (SRO)**	**83.37**	**207**	P		**P**	**09 54 00.3**	**-2.0**	
	comp=Z,22nm,0.8s,mb5.2,baz=347,slow=3.1,SNR=9.4								
HYF	**Humbligny**	**83.40**	**338**	*eP*		**P**	**09 54 02.2**	**-0.2**	
NATX	**Nacogdoches**	**83.46**	**51**	*eP*		**P**	**09 54 02.8**	**+0.1**	
	comp=Z,16nm,0.6s,mb5.2								
NATX				*ep*P		pP	09 54 16.3	-0.2	
WVT	**Waverly**	**83.58**	**44**	*eP*		**P**	**09 54 02.3**	**-1.0**	
WVT				*e**PP		pP	09 54 15.5	-1.6	
WVT				pmax		pmax			
	comp=Z,16nm,0.9s,mb5.2								
WVT	**Waverly**	**83.58**	**44**	*eP*		**P**	**09 54 02.3**	**-1.0**	
	comp=Z,16nm,0.9s,mb5.1								
WVT				*ep*P		pP	09 54 15.5	-1.6	
AVF	**Avril sur Loir**	**83.65**	**338**	⇑*iP*		**P**	**09 54 03.2**	**-0.5**	
	comp=Z,43nm,0.9s,mb5.3								
AVF	**Avril sur Loir**	**83.65**	**338**	⇑*iP*		**P**	**09 54 03.2**	**-0.5**	
AVF				pmax		pmax			
	comp=Z,22nm,0.9s,mb5.3								
AVF	**Avril sur Loir**	**83.65**	**338**	⇑*iP*		**P**	**09 54 03.2**	**-0.5**	
	comp=Z,22nm,0.9s,mb5.3								
SMF	**Signal de Mont**	**83.65**	**337**	⇑*iP*		**P**	**09 54 03.3**	**-0.4**	
	comp=Z,64nm,0.8s,mb5.5								
SMF	**Signal de Mont**	**83.65**	**337**	⇑*iP*		**P**	**09 54 03.3**	**-0.4**	
SMF				pmax		pmax			
	comp=Z,32nm,0.8s,mb5.5								
SMF	**Signal de Mont**	**83.65**	**337**	⇑*iP*		**P**	**09 54 03.3**	**-0.4**	
	comp=Z,32nm,0.8s,mb5.5								
SGMF	**Saint Gilles**	**83.72**	**342**	*eP*		**P**	**09 54 03.7**	**-0.4**	
	comp=Z,82nm,0.8s,mb5.6								
SGMF	**Saint Gilles**	**83.72**	**342**	*eP*		**P**	**09 54 03.7**	**-0.4**	
SGMF				pmax		pmax			
	comp=Z,41nm,0.8s,mb5.6								
SGMF	**Saint Gilles**	**83.72**	**342**	*eP*		**P**	**09 54 03.7**	**-0.4**	
	comp=Z,41nm,0.8s,mb5.6								
ROSF	**Rostrenen**	**83.80**	**342**	*eP*		**P**	**09 54 04.1**	**-0.3**	
	comp=Z,82nm,1.0s,mb5.5								
ROSF	**Rostrenen**	**83.80**	**342**	*eP*		**P**	**09 54 04.1**	**-0.3**	
ROSF				pmax		pmax			
	comp=Z,41nm,1.0s,mb5.5								
ROSF	**Rostrenen**	**83.80**	**342**	*eP*		**P**	**09 54 04.1**	**-0.3**	
	comp=Z,41nm,1.0s,mb5.5								
LPL	**La Plagne**	**83.86**	**335**	⇑*iP*		**P**	**09 54 05.0**	**+0.3**	
	comp=Z,46nm,0.9s,mb5.3								
LPL	**La Plagne**	**83.86**	**335**	⇑*iP*		**P**	**09 54 05.0**	**+0.3**	
LPL				pmax		pmax			
	comp=Z,23nm,0.9s,mb5.3								
LPL	**La Plagne**	**83.86**	**335**	⇑*iP*		**P**	**09 54 05.0**	**+0.3**	
	comp=Z,23nm,0.9s,mb5.3								
LPG	**La Plagne**	**83.87**	**335**	⇑*iP*		**P**	**09 54 05.2**	**+0.4**	
	comp=Z,56nm,1.0s,mb5.4								
LPG	**La Plagne**	**83.87**	**335**	⇑*iP*		**P**	**09 54 05.2**	**+0.4**	
LPG				pmax		pmax			
	comp=Z,28nm,1.0s,mb5.3								
LPG	**La Plagne**	**83.87**	**335**	⇑*iP*		**P**	**09 54 05.2**	**+0.4**	
	comp=Z,28nm,1.0s,mb5.3								
VLC	**Villacollemand**	**83.92**	**332**	*eP*		**P**	**09 54 04.3**	**-0.7**	
QUIF	**Quistinic**	**84.17**	**342**	⇑*iP*		**P**	**09 54 05.8**	**-0.6**	
	comp=Z,28nm,0.8s,mb5.1								
QUIF	**Quistinic**	**84.17**	**342**	⇑*iP*		**P**	**09 54 05.8**	**-0.6**	
QUIF				pmax		pmax			
	comp=Z,14nm,0.8s,mb5.1								
QUIF	**Quistinic**	**84.17**	**342**	⇑*iP*		**P**	**09 54 05.8**	**-0.6**	
	comp=Z,14nm,0.8s,mb5.2								
HKT	**Hockley**	**84.19**	**53**	*ep*P		pP	09 54 21.7	+1.5	
BNI	**Bardonecchia**	**84.29**	**335**	*eP*		**P**	**09 54 07.2**	**+0.2**	
BNI				pmax		pmax			
	comp=Z,12nm,0.6s,mb5.2								
BNI	**Bardonecchia**	**84.29**	**335**	*eP*		**P**	**09 54 07.2**	**+0.3**	
	comp=Z,12nm,0.6s,mb5.2								
PLDF	**La Plantade**	**84.33**	**337**	*eP*		**P**	**09 54 07.4**	**+0.2**	
PLAL	**Pickwick Lake**	**84.37**	**44**	*eP*		**P**	**09 54 06.1**	**-1.2**	
	comp=Z,35nm,1.4s,mb5.3								
PLAL				*ep*P		pP	09 54 19.1	-2.0	
AGO	**Saint Agoulin**	**84.39**	**337**	*eP*		**P**	**09 54 08.2**	**+0.8**	
TCF	**Toulx Ste Croi**	**84.42**	**338**	⇑*iP*		**P**	**09 54 07.4**	**-0.2**	
	comp=Z,44nm,0.9s,mb5.5								
TCF	**Toulx Ste Croi**	**84.42**	**338**	⇑*iP*		**P**	**09 54 07.4**	**-0.2**	
TCF				pmax		pmax			
	comp=Z,22nm,0.9s,mb5.3								
TCF	**Toulx Ste Croi**	**84.42**	**338**	⇑*iP*		**P**	**09 54 07.4**	**-0.2**	
	comp=Z,22nm,0.9s,mb5.3								
MBDF	**Montbardon**	**84.56**	**335**	⇑*iP*		**P**	**09 54 07.8**	**-0.5**	
	comp=Z,31nm,0.8s,mb5.2								
MBDF	**Montbardon**	**84.56**	**335**	⇑*iP*		**P**	**09 54 07.8**	**-0.5**	
MBDF				pmax		pmax			
	comp=Z,15nm,0.8s,mb5.2								
MBDF	**Montbardon**	**84.56**	**335**	⇑*iP*		**P**	**09 54 07.8**	**-0.5**	
	comp=Z,15nm,0.8s,mb5.2								
ORIF	**Oris-en-Rattie**	**84.65**	**335**	⇑*iP*		**P**	**09 54 08.8**	**0.0**	
	comp=Z,51nm,0.8s,mb5.4								
ORIF				*e*R					
	comp=Z,258nm,21.8s								
ORIF	**Oris-en-Rattie**	**84.65**	**335**	⇑*iP*		**P**	**09 54 08.8**	**0.0**	
ORIF				pmax		pmax			
	comp=Z,25nm,0.8s,mb5.4								
ORIF	**Oris-en-Rattie**	**84.65**	**335**	⇑*iP*		**P**	**09 54 08.8**	**0.0**	
	comp=Z,25nm,0.8s,mb5.4								
PYM	**Petit Puy Mans**	**84.70**	**337**	*eP*		**P**	**09 54 09.3**	**+0.3**	
EIL	**Elat**	**84.85**	**308**	*eP*		**P**	**09 54 10.4**	**+0.6**	
	comp=Z,644nm,1.0s								
AUTN	**L'Aution**	**85.02**	**334**	*eP*		**P**	**09 54 09.8**	**-0.8**	
TOUF	**Mont Tournerai**	**85.06**	**334**	*eP*		**P**	**09 54 09.8**	**-1.0**	
LBL	**Lubilhac**	**85.11**	**337**	*eP*		**P**	**09 54 11.3**	**+0.2**	
OCF	**Saint Nazaire**	**85.13**	**335**	*eP*		**P**	**09 54 06.6**	**-4.6**	
OG26	**St.-Nazaire-De**	**85.13**	**335**	*eP*		**P**	**09 54 06.6**	**-4.6**	
SBF	**Sospel**	**85.14**	**334**	*eP*		**P**	**09 54 10.3**	**-0.9**	
	comp=Z,30nm,0.7s,mb5.2								
SBF	**Sospel**	**85.14**	**334**	*eP*		**P**	**09 54 10.3**	**-0.9**	
SBF				pmax		pmax			
	comp=Z,15nm,0.7s,mb5.2								
SBF	**Sospel**	**85.14**	**334**	*eP*		**P**	**09 54 10.3**	**-0.9**	
	comp=Z,15nm,0.7s,mb5.2								
MVIF	**Mont Vial**	**85.19**	**334**	*eP*		**P**	**09 54 08.9**	**-2.6**	
SWET	**Sewanee**	**85.23**	**43**	*eP*		**P**	**09 54 10.6**	**-1.1**	
SWET				*ep*P		pP	09 54 23.5	-2.0	
TZTN	**Tazewell**	**85.26**	**41**	*eP*		**P**	**09 54 11.7**	**-0.1**	
RJF	**Les Rejaudoux**	**85.51**	**338**	⇑*iP*		**P**	**09 54 13.1**	**0.0**	
	comp=Z,51nm,0.9s,mb5.5								
RJF				*e*R					
	comp=Z,480nm,23.0s								
RJF	**Les Rejaudoux**	**85.51**	**338**	⇑*iP*		**P**	**09 54 13.1**	**0.0**	
RJF				pmax		pmax			
	comp=Z,26nm,0.9s,mb5.5								
RJF				MLR		MLR			
	comp=Z,480nm,23.0s,MS4.8								
RJF	**Les Rejaudoux**	**85.51**	**338**	⇑*iP*		**P**	**09 54 13.1**	**0.0**	
	comp=Z,26nm,0.9s,mb5.5								
RJF				LR		LR			
	comp=Z,480nm,23.0s,MS4.8								
SMRF	**Simiane la Rot**	**85.60**	**335**	*eP*		**P**	**09 54 13.9**	**+0.4**	
	comp=Z,33nm,1.0s,mb5.2								
SMRF	**Simiane la Rot**	**85.60**	**335**	*eP*		**P**	**09 54 13.9**	**+0.4**	
	comp=Z,33nm,1.0s,mb5.5								
FWV	**Forest Hill**	**85.63**	**38**	*eP*		**P**	**09 54 12.9**	**-0.7**	
FWV				*ep*P		pP	09 54 26.6	-0.9	
FRF	**La Foret Royal**	**85.65**	**334**	*eP*		**P**	**09 54 13.4**	**-0.4**	
	comp=Z,44nm,1.3s,mb5.2								
FRF	**La Foret Royal**	**85.65**	**334**	*eP*		**P**	**09 54 13.4**	**-0.4**	
FRF				pmax		pmax			
	comp=Z,22nm,1.3s,mb5.2								
FRF	**La Foret Royal**	**85.65**	**334**	*eP*		**P**	**09 54 13.4**	**-0.4**	
	comp=Z,22nm,1.3s,mb5.2								
CAF	**Calviac**	**85.72**	**338**	⇑*iP*		**P**	**09 54 14.6**	**+0.5**	
	comp=Z,83nm,0.9s,mb5.7								
CAF	**Calviac**	**85.72**	**338**	⇑*iP*		**P**	**09 54 14.6**	**+0.5**	
CAF				pmax		pmax			
	comp=Z,42nm,0.9s,mb5.7								
CAF	**Calviac**	**85.72**	**338**	⇑*iP*		**P**	**09 54 14.6**	**+0.5**	
	comp=Z,42nm,0.9s,mb5.7								
LMR	**La Mourre**	**85.90**	**334**	*eP*		**P**	**09 54 14.6**	**-0.4**	
	comp=Z,117nm,1.1s,mb5.7								
LMR	**La Mourre**	**85.90**	**334**	*eP*		**P**	**09 54 14.6**	**-0.4**	
LMR				pmax		pmax			
	comp=Z,59nm,1.1s,mb5.7								
LMR	**La Mourre**	**85.90**	**334**	*eP*		**P**	**09 54 14.6**	**-0.4**	
	comp=Z,59nm,1.1s,mb5.7								
ELN	**Prospectdale**	**85.95**	**38**	*eP*		**P**	**09 54 14.4**	**-0.8**	
ELN				*ep*P		pP	09 54 27.9	-1.2	
PUYF	**Puyloubier**	**85.97**	**335**	*eP*		**P**	**09 54 14.1**	**-1.2**	
LFF	**La Frestale**	**86.05**	**339**	⇑*iP*		**P**	**09 54 16.1**	**+0.4**	
	comp=Z,80nm,0.8s,mb5.7								
LFF	**La Frestale**	**86.05**	**339**	⇑*iP*		**P**	**09 54 16.1**	**+0.4**	
LFF				pmax		pmax			
	comp=Z,40nm,0.8s,mb5.7								
LFF	**La Frestale**	**86.05**	**339**	⇑*iP*		**P**	**09 54 16.1**	**+0.4**	
	comp=Z,40nm,0.8s,mb5.7								
GELF	**Grande-Etoile**	**86.18**	**335**	*eP*		**P**	**09 54 15.8**	**-0.6**	
MYNC	**Murphy**	**86.20**	**42**	*eP*		**P**	**09 54 15.8**	**-0.7**	
MYNC				*e**PP		pP	09 54 29.3	-1.0	
MYNC				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.9								
MYNC	**Murphy**	**86.20**	**42**	*eP*		**P**	**09 54 15.8**	**-0.6**	
	comp=Z,6.1nm,0.7s,mb4.9								
MYNC				*ep*P		pP	09 54 29.3	-1.0	
MTLF	**Montolieu**	**87.14**	**337**	⇑*iP*		**P**	**09 54 21.6**	**+0.5**	
	comp=Z,44nm,1.1s,mb5.3								
MTLF	**Montolieu**	**87.14**	**337**	⇑*iP*		**P**	**09 54 21.6**	**+0.5**	
MTLF				pmax		pmax			
	comp=Z,22nm,1.1s,mb5.3								
MTLF	**Montolieu**	**87.14**	**337**	⇑*iP*		**P**	**09 54 21.6**	**+0.5**	
	comp=Z,22nm,1.1s,mb5.3								
TBI	**Tubuai**	**87.77**	**127**	*e*LR		LR	10 21 34.3		
	comp=Z,367nm,28.5s								
EPF	**Esparros**	**87.94**	**338**	*eP*		**P**	**09 54 25.0**	**+0.1**	
JSC	**Jenkinsville**	**88.18**	**40**	*eP*		**P**	**09 54 25.8**	**-0.3**	
JSC				*ep*P		pP	09 54 38.0	-1.9	
SJPF	**Ste Jean**	**88.26**	**339**	*eP*		**P**	**09 54 26.7**	**+0.3**	
KEST	**Kesra**	**91.79**	**329**	P		**P**	**09 54 42.0**	**-0.9**	
	comp=Z,2.4nm,0.8s,mb4.6,baz=285,slow=7.1,SNR=5.6								
ESDC	**Sonseca Array**	**92.18**	**340**	P		**P**	**09 54 43.5**	**-1.2**	
	comp=Z,0.2nm,0.3s,baz=49,slow=2.1,SNR=5.0								
RKT	**Rikitea**	**96.29**	**116**	*e*LR		LR	10 25 20.3		
	comp=Z,305nm,30.0s								
KMBO	**Kilima Mbogo**	**106.62**	**286**	Pdiff		Pdif	09 55 49.0	-0.6	
	comp=Z,0.4nm,0.4s,baz=53,slow=23,SNR=3.5								
CBYP	**Canovanas**	**108.81**	**36**	*e*Pdif		Pdif	09 55 53.1	-6.3	
HUMP	**Col San Antoni**	**108.93**	**36**	*e*Pdif		Pdif	09 55 53.4	-6.5	
TORD	**Torodi Ar. Bea**	**115.08**	**326**	PKP		PKiKP	10 00 14.9	-1.2	
	comp=Z,1.2nm,0.5s,baz=18,slow=2.1,SNR=21								
TORD				PKKPbc		PKKPbc	10 10 55.9	+4.4	
	comp=Z,0.7nm,0.7s,baz=215,slow=3.9,SNR=7.5								
CASY	**Casey**	**115.34**	**197**	*e*PKPdf		PKPdf	10 00 14.0	-2.5	
VNDA	**Vanda**	**122.82**	**177**	PKP		PKPdf	10 00 27.6	-3.3	
	comp=Z,3.4nm,0.8s,baz=321,slow=3.8,SNR=26								
VNDA				PKKPbc		PKKPbc	10 10 21.9	-1.5	
	comp=Z,1.2nm,0.8s,baz=192,slow=4.8,SNR=8.2								
ATAH	**Atahualpa**	**123.44**	**63**	PKP		PKPdf	10 00 32.7	+0.6	
	comp=Z,3.6nm,1.0s,baz=139,slow=3.3,SNR=4.8								
DBIC	**Dimbokro**	**123.51**	**330**	PKP		PKPdf	10 00 30.4	-1.8	
	comp=Z,5.1nm,0.6s,baz=350,slow=3.5,SNR=12								
MAW	**Mawson**	**129.88**	**210**	PKP		PKPdf	10 00 41.9	-2.5	
	comp=Z,4.0nm,0.7s,baz=65,slow=1.5,SNR=19								
BOSA	**Boshof**	**133.69**	**272**	SKPbc		SKPbc	10 04 15.2	-1.2	
	comp=Z,7.4nm,1.0s,baz=355,slow=3.6,SNR=3.6								
QSPA	**South Pole Qui**	**135.08**	**180**	*eP*		PKPdf	10 00 53.4	-0.8	
LPAZ	**La Paz**	**136.94**	**60**	PKP		PKPdf	10 00 58.0	+0.3	
	comp=Z,2.4nm,0.8s,baz=355,slow=2.5,SNR=16								
SYO	**Syowa Base**	**138.57**	**211**	⇑*e*PKPdf		PKPdf	10 01 00.0	-0.7	
SIV	**San Ignacio**	**140.83**	**52**	PKhKP			10 00 56.8		
	comp=Z,2.0nm,0.7s,baz=268,slow=2.8,SNR=9.6								
BDFB	**Brasilia**	**146.74**	**33**	PKPbc		PKPbc	10 01 15.3	-1.6	
	comp=Z,27nm,0.7s,baz=301,slow=2.6,SNR=27								
BDFB	**Brasilia**	**146.74**	**33**	PKP2		PKPbc	10 01 15.3	-1.6	
BDFB				pmax		pmax			
	comp=Z,27nm,0.7s								
BAO	**Brasilia Array**	**146.75**	**33**	PKPdf		PKPdf	10 01 17.0	+1.9	
MAIT	**Maitri**	**147.48**	**204**	*e*Pdiff		PKPdf	10 01 16.9	+0.6	
PLCA	**Paso Flores**	**150.26**	**96**	PKP		PKPdf	10 01 18.7	-2.2	
	comp=Z,3.1nm,1.0s,baz=338,slow=8.2,SNR=3.7								
PLCA				PKPbc		PKPbc	10 01 25.2	-0.8	
	comp=Z,23nm,0.9s,baz=269,slow=3.2,SNR=31								
PLCA	**Paso Flores**	**150.26**	**96**	PKIKP		PKPbc	10 01 25.2	-0.8	
PLCA				pmax		pmax			
	comp=Z,23nm,0.9s								
PLCA	**Paso Flores**	**150.26**	**96**	PKP		PKPdf	10 01 18.7	-2.2	
PLCA				PKPbc		PKPbc	10 01 25.2	-0.9	
SNAA	**Sanae**	**150.58**	**197**	*e*PKPdf		PKPdf	10 01 24.7	+3.4	
SNAA				*e*			10 01 32.2		
SNAA				*e*			10 01 40.4		
SNAA				*e*			10 01 45.5		
SNAA				*e*			10 01 51.3		
CPUP	**Villa Florida**	**151.07**	**58**	PKP		PKPdf	10 01 22.2	+0.2	
	comp=Z,8.1nm,0.8s,baz=91,slow=3.3,SNR=4.3								
CPUP				PKPbc		PKPbc	10 01 27.2	-0.7	
	comp=Z,9.9nm,0.7s,baz=312,slow=2.0,SNR=23								
VNA1	**Neumayer--Stat**	**152.47**	**196**	*e*PKPdf		PKPbc	10 01 29.7	-1.4	
VNA1				*e*			10 01 40.7		
VNA1				*e*			10 01 44.4		
VNA1				*e*			10 01 57.3		

NEIC ***31*** *09:54:47.2, 2045N×6976W, h11km, MD3.8(RSPR), After RSPR.*

RSPR 31 09:54:47.2, 2045N×6976W, h11km±81km, MD3.9/6, MD3.9/6,6C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LSP	**Las Mesas**	**3.38**	**131**	⇑*eP*		Pn	09 55 37.1	-2.9
LSP	**Las Mesas**	**3.38**	**131**	*e*S		Sn	09 56 19.4	-0.8
LRS	**Lares**	**3.48**	**127**	⇑*eP*		Pn	09 55 40.4	-1.0
LRS				*e*S		Sn	09 56 17.6	-5.1
CRPR	**Cabo Rojo, PR**	**3.48**	**134**	⇑*eP*		Pn	09 55 37.5	-3.9
CRPR				*e*S		Sn	09 56 17.8	-4.9
AOPR	**Arecibo Observ**	**3.52**	**126**	⇑*eP*		Pn	09 55 41.5	-0.4
CELP	**Cerrillos**	**3.82**	**128**	⇑*eP*		Pn	09 55 42.7	-3.3
CELP				*e*S		Sn	09 56 31.0	+0.1
MTP	**Monte Pirata**	**4.61**	**120**	⇑*eP*		Pn	09 55 54.9	-1.9
MTP				*e*S		Sn	09 56 46.5	-3.8

ISCJB ***31*** *10:18:04.1±1.0, 604N±006×1269E±0.1, h114km±9km, mb4.2/17, Error ellipse: s-maj=22.2km s-min=8.2km az=143.2*

NEIC ***31*** *10:18:11.0±0.4, 599N×12696E, mb4.4/9, Error ellipse: s-maj=25.2km s-min=5.7km az=73.0*

IDC ***31*** *10:18:18.9±17.0, 588N×12696E, h240km±173km, mb3.7/10, mb1 3.8/10, mb1mx3.6/20, mbtmp4.3/10, Error ellipse: s-maj=56.3km s-min=35.5km az=58.0*

ISC 31 10:18:05.7±0.9, 605N±006×1269E±01, h111km±8km, n35, σ0.9 63/37, mb4.2/17, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.62**	**309**	*eP*		**Pn**	**10 18 34.0**	**+0.1**
KCP	**Kidapawan**	**1.99**	**299**	⇑*iP*		**Pn**	**10 18 37.8**	**-0.8**
KCP				*i* S		**Sn**	**10 19 03.1**	**-0.6**
BUKP	**Musuan**	**2.54**	**316**	*eP*		**Pn**	**10 18 45.4**	**-0.2**
BUTP	**Butuan**	**3.14**	**337**	*eP*		**Pn**	**10 18 54.3**	**+0.8**
CGP	**Cagayan de Oro**	**3.20**	**318**	⇑*iP*		**Pn**	**10 18 54.5**	**+0.1**
CGP				*i* S		**Sn**	**10 19 30.8**	**-1.2**
PAGZ	**Pagadian**	**3.88**	**298**	*eP*		**Pn**	**10 19 04.5**	**+1.1**
SCPH	**Surigao**	**3.94**	**340**	⇑*eP*		**Pn**	**10 19 04.3**	**+0.1**
MSLP	**Maasin**	**4.51**	**334**	*eP*		**Pn**	**10 19 11.9**	**0.0**
IPIL	**Ipil**	**4.58**	**292**	*eP*		**Pn**	**10 19 14.3**	**+1.4**
KAKA	**Kakadu**	**19.45**	**163**	*eP*		**P**	**10 22 23.2**	**-0.3**
	15nm,0.7s							
FITZ	**Fitzroy Crossi**	**24.03**	**183**	*eP*		**P**	**10 23 10.7**	**+0.4**
	9.4nm,0.8s,mb4.2							
FITZ	**Fitzroy Crossi**	**24.03**	**183**	P		**P**	**10 23 10.7**	**+0.4**
	4.2nm,0.6s,mb4.0,baz=353,slow=11,SNR=24							
WRAB	**Tennant Creek**	**26.86**	**164**	*eP*		**P**	**10 23 35.8**	**-0.1**
	4.8nm,0.3s,mb4.5							
WRA	**Warramunga Arr**	**26.86**	**164**	P		**P**	**10 23 35.5**	**-0.4**
	2.9nm,0.5s,mb4.1,baz=342,slow=10.0,SNR=38							
WB2	**Warramunga Arr**	**26.87**	**164**	*eP*		**P**	**10 23 36.1**	**+0.2**
MBWA	**Marble Bar**	**27.93**	**194**	*eP*		**P**	**10 23 45.1**	**-0.3**
	6.3nm,1.0s,mb4.1							
MBWA				*ep*P		pP	10 24 20.4	+11
AS31	**Alice Springs**	**30.33**	**167**	*eP*		**P**	**10 24 06.9**	**+0.2**
ASAR	**Alice Springs**	**30.33**	**167**	P		**P**	**10 24 06.3**	**-0.3**
	0.6nm,0.3s,mb3.7,baz=340,slow=7.1,SNR=26							
ASPA	**Alice Springs**	**30.33**	**167**	*eP*		**P**	**10 24 06.9**	**+0.2**
FORT	**Forrest**	**36.64**	**178**	*eP*		**P**	**10 25 01.4**	**0.0**
	8.2nm,0.8s,mb4.7							
KLBR	**Kellerberrin**	**38.43**	**193**	*eP*		**P**	**10 25 16.3**	**-0.1**
	17nm,0.9s,mb4.9							
MUN	**Mundaring**	**39.16**	**194**	*eP*		**P**	**10 25 22.7**	**+0.2**
NWAO	**Narrogin (SRO)**	**39.83**	**193**	P		**P**	**10 25 27.9**	**-0.2**
	5.4nm,0.3s,mb4.8,baz=12,slow=8.8,SNR=17							
STKA	**Stephens Creek**	**40.26**	**160**	*eP*		**P**	**10 25 31.6**	**0.0**
	2.5nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**40.26**	**160**	P		**P**	**10 25 31.7**	**+0.1**
	5.6nm,0.8s,mb4.5,baz=340,slow=9.5,SNR=8.8							
STKA	**Stephens Creek**	**40.26**	**160**	*eP*		**P**	**10 25 31.5**	**-0.1**
STKA				*ep*P		pP	10 26 06.4	+10
BVAR	**Borovoye Array**	**65.45**	**326**	P		**P**	**10 28 37.9**	**+1.1**
	1.6nm,0.7s,mb4.0,baz=116,slow=10,SNR=4.5							
BRVK	**Borovoye**	**65.53**	**326**	*eP*		**P**	**10 28 37.9**	**+0.6**
	1.5nm,0.6s,mb4.0							
ZRNK	**Zerenda**	**66.19**	**326**	*eP*		**P**	**10 28 41.9**	**+0.4**
	2.4nm,0.6s,mb4.2							
AKTK	**Aktyubinsk**	**71.93**	**321**	P		**P**	**10 29 17.4**	**+0.5**
AKTO	**Aktyubinsk**	**71.93**	**321**	P		**P**	**10 29 17.4**	**+0.5**
	2.2nm,0.6s,mb4.2,baz=104,slow=6.5,SNR=13							
ARU	**Arti**	**73.05**	**327**	*eP*		**P**	**10 29 23.2**	**-0.4**
	3.4nm,0.5s,mb4.4							
ARCES	**ARCESS Array B**	**88.32**	**340**	P		**P**	**10 30 42.9**	**-2.0**
	2.6nm,0.9s,mb4.3,baz=74,slow=6.7,SNR=4.3							
BRTR	**Keskin Array B**	**88.64**	**310**	P		**P**	**10 30 45.9**	**-0.5**
	0.6nm,0.7s,mb3.7,baz=123,slow=5.3,SNR=3.5							
FINES	**FINESS Array B**	**89.85**	**332**	P		**P**	**10 30 51.5**	**-0.5**
	1.8nm,0.7s,mb4.3,baz=61,slow=6.5,SNR=5.0							

MAN 31 10:26:00.5, 1907N×12114E, h1km, mb2.7, ML4.1, MS1.8, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.89**	**214**	⇓*iP*		Pg	10 26 18.2	+0.6
PIP				*e*S		Sg	10 26 33.7	+4.6
SGCP	**Mt. Cagua**	**1.19**	**134**	*eP*		Pg	10 26 23.4	+0.2
ABRA	**Dolores**	**1.47**	**196**	*eP*		Pn	10 26 27.3	-0.8
CVP	**Callao Caves**	**1.50**	**155**	⇑*iP*		Pn	10 26 28.0	-0.6
CVP				*i* S		Sb	10 26 50.0	+1.2
BALP	**Baler**	**3.34**	**173**	*eP*		Pn	10 26 55.3	+1.5

IDC ***31*** *10:36:55.9±0

MAT	**Matsushiro**	**47.12 346**	P	**P**	**10 45 30.8 +0.7**	
MAT			*e*S	**S**	**10 52 25.0 +6.2**	
RAR	**Rarotonga**	**49.09 110**	LR	LR	11 01 32.5	
	comp=Z,382nm,18.6s,MS4.4,baz=224,slow=30					
SSE	**Sheshan**	**49.13 326**	P	**P**	**10 45 44.3 -1.3**	
SSE			AP	pP	10 45 57.8 -1.5	
SSE			S	**S**	**10 52 47.5 +0.3**	
SSE			XS	sS	10 53 10.8 +0.6	
SSE			AMB	AMB		
	comp=Z,37nm,0.7s,mb5.5					
SSE			AMB	AMB		
	comp=Z,215nm,5.9s					
SSE			LR	LR		
	comp=N,154nm,20.0s,MS4.2					
SSE			LR	LR		
	comp=E,225nm,20.0s,MS4.2					
SSE			LR	LR		
	comp=Z,322nm,20.0s,MS4.3					
NJ2	**Nanjing**	**51.16 325**	*e*P	**P**	**10 45 59.3 -1.7**	
NJ2			AP	pP	10 46 15.0 +0.3	
NJ2			XP	sP	10 46 22.0 +1.4	
NJ2			PP	PP	10 47 57.3 -0.7	
NJ2			S	**S**	**10 53 10.0 -5.4**	
NJ2			XS	sS	10 53 40.0 +1.6	
NJ2			AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3					
NJ2			AMB	AMB		
	comp=Z,220nm,5.2s					
NJ2			LR	LR		
	comp=N,700nm,24.2s,MS4.6					
NJ2			LR	LR		
	comp=E,220nm,22.8s,MS4.6					
NJ2			LR	LR		
	comp=Z,230nm,17.3s					
KULM	**Kulim**	**51.88 284**	*e*P	**P**	**10 46 06.0 -0.4**	
KULM			*e*pP	pP	10 46 18.3 -1.8	
WHN	**Wuhan**	**52.79 320**	*e*P	**P**	**10 46 16.8 +3.7**	
PSI	**Prapat**	**52.91 281**	P	**P**	**10 46 15.1 +1.2**	
	comp=Z,3.6nm,0.7s,mb4.4,baz=90,slow=3.0,SNR=3.6					
MDJ	**Mudanjiang**	**56.99 342**	P	**P**	**10 46 42.8 -0.6**	
MDJ			AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.8					
MDJ			AMB	AMB		
	comp=Z,75nm,6.7s					
KMI	**Kunming**	**57.88 307**	P	**P**	**10 46 51.3 +1.6**	
KMI			AP	pP	10 47 02.3 -1.3	
KMI			S	**S**	**10 54 47.5 +1.8**	
KMI			SS	SS	10 58 43.0 +6.0	
KMI			AMB	AMB		
	comp=Z,13nm,0.9s,mb5.0					
KMI			LR	LR		
	comp=Z,227nm,31.0s,MS4.1					
CHTO	**Chiang Mai**	**58.14 299**	*e*P	**P**	**10 46 54.1 +2.6**	
CHTO			pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5					
CHTO	**Chiang Mai**	**58.14 299**	*e*P	**P**	**10 46 54.1 +2.6**	
	comp=Z,5.1nm,0.9s,mb4.5					
PPT	**Papeete**	**58.53 105**	*e*LQ		11 01 59.0	
PPT	comp=Z,2µm,35.5s		*e*LR	LR	11 04 30.9	
	comp=Z,652nm,30.0s					
PPT	**Papeete**	**58.53 105**	LR	LR	11 05 01.7	
	comp=Z,178nm,21.2s,MS4.2,baz=272,slow=29					
XAN	**Xi'an**	**58.54 320**	P	**P**	**10 46 53.8 -0.5**	
XAN			AP	pP	10 47 06.5 -1.8	
XAN			AMB	AMB		
	comp=Z,12nm,1.2s,mb4.8					
TBI	**Tubuai**	**58.78 112**	*e*LQ		11 02 05.1	
	comp=Z,865nm,31.5s					
TBI			*e*LR	LR	11 04 37.5	
	comp=Z,241nm,26.0s					
HABR	**Khabarovsk**	**59.20 348**	*e*P	**P**	**10 47 00.1 +1.2**	
CD2	**Chengdu**	**60.17 314**	*e*P	**P**	**10 47 07.5 +1.9**	
CD2			AP	pP	10 47 20.5 +0.9	
CD2			XP	sP	10 47 25.5 +0.1	
CD2			PP	PP	10 49 22.5 +3.9	
CD2			S	**S**	**10 55 16.5 +1.1**	
CD2			XS	sS	10 55 38.0 -1.0	
CD2			SS	SS	10 59 16.0 +2.9	
CD2			AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9					
CD2			AMB	AMB		
	comp=Z,30nm,5.9s					
CD2			LR	LR		
	comp=E,150nm,20.4s					
CD2			LR	LR		
	comp=Z,110nm,18.0s,MS4.0					
KLR	**Kul'dur**	**60.65 346**	*e*P	**P**	**10 47 03.9 -4.9**	
HHC	**Hu-ho-hao-te**	**61.57 327**	*e*P	**P**	**10 47 17.0 +1.9**	
HHC			AP	pP	10 47 30.0 +0.8	
HHC			XP	sP	10 47 35.3 +0.4	
HHC			PCP	PcP	10 47 57.5 +1.1	
HHC			PP	PP	10 49 35.5 +4.5	
HHC			SCP	ScP	10 51 55.0 +1.2	
HHC			PCS	PcS	10 51 59.5 +0.1	
HHC			S	**S**	**10 55 35.8 +2.6**	
HHC			PS		10 55 58.8	
HHC			SCS	ScS	10 57 01.3 -1.0	
HHC			AMB	AMB		
	comp=Z,15nm,1.0s,mb5.1					
HHC			AMB	AMB		
	comp=Z,72nm,5.4s					
HHC			LR	LR		
	comp=N,162nm,20.9s,MS4.3					
HHC			LR	LR		
	comp=E,159nm,19.9s,MS4.3					
HHC			LR	LR		
	comp=Z,169nm,19.6s,MS4.2					
CASY	**Casey**	**63.05 197**	*e*P	**P**	**10 47 24.3 -0.7**	
	comp=Z,2.9nm,0.9s,mb4.4					
LZH	**Lanzhou**	**63.08 319**	*e*P	**P**	**10 47 26.0 +0.8**	
LZH			AMB	AMB		
	comp=Z,15nm,1.0s,mb5.1					
LZH			AMB	AMB		
	comp=Z,34nm,4.1s					
HIA	**Hailar**	**64.36 338**⇓	*e*P	**P**	**10 47 32.9 -0.7**	
HIA	**Hailar**	**64.36 338**	*e*P	**P**	**10 47 32.7 -0.8**	
	comp=Z,12nm,0.8s,mb5.0					
HIA			*e*pP	pP	10 47 47.8 +0.1	
GTA	**Gaotai**	**67.61 320**	*e*P	**P**	**10 47 55.0 +0.6**	
GTA			AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.6					
VNDA	**Vanda**	**68.39 177**	P	**P**	**10 47 59.3 0.0**	
	comp=Z,2.4nm,0.8s,mb4.3,baz=327,slow=6.5,SNR=24					
VNDA			LR	LR	11 16 44.2	
	comp=Z,151nm,19.6s,MS4.2,baz=103,slow=35					
ULN	**Ulaanbaatar**	**68.77 330**	*e*P	**P**	**10 48 01.5 -0.3**	
ULN			*e**PP	pP	10 48 19.1 +3.1	
ULN			pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5					
ULN	**Ulaanbaatar**	**68.77 330**	*e*P	**P**	**10 48 01.5 -0.3**	
	comp=Z,4.8nm,0.7s,mb4.5					
ULN			*e*pP	pP	10 48 19.1 +3.0	
MIR	**Mirnyy**	**68.92 201**	*e*P	**P**	**10 48 08.0 +5.3**	
MIR			pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7					
SBA	**Scott Base**	**68.98 176**	*e*P	**P**	**10 48 03.7 +0.7**	
SONM	**Songino Array**	**69.08 330**	P	**P**	**10 48 03.3 -0.3**	
	comp=Z,9.9nm,0.9s,mb4.7,baz=144,slow=5.9,SNR=17					
SONM			LR	LR	11 18 45.2	
	comp=Z,304nm,18.8s,MS4.6,baz=253,slow=36					
RKT	**Rikitea**	**72.10 111**	*e*LR	LR	11 10 48.5	
	comp=Z,168nm,25.5s					
ZAK	**Zakamensk**	**72.30 330**⇑	*e*P	**P**	**10 48 22.2 -1.0**	
ZAK			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7					
YAK	**Yakutsk**	**73.02 350**⇑	*e*P	**P**	**10 48 25.8 -1.7**	
YAK			pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0					
BOD	**Bodaibo**	**73.30 341**	*e*P	**P**	**10 48 27.2 -1.9**	
BOD			pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2					
WMQ	**Urumqi**	**77.66 319**	*e*P	**P**	**10 48 55.0 +0.8**	
WMQ			AP	pP	10 49 09.0 +0.3	
WMQ			XP	sP	10 49 14.0 -0.3	
WMQ			PP	PP	10 51 52.0 +2.2	
WMQ			S	S	10 58 42.0 -0.2	
WMQ			SS	SS	11 03 45.0 +2.4	
WMQ			AMB	AMB		
	comp=Z,18nm,1.0s,mb5.0					
WMQ			LR	LR		
	comp=N,98nm,15.0s,MS4.4					
WMQ			LR	LR		
	comp=E,116nm,15.0s,MS4.4					
WMQ			LR	LR		
	comp=Z,87nm,15.0s,MS4.2					
BILL	**Bilibino**	**78.01**	**6**⇓ *e*P	**P**	**10 48 56.6 +0.5**	
BILL			pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6					
MAW	**Mawson**	**80.56 203**	P	**P**	**10 49 10.2 +0.2**	
	comp=Z,3.6nm,0.8s,mb4.4,baz=106,slow=8.3,SNR=8.5					
QSPA	**South Pole Qui**	**80.63 180**	*e*P	**P**	**10 49 10.8 +0.4**	
	comp=Z,14nm,0.8s,mb4.9					
KRAR	**Krasnoyarsk**	**80.67 331**⇑	*e*P	**P**	**10 49 07.3 -3.3**	
KRAR			pmax	pmax		
	comp=Z,61nm,0.5s,mb5.8					
MKAR	**Makanchi Array**	**82.36 320**	P	**P**	**10 49 18.9 -0.5**	
	comp=Z,4.0nm,0.9s,mb4.4,baz=101,slow=6.3,SNR=11					
ZAL	**Zalesovo**	**83.76 327**	P	**P**	**10 49 24.5 -2.2**	
	comp=Z,1.4nm,0.5s,mb4.3,baz=48,slow=4.2,SNR=6.5					
ZAL			LR	LR	11 30 16.2	
	comp=Z,187nm,18.1s,MS4.5,baz=356,slow=38					
NVS	**Novosibirsk**	**84.97 328**⇑	*e*P	**P**	**10 49 29.7 -3.1**	
NVS			pmax	pmax		
	comp=E,11nm,1.6s					
NVS			pmax	pmax		
	comp=Z,15nm,1.6s,mb4.9					
AAK	**Ala-Archa**	**86.24 314**	*e*P	**P**	**10 49 38.5 -0.7**	
AAK			*e**PP	pP	10 49 52.3 -1.6	
AAK			pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8					
AAK	**Ala-Archa**	**86.24 314**	*e*P	**P**	**10 49 38.5 -0.7**	
	comp=Z,4.7nm,0.8s,mb4.8					
AAK			*e*pP	pP	10 49 52.3 -1.6	
COLA	**College**	**86.86 22**⇑	*e*P	**P**	**10 49 40.6 -1.6**	
SYO	**Syowa Base**	**88.68 200**⇑	*e*P	**P**	**10 49 50.3 -0.6**	
NVAR	**Mina Array Bea**	**96.58 52**	P	**P**	**10 50 28.5 +1.1**	
	comp=Z,0.9nm,0.9s,mb4.2,baz=257,slow=4.1,SNR=7.0					
SNAA	**Sanae**	**97.24 188**	P	**P**	**10 50 32.5 +2.2**	
	comp=Z,0.4nm,0.8s,mb3.9,baz=275,slow=3.8,SNR=3.6					
ARU	**Arti**	**98.86 326**⇑	*e*P	**P**	**10 50 37.0 -0.6**	
ARU			pmax	pmax		
	comp=Z,4.0nm,1.8s,mb4.7					
SDV	**Santo Domingo**	**139.28 87**	*e*PKPdf	PKPdf	10 56 25.5 +1.0	
BDFB	**Brasilia**	**149.05 143**	PKPbc	PKPbc	10 56 46.6 +1.1	
	comp=Z,5.0nm,0.6s,baz=135,slow=4.7,SNR=5.0					
TOA0	**Torodi Ar. Sit**	**149.31 280**	*e*PKPbc	PKPbc	10 56 47.5 +1.3	
TORD	**Torodi Ar. Bea**	**149.31 280**	PKPbc	PKPbc	10 56 47.6 +1.4	
	comp=Z,9.4nm,0.8s,baz=56,slow=2.6,SNR=30					

CASC 31 10:37:37.9±0.9, 1275N×8850W, h31km±16km, MD3.5, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.71**	**18**	*e*P	x	10 37 51.8	
VSM				*e*S	x	10 38 03.0	
CNCH	**Conchagua**	**0.84**	**51**⇑	*i*P	x	10 37 53.7	
CNCH				*e*S	x	10 38 05.8	
SBLS	**San Blas**	**1.54**	**315**⇓	*i*P	x	10 37 54.9	
SBLS				*e*S	x	10 38 30.6	
LEON	**Leon**	**1.60**	**102**	*e*P	Pn	10 38 03.5	-0.6
CNGN	**Cerro Negro**	**1.78**	**98**	*e*P	Pn	10 38 07.0	+0.5

IDC 31 10:37:43.1±5.5, 2221N×14441E, h52km±37km, mb3.7/4, mb1 3.8/5, mb1mx3.5/20, mbtmp4.0/5, ML3.5/1, Error ellipse: s-maj=120.5km s-min=23.1km az=79.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.27**	**338**	P	Pn	10 39 00.4	+1.2
	3.9nm,0.3s,baz=319,slow=21,SNR=6.3						
CBIJ				S	Sn	10 39 58.6	+0.1
	13nm,0.3s,baz=280,slow=22,SNR=7.8						
WRA	**Warramunga Arr**	**43.03**	**194**	P	P	10 45 37.4	-0.2
	0.6nm,0.5s,baz=12,slow=8.5,SNR=7.5						
MKAR	**Makanchi Array**	**55.19**	**312**	P	P	10 47 11.2	+0.8
	1.0nm,0.6s,baz=89,slow=9.2,SNR=6.1						
BVAR	**Borovoye Array**	**63.02**	**319**	P	P	10 48 05.0	+0.3
	1.6nm,0.4s,baz=95,slow=7.3,SNR=9.1						
FINES	**FINESS Array B**	**83.21**	**335**	P	P	10 50 02.9	-0.8
	0.7nm,0.5s,baz=73,slow=4.8,SNR=8.8						

CASC 31 10:52:14.2±4.4, 1425N×9132W, h20km±15km, MD3.6, 4D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.31**	**283**⇓	*e*P	Pb	10 52 21.8	+0.7
JAT				*e*S	Sb	10 52 27.1	+1.3
FUG	**Fuego 3**	**0.51**	**67**⇓	*e*P	Pb	10 52 26.5	+2.1
TER	**Terranova**	**0.62**	**85**	*e*P	Pb	10 52 27.6	+1.3
RBDL	**Robledal**	**1.59**	**95**⇓	*e*P	x	10 52 53.5	
RBDL				*e*S	x	10 53 16.1	
SBLS	**San Blas**	**1.70**	**104**⇓	*e*P	x	10 52 55.1	
SBLS				*e*S	x	10 53 17.9	
SNJE	**San Jose**	**1.71**	**103**	*e*P	x	10 52 55.4	
SNJE				*e*S	x	10 53 20.8	
LFRS	**El Faro**	**2.28**	**106**	*e*P	x	10 53 03.0	
LFRS				*e*S	x	10 53 32.2	

IDC 31 10:58:02.4±2.0, 2009S×6869W, h121km±16km, mb3.6/3, mb1 3.5/6, mb1mx3.3/19, mbtmp3.9/6, Error ellipse: s-maj=42.4km s-min=19.4km az=106.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.52**	**185**	P	Pn	10 58 41.5	-0.9
LPAZ	**La Paz**	**3.82**	**8**	P	Pn	10 59 00.8	+1.3
	2.3nm,0.3s,baz=191,slow=5.7,SNR=52						
SIV	**San Ignacio**	**8.31**	**62**	P	Pn	11 00 00.4	+0.3
	2.2nm,0.3s,baz=256,slow=12,SNR=37						
CPUP	**Villa Florida**	**12.14**	**123**	P	Pn	11 00 52.1	+0.8
	0.3nm,0.3s,baz=299,slow=14,SNR=4.4						
PLCA	**Paso Flores**	**20.64**	**184**	P	P	11 02 33.9	+1.7
	1.1nm,0.6s,baz=11,slow=5.2,SNR=3.3						
DBIC	**Dimbokro**	**68.14**	**74**	P	P	11 08 49.8	+0.4
	4.7nm,0.9s,baz=230,slow=7.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.69**	**71**	P	P	11 09 40.6	+0.6
	0.4nm,0.3s,baz=256,slow=5.4,SNR=18						
MKAR	**Makanchi Array**	**144.37**	**35**	PKP	PKPdf	11 17 23.2	-1.0
	0.3nm,0.4s,baz=297,slow=2.4,SNR=4.3						

*ISCJB **31** 11:24:48.8±1.0, 2982N±004×3624E±006, h10km, Error ellipse: s-maj=7.9km s-min=6.0km az=50.8*
*GII **31** 11:24:48.2±1.7, 2987N×3623E, h0km, ML2.6/4*
*HLW **31** 11:24:52.7, 2971N×3628E, h46km, Mb4.4*

ISC 31 11:24:48.9±1.0, 2982N±005×3628E±006, h10km, n18, σ0§98/25, 3C-1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.07**	**265**	Pg	**Pg**	**11 25 08.3**	**-1.2**
EIL	**Elat**	**1.16**	**263**	Pg	**Pg**	**11 25 10.9**	**-0.3**
EIL				Sg	**Sg**	**11 25 26.7**	**+0.4**
MBH	**Mount Berech**	**1.18**	**269**	Pg	**Pg**	**11 25 10.4**	**-1.2**
MBH				Sg	**Sg**	**11 25 28.1**	**+1.1**
ZFRI	**Zfri**	**1.20**	**308**	Pg	**Pg**	**11 25 09.7**	**-2.3**
ZFRI	**Zfri**	**1.20**	**308**	Pg	**Pg**	**11 25 09.6**	**-2.4**
PRNI	**Paran**	**1.22**	**296**	Pg	**Pg**	**11 25 10.4**	**-2.1**
PRNI				Sg	**Sg**	**11 25 28.8**	**+0.5**
HBST	**Basata**	**1.47**	**246**	⇑P	**Pn**	**11 25 16.3**	**+0.8**
HBST				S	**Sn**	**11 25 33.3**	**-1.6**
MZDA	**Masada**	**1.68**	**332**	Pn	**Pn**	**11 25 17.7**	**-0.7**
MZDA				Sn	**Sn**	**11 25 40.7**	**+0.7**
MASH	**Mash'abbe Sade**	**1.74**	**313**	Pn	**Pn**	**11 25 19.2**	**0.0**
SVTA	**Shivta**	**1.81**	**308**	Pn	**Pn**	**11 25 20.3**	**+0.1**
HDHB	**Dhahab**	**1.82**	**233**	⇓P	**Pn**	**11 25 20.7**	**+0.5**
RTMM	**Retamin**	**1.84**	**312**	Pn	**Pn**	**11 25 20.1**	**-0.5**
DRGI	**Dragot**	**1.92**	**337**	Pn	**Pn**	**11 25 21.9**	**+0.2**
KZIT	**Kziot**	**1.95**	**304**	Pn	**Pn**	**11 25 22.5**	**+0.4**
KZIT				Sn	**Sn**	**11 25 48.4**	**+1.8**
HNKL	**Nakhl**	**2.00**	**274**	⇑P	**Pn**	**11 25 24.0**	**+1.3**
HNKL				S	**Sn**	**11 25 47.4**	**-0.3**
HKAT	**Jabal Katrina**	**2.38**	**238**	P	**Pn**	**11 25 28.5**	**+0.5**
TR2		**2.65**	**238**	P	**Pn**	**11 25 32.0**	**+0.3**
TR1		**2.72**	**229**	⇑P	**Pn**	**11 25 33.5**	**+0.7**

*CSEM **31** 11:30:27.7±0.1, 3781N×2607E, h10km, ML3.7, Error ellipse: s-maj=2.3km s-min=1.9km az=171.0*
*ISK **31** 11:30:27.5, 3783N×2583E, h28km, MD3.3*
*NEIC **31** 11:30:27.7, 3770N×2624E, h71km, MD3.2(ISK), After ATH.*
*ATH **31** 11:30:27.7, 3770N×2624E, h71km±7km, ML3.7*
*ISCJB **31** 11:30:28.0±1.0, 3783N±004×2606E±005, h5km±7km, Error ellipse: s-maj=6.9km s-min=5.8km az=109.7*

ISC 31 11:30:28.9±0.8, 3783N±004×2606E±004, h12km±5km, n21, σ0§69/29, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.63**	**101**	*e*P	**Pg**	**11 30 40.7**	**-0.5**
SMG				*e*S	**Sg**	**11 30 50.6**	**+1.1**
APE	**Apeiranthos**	**0.87**	**209**	*e*P	**Pg**	**11 30 45.3**	**-0.4**
APE				*e*S	**Sg**	**11 30 58.1**	**+1.1**
BLCB	**Balcova**	**0.95**	**54**	PN	**Pn**	**11 30 47.3**	**-0.9**
BLCB	**Balcova**	**0.95**	**54**	Pg	**Pg**	**11 30 48.2**	**+0.9**
BLCB	**Balcova**	**0.95**	**54**	Pg	**Pg**	**11 30 48.2**	**+0.8**
IZM	**Izmir**	**1.11**	**59**	PN	**Pn**	**11 30 50.2**	**0.0**
IZM				SN	**Sn**	**11 31 06.2**	**+0.8**
IZM	**Izmir**	**1.11**	**59**	Pn	**Pn**	**11 30 50.2**	**0.0**
IZM				Sg	**Sg**	**11 31 04.2**	**-0.5**
BODT	**Bodrum**	**1.26**	**127**	PN	**Pn**	**11 30 51.8**	**-0.5**
BODT				SN	**Sn**	**11 31 09.5**	**+0.4**
BODT	**Bodrum**	**1.26**	**127**	Pn	**Pn**	**11 30 51.9**	**-0.4**
BODT				Sg	**Sg**	**11 31 07.9**	**-1.5**
BODT	**Bodrum**	**1.26**	**127**	*e*Pn	**Pn**	**11 30 51.8**	**-0.5**
BODT				Sg	**Sg**	**11 31 07.9**	**-1.5**
BODT				*e*Sn	**Sn**	**11 31 09.5**	**+0.4**
PRK	**Paraskevi**	**1.43**	**7**	*e*P	**Pn**	**11 30 54.6**	**0.0**
MLSB	**Milas**	**1.47**	**111**	PN	**Pn**	**11 30 54.9**	**-0.3**
MLSB	**Milas**	**1.47**	**111**	Pn	**Pn**	**11 30 55.2**	**0.0**
DAT	**Datca**	**1.64**	**132**	PN	**Pn**	**11 30 57.1**	**-0.4**
AKS	**Akhisar**	**1.73**	**52**	*e*PN	**Pn**	**11 30 58.6**	**-0.3**
AKS	**Akhisar**	**1.73**	**52**	Pn	**Pn**	**11 30 59.5**	**+0.6**
PTL	**Penteli**	**1.75**	**278**	*e*P	**Pn**	**11 30 59.0**	**-0.1**
ATH	**Athens Observa**	**1.86**	**275**	*e*P	**Pn**	**11 31 00.0**	**-0.6**
YER	**Yerkesik**	**1.90**	**111**	*e*PN	**Pn**	**11 31 01.0**	**-0.1**
FETY	**Fethiye**	**2.69**	**115**	Pn	**Pn**	**11 31 13.1**	**+1.0**
FETY	**Fethiye**	**2.69**	**115**	Pn	**Pn**	**11 31 13.1**	**+1.1**

*ISCJB **31** 11:44:21.3±0.2, 5144N±001×1607E±002, h0km, mb3.9/9, Error ellipse: s-maj=2.0km s-min=1.5km az=8.2*
*MOS **31** 11:44:22.1±1.1, 5154N×1601E, h10km, mb4.3/4, Error ellipse: s-maj=6.6km s-min=3.8km az=80.0*
*IPEC **31** 11:44:22.7±0.3, 5151N×1639E, h0km, ML3.4/4, Error ellipse: s-maj=3.8km s-min=2.0km az=85.0*
*LDG **31** 11:44:23.3±0.2, 5159N×1617E, h1km, Ml4.3/17, Error ellipse: s-maj=4.7km s-min=2.7km az=165.0, Suspected Mining induced.*
*CSEM **31** 11:44:23.8±0.1, 5149N×1616E, h1km, mb3.9/2, ML4.2/34, Error ellipse: s-maj=2.1km s-min=1.3km az=14.0*
*WAR **31** 11:44:23.9, 5148N×1612E, ML3.5, Mining Induced*
*IDC **31** 11:44:23.7±0.6, 5147N×1605E, h0km, mb3.9/6, mb1 3.9/13, mb1mx3.8/25, mbtmp3.8/13, ML3.3/7, Error ellipse: s-maj=10.6km s-min=6.1km az=114.0*
*BGR **31** 11:44:24.5±0.5, 5150N×1604E, h1km, ML3.8, Error ellipse: s-maj=5.6km s-min=4.4km az=150.0*
*NEIC **31** 11:44:24.5, 5150N×1604E, h1km, ML3.8(SZGRF), After SZGRF.*
*PRU **31** 11:44:24.4, 5145N×1604E, h0km, Felt In Harrachov*
*VIE **31** 11:44:25.9±0.3, 5124N×1615E, h1km, mb3.1/8, ML3.3/11, Error ellipse: s-maj=2.1km s-min=1.6km az=7.0 62 km WNW of Breslau Suspected Mining induced.*
*STR **31** 11:44:33.9±2.9, 5180N×1483E, h10km±1km, Ml4.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 31 11:44:22.7±0.2, 5149N±001×1608E±002, h0km, n164, σ1§14/263, mb3.9/9, 24C-14D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.66**	**168**	*e*Pg	**Pg**	**11 44 35.7**	**+0.4**
KSP				*e*		11 44 43.0	
KSP				*e*Sg	**Sg**	**11 44 44.4**	**+0.6**
KSP				*e*L		11 44 48.0	
KSP	**Ksiaz**	**0.66**	**168**	*e*Pg	**Pg**	**11 44 35.7**	**+0.4**
KSP				*e*		11 44 43.0	
KSP				*e*Sg	**Sg**	**11 44 44.4**	**+0.6**
KSP				*e*		11 44 48.0	
UPC	**Upice**	**0.98**	**183**	*e*PG	**Pg**	**11 44 41.8**	**+0.3**
DPC	**Dobruska-Polom**	**1.15**	**172**	*e*PG	**Pg**	**11 44 44.6**	**-0.1**
DPC				*e*SG	**Sg**	**11 44 59.4**	**-0.2**
	410nm,0.7s						
DPC	**Dobruska-Polom**	**1.15**	**172**	*e*Pg	**Pg**	**11 44 44.6**	**-0.1**
DPC				*e*Sg	**Sg**	**11 44 59.5**	**-0.1**
PVCC	**Panska Ves**	**1.35**	**225**	*e*PG	**Pg**	**11 44 48.8**	**+0.1**
BRG	**Berggiesshubel**	**1.48**	**246**	*e*Pn	**Pn**	**11 44 50.1**	**-0.5**
BRG				*e*Sg	**Sg**	**11 45 12.3**	**+2.1**
BRG	**Berggiesshubel**	**1.48**	**246**	PN	**Pn**	**11 44 50.3**	**-0.3**
BRG				PG	**Pg**	**11 44 51.7**	**+0.6**
BRG				SG	**Sg**	**11 45 12.2**	**+2.0**
	227nm,0.5s						
RUE	**Ruedersdorf**	**1.74**	**306**	*e*Pn	**Pn**	**11 44 53.5**	**-0.6**
RUE				*e*Sg	**Sg**	**11 45 20.0**	**+1.5**
RUE	**Ruedersdorf**	**1.74**	**306**	*e*Pn	**Pn**	**11 44 53.5**	**-0.6**
RUE				*e*Sg	**Sg**	**11 45 20.0**	**+1.5**
RUE	**Ruedersdorf**	**1.74**	**306**	Pn	**Pn**	**11 44 53.3**	**-0.6**
RUE				Sg	**Sg**	**11 45 20.0**	**+1.5**
PRA	**Prague**	**1.76**	**217**	PG	**Pg**	**11 44 54.0**	**-2.5**
PRA				SG	**Sg**	**11 45 20.0**	**+0.7**
PRU	**Pruhonice**	**1.79**	**214**	*e*PN	**Pn**	**11 44 54.8**	**-0.1**
PRU				*e*PG	**Pg**	**11 44 56.3**	**-0.7**
PRU				*e*SG	**Sg**	**11 45 19.8**	**-0.4**
	299nm,0.8s						
FBE	**Freiberg**	**1.81**	**253**	*e*Pn	**Pn**	**11 44 56.4**	**+1.3**
FBE				*e*Sg	**Sg**	**11 45 22.0**	**+1.3**
GKP	**Gorka Klasztor**	**1.92**	**21**	*e*Pn	**Pn**	**11 44 57.5**	**+0.8**
GKP				*e*Pg	**Pg**	**11 45 05.1**	**+5.5**
GKP				*e*Sg	**Sg**	**11 45 27.1**	**+2.6**
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**11 44 56.4**	**-0.4**
CLL				*i* Pg	**Pg**	**11 44 59.8**	**0.0**
CLL				*e*Sg	**Sg**	**11 45 25.4**	**+0.4**
CLL	**Collm**	**1.94**	**266**	*i* Pn	**Pn**	**11 44 56.4**	**-0.5**
CLL				*i* Pg	**Pg**	**11 44 59.8**	**0.0**
CLL				*i* x	x	11 45 03.9	
CLL				*i* x	x	11 45 14.8	
CLL				*i* Sn	**Sn**	**11 45 23.6**	**+1.7**
CLL				*e*Sg	**Sg**	**11 45 26.0**	**+1.1**
	comp=Z,351nm,1.3s						
CLL				*ex*	x	11 45 35.0	
CLL	**Collm**	**1.94**

comp=Z,282nm,0.4s
GUNZ Gunzen 2.62 246 *e*Pn **Pn 11 45 07.1 +0.7**
WERN Wernitzgruen 2.63 244 *e*Pn **Pn 11 45 07.2 +0.7**
WERN *e*Sg **Sg 11 45 47.6 +0.2**
OJC Ojcow 2.68 117 *e*Pn **Pn 11 45 05.1 -2.0**
OJC *e*Pg **Pg 11 45 13.6 -0.4**
OJC *e*Sg **Sg 11 45 48.9 +0.2**
JAVC Velka Javorina 2.82 158 *e*Sg **Sg 11 45 51.1 -2.3**
comp=Z,386nm,1.1s
KHC Kasperske Hory 2.85 215 *e*PN **Pn 11 45 09.4 -0.1**
KHC *e*PG **Pg 11 45 15.8 -1.6**
KHC *e*SG **Sg 11 45 53.9 -0.4**
comp=Z,198nm,0.9s
MGBB Grossbuechelbe 2.88 240⇑ *i*Pn **Pn 11 45 10.9 +1.0**
MANZ Manzenberg 2.94 241 *e*Pn **Pn 11 45 11.3 +0.7**
MANZ *e*Sg **Sg 11 45 57.9 +0.8**
MOX Moxa 2.94 255 *e*Pn **Pn 11 45 11.1 +0.4**
MOX *e*Pg **Pg 11 45 18.9 -0.2**
MOX *e*Sg **Sg 11 45 58.5 +1.3**
MOX Moxa 2.94 255 *e*PN **Pn 11 45 10.9 +0.2**
MOX *e*PG **Pg 11 45 18.9 -0.2**
MOX *e*SG **Sg 11 45 59.4 +2.2**
MOX Moxa 2.94 255 *e*Pn **Pn 11 45 10.9 +0.2**
MOX *e*Pg **Pg 11 45 18.9 -0.2**
MOX *e*Sg **Sg 11 45 59.4 +2.2**
MOX Moxa 2.94 255 Pg **Pg 11 45 18.9 -0.2**
MOX Sg **Sg 11 45 58.5 +1.3**
ROTZ Rotzenmuhle 3.01 237 *e*Pn **Pn 11 45 12.3 +0.7**
ROTZ *e*Sg **Sg 11 45 59.1 -0.2**
GEC2 GERESS Array S 3.05 211 *e*Pn **Pn 11 45 12.9 +0.7**
GEC2 GERESS Array S 3.05 211 *e*Pn **Pn 11 45 12.9 +0.7**
GERES GERESS Array B 3.05 211 Pn **Pn 11 45 13.3 +1.1**
comp=Z,2.2nm,0.3s,baz=23,slow=12,SNR=27
GERES Pg **Pg 11 45 19.7 -1.6**
comp=Z,12nm,0.3s,baz=28,slow=17,SNR=57
GERES Sn **Sn 11 45 49.9 +0.5**
comp=Z,9.1nm,0.3s,baz=32,slow=25,SNR=8.0
GERES Lg 11 45 59.0
comp=Z,14nm,0.3s,baz=33,slow=27,SNR=12
GERES GERESS Array B 3.05 211 P **Pn 11 45 13.3 +1.1**
GERES 11 45 49.9
GERES GERESS Array B 3.05 211 Pg **Pg 11 45 19.7 -1.6**
GERES S **Sn 11 45 49.9 +0.4**
SMOL Smolenice 3.10 163 *e*SG **Sg 11 46 04.8 +2.5**
SMOL Smolenice 3.10 163 *e*P **Pg 11 45 22.8 +0.7**
SMOL Smolenice 3.10 163 *e*Sg **Sg 11 46 04.2 +1.9**
WET Wettzell 3.12 222 *e*Pn **Pn 11 45 13.5 +0.5**
WET Wettzell 3.12 222 *e*Pn **Pn 11 45 13.5 +0.4**
WET Wettzell 3.12 222 Pn **Pn 11 45 13.5 +0.4**
LIKS Likavka 3.12 140 *e*SG **Sg 11 46 06.7 +3.8**
ZST Bratislava 3.36 168 *e*PN **Pn 11 45 18.3 +1.9**
ZST *e*PG **Pg 11 45 25.3 -1.8**
ZST *e*SG **Sg 11 46 09.9 -0.7**
NIE Niedzica 3.41 126 *e*P **Pg 11 45 27.8 -0.2**
NIE *e*S **Sg 11 46 12.1 -0.1**
VYHS Vyhne 3.48 148 *e*PN **Pn 11 45 17.4 -0.7**
VYHS *e*PG **Pg 11 45 30.3 +0.8**
VYHS *e*SG **Sg 11 46 16.6 +2.0**
VYHS Vyhne 3.48 148 *e*P **Pn 11 45 17.7 -0.4**
CONA Conrad Observa 3.56 182⇑ *i*Pn **Pn 11 45 19.7 +0.5**
CONA ⇑ *i*Sg **Sg 11 46 15.3 -1.9**
comp=Z,133nm,0.8s
CONA Conrad Observa 3.56 182 Pn **Pn 11 45 19.7 +0.4**
CONA Sg **Sg 11 46 15.3 -1.9**
comp=Z,133nm,0.8s
GRA1 Grafenberg Arr 3.58 242 *e*Pn **Pn 11 45 20.4 +0.9**
GRA1 *e*Sg **Sg 11 46 16.8 -0.9**
GRA1 Grafenberg Arr 3.58 242 Pn **Pn 11 45 20.4 +0.9**
GRA1 *e*Sg **Sg 11 46 16.8 -0.9**
GRF Grafenberg Arr 3.58 242 *e*Pn **Pn 11 45 20.4 +0.9**
GRF *e*Sg **Sg 11 46 16.8 -0.9**
BSD Bornholm Skovb 3.70 350 *i*P **Pn 11 45 19.5 -1.7**
BSD *i*S **Sn 11 46 00.4 -5.1**
BSD *i*LG 11 46 02.4
BSD Bornholm Skovb 3.70 350 *i*P **Pn 11 45 19.5 -1.7**
BSD *i*S **Sn 11 46 00.4 -5.1**
SOP Sopron 3.82 175⇓ *e*Pn **Pn 11 45 23.8 +1.0**
SOP *e*SB **Sb 11 46 18.4 +0.6**
MOA Molln 3.83 199⇑ *i*Pn **Pn 11 45 23.2 +0.3**
SNR=12
MOA ⇑ *i*Sg **Sg 11 46 25.7 +0.1**
comp=Z,122nm,0.6s
HROE Hohe Rhon--Fla 3.86 258⇑ *i*Pn **Pn 11 45 24.1 +0.8**
UBBA Unterbreizbach 3.88 262 *e*Pn **Pn 11 45 24.6 +0.9**
UBBA *e*Sg **Sg 11 46 27.4 -0.2**
STHS Stebnicka Huta 3.90 120 *e*PN **Pn 11 45 26.6 +2.8**
STHS *e*PG **Pg 11 45 38.3 +0.9**
STHS *e*SG **Sg 11 46 31.7 +3.8**
STHS Stebnicka Huta 3.90 120 *e*Pn **Pn 11 45 24.5 +0.7**
KECS Kecovo 4.14 135 *e*PN **Pn 11 45 26.4 -0.7**
KECS *e*PG **Pg 11 45 43.5 +1.5**
KECS *e* 11 46 34.2
KECS Kecovo 4.14 135 *e*P **Pn 11 45 26.9 -0.2**
ARSA Arzberg 4.25 185⇑ *i*Pn **Pn 11 45 28.9 +0.2**
ARSA ⇑ *i*Sg **Sg 11 46 37.9 -1.5**
comp=Z,118nm,0.8s
CRVS Cervenica-Dubn 4.32 125 *e*PN **Pn 11 45 30.4 +0.8**
CRVS *e*PG **Pg 11 45 46.7 +1.2**
CRVS *e*SG **Sg 11 46 47.0 +5.6**
CRVS Cervenica-Dubn 4.32 125 *e*Pn **Pn 11 45 30.2 +0.6**
PSZ Piszkesteto 4.34 144⇑ *e*Pn **Pn 11 45 30.3 +0.3**
PSZ *e*SB **Sb 11 46 39.4 +6.5**
KWP Kalwaria 4.62 111 *e*Pn **Pb 11 45 47.6 +3.1**
KWP *e*SG **Sg 11 46 54.2 +3.2**
KOLS Kolonicke sedl 4.73 120 *e*PN **Pn 11 45 35.0 -0.2**
KOLS *e*PG **Pg 11 45 54.1 +0.8**
KBA Koelnbreinsper 4.76 203⇑ *i*Pn **Pn 11 45 36.2 +0.6**
KBA ⇓ *i*Sg **Sg 11 46 56.5 +0.9**
comp=Z,83nm,0.9s
UZH Uzhgorod 4.92 123 *e*P **Pn 11 45 37.0 -0.9**
UZH *i*S **Sn 11 46 36.0 +0.6**
TOD Tromm 5.01 251 P **Pn 11 45 39.5 +0.4**
OBKA Obir 5.08 192⇑ *i*Pn **Pn 11 45 39.7 -0.4**
OBKA ⇓ *i*Sg **Sg 11 47 06.6 +0.6**
comp=Z,104nm,0.9s
WATA Walderalm 5.09 217⇑ *i*Pn **Pn 11 45 41.4 +1.2**
WATA ⇑ *i*Sg **Sg 11 47 08.4 +2.2**
comp=Z,27nm,0.6s
WTTA Wattenberg 5.12 216⇓ *i*Pn **Pn 11 45 41.8 +1.1**
WTTA ⇑ *i*Sg **Sg 11 47 09.4 +2.1**
comp=Z,88nm,0.8s
MOTA Moosalm 5.26 220⇑ *i*Pn **Pn 11 45 43.3 +0.7**
MOTA ⇓ *i*Sg **Sg 11 47 11.4 -0.4**
comp=Z,36nm,0.7s
MOTA Moosalm 5.26 220⇑ *i*Pn **Pn 11 45 43.3 +0.7**
MOTA *i*Sg **Sg 11 47 11.4 -0.4**
SCE Schlegeis 5.29 214⇑ *i*Pn **Pn 11 45 44.2 +1.2**
SQTA Sankt Quirin 5.32 219⇑ *i*Pn **Pn 11 45 44.1 +0.7**
SQTA ⇑ *i*Sg **Sg 11 47 16.5 +2.8**
comp=Z,65nm,1.1s
LVV L'vov 5.33 105 *e*P **Pn 11 45 47.2 +3.7**
LVV *e*S **Sn 11 46 54.6 +9.1**
LVV MLR MLR
comp=N,100nm,7.0s
LVV MLR MLR
comp=E,100nm,7.0s
LVV MLR MLR
comp=Z,100nm,6.0s
LJU Ljubljana 5.54 191 *e*Pn **Pn 11 45 47.5 +1.1**
LJU *e* 11 47 13.2
LJU *e*(Sg) **Sg 11 47 30.0 +9.3**
PKSM Moragy 5.54 161⇑ *i*P **Pn 11 45 46.6 +0.2**
PKSM Moragy 5.54 161⇓ *e*Pn **Pn 11 45 47.5 +1.1**
PKSM *e*Sn **Sn 11 46 58.8 +8.0**
ABH Alteburg 5.66 257 P **Pn 11 45 49.1 +1.1**
DAVA Damuels 5.83 226⇑ *i*Pn **Pn 11 45 50.3 -0.2**
DAVA ⇓ *i*Sg **Sg 11 47 31.0 +0.9**
comp=Z,63nm,1.2s
LANF Langenberg 5.87 248 P **Pn 11 45 54.0 +3.0**
CDF Champ du Feu 6.46 245 *e*Pn **Pn 11 45 58.4 -0.7**
CDF *e*Sg **Sg 11 47 49.1 -1.1**
comp=Z,272nm,1.3s
CDF Champ du Feu 6.46 245 *e*Pn **Pn 11 45 58.4 -0.7**
CDF *e*Sg **Sg 11 47 49.1 -1.1**
comp=Z,136nm,1.3s
CDF *e*Sg **Sg 11 47 49.1 -1.1**
comp=Z,136nm,1.3s
HINF Hinteralfeld 7.02 242 *e*Sg **Sg 11 48 05.2 -3.1**
comp=Z,140nm,1.1s
HINF Hinteralfeld 7.02 242 *e*Sg **Sg 11 48 05.2 -3.1**
comp=Z,70nm,1.1s
HINF *e*Sg **Sg 11 48 05.2 -3.1**
comp=Z,70nm,1.1s
BURAR Bucovina Array 7.09 120⇑ *i*P **Pn 11 46 08.1 +0.3**
BURAR Bucovina Array 7.09 120⇑ P **Pn 11 46 08.1 +0.4**
HAU Haudompre 7.20 245 *e*Sg **Sg 11 48 12.9 -1.1**
comp=Z,123nm,1.1s
HAU Haudompre 7.20 245 *e*Sg **Sg 11 48 12.9 -1.1**
comp=Z,62nm,1.1s
HAU *e*Sg **Sg 11 48 12.9 -1.1**
comp=Z,62nm,1.1s
GIVF Givet 7.27 263 *e*Pn **Pn 11 46 09.1 -1.1**
GIVF *e*Sg **Sg 11 48 13.3 -2.9**
comp=Z,72nm,0.8s
GIVF Givet 7.27 263 *e*Pn **Pn 11 46 09.1 -1.1**
GIVF *e*Sg **Sg 11 48 13.3 -2.9**
comp=Z,36nm,0.8s
GIVF *e*Sg **Sg 11 48 13.3 -2.9**
comp=Z,36nm,0.8s
BAIF Baives 7.66 264 *e*Pn **Pn 11 46 14.3 -1.3**
BAIF *e*Sg **Sg 11 48 25.3 -3.5**
CABF La Chapelle 8.18 237 *e*Sg **Sg 11 48 44.0 -1.2**
comp=Z,270nm,1.4s
CABF La Chapelle 8.18 237 *e*Sg **Sg 11 48 44.0 -1.2**
comp=Z,135nm,1.4s
AKASG Malin Array Be 8.31 90 Pn **Pn 11 46 22.4 -2.1**
comp=Z,2.2nm,0.3s,baz=279,slow=12,SNR=11
AKASG Sn **Sn 11 47 52.8 -6.3**
comp=Z,1.5nm,0.3s,baz=273,slow=23,SNR=5.0
AKASG Lg 11 48 51.5
comp=Z,0.4nm,0.3s,baz=277,slow=25,SNR=5.7
AKASG Malin Array Be 8.31 90 P **Pn 11 46 22.4 -2.1**
AKASG 11 47 52.8
AKASG Malin Array Be 8.31 90 Pn **Pn 11 46 22.4 -2.1**
AKASG Sn **Sn 11 47 52.8 -6.3**
AKASG Lg 11 48 51.5
LPL La Plagne 8.61 230 *e*Sg **Sg 11 48 56.8 -2.3**
comp=Z,12nm,0.7s
LPL La Plagne 8.61 230 *e*Sg **Sg 11 48 56.8 -2.3**
comp=Z,6.0nm,0.7s
LPG La Plagne 8.61 230 *e*Sg **Sg 11 48 56.7 -2.6**
comp=Z,1.8nm,0.3s
LPG La Plagne 8.61 230 *e*Sg **Sg 11 48 56.7 -2.6**
comp=Z,0.9nm,0.3s
HFS Hagfors 8.77 352 Pn **Pn 11 46 29.1 -1.7**
comp=Z,0.2nm,0.3s,baz=148,slow=16,SNR=4.5
HFS Hagfors 8.77 352 Pn **Pn 11 46 29.1 -1.7**
LOR Lormes 9.02 247 *e*Pn **Pn 11 46 33.5 -0.7**
LOR *e*Sg **Sg 11 49 09.1 -3.2**
comp=Z,64nm,1.3s
LOR Lormes 9.02 247 *e*Pn **Pn 11 46 33.5 -0.7**
LOR *e*Sg **Sg 11 49 09.1 -3.2**
comp=Z,32nm,1.3s
MBDF Montbardon 9.19 226 *e*Pn **Pn 11 46 35.9 -0.6**
MBDF *e*Sg **Sn** 11 49 14.5 +54
VSU Vasula 9.29 37⇓ *e*P **Pn 11 46 37.9 +0.1**
SMF Signal de Mont 9.38 244 *e*Pn **Pn 11 46 38.0 -1.1**
SMF *e*Sg **Sn** 11 49 21.0 +56
comp=Z,82nm,1.3s
SMF Signal de Mont 9.38 244 *e*Pn **Pn 11 46 38.0 -1.1**
SMF *e*Sg **Sn** 11 49 21.0 +56
comp=Z,41nm,1.3s
SMF *e*Sg **Sn** 11 49 21.0 +56
comp=Z,41nm,1.3s
ORIF Oris-en-Rattie 9.46 230 *e*Pn **Pn 11 46 39.4 -0.8**
ORIF *e*Sg **Sn** 11 49 22.9 +56
comp=Z,86nm,1.6s
ORIF Oris-en-Rattie 9.46 230 *e*Pn **Pn 11 46 39.4 -0.8**
ORIF *e*Sg **Sn** 11 49 22.9 +56
comp=Z,43nm,1.6s
AVF Avril sur Loir 9.57 246 *e*Pn **Pn 11 46 40.9 -0.8**
AVF *e*Sg **Sn** 11 49 25.7 +56
comp=Z,67nm,1.3s
AVF Avril sur Loir 9.57 246 *e*Pn **Pn 11 46 40.9 -0.8**
AVF *e*Sg **Sn** 11 49 25.7 +56
comp=Z,34nm,1.3s
AVF *e*Sg **Sn** 11 49 25.7 +56
comp=Z,34nm,1.3s
SBF Sospel 9.59 221 *e*Pn **Pn 11 46 40.9 -1.1**
NOA NORSAR Array B 9.95 346 Pn **Pn 11 46 46.7 -0.2**
comp=Z,0.3nm,0.3s,baz=160,slow=12,SNR=3.4
BGF Bois d'Agland 9.99 246 *e*Sg Sx 11 49 39.2
comp=Z,133nm,1.5s
BGF Bois d'Agland 9.99 246 *e*Sg Sx 11 49 39.2
comp=Z,66nm,1.5s
BGF *e*Sg Sx 11 49 39.2
comp=Z,66nm,1.5s
VIVF Saint-Julien-l 10.09 233 *e*Pn **Pn 11 46 48.2 -0.7**
VIVF *e*Sg **Sn** 11 49 42.3 +59
comp=Z,13nm,0.8s
VIVF Saint-Julien-l 10.09 233 *e*Pn **Pn 11 46 48.2 -0.7**
VIVF *e*Sg **Sn** 11 49 42.3 +59
comp=Z,6.5nm,0.8s
VIVF *e*Sg **Sn** 11 49 42.3 +59
comp=Z,6.5nm,0.8s
LMR La Mourre 10.41 222 *e*Pn **Pn 11 46 52.3 -1.0**
TCF Toulx Ste Croi 10.51 246 *e*Sg Sx 11 49 55.2
comp=Z,4.1nm,0.5s
TCF Toulx Ste Croi 10.51 246 *e*Sg Sx 11 49 55.2
comp=Z,2.0nm,0.5s
TCF *e*Sg Sx 11 49 55.2
comp=Z,2.0nm,0.5s
FLN La Foliniere 10.98 262 *e*Pn **Pn 11 46 59.5 -1.5**
FINES FINESS Array B 11.39 25 Pn **Pn 11 47 04.1 -2.6**
comp=Z,0.2nm,0.3s,baz=172,slow=15,SNR=6.7
FINES Sn **Sn 11 49 05.7 -9.0**
comp=Z,0.4nm,0.3s,baz=213,slow=20,SNR=6.3
MTLF Montolieu 12.41 234 *e*Pn **Pn 11 47 19.6 -1.1**
SGMF Saint Gilles 12.45 262 *e*Pn **Pn 11 47 19.7 -1.4**
OBN Obninsk 12.77 65⇑ *e*P **Pn 11 47 27.3 +1.8**
OBN pmax pmax
comp=Z,24nm,1.2s
OBN Obninsk 12.77 65 *e*P **Pn 11 47 27.3 +1.8**
comp=Z,24nm,1.2s
ARCES ARCESS Array B 18.65 10 Pn **Pn 11 48 36.9 -5.4**
comp=Z,0.4nm,0.3s,baz=195,slow=11,SNR=14
ARU Arti 25.17 62⇓ *i*P **P 11 49 48.2 -1.5**
ARU *e*PPP 11 50 32.4
ARU *e*S **S 11 54 13.8 -1.9**
ARU pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
AKTK Aktyubinsk 26.18 76 P **P 11 49 58.6 -0.3**
comp=Z,2.0nm,0.8s,mb3.8
AKTO Aktyubinsk 26.18 76 P **P 11 49 58.6 -0.3**
comp=Z,2.0nm,0.8s,mb3.8,baz=298,slow=13,SNR=4.6
AKTO Aktyubinsk 26.18 76 P **P 11 49 58.6 -0.3**
AKTO pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
BVAR Borovoye Array 32.62 66 P **P 11 50 55.8 -0.3**
comp=Z,0.4nm,0.4s,mb3.7,baz=274,slow=6.8,SNR=6.5
NVS Novosibirsk 39.01 58 *e*P **P 11 51 50.8 -0.1**
AAK Ala-Archa 39.80 79⇓ *i*P **P 11 51 57.8 +0.3**
AAK pmax pmax
comp=Z,6.0nm,1.3s,mb4.1
AAK Ala-Archa 39.80 79 *i*P **P 11 51 57.8 +0.3**
comp=Z,6.0nm,1.3s,mb4.1
TORD Torodi Ar. Bea 39.97 202 P **P 11 51 58.2 -0.7**
comp=Z,2.9nm,1.1s,mb3.8,baz=8.8,slow=8.1,SNR=7.1
ZAL Zalesovo 40.22 59 P **P 11 52 01.2 +0.2**
comp=Z,1.4nm,0.3s,mb4.0,baz=140,slow=2.7,SNR=4.9
ZAL Zalesovo 40.22 59 P **P 11 52 01.2 +0.2**
ZAL pmax pmax
comp=Z,1.0nm,0.4s
SONM Songino Array 54.95 55 P **P 11 53 57.2 +1.8**
comp=Z,0.4nm,0.3s,mb3.9,baz=294,slow=10,SNR=3.8
SEY Seymchan 60.85 21⇓ *i*P **P 11 54 35.4 -1.5**
COLA College 63.31 352 *i*P **P 11 54 51.6 -1.8**
PDAR Pinedale Array 74.95 322 P **P 11 56 06.0 +0.3**
comp=Z,0.4nm,0.7s,mb3.6,baz=25,slow=4.9,SNR=4.5

IDC 31 11:54:17.6±4.7, 5287N×16893W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/22, mbtmp3.7/3, Error ellipse: s-maj=148.3km s-min=36.9km az=17.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDAR	**Pinedale Array**	**40.05**	**80**	P		12 01 54.4	-0.1
	0.3nm,0.6s,baz=321,slow=4.2,SNR=4.0						
MKAR	**Makanchi Array**	**63.66**	**313**	P		12 04 50.3	-0.3
	0.8nm,0.8s,baz=36,slow=5.4,SNR=4.3						
FINES	**FINESS Array B**	**65.42**	**352**	P		12 05 01.5	-0.6
	1.0nm,0.7s,baz=7.6,slow=5.8,SNR=7.0						

*TIF **31** 11:54:34.5, 4340N×45.13E, h16km±7km*
*MOS **31** 11:54:35.7±0.8, 4322N×45.13E, h9km, mb4.3/1, Error ellipse: s-maj=11.0km s-min=7.1km az=17.3*
*CSEM **31** 11:54:35.1, 4322N×45.13E, h9km, mb4.3, After OBN*
*ISCJB **31** 11:54:36.6±0.4, 4324N±003×4510E±003, h9km, Error ellipse: s-maj=3.8km s-min=2.6km az=53.1*

ISC 31 11:54:36.8±0.4, 4324N±003×4512E±003, h9km, n27, σ1§14/51, 2C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNJR	**Sundja**	**0.29**	**233**	*i* Pg	**Pg**	**11 54 42.5**	**-0.1**
SNJR				*e*Sg	**Sg**	**11 54 45.9**	**-0.5**
VLKR	**Vladikavkaz**	**0.38**	**239**	*e*Pg	**Pg**	**11 54 44.2**	**-0.1**
VLKR				*e*Sg	**Sg**	**11 54 48.7**	**-0.7**
TRKR	**Terskaya**	**0.56**	**329**	*i* Pg	**Pg**	**11 54 48.7**	**+1.1**
TRKR				*i* Sg	**Sg**	**11 54 56.6**	**+1.7**
ARNR	**Ardon**	**0.62**	**265**	*e*Pg	**Pg**	**11 54 48.6**	**-0.2**
ARNR				*e*Sg	**Sg**	**11 54 56.4**	**-0.5**
KMSR	**Komsomolskaya**	**0.62**	**282**	*e*Pg	**Pg**	**11 54 48.8**	**0.0**
KMSR				*e*Sg	**Sg**	**11 54 56.8**	**-0.1**
LACR	**Lac**	**0.74**	**236**	*i* Pg	**Pg**	**11 54 50.7**	**-0.3**
LACR				*i* Sg	**Sg**	**11 55 00.1**	**-0.6**
KORR	**Kora**	**0.79**	**259**	*i* Pg	**Pg**	**11 54 51.7**	**-0.3**
KORR				*e*Sg	**Sg**	**11 55 01.8**	**-0.5**
PRTR	**Priterechnaya**	**0.80**	**310**	*i* Pg	**Pg**	**11 54 52.6**	**+0.5**
PRTR				*e*Sg	**Sg**	**11 55 03.4**	**+0.9**
BTLR	**Botlikh**	**0.99**	**125**	*e*Pg	**Pg**	**11 54 53.5**	**-2.4**
BTLR				*i* S	**Sg**	**11 55 07.5**	**-1.3**
BTLR				pmax	pmax		
	comp=Z,57nm,0.2s						
BTLR	**Botlikh**	**0.99**	**125**	*e*Pg	**Pg**	**11 54 53.5**	**-2.4**
	comp=Z,57nm,0.2s						
BTLR				*i* Sg	**Sg**	**11 55 07.5**	**-1.3**
ZEI	**Tsey**	**1.02**	**243**	*e*PG	**Pg**	**11 54 55.8**	**-0.5**
ZEI				*e*		11 55 09.9	
ZEI				pmax	pmax		
	comp=Z,94nm,0.1s						
ZEI				smax			
	comp=N,536nm,0.2s						
ZEI	**Tsey**	**1.02**	**243**	*e*Pg	**Pg**	**11 54 55.8**	**-0.5**
	comp=N,94nm,0.1s						
ZEI				*e*Sg	**Sg**	**11 55 09.9**	**+0.3**
	comp=N,536nm,0.2s						
DIGR	**Digorskoe uzhe**	**1.18**	**254**	*i* Pg	**Pg**	**11 54 58.7**	**-0.8**
DIGR				*i* Sg	**Sg**	**11 55 13.9**	**-1.0**
DUS	**Dusheti**	**1.19**	**195**	P	**Pb**	**11 55 00.3**	**+0.7**
DUS				S	**Sb**	**11 55 18.7**	**+3.6**
XNZR	**Khunzakh**	**1.36**	**121**	*e*PG	**Pg**	**11 55 02.0**	**-0.9**
XNZR				*i* S	**Sg**	**11 55 21.5**	**+1.0**
XNZR				pmax	pmax		
	comp=Z,33nm,0.3s						
XNZR	**Khunzakh**	**1.36**	**121**	*e*Pg	**Pg**	**11 55 02.0**	**-0.9**
	comp=Z,33nm,0.3s						
XNZR				*i* Sg	**Sg**	**11 55 21.5**	**+1.0**
KUBR	**Kubataba**	**1.36**	**295**	*e*Pg	**Pg**	**11 55 01.7**	**-1.3**
KUBR				*e*Sg	**Sg**	**11 55 21.8**	**+1.1**
ONI	**Oni**	**1.40**	**242**	P	**Pn**	**11 55 02.1**	**-0.3**
ONI				S	**Sb**	**11 55 21.9**	**+0.9**
BUJR	**Buynaksk**	**1.51**	**105**	*e*PG	**Pg**	**11 55 02.5**	**-3.4**
BUJR				*i* S	**Sg**	**11 55 25.0**	**-0.5**
BUJR				pmax	pmax		
	comp=Z,52nm,0.3s						
BUJR	**Buynaksk**	**1.51**	**105**	*e*Pg	**Pg**	**11 55 02.5**	**-3.4**
	comp=Z,52nm,0.3s						
BUJR				*i* Sg	**Sg**	**11 55 25.0**	**-0.5**
TBLG	**Delisi**	**1.54**	**191**	P	**Pn**	**11 55 05.3**	**+0.9**
TBLG				S	**Sn**	**11 55 27.9**	**+3.4**
MTA	**Mtatsminda**	**1.57**	**189**	P	**Pn**	**11 55 05.7**	**+0.9**
MTA				S	**Sn**	**11 55 28.8**	**+3.5**
DGRG	**David-gareji**	**1.80**	**174**	P	**Pn**	**11 55 10.2**	**+2.1**
DGRG				S	**Sg**	**11 55 37.5**	**+2.7**
BEYR	**Belyy Ugol+**	**1.84**	**295**	*e*Pn	**Pn**	**11 55 09.1**	**+0.5**
BEYR				*e*Sg	**Sg**	**11 55 33.4**	**-2.7**
SHAR	**Shatzhatmas**	**1.85**	**286**⇑	*e*PN	**Pn**	**11 55 08.6**	**-0.2**
SHAR				*e*S	**Sn**	**11 55 34.9**	**+2.6**
KIV0	**Kislovodsk Arr**	**1.90**	**293**	*e*Pn	**Pn**	**11 55 08.2**	**-1.2**
KIV	**Kislovodsk**	**1.91**	**293**⇑	*e*PN	**Pn**	**11 55 08.5**	**-1.0**

IDC 31 12:05:56.6±6.4, 2125S×16956E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/11, mbtmp3.4/2, MS3.4/1, Ms1 3.3/1, ms1mx2.7/7, Error ellipse: s-maj=269.8km s-min=58.3km az=151.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.01**	**254**	*e*P	Pn	12 06 50.3	+4.8
DZM				*e*S	Sn	12 07 30.3	+8.0
STKA	**Stephens Creek**	**27.08**	**241**	LR	LR	12 21 18.0	
	comp=Z,84nm,19.9s,baz=224,slow=34						
WRA	**Warramunga Arr**	**32.95**	**266**	P	P	12 12 33.6	+0.8
	0.5nm,0.8s,baz=96,slow=8.5,SNR=6.8						
ASAR	**Alice Springs**	**32.98**	**259**	P	P	12 12 33.0	-0.1
	0.4nm,0.7s,baz=84,slow=9.8,SNR=7.9						
GERES	**GERESS Array B**	**146.39**	**331**	PKPbc	PKPbc	12 25 38.8	-0.7
	0.3nm,0.3s,baz=19,slow=3.3,SNR=3.6						

IDC 31 12:16:45.4±1.8, 120N×9715E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/21, mbtmp3.7/6, ML2.9/1, Error ellipse: s-maj=51.4km s-min=22.8km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.38**	**48**	Pn	Pn	12 17 25.3	-0.4
	3.4nm,0.3s,baz=125,slow=23,SNR=11						
WRA	**Warramunga Arr**	**42.08**	**122**	P	P	12 24 39.2	+0.2
	0.5nm,0.5s,baz=301,slow=9.2,SNR=10						
ASAR	**Alice Springs**	**43.44**	**127**	P	P	12 24 50.5	+0.5
	0.4nm,0.7s,baz=299,slow=7.5,SNR=4.8						
SONM	**Songino Array**	**47.13**	**8**	P	P	12 25 19.2	-0.1
	0.8nm,0.7s,baz=185,slow=9.4,SNR=4.6						
MKAR	**Makanchi Array**	**47.23**	**346**	P	P	12 25 20.2	+0.2
	0.8nm,0.5s,baz=153,slow=5.9,SNR=4.4						
ZAL	**Zalesovo**	**53.54**	**351**	P	P	12 26 07.6	-0.3
	1.1nm,0.4s,baz=314,slow=4.9,SNR=3.8						

*ISCJB **31** 12:23:46.0±2.8, 137S±0.1×1670E±0.2, h221km±21km, mb3.9/11, Error ellipse: s-maj=26.6km s-min=22.0km az=100.2*
*NEIC **31** 12:23:46.0±2.6, 1365S×167.10E, h210km±19km, mb4.2/7, Error ellipse: s-maj=23.1km s-min=15.2km az=216.0*
*IDC **31** 12:23:48.0±2.7, 1377S×16700E, h222km±23km, mb3.6/7, mb1 3.6/8, mb1mx3.5/15, mbtmp4.1/8, MS3.1/1, Ms1 3.1/1, ms1mx2.6/18, Error ellipse: s-maj=23.9km s-min=19.3km az=160.0*

ISC 31 12:23:47.5±2.8, 138S±02×1671E±02, h218km±20km, n19, σ0§67/19, mb3.9/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.28**	**184**	P	**Pn**	**12 25 44.4**	**+0.2**
	0.7nm,0.3s,baz=119,slow=22,SNR=16						
DZM				S	**S**	**12 27 17.3**	**-0.4**
	0.6nm,0.3s,baz=152,slow=18,SNR=2.3						
DZM				LR	LR	12 28 07.9	
	comp=Z,124nm,19.1s,baz=206,slow=31						
CTA	**Charters Tower**	**20.88**	**250**	*e*P	**P**	**12 28 09.5**	**-3.3**
	4.0nm,0.9s						
CTA	**Charters Tower**	**20.88**	**250**	P	**P**	**12 28 13.2**	**+0.4**
	4.1nm,0.7s,baz=90,slow=8.2,SNR=5.3						
CNB	**Canberra Magne**	**26.74**	**214**	*e*P	**P**	**12 29 07.8**	**+1.0**
	20nm,1.3s,mb4.6						
STKA	**Stephens Creek**	**29.48**	**228**	*e*P	**P**	**12 29 32.0**	**+0.9**
	2.5nm,0.3s,mb4.3						
STKA	**Stephens Creek**	**29.48**	**228**	P	**P**	**12 29 32.2**	**+1.1**
	3.0nm,0.4s,mb4.3,baz=52,slow=9.5,SNR=18						
TOO	**Toolangi**	**30.51**	**215**	*e*P	**P**	**12 29 41.2**	**+1.0**
	2.8nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**31.89**	**254**	P	**P**	**12 29 51.7**	**-0.6**
	0.6nm,0.7s,mb3.2,baz=82,slow=7.6,SNR=14						
WRA				PcP	PcP	12 32 37.7	+0.4
	1.1nm,1.0s,baz=7.9,slow=1.1,SNR=7.2						
ASAR	**Alice Springs**	**32.85**	**248**	P	**P**	**12 30 00.

CASY	**Casey**	**64.34**	**202**	*e*P	**P**	**12 33 59.0**	**-0.8**
	1.5nm,0.5s,mb3.9						
QSPA	**South Pole Qui**	**76.25**	**180**	*e*P	**P**	**12 35 11.6**	**-0.3**
	5.2nm,1.0s,mb4.1						
MAW	**Mawson**	**82.70**	**202**	P	**P**	**12 35 46.7**	**+0.1**
	2.1nm,0.7s,mb4.0,baz=112,slow=4.7,SNR=17						
MAW	**Mawson**	**82.70**	**202**	*e*P	**P**	**12 35 46.5**	**-0.2**
	2.3nm,0.6s,mb4.1						
MKAR	**Makanchi Array**	**96.39**	**316**	P	**P**	**12 36 51.5**	**0.0**
	0.6nm,0.6s,mb4.0,baz=86,slow=7.7,SNR=4.0						
MKAR	**Makanchi Array**	**96.39**	**316**	P	**P**	**12 36 51.5**	**0.0**
ARCES	**ARCESS Array B**	**119.29**	**345**	PKP	PKPdf	12 42 09.2	-1.4
	2.3nm,0.7s,baz=75,slow=1.5,SNR=8.3						
KEST	**Kesra**	**150.36**	**321**	PKPbc	PKPbc	12 43 13.3	+0.6
	1.6nm,0.7s,baz=339,slow=4.0,SNR=5.2						

*ISCJB **31** 13:04:36.0±0.6, 4295N±008×1342E±0.1, h500km, mb3.2/5, Error ellipse: s-maj=13.3km s-min=6.4km az=95.6*
*IDC **31** 13:04:36.1±1.9, 4313N×13368E, h449km±29km, mb2.8/5, mb1 2.9/8, mb1mx2.8/23, mbtmp3.6/8, Error ellipse: s-maj=35.4km s-min=15.7km az=64.0*
*JMA **31** 13:04:37.8±0.4, 4295N×13454E, h502km, M3.5*
ISC 31 13:04:38.4±0.8, 4295N±008×1345E±01, h500km, n22, σ1°32/27, mb3.2/5, Primorye

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**3.79**	**102**	P	**P**	**13 05 54.3**	**-0.8**
JOT	**Ohata**	**5.12**	**106**	P	**P**	**13 06 06.2**	**-0.2**
JHR	**Hokuryu**	**5.33**	**79**	P	**P**	**13 06 08.9**	**+0.5**
JWK2	**Keihoku**	**5.83**	**64**	P	**P**	**13 06 14.1**	**+1.0**
JRG	**Rokugo**	**5.84**	**125**	P	**P**	**13 06 14.1**	**+1.0**
JRG				*e*S	**S**	**13 07 31.9**	**+1.3**
ASAJ	**Asahikawa**	**6.01**	**76**	P	**P**	**13 06 15.6**	**+0.8**
	4.7nm,0.3s,baz=262,slow=4.4,SNR=34						
JMK	**Ichinoseki**	**6.47**	**126**	P	**P**	**13 06 19.1**	**-0.2**
JMK				*e*S	**S**	**13 07 41.7**	**-0.1**
JHK	**Hiroka**	**6.67**	**147**	P	**P**	**13 06 22.2**	**+1.0**
JMM	**Marumori**	**6.99**	**134**	P	**P**	**13 06 24.3**	**-0.2**
JMM				*e*S	**S**	**13 07 52.0**	**+0.7**
MJAR	**Matsushiro Arr**	**7.01**	**155**	P	**P**	**13 06 26.7**	**+2.0**
	0.3nm,0.3s,baz=331,slow=12,SNR=3.5						
JFK	**Kawauchi**	**7.41**	**137**	*e*S	**S**	**13 07 58.0**	**-1.2**
JHO	**Hitachi**	**7.87**	**142**	P	**P**	**13 06 32.5**	**-0.9**
JHO				*e*S	**S**	**13 08 05.0**	**-2.8**
JNY	**Yasuok**	**8.02**	**160**	P	**P**	**13 06 36.1**	**+1.1**
JYT	**Yasato**	**8.03**	**145**	P	**P**	**13 06 33.0**	**-2.0**
JYT				*e*S	**S**	**13 08 08.0**	**-2.7**
JIE	**Ise**	**8.72**	**168**	P	**P**	**13 06 43.3**	**+1.1**
BSO3	**Boso 3**	**9.39**	**148**	P	**P**	**13 06 48.9**	**-0.4**
SONM	**Songino Array**	**20.27**	**294**	P	**P**	**13 08 34.2**	**-5.3**
	0.1nm,0.3s,baz=79,slow=7.5,SNR=3.0						
MKAR	**Makanchi Array**	**36.63**	**295**	P	**P**	**13 10 57.4**	**-4.4**
	0.4nm,0.5s,mb3.1,baz=72,slow=10,SNR=3.6						
ARCES	**ARCESS Array B**	**56.53**	**337**	P	**P**	**13 13 31.1**	**-1.6**
	0.5nm,0.4s,mb3.2,baz=62,slow=7.9,SNR=5.9						
FINES	**FINESS Array B**	**61.06**	**329**	P	**P**	**13 14 01.5**	**-1.6**
	2.5nm,0.8s,mb3.7,baz=70,slow=9.0,SNR=4.0						
WRA	**Warramunga Arr**	**62.58**	**180**	P	**P**	**13 14 15.9**	**+2.8**
	0.2nm,0.4s,mb3.0,baz=353,slow=7.1,SNR=7.2						
ASAR	**Alice Springs**	**66.28**	**181**	P	**P**	**13 14 39.9**	**+3.2**
	0.2nm,0.6s,mb3.0,baz=349,slow=6.9,SNR=6.8						

KRSC 31 13:10:14, 5107N×15833E, h16km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**1.37**	**5**	*e*P	Pn	13 10 39.4	+1.0
RUS				*i* S	Sn	13 10 57.3	+1.1
GRL	**Gorelyy**	**1.49**	**354**	*e*P	Pn	13 10 42.0	+1.9
GRL				*i* S	Sn	13 11 01.7	+2.4
ALID	**Alaid**	**1.77**	**265**	*e*P	Pn	13 10 44.7	+0.8
ALID				*i* S	Sn	13 11 06.5	+0.4
PET	**Petropavlovsk**	**1.97**	**6**	*e*P	Pn	13 10 48.4	+1.7
PET				*i* S	Sn	13 11 13.1	+2.1
AVH	**Avacha**	**2.21**	**6**	*e*P	Pn	13 10 52.9	+2.9
AVH				*i* S	Sn	13 11 20.8	+3.8
SPN	**Mys Shipunski**	**2.28**	**27**	*e*P	Pn	13 10 53.6	+2.6
SPN				*i* S	Sn	13 11 21.7	+2.9
GNL	**Ganaly**	**2.64**	**355**	*e*P	Pn	13 10 58.4	+2.5
MKZ	**Mys Kozlova**	**4.05**	**29**	*e*P	Pn	13 11 17.4	+2.0
MKZ				*i* S	Sn	13 12 03.7	+1.2
KBTR	**Krutoberegovo**	**5.80**	**26**	*e*P	Pn	13 11 42.0	+2.7

*IDC **31** 13:22:32.1±0.4, 1129S×11839E, h0km, mb4.8/15, mb1 4.9/18, mb1mx4.9/21, mbtmp4.9/18, ML5.0/3, MS3.9/16, Ms1 3.8/16, ms1mx3.7/24, Error ellipse: s-maj=19.6km s-min=11.6km az=73.0*
*ISCJB **31** 13:22:33.1±1.1, 1138S±003×11840E±004, h21km±8km, mb5.0/65, MS3.9/23, Error ellipse: s-maj=7.1km s-min=4.6km az=100.9*
*MOS **31** 13:22:35.4±1.2, 1124S×11848E, h33km, mb5.2/27, Error ellipse: s-maj=11.9km s-min=6.6km az=113.7*
*NEIC **31** 13:22:37.1±0.2, 1135S×11847E, h35km, mb4.9/26, Error ellipse: s-maj=9.6km s-min=4.8km az=57.0*
NEIC Felt [III] at Sumbawa Besar.
*BJI **31** 13:22:37.1, 1140S×11850E, h35km, mB5.0, mb5.0, Ms4.4, Msz4.0*
ISC 31 13:22:36.3±1.1, 1139S±003×11840E±003, h30km±8km, h44km±2.6km; pP-P, n174, σ1°17/166, mb5.0/65, MS3.9/23, 10C-15D, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**2.53**	**48**	P	**Pn**	**13 23 17.0**	**+1.6**
	6μm,0.8s						
DNP	**Denpasar**	**4.14**	**310**	P	**Pn**	**13 23 37.7**	**+0.2**
	9μm,0.8s						
NBBI	**Negara**	**4.78**	**309**	P	**Pn**	**13 23 46.8**	**+0.5**
	2μm,1.0s						
KMMI	**Kalianget**	**6.14**	**314**	P	**Pn**	**13 24 05.8**	**+0.8**
	992nm,1.0s						
KRKI	**Karangkates**	**6.68**	**298**	P	**Pn**	**13 24 11.1**	**-1.3**
	3μm,0.7s						
BJII	**Banjamegara**	**9.47**	**294**	P	**Pn**	**13 24 49.5**	**-1.2**
	674nm,1.2s						
BJII	**Banjamegara**	**9.47**	**294**	⇓*e*P	**Pn**	**13 24 51.1**	**+0.4**
BJII				*i* S	**Sn**	**13 26 35.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**9.67**	**134**	*e*P	**Pn**	**13 24 51.7**	**-1.7**
	310nm,0.8s						
FITZ				*e*S	**Sn**	**13 26 32.2**	**-8.8**
FITZ	**Fitzroy Crossi**	**9.67**	**134**	Pn	**Pn**	**13 24 52.4**	**-1.0**
	17nm,0.3s,baz=324,slow=9.7,SNR=375						
FITZ				Sn	**Sn**	**13 26 32.5**	**-8.5**
	15nm,0.3s,baz=182,slow=20,SNR=7.7						
FITZ				LR	LR	13 28 42.3	
	comp=Z,721nm,19.6s,baz=320,slow=38						
MBWA	**Marble Bar**	**9.80**	**173**	*e*Pn	**Pn**	**13 24 53.3**	**-1.9**
	103nm,0.3s						
MBWA				*e*Sn	**Sn**	**13 26 31.7**	**-12**
JCJI	**Jatiwangi**	**11.13**	**295**	P	**Pn**	**13 25 11.0**	**-2.3**
	529nm,0.6s						
LEM	**Lembang**	**11.57**	**292**	P	**Pn**	**13 25 18.8**	**-0.6**
	212nm,1.1s						
CBJI	**Citeko**	**12.43**	**292**	P	**Pn**	**13 25 26.9**	**-4.3**
	861nm,0.9s						
KAKA	**Kakadu**	**13.79**	**97**	*e*P	**Pn**	**13 25 48.3**	**-1.5**
	88nm,0.6s						
KAKA				*e*S	**Sn**	**13 28 19.3**	**-2.6**
KLI	**Kotabumi**	**14.89**	**295**	P	**Pn**	**13 26 04.5**	**-0.2**
	148nm,1.3s						
TSM	**Tawau**	**15.59**	**358**	P	**Pn**	**13 26 22.9**	**+9.0**
SWI	**Sorong**	**16.50**	**52**	P	**Pn**	**13 26 23.9**	**-1.7**
	181nm,1.0s						
KKM	**Kota Kinabalu**	**17.45**	**353**	*e*P	**Pn**	**13 26 38.0**	**+0.5**
WRA	**Warramunga Arr**	**17.53**	**121**	P	**Pn**	**13 26 37.1**	**-1.3**
	4.8nm,0.3s,baz=300,slow=14,SNR=364						
WRA				S	**Sn**	**13 29 39.9**	**-13**
	2.4nm,0.3s,baz=293,slow=24,SNR=7.9						
WRA				LR	LR	13 34 00.1	
	comp=Z,443nm,18.8s,baz=290,slow=39						
WRAB	**Tennant Creek**	**17.54**	**121**	*d*P	**Pn**	**13 26 36.7**	**-1.8**
WRAB	**Tennant Creek**	**17.54**	**121**	*e*P	**Pn**	**13 26 36.4**	**-2.1**
	102nm,1.0s						
WRAB				*e*S	**Sn**	**13 29 38.2**	**-15**
WB2	**Warramunga Arr**	**17.54**	**121**	⇓*i*P	**Pn**	**13 26 36.0**	**-2.6**
WB2				*e*S	**Sn**	**13 29 40.2**	**-13**
ASPA	**Alice Springs**	**19.15**	**132**	*e*P	**Pn**	**13 26 59.0**	**+0.8**
ASPA				*e*S	**Sn**	**13 30 19.9**	**-12**
AS31	**Alice Springs**	**19.15**	**132**	*e*P	**Pn**	**13 26 59.0**	**+0.8**
AS31				*e*S	**Sn**	**13 30 19.9**	**-12**
ASAR	**Alice Springs**	**19.15**	**132**	P	**Pn**	**13 26 58.4**	**+0.3**
	4.0nm,0.3s,baz=316,slow=12,SNR=348						
ASAR				S	**Sn**	**13 30 19.1**	**-13**
	1.2nm,0.3s,baz=302,slow=23,SNR=4.7						
ASAR				LR	LR	13 34 14.8	
	comp=Z,346nm,20.7s,baz=334,slow=36						
ASAR	**Alice Springs**	**19.15**	**132**	P	**Pn**	**13 26 58.4**	**+0.2**
ASAR				S	**Sn**	**13 30 19.1**	**-13**
IPIL	**Ipil**	**19.50**	**12**	*e*P	**Pn**	**13 27 03.2**	**+0.8**
PAGZ	**Pagadian**	**19.74**	**15**	*e*P	**Pn**	**13 27 05.8**	**+0.6**
MATI	**Mati**	**19.82**	**24**	*e*P	**Pn**	**13 27 07.2**	**+1.1**
KGM	**Kluang**	**20.06**	**311**	P	**P**	**13 27 08.2**	**+1.1**
KLBR	**Kellerberrin**	**20.11**	**182**	*e*P	**P**	**13 27 08.5**	**+0.8**
	21nm,0.6s						
KLBR				*e*S	**S**	**13 30 30.4**	**-22**
BUKP	**Musuan**	**20.26**	**19**	*e*P	**P**	**13 27 11.1**	**+1.9**
BAKI	**Biak**	**20.29**	**61**	P	**P**	**13 27 11.5**	**+1.9**
	280nm,1.2s						
MUN	**Mundaring**	**20.59**	**185**	*e*P	**P**	**13 27 17.7**	**+4.9**
MUN				*e*S	**S**	**13 30 44.1**	**-17**
FORT	**Forrest**	**21.27**	**157**	⇑*i*P	**P**	**13 27 20.8**	**+0.6**
	56nm,0.5s,mb5.2						
FORT				*e*S	**S**	**13 31 02.8**	**-12**
NWAO	**Narrogin (SRO)**	**21.46**	**183**	P	**P**	**13 27 23.1**	**+0.8**
	18nm,0.6s,mb4.6,baz=352,slow=8.2,SNR=15						
NWAO				S	**S**	**13 31 05.6**	**-13**
	46nm,0.4s,baz=92,slow=17,SNR=9.9						
NWAO	**Narrogin (SRO)**	**21.46**	**183**	*e*P	**P**	**13 27 23.0**	**+0.7**
	33nm,0.8s,mb4.7						
NWAO				*e*S	**S**	**13 31 03.1**	**-16**
OCLP	**Ormoc**	**23.13**	**16**	*e*P	**P**	**13 27 40.9**	**+0.9**
JAY	**Jayapura**	**23.81**	**70**	P	**P**	**13 27 48.3**	**+1.7**
	70nm,1.0s,mb5.0						
PSI	**Prapat**	**23.96**	**305**	P	**P**	**13 27 48.7**	**+0.8**
	26nm,0.8s,mb4.7,baz=156,slow=10,SNR=13						
PSI				LR	LR	13 39 53.1	
	comp=Z,361nm,18.4s,MS3.9,baz=126,slow=44						
PSI	**Prapat**	**23.96**	**305**	P	**P**	**13 27 48.7**	**+0.8**
PSI				LR	LR	13 39 53.1	
KULM	**Kulim**	**24.22**	**312**	*e*P	**P**	**13 27 50.7**	**+0.3**
TSI	**Tuntungan**	**24.66**	**306**	P	**P**	**13 27 57.1**	**+2.7**
	212nm,0.8s,mb5.7						
TGY	**Tagaytay City**	**25.45**	**6**	P	**P**	**13 28 02.3**	**+0.8**
	186nm,0.4s,baz=27,slow=8.8,SNR=3.7						
CTA	**Charters Tower**	**28.13**	**111**	*e*P	**P**	**13 28 27.3**	**+1.6**
	5.2nm,0.7s,mb4.3						
CTA	**Charters Tower**	**28.13**	**111**	P	**P**	**13 28 27.5**	**+1.8**
	3.1nm,0.6s,mb4.1,baz=310,slow=7.9,SNR=4.8						
CTA				LR	LR	13 40 08.4	
	comp=Z,267nm,21.8s,MS3.8,baz=118,slow=38						
PMG	**Port Moresby**	**28.35**	**89**	LR	LR	13 41 09.9	
	comp=Z,226nm,19.1s,MS3.8,baz=68,slow=39						
PMG	**Port Moresby**	**28.35**	**89**	⇑*e*P	**P**	**13 28 29.9**	**+2.3**
STKA	**Stephens Creek**	**29.55**	**137**	*e*P	**P**	**13 28 38.4**	**+0.1**
	4.7nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**29.55**	**137**	P	**P**	**13 28 40.0**	**+1.7**
	2.1nm,0.5s,mb4.1,baz=320,slow=7.2,SNR=7.8						
STKA				LR	LR	13 40 59.6	
	comp=Z,456nm,21.1s,MS4.1,baz=118,slow=37						
QIZ	**Qiongzhong**	**31.38**	**344**	P	**P**	**13 28 58.3**	**+3.8**
QIZ				S	**S**	**13 34 04.8**	**+4.9**
QIZ				AMB	AMB		
	comp=Z,9.0nm,2.1s,mb4.2						
QIZ				LR	LR		
	comp=N,158nm,16.4s						
QIZ				LR	LR		
	comp=Z,182nm,17.2s,MS3.8						
TOO	**Toolangi**	**35.63**	**142**	*e*P	**P**	**13 29 34.2**	**+2.7**
	comp=Z,4.1nm,0.6s,mb4.5						
CNB	**Canberra Magne**	**36.82**	**135**	*e*P	**P**	**13 29 43.4**	**+1.8**
	comp=Z,29nm,1.4s,mb4.9						
GYA	**Guiyang**	**39.31**	**343**	⇑*i*P	**P**	**13 30 02.3**	**-0.3**
GYA				AP	pP	13 30 14.8	+3.4
GYA				XP	sP	13 30 20.0	+5.0
GYA				S	**S**	**13 35 59.5**	**-2.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,430nm,17.9s,MS4.5						
GYA				LR	LR		
	comp=E,380nm,17.6s,MS4.5						
GYA				LR	LR		
	comp=Z,340nm,17.0s,MS4.2						
KMI	**Kunming**	**39.37**	**337**	P	**P**	**13 30 04.3**	**+1.2**
KMI				AP	pP	13 30 15.8	+3.9
KMI				XP	sP	13 30 21.0	+5.5
KMI				PP	PP	13 31 43.3	+10
KMI				PPP		13 32 07.5	
KMI				S	**S**	**13 36 06.0**	**+3.4**
KMI				XS	sS	13 36 27.0	+10
KMI				SS	SS	13 38 58.0	+1.0
KMI				SSS		13 39 31.5	
KMI				AMB	AMB		
	comp=Z,17nm,1.2s,mb4.7						
KMI				AMB	AMB		
	comp=Z,95nm,6.5s						
KMI				LR	LR		
	comp=N,130nm,20.1s,MS4.0						
KMI				LR	LR		
	comp=E,130nm,15.9s,MS4.0						
KMI				LR	LR		
	comp=Z,156nm,15.9s,MS3.9						
SSE	**Sheshan**	**42.32**	**4**	P	**P**	**13 30 28.5**	**+1.1**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,130nm,3.8s						
NJ2	**Nanjing**	**43.20**	**1**	*e*P	**P**	**13 30 35.5**	**+1.0**
NJ2				AP	pP	13 30 48.0	+4.7
NJ2				XP	sP	13 30 53.3	+6.4
NJ2				PP	PP	13 32 18.8	+3.7
NJ2				S	**S**	**13 36 55.0**	**-4.3**
NJ2				XS	sS	13 37 16.0	+2.1
NJ2				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,280nm,4.1s						
NJ2				LR	LR		
	comp=N,270nm,19.9s						
NJ2				LR	LR		
	comp=E,550nm,37.7s						
NJ2				LR	LR		
	comp=Z,310nm,22.7s,MS4.2						
CD2	**Chengdu**	**44.35**	**342**	P	**P**	**13 30 43.5**	**-0.3**
CD2				AP	pP	13 30 56.0	+3.4
CD2				XP	sP	13 31 01.3	+5.1
CD2				PP	PP	13 32 29.0	+1.6
CD2				S	**S**	**13 37 15.8**	**-0.3**
CD2				XS	sS	13 37 36.5	+5.8
CD2				SS	SS	13 40 27.5	-7.7
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,70nm,5.8s						
CD2				LR	LR		
	comp=E,80nm,15.6s						
CD2				LR	LR		
	comp=Z,70nm,15.6s,MS3.7						
CBIJ	**Chichi jima**	**44.68**	**31**	P	**P**	**13 30 46.1**	**-0.3**
	comp=Z,86nm,0.9s,mb5.6,baz=263,slow=8.7,SNR=4.2						
XAN	**Xi'an**	**46.07**	**349**	P	**P**	**13 30 56.0**	**-1.4**
XAN				AP	pP	13 31 12.5	+6.2
XAN				AMB	AMB		
	comp=Z,25nm,0.9s,mb5.1						
LSA	**Lhasa**	**48.57**	**328**	P	**P**	**13 31 18.3**	**+1.4**
LSA	**Lhasa**	**48.57**	**328**	*e*P	**P**	**13 31 18.0**	**+1.1**
LSA				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
LSA	**Lhasa**	**48.57**	**328**	*e*P	**P**	**13 31 18.0**	**+1.2**
	comp=Z,18nm,0.8s,mb5.2						
HYB	**Hyderabad**	**48.67**	**305**	*i* P	**P**	**13 31 17.5**	**-0.2**
HYB				*e*		13 31 36.5	
HYB	**Hyderabad**	**48.67**	**305**	*e*P	**P**	**13 31 17.5**	**-0.2**
JHJ	**Hachijo jima 2**	**48.73**	**24**	LR	LR	13 52 49.6	
	comp=Z,85nm,19.6s,MS3.7,baz=162,slow=37						
LZH	**Lanzhou**	**49.18**	**344**	*e*P	**P**	**13 31 22.0**	**+0.4**
LZH				AP	pP	13 31 34.0	+3.5
LZH				XP	sP	13 31 38.0	+4.0
LZH				*e*S	**S**	**13 38 19.0**	**-6.2**
LZH				XS	sS	13 38 44.0	+4.1
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,62nm,6.4s						
LZH				LR	LR		
	comp=N,117nm,13.6s						
LZH				LR	LR		
	comp=Z,539nm,15.6s,MS4.7						
GUN	**Gumba**	**50.18**	**322**	*e*P	**P**	**13 31 29.8**	**+0.6**
	comp=Z,116nm,0.7s,mb6.0						
PKI	**Pulchoki**	**50.23**	**321**	*e*P	**P**	**13 31 29.7**	**+0.2**
	comp=Z,51nm,0.6s,mb5.7						
PKI	**Pulchoki**	**50.23**	**321**	*e*P	**P**	**13 31 29.7**	**+0.2**
PKI				pmax	pmax		
	comp=Z,51nm,0.6s,mb5.7						
DMN	**Daman**	**50.44**	**321**	*e*P	**P**	**13 31 31.4**	**+0.2**
	comp=Z,88nm,0.8s,mb5.8						
KKN	**Kakani**	**50.46**	**321**	*e*P	**P**	**13 31 31.5**	**+0.2**
	comp=Z,50nm,0.8s,mb5.6						
KKN	**Kakani**	**50.46**	**321**	*e*P	**P**	**13 31 31.5**	**+0.2**
KKN				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.6						
GKN	**Gorkha**	**51.01**	**321**	*e*P	**P**	**13 31 35.6**	**+0.1**
	comp=Z,57nm,0.5s,mb5.8						
MAJO	**Matsushiro**	**51.20**	**20**	*e*P	**P**	**13 31 35.4**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
MAJO	**Matsushiro**	**51.20**	**20**	*e*P	**P**	**13 31 35.4**	**-1.5**
	comp=Z,7.1nm,0.8s,mb4.7						
MAT	**Matsushiro**	**51.20**	**20**	P	**P**	**13 31 35.4**	**-1.5**
MJAR	**Matsushiro Arr**	**51.20**	**20**	P	**P**	**13 31 35.6**	**-1.3**
	comp=Z,9.8nm,0.9s,mb4.8,baz=195,slow=7.5,SNR=22						
MJAR				PcP	PcP	13 32 53.3	+1.4
	comp=Z,2.3nm,0.7s,baz=193,slow=4.1,SNR=5.2						
BJI	**Beijing**	**51.21**	**358**	*e*P	**P**	**13 31 36.3**	**-0.6**
BJI				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
KOLN	**Koldanda**	**51.50**	**320**	*e*P	**P**	**13 31 39.3**	**+0.2**
	comp=Z,76nm,0.8s,mb5.7						
HHC	**Hu-ho-hao-te**	**52.36**	**353**	*e*P	**P**	**13 31 48.0**	**+2.5**
HHC				AP	pP	13 32 03.5	+9.0
HHC				PCP	PcP	13 32 56.8	+0.5
HHC				PP	PP	13 33 50.0	+5.7
HHC				SCP	ScP	13 36 47.3	-3.9
HHC				PCS	PcS	13 36 54.8	+0.2
HHC				S	**S**	**13 39 10.3**	**+1.1**
HHC				SCS	ScS	13 41 28.8	-4.5
HHC				SS	SS	13 42 48.8	+1.7
HHC				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,64nm,5.7s						
HHC				LR	LR		
	comp=N,82nm,21.8s,MS3.9						
HHC				LR	LR		
	comp=E,99nm,19.9s,MS3.9						
HHC				LR	LR		
	comp=Z,72nm,20.9s,MS3.7						
SNY	**Shenyang**	**53.16**	**5**	⇓P	**P**	**13 31 50.5**	**-1.0**
SNY				AP	pP	13 32 01.5	+1.0
SNY				XP	sP	13 32 04.8	+0.8
SNY				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
GTA	**Gaotai**	**53.42**	**342**	P	**P**	**13 31 53.8**	**+0.5**
GTA				AP	pP	13 32 03.8	+1.4
GTA				XP	sP	13 32 10.3	+4.4
GTA				PCP	PcP	13 33 01.5	+1.2
GTA				AMB	AMB		
	comp=Z,14nm,1.6s,mb4.6						
CASY	**Casey**	**55.08**	**184**	*e*P	**P**	**13 32 05.0**	**-0.5**
CN2	**Changchun**	**55.30**	**6**	*e*P	**P**	**13 32 05.8**	**-1.2**
CN2				*e*XP	sP	13 32 23.5	+3.9
CN2				*e*S	**S**	**13 39 45.5**	**-3.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,100nm,17.0s,MS4.1						
CN2				LR	LR		
	comp=E,100nm,17.0s,MS4.1						
CN2				LR	LR		
	comp=Z,100nm,16.0s,MS4.0						
NDI	**New Delhi**	**56.31**	**316**	*ex*	x	13 32 11.5	
KUDL	**Kundal**	**56.47**	**315**	*e*P	**P**	**13 32 13.7**	**-1.7**
KUDL				*e*S	pP	13 32 23.7	-0.8
MDJ	**Mudanjiang**	**56.66**	**10**	P	**P**	**13 32 16.5**	**-0.2**
MDJ				AP	pP	13 32 28.0	+2.2
MDJ				XP	sP	13 32 36.3	+7.0
MDJ				PCP	PcP	13 33 12.8	+0.1
MDJ				PP	PP	13 34 22.5	-0.4
MDJ				SCP	ScP	13 37 07.5	-2.6
MDJ				PCS	PcS	13 37 13.5	0.0
MDJ				S	**S**	**13 40 11.0**	**+3.9**
MDJ				AMB	AMB		
	comp=Z,29nm,0.8s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,55nm,4.9s						
MDJ				LR	LR		
	comp=N,40nm,21.1s						
MDJ				LR	LR		
	comp=E,11nm,14.8s						
MDJ				LR	LR		
	comp=Z,41nm,16.9s,MS3.6						
MDJ	**Mudanjiang**	**56.66**	**10**	*e*P	**P**	**13 32 16.8**	**0.0**
	comp=Z,5.4nm,0.6s,mb4.8						
MDJ				*e*		13 32 27.8	
KLP	**Kalpa**	**57.46**	**319**	*ex*	x	13 31 31.8	
KLP				*ex*	x	13 32 39.3	
KLP				AML	AML	13 32 42.4	
	comp=N,50nm,0.7s						
KLP				AML	AML	13 32 42.6	
	comp=E,70nm,0.9s						
SMLA	**Simla**	**57.90**	**318**	*ex*	x	13 32 23.6	
SMLA				*ex*	x	13 32 42.7	
	comp=E,36nm,0.4s						
ASAJ	**Asahikawa**	**59.46**	**20**	P	**P**	**13 32 36.2**	**-0.2**
	comp=E,18nm,0.7s,mb5.2,baz=250,slow=14,SNR=13						
ASAJ	**Asahikawa**	**59.46**	**20**	P	**P**	**13 32 36.2**	**-0.2**
ASAJ				pmax	pmax

AAK					*e*				13 33 42.6		
AAK					pmax		pmax				
	comp=Z,9.0nm,0.9s,mb4.8										
AAK	**Ala-Archa**	**67.11**	**326**	*e*P		**P**			**13 33 26.4**	**-0.6**	
	comp=Z,8.9nm,0.9s,mb4.8										
AAK					*e*				13 33 42.6		
BOD	**Bodaibo**	**69.05**	**357**	⇓*i*P		**P**			**13 33 39.2**	**0.0**	
BOD					pmax		pmax				
	comp=Z,44nm,1.2s,mb5.3										
VNDA	**Vanda**	**69.74**	**171**	P		**P**			**13 33 43.9**	**+0.4**	
	comp=Z,4.4nm,1.0s,mb4.3,baz=304,slow=6.0,SNR=20										
KRAR	**Krasnoyarsk**	**70.45**	**345**	⇑*e*P		**P**			**13 33 46.5**	**-1.3**	
KRAR					pmax		pmax				
	comp=Z,19nm,0.6s,mb5.2										
SBA	**Scott Base**	**70.75**	**170**	*e*P		**P**			**13 33 50.7**	**+1.1**	
SBA					*e*		pP		13 33 58.3	-0.6	
SBA					pmax		pmax				
	comp=Z,12nm,1.4s,mb4.6										
SBA	**Scott Base**	**70.75**	**170**	*e*P		**P**			**13 33 50.7**	**+1.1**	
	comp=Z,12nm,1.4s,mb4.6										
SBA					*e*		pP		13 33 58.3	-0.6	
ZAL	**Zalesovo**	**71.05**	**340**	P		**P**			**13 33 50.1**	**-1.4**	
	comp=Z,14nm,0.6s,mb5.1,baz=334,slow=4.4,SNR=52										
ZAL					LR		LR		14 08 48.9		
	comp=Z,50nm,19.7s,MS3.8,baz=142,slow=39										
NVS	**Novosibirsk**	**72.32**	**340**	*e*P		**P**			**13 33 57.4**	**-1.7**	
NVS					*e*				13 34 13.9		
NVS					pmax		pmax				
	comp=E,9.0nm,1.1s										
NVS					pmax		pmax				
	comp=Z,16nm,1.1s,mb4.9										
NVS					pmax		pmax				
	comp=N,8.0nm,1.0s										
PET	**Petropavlovsk**	**72.80**	**24**	*d*iP		**P**			**13 34 02.8**	**+0.8**	
PET					pmax		pmax				
	comp=Z,61nm,1.7s,mb5.2										
YAK	**Yakutsk**	**73.72**	**6**	⇓*e*P		**P**			**13 34 06.8**	**-0.6**	
YAK					pmax		pmax				
	comp=Z,43nm,1.1s,mb5.3										
YAK					pmax		pmax				
	comp=N,22nm,1.6s										
YAK					pmax		pmax				
	comp=E,4.0nm,1.7s										
YAK	**Yakutsk**	**73.72**	**6**	*e*P		**P**			**13 34 06.7**	**-0.7**	
	comp=E,60nm,0.9s,mb5.5										
MA2	**Magadan**	**75.37**	**16**	*d*iP		**P**			**13 34 17.9**	**+0.9**	
MA2					*e*				13 34 24.1		
MA2					*e*				13 34 29.7		
MA2					*e*				13 34 34.6		
MA2					pmax		pmax				
	comp=Z,140nm,0.8s,mb5.9										
MA2					pmax		pmax				
	comp=N,40nm,0.7s										
SYO	**Syowa Base**	**75.43**	**201**	⇓*e*P		**P**			**13 34 17.0**	**-0.3**	
VOSK	**Vostochnaya**	**75.65**	**332**	P		**P**			**13 34 17.6**	**-1.0**	
VOSK					pmax		pmax				
	comp=Z,4.0nm,0.7s,mb4.5										
BVAR	**Borovoye Array**	**76.12**	**332**	P		**P**			**13 34 20.8**	**-0.5**	
	comp=Z,4.5nm,0.7s,mb4.5,baz=134,slow=6.4,SNR=29										
BVAR					LR		LR		14 10 57.5		
	comp=Z,42nm,20.8s,MS3.7,baz=123,slow=38										
BRVK	**Borovoye**	**76.19**	**332**	*e*P		**P**			**13 34 21.0**	**-0.7**	
BRVK					pmax		pmax				
	comp=Z,8.0nm,1.4s,mb4.5										
BRVK	**Borovoye**	**76.19**	**332**	*e*P		**P**			**13 34 20.9**	**-0.7**	
	comp=Z,7.9nm,1.4s,mb4.5										
CHKZ	**Chkalovo**	**76.45**	**333**	*e*P		**P**			**13 34 22.7**	**-0.4**	
CHKZ					pmax		pmax				
	comp=Z,5.0nm,0.8s,mb4.5										
CHKZ	**Chkalovo**	**76.45**	**333**	*e*P		**P**			**13 34 22.7**	**-0.5**	
	comp=Z,4.8nm,0.8s,mb4.5										
ZRNK	**Zerenda**	**76.71**	**332**	*e*P		**P**			**13 34 24.1**	**-0.5**	
ZRNK					pmax		pmax				
	comp=Z,11nm,0.6s,mb5.0										
ZRNK	**Zerenda**	**76.71**	**332**	*e*P		**P**			**13 34 24.1**	**-0.5**	
	comp=Z,11nm,0.6s,mb5.0										
SEY	**Seymchan**	**78.61**	**15**	*d*iP		**P**			**13 34 35.7**	**+0.5**	
SEY				*i* *PP		pP			13 34 52.7	+8.1	
QSPA	**South Pole Qui**	**78.62**	**180**	*e*P		**P**			**13 34 35.5**	**+0.2**	
	comp=Z,5.0nm,1.1s,mb4.4										
AB31	**Akbulak array**	**79.17**	**325**	*i* P		**P**			**13 34 38.0**	**-0.3**	
AB31					pmax		pmax				
	comp=Z,5.0nm,0.6s,mb4.6										
TIXI	**Tiksi**	**83.15**	**3**	*d*iP		**P**			**13 34 58.2**	**-1.2**	
TIXI					pmax		pmax				
	comp=Z,33nm,1.0s,mb5.3										
ARU	**Arti**	**83.65**	**331**	⇑*i*P		**P**			**13 35 00.7**	**-1.3**	
ARU					*e*				13 38 13.6		
ARU					*e*PPP				13 40 05.6		
ARU					*e*S		S		13 45 19.9	-2.6	
ARU					*e*SS		SS		13 50 43.6	-5.7	
ARU					pmax		pmax				
	comp=Z,14nm,1.3s,mb4.9										
ARU	**Arti**	**83.65**	**331**	*e*P		**P**			**13 35 01.5**	**-0.5**	
	comp=Z,4.5nm,0.8s,mb4.7										
GNI	**Garni**	**85.10**	**312**	LR		LR			14 15 50.9		
	comp=Z,31nm,20.2s,MS3.7,baz=328,slow=38										
GNI	**Garni**	**85.10**	**312**	⇑*e*P		**P**			**13 35 09.3**	**0.0**	
GNI					pmax		pmax				
	comp=Z,18nm,1.5s										
LSZ	**Lusaka**	**87.26**	**255**	*e*P		**P**			**13 35 22.2**	**+2.2**	
LSZ					*e*				13 35 38.0		
BOSA	**Boshof**	**87.35**	**242**	P		**P**			**13 35 22.2**	**+1.8**	
	comp=Z,7.9nm,0.9s,mb5.0,baz=132,slow=6.7,SNR=9.4										
BOSA					LR		LR		14 09 11.9		
	comp=Z,91nm,19.6s,MS4.2,baz=3.5,slow=32										
KIV	**Kislovodsk**	**87.76**	**316**	⇑*e*P		**P**			**13 35 20.7**	**-1.7**	
KIV					pmax		pmax				
	comp=Z,7.0nm,1.0s,mb4.8										
PPT	**Papeete**	**88.52**	**108**	*e*LR		LR			14 03 35.0		
	comp=Z,77nm,22.8s										
SNAA	**Sanae**	**88.55**	**196**	⇑*i*P		**P**			**13 35 26.0**	**-0.2**	
SNAA					*e*				13 35 38.4		
SNAA					*e*				13 35 42.7		
SNAA					*e*				13 35 50.4		
SNAA	**Sanae**	**88.55**	**196**	*e*P		**P**			**13 35 25.1**	**-1.1**	
SNAA					*e*				13 35 41.9		
ASF	**Jabal al Asfar**	**88.92**	**303**	LR		LR			14 16 29.8		
	comp=Z,49nm,20.8s,MS3.9,baz=218,slow=36										
MALT	**Malatya**	**89.25**	**309**	*e*P		**P**			**13 35 31.4**	**+2.0**	
MALT					pmax		pmax				
	comp=Z,12nm,1.3s,mb5.1										
MALT	**Malatya**	**89.25**	**309**	*e*P		**P**			**13 35 31.4**	**+2.0**	
	comp=Z,12nm,1.3s,mb5.1										
VNA3	**Neumayer Olymp**	**90.57**	**195**	⇓*i*P		**P**			**13 35 34.9**	**-0.7**	
VNA3					*e*				13 35 35.8		
VNA3					*e*				13 35 47.5		
VNA3					*e*				13 35 52.2		
VNA1	**Neumayer--Stat**	**90.58**	**196**	⇑*i*P		**P**			**13 35 37.1**	**+1.4**	
VNA1					*e*				13 35 48.3		
VNA1					*e*				13 35 52.4		
BRTR	**Keskin Array B**	**93.20**	**310**	P		**P**			**13 35 47.8**	**0.0**	
	comp=Z,2.4nm,0.8s,mb4.7,baz=129,slow=5.9,SNR=9.7										
BRTR					LR		LR		14 25 12.8		
	comp=Z,30nm,20.6s,MS3.7,baz=298,slow=40										
OBN	**Obninsk**	**94.62**	**325**	⇑*e*P		**P**			**13 35 51.7**	**-2.6**	
OBN					pmax		pmax				
	comp=Z,11nm,1.2s,mb5.2										
RKT	**Rikitea**	**100.47**	**116**	*e*LR		LR			14 09 14.6		
	comp=Z,73nm,26.0s										
FINES	**FINESS Array B**	**101.02**	**331**	P		Pdif			13 36 22.7	-0.4	
	comp=Z,3.9nm,0.9s,baz=96,slow=11,SNR=6.5										
ARCES	**ARCESS Array B**	**101.60**	**339**	P		Pdif			13 36 25.3	-0.4	
	comp=Z,4.6nm,1.0s,baz=90,slow=9.7,SNR=5.1										
YKA	**Yellowknife Ar**	**116.60**	**25**	PKP		PKPdf			13 41 16.8	-0.6	
	comp=Z,1.4nm,0.6s,baz=301,slow=2.4,SNR=7.2										
TORD	**Torodi Ar. Bea**	**118.27**	**279**	PKP		PKPdf			13 41 21.8	+1.2	
	comp=Z,1.5nm,0.6s,baz=49,slow=1.5,SNR=8.9										
NVAR	**Mina Array Bea**	**122.97**	**51**	PKP		PKPdf			13 41 31.8	+2.1	
	comp=Z,1.9nm,0.8s,baz=226,slow=0.8,SNR=14										
DBIC	**Dimbokro**	**123.83**	**270**	PKP		PKPdf			13 41 33.1	+1.8	
	comp=Z,3.7nm,0.6s,baz=104,slow=4.7,SNR=6.0										
CHMT	**Chamberlain Mo**	**124.05**	**40**	*e*PKPdf		PKPdf			13 41 32.4	+0.7	
HLID	**Hailey**	**124.44**	**45**	*e*PKPdf		PKPdf			13 41 34.6	+2.1	
EGMT	**Eagleton**	**125.77**	**38**	*e*PKPdf		PKPdf			13 41 36.2	+1.2	
IMW	**Indian Meadow**	**126.69**	**43**	*e*PKPdf		PKPdf			13 41 39.1	+2.3	
REDW	**Red Top Meadow**	**126.94**	**44**	*e*PKPdf		PKPdf			13 41 39.4	+2.1	
LOHW	**Long Hollow**	**127.02**	**43**	*e*PKPdf		PKPdf			13 41 39.4	+2.0	
MSU	**Marysvale**	**127.60**	**50**	*e*PKIKP		PKPdf			13 41 41.2	+2.7	
RSSD	**Black Hills**	**131.10**	**40**	*e*PKIKP		PKPdf			13 41 46.5	+1.3	
MNTX	**Cornudas Mount**	**134.91**	**56**	*e*PKPdf		PKPdf			13 41 54.7	+2.4	
JCT	**Junction City**	**139.84**	**56**	*e*PKIKP		PKPdf			13 42 01.6	+0.2	
LONY	**Lake Ozonia**	**145.06**	**16**	*e*PKPdf		PKPdf			13 42 10.3	-0.4	
WCI	**Wyandotte Cave**	**145.34**	**35**	*e*PKIKP		PKPdf			13 42 11.3	+0.1	
NCB	**Newcomb**	**145.75**	**16**	*e*PKPab		PKPab			13 42 13.3	+0.6	
WVT	**Waverly**	**145.82**	**40**	*e*PKP2		PKPab			13 42 12.7	-0.3	
PLAL	**Pickwick Lake**	**146.38**	**41**	*e*PKPdf		PKPdf			13 42 13.1	+0.1	
PLAL				*e*PKPab		PKPab			13 42 15.0	-0.1	
SSPA	**Standing Stone**	**147.52**	**23**	*e*PKPbc		PKPbc			13 42 18.0	+0.5	
BDFB	**Brasilia**	**149.96**	**207**	PKPbc		PKPbc			13 42 26.2	+2.4	
	comp=Z,12nm,0.6s,baz=127,slow=4.7,SNR=11										
BDFB	**Brasilia**	**149.96**	**207**	PKIKP		PKPbc			13 42 26.2	+2.5	
BDFB					pmax		pmax				
	comp=Z,12nm,0.6s										
LPAZ	**La Paz**	**151.75**	**167**	PKPbc		PKPbc			13 42 31.2	+3.3	
	comp=Z,6.0nm,0.9s,baz=107,slow=2.4,SNR=20										
LPAZ				PKPab		PKPab			13 42 39.7	+2.8	
	comp=Z,6.2nm,0.8s,baz=226,slow=4.2,SNR=9.2										

IDC ***31*** *13:49:47.5±0.7, 034S×124.96E, h0km, mb4.6/11, mb1 4.6/12, mb1mx4.5/20, mbtmp4.6/12, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/24, Error ellipse: s-maj=36.2km s-min=13.3km az=69.0*

NEIC ***31*** *13:49:52.6±0.3, 032S×125.15E, h35km, mb4.6/17, Error ellipse: s-maj=17.5km s-min=6.0km az=71.0*

BJI ***31*** *13:49:52.1, 033S×12534E, h41km, mB5.1, mb4.7, Ms4.3, Msz3.9*

MOS ***31*** *13:49:52.1±1.2, 032S×125.13E, h48km, mb5.0/14, Error ellipse: s-maj=23.7km s-min=8.6km az=114.8*

ISCJB ***31*** *13:49:55.7±1.2, 033S±005×12537E±007, h82km±12km, mb4.6/36, Error ellipse: s-maj=13.5km s-min=6.9km az=118.1*

ISC 31 13:49:57.6±1.2, 035S±006×12533E±007, h82km±12km, n66, σ1§24/68, mb4.6/36, 4C-6D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**4.38**	**139**	P		**Pn**	**13 51 00.8**	**-0.8**
	0.0nm,0.0s							
PCI	**Palu**	**5.52**	**264**	P		**Pn**	**13 51 18.7**	**+1.5**
	0.0nm,0.0s							
KAKA	**Kakadu**	**14.16**	**150**	*e*P		**Pn**	**13 53 10.8**	**-3.4**
	26nm,0.6s							
KSM	**Kuching**	**15.13**	**277**	*e*P		**Pn**	**13 53 27.3**	**+0.6**
KNA	**Kununurra**	**15.68**	**168**	*e*P		**Pn**	**13 53 31.9**	**-1.7**
	15nm,0.9s							
BJII	**Banjamegara**	**17.05**	**246**	P		**Pn**	**13 53 58.3**	**+7.6**
	31nm,1.4s							
FITZ	**Fitzroy Crossi**	**17.65**	**179**	*e*P		**Pn**	**13 53 56.4**	**-1.5**
	16nm,1.0s							
FITZ	**Fitzroy Crossi**	**17.65**	**179**	P		**Pn**	**13 53 55.6**	**-2.4**
	0.3nm,0.3s,baz=14,slow=13,SNR=15							
FITZ					LR	LR	14 01 01.8	
	comp=Z,131nm,20.6s,baz=354,slow=38							
CBJI	**Citeko**	**19.40**	**252**	P		**Pn**	**13 54 19.8**	**+0.8**
	121nm,1.3s							
WRAB	**Tennant Creek**	**21.38**	**156**	*c* iP		**P**	**13 54 37.2**	**-1.1**
WRAB	**Tennant Creek**	**21.38**	**156**	*e*P		**P**	**13 54 37.1**	**-1.2**
	36nm,0.8s,mb4.8							
WRA	**Warramunga Arr**	**21.38**	**156**	P		**P**	**13 54 37.2**	**-1.2**
	16nm,0.7s,mb4.5,baz=334,slow=11,SNR=65							
WB2	**Warramunga Arr**	**21.38**	**156**	*e*P		**P**	**13 54 36.7**	**-1.7**
MBWA	**Marble Bar**	**21.40**	**194**	*e*P		**P**	**13 54 38.3**	**-0.2**
	60nm,1.4s,mb4.7							
PMG	**Port Moresby**	**23.52**	**113**	P		**P**	**13 55 01.7**	**+1.6**
	16nm,1.1s,mb4.2,baz=295,slow=14,SNR=4.6							
AS31	**Alice Springs**	**24.63**	**161**	*e*P		**P**	**13 55 10.9**	**+0.6**
ASAR	**Alice Springs**	**24.63**	**161**	P		**P**	**13 55 10.8**	**+0.5**
	14nm,1.0s,mb4.4,baz=337,slow=8.0,SNR=67							
ASAR					PcP	PcP	13 58 48.2	+2.4
	0.9nm,0.6s,baz=345,slow=2.6,SNR=5.6							
ASPA	**Alice Springs**	**24.63**	**161**	*e*P		**P**	**13 55 10.9**	**+0.6**
JOW	**Kunigami**	**27.17**	**6**	P		**P**	**13 55 35.1**	**+1.9**
	23nm,0.8s,mb4.8,baz=172,slow=11,SNR=7.0							
CTAO	**Charters Tower**	**28.36**	**135**	*e*P		**P**	**13 55 45.1**	**+1.2**
CTAO					pmax	pmax		
	comp=Z,15nm,1.1s,mb4.4							
CTAO	**Charters Tower**	**28.36**	**135**	*e*P		**P**	**13 55 45.1**	**+1.2**
	comp=Z,15nm,1.1s,mb4.5							
FORT	**Forrest**	**30.38**	**175**	*e*P		**P**	**13 56 01.6**	**-0.1**
	comp=Z,21nm,0.6s,mb4.9							
CHTO	**Chiang Mai**	**32.16**	**308**	*e*P		**P**	**13 56 16.4**	**-1.0**
CHTO					*e**PP	pP	13 56 31.6	-4.7
CHTO					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2							
CHTO	**Chiang Mai**	**32.16**	**308**	*e*P		**P**	**13 56 16.4**	**-0.9**
	comp=Z,5.0nm,0.9s,mb4.2							
CHTO					*e*pP	pP	13 56 31.6	-4.8
NJ2	**Nanjing**	**32.80**	**350**	*e*P		**P**	**13 56 22.5**	**-0.5**
NJ2					PP	PP	13 57 35.5	-3.0
NJ2					S	**S**	**14 01 30.0**	**-4.1**
NJ2					AMB	AMB		
	comp=Z,30nm,0.6s,mb5.3							
NJ2					AMB	AMB		
	comp=Z,270nm,3.6s							
NJ2					LR	LR		
	comp=N,220nm,22.1s							
NJ2					LR	LR		
	comp=E,480nm,22.8s							
NJ2					LR	LR		
	comp=Z,380nm,23.5s							
STKA	**Stephens Creek**	**34.93**	**155**	*e*P		**P**	**13 56 42.5**	**+1.1**
	comp=Z,14nm,1.0s,mb4.7							
STKA	**Stephens Creek**	**34.93**	**155**	P		**P**	**13 56 43.0**	**+1.6**
	comp=Z,12nm,0.7s,mb4.9,baz=324,slow=8.3,SNR=22							
CD2	**Chengdu**	**37.23**	**329**	*e*P		**P**	**13 57 01.5**	**+0.4**
CD2					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
MAJO	**Matsushiro**	**38.60**	**17**	*e*P		**P**	**13 57 11.5**	**-1.1**
MAJO					pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5							
MAJO	**Matsushiro**	**38.60**	**17**	*e*P		**P**	**13 57 11.5**	**-1.1**
	comp=Z,3.1nm,0.4s,mb4.5							
MJAR	**Matsushiro Arr**	**38.60**	**17**	P		**P**	**13 57 12.2**	**-0.4**
	comp=Z,2.7nm,0.6s,mb4.2,baz=189,slow=8.0,SNR=12							
ARMA	**Armidale**	**38.97**	**143**	*e*P		**P**	**13 57 18.0**	**+2.3**
CNB	**Canberra Magne**	**41.38**	**150**	*e*P		**P**	**13 57 38.5**	**+2.9**
	comp=Z,9.3nm,0.8s,mb4.7							
LZH	**Lanzhou**	**41.40**	**333**	*e*P		**P**	**13 57 37.0**	**+1.3**
LZH					AP	pP	13 57 43.3	-12
LZH					AMB	AMB		
	comp=Z,21nm,1.3s,mb4.8							
TOO	**Toolangi**	**41.45**	**156**	⇓*i*P		**P**	**13 57 38.9**	**+2.7**
	comp=Z,10nm,0.8s,mb4.7							
TOO	**Toolangi**	**41.45**	**156**	⇓*i*P		**P**	**13 57 38.9**	**+2.7**
TOO					pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7							
HHC	**Hu-ho-hao-te**	**42.87**	**345**	*e*P		**P**	**13 57 48.5**	**+0.8**
HHC					PP	PP	13 59 32.3	+3.7
HHC					PCP	PcP	13 59 37.8	+0.5
HHC					PCS	PcS	14 03 29.0	-0.6
HHC					S	**S**	**14 04 06.5**	**+0.2**
HHC					SS	SS	14 07 14.0	-6.4
HHC					AMB	AMB		
	comp=Z,17nm,1.3s,mb4.6							
HHC					AMB	AMB		
	comp=Z,63nm,6.1s							
HHC					LR	LR		
	comp=N,131nm,19.0s							
HHC					LR	LR		
	comp=E,107nm,19.0s							
HHC					LR	LR		
	comp=Z,93nm,19.0s							
GTA	**Gaotai**	**45.95**	**332**	P		**P**	**13 58 13.5**	**+1.3**
GTA					AP	pP	13 58 19.3	-13
GTA					AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.5							
HIA	**Hailar**	**49.66**	**355**	*d* iP		**P**	**13 58 41.0**	**+0.1**
KLR	**Kul'dur**	**49.69**	**6**	*e*P		**P**	**13 58 37.2**	**-4.0**
ULN	**Ulaanbaatar**	**50.59**	**344**	*e*P		**P**	**13 58 49.7**	**+1.8**
ULN					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5							
ULN	**Ulaanbaatar**	**50.59**	**344**	*e*P		**P**	**13 58 49.6**	**+1.7**
	comp=Z,4.8nm,0.9s,mb4.5							
SONM	**Songino Array**	**50.74**	**344**	P		**P**	**13 58 48.3**	**-0.7**
	comp=Z,2.9nm,0.7s,mb4.5,baz=156,slow=8.5,SNR=18							
WMQ	**Urumqi**	**55.32**	**327**	*e*P		**P**	**13 59 24.0**	**+1.3**
WMQ					PP	PP	14 01 31.0	+3.9
WMQ					S	**S**	**14 06 59.0**	**-1.5**
WMQ					SS	SS	14 10 44.0	-1.9
WMQ					AMB	AMB		
	comp=Z,21nm,1.0s,mb5.1							
WMQ					AMB	AMB		
	comp=Z,114nm,4.0s							
WMQ					LR	LR		
	comp=N,105nm,14.0s							
WMQ					LR	LR		
	comp=E,168nm,14.0s							
WMQ					LR	LR		
	comp=Z,64nm,14.0s							
BOD	**Bodaibo**	**58.69**	**353**	*e*P		**P**	**13 59 46.4**	**-0.1**
BOD					pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8							
MKAR	**Makanchi Array**	**60.15**	**327**	P		**P**	**13 59 55.3**	**-1.3**
	comp=Z,3.5nm,0.5s,mb4.6,baz=115,slow=8.4,SNR=26							
YAK	**Yakutsk**	**62.30**	**2**	*d* iP		**P**	**14 00 10.9**	**-0.2**
YAK					pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0							
YAK	**Yakutsk**	**62.30**	**2**	*e*P		**P**	**14 00 10.7**	**-0.4**
	comp=Z,11nm,0.6s,mb5.1							
AAK	**Ala-Archa**	**62.48**	**320**	*d* iP		**P**	**14 00 12.8**	**+0.5**
AAK					pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.4							
ZAL	**Zalesovo**	**63.61**	**335**	P		**P**	**14 00 18.6**	**-1.2**
	comp=Z,1.4nm,0.8s,mb3.9,baz=350,slow=6.2,SNR=7.9							
ZAL					LR	LR	14 28 10.2	
	comp=Z,47nm,18.2s,baz=154,slow=36							
NVS	**Novosibirsk**	**64.89**	**335**	*e*P		**P**	**14 00 25.7**	**-2.5**
BRVK	**Borovoye**	**70.06**	**328**	*e*P		**P**	**14 00 59.6**	**-1.1**
BRVK					*e**PP	pP	14 01 18.6	-3.3
BRVK					pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.3							
BRVK	**Borovoye**	**70.06**	**328**	*e*P		**P**	**14 00 59.6**	**-1.1**
	comp=Z,5.8nm,1.3s,mb4.2							
BRVK					*e*pP	pP	14 01 18.6	-3.3
CHKZ	**Chkalovo**	**70.20**	**329**	*e*P		**P**	**14 01 00.2**	**-1.4**
CHKZ					pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1							
CHKZ	**Chkalovo**	**70.20**	**329**	*e*P		**P**	**14 01 00.2**	**-1.4**
	comp=Z,3.3nm,0.9s,mb4.2							
ZRNK	**Zerenda**	**70.69**	**328**	*e*P		**P**	**14 01 03.0**	**-1.6**
ZRNK					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4							
ZRNK	**Zerenda**	**70.69**	**328**	*e*P		**P**	**14 01 03.0**	**-1.5**
	comp=Z,4.0nm,0.6s,mb4.4							
TIXI	**Tiksi**	**71.91**	**1**	⇓*i*P		**P**	**14 01 12.6**	**+0.7**
TIXI					pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3							
AKTK	**Aktyubinsk**	**76.00**	**323**	P		**P**	**14 01 35.4**	**-0.4**
AKTO	**Aktyubinsk**	**76.00**	**323**	P		**P**	**14 01 35.4**	**-0.4**
	comp=Z,5.0nm,0.7s,mb4.4,baz=138,slow=6.3							
ARU	**Arti**	**77.64**	**328**	⇑*i*P		**P**	**14 01 46.4**	**+1.4**
ARU					*e*		14 01 56.1	
ARU					*e*		14 04 42.6	
ARU					*e*PPP		14 06 31.6	
ARU					*e*S	S	14 11 38.6	+8.4
ARU					*e*SS	SS	14 16 40.1	+8.8
ARU					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2							
ARU	**Arti**	**77.64**	**328**	*e*P		**P**	**14 01 43.5**	**-1.5**
	comp=Z,4.1nm,0.9s,mb4.2							
KIV	**Kislovodsk**	**84.94**	**314**	⇑*e*P		**P**	**14 02 27.5**	**+3.9**
KIV					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6							
OBN	**Obninsk**	**89.57**	**325**	*c* iP		**P**	**14 02 46.2**	**+0.3**
OBN					pmax	pmax		
	comp=Z,16nm,1.2s,mb5.0							
BRTR	**Keskin Array B**	**91.53**	**310**	P		**P**	**14 02 54.1**	**-0.9**
	comp=Z,1.0nm,0.9s,mb4.0,baz=38,slow=9.7,SNR=2.8							
LPAZ	**La Paz**	**158.79**	**142**	PKPab		PKPab	14 10 27.1	+5.2
	comp=Z,1.3nm,0.8s,baz=182,slow=10,SNR=7.3							

IDC ***31*** *14:16:17.4±1.0, 022S×12534E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/19, mbtmp3.9/8, ML3.5/1, Error ellipse: s-maj=98.3km s-min=16.3km az=67.0*

ISCJB ***31*** *14:16:22.5±4.0, 02S±01×1256E±02, h57km±37km, mb3.9/10, Error ellipse: s-maj=38.2km s-min=11.7km az=106.8*

NEIC ***31*** *14

	comp=N,408nm,0.1s									
ANCH	**Antofagasta**	**3.03**	**282**	⇑*i*P		**Pn**		**14 21 37.2**	**+1.4**
ANCH				*i* S		**Sn**		14 22 12.5	**-0.6**
CDCH	**Caldera**	**4.25**	**230**	*e*P		**Pn**		**14 21 50.6**	**-0.8**
CDCH				*i* S		**Sn**		**14 22 37.6**	**-3.4**
CDCH	**Caldera**	**4.25**	**230**	*e*P		**Pn**		**14 21 50.9**	**-0.6**
CDCH				*i* S		**Sn**		**14 22 38.0**	**-3.0**
LCO	**Las Campanas**	**5.59**	**213**	⇓*i*P		**Pn**		**14 22 08.8**	**-0.3**
LCO				*e*S		**Sn**		**14 23 10.9**	**-1.8**
TLL	**Tololo Astrono**	**6.61**	**208**	⇓*i*P		**Pn**		**14 22 23.9**	**+1.4**
TLL				*i* S		**Sn**		**14 23 35.9**	**-1.1**
TLL	**Tololo Astrono**	**6.61**	**208**	*e*P		**Pn**		**14 22 23.8**	**+1.3**
TLL				*i* S		**Sn**		**14 23 35.9**	**-1.1**
CFAA	**Coronel Fontan**	**7.26**	**187**	P		**Pn**		**14 22 32.6**	**+1.3**
	comp=N,0.0nm,0.3s,baz=108,slow=18,SNR=4.6									
CFAA				S		**Sn**		**14 23 51.9**	**-0.8**
	comp=N,0.1nm,0.3s,baz=66,slow=20,SNR=4.7									
LPAZ	**La Paz**	**8.09**	**354**	P		**Pn**		**14 22 43.5**	**+1.3**
	comp=N,0.5nm,0.3s,baz=158,slow=7.2,SNR=9.3									
LPAZ				S		**Sn**		**14 24 09.5**	**-3.1**
	comp=N,0.1nm,0.3s,baz=344,slow=20,SNR=1.9									
CPUP	**Villa Florida**	**9.13**	**104**	P		**Pn**		**14 22 56.2**	**+0.2**
	comp=N,0.3nm,0.3s,baz=262,slow=9.6,SNR=3.9									
CPUP	**Villa Florida**	**9.13**	**104**	*e*Pn		**Pn**		**14 22 56.0**	**+0.1**
CPUP				P				14 22 56.2	
CPUP				*e*				14 23 05.2	
SIV	**San Ignacio**	**10.12**	**36**	P		**Pn**		**14 23 07.4**	**-1.7**
	comp=N,0.3nm,0.3s,baz=189,slow=13,SNR=7.8									
TRQA	**Tornquist**	**14.35**	**163**	*e*Pn		**Pn**		**14 24 07.0**	**+3.5**
	comp=N,4.3nm,0.7s									
SAML	**Samuel**	**15.81**	**15**	P		**Pn**		**14 24 20.4**	**-1.2**
	comp=N,1.4nm,1.0s									
PLCA	**Paso Flores**	**16.55**	**189**	P		**Pn**		**14 24 34.2**	**+3.6**
	comp=N,0.2nm,0.3s,baz=352,slow=15,SNR=3.0									
PLCA	**Paso Flores**	**16.55**	**189**	*e*P		**Pn**		**14 24 32.3**	**+1.6**
	comp=N,2.5nm,0.7s									
BDFB	**Brasilia**	**19.98**	**68**	P		**P**		**14 25 07.5**	**-0.2**
	comp=N,0.7nm,0.3s,baz=238,slow=7.7,SNR=5.4									
ATAH	**Atahualpa**	**20.34**	**326**	LR		LR		14 32 54.3		
	comp=N,60nm,18.9s,baz=214,slow=36									
SNAA	**Sanae**	**59.06**	**161**	*e*P		**P**		**14 30 30.9**	**0.0**
	comp=N,0.8nm,0.7s,mb3.7									
TORD	**Torodi Ar. Bea**	**76.86**	**69**	P		**P**		**14 32 22.1**	**+0.1**
	comp=N,0.2nm,0.4s,mb3.1,baz=262,slow=5.4,SNR=5.6									
ASAR	**Alice Springs**	**128.05**	**205**	PKP		PKPdf		14 39 35.5	+0.9	
	comp=N,0.3nm,0.7s,baz=120,slow=1.6,SNR=5.7									
WRA	**Warramunga Arr**	**131.22**	**207**	PKP		PKPdf		14 39 41.8	+1.1	
	comp=N,0.2nm,0.5s,baz=159,slow=1.8,SNR=8.5									
MKAR	**Makanchi Array**	**146.92**	**40**	PKPbc		PKPbc		14 40 11.6	+0.3	
	comp=N,0.8nm,0.6s,baz=328,slow=2.6,SNR=7.1									
MKAR	**Makanchi Array**	**146.92**	**40**	PKPbc		PKPbc		14 40 11.6	+0.3	

*SKO **31** 14:38:27.9, 41.05N×20.27E, h10km, M2.3, ML2.6*
*ISCJB **31** 14:38:29.4±0.3, 41.16N±0.02×20.35E±0.03, h8km, Error ellipse: s-maj=4.1km s-min=2.3km az=86.4*
*THE **31** 14:38:29.5, 41.21N×20.36E, h0km, ML3.1*
*PDG **31** 14:38:30.0±0.1, 41.15N×20.14E, h7km*
*NEIC **31** 14:38:30.0, 41.15N×20.14E, h7km, MD2.8(PDG), After PDG.*
*CSEM **31** 14:38:30.8±0.1, 41.07N×20.44E, h8km, ML3.1, Error ellipse: s-maj=2.3km s-min=1.8km az=50.0*
*TIR **31** 14:38:32.5, 41.40N×20.10E, h0km, MI3.5*
ISC 31 14:38:29.4±0.5, 4113N±003×2030E±004, h0km±4km, n32, σ1§13/56, 5C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHR	**Ohrid**	**0.38**	**93**	*e*Pg		**Pg**	**14 38 35.6**	**-1.1**
OHR				*e*Sg		**Sg**	**14 38 41.9**	**+0.2**
OHR	**Ohrid**	**0.38**	**93**	*e*Pg		**Pg**	**14 38 35.6**	**-1.1**
OHR				*e*Sg		**Sg**	**14 38 41.9**	**+0.3**
OHR				*e*Lg			14 38 42.0	
	comp=N,384nm,0.3s							
OHR				*e*Lg			14 38 42.5	
	comp=E,526nm,0.5s							
OHR	**Ohrid**	**0.38**	**93**	*e*Pg		**Pg**	**14 38 35.6**	**-1.1**
OHR				*e*Sg		**Sg**	**14 38 41.8**	**+0.2**
TIR	**Tirane**	**0.39**	**304**	*e*Pg		**Pg**	**14 38 36.0**	**-0.9**
TIR				*e*Sg		**Sg**	**14 38 43.6**	**+1.6**
TIR	**Tirane**	**0.39**	**304**	*i* Pg		**Pg**	**14 38 36.0**	**-0.9**
PRZA	**Preza**	**0.56**	**303**	*i* Pg		**Pg**	**14 38 38.0**	**-2.2**
PRZA				*i* Sg		**Sg**	**14 38 45.0**	**-2.4**
KBN	**Korca**	**0.63**	**144**	*i* pg?		**Pg**	**14 38 41.2**	**-0.3**
KBN				*i* Sg		**Sg**	**14 38 51.9**	**+2.3**
KBN	**Korca**	**0.63**	**144**	*e*Pg		**Pg**	**14 38 41.2**	**-0.3**
KBN				*i* Sg		**Sg**	**14 38 51.9**	**+2.3**
BIA	**Bitola**	**0.78**	**98**	*e*Pg		**Pg**	**14 38 43.0**	**-1.5**
BIA				*e*Sg		**Sg**	**14 38 54.5**	**-0.1**
BIA				*e*Lg			14 38 59.0	
	comp=E,120nm,0.3s							
BIA				*e*Lg			14 38 59.2	
	comp=N,106nm,0.4s							
BIA	**Bitola**	**0.78**	**98**	*e*Pg		**Pg**	**14 38 42.9**	**-1.6**
BIA				*e*Sg		**Sg**	**14 38 54.5**	**-0.1**
FNA	**Florina**	**0.89**	**113**	*e*Pg		**Pg**	**14 38 45.3**	**-1.1**
FNA				*e*Sg		**Sg**	**14 38 59.2**	**+1.2**
VLO	**Vlora**	**0.90**	**223**	*i* Pg		**Pg**	**14 38 54.3**	**+7.6**
VLO				*i* Sg		**Sg**	**14 39 03.5**	**+5.2**
VLO	**Vlora**	**0.90**	**223**	*i* Sg		**Sg**	**14 39 03.5**	**+5.2**
LSK	**Leskovik**	**1.01**	**167**	*i* Pg		**Pg**	**14 38 58.0**	**+9.3**
LSK				*i* Sg		**Sg**	**14 39 11.0**	**+9.2**
SDA	**Shkodra**	**1.10**	**327**	*i* pg?		Px	14 39 03.0	
SDA				*i* Sg		Sx	14 39 17.0	
ULC	**Ulcinj**	**1.15**	**317**	⇑*i*Pg		**Pg**	**14 38 49.5**	**-1.9**
ULC				*e*Sg		**Sg**	**14 39 06.0**	**-0.2**
SKO	**Skopje**	**1.20**	**45**	*e*Pg		**Pg**	**14 38 52.7**	**+0.2**
SKO				*e*Sg		**Sg**	**14 39 08.2**	**+0.2**
SKO	**Skopje**	**1.20**	**45**	*e*Pg		**Pg**	**14 38 52.8**	**+0.3**
SKO				*e*Sg		**Sg**	**14 39 08.1**	**+0.1**
SKO				*e*Lg			14 39 11.2	
	comp=E,161nm,0.5s							
SKO				*e*Lg			14 39 11.2	
	comp=N,385nm,0.6s							
SKO	**Skopje**	**1.20**	**45**	*e*Pg		**Pg**	**14 38 52.7**	**+0.2**
SKO				*e*Sg		**Sg**	**14 39 08.1**	**+0.1**
KZN	**Kozani**	**1.39**	**126**	*e*P		**Pn**	**14 38 54.5**	**-1.5**
KEK	**Kerkira**	**1.47**	**195**	*e*P		**Pn**	**14 38 57.3**	**+0.2**
PVY	**Plav**	**1.48**	**351**	⇑*i*Pg		**Pn**	**14 38 56.7**	**-0.6**
PVY				*e*Sg		**Sg**	**14 39 19.8**	**+2.7**
TTG	**Podgorica**	**1.51**	**330**	⇓*i*Pg		**Pn**	**14 38 56.5**	**-1.2**
TTG				*i* Sg		**Sg**	**14 39 18.9**	**+0.9**
MEV	**Metsovon**	**1.52**	**152**	*e*Pg		**Pg**	**14 38 58.8**	**+0.2**
JAN	**Janina**	**1.53**	**164**	*e*P		**Pg**	**14 39 00.3**	**+1.5**
BUM	**Brajici-Budva**	**1.57**	**319**	⇓*i*Pg		**Pn**	**14 38 57.3**	**-1.2**
BUM				*e*Sg		**Sg**	**14 39 20.4**	**+0.5**
IVA	**Berane**	**1.77**	**350**	⇓*i*Pn		**Pn**	**14 39 01.3**	**+0.1**
IVA				*i* Sn		**Sg**	**14 39 26.8**	**+0.6**
HCY	**Herceg Novi**	**1.88**	**315**	⇓*i*Pn		**Pn**	**14 39 02.3**	**-0.5**
HCY				*e*Sn		**Sn**	**14 39 27.6**	**+0.4**
NKY	**Niksic**	**1.94**	**330**	⇓*i*Pn		**Pn**	**14 39 03.6**	**0.0**
NKY				*e*Sn		**Sn**	**14 39 29.8**	**+1.2**
BRY	**Bratogost**	**2.20**	**324**	⇑*i*Pn		**Pn**	**14 39 06.7**	**-0.5**
BRY				*e*Sn		**Sn**	**14 39 35.7**	**+0.6**
UPM	**Unac-Piva**	**2.31**	**334**	⇑*i*Pn		**Pn**	**14 39 09.2**	**+0.5**
UPM				*e*Sn		**Sn**	**14 39 38.6**	**+0.7**
UPM	**Unac-Piva**	**2.31**	**334**	⇑*i*Pn		**Pn**	**14 39 09.2**	**+0.5**
UPM				*e*Sn		**Sn**	**14 39 38.6**	**+0.7**

IDC 31 14:56:18.5±1.7, 001S×12598E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/16, mbtmp3.3/3, Error ellipse: s-maj=207.2km s-min=25.9km az=65.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.43**	**158**	P		P	15 01 07.8	-0.4
	0.8nm,0.7s,baz=336,slow=11,SNR=6.8							
ASAR	**Alice Springs**	**24.74**	**162**	P		P	15 01 42.4	+0.9
	0.2nm,0.5s,baz=348,slow=13,SNR=9.3							
ASAR				PcP		PcP	15 05 18.6	+0.2
	0.1nm,0.4s,baz=350,slow=2.0,SNR=8.2							
MKAR	**Makanchi Array**	**60.22**	**327**	P		P	15 06 28.5	+0.2
	0.4nm,0.5s,baz=123,slow=7.9,SNR=6.4							

CASC 31 15:19:05.6±2.4, 1128N×8562W, h177km±8km, MD3.6, 4C-4D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MADN	**Villa Maderas**	**0.15**	**35**	*e*P		Pn	15 19 30.0	+1.0
SSNN	**San Juan del S**	**0.22**	**271**	⇑*e*P		Pn	15 19 29.8	+0.6
SSNN				*e*S		Sn	15 19 48.8	+1.5
CONN	**Concepcion**	**0.28**	**359**	*e*P		Pn	15 19 29.8	+0.5
CRZC	**La Cruz**	**0.33**	**176**	*e*P		Pn	15 19 29.3	-0.2
CRZC				*e*S		Sn	15 19 49.1	+1.4
LIM1	**Limonal**	**0.69**	**148**	*e*P		Pn	15 19 32.7	+1.8
LIM1				*e*S		Sn	15 19 51.5	+1.1
TICN	**Ticuantepe**	**0.95**	**321**	*e*P		Pn	15 19 33.8	+1.2
MGAN	**Managua**	**1.05**	**325**	*e*S		Sn	15 19 56.2	+1.4
VCR	**Vista de Mar**	**1.15**	**180**	*e*P		Pn	15 19 34.6	+0.5
VCR				*e*S		Sn	15 19 56.4	+0.2
APYN	**Apoyeque**	**1.18**	**323**	*e*P		Pn	15 19 35.6	+1.2
BOA	**Boaco**	**1.19**	**356**	⇓*i*P		Pn	15 19 33.5	-1.1
COPN	**Copaltepe**	**1.30**	**313**	*e*P		Pn	15 19 35.3	-0.2
COPN				*e*S		Sn	15 20 00.4	+1.9
MOMJ	**Momotombo**	**1.43**	**321**	*e*P		Pn	15 19 36.8	+0.2
JCR	**Jicaral**	**1.51**	**161**	⇓*e*P		Pn	15 19 38.0	+0.6
JCR				*e*S		Sn	15 20 02.1	+0.2
LEON	**Leon**	**1.68**	**312**	*e*P		Pn	15 19 40.4	+1.4
LEON				*e*S		Sn	15 20 04.4	-0.4
CGA2	**Cerro Gallo 2**	**1.70**	**138**	⇑*e*P		Pn	15 19 40.3	+1.0
CGA2				*e*S		Sn	15 20 06.6	+1.3
PRS1	**Puriscal**	**1.82**	**135**	⇓*e*P		Pn	15 19 42.3	+1.7
LAJ	**Bijagual**	**2.04**	**134**	⇓*e*P		Pn	15 19 42.2	-0.7
LCR2	**La Lucha 2**	**2.21**	**134**	⇓*e*P		Pn	15 19 46.0	+1.3
LCR2				*e*S		Sn	15 20 16.4	+1.3
BUS	**Buena Vista**	**2.51**	**133**	⇑*e*P		Pn	15 19 49.9	+1.6
BUS				*e*S		Sn	15 20 23.3	+1.9

IDC 31 15:19:55.1±1.6, 032S×12525E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.8/4, Error ellipse: s-maj=182.4km s-min=23.4km az=63.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.43**	**156**	P		P	15 24 43.9	-0.9
	1.1nm,0.6s,baz=334,slow=11,SNR=11							
ASAR	**Alice Springs**	**24.68**	**161**	P		P	15 25 18.3	+0.7
	0.5nm,0.5s,baz=346,slow=12,SNR=9.3							
STKA	**Stephens Creek**	**34.98**	**155**	P		P	15 26 49.8	+0.8
	1.8nm,0.9s,baz=335,slow=12,SNR=4.7							
MKAR	**Makanchi Array**	**60.08**	**327**	P		P	15 30 04.0	+0.1
	0.3nm,0.3s,baz=124,slow=6.9,SNR=8.2							

*IDC **31** 15:22:17.7±1.6, 4390N×12858W, h0km, mb3.9/5, mb1 4.0/10, mb1mx3.8/27, mbtmp3.8/10, ML3.5/5, MS3.9/18, Ms1 3.8/18, ms1mx3.6/42, Error ellipse: s-maj=40.1km s-min=14.0km az=41.0*
*ISCJB **31** 15:22:19.5±0.3, 4405N±002×12834W±004, h10km, mb4.5/17, MS3.9/15, Error ellipse: s-maj=4.3km s-min=3.3km az=140.8*
*BJI **31** 15:22:21.6, 4508N×129.10W, h5km, mB5.1, mb4.8, Ms4.6, Msz4.1*
*NEIC **31** 15:22:21.6±0.9, 44.10N×128.37W, h10km, mb4.4/12, Error ellipse: s-maj=13.4km s-min=7.2km az=59.0*
*HRVD **31** 15:22:21.6±0.3, 4381N×128.74W, h14km±1km, MW4.8/65, Centroid moment Tensor Solution. LP body waves: s23,c29;Mantle waves: s65,c96; Half duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=.1.99±. 14; Mθθ 0.32±.09; Mϕϕ 1.66±.09; Mrθ -0.06±.23; Mϕθ 0.68±.06; Mϕr -0.41±. 17; Best double couple: Mo2.01100×10^16 NP1:ϕs206.00000°, δ39.00000°, λ-85.00000°. NP2: ϕs20.00000°, δ51.00000°, λ-94.00000°. Principal axes: T 1.9850, Plg6.0000°, Azm112.0000°; N 0.0450, Plg3.0000°, Azm22.0000°; P -2.0370, Plg83.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 31 15:22:21.2±0.4, 4410N±002×12839W±004, h10km, (h14km±1.2km:pP-P), n201, σ1§07/197, mb4.5/17, MS3.9/15, 60C-57D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**3.20**	**111**	*e*Pn		**Pn**	**15 23 07.1**	**-4.4**
KEBM				*e*Sn		**Sn**	**15 23 44.4**	**-5.2**
H02A	**Toledo**	**3.20**	**78**	⇓P		**Pn**	**15 23 10.4**	**-1.1**
	baz=3.2,SNR=9.8							
H02A				⇓S		**Sn**	**15 23 47.5**	**-2.3**
	baz=3.2							
I02A	**Mapleton**	**3.29**	**90**	⇓P		**Pn**	**15 23 11.4**	**-1.3**
	baz=3.3,SNR=14							
I02A				⇑S		**Sn**	**15 23 48.4**	**-3.5**
	baz=3.3							
RNO	**Roman Nose**	**3.36**	**92**	P		**Pn**	**15 23 12.5**	**-1.2**
MPOR	**Mary's Peak**	**3.50**	**82**	P		**Pn**	**15 23 14.9**	**-0.8**
J02A	**Umpqua**	**3.57**	**100**	⇓P		**Pn**	**15 23 14.7**	**-1.9**
	baz=3.5,SNR=26							
J02A				⇑S		**Sn**	**15 23 55.2**	**-3.5**
	baz=3.5							
COR	**Corvallis**	**3.68**	**81**	*e*Pn		**Pn**	**15 23 16.7**	**-1.4**
COR				*e*Sn		**Sn**	**15 23 59.4**	**-2.2**
I03A	**Eugene**	**3.69**	**90**	⇓P		**Pn**	**15 23 16.9**	**-1.3**
	baz=3.7,SNR=33							
I03A				⇑S		**Sn**	**15 23 58.2**	**-3.5**
	baz=3.7							
H03A	**Soap Creek Ran**	**3.70**	**79**	⇑P		**Pn**	**15 23 17.4**	**-1.0**
	baz=3.7,SNR=11							
H03A				⇑S		**Sn**	**15 24 00.6**	**-1.5**
	baz=3.7							
G03A	**Yamhill**	**3.84**	**70**	⇓P		**Pn**	**15 23 20.1**	**-0.2**
	baz=3.8							
DBO	**Dodson Butte**	**3.86**	**103**	P		**Pn**	**15 23 18.7**	**-1.9**
HSO	**Harness Mounta**	**3.88**	**97**	P		**Pn**	**15 23 19.5**	**-1.4**
J03A	**Ideyld Park**	**4.00**	**99**	⇑P		**Pn**	**15 23 20.8**	**-1.7**
	baz=4.0,SNR=37							
E03A	**Lebam**	**4.20**	**53**	⇓P		**Pn**	**15 23 26.1**	**+0.9**
	baz=4.2							
SSOR	**Sweet Springs**	**4.31**	**78**	P		**Pn**	**15 23 26.9**	**+0.1**
BBOR	**Butler Butte**	**4.33**	**104**	P		**Pn**	**15 23 25.6**	**-1.4**
G04A	**Mulino**	**4.36**	**73**	⇑P		**Pn**	**15 23 27.2**	**-0.3**
	baz=4.3							
HBO	**Huckleberry Mo**	**4.39**	**91**	P		**Pn**	**15 23 27.2**	**-0.6**
D03A	**Wishkah Elem.**	**4.43**	**45**	⇑P		**Pn**	**15 23 29.5**	**+1.0**
	baz=4.4							
H04A	**Detroit Lake**	**4.49**	**80**	⇓P		**Pn**	**15 23 28.4**	**-0.8**
	baz=4.5,SNR=14							
F04A	**Amboy**	**4.62**	**64**	⇑P		**Pn**	**15 23 31.3**	**+0.4**
	baz=4.6,SNR=12							
C03A	**Quillayute Air**	**4.68**	**33**	⇑P		**Pn**	**15 23 33.6**	**+1.7**
	baz=4.7							
VLMM	**Larch Mountain**	**4.74**	**70**	P		**Pn**	**15 23 33.5**	**+0.8**
FL2	**Flat Top 2**	**4.76**	**62**	P		**Pn**	**15 23 34.2**	**+1.2**
MTMW	**Mount Mitchell**	**4.78**	**64**	P		**Pn**	**15 23 34.3**	**+1.0**
YBH	**Yreka Blue Hor**	**4.79**	**118**	Pn		**Pn**	**15 23 31.4**	**-2.0**
	1.0nm,0.3s,baz=300,slow=11,SNR=8.8							
YBH					Sn	**Sn**	**15 24 28.9**	**-0.2**
	0.4nm,0.3s,baz=12,slow=20,SNR=2.8							
YBH					LR	LR	15 25 21.4	
	comp=Z,4μm,20.7s,baz=340,slow=38							
YBH	**Yreka Blue Hor**	**4.79**	**118**	*e*Pn		**Pn**	**15 23 31.3**	**-2.1**
YBH	**Yreka Blue Hor**	**4.79**	**118**	⇑P		**Pn**	**15 23 32.2**	**-1.2**
	baz=4.8							
BPO	**Bald Peter**	**4.84**	**81**	P		**Pn**	**15 23 34.8**	**+0.8**
VLL	**Laurance Lake**	**4.97**	**72**	P		**Pn**	**15 23 37.1**	**+1.2**
VFP	**Flag Point**	**5.09**	**74**	P		**Pn**	**15 23 38.6**	**+1.2**
B04A	**Port Angeles**	**5.22**	**39**	⇑P		**Pn**	**15 23 41.3**	**+2.0**
	baz=5.2							
F05A	**White Salmon**	**5.23**	**68**	⇑P		**Pn**	**15 23 40.1**	**+0.6**
	baz=5.2							
C04A	**Brinnon**	**5.24**	**44**	⇑P		**Pn**	**15 23 41.1**	**+1.6**
	baz=5.2							
J05A	**Fort Rock**	**5.25**	**96**	⇑P		**Pn**	**15 23 38.8**	**-0.9**
	baz=5.2							
E05A	**Randle**	**5.29**	**60**	⇓P		**Pn**	**15 23 41.2**	**+1.0**
	baz=5.3							
D05A	**Enumclaw**	**5.45**	**53**	⇓P		**Pn**	**15 23 42.1**	**-0.3**
	baz=5.4							
WDC	**Whiskeytown Da**	**5.58**	**127**	*e*Pn		**Pn**	**15 23 45.5**	**+1.2**
	12nm,1.0s							
WDC	**Whiskeytown Da**	**5.58**	**127**	⇓P		**Pn**	**15 23 42.7**	**-1.5**
	baz=5.6							
K05A	**Summer Lake**	**5.63**	**101**	⇓P		**Pn**	**15 23 43.6**	**-1.4**
	baz=5.6							
G06A	**Carlson Farm,**	**5.65**	**76**	⇓P		**Pn**	**15 23 44.9**	**-0.3**
	baz=5.6							
H06A	**Lindquist Farm**	**5.81**	**81**	⇑P		**Pn**	**15 23 47.1**	**-0.2**
	baz=5.8							
I06A	**Prineville**	**5.90**	**89**	⇑P		**Pn**	**15 23 48.3**	**-0.4**
	baz=5.9							
L05A	**Lakeview**	**5.90**	**108**	⇓P		**Pn**	**15 23 48.1**	**-0.5**
	baz=5.9,SNR=6.3							
J06A	**Christmas Vall**	**6.04**	**95**	⇑P		**Pn**	**15 23 50.0**	**-0.5**
	baz=6.0							
B05A	**Bryant**	**6.04**	**44**	⇓P		**Pn**	**15 23 52.4**	**+1.9**
	baz=6.0							
K06A	**Valley Falls**	**6.07**	**100**	⇓P		**Pn**	**15 23 50.5**	**-0.4**
	baz=6.0							
A04A	**Legoe Bay, Lum**	**6.07**	**38**	⇑P		**Pn**	**15 23 52.7**	**+1.8**
	baz=6.0							
G07A	**Ruggs Ranch, H**	**6.33**	**76**	⇓P		**Pn**	**15 23 54.2**	**-0.3**
	baz=6.3							
H07A	**Lands Inn, Kim**	**6.35**	**82**	⇑P		**Pn**	**15 23 54.0**	**-0.8**
	baz=6.3							
HAWA	**Hanford**	**6.66**	**67**	*e*Pn		**Pn**	**15 24 00.1**	**+1.0**
	1.0nm,0.7s							
K07A	**Rock Creek Ran**	**6.81**	**99**	⇑P		**Pn**	**15 24 00.5**	**-0.6**
	baz=6.8,SNR=7.1							
G08A	**Pilot Rock**	**6.83**	**77**	⇑P		**Pn**	**15 24 01.1**	**-0.3**
	baz=6.8							
ORV	**Oroville**	**6.86**	**129**	⇑P		**Pn**	**15 24 01.9**	**+0.1**
	baz=6.8							
MNRC	**McLaughlin Nat**	**6.86**	**137**	⇑P		**Pn**	**15 24 01.8**	**-0.1**
	baz=6.9							
L07A	**Adell**	**6.95**	**104**	⇑P		**Pn**	**15 24 01.9**	**-1.2**
	baz=6.9,SNR=12							
H08A	**Prairie City**	**6.99**	**83**	⇑P		**Pn**	**15 24 03.1**	**-0.5**
	baz=7.0							
OHCM	**Honcut**	**7.02**	**130**	*e*Pn		**Pn**	**15 24 04.3**	**+0.3**
F08A	**Pendleton**	**7.03**	**73**	⇓P		**Pn**	**15 24 03.2**	**-1.0**
	baz=7.0							
M07A	**Soldier Meadow**	**7.31**	**109**	⇓P		**Pn**	**15 24 06.8**	**-1.2**
	baz=7.3							
WVOR	**Wild Horse Val**	**7.31**	**100**	*e*Pn		**Pn**	**15 24 06.0**	**-2.1**
	7.0nm,0.8s							
K08A	**Mann Creek Ran**	**7.34**	**97**	⇓P		**Pn**	**15 24 07.4**	**-1.0**
	baz=7.3							
P05C	**Yuba Gap, Truc**	**7.54**	**127**	⇑P		**Pn**	**15 24 11.1**	**0.0**
	baz=7.5							
L08A	**Fields**	**7.59**	**101**	⇑P		**Pn**	**15 24 10.9**	**-0.9**
	baz=7.6							
J09A	**Fry Pan Ranch,**	**7.74**	**92**	⇓P		**Pn**	**15 24 13.7**	**-0.2**
	baz=7.7							
M08A	**Happy Creek Ra**	**7.83**	**106**	⇑P		**Pn**	**15 24 14.9**	**-0.2**
	baz=7.8							
LAVA	**Lava Cap Winer**	**7.84**	**130**	⇑P		**Pn**	**15 24 15.3**	**0.0**
	baz=7.8							
K09A	**Rome**	**7.89**	**96**	⇑P		**Pn**	**15 24 16.0**	**0.0**
	baz=7.9							
BMO	**Blue Mountains**	**7.97**	**81**	*e*Pn		**Pn**	**15 24 15.5**	**-1.5**
	7.6nm,1.2s							
PAHR	**Pah Rah Range**	**8.02**	**120**	*e*Pn		**Pn**	**15 24 20.4**	**+2.7**
	44nm,1.6s							
WCN	**Washoe City**	**8.04**	**124**	⇑P		**Pn**	**15 24 18.2**	**+0.2**
	baz=8.0							
O07A	**Toulon**	**8.09**	**116**	⇑P		**Pn**	**15 24 19.1**	**+0.4**
	baz=8.1							
BBB	**Bella Bella**	**8.10**	**1**	Pn		**Pn**	**15 24 20.6**	**+1.8**
	0.7nm,0.3s,baz=177,slow=15,SNR=5.7							
BBB						LR	LR	15 26 47.7	
	comp=Z,148nm,21.6s,baz=69,slow=32							
WENL	**Wente Brothers**	**8.19**	**140**	⇓P		**Pn**	**15 24 20.4**	**+0.4**
	baz=8.2							
R05C	**Kirkwood Meado**	**8.25**	**128**	⇓P		**Pn**	**15 24 21.6**	**+0.7**
	baz=8.2							
M09A	**Marrel Ranch,**	**8.48**	**105**	⇓P		**Pn**	**15 24 24.6**	**+0.5**
	baz=8.4							
CMB	**Columbia Colle**	**8.55**	**132**	*e*Pn		**Pn**	**15 24 24.9**	**-0.1**
	170nm,2.0s							
CMB	**Columbia Colle**	**8.55**	**132**	⇓P		**Pn**	**15 24 25.3**	**+0.3

baz=13
MSU Marysvale 13.40 109 *e*Pn **Pn** **15 25 33.6 +2.2**
SCI San Clemente I 13.50 142 ⇑P **Pn** **15 25 33.5 +0.8**
baz=14
W12A Cal Nev Ari 13.61 126 ⇑P **Pn** **15 25 35.2 +1.0**
baz=14
TMUT Trail Mountain 13.70 105 *e*Pn **Pn** **15 25 36.4 +0.9**
TMUT *e* 15 25 47.0
PDAR Pinedale Array 13.75 89 Pn **Pn** **15 25 39.1 +2.9**
0.0nm,0.3s,baz=280,slow=13,SNR=12
PDAR LR LR 15 31 08.7
comp=Z,1μm,18.5s,baz=281,slow=38
BELC Belle Mtn. 13.93 132 ⇓P **Pn** **15 25 38.4 -0.2**
baz=14
PFO Pinyon Flat Ob 13.99 134 ⇓P **Pn** **15 25 39.3 -0.1**
baz=14
NEE2 Needles Airpor 14.13 127 ⇓P **Pn** **15 25 41.5 +0.2**
baz=14
SRU San Rafael 14.26 104 *e*Pn **Pn** **15 25 44.6 +1.5**
79nm,1.2s
SRU *e* 15 25 52.9
W13A Hualapai Mount 14.33 124 ⇓P **Pn** **15 25 43.7 -0.3**
baz=14
DLBC Dease Lake 14.40 357 LR LR 15 30 20.8
comp=Z,152nm,20.3s,baz=100,slow=33
MONP Monument Peak 14.58 136 ⇓P **Pn** **15 25 47.1 -0.3**
baz=15
X13A Yucca 14.71 125 ⇑P **Pn** **15 25 49.8 +0.6**
baz=15
PDMCI Parker Dam,Lak 14.74 127 ⇓P **Pn** **15 25 49.7 +0.1**
baz=15
W14A Seligman 14.74 122 ⇑P **Pn** **15 25 50.1 +0.5**
baz=15
SWSC Sam W. Stewart 14.85 134 ⇓P **Pn** **15 25 50.0 -1.2**
baz=15
Y12C Blythe 14.92 129 ⇓P **Pn** **15 25 52.7 +0.6**
baz=15
DVTC Desert V Tower 14.92 136 ⇓P **Pn** **15 25 51.5 -0.6**
baz=15
W15A Williams 15.26 120 ⇓P **Pn** **15 25 56.8 +0.1**
baz=15
GLA Glamis 15.28 132 ⇑P **Pn** **15 25 56.5 -0.4**
baz=15
X14A Yava 15.36 124 ⇓P **Pn** **15 25 58.7 +0.8**
baz=15
WUAZ Wupatki 15.61 117 *e*Pn **Pn** **15 26 02.4 +1.1**
99nm,1.8s
WUAZ *e* 15 26 07.8
PV10 Paradox Valley 15.63 105 *e*Pn **Pn** **15 26 04.0 +2.5**
PV10 *e* 15 26 09.5
Y14A Wickenburg 15.66 125 ⇓P **Pn** **15 26 01.0 -0.9**
baz=16
RWWY Rawlins 15.71 91 *e*Pn **Pn** **15 26 01.9 -0.6**
49nm,1.6s
X15A Humboldt 15.74 122 ⇓P **Pn** **15 26 03.8 +0.9**
baz=16
PV01 Paradox Valley 16.07 105 *e*Pn **Pn** **15 26 08.6 +1.5**
PV01 *e* 15 26 13.0
Z14A Wintersburg 16.10 127 ⇑P **Pn** **15 26 07.2 -0.4**
baz=16
115A Sonoran Desert 16.99 127 ⇑P **Pn** **15 26 18.3 -0.7**
baz=17
PHWY Pilot Hill 17.08 91 *e*Pn **Pn** **15 26 19.2 -0.8**
116A Eloy 17.40 126 ⇓P **Pn** **15 26 23.8 -0.2**
baz=17
ISCO Idaho Springs 17.46 96 *e*Pn **Pn** **15 26 24.8 0.0**
66nm,1.9s
RSSD Black Hills 17.48 81 *e*Pn **Pn** **15 26 26.7 +1.6**
30nm,1.6s
TUC Tucson 18.12 125 *e*Pn **Pn** **15 26 33.2 +0.3**
15nm,1.3s
LAZ Ladron 19.05 113 *e*Pn **Pn** **15 26 45.0 +0.8**
ANMO Albuquerque 19.18 111 P **Pn** **15 26 45.4 -0.4**
0.1nm,0.3s,baz=318,slow=12,SNR=10
ANMO LR LR 15 34 33.8
comp=Z,1μm,19.1s,baz=254,slow=38
ANMO Albuquerque 19.18 111 *e*P **Pn** **15 26 46.4 +0.6**
63nm,2.0s
LENM Lemitar 19.30 114 *e*P **Pn** **15 26 47.9 +0.6**
LPM Los Pinos Moun 19.44 113 *e*P **Pn** **15 26 49.4 +0.5**
YKA Yellowknife Ar 20.11 19 P **P** **15 26 56.5 +1.5**
4.1nm,0.6s,baz=212,slow=12,SNR=7.8
YKA LR LR 15 34 19.0
comp=Z,79nm,20.5s,MS3.0,baz=205,slow=36
YKA Yellowknife Ar 20.11 19 P **P** **15 26 56.5 +1.5**
YKA LR LR 15 34 19.0
KDAK Kodiak Island 20.34 321 LR LR 15 32 49.0
comp=Z,781nm,21.0s,MS4.0,baz=138,slow=31
MNTX Cornudas Mount 21.89 117 *e*P **P** **15 27 14.5 +0.2**
11nm,1.3s,mb4.1
EGAK Eagle 21.93 345 *e*P **P** **15 27 15.0 +0.3**
ULM Lac du Bonnet 22.82 63 LR LR 15 36 31.4
comp=Z,288nm,19.6s,MS3.7,baz=323,slow=37
ECSD EROS,Sioux Fal 22.83 80 *e*P **P** **15 27 24.3 0.0**
INK Inuvik 24.42 355 P **P** **15 27 40.1 +0.3**
1.8nm,0.7s,mb3.6,baz=173,slow=12,SNR=3.6
INK Inuvik 24.42 355 *e*P **P** **15 27 39.5 -0.3**
3.8nm,1.0s,mb3.8
WMOK Wichita Mounta 24.60 102 *e*P **P** **15 27 42.3 +0.8**
51nm,1.1s,mb5.0
LPIG La Paz 24.84 138 LR LR 15 37 37.1
comp=Z,195nm,18.3s,MS3.6,baz=329,slow=37
MIAR Mount Ida 28.39 98 P **P** **15 28 23.1 +7.4**
40nm,1.4s,mb4.8
RES Resolute Bay 34.09 15 P **P** **15 29 04.5 -1.3**
7.3nm,0.9s,mb4.6
SCHQ Schefferville 40.17 52 LR LR 15 45 21.9
comp=Z,99nm,21.9s,MS3.6,baz=249,slow=34
ROSC El Rosal 61.33 113 LR LR 15 57 51.2
comp=Z,72nm,21.6s,MS3.8,baz=220,slow=35
PPT Papeete 64.35 202 LR LR 15 56 53.9
comp=Z,175nm,18.4s,MS4.3,baz=336,slow=32
MDJ Mudanjiang 67.78 311 P **P** **15 33 16.8 -2.3**
MDJ AP pP 15 33 20.0 -2.4
MDJ PCP PcP 15 33 44.3 -1.5
MDJ PP PP 15 35 45.3 -3.2
MDJ S S 15 42 13.8 -3.2
MDJ XS sS 15 42 19.0 -3.4
MDJ SCS ScS 15 43 14.0 -3.9
MDJ AMB AMB
comp=Z,3.0nm,0.9s,mb4.3
MDJ AMB AMB
comp=Z,48nm,5.8s
MDJ LR LR
comp=N,50nm,36.2s,MS3.9
MDJ LR LR
comp=E,109nm,31.6s,MS3.9
MDJ LR LR
comp=Z,159nm,36.2s,MS4.0
MJAR Matsushiro Arr 67.87 300 LR LR 16 00 23.7
comp=Z,96nm,19.3s,MS4.0,baz=130,slow=34
NOA NORSAR Array B 70.20 20 LR LR 16 04 40.9
comp=Z,19nm,19.2s,MS3.4,baz=295,slow=36
CN2 Changchun 70.54 312 *e*P **P** **15 33 35.8 -0.5**
CN2 *e*S S 15 42 46.3 -3.4
CN2 LR LR
comp=N,100nm,16.0s,MS4.3
CN2 LR LR
comp=E,100nm,16.0s,MS4.3
CN2 LR LR
comp=Z,100nm,17.0s,MS4.1
CBIJ Chichi jima 71.30 290 LR LR 16 00 18.2
comp=Z,115nm,21.5s,MS4.1,baz=343,slow=32
SNY Shenyang 72.90 312 ⇑P **P** **15 33 47.8 -2.7**
SNY *e*S S 15 43 11.8 -5.1
SNY AMB AMB
comp=Z,8.0nm,0.5s,mb4.9
SNY AMB AMB
comp=Z,88nm,14.7s
SNY LR LR
comp=N,182nm,20.4s
SNY LR LR
comp=Z,151nm,35.3s
SONM Songino Array 76.56 326 P **P** **15 34 10.9 -0.8**
comp=Z,2.1nm,0.9s,mb4.1,baz=38,slow=5.4,SNR=12
SONM LR LR 16 08 01.5
comp=Z,143nm,20.6s,MS4.3,baz=251,slow=36
BJI Beijing 78.07 315 *e*P **P** **15 34 14.0 -6.1**
BJI AMB AMB
comp=Z,4.0nm,0.8s,mb4.4
HHC Hu-ho-hao-te 79.74 318 *e*P **P** **15 34 28.0 -1.3**
HHC AP pP 15 34 32.3 -0.3
HHC XP sP 15 34 34.8 +1.0
HHC PCP PcP 15 34 36.5 -0.5
HHC PP PP 15 37 29.5 -0.8
HHC S S 15 44 28.0 -4.0
HHC XS sS 15 44 35.5 -1.9
HHC SKS 15 44 39.5
HHC SCS ScS 15 44 47.0 -6.5
HHC PS 15 45 12.5
HHC AMB AMB
comp=Z,9.0nm,1.0s,mb4.7
HHC AMB AMB
comp=Z,49nm,5.5s
HHC LR LR
comp=N,165nm,21.8s,MS4.4
HHC LR LR
comp=E,103nm,21.8s,MS4.4
HHC LR LR
comp=Z,106nm,23.7s,MS4.1
GERES GERESS Array B 81.66 24 LR LR 16 11 10.3
comp=Z,40nm,21.1s,MS3.8,baz=288,slow=36
BVAR Borovoye Array 81.92 349 P **P** **15 34 37.8 -3.2**
comp=Z,0.4nm,0.5s,mb3.6,baz=7.6,slow=4.5,SNR=4.6
ZRNK Zerenda 82.18 349 *e*P **P** **15 34 39.6 -2.7**
comp=Z,2.4nm,0.8s,mb4.2
ZRNK *e* 15 34 47.9
NJ2 Nanjing 82.56 308 *e*P **P** **15 34 44.5 +0.2**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
AKASG Malin Array Be 83.60 14 P **P** **15 34 47.1 -2.5**
comp=Z,0.2nm,0.3s,mb3.7,baz=336,slow=6.7,SNR=4.3
WMQ Urumqi 86.73 335 *e*P **P** **15 35 05.0 -0.4**
LZH Lanzhou 87.18 320 *e*P **P** **15 35 04.5 -3.1**
LZH AP pP 15 35 09.0 -1.9
LZH XP sP 15 35 11.5 -0.6
LZH AMB AMB
comp=Z,9.0nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,84nm,4.9s
CD2 Chengdu 91.46 317 *e*P **P** **15 35 24.3 -3.4**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.2
KMI Kunming 96.72 315 P **P** **15 35 52.0 +0.1**
KMI AP pP 15 35 57.3 +2.1
KMI XP sP 15 36 01.0 +4.6
KMI AMB AMB
comp=Z,6.0nm,0.9s,mb5.0
KMI AMB AMB
comp=Z,32nm,4.4s

*ISCJB **31** 15:59:28.6±0.9, 32.70S×0.10×138.20E±0.06, h16km, Error ellipse: s-maj=14.0km s-min=7.2km az=173.7*
*AUST **31** 15:59:30.3, 32.87S×138.17E, h16km, ML1.9*
*IDC **31** 15:59:33.1±6.0, 32.23S×138.38E, h0km, mb1 2.8/3, mb1mx2.8/12, mbtmp2.6/3, ML2.1/3, Error ellipse: s-maj=82.9km s-min=18.9km az=20.0*
ISC 31 15:59:28.9±3.1, 32.84S±0.07×138.21E±0.06, h11km±20km, n6, σ1§26/12, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBOO	**Buckleboo**	**1.81**	**270**	*e*P	**Pn**	**16 00 01.0**	**+1.0**
BBOO				*e*S	**Sn**	**16 00 22.7**	**-0.2**
	6.2nm,0.3s						
STKA	**Stephens Creek**	**3.02**	**72**	*e*P	**Pn**	**16 00 18.9**	**+2.3**
STKA				*e*S	**Sn**	**16 00 54.0**	**+1.2**
	1.5nm,0.3s						
STKA	**Stephens Creek**	**3.02**	**72**	Pn	**Pn**	**16 00 18.5**	**+1.8**
	0.1nm,0.3s,baz=258,slow=12,SNR=4.2						
STKA				Pg	**Pg**	**16 00 22.8**	**-4.1**
	0.5nm,0.3s,baz=267,slow=9.7,SNR=12						
STKA				Sn	**Sn**	**16 00 52.2**	**-0.6**
	0.5nm,0.3s,baz=284,slow=19,SNR=3.9						
STKA				Lg		16 01 01.4	
	0.7nm,0.3s,baz=311,slow=18,SNR=6.5						
ARPS	**Mount Arapiles**	**4.93**	**144**	*e*P	**Pn**	**16 00 43.7**	**+0.9**
ARPS				*e*S	**Sn**	**16 01 38.4**	**-1.4**
	2.1nm,0.2s						
ASAR	**Alice Springs**	**9.89**	**336**	Pn	**Pn**	**16 01 50.6**	**-0.4**
	0.0nm,0.3s,baz=158,slow=8.4,SNR=4.7						
ASAR				Sn	**Sn**	**16 03 35.3**	**-6.7**
	0.0nm,0.3s,baz=158,slow=22,SNR=3.4						
WRA	**Warramunga Arr**	**13.30**	**344**	Pn	**Pn**	**16 02 36.3**	**-1.3**
	0.0nm,0.3s,baz=160,slow=12,SNR=3.3						

*ISCJB **31** 16:06:48.9±0.7, 36.78N±0.05×456E±0.08, h10km, Error ellipse: s-maj=10.4km s-min=6.1km az=123.6*
*CRAAG **31** 16:06:48.6, 36.50N×463E, Ml2.9*
*CSEM **31** 16:06:48.6, 36.50N×463E, h0km, ML2.9, After ALG*
*MDD **31** 16:06:50.7±0.6, 36.65N×460E, h11km±5km, mb3.6/2, Error ellipse: s-maj=8.8km s-min=7.2km az=9.0, PRXIMO*
ISC 31 16:06:49.2±0.7, 36.73N±0.05×459E±0.08, h10km, n8, σ1§03/10, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKF	**Akfadou**	**0.10**	**190**	P	**Pg**	**16 06 52.8**	**+1.0**
AKET	**Djebel Ketaf**	**0.89**	**220**	P	**Pg**	**16 07 06.3**	**0.0**
ATAF	**Djebel Tarf**	**0.89**	**196**	P	**Pg**	**16 07 04.8**	**-1.6**
CKHR	**Kef el Ahmar**	**1.03**	**133**	P	**Pg**	**16 07 08.0**	**-1.1**
DFRA	**Djebel Bou Aff**	**1.05**	**100**	P	**Pg**	**16 07 10.0**	**+0.5**
ADJB	**Djebel Djouab**	**1.09**	**239**	P	**Pb**	**16 07 11.0**	**+0.9**
ETOS	**Mallorca**	**3.34**	**336**	P	**Pn**	**16 07 42.7**	**+1.2**
	1.0nm,0.1s,SNR=7.9						
ETOS				S	**Sn**	**16 08 20.0**	**-1.2**
	0.7nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.44**	**313**	P	**Pn**	**16 07 44.0**	**+1.1**
	1.4nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**16 08 22.7**	**-1.0**
	1.0nm,0.2s,SNR=7.9						

*NEIC **31** 16:19:38.8, 33.02S×72.16W, h34km, ML3.5(GUC), After GUC.*
GUC 31 16:19:38.8±0.9, 33.02S×72.16W, h34km±3km, MD3.7, ML3.5, 12C-7D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.43**	**91**	⇓*i*P		16 19 47.8	-0.6
IHA				*i* S		16 19 54.4	-0.7
LCCH	**Las Cruces**	**0.67**	**133**	⇑*i*P		16 19 51.6	-0.4
LCCH				*i* S		16 20 01.3	0.0
PACH	**Papudo**	**0.78**	**52**	⇑*i*P		16 19 53.7	+0.4
PACH				*i* S		16 20 04.3	+0.5
ROCH	**El Roble**	**0.97**	**88**	⇑*i*P		16 19 56.4	+0.5
ROCH				*i* S		16 20 09.9	+1.4
LNV	**Longovilo**	**1.12**	**146**	⇑*i*P		16 19 58.5	+0.3
LNV				*i* S		16 20 12.8	+0.3
TACH	**Talagante**	**1.20**	**122**	⇓*i*P		16 20 00.3	+1.0
TACH				*i* S		16 20 16.1	+1.8
RCDM	**Rinconada Maip**	**1.23**	**113**	⇑*i*P		16 20 00.3	+0.8
RCDM				AML	AML	16 20 23.3	
	comp=N,985nm,0.2s						
PEL	**Peldehue**	**1.24**	**96**	⇑*i*P		16 20 01.3	+1.5
PEL				*i* S		16 20 18.4	+3.0
PEL				AML	AML	16 20 24.7	
	comp=E,2μm,0.5s						
PEL	**Peldehue**	**1.24**	**96**	⇑*i*P		16 20 01.3	+1.5
PEL				*i* S		16 20 18.4	+3.0
CHNG	**Los Chungos**	**1.26**	**26**	⇑*i*P		16 20 00.6	+0.5
CHNG				*i* S		16 20 17.1	+1.3
PTCH	**Petorca**	**1.28**	**54**	*i* P		16 20 02.0	+1.7
PTCH				*i* S		16 20 18.4	+2.1
PTCH				AML	AML	16 20 22.1	
	comp=N,2μm,0.3s						
PTCH	**Petorca**	**1.28**	**54**	*i* P		16 20 02.0	+1.7
PTCH				*i* S		16 20 18.4	+2.1
SAN	**Santiago**	**1.33**	**109**	AML	AML	16 20 30.4	
	comp=N,845nm,0.6s						
STL	**Santa Lucia**	**1.34**	**109**	⇓*i*P		16 20 02.3	+1.2
STL				*i* S		16 20 20.1	+2.4
JACH	**Jahuel**	**1.36**	**76**	⇑*i*P		16 20 02.7	+1.3
JACH				*i* S		16 20 20.4	+2.1
ANTU	**Antumapu**	**1.39**	**114**	⇑*i*P		16 20 03.5	+1.7
CLCH	**Cerro Calan**	**1.41**	**106**	⇓*i*P		16 20 04.0	+1.9
CLCH				*i* S		16 20 23.2	+3.7
CLCH				AML	AML	16 20 28.8	
	comp=N,1μm,0.6s						
PCH	**Pirque**	**1.50**	**114**	⇓*i*P		16 20 05.3	+1.9
PCH				*e*S		16 20 25.7	+3.9
CHCH	**Chadas Angostu**	**1.56**	**126**	*i* P		16 20 05.8	+1.7
CHCH				*i* S		16 20 25.4	+2.3
FCH	**Farellones**	**1.60**	**102**	⇑*i*P		16 20 06.9	+2.3
FCH				*i* S		16 20 27.9	+3.8
FCH				AML	AML	16 20 34.1	
	comp=N,944nm,0.7s						
SJCH	**San Jose de Ma**	**1.63**	**113**	*e*P		16 20 06.6	+1.4
SJCH				*i* S		16 20 28.5	+3.5
SJCH				AML	AML	16 20 32.9	
	comp=N,713nm,1.0s						
SJCH	**San Jose de Ma**	**1.63**	**113**	*e*P		16 20 06.6	+1.4
SJCH				*i* S		16 20 28.5	+3.5
CACH	**El Canelo**	**1.70**	**131**	⇑*i*P		16 20 08.3	+2.2
CACH				*i* S		16 20 30.4	+3.7
SFDO	**San Fernando**	**1.86**	**149**	⇓*i*P		16 20 09.4	+1.2
SFDO				*i* S		16 20 32.8	+2.3
CICH	**Cipreses**	**1.95**	**132**	⇓*i*P		16 20 11.4	+2.0
CICH				*i* S		16 20 36.1	+3.4
TLL	**Tololo Astrono**	**3.07**	**22**	AML	AML	16 21 22.7	
	comp=N,357nm,0.6s						

*ISCJB **31** 16:20:30.4±0.5, 2431S×0.03×6702W±0.04, h148km±4km, mb4.9/82, Error ellipse: s-maj=6.1km s-min=4.3km az=142.7*
*MOS **31** 16:20:32.2±1.1, 2426S×6709W, h163km, mb5.0/34, Error ellipse: s-maj=14.5km s-min=7.5km az=112.0*
*GUC **31** 16:20:33.3±0.8, 2442S×6751W, h190km, ML5.7*
*IDC **31** 16:20:34.4±0.6, 2423S×6701W, h173km±5km, mb4.5/21, mb1 4.7/28, mb1mx4.6/30, mbtmp5.0/28, MS3.7/2, Ms1 3.7/2, ms1mx3.0/25, Error ellipse: s-maj=10.9km s-min=8.2km az=68.0*
*HRVD **31** 16:20:35.3±0.3, 2447S×6735W, h190km±2km, MW5.1/71, Centroid moment Tensor Solution. LP body waves: s36,c46; Mantle waves: s71,c100; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.82±.15; $M_{\theta\theta}$-0.41±.20; $M_{\phi\phi}$5.23±.25; $M_{r\theta}$1.66±.12; $M_{\theta\phi}$-0.66±.17; $M_{\phi r}$-2.83±.17; Best double couple: $M_0$6.04500×10^{16} NP1:ϕ_s187.00000°, δ31.00000°, λ-67.00000°. NP2: ϕ_s340.00000°, δ62.00000°, λ-104.00000°. Principal axes: T 6.1480, Plg16.0000°, Azm80.0000°; N -0.2000, Plg12.0000°, Azm347.0000°; P -5.9420, Plg70.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **31** 16:20:35.3±0.2, 2422S×6694W, mb5.0/70 Error ellipse: s-maj=7.2km s-min=4.3km az=55.0*
*BJI **31** 16:20:35.3, 2420S×6690W, h182km, mB5.0*
ISC 31 16:20:31.8±0.4, 2431S±0.03×6703W±0.04, h147km±3km, h183km±1.4km; pP-P, n456, σ0§77/391, mb4.9/82, 75C-139D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.42**	**314**	P	**Pn**	**16 21 14.8**	**+3.1**
	695nm,0.3s,baz=139,slow=20,SNR=3704						
LVC				S	**Sn**	**16 21 45.3**	**+5.7**
	3μm,0.3s,baz=135,slow=20,SNR=16						
LVC	**Limon Verde**	**2.42**	**314**	*e*Pn	**Pn**	**16 21 14.2**	**+2.5**
LVC				*e*Sn	**Sn**	**16 21 44.3**	**+4.7**
CPN1	**Cerro Paranal**	**3.09**	**264**	⇑*i*P	**Pn**	**16 21 20.7**	**+0.6**
CPN1				*i* S	**Sn**	**16 21 55.9**	**+0.1**
CPN1				AML	AML	16 21 57.6	
	comp=E,19μm,0.4s						
CPN1				AML	AML	16 22 01.9	
	comp=N,12μm,0.8s						
ANCH	**Antofagasta**	**3.15**	**281**	⇑*i*P	**Pn**	**16 21 22.0**	**+1.0**
ANCH				*i* S	**Sn**	**16 21 58.1**	**+0.8**
ANCH				AML	AML	16 22 00.1	
	comp=N,21μm,0.4s						
ANCH				AML	AML	16 22 02.0	
	comp=E,14μm,0.4s						
ANCH	**Antofagasta**	**3.15**	**281**	⇑*i*P	**Pn**	**16 21 22.0**	**+1.0**
ANCH				*i* S	**Sn**	**16 21 58.1**	**+0.8**
CPCH	**Copiapo**	**4.26**	**224**	⇑*i*P	**Pn**	**16 21 35.1**	**-0.3**
CPCH				*i* S	**Sn**	**16 22 23.8**	**-0.2**
CDCH	**Caldera**	**4.39**	**230**	*e*P	**Pn**	**16 21 35.3**	**-1.7**
CDCH				*i* S	**Sn**	**16 22 23.2**	**-3.9**
VACH	**Vallenar**	**5.40**	**217**	⇓*i*P	**Pn**	**16 21 51.1**	**+0.7**
VACH				*i* S	**Sn**	**16 22 50.8**	**-0.7**
CFAA	**Coronel Fontan**	**7.34**	**188**	P	**Pn**	**16 22 17.2**	**+0.9**
	comp=E,2.3nm,0.3s,baz=354,slow=12,SNR=8.0						
CFAA				S	**Sn**	**16 23 35.2**	**-3.0**
	comp=E,5.2nm,0.3s,baz=115,slow=21,SNR=4.9						
LPAZ	**La Paz**	**8.05**	**352**	P	**Pn**	**16 22 27.8**	**+2.0**
	comp=E,14nm,0.3s,baz=158,slow=8.4,SNR=292						
LPAZ				S	**Sn**	**16 23 55.3**	**-0.1**
	comp=E,3.4nm,0.3s,baz=60,slow=20,SNR=3.4						
LPAZ	**La Paz**	**8.05**	**352**	P	**Pn**	**16 22 27.8**	**+2.0**
LPAZ				S	**Sn**	**16 23 55.3**	**-0.1**
LPAZ				pmax	pmax		
	comp=Z,14nm,0.3s						
LPAZ				smax			
	comp=N,3.0nm,0.3s						
LPAZ	**La Paz**	**8.05**	**352**	*e*Pn	**Pn**	**16 22 27.4**	**+1.6**
	comp=N,36nm,0.4s						
LPAZ				*e*Sn	**Sn**	**16 23 54.2**	**-1.3**
CPUP	**Villa Florida**	**9.01**	**105**	P	**Pn**	**16 22 39.3**	**+0.7**
	comp=N,5.1nm,0.3s,baz=268,slow=12,SNR=127						
SIV	**San Ignacio**	**9.99**	**35**	P	**Pn**	**16 22 51.8**	**+0.1**
	comp=N,9.7nm,0.3s,baz=240,slow=12,SNR=440						
SIV				S	**Sn**	**16 24 32.6**	**-10**
	comp=N,1.7nm,0.3s,baz=231,slow=17,SNR=2.6						
TRQA	**Tornquist**	**14.36**	**164**	*e*Pn	**Pn**	**16 23 46.5**	**-1.8**
	comp=N,159nm,0.7s						
TRQA				*e*Sn	**Sn**	**16 26 30.4**	**+3.0**
NNA	**Nana**	**15.39**	**321**	P	**Pn**	**16 24 01.5**	**+0.3**
	comp=N,1.9nm,0.3s,baz=165,slow=13,SNR=6.7						
NNA				S	**S**	**16 26 45.9**	**-6.8**
	comp=N,2.1nm,0.3s,baz=240,slow=19,SNR=2.0						
NNA	**Nana**	**15.39**	**321**	*e*Pn	**Pn**	**16 24 00.4**	**-0.7**
	comp=N,101nm,1.3s						
SAML	**Samuel**	**15.72**	**14**	*e*Pn	**Pn**	**16 24 04.7**	**-0.4**
	comp=N,60nm,0.9s						
PLCA	**Paso Flores**	**16.64**	**189**	P	**Pn**	**16 24 16.4**	**0.0**
	comp=N,2.4nm,0.3s,baz=8.6,slow=13,SNR=42						
PLCA	**Paso Flores**	**16.64**	**189**	P	**Pn**	**16 24 16.4**	**+0.1**
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PLCA	**Paso Flores**	**16.64**	**189**	*e*P	**Pn**	**16 24 15.9**	**-0.5**
	comp=Z,110nm,0.7s						
PLCA				*e*		16 24 23.8	
PLCA				*e*S	**S**	**16 27 35.7**	**+14**
BDFB	**Brasilia**	**19.83**	**68**	P	**P**	**16 24 51.7**	**+0.6**
	comp=Z,15nm,0.3s,baz=249,slow=10.0,SNR=192						
BDFB				S	**S**	**16 28 26.6**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=157,slow=22,SNR=1.8						
BDFB	**Brasilia**	**19.83**	**68**	P	**P**	**16 24 51.7**	**+0.7**
BDFB				S	**S**	**16 28 26.6**	**+0.3**
BDFB				pmax	pmax		
	comp=Z,15nm,0.3s						
BDFB	**Brasilia**	**19.83**	**68**	⇑*i*P	**P**	**16 24 51.5**	**+0.4**
	comp=Z,822nm,1.0s						
BAO	**Brasilia Array**	**19.85**	**68**	P	**P**	**16 24 52.1**	**+0.8**
ATAH	**Atahualpa**	**20.37**	**326**	P	**P**	**16 24 56.9**	**0.0**
	comp=Z,14nm,0.8s,baz=153,slow=14,SNR=6.9						
EFI	**East Falkland**	**28.17**	**168**	*e*P	**P**	**16 26 09.6**	**-0.7**
EFI				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.2						
EFI	**East Falkland**	**28.17**	**168**	*e*P	**P**	**16 26 09.6**	**-0.7**
	comp=Z,29nm,0.6s,mb5.2						
ROSC	**El Rosal**	**29.85**	**345**	P	**P**	**16 26 23.8**	**-1.4**
	comp=Z,6.0nm,0.4s,mb4.6,baz=90,slow=20,SNR=2.7						
ROSC				LR	LR	16 40 07.5	
	comp=Z,96nm,19.5s,baz=192,slow=39						
USHA	**Ushuaia**	**30.50**	**182**	P	**P**	**16 26 30.6**	**-0.3**
	comp=Z,20nm,0.8s,mb4.9,baz=14,slow=7.3,SNR=11						
PAYG	**Puerto Ayora**	**32.55**	**313**	P	**P**	**16 26 49.6**	**+0.7**
	comp=Z,59nm,1.0s,mb5.3						
SDV	**Santo Domingo**	**33.18**	**353**	*e*P	**P**	**16 26 52.7**	**-1.6**
	comp=Z,13nm,1.1s,mb4.6						
RCBR	**Riachuelo**	**35.09**	**63**	*e*P	**P**	**16 27 10.8**	**0.0**
	comp=Z,67nm,1.1s,mb5.2						
PMSA	**Palmer Station**	**40.50**	**178**	P	**P**	**16 27 56.8**	**+0.6**
	comp=Z,19nm,0.7s,mb4.8,baz=195,slow=20,SNR=11						
PMSA	**Palmer Station**	**40.50**	**178**	*e*P	**P**	**16 27 56.6**	**+0.4**
	comp=Z,59nm,1.3s,mb5.1						
SJG	**San Juan**	**42.18**	**1**	*e*P	**P**	**16 28 06.9**	**-3.0**
SJG				*e*PP	pP	16 28 44.7	+2.3
SJG				pmax	pmax		
	comp=Z,12nm,0.5s						
SJG	**San Juan**	**42.18**	**1**	*e*P	**P**	**16 28 06.9**	**-3.0**
	comp=Z,12nm,0.5s,mb4.8						
SJG				*e*pP	pP	16 28 44.7	+2.4
CMIG	**Matias Romero**	**49.32**	**324**	P	**P**	**16 29 05.5**	**-0.3**
	comp=Z,14nm,0.8s,mb4.6,baz=119,slow=5.2,SNR=20						
BBSR	**BB Station**	**56.41**	**2**	P	**P**	**16 29 54.3**	**-3.6**
	comp=Z,18nm,0.9s,mb4.9						

VNA3 Neumayer Olymp 56.87 161 ⇓*iP* **P 16 30 01.0 -0.1**
VNA3 *e* 16 30 42.1
VNA3 *e* 16 30 54.5
VNA3 *e* 16 31 04.1
VNA3 *e* 16 32 12.6
VNA1 Neumayer--Stat 57.06 160 ⇓*iP* **P 16 30 03.0 +0.5**
VNA1 *e* 16 30 04.0
VNA1 *e* 16 30 43.7
VNA1 *e* 16 30 55.8
VNA1 *e* 16 31 03.0
SNAA Sanae 59.06 161 P **P 16 30 16.1 -0.3**
comp=Z,8.5nm,0.7s,mb4.7,baz=285,slow=7.1,SNR=111
SNAA pP pP 16 30 57.6 +6.6
comp=Z,2.8nm,0.5s,baz=305,slow=8.4,SNR=2.2
SNAA Sanae 59.06 161 ⇓*iP* **P 16 30 15.8 -0.6**
SNAA *e* 16 30 16.8
SNAA *e* 16 30 57.8
SNAA *e* 16 31 02.5
SNAA *e* 16 31 16.6
SNAA Sanae 59.06 161 P **P 16 30 16.1 -0.3**
SNAA *PP pP 16 30 57.6 +6.7
SNAA pmax pmax
comp=Z,9.0nm,0.7s
SNAA Sanae 59.06 161 ⇓*iP* **P 16 30 15.7 -0.7**
comp=Z,51nm,1.1s,mb5.3
SNAA *epP pP 16 30 57.9 +7.0
SNAA *ePcP PcP 16 31 03.1 -0.6
JSC Jenkinsville 59.82 346 *eP* **P 16 30 20.5 -1.1**
LRAL Lakeview Retre 60.12 341 *eP* **P 16 30 21.9 -1.8**
comp=Z,23nm,1.2s,mb4.9
HKT Hockley 60.63 331 *eP* **P 16 30 26.4 -0.7**
HKT pmax pmax
comp=Z,32nm,1.6s,mb4.9
HKT Hockley 60.63 331 *eP* **P 16 30 26.4 -0.7**
comp=Z,32nm,1.6s,mb4.9
MYNC Murphy 61.25 344 *eP* **P 16 30 29.9 -1.4**
MYNC pmax pmax
comp=Z,22nm,0.8s,mb5.0
MYNC Murphy 61.25 344 *eP* **P 16 30 29.9 -1.3**
comp=Z,22nm,0.8s,mb5.0
NATX Nacogdoches 61.70 333 *eP* **P 16 30 34.5 +0.2**
comp=Z,33nm,0.6s,mb5.3
CPCT Cooper Cave 61.70 344 *eP* **P 16 30 33.1 -1.2**
SWET Sewanee 61.85 342 *eP* **P 16 30 33.6 -1.7**
SWET *epP pP 16 31 15.4 +5.2
PLAL Pickwick Lake 62.26 341 *eP* **P 16 30 35.8 -2.2**
comp=Z,36nm,1.1s,mb5.1
PLAL *epP pP 16 31 18.8 +6.0
JCT Junction City 62.90 328 ⇓*iP* **P 16 30 41.3 -0.9**
JCT pmax pmax
comp=Z,39nm,0.8s,mb5.3
JCT Junction City 62.90 328 ⇓*iP* **P 16 30 41.3 -0.9**
comp=Z,39nm,0.8s,mb5.3
WVT Waverly 63.25 341 ⇓*eP* **P 16 30 42.2 -2.4**
WVT *e*PP pP 16 31 25.5 +6.0
WVT pmax pmax
comp=Z,45nm,0.9s,mb5.3
WVT Waverly 63.25 341 ⇓*eP* **P 16 30 42.2 -2.4**
comp=Z,45nm,0.9s,mb5.3
WVT *epP pP 16 31 25.5 +6.0
MAIT Maitri 63.56 159 ⇑*iP* **P 16 30 46.4 -0.3**
NVL N'lazarevskaya 63.60 159 *diP* **P 16 30 46.3 -0.6**
NVL pmax pmax
comp=Z,62nm,1.3s,mb5.3
NVL pmax pmax
comp=N,16nm,1.5s
NVL pmax pmax
comp=E,22nm,1.3s
MIAR Mount Ida 63.73 336 ⇓*iP* **P 16 30 46.5 -1.2**
MIAR pmax pmax
comp=Z,35nm,1.1s,mb5.1
MIAR Mount Ida 63.73 336 ⇓*iP* **P 16 30 46.5 -1.2**
comp=Z,35nm,1.1s,mb5.1
PARMO Parma 64.33 340 *eP* **P 16 30 50.3 -1.4**
FVM French Village 65.75 340 *eP* **P 16 30 59.4 -1.4**
FVM *e*PP pP 16 31 42.7 +6.7
FVM pmax pmax
comp=Z,63nm,1.1s,mb5.4
FVM French Village 65.75 340 *eP* **P 16 30 59.4 -1.4**
comp=Z,62nm,1.1s,mb5.3
FVM *epP pP 16 31 42.7 +6.7
QSPA South Pole Qui 65.89 180 *eP* **P 16 31 01.7 0.0**
comp=Z,46nm,0.6s,mb5.5
WMOK Wichita Mounta 66.00 332 *eP* **P 16 31 00.8 -1.6**
comp=Z,12nm,1.2s,mb4.6
WMOK *ePcP PcP 16 31 31.4 -0.6
MNTX Cornudas Mount 66.69 325 ⇓*eP* **P 16 31 05.4 -1.4**
comp=Z,23nm,1.0s,mb5.0
DBIC Dimbokro 67.93 71 P **P 16 31 14.1 -0.5**
comp=Z,17nm,0.7s,mb4.9,baz=207,slow=7.5,SNR=7.1
DBIC Dimbokro 67.93 71 P **P 16 31 14.1 -0.5**
DBIC pmax pmax
comp=Z,17nm,0.7s
DBIC Dimbokro 67.93 71 *eP* **P 16 31 13.8 -0.9**
comp=Z,14nm,0.6s,mb4.9
LONY Lake Ozonia 68.94 354 *eP* **P 16 31 19.6 -1.3**
LONY *epP pP 16 32 03.0 +6.6
LENM Lemitar 69.44 325 *eP* **P 16 31 24.8 +0.8**
LAZ Ladron 69.71 325 *eP* **P 16 31 26.6 +0.9**
LAZ *esP sP 16 32 30.5 +14
ANMO Albuquerque 69.79 326 P **P 16 31 26.8 +0.6**
comp=Z,24nm,0.9s,mb4.9,baz=134,slow=7.9
ANMO Albuquerque 69.79 326 *diP* **P 16 31 26.2 +0.1**
ANMO Albuquerque 69.79 326 ⇓*iP* **P 16 31 26.4 +0.2**
comp=Z,34nm,1.0s,mb5.0
ANMO *epP pP 16 32 09.9 +8.2
TUC Tucson 70.11 321 ⇓*iP* **P 16 31 28.1 0.0**
TUC pmax pmax
comp=Z,35nm,1.3s,mb4.9
TUC Tucson 70.11 321 ⇓*iP* **P 16 31 28.1 +0.1**
comp=Z,36nm,1.3s,mb4.9
JFWS Jewell Farm 70.23 342 *eP* **P 16 31 26.7 -2.1**
JFWS pmax pmax
comp=Z,41nm,1.0s,mb5.1
JFWS Jewell Farm 70.23 342 *eP* **P 16 31 26.7 -2.1**
comp=Z,41nm,1.0s,mb5.1
116A Eloy 70.82 321 ⇓*P* **P 16 31 32.7 +0.3**
baz=71,SNR=5.1
115A Sonoran Desert 71.22 321 ⇓*P* **P 16 31 35.2 +0.5**
baz=71
Z14A Wintersburg 72.11 321 ⇓*P* **P 16 31 40.3 +0.1**
baz=72
X15A Humboldt 72.53 322 ⇑*P* **P 16 31 43.3 +0.7**
baz=73,SNR=11
Y14A Wickenburg 72.56 321 ⇑*P* **P 16 31 43.0 +0.2**
baz=73,SNR=9.2
WUAZ Wupatki 72.81 323 ⇓*iP* **P 16 31 44.9 +0.6**
comp=Z,50nm,1.0s,mb5.2
WUAZ *ePcP PcP 16 32 02.0 +1.3
X14A Yava 72.89 322 ⇓*P* **P 16 31 45.5 +0.8**
baz=73
ECSD EROS,Sioux Fal 72.96 338 ⇓*iP* **P 16 31 43.4 -1.7**
ECSD *epP pP 16 32 27.8 +6.8
GLA Glamis 72.99 319 ⇑*P* **P 16 31 45.7 +0.4**
baz=73,SNR=10
W15A Williams 73.05 323 ⇓*P* **P 16 31 46.4 +0.7**
baz=73
ISCO Idaho Springs 73.24 330 ⇓*iP* **P 16 31 47.0 +0.2**
ISCO pmax pmax
comp=Z,29nm,1.1s,mb4.9
ISCO Idaho Springs 73.24 330 ⇓*iP* **P 16 31 47.0 +0.3**
comp=Z,30nm,1.1s,mb4.9
SYO Syowa Base 73.27 159 ⇑*eP* **P 16 31 46.0 -0.9**
Y12C Blythe 73.31 320 ⇓*P* **P 16 31 47.8 +0.7**
baz=74,SNR=10.0
PV01 Paradox Valley 73.34 327 *eP* **P 16 31 48.3 +0.9**
SMCO Snowmass 73.38 329 ⇓*iP* **P 16 31 48.4 +0.8**
comp=Z,79nm,1.5s,mb5.2
SMCO *epP pP 16 32 32.5 +9.0
SBA Scott Base 73.38 190 ⇓*iP* **P 16 31 48.0 +0.4**
SBA pmax pmax
comp=Z,38nm,1.2s,mb5.0
SBA Scott Base 73.38 190 ⇓*iP* **P 16 31 48.0 +0.4**
comp=Z,38nm,1.2s,mb5.0
PDMCI Parker Dam,Lak 73.48 321 ⇑*P* **P 16 31 48.4 +0.2**
baz=74
DVTC Desert V Tower 73.48 318 ⇑*P* **P 16 31 49.0 +0.8**
baz=74,SNR=8.3
SWSC Sam W. Stewart 73.49 319 ⇓*P* **P 16 31 48.6 +0.3**
baz=74
W14A Seligman 73.53 322 ⇑*P* **P 16 31 49.3 +0.8**
baz=74,SNR=9.8
PV10 Paradox Valley 73.76 327 *eP* **P 16 31 49.9 +0.1**
MONP Monument Peak 73.84 318 ⇑*P* **P 16 31 50.9 +0.6**
baz=74,SNR=11

W13A Hualapai Mount 73.91 321 ⇑*P* **P 16 31 51.5 +0.9**
baz=74
NEE2 Needles Airpor 74.09 321 ⇑*P* **P 16 31 51.7 0.0**
baz=74
TBI Tubuai 74.23 251 *eS* S 16 41 11.9 -2.2
comp=Z,196nm,28.2s
109C Camp Elliot, M 74.25 318 ⇑*P* **P 16 31 52.8 +0.1**
baz=74
BELC Belle Mtn. 74.35 319 ⇓*P* **P 16 31 53.8 +0.6**
baz=75,SNR=12
PFO Pinyon Flat Ob 74.36 319 ⇓*eP* **P 16 31 53.9 +0.6**
PFO pmax pmax
comp=Z,21nm,1.1s,mb4.8
PFO Pinyon Flat Ob 74.36 319 ⇓*eP* **P 16 31 53.9 +0.6**
comp=Z,21nm,1.1s,mb4.8
PFO Pinyon Flat Ob 74.36 319 ⇑*P* **P 16 31 53.8 +0.5**
baz=75,SNR=9.5
PHWY Pilot Hill 74.38 331 ⇓*eP* **P 16 31 53.5 +0.1**
VNDA Vanda 74.39 190 P **P 16 31 53.9 +0.4**
comp=Z,21nm,0.9s,mb4.9,baz=135,slow=5.3,SNR=82
VNDA Vanda 74.39 190 ⇓*iP* **P 16 31 53.7 +0.2**
VNDA pmax pmax
comp=Z,23nm,0.9s
VNDA Vanda 74.39 190 ⇓*iP* **P 16 31 53.7 +0.2**
comp=Z,23nm,0.9s,mb4.9
W12A Cal Nev Ari 74.61 321 ⇑*P* **P 16 31 54.9 +0.2**
baz=75
MURC Murrieta 74.80 318 ⇓*P* **P 16 31 56.3 +0.4**
baz=75
V12A Nelson 74.90 321 ⇓*P* **P 16 31 56.7 +0.3**
baz=75
SRU San Rafael 75.07 326 ⇓*iP* **P 16 31 57.4 0.0**
SRU pmax pmax
comp=Z,36nm,0.8s,mb5.0
SRU San Rafael 75.07 326 ⇓*iP* **P 16 31 57.4 +0.1**
comp=Z,36nm,0.8s,mb5.0
BBRC Big Bear Sol-O 75.09 319 ⇓*P* **P 16 31 58.4 +0.9**
baz=75
HEC Hector,Ludlow 75.13 320 ⇓*P* **P 16 31 58.6 +0.9**
baz=75,SNR=20
SCI San Clemente I 75.20 317 ⇓*P* **P 16 31 59.9 +1.7**
baz=75
U12A Valley of Fire 75.23 322 ⇓*P* **P 16 31 58.8 +0.5**
baz=76,SNR=16
TUQ Turquoise Mtn. 75.31 320 P **P 16 31 59.5 +0.7**
baz=76,SNR=15
CCUT Cedar City 75.39 324 ⇓*iP* **P 16 32 00.5 +1.2**
CCUT *epP pP 16 32 43.3 +8.0
CIS Catalina Islan 75.40 318 ⇑*P* **P 16 31 59.5 +0.2**
baz=76
MSU Marysvale 75.47 325 *eP* **P 16 32 00.2 +0.5**
MSU *e* 16 32 12.9
MSU *e*PP pP 16 32 44.1 +8.4
MSU Marysvale 75.47 325 *eP* **P 16 32 00.2 +0.6**
MSU *ePcP PcP 16 32 12.9 +0.8
MSU *epP pP 16 32 44.0 +8.3
MSU *esP sP 16 33 03.9 +13
VAH Vaihoa 75.47 260 *eP* **P 16 32 01.4 +1.7**
comp=Z,143nm,1.0s,mb5.6
RWWY Rawlins 75.47 330 ⇓*eP* **P 16 31 60.0 +0.3**
comp=Z,44nm,1.0s,mb5.0
RWWY *ePP PP 16 34 56.8 +6.1
BFSC Mount Baldy St 75.51 319 ⇑*P* **P 16 32 00.3 +0.4**
baz=76,SNR=6.6
FMP Fort Macarthur 75.54 318 ⇑*P* **P 16 32 00.5 +0.4**
baz=76
RRX Edison Barstow 75.56 319 ⇓*P* **P 16 32 01.0 +0.9**
baz=76
ARUT Antelope Range 75.61 324 *eP* **P 16 32 01.7 +1.2**
SUR Sutherland 75.68 119 *eP* **P 16 32 02.5 +1.6**
comp=Z,11nm,0.7s,mb4.6
U11A Corn Creek 75.70 322 ⇓*P* **P 16 32 01.9 +1.0**
baz=76
GSC Goldstone 75.74 320 ⇓*P* **P 16 32 01.8 +0.6**
baz=76,SNR=12
PMOR Pomariorio Ree 75.80 260 *eP* **P 16 32 03.1 +1.6**
comp=Z,110nm,0.9s,mb5.5
SHOC Shoshone 75.85 321 ⇓*P* **P 16 32 02.0 +0.2**
baz=76
DECC Green Verdugo 75.93 318 P **P 16 32 02.8 +0.5**
baz=76
RSSD Black Hills 76.07 333 *eP* **P 16 32 02.9 -0.2**
RSSD pmax pmax
comp=Z,21nm,0.9s,mb4.8
RSSD Black Hills 76.07 333 *eP* **P 16 32 02.9 -0.2**
comp=Z,21nm,0.9s,mb4.8
EDW2 Edwards Air Fo 76.15 319 P **P 16 32 03.7 +0.2**
baz=76,SNR=9.2
U10A Ash Meadows, A 76.24 321 P **P 16 32 05.0 +0.9**
baz=76,SNR=15
BLG Laguna Peak 76.28 318 ⇑*P* **P 16 32 04.3 0.0**
baz=76
PAE Paea 76.33 257 *eP* **P 16 32 06.0 +1.4**
comp=Z,80nm,0.9s,mb5.3
PAE *epP pP 16 32 46.5 +5.8
comp=Z,188nm,1.3s
PPT Papeete 76.36 257 *eP* **P 16 32 06.5 +1.8**
comp=Z,127nm,1.5s,mb5.3
PPT Papeete 76.36 257 *eS* S 16 41 35.4 -2.3
comp=Z,474nm,26.8s
PPT *eLR LR 16 56 00.6
comp=Z,88nm,24.5s
LRMC Laurel Mountai 76.38 319 ⇓*P* **P 16 32 05.1 +0.3**
baz=77,SNR=13
OSI Osito Adit 76.41 318 ⇑*P* **P 16 32 05.1 +0.1**
baz=77
NLU North Lily Min 76.49 326 *eP* **P 16 32 06.2 +0.7**
BSC Santa Cruz Isl 76.56 317 ⇓*P* **P 16 32 06.0 +0.2**
baz=77,SNR=5.1
FURC Furnace Creek, 76.58 321 ⇓*P* **P 16 32 06.3 +0.4**
baz=77,SNR=16
MPMC Manual Prospec 76.66 320 ⇓*P* **P 16 32 06.5 +0.1**
baz=77,SNR=6.5
TOA0 Torodi Ar. Sit 76.71 69 ⇑*iP* **P 16 32 06.1 -0.6**
TORD Torodi Ar. Bea 76.71 69 P **P 16 32 06.2 -0.4**
comp=Z,17nm,0.7s,mb4.8,baz=259,slow=6.0,SNR=95
TORD Torodi Ar. Bea 76.71 69 P **P 16 32 06.2 -0.5**
ARVC Arvin 76.82 319 ⇓*P* **P 16 32 07.5 +0.2**
baz=77
DAC Darwin (Calif) 76.87 320 ⇓*iP* **P 16 32 07.9 +0.3**
DAC pmax pmax
comp=Z,29nm,1.1s,mb4.8
DAC Darwin (Calif) 76.87 320 ⇓*iP* **P 16 32 07.9 +0.3**
comp=Z,29nm,1.1s,mb4.8
ISA Isabella 76.97 319 *eP* **P 16 32 08.2 0.0**
ISA Isabella 76.97 319 ⇓*P* **P 16 32 08.8 +0.6**
baz=77,SNR=18
TCUT Toone Canyon 77.03 327 *eP* **P 16 32 08.9 +0.4**
DUG Dugway 77.05 326 ⇓*eP* **P 16 32 08.9 +0.3**
DUG pmax pmax
comp=Z,25nm,1.1s,mb4.8
DUG Dugway 77.05 326 ⇓*eP* **P 16 32 08.8 +0.3**
comp=Z,25nm,1.1s,mb4.8
TRCR Troy Canyon 77.18 323 ⇓*iP* **P 16 32 10.2 +0.9**
TRCR *epP pP 16 32 56.7 +11
GRAC Grapevine Rang 77.24 321 ⇑*P* **P 16 32 10.1 +0.5**
baz=78
Q12A Willow Creek R 77.27 324 ⇓*P* **P 16 32 10.3 +0.5**
baz=78
PKM Peak Mountain 77.27 318 ⇓*P* **P 16 32 10.6 +0.8**
baz=78,SNR=16
CWC Cottonwood Cre 77.27 320 P **P 16 32 10.4 +0.6**
baz=78,SNR=6.3
PDAR Pinedale Array 77.40 329 P **P 16 32 10.2 -0.3**
comp=Z,5.0nm,0.8s,mb4.2,baz=134,slow=6.4,SNR=17
VES Vestal, Richgr 77.45 319 ⇑*P* **P 16 32 11.0 +0.2**
baz=78,SNR=8.8
HWUT Hardware Ranch 77.47 327 ⇓*eP* **P 16 32 10.5 -0.4**
comp=Z,15nm,0.8s,mb4.7
R10A Warm Springs 77.54 322 ⇑*P* **P 16 32 12.5 +1.2**
baz=78,SNR=34
TSUM Tsumeb 77.60 106 *eP* **P 16 32 11.5 -0.1**
comp=Z,5.3nm,0.6s,mb4.3
P12A McGill 77.62 324 ⇓*P* **P 16 32 12.5 +0.7**
baz=78,SNR=15
S09A Goldfield 77.66 321 ⇑*P* **P 16 32 12.3 +0.3**
baz=78,SNR=14
BGU Big Grassy Mou 77.70 326 ⇓*eP* **P 16 32 12.0 -0.2**
R09A Tonopah 77.93 322 P **P 16 32 13.9 +0.4**
baz=78,SNR=20
V05C Boulder Hill, 77.97 319 ⇓*P* **P 16 32 14.0 +0.4**
baz=78
HELL Mitchell Peak, 77.99 320 ⇓*P* **P 16 32 13.6 -0.2**
baz=78,SNR=20
O12A Currie 78.11 325 P **P 16 32 15.0 +0.6**
baz=78,SNR=20
AHID Auburn Hatcher 78.13 328 ⇓*iP* **P 16 32 14.6 0.0**
comp=Z,53nm,1.1s,mb5.1
P11A Circle Ranch, 78.13 324 ⇓*P* **P 16 32 15.0 +0.4**
baz=78,SNR=7.8
MTUM Tungsten Hills 78.18 320 *eP* **P 16 32 14.9 0.0**
N13A Wendover, West 78.25 325 ⇑*P* **P 16 32 15.2 0.0**
baz=78
PKD Parkfield 78.41 318 ⇑*P* **P 16 32 16.2 +0.1**
baz=79,SNR=5.4
Q09A Carvers 78.41 322 ⇑*P* **P 16 32 16.4 +0.3**
baz=79
REDW Red Top Meadow 78.47 329 ⇓*iP* **P 16 32 16.4 0.0**
comp=Z,49nm,1.3s,mb5.0
REDW *ePcP PcP 16 32 23.6 -1.4
O11A Cowboy Ranch, 78.49 324 ⇑*P* **P 16 32 16.7 +0.2**
baz=79,SNR=12
SNOW Snow King Moun 78.50 329 *eP* **P 16 32 16.5 -0.1**
comp=Z,27nm,0.8s,mb4.9
ULM Lac du Bonnet 78.51 342 P **P 16 32 15.4 -1.3**
comp=Z,15nm,0.8s,mb4.7,baz=149,slow=5.6,SNR=12
ULM Lac du Bonnet 78.51 342 *eP* **P 16 32 15.0 -1.7**
comp=Z,116nm,1.7s,mb5.2
MLAC Mammoth Lakes 78.52 320 ⇓*P* **P 16 32 17.2 +0.4**
baz=79
LOHW Long Hollow 78.54 329 ⇓*eP* **P 16 32 16.7 -0.1**
comp=Z,46nm,1.3s,mb5.0
R08A Mina 78.60 321 ⇓*P* **P 16 32 17.4 +0.3**
baz=79
KCC Kaiser Creek 78.60 320 ⇓*P* **P 16 32 16.7 -0.5**
baz=79,SNR=5.9
M13A Montello 78.60 326 P **P 16 32 17.1 0.0**
baz=79,SNR=13
TPAW Teton Pass 78.61 329 *eP* **P 16 32 17.4 +0.2**
comp=Z,64nm,1.4s,mb5.1
T06C Millerton Lake 78.61 320 ⇓*P* **P 16 32 17.7 +0.5**
baz=79
RRI2 Red Ridge 78.67 329 ⇓*iP* **P 16 32 17.6 0.0**
comp=Z,68nm,1.3s,mb5.1
N12A Clover Valley, 78.68 325 ⇑*P* **P 16 32 17.6 0.0**
baz=79,SNR=8.7
MOOW Moose Ponds 78.71 329 *eP* **P 16 32 17.9 +0.2**
comp=Z,32nm,1.5s,mb4.7
ELK Elko 78.71 325 *eP* **P 16 32 18.0 +0.2**
ELK pmax pmax
comp=Z,24nm,1.0s
ELK Elko 78.71 325 *eP* **P 16 32 18.0 +0.2**
comp=Z,24nm,1.0s,mb4.8
NVAR Mina Array Bea 78.76 321 P **P 16 32 18.4 +0.4**
comp=Z,5.1nm,0.8s,mb4.2,baz=148,slow=6.6,SNR=40
SCHQ Schefferville 78.82 0 P **P 16 32 17.1 -1.2**
comp=Z,4.5nm,0.9s,mb4.1,baz=200,slow=8.3,SNR=4.4
U04C Hernandez Rese 78.83 318 ⇓*P* **P 16 32 18.8 +0.4**
baz=79,SNR=6.8
Q08A Gabbs 78.85 322 ⇑*P* **P 16 32 18.7 +0.1**
baz=79,SNR=14
V03C Hunter Liggett 78.88 318 ⇓*P* **P 16 32 19.2 +0.5**
baz=79
P09A Austin 78.89 323 ⇑*P* **P 16 32 18.9 +0.1**
baz=79
IMW Indian Meadow 78.91 329 ⇓*iP* **P 16 32 19.1 +0.2**
comp=Z,70nm,1.3s,mb5.1
IMW *epP pP 16 33 04.5 +9.3
FLWY Flagg Ranch 78.94 330 *eP* **P 16 32 19.7 +0.7**
comp=Z,96nm,1.5s,mb5.2
R07C Lee Vining 78.96 321 ⇑*P* **P 16 32 20.0 +0.9**
baz=79
LRV Little Rabbit 79.01 318 *eP* **P 16 32 20.3 +0.9**
N11A Elko Archery C 79.03 324 ⇓*P* **P 16 32 19.6 +0.1**
baz=79
M12A Wells 79.03 325 P **P 16 32 19.6 +0.2**
baz=79,SNR=18
O10A Cortez Mining, 79.06 324 ⇑*P* **P 16 32 20.0 +0.4**
baz=79
T05C Eagle Field, D 79.11 319 ⇑*P* **P 16 32 20.6 +0.6**
baz=79
LKWY Lake 79.18 330 *eP* **P 16 32 21.6 +1.3**
LKWY pmax pmax
comp=Z,29nm,1.2s,mb4.8
LKWY Lake 79.18 330 *eP* **P 16 32 21.6 +1.3**
comp=Z,29nm,1.2s,mb4.8
S05C Merced 79.21 319 ⇑*P* **P 16 32 20.7 +0.2**
baz=79
S06C San Francisco 79.28 320 ⇓*P* **P 16 32 21.1 +0.2**
baz=80,SNR=14
YFT Old Faithful 79.29 330 *eP* **P 16 32 22.6 +1.6**
HAST UC Hastings Re 79.31 318 ⇓*P* **P 16 32 21.5 +0.5**
baz=80
O09A Fish Creek Ran 79.35 323 ⇓*P* **P 16 32 21.1 -0.1**
baz=80,SNR=7.8
N10A Dunphy 79.37 324 ⇓*P* **P 16 32 21.2 -0.1**
baz=80
R06C Coleville 79.48 321 ⇑*P* **P 16 32 22.9 +0.9**
baz=80,SNR=12
M11A Holland Ranch, 79.49 325 P **P 16 32 22.6 +0.6**
baz=80,SNR=17
P08A Dixie Valley 79.51 322 ⇓*P* **P 16 32 22.6 +0.5**
baz=80,SNR=16
CMB Columbia Colle 79.70 320 *eP* **P 16 32 22.0 -1.1**
comp=Z,13nm,1.3s,mb4.4
CMB Columbia Colle 79.70 320 ⇓*P* **P 16 32 22.8 -0.4**
baz=80
GCMT Greycliff 79.80 331 *eP* **P 16 32 23.5 -0.1**
QLMT Earthquake Lak 79.85 330 *eP* **P 16 32 24.8 +0.8**
P07A Fallon 79.86 322 ⇑*P* **P 16 32 24.0 0.0**
baz=80
S04C Ingram Canyon, 79.91 319 ⇑*P* **P 16 32 24.3 0.0**
baz=80
M10A I.L. Ranch, Tu 79.95 325 ⇑*P* **P 16 32 24.9 +0.4**
baz=80
R05C Kirkwood Meado 79.97 321 ⇓*P* **P 16 32 25.1 +0.5**
baz=80,SNR=5.1
N09A Rock Creek Ran 80.01 324 ⇓*P* **P 16 32 24.1 -0.7**
baz=80
R04C Big Horse Ranc 80.17 320 ⇓*P* **P 16 32 25.5 -0.2**
baz=80
WCN Washoe City 80.19 321 ⇓*P* **P 16 32 26.3 +0.6**
baz=80
PAHR Pah Rah Range 80.25 322 ⇓*iP* **P 16 32 26.5 +0.4**
comp=Z,96nm,1.3s,mb5.3
PAHR *epP pP 16 33 10.6 +8.1
O07A Toulon 80.28 322 P **P 16 32 26.3 +0.1**
baz=80,SNR=13
HLID Hailey 80.33 327 ⇓*iP* **P 16 32 26.9 +0.3**
comp=Z,43nm,0.9s,mb5.1
HLID *epP pP 16 33 13.5 +10
M09A Marrel Ranch, 80.37 324 ⇓*P* **P 16 32 26.7 0.0**
baz=81,SNR=12
LAVA Lava Cap Winer 80.39 320 ⇑*P* **P 16 32 26.7 -0.1**
baz=81
MCMT McKenzie Canyo 80.51 329 *eP* **P 16 32 28.4 +0.9**
MCMT *epP pP 16 33 13.1 +9.1
BDM Black Diamond 80.53 319 ⇑*P* **P 16 32 28.1 +0.5**
baz=81
BOZ Bozeman (W) 80.57 330 *eP* **P 16 32 27.4 -0.4**
BOZ pmax pmax
comp=Z,15nm,1.3s,mb4.5
BOZ Bozeman (W) 80.57 330 *eP* **P 16 32 27.4 -0.4**
comp=Z,15nm,1.3s,mb4.5
BOSA Boshof 80.62 117 P **P 16 32 28.9 +0.9**
comp=Z,8.8nm,0.6s,mb4.6,baz=266,slow=4.0,SNR=32
BOSA Boshof 80.62 117 *eP* **P 16 32 28.3 +0.3**
BOSA pmax pmax
comp=Z,15nm,1.1s,mb4.5
BOSA Boshof 80.62 117 *eP* **P 16 32 28.3 +0.2**
comp=Z,15nm,1.1s,mb4.5
P05C Yuba Gap, Truc 80.68 321 ⇑*P* **P 16 32 28.7 +0.4**
baz=81
DLMT Dillon 80.80 329 *eP* **P 16 32 29.2 +0.2**
comp=Z,54nm,1.3s,mb5.0
O06A Flanigan 80.81 322 ⇑*P* **P 16 32 29.1 0.0**
baz=81
Q04C Lincoln 80.82 320 ⇓*P* **P 16 32 29.2 +0.1**
baz=81
M08A Happy Creek Ra 80.89 324 ⇑*P* **P 16 32 29.1 -0.4**
baz=81,SNR=12
L09A Wilkinson Ranc 80.90 324 ⇓*P* **P 16 32 29.5 -0.1**
baz=81
BEKR Beckwourth 80.91 321 P **P 16 32 30.0 +0.4**
baz=81,SNR=11
MAW Mawson 81.15 163 P **P 16 32 30.6 -0.2**
comp=Z,29nm,0.7s,mb5.0,baz=218,slow=6.4,SNR=55
MAW Mawson 81.15 163 *eP* **P 16 32 30.7 -0.2**
MAW pmax pmax
comp=Z,63nm,1.0s
MAW Mawson 81.15 163 *eP* **P 16 32 30.7 -0.2**
comp=Z,62nm,1.0s,mb5.2
OHCM Honcut 81.21 320 *eP* **P 16 32 30.8 -0.4**
N06A Buffalo Meadow 81.21 322 ⇑*P* **P 16 32 31.2 0.0**
baz=81

MCCM	Marconi Confer	81.26	319	⇓P		P	16 32 32.1	+0.6
	baz=82							
M07A	Soldier Meadow	81.28	323	⇓P		P	16 32 31.5	0.0
	baz=82,SNR=14							
O05C	Quincy	81.29	321	⇑P		P	16 32 31.7	+0.1
	baz=82							
SUTB	Sutter Butte	81.31	320	⇑P		P	16 32 31.3	-0.4
	baz=82							
ORV	Oroville	81.36	320	P		P	16 32 32.1	+0.1
	baz=82,SNR=13							
L08A	Fields	81.38	324	⇓P		P	16 32 32.0	-0.1
	baz=82							
K09A	Rome	81.41	325	P		P	16 32 32.2	0.0
	baz=82,SNR=23							
HRY	Holter Researc	81.47	331	*e*P		P	16 32 32.9	+0.4
ELFS	Eagle Lake Fie	81.62	322	⇓P		P	16 32 33.7	+0.3
	baz=82							
O04C	Chester	81.63	321	⇓P		P	16 32 33.2	-0.2
	baz=82							
WVOR	Wild Horse Val	81.71	324	*e*P		P	16 32 33.6	-0.2
	comp=Z,8.5nm,1.1s,mb4.3							
L07A	Adell	81.80	323	P		P	16 32 34.8	+0.5
	baz=82,SNR=13							
K08A	Mann Creek Ran	81.83	324	⇑P		P	16 32 34.4	0.0
	baz=82							
M06C	Likely Place G	81.88	322	⇓P		P	16 32 34.6	0.0
	baz=82							
J09A	Fry Pan Ranch,	81.88	325	⇑P		P	16 32 34.8	+0.1
	baz=82							
LBCM	Butte Creek Ri	82.12	322	P		P	16 32 35.5	-0.5
HATC	Hat Creek Radi	82.17	321	⇓P		P	16 32 36.0	-0.3
	baz=82							
K07A	Rock Creek Ran	82.21	324	P		P	16 32 36.7	+0.3
	baz=82,SNR=33							
CHMT	Chamberlain Mo	82.26	330	*e*P		P	16 32 36.2	-0.5
CHMT				*e*pP		pP	16 33 21.9	+8.6
LBTB	Lobatse	82.29	114	*e*P		P	16 32 37.6	+0.8
LBTB				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.5							
LBTB	Lobatse	82.29	114	*e*P		P	16 32 37.5	+0.7
	comp=Z,12nm,0.8s,mb4.6							
I09A	Lost Marbles R	82.31	326	⇓P		P	16 32 37.0	+0.1
	baz=82							
LTIM	Timbered Crate	82.42	322	P		P	16 32 37.1	-0.4
WDC	Whiskeytown Da	82.64	321	⇑P		P	16 32 38.9	+0.3
	baz=83							
L05A	Lakeview	82.64	323	⇓P		P	16 32 39.1	+0.4
	baz=83							
I08A	Drewsey	82.69	325	⇓P		P	16 32 39.2	+0.3
	baz=83,SNR=22							
BMO	Blue Mountains	82.71	327	⇓*i*P		P	16 32 38.4	-0.7
	comp=Z,33nm,1.4s,mb4.9							
J07A	Hines	82.71	324	⇑P		P	16 32 39.1	0.0
	baz=83							
H09A	Durkee	82.75	326	⇓P		P	16 32 39.1	-0.1
	baz=83							
LASM	Arnica Sink	82.75	322	P		P	16 32 39.1	-0.1
K06A	Valley Falls	82.83	324	⇓P		P	16 32 40.0	+0.4
	baz=83							
M04C	Macdoel	83.02	322	⇓P		P	16 32 40.4	-0.2
	baz=83							
J06A	Christmas Vall	83.08	324	⇑P		P	16 32 41.0	0.0
	baz=83							
K05A	Summer Lake	83.13	323	⇓P		P	16 32 41.8	+0.7
	baz=83							
LHEM	Herd Peak	83.14	322	P		P	16 32 41.0	-0.3
H08A	Prairie City	83.17	326	⇓P		P	16 32 41.4	0.0
	baz=83							
N02C	Big Bar	83.23	321	⇑P		P	16 32 41.7	-0.1
	baz=83							
I07A	Izee	83.30	325	⇓P		P	16 32 42.2	+0.1
	baz=84							
L04A	Klamath Falls	83.31	322	⇑P		P	16 32 41.8	-0.3
	baz=84							
M02C	Callahan	83.34	321	⇓P		P	16 32 41.5	-0.8
	baz=84							
YBH	Yreka Blue Hor	83.48	322	P		P	16 32 41.7	-1.3
	comp=Z,6.8nm,0.9s,mb4.4,baz=97,slow=3.1,SNR=8.6							
YBH	Yreka Blue Hor	83.48	322	*e*P		P	16 32 41.8	-1.2
YBH				pmax		pmax		
	comp=Z,11nm,1.1s							
YBH	Yreka Blue Hor	83.48	322	*e*P		P	16 32 41.8	-1.2
	comp=Z,11nm,1.1s,mb4.5							
YBH	Yreka Blue Hor	83.48	322	⇑P		P	16 32 43.4	+0.4
	baz=84							
K04A	Chiloquin	83.51	323	⇓P		P	16 32 42.9	-0.2
	baz=84							
I06A	Prineville	83.58	324	⇓P		P	16 32 43.8	+0.3
	baz=84							
F09A	S2 Ranch, Elgi	83.61	327	⇑P		P	16 32 43.0	-0.6
	baz=84							
H07A	Lands Inn, Kim	83.68	325	⇑P		P	16 32 43.8	-0.2
	baz=84							
J05A	Fort Rock	83.69	323	⇓P		P	16 32 44.1	0.0
	baz=84							
G08A	Pilot Rock	83.85	326	⇑P		P	16 32 44.3	-0.6
	baz=84							
KTRM	Thompson Ridge	83.98	321	P		P	16 32 45.7	+0.2
F08A	Pendleton	84.11	326	⇑P		P	16 32 45.2	-0.9
	baz=84							
WALA	Waterton Lakes	84.16	331	*e*P		P	16 32 45.5	-0.9
	comp=Z,14nm,0.8s,mb4.7							
WALA				*e*pP		pP	16 33 31.1	+7.9
H06A	Lindquist Farm	84.18	325	⇑P		P	16 32 46.9	+0.3
	baz=84							
G07A	Ruggs Ranch, H	84.20	326	⇓P		P	16 32 46.8	+0.1
	baz=84							
BBOR	Butler Butte	84.22	322	P		P	16 32 45.8	-0.9
L02A	Cave Junction	84.26	321	⇓P		P	16 32 46.8	-0.2
	baz=84							
I05A	Bend	84.29	324	⇑P		P	16 32 47.2	+0.1
	baz=84							
G06A	Carlson Farm,	84.68	325	⇓P		P	16 32 49.1	+0.1
	baz=85							
PRW	Prosser	84.85	326	P		P	16 32 50.0	+0.1
HAWA	Hanford	84.90	327	*e*P		P	16 32 49.8	-0.4
	comp=Z,3.0nm,1.3s,mb3.9							
RSW	Rattlesnake Hi	84.93	327	P		P	16 32 50.1	-0.2
BROR	Big Rock Looko	85.00	324	P		P	16 32 49.7	-0.9
GBL	Gable Mountain	85.00	327	P		P	16 32 50.4	-0.3
G05A	Wamic	85.04	325	⇓P		P	16 32 51.1	+0.3
	baz=85							
NEW	Newport	85.04	329	P		P	16 32 49.7	-1.1
	comp=Z,6.4nm,0.8s,mb4.4,baz=122,slow=0.1,SNR=5.2							
H04A	Detroit Lake	85.13	324	⇑P		P	16 32 50.5	-0.8
	baz=85							
VFP	Flag Point	85.17	325	P		P	16 32 51.3	-0.2
OD2	Odessa Site #2	85.18	328	P		P	16 32 51.0	-0.6
I03A	Eugene	85.26	323	⇓P		P	16 32 51.5	-0.4
	baz=86							
F05A	White Salmon	85.54	325	⇑P		P	16 32 52.9	-0.5
	baz=86							
I02A	Mapleton	85.58	323	⇓P		P	16 32 53.2	-0.3
	baz=86							
H03A	Soap Creek Ran	85.72	323	⇓P		P	16 32 54.2	0.0
	baz=86							
EBG	Ellensburg	85.78	326	P		P	16 32 54.4	-0.1
TBM	Table Mountain	85.97	327	P		P	16 32 55.2	-0.3
WTV	Waterville	86.01	327	P		P	16 32 54.9	-0.7
MTMW	Mount Mitchell	86.03	325	P		P	16 32 55.2	-0.5
LTY	Liberty	86.06	327	P		P	16 32 55.0	-0.9
F04A	Amboy	86.08	325	⇓P		P	16 32 55.1	-0.9
	baz=86							
ETW	Entiat	86.13	327	P		P	16 32 55.8	-0.4
G03A	Yamhill	86.13	324	⇑P		P	16 32 56.1	-0.1
	baz=86							
E05A	Randle	86.15	326	⇓P		P	16 32 55.2	-1.1
	baz=86							
ESDC	Sonseca Array	86.64	44	P		P	16 32 59.6	+0.9
	comp=Z,0.4nm,0.3s,baz=228,slow=4.7,SNR=10.0							
ESDC				pP		pP	16 33 42.5	+6.8
	comp=Z,0.6nm,0.4s,baz=235,slow=4.6,SNR=3.7							
ESDC				LR		LR	17 10 22.7	
	comp=Z,48nm,19.5s,baz=270,slow=34							
D05A	Enumclaw	86.68	326	⇑P		P	16 32 57.5	-1.4
	baz=87							
C05A	Tolt Reservoir	86.87	327	⇓P		P	16 32 58.1	-1.7
	baz=87							
EDM	Edmonton	87.03	334	*e*P		P	16 32 58.6	-2.0
EDM				*e**PP		pP	16 33 43.3	+5.7
E03A	Lebam	87.08	325	⇓P		P	16 32 59.9	-1.0
	baz=87							
RPW	Rockport	87.28	327	P		P	16 33 00.4	-1.4
JCW	Jim Creek	87.32	327	P		P	16 33 00.4	-1.6
B05A	Bryant	87.45	327	⇑P		P	16 33 01.1	-1.6
	baz=88							
CMW	Cultus Mountai	87.57	327	P		P	16 33 02.0	-1.2
A05A	Maple Falls	87.93	327	⇓P		P	16 33 03.8	-1.1
	baz=88							
B04A	Port Angeles	88.03	326	⇓P		P	16 33 04.3	-1.1
	baz=88							
A04A	Legoe Bay, Lum	88.06	327	⇑P		P	16 33 04.9	-0.6
	baz=88							
LSZ	Lusaka	88.45	106	*e*P		P	16 33 09.1	+1.8
LSZ				*e**PP		pP	16 33 52.4	+7.9
LSZ				pmax		pmax		
	comp=Z,15nm,1.4s,mb4.6							
LSZ	Lusaka	88.45	106	*e*P		P	16 33 09.1	+1.8
	comp=Z,15nm,1.4s,mb4.6							
LSZ				*e*pP		pP	16 33 52.4	+7.9
C03A	Quillayute Air	88.50	325	⇑P		P	16 33 07.5	-0.1
	baz=89							
CASY	Casey	89.67	179	⇓*e*P		P	16 33 13.0	-0.1
	comp=Z,66nm,1.0s,mb5.5							
CASY				*e*pP		pP	16 33 57.3	+7.1
SJPF	Ste Jean	90.29	42	*e*P		P	16 33 15.1	-0.8
	comp=Z,3.4nm,0.4s,mb4.3							
ETSF	Etsaut	90.58	42	*e*P		P	16 33 16.9	-0.4
	comp=Z,4.5nm,0.6s,mb4.3							
ETSF	Etsaut	90.58	42	*e*P		P	16 33 16.9	-0.4
ETSF				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.3							
ETSF	Etsaut	90.58	42	*e*P		P	16 33 16.9	-0.4
	comp=Z,2.3nm,0.6s,mb4.4							
YKA	Yellowknife Ar	94.41	340	P		P	16 33 33.5	-1.5
	comp=Z,15nm,1.0s,mb5.1,baz=131,slow=4.5,SNR=15							
YKA	Yellowknife Ar	94.41	340	P		P	16 33 33.5	-1.5
DLBC	Dease Lake	97.49	332	P		P	16 33 48.5	-0.5
	comp=Z,7.1nm,0.7s,mb5.1,baz=180,slow=19							
DLBC	Dease Lake	97.49	332	P		P	16 33 48.5	-0.5
GERES	GERESS Array B	102.14	42	PKKPbc	PKKPbc		16 50 10.9	-1.2
	comp=Z,0.8nm,0.7s,baz=90,slow=2.7,SNR=5.2							
AKASG	Malin Array Be	112.28	43	PKiKP	PKiKP		16 38 47.5	-2.6
	comp=Z,0.3nm,0.3s,baz=263,slow=2.8,SNR=9.5							
AKASG				PKKPbc	PKKPbc		16 49 39.5	-1.0
	comp=Z,0.4nm,0.4s,baz=63,slow=4.0,SNR=5.0							
FINES	FINESS Array B	112.51	31	PKKPbc	PKKPbc		16 49 37.8	-2.1
	comp=Z,1.3nm,0.8s,baz=191,slow=1.9,SNR=3.7							
BRTR	Keskin Array B	113.01	55	PKiKP	PKiKP		16 38 51.2	-0.2
	comp=Z,0.7nm,0.6s,baz=198,slow=3.6,SNR=3.9							
BRTR				PKKPab	PKKPab		16 49 45.9	-0.6
	comp=Z,1.7nm,0.8s,baz=98,slow=4.2,SNR=4.9							
ARCES	ARCESS Array B	113.42	23	PKKPbc	PKKPbc		16 49 34.7	-2.1
	comp=Z,1.1nm,0.6s,baz=97,slow=2.8,SNR=7.9							
ANN	Anapa	116.73	51	*i* PKiKP	PKPdf		16 39 05.0	+6.4
ANN				pmax	pmax			
	comp=Z,148nm,1.7s							
OBN	Obninsk	117.28	39	⇓*i*PKiKP	PKPdf		16 38 58.9	-0.7
OBN				pmax	pmax			
	comp=Z,3.0nm,0.6s							
STKA	Stephens Creek	117.78	207	PKP	PKPdf		16 38 58.4	-2.2
	comp=Z,1.4nm,0.4s,baz=13,slow=0.2,SNR=4.1							
KIV	Kislovodsk	120.36	52	*d* iPKiKP	PKPdf		16 39 04.4	-1.2
FORT	Forrest	123.34	196	*e*PKP	PKPdf		16 39 10.6	-0.7
	comp=Z,8.5nm,0.8s							
MUN	Mundaring	123.94	183	*e*PKP	PKPdf		16 39 11.9	-0.5
KLBR	Kellerberrin	124.22	185	*e*PKP	PKPdf		16 39 12.5	-0.5
	comp=Z,7.2nm,0.6s							
CTA	Charters Tower	125.24	219	*e*PKP	PKPdf		16 39 15.3	+0.4
	comp=Z,8.3nm,1.0s							
CTA	Charters Tower	125.24	219	PKP	PKPdf		16 39 15.2	+0.3
	comp=Z,12nm,0.9s,baz=82,slow=0.5,SNR=7.4							
BILL	Bilibino	125.76	338	⇑*i*PKiKP	PKPdf		16 39 14.9	-1.0
ASAR	Alice Springs	128.16	205	PKhKP			16 39 00.5	
	comp=Z,0.2nm,0.5s,baz=140,slow=1.5,SNR=4.7							
ASAR				PKP	PKPdf		16 39 19.9	-0.6
	comp=Z,12nm,0.8s,baz=139,slow=1.8,SNR=82							
ASAR				pPKP	pPKPdf		16 40 05.8	+6.4
	comp=Z,2.2nm,0.8s,baz=101,slow=1.3,SNR=2.9							
ASAR	Alice Springs	128.16	205	PKiKP	PKPdf		16 39 20.0	-0.5
ASAR							16 40 05.9	
AS31	Alice Springs	128.16	205	*e*PKPdf	PKPdf		16 39 19.9	-0.7
ASPA	Alice Springs	128.16	205	*e*PKP	PKPdf		16 39 20.0	-0.5
ARU	Arti	129.45	36	*i* PKiKP	PKPdf		16 39 21.3	-1.7
ARU				*e*			16 41 40.1	
ARU	Arti	129.45	36	*e*PKPdf	PKPdf		16 39 22.3	-0.7
ARU				*ep*PKPdf	pPKPdf		16 40 09.4	+7.6
ARU				*e*SKP			16 42 28.3	
AKTO	Aktyubinsk	130.53	44	SKPbc	SKPbc		16 42 33.2	-1.8
	comp=Z,12nm,1.1s,baz=285,slow=3.5,SNR=23							
WB2	Warramunga Arr	131.33	207	*e*PKP	PKPdf		16 39 26.7	+0.2
WB2	Warramunga Arr	131.33	207	*e*PKPdf	PKPdf		16 39 26.1	-0.4
WRA	Warramunga Arr	131.34	207	PKhKP			16 39 06.8	
	comp=Z,0.3nm,0.8s,baz=162,slow=2.2,SNR=6.4							
WRA				PKP	PKPdf		16 39 26.3	-0.3
	comp=Z,7.8nm,0.7s,baz=158,slow=1.6,SNR=67							
WRA				SKPbc	SKPbc		16 42 35.5	-2.4
	comp=Z,4.1nm,0.9s,baz=152,slow=3.5,SNR=11							
WRA	Warramunga Arr	131.34	207	PKP	PKPdf		16 39 26.3	-0.3
WRA				SKPbc	SKPbc		16 42 35.5	-2.4
WRAB	Tennant Creek	131.34	207	*e*PKIKP	PKPdf		16 39 26.3	-0.2
TIXI	Tiksi	131.78	353	*d* iPKIKP	PKPdf		16 39 26.0	-1.4
AB31	Akbulak array	131.98	45	PKIKP	PKPdf		16 39 27.2	-0.5
AB31				pmax	pmax			
	comp=Z,3.0nm,0.6s							
SEY	Seymchan	133.36	336	*d* iPKIKP	PKPdf		16 39 29.5	-0.8
FITZ	Fitzroy Crossi	136.07	197	*e*PKP	PKPdf		16 39 35.8	+0.4
	comp=Z,6.9nm,0.6s							
FITZ	Fitzroy Crossi	136.07	197	PKhKP			16 39 22.2	
	comp=Z,1.2nm,0.7s,baz=256,slow=4.2,SNR=5.1							
FITZ				PKP	PKPdf		16 39 35.9	+0.4
	comp=Z,6.2nm,0.9s,baz=204,slow=3.7,SNR=9.3							
FITZ				SKPbc	SKPbc		16 42 51.1	-2.5
	comp=Z,2.8nm,0.9s,baz=149,slow=6.3,SNR=3.9							
FITZ	Fitzroy Crossi	136.07	197	PKP	PKPdf		16 39 35.9	+0.4
FITZ				SKPbc	SKPbc		16 42 51.1	-2.5
ZRNK	Zerenda	136.33	37	*e*PKIKP	PKPdf		16 39 35.7	-0.2
ZRNK				*e*			16 40 22.2	
ZRNK	Zerenda	136.33	37	*e*PKPdf	PKPdf		16 39 35.7	-0.2
ZRNK				*ep*PKPdf	pPKPdf		16 40 22.2	+7.4
ZRNK				*e*SKP			16 42 52.7	
CHKZ	Chkalovo	136.91	36	*e*PKIKP	PKPdf		16 39 36.2	-0.8
CHKZ				*e*			16 40 23.9	
CHKZ				*e*			16 42 27.3	
CHKZ	Chkalovo	136.91	36	*e*PKPdf	PKPdf		16 39 36.2	-0.7
CHKZ				*ep*PKPdf	pPKPdf		16 40 23.9	+8.0
CHKZ				*e*PP	PP		16 42 27.3	+5.6
CHKZ				*e*SKP			16 42 54.5	
BRVK	Borovoye	136.99	37	*e*PKIKP	PKPdf		16 39 37.3	+0.2
KAKA	Kakadu	138.58	209	*e*PKP	PKPdf		16 39 30.9	-9.1
	comp=Z,3.7nm,0.5s							
KK31	Karatay Array	140.51	51	*i* PKIKP	PKPdf		16 39 43.3	-0.3
KK31				pmax	pmax			
	comp=Z,2.0nm,0.8s							
KKAR	Karatay Array	140.51	51	PKIKP	PKPdf		16 39 43.3	-0.3
KKAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
YAK	Yakutsk	140.63	348	*d* iPKHKP			16 39 35.7	
YAK	Yakutsk	140.63	348	*e*PKPpre			16 39 34.9	
NVS	Novosibirsk	142.40	28	*e*PKHKP			16 39 41.3	
NVS				*e*			16 43 00.8	
NVS				pmax	pmax			
	comp=Z,24nm,1.3s							
AAK	Ala-Archa	143.46	50	⇑*i*PKIKP	PKPdf		16 39 47.7	-1.1
AAK	Ala-Archa	143.46	50	*e*PKPdf	PKPdf		16 39 46.1	-2.7
ZAL	Zalesovo	143.68	28	PKP	PKPdf		16 39 46.2	-3.0
	comp=Z,6.4nm,0.5s,baz=171,slow=4.2,SNR=39							
ZAL				SKPbc	SKPbc		16 43 11.6	-2.6
	comp=Z,4.0nm,1.0s,baz=235,slow=3.4,SNR=5.6							
ZAL	Zalesovo	143.68	28	PKP	PKPdf		16 39 46.2	-3.0
ZAL				SKPbc	SKPbc		16 43 11.6	-2.6
TKM2	Tokmak 2	144.14	50	*i* PKIKP	PKPdf		16 39 49.2	-0.8
TKM2				pmax	pmax			
	comp=Z,17nm,1.3s							
KRAR	Krasnoyarsk	145.08	20	*d* iPKIKP	PKPdf		16 39 50.4	-1.2
BOD	Bodaibo	146.52	359	*e*PKIKP	PKPdf		16 39 52.6	-1.5
BOD				pmax	pmax			
	comp=Z,34nm,1.0s							
MK31	Makanchi Array	146.78	40	PKIKP	PKPdf		16 39 54.0	-0.5
MK31				pmax	pmax			
	comp=Z,22nm,0.7s							
MKAR	Makanchi Array	146.78	40	PKPbc	PKPbc		16 39 54.2	-2.3
	comp=Z,32nm,0.8s,baz=325,slow=1.9,SNR=70							
MKAR				pPKPbc	pPKPbc		16 40 40.6	+5.6
	comp=Z,6.3nm,0.8s,baz=307,slow=2.6,SNR=2.9							
MKAR	Makanchi Array	146.78	40	PKPbc	PKPbc		16 39 54.2	-2.3
MKAR				pPKPbc	pPKPbc		16 40 40.6	+5.6
HYB	Hyderabad	147.18	95	*i* PKP	PKPdf		16 39 55.0	-0.2
HYB				*e*			16 39 58.5	
HYB	Hyderabad	147.18	95	*e*P	PKPdf		16 39 55.0	-0.2
YSS	Yuzh-Sakhalins	147.21	321	*e*PKIKP	PKPdf		16 39 54.8	-0.4
GUMO	Guam	148.07	256	PKPbc	PKPbc		16 39 59.8	-0.2
	comp=Z,220nm,1.0s,baz=178,slow=6.8,SNR=9.3							
GUMO	Guam	148.07	256	PKPbc	PKPbc		16 39 59.8	-0.2
HABR	Khabarovsk	150.25	330	⇓*i*PKIKP	PKPbc		16 40 05.1	-0.3
KLR	Kul'dur	151.09	334	*e*PKIKP	PKPdf		16 39 57.5	-4.0
KLR				*e*			16 40 03.0	
KLR				pmax	pmax			
	comp=Z,44nm,1.0s							
MOY	Mondy	151.19	16	*e*PKIKP	PKPdf		16 40 02.5	+0.9
MOY				pmax	pmax			
	comp=Z,45nm,2.3s							
WMQ	Urumqi	151.60	41	*e*PKP	PKPdf		16 40 02.0	-0.2
WMQ				PP	PP		16 43 49.0	-0.4
WMQ				SKS	SKSdf		16 46 50.0	-5.9
WMQ				SKKS	SKKSac		16 50 21.0	-4.8
WMQ				SS	SS		17 02 58.0	-4.5
WMQ				PP	PP			
	comp=Z,124nm,8.0s							
WMQ				LR	LR			
	comp=N,42nm,16.0s							
WMQ				LR	LR			
	comp=E,38nm,16.0s							
WMQ				LR	LR			
	comp=Z,37nm,16.0s							
CIT	Chita	152.33	359	*e*PKIKP	PKPbc		16 40 08.4	-1.8
CIT				*e*			16 40 50.5	
ZAK	Zakamensk	152.91	14	*e*PKIKP	PKPdf		16 40 04.0	-0.2
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.1s							
MJAR	Matsushiro Arr	155.14	305	PKP	PKPdf		16 40 06.8	-0.5
	comp=Z,1.9nm,0.9s,baz=95,slow=0.3,SNR=7.1							
MJAR				PKPbc	PKPdf		16 40 15.6	+8.3
	comp=Z,4.3nm,0.9s,baz=327,slow=0.1,SNR=9.2							
MJAR				PKPab	PKPab		16 40 32.5	-0.2
	comp=Z,19nm,0.9s,baz=62,slow=2.5,SNR=24							
MAJO	Matsushiro	155.14	305	*e*PKPdf	PKPdf		16 40 06.7	-0.6
MAJO				*e*PKPbc	PKPdf		16 40 15.7	+8.4
MAJO				*e*PKPab	PKPab		16 40 32.4	-0.3
MAT	Matsushiro	155.14	305	PKP2	PKPab		16 40 32.3	-0.4
MDJ	Mudanjiang	155.63	330	PKP	PKPdf		16 40 07.3	-0.7
SONM	Songino Array	155.95	11	PKP	PKPdf		16 40 07.8	-0.6
	comp=Z,2.8nm,0.9s,baz=282,slow=0.6,SNR=13							
SONM				PKPab	PKPab		16 40 35.1	-1.1
	comp=Z,2.4nm,0.7s,baz=314,slow=2.7,SNR=5.6							
SONM	Songino Array	155.95	11	PKP2	PKPab		16 40 35.1	-1.1
SONM				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ULN	Ulaanbaatar	156.03	10	*e*PKIKP	PKPdf		16 40 08.5	0.0
ULN				*e*			16 40 35.9	
CN2	Changchun	158.03	335	*e*PKP	PKPdf		16 40 09.0	-2.0
CN2				PP	PP		16 44 25.0	-0.3
LSA	Lhasa	159.84	70	*e*PKIKP	PKPdf		16 40 13.8	+0.6
LSA				*e*			16 40 55.3	
GTA	Gaotai	161.29	33	*e*PKP	PKPdf		16 40 15.3	+0.6
GTA				APKP			16 40 58.0	
GTA				PKS			16 43 47.8	
GTA				PP	PP		16 44 45.3	+2.4
GTA				SKS	SKSdf		16 47 03.3	-2.7
GTA				SKKS	SKKSac		16 51 16.0	-1.1
GTA				PP	PP			
	comp=Z,76nm,5.7s							
GTA				LR	LR			
	comp=N,55nm,9.1s							
GTA				LR	LR			
	comp=E,69nm,8.7s							
GTA				LR	LR			
	comp=Z,59nm,12.9s							
HHC	Hu-ho-hao-te	163.47	4	*e*PKP	PKPdf		16 40 17.8	+0.9
HHC				APKP			16 41 00.5	
HHC				PKP2	PKPab		16 41 11.5	+2.6
HHC				XPKP			16 41 17.3	
HHC				PKS			16 43 50.3	
HHC				PP	PP		16 44 57.5	+3.1
HHC				SKS	SKSdf		16 47 04.8	-2.9
HHC				SKKS	SKKSac		16 51 27.3	-1.0
HHC				SS	SS		17 05 06.3	-2.6
HHC				LR	LR			
	comp=N,66nm,5.5s							
HHC				LR	LR			
	comp=E,95nm,4.3s							
HHC				LR	LR			
	comp=Z,80nm,5.5s							
BJI	Beijing	164.09	351	*e*PKP	PKPdf		16 40 17.0	-0.5
LZH	Lanzhou	165.87	32	*e*PKP	PKPdf		16 40 20.0	+1.0
LZH				APKP			16 41 07.5	
LZH				XPKP			16 41 26.0	
LZH				LR	LR			
	comp=E,236nm,19.6s							
LZH				LR

NEIC ***31*** *16:44:39.3, 37.18S×176.74E, h247km, MG4.2(WEL), After WEL.*

WEL 31 16:44:39.1±0.4, 3714S×17675E, h247km±4km, ML4.1/8, 2C, Error ellipse: s-maj=5.4km s-min=4.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.15**	**166**	*eP*	Pn	16 45 14.3	-0.3
URZ	**Urewera**	**1.15**	**166**	PN	Pn	16 45 14.4	-0.2
URZ				SN	S	16 45 42.0	-0.6
MXZ	**Matakaoa Point**	**1.31**	**109**	P	Pn	16 45 15.7	0.0
MXZ				S	S	16 45 44.2	-0.3
MXZ	**Matakaoa Point**	**1.31**	**109**	⇑PN	Pn	16 45 15.7	0.0
MXZ				SN	S	16 45 44.2	-0.2
MWZ	**Matawai**	**1.34**	**153**	P	Pn	16 45 16.0	+0.1
MWZ	**Matawai**	**1.34**	**153**	PN	Pn	16 45 16.0	+0.1
MWZ				SN	S	16 45 44.9	0.0
PUZ	**Puketiti**	**1.52**	**128**	P	Pn	16 45 17.4	+0.2
PUZ	**Puketiti**	**1.52**	**128**	PN	Pn	16 45 17.4	+0.3
PUZ				SN	S	16 45 46.6	-0.5
KNZ	**Kokohu**	**2.01**	**159**	*eP*	Pn	16 45 21.7	+0.3
KNZ	**Kokohu**	**2.01**	**159**	PN	Pn	16 45 21.7	+0.3
KNZ				SN	S	16 45 54.0	-0.7
BKZ	**Black Stump Fm**	**2.03**	**186**	P	Pn	16 45 21.3	-0.2
BKZ				S	S	16 45 54.6	-0.4
BKZ	**Black Stump Fm**	**2.03**	**186**	⇑PN	Pn	16 45 21.3	-0.2
BKZ				SN	S	16 45 54.2	-0.8
WTVZ	**West Tongariro**	**2.17**	**204**	P	Pn	16 45 23.5	+0.7
WTVZ	**West Tongariro**	**2.17**	**204**	PN	Pn	16 45 23.6	+0.8
OTVZ	**Oturere**	**2.19**	**203**	PN	Pn	16 45 23.6	+0.6
NGZ	**Ngauruhoe**	**2.22**	**204**	P	Pn	16 45 24.5	+1.2
NGZ	**Ngauruhoe**	**2.22**	**204**	PN	Pn	16 45 24.4	+1.1
FWVZ	**Far West T-bar**	**2.31**	**204**	*eP*	Pn	16 45 25.1	+0.9
FWVZ	**Far West T-bar**	**2.31**	**204**	PN	Pn	16 45 24.8	+0.7
MOVZ	**Moawhango**	**2.39**	**199**	P	Pn	16 45 24.8	-0.2
MOVZ	**Moawhango**	**2.39**	**199**	PN	Pn	16 45 24.9	0.0
PKVZ	**Pokaka**	**2.41**	**207**	PN	Pn	16 45 25.8	+0.6
MTVZ	**Mangateitei**	**2.46**	**204**	PN	Pn	16 45 26.1	+0.5
PXZ	**Pawanui**	**2.89**	**178**	PN	Pn	16 45 29.6	-0.5
WAZ	**Wanganui**	**2.95**	**207**	*eP*	Pn	16 45 31.1	+0.3
WAZ	**Wanganui**	**2.95**	**207**	PN	Pn	16 45 31.1	+0.3
TSZ	**Takapari Road**	**2.98**	**192**	P	Pn	16 45 30.4	-0.7
TSZ	**Takapari Road**	**2.98**	**192**	PN	Pn	16 45 30.4	-0.7
BFZ	**Birch Farm**	**3.56**	**186**	*eP*	Pn	16 45 36.4	-1.1
MRZ	**Mangatainoka R**	**3.63**	**194**	P	Pn	16 45 36.8	-1.6
MRZ	**Mangatainoka R**	**3.63**	**194**	PN	Pn	16 45 36.7	-1.7
TIWZ	**Tintock**	**3.69**	**190**	PN	Pn	16 45 37.9	-1.2
KIW	**Kapiti Island**	**3.98**	**200**	P	Pn	16 45 39.4	-3.0
KIW	**Kapiti Island**	**3.98**	**200**	PN	Pn	16 45 40.6	-1.8
MTW	**Mount Morrison**	**4.13**	**193**	P	Pn	16 45 41.8	-2.4
CAW	**Cannon Point**	**4.17**	**198**	P	Pn	16 45 42.7	-2.0
CAW	**Cannon Point**	**4.17**	**198**	PN	Pn	16 45 42.7	-2.0
MRW	**Makara Radio**	**4.38**	**201**	P	Pn	16 45 45.2	-2.0
WEL	**Wellington**	**4.41**	**200**	P	Pn	16 45 45.4	-2.2
MSWZ	**Moikau Station**	**4.42**	**195**	P	Pn	16 45 45.2	-2.5
SNZO	**South Karori**	**4.45**	**200**	P	Pn	16 45 45.7	-2.4
TCW	**Tory Channel**	**4.50**	**204**	P	Pn	16 45 46.3	-2.3
NNZ	**Nelson**	**4.84**	**212**	*eP*	Pn	16 45 50.0	-2.7
THZ	**Tophouse**	**5.49**	**212**	*eP*	Pn	16 45 57.6	-3.1
KHZ	**Kahutara**	**5.82**	**204**	P	Pn	16 46 02.5	-2.3
LTZ	**Lake Taylor**	**6.60**	**210**	*eP*	Pn	16 46 11.2	-3.4
ODZ	**Otahua Downs**	**9.14**	**208**	*eP*	Pn	16 46 44.1	-2.6

NEIC ***31*** *16:44:47.3±1.9, 1027S×10699E, h10km, mb4.2/1, Error ellipse: s-maj=93.1km s-min=12.5km az=48.0*
IDC ***31*** *16:44:48.5±1.7, 940S×10780E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, ML3.3/1, Error ellipse: s-maj=99.3km s-min=19.0km az=47.0*
ISCJB ***31*** *16:44:51.2±0.9, 961S±008×1077E±01, h33km, mb3.8/6, Error ellipse: s-maj=14.9km s-min=11.1km az=12.3*

ISC 31 16:44:53.7±0.9, 957S±008×1077E±01, h35km, n10, σ0§76/12, mb3.8/6, 1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.98**	**42**	⇓*iP*	**Pn**	**16 45 36.8**	**-1.7**
BJII				*i* S	**Sn**	**16 46 13.8**	**+0.8**
MBWA	**Marble Bar**	**16.33**	**136**	*e*Pn	**Pn**	**16 48 35.5**	**-4.8**
MBWA				*e*Sn	**Sn**	**16 51 22.6**	**-18**
FITZ	**Fitzroy Crossi**	**19.36**	**118**	P	**Pn**	**16 49 17.7**	**+0.2**
	0.1nm,0.3s,baz=326,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**27.70**	**115**	P	**P**	**16 50 38.6**	**+0.1**
	1.2nm,0.7s,mb3.6,baz=286,slow=11,SNR=12						
WRA				PcP	PcP	16 53 55.2	+0.4
	0.3nm,0.5s,baz=298,slow=2.1,SNR=6.2						
WRAB	**Tennant Creek**	**27.71**	**115**	P	**P**	**16 50 38.5**	**-0.1**
ASAR	**Alice Springs**	**28.68**	**122**	P	**P**	**16 50 47.4**	**+0.1**
	0.5nm,0.9s,mb3.3,baz=298,slow=8.7,SNR=6.1						
ASAR				PcP	PcP	16 53 57.8	+0.5
	0.3nm,0.6s,baz=295,slow=2.2,SNR=5.5						
STKA	**Stephens Creek**	**38.43**	**130**	P	**P**	**16 52 12.1**	**+0.1**
	3.7nm,0.9s,mb4.1,baz=297,slow=12,SNR=4.9						
LSA	**Lhasa**	**42.17**	**338**	*eP*	**P**	**16 52 44.2**	**+1.3**
	2.1nm,0.4s,mb4.1						
MKAR	**Makanchi Array**	**60.53**	**340**	P	**P**	**16 54 59.8**	**-0.6**
	1.1nm,0.6s,mb4.2,baz=136,slow=7.2,SNR=11						
BVAR	**Borovoye Array**	**69.99**	**337**	P	**P**	**16 56 01.4**	**-0.3**
	0.4nm,0.5s,mb3.6,baz=151,slow=6.6,SNR=3.3						

ISCJB ***31*** *17:03:11.1±0.6, 5140N±003×1608E±003, h0km, Error ellipse: s-maj=5.0km s-min=2.7km az=25.8*
VIE ***31*** *17:03:13.7±0.4, 5133N×1617E, h0km, mb2.1/3, ML2.5/4, Error ellipse: s-maj=2.8km s-min=2.6km az=170.0 64 km WNW of Breslau Suspected Mining induced.*
IPEC ***31*** *17:03:13.0±0.3, 5144N×1653E, h0km, ML1.9/4, Error ellipse: s-maj=3.4km s-min=2.0km az=87.0*
PRU ***31*** *17:03:14.7, 5134N×1606E, h0km*
CSEM ***31*** *17:03:14.7±0.4, 5137N×1607E, h1km±1km, ML3.0/8, Error ellipse: s-maj=6.0km s-min=3.2km az=10.0*

ISC 31 17:03:11.8±0.6, 5147N±003×1611E±003, h0km, n23, σ0§93/47, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**170**	*i* Pgd	**Pg**	**17 03 24.7**	**+0.8**
KSP				*e*Sg	**Sg**	**17 03 33.2**	**+1.1**
KSP	**Ksiaz**	**0.63**	**170**	*e*Pg	**Pg**	**17 03 24.7**	**+0.8**
KSP				*e*Sg	**Sg**	**17 03 33.2**	**+1.1**
UPC	**Upice**	**0.96**	**184**	*e*PG	**Pg**	**17 03 30.8**	**+0.6**
DPC	**Dobruska-Polom**	**1.12**	**173**	*e*PG	**Pg**	**17 03 33.5**	**+0.2**
DPC				*e*SG	**Sg**	**17 03 48.0**	**+0.1**
	25nm,0.6s						
PVCC	**Panska Ves**	**1.35**	**227**	*e*PG	**Pg**	**17 03 37.8**	**+0.1**
BRG	**Berggiesshubel**	**1.49**	**247**	PG	**Pg**	**17 03 40.2**	**-0.1**
BRG				SG	**Sg**	**17 04 00.6**	**+1.0**
	24nm,0.3s						
PRU	**Pruhonice**	**1.79**	**215**	*e*PN	**Pn**	**17 03 44.0**	**+0.2**
PRU				*e*PG	**Pg**	**17 03 45.5**	**-0.5**
PRU				*e*SG	**Sg**	**17 04 07.8**	**-1.3**
	16nm,0.4s						
MORC	**Moravsky Berou**	**1.92**	**151**	*e*Pn	**Pn**	**17 03 45.5**	**-0.2**
MORC				*e*Sg	**Sg**	**17 04 08.9**	**-4.6**
CLL	**Collm**	**1.96**	**267**	*i* Pg	**Pg**	**17 03 48.0**	**-1.3**
CLL				*i* x	x	17 03 51.5	
CLL				*i* Sg	**Sg**	**17 04 14.6**	**0.0**
	comp=Z,13nm,0.5s						
CLL				*ex*	x	17 04 24.0	
OKC	**Ostrava-Krasne**	**2.08**	**141**	*e*PG	**Pg**	**17 03 52.0**	**+0.3**
OKC				*e*SG	**Sg**	**17 04 17.1**	**-1.6**
	comp=Z,25nm,0.6s						
VRAC	**Vranov**	**2.18**	**172**	*e*Pn	**Pn**	**17 03 50.0**	**+0.7**
VRAC				*e*Sg	**Sg**	**17 04 19.2**	**-2.7**
	comp=Z,4.6nm,0.2s						
KRUC	**Moravsky**	**2.41**	**176**	*e*Pn	**Pn**	**17 03 53.3**	**+0.8**
KRUC				*e*Sg	**Sg**	**17 04 28.0**	**-1.3**
	comp=Z,6.3nm,0.3s						
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**17 03 55.5**	**0.0**
NKC				*e*PG	**Pg**	**17 04 02.1**	**-0.1**
NKC				*e*SG	**Sg**	**17 04 37.0**	**+0.7**
	comp=Z,24nm,0.5s						
OJC	**Ojcow**	**2.65**	**117**	*e*Pg	**Pg**	**17 04 02.4**	**-0.1**
OJC				*e*Sg	**Sg**	**17 04 38.3**	**+1.4**
JAVC	**Velka Javorina**	**2.79**	**158**	*e*Sg	**Sg**	**17 04 40.3**	**-1.3**
	comp=Z,6.7nm,0.4s						
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PN	**Pn**	**17 03 58.6**	**+0.1**
KHC				*e*PG	**Pg**	**17 04 04.8**	**-1.6**
KHC				*e*SN	**Sn**	**17 04 33.6**	**+0.2**
KHC				*e*SG	**Sg**	**17 04 42.1**	**-1.2**
	comp=Z,9.5nm,0.5s						
MOX				*e*SG	**Sg**	**17 04 47.9**	**+1.2**
MOX				*e*PG		19 10 08.8	
MOX				*e*SG		19 10 48.2	
MOX	**Moxa**	**2.96**	**256**	*e*PG	**Pg**	**17 04 08.2**	**-0.2**
VYHS	**Vyhne**	**3.46**	**148**	*e*PN	**Pn**	**17 04 07.2**	**+0.4**
VYHS				*e*PG	**Pg**	**17 04 17.8**	**-0.2**
VYHS				*e*		17 05 00.9	
VYHS	**Vyhne**	**3.46**	**148**	*e*Pn	**Pn**	**17 04 07.3**	**+0.5**
CONA	**Conrad Observa**	**3.54**	**183**	⇓*i*Pn	**Pn**	**17 04 08.3**	**+0.2**
CONA				⇑*i*Sg	**Sg**	**17 05 06.4**	**+0.7**
	comp=Z,4.7nm,0.3s						
BSD	**Bornholm Skovb**	**3.73**	**349**	*i* P	**Pn**	**17 04 08.7**	**-1.8**
BSD				*e*S	**Sn**	**17 04 49.6**	**-5.5**
BSD				*i* LG		17 04 52.3	
MOA	**Molln**	**3.81**	**199**	⇑*i*Pn	**Pn**	**17 04 12.4**	**+0.7**
MOA				⇓*i*Sg	**Sg**	**17 05 16.2**	**+1.9**
	comp=Z,3.9nm,0.4s						
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*PN	**Pn**	**17 04 16.6**	**+4.1**
STHS				*e*PG	**Pg**	**17 04 26.6**	**+0.7**
STHS				*e*SG	**Sg**	**17 05 20.8**	**+4.7**

JMA ***31*** *17:09:41.9±0.2, 3111N×1383.7E, h458km, M3.1*
ISCJB ***31*** *17:09:42.3±0.8, 3105N±007×1384E±01, h443km±9km, mb3.5/2, Error ellipse: s-maj=19.3km s-min=9.7km az=153.8*
IDC ***31*** *17:09:47.7±39.0, 3159N×13800E, h440km±134km, mb3.1/2, mb1 3.0/3, mb1mx2.7/21, mbtmp3.7/3, Error ellipse: s-maj=664.4km s-min=84.6km az=166.0*

ISC 31 17:09:44.0±0.9, 3118N±009×1384E±02, h441km±9km, n12, σ0§69/18, mb3.5/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.26**	**31**	P	**P**	**17 10 45.9**	**+0.7**
JHJ2				*e*S	**S**	**17 11 35.8**	**+1.0**
JWZ	**Kozaga**	**3.29**	**316**	P	**P**	**17 10 51.8**	**-0.7**
JIE	**Ise**	**3.52**	**336**	P	**P**	**17 10 54.7**	**+0.3**
JWY	**Kouya**	**3.86**	**322**	P	**P**	**17 10 57.3**	**0.0**
BSO1	**Boso 1**	**4.08**	**31**	P	**P**	**17 10 59.2**	**0.0**
BSO1				*e*S	**S**	**17 11 59.2**	**-1.2**
JOD2	**Odawara 2**	**4.11**	**8**	P	**P**	**17 11 00.5**	**+1.0**
JOD2				*e*S	**S**	**17 12 00.9**	**-0.1**
JRY	**Ryogami san**	**4.84**	**5**	P	**P**	**17 11 06.3**	**0.0**
JRY				*e*S	**S**	**17 12 13.0**	**-0.5**
CBIJ	**Chichi jima**	**5.23**	**140**	P	**P**	**17 11 09.3**	**-0.8**
CBIJ				*e*S	**S**	**17 12 14.8**	**-5.5**
MJAR	**Matsushiro Arr**	**5.36**	**358**	P	**P**	**17 11 10.8**	**-0.6**
	0.7nm,0.3s,baz=184,slow=10.0,SNR=12						
JMK	**Ichinoseki**	**8.09**	**16**	P	**P**	**17 11 41.6**	**+1.5**
JMK				*e*S	**S**	**17 13 15.1**	**-0.4**
MKAR	**Makanchi Array**	**45.38**	**307**	P	**P**	**17 17 20.8**	**-0.5**
	0.4nm,0.2s,mb3.3,baz=83,slow=9.2,SNR=3.9						
FINES	**FINESS Array B**	**72.83**	**332**	P	**P**	**17 20 27.0**	**+0.4**
	0.8nm,0.4s,mb3.6,baz=60,slow=5.0,SNR=8.1						

IDC ***31*** *17:26:16.5±0.7, 924S×10759E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/19, mbtmp4.1/11, ML3.2/1, Error ellipse: s-maj=28.3km s-min=15.7km az=52.0*
NEIC ***31*** *17:26:17.9±0.4, 932S×10759E, h10km, mb4.7/14, Error ellipse: s-maj=17.8km s-min=7.8km az=51.0*
BJI ***31*** *17:26:17.8, 930S×10760E, h10km, mB4.9, mb4.7*
ISCJB ***31*** *17:26:24.0±2.9, 926S±009×1078E±01, h74km±25km, mb4.3/26, Error ellipse: s-maj=23.0km s-min=10.1km az=117.0*

ISC 31 17:26:24.9±2.7, 927S±009×1077E±01, h64km±24km, h24km±4.8km: pP-P, n39, σ0§89/42, mb4.4/26, 1C-1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.75**	**46**	⇓*iP*	**Pn**	**17 27 06.8**	**+0.2**
BJII				*i* S	**Sn**	**17 27 21.4**	**-17**
BJII	**Banjamegara**	**2.75**	**46**	⇑*iP*	**Pn**	**17 27 01.2**	**-5.4**
BJII				*i* S	**Sn**	**17 27 37.6**	**-1.1**
KULM	**Kulim**	**16.10**	**334**	Pn	**Pn**	**17 29 58.9**	**-8.2**
MBWA	**Marble Bar**	**16.53**	**137**	*e*Pn	**Pn**	**17 30 06.2**	**-6.3**
MBWA				*e*Sn	**Sn**	**17 32 54.8**	**-20**
FITZ	**Fitzroy Crossi**	**19.47**	**119**	P	**Pn**	**17 30 48.3**	**+0.1**
	0.1nm,0.3s,baz=271,slow=8.5,SNR=3.7						
WRA	**Warramunga Arr**	**27.80**	**115**	P	**P**	**17 32 08.8**	**+0.9**
	1.7nm,0.9s,mb3.7,baz=286,slow=12,SNR=6.9						
WRA				PcP	PcP	17 35 25.2	+2.4
	0.4nm,0.8s,baz=295,slow=1.9,SNR=4.6						
WRAB	**Tennant Creek**	**27.81**	**115**	P	**P**	**17 32 08.3**	**+0.3**
	5.1nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**28.82**	**123**	P	**P**	**17 32 17.1**	**+0.1**
	0.7nm,0.7s,mb3.5,baz=303,slow=8.2,SNR=9.3						
ASAR				PcP	PcP	17 35 27.2	+1.9
	0.4nm,0.7s,baz=308,slow=2.7,SNR=4.3						
STKA	**Stephens Creek**	**38.61**	**131**	P	**P**	**17 33 43.0**	**+1.2**
	3.5nm,0.9s,mb4.1,baz=296,slow=10,SNR=5.6						
STKA	**Stephens Creek**	**38.61**	**131**	*e*P	**P**	**17 33 40.5**	**-1.2**
LSA	**Lhasa**	**41.91**	**338**	P	**P**	**17 34 10.3**	**+1.2**
LSA	**Lhasa**	**41.91**	**338**	*e*Pn	**P**	**17 34 09.8**	**+0.7**
	7.7nm,0.7s,mb4.4						
PKI	**Pulchoki**	**42.53**	**330**	*e*P	**P**	**17 34 13.9**	**-0.2**
GUN	**Gumba**	**42.59**	**331**	*e*P	**P**	**17 34 14.2**	**-0.4**
DMN	**Daman**	**42.71**	**330**	*e*P	**P**	**17 34 15.9**	**+0.3**
	19nm,0.6s,mb5.0						
KKN	**Kakani**	**42.78**	**330**	*e*P	**P**	**17 34 17.0**	**+0.9**
	12nm,0.7s,mb4.8						
XAN	**Xi'an**	**43.09**	**1**	P	**P**	**17 34 18.0**	**-0.6**
XAN				AP	pP	17 34 27.3	-7.4
XAN				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.7						
GKN	**Gorkha**	**43.27**	**330**	*e*P	**P**	**17 34 20.0**	**-0.1**
	comp=Z,33nm,1.0s,mb5.0						
KOLN	**Koldanda**	**43.61**	**328**	*e*P	**P**	**17 34 23.9**	**+1.1**
	comp=Z,24nm,0.7s,mb5.1						
LZH	**Lanzhou**	**45.26**	**356**	*e*P	**P**	**17 34 36.5**	**+0.5**
LZH				AP	pP	17 34 44.0	-8.2
LZH				XP	sP	17 34 47.5	-12
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,65nm,4.1s						
GTA	**Gaotai**	**48.99**	**352**	*e*P	**P**	**17 35 06.5**	**+1.5**
GTA				AP	pP	17 35 12.5	-8.9
GTA				XP	sP	17 35 15.5	-13
GTA				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.3						
MJAR	**Matsushiro Arr**	**53.83**	**30**	P	**P**	**17 35 40.3**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.8,baz=216,slow=6.2,SNR=4.5						
SONM	**Songino Array**	**56.87**	**359**	P	**P**	**17 36 03.5**	**+0.5**
	comp=Z,2.4nm,0.5s,mb4.5,baz=172,slow=8.4,SNR=16						
ULN	**Ulaanbaatar**	**56.89**	**359**	*e*P	**P**	**17 36 03.8**	**+0.6**
	comp=Z,4.2nm,0.5s,mb4.7						
ULN				*e*		17 36 12.9	
MKAR	**Makanchi Array**	**60.26**	**340**	P	**P**	**17 36 26.5**	**-0.1**
	comp=Z,1.4nm,0.5s,mb4.2,baz=151,slow=7.9,SNR=12						
MKAR	**Makanchi Array**	**60.26**	**340**	P	**P**	**17 36 26.5**	**-0.1**
YSS	**Yuzh-Sakhalins**	**64.08**	**26**	P	**P**	**17 36 53.8**	**+1.6**
	comp=Z,19nm,0.9s,mb5.1						
MAW	**Mawson**	**65.42**	**197**	P	**P**	**17 36 59.4**	**-1.5**
	comp=Z,1.6nm,0.7s,mb4.2,baz=59,slow=7.4,SNR=3.6						
MAW	**Mawson**	**65.42**	**197**	*e*P	**P**	**17 36 58.7**	**-2.2**
	comp=Z,2.2nm,0.8s,mb4.2						
ZAL	**Zalesovo**	**65.89**	**345**	P	**P**	**17 37 02.2**	**-1.8**
	comp=Z,1.7nm,0.3s,mb4.5,baz=349,slow=5.7,SNR=5.9						
ZAL	**Zalesovo**	**65.89**	**345**	P	**P**	**17 37 02.2**	**-1.8**
BVAR	**Borovoye Array**	**69.73**	**337**	P	**P**	**17 37 27.7**	**-0.4**
	comp=Z,3.5nm,0.7s,mb4.4,baz=139,slow=8.5,SNR=15						
BRVK	**Borovoye**	**69.79**	**337**	P	**P**	**17 37 26.8**	**-1.6**
	comp=Z,2.4nm,1.1s,mb4.3						
CHKZ	**Chkalovo**	**70.14**	**338**	*e*P	**P**	**17 37 30.3**	**-0.3**
	comp=Z,6.8nm,0.8s,mb4.6						
ZRNK	**Zerenda**	**70.21**	**336**	*e*P	**P**	**17 37 30.0**	**-1.0**
	comp=Z,4.8nm,0.9s,mb4.4						
KMBO	**Kilima Mbogo**	**70.55**	**272**	P	**P**	**17 37 34.0**	**+0.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=48,slow=19,SNR=3.3						
KMBO	**Kilima Mbogo**	**70.55**	**272**	P	**P**	**17 37 34.0**	**+0.9**
YAK	**Yakutsk**	**73.11**	**11**	*e*P	**P**	**17 37 47.6**	**-0.8**
	comp=Z,11nm,0.8s,mb4.8						
VNDA	**Vanda**	**73.61**	**169**	P	**P**	**17 37 51.6**	**+0.2**
	comp=Z,1.1nm,1.0s,mb3.7						

MOS ***31*** *18:02:18.1±1.0, 3632N×7090E, h119km, mb4.7/13, Error ellipse: s-maj=10.2km s-min=5.2km az=94.0*
ISCJB ***31*** *18:02:19.5±0.4, 3635N±002×7103E±004, h136km±4km, mb4.4/34, Error ellipse: s-maj=5.6km s-min=3.1km az=158.3*
IDC ***31*** *18:02:21.6±0.7, 3626N×7098E, h142km±6km, mb4.1/16, mb1 4.3/18, mb1mx4.1/26, mbtmp4.6/18, Error ellipse: s-maj=14.9km s-min=10.5km az=31.0*
NEIC ***31*** *18:02:21.9±0.4, 3637N×7114E, mb4.6/15, Error ellipse: s-maj=10.5km s-min=6.0km az=50.0*
BJI ***31*** *18:02:21.6, 3668N×7103E, h138km, mB4.8, mb4.4*
NNC ***31*** *18:02:28.9±3.2, 3701N×7079E, h183km±24km, mb3.7, mpv4.9, Error ellipse: s-maj=27.5km s-min=21.3km az=43.0*

ISC 31 18:02:20.7±0.3, 3635N±002×7105E±004, h133km±4km, h148km±3.6km: pP-P, n143, σ1§13/180, mb4.4/34, 22C-21D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.62**	**164**	⇑P	**Pn**	**18 03 04.0**	**+1.6**
CHCP	**Chirah Chowk**	**3.24**	**145**	⇑P	**Pn**	**18 03 12.2**	**+1.7**
THW	**Thamme Wali**	**3.59**	**171**	⇓P	**Pn**	**18 03 15.8**	**+0.7**
SBDP	**Sheikh Budin**	**4.04**	**183**	⇓P	**Pn**	**18 03 21.4**	**+0.3**
SARP	**Sargodha**	**4.62**	**163**	⇓P	**Pn**	**18 03 28.6**	**0.0**
DRP	**Derazinda**	**4.65**	**189**	⇓P	**Pn**	**18 03 29.4**	**+0.3**
JMU	**Jammu**	**4.82**	**138**	*e*P	**Pn**	**18 03 31.5**	**+0.2**
JMU				*e*S	**Sn**	**18 04 24.5**	**-1.8**
KSH	**Kashi**	**5.01**	**49**	⇓*i*P	**Pn**	**18 03 36.3**	**+2.4**
KSH				S	**Sn**	**18 04 32.3**	**+1.3**
KSH				Smax			
	comp=E,736nm,0.6s						
KSH				Smax			
	comp=N,845nm,0.6s						
THN	**Thein Dam**	**5.49**	**134**	*e*P	**Pn**	**18 03 40.8**	**+0.5**
THN				*ex*	x	18 04 45.2	
DLH	**Dalhousie**	**5.56**	**132**	*e*P	**Pn**	**18 03 43.0**	**+1.7**
DLH				*ex*	x	18 04 48.0	
PONG	**Pong**	**5.97**	**136**	*e*P	**Pn**	**18 03 47.0**	**+0.2**
PONG				*ex*	x	18 04 55.0	
AML	**Almayashu**	**6.13**	**19**	P	**Pn**	**18 03 49.1**	**+0.2**
	SNR=424						
KZA	**Kyzart**	**6.58**	**28**	P	**Pn**	**18 03 54.9**	**-0.1**
	SNR=30						
BHK	**Bhakra**	**6.64**	**136**	*e*P	**Pn**	**18 04 00.2**	**+4.4**
BHK				*e*S	**Sn**	**18 05 12.8**	**+2.7**
EKS2	**Erkin-Say**	**6.65**	**18**	P	**Pn**	**18 03 56.3**	**+0.4**
	SNR=25						
KK31	**Karatay Array**	**6.76**	**357**	⇑P	**Pn**	**18 03 56.6**	**-0.8**
	comp=N,47nm,0.4s,baz=180,slow=12,SNR=1579						
KK31				⇑S	**Sn**	**18 05 07.8**	**-5.2**
	comp=N,289nm,0.8s						
KK31	**Karatay Array**	**6.76**	**357**	*i* PN	**Pn**	**18 03 56.6**	**-0.8**
KK31				pmax	pmax		
	comp=Z,90nm,0.3s						
KKAR	**Karatay Array**	**6.76**	**357**	PN	**Pn**	**18 03 56.6**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,31nm,0.4s						
AAK	**Ala-Archa**	**6.82**	**22**	P	**Pn**	**18 03 58.4**	**+0.2**
	SNR=118						
AAK	**Ala-Archa**	**6.82**	**22**	⇑P	**Pn**	**18 03 57.7**	**-0.4**
	SNR=13						
AAK	**Ala-Archa**	**6.82**	**22**	*e*PN	**Pn**	**18 03 57.2**	**-1.0**
AAK				pmax	pmax		
	comp=Z,175nm,0.5s						
AAK	**Ala-Archa**	**6.82**	**22**	*e*P	**Pn**	**18 03 57.1**	**-1.0**
	comp=Z,175nm,0.5s						
SDNR	**Sundarnagar**	**6.90**	**133**	*e*P	**Pn**	**18 03 59.4**	**+0.2**
SDNR				*e*S	**Sn**	**18 05 11.8**	**-4.5**
KBK	**Karagaybulak**	**6.98**	**24**	P	**Pn**	**18 04 01.2**	**+0.8**
	SNR=69						
FRU	**Bishkek**	**7.04**	**22**	*e*PN	**Pn**	**18 04 02.0**	**+0.9**
FRU				pmax	pmax		
	comp=Z,130nm,1.8s						
ULHL	**Ulahol**	**7.13**	**33**	P	**Pn**	**18 04 02.6**	**+0.2**
	SNR=30						
CHMS	**Chumysh**	**7.23**	**22**	P	**Pn**	**18 04 03.4**	**-0.3**
	SNR=133						
SMLA	**Simla**	**7.28**	**134**	*e*P	**Pn**	**18 04 03.8**	**-0.7**
SMLA				*e*S	**Sn**	**18 05 21.6**	**-4.0**
SMLA				AML	AML	18 05 26.1	
	comp=N,589nm,0.1s						
SMLA				AML	AML	18 05 30.9	
	comp=E,600nm,0.5s						

comp=Z,44nm,0.3s
GUN eS S 18 08 24.7 -17
AB31 Akbulak array 15.24 331 P Pn 18 05 46.6 -2.1
comp=Z,15nm,0.5s,baz=145,slow=12,SNR=236
AB31 ⇑S S 18 08 22.9 -22
comp=Z,17nm,0.7s,baz=149,slow=23,SNR=8.4
AB31 Akbulak array 15.24 331 eP Pn 18 05 46.5 -2.2
AB31 pmax pmax
comp=Z,7.0nm,0.5s
JBP Jabalpur 15.24 147⇑iP Pn 18 05 52.2 +3.4
JBP ex x 18 08 28.4
VOSK Vostochnaya 16.37 360 ⇓P Pn 18 06 01.1 -1.6
comp=Z,15nm,0.8s
VOSK ⇑S S 18 08 53.4 -12
comp=Z,12nm,1.1s
ZRNK Zerenda 16.66 356 ⇑P Pn 18 06 05.3 -1.0
comp=Z,28nm,1.2s
ZRNK ⇓S S 18 09 04.9 -7.0
comp=Z,0.1nm,0.2s
ZRNK Zerenda 16.66 356 eP Pn 18 06 05.0 -1.2
ZRNK pmax pmax
comp=Z,15nm,0.4s
ZRNK Zerenda 16.66 356 eP Pn 18 06 05.0 -1.3
comp=Z,14nm,0.4s
BVA0 Borovoye Array 16.68 359 ⇓P Pn 18 06 05.2 -1.2
comp=Z,5.2nm,1.2s
BVA0 ⇓S S 18 09 05.2 -7.1
comp=Z,3.1nm,1.1s
BVAR Borovoye Array 16.68 359 P Pn 18 06 05.6 -0.8
comp=Z,2.4nm,0.3s,baz=165,slow=13,SNR=51
BVAR S S 18 09 15.5 +3.3
baz=171,slow=24,SNR=6.7
BRVK Borovoye 16.72 358 ⇓P Pn 18 06 06.1 -0.8
SNR=11
BRVK Borovoye 16.72 358 eP Pn 18 06 05.6 -1.3
BRVK pmax pmax
comp=Z,10.0nm,0.6s
BRVK Borovoye 16.72 358 eP Pn 18 06 05.6 -1.3
comp=Z,9.8nm,0.6s
AKTK Aktyubinsk 16.93 330 P Pn 18 06 09.0 -0.5
AKTK S S 18 09 06.5 -12
AKTO Aktyubinsk 16.93 330 ⇑P Pn 18 06 08.5 -1.0
comp=Z,1.1nm,0.7s
AKTO ⇑S S 18 09 05.4 -13
comp=Z,0.3nm,0.7s
AKTO Aktyubinsk 16.93 330 P Pn 18 06 09.0 -0.5
comp=Z,3.7nm,0.3s,baz=136,slow=13,SNR=177
AKTO S S 18 09 06.5 -12
comp=Z,0.4nm,0.3s,baz=75,slow=19,SNR=3.3
AKTO Aktyubinsk 16.93 330 P Pn 18 06 09.0 -0.5
AKTO S S 18 09 06.5 -12
AKTO pmax pmax
comp=Z,4.0nm,0.3s
CHKZ Chkalovo 17.33 359⇑P Pn 18 06 13.1 -1.2
comp=Z,4.4nm,0.5s
CHKZ ⇓S S 18 09 13.7 -13
comp=Z,13nm,1.4s
CHKZ Chkalovo 17.33 359 eP Pn 18 06 13.1 -1.2
CHKZ pmax pmax
comp=Z,9.0nm,0.6s
CHKZ Chkalovo 17.33 359 eP Pn 18 06 13.1 -1.2
comp=Z,9.2nm,0.6s
BOK Bokaro 17.90 130 eP Pn 18 06 25.8 +4.7
LSA Lhasa 18.09 106 P P 18 06 26.5 +4.5
LSA Lhasa 18.09 106 eP P 18 06 26.4 +4.4
LSA pmax pmax
comp=Z,27nm,0.8s
LSA Lhasa 18.09 106 eP P 18 06 26.4 +4.3
comp=Z,27nm,0.8s
HYB Hyderabad 19.99 159iP P 18 06 45.0 +2.3
HYB Hyderabad 19.99 159 eP P 18 06 45.0 +2.3
ZAL Zalesovo 20.02 24 P P 18 06 43.0 +0.1
comp=Z,28nm,0.4s,baz=251,slow=8.8,SNR=62
NVS Novosibirsk 20.31 21 iP P 18 06 45.9 -0.1
NVS ePPP 18 07 28.6
NVS eS S 18 10 22.7 -3.6
NVS eSS 18 10 52.0
NVS pmax pmax
comp=E,10.0nm,1.0s
NVS pmax pmax
comp=Z,40nm,1.0s
NVS pmax pmax
comp=N,43nm,1.2s
NVS smax
comp=N,60nm,1.8s
NVS smax
comp=E,16nm,1.3s
UMR Umm Al-Rimmam 20.70 258 eP P 18 06 50.2 0.0
UMR AMb AMB 18 06 54.6
comp=Z,69nm,0.4s
KBD Kabd 20.88 257 eP P 18 06 52.1 -0.1
KBD AMb AMB 18 06 52.4
comp=Z,67nm,0.4s
MIB Mutribah 20.89 259 eP P 18 06 52.4 +0.2
MIB AMb AMB 18 06 54.6
comp=Z,42nm,0.9s
QRN Al-Qurain 20.89 255 eP P 18 06 52.0 -0.3
QRN AMb AMB 18 06 52.8
comp=Z,20nm,0.3s
GNI Garni 20.98 288 P P 18 06 54.0 +0.7
comp=Z,5.1nm,0.5s,baz=17,slow=11,SNR=6.1
GNI Garni 20.98 288 ⇓P P 18 06 57.3 +4.1
SNR=6.5
GNI Garni 20.98 288diP P 18 06 56.6 +3.4
GNI pmax pmax
comp=Z,27nm,1.0s
NAY Al-Naaiem 21.20 257 eP P 18 06 55.2 -0.3
NAY AMb AMB 18 06 57.6
comp=Z,22nm,0.8s,mb4.5
ARU Arti 21.79 341⇑iP P 18 07 02.1 +0.3
ARU e 18 07 27.8
ARU ePPP 18 07 39.2
ARU eS S 18 10 52.6 -1.7
ARU pmax pmax
comp=Z,59nm,1.0s,mb5.0
ARU Arti 21.79 341 eP P 18 07 02.2 +0.4
comp=Z,56nm,1.0s,mb5.0
ZEI Tsey 21.84 295 eP P 18 07 05.3 +2.9
ZEI eS S 18 11 04.3 +9.1
ZEI pmax pmax
comp=Z,11nm,0.5s,mb4.5
GTA Gaotai 22.87 74 eP P 18 07 15.8 +3.2
GTA AMB AMB
comp=Z,11nm,0.7s,mb4.4
KIV Kislovodsk 22.90 298⇓eP P 18 07 16.9 +4.1
KIV pmax pmax
comp=Z,11nm,1.7s,mb4.0
KRAR Krasnoyarsk 24.61 30⇓eP P 18 07 30.3 +1.9
KRAR pmax pmax
comp=Z,27nm,1.3s,mb4.6
SOKR Solikamsk 25.01 343 eP P 18 07 33.5 +1.4
SOKR pmax pmax
comp=Z,20nm,1.2s,mb4.5
MOY Mondy 26.18 45 eP P 18 07 49.6 +6.9
LZH Lanzhou 26.39 81 eP P 18 07 42.5 -2.0
LZH AP pP 18 08 15.0 +2.2
LZH XP sP 18 08 36.0 +7.7
LZH AMB AMB
comp=Z,6.0nm,1.0s,mb4.2
LZH AMB AMB
comp=Z,104nm,4.2s
SONM Songino Array 28.39 55 P P 18 08 04.4 +2.0
comp=Z,1.3nm,0.7s,mb3.8,baz=261,slow=9.6,SNR=12
ULN Ulaanbaatar 28.83 55⇑eP P 18 08 09.9 +3.7
ULN Ulaanbaatar 28.83 55 eP P 18 08 07.9 +1.7
comp=Z,1.2nm,0.8s,mb3.7
BRTR Keskin Array B 29.52 288 P P 18 08 13.8 +1.4
comp=Z,1.1nm,0.7s,mb3.7,baz=92,slow=8.6,SNR=5.6
OBN Obninsk 30.08 320deP P 18 08 18.1 +0.8
OBN e*PP pP 18 08 46.0 0.0
OBN pmax pmax
comp=Z,12nm,0.6s,mb4.8
AKASG **Malin Array Be 33.07 309** P P 18 08 44.0 +0.4
comp=Z,2.3nm,0.5s,mb4.2,baz=81,slow=7.1,SNR=20
JOF Joensuu 36.02 330 ep P 18 09 08.4 -0.5
comp=Z,15nm,0.4s,mb5.0
FINES FINESS Array B 37.63 326 P P 18 09 23.1 +0.6
comp=Z,8.0nm,0.7s,mb4.5,baz=118,slow=9.4,SNR=35
KAF Kangasniemi 37.78 327 ep P 18 09 22.4 -1.3
baz=110,slow=8.4
NJ2 Nanjing 39.45 82 eP P 18 09 40.3 +2.6
NJ2 AP pP 18 10 15.5 +8.2
NJ2 PP PP 18 11 18.0 +7.1
NJ2 S S 18 15 27.0 -2.7
NJ2 XS sS 18 16 30.0 +8.9
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.8
NJ2 AMB AMB
comp=Z,190nm,7.8s
NJ2 LR LR
comp=N,250nm,22.9s
NJ2 LR LR
comp=E,300nm,13.1s
NJ2 LR LR
comp=Z,160nm,18.3s
KEV Kevo 40.96 338 ep P 18 09 48.5 -1.6
comp=Z,5.3nm,0.6s,mb4.3
KEV Kevo 40.96 338 eP P 18 09 48.5 -1.6
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
ARCES ARCESS Array B 41.30 338 P P 18 09 53.6 +0.6
comp=Z,15nm,0.7s,mb4.7,baz=111,slow=8.6,SNR=65
KTK1 Kautokeino 41.77 336⇑iP P 18 09 57.9 +1.2
KTK1 AMb AMB 18 10 01.4
comp=Z,24nm,2.0s,mb4.5
KTK1 Kautokeino 41.77 336 eP P 18 09 58.1 +1.3
MOR8 Moi Rana 43.97 331⇑iP P 18 10 14.0 -0.4
MOR8 AMb AMB 18 10 14.8
comp=Z,44nm,0.7s,mb5.2
MOR8 Moi Rana 43.97 331 eS S 18 16 20.2 -16
MOR8 Moi Rana 43.97 331 eP P 18 10 14.2 -0.3
YAK Yakutsk 44.06 35 eP P 18 10 14.8 -0.4
YAK e*PP pP 18 10 47.4 +2.1
YAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
YAK Yakutsk 44.06 35 eP P 18 10 14.8 -0.4
comp=Z,5.1nm,0.6s,mb4.3
YAK epP pP 18 10 47.4 +2.1
NB2 NORSAR Subarra 44.53 323 P P 18 10 18.6 -0.3
comp=Z,16nm,0.7s,mb4.8,baz=94,slow=7.9
NOA NORSAR Array B 44.53 323 P P 18 10 18.9 0.0
comp=Z,16nm,0.7s,mb4.8,baz=96,slow=7.8,SNR=57
NOA pP pP 18 10 48.8 -0.2
comp=Z,3.7nm,0.8s,baz=97,slow=8.1,SNR=3.3
LOF Lofoten 44.80 333 eP P 18 10 22.9 +1.9
LOF AMb AMB 18 10 26.4
comp=Z,39nm,1.7s,mb4.8
TIXI Tiksi 45.90 22⇓eP P 18 10 31.3 +1.6
TIXI pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
MJAR Matsushiro Arr 52.97 68 P P 18 11 24.4 +1.1
comp=Z,4.1nm,0.9s,mb4.2,baz=291,slow=9.6,SNR=10
MJAR Matsushiro Arr 52.97 68 P P 18 11 24.4 +1.1
DAG Danmarks Havn 54.89 344⇑iP P 18 11 38.2 +0.9
comp=Z,8.2nm,0.7s,mb4.6
DAG Danmarks Havn 54.89 344⇑iP P 18 11 38.2 +0.9
DAG pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
BILL Bilibino 58.73 26⇓eP P 18 12 05.3 +0.9
BILL pmax pmax
comp=Z,14nm,1.7s,mb4.5
TORD Torodi Ar. Bea 65.76 269 P P 18 12 49.8 -1.4
comp=Z,3.2nm,0.6s,mb4.4,baz=43,slow=5.3,SNR=31
TORD pP pP 18 13 25.1 +1.6
comp=Z,1.8nm,0.6s,baz=44,slow=5.5,SNR=3.6
FITZ Fitzroy Crossi 74.77 127 eP P 18 13 46.7 +0.7
comp=Z,5.3nm,0.9s,mb4.2
FITZ Fitzroy Crossi 74.77 127 P P 18 13 46.5 +0.5
comp=Z,3.0nm,0.9s,mb3.9,baz=253,slow=6.2,SNR=7.5
BOSA Boshof 77.66 220 P P 18 14 02.5 +0.1
comp=Z,7.6nm,0.8s,mb4.4,baz=18,slow=7.7,SNR=14
YKA Yellowknife Ar 81.39 3 P P 18 14 22.7 +0.1
comp=Z,3.1nm,0.7s,mb4.0,baz=352,slow=5.4,SNR=6.5
YKA Yellowknife Ar 81.39 3 P P 18 14 22.7 +0.1
WRA Warramunga Arr 81.87 122 P P 18 14 24.9 -0.2
comp=Z,5.2nm,0.7s,mb4.3,baz=324,slow=4.9,SNR=93
WRA pP pP 18 15 02.2 +3.6
comp=Z,2.4nm,0.9s,baz=324,slow=5.0,SNR=4.6
WB2 Warramunga Arr 81.88 122⇑iP P 18 14 24.8 -0.3
ASPA Alice Springs 84.13 125⇓iP P 18 14 36.5 -0.2
AS31 Alice Springs 84.13 125⇓iP P 18 14 36.5 -0.2
ASAR Alice Springs 84.13 125 P P 18 14 36.4 -0.3
comp=Z,5.4nm,0.6s,mb4.4,baz=310,slow=5.1,SNR=117
ASAR pP pP 18 15 12.6 +2.1
comp=Z,1.2nm,0.7s,baz=310,slow=5.1,SNR=3.2
CTA Charters Tower 90.44 115 eP P 18 15 07.1 0.0
comp=Z,4.3nm,0.6s,mb4.6
CTA Charters Tower 90.44 115 P P 18 15 07.0 0.0
comp=Z,6.3nm,0.7s,mb4.7,baz=253,slow=1.6,SNR=7.1
CTA Charters Tower 90.44 115 eP P 18 15 07.1 0.0
CTA pmax pmax
comp=Z,4.0nm,0.6s

*NEIC **31** 18:33:01.7, 3107S×6948W, h150km, mb4.5/1, After GUC.*
GUC 31 18:33:01.7±0.3, 3107S×6948W, h150km, MD3.9, ML4.0, 10C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**1.31**	**265**	*i* P	Pn	18 33 29.8	+0.5
CMCH				*i* S	Sn	18 33 51.1	+0.7
CMCH				AML	AML	18 33 53.5	
	comp=E,3μm,0.7s						
CMCH	**Combarbala**	**1.31**	**265**	*i* P	Pn	18 33 29.8	+0.5
CMCH				*i* S	Sn	18 33 51.1	+0.7
TLL	**Tololo Astrono**	**1.45**	**308**	*i* P	Pn	18 33 51.5	+0.8
TLL				*i* S	Sn	18 33 54.4	+1.4
TLL				AML	AML	18 33 57.1	
	comp=N,3μm,0.6s						
TLL	**Tololo Astrono**	**1.45**	**308**	*i* P	Pn	18 33 31.5	+0.8
TLL				*i* S	Sn	18 33 54.4	+1.4
OVCH	**Ovalle**	**1.55**	**287**	*i* P	Pn	18 33 32.1	+0.4
OVCH				*i* S	Sn	18 33 55.1	+0.4
OVCH				AML	AML	18 33 57.1	
	comp=N,2μm,0.4s						
OVCH	**Ovalle**	**1.55**	**287**	*i* P	Pn	18 33 32.1	+0.4
OVCH				*i* S	Sn	18 33 55.1	+0.4
PTCH	**Petorca**	**1.72**	**226**	*i* S	Sn	18 33 58.5	+0.5
PTCH				AML	AML	18 34 01.0	
	comp=N,806nm,0.4s						
JACH	**Jahuel**	**1.87**	**210**⇑*i* P		Pn	18 33 35.9	+0.7
JACH				*i* S	Sn	18 34 01.6	+0.6
MDZ	**Mendoza**	**1.89**	**164**	eP	Pn	18 33 32.7	-2.8
MDZ				*i* S	Sn	18 33 58.7	-2.7
CHNG	**Los Chungos**	**1.91**	**244**⇑*i* P		Pn	18 33 35.9	+0.2
CHNG				*i* S	Sn	18 34 02.1	+0.3
LSCH	**La Serena**	**1.91**	**307**⇑*i* P		Pn	18 33 36.1	+0.3
LSCH				*i* S	Sn	18 34 01.8	-0.1
PACH	**Papudo**	**2.22**	**228**⇓*i* P		Pn	18 33 40.0	+0.6
PACH				*i* S	Sn	18 34 08.7	+0.4
PEL	**Peldehue**	**2.31**	**206**	*i* P	Pn	18 33 40.9	+0.4
PEL				AML	AML	18 34 12.7	
	comp=E,574nm,0.3s						
FCH	**Farellones**	**2.35**	**197**⇓*i* P		Pn	18 33 42.2	+1.2
FCH				*i* S	Sn	18 34 13.1	+1.8
FCH				AML	AML	18 34 18.8	
	comp=E,450nm,0.2s						
CLCH	**Cerro Calan**	**2.49**	**201**⇓*i* P		Pn	18 33 43.5	+0.9
CLCH				*i* S	Sn	18 34 15.0	+0.8
CLCH				AML	AML	18 34 18.3	
	comp=E,470nm,0.7s						
RCDM	**Rinconada Maip**	**2.66**	**205**⇑*i* P		Pn	18 33 45.3	+0.5
RCDM				*i* S	Sn	18 34 18.8	+0.8
RCDM				AML	AML	18 34 22.6	
	comp=E,488nm,0.2s						
RCDM	**Rinconada Maip**	**2.66**	**205**⇑*i* P		Pn	18 33 45.3	+0.5
RCDM				*i* S	Sn	18 34 18.8	+0.8
ANTU	**Antumapu**	**2.68**	**201**⇑*i* P		Pn	18 33 45.5	+0.6
ANTU				*i* S	Sn	18 34 19.0	+0.6
ANTU				AML	AML	18 34 21.3	
	comp=N,384nm,0.4s						
ANTU	**Antumapu**	**2.68**	**201**⇑*i* P		Pn	18 33 45.5	+0.6
ANTU				*i* S	Sn	18 34 19.0	+0.6
PCH	**Pirque**	**2.69**	**199**	*i* P	Pn	18 33 46.0	+0.8
PCH				*i* S	Sn	18 34 19.4	+0.7
VACH	**Vallenar**	**2.72**	**336**	*i* S	Sn	18 34 19.8	+0.5
TACH	**Talagante**	**2.86**	**205**⇑*i* P		Pn	18 33 47.7	+0.5
TACH				*i* S	Sn	18 34 22.9	+0.4
CHCH	**Chadas Angostu**	**3.02**	**199**	*i* P	Pn	18 33 49.9	+0.6
CHCH				*i* S	Sn	18 34 26.7	+0.5
CACH	**El Canelo**	**3.18**	**197**	*i* P	Pn	18 33 52.8	+1.5
CACH				*i* S	Sn	18 34 31.6	+1.7
CICH	**Cipreses**	**3.34**	**193**⇑*i* P		Pn	18 33 54.2	+0.9
CICH				*i* S	Sn	18 34 34.3	+1.0
SFDO	**San Fernando**	**3.77**	**200**⇑*i* P		Pn	18 33 59.6	+0.8
SFDO				*i* S	Sn	18 34 43.7	+0.5
TRQA	**Tornquist**	**9.32**	**140**	eP	Pn	18 35 08.2	-4.4
	comp=N,6.3nm,0.5s						
LPAZ	**La Paz**	**14.77**	**5**	eP	Pn	18 36 25.2	+2.1

MAN 31 18:36:29.1, 741N×12137E, h31km, mb2.0, ML3.7, MS2.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**1.25**	**72**⇓*i* P		Pn	18 36 50.1	-0.2
IPIL				*i* S	Sn	18 37 11.8	+5.7
IPIL	**Ipil**	**1.25**	**72**	eP	Pn	18 36 50.1	-0.2
IPIL				eS	Sn	18 37 11.6	+5.5
PAGZ	**Pagadian**	**2.04**	**77**	eP	Pn	18 37 01.7	+0.5
PAGZ				eS	Sn	18 37 33.4	+7.7
GUIM	**Jordan**	**3.42**	**20**	eP	Pn	18 37 22.6	+2.4
CUYO	**Cuyo Island**	**3.44**	**354**	eP	Pn	18 37 21.7	+1.2

*ISCJB **31** 19:03:52.8±0.6, 4369N±005×105.18W±006, h0km, mb4.2/1, MS3.0/1, Error ellipse: s-maj=6.8km s-min=6.1km az=104.6*
*NEIC **31** 19:03:54.2±0.5, 4369N×10523W, h0km, ML3.3, Error ellipse: s-maj=6.9km s-min=5.2km az=159.0, Suspected Mining explosion.*
NEIC 75 km [45 miles] SSE of Gillette.
*IDC **31** 19:03:54.2±2.0, 4383N×10545W, h0km, mb4.0/1, mb1 4.1/3, mb1mx3.5/23, mbtmp3.9/3, ML3.4/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/39, Error ellipse: s-maj=60.1km s-min=8.9km az=150.0*

ISC 31 19:03:54.1±0.5, 4367N±005×10516W±006, h0km, n36, σ1°17/38, mb4.2/1, MS3.0/1, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.93**	**60**	eP	**Pg**	**19 04 12.7**	**+0.8**
PHWY	**Pilot Hill**	**2.37**	**185**	eP	**Pn**	**19 04 34.1**	**-0.2**
RWWY	**Rawlins**	**2.49**	**218**	ePn	**Pn**	**19 04 36.7**	**+0.8**
RWWY				eSn	**Sn**	**19 05 07.0**	**0.0**
BW06	**Boulder Array**	**3.34**	**256**	eP	**Pn**	**19 04 46.9**	**-0.7**
BW06				eS	**Sn**	**19 05 32.6**	**+4.6**
PDAR	**Pinedale Array**	**3.34**	**256**	Pn	**Pn**	**19 04 48.6**	**+1.0**
	2.6nm,0.3s,baz=69,slow=16,SNR=42						
PDAR				Lg		19 05 34.0	
	12nm,0.3s,baz=71,slow=31,SNR=11						
GCMT	**Greycliff**	**3.85**	**305**	eP	**Pn**	**19 04 54.2**	**-0.4**
ISCO	**Idaho Springs**	**3.88**	**185**	eP	**Pn**	**19 04 54.6**	**-0.4**
ISCO				eS	**Sn**	**19 05 53.9**	**+13**
LOHW	**Long Hollow**	**3.96**	**271**	eP	**Pn**	**19 04 58.0**	**+2.0**
FLWY	**Flagg Ranch**	**4.03**	**278**	eP	**Pn**	**19 04 59.2**	**+2.2**
MOOW	**Moose Ponds**	**4.05**	**273**	eP	**Pn**	**19 04 57.8**	**+0.4**
SNOW	**Snow King Moun**	**4.07**	**269**	eP	**Pn**	**19 05 00.3**	**+2.7**
YNR	**Norris Junctio**	**4.11**	**287**	eP	**Pn**	**19 05 00.1**	**+1.9**
REDW	**Red Top Meadow**	**4.15**	**268**	eP	**Pn**	**19 04 57.5**	**-1.3**
YFT	**Old Faithful**	**4.17**	**283**	P	**Pn**	**19 04 60.0**	**+1.0**
IMW	**Indian Meadow**	**4.19**	**275**	eP	**Pn**	**19 04 59.8**	**+0.5**
TPAW	**Teton Pass**	**4.21**	**270**	eP	**Pn**	**19 05 00.1**	**+0.5**
AHID	**Auburn Hatcher**	**4.44**	**260**	ePg	**Pg**	**19 05 15.8**	**-3.4**
RRI2	**Red Ridge**	**4.50**	**268**	eP	**Pn**	**19 05 03.4**	**0.0**
QLMT	**Earthquake Lak**	**4.66**	**287**	ePn	**Pn**	**19 05 04.7**	**-1.0**
SMCO	**Snowmass**	**4.69**	**198**	ePg	**Pg**	**19 05 18.6**	**-5.4**
BOZ	**Bozeman (W)**	**5.03**	**295**	eP	**Pn**	**19 05 09.1**	**-1.6**
HWUT	**Hardware Ranch**	**5.16**	**249**	eP	**Pn**	**19 05 12.6**	**+0.1**
	12nm,0.6s						
TCUT	**Toone Canyon**	**5.28**	**243**	ePn	**Pn**	**19 05 14.1**	**-0.2**
EGMT	**Eagleton**	**5.41**	**325**	eP	**Pn**	**19 05 15.9**	**-0.1**
	18nm,0.9s						
DLMT	**Dillon**	**5.58**	**290**	ePn	**Pn**	**19 05 18.1**	**-0.3**
	13nm,1.0s						
HRY	**Holter Researc**	**5.61**	**305**	eP	**Pn**	**19 05 18.3**	**-0.5**
HVU	**Hansel Valley**	**5.92**	**254**	ePn	**Pn**	**19 05 22.7**	**-0.3**
	5.7nm,0.7s						
SRU	**San Rafael**	**6.08**	**223**	eP	**Pn**	**19 05 24.4**	**-0.9**
	6.3nm,0.6s						
PV01	**Paradox Valley**	**6.10**	**206**	ePg	**Pg**	**19 05 44.3**	**-6.8**
ECSD	**EROS,Sioux Fal**	**6.19**	**86**	eP	**Pn**	**19 05 29.4**	**+2.7**
TMUT	**Trail Mountain**	**6.30**	**228**	ePn	**Pn**	**19 05 25.7**	**-2.6**
CHMT	**Chamberlain Mo**	**6.57**	**302**	ePn	**Pn**	**19 05 31.4**	**-0.5**
MSU	**Marysvale**	**7.39**	**228**	ePn	**Pn**	**19 05 43.1**	**-0.1**
ULM	**Lac du Bonnet**	**9.14**	**41**	Pn	**Pn**	**19 06 05.9**	**-1.3**
	1.0nm,0.3s,baz=227,slow=13,SNR=7.7						
ULM				Lg		19 08 37.1	
	0.2nm,0.3s,baz=305,slow=15,SNR=2.1						
DLBC	**Dease Lake**	**21.34**	**323**	LR	LR	19 17 30.5	
	comp=Z,55nm,19.2s,MS3.0,baz=326,slow=39						
ARCES	**ARCESS Array B**	**61.46**	**18**	P	**P**	**19 14 10.4**	**-2.0**
	1.4nm,0.7s,mb4.2,baz=332,slow=7.5,SNR=4.2						

*IDC **31** 19:08:37.6±0.7, 976S×10735E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/18, mbtmp4.1/11, ML3.1/1, MS3.7/6, Ms1 3.6/6, ms1mx3.2/27, Error ellipse: s-maj=26.3km s-min=16.1km az=55.0*
*NEIC **31** 19:08:39.5±0.4, 981S×10740E, h10km, mb4.7/10, Error ellipse: s-maj=15.8km s-min=6.4km az=47.0*
NEIC Felt [II] at Pangandaran.
*BJI **31** 19:08:39.4, 980S×10740E, h10km, mB5.0, mb4.3, Ms4.4, Msz4.1*
*MOS **31** 19:08:40.6±0.9, 978S×10746E, h33km, mb5.0/9, Error ellipse: s-maj=20.9km s-min=10.1km az=117.7*
*ISCJB **31** 19:08:41.6±1.2, 974S±006×10745E±006, h40km±10km, mb4.5/30, MS3.8/6, Error ellipse: s-maj=12.0km s-min=7.8km az=101.4*

ISC 31 19:08:43.3±1.2, 977S±006×10741E±007, h38km±10km, h31km±2.7km; pP-P, n62, σ1°8/61, mb4.5/30, MS3.8/6, 7C-2D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**2.93**	**4**	P	**Pn**	**19 09 26.7**	**-0.7**
	0.0nm,0.0s						
BJII	**Banjamegara**	**3.32**	**43**	P	**Pn**	**19 09 33.1**	**+0.4**
	0.0nm,0.0s						
BJII	**Banjamegara**	**3.32**	**43**⇓*i* P		**Pn**	**19 09 27.4**	**-5.3**
BJII				*i* S	**Sn**	**19 10 07.6**	**-3.3**
JCJI	**Jatiwangi**	**3.37**	**15**	P	**Pn**	**19 09 29.9**	**-3.5**
	0.0nm,0.0s						
CBJI	**Citeko**	**3.38**	**350**	P	**Pn**	**19 09 27.9**	**-5.5**
	0.0nm,0.0s						
SBJI	**Serang**	**3.84**	**341**	P	**Pn**	**19 09 38.1**	**-1.8**
	0.0nm,0.0s						
KRKI	**Karangkates**	**5.23**	**73**	P	**Pn**	**19 10 01.0**	**+2.0**
	0.0nm,0.0s						
PSI	**Prapat**	**15.08**	**325**	Pn	**Pn**	**19 12 14.4**	**+0.8**
	0.5nm,0.3s,baz=310,slow=15,SNR=2.4						
PSI				LR	LR	19 18 35.3	
	comp=Z,184nm,19.0s,baz=204,slow=40						
MBWA	**Marble Bar**	**16.39**	**135**	eP	**Pn**	**19 12 25.0**	**-5.4**
	21nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.52**	**117**	eP	**Pn**	**19 13 08.0**	**-0.8**
	10nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.52**	**117**	P	**Pn**	**19 13 08.2**	**-0.6**
	0.0nm,0.3s,baz=322,slow=8.6,SNR=6.4						
IPIL	**Ipil**	**23.07**	**41**	eP	**P**	**19 13 37.5**	**-8.0**
PAGZ	**Pagadian**	**23.65**	**43**	eP	**P**	**19 14 03.0**	**+12**
KAKA	**Kakadu**	**24.72**	**99**	eP	**P**	**19 14 01.2**	**+0.3**
	15nm,0.8s,mb4.6						
NWAO	**Narrogin (SRO)**	**24.76**	**160**	LR	LR	19 22 00.8	
	comp=Z,222nm,19.4s,MS3.7,baz=153,slow=32						
BUKP	**Musuan**	**24.83**	**46**	eP	**P**	**19 14 03.4**	**+1.5**
WRA	**Warramunga Arr**	**27.88**	**114**	P	**P**	**19 14 29.5**	**+0.1**
	4.0nm,0.9s,mb4.0,baz=284,slow=10,SNR=16						
WRAB	**Tennant Creek**	**27.89**	**114**⇑eP		**P**	**19 14 29.3**	**-0.2**
WB2	**Warramunga Arr**	**27.89**	**114**	eP	**P**	**19 14 29.5**	**0.0**
ASAR	**Alice Springs**	**28.82**	**122**	P	**P**	**19 14 38.0**	**+0.3**
	1.7nm,0.8s,mb3.8,baz=301,slow=8.9,SNR=13						
ASAR				PcP	PcP	19 17 47.6	+0.8
	0.6nm,0.9s,baz=268,slow=1.4,SNR=4.3						
STKA	**Stephens Creek**	**38.53**	**130**	eP	**P**	**19 16 02.6**	**+0.6**
	6.3nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**38.53**	**130**	P	**P**	**19 16 02.6**	**+0.6**
	8.0nm,0.9s,mb4.5,baz=311,slow=8.9,SNR=11						
STKA				LR	LR	19 31 42.5	
	comp=Z,74nm,18.3s,MS3.5,baz=25,slow=36						
LSA	**Lhasa**	**42.25**	**339**	P	**P**	**19 16 34.0**	**+1.2**
LSA	**Lhasa**	**42.25**	**339**	eP	**P**	**19 16 34.5**	**+1.7**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
LSA	**Lhasa**	**42.25**	**339**	eP	**P**	**19 16 34.5**	**+1.6**
	comp=Z,10.0nm,0.7s,mb4.5						
PKI	**Pulchoki**	**42.81**	**331**	eP	**P**	**19 16 38.1**	**+0.8**
GUN	**Gumba**	**42.87**	**331**	eP	**P**	**19 16 39.1**	**+1.3**
	comp=Z,37nm,0.9s,mb5.1						
DMN	**Daman**	**42.99**	**330**	eP	**P**	**19 16 39.8**	**+1.0**
	comp=Z,18nm,0.8s,mb4.9						

NJ2	**Nanjing**	**43.00**	**14**	*e*P	**P**	**19 16 37.5**	**-1.4**
NJ2				AP	pP	19 16 47.5	-2.2
NJ2				XP	sP	19 16 51.3	-2.9
NJ2				PP	PP	19 18 20.0	+0.9
NJ2				S	**S**	**19 22 59.0**	**-2.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,130nm,4.1s						
NJ2				LR	LR		
	comp=N,270nm,16.8s,MS4.3						
NJ2				LR	LR		
	comp=E,180nm,19.5s,MS4.3						
NJ2				LR	LR		
	comp=Z,240nm,21.8s,MS4.0						
KKN	**Kakani**	**43.05**	**331**	*e*P	**P**	**19 16 40.2**	**+0.9**
	comp=Z,15nm,0.8s,mb4.8						
KKN	**Kakani**	**43.05**	**331**	*e*P	**P**	**19 16 40.2**	**+0.9**
KKN				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
GKN	**Gorkha**	**43.54**	**330**	*e*P	**P**	**19 16 43.9**	**+0.6**
KOLN	**Koldanda**	**43.87**	**329**	*e*P	**P**	**19 16 46.6**	**+0.7**
	comp=Z,25nm,0.9s,mb4.9						
LZH	**Lanzhou**	**45.73**	**356**	*e*P	**P**	**19 17 00.3**	**-0.4**
LZH				AP	pP	19 17 07.5	-4.1
LZH				XP	sP	19 17 11.5	-4.6
LZH				AMB	AMB		
	comp=Z,22nm,1.2s,mb5.0						
GTA	**Gaotai**	**49.44**	**352**	*e*P	**P**	**19 17 31.5**	**+2.0**
GTA				AP	pP	19 17 38.5	-2.0
GTA				XP	sP	19 17 42.3	-2.6
GTA				AMB	AMB		
	comp=Z,5.0nm,1.8s,mb4.2						
MJAR	**Matsushiro Arr**	**54.42**	**30**	P	**P**	**19 18 05.8**	**-0.8**
	comp=Z,0.7nm,0.4s,mb4.0,baz=245,slow=6.7,SNR=3.2						
VLA	**Vladivostok**	**57.18**	**21**	*e*P	**P**	**19 18 30.0**	**+3.6**
VLA				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
SONM	**Songino Array**	**57.36**	**359**	P	**P**	**19 18 28.4**	**+0.8**
	comp=Z,0.7nm,0.6s,mb3.9,baz=174,slow=7.8,SNR=8.7						
ZAK	**Zakamensk**	**60.01**	**357**	*e*P	**P**	**19 18 50.6**	**+4.6**
MK31	**Makanchi Array**	**60.62**	**340**	P	**P**	**19 18 49.3**	**-0.9**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**60.62**	**340**	P	**P**	**19 18 50.5**	**+0.3**
	comp=Z,2.1nm,0.6s,mb4.4,baz=146,slow=6.7,SNR=18						
MAW	**Mawson**	**64.85**	**197**	P	**P**	**19 19 19.0**	**+0.6**
	comp=Z,3.5nm,0.9s,mb4.4,baz=50,slow=7.7,SNR=5.9						
MAW				LR	LR	19 42 31.8	
	comp=Z,52nm,18.4s,MS3.8,baz=246,slow=31						
ZAL	**Zalesovo**	**66.30**	**346**	P	**P**	**19 19 27.3**	**-0.4**
	comp=Z,0.7nm,0.3s,mb4.2,baz=172,slow=10,SNR=3.6						
ZAL				LR	LR	19 54 18.3	
	comp=Z,30nm,19.1s,MS3.5,baz=54,slow=41						
VOSK	**Vostochnaya**	**69.60**	**337**	P	**P**	**19 19 47.3**	**-1.2**
VOSK				pmax	pmax		
	comp=Z,13nm,1.8s,mb4.6						
KMBO	**Kilima Mbogo**	**70.26**	**272**	P	**P**	**19 19 52.1**	**-0.4**
	comp=Z,1.4nm,0.6s,mb4.1,baz=36,slow=14,SNR=5.2						
ZRNK	**Zerenda**	**70.54**	**337**	*e*P	**P**	**19 19 54.3**	**0.0**
ZRNK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
ZRNK	**Zerenda**	**70.54**	**337**	*e*P	**P**	**19 19 54.2**	**0.0**
	comp=Z,6.8nm,1.3s,mb4.4						
AB31	**Akbulak array**	**71.99**	**329**	P	**P**	**19 20 01.9**	**-1.1**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SYO	**Syowa Base**	**73.06**	**200**⇑	*e*P	**P**	**19 20 08.8**	**-0.6**
VNDA	**Vanda**	**73.19**	**169**	P	**P**	**19 20 09.8**	**-0.3**
	comp=Z,1.6nm,1.1s,mb3.9,baz=301,slow=6.0,SNR=5.1						
VNDA	**Vanda**	**73.19**	**169**	P	**P**	**19 20 09.8**	**-0.3**
YAK	**Yakutsk**	**73.66**	**11**⇑	*e*P	**P**	**19 20 12.6**	**-0.3**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
AKTO	**Aktyubinsk**	**73.70**	**330**	P	**P**	**19 20 13.0**	**-0.2**
AKTO				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
PET	**Petropavlovsk**	**76.21**	**29**⇓	*e*P	**P**	**19 20 28.3**	**+0.7**
PET				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
ARU	**Arti**	**77.28**	**335**⇑	*i*P	**P**	**19 20 33.7**	**0.0**
ARU				*e*	pP	19 20 42.7	-2.6
ARU				*e*		19 23 28.5	
ARU				*e*PPP		19 25 16.5	
ARU				*e*S	S	19 30 23.2	+2.3
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
BOSA	**Boshof**	**78.54**	**243**	LR	LR	19 49 44.2	
	comp=Z,102nm,18.5s,MS4.2,baz=107,slow=31						
TIXI	**Tiksi**	**82.49**	**7**⇑	*e*P	**P**	**19 21 05.1**	**+3.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
SNAA	**Sanae**	**87.02**	**197**	*e*P	**P**	**19 21 21.7**	**-3.0**
SNAA				*e*		19 21 24.4	
SNAA				*e*	pP	19 21 32.6	-3.8
SNAA				*e*		19 21 36.2	
SNAA	**Sanae**	**87.02**	**197**⇑	*e*P	**P**	**19 21 23.7**	**-1.0**
OBN	**Obninsk**	**87.26**	**327**⇑	*e*P	**P**	**19 21 24.4**	**-1.4**
OBN				pmax	pmax		
	comp=Z,26nm,2.5s,mb5.0						
VNA1	**Neumayer--Stat**	**89.05**	**197**	*e*P	**P**	**19 21 32.9**	**-1.4**
VNA1				*e*		19 21 35.8	
VNA1				*e*	pP	19 21 43.7	-2.4
BDFB	**Brasilia**	**144.93**	**224**	PKP	PKPdf	19 28 17.8	+1.5
	comp=Z,6.9nm,0.8s,baz=188,slow=4.9,SNR=7.4						

*NIED **31** 19:14:00.4360N×14730E.h41km.Mw3.5 Best double couple: M₀1.90000×10¹⁴ NP1:φ₀=132.00000°,δ81.00000°, λ=-44.00000°. NP2:φ₀=231.00000°,δ46.00000°, λ=-168.00000°.*

JMA 31 19:14:35.8±0.2,4359N×14731E,h31km,M3.9,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.16**	**259**	P	Pn	19 14 56.4	+0.5
NEM2				*e*S	Sn	19 15 11.3	+0.6
JRA	**Rausu**	**1.62**	**283**	P	Pn	19 15 03.0	+0.8
JRA				*e*S	Sn	19 15 23.2	+1.1
JNK	**Nakash**	**1.88**	**271**	P	Pn	19 15 06.4	+0.6
JNK				*e*S	Sn	19 15 29.3	+0.8
JAK	**Akkeshi**	**2.00**	**254**	P	Pn	19 15 08.1	+0.7
JAK				*e*S	Sn	19 15 32.6	+1.3
JTKR	**Abashiri--Toko**	**2.49**	**280**	P	Pn	19 15 15.8	+1.6
JAR	**Ashorobuto**	**2.59**	**265**	P	Pn	19 15 17.1	+1.5
JAR				*e*S	Sn	19 15 47.6	+1.5
JOB	**Onbets**	**2.63**	**256**	P	Pn	19 15 17.4	+1.3
JOB				*e*S	Sn	19 15 48.5	+1.6
JMP	**Maruseppu**	**2.89**	**280**	P	Pn	19 15 21.4	+1.7
JCH	**Churui**	**3.05**	**253**	P	Pn	19 15 22.8	+0.9
JEM	**Erimo**	**3.44**	**244**	P	Pn	19 15 29.9	+2.7
JNBK	**Urakawa-nobuka**	**3.59**	**250**	P	Pn	19 15 30.3	+1.0
JNBK				*e*S	Sn	19 16 11.1	+0.4

IDC 31 19:45:50.1±1.1,048S×12501E,h0km,mb3.6/5,mb1 3.7/5, mb1mx3.6/17,mbtmp3.6/5,Error ellipse: s-maj=130.6km s-min=20.3km az=65.0,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.39**	**155**	P	P	19 50 38.9	-0.4
	1.0nm,0.6s,baz=335,slow=12,SNR=12						
ASAR	**Alice Springs**	**24.61**	**160**	P	P	19 51 12.8	+0.8
	0.6nm,0.8s,baz=339,slow=8.5,SNR=8.1						
ASAR				PcP	PcP	19 54 50.5	+0.7
	0.2nm,0.5s,baz=347,slow=2.3,SNR=5.3						
SONM	**Songino Array**	**50.78**	**344**	P	P	19 54 53.4	+1.3
	0.4nm,0.7s,baz=154,slow=8.8,SNR=3.9						
MKAR	**Makanchi Array**	**60.09**	**327**	P	P	19 55 58.6	-0.4
	0.9nm,0.6s,baz=120,slow=7.6,SNR=10						
AKTO	**Aktyubinsk**	**75.91**	**323**	P	P	19 57 38.3	-0.2
	1.4nm,0.7s,baz=96,slow=8.3,SNR=6.0						

*NEIC **31** 20:12:52.6,3247S×7136W,h52km±3km,**MD3.5**(GUC),After GUC.*

GUC 31 20:12:52.6±0.8,3247S×7136W,h52km±3km,MD3.5, ML2.5,7C-3D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.09**	**221**	*e*P	Pn	20 13 01.1	+0.4
PACH				*i* S	Sn	20 13 07.3	+0.9
PTCH	**Petorca**	**0.42**	**61**	*i* P	Pn	20 13 03.5	+0.4
PTCH				*i* S	Sn	20 13 12.0	+1.4
PTCH				AML	AML	20 13 13.6	
	comp=E,1μm,0.1s						
PTCH	**Petorca**	**0.42**	**61**	*i* P	Pn	20 13 03.5	+0.4
PTCH				*i* S	Sn	20 13 12.0	+1.4
ROCH	**El Roble**	**0.58**	**150**	*i* P	Pn	20 13 05.2	+0.2
ROCH				*i* S	Sn	20 13 15.1	+1.1
CHNG	**Los Chungos**	**0.59**	**349**⇓	*i* P	Pn	20 13 05.6	+0.5
CHNG				*i* S	Sn	20 13 14.6	+0.5
CHNG				AML	AML	20 13 15.6	
	comp=E,226nm,0.3s						
JACH	**Jahuel**	**0.69**	**109**⇓	*i* P	Pn	20 13 06.8	+0.6
JACH				*i* S	Sn	20 13 17.2	+1.0
PEL	**Peldehue**	**0.88**	**140**⇑	*i* P	Pn	20 13 09.4	+0.6
PEL				*i* S	Sn	20 13 22.1	+1.4
PEL				AML	AML	20 13 23.2	
	comp=E,375nm,0.3s						
PEL	**Peldehue**	**0.88**	**140**⇑	*i* P	Pn	20 13 09.4	+0.6
PEL				*i* S	Sn	20 13 22.1	+1.4
LCCH	**Las Cruces**	**1.02**	**190**	*e*P	Pn	20 13 10.8	+0.1
LCCH				*i* S	Sn	20 13 24.7	+0.8
RCDM	**Rinconada Maip**	**1.12**	**156**	*e*P	Pn	20 13 12.5	+0.5
RCDM				*e*S	Sn	20 13 27.6	+1.2
RCDM				AML	AML	20 13 28.4	
	comp=E,147nm,0.2s						
RCDM	**Rinconada Maip**	**1.12**	**156**	*e*P	Pn	20 13 12.5	+0.5
RCDM				*e*S	Sn	20 13 27.6	+1.2
CLCH	**Cerro Calan**	**1.16**	**143**	*e*P	Pn	20 13 13.3	+0.8
CLCH				*i* S	Sn	20 13 28.7	+1.5
CLCH				AML	AML	20 13 29.5	
	comp=N,171nm,0.3s						
TACH	**Talagante**	**1.24**	**163**⇑	*i* P	Pn	20 13 14.3	+0.8
TACH				*i* S	Sn	20 13 30.3	+1.1
FCH	**Farellones**	**1.25**	**134**⇓	*i* P	Pn	20 13 14.7	+1.0
FCH				*i* S	Sn	20 13 31.3	+1.9
FCH				AML	AML	20 13 32.8	
	comp=E,100nm,0.2s						
CMCH	**Combarbala**	**1.32**	**14**	*e*P	Pn	20 13 15.2	+0.4
CMCH				*i* S	Sn	20 13 32.8	+1.5
CMCH				AML	AML	20 13 36.8	
	comp=E,375nm,0.2s						
CMCH	**Combarbala**	**1.32**	**14**	*e*P	Pn	20 13 15.2	+0.4
CMCH				*i* S	Sn	20 13 32.8	+1.5
PCH	**Pirque**	**1.35**	**148**⇑	*i* P	Pn	20 13 16.0	+0.9
PCH				*i* S	Sn	20 13 34.0	+1.9
LNV	**Longovilo**	**1.49**	**182**⇑	*i* P	Pn	20 13 16.9	0.0
CHCH	**Chadas Angostu**	**1.58**	**158**	*e*P	Pn	20 13 19.1	+0.9
CHCH				*i* S	Sn	20 13 39.0	+1.5
CACH	**El Canelo**	**1.77**	**159**⇑	*i* P	Pn	20 13 22.7	+1.9
SFDO	**San Fernando**	**2.16**	**172**⇑	*i* P	Pn	20 13 27.3	+1.1

*IDC **31** 20:21:19.3±1.7,2046S×16919E,h0km,mb3.9/6, mb1 4.0/7,mb1mx3.9/13,mbtmp3.9/7,ML3.5/1,MS3.2/2, Ms1 3.2/2,ms1mx2.7/28,Error ellipse: s-maj=45.9km s-min=32.8km az=135.0*

*NEIC **31** 20:21:21.3±1.4,2048S×16913E,h10km,mb4.1/1,Error ellipse: s-maj=34.1km s-min=21.8km az=129.0*

*ISCJB **31** 20:21:23.3±6.5,2055S×16906E±02,h31km±44km, mb3.8/6,MS3.3/1,Error ellipse: s-maj=48.8km s-min=19.3km az=97.6*

*SZGRF **31** 20:21:23.8,2084S×17098E,h50km,Vanuatu Islands*

ISC 31 20:21:24.1±6.7,206S±02×169.1E±02,h26km±47km,n28, σ0=46/12,mb3.8/6,MS3.3/1,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.89**	**239**	*e*P	**Pn**	**20 22 07.9**	**-0.5**
DZM				*e*S	**Sn**	**20 22 42.1**	**-0.2**
DZM	**Mont Dzumac**	**2.89**	**239**	Pn	**Pn**	**20 22 08.4**	**0.0**
	6.5nm,0.3s,baz=33,slow=20,SNR=83						
DZM				Sn	**Sn**	**20 22 42.0**	**-0.2**
	25nm,0.3s,baz=349,slow=22,SNR=9.3						
HNR	**Honiara**	**14.16**	**320**	LR	LR	20 28 44.6	
	comp=Z,67nm,18.4s,baz=179,slow=32						
STKA	**Stephens Creek**	**27.04**	**240**	P	**P**	**20 27 04.8**	**+0.6**
	1.2nm,0.6s,mb3.6,baz=93,slow=14,SNR=3.5						
STKA				LR	LR	20 37 53.0	
	comp=Z,74nm,19.4s,MS3.3,baz=21,slow=37						
STKA	**Stephens Creek**	**27.04**	**240**	P	**P**	**20 27 04.8**	**+0.6**
STKA				LR	LR	20 37 53.0	
WRA	**Warramunga Arr**	**32.58**	**265**	P	**P**	**20 27 52.7**	**-0.6**
	0.5nm,0.4s,mb3.8,baz=92,slow=8.5,SNR=28						
ASAR	**Alice Springs**	**32.70**	**258**	P	**P**	**20 27 55.0**	**+0.6**
	0.7nm,0.5s,mb3.8,baz=82,slow=9.4,SNR=18						
FITZ	**Fitzroy Crossi**	**40.99**	**266**	*e*P	**P**	**20 29 05.4**	**+0.5**
	3.4nm,0.8s,mb4.0						
FITZ	**Fitzroy Crossi**	**40.99**	**266**	P	**P**	**20 29 05.4**	**+0.5**
	1.5nm,0.7s,mb3.8,baz=124,slow=7.3,SNR=6.0						
MAW	**Mawson**	**77.15**	**202**	P	**P**	**20 33 15.3**	**-0.2**
	1.6nm,0.7s,mb4.1,baz=204,slow=5.0,SNR=8.6						
SONM	**Songino Array**	**88.20**	**323**	P	**P**	**20 34 12.4**	**-0.5**
	0.4nm,0.7s,mb3.8,baz=139,slow=7.3,SNR=3.9						
BRG	**Berggiesshubel**	**144.00**	**333**	*e*PKPbc	PKPdf	20 40 53.4	-3.9
BRG	**Berggiesshubel**	**144.00**	**333**	*i* P	PKPdf	20 40 53.3	-4.0
	3.6nm,0.7s						
CLL	**Collm**	**144.06**	**334**	*e*PKPbc	PKPdf	20 40 53.5	-3.9
CLL	**Collm**	**144.06**	**334**	*e*PKIKP	PKPdf	20 40 54.0	-3.4
	logA/T=0.7						
CLL	**Collm**	**144.06**	**334**	*e*PKPdf	PKPdf	20 40 54.0	-3.4
	comp=Z,3.0nm,0.6s						
FBE	**Freiberg**	**144.21**	**334**	*e*PKPbc	PKPdf	20 40 54.5	-3.1
NEUB	**Neuenburg**	**144.63**	**335**	*e*PKPbc	PKPdf	20 40 55.5	-2.9
TANN	**Tannenbergstha**	**144.97**	**334**	*e*PKPbc	PKPdf	20 40 56.2	-2.7
WERD	**Werda**	**145.01**	**334**	*e*PKPbc	PKPbc	20 40 56.9	-1.5
GUNZ	**Gunzen**	**145.06**	**334**	*e*PKPbc	PKPbc	20 40 56.9	-1.6
WERN	**Wernitzgruen**	**145.10**	**334**	*e*PKPbc	PKPbc	20 40 57.2	-1.5
MOX	**Moxa**	**145.13**	**335**	*e*PKPbc	PKPbc	20 40 56.7	-2.1
MANZ	**Manzenberg**	**145.44**	**334**	*e*PKPbc	PKPbc	20 40 59.7	-0.1
ROTZ	**Rotzenmuhle**	**145.57**	**333**	*e*PKPbc	PKPbc	20 41 00.1	-0.1
GEC2	**GERESS Array S**	**145.60**	**331**	*e*PKPbc	PKPbc	20 40 58.7	-1.6
GERES	**GERESS Array B**	**145.60**	**331**	PKPbc	PKPbc	20 40 58.6	-1.7
	comp=Z,1.6nm,0.6s,baz=33,slow=2.9,SNR=18						
GRF	**Grafenberg Arr**	**146.03**	**334**	*e*PKPbc	PKPbc	20 41 01.2	-0.4

*IDC **31** 20:24:11.2±1.1,058S×12476E,h0km,mb3.7/5,mb1 3.9/6, mb1mx3.7/17,mbtmp3.7/6,ML3.0/1,Error ellipse: s-maj=113.5km s-min=19.6km az=68.0*

*ISCJB **31** 20:24:14.0±0.9,05S±02×1250E±04,h33km,mb3.9/6, Error ellipse: s-maj=66.7km s-min=14.0km az=140.1*

*NEIC **31** 20:24:16.3±0.8,050S×12497E,h35km,mb4.0/1,Error ellipse: s-maj=62.0km s-min=12.8km az=69.0*

ISC 31 20:24:16.6±0.9,05S±02×1250E±04,h35km,n8,σ0=87/8, mb3.9/6,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**17.50**	**178**	P	**Pn**	**20 28 17.9**	**+0.1**
	0.0nm,0.3s,baz=342,slow=13,SNR=2.6						
WRAB	**Tennant Creek**	**21.39**	**155**	*e*P	**P**	**20 29 00.1**	**-0.9**
	5.7nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**21.39**	**155**	P	**P**	**20 28 59.9**	**-1.2**
	2.0nm,0.6s,mb3.6,baz=329,slow=12,SNR=17						
WB2	**Warramunga Arr**	**21.40**	**155**	*e*P	**P**	**20 29 03.1**	**+2.0**
ASAR	**Alice Springs**	**24.61**	**160**	P	**P**	**20 29 33.6**	**+0.2**
	10nm,1.3s,mb4.2,baz=343,slow=9.5,SNR=13						
ASAR				PcP	PcP	20 33 11.2	+0.7
	0.3nm,0.5s,baz=358,slow=2.3,SNR=5.0						
STKA	**Stephens Creek**	**34.94**	**155**	P	**P**	**20 31 05.2**	**+0.1**
	1.0nm,0.5s,mb4.0,baz=342,slow=8.2,SNR=5.6						
SONM	**Songino Array**	**50.78**	**344**	P	**P**	**20 33 13.6**	**+0.4**
	0.5nm,0.8s,mb3.5,baz=165,slow=6.0,SNR=3.6						
MKAR	**Makanchi Array**	**60.08**	**327**	P	**P**	**20 34 19.7**	**-0.4**
	0.5nm,0.4s,mb3.9,baz=118,slow=7.8,SNR=5.0						

*ISCJB **31** 20:53:51.5±1.3,402N±008×1233E±0.1,h545km±23km, mb4.4/12,Error ellipse: s-maj=19.2km s-min=8.6km az=121.9*

*NEIC **31** 20:53:52.4±0.9,404N×12327E,h540km±14km,mb4.9/4, Error ellipse: s-maj=16.1km s-min=5.5km az=58.0*

*IDC **31** 20:53:53.7±1.7,402N×12329E,h554km±22km,mb3.4/8, mb1 3.5/8,mb1mx3.2/20,mbtmp4.3/8,Error ellipse: s-maj=26.9km s-min=9.6km az=83.0*

ISC 31 20:53:52.5±1.3,404N±008×1233E±01,h536km±21km,n24, σ0=52/24,mb4.4/12,3D,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**7.33**	**286**	*e*P	**P**	**20 55 43.3**	**+0.1**
KAKA	**Kakadu**	**18.95**	**152**	*e*P	**P**	**20 57 39.5**	**-0.2**
	17nm,0.5s						
FITZ	**Fitzroy Crossi**	**22.12**	**174**	*e*P	**P**	**20 58 07.7**	**-0.6**
	5.6nm,1.4s,mb4.0						
FITZ	**Fitzroy Crossi**	**22.12**	**174**	P	**P**	**20 58 08.1**	**-0.2**
	1.2nm,0.4s,mb3.9,baz=25,slow=11,SNR=16						
WRAB	**Tennant Creek**	**26.18**	**156**	*e*P	**P**	**20 58 43.9**	**-0.4**
	16nm,0.3s,mb5.1						
WRA	**Warramunga Arr**	**26.18**	**156**	P	**P**	**20 58 44.0**	**-0.4**
	9.0nm,0.3s,mb4.8,baz=334,slow=9.8,SNR=243						
WRA				ScP	ScP	21 04 39.7	-2.5
	0.7nm,1.0s,baz=304,slow=7.6,SNR=5.4						
WB2	**Warramunga Arr**	**26.19**	**156**⇓	*i* P	**P**	**20 58 43.9**	**-0.5**
CBIJ	**Chichi jima**	**29.18**	**36**	P	**P**	**20 59 10.6**	**+0.1**
	35nm,0.4s,mb5.3,baz=257,slow=7.8,SNR=9.2						
AS31	**Alice Springs**	**29.41**	**160**⇓	*i* P	**P**	**20 59 12.8**	**+0.3**
ASPA	**Alice Springs**	**29.41**	**160**⇓	*i* P	**P**	**20 59 12.8**	**+0.3**
ASAR	**Alice Springs**	**29.41**	**160**	P	**P**	**20 59 12.9**	**+0.4**
	3.4nm,0.4s,mb4.3,baz=340,slow=7.0,SNR=91						
ASAR				ScP	ScP	21 04 50.0	-2.3
	1.2nm,1.0s,baz=320,slow=2.2,SNR=5.5						
MJAR	**Matsushiro Arr**	**35.14**	**21**	P	**P**	**21 00 00.9**	**-0.3**
	3.3nm,0.6s,mb4.1,baz=192,slow=8.2,SNR=12						
LSA	**Lhasa**	**39.71**	**314**	*e*P	**P**	**21 00 40.1**	**+1.6**
STKA	**Stephens Creek**	**39.73**	**155**	P	**P**	**21 00 39.6**	**+0.9**
	2.7nm,0.4s,mb4.1,baz=328,slow=7.8,SNR=12						
MDJ	**Mudanjiang**	**40.79**	**7**	*e*P	**P**	**21 00 46.6**	**-0.5**
GUN	**Gumba**	**42.80**	**308**	*e*P	**P**	**21 01 02.7**	**-0.4**
	14nm,0.6s,mb4.6						
PKI	**Pulchoki**	**43.03**	**307**	*e*P	**P**	**21 01 04.6**	**-0.2**
KKN	**Kakani**	**43.23**	**307**	*e*P	**P**	**21 01 05.3**	**-1.0**
DMN	**Daman**	**43.28**	**307**	*e*P	**P**	**21 01 06.9**	**+0.1**
ASAJ	**Asahikawa**	**43.39**	**20**	P	**P**	**21 01 08.2**	**+0.6**
	5.3nm,0.5s,mb4.4,baz=224,slow=8.8,SNR=9.3						
GKN	**Gorkha**	**43.83**	**307**	*e*P	**P**	**21 01 10.9**	**-0.1**
KOLN	**Koldanda**	**44.56**	**306**	*e*P	**P**	**21 01 17.0**	**+0.3**
	12nm,0.3s,mb4.9						
SONM	**Songino Array**	**45.99**	**344**	P	**P**	**21 01 27.7**	**0.0**
	0.5nm,0.7s,mb3.2,baz=160,slow=9.2,SNR=5.7						
MKAR	**Makanchi Array**	**55.39**	**327**	P	**P**	**21 02 35.9**	**-0.2**
	1.4nm,0.3s,mb3.6,baz=118,slow=7.5,SNR=21						

*CSEM **31** 21:10:03.6±0.2,4320N×4646E,h10km,mb4.2,Error ellipse: s-maj=6.6km s-min=1.9km az=172.0*

*ISCJB **31** 21:10:07.4±1.2,4344N±009×463E±0.1,h31km±16km, Error ellipse: s-maj=17.9km s-min=7.8km az=97.3*

*TIF **31** 21:10:07.8,4355N×4598E,h15km±5km*

*MOS **31** 21:10:11.1±2.9,4331N×4581E,h13km,mb4.2/1,Error ellipse: s-maj=19.7km s-min=8.3km az=5.9*

ISC 31 21:10:07.3±1.0,4344N±004×4613E±006,h15km±4km,n20, σ0=95/33,4C-1D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNJR	**Sundja**	**1.03**	**249**	*e*Pg	**Pg**	**21 10 30.9**	**+3.6**
TRKR	**Terskaya**	**1.06**	**286**	*i* Pg	**Pg**	**21 10 32.1**	**+4.4**
TRKR				*i* Sg	**Sg**	**21 10 46.7**	**+5.2**
KMSR	**Komsomolskaya**	**1.34**	**268**	*e*Pg	**Pg**	**21 10 34.3**	**+1.2**
KMSR				*e*Sg	**Sg**	**21 10 50.5**	**-0.1**
ARNR	**Ardon**	**1.38**	**260**	*i* Pg	**Pg**	**21 10 34.5**	**+0.7**
ARNR				*i* Sg	**Sg**	**21 10 50.8**	**-0.9**
PRTR	**Priterechnaya**	**1.38**	**284**	*i* Pg	**Pg**	**21 10 34.9**	**+1.1**
PRTR				*i* Sg	**Sg**	**21 10 51.9**	**+0.1**
LACR	**Lac**	**1.48**	**246**	*i* Pg	**Pg**	**21 10 35.4**	**-0.3**
LACR				*i* Sg	**Sn**	**21 10 52.4**	**0.0**
KORR	**Kora**	**1.55**	**257**	*i* Pg	**Pg**	**21 10 36.4**	**-0.7**
KORR				*i* Sg	**Sn**	**21 10 54.1**	**0.0**
ZEI	**Tsey**	**1.77**	**248**	*e*Pg	**Pn**	**21 10 38.8**	**+1.5**
ZEI				*e*Sg	**Sn**	**21 10 58.3**	**-1.2**
DIGR	**Digorskoe uzhe**	**1.94**	**255**	*e*Pn	**Pn**	**21 10 41.2**	**+1.5**
DIGR				*e*Sg	**Sn**	**21 11 02.4**	**-1.5**
TBLG	**Delisi**	**2.00**	**212**	P	**Pb**	**21 10 43.8**	**+0.5**
TBLG				S	**Sb**	**21 11 08.8**	**+0.8**
MTA	**Mtatsminda**	**2.01**	**210**	P	**Pb**	**21 10 43.8**	**+0.3**
MTA				S	**Sb**	**21 11 08.7**	**+0.4**
KUBR	**Kubataba**	**2.01**	**281**	*e*Pn	**Pn**	**21 10 41.0**	**+0.4**
DGRG	**David-gareji**	**2.07**	**196**	P	**Pg**	**21 10 45.7**	**-1.3**
DGRG				S	**Sg**	**21 11 12.6**	**-1.2**
ONI	**Oni**	**2.15**	**247**	P	**Pn**	**21 10 44.2**	**+1.6**
ONI				S	**Sn**	**21 11 10.1**	**+1.2**
PYA	**Pyatigorsk**	**2.31**	**286**⇑

STKA	**Stephens Creek**	**78.09**	**127**	*e*P		**P**	**21 33 12.6**	**+0.3**	
	2.7nm,1.0s,mb4.1								
STKA	**Stephens Creek**	**78.09**	**127**	P		**P**	**21 33 12.2**	**-0.1**	
	2.3nm,0.7s,mb4.2,baz=205,slow=3.1,SNR=7.2								
FITZ	**Fitzroy Crossi**	**80.44**	**107**	*e*P		**P**	**21 33 24.5**	**-0.6**	
	3.0nm,0.7s,mb4.3								
FITZ	**Fitzroy Crossi**	**80.44**	**107**	P		**P**	**21 33 25.0**	**-0.2**	
	1.9nm,0.8s,mb4.1,baz=288,slow=3.7,SNR=7.5								
PSI	**Prapat**	**80.72**	**73**	P		**P**	**21 33 27.0**	**+0.4**	
	6.6nm,0.8s,mb4.6,baz=236,slow=4.6,SNR=3.6								
ASPA	**Alice Springs**	**80.73**	**117**	*e*P		**P**	**21 33 26.9**	**+0.2**	
ASAR	**Alice Springs**	**80.73**	**117**	P		**P**	**21 33 26.8**	**+0.1**	
	3.6nm,0.7s,mb4.4,baz=214,slow=4.7,SNR=42								
ASAR				LR	LR		22 04 56.6		
	comp=Z,83nm,21.5s,MS4.0,baz=2.9,slow=32								
AS31	**Alice Springs**	**80.73**	**117**	*e*P		**P**	**21 33 26.7**	**0.0**	
SAML	**Samuel**	**83.68**	**264**	*e*P		**P**	**21 33 41.9**	**-0.2**	
	13nm,1.3s,mb4.9								
WRA	**Warramunga Arr**	**83.95**	**115**	P		**P**	**21 33 43.2**	**-0.3**	
	2.6nm,0.8s,mb4.4,baz=211,slow=4.0,SNR=21								
WB2	**Warramunga Arr**	**83.96**	**115**	*e*P		**P**	**21 33 43.4**	**-0.2**	
PDAR	**Pinedale Array**	**150.16**	**268**	PKPbc	PKPbc		21 41 01.7	-2.6	
	0.9nm,0.8s,baz=113,slow=2.8,SNR=6.9								
PDAR				PKPab	PKPab		21 41 09.1	-1.3	
	2.9nm,0.7s,baz=119,slow=5.9,SNR=20								
NVAR	**Mina Array Bea**	**152.79**	**253**	PKPbc	PKPbc		21 41 10.4	0.0	
	0.8nm,0.7s,baz=132,slow=3.7,SNR=7.3								
NVAR				PKPab	PKPab		21 41 20.9	-0.4	
	0.6nm,0.5s,baz=128,slow=5.3,SNR=4.2								

*IDC **31** 21:29:47.6±1.2,270.5×12739E,h0km,mb3.6/4,mb1 3.9/5, mb1mx3.7/16,mbtmp3.7/5,ML3.8/1,MS2.9/1,Ms1 2.9/1, ms1mx2.2/17,Error ellipse: s-maj=119.9km s-min=21.9km az=70.0*

*NEIC **31** 21:29:49.6±0.9,275.5×12720E,h10km,mb4.0/3,Error ellipse: s-maj=105.0km s-min=11.5km az=65.0*

*ISCJB **31** 21:29:50.6±1.0,27S±03×1275E±07,h33km,mb3.8/6, Error ellipse: s-maj=106.9km s-min=11.0km az=131.4*

ISC 31 21:29:53.1±1.0,27S±03×1274E±07,h35km,n11,σ1°07/10, mb3.8/6,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**11.12**	**154**	*e*P		**Pn**	**21 32 36.3**	**+6.8**
	2.4nm,0.6s							
FITZ	**Fitzroy Crossi**	**15.40**	**186**	LR		LR	21 39 53.5	
	comp=Z,42nm,19.7s,baz=49,slow=39							
WRAB	**Tennant Creek**	**18.42**	**159**	*e*P		**Pn**	**21 34 05.4**	**-0.1**
	5.8nm,0.7s							
WRA	**Warramunga Arr**	**18.42**	**159**	P		**Pn**	**21 34 04.8**	**-0.8**
	0.3nm,0.3s,baz=339,slow=11,SNR=24							
WB2	**Warramunga Arr**	**18.43**	**159**	*e*P		**Pn**	**21 34 07.6**	**+2.0**
ASAR	**Alice Springs**	**21.77**	**164**	P		**P**	**21 34 42.0**	**+0.4**
	1.2nm,0.5s,mb3.5,baz=342,slow=12,SNR=15							
ASAR				PcP		PcP	21 38 42.2	+1.1
	0.3nm,0.6s,baz=349,slow=3.8,SNR=4.2							
LSA	**Lhasa**	**47.34**	**316**	*e*P		**P**	**21 38 24.6**	**+1.2**
	2.1nm,0.8s,mb4.1							
SONM	**Songino Array**	**53.58**	**343**	P		**P**	**21 39 11.1**	**+0.5**
	0.9nm,1.0s,mb3.6,baz=152,slow=6.5,SNR=4.0							
MKAR	**Makanchi Array**	**63.24**	**327**	P		**P**	**21 40 17.8**	**-0.2**
	0.4nm,0.5s,mb3.8,baz=114,slow=7.2,SNR=4.0							
ZRNK	**Zerenda**	**73.78**	**328**	*e*P		**P**	**21 41 22.8**	**-1.0**
	0.8nm,0.6s,mb3.8							
VNDA	**Vanda**	**77.00**	**173**	P		**P**	**21 41 40.4**	**-1.9**
	0.5nm,0.7s,mb3.5,baz=307,slow=7.2,SNR=3.9							

KRSC 31 21:48:59,4976N×15757E,h13km,ML3.7,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ALID	**Alaid**	**1.71**	**311**	P		Pn	21 49 32.0	+3.6
RUS	**Russkaya**	**2.74**	**12**	*e*P		Pn	21 49 44.2	+1.5
RUS				*i* S		Sn	21 50 16.6	+0.9
GRL	**Gorelyy**	**2.81**	**6**	*e*P		Pn	21 49 44.4	+0.7
GRL				*i* S		Sn	21 50 17.3	-0.1
AVH	**Avacha**	**3.58**	**11**	*e*P		Pn	21 49 57.3	+3.0
SPN	**Mys Shipunski**	**3.68**	**24**	*e*P		Pn	21 49 58.8	+3.3
SPN				*i* S		Sn	21 50 43.2	+4.4
GNL	**Ganaly**	**3.95**	**3**	*e*P		Pn	21 50 00.6	+1.3
MKZ	**Mys Kozlova**	**5.44**	**26**	*e*P		Pn	21 50 22.3	+2.5

*IDC **31** 22:24:57.4±0.7,1798S×17307W,h0km,mb4.6/10, mb1 4.7/11,mb1mx4.6/18,mbtmp4.6/11,MS4.1/7, Ms1 4.1/7,ms1mx3.6/33,Error ellipse: s-maj=25.1km s-min=17.2km az=137.0*

*SZGRF **31** 22:24:57.1,2065S×17267W,h33km,Tonga Islands region*

*ISCJB **31** 22:24:58.3±3.5,1809S±008×173.11W±007,h15km±21km, mb4.7/35,MS4.1/7,Error ellipse: s-maj=15.8km s-min=8.1km az=113.8*

*BJI **31** 22:25:04.2,1820S×17340W,h35km,mB5.1,mb5.0,Ms4.8, Msz4.5*

*NEIC **31** 22:25:04.3±0.4,1816S×17335W,h35km,mb4.7/22,Error ellipse: s-maj=16.6km s-min=11.8km az=138.0*

*MOS **31** 22:25:08.3±1.8,1707S×17397W,h33km,mb5.1/8,Error ellipse: s-maj=19.2km s-min=16.0km az=30.7*

ISC 31 22:25:01.9±3.7,1811S±008×17305W±007,h28km±25km, n144,σ1°04/78,mb4.7/35,MS4.1/7,2C-5D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**4.35**	**17**	Pn		**Pn**	**22 25 57.4**	**-8.6**
	5.1nm,0.3s,baz=6.3,slow=24,SNR=5.7							
AFI				Sn		**Sn**	**22 26 44.1**	**-12**
	38nm,0.3s,baz=104,slow=17,SNR=7.3							
AFI				T			22 31 02.0	
	43nm,0.3s,baz=238,slow=17,SNR=5.9							
AFI	**Afiamalu**	**4.35**	**17**	*e*Pn		**Pn**	**22 25 57.9**	**-8.1**
AFI				*e*Sn		**Sn**	**22 26 44.9**	**-11**
RAR	**Rarotonga**	**12.89**	**106**	Pn		**Pn**	**22 27 54.2**	**-8.9**
	2.9nm,0.3s,baz=260,slow=6.1,SNR=5.5							
RAR				LR		LR	22 31 23.3	
	comp=Z,1µm,21.6s,baz=345,slow=30							
DZM	**Mont Dzumac**	**19.65**	**255**	P		**Pn**	**22 29 30.0**	**+0.1**
	0.4nm,0.3s,baz=80,slow=22,SNR=4.9							
URZ	**Urewera**	**21.84**	**201**	P		**P**	**22 29 52.4**	**+0.3**
	42nm,0.9s,mb4.9,baz=13,slow=4.4,SNR=13							
PPT	**Papeete**	**22.35**	**92**	*e*LR		LR	22 34 50.2	
	2µm,26.5s,baz=261							
PPT	**Papeete**	**22.35**	**92**	LR		LR	22 35 42.1	
	comp=Z,768nm,20.5s,MS4.1,baz=242,slow=29							
TBI	**Tubuai**	**22.66**	**107**	*e*LQ			22 34 17.3	
	832nm,26.2s							
TBI				*e*LR		LR	22 35 04.9	
	1µm,29.0s,baz=278							
SNZO	**South Karori**	**25.40**	**202**	P		**P**	**22 30 32.8**	**+5.9**
HNR	**Honiara**	**27.57**	**285**	*e*P		**P**	**22 30 47.2**	**+0.8**
RPZ	**Rata Peaks**	**28.84**	**204**	P		**P**	**22 31 03.4**	**+5.7**
	31nm,0.6s,mb5.2,baz=219,slow=3.5,SNR=16							
TAOE	**Nuku Hiva Isla**	**33.24**	**78**	*e*LR		LR	22 39 58.4	
	2µm,27.1s							
RKT	**Rikitea**	**35.92**	**105**	*e*LR		LR	22 41 09.1	
	924nm,29.0s							
CTA	**Charters Tower**	**38.44**	**260**	*e*P		**P**	**22 32 20.3**	**-0.7**
	6.9nm,0.8s,mb4.4							
CTA	**Charters Tower**	**38.44**	**260**	*e*P		**P**	**22 32 20.3**	**-0.7**
CTA				pmax	pmax			
	comp=Z,7.0nm,0.8s							
CTAO	**Charters Tower**	**38.44**	**260**	*e*P		**P**	**22 32 20.6**	**-0.4**
CTAO				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.5							
CTAO	**Charters Tower**	**38.44**	**260**	*e*P		**P**	**22 32 20.6**	**-0.4**
	comp=Z,6.3nm,0.6s,mb4.5							
PMG	**Port Moresby**	**39.53**	**277**	*e*P		**P**	**22 32 30.0**	**-0.2**
	comp=Z,7.3nm,0.6s,mb4.6,baz=129,slow=17,SNR=3.3							
PMG	**Port Moresby**	**39.53**	**277**	*e*P		**P**	**22 32 30.3**	**+0.1**
PMG				pmax	pmax			
	comp=Z,9.0nm,0.8s							
PMG	**Port Moresby**	**39.53**	**277**	*e*P		**P**	**22 32 30.3**	**+0.2**
	comp=Z,8.8nm,0.8s,mb4.5							
POHA	**Pohakuloa**	**41.37**	**25**	P		**P**	**22 32 49.8**	**+4.4**
STKA	**Stephens Creek**	**43.03**	**242**	*e*P		**P**	**22 32 58.8**	**-0.1**
	comp=Z,5.0nm,0.7s,mb4.3							
STKA	**Stephens Creek**	**43.03**	**242**	P		**P**	**22 32 59.1**	**+0.2**
	comp=Z,5.9nm,0.7s,mb4.4,baz=102,slow=11,SNR=11							
STKA				LR		LR	22 48 00.1	
	comp=Z,306nm,19.1s,MS4.2,baz=293,slow=32							
WB2	**Warramunga Arr**	**49.59**	**259**	*e*P		**P**	**22 33 48.8**	**-1.7**
WRAB	**Tennant Creek**	**49.59**	**259**	*e*P		**P**	**22 33 49.0**	**-1.5**
WRAB				pmax	pmax			
	comp=Z,17nm,1.0s,mb5.0							
WRAB	**Tennant Creek**	**49.59**	**259**	*e*P		**P**	**22 33 49.0**	**-1.4**
	comp=Z,17nm,1.0s,mb5.0							
WRA	**Warramunga Arr**	**49.60**	**259**	P		**P**	**22 33 49.3**	**-1.3**
	comp=Z,4.4nm,0.7s,mb4.6,baz=96,slow=8.5,SNR=32							
WRA				LR		LR	22 53 11.2	
	comp=Z,234nm,21.9s,MS4.1,baz=95,slow=34							
AS31	**Alice Springs**	**49.64**	**254**	*e*P		**P**	**22 33 50.0**	**-0.9**
ASAR	**Alice Springs**	**49.64**	**254**	P		**P**	**22 33 50.4**	**-0.5**
	comp=Z,12nm,0.7s,mb5.0,baz=86,slow=8.6,SNR=48							
ASAR				PcP	PcP		22 35 13.3	+1.3
	comp=Z,2.5nm,0.9s,baz=92,slow=5.0,SNR=4.2							
ASAR				S		**S**	**22 40 57.0**	**-0.6**
	comp=Z,2.0nm,1.1s,baz=90,slow=15,SNR=5.7							
ASPA	**Alice Springs**	**49.64**	**254**	*e*P		**P**	**22 33 50.5**	**-0.4**
KAKA	**Kakadu**	**52.67**	**268**	*e*P		**P**	**22 34 12.5**	**-1.1**
	comp=Z,9.1nm,0.6s,mb4.9							
FITZ	**Fitzroy Crossi**	**58.02**	**260**	*e*P		**P**	**22 34 51.4**	**-0.7**
	comp=Z,3.4nm,0.6s,mb4.5							
SBA	**Scott Base**	**60.60**	**185**	*e*P		**P**	**22 35 11.5**	**+1.6**
SBA				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.8							
SBA	**Scott Base**	**60.60**	**185**	*e*P		**P**	**22 35 11.5**	**+1.6**
	comp=Z,6.2nm,0.8s,mb4.8							
VNDA	**Vanda**	**60.73**	**186**	P		**P**	**22 35 12.0**	**+1.1**
	comp=Z,4.4nm,1.0s,mb4.5,baz=8.8,slow=6.4,SNR=16							
VNDA				LR		LR	22 54 45.7	
	comp=Z,59nm,21.9s,MS3.7,baz=59,slow=29							
VNDA	**Vanda**	**60.73**	**186**	*e*P		**P**	**22 35 11.9**	**+1.1**
	comp=Z,7.1nm,1.1s,mb4.7							
MBWA	**Marble Bar**	**62.96**	**255**	*e*P		**P**	**22 35 25.7**	**-0.1**
	comp=Z,4.3nm,0.6s,mb4.8							
CASY	**Casey**	**68.11**	**205**	P		**P**	**22 35 58.1**	**-0.9**
MJAR	**Matsushiro Arr**	**71.21**	**320**	P		**P**	**22 36 18.1**	**-0.1**
	comp=Z,1.6nm,0.7s,mb4.0,baz=157,slow=5.0,SNR=5.2							
MAJO	**Matsushiro**	**71.22**	**320**	P		**P**	**22 36 20.6**	**+2.4**
LPIG	**La Paz**	**74.18**	**58**	LR		LR	23 00 26.8	
	comp=Z,89nm,20.9s,MS4.0,baz=215,slow=29							
CMB	**Columbia Colle**	**74.58**	**41**	P		**P**	**22 36 37.6**	**-0.6**
MIR	**Mirnyy**	**75.11**	**204**	*d* /P		**P**	**22 36 43.0**	**+1.8**
MIR				pmax	pmax			
	comp=Z,15nm,1.5s,mb4.7							
DAC	**Darwin (Calif)**	**75.30**	**43**	*e*P		**P**	**22 36 42.1**	**-0.2**
	comp=Z,7.1nm,1.4s,mb4.4							
MTUM	**Tungsten Hills**	**75.31**	**42**	*e*P		**P**	**22 36 42.8**	**+0.4**
NVAR	**Mina Array Bea**	**76.12**	**41**	P		**P**	**22 36 46.8**	**-0.2**
	comp=Z,2.5nm,0.9s,mb4.2,baz=216,slow=8.0,SNR=14							
TPH	**Tonopah**	**76.59**	**42**	P		**P**	**22 36 53.1**	**+3.4**
YHNB	**Yeheng**	**76.72**	**302**	*e*P		**P**	**22 36 52.2**	**+1.8**
YHNB				*e*PcP		PcP	22 37 01.1	-0.6
KSM	**Kuching**	**77.77**	**276**	*e*P		**P**	**22 36 58.8**	**+2.5**
TUC	**Tucson**	**77.85**	**50**	*e*P		**P**	**22 36 56.9**	**+0.2**
	comp=Z,3.1nm,0.8s,mb4.3							
WVOR	**Wild Horse Val**	**78.34**	**38**	P		**P**	**22 36 59.3**	**-0.1**
	comp=Z,22nm,1.6s,mb4.8							
MSU	**Marysvale**	**80.12**	**44**	*e*P		**P**	**22 37 10.0**	**+0.8**
BMO	**Blue Mountains**	**80.58**	**37**	*e*P		**P**	**22 37 10.9**	**-0.8**
BMO				pmax	pmax			
	comp=Z,18nm,1.6s,mb4.8							
BMO	**Blue Mountains**	**80.58**	**37**	*e*P		**P**	**22 37 10.9**	**-0.8**
	comp=Z,18nm,1.6s,mb4.7							
MDJ	**Mudanjiang**	**81.36**	**323**	P		**P**	**22 37 17.8**	**+2.0**
MDJ				AMB	AMB			
	comp=Z,6.0nm,0.9s,mb4.5							
MDJ				AMB	AMB			
	comp=Z,91nm,6.0s							
MNTX	**Cornudas Mount**	**81.58**	**53**	*e*P		**P**	**22 37 17.1**	**+0.1**
	comp=Z,26nm,1.8s,mb4.9							
ANMO	**Albuquerque**	**82.28**	**50**	LR		LR	23 05 35.6	
	comp=Z,93nm,21.6s,MS4.1,baz=188,slow=30							
ANMO	**Albuquerque**	**82.28**	**50**	*e*P		**P**	**22 37 20.9**	**+0.3**
	comp=Z,1.0nm,0.4s,mb4.1							
PV01	**Paradox Valley**	**82.35**	**46**	*e*P		**P**	**22 37 21.0**	**0.0**
MA2	**Magadan**	**82.83**	**342**	P		**P**	**22 37 26.3**	**+2.8**
RRI2	**Red Ridge**	**83.26**	**40**	*e*P		**P**	**22 37 26.1**	**+0.3**
	comp=Z,14nm,1.2s,mb4.9							
REDW	**Red Top Meadow**	**83.56**	**40**	*e*P		**P**	**22 37 26.6**	**-0.7**
	comp=Z,6.5nm,0.7s,mb4.9							
DLMT	**Dillon**	**83.59**	**38**	*e*P		**P**	**22 37 27.3**	**-0.2**
	comp=Z,3.9nm,0.7s,mb4.7							
MCK	**McKinley**	**83.70**	**11**	P		**P**	**22 37 27.3**	**-0.7**
SMCO	**Snowmass**	**83.95**	**46**	*e*P		**P**	**22 37 27.9**	**-1.4**
	comp=Z,16nm,1.2s,mb5.0							
QLMT	**Earthquake Lak**	**83.99**	**39**	*e*P		**P**	**22 37 30.0**	**+0.5**
PDAR	**Pinedale Array**	**84.05**	**41**	P		**P**	**22 37 29.2**	**-0.6**
	comp=Z,3.1nm,0.8s,mb4.5,baz=236,slow=1.6,SNR=8.6							
CHMT	**Chamberlain Mo**	**84.08**	**37**	*e*P		**P**	**22 37 28.9**	**-1.0**
SDCO	**Great Sand Dun**	**84.28**	**47**	P		**P**	**22 37 35.7**	**+4.8**
BOZ	**Bozeman (W)**	**84.32**	**38**	P		**P**	**22 37 24.4**	**-6.8**
HRY	**Holter Researc**	**84.78**	**37**	*e*P		**P**	**22 37 32.8**	**-0.7**
WALA	**Waterton Lakes**	**84.94**	**35**	*e*P		**P**	**22 37 32.0**	**-2.3**
	comp=Z,34nm,1.8s,mb5.2							
COLA	**College**	**84.94**	**11**	*e*P		**P**	**22 37 33.8**	**-0.5**
MAW	**Mawson**	**85.35**	**199**	P		**P**	**22 37 36.9**	**+0.6**
	comp=Z,8.4nm,0.9s,mb4.8,baz=119,slow=7.3,SNR=12							
DAWY	**Dawson**	**85.95**	**14**	*e*P		**P**	**22 37 40.4**	**+1.1**
BILL	**Bilibino**	**87.22**	**352**	*e*P		**P**	**22 37 45.6**	**+0.1**
BILL				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.9							
BJT	**Baijiatuao**	**87.56**	**313**	*e*P		**P**	**22 37 47.5**	**+0.3**
SNAA	**Sanae**	**90.20**	**177**	*e*P		**P**	**22 37 58.8**	**-0.8**
SNAA				pmax	pmax			
	comp=Z,5.0nm,1.0s							
SNAA	**Sanae**	**90.20**	**177**	*e*P		**P**	**22 37 58.8**	**-0.8**
	comp=Z,4.8nm,1.0s,mb4.8							
HHC	**Hu-ho-hao-te**	**91.10**	**313**	*e*P		**P**	**22 38 08.0**	**+4.2**
HHC				PP	PP		22 41 47.0	+6.5
HHC				SKS			22 48 33.8	
HHC				S	S		22 48 53.0	-6.8
HHC				AMB	AMB			
	comp=Z,8.0nm,0.7s,mb5.2							
HHC				PP	PP			
	comp=Z,94nm,3.7s							
KMI	**Kunming**	**92.49**	**295**	P		**P**	**22 38 13.3**	**+3.1**
KMI				AMB	AMB			
	comp=Z,6.0nm,0.8s,mb5.0							
CD2	**Chengdu**	**93.49**	**301**	*e*P		**P**	**22 38 14.5**	**-0.4**
CD2				AP	pP		22 38 31.5	+7.5
CD2				PP	PP		22 42 02.0	+2.6
CD2				SKS			22 48 42.0	
CD2				S	S		22 49 14.5	-6.8
CD2				XS	sS		22 49 44.0	+7.6
CD2				SS	SS		22 55 36.0	-2.3
CD2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb5.3							
CD2				AMB	AMB			
	comp=Z,30nm,6.8s							
CD2				LR	LR			
	comp=E,80nm,16.8s							
CD2				LR	LR			
	comp=Z,70nm,18.4s,MS4.2							
CHKZ	**Chkalovo**	**119.95**	**322**	*e*PKIKP	PKPdf		22 43 49.5	-0.1
ZRNK	**Zerenda**	**121.04**	**321**	*e*PKIKP	PKPdf		22 43 51.7	0.0
ARU	**Arti**	**125.80**	**328**	*e*PKIKP	PKPdf		22 43 59.6	-1.2
KMBO	**Kilima Mbogo**	**144.58**	**241**	PKP	PKPdf		22 44 36.7	+1.1
	comp=Z,13nm,0.9s,baz=60,slow=4.0,SNR=32							
KMBO	**Kilima Mbogo**	**144.58**	**241**	PKP	PKPdf		22 44 36.7	+1.1
LVV	**L'vov**	**145.51**	**340**	*e*PKHKP			22 44 36.9	
MALT	**Malatya**	**145.97**	**313**	/P	PKPbc		22 44 41.5	+2.7
MALT	**Malatya**	**145.97**	**313**	*e*PKPdf	PKPbc		22 44 41.7	+2.9
OJC	**Ojcow**	**146.34**	**345**	*e*PX	PKPbc		22 44 41.8	+1.9
KSP	**Ksiaz**	**146.50**	**349**	*e*PKP2	PKPab		22 44 40.5	-0.8
CLL	**Collm**	**146.52**	**353**	*e*PKPbc	PKPbc		22 44 41.1	+0.7
CLL	**Collm**	**146.52**	**353**	/PKPbc	PKPbc		22 44 40.9	+0.5
	comp=Z,24nm,1.0s							
CLL				*i* PKiKP	PKiKP		22 44 45.7	+2.4
CLL				*i* pPKPbc	pPKPbc		22 44 51.5	+1.8
STHS	**Stebnicka Huta**	**146.70**	**343**	*e*PKP	PKPab		22 44 44.6	+2.5
BRG	**Berggiesshubel**	**146.83**	**352**	*e*PKPbc	PKPbc		22 44 42.1	+0.8
BRG	**Berggiesshubel**	**146.83**	**352**	*e*P	PKPdf		22 44 41.9	+2.5
	comp=Z,14nm,1.6s							
BRG				*e*			22 45 11.1	
	comp=Z,18nm,1.8s							
UPC	**Upice**	**146.87**	**349**	*e*PKP	PKPbc		22 44 42.5	+1.1
DPC	**Dobruska-Polom**	**146.97**	**349**	*e*PKP	PKPbc		22 44 42.8	+1.1
CRVS	**Cervenica-Dubn**	**147.10**	**342**	*e*PKP	PKPbc		22 44 43.1	+1.0
CRVS				*e*			22 45 02.1	
MORC	**Moravsky Berou**	**147.27**	**347**	/P	PKPbc		22 44 44.0	+1.4
MORC	**Moravsky Berou**	**147.27**	**347**	*e*PKPdf	PKPbc		22 44 43.3	+0.7
MOX	**Moxa**	**147.32**	**354**	*e*PKPbc	PKPbc		22 44 44.6	+1.9
TANN	**Tannenbergstha**	**147.47**	**353**	*e*PKPbc	PKPbc		22 44 45.7	+2.6
PRU	**Pruhonice**	**147.61**	**351**	*e*PKP	PKPbc		22 44 44.4	+0.9
NKC	**Novy Kostel**	**147.65**	**353**	*e*PKP	PKPbc		22 44 45.8	+2.2
KECS	**Kecovo**	**147.76**	**343**	*e*PKP	PKPbc		22 44 46.0	+2.1
MANZ	**Manzenberg**	**147.93**	**354**	*e*PKPbc	PKPbc		22 44 45.4	+1.1
BAIF	**Baives**	**148.05**	**3**	*e*PKIKP	PKPab		22 44 48.2	+0.8
TREC	**Trest**	**148.13**	**349**	*e*PKP	PKPbc		22 44 45.9	+1.0
ROTZ	**Rotzenmuhle**	**148.13**	**354**	*e*PKPbc	PKPbc		22 44 45.8	+0.9
VYHS	**Vyhne**	**148.18**	**345**	*e*PKP	PKPbc		22 44 46.0	+1.0
VYHS				*e*			22 45 08.4	
VYHS	**Vyhne**	**148.18**	**345**	*e*PKP	PKPbc		22 44 46.0	+1.0
VYHS				*e*			22 45 08.4	
VYHS				LR	LR			
	comp=Z,5µm,17.4s							
GRA1	**Grafenberg Arr**	**148.30**	**355**	*e*PKPbc	PKPbc		22 44 46.5	+1.2
GRF	**Grafenberg Arr**	**148.30**	**355**	*e*PKPbc	PKPbc		22 44 46.5	+1.2
BR131	**Keskin Array S**	**148.43**	**319**	*e*PKPdf	PKPdf		22 44 43.7	+1.6
PSZ	**Piszkesteto**	**148.44**	**343**	*e*PKIKP	PKPbc		22 44 45.2	-0.5
WLF	**Walferdange**	**148.51**	**1**	*e*PKPbc	PKPbc		22 44 46.4	+0.5
DRGR		**148.58**	**339**	/P	PKPbc		22 44 47.5	+1.5
KHC	**Kasperske Hory**	**148.59**	**352**	*e*PKP	PKPbc		22 44 46.9	+0.8
WET	**Wettzell**	**148.67**	**353**	*e*PKPbc	PKPbc		22 44 47.0	+0.7
FLN	**La Foliniere**	**148.83**	**10**	*e*PKIKP	PKPbc		22 44 46.2	-0.5
GEC2	**GERESS Array S**	**148.85**	**351**	*e*PKPbc	PKPbc		22 44 47.5	+0.8
GERES	**GERESS Array B**	**148.85**	**351**	PKPbc	PKPbc		22 44 47.6	+0.9
	comp=Z,2.3nm,0.9s,baz=28,slow=3.2,SNR=17							
LDF	**La Druitiere**	**149.05**	**9**	*e*PKIKP	PKPbc		22 44 47.3	+0.1
GRR	**Gorron**	**149.13**	**10**	*e*PKIKP	PKPbc		22 44 49.3	+1.9
MEZF	**Maizieres J'vi**	**149.64**	**2**	*e*PKIKP	PKPbc		22 44 50.5	+1.8
CDF	**Champ du Feu**	**149.77**	**360**	*e*PKIKP	PKPbc		22 44 49.8	+0.8
	comp=Z,30nm,1.1s							
FUR	**Furstenfeldbru**	**149.81**	**354**	*e*PKPbc	PKPbc		22 44 50.0	+0.9
BFO	**Black Forest**	**149.83**	**358**	*e*PKPbc	PKPbc		22 44 50.2	+1.0
BZS	**Buzias**	**149.97**	**339**	/P	PKPbc		22 44 50.3	+0.8
HAU	**Haudompre**	**150.17**	**1**	*e*PKIKP	PKPbc		22 44 50.7	+0.7
	comp=Z,15nm,0.9s							
PKSM	**Moragy**	**150.34**	**343**	/P	PKPbc		22 44 50.7	+0.3
HINF	**Hinteralfeld**	**150.37**	**0**	*e*PKIKP	PKPbc		22 44 50.9	+0.4
LOR	**Lormes**	**150.81**	**4**	*e*PKIKP	PKPbc		22 44 52.1	+0.6
DOBS	**Dobrina**	**151.16**	**348**	*e*PKPab	PKPbc		22 44 52.3	0.0
AVF	**Avril sur Loir**	**151.24**	**5**	*e*PKIKP	PKPbc		22 44 52.7	+0.2
	comp=Z,7.3nm,0.9s							
SMF	**Signal de Mont**	**151.42**	**4**	*e*PKIKP	PKPbc		22 44 53.2	+0.3
BGF	**Bois d'Agland**	**151.42**	**6**	*e*PKIKP	PKPbc		22 44 53.4	+0.5
	comp=Z,19nm,0.9s							
TCF	**Toulx Ste Croi**	**151.62**	**7**	*e*PKIKP	PKPbc		22 44 53.5	+0.1
	comp=Z,7.7nm,0.9s							
JAVS	**Javornik**	**151.67**	**349**	*e*PKPbc	PKPbc		22 44 53.4	-0.1
CEY	**Cerknica**	**151.75**	**349**	*e*PKPbc	PKPbc		22 44 53.9	+0.2
ESDC	**Sonseca Array**	**156.52**	**22**	PKPab	PKPab		22 45 22.6	-0.3
	comp=Z,0.7nm,0.7s,baz=323,slow=3.8,SNR=4.4							
TORD	**Torodi Ar. Bea**	**172.94**	**134**	PKP	PKPdf		22 45 07.8	-0.4
	comp=Z,1.1nm,1.1s,baz=286,slow=1.6,SNR=3.7							
TORD				PKPab	PKPab		22 46 34.9	-0.1
	comp=Z,0.7nm,0.8s,baz=261,slow=4.5,SNR=4.2							

**CASC 31 22:50:30.8±0.9,947N×

PDAR	Pinedale Array	47.71	323	P		P		22 59 20.0	+0.4
	0.5nm,0.7s,mb3.7,baz=115,slow=6.1,SNR=2.4								
HWUT	Hardware Ranch	48.28	321	*e*P		P		22 59 25.5	+1.5
HLID	Hailey	51.10	321	*e*P		P		22 59 45.8	+0.3
DBIC	Dimbokro	66.98	86	P		P		23 01 34.3	-1.3
	2.1nm,0.8s,mb4.2,baz=249,slow=8.6,SNR=3.7								
ROSF	Rostrenen	70.39	41	*e*P		P		23 01 56.4	-0.5
GRR	Gorron	71.99	42	*e*P		P		23 02 05.9	-0.7
	5.7nm,0.7s,mb4.3								
GRR	Gorron	71.99	42	*e*P		P		23 02 05.9	-0.7
	2.8nm,0.7s,mb4.3								
EPF	Esparros	72.13	47	*e*P		P		23 02 07.2	-0.2
	8.4nm,0.9s,mb4.4								
EPF	Esparros	72.13	47	*e*P		P		23 02 07.2	-0.2
	4.2nm,0.9s,mb4.4								
FLN	La Foliniere	72.29	41	*e*P		P		23 02 07.9	-0.5
	12nm,0.8s,mb4.6								
FLN	La Foliniere	72.29	41	*e*P		P		23 02 07.9	-0.5
	5.8nm,0.8s,mb4.6								
LDF	La Druitiere	72.50	42	*e*P		P		23 02 08.9	-0.7
	18nm,1.1s,mb4.6								
LDF	La Druitiere	72.50	42	*e*P		P		23 02 08.9	-0.7
	8.9nm,1.1s,mb4.6								
LFF	La Frestale	72.63	45	*e*P		P		23 02 09.9	-0.5
TORD	Torodi Ar. Bea	72.87	79	P		P		23 02 10.7	-1.1
	1.0nm,0.9s,mb3.8,baz=266,slow=4.6,SNR=8.2								
RJF	Les Rejaudoux	73.21	45	*e*P		P		23 02 13.1	-0.7
MTLF	Montolieu	73.53	47	*e*P		P		23 02 14.8	-0.9
	23nm,1.5s,mb4.6								
MTLF	Montolieu	73.53	47	*e*P		P		23 02 14.8	-0.9
	11nm,1.5s,mb4.6								
CAF	Calviac	73.56	46	*e*P		P		23 02 13.9	-2.0
	7.7nm,0.8s,mb4.4								
CAF	Calviac	73.56	46	*e*P		P		23 02 13.9	-2.0
	3.8nm,0.8s,mb4.4								
TCF	Toulx Ste Croi	73.79	44	*e*P		P		23 02 16.5	-0.8
AVF	Avril sur Loir	74.63	44	*e*P		P		23 02 21.1	-1.0
SMF	Signal de Mont	74.95	44	*e*P		P		23 02 23.1	-0.9
	8.1nm,0.9s,mb4.4								
SMF	Signal de Mont	74.95	44	*e*P		P		23 02 23.1	-0.9
	4.1nm,0.9s,mb4.4								
LOR	Lormes	75.01	43	*e*P		P		23 02 23.3	-1.1
	10nm,0.9s,mb4.5								
LOR	Lormes	75.01	43	*e*P		P		23 02 23.3	-1.1
	5.2nm,0.9s,mb4.5								
VIVF	Saint-Julien-l	75.40	46	*e*P		P		23 02 25.7	-0.9
	6.3nm,0.9s,mb4.2								
VIVF	Saint-Julien-l	75.40	46	*e*P		P		23 02 25.7	-0.9
	3.2nm,0.9s,mb4.2								
MEZF	Maizieres J'vi	75.91	42	*e*P		P		23 02 28.8	-0.7
	16nm,0.8s,mb4.7								
MEZF	Maizieres J'vi	75.91	42	*e*P		P		23 02 28.8	-0.7
	16nm,0.8s,mb5.0								
LPL	La Plagne	76.89	45	*e*P		P		23 02 35.4	+0.3
	9.8nm,0.9s,mb4.4								
LPL	La Plagne	76.89	45	*e*P		P		23 02 35.4	+0.3
	4.9nm,0.9s,mb4.4								
LPG	La Plagne	76.90	45	*e*P		P		23 02 35.6	+0.5
	9.7nm,0.9s,mb4.4								
LPG	La Plagne	76.90	45	*e*P		P		23 02 35.6	+0.5
	4.8nm,0.9s,mb4.4								
HINF	Hinteralfeld	77.07	43	*e*P		P		23 02 35.0	-1.1
	6.1nm,0.8s,mb4.3								
HINF	Hinteralfeld	77.07	43	*e*P		P		23 02 35.0	-1.1
	3.0nm,0.8s,mb4.3								
CDF	Champ du Feu	77.38	42	*e*P		P		23 02 37.0	-0.8
	4.1nm,0.7s,mb4.2								
CDF	Champ du Feu	77.38	42	*e*P		P		23 02 37.0	-0.8
	2.0nm,0.7s,mb4.2								
GERES	GERESS Array B	81.64	42	P		P		23 03 00.5	-0.6
	0.8nm,0.7s,mb3.7,baz=270,slow=2.7,SNR=7.3								
CASY	Casey	121.57	181	*e*PKPdf		PKPdf		23 09 36.2	-0.3
WRA	Warramunga Arr	151.40	242	PKPbc		PKPbc		23 10 37.1	+0.4
	2.5nm,0.7s,baz=112,slow=2.0,SNR=5.4								

NIED ***31*** *22:58:00, 28.70N× 130.20E, h35km, Mw5.5 Best double couple: M₀2.20000×10¹⁷ NP1:φs57.00000°, δ68.00000°, λ122.00000°. NP2:φs178.00000°, δ38.00000°, λ37.00000°.*

BGS ***31*** *22:58:21.0± 1.2, 28.14N× 130.55E, h33km, mb5.5, MS5.3*

SZGRF ***31*** *22:58:22.8, 28.35N× 130.31E, h33km, mb6.0, MS5.7, Ryukyu Islands, Japan*

BJI ***31*** *22:58:23.9, 28.59N× 130.51E, h62km, mB5.4, mb5.3, Ms5.6, Msz5.5*

MOS ***31*** *22:58:23.2± 0.9, 28.80N× 130.13E, h33km, mb5.8/89, MS5.5/44, Error ellipse: s-maj=8.0km s-min=4.8km az=107.6*

ISCJB ***31*** *22:58:24.6± 0.1, 28.82N× 130.02E× 130.02E, h34km, mb5.6/211, MS5.3/131, Error ellipse: s-maj=2.7km s-min=2.0km az=108.9*

JMA ***31*** *22:58:24.3± 0.2, 28.69N× 130.24E, h55km± 4km, M5.4*

JMA Felt III J1.

IDC ***31*** *22:58:24.7± 2.1, 28.78N× 130.10E, h28km± 13km, mb5.1/24, mb1 5.1/29, mb1mx5.1/30, mbtmp5.2/29, ML4.4/5, MS5.1/27, Ms1 5.1/27, ms1mx5.0/36, Error ellipse: s-maj=13.9km s-min=10.0km az=78.0*

NEIC ***31*** *22:58:25.8± 0.1, 28.80N× 130.03E, mb5.6/122, MS5.2/65, MW5.5, MW5.5(NIED), Error ellipse: s-maj=3.6km s-min=3.0km az=142.0, Moment Tensor Solution. s22 Moment tensor: Scale 10¹⁷Nm; Mrr 2.26; Mθθ -1.71; Mφφ -0.55; Mrθ -0.34; Mθφ -1.35; Mφr 0.38; Best double couple: M₀2.50000×10¹⁷ NP1:φs250.00000°, δ48.00000°, λ109.00000°. NP2:φs43.00000°, δ46.00000°, λ70.00000°. Principal axes: T 2.3800, Plg76.0000°, Azm233.0000°; N 0.2200, Plg14.0000°, Azm57.0000°; P -2.6000, Plg1.0000°, Azm327.0000°;*

NEIC Recorded [3 JMA] on Amami-oshima and [1 JMA] on Nakano-shima.

HRVD ***31*** *22:58:25.8± 0.1, 28.60N× 130.33E, h30km, MW5.5/92, Centroid moment Tensor Solution. LP body waves: s79,c164;Mantle waves: s92,c200; Half duration: 1ŝ4 Moment tensor: Scale 10¹⁷Nm; Mrr 1.56± .04; Mθθ -0.60± .03; Mφφ -0.95± .03; Mrθ 1.42± .05; Mθφ -0.97± .02; Mφr 0.93± .04; Best double couple: M₀2.38300×10¹⁷ NP1:φs206.00000°, δ24.00000°, λ65.00000°. NP2: φs52.00000°, δ68.00000°, λ101.00000°. Principal axes: T 2.3220, Plg65.0000°, Azm340.0000°; N 0.1240, Plg10.0000°, Azm228.0000°; P -2.4440, Plg23.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 31 22:58:26.4± 0.1, 2884N± 002× 13003E± 002, h36km, h36km± 1.4km:pP-P, n1112, σ0ŝ93/1063, mb5.6/211, MS5.3/131, 312C-83D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	Kikaishima	0.53	186	P	Pn	22 58 35.3	-2.1
JAM	Amami Oshima	0.57	221	P	Pn	22 58 37.1	-0.9
JAM				S	Sn	22 58 47.2	+1.1
JNN	Nakanoshima	1.00	352	P	Pn	22 58 45.0	+1.1
JNN				*e*S	Sn	22 59 01.3	+4.4
JTK	Tokunoshima	1.42	222	P	Pn	22 58 49.6	-0.1
JTK				*e*S	Sn	22 59 08.3	+1.2
JKC	Kuchinoerabu	1.62	5	P	Pn	22 58 52.8	+0.4
JTN	Tanegashima 3	1.98	24	P	Pn	22 58 56.8	-0.6
JTSR	Tashiro 2	2.44	18	P	Pn	22 59 03.5	-0.2
JTSR				*e*S	Sn	22 59 33.0	+0.7
JOW	Kunigami	2.54	218	Pn	Pn	22 59 04.2	-0.7
	127nm,0.3s,baz=67,slow=9.6,SNR=221						
JOW				Sn	Sn	22 59 35.0	+0.4
	668nm,0.3s,baz=61,slow=23,SNR=10.0						
JOW	Kunigami	2.54	218	P	Pn	22 59 04.2	-0.8
JOW				*e*S	Sn	22 59 35.0	+0.4
JIH	Iheya	2.56	226	P	Pn	22 59 05.3	-0.1
JSU	Suzuyama	2.68	8	P	Pn	22 59 07.4	+0.4
JZO	Okuchi	3.32	8	P	Pn	22 59 16.6	+0.8
JAGN	Aguni-jima	3.34	228	P	Pn	22 59 15.8	-0.2
NAH1	Naha	3.35	219	P	Pn	22 59 15.7	-0.5
JJT2	Tamagusuku 2	3.37	218	P	Pn	22 59 15.8	-0.7
JKE	Kume jima 2	3.82	230	P	Pn	22 59 22.2	-0.4
JKE				*e*S	Sn	23 00 06.4	+0.1
JNA	Nagahama	5.15	23	P	Pn	22 59 39.0	-1.9
JHIK	Hikimi	5.90	15	P	Pn	22 59 50.1	-1.1
JJS	Sakaide	6.44	30	P	Pn	22 59 57.6	-1.0
JWZ	Kozaga	6.75	45	P	Pn	23 00 00.2	-2.7
JKN2	Miekihoku	7.57	43	P	Pn	23 00 12.2	-1.9
JKSM	Kasumi	7.79	29	P	Pn	23 00 17.0	-0.1
JFM	Mihama	8.36	36	P	Pn	23 00 23.9	-1.0
TATO	Taipei	8.54	245	Pn	Pn	23 00 27.1	-0.4
	404nm,1.2s						
YHNB	Yeheng	8.78	244	Pn	Pn	23 00 30.4	-0.4
JGM	Miyama	8.87	38	P	Pn	23 00 30.9	-1.1
JGM				S	Sn	23 02 28.6	+18
INCN	Inchon	9.07	343	⇑P	Pn	23 00 39.1	+4.3
	SNR=10						
INCN	Inchon	9.07	343	*e*Pn	Pn	23 00 39.3	+4.5
JHJ	Hachijo jima 2	9.39	61	Pn	Pn	23 00 38.0	-1.1
	31nm,0.3s,baz=208,slow=14,SNR=9.9						
JHJ				LR	LR	23 03 53.4	
	comp=Z,8μm,20.6s,baz=259,slow=35						
JIZS	Izushimoda	9.54	50	P	Pn	23 00 40.0	-1.1
JGN	Niukaw	9.59	38	P	Pn	23 00 40.3	-1.5
JOD2	Odawara 2	10.00	48	P	Pn	23 00 45.9	-1.5
NJ2	Nanjing	10.16	291	*e*P	Pn	23 00 54.3	+4.6
NJ2				PP		23 01 03.0	
NJ2				S	Sn	23 02 48.0	+5.6
NJ2				AMB	AMB		
	comp=Z,150nm,0.7s						
NJ2				LR	LR		
	comp=N,45μm,14.9s						
NJ2				LR	LR		
	comp=E,52μm,12.2s						
NJ2				LR	LR		
	comp=Z,53μm,13.9s						
MAJO	Matsushiro	10.31	40	*e*P	Pn	23 00 51.8	+0.1
MAT	Matsushiro	10.31	40	P	Pn	23 00 50.8	-0.9
MAT				S	Sn	23 02 48.0	+2.0
MJAR	Matsushiro Arr	10.31	40	Pn	Pn	23 00 50.1	-1.6
	comp=Z,1.2nm,0.3s,baz=226,slow=14,SNR=12						
JRY	Ryogami san	10.36	44	P	Pn	23 00 52.1	-0.2
CBIJ	Chichi jima	10.88	96	Pn	Pn	23 00 56.0	-3.6
	comp=Z,57nm,0.3s,baz=325,slow=1.5,SNR=28						
CBIJ				LR	LR	23 04 27.6	
	comp=Z,9μm,21.8s,baz=293,slow=34						
QZH	Quanzhou	10.92	252	⇑*i*P	Pn	23 01 03.8	+3.7
QZH				S	Sn	23 03 02.3	+1.3
QZH				AMB	AMB		
	comp=Z,120nm,1.0s						
QZH				LR	LR		
	comp=N,45μm,16.7s						
QZH				LR	LR		
	comp=E,19μm,16.4s						
QZH				LR	LR		
	comp=Z,25μm,14.9s						
DL2	Dalian	12.22	327	⇑*i*P	Pn	23 01 21.3	+3.5
DL2				*e*S	Sn	23 03 39.0	+6.2
DL2				AMB	AMB		
	comp=Z,60nm,1.1s						
DL2				AMB	AMB		
	comp=Z,860nm,4.6s						
DL2				LR	LR		
	comp=N,9μm,13.7s						
DL2				LR	LR		
	comp=E,8μm,13.7s						
DL2				LR	LR		
	comp=Z,12μm,14.0s						
TIA	Tai'an	13.13	307	P	Pn	23 01 34.5	+4.2
TIA				AMB	AMB		
	comp=Z,877nm,1.8s						
TIA				LR	LR		
	comp=N,9μm,13.0s						
TIA				LR	LR		
	comp=E,11μm,14.0s						
TIA				LR	LR		
	comp=N,6μm,13.5s						
TIA				LR	LR		
	comp=E,6μm,15.3s						
WHN	Wuhan	13.74	281	⇑P	Pn	23 01 40.5	+1.9
WHN				LR	LR		
	comp=Z,26μm,16.1s						
SNY	Shenyang	13.98	340	⇑P	Pn	23 01 45.3	+3.4
SNY				AP		23 01 52.5	
SNY				PP		23 01 55.3	
SNY				S	Sn	23 04 22.5	+6.8
SNY				SS		23 04 38.8	
SNY				AMB	AMB		
	comp=Z,72nm,2.5s						
SNY				AMB	AMB		
	comp=Z,2μm,4.9s						
SNY				LR	LR		
	comp=N,24μm,11.8s						
SNY				LR	LR		
	comp=E,16μm,10.4s						
SNY				LR	LR		
	comp=Z,25μm,11.7s						
VLA	Vladivostok	14.33	6	*e*P	Pn	23 01 54.2	+7.6
VLA				pmax	pmax		
	comp=Z,78nm,1.1s						
VLA				MLR	MLR		
	comp=Z,13μm,19.5s						
VLA	Vladivostok	14.33	6	*e*P	Pn	23 01 47.4	+0.8
CN2	Changchun	15.38	347	*e*P	Pn	23 02 02.8	+2.2
CN2				*e*S	S	23 04 53.0	-12
CN2				AMB	AMB		
	comp=Z,90nm,1.2s						
CN2				AMB	AMB		
	comp=Z,260nm,5.0s						
CN2				LR	LR		
	comp=N,28μm,13.0s						
CN2				LR	LR		
	comp=E,9μm,13.0s						
CN2				LR	LR		
	comp=Z,28μm,14.0s						
HKC	Hong Kong	15.71	249	P	Pn	23 02 12.0	+7.0
MDJ	Mudanjiang	15.75	359	P	Pn	23 02 06.8	+1.4
MDJ				S	S	23 05 00.5	-12
MDJ				PCP	PcP	23 07 04.5	+0.6
MDJ				PCS	PcS	23 10 39.8	+0.4
MDJ				AMB	AMB		
	comp=Z,31nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,1μm,9.1s						
MDJ				LR	LR		
	comp=N,6μm,12.1s						
MDJ				LR	LR		
	comp=E,4μm,12.6s						
MDJ				LR	LR		
	comp=Z,10μm,16.3s						
MDJ	Mudanjiang	15.75	359	*e*Pn	Pn	23 02 06.1	+0.7
	comp=Z,45nm,1.2s						
BJT	Baijiatuan	15.95	318	*e*P	Pn	23 02 10.0	+2.0
BJT				pmax	pmax		
	comp=Z,378nm,1.1s						
BJT	Baijiatuan	15.95	318	*e*Pn	Pn	23 02 10.0	+2.0
	comp=Z,378nm,1.1s						
BJT				*e*S	S	23 05 26.1	+9.3
BJI	Beijing	15.96	318	P	Pn	23 02 11.5	+3.4
BJI				AP	pP	23 02 21.0	+0.4
BJI				XP	sP	23 02 26.8	+1.7
BJI				AMB	AMB		
	comp=Z,184nm,1.5s						
BJI				LR	LR		
	comp=N,19μm,14.3s						
BJI				LR	LR		
	comp=E,12μm,12.8s						
BJI				LR	LR		
	comp=Z,11μm,16.5s						
SCZP	Santa Cruz	16.01	218	*e*P	Pn	23 02 11.6	+2.9
GZH	Guangzhou	16.06	253	P	Pn	23 02 06.5	-2.9
GZH				S	S	23 05 00.5	-18
GZH				AMB	AMB		
	comp=Z,115nm,1.3s						
GZH				LR	LR		
	comp=N,10μm,19.9s						
GZH				LR	LR		
	comp=E,11μm,15.9s						
GZH				LR	LR		
	comp=Z,17μm,16.5s						
ERM	Erimo	16.92	36	⇑*e*P	Pn	23 02 20.8	+0.6
TGY	Tagaytay City	16.92	212	Pn	Pn	23 02 21.0	+0.7
	comp=Z,348nm,0.3s,baz=170,slow=4.1,SNR=17						
TGY				LR	LR	23 09 20.5	
	comp=Z,27nm,18.6s,baz=16,slow=39						
ASAJ	Asahikawa	18.25	30	P	Pn	23 02 34.2	-2.5
	comp=Z,0.5nm,0.3s,baz=234,slow=14,SNR=4.9						
ASAJ				LR	LR	23 09 59.9	
	comp=Z,3μm,20.4s,baz=238,slow=38						
XAN	Xi'an	18.73	291	P	Pn	23 02 43.3	+0.7
XAN				S	S	23 06 14.5	+1.2
XAN				AMB	AMB		
	comp=Z,300nm,1.4s						
XAN				AMB	AMB		
	comp=Z,3μm,12.1s						
XAN				LR	LR		
	comp=N,3μm,15.2s						
XAN				LR	LR		
	comp=E,4μm,18.0s						
XAN				LR	LR		
	comp=Z,6μm,17.0s						
MSLP	Maasin	19.23	196	*e*P	Pn	23 02 48.9	+0.3
HHC	Hu-ho-hao-te	19.27	313	⇑*i*P	Pn	23 02 49.8	+0.7
HHC				PP		23 03 07.0	
HHC				S	S	23 06 19.0	-5.2
HHC				PCP	PcP	23 07 12.0	+2.4
HHC				AMB	AMB		
	comp=Z,1μm,2.1s						
HHC				LR	LR		
	comp=N,8μm,17.1s						
HHC				LR	LR		
	comp=E,10μm,15.5s						
HHC				LR	LR		
	comp=Z,12μm,16.3s						
GUIM	Jordan	19.42	203	*e*P	Pn	23 02 47.1	-3.7
YUK	Yuzh-Kuril'sk	19.75	36	*e*P	Pn	23 02 54.5	-0.2
YUK				*e*S	S	23 06 36.5	+2.8
YUK				pmax	pmax		
	comp=N,2μm,2.6s						
YUK				pmax	pmax		
	comp=Z,3μm,2.6s						
YUK				pmax	pmax		
	comp=E,3μm,3.0s						
YUK				smax			
	comp=N,3μm,4.0s						
YUK				smax			
	comp=E,4μm,4.0s						
YUK				MLR	MLR		
	comp=Z,8μm,18.0s						
YUK				MLR	MLR		
	comp=N,4μm,19.0s						
YUK				MLR	MLR		
	comp=E,4μm,19.0s						
BTO	Baotou	20.16	311	*e*P	P	23 02 56.3	-1.2
BUTP	Butuan	20.20	193	*e*P	P	23 02 58.8	+0.8
KLR	Kul'dur	20.40	3	⇓*i*P	P	23 02 55.5	-4.7
KLR				*e*S	S	23 06 52.0	+5.3
KLR				pmax	pmax		
	comp=E,280nm,1.2s						
KLR				pmax	pmax		
	comp=Z,1μm,1.2s						
KLR				MLR	MLR		
	comp=N,4μm,13.0s,MS5.0						
KLR				MLR	MLR		
	comp=E,2μm,13.0s,MS5.0						
KLR				MLR	MLR		
	comp=Z,6μm,13.0s,MS5.1						
GUMO	Guam	20.50	135	P	P	23 02 60.0	-1.2
	comp=Z,476nm,1.1s,baz=216,slow=2.4,SNR=16						
GUMO				LR	LR	23 10 51.5	
	comp=Z,3μm,18.1s,MS4.7,baz=141,slow=37						
GUMO	Guam	20.50	135	P	P	23 03 00.0	-1.2
GUMO				pmax	pmax		
	comp=Z,476nm,1.1s						
GUMO				MLR	MLR		
	comp=Z,3μm,18.2s,MS4.7						
YSS	Yuzh-Sakhalins	20.63	25	*c i*P	P	23 03 03.0	+0.3
YSS				pmax	pmax		
	comp=Z,579nm,1.7s						
YSS				MLR	MLR		
	comp=Z,5μm,17.0s,MS4.9						
YSS	Yuzh-Sakhalins	20.63	25	*e*P	P	23 03 02.7	0.0
	comp=Z,577nm,1.4s						
YSS				LR	LR		
	comp=Z,3μm,19.0s,MS4.7						
GYA	Guiyang	20.83	269	⇑*i*P	P	23 03 05.5	+0.7
GYA				AP		23 03 15.8	
GYA				PP		23 03 30.3	
GYA				S	S	23 06 54.5	-0.7
GYA				AMB	AMB		
	comp=Z,320nm,1.0s						
GYA				AMB	AMB		
	comp=Z,570nm,5.4s						
GYA				LR	LR		
	comp=N,12μm,14.7s,MS5.5						
GYA				LR	LR		
	comp=E,10μm,16.2s,MS5.5						
GYA				LR	LR		
	comp=Z,13μm,14.7s,MS5.4						
QIZ	Qiongzhong	20.85	247	P	P	23 03 06.5	+1.5
QIZ				S	S	23 06 57.0	+1.4
QIZ				SS		23 07 26.3	
QIZ				AMB	AMB		
	comp=Z,163nm,1.2s						
QIZ				LR	LR		
	comp=N,7μm,19.0s						
QIZ	Qiongzhong	20.85	247	*e*P	P	23 03 06.2	+1.2
	comp=N,207nm,1.1s						
CGP	Cagayan de Oro	20.89	195	⇓*e*P	P	23 03 04.1	-1.3
BUKP	Musuan	21.37	194	*e*P	P	23 03 10.2	-0.4
PAGZ	Pagadian	21.80	198	*e*P	P	23 03 14.0	-1.2
HIA	Hailar	21.87	342	*i* P	P	23 03 15.1	-0.8
HIA	Hailar	21.87	342	*i* Pr	P	23 03 15.1	-0.8
DAV	Davao City (W)	22.06	192	PFAKE		23 03 30.0	+12
DAV				LR	LR		
	comp=Z,5μm,19.0s,MS5.0						
IPIL	Ipil	22.09	200	*e*P	P	23 03 16.4	-1.9
CD2	Chengdu	22.86	282	P	P	23 03 25.5	-1.0
CD2				AP		23 03 40.8	
CD2				PP		23 03 56.5	
CD2				PCP	PcP	23 07 16.0	-0.5
CD2				S	S	23 07 29.5	-4.2
CD2				AMB	AMB		
	comp=Z,230nm,1.2s,mb5.5						
CD2				AMB	AMB		
	comp=Z,430nm,5.2s						
CD2				LR	LR		
	comp=N,7μm,18.0s						
CD2				LR	LR		
	comp=Z,7μm,15.0s,MS5.2						
BATP	Bataraza	23.02	212	*e*P	P	23 03 29.0	+0.8
LZH	Lanzhou	23.20	295	⇑P	P	23 03 30.0	-0.1
LZH				PP		23 04 06.0	
LZH				PCP	PcP	23 07 20.0	+2.8
LZH				*e*S	S	23 07 37.0	-2.2
LZH				AMB	AMB		
	comp=Z,164nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,721nm,4.1s						
LZH				LR	LR		
	comp=E,8μm,11.8s						
LZH				LR	LR		
	comp=Z,8μm,12.5s,MS5.4						
KMI	Kunming	24.58	268	P	P	23 03 43.3	+0.4
KMI				AP		23 03 53.5	
KMI				S	S	23 07 57.5	-4.0
KMI				AMB	AMB		
	comp=Z,296nm,1.0s,mb5.8						
KMI				AMB	AMB		
	comp=Z,389nm,3.3s						
KMI				LR	LR		
	comp=N,7μm,14.7s,MS5.4						
KMI				LR	LR		
	comp=E,7μm,15.4s,MS5.4						
KMI				LR	LR		
	comp=Z,8μm,14.3s,MS5.3						
ULN	Ulaanbaatar	26.02	323	P	P	23 03 56.2	+0.2
	SNR=47						
ULN	Ulaanbaatar	26.02	323	⇑*i*P	P	23 03 56.0	+0.1
KKM	Kota Kinabalu	26.17	213	P	P	23 03 58.3	+0.9
KKM	Kota Kinabalu	26.17	213	*e*P	P	23 03 57.7	+0.3
KKM				*e*	pP	23 04 06.0	-1.5
CIT	Chita	26.21	337	*e*P	P	23 03 58.1	+0.4
CIT				*e*		23 04 40.9	
CIT				pmax	pmax		
	comp=Z,361nm,1.4s,mb5.7						
SONM	Songino Array	26.35	323	P	P	23 03 58.4	-0.5
	comp=Z,19nm,0.7s,mb4.7,baz=137,slow=7.9,SNR=105						
SONM				ScP	ScP	23 11 03.1	+1.9
	comp=Z,0.5nm,0.2s,baz=150,slow=6.0,SNR=7.1						
GTA	Gaotai	27.03	301	P	P	23 04 03.8	-1.3
GTA				AP	pP	23 04 17.3	+2.1
GTA				PP		23 04 51.0	
GTA				PPP		23 05 04.3	
GTA				PCP	PcP	23 07 25.3	-0.5
GTA				S	S	23 08 38.0	-2.4
GTA				PCS	PcS	23 11 07.3	0.0
GTA				AMB	AMB		
	comp=Z,57nm,1.6s,mb4.8						
GTA				AMB	AMB		
	comp=Z,484nm,6.8s						
GTA				LR	LR		

comp=N,10µm,16.7s,MS5.6
GTA LR LR
comp=E,11µm,17.1s,MS5.6
GTA LR LR
comp=Z,19µm,16.7s,MS5.7
CLNS Chul'man 28.22 354 *e*P **P** **23 04 14.2 -1.5**
CLNS *e*PPP 23 05 06.2
CLNS *e* 23 07 28.0
CLNS *e*S **S** **23 08 53.2 -5.8**
CLNS *e*SS 23 10 19.5
CLNS pmax pmax
comp=N,35nm,1.1s
CLNS pmax pmax
comp=Z,23nm,1.1s,mb4.7
CLNS pmax pmax
comp=E,20nm,0.9s
CLNS smax
comp=N,10.0nm,0.9s
CLNS smax
comp=Z,8.0nm,0.9s
CLNS smax
comp=E,11nm,0.8s
CLNS MLR MLR
comp=E,3µm,13.0s,MS5.1
CLNS MLR MLR
comp=Z,5µm,13.0s,MS5.3
CLNS MLR MLR
comp=N,2µm,12.0s,MS5.1
ZAK Zakamensk 29.52 324 *e*P **P** **23 04 26.6 -0.6**
ZAK *e* 23 11 11.9
CHTO Chiang Mai 30.06 258 P **P** **23 04 32.8 +0.7**
SNR=27
CHTO Chiang Mai 30.06 258 *e*P **P** **23 04 32.7 +0.6**
CHTO *e* 23 07 34.2
CHTO pmax pmax
comp=Z,165nm,1.3s,mb5.6
CHTO Chiang Mai 30.06 258 *e*P **P** **23 04 32.7 +0.6**
comp=Z,165nm,1.3s,mb5.6
CHTO *e*PcP PcP 23 07 34.2 +0.9
TLY Talaya 30.13 327 ⇑P **P** **23 04 32.0 -0.8**
SNR=7.8
TLY Talaya 30.13 327*c i*P **P** **23 04 31.6 -1.1**
TLY *e* 23 05 28.3
TLY *e*PPP 23 05 42.7
TLY *e* 23 07 28.4
TLY *e* 23 11 01.2
TLY pmax pmax
comp=Z,54nm,1.3s,mb5.1
TLY MLR MLR
comp=Z,8µm,15.0s,MS5.5
TLY Talaya 30.13 327 *e*P **P** **23 04 34.1 +1.4**
TLY LR LR
comp=Z,2µm,20.0s,MS4.8
IRK Irkutsk 30.20 328 ⇓*i*P **P** **23 04 33.7 +0.4**
IRK *e* 23 04 46.8
IRK pmax pmax
comp=Z,164nm,1.0s,mb5.7
CM31 Chiang Mai Arr 30.21 257 *e*P **P** **23 04 34.6 +1.2**
BOD Bodaibo 31.06 343 *e*P **P** **23 04 39.8 -1.1**
MOY Mondy 31.44 325 *e*P **P** **23 04 44.5 +0.3**
MOY pmax pmax
comp=Z,64nm,2.9s,mb4.9
PET Petropavlovsk 32.04 33 *e*P **P** **23 04 50.0 +0.5**
PET *e*S **S** **23 09 55.1 -3.9**
PET pmax pmax
comp=Z,53nm,1.7s,mb5.1
PET smax
comp=N,700nm,12.7s
PET smax
comp=E,600nm,17.4s
PET MLR MLR
comp=Z,4µm,20.0s,MS5.1
PET MLR MLR
comp=Z,4µm,20.0s
PET Petropavlovsk 32.04 33 P **P** **23 04 48.6 -0.9**
PET LR LR
comp=Z,4µm,19.0s,MS5.1
KSM Kuching 33.09 218 *e*P **P** **23 04 59.5 +0.8**
KSM *e*pP pP 23 05 08.8 -0.1
YAK Yakutsk 33.19 360 *e*P **P** **23 04 57.5 -2.1**
YAK *e**PP pP 23 05 06.6 -3.2
YAK *e* 23 06 09.9
YAK *e*PPP 23 06 20.2
YAK *e* 23 07 41.4
YAK *e*S **S** **23 10 15.1 -1.8**
YAK *e**SS sS 23 10 28.2 -5.6
YAK *e*SS SS 23 12 25.2 -16
YAK *e* 23 15 21.2
YAK pmax pmax
comp=Z,59nm,1.2s,mb5.4
YAK pmax pmax
comp=N,49nm,1.4s
YAK pmax pmax
comp=N,11nm,1.2s
YAK smax
comp=N,17nm,0.9s
YAK smax
comp=Z,9.0nm,0.8s
YAK MLR MLR
comp=Z,2µm,13.0s,MS5.1
YAK MLR MLR
comp=N,2µm,14.0s
YAK Yakutsk 33.19 360 *e*P **P** **23 04 56.8 -2.8**
comp=N,94nm,1.0s,mb5.7
LSA Lhasa 33.82 281 P **P** **23 05 06.5 +1.4**
LSA AP pP 23 05 19.0 +3.7
LSA PP PP 23 06 23.5 +1.5
LSA S **S** **23 10 35.8 +9.1**
LSA XS sS 23 10 54.0 +10
LSA SCS ScS 23 15 24.0 -3.1
LSA AMB AMB
comp=Z,50nm,1.1s,mb5.4
LSA LR LR
comp=N,3µm,21.0s,MS5.3
LSA LR LR
comp=E,5µm,19.7s,MS5.3
LSA LR LR
comp=Z,6µm,15.3s,MS5.4
LSA Lhasa 33.82 281 *e*P **P** **23 05 06.4 +1.3**
LSA *e* 23 07 43.6
LSA pmax pmax
comp=Z,48nm,0.9s,mb5.4
LSA Lhasa 33.82 281 *e*P **P** **23 05 06.4 +1.3**
comp=Z,48nm,0.9s,mb5.4
LSA *e*PcP PcP 23 07 43.6 +0.1
MA2 Magadan 33.83 19 *e*P **P** **23 05 04.8 -0.4**
MA2 pmax pmax
comp=Z,98nm,1.4s,mb5.5
MA2 Magadan 33.83 19 *e*P **P** **23 05 04.8 -0.4**
comp=Z,98nm,1.4s,mb5.5
AGT Agartala 34.99 271 *i* x P **23 05 19.0 +3.8**
AGT *i* x x 23 05 50.0
KULM Kulim 36.37 235 *e*P **P** **23 05 28.0 +0.9**
KULM *e*PcP PcP 23 07 52.1 +1.2
IPM Ipoh 36.66 234 P **P** **23 05 30.4 +0.9**
WMQ Ürumqi 36.82 306 ⇑*i*P **P** **23 05 30.5 -0.3**
WMQ AP pP 23 05 44.5 +3.3
WMQ PP PP 23 06 57.0 +1.9
WMQ S **S** **23 11 12.0 -0.7**
WMQ AMB AMB
comp=Z,54nm,1.2s,mb5.2
WMQ AMB AMB
comp=Z,327nm,4.0s
WMQ LR LR
comp=N,4µm,12.0s,MS5.6
WMQ LR LR
comp=E,4µm,12.0s,MS5.6
WMQ LR LR
comp=Z,6µm,13.0s,MS5.5
SEY Seymchan 37.07 17 ⇑*i*P **P** **23 05 33.0 +0.1**
KRAR Krasnoyarsk 37.84 326 ⇓*e*P **P** **23 05 40.2 +0.7**
KRAR pmax pmax
comp=Z,80nm,1.3s,mb5.3
KRAR MLR MLR
comp=Z,3µm,18.0s,MS5.1
CAL Calcutta 37.96 270 *ex* x 23 07 16.2
CAL *ex* x 23 11 50.9
GUN Gumba 38.69 280 *e*P **P** **23 05 47.9 +1.2**
comp=Z,874nm,1.2s,mb6.3
PKI Pulchoki 39.17 279 *e*P **P** **23 05 51.4 +0.7**
comp=Z,438nm,1.1s,mb6.1
PKI Pulchoki 39.17 279 *e*P **P** **23 05 51.4 +0.7**
PKI pmax pmax
comp=Z,44nm,1.1s,mb5.1
KKN Kakani 39.24 280 *e*P **P** **23 05 52.0 +0.8**

DMN Daman 39.43 279 *e*P **P** **23 05 53.6 +0.8**
comp=Z,506nm,1.2s,mb6.1
BOK Bokaro 39.72 273 ⇑*i*P **P** **23 05 55.8 +0.6**
BOK AMb AMB 23 05 58.0
comp=Z,155nm,1.1s,mb5.7
GKN Gorkha 39.75 280 *e*P **P** **23 05 56.0 +0.5**
KOLN Koldanda 40.69 280 *e*P **P** **23 06 04.0 +0.7**
comp=Z,396nm,1.3s,mb5.9
MK31 Makanchi Array 41.06 309 P **P** **23 06 05.7 -0.6**
MK31 pmax pmax
comp=Z,26nm,0.9s,mb4.9
MKAR Makanchi Array 41.06 309 P **P** **23 06 05.9 -0.4**
comp=Z,22nm,0.7s,mb4.9,baz=91,slow=9.7,SNR=146
MKAR PP PP 23 07 44.8 +3.4
comp=Z,4.7nm,0.8s,baz=105,slow=8.9,SNR=3.9
MKAR PcP PcP 23 08 05.6 -0.1
comp=Z,16nm,0.9s,baz=96,slow=3.7,SNR=7.7
MKAR ScP ScP 23 11 54.8 +2.2
comp=Z,2.4nm,0.9s,baz=76,slow=5.1,SNR=4.4
MKAR Makanchi Array 41.06 309 P **P** **23 06 05.9 -0.4**
MKAR 23 07 44.8
MKAR 23 08 05.6
MKAR Makanchi Array 41.06 309 P **P** **23 06 05.9 -0.4**
MKAR PP PP 23 07 44.8 +3.4
MKAR PcP PcP 23 08 05.6 -0.1
MKAR ScP ScP 23 11 54.8 +2.2
KAKA Kakadu 41.37 176 *e*P **P** **23 06 06.5 -2.4**
comp=Z,22nm,0.9s,mb4.8
PMG Port Moresby 41.46 154 LR LR 23 20 56.7
comp=Z,3µm,20.9s,MS5.2,baz=321,slow=33
PMG Port Moresby 41.46 154 *e*P **P** **23 06 07.6 -2.0**
PMG *e**PP pP 23 06 21.2 +1.1
NVS Novosibirsk 42.36 321 ⇑*i*P **P** **23 06 16.4 -0.6**
NVS *e*S **S** **23 12 33.1 -2.7**
NVS *e* 23 16 12.8
NVS pmax pmax
comp=Z,169nm,1.1s,mb5.6
NVS pmax pmax
comp=N,74nm,1.4s
NVS pmax pmax
comp=E,171nm,1.2s
NVS smax
comp=E,34nm,2.0s
ALBI Allahabad 42.86 277 *e*P **P** **23 06 19.5 -1.5**
TIXI Tiksi 42.86 359 *e*P **P** **23 06 19.2 -1.8**
TIXI *e**PP pP 23 06 30.9 -0.6
TIXI Tiksi 42.86 359 ⇑*i*P **P** **23 06 18.0 -3.0**
LGTI Lohaghat 43.22 283 *i* P **P** **23 06 26.5 +2.6**
VIS Vishakhapatnam 44.06 266 *e*P **P** **23 06 30.9 +0.2**
VIS AMb AMB 23 06 33.3
comp=Z,87nm,0.8s,mb5.5
VIS *i* x x 23 16 41.0
KURK Kurchatov 44.09 314 P **P** **23 06 29.8 -1.1**
comp=Z,383nm,0.9s,mb6.1,SNR=22
AAA Alma-Ata 44.55 304 *e*P **P** **23 06 27.0 -7.6**
AAA pmax pmax
comp=Z,229nm,2.2s,mb5.6
BILL Bilibino 44.70 18 *e*P **P** **23 06 36.0 +0.2**
BILL pmax pmax
comp=Z,57nm,1.1s,mb5.3
BILL Bilibino 44.70 18 ⇑*i*P **P** **23 06 35.3 -0.5**
JBP Jabalpur 45.07 275 ⇑*e*P **P** **23 06 39.5 +0.7**
JBP *ex* x 23 06 42.9
comp=Z,121nm,1.7s
JBP *ex* x 23 13 41.2
KSH Kashi 45.38 298 P **P** **23 06 43.0 +1.8**
KSH AP pP 23 06 52.8 +1.1
KSH PCP PcP 23 08 23.0 +2.8
KSH PP PP 23 08 29.3 +1.6
KSH PCS PcS 23 12 15.0 +0.9
KSH S **S** **23 13 21.3 +1.6**
KSH SCS ScS 23 16 34.0 -0.9
KSH SS SS 23 16 36.0 -7.6
KSH AMB AMB
comp=Z,222nm,1.0s,mb6.0
KSH LR LR
comp=N,10µm,14.1s,MS6.1
KSH LR LR
comp=E,15µm,16.7s,MS6.1
KSH LR LR
comp=Z,13µm,18.0s,MS5.9
SMLA Simla 45.49 287 *e*P **P** **23 06 41.9 -0.2**
SMLA AMb AMB 23 06 44.8
comp=Z,296nm,1.6s,mb5.9
TKM2 Tokmak 2 45.54 303 P **P** **23 06 43.5 +1.0**
SNR=59
TKM2 Tokmak 2 45.54 303 *i* P **P** **23 06 42.1 -0.4**
KZA Kyzart 45.81 302 P **P** **23 06 46.5 +1.9**
SNR=17
NDI New Delhi 45.97 283 *e*P **P** **23 06 44.0 -1.9**
NDI *e*P 23 06 46.2
NDI AMb AMB 23 06 48.4
comp=Z,356nm,1.8s,mb6.0
KBK Karagaybulak 46.02 303 P **P** **23 06 47.2 +1.0**
SNR=40
CHMS Chumysh 46.16 303 P **P** **23 06 47.9 +0.6**
SNR=49
FRU Bishkek 46.26 303 *e*P **P** **23 06 48.4 +0.2**
FRU *e* 23 07 04.4
FRU pmax pmax
comp=Z,150nm,1.4s,mb5.7
USP Ospenovka 46.34 304 P **P** **23 06 49.2 +0.4**
SNR=26
AAK Ala-Archa 46.35 303 P **P** **23 06 49.7 +0.8**
SNR=13
AAK Ala-Archa 46.35 303 ⇑P **P** **23 06 48.6 -0.3**
SNR=7.1
AAK Ala-Archa 46.35 303*c i*P **P** **23 06 48.4 -0.5**
AAK pmax pmax
comp=Z,58nm,1.3s,mb5.3
AAK MLR MLR
comp=Z,4µm,19.0s,MS5.3
AAK Ala-Archa 46.35 303 *e*P **P** **23 06 48.2 -0.7**
THN Thein Dam 46.46 289 *e*P **P** **23 06 48.3 -1.4**
NGP Nagpur 46.55 273 *ex* **P** **23 06 46.8 -3.6**
NGP AMb AMB 23 06 49.6
comp=Z,171nm,1.1s,mb5.9
FITZ Fitzroy Crossi 46.86 186 *e*P **P** **23 06 51.9 -1.0**
comp=Z,23nm,1.0s,mb5.1
FITZ *e*PCP PcP 23 08 37.6 +12
FITZ *e*S S **23 13 45.0 +4.0**
FITZ *e*SCS ScS 23 16 37.8 -6.8
FITZ Fitzroy Crossi 46.86 186 LR LR 23 25 26.7
comp=Z,940nm,20.0s,MS4.8,baz=10,slow=35
EKS2 Erkin-Say 46.88 303 P **P** **23 06 53.8 +0.8**
SNR=18
AML Almayashu 46.96 302 P **P** **23 06 55.3 +1.6**
SNR=21
BHPL Bhopal 47.29 276 *e*P **P** **23 06 55.8 -0.4**
BHPL AMb AMB 23 06 58.3
comp=Z,107nm,1.3s,mb5.6
HYB Hyderabad 48.36 268 ⇓*i*P **P** **23 07 06.0 +1.5**
comp=Z,60nm,1.0s,mb5.6
HYB *e*S **S** **23 14 12.0 +10**
HYB Hyderabad 48.36 268 ⇓*e*P **P** **23 07 06.0 +1.5**
HYB *e*S **S** **23 14 12.0 +10**
HYB pmax pmax
comp=Z,60nm,1.0s,mb5.6
HYB Hyderabad 48.36 268 ⇓*e*P **P** **23 07 06.0 +1.5**
comp=Z,60nm,1.0s,mb5.6
HYB *e*S **S** **23 14 12.0 +10**
AKL Akola 48.49 273 *e*P **P** **23 07 06.3 +0.8**
AKL AMb AMB 23 07 08.9
comp=Z,309nm,1.0s,mb6.3
WRAB Tennant Creek 48.67 175 *e*P **P** **23 07 05.4 -1.5**
WRAB *e**PP pP 23 07 14.1 -3.4
WRA Warramunga Arr 48.68 175 P **P** **23 07 05.5 -1.4**
comp=Z,35nm,0.8s,mb5.4,baz=351,slow=8.3,SNR=114
WRA ScP ScP 23 12 24.7 +0.8
comp=Z,1.8nm,0.8s,baz=3.9,slow=3.9,SNR=6.3
WRA S **S** **23 14 04.4 -2.4**
comp=Z,1.3nm,1.1s,baz=349,slow=15,SNR=6.8
WRA LR LR 23 26 32.4
comp=Z,1µm,20.5s,MS4.9,baz=10.0,slow=35
WRA Warramunga Arr 48.68 175 P **P** **23 07 05.5 -1.4**
WRA S **S** **23 14 04.4 -2.4**
WB2 Warramunga Arr 48.68 175 *e*P **P** **23 07 05.1 -1.8**
WB2 *e*PCP PcP 23 08 46.4 +15
MDRS Chennai 48.72 262 *ex* **P** **23 07 07.8 +0.6**
MDRS AMb AMB 23 07 11.7
comp=Z,99nm,1.1s,mb5.8
MDRS *i* x x 23 07 56.2
AJM Ajmer 48.74 281 *i* P **P** **23 07 07.0 -0.4**
AJM *e*P 23 07 07.5
AJM AMb AMB 23 07 10.5

comp=Z,94nm,1.2s,mb5.7
VOSK Vostochnaya 49.05 316 P **P** **23 07 09.7 -0.1**
KK31 Karatay Array 49.26 304 *i* P **P** **23 07 11.4 0.0**
KKAR Karatay Array 49.26 304 P **P** **23 07 11.4 0.0**
KKAR pmax pmax
comp=Z,114nm,1.1s,mb5.8
CHKZ Chkalovo 49.36 318 *e*P **P** **23 07 11.7 -0.5**
CHKZ *e**PP pP 23 07 21.1 -1.7
CHKZ *e* 23 08 34.0
CHKZ pmax pmax
comp=Z,124nm,1.0s,mb5.9
CHKZ Chkalovo 49.36 318 *e*P **P** **23 07 11.7 -0.5**
comp=Z,124nm,1.0s,mb5.9
CHKZ *e*pP pP 23 07 21.1 -1.7
CHKZ *e*PcP PcP 23 08 34.0 -0.3
BVA0 Borovoye Array 49.44 317 P **P** **23 07 12.7 -0.1**
BVA0 pmax pmax
comp=Z,28nm,0.9s,mb5.3
BVAR Borovoye Array 49.44 317 P **P** **23 07 13.5 +0.7**
comp=Z,157nm,0.8s,mb6.1,baz=94,slow=8.7,SNR=29
BVAR PcP PcP 23 08 33.0 -1.6
comp=Z,16nm,0.7s,baz=99,slow=3.1,SNR=5.2
BRVK Borovoye 49.50 317 ⇑P **P** **23 07 13.5 +0.2**
SNR=145
BRVK Borovoye 49.50 317 ⇑*i*P **P** **23 07 13.2 -0.1**
ZRNK Zerenda 50.27 316 *i* P **P** **23 07 19.1 0.0**
ZRNK pmax pmax
comp=Z,196nm,0.9s,mb6.1
ZRNK Zerenda 50.27 316 ⇑*i*P **P** **23 07 18.9 -0.2**
comp=Z,238nm,0.9s,mb6.2
ZRNK *e*PcP PcP 23 08 37.5 -0.2
MBWA Marble Bar 50.69 192 *e*P **P** **23 07 22.1 -0.2**
MBWA LR LR
comp=Z,822nm,19.0s,MS4.8
CTA Charters Tower 51.10 160 *e*P **P** **23 07 24.1 -1.3**
comp=Z,11nm,0.8s,mb4.8
CTA *e*S **S** **23 14 41.9 +1.3**
CTA *e*SS SS 23 18 27.0 +11
CTA Charters Tower 51.10 160 LR LR 23 28 29.5
comp=Z,2µm,18.6s,MS5.2,baz=359,slow=35
CTA Charters Tower 51.10 160 *e*P **P** **23 07 24.1 -1.3**
CTA *e*S **S** **23 14 41.9 +1.3**
CTAO Charters Tower 51.10 160 *e*P **P** **23 07 23.8 -1.5**
comp=Z,9.7nm,0.8s,mb4.8
CTAO *e*pP pP 23 07 35.0 -1.0
CTAO LR LR
comp=Z,2µm,20.0s,MS5.2
PALK Pallekele 51.13 255 ⇑P **P** **23 07 26.7 +1.2**
SNR=6.2
PALK Pallekele 51.13 255 *e*P **P** **23 07 27.2 +1.7**
comp=Z,136nm,1.4s,mb5.7
COCO West Island 51.89 223 PFAKE 23 07 40.0 +8.7
COCO LR LR
comp=Z,180nm,15.2s
POO Poona 52.06 272 ⇓*i*x **P** **23 07 29.5 -3.0**
comp=Z,200nm,1.0s,mb6.0
KAD Karad 52.24 270 *e*P **P** **23 07 33.9 0.0**
KAD *e*P 23 07 34.5
KAD AMb AMB 23 07 36.0
comp=Z,147nm,1.1s,mb5.8
AS31 Alice Springs 52.34 176 *e*P **P** **23 07 33.9 -0.7**
AS31 *e*pP pP 23 07 44.0 -1.2
ASAR Alice Springs 52.34 176 P **P** **23 07 34.0 -0.6**
comp=Z,12nm,0.6s,mb5.0,baz=8.0,slow=14,SNR=135
ASAR S **S** **23 14 57.2 -0.4**
comp=Z,5.0nm,1.2s,baz=9.9,slow=19,SNR=10
ASAR LR LR 23 29 18.5
comp=Z,1µm,18.3s,MS5.0,baz=1.0,slow=36
ASAR Alice Springs 52.34 176 P **P** **23 07 34.0 -0.6**
ASAR S **S** **23 14 57.3 -0.3**
ASPA Alice Springs 52.34 176 *e*P **P** **23 07 33.9 -0.7**
TNA Tin City 52.59 28 *e*P **P** **23 07 37.1 +0.7**
comp=Z,58nm,1.3s,mb5.3
TRD Trivandrum 53.71 259 *e*P **P** **23 07 45.0 +0.3**
TRD AMb AMB 23 07 47.8
comp=Z,105nm,1.3s,mb5.6
AB31 Akbulak array 56.06 312 ⇑*e*P **P** **23 08 01.6 -0.1**
ARU Arti 56.36 321 ⇑*i*P **P** **23 08 03.7 -0.2**
ARU *e* 23 08 58.8
ARU *e* 23 10 14.4
ARU *e*PPP 23 11 25.0
ARU *e*S **S** **23 15 54.6 +2.7**
ARU *e*SSS 23 21 45.8
ARU pmax pmax
comp=Z,281nm,1.0s,mb6.2
ARU MLR MLR
comp=E,3µm,16.0s,MS5.6
ARU MLR MLR
comp=Z,4µm,16.0s,MS5.6
ARU MLR MLR
comp=N,3µm,18.0s,MS5.6
ARU Arti 56.36 321 *e*P **P** **23 08 03.5 -0.4**
AKTK Aktyubinsk 57.17 314 P **P** **23 08 09.3 -0.2**
AKTO Aktyubinsk 57.17 314 P **P** **23 08 09.3 -0.2**
comp=N,46nm,0.8s,mb5.5,baz=83,slow=11,SNR=24
AKTO Aktyubinsk 57.17 314 P **P** **23 08 09.4 -0.2**
AKTO pmax pmax
comp=Z,46nm,0.8s,mb5.6
SOKR Solikamsk 57.19 325*c i*P **P** **23 08 09.3 -0.4**
SOKR pmax pmax
comp=Z,280nm,1.0s,mb6.2
SOKR MLR MLR
comp=Z,5µm,14.0s,MS5.8
TTA Tatalina 57.48 31 *e*P **P** **23 08 11.7 0.0**
TTA *e**PP pP 23 08 20.9 -1.6
FORT Forrest 59.32 182 *e*P **P** **23 08 22.5 -2.1**
comp=Z,32nm,1.4s,mb5.2
KDAK Kodiak Island 59.48 37 P **P** **23 08 24.7 -1.0**
comp=Z,15nm,0.8s,mb5.1,baz=256,slow=3.2,SNR=5.6
KDAK Kodiak Island 59.48 37 *e*P **P** **23 08 21.7 -4.0**
KDAK LR LR
comp=Z,356nm,19.0s,MS4.5
FUNA Funafuti 60.22 120 PFAKE 23 08 40.0 +9.2
FUNA LR LR
comp=Z,8µm,19.0s,MS5.8
MCK McKinley 60.62 30 *e*P **P** **23 08 33.0 -0.5**
MCK pmax pmax
comp=Z,54nm,1.3s,mb5.5
MCK McKinley 60.62 30 *e*P **P** **23 08 33.0 -0.5**
comp=Z,54nm,1.3s,mb5.5
PMR Palmer 60.77 33 *e*P **P** **23 08 33.5 -1.1**
PMR pmax pmax
comp=Z,50nm,1.1s,mb5.6
PMR MLR MLR
comp=Z,660nm,20.0s,MS4.8
PMR Palmer 60.77 33 *e*P **P** **23 08 33.5 -1.1**
comp=Z,50nm,1.1s,mb5.6
PMR LR LR
comp=Z,660nm,20.0s,MS4.8
COLA College 60.97 29 P **P** **23 08 36.3 +0.4**
COLA pmax pmax
comp=Z,85nm,1.6s,mb5.6
COLA College 60.97 29 ⇑*e*P **P** **23 08 35.3 -0.6**
KLBR Kellerberrin 61.22 192 *e*P **P** **23 08 35.9 -1.7**
comp=Z,23nm,1.0s,mb5.3
STKA Stephens Creek 61.38 169 ⇑*i*P **P** **23 08 37.8 -0.9**
comp=Z,8.9nm,0.8s,mb5.0
STKA *e*S **S** **23 16 55.9 -1.0**
STKA Stephens Creek 61.38 169 P **P** **23 08 38.0 -0.7**
comp=Z,3.6nm,0.7s,mb4.6,baz=356,slow=7.1,SNR=5.0
STKA LR LR 23 34 04.1
comp=Z,941nm,21.1s,MS4.9,baz=131,slow=35
STKA Stephens Creek 61.38 169 *e*P **P** **23 08 37.9 -0.7**
DZM Mont Dzumac 61.60 141 LR LR 23 31 27.9
comp=Z,737nm,20.9s,MS4.8,baz=124,slow=32
ARMA Armidale 62.43 159 *e*P **P** **23 08 45.4 -0.3**
DIV Divide 62.44 33 *e*P **P** **23 08 46.1 +0.3**
NWAO Narrogin (SRO) 62.62 192 LR LR 23 38 11.1
comp=Z,564nm,19.6s,MS4.7,baz=18,slow=38
NWAO Narrogin (SRO) 62.62 192 P **P** **23 08 45.7 -1.3**
WBK Wadi Bani Khal 63.48 282 ⇓P **P** **23 08 54.7 +2.0**
SNR=9.7
EGAK Eagle 63.80 29 *e*P **P** **23 08 54.0 -0.9**
BIDO Bidbid 63.86 284 P **P** **23 08 57.7 +2.5**
SNR=20
SMDO Samad 64.10 283 P **P** **23 08 58.3 +1.5**
SNR=13
JMDO Jabal Madar 64.31 282 P **P** **23 08 59.5 +1.3**
SNR=17
PECR Pechory 64.34 322 *i* P **P** **23 08 57.2 -1.2**
PECR pmax pmax
comp=Z,3µm,1.4s
PECR MLR MLR
comp=Z,8µm,19.0s,MS5.9
PECR MLR MLR

comp=N,2µm,16.0s,MS5.7
PECR MLR MLR
comp=E,3µm,15.0s,MS5.7
HOQ Hoqain 64.53 284 P P 23 09 01.1 +1.5
SNR=17
BANOM Banah 64.53 287 P P 23 09 01.8 +2.1
SNR=8.3
KIP Kipapa 64.69 79 PFAKE 23 09 10.0 +9.3
KIP LR LR
comp=Z,967nm,24.0s,MS4.9
DAWY Dawson 64.71 29 eP P 23 09 00.8 -0.1
BSY Bisya 64.94 283 P P 23 09 03.8 +1.5
SNR=10
ASHO Ashiyiah 65.19 286 P P 23 09 05.5 +1.6
SNR=37
ARQ Araqi 65.30 284 P P 23 09 06.0 +1.4
SNR=12
LVZ Lovozero 65.60 336 eP P 23 09 02.6 -4.0
LVZ eS S 23 17 47.9 -1.6
LVZ pmax pmax
comp=E,16nm,1.0s
LVZ pmax pmax
comp=Z,30nm,1.0s,mb5.3
LVZ pmax pmax
comp=N,19nm,0.9s
LVZ smax
comp=N,118nm,20.0s
LVZ smax
comp=Z,153nm,15.5s
LVZ smax
comp=E,253nm,18.9s
LVZ MLR MLR
comp=Z,3µm,18.0s,MS5.6
LVZ MLR MLR
comp=N,795nm,17.0s,MS5.4
LVZ MLR MLR
comp=E,2µm,19.0s,MS5.4
MAK Makhachkala 65.82 307 eP P 23 09 06.5 -1.5
MAK e 23 11 39.8
MAK eS S 23 17 56.2 +4.0
MAK e 23 19 01.0
MAK pmax pmax
comp=Z,362nm,1.5s,mb6.2
MAK MLR MLR
comp=Z,4µm,16.0s,MS5.7
INK Inuvik 65.87 24 P P 23 09 08.1 -0.2
comp=Z,26nm,1.1s,mb5.2,baz=286,slow=5.5,SNR=10
INK Inuvik 65.87 24 P P 23 09 08.1 -0.2
INK pmax pmax
comp=Z,260nm,1.1s
INK Inuvik 65.87 24 eP P 23 09 08.0 -0.3
comp=Z,68nm,1.3s,mb5.5
DGAR Diego Garcia 66.11 246 PFAKE 23 09 20.0 +10
DGAR LR LR
comp=Z,257nm,18.3s,MS4.5
APA Apatity 66.15 335⇑ iP P 23 09 09.8 -0.3
APA i 23 09 28.0
APA i 23 09 43.0
APA e 23 18 34.0
APA pmax pmax
comp=Z,65nm,1.0s,mb5.6
APA MLR MLR
comp=Z,4µm,18.0s,MS5.7
SPB4 Spitsbergen Ar 66.61 348 eP P 23 09 12.4 -0.6
KBS Kingsbay 66.98 349 eP P 23 09 13.7 -1.8
KBS AMb AMB 23 09 16.8
comp=Z,36nm,1.0s,mb5.4
KBS AMS AMS 23 40 49.8
comp=Z,1µm,18.9s,MS5.1
KBS Kingsbay 66.98 349 eP P 23 09 14.4 -1.0
KBS pmax pmax
comp=Z,57nm,1.2s,mb5.5
KBS Kingsbay 66.98 349 eP P 23 09 14.4 -1.0
comp=Z,57nm,1.2s,mb5.5
VRHR Novokhopersk 67.18 317 eP P 23 09 15.9 -0.8
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=Z,140nm,0.6s,mb6.2
VRHR pmax pmax
comp=E,80nm,0.7s
VRHR MLR MLR
comp=Z,3µm,12.0s,MS5.8
VRHR MLR MLR
comp=N,2µm,15.0s,MS5.7
VRHR MLR MLR
comp=E,3µm,15.0s,MS5.7
POHA Pohakuloa 67.48 79 PFAKE 23 09 30.0 +11
POHA LR LR
comp=Z,1µm,21.0s,MS5.1
KEV Kevo 67.60 338 ep P 23 09 16.8 -2.5
comp=Z,25nm,0.7s,mb5.3
KEV Kevo 67.60 338 P P 23 09 18.4 -0.9
KEV pmax pmax
comp=Z,33nm,0.8s,mb5.4
BJO Bjornoya 67.77 344 AMS AMS 23 43 29.8
comp=Z,3µm,20.3s,MS5.5
DGRG David-gareji 67.80 306 P P 23 09 21.7 +1.2
SKAG Skagway 67.89 33 eP P 23 09 21.8 +0.6
SKAG epP pP 23 09 29.9 -2.2
MOS Moscow 67.98 322⇓ iP P 23 09 19.9 -1.8
MOS e pP 23 09 29.4 -3.3
MOS e 23 09 36.3
MOS e 23 09 47.0
MOS eS S 23 18 16.2 -2.1
MOS pmax pmax
comp=Z,332nm,1.4s,mb6.2
MOS MLR MLR
comp=N,1µm,17.0s,MS5.5
MOS MLR MLR
comp=Z,6µm,17.0s,MS5.9
MOS MLR MLR
comp=E,2µm,18.0s,MS5.5
MTA Mtatsminda 68.13 306 P P 23 09 23.1 +0.4
TBLG Delisi 68.15 307 P P 23 09 24.0 +1.2
ARCES ARCESS Array B 68.17 338 P P 23 09 21.9 -1.1
comp=E,24nm,0.9s,mb5.2,baz=67,slow=7.5,SNR=37
ARCES PP PP 23 11 52.0 -1.5
comp=E,12nm,1.2s,baz=63,slow=8.5,SNR=3.9
ARCES LR LR 23 44 35.4
comp=E,5µm,19.0s,MS5.7,baz=58,slow=41
ARCES ARCESS Array B 68.17 338 P P **23 09 21.9 -1.0**
ARCES 23 11 52.1
AREO ARCESS Array S 68.17 338 eP P 23 09 22.3 -0.7
ZEI Tsey 68.39 308 eP P 23 09 24.9 +0.6
ZEI e*PP pP 23 09 33.2 -2.1
ZEI e 23 11 56.3
ZEI pmax pmax
comp=Z,136nm,0.9s,mb6.0
VOR Voronezh 68.42 318 eP P 23 09 23.3 -1.1
VOR eS S 23 18 21.0 -2.4
VOR pmax pmax
comp=Z,500nm,1.3s,mb6.4
VOR pmax pmax
comp=N,130nm,1.2s
VOR pmax pmax
comp=E,450nm,1.3s
VOR smax
comp=E,70nm,2.0s
VOR smax
comp=N,60nm,1.8s
GOR Gori 68.51 307 P P 23 09 25.7 +0.6
JOF Joensuu 68.54 331 ep P 23 09 23.6 -1.6
comp=N,27nm,0.3s,mb5.7
VRSR Storozhevoye 68.59 318 eP P 23 09 24.7 -0.9
VRSR eS S 23 18 24.7 -0.9
VRSR pmax pmax
comp=Z,330nm,1.1s,mb6.2
VRSR pmax pmax
comp=N,200nm,1.0s
VRSR pmax pmax
comp=E,380nm,1.0s
VRSR smax
comp=N,20nm,1.7s
VRSR MLR MLR
comp=E,4µm,16.0s,MS5.8
VRSR MLR MLR
comp=Z,5µm,16.0s,MS5.9
VRSR MLR MLR
comp=N,1µm,18.0s,MS5.8
GNI Garni 68.69 305 eP P 23 09 27.5 +1.3
GNI Garni 68.69 305 ⇓P P 23 09 28.3 +2.1
SNR=47
GNI Garni 68.69 305 eP P 23 09 27.9 +1.7
ALE Alert 68.70 2 P P 23 09 26.0 -0.2
comp=N,448nm,1.2s,mb6.3,SNR=29

SIT Sitka 68.71 36 PFAKE 23 09 40.0 +14
SIT LR LR
comp=Z,476nm,17.8s,MS4.8
OBN Obninsk 68.76 322 *ceP* **P 23 09 25.6 -1.0**
OBN *i* pP 23 09 37.7 +0.1
OBN *e* 23 09 48.1
OBN eS S 23 18 27.8 +0.3
OBN pmax pmax
comp=Z,334nm,1.7s,mb6.0
OBN MLR MLR
comp=Z,7µm,21.0s,MS5.9
OBN Obninsk 68.76 322 eP P 23 09 25.8 -0.8
ONI Oni 68.77 308 P P 23 09 23.1 -3.6
KIV Kislovodsk 68.82 309 P P 23 09 28.3 +1.3
SNR=67
KIV Kislovodsk 68.82 309 *c iP* **P 23 09 27.7 +0.7**
KIV pmax pmax
comp=Z,510nm,1.3s,mb6.3
KIV Kislovodsk 68.82 309 eP P 23 09 27.9 +0.9
KTK1 Kautokeino 69.12 338 eP P 23 09 29.0 +0.1
KTK1 AMb AMB 23 09 30.7
comp=Z,88nm,1.2s,mb5.6
KTK1 Kautokeino 69.12 338 eP P 23 09 29.0 +0.1
comp=Z,88nm,1.2s,mb5.6
RBK Rabkut 69.61 279 ⇓P P 23 09 33.2 +1.3
SNR=7.0
CLDR Caldiran 69.64 304 eP P 23 09 33.4 +1.4
WHFO Wadi Hawf 69.81 280 P P 23 09 34.0 +0.9
SNR=11
PUL Pulkovo 70.19 328 eP P 23 09 32.8 -2.6
PUL *e* 23 12 11.0
PUL *e*PPP 23 13 55.9
PUL eS S 23 19 05.9 +22
PUL pmax pmax
comp=Z,138nm,1.0s,mb5.8
PUL pmax pmax
comp=N,71nm,0.9s
PUL pmax pmax
comp=E,149nm,0.9s
PUL smax
comp=N,189nm,21.2s
PUL smax
comp=Z,240nm,16.0s
PUL smax
comp=E,409nm,16.5s
PUL MLR MLR
comp=Z,7µm,19.0s,MS5.9
PUL MLR MLR
comp=N,2µm,16.0s,MS5.9
PUL MLR MLR
comp=E,5µm,18.0s,MS5.9
TRO Tromso 70.19 340 eP P 23 09 33.3 -2.1
TRO AMS AMS 23 45 28.7
comp=Z,3µm,20.8s,MS5.5
VANB Van 70.22 304 eP P 23 09 36.3 +0.7
UMR Umm Al-Rimmam 70.26 293 eP P 23 09 33.7 -2.2
HKR Hakkari 70.34 303 eP P 23 09 35.3 -1.0
KBD Kabd 70.43 293 eP P 23 09 34.0 -2.8
BCA Borcka 70.44 307 eP P 23 09 36.2 -0.7
ABTO Aybut 70.46 279 ⇑P P 23 09 38.7 +1.6
SNR=7.9
AFI Afiamalu 70.46 119 PFAKE 23 09 50.0 +13
AFI LR LR
comp=Z,1µm,20.0s,MS5.2
CUKT Cukurca 70.56 302 eP P 23 09 37.4 -0.2
SOC Sochi 70.96 310 eP P 23 09 39.5 -0.6
SOC eS S 23 18 52.9 -0.5
SOC eSSS 23 26 32.0
SOC pmax pmax
comp=Z,286nm,1.0s,mb6.2
SOC Sochi 70.96 310 *i* P **P 23 09 40.8 +0.7**
KAF Kangasniemi 71.00 331 *ep* **P 23 09 38.5 -1.8**
comp=Z,36nm,0.7s,mb5.4,baz=62,slow=5.8
KAF Kangasniemi 71.00 331 eP P 23 09 38.5 -1.8
KAF pmax pmax
comp=Z,36nm,0.7s,mb5.4
EZM Erzurum 71.20 306 eP P 23 09 43.2 +1.6
FIA1 FINESS Array S 71.38 331 eP P 23 09 41.9 -0.8
FINES FINESS Array B 71.39 331 P P 23 09 41.7 -1.0
comp=Z,24nm,0.6s,mb5.3,baz=71,slow=6.1,SNR=95
FINES LR LR 23 44 36.9
comp=Z,3µm,18.1s,MS5.6,baz=62,slow=39
FINES FINESS Array B 71.39 331 P P 23 09 41.7 -1.0
FINES LR LR 23 44 36.9
BTMT Batman 71.76 304 eP P 23 09 45.7 +0.7
ANN Anapa 72.02 312 *c iP* **P 23 09 46.3 -0.2**
ANN *i* *PP pP 23 09 56.7 -0.9
ANN eS S 23 19 08.5 +2.9
ANN pmax pmax
comp=Z,620nm,1.2s,mb6.4
ANN MLR MLR
comp=Z,4µm,24.0s,MS5.6
BINT Bingol 72.22 305 eP P 23 09 48.9 +1.2
EZC Erzincan 72.36 306 eP P 23 09 51.7 +3.1
VSU Vasula 72.41 328⇑ iP P 23 09 47.9 -0.9
LOF Lofoten 72.64 339 eP P 23 09 50.5 +0.3
RES Resolute Bay 72.69 11 eP P 23 09 50.4 -0.1
RES pmax pmax
comp=Z,122nm,1.1s,mb5.7
RES Resolute Bay 72.69 11 eP P 23 09 50.4 -0.1
comp=Z,122nm,1.1s,mb5.8
DIY Diyarbakir 72.79 304 eP P 23 09 52.5 +1.4
DAG Danmarks Havn 72.88 353⇓ iP P 23 09 50.9 -0.7
comp=Z,219nm,1.3s,mb5.9
DAG Danmarks Havn 72.88 353⇓ *i*P P **23 09 50.9 -0.7**
DAG pmax pmax
comp=Z,219nm,1.3s,mb5.9
PTK Pertek 73.00 305 eP P 23 09 53.0 +0.7
MNK Minsk 73.64 324 eP P 23 09 53.0 -3.1
MNK pmax pmax
comp=N,210nm,1.5s
MNK pmax pmax
comp=E,280nm,1.5s
MNK pmax pmax
comp=Z,270nm,1.5s,mb6.0
MNK MLR MLR
comp=N,8µm,18.0s,MS6.2
MNK MLR MLR
comp=E,8µm,18.0s,MS6.2
MNK MLR MLR
comp=Z,9µm,18.0s,MS6.1
IDID Didziasalis 73.83 325 eP P 23 09 57.6 +0.4
IDID AMb AMB 23 09 58.4
comp=Z,1µm,0.8s
IZAR Zarasai 73.88 325 eP P 23 09 57.9 +0.3
IZAR AMb AMB 23 09 58.7
comp=Z,1µm,0.9s
MYA Malataya 73.92 305 eP P 23 09 57.7 0.0
MALT Malatya 73.92 305⇑ iP P 23 09 59.4 +1.6
MALT Malatya 73.92 305 eP P 23 09 58.9 +1.1
URFA Urfa 73.99 304 eP P 23 09 58.0 -0.2
IIGN Ignalina 74.08 325 eP P 23 09 59.1 +0.4
IIGN AMb AMB 23 09 59.9
comp=Z,926nm,1.0s,mb6.7
SIM Simferopol' 74.12 313 *c iP* **P 23 09 59.0 +0.1**
SIM S S 23 19 30.0 +0.6
SIM pmax pmax
comp=Z,202nm,0.9s,mb6.0
TOKT Tokat 74.42 308 eP P 23 10 00.3 -0.4
KVT Kavak 74.45 308 eP P 23 09 59.0 -1.9
AKASG Malin Array Be 74.59 320 P P 23 10 01.0 -0.7
comp=Z,39nm,0.6s,mb5.5,baz=56,slow=6.1,SNR=141
AKASG LR LR 23 46 38.6
comp=Z,2µm,18.2s,MS5.5,baz=50,slow=39
AKBB Malin Array Si 74.59 320 eP P 23 10 00.8 -0.9
DIKM Dikmen 74.75 309 eP P 23 10 02.4 -0.2
BYBT Boyabat 75.16 309 eP P 23 10 04.9 -0.1
GAZ Gaziantep 75.27 304 eP P 23 10 05.7 +0.1
NSS Namsos 75.27 337 eP P 23 10 03.4 -2.2
NSS AMS AMS 23 49 06.4
comp=Z,6µm,18.0s,MS5.9
KMRS Kahramanmaras 75.36 305 eP P 23 10 05.2 -0.9
YKW3 Yellowknife Ar 75.45 26 eP P 23 10 05.9 -0.7
YKA Yellowknife Ar 75.49 26 P P 23 10 06.7 -0.1
comp=Z,14nm,0.8s,mb4.9,baz=303,slow=5.5,SNR=29
YKA LR LR 23 47 22.6
comp=Z,488nm,19.8s,MS4.8,baz=320,slow=39
BNN Bunyan 75.53 306 eP P 23 10 06.3 -0.8
CORM Corum 75.81 308 eP P 23 10 08.8 +0.1
TOS Tosya 75.86 309 eP P 23 10 09.7 +0.7
KOZT Kozan 76.14 305 eP P 23 10 09.7 -0.8
RAO Raoul Island 76.22 135 PFAKE 23 10 20.0 +9.0
RAO LR LR
comp=Z,900nm,17.6s,MS5.1

JMIC Jan Mayen 76.24 347 eP P 23 10 06.8 -4.3
JMIC AMS AMS 23 45 41.6
comp=Z,716nm,23.2s,MS4.9
SUW Suwalki 76.27 324 ePc P 23 10 10.9 -0.4
comp=Z,0.3nm,1.1s
SUW epP pP 23 10 17.0 -5.4
SUW L 23 47 22.6
comp=Z,6.1nm,18.4s
SUW Suwalki 76.27 324 eP P 23 10 10.8 -0.5
SUW epP pP 23 10 17.0 -5.4
CANT Cankiri 76.32 309 eP P 23 10 12.1 +0.5
CEYT Ceyhan 76.40 305 eP P 23 10 11.9 -0.2
HTY Hatay 76.50 304 eP P 23 10 12.1 -0.5
KIS Kishinev 76.52 316 i P P 23 10 10.0 -2.7
KIS e pP 23 10 20.0 -3.8
KIS e 23 20 42.0
KIS MLR MLR
comp=N,2µm,15.0s,MS5.8
KIS MLR MLR
comp=E,3µm,15.0s,MS5.8
KIS MLR MLR
comp=Z,5µm,15.0s,MS6.0
SAFT Safranbolu 76.67 310 eP P 23 10 13.6 0.0
BR131 Keskin Array S 76.69 308 eP P 23 10 14.3 +0.6
BRTR Keskin Array B 76.69 308 P P 23 10 14.6 +0.8
comp=Z,139nm,1.0s,mb5.8,baz=101,slow=4.1,SNR=215
BRTR LR LR 23 51 51.1
comp=Z,992nm,18.4s,MS5.2,baz=44,slow=42
KARA Karaisali 76.79 305 eP P 23 10 12.8 -1.4
KAMT Kaman 76.80 308 eP P 23 10 13.9 -0.4
IAS Iasi 77.19 317 P P 23 10 16.8 +0.3
ANTO Ankara 77.21 308 eP P 23 10 15.5 -1.1
ANTO Ankara 77.21 308⇑ iP P 23 10 17.2 +0.6
ANTO Ankara 77.21 308 ⇓P P 23 10 17.7 +1.1
SNR=33
ANTO Ankara 77.21 308 P P 23 10 17.8 +1.2
ANTO pmax pmax
comp=Z,190nm,1.2s,mb5.9
ANTO Ankara 77.21 308 P P 23 10 17.4 +0.8
MERS Ankara 77.34 305 eP P 23 10 16.8 -0.5
ASF Jabal al Asfar 77.67 300 LR LR 23 50 45.7
comp=Z,1µm,18.2s,MS5.2,baz=305,slow=40
NB2 NORSAR Subarra 77.68 334 P P 23 10 17.7 -1.5
comp=Z,109nm,1.4s,mb5.6,baz=50,slow=5.3
NOA NORSAR Array B 77.68 334 P P 23 10 17.9 -1.3
comp=Z,39nm,1.0s,mb5.3,baz=50,slow=5.6,SNR=46
NOA PP PP 23 13 12.1 -2.5
comp=Z,2.3nm,0.8s,baz=48,slow=8.6,SNR=4.3
NOA LR LR 23 47 56.5
comp=Z,1µm,19.6s,MS5.3,baz=20,slow=38
NOA NORSAR Array B 77.68 334 P P **23 10 18.0 -1.2**
NOA 23 13 12.1
BHL Bhannes 77.83 302 eP P 23 10 20.6 +0.5
RCY Rachaya 77.90 302 eP P 23 10 21.5 +1.1
NAO01 NORSAR Array S 77.93 334 eP P 23 10 19.5 -1.1
LVV L'vov 77.94 320⇑ iP P 23 10 20.7 0.0
LVV MLR MLR
comp=N,1µm,17.0s,MS5.7
LVV MLR MLR
comp=E,3µm,17.0s,MS5.7
LVV MLR MLR
comp=Z,3µm,17.0s,MS5.7
TIRR Tirgusor 77.97 314⇑ iP P 23 10 20.9 +0.1
TIRR Tirgusor 77.97 314 P P 23 10 21.1 +0.3
MDU Mudurnu 78.02 310 eP P 23 10 20.9 -0.1
IKL Isikli 78.23 305 eP P 23 10 20.8 -1.5
KIZT Kizilcal 78.29 308 eP P 23 10 22.3 -0.4
WAR Warsaw 78.30 324 eP P 23 10 23.2 +0.5
WAR L 23 48 26.4
comp=Z,4.9nm,18.8s
BURAR Bucovina Array 78.37 318⇑ iP P 23 10 23.2 +0.1
BURAR Bucovina Array 78.37 318 P P 23 10 23.2 +0.2
PSN Preselentsi 78.49 314 *i P* **P 23 10 25.2 +1.5**
SUMG Summit 78.55 356 eP P 23 10 24.6 +0.6
ESKT Eskisehir 78.70 309 eP P 23 10 23.9 -1.0
KWP Kalwaria 78.77 321 ePc P 23 10 26.1 +0.8
comp=Z,0.8nm,2.5s
KWP L 23 48 14.3
comp=Z,7.5nm,18.5s
KWP Kalwaria 78.77 321 eP P 23 10 26.1 +0.8
comp=Z,276nm,1.2s,mb6.1
MLR Muntele Rosu 79.00 316⇑ iP P 23 10 26.7 +0.2
MLR Muntele Rosu 79.00 316 P P 23 10 27.1 +0.6
ADVT Abdulvahap 79.03 310 eP P 23 10 24.8 -1.9
MAMC Mammari 79.05 304 P P 23 10 27.2 +0.4
CSS Prodhromos 79.07 304 ⇑P P 23 10 27.2 +0.3
comp=Z,1.8nm,1.2s
CSS Prodhromos 79.07 304 eP P 23 10 24.8 -2.1
CSS Prodhromos 79.07 304 eP P 23 10 27.3 +0.4
CSS Prodhromos 79.07 304⇑ eP P 23 10 27.2 +0.3
B04A Port Angeles 79.10 41 ⇓P P 23 10 27.4 +0.3
baz=79
KONO Kongsberg 79.18 334 eP P 23 10 26.5 -1.0
KONO eS S 23 20 25.4 +0.7
KONO Kongsberg 79.18 334 eP P 23 10 26.8 -0.7
KONO pmax pmax
comp=Z,56nm,1.2s,mb5.4
KONO Kongsberg 79.18 334⇑ iP P 23 10 26.3 -1.2
KONO eP 23 10 26.5
YLV Yalova 79.21 310 eP P 23 10 25.6 -2.0
KOLS Kolonicke sedl 79.38 320 eP P 23 10 28.9 +0.3
KOLS e 23 10 34.3
KOLS Kolonicke sedl 79.38 320 eP P 23 10 28.9 +0.3
KOLS e 23 10 34.4
A05A Maple Falls 79.42 40 ⇑P P 23 10 28.5 -0.3
baz=79
BUC1 Bucharest 79.52 315 P P 23 10 30.5 +1.2
VOIR 79.57 316⇓ iP P 23 10 29.1 -0.5
VOIR 79.57 316 P P 23 10 29.1 -0.6
MBW Mount Baker 79.63 40 P P 23 10 30.1 +0.1
GKP Gorka Klasztor 79.66 326 ePc P 23 10 30.3 +0.2
comp=Z,0.3nm,1.5s
GKP eSKS 23 20 38.2
GKP L 23 49 36.6
comp=Z,9.0nm,17.0s
GKP Gorka Klasztor 79.66 326⇑ eP P 23 10 30.3 +0.2
GKP e 23 20 38.2
STHS Stebnicka Huta 79.69 321 eP P 23 10 30.7 +0.4
STHS e 23 10 35.5
STHS pmax pmax
comp=Z,20nm,1.0s,mb5.0
STHS Stebnicka Huta 79.69 321 eP P 23 10 30.7 +0.4
comp=Z,20nm,1.0s,mb5.0
STHS e 23 10 35.5
BSD Bornholm Skovb 79.70 328⇑ iP P 23 10 29.8 -0.5
comp=Z,58nm,0.8s,mb5.6
BSD *i* 23 13 42.6
BSD *e* 23 20 34.7
BSD
comp=Z,6µm,17.0s
BSD Bornholm Skovb 79.70 328⇑ iP P 23 10 29.8 -0.5
comp=Z,58nm,0.8s,mb5.6
BSD *i* 23 13 42.6
BSD *e* 23 20 34.7
ISP Isparta 79.73 307 eP P 23 10 28.8 -1.7
ISP Isparta 79.73 307 *c iP* **P 23 10 30.2 -0.3**
ISP Isparta 79.73 307 eP P 23 10 30.8 +0.3
B05A Bryant 79.80 40 ⇑P P 23 10 30.6 -0.3
baz=80
PPCY Paphos 79.82 304 P P 23 10 30.8 -0.2
E03A Lebam 79.85 42 ⇓P P 23 10 31.1 -0.1
baz=80
CRVS Cervenica-Dubn 79.85 321 eP P 23 10 31.6 +0.4
OJC Ojcow 80.05 322⇑ iP P 23 10 32.7 +0.5
OJC *e* pP 23 10 40.8 -2.6
OJC *e* 23 20 45.0
OJC Ojcow 80.05 322⇑ iP P 23 10 32.7 +0.5
OJC ePcP PcP 23 10 40.8 +1.3
OJC eSKSac SKSac 23 20 45.0 -1.8
OJC LR LR
comp=Z,33µm,17.6s
JMB Yambol 80.11 313 eP P 23 10 33.4 +0.8
JMB Yambol 80.11 313 *i* **P P 23 10 33.0 +0.5**
F03A Seaside 80.17 43 ⇑P P 23 10 33.0 +0.1
baz=80
NIE Niedzica 80.20 321 *i* Pc **P 23 10 34.1 +1.0**
DRGR 80.26 318⇑ iP P 23 10 33.8 +0.4
DRGR 80.26 318 P P 23 10 33.8 +0.4
ZIMR 80.28 315 P P 23 10 34.1 +0.6
EIL Elat 80.29 298 eP P 23 10 33.5 0.0
BER Bergen 80.30 336 eP P 23 10 33.8 +0.2
BER AMS AMS 23 52 22.0
comp=Z,5µm,19.4s,MS5.8

EDRB	**Edirne**	**80.31**	**312**	*e*P		**P**	**23 10 31.9**	**-1.7**
C05A	**Tolt Reservoir**	**80.33**	**41**	⇑P		**P**	**23 10 33.8**	**+0.1**
	baz=80							
D05A	**Enumclaw**	**80.43**	**41**	⇑P		**P**	**23 10 34.6**	**+0.3**
	baz=80							
COP	**Copenhagen**	**80.48**	**329**	⇑*i*P		**P**	**23 10 34.6**	**0.0**
	comp=Z,59nm,1.2s,mb5.4							
COP				*i*			23 13 47.0	
COP				*i* S	S		23 20 52.6	+14
COP								
	comp=Z,2μm,19.0s							
COP	**Copenhagen**	**80.48**	**329**	⇑*e*P		**P**	**23 10 34.6**	**0.0**
COP					pmax	pmax		
	comp=Z,59nm,1.2s,mb5.4							
COP					MLR	MLR		
	comp=Z,2μm,19.0s,MS5.5							
COP	**Copenhagen**	**80.48**	**329**	⇑*e*P		**P**	**23 10 34.6**	**0.0**
	comp=Z,59nm,1.2s,mb5.4							
COP				*i*			23 13 47.0	
COP				*i* S	S		23 20 52.6	+14
COP					LR	LR		
	comp=Z,2μm,19.0s,MS5.5							
KECS	**Kecovo**	**80.62**	**321**	*i* P		**P**	**23 10 35.7**	**+0.4**
	comp=Z,22nm,1.1s,mb5.0							
KECS				*e*PP		PP	23 13 33.8	-5.4
KECS				*e*PP		PP	23 13 35.5	-3.7
G03A	**Yamhill**	**80.66**	**43**	⇓P		**P**	**23 10 35.3**	**-0.2**
	baz=80							
FMW	**Mount Fremont**	**80.75**	**41**	P		**P**	**23 10 36.2**	**+0.2**
LON	**Longmire**	**80.77**	**41**	*e*P		**P**	**23 10 36.8**	**+0.7**
F04A	**Amboy**	**80.85**	**42**	⇓P		**P**	**23 10 36.1**	**-0.4**
	baz=81							
E05A	**Randle**	**80.90**	**42**	⇓P		**P**	**23 10 36.5**	**-0.3**
	baz=81							
GZR	**Gura Zlata**	**80.96**	**317**	⇓*i*P		**P**	**23 10 38.0**	**+0.9**
GZR	**Gura Zlata**	**80.96**	**317**	P		**P**	**23 10 37.7**	**+0.6**
RAC	**Raciborz**	**80.98**	**323**	*e*P		**P**	**23 10 38.2**	**+1.0**
RAC					MLR	MLR		
	comp=Z,5μm,17.7s,MS6.0							
H03A	**Soap Creek Ran**	**80.99**	**44**	⇑P		**P**	**23 10 36.8**	**-0.4**
	baz=81							
CANB	**Canakkale**	**81.02**	**311**	*e*P		**P**	**23 10 36.6**	**-0.9**
COR	**Corvallis**	**81.03**	**44**	PFAKE			23 10 50.0	+13
COR				LR		LR		
	comp=Z,90nm,19.4s							
SNZO	**South Karori**	**81.12**	**148**	PFAKE			23 10 50.0	+12
SNZO				LR		LR		
	comp=Z,1μm,22.0s,MS5.3							
OKC	**Ostrava-Krasne**	**81.14**	**323**	*e*P		**P**	**23 10 38.3**	**+0.2**
OKC				*e*SKS			23 20 50.9	
OKC				AMS		AMS	23 49 50.0	
	comp=Z,4μm,16.5s							
OKC	**Ostrava-Krasne**	**81.14**	**323**	*e*P		**P**	**23 10 38.3**	**+0.2**
OKC				*e*			23 20 50.9	
ENEZ	**Enez**	**81.25**	**312**	*e*P		**P**	**23 10 37.7**	**-1.0**
PSZ	**Piszkesteto**	**81.26**	**320**	⇑*i*P		**P**	**23 10 39.2**	**+0.5**
KDZ	**Kurdzhali**	**81.27**	**313**	*i* P		**P**	**23 10 40.0**	**+1.3**
MUD	**Monsted U'grnd**	**81.41**	**331**	⇑*i*P		**P**	**23 10 39.1**	**-0.4**
	comp=Z,93nm,1.2s,mb5.6							
MUD				*e*			23 13 52.4	
MUD				*i*			23 20 59.0	
MUD								
	comp=Z,3μm,20.0s							
MUD	**Monsted U'grnd**	**81.41**	**331**	⇑*i*P		**P**	**23 10 39.1**	**-0.4**
	comp=Z,93nm,1.2s,mb5.6							
MUD				*e*			23 13 52.4	
MUD				*i*			23 20 59.0	
F05A	**White Salmon**	**81.44**	**42**	⇓P		**P**	**23 10 38.8**	**-0.8**
	baz=81							
RDO	**Rodhopi**	**81.45**	**312**	*e*P		**P**	**23 10 40.0**	**+0.3**
PLD	**Plovdiv**	**81.49**	**313**	*e*P		**P**	**23 10 40.5**	**+0.6**
MORC	**Moravsky Berou**	**81.50**	**323**	⇑*i*P		**P**	**23 10 40.4**	**+0.4**
MORC	**Moravsky Berou**	**81.50**	**323**	*e*P		**P**	**23 10 40.9**	**+0.9**
	comp=Z,60nm,1.1s,mb5.4							
BZS	**Buzias**	**81.53**	**318**	⇑*i*P		**P**	**23 10 39.7**	**-0.4**
BZS	**Buzias**	**81.53**	**318**	P		**P**	**23 10 40.0**	**-0.1**
VYHS	**Vyhne**	**81.53**	**321**	*i* P		**P**	**23 10 40.9**	**+0.8**
VYHS				*e*S		S	23 20 57.4	+8.0
VYHS					pmax	pmax		
	comp=Z,54nm,1.2s,mb5.3							
VYHS					MLR	MLR		
	comp=Z,5μm,17.4s,MS6.0							
VYHS	**Vyhne**	**81.53**	**321**	*i* P		**P**	**23 10 40.9**	**+0.8**
	comp=Z,54nm,1.2s,mb5.3							
VYHS				*e*S		S	23 20 57.4	+8.0
VYHS				LR		LR		
	comp=Z,5μm,17.4s,MS6.0							
KSP	**Ksiaz**	**81.54**	**324**	*e*Pc		**P**	**23 10 40.9**	**+0.7**
	comp=Z,0.7nm,2.8s							
KSP				*e*S		S	23 20 33.3	-16
KSP				L			23 50 40.7	
	comp=Z,9.9nm,18.4s							
KSP	**Ksiaz**	**81.54**	**324**	⇑*e*P		**P**	**23 10 40.7**	**+0.5**
KSP				*e*			23 13 47.0	
KSP	**Ksiaz**	**81.54**	**324**	⇑*e*P		**P**	**23 10 40.7**	**+0.5**
KSP				*e*PP		PP	23 13 47.0	+0.3
KSP				*e*PPPP			23 17 17.5	
KSP				*e*SKS			23 21 02.0	
KSP				*e*SS		SS	23 26 01.0	-5.6
KSP				LR		LR		
	comp=Z,11μm,18.4s,MS6.3							
EDM	**Edmonton**	**81.54**	**33**	*e*P		**P**	**23 10 40.4**	**+0.2**
EDM				*e**PP		pP	23 10 51.6	+0.2
YER	**Yerkesik**	**81.62**	**308**	*e*P		**P**	**23 10 40.1**	**-0.5**
HOOD	**Mount Hood Mea**	**81.63**	**43**	*e*P		**P**	**23 10 42.0**	**+1.4**
H04A	**Detroit Lake**	**81.65**	**43**	⇓P		**P**	**23 10 40.0**	**-0.8**
	baz=82							
IZM	**Izmir**	**81.69**	**309**	*e*P		**P**	**23 10 40.6**	**-0.4**
EPH	**Ephrata**	**81.71**	**40**	P		**P**	**23 10 41.2**	**+0.2**
VFP	**Flag Point**	**81.74**	**43**	P		**P**	**23 10 42.0**	**+0.7**
DPC	**Dobruska-Polom**	**81.81**	**324**	*e*P		**P**	**23 10 42.4**	**+0.8**
DPC					AMS	AMS	23 50 20.0	
	comp=Z,6μm,16.9s							
RUE	**Ruedersdorf**	**81.82**	**326**	*e*P		**P**	**23 10 42.4**	**+0.7**
	comp=Z,200nm,1.3s,mb5.9							
BLCB	**Balcova**	**81.85**	**309**	*e*P		**P**	**23 10 40.9**	**-0.9**
G05A	**Wamic**	**81.87**	**43**	⇑P		**P**	**23 10 42.0**	**+0.1**
	baz=82							
UPC	**Upice**	**81.88**	**324**	*e*P		**P**	**23 10 42.7**	**+0.7**
PRK	**Paraskevi**	**81.93**	**310**	*e*P		**P**	**23 10 43.0**	**+0.7**
M01C	**Crescent City**	**81.95**	**47**	⇓P		**P**	**23 10 42.1**	**-0.3**
	baz=82							
BUD	**Budapest**	**81.99**	**320**	*i* Pc		**P**	**23 10 43.0**	**+0.4**
VTS	**Vitosha**	**82.18**	**314**	*e*P		**P**	**23 10 44.4**	**+0.8**
VTS	**Vitosha**	**82.18**	**314**	*i* P		**P**	**23 10 44.2**	**+0.6**
VTS	**Vitosha**	**82.18**	**314**	⇑*i*P		**P**	**23 10 44.1**	**+0.5**
H05A	**Madras**	**82.25**	**43**	⇓P		**P**	**23 10 44.1**	**+0.2**
	baz=82							
VRAC	**Vranov**	**82.28**	**323**	⇑*i*P		**P**	**23 10 44.8**	**+0.7**
VRAC	**Vranov**	**82.28**	**323**	P		**P**	**23 10 45.0**	**+0.9**
G06A	**Carlson Farm,**	**82.28**	**42**	⇑P		**P**	**23 10 44.6**	**+0.5**
	baz=82,SNR=6.2							
HAWA	**Hanford**	**82.28**	**41**	*e*P		**P**	**23 10 44.3**	**+0.2**
HAWA				*e*pP		pP	23 10 54.3	-1.0
SMOL	**Smolenice**	**82.29**	**322**	*e*P		**P**	**23 10 45.4**	**+1.3**
MMB	**Musomiste**	**82.38**	**313**	*e*P		**P**	**23 10 44.9**	**+0.3**
MMB	**Musomiste**	**82.38**	**313**	*i* P		**P**	**23 10 45.0**	**+0.4**
KTRM	**Thompson Ridge**	**82.39**	**46**	P		**P**	**23 10 45.6**	**+1.0**
BSEG	**Bad Segeberg**	**82.54**	**329**	*e*P		**P**	**23 10 45.1**	**-0.3**
	comp=Z,112nm,1.0s,mb5.8							
BSEG				*e*PP		PP	23 13 56.5	+1.5
JCC	**Jacoby Creek**	**82.55**	**47**	⇑P		**P**	**23 10 45.8**	**+0.3**
	baz=82							
PVCC	**Panska Ves**	**82.61**	**324**	*e*P		**P**	**23 10 46.6**	**+0.8**
PVCC					AMS	AMS	23 51 20.0	
	comp=Z,5μm,17.4s							
KKB	**Krupnik**	**82.64**	**314**	*i* P		**P**	**23 10 46.5**	**+0.5**
ZST	**Bratislava**	**82.65**	**322**	*e*P		**P**	**23 10 46.9**	**+0.9**
ZST				*e*S		S	23 21 08.6	+7.7
ZST				MLR		MLR		
	comp=Z,4μm,17.5s,MS5.9							
BRG	**Berggiesshubel**	**82.71**	**325**	*e*P		**P**	**23 10 46.3**	**0.0**
	comp=Z,143nm,1.7s,mb5.7							
BRG				*e*PP		PP	23 13 58.3	+1.9
BRG	**Berggiesshubel**	**82.71**	**325**	⇑*i*P		**P**	**23 10 46.8**	**+0.4**
	comp=Z,84nm,1.7s,mb5.5							
BRG				*i*			23 11 02.4	
	comp=Z,23nm,1.2s							
BRG					PP	PP	23 13 56.0	-0.4
BRG					S	S	23 21 16.0	+14
BRG					SP		23 22 11.0	
BRG					SS	SS	23 26 45.0	+21
BRG								
	comp=N,2μm,15.6s							
BRG								
	comp=E,2μm,16.4s							
BRG								
	comp=Z,3μm,16.4s							
BRG	**Berggiesshubel**	**82.71**	**325**	⇑*i*P		**P**	**23 10 46.8**	**+0.5**
BRG				*i*			23 11 02.4	
BRG							23 13 56.0	
BRG					SP		23 22 11.0	
BRG					pmax	pmax		
	comp=Z,84nm,1.7s,mb5.5							
BRG					MLR	MLR		
	comp=Z,3μm,16.4s,MS5.8							
BRG	**Berggiesshubel**	**82.71**	**325**	⇑*i*P		**P**	**23 10 46.8**	**+0.4**
	comp=Z,84nm,1.7s,mb5.5							
BRG				*i*			23 11 02.4	
BRG					PP	PP	23 13 56.0	-0.4
BRG					S	S	23 21 16.0	+14
BRG					SP		23 22 11.0	
BRG					SS	SS	23 26 45.0	+21
BRG					LR	LR		
	comp=Z,3μm,16.4s,MS5.8							
H06A	**Lindquist Farm**	**82.73**	**43**	⇓P		**P**	**23 10 46.7**	**+0.2**
	baz=82							
LRW	**Lerwick**	**82.75**	**338**	⇑*i*P		**P**	**23 10 45.7**	**-0.8**
LRW				⇑*i*P			23 10 45.7	
LRW					AMS	AMS	23 54 20.0	
	comp=Z,964nm,17.6s,MS5.2							
LRW	**Lerwick**	**82.75**	**338**	⇑*i*P		**P**	**23 10 45.7**	**-0.8**
LRW				⇑*i*P			23 10 45.7	
LRW					AMS	AMS	23 54 20.0	
	comp=Z,964nm,17.6s,MS5.2							
WAL1	**Walls**	**82.81**	**338**	⇑*e*P		**P**	**23 10 46.2**	**-0.6**
WAL1	**Walls**	**82.81**	**338**	⇑*e*P		**P**	**23 10 46.2**	**-0.6**
G07A	**Ruggs Ranch, H**	**82.83**	**42**	⇓P		**P**	**23 10 47.3**	**+0.4**
	baz=83,SNR=8.3							
TREC	**Trest**	**82.87**	**323**	*e*P		**P**	**23 10 47.9**	**+0.8**
TREC				*e*SKS			23 21 13.1	
TREC					AMS	AMS	23 51 10.0	
	comp=Z,4μm,16.5s							
BUOR	**Burton Butte**	**82.91**	**45**	P		**P**	**23 10 48.1**	**+0.8**
YBH	**Yreka Blue Hor**	**82.91**	**46**	*e*P		**P**	**23 10 47.6**	**+0.2**
YBH				*e**PP		pP	23 10 58.5	-0.1
YBH	**Yreka Blue Hor**	**82.91**	**46**	⇓P		**P**	**23 10 47.6**	**+0.3**
	baz=83							
CLL	**Collm**	**82.92**	**326**	⇑*i*P		**P**	**23 10 47.7**	**+0.3**
	comp=Z,336nm,1.5s,mb6.2							
CLL				*e*pP		pP	23 10 59.7	+1.1
CLL				*e*PP		PP	23 13 55.5	-2.6
CLL				*e*pPP			23 14 08.0	
CLL				*e*PPPP			23 17 11.2	
CLL				*e*S		S	23 21 07.5	+3.9
CLL				*e*SS		SS	23 26 43.3	+16
CLL				*e*L			23 51 41.9	
	comp=Z,6μm,18.0s							
CLL	**Collm**	**82.92**	**326**	⇑P		**P**	**23 10 47.7**	**+0.3**
	comp=Z,logA/T=2.3,mb6.1							
CLL				*e**PP		pP	23 10 57.0	-1.6
CLL				*e*PP		PP	23 13 56.0	-2.1
CLL				*e**PPP			23 14 08.0	
CLL				*e*			23 17 11.0	
CLL				*e*S		S	23 21 07.0	+3.4
CLL				*e*SPP			23 22 14.0	
CLL				*e*			23 23 15.0	
CLL				*e*SS		SS	23 26 42.0	+15
CLL	**Collm**	**82.92**	**326**	⇑*i*P		**P**	**23 10 47.7**	**+0.3**
	comp=Z,330nm,1.5s,mb6.1							
CLL				*e*pP		pP	23 10 57.0	-1.6
CLL				*e*PP		PP	23 13 56.0	-2.1
CLL				*e*pPP			23 14 08.0	
CLL				*e*PPPP			23 17 11.0	
CLL				*e*S		S	23 21 07.0	+3.4
CLL				*e*SPP			23 22 14.0	
CLL				*ex*		x	23 23 15.0	
CLL				*e*SS		SS	23 26 42.0	+15
CLL				*ex*		x	23 31 18.0	
CLL	**Collm**	**82.92**	**326**	⇑*i*P		**P**	**23 10 47.7**	**+0.3**
CLL				*e**PP		pP	23 10 57.0	-1.6
CLL				*e*S		S	23 21 07.0	+3.4
CLL					pmax	pmax		
	comp=Z,330nm,1.5s,mb6.1							
CLL					MLR	MLR		
	comp=Z,6μm,16.0s,MS6.1							
CLL	**Collm**	**82.92**	**326**	⇑*i*P		**P**	**23 10 47.7**	**+0.3**
	comp=Z,330nm,1.5s,mb6.1							
CLL				*e*pP		pP	23 10 57.0	-1.6
CLL				*e*S		S	23 21 07.0	+3.4
CLL				LR		LR		
	comp=Z,6μm,16.0s,MS6.1							
PKSM	**Moragy**	**82.93**	**319**	⇑*i*P		**P**	**23 10 47.6**	**+0.1**
PKSM	**Moragy**	**82.93**	**319**	⇑*i*P		**P**	**23 10 47.4**	**-0.1**
PRU	**Pruhonice**	**82.94**	**324**	*e*P		**P**	**23 10 47.9**	**+0.4**
PRU				*e*SKS			23 21 10.8	
PRU					AMS	AMS	23 51 10.0	
	comp=Z,5μm,18.0s							
PRA	**Prague**	**82.95**	**324**	P		**P**	**23 10 48.0**	**+0.4**
J05A	**Fort Rock**	**82.99**	**44**	⇓P		**P**	**23 10 48.5**	**+0.7**
	baz=83,SNR=11							
M02C	**Callahan**	**83.00**	**46**	⇓P		**P**	**23 10 48.4**	**+0.6**
	baz=83							
GRUS	**Gruza**	**83.01**	**317**	⇑*i*P		**P**	**23 10 47.3**	**-0.6**
N02C	**Big Bar**	**83.02**	**47**	⇑P		**P**	**23 10 47.8**	**-0.1**
	baz=83							
K04A	**Chilquin**	**83.05**	**45**	⇑P		**P**	**23 10 48.0**	**-0.1**
	baz=83							
L04A	**Klamath Falls**	**83.19**	**45**	⇓P		**P**	**23 10 49.1**	**+0.3**
	baz=83							
G08A	**Pilot Rock**	**83.23**	**42**	⇑P		**P**	**23 10 49.1**	**+0.1**
	baz=83,SNR=8.5							
I06A	**Prineville**	**83.24**	**43**	⇑P		**P**	**23 10 49.3**	**+0.2**
	baz=83,SNR=7.9							
SOP	**Sopron**	**83.25**	**321**	⇑*i*P		**P**	**23 10 49.9**	**+0.8**
VAY	**Valandovo**	**83.26**	**314**	*e*P		**P**	**23 10 48.8**	**-0.4**
VAY	**Valandovo**	**83.26**	**314**	*e*P		**P**	**23 10 48.4**	**-0.8**
H07A	**Lands Inn, Kim**	**83.27**	**42**	⇑P		**P**	**23 10 49.0**	**-0.2**
	baz=83,SNR=6.4							
LHEM	**Herd Peak**	**83.28**	**46**	P		**P**	**23 10 50.0**	**+0.7**
STIP	**Stip**	**83.30**	**314**	*e*P		**P**	**23 10 49.1**	**-0.3**
DIVS	**Divcibare**	**83.33**	**317**	⇑*i*P		**P**	**23 10 49.4**	**-0.1**
DIVS	**Divcibare**	**83.33**	**317**	*e*P		**P**	**23 10 49.5**	**0.0**
M04C	**Macdoel**	**83.43**	**46**	⇓P		**P**	**23 10 50.3**	**+0.3**
	baz=83,SNR=6.2							
CONA	**Conrad Observa**	**83.48**	**322**	*i* P		**P**	**23 10 51.4**	**+1.1**
	comp=Z,99nm,1.2s,mb5.7,SNR=50							
K05A	**Summer Lake**	**83.50**	**45**	⇑P		**P**	**23 10 51.0**	**+0.5**
	baz=83							
M03C	**McCloud**	**83.53**	**46**	⇓P		**P**	**23 10 50.8**	**+0.3**
	baz=83							
NRDL	**Niedersach Rie**	**83.56**	**328**	*e*P		**P**	**23 10 51.6**	**+0.9**
	comp=Z,184nm,1.4s,mb6.0							
I07A	**Izee**	**83.59**	**43**	⇑P		**P**	**23 10 51.1**	**+0.2**
	baz=83,SNR=7.8							
F09A	**S2 Ranch, Elgi**	**83.60**	**41**	⇓P		**P**	**23 10 51.0**	**+0.1**
	baz=83							
SKO	**Skopje**	**83.62**	**315**	*e*P		**P**	**23 10 52.2**	**+1.2**
WDC	**Whiskeytown Da**	**83.64**	**47**	*e*P		**P**	**23 10 53.0**	**+1.9**
WDC					pmax	pmax		
	comp=Z,80nm,1.8s,mb5.5							
WDC	**Whiskeytown Da**	**83.64**	**47**	*e*P		**P**	**23 10 53.0**	**+1.9**
	comp=Z,80nm,1.8s,mb5.5							
WDC	**Whiskeytown Da**	**83.64**	**47**	⇑P		**P**	**23 10 51.1**	**0.0**
	baz=84							
J06A	**Christmas Vall**	**83.66**	**44**	⇓P		**P**	**23 10 51.5**	**+0.2**
	baz=84,SNR=12							
O02C	**Red Bluff**	**83.69**	**47**	⇑P		**P**	**23 10 51.8**	**+0.4**
	baz=84							
TANN	**Tannenbergstha**	**83.74**	**325**	*e*P		**P**	**23 10 51.6**	**0.0**
	comp=Z,107nm,1.4s,mb5.8							
TANN				*e*PP		PP	23 14 06.1	+1.3
H08A	**Prairie City**	**83.84**	**42**	⇑P		**P**	**23 10 52.1**	**0.0**
	baz=84,SNR=8.8							
K06A	**Valley Falls**	**83.86**	**44**	⇑P		**P**	**23 10 52.7**	**+0.4**
	baz=84,SNR=9.1							
NKC	**Novy Kostel**	**83.86**	**325**	*e*P		**P**	**23 10 52.7**	**+0.5**
NKC				*e*SKS			23 21 09.8	
NKC					AMS	AMS	23 52 50.0	
	comp=Z,8μm,15.7s							
NKC	**Novy Kostel**	**83.86**	**325**	*e*P		**P**	**23 10 52.7**	**+0.5**
NKC				*e*			23 21 09.8	
L05A	**Lakeview**	**83.91**	**45**	⇑P		**P**	**23 10 52.7**	**+0.2**
	baz=84,SNR=5.8							
KHC	**Kasperske Hory**	**83.97**	**324**	*e*P		**P**	**23 10 53.2**	**+0.4**
KHC				*e*SKS			23 21 13.8	
KHC					AMS	AMS	23 52 00.0	
	comp=Z,5μm,18.3s							
KHC	**Kasperske Hory**	**83.97**	**324**	*c i*P		**P**	**23 10 53.1**	**+0.3**
LIT	**Litokhoron**	**83.97**	**313**	*e*P		**P**	**23 10 52.3**	**-0.5**
MOX	**Moxa**	**84.02**	**326**	*e*P		**P**	**23 10 52.9**	**-0.1**
	comp=Z,164nm,1.6s,mb5.9							
MOX	**Moxa**	**84.02**	**326**	*e*P		**P**	**23 10 53.3**	**+0.3**
	comp=Z,140nm,1.5s,mb5.9							
MOX								
	comp=Z,4μm,18.0s							
MOX	**Moxa**	**84.02**	**326**	*e*P		**P**	**23 10 53.3**	**+0.3**
MOX					pmax	pmax		
	comp=Z,140nm,1.5s,mb5.9							
MOX					MLR	MLR		
	comp=Z,4μm,18.0s,MS5.8							
GASB	**Alder Springs**	**84.02**	**48**	⇑P		**P**	**23 10 53.6**	**+0.5**
	baz=84							
ARSA	**Arzberg**	**84.07**	**321**	⇑*i*P		**P**	**23 10 53.7**	**+0.4**
	comp=Z,287nm,1.8s,mb6.1,SNR=34							
BSMT	**Bassoo Peak**	**84.07**	**38**	P		**P**	**23 10 53.9**	**+0.5**
BORG	**Borgarnes**	**84.08**	**348**	*e*P		**P**	**23 10 55.1**	**+1.8**
GEC2	**GERESS Array S**	**84.08**	**323**	*e*P		**P**	**23 10 53.6**	**+0.3**
GEC2				*e*			23 14 08.8	
GERES	**GERESS Array B**	**84.08**	**323**	P		**P**	**23 10 53.6**	**+0.3**
	comp=Z,36nm,0.9s,mb5.5,baz=48,slow=4.2,SNR=228							
GERES					PP	PP	23 14 08.0	+0.4
	comp=Z,0.7nm,0.7s,baz=61,slow=6.7,SNR=3.9							
GERES					PKKPbc	PKKPbc	23 29 05.1	-2.0
	comp=Z,0.4nm,0.7s,baz=117,slow=1.8,SNR=5.0							
GERES					LR	LR	23 52 29.9	
	comp=Z,4μm,18.3s,MS5.8,baz=50,slow=39							
GERES	**GERESS Array B**	**84.08**	**323**	P		**P**	**23 10 53.6**	**+0.3**
GERES							23 14 08.0	
M05C	**Lookout**	**84.10**	**46**	⇑P		**P**	**23 10 53.6**	**+0.1**
	baz=84							
J07A	**Hines**	**84.11**	**43**	⇓P		**P**	**23 10 54.3**	**+0.8**
	baz=84,SNR=10							
KOGS	**Kog**	**84.14**	**321**	*e*P		**P**	**23 10 53.4**	**-0.3**
HOPS	**Hopland**	**84.14**	**49**	PFAKE			23 11 10.0	+16
HOPS				LR		LR		
	comp=Z,645nm,19.0s,MS5.0							
MANZ	**Manzenberg**	**84.19**	**325**	*e*P		**P**	**23 10 54.0**	**+0.1**
	comp=Z,109nm,1.2s,mb5.8							
HATC	**Hat Creek Radi**	**84.20**	**46**	⇓P		**P**	**23 10 54.2**	**+0.2**
	baz=84							
BIA	**Bitola**	**84.21**	**314**	*e*P		**P**	**23 10 52.6**	**-1.5**
I08A	**Drewsey**	**84.24**	**43**	⇓P		**P**	**23 10 54.5**	**+0.3**
	baz=84							
ROTZ	**Rotzenmuhle**	**84.27**	**325**	*e*P		**P**	**23 10 54.7**	**+0.3**
	comp=Z,196nm,1.3s,mb6.1							
ROTZ				*e*PP		PP	23 14 10.8	+1.6
WET	**Wettzell**	**84.32**	**324**	*e*P		**P**	**23 10 54.6**	**0.0**
	comp=Z,64nm,1.2s,mb5.6							
WET				*e*PP		PP	23 14 10.6	+1.1
WET	**Wettzell**	**84.32**	**324**	*e*P		**P**	**23 10 54.6**	**0.0**
WET				*e*			23 14 10.6	
WET					pmax	pmax		
	comp=Z,64nm,1.2s,mb5.6							
H09A	**Durkee**	**84.34**	**42**	⇓P		**P**	**23 10 54.8**	**+0.1**
	baz=84,SNR=8.1							
MOA	**Molln**	**84.39**	**322**	*i* P		**P**	**23 10 55.7**	**+0.7**
	comp=Z,182nm,1.4s,mb6.0,SNR=61							
NPS	**Neapolis**	**84.43**	**307**	*e*P		**P**	**23 10 54.0**	**-1.2**
BMO	**Blue Mountains**	**84.44**	**41**	*e*P		**P**	**23 10 55.4**	**+0.2**
	comp=Z,43nm,1.4s,mb5.4							
BMO					LR	LR		
	comp=Z,375nm,22.0s,MS4.7							
SFJD	**Kangerlussuaq**	**84.46**	**0**	*i* P		**P**	**23 10 54.9**	**-0.4**
SFJD				*i* S		S	23 21 24.0	+4.8
SFJD					pmax	pmax		
	comp=Z,53nm,0.8s,mb5.7							
SFJD					MLR	MLR		
	comp=Z,1μm,20.0s,MS5.2							
SFJD	**Kangerlussuaq**	**84.46**	**0**	*i* P		**P**	**23 10 54.9**	**-0.4**
	comp=Z,53nm,0.8s,mb5.7							
SFJD				*i* S		S	23 21 24.0	+4.8
SFJD				LR		LR		
	comp=Z,1μm,20.0s,MS5.2							
OHR	**Ohrid**	**84.49**	**314**	*e*P		**P**	**23 10 54.2**	**-1.2**
K07A	**Rock Creek Ran**	**84.53**	**44**	⇓P		**P**	**23 10 56.1**	**+0.4**
	baz=84,SNR=21							
OBR	**Brabster**	**84.57**	**337**	⇑*i*P		**P**	**23 10 54.9**	**-1.0**
OBR	**Brabster**	**84.57**	**337**	⇑*i*P		**P**	**23 10 54.9**	**-1.0**
M06C	**Likely Place G**	**84.60**	**46**	⇑P		**P**	**23 10 56.6**	**+0.6**
	baz=84,SNR=6.1							
J08A	**Circle Bar Ran**	**84.61**	**43**	⇑P		**P**	**23 10 56.6**	**+0.5**
	baz=84,SNR=12							
MNRC	**McLaughlin Nat**	**84.62**	**48**	⇑P		**P**	**23 10 56.7**	**+0.6**
	baz=84							
AGG	**Agios Georgios**	**84.66**	**312**	*e*P		**P**	**23 10 55.3**	**-1.0**
PERS	**Pernice**	**84.66**	**321**	*i* P		**P**	**23 10 56.7**	**+0.4**
UBBA	**Unter

comp=Ƶ,195nm,2.1s,mb5.9
L08A Fields 85.36 44 P P 23 11 00.6 +0.8
baz=85,SNR=21
MCD Coleburn Disti 85.39 337⇑ *i*P P 23 10 58.8 -1.2
MCD Coleburn Disti 85.39 337⇑ *i*P P 23 10 58.8 -1.2
BEKR Beckwourth 85.42 47 ⇓P P 23 10 60.0 -0.2
baz=85,SNR=11
K09A Rome 85.44 43 ⇑P P 23 11 00.6 +0.3
baz=85,SNR=11
MVH1 Achvaich 85.45 337⇑ *i*P P 23 10 59.0 -1.2
MVH1 Achvaich 85.45 337⇑ *i*P P 23 10 59.0 -1.2
CHMT Chamberlain Mo 85.47 38 *e*P P 23 11 00.7 +0.3
CHMT *e*pP pP 23 11 13.0 +1.4
VLI Veliai 85.50 310 *e*P pP 23 11 08.5 -3.3
FFC Flin Flon 85.55 27 *e*P P 23 10 59.6 -1.1
FFC pmax pmax
comp=Ƶ,23nm,1.0s,mb5.4
FFC Flin Flon 85.55 27 *e*P P 23 10 59.6 -1.2
comp=Ƶ,23nm,1.0s,mb5.4
BUG Bochum–Univer 85.58 328 *e*P P 23 11 01.0 +0.1
comp=Ƶ,171nm,1.2s,mb6.2
P05C Yuba Gap, Truc 85.58 47 ⇓P P 23 11 01.0 +0.1
baz=85
O06A Flanigan 85.59 46 ⇑P P 23 11 01.1 +0.1
baz=85
CADS Cadrg 85.66 321 *i* P P 23 11 00.6 -0.8
VOY Vojsko 85.70 321 *e*P P 23 11 00.5 -1.0
VOY *e* 23 11 01.3
VOY *e* pP 23 11 14.0 +1.2
GVD Gavdhos 85.72 308 *e*P P 23 11 01.8 +0.2
KNDS Knezji Dol 85.74 321 *e*P P 23 11 01.6 -0.1
FUR Furstenfeldbru 85.76 324 *e*P P 23 11 02.5 +0.7
comp=Ƶ,214nm,1.4s,mb6.2
FUR Furstenfeldbru 85.76 324 *e*P P 23 11 02.5 +0.7
FUR pmax pmax
comp=Ƶ,214nm,1.4s,mb6.2
PTCC Patocco-Chiusa 85.76 322 P P 23 11 01.3 -0.5
comp=Ƶ,118nm,2.0s,mb5.8
M08A Happy Creek Ra 85.77 45 ⇑P P 23 11 02.4 +0.5
baz=86,SNR=7.4
N07B Gerlach 85.78 45 ⇑P P 23 11 01.9 0.0
baz=86
LAVA Lava Cap Winer 85.80 48 ⇑P P 23 11 01.7 -0.2
baz=86
TNS Taunus Mts 85.83 327 *e*P P 23 11 02.0 -0.2
comp=Ƶ,81nm,1.2s,mb5.8
TNS *e*PP PP 23 14 24.4 +2.5
TNS Taunus Mts 85.83 327 *e*P P 23 11 02.0 -0.2
TNS *e* 23 14 24.4
TNS pmax pmax
comp=Ƶ,81nm,1.2s,mb5.8
L09A Wilkinson Ranc 85.87 44 P P 23 11 03.3 +0.9
baz=86,SNR=9.4
GMNA Gemona 85.91 322 *i* Pr P 23 11 02.7 +0.2
comp=Ƶ,123nm,0.8s,mb6.2
ITM Ithomi 85.93 310 *e*P P 23 11 02.5 -0.1
FVI Forni Avoltri 85.96 322 *i* P P 23 11 02.1 -0.7
FVI Forni Avoltri 85.96 322 *i* Pu P 23 11 02.1 -0.7
NVLJ Novalja 86.05 320 *i* Pg P 23 11 02.0 -1.2
TOD Tromm 86.07 326 *e*P P 23 11 03.3 0.0
S04C Ingram Canyon, 86.11 49 ⇑P P 23 11 03.2 -0.3
baz=86
WCN Washoe City 86.13 47 ⇑P P 23 11 03.7 +0.1
baz=86
WATA Walderalm 86.13 323 ⇓*i*P P 23 11 03.4 -0.2
comp=Ƶ,24nm,1.2s,mb5.3
WATA Walderalm 86.13 323 ⇓*i*P P 23 11 03.4 -0.2
WATA pmax pmax
comp=Ƶ,24nm,1.2s,mb5.3
PAHR Pah Rah Range 86.13 46 *e*P P 23 11 04.1 +0.4
comp=Ƶ,83nm,1.6s,mb5.7
WTTA Wattenberg 86.15 323 *i* P P 23 11 03.7 -0.1
comp=Ƶ,110nm,1.5s,mb5.9,SNR=18
WTTA Wattenberg 86.15 323 *i* P P 23 11 03.7 0.0
WTTA pmax pmax
comp=Ƶ,111nm,1.5s,mb5.9
KAC Achnashellach 86.15 338⇑ *i*P P 23 11 02.5 -1.3
KAC Achnashellach 86.15 338⇑ *i*P P 23 11 02.5 -1.3
SEST Monte Rota 86.16 322 *i* Pr P 23 11 04.4 +0.6
O07A Toulon 86.20 46 ⇑P P 23 11 04.2 +0.3
baz=86,SNR=11
R05C Kirkwood Meado 86.26 48 ⇓P P 23 11 04.2 -0.1
baz=86
VLS Valsamata 86.26 312 *e*P P 23 11 04.5 +0.2
N08A GE Springer Mi 86.30 45 ⇓P P 23 11 04.8 +0.3
baz=86
M09A Marrel Ranch, 86.35 44 ⇓P P 23 11 05.4 +0.6
baz=86
HRY Holter Researc 86.36 37 *e*P P 23 11 05.3 +0.6
MOTA Moosalm 86.37 323⇑ *i*P P 23 11 04.4 -0.4
comp=Ƶ,20nm,0.9s,mb5.3,SNR=19
MOTA Moosalm 86.37 323⇑ *i*P P 23 11 04.4 -0.4
MOTA pmax pmax
comp=Ƶ,20nm,0.9s,mb5.3
KPL Plockton 86.40 338⇑ *e*P P 23 11 03.6 -1.3
KPL Plockton 86.40 338⇑ *e*P P 23 11 03.6 -1.3
SQTA Sankt Quirin 86.40 323⇑ *i*P P 23 11 04.8 -0.1
comp=Ƶ,28nm,1.2s,mb5.4,SNR=14
SQTA Sankt Quirin 86.40 323⇑ *i*P P 23 11 04.8 -0.2
SQTA pmax pmax
comp=Ƶ,28nm,1.2s,mb5.4
PACP Pacheco Peak 86.41 49 ⇑P P 23 11 04.9 -0.1
baz=86
KSB Sheil Bridge 86.42 338⇑ *i*P P 23 11 04.1 -1.0
KSB Sheil Bridge 86.42 338⇑ *i*P P 23 11 04.1 -1.0
STU Stuttgart 86.43 325 *e*P P 23 11 04.5 -0.6
comp=Ƶ,44nm,1.2s,mb5.6
STU *e*PP PP 23 14 27.8 +1.2
STU Stuttgart 86.43 325 *e*P P 23 11 05.3 +0.2
STU pmax pmax
comp=Ƶ,33nm,1.0s,mb5.5
STU Stuttgart 86.43 325 *e*P P 23 11 05.3 +0.2
comp=Ƶ,33nm,1.0s,mb5.5
CMB Columbia Colle 86.43 48 *e*P P 23 11 05.0 -0.1
CMB pmax pmax
comp=Ƶ,44nm,1.4s,mb5.5
CMB Columbia Colle 86.43 48 *e*P P 23 11 05.0 -0.1
comp=Ƶ,44nm,1.4s,mb5.5
CMB Columbia Colle 86.43 48 P P 23 11 05.0 -0.1
baz=86,SNR=5.8
SAO San Andreas Ge 86.43 50 PFAKE 23 11 20.0 +15
SAO LR LR
comp=Ƶ,568nm,19.0s,MS5.0
ESY Stoneypath 86.44 335⇑ *i*P P 23 11 03.9 -1.3
ESY Stoneypath 86.44 335⇑ *i*P P 23 11 03.9 -1.3
ABH Alteburg 86.50 327 *e*P P 23 11 05.9 +0.5
P07A Fallon 86.54 46 ⇑P P 23 11 06.1 +0.5
baz=86
HAST UC Hastings Re 86.57 50 ⇓P P 23 11 05.5 -0.3
baz=86
LRM Limekiln Ridge 86.58 38 *e*P P 23 11 03.8 -2.0
EGMT Eagleton 86.60 36 PFAKE 23 11 20.0 +14
EGMT LR LR
comp=Ƶ,554nm,22.0s,MS4.9
XSO Sourhope Farm 86.64 335⇑ *e*P P 23 11 04.8 -1.3
XSO AMb AMB 23 11 07.3
comp=Ƶ,133nm,1.5s,mb6.0
XSO Sourhope Farm 86.64 335⇑ *e*P P 23 11 04.8 -1.3
XSO AMb AMB 23 11 07.3
comp=Ƶ,133nm,1.5s,mb6.0
N09A Rock Creek Ran 86.64 45 ⇓P P 23 11 06.9 +0.7
baz=86,SNR=6.7
EDI Edinburgh 86.65 336 *e*P P 23 11 05.8 -0.4
EDI AMS AMS 23 54 38.4
comp=Ƶ,2µm,18.9s,MS5.4
EDI Edinburgh 86.65 336 *e*P P 23 11 05.8 -0.4
EDI AMS AMS 23 54 38.4
comp=Ƶ,2µm,18.9s,MS5.4
HGN Heimansgroeve 86.66 328⇑ *i*P P 23 11 05.6 -0.6
comp=Ƶ,89nm,1.8s,mb5.7
HGN Heimansgroeve 86.66 328 *e*S S 23 21 40.6 -0.2
EBL Broad Law 86.71 336⇑ *i*P P 23 11 05.5 -1.0
EBL Broad Law 86.71 336⇑ *i*P P 23 11 05.5 -1.0
MEM Membach 86.73 328 P P 23 11 06.5 0.0
BEBN Eben Emael 86.75 328 P P 23 11 06.3 -0.4
R06C Coleville 86.76 47 P P 23 11 07.3 +0.6
baz=87,SNR=6.2
WAKR Walker 86.78 47 *e*P P 23 11 07.4 +0.5
KAR1 Arisaig 86.79 338⇑ *i*P P 23 11 06.0 -0.9
KAR1 Arisaig 86.79 338⇑ *i*P P 23 11 06.0 -0.9
EAU Auchinoon 86.80 336⇑ *e*P P 23 11 05.9 -1.1
EAU Auchinoon 86.80 336⇑ *e*P P 23 11 05.9 -1.1
M10A I.L. Ranch, Tu 86.85 44 ⇑P P 23 11 08.1 +1.0
baz=87,SNR=6.5
RUP Ruppelstein 86.85 327 *e*P P 23 11 07.4 +0.2
EAB Aberfoyle 86.85 336⇑ *i*P P 23 11 06.1 -1.1
EAB Aberfoyle 86.85 336⇑ *i*P P 23 11 06.1 -1.1
S05C Merced 86.85 49 ⇓P P 23 11 07.0 -0.1
baz=87
S06C San Francisco 86.87 48 ⇓P P 23 11 06.9 -0.3
baz=87,SNR=6.1
HLID Hailey 86.88 41 *e*P P 23 11 07.4 +0.1
LCCM Lewis and Clar 86.89 38 P P 23 11 08.0 +0.7
CTI Castel Tesino 86.91 322 P P 23 11 06.7 -0.8
CTI pmax pmax
comp=Ƶ,35nm,0.8s,mb5.6
CTI Castel Tesino 86.91 322 P P 23 11 06.7 -0.8
comp=Ƶ,35nm,0.8s,mb5.7
PCOU Corrie 86.92 336⇑ *e*P P 23 11 06.6 -0.9
PCOU Corrie 86.92 336⇑ *e*P P 23 11 06.6 -0.9
P08A Dixie Valley 86.97 46 ⇑P P 23 11 08.3 +0.6
baz=87
LANF Langenberg 86.97 326 *e*P P 23 11 07.6 -0.2
V03C Hunter Liggett 86.99 50 ⇓P P 23 11 08.5 +0.7
baz=87
DAVA Damuels 87.05 324⇑ *i*P P 23 11 07.8 -0.4
comp=Ƶ,92nm,1.7s,mb5.7,SNR=11
BMN Battle Mountai 87.07 45 *e*P P 23 11 09.6 +1.4
BMN pmax pmax
comp=Ƶ,62nm,1.6s,mb5.6
BMN Battle Mountai 87.07 45 *e*P P 23 11 09.6 +1.4
comp=Ƶ,62nm,1.6s,mb5.6
U04C Hernandez Rese 87.10 50 ⇑P P 23 11 08.5 +0.1
baz=87
ESK Eskdalemuir 87.12 335⇑ *e*P P 23 11 05.7 -2.8
ESK Eskdalemuir 87.12 335⇑ *e*P P 23 11 05.7 -2.8
ESK Eskdalemuir 87.12 335 *e*P P 23 11 06.3 -2.2
ESK pmax pmax
comp=Ƶ,48nm,1.0s,mb5.7
ESK Eskdalemuir 87.12 335 *e*P P 23 11 06.2 -2.2
comp=Ƶ,48nm,1.0s,mb5.7
BOZ Bozeman (W) 87.14 38 P P 23 11 09.2 +0.6
BOZ pmax pmax
comp=Ƶ,29nm,1.4s,mb5.3
BOZ Bozeman (W) 87.14 38 *e*P P 23 11 08.7 +0.1
comp=Ƶ,29nm,1.5s,mb5.3
BOZ *e*pP pP 23 11 18.8 -1.1
BFO Black Forest 87.15 325 *e*P P 23 11 08.1 -0.5
comp=Ƶ,31nm,1.2s,mb5.4
BFO *e*PP PP 23 14 34.2 +1.7
BFO Black Forest 87.15 325 *e*P P 23 11 08.1 -0.5
BFO *e* 23 14 34.2
BFO pmax pmax
comp=Ƶ,31nm,1.2s,mb5.4
POB1 Observatory 87.15 336⇑ *e*P P 23 11 07.6 -1.0
POB1 Observatory 87.15 336⇑ *e*P P 23 11 07.6 -1.0
BCLA Clavier 87.19 328 P P 23 11 08.4 -0.4
ECK Cauldkaine Hil 87.20 335⇑ *i*P P 23 11 07.7 -1.1
ECK AMb AMB 23 11 09.4
comp=Ƶ,108nm,1.2s,mb6.0
ECK Cauldkaine Hil 87.20 335⇑ *i*P P 23 11 07.7 -1.1
ECK AMb AMB 23 11 09.4
comp=Ƶ,108nm,1.2s,mb6.0
O09A Fish Creek Ran 87.25 45 ⇑P P 23 11 09.4 +0.4
baz=87,SNR=6.0
PMSU Muirshiel 87.26 336⇑ *e*P P 23 11 07.3 -1.9
PMSU Muirshiel 87.26 336⇑ *e*P P 23 11 07.3 -1.9
R07C Lee Vining 87.27 48 ⇓P P 23 11 09.9 +0.7
baz=87
BHH Howats Hill 87.30 335⇑ *e*P P 23 11 08.3 -1.0
BHH Howats Hill 87.30 335⇑ *e*P P 23 11 08.3 -1.0
WLF Walferdange 87.31 327 *e*P P 23 11 09.3 -0.1
comp=Ƶ,182nm,1.5s,mb6.1
WLF Walferdange 87.31 327 P P 23 11 09.9 +0.5
WLF Walferdange 87.31 327 *e*P P 23 11 09.9 +0.5
BRMO Bormio 87.32 323 P P 23 11 08.3 -1.1
N10A Dunphy 87.34 44 ⇑P P 23 11 09.9 +0.3
baz=87
UCC Uccle 87.35 329 P P 23 11 09.1 -0.6
M11A Holland Ranch, 87.35 43 ⇑P P 23 11 10.6 +1.0
baz=87
RGNG Rignano Grg 87.37 317 P P 23 11 10.1 +0.4
BWH Wardlaw 87.39 335⇑ *e*P P 23 11 08.7 -1.1
BWH Wardlaw 87.39 335⇑ *e*P P 23 11 08.7 -1.1
V04C Ramage Ranch, 87.45 50 ⇑P P 23 11 09.5 -0.6
baz=87
T06C Millerton Lake 87.45 49 ⇑P P 23 11 09.8 -0.3
baz=87
PKD Parkfield 87.50 50 ⇑P P 23 11 10.3 0.0
baz=87
KCC Kaiser Creek 87.53 48 ⇓P P 23 11 10.6 +0.1
baz=87
Q08A Gabbs 87.54 46 ⇓P P 23 11 10.4 -0.1
baz=87
NVAR Mina Array Bea 87.55 47 P P 23 11 11.2 +0.6
comp=Ƶ,1.8nm,0.8s,baz=301,slow=3.5,SNR=16
WLS Welschbruch 87.58 326 *e*P P 23 11 10.0 -0.7
SNF Seneffe 87.59 329 P P 23 11 10.9 +0.2
O10A Cortez Mining, 87.60 45 ⇑P P 23 11 11.2 +0.4
baz=87
FELD Feldberg im Sc 87.61 325 *e*P P 23 11 10.0 -0.9
CDF Champ du Feu 87.62 326⇑ *i*P P 23 11 10.5 -0.4
comp=Ƶ,113nm,1.2s,mb5.7
CDF Champ du Feu 87.62 326⇑ *i*P P 23 11 10.5 -0.4
CDF pmax pmax
comp=Ƶ,56nm,1.2s,mb5.7
CDF Champ du Feu 87.62 326⇑ *i*P P 23 11 10.5 -0.4
comp=Ƶ,56nm,1.2s,mb5.7
GIVF Givet 87.63 328⇑ *i*P P 23 11 10.4 -0.5
comp=Ƶ,150nm,1.3s,mb5.8
GIVF Givet 87.63 328⇑ *i*P P 23 11 10.4 -0.5
GIVF pmax pmax
comp=Ƶ,75nm,1.3s,mb5.8
GIVF Givet 87.63 328⇑ *i*P P 23 11 10.4 -0.5
comp=Ƶ,75nm,1.3s,mb5.8
P09A Austin 87.64 45 ⇑P P 23 11 11.5 +0.6
baz=87
CING Cingoli 87.73 319 *i* Pu P 23 11 12.1 +0.7
DOU Dourbes 87.74 328 P P 23 11 10.9 -0.5
FG4 Candela 87.74 317 P P 23 11 12.0 +0.5
comp=Ƶ,211nm,1.0s,mb6.3
GCD Castle Douglas 87.74 335⇑ *i*P P 23 11 10.3 -1.2
GCD Castle Douglas 87.74 335⇑ *i*P P 23 11 10.3 -1.2
N11A Elko Archery C 87.75 44 ⇓P P 23 11 11.9 +0.3
baz=88
QLMT Earthquake Lak 87.77 39 *e*P P 23 11 13.1 +1.5
QLMT *e*PP PP 23 14 40.0 +2.6
FG5 Orsara di Pugl 87.80 317 *i* P P 23 11 12.8 +1.1
FG5 pmax pmax
comp=Ƶ,160nm,1.2s,mb6.1
FG5 Orsara di Pugl 87.80 317 *i* Pr P 23 11 12.8 +1.1
comp=Ƶ,160nm,1.2s,mb6.1
ECH Echery 87.81 326 *e*P P 23 11 11.5 -0.3
TUE Stuetta 87.86 324 *i* Pu P 23 11 12.0 0.0
M12A Wells 87.89 43 ⇑P P 23 11 13.2 +1.1
baz=88,SNR=11
BAIF Baives 87.94 328⇑ *i*P P 23 11 11.9 -0.5
comp=Ƶ,60nm,1.1s,mb5.4
BAIF Baives 87.94 328⇑ *i*P P 23 11 11.9 -0.5
BAIF pmax pmax
comp=Ƶ,30nm,1.1s,mb5.4
BAIF Baives 87.94 328⇑ *i*P P 23 11 11.9 -0.5
comp=Ƶ,30nm,1.1s,mb5.4
GMK Mull of Kintyr 87.95 336⇑ *e*P P 23 11 11.4 -1.1
GMK Mull of Kintyr 87.95 336⇑ *e*P P 23 11 11.4 -1.1
TERO Teramo 87.96 319 P P 23 11 12.9 +0.4
LHO Holmfirth 87.97 334⇑ *e*P P 23 11 11.3 -1.2
LHO AMb AMB 23 11 13.1
comp=Ƶ,107nm,1.3s,mb5.9
LHO Holmfirth 87.97 334⇑ *e*P P 23 11 11.3 -1.2
LHO AMb AMB 23 11 13.1
comp=Ƶ,107nm,1.3s,mb5.9
GAL1 Galloway 88.02 336 P P 23 11 11.4 -1.4
GAL1 Galloway 88.02 336 *e*P P 23 11 10.1 -2.7
GAL1 ⇑*i*P 23 11 11.4
GAL1 Galloway 88.02 336 *e*P P 23 11 10.1 -2.7
GAL1 ⇑*i*P 23 11 11.4
P10A Eureka 88.02 45 ⇓P P 23 11 13.1 +0.3
baz=88
Q09A Carvers 88.03 46 ⇑P P 23 11 13.4 +0.6
baz=88
KBI1 Birley Grange 88.06 333⇑ *e*P P 23 11 11.8 -1.1
KBI1 Birley Grange 88.06 333⇑ *e*P P 23 11 11.8 -1.1
MOF Molkenrain 88.07 326 *e*P P 23 11 12.4 -0.6
HELL Mitchell Peak, 88.09 49 ⇑P P 23 11 12.9 -0.2
baz=88
ELK Elko 88.10 44 P P 23 11 14.0 +0.8
BBS Basel-Blauen 88.14 325 *e*P P 23 11 12.8 -0.6
N12A Clover Valley, 88.16 43 ⇓P P 23 11 14.5 +1.1
baz=88,SNR=8.0
MIDA Miranda 88.18 318 P P 23 11 14.2 +0.6
RNI2 Rionero Sannit 88.21 318 P P 23 11 14.7 +1.0
SMMC Simmler 88.22 50 ⇓P P 23 11 14.1 +0.4
baz=88
HINF Hinteralfeld 88.23 326⇑ *i*P P 23 11 12.8 -1.0
comp=Ƶ,44nm,1.1s,mb5.3
HINF Hinteralfeld 88.23 326⇑ *i*P P 23 11 12.8 -1.0
HINF pmax pmax
comp=Ƶ,22nm,1.1s,mb5.3
HINF Hinteralfeld 88.23 326⇑ *i*P P 23 11 12.8 -1.0
comp=Ƶ,22nm,1.1s,mb5.3
YNR Norris Junctio 88.25 38 *e*P P 23 11 16.9 +3.0
YFT Old Faithful 88.34 39 *e*P P 23 11 17.5 +3.2
HAU Haudompre 88.35 326⇑ *i*P P 23 11 13.6 -0.8
comp=Ƶ,64nm,1.1s,mb5.5
HAU *e*R
comp=Ƶ,5µm,17.5s
HAU Haudompre 88.35 326⇑ *i*P P 23 11 13.6 -0.8
HAU pmax pmax
comp=Ƶ,32nm,1.1s,mb5.5
HAU MLR MLR
comp=Ƶ,5µm,17.5s,MS6.0
HAU Haudompre 88.35 326⇑ *i*P P 23 11 13.6 -0.8
comp=Ƶ,32nm,1.1s,mb5.5
HAU LR LR
comp=Ƶ,5µm,17.5s,MS6.0
GCL Cushendall 88.36 337⇑ *e*P P 23 11 13.2 -1.2
GCL Cushendall 88.36 337⇑ *e*P P 23 11 13.2 -1.2
ZCCA Zocca 88.36 321 P P 23 11 15.5 +1.1
KWE Weaver Farm 88.36 333 *e*P P 23 11 13.2 -1.2
KWE Weaver Farm 88.36 333 *e*P P 23 11 13.2 -1.2
M13A Montello 88.37 43 ⇑P P 23 11 15.1 +0.7
baz=88,SNR=8.0
THEF They Montfort 88.37 326 *e*P P 23 11 13.9 -0.6
FNVD Fontana Vidola 88.40 321 P P 23 11 15.7 +1.1
VVLD Villa Vallelon 88.42 318 P P 23 11 14.6 -0.1
R09A Tonopah 88.45 47 P P 23 11 15.2 +0.4
baz=88,SNR=12
TPH Tonopah 88.45 47 *e*P P 23 11 16.2 +1.4
TPH *e*PP pP 23 11 27.8 +1.7
P11A Circle Ranch, 88.50 45 ⇑P P 23 11 15.5 +0.4
baz=88
LKWY Lake 88.50 38 PFAKE 23 11 30.0 +15
LKWY LR LR
comp=Ƶ,1µm,19.0s,MS5.3
MENF Mencas 88.51 330 *e*P P 23 11 13.9 -1.2
LOMF Lomont 88.56 325 *e*P P 23 11 15.0 -0.3
GSCL Gusciola 88.57 321 P P 23 11 16.5 +1.1
comp=Ƶ,93nm,1.3s,mb6.0
ERBM Eremo 88.62 321 P P 23 11 16.7 +1.0
MEZF Maizieres J'vi 88.63 327⇑ *i*P P 23 11 15.5 -0.2
comp=Ƶ,171nm,1.3s,mb5.9
MEZF Maizieres J'vi 88.63 327⇑ *i*P P 23 11 15.5 -0.2
comp=Ƶ,171nm,1.3s,mb6.2
IMW Indian Meadow 88.64 39 *e*P P 23 11 17.4 +1.7
comp=Ƶ,23nm,1.2s,mb5.4
N13A Wendover, West 88.66 43 ⇓P P 23 11 16.7 +0.9
baz=88
S09A Goldfield 88.66 47 ⇓P P 23 11 16.1 +0.3
baz=88,SNR=6.0
O12A Currie 88.69 44 ⇑P P 23 11 16.6 +0.6
baz=88,SNR=5.2
CSNT Castellina Chi 88.75 320 P P 23 11 15.5 -0.7
BDI Bagni Di Lucca 88.75 321 P P 23 11 16.6 +0.3
RRI2 Red Ridge 88.77 40 *e*P P 23 11 17.9 +1.6
VLC Villacollemand 88.81 321 *e*P P 23 11 18.7 +2.2
comp=Ƶ,41nm,1.2s,mb5.6
TSA1 Sevenoaks 88.87 331 *e*P P 23 11 15.6 -1.2
TSA1 Sevenoaks 88.87 331 *e*P P 23 11 15.6 -1.2
TPAW Teton Pass 88.89 40 *e*P P 23 11 18.7 +1.8
comp=Ƶ,34nm,1.4s,mb5.5
R10A Warm Springs 88.91 46 ⇑P P 23 11 17.6 +0.6
baz=89
BOB Bobbio (Coli) 88.92 322 P P 23 11 17.1 0.0
BOB pmax pmax
comp=Ƶ,43nm,0.9s,mb5.8
BOB Bobbio (Coli) 88.92 322 P P 23 11 17.1 0.0
comp=Ƶ,43nm,0.9s,mb5.8
HVU Hansel Valley 88.93 42 *e*P P 23 11 18.7 +1.6
GMM Mts of Mourne 88.96 336⇑ *i*P P 23 11 15.8 -1.4
GMM Mts of Mourne 88.96 336⇑ *i*P P 23 11 15.8 -1.4
GRAC Grapevine Rang 88.99 48 ⇑P P 23 11 17.5 +0.1
baz=89
SBD1 Bryn Du 89.00 334⇑ *e*P P 23 11 14.8 -2.6
SBD1 Bryn Du 89.00 334⇑ *e*P P 23 11 14.8 -2.6
LOHW Long Hollow 89.00 39 *e*P P 23 11 18.8 +1.4
REDW Red Top Meadow 89.03 40 *e*P P 23 11 19.1 +1.5
ISA Isabella 89.04 49 PFAKE 23 11 30.0 +12
ISA LR LR
comp=Ƶ,110nm,19.0s,MS4.3
P12A McGill 89.07 45 ⇓P P 23 11 18.4 +0.6
baz=89,SNR=5.6
ORO Oropa 89.13 323 P P 23 11 16.8 -1.2
ORO pmax pmax
comp=Ƶ,30nm,1.0s,mb5.6
ORO Oropa 89.13 323 P P 23 11 16.8 -1.2
comp=Ƶ,30nm,1.0s,mb5.6
GRFL Gerfalco 89.13 320 P P 23 11 17.8 -0.2
comp=Ƶ,7.8nm,0.7s,mb5.2
HLM1 Long Mynd 89.15 333⇑ *e*P P 23 11 16.9 -1.2
HLM1 AMb AMB 23 11 19.6
comp=Ƶ,36nm,1.9s,mb5.4
HLM1 Long Mynd 89.15 333⇑ *e*P P 23 11 16.9 -1.2
HLM1 AMb AMB 23 11 19.6
comp=Ƶ,36nm,1.9s,mb5.4
CEL Celeste 89.23 314 P P 23 11 19.6 +1.1
SOI Samo 89.24 314 P P 23 11 19.4 +0.9
SOI pmax pmax
comp=Ƶ,63nm,1.0s,mb5.9
SOI Samo 89.24 314 P P 23 11 19.4 +0.9
comp=Ƶ,63nm,1.0s,mb5.9
DAC Darwin (Calif) 89.26 48 *e*P P 23 11 19.8 +1.2
DAC LR LR
comp=Ƶ,437nm,19.0s,MS4.9
AHID Auburn Hatcher 89.27 40 *e*P P 23 11 19.9 +1.2
LAO LASA Array 89.28 35 PFAKE 23 11 30.0 +11
LAO LR LR
comp=Ƶ,380nm,15.4s,MS4.9
BGU Big Grassy Mou 89.31 42 *e*P P 23 11 19.9 +1.1
BGU *e*pP pP 23 11 31.2 +1.0
TRCR Troy Canyon 89.33 46 *e*P P 23 11 19.9 +0.9
Q12A Willow Creek R 89.38 45 ⇑P P 23 11 19.8 +0.6
baz=89
SPUT South Promonto 89.42 42 *e*P P 23 11 21.0 +1.6
CABF La Chapelle 89.43 325⇑ *i*P P 23 11 18.9 -0.5
comp=Ƶ,30nm,1.0s,mb5.3
CABF La Chapelle 89.43 325⇑ *i*P P 23 11 18.9 -0.5
CABF pmax pmax
comp=Ƶ,15nm,1.0s,mb5.3
CABF La Chapelle 89.43 325⇑ *i*P P 23 11 18.9 -0.5
comp=Ƶ,15nm,1.0s,mb5.3
MPMC Manual Prospec 89.46 48 ⇑P P 23 11 19.8 +0.2
baz=89
MTTG Motta San Giov 89.51 314 P P 23 11 20.4 +0.6
comp=Ƶ,80nm,1.1s,mb6.0
MCH1 Michaelchurch 89.60 333⇑ *i*P P 23 11 19.2 -1.0
MCH1 ⇑*e*P 23 11 19.2
MCH1 Michaelchurch 89.60 333⇑ *i*P P 23 11 19.2 -1.0
MCH1 ⇑*e*P 23 11 19.2
FURC Furnace Creek, 89.63 48 ⇑P P 23 11 20.6 +0.2
baz=89
HTR Trewern Hill 89.64 333⇑ *e*P P 23 11 19.5 -1.0
HTR AMb AMB 23 11 23.0
comp=Ƶ,47nm,1.5s,mb5.6
HTR Trewern Hill 89.64 333⇑ *e*P P 23 11 19.5 -1.0
HTR AMb AMB 23 11 23.0
comp=Ƶ,47nm,1.5s,mb5.6
LRMC Laurel Mountai 89.67 49 ⇓P P 23 11 20.7 +0.2
baz=90
SNCC San Nicolas Is 89.71 52 PFAKE 23 11 30.0 +9.3
SNCC LR LR
comp=Ƶ,597nm,20.0s,MS5.0
SNCC San Nicolas Is 89.71 52 ⇓P P 23 11 20.9 +0.1
baz=90
HWUT Hardware Ranch 89.74 41 *e*P P 23 11 22.4 +1.5
comp=Ƶ,54nm,1.4s,mb5.7
LPL La Plagne 89.85 324⇑ *i*P P 23 11 21.1 -0.3
comp=Ƶ,16nm,0.8s,mb5.1
LPL La Plagne 89.85 324⇑ *i*P P 23 11 21.1 -0.3
LPL pmax pmax
comp=Ƶ,8.0nm,0.8s,mb5.1
LPL La Plagne 89.85 324⇑ *i*P P 23 11 21.1 -0.3
comp=Ƶ,7.8nm,0.8s,mb5.1
LPG La Plagne 89.86 324⇑ *i*P P 23 11 21.2 -0.2
comp=Ƶ,21nm,0.7s,mb5.2

LPG La Plagne 89.86 324⇑ iP P 23 11 21.2 -0.2
LPG pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
LPG La Plagne 89.86 324⇑ iP P 23 11 21.2 -0.2
comp=Z,10nm,0.7s,mb5.3
DUG Dugway 89.90 43 eP P 23 11 22.6 +1.0
DUG pmax pmax
comp=Z,51nm,1.4s,mb5.7
DUG Dugway 89.90 43 eP P 23 11 22.6 +1.0
comp=Z,51nm,1.4s,mb5.7
FIN Finale Ligure 89.96 322 P P 23 11 20.9 -1.0
FIN pmax pmax
comp=Z,34nm,1.1s,mb5.6
FIN Finale Ligure 89.96 322 P P 23 11 20.9 -1.0
comp=Z,34nm,1.1s,mb5.6
LOR Lormes 90.07 327⇑ iP P 23 11 21.6 -0.8
comp=Z,53nm,1.2s,mb5.4
LOR eR
comp=Z,6µm,18.0s
LOR Lormes 90.07 327⇑ iP P 23 11 21.6 -0.8
LOR pmax pmax
comp=Z,26nm,1.2s,mb5.4
LOR MLR MLR
comp=Z,6µm,18.0s,MS6.0
LOR Lormes 90.07 327⇑ iP P 23 11 21.6 -0.8
comp=Z,26nm,1.2s,mb5.4
LOR LR LR
comp=Z,6µm,18.0s,MS6.0
BW06 Boulder Array 90.14 39 eP P 23 11 22.2 -0.5
comp=Z,26nm,1.4s,mb5.4
BW06 epP pP 23 11 32.4 -1.7
PDAR Pinedale Array 90.14 39 P P 23 11 22.6 -0.1
comp=Z,4.8nm,1.0s,mb4.8,baz=318,slow=2.0,SNR=30
TCUT Toone Canyon 90.14 42 eP P 23 11 25.0 +2.2
TCUT epP pP 23 11 34.3 +0.2
TCUT ePP PP 23 15 04.5 +8.1
BNI Bardonecchia 90.20 324 eP P 23 11 22.9 -0.1
BNI e 23 14 56.3
CTU Camp Tracy 90.21 42 eP P 23 11 24.4 +1.3
PPT Papeete 90.25 110 eSS SS 23 28 16.9 +2.5
comp=Z,447nm,24.8s
PPT eLR LR 23 40 08.0
comp=Z,668nm,24.8s,baz=284
PPT Papeete 90.25 110 LR LR 23 44 34.0
comp=Z,370nm,19.0s,MS4.8,baz=290,slow=31
IMI Imperia 90.33 322 P P 23 11 23.4 -0.2
comp=Z,17nm,0.9s,mb5.4
GSC Goldstone 90.35 49 eP P 23 11 25.8 +2.0
GSC e*PP pP 23 11 36.8 +1.7
MBDF Montbardon 90.37 323⇑ iP P 23 11 22.7 -1.1
comp=Z,36nm,1.1s,mb5.3
MBDF Montbardon 90.37 323⇑ iP P 23 11 22.7 -1.1
MBDF pmax pmax
comp=Z,18nm,1.1s,mb5.3
MBDF Montbardon 90.37 323⇑ iP P 23 11 22.7 -1.1
comp=Z,18nm,1.1s,mb5.3
SAOF Saorge 90.45 322 eP P 23 11 23.2 -1.0
NLU North Lily Min 90.49 43 eP P 23 11 25.9 +1.5
SMF Signal de Mont 90.52 326⇑ iP P 23 11 23.7 -0.8
comp=Z,97nm,1.1s,mb5.7
SMF Signal de Mont 90.52 326⇑ iP P 23 11 23.7 -0.8
SMF pmax pmax
comp=Z,48nm,1.1s,mb5.7
SMF Signal de Mont 90.52 326⇑ iP P 23 11 23.7 -0.8
comp=Z,48nm,1.1s,mb5.7
TOUF Mont Tournerai 90.60 323 eP P 23 11 23.9 -1.0
SBF Sospel 90.60 322 eP P 23 11 23.8 -1.1
comp=Z,68nm,1.2s,mb5.6
SBF Sospel 90.60 322 eP P 23 11 23.8 -1.1
SBF pmax pmax
comp=Z,34nm,1.2s,mb5.5
SBF Sospel 90.60 322 eP P 23 11 23.8 -1.1
comp=Z,34nm,1.2s,mb5.5
LUCF Luceram 90.63 323 eP P 23 11 24.1 -0.9
VAE Valguarnera 90.63 314 LR LR 23 57 41.1
comp=Z,970nm,18.2s,MS5.3,baz=46,slow=39
AVF Avril sur Loir 90.66 327⇑ iP P 23 11 24.4 -0.8
comp=Z,83nm,1.2s,mb5.6
AVF Avril sur Loir 90.66 327⇑ iP P 23 11 24.4 -0.8
AVF pmax pmax
comp=Z,42nm,1.2s,mb5.6
AVF Avril sur Loir 90.66 327⇑ iP P 23 11 24.4 -0.8
comp=Z,42nm,1.2s,mb5.6
HYF Humbligny 90.66 327⇑ iP P 23 11 25.1 -0.1
ORIF Oris-en-Rattie 90.70 324 eP P 23 11 24.9 -0.5
comp=Z,11nm,0.8s,mb4.9
ORIF eR
comp=Z,4µm,18.8s
ORIF Oris-en-Rattie 90.70 324 eP P 23 11 24.9 -0.5
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
ORIF Oris-en-Rattie 90.70 324 eP P 23 11 24.9 -0.5
comp=Z,5.6nm,0.8s,mb5.0
SHPR Sheep Range 90.71 47 eP P 23 11 26.8 +1.4
SHPR epP pP 23 11 37.4 +0.7
MPU Maple Canyon 90.71 43 eP P 23 11 27.6 +2.1
MVIF Mont Vial 90.73 323 eP P 23 11 25.2 -0.3
TUQ Turquoise Mtn. 90.85 48 ⇓P P 23 11 25.9 -0.2
baz=91
HEC Hector,Ludlow 90.95 49 ⇓P P 23 11 26.5 0.0
baz=91
LDF La Druitiere 90.96 330⇑ iP P 23 11 25.9 -0.7
comp=Z,199nm,1.3s,mb6.0
LDF La Druitiere 90.96 330⇑ iP P 23 11 25.9 -0.7
LDF pmax pmax
comp=Z,99nm,1.3s,mb6.0
LDF La Druitiere 90.96 330⇑ iP P 23 11 25.9 -0.7
comp=Z,99nm,1.3s,mb6.0
FLN La Foliniere 90.99 330⇑ iP P 23 11 26.0 -0.7
comp=Z,130nm,1.3s,mb5.8
FLN eR
comp=Z,6µm,22.5s
FLN La Foliniere 90.99 330⇑ iP P 23 11 26.0 -0.7
FLN pmax pmax
comp=Z,65nm,1.3s,mb5.8
FLN MLR MLR
comp=Z,6µm,22.5s,MS6.0
FLN La Foliniere 90.99 330⇑ iP P 23 11 26.0 -0.7
comp=Z,65nm,1.3s,mb5.8
FLN LR LR
comp=Z,6µm,22.5s,MS6.0
ARUT Antelope Range 91.01 45 P P 23 11 27.4 +0.6
ARUT Antelope Range 91.01 45 eP P 23 11 26.5 -0.3
BGF Bois d'Agland 91.06 327 eP P 23 11 26.3 -0.8
comp=Z,76nm,1.4s,mb5.5
BGF Bois d'Agland 91.06 327 eP P 23 11 26.3 -0.8
BGF pmax pmax
comp=Z,39nm,1.4s,mb5.5
BGF Bois d'Agland 91.06 327 eP P 23 11 26.3 -0.8
comp=Z,39nm,1.4s,mb5.5
PLDF La Plantade 91.11 326 eP P 23 11 26.7 -0.5
U12A Valley of Fire 91.15 47 ⇓P P 23 11 27.2 -0.2
baz=91
FRF La Foret Royal 91.23 323⇑ iP P 23 11 26.8 -1.0
comp=Z,44nm,1.2s,mb5.4
FRF La Foret Royal 91.23 323⇑ iP P 23 11 26.8 -1.0
FRF pmax pmax
comp=Z,22nm,1.2s,mb5.4
FRF La Foret Royal 91.23 323⇑ iP P 23 11 26.8 -1.0
comp=Z,22nm,1.2s,mb5.4
AGO Saint Agoulin 91.29 326 eP P 23 11 27.6 -0.5
MSU Marysvale 91.34 44 eP P 23 11 29.9 +1.6
VIVF Saint-Julien-l 91.36 325⇑ iP P 23 11 27.5 -0.9
comp=Z,65nm,1.6s,mb5.4
VIVF Saint-Julien-l 91.36 325⇑ iP P 23 11 27.5 -0.9
VIVF pmax pmax
comp=Z,32nm,1.6s,mb5.4
VIVF Saint-Julien-l 91.36 325⇑ iP P 23 11 27.5 -0.9
comp=Z,32nm,1.6s,mb5.4
JRS Jersey 91.37 331 eP P 23 11 27.4 -1.1
JRS Jersey 91.37 331 eP P 23 11 27.4 -1.1
ULM Lac du Bonnet 91.37 27 P P 23 11 28.3 -0.2
comp=Z,19nm,1.0s,mb5.4,baz=311,slow=8.5,SNR=12
ULM Lac du Bonnet 91.37 27 P P 23 11 28.3 -0.2
ULM LR LR
comp=Z,735nm,19.0s,MS5.1
V12A Nelson 91.38 47 ⇑P P 23 11 29.1 +0.5
baz=91
JVM Valle D.L. Mar 91.40 331 eP P 23 11 27.3 -1.3
JVM Valle D.L. Mar 91.40 331 eP P 23 11 27.3 -1.3
JSA Saint Aubin 91.41 331⇑ eP P 23 11 27.7 -0.9
JSA Saint Aubin 91.41 331⇑ eP P 23 11 27.7 -0.9
GMRC Granite Mounta 91.42 49 ⇑P P 23 11 29.4 +0.7
baz=91
GRR Gorron 91.44 330⇑ iP P 23 11 28.3 -0.5
comp=Z,289nm,1.3s,mb6.1
GRR Gorron 91.44 330⇑ iP P 23 11 28.3 -0.5
GRR pmax pmax
comp=Z,144nm,1.3s,mb6.1
GRR Gorron 91.44 330⇑ iP P 23 11 28.3 -0.5
comp=Z,144nm,1.3s,mb6.2
LMR La Mourre 91.45 323⇑ iP P 23 11 28.1 -0.8
comp=Z,94nm,1.3s,mb5.7
LMR La Mourre 91.45 323⇑ iP P 23 11 28.1 -0.8
LMR pmax pmax
comp=Z,47nm,1.3s,mb5.7
LMR La Mourre 91.45 323⇑ iP P 23 11 28.1 -0.8
comp=Z,47nm,1.3s,mb5.7
SMRF Simiane la Rot 91.51 323 eP P 23 11 27.5 -1.6
comp=Z,27nm,1.2s,mb5.1
SMRF Simiane la Rot 91.51 323 eP P 23 11 27.5 -1.6
comp=Z,27nm,1.2s,mb5.5
PYM Petit Puy Mans 91.56 326 eP P 23 11 29.2 -0.2
TCF Toulx Ste Croi 91.56 327⇑ iP P 23 11 28.9 -0.5
comp=Z,53nm,1.2s,mb5.4
TCF Toulx Ste Croi 91.56 327⇑ iP P 23 11 28.9 -0.5
TCF pmax pmax
comp=Z,26nm,1.2s,mb5.4
TCF Toulx Ste Croi 91.56 327⇑ iP P 23 11 28.9 -0.5
comp=Z,26nm,1.2s,mb5.4
PFO Pinyon Flat Ob 91.59 50 PFAKE 23 11 40.0 +11
PFO LR LR
comp=Z,200nm,21.0s,MS4.5
PFO Pinyon Flat Ob 91.59 50 ⇑P P 23 11 29.7 +0.2
baz=91
W12A Cal Nev Ari 91.62 48 ⇓P P 23 11 30.2 +0.6
baz=91
BELC Belle Mtn. 91.66 49 ⇓P P 23 11 30.2 +0.4
baz=92
LBL Lubilhac 91.81 326 eP P 23 11 30.8 +0.3
SRU San Rafael 91.95 43 eP P 23 11 32.0 +0.8
RWWY Rawlins 92.15 39 eP P 23 11 33.0 +0.9
comp=Z,16nm,1.1s,mb5.2
RSSD Black Hills 92.17 36 eP P 23 11 33.0 +0.8
RSSD pmax pmax
comp=Z,36nm,1.4s,mb5.5
RSSD Black Hills 92.17 36 eP P 23 11 33.0 +0.9
comp=Z,36nm,1.4s,mb5.5
SGMF Saint Gilles 92.28 330⇑ iP P 23 11 32.4 -0.3
comp=Z,229nm,1.2s,mb6.1
SGMF Saint Gilles 92.28 330⇑ iP P 23 11 32.4 -0.3
SGMF pmax pmax
comp=Z,115nm,1.2s,mb6.1
SGMF Saint Gilles 92.28 330⇑ iP P 23 11 32.4 -0.3
comp=Z,115nm,1.2s,mb6.1
W13A Hualapai Mount 92.38 47 ⇓P P 23 11 33.5 +0.4
baz=92
VSL Villasalto 92.41 318 eP P 23 11 33.5 +0.2
ROSF Rostrenen 92.53 331⇑ iP P 23 11 33.5 -0.3
comp=Z,254nm,1.2s,mb6.2
ROSF Rostrenen 92.53 331⇑ iP P 23 11 33.5 -0.3
ROSF pmax pmax
comp=Z,127nm,1.2s,mb6.2
ROSF Rostrenen 92.53 331⇑ iP P 23 11 33.5 -0.3
comp=Z,127nm,1.2s,mb6.2
RJF Les Rejaudoux 92.61 326⇑ iP P 23 11 34.0 -0.2
comp=Z,83nm,1.2s,mb5.7
RJF eR
comp=Z,5µm,18.2s
RJF Les Rejaudoux 92.61 326⇑ iP P 23 11 34.0 -0.2
RJF pmax pmax
comp=Z,42nm,1.2s,mb5.7
RJF MLR MLR
comp=Z,5µm,18.3s,MS6.0
RJF Les Rejaudoux 92.61 326⇑ iP P 23 11 34.0 -0.2
comp=Z,42nm,1.2s,mb5.7
RJF LR LR
comp=Z,5µm,18.3s,MS6.0
CAF Calvac 92.62 326⇑ iP P 23 11 34.0 -0.2
comp=Z,50nm,1.4s,mb5.5
CAF Calvac 92.62 326⇑ iP P 23 11 34.0 -0.2
CAF pmax pmax
comp=Z,25nm,1.4s,mb5.5
CAF Calvac 92.62 326⇑ iP P 23 11 34.0 -0.2
comp=Z,25nm,1.4s,mb5.5
PDMCI Parker Dam,Lak 92.71 48 ⇓P P 23 11 35.2 +0.6
baz=92
X13A Yucca 92.73 48 ⇓P P 23 11 35.0 +0.3
baz=92
Y12C Blythe 92.79 49 ⇑P P 23 11 35.2 +0.1
baz=93
QUIF Quistinic 92.80 331⇑ iP P 23 11 34.6 -0.5
comp=Z,111nm,1.1s,mb5.9
QUIF Quistinic 92.80 331⇑ iP P 23 11 34.6 -0.5
QUIF pmax pmax
comp=Z,55nm,1.1s,mb5.9
QUIF Quistinic 92.80 331⇑ iP P 23 11 34.6 -0.5
comp=Z,55nm,1.1s,mb5.9
W14A Seligman 92.83 47 P P 23 11 36.3 +1.1
baz=93,SNR=6.8
KMBO Kilima Mbogo 92.98 270 P P 23 11 37.2 +1.4
comp=Z,6.7nm,0.9s,mb5.1,baz=52,slow=6.4,SNR=17
KMBO PP PP 23 15 19.8 +0.9
comp=Z,1.3nm,0.7s,baz=41,slow=9.6,SNR=3.9
KMBO LR LR 23 58 50.0
comp=Z,605nm,18.9s,MS5.1,baz=275,slow=39
KMBO Kilima Mbogo 92.98 270 P P 23 11 37.3 +1.4
KMBO 23 15 19.8
GLA Glamis 93.01 50 eP P 23 11 37.1 +1.0
GLA Glamis 93.01 50 ⇓P P 23 11 36.8 +0.7
baz=93
Y13A Salome 93.21 48 ⇑P P 23 11 37.5 +0.5
baz=93
TBI Tubuai 93.22 115 ePP PP 23 15 17.0 -3.7
comp=Z,98nm,27.5s
TBI Tubuai 93.22 115 eSS SS 23 28 54.1 -3.1
comp=Z,313nm,25.0s
TBI eLR LR 23 41 40.2
comp=Z,919nm,23.8s,baz=303
LFF La Frestale 93.25 327⇑ iP P 23 11 37.0 -0.2
comp=Z,48nm,1.1s,mb5.5
LFF La Frestale 93.25 327⇑ iP P 23 11 37.0 -0.2
LFF pmax pmax
comp=Z,24nm,1.1s,mb5.5
LFF La Frestale 93.25 327⇑ iP P 23 11 37.0 -0.2
comp=Z,24nm,1.1s,mb5.5
W15A Williams 93.37 47 ⇑P P 23 11 38.8 +1.1
baz=93
PHWY Pilot Hill 93.38 38 eP P 23 11 37.2 -0.6
X14A Yava 93.42 47 ⇑P P 23 11 38.6 +0.7
baz=93
Y14A Wickenburg 93.67 48 ⇓P P 23 11 39.8 +0.7
baz=94
MTLF Montolieu 93.68 325 eP P 23 11 37.3 -1.9
comp=Z,26nm,1.5s,mb5.1
MTLF Montolieu 93.68 325 eP P 23 11 37.3 -1.9
MTLF pmax pmax
comp=Z,13nm,1.5s,mb5.1
MTLF Montolieu 93.68 325 eP P 23 11 37.3 -1.9
comp=Z,13nm,1.5s,mb5.1
WUAZ Wupatki 93.73 46 PFAKE 23 11 50.0 +11
WUAZ LR LR
comp=Z,577nm,20.0s,MS5.0
PV01 Paradox Valley 93.75 42 eP P 23 11 38.8 -0.6
X15A Humboldt 93.83 47 ⇓P P 23 11 41.1 +1.3
baz=94,SNR=6.2
SMCO Snowmass 93.98 41 eP P 23 11 42.2 +1.7
TAOE Nuku Hiva Isla 94.05 98 ePS PS 23 24 09.1 +1.5
comp=Z,1µm,26.1s
TAOE Nuku Hiva Isla 94.05 98 eSS SS 23 29 12.1 +3.0
comp=Z,825nm,22.7s
TAOE eLR LR 23 41 24.5
comp=Z,2µm,24.0s
ISCO Idaho Springs 94.33 40 eP P 23 11 43.5 +1.4
EPF Esparros 94.85 326 eP P 23 11 43.2 -1.3
comp=Z,24nm,1.4s,mb5.1
EPF Esparros 94.85 326 eP P 23 11 43.2 -1.3
EPF pmax pmax
comp=Z,12nm,1.4s,mb5.1
EPF Esparros 94.85 326 eP P 23 11 43.2 -1.3
comp=Z,12nm,1.4s,mb5.1
KEST Kesra 94.89 315 P P 23 11 45.8 +1.1
comp=Z,4.6nm,1.0s,mb4.9,baz=358,slow=5.4,SNR=8.8
KEST PP PP 23 15 36.3 +2.5
comp=Z,2.1nm,1.0s,baz=332,slow=6.3,SNR=3.9
115A Sonoran Desert 94.95 49 ⇓P P 23 11 45.9 +0.9
baz=95
SCHQ Schefferville 95.41 10 P P 23 11 46.0 -1.1
comp=Z,10nm,1.0s,mb5.2,baz=33,slow=5.3,SNR=5.3
SCHQ LR LR 23 58 17.5
comp=Z,2µm,19.2s,MS5.5,baz=337,slow=38
DRV Dumont d'Urvil 95.51 176 PP PP 23 15 36.0 -2.6
DRV SP SP 23 24 13.0 -6.0
DRV SS SS 23 29 24.0 -5.9
SJPF Ste Jean 95.56 326 eP P 23 11 45.9 -1.8
comp=Z,36nm,1.5s,mb5.3
SJPF Ste Jean 95.56 326 eP P 23 11 45.9 -1.8
SJPF pmax pmax
comp=Z,18nm,1.5s,mb5.3
SJPF Ste Jean 95.56 326 eP P 23 11 45.9 -1.8
comp=Z,18nm,1.5s,mb5.3
SDCO Great Sand Dun 95.80 41 PFAKE 23 12 00.0 +11
SDCO LR LR
comp=Z,807nm,21.0s,MS5.2
TUC Tucson 96.14 48 PFAKE 23 12 00.0 +10
TUC LR LR
comp=Z,502nm,20.0s,MS5.0
ANMO Albuquerque 97.13 44⇑ eP P 23 11 54.5 -0.4
ANMO Albuquerque 97.13 44 P P 23 11 54.7 -0.2
ANMO LR LR
comp=Z,437nm,22.0s,MS4.9
ESDC Sonseca Array 99.51 326 P P 23 12 03.6 -1.9
comp=Z,5.4nm,1.0s,mb4.9,baz=31,slow=4.0,SNR=13
ESDC PP PP 23 16 10.1 +0.8
comp=Z,12nm,1.1s,baz=44,slow=8.0,SNR=11
JFWS Jewell Farm 99.56 29 PFAKE 23 12 20.0 +14
JFWS LR LR
comp=Z,586nm,21.0s,MS5.1
MNTX Cornudas Mount 100.00 45 PFAKE 23 12 20.0 +12
MNTX LR LR
comp=Z,641nm,20.0s,MS5.1
WMOK Wichita Mounta 101.75 39 PFAKE 23 12 30.0 +15
WMOK LR LR
comp=Z,471nm,18.4s,MS5.0
AAM Ann Arbor 102.69 25 PFAKE 23 12 30.0 +10
AAM LR LR
comp=Z,756nm,17.6s,MS5.3
ERPA Erie 104.15 23 PFAKE 23 12 40.0 +14
ERPA LR LR
comp=Z,1µm,15.2s,MS5.5
NCB Newcomb 104.21 18 PFAKE 23 12 40.0 +14
NCB LR LR
comp=Z,888nm,21.3s,MS5.3
JCT Junction City 104.26 43 PFAKE 23 12 40.0 +13
JCT LR LR
comp=Z,481nm,14.0s,MS5.2
SIUC Southern Illin 104.27 31 ePdif Pdif 23 12 26.6 -0.1
LBNH Lisbon 104.55 16 PFAKE 23 12 40.0 +12
LBNH LR LR
comp=Z,1µm,22.0s,MS5.3
MIAR Mount Ida 104.69 36 PFAKE 23 12 40.0 +11
MIAR LR LR
comp=Z,537nm,21.0s,MS5.1
ACSO Alum Creek Sta 104.74 26 PFAKE 23 12 40.0 +11
ACSO LR LR
comp=Z,568nm,20.0s,MS5.1
RKT Rikitea 104.93 108 ePP PP 23 16 49.6 -0.5
comp=Z,60nm,28.8s
RKT Rikitea 104.93 108 ePS PS 23 26 04.2 -0.3
comp=Z,312nm,27.2s
RKT Rikitea 104.93 108 eSKSac SKSac 23 23 03.6 -3.4
comp=Z,463nm,32.2s
RKT eSS SS 23 31 42.4 +1.2
comp=Z,503nm,26.8s
RKT eLR LR 23 46 56.4
comp=Z,617nm,23.2s
WCI Wyandotte Cave 105.13 29 PFAKE 23 17 00.0 +15
WCI LR LR
comp=Z,213nm,21.0s,MS4.7
BINY Binghamton 105.35 20 PFAKE 23 17 00.0 +15
BINY LR LR
comp=Z,1µm,21.0s,MS5.5
WVT Waverly 106.20 31 PFAKE 23 17 00.0 +13
WVT LR LR
comp=Z,724nm,19.0s,MS5.2
NATX Nacogdoches 106.25 39 PFAKE 23 17 00.0 +13
NATX LR LR
comp=Z,729nm,20.0s,MS5.2
HRV Harvard--Oak R 106.27 16 PFAKE 23 17 00.0 +13
HRV LR LR
comp=Z,734nm,20.0s,MS5.2
WES Weston 106.44 16 PFAKE 23 17 00.0 +13
WES LR LR
comp=Z,711nm,22.0s,MS5.2
HKT Hockley 106.97 41 PFAKE 23 17 00.0 +12
HKT LR LR
comp=Z,98nm,20.0s,MS4.4
PLAL Pickwick Lake 107.03 32 PFAKE 23 17 00.0 +12
PLAL LR LR
comp=Z,659nm,19.0s,MS5.2
LSZ Lusaka 107.42 262 PFAKE 23 17 00.0 +11
LSZ LR LR
comp=Z,1µm,19.0s,MS5.4
VNDA Vanda 107.83 173 PP PP 23 17 08.9 -2.5
comp=Z,1.3nm,1.1s,baz=329,slow=7.7,SNR=4.4
VNDA Vanda 107.83 173 PFAKE 23 17 00.0 +10
VNDA LR LR
comp=Z,917nm,21.0s,MS5.3
MAW Mawson 108.23 202 PFAKE 23 17 00.0 +9.4
MAW LR LR
comp=Z,319nm,16.6s,MS5.0
BLA Blacksburg 108.35 25 PFAKE 23 17 00.0 +9.2
BLA LR LR
comp=Z,114nm,20.0s,MS4.4
CBN Corbin 108.55 22 PFAKE 23 17 00.0 +8.8
CBN LR LR
comp=Z,1µm,20.0s,MS5.5
SBA Scott Base 108.67 172 PFAKE 23 17 00.0 +8.6
SBA LR LR
comp=Z,755nm,22.0s,MS5.2
LBTB Lobatse 113.59 253 PFAKE 23 17 10.0 +9.2
LBTB LR LR
comp=Z,717nm,22.0s,MS5.2
TORD Torodi Ar. Bea 114.94 303 PKP PKiKP 23 17 03.3 0.0
comp=Z,4.8nm,1.0s,baz=12,slow=2.3,SNR=16
TORD PP PP 23 18 00.0 -2.4
comp=Z,7.6nm,1.0s,baz=32,slow=6.2,SNR=5.2
TORD PKKPbc PKKPbc 23 27 39.8 +0.2
comp=Z,0.6nm,0.8s,baz=248,slow=1.7,SNR=4.8
BOSA Boshof 115.17 250 PKiKP PKiKP 23 17 03.4 -0.4
comp=Z,2.9nm,1.0s,baz=109,slow=12,SNR=3.6
CMIG Matias Romero 117.00 49 PKiKP PKiKP 23 17 06.8 -0.5
comp=Z,2.4nm,0.7s,baz=80,slow=0.5,SNR=5.6
BBSR BB Station 117.54 14 PFAKE 23 17 20.0 +12
BBSR LR LR
comp=Z,686nm,20.0s,MS5.3
TSUM Tsumeb 118.26 263 PFAKE 23 17 20.0 +10
TSUM LR LR
comp=Z,873nm,22.0s,MS5.3
DBIC Dimbokro 124.03 302 PKP PKPdf 23 17 21.5 +0.7
comp=Z,9.6nm,0.8s,baz=104,slow=2.8,SNR=9.0
SNAA Sanae 130.10 198⇑ iPKiKP PKPdf 23 17 31.5 -0.9
SJG San Juan 130.77 20 PFAKE 23 17 50.0 +16
SJG LR LR
comp=Z,397nm,20.0s,MS5.1
CPD Cerro la Pandu 130.91 20 ePKiKP PKPdf 23 17 34.8 +0.9
CPD Cerro la Pandu 130.91 20 ePKPdf PKPdf 23 17 33.7 -0.2
PAYG Puerto Ayora 132.41 61 PFAKE 23 17 50.0 +13
PAYG LR LR
comp=Z,282nm,20.1s,MS5.0
SDV Santo Domingo 137.52 31 ePKPdf PKPdf 23 17 47.1 +0.8
SDV epPKPdf pPKPdf 23 17 58.0 0.0
ROSC El Rosal 139.11 39 PKP PKPdf 23 17 50.6 +1.4
comp=Z,2.9nm,0.4s,baz=90,slow=21,SNR=7.0
ATAH Atahualpa 145.48 57 PKPbc PKPbc 23 18 02.4 +1.8
comp=Z,9.7nm,0.7s,baz=358,slow=1.6,SNR=9.1
NNA Nana 149.85 62 PKPbc PKPbc 23 18 11.0 -1.6
comp=Z,18nm,0.8s,baz=286,slow=5.5,SNR=5.5
NNA Nana 149.85 62 ePKPdf PKPdf 23 18 10.8 +3.0
RCBR Riachuelo 153.52 327 PFAKE 23 18 30.0 +17
RCBR LR LR
comp=Z,610nm,20.0s,MS5.4
SAML Samuel 156.63 35 ePKPdf PKPdf 23 18 17.9 +0.4
LPAZ La Paz 159.12 57 PKP PKPdf 23 18 22.6 +2.0
comp=Z,2.4nm,1.0s,baz=337,slow=1.9,SNR=6.1
PLCA Paso Flores 159.40 131 PKP PKPdf 23 18 22.1 +1.1
comp=Z,1.5nm,0.9s,baz=337,slow=18,SNR=2.1
LVC Limon Verde 161.85 74 PFAKE 23 18 40.0 +16
LVC LR LR
comp=Z,674nm,22.0s
SIV San Ignacio 163.62 41 PKP PKPdf 23 18 26.4 +1.1
comp=Z,7.3nm,1.2s,baz=349,slow=1.5,SNR=14
BDFB Brasilia 166.74 352 PKP PKPdf 23 18 28.8 +0.8
comp=Z,4.1nm,0.9s,baz=11,slow=6.8,SNR=4.1
BDFB PKPab PKPab 23 19 30.5 -0.4
comp=Z,8.3nm,0.9s,baz=3.8,slow=5.5,SNR=6.1
CPUP Villa Florida 173.00 71 PKP PKPdf 23 18 32.6 +1.0
comp=Z,2.9nm,0.8s,baz=197,slow=0.9,SNR=4.6
CPUP Villa Florida 173.00 71 PKP PKPdf 23 18 32.6 +1.0

CPUP LR LR
comp=Z,201nm,22.0s

MAN 31 23:02:01.8, 1299N×12087E, h27km, mb1.9, ML3.6, MS3.4, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.51**	**9**	*eP*	Pb	23 02 09.2	-3.1
TGY	**Tagaytay City**	**1.11**	**4**	*eP*	Pn	23 02 20.9	-0.5
TGY				*eS*	Sn	23 02 35.9	+0.1
OTRP	**Odiongan**	**1.29**	**119**	*eP*	Pn	23 02 23.7	-0.3
OTRP				*eS*	Sn	23 02 40.0	-0.3
POLP	**Polilio Island**	**2.02**	**31**	*eP*	Pn	23 02 35.0	+1.0
POLP				*eS*	Sn	23 03 00.9	+2.6
CUYO	**Cuyo Island**	**2.13**	**176**	*eP*	Pn	23 02 35.9	+0.3
ENPP	**El Nido**	**2.27**	**219**	*eP*	Pn	23 02 38.2	+0.7
BALP	**Baler**	**2.82**	**14**	*eP*	Pn	23 02 48.0	+3.0

*IDC **31** 23:03:17.4±0.7, 2886N×13028E, h0km, mb4.2/13, mb1 4.2/14, mb1mx4.2/24, mbtmp4.2/14, ML3.3/1, MS4.9/2, Ms1 4.8/2, ms1mx3.8/36, Error ellipse: s-maj=25.2km s-min=15.5km az=83.0*
*MOS **31** 23:03:20.2±1.4, 2879N×13025E, h33km, mb4.8/3, Error ellipse: s-maj=18.4km s-min=11.4km az=110.2*
*ISCJB **31** 23:03:22.1±0.5, 2873N±004×13021E±007, h51km±4km, mb4.2/17, MS5.0/2, Error ellipse: s-maj=11.9km s-min=3.9km az=50.5*
*JMA **31** 23:03:22.4±0.2, 2873N×130.19E, h53km±4km, M3.7*
*NEIC **31** 23:03:22.4±3.0, 2881N×130.18E, h35km±22km, mb4.6/4, Error ellipse: s-maj=12.4km s-min=9.4km az=118.0*

ISC 31 23:03:23.3±0.5, 2874N±004×13018E±007, h42km±4km, n45, σ0§90/54, mb4.2/17, MS5.0/2, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.46**	**203**	P	**Pn**	**23 03 33.3**	**-0.3**
JZK				S	**Sn**	**23 03 41.7**	**+0.8**
JAM	**Amami Oshima**	**0.60**	**237**	P	**Pn**	**23 03 35.0**	**-0.4**
JAM				S	**Sn**	**23 03 44.0**	**-0.1**
JNN	**Nakanoshima**	**1.13**	**347**	P	**Pn**	**23 03 42.3**	**-0.3**
JTK	**Tokunoshima**	**1.44**	**229**	P	**Pn**	**23 03 48.0**	**+1.1**
JKC	**Kuchinoerabu**	**1.72**	**1**	P	**Pn**	**23 03 51.0**	**+0.3**
JKC				S	**Sn**	**23 04 11.7**	**+0.3**
JTN	**Tanegashima 3**	**2.03**	**20**	P	**Pn**	**23 03 54.5**	**-0.5**
JTN				*eS*	**Sn**	**23 04 18.9**	**-0.2**
JTSR	**Tashiro 2**	**2.50**	**15**	P	**Pn**	**23 04 00.7**	**-0.8**
JTSR				*eS*	**Sn**	**23 04 30.7**	**-0.1**
JOW	**Kunigami**	**2.54**	**222**	Pn	**Pn**	**23 04 01.9**	**0.0**
	10nm,0.3s,baz=107,slow=26,SNR=2.3						
JOW				Sn	**Sn**	**23 04 35.5**	**+3.9**
	11nm,0.3s,baz=149,slow=27,SNR=3.2						
JOW	**Kunigami**	**2.54**	**222**	P	**Pn**	**23 04 02.0**	**0.0**
JOW				*eS*	**Sn**	**23 04 31.1**	**-0.5**
JIH	**Iheya**	**2.59**	**230**	P	**Pn**	**23 04 02.7**	**0.0**
JIH				*eS*	**Sn**	**23 04 31.8**	**-1.1**
JNAR	**Kushima--Naru**	**2.94**	**19**	P	**Pn**	**23 04 07.5**	**+0.1**
JNAR				*eS*	**Sn**	**23 04 41.0**	**-0.4**
JSJ	**Shimokoshiki**	**2.96**	**352**	P	**Pn**	**23 04 08.0**	**+0.3**
JSJ				*eS*	**Sn**	**23 04 43.3**	**+1.4**
JTZ	**Takazaki**	**3.25**	**14**	P	**Pn**	**23 04 11.8**	**+0.1**
JTZ				*eS*	**Sn**	**23 04 49.8**	**+0.7**
NACB	**Ninganchiao**	**8.93**	**241**	Pn	**Pn**	**23 05 29.0**	**-0.7**
MAJO	**Matsushiro**	**10.31**	**39**	P	**Pn**	**23 05 47.6**	**-1.0**
SONM	**Songino Array**	**26.50**	**322**	P	**P**	**23 08 57.2**	**+0.6**
	2.6nm,1.0s,mb3.7,baz=148,slow=7.8,SNR=3.3						
SKR	**Severo-Kuril's**	**29.37**	**35**	*eP*	**P**	**23 09 23.1**	**+0.8**
LSA	**Lhasa**	**33.97**	**281**	P	**P**	**23 10 01.3**	**-1.3**
MKAR	**Makanchi Array**	**41.22**	**309**	P	**P**	**23 11 04.0**	**+0.1**
	1.2nm,0.7s,mb3.6,baz=90,slow=9.9,SNR=4.8						
MKAR	**Makanchi Array**	**41.22**	**309**	P	**P**	**23 11 04.0**	**+0.1**
WRA	**Warramunga Arr**	**48.56**	**175**	P	**P**	**23 12 02.4**	**0.0**
	1.4nm,0.6s,mb4.2,baz=351,slow=8.2,SNR=4.8						
CHKZ	**Chkalovo**	**49.52**	**318**	*eP*	**P**	**23 12 07.9**	**-1.7**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
CHKZ	**Chkalovo**	**49.52**	**318**	*eP*	**P**	**23 12 07.9**	**-1.8**
	comp=Z,1.7nm,0.4s,mb4.4						
BVAR	**Borovoye Array**	**49.60**	**317**	P	**P**	**23 12 10.8**	**+0.6**
	comp=Z,5.9nm,0.6s,mb4.8,baz=88,slow=8.7,SNR=23						
BRVK	**Borovoye**	**49.66**	**317**	*eP*	**P**	**23 12 11.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
BRVK	**Borovoye**	**49.66**	**317**	*eP*	**P**	**23 12 11.1**	**+0.3**
	comp=Z,4.3nm,0.5s,mb4.7						
ZRNK	**Zerenda**	**50.43**	**317**	*eP*	**P**	**23 12 16.5**	**0.0**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
ZRNK	**Zerenda**	**50.43**	**317**	*eP*	**P**	**23 12 16.5**	**0.0**
	comp=Z,5.7nm,0.7s,mb4.7						
ASAR	**Alice Springs**	**52.23**	**176**	P	**P**	**23 12 31.7**	**+1.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=9.0,slow=13,SNR=6.3						
ARU	**Arti**	**56.52**	**321**	*iP*	**P**	**23 13 03.2**	**+2.0**
KDAK	**Kodiak Island**	**59.48**	**37**	P	**P**	**23 13 21.8**	**-0.2**
	comp=Z,9.8nm,1.0s,mb4.8,baz=18,slow=18,SNR=2.7						
COLA	**College**	**60.99**	**29**	P	**P**	**23 13 29.2**	**-3.1**
	comp=Z,254nm,1.3s						
STKA	**Stephens Creek**	**61.25**	**169**	P	**P**	**23 13 35.1**	**+1.1**
	comp=Z,1.6nm,0.8s,mb4.2,baz=348,slow=9.3,SNR=2.6						
INK	**Inuvik**	**65.91**	**24**	P	**P**	**23 14 03.2**	**-1.5**
	comp=Z,0.6nm,0.3s,mb4.1,baz=216,slow=15,SNR=4.7						
INK	**Inuvik**	**65.91**	**24**	P	**P**	**23 14 03.2**	**-1.5**
JOF	**Joensuu**	**68.69**	**331**	*ep*	**P**	**23 14 21.5**	**-0.9**
	comp=Z,3.6nm,0.4s,mb4.7						
GNI	**Garni**	**68.85**	**305**	LR	LR	23 48 00.4	
	comp=Z,1μm,19.2s,MS5.1,baz=222,slow=39						
FINES	**FINESS Array B**	**71.53**	**331**	P	**P**	**23 14 39.1**	**-0.7**
	comp=Z,1.6nm,0.5s,mb4.2,baz=74,slow=5.7,SNR=12						
AKASG	**Malin Array Be**	**74.75**	**320**	P	**P**	**23 14 58.6**	**-0.2**
	comp=Z,2.2nm,0.4s,mb4.4,baz=60,slow=6.2,SNR=7.3						
KIS	**Kishinev**	**76.68**	**316**	*iP*	**P**	**23 15 12.0**	**+2.2**
BR131	**Keskin Array S**	**76.86**	**308**	*eP*	**P**	**23 15 11.8**	**+1.1**
	comp=Z,3.3nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**76.86**	**308**	P	**P**	**23 15 12.1**	**+1.3**
	comp=Z,3.2nm,0.8s,mb4.3,baz=96,slow=3.7,SNR=8.0						
NOA	**NORSAR Array B**	**77.82**	**334**	P	**P**	**23 15 15.4**	**-0.8**
	comp=Z,0.6nm,0.7s,mb3.7,baz=48,slow=5.5,SNR=2.7						
GERES	**GERESS Array B**	**84.23**	**324**	P	**P**	**23 15 49.6**	**-0.7**
	comp=Z,0.7nm,0.7s,mb3.9,baz=74,slow=5.2,SNR=5.0						
PDAR	**Pinedale Array**	**90.13**	**39**	LR	LR	23 58 55.5	
	comp=Z,352nm,18.2s,MS4.8,baz=344,slow=37						

*ISCJB **31** 23:15:38.5±0.7, 3965N±004×2085E±006, h6km±4km, Error ellipse: s-maj=8.2km s-min=7.3km az=128.5*
*CSEM **31** 23:15:38.5±0.1, 3968N×2090E, h10km, ML2.1, Error ellipse: s-maj=3.3km s-min=2.4km az=161.0*
*THE **31** 23:15:39.0, 3969N×2085E, h0km, ML2.1*
*ATH **31** 23:15:38.1, 3971N×2092E, h6km, MD3.0/3*

ISC 31 23:15:38.4±0.8, 3961N±005×2087E±007, h6km±5km, n9, σ0§74/13, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.05**	**346**	*ePG*	**Pg**	**23 15 39.7**	**-0.1**
JAN				*eSG*	**Sg**	**23 15 40.9**	**+0.1**
MEV	**Metsovon**	**0.33**	**58**	*ePg*	**Pg**	**23 15 44.3**	**-0.5**
IGT	**Igoumenitsa**	**0.42**	**259**	*ePg*	**Pg**	**23 15 47.3**	**+0.8**
KEK	**Kerkira**	**0.83**	**277**	*ePB*	**Pb**	**23 15 54.5**	**-0.6**
EVR	**Evrytania**	**1.01**	**133**	*ePB*	**Pb**	**23 15 57.9**	**-0.3**
FNA	**Florina**	**1.23**	**18**	*ePg*	**Pg**	**23 16 00.5**	**-1.6**
FNA				*eSg*	**Sg**	**23 16 18.9**	**+0.8**
AGG	**Agios Georgios**	**1.28**	**117**	*ePg*	**Pg**	**23 16 03.8**	**+0.8**
AGG				*eSg*	**Sg**	**23 16 24.0**	**+4.5**
BIA	**Bitola**	**1.45**	**14**	*ePn*	**Pn**	**23 16 05.1**	**+0.1**
BIA				*eSn*	**Sn**	**23 16 25.1**	**+0.8**
GRG	**Griva**	**1.78**	**41**	*ePb*	**Pn**	**23 16 09.1**	**-0.6**

*MOS **31** 23:16:41.8±1.2, 2886S×7075W, h75km, mb5.5/14, Error ellipse: s-maj=19.4km s-min=6.7km az=98.9*
*ISCJB **31** 23:16:41.7±0.3, 2888S±002×7059W±005, h76km±3km, mb4.6/43, Error ellipse: s-maj=7.7km s-min=3.0km az=178.1*
*GUC **31** 23:16:42.0±0.9, 2887S×7060W, h80km±9km, ML5.4*
*HRVD **31** 23:16:42.0±0.4, 2889S×7086W, h81km±3km, MW5.1/49, Centroid moment Tensor Solution. LP body waves: s23,c29;Mantle waves: s49,c70; Half duration: 0*

Moment tensor: Scale 10^16^Nm; Mrr=0.79±.22; Mθθ2.34±.20; Mφφ-1.55±.25; Mrθ1.21±.12; Mrφ-4.72±.20; Mθφ1.23±.20; Best double couple: M0 5.43000×10^16^ NP1:ϕ§167.00000°, δ73.00000°, λ-13.00000°. NP2: ϕ§261.00000°, δ78.00000°, λ-163.00000°. Principal axes: T 5.5170, Plg3.0000°, Azm33.0000°; N -0.1770, Plg69.0000°, Azm295.0000°; P -5.3430, Plg20.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
*NEIC **31** 23:16:42.0, 2887S×7060W, h80km, mb4.7/32, After GUC.*
*IDC **31** 23:16:43.5±0.4, 2879S×7060W, h75km±2km, mb4.2/12, mb1 4.4/18, mb1mx4.3/24, mbtmp4.6/18, MS3.8/9, Ms1 3.8/9, ms1mx3.7/21, Error ellipse: s-maj=15.2km s-min=8.8km az=75.0*

ISC 31 23:16:42.8±0.3, 2886S±002×7065W±005, h70km±3km, h78km±1.0km:pP-P, n176, σ1§00/173, mb4.6/43, 10C-7D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VACH	**Vallenar**	**0.30**	**342**	*iP*	**Pn**	**23 16 57.0**	**+3.1**
VACH				*i* S	**Sn**	**23 17 05.9**	**+3.8**
VACH				AML	AML	23 17 07.7	
	comp=N,186μm,0.5s						
VACH	**Vallenar**	**0.30**	**342**	*iP*	**Pn**	**23 16 57.0**	**+3.1**
VACH				*i* S	**Sn**	**23 17 05.9**	**+3.8**
LSCH	**La Serena**	**1.17**	**206**	*eP*	**Pn**	**23 17 03.6**	**+0.2**
LSCH				*i* S	**Sn**	**23 17 18.8**	**+2.0**
TLL	**Tololo Astrono**	**1.31**	**186**	*iP*	**Pn**	**23 17 06.3**	**+1.0**
TLL				*i* S	**Sn**	**23 17 23.9**	**+2.5**
TLL				AML	AML	23 17 29.7	
	comp=N,75μm,0.7s						
TLL	**Tololo Astrono**	**1.31**	**186**	*iP*	**Pn**	**23 17 06.3**	**+1.0**
TLL				*i* S	**Sn**	**23 17 23.9**	**+2.5**
CPCH	**Copiapo**	**1.52**	**10**	*eP*	**Pn**	**23 17 07.9**	**0.0**
CPCH				*i* S	**Sn**	**23 17 27.7**	**+1.3**
CDCH	**Caldera**	**1.79**	**355**	*iP*	**Pn**	**23 17 11.3**	**-0.2**
CDCH				*i* S	**Sn**	**23 17 33.8**	**+0.9**
CDCH				AML	AML	23 17 40.5	
	comp=N,50μm,0.5s						
CDCH	**Caldera**	**1.79**	**355**	*iP*	**Pn**	**23 17 11.3**	**-0.2**
CDCH				*i* S	**Sn**	**23 17 33.8**	**+0.9**
OVCH	**Ovalle**	**1.81**	**195**	*iP*	**Pn**	**23 17 11.9**	**+0.1**
OVCH				*i* S	**Sn**	**23 17 34.2**	**+0.7**
OVCH				AML	AML	23 17 40.6	
	comp=N,112μm,0.5s						
OVCH	**Ovalle**	**1.81**	**195**	*iP*	**Pn**	**23 17 11.9**	**+0.1**
OVCH				*i* S	**Sn**	**23 17 34.2**	**+0.7**
CMCH	**Combarbala**	**2.33**	**187**	*iP*	**Pn**	**23 17 18.6**	**-0.2**
CMCH				*i* S	**Sn**	**23 17 46.7**	**+0.4**
CHNG	**Los Chungos**	**3.10**	**193**	*eP*	**Pn**	**23 17 28.6**	**-0.8**
CHNG				*i* S	**Sn**	**23 18 04.7**	**-0.5**
PTCH	**Petorca**	**3.40**	**184**	*eP*	**Pn**	**23 17 33.7**	**+0.2**
PTCH				*i* S	**Sn**	**23 18 11.9**	**-0.7**
CFAA	**Coronel Fontan**	**3.44**	**143**	P	**Pn**	**23 17 35.9**	**+1.9**
	comp=N,74nm,0.3s,baz=322,slow=13,SNR=1097						
CFAA				S	**Sn**	**23 18 17.3**	**+3.7**
	comp=N,32nm,0.3s,baz=331,slow=12,SNR=3.1						
CFAA				LR	LR	23 18 43.5	
	comp=N,177nm,18.8s,baz=294,slow=34						
CFAA	**Coronel Fontan**	**3.44**	**143**	P	**Pn**	**23 17 35.9**	**+1.9**
CFAA				S	**Sn**	**23 18 17.3**	**+3.7**
CFAA				LR	LR	23 18 43.5	
PACH	**Papudo**	**3.73**	**190**	*eP*	**Pn**	**23 17 37.0**	**-0.9**
JACH	**Jahuel**	**3.81**	**179**	*eP*	**Pn**	**23 17 39.5**	**+0.5**
ROCH	**El Roble**	**4.11**	**184**	*eP*	**Pn**	**23 17 42.3**	**-0.8**
CPN1	**Cerro Paranal**	**4.22**	**3**	*eP*	**Pn**	**23 17 43.4**	**-1.2**
IHA	**Instituto Hidr**	**4.24**	**191**	*eP*	**Pn**	**23 17 43.4**	**-1.4**
PEL	**Peldehue**	**4.27**	**180**	*eP*	**Pn**	**23 17 45.1**	**-0.2**
PEL				*i* S	**Sn**	**23 18 33.7**	**-0.2**
MDZ	**Mendoza**	**4.30**	**159**	*eP*	**Pn**	**23 17 46.9**	**+1.2**
MDZ				*i*		23 17 50.9	
MDZ				*i*		23 18 04.5	
MDZ				S	**Sn**	**23 18 17.7**	**-17**
MDZ				S	**Sn**	**23 18 42.9**	**+8.3**
FCH	**Farellones**	**4.47**	**176**	*iP*	**Pn**	**23 17 49.5**	**+1.5**
FCH				*i* S	**Sn**	**23 18 39.6**	**+1.0**
CLCH	**Cerro Calan**	**4.53**	**179**	*eP*	**Pn**	**23 17 48.9**	**+0.1**
CLCH				*i* S	**Sn**	**23 18 41.0**	**+1.0**
LACH	**Colegio Las Am**	**4.58**	**179**	*eP*	**Pn**	**23 17 48.9**	**-0.7**
SAN	**Santiago**	**4.58**	**180**	*eP*	**Pn**	**23 17 49.4**	**-0.1**
RCDM	**Rinconada Maip**	**4.62**	**182**	*eP*	**Pn**	**23 17 49.9**	**-0.1**
RCDM				*i* S	**Sn**	**23 18 41.5**	**-0.9**
LCCH	**Las Cruces**	**4.67**	**189**	*eP*	**Pn**	**23 17 49.5**	**-1.3**
ANTU	**Antumapu**	**4.70**	**180**	*eP*	**Pn**	**23 17 51.0**	**-0.1**
PCH	**Pirque**	**4.75**	**179**	*eP*	**Pn**	**23 17 51.8**	**0.0**
TACH	**Talagante**	**4.79**	**183**	*eP*	**Pn**	**23 17 52.0**	**-0.3**
CHCH	**Chadas Angostu**	**5.06**	**180**	*iP*	**Pn**	**23 17 56.0**	**-0.1**
LNV	**Longovilo**	**5.12**	**187**	*iP*	**Pn**	**23 17 55.3**	**-1.7**
ANCH	**Antofagasta**	**5.16**	**2**	*eP*	**Pn**	**23 17 54.8**	**-2.7**
CACH	**El Canelo**	**5.24**	**180**	*iP*	**Pn**	**23 17 59.2**	**+0.6**
CICH	**Cipreses**	**5.45**	**178**	*eP*	**Pn**	**23 18 01.7**	**+0.3**
SFDO	**San Fernando**	**5.75**	**183**	*iP*	**Pn**	**23 18 04.6**	**-0.9**
NICH	**Los Niches**	**6.15**	**184**	*eP*	**Pn**	**23 18 09.4**	**-1.5**
LVC	**Limon Verde**	**6.41**	**15**	P	**Pn**	**23 18 14.4**	**-0.1**
	comp=N,14nm,0.3s,baz=52,slow=0.0,SNR=65						
LVC				LR	LR	23 20 46.3	
	comp=N,1μm,21.8s,baz=45,slow=38						
LVC	**Limon Verde**	**6.41**	**15**	*ePn*	**Pn**	**23 18 13.2**	**-1.4**
	comp=N,564nm,0.7s						
LVC				Sn	**Sn**	**23 19 43.5**	**+17**
TALC	**Talca**	**6.57**	**187**	*eP*	**Pn**	**23 18 14.4**	**-2.3**
CCHI	**Chillan**	**7.82**	**188**	*eP*	**Pn**	**23 18 33.1**	**-0.6**
TRQA	**Tornquist**	**11.68**	**144**	*ePn*	**Pn**	**23 19 27.8**	**+1.2**
	comp=N,400nm,0.6s						
TRQA				*eSn*	**Sn**	**23 21 34.1**	**-1.0**
PLCA	**Paso Flores**	**11.85**	**180**	P	**Pn**	**23 19 29.7**	**+1.0**
	comp=N,0.6nm,0.3s,baz=358,slow=15,SNR=8.6						
PLCA	**Paso Flores**	**11.85**	**180**	*eP*	**Pn**	**23 19 27.3**	**-1.5**
PLCA				pmax	pmax		
	comp=Z,20nm,0.6s						
PLCA	**Paso Flores**	**11.85**	**180**	*ePn*	**Pn**	**23 19 27.3**	**-1.5**
	comp=Z,20nm,0.6s						
CPUP	**Villa Florida**	**12.08**	**81**	P	**Pn**	**23 19 31.2**	**-0.7**
	comp=Z,2.1nm,0.3s,baz=237,slow=12,SNR=42						
CPUP				S	**Sn**	**23 21 37.3**	**-7.6**
	comp=Z,4.2nm,0.3s,baz=206,slow=17,SNR=1.5						
CPUP	**Villa Florida**	**12.08**	**81**	*eP*	**Pn**	**23 19 30.3**	**-1.7**
CPUP				*e*		23 21 40.2	
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CPUP	**Villa Florida**	**12.08**	**81**	*ePn*	**Pn**	**23 19 30.3**	**-1.7**
	comp=Z,1.8nm,0.6s						
CPUP				*eSn*	**Sn**	**23 21 40.2**	**-4.7**
LPAZ	**La Paz**	**12.72**	**11**	P	**Pn**	**23 19 39.5**	**-1.3**
	comp=Z,1.7nm,0.3s,baz=180,slow=8.2,SNR=28						
LPAZ				LR	LR	23 24 20.6	
	comp=Z,389nm,21.3s,baz=226,slow=36						
LPAZ	**La Paz**	**12.72**	**11**	*ePn*	**Pn**	**23 19 42.3**	**+1.6**
SIV	**San Ignacio**	**15.56**	**37**	P	**Pn**	**23 20 15.9**	**-1.9**
	comp=Z,1.3nm,0.3s,baz=229,slow=17,SNR=17						
NNA	**Nana**	**17.75**	**340**	LR	LR	23 26 16.2	
	comp=Z,259nm,20.6s,baz=170,slow=32						
NNA	**Nana**	**17.75**	**340**	P	**Pn**	**23 20 45.9**	**+0.7**
SAML	**Samuel**	**21.01**	**21**	*eP*	**P**	**23 21 20.9**	**+0.4**
ATAH	**Atahualpa**	**22.94**	**340**	LR	LR	23 28 54.5	
	comp=Z,263nm,19.5s,baz=346,slow=32						
EFI	**East Falkland**	**24.66**	**161**	*eP*	**P**	**23 21 58.3**	**+1.4**
EFI				*e*		23 22 10.6	
EFI				pmax	pmax		
	comp=Z,47nm,0.6s,mb5.1						
EFI	**East Falkland**	**24.66**	**161**	*eP*	**P**	**23 21 58.3**	**+1.4**
	comp=Z,48nm,0.6s,mb5.1						
EFI				*e*		23 22 10.6	
BDFB	**Brasilia**	**24.68**	**63**	P	**P**	**23 21 57.4**	**+0.3**
	comp=Z,10nm,0.6s,mb4.4,baz=242,slow=12,SNR=13						
BDFB				LR	LR	23 32 25.1	
	comp=Z,199nm,20.1s,baz=48,slow=38						
BDFB	**Brasilia**	**24.68**	**63**	*eP*	**P**	**23 21 57.4**	**+0.3**
BDFB				*e*		23 22 21.2	
BDFB				pmax	pmax		
	comp=Z,130nm,0.6s						
BDFB	**Brasilia**	**24.68**	**63**	*eP*	**P**	**23 21 57.4**	**+0.3**
	comp=Z,13nm,0.6s,mb4.5						
BDFB				*e*		23 22 21.2	
USHA	**Ushuaia**	**26.00**	**177**	P	**P**	**23 22 08.8**	**-0.3**
	comp=Z,19nm,1.0s,mb4.5,baz=299,slow=14,SNR=3.0						
USHA				pP	pP	23 22 27.9	+2.3
	comp=Z,27nm,1.0s,baz=334,slow=8.4,SNR=3.8						
USHA				LR	LR	23 31 52.4	
	comp=Z,333nm,21.8s,baz=348,slow=35						
CAM4	**Nova Friburgo**	**26.11**	**82**	(P)	**P**	**23 22 08.7**	**-1.3**
CAM3	**Guarapari**	**28.47**	**80**	(P)	sP	23 23 00.7	+4.7
CAM3				*i*		23 23 02.9	
CAM3				*i*		23 23 08.2	
ROSC	**El Rosal**	**33.70**	**353**	LR	LR	23 36 41.3	
	comp=Z,135nm,20.2s,baz=188,slow=36						
PAYG	**Puerto Ayora**	**33.72**	**323**	*eP*	**P**	**23 23 14.1**	**-3.3**
PMSA	**Palmer Station**	**36.17**	**175**	*eP*	**P**	**23 23 37.4**	**-1.0**
PMSA				*e*		23 24 06.8	
SDV	**Santo Domingo**	**37.52**	**0**	P	**P**	**23 23 48.2**	**-1.6**
	comp=Z,7.4nm,0.9s,mb4.5,baz=243,slow=6.8,SNR=4.5						
SDV	**Santo Domingo**	**37.52**	**0**	*eP*	**P**	**23 23 49.0**	**-0.9**
	comp=Z,2.9nm,0.4s,mb4.5						
RCBR	**Riachuelo**	**40.05**	**62**	P	**P**	**23 24 12.3**	**+1.3**
SJG	**San Juan**	**46.90**	**6**	*eP*	**P**	**23 25 04.2**	**-1.9**
SJG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SJG	**San Juan**	**46.90**	**6**	*eP*	**P**	**23 25 04.2**	**-1.8**
	comp=Z,6.6nm,0.6s,mb4.5						
TEIG	**Tepich**	**51.68**	**339**	P	**P**	**23 25 42.2**	**-0.3**
VNA1	**Neumayer--Stat**	**53.97**	**159**	*e*	**P**	**23 26 00.0**	**+0.6**
VNA1				*e*		23 26 01.5	
VNA1				*e*		23 26 28.1	
VNA1				*e*		23 26 31.1	
VNA1				*e*		23 26 35.3	
VNA1				*e*		23 26 53.4	
SNAA	**Sanae**	**55.93**	**159**	P	**P**	**23 26 13.4**	**-0.2**
	comp=Z,3.4nm,0.7s,mb4.5,baz=283,slow=6.8,SNR=69						
SNAA				pP	pP	23 26 32.1	+0.5
	comp=Z,2.2nm,0.7s,baz=291,slow=7.2,SNR=4.7						
SNAA				sP	sP	23 26 40.7	+1.3
	comp=Z,9.0nm,0.7s,baz=293,slow=7.0,SNR=13						
SNAA	**Sanae**	**55.93**	**159**	*e*	**P**	**23 26 12.2**	**-1.3**
SNAA				*e*		23 26 15.4	
SNAA				*e*		23 26 40.7	
SNAA				*e*		23 26 41.8	
SNAA				*e*		23 27 06.4	
MAIT	**Maitri**	**60.56**	**158**	*eP*	**P**	**23 26 45.3**	**-0.6**
MAIT				*ep*	pP	23 27 05.6	+1.5
NVL	**N'lazarevskaya**	**60.59**	**158**	*iP*	**P**	**23 26 43.1**	**-3.0**
NVL				*e*		23 34 57.1	
NVL				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
NVL				pmax	pmax		
	comp=Z,416nm,18.7s						
QSPA	**South Pole Qui**	**61.37**	**180**	*eP*	**P**	**23 26 51.7**	**+0.4**
	comp=Z,8.8nm,0.9s,mb4.8						
JCT	**Junction City**	**65.22**	**332**	*eP*	**P**	**23 27 17.9**	**+1.1**
JCT				*e*PP	pP	23 27 38.3	+3.1
JCT				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.5						
JCT	**Junction City**	**65.22**	**332**	*eP*	**P**	**23 27 17.9**	**+1.1**
	comp=Z,6.4nm,0.7s,mb4.6						
JCT				*ep*P	pP	23 27 38.3	+3.1
SWET	**Sewanee**	**65.34**	**346**	P	**P**	**23 27 17.3**	**-0.3**
ELN	**Prospectdale**	**66.42**	**351**	P	**P**	**23 27 23.5**	**-1.0**
WVT	**Waverly**	**66.63**	**345**	*eP*	**P**	**23 27 25.4**	**-0.5**
WVT				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.6						
WVT	**Waverly**	**66.63**	**345**	*eP*	**P**	**23 27 25.4**	**-0.5**
	comp=Z,6.3nm,0.6s,mb4.6						
MIAR	**Mount Ida**	**66.68**	**340**	*eP*	**P**	**23 27 26.0**	**-0.1**
MIAR				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.4						
MIAR	**Mount Ida**	**66.68**	**340**	*eP*	**P**	**23 27 26.0**	**-0.1**
	comp=Z,3.5nm,0.7s,mb4.3						
SBA	**Scott Base**	**68.34**	**191**	*eP*	**P**	**23 27 37.4**	**+0.8**
WMOK	**Wichita Mounta**	**68.61**	**335**	*eP*	**P**	**23 27 37.9**	**-0.4**
WMOK				*e*PP	pP	23 27 56.5	-0.3
MNTX	**Cornudas Mount**	**68.69**	**329**	*eP*	**P**	**23 27 34.6**	**-4.2**
	comp=Z,1.9nm,0.7s,mb4.0						
MNTX				*ep*P	pP	23 27 57.5	+0.1
FVM	**French Village**	**69.02**	**343**	*eP*	**P**	**23 27 41.0**	**+0.1**
FVM				*e*PP	pP	23 28 01.0	+1.6
FVM				*e*SP	sP	23 28 08.4	+1.2
FVM				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
FVM	**French Village**	**69.02**	**343**	*eP*	**P**	**23 27 41.0**	**+0.1**
	comp=Z,20nm,

RSSD				*e**PP	pP	23 28 57.8	+1.0		
RSSD				*e**SP	sP	23 29 06.4	+1.9		
RSSD				pmax	pmax				
	comp=Z,20nm,0.6s,mb5.1								
RSSD	**Black Hills**	**78.79**	**336**	*eP*	**P**	**23 28 37.8**	**-0.1**		
	comp=Z,1.5nm,0.6s,mb4.0								
RSSD				*e*pP	pP	23 28 57.8	+1.0		
RSSD				*es*P	sP	23 29 06.4	+2.0		
DUG	**Dugway**	**79.08**	**328**	*eP*	**P**	**23 28 39.9**	**+0.4**		
DUG				*e**PP	pP	23 29 00.5	+2.1		
DUG				*e**SP	sP	23 29 08.6	+2.5		
DUG				pmax	pmax				
	comp=Z,140nm,1.1s,mb5.7								
DUG	**Dugway**	**79.08**	**328**	*eP*	**P**	**23 28 39.9**	**+0.4**		
	comp=Z,14nm,1.1s,mb4.7								
DUG				*e*pP	pP	23 29 00.5	+2.1		
DUG				*es*P	sP	23 29 08.6	+2.5		
TSUM	**Tsumeb**	**79.49**	**106**	*eP*	**P**	**23 28 42.6**	**+0.9**		
	comp=Z,6.7nm,1.0s,mb4.4								
TSUM				*e*PcP	PcP	23 28 51.2	+1.7		
TSUM				*e*pP	pP	23 29 02.7	+2.0		
TSUM				*es*P	sP	23 29 10.2	+1.9		
HWUT	**Hardware Ranch**	**79.66**	**330**	*eP*	**P**	**23 28 43.5**	**+0.9**		
	comp=Z,3.3nm,0.5s,mb4.4								
HWUT				*e*PcP	PcP	23 28 50.5	+0.3		
HWUT				*e*pP	pP	23 29 03.3	+1.7		
HWUT				*es*P	sP	23 29 11.3	+2.1		
PDAR	**Pinedale Array**	**79.75**	**332**	P	**P**	**23 28 44.1**	**+1.0**		
	comp=Z,0.7nm,0.6s,mb3.7,baz=114,slow=5.5,SNR=6.8								
PDAR				pP	pP	23 29 03.1	+1.0		
	comp=Z,1.4nm,0.6s,baz=122,slow=7.6,SNR=6.5								
PDAR				sP	sP	23 29 12.4	+2.7		
	comp=Z,2.7nm,0.6s,baz=133,slow=6.3,SNR=7.7								
SPUT	**South Promonto**	**79.81**	**329**	*eP*	**P**	**23 28 44.3**	**+0.8**		
SPUT				*e*pP	pP	23 29 04.3	+1.9		
SPUT				*es*P	sP	23 29 11.5	+1.5		
NVAR	**Mina Array Bea**	**80.39**	**324**	P	**P**	**23 28 47.1**	**+0.5**		
	comp=Z,0.6nm,0.8s,mb3.5,baz=144,slow=6.3,SNR=2.4								
NVAR				pP	pP	23 29 08.5	+2.9		
	comp=Z,0.9nm,0.6s,baz=145,slow=5.8,SNR=4.7								
NVAR				sP	sP	23 29 16.2	+3.0		
	comp=Z,2.4nm,0.8s,baz=135,slow=6.0,SNR=7.6								
NVAR	**Mina Array Bea**	**80.39**	**324**	P	**P**	**23 28 47.1**	**+0.5**		
NVAR				pP	pP	23 29 08.5	+2.9		
NVAR				sP	sP	23 29 16.2	+3.0		
REDW	**Red Top Meadow**	**80.78**	**332**	*eP*	**P**	**23 28 43.3**	**-5.4**		
	comp=Z,16nm,1.0s,mb4.8								
REDW				*e*pP	pP	23 29 09.7	+2.0		
SNOW	**Snow King Moun**	**80.83**	**332**	P	**P**	**23 28 47.7**	**-1.2**		
LOHW	**Long Hollow**	**80.89**	**332**	P	**P**	**23 28 49.1**	**-0.1**		
	comp=Z,7.7nm,1.0s,mb4.5								
LOHW				*e*pP	pP	23 29 09.0	+0.8		
TPAW	**Teton Pass**	**80.93**	**332**	*eP*	**P**	**23 28 49.2**	**-0.3**		
	comp=Z,9.5nm,1.0s,mb4.6								
TPAW				*e*pP	pP	23 29 10.7	+2.2		
TPAW				*es*P	sP	23 29 18.8	+2.7		
RRI2	**Red Ridge**	**80.97**	**331**	*eP*	**P**	**23 28 50.4**	**+0.7**		
	comp=Z,11nm,1.0s,mb4.7								
RRI2				*e*PcP	PcP	23 28 57.1	+1.2		
RRI2				*e*pP	pP	23 29 11.4	+2.8		
RRI2				*es*P	sP	23 29 18.3	+2.0		
CMB	**Columbia Colle**	**81.19**	**322**	*eP*	**P**	**23 28 51.4**	**+0.5**		
CMB				*e**PP	pP	23 29 14.1	+4.2		
CMB				*e**SP	sP	23 29 17.6	+0.1		
CMB				pmax	pmax				
	comp=Z,50nm,1.1s,mb5.3								
CMB	**Columbia Colle**	**81.19**	**322**	*eP*	**P**	**23 28 51.4**	**+0.5**		
	comp=Z,4.7nm,1.1s,mb4.2								
CMB				*e*PcP	PcP	23 28 59.9	+3.0		
CMB				*e*pP	pP	23 29 14.1	+4.2		
CMB				*es*P	sP	23 29 17.6	+0.1		
IMW	**Indian Meadow**	**81.26**	**332**	*eP*	**P**	**23 28 52.7**	**+1.5**		
	comp=Z,2.2nm,0.6s,mb4.2								
IMW				*e*pP	pP	23 29 12.8	+2.6		
IMW				*es*P	sP	23 29 20.0	+2.1		
IMW				*e*PP	PP	23 31 58.1	+0.7		
FLWY	**Flagg Ranch**	**81.31**	**332**	*eP*	**P**	**23 28 51.4**	**0.0**		
FLWY				*e*pP	pP	23 29 14.5	+4.0		
TOA0	**Torodi Ar. Sit**	**81.34**	**70**	*eP*	**P**	**23 28 51.9**	**+0.3**		
TOA0				*e*pP	pP	23 29 13.5	+2.9		
TOA0				*es*P	sP	23 29 20.9	+2.6		
TORD	**Torodi Ar. Bea**	**81.34**	**70**	P	**P**	**23 28 51.9**	**+0.2**		
	comp=Z,4.7nm,0.6s,mb4.5,baz=269,slow=5.1,SNR=44								
TORD				pP	pP	23 29 13.2	+2.5		
	comp=Z,3.7nm,0.6s,baz=269,slow=5.7,SNR=4.0								
TORD				sP	sP	23 29 20.8	+2.5		
	comp=Z,6.6nm,0.7s,baz=262,slow=4.7,SNR=5.7								
BOSA	**Boshof**	**81.41**	**118**	P	**P**	**23 28 52.3**	**+0.3**		
	comp=Z,5.7nm,0.6s,mb4.6,baz=230,slow=4.9,SNR=21								
BOSA				LR	LR	00 01 15.1			
	comp=Z,538nm,21.6s,baz=75,slow=33								
ULM	**Lac du Bonnet**	**81.88**	**344**	P	**P**	**23 28 53.7**	**-0.7**		
	comp=Z,3.2nm,0.7s,mb4.3,baz=152,slow=6.5,SNR=3.3								
ULM				pP	pP	23 29 12.9	-0.6		
	comp=Z,5.4nm,0.9s,baz=147,slow=6.6,SNR=3.4								
ULM				sP	sP	23 29 23.1	+2.0		
	comp=Z,7.7nm,0.9s,baz=165,slow=6.4,SNR=4.7								
ULM	**Lac du Bonnet**	**81.88**	**344**	P	**P**	**23 28 53.7**	**-0.7**		
ULM				pP	pP	23 29 12.9	-0.6		
ULM				sP	sP	23 29 23.1	+2.0		
QLMT	**Earthquake Lak**	**82.22**	**332**	*eP*	**P**	**23 28 57.8**	**+1.5**		
QLMT				*e*pP	pP	23 29 15.8	+0.4		
QLMT				*es*P	sP	23 29 25.6	+2.7		
GCMT	**Greycliff**	**82.31**	**334**	*eP*	**P**	**23 28 58.3**	**+1.6**		
GCMT				*e*pP	pP	23 29 18.0	+2.2		
GCMT				*es*P	sP	23 29 24.7	+1.3		
HLID	**Hailey**	**82.48**	**330**	*eP*	**P**	**23 28 58.4**	**+0.7**		
	comp=Z,5.9nm,1.4s,mb4.2								
HLID				*e*pP	pP	23 29 19.2	+2.6		
HLID				*es*P	sP	23 29 27.7	+3.4		
MCMT	**McKenzie Canyo**	**82.81**	**331**	*eP*	**P**	**23 28 50.1**	**-9.2**		
MCMT				*e*pP	pP	23 29 19.8	+1.3		
MCMT				*es*P	sP	23 29 29.2	+3.2		
BOZ	**Bozeman (W)**	**82.97**	**332**	P	**P**	**23 28 59.0**	**-1.2**		
BOZ				*e**PP	pP	23 29 19.9	+0.7		
DLMT	**Dillon**	**83.14**	**332**	P	**P**	**23 29 00.4**	**-0.7**		
	comp=Z,8.2nm,1.1s,mb4.5								
DLMT				*e*PcP	PcP	23 29 06.0	+0.5		
DLMT				*e*pP	pP	23 29 20.7	+0.6		
DLMT				*es*P	sP	23 29 31.5	+3.8		
LBTB	**Lobatse**	**83.38**	**115**	*eP*	**P**	**23 29 02.3**	**0.0**		
LBTB				pmax	pmax				
	comp=Z,70nm,0.7s,mb5.6								
LBTB	**Lobatse**	**83.38**	**115**	*eP*	**P**	**23 29 02.3**	**0.0**		
	comp=Z,6.9nm,0.7s,mb4.6								
WVOR	**Wild Horse Val**	**83.58**	**326**	*eP*	**P**	**23 29 02.8**	**-0.5**		
WVOR				*e**PP	pP	23 29 23.9	+1.5		
WVOR				*e**SP	sP	23 29 30.7	+0.7		
WVOR				pmax	pmax				
	comp=Z,80nm,1.1s,mb5.5								
WVOR	**Wild Horse Val**	**83.58**	**326**	*eP*	**P**	**23 29 02.8**	**-0.5**		
	comp=Z,7.9nm,1.1s,mb4.5								
WVOR				*e*pP	pP	23 29 23.9	+1.5		
WVOR				*es*P	sP	23 29 30.7	+0.7		
CASY	**Casey**	**85.17**	**180**	*eP*	**P**	**23 29 11.6**	**+0.3**		
	comp=Z,12nm,0.9s,mb4.8								
CASY				*e*pP	pP	23 29 32.3	+1.8		
CASY				*es*P	sP	23 29 39.8	+1.7		
WALA	**Waterton Lakes**	**86.64**	**333**	*eP*	**P**	**23 29 18.3**	**-0.3**		
	comp=Z,6.6nm,1.1s,mb4.5								
WALA				*e*pP	pP	23 29 39.6	+1.8		
WALA				*es*P	sP	23 29 47.6	+2.2		
FCC	**Fort Churchill**	**89.45**	**348**	*eP*	**P**	**23 29 31.1**	**-0.8**		
LSZ	**Lusaka**	**90.25**	**108**	*eP*	**P**	**23 29 37.6**	**+1.9**		
LSZ				*e**PP	pP	23 29 57.1	+2.1		
LSZ				*e**SP	sP	23 30 04.6	+2.0		
POHA	**Pohakuloa**	**95.03**	**290**	PFAKE		23 30 10.0	+12		
POHA				LR	LR				
	comp=Z,1μm,21.0s								
SIT	**Sitka**	**101.37**	**330**	PFAKE		23 30 40.0	+14		
SIT				LR	LR				
	comp=Z,926nm,20.0s								
SUMG	**Summit**	**103.54**	**10**	Pdif	Pdif	23 30 35.7	-0.2		
NAO01	**NORSAR Array S**	**110.82**	**31**	PFAKE		23 35 20.0	+12		
NAO01				LR	LR				
	comp=Z,4μm,19.0s								
ANTO	**Ankara**	**117.62**	**58**	PFAKE		23 35 30.0	+9.3		
ANTO				LR	LR				
	comp=Z,2μm,22.0s								
AKASG	**Malin Array Be**	**117.79**	**45**	pPKP	pPKPdf	23 35 41.6	+0.6		
	comp=Z,0.2nm,0.3s,baz=262,slow=2.8,SNR=2.9								
BR131	**Keskin Array S**	**118.21**	**58**	PFAKE		23 35 30.0	+8.2		
BR131				LR	LR				
	comp=Z,889nm,20.0s								
BRTR	**Keskin Array B**	**118.21**	**58**	pPKP	pPKPdf	23 35 42.9	+1.0		
	comp=Z,0.4nm,0.4s,baz=271,slow=1.4,SNR=3.0								
ASAR	**Alice Springs**	**122.68**	**207**	PKP	PKPdf	23 35 30.4	-0.1		
	comp=Z,0.9nm,0.5s,baz=128,slow=1.6,SNR=12								
ASAR				pPKP	pPKPdf	23 35 51.5	+1.0		
	comp=Z,0.7nm,0.5s,baz=129,slow=1.6,SNR=4.2								
WB2	**Warramunga Arr**	**125.81**	**209**	*e*PKPdf	PKPdf	23 35 36.8	+0.3		
WB2				*ep*PKPdf	pPKPdf	23 35 58.0	+1.5		
WB2				*es*PKPdf		23 36 06.9			
WRA	**Warramunga Arr**	**125.81**	**209**	PKP	PKPdf	23 35 36.6	+0.1		
	comp=Z,2.4nm,0.5s,baz=165,slow=1.6,SNR=12								
WRA				pPKP	pPKPdf	23 35 58.5	+2.0		
	comp=Z,2.0nm,0.5s,baz=160,slow=1.6,SNR=5.0								
AB31	**Akbulak array**	**137.45**	**47**	*i* PKIKP	PKPdf	23 35 59.4	+1.0		
AB31				pmax	pmax				
	comp=Z,1μm,0.1s								
KAD	**Karad**	**145.79**	**102**	*eP*	PKPdf	23 36 14.8	+1.5		
KKAR	**Karatay Array**	**145.83**	**55**	*i* PKP2	PKPab	23 36 13.8	-0.7		
KKAR				pmax	pmax				
	comp=Z,24nm,1.4s								
NVS	**Novosibirsk**	**147.92**	**29**	*e*PKP2	PKPbc	23 36 18.4	-1.5		
NVS				pmax	pmax				
	comp=Z,11nm,0.9s								
HYB	**Hyderabad**	**149.57**	**105**	*i* PKP	PKPbc	23 36 25.0	+0.8		
HYB	**Hyderabad**	**149.57**	**105**	*eP*	PKPbc	23 36 25.0	+0.8		
BOD	**Bodaibo**	**150.87**	**355**	*e*PKIKP	PKPbc	23 36 26.3	-1.0		
BOD				*e*		23 36 50.2			
BOD				pmax	pmax				
	comp=Z,5.0nm,1.3s								
BOD				pmax	pmax				
	comp=Z,7.0nm,0.9s								
MK31	**Makanchi Array**	**152.33**	**42**	PKIKP	PKPbc	23 36 30.5	-0.1		
MK31				pmax	pmax				
	comp=Z,5.0nm,0.9s								
MKAR	**Makanchi Array**	**152.33**	**42**	PKPbc	PKPbc	23 36 30.8	+0.2		
	comp=Z,3.1nm,0.6s,baz=331,slow=1.9,SNR=36								
MKAR				pPKPbc	pPKPbc	23 36 51.9	+1.3		
	comp=Z,4.5nm,0.7s,baz=281,slow=1.9,SNR=7.1								
MKAR				pPKPab	pPKPab	23 36 59.5	-0.8		
	comp=Z,6.0nm,0.8s,baz=336,slow=3.2,SNR=5.0								
MKAR	**Makanchi Array**	**152.33**	**42**	PKPbc	PKPbc	23 36 30.8	+0.2		
MKAR				*es*PKPbc	pPKPbc	23 36 51.9	+1.3		
MKAR				pPKPab	pPKPab	23 36 59.5	-0.8		
MJAR	**Matsushiro Arr**	**154.60**	**295**	pPKPab	pPKPab	23 37 11.3	+1.4		
	comp=Z,1.2nm,0.5s,baz=108,slow=3.2,SNR=3.3								
SONM	**Songino Array**	**160.91**	**6**	PKP	PKPdf	23 36 35.7	+0.9		
	comp=Z,0.4nm,0.7s,baz=90,slow=3.3,SNR=3.2								
SONM				pPKP	pPKPdf	23 36 57.3	+2.3		
	comp=Z,0.7nm,0.9s,baz=328,slow=1.9,SNR=3.0								
SONM				PKPab	PKPab	23 37 18.3	+0.5		
	comp=Z,0.4nm,0.6s,baz=350,slow=4.2,SNR=4.4								
SONM	**Songino Array**	**160.91**	**6**	PKIKP	PKPdf	23 36 35.8	+1.0		
SONM						23 36 57.3			

ISCJB ***31*** *23:16:50.9±0.9, 6.16S±0.10×1299E±0.1, h100km, mb3.5/2, Error ellipse: s-maj=20.7km s-min=13.0km az=151.2*
NEIC ***31*** *23:16:50.8±3.2, 609S×12991E, h80km±35km, mb4.0/2, Error ellipse: s-maj=21.2km s-min=16.5km az=161.0*
IDC ***31*** *23:16:54.6±16.0, 627S×12970E, h118km±171km, mb3.2/1, mb1 3.5/4, mb1mx3.3/13, mbtmp3.8/4, ML3.6/3, Error ellipse: s-maj=127.7km s-min=58.6km az=42.0*

ISC 31 23:16:51.4±5.6, 61S±02×1299E±02, h85km±61km, n13, σ0s72/14, mb3.5/2, 1C, Banda Sea

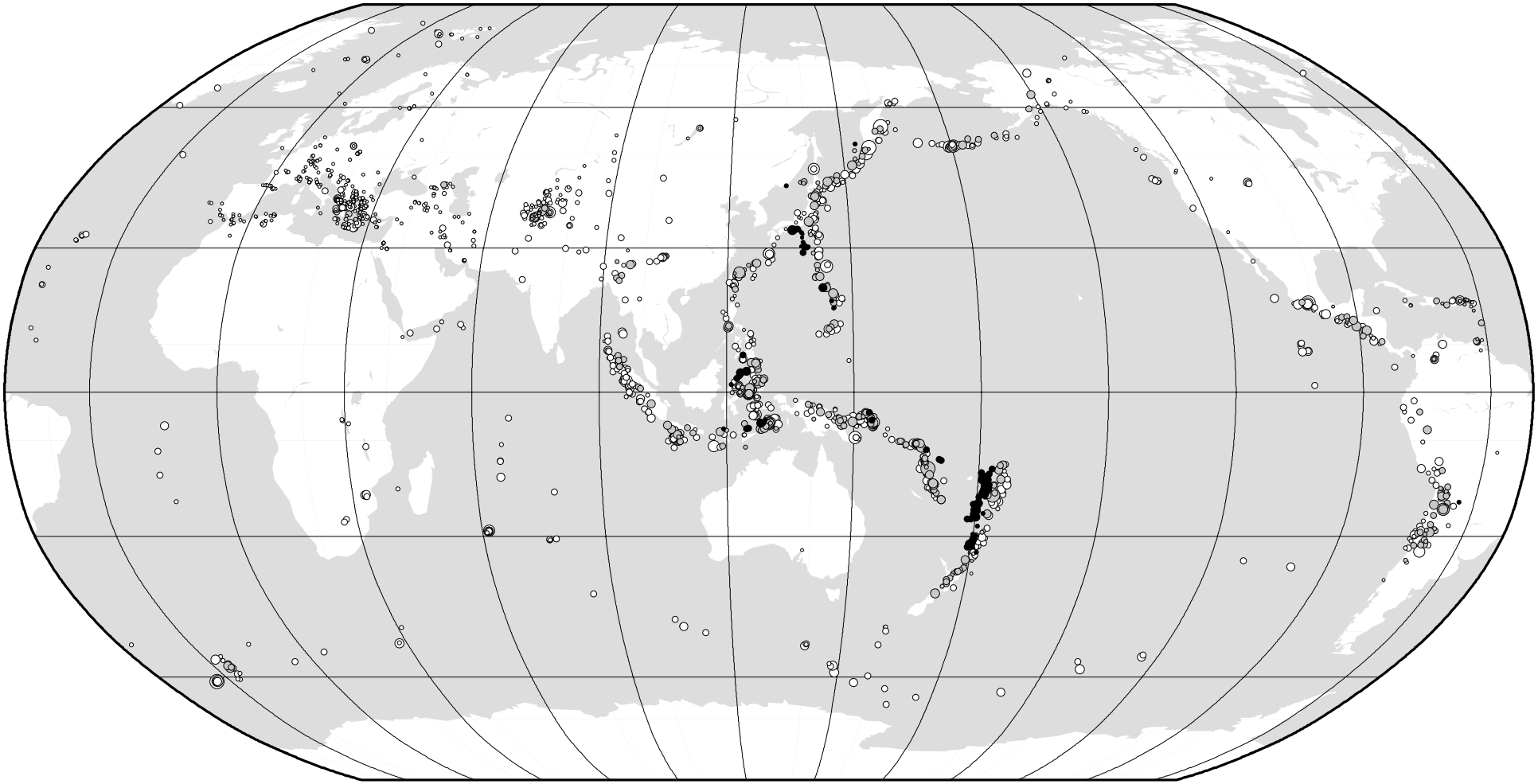
Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.99**	**159**	*eP*	**Pn**	**23 18 38.9**	**+7.8**
	7.9nm,0.2s						
FITZ	**Fitzroy Crossi**	**12.61**	**199**	*iP*	**Pn**	**23 19 47.6**	**+0.2**
	1.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.61**	**199**	P	**Pn**	**23 19 47.6**	**+0.2**
	0.5nm,0.3s,baz=294,slow=16,SNR=20						
FITZ				S	**Sn**	**23 21 54.0**	**-12**
	0.3nm,0.3s,baz=106,slow=23,SNR=4.5						
WRAB	**Tennant Creek**	**14.38**	**163**	*e*Pn	**Pn**	**23 20 07.7**	**-2.9**
	3.5nm,0.6s						
WRA	**Warramunga Arr**	**14.38**	**163**	P	**Pn**	**23 20 10.9**	**+0.2**
	0.1nm,0.3s,baz=344,slow=12,SNR=3.8						
WB2	**Warramunga Arr**	**14.39**	**163**	*eP*	**Pn**	**23 20 15.2**	**+4.4**
WB2	**Warramunga Arr**	**14.39**	**163**	*eP*	**Pn**	**23 20 11.7**	**+0.9**
PMG	**Port Moresby**	**17.39**	**102**	Pn	**Pn**	**23 20 48.6**	**+0.2**
	9.7nm,0.7s						
AS31	**Alice Springs**	**17.85**	**168**	*eP*	**Pn**	**23 20 54.1**	**+0.1**
ASAR	**Alice Springs**	**17.85**	**168**	P	**Pn**	**23 20 54.0**	**+0.1**
	0.4nm,0.3s,baz=344,slow=9.6,SNR=26						
ASPA	**Alice Springs**	**17.85**	**168**	*eP*	**Pn**	**23 20 54.1**	**+0.1**
MKAR	**Makanchi Array**	**67.46**	**327**	P	**P**	**23 27 37.6**	**-0.3**
	0.2nm,0.3s,mb3.4,baz=102,slow=7.4,SNR=4.3						
BRVK	**Borovoye**	**77.36**	**328**	P	**P**	**23 28 37.1**	**+0.2**
	0.6nm,0.5s,mb3.6						

ISCJB ***31*** *23:19:36.6±1.8, 692S±008×1293E±0.1, h153km±18km, mb3.9/5, Error ellipse: s-maj=21.6km s-min=11.0km az=141.6*
NEIC ***31*** *23:19:40.2±1.9, 701S×12921E, h174km±19km, mb4.4/5, Error ellipse: s-maj=20.3km s-min=13.0km az=57.0*
IDC ***31*** *23:19:41.7±5.1, 709S×129.18E, h187km±52km, mb3.8/3, mb1 3.9/5, mb1mx3.6/13, mbtmp4.4/5, Error ellipse: s-maj=50.2km s-min=19.4km az=59.0*

ISC 31 23:19:39.5±1.2, 712S±006×1293E±01, h167km±11km, n19, σ1s60/27, mb3.9/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.38**	**151**	*eP*	**Pn**	**23 21 12.3**	**+0.9**
	32nm,0.4s						
KAKA				*e*S	**Sn**	**23 22 19.8**	**-3.7**
FITZ	**Fitzroy Crossi**	**11.46**	**198**	*eP*	**Pn**	**23 22 20.6**	**+2.3**
	5.2nm,0.3s						
FITZ				*e*S	**Sn**	**23 24 22.4**	**-2.9**
FITZ	**Fitzroy Crossi**	**11.46**	**198**	P	**Pn**	**23 22 19.8**	**+1.5**
	0.9nm,0.3s,baz=51,slow=15,SNR=7.3						
FITZ				S	**Sn**	**23 24 24.4**	**-0.9**
	1.4nm,0.3s,baz=194,slow=18,SNR=5.2						
WRAB	**Tennant Creek**	**13.66**	**159**	*e*Pn	**Pn**	**23 22 45.1**	**-1.3**
	26nm,0.4s						
WRAB				*e*Sn	**Sn**	**23 25 12.7**	**-5.4**
WRA	**Warramunga Arr**	**13.67**	**159**	P	**Pn**	**23 22 45.0**	**-1.4**
	4.1nm,0.3s,baz=336,slow=12,SNR=16						
WRA				S	**Sn**	**23 25 12.5**	**-5.7**
	2.4nm,0.3s,baz=334,slow=24,SNR=7.4						
WB2	**Warramunga Arr**	**13.67**	**159**	*eP*	**Pn**	**23 22 45.0**	**-1.5**
WB2				*e*S	**Sn**	**23 25 11.1**	**-7.2**
MBWA	**Marble Bar**	**16.72**	**212**	*eP*	**Pn**	**23 23 27.3**	**+3.3**
AS31	**Alice Springs**	**17.05**	**165**	*e*Pn	**Pn**	**23 23 30.0**	**+2.1**
AS31				*e*S	**S**	**23 26 35.0**	**-1.1**
ASPA	**Alice Springs**	**17.05**	**165**	*eP*	**Pn**	**23 23 29.9**	**+2.0**
ASPA				*e*S	**S**	**23 26 35.3**	**-0.7**
ASAR	**Alice Springs**	**17.05**	**165**	P	**Pn**	**23 23 29.9**	**+2.0**
	3.8nm,0.3s,baz=346,slow=10,SNR=157						
ASAR				S	**S**	**23 26 37.4**	**+1.4**
	0.9nm,0.3s,baz=313,slow=17,SNR=7.7						
CTA	**Charters Tower**	**20.93**	**130**	P	**P**	**23 24 10.6**	**+1.6**
	6.5nm,0.9s,baz=318,slow=14,SNR=3.6						
CTAO	**Charters Tower**	**20.93**	**130**	*eP*	**P**	**23 24 11.0**	**+2.0**
STKA	**Stephens Creek**	**27.19**	**157**	P	**P**	**23 25 08.5**	**+1.1**
	2.3nm,0.4s,mb4.1,baz=354,slow=7.2,SNR=5.7						
YHNB	**Yeheng**	**32.52**	**347**	P	**P**	**23 25 55.3**	**+0.9**
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**23 30 19.9**	**-0.2**
	2.4nm,0.5s,mb4.2,baz=113,slow=8.0,SNR=30						
CHKZ	**Chkalovo**	**77.98**	**329**	*eP*	**P**	**23 31 17.6**	**-1.6**
	0.9nm,0.5s,mb3.7						
ZRNK	**Zerenda**	**78.47**	**328**	*eP*	**P**	**23 31 20.3**	**-1.5**
	0.7nm,0.7s,mb3.4						
ZRNK				*e*PcP	PcP	23 31 30.9	+0.5
KIV	**Kislovodsk**	**92.42**	**314**	P	**P**	**23 32 30.2**	**-0.9**
BOSA	**Boshof**	**98.76**	**240**	*e*PcP	PcP	23 33 00.8	+0.8

ISC Computed Locations for August 2006



Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

1923 Events